

July Skies

One planet we often overlook in these discussions is Earth! When we talk about the Earth's orbit we generally say that it is 93 million miles from the Sun! In round numbers, this is called 1 Astronomical Unit or 1 AU. Distances to other planets are often expressed as multiples or fractions of an Astronomical Unit

However, the Earth does not travel in a perfectly circular orbit around the Sun. Its actual orbit is somewhat elliptical and during the summer season in the northern hemisphere, the Earth actually reaches its furthest point from the Sun. This point is called the aphelion and this year will be reached on July 3rd, at about 5 PM Mountain Time, when the Earth will be 94,507, 915 miles from the Sun! It has always amused me that our hottest season is when we are furthest from the Sun. However, this distance is only about 3.4% further than perihelion, in early January, when the Earth is closest to the Sun!

Saturn is moving further west each night and is becoming ever harder to spot. By the third week of July we will lose sight of the ringed planet. Mars is also moving further west but at a slower pace. On the evening of July 22nd, Mars will have a close encounter with the bright star Regulus, at magnitude +1.4, in the constellation of Leo, the Lion.

Jupiter continues to appear as the most prominent object in the evening sky, high to south at sunset. With its eleven hour rotation there have been numerous sightings of the Great Red Spot and Red Jr. which follows about an hour and a half behind Great Red.

Venus continues to shine brightly in the east-northeastern sky about 20 degrees above the horizon at one hour before sunrise. On July 2nd it will be only 4 degrees above and to the left of the bright star Aldebaran in the constellation Taurus, the Bull.

The Moon will be first quarter on the 3rd, full on the 10th, last quarter on the 17th, and new on the 25th. During the early morning hours on the 20th, the waning crescent Moon will occult (pass in front of) a number of the stars in the famous Pleiades star cluster. The occultation will last about 3 hours as various of the cluster's stars are covered and uncovered. The fun starts around midnight Mountain Time or at 1 AM or 2 AM for Central and Eastern Time if you are traveling east. This occultation will be easily seen by naked eye but some binoculars or a small telescope will give close up views of stars winking out as they disappear behind the Moon.

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