## A sample page from: The New American Ephemeris, 2007-2020

by Rique Pottenger. Based on the earlier work of Neil Michelsen
Daily longitudes for: Sun, Mean Node, True Node, Mercury, Venus, Mars, Ceres, Jupiter, Saturn, Chiron, Uranus, Neptune \& Pluto

Daily Declinations \& Latitudes for: Sun, Mercury, Venus, Mars, Ceres, Jupiter \& Saturn.
Every 12 hours: The Moon's longitude, latitude \& declination
Every 5 days: Longitudes of Pallas, Juno, Vesta.
Declination \& Latitude of Chiron, Uranus, Neptune, Pluto, Pallas, Juno, Vesta, Eris
Monthly: Julian Day. Obliquity. SVP on Aldebaran. Galactic Center. Longitude for Eris
Moon's phases. Date/time of Moon's maximum \& minimum declination (N/S) \& equatorial crossings.
Moon's void of course \& sign ingress
Daily Aspectarian, which includes Chiron \& Ceres. Times are 24 h clock, not am/pm, as in earlier ACS editions

## December 2020 <br> LONGITUDE

| Day | Sid.Time | $\bigcirc$ | D | D 12 hour | Mean88 | True 8 | \% | 9 | $0^{8}$ | $?$ | 4 | ち | $\delta$ | \% | 7 | P |  | st of Month |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | h m s |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Julian Day * |  |
|  | $44114$ | $\begin{array}{r} 9 \times 1443 \\ 10 \end{array}$ | 15 II 5635 28 10 | $\left\lvert\, \begin{array}{r} 22 \text { II } 0211 \\ 4 \text { S } 2030 \end{array}\right.$ | $\left\|\begin{array}{l\|l\|} 201299.9 \\ 20 & 26.7 \end{array}\right\|$ | $\left\lvert\, \begin{aligned} & 19 \text { II } 53.3 \\ & 19053.3 \end{aligned}\right.$ | $\left\|\begin{array}{r} 28 m 42.5 \\ 0 \times 16.1 \end{array}\right\|$ | $\left\|\begin{array}{lr} 11 m & 42.2 \\ 12 & 56.8 \end{array}\right\|$ | 17 r 03.2 | $\begin{aligned} & 3+42.2 \\ & 3 \quad 55.3 \end{aligned}$ | $26 \mathrm{~F} 08.8$ $2620.6$ | $\left.\begin{array}{rr} 28 & 24.3 \\ 28 & 29.8 \end{array} \right\rvert\,$ | $5 \Upsilon 02.6$ | $7831.0$ | $18409.8$ | $23116.1$ |  | $2459184.5$ |
|  | 44907 | 111621 | 10 こ33 37 | 164938 | 2023.5 | 1953.9 | 49.7 | 14 11.4 | 1729.0 | 08.7 | 2632.5 | 2835.3 | 501.1 | 727.1 | 1810.0 | 23 19.2 | Obliquity $23^{\circ} 26^{\prime} 13^{\prime \prime}$ |  |
|  | 45304 | 121711 | 230847 | 293116 | 20 20.3 | 1954.6 | $3 \quad 23.4$ | $15 \quad 26.0$ | 1742.7 | 22.4 | $26 \quad 44.4$ | $28 \quad 40.9$ | 00. | 25.2 | 1810.2 | 2320.8 | $\begin{gathered} 23^{\circ} 26^{\prime} 13^{\prime \prime} \\ \text { SVP } 4 \not+58^{\prime} 21^{\prime \prime} \end{gathered}$ |  |
| 5 S | 45700 | $13 \quad 1803$ | $5 \Omega 5719$ | 12 Я 2710 | 2017.2 | 1955.4 | 457.1 | $16 \quad 40.7$ | 1757.1 | 36.2 | 2656.5 | 2846.6 | 59. | 23.3 | 1810.4 | $23 \quad 22$ | GC $27 \times 07.9$ Eris 23r35.9R |  |
| 6 Su | 500 | $14 \quad 1857$ | 1901 | $25 \quad 39$ | 2014.0 | 1956.0 | 30.8 | 1755.4 | 1812.0 | 50.2 | $27 \quad 08.6$ | 28 52.3 | 59. | 21.5 | 1810.6 | 23 |  |  |
|  | 50453 | $15 \quad 1951$ | 2 m 2141 | 9 m 0849 | 2010.8 | 1956.4 | $8 \quad 04.5$ | 1910.1 | 1827.5 | 04.5 | $27 \quad 20.8$ | $28 \quad 58.1$ | 58.7 | 19.7 | 1810.9 | $23 \quad 25$. | $\begin{array}{\|l\|} \hline \text { Eris } 23 r 35.9 R \\ \hline \text { Day } \% \end{array}$ |  |
| 8 TU | 5085 | $16 \quad 2047$ | 160039 | 225714 | 2007.6 | 19R 56.5 | 9 | 2024.9 | 1843.4 | 18.9 | 27 | 2903.9 | 58 | 17.9 | 1811.2 | $23 \quad 27.3$ | $128{ }^{\circ} 01.3$ |  |
|  | 51247 | $17 \quad 2144$ | 295832 | $7 \simeq 0426$ | 2004.5 | 1956.4 | 1112.1 | 21 | 1900.0 | 33.6 | 2745.4 | 2909.8 | 57.8 | 16.1 | 1811.5 | 23.0 | 62932.2 |  |
| 10 | 51643 | $18 \quad 2242$ | $14 \sim 1443$ | 212901 | 2001.3 | 1956.3 | 245.9 | 2254.5 | 1917.0 | 48.4 | $27 \quad 57.9$ | 2915.7 | 57. | 14. | 1811.8 | 2330.7 | $11{ }^{1} 1004.9$ |  |
| 11 | 52040 | 19 | 1284654 | $6 \mathrm{mbo7} 46$ | 1958.1 | 19D 56.2 | $14 \begin{array}{ll}19.8 \\ 15 & 53.7\end{array}$ | 24 | 1934.5 | 03.5 | 2810.4 | 29 | 57. | 12.8 | 1812.2 | 2332. | 16.239 .5 |  |
| 12 Se | 52436 | $20 \quad 2443$ | 13 m 3055 | 205534 | 1954.9 | 1956.2 | $15 \quad 53.7$ | $25 \quad 24.2$ | 1952.6 | 18.7 | $28 \quad 22.9$ | 2927.7 | 56.9 | 11.2 | 1812.7 | $23 \quad 34$. | $\begin{array}{l\|ll} 21 & 4 & 15.5 \\ 26 & 5 & 52.9 \\ 31 & 7 & 31.3 \end{array}$ |  |
|  | 52833 | $21 \quad 2544$ | 28.2050 | $5 \times 4547$ | 1951.8 | $19 \quad 56.3$ | $17 \quad 27.7$ | 26 | 2011.1 | 34.2 | $28 \quad 35.6$ | 2933.8 | 56.7 | 09. | 1813.1 | $23 \quad 35$. |  |  |
|  | 53229 | $22 \quad 2647$ | $13 \times 10928$ | $20 \quad 3056$ | 1948.6 | 19R 56.4 | 1901.7 | 2753.9 | 2030.1 | 49.8 | 2848.3 | 2940.0 | 56.6 | 08.1 | 1813.6 | 2337.6 | $\begin{array}{l\|lll} 31 & 7 & 31.3 \\ \hline \end{array}$ |  |
|  | 53626 | $23 \quad 2751$ | $\begin{array}{llll}27 & 49 & 17\end{array}$ | 5 म03 42 | 19 45.4 | 1956.4 | 2035.9 | 2908.9 | 2049.6 | 05.6 | 2901.1 | 2946.1 | 4D 56.5 | 06.6 | 1814.2 | $23 \quad 39$. |  |  |
|  | 54022 | $24 \quad 2855$ | 12 113 27 | 191758 | 19 | 1956.1 | 2210.1 | $0 \times 23.8$ | 2109.5 | $7 \quad 21.6$ | 2913.9 | 2952.4 | 456.5 | $7{ }^{7}$ | 1814.7 | 2341.2 | $1{ }^{1}$ 24m ${ }^{\text {\% }}$ |  |
| 17 | 54419 54816 | $\begin{array}{ll}25 & 3000 \\ 26 & 31\end{array}$ | 26 9 9 | $\begin{array}{r}3 W 0930 \\ 16 \\ \hline 6318\end{array}$ | 19 | 19554.6 | 23 24.5 | $\begin{array}{ll}1 & 38.8 \\ 2 & 53\end{array}$ | 21129.9 | $\begin{array}{ll}7 & 37.8 \\ 7 & 54\end{array}$ | 29 236.8 | 2958.7 | $\begin{array}{lll}4 & 56.5 \\ 4 & 56.5\end{array}$ | $\begin{array}{ll}7 & 03.7 \\ 7 & 02.7\end{array}$ | 1818.4 | 2343.0 | $6{ }_{6} \mathbf{2 5} 478.4$ |  |
| $19$ | $\begin{array}{lll} 5 & 48 & 16 \\ 5 & 52 & 12 \end{array}$ | $\begin{array}{ll}26 & 3106 \\ 27 & 3211\end{array}$ |  | $\left\lvert\, \begin{array}{ll} 16 & 36 \\ 29 & 18 \\ 29 \end{array}\right.$ | $\left\lvert\, \begin{array}{ll}19 & 35.9 \\ 19 & 32.7\end{array}\right.$ | 19194.9 19 | 2525 <br> 26 <br> 19.6 | 253.7 | 21 2120.7 | $\begin{array}{ll}7 & 54.1 \\ 8 & 10.6\end{array}$ | 29 39.8 | OW05.0 | 456.6 | $7 \quad 02.3$ | 1816.0 | 2344.8 | 1127 |  |
|  | 5 | $28 \quad 3317$ | $6+0107$ | 12 + 1824 | 1929.5 | $19 \quad 53.0$ | 2828.4 | 23.7 | 2233.6 | 27.3 | 0w05.9 | 17.8 | 56.9 | 59. | 17.4 |  | 162906.4 |  |
|  | 600 | $29 \quad 3423$ | $18 \quad 3054$ | $24 \quad 3907$ | 1926.3 | 19D 52.4 | OP03.4 | 38.7 | 2255.6 | 44.2 | $0 \quad 19.1$ | 24.2 | 57.2 | 58.5 | 18.1 | 2350.3 | 26 2 21.0 <br> 31 3 56.1 |  |
| 22 | 60402 | Or 3530 | 0 24338 | 6 r 4501 | 1923.2 | 1952.1 | 138.6 | 53.8 | 2318.0 | 01.2 | 32.3 | 30.7 | 57.5 | 57.3 | 1818.9 | 2352.1 |  |  |
|  |  | 11 36 | 124352 | $18 \quad 4048$ | 1920.0 | 1952.4 | 313.9 | 908.8 | 2340.8 | 18.3 | 45.5 | 37.2 | 57.8 | 56.1 | 1819.7 | 2354.0 | * |  |
|  | 611 | 23743 | $24 \quad 3623$ | 0 ర 3114 | 1916.8 | 1953.2 | 449.5 | 1023.8 | 24 04.0 | 35.7 | 58.8 | 43.8 | 58.2 | 55. | 20.5 | 2355. | 13 m 29.1 |  |
|  | 615 | $\begin{array}{lll}3 & 38 \\ 4 & 50\end{array}$ | 6 ర 2554 | $12 \quad 2056$ | 1913.6 | 1954.5 | $6 \quad 25.3$ | 1138.9 | $24 \quad 27.5$ | 953.1 | 12.2 | 50.4 | 58.7 | 54.0 | 1821.4 | 2357.8 | 1 13  <br> 6 14 59.1 <br> 6 14 51.4 |  |
| 26 | 6 | 39 | 18 | 24 | 19 | 19 | 801.3 | 1254.0 | 2451.4 | 10 | 25 | 057.0 | 459.2 | 653.0 | 1822 | 23 | $16 \quad 07.8$ |  |
|  | 623 | 54105 | OII 1307 | 6 II 1420 | 1907.3 | $19 \quad 57.2$ | 937.6 | 14 | 2515.6 | 1028.5 | 39.0 | 03.7 | 59.8 | 52.0 | $18 \quad 23.2$ | 2401.6 |  |  |
|  | 62741 | 6 7 4213 | 121804 | $18 \quad 2436$ | 1904.1 | 19R 58.1 | 11 | 15 | 25 | 1046.5 | 52.5 | 10.4 | 00.5 | 51.1 | 1824.2 | 2403.5 | 11 18 17.6 <br> 26 18 20.0 <br> 31 19 14.5 <br>  20 00.4 |  |
|  | 63138 63534 | $\begin{array}{ll}7 & 4320 \\ 8 & 4428\end{array}$ | 24 <br> 760 <br> 7 | $\begin{array}{r}0-4703 \\ 13 \\ \hline 2302\end{array}$ | $\begin{array}{ll}19 & 00.9 \\ 18 & 578\end{array}$ | 1958.2 | $\begin{array}{ll}12 & 50.9 \\ 14 & 28.0\end{array}$ | $\begin{array}{lll}16 & 39.2 \\ 17 & 54.4\end{array}$ | 26 26.0 | $\begin{array}{ll}11 & 04.5 \\ 11 & 22.7\end{array}$ | 06.1 | 17. | 501.2 | 50.2 | 1825.2 | $24 \quad 05.5$ |  |  |
| 31 | 639 | ¢ 4536 | 1946 | $26 \quad 1308$ |  | 19 T 55.5 |  |  |  | 11+41.1 | 2N33.3 | $1 \times 30.7$ | $5 \bigcirc 02.7$ |  | 26. |  |  |  |




