

The January 20th Total Lunar Eclipse

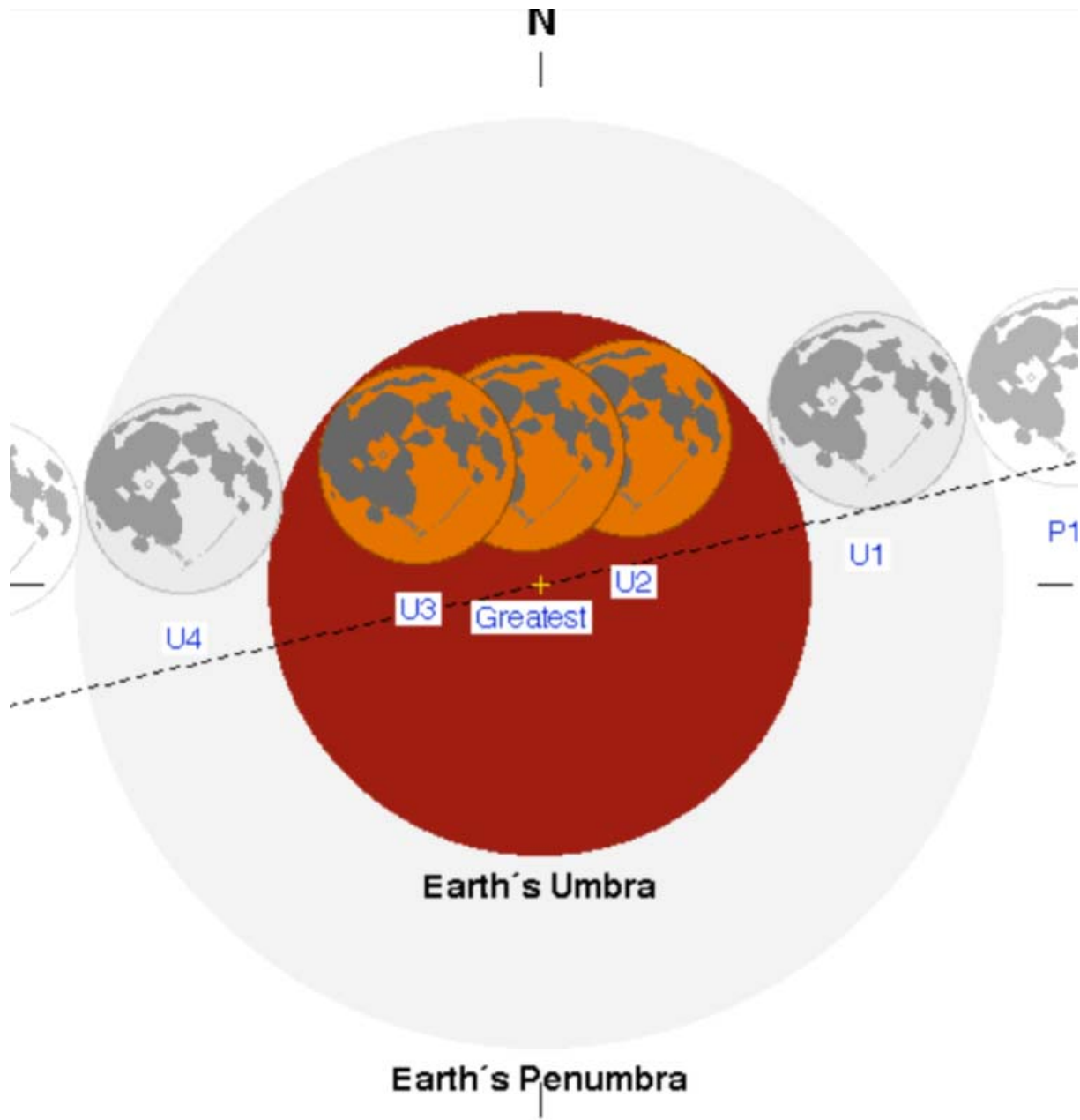
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On the night of January 20th 2019, the moon will pass deeply into the darkest part of earth's shadow, producing a three and a half hour lunar eclipse. This hasn't happened in our evening skies since September 27th 2015, and it won't happen again for another three years, until May 15th 2022.

No two lunar eclipses are alike. This is due to the earth's atmosphere, which bends the light of the Sun around earth's rim. In effect, the Moon will be illuminated by sunset/sunrise earth colors. Depending on clouds, dust, and other phenomenon, that light will produce effects that will color the way the Moon looks.

For Los Angeles, sunset occurs around 5:10pm, and twilight ends around 5:30pm. The moon will already be in the lighter part of earth's shadow, the penumbra, but this is difficult to detect. The moon enters the umbra, the dark part of earth's shadow, around 7:30pm. This part of the eclipse will be obvious even to the unaided eye. The eclipse progresses through the umbra until around 10:50pm.

The chart below is taken from the NASA eclipse website at <<https://eclipse.gsfc.nasa.gov/eclipse.html>>. The light grey area is the penumbra, the barely perceptible outer part of earth's shadow. The red disk is earth's umbra, the part that produces the dark red colors.



As to what you'll see, that can only be answered if you look. I've seen total lunar eclipses that ranged from bright red to almost black. And of course, clouds might interfere, as they did during the last evening total lunar eclipse back in September 27th 2015, when clouds prevented observations of the moon until after the umbral part of the eclipse had passed. Hopefully that will not happen this time around.

And use different magnifications. A magnification around 90x is great for an overall view, but higher mags will reveal how features like the large crater Copernicus change as the earth's shadow passes over it.

Griffith Observatory will probably be hosting an event, as undoubtedly will other observatories/planetariums. The observatory's own telescopes will be trained on the moon, as well as those from the Los Angeles Astronomical Society and the LA Sidewalk Astronomers. And if the September 27th 2015 event was any indication, LOTS of people will join us up there. But you can view the eclipse anywhere. Simply look at the moon !