

Location:

Lat: 38.7151 N Long: 77.1811 W

Time from UTC: -5

| Date     | Sun  |      | C Twi |      | N Twi |      | A Twi |      | Moon |      | Moon<br>Illum |
|----------|------|------|-------|------|-------|------|-------|------|------|------|---------------|
|          | R    | S    | B     | E    | B     | E    | B     | E    | R    | S    |               |
| 20240301 | 0640 | 1802 | 0613  | 1829 | 0543  | 1900 | 0512  | 1931 | ---- | 0919 | 73.7%         |
| 20240302 | 0639 | 1803 | 0612  | 1830 | 0542  | 1901 | 0511  | 1932 | 0013 | 0951 | 64.6%         |
| 20240303 | 0637 | 1804 | 0611  | 1831 | 0540  | 1902 | 0509  | 1933 | 0120 | 1031 | 54.7%         |
| 20240304 | 0636 | 1805 | 0609  | 1832 | 0539  | 1903 | 0508  | 1934 | 0225 | 1121 | 44.2%         |
| 20240305 | 0634 | 1806 | 0608  | 1833 | 0537  | 1904 | 0506  | 1935 | 0327 | 1222 | 33.7%         |
| 20240306 | 0633 | 1807 | 0606  | 1834 | 0536  | 1905 | 0505  | 1936 | 0421 | 1334 | 23.6%         |
| 20240307 | 0631 | 1808 | 0605  | 1835 | 0534  | 1906 | 0503  | 1937 | 0507 | 1452 | 14.5%         |
| 20240308 | 0630 | 1809 | 0603  | 1836 | 0533  | 1907 | 0502  | 1938 | 0545 | 1611 | 7.1%          |
| 20240309 | 0628 | 1810 | 0602  | 1837 | 0531  | 1908 | 0500  | 1939 | 0617 | 1730 | 2.2%          |
| 20240310 | 0627 | 1811 | 0600  | 1838 | 0530  | 1909 | 0459  | 1940 | 0645 | 1848 | 0.1%          |
| 20240311 | 0726 | 1913 | 0659  | 1939 | 0628  | 2010 | 0557  | 2041 | 0812 | 2104 | 1%            |
| 20240312 | 0724 | 1914 | 0657  | 1940 | 0626  | 2011 | 0556  | 2042 | 0839 | 2220 | 4.9%          |
| 20240313 | 0722 | 1915 | 0656  | 1941 | 0625  | 2012 | 0554  | 2043 | 0909 | 2336 | 11.3%         |
| 20240314 | 0721 | 1916 | 0654  | 1942 | 0623  | 2013 | 0552  | 2044 | 0942 | ---- | 19.7%         |
| 20240315 | 0719 | 1917 | 0653  | 1943 | 0622  | 2014 | 0551  | 2045 | 1020 | 0050 | 29.3%         |
| 20240316 | 0718 | 1918 | 0651  | 1944 | 0620  | 2015 | 0549  | 2046 | 1106 | 0200 | 39.6%         |
| 20240317 | 0716 | 1919 | 0649  | 1945 | 0618  | 2016 | 0548  | 2047 | 1159 | 0303 | 50.1%         |
| 20240318 | 0715 | 1920 | 0648  | 1946 | 0617  | 2017 | 0546  | 2048 | 1257 | 0357 | 60.2%         |
| 20240319 | 0713 | 1921 | 0646  | 1947 | 0615  | 2018 | 0544  | 2049 | 1359 | 0441 | 69.6%         |
| 20240320 | 0711 | 1921 | 0645  | 1948 | 0614  | 2019 | 0543  | 2050 | 1502 | 0518 | 78.1%         |
| 20240321 | 0710 | 1922 | 0643  | 1949 | 0612  | 2020 | 0541  | 2052 | 1604 | 0548 | 85.5%         |
| 20240322 | 0708 | 1923 | 0642  | 1950 | 0610  | 2021 | 0539  | 2053 | 1705 | 0613 | 91.5%         |
| 20240323 | 0707 | 1924 | 0640  | 1951 | 0609  | 2022 | 0538  | 2054 | 1804 | 0635 | 96%           |
| 20240324 | 0705 | 1925 | 0638  | 1952 | 0607  | 2023 | 0536  | 2055 | 1902 | 0655 | 98.8%         |
| 20240325 | 0704 | 1926 | 0637  | 1953 | 0606  | 2024 | 0534  | 2056 | 2000 | 0715 | 100%          |
| 20240326 | 0702 | 1927 | 0635  | 1954 | 0604  | 2025 | 0532  | 2057 | 2100 | 0736 | 99.3%         |
| 20240327 | 0700 | 1928 | 0634  | 1955 | 0602  | 2026 | 0531  | 2058 | 2202 | 0758 | 96.9%         |
| 20240328 | 0659 | 1929 | 0632  | 1956 | 0601  | 2027 | 0529  | 2059 | 2306 | 0822 | 92.6%         |
| 20240329 | 0657 | 1930 | 0630  | 1957 | 0559  | 2028 | 0527  | 2101 | ---- | 0852 | 86.7%         |
| 20240330 | 0656 | 1931 | 0629  | 1958 | 0558  | 2029 | 0525  | 2102 | 0011 | 0929 | 79.2%         |
| 20240331 | 0654 | 1932 | 0627  | 1959 | 0556  | 2030 | 0524  | 2103 | 0116 | 1014 | 70.4%         |

.... means sun or moon below horizon all day or  
twilight never begins

\*\*\*\* means sun or moon above horizon all day  
or twilight never ends

---- in rise column means no rise that day and  
in set column - no set that day

R - Rise

S - Set

B - Beginning

E - Ending

C Twi - Civil Twilight: Sun is 6 deg below the horizon  
N Twi - Nautical Twilight: Sun is 12 deg below the horizon  
A Twi - Astonomical Twilight: Sun is 18 deg below the horizon  
Moon Illumination is valid 00:01L for that day.