

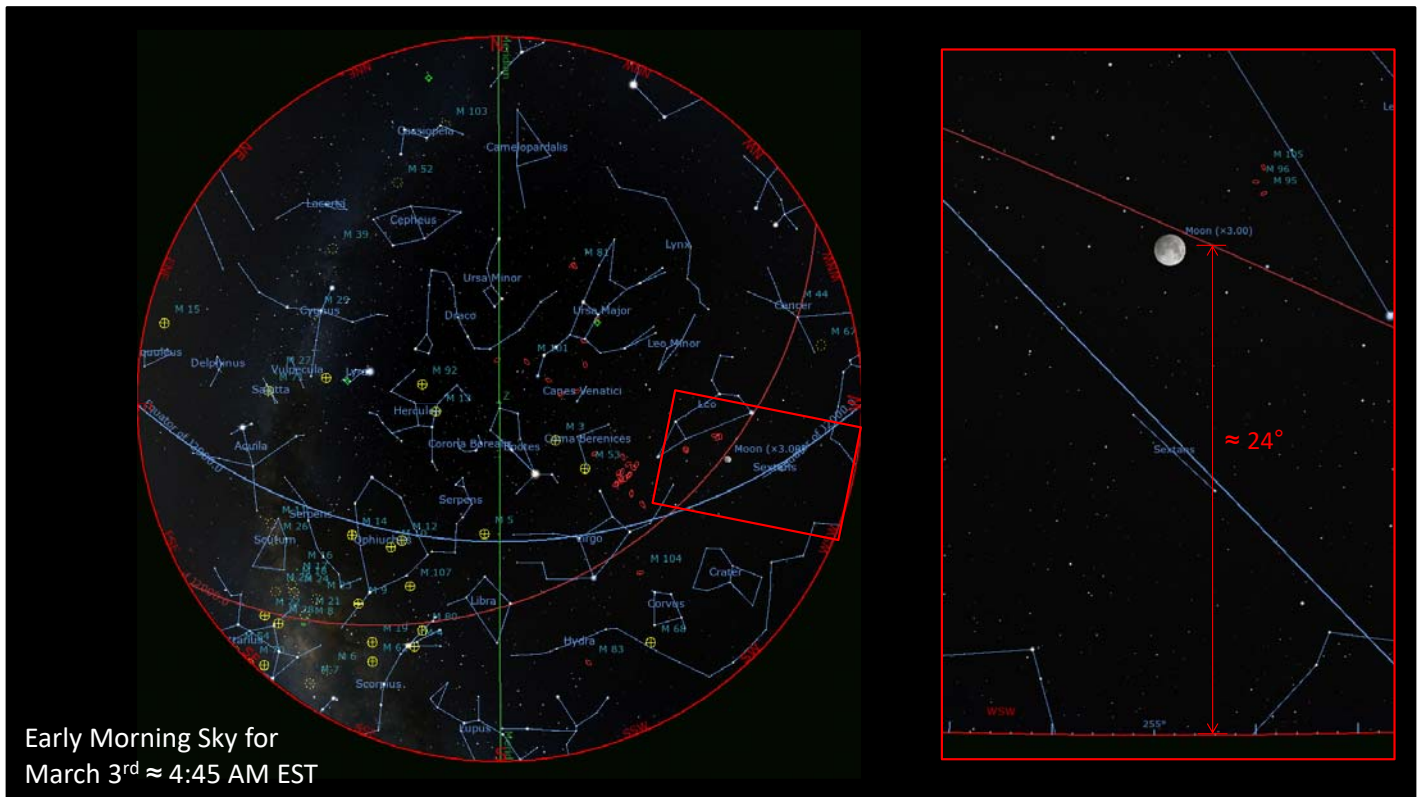


Directorate of Observing Report Excerpts

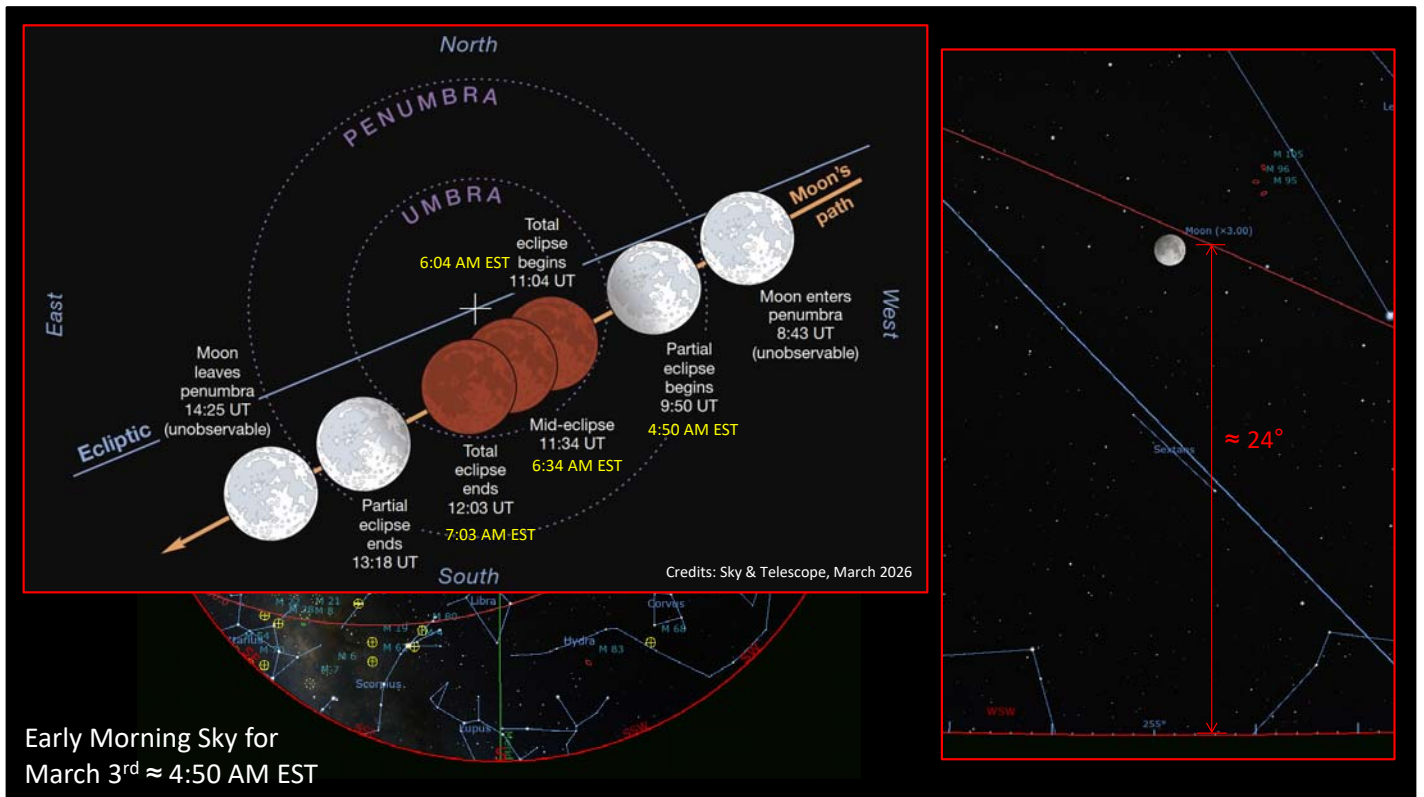
# March 3<sup>rd</sup> 2026 Total Lunar Eclipse - Planning and Preparing

Prepared by:

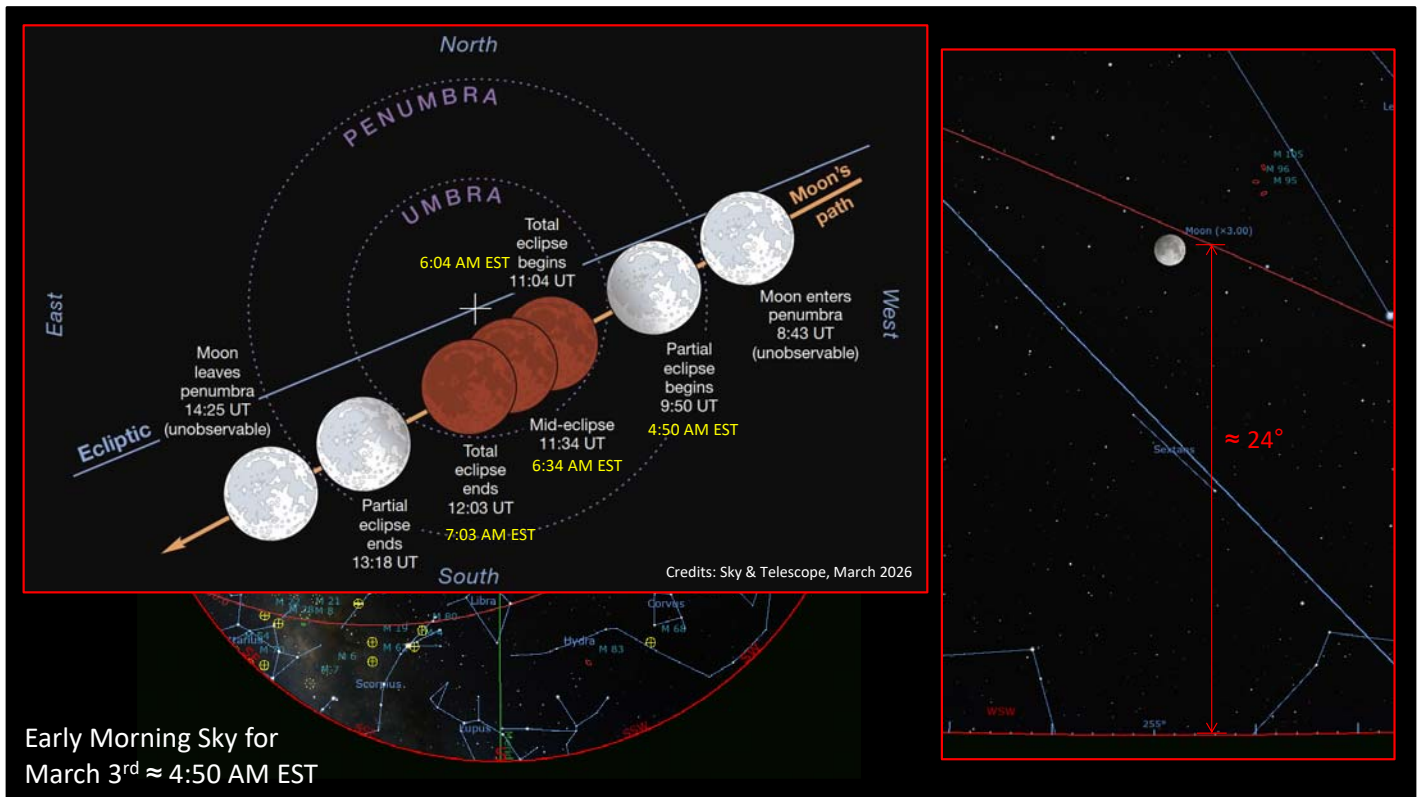
Susan Sawyer-Beaulieu, Ph.D., P.Eng.



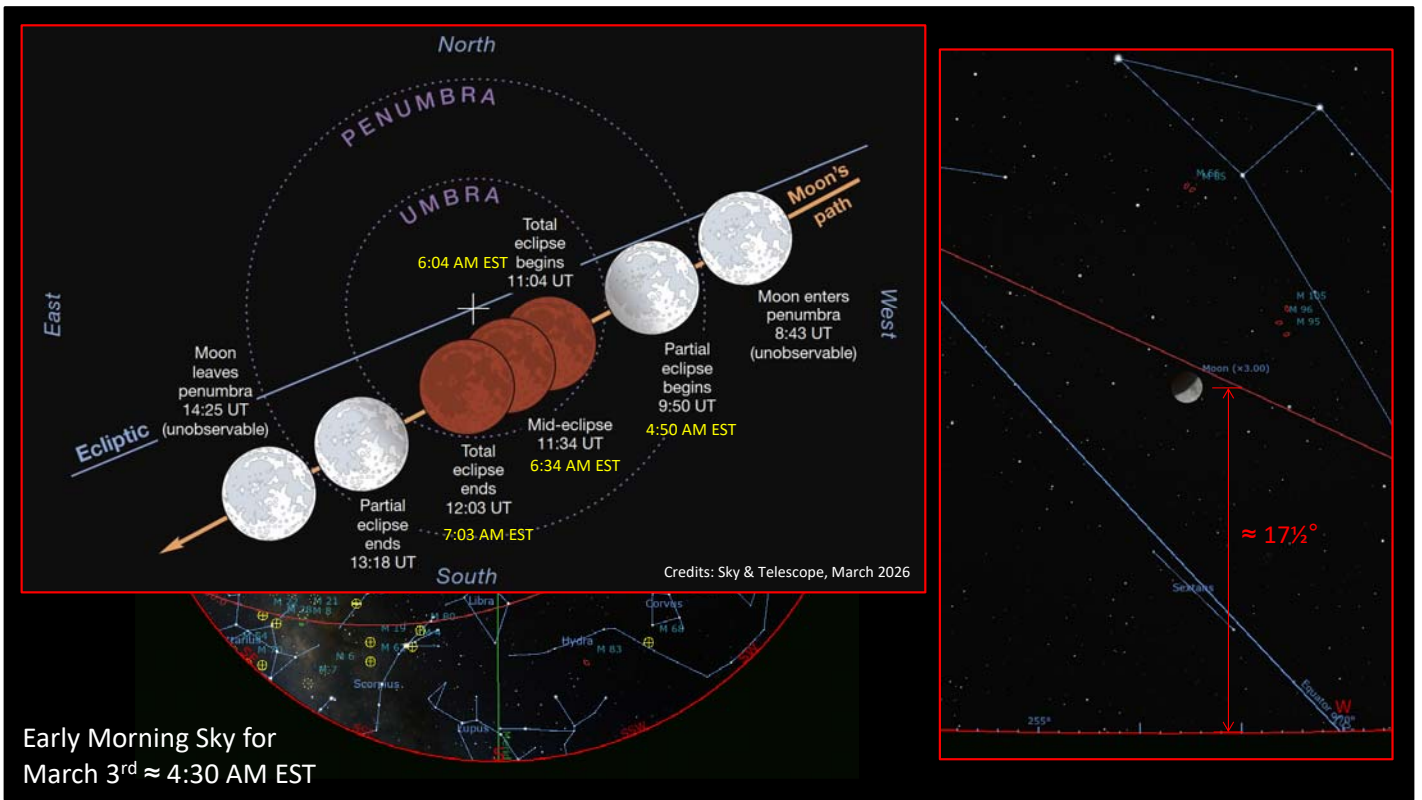
- This is the morning sky chart for Tuesday March 3<sup>rd</sup>, about 4:45 AM EST, ≈ 2.5 hours before sunrise
- Early in the morning of March 3<sup>rd</sup> there will be a total lunar eclipse.
- Looking West, the Full Moon will be ≈ 24° above the horizon.
- Important: To be able to view this eclipse, you will need a clear unobstructed view of the WSW horizon, such as out at Hallam Observatory.



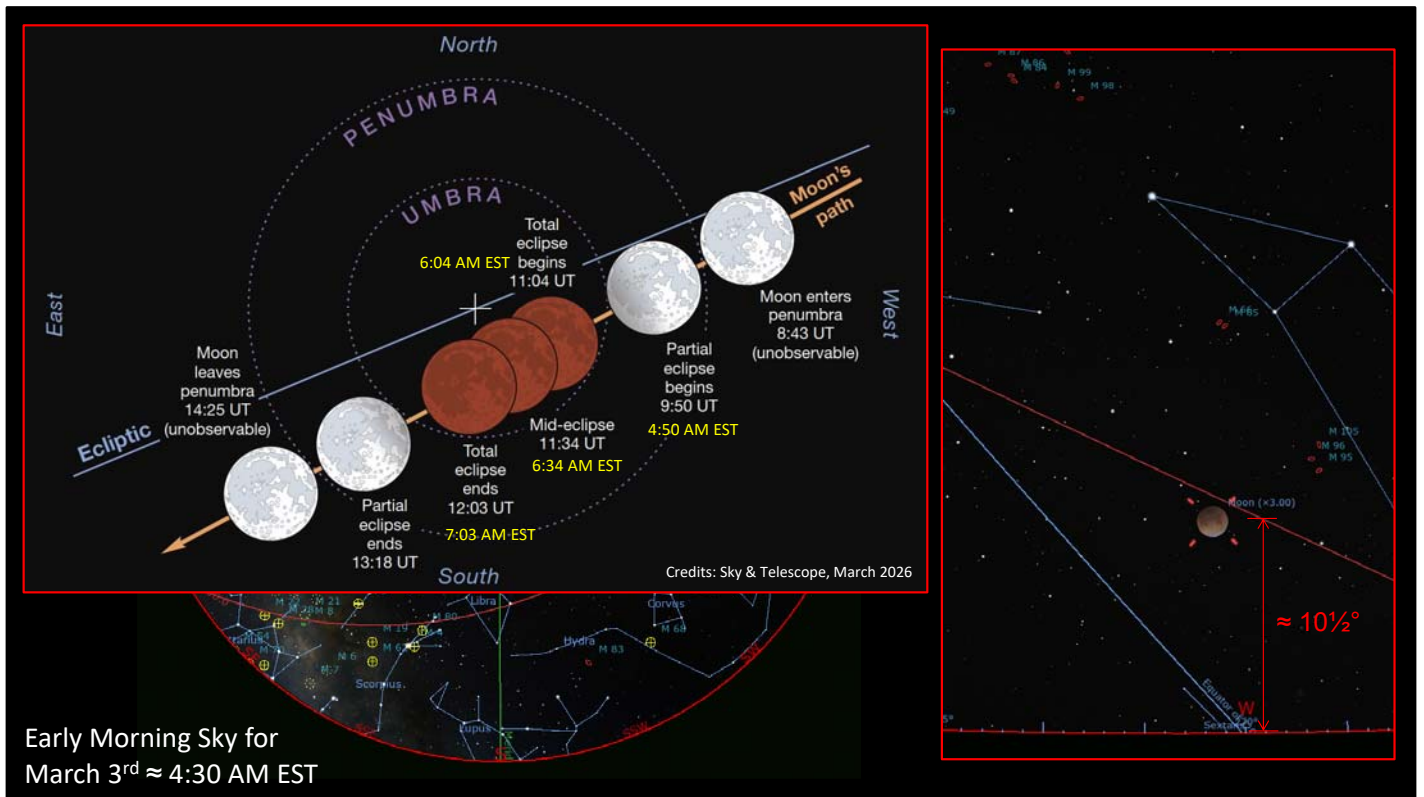
- The chart on the left illustrates the path of the Moon through the Earth's shadow; the Earth's shadow consists of the Penumbra and Umbra:
  - Penumbra is the outer, lighter part of the shadow cast by Earth into space, where the Sun's light is only partially blocked.
  - Umbra is the innermost and darkest part of the Earth shadow, where the Sun is completely blocked by the Earth.
- The Moon will travel diagonally through the southern half of the Earth's Umbral shadow.



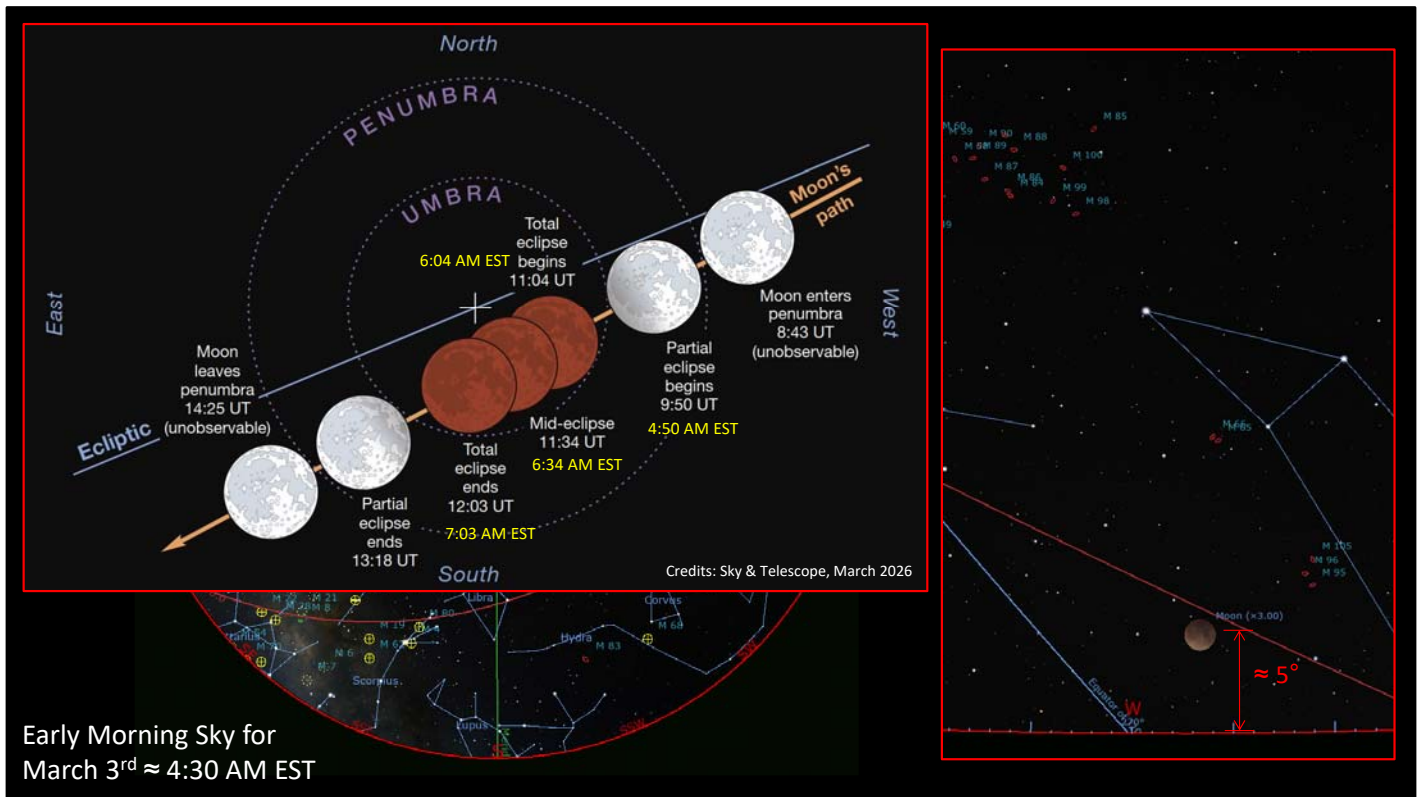
- As illustrated in the chart on the left, the Partial eclipse starts @ 4:50 AM with the Moon entering the Umbral shadow, with the Moon 24° above the horizon
- The inbound partial phase lasts 74min and then totality starts.



- At 37 minutes into the partial phase, @ 5:27 am, half-way through inbound partiality, the Moon will be  $17\frac{1}{2}^\circ$  above Western horizon.



- Another 37 min later, Totality starts @ 6:04 AM and the Moon will then be only  $10\frac{1}{2}^\circ$  above Western horizon.
- As Totality starts, sunrise will be no more than 1hr away, so the sky will start to noticeably brighten in the East.



- **By Mid-eclipse @ 6:34 AM, the Moon drops to only 5° above Western horizon.**
- **At this time, Sunrise is only ½ hr away and the sky will become considerably brighter.**

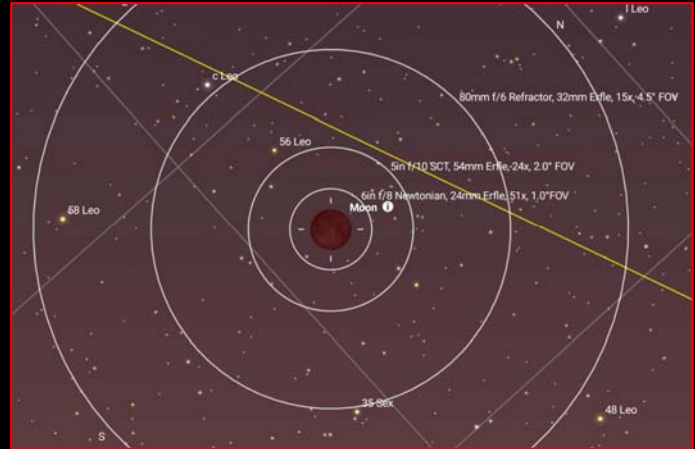
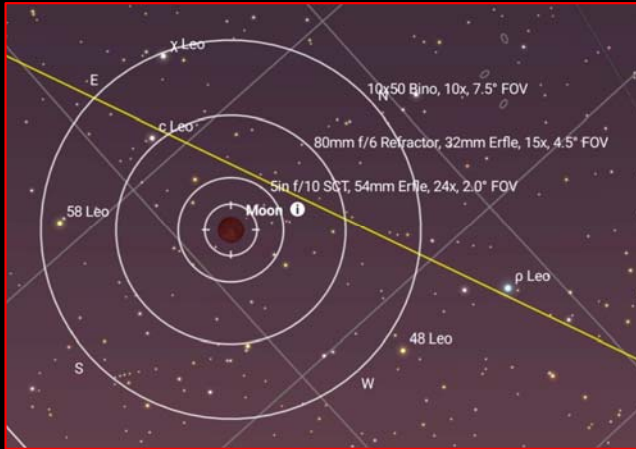
Examples of Different Sizes of Instrument Field of Views (FOV) Relative to Moon Diameter =  $\frac{1}{2}^\circ$   
Binoculars versus Telescope/Eyepiece Combinations

Binoculars Specifications

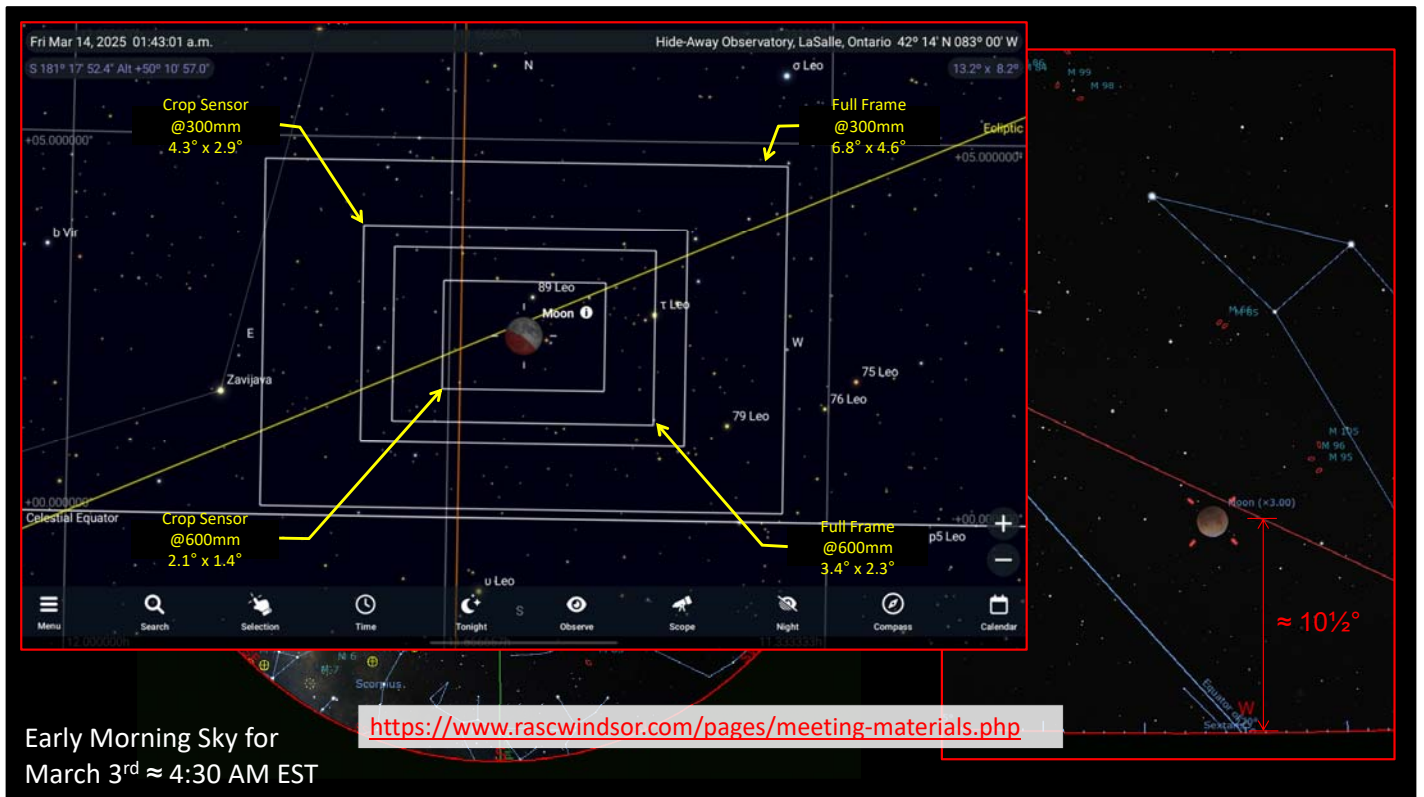
- Eg., 10 x 50 means 10X magnification and 50mm lens aperture
- 10x50 binoculars shown below have a  $7.5^\circ$  FOV

Specifications of Telescope/Eyepiece Combinations

- Magnification = Telescope f.l. mm  $\div$  Eyepiece f.l. mm
- Focal Ratio (or f/stop) = Telescope f.l. (mm)  $\div$  Clear Aperture (mm)
- True FOV = Eyepiece Apparent FOV  $\div$  Magnification



- I encourage you to try to get out and watch the eclipse.
- Although, it is easily visible without optical aid, I suggest using binoculars, or a telescope, to enhance the view.
- For example, these SkySafari screenshots simulate the size of the  $\frac{1}{2}^\circ$  Full Moon in 4 different Instrument Field of Views (FOV)
  1. Largest FOV is a  $7.5^\circ$  FOV of 10x 50mm binoculars
  2. 2nd Largest FOV is a  $4.5^\circ$  FOV of an 80mm f/6 refractor using a 32mm Erfle eyepiece giving 15X magnification
  3. 2nd Smallest FOV is a  $2.0^\circ$  FOV of an 5in f/10 SCT using a 54mm Erfle eyepiece giving 24X magnification
  4. Smallest FOV is a  $1.0^\circ$  FOV of an 6in f/8 Newtonian using a 24mm Erfle eyepiece giving 51X magnification.



- If you are interested in the option of imaging the eclipse, I suggest you look at the excerpts from my February 18<sup>th</sup> 2025 DofO presentation which is posted on the RASC Windsor Centre website under “Meeting Materials”.

The screenshot shows a web browser window with the URL [rascwindsor.com/pages/meeting-materials.php](https://rascwindsor.com/pages/meeting-materials.php). The page title is "Binocular Messier Lists – Data or Observing Log". The navigation menu includes "Member Login", "Home", "Contact", "National Center", and "Privacy Policy". The main content area is titled "WELCOME TO THE ROYAL ASTRONOMICAL SOCIETY OF CANADA - WINDSOR CENTRE". On the left, there is a sidebar with categories: "General" (News/Events, Meetings, Meeting Materials, Member List, Membership Benefits, Minutes/Newsletter Archive, Join, Library, Light Pollution Abatement, Council, Past President list, Contact Us, Resources, Astrospheric Sky Chart), "Special Events" (Solar Eclipse, Imaging: Tips, Tricks & Tools), and "Hallam Observatory" (History, Hallam Observatory Visits). The main content area has a section titled "Meeting Materials" (circled in red). Below this, there is a paragraph explaining the page's purpose and a note about broken links. The next section is titled "Tuesday, February 18, 2025" (circled in red). It contains a paragraph mentioning a presentation by Susan Sawyer-Beaulieu on a DofO report, with a link to "2025 DofO Excerpts March14th Total Lunar Eclipse" (circled in red and pointed to by a red arrow). Below this is a section for "Tuesday, May 21, 2024" and another for "Tuesday, February 20, 2024".

- A link is provided to download a PDF of the excerpts from my February 18th 2025 DofO presentation, “2025 DofO Excerpts March14th Total Lunar Eclipse”.

## Resources:

- Sky & Telescope Magazine
- SkySafari 6 & 7 Pro
- Stellarium 25.4

