Astronomical Events of July 2019

July 2    -   **Total Solar Eclipse.**  
A total solar eclipse occurs when the moon completely blocks the Sun, revealing the Sun's beautiful outer atmosphere known as the corona. The path of totality will only be visible in parts of the southern Pacific Ocean, central Chile, and central Argentina. A partial eclipse will be visible in most parts of the southern Pacific Ocean and western South America.

July 9    -   **Saturn at Opposition.**  
The ringed planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. It will be brighter than any other time of the year and will be visible all night long. This is the best time to view and photograph Saturn and its moons. A medium-sized or larger telescope will allow you to see Saturn’s rings and a few of its brightest moons.

July 16   -   **Partial Lunar Eclipse.**  
A partial lunar eclipse occurs when the Moon passes through the Earth’s partial shadow, or penumbra, and only a portion of it passes through the darkest shadow, or umbra. During this type of eclipse a part of the Moon will darken as it moves through the Earth’s shadow. The eclipse will be visible throughout most of Europe, Africa, central Asia, and the Indian Ocean.

July 28, 29   -   **Delta Aquarids Meteor Shower.**  
The Delta Aquarids is an average shower that can produce up to 20 meteors per hour at its peak. It is produced by debris left behind by comets Marsden and Kracht. The shower runs annually from July 12 to August 23. It peaks this year on the night of July 28 and morning of July 29. The waning crescent moon will not be too much of a problem this year. The skies should be dark enough for what could be a good show. Best viewing will be from a dark location after midnight. Meteors will radiate from the constellation Aquarius, but can appear anywhere in the sky.