

### Lunar eclipse on the way

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An eclipse is a wonderful thing to watch be it solar or lunar.

A solar eclipse occurs when the moon passes between Earth and the Sun blocking the view. A lunar eclipse happens when Earth blocks sunlight from reaching the moon, plunging the lunar body into Earth's dark shadow.

There are two kinds of lunar eclipse. Imagine if you will two circles, a larger one, which we call the penumbra, and a smaller one inside that circle which we call the umbra.

The umbra is the deeper and darker part of Earth's shadow. In the penumbra the shadow is much fainter where sunlight leaks around the edge Earth's horizons out into space.

On Friday, Oct. 18, the moon will be passing through the penumbra, or outer, part of Earth's shadow causing a partial lunar eclipse. The disappointing thing will be that it is very difficult to see.

When the moon rises on that day shortly after 6 p.m. MDT the eclipse will be about half over, at least from our viewpoint. The moon will already be inside the largest part of the penumbra; however, the effects of that shadow will hardly be noticeable as the shadow is so dim.

The eclipse will continue to progress with the faint shadow decreasing until almost 8 p.m. when it will leave the shadow completely.

The only thing that will be noticeable is perhaps the moon is not shining as brightly as a normal full moon would.

That is something else about a lunar eclipse, it can only happen when the moon is full. A solar eclipse occurs only when the moon is at its new stage.

Comet ISON is coming on apace. According to observers it is brightening ever so steadily as it nears the Sun. It will have its closest approach and go around the Sun on Nov. 28, Thanksgiving Day.

At present the comet and the planet Mars are in the morning sky, the best time to look would be no later than an hour to an hour-and-a-half before sunrise, which isn't as bad as it sounds since sunrise today was at about 7 a.m. MDT here in southwest Nebraska.

Tomorrow morning the comet, Mars and the star Regulus, the brightest star in the constellation Leo, the Lion, are all within one degree of each other. Keep in mind the moon is only one-half degree wide so imagine two full moons side by side and that is how far apart they would be.

The comet is shining at about the 10th magnitude which means it could be with the reach of a good pair of binoculars—at least 10x50—and all three would present a nice grouping in the field of view.

Of course, a telescope would present a very nice view, if you have one.

Now—and here is the fine print—don't expect a comet with a large, flowing tail like we have seen with other great comets. You will probably only be able to see a small, probably greenish

blob up next to Mars and Regulus.

SKY WATCH: Full moon, and penumbral eclipse Friday, Oct. 18. Moon near Pleiades on Sunday, Oct. 20, at about 10 p.m. MDT, and near Mars and Comet ISON on Monday, Oct. 28 at 5 a.m. MDT.

NEXT WEEK: More astronomical blathering.