

“It is important that students bring a certain ragamuffin, barefoot, irreverence to their studies; they are not here to worship what is known, but to question it.”

Jacob Chanowski

<http://sdbv.missouristate.edu/mreed/CLASS/A115>

Question #1

Would you like the class curved (fixed number of A grades, B grades, etc.), or would you like percentage grading (90% + is an A, 80-90% is a B, etc.)?

Time to determine!

A) Curved

B) Percent (90, 80, 70, etc)

Question #2

Would you like +/- grading? (There are no A+ or D- scores.)

A) Yes, +/- grading

B) No, +/- grading

The easy questions

How big is the Earth?

How far away are the Sun and
Moon?

**What would you
like to learn
about?**



A picture of our solar system.

Order by size:

Earth, Moon, Sun, Stars, Comets, Planets






A picture of our solar system.

Order by size:

Earth, Moon, Sun, Stars, Comets, Planets

How could you determine these sizes?





What is at the center of our solar system?



We begin by examining what we
know about the Earth and the Moon

Lunar Orbit.

We see a Full Moon once every 29.5 days.

But the Moon actually goes around the Earth once every 27.3 days!

Why are these numbers different?

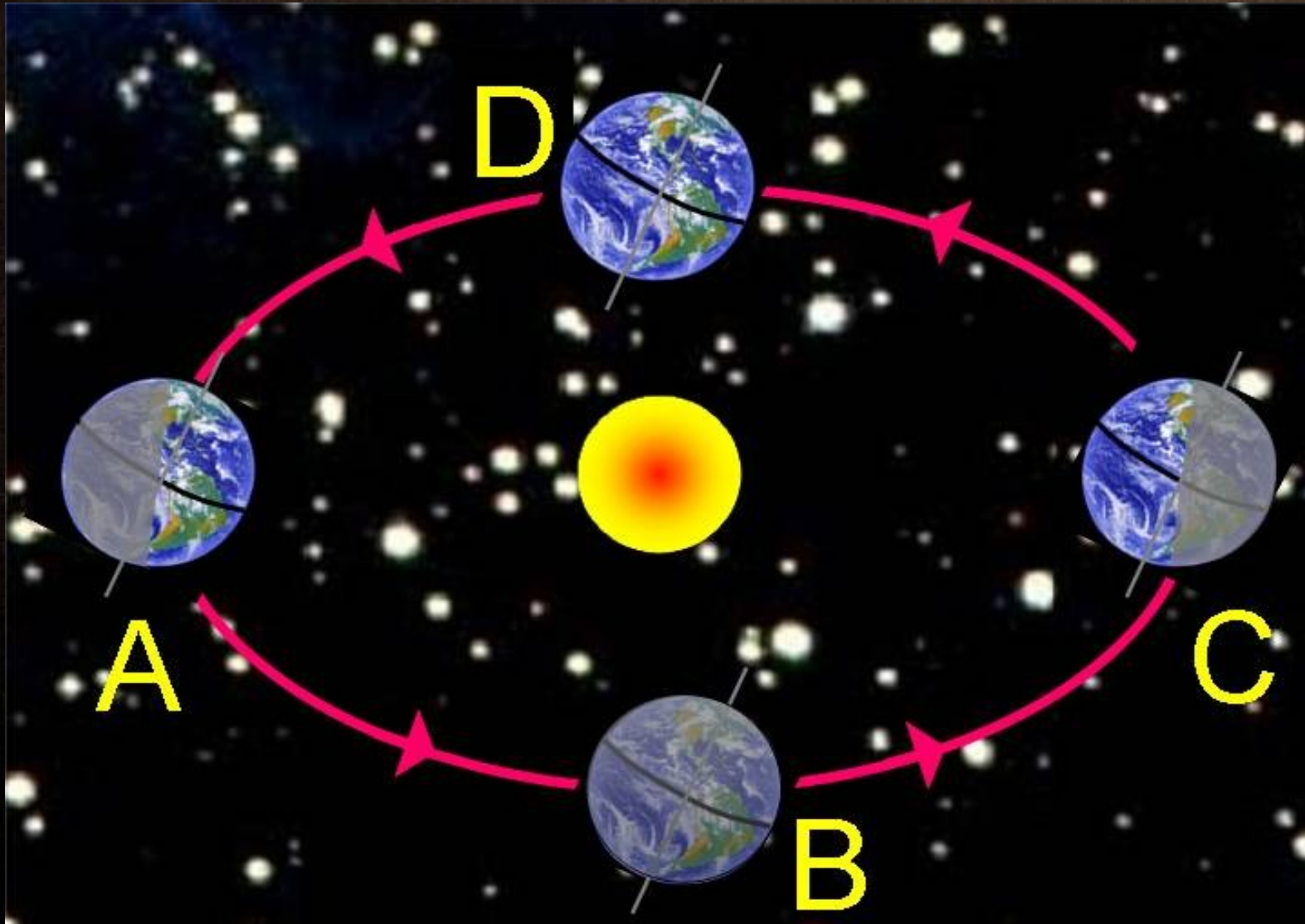
Definition: Sidereal vs Solar

Sidereal: One complete revolution according to the stars.

Solar: One complete revolution according to the Sun.

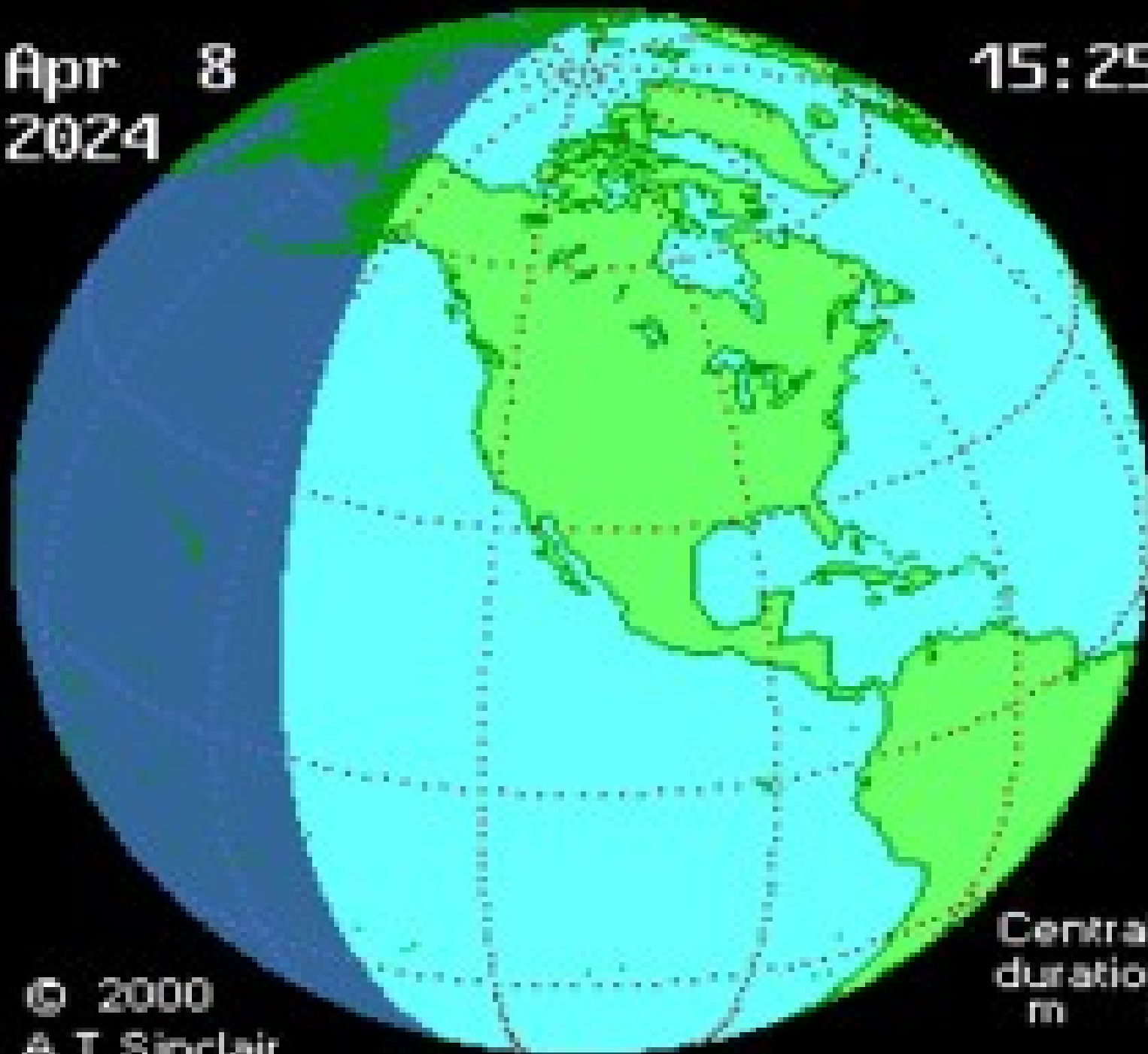
This will be very funky for some planets!

The Earth only goes around 1 star, our Sun. Other stars are much farther away.



Apr 8
2024

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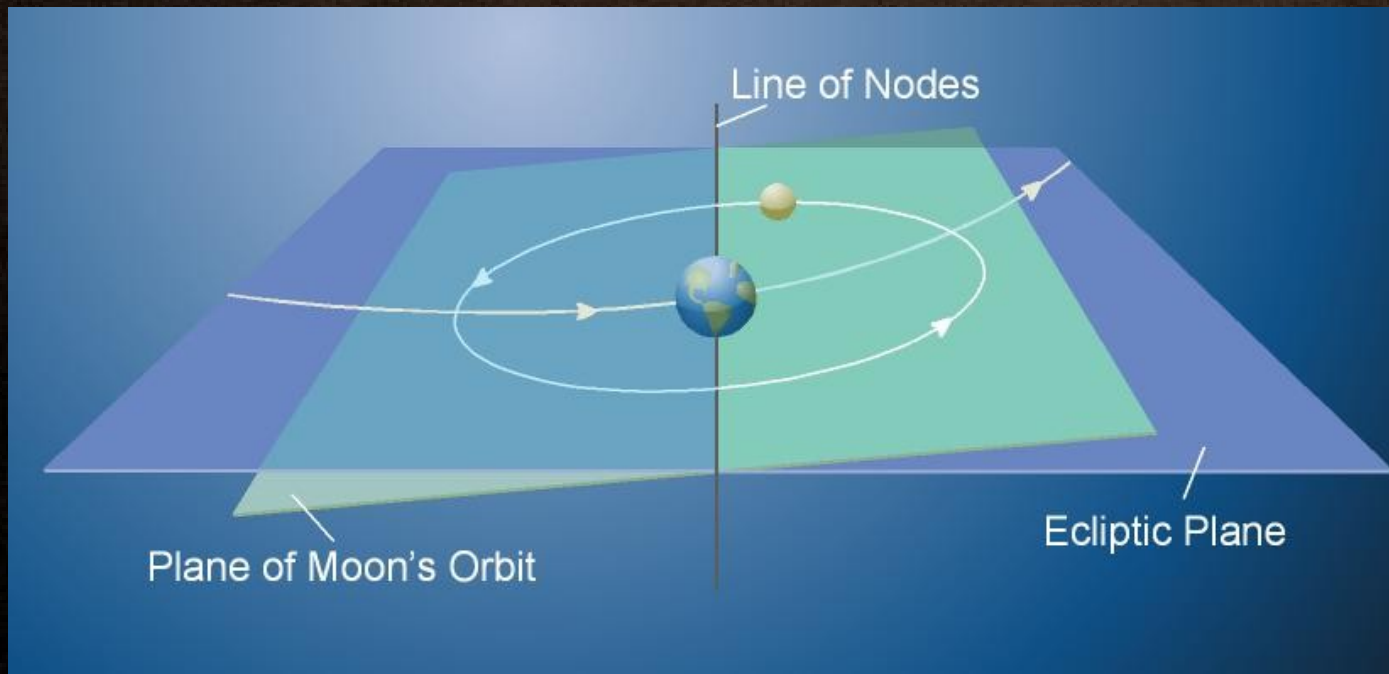
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A. T. Sinclair

Central
duration
m s

sunearth.gsfc.nasa.gov/eclipse

why don't solar and lunar eclipses happen once every lunar orbit?

Because the Moon's orbit is tipped compared to the Earth's. An eclipse only happens if a New or Full Moon occurs when the Moon is on the Earth's orbital plane (called the **ecliptic**).



Baseline: The Earth and Moon

