

Keep your eyes on the sky for October's 'double eclipse'

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The Popular Astronomy Club

Editor's note: The Popular Astronomy Club will do periodic monthly columns on astronomical events that can be viewed in the Quad-Cities area. Here is the first column.

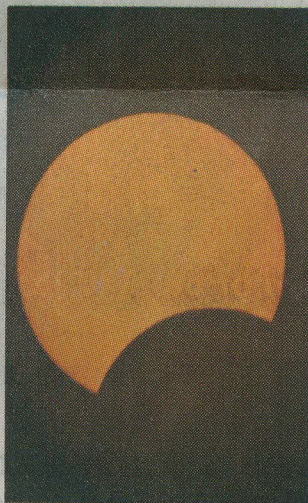
October offers a very nice "double eclipse" opportunity. Early Oct. 8, there will be a lunar eclipse, and 15 days later, on the afternoon of Oct. 23, there will be a partial solar eclipse.

During the course of a year, the earth orbits the sun in a circle 186 million miles in diameter. The moon orbits the earth in a smaller circle about a half-million miles in diameter. These two orbital circles are slightly inclined to each other.

Occasionally, as we have coming up this month, the two orbits align so that on Oct. 8, the moon passes directly into the shadow of the earth as it swings past us in its orbit. When this happens, we have what is known as a lunar eclipse.

On Oct. 8, the full moon will pass into the darkest part of the earth's shadow (called the umbra) about 5:25 a.m. If conditions are good, we might be able to see the moon as a dark, reddish disk, which is called a "blood moon," in the western sky.

It's a truly spectacular occurrence. No telescope is needed. Just get up early with your cup of coffee and look.



Photos: Alan Sheidler / Popular Astronomy Club

This shows a partial solar eclipse taken in 2012 with special photography equipment.

Then, in late afternoon on Oct. 23, there will be a partial solar eclipse. The moon's orbital circle again is aligned with the earth's orbital circle so that the moon actually will pass in front of the sun.

The moon will not totally cover the sun, but graze it starting about 4:36 p.m. and continue until sunset. Do not look directly at the sun under any circumstances, unless you have proper equipment.

The Popular Astronomy Club will have the proper equipment available that afternoon in the parking lot at the Niabi Zoo parking lot, so you can view the partial solar eclipse.

October will provide two opportunities to view eclipses, which doesn't happen often.



A blood moon in April 2014.