

## TRUE BEARING OF THE SUN AT SUNRISE AND SUNSET

This table gives the true bearing of the rising and setting Sun every tenth day at 10° intervals of latitude from 0° to 60° South. Simple interpolation will give values for other dates and latitudes. Bearings are given to the nearest degree and apply to the time when the Sun's upper limb appears to be coincident with a level, unobstructed horizon.

### OBSERVER'S LATITUDE (SOUTH)

|               | 0°          |            | 10°         |            | 20°         |            | 30°         |            | 40°         |            | 50°         |            | 60°         |            |
|---------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
|               | Bearing°    |            | Bearing°    |            | Bearing°    |            | Bearing°    |            | Bearing°    |            | Bearing°    |            | Bearing°    |            |
|               | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> | <i>Rise</i> | <i>Set</i> |
| <b>Jul 1</b>  | 67          | 293        | 67          | 293        | 66          | 294        | 64          | 296        | 60          | 300        | 54          | 306        | 41          | 320        |
| <b>Jul 11</b> | 68          | 292        | 68          | 292        | 67          | 293        | 65          | 295        | 61          | 299        | 55          | 305        | 43          | 317        |
| <b>Jul 21</b> | 70          | 291        | 69          | 291        | 69          | 292        | 67          | 293        | 64          | 296        | 58          | 302        | 48          | 313        |
| <b>Jul 31</b> | 72          | 288        | 72          | 288        | 71          | 289        | 69          | 291        | 67          | 294        | 62          | 298        | 53          | 307        |
| <b>Aug 10</b> | 74          | 286        | 74          | 286        | 74          | 286        | 73          | 288        | 70          | 290        | 67          | 294        | 59          | 301        |
| <b>Aug 20</b> | 78          | 283        | 78          | 283        | 77          | 283        | 76          | 284        | 74          | 286        | 72          | 289        | 66          | 294        |
| <b>Aug 30</b> | 81          | 279        | 81          | 279        | 81          | 279        | 80          | 280        | 79          | 281        | 77          | 283        | 73          | 287        |
| <b>Sep 9</b>  | 85          | 275        | 85          | 275        | 85          | 275        | 84          | 276        | 84          | 276        | 83          | 277        | 81          | 279        |
| <b>Sep 19</b> | 89          | 272        | 89          | 271        | 89          | 271        | 89          | 271        | 89          | 271        | 89          | 272        | 89          | 272        |
| <b>Sep 29</b> | 92          | 268        | 93          | 268        | 93          | 267        | 93          | 267        | 94          | 266        | 95          | 265        | 96          | 264        |
| <b>Oct 9</b>  | 96          | 264        | 97          | 264        | 97          | 263        | 98          | 262        | 99          | 261        | 101         | 259        | 104         | 256        |
| <b>Oct 19</b> | 100         | 260        | 100         | 260        | 101         | 259        | 102         | 258        | 104         | 256        | 107         | 254        | 112         | 248        |
| <b>Oct 29</b> | 103         | 257        | 104         | 256        | 105         | 255        | 106         | 254        | 108         | 252        | 112         | 248        | 119         | 241        |
| <b>Nov 8</b>  | 107         | 254        | 107         | 253        | 108         | 252        | 110         | 250        | 113         | 248        | 117         | 243        | 127         | 234        |
| <b>Nov 18</b> | 109         | 251        | 110         | 250        | 111         | 249        | 113         | 247        | 116         | 244        | 122         | 238        | 133         | 227        |
| <b>Nov 28</b> | 111         | 249        | 112         | 248        | 113         | 247        | 115         | 245        | 119         | 241        | 126         | 234        | 139         | 221        |
| <b>Dec 8</b>  | 113         | 247        | 113         | 247        | 115         | 245        | 117         | 243        | 121         | 239        | 128         | 232        | 143         | 217        |
| <b>Dec 18</b> | 113         | 247        | 114         | 246        | 115         | 245        | 118         | 242        | 122         | 238        | 129         | 231        | 145         | 215        |
| <b>Dec 28</b> | 113         | 247        | 114         | 246        | 115         | 245        | 118         | 242        | 122         | 238        | 129         | 231        | 145         | 215        |
| <b>Jan 7</b>  | 112         | 248        | 113         | 247        | 114         | 246        | 117         | 243        | 121         | 239        | 128         | 232        | 142         | 218        |
| <b>Jan 17</b> | 111         | 249        | 111         | 249        | 112         | 247        | 115         | 245        | 118         | 242        | 125         | 235        | 137         | 223        |
| <b>Jan 27</b> | 108         | 251        | 109         | 251        | 110         | 250        | 112         | 248        | 115         | 245        | 121         | 239        | 131         | 229        |
| <b>Feb 6</b>  | 106         | 254        | 106         | 254        | 107         | 253        | 109         | 251        | 111         | 248        | 116         | 244        | 124         | 235        |
| <b>Feb 16</b> | 102         | 257        | 103         | 257        | 103         | 256        | 105         | 255        | 107         | 253        | 111         | 249        | 117         | 243        |
| <b>Feb 26</b> | 99          | 261        | 99          | 261        | 100         | 260        | 101         | 259        | 102         | 258        | 105         | 255        | 109         | 250        |
| <b>Mar 8</b>  | 95          | 265        | 95          | 265        | 96          | 265        | 96          | 264        | 97          | 263        | 99          | 261        | 102         | 259        |
| <b>Mar 18</b> | 91          | 269        | 91          | 269        | 91          | 269        | 92          | 269        | 92          | 268        | 93          | 268        | 94          | 267        |
| <b>Mar 28</b> | 87          | 273        | 87          | 273        | 87          | 273        | 87          | 273        | 87          | 273        | 87          | 274        | 86          | 275        |
| <b>Apr 7</b>  | 83          | 277        | 83          | 277        | 83          | 277        | 83          | 277        | 82          | 278        | 81          | 280        | 78          | 282        |
| <b>Apr 17</b> | 80          | 281        | 80          | 281        | 79          | 281        | 78          | 282        | 77          | 283        | 75          | 285        | 70          | 290        |
| <b>Apr 27</b> | 76          | 284        | 76          | 284        | 76          | 284        | 75          | 286        | 73          | 288        | 69          | 291        | 63          | 297        |
| <b>May 7</b>  | 73          | 287        | 73          | 287        | 72          | 288        | 71          | 289        | 69          | 291        | 64          | 296        | 57          | 304        |
| <b>May 17</b> | 71          | 289        | 71          | 290        | 70          | 290        | 68          | 292        | 65          | 295        | 60          | 300        | 51          | 310        |
| <b>May 27</b> | 69          | 291        | 69          | 292        | 68          | 292        | 66          | 294        | 63          | 298        | 57          | 303        | 46          | 315        |
| <b>Jun 6</b>  | 67          | 293        | 67          | 293        | 66          | 294        | 64          | 296        | 61          | 299        | 54          | 306        | 42          | 318        |
| <b>Jun 16</b> | 67          | 293        | 66          | 294        | 65          | 295        | 63          | 297        | 60          | 300        | 53          | 307        | 40          | 320        |
| <b>Jun 26</b> | 67          | 293        | 66          | 294        | 65          | 295        | 63          | 297        | 60          | 300        | 53          | 307        | 40          | 320        |
| <b>Jul 6</b>  | 67          | 293        | 67          | 293        | 66          | 294        | 64          | 296        | 61          | 299        | 54          | 306        | 42          | 318        |