# NAVEGAÇÃO ASTRONÔMICA

## UM GUIA PARA A PROVA PARA CAPITÃO AMADOR

## MATERIAL DE APOIO

TOMAZ CAVALCANTE

**Este é um documento contendo material de apoio para o livro "NAVEGAÇÃO ASTRONÔMICA – Um guia para a prova para Capitão Amador".**

Você pode encontrar mais informações sobre o livro em:

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http://fb.me/NavAstronomica

Apesar de todo este material também constar no livro, este arquivo contém as páginas do Almanaque Náutico necessárias para resolver as diversas questões que são analisadas e resolvidas no livro.

Ele está em um formato fácil de imprimir, o que permitirá o candidato ter em mãos cópias físicas das diversas tabelas utilizadas, facilitando a manipulação.

Este material contém:

1. A página "A2 – Correção de Altura de 10° - 90° - Sol, Estrelas e Planetas", utilizada em diversas provas de Capitão Amador (no livro, as questões são retiradas de provas de outubro de 2013 a outubro de 2017 e estão identificadas)
2. A página de "Conversão de Arco em Tempo", também utilizada em diversas provas.
3. As "Páginas Diárias", ordenadas pela ordem cronológica das provas. Há um cabeçalho, em fundo preto, identificando a que prova cada página corresponde
4. As páginas de "Acréscimos e Correções", organizadas pelos minutos a que correspondem as páginas. O cabeçalho identifica as provas onde estas páginas são utilizadas. Às vezes, uma mesma página é utilizada em mais de uma prova.
5. A página com "Tábuas para Interpolação das horas do Nascer do Sol, do Nascer da Lua, etc", utilizada na prova CPA II/2015.
6. A Tábua de Pontos, utilizada nas provas

UTILIZADA EM TODAS AS PROVAS.

# A2 CORREÇÃO DE ALTURA DE 10° - 90° - SOL, ESTRELAS E PLANETAS

## SOL

Out — Mar / Abr — Set

| a ap | Limbo Inf | Limbo Sup |
|---|---|---|
| ° ′ | ′ | ′ |
| 9 33 | + 10·8 | − 21·5 |
| 9 45 | + 10·9 | − 21·4 |
| 9 56 | + 11·0 | − 21·3 |
| 10 08 | + 11·1 | − 21·2 |
| 10 20 | + 11·2 | − 21·1 |
| 10 33 | + 11·3 | − 21·0 |
| 10 46 | + 11·4 | − 20·9 |
| 11 00 | + 11·5 | − 20·8 |
| 11 15 | + 11·6 | − 20·7 |
| 11 30 | + 11·7 | − 20·6 |
| 11 45 | + 11·8 | − 20·5 |
| 12 01 | + 11·9 | − 20·4 |
| 12 18 | + 12·0 | − 20·3 |
| 12 36 | + 12·1 | − 20·2 |
| 12 54 | + 12·2 | − 20·1 |
| 13 14 | + 12·3 | − 20·0 |
| 13 34 | + 12·4 | − 19·9 |
| 13 55 | + 12·5 | − 19·8 |
| 14 17 | + 12·6 | − 19·7 |
| 14 41 | + 12·7 | − 19·6 |
| 15 05 | + 12·8 | − 19·5 |
| 15 31 | + 12·9 | − 19·4 |
| 15 59 | + 13·0 | − 19·3 |
| 16 27 | + 13·1 | − 19·2 |
| 16 58 | + 13·2 | − 19·1 |
| 17 30 | + 13·3 | − 19·0 |
| 18 05 | + 13·4 | − 18·9 |
| 18 41 | + 13·5 | − 18·8 |
| 19 20 | + 13·6 | − 18·7 |
| 20 02 | + 13·7 | − 18·6 |
| 20 46 | + 13·8 | − 18·5 |
| 21 34 | + 13·9 | − 18·4 |
| 22 25 | + 14·0 | − 18·3 |
| 23 20 | + 14·1 | − 18·2 |
| 24 20 | + 14·2 | − 18·1 |
| 25 24 | + 14·3 | − 18·0 |
| 26 34 | + 14·4 | − 17·9 |
| 27 50 | + 14·5 | − 17·8 |
| 29 13 | + 14·6 | − 17·7 |
| 30 44 | + 14·7 | − 17·6 |
| 32 24 | + 14·8 | − 17·5 |
| 34 15 | + 14·9 | − 17·4 |
| 36 17 | + 15·0 | − 17·3 |
| 38 34 | + 15·1 | − 17·2 |
| 41 06 | + 15·2 | − 17·1 |
| 43 56 | + 15·3 | − 17·0 |
| 47 07 | + 15·4 | − 16·9 |
| 50 43 | + 15·5 | − 16·8 |
| 54 46 | + 15·6 | − 16·7 |
| 59 21 | + 15·7 | − 16·6 |
| 64 28 | + 15·8 | − 16·5 |
| 70 10 | + 15·9 | − 16·4 |
| 76 24 | + 16·0 | − 16·3 |
| 83 05 | + 16·1 | − 16·2 |
| 90 00 | | |

| a ap | Limbo Inf | Limbo Sup |
|---|---|---|
| ° ′ | ′ | ′ |
| 9 39 | + 10·6 | − 21·2 |
| 9 50 | + 10·7 | − 21·1 |
| 10 02 | + 10·8 | − 21·0 |
| 10 14 | + 10·9 | − 20·9 |
| 10 27 | + 11·0 | − 20·8 |
| 10 40 | + 11·1 | − 20·7 |
| 10 53 | + 11·2 | − 20·6 |
| 11 07 | + 11·3 | − 20·5 |
| 11 22 | + 11·4 | − 20·4 |
| 11 37 | + 11·5 | − 20·3 |
| 11 53 | + 11·6 | − 20·2 |
| 12 10 | + 11·7 | − 20·1 |
| 12 27 | + 11·8 | − 20·0 |
| 12 45 | + 11·9 | − 19·9 |
| 13 04 | + 12·0 | − 19·8 |
| 13 24 | + 12·1 | − 19·7 |
| 13 44 | + 12·2 | − 19·6 |
| 14 06 | + 12·3 | − 19·5 |
| 14 29 | + 12·4 | − 19·4 |
| 14 53 | + 12·5 | − 19·3 |
| 15 18 | + 12·6 | − 19·2 |
| 15 45 | + 12·7 | − 19·1 |
| 16 13 | + 12·8 | − 19·0 |
| 16 43 | + 12·9 | − 18·9 |
| 17 14 | + 13·0 | − 18·8 |
| 17 47 | + 13·1 | − 18·7 |
| 18 23 | + 13·2 | − 18·6 |
| 19 00 | + 13·3 | − 18·5 |
| 19 41 | + 13·4 | − 18·4 |
| 20 24 | + 13·5 | − 18·3 |
| 21 10 | + 13·6 | − 18·2 |
| 21 59 | + 13·7 | − 18·1 |
| 22 52 | + 13·8 | − 18·0 |
| 23 49 | + 13·9 | − 17·9 |
| 24 51 | + 14·0 | − 17·8 |
| 25 58 | + 14·1 | − 17·7 |
| 27 11 | + 14·2 | − 17·6 |
| 28 31 | + 14·3 | − 17·5 |
| 29 58 | + 14·4 | − 17·4 |
| 31 33 | + 14·5 | − 17·3 |
| 33 18 | + 14·6 | − 17·2 |
| 35 15 | + 14·7 | − 17·1 |
| 37 24 | + 14·8 | − 17·0 |
| 39 48 | + 14·9 | − 16·9 |
| 42 28 | + 15·0 | − 16·8 |
| 45 29 | + 15·1 | − 16·7 |
| 48 52 | + 15·2 | − 16·6 |
| 52 41 | + 15·3 | − 16·5 |
| 56 59 | + 15·4 | − 16·4 |
| 61 50 | + 15·5 | − 16·3 |
| 67 15 | + 15·6 | − 16·2 |
| 73 14 | + 15·7 | − 16·1 |
| 79 42 | + 15·8 | − 16·0 |
| 86 31 | + 15·9 | − 15·9 |
| 90 00 | | |

## ESTRELAS E PLANETAS

| a ap | Corr. |
|---|---|
| ° ′ | ′ |
| 9 55 | − 5·3 |
| 10 07 | − 5·2 |
| 10 20 | − 5·1 |
| 10 32 | − 5·0 |
| 10 46 | − 4·9 |
| 10 59 | − 4·8 |
| 11 14 | − 4·7 |
| 11 29 | − 4·6 |
| 11 44 | − 4·5 |
| 12 00 | − 4·4 |
| 12 17 | − 4·3 |
| 12 35 | − 4·2 |
| 12 53 | − 4·1 |
| 13 12 | − 4·0 |
| 13 32 | − 3·9 |
| 13 53 | − 3·8 |
| 14 16 | − 3·7 |
| 14 39 | − 3·6 |
| 15 03 | − 3·5 |
| 15 29 | − 3·4 |
| 15 56 | − 3·3 |
| 16 25 | − 3·2 |
| 16 55 | − 3·1 |
| 17 27 | − 3·0 |
| 18 01 | − 2·9 |
| 18 37 | − 2·8 |
| 19 16 | − 2·7 |
| 19 56 | − 2·6 |
| 20 40 | − 2·5 |
| 21 27 | − 2·4 |
| 22 17 | − 2·3 |
| 23 11 | − 2·2 |
| 24 09 | − 2·1 |
| 25 12 | − 2·0 |
| 26 20 | − 1·9 |
| 27 34 | − 1·8 |
| 28 54 | − 1·7 |
| 30 22 | − 1·6 |
| 31 58 | − 1·5 |
| 33 43 | − 1·4 |
| 35 38 | − 1·3 |
| 37 45 | − 1·2 |
| 40 06 | − 1·1 |
| 42 42 | − 1·0 |
| 45 34 | − 0·9 |
| 48 45 | − 0·8 |
| 52 16 | − 0·7 |
| 56 09 | − 0·6 |
| 60 26 | − 0·5 |
| 65 06 | − 0·4 |
| 70 09 | − 0·3 |
| 75 32 | − 0·2 |
| 81 12 | − 0·1 |
| 87 03 | 0·0 |
| 90 00 | |

| a ap | Corr. adicional |
|---|---|
| | **2015** |
| | **VÊNUS** |
| 1 jan | − 3 mai |
| 4 dez | − 31 dez |
| ° | ′ |
| 0 | + 0·1 |
| 60 | |
| 4 mai | − 22 jun |
| 13 out | − 3 dez |
| ° | ′ |
| 0 | + 0·2 |
| 41 | + 0·1 |
| 76 | |
| 23 jun | − 14 jul |
| 19 set | − 12 out |
| ° | ′ |
| 0 | + 0·3 |
| 34 | + 0·2 |
| 60 | + 0·1 |
| 80 | |
| 15 jul | − 30 jul |
| 2 set | − 18 set |
| ° | ′ |
| 0 | + 0·4 |
| 29 | + 0·3 |
| 51 | + 0·2 |
| 68 | + 0·1 |
| 83 | |
| 31 jul | − 1 set |
| ° | ′ |
| 0 | + 0·5 |
| 26 | + 0·4 |
| 46 | + 0·3 |
| 60 | + 0·2 |
| 73 | + 0·1 |
| 84 | |
| | **MARTE** |
| 1 jan | − 31 dez |
| ° | ′ |
| 0 | + 0·1 |
| 60 | |

## DEPRESSÃO

| Elev do Olho | Corr. | Elev do Olho | Elev do Olho | Corr. |
|---|---|---|---|---|
| m | ′ | Pés | m | ′ |
| 2·4 | − 2·8 | 8·0 | 1·0 | − 1·8 |
| 2·6 | − 2·9 | 8·6 | 1·5 | − 2·2 |
| 2·8 | − 3·0 | 9·2 | 2·0 | − 2·5 |
| 3·0 | − 3·1 | 9·8 | 2·5 | − 2·8 |
| 3·2 | − 3·2 | 10·5 | 3·0 | − 3·0 |
| 3·4 | − 3·3 | 11·2 | Ver tábua ← | |
| 3·6 | − 3·4 | 11·9 | | |
| 3·8 | − 3·5 | 12·6 | m | ′ |
| 4·0 | − 3·6 | 13·3 | 20 | − 7·9 |
| 4·3 | − 3·7 | 14·1 | 22 | − 8·3 |
| 4·5 | − 3·8 | 14·9 | 24 | − 8·6 |
| 4·7 | − 3·9 | 15·7 | 26 | − 9·0 |
| 5·0 | − 4·0 | 16·5 | 28 | − 9·3 |
| 5·2 | − 4·1 | 17·4 | | |
| 5·5 | − 4·2 | 18·3 | 30 | − 9·6 |
| 5·8 | − 4·3 | 19·1 | 32 | − 10·0 |
| 6·1 | − 4·4 | 20·1 | 34 | − 10·3 |
| 6·3 | − 4·5 | 21·0 | 36 | − 10·6 |
| 6·6 | − 4·6 | 22·0 | 38 | − 10·8 |
| 6·9 | − 4·7 | 22·9 | | |
| 7·2 | − 4·8 | 23·9 | 40 | − 11·1 |
| 7·5 | − 4·9 | 24·9 | 42 | − 11·4 |
| 7·9 | − 5·0 | 26·0 | 44 | − 11·7 |
| 8·2 | − 5·1 | 27·1 | 46 | − 11·9 |
| 8·5 | − 5·2 | 28·1 | 48 | − 12·2 |
| 8·8 | − 5·3 | 29·2 | Pés | ′ |
| 9·2 | − 5·4 | 30·4 | 2 | − 1·4 |
| 9·5 | − 5·5 | 31·5 | 4 | − 1·9 |
| 9·9 | − 5·6 | 32·7 | 6 | − 2·4 |
| 10·3 | − 5·7 | 33·9 | 8 | − 2·7 |
| 10·6 | − 5·8 | 35·1 | 10 | − 3·1 |
| 11·0 | − 5·9 | 36·3 | Ver tábua ← | |
| 11·4 | − 6·0 | 37·6 | | |
| 11·8 | − 6·1 | 38·9 | | |
| 12·2 | − 6·2 | 40·1 | Pés | ′ |
| 12·6 | − 6·3 | 41·5 | 70 | − 8·1 |
| 13·0 | − 6·4 | 42·8 | 75 | − 8·4 |
| 13·4 | − 6·5 | 44·2 | 80 | − 8·7 |
| 13·8 | − 6·6 | 45·5 | 85 | − 8·9 |
| 14·2 | − 6·7 | 46·9 | 90 | − 9·2 |
| 14·7 | − 6·8 | 48·4 | 95 | − 9·5 |
| 15·1 | − 6·9 | 49·8 | | |
| 15·5 | − 7·0 | 51·3 | 100 | − 9·7 |
| 16·0 | − 7·1 | 52·8 | 105 | − 9·9 |
| 16·5 | − 7·2 | 54·3 | 110 | − 10·2 |
| 16·9 | − 7·3 | 55·8 | 115 | − 10·4 |
| 17·4 | − 7·4 | 57·4 | 120 | − 10·6 |
| 17·9 | − 7·5 | 58·9 | 125 | − 10·8 |
| 18·4 | − 7·6 | 60·5 | | |
| 18·8 | − 7·7 | 62·1 | 130 | − 11·1 |
| 19·3 | − 7·8 | 63·8 | 135 | − 11·3 |
| 19·8 | − 7·9 | 65·4 | 140 | − 11·5 |
| 20·4 | − 8·0 | 67·1 | 145 | − 11·7 |
| 20·9 | − 8·1 | 68·8 | 150 | − 11·9 |
| 21·4 | | 70·5 | 155 | − 12·1 |

a ap = Altura dada pelo sextante corrigida do erro instrumental e da depressão

UTILIZADA EM TODAS AS PROVAS

# CONVERSÃO DE ARCO EM TEMPO

| 0°–59° | | 60°–119° | | 120°–179° | | 180°–239° | | 240°–299° | | 300°–359° | | | 0'.00 | 0'.25 | 0'.50 | 0'.75 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ° | h m | ° | h m | ° | h m | ° | h m | ° | h m | ° | h m | ' | m s | m s | m s | m s |
| 0 | 0 00 | 60 | 4 00 | 120 | 8 00 | 180 | 12 00 | 240 | 16 00 | 300 | 20 00 | 0 | 0 00 | 0 01 | 0 02 | 0 03 |
| 1 | 0 04 | 61 | 4 04 | 121 | 8 04 | 181 | 12 04 | 241 | 16 04 | 301 | 20 04 | 1 | 0 04 | 0 05 | 0 06 | 0 07 |
| 2 | 0 08 | 62 | 4 08 | 122 | 8 08 | 182 | 12 08 | 242 | 16 08 | 302 | 20 08 | 2 | 0 08 | 0 09 | 0 10 | 0 11 |
| 3 | 0 12 | 63 | 4 12 | 123 | 8 12 | 183 | 12 12 | 243 | 16 12 | 303 | 20 12 | 3 | 0 12 | 0 13 | 0 14 | 0 15 |
| 4 | 0 16 | 64 | 4 16 | 124 | 8 16 | 184 | 12 16 | 244 | 16 16 | 304 | 20 16 | 4 | 0 16 | 0 17 | 0 18 | 0 19 |
| 5 | 0 20 | 65 | 4 20 | 125 | 8 20 | 185 | 12 20 | 245 | 16 20 | 305 | 20 20 | 5 | 0 20 | 0 21 | 0 22 | 0 23 |
| 6 | 0 24 | 66 | 4 24 | 126 | 8 24 | 186 | 12 24 | 246 | 16 24 | 306 | 20 24 | 6 | 0 24 | 0 25 | 0 26 | 0 27 |
| 7 | 0 28 | 67 | 4 28 | 127 | 8 28 | 187 | 12 28 | 247 | 16 28 | 307 | 20 28 | 7 | 0 28 | 0 29 | 0 30 | 0 31 |
| 8 | 0 32 | 68 | 4 32 | 128 | 8 32 | 188 | 12 32 | 248 | 16 32 | 308 | 20 32 | 8 | 0 32 | 0 33 | 0 34 | 0 35 |
| 9 | 0 36 | 69 | 4 36 | 129 | 8 36 | 189 | 12 36 | 249 | 16 36 | 309 | 20 36 | 9 | 0 36 | 0 37 | 0 38 | 0 39 |
| 10 | 0 40 | 70 | 4 40 | 130 | 8 40 | 190 | 12 40 | 250 | 16 40 | 310 | 20 40 | 10 | 0 40 | 0 41 | 0 42 | 0 43 |
| 11 | 0 44 | 71 | 4 44 | 131 | 8 44 | 191 | 12 44 | 251 | 16 44 | 311 | 20 44 | 11 | 0 44 | 0 45 | 0 46 | 0 47 |
| 12 | 0 48 | 72 | 4 48 | 132 | 8 48 | 192 | 12 48 | 252 | 16 48 | 312 | 20 48 | 12 | 0 48 | 0 49 | 0 50 | 0 51 |
| 13 | 0 52 | 73 | 4 52 | 133 | 8 52 | 193 | 12 52 | 253 | 16 52 | 313 | 20 52 | 13 | 0 52 | 0 53 | 0 54 | 0 55 |
| 14 | 0 56 | 74 | 4 56 | 134 | 8 56 | 194 | 12 56 | 254 | 16 56 | 314 | 20 56 | 14 | 0 56 | 0 57 | 0 58 | 0 59 |
| 15 | 1 00 | 75 | 5 00 | 135 | 9 00 | 195 | 13 00 | 255 | 17 00 | 315 | 21 00 | 15 | 1 00 | 1 01 | 1 02 | 1 03 |
| 16 | 1 04 | 76 | 5 04 | 136 | 9 04 | 196 | 13 04 | 256 | 17 04 | 316 | 21 04 | 16 | 1 04 | 1 05 | 1 06 | 1 07 |
| 17 | 1 08 | 77 | 5 08 | 137 | 9 08 | 197 | 13 08 | 257 | 17 08 | 317 | 21 08 | 17 | 1 08 | 1 09 | 1 10 | 1 11 |
| 18 | 1 12 | 78 | 5 12 | 138 | 9 12 | 198 | 13 12 | 258 | 17 12 | 318 | 21 12 | 18 | 1 12 | 1 13 | 1 14 | 1 15 |
| 19 | 1 16 | 79 | 5 16 | 139 | 9 16 | 199 | 13 16 | 259 | 17 16 | 319 | 21 16 | 19 | 1 16 | 1 17 | 1 18 | 1 19 |
| 20 | 1 20 | 80 | 5 20 | 140 | 9 20 | 200 | 13 20 | 260 | 17 20 | 320 | 21 20 | 20 | 1 20 | 1 21 | 1 22 | 1 23 |
| 21 | 1 24 | 81 | 5 24 | 141 | 9 24 | 201 | 13 24 | 261 | 17 24 | 321 | 21 24 | 21 | 1 24 | 1 25 | 1 26 | 1 27 |
| 22 | 1 28 | 82 | 5 28 | 142 | 9 28 | 202 | 13 28 | 262 | 17 28 | 322 | 21 28 | 22 | 1 28 | 1 29 | 1 30 | 1 31 |
| 23 | 1 32 | 83 | 5 32 | 143 | 9 32 | 203 | 13 32 | 263 | 17 32 | 323 | 21 32 | 23 | 1 32 | 1 33 | 1 34 | 1 35 |
| 24 | 1 36 | 84 | 5 36 | 144 | 9 36 | 204 | 13 36 | 264 | 17 36 | 324 | 21 36 | 24 | 1 36 | 1 37 | 1 38 | 1 39 |
| 25 | 1 40 | 85 | 5 40 | 145 | 9 40 | 205 | 13 40 | 265 | 17 40 | 325 | 21 40 | 25 | 1 40 | 1 41 | 1 42 | 1 43 |
| 26 | 1 44 | 86 | 5 44 | 146 | 9 44 | 206 | 13 44 | 266 | 17 44 | 326 | 21 44 | 26 | 1 44 | 1 45 | 1 46 | 1 47 |
| 27 | 1 48 | 87 | 5 48 | 147 | 9 48 | 207 | 13 48 | 267 | 17 48 | 327 | 21 48 | 27 | 1 48 | 1 49 | 1 50 | 1 51 |
| 28 | 1 52 | 88 | 5 52 | 148 | 9 52 | 208 | 13 52 | 268 | 17 52 | 328 | 21 52 | 28 | 1 52 | 1 53 | 1 54 | 1 55 |
| 29 | 1 56 | 89 | 5 56 | 149 | 9 56 | 209 | 13 56 | 269 | 17 56 | 329 | 21 56 | 29 | 1 56 | 1 57 | 1 58 | 1 59 |
| 30 | 2 00 | 90 | 6 00 | 150 | 10 00 | 210 | 14 00 | 270 | 18 00 | 330 | 22 00 | 30 | 2 00 | 2 01 | 2 02 | 2 03 |
| 31 | 2 04 | 91 | 6 04 | 151 | 10 04 | 211 | 14 04 | 271 | 18 04 | 331 | 22 04 | 31 | 2 04 | 2 05 | 2 06 | 2 07 |
| 32 | 2 08 | 92 | 6 08 | 152 | 10 08 | 212 | 14 08 | 272 | 18 08 | 332 | 22 08 | 32 | 2 08 | 2 09 | 2 10 | 2 11 |
| 33 | 2 12 | 93 | 6 12 | 153 | 10 12 | 213 | 14 12 | 273 | 18 12 | 333 | 22 12 | 33 | 2 12 | 2 13 | 2 14 | 2 15 |
| 34 | 2 16 | 94 | 6 16 | 154 | 10 16 | 214 | 14 16 | 274 | 18 16 | 334 | 22 16 | 34 | 2 16 | 2 17 | 2 18 | 2 19 |
| 35 | 2 20 | 95 | 6 20 | 155 | 10 20 | 215 | 14 20 | 275 | 18 20 | 335 | 22 20 | 35 | 2 20 | 2 21 | 2 22 | 2 23 |
| 36 | 2 24 | 96 | 6 24 | 156 | 10 24 | 216 | 14 24 | 276 | 18 24 | 336 | 22 24 | 36 | 2 24 | 2 25 | 2 26 | 2 27 |
| 37 | 2 28 | 97 | 6 28 | 157 | 10 28 | 217 | 14 28 | 277 | 18 28 | 337 | 22 28 | 37 | 2 28 | 2 29 | 2 30 | 2 31 |
| 38 | 2 32 | 98 | 6 32 | 158 | 10 32 | 218 | 14 32 | 278 | 18 32 | 338 | 22 32 | 38 | 2 32 | 2 33 | 2 34 | 2 35 |
| 39 | 2 36 | 99 | 6 36 | 159 | 10 36 | 219 | 14 36 | 279 | 18 36 | 339 | 22 36 | 39 | 2 36 | 2 37 | 2 38 | 2 39 |
| 40 | 2 40 | 100 | 6 40 | 160 | 10 40 | 220 | 14 40 | 280 | 18 40 | 340 | 22 40 | 40 | 2 40 | 2 41 | 2 42 | 2 43 |
| 41 | 2 44 | 101 | 6 44 | 161 | 10 44 | 221 | 14 44 | 281 | 18 44 | 341 | 22 44 | 41 | 2 44 | 2 45 | 2 46 | 2 47 |
| 42 | 2 48 | 102 | 6 48 | 162 | 10 48 | 222 | 14 48 | 282 | 18 48 | 342 | 22 48 | 42 | 2 48 | 2 49 | 2 50 | 2 51 |
| 43 | 2 52 | 103 | 6 52 | 163 | 10 52 | 223 | 14 52 | 283 | 18 52 | 343 | 22 52 | 43 | 2 52 | 2 53 | 2 54 | 2 55 |
| 44 | 2 56 | 104 | 6 56 | 164 | 10 56 | 224 | 14 56 | 284 | 18 56 | 344 | 22 56 | 44 | 2 56 | 2 57 | 2 58 | 2 59 |
| 45 | 3 00 | 105 | 7 00 | 165 | 11 00 | 225 | 15 00 | 285 | 19 00 | 345 | 23 00 | 45 | 3 00 | 3 01 | 3 02 | 3 03 |
| 46 | 3 04 | 106 | 7 04 | 166 | 11 04 | 226 | 15 04 | 286 | 19 04 | 346 | 23 04 | 46 | 3 04 | 3 05 | 3 06 | 3 07 |
| 47 | 3 08 | 107 | 7 08 | 167 | 11 08 | 227 | 15 08 | 287 | 19 08 | 347 | 23 08 | 47 | 3 08 | 3 09 | 3 10 | 3 11 |
| 48 | 3 12 | 108 | 7 12 | 168 | 11 12 | 228 | 15 12 | 288 | 19 12 | 348 | 23 12 | 48 | 3 12 | 3 13 | 3 14 | 3 15 |
| 49 | 3 16 | 109 | 7 16 | 169 | 11 16 | 229 | 15 16 | 289 | 19 16 | 349 | 23 16 | 49 | 3 16 | 3 17 | 3 18 | 3 19 |
| 50 | 3 20 | 110 | 7 20 | 170 | 11 20 | 230 | 15 20 | 290 | 19 20 | 350 | 23 20 | 50 | 3 20 | 3 21 | 3 22 | 3 23 |
| 51 | 3 24 | 111 | 7 24 | 171 | 11 24 | 231 | 15 24 | 291 | 19 24 | 351 | 23 24 | 51 | 3 24 | 3 25 | 3 26 | 3 27 |
| 52 | 3 28 | 112 | 7 28 | 172 | 11 28 | 232 | 15 28 | 292 | 19 28 | 352 | 23 28 | 52 | 3 28 | 3 29 | 3 30 | 3 31 |
| 53 | 3 32 | 113 | 7 32 | 173 | 11 32 | 233 | 15 32 | 293 | 19 32 | 353 | 23 32 | 53 | 3 32 | 3 33 | 3 34 | 3 35 |
| 54 | 3 36 | 114 | 7 36 | 174 | 11 36 | 234 | 15 36 | 294 | 19 36 | 354 | 23 36 | 54 | 3 36 | 3 37 | 3 38 | 3 39 |
| 55 | 3 40 | 115 | 7 40 | 175 | 11 40 | 235 | 15 40 | 295 | 19 40 | 355 | 23 40 | 55 | 3 40 | 3 41 | 3 42 | 3 43 |
| 56 | 3 44 | 116 | 7 44 | 176 | 11 44 | 236 | 15 44 | 296 | 19 44 | 356 | 23 44 | 56 | 3 44 | 3 45 | 3 46 | 3 47 |
| 57 | 3 48 | 117 | 7 48 | 177 | 11 48 | 237 | 15 48 | 297 | 19 48 | 357 | 23 48 | 57 | 3 48 | 3 49 | 3 50 | 3 51 |
| 58 | 3 52 | 118 | 7 52 | 178 | 11 52 | 238 | 15 52 | 298 | 19 52 | 358 | 23 52 | 58 | 3 52 | 3 53 | 3 54 | 3 55 |
| 59 | 3 56 | 119 | 7 56 | 179 | 11 56 | 239 | 15 56 | 299 | 19 56 | 359 | 23 56 | 59 | 3 56 | 3 57 | 3 58 | 3 59 |

A tábua acima destina-se à conversão de arco em tempo; sua principal aplicação nesse Almanaque é a conversão da longitude, cujo valor em horas, minutos e segundos é utilizado na fórmula que relaciona a HML com a TU: TU = HML + $\lambda$ , sendo $\lambda$ positivo para longitude W e negativo para longitude E.

| TU | | SOL | | | | LUA | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| 4 | 00 | 182 | 48.0 | S 4 | 19.6 | 195 | 40.5 | 12.4 | S | 2 | 24.2 | 10.9 | 56.9 |
| | 01 | 197 | 48.2 | | 20.5 | 210 | 11.9 | 12.5 | | 2 | 35.1 | 10.9 | 56.9 |
| | 02 | 212 | 48.4 | | 21.5 | 224 | 43.4 | 12.3 | | 2 | 46.0 | 10.9 | 56.9 |
| | 03 | 227 | 48.6 | | 22.5 | 239 | 14.7 | 12.4 | | 2 | 56.9 | 10.9 | 56.9 |
| | 04 | 242 | 48.8 | | 23.4 | 253 | 46.1 | 12.3 | | 3 | 07.8 | 10.9 | 57.0 |
| | 05 | 257 | 49.0 | | 24.4 | 268 | 17.4 | 12.2 | | 3 | 18.7 | 10.9 | 57.0 |
| | 06 | 272 | 49.2 | S 4 | 25.3 | 282 | 48.6 | 12.2 | S | 3 | 29.6 | 10.9 | 57.0 |
| | 07 | 287 | 49.3 | | 26.3 | 297 | 19.8 | 12.2 | | 3 | 40.5 | 10.9 | 57.0 |
| | 08 | 302 | 49.5 | | 27.3 | 311 | 51.0 | 12.1 | | 3 | 51.4 | 10.8 | 57.1 |
| | 09 | 317 | 49.7 | | 28.2 | 326 | 22.1 | 12.1 | | 4 | 02.2 | 10.9 | 57.1 |
| | 10 | 332 | 49.9 | | 29.2 | 340 | 53.2 | 12.1 | | 4 | 13.1 | 10.9 | 57.1 |
| | 11 | 347 | 50.1 | | 30.2 | 355 | 24.3 | 12.0 | | 4 | 24.0 | 10.8 | 57.1 |
| | 12 | 2 | 50.3 | S 4 | 31.1 | 9 | 55.3 | 11.9 | S | 4 | 34.8 | 10.8 | 57.2 |
| | 13 | 17 | 50.5 | | 32.1 | 24 | 26.2 | 11.9 | | 4 | 45.6 | 10.8 | 57.2 |
| | 14 | 32 | 50.7 | | 33.1 | 38 | 57.1 | 11.9 | | 4 | 56.4 | 10.8 | 57.2 |
| | 15 | 47 | 50.9 | | 34.0 | 53 | 28.0 | 11.8 | | 5 | 07.2 | 10.8 | 57.3 |
| | 16 | 62 | 51.1 | | 35.0 | 67 | 58.8 | 11.8 | | 5 | 18.0 | 10.8 | 57.3 |
| | 17 | 77 | 51.2 | | 35.9 | 82 | 29.6 | 11.7 | | 5 | 28.8 | 10.7 | 57.3 |
| | 18 | 92 | 51.4 | S 4 | 36.9 | 97 | 00.3 | 11.7 | S | 5 | 39.5 | 10.7 | 57.3 |
| | 19 | 107 | 51.6 | | 37.9 | 111 | 31.0 | 11.6 | | 5 | 50.2 | 10.7 | 57.4 |
| | 20 | 122 | 51.8 | | 38.8 | 126 | 01.6 | 11.6 | | 6 | 00.9 | 10.7 | 57.4 |
| | 21 | 137 | 52.0 | | 39.8 | 140 | 32.2 | 11.5 | | 6 | 11.6 | 10.7 | 57.4 |
| | 22 | 152 | 52.2 | | 40.8 | 155 | 02.7 | 11.5 | | 6 | 22.3 | 10.6 | 57.4 |
| | 23 | 167 | 52.4 | | 41.7 | 169 | 33.2 | 11.4 | | 6 | 32.9 | 10.6 | 57.5 |
| 5 | 00 | 182 | 52.6 | S 4 | 42.7 | 184 | 03.6 | 11.4 | S | 6 | 43.5 | 10.6 | 57.5 |
| | 01 | 197 | 52.7 | | 43.6 | 198 | 34.0 | 11.3 | | 6 | 54.1 | 10.6 | 57.5 |
| | 02 | 212 | 52.9 | | 44.6 | 213 | 04.3 | 11.3 | | 7 | 04.7 | 10.5 | 57.5 |
| | 03 | 227 | 53.1 | | 45.6 | 227 | 34.6 | 11.2 | | 7 | 15.2 | 10.5 | 57.6 |
| | 04 | 242 | 53.3 | | 46.5 | 242 | 04.8 | 11.1 | | 7 | 25.7 | 10.5 | 57.6 |
| | 05 | 257 | 53.5 | | 47.5 | 256 | 34.9 | 11.2 | | 7 | 36.2 | 10.4 | 57.6 |
| | 06 | 272 | 53.7 | S 4 | 48.5 | 271 | 05.1 | 11.0 | S | 7 | 46.6 | 10.4 | 57.6 |
| | 07 | 287 | 53.9 | | 49.4 | 285 | 35.1 | 11.0 | | 7 | 57.0 | 10.4 | 57.6 |
| | 08 | 302 | 54.1 | | 50.4 | 300 | 05.1 | 11.0 | | 8 | 07.4 | 10.3 | 57.7 |
| | 09 | 317 | 54.2 | | 51.3 | 314 | 35.1 | 10.9 | | 8 | 17.7 | 10.3 | 57.7 |
| | 10 | 332 | 54.4 | | 52.3 | 329 | 05.0 | 10.8 | | 8 | 28.0 | 10.3 | 57.7 |
| | 11 | 347 | 54.6 | | 53.3 | 343 | 34.8 | 10.8 | | 8 | 38.3 | 10.2 | 57.7 |
| | 12 | 2 | 54.8 | S 4 | 54.2 | 358 | 04.6 | 10.7 | S | 8 | 48.5 | 10.2 | 57.8 |
| | 13 | 17 | 55.0 | | 55.2 | 12 | 34.3 | 10.7 | | 8 | 58.7 | 10.1 | 57.8 |
| | 14 | 32 | 55.2 | | 56.1 | 27 | 04.0 | 10.6 | | 9 | 08.8 | 10.1 | 57.8 |
| | 15 | 47 | 55.4 | | 57.1 | 41 | 33.6 | 10.5 | | 9 | 18.9 | 10.1 | 57.8 |
| | 16 | 62 | 55.5 | | 58.1 | 56 | 03.1 | 10.5 | | 9 | 29.0 | 10.0 | 57.9 |
| | 17 | 77 | 55.7 | 4 | 59.0 | 70 | 32.6 | 10.5 | | 9 | 39.0 | 10.0 | 57.9 |
| | 18 | 92 | 55.9 | S 5 | 00.0 | 85 | 02.1 | 10.4 | S | 9 | 49.0 | 9.9 | 57.9 |
| | 19 | 107 | 56.1 | | 00.9 | 99 | 31.5 | 10.3 | | 9 | 58.9 | 9.9 | 57.9 |
| | 20 | 122 | 56.3 | | 01.9 | 114 | 00.8 | 10.3 | | 10 | 08.8 | 9.8 | 57.9 |
| | 21 | 137 | 56.5 | | 02.9 | 128 | 30.1 | 10.2 | | 10 | 18.6 | 9.8 | 58.0 |
| | 22 | 152 | 56.6 | | 03.8 | 142 | 59.3 | 10.1 | | 10 | 28.4 | 9.8 | 58.0 |
| | 23 | 167 | 56.8 | | 04.8 | 157 | 28.4 | 10.1 | | 10 | 38.2 | 9.6 | 58.0 |
| 6 | 00 | 182 | 57.0 | S 5 | 05.7 | 171 | 57.5 | 10.0 | S | 10 | 47.8 | 9.7 | 58.0 |
| | 01 | 197 | 57.2 | | 06.7 | 186 | 26.5 | 10.0 | | 10 | 57.5 | 9.5 | 58.1 |
| | 02 | 212 | 57.4 | | 07.7 | 200 | 55.5 | 9.9 | | 11 | 07.0 | 9.6 | 58.1 |
| | 03 | 227 | 57.6 | | 08.6 | 215 | 24.4 | 9.9 | | 11 | 16.6 | 9.4 | 58.1 |
| | 04 | 242 | 57.7 | | 09.6 | 229 | 53.3 | 9.7 | | 11 | 26.0 | 9.4 | 58.1 |
| | 05 | 257 | 57.9 | | 10.5 | 244 | 22.0 | 9.8 | | 11 | 35.4 | 9.4 | 58.1 |
| | 06 | 272 | 58.1 | S 5 | 11.5 | 258 | 50.8 | 9.6 | S | 11 | 44.8 | 9.3 | 58.2 |
| | 07 | 287 | 58.3 | | 12.5 | 273 | 19.4 | 9.6 | | 11 | 54.1 | 9.2 | 58.2 |
| | 08 | 302 | 58.5 | | 13.4 | 287 | 48.0 | 9.6 | | 12 | 03.3 | 9.1 | 58.2 |
| | 09 | 317 | 58.7 | | 14.4 | 302 | 16.6 | 9.5 | | 12 | 12.4 | 9.1 | 58.2 |
| | 10 | 332 | 58.8 | | 15.3 | 316 | 45.1 | 9.4 | | 12 | 21.5 | 9.1 | 58.2 |
| | 11 | 347 | 59.0 | | 16.3 | 331 | 13.5 | 9.3 | | 12 | 30.6 | 8.9 | 58.3 |
| | 12 | 2 | 59.2 | S 5 | 17.2 | 345 | 41.8 | 9.3 | S | 12 | 39.5 | 8.9 | 58.3 |
| | 13 | 17 | 59.4 | | 18.2 | 0 | 10.1 | 9.3 | | 12 | 48.4 | 8.9 | 58.3 |
| | 14 | 32 | 59.6 | | 19.2 | 14 | 38.4 | 9.2 | | 12 | 57.3 | 8.7 | 58.3 |
| | 15 | 47 | 59.8 | | 20.1 | 29 | 06.6 | 9.1 | | 13 | 06.0 | 8.7 | 58.3 |
| | 16 | 62 | 59.9 | | 21.1 | 43 | 34.7 | 9.0 | | 13 | 14.7 | 8.6 | 58.4 |
| | 17 | 78 | 00.1 | | 22.0 | 58 | 02.7 | 9.0 | | 13 | 23.3 | 8.6 | 58.4 |
| | 18 | 93 | 00.3 | S 5 | 23.0 | 72 | 30.7 | 9.0 | S | 13 | 31.9 | 8.5 | 58.4 |
| | 19 | 108 | 00.5 | | 24.0 | 86 | 58.7 | 8.8 | | 13 | 40.4 | 8.4 | 58.4 |
| | 20 | 123 | 00.7 | | 24.9 | 101 | 26.5 | 8.8 | | 13 | 48.8 | 8.3 | 58.4 |
| | 21 | 138 | 00.8 | | 25.9 | 115 | 54.3 | 8.8 | | 13 | 57.1 | 8.2 | 58.5 |
| | 22 | 153 | 01.0 | | 26.8 | 130 | 22.1 | 8.7 | | 14 | 05.3 | 8.2 | 58.5 |
| | 23 | 168 | 01.2 | | 27.8 | 144 | 49.8 | 8.6 | S | 14 | 13.5 | 8.1 | 58.5 |
| | | SD | 16.0 | d | 1.0 | SD | | 15.6 | | | 15.7 | | 15.9 |

SEXTA FEIRA — SÁBADO — DOMINGO

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 04 10 | 05 30 | 06 37 | 05 53 | 07 45 | 09 44 | 11 57 |
| N 70 | 04 19 | 05 31 | 06 32 | 05 48 | 07 32 | 09 20 | 11 14 |
| 68 | 04 27 | 05 32 | 06 27 | 05 44 | 07 21 | 09 02 | 10 45 |
| 66 | 04 33 | 05 33 | 06 24 | 05 40 | 07 13 | 08 48 | 10 24 |
| 64 | 04 38 | 05 33 | 06 20 | 05 37 | 07 06 | 08 36 | 10 07 |
| 62 | 04 42 | 05 33 | 06 18 | 05 35 | 07 00 | 08 26 | 09 53 |
| 60 | 04 45 | 05 34 | 06 15 | 05 33 | 06 54 | 08 18 | 09 41 |
| N 58 | 04 48 | 05 34 | 06 13 | 05 31 | 06 50 | 08 10 | 09 31 |
| 56 | 04 51 | 05 34 | 06 11 | 05 29 | 06 46 | 08 04 | 09 22 |
| 54 | 04 53 | 05 34 | 06 09 | 05 27 | 06 42 | 07 58 | 09 14 |
| 52 | 04 55 | 05 34 | 06 08 | 05 26 | 06 39 | 07 53 | 09 07 |
| 50 | 04 56 | 05 34 | 06 06 | 05 25 | 06 36 | 07 48 | 09 01 |
| 45 | 05 00 | 05 34 | 06 03 | 05 22 | 06 29 | 07 38 | 08 47 |
| N 40 | 05 02 | 05 33 | 06 00 | 05 19 | 06 24 | 07 30 | 08 36 |
| 35 | 05 03 | 05 33 | 05 58 | 05 17 | 06 19 | 07 22 | 08 27 |
| 30 | 05 04 | 05 32 | 05 56 | 05 16 | 06 15 | 07 16 | 08 18 |
| 20 | 05 04 | 05 30 | 05 52 | 05 13 | 06 08 | 07 05 | 08 04 |
| N 10 | 05 03 | 05 27 | 05 48 | 05 10 | 06 02 | 06 56 | 07 52 |
| 0 | 05 00 | 05 24 | 05 45 | 05 08 | 05 56 | 06 47 | 07 40 |
| S 10 | 04 56 | 05 21 | 05 42 | 05 05 | 05 50 | 06 38 | 07 29 |
| 20 | 04 50 | 05 16 | 05 38 | 05 03 | 05 44 | 06 29 | 07 16 |
| 30 | 04 41 | 05 09 | 05 33 | 05 00 | 05 38 | 06 18 | 07 03 |
| 35 | 04 35 | 05 05 | 05 31 | 04 58 | 05 34 | 06 12 | 06 55 |
| 40 | 04 28 | 05 01 | 05 28 | 04 56 | 05 29 | 06 05 | 06 45 |
| 45 | 04 19 | 04 55 | 05 24 | 04 54 | 05 24 | 05 57 | 06 35 |
| S 50 | 04 08 | 04 47 | 05 20 | 04 52 | 05 18 | 05 48 | 06 22 |
| 52 | 04 03 | 04 44 | 05 18 | 04 50 | 05 15 | 05 43 | 06 16 |
| 54 | 03 56 | 04 40 | 05 16 | 04 49 | 05 12 | 05 39 | 06 10 |
| 56 | 03 49 | 04 36 | 05 14 | 04 48 | 05 09 | 05 33 | 06 02 |
| 58 | 03 41 | 04 31 | 05 11 | 04 46 | 05 05 | 05 27 | 05 54 |
| S 60 | 03 32 | 04 25 | 05 08 | 04 45 | 05 01 | 05 21 | 05 45 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 16 57 | 18 04 | 19 24 | 16 20 | 16 10 | 15 57 | 15 37 |
| N 70 | 17 03 | 18 04 | 19 15 | 16 27 | 16 25 | 16 22 | 16 21 |
| 68 | 17 08 | 18 03 | 19 08 | 16 34 | 16 37 | 16 41 | 16 50 |
| 66 | 17 11 | 18 02 | 19 02 | 16 39 | 16 46 | 16 57 | 17 12 |
| 64 | 17 15 | 18 02 | 18 57 | 16 43 | 16 55 | 17 10 | 17 30 |
| 62 | 17 18 | 18 02 | 18 53 | 16 47 | 17 02 | 17 20 | 17 45 |
| 60 | 17 20 | 18 02 | 18 50 | 16 51 | 17 08 | 17 30 | 17 57 |
| N 58 | 17 23 | 18 02 | 18 47 | 16 54 | 17 14 | 17 38 | 18 08 |
| 56 | 17 25 | 18 02 | 18 45 | 16 56 | 17 19 | 17 45 | 18 17 |
| 54 | 17 26 | 18 02 | 18 42 | 16 59 | 17 23 | 17 51 | 18 25 |
| 52 | 17 28 | 18 02 | 18 41 | 17 01 | 17 27 | 17 57 | 18 33 |
| 50 | 17 30 | 18 02 | 18 39 | 17 03 | 17 31 | 18 02 | 18 40 |
| 45 | 17 33 | 18 02 | 18 36 | 17 07 | 17 39 | 18 14 | 18 54 |
| N 40 | 17 36 | 18 03 | 18 34 | 17 11 | 17 45 | 18 23 | 19 06 |
| 35 | 17 38 | 18 04 | 18 33 | 17 14 | 17 51 | 18 31 | 19 16 |
| 30 | 17 41 | 18 04 | 18 32 | 17 17 | 17 56 | 18 38 | 19 25 |
| 20 | 17 45 | 18 07 | 18 32 | 17 22 | 18 05 | 18 51 | 19 40 |
| N 10 | 17 48 | 18 09 | 18 34 | 17 26 | 18 13 | 19 02 | 19 54 |
| 0 | 17 52 | 18 12 | 18 36 | 17 31 | 18 20 | 19 12 | 20 06 |
| S 10 | 17 55 | 18 16 | 18 41 | 17 35 | 18 27 | 19 22 | 20 19 |
| 20 | 17 59 | 18 21 | 18 47 | 17 39 | 18 35 | 19 33 | 20 33 |
| 30 | 18 04 | 18 28 | 18 56 | 17 44 | 18 44 | 19 46 | 20 48 |
| 35 | 18 06 | 18 32 | 19 02 | 17 47 | 18 49 | 19 53 | 20 57 |
| 40 | 18 10 | 18 37 | 19 09 | 17 50 | 18 55 | 20 01 | 21 07 |
| 45 | 18 13 | 18 43 | 19 18 | 17 54 | 19 02 | 20 11 | 21 20 |
| S 50 | 18 17 | 18 50 | 19 30 | 17 58 | 19 10 | 20 23 | 21 34 |
| 52 | 18 19 | 18 54 | 19 36 | 18 00 | 19 14 | 20 28 | 21 41 |
| 54 | 18 22 | 18 58 | 19 42 | 18 03 | 19 18 | 20 34 | 21 49 |
| 56 | 18 24 | 19 02 | 19 49 | 18 05 | 19 23 | 20 41 | 21 57 |
| 58 | 18 27 | 19 07 | 19 58 | 18 08 | 19 28 | 20 48 | 22 07 |
| S 60 | 18 30 | 19 13 | 20 07 | 18 11 | 19 34 | 20 57 | 22 18 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 4 | 11 12 | 11 21 | 11 49 | 11 19 | 23 43 | 29 | 0 |
| 5 | 11 30 | 11 39 | 11 48 | 12 08 | 24 33 | 00 | 0 |
| 6 | 11 48 | 11 56 | 11 48 | 12 59 | 00 33 | 01 | 3 |

| TU | | SOL | | | | LUA | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| 22 | 00 | 180 | 21.1 | N12 | 05.7 | 271 | 31.8 | 7.5 | S15 | 29.0 | 6.9 | 59.3 | |
| | 01 | 195 | 21.2 | | 06.5 | 285 | 58.3 | 7.4 | 15 | 22.1 | 6.9 | 59.3 | |
| | 02 | 210 | 21.3 | | 07.4 | 300 | 24.7 | 7.5 | 15 | 15.2 | 7.0 | 59.3 | |
| | 03 | 225 | 21.4 | | 08.2 | 314 | 51.2 | 7.6 | 15 | 08.2 | 7.2 | 59.3 | |
| | 04 | 240 | 21.5 | | 09.1 | 329 | 17.8 | 7.6 | 15 | 01.0 | 7.2 | 59.3 | |
| | 05 | 255 | 21.7 | | 09.9 | 343 | 44.4 | 7.6 | 14 | 53.8 | 7.3 | 59.3 | |
| | 06 | 270 | 21.8 | N12 | 10.8 | 358 | 11.0 | 7.6 | S14 | 46.5 | 7.4 | 59.3 | |
| | 07 | 285 | 21.9 | | 11.6 | 12 | 37.6 | 7.7 | 14 | 39.1 | 7.5 | 59.3 | |
| | 08 | 300 | 22.0 | | 12.4 | 27 | 04.3 | 7.8 | 14 | 31.6 | 7.6 | 59.3 | |
| | 09 | 315 | 22.2 | | 13.3 | 41 | 31.1 | 7.7 | 14 | 24.0 | 7.7 | 59.3 | |
| | 10 | 330 | 22.3 | | 14.1 | 55 | 57.8 | 7.8 | 14 | 16.3 | 7.7 | 59.3 | |
| | 11 | 345 | 22.4 | | 15.0 | 70 | 24.6 | 7.9 | 14 | 08.6 | 7.9 | 59.3 | |
| | 12 | 0 | 22.5 | N12 | 15.8 | 84 | 51.5 | 7.9 | S14 | 00.7 | 7.9 | 59.3 | |
| | 13 | 15 | 22.6 | | 16.6 | 99 | 18.4 | 7.9 | 13 | 52.8 | 8.0 | 59.3 | |
| | 14 | 30 | 22.8 | | 17.5 | 113 | 45.3 | 8.0 | 13 | 44.8 | 8.2 | 59.3 | |
| | 15 | 45 | 22.9 | | 18.3 | 128 | 12.3 | 8.0 | 13 | 36.6 | 8.2 | 59.3 | |
| | 16 | 60 | 23.0 | | 19.1 | 142 | 39.3 | 8.0 | 13 | 28.4 | 8.2 | 59.3 | |
| | 17 | 75 | 23.1 | | 20.0 | 157 | 06.3 | 8.1 | 13 | 20.2 | 8.4 | 59.3 | |
| | 18 | 90 | 23.2 | N12 | 20.8 | 171 | 33.4 | 8.1 | S13 | 11.8 | 8.4 | 59.3 | |
| | 19 | 105 | 23.4 | | 21.7 | 186 | 00.5 | 8.1 | 13 | 03.4 | 8.6 | 59.3 | |
| | 20 | 120 | 23.5 | | 22.5 | 200 | 27.6 | 8.2 | 12 | 54.8 | 8.6 | 59.3 | |
| | 21 | 135 | 23.6 | | 23.3 | 214 | 54.8 | 8.3 | 12 | 46.2 | 8.6 | 59.3 | |
| | 22 | 150 | 23.7 | | 24.2 | 229 | 22.1 | 8.2 | 12 | 37.6 | 8.8 | 59.3 | |
| | 23 | 165 | 23.8 | | 25.0 | 243 | 49.3 | 8.4 | 12 | 28.8 | 8.8 | 59.3 | |
| 23 | 00 | 180 | 24.0 | N12 | 25.8 | 258 | 16.7 | 8.3 | S12 | 20.0 | 8.9 | 59.3 | |
| | 01 | 195 | 24.1 | | 26.7 | 272 | 44.0 | 8.4 | 12 | 11.1 | 9.0 | 59.3 | |
| | 02 | 210 | 24.2 | | 27.5 | 287 | 11.4 | 8.4 | 12 | 02.1 | 9.1 | 59.3 | |
| | 03 | 225 | 24.3 | | 28.3 | 301 | 38.8 | 8.5 | 11 | 53.0 | 9.1 | 59.3 | |
| | 04 | 240 | 24.4 | | 29.2 | 316 | 06.3 | 8.5 | 11 | 43.9 | 9.2 | 59.3 | |
| | 05 | 255 | 24.6 | | 30.0 | 330 | 33.8 | 8.5 | 11 | 34.7 | 9.3 | 59.3 | |
| | 06 | 270 | 24.7 | N12 | 30.8 | 345 | 01.3 | 8.6 | S11 | 25.4 | 9.3 | 59.3 | |
| | 07 | 285 | 24.8 | | 31.7 | 359 | 28.9 | 8.6 | 11 | 16.1 | 9.4 | 59.3 | |
| | 08 | 300 | 24.9 | | 32.5 | 13 | 56.5 | 8.7 | 11 | 06.7 | 9.5 | 59.3 | |
| | 09 | 315 | 25.0 | | 33.3 | 28 | 24.2 | 8.7 | 10 | 57.2 | 9.5 | 59.3 | |
| | 10 | 330 | 25.1 | | 34.2 | 42 | 51.9 | 8.7 | 10 | 47.7 | 9.6 | 59.3 | |
| | 11 | 345 | 25.3 | | 35.0 | 57 | 19.6 | 8.8 | 10 | 38.1 | 9.7 | 59.3 | |
| | 12 | 0 | 25.4 | N12 | 35.8 | 71 | 47.4 | 8.8 | S10 | 28.4 | 9.7 | 59.3 | |
| | 13 | 15 | 25.5 | | 36.7 | 86 | 15.2 | 8.8 | 10 | 18.7 | 9.8 | 59.3 | |
| | 14 | 30 | 25.6 | | 37.5 | 100 | 43.0 | 8.9 | 10 | 08.9 | 9.9 | 59.3 | |
| | 15 | 45 | 25.7 | | 38.3 | 115 | 10.9 | 8.9 | 9 | 59.0 | 9.9 | 59.3 | |
| | 16 | 60 | 25.8 | | 39.2 | 129 | 38.8 | 9.0 | 9 | 49.1 | 9.9 | 59.3 | |
| | 17 | 75 | 25.9 | | 40.0 | 144 | 06.8 | 9.0 | 9 | 39.2 | 10.1 | 59.3 | |
| | 18 | 90 | 26.1 | N12 | 40.8 | 158 | 34.8 | 9.0 | S 9 | 29.1 | 10.1 | 59.3 | |
| | 19 | 105 | 26.2 | | 41.6 | 173 | 02.8 | 9.0 | 9 | 19.0 | 10.1 | 59.3 | |
| | 20 | 120 | 26.3 | | 42.5 | 187 | 30.8 | 9.1 | 9 | 08.9 | 10.2 | 59.3 | |
| | 21 | 135 | 26.4 | | 43.3 | 201 | 58.9 | 9.2 | 8 | 58.7 | 10.2 | 59.3 | |
| | 22 | 150 | 26.5 | | 44.1 | 216 | 27.1 | 9.1 | 8 | 48.5 | 10.3 | 59.3 | |
| | 23 | 165 | 26.6 | | 44.9 | 230 | 55.2 | 9.2 | 8 | 38.2 | 10.3 | 59.3 | |
| 24 | 00 | 180 | 26.8 | N12 | 45.8 | 245 | 23.4 | 9.2 | S 8 | 27.9 | 10.4 | 59.3 | |
| | 01 | 195 | 26.9 | | 46.6 | 259 | 51.6 | 9.3 | 8 | 17.5 | 10.5 | 59.3 | |
| | 02 | 210 | 27.0 | | 47.4 | 274 | 19.9 | 9.3 | 8 | 07.0 | 10.5 | 59.3 | |
| | 03 | 225 | 27.1 | | 48.2 | 288 | 48.2 | 9.3 | 7 | 56.5 | 10.5 | 59.2 | |
| | 04 | 240 | 27.2 | | 49.1 | 303 | 16.5 | 9.4 | 7 | 46.0 | 10.6 | 59.2 | |
| | 05 | 255 | 27.3 | | 49.9 | 317 | 44.9 | 9.3 | 7 | 35.4 | 10.6 | 59.2 | |
| | 06 | 270 | 27.4 | N12 | 50.7 | 332 | 13.2 | 9.5 | S 7 | 24.8 | 10.6 | 59.2 | |
| | 07 | 285 | 27.5 | | 51.5 | 346 | 41.7 | 9.4 | 7 | 14.2 | 10.7 | 59.2 | |
| | 08 | 300 | 27.7 | | 52.4 | 1 | 10.1 | 9.5 | 7 | 03.5 | 10.8 | 59.2 | |
| | 09 | 315 | 27.8 | | 53.2 | 15 | 38.6 | 9.5 | 6 | 52.7 | 10.8 | 59.2 | |
| | 10 | 330 | 27.9 | | 54.0 | 30 | 07.1 | 9.5 | 6 | 41.9 | 10.8 | 59.2 | |
| | 11 | 345 | 28.0 | | 54.8 | 44 | 35.6 | 9.6 | 6 | 31.1 | 10.8 | 59.2 | |
| | 12 | 0 | 28.1 | N12 | 55.7 | 59 | 04.2 | 9.6 | S 6 | 20.3 | 10.9 | 59.2 | |
| | 13 | 15 | 28.2 | | 56.5 | 73 | 32.8 | 9.6 | 6 | 09.4 | 10.9 | 59.2 | |
| | 14 | 30 | 28.3 | | 57.3 | 88 | 01.4 | 9.6 | 5 | 58.5 | 11.0 | 59.2 | |
| | 15 | 45 | 28.4 | | 58.1 | 102 | 30.0 | 9.7 | 5 | 47.5 | 11.0 | 59.2 | |
| | 16 | 60 | 28.5 | | 58.9 | 116 | 58.7 | 9.7 | 5 | 36.5 | 11.0 | 59.2 | |
| | 17 | 75 | 28.7 | 12 | 59.8 | 131 | 27.4 | 9.7 | 5 | 25.5 | 11.1 | 59.2 | |
| | 18 | 90 | 28.8 | N13 | 00.6 | 145 | 56.1 | 9.8 | S 5 | 14.4 | 11.0 | 59.2 | |
| | 19 | 105 | 28.9 | | 01.4 | 160 | 24.9 | 9.8 | 5 | 03.4 | 11.1 | 59.2 | |
| | 20 | 120 | 29.0 | | 02.2 | 174 | 53.7 | 9.8 | 4 | 52.3 | 11.2 | 59.2 | |
| | 21 | 135 | 29.1 | | 03.0 | 189 | 22.5 | 9.8 | 4 | 41.1 | 11.1 | 59.1 | |
| | 22 | 150 | 29.2 | | 03.9 | 203 | 51.3 | 9.8 | 4 | 30.0 | 11.2 | 59.1 | |
| | 23 | 165 | 29.3 | | 04.7 | 218 | 20.1 | 9.9 | S 4 | 18.8 | 11.2 | 59.1 | |
| | | SD | 15.9 | d | 0.8 | SD | | 16.2 | | 16.2 | | 16.1 | |

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 22 | 23 | 24 | 25 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | //// | //// | 02 51 | 03 49 | 03 37 | 03 29 | 03 21 |
| N 70 | //// | 01 31 | 03 16 | 03 15 | 03 17 | 03 17 | 03 16 |
| 68 | //// | 02 13 | 03 34 | 02 51 | 03 01 | 03 07 | 03 12 |
| 66 | //// | 02 41 | 03 49 | 02 32 | 02 48 | 02 59 | 03 09 |
| 64 | 01 19 | 03 01 | 04 02 | 02 16 | 02 37 | 02 53 | 03 06 |
| 62 | 01 57 | 03 18 | 04 12 | 02 03 | 02 28 | 02 47 | 03 03 |
| 60 | 02 23 | 03 32 | 04 21 | 01 52 | 02 20 | 02 42 | 03 01 |
| N 58 | 02 42 | 03 43 | 04 28 | 01 43 | 02 13 | 02 37 | 02 59 |
| 56 | 02 58 | 03 53 | 04 35 | 01 34 | 02 06 | 02 33 | 02 57 |
| 54 | 03 11 | 04 02 | 04 41 | 01 27 | 02 01 | 02 30 | 02 56 |
| 52 | 03 22 | 04 10 | 04 47 | 01 20 | 01 56 | 02 26 | 02 54 |
| 50 | 03 32 | 04 16 | 04 52 | 01 14 | 01 51 | 02 23 | 02 53 |
| 45 | 03 52 | 04 31 | 05 02 | 01 01 | 01 41 | 02 17 | 02 50 |
| N 40 | 04 08 | 04 42 | 05 11 | 00 50 | 01 33 | 02 11 | 02 47 |
| 35 | 04 20 | 04 52 | 05 18 | 00 41 | 01 25 | 02 07 | 02 45 |
| 30 | 04 31 | 05 00 | 05 25 | 00 32 | 01 19 | 02 02 | 02 43 |
| 20 | 04 47 | 05 13 | 05 36 | 00 18 | 01 08 | 01 55 | 02 40 |
| N 10 | 04 59 | 05 24 | 05 46 | 00 06 | 00 58 | 01 49 | 02 37 |
| 0 | 05 09 | 05 34 | 05 55 | 24 49 | 00 49 | 01 43 | 02 35 |
| S 10 | 05 18 | 05 42 | 06 04 | 24 40 | 00 40 | 01 37 | 02 32 |
| 20 | 05 25 | 05 51 | 06 13 | 24 31 | 00 31 | 01 30 | 02 29 |
| 30 | 05 31 | 05 59 | 06 24 | 24 19 | 00 19 | 01 23 | 02 26 |
| 35 | 05 34 | 06 04 | 06 30 | 24 13 | 00 13 | 01 19 | 02 24 |
| 40 | 05 37 | 06 09 | 06 37 | 24 06 | 00 06 | 01 14 | 02 22 |
| 45 | 05 40 | 06 15 | 06 45 | 23 57 | 25 08 | 01 08 | 02 20 |
| S 50 | 05 43 | 06 21 | 06 54 | 23 47 | 25 02 | 01 02 | 02 17 |
| 52 | 05 44 | 06 24 | 06 59 | 23 42 | 24 59 | 00 59 | 02 15 |
| 54 | 05 45 | 06 27 | 07 04 | 23 37 | 24 55 | 00 55 | 02 14 |
| 56 | 05 46 | 06 30 | 07 09 | 23 31 | 24 51 | 00 51 | 02 12 |
| 58 | 05 48 | 06 34 | 07 15 | 23 24 | 24 47 | 00 47 | 02 11 |
| S 60 | 05 49 | 06 38 | 07 22 | 23 17 | 24 42 | 00 42 | 02 08 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 22 | 23 | 24 | 25 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 21 10 | //// | //// | 08 40 | 10 46 | 12 45 | 14 40 |
| N 70 | 20 45 | 22 35 | //// | 09 13 | 11 05 | 12 55 | 14 43 |
| 68 | 20 25 | 21 49 | //// | 09 36 | 11 19 | 13 02 | 14 44 |
| 66 | 20 10 | 21 20 | //// | 09 55 | 11 31 | 13 09 | 14 46 |
| 64 | 19 57 | 20 58 | 22 45 | 10 09 | 11 41 | 13 14 | 14 47 |
| 62 | 19 47 | 20 41 | 22 04 | 10 22 | 11 49 | 13 19 | 14 48 |
| 60 | 19 38 | 20 27 | 21 38 | 10 32 | 11 57 | 13 23 | 14 49 |
| N 58 | 19 30 | 20 15 | 21 17 | 10 41 | 12 03 | 13 26 | 14 50 |
| 56 | 19 23 | 20 05 | 21 01 | 10 49 | 12 09 | 13 29 | 14 50 |
| 54 | 19 17 | 19 56 | 20 48 | 10 56 | 12 13 | 13 32 | 14 51 |
| 52 | 19 11 | 19 48 | 20 36 | 11 02 | 12 18 | 13 35 | 14 52 |
| 50 | 19 06 | 19 41 | 20 26 | 11 08 | 12 22 | 13 37 | 14 52 |
| 45 | 18 55 | 19 27 | 20 05 | 11 20 | 12 31 | 13 42 | 14 53 |
| N 40 | 18 46 | 19 15 | 19 50 | 11 30 | 12 38 | 13 46 | 14 54 |
| 35 | 18 39 | 19 05 | 19 37 | 11 39 | 12 44 | 13 50 | 14 55 |
| 30 | 18 32 | 18 57 | 19 27 | 11 46 | 12 50 | 13 53 | 14 56 |
| 20 | 18 21 | 18 43 | 19 10 | 11 59 | 12 59 | 13 58 | 14 57 |
| N 10 | 18 11 | 18 32 | 18 58 | 12 10 | 13 07 | 14 03 | 14 58 |
| 0 | 18 02 | 18 23 | 18 47 | 12 21 | 13 15 | 14 08 | 14 59 |
| S 10 | 17 53 | 18 14 | 18 39 | 12 31 | 13 22 | 14 12 | 15 00 |
| 20 | 17 43 | 18 06 | 18 32 | 12 42 | 13 30 | 14 16 | 15 01 |
| 30 | 17 32 | 17 57 | 18 25 | 12 55 | 13 40 | 14 22 | 15 02 |
| 35 | 17 26 | 17 52 | 18 22 | 13 02 | 13 45 | 14 25 | 15 03 |
| 40 | 17 19 | 17 47 | 18 19 | 13 10 | 13 51 | 14 28 | 15 03 |
| 45 | 17 11 | 17 41 | 18 16 | 13 20 | 13 57 | 14 32 | 15 04 |
| S 50 | 17 02 | 17 35 | 18 13 | 13 31 | 14 06 | 14 36 | 15 05 |
| 52 | 16 57 | 17 32 | 18 12 | 13 36 | 14 09 | 14 38 | 15 05 |
| 54 | 16 52 | 17 29 | 18 10 | 13 42 | 14 13 | 14 41 | 15 06 |
| 56 | 16 47 | 17 26 | 18 09 | 13 49 | 14 18 | 14 43 | 15 06 |
| 58 | 16 41 | 17 22 | 18 08 | 13 56 | 14 23 | 14 46 | 15 07 |
| S 60 | 16 34 | 17 18 | 18 07 | 14 04 | 14 29 | 14 49 | 15 08 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 22 | 01 24 | 01 30 | 11 59 | 06 08 | 18 35 | 23 | 48 |
| 23 | 01 36 | 01 41 | 11 58 | 07 02 | 19 29 | 24 | 37 |
| 24 | 01 47 | 01 52 | 11 58 | 07 55 | 20 21 | 25 | 26 |

TERÇA FEIRA

QUARTA FEIRA

QUINTA FEIRA

| TU | | SOL | | | | LUA | | | | | | | Lat | CREP | | SOL | LUA - Nascer | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph | | Naut | Civil | Nascer | 20 | 21 | 22 | 23 |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ | ° | h m | h m | h m | h m | h m | h m | h m |
| | | | | | | | | | | | | | | N 72 | //// | //// | 03 02 | ▭ | 22 40 | 24 30 | 00 30 |
| 20 | 00 | 179 | 07.4 | N12 | 32.2 | 242 | 55.4 | 11.4 | N18 | 44.8 | 0.2 | 54.9 | | N 70 | //// | 01 44 | 03 25 | 22 13 | 23 34 | 25 03 | 01 03 |
| | 01 | 194 | 07.5 | | 31.4 | 257 | 25.8 | 11.4 | 18 | 44.6 | 0.3 | 54.9 | | 68 | //// | 02 23 | 03 43 | 22 55 | 24 07 | 00 07 | 01 27 |
| | 02 | 209 | 07.6 | | 30.6 | 271 | 56.2 | 11.3 | 18 | 44.3 | 0.4 | 54.9 | | 66 | //// | 02 50 | 03 58 | 23 24 | 24 31 | 00 31 | 01 45 |
| | 03 | 224 | 07.8 | . . | 29.8 | 286 | 26.5 | 11.5 | 18 | 43.9 | 0.5 | 54.9 | | 64 | 01 31 | 03 10 | 04 10 | 23 46 | 24 50 | 00 50 | 02 00 |
| | 04 | 239 | 07.9 | | 29.0 | 300 | 57.0 | 11.4 | 18 | 43.4 | 0.6 | 54.9 | | 62 | 02 06 | 03 26 | 04 20 | 24 03 | 00 03 | 01 05 | 02 13 |
| Q | 05 | 254 | 08.1 | | 28.1 | 315 | 27.4 | 11.5 | 18 | 42.8 | 0.6 | 54.8 | | 60 | 02 31 | 03 39 | 04 28 | 24 18 | 00 18 | 01 18 | 02 23 |
| U | 06 | 269 | 08.2 | N12 | 27.3 | 329 | 57.9 | 11.5 | N18 | 42.2 | 0.8 | 54.8 | | N 58 | 02 50 | 03 51 | 04 36 | 24 30 | 00 30 | 01 29 | 02 32 |
| A | 07 | 284 | 08.4 | | 26.5 | 344 | 28.4 | 11.5 | 18 | 41.4 | 0.8 | 54.8 | | 56 | 03 06 | 04 00 | 04 42 | 24 41 | 00 41 | 01 38 | 02 40 |
| R | 08 | 299 | 08.5 | | 25.7 | 358 | 58.9 | 11.5 | 18 | 40.6 | 1.0 | 54.8 | | 54 | 03 19 | 04 09 | 04 48 | 24 50 | 00 50 | 01 47 | 02 47 |
| T | 09 | 314 | 08.7 | . . | 24.8 | 13 | 29.4 | 11.6 | 18 | 39.6 | 1.0 | 54.8 | | 52 | 03 30 | 04 16 | 04 54 | 00 06 | 00 58 | 01 54 | 02 54 |
| A | 10 | 329 | 08.8 | | 24.0 | 28 | 00.0 | 11.6 | 18 | 38.6 | 1.1 | 54.7 | | 50 | 03 39 | 04 23 | 04 58 | 00 14 | 01 06 | 02 01 | 02 59 |
| | 11 | 344 | 09.0 | | 23.2 | 42 | 30.6 | 11.6 | 18 | 37.5 | 1.2 | 54.7 | | 45 | 03 59 | 04 37 | 05 09 | 00 31 | 01 22 | 02 16 | 03 12 |
| | 12 | 359 | 09.1 | N12 | 22.4 | 57 | 01.2 | 11.6 | N18 | 36.3 | 1.3 | 54.7 | | N 40 | 04 14 | 04 49 | 05 17 | 00 44 | 01 35 | 02 28 | 03 22 |
| F | 13 | 14 | 09.3 | | 21.5 | 71 | 31.8 | 11.7 | 18 | 35.0 | 1.4 | 54.7 | | 35 | 04 26 | 04 58 | 05 24 | 00 56 | 01 46 | 02 38 | 03 31 |
| E | 14 | 29 | 09.4 | | 20.7 | 86 | 02.5 | 11.7 | 18 | 33.6 | 1.5 | 54.7 | | 30 | 04 36 | 05 06 | 05 31 | 01 06 | 01 56 | 02 47 | 03 38 |
| I | 15 | 44 | 09.6 | . . | 19.9 | 100 | 33.2 | 11.7 | 18 | 32.1 | 1.5 | 54.7 | | 20 | 04 52 | 05 19 | 05 42 | 01 23 | 02 13 | 03 02 | 03 52 |
| R | 16 | 59 | 09.7 | | 19.1 | 115 | 03.9 | 11.8 | 18 | 30.6 | 1.7 | 54.6 | | N 10 | 05 04 | 05 30 | 05 51 | 01 38 | 02 27 | 03 16 | 04 03 |
| A | 17 | 74 | 09.9 | | 18.2 | 129 | 34.7 | 11.8 | 18 | 28.9 | 1.7 | 54.6 | | 0 | 05 14 | 05 39 | 06 00 | 01 52 | 02 41 | 03 28 | 04 14 |
| | 18 | 89 | 10.0 | N12 | 17.4 | 144 | 05.5 | 11.8 | N18 | 27.2 | 1.8 | 54.6 | | S 10 | 05 22 | 05 47 | 06 08 | 02 07 | 02 55 | 03 41 | 04 25 |
| | 19 | 104 | 10.2 | | 16.6 | 158 | 36.3 | 11.8 | 18 | 25.4 | 1.9 | 54.6 | | 20 | 05 29 | 05 55 | 06 18 | 02 22 | 03 09 | 03 54 | 04 36 |
| | 20 | 119 | 10.3 | | 15.7 | 173 | 07.1 | 11.9 | 18 | 23.5 | 2.0 | 54.6 | | 30 | 05 35 | 06 03 | 06 28 | 02 39 | 03 26 | 04 09 | 04 49 |
| | 21 | 134 | 10.5 | . . | 14.9 | 187 | 38.0 | 11.9 | 18 | 21.5 | 2.1 | 54.6 | | 35 | 05 38 | 06 08 | 06 34 | 02 49 | 03 36 | 04 18 | 04 57 |
| | 22 | 149 | 10.6 | | 14.1 | 202 | 08.9 | 11.9 | 18 | 19.4 | 2.1 | 54.5 | | 40 | 05 41 | 06 13 | 06 40 | 03 01 | 03 47 | 04 28 | 05 05 |
| | 23 | 164 | 10.8 | | 13.3 | 216 | 39.8 | 11.9 | 18 | 17.3 | 2.3 | 54.5 | | 45 | 05 44 | 06 18 | 06 48 | 03 15 | 04 00 | 04 40 | 05 15 |
| 21 | 00 | 179 | 10.9 | N12 | 12.4 | 231 | 10.7 | 12.0 | N18 | 15.0 | 2.3 | 54.5 | | S 50 | 05 46 | 06 24 | 06 57 | 03 31 | 04 16 | 04 54 | 05 28 |
| | 01 | 194 | 11.1 | | 11.6 | 245 | 41.7 | 12.0 | 18 | 12.7 | 2.4 | 54.5 | | 52 | 05 47 | 06 26 | 07 01 | 03 39 | 04 23 | 05 01 | 05 33 |
| | 02 | 209 | 11.2 | | 10.8 | 260 | 12.7 | 12.1 | 18 | 10.3 | 2.5 | 54.5 | | 54 | 05 48 | 06 29 | 07 06 | 03 48 | 04 31 | 05 08 | 05 39 |
| | 03 | 224 | 11.4 | . . | 09.9 | 274 | 43.8 | 12.0 | 18 | 07.8 | 2.6 | 54.5 | | 56 | 05 49 | 06 32 | 07 11 | 03 58 | 04 41 | 05 16 | 05 46 |
| | 04 | 239 | 11.5 | | 09.1 | 289 | 14.8 | 12.1 | 18 | 05.2 | 2.6 | 54.4 | | 58 | 05 50 | 06 36 | 07 17 | 04 09 | 04 51 | 05 26 | 05 54 |
| | 05 | 254 | 11.7 | | 08.3 | 303 | 45.9 | 12.1 | 18 | 02.6 | 2.8 | 54.4 | | S 60 | 05 51 | 06 40 | 07 23 | 04 22 | 05 03 | 05 36 | 06 03 |
| Q | 06 | 269 | 11.9 | N12 | 07.4 | 318 | 17.0 | 12.2 | N17 | 59.8 | 2.8 | 54.4 | | | | | | | | | |
| U | 07 | 284 | 12.0 | | 06.6 | 332 | 48.2 | 12.2 | 17 | 57.0 | 2.9 | 54.4 | | Lat | SOL | CREP | | LUA - Pôr | | | |
| I | 08 | 299 | 12.2 | | 05.8 | 347 | 19.4 | 12.2 | 17 | 54.1 | 3.0 | 54.4 | | | Pôr | Civil | Naut | 20 | 21 | 22 | 23 |
| N | 09 | 314 | 12.3 | . . | 05.0 | 1 | 50.6 | 12.2 | 17 | 51.1 | 3.1 | 54.4 | | | | | | | | | |
| T | 10 | 329 | 12.5 | | 04.1 | 16 | 21.8 | 12.3 | 17 | 48.0 | 3.1 | 54.4 | | ° | h m | h m | h m | h m | h m | h m | h m |
| A | 11 | 344 | 12.6 | | 03.3 | 30 | 53.1 | 12.3 | 17 | 44.9 | 3.3 | 54.4 | | N 72 | 21 00 | 23 36 | //// | ▭ | 20 00 | 19 46 | 19 37 |
| | 12 | 359 | 12.8 | N12 | 02.5 | 45 | 24.4 | 12.4 | N17 | 41.6 | 3.3 | 54.3 | | N 70 | 20 37 | 22 15 | //// | 18 47 | 19 04 | 19 12 | 19 15 |
| F | 13 | 14 | 12.9 | | 01.6 | 59 | 55.8 | 12.3 | 17 | 38.3 | 3.4 | 54.3 | | 68 | 20 20 | 21 38 | //// | 18 05 | 18 31 | 18 47 | 18 57 |
| E | 14 | 29 | 13.1 | 12 | 00.8 | 74 | 27.1 | 12.4 | 17 | 34.9 | 3.5 | 54.3 | | 66 | 20 06 | 21 13 | 23 40 | 17 36 | 18 07 | 18 28 | 18 43 |
| I | 15 | 44 | 13.2 | 11 | 59.9 | 88 | 58.5 | 12.5 | 17 | 31.4 | 3.5 | 54.3 | | 64 | 19 54 | 20 53 | 22 29 | 17 14 | 17 48 | 18 12 | 18 31 |
| R | 16 | 59 | 13.4 | | 59.1 | 103 | 30.0 | 12.4 | 17 | 27.9 | 3.6 | 54.3 | | 62 | 19 45 | 20 38 | 21 55 | 16 56 | 17 32 | 17 59 | 18 21 |
| A | 17 | 74 | 13.5 | | 58.3 | 118 | 01.4 | 12.5 | 17 | 24.3 | 3.8 | 54.3 | | 60 | 19 36 | 20 25 | 21 32 | 16 42 | 17 19 | 17 48 | 18 12 |
| | 18 | 89 | 13.7 | N11 | 57.4 | 132 | 32.9 | 12.6 | N17 | 20.5 | 3.7 | 54.3 | | N 58 | 19 29 | 20 14 | 21 14 | 16 29 | 17 08 | 17 39 | 18 05 |
| | 19 | 104 | 13.9 | | 56.6 | 147 | 04.5 | 12.5 | 17 | 16.8 | 3.9 | 54.3 | | 56 | 19 23 | 20 04 | 20 58 | 16 18 | 16 58 | 17 30 | 17 58 |
| | 20 | 119 | 14.0 | | 55.8 | 161 | 36.0 | 12.6 | 17 | 12.9 | 3.9 | 54.2 | | 54 | 19 17 | 19 56 | 20 46 | 16 09 | 16 49 | 17 23 | 17 52 |
| | 21 | 134 | 14.2 | . . | 54.9 | 176 | 07.6 | 12.6 | 17 | 09.0 | 4.1 | 54.2 | | 52 | 19 12 | 19 49 | 20 35 | 16 01 | 16 41 | 17 16 | 17 46 |
| | 22 | 149 | 14.3 | | 54.1 | 190 | 39.2 | 12.7 | 17 | 04.9 | 4.1 | 54.2 | | 50 | 19 07 | 19 42 | 20 25 | 15 53 | 16 34 | 17 10 | 17 41 |
| | 23 | 164 | 14.5 | | 53.3 | 205 | 10.9 | 12.7 | 17 | 00.8 | 4.1 | 54.2 | | 45 | 18 57 | 19 28 | 20 06 | 15 37 | 16 19 | 16 57 | 17 31 |
| 22 | 00 | 179 | 14.6 | N11 | 52.4 | 219 | 42.6 | 12.7 | N16 | 56.7 | 4.3 | 54.2 | | N 40 | 18 49 | 19 17 | 19 51 | 15 23 | 16 07 | 16 46 | 17 22 |
| | 01 | 194 | 14.8 | | 51.6 | 234 | 14.3 | 12.7 | 16 | 52.4 | 4.3 | 54.2 | | 35 | 18 41 | 19 08 | 19 39 | 15 12 | 15 56 | 16 37 | 17 14 |
| | 02 | 209 | 15.0 | | 50.7 | 248 | 46.0 | 12.8 | 16 | 48.1 | 4.4 | 54.2 | | 30 | 18 35 | 19 00 | 19 29 | 15 02 | 15 47 | 16 29 | 17 07 |
| | 03 | 224 | 15.1 | . . | 49.9 | 263 | 17.8 | 12.8 | 16 | 43.7 | 4.5 | 54.2 | | 20 | 18 24 | 18 47 | 19 14 | 14 45 | 15 31 | 16 15 | 16 56 |
| | 04 | 239 | 15.3 | | 49.1 | 277 | 49.6 | 12.9 | 16 | 39.2 | 4.5 | 54.2 | | N 10 | 18 15 | 18 37 | 19 02 | 14 30 | 15 17 | 16 02 | 16 45 |
| | 05 | 254 | 15.4 | | 48.2 | 292 | 21.5 | 12.8 | 16 | 34.7 | 4.6 | 54.2 | | 0 | 18 06 | 18 28 | 18 52 | 14 16 | 15 04 | 15 50 | 16 36 |
| S | 06 | 269 | 15.6 | N11 | 47.4 | 306 | 53.3 | 12.9 | N16 | 30.1 | 4.7 | 54.1 | | S 10 | 17 58 | 18 19 | 18 44 | 14 02 | 14 51 | 15 39 | 16 26 |
| E | 07 | 284 | 15.7 | | 46.6 | 321 | 25.2 | 13.0 | 16 | 25.4 | 4.8 | 54.1 | | 20 | 17 49 | 18 11 | 18 37 | 13 47 | 14 37 | 15 26 | 16 15 |
| X | 08 | 299 | 15.9 | | 45.7 | 335 | 57.2 | 12.9 | 16 | 20.6 | 4.8 | 54.1 | | 30 | 17 39 | 18 03 | 18 31 | 13 30 | 14 20 | 15 12 | 16 03 |
| T | 09 | 314 | 16.1 | . . | 44.9 | 350 | 29.1 | 13.1 | 16 | 15.8 | 4.9 | 54.1 | | 35 | 17 33 | 17 59 | 18 29 | 13 20 | 14 11 | 15 03 | 15 57 |
| A | 10 | 329 | 16.2 | | 44.0 | 5 | 01.2 | 13.0 | 16 | 10.9 | 5.0 | 54.1 | | 40 | 17 27 | 17 54 | 18 26 | 13 08 | 14 00 | 14 54 | 15 49 |
| | 11 | 344 | 16.4 | | 43.2 | 19 | 33.2 | 13.1 | 16 | 05.9 | 5.0 | 54.1 | | 45 | 17 19 | 17 49 | 18 23 | 12 54 | 13 47 | 14 42 | 15 39 |
| | 12 | 359 | 16.5 | N11 | 42.3 | 34 | 05.3 | 13.1 | N16 | 00.9 | 5.1 | 54.1 | | S 50 | 17 10 | 17 43 | 18 21 | 12 38 | 13 32 | 14 29 | 15 28 |
| F | 13 | 14 | 16.7 | | 41.5 | 48 | 37.4 | 13.1 | 15 | 55.8 | 5.2 | 54.1 | | 52 | 17 06 | 17 41 | 18 20 | 12 30 | 13 24 | 14 22 | 15 23 |
| E | 14 | 29 | 16.8 | | 40.7 | 63 | 09.5 | 13.1 | 15 | 50.6 | 5.3 | 54.1 | | 54 | 17 01 | 17 38 | 18 19 | 12 21 | 13 16 | 14 15 | 15 17 |
| I | 15 | 44 | 17.0 | . . | 39.8 | 77 | 41.6 | 13.2 | 15 | 45.3 | 5.3 | 54.1 | | 56 | 16 56 | 17 35 | 18 18 | 12 12 | 13 07 | 14 07 | 15 11 |
| R | 16 | 59 | 17.2 | | 39.0 | 92 | 13.8 | 13.3 | 15 | 40.0 | 5.4 | 54.1 | | 58 | 16 51 | 17 31 | 18 17 | 12 01 | 12 57 | 13 58 | 15 03 |
| A | 17 | 74 | 17.3 | | 38.1 | 106 | 46.1 | 13.2 | 15 | 34.6 | 5.4 | 54.1 | | S 60 | 16 44 | 17 28 | 18 16 | 11 48 | 12 45 | 13 48 | 14 55 |
| | 18 | 89 | 17.5 | N11 | 37.3 | 121 | 18.3 | 13.3 | N15 | 29.2 | 5.5 | 54.1 | | | | | | | | | |
| | 19 | 104 | 17.6 | | 36.4 | 135 | 50.6 | 13.3 | 15 | 23.7 | 5.6 | 54.0 | | | SOL | | | LUA | | | |
| | 20 | 119 | 17.8 | | 35.6 | 150 | 22.9 | 13.4 | 15 | 18.1 | 5.7 | 54.0 | | Dia | ET | (-) | Pass | Pass Merid | | Idade | Fase |
| | 21 | 134 | 18.0 | . . | 34.8 | 164 | 55.3 | 13.4 | 15 | 12.4 | 5.7 | 54.0 | | | 00h | 12h | Merid | Sup | Inf | | |
| | 22 | 149 | 18.1 | | 33.9 | 179 | 27.7 | 13.4 | 15 | 06.7 | 5.8 | 54.0 | | d | m s | m s | h m | h m | h m | d % | |
| | 23 | 164 | 18.3 | | 33.1 | 194 | 00.1 | 13.4 | N15 | 00.9 | 5.8 | 54.0 | | 20 | 03 31 | 03 24 | 12 03 | 08 04 | 20 28 | 25 22 | |
| | | SD | 15.8 | d | 0.8 | SD | | 14.9 | | 14.8 | | 14.7 | | 21 | 03 17 | 03 09 | 12 03 | 08 52 | 21 16 | 26 15 | |
| | | | | | | | | | | | | | | 22 | 03 02 | 02 54 | 12 03 | 09 39 | 22 02 | 27 9 | |

| TU | | SOL | | | | LUA | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| | d h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| 25 | 00 | 183 | 57.8 | S11 | 59.5 | 170 | 44.2 | 10.7 | S14 | 00.1 | 6.8 | 56.6 | |
| | 01 | 198 | 57.9 | 12 | 00.4 | 185 | 13.9 | 10.7 | 14 | 06.9 | 6.8 | 56.6 | |
| | 02 | 213 | 58.0 | | 01.3 | 199 | 43.6 | 10.6 | 14 | 13.7 | 6.8 | 56.6 | |
| | 03 | 228 | 58.0 | . . | 02.1 | 214 | 13.2 | 10.5 | 14 | 20.5 | 6.6 | 56.6 | |
| | 04 | 243 | 58.1 | | 03.0 | 228 | 42.7 | 10.5 | 14 | 27.1 | 6.6 | 56.6 | |
| | 05 | 258 | 58.2 | | 03.9 | 243 | 12.2 | 10.4 | 14 | 33.7 | 6.5 | 56.7 | |
| | 06 | 273 | 58.3 | S12 | 04.7 | 257 | 41.6 | 10.4 | S14 | 40.2 | 6.5 | 56.7 | |
| | 07 | 288 | 58.3 | | 05.6 | 272 | 11.0 | 10.3 | 14 | 46.7 | 6.4 | 56.7 | |
| S | 08 | 303 | 58.4 | | 06.4 | 286 | 40.3 | 10.3 | 14 | 53.1 | 6.3 | 56.7 | |
| Á | 09 | 318 | 58.5 | . . | 07.3 | 301 | 09.6 | 10.2 | 14 | 59.4 | 6.2 | 56.7 | |
| B | 10 | 333 | 58.6 | | 08.2 | 315 | 38.8 | 10.1 | 15 | 05.6 | 6.1 | 56.8 | |
| A | 11 | 348 | 58.6 | | 09.0 | 330 | 07.9 | 10.1 | 15 | 11.7 | 6.1 | 56.8 | |
| D | 12 | 3 | 58.7 | S12 | 09.9 | 344 | 37.0 | 10.1 | S15 | 17.8 | 6.0 | 56.8 | |
| O | 13 | 18 | 58.8 | | 10.7 | 359 | 06.1 | 10.0 | 15 | 23.8 | 5.9 | 56.8 | |
| | 14 | 33 | 58.8 | | 11.6 | 13 | 35.1 | 9.9 | 15 | 29.7 | 5.8 | 56.8 | |
| | 15 | 48 | 58.9 | . . | 12.5 | 28 | 04.0 | 9.9 | 15 | 35.5 | 5.8 | 56.9 | |
| | 16 | 63 | 59.0 | | 13.3 | 42 | 32.9 | 9.8 | 15 | 41.3 | 5.6 | 56.9 | |
| | 17 | 78 | 59.0 | | 14.2 | 57 | 01.7 | 9.8 | 15 | 46.9 | 5.6 | 56.9 | |
| | 18 | 93 | 59.1 | S12 | 15.0 | 71 | 30.5 | 9.7 | S15 | 52.5 | 5.5 | 56.9 | |
| | 19 | 108 | 59.2 | | 15.9 | 85 | 59.2 | 9.7 | 15 | 58.0 | 5.4 | 57.0 | |
| | 20 | 123 | 59.3 | | 16.8 | 100 | 27.9 | 9.6 | 16 | 03.4 | 5.4 | 57.0 | |
| | 21 | 138 | 59.3 | . . | 17.6 | 114 | 56.5 | 9.5 | 16 | 08.8 | 5.2 | 57.0 | |
| | 22 | 153 | 59.4 | | 18.5 | 129 | 25.0 | 9.6 | 16 | 14.0 | 5.2 | 57.0 | |
| | 23 | 168 | 59.5 | | 19.3 | 143 | 53.6 | 9.4 | 16 | 19.2 | 5.0 | 57.0 | |
| 26 | 00 | 183 | 59.5 | S12 | 20.2 | 158 | 22.0 | 9.4 | S16 | 24.2 | 5.0 | 57.1 | |
| | 01 | 198 | 59.6 | | 21.0 | 172 | 50.4 | 9.4 | 16 | 29.2 | 4.9 | 57.1 | |
| | 02 | 213 | 59.7 | | 21.9 | 187 | 18.8 | 9.3 | 16 | 34.1 | 4.8 | 57.1 | |
| | 03 | 228 | 59.7 | . . | 22.7 | 201 | 47.1 | 9.2 | 16 | 38.9 | 4.7 | 57.1 | |
| | 04 | 243 | 59.8 | | 23.6 | 216 | 15.3 | 9.2 | 16 | 43.6 | 4.7 | 57.1 | |
| | 05 | 258 | 59.9 | | 24.5 | 230 | 43.5 | 9.2 | 16 | 48.3 | 4.5 | 57.2 | |
| | 06 | 273 | 59.9 | S12 | 25.3 | 245 | 11.7 | 9.1 | S16 | 52.8 | 4.4 | 57.2 | |
| D | 07 | 289 | 00.0 | | 26.2 | 259 | 39.8 | 9.1 | 16 | 57.2 | 4.4 | 57.2 | |
| O | 08 | 304 | 00.0 | | 27.0 | 274 | 07.9 | 9.0 | 17 | 01.6 | 4.2 | 57.2 | |
| M | 09 | 319 | 00.1 | . . | 27.9 | 288 | 35.9 | 8.9 | 17 | 05.8 | 4.2 | 57.2 | |
| I | 10 | 334 | 00.2 | | 28.7 | 303 | 03.8 | 8.9 | 17 | 10.0 | 4.1 | 57.3 | |
| N | 11 | 349 | 00.2 | | 29.6 | 317 | 31.7 | 8.9 | 17 | 14.1 | 3.9 | 57.3 | |
| G | 12 | 4 | 00.3 | S12 | 30.4 | 331 | 59.6 | 8.8 | S17 | 18.0 | 3.9 | 57.3 | |
| O | 13 | 19 | 00.4 | | 31.3 | 346 | 27.4 | 8.8 | 17 | 21.9 | 3.8 | 57.3 | |
| | 14 | 34 | 00.4 | | 32.1 | 0 | 55.2 | 8.7 | 17 | 25.7 | 3.7 | 57.3 | |
| | 15 | 49 | 00.5 | . . | 33.0 | 15 | 22.9 | 8.7 | 17 | 29.4 | 3.5 | 57.4 | |
| | 16 | 64 | 00.6 | | 33.8 | 29 | 50.6 | 8.7 | 17 | 32.9 | 3.5 | 57.4 | |
| | 17 | 79 | 00.6 | | 34.7 | 44 | 18.3 | 8.6 | 17 | 36.4 | 3.4 | 57.4 | |
| | 18 | 94 | 00.7 | S12 | 35.5 | 58 | 45.9 | 8.5 | S17 | 39.8 | 3.3 | 57.4 | |
| | 19 | 109 | 00.7 | | 36.4 | 73 | 13.4 | 8.5 | 17 | 43.1 | 3.2 | 57.4 | |
| | 20 | 124 | 00.8 | | 37.2 | 87 | 40.9 | 8.5 | 17 | 46.3 | 3.0 | 57.5 | |
| | 21 | 139 | 00.9 | . . | 38.1 | 102 | 08.4 | 8.4 | 17 | 49.3 | 3.0 | 57.5 | |
| | 22 | 154 | 00.9 | | 38.9 | 116 | 35.8 | 8.4 | 17 | 52.3 | 2.9 | 57.5 | |
| | 23 | 169 | 01.0 | | 39.8 | 131 | 03.2 | 8.4 | 17 | 55.2 | 2.8 | 57.5 | |
| 27 | 00 | 184 | 01.0 | S12 | 40.6 | 145 | 30.6 | 8.3 | S17 | 58.0 | 2.6 | 57.5 | |
| | 01 | 199 | 01.1 | | 41.5 | 159 | 57.9 | 8.3 | 18 | 00.6 | 2.6 | 57.5 | |
| | 02 | 214 | 01.2 | | 42.3 | 174 | 25.2 | 8.2 | 18 | 03.2 | 2.4 | 57.6 | |
| | 03 | 229 | 01.2 | . . | 43.2 | 188 | 52.4 | 8.2 | 18 | 05.6 | 2.4 | 57.6 | |
| S | 04 | 244 | 01.3 | | 44.0 | 203 | 19.6 | 8.2 | 18 | 08.0 | 2.2 | 57.6 | |
| E | 05 | 259 | 01.3 | | 44.9 | 217 | 46.8 | 8.1 | 18 | 10.2 | 2.2 | 57.6 | |
| G | 06 | 274 | 01.4 | S12 | 45.7 | 232 | 13.9 | 8.1 | S18 | 12.4 | 2.0 | 57.6 | |
| U | 07 | 289 | 01.4 | | 46.6 | 246 | 41.0 | 8.1 | 18 | 14.4 | 1.9 | 57.7 | |
| N | 08 | 304 | 01.5 | | 47.4 | 261 | 08.1 | 8.0 | 18 | 16.3 | 1.9 | 57.7 | |
| D | 09 | 319 | 01.6 | . . | 48.2 | 275 | 35.1 | 8.0 | 18 | 18.2 | 1.7 | 57.7 | |
| A | 10 | 334 | 01.6 | | 49.1 | 290 | 02.1 | 8.0 | 18 | 19.9 | 1.6 | 57.7 | |
| | 11 | 349 | 01.7 | | 49.9 | 304 | 29.1 | 7.9 | 18 | 21.5 | 1.5 | 57.7 | |
| F | 12 | 4 | 01.7 | S12 | 50.8 | 318 | 56.0 | 7.9 | S18 | 23.0 | 1.4 | 57.8 | |
| E | 13 | 19 | 01.8 | | 51.6 | 333 | 22.9 | 7.9 | 18 | 24.4 | 1.2 | 57.8 | |
| I | 14 | 34 | 01.8 | | 52.5 | 347 | 49.8 | 7.8 | 18 | 25.6 | 1.2 | 57.8 | |
| R | 15 | 49 | 01.9 | . . | 53.3 | 2 | 16.6 | 7.9 | 18 | 26.8 | 1.1 | 57.8 | |
| A | 16 | 64 | 02.0 | | 54.1 | 16 | 43.5 | 7.8 | 18 | 27.9 | 0.9 | 57.8 | |
| | 17 | 79 | 02.0 | | 55.0 | 31 | 10.3 | 7.7 | 18 | 28.8 | 0.8 | 57.8 | |
| | 18 | 94 | 02.1 | S12 | 55.8 | 45 | 37.0 | 7.8 | S18 | 29.6 | 0.8 | 57.9 | |
| | 19 | 109 | 02.1 | | 56.7 | 60 | 03.8 | 7.7 | 18 | 30.4 | 0.6 | 57.9 | |
| | 20 | 124 | 02.2 | | 57.5 | 74 | 30.5 | 7.7 | 18 | 31.0 | 0.5 | 57.9 | |
| | 21 | 139 | 02.2 | . . | 58.4 | 88 | 57.2 | 7.7 | 18 | 31.5 | 0.4 | 57.9 | |
| | 22 | 154 | 02.3 | 12 | 59.2 | 103 | 23.9 | 7.6 | 18 | 31.9 | 0.3 | 57.9 | |
| | 23 | 169 | 02.3 | S13 | 00.0 | 117 | 50.5 | 7.6 | S18 | 32.2 | 0.1 | 58.0 | |
| | | SD | 16.1 | d | 0.9 | SD | | 15.5 | | 15.6 | | 15.7 | |

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 05 41 | 07 02 | 08 21 | 10 48 | 12 58 | ▬ | ▬ |
| N 70 | 05 40 | 06 52 | 08 01 | 10 12 | 11 50 | 13 16 | 14 10 |
| 68 | 05 39 | 06 44 | 07 46 | 09 46 | 11 13 | 12 30 | 13 25 |
| 66 | 05 37 | 06 38 | 07 33 | 09 26 | 10 48 | 11 59 | 12 55 |
| 64 | 05 36 | 06 32 | 07 23 | 09 10 | 10 28 | 11 37 | 12 33 |
| 62 | 05 35 | 06 27 | 07 14 | 08 57 | 10 12 | 11 19 | 12 15 |
| 60 | 05 34 | 06 23 | 07 06 | 08 46 | 09 58 | 11 04 | 12 00 |
| N 58 | 05 33 | 06 19 | 07 00 | 08 37 | 09 47 | 10 51 | 11 47 |
| 56 | 05 32 | 06 15 | 06 54 | 08 28 | 09 37 | 10 40 | 11 36 |
| 54 | 05 30 | 06 12 | 06 49 | 08 21 | 09 28 | 10 31 | 11 27 |
| 52 | 05 29 | 06 09 | 06 44 | 08 14 | 09 20 | 10 22 | 11 18 |
| 50 | 05 28 | 06 06 | 06 39 | 08 08 | 09 13 | 10 14 | 11 10 |
| 45 | 05 25 | 06 00 | 06 30 | 07 56 | 08 58 | 09 58 | 10 54 |
| N 40 | 05 23 | 05 54 | 06 22 | 07 45 | 08 46 | 09 45 | 10 41 |
| 35 | 05 20 | 05 49 | 06 15 | 07 36 | 08 35 | 09 33 | 10 29 |
| 30 | 05 17 | 05 45 | 06 09 | 07 28 | 08 26 | 09 23 | 10 19 |
| 20 | 05 10 | 05 36 | 05 59 | 07 14 | 08 10 | 09 06 | 10 02 |
| N 10 | 05 03 | 05 28 | 05 49 | 07 03 | 07 56 | 08 51 | 09 47 |
| 0 | 04 55 | 05 19 | 05 41 | 06 51 | 07 43 | 08 37 | 09 33 |
| S 10 | 04 45 | 05 10 | 05 32 | 06 40 | 07 31 | 08 24 | 09 19 |
| 20 | 04 33 | 04 59 | 05 22 | 06 29 | 07 17 | 08 09 | 09 04 |
| 30 | 04 16 | 04 46 | 05 11 | 06 15 | 07 01 | 07 52 | 08 47 |
| 35 | 04 06 | 04 38 | 05 04 | 06 08 | 06 52 | 07 42 | 08 37 |
| 40 | 03 54 | 04 28 | 04 57 | 05 59 | 06 42 | 07 31 | 08 25 |
| 45 | 03 39 | 04 17 | 04 48 | 05 49 | 06 30 | 07 18 | 08 12 |
| S 50 | 03 19 | 04 03 | 04 38 | 05 37 | 06 16 | 07 02 | 07 56 |
| 52 | 03 09 | 03 56 | 04 33 | 05 31 | 06 09 | 06 54 | 07 48 |
| 54 | 02 58 | 03 48 | 04 27 | 05 25 | 06 02 | 06 46 | 07 39 |
| 56 | 02 44 | 03 39 | 04 21 | 05 18 | 05 53 | 06 37 | 07 30 |
| 58 | 02 29 | 03 30 | 04 15 | 05 10 | 05 44 | 06 26 | 07 19 |
| S 60 | 02 09 | 03 18 | 04 07 | 05 01 | 05 33 | 06 14 | 07 06 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 25 | 26 | 27 | 28 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 15 06 | 16 25 | 17 44 | 15 08 | 14 48 | ▬ | ▬ |
| N 70 | 15 25 | 16 34 | 17 46 | 15 45 | 15 56 | 16 23 | 17 25 |
| 68 | 15 41 | 16 42 | 17 48 | 16 12 | 16 33 | 17 10 | 18 10 |
| 66 | 15 53 | 16 49 | 17 49 | 16 32 | 16 59 | 17 40 | 18 39 |
| 64 | 16 04 | 16 55 | 17 50 | 16 49 | 17 19 | 18 03 | 19 02 |
| 62 | 16 13 | 17 00 | 17 52 | 17 02 | 17 36 | 18 21 | 19 19 |
| 60 | 16 20 | 17 04 | 17 53 | 17 14 | 17 49 | 18 36 | 19 34 |
| N 58 | 16 27 | 17 08 | 17 54 | 17 24 | 18 01 | 18 49 | 19 47 |
| 56 | 16 33 | 17 12 | 17 55 | 17 33 | 18 11 | 19 00 | 19 58 |
| 54 | 16 39 | 17 15 | 17 57 | 17 40 | 18 21 | 19 09 | 20 07 |
| 52 | 16 43 | 17 18 | 17 58 | 17 47 | 18 29 | 19 18 | 20 16 |
| 50 | 16 48 | 17 21 | 17 59 | 17 54 | 18 36 | 19 26 | 20 23 |
| 45 | 16 57 | 17 27 | 18 02 | 18 07 | 18 51 | 19 42 | 20 39 |
| N 40 | 17 05 | 17 33 | 18 05 | 18 19 | 19 04 | 19 56 | 20 53 |
| 35 | 17 12 | 17 38 | 18 08 | 18 28 | 19 15 | 20 07 | 21 04 |
| 30 | 17 18 | 17 43 | 18 11 | 18 37 | 19 25 | 20 17 | 21 14 |
| 20 | 17 29 | 17 51 | 18 17 | 18 51 | 19 41 | 20 35 | 21 31 |
| N 10 | 17 38 | 18 00 | 18 25 | 19 04 | 19 56 | 20 50 | 21 46 |
| 0 | 17 47 | 18 09 | 18 33 | 19 16 | 20 09 | 21 04 | 21 59 |
| S 10 | 17 56 | 18 18 | 18 43 | 19 28 | 20 22 | 21 18 | 22 13 |
| 20 | 18 06 | 18 29 | 18 56 | 19 41 | 20 37 | 21 33 | 22 28 |
| 30 | 18 18 | 18 43 | 19 12 | 19 56 | 20 53 | 21 50 | 22 44 |
| 35 | 18 24 | 18 51 | 19 22 | 20 04 | 21 03 | 22 00 | 22 54 |
| 40 | 18 32 | 19 00 | 19 35 | 20 14 | 21 14 | 22 11 | 23 05 |
| 45 | 18 41 | 19 12 | 19 51 | 20 25 | 21 27 | 22 25 | 23 18 |
| S 50 | 18 51 | 19 27 | 20 11 | 20 39 | 21 42 | 22 41 | 23 34 |
| 52 | 18 56 | 19 34 | 20 21 | 20 46 | 21 50 | 22 49 | 23 41 |
| 54 | 19 02 | 19 41 | 20 32 | 20 53 | 21 58 | 22 57 | 23 50 |
| 56 | 19 08 | 19 50 | 20 46 | 21 01 | 22 07 | 23 07 | 23 59 |
| 58 | 19 15 | 20 00 | 21 02 | 21 10 | 22 17 | 23 18 | 24 09 |
| S 60 | 19 23 | 20 12 | 21 22 | 21 20 | 22 29 | 23 30 | 24 21 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 25 | 15 51 | 15 55 | 11 44 | 13 04 | 00 38 | 02 | 3 |
| 26 | 15 58 | 16 01 | 11 44 | 13 56 | 01 30 | 03 | 7 |
| 27 | 16 04 | 16 07 | 11 44 | 14 51 | 02 23 | 04 | 14 |

| TU | | SOL | | | | LUA | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| 10 | 00 | 183 | 12.9 | S 6 | 31.7 | 343 | 05.9 | 8.4 | N12 | 22.4 | 8.4 | 59.0 | |
| | 01 | 198 | 13.0 | | 32.7 | 357 | 33.3 | 8.5 | | 12 30.8 | 8.3 | 58.9 | |
| | 02 | 213 | 13.2 | | 33.6 | 12 | 00.8 | 8.4 | | 12 39.1 | 8.2 | 58.9 | |
| | 03 | 228 | 13.4 | | 34.6 | 26 | 28.2 | 8.5 | | 12 47.3 | 8.2 | 58.9 | |
| | 04 | 243 | 13.5 | | 35.5 | 40 | 55.7 | 8.5 | | 12 55.5 | 8.0 | 58.8 | |
| | 05 | 258 | 13.7 | | 36.5 | 55 | 23.2 | 8.5 | | 13 03.5 | 8.0 | 58.8 | |
| | 06 | 273 | 13.9 | S 6 | 37.4 | 69 | 50.7 | 8.4 | N13 | 11.5 | 7.9 | 58.8 | |
| | 07 | 288 | 14.0 | | 38.4 | 84 | 18.1 | 8.5 | | 13 19.4 | 7.8 | 58.7 | |
| | 08 | 303 | 14.2 | | 39.3 | 98 | 45.6 | 8.5 | | 13 27.2 | 7.7 | 58.7 | |
| | 09 | 318 | 14.4 | | 40.3 | 113 | 13.1 | 8.5 | | 13 34.9 | 7.6 | 58.7 | |
| | 10 | 333 | 14.5 | | 41.2 | 127 | 40.6 | 8.5 | | 13 42.5 | 7.6 | 58.6 | |
| | 11 | 348 | 14.7 | | 42.2 | 142 | 08.1 | 8.5 | | 13 50.1 | 7.4 | 58.6 | |
| | 12 | 3 | 14.9 | S 6 | 43.1 | 156 | 35.6 | 8.5 | N13 | 57.5 | 7.4 | 58.6 | |
| | 13 | 18 | 15.0 | | 44.0 | 171 | 03.1 | 8.5 | | 14 04.9 | 7.2 | 58.5 | |
| | 14 | 33 | 15.2 | | 45.0 | 185 | 30.6 | 8.6 | | 14 12.1 | 7.2 | 58.5 | |
| | 15 | 48 | 15.4 | | 45.9 | 199 | 58.2 | 8.5 | | 14 19.3 | 7.0 | 58.4 | |
| | 16 | 63 | 15.5 | | 46.9 | 214 | 25.7 | 8.5 | | 14 26.3 | 7.0 | 58.4 | |
| | 17 | 78 | 15.7 | | 47.8 | 228 | 53.2 | 8.6 | | 14 33.3 | 6.9 | 58.4 | |
| | 18 | 93 | 15.9 | S 6 | 48.8 | 243 | 20.8 | 8.5 | N14 | 40.2 | 6.8 | 58.3 | |
| | 19 | 108 | 16.0 | | 49.7 | 257 | 48.3 | 8.6 | | 14 47.0 | 6.6 | 58.3 | |
| | 20 | 123 | 16.2 | | 50.7 | 272 | 15.9 | 8.6 | | 14 53.6 | 6.6 | 58.3 | |
| | 21 | 138 | 16.4 | | 51.6 | 286 | 43.5 | 8.5 | | 15 00.2 | 6.5 | 58.2 | |
| | 22 | 153 | 16.5 | | 52.5 | 301 | 11.0 | 8.6 | | 15 06.7 | 6.4 | 58.2 | |
| | 23 | 168 | 16.7 | | 53.5 | 315 | 38.6 | 8.6 | | 15 13.1 | 6.3 | 58.2 | |
| 11 | 00 | 183 | 16.9 | S 6 | 54.4 | 330 | 06.2 | 8.6 | N15 | 19.4 | 6.2 | 58.1 | |
| | 01 | 198 | 17.0 | | 55.4 | 344 | 33.8 | 8.7 | | 15 25.6 | 6.1 | 58.1 | |
| | 02 | 213 | 17.2 | | 56.3 | 359 | 01.5 | 8.6 | | 15 31.7 | 6.0 | 58.1 | |
| | 03 | 228 | 17.4 | | 57.3 | 13 | 29.1 | 8.7 | | 15 37.7 | 5.9 | 58.0 | |
| | 04 | 243 | 17.5 | | 58.2 | 27 | 56.8 | 8.6 | | 15 43.6 | 5.8 | 58.0 | |
| | 05 | 258 | 17.7 | 6 | 59.1 | 42 | 24.4 | 8.7 | | 15 49.4 | 5.7 | 58.0 | |
| | 06 | 273 | 17.8 | S 7 | 00.1 | 56 | 52.1 | 8.7 | N15 | 55.1 | 5.6 | 57.9 | |
| | 07 | 288 | 18.0 | | 01.0 | 71 | 19.8 | 8.7 | | 16 00.7 | 5.5 | 57.9 | |
| | 08 | 303 | 18.2 | | 02.0 | 85 | 47.5 | 8.7 | | 16 06.2 | 5.4 | 57.8 | |
| | 09 | 318 | 18.3 | | 02.9 | 100 | 15.2 | 8.7 | | 16 11.6 | 5.3 | 57.8 | |
| | 10 | 333 | 18.5 | | 03.9 | 114 | 42.9 | 8.8 | | 16 16.9 | 5.2 | 57.8 | |
| | 11 | 348 | 18.7 | | 04.8 | 129 | 10.7 | 8.7 | | 16 22.1 | 5.1 | 57.7 | |
| | 12 | 3 | 18.8 | S 7 | 05.7 | 143 | 38.4 | 8.8 | N16 | 27.2 | 4.9 | 57.7 | |
| | 13 | 18 | 19.0 | | 06.7 | 158 | 06.2 | 8.8 | | 16 32.1 | 4.9 | 57.7 | |
| | 14 | 33 | 19.1 | | 07.6 | 172 | 34.0 | 8.8 | | 16 37.0 | 4.8 | 57.6 | |
| | 15 | 48 | 19.3 | | 08.6 | 187 | 01.8 | 8.8 | | 16 41.8 | 4.7 | 57.6 | |
| | 16 | 63 | 19.5 | | 09.5 | 201 | 29.6 | 8.9 | | 16 46.5 | 4.6 | 57.6 | |
| | 17 | 78 | 19.6 | | 10.4 | 215 | 57.5 | 8.8 | | 16 51.1 | 4.5 | 57.5 | |
| | 18 | 93 | 19.8 | S 7 | 11.4 | 230 | 25.3 | 8.9 | N16 | 55.6 | 4.3 | 57.5 | |
| | 19 | 108 | 19.9 | | 12.3 | 244 | 53.2 | 8.9 | | 16 59.9 | 4.3 | 57.4 | |
| | 20 | 123 | 20.1 | | 13.3 | 259 | 21.1 | 9.0 | | 17 04.2 | 4.2 | 57.4 | |
| | 21 | 138 | 20.3 | | 14.2 | 273 | 49.1 | 8.9 | | 17 08.4 | 4.1 | 57.4 | |
| | 22 | 153 | 20.4 | | 15.1 | 288 | 17.0 | 9.0 | | 17 12.5 | 3.9 | 57.3 | |
| | 23 | 168 | 20.6 | | 16.1 | 302 | 45.0 | 9.0 | | 17 16.4 | 3.9 | 57.3 | |
| 12 | 00 | 183 | 20.7 | S 7 | 17.0 | 317 | 13.0 | 9.0 | N17 | 20.3 | 3.7 | 57.3 | |
| | 01 | 198 | 20.9 | | 18.0 | 331 | 41.0 | 9.0 | | 17 24.0 | 3.7 | 57.2 | |
| | 02 | 213 | 21.1 | | 18.9 | 346 | 09.0 | 9.1 | | 17 27.7 | 3.5 | 57.2 | |
| | 03 | 228 | 21.2 | | 19.8 | 0 | 37.1 | 9.0 | | 17 31.2 | 3.5 | 57.2 | |
| | 04 | 243 | 21.4 | | 20.8 | 15 | 05.1 | 9.1 | | 17 34.7 | 3.3 | 57.1 | |
| | 05 | 258 | 21.5 | | 21.7 | 29 | 33.2 | 9.2 | | 17 38.0 | 3.3 | 57.1 | |
| | 06 | 273 | 21.7 | S 7 | 22.7 | 44 | 01.4 | 9.1 | N17 | 41.3 | 3.1 | 57.0 | |
| | 07 | 288 | 21.8 | | 23.6 | 58 | 29.5 | 9.2 | | 17 44.4 | 3.0 | 57.0 | |
| | 08 | 303 | 22.0 | | 24.5 | 72 | 57.7 | 9.2 | | 17 47.4 | 3.0 | 57.0 | |
| | 09 | 318 | 22.2 | | 25.5 | 87 | 25.9 | 9.2 | | 17 50.4 | 2.8 | 56.9 | |
| | 10 | 333 | 22.3 | | 26.4 | 101 | 54.1 | 9.3 | | 17 53.2 | 2.7 | 56.9 | |
| | 11 | 348 | 22.5 | | 27.3 | 116 | 22.4 | 9.3 | | 17 55.9 | 2.6 | 56.9 | |
| | 12 | 3 | 22.6 | S 7 | 28.3 | 130 | 50.7 | 9.3 | N17 | 58.5 | 2.6 | 56.8 | |
| | 13 | 18 | 22.8 | | 29.2 | 145 | 19.0 | 9.4 | | 18 01.1 | 2.4 | 56.8 | |
| | 14 | 33 | 22.9 | | 30.2 | 159 | 47.4 | 9.3 | | 18 03.5 | 2.3 | 56.8 | |
| | 15 | 48 | 23.1 | | 31.1 | 174 | 15.7 | 9.4 | | 18 05.8 | 2.2 | 56.7 | |
| | 16 | 63 | 23.3 | | 32.0 | 188 | 44.1 | 9.5 | | 18 08.0 | 2.1 | 56.7 | |
| | 17 | 78 | 23.4 | | 33.0 | 203 | 12.6 | 9.5 | | 18 10.1 | 2.0 | 56.7 | |
| | 18 | 93 | 23.6 | S 7 | 33.9 | 217 | 41.1 | 9.5 | N18 | 12.1 | 1.9 | 56.6 | |
| | 19 | 108 | 23.7 | | 34.8 | 232 | 09.6 | 9.5 | | 18 14.0 | 1.8 | 56.6 | |
| | 20 | 123 | 23.9 | | 35.8 | 246 | 38.1 | 9.5 | | 18 15.8 | 1.7 | 56.6 | |
| | 21 | 138 | 24.0 | | 36.7 | 261 | 06.6 | 9.6 | | 18 17.5 | 1.6 | 56.5 | |
| | 22 | 153 | 24.2 | | 37.7 | 275 | 35.2 | 9.7 | | 18 19.1 | 1.5 | 56.5 | |
| | 23 | 168 | 24.3 | | 38.6 | 290 | 03.9 | 9.6 | N18 | 20.6 | 1.4 | 56.5 | |
| | | SD | 16.0 | d | 0.9 | SD | | 16.0 | | 15.7 | | 15.5 | |

SEXTA FEIRA

SÁBADO

DOMINGO

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 04 37 | 05 55 | 07 04 | 16 16 | 16 06 | 15 30 | |
| N 70 | 04 43 | 05 54 | 06 56 | 16 45 | 16 54 | 17 13 | 17 55 |
| 68 | 04 47 | 05 52 | 06 48 | 17 07 | 17 24 | 17 54 | 18 39 |
| 66 | 04 51 | 05 51 | 06 42 | 17 24 | 17 47 | 18 21 | 19 08 |
| 64 | 04 54 | 05 49 | 06 37 | 17 38 | 18 06 | 18 42 | 19 30 |
| 62 | 04 57 | 05 48 | 06 33 | 17 50 | 18 21 | 19 00 | 19 48 |
| 60 | 04 59 | 05 47 | 06 29 | 18 00 | 18 33 | 19 14 | 20 03 |
| N 58 | 05 01 | 05 46 | 06 26 | 18 09 | 18 44 | 19 26 | 20 15 |
| 56 | 05 02 | 05 45 | 06 23 | 18 17 | 18 54 | 19 37 | 20 26 |
| 54 | 05 04 | 05 44 | 06 20 | 18 24 | 19 02 | 19 46 | 20 36 |
| 52 | 05 05 | 05 44 | 06 17 | 18 30 | 19 10 | 19 54 | 20 44 |
| 50 | 05 05 | 05 43 | 06 15 | 18 36 | 19 16 | 20 02 | 20 52 |
| 45 | 05 07 | 05 41 | 06 10 | 18 48 | 19 31 | 20 18 | 21 08 |
| N 40 | 05 08 | 05 39 | 06 06 | 18 58 | 19 43 | 20 31 | 21 21 |
| 35 | 05 08 | 05 37 | 06 02 | 19 07 | 19 53 | 20 42 | 21 33 |
| 30 | 05 07 | 05 35 | 05 59 | 19 15 | 20 02 | 20 52 | 21 43 |
| 20 | 05 06 | 05 31 | 05 53 | 19 28 | 20 18 | 21 09 | 22 00 |
| N 10 | 05 03 | 05 27 | 05 48 | 19 40 | 20 32 | 21 24 | 22 15 |
| 0 | 04 58 | 05 23 | 05 43 | 19 51 | 20 45 | 21 37 | 22 29 |
| S 10 | 04 53 | 05 17 | 05 38 | 20 02 | 20 58 | 21 51 | 22 43 |
| 20 | 04 45 | 05 11 | 05 33 | 20 14 | 21 12 | 22 06 | 22 58 |
| 30 | 04 34 | 05 02 | 05 27 | 20 28 | 21 27 | 22 23 | 23 15 |
| 35 | 04 27 | 04 57 | 05 23 | 20 36 | 21 37 | 22 33 | 23 25 |
| 40 | 04 18 | 04 51 | 05 19 | 20 45 | 21 47 | 22 44 | 23 36 |
| 45 | 04 08 | 04 44 | 05 14 | 20 56 | 22 00 | 22 58 | 23 49 |
| S 50 | 03 54 | 04 35 | 05 08 | 21 09 | 22 15 | 23 14 | 24 06 |
| 52 | 03 48 | 04 30 | 05 05 | 21 15 | 22 22 | 23 22 | 24 13 |
| 54 | 03 40 | 04 25 | 05 02 | 21 22 | 22 30 | 23 30 | 24 22 |
| 56 | 03 32 | 04 20 | 04 59 | 21 29 | 22 39 | 23 40 | 24 32 |
| 58 | 03 22 | 04 14 | 04 55 | 21 38 | 22 49 | 23 51 | 24 42 |
| S 60 | 03 11 | 04 07 | 04 51 | 21 47 | 23 01 | 24 04 | 00 04 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 16 27 | 17 36 | 18 54 | 10 44 | 12 46 | 15 13 | |
| N 70 | 16 36 | 17 38 | 18 48 | 10 16 | 12 00 | 13 30 | 14 36 |
| 68 | 16 44 | 17 40 | 18 44 | 09 56 | 11 29 | 12 50 | 13 52 |
| 66 | 16 50 | 17 41 | 18 40 | 09 39 | 11 07 | 12 23 | 13 23 |
| 64 | 16 55 | 17 43 | 18 37 | 09 26 | 10 49 | 12 02 | 13 01 |
| 62 | 16 59 | 17 44 | 18 35 | 09 15 | 10 35 | 11 45 | 12 43 |
| 60 | 17 03 | 17 45 | 18 33 | 09 05 | 10 22 | 11 31 | 12 28 |
| N 58 | 17 07 | 17 46 | 18 31 | 08 57 | 10 12 | 11 19 | 12 16 |
| 56 | 17 10 | 17 47 | 18 30 | 08 49 | 10 03 | 11 08 | 12 05 |
| 54 | 17 13 | 17 48 | 18 29 | 08 43 | 09 55 | 10 59 | 11 55 |
| 52 | 17 15 | 17 49 | 18 28 | 08 37 | 09 47 | 10 51 | 11 47 |
| 50 | 17 17 | 17 50 | 18 27 | 08 32 | 09 41 | 10 44 | 11 39 |
| 45 | 17 23 | 17 52 | 18 26 | 08 20 | 09 27 | 10 28 | 11 23 |
| N 40 | 17 27 | 17 54 | 18 25 | 08 11 | 09 15 | 10 15 | 11 10 |
| 35 | 17 31 | 17 56 | 18 25 | 08 03 | 09 05 | 10 04 | 10 58 |
| 30 | 17 34 | 17 58 | 18 26 | 07 56 | 08 57 | 09 55 | 10 48 |
| 20 | 17 40 | 18 02 | 18 27 | 07 44 | 08 42 | 09 38 | 10 31 |
| N 10 | 17 45 | 18 06 | 18 31 | 07 33 | 08 29 | 09 24 | 10 16 |
| 0 | 17 50 | 18 11 | 18 35 | 07 23 | 08 17 | 09 10 | 10 02 |
| S 10 | 17 55 | 18 16 | 18 41 | 07 13 | 08 05 | 08 57 | 09 48 |
| 20 | 18 01 | 18 23 | 18 49 | 07 02 | 07 52 | 08 42 | 09 33 |
| 30 | 18 07 | 18 32 | 19 00 | 06 50 | 07 37 | 08 26 | 09 16 |
| 35 | 18 11 | 18 37 | 19 07 | 06 43 | 07 29 | 08 16 | 09 06 |
| 40 | 18 15 | 18 43 | 19 16 | 06 35 | 07 19 | 08 05 | 08 54 |
| 45 | 18 20 | 18 51 | 19 27 | 06 26 | 07 07 | 07 52 | 08 41 |
| S 50 | 18 27 | 19 00 | 19 41 | 06 15 | 06 54 | 07 37 | 08 25 |
| 52 | 18 29 | 19 04 | 19 47 | 06 10 | 06 47 | 07 29 | 08 17 |
| 54 | 18 33 | 19 09 | 19 55 | 06 04 | 06 40 | 07 21 | 08 08 |
| 56 | 18 36 | 19 15 | 20 04 | 05 58 | 06 32 | 07 12 | 07 59 |
| 58 | 18 40 | 19 21 | 20 14 | 05 51 | 06 23 | 07 02 | 07 48 |
| S 60 | 18 44 | 19 29 | 20 25 | 05 43 | 06 13 | 06 50 | 07 35 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 10 | 12 51 | 12 59 | 11 47 | 01 10 | 13 37 | 16 | 95 |
| 11 | 13 07 | 13 15 | 11 47 | 02 04 | 14 31 | 17 | 88 |
| 12 | 13 23 | 13 30 | 11 46 | 02 57 | 15 24 | 18 | 81 |

| TU | | SOL | | | LUA | | | | | | Lat | CREP | | SOL | LUA - Nascer | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | AHG | v | | Dec | d | Ph | | Naut | Civil | Nascer | 13 | 14 | 15 | 16 |
| d | h | ° | ′ | ° ′ | ° ′ | ′ | | ° ′ | ′ | ′ | ° | h m | h m | h m | h m | h m | h m | h m |
| 13 | 00 | 179 | 49.3 | N 8 50.9 | 256 04.1 | 8.0 | S14 | 37.3 | 6.8 | 58.9 | N 72 | //// | 02 10 | 03 47 | 04 31 | 04 25 | 04 20 | 04 15 |
| | 01 | 194 | 49.4 | 51.8 | 270 31.1 | 8.0 | 14 | 30.5 | 6.8 | 59.0 | N 70 | //// | 02 44 | 04 03 | 04 03 | 04 07 | 04 10 | 04 12 |
| | 02 | 209 | 49.6 | 52.7 | 284 58.1 | 8.0 | 14 | 23.7 | 6.9 | 59.0 | 68 | 01 02 | 03 07 | 04 15 | 03 41 | 03 53 | 04 02 | 04 09 |
| | 03 | 224 | 49.8 | . . 53.6 | 299 25.1 | 8.0 | 14 | 16.8 | 7.1 | 59.0 | 66 | 01 52 | 03 25 | 04 25 | 03 24 | 03 41 | 03 55 | 04 06 |
| S | 04 | 239 | 49.9 | 54.5 | 313 52.1 | 8.0 | 14 | 09.7 | 7.1 | 59.0 | 64 | 02 22 | 03 40 | 04 34 | 03 10 | 03 32 | 03 49 | 04 04 |
| E | 05 | 254 | 50.1 | 55.4 | 328 19.1 | 8.0 | 14 | 02.6 | 7.2 | 59.1 | 62 | 02 44 | 03 52 | 04 41 | 02 58 | 03 23 | 03 44 | 04 02 |
| G | 06 | 269 | 50.2 | N 8 56.3 | 342 46.1 | 8.0 | S13 | 55.4 | 7.3 | 59.1 | 60 | 03 02 | 04 02 | 04 48 | 02 48 | 03 16 | 03 39 | 04 01 |
| U | 07 | 284 | 50.4 | 57.3 | 357 13.1 | 8.0 | 13 | 48.1 | 7.4 | 59.1 | N 58 | 03 16 | 04 11 | 04 53 | 02 39 | 03 09 | 03 36 | 03 59 |
| N | 08 | 299 | 50.6 | 58.2 | 11 40.1 | 8.0 | 13 | 40.7 | 7.5 | 59.2 | 56 | 03 28 | 04 18 | 04 58 | 02 32 | 03 04 | 03 32 | 03 58 |
| D | 09 | 314 | 50.7 | 8 59.1 | 26 07.1 | 8.0 | 13 | 33.2 | 7.6 | 59.2 | 54 | 03 38 | 04 25 | 05 02 | 02 25 | 02 59 | 03 29 | 03 57 |
| A | 10 | 329 | 50.9 | 9 00.0 | 40 34.1 | 8.0 | 13 | 25.6 | 7.7 | 59.2 | 52 | 03 47 | 04 31 | 05 06 | 02 18 | 02 54 | 03 26 | 03 56 |
| | 11 | 344 | 51.0 | 00.9 | 55 01.1 | 8.0 | 13 | 17.9 | 7.7 | 59.2 | 50 | 03 54 | 04 36 | 05 10 | 02 13 | 02 50 | 03 23 | 03 55 |
| F | 12 | 359 | 51.2 | N 9 01.8 | 69 28.1 | 8.0 | S13 | 10.2 | 7.9 | 59.3 | 45 | 04 11 | 04 47 | 05 18 | 02 01 | 02 41 | 03 18 | 03 53 |
| E | 13 | 14 | 51.4 | 02.7 | 83 55.1 | 8.0 | 13 | 02.3 | 7.9 | 59.3 | N 40 | 04 23 | 04 56 | 05 24 | 01 50 | 02 33 | 03 13 | 03 51 |
| I | 14 | 29 | 51.5 | 03.6 | 98 22.1 | 8.0 | 12 | 54.4 | 8.1 | 59.3 | 35 | 04 33 | 05 04 | 05 30 | 01 42 | 02 26 | 03 09 | 03 50 |
| R | 15 | 44 | 51.7 | . . 04.5 | 112 49.1 | 8.1 | 12 | 46.3 | 8.1 | 59.4 | 30 | 04 41 | 05 10 | 05 35 | 01 34 | 02 21 | 03 05 | 03 49 |
| A | 16 | 59 | 51.8 | 05.4 | 127 16.2 | 8.0 | 12 | 38.2 | 8.2 | 59.4 | 20 | 04 54 | 05 21 | 05 43 | 01 21 | 02 10 | 02 59 | 03 46 |
| | 17 | 74 | 52.0 | 06.3 | 141 43.2 | 8.0 | 12 | 30.0 | 8.3 | 59.4 | N 10 | 05 04 | 05 29 | 05 50 | 01 09 | 02 02 | 02 53 | 03 44 |
| | 18 | 89 | 52.1 | N 9 07.2 | 156 10.2 | 8.1 | S12 | 21.7 | 8.4 | 59.4 | 0 | 05 12 | 05 36 | 05 57 | 00 58 | 01 53 | 02 48 | 03 43 |
| | 19 | 104 | 52.3 | 08.1 | 170 37.3 | 8.0 | 12 | 13.3 | 8.4 | 59.5 | S 10 | 05 18 | 05 42 | 06 04 | 00 48 | 01 45 | 02 43 | 03 41 |
| | 20 | 119 | 52.5 | 09.0 | 185 04.3 | 8.0 | 12 | 04.9 | 8.5 | 59.5 | 20 | 05 23 | 05 48 | 06 10 | 00 36 | 01 36 | 02 37 | 03 39 |
| | 21 | 134 | 52.6 | . . 09.9 | 199 31.3 | 8.1 | 11 | 56.4 | 8.7 | 59.5 | 30 | 05 26 | 05 54 | 06 18 | 00 23 | 01 26 | 02 31 | 03 37 |
| | 22 | 149 | 52.8 | 10.8 | 213 58.4 | 8.0 | 11 | 47.7 | 8.7 | 59.5 | 35 | 05 28 | 05 57 | 06 23 | 00 15 | 01 20 | 02 27 | 03 35 |
| | 23 | 164 | 52.9 | 11.7 | 228 25.4 | 8.1 | 11 | 39.0 | 8.7 | 59.6 | 40 | 05 29 | 06 00 | 06 28 | 00 06 | 01 13 | 02 23 | 03 34 |
| 14 | 00 | 179 | 53.1 | N 9 12.7 | 242 52.5 | 8.0 | S11 | 30.3 | 8.9 | 59.6 | 45 | 05 30 | 06 04 | 06 33 | 25 06 | 01 06 | 02 18 | 03 32 |
| | 01 | 194 | 53.2 | 13.6 | 257 19.5 | 8.1 | 11 | 21.4 | 8.9 | 59.6 | S 50 | 05 30 | 06 07 | 06 40 | 24 56 | 00 56 | 02 12 | 03 30 |
| | 02 | 209 | 53.4 | 14.5 | 271 46.6 | 8.1 | 11 | 12.5 | 9.1 | 59.6 | 52 | 05 30 | 06 09 | 06 43 | 24 52 | 00 52 | 02 09 | 03 29 |
| | 03 | 224 | 53.6 | . . 15.4 | 286 13.7 | 8.0 | 11 | 03.4 | 9.1 | 59.7 | 54 | 05 30 | 06 11 | 06 47 | 24 47 | 00 47 | 02 07 | 03 28 |
| | 04 | 239 | 53.7 | 16.3 | 300 40.7 | 8.1 | 10 | 54.3 | 9.1 | 59.7 | 56 | 05 30 | 06 13 | 06 50 | 24 42 | 00 42 | 02 03 | 03 27 |
| | 05 | 254 | 53.9 | 17.2 | 315 07.8 | 8.1 | 10 | 45.2 | 9.3 | 59.7 | 58 | 05 29 | 06 15 | 06 55 | 24 36 | 00 36 | 02 00 | 03 26 |
| T | 06 | 269 | 54.0 | N 9 18.1 | 329 34.9 | 8.1 | S10 | 35.9 | 9.3 | 59.7 | S 60 | 05 29 | 06 17 | 06 59 | 24 29 | 00 29 | 01 55 | 03 25 |
| E | 07 | 284 | 54.2 | 19.0 | 344 02.0 | 8.0 | 10 | 26.6 | 9.4 | 59.8 | | | | | | | | |
| R | 08 | 299 | 54.3 | 19.9 | 358 29.0 | 8.1 | 10 | 17.2 | 9.5 | 59.8 | | | | | | | | |
| Ç | 09 | 314 | 54.5 | . . 20.8 | 12 56.1 | 8.1 | 10 | 07.7 | 9.5 | 59.8 | | | | | | | | |
| A | 10 | 329 | 54.6 | 21.7 | 27 23.2 | 8.1 | 9 | 58.2 | 9.6 | 59.8 | | | | | | | | |
| | 11 | 344 | 54.8 | 22.6 | 41 50.3 | 8.1 | 9 | 48.6 | 9.7 | 59.9 | | | | | | | | |
| | 12 | 359 | 55.0 | N 9 23.5 | 56 17.4 | 8.1 | S 9 | 38.9 | 9.7 | 59.9 | | | | | | | | |
| F | 13 | 14 | 55.1 | 24.4 | 70 44.5 | 8.1 | 9 | 29.2 | 9.8 | 59.9 | | | | | | | | |
| E | 14 | 29 | 55.3 | 25.3 | 85 11.6 | 8.2 | 9 | 19.4 | 9.9 | 59.9 | | | | | | | | |
| I | 15 | 44 | 55.4 | . . 26.2 | 99 38.8 | 8.1 | 9 | 09.5 | 10.0 | 60.0 | | | | | | | | |
| R | 16 | 59 | 55.6 | 27.1 | 114 05.9 | 8.1 | 8 | 59.5 | 10.0 | 60.0 | | | | | | | | |
| A | 17 | 74 | 55.7 | 28.0 | 128 33.0 | 8.1 | 8 | 49.5 | 10.0 | 60.0 | | | | | | | | |
| | 18 | 89 | 55.9 | N 9 28.9 | 143 00.1 | 8.1 | S 8 | 39.5 | 10.2 | 60.0 | | | | | | | | |
| | 19 | 104 | 56.0 | 29.8 | 157 27.2 | 8.2 | 8 | 29.3 | 10.2 | 60.1 | | | | | | | | |
| | 20 | 119 | 56.2 | 30.7 | 171 54.4 | 8.1 | 8 | 19.1 | 10.2 | 60.1 | | | | | | | | |
| | 21 | 134 | 56.3 | . . 31.6 | 186 21.5 | 8.1 | 8 | 08.9 | 10.3 | 60.1 | | | | | | | | |
| | 22 | 149 | 56.5 | 32.5 | 200 48.6 | 8.2 | 7 | 58.6 | 10.4 | 60.1 | | | | | | | | |
| | 23 | 164 | 56.6 | 33.4 | 215 15.8 | 8.1 | 7 | 48.2 | 10.4 | 60.1 | | | | | | | | |
| 15 | 00 | 179 | 56.8 | N 9 34.3 | 229 42.9 | 8.1 | S 7 | 37.8 | 10.5 | 60.2 | | | | | | | | |
| | 01 | 194 | 57.0 | 35.2 | 244 10.0 | 8.2 | 7 | 27.3 | 10.6 | 60.2 | | | | | | | | |
| | 02 | 209 | 57.1 | 36.1 | 258 37.2 | 8.1 | 7 | 16.7 | 10.6 | 60.2 | | | | | | | | |
| | 03 | 224 | 57.3 | . . 37.0 | 273 04.3 | 8.2 | 7 | 06.1 | 10.6 | 60.2 | | | | | | | | |
| Q | 04 | 239 | 57.4 | 37.9 | 287 31.5 | 8.1 | 6 | 55.5 | 10.7 | 60.2 | | | | | | | | |
| U | 05 | 254 | 57.6 | 38.7 | 301 58.6 | 8.2 | 6 | 44.8 | 10.7 | 60.3 | | | | | | | | |
| A | 06 | 269 | 57.7 | N 9 39.6 | 316 25.8 | 8.1 | S 6 | 34.1 | 10.8 | 60.3 | | | | | | | | |
| R | 07 | 284 | 57.9 | 40.5 | 330 52.9 | 8.2 | 6 | 23.3 | 10.9 | 60.3 | | | | | | | | |
| T | 08 | 299 | 58.0 | 41.4 | 345 20.1 | 8.1 | 6 | 12.4 | 10.9 | 60.3 | | | | | | | | |
| A | 09 | 314 | 58.2 | . . 42.3 | 359 47.2 | 8.2 | 6 | 01.5 | 10.9 | 60.3 | | | | | | | | |
| | 10 | 329 | 58.3 | 43.2 | 14 14.4 | 8.1 | 5 | 50.6 | 11.0 | 60.4 | | | | | | | | |
| | 11 | 344 | 58.5 | 44.1 | 28 41.5 | 8.2 | 5 | 39.6 | 11.0 | 60.4 | | | | | | | | |
| F | 12 | 359 | 58.6 | N 9 45.0 | 43 08.7 | 8.1 | S 5 | 28.6 | 11.1 | 60.4 | | | | | | | | |
| E | 13 | 14 | 58.8 | 45.9 | 57 35.8 | 8.2 | 5 | 17.5 | 11.1 | 60.4 | | | | | | | | |
| I | 14 | 29 | 58.9 | 46.8 | 72 03.0 | 8.1 | 5 | 06.4 | 11.1 | 60.4 | | | | | | | | |
| R | 15 | 44 | 59.1 | . . 47.7 | 86 30.1 | 8.2 | 4 | 55.3 | 11.2 | 60.4 | | | | | | | | |
| A | 16 | 59 | 59.2 | 48.6 | 100 57.3 | 8.1 | 4 | 44.1 | 11.2 | 60.5 | | | | | | | | |
| | 17 | 74 | 59.4 | 49.5 | 115 24.4 | 8.2 | 4 | 32.9 | 11.3 | 60.5 | | | | | | | | |
| | 18 | 89 | 59.5 | N 9 50.4 | 129 51.6 | 8.1 | S 4 | 21.6 | 11.3 | 60.5 | | | | | | | | |
| | 19 | 104 | 59.7 | 51.3 | 144 18.7 | 8.2 | 4 | 10.3 | 11.3 | 60.5 | | | | | | | | |
| | 20 | 119 | 59.8 | 52.2 | 158 45.9 | 8.1 | 3 | 59.0 | 11.3 | 60.5 | | | | | | | | |
| | 21 | 135 | 00.0 | . . 53.0 | 173 13.0 | 8.1 | 3 | 47.7 | 11.4 | 60.5 | | | | | | | | |
| | 22 | 150 | 00.1 | 53.9 | 187 40.1 | 8.2 | 3 | 36.3 | 11.4 | 60.5 | | | | | | | | |
| | 23 | 165 | 00.3 | 54.8 | 202 07.3 | 8.1 | S 3 | 24.9 | 11.4 | 60.5 | | | | | | | | |
| | | SD | 16.0 | d 0.9 | SD | 16.1 | | 16.3 | | 16.5 | | | | | | | | |

| Lat | SOL | CREP | | LUA - Pôr | | | |
|---|---|---|---|---|---|---|---|
| | Pôr | Civil | Naut | 13 | 14 | 15 | 16 |
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 20 17 | 21 58 | //// | 10 06 | 12 07 | 14 06 | 16 05 |
| N 70 | 20 01 | 21 22 | //// | 10 34 | 12 23 | 14 14 | 16 06 |
| 68 | 19 48 | 20 57 | 23 14 | 10 54 | 12 36 | 14 20 | 16 06 |
| 66 | 19 38 | 20 39 | 22 15 | 11 10 | 12 46 | 14 25 | 16 06 |
| 64 | 19 29 | 20 24 | 21 43 | 11 24 | 12 55 | 14 30 | 16 07 |
| 62 | 19 21 | 20 11 | 21 20 | 11 35 | 13 02 | 14 34 | 16 07 |
| 60 | 19 15 | 20 01 | 21 02 | 11 44 | 13 09 | 14 37 | 16 07 |
| N 58 | 19 09 | 19 52 | 20 47 | 11 53 | 13 15 | 14 40 | 16 07 |
| 56 | 19 04 | 19 44 | 20 35 | 12 00 | 13 20 | 14 42 | 16 07 |
| 54 | 18 59 | 19 37 | 20 25 | 12 06 | 13 24 | 14 45 | 16 07 |
| 52 | 18 55 | 19 31 | 20 16 | 12 12 | 13 28 | 14 47 | 16 07 |
| 50 | 18 52 | 19 26 | 20 08 | 12 17 | 13 32 | 14 49 | 16 08 |
| 45 | 18 44 | 19 14 | 19 51 | 12 28 | 13 40 | 14 53 | 16 08 |
| N 40 | 18 37 | 19 05 | 19 39 | 12 38 | 13 46 | 14 56 | 16 08 |
| 35 | 18 31 | 18 57 | 19 28 | 12 46 | 13 52 | 14 59 | 16 08 |
| 30 | 18 26 | 18 51 | 19 20 | 12 53 | 13 57 | 15 02 | 16 08 |
| 20 | 18 18 | 18 40 | 19 07 | 13 04 | 14 05 | 15 06 | 16 08 |
| N 10 | 18 10 | 18 32 | 18 57 | 13 15 | 14 12 | 15 10 | 16 08 |
| 0 | 18 04 | 18 25 | 18 49 | 13 25 | 14 19 | 15 14 | 16 08 |
| S 10 | 17 57 | 18 18 | 18 43 | 13 34 | 14 26 | 15 17 | 16 09 |
| 20 | 17 50 | 18 12 | 18 38 | 13 44 | 14 33 | 15 21 | 16 09 |
| 30 | 17 42 | 18 06 | 18 34 | 13 56 | 14 41 | 15 25 | 16 09 |
| 35 | 17 38 | 18 03 | 18 33 | 14 03 | 14 46 | 15 28 | 16 09 |
| 40 | 17 33 | 18 00 | 18 31 | 14 10 | 14 51 | 15 30 | 16 09 |
| 45 | 17 27 | 17 56 | 18 30 | 14 19 | 14 58 | 15 34 | 16 09 |
| S 50 | 17 20 | 17 52 | 18 30 | 14 30 | 15 05 | 15 37 | 16 09 |
| 52 | 17 17 | 17 51 | 18 30 | 14 35 | 15 08 | 15 39 | 16 09 |
| 54 | 17 13 | 17 49 | 18 30 | 14 40 | 15 12 | 15 41 | 16 09 |
| 56 | 17 09 | 17 47 | 18 30 | 14 46 | 15 16 | 15 43 | 16 09 |
| 58 | 17 05 | 17 45 | 18 30 | 14 52 | 15 20 | 15 45 | 16 09 |
| S 60 | 17 00 | 17 43 | 18 31 | 15 00 | 15 25 | 15 48 | 16 09 |

| Dia | SOL | | | LUA | | | |
|---|---|---|---|---|---|---|---|
| | ET 00h | (-) 12h | Pass Merid | Pass Merid Sup | Pass Merid Inf | Idade | Fase |
| d | m s | m s | h m | h m | h m | d % | |
| 13 | 00 43 | 00 36 | 12 01 | 07 12 | 19 39 | 24 35 | |
| 14 | 00 28 | 00 20 | 12 00 | 08 06 | 20 34 | 25 25 | |
| 15 | 00 13 | 00 06 | 12 00 | 09 01 | 21 28 | 26 15 | |

# 22, 23 e 24 DE OUTUBRO DE 2015 (5ª feira, 6ª feira e Sábado)



| TU | | SOL AHG | SOL Dec | LUA AHG | LUA v | LUA Dec | LUA d | LUA Ph |
|---|---|---|---|---|---|---|---|---|
| d | h | ° ′ | ° ′ | ° ′ | ′ | ° ′ | ′ | ′ |
| 22 | 00 | 183 51.0 | S10 51.4 | 76 00.0 | 8.6 | S13 13.8 | 7.6 | 58.7 |
| | 01 | 198 51.1 | 52.3 | 90 27.6 | 8.7 | 13 06.2 | 7.7 | 58.7 |
| | 02 | 213 51.2 | 53.2 | 104 55.3 | 8.7 | 12 58.5 | 7.8 | 58.8 |
| | 03 | 228 51.3 | 54.0 | 119 23.0 | 8.7 | 12 50.7 | 7.9 | 58.8 |
| | 04 | 243 51.4 | 54.9 | 133 50.7 | 8.6 | 12 42.8 | 7.9 | 58.8 |
| | 05 | 258 51.5 | 55.8 | 148 18.3 | 8.7 | 12 34.9 | 8.0 | 58.9 |
| | 06 | 273 51.6 | S10 56.7 | 162 46.0 | 8.6 | S12 26.9 | 8.2 | 58.9 |
| | 07 | 288 51.7 | 57.6 | 177 13.6 | 8.7 | 12 18.7 | 8.2 | 58.9 |
| | 08 | 303 51.8 | 58.5 | 191 41.3 | 8.6 | 12 10.5 | 8.3 | 59.0 |
| | 09 | 318 51.9 | 10 59.4 | 206 08.9 | 8.6 | 12 02.2 | 8.3 | 59.0 |
| | 10 | 333 52.0 | 11 00.2 | 220 36.5 | 8.7 | 11 53.9 | 8.5 | 59.0 |
| | 11 | 348 52.1 | 01.1 | 235 04.2 | 8.6 | 11 45.4 | 8.5 | 59.1 |
| | 12 | 3 52.2 | S11 02.0 | 249 31.8 | 8.6 | S11 36.9 | 8.6 | 59.1 |
| | 13 | 18 52.3 | 02.9 | 263 59.4 | 8.6 | 11 28.3 | 8.7 | 59.1 |
| | 14 | 33 52.4 | 03.8 | 278 27.0 | 8.6 | 11 19.6 | 8.8 | 59.2 |
| | 15 | 48 52.5 | 04.7 | 292 54.6 | 8.6 | 11 10.8 | 8.8 | 59.2 |
| | 16 | 63 52.6 | 05.5 | 307 22.2 | 8.6 | 11 02.0 | 9.0 | 59.3 |
| | 17 | 78 52.6 | 06.4 | 321 49.8 | 8.6 | 10 53.0 | 9.0 | 59.3 |
| | 18 | 93 52.7 | S11 07.3 | 336 17.4 | 8.5 | S10 44.0 | 9.1 | 59.3 |
| | 19 | 108 52.8 | 08.2 | 350 44.9 | 8.6 | 10 34.9 | 9.1 | 59.4 |
| | 20 | 123 52.9 | 09.1 | 5 12.5 | 8.5 | 10 25.8 | 9.2 | 59.4 |
| | 21 | 138 53.0 | 09.9 | 19 40.0 | 8.6 | 10 16.6 | 9.3 | 59.4 |
| | 22 | 153 53.1 | 10.8 | 34 07.6 | 8.5 | 10 07.3 | 9.4 | 59.5 |
| | 23 | 168 53.2 | 11.7 | 48 35.1 | 8.6 | 9 57.9 | 9.5 | 59.5 |
| 23 | 00 | 183 53.3 | S11 12.6 | 63 02.7 | 8.5 | S 9 48.4 | 9.5 | 59.5 |
| | 01 | 198 53.4 | 13.5 | 77 30.2 | 8.5 | 9 38.9 | 9.6 | 59.6 |
| | 02 | 213 53.5 | 14.3 | 91 57.7 | 8.5 | 9 29.3 | 9.6 | 59.6 |
| | 03 | 228 53.6 | 15.2 | 106 25.2 | 8.6 | 9 19.7 | 9.7 | 59.6 |
| | 04 | 243 53.7 | 16.1 | 120 52.8 | 8.5 | 9 10.0 | 9.8 | 59.6 |
| | 05 | 258 53.8 | 17.0 | 135 20.3 | 8.4 | 9 00.2 | 9.9 | 59.7 |
| | 06 | 273 53.8 | S11 17.9 | 149 47.7 | 8.5 | S 8 50.3 | 9.9 | 59.7 |
| | 07 | 288 53.9 | 18.7 | 164 15.2 | 8.5 | 8 40.4 | 10.0 | 59.7 |
| | 08 | 303 54.0 | 19.6 | 178 42.7 | 8.5 | 8 30.4 | 10.0 | 59.8 |
| | 09 | 318 54.1 | 20.5 | 193 10.2 | 8.4 | 8 20.4 | 10.1 | 59.8 |
| | 10 | 333 54.2 | 21.4 | 207 37.6 | 8.5 | 8 10.3 | 10.2 | 59.8 |
| | 11 | 348 54.3 | 22.2 | 222 05.1 | 8.4 | 8 00.1 | 10.2 | 59.9 |
| | 12 | 3 54.4 | S11 23.1 | 236 32.5 | 8.4 | S 7 49.9 | 10.3 | 59.9 |
| | 13 | 18 54.5 | 24.0 | 250 59.9 | 8.5 | 7 39.6 | 10.4 | 59.9 |
| | 14 | 33 54.6 | 24.9 | 265 27.4 | 8.4 | 7 29.2 | 10.4 | 60.0 |
| | 15 | 48 54.6 | 25.8 | 279 54.8 | 8.4 | 7 18.8 | 10.5 | 60.0 |
| | 16 | 63 54.7 | 26.6 | 294 22.2 | 8.4 | 7 08.3 | 10.5 | 60.0 |
| | 17 | 78 54.8 | 27.5 | 308 49.6 | 8.3 | 6 57.8 | 10.6 | 60.0 |
| | 18 | 93 54.9 | S11 28.4 | 323 16.9 | 8.4 | S 6 47.2 | 10.6 | 60.1 |
| | 19 | 108 55.0 | 29.3 | 337 44.3 | 8.4 | 6 36.6 | 10.7 | 60.1 |
| | 20 | 123 55.1 | 30.1 | 352 11.7 | 8.3 | 6 25.9 | 10.7 | 60.1 |
| | 21 | 138 55.2 | 31.0 | 6 39.0 | 8.4 | 6 15.2 | 10.8 | 60.2 |
| | 22 | 153 55.3 | 31.9 | 21 06.4 | 8.3 | 6 04.4 | 10.8 | 60.2 |
| | 23 | 168 55.3 | 32.7 | 35 33.7 | 8.3 | 5 53.6 | 10.9 | 60.2 |
| 24 | 00 | 183 55.4 | S11 33.6 | 50 01.0 | 8.3 | S 5 42.7 | 10.9 | 60.2 |
| | 01 | 198 55.5 | 34.5 | 64 28.3 | 8.3 | 5 31.8 | 11.0 | 60.3 |
| | 02 | 213 55.6 | 35.4 | 78 55.6 | 8.2 | 5 20.8 | 11.0 | 60.3 |
| | 03 | 228 55.7 | 36.2 | 93 22.8 | 8.3 | 5 09.8 | 11.0 | 60.3 |
| | 04 | 243 55.8 | 37.1 | 107 50.1 | 8.3 | 4 58.8 | 11.1 | 60.4 |
| | 05 | 258 55.8 | 38.0 | 122 17.4 | 8.2 | 4 47.7 | 11.2 | 60.4 |
| | 06 | 273 55.9 | S11 38.8 | 136 44.6 | 8.2 | S 4 36.5 | 11.2 | 60.4 |
| | 07 | 288 56.0 | 39.7 | 151 11.8 | 8.2 | 4 25.3 | 11.2 | 60.4 |
| | 08 | 303 56.1 | 40.6 | 165 39.0 | 8.2 | 4 14.1 | 11.2 | 60.5 |
| | 09 | 318 56.2 | 41.5 | 180 06.2 | 8.2 | 4 02.9 | 11.3 | 60.5 |
| | 10 | 333 56.3 | 42.3 | 194 33.4 | 8.1 | 3 51.6 | 11.3 | 60.5 |
| | 11 | 348 56.3 | 43.2 | 209 00.5 | 8.2 | 3 40.3 | 11.4 | 60.5 |
| | 12 | 3 56.4 | S11 44.1 | 223 27.7 | 8.1 | S 3 28.9 | 11.4 | 60.6 |
| | 13 | 18 56.5 | 44.9 | 237 54.8 | 8.1 | 3 17.5 | 11.4 | 60.6 |
| | 14 | 33 56.6 | 45.8 | 252 21.9 | 8.1 | 3 06.1 | 11.5 | 60.6 |
| | 15 | 48 56.7 | 46.7 | 266 49.0 | 8.1 | 2 54.6 | 11.4 | 60.6 |
| | 16 | 63 56.7 | 47.5 | 281 16.1 | 8.1 | 2 43.2 | 11.5 | 60.6 |
| | 17 | 78 56.8 | 48.4 | 295 43.2 | 8.0 | 2 31.7 | 11.6 | 60.7 |
| | 18 | 93 56.9 | S11 49.3 | 310 10.2 | 8.0 | S 2 20.1 | 11.5 | 60.7 |
| | 19 | 108 57.0 | 50.1 | 324 37.2 | 8.0 | 2 08.6 | 11.6 | 60.7 |
| | 20 | 123 57.1 | 51.0 | 339 04.2 | 8.0 | 1 57.0 | 11.6 | 60.7 |
| | 21 | 138 57.1 | 51.9 | 353 31.2 | 8.0 | 1 45.4 | 11.6 | 60.8 |
| | 22 | 153 57.2 | 52.7 | 7 58.2 | 8.0 | 1 33.8 | 11.6 | 60.8 |
| | 23 | 168 57.3 | 53.6 | 22 25.2 | 7.9 | S 1 22.2 | 11.7 | 60.8 |
| | | SD 16.1 | d 0.9 | SD | 16.1 | | 16.3 | 16.5 |

QUINTA FEIRA

SEXTA FEIRA

SÁBADO

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 22 | LUA - Nascer 23 | LUA - Nascer 24 | LUA - Nascer 25 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 05 28 | 06 47 | 08 03 | 16 01 | 15 56 | 15 51 | 15 46 |
| N 70 | 05 28 | 06 39 | 07 46 | 15 42 | 15 45 | 15 47 | 15 49 |
| 68 | 05 28 | 06 33 | 07 33 | 15 28 | 15 36 | 15 44 | 15 50 |
| 66 | 05 28 | 06 27 | 07 22 | 15 16 | 15 29 | 15 41 | 15 52 |
| 64 | 05 27 | 06 23 | 07 13 | 15 06 | 15 23 | 15 39 | 15 53 |
| 62 | 05 27 | 06 19 | 07 05 | 14 57 | 15 18 | 15 37 | 15 55 |
| 60 | 05 26 | 06 15 | 06 58 | 14 50 | 15 13 | 15 35 | 15 56 |
| N 58 | 05 26 | 06 12 | 06 52 | 14 43 | 15 09 | 15 33 | 15 57 |
| 56 | 05 25 | 06 09 | 06 47 | 14 37 | 15 06 | 15 32 | 15 58 |
| 54 | 05 25 | 06 06 | 06 42 | 14 32 | 15 02 | 15 31 | 15 58 |
| 52 | 05 24 | 06 03 | 06 38 | 14 27 | 14 59 | 15 29 | 15 59 |
| 50 | 05 23 | 06 01 | 06 34 | 14 23 | 14 56 | 15 28 | 16 00 |
| 45 | 05 21 | 05 56 | 06 26 | 14 14 | 14 51 | 15 26 | 16 01 |
| N 40 | 05 19 | 05 51 | 06 19 | 14 06 | 14 46 | 15 24 | 16 02 |
| 35 | 05 17 | 05 47 | 06 12 | 13 59 | 14 41 | 15 22 | 16 03 |
| 30 | 05 15 | 05 43 | 06 07 | 13 53 | 14 37 | 15 21 | 16 04 |
| 20 | 05 09 | 05 35 | 05 57 | 13 43 | 14 31 | 15 18 | 16 06 |
| N 10 | 05 03 | 05 28 | 05 49 | 13 34 | 14 25 | 15 16 | 16 08 |
| 0 | 04 55 | 05 20 | 05 41 | 13 26 | 14 20 | 15 14 | 16 09 |
| S 10 | 04 46 | 05 11 | 05 33 | 13 17 | 14 14 | 15 12 | 16 10 |
| 20 | 04 35 | 05 02 | 05 24 | 13 08 | 14 08 | 15 10 | 16 12 |
| 30 | 04 20 | 04 49 | 05 14 | 12 58 | 14 02 | 15 07 | 16 14 |
| 35 | 04 11 | 04 42 | 05 08 | 12 52 | 13 58 | 15 06 | 16 15 |
| 40 | 03 59 | 04 33 | 05 01 | 12 45 | 13 53 | 15 04 | 16 16 |
| 45 | 03 45 | 04 22 | 04 53 | 12 37 | 13 48 | 15 02 | 16 18 |
| S 50 | 03 26 | 04 09 | 04 44 | 12 27 | 13 42 | 15 00 | 16 19 |
| 52 | 03 17 | 04 03 | 04 40 | 12 23 | 13 39 | 14 59 | 16 20 |
| 54 | 03 07 | 03 56 | 04 35 | 12 18 | 13 36 | 14 58 | 16 21 |
| 56 | 02 55 | 03 48 | 04 29 | 12 13 | 13 33 | 14 56 | 16 22 |
| 58 | 02 41 | 03 39 | 04 23 | 12 07 | 13 29 | 14 55 | 16 23 |
| S 60 | 02 24 | 03 29 | 04 16 | 12 00 | 13 25 | 14 53 | 16 24 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 22 | LUA - Pôr 23 | LUA - Pôr 24 | LUA - Pôr 25 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 15 24 | 16 40 | 17 59 | 23 35 | 25 33 | 01 33 | 03 32 |
| N 70 | 15 41 | 16 48 | 17 59 | 23 52 | 25 41 | 01 41 | 03 33 |
| 68 | 15 54 | 16 54 | 17 59 | 24 05 | 00 05 | 01 48 | 03 34 |
| 66 | 16 05 | 17 00 | 17 59 | 24 16 | 00 16 | 01 54 | 03 34 |
| 64 | 16 15 | 17 05 | 18 00 | 24 25 | 00 25 | 01 58 | 03 35 |
| 62 | 16 23 | 17 09 | 18 00 | 24 32 | 00 32 | 02 02 | 03 35 |
| 60 | 16 29 | 17 13 | 18 01 | 24 39 | 00 39 | 02 06 | 03 36 |
| N 58 | 16 35 | 17 16 | 18 02 | 24 45 | 00 45 | 02 09 | 03 36 |
| 56 | 16 41 | 17 19 | 18 02 | 24 50 | 00 50 | 02 12 | 03 36 |
| 54 | 16 46 | 17 22 | 18 03 | 24 54 | 00 54 | 02 14 | 03 37 |
| 52 | 16 50 | 17 25 | 18 04 | 24 59 | 00 59 | 02 17 | 03 37 |
| 50 | 16 54 | 17 27 | 18 05 | 25 02 | 01 02 | 02 19 | 03 37 |
| 45 | 17 02 | 17 32 | 18 07 | 00 01 | 01 10 | 02 23 | 03 38 |
| N 40 | 17 10 | 17 37 | 18 09 | 00 10 | 01 17 | 02 27 | 03 38 |
| 35 | 17 16 | 17 42 | 18 11 | 00 18 | 01 23 | 02 30 | 03 38 |
| 30 | 17 21 | 17 46 | 18 14 | 00 25 | 01 28 | 02 33 | 03 39 |
| 20 | 17 31 | 17 53 | 18 19 | 00 37 | 01 37 | 02 37 | 03 39 |
| N 10 | 17 40 | 18 01 | 18 26 | 00 48 | 01 44 | 02 41 | 03 40 |
| 0 | 17 48 | 18 09 | 18 33 | 00 57 | 01 51 | 02 45 | 03 40 |
| S 10 | 17 56 | 18 17 | 18 43 | 01 07 | 01 58 | 02 49 | 03 40 |
| 20 | 18 05 | 18 28 | 18 54 | 01 18 | 02 06 | 02 53 | 03 41 |
| 30 | 18 15 | 18 40 | 19 09 | 01 29 | 02 14 | 02 58 | 03 41 |
| 35 | 18 21 | 18 48 | 19 19 | 01 36 | 02 19 | 03 00 | 03 41 |
| 40 | 18 28 | 18 57 | 19 31 | 01 44 | 02 24 | 03 03 | 03 41 |
| 45 | 18 36 | 19 07 | 19 45 | 01 53 | 02 30 | 03 06 | 03 42 |
| S 50 | 18 46 | 19 21 | 20 04 | 02 03 | 02 38 | 03 10 | 03 42 |
| 52 | 18 50 | 19 27 | 20 13 | 02 08 | 02 41 | 03 12 | 03 42 |
| 54 | 18 55 | 19 34 | 20 24 | 02 13 | 02 45 | 03 14 | 03 42 |
| 56 | 19 01 | 19 42 | 20 36 | 02 19 | 02 49 | 03 16 | 03 42 |
| 58 | 19 07 | 19 52 | 20 51 | 02 26 | 02 54 | 03 19 | 03 42 |
| S 60 | 19 14 | 20 02 | 21 08 | 02 34 | 02 59 | 03 21 | 03 42 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d % | |
| 22 | 15 24 | 15 28 | 11 45 | 19 38 | 07 12 | 09 68 | |
| 23 | 15 33 | 15 37 | 11 44 | 20 32 | 08 05 | 10 78 | |
| 24 | 15 42 | 15 46 | 11 44 | 21 27 | 09 00 | 11 87 | |

| TU | | SOL | | | | LUA | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | v | | Dec | d | Ph | |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | ° | ′ | ′ | |
| 13 | 00 | 177 | 37.7 | S 2 | 50.4 | 124 | 54.7 | 7.1 | N12 | 48.4 | 8.2 | 60.0 |
| | 01 | 192 | 37.9 | | 49.4 | 139 | 20.8 | 7.1 | 12 | 56.6 | 8.1 | 60.0 |
| | 02 | 207 | 38.1 | | 48.4 | 153 | 46.9 | 7.2 | 13 | 04.7 | 7.9 | 60.0 |
| | 03 | 222 | 38.3 | . . | 47.4 | 168 | 13.1 | 7.1 | 13 | 12.6 | 7.9 | 59.9 |
| | 04 | 237 | 38.4 | | 46.4 | 182 | 39.2 | 7.1 | 13 | 20.5 | 7.8 | 59.9 |
| | 05 | 252 | 38.6 | | 45.5 | 197 | 05.3 | 7.2 | 13 | 28.3 | 7.7 | 59.9 |
| | 06 | 267 | 38.8 | S 2 | 44.5 | 211 | 31.5 | 7.1 | N13 | 36.0 | 7.6 | 59.9 |
| | 07 | 282 | 38.9 | | 43.5 | 225 | 57.6 | 7.1 | 13 | 43.6 | 7.5 | 59.8 |
| D | 08 | 297 | 39.1 | | 42.5 | 240 | 23.7 | 7.1 | 13 | 51.1 | 7.4 | 59.8 |
| O | 09 | 312 | 39.3 | . . | 41.5 | 254 | 49.8 | 7.1 | 13 | 58.5 | 7.3 | 59.8 |
| M | 10 | 327 | 39.4 | | 40.5 | 269 | 15.9 | 7.2 | 14 | 05.8 | 7.2 | 59.7 |
| I | 11 | 342 | 39.6 | | 39.5 | 283 | 42.1 | 7.1 | 14 | 13.0 | 7.2 | 59.7 |
| N | 12 | 357 | 39.8 | S 2 | 38.6 | 298 | 08.2 | 7.1 | N14 | 20.2 | 7.0 | 59.7 |
| G | 13 | 12 | 40.0 | | 37.6 | 312 | 34.3 | 7.1 | 14 | 27.2 | 6.9 | 59.7 |
| O | 14 | 27 | 40.1 | | 36.6 | 327 | 00.4 | 7.1 | 14 | 34.1 | 6.8 | 59.6 |
| | 15 | 42 | 40.3 | . . | 35.6 | 341 | 26.5 | 7.2 | 14 | 40.9 | 6.7 | 59.6 |
| | 16 | 57 | 40.5 | | 34.6 | 355 | 52.7 | 7.1 | 14 | 47.6 | 6.6 | 59.6 |
| | 17 | 72 | 40.6 | | 33.6 | 10 | 18.8 | 7.1 | 14 | 54.2 | 6.5 | 59.5 |
| | 18 | 87 | 40.8 | S 2 | 32.6 | 24 | 44.9 | 7.1 | N15 | 00.7 | 6.4 | 59.5 |
| | 19 | 102 | 41.0 | | 31.7 | 39 | 11.0 | 7.2 | 15 | 07.1 | 6.3 | 59.5 |
| | 20 | 117 | 41.2 | | 30.7 | 53 | 37.2 | 7.1 | 15 | 13.4 | 6.2 | 59.4 |
| | 21 | 132 | 41.3 | . . | 29.7 | 68 | 03.3 | 7.1 | 15 | 19.6 | 6.1 | 59.4 |
| | 22 | 147 | 41.5 | | 28.7 | 82 | 29.4 | 7.2 | 15 | 25.7 | 6.0 | 59.4 |
| | 23 | 162 | 41.7 | | 27.7 | 96 | 55.6 | 7.1 | 15 | 31.7 | 5.9 | 59.4 |
| 14 | 00 | 177 | 41.9 | S 2 | 26.7 | 111 | 21.7 | 7.2 | N15 | 37.6 | 5.8 | 59.3 |
| | 01 | 192 | 42.0 | | 25.7 | 125 | 47.9 | 7.1 | 15 | 43.4 | 5.6 | 59.3 |
| | 02 | 207 | 42.2 | | 24.7 | 140 | 14.0 | 7.2 | 15 | 49.0 | 5.6 | 59.3 |
| | 03 | 222 | 42.4 | . . | 23.8 | 154 | 40.2 | 7.2 | 15 | 54.6 | 5.4 | 59.2 |
| | 04 | 237 | 42.5 | | 22.8 | 169 | 06.4 | 7.1 | 16 | 00.0 | 5.4 | 59.2 |
| | 05 | 252 | 42.7 | | 21.8 | 183 | 32.5 | 7.2 | 16 | 05.4 | 5.2 | 59.2 |
| S | 06 | 267 | 42.9 | S 2 | 20.8 | 197 | 58.7 | 7.2 | N16 | 10.6 | 5.1 | 59.1 |
| E | 07 | 282 | 43.1 | | 19.8 | 212 | 24.9 | 7.2 | 16 | 15.7 | 5.1 | 59.1 |
| G | 08 | 297 | 43.2 | | 18.8 | 226 | 51.1 | 7.3 | 16 | 20.8 | 4.9 | 59.1 |
| U | 09 | 312 | 43.4 | . . | 17.8 | 241 | 17.4 | 7.2 | 16 | 25.7 | 4.8 | 59.0 |
| N | 10 | 327 | 43.6 | | 16.9 | 255 | 43.6 | 7.2 | 16 | 30.5 | 4.7 | 59.0 |
| D | 11 | 342 | 43.8 | | 15.9 | 270 | 09.8 | 7.3 | 16 | 35.2 | 4.6 | 59.0 |
| A | 12 | 357 | 43.9 | S 2 | 14.9 | 284 | 36.1 | 7.2 | N16 | 39.8 | 4.4 | 58.9 |
| | 13 | 12 | 44.1 | | 13.9 | 299 | 02.3 | 7.3 | 16 | 44.2 | 4.4 | 58.9 |
| | 14 | 27 | 44.3 | | 12.9 | 313 | 28.6 | 7.3 | 16 | 48.6 | 4.3 | 58.9 |
| F | 15 | 42 | 44.5 | . . | 11.9 | 327 | 54.9 | 7.3 | 16 | 52.9 | 4.1 | 58.8 |
| E | 16 | 57 | 44.6 | | 10.9 | 342 | 21.2 | 7.3 | 16 | 57.0 | 4.0 | 58.8 |
| I | 17 | 72 | 44.8 | | 09.9 | 356 | 47.5 | 7.4 | 17 | 01.0 | 4.0 | 58.8 |
| R | 18 | 87 | 45.0 | S 2 | 09.0 | 11 | 13.9 | 7.3 | N17 | 05.0 | 3.8 | 58.7 |
| A | 19 | 102 | 45.2 | | 08.0 | 25 | 40.2 | 7.4 | 17 | 08.8 | 3.7 | 58.7 |
| | 20 | 117 | 45.3 | | 07.0 | 40 | 06.6 | 7.3 | 17 | 12.5 | 3.6 | 58.7 |
| | 21 | 132 | 45.5 | . . | 06.0 | 54 | 32.9 | 7.5 | 17 | 16.1 | 3.4 | 58.7 |
| | 22 | 147 | 45.7 | | 05.0 | 68 | 59.4 | 7.4 | 17 | 19.5 | 3.4 | 58.6 |
| | 23 | 162 | 45.9 | | 04.0 | 83 | 25.8 | 7.4 | 17 | 22.9 | 3.3 | 58.6 |
| 15 | 00 | 177 | 46.0 | S 2 | 03.0 | 97 | 52.2 | 7.5 | N17 | 26.2 | 3.1 | 58.6 |
| | 01 | 192 | 46.2 | | 02.0 | 112 | 18.7 | 7.4 | 17 | 29.3 | 3.0 | 58.5 |
| | 02 | 207 | 46.4 | | 01.1 | 126 | 45.1 | 7.5 | 17 | 32.3 | 3.0 | 58.5 |
| | 03 | 222 | 46.6 | 2 | 00.1 | 141 | 11.6 | 7.6 | 17 | 35.3 | 2.8 | 58.5 |
| | 04 | 237 | 46.7 | 1 | 59.1 | 155 | 38.2 | 7.5 | 17 | 38.1 | 2.7 | 58.4 |
| | 05 | 252 | 46.9 | | 58.1 | 170 | 04.7 | 7.6 | 17 | 40.8 | 2.6 | 58.4 |
| T | 06 | 267 | 47.1 | S 1 | 57.1 | 184 | 31.3 | 7.6 | N17 | 43.4 | 2.4 | 58.4 |
| E | 07 | 282 | 47.3 | | 56.1 | 198 | 57.9 | 7.6 | 17 | 45.8 | 2.4 | 58.3 |
| R | 08 | 297 | 47.4 | | 55.1 | 213 | 24.5 | 7.6 | 17 | 48.2 | 2.2 | 58.3 |
| Ç | 09 | 312 | 47.6 | . . | 54.1 | 227 | 51.1 | 7.7 | 17 | 50.4 | 2.2 | 58.3 |
| A | 10 | 327 | 47.8 | | 53.2 | 242 | 17.8 | 7.7 | 17 | 52.6 | 2.0 | 58.2 |
| | 11 | 342 | 48.0 | | 52.2 | 256 | 44.5 | 7.7 | 17 | 54.6 | 1.9 | 58.2 |
| F | 12 | 357 | 48.1 | S 1 | 51.2 | 271 | 11.2 | 7.8 | N17 | 56.5 | 1.8 | 58.2 |
| E | 13 | 12 | 48.3 | | 50.2 | 285 | 38.0 | 7.7 | 17 | 58.3 | 1.7 | 58.1 |
| I | 14 | 27 | 48.5 | | 49.2 | 300 | 04.7 | 7.8 | 18 | 00.0 | 1.6 | 58.1 |
| R | 15 | 42 | 48.7 | . . | 48.2 | 314 | 31.5 | 7.9 | 18 | 01.6 | 1.5 | 58.1 |
| A | 16 | 57 | 48.9 | | 47.2 | 328 | 58.4 | 7.8 | 18 | 03.1 | 1.4 | 58.0 |
| | 17 | 72 | 49.0 | | 46.2 | 343 | 25.2 | 7.9 | 18 | 04.5 | 1.2 | 58.0 |
| | 18 | 87 | 49.2 | S 1 | 45.3 | 357 | 52.1 | 7.9 | N18 | 05.7 | 1.2 | 58.0 |
| | 19 | 102 | 49.4 | | 44.3 | 12 | 19.0 | 8.0 | 18 | 06.9 | 1.0 | 57.9 |
| | 20 | 117 | 49.6 | | 43.3 | 26 | 46.0 | 8.0 | 18 | 07.9 | 0.9 | 57.9 |
| | 21 | 132 | 49.7 | . . | 42.3 | 41 | 13.0 | 8.0 | 18 | 08.8 | 0.8 | 57.9 |
| | 22 | 147 | 49.9 | | 41.3 | 55 | 40.0 | 8.1 | 18 | 09.6 | 0.7 | 57.8 |
| | 23 | 162 | 50.1 | | 40.3 | 70 | 07.1 | 8.0 | N18 | 10.3 | 0.6 | 57.8 |
| | | SD | 16.1 | d | 1.0 | SD | | 16.3 | | 16.1 | | 15.8 |

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 03 57 | 05 20 | 06 27 | 06 44 | 06 39 | 06 33 | |
| N 70 | 04 11 | 05 25 | 06 25 | 07 10 | 07 20 | 07 42 | 08 26 |
| 68 | 04 21 | 05 28 | 06 23 | 07 30 | 07 49 | 08 19 | 09 06 |
| 66 | 04 30 | 05 31 | 06 22 | 07 46 | 08 10 | 08 45 | 09 34 |
| 64 | 04 37 | 05 34 | 06 21 | 07 59 | 08 27 | 09 05 | 09 56 |
| 62 | 04 43 | 05 36 | 06 20 | 08 10 | 08 41 | 09 22 | 10 13 |
| 60 | 04 49 | 05 37 | 06 19 | 08 19 | 08 53 | 09 36 | 10 27 |
| N 58 | 04 53 | 05 39 | 06 18 | 08 27 | 09 04 | 09 47 | 10 39 |
| 56 | 04 57 | 05 40 | 06 17 | 08 35 | 09 13 | 09 58 | 10 50 |
| 54 | 05 00 | 05 41 | 06 16 | 08 41 | 09 21 | 10 07 | 10 59 |
| 52 | 05 03 | 05 42 | 06 16 | 08 47 | 09 28 | 10 15 | 11 08 |
| 50 | 05 05 | 05 43 | 06 15 | 08 53 | 09 35 | 10 22 | 11 15 |
| 45 | 05 11 | 05 45 | 06 14 | 09 04 | 09 49 | 10 38 | 11 31 |
| N 40 | 05 14 | 05 46 | 06 13 | 09 14 | 10 00 | 10 51 | 11 44 |
| 35 | 05 17 | 05 46 | 06 12 | 09 22 | 10 10 | 11 02 | 11 55 |
| 30 | 05 19 | 05 47 | 06 11 | 09 29 | 10 19 | 11 11 | 12 05 |
| 20 | 05 21 | 05 47 | 06 09 | 09 42 | 10 34 | 11 28 | 12 22 |
| N 10 | 05 22 | 05 46 | 06 07 | 09 53 | 10 47 | 11 42 | 12 36 |
| 0 | 05 21 | 05 45 | 06 06 | 10 04 | 11 00 | 11 56 | 12 50 |
| S 10 | 05 19 | 05 43 | 06 04 | 10 14 | 11 12 | 12 09 | 13 04 |
| 20 | 05 14 | 05 40 | 06 02 | 10 26 | 11 26 | 12 24 | 13 19 |
| 30 | 05 08 | 05 36 | 06 00 | 10 39 | 11 41 | 12 41 | 13 36 |
| 35 | 05 03 | 05 33 | 05 58 | 10 46 | 11 50 | 12 50 | 13 45 |
| 40 | 04 58 | 05 30 | 05 57 | 10 55 | 12 01 | 13 01 | 13 57 |
| 45 | 04 51 | 05 26 | 05 55 | 11 05 | 12 13 | 13 15 | 14 10 |
| S 50 | 04 42 | 05 20 | 05 53 | 11 17 | 12 27 | 13 31 | 14 26 |
| 52 | 04 37 | 05 18 | 05 52 | 11 23 | 12 34 | 13 38 | 14 33 |
| 54 | 04 32 | 05 15 | 05 51 | 11 29 | 12 42 | 13 47 | 14 42 |
| 56 | 04 26 | 05 12 | 05 49 | 11 37 | 12 51 | 13 56 | 14 51 |
| 58 | 04 20 | 05 08 | 05 48 | 11 45 | 13 00 | 14 07 | 15 02 |
| S 60 | 04 12 | 05 04 | 05 46 | 11 54 | 13 11 | 14 19 | 15 14 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 17 53 | 19 01 | 20 25 | 00 38 | 02 41 | 04 45 | |
| N 70 | 17 55 | 18 56 | 20 11 | 00 13 | 02 01 | 03 36 | 04 47 |
| 68 | 17 57 | 18 52 | 20 00 | 25 33 | 01 33 | 02 59 | 04 06 |
| 66 | 17 58 | 18 49 | 19 50 | 25 12 | 01 12 | 02 33 | 03 38 |
| 64 | 17 59 | 18 46 | 19 43 | 24 56 | 00 56 | 02 13 | 03 17 |
| 62 | 18 00 | 18 44 | 19 37 | 24 42 | 00 42 | 01 57 | 03 00 |
| 60 | 18 01 | 18 42 | 19 31 | 24 31 | 00 31 | 01 44 | 02 45 |
| N 58 | 18 02 | 18 41 | 19 27 | 24 21 | 00 21 | 01 32 | 02 33 |
| 56 | 18 02 | 18 39 | 19 23 | 24 12 | 00 12 | 01 22 | 02 22 |
| 54 | 18 03 | 18 38 | 19 20 | 24 04 | 00 04 | 01 13 | 02 13 |
| 52 | 18 03 | 18 37 | 19 17 | 23 57 | 25 05 | 01 05 | 02 05 |
| 50 | 18 04 | 18 36 | 19 14 | 23 51 | 24 58 | 00 58 | 01 57 |
| 45 | 18 05 | 18 34 | 19 09 | 23 38 | 24 43 | 00 43 | 01 41 |
| N 40 | 18 06 | 18 33 | 19 05 | 23 27 | 24 30 | 00 30 | 01 28 |
| 35 | 18 07 | 18 32 | 19 02 | 23 17 | 24 19 | 00 19 | 01 17 |
| 30 | 18 08 | 18 32 | 19 00 | 23 09 | 24 10 | 00 10 | 01 07 |
| 20 | 18 09 | 18 31 | 18 57 | 22 55 | 23 54 | 24 50 | 00 50 |
| N 10 | 18 11 | 18 32 | 18 56 | 22 42 | 23 40 | 24 36 | 00 36 |
| 0 | 18 12 | 18 33 | 18 57 | 22 31 | 23 27 | 24 22 | 00 22 |
| S 10 | 18 14 | 18 35 | 18 59 | 22 19 | 23 14 | 24 08 | 00 08 |
| 20 | 18 16 | 18 38 | 19 03 | 22 07 | 22 59 | 23 53 | 24 48 |
| 30 | 18 18 | 18 42 | 19 10 | 21 52 | 22 43 | 23 36 | 24 31 |
| 35 | 18 19 | 18 44 | 19 14 | 21 44 | 22 34 | 23 27 | 24 21 |
| 40 | 18 21 | 18 48 | 19 19 | 21 35 | 22 23 | 23 15 | 24 10 |
| 45 | 18 22 | 18 52 | 19 26 | 21 24 | 22 11 | 23 02 | 23 57 |
| S 50 | 18 24 | 18 57 | 19 35 | 21 11 | 21 56 | 22 46 | 23 41 |
| 52 | 18 25 | 18 59 | 19 40 | 21 05 | 21 48 | 22 38 | 23 34 |
| 54 | 18 26 | 19 02 | 19 45 | 20 58 | 21 41 | 22 30 | 23 26 |
| 56 | 18 28 | 19 05 | 19 50 | 20 50 | 21 32 | 22 20 | 23 16 |
| 58 | 18 29 | 19 09 | 19 56 | 20 42 | 21 22 | 22 10 | 23 06 |
| S 60 | 18 31 | 19 13 | 20 04 | 20 32 | 21 10 | 21 57 | 22 54 |

| Dia | SOL ET 00h | SOL (-) 12h | Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 13 | 09 29 | 09 21 | 12 09 | 16 17 | 03 49 | 04 | 26 |
| 14 | 09 13 | 09 05 | 12 09 | 17 13 | 04 45 | 05 | 37 |
| 15 | 08 56 | 08 48 | 12 09 | 18 09 | 05 41 | 06 | 48 |

# 20, 21 e 22 DE JULHO DE 2016 (4ª feira, 5ª feira e 6ª feira)



| TU | | SOL | | | | LUA | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | v | | Dec | d | Ph |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | ° ′ | ′ | ′ |
| 20 | 00 | 178 | 24.7 | N20 | 36.9 | 358 36.9 | 9.2 | S16 | 55.7 | 4.5 | 57.0 |
| | 01 | 193 | 24.7 | | 36.4 | 13 05.1 | 9.3 | 16 | 51.2 | 4.6 | 57.0 |
| | 02 | 208 | 24.6 | | 35.9 | 27 33.4 | 9.3 | 16 | 46.6 | 4.7 | 57.1 |
| | 03 | 223 | 24.6 | . . | 35.5 | 42 01.7 | 9.3 | 16 | 41.9 | 4.8 | 57.1 |
| | 04 | 238 | 24.6 | | 35.0 | 56 30.0 | 9.2 | 16 | 37.1 | 4.8 | 57.1 |
| Q | 05 | 253 | 24.6 | | 34.5 | 70 58.2 | 9.3 | 16 | 32.3 | 5.0 | 57.1 |
| U | 06 | 268 | 24.5 | N20 | 34.0 | 85 26.5 | 9.3 | S16 | 27.3 | 5.1 | 57.1 |
| A | 07 | 283 | 24.5 | | 33.6 | 99 54.8 | 9.2 | 16 | 22.2 | 5.2 | 57.2 |
| R | 08 | 298 | 24.5 | | 33.1 | 114 23.0 | 9.3 | 16 | 17.0 | 5.2 | 57.2 |
| T | 09 | 313 | 24.4 | . . | 32.6 | 128 51.3 | 9.3 | 16 | 11.8 | 5.4 | 57.2 |
| A | 10 | 328 | 24.4 | | 32.1 | 143 19.6 | 9.3 | 16 | 06.4 | 5.4 | 57.2 |
| | 11 | 343 | 24.4 | | 31.7 | 157 47.9 | 9.3 | 16 | 01.0 | 5.6 | 57.3 |
| | 12 | 358 | 24.3 | N20 | 31.2 | 172 16.2 | 9.3 | S15 | 55.4 | 5.6 | 57.3 |
| F | 13 | 13 | 24.3 | | 30.7 | 186 44.5 | 9.3 | 15 | 49.8 | 5.8 | 57.3 |
| E | 14 | 28 | 24.3 | | 30.2 | 201 12.8 | 9.3 | 15 | 44.0 | 5.8 | 57.3 |
| I | 15 | 43 | 24.2 | . . | 29.7 | 215 41.1 | 9.3 | 15 | 38.2 | 5.9 | 57.4 |
| R | 16 | 58 | 24.2 | | 29.3 | 230 09.4 | 9.3 | 15 | 32.3 | 6.0 | 57.4 |
| A | 17 | 73 | 24.2 | | 28.8 | 244 37.7 | 9.3 | 15 | 26.3 | 6.1 | 57.4 |
| | 18 | 88 | 24.1 | N20 | 28.3 | 259 06.0 | 9.3 | S15 | 20.2 | 6.2 | 57.4 |
| | 19 | 103 | 24.1 | | 27.8 | 273 34.3 | 9.4 | 15 | 14.0 | 6.3 | 57.4 |
| | 20 | 118 | 24.1 | | 27.3 | 288 02.7 | 9.3 | 15 | 07.7 | 6.4 | 57.5 |
| | 21 | 133 | 24.1 | . . | 26.8 | 302 31.0 | 9.4 | 15 | 01.3 | 6.5 | 57.5 |
| | 22 | 148 | 24.0 | | 26.4 | 316 59.4 | 9.3 | 14 | 54.8 | 6.5 | 57.5 |
| | 23 | 163 | 24.0 | | 25.9 | 331 27.7 | 9.4 | 14 | 48.3 | 6.7 | 57.5 |
| 21 | 00 | 178 | 24.0 | N20 | 25.4 | 345 56.1 | 9.4 | S14 | 41.6 | 6.7 | 57.6 |
| | 01 | 193 | 23.9 | | 24.9 | 0 24.5 | 9.4 | 14 | 34.9 | 6.8 | 57.6 |
| | 02 | 208 | 23.9 | | 24.4 | 14 52.9 | 9.4 | 14 | 28.1 | 6.9 | 57.6 |
| | 03 | 223 | 23.9 | . . | 23.9 | 29 21.3 | 9.4 | 14 | 21.2 | 7.0 | 57.6 |
| | 04 | 238 | 23.9 | | 23.4 | 43 49.7 | 9.4 | 14 | 14.2 | 7.1 | 57.6 |
| Q | 05 | 253 | 23.8 | | 23.0 | 58 18.1 | 9.4 | 14 | 07.1 | 7.1 | 57.7 |
| U | 06 | 268 | 23.8 | N20 | 22.5 | 72 46.5 | 9.5 | S14 | 00.0 | 7.3 | 57.7 |
| I | 07 | 283 | 23.8 | | 22.0 | 87 15.0 | 9.4 | 13 | 52.7 | 7.3 | 57.7 |
| N | 08 | 298 | 23.8 | | 21.5 | 101 43.4 | 9.5 | 13 | 45.4 | 7.4 | 57.7 |
| T | 09 | 313 | 23.7 | . . | 21.0 | 116 11.9 | 9.5 | 13 | 38.0 | 7.5 | 57.8 |
| A | 10 | 328 | 23.7 | | 20.5 | 130 40.4 | 9.5 | 13 | 30.5 | 7.6 | 57.8 |
| | 11 | 343 | 23.7 | | 20.0 | 145 08.9 | 9.5 | 13 | 22.9 | 7.6 | 57.8 |
| | 12 | 358 | 23.7 | N20 | 19.5 | 159 37.4 | 9.5 | S13 | 15.3 | 7.8 | 57.8 |
| F | 13 | 13 | 23.6 | | 19.0 | 174 05.9 | 9.5 | 13 | 07.5 | 7.8 | 57.8 |
| E | 14 | 28 | 23.6 | | 18.5 | 188 34.4 | 9.6 | 12 | 59.7 | 7.9 | 57.9 |
| I | 15 | 43 | 23.6 | . . | 18.0 | 203 03.0 | 9.5 | 12 | 51.8 | 7.9 | 57.9 |
| R | 16 | 58 | 23.6 | | 17.5 | 217 31.5 | 9.6 | 12 | 43.9 | 8.1 | 57.9 |
| A | 17 | 73 | 23.5 | | 17.1 | 232 00.1 | 9.6 | 12 | 35.8 | 8.1 | 57.9 |
| | 18 | 88 | 23.5 | N20 | 16.6 | 246 28.7 | 9.6 | S12 | 27.7 | 8.2 | 57.9 |
| | 19 | 103 | 23.5 | | 16.1 | 260 57.3 | 9.6 | 12 | 19.5 | 8.3 | 58.0 |
| | 20 | 118 | 23.5 | | 15.6 | 275 25.9 | 9.6 | 12 | 11.2 | 8.3 | 58.0 |
| | 21 | 133 | 23.4 | . . | 15.1 | 289 54.5 | 9.7 | 12 | 02.9 | 8.4 | 58.0 |
| | 22 | 148 | 23.4 | | 14.6 | 304 23.2 | 9.6 | 11 | 54.5 | 8.5 | 58.0 |
| | 23 | 163 | 23.4 | | 14.1 | 318 51.8 | 9.7 | 11 | 46.0 | 8.6 | 58.0 |
| 22 | 00 | 178 | 23.4 | N20 | 13.6 | 333 20.5 | 9.7 | S11 | 37.4 | 8.6 | 58.1 |
| | 01 | 193 | 23.4 | | 13.1 | 347 49.2 | 9.7 | 11 | 28.8 | 8.7 | 58.1 |
| | 02 | 208 | 23.3 | | 12.6 | 2 17.9 | 9.7 | 11 | 20.1 | 8.8 | 58.1 |
| | 03 | 223 | 23.3 | . . | 12.1 | 16 46.6 | 9.7 | 11 | 11.3 | 8.8 | 58.1 |
| | 04 | 238 | 23.3 | | 11.6 | 31 15.3 | 9.8 | 11 | 02.5 | 8.9 | 58.1 |
| | 05 | 253 | 23.3 | | 11.1 | 45 44.1 | 9.7 | 10 | 53.6 | 9.0 | 58.2 |
| S | 06 | 268 | 23.3 | N20 | 10.6 | 60 12.8 | 9.8 | S10 | 44.6 | 9.0 | 58.2 |
| E | 07 | 283 | 23.2 | | 10.1 | 74 41.6 | 9.8 | 10 | 35.6 | 9.1 | 58.2 |
| X | 08 | 298 | 23.2 | | 09.5 | 89 10.4 | 9.8 | 10 | 26.5 | 9.2 | 58.2 |
| T | 09 | 313 | 23.2 | . . | 09.0 | 103 39.2 | 9.8 | 10 | 17.3 | 9.2 | 58.2 |
| A | 10 | 328 | 23.2 | | 08.5 | 118 08.0 | 9.8 | 10 | 08.1 | 9.3 | 58.2 |
| | 11 | 343 | 23.2 | | 08.0 | 132 36.8 | 9.8 | 9 | 58.8 | 9.3 | 58.3 |
| | 12 | 358 | 23.1 | N20 | 07.5 | 147 05.6 | 9.9 | S 9 | 49.5 | 9.4 | 58.3 |
| F | 13 | 13 | 23.1 | | 07.0 | 161 34.5 | 9.8 | 9 | 40.1 | 9.5 | 58.3 |
| E | 14 | 28 | 23.1 | | 06.5 | 176 03.3 | 9.9 | 9 | 30.6 | 9.5 | 58.3 |
| I | 15 | 43 | 23.1 | . . | 06.0 | 190 32.2 | 9.9 | 9 | 21.1 | 9.6 | 58.3 |
| R | 16 | 58 | 23.1 | | 05.5 | 205 01.1 | 9.9 | 9 | 11.5 | 9.6 | 58.4 |
| A | 17 | 73 | 23.0 | | 05.0 | 219 30.0 | 9.9 | 9 | 01.9 | 9.7 | 58.4 |
| | 18 | 88 | 23.0 | N20 | 04.5 | 233 58.9 | 10.0 | S 8 | 52.2 | 9.8 | 58.4 |
| | 19 | 103 | 23.0 | | 04.0 | 248 27.9 | 9.9 | 8 | 42.4 | 9.8 | 58.4 |
| | 20 | 118 | 23.0 | | 03.5 | 262 56.8 | 10.0 | 8 | 32.6 | 9.9 | 58.4 |
| | 21 | 133 | 23.0 | . . | 02.9 | 277 25.8 | 9.9 | 8 | 22.7 | 9.9 | 58.4 |
| | 22 | 148 | 23.0 | | 02.4 | 291 54.7 | 10.0 | 8 | 12.8 | 9.9 | 58.4 |
| | 23 | 163 | 22.9 | | 01.9 | 306 23.7 | 10.0 | S 8 | 02.9 | 10.0 | 58.5 |
| | | SD | 15.8 | d | 0.5 | SD | 15.6 | | 15.8 | | 15.9 |

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | | | | 22 35 | 22 27 | 22 20 | 22 14 |
| N 70 | | | | 22 03 | 22 06 | 22 08 | 22 08 |
| 68 | //// | //// | 01 09 | 21 39 | 21 50 | 21 58 | 22 04 |
| 66 | //// | //// | 02 03 | 21 20 | 21 37 | 21 49 | 22 00 |
| 64 | //// | //// | 02 35 | 21 05 | 21 26 | 21 42 | 21 56 |
| 62 | //// | 01 28 | 02 58 | 20 52 | 21 17 | 21 36 | 21 54 |
| 60 | //// | 02 06 | 03 17 | 20 42 | 21 09 | 21 31 | 21 51 |
| N 58 | //// | 02 32 | 03 32 | 20 32 | 21 01 | 21 26 | 21 49 |
| 56 | 01 20 | 02 52 | 03 45 | 20 24 | 20 55 | 21 22 | 21 47 |
| 54 | 01 55 | 03 08 | 03 56 | 20 17 | 20 49 | 21 18 | 21 45 |
| 52 | 02 19 | 03 22 | 04 06 | 20 10 | 20 44 | 21 15 | 21 43 |
| 50 | 02 38 | 03 34 | 04 15 | 20 04 | 20 40 | 21 12 | 21 42 |
| 45 | 03 13 | 03 59 | 04 34 | 19 51 | 20 30 | 21 05 | 21 38 |
| N 40 | 03 38 | 04 18 | 04 49 | 19 40 | 20 21 | 20 59 | 21 36 |
| 35 | 03 58 | 04 33 | 05 02 | 19 31 | 20 14 | 20 55 | 21 33 |
| 30 | 04 14 | 04 46 | 05 13 | 19 23 | 20 08 | 20 50 | 21 31 |
| 20 | 04 39 | 05 08 | 05 32 | 19 09 | 19 57 | 20 43 | 21 27 |
| N 10 | 04 59 | 05 25 | 05 48 | 18 57 | 19 47 | 20 36 | 21 24 |
| 0 | 05 15 | 05 41 | 06 03 | 18 46 | 19 38 | 20 30 | 21 21 |
| S 10 | 05 30 | 05 55 | 06 18 | 18 34 | 19 29 | 20 24 | 21 18 |
| 20 | 05 43 | 06 10 | 06 34 | 18 22 | 19 19 | 20 17 | 21 15 |
| 30 | 05 57 | 06 26 | 06 52 | 18 08 | 19 08 | 20 09 | 21 11 |
| 35 | 06 04 | 06 35 | 07 02 | 18 00 | 19 02 | 20 05 | 21 09 |
| 40 | 06 11 | 06 45 | 07 14 | 17 51 | 18 54 | 20 00 | 21 07 |
| 45 | 06 20 | 06 56 | 07 28 | 17 40 | 18 46 | 19 54 | 21 04 |
| S 50 | 06 29 | 07 09 | 07 45 | 17 27 | 18 36 | 19 47 | 21 01 |
| 52 | 06 33 | 07 15 | 07 53 | 17 21 | 18 31 | 19 44 | 20 59 |
| 54 | 06 37 | 07 21 | 08 02 | 17 14 | 18 25 | 19 40 | 20 57 |
| 56 | 06 42 | 07 29 | 08 12 | 17 06 | 18 20 | 19 37 | 20 55 |
| 58 | 06 47 | 07 37 | 08 24 | 16 58 | 18 13 | 19 32 | 20 53 |
| S 60 | 06 52 | 07 46 | 08 37 | 16 48 | 18 06 | 19 27 | 20 51 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | | | | 01 30 | 03 35 | 05 32 | 07 26 |
| N 70 | | | | 02 25 | 04 06 | 05 51 | 07 36 |
| 68 | 22 56 | //// | //// | 02 58 | 04 29 | 06 06 | 07 45 |
| 66 | 22 07 | //// | //// | 03 22 | 04 47 | 06 18 | 07 52 |
| 64 | 21 36 | //// | //// | 03 41 | 05 01 | 06 28 | 07 57 |
| 62 | 21 13 | 22 41 | //// | 03 56 | 05 13 | 06 36 | 08 02 |
| 60 | 20 55 | 22 04 | //// | 04 09 | 05 23 | 06 44 | 08 07 |
| N 58 | 20 40 | 21 39 | //// | 04 20 | 05 32 | 06 50 | 08 10 |
| 56 | 20 27 | 21 19 | 22 49 | 04 29 | 05 40 | 06 56 | 08 14 |
| 54 | 20 16 | 21 03 | 22 15 | 04 38 | 05 47 | 07 01 | 08 17 |
| 52 | 20 06 | 20 50 | 21 52 | 04 45 | 05 53 | 07 05 | 08 19 |
| 50 | 19 57 | 20 38 | 21 33 | 04 52 | 05 59 | 07 09 | 08 22 |
| 45 | 19 39 | 20 14 | 20 59 | 05 07 | 06 11 | 07 18 | 08 27 |
| N 40 | 19 24 | 19 55 | 20 34 | 05 18 | 06 21 | 07 25 | 08 32 |
| 35 | 19 11 | 19 39 | 20 14 | 05 29 | 06 29 | 07 32 | 08 35 |
| 30 | 19 00 | 19 26 | 19 58 | 05 37 | 06 37 | 07 37 | 08 39 |
| 20 | 18 41 | 19 05 | 19 33 | 05 53 | 06 49 | 07 47 | 08 45 |
| N 10 | 18 25 | 18 48 | 19 14 | 06 06 | 07 00 | 07 55 | 08 50 |
| 0 | 18 10 | 18 32 | 18 58 | 06 18 | 07 11 | 08 03 | 08 54 |
| S 10 | 17 55 | 18 17 | 18 43 | 06 31 | 07 21 | 08 11 | 08 59 |
| 20 | 17 39 | 18 03 | 18 30 | 06 44 | 07 32 | 08 19 | 09 04 |
| 30 | 17 21 | 17 47 | 18 16 | 06 59 | 07 45 | 08 28 | 09 09 |
| 35 | 17 11 | 17 38 | 18 09 | 07 07 | 07 52 | 08 33 | 09 13 |
| 40 | 16 59 | 17 29 | 18 02 | 07 17 | 08 00 | 08 39 | 09 16 |
| 45 | 16 45 | 17 17 | 17 54 | 07 29 | 08 09 | 08 46 | 09 20 |
| S 50 | 16 28 | 17 04 | 17 45 | 07 43 | 08 21 | 08 54 | 09 25 |
| 52 | 16 20 | 16 59 | 17 41 | 07 49 | 08 26 | 08 58 | 09 27 |
| 54 | 16 11 | 16 52 | 17 36 | 07 56 | 08 32 | 09 02 | 09 30 |
| 56 | 16 01 | 16 45 | 17 32 | 08 04 | 08 38 | 09 07 | 09 33 |
| 58 | 15 50 | 16 37 | 17 27 | 08 13 | 08 45 | 09 12 | 09 35 |
| S 60 | 15 36 | 16 28 | 17 21 | 08 23 | 08 53 | 09 18 | 09 39 |

| Dia | SOL ET 00h | SOL (-) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 20 | 06 21 | 06 23 | 12 06 | 00 06 | 12 32 | 16 | 100 |
| 21 | 06 24 | 06 25 | 12 06 | 00 58 | 13 24 | 17 | 97 |
| 22 | 06 26 | 06 27 | 12 06 | 01 50 | 14 16 | 18 | 92 |

# 30 DE SETEMBRO, 1 e 2 DE OUTUBRO DE 2016 (6ª feira, Sábado e Domingo) 195

| TU | SOL AHG | SOL Dec | LUA AHG | LUA v | LUA Dec | LUA d | LUA Ph |
|---|---|---|---|---|---|---|---|
| d h | ° ′ | ° ′ | ° ′ | ′ | ° ′ | ′ | ′ |
| 30 00 | 182 30.4 | S 2 52.8 | 192 22.0 | 14.3 | N 2 42.0 | 9.7 | 55.0 |
| 01 | 197 30.6 | 53.8 | 206 55.3 | 14.3 | 2 32.3 | 9.6 | 54.9 |
| 02 | 212 30.8 | 54.8 | 221 28.6 | 14.3 | 2 22.7 | 9.7 | 54.9 |
| 03 | 227 31.0 | 55.8 | 236 01.9 | 14.4 | 2 13.0 | 9.6 | 54.9 |
| 04 | 242 31.2 | 56.7 | 250 35.3 | 14.4 | 2 03.4 | 9.7 | 54.9 |
| 05 | 257 31.4 | 57.7 | 265 08.7 | 14.4 | 1 53.7 | 9.6 | 54.9 |
| 06 | 272 31.6 | S 2 58.7 | 279 42.1 | 14.5 | N 1 44.1 | 9.7 | 54.9 |
| 07 | 287 31.8 | 2 59.6 | 294 15.6 | 14.4 | 1 34.4 | 9.7 | 54.8 |
| 08 | 302 32.0 | 3 00.6 | 308 49.0 | 14.5 | 1 24.7 | 9.6 | 54.8 |
| 09 | 317 32.2 | 01.6 | 323 22.5 | 14.5 | 1 15.1 | 9.7 | 54.8 |
| 10 | 332 32.4 | 02.5 | 337 56.0 | 14.5 | 1 05.4 | 9.7 | 54.8 |
| 11 | 347 32.6 | 03.5 | 352 29.5 | 14.5 | 0 55.7 | 9.7 | 54.8 |
| 12 | 2 32.8 | S 3 04.5 | 7 03.0 | 14.6 | N 0 46.0 | 9.6 | 54.8 |
| 13 | 17 33.0 | 05.5 | 21 36.6 | 14.6 | 0 36.4 | 9.7 | 54.8 |
| 14 | 32 33.2 | 06.4 | 36 10.2 | 14.5 | 0 26.7 | 9.7 | 54.7 |
| 15 | 47 33.4 | 07.4 | 50 43.7 | 14.6 | 0 17.0 | 9.6 | 54.7 |
| 16 | 62 33.6 | 08.4 | 65 17.3 | 14.6 | N 0 07.4 | 9.7 | 54.7 |
| 17 | 77 33.8 | 09.3 | 79 50.9 | 14.7 | S 0 02.3 | 9.6 | 54.7 |
| 18 | 92 34.0 | S 3 10.3 | 94 24.6 | 14.6 | S 0 11.9 | 9.7 | 54.7 |
| 19 | 107 34.2 | 11.3 | 108 58.2 | 14.7 | 0 21.6 | 9.6 | 54.7 |
| 20 | 122 34.4 | 12.2 | 123 31.9 | 14.6 | 0 31.2 | 9.6 | 54.7 |
| 21 | 137 34.6 | 13.2 | 138 05.5 | 14.7 | 0 40.8 | 9.7 | 54.6 |
| 22 | 152 34.8 | 14.2 | 152 39.2 | 14.7 | 0 50.5 | 9.6 | 54.6 |
| 23 | 167 35.0 | 15.2 | 167 12.9 | 14.7 | 1 00.1 | 9.6 | 54.6 |
| 1 00 | 182 35.2 | S 3 16.1 | 181 46.6 | 14.7 | S 1 09.7 | 9.6 | 54.6 |
| 01 | 197 35.4 | 17.1 | 196 20.3 | 14.7 | 1 19.3 | 9.6 | 54.6 |
| 02 | 212 35.6 | 18.1 | 210 54.0 | 14.8 | 1 28.9 | 9.6 | 54.6 |
| 03 | 227 35.8 | 19.0 | 225 27.8 | 14.7 | 1 38.5 | 9.5 | 54.6 |
| 04 | 242 36.0 | 20.0 | 240 01.5 | 14.8 | 1 48.0 | 9.6 | 54.6 |
| 05 | 257 36.2 | 21.0 | 254 35.3 | 14.7 | 1 57.6 | 9.5 | 54.5 |
| 06 | 272 36.4 | S 3 21.9 | 269 09.0 | 14.8 | S 2 07.1 | 9.6 | 54.5 |
| 07 | 287 36.6 | 22.9 | 283 42.8 | 14.8 | 2 16.7 | 9.5 | 54.5 |
| 08 | 302 36.8 | 23.9 | 298 16.6 | 14.8 | 2 26.2 | 9.5 | 54.5 |
| 09 | 317 37.0 | 24.8 | 312 50.4 | 14.7 | 2 35.7 | 9.5 | 54.5 |
| 10 | 332 37.2 | 25.8 | 327 24.1 | 14.8 | 2 45.2 | 9.4 | 54.5 |
| 11 | 347 37.4 | 26.8 | 341 57.9 | 14.8 | 2 54.6 | 9.5 | 54.5 |
| 12 | 2 37.6 | S 3 27.8 | 356 31.7 | 14.8 | S 3 04.1 | 9.4 | 54.5 |
| 13 | 17 37.8 | 28.7 | 11 05.5 | 14.9 | 3 13.5 | 9.4 | 54.4 |
| 14 | 32 38.0 | 29.7 | 25 39.4 | 14.8 | 3 22.9 | 9.4 | 54.4 |
| 15 | 47 38.2 | 30.7 | 40 13.2 | 14.8 | 3 32.3 | 9.4 | 54.4 |
| 16 | 62 38.4 | 31.6 | 54 47.0 | 14.8 | 3 41.7 | 9.4 | 54.4 |
| 17 | 77 38.6 | 32.6 | 69 20.8 | 14.8 | 3 51.1 | 9.3 | 54.4 |
| 18 | 92 38.8 | S 3 33.6 | 83 54.6 | 14.8 | S 4 00.4 | 9.4 | 54.4 |
| 19 | 107 39.0 | 34.5 | 98 28.4 | 14.9 | 4 09.8 | 9.3 | 54.4 |
| 20 | 122 39.2 | 35.5 | 113 02.3 | 14.8 | 4 19.1 | 9.2 | 54.4 |
| 21 | 137 39.4 | 36.5 | 127 36.1 | 14.8 | 4 28.3 | 9.3 | 54.4 |
| 22 | 152 39.6 | 37.4 | 142 09.9 | 14.8 | 4 37.6 | 9.2 | 54.3 |
| 23 | 167 39.8 | 38.4 | 156 43.7 | 14.8 | 4 46.8 | 9.2 | 54.3 |
| 2 00 | 182 40.0 | S 3 39.4 | 171 17.5 | 14.9 | S 4 56.0 | 9.2 | 54.3 |
| 01 | 197 40.2 | 40.3 | 185 51.4 | 14.8 | 5 05.2 | 9.2 | 54.3 |
| 02 | 212 40.4 | 41.3 | 200 25.2 | 14.8 | 5 14.4 | 9.1 | 54.3 |
| 03 | 227 40.6 | 42.3 | 214 59.0 | 14.8 | 5 23.5 | 9.1 | 54.3 |
| 04 | 242 40.8 | 43.2 | 229 32.8 | 14.8 | 5 32.6 | 9.1 | 54.3 |
| 05 | 257 41.0 | 44.2 | 244 06.6 | 14.8 | 5 41.7 | 9.1 | 54.3 |
| 06 | 272 41.2 | S 3 45.2 | 258 40.4 | 14.8 | S 5 50.8 | 9.0 | 54.3 |
| 07 | 287 41.4 | 46.1 | 273 14.2 | 14.8 | 5 59.8 | 9.0 | 54.3 |
| 08 | 302 41.6 | 47.1 | 287 48.0 | 14.8 | 6 08.8 | 9.0 | 54.2 |
| 09 | 317 41.8 | 48.1 | 302 21.8 | 14.8 | 6 17.8 | 8.9 | 54.2 |
| 10 | 332 42.0 | 49.0 | 316 55.6 | 14.8 | 6 26.7 | 9.0 | 54.2 |
| 11 | 347 42.1 | 50.0 | 331 29.4 | 14.7 | 6 35.7 | 8.8 | 54.2 |
| 12 | 2 42.3 | S 3 51.0 | 346 03.1 | 14.8 | S 6 44.5 | 8.9 | 54.2 |
| 13 | 17 42.5 | 51.9 | 0 36.9 | 14.8 | 6 53.4 | 8.8 | 54.2 |
| 14 | 32 42.7 | 52.9 | 15 10.7 | 14.7 | 7 02.2 | 8.8 | 54.2 |
| 15 | 47 42.9 | 53.9 | 29 44.4 | 14.8 | 7 11.0 | 8.8 | 54.2 |
| 16 | 62 43.1 | 54.8 | 44 18.2 | 14.7 | 7 19.8 | 8.7 | 54.2 |
| 17 | 77 43.3 | 55.8 | 58 51.9 | 14.7 | 7 28.5 | 8.7 | 54.2 |
| 18 | 92 43.5 | S 3 56.8 | 73 25.6 | 14.7 | S 7 37.2 | 8.7 | 54.2 |
| 19 | 107 43.7 | 57.7 | 87 59.3 | 14.7 | 7 45.9 | 8.6 | 54.2 |
| 20 | 122 43.9 | 58.7 | 102 33.0 | 14.7 | 7 54.5 | 8.6 | 54.1 |
| 21 | 137 44.1 | 3 59.7 | 117 06.7 | 14.7 | 8 03.1 | 8.5 | 54.1 |
| 22 | 152 44.3 | 4 00.6 | 131 40.4 | 14.7 | 8 11.6 | 8.5 | 54.1 |
| 23 | 167 44.5 | S 4 01.6 | 146 14.1 | 14.6 | S 8 20.1 | 8.5 | 54.1 |
| | SD 16.0 | d 1.0 | SD 14.9 | | 14.8 | | 14.8 |

SEXTA FEIRA — SÁBADO — DOMINGO

| Lat | CREP Naut | CREP Civil | SOL Nascer | LUA - Nascer 30 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 03 51 | 05 13 | 06 20 | 04 57 | 06 33 | 08 08 | 09 44 |
| N 70 | 04 03 | 05 16 | 06 17 | 05 00 | 06 30 | 07 59 | 09 28 |
| 68 | 04 12 | 05 19 | 06 14 | 05 02 | 06 27 | 07 51 | 09 15 |
| 66 | 04 20 | 05 21 | 06 12 | 05 04 | 06 25 | 07 45 | 09 04 |
| 64 | 04 26 | 05 22 | 06 10 | 05 05 | 06 23 | 07 40 | 08 56 |
| 62 | 04 32 | 05 24 | 06 08 | 05 06 | 06 21 | 07 35 | 08 48 |
| 60 | 04 36 | 05 25 | 06 06 | 05 07 | 06 20 | 07 31 | 08 42 |
| N 58 | 04 40 | 05 26 | 06 05 | 05 08 | 06 19 | 07 28 | 08 36 |
| 56 | 04 43 | 05 27 | 06 04 | 05 09 | 06 17 | 07 25 | 08 31 |
| 54 | 04 46 | 05 27 | 06 02 | 05 10 | 06 16 | 07 22 | 08 26 |
| 52 | 04 48 | 05 28 | 06 01 | 05 11 | 06 16 | 07 19 | 08 22 |
| 50 | 04 51 | 05 28 | 06 00 | 05 11 | 06 15 | 07 17 | 08 19 |
| 45 | 04 55 | 05 29 | 05 58 | 05 13 | 06 13 | 07 12 | 08 11 |
| N 40 | 04 58 | 05 30 | 05 57 | 05 14 | 06 11 | 07 08 | 08 04 |
| 35 | 05 00 | 05 30 | 05 55 | 05 15 | 06 10 | 07 05 | 07 58 |
| 30 | 05 02 | 05 30 | 05 54 | 05 16 | 06 09 | 07 01 | 07 53 |
| 20 | 05 03 | 05 29 | 05 51 | 05 18 | 06 07 | 06 56 | 07 45 |
| N 10 | 05 03 | 05 28 | 05 49 | 05 19 | 06 05 | 06 51 | 07 37 |
| 0 | 05 02 | 05 26 | 05 46 | 05 20 | 06 04 | 06 47 | 07 30 |
| S 10 | 04 58 | 05 23 | 05 44 | 05 22 | 06 02 | 06 43 | 07 23 |
| 20 | 04 53 | 05 19 | 05 41 | 05 23 | 06 01 | 06 38 | 07 16 |
| 30 | 04 46 | 05 14 | 05 38 | 05 25 | 05 59 | 06 33 | 07 08 |
| 35 | 04 41 | 05 11 | 05 36 | 05 26 | 05 58 | 06 30 | 07 03 |
| 40 | 04 35 | 05 07 | 05 34 | 05 27 | 05 57 | 06 27 | 06 57 |
| 45 | 04 27 | 05 02 | 05 31 | 05 28 | 05 55 | 06 23 | 06 51 |
| S 50 | 04 17 | 04 56 | 05 28 | 05 30 | 05 54 | 06 18 | 06 44 |
| 52 | 04 12 | 04 53 | 05 27 | 05 30 | 05 53 | 06 16 | 06 40 |
| 54 | 04 07 | 04 50 | 05 25 | 05 31 | 05 52 | 06 14 | 06 36 |
| 56 | 04 00 | 04 46 | 05 24 | 05 32 | 05 51 | 06 11 | 06 32 |
| 58 | 03 53 | 04 42 | 05 22 | 05 33 | 05 50 | 06 08 | 06 28 |
| S 60 | 03 45 | 04 37 | 05 20 | 05 34 | 05 49 | 06 05 | 06 22 |

| Lat | SOL Pôr | CREP Civil | CREP Naut | LUA - Pôr 30 | 1 | 2 | 3 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 17 16 | 18 23 | 19 44 | 17 39 | 17 33 | 17 28 | 17 22 |
| N 70 | 17 20 | 18 20 | 19 33 | 17 39 | 17 39 | 17 39 | 17 40 |
| 68 | 17 23 | 18 18 | 19 24 | 17 39 | 17 43 | 17 48 | 17 54 |
| 66 | 17 26 | 18 16 | 19 17 | 17 40 | 17 47 | 17 55 | 18 05 |
| 64 | 17 28 | 18 15 | 19 11 | 17 40 | 17 50 | 18 02 | 18 15 |
| 62 | 17 30 | 18 14 | 19 06 | 17 40 | 17 53 | 18 07 | 18 23 |
| 60 | 17 31 | 18 13 | 19 01 | 17 40 | 17 56 | 18 12 | 18 30 |
| N 58 | 17 33 | 18 12 | 18 58 | 17 40 | 17 58 | 18 16 | 18 37 |
| 56 | 17 34 | 18 11 | 18 54 | 17 40 | 18 00 | 18 20 | 18 42 |
| 54 | 17 36 | 18 11 | 18 52 | 17 40 | 18 02 | 18 24 | 18 47 |
| 52 | 17 37 | 18 10 | 18 49 | 17 40 | 18 03 | 18 27 | 18 52 |
| 50 | 17 38 | 18 10 | 18 47 | 17 41 | 18 05 | 18 30 | 18 56 |
| 45 | 17 40 | 18 09 | 18 43 | 17 41 | 18 08 | 18 36 | 19 05 |
| N 40 | 17 42 | 18 09 | 18 40 | 17 41 | 18 11 | 18 41 | 19 13 |
| 35 | 17 44 | 18 09 | 18 38 | 17 41 | 18 13 | 18 45 | 19 19 |
| 30 | 17 45 | 18 09 | 18 37 | 17 41 | 18 15 | 18 49 | 19 25 |
| 20 | 17 48 | 18 10 | 18 35 | 17 41 | 18 19 | 18 56 | 19 35 |
| N 10 | 17 50 | 18 11 | 18 36 | 17 41 | 18 22 | 19 02 | 19 43 |
| 0 | 17 53 | 18 13 | 18 38 | 17 41 | 18 25 | 19 08 | 19 52 |
| S 10 | 17 55 | 18 16 | 18 41 | 17 42 | 18 28 | 19 14 | 20 00 |
| 20 | 17 58 | 18 20 | 18 46 | 17 42 | 18 31 | 19 20 | 20 09 |
| 30 | 18 02 | 18 26 | 18 54 | 17 42 | 18 34 | 19 27 | 20 19 |
| 35 | 18 03 | 18 29 | 18 59 | 17 42 | 18 36 | 19 31 | 20 24 |
| 40 | 18 06 | 18 33 | 19 05 | 17 42 | 18 39 | 19 35 | 20 31 |
| 45 | 18 08 | 18 38 | 19 13 | 17 42 | 18 42 | 19 40 | 20 39 |
| S 50 | 18 12 | 18 44 | 19 23 | 17 42 | 18 45 | 19 47 | 20 48 |
| 52 | 18 13 | 18 47 | 19 28 | 17 42 | 18 46 | 19 50 | 20 52 |
| 54 | 18 15 | 18 51 | 19 34 | 17 42 | 18 48 | 19 53 | 20 57 |
| 56 | 18 17 | 18 54 | 19 40 | 17 42 | 18 50 | 19 57 | 21 02 |
| 58 | 18 19 | 18 59 | 19 48 | 17 42 | 18 52 | 20 00 | 21 08 |
| S 60 | 18 21 | 19 04 | 19 56 | 17 42 | 18 54 | 20 05 | 21 15 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d % | |
| 30 | 10 01 | 10 11 | 11 50 | 11 31 | 23 53 | 29 0 | |
| 1 | 10 20 | 10 30 | 11 50 | 12 14 | 24 36 | 00 0 | |
| 2 | 10 40 | 10 49 | 11 49 | 12 57 | 00 36 | 01 2 | |

# 29, 30 e 31 DE MARÇO DE 2017 (4ª feira, 5ª feira e 6ª feira)

| TU | | SOL | | | | LUA | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| d | h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| 29 | 00 | 178 | 47.4 | N 3 | 22.0 | 166 | 21.3 | 8.7 | N | 4 | 24.7 | 11.5 | 60.0 |
| | 01 | 193 | 47.6 | | 22.9 | 180 | 49.0 | 8.6 | | 4 | 36.2 | 11.6 | 60.0 |
| | 02 | 208 | 47.8 | | 23.9 | 195 | 16.6 | 8.7 | | 4 | 47.8 | 11.5 | 60.0 |
| | 03 | 223 | 48.0 | . . | 24.9 | 209 | 44.3 | 8.6 | | 4 | 59.3 | 11.4 | 60.0 |
| | 04 | 238 | 48.1 | | 25.8 | 224 | 11.9 | 8.6 | | 5 | 10.7 | 11.5 | 60.1 |
| Q | 05 | 253 | 48.3 | | 26.8 | 238 | 39.5 | 8.5 | | 5 | 22.2 | 11.4 | 60.1 |
| U | 06 | 268 | 48.5 | N 3 | 27.8 | 253 | 07.0 | 8.5 | N | 5 | 33.6 | 11.4 | 60.1 |
| A | 07 | 283 | 48.7 | | 28.8 | 267 | 34.5 | 8.5 | | 5 | 45.0 | 11.4 | 60.1 |
| R | 08 | 298 | 48.9 | | 29.7 | 282 | 02.0 | 8.4 | | 5 | 56.4 | 11.3 | 60.1 |
| T | 09 | 313 | 49.1 | . . | 30.7 | 296 | 29.4 | 8.4 | | 6 | 07.7 | 11.3 | 60.1 |
| A | 10 | 328 | 49.3 | | 31.7 | 310 | 56.8 | 8.3 | | 6 | 19.0 | 11.2 | 60.1 |
| | 11 | 343 | 49.5 | | 32.7 | 325 | 24.1 | 8.3 | | 6 | 30.2 | 11.3 | 60.1 |
| | 12 | 358 | 49.6 | N 3 | 33.6 | 339 | 51.4 | 8.3 | N | 6 | 41.5 | 11.1 | 60.1 |
| F | 13 | 13 | 49.8 | | 34.6 | 354 | 18.7 | 8.3 | | 6 | 52.6 | 11.2 | 60.2 |
| E | 14 | 28 | 50.0 | | 35.6 | 8 | 46.0 | 8.2 | | 7 | 03.8 | 11.1 | 60.2 |
| I | 15 | 43 | 50.2 | . . | 36.6 | 23 | 13.2 | 8.2 | | 7 | 14.9 | 11.0 | 60.2 |
| R | 16 | 58 | 50.4 | | 37.5 | 37 | 40.4 | 8.1 | | 7 | 25.9 | 11.1 | 60.2 |
| A | 17 | 73 | 50.6 | | 38.5 | 52 | 07.5 | 8.1 | | 7 | 37.0 | 10.9 | 60.2 |
| | 18 | 88 | 50.8 | N 3 | 39.5 | 66 | 34.6 | 8.0 | N | 7 | 47.9 | 11.0 | 60.2 |
| | 19 | 103 | 51.0 | | 40.4 | 81 | 01.6 | 8.1 | | 7 | 58.9 | 10.8 | 60.2 |
| | 20 | 118 | 51.1 | | 41.4 | 95 | 28.7 | 7.9 | | 8 | 09.7 | 10.9 | 60.2 |
| | 21 | 133 | 51.3 | . . | 42.4 | 109 | 55.6 | 8.0 | | 8 | 20.6 | 10.7 | 60.2 |
| | 22 | 148 | 51.5 | | 43.4 | 124 | 22.6 | 7.9 | | 8 | 31.3 | 10.8 | 60.2 |
| | 23 | 163 | 51.7 | | 44.3 | 138 | 49.5 | 7.9 | | 8 | 42.1 | 10.6 | 60.2 |
| 30 | 00 | 178 | 51.9 | N 3 | 45.3 | 153 | 16.4 | 7.8 | N | 8 | 52.7 | 10.6 | 60.2 |
| | 01 | 193 | 52.1 | | 46.3 | 167 | 43.2 | 7.8 | | 9 | 03.3 | 10.6 | 60.2 |
| | 02 | 208 | 52.3 | | 47.2 | 182 | 10.0 | 7.7 | | 9 | 13.9 | 10.5 | 60.2 |
| | 03 | 223 | 52.5 | . . | 48.2 | 196 | 36.7 | 7.8 | | 9 | 24.4 | 10.4 | 60.2 |
| | 04 | 238 | 52.6 | | 49.2 | 211 | 03.5 | 7.6 | | 9 | 34.8 | 10.4 | 60.3 |
| Q | 05 | 253 | 52.8 | | 50.2 | 225 | 30.1 | 7.7 | | 9 | 45.2 | 10.3 | 60.3 |
| U | 06 | 268 | 53.0 | N 3 | 51.1 | 239 | 56.8 | 7.6 | N | 9 | 55.5 | 10.3 | 60.3 |
| I | 07 | 283 | 53.2 | | 52.1 | 254 | 23.4 | 7.5 | | 10 | 05.8 | 10.2 | 60.3 |
| N | 08 | 298 | 53.4 | | 53.1 | 268 | 49.9 | 7.6 | | 10 | 16.0 | 10.1 | 60.3 |
| T | 09 | 313 | 53.6 | . . | 54.0 | 283 | 16.5 | 7.4 | | 10 | 26.1 | 10.1 | 60.3 |
| A | 10 | 328 | 53.8 | | 55.0 | 297 | 42.9 | 7.5 | | 10 | 36.2 | 10.0 | 60.3 |
| | 11 | 343 | 53.9 | | 56.0 | 312 | 09.4 | 7.4 | | 10 | 46.2 | 9.9 | 60.3 |
| | 12 | 358 | 54.1 | N 3 | 56.9 | 326 | 35.8 | 7.4 | N | 10 | 56.1 | 9.9 | 60.3 |
| F | 13 | 13 | 54.3 | | 57.9 | 341 | 02.2 | 7.3 | | 11 | 06.0 | 9.7 | 60.3 |
| E | 14 | 28 | 54.5 | | 58.9 | 355 | 28.5 | 7.3 | | 11 | 15.7 | 9.7 | 60.3 |
| I | 15 | 43 | 54.7 | 3 | 59.9 | 9 | 54.8 | 7.3 | | 11 | 25.4 | 9.7 | 60.3 |
| R | 16 | 58 | 54.9 | 4 | 00.8 | 24 | 21.1 | 7.2 | | 11 | 35.1 | 9.5 | 60.3 |
| A | 17 | 73 | 55.1 | | 01.8 | 38 | 47.3 | 7.2 | | 11 | 44.6 | 9.5 | 60.3 |
| | 18 | 88 | 55.2 | N 4 | 02.8 | 53 | 13.5 | 7.1 | N | 11 | 54.1 | 9.4 | 60.3 |
| | 19 | 103 | 55.4 | | 03.7 | 67 | 39.6 | 7.1 | | 12 | 03.5 | 9.3 | 60.3 |
| | 20 | 118 | 55.6 | | 04.7 | 82 | 05.7 | 7.1 | | 12 | 12.8 | 9.3 | 60.3 |
| | 21 | 133 | 55.8 | . . | 05.7 | 96 | 31.8 | 7.0 | | 12 | 22.1 | 9.1 | 60.3 |
| | 22 | 148 | 56.0 | | 06.6 | 110 | 57.8 | 7.0 | | 12 | 31.2 | 9.1 | 60.2 |
| | 23 | 163 | 56.2 | | 07.6 | 125 | 23.8 | 7.0 | | 12 | 40.3 | 9.0 | 60.2 |
| 31 | 00 | 178 | 56.4 | N 4 | 08.6 | 139 | 49.8 | 6.9 | N | 12 | 49.3 | 8.9 | 60.2 |
| | 01 | 193 | 56.6 | | 09.5 | 154 | 15.7 | 6.9 | | 12 | 58.2 | 8.8 | 60.2 |
| | 02 | 208 | 56.7 | | 10.5 | 168 | 41.6 | 6.9 | | 13 | 07.0 | 8.7 | 60.2 |
| | 03 | 223 | 56.9 | . . | 11.5 | 183 | 07.5 | 6.8 | | 13 | 15.7 | 8.7 | 60.2 |
| | 04 | 238 | 57.1 | | 12.5 | 197 | 33.3 | 6.8 | | 13 | 24.4 | 8.5 | 60.2 |
| S | 05 | 253 | 57.3 | | 13.4 | 211 | 59.1 | 6.8 | | 13 | 32.9 | 8.5 | 60.2 |
| E | 06 | 268 | 57.5 | N 4 | 14.4 | 226 | 24.9 | 6.7 | N | 13 | 41.4 | 8.4 | 60.2 |
| X | 07 | 283 | 57.7 | | 15.4 | 240 | 50.6 | 6.7 | | 13 | 49.8 | 8.2 | 60.2 |
| T | 08 | 298 | 57.9 | | 16.3 | 255 | 16.3 | 6.6 | | 13 | 58.0 | 8.2 | 60.2 |
| A | 09 | 313 | 58.0 | . . | 17.3 | 269 | 41.9 | 6.7 | | 14 | 06.2 | 8.1 | 60.2 |
| | 10 | 328 | 58.2 | | 18.3 | 284 | 07.6 | 6.6 | | 14 | 14.3 | 8.0 | 60.2 |
| | 11 | 343 | 58.4 | | 19.2 | 298 | 33.2 | 6.5 | | 14 | 22.3 | 7.9 | 60.2 |
| | 12 | 358 | 58.6 | N 4 | 20.2 | 312 | 58.7 | 6.6 | N | 14 | 30.2 | 7.8 | 60.2 |
| F | 13 | 13 | 58.8 | | 21.2 | 327 | 24.3 | 6.5 | | 14 | 38.0 | 7.7 | 60.2 |
| E | 14 | 28 | 59.0 | | 22.1 | 341 | 49.8 | 6.4 | | 14 | 45.7 | 7.5 | 60.1 |
| I | 15 | 43 | 59.2 | . . | 23.1 | 356 | 15.2 | 6.5 | | 14 | 53.2 | 7.5 | 60.1 |
| R | 16 | 58 | 59.3 | | 24.1 | 10 | 40.7 | 6.4 | | 15 | 00.7 | 7.4 | 60.1 |
| A | 17 | 73 | 59.5 | | 25.0 | 25 | 06.1 | 6.4 | | 15 | 08.1 | 7.3 | 60.1 |
| | 18 | 88 | 59.7 | N 4 | 26.0 | 39 | 31.5 | 6.4 | N | 15 | 15.4 | 7.2 | 60.1 |
| | 19 | 103 | 59.9 | | 27.0 | 53 | 56.9 | 6.3 | | 15 | 22.6 | 7.1 | 60.1 |
| | 20 | 119 | 00.1 | | 27.9 | 68 | 22.2 | 6.3 | | 15 | 29.7 | 6.9 | 60.1 |
| | 21 | 134 | 00.3 | . . | 28.9 | 82 | 47.5 | 6.3 | | 15 | 36.6 | 6.9 | 60.1 |
| | 22 | 149 | 00.5 | | 29.9 | 97 | 12.8 | 6.3 | | 15 | 43.5 | 6.7 | 60.1 |
| | 23 | 164 | 00.6 | | 30.8 | 111 | 38.1 | 6.2 | N | 15 | 50.2 | 6.7 | 60.1 |
| | | SD | 16.0 | d | 1.0 | SD | | 16.4 | | | 16.4 | | 16.4 |

| Lat. | CREP Naut. | CREP Civil | SOL Nascer | LUA - Nascer 29 | 30 | 31 | 1 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 01 59 | 03 53 | 05 06 | 06 00 | 05 52 | 05 43 | 05 30 |
| N 70 | 02 35 | 04 07 | 05 12 | 06 07 | 06 07 | 06 09 | 06 14 |
| 68 | 03 00 | 04 19 | 05 17 | 06 14 | 06 20 | 06 28 | 06 43 |
| 66 | 03 19 | 04 28 | 05 21 | 06 19 | 06 30 | 06 44 | 07 05 |
| 64 | 03 34 | 04 36 | 05 25 | 06 23 | 06 38 | 06 57 | 07 23 |
| 62 | 03 46 | 04 43 | 05 28 | 06 27 | 06 45 | 07 08 | 07 38 |
| 60 | 03 56 | 04 48 | 05 31 | 06 30 | 06 52 | 07 17 | 07 50 |
| N 58 | 04 04 | 04 53 | 05 33 | 06 33 | 06 57 | 07 26 | 08 01 |
| 56 | 04 12 | 04 58 | 05 36 | 06 36 | 07 02 | 07 33 | 08 10 |
| 54 | 04 18 | 05 02 | 05 38 | 06 39 | 07 07 | 07 40 | 08 18 |
| 52 | 04 24 | 05 05 | 05 39 | 06 41 | 07 11 | 07 45 | 08 26 |
| 50 | 04 29 | 05 08 | 05 41 | 06 43 | 07 15 | 07 51 | 08 32 |
| 45 | 04 40 | 05 15 | 05 44 | 06 47 | 07 23 | 08 02 | 08 47 |
| N 40 | 04 48 | 05 20 | 05 47 | 06 51 | 07 30 | 08 12 | 08 59 |
| 35 | 04 54 | 05 24 | 05 50 | 06 54 | 07 36 | 08 20 | 09 09 |
| 30 | 05 00 | 05 28 | 05 52 | 06 57 | 07 41 | 08 28 | 09 18 |
| 20 | 05 07 | 05 33 | 05 55 | 07 02 | 07 50 | 08 40 | 09 33 |
| N 10 | 05 13 | 05 37 | 05 58 | 07 07 | 07 58 | 08 51 | 09 47 |
| 0 | 05 16 | 05 40 | 06 01 | 07 11 | 08 06 | 09 02 | 10 00 |
| S 10 | 05 18 | 05 43 | 06 04 | 07 15 | 08 13 | 09 13 | 10 13 |
| 20 | 05 19 | 05 45 | 06 07 | 07 20 | 08 21 | 09 24 | 10 26 |
| 30 | 05 18 | 05 46 | 06 10 | 07 25 | 08 31 | 09 37 | 10 42 |
| 35 | 05 17 | 05 46 | 06 11 | 07 28 | 08 36 | 09 45 | 10 51 |
| 40 | 05 15 | 05 46 | 06 13 | 07 31 | 08 43 | 09 53 | 11 02 |
| 45 | 05 12 | 05 46 | 06 15 | 07 35 | 08 50 | 10 03 | 11 14 |
| S 50 | 05 08 | 05 45 | 06 18 | 07 40 | 08 59 | 10 16 | 11 30 |
| 52 | 05 06 | 05 45 | 06 19 | 07 43 | 09 03 | 10 22 | 11 37 |
| 54 | 05 04 | 05 45 | 06 20 | 07 45 | 09 07 | 10 28 | 11 45 |
| 56 | 05 01 | 05 44 | 06 21 | 07 48 | 09 12 | 10 35 | 11 53 |
| 58 | 04 58 | 05 44 | 06 23 | 07 51 | 09 18 | 10 43 | 12 04 |
| S 60 | 04 54 | 05 43 | 06 25 | 07 54 | 09 24 | 10 52 | 12 15 |

| Lat. | SOL Pôr | CREP Civil | CREP Naut. | LUA - Pôr 29 | 30 | 31 | 1 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 19 06 | 20 20 | 22 19 | 21 27 | 23 33 | 25 47 | 01 47 |
| N 70 | 18 59 | 20 05 | 21 39 | 21 14 | 23 09 | 25 04 | 01 04 |
| 68 | 18 54 | 19 53 | 21 13 | 21 04 | 22 51 | 24 36 | 00 36 |
| 66 | 18 49 | 19 43 | 20 54 | 20 55 | 22 36 | 24 14 | 00 14 |
| 64 | 18 45 | 19 35 | 20 38 | 20 48 | 22 24 | 23 57 | 25 21 |
| 62 | 18 42 | 19 28 | 20 26 | 20 42 | 22 14 | 23 43 | 25 04 |
| 60 | 18 39 | 19 22 | 20 15 | 20 36 | 22 05 | 23 31 | 24 50 |
| N 58 | 18 37 | 19 17 | 20 06 | 20 32 | 21 58 | 23 21 | 24 38 |
| 56 | 18 34 | 19 12 | 19 59 | 20 27 | 21 51 | 23 12 | 24 27 |
| 54 | 18 32 | 19 08 | 19 52 | 20 24 | 21 45 | 23 04 | 24 18 |
| 52 | 18 31 | 19 05 | 19 46 | 20 20 | 21 40 | 22 57 | 24 09 |
| 50 | 18 29 | 19 02 | 19 41 | 20 17 | 21 35 | 22 51 | 24 02 |
| 45 | 18 25 | 18 55 | 19 30 | 20 11 | 21 25 | 22 37 | 23 46 |
| N 40 | 18 22 | 18 50 | 19 22 | 20 05 | 21 16 | 22 26 | 23 33 |
| 35 | 18 20 | 18 45 | 19 15 | 20 00 | 21 09 | 22 17 | 23 22 |
| 30 | 18 18 | 18 42 | 19 10 | 19 56 | 21 02 | 22 08 | 23 12 |
| 20 | 18 14 | 18 36 | 19 02 | 19 49 | 20 51 | 21 54 | 22 56 |
| N 10 | 18 11 | 18 32 | 18 56 | 19 43 | 20 41 | 21 41 | 22 41 |
| 0 | 18 08 | 18 28 | 18 52 | 19 37 | 20 32 | 21 29 | 22 27 |
| S 10 | 18 05 | 18 26 | 18 50 | 19 31 | 20 23 | 21 18 | 22 14 |
| 20 | 18 02 | 18 24 | 18 50 | 19 24 | 20 13 | 21 05 | 21 59 |
| 30 | 17 59 | 18 23 | 18 50 | 19 17 | 20 02 | 20 51 | 21 43 |
| 35 | 17 57 | 18 22 | 18 52 | 19 13 | 19 56 | 20 42 | 21 33 |
| 40 | 17 55 | 18 22 | 18 53 | 19 08 | 19 49 | 20 33 | 21 22 |
| 45 | 17 53 | 18 22 | 18 56 | 19 03 | 19 40 | 20 22 | 21 09 |
| S 50 | 17 50 | 18 22 | 19 00 | 18 56 | 19 30 | 20 08 | 20 53 |
| 52 | 17 49 | 18 23 | 19 02 | 18 53 | 19 25 | 20 02 | 20 46 |
| 54 | 17 48 | 18 23 | 19 04 | 18 50 | 19 20 | 19 55 | 20 38 |
| 56 | 17 46 | 18 23 | 19 06 | 18 46 | 19 15 | 19 48 | 20 28 |
| 58 | 17 45 | 18 24 | 19 09 | 18 42 | 19 08 | 19 39 | 20 18 |
| S 60 | 17 43 | 18 24 | 19 13 | 18 38 | 19 01 | 19 30 | 20 06 |

| Dia | SOL ET 00h | SOL (-) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| d | m s | m s | h m | h m | h m | d | % |
| 29 | 04 51 | 04 42 | 12 05 | 13 24 | 00 57 | 01 | 3 |
| 30 | 04 33 | 04 24 | 12 04 | 14 19 | 01 51 | 02 | 8 |
| 31 | 04 15 | 04 06 | 12 04 | 15 16 | 02 47 | 03 | 16 |

# 13, 14 e 15 DE SETEMBRO DE 2017 (4ª feira, 5ª feira e 6ª feira)



| TU | | SOL | | | | LUA | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | AHG | | Dec | | AHG | | v | | Dec | | d | Ph |
| | d h | ° | ′ | ° | ′ | ° | ′ | ′ | | ° | ′ | ′ | ′ |
| | 13 00 | 180 | 59.9 | N 3 | 48.2 | 275 | 57.1 | 6.5 | N17 | 59.3 | 4.5 | 59.3 | |
| | 01 | 196 | 00.2 | | 47.2 | 290 | 22.6 | 6.5 | 18 | 03.8 | 4.5 | 59.3 | |
| | 02 | 211 | 00.4 | | 46.3 | 304 | 48.1 | 6.5 | 18 | 08.3 | 4.3 | 59.3 | |
| | 03 | 226 | 00.6 | . . | 45.3 | 319 | 13.6 | 6.5 | 18 | 12.6 | 4.2 | 59.3 | |
| | 04 | 241 | 00.8 | | 44.4 | 333 | 39.1 | 6.4 | 18 | 16.8 | 4.1 | 59.3 | |
| QUARTA | 05 | 256 | 01.0 | | 43.4 | 348 | 04.5 | 6.3 | 18 | 20.9 | 3.9 | 59.3 | |
| | 06 | 271 | 01.3 | N 3 | 42.4 | 2 | 29.8 | 6.4 | N18 | 24.8 | 3.9 | 59.3 | |
| | 07 | 286 | 01.5 | | 41.5 | 16 | 55.2 | 6.3 | 18 | 28.7 | 3.7 | 59.3 | |
| | 08 | 301 | 01.7 | | 40.5 | 31 | 20.5 | 6.3 | 18 | 32.4 | 3.6 | 59.3 | |
| | 09 | 316 | 01.9 | . . | 39.6 | 45 | 45.8 | 6.3 | 18 | 36.0 | 3.5 | 59.3 | |
| | 10 | 331 | 02.2 | | 38.6 | 60 | 11.1 | 6.2 | 18 | 39.5 | 3.4 | 59.3 | |
| | 11 | 346 | 02.4 | | 37.7 | 74 | 36.3 | 6.2 | 18 | 42.9 | 3.2 | 59.3 | |
| | 12 | 1 | 02.6 | N 3 | 36.7 | 89 | 01.5 | 6.2 | N18 | 46.1 | 3.1 | 59.3 | |
| | 13 | 16 | 02.8 | | 35.7 | 103 | 26.7 | 6.2 | 18 | 49.2 | 3.0 | 59.3 | |
| | 14 | 31 | 03.0 | | 34.8 | 117 | 51.9 | 6.1 | 18 | 52.2 | 2.9 | 59.3 | |
| | 15 | 46 | 03.3 | . . | 33.8 | 132 | 17.0 | 6.1 | 18 | 55.1 | 2.7 | 59.3 | |
| | 16 | 61 | 03.5 | | 32.9 | 146 | 42.1 | 6.1 | 18 | 57.8 | 2.6 | 59.3 | |
| FEIRA | 17 | 76 | 03.7 | | 31.9 | 161 | 07.2 | 6.1 | 19 | 00.4 | 2.5 | 59.3 | |
| | 18 | 91 | 03.9 | N 3 | 31.0 | 175 | 32.3 | 6.1 | N19 | 02.9 | 2.4 | 59.3 | |
| | 19 | 106 | 04.1 | | 30.0 | 189 | 57.4 | 6.0 | 19 | 05.3 | 2.2 | 59.3 | |
| | 20 | 121 | 04.4 | | 29.0 | 204 | 22.4 | 6.0 | 19 | 07.5 | 2.2 | 59.3 | |
| | 21 | 136 | 04.6 | . . | 28.1 | 218 | 47.4 | 6.0 | 19 | 09.7 | 1.9 | 59.3 | |
| | 22 | 151 | 04.8 | | 27.1 | 233 | 12.4 | 6.0 | 19 | 11.6 | 1.9 | 59.3 | |
| | 23 | 166 | 05.0 | | 26.2 | 247 | 37.4 | 6.0 | 19 | 13.5 | 1.7 | 59.3 | |
| | 14 00 | 181 | 05.3 | N 3 | 25.2 | 262 | 02.4 | 6.0 | N19 | 15.2 | 1.7 | 59.3 | |
| | 01 | 196 | 05.5 | | 24.2 | 276 | 27.4 | 6.0 | 19 | 16.9 | 1.4 | 59.3 | |
| | 02 | 211 | 05.7 | | 23.3 | 290 | 52.4 | 5.9 | 19 | 18.3 | 1.4 | 59.3 | |
| | 03 | 226 | 05.9 | . . | 22.3 | 305 | 17.3 | 6.0 | 19 | 19.7 | 1.2 | 59.3 | |
| | 04 | 241 | 06.1 | | 21.4 | 319 | 42.3 | 5.9 | 19 | 20.9 | 1.1 | 59.3 | |
| QUINTA | 05 | 256 | 06.4 | | 20.4 | 334 | 07.2 | 5.9 | 19 | 22.0 | 1.0 | 59.3 | |
| | 06 | 271 | 06.6 | N 3 | 19.4 | 348 | 32.1 | 5.9 | N19 | 23.0 | 0.8 | 59.3 | |
| | 07 | 286 | 06.8 | | 18.5 | 2 | 57.0 | 6.0 | 19 | 23.8 | 0.7 | 59.3 | |
| | 08 | 301 | 07.0 | | 17.5 | 17 | 22.0 | 5.9 | 19 | 24.5 | 0.6 | 59.3 | |
| | 09 | 316 | 07.3 | . . | 16.6 | 31 | 46.9 | 5.9 | 19 | 25.1 | 0.5 | 59.3 | |
| | 10 | 331 | 07.5 | | 15.6 | 46 | 11.8 | 5.9 | 19 | 25.6 | 0.3 | 59.3 | |
| | 11 | 346 | 07.7 | | 14.6 | 60 | 36.7 | 5.9 | 19 | 25.9 | 0.2 | 59.3 | |
| | 12 | 1 | 07.9 | N 3 | 13.7 | 75 | 01.6 | 5.9 | N19 | 26.1 | 0.1 | 59.3 | |
| | 13 | 16 | 08.1 | | 12.7 | 89 | 26.5 | 5.9 | 19 | 26.2 | 0.1 | 59.3 | |
| | 14 | 31 | 08.4 | | 11.8 | 103 | 51.4 | 5.9 | 19 | 26.1 | 0.2 | 59.3 | |
| | 15 | 46 | 08.6 | . . | 10.8 | 118 | 16.3 | 6.0 | 19 | 25.9 | 0.3 | 59.2 | |
| | 16 | 61 | 08.8 | | 09.8 | 132 | 41.3 | 5.9 | 19 | 25.6 | 0.4 | 59.2 | |
| FEIRA | 17 | 76 | 09.0 | | 08.9 | 147 | 06.2 | 5.9 | 19 | 25.2 | 0.6 | 59.2 | |
| | 18 | 91 | 09.3 | N 3 | 07.9 | 161 | 31.1 | 6.0 | N19 | 24.6 | 0.7 | 59.2 | |
| | 19 | 106 | 09.5 | | 07.0 | 175 | 56.1 | 5.9 | 19 | 23.9 | 0.8 | 59.2 | |
| | 20 | 121 | 09.7 | | 06.0 | 190 | 21.0 | 6.0 | 19 | 23.1 | 1.0 | 59.2 | |
| | 21 | 136 | 09.9 | . . | 05.0 | 204 | 46.0 | 6.0 | 19 | 22.1 | 1.1 | 59.2 | |
| | 22 | 151 | 10.1 | | 04.1 | 219 | 11.0 | 5.9 | 19 | 21.0 | 1.2 | 59.2 | |
| | 23 | 166 | 10.4 | | 03.1 | 233 | 35.9 | 6.0 | 19 | 19.8 | 1.3 | 59.2 | |
| | 15 00 | 181 | 10.6 | N 3 | 02.2 | 248 | 00.9 | 6.0 | N19 | 18.5 | 1.5 | 59.2 | |
| | 01 | 196 | 10.8 | | 01.2 | 262 | 25.9 | 6.1 | 19 | 17.0 | 1.6 | 59.2 | |
| | 02 | 211 | 11.0 | 3 | 00.2 | 276 | 51.0 | 6.0 | 19 | 15.4 | 1.7 | 59.2 | |
| | 03 | 226 | 11.3 | 2 | 59.3 | 291 | 16.0 | 6.1 | 19 | 13.7 | 1.9 | 59.2 | |
| | 04 | 241 | 11.5 | | 58.3 | 305 | 41.1 | 6.1 | 19 | 11.8 | 2.0 | 59.2 | |
| SEXTA | 05 | 256 | 11.7 | | 57.3 | 320 | 06.2 | 6.1 | 19 | 09.8 | 2.1 | 59.2 | |
| | 06 | 271 | 11.9 | N 2 | 56.4 | 334 | 31.3 | 6.1 | N19 | 07.7 | 2.2 | 59.2 | |
| | 07 | 286 | 12.2 | | 55.4 | 348 | 56.4 | 6.1 | 19 | 05.5 | 2.3 | 59.2 | |
| | 08 | 301 | 12.4 | | 54.5 | 3 | 21.5 | 6.2 | 19 | 03.2 | 2.5 | 59.2 | |
| | 09 | 316 | 12.6 | . . | 53.5 | 17 | 46.7 | 6.2 | 19 | 00.7 | 2.6 | 59.2 | |
| | 10 | 331 | 12.8 | | 52.5 | 32 | 11.9 | 6.2 | 18 | 58.1 | 2.7 | 59.2 | |
| | 11 | 346 | 13.0 | | 51.6 | 46 | 37.1 | 6.3 | 18 | 55.4 | 2.9 | 59.2 | |
| | 12 | 1 | 13.3 | N 2 | 50.6 | 61 | 02.4 | 6.3 | N18 | 52.5 | 3.0 | 59.1 | |
| | 13 | 16 | 13.5 | | 49.6 | 75 | 27.7 | 6.3 | 18 | 49.5 | 3.1 | 59.1 | |
| | 14 | 31 | 13.7 | | 48.7 | 89 | 53.0 | 6.3 | 18 | 46.4 | 3.2 | 59.1 | |
| | 15 | 46 | 13.9 | . . | 47.7 | 104 | 18.3 | 6.4 | 18 | 43.2 | 3.3 | 59.1 | |
| | 16 | 61 | 14.2 | | 46.8 | 118 | 43.7 | 6.3 | 18 | 39.9 | 3.5 | 59.1 | |
| FEIRA | 17 | 76 | 14.4 | | 45.8 | 133 | 09.0 | 6.5 | 18 | 36.4 | 3.5 | 59.1 | |
| | 18 | 91 | 14.6 | N 2 | 44.8 | 147 | 34.5 | 6.4 | N18 | 32.9 | 3.7 | 59.1 | |
| | 19 | 106 | 14.8 | | 43.9 | 161 | 59.9 | 6.5 | 18 | 29.2 | 3.9 | 59.1 | |
| | 20 | 121 | 15.0 | | 42.9 | 176 | 25.4 | 6.6 | 18 | 25.3 | 3.9 | 59.1 | |
| | 21 | 136 | 15.3 | . . | 41.9 | 190 | 51.0 | 6.5 | 18 | 21.4 | 4.1 | 59.1 | |
| | 22 | 151 | 15.5 | | 41.0 | 205 | 16.5 | 6.6 | 18 | 17.3 | 4.1 | 59.1 | |
| | 23 | 166 | 15.7 | | 40.0 | 219 | 42.1 | 6.7 | N18 | 13.2 | 4.3 | 59.1 | |
| | | SD | 15.9 | d | 1.0 | SD | | 16.2 | | 16.1 | | 16.1 | |

| Lat. | CREP Naut. | CREP Civil | SOL Nascer | LUA - Nascer 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 02 00 | 03 50 | 05 03 | | | | 23 13 |
| N 70 | 02 34 | 04 04 | 05 09 | 19 39 | 20 26 | 22 02 | 23 54 |
| 68 | 02 57 | 04 15 | 05 13 | 20 30 | 21 24 | 22 45 | 24 22 |
| 66 | 03 15 | 04 24 | 05 17 | 21 02 | 21 57 | 23 14 | 24 43 |
| 64 | 03 29 | 04 31 | 05 20 | 21 26 | 22 22 | 23 35 | 25 00 |
| 62 | 03 41 | 04 38 | 05 23 | 21 45 | 22 42 | 23 53 | 25 14 |
| 60 | 03 51 | 04 43 | 05 26 | 22 00 | 22 57 | 24 07 | 00 07 |
| N 58 | 03 59 | 04 48 | 05 28 | 22 14 | 23 11 | 24 19 | 00 19 |
| 56 | 04 06 | 04 52 | 05 30 | 22 25 | 23 23 | 24 30 | 00 30 |
| 54 | 04 12 | 04 56 | 05 31 | 22 35 | 23 33 | 24 39 | 00 39 |
| 52 | 04 18 | 04 59 | 05 33 | 22 44 | 23 42 | 24 48 | 00 48 |
| 50 | 04 23 | 05 02 | 05 34 | 22 52 | 23 50 | 24 55 | 00 55 |
| 45 | 04 33 | 05 08 | 05 37 | 23 09 | 24 07 | 00 07 | 01 11 |
| N 40 | 04 41 | 05 13 | 05 40 | 23 23 | 24 21 | 00 21 | 01 24 |
| 35 | 04 47 | 05 17 | 05 42 | 23 35 | 24 33 | 00 33 | 01 35 |
| 30 | 04 52 | 05 20 | 05 44 | 23 46 | 24 44 | 00 44 | 01 45 |
| 20 | 04 59 | 05 25 | 05 47 | 24 03 | 00 03 | 01 02 | 02 02 |
| N 10 | 05 04 | 05 29 | 05 50 | 24 19 | 00 19 | 01 17 | 02 16 |
| 0 | 05 08 | 05 32 | 05 52 | 24 34 | 00 34 | 01 32 | 02 30 |
| S 10 | 05 09 | 05 34 | 05 55 | 24 49 | 00 49 | 01 47 | 02 43 |
| 20 | 05 09 | 05 35 | 05 57 | 00 04 | 01 04 | 02 03 | 02 58 |
| 30 | 05 08 | 05 36 | 05 59 | 00 21 | 01 22 | 02 21 | 03 15 |
| 35 | 05 06 | 05 36 | 06 01 | 00 31 | 01 33 | 02 31 | 03 24 |
| 40 | 05 04 | 05 35 | 06 02 | 00 42 | 01 45 | 02 43 | 03 35 |
| 45 | 05 01 | 05 35 | 06 04 | 00 55 | 01 59 | 02 57 | 03 48 |
| S 50 | 04 57 | 05 34 | 06 06 | 01 12 | 02 17 | 03 15 | 04 04 |
| 52 | 04 54 | 05 34 | 06 07 | 01 19 | 02 25 | 03 23 | 04 11 |
| 54 | 04 52 | 05 33 | 06 08 | 01 28 | 02 35 | 03 32 | 04 20 |
| 56 | 04 49 | 05 32 | 06 09 | 01 37 | 02 45 | 03 42 | 04 29 |
| 58 | 04 46 | 05 32 | 06 11 | 01 48 | 02 57 | 03 54 | 04 39 |
| S 60 | 04 42 | 05 31 | 06 12 | 02 01 | 03 11 | 04 07 | 04 51 |

| Lat. | SOL Pôr | CREP Civil | CREP Naut. | LUA - Pôr 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|
| ° | h m | h m | h m | h m | h m | h m | h m |
| N 72 | 18 45 | 19 57 | 21 43 | | | | 19 22 |
| N 70 | 18 40 | 19 44 | 21 12 | 16 54 | 18 09 | 18 34 | 18 40 |
| 68 | 18 35 | 19 33 | 20 50 | 16 03 | 17 12 | 17 51 | 18 11 |
| 66 | 18 32 | 19 25 | 20 33 | 15 31 | 16 38 | 17 22 | 17 49 |
| 64 | 18 29 | 19 17 | 20 19 | 15 08 | 16 13 | 17 00 | 17 32 |
| 62 | 18 26 | 19 11 | 20 08 | 14 49 | 15 53 | 16 42 | 17 18 |
| 60 | 18 24 | 19 06 | 19 58 | 14 34 | 15 37 | 16 28 | 17 05 |
| N 58 | 18 22 | 19 02 | 19 50 | 14 21 | 15 24 | 16 15 | 16 55 |
| 56 | 18 20 | 18 58 | 19 43 | 14 09 | 15 12 | 16 04 | 16 46 |
| 54 | 18 18 | 18 54 | 19 37 | 14 00 | 15 02 | 15 55 | 16 37 |
| 52 | 18 17 | 18 51 | 19 32 | 13 51 | 14 53 | 15 46 | 16 30 |
| 50 | 18 16 | 18 48 | 19 27 | 13 43 | 14 45 | 15 38 | 16 23 |
| 45 | 18 13 | 18 42 | 19 17 | 13 26 | 14 27 | 15 22 | 16 09 |
| N 40 | 18 10 | 18 37 | 19 09 | 13 12 | 14 13 | 15 08 | 15 57 |
| 35 | 18 08 | 18 34 | 19 03 | 13 01 | 14 01 | 14 57 | 15 47 |
| 30 | 18 06 | 18 30 | 18 58 | 12 50 | 13 50 | 14 47 | 15 38 |
| 20 | 18 04 | 18 26 | 18 51 | 12 33 | 13 32 | 14 29 | 15 23 |
| N 10 | 18 01 | 18 22 | 18 46 | 12 18 | 13 16 | 14 14 | 15 09 |
| 0 | 17 59 | 18 19 | 18 43 | 12 03 | 13 02 | 14 00 | 14 57 |
| S 10 | 17 57 | 18 18 | 18 42 | 11 49 | 12 47 | 13 46 | 14 44 |
| 20 | 17 54 | 18 16 | 18 42 | 11 34 | 12 31 | 13 30 | 14 30 |
| 30 | 17 52 | 18 16 | 18 44 | 11 16 | 12 13 | 13 13 | 14 15 |
| 35 | 17 51 | 18 16 | 18 45 | 11 06 | 12 02 | 13 02 | 14 05 |
| 40 | 17 49 | 18 16 | 18 48 | 10 54 | 11 50 | 12 50 | 13 55 |
| 45 | 17 48 | 18 17 | 18 51 | 10 41 | 11 35 | 12 36 | 13 43 |
| S 50 | 17 46 | 18 18 | 18 55 | 10 24 | 11 18 | 12 19 | 13 28 |
| 52 | 17 45 | 18 18 | 18 58 | 10 16 | 11 09 | 12 11 | 13 20 |
| 54 | 17 44 | 18 19 | 19 00 | 10 07 | 11 00 | 12 02 | 13 13 |
| 56 | 17 43 | 18 20 | 19 03 | 09 58 | 10 50 | 11 52 | 13 04 |
| 58 | 17 42 | 18 21 | 19 07 | 09 47 | 10 38 | 11 41 | 12 54 |
| S 60 | 17 40 | 18 22 | 19 11 | 09 34 | 10 24 | 11 28 | 12 42 |

| Dia | SOL ET 00h | SOL (+) 12h | SOL Pass Merid | LUA Pass Merid Sup | LUA Pass Merid Inf | LUA Idade | LUA Fase |
|---|---|---|---|---|---|---|---|
| | d | m s | m s | h m | h m | h m | d | % |
| | 13 | 03 59 | 04 10 | 11 56 | 05 50 | 18 19 | 23 | 47 |
| | 14 | 04 21 | 04 31 | 11 55 | 06 48 | 19 17 | 24 | 36 |
| | 15 | 04 42 | 04 53 | 11 55 | 07 46 | 20 15 | 25 | 26 |

## $0^m$ ACRÉSCIMOS E CORREÇÕES $1^m$

| m 0 | SOL PLANETAS | ♈ | LUA | ν ou Corr. d | | ν ou Corr. d | | ν ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 0 00·0 | 0 00·0 | 0 00·0 | 0·0 | 0·0 | 6·0 | 0·1 | 12·0 | 0·1 |
| 01 | 0 00·3 | 0 00·3 | 0 00·2 | 0·1 | 0·0 | 6·1 | 0·1 | 12·1 | 0·1 |
| 02 | 0 00·5 | 0 00·5 | 0 00·5 | 0·2 | 0·0 | 6·2 | 0·1 | 12·2 | 0·1 |
| 03 | 0 00·8 | 0 00·8 | 0 00·7 | 0·3 | 0·0 | 6·3 | 0·1 | 12·3 | 0·1 |
| 04 | 0 01·0 | 0 01·0 | 0 01·0 | 0·4 | 0·0 | 6·4 | 0·1 | 12·4 | 0·1 |
| 05 | 0 01·3 | 0 01·3 | 0 01·2 | 0·5 | 0·0 | 6·5 | 0·1 | 12·5 | 0·1 |
| 06 | 0 01·5 | 0 01·5 | 0 01·4 | 0·6 | 0·0 | 6·6 | 0·1 | 12·6 | 0·1 |
| 07 | 0 01·8 | 0 01·8 | 0 01·7 | 0·7 | 0·0 | 6·7 | 0·1 | 12·7 | 0·1 |
| 08 | 0 02·0 | 0 02·0 | 0 01·9 | 0·8 | 0·0 | 6·8 | 0·1 | 12·8 | 0·1 |
| 09 | 0 02·3 | 0 02·3 | 0 02·1 | 0·9 | 0·0 | 6·9 | 0·1 | 12·9 | 0·1 |
| 10 | 0 02·5 | 0 02·5 | 0 02·4 | 1·0 | 0·0 | 7·0 | 0·1 | 13·0 | 0·1 |
| 11 | 0 02·8 | 0 02·8 | 0 02·6 | 1·1 | 0·0 | 7·1 | 0·1 | 13·1 | 0·1 |
| 12 | 0 03·0 | 0 03·0 | 0 02·9 | 1·2 | 0·0 | 7·2 | 0·1 | 13·2 | 0·1 |
| 13 | 0 03·3 | 0 03·3 | 0 03·1 | 1·3 | 0·0 | 7·3 | 0·1 | 13·3 | 0·1 |
| 14 | 0 03·5 | 0 03·5 | 0 03·3 | 1·4 | 0·0 | 7·4 | 0·1 | 13·4 | 0·1 |
| 15 | 0 03·8 | 0 03·8 | 0 03·6 | 1·5 | 0·0 | 7·5 | 0·1 | 13·5 | 0·1 |
| 16 | 0 04·0 | 0 04·0 | 0 03·8 | 1·6 | 0·0 | 7·6 | 0·1 | 13·6 | 0·1 |
| 17 | 0 04·3 | 0 04·3 | 0 04·1 | 1·7 | 0·0 | 7·7 | 0·1 | 13·7 | 0·1 |
| 18 | 0 04·5 | 0 04·5 | 0 04·3 | 1·8 | 0·0 | 7·8 | 0·1 | 13·8 | 0·1 |
| 19 | 0 04·8 | 0 04·8 | 0 04·5 | 1·9 | 0·0 | 7·9 | 0·1 | 13·9 | 0·1 |
| 20 | 0 05·0 | 0 05·0 | 0 04·8 | 2·0 | 0·0 | 8·0 | 0·1 | 14·0 | 0·1 |
| 21 | 0 05·3 | 0 05·3 | 0 05·0 | 2·1 | 0·0 | 8·1 | 0·1 | 14·1 | 0·1 |
| 22 | 0 05·5 | 0 05·5 | 0 05·2 | 2·2 | 0·0 | 8·2 | 0·1 | 14·2 | 0·1 |
| 23 | 0 05·8 | 0 05·8 | 0 05·5 | 2·3 | 0·0 | 8·3 | 0·1 | 14·3 | 0·1 |
| 24 | 0 06·0 | 0 06·0 | 0 05·7 | 2·4 | 0·0 | 8·4 | 0·1 | 14·4 | 0·1 |
| 25 | 0 06·3 | 0 06·3 | 0 06·0 | 2·5 | 0·0 | 8·5 | 0·1 | 14·5 | 0·1 |
| 26 | 0 06·5 | 0 06·5 | 0 06·2 | 2·6 | 0·0 | 8·6 | 0·1 | 14·6 | 0·1 |
| 27 | 0 06·8 | 0 06·8 | 0 06·4 | 2·7 | 0·0 | 8·7 | 0·1 | 14·7 | 0·1 |
| 28 | 0 07·0 | 0 07·0 | 0 06·7 | 2·8 | 0·0 | 8·8 | 0·1 | 14·8 | 0·1 |
| 29 | 0 07·3 | 0 07·3 | 0 06·9 | 2·9 | 0·0 | 8·9 | 0·1 | 14·9 | 0·1 |
| 30 | 0 07·5 | 0 07·5 | 0 07·2 | 3·0 | 0·0 | 9·0 | 0·1 | 15·0 | 0·1 |
| 31 | 0 07·8 | 0 07·8 | 0 07·4 | 3·1 | 0·0 | 9·1 | 0·1 | 15·1 | 0·1 |
| 32 | 0 08·0 | 0 08·0 | 0 07·6 | 3·2 | 0·0 | 9·2 | 0·1 | 15·2 | 0·1 |
| 33 | 0 08·3 | 0 08·3 | 0 07·9 | 3·3 | 0·0 | 9·3 | 0·1 | 15·3 | 0·1 |
| 34 | 0 08·5 | 0 08·5 | 0 08·1 | 3·4 | 0·0 | 9·4 | 0·1 | 15·4 | 0·1 |
| 35 | 0 08·8 | 0 08·8 | 0 08·4 | 3·5 | 0·0 | 9·5 | 0·1 | 15·5 | 0·1 |
| 36 | 0 09·0 | 0 09·0 | 0 08·6 | 3·6 | 0·0 | 9·6 | 0·1 | 15·6 | 0·1 |
| 37 | 0 09·3 | 0 09·3 | 0 08·8 | 3·7 | 0·0 | 9·7 | 0·1 | 15·7 | 0·1 |
| 38 | 0 09·5 | 0 09·5 | 0 09·1 | 3·8 | 0·0 | 9·8 | 0·1 | 15·8 | 0·1 |
| 39 | 0 09·8 | 0 09·8 | 0 09·3 | 3·9 | 0·0 | 9·9 | 0·1 | 15·9 | 0·1 |
| 40 | 0 10·0 | 0 10·0 | 0 09·5 | 4·0 | 0·0 | 10·0 | 0·1 | 16·0 | 0·1 |
| 41 | 0 10·3 | 0 10·3 | 0 09·8 | 4·1 | 0·0 | 10·1 | 0·1 | 16·1 | 0·1 |
| 42 | 0 10·5 | 0 10·5 | 0 10·0 | 4·2 | 0·0 | 10·2 | 0·1 | 16·2 | 0·1 |
| 43 | 0 10·8 | 0 10·8 | 0 10·3 | 4·3 | 0·0 | 10·3 | 0·1 | 16·3 | 0·1 |
| 44 | 0 11·0 | 0 11·0 | 0 10·5 | 4·4 | 0·0 | 10·4 | 0·1 | 16·4 | 0·1 |
| 45 | 0 11·3 | 0 11·3 | 0 10·7 | 4·5 | 0·0 | 10·5 | 0·1 | 16·5 | 0·1 |
| 46 | 0 11·5 | 0 11·5 | 0 11·0 | 4·6 | 0·0 | 10·6 | 0·1 | 16·6 | 0·1 |
| 47 | 0 11·8 | 0 11·8 | 0 11·2 | 4·7 | 0·0 | 10·7 | 0·1 | 16·7 | 0·1 |
| 48 | 0 12·0 | 0 12·0 | 0 11·5 | 4·8 | 0·0 | 10·8 | 0·1 | 16·8 | 0·1 |
| 49 | 0 12·3 | 0 12·3 | 0 11·7 | 4·9 | 0·0 | 10·9 | 0·1 | 16·9 | 0·1 |
| 50 | 0 12·5 | 0 12·5 | 0 11·9 | 5·0 | 0·0 | 11·0 | 0·1 | 17·0 | 0·1 |
| 51 | 0 12·8 | 0 12·8 | 0 12·2 | 5·1 | 0·0 | 11·1 | 0·1 | 17·1 | 0·1 |
| 52 | 0 13·0 | 0 13·0 | 0 12·4 | 5·2 | 0·0 | 11·2 | 0·1 | 17·2 | 0·1 |
| 53 | 0 13·3 | 0 13·3 | 0 12·6 | 5·3 | 0·0 | 11·3 | 0·1 | 17·3 | 0·1 |
| 54 | 0 13·5 | 0 13·5 | 0 12·9 | 5·4 | 0·0 | 11·4 | 0·1 | 17·4 | 0·1 |
| 55 | 0 13·8 | 0 13·8 | 0 13·1 | 5·5 | 0·0 | 11·5 | 0·1 | 17·5 | 0·1 |
| 56 | 0 14·0 | 0 14·0 | 0 13·4 | 5·6 | 0·0 | 11·6 | 0·1 | 17·6 | 0·1 |
| 57 | 0 14·3 | 0 14·3 | 0 13·6 | 5·7 | 0·0 | 11·7 | 0·1 | 17·7 | 0·1 |
| 58 | 0 14·5 | 0 14·5 | 0 13·8 | 5·8 | 0·0 | 11·8 | 0·1 | 17·8 | 0·1 |
| 59 | 0 14·8 | 0 14·8 | 0 14·1 | 5·9 | 0·0 | 11·9 | 0·1 | 17·9 | 0·1 |
| 60 | 0 15·0 | 0 15·0 | 0 14·3 | 6·0 | 0·1 | 12·0 | 0·1 | 18·0 | 0·2 |

| m 1 | SOL PLANETAS | ♈ | LUA | ν ou Corr. d | | ν ou Corr. d | | ν ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 0 15·0 | 0 15·0 | 0 14·3 | 0·0 | 0·0 | 6·0 | 0·2 | 12·0 | 0·3 |
| 01 | 0 15·3 | 0 15·3 | 0 14·6 | 0·1 | 0·0 | 6·1 | 0·2 | 12·1 | 0·3 |
| 02 | 0 15·5 | 0 15·5 | 0 14·8 | 0·2 | 0·0 | 6·2 | 0·2 | 12·2 | 0·3 |
| 03 | 0 15·8 | 0 15·8 | 0 15·0 | 0·3 | 0·0 | 6·3 | 0·2 | 12·3 | 0·3 |
| 04 | 0 16·0 | 0 16·0 | 0 15·3 | 0·4 | 0·0 | 6·4 | 0·2 | 12·4 | 0·3 |
| 05 | 0 16·3 | 0 16·3 | 0 15·5 | 0·5 | 0·0 | 6·5 | 0·2 | 12·5 | 0·3 |
| 06 | 0 16·5 | 0 16·5 | 0 15·7 | 0·6 | 0·0 | 6·6 | 0·2 | 12·6 | 0·3 |
| 07 | 0 16·8 | 0 16·8 | 0 16·0 | 0·7 | 0·0 | 6·7 | 0·2 | 12·7 | 0·3 |
| 08 | 0 17·0 | 0 17·0 | 0 16·2 | 0·8 | 0·0 | 6·8 | 0·2 | 12·8 | 0·3 |
| 09 | 0 17·3 | 0 17·3 | 0 16·5 | 0·9 | 0·0 | 6·9 | 0·2 | 12·9 | 0·3 |
| 10 | 0 17·5 | 0 17·5 | 0 16·7 | 1·0 | 0·0 | 7·0 | 0·2 | 13·0 | 0·3 |
| 11 | 0 17·8 | 0 17·8 | 0 16·9 | 1·1 | 0·0 | 7·1 | 0·2 | 13·1 | 0·3 |
| 12 | 0 18·0 | 0 18·0 | 0 17·2 | 1·2 | 0·0 | 7·2 | 0·2 | 13·2 | 0·3 |
| 13 | 0 18·3 | 0 18·3 | 0 17·4 | 1·3 | 0·0 | 7·3 | 0·2 | 13·3 | 0·3 |
| 14 | 0 18·5 | 0 18·6 | 0 17·7 | 1·4 | 0·0 | 7·4 | 0·2 | 13·4 | 0·3 |
| 15 | 0 18·8 | 0 18·8 | 0 17·9 | 1·5 | 0·0 | 7·5 | 0·2 | 13·5 | 0·3 |
| 16 | 0 19·0 | 0 19·1 | 0 18·1 | 1·6 | 0·0 | 7·6 | 0·2 | 13·6 | 0·3 |
| 17 | 0 19·3 | 0 19·3 | 0 18·4 | 1·7 | 0·0 | 7·7 | 0·2 | 13·7 | 0·3 |
| 18 | 0 19·5 | 0 19·6 | 0 18·6 | 1·8 | 0·0 | 7·8 | 0·2 | 13·8 | 0·3 |
| 19 | 0 19·8 | 0 19·8 | 0 18·9 | 1·9 | 0·0 | 7·9 | 0·2 | 13·9 | 0·3 |
| 20 | 0 20·0 | 0 20·1 | 0 19·1 | 2·0 | 0·1 | 8·0 | 0·2 | 14·0 | 0·4 |
| 21 | 0 20·3 | 0 20·3 | 0 19·3 | 2·1 | 0·1 | 8·1 | 0·2 | 14·1 | 0·4 |
| 22 | 0 20·5 | 0 20·6 | 0 19·6 | 2·2 | 0·1 | 8·2 | 0·2 | 14·2 | 0·4 |
| 23 | 0 20·8 | 0 20·8 | 0 19·8 | 2·3 | 0·1 | 8·3 | 0·2 | 14·3 | 0·4 |
| 24 | 0 21·0 | 0 21·1 | 0 20·0 | 2·4 | 0·1 | 8·4 | 0·2 | 14·4 | 0·4 |
| 25 | 0 21·3 | 0 21·3 | 0 20·3 | 2·5 | 0·1 | 8·5 | 0·2 | 14·5 | 0·4 |
| 26 | 0 21·5 | 0 21·6 | 0 20·5 | 2·6 | 0·1 | 8·6 | 0·2 | 14·6 | 0·4 |
| 27 | 0 21·8 | 0 21·8 | 0 20·8 | 2·7 | 0·1 | 8·7 | 0·2 | 14·7 | 0·4 |
| 28 | 0 22·0 | 0 22·1 | 0 21·0 | 2·8 | 0·1 | 8·8 | 0·2 | 14·8 | 0·4 |
| 29 | 0 22·3 | 0 22·3 | 0 21·2 | 2·9 | 0·1 | 8·9 | 0·2 | 14·9 | 0·4 |
| 30 | 0 22·5 | 0 22·6 | 0 21·5 | 3·0 | 0·1 | 9·0 | 0·2 | 15·0 | 0·4 |
| 31 | 0 22·8 | 0 22·8 | 0 21·7 | 3·1 | 0·1 | 9·1 | 0·2 | 15·1 | 0·4 |
| 32 | 0 23·0 | 0 23·1 | 0 22·0 | 3·2 | 0·1 | 9·2 | 0·2 | 15·2 | 0·4 |
| 33 | 0 23·3 | 0 23·3 | 0 22·2 | 3·3 | 0·1 | 9·3 | 0·2 | 15·3 | 0·4 |
| 34 | 0 23·5 | 0 23·6 | 0 22·4 | 3·4 | 0·1 | 9·4 | 0·2 | 15·4 | 0·4 |
| 35 | 0 23·8 | 0 23·8 | 0 22·7 | 3·5 | 0·1 | 9·5 | 0·2 | 15·5 | 0·4 |
| 36 | 0 24·0 | 0 24·1 | 0 22·9 | 3·6 | 0·1 | 9·6 | 0·2 | 15·6 | 0·4 |
| 37 | 0 24·3 | 0 24·3 | 0 23·1 | 3·7 | 0·1 | 9·7 | 0·2 | 15·7 | 0·4 |
| 38 | 0 24·5 | 0 24·6 | 0 23·4 | 3·8 | 0·1 | 9·8 | 0·2 | 15·8 | 0·4 |
| 39 | 0 24·8 | 0 24·8 | 0 23·6 | 3·9 | 0·1 | 9·9 | 0·2 | 15·9 | 0·4 |
| 40 | 0 25·0 | 0 25·1 | 0 23·9 | 4·0 | 0·1 | 10·0 | 0·3 | 16·0 | 0·4 |
| 41 | 0 25·3 | 0 25·3 | 0 24·1 | 4·1 | 0·1 | 10·1 | 0·3 | 16·1 | 0·4 |
| 42 | 0 25·5 | 0 25·6 | 0 24·3 | 4·2 | 0·1 | 10·2 | 0·3 | 16·2 | 0·4 |
| 43 | 0 25·8 | 0 25·8 | 0 24·6 | 4·3 | 0·1 | 10·3 | 0·3 | 16·3 | 0·4 |
| 44 | 0 26·0 | 0 26·1 | 0 24·8 | 4·4 | 0·1 | 10·4 | 0·3 | 16·4 | 0·4 |
| 45 | 0 26·3 | 0 26·3 | 0 25·1 | 4·5 | 0·1 | 10·5 | 0·3 | 16·5 | 0·4 |
| 46 | 0 26·5 | 0 26·6 | 0 25·3 | 4·6 | 0·1 | 10·6 | 0·3 | 16·6 | 0·4 |
| 47 | 0 26·8 | 0 26·8 | 0 25·5 | 4·7 | 0·1 | 10·7 | 0·3 | 16·7 | 0·4 |
| 48 | 0 27·0 | 0 27·1 | 0 25·8 | 4·8 | 0·1 | 10·8 | 0·3 | 16·8 | 0·4 |
| 49 | 0 27·3 | 0 27·3 | 0 26·0 | 4·9 | 0·1 | 10·9 | 0·3 | 16·9 | 0·4 |
| 50 | 0 27·5 | 0 27·6 | 0 26·2 | 5·0 | 0·1 | 11·0 | 0·3 | 17·0 | 0·4 |
| 51 | 0 27·8 | 0 27·8 | 0 26·5 | 5·1 | 0·1 | 11·1 | 0·3 | 17·1 | 0·4 |
| 52 | 0 28·0 | 0 28·1 | 0 26·7 | 5·2 | 0·1 | 11·2 | 0·3 | 17·2 | 0·4 |
| 53 | 0 28·3 | 0 28·3 | 0 27·0 | 5·3 | 0·1 | 11·3 | 0·3 | 17·3 | 0·4 |
| 54 | 0 28·5 | 0 28·6 | 0 27·2 | 5·4 | 0·1 | 11·4 | 0·3 | 17·4 | 0·4 |
| 55 | 0 28·8 | 0 28·8 | 0 27·4 | 5·5 | 0·1 | 11·5 | 0·3 | 17·5 | 0·4 |
| 56 | 0 29·0 | 0 29·1 | 0 27·7 | 5·6 | 0·1 | 11·6 | 0·3 | 17·6 | 0·4 |
| 57 | 0 29·3 | 0 29·3 | 0 27·9 | 5·7 | 0·1 | 11·7 | 0·3 | 17·7 | 0·4 |
| 58 | 0 29·5 | 0 29·6 | 0 28·2 | 5·8 | 0·1 | 11·8 | 0·3 | 17·8 | 0·4 |
| 59 | 0 29·8 | 0 29·8 | 0 28·4 | 5·9 | 0·1 | 11·9 | 0·3 | 17·9 | 0·4 |
| 60 | 0 30·0 | 0 30·1 | 0 28·6 | 6·0 | 0·2 | 12·0 | 0·3 | 18·0 | 0·5 |

## 6m ACRÉSCIMOS E CORREÇÕES 7m

| m 6 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | v ou d Corr. | v ou d Corr. |
|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ ′ | ′ ′ | ′ ′ |
| 00 | 1 30·0 | 1 30·2 | 1 25·9 | 0·0 0·0 | 6·0 0·7 | 12·0 1·3 |
| 01 | 1 30·3 | 1 30·5 | 1 26·1 | 0·1 0·0 | 6·1 0·7 | 12·1 1·3 |
| 02 | 1 30·5 | 1 30·7 | 1 26·4 | 0·2 0·0 | 6·2 0·7 | 12·2 1·3 |
| 03 | 1 30·8 | 1 31·0 | 1 26·6 | 0·3 0·0 | 6·3 0·7 | 12·3 1·3 |
| 04 | 1 31·0 | 1 31·2 | 1 26·9 | 0·4 0·0 | 6·4 0·7 | 12·4 1·3 |
| 05 | 1 31·3 | 1 31·5 | 1 27·1 | 0·5 0·1 | 6·5 0·7 | 12·5 1·4 |
| 06 | 1 31·5 | 1 31·8 | 1 27·3 | 0·6 0·1 | 6·6 0·7 | 12·6 1·4 |
| 07 | 1 31·8 | 1 32·0 | 1 27·6 | 0·7 0·1 | 6·7 0·7 | 12·7 1·4 |
| 08 | 1 32·0 | 1 32·3 | 1 27·8 | 0·8 0·1 | 6·8 0·7 | 12·8 1·4 |
| 09 | 1 32·3 | 1 32·5 | 1 28·0 | 0·9 0·1 | 6·9 0·7 | 12·9 1·4 |
| 10 | 1 32·5 | 1 32·8 | 1 28·3 | 1·0 0·1 | 7·0 0·8 | 13·0 1·4 |
| 11 | 1 32·8 | 1 33·0 | 1 28·5 | 1·1 0·1 | 7·1 0·8 | 13·1 1·4 |
| 12 | 1 33·0 | 1 33·3 | 1 28·8 | 1·2 0·1 | 7·2 0·8 | 13·2 1·4 |
| 13 | 1 33·3 | 1 33·5 | 1 29·0 | 1·3 0·1 | 7·3 0·8 | 13·3 1·4 |
| 14 | 1 33·5 | 1 33·8 | 1 29·2 | 1·4 0·2 | 7·4 0·8 | 13·4 1·5 |
| 15 | 1 33·8 | 1 34·0 | 1 29·5 | 1·5 0·2 | 7·5 0·8 | 13·5 1·5 |
| 16 | 1 34·0 | 1 34·3 | 1 29·7 | 1·6 0·2 | 7·6 0·8 | 13·6 1·5 |
| 17 | 1 34·3 | 1 34·5 | 1 30·0 | 1·7 0·2 | 7·7 0·8 | 13·7 1·5 |
| 18 | 1 34·5 | 1 34·8 | 1 30·2 | 1·8 0·2 | 7·8 0·8 | 13·8 1·5 |
| 19 | 1 34·8 | 1 35·0 | 1 30·4 | 1·9 0·2 | 7·9 0·9 | 13·9 1·5 |
| 20 | 1 35·0 | 1 35·3 | 1 30·7 | 2·0 0·2 | 8·0 0·9 | 14·0 1·5 |
| 21 | 1 35·3 | 1 35·5 | 1 30·9 | 2·1 0·2 | 8·1 0·9 | 14·1 1·5 |
| 22 | 1 35·5 | 1 35·8 | 1 31·1 | 2·2 0·2 | 8·2 0·9 | 14·2 1·5 |
| 23 | 1 35·8 | 1 36·0 | 1 31·4 | 2·3 0·2 | 8·3 0·9 | 14·3 1·5 |
| 24 | 1 36·0 | 1 36·3 | 1 31·6 | 2·4 0·3 | 8·4 0·9 | 14·4 1·6 |
| 25 | 1 36·3 | 1 36·5 | 1 31·9 | 2·5 0·3 | 8·5 0·9 | 14·5 1·6 |
| 26 | 1 36·5 | 1 36·8 | 1 32·1 | 2·6 0·3 | 8·6 0·9 | 14·6 1·6 |
| 27 | 1 36·8 | 1 37·0 | 1 32·3 | 2·7 0·3 | 8·7 0·9 | 14·7 1·6 |
| 28 | 1 37·0 | 1 37·3 | 1 32·6 | 2·8 0·3 | 8·8 1·0 | 14·8 1·6 |
| 29 | 1 37·3 | 1 37·5 | 1 32·8 | 2·9 0·3 | 8·9 1·0 | 14·9 1·6 |
| 30 | 1 37·5 | 1 37·8 | 1 33·1 | 3·0 0·3 | 9·0 1·0 | 15·0 1·6 |
| 31 | 1 37·8 | 1 38·0 | 1 33·3 | 3·1 0·3 | 9·1 1·0 | 15·1 1·6 |
| 32 | 1 38·0 | 1 38·3 | 1 33·5 | 3·2 0·3 | 9·2 1·0 | 15·2 1·6 |
| 33 | 1 38·3 | 1 38·5 | 1 33·8 | 3·3 0·4 | 9·3 1·0 | 15·3 1·7 |
| 34 | 1 38·5 | 1 38·8 | 1 34·0 | 3·4 0·4 | 9·4 1·0 | 15·4 1·7 |
| 35 | 1 38·8 | 1 39·0 | 1 34·3 | 3·5 0·4 | 9·5 1·0 | 15·5 1·7 |
| 36 | 1 39·0 | 1 39·3 | 1 34·5 | 3·6 0·4 | 9·6 1·0 | 15·6 1·7 |
| 37 | 1 39·3 | 1 39·5 | 1 34·7 | 3·7 0·4 | 9·7 1·1 | 15·7 1·7 |
| 38 | 1 39·5 | 1 39·8 | 1 35·0 | 3·8 0·4 | 9·8 1·1 | 15·8 1·7 |
| 39 | 1 39·8 | 1 40·0 | 1 35·2 | 3·9 0·4 | 9·9 1·1 | 15·9 1·7 |
| 40 | 1 40·0 | 1 40·3 | 1 35·4 | 4·0 0·4 | 10·0 1·1 | 16·0 1·7 |
| 41 | 1 40·3 | 1 40·5 | 1 35·7 | 4·1 0·4 | 10·1 1·1 | 16·1 1·7 |
| 42 | 1 40·5 | 1 40·8 | 1 35·9 | 4·2 0·5 | 10·2 1·1 | 16·2 1·8 |
| 43 | 1 40·8 | 1 41·0 | 1 36·2 | 4·3 0·5 | 10·3 1·1 | 16·3 1·8 |
| 44 | 1 41·0 | 1 41·3 | 1 36·4 | 4·4 0·5 | 10·4 1·1 | 16·4 1·8 |
| 45 | 1 41·3 | 1 41·5 | 1 36·6 | 4·5 0·5 | 10·5 1·1 | 16·5 1·8 |
| 46 | 1 41·5 | 1 41·8 | 1 36·9 | 4·6 0·5 | 10·6 1·1 | 16·6 1·8 |
| 47 | 1 41·8 | 1 42·0 | 1 37·1 | 4·7 0·5 | 10·7 1·2 | 16·7 1·8 |
| 48 | 1 42·0 | 1 42·3 | 1 37·4 | 4·8 0·5 | 10·8 1·2 | 16·8 1·8 |
| 49 | 1 42·3 | 1 42·5 | 1 37·6 | 4·9 0·5 | 10·9 1·2 | 16·9 1·8 |
| 50 | 1 42·5 | 1 42·8 | 1 37·8 | 5·0 0·5 | 11·0 1·2 | 17·0 1·8 |
| 51 | 1 42·8 | 1 43·0 | 1 38·1 | 5·1 0·6 | 11·1 1·2 | 17·1 1·9 |
| 52 | 1 43·0 | 1 43·3 | 1 38·3 | 5·2 0·6 | 11·2 1·2 | 17·2 1·9 |
| 53 | 1 43·3 | 1 43·5 | 1 38·5 | 5·3 0·6 | 11·3 1·2 | 17·3 1·9 |
| 54 | 1 43·5 | 1 43·8 | 1 38·8 | 5·4 0·6 | 11·4 1·2 | 17·4 1·9 |
| 55 | 1 43·8 | 1 44·0 | 1 39·0 | 5·5 0·6 | 11·5 1·2 | 17·5 1·9 |
| 56 | 1 44·0 | 1 44·3 | 1 39·3 | 5·6 0·6 | 11·6 1·3 | 17·6 1·9 |
| 57 | 1 44·3 | 1 44·5 | 1 39·5 | 5·7 0·6 | 11·7 1·3 | 17·7 1·9 |
| 58 | 1 44·5 | 1 44·8 | 1 39·7 | 5·8 0·6 | 11·8 1·3 | 17·8 1·9 |
| 59 | 1 44·8 | 1 45·0 | 1 40·0 | 5·9 0·6 | 11·9 1·3 | 17·9 1·9 |
| 60 | 1 45·0 | 1 45·3 | 1 40·2 | 6·0 0·7 | 12·0 1·3 | 18·0 2·0 |

| m 7 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | v ou d Corr. | v ou d Corr. |
|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ ′ | ′ ′ | ′ ′ |
| 00 | 1 45·0 | 1 45·3 | 1 40·2 | 0·0 0·0 | 6·0 0·8 | 12·0 1·5 |
| 01 | 1 45·3 | 1 45·5 | 1 40·5 | 0·1 0·0 | 6·1 0·8 | 12·1 1·5 |
| 02 | 1 45·5 | 1 45·8 | 1 40·7 | 0·2 0·0 | 6·2 0·8 | 12·2 1·5 |
| 03 | 1 45·8 | 1 46·0 | 1 40·9 | 0·3 0·0 | 6·3 0·8 | 12·3 1·5 |
| 04 | 1 46·0 | 1 46·3 | 1 41·2 | 0·4 0·1 | 6·4 0·8 | 12·4 1·6 |
| 05 | 1 46·3 | 1 46·5 | 1 41·4 | 0·5 0·1 | 6·5 0·8 | 12·5 1·6 |
| 06 | 1 46·5 | 1 46·8 | 1 41·6 | 0·6 0·1 | 6·6 0·8 | 12·6 1·6 |
| 07 | 1 46·8 | 1 47·0 | 1 41·9 | 0·7 0·1 | 6·7 0·8 | 12·7 1·6 |
| 08 | 1 47·0 | 1 47·3 | 1 42·1 | 0·8 0·1 | 6·8 0·9 | 12·8 1·6 |
| 09 | 1 47·3 | 1 47·5 | 1 42·4 | 0·9 0·1 | 6·9 0·9 | 12·9 1·6 |
| 10 | 1 47·5 | 1 47·8 | 1 42·6 | 1·0 0·1 | 7·0 0·9 | 13·0 1·6 |
| 11 | 1 47·8 | 1 48·0 | 1 42·8 | 1·1 0·1 | 7·1 0·9 | 13·1 1·6 |
| 12 | 1 48·0 | 1 48·3 | 1 43·1 | 1·2 0·2 | 7·2 0·9 | 13·2 1·7 |
| 13 | 1 48·3 | 1 48·5 | 1 43·3 | 1·3 0·2 | 7·3 0·9 | 13·3 1·7 |
| 14 | 1 48·5 | 1 48·8 | 1 43·6 | 1·4 0·2 | 7·4 0·9 | 13·4 1·7 |
| 15 | 1 48·8 | 1 49·0 | 1 43·8 | 1·5 0·2 | 7·5 0·9 | 13·5 1·7 |
| 16 | 1 49·0 | 1 49·3 | 1 44·0 | 1·6 0·2 | 7·6 1·0 | 13·6 1·7 |
| 17 | 1 49·3 | 1 49·5 | 1 44·3 | 1·7 0·2 | 7·7 1·0 | 13·7 1·7 |
| 18 | 1 49·5 | 1 49·8 | 1 44·5 | 1·8 0·2 | 7·8 1·0 | 13·8 1·7 |
| 19 | 1 49·8 | 1 50·1 | 1 44·8 | 1·9 0·2 | 7·9 1·0 | 13·9 1·7 |
| 20 | 1 50·0 | 1 50·3 | 1 45·0 | 2·0 0·3 | 8·0 1·0 | 14·0 1·8 |
| 21 | 1 50·3 | 1 50·6 | 1 45·2 | 2·1 0·3 | 8·1 1·0 | 14·1 1·8 |
| 22 | 1 50·5 | 1 50·8 | 1 45·5 | 2·2 0·3 | 8·2 1·0 | 14·2 1·8 |
| 23 | 1 50·8 | 1 51·1 | 1 45·7 | 2·3 0·3 | 8·3 1·0 | 14·3 1·8 |
| 24 | 1 51·0 | 1 51·3 | 1 45·9 | 2·4 0·3 | 8·4 1·1 | 14·4 1·8 |
| 25 | 1 51·3 | 1 51·6 | 1 46·2 | 2·5 0·3 | 8·5 1·1 | 14·5 1·8 |
| 26 | 1 51·5 | 1 51·8 | 1 46·4 | 2·6 0·3 | 8·6 1·1 | 14·6 1·8 |
| 27 | 1 51·8 | 1 52·1 | 1 46·7 | 2·7 0·3 | 8·7 1·1 | 14·7 1·8 |
| 28 | 1 52·0 | 1 52·3 | 1 46·9 | 2·8 0·4 | 8·8 1·1 | 14·8 1·9 |
| 29 | 1 52·3 | 1 52·6 | 1 47·1 | 2·9 0·4 | 8·9 1·1 | 14·9 1·9 |
| 30 | 1 52·5 | 1 52·8 | 1 47·4 | 3·0 0·4 | 9·0 1·1 | 15·0 1·9 |
| 31 | 1 52·8 | 1 53·1 | 1 47·6 | 3·1 0·4 | 9·1 1·1 | 15·1 1·9 |
| 32 | 1 53·0 | 1 53·3 | 1 47·9 | 3·2 0·4 | 9·2 1·2 | 15·2 1·9 |
| 33 | 1 53·3 | 1 53·6 | 1 48·1 | 3·3 0·4 | 9·3 1·2 | 15·3 1·9 |
| 34 | 1 53·5 | 1 53·8 | 1 48·3 | 3·4 0·4 | 9·4 1·2 | 15·4 1·9 |
| 35 | 1 53·8 | 1 54·1 | 1 48·6 | 3·5 0·4 | 9·5 1·2 | 15·5 1·9 |
| 36 | 1 54·0 | 1 54·3 | 1 48·8 | 3·6 0·5 | 9·6 1·2 | 15·6 2·0 |
| 37 | 1 54·3 | 1 54·6 | 1 49·0 | 3·7 0·5 | 9·7 1·2 | 15·7 2·0 |
| 38 | 1 54·5 | 1 54·8 | 1 49·3 | 3·8 0·5 | 9·8 1·2 | 15·8 2·0 |
| 39 | 1 54·8 | 1 55·1 | 1 49·5 | 3·9 0·5 | 9·9 1·2 | 15·9 2·0 |
| 40 | 1 55·0 | 1 55·3 | 1 49·8 | 4·0 0·5 | 10·0 1·3 | 16·0 2·0 |
| 41 | 1 55·3 | 1 55·6 | 1 50·0 | 4·1 0·5 | 10·1 1·3 | 16·1 2·0 |
| 42 | 1 55·5 | 1 55·8 | 1 50·2 | 4·2 0·5 | 10·2 1·3 | 16·2 2·0 |
| 43 | 1 55·8 | 1 56·1 | 1 50·5 | 4·3 0·5 | 10·3 1·3 | 16·3 2·0 |
| 44 | 1 56·0 | 1 56·3 | 1 50·7 | 4·4 0·6 | 10·4 1·3 | 16·4 2·1 |
| 45 | 1 56·3 | 1 56·6 | 1 51·0 | 4·5 0·6 | 10·5 1·3 | 16·5 2·1 |
| 46 | 1 56·5 | 1 56·8 | 1 51·2 | 4·6 0·6 | 10·6 1·3 | 16·6 2·1 |
| 47 | 1 56·8 | 1 57·1 | 1 51·4 | 4·7 0·6 | 10·7 1·3 | 16·7 2·1 |
| 48 | 1 57·0 | 1 57·3 | 1 51·7 | 4·8 0·6 | 10·8 1·4 | 16·8 2·1 |
| 49 | 1 57·3 | 1 57·6 | 1 51·9 | 4·9 0·6 | 10·9 1·4 | 16·9 2·1 |
| 50 | 1 57·5 | 1 57·8 | 1 52·1 | 5·0 0·6 | 11·0 1·4 | 17·0 2·1 |
| 51 | 1 57·8 | 1 58·1 | 1 52·4 | 5·1 0·6 | 11·1 1·4 | 17·1 2·1 |
| 52 | 1 58·0 | 1 58·3 | 1 52·6 | 5·2 0·7 | 11·2 1·4 | 17·2 2·2 |
| 53 | 1 58·3 | 1 58·6 | 1 52·9 | 5·3 0·7 | 11·3 1·4 | 17·3 2·2 |
| 54 | 1 58·5 | 1 58·8 | 1 53·1 | 5·4 0·7 | 11·4 1·4 | 17·4 2·2 |
| 55 | 1 58·8 | 1 59·1 | 1 53·3 | 5·5 0·7 | 11·5 1·4 | 17·5 2·2 |
| 56 | 1 59·0 | 1 59·3 | 1 53·6 | 5·6 0·7 | 11·6 1·5 | 17·6 2·2 |
| 57 | 1 59·3 | 1 59·6 | 1 53·8 | 5·7 0·7 | 11·7 1·5 | 17·7 2·2 |
| 58 | 1 59·5 | 1 59·8 | 1 54·1 | 5·8 0·7 | 11·8 1·5 | 17·8 2·2 |
| 59 | 1 59·8 | 2 00·1 | 1 54·3 | 5·9 0·7 | 11·9 1·5 | 17·9 2·2 |
| 60 | 2 00·0 | 2 00·3 | 1 54·5 | 6·0 0·8 | 12·0 1·5 | 18·0 2·3 |

## 10m ACRÉSCIMOS E CORREÇÕES 11m

| m 10 | SOL PLANETAS | ♈ | LUA | v ou d | Corr. | v ou d | Corr. | v ou d | Corr. |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 2 30·0 | 2 30·4 | 2 23·2 | 0·0 | 0·0 | 6·0 | 1·1 | 12·0 | 2·1 |
| 01 | 2 30·3 | 2 30·7 | 2 23·4 | 0·1 | 0·0 | 6·1 | 1·1 | 12·1 | 2·1 |
| 02 | 2 30·5 | 2 30·9 | 2 23·6 | 0·2 | 0·0 | 6·2 | 1·1 | 12·2 | 2·1 |
| 03 | 2 30·8 | 2 31·2 | 2 23·9 | 0·3 | 0·1 | 6·3 | 1·1 | 12·3 | 2·2 |
| 04 | 2 31·0 | 2 31·4 | 2 24·1 | 0·4 | 0·1 | 6·4 | 1·1 | 12·4 | 2·2 |
| 05 | 2 31·3 | 2 31·7 | 2 24·4 | 0·5 | 0·1 | 6·5 | 1·1 | 12·5 | 2·2 |
| 06 | 2 31·5 | 2 31·9 | 2 24·6 | 0·6 | 0·1 | 6·6 | 1·2 | 12·6 | 2·2 |
| 07 | 2 31·8 | 2 32·2 | 2 24·8 | 0·7 | 0·1 | 6·7 | 1·2 | 12·7 | 2·2 |
| 08 | 2 32·0 | 2 32·4 | 2 25·1 | 0·8 | 0·1 | 6·8 | 1·2 | 12·8 | 2·2 |
| 09 | 2 32·3 | 2 32·7 | 2 25·3 | 0·9 | 0·2 | 6·9 | 1·2 | 12·9 | 2·3 |
| 10 | 2 32·5 | 2 32·9 | 2 25·6 | 1·0 | 0·2 | 7·0 | 1·2 | 13·0 | 2·3 |
| 11 | 2 32·8 | 2 33·2 | 2 25·8 | 1·1 | 0·2 | 7·1 | 1·2 | 13·1 | 2·3 |
| 12 | 2 33·0 | 2 33·4 | 2 26·0 | 1·2 | 0·2 | 7·2 | 1·3 | 13·2 | 2·3 |
| 13 | 2 33·3 | 2 33·7 | 2 26·3 | 1·3 | 0·2 | 7·3 | 1·3 | 13·3 | 2·3 |
| 14 | 2 33·5 | 2 33·9 | 2 26·5 | 1·4 | 0·2 | 7·4 | 1·3 | 13·4 | 2·3 |
| 15 | 2 33·8 | 2 34·2 | 2 26·7 | 1·5 | 0·3 | 7·5 | 1·3 | 13·5 | 2·4 |
| 16 | 2 34·0 | 2 34·4 | 2 27·0 | 1·6 | 0·3 | 7·6 | 1·3 | 13·6 | 2·4 |
| 17 | 2 34·3 | 2 34·7 | 2 27·2 | 1·7 | 0·3 | 7·7 | 1·3 | 13·7 | 2·4 |
| 18 | 2 34·5 | 2 34·9 | 2 27·5 | 1·8 | 0·3 | 7·8 | 1·4 | 13·8 | 2·4 |
| 19 | 2 34·8 | 2 35·2 | 2 27·7 | 1·9 | 0·3 | 7·9 | 1·4 | 13·9 | 2·4 |
| 20 | 2 35·0 | 2 35·4 | 2 27·9 | 2·0 | 0·4 | 8·0 | 1·4 | 14·0 | 2·5 |
| 21 | 2 35·3 | 2 35·7 | 2 28·2 | 2·1 | 0·4 | 8·1 | 1·4 | 14·1 | 2·5 |
| 22 | 2 35·5 | 2 35·9 | 2 28·4 | 2·2 | 0·4 | 8·2 | 1·4 | 14·2 | 2·5 |
| 23 | 2 35·8 | 2 36·2 | 2 28·7 | 2·3 | 0·4 | 8·3 | 1·5 | 14·3 | 2·5 |
| 24 | 2 36·0 | 2 36·4 | 2 28·9 | 2·4 | 0·4 | 8·4 | 1·5 | 14·4 | 2·5 |
| 25 | 2 36·3 | 2 36·7 | 2 29·1 | 2·5 | 0·4 | 8·5 | 1·5 | 14·5 | 2·5 |
| 26 | 2 36·5 | 2 36·9 | 2 29·4 | 2·6 | 0·5 | 8·6 | 1·5 | 14·6 | 2·6 |
| 27 | 2 36·8 | 2 37·2 | 2 29·6 | 2·7 | 0·5 | 8·7 | 1·5 | 14·7 | 2·6 |
| 28 | 2 37·0 | 2 37·4 | 2 29·8 | 2·8 | 0·5 | 8·8 | 1·5 | 14·8 | 2·6 |
| 29 | 2 37·3 | 2 37·7 | 2 30·1 | 2·9 | 0·5 | 8·9 | 1·6 | 14·9 | 2·6 |
| 30 | 2 37·5 | 2 37·9 | 2 30·3 | 3·0 | 0·5 | 9·0 | 1·6 | 15·0 | 2·6 |
| 31 | 2 37·8 | 2 38·2 | 2 30·6 | 3·1 | 0·5 | 9·1 | 1·6 | 15·1 | 2·6 |
| 32 | 2 38·0 | 2 38·4 | 2 30·8 | 3·2 | 0·6 | 9·2 | 1·6 | 15·2 | 2·7 |
| 33 | 2 38·3 | 2 38·7 | 2 31·0 | 3·3 | 0·6 | 9·3 | 1·6 | 15·3 | 2·7 |
| 34 | 2 38·5 | 2 38·9 | 2 31·3 | 3·4 | 0·6 | 9·4 | 1·6 | 15·4 | 2·7 |
| 35 | 2 38·8 | 2 39·2 | 2 31·5 | 3·5 | 0·6 | 9·5 | 1·7 | 15·5 | 2·7 |
| 36 | 2 39·0 | 2 39·4 | 2 31·8 | 3·6 | 0·6 | 9·6 | 1·7 | 15·6 | 2·7 |
| 37 | 2 39·3 | 2 39·7 | 2 32·0 | 3·7 | 0·6 | 9·7 | 1·7 | 15·7 | 2·7 |
| 38 | 2 39·5 | 2 39·9 | 2 32·2 | 3·8 | 0·7 | 9·8 | 1·7 | 15·8 | 2·8 |
| 39 | 2 39·8 | 2 40·2 | 2 32·5 | 3·9 | 0·7 | 9·9 | 1·7 | 15·9 | 2·8 |
| 40 | 2 40·0 | 2 40·4 | 2 32·7 | 4·0 | 0·7 | 10·0 | 1·8 | 16·0 | 2·8 |
| 41 | 2 40·3 | 2 40·7 | 2 32·9 | 4·1 | 0·7 | 10·1 | 1·8 | 16·1 | 2·8 |
| 42 | 2 40·5 | 2 40·9 | 2 33·2 | 4·2 | 0·7 | 10·2 | 1·8 | 16·2 | 2·8 |
| 43 | 2 40·8 | 2 41·2 | 2 33·4 | 4·3 | 0·8 | 10·3 | 1·8 | 16·3 | 2·9 |
| 44 | 2 41·0 | 2 41·4 | 2 33·7 | 4·4 | 0·8 | 10·4 | 1·8 | 16·4 | 2·9 |
| 45 | 2 41·3 | 2 41·7 | 2 33·9 | 4·5 | 0·8 | 10·5 | 1·8 | 16·5 | 2·9 |
| 46 | 2 41·5 | 2 41·9 | 2 34·1 | 4·6 | 0·8 | 10·6 | 1·9 | 16·6 | 2·9 |
| 47 | 2 41·8 | 2 42·2 | 2 34·4 | 4·7 | 0·8 | 10·7 | 1·9 | 16·7 | 2·9 |
| 48 | 2 42·0 | 2 42·4 | 2 34·6 | 4·8 | 0·8 | 10·8 | 1·9 | 16·8 | 2·9 |
| 49 | 2 42·3 | 2 42·7 | 2 34·9 | 4·9 | 0·9 | 10·9 | 1·9 | 16·9 | 3·0 |
| 50 | 2 42·5 | 2 42·9 | 2 35·1 | 5·0 | 0·9 | 11·0 | 1·9 | 17·0 | 3·0 |
| 51 | 2 42·8 | 2 43·2 | 2 35·3 | 5·1 | 0·9 | 11·1 | 1·9 | 17·1 | 3·0 |
| 52 | 2 43·0 | 2 43·4 | 2 35·6 | 5·2 | 0·9 | 11·2 | 2·0 | 17·2 | 3·0 |
| 53 | 2 43·3 | 2 43·7 | 2 35·8 | 5·3 | 0·9 | 11·3 | 2·0 | 17·3 | 3·0 |
| 54 | 2 43·5 | 2 43·9 | 2 36·1 | 5·4 | 0·9 | 11·4 | 2·0 | 17·4 | 3·0 |
| 55 | 2 43·8 | 2 44·2 | 2 36·3 | 5·5 | 1·0 | 11·5 | 2·0 | 17·5 | 3·1 |
| 56 | 2 44·0 | 2 44·4 | 2 36·5 | 5·6 | 1·0 | 11·6 | 2·0 | 17·6 | 3·1 |
| 57 | 2 44·3 | 2 44·7 | 2 36·8 | 5·7 | 1·0 | 11·7 | 2·0 | 17·7 | 3·1 |
| 58 | 2 44·5 | 2 45·0 | 2 37·0 | 5·8 | 1·0 | 11·8 | 2·1 | 17·8 | 3·1 |
| 59 | 2 44·8 | 2 45·2 | 2 37·2 | 5·9 | 1·0 | 11·9 | 2·1 | 17·9 | 3·1 |
| 60 | 2 45·0 | 2 45·5 | 2 37·5 | 6·0 | 1·1 | 12·0 | 2·1 | 18·0 | 3·2 |

| m 11 | SOL PLANETAS | ♈ | LUA | v ou d | Corr. | v ou d | Corr. | v ou d | Corr. |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 2 45·0 | 2 45·5 | 2 37·5 | 0·0 | 0·0 | 6·0 | 1·2 | 12·0 | 2·3 |
| 01 | 2 45·3 | 2 45·7 | 2 37·7 | 0·1 | 0·0 | 6·1 | 1·2 | 12·1 | 2·3 |
| 02 | 2 45·5 | 2 46·0 | 2 38·0 | 0·2 | 0·0 | 6·2 | 1·2 | 12·2 | 2·3 |
| 03 | 2 45·8 | 2 46·2 | 2 38·2 | 0·3 | 0·1 | 6·3 | 1·2 | 12·3 | 2·4 |
| 04 | 2 46·0 | 2 46·5 | 2 38·4 | 0·4 | 0·1 | 6·4 | 1·2 | 12·4 | 2·4 |
| 05 | 2 46·3 | 2 46·7 | 2 38·7 | 0·5 | 0·1 | 6·5 | 1·2 | 12·5 | 2·4 |
| 06 | 2 46·5 | 2 47·0 | 2 38·9 | 0·6 | 0·1 | 6·6 | 1·3 | 12·6 | 2·4 |
| 07 | 2 46·8 | 2 47·2 | 2 39·2 | 0·7 | 0·1 | 6·7 | 1·3 | 12·7 | 2·4 |
| 08 | 2 47·0 | 2 47·5 | 2 39·4 | 0·8 | 0·2 | 6·8 | 1·3 | 12·8 | 2·5 |
| 09 | 2 47·3 | 2 47·7 | 2 39·6 | 0·9 | 0·2 | 6·9 | 1·3 | 12·9 | 2·5 |
| 10 | 2 47·5 | 2 48·0 | 2 39·9 | 1·0 | 0·2 | 7·0 | 1·3 | 13·0 | 2·5 |
| 11 | 2 47·8 | 2 48·2 | 2 40·1 | 1·1 | 0·2 | 7·1 | 1·4 | 13·1 | 2·5 |
| 12 | 2 48·0 | 2 48·5 | 2 40·3 | 1·2 | 0·2 | 7·2 | 1·4 | 13·2 | 2·5 |
| 13 | 2 48·3 | 2 48·7 | 2 40·6 | 1·3 | 0·2 | 7·3 | 1·4 | 13·3 | 2·5 |
| 14 | 2 48·5 | 2 49·0 | 2 40·8 | 1·4 | 0·3 | 7·4 | 1·4 | 13·4 | 2·6 |
| 15 | 2 48·8 | 2 49·2 | 2 41·1 | 1·5 | 0·3 | 7·5 | 1·4 | 13·5 | 2·6 |
| 16 | 2 49·0 | 2 49·5 | 2 41·3 | 1·6 | 0·3 | 7·6 | 1·5 | 13·6 | 2·6 |
| 17 | 2 49·3 | 2 49·7 | 2 41·5 | 1·7 | 0·3 | 7·7 | 1·5 | 13·7 | 2·6 |
| 18 | 2 49·5 | 2 50·0 | 2 41·8 | 1·8 | 0·3 | 7·8 | 1·5 | 13·8 | 2·6 |
| 19 | 2 49·8 | 2 50·2 | 2 42·0 | 1·9 | 0·4 | 7·9 | 1·5 | 13·9 | 2·7 |
| 20 | 2 50·0 | 2 50·5 | 2 42·3 | 2·0 | 0·4 | 8·0 | 1·5 | 14·0 | 2·7 |
| 21 | 2 50·3 | 2 50·7 | 2 42·5 | 2·1 | 0·4 | 8·1 | 1·6 | 14·1 | 2·7 |
| 22 | 2 50·5 | 2 51·0 | 2 42·7 | 2·2 | 0·4 | 8·2 | 1·6 | 14·2 | 2·7 |
| 23 | 2 50·8 | 2 51·2 | 2 43·0 | 2·3 | 0·4 | 8·3 | 1·6 | 14·3 | 2·7 |
| 24 | 2 51·0 | 2 51·5 | 2 43·2 | 2·4 | 0·5 | 8·4 | 1·6 | 14·4 | 2·8 |
| 25 | 2 51·3 | 2 51·7 | 2 43·4 | 2·5 | 0·5 | 8·5 | 1·6 | 14·5 | 2·8 |
| 26 | 2 51·5 | 2 52·0 | 2 43·7 | 2·6 | 0·5 | 8·6 | 1·6 | 14·6 | 2·8 |
| 27 | 2 51·8 | 2 52·2 | 2 43·9 | 2·7 | 0·5 | 8·7 | 1·7 | 14·7 | 2·8 |
| 28 | 2 52·0 | 2 52·5 | 2 44·2 | 2·8 | 0·5 | 8·8 | 1·7 | 14·8 | 2·8 |
| 29 | 2 52·3 | 2 52·7 | 2 44·4 | 2·9 | 0·6 | 8·9 | 1·7 | 14·9 | 2·9 |
| 30 | 2 52·5 | 2 53·0 | 2 44·6 | 3·0 | 0·6 | 9·0 | 1·7 | 15·0 | 2·9 |
| 31 | 2 52·8 | 2 53·2 | 2 44·9 | 3·1 | 0·6 | 9·1 | 1·7 | 15·1 | 2·9 |
| 32 | 2 53·0 | 2 53·5 | 2 45·1 | 3·2 | 0·6 | 9·2 | 1·8 | 15·2 | 2·9 |
| 33 | 2 53·3 | 2 53·7 | 2 45·4 | 3·3 | 0·6 | 9·3 | 1·8 | 15·3 | 2·9 |
| 34 | 2 53·5 | 2 54·0 | 2 45·6 | 3·4 | 0·7 | 9·4 | 1·8 | 15·4 | 3·0 |
| 35 | 2 53·8 | 2 54·2 | 2 45·8 | 3·5 | 0·7 | 9·5 | 1·8 | 15·5 | 3·0 |
| 36 | 2 54·0 | 2 54·5 | 2 46·1 | 3·6 | 0·7 | 9·6 | 1·8 | 15·6 | 3·0 |
| 37 | 2 54·3 | 2 54·7 | 2 46·3 | 3·7 | 0·7 | 9·7 | 1·9 | 15·7 | 3·0 |
| 38 | 2 54·5 | 2 55·0 | 2 46·6 | 3·8 | 0·7 | 9·8 | 1·9 | 15·8 | 3·0 |
| 39 | 2 54·8 | 2 55·2 | 2 46·8 | 3·9 | 0·7 | 9·9 | 1·9 | 15·9 | 3·0 |
| 40 | 2 55·0 | 2 55·5 | 2 47·0 | 4·0 | 0·8 | 10·0 | 1·9 | 16·0 | 3·1 |
| 41 | 2 55·3 | 2 55·7 | 2 47·3 | 4·1 | 0·8 | 10·1 | 1·9 | 16·1 | 3·1 |
| 42 | 2 55·5 | 2 56·0 | 2 47·5 | 4·2 | 0·8 | 10·2 | 2·0 | 16·2 | 3·1 |
| 43 | 2 55·8 | 2 56·2 | 2 47·7 | 4·3 | 0·8 | 10·3 | 2·0 | 16·3 | 3·1 |
| 44 | 2 56·0 | 2 56·5 | 2 48·0 | 4·4 | 0·8 | 10·4 | 2·0 | 16·4 | 3·1 |
| 45 | 2 56·3 | 2 56·7 | 2 48·2 | 4·5 | 0·9 | 10·5 | 2·0 | 16·5 | 3·2 |
| 46 | 2 56·5 | 2 57·0 | 2 48·5 | 4·6 | 0·9 | 10·6 | 2·0 | 16·6 | 3·2 |
| 47 | 2 56·8 | 2 57·2 | 2 48·7 | 4·7 | 0·9 | 10·7 | 2·1 | 16·7 | 3·2 |
| 48 | 2 57·0 | 2 57·5 | 2 48·9 | 4·8 | 0·9 | 10·8 | 2·1 | 16·8 | 3·2 |
| 49 | 2 57·3 | 2 57·7 | 2 49·2 | 4·9 | 0·9 | 10·9 | 2·1 | 16·9 | 3·2 |
| 50 | 2 57·5 | 2 58·0 | 2 49·4 | 5·0 | 1·0 | 11·0 | 2·1 | 17·0 | 3·3 |
| 51 | 2 57·8 | 2 58·2 | 2 49·7 | 5·1 | 1·0 | 11·1 | 2·1 | 17·1 | 3·3 |
| 52 | 2 58·0 | 2 58·5 | 2 49·9 | 5·2 | 1·0 | 11·2 | 2·1 | 17·2 | 3·3 |
| 53 | 2 58·3 | 2 58·7 | 2 50·1 | 5·3 | 1·0 | 11·3 | 2·2 | 17·3 | 3·3 |
| 54 | 2 58·5 | 2 59·0 | 2 50·4 | 5·4 | 1·0 | 11·4 | 2·2 | 17·4 | 3·3 |
| 55 | 2 58·8 | 2 59·2 | 2 50·6 | 5·5 | 1·1 | 11·5 | 2·2 | 17·5 | 3·4 |
| 56 | 2 59·0 | 2 59·5 | 2 50·8 | 5·6 | 1·1 | 11·6 | 2·2 | 17·6 | 3·4 |
| 57 | 2 59·3 | 2 59·7 | 2 51·1 | 5·7 | 1·1 | 11·7 | 2·2 | 17·7 | 3·4 |
| 58 | 2 59·5 | 3 00·0 | 2 51·3 | 5·8 | 1·1 | 11·8 | 2·3 | 17·8 | 3·4 |
| 59 | 2 59·8 | 3 00·2 | 2 51·6 | 5·9 | 1·1 | 11·9 | 2·3 | 17·9 | 3·4 |
| 60 | 3 00·0 | 3 00·5 | 2 51·8 | 6·0 | 1·2 | 12·0 | 2·3 | 18·0 | 3·5 |

## 16ᵐ ACRÉSCIMOS E CORREÇÕES 17ᵐ

| m 16 | SOL PLANETAS | ♈ | LUA | v ou Corr. d | | v ou Corr. d | | v ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 4 00·0 | 4 00·7 | 3 49·1 | 0·0 | 0·0 | 6·0 | 1·7 | 12·0 | 3·3 |
| 01 | 4 00·3 | 4 00·9 | 3 49·3 | 0·1 | 0·0 | 6·1 | 1·7 | 12·1 | 3·3 |
| 02 | 4 00·5 | 4 01·2 | 3 49·5 | 0·2 | 0·1 | 6·2 | 1·7 | 12·2 | 3·4 |
| 03 | 4 00·8 | 4 01·4 | 3 49·8 | 0·3 | 0·1 | 6·3 | 1·7 | 12·3 | 3·4 |
| 04 | 4 01·0 | 4 01·7 | 3 50·0 | 0·4 | 0·1 | 6·4 | 1·8 | 12·4 | 3·4 |
| 05 | 4 01·3 | 4 01·9 | 3 50·3 | 0·5 | 0·1 | 6·5 | 1·8 | 12·5 | 3·4 |
| 06 | 4 01·5 | 4 02·2 | 3 50·5 | 0·6 | 0·2 | 6·6 | 1·8 | 12·6 | 3·5 |
| 07 | 4 01·8 | 4 02·4 | 3 50·7 | 0·7 | 0·2 | 6·7 | 1·8 | 12·7 | 3·5 |
| 08 | 4 02·0 | 4 02·7 | 3 51·0 | 0·8 | 0·2 | 6·8 | 1·9 | 12·8 | 3·5 |
| 09 | 4 02·3 | 4 02·9 | 3 51·2 | 0·9 | 0·2 | 6·9 | 1·9 | 12·9 | 3·5 |
| 10 | 4 02·5 | 4 03·2 | 3 51·5 | 1·0 | 0·3 | 7·0 | 1·9 | 13·0 | 3·6 |
| 11 | 4 02·8 | 4 03·4 | 3 51·7 | 1·1 | 0·3 | 7·1 | 2·0 | 13·1 | 3·6 |
| 12 | 4 03·0 | 4 03·7 | 3 51·9 | 1·2 | 0·3 | 7·2 | 2·0 | 13·2 | 3·6 |
| 13 | 4 03·3 | 4 03·9 | 3 52·2 | 1·3 | 0·4 | 7·3 | 2·0 | 13·3 | 3·7 |
| 14 | 4 03·5 | 4 04·2 | 3 52·4 | 1·4 | 0·4 | 7·4 | 2·0 | 13·4 | 3·7 |
| 15 | 4 03·8 | 4 04·4 | 3 52·6 | 1·5 | 0·4 | 7·5 | 2·1 | 13·5 | 3·7 |
| 16 | 4 04·0 | 4 04·7 | 3 52·9 | 1·6 | 0·4 | 7·6 | 2·1 | 13·6 | 3·7 |
| 17 | 4 04·3 | 4 04·9 | 3 53·1 | 1·7 | 0·5 | 7·7 | 2·1 | 13·7 | 3·8 |
| 18 | 4 04·5 | 4 05·2 | 3 53·4 | 1·8 | 0·5 | 7·8 | 2·1 | 13·8 | 3·8 |
| 19 | 4 04·8 | 4 05·4 | 3 53·6 | 1·9 | 0·5 | 7·9 | 2·2 | 13·9 | 3·8 |
| 20 | 4 05·0 | 4 05·7 | 3 53·8 | 2·0 | 0·6 | 8·0 | 2·2 | 14·0 | 3·9 |
| 21 | 4 05·3 | 4 05·9 | 3 54·1 | 2·1 | 0·6 | 8·1 | 2·2 | 14·1 | 3·9 |
| 22 | 4 05·5 | 4 06·2 | 3 54·3 | 2·2 | 0·6 | 8·2 | 2·3 | 14·2 | 3·9 |
| 23 | 4 05·8 | 4 06·4 | 3 54·6 | 2·3 | 0·6 | 8·3 | 2·3 | 14·3 | 3·9 |
| 24 | 4 06·0 | 4 06·7 | 3 54·8 | 2·4 | 0·7 | 8·4 | 2·3 | 14·4 | 4·0 |
| 25 | 4 06·3 | 4 06·9 | 3 55·0 | 2·5 | 0·7 | 8·5 | 2·3 | 14·5 | 4·0 |
| 26 | 4 06·5 | 4 07·2 | 3 55·3 | 2·6 | 0·7 | 8·6 | 2·4 | 14·6 | 4·0 |
| 27 | 4 06·8 | 4 07·4 | 3 55·5 | 2·7 | 0·7 | 8·7 | 2·4 | 14·7 | 4·0 |
| 28 | 4 07·0 | 4 07·7 | 3 55·7 | 2·8 | 0·8 | 8·8 | 2·4 | 14·8 | 4·1 |
| 29 | 4 07·3 | 4 07·9 | 3 56·0 | 2·9 | 0·8 | 8·9 | 2·4 | 14·9 | 4·1 |
| 30 | 4 07·5 | 4 08·2 | 3 56·2 | 3·0 | 0·8 | 9·0 | 2·5 | 15·0 | 4·1 |
| 31 | 4 07·8 | 4 08·4 | 3 56·5 | 3·1 | 0·9 | 9·1 | 2·5 | 15·1 | 4·2 |
| 32 | 4 08·0 | 4 08·7 | 3 56·7 | 3·2 | 0·9 | 9·2 | 2·5 | 15·2 | 4·2 |
| 33 | 4 08·3 | 4 08·9 | 3 56·9 | 3·3 | 0·9 | 9·3 | 2·6 | 15·3 | 4·2 |
| 34 | 4 08·5 | 4 09·2 | 3 57·2 | 3·4 | 0·9 | 9·4 | 2·6 | 15·4 | 4·2 |
| 35 | 4 08·8 | 4 09·4 | 3 57·4 | 3·5 | 1·0 | 9·5 | 2·6 | 15·5 | 4·3 |
| 36 | 4 09·0 | 4 09·7 | 3 57·7 | 3·6 | 1·0 | 9·6 | 2·6 | 15·6 | 4·3 |
| 37 | 4 09·3 | 4 09·9 | 3 57·9 | 3·7 | 1·0 | 9·7 | 2·7 | 15·7 | 4·3 |
| 38 | 4 09·5 | 4 10·2 | 3 58·1 | 3·8 | 1·0 | 9·8 | 2·7 | 15·8 | 4·3 |
| 39 | 4 09·8 | 4 10·4 | 3 58·4 | 3·9 | 1·1 | 9·9 | 2·7 | 15·9 | 4·4 |
| 40 | 4 10·0 | 4 10·7 | 3 58·6 | 4·0 | 1·1 | 10·0 | 2·8 | 16·0 | 4·4 |
| 41 | 4 10·3 | 4 10·9 | 3 58·8 | 4·1 | 1·1 | 10·1 | 2·8 | 16·1 | 4·4 |
| 42 | 4 10·5 | 4 11·2 | 3 59·1 | 4·2 | 1·2 | 10·2 | 2·8 | 16·2 | 4·5 |
| 43 | 4 10·8 | 4 11·4 | 3 59·3 | 4·3 | 1·2 | 10·3 | 2·8 | 16·3 | 4·5 |
| 44 | 4 11·0 | 4 11·7 | 3 59·6 | 4·4 | 1·2 | 10·4 | 2·9 | 16·4 | 4·5 |
| 45 | 4 11·3 | 4 11·9 | 3 59·8 | 4·5 | 1·2 | 10·5 | 2·9 | 16·5 | 4·5 |
| 46 | 4 11·5 | 4 12·2 | 4 00·0 | 4·6 | 1·3 | 10·6 | 2·9 | 16·6 | 4·6 |
| 47 | 4 11·8 | 4 12·4 | 4 00·3 | 4·7 | 1·3 | 10·7 | 2·9 | 16·7 | 4·6 |
| 48 | 4 12·0 | 4 12·7 | 4 00·5 | 4·8 | 1·3 | 10·8 | 3·0 | 16·8 | 4·6 |
| 49 | 4 12·3 | 4 12·9 | 4 00·8 | 4·9 | 1·3 | 10·9 | 3·0 | 16·9 | 4·6 |
| 50 | 4 12·5 | 4 13·2 | 4 01·0 | 5·0 | 1·4 | 11·0 | 3·0 | 17·0 | 4·7 |
| 51 | 4 12·8 | 4 13·4 | 4 01·2 | 5·1 | 1·4 | 11·1 | 3·1 | 17·1 | 4·7 |
| 52 | 4 13·0 | 4 13·7 | 4 01·5 | 5·2 | 1·4 | 11·2 | 3·1 | 17·2 | 4·7 |
| 53 | 4 13·3 | 4 13·9 | 4 01·7 | 5·3 | 1·5 | 11·3 | 3·1 | 17·3 | 4·8 |
| 54 | 4 13·5 | 4 14·2 | 4 02·0 | 5·4 | 1·5 | 11·4 | 3·1 | 17·4 | 4·8 |
| 55 | 4 13·8 | 4 14·4 | 4 02·2 | 5·5 | 1·5 | 11·5 | 3·2 | 17·5 | 4·8 |
| 56 | 4 14·0 | 4 14·7 | 4 02·4 | 5·6 | 1·5 | 11·6 | 3·2 | 17·6 | 4·8 |
| 57 | 4 14·3 | 4 14·9 | 4 02·7 | 5·7 | 1·6 | 11·7 | 3·2 | 17·7 | 4·9 |
| 58 | 4 14·5 | 4 15·2 | 4 02·9 | 5·8 | 1·6 | 11·8 | 3·2 | 17·8 | 4·9 |
| 59 | 4 14·8 | 4 15·4 | 4 03·1 | 5·9 | 1·6 | 11·9 | 3·3 | 17·9 | 4·9 |
| 60 | 4 15·0 | 4 15·7 | 4 03·4 | 6·0 | 1·7 | 12·0 | 3·3 | 18·0 | 5·0 |

| m 17 | SOL PLANETAS | ♈ | LUA | v ou Corr. d | | v ou Corr. d | | v ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 4 15·0 | 4 15·7 | 4 03·4 | 0·0 | 0·0 | 6·0 | 1·8 | 12·0 | 3·5 |
| 01 | 4 15·3 | 4 15·9 | 4 03·6 | 0·1 | 0·0 | 6·1 | 1·8 | 12·1 | 3·5 |
| 02 | 4 15·5 | 4 16·2 | 4 03·9 | 0·2 | 0·1 | 6·2 | 1·8 | 12·2 | 3·6 |
| 03 | 4 15·8 | 4 16·5 | 4 04·1 | 0·3 | 0·1 | 6·3 | 1·8 | 12·3 | 3·6 |
| 04 | 4 16·0 | 4 16·7 | 4 04·3 | 0·4 | 0·1 | 6·4 | 1·9 | 12·4 | 3·6 |
| 05 | 4 16·3 | 4 17·0 | 4 04·6 | 0·5 | 0·1 | 6·5 | 1·9 | 12·5 | 3·6 |
| 06 | 4 16·5 | 4 17·2 | 4 04·8 | 0·6 | 0·2 | 6·6 | 1·9 | 12·6 | 3·7 |
| 07 | 4 16·8 | 4 17·5 | 4 05·1 | 0·7 | 0·2 | 6·7 | 2·0 | 12·7 | 3·7 |
| 08 | 4 17·0 | 4 17·7 | 4 05·3 | 0·8 | 0·2 | 6·8 | 2·0 | 12·8 | 3·7 |
| 09 | 4 17·3 | 4 18·0 | 4 05·5 | 0·9 | 0·3 | 6·9 | 2·0 | 12·9 | 3·8 |
| 10 | 4 17·5 | 4 18·2 | 4 05·8 | 1·0 | 0·3 | 7·0 | 2·0 | 13·0 | 3·8 |
| 11 | 4 17·8 | 4 18·5 | 4 06·0 | 1·1 | 0·3 | 7·1 | 2·1 | 13·1 | 3·8 |
| 12 | 4 18·0 | 4 18·7 | 4 06·2 | 1·2 | 0·4 | 7·2 | 2·1 | 13·2 | 3·9 |
| 13 | 4 18·3 | 4 19·0 | 4 06·5 | 1·3 | 0·4 | 7·3 | 2·1 | 13·3 | 3·9 |
| 14 | 4 18·5 | 4 19·2 | 4 06·7 | 1·4 | 0·4 | 7·4 | 2·2 | 13·4 | 3·9 |
| 15 | 4 18·8 | 4 19·5 | 4 07·0 | 1·5 | 0·4 | 7·5 | 2·2 | 13·5 | 3·9 |
| 16 | 4 19·0 | 4 19·7 | 4 07·2 | 1·6 | 0·5 | 7·6 | 2·2 | 13·6 | 4·0 |
| 17 | 4 19·3 | 4 20·0 | 4 07·4 | 1·7 | 0·5 | 7·7 | 2·2 | 13·7 | 4·0 |
| 18 | 4 19·5 | 4 20·2 | 4 07·7 | 1·8 | 0·5 | 7·8 | 2·3 | 13·8 | 4·0 |
| 19 | 4 19·8 | 4 20·5 | 4 07·9 | 1·9 | 0·6 | 7·9 | 2·3 | 13·9 | 4·1 |
| 20 | 4 20·0 | 4 20·7 | 4 08·2 | 2·0 | 0·6 | 8·0 | 2·3 | 14·0 | 4·1 |
| 21 | 4 20·3 | 4 21·0 | 4 08·4 | 2·1 | 0·6 | 8·1 | 2·4 | 14·1 | 4·1 |
| 22 | 4 20·5 | 4 21·2 | 4 08·6 | 2·2 | 0·6 | 8·2 | 2·4 | 14·2 | 4·1 |
| 23 | 4 20·8 | 4 21·5 | 4 08·9 | 2·3 | 0·7 | 8·3 | 2·4 | 14·3 | 4·2 |
| 24 | 4 21·0 | 4 21·7 | 4 09·1 | 2·4 | 0·7 | 8·4 | 2·5 | 14·4 | 4·2 |
| 25 | 4 21·3 | 4 22·0 | 4 09·3 | 2·5 | 0·7 | 8·5 | 2·5 | 14·5 | 4·2 |
| 26 | 4 21·5 | 4 22·2 | 4 09·6 | 2·6 | 0·8 | 8·6 | 2·5 | 14·6 | 4·3 |
| 27 | 4 21·8 | 4 22·5 | 4 09·8 | 2·7 | 0·8 | 8·7 | 2·5 | 14·7 | 4·3 |
| 28 | 4 22·0 | 4 22·7 | 4 10·1 | 2·8 | 0·8 | 8·8 | 2·6 | 14·8 | 4·3 |
| 29 | 4 22·3 | 4 23·0 | 4 10·3 | 2·9 | 0·8 | 8·9 | 2·6 | 14·9 | 4·3 |
| 30 | 4 22·5 | 4 23·2 | 4 10·5 | 3·0 | 0·9 | 9·0 | 2·6 | 15·0 | 4·4 |
| 31 | 4 22·8 | 4 23·5 | 4 10·8 | 3·1 | 0·9 | 9·1 | 2·7 | 15·1 | 4·4 |
| 32 | 4 23·0 | 4 23·7 | 4 11·0 | 3·2 | 0·9 | 9·2 | 2·7 | 15·2 | 4·4 |
| 33 | 4 23·3 | 4 24·0 | 4 11·3 | 3·3 | 1·0 | 9·3 | 2·7 | 15·3 | 4·5 |
| 34 | 4 23·5 | 4 24·2 | 4 11·5 | 3·4 | 1·0 | 9·4 | 2·7 | 15·4 | 4·5 |
| 35 | 4 23·8 | 4 24·5 | 4 11·7 | 3·5 | 1·0 | 9·5 | 2·8 | 15·5 | 4·5 |
| 36 | 4 24·0 | 4 24·7 | 4 12·0 | 3·6 | 1·1 | 9·6 | 2·8 | 15·6 | 4·6 |
| 37 | 4 24·3 | 4 25·0 | 4 12·2 | 3·7 | 1·1 | 9·7 | 2·8 | 15·7 | 4·6 |
| 38 | 4 24·5 | 4 25·2 | 4 12·5 | 3·8 | 1·1 | 9·8 | 2·9 | 15·8 | 4·6 |
| 39 | 4 24·8 | 4 25·5 | 4 12·7 | 3·9 | 1·1 | 9·9 | 2·9 | 15·9 | 4·6 |
| 40 | 4 25·0 | 4 25·7 | 4 12·9 | 4·0 | 1·2 | 10·0 | 2·9 | 16·0 | 4·7 |
| 41 | 4 25·3 | 4 26·0 | 4 13·2 | 4·1 | 1·2 | 10·1 | 2·9 | 16·1 | 4·7 |
| 42 | 4 25·5 | 4 26·2 | 4 13·4 | 4·2 | 1·2 | 10·2 | 3·0 | 16·2 | 4·7 |
| 43 | 4 25·8 | 4 26·5 | 4 13·6 | 4·3 | 1·3 | 10·3 | 3·0 | 16·3 | 4·8 |
| 44 | 4 26·0 | 4 26·7 | 4 13·9 | 4·4 | 1·3 | 10·4 | 3·0 | 16·4 | 4·8 |
| 45 | 4 26·3 | 4 27·0 | 4 14·1 | 4·5 | 1·3 | 10·5 | 3·1 | 16·5 | 4·8 |
| 46 | 4 26·5 | 4 27·2 | 4 14·4 | 4·6 | 1·3 | 10·6 | 3·1 | 16·6 | 4·8 |
| 47 | 4 26·8 | 4 27·5 | 4 14·6 | 4·7 | 1·4 | 10·7 | 3·1 | 16·7 | 4·9 |
| 48 | 4 27·0 | 4 27·7 | 4 14·8 | 4·8 | 1·4 | 10·8 | 3·2 | 16·8 | 4·9 |
| 49 | 4 27·3 | 4 28·0 | 4 15·1 | 4·9 | 1·4 | 10·9 | 3·2 | 16·9 | 4·9 |
| 50 | 4 27·5 | 4 28·2 | 4 15·3 | 5·0 | 1·5 | 11·0 | 3·2 | 17·0 | 5·0 |
| 51 | 4 27·8 | 4 28·5 | 4 15·6 | 5·1 | 1·5 | 11·1 | 3·2 | 17·1 | 5·0 |
| 52 | 4 28·0 | 4 28·7 | 4 15·8 | 5·2 | 1·5 | 11·2 | 3·3 | 17·2 | 5·0 |
| 53 | 4 28·3 | 4 29·0 | 4 16·0 | 5·3 | 1·5 | 11·3 | 3·3 | 17·3 | 5·0 |
| 54 | 4 28·5 | 4 29·2 | 4 16·3 | 5·4 | 1·6 | 11·4 | 3·3 | 17·4 | 5·1 |
| 55 | 4 28·8 | 4 29·5 | 4 16·5 | 5·5 | 1·6 | 11·5 | 3·4 | 17·5 | 5·1 |
| 56 | 4 29·0 | 4 29·7 | 4 16·7 | 5·6 | 1·6 | 11·6 | 3·4 | 17·6 | 5·1 |
| 57 | 4 29·3 | 4 30·0 | 4 17·0 | 5·7 | 1·7 | 11·7 | 3·4 | 17·7 | 5·2 |
| 58 | 4 29·5 | 4 30·2 | 4 17·2 | 5·8 | 1·7 | 11·8 | 3·4 | 17·8 | 5·2 |
| 59 | 4 29·8 | 4 30·5 | 4 17·5 | 5·9 | 1·7 | 11·9 | 3·5 | 17·9 | 5·2 |
| 60 | 4 30·0 | 4 30·7 | 4 17·7 | 6·0 | 1·8 | 12·0 | 3·5 | 18·0 | 5·3 |

X

## 22m ACRÉSCIMOS E CORREÇÕES 23m

| m 22 | SOL PLANETAS | ♈ | LUA | v ou Corr. d | | v ou Corr. d | | v ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 5 30·0 | 5 30·9 | 5 15·0 | 0·0 | 0·0 | 6·0 | 2·3 | 12·0 | 4·5 |
| 01 | 5 30·3 | 5 31·2 | 5 15·2 | 0·1 | 0·0 | 6·1 | 2·3 | 12·1 | 4·5 |
| 02 | 5 30·5 | 5 31·4 | 5 15·4 | 0·2 | 0·1 | 6·2 | 2·3 | 12·2 | 4·6 |
| 03 | 5 30·8 | 5 31·7 | 5 15·7 | 0·3 | 0·1 | 6·3 | 2·4 | 12·3 | 4·6 |
| 04 | 5 31·0 | 5 31·9 | 5 15·9 | 0·4 | 0·2 | 6·4 | 2·4 | 12·4 | 4·7 |
| 05 | 5 31·3 | 5 32·2 | 5 16·2 | 0·5 | 0·2 | 6·5 | 2·4 | 12·5 | 4·7 |
| 06 | 5 31·5 | 5 32·4 | 5 16·4 | 0·6 | 0·2 | 6·6 | 2·5 | 12·6 | 4·7 |
| 07 | 5 31·8 | 5 32·7 | 5 16·6 | 0·7 | 0·3 | 6·7 | 2·5 | 12·7 | 4·8 |
| 08 | 5 32·0 | 5 32·9 | 5 16·9 | 0·8 | 0·3 | 6·8 | 2·6 | 12·8 | 4·8 |
| 09 | 5 32·3 | 5 33·2 | 5 17·1 | 0·9 | 0·3 | 6·9 | 2·6 | 12·9 | 4·8 |
| 10 | 5 32·5 | 5 33·4 | 5 17·4 | 1·0 | 0·4 | 7·0 | 2·6 | 13·0 | 4·9 |
| 11 | 5 32·8 | 5 33·7 | 5 17·6 | 1·1 | 0·4 | 7·1 | 2·7 | 13·1 | 4·9 |
| 12 | 5 33·0 | 5 33·9 | 5 17·8 | 1·2 | 0·5 | 7·2 | 2·7 | 13·2 | 5·0 |
| 13 | 5 33·3 | 5 34·2 | 5 18·1 | 1·3 | 0·5 | 7·3 | 2·7 | 13·3 | 5·0 |
| 14 | 5 33·5 | 5 34·4 | 5 18·3 | 1·4 | 0·5 | 7·4 | 2·8 | 13·4 | 5·0 |
| 15 | 5 33·8 | 5 34·7 | 5 18·5 | 1·5 | 0·6 | 7·5 | 2·8 | 13·5 | 5·1 |
| 16 | 5 34·0 | 5 34·9 | 5 18·8 | 1·6 | 0·6 | 7·6 | 2·9 | 13·6 | 5·1 |
| 17 | 5 34·3 | 5 35·2 | 5 19·0 | 1·7 | 0·6 | 7·7 | 2·9 | 13·7 | 5·1 |
| 18 | 5 34·5 | 5 35·4 | 5 19·3 | 1·8 | 0·7 | 7·8 | 2·9 | 13·8 | 5·2 |
| 19 | 5 34·8 | 5 35·7 | 5 19·5 | 1·9 | 0·7 | 7·9 | 3·0 | 13·9 | 5·2 |
| 20 | 5 35·0 | 5 35·9 | 5 19·7 | 2·0 | 0·8 | 8·0 | 3·0 | 14·0 | 5·3 |
| 21 | 5 35·3 | 5 36·2 | 5 20·0 | 2·1 | 0·8 | 8·1 | 3·0 | 14·1 | 5·3 |
| 22 | 5 35·5 | 5 36·4 | 5 20·2 | 2·2 | 0·8 | 8·2 | 3·1 | 14·2 | 5·3 |
| 23 | 5 35·8 | 5 36·7 | 5 20·5 | 2·3 | 0·9 | 8·3 | 3·1 | 14·3 | 5·4 |
| 24 | 5 36·0 | 5 36·9 | 5 20·7 | 2·4 | 0·9 | 8·4 | 3·2 | 14·4 | 5·4 |
| 25 | 5 36·3 | 5 37·2 | 5 20·9 | 2·5 | 0·9 | 8·5 | 3·2 | 14·5 | 5·4 |
| 26 | 5 36·5 | 5 37·4 | 5 21·2 | 2·6 | 1·0 | 8·6 | 3·2 | 14·6 | 5·5 |
| 27 | 5 36·8 | 5 37·7 | 5 21·4 | 2·7 | 1·0 | 8·7 | 3·3 | 14·7 | 5·5 |
| 28 | 5 37·0 | 5 37·9 | 5 21·6 | 2·8 | 1·0 | 8·8 | 3·3 | 14·8 | 5·6 |
| 29 | 5 37·3 | 5 38·2 | 5 21·9 | 2·9 | 1·1 | 8·9 | 3·3 | 14·9 | 5·6 |
| 30 | 5 37·5 | 5 38·4 | 5 22·1 | 3·0 | 1·1 | 9·0 | 3·4 | 15·0 | 5·6 |
| 31 | 5 37·8 | 5 38·7 | 5 22·4 | 3·1 | 1·2 | 9·1 | 3·4 | 15·1 | 5·7 |
| 32 | 5 38·0 | 5 38·9 | 5 22·6 | 3·2 | 1·2 | 9·2 | 3·5 | 15·2 | 5·7 |
| 33 | 5 38·3 | 5 39·2 | 5 22·8 | 3·3 | 1·2 | 9·3 | 3·5 | 15·3 | 5·7 |
| 34 | 5 38·5 | 5 39·4 | 5 23·1 | 3·4 | 1·3 | 9·4 | 3·5 | 15·4 | 5·8 |
| 35 | 5 38·8 | 5 39·7 | 5 23·3 | 3·5 | 1·3 | 9·5 | 3·6 | 15·5 | 5·8 |
| 36 | 5 39·0 | 5 39·9 | 5 23·6 | 3·6 | 1·4 | 9·6 | 3·6 | 15·6 | 5·9 |
| 37 | 5 39·3 | 5 40·2 | 5 23·8 | 3·7 | 1·4 | 9·7 | 3·6 | 15·7 | 5·9 |
| 38 | 5 39·5 | 5 40·4 | 5 24·0 | 3·8 | 1·4 | 9·8 | 3·7 | 15·8 | 5·9 |
| 39 | 5 39·8 | 5 40·7 | 5 24·3 | 3·9 | 1·5 | 9·9 | 3·7 | 15·9 | 6·0 |
| 40 | 5 40·0 | 5 40·9 | 5 24·5 | 4·0 | 1·5 | 10·0 | 3·8 | 16·0 | 6·0 |
| 41 | 5 40·3 | 5 41·2 | 5 24·7 | 4·1 | 1·5 | 10·1 | 3·8 | 16·1 | 6·0 |
| 42 | 5 40·5 | 5 41·4 | 5 25·0 | 4·2 | 1·6 | 10·2 | 3·8 | 16·2 | 6·1 |
| 43 | 5 40·8 | 5 41·7 | 5 25·2 | 4·3 | 1·6 | 10·3 | 3·9 | 16·3 | 6·1 |
| 44 | 5 41·0 | 5 41·9 | 5 25·5 | 4·4 | 1·7 | 10·4 | 3·9 | 16·4 | 6·1 |
| 45 | 5 41·3 | 5 42·2 | 5 25·7 | 4·5 | 1·7 | 10·5 | 3·9 | 16·5 | 6·2 |
| 46 | 5 41·5 | 5 42·4 | 5 25·9 | 4·6 | 1·7 | 10·6 | 4·0 | 16·6 | 6·2 |
| 47 | 5 41·8 | 5 42·7 | 5 26·2 | 4·7 | 1·8 | 10·7 | 4·0 | 16·7 | 6·3 |
| 48 | 5 42·0 | 5 42·9 | 5 26·4 | 4·8 | 1·8 | 10·8 | 4·1 | 16·8 | 6·3 |
| 49 | 5 42·3 | 5 43·2 | 5 26·7 | 4·9 | 1·8 | 10·9 | 4·1 | 16·9 | 6·3 |
| 50 | 5 42·5 | 5 43·4 | 5 26·9 | 5·0 | 1·9 | 11·0 | 4·1 | 17·0 | 6·4 |
| 51 | 5 42·8 | 5 43·7 | 5 27·1 | 5·1 | 1·9 | 11·1 | 4·2 | 17·1 | 6·4 |
| 52 | 5 43·0 | 5 43·9 | 5 27·4 | 5·2 | 2·0 | 11·2 | 4·2 | 17·2 | 6·5 |
| 53 | 5 43·3 | 5 44·2 | 5 27·6 | 5·3 | 2·0 | 11·3 | 4·2 | 17·3 | 6·5 |
| 54 | 5 43·5 | 5 44·4 | 5 27·9 | 5·4 | 2·0 | 11·4 | 4·3 | 17·4 | 6·5 |
| 55 | 5 43·8 | 5 44·7 | 5 28·1 | 5·5 | 2·1 | 11·5 | 4·3 | 17·5 | 6·6 |
| 56 | 5 44·0 | 5 44·9 | 5 28·3 | 5·6 | 2·1 | 11·6 | 4·4 | 17·6 | 6·6 |
| 57 | 5 44·3 | 5 45·2 | 5 28·6 | 5·7 | 2·1 | 11·7 | 4·4 | 17·7 | 6·6 |
| 58 | 5 44·5 | 5 45·4 | 5 28·8 | 5·8 | 2·2 | 11·8 | 4·4 | 17·8 | 6·7 |
| 59 | 5 44·8 | 5 45·7 | 5 29·0 | 5·9 | 2·2 | 11·9 | 4·5 | 17·9 | 6·7 |
| 60 | 5 45·0 | 5 45·9 | 5 29·3 | 6·0 | 2·3 | 12·0 | 4·5 | 18·0 | 6·8 |

| m 23 | SOL PLANETAS | ♈ | LUA | v ou Corr. d | | v ou Corr. d | | v ou Corr. d | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 5 45·0 | 5 45·9 | 5 29·3 | 0·0 | 0·0 | 6·0 | 2·4 | 12·0 | 4·7 |
| 01 | 5 45·3 | 5 46·2 | 5 29·5 | 0·1 | 0·0 | 6·1 | 2·4 | 12·1 | 4·7 |
| 02 | 5 45·5 | 5 46·4 | 5 29·8 | 0·2 | 0·1 | 6·2 | 2·4 | 12·2 | 4·8 |
| 03 | 5 45·8 | 5 46·7 | 5 30·0 | 0·3 | 0·1 | 6·3 | 2·5 | 12·3 | 4·8 |
| 04 | 5 46·0 | 5 46·9 | 5 30·2 | 0·4 | 0·2 | 6·4 | 2·5 | 12·4 | 4·9 |
| 05 | 5 46·3 | 5 47·2 | 5 30·5 | 0·5 | 0·2 | 6·5 | 2·5 | 12·5 | 4·9 |
| 06 | 5 46·5 | 5 47·4 | 5 30·7 | 0·6 | 0·2 | 6·6 | 2·6 | 12·6 | 4·9 |
| 07 | 5 46·8 | 5 47·7 | 5 31·0 | 0·7 | 0·3 | 6·7 | 2·6 | 12·7 | 5·0 |
| 08 | 5 47·0 | 5 48·0 | 5 31·2 | 0·8 | 0·3 | 6·8 | 2·7 | 12·8 | 5·0 |
| 09 | 5 47·3 | 5 48·2 | 5 31·4 | 0·9 | 0·4 | 6·9 | 2·7 | 12·9 | 5·1 |
| 10 | 5 47·5 | 5 48·5 | 5 31·7 | 1·0 | 0·4 | 7·0 | 2·7 | 13·0 | 5·1 |
| 11 | 5 47·8 | 5 48·7 | 5 31·9 | 1·1 | 0·4 | 7·1 | 2·8 | 13·1 | 5·1 |
| 12 | 5 48·0 | 5 49·0 | 5 32·1 | 1·2 | 0·5 | 7·2 | 2·8 | 13·2 | 5·2 |
| 13 | 5 48·3 | 5 49·2 | 5 32·4 | 1·3 | 0·5 | 7·3 | 2·9 | 13·3 | 5·2 |
| 14 | 5 48·5 | 5 49·5 | 5 32·6 | 1·4 | 0·5 | 7·4 | 2·9 | 13·4 | 5·2 |
| 15 | 5 48·8 | 5 49·7 | 5 32·9 | 1·5 | 0·6 | 7·5 | 2·9 | 13·5 | 5·3 |
| 16 | 5 49·0 | 5 50·0 | 5 33·1 | 1·6 | 0·6 | 7·6 | 3·0 | 13·6 | 5·3 |
| 17 | 5 49·3 | 5 50·2 | 5 33·3 | 1·7 | 0·7 | 7·7 | 3·0 | 13·7 | 5·4 |
| 18 | 5 49·5 | 5 50·5 | 5 33·6 | 1·8 | 0·7 | 7·8 | 3·1 | 13·8 | 5·4 |
| 19 | 5 49·8 | 5 50·7 | 5 33·8 | 1·9 | 0·7 | 7·9 | 3·1 | 13·9 | 5·4 |
| 20 | 5 50·0 | 5 51·0 | 5 34·1 | 2·0 | 0·8 | 8·0 | 3·1 | 14·0 | 5·5 |
| 21 | 5 50·3 | 5 51·2 | 5 34·3 | 2·1 | 0·8 | 8·1 | 3·2 | 14·1 | 5·5 |
| 22 | 5 50·5 | 5 51·5 | 5 34·5 | 2·2 | 0·9 | 8·2 | 3·2 | 14·2 | 5·6 |
| 23 | 5 50·8 | 5 51·7 | 5 34·8 | 2·3 | 0·9 | 8·3 | 3·3 | 14·3 | 5·6 |
| 24 | 5 51·0 | 5 52·0 | 5 35·0 | 2·4 | 0·9 | 8·4 | 3·3 | 14·4 | 5·6 |
| 25 | 5 51·3 | 5 52·2 | 5 35·2 | 2·5 | 1·0 | 8·5 | 3·3 | 14·5 | 5·7 |
| 26 | 5 51·5 | 5 52·5 | 5 35·5 | 2·6 | 1·0 | 8·6 | 3·4 | 14·6 | 5·7 |
| 27 | 5 51·8 | 5 52·7 | 5 35·7 | 2·7 | 1·1 | 8·7 | 3·4 | 14·7 | 5·8 |
| 28 | 5 52·0 | 5 53·0 | 5 36·0 | 2·8 | 1·1 | 8·8 | 3·4 | 14·8 | 5·8 |
| 29 | 5 52·3 | 5 53·2 | 5 36·2 | 2·9 | 1·1 | 8·9 | 3·5 | 14·9 | 5·8 |
| 30 | 5 52·5 | 5 53·5 | 5 36·4 | 3·0 | 1·2 | 9·0 | 3·5 | 15·0 | 5·9 |
| 31 | 5 52·8 | 5 53·7 | 5 36·7 | 3·1 | 1·2 | 9·1 | 3·6 | 15·1 | 5·9 |
| 32 | 5 53·0 | 5 54·0 | 5 36·9 | 3·2 | 1·3 | 9·2 | 3·6 | 15·2 | 6·0 |
| 33 | 5 53·3 | 5 54·2 | 5 37·2 | 3·3 | 1·3 | 9·3 | 3·6 | 15·3 | 6·0 |
| 34 | 5 53·5 | 5 54·5 | 5 37·4 | 3·4 | 1·3 | 9·4 | 3·7 | 15·4 | 6·0 |
| 35 | 5 53·8 | 5 54·7 | 5 37·6 | 3·5 | 1·4 | 9·5 | 3·7 | 15·5 | 6·1 |
| 36 | 5 54·0 | 5 55·0 | 5 37·9 | 3·6 | 1·4 | 9·6 | 3·8 | 15·6 | 6·1 |
| 37 | 5 54·3 | 5 55·2 | 5 38·1 | 3·7 | 1·4 | 9·7 | 3·8 | 15·7 | 6·1 |
| 38 | 5 54·5 | 5 55·5 | 5 38·4 | 3·8 | 1·5 | 9·8 | 3·8 | 15·8 | 6·2 |
| 39 | 5 54·8 | 5 55·7 | 5 38·6 | 3·9 | 1·5 | 9·9 | 3·9 | 15·9 | 6·2 |
| 40 | 5 55·0 | 5 56·0 | 5 38·8 | 4·0 | 1·6 | 10·0 | 3·9 | 16·0 | 6·3 |
| 41 | 5 55·3 | 5 56·2 | 5 39·1 | 4·1 | 1·6 | 10·1 | 4·0 | 16·1 | 6·3 |
| 42 | 5 55·5 | 5 56·5 | 5 39·3 | 4·2 | 1·6 | 10·2 | 4·0 | 16·2 | 6·3 |
| 43 | 5 55·8 | 5 56·7 | 5 39·5 | 4·3 | 1·7 | 10·3 | 4·0 | 16·3 | 6·4 |
| 44 | 5 56·0 | 5 57·0 | 5 39·8 | 4·4 | 1·7 | 10·4 | 4·1 | 16·4 | 6·4 |
| 45 | 5 56·3 | 5 57·2 | 5 40·0 | 4·5 | 1·8 | 10·5 | 4·1 | 16·5 | 6·5 |
| 46 | 5 56·5 | 5 57·5 | 5 40·3 | 4·6 | 1·8 | 10·6 | 4·2 | 16·6 | 6·5 |
| 47 | 5 56·8 | 5 57·7 | 5 40·5 | 4·7 | 1·8 | 10·7 | 4·2 | 16·7 | 6·5 |
| 48 | 5 57·0 | 5 58·0 | 5 40·7 | 4·8 | 1·9 | 10·8 | 4·2 | 16·8 | 6·6 |
| 49 | 5 57·3 | 5 58·2 | 5 41·0 | 4·9 | 1·9 | 10·9 | 4·3 | 16·9 | 6·6 |
| 50 | 5 57·5 | 5 58·5 | 5 41·2 | 5·0 | 2·0 | 11·0 | 4·3 | 17·0 | 6·7 |
| 51 | 5 57·8 | 5 58·7 | 5 41·5 | 5·1 | 2·0 | 11·1 | 4·3 | 17·1 | 6·7 |
| 52 | 5 58·0 | 5 59·0 | 5 41·7 | 5·2 | 2·0 | 11·2 | 4·4 | 17·2 | 6·7 |
| 53 | 5 58·3 | 5 59·2 | 5 41·9 | 5·3 | 2·1 | 11·3 | 4·4 | 17·3 | 6·8 |
| 54 | 5 58·5 | 5 59·5 | 5 42·2 | 5·4 | 2·1 | 11·4 | 4·5 | 17·4 | 6·8 |
| 55 | 5 58·8 | 5 59·7 | 5 42·4 | 5·5 | 2·2 | 11·5 | 4·5 | 17·5 | 6·9 |
| 56 | 5 59·0 | 6 00·0 | 5 42·6 | 5·6 | 2·2 | 11·6 | 4·5 | 17·6 | 6·9 |
| 57 | 5 59·3 | 6 00·2 | 5 42·9 | 5·7 | 2·2 | 11·7 | 4·6 | 17·7 | 6·9 |
| 58 | 5 59·5 | 6 00·5 | 5 43·1 | 5·8 | 2·3 | 11·8 | 4·6 | 17·8 | 7·0 |
| 59 | 5 59·8 | 6 00·7 | 5 43·4 | 5·9 | 2·3 | 11·9 | 4·7 | 17·9 | 7·0 |
| 60 | 6 00·0 | 6 01·0 | 5 43·6 | 6·0 | 2·4 | 12·0 | 4·7 | 18·0 | 7·1 |

## 24m ACRÉSCIMOS E CORREÇÕES 25m

| m 24 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | | v ou d Corr. | | v ou d Corr. | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 6 00·0 | 6 01·0 | 5 43·6 | 0·0 | 0·0 | 6·0 | 2·5 | 12·0 | 4·9 |
| 01 | 6 00·3 | 6 01·2 | 5 43·8 | 0·1 | 0·0 | 6·1 | 2·5 | 12·1 | 4·9 |
| 02 | 6 00·5 | 6 01·5 | 5 44·1 | 0·2 | 0·1 | 6·2 | 2·5 | 12·2 | 5·0 |
| 03 | 6 00·8 | 6 01·7 | 5 44·3 | 0·3 | 0·1 | 6·3 | 2·6 | 12·3 | 5·0 |
| 04 | 6 01·0 | 6 02·0 | 5 44·6 | 0·4 | 0·2 | 6·4 | 2·6 | 12·4 | 5·1 |
| 05 | 6 01·3 | 6 02·2 | 5 44·8 | 0·5 | 0·2 | 6·5 | 2·7 | 12·5 | 5·1 |
| 06 | 6 01·5 | 6 02·5 | 5 45·0 | 0·6 | 0·2 | 6·6 | 2·7 | 12·6 | 5·1 |
| 07 | 6 01·8 | 6 02·7 | 5 45·3 | 0·7 | 0·3 | 6·7 | 2·7 | 12·7 | 5·2 |
| 08 | 6 02·0 | 6 03·0 | 5 45·5 | 0·8 | 0·3 | 6·8 | 2·8 | 12·8 | 5·2 |
| 09 | 6 02·3 | 6 03·2 | 5 45·7 | 0·9 | 0·4 | 6·9 | 2·8 | 12·9 | 5·3 |
| 10 | 6 02·5 | 6 03·5 | 5 46·0 | 1·0 | 0·4 | 7·0 | 2·9 | 13·0 | 5·3 |
| 11 | 6 02·8 | 6 03·7 | 5 46·2 | 1·1 | 0·4 | 7·1 | 2·9 | 13·1 | 5·3 |
| 12 | 6 03·0 | 6 04·0 | 5 46·5 | 1·2 | 0·5 | 7·2 | 2·9 | 13·2 | 5·4 |
| 13 | 6 03·3 | 6 04·2 | 5 46·7 | 1·3 | 0·5 | 7·3 | 3·0 | 13·3 | 5·4 |
| 14 | 6 03·5 | 6 04·5 | 5 46·9 | 1·4 | 0·6 | 7·4 | 3·0 | 13·4 | 5·5 |
| 15 | 6 03·8 | 6 04·7 | 5 47·2 | 1·5 | 0·6 | 7·5 | 3·1 | 13·5 | 5·5 |
| 16 | 6 04·0 | 6 05·0 | 5 47·4 | 1·6 | 0·7 | 7·6 | 3·1 | 13·6 | 5·6 |
| 17 | 6 04·3 | 6 05·2 | 5 47·7 | 1·7 | 0·7 | 7·7 | 3·1 | 13·7 | 5·6 |
| 18 | 6 04·5 | 6 05·5 | 5 47·9 | 1·8 | 0·7 | 7·8 | 3·2 | 13·8 | 5·6 |
| 19 | 6 04·8 | 6 05·7 | 5 48·1 | 1·9 | 0·8 | 7·9 | 3·2 | 13·9 | 5·7 |
| 20 | 6 05·0 | 6 06·0 | 5 48·4 | 2·0 | 0·8 | 8·0 | 3·3 | 14·0 | 5·7 |
| 21 | 6 05·3 | 6 06·3 | 5 48·6 | 2·1 | 0·9 | 8·1 | 3·3 | 14·1 | 5·8 |
| 22 | 6 05·5 | 6 06·5 | 5 48·8 | 2·2 | 0·9 | 8·2 | 3·3 | 14·2 | 5·8 |
| 23 | 6 05·8 | 6 06·8 | 5 49·1 | 2·3 | 0·9 | 8·3 | 3·4 | 14·3 | 5·8 |
| 24 | 6 06·0 | 6 07·0 | 5 49·3 | 2·4 | 1·0 | 8·4 | 3·4 | 14·4 | 5·9 |
| 25 | 6 06·3 | 6 07·3 | 5 49·6 | 2·5 | 1·0 | 8·5 | 3·5 | 14·5 | 5·9 |
| 26 | 6 06·5 | 6 07·5 | 5 49·8 | 2·6 | 1·1 | 8·6 | 3·5 | 14·6 | 6·0 |
| 27 | 6 06·8 | 6 07·8 | 5 50·0 | 2·7 | 1·1 | 8·7 | 3·6 | 14·7 | 6·0 |
| 28 | 6 07·0 | 6 08·0 | 5 50·3 | 2·8 | 1·1 | 8·8 | 3·6 | 14·8 | 6·0 |
| 29 | 6 07·3 | 6 08·3 | 5 50·5 | 2·9 | 1·2 | 8·9 | 3·6 | 14·9 | 6·1 |
| 30 | 6 07·5 | 6 08·5 | 5 50·8 | 3·0 | 1·2 | 9·0 | 3·7 | 15·0 | 6·1 |
| 31 | 6 07·8 | 6 08·8 | 5 51·0 | 3·1 | 1·3 | 9·1 | 3·7 | 15·1 | 6·2 |
| 32 | 6 08·0 | 6 09·0 | 5 51·2 | 3·2 | 1·3 | 9·2 | 3·8 | 15·2 | 6·2 |
| 33 | 6 08·3 | 6 09·3 | 5 51·5 | 3·3 | 1·3 | 9·3 | 3·8 | 15·3 | 6·2 |
| 34 | 6 08·5 | 6 09·5 | 5 51·7 | 3·4 | 1·4 | 9·4 | 3·8 | 15·4 | 6·3 |
| 35 | 6 08·8 | 6 09·8 | 5 52·0 | 3·5 | 1·4 | 9·5 | 3·9 | 15·5 | 6·3 |
| 36 | 6 09·0 | 6 10·0 | 5 52·2 | 3·6 | 1·5 | 9·6 | 3·9 | 15·6 | 6·4 |
| 37 | 6 09·3 | 6 10·3 | 5 52·4 | 3·7 | 1·5 | 9·7 | 4·0 | 15·7 | 6·4 |
| 38 | 6 09·5 | 6 10·5 | 5 52·7 | 3·8 | 1·6 | 9·8 | 4·0 | 15·8 | 6·5 |
| 39 | 6 09·8 | 6 10·8 | 5 52·9 | 3·9 | 1·6 | 9·9 | 4·0 | 15·9 | 6·5 |
| 40 | 6 10·0 | 6 11·0 | 5 53·1 | 4·0 | 1·6 | 10·0 | 4·1 | 16·0 | 6·5 |
| 41 | 6 10·3 | 6 11·3 | 5 53·4 | 4·1 | 1·7 | 10·1 | 4·1 | 16·1 | 6·6 |
| 42 | 6 10·5 | 6 11·5 | 5 53·6 | 4·2 | 1·7 | 10·2 | 4·2 | 16·2 | 6·6 |
| 43 | 6 10·8 | 6 11·8 | 5 53·9 | 4·3 | 1·8 | 10·3 | 4·2 | 16·3 | 6·7 |
| 44 | 6 11·0 | 6 12·0 | 5 54·1 | 4·4 | 1·8 | 10·4 | 4·2 | 16·4 | 6·7 |
| 45 | 6 11·3 | 6 12·3 | 5 54·3 | 4·5 | 1·8 | 10·5 | 4·3 | 16·5 | 6·7 |
| 46 | 6 11·5 | 6 12·5 | 5 54·6 | 4·6 | 1·9 | 10·6 | 4·3 | 16·6 | 6·8 |
| 47 | 6 11·8 | 6 12·8 | 5 54·8 | 4·7 | 1·9 | 10·7 | 4·4 | 16·7 | 6·8 |
| 48 | 6 12·0 | 6 13·0 | 5 55·1 | 4·8 | 2·0 | 10·8 | 4·4 | 16·8 | 6·9 |
| 49 | 6 12·3 | 6 13·3 | 5 55·3 | 4·9 | 2·0 | 10·9 | 4·5 | 16·9 | 6·9 |
| 50 | 6 12·5 | 6 13·5 | 5 55·5 | 5·0 | 2·0 | 11·0 | 4·5 | 17·0 | 6·9 |
| 51 | 6 12·8 | 6 13·8 | 5 55·8 | 5·1 | 2·1 | 11·1 | 4·5 | 17·1 | 7·0 |
| 52 | 6 13·0 | 6 14·0 | 5 56·0 | 5·2 | 2·1 | 11·2 | 4·6 | 17·2 | 7·0 |
| 53 | 6 13·3 | 6 14·3 | 5 56·2 | 5·3 | 2·2 | 11·3 | 4·6 | 17·3 | 7·1 |
| 54 | 6 13·5 | 6 14·5 | 5 56·5 | 5·4 | 2·2 | 11·4 | 4·7 | 17·4 | 7·1 |
| 55 | 6 13·8 | 6 14·8 | 5 56·7 | 5·5 | 2·2 | 11·5 | 4·7 | 17·5 | 7·1 |
| 56 | 6 14·0 | 6 15·0 | 5 57·0 | 5·6 | 2·3 | 11·6 | 4·7 | 17·6 | 7·2 |
| 57 | 6 14·3 | 6 15·3 | 5 57·2 | 5·7 | 2·3 | 11·7 | 4·8 | 17·7 | 7·2 |
| 58 | 6 14·5 | 6 15·5 | 5 57·4 | 5·8 | 2·4 | 11·8 | 4·8 | 17·8 | 7·3 |
| 59 | 6 14·8 | 6 15·8 | 5 57·7 | 5·9 | 2·4 | 11·9 | 4·9 | 17·9 | 7·3 |
| 60 | 6 15·0 | 6 16·0 | 5 57·9 | 6·0 | 2·5 | 12·0 | 4·9 | 18·0 | 7·4 |

| m 25 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | | v ou d Corr. | | v ou d Corr. | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 6 15·0 | 6 16·0 | 5 57·9 | 0·0 | 0·0 | 6·0 | 2·6 | 12·0 | 5·1 |
| 01 | 6 15·3 | 6 16·3 | 5 58·2 | 0·1 | 0·0 | 6·1 | 2·6 | 12·1 | 5·1 |
| 02 | 6 15·5 | 6 16·5 | 5 58·4 | 0·2 | 0·1 | 6·2 | 2·6 | 12·2 | 5·2 |
| 03 | 6 15·8 | 6 16·8 | 5 58·6 | 0·3 | 0·1 | 6·3 | 2·7 | 12·3 | 5·2 |
| 04 | 6 16·0 | 6 17·0 | 5 58·9 | 0·4 | 0·2 | 6·4 | 2·7 | 12·4 | 5·3 |
| 05 | 6 16·3 | 6 17·3 | 5 59·1 | 0·5 | 0·2 | 6·5 | 2·8 | 12·5 | 5·3 |
| 06 | 6 16·5 | 6 17·5 | 5 59·3 | 0·6 | 0·3 | 6·6 | 2·8 | 12·6 | 5·4 |
| 07 | 6 16·8 | 6 17·8 | 5 59·6 | 0·7 | 0·3 | 6·7 | 2·8 | 12·7 | 5·4 |
| 08 | 6 17·0 | 6 18·0 | 5 59·8 | 0·8 | 0·3 | 6·8 | 2·9 | 12·8 | 5·4 |
| 09 | 6 17·3 | 6 18·3 | 6 00·1 | 0·9 | 0·4 | 6·9 | 2·9 | 12·9 | 5·5 |
| 10 | 6 17·5 | 6 18·5 | 6 00·3 | 1·0 | 0·4 | 7·0 | 3·0 | 13·0 | 5·5 |
| 11 | 6 17·8 | 6 18·8 | 6 00·5 | 1·1 | 0·5 | 7·1 | 3·0 | 13·1 | 5·6 |
| 12 | 6 18·0 | 6 19·0 | 6 00·8 | 1·2 | 0·5 | 7·2 | 3·1 | 13·2 | 5·6 |
| 13 | 6 18·3 | 6 19·3 | 6 01·0 | 1·3 | 0·6 | 7·3 | 3·1 | 13·3 | 5·7 |
| 14 | 6 18·5 | 6 19·5 | 6 01·3 | 1·4 | 0·6 | 7·4 | 3·1 | 13·4 | 5·7 |
| 15 | 6 18·8 | 6 19·8 | 6 01·5 | 1·5 | 0·6 | 7·5 | 3·2 | 13·5 | 5·7 |
| 16 | 6 19·0 | 6 20·0 | 6 01·7 | 1·6 | 0·7 | 7·6 | 3·2 | 13·6 | 5·8 |
| 17 | 6 19·3 | 6 20·3 | 6 02·0 | 1·7 | 0·7 | 7·7 | 3·3 | 13·7 | 5·8 |
| 18 | 6 19·5 | 6 20·5 | 6 02·2 | 1·8 | 0·8 | 7·8 | 3·3 | 13·8 | 5·9 |
| 19 | 6 19·8 | 6 20·8 | 6 02·5 | 1·9 | 0·8 | 7·9 | 3·4 | 13·9 | 5·9 |
| 20 | 6 20·0 | 6 21·0 | 6 02·7 | 2·0 | 0·9 | 8·0 | 3·4 | 14·0 | 6·0 |
| 21 | 6 20·3 | 6 21·3 | 6 02·9 | 2·1 | 0·9 | 8·1 | 3·4 | 14·1 | 6·0 |
| 22 | 6 20·5 | 6 21·5 | 6 03·2 | 2·2 | 0·9 | 8·2 | 3·5 | 14·2 | 6·0 |
| 23 | 6 20·8 | 6 21·8 | 6 03·4 | 2·3 | 1·0 | 8·3 | 3·5 | 14·3 | 6·1 |
| 24 | 6 21·0 | 6 22·0 | 6 03·6 | 2·4 | 1·0 | 8·4 | 3·6 | 14·4 | 6·1 |
| 25 | 6 21·3 | 6 22·3 | 6 03·9 | 2·5 | 1·1 | 8·5 | 3·6 | 14·5 | 6·2 |
| 26 | 6 21·5 | 6 22·5 | 6 04·1 | 2·6 | 1·1 | 8·6 | 3·7 | 14·6 | 6·2 |
| 27 | 6 21·8 | 6 22·8 | 6 04·4 | 2·7 | 1·1 | 8·7 | 3·7 | 14·7 | 6·2 |
| 28 | 6 22·0 | 6 23·0 | 6 04·6 | 2·8 | 1·2 | 8·8 | 3·7 | 14·8 | 6·3 |
| 29 | 6 22·3 | 6 23·3 | 6 04·8 | 2·9 | 1·2 | 8·9 | 3·8 | 14·9 | 6·3 |
| 30 | 6 22·5 | 6 23·5 | 6 05·1 | 3·0 | 1·3 | 9·0 | 3·8 | 15·0 | 6·4 |
| 31 | 6 22·8 | 6 23·8 | 6 05·3 | 3·1 | 1·3 | 9·1 | 3·9 | 15·1 | 6·4 |
| 32 | 6 23·0 | 6 24·0 | 6 05·6 | 3·2 | 1·4 | 9·2 | 3·9 | 15·2 | 6·5 |
| 33 | 6 23·3 | 6 24·3 | 6 05·8 | 3·3 | 1·4 | 9·3 | 4·0 | 15·3 | 6·5 |
| 34 | 6 23·5 | 6 24·5 | 6 06·0 | 3·4 | 1·4 | 9·4 | 4·0 | 15·4 | 6·5 |
| 35 | 6 23·8 | 6 24·8 | 6 06·3 | 3·5 | 1·5 | 9·5 | 4·0 | 15·5 | 6·6 |
| 36 | 6 24·0 | 6 25·1 | 6 06·5 | 3·6 | 1·5 | 9·6 | 4·1 | 15·6 | 6·6 |
| 37 | 6 24·3 | 6 25·3 | 6 06·7 | 3·7 | 1·6 | 9·7 | 4·1 | 15·7 | 6·7 |
| 38 | 6 24·5 | 6 25·6 | 6 07·0 | 3·8 | 1·6 | 9·8 | 4·2 | 15·8 | 6·7 |
| 39 | 6 24·8 | 6 25·8 | 6 07·2 | 3·9 | 1·7 | 9·9 | 4·2 | 15·9 | 6·8 |
| 40 | 6 25·0 | 6 26·1 | 6 07·5 | 4·0 | 1·7 | 10·0 | 4·3 | 16·0 | 6·8 |
| 41 | 6 25·3 | 6 26·3 | 6 07·7 | 4·1 | 1·7 | 10·1 | 4·3 | 16·1 | 6·8 |
| 42 | 6 25·5 | 6 26·6 | 6 07·9 | 4·2 | 1·8 | 10·2 | 4·3 | 16·2 | 6·9 |
| 43 | 6 25·8 | 6 26·8 | 6 08·2 | 4·3 | 1·8 | 10·3 | 4·4 | 16·3 | 6·9 |
| 44 | 6 26·0 | 6 27·1 | 6 08·4 | 4·4 | 1·9 | 10·4 | 4·4 | 16·4 | 7·0 |
| 45 | 6 26·3 | 6 27·3 | 6 08·7 | 4·5 | 1·9 | 10·5 | 4·5 | 16·5 | 7·0 |
| 46 | 6 26·5 | 6 27·6 | 6 08·9 | 4·6 | 2·0 | 10·6 | 4·5 | 16·6 | 7·1 |
| 47 | 6 26·8 | 6 27·8 | 6 09·1 | 4·7 | 2·0 | 10·7 | 4·5 | 16·7 | 7·1 |
| 48 | 6 27·0 | 6 28·1 | 6 09·4 | 4·8 | 2·0 | 10·8 | 4·6 | 16·8 | 7·1 |
| 49 | 6 27·3 | 6 28·3 | 6 09·6 | 4·9 | 2·1 | 10·9 | 4·6 | 16·9 | 7·2 |
| 50 | 6 27·5 | 6 28·6 | 6 09·8 | 5·0 | 2·1 | 11·0 | 4·7 | 17·0 | 7·2 |
| 51 | 6 27·8 | 6 28·8 | 6 10·1 | 5·1 | 2·2 | 11·1 | 4·7 | 17·1 | 7·3 |
| 52 | 6 28·0 | 6 29·1 | 6 10·3 | 5·2 | 2·2 | 11·2 | 4·8 | 17·2 | 7·3 |
| 53 | 6 28·3 | 6 29·3 | 6 10·6 | 5·3 | 2·3 | 11·3 | 4·8 | 17·3 | 7·4 |
| 54 | 6 28·5 | 6 29·6 | 6 10·8 | 5·4 | 2·3 | 11·4 | 4·8 | 17·4 | 7·4 |
| 55 | 6 28·8 | 6 29·8 | 6 11·0 | 5·5 | 2·3 | 11·5 | 4·9 | 17·5 | 7·4 |
| 56 | 6 29·0 | 6 30·1 | 6 11·3 | 5·6 | 2·4 | 11·6 | 4·9 | 17·6 | 7·5 |
| 57 | 6 29·3 | 6 30·3 | 6 11·5 | 5·7 | 2·4 | 11·7 | 5·0 | 17·7 | 7·5 |
| 58 | 6 29·5 | 6 30·6 | 6 11·8 | 5·8 | 2·5 | 11·8 | 5·0 | 17·8 | 7·6 |
| 59 | 6 29·8 | 6 30·8 | 6 12·0 | 5·9 | 2·5 | 11·9 | 5·1 | 17·9 | 7·6 |
| 60 | 6 30·0 | 6 31·1 | 6 12·2 | 6·0 | 2·6 | 12·0 | 5·1 | 18·0 | 7·7 |

## 28m ACRÉSCIMOS E CORREÇÕES 29m

| m 28 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | | v ou d Corr. | | v ou d Corr. | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 7 00·0 | 7 01·1 | 6 40·9 | 0·0 | 0·0 | 6·0 | 2·9 | 12·0 | 5·7 |
| 01 | 7 00·3 | 7 01·4 | 6 41·1 | 0·1 | 0·0 | 6·1 | 2·9 | 12·1 | 5·7 |
| 02 | 7 00·5 | 7 01·7 | 6 41·3 | 0·2 | 0·1 | 6·2 | 2·9 | 12·2 | 5·8 |
| 03 | 7 00·8 | 7 01·9 | 6 41·6 | 0·3 | 0·1 | 6·3 | 3·0 | 12·3 | 5·8 |
| 04 | 7 01·0 | 7 02·2 | 6 41·8 | 0·4 | 0·2 | 6·4 | 3·0 | 12·4 | 5·9 |
| 05 | 7 01·3 | 7 02·4 | 6 42·1 | 0·5 | 0·2 | 6·5 | 3·1 | 12·5 | 5·9 |
| 06 | 7 01·5 | 7 02·7 | 6 42·3 | 0·6 | 0·3 | 6·6 | 3·1 | 12·6 | 6·0 |
| 07 | 7 01·8 | 7 02·9 | 6 42·5 | 0·7 | 0·3 | 6·7 | 3·2 | 12·7 | 6·0 |
| 08 | 7 02·0 | 7 03·2 | 6 42·8 | 0·8 | 0·4 | 6·8 | 3·2 | 12·8 | 6·1 |
| 09 | 7 02·3 | 7 03·4 | 6 43·0 | 0·9 | 0·4 | 6·9 | 3·3 | 12·9 | 6·1 |
| 10 | 7 02·5 | 7 03·7 | 6 43·3 | 1·0 | 0·5 | 7·0 | 3·3 | 13·0 | 6·2 |
| 11 | 7 02·8 | 7 03·9 | 6 43·5 | 1·1 | 0·5 | 7·1 | 3·4 | 13·1 | 6·2 |
| 12 | 7 03·0 | 7 04·2 | 6 43·7 | 1·2 | 0·6 | 7·2 | 3·4 | 13·2 | 6·3 |
| 13 | 7 03·3 | 7 04·4 | 6 44·0 | 1·3 | 0·6 | 7·3 | 3·5 | 13·3 | 6·3 |
| 14 | 7 03·5 | 7 04·7 | 6 44·2 | 1·4 | 0·7 | 7·4 | 3·5 | 13·4 | 6·4 |
| 15 | 7 03·8 | 7 04·9 | 6 44·4 | 1·5 | 0·7 | 7·5 | 3·6 | 13·5 | 6·4 |
| 16 | 7 04·0 | 7 05·2 | 6 44·7 | 1·6 | 0·8 | 7·6 | 3·6 | 13·6 | 6·5 |
| 17 | 7 04·3 | 7 05·4 | 6 44·9 | 1·7 | 0·8 | 7·7 | 3·7 | 13·7 | 6·5 |
| 18 | 7 04·5 | 7 05·7 | 6 45·2 | 1·8 | 0·9 | 7·8 | 3·7 | 13·8 | 6·6 |
| 19 | 7 04·8 | 7 05·9 | 6 45·4 | 1·9 | 0·9 | 7·9 | 3·8 | 13·9 | 6·6 |
| 20 | 7 05·0 | 7 06·2 | 6 45·6 | 2·0 | 1·0 | 8·0 | 3·8 | 14·0 | 6·7 |
| 21 | 7 05·3 | 7 06·4 | 6 45·9 | 2·1 | 1·0 | 8·1 | 3·8 | 14·1 | 6·7 |
| 22 | 7 05·5 | 7 06·7 | 6 46·1 | 2·2 | 1·0 | 8·2 | 3·9 | 14·2 | 6·7 |
| 23 | 7 05·8 | 7 06·9 | 6 46·4 | 2·3 | 1·1 | 8·3 | 3·9 | 14·3 | 6·8 |
| 24 | 7 06·0 | 7 07·2 | 6 46·6 | 2·4 | 1·1 | 8·4 | 4·0 | 14·4 | 6·8 |
| 25 | 7 06·3 | 7 07·4 | 6 46·8 | 2·5 | 1·2 | 8·5 | 4·0 | 14·5 | 6·9 |
| 26 | 7 06·5 | 7 07·7 | 6 47·1 | 2·6 | 1·2 | 8·6 | 4·1 | 14·6 | 6·9 |
| 27 | 7 06·8 | 7 07·9 | 6 47·3 | 2·7 | 1·3 | 8·7 | 4·1 | 14·7 | 7·0 |
| 28 | 7 07·0 | 7 08·2 | 6 47·5 | 2·8 | 1·3 | 8·8 | 4·2 | 14·8 | 7·0 |
| 29 | 7 07·3 | 7 08·4 | 6 47·8 | 2·9 | 1·4 | 8·9 | 4·2 | 14·9 | 7·1 |
| 30 | 7 07·5 | 7 08·7 | 6 48·0 | 3·0 | 1·4 | 9·0 | 4·3 | 15·0 | 7·1 |
| 31 | 7 07·8 | 7 08·9 | 6 48·3 | 3·1 | 1·5 | 9·1 | 4·3 | 15·1 | 7·2 |
| 32 | 7 08·0 | 7 09·2 | 6 48·5 | 3·2 | 1·5 | 9·2 | 4·4 | 15·2 | 7·2 |
| 33 | 7 08·3 | 7 09·4 | 6 48·7 | 3·3 | 1·6 | 9·3 | 4·4 | 15·3 | 7·3 |
| 34 | 7 08·5 | 7 09·7 | 6 49·0 | 3·4 | 1·6 | 9·4 | 4·5 | 15·4 | 7·3 |
| 35 | 7 08·8 | 7 09·9 | 6 49·2 | 3·5 | 1·7 | 9·5 | 4·5 | 15·5 | 7·4 |
| 36 | 7 09·0 | 7 10·2 | 6 49·5 | 3·6 | 1·7 | 9·6 | 4·6 | 15·6 | 7·4 |
| 37 | 7 09·3 | 7 10·4 | 6 49·7 | 3·7 | 1·8 | 9·7 | 4·6 | 15·7 | 7·5 |
| 38 | 7 09·5 | 7 10·7 | 6 49·9 | 3·8 | 1·8 | 9·8 | 4·7 | 15·8 | 7·5 |
| 39 | 7 09·8 | 7 10·9 | 6 50·2 | 3·9 | 1·9 | 9·9 | 4·7 | 15·9 | 7·6 |
| 40 | 7 10·0 | 7 11·2 | 6 50·4 | 4·0 | 1·9 | 10·0 | 4·8 | 16·0 | 7·6 |
| 41 | 7 10·3 | 7 11·4 | 6 50·6 | 4·1 | 1·9 | 10·1 | 4·8 | 16·1 | 7·6 |
| 42 | 7 10·5 | 7 11·7 | 6 50·9 | 4·2 | 2·0 | 10·2 | 4·8 | 16·2 | 7·7 |
| 43 | 7 10·8 | 7 11·9 | 6 51·1 | 4·3 | 2·0 | 10·3 | 4·9 | 16·3 | 7·7 |
| 44 | 7 11·0 | 7 12·2 | 6 51·4 | 4·4 | 2·1 | 10·4 | 4·9 | 16·4 | 7·8 |
| 45 | 7 11·3 | 7 12·4 | 6 51·6 | 4·5 | 2·1 | 10·5 | 5·0 | 16·5 | 7·8 |
| 46 | 7 11·5 | 7 12·7 | 6 51·8 | 4·6 | 2·2 | 10·6 | 5·0 | 16·6 | 7·9 |
| 47 | 7 11·8 | 7 12·9 | 6 52·1 | 4·7 | 2·2 | 10·7 | 5·1 | 16·7 | 7·9 |
| 48 | 7 12·0 | 7 13·2 | 6 52·3 | 4·8 | 2·3 | 10·8 | 5·1 | 16·8 | 8·0 |
| 49 | 7 12·3 | 7 13·4 | 6 52·6 | 4·9 | 2·3 | 10·9 | 5·2 | 16·9 | 8·0 |
| 50 | 7 12·5 | 7 13·7 | 6 52·8 | 5·0 | 2·4 | 11·0 | 5·2 | 17·0 | 8·1 |
| 51 | 7 12·8 | 7 13·9 | 6 53·0 | 5·1 | 2·4 | 11·1 | 5·3 | 17·1 | 8·1 |
| 52 | 7 13·0 | 7 14·2 | 6 53·3 | 5·2 | 2·5 | 11·2 | 5·3 | 17·2 | 8·2 |
| 53 | 7 13·3 | 7 14·4 | 6 53·5 | 5·3 | 2·5 | 11·3 | 5·4 | 17·3 | 8·2 |
| 54 | 7 13·5 | 7 14·7 | 6 53·8 | 5·4 | 2·6 | 11·4 | 5·4 | 17·4 | 8·3 |
| 55 | 7 13·8 | 7 14·9 | 6 54·0 | 5·5 | 2·6 | 11·5 | 5·5 | 17·5 | 8·3 |
| 56 | 7 14·0 | 7 15·2 | 6 54·2 | 5·6 | 2·7 | 11·6 | 5·5 | 17·6 | 8·4 |
| 57 | 7 14·3 | 7 15·4 | 6 54·5 | 5·7 | 2·7 | 11·7 | 5·6 | 17·7 | 8·4 |
| 58 | 7 14·5 | 7 15·7 | 6 54·7 | 5·8 | 2·8 | 11·8 | 5·6 | 17·8 | 8·5 |
| 59 | 7 14·8 | 7 15·9 | 6 54·9 | 5·9 | 2·8 | 11·9 | 5·7 | 17·9 | 8·5 |
| 60 | 7 15·0 | 7 16·2 | 6 55·2 | 6·0 | 2·9 | 12·0 | 5·7 | 18·0 | 8·6 |

| m 29 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | | v ou d Corr. | | v ou d Corr. | |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 7 15·0 | 7 16·2 | 6 55·2 | 0·0 | 0·0 | 6·0 | 3·0 | 12·0 | 5·9 |
| 01 | 7 15·3 | 7 16·4 | 6 55·4 | 0·1 | 0·0 | 6·1 | 3·0 | 12·1 | 5·9 |
| 02 | 7 15·5 | 7 16·7 | 6 55·7 | 0·2 | 0·1 | 6·2 | 3·0 | 12·2 | 6·0 |
| 03 | 7 15·8 | 7 16·9 | 6 55·9 | 0·3 | 0·1 | 6·3 | 3·1 | 12·3 | 6·0 |
| 04 | 7 16·0 | 7 17·2 | 6 56·1 | 0·4 | 0·2 | 6·4 | 3·1 | 12·4 | 6·1 |
| 05 | 7 16·3 | 7 17·4 | 6 56·4 | 0·5 | 0·2 | 6·5 | 3·2 | 12·5 | 6·1 |
| 06 | 7 16·5 | 7 17·7 | 6 56·6 | 0·6 | 0·3 | 6·6 | 3·2 | 12·6 | 6·2 |
| 07 | 7 16·8 | 7 17·9 | 6 56·9 | 0·7 | 0·3 | 6·7 | 3·3 | 12·7 | 6·2 |
| 08 | 7 17·0 | 7 18·2 | 6 57·1 | 0·8 | 0·4 | 6·8 | 3·3 | 12·8 | 6·3 |
| 09 | 7 17·3 | 7 18·4 | 6 57·3 | 0·9 | 0·4 | 6·9 | 3·4 | 12·9 | 6·3 |
| 10 | 7 17·5 | 7 18·7 | 6 57·6 | 1·0 | 0·5 | 7·0 | 3·4 | 13·0 | 6·4 |
| 11 | 7 17·8 | 7 18·9 | 6 57·8 | 1·1 | 0·5 | 7·1 | 3·5 | 13·1 | 6·4 |
| 12 | 7 18·0 | 7 19·2 | 6 58·0 | 1·2 | 0·6 | 7·2 | 3·5 | 13·2 | 6·5 |
| 13 | 7 18·3 | 7 19·4 | 6 58·3 | 1·3 | 0·6 | 7·3 | 3·6 | 13·3 | 6·5 |
| 14 | 7 18·5 | 7 19·7 | 6 58·5 | 1·4 | 0·7 | 7·4 | 3·6 | 13·4 | 6·6 |
| 15 | 7 18·8 | 7 20·0 | 6 58·8 | 1·5 | 0·7 | 7·5 | 3·7 | 13·5 | 6·6 |
| 16 | 7 19·0 | 7 20·2 | 6 59·0 | 1·6 | 0·8 | 7·6 | 3·7 | 13·6 | 6·7 |
| 17 | 7 19·3 | 7 20·5 | 6 59·2 | 1·7 | 0·8 | 7·7 | 3·8 | 13·7 | 6·7 |
| 18 | 7 19·5 | 7 20·7 | 6 59·5 | 1·8 | 0·9 | 7·8 | 3·8 | 13·8 | 6·8 |
| 19 | 7 19·8 | 7 21·0 | 6 59·7 | 1·9 | 0·9 | 7·9 | 3·9 | 13·9 | 6·8 |
| 20 | 7 20·0 | 7 21·2 | 7 00·0 | 2·0 | 1·0 | 8·0 | 3·9 | 14·0 | 6·9 |
| 21 | 7 20·3 | 7 21·5 | 7 00·2 | 2·1 | 1·0 | 8·1 | 4·0 | 14·1 | 6·9 |
| 22 | 7 20·5 | 7 21·7 | 7 00·4 | 2·2 | 1·1 | 8·2 | 4·0 | 14·2 | 7·0 |
| 23 | 7 20·8 | 7 22·0 | 7 00·7 | 2·3 | 1·1 | 8·3 | 4·1 | 14·3 | 7·0 |
| 24 | 7 21·0 | 7 22·2 | 7 00·9 | 2·4 | 1·2 | 8·4 | 4·1 | 14·4 | 7·1 |
| 25 | 7 21·3 | 7 22·5 | 7 01·1 | 2·5 | 1·2 | 8·5 | 4·2 | 14·5 | 7·1 |
| 26 | 7 21·5 | 7 22·7 | 7 01·4 | 2·6 | 1·3 | 8·6 | 4·2 | 14·6 | 7·2 |
| 27 | 7 21·8 | 7 23·0 | 7 01·6 | 2·7 | 1·3 | 8·7 | 4·3 | 14·7 | 7·2 |
| 28 | 7 22·0 | 7 23·2 | 7 01·9 | 2·8 | 1·4 | 8·8 | 4·3 | 14·8 | 7·3 |
| 29 | 7 22·3 | 7 23·5 | 7 02·1 | 2·9 | 1·4 | 8·9 | 4·4 | 14·9 | 7·3 |
| 30 | 7 22·5 | 7 23·7 | 7 02·3 | 3·0 | 1·5 | 9·0 | 4·4 | 15·0 | 7·4 |
| 31 | 7 22·8 | 7 24·0 | 7 02·6 | 3·1 | 1·5 | 9·1 | 4·5 | 15·1 | 7·4 |
| 32 | 7 23·0 | 7 24·2 | 7 02·8 | 3·2 | 1·6 | 9·2 | 4·5 | 15·2 | 7·5 |
| 33 | 7 23·3 | 7 24·5 | 7 03·1 | 3·3 | 1·6 | 9·3 | 4·6 | 15·3 | 7·5 |
| 34 | 7 23·5 | 7 24·7 | 7 03·3 | 3·4 | 1·7 | 9·4 | 4·6 | 15·4 | 7·6 |
| 35 | 7 23·8 | 7 25·0 | 7 03·5 | 3·5 | 1·7 | 9·5 | 4·7 | 15·5 | 7·6 |
| 36 | 7 24·0 | 7 25·2 | 7 03·8 | 3·6 | 1·8 | 9·6 | 4·7 | 15·6 | 7·7 |
| 37 | 7 24·3 | 7 25·5 | 7 04·0 | 3·7 | 1·8 | 9·7 | 4·8 | 15·7 | 7·7 |
| 38 | 7 24·5 | 7 25·7 | 7 04·3 | 3·8 | 1·9 | 9·8 | 4·8 | 15·8 | 7·8 |
| 39 | 7 24·8 | 7 26·0 | 7 04·5 | 3·9 | 1·9 | 9·9 | 4·9 | 15·9 | 7·8 |
| 40 | 7 25·0 | 7 26·2 | 7 04·7 | 4·0 | 2·0 | 10·0 | 4·9 | 16·0 | 7·9 |
| 41 | 7 25·3 | 7 26·5 | 7 05·0 | 4·1 | 2·0 | 10·1 | 5·0 | 16·1 | 7·9 |
| 42 | 7 25·5 | 7 26·7 | 7 05·2 | 4·2 | 2·1 | 10·2 | 5·0 | 16·2 | 8·0 |
| 43 | 7 25·8 | 7 27·0 | 7 05·4 | 4·3 | 2·1 | 10·3 | 5·1 | 16·3 | 8·0 |
| 44 | 7 26·0 | 7 27·2 | 7 05·7 | 4·4 | 2·2 | 10·4 | 5·1 | 16·4 | 8·1 |
| 45 | 7 26·3 | 7 27·5 | 7 05·9 | 4·5 | 2·2 | 10·5 | 5·2 | 16·5 | 8·1 |
| 46 | 7 26·5 | 7 27·7 | 7 06·2 | 4·6 | 2·3 | 10·6 | 5·2 | 16·6 | 8·2 |
| 47 | 7 26·8 | 7 28·0 | 7 06·4 | 4·7 | 2·3 | 10·7 | 5·3 | 16·7 | 8·2 |
| 48 | 7 27·0 | 7 28·2 | 7 06·6 | 4·8 | 2·4 | 10·8 | 5·3 | 16·8 | 8·3 |
| 49 | 7 27·3 | 7 28·5 | 7 06·9 | 4·9 | 2·4 | 10·9 | 5·4 | 16·9 | 8·3 |
| 50 | 7 27·5 | 7 28·7 | 7 07·1 | 5·0 | 2·5 | 11·0 | 5·4 | 17·0 | 8·4 |
| 51 | 7 27·8 | 7 29·0 | 7 07·4 | 5·1 | 2·5 | 11·1 | 5·5 | 17·1 | 8·4 |
| 52 | 7 28·0 | 7 29·2 | 7 07·6 | 5·2 | 2·6 | 11·2 | 5·5 | 17·2 | 8·5 |
| 53 | 7 28·3 | 7 29·5 | 7 07·8 | 5·3 | 2·6 | 11·3 | 5·6 | 17·3 | 8·5 |
| 54 | 7 28·5 | 7 29·7 | 7 08·1 | 5·4 | 2·7 | 11·4 | 5·6 | 17·4 | 8·6 |
| 55 | 7 28·8 | 7 30·0 | 7 08·3 | 5·5 | 2·7 | 11·5 | 5·7 | 17·5 | 8·6 |
| 56 | 7 29·0 | 7 30·2 | 7 08·5 | 5·6 | 2·8 | 11·6 | 5·7 | 17·6 | 8·7 |
| 57 | 7 29·3 | 7 30·5 | 7 08·8 | 5·7 | 2·8 | 11·7 | 5·8 | 17·7 | 8·7 |
| 58 | 7 29·5 | 7 30·7 | 7 09·0 | 5·8 | 2·9 | 11·8 | 5·8 | 17·8 | 8·8 |
| 59 | 7 29·8 | 7 31·0 | 7 09·3 | 5·9 | 2·9 | 11·9 | 5·9 | 17·9 | 8·8 |
| 60 | 7 30·0 | 7 31·2 | 7 09·5 | 6·0 | 3·0 | 12·0 | 5·9 | 18·0 | 8·9 |

## 32 m ACRÉSCIMOS E CORREÇÕES 33 m

| m 32 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | v ou d Corr. | v ou d Corr. |
|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ ′ | ′ ′ | ′ ′ |
| 00 | 8 00·0 | 8 01·3 | 7 38·1 | 0·0 0·0 | 6·0 3·3 | 12·0 6·5 |
| 01 | 8 00·3 | 8 01·6 | 7 38·4 | 0·1 0·1 | 6·1 3·3 | 12·1 6·6 |
| 02 | 8 00·5 | 8 01·8 | 7 38·6 | 0·2 0·1 | 6·2 3·4 | 12·2 6·6 |
| 03 | 8 00·8 | 8 02·1 | 7 38·8 | 0·3 0·2 | 6·3 3·4 | 12·3 6·7 |
| 04 | 8 01·0 | 8 02·3 | 7 39·1 | 0·4 0·2 | 6·4 3·5 | 12·4 6·7 |
| 05 | 8 01·3 | 8 02·6 | 7 39·3 | 0·5 0·3 | 6·5 3·5 | 12·5 6·8 |
| 06 | 8 01·5 | 8 02·8 | 7 39·6 | 0·6 0·3 | 6·6 3·6 | 12·6 6·8 |
| 07 | 8 01·8 | 8 03·1 | 7 39·8 | 0·7 0·4 | 6·7 3·6 | 12·7 6·9 |
| 08 | 8 02·0 | 8 03·3 | 7 40·0 | 0·8 0·4 | 6·8 3·7 | 12·8 6·9 |
| 09 | 8 02·3 | 8 03·6 | 7 40·3 | 0·9 0·5 | 6·9 3·7 | 12·9 7·0 |
| 10 | 8 02·5 | 8 03·8 | 7 40·5 | 1·0 0·5 | 7·0 3·8 | 13·0 7·0 |
| 11 | 8 02·8 | 8 04·1 | 7 40·8 | 1·1 0·6 | 7·1 3·8 | 13·1 7·1 |
| 12 | 8 03·0 | 8 04·3 | 7 41·0 | 1·2 0·7 | 7·2 3·9 | 13·2 7·2 |
| 13 | 8 03·3 | 8 04·6 | 7 41·2 | 1·3 0·7 | 7·3 4·0 | 13·3 7·2 |
| 14 | 8 03·5 | 8 04·8 | 7 41·5 | 1·4 0·8 | 7·4 4·0 | 13·4 7·3 |
| 15 | 8 03·8 | 8 05·1 | 7 41·7 | 1·5 0·8 | 7·5 4·1 | 13·5 7·3 |
| 16 | 8 04·0 | 8 05·3 | 7 42·0 | 1·6 0·9 | 7·6 4·1 | 13·6 7·4 |
| 17 | 8 04·3 | 8 05·6 | 7 42·2 | 1·7 0·9 | 7·7 4·2 | 13·7 7·4 |
| 18 | 8 04·5 | 8 05·8 | 7 42·4 | 1·8 1·0 | 7·8 4·2 | 13·8 7·5 |
| 19 | 8 04·8 | 8 06·1 | 7 42·7 | 1·9 1·0 | 7·9 4·3 | 13·9 7·5 |
| 20 | 8 05·0 | 8 06·3 | 7 42·9 | 2·0 1·1 | 8·0 4·3 | 14·0 7·6 |
| 21 | 8 05·3 | 8 06·6 | 7 43·1 | 2·1 1·1 | 8·1 4·4 | 14·1 7·6 |
| 22 | 8 05·5 | 8 06·8 | 7 43·4 | 2·2 1·2 | 8·2 4·4 | 14·2 7·7 |
| 23 | 8 05·8 | 8 07·1 | 7 43·6 | 2·3 1·2 | 8·3 4·5 | 14·3 7·7 |
| 24 | 8 06·0 | 8 07·3 | 7 43·9 | 2·4 1·3 | 8·4 4·6 | 14·4 7·8 |
| 25 | 8 06·3 | 8 07·6 | 7 44·1 | 2·5 1·4 | 8·5 4·6 | 14·5 7·9 |
| 26 | 8 06·5 | 8 07·8 | 7 44·3 | 2·6 1·4 | 8·6 4·7 | 14·6 7·9 |
| 27 | 8 06·8 | 8 08·1 | 7 44·6 | 2·7 1·5 | 8·7 4·7 | 14·7 8·0 |
| 28 | 8 07·0 | 8 08·3 | 7 44·8 | 2·8 1·5 | 8·8 4·8 | 14·8 8·0 |
| 29 | 8 07·3 | 8 08·6 | 7 45·1 | 2·9 1·6 | 8·9 4·8 | 14·9 8·1 |
| 30 | 8 07·5 | 8 08·8 | 7 45·3 | 3·0 1·6 | 9·0 4·9 | 15·0 8·1 |
| 31 | 8 07·8 | 8 09·1 | 7 45·5 | 3·1 1·7 | 9·1 4·9 | 15·1 8·2 |
| 32 | 8 08·0 | 8 09·3 | 7 45·8 | 3·2 1·7 | 9·2 5·0 | 15·2 8·2 |
| 33 | 8 08·3 | 8 09·6 | 7 46·0 | 3·3 1·8 | 9·3 5·0 | 15·3 8·3 |
| 34 | 8 08·5 | 8 09·8 | 7 46·2 | 3·4 1·8 | 9·4 5·1 | 15·4 8·3 |
| 35 | 8 08·8 | 8 10·1 | 7 46·5 | 3·5 1·9 | 9·5 5·1 | 15·5 8·4 |
| 36 | 8 09·0 | 8 10·3 | 7 46·7 | 3·6 2·0 | 9·6 5·2 | 15·6 8·5 |
| 37 | 8 09·3 | 8 10·6 | 7 47·0 | 3·7 2·0 | 9·7 5·3 | 15·7 8·5 |
| 38 | 8 09·5 | 8 10·8 | 7 47·2 | 3·8 2·1 | 9·8 5·3 | 15·8 8·6 |
| 39 | 8 09·8 | 8 11·1 | 7 47·4 | 3·9 2·1 | 9·9 5·4 | 15·9 8·6 |
| 40 | 8 10·0 | 8 11·3 | 7 47·7 | 4·0 2·2 | 10·0 5·4 | 16·0 8·7 |
| 41 | 8 10·3 | 8 11·6 | 7 47·9 | 4·1 2·2 | 10·1 5·5 | 16·1 8·7 |
| 42 | 8 10·5 | 8 11·8 | 7 48·2 | 4·2 2·3 | 10·2 5·5 | 16·2 8·8 |
| 43 | 8 10·8 | 8 12·1 | 7 48·4 | 4·3 2·3 | 10·3 5·6 | 16·3 8·8 |
| 44 | 8 11·0 | 8 12·3 | 7 48·6 | 4·4 2·4 | 10·4 5·6 | 16·4 8·9 |
| 45 | 8 11·3 | 8 12·6 | 7 48·9 | 4·5 2·4 | 10·5 5·7 | 16·5 8·9 |
| 46 | 8 11·5 | 8 12·8 | 7 49·1 | 4·6 2·5 | 10·6 5·7 | 16·6 9·0 |
| 47 | 8 11·8 | 8 13·1 | 7 49·3 | 4·7 2·5 | 10·7 5·8 | 16·7 9·0 |
| 48 | 8 12·0 | 8 13·3 | 7 49·6 | 4·8 2·6 | 10·8 5·9 | 16·8 9·1 |
| 49 | 8 12·3 | 8 13·6 | 7 49·8 | 4·9 2·7 | 10·9 5·9 | 16·9 9·2 |
| 50 | 8 12·5 | 8 13·8 | 7 50·1 | 5·0 2·7 | 11·0 6·0 | 17·0 9·2 |
| 51 | 8 12·8 | 8 14·1 | 7 50·3 | 5·1 2·8 | 11·1 6·0 | 17·1 9·3 |
| 52 | 8 13·0 | 8 14·3 | 7 50·5 | 5·2 2·8 | 11·2 6·1 | 17·2 9·3 |
| 53 | 8 13·3 | 8 14·6 | 7 50·8 | 5·3 2·9 | 11·3 6·1 | 17·3 9·4 |
| 54 | 8 13·5 | 8 14·9 | 7 51·0 | 5·4 2·9 | 11·4 6·2 | 17·4 9·4 |
| 55 | 8 13·8 | 8 15·1 | 7 51·3 | 5·5 3·0 | 11·5 6·2 | 17·5 9·5 |
| 56 | 8 14·0 | 8 15·4 | 7 51·5 | 5·6 3·0 | 11·6 6·3 | 17·6 9·5 |
| 57 | 8 14·3 | 8 15·6 | 7 51·7 | 5·7 3·1 | 11·7 6·3 | 17·7 9·6 |
| 58 | 8 14·5 | 8 15·9 | 7 52·0 | 5·8 3·1 | 11·8 6·4 | 17·8 9·6 |
| 59 | 8 14·8 | 8 16·1 | 7 52·2 | 5·9 3·2 | 11·9 6·4 | 17·9 9·7 |
| 60 | 8 15·0 | 8 16·4 | 7 52·5 | 6·0 3·3 | 12·0 6·5 | 18·0 9·8 |

| m 33 | SOL PLANETAS | ♈ | LUA | v ou d Corr. | v ou d Corr. | v ou d Corr. |
|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ ′ | ′ ′ | ′ ′ |
| 00 | 8 15·0 | 8 16·4 | 7 52·5 | 0·0 0·0 | 6·0 3·4 | 12·0 6·7 |
| 01 | 8 15·3 | 8 16·6 | 7 52·7 | 0·1 0·1 | 6·1 3·4 | 12·1 6·8 |
| 02 | 8 15·5 | 8 16·9 | 7 52·9 | 0·2 0·1 | 6·2 3·5 | 12·2 6·8 |
| 03 | 8 15·8 | 8 17·1 | 7 53·2 | 0·3 0·2 | 6·3 3·5 | 12·3 6·9 |
| 04 | 8 16·0 | 8 17·4 | 7 53·4 | 0·4 0·2 | 6·4 3·6 | 12·4 6·9 |
| 05 | 8 16·3 | 8 17·6 | 7 53·6 | 0·5 0·3 | 6·5 3·6 | 12·5 7·0 |
| 06 | 8 16·5 | 8 17·9 | 7 53·9 | 0·6 0·3 | 6·6 3·7 | 12·6 7·0 |
| 07 | 8 16·8 | 8 18·1 | 7 54·1 | 0·7 0·4 | 6·7 3·7 | 12·7 7·1 |
| 08 | 8 17·0 | 8 18·4 | 7 54·4 | 0·8 0·4 | 6·8 3·8 | 12·8 7·1 |
| 09 | 8 17·3 | 8 18·6 | 7 54·6 | 0·9 0·5 | 6·9 3·9 | 12·9 7·2 |
| 10 | 8 17·5 | 8 18·9 | 7 54·8 | 1·0 0·6 | 7·0 3·9 | 13·0 7·3 |
| 11 | 8 17·8 | 8 19·1 | 7 55·1 | 1·1 0·6 | 7·1 4·0 | 13·1 7·3 |
| 12 | 8 18·0 | 8 19·4 | 7 55·3 | 1·2 0·7 | 7·2 4·0 | 13·2 7·4 |
| 13 | 8 18·3 | 8 19·6 | 7 55·6 | 1·3 0·7 | 7·3 4·1 | 13·3 7·4 |
| 14 | 8 18·5 | 8 19·9 | 7 55·8 | 1·4 0·8 | 7·4 4·1 | 13·4 7·5 |
| 15 | 8 18·8 | 8 20·1 | 7 56·0 | 1·5 0·8 | 7·5 4·2 | 13·5 7·5 |
| 16 | 8 19·0 | 8 20·4 | 7 56·3 | 1·6 0·9 | 7·6 4·2 | 13·6 7·6 |
| 17 | 8 19·3 | 8 20·6 | 7 56·5 | 1·7 0·9 | 7·7 4·3 | 13·7 7·6 |
| 18 | 8 19·5 | 8 20·9 | 7 56·7 | 1·8 1·0 | 7·8 4·4 | 13·8 7·7 |
| 19 | 8 19·8 | 8 21·1 | 7 57·0 | 1·9 1·1 | 7·9 4·4 | 13·9 7·8 |
| 20 | 8 20·0 | 8 21·4 | 7 57·2 | 2·0 1·1 | 8·0 4·5 | 14·0 7·8 |
| 21 | 8 20·3 | 8 21·6 | 7 57·5 | 2·1 1·2 | 8·1 4·5 | 14·1 7·9 |
| 22 | 8 20·5 | 8 21·9 | 7 57·7 | 2·2 1·2 | 8·2 4·6 | 14·2 7·9 |
| 23 | 8 20·8 | 8 22·1 | 7 57·9 | 2·3 1·3 | 8·3 4·6 | 14·3 8·0 |
| 24 | 8 21·0 | 8 22·4 | 7 58·2 | 2·4 1·3 | 8·4 4·7 | 14·4 8·0 |
| 25 | 8 21·3 | 8 22·6 | 7 58·4 | 2·5 1·4 | 8·5 4·7 | 14·5 8·1 |
| 26 | 8 21·5 | 8 22·9 | 7 58·7 | 2·6 1·5 | 8·6 4·8 | 14·6 8·2 |
| 27 | 8 21·8 | 8 23·1 | 7 58·9 | 2·7 1·5 | 8·7 4·9 | 14·7 8·2 |
| 28 | 8 22·0 | 8 23·4 | 7 59·1 | 2·8 1·6 | 8·8 4·9 | 14·8 8·3 |
| 29 | 8 22·3 | 8 23·6 | 7 59·4 | 2·9 1·6 | 8·9 5·0 | 14·9 8·3 |
| 30 | 8 22·5 | 8 23·9 | 7 59·6 | 3·0 1·7 | 9·0 5·0 | 15·0 8·4 |
| 31 | 8 22·8 | 8 24·1 | 7 59·8 | 3·1 1·7 | 9·1 5·1 | 15·1 8·4 |
| 32 | 8 23·0 | 8 24·4 | 8 00·1 | 3·2 1·8 | 9·2 5·1 | 15·2 8·5 |
| 33 | 8 23·3 | 8 24·6 | 8 00·3 | 3·3 1·8 | 9·3 5·2 | 15·3 8·5 |
| 34 | 8 23·5 | 8 24·9 | 8 00·6 | 3·4 1·9 | 9·4 5·2 | 15·4 8·6 |
| 35 | 8 23·8 | 8 25·1 | 8 00·8 | 3·5 2·0 | 9·5 5·3 | 15·5 8·7 |
| 36 | 8 24·0 | 8 25·4 | 8 01·0 | 3·6 2·0 | 9·6 5·4 | 15·6 8·7 |
| 37 | 8 24·3 | 8 25·6 | 8 01·3 | 3·7 2·1 | 9·7 5·4 | 15·7 8·8 |
| 38 | 8 24·5 | 8 25·9 | 8 01·5 | 3·8 2·1 | 9·8 5·5 | 15·8 8·8 |
| 39 | 8 24·8 | 8 26·1 | 8 01·8 | 3·9 2·2 | 9·9 5·5 | 15·9 8·9 |
| 40 | 8 25·0 | 8 26·4 | 8 02·0 | 4·0 2·2 | 10·0 5·6 | 16·0 8·9 |
| 41 | 8 25·3 | 8 26·6 | 8 02·2 | 4·1 2·3 | 10·1 5·6 | 16·1 9·0 |
| 42 | 8 25·5 | 8 26·9 | 8 02·5 | 4·2 2·3 | 10·2 5·7 | 16·2 9·0 |
| 43 | 8 25·8 | 8 27·1 | 8 02·7 | 4·3 2·4 | 10·3 5·8 | 16·3 9·1 |
| 44 | 8 26·0 | 8 27·4 | 8 02·9 | 4·4 2·5 | 10·4 5·8 | 16·4 9·2 |
| 45 | 8 26·3 | 8 27·6 | 8 03·2 | 4·5 2·5 | 10·5 5·9 | 16·5 9·2 |
| 46 | 8 26·5 | 8 27·9 | 8 03·4 | 4·6 2·6 | 10·6 5·9 | 16·6 9·3 |
| 47 | 8 26·8 | 8 28·1 | 8 03·7 | 4·7 2·6 | 10·7 6·0 | 16·7 9·3 |
| 48 | 8 27·0 | 8 28·4 | 8 03·9 | 4·8 2·7 | 10·8 6·0 | 16·8 9·4 |
| 49 | 8 27·3 | 8 28·6 | 8 04·1 | 4·9 2·7 | 10·9 6·1 | 16·9 9·4 |
| 50 | 8 27·5 | 8 28·9 | 8 04·4 | 5·0 2·8 | 11·0 6·1 | 17·0 9·5 |
| 51 | 8 27·8 | 8 29·1 | 8 04·6 | 5·1 2·8 | 11·1 6·2 | 17·1 9·5 |
| 52 | 8 28·0 | 8 29·4 | 8 04·9 | 5·2 2·9 | 11·2 6·3 | 17·2 9·6 |
| 53 | 8 28·3 | 8 29·6 | 8 05·1 | 5·3 3·0 | 11·3 6·3 | 17·3 9·7 |
| 54 | 8 28·5 | 8 29·9 | 8 05·3 | 5·4 3·0 | 11·4 6·4 | 17·4 9·7 |
| 55 | 8 28·8 | 8 30·1 | 8 05·6 | 5·5 3·1 | 11·5 6·4 | 17·5 9·8 |
| 56 | 8 29·0 | 8 30·4 | 8 05·8 | 5·6 3·1 | 11·6 6·5 | 17·6 9·8 |
| 57 | 8 29·3 | 8 30·6 | 8 06·1 | 5·7 3·2 | 11·7 6·5 | 17·7 9·9 |
| 58 | 8 29·5 | 8 30·9 | 8 06·3 | 5·8 3·2 | 11·8 6·6 | 17·8 9·9 |
| 59 | 8 29·8 | 8 31·1 | 8 06·5 | 5·9 3·3 | 11·9 6·6 | 17·9 10·0 |
| 60 | 8 30·0 | 8 31·4 | 8 06·8 | 6·0 3·4 | 12·0 6·7 | 18·0 10·1 |

## 52m ACRÉSCIMOS E CORREÇÕES 53m

| m 52 | SOL PLANETAS | ♈ | LUA | ν ou d | Corr. | ν ou d | Corr. | ν ou d | Corr. |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 13 00·0 | 13 02·1 | 12 24·5 | 0·0 | 0·0 | 6·0 | 5·3 | 12·0 | 10·5 |
| 01 | 13 00·3 | 13 02·4 | 12 24·7 | 0·1 | 0·1 | 6·1 | 5·3 | 12·1 | 10·6 |
| 02 | 13 00·5 | 13 02·6 | 12 24·9 | 0·2 | 0·2 | 6·2 | 5·4 | 12·2 | 10·7 |
| 03 | 13 00·8 | 13 02·9 | 12 25·2 | 0·3 | 0·3 | 6·3 | 5·5 | 12·3 | 10·8 |
| 04 | 13 01·0 | 13 03·1 | 12 25·4 | 0·4 | 0·4 | 6·4 | 5·6 | 12·4 | 10·9 |
| 05 | 13 01·3 | 13 03·4 | 12 25·7 | 0·5 | 0·4 | 6·5 | 5·7 | 12·5 | 10·9 |
| 06 | 13 01·5 | 13 03·6 | 12 25·9 | 0·6 | 0·5 | 6·6 | 5·8 | 12·6 | 11·0 |
| 07 | 13 01·8 | 13 03·9 | 12 26·1 | 0·7 | 0·6 | 6·7 | 5·9 | 12·7 | 11·1 |
| 08 | 13 02·0 | 13 04·1 | 12 26·4 | 0·8 | 0·7 | 6·8 | 6·0 | 12·8 | 11·2 |
| 09 | 13 02·3 | 13 04·4 | 12 26·6 | 0·9 | 0·8 | 6·9 | 6·0 | 12·9 | 11·3 |
| 10 | 13 02·5 | 13 04·6 | 12 26·9 | 1·0 | 0·9 | 7·0 | 6·1 | 13·0 | 11·4 |
| 11 | 13 02·8 | 13 04·9 | 12 27·1 | 1·1 | 1·0 | 7·1 | 6·2 | 13·1 | 11·5 |
| 12 | 13 03·0 | 13 05·1 | 12 27·3 | 1·2 | 1·1 | 7·2 | 6·3 | 13·2 | 11·6 |
| 13 | 13 03·3 | 13 05·4 | 12 27·6 | 1·3 | 1·1 | 7·3 | 6·4 | 13·3 | 11·6 |
| 14 | 13 03·5 | 13 05·6 | 12 27·8 | 1·4 | 1·2 | 7·4 | 6·5 | 13·4 | 11·7 |
| 15 | 13 03·8 | 13 05·9 | 12 28·0 | 1·5 | 1·3 | 7·5 | 6·6 | 13·5 | 11·8 |
| 16 | 13 04·0 | 13 06·1 | 12 28·3 | 1·6 | 1·4 | 7·6 | 6·7 | 13·6 | 11·9 |
| 17 | 13 04·3 | 13 06·4 | 12 28·5 | 1·7 | 1·5 | 7·7 | 6·7 | 13·7 | 12·0 |
| 18 | 13 04·5 | 13 06·6 | 12 28·8 | 1·8 | 1·6 | 7·8 | 6·8 | 13·8 | 12·1 |
| 19 | 13 04·8 | 13 06·9 | 12 29·0 | 1·9 | 1·7 | 7·9 | 6·9 | 13·9 | 12·2 |
| 20 | 13 05·0 | 13 07·1 | 12 29·2 | 2·0 | 1·8 | 8·0 | 7·0 | 14·0 | 12·3 |
| 21 | 13 05·3 | 13 07·4 | 12 29·5 | 2·1 | 1·8 | 8·1 | 7·1 | 14·1 | 12·3 |
| 22 | 13 05·5 | 13 07·7 | 12 29·7 | 2·2 | 1·9 | 8·2 | 7·2 | 14·2 | 12·4 |
| 23 | 13 05·8 | 13 07·9 | 12 30·0 | 2·3 | 2·0 | 8·3 | 7·3 | 14·3 | 12·5 |
| 24 | 13 06·0 | 13 08·2 | 12 30·2 | 2·4 | 2·1 | 8·4 | 7·4 | 14·4 | 12·6 |
| 25 | 13 06·3 | 13 08·4 | 12 30·4 | 2·5 | 2·2 | 8·5 | 7·4 | 14·5 | 12·7 |
| 26 | 13 06·5 | 13 08·7 | 12 30·7 | 2·6 | 2·3 | 8·6 | 7·5 | 14·6 | 12·8 |
| 27 | 13 06·8 | 13 08·9 | 12 30·9 | 2·7 | 2·4 | 8·7 | 7·6 | 14·7 | 12·9 |
| 28 | 13 07·0 | 13 09·2 | 12 31·1 | 2·8 | 2·5 | 8·8 | 7·7 | 14·8 | 13·0 |
| 29 | 13 07·3 | 13 09·4 | 12 31·4 | 2·9 | 2·5 | 8·9 | 7·8 | 14·9 | 13·0 |
| 30 | 13 07·5 | 13 09·7 | 12 31·6 | 3·0 | 2·6 | 9·0 | 7·9 | 15·0 | 13·1 |
| 31 | 13 07·8 | 13 09·9 | 12 31·9 | 3·1 | 2·7 | 9·1 | 8·0 | 15·1 | 13·2 |
| 32 | 13 08·0 | 13 10·2 | 12 32·1 | 3·2 | 2·8 | 9·2 | 8·0 | 15·2 | 13·3 |
| 33 | 13 08·3 | 13 10·4 | 12 32·3 | 3·3 | 2·9 | 9·3 | 8·1 | 15·3 | 13·4 |
| 34 | 13 08·5 | 13 10·7 | 12 32·6 | 3·4 | 3·0 | 9·4 | 8·2 | 15·4 | 13·5 |
| 35 | 13 08·8 | 13 10·9 | 12 32·8 | 3·5 | 3·1 | 9·5 | 8·3 | 15·5 | 13·6 |
| 36 | 13 09·0 | 13 11·2 | 12 33·1 | 3·6 | 3·2 | 9·6 | 8·4 | 15·6 | 13·7 |
| 37 | 13 09·3 | 13 11·4 | 12 33·3 | 3·7 | 3·2 | 9·7 | 8·5 | 15·7 | 13·7 |
| 38 | 13 09·5 | 13 11·7 | 12 33·5 | 3·8 | 3·3 | 9·8 | 8·6 | 15·8 | 13·8 |
| 39 | 13 09·8 | 13 11·9 | 12 33·8 | 3·9 | 3·4 | 9·9 | 8·7 | 15·9 | 13·9 |
| 40 | 13 10·0 | 13 12·2 | 12 34·0 | 4·0 | 3·5 | 10·0 | 8·8 | 16·0 | 14·0 |
| 41 | 13 10·3 | 13 12·4 | 12 34·2 | 4·1 | 3·6 | 10·1 | 8·8 | 16·1 | 14·1 |
| 42 | 13 10·5 | 13 12·7 | 12 34·5 | 4·2 | 3·7 | 10·2 | 8·9 | 16·2 | 14·2 |
| 43 | 13 10·8 | 13 12·9 | 12 34·7 | 4·3 | 3·8 | 10·3 | 9·0 | 16·3 | 14·3 |
| 44 | 13 11·0 | 13 13·2 | 12 35·0 | 4·4 | 3·9 | 10·4 | 9·1 | 16·4 | 14·3 |
| 45 | 13 11·3 | 13 13·4 | 12 35·2 | 4·5 | 3·9 | 10·5 | 9·2 | 16·5 | 14·4 |
| 46 | 13 11·5 | 13 13·7 | 12 35·4 | 4·6 | 4·0 | 10·6 | 9·3 | 16·6 | 14·5 |
| 47 | 13 11·8 | 13 13·9 | 12 35·7 | 4·7 | 4·1 | 10·7 | 9·4 | 16·7 | 14·6 |
| 48 | 13 12·0 | 13 14·2 | 12 35·9 | 4·8 | 4·2 | 10·8 | 9·5 | 16·8 | 14·7 |
| 49 | 13 12·3 | 13 14·4 | 12 36·2 | 4·9 | 4·3 | 10·9 | 9·5 | 16·9 | 14·8 |
| 50 | 13 12·5 | 13 14·7 | 12 36·4 | 5·0 | 4·4 | 11·0 | 9·6 | 17·0 | 14·9 |
| 51 | 13 12·8 | 13 14·9 | 12 36·6 | 5·1 | 4·5 | 11·1 | 9·7 | 17·1 | 15·0 |
| 52 | 13 13·0 | 13 15·2 | 12 36·9 | 5·2 | 4·6 | 11·2 | 9·8 | 17·2 | 15·1 |
| 53 | 13 13·3 | 13 15·4 | 12 37·1 | 5·3 | 4·6 | 11·3 | 9·9 | 17·3 | 15·1 |
| 54 | 13 13·5 | 13 15·7 | 12 37·4 | 5·4 | 4·7 | 11·4 | 10·0 | 17·4 | 15·2 |
| 55 | 13 13·8 | 13 15·9 | 12 37·6 | 5·5 | 4·8 | 11·5 | 10·1 | 17·5 | 15·3 |
| 56 | 13 14·0 | 13 16·2 | 12 37·8 | 5·6 | 4·9 | 11·6 | 10·2 | 17·6 | 15·4 |
| 57 | 13 14·3 | 13 16·4 | 12 38·1 | 5·7 | 5·0 | 11·7 | 10·2 | 17·7 | 15·5 |
| 58 | 13 14·5 | 13 16·7 | 12 38·3 | 5·8 | 5·1 | 11·8 | 10·3 | 17·8 | 15·6 |
| 59 | 13 14·8 | 13 16·9 | 12 38·5 | 5·9 | 5·2 | 11·9 | 10·4 | 17·9 | 15·7 |
| 60 | 13 15·0 | 13 17·2 | 12 38·8 | 6·0 | 5·3 | 12·0 | 10·5 | 18·0 | 15·8 |

| m 53 | SOL PLANETAS | ♈ | LUA | ν ou d | Corr. | ν ou d | Corr. | ν ou d | Corr. |
|---|---|---|---|---|---|---|---|---|---|
| s | ° ′ | ° ′ | ° ′ | ′ | ′ | ′ | ′ | ′ | ′ |
| 00 | 13 15·0 | 13 17·2 | 12 38·8 | 0·0 | 0·0 | 6·0 | 5·4 | 12·0 | 10·7 |
| 01 | 13 15·3 | 13 17·4 | 12 39·0 | 0·1 | 0·1 | 6·1 | 5·4 | 12·1 | 10·8 |
| 02 | 13 15·5 | 13 17·7 | 12 39·3 | 0·2 | 0·2 | 6·2 | 5·5 | 12·2 | 10·9 |
| 03 | 13 15·8 | 13 17·9 | 12 39·5 | 0·3 | 0·3 | 6·3 | 5·6 | 12·3 | 11·0 |
| 04 | 13 16·0 | 13 18·2 | 12 39·7 | 0·4 | 0·4 | 6·4 | 5·7 | 12·4 | 11·1 |
| 05 | 13 16·3 | 13 18·4 | 12 40·0 | 0·5 | 0·4 | 6·5 | 5·8 | 12·5 | 11·1 |
| 06 | 13 16·5 | 13 18·7 | 12 40·2 | 0·6 | 0·5 | 6·6 | 5·9 | 12·6 | 11·2 |
| 07 | 13 16·8 | 13 18·9 | 12 40·5 | 0·7 | 0·6 | 6·7 | 6·0 | 12·7 | 11·3 |
| 08 | 13 17·0 | 13 19·2 | 12 40·7 | 0·8 | 0·7 | 6·8 | 6·1 | 12·8 | 11·4 |
| 09 | 13 17·3 | 13 19·4 | 12 40·9 | 0·9 | 0·8 | 6·9 | 6·2 | 12·9 | 11·5 |
| 10 | 13 17·5 | 13 19·7 | 12 41·2 | 1·0 | 0·9 | 7·0 | 6·2 | 13·0 | 11·6 |
| 11 | 13 17·8 | 13 19·9 | 12 41·4 | 1·1 | 1·0 | 7·1 | 6·3 | 13·1 | 11·7 |
| 12 | 13 18·0 | 13 20·2 | 12 41·6 | 1·2 | 1·1 | 7·2 | 6·4 | 13·2 | 11·8 |
| 13 | 13 18·3 | 13 20·4 | 12 41·9 | 1·3 | 1·2 | 7·3 | 6·5 | 13·3 | 11·9 |
| 14 | 13 18·5 | 13 20·7 | 12 42·1 | 1·4 | 1·2 | 7·4 | 6·6 | 13·4 | 11·9 |
| 15 | 13 18·8 | 13 20·9 | 12 42·4 | 1·5 | 1·3 | 7·5 | 6·7 | 13·5 | 12·0 |
| 16 | 13 19·0 | 13 21·2 | 12 42·6 | 1·6 | 1·4 | 7·6 | 6·8 | 13·6 | 12·1 |
| 17 | 13 19·3 | 13 21·4 | 12 42·8 | 1·7 | 1·5 | 7·7 | 6·9 | 13·7 | 12·2 |
| 18 | 13 19·5 | 13 21·7 | 12 43·1 | 1·8 | 1·6 | 7·8 | 7·0 | 13·8 | 12·3 |
| 19 | 13 19·8 | 13 21·9 | 12 43·3 | 1·9 | 1·7 | 7·9 | 7·0 | 13·9 | 12·4 |
| 20 | 13 20·0 | 13 22·2 | 12 43·6 | 2·0 | 1·8 | 8·0 | 7·1 | 14·0 | 12·5 |
| 21 | 13 20·3 | 13 22·4 | 12 43·8 | 2·1 | 1·9 | 8·1 | 7·2 | 14·1 | 12·6 |
| 22 | 13 20·5 | 13 22·7 | 12 44·0 | 2·2 | 2·0 | 8·2 | 7·3 | 14·2 | 12·7 |
| 23 | 13 20·8 | 13 22·9 | 12 44·3 | 2·3 | 2·1 | 8·3 | 7·4 | 14·3 | 12·8 |
| 24 | 13 21·0 | 13 23·2 | 12 44·5 | 2·4 | 2·1 | 8·4 | 7·5 | 14·4 | 12·8 |
| 25 | 13 21·3 | 13 23·4 | 12 44·7 | 2·5 | 2·2 | 8·5 | 7·6 | 14·5 | 12·9 |
| 26 | 13 21·5 | 13 23·7 | 12 45·0 | 2·6 | 2·3 | 8·6 | 7·7 | 14·6 | 13·0 |
| 27 | 13 21·8 | 13 23·9 | 12 45·2 | 2·7 | 2·4 | 8·7 | 7·8 | 14·7 | 13·1 |
| 28 | 13 22·0 | 13 24·2 | 12 45·5 | 2·8 | 2·5 | 8·8 | 7·8 | 14·8 | 13·2 |
| 29 | 13 22·3 | 13 24·4 | 12 45·7 | 2·9 | 2·6 | 8·9 | 7·9 | 14·9 | 13·3 |
| 30 | 13 22·5 | 13 24·7 | 12 45·9 | 3·0 | 2·7 | 9·0 | 8·0 | 15·0 | 13·4 |
| 31 | 13 22·8 | 13 24·9 | 12 46·2 | 3·1 | 2·8 | 9·1 | 8·1 | 15·1 | 13·5 |
| 32 | 13 23·0 | 13 25·2 | 12 46·4 | 3·2 | 2·9 | 9·2 | 8·2 | 15·2 | 13·6 |
| 33 | 13 23·3 | 13 25·4 | 12 46·7 | 3·3 | 2·9 | 9·3 | 8·3 | 15·3 | 13·6 |
| 34 | 13 23·5 | 13 25·7 | 12 46·9 | 3·4 | 3·0 | 9·4 | 8·4 | 15·4 | 13·7 |
| 35 | 13 23·8 | 13 26·0 | 12 47·1 | 3·5 | 3·1 | 9·5 | 8·5 | 15·5 | 13·8 |
| 36 | 13 24·0 | 13 26·2 | 12 47·4 | 3·6 | 3·2 | 9·6 | 8·6 | 15·6 | 13·9 |
| 37 | 13 24·3 | 13 26·5 | 12 47·6 | 3·7 | 3·3 | 9·7 | 8·6 | 15·7 | 14·0 |
| 38 | 13 24·5 | 13 26·7 | 12 47·9 | 3·8 | 3·4 | 9·8 | 8·7 | 15·8 | 14·1 |
| 39 | 13 24·8 | 13 27·0 | 12 48·1 | 3·9 | 3·5 | 9·9 | 8·8 | 15·9 | 14·2 |
| 40 | 13 25·0 | 13 27·2 | 12 48·3 | 4·0 | 3·6 | 10·0 | 8·9 | 16·0 | 14·3 |
| 41 | 13 25·3 | 13 27·5 | 12 48·6 | 4·1 | 3·7 | 10·1 | 9·0 | 16·1 | 14·4 |
| 42 | 13 25·5 | 13 27·7 | 12 48·8 | 4·2 | 3·7 | 10·2 | 9·1 | 16·2 | 14·4 |
| 43 | 13 25·8 | 13 28·0 | 12 49·0 | 4·3 | 3·8 | 10·3 | 9·2 | 16·3 | 14·5 |
| 44 | 13 26·0 | 13 28·2 | 12 49·3 | 4·4 | 3·9 | 10·4 | 9·3 | 16·4 | 14·6 |
| 45 | 13 26·3 | 13 28·5 | 12 49·5 | 4·5 | 4·0 | 10·5 | 9·4 | 16·5 | 14·7 |
| 46 | 13 26·5 | 13 28·7 | 12 49·8 | 4·6 | 4·1 | 10·6 | 9·5 | 16·6 | 14·8 |
| 47 | 13 26·8 | 13 29·0 | 12 50·0 | 4·7 | 4·2 | 10·7 | 9·5 | 16·7 | 14·9 |
| 48 | 13 27·0 | 13 29·2 | 12 50·2 | 4·8 | 4·3 | 10·8 | 9·6 | 16·8 | 15·0 |
| 49 | 13 27·3 | 13 29·5 | 12 50·5 | 4·9 | 4·4 | 10·9 | 9·7 | 16·9 | 15·1 |
| 50 | 13 27·5 | 13 29·7 | 12 50·7 | 5·0 | 4·5 | 11·0 | 9·8 | 17·0 | 15·2 |
| 51 | 13 27·8 | 13 30·0 | 12 51·0 | 5·1 | 4·5 | 11·1 | 9·9 | 17·1 | 15·2 |
| 52 | 13 28·0 | 13 30·2 | 12 51·2 | 5·2 | 4·6 | 11·2 | 10·0 | 17·2 | 15·3 |
| 53 | 13 28·3 | 13 30·5 | 12 51·4 | 5·3 | 4·7 | 11·3 | 10·1 | 17·3 | 15·4 |
| 54 | 13 28·5 | 13 30·7 | 12 51·7 | 5·4 | 4·8 | 11·4 | 10·2 | 17·4 | 15·5 |
| 55 | 13 28·8 | 13 31·0 | 12 51·9 | 5·5 | 4·9 | 11·5 | 10·3 | 17·5 | 15·6 |
| 56 | 13 29·0 | 13 31·2 | 12 52·1 | 5·6 | 5·0 | 11·6 | 10·3 | 17·6 | 15·7 |
| 57 | 13 29·3 | 13 31·5 | 12 52·4 | 5·7 | 5·1 | 11·7 | 10·4 | 17·7 | 15·8 |
| 58 | 13 29·5 | 13 31·7 | 12 52·6 | 5·8 | 5·2 | 11·8 | 10·5 | 17·8 | 15·9 |
| 59 | 13 29·8 | 13 32·0 | 12 52·9 | 5·9 | 5·3 | 11·9 | 10·6 | 17·9 | 16·0 |
| 60 | 13 30·0 | 13 32·2 | 12 53·1 | 6·0 | 5·4 | 12·0 | 10·7 | 18·0 | 16·1 |

# TÁBUAS PARA INTERPOLAÇÃO DAS HORAS DO NASCER DO SOL, DO NASCER DA LUA, ETC.

## TÁBUA I — PARA A LATITUDE

| Intervalo Tabular | | | Diferença de horas para latitudes consecutivas | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10° | 5° | 2° | 5m | 10m | 15m | 20m | 25m | 30m | 35m | 40m | 45m | 50m | 55m | 60m | 1h05m | 1h10m | 1h15m | 1h20m |
| ° ′ | ° ′ | ° ′ | m | m | m | m | m | m | m | m | m | m | m | m | h m | h m | h m | h m |
| 0 30 | 0 15 | 0 06 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 0 02 | 0 02 | 0 02 | 0 02 |
| 1 00 | 0 30 | 0 12 | 0 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 | 5 | 05 | 05 | 05 | 05 |
| 1 30 | 0 45 | 0 18 | 1 | 1 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 07 | 07 | 07 | 07 |
| 2 00 | 1 00 | 0 24 | 1 | 2 | 3 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 9 | 10 | 10 | 10 | 10 | 10 |
| 2 30 | 1 15 | 0 30 | 1 | 2 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 10 | 11 | 12 | 12 | 13 | 13 | 13 |
| 3 00 | 1 30 | 0 36 | 1 | 3 | 4 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 0 15 | 0 15 | 0 16 | 0 16 |
| 3 30 | 1 45 | 0 42 | 2 | 3 | 5 | 7 | 8 | 10 | 11 | 12 | 13 | 14 | 16 | 17 | 18 | 18 | 19 | 19 |
| 4 00 | 2 00 | 0 48 | 2 | 4 | 6 | 8 | 9 | 11 | 13 | 14 | 15 | 16 | 18 | 19 | 20 | 21 | 22 | 22 |
| 4 30 | 2 15 | 0 54 | 2 | 4 | 7 | 9 | 11 | 13 | 15 | 16 | 18 | 19 | 21 | 22 | 23 | 24 | 25 | 26 |
| 5 00 | 2 30 | 1 00 | 2 | 5 | 7 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 23 | 25 | 26 | 27 | 28 | 29 |
| 5 30 | 2 45 | 1 06 | 3 | 5 | 8 | 11 | 13 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 0 29 | 0 30 | 0 31 | 0 32 |
| 6 00 | 3 00 | 1 12 | 3 | 6 | 9 | 12 | 14 | 17 | 20 | 22 | 24 | 26 | 29 | 31 | 32 | 33 | 34 | 36 |
| 6 30 | 3 15 | 1 18 | 3 | 6 | 10 | 13 | 16 | 19 | 22 | 24 | 26 | 29 | 31 | 34 | 36 | 37 | 38 | 40 |
| 7 00 | 3 30 | 1 24 | 3 | 7 | 10 | 14 | 17 | 20 | 23 | 26 | 29 | 31 | 34 | 37 | 39 | 41 | 42 | 44 |
| 7 30 | 3 45 | 1 30 | 4 | 7 | 11 | 15 | 18 | 22 | 25 | 28 | 31 | 34 | 37 | 40 | 43 | 44 | 46 | 48 |
| 8 00 | 4 00 | 1 36 | 4 | 8 | 12 | 16 | 20 | 23 | 27 | 30 | 34 | 37 | 41 | 44 | 0 47 | 0 48 | 0 51 | 0 53 |
| 8 30 | 4 15 | 1 42 | 4 | 8 | 13 | 17 | 21 | 25 | 29 | 33 | 36 | 40 | 44 | 48 | 0 51 | 0 53 | 0 56 | 0 58 |
| 9 00 | 4 30 | 1 48 | 4 | 9 | 13 | 18 | 22 | 27 | 31 | 35 | 39 | 43 | 47 | 52 | 0 55 | 0 58 | 1 01 | 1 04 |
| 9 30 | 4 45 | 1 54 | 5 | 9 | 14 | 19 | 24 | 28 | 33 | 38 | 42 | 47 | 51 | 56 | 1 00 | 1 04 | 1 08 | 1 12 |
| 10 00 | 5 00 | 2 00 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 1 05 | 1 10 | 1 15 | 1 20 |

A Tábua I serve para fazer a interpolação em latitude da HML do nascer do Sol e da Lua, do crepúsculo etc. Cumpre ter em vista que essa interpolação não é linear, de modo que, ao efetuá-la, deve-se usar, sistematicamente, como primeiro valor aproximado para o instante do fenômeno, aquele que corresponde à mais próxima latitude tabular inferior à latitude dada. Entra-se, então, na Tábua (linha superior) com o argumento mais próximo da diferença entre o instante correspondente à latitude tabular acima mencionada e a latitude tabular seguinte; e, na coluna correspondente à diferença entre essas duas latitudes tabulares, entra-se com o excesso da latitude dada sobre a mais próxima latitude tabular inferior. A correção assim obtida é, então, aplicada ao primeiro valor aproximado para o instante do fenômeno, já obtido das páginas diárias. Determina-se o sinal dessa correção por simples inspeção.

## TÁBUA II — PARA A LONGITUDE

| Long Este ou Oeste | Diferença entre os instantes para uma data e a precedente (para longitude E) ou para uma data e a seguinte (para longitude W) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 10m 20m 30m | 40m 50m 60m | 1h + 10m 20m 30m | 1h + 40m 50m 60m | 2h10m | 2h20m | 2h30m | 2h40m | 2h50m | 3h00m |
| ° | m m m | m m m | m m m | m m m | h m | h m | h m | h m | h m | h m |
| 0 | 0 0 0 | 0 0 0 | 0 0 0 | 0 0 0 | 0 00 | 0 00 | 0 00 | 0 00 | 0 00 | 0 00 |
| 10 | 0 1 1 | 1 1 2 | 2 2 2 | 3 3 3 | 04 | 04 | 04 | 04 | 05 | 05 |
| 20 | 1 1 2 | 2 3 3 | 4 4 5 | 6 6 7 | 07 | 08 | 08 | 09 | 09 | 10 |
| 30 | 1 2 2 | 3 4 5 | 6 7 7 | 8 9 10 | 11 | 12 | 12 | 13 | 14 | 15 |
| 40 | 1 2 3 | 4 6 7 | 8 9 10 | 11 12 13 | 14 | 16 | 17 | 18 | 19 | 20 |
| 50 | 1 3 4 | 6 7 8 | 10 11 12 | 14 15 17 | 0 18 | 0 19 | 0 21 | 0 22 | 0 24 | 0 25 |
| 60 | 2 3 5 | 7 8 10 | 12 13 15 | 17 18 20 | 22 | 23 | 25 | 27 | 28 | 30 |
| 70 | 2 4 6 | 8 10 12 | 14 16 17 | 19 21 23 | 25 | 27 | 29 | 31 | 33 | 35 |
| 80 | 2 4 7 | 9 11 13 | 16 18 20 | 22 24 27 | 29 | 31 | 33 | 36 | 38 | 40 |
| 90 | 2 5 7 | 10 12 15 | 17 20 22 | 25 27 30 | 32 | 35 | 37 | 40 | 42 | 45 |
| 100 | 3 6 8 | 11 14 17 | 19 22 25 | 28 31 33 | 0 36 | 0 39 | 0 42 | 0 44 | 0 47 | 0 50 |
| 110 | 3 6 9 | 12 15 18 | 21 24 27 | 31 34 37 | 40 | 43 | 46 | 49 | 0 52 | 0 55 |
| 120 | 3 7 10 | 13 17 20 | 23 27 30 | 33 37 40 | 43 | 47 | 50 | 53 | 0 57 | 1 00 |
| 130 | 4 7 11 | 14 18 22 | 25 29 32 | 36 40 43 | 47 | 51 | 54 | 0 58 | 1 01 | 1 05 |
| 140 | 4 8 12 | 16 19 23 | 27 31 35 | 39 43 47 | 51 | 54 | 0 58 | 1 02 | 1 06 | 1 10 |
| 150 | 4 8 13 | 17 21 25 | 29 33 38 | 42 46 50 | 0 54 | 0 58 | 1 03 | 1 07 | 1 11 | 1 15 |
| 160 | 4 9 13 | 18 22 27 | 31 36 40 | 44 49 53 | 0 58 | 1 02 | 1 07 | 1 11 | 1 16 | 1 20 |
| 170 | 5 9 14 | 19 24 28 | 33 38 42 | 47 52 57 | 1 01 | 1 06 | 1 11 | 1 16 | 1 20 | 1 25 |
| 180 | 5 10 15 | 20 25 30 | 35 40 45 | 50 55 60 | 1 05 | 1 10 | 1 15 | 1 20 | 1 25 | 1 30 |

A Tábua II serve para fazer a interpolação em longitude da HML do nascer e do pôr da Lua e da HML da passagem meridiana da Lua. Entra-se na tábua com a longitude e com a diferença entre o instante correspondente ao dia dado e o correspondente ao dia anterior ou ao dia seguinte, conforme a longitude seja E ou W. A correção assim obtida é, em geral, aditiva para longitudes W e subtrativa para longitudes E, exceto se, como às vezes acontece, no dia seguinte ao dia dado o fenômeno ocorre mais cedo e não mais tarde.

| RUMOS | | | | Δφ | ap |
|---|---|---|---|---|---|
| ° | ° | ° | ° | | |
| 0 | 180 | 180 | 360 | 1,00 | 0 |
| 5 | 175 | 185 | 355 | 1,00 | 0,09 |
| 10 | 170 | 190 | 350 | 0,98 | 0,17 |
| 15 | 165 | 195 | 345 | 0,97 | 0,26 |
| 20 | 160 | 200 | 340 | 0,94 | 0,34 |
| 25 | 155 | 205 | 335 | 0,91 | 0,42 |
| 30 | 150 | 210 | 330 | 0,87 | 0,5 |
| 35 | 145 | 215 | 325 | 0,82 | 0,57 |
| 40 | 140 | 220 | 320 | 0,77 | 0,64 |
| 45 | 135 | 225 | 315 | 0,71 | 0,71 |
| 50 | 130 | 230 | 310 | 0,64 | 0,77 |
| 55 | 125 | 235 | 305 | 0,57 | 0,82 |
| 60 | 120 | 240 | 300 | 0,5 | 0,87 |
| 65 | 115 | 245 | 295 | 0,42 | 0,91 |
| 70 | 110 | 250 | 290 | 0,34 | 0,94 |
| 75 | 105 | 255 | 285 | 0,26 | 0,97 |
| 80 | 100 | 260 | 280 | 0,17 | 0,98 |
| 85 | 95 | 265 | 275 | 0,09 | 1,00 |
| 90 | 90 | 270 | 270 | 0 | 1,00 |

| φm (°) | FATOR | φm (°) | FATOR | φm (°) | FATOR |
|---|---|---|---|---|---|
| 0 | 1,00 | 30 | 1,15 | 60 | 2,00 |
| 5 | 1,00 | 35 | 1,22 | 65 | 2,37 |
| 10 | 1,02 | 40 | 1,30 | 70 | 2,92 |
| 15 | 1,04 | 45 | 1,41 | 75 | 3,86 |
| 20 | 1,06 | 50 | 1,56 | 80 | 5,76 |
| 25 | 1,10 | 55 | 1,74 | 85 | 11,47 |