

Overnight Monday night, December 20-21, the Moon will be TOTALLY eclipsed by Earth's shadow. Weather permitting (and the forecast is not good), the eclipse will be visible almost centered on midnight and almost directly overhead. I suggest you look at the full moon after it rises Monday night to compare to the view during the eclipse (especially how it compares to crescents you see in the evening or morning skies, Angela). Look before 9:00 p.m. Notice the color of the Moon at this time.

The timing of the eclipse is given and explained below (24 hour clock; subtract 12 hours for the p.m. time):

Penumbral Eclipse Begins: 21:27:24 PST                      This is invisible from Earth. Somewhere on the Moon a growing partial eclipse of the Sun, a nibble of the Sun's disk caused by Earth, is visible as the Moon enters Earth's penumbral shadow (penumbra).

Partial Eclipse Begins:                      22:32:00 PST                      Starting 10-20 minutes before this event, the Moon's penetration of the penumbra leads to graying of a portion of the Moon's disk. A sharper-edged shadow, Earth's umbra, becomes visible on the Moon after this time. The portion of the Moon inside the umbra is seeing a total eclipse of the Sun. Is the curvature of the umbral shadow (watch as it crosses the Moon) smooth and constant radius or are there bumps or irregularities? Does the shadowed area have any color? What about the area still in the penumbra?

Total Eclipse Begins:                      23:40:12 PST                      All of the Moon is now in Earth's shadow. What color is the Moon? Why? Does the color or shadowed zone change over the next hour and a quarter?

Mid-Eclipse:                                              24:16:48 PST

Total Eclipse Ends:                      24:53:30 PST                      Observer the shadow curvature and color as the Moon exits Earth's umbra.

Partial Eclipse Ends:                      02:01:42 PST                      How long will the penumbra remain visible after the Moon exits the umbra?

Penumbral Eclipse Ends:                      03:06:06 PST                      This phenomenon is invisible to observers, as at the start.

You can find a chart illustrating the event at <http://www.mreclipse.com/LEdata/TLE2010Dec21/image/TLE2010Dec21-PST.GIF> . There's more description at <http://www.mreclipse.com/LEdata/TLE2010Dec21/TLE2010Dec21.html> .

I hope we all have clear skies.

Steve Edberg