

Merrillville Community Planetarium
Fact Sheet
January 10, 2019



Total Lunar Eclipse on January 20, 2019

Weather permitting, observers in the North and South America – including Northwest Indiana – will be able to observe a total lunar eclipse during the evening of Sunday, January 20. This is the first total lunar eclipse visible from Northwest Indiana since September 2015.

The moon will be relatively close to Earth on January 20, resulting in a slightly larger, brighter moon. The moon's orbit is elliptical, meaning that the moon is sometimes a little closer to Earth and sometimes a little farther away from Earth. When the moon is at its closest point to Earth, it appears slightly larger – about 7% wider – than when the moon is at its most distant point. The lunar eclipse of January 20 occurs just one day before the moon is at its closest point to Earth on January 21.

The evening of January 20 starts with the rise of the full moon at 4:26 p.m. followed by sunset at 4:50 p.m. The moon begins to enter the dark umbra shadow of Earth at 9:33 p.m. – this is the beginning of the partial eclipse. For the next hour, the dark shadow of Earth will slide across the face of the moon. When the shadow completely covers the Earth-side of the moon – at about 10:41 p.m. – the total eclipse starts. The total lunar eclipse lasts about 62 minutes, ending at 11:43 p.m. Over the next hour, Earth's shadow gradually uncovers the moon until the partial eclipse ends at 12:50 a.m. Monday.

No special preparations are required to observe the lunar eclipse. A lunar eclipse is safe and easy to observe with the unaided eye. If the sky is mostly clear, the eclipse will be easily visible. Even if the sky is partly or mostly cloudy at the beginning of the eclipse, glimpses of the moon may be visible during latter portions of the eclipse.

Viewing of the eclipse can be greatly enhanced by using binoculars. Observers should try to watch the moon at the beginning of the eclipse and then follow the dark shadow of Earth as it moves across the craters and features of the moon. By using a tripod and camera with a zoom lens, it is possible to photograph the eclipse.

As the moon orbits Earth, the moon sometimes passes through the shadow of our planet. When this occurs, the surface of the moon gradually becomes dark. A lunar eclipse may be partial or total depending upon the position of the sun, Earth, and moon.