NOVEMBER 2018

EVENING PLANETS: Mercury (1–8), Mars, Saturn
MORNING PLANETS: Venus

THE SKY (mountain time zone)

4  2:00 a.m.  Daylight saving time ends
5  10:31 a.m.  South Taurid meteor shower peak*
7  9:02 a.m.  New moon: moonrise, 6:21 a.m.; moonset, 5:20 p.m.
11  7:21 p.m.  Moon at greatest southern declination: 21.4° S
12  9:48 a.m.  North Taurid meteor shower peak*
13  7:04 a.m.  Moon at descending node
14  8:57 a.m.  Moon at apogee; 251,220 miles from Earth (404,300 km)
15  7:54 a.m.  First quarter moon: moonrise, 1:08 p.m.; moonset, 11:46 p.m.
17  4:05 p.m.  Leonid meteor shower peak**
22 10:39 p.m.  Full moon: moonrise, 4:45 p.m.; moonset, 5:57 a.m.
25  6:48 p.m.  Moon at greatest northern declination: 21.5° N
26  5:10 a.m.  Moon at perigee; 227,795 miles from Earth (366,600 km)
10:18 p.m.  Moon at ascending node
29  5:19 p.m.  Last quarter moon: moonrise, 11:44 p.m.; moonset, 12:39 p.m.

*The Taurids are associated with comet Encke and are named after their radiant point in the constellation Taurus. Due to the size of the comet's debris stream, Earth takes several weeks to pass through it, causing an extended period of meteor activity. The Taurids are also made up of weightier material, pebbles instead of dust grains. If large enough, these meteors may become bolides, with spectacular light shows and even audible sound. The maximum hourly rate typically reaches about 10–15.

**The Leonid appears to radiate from within the constellation of Leo and is best viewed in the predawn hours between midnight and dawn. This year’s expected observation rate is 20 meteors per hour.

THE PLANETS

Mercury can be found very low in evening twilight but unfavorably for northern hemisphere observers most of the month.

Venus, in “Morning Star” mode, emerges in morning twilight early in the month. At midmonth Venus rises near 4:30 a.m., transits about 9:45 a.m., and sets around 3:15 p.m. Its apparent visual magnitude is -4.6.

Mars moves from Capricornus into Aquarius but continues to fade over the course of the month. The first quarter moon makes a close pass on the evening of the 15th and 16th. At midmonth Mars rises near 1:15 p.m., transits about 6:30 p.m., and sets around 1:45 p.m. Its apparent visual magnitude is -0.3.

Jupiter may be glimpsed with difficulty in early evening twilight at the beginning of the month, but rapidly disappears into sunset as it approaches conjunction with the sun on the 26th. At midmonth Jupiter rises near 7:15 a.m., transits about 12:15 p.m., and sets around 5:15 p.m. Its apparent visual magnitude is -1.7.

Saturn can be found with increasing difficulty low in the southwest evening twilight. The four-day-old moon passes nearby on the 11th. At midmonth Saturn rises near 10 a.m., transits about 2:45 p.m., and sets around 7:30 p.m. Its apparent visual magnitude is +0.6.

Uranus, on the border of Aries and Pisces, is well-placed fairly high in the evening sky for observers. At midmonth Uranus rises near 4:30 p.m., transits about 11:15 p.m., and sets around 5:45 a.m. Its apparent visual magnitude is +5.6.

Neptune can be found among the stars of Aquarius and is visible throughout most of the night. The moon makes a close pass on the evening of the 16th. Neptune resumes direct eastward motion on the 26th. At midmonth Neptune rises near 2:45 p.m., transits about 8:30 p.m., and sets around 2 a.m. Its apparent visual magnitude is +7.8.