

Location:

Lat: 38.7151 N Long: 77.1811 W

Time from UTC: -4

Date	Sun		C Twi		N Twi		A Twi		Moon		Moon Illum
	R	S	B	E	B	E	B	E	R	S	
20240701	0548	2037	0516	2109	0436	2149	0351	2234	0201	1638	25.5%
20240702	0549	2037	0517	2109	0437	2149	0352	2234	0235	1751	16.4%
20240703	0549	2037	0517	2109	0437	2149	0352	2233	0316	1901	9.1%
20240704	0550	2037	0518	2109	0438	2148	0353	2233	0405	2005	3.9%
20240705	0550	2036	0519	2108	0439	2148	0354	2232	0503	2058	0.9%
20240706	0551	2036	0519	2108	0439	2148	0355	2232	0606	2142	0.2%
20240707	0551	2036	0520	2108	0440	2147	0356	2231	0713	2217	1.8%
20240708	0552	2036	0521	2107	0441	2147	0357	2231	0818	2245	5.3%
20240709	0553	2035	0521	2107	0442	2146	0358	2230	0922	2310	10.5%
20240710	0553	2035	0522	2106	0443	2146	0359	2229	1022	2332	17.2%
20240711	0554	2034	0523	2106	0443	2145	0400	2228	1121	2352	25%
20240712	0555	2034	0524	2105	0444	2144	0401	2227	1219	----	33.6%
20240713	0555	2033	0524	2105	0445	2144	0402	2227	1318	0011	42.8%
20240714	0556	2033	0525	2104	0446	2143	0403	2226	1418	0032	52.2%
20240715	0557	2032	0526	2104	0447	2142	0404	2225	1521	0056	61.7%
20240716	0557	2032	0527	2103	0448	2141	0405	2224	1626	0124	71%
20240717	0558	2031	0528	2102	0449	2141	0406	2223	1733	0158	79.6%
20240718	0559	2031	0528	2101	0450	2140	0407	2222	1838	0240	87.2%
20240719	0600	2030	0529	2101	0451	2139	0408	2221	1938	0333	93.4%
20240720	0601	2029	0530	2100	0452	2138	0410	2219	2030	0437	97.7%
20240721	0601	2028	0531	2059	0453	2137	0411	2218	2113	0550	99.7%
20240722	0602	2028	0532	2058	0454	2136	0412	2217	2148	0706	99.1%
20240723	0603	2027	0533	2057	0455	2135	0413	2216	2218	0823	95.8%
20240724	0604	2026	0534	2056	0456	2134	0415	2215	2245	0938	89.9%
20240725	0605	2025	0535	2056	0457	2133	0416	2213	2311	1052	81.7%
20240726	0605	2024	0536	2055	0458	2132	0417	2212	2336	1204	71.9%
20240727	0606	2023	0537	2054	0459	2131	0419	2211	----	1317	60.9%
20240728	0607	2023	0538	2053	0501	2130	0420	2209	0004	1429	49.6%
20240729	0608	2022	0538	2052	0502	2128	0421	2208	0036	1542	38.5%
20240730	0609	2021	0539	2050	0503	2127	0423	2206	0114	1652	28.1%
20240731	0610	2020	0540	2049	0504	2126	0424	2205	0200	1757	19%

Key

.... 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.