

Eclipses and why we do not get them every month

See video: <https://youtu.be/uG10BUw5BPc?list=PLnaLs2ftFrCPsG0FJ0hGipQaVT-Mcv1vT>

Duration: 1 hr, 11 min Start video at 11 min mark

Speaker: Dr. Angela Speck

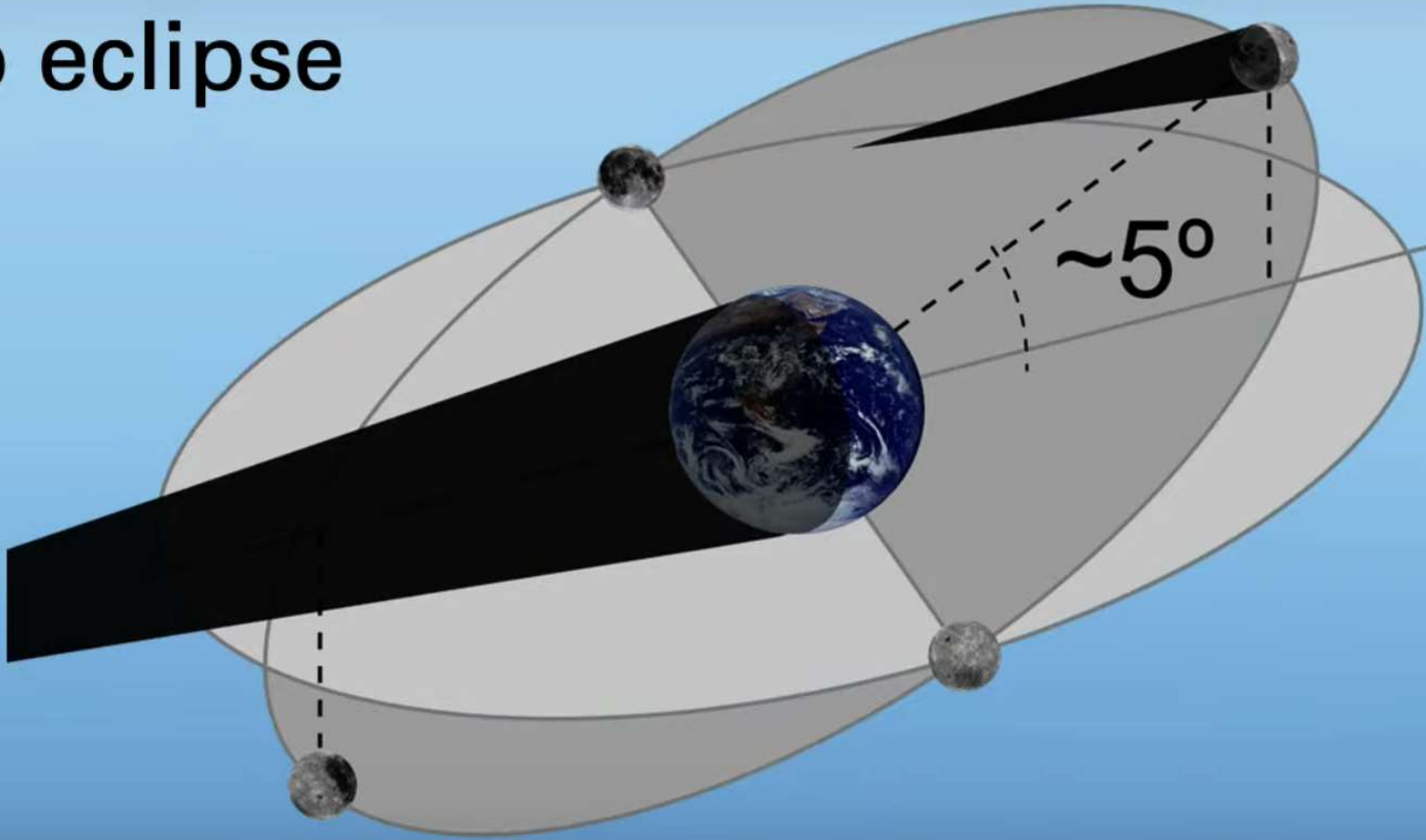
Chair, Dept. of Physics & Astronomy, University of Texas, San Antonio

Co-Chair, Solar Eclipse Task Force, American Astronomical Society

Time	Topic
0:00:00 – 0:11:10	Poster art for various locales and eclipses
0:11:10 – 0:12:00	Welcome and Introduction by Dr. Pamela Gay, American Astronomical Society host
0:12:00 – 0:16:00	Why Eclipses Happen, phases of the Moon
0:16:00 – 0:19:40	Thinking in 3 dimensions, angle between the orbital plane of the Earth vs. the Moon's
0:19:40 – 0:20:24	Why you are more likely to get a Lunar Eclipse vs. a Solar Eclipse
0:20:24 – 0:22:40	Periods of alignment in Earth's rotation around the Sun
0:22:40 – 0:25:20	Path of the Eclipse on the Earth, various Total Solar Eclipse paths in a 50 year period, chances of being in the eclipse path
0:25:20 – 0:32:20	What happens during an Eclipse, partial phase, totality, viewing safely, shadow semi-circles, effects on wild-life
0:32:20 – 0:35:00	Approaching Totality – Bailey's Beads (surface of the moon!), the Diamond Ring, glimpsing the Corona
0:35:00 – 0:38:50	Totality – the Corona, prominences, solar wind, bright stars visible, temperature drops, looking at the horizon
0:38:50 – 0:39:30	Duration of Totality
0:39:30 – 0:41:25	Ring of Fire - Annular Eclipses, why some of the sun is still visible, need for eye protection throughout Annular Eclipses
0:41:25 – 0:45:31	Elliptical orbits and impact of Eclipses (apparent size of the Moon and Sun, Super Moons)
0:45:31 – 0:47:10	Mapping the paths of past and future Eclipses
0:47:10 – 0:50:20	How long Eclipses last – Elliptical orbital speeds, location within the path of totality
0:50:20 – 0:57:10	The paths of the Oct 14, 2023 and April 13, 2024 Eclipses – where to see Ring of Fire, Totality, and partial maps
0:57:10 – 1:01:20	Mapping the expected duration of eclipses, website with start and stop times based on your location
1:01:20 – 1:04:50	Weather, expected cloud cover based on previous weather observations
1:04:50 – 1:10:25	Getting Ready – Safety! Viewing Glasses, traffic, cool factor

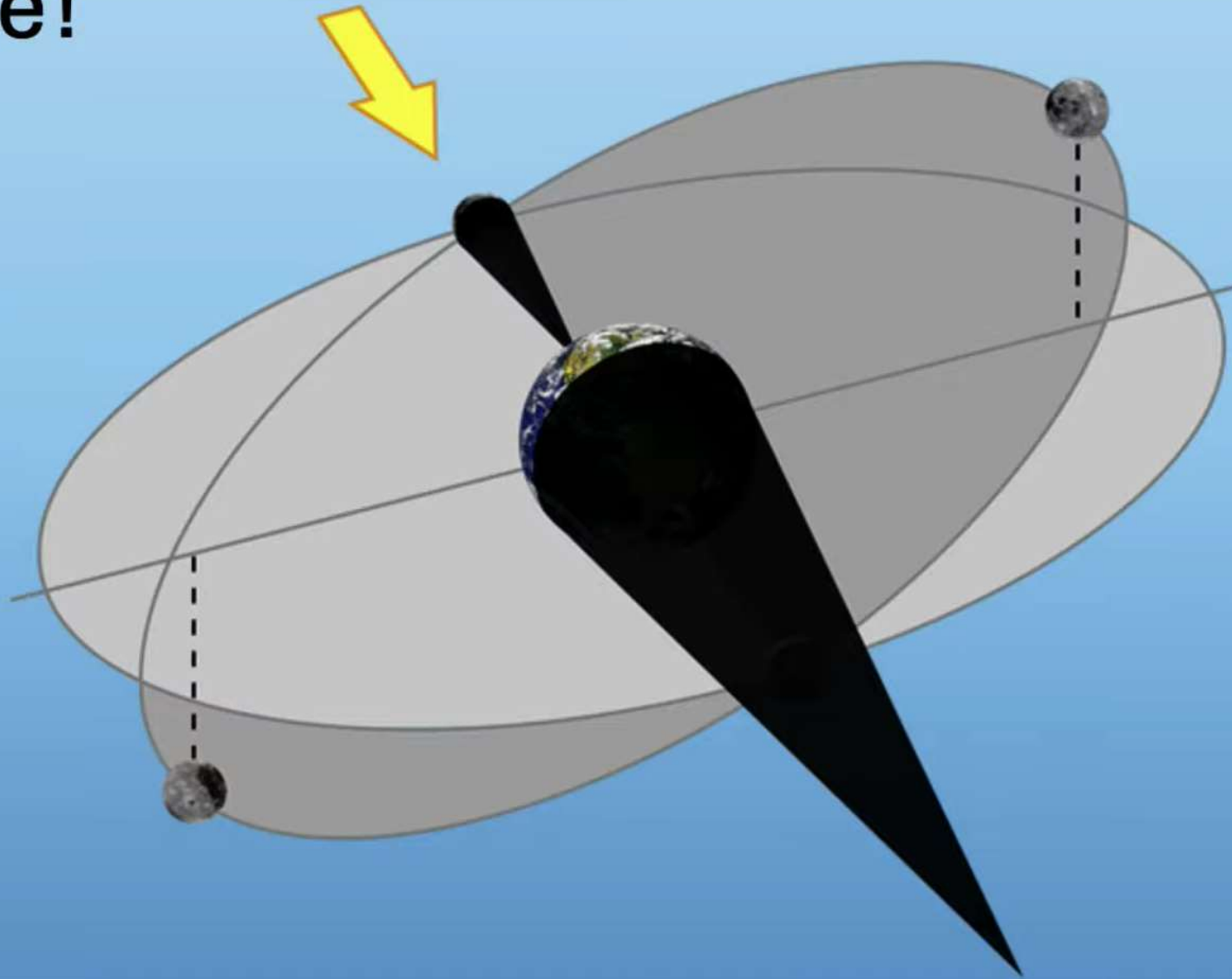
For more information from the American Astronomy Society see their website: <https://eclipse.aas.org>

No eclipse

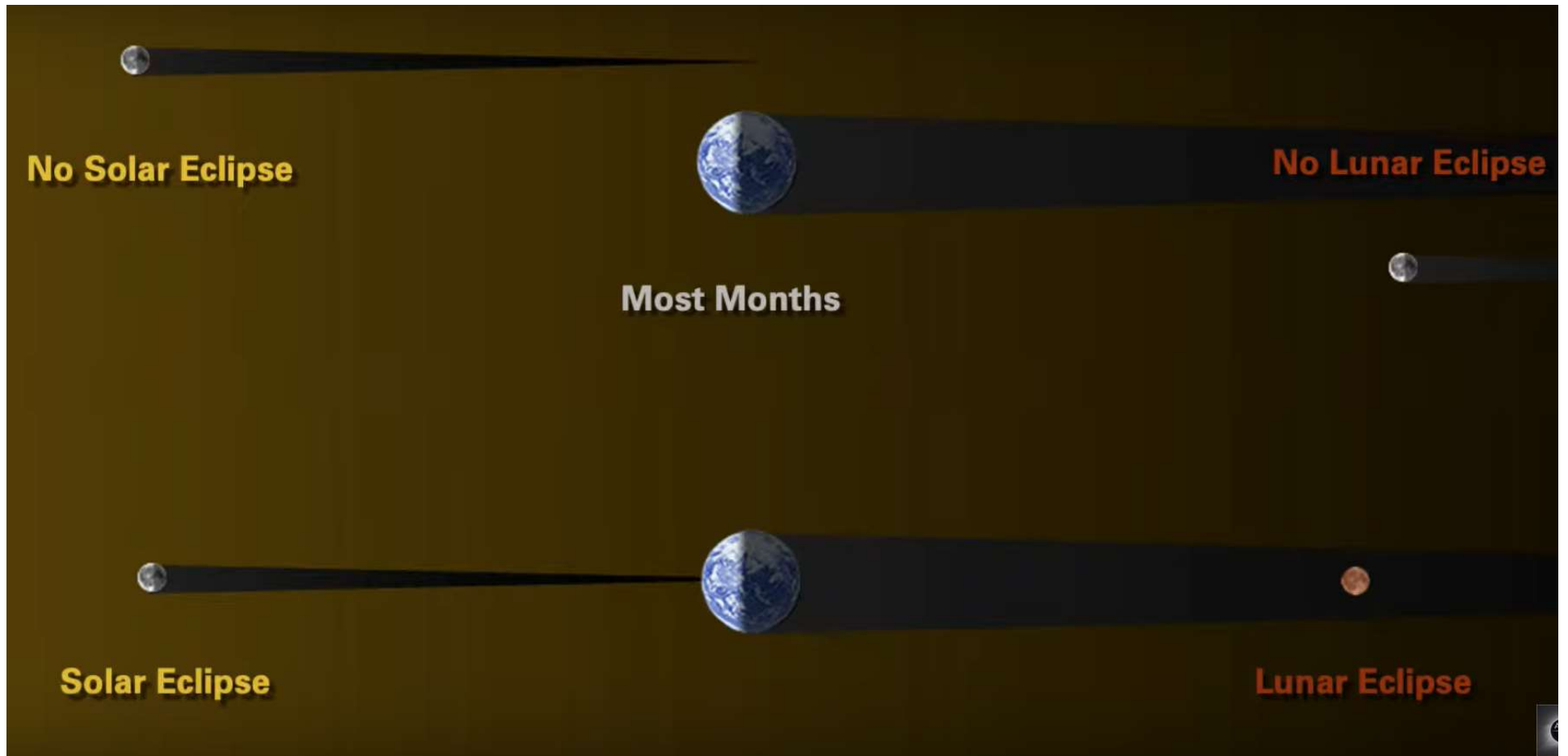


Time 0:17:00

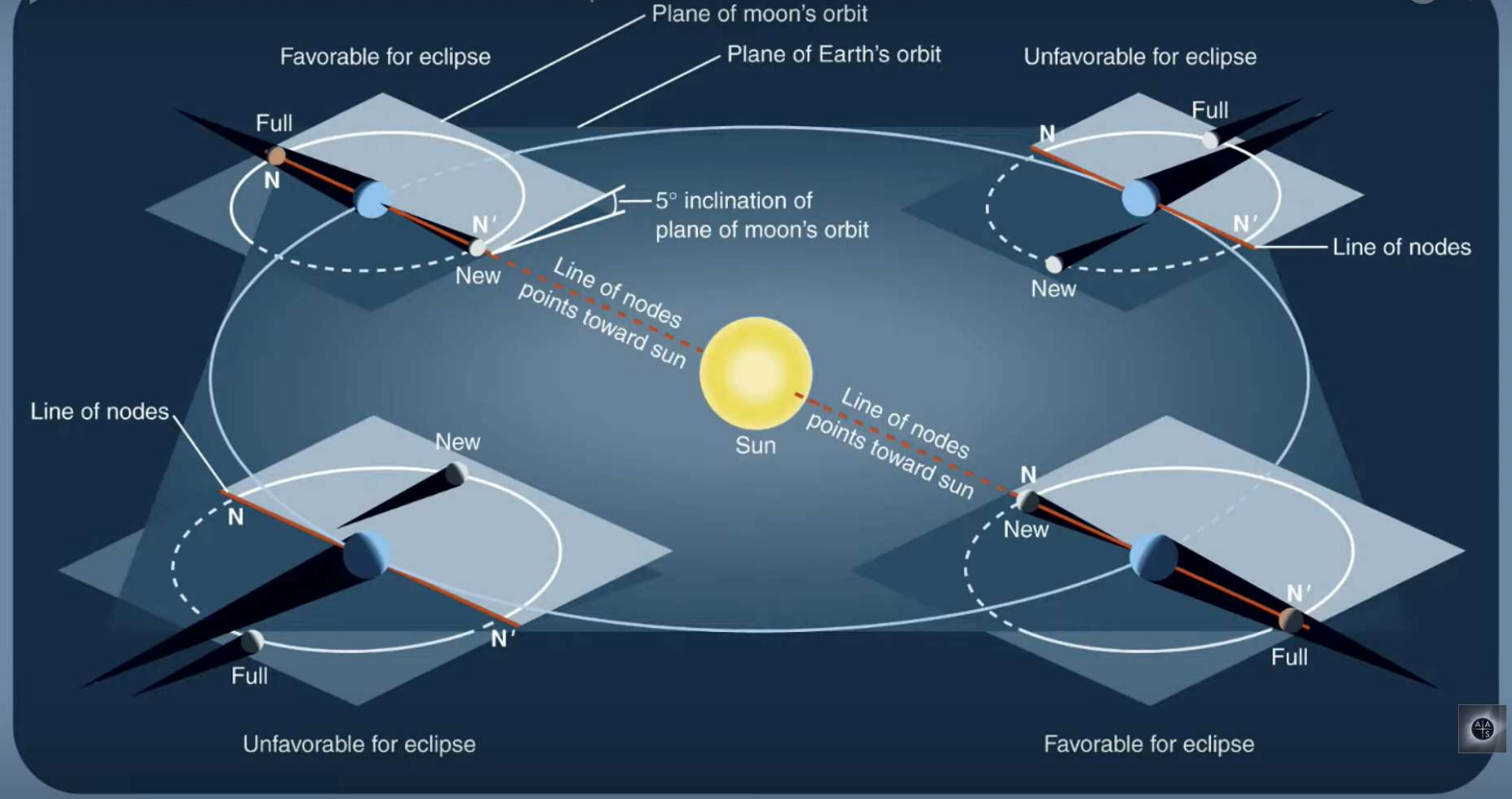
Eclipse!



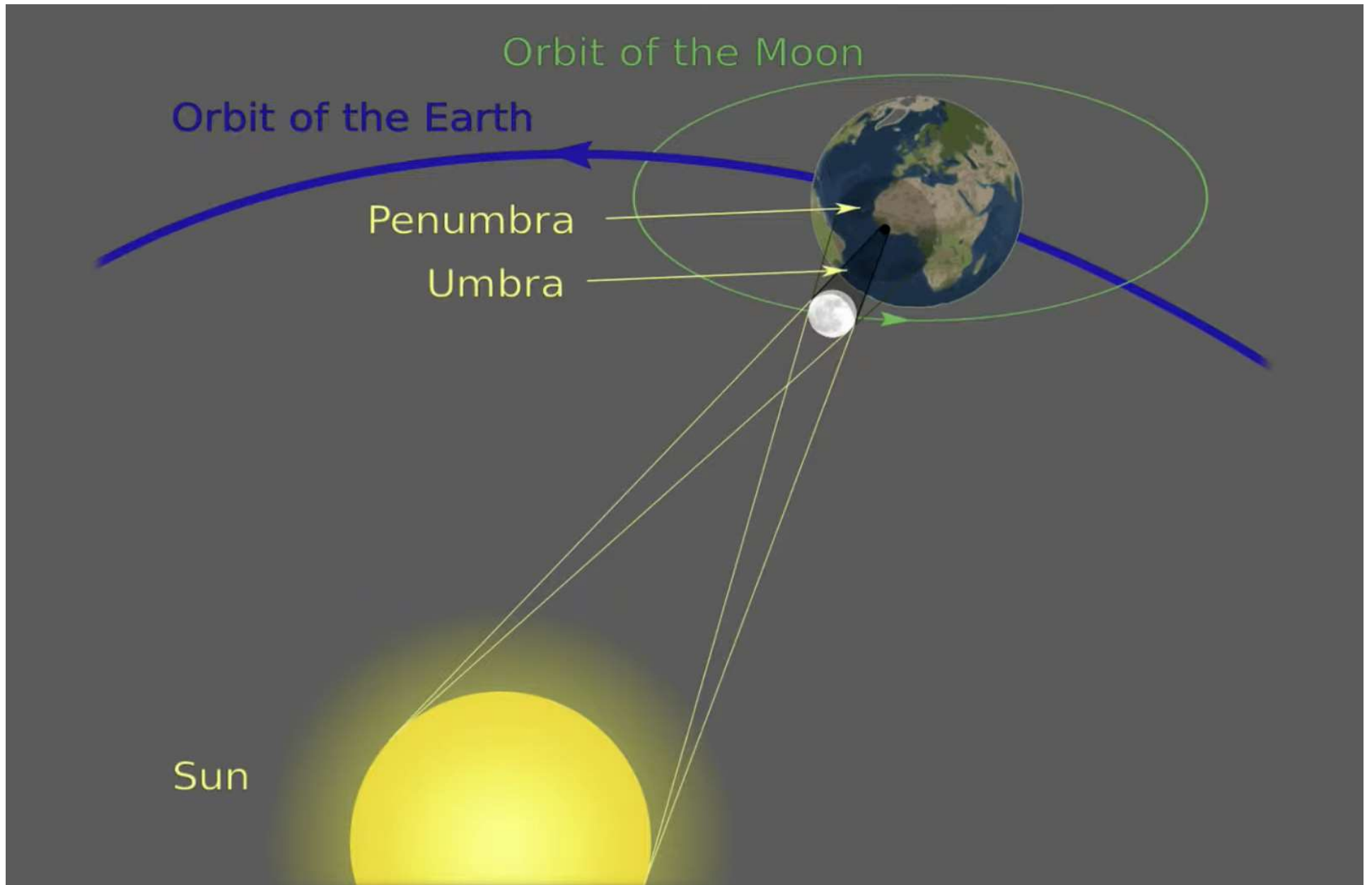
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Public Talk: The Great American Eclipses of 2023 and 2024

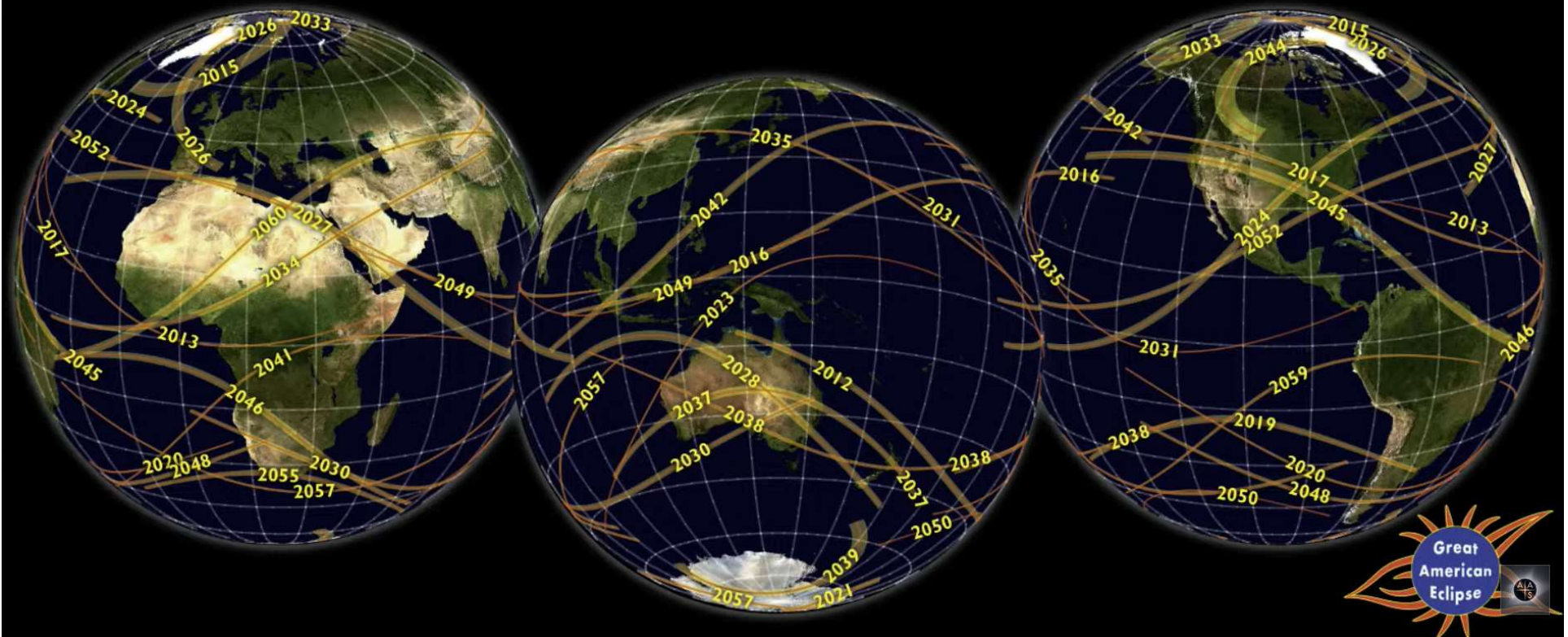


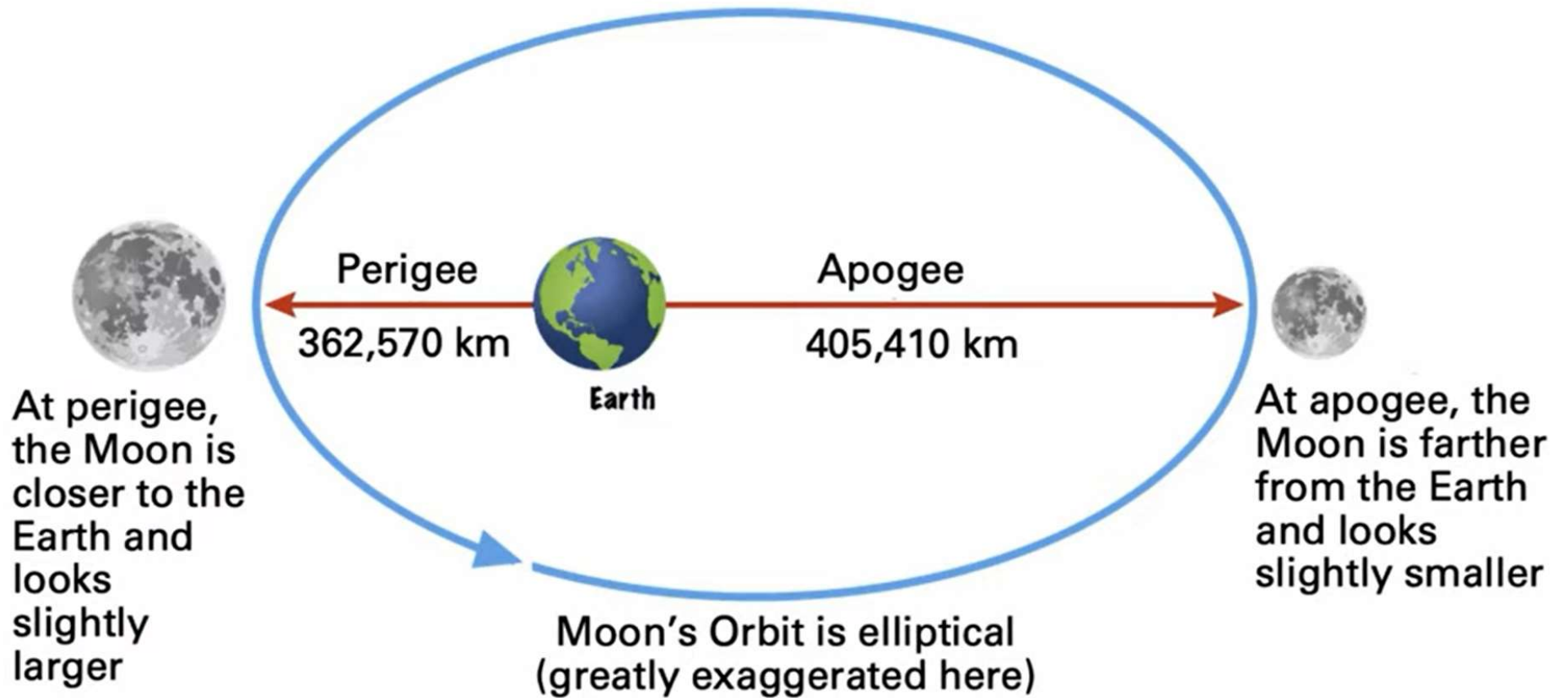
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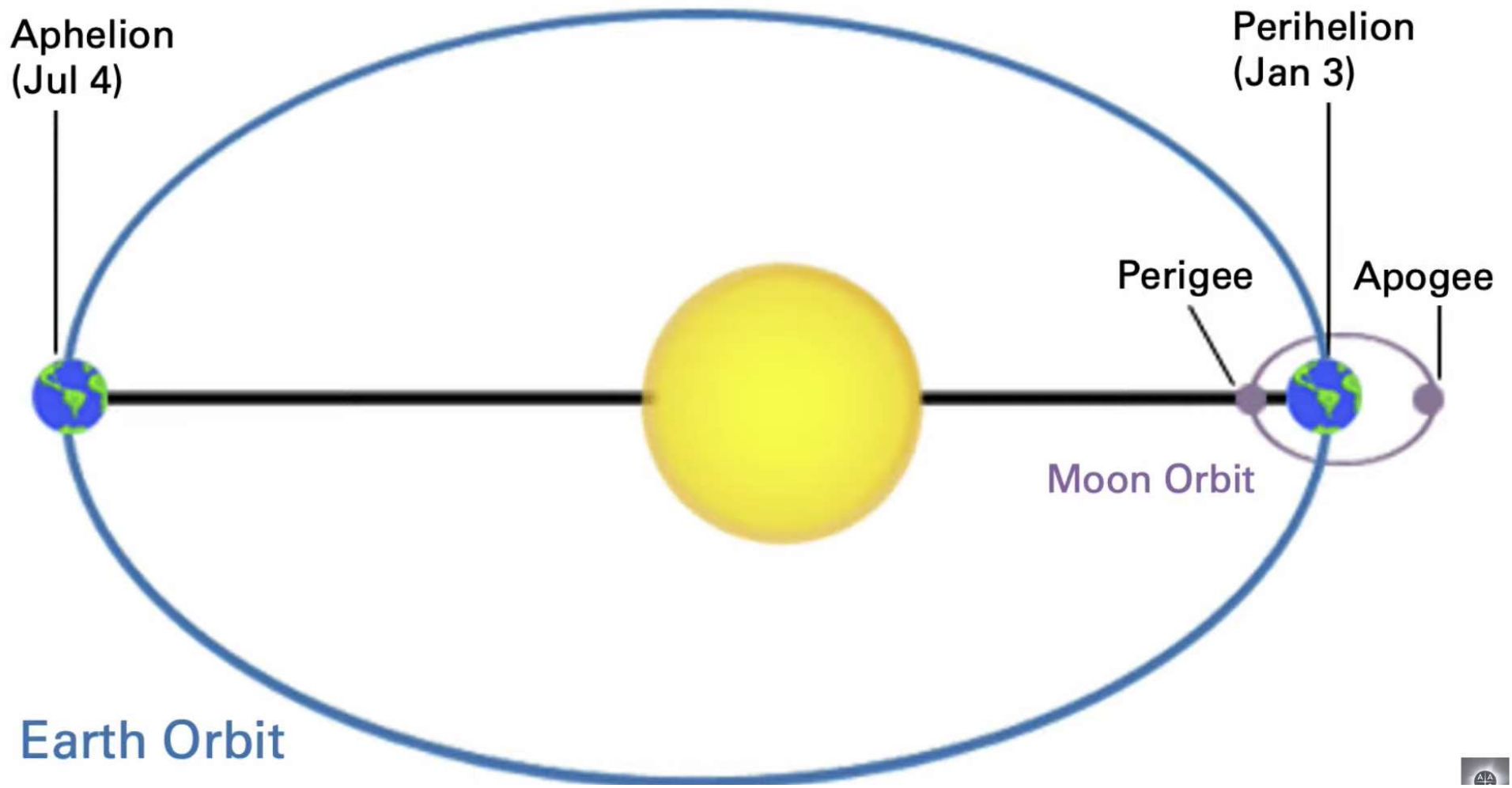


Every total eclipse on the planet in 50 years (2010-2060)

Each total eclipse is seen by one thousandth of the Earth's surface. Most of the planet does not see a total eclipse in 50 years.







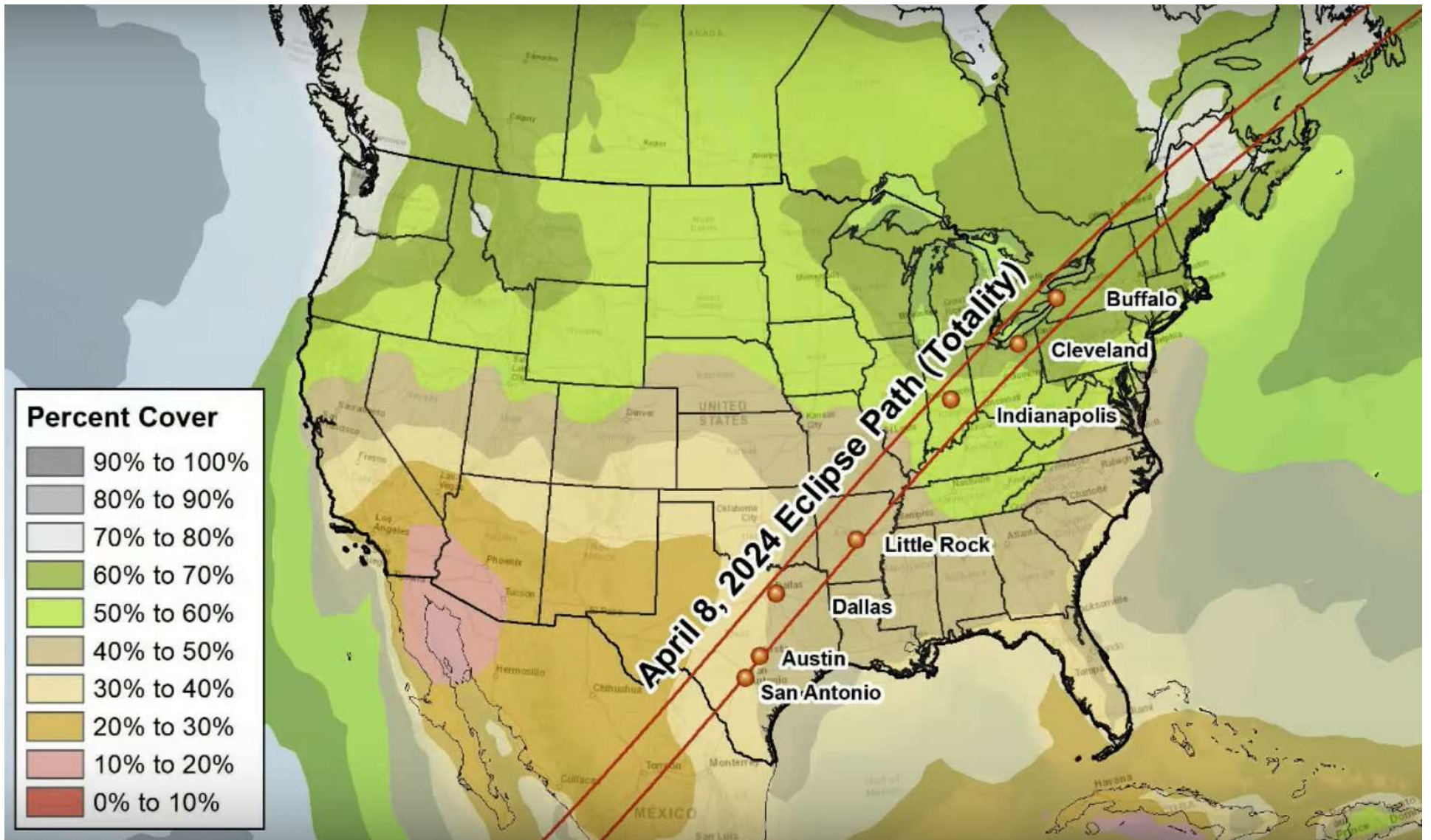
Earth Orbit

Time 0:43:22

http://xjubier.free.fr/en/site_pages/SolarEclipsesGoogleMaps.html

http://xjubier.fr/en/site_pages/SolarEclipsesGoogleMaps.html

Time 0:55:00



Time: 1:02:15