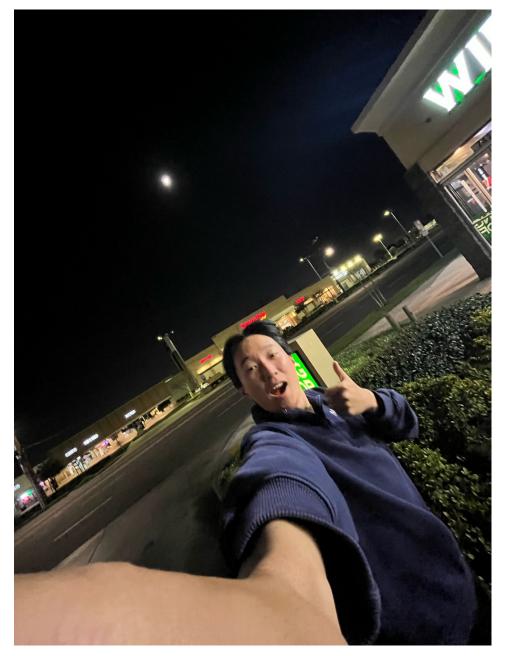
### Lunar Eclipse Observations on March 13th, 2025

Wesley Marshall Physics 1D: Optics and Modern Physics Dr. Susan Stolovy

# Selfie of Me



I was at Wingstop with my friends

# The Penumbral Phase

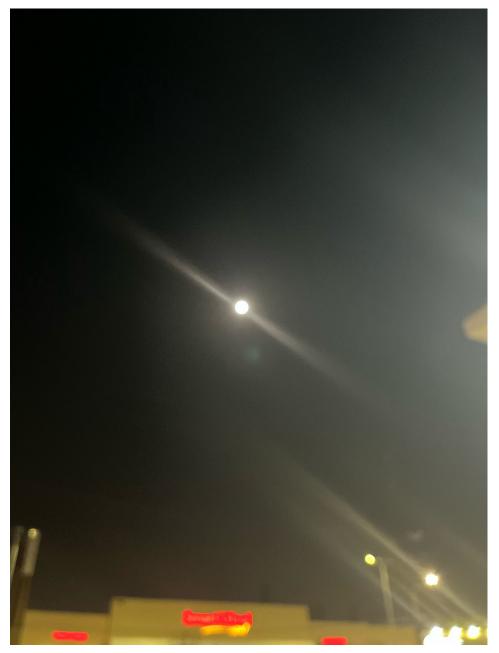


Photo of the penumbral phase at 10:00 PM

# Early Into the Partial Phase



Photo of the partial phase at 10:10 PM (It's hard to see the "bite" in the moon)

# Partial Phase At 10:16 PM



The "bite" is a little easier to see at 10:16 PM

# Partial Phase At 10:41 PM



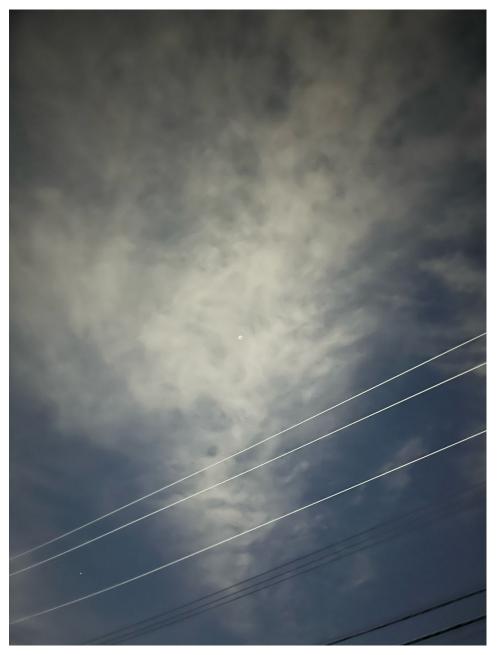
Photo of the partial phase at 10:41 PM (Zoomed in version on next page)

# Partial Phase At 10:41 PM (Zoomed In)



The "bite" in the moon is a lot easier to see in this image

# Total Eclipse At 11:45 PM



I went home at this point, but the red began to set in (zoomed in image on next page)

# Total Eclipse At 11:45 PM (Zoomed In)



The red is more visible once zooming in, although the clouds make it a little hard to see. I'm also unsure why from my view, it had some white at the top.

#### Why the Moon Looks Red

During a lunar eclipse, the Earth, Moon, and Sun all align in a way where sunlight is blocked from hitting the moon. As the sunlight enters the Earth's atmosphere the colors with longer wavelengths are able to get through, while the colors with shorter wavelengths are scattered. The colors that have made it through are then refracted, where the red light tends to have the lowest angle of refraction meaning it goes towards the moon. Finally when the red light hits the Moon it's reflected back towards Earth, meaning we see a red colored Moon.

## Pictures In Order

