$\left.\begin{array}{|c|c|c|c|c|c|c|c|c|c|c|}\hline \text { EST }+05: 00 & \text { Sun } & \text { Mercury } & \text { Venus } \\ \text { Tropical } \\ \text { Geocentric Decl }\end{array}\right)$

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|  |  | 9' |  | +130 $43^{\prime}-04^{\circ} 45^{\prime}$ |  |  |
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|  |  | +23 $35^{\prime}-14^{\circ} 56^{\prime}-$ |  | 30' |  |  |
|  |  | +23 ${ }^{\circ} 39^{\prime}-14^{\circ} 52 '$ |  |  |  |  |
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|  |  |  |  |  |  |  |
|  |  | +23 $58^{\prime}-14^{\circ} 37{ }^{\prime}$ |  |  |  |  |
| +03 ${ }^{\circ} 27{ }^{\prime}-06^{\circ} 12^{\prime}$ |  |  |  |  |  |  |
| - |  | +24 ${ }^{\circ} 06^{\prime}-14^{\circ} 30^{\prime}-$ |  |  |  |  |
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|  |  | 8' |  | 7'-04ํ22' |  |  |
|  | +0 | - | + | , |  |  |
| ' |  |  |  | +14* $09^{\prime}-04^{\circ} 20^{\prime}$ |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | ' |  | 8' |  |  |
| + $01^{\circ} 09^{\prime}$ | +0 | - |  | ' |  |  |
| + | + | '-1353' |  |  |  |  |
| +02 |  | +24* $40^{\prime}-13^{\circ} 50^{\prime}$ |  |  |  |  |
|  |  | 42'-1346' |  |  |  |  |
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| + $05^{\circ} 24^{\prime}$ | +09 ${ }^{\circ} 53^{\prime}+$ | - | + |  |  |  |
| +0 |  |  |  |  |  |  |
| '+07 ${ }^{\circ} 11^{\prime}$ |  |  |  | 12' |  | $6^{\circ} 02^{\prime}$ |
| + $+08^{\circ} 05^{\prime}$ |  |  |  | $4^{\circ} 11^{\prime}$ |  |  |
|  |  |  |  |  |  |  |
| + + |  | +24 $51^{\prime}-13^{\circ} 23^{\prime}$ |  |  |  |  |
|  |  |  |  |  |  |  |
| $5^{\prime}+11^{\circ} 40^{\prime}$ | +1 |  |  | 08' |  | $6^{\circ} 08^{\prime}$ |
|  |  | +24 ${ }^{\circ} 53^{\prime}-13^{\circ} 13^{\prime}$ | $7^{\circ} 32^{\prime}+$ | 07' |  |  |
|  |  |  |  |  |  |  |
| '+14 |  | +24 ${ }^{\circ} 53^{\prime}-13^{\circ} 07^{\prime}$ |  |  |  |  |
|  |  |  |  |  |  |  |
| '+15 $5^{\circ} 9^{\prime}$ | +1 | $4^{\circ} 53^{\prime}-13^{\circ} 01^{\prime}-$ | + | 32'-0400' |  | $6^{\circ} 14^{\prime}$ |
| '+16²8' | + | ' | + | 04' |  | $6^{\circ} 16^{\prime}$ |
| +17 ${ }^{\circ} 35^{\prime}$ |  | 5' |  |  |  | $6^{\circ} 17{ }^{\prime}$ |
| + |  |  |  |  |  |  |
| +14 ${ }^{\circ} 31^{\prime}+19^{\circ} 02$ | +16 ${ }^{\circ} 44^{\prime}+$ |  |  |  |  | $6^{\circ} 20^{\prime}$ |
| $0^{\prime}+19^{\circ} 43^{\prime}$ | +17 ${ }^{\circ} 07{ }^{\prime}+$ | 49'-12 ${ }^{\circ} 46^{\prime}$ - | $-17^{\circ} 26^{\prime}+$ | 37'-0401' |  | $6^{\circ} 21^{\prime}$ |
| $+20^{\circ} 22^{\prime}$ | +17 ${ }^{\circ} 29$ | ' - | ' | '-0400' | $-22^{\circ} 11$ | $6^{\circ} 22^{\prime}$ |
| +20 ${ }^{\circ} 58^{\prime}$ |  |  | 25 + | $4^{\circ} 0{ }^{\prime}$ |  | +06²3' |
| +21 ${ }^{\circ} 32^{\prime}$ | +18 ${ }^{\circ} 12^{\prime}+$ | ${ }^{\prime}$ | $7^{\circ} 25^{\prime}+$ | $3^{\circ} 5{ }^{\prime}$ |  |  |
| +22 |  |  | $-17^{\circ} 24^{\prime}+$ | 03 ${ }^{\prime}{ }^{\prime}$ |  |  |


| EST +05:00 <br> Tropical <br> Geocentric Decl | $\begin{gathered} \text { Sun } \\ \odot \end{gathered}$ | Mercury ४ | $\begin{gathered} \text { Venus } \\ \stackrel{9}{4} \end{gathered}$ | Mars $\sigma^{\prime}$ | Jupiter 4 | Saturn ћ | $\begin{aligned} & \text { Uranus } \\ & \underset{j}{\nless} \end{aligned}$ | Neptune $\Psi$ | $\begin{aligned} & \text { Pluto } \\ & \text { ¢ } \end{aligned}$ | Chiron $k$ |
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| May 52021 | +1 | +22 ${ }^{\circ} 32^{\prime}$ | +1 |  |  | - $17^{\circ} 24{ }^{\prime}$ | +14** ${ }^{\prime}$ |  | -220 $11^{\prime}$ |  |
| May 62021 | +16 | +22 ${ }^{\circ} 58^{\prime}$ | +19 ${ }^{\circ} 13^{\prime}+$ | +24 ${ }^{\circ} 8^{\prime}$ | 12 ${ }^{\circ} 31^{\prime}$ | $-17^{\circ} 23^{\prime}$ | +14* $44^{\prime}$ | 03 $58^{\prime}$ | $-22^{\circ} 12^{\prime}$ | 06 ${ }^{\circ} 28^{\prime}$ |
| May 72021 | +16 ${ }^{\circ} 52^{\prime}$ | +23 ${ }^{\circ} 22^{\prime}$ | +19 ${ }^{\circ} 32^{\prime}+$ | +24 ${ }^{\circ} 6^{\prime}$ | $-12^{\circ} 28^{\prime}$ | - $17^{\circ} 23^{\prime}$ | +14* ${ }^{\circ} 5^{\prime}$ | -03 $57{ }^{\prime}$ | $-22^{\circ} 12^{\prime}$ | $+06^{\circ} 29^{\prime}$ |
| May 82021 | +17 ${ }^{\circ} 08^{\prime}$ | +23 ${ }^{\circ} 43^{\prime}$ | +19 ${ }^{\circ} 51$ | +24 ${ }^{\circ} 33^{\prime}$ | $-12^{\circ} 26^{\prime}$ | - $17^{\circ} 23^{\prime}$ | $+14^{\circ} 46^{\prime}$ | -03 $56{ }^{\prime}$ | $-22^{\circ} 12^{\prime}$ | 06 ${ }^{\circ} 30^{\prime}$ |
| May 92021 | $+17^{\circ} 24^{\prime}$ | +24 ${ }^{\circ} 02$ | +20 ${ }^{\circ} 09^{\prime}+$ | +24 ${ }^{\circ} 1^{\prime}$ | 12²3' | ${ }^{\circ} 23{ }^{\prime}$ | +14* 47 | -03 56 | -22 12 | ' |
| May 102021 | +17* 40 | +24*19' | +20 ${ }^{\circ} 27$ ' | +24 ${ }^{\circ} 28^{\prime}$ | -12 ${ }^{\circ} 1^{\prime}$ | $7{ }^{\circ} 22^{\prime}$ | +14* $48^{\prime}$ | -035 $5^{\prime}$ | -22 ${ }^{\circ} 2^{\prime}$ | ' |
| May 112021 | +17 ${ }^{\circ} 56$ | +24 ${ }^{\circ} 33^{\prime}$ | +20 ${ }^{\circ} 44^{\prime}+$ | +24 ${ }^{\circ} 5^{\prime}$ | 120 $19^{\prime}$ | -17 ${ }^{\circ} 22^{\prime}$ | +14* ${ }^{\circ} 9^{\prime}$ | -03 ${ }^{\circ} 55^{\prime}$ | $-22^{\circ} 12^{\prime}$ | ${ }^{\prime}$ |
| May 122021 | +18 ${ }^{\circ} 11^{\prime}$ | +24* $45^{\prime}$ | +21 ${ }^{\circ} 1^{\prime}+$ | +24 ${ }^{\circ} 1^{\prime}$ | -12 ${ }^{\circ} 6^{\prime}$ | $-17^{\circ} 22^{\prime}$ | +140 50 | -03 $54 '$ | $-22^{\circ} 13^{\prime}$ | +06 ${ }^{\circ} 5^{\prime}$ |
| May 132021 | +18 ${ }^{\circ} 26^{\prime}$ | +24 ${ }^{\circ} 55^{\prime}$ | +21 ${ }^{\circ} 17^{\prime}+$ | +24 ${ }^{\circ} 18^{\prime}$ | -12 ${ }^{\circ} 14^{\prime}$ | $-17^{\circ} 22^{\prime}$ | +14* 51 | -03 $54 '$ | -22 $13 \cdot$ | 06 ${ }^{\circ} 36^{\prime}$ |
| May 142021 | +18* ${ }^{\circ} 0^{\prime}$ | +25 ${ }^{\circ} 03^{\prime}$ | +21 ${ }^{\circ} 32^{\prime}+$ | +24 ${ }^{\circ} 14^{\prime}$ | 12 ${ }^{\circ} 12^{\prime}$ | $7^{\circ} 22 \cdot$ | +14* 52 | -03 $53 '$ | -22 13 | 37' |
| May 152021 | +18 ${ }^{\circ} 54^{\prime}$ | +25 ${ }^{\circ} 08^{\prime}$ | +21 ${ }^{\circ} 47$ |  | 120 10 | $21^{\prime}$ | +14* $53^{\prime}$ | $-03^{\circ} 53^{\prime}$ | -22 ${ }^{\circ} 13^{\prime}$ | ' |
| May 162021 | +19 ${ }^{\circ} 08^{\prime}$ | +25 ${ }^{\circ} 12^{\prime}$ | $+22^{\circ} 01$ | +2407' | -1208' | $-17^{\circ} 21^{\prime}$ | +14* $54^{\prime}$ | -0352' | -2 | ' |
| May 172021 | +19 $22^{\prime}$ | +25 ${ }^{\circ} 14^{\prime}$ | +22 ${ }^{\circ} 5^{\prime}$ | +24 ${ }^{\circ} 03^{\prime}$ | $-12^{\circ} 06^{\prime}$ | - $17^{\circ} 21^{\prime}$ | +14* $55^{\prime}$ | -0352' | $-22^{\circ} 14^{\prime}$ | +06* $41^{\prime}$ |
| May 182021 | +19 ${ }^{\circ} 35^{\prime}$ | +25 ${ }^{\circ} 14^{\prime}$ | +22 ${ }^{\circ} 28^{\prime}+$ | +23 ${ }^{\circ} 58^{\prime}$ | -12 ${ }^{\circ} 04^{\prime}$ | $-17^{\circ} 21^{\prime}$ | +14* 57 | -0351' | $-22^{\circ} 14^{\prime}$ | 06 ${ }^{\circ} 42^{\prime}$ |
| May 192021 | +19 ${ }^{\circ} 48^{\prime}$ | +25 ${ }^{\circ} 13^{\prime}$ | +22 ${ }^{\circ} 40^{\prime}+$ | +23 ${ }^{\circ} 54^{\prime}$ | 12 ${ }^{\circ} 02^{\prime}$ | $-17^{\circ} 21^{\prime}$ | +14* $58^{\prime}$ | -0351' | $-22^{\circ} 14^{\prime}$ | 43' |
| May 202021 | +20 ${ }^{\circ} 1^{\prime}$ | +25 ${ }^{\circ} 0^{\prime}$ | +22 ${ }^{\circ} 52^{\prime}+$ | +23 ${ }^{\circ} 49^{\prime}$ | -12 ${ }^{\circ} 00^{\prime}$ | $-17^{\circ} 21^{\prime}$ | +14* $59^{\prime}$ | -03 51 | -22 ${ }^{\circ} 14^{\prime}$ | 44' |
| May 212021 | +20 ${ }^{\circ} 13^{\prime}$ | +25 ${ }^{\circ} 05^{\prime}$ | +23 | +23 ${ }^{\circ} 45^{\prime}$ | -11 ${ }^{\circ} 58$ |  | $+15^{\circ} 00^{\prime}$ | -030 50 | -22 | $5^{\prime}$ |
| May 222021 | +20 ${ }^{\circ} 5^{\prime}$ | +24* 59 | +23 ${ }^{\circ} 13^{\prime}$ | +23 ${ }^{\circ} 40^{\prime}$ | -11* 57 | $-17^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 01^{\prime}$ | -0350' | $-22^{\circ} 15^{\prime}$ | 06 ${ }^{\circ} 46^{\prime}$ |
| May 232021 | $+20^{\circ} 37{ }^{\prime}$ | +24 ${ }^{\circ} 52^{\prime}$ | +23 ${ }^{\circ} 23^{\prime}+$ | +23 ${ }^{\circ} 35^{\prime}$ | -11 ${ }^{\circ} 55^{\prime}$ | $7^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 02^{\prime}$ | -030 $49^{\prime}$ | $-22^{\circ} 15^{\prime}$ | +06* $47^{\prime}$ |
| May 242021 | +20 ${ }^{\circ} 48^{\prime}$ | +24* $43{ }^{\prime}$ | +23 ${ }^{\circ} 32^{\prime}+$ | +23 ${ }^{\circ} 30^{\prime}$ | -11 ${ }^{\circ} 54$ | $-17^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 03^{\prime}$ | -030 $49^{\prime}$ | $-22^{\circ} 15^{\prime}$ | 0648' |
| May 252021 | +20 ${ }^{\circ} 59^{\prime}$ | +24 ${ }^{\circ} 33^{\prime}$ | +23 ${ }^{\circ} 40^{\prime}+$ | +23 ${ }^{\circ} 24^{\prime}$ | $-11^{\circ} 52$ | - $17^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 04^{\prime}$ | -03²9' | $-22^{\circ} 16^{\prime}$ | 06* 49 |
| May 262021 | +21 ${ }^{\circ} 09^{\prime}$ | +24 ${ }^{\circ} 22^{\prime}$ | +23 | +23019 | -11 ${ }^{\circ} 51$ | -17 ${ }^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 05^{\prime}$ | -030 $48^{\prime}$ | -22 | ' |
| May 272021 | +21 ${ }^{\circ} 9^{\prime}$ | +24 ${ }^{\circ} 0^{\prime}$ | +23 ${ }^{\circ} 55^{\prime}+$ | +23 ${ }^{\circ} 13^{\prime}$ | -11 ${ }^{\circ} 49^{\prime}$ | - $17^{\circ} 22^{\prime}$ | +15 ${ }^{\circ} 06^{\prime}$ | -030 $48^{\prime}$ | $-22^{\circ} 16^{\prime}$ | 06º 51 |
| May 282021 | +21 ${ }^{\circ} 29^{\prime}$ | +23 ${ }^{\circ} 56^{\prime}$ | +24 ${ }^{\circ} 01^{\prime}+$ | +23 ${ }^{\circ} 07^{\prime}$ | $-11^{\circ} 48^{\prime}$ | - $17^{\circ} 23^{\prime}$ | +15 ${ }^{\circ} 07^{\prime}$ | -03 $48^{\prime}$ | -22 ${ }^{\circ} 1{ }^{\prime}$ | +06 ${ }^{\circ} 52^{\prime}$ |
| May 292021 | +21 ${ }^{\circ} 38^{\prime}$ | +23 ${ }^{\circ} 42^{\prime}$ | +24 ${ }^{\circ} 06^{\prime}+$ | +23 ${ }^{\circ} 01^{\prime}$ | -11 ${ }^{\circ} 47$ | - $17^{\circ} 23^{\prime}$ | +15 ${ }^{\circ} 08^{\prime}$ | -03 $47^{\prime}$ | $-22^{\circ} 17^{\prime}$ | +06 $53 '$ |
| May 302021 | +21 ${ }^{\circ} 47{ }^{\prime}$ | +23 ${ }^{\circ} 27$ ' | +24 ${ }^{\circ} 11^{\prime}+$ | +22 ${ }^{\circ} 55^{\prime}$ | $-11^{\circ} 45$ | $-17^{\circ} 23^{\prime}$ | +15 ${ }^{\circ} 09^{\prime}$ | -030 $47{ }^{\prime}$ | $-22^{\circ} 17^{\prime}$ | 53' |
| May 312021 | +21 ${ }^{\circ} 56$ | +23 ${ }^{\circ} 11^{\prime}$ | +24 ${ }^{\circ} 15^{\prime}+$ | +22 ${ }^{\circ} 49^{\prime}$ | 11 ${ }^{\circ} 44^{\prime}$ | - $17^{\circ} 24^{\prime}$ | + | 7 | $7{ }^{\prime}$ | $4^{\prime}$ |
| Jun 12021 | +22 ${ }^{\circ} 04^{\prime}$ | +22 ${ }^{\circ} 54$ | +24 ${ }^{\circ} 9^{\prime}+$ | +22 ${ }^{\circ} 42^{\prime}$ | -11 ${ }^{\circ} 43^{\prime}$ | $-17^{\circ} 24^{\prime}$ | +15 ${ }^{\circ} 10^{\prime}$ | -030 46 | $-22^{\circ} 18^{\prime}$ | +06º $55^{\prime}$ |
| Jun 22021 | +22 ${ }^{\circ} 2^{\prime}$ | +22 ${ }^{\circ} 37$ | +24 ${ }^{\circ} 22^{\prime}+$ | +22 ${ }^{\circ} 5^{\prime}$ | -11 ${ }^{\circ} 42$ | - $17^{\circ} 24^{\prime}$ | +15 ${ }^{\circ} 11^{\prime}$ | $-03^{\circ} 46^{\prime}$ | -22 ${ }^{\circ} 18^{\prime}$ | 06 56 |
| Jun 32021 | +22 ${ }^{\circ} 0^{\prime}$ | +22 ${ }^{\circ} 9^{\prime}$ | +24 ${ }^{\circ} 4^{\prime}$ | +22 ${ }^{\circ} 29^{\prime}$ | -11 ${ }^{\circ} 41^{\prime}$ | $-17^{\circ} 25^{\prime}$ | +15 ${ }^{\circ} 12^{\prime}$ | -030 46 | $-22^{\circ} 18^{\prime}$ | 657' |
| Jun 42021 | +22 ${ }^{\circ} 27^{\prime}$ | +22 ${ }^{\circ} 01^{\prime}$ | +24 ${ }^{\circ} 25^{\prime}+$ | +22 ${ }^{\circ} 22^{\prime}$ | -11 ${ }^{\circ} 40^{\prime}$ | - $17^{\circ} 25^{\prime}$ | +15 ${ }^{\circ} 13^{\prime}$ | $-03^{\circ} 46^{\prime}$ | -22 | ' |
| Jun 52021 | +22 ${ }^{\circ} 3^{\prime}$ | +21* 42 | +24 ${ }^{\circ} 26^{\prime}$ | +22 ${ }^{\circ} 15^{\prime}$ | -11 ${ }^{\circ} 39^{\prime}$ | - $17^{\circ} 26^{\prime}$ | +15 ${ }^{\circ} 14^{\prime}$ | -03 $45^{\prime}$ | $-22^{\circ} 19^{\prime}$ | 06º 59 |
| Jun 62021 | +22 ${ }^{\circ} 40^{\prime}$ | +21 ${ }^{\circ} 24^{\prime}$ | +24 ${ }^{\circ} 25^{\prime}+$ | +22 ${ }^{\circ} 07^{\prime}$ | -11 ${ }^{\circ} 39^{\prime}$ | $-17^{\circ} 26^{\prime}$ | +15 ${ }^{\circ} 15^{\prime}$ | -03045' | -22 | 06º 59 |
| Jun 72021 | +22 ${ }^{\circ} 46^{\prime}$ | +21 ${ }^{\circ} 05^{\prime}$ | +24 ${ }^{\circ} 5^{\prime}+$ | +22 ${ }^{\circ} 00^{\prime}$ | -11 ${ }^{\circ} 38^{\prime}$ | - $17^{\circ} 27^{\prime}$ | +15 ${ }^{\circ} 16^{\prime}$ | -03 $45^{\prime}$ | $-22^{\circ} 20^{\prime}$ | 07 $00{ }^{\prime}$ |
| Jun 82021 | +22 ${ }^{\circ} 1^{\prime}$ | +20 ${ }^{\circ} 47$ | +24 ${ }^{\circ} 23^{\prime}+$ | +21 ${ }^{\circ} 52^{\prime}$ | -11 ${ }^{\circ} 37$ | $-17^{\circ} 27{ }^{\prime}$ | +15 ${ }^{\circ} 17^{\prime}$ | -030 $45^{\prime}$ | $-22^{\circ} 20^{\prime}$ | 07 $01^{\prime}$ |
| Jun 92021 | +22 ${ }^{\circ} 56^{\prime}$ | +20 ${ }^{\circ} 29^{\prime}$ | $+24^{\circ} 21^{\prime}+$ | +21 ${ }^{\circ} 45^{\prime}$ | -11 $37{ }^{\prime}$ | - $17^{\circ} 28^{\prime}$ | +15 ${ }^{\circ} 18^{\prime}$ | $-03^{\circ} 45^{\prime}$ | $-22^{\circ} 20^{\prime}$ | +07 ${ }^{\circ} 02^{\prime}$ |
| Jun 102021 | +23 $01^{\prime}$ | +20 ${ }^{\circ} 11^{\prime}$ | +24 ${ }^{\circ} 18^{\prime}$ | +21 ${ }^{\circ} 37$ | -11 ${ }^{\circ} 36^{\prime}$ | - $17^{\circ} 28^{\prime}$ | +15 ${ }^{\circ} 19^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 2$ | +07* $0{ }^{\prime}$ |
| Jun 112021 | +23 ${ }^{\circ} 05^{\prime}$ | +19 ${ }^{\circ} 54^{\prime}$ | +24 ${ }^{\circ} 14^{\prime}+$ | +21 ${ }^{\circ} 29^{\prime}$ | -11 ${ }^{\circ} 3{ }^{\prime}$ | - $17^{\circ} 29^{\prime}$ | $+15^{\circ} 20^{\prime}$ | -03044' | $-22^{\circ} 21^{\prime}$ | +07º $03^{\prime}$ |
| Jun 122021 | +23 ${ }^{\circ} 0{ }^{\prime}$ | +19 ${ }^{\circ} 38^{\prime}$ | +24 ${ }^{\circ} 09^{\prime}+$ | +21 ${ }^{\circ} 21^{\prime}$ | -11 ${ }^{\circ} 35$ | $-17^{\circ} 30^{\prime}$ | +15 ${ }^{\circ} 20^{\prime}$ | -03044' | $-22^{\circ} 21^{\prime}$ | +070 $04^{\prime}$ |
| Jun 132021 | +23 ${ }^{\circ} 13^{\prime}$ | +19 ${ }^{\circ} 24^{\prime}$ | +24 ${ }^{\circ} 04^{\prime}+$ | +21 ${ }^{\circ} 12^{\prime}$ | -11 ${ }^{\circ} 35^{\prime}$ | $-17^{\circ} 30^{\prime}$ | +15 ${ }^{\circ} 21^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 22^{\prime}$ | +07 ${ }^{\circ} 05^{\prime}$ |
| Jun 142021 | +23 ${ }^{\circ} 16^{\prime}$ | +19 ${ }^{\circ} 10^{\prime}$ | +23 ${ }^{\circ} 58^{\prime}+$ | +21 ${ }^{\circ} 04^{\prime}$ | -11 ${ }^{\circ} 35^{\prime}$ | $-17^{\circ} 31^{\prime}$ | $+15^{\circ} 22^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 22^{\prime}$ | +07 ${ }^{\circ} 05^{\prime}$ |
| Jun 152021 | +23 ${ }^{\circ} 18^{\prime}$ | +18 ${ }^{\circ} 57$ | +23 ${ }^{\circ} 52^{\prime}+$ | +20 ${ }^{\circ} 55^{\prime}$ | -11 ${ }^{\circ} 35$ | $-17^{\circ} 32^{\prime}$ | +15 ${ }^{\circ} 23^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 22^{\prime}$ | +070 $0{ }^{\prime}$ |
| Jun 162021 | +23 ${ }^{\circ} 21^{\prime}$ | +18* 46 | +23 ${ }^{\circ} 45^{\prime}+$ | +2047' | -11 ${ }^{\circ} 35$ | - $17^{\circ} 33^{\prime}$ | +15 ${ }^{\circ} 24^{\prime}$ | -03044' | $-22^{\circ} 23^{\prime}$ | +07 $0{ }^{\circ}$ |
| Jun 172021 | +23 ${ }^{\circ} 22^{\prime}$ | +18 ${ }^{\circ} 37$ | +23 ${ }^{\circ} 37^{\prime}+$ | +203 ${ }^{\prime}$ | -11 ${ }^{\circ} 35^{\prime}$ | - $17^{\circ} 33^{\prime}$ | +15 ${ }^{\circ} 25^{\prime}$ | -03044' | $-22^{\circ} 23^{\prime}$ | +07 $0{ }^{\prime}$ |
| Jun 182021 | $+23^{\circ} 24^{\prime}$ | +18 ${ }^{\circ} 29^{\prime}$ | +23 ${ }^{\circ} 28^{\prime}+$ | +20²9' | -11 ${ }^{\circ} 35^{\prime}$ | $-17^{\circ} 34^{\prime}$ | +15 ${ }^{\circ} 25^{\prime}$ | -030 $44^{\prime}$ | $-22^{\circ} 23^{\prime}$ | +07 ${ }^{\circ} 08^{\prime}$ |
| Jun 192021 | +23 ${ }^{\circ} 25^{\prime}$ | +18 ${ }^{\circ} 23^{\prime}$ | +23 ${ }^{\circ} 9^{\prime}$ + | +20 ${ }^{\circ} 20^{\prime}$ | -11 ${ }^{\circ} 5^{\prime}$ | $-17^{\circ} 35^{\prime}$ | +15 ${ }^{\circ} 26^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 2$ | +07 $08^{\prime}$ |
| Jun 202021 | +23 ${ }^{\circ} 26^{\prime}$ | +18 ${ }^{\circ} 9^{\prime}$ | +23 ${ }^{\circ} 09^{\prime}+$ | +20 ${ }^{\circ} 11^{\prime}$ | -11 ${ }^{\circ} 35^{\prime}$ | - $17^{\circ} 36^{\prime}$ | +15 ${ }^{\circ} 27^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 24^{\prime}$ | +07 $0{ }^{\prime}$ |
| Jun 212021 | +23 ${ }^{\circ} 26^{\prime}$ | +18 ${ }^{\circ} 16^{\prime}$ | +22 ${ }^{\circ} 58^{\prime}+$ | $+20^{\circ} 01^{\prime}$ | -11 ${ }^{\circ} 35^{\prime}$ | -17 ${ }^{\circ} 37{ }^{\prime}$ | +15 ${ }^{\circ} 28^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 24^{\prime}$ | +07º $0{ }^{\prime}$ |
| Jun 222021 | +23 ${ }^{\circ} 25^{\prime}$ | +18 ${ }^{\circ} 15^{\prime}$ | +22 ${ }^{\circ} 4{ }^{\prime}+$ | +19 ${ }^{\circ} 52$ | -11 ${ }^{\circ} 36$ | - $17^{\circ} 38^{\prime}$ | +15 ${ }^{\circ} 29^{\prime}$ | -03³4' | $-22^{\circ} 25^{\prime}$ | +07* $10^{\prime}$ |
| Jun 232021 | +23 ${ }^{\circ} 25^{\prime}$ | +18 ${ }^{\circ} 16^{\prime}$ | +22 ${ }^{\circ} 35^{\prime}+$ | +19 ${ }^{\circ} 42^{\prime}$ | -11 ${ }^{\circ} 36$ | $-17^{\circ} 38^{\prime}$ | +15 ${ }^{\circ} 29^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 25^{\prime}$ | +07 ${ }^{\circ} 10^{\prime}$ |
| Jun 242021 | $+23^{\circ} 24^{\prime}$ | +18 ${ }^{\circ} 18^{\prime}$ | $+22^{\circ} 22^{\prime}+$ | +19 ${ }^{\circ} 32^{\prime}$ | -11 ${ }^{\circ} 37{ }^{\prime}$ | $-17^{\circ} 39^{\prime}$ | +15 ${ }^{\circ} 30^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 25^{\prime}$ | +07 ${ }^{\circ} 11^{\prime}$ |
| Jun 252021 | +23 ${ }^{\circ} 22^{\prime}$ | +18 ${ }^{\circ} 23^{\prime}$ | +22 ${ }^{\circ} 09^{\prime}+$ | +19 ${ }^{\circ} 22^{\prime}$ | -11 ${ }^{\circ} 37{ }^{\prime}$ | $-17^{\circ} 40^{\prime}$ | +15 ${ }^{\circ} 31^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 26^{\prime}$ | +07 ${ }^{\circ} 11^{\prime}$ |
| Jun 262021 | +23 ${ }^{\circ} 20^{\prime}$ | +18 ${ }^{\circ} 28^{\prime}$ | +21 ${ }^{\circ} 55^{\prime}+$ | +19 ${ }^{\circ} 12^{\prime}$ | -11 ${ }^{\circ} 38^{\prime}$ | - $17^{\circ} 41^{\prime}$ | +15 ${ }^{\circ} 32^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 26^{\prime}$ | +07 ${ }^{\circ} 1^{\prime}$ |
| Jun 272021 | +23 ${ }^{\circ} 18^{\prime}$ | +18 ${ }^{\circ} 35^{\prime}$ | +21 ${ }^{\circ} 41^{\prime}+$ | +19 ${ }^{\circ} 02$ | -11 ${ }^{\circ} 38^{\prime}$ | $-17^{\circ} 42$ | +15 ${ }^{\circ} 32^{\prime}$ | -030 $44^{\prime}$ | $-22^{\circ} 26^{\prime}$ | +07 ${ }^{\circ} 2^{\prime}$ |
| Jun 282021 | +23 ${ }^{\circ} 15^{\prime}$ | +18 ${ }^{\circ} 44^{\prime}$ | $+21^{\circ} 26^{\prime}+$ | +180 52 | -11 ${ }^{\circ} 39^{\prime}$ | -17 ${ }^{\circ} 43^{\prime}$ | +15 ${ }^{\circ} 33^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 27^{\prime}$ | +07 ${ }^{\circ} 13^{\prime}$ |
| Jun 292021 | +23 ${ }^{\circ} 12^{\prime}$ | +18 ${ }^{\circ} 54^{\prime}$ | +21 ${ }^{\circ} 0^{\prime}+$ | +18 ${ }^{\circ} 41^{\prime}$ | $-11^{\circ} 40^{\prime}$ | - $17^{\circ} 44^{\prime}$ | +15 ${ }^{\circ} 34^{\prime}$ | -03044' | $-22^{\circ} 27^{\prime}$ | +07 ${ }^{\circ} 13^{\prime}$ |
| Jun 302021 | +23 ${ }^{\circ} 09^{\prime}$ | +19 ${ }^{\circ} 04^{\prime}$ | $+20^{\circ} 54^{\prime}+$ | +18 ${ }^{\circ} 31^{\prime}$ | $-11^{\circ} 41^{\prime}$ | - $17^{\circ} 45^{\prime}$ | +15 ${ }^{\circ} 34^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 27^{\prime}$ | +07 ${ }^{\circ} 14^{\prime}$ |
| Jul 12021 | +23 ${ }^{\circ} 5^{\prime}$ | +19 ${ }^{\circ} 16^{\prime}$ | $+20^{\circ} 37{ }^{\prime}+$ | $+18^{\circ} 20^{\prime}$ | $-11^{\circ} 42^{\prime}$ | - $17^{\circ} 46{ }^{\prime}$ | +15 ${ }^{\circ} 35^{\prime}$ | -030 $44^{\prime}$ | $-22^{\circ} 28^{\prime}$ | +07 ${ }^{\circ} 14^{\prime}$ |
| Jul 22021 | +23 ${ }^{\circ} 1^{\prime}$ | +19 ${ }^{\circ} 29^{\prime}$ | $+20^{\circ} 20^{\prime}+$ | +18 ${ }^{\circ} 09^{\prime}$ | -11 ${ }^{\circ} 43$ | $-17^{\circ} 47{ }^{\prime}$ | +15 ${ }^{\circ} 36^{\prime}$ | -03 $44^{\prime}$ | $-22^{\circ} 28^{\prime}$ | +07 ${ }^{\circ} 14^{\prime}$ |
| Jul 32021 | +22 ${ }^{\circ} 56^{\prime}$ | +19** ${ }^{\prime}$ | $+20^{\circ} 02^{\prime}+$ | +17${ }^{\circ} 59^{\prime}$ | -11 ${ }^{\circ} 44^{\prime}$ | $-17^{\circ} 49^{\prime}$ | +15 ${ }^{\circ} 36^{\prime}$ | -030 $44^{\prime}$ | $-22^{\circ} 29^{\prime}$ | +07 ${ }^{\circ} 5^{\prime}$ |
| Jul 42021 | +22 ${ }^{\circ} 1^{\prime}$ | +19 ${ }^{\circ} 57$ | +19 ${ }^{\circ} 43^{\prime}+$ | +170 $48^{\prime}$ | -11 ${ }^{\circ} 45$ | - $17^{\circ} 50$ | +15 ${ }^{\circ} 37$ | -030 $44^{\prime}$ | $-22^{\circ} 29^{\prime}$ | +07 ${ }^{\circ} 5^{\prime}$ |
| Jul 52021 | +22* $45^{\prime}$ | +20 $11{ }^{\prime}$ | +19 ${ }^{\circ} 24^{\prime}+$ | $+17^{\circ} 36^{\prime}$ | -11 ${ }^{\circ} 46$ | - $17^{\circ} 51{ }^{\prime}$ | +15 ${ }^{\circ} 38^{\prime}$ | -0304 ${ }^{\prime}$ | $-22^{\circ} 29^{\prime}$ | +07* $15^{\prime}$ |


| EST $+05: 00$ Tropical Geocentric Decl | Sun $\odot$ | rcury ఛఛ | Venus 9 | Mars $\sigma^{7}$ | Jupiter 4 | Saturn ち | Uranus然 | Neptune $\Psi$ | Pluto 우 | Chiron $k$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jul 62021 | + | +2026' | + | +17 ${ }^{\circ} 25$ | - | -170 $52 '$ | +15 38 | ' | $-22^{\circ} 30^{\prime}$ |  |
| Jul 72021 | +22 | +20 ${ }^{\circ} 41^{\prime}$ | +18* $45^{\prime}$ |  | ' | $-17^{\circ} 53 '$ | +15 ${ }^{\circ} 39^{\prime}$ | 45' | -2 |  |
| Jul 82021 | $+22^{\circ} 2$ | +20 ${ }^{\circ} 57^{\prime}$ | +18 ${ }^{\circ} 24^{\prime}+$ | +17 ${ }^{\circ} 02{ }^{\prime}$ | $-11^{\circ} 50^{\prime}$ | $-17^{\circ} 54^{\prime}$ | +15 ${ }^{\circ} 39^{\prime}$ | -03* $45^{\prime}$ | $-22^{\circ} 30^{\prime}$ | +07* $16^{\prime}$ |
| Jul 92021 | +22 | +21 ${ }^{\circ} 11^{\prime}$ | +18 ${ }^{\circ} 03^{\prime}+$ | +1 | -11 ${ }^{\circ} 52$ | $-17^{\circ} 55^{\prime}$ | +15 ${ }^{\circ} 40^{\prime}$ | -0345' | -22 | 07 ${ }^{\circ} 16^{\prime}$ |
| Jul 102021 | +22 ${ }^{\circ} 12^{\prime}$ | +21 ${ }^{\circ} 26^{\prime}$ | +17* $41^{\prime}+$ | +16 ${ }^{\circ} 39^{\prime}$ | -11 ${ }^{\circ} 53$ | $-17^{\circ} 57$ | +15 ${ }^{\circ} 1^{\prime}$ | -03 $46 '$ | $-22^{\circ} 31^{\prime}$ | +07${ }^{\circ} 6^{\prime}$ |
| Jul 112021 | +22 ${ }^{\circ} 04^{\prime}$ | +21 ${ }^{\circ} 40^{\prime}$ | +17 ${ }^{\circ} 19^{\prime}$ | +16 ${ }^{\circ} 27{ }^{\prime}$ | -11 ${ }^{\circ} 55^{\prime}$ | $-17^{\circ} 58^{\prime}$ | +15 ${ }^{\circ} 41^{\prime}$ | $-03^{\circ} 46^{\prime}$ | $-22^{\circ} 3$ | 16' |
| Jul 122021 | +21 ${ }^{\circ} 56$ | +21 ${ }^{\circ} 53^{\prime}$ | +16 ${ }^{\circ} 57$ | +16 | -1156' | -17 $59^{\prime}$ | +15 ${ }^{\circ} 42^{\prime}$ | -03 $46 '$ | -22 | 17' |
| Jul 132021 | +2 | +22 ${ }^{\circ} 06^{\prime}$ | +1 | + | 8' | ${ }^{\prime}$ | +15 ${ }^{\circ} 42^{\prime}$ | $-03^{\circ} 46^{\prime}$ | $-22^{\circ} 32^{\prime}$ | +07* 17 |
| Jul 142021 | +21 ${ }^{\circ} 38^{\prime}$ | +22 ${ }^{\circ} 17^{\prime}$ | +16 ${ }^{\circ}$ | +15 | -1200' | $18^{\circ} 01^{\prime}$ | +15 ${ }^{\circ} 43^{\prime}$ | -03²7' | -22³3' | +07* 17 |
| Jul 152021 | +21 ${ }^{\circ} 29^{\prime}$ | +22 ${ }^{\circ} 27^{\prime}$ | +15 ${ }^{\circ} 47^{\prime}+$ | +15 ${ }^{\circ} 39^{\prime}$ | $-12^{\circ} 02^{\prime}$ | $8^{\circ} 03 \cdot$ | +15 ${ }^{\circ} 43^{\prime}$ | -03* $47{ }^{\prime}$ | -22 ${ }^{\circ} 33^{\prime}$ | 07 ${ }^{\circ} 17^{\prime}$ |
| Jul 162021 | +21019' | +22 ${ }^{\circ} 36^{\prime}$ | +15 ${ }^{\circ} 23^{\prime}+$ | +15 ${ }^{\circ} 27{ }^{\prime}$ | -12004' | 18 ${ }^{\circ} 04^{\prime}$ | +15 ${ }^{\circ} 44^{\prime}$ | -03²7' | -22³3' | 17' |
| Jul 172021 | +21 ${ }^{\circ} 09^{\prime}$ | +22 ${ }^{\circ} 43^{\prime}$ | +14 |  | -1200 ${ }^{\prime}$ | 18 ${ }^{\circ} 05^{\prime}$ |  | -03²7' | -2 | 17' |
| Jul 182021 | +20 ${ }^{\circ}$ | +220 $48^{\prime}$ | +14 ${ }^{\circ} 33^{\prime}$ | +15 | -12 ${ }^{\circ} 08^{\prime}$ | ' | +15 ${ }^{\circ} 45^{\prime}$ | -03 $48^{\prime}$ | -2 | +07* 17 |
| Jul 192021 | +2048' | +22 ${ }^{\circ} 51^{\prime}$ | +14 ${ }^{\circ} 08$ | +14**9' | -12* $10^{\prime}$ | 180 ${ }^{\prime}$ | +15 ${ }^{\circ} 45^{\prime}$ | -03² $48^{\prime}$ | -223ㄴ' | 7 |
| Jul 202021 | +20 ${ }^{\circ} 36^{\prime}$ | +22 ${ }^{\circ} 51^{\prime}$ | +13 ${ }^{\circ} 43^{\prime}+$ | $+14^{\circ} 3$ | $-12^{\circ} 12^{\prime}$ | 18 ${ }^{\circ} 09^{\prime}$ | +15 ${ }^{\circ} 46^{\prime}$ | -030 $48^{\prime}$ | $-22^{\circ} 35^{\prime}$ | +07* $17^{\prime}$ |
| Jul 212021 | +20²5' | +22 ${ }^{\circ} 49^{\prime}$ | +13 ${ }^{\circ} 17^{\prime}+$ | +14 ${ }^{\circ} 2$ | -12 ${ }^{\circ} 1{ }^{\prime}$ | -18 ${ }^{\circ} 10^{\prime}$ | +15 ${ }^{\circ} 46^{\prime}$ | -030 49 | -22 ${ }^{\circ} 5^{\prime}$ | 7' |
| Jul 222021 | +20 ${ }^{\circ} 13$ | +22 ${ }^{\circ} 45^{\prime}$ | +12 ${ }^{\circ}$ |  | -12 ${ }^{\circ} 16^{\prime}$ | ' | +15 ${ }^{\circ} 46^{\prime}$ | -030 49 | $-22^{\circ} 35^{\prime}$ | 7 |
| Jul 232021 | +20 | +22 ${ }^{\circ} 38^{\prime}$ | +12 | +13 | -12 ${ }^{\circ} 18^{\prime}$ | ' | +15 ${ }^{\circ} 47^{\prime}$ | -030 49 | -22 | +07º 17 |
| Jul 242021 | +19 ${ }^{\circ} 48^{\prime}$ | +22 ${ }^{\circ} 29^{\prime}$ | +11 ${ }^{\circ} 57$ | +13 ${ }^{\circ} 45^{\prime}$ | -12²1' | $-18^{\circ} 14^{\prime}$ | +15 ${ }^{\circ} 47$ | -03 $50 '$ | -22³6' | ' |
| Jul 252021 | +19 ${ }^{\circ} 36^{\prime}$ | +22 ${ }^{\circ} 17^{\prime}$ | +11 ${ }^{\circ} 29^{\prime}+$ | +13 ${ }^{\circ} 32^{\prime}$ | -12²3' | -18 ${ }^{\circ} 15^{\prime}$ | +15 ${ }^{\circ} 47^{\prime}$ | -0350' | $-22^{\circ} 36^{\prime}$ | 07 ${ }^{\circ} 16^{\prime}$ |
| Jul 262021 | +19 ${ }^{\circ} 22^{\prime}$ | +22 ${ }^{\circ} 02^{\prime}$ | +11 ${ }^{\circ} 02^{\prime}+$ | +13 ${ }^{\circ}$ | -12 ${ }^{\circ} 5^{\prime}$ | $8^{\circ} 17{ }^{\prime}$ | +15 ${ }^{\circ}$ | 351' | $-22^{\circ} 37^{\prime}$ | 6' |
| Jul 272021 | +19 ${ }^{\circ} 09$ | +21 ${ }^{\circ} 45^{\prime}$ | +10 | +13 $05^{\circ}$ | -12 ${ }^{\circ} 28^{\prime}$ | -18 ${ }^{\circ} 18^{\prime}$ | +15 | -0351' | -22³7' | +07* $16^{\prime}$ |
| Jul 282021 | +18${ }^{\circ} 5^{\prime}$ | +21 ${ }^{\circ} 25^{\prime}$ | +10 | +12 ${ }^{\circ} 5$ | -12³0' | $8^{\circ} 19^{\prime}$ | +15 | -0351' | $-22^{\circ} 37^{\prime}$ | +07* $16^{\prime}$ |
| Jul 292021 | +18 ${ }^{\circ} 41^{\prime}$ | +21 ${ }^{\circ} 02^{\prime}$ | +09 ${ }^{\circ} 38^{\prime}+$ | +12 ${ }^{\circ} 38$ | -1233' | $8^{\circ} 21^{\prime}$ | +1 | -0352' | -223 ${ }^{\prime}$ | 16' |
| Jul 302021 | +18 ${ }^{\circ} 27$ | +2037' | +09 ${ }^{\circ} 09^{\prime}$ | +12 ${ }^{\circ} 25^{\prime}$ | -12 ${ }^{\circ} 5^{\prime}$ | $8^{\circ} 22{ }^{\prime}$ | +15 ${ }^{\circ} 49^{\prime}$ | -0352' | $-22^{\circ} 38^{\prime}$ | 07¹6' |
| Jul 312021 | +180 $12^{\prime}$ | +2010' | +08 ${ }^{\circ} 40$ | +12 ${ }^{\circ} 11$ | 12³8' | $-18^{\circ} 23 '$ | +15 | -035 $53^{\prime}$ | -22 | 5' |
| Aug 12021 | +17 ${ }^{\circ} 57{ }^{\prime}$ | +19 ${ }^{\circ} 41^{\prime}$ | +08 | +11 57 | 12* 40 | $-18^{\circ} 25^{\prime}$ | +15 ${ }^{\circ} 50^{\prime}$ | -03 $53 '$ | -22 | ' |
| Aug 22021 | +17* ${ }^{\circ}{ }^{\prime}$ | +19 ${ }^{\circ} 09^{\prime}$ | +07 | $+11^{\circ} 4$ | -120 ${ }^{\prime}$ | $-18^{\circ} 26{ }^{\prime}$ | +15 | -0354' | -22 | 5' |
| Aug 32021 | +17 ${ }^{\circ} 26^{\prime}$ | +18 ${ }^{\circ} 36^{\prime}$ | +07* 13 | +11 | -12 ${ }^{\circ} 45^{\prime}$ | $8^{\circ} 27$ | +15 | $3^{\circ} 54{ }^{\prime}$ | $-22^{\circ} 39^{\prime}$ | ' |
| Aug 42021 | +17 ${ }^{\circ} 10^{\prime}$ | +18 ${ }^{\circ} 02^{\prime}$ | +06* 43 | + | -12 ${ }^{\circ} 48^{\prime}$ | $8^{\circ} 28^{\prime}$ | +15 ${ }^{\circ} 50^{\prime}$ | -035 $5{ }^{\prime}$ | $-22^{\circ} 40$ | ' |
| Aug 52021 | +16 | +17 ${ }^{\circ} 25^{\prime}$ | +06 13 | +11 ${ }^{\circ} 02$ | $-12^{\circ} 51^{\prime}$ | $-18^{\circ} 30^{\prime}$ | +1 | -035 5 | $-22^{\circ} 40$ | 07 $14{ }^{\prime}$ |
| Aug 62021 | +16 ${ }^{\circ} 38$ | +16 ${ }^{\circ} 48^{\prime}$ | $+05^{\circ} 4$ | +10*4 | -12 ${ }^{\circ}$ | -18³1' | + | -03 $56 '$ | -22 | 07 $13 '$ |
| Aug 72021 | +16 ${ }^{\circ} 21^{\prime}$ | +16 ${ }^{\circ} 09^{\prime}$ | +05 | +10 | -120 56' | $8^{\circ} 32^{\prime}$ | +1 | -03 $56 '$ | -22 | 3' |
| Aug 82021 | +16 ${ }^{\circ} 04^{\prime}$ | +15 ${ }^{\circ} 29^{\prime}$ | +04 43 |  | 125 $9^{\prime}$ | $8^{\circ} 33^{\prime}$ | +1 | -0357' | -22 | 3' |
| Aug 92021 | +15 ${ }^{\circ} 47{ }^{\prime}$ | +14* $49^{\prime}$ | +04 ${ }^{\circ} 13^{\prime}$ | + | -13 $02^{\prime}$ | $-18^{\circ} 35^{\prime}$ | +1 | 0357' | -22 | 2' |
| Aug 102021 | +15 ${ }^{\circ} 29^{\prime}$ | +14 ${ }^{\circ} 07^{\prime}$ | +03 ${ }^{\circ} 42^{\prime}$ | +09 | -13 $05^{\prime}$ | $-18^{\circ} 36^{\prime}$ | +1 | -0358' | -220 ${ }^{\prime}$ | ' |
| Aug 112021 | +15 ${ }^{\circ} 11^{\prime}$ | +13 ${ }^{\circ} 25^{\prime}$ | $+03^{\circ} 1$ | $+09^{\circ} 36$ | -13007' | ' | +15 ${ }^{\circ} 52^{\prime}$ | -03 ${ }^{\circ} 58^{\prime}$ | -22 | 07 ${ }^{\circ} 11^{\prime}$ |
| Aug 122021 | +14* ${ }^{\circ} 4^{\prime}$ | +12 ${ }^{\circ} 42^{\prime}$ | +02 ${ }^{\circ}$ | +09 ${ }^{\circ} 2$ | -13* $10^{\prime}$ | $8^{\circ} 38^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -03 $59 '$ | -22 | 07 $11^{\prime}$ |
| Aug 132021 | +14* $35^{\prime}$ | +11 ${ }^{\circ} 59^{\prime}$ | +02 | +09 ${ }^{\circ} 07$ | -13 $13^{\prime}$ | $8^{\circ} 40^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -03 $59 '$ | $-22^{\circ} 43^{\prime}$ | O' |
| Aug 142021 | +14 ${ }^{\circ} 17$ | +11 ${ }^{\circ} 15^{\prime}$ | +01 | +08 | -13 ${ }^{\circ} 16^{\prime}$ | $8^{\circ} 41^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -04 ${ }^{\circ} 00^{\prime}$ | $-22^{\circ} 43^{\prime}$ | 0' |
| Aug 152021 | +13 ${ }^{\circ} 58^{\prime}$ | +10 ${ }^{\circ} 31^{\prime}$ | +01 ${ }^{\circ} 09^{\prime}$ | $+08^{\circ} 3$ | -13 ${ }^{\circ} 19^{\prime}$ | $-18^{\circ} 42^{\prime}$ | +15 ${ }^{\circ} 52^{\prime}$ | -04 ${ }^{\circ} 00^{\prime}$ | $-22^{\circ} 4$ | 07º $0{ }^{\prime}$ |
| Aug 162021 | +13 ${ }^{\circ} 39^{\prime}$ | +09 ${ }^{\circ} 46^{\prime}$ | $+00^{\circ} 38^{\prime}+$ | $+08^{\circ} 2$ | -13 ${ }^{\circ} 1^{\prime}$ | $8^{\circ} 43 '$ | $+15^{\circ} 5$ | -04 ${ }^{\circ} 01^{\prime}$ | -22 | ' |
| Aug 172021 | +13 ${ }^{\circ} 20^{\prime}$ | +09 $02^{\prime}$ | +00 ${ }^{\circ} 07{ }^{\prime}+$ | +08 ${ }^{\circ} 08^{\prime}$ | -13 $24^{\prime}$ | $8^{\circ} 44^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -0402' | $-22^{\circ} 4$ | 07º $08^{\prime}$ |
| Aug 182021 | +13 ${ }^{\circ} 01^{\prime}$ | +08 $17^{\prime}$ | $-00^{\circ} 23^{\prime}+$ | +07 53 | -13²7' | $-18^{\circ} 46^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -0402' | -220 ${ }^{\circ}$ | 070 $0{ }^{\prime}$ |
| Aug 192021 | +12 ${ }^{\circ} 41^{\prime}$ | +07 ${ }^{\circ} 33^{\prime}$ | -0 | $+07^{\circ} 3$ | -13 ${ }^{\circ} 0^{\prime}$ | $-18^{\circ} 47{ }^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -0403' | $-22^{\circ} 44^{\prime}$ | 07º 07 |
| Aug 202021 | +12 ${ }^{\circ} 22^{\prime}$ | +06 $48^{\prime}$ | -01 ${ }^{\circ} 25$ | $+07^{\circ} 2$ | -13 ${ }^{\circ} 33^{\prime}$ | $-18^{\circ} 48^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -0403' | $-22^{\circ} 4$ | 07º $06^{\prime}$ |
| Aug 212021 | +12 ${ }^{\circ} 02^{\prime}$ | +060 $03^{\prime}$ | -01 56 | +07 | -13 ${ }^{\circ} \mathbf{3 6}^{\prime}$ | $8^{\circ} 49^{\prime}$ | + | -0404' | -22 | 07º ${ }^{\prime}$ |
| Aug 222021 | +11 ${ }^{\circ} 42^{\prime}$ | +05 ${ }^{\circ} 19^{\prime}$ | $-02^{\circ} 26^{\prime}+$ | +06 ${ }^{\circ} 5$ | -13 ${ }^{\circ} 8^{\prime}$ | $-18^{\circ} 50 '$ | +15 ${ }^{\circ} 2^{\prime}$ | -040 $0{ }^{\prime}$ | $-22^{\circ} 45^{\prime}$ | 07 ${ }^{\circ} 05^{\prime}$ |
| Aug 232021 | +11 ${ }^{\circ} 21^{\prime}$ | +04 ${ }^{\circ} 35^{\prime}$ | $-02^{\circ} 57^{\prime}+$ | +06 ${ }^{\circ} 38^{\prime}$ | -130 $41^{\prime}$ | $-18^{\circ} 51 '$ | +15 ${ }^{\circ} 52^{\prime}$ | -040 $0{ }^{\prime}$ | $-22^{\circ} 45^{\prime}$ | 07 ${ }^{\circ} 04^{\prime}$ |
| Aug 242021 | +11 ${ }^{\circ} 01^{\prime}$ | +03 ${ }^{\circ} 51^{\prime}$ | -03 | +06 | -13044' | -1852' | +15 ${ }^{\circ} 2^{\prime}$ | -04 ${ }^{\circ} 06^{\prime}$ | $-22^{\circ} 46$ | 07º $03^{\prime}$ |
| Aug 252021 | +10 ${ }^{\circ} 40^{\prime}$ | +03 ${ }^{\circ} 07^{\prime}$ | -03 ${ }^{\circ} 59$ | $+06^{\circ}$ | 130 47 | $-18^{\circ} 53^{\prime}$ | +15 ${ }^{\circ} 52^{\prime}$ | -0406' | -22* 46 | 07 $03^{\prime}$ |
| Aug 262021 | +10 ${ }^{\circ} 20$ | +02 ${ }^{\circ} 23^{\prime}$ | -04 | +05 | 130 49 | $8^{\circ} 54$ | +15 ${ }^{\circ} 2^{\prime}$ | -04 ${ }^{\circ} 07$ | -22 | 07º $0{ }^{\prime}$ |
| Aug 272021 | +09 ${ }^{\circ} 59^{\prime}$ | +01 ${ }^{\circ} 40^{\prime}$ | $-05^{\circ} 00^{\prime}+$ | +05 ${ }^{\circ} 8^{\prime}$ | -13 ${ }^{\circ} 52^{\prime}$ | $8^{\circ} 56{ }^{\prime}$ | +15 ${ }^{\circ} 2^{\prime}$ | -0408' | $-22^{\circ} 46^{\prime}$ | 07º $01^{\prime}$ |
| Aug 282021 | +09³7' | +00 ${ }^{\circ} 57^{\prime}$ | $-05^{\circ} 31^{\prime}+$ | +05 ${ }^{\circ} 22^{\prime}$ | $-13^{\circ} 55^{\prime}$ | $-18^{\circ} 57{ }^{\prime}$ | +15 ${ }^{\circ} 51^{\prime}$ | -04 ${ }^{\circ} 08^{\prime}$ | $-22^{\circ} 47{ }^{\prime}$ | +07 ${ }^{\circ} 00^{\prime}$ |
| Aug 292021 | +09 ${ }^{\circ} 16^{\prime}$ | +0015' | -06 ${ }^{\circ} 1^{\prime}$ | +05 ${ }^{\circ} 07$ | -1357' | $-18^{\circ} 58^{\prime}$ | $+15^{\circ} 5$ | -0409' | $-22^{\circ} 47{ }^{\prime}$ | +07 ${ }^{\circ} 00^{\prime}$ |
| Aug 302021 | +08 $55^{\prime}$ | -00 ${ }^{\circ} 26^{\prime}$ | $-06^{\circ} 32^{\prime}+$ | $+04^{\circ} 5$ | -14 ${ }^{\circ} 00^{\prime}$ | -185․ | $+15^{\circ} 5$ | 04 ${ }^{\circ} 10^{\prime}$ | $-22^{\circ} 47$ | 06º 59 |
| Aug 312021 | +08 ${ }^{\circ} 33^{\prime}$ | $-01^{\circ} 08^{\prime}$ | -070 $02^{\prime}+$ | $+04^{\circ} 3$ | -14*03' | $-18^{\circ} 59^{\prime}$ | +15 ${ }^{\circ} 51^{\prime}$ | -0410' | $-22^{\circ} 47$ | +06 ${ }^{\circ} 58^{\prime}$ |
| Sep 12021 | +08 ${ }^{\circ} 11$ | -01 ${ }^{\circ} 49^{\prime}$ | $-07^{\circ} 32^{\prime}+$ | $+04^{\circ} 21$ | -14*05' | $-19^{\circ} 00^{\prime}$ | +15 ${ }^{\circ} 51^{\prime}$ | -0411' | $-22^{\circ} 48^{\prime}$ | +06 ${ }^{\circ} 57{ }^{\prime}$ |
| Sep 22021 | +07 ${ }^{\circ} 50$ | -020 ${ }^{\circ} 9^{\prime}$ | $-08^{\circ} 02^{\prime}+$ | +04 ${ }^{\circ} 05^{\prime}$ | -14 ${ }^{\circ} 8^{\prime}$ | -19 01 | +15 ${ }^{\circ} 51^{\prime}$ | -0411' | $-22^{\circ} 48^{\prime}$ | 06º 56 |
| Sep 32021 | +07${ }^{\circ} 28^{\prime}$ | -0309' | $-08^{\circ} 32^{\prime}+$ | +03 ${ }^{\circ} 5$ | -14*10' | -19 $02{ }^{\prime}$ | $+15^{\circ} 50$ | -0412' | $-22^{\circ} 48^{\prime}$ | +065 $5^{\prime}$ |
| Sep 42021 | +07 ${ }^{\circ} 06{ }^{\prime}$ | -03 $48^{\prime}$ | -09 01 | +03 ${ }^{\circ} 34^{\prime}$ | -14*13' | $19^{\circ} 03^{\prime}$ | $+15^{\circ} 50$ | 04 ${ }^{\circ} 13^{\prime}$ | $-22^{\circ} 48^{\prime}$ | 60 $55^{\prime}$ |
| Sep 52021 | +06 ${ }^{\circ} 43^{\prime}$ | -04²7' | $-09^{\circ} 31^{\prime}+$ | +03 ${ }^{\circ} 18^{\prime}$ | $-14^{\circ} 15^{\prime}$ | -19 $04^{\prime}$ | +15 ${ }^{\circ} 50^{\prime}$ | -0413' | -22 | 06 $54 \cdot$ |


|  |  | Mercury |  | ars |  |  |  | $\overline{\mathrm{e}}$ | Pluto 우 | $k$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| S |  |  |  |  |  |  |  |  |  |  |
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|  |  |  |  |  |  |  |  |  |  |  |
|  |  | -07 ${ }^{\circ} 27$ |  |  |  |  |  |  |  |  |
| Sep 112021 |  | -08 ${ }^{\circ} 01^{\prime}$ |  |  |  |  |  |  |  |  |
|  |  | $-08^{\circ} 33^{\prime}$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  | +03 | - | -13 |  |  |  |  |  |  |  |
| Sep 152021 | +02 | 1003' |  |  |  |  |  |  |  |  |
| Sep 162021 |  | 3' |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ep 182021 |  |  |  |  |  |  |  |  |  |  |
|  |  | 110 ${ }^{\circ}{ }^{\prime}$ | $15^{\circ}$ |  |  |  |  | ' |  |  |
| Sep 202021 |  | $12^{\circ} 03$ |  |  | $4^{\circ} 46^{\prime}$ |  |  | ' |  |  |
|  | +00³7' | 22' |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | ${ }^{\circ}$ |  |  |  |  |  |  |  |  |
|  | -00 | -13 $04^{\prime}$ | -18 |  |  |  |  | ' |  |  |
|  |  | 13 ${ }^{\circ} 12^{\prime}$ | -1 |  |  |  |  | ' |  | $6^{\circ} 34^{\prime}$ |
|  |  | $3^{\circ} 18^{\prime}$ |  |  |  |  |  | 7 |  | 32' |
| Sep 272021 |  | $13^{\circ} 20^{\prime}$ |  |  |  |  |  | ' |  |  |
|  |  | 13${ }^{\circ} 19^{\prime}$ |  |  |  |  |  |  |  |  |
|  |  |  | -19 |  |  |  |  |  |  |  |
|  | -02 | 13 ${ }^{\circ} 05^{\prime}$ |  |  |  |  |  | ' |  |  |
|  | -03 | ' |  |  |  |  |  | 30' |  |  |
| Oct 22021 | - | -12 35 | -21 ${ }^{\circ}$ | -03 47 | - |  | +15 ${ }^{\circ} 39^{\prime}$ | ' |  | $6^{\circ} 26^{\prime}$ |
|  | -04 | -12 ${ }^{\circ} 13^{\prime}$ |  |  |  |  |  |  |  |  |
|  |  | $-11^{\circ} 46$ |  |  |  |  |  |  |  |  |
|  |  |  |  |  | ' |  |  | 33' |  |  |
|  | -05 | 1 |  |  | ' |  |  | 33' |  |  |
| Oct 72021 | -05 | - 02 | -2 | -05 05 | 15 |  | $+15^{\circ} 36$ | $-04^{\circ} 34^{\prime}$ |  | $+06^{\circ} 20^{\prime}$ |
|  | -05 | -09 |  |  |  |  |  |  |  |  |
|  |  | $-08^{\circ} 37$ |  |  |  |  |  |  |  |  |
|  |  | -070 ${ }^{\prime}$ |  |  | 07' |  |  | 36' |  |  |
| Oct 112021 | -07 | -070 $0{ }^{\prime}$ |  | -06 ${ }^{\circ}$ | -15 $08^{\prime}$ |  |  | 36' |  |  |
| Oct 122021 | -07 | -06 ${ }^{\circ} 23^{\prime}$ | -2 | -06 |  |  |  | -04³ $37^{\prime}$ |  |  |
|  | -07 | -05 $41^{\prime}$ |  |  |  |  |  | 37' |  |  |
| 促1 | -08 | 05 ${ }^{\circ} 02^{\prime}$ |  |  |  |  |  | 38' |  |  |
|  | -0 | $4^{\circ} 28{ }^{\prime}$ |  |  |  |  |  | 38' |  |  |
| Oct 162021 | -08 | -03 ${ }^{\circ} 58$ |  |  | '-15 $09^{\prime}$ |  |  | ' | -22 |  |
| 172021 | -09 | -03 ${ }^{\circ} 33^{\prime}$ | -25 | -070 40 | '-1509' |  |  | ' |  |  |
| 1 | -0 | -03 ${ }^{\circ} 14^{\prime}$ |  |  |  |  |  | 40' |  |  |
| 1 | -10 | $3^{\circ} 01^{\prime}$ | -25 |  | $5^{\circ} 08^{\prime}$ |  |  | 40' |  | - |
| Oct 202021 | -10 | -0254' |  |  |  |  |  | $4^{\circ} 4{ }^{\prime}$ |  |  |
| 212021 | -10 | -02 ${ }^{\circ} 52^{\prime}$ | -25 |  | - |  | +15 ${ }^{\circ} 27^{\prime}$ | 41' | -2 |  |
|  | -11 | $2^{\circ} 56$ |  |  | ' |  |  |  |  |  |
| 21 | -11 | -03 $04^{\prime}$ |  |  | $5^{\circ} 07^{\prime}$ |  |  | $4^{\circ} 42$ |  |  |
| Oct 242021 | -11 | -03 ${ }^{\circ} 17$ | -2 |  | 07' | -19 ${ }^{\circ} 18^{\prime}$ |  | $4^{\circ} 431$ |  | $6^{\circ} 01^{\prime}$ |
| Oct 252021 | -1 | -03³4' |  |  |  |  |  | 43' |  |  |
|  | $-12^{\circ} 30$ | -035 $5^{\prime}$ | -26 ${ }^{\circ}$ | 09 | - |  |  | ' |  |  |
|  |  | $4^{\circ} 19$ |  |  |  |  |  | ' |  | ' |
| 21 | -13 | -04²6' | -26 | '-10²6' | 04' | $6^{\prime}$ |  | $4^{\circ} 44^{\prime}$ | -2 | 05 ${ }^{\circ} 57$ |
| Oct 292021 | -1 | 15' | -2 | '-1041' | 03' | 16' |  | $4^{\circ} 45^{\prime}$ | $-22^{\circ} 52$ | - |
| Oct 30 | -13 | -05 ${ }^{\circ}{ }^{\prime}$ | - | 10 56 | $15^{\circ} 02$ |  | + | 04 ${ }^{\circ} 45^{\prime}$ | $-22^{\circ} 52$ | $5^{\circ} 55^{\prime}$ |
| 21 | - | 20 |  |  | '-15 ${ }^{\circ} 01^{\prime}$ | ' |  |  |  |  |
| Nov 12021 | -14 | 0654' |  | '-11²5' |  |  |  | 46' |  | 53' |
| 21 | -14* 48 | 07 ${ }^{\circ} 30^{\prime}$ | $-27^{\circ} 0$ | - | -1459' | ' | +15 ${ }^{\circ} 18^{\prime}$ | -04²6' | $-22^{\circ} 52$ | $5^{\circ} 52^{\prime}$ |
| Nov 32021 | -15 ${ }^{\circ} 07$ | 08º $0{ }^{\prime}$ | $-27^{\circ} 1$ | 115 53 | -14 $58^{\prime}$ | -19 $13 '$ | +15 ${ }^{\circ} 17^{\prime}$ | -0447' | -22 | $5^{\circ} 51$ |
| ov 42021 | -15 ${ }^{\circ} 25^{\prime}$ | -08${ }^{\circ} 43^{\prime}$ | $-27^{\circ} 12^{\prime}$ | $12^{\circ} 08^{\prime}$ | -1457' | $9^{\circ} 13^{\prime}$ | + | -04${ }^{\circ} 47^{\prime}$ | -2 | $+05^{\circ} 50^{\prime}$ |
| 21 | -15 ${ }^{\circ} 44^{\prime}$ | 09²1' | $-27^{\circ} 1$ | $2^{\circ} 22^{\prime}$ | - $14^{\circ} 56{ }^{\prime}$ | 9 |  | -0447' |  |  |
| 1 | $-16^{\circ} 02 \cdot$ | $-09^{\circ} 58^{\prime}$ | -27 |  | -14 |  |  | 040 ${ }^{\circ}$ |  |  |


| EST $+05: 00$ Tropical Geocentric Decl | Sun | rcury ४ | Venus + | Mars $\sigma^{\prime}$ | Jupiter | $\begin{gathered} \text { Saturn } \\ \hbar \end{gathered}$ | Uranus然 | Neptune $\Psi$ | Pluto 우 | Chiron $k$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nov 72021 | $-16^{\circ} 20^{\prime}$ | -1036' |  |  |  |  | + |  | 2251 | +05 47 |
| Nov 82021 | -16³7' | -11 ${ }^{\circ} 14{ }^{\prime}$ | $-27^{\circ} 13^{\prime}$ | 1304' | '-1452' | $-19^{\circ} 10^{\prime}$ |  | -04² ${ }^{\prime}$ | $-22^{\circ} 51$ | ' |
| Nov 9202 | -16 ${ }^{\circ} 54^{\prime}$ | -11 ${ }^{\circ} 52$ | $-27^{\circ} 12^{\prime}$ | 13¹8' | '-1450' | -19 09' |  | -0448' | -22 | 45' |
| Nov 102021 | -17 ${ }^{\circ} 11^{\prime}$ | -12*²9' | -27 | 13 ${ }^{\circ} 32^{\prime}$ | '-14²8' | -19 08' | +15 ${ }^{\circ} 12^{\prime}$ | -04²9' | -22 | 44' |
| Nov 112021 | -170 $28^{\prime}$ | -1306' | $-27^{\circ} 08^{\prime}$ | 130 ${ }^{\prime}$ | '-140 ${ }^{\prime}$ | -19 08' | +15011' | -04²9' | $-22^{\circ} 51$ | 05²3' |
| Nov 122021 | -17* $44^{\prime}$ | -130 $43^{\prime}$ | -270 ${ }^{\prime}$ | $13^{\circ} 59^{\prime}$ | $-14^{\circ} 45^{\prime}$ | $9^{\circ} 07{ }^{\prime}$ | +15 ${ }^{\circ} 10^{\prime}$ | -040 49 | $-22^{\circ} 50$ | 05 ${ }^{\circ} 42^{\prime}$ |
| Nov 132021 | -18 ${ }^{\circ} 00^{\prime}$ | -14*19' | -2702' | 14* 13 | 14* 43 | -19 06' | +15 ${ }^{\circ} 10^{\prime}$ | -0449' | -220 5 | 41' |
| No | -18 ${ }^{\circ} 16^{\prime}$ | $-14^{\circ} 55^{\prime}$ | -26 | $-14^{\circ} 26^{\prime}$ | -14* $41^{\prime}$ | $-19^{\circ} 05^{\prime}$ | +15 ${ }^{\circ} 09^{\prime}$ | -0450' | -2 | $0^{\prime}$ |
| Nov 152021 | -1831' | $-15^{\circ} 30^{\prime}$ | $-26^{\circ} 5$ | -14³9' | '-140 ${ }^{\prime}$ | -19 $04^{\prime}$ | +15 ${ }^{\circ} 08^{\prime}$ | -0450' | -22º 50' | ' |
| Nov 162021 | -18²6' | -1604' | $-26^{\circ} 49^{\prime}$ | -145 51 | '-14³8' | -19 $03^{\prime}$ | +15 ${ }^{\circ} 07{ }^{\prime}$ | -0450' | $-22^{\circ} 50$ | 05 ${ }^{\circ} 39^{\prime}$ |
| Nov 172021 | -19 $01{ }^{\prime}$ | -16³8' | $-26^{\circ} 43^{\prime}$ | 15 ${ }^{\circ} 06^{\prime}$ | '-14³6' | -19 $02^{\prime}$ | +15 ${ }^{\circ} 07{ }^{\prime}$ | -0450' | $-22^{\circ} 50$ | 05 ${ }^{\circ} 38^{\prime}$ |
| Nov 182021 | -19 $16^{\prime}$ | -17* $11{ }^{\prime}$ | -26³8' | 15 ${ }^{\circ} 19^{\prime}$ | -14³ $3{ }^{\prime}$ | -19 02' | +15 ${ }^{\circ} 06^{\prime}$ | -0450' | $-22^{\circ} 49^{\prime}$ | 37' |
| Nov 192021 | -19 ${ }^{\circ} 30^{\prime}$ | -170 43 | $-26^{\circ} 3$ | 15 ${ }^{\circ} 32^{\prime}$ | $-14^{\circ} 31^{\prime}$ |  | +15 ${ }^{\circ} 05^{\prime}$ | -0450' | $-22^{\circ} 49^{\prime}$ | ' |
| Nov 202021 | -19043' | -1814' | $-26^{\circ} 24^{\prime}$ | -15 ${ }^{\circ} 44^{\prime}$ | '-14²9' | $-19^{\circ} 00^{\prime}$ | +15 ${ }^{\circ} 05^{\prime}$ | -0451' | $-22^{\circ} 49^{\prime}$ | $+05^{\circ} 36^{\prime}$ |
| Nov 212021 | -1957' | -18²4' | -26¹7' | 1557' | '-14²7' | -1859' | +15 ${ }^{\circ} 04^{\prime}$ | -0451' | -22* $49^{\prime}$ | +05 ${ }^{\circ} 5^{\prime}$ |
| Nov 222021 | $-20^{\circ} 10^{\prime}$ | -19¹4' | $-26^{\circ} 10^{\prime}$ | 16 ${ }^{\circ} 10^{\prime}$ | $-14^{\circ} 25^{\prime}$ | -1858' | +15 ${ }^{\circ} 03^{\prime}$ | -0451' | $-22^{\circ} 49^{\prime}$ | +05 ${ }^{\circ} 34^{\prime}$ |
| Nov 232021 | -20²2' | -19** ${ }^{\prime}$ | -26 $02{ }^{\prime}$ | $16^{\circ} 22^{\prime}$ | '-14²2' | -1856' | +15 ${ }^{\circ} 03^{\prime}$ | -0451' | $-22^{\circ} 49^{\prime}$ | 33' |
| Nov 242021 | $-20^{\circ} 35^{\prime}$ | -2010' | $-25^{\circ} 53^{\prime}$ | 16 ${ }^{\circ} 34{ }^{\prime}$ | '-14²0' | -1855' | +15 ${ }^{\circ} 02^{\prime}$ | -0451' | -22 | ' |
| Nov 252021 | -2046' | $-20^{\circ} 36$ | -2544' | 1647' | -14*18' | -1854' | +15 | -0451' | $-22^{\circ} 48^{\prime}$ | 32' |
| Nov 262021 | $-20^{\circ} 58{ }^{\prime}$ | -21 ${ }^{\circ} 02$ | $-25^{\circ} 35^{\prime}$ | -1659' | -14* $15^{\prime}$ | $8^{\circ} 53 '$ | $+15^{\circ} 00^{\prime}$ | -0451' | $-22^{\circ} 48^{\prime}$ | 05 $31^{\prime}$ |
| Nov 272021 | -21 ${ }^{\circ} 09^{\prime}$ | -21²7' | $-25^{\circ} 26^{\prime}$ | -17 ${ }^{\circ} 11^{\prime}$ | '-14012' | $8^{\circ} 52 \cdot$ | +15 ${ }^{\circ} 00^{\prime}$ | -0451' | $-22^{\circ} 48^{\prime}$ | 05 $31{ }^{\prime}$ |
| Nov 282021 | -21 ${ }^{\circ} 20^{\prime}$ | $-21^{\circ} 50$ | -25 | 17 ${ }^{\circ} 22^{\prime}$ | '-14¹0' | $1^{\prime}$ | +14* 59 | -0451' | $-22^{\circ} 48^{\prime}$ | +05 ${ }^{\circ} 30^{\prime}$ |
| Nov 292021 | $-21^{\circ} 30^{\prime}$ | -22 ${ }^{\circ} 13^{\prime}$ | $-25^{\circ} 06^{\prime}$ | $-17^{\circ} 34^{\prime}$ | '-1407' | -180 50 | +14* 59 | -0451' | $-22^{\circ} 47^{\prime}$ | +05 ${ }^{\circ} 29^{\prime}$ |
| Nov 302021 | $-21^{\circ} 40^{\prime}$ | -22³4' | $-24^{\circ} 55^{\prime}$ | -17* 46 | '-1404' | -18* $48^{\prime}$ | +14* 58 | -0451' | $-22^{\circ} 47{ }^{\prime}$ | +05 ${ }^{\circ} 9^{\prime}$ |
| Dec 12021 | -2149' | -2254' | $-24^{\circ} 45$ | 175 51 | -14*02' | $8^{\circ} 47{ }^{\prime}$ | +14ํ 57 | -0451' | $-22^{\circ} 47^{\prime}$ | +05 ${ }^{\circ} 28^{\prime}$ |
| Dec 22021 | -2158' | -23¹3' | -24³4' | 1808' | -1359' | -18²6' | +14ํ 57 | -045ㄴ' | $-22^{\circ} 47{ }^{\prime}$ | 05 ${ }^{\circ} 28^{\prime}$ |
| Dec 32021 | -22 ${ }^{\circ} 07$ | -23 ${ }^{\circ} 1^{\prime}$ | -24²2' | 18 ${ }^{\circ} 20^{\prime}$ | -1356' | $-18^{\circ} 45^{\prime}$ | +14* 56 | -0451' | $-22^{\circ} 46^{\prime}$ | +05 ${ }^{\circ} 27$ |
| Dec 42021 | -22 ${ }^{\circ} 5^{\prime}$ | -230 $48^{\prime}$ | -24¹1' | -1831' | '-1353' | $-18^{\circ} 43^{\prime}$ | +14 ${ }^{\circ} 55^{\prime}$ | -0451' | -22 | +05 ${ }^{\circ} 27^{\prime}$ |
| Dec 52021 | -22 ${ }^{\circ} 3^{\prime}$ | -2403' | -2359' | -18* ${ }^{\circ}{ }^{\prime}$ | '-1350' | -18* $42^{\prime}$ | +14*55' | -0451' | $-22^{\circ} 46^{\prime}$ | 05 ${ }^{\circ} 6^{\prime}$ |
| Dec 62021 | -22 ${ }^{\circ} 0^{\prime}$ | $-24^{\circ} 17^{\prime}$ | -23²7' | -1852' | '-13* 47 ' | -180 $41^{\prime}$ | +14*54' | -0451' | $-22^{\circ} 46^{\prime}$ | 05 ${ }^{\circ} 6^{\prime}$ |
| Dec 72021 | -22 ${ }^{\circ} 37$ | $-24^{\circ} 30^{\prime}$ | -23³5' | 19 ${ }^{\circ} 03^{\prime}$ | -13* $44^{\prime}$ | -18 ${ }^{\circ} 3{ }^{\prime}$ | +14*54' | -0451' | $-22^{\circ} 45^{\prime}$ | 05 ${ }^{\circ} 5^{\prime}$ |
| Dec 82021 | $-22^{\circ} 44^{\prime}$ | -24* 42 | $-23^{\circ} 2$ | -1913' | -13* $41^{\prime}$ | -18 ${ }^{\circ} 38^{\prime}$ | +14 ${ }^{\circ} 53^{\prime}$ | -0451' | $-22^{\circ} 45^{\prime}$ | +05 ${ }^{\circ} 5^{\prime}$ |
| Dec 92021 | -22* $49^{\prime}$ | -2452' | -23¹1' | -19²3' | '-13 ${ }^{\circ} 37$ | -18 ${ }^{\circ} 37^{\prime}$ | +14 ${ }^{\circ} 52^{\prime}$ | -04ํ 50' | $-22^{\circ} 45^{\prime}$ | +05 ${ }^{\circ} 24^{\prime}$ |
| Dec 102021 | $-22^{\circ} 55^{\prime}$ | -25 ${ }^{\circ} 1^{\prime}$ | -2259' | -19³3' | '-13 ${ }^{\circ} 34^{\prime}$ | -18 ${ }^{\circ} 35^{\prime}$ | +14* $52^{\prime}$ | -04ํ 50' | $-22^{\circ} 45^{\prime}$ | 05 ${ }^{\circ} 24^{\prime}$ |
| Dec 112021 | $-23^{\circ} 00^{\prime}$ | -2509' | $-22^{\circ} 46^{\prime}$ | 1943' | '-13 ${ }^{\circ} 31^{\prime}$ | -18 ${ }^{\circ} 34^{\prime}$ | +14* 51 | -040 ${ }^{\prime}$ | $-22^{\circ} 44^{\prime}$ | $5^{\circ} 24^{\prime}$ |
| Dec 122021 | $-23^{\circ} 05^{\prime}$ | $-25^{\circ} 15^{\prime}$ | -22 ${ }^{\circ} 33^{\prime}$ | 1953' | -13 ${ }^{\circ} 8^{\prime}$ | -18 ${ }^{\circ} 2^{\prime}$ | +14 ${ }^{\circ}{ }^{\prime}$ | $-04^{\circ} 50$ | $-22^{\circ} 44^{\prime}$ | 05 ${ }^{\circ} 23^{\prime}$ |
| Dec 132021 | $-23^{\circ} 09^{\prime}$ | -25 ${ }^{\circ} 0^{\prime}$ | $-22^{\circ} 2$ | -2003' | $-13^{\circ} 24^{\prime}$ | -18 ${ }^{\circ} 1^{\prime}$ | +14 ${ }^{\circ} 50^{\prime}$ | -0450' | -22 | +05 ${ }^{\circ} 23^{\prime}$ |
| Dec 142021 | -23¹3' | -25 ${ }^{\circ} 23^{\prime}$ | $-22^{\circ} 08^{\prime}$ | -2012' | '-13²1' | -18²9' | $+14^{\circ} 50$ | -040 50 | $-22^{\circ}$ | 05 ${ }^{\circ} 23^{\prime}$ |
| Dec 152021 | $-23^{\circ} 16^{\prime}$ | $-25^{\circ} 25^{\prime}$ | $-21^{\circ} 56$ | -20²1' | - $\mathbf{1 3}^{\circ} 17^{\prime}$ | $-18^{\circ} 28^{\prime}$ | +14* ${ }^{\circ}{ }^{\prime}$ | -040 $49^{\prime}$ | $-22^{\circ} 43^{\prime}$ | $+05^{\circ} 22^{\prime}$ |
| Dec 162021 | -23*19' | -25 ${ }^{\circ} 6^{\prime}$ | -2143' | -20 ${ }^{\circ} 3{ }^{\prime}$ | '-13 ${ }^{\circ} 14^{\prime}$ | $-18^{\circ} 26^{\prime}$ | +14* $49^{\prime}$ | -04²9' | $-22^{\circ} 43^{\prime}$ | $5^{\circ} 22^{\prime}$ |
| Dec 172021 | -23 ${ }^{\circ} 1^{\prime}$ | -25 ${ }^{\circ} 5^{\prime}$ | $-21^{\circ} 3$ | 2039' | -13010' | $-18^{\circ} 25^{\prime}$ | +14* $48^{\prime}$ | -0449' | $-22^{\circ} 4$ | 05 ${ }^{\circ} 22^{\prime}$ |
| Dec 182021 | $-23^{\circ} 23^{\prime}$ | -25 ${ }^{\circ} 23^{\prime}$ | -21 ${ }^{\circ} 18^{\prime}$ | -2048' | '-13 ${ }^{\circ} 06^{\prime}$ | -18²3' | +14* ${ }^{\circ} 8^{\prime}$ | -04²9' | $-22^{\circ} 4$ | $+05^{\circ} 22^{\prime}$ |
| Dec 192021 | -23²4' | -25*19' | -2105' | -2057' | - $13^{\circ} 03^{\prime}$ | -18²2' | +14* $48^{\prime}$ | -04048' | $-22^{\circ} 42^{\prime}$ | $+05^{\circ} 22^{\prime}$ |
| Dec 202021 | -23²5' | -25*13' | $-20^{\circ} 52$ | -21 ${ }^{\circ} 05^{\prime}$ | '-1259' | $-18^{\circ} 20^{\prime}$ | +14* ${ }^{\circ}{ }^{\prime}$ | -040 $48^{\prime}$ | $-22^{\circ} 42^{\prime}$ | +05 ${ }^{\circ} 21^{\prime}$ |
| Dec 212021 | -23²6' | -2507' | $-20^{\circ} 40^{\prime}$ | -21 ${ }^{\circ} 3^{\prime}$ | '-1255' | -18*18' | +14* 47 | -040 $48^{\prime}$ | $-22^{\circ} 42^{\prime}$ | +05 ${ }^{\circ} 21^{\prime}$ |
| Dec 222021 | -23²6' | -245 ${ }^{\prime}$ | $-20^{\circ} 2{ }^{\prime}$ | -21 ${ }^{\circ} 21^{\prime}$ | '-12 ${ }^{\circ} 52^{\prime}$ | $-18^{\circ} 17^{\prime}$ | +14* $46^{\prime}$ | -04²4' | $-22^{\circ} 42^{\prime}$ | 05 ${ }^{\circ} 1^{\prime}$ |
| Dec 232021 | -23 ${ }^{\circ} 25^{\prime}$ | -24* $48{ }^{\prime}$ | $-20^{\circ} 15^{\prime}$ | -21 ${ }^{\circ} 29^{\prime}$ | '-12 ${ }^{\circ} 48^{\prime}$ | -180 $15^{\prime}$ | +14* ${ }^{\circ} 6^{\prime}$ | -040 47 | -22 | $5^{\circ} 21^{\prime}$ |
| Dec 242021 | -23²4' | -24*37' | $-20^{\circ} 03 '$ | -21 ${ }^{\circ} 37^{\prime}$ | '-12 ${ }^{\circ} 44^{\prime}$ | -1814' | +14* $45^{\prime}$ | -04047' | -220 ${ }^{1}$ | +05 ${ }^{\circ} 1^{\prime}$ |
| Dec 252021 | -23²3' | -24²4' | -1951' | -21 ${ }^{\circ} 44^{\prime}$ | '-12* 40 ' | -18*12' | +14* $45^{\prime}$ | -04047' | $-22^{\circ} 41^{\prime}$ | +05 ${ }^{\circ} 1^{\prime}$ |
| Dec 262021 | $-23^{\circ} 21^{\prime}$ | -2409' | -19 ${ }^{\circ} 39^{\prime}$ | $-21^{\circ} 51^{\prime}$ | $-12^{\circ} 36^{\prime}$ | $-18^{\circ} 10^{\prime}$ | +14* $45^{\prime}$ | -04²6' | $-22^{\circ} 40^{\prime}$ | 05 ${ }^{\circ} 21^{\prime}$ |
| Dec 272021 | -23*18' | -2353' | -19²8' | -21 ${ }^{\circ} 58^{\prime}$ | - $12^{\circ} 32^{\prime}$ | -1808' | +14* $44^{\prime}$ | -0446' | $-22^{\circ} 40^{\prime}$ | 05 ${ }^{\circ} 1^{\prime}$ |
| Dec 282021 | -23 ${ }^{\circ} 16^{\prime}$ | $-23^{\circ} 36^{\prime}$ | -19 ${ }^{\circ} 16^{\prime}$ | -22 ${ }^{\circ} 05^{\prime}$ | '-12 ${ }^{\circ} 28^{\prime}$ | -18007' | +14* $44^{\prime}$ | -040 ${ }^{\prime}$ | $-22^{\circ} 4$ | 05 ${ }^{\circ} 21^{\prime}$ |
| Dec 292021 | -23*12' | -23 ${ }^{\circ} 17^{\prime}$ | -19 ${ }^{\circ} 05^{\prime}$ | -22 ${ }^{\circ}{ }^{\prime}$ | '-12 ${ }^{\circ} 24^{\prime}$ | -18 ${ }^{\circ} 05^{\prime}$ | +14* $44^{\prime}$ | -0445' | $-22^{\circ} 40^{\prime}$ | +05 $21^{\prime}$ |
| Dec 302021 | -2309' | -22º 57' | -1854' | -220 $18^{\prime}$ | -12 ${ }^{\circ} 0^{\prime}$ | -1803' | +14* $44^{\prime}$ | -04* $45^{\prime}$ | $-22^{\circ} 39^{\prime}$ | $+05^{\circ} 21^{\prime}$ |
| Dec 312021 | $-23^{\circ} 04^{\prime}$ | $-22^{\circ} 36^{\prime}$ | $-18^{\circ} 4$ | -22²5' | $-12^{\circ} 15^{\prime}$ | $-18^{\circ} 0$ | $+14^{\circ} 4$ | -0444' | -22* $39^{\prime}$ | $+05^{\circ} 21^{\prime}$ |

