

# Young Earth Creationism -The Scientific Evidence-

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# Topics

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- Lunar Recession
- Comets
- Magnetic Fields

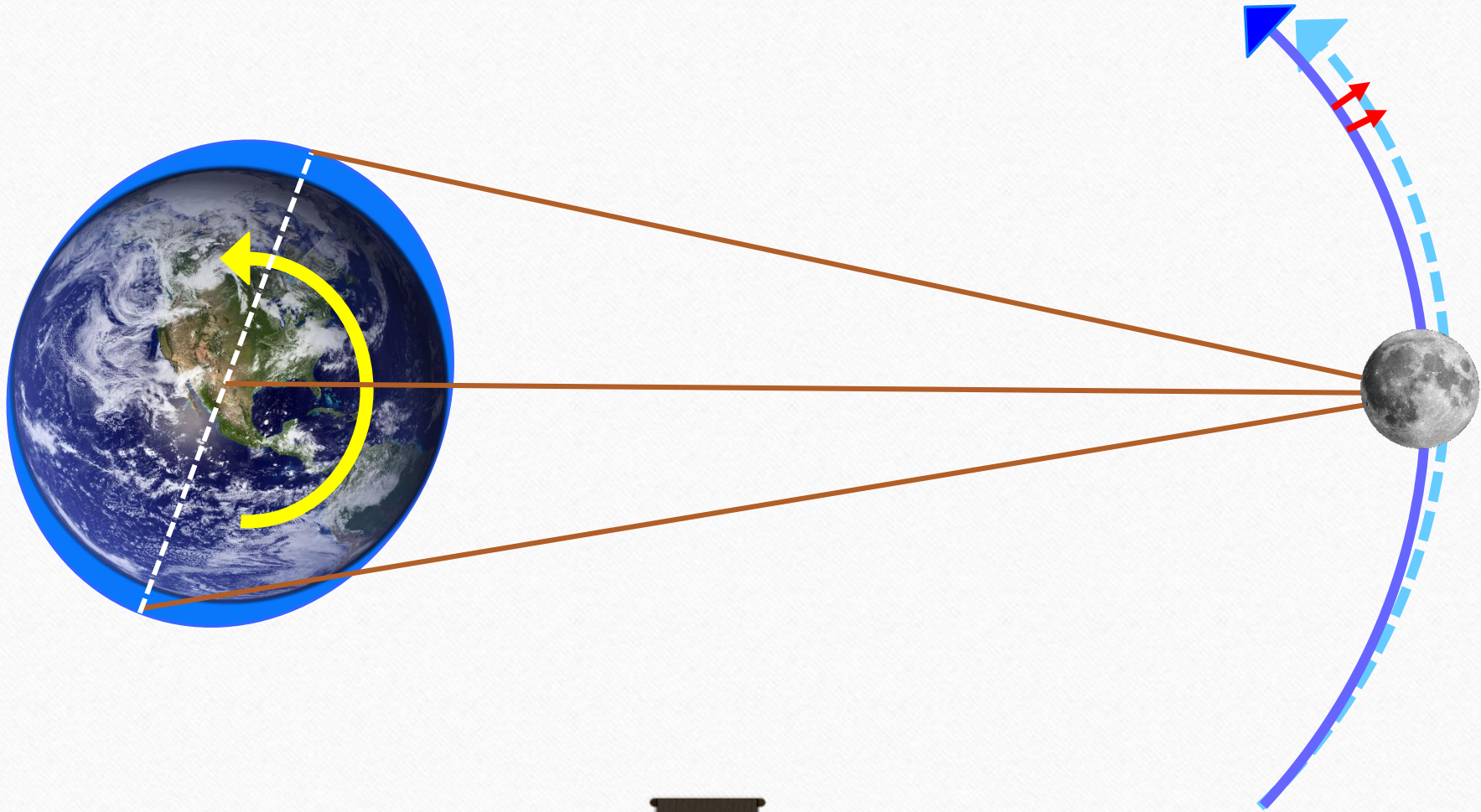


# Lunar Recession

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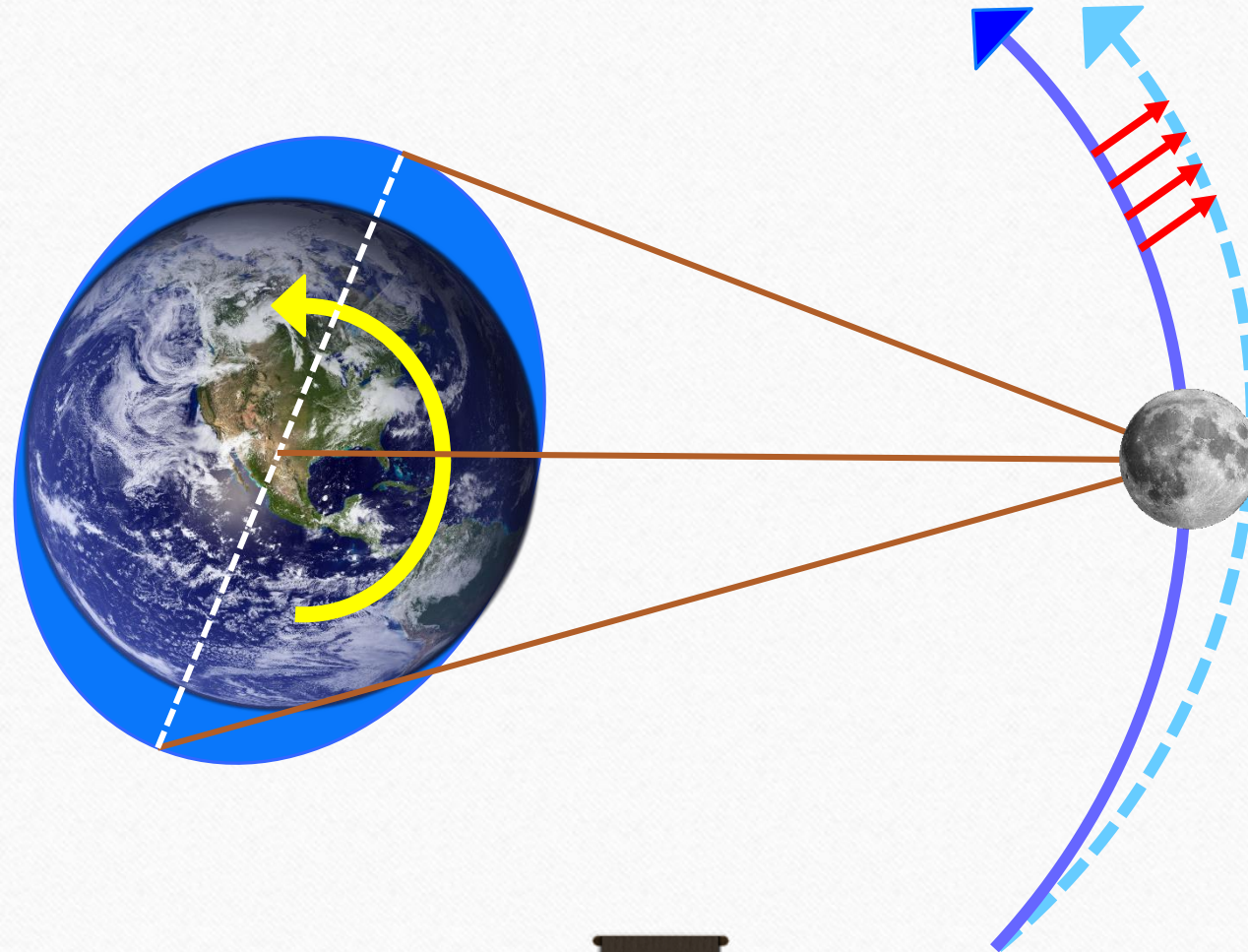
- The moon is at present day  $3.84402 \times 10^8$  meters from the earth
- The moon is receding at  $(4.4 \pm 0.6 \text{ cm/yr})$ , or  $(4.4 \pm 0.6) \times 10^{-2} \text{ m/yr}$
- This is measured by bouncing lasers off of mirrors left by the Apollo missions
- Tidal forces cause this recession
- The earth spins faster than the moon orbits the earth thus causing the tides caused by the moons gravity to be ahead of the orbit of the moon.
- 6000 years ago the moon would have been about 264 m closer to the earth

# Present Day Recession Rate





# Past Recession Rate



- Recession rate of the moon

$$\frac{dr}{dt} = \frac{k}{r^6}$$

- Recession time to present orbit

$$t = \frac{1}{7k} (r^7 - r_0^7)$$

- Roche limit equation

$$r_0 = 2.4554R \left( \frac{\rho_p}{\rho_m} \right)^{1/3}$$



# The Results

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- With a present day recession rate of 4.4 cm/yr the moon would have been at the Roche limit  $1.248 \times 10^9$  years ago
- With a present day recession rate of 3.8 cm/yr the moon would have been at the Roche limit  $1.445 \times 10^9$  years ago.
- Even at the lowest possible recession rate the earth moon relationship could only be within 32% of the current evolutionary time scale for the age of the earth.

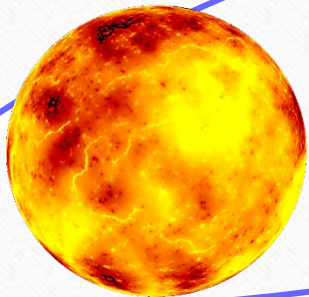
# Comets

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- Comets are balls of dirt that orbit the sun with highly eccentric orbits
- Comets develop “tails” as they approach the sun
- This tail is comprised of a stream of vaporized material swept away by solar wind and radiation
- Comets are continually losing material as they orbit close to the sun

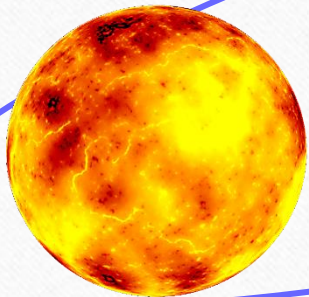


perihelion

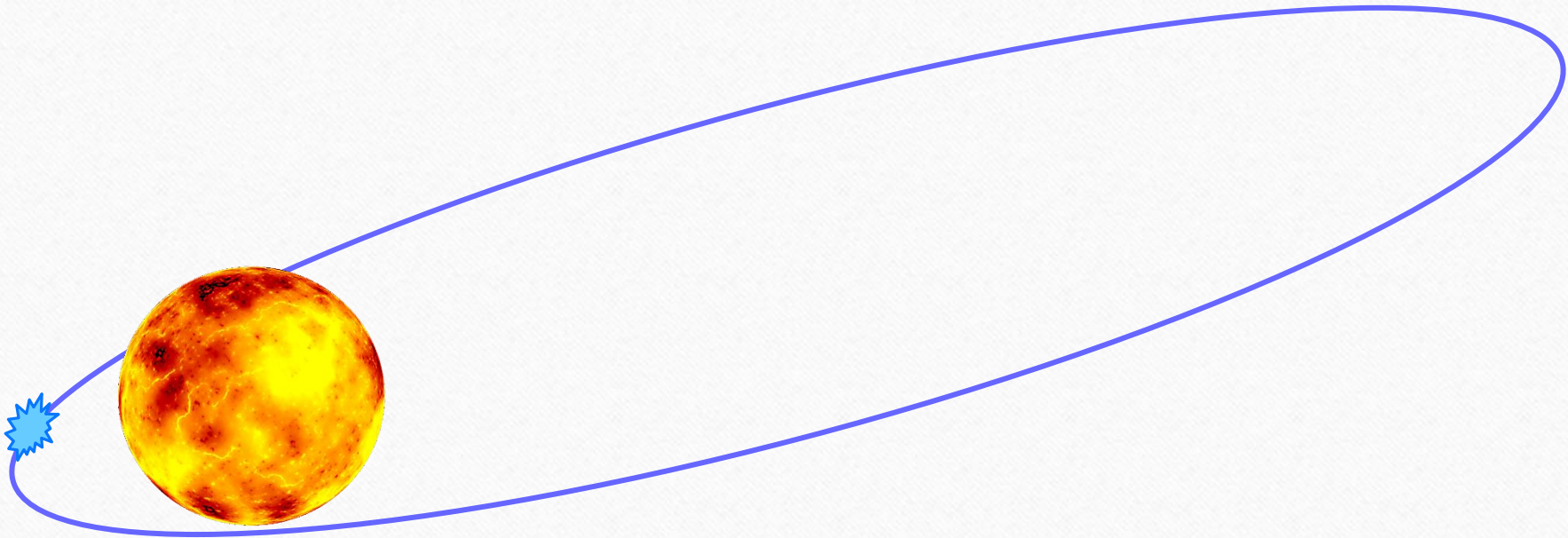


aphelion

perihelion



aphelion





# Conclusions

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- A typical comet can only orbit the sun at the most for a 100,000 years before disintegrating
- The solar system must be less than 100,000 years old as there are still many comets in the solar system.
- **Rescuing device:** There is an Oort cloud, an undetectable cloud of icy masses beyond the outer reaches of the solar system.

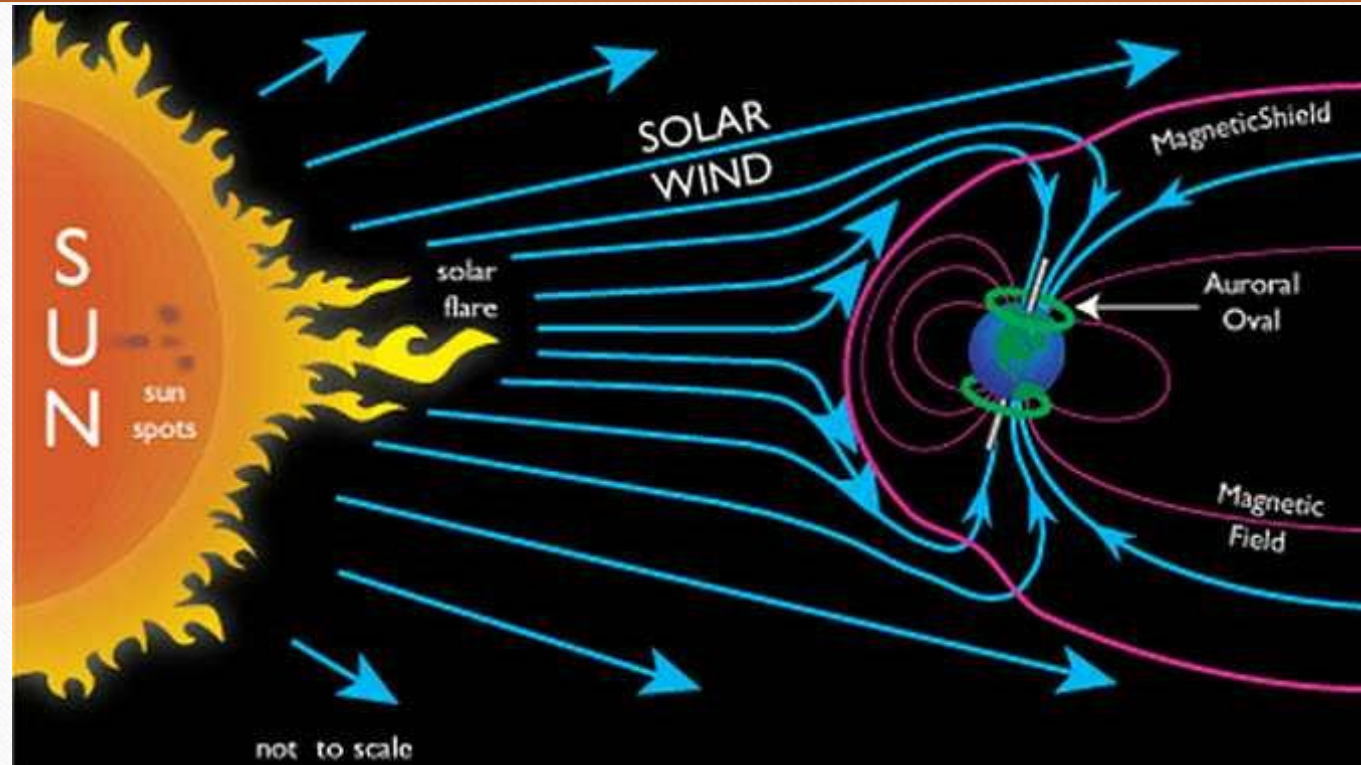
# Magnetic Fields

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- The earth and all of the planets have a magnetic field
- Are caused by electrical currents within the planet
- Due to resistance the magnetic fields decay over time and reduce in strength
- Protects life on the earth by deflecting dangerous cosmic and solar radiation
- The magnetic field has been reliably and continually measured since 1835
- The earth's magnetic field decays at about 5% every century.
- The magnetic field of the earth has a half-life of about 1400 years



# Magnetic field of the Earth



# Conclusions

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- 6,000 years ago the magnetic field of the earth would have been significantly stronger but still suitable for life.
- If the earth was older than 10,000 years the magnetic field would have been so strong it would have caused the planet to disintegrate, the earth must be less than 10,000 years old.
- **Rescuing device:** self-generating dynamo of circulating core fluids that slowly decline to zero strength and start up again with reversed orientation.