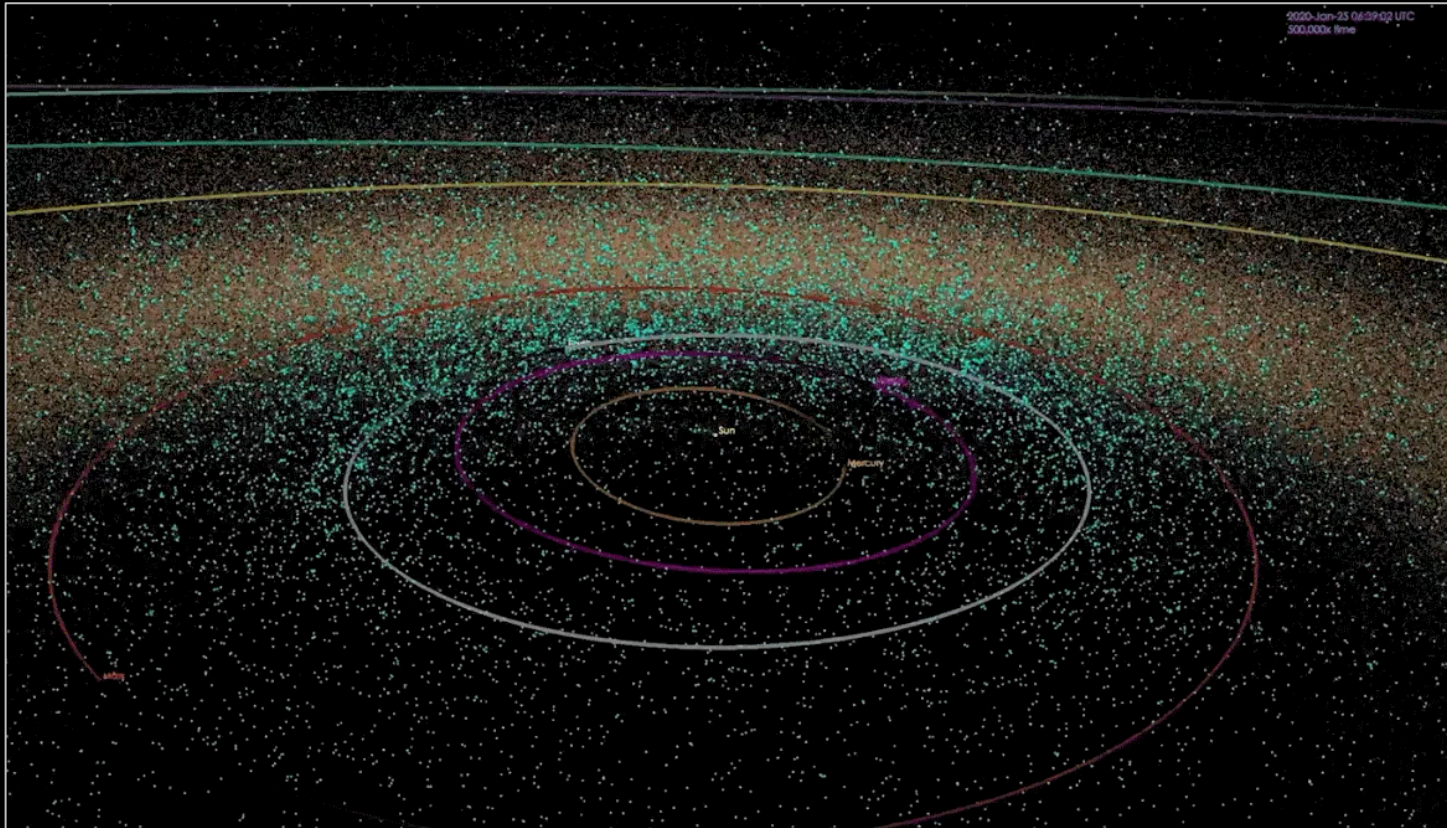


IMPACT CRATERING

A FEW DEFINITIONS...

- ★ **Asteroid:** Small body orbiting the Sun, mostly made of rock and with an irregular shape (~ 10 m up to 100s of km) .
- ★ **Meteoroid:** Very small rock in orbit around the Sun.
- ★ **Meteor:** Streak of light caused by a space rock falling into the Earth's atmosphere (shooting star)
- ★ **Bolide/fireball:** Very bright meteor
- ★ **Meteorite:** Space rock which falls into the atmosphere and makes it to the ground.

POSITION OF ASTEROIDS



Yes, there is a risk of impact, but it's very small (the size of the dots isn't to scale here...)

IMPACT

Kinetic Energy



Light, sound, heat...

Velocity \approx 15-30 km/s

Lots of energy!

$$E = \frac{1}{2}mv^2$$

If impact: crater will be 10s x larger than impactor

ABOUT 200 KNOWN CRATERS ON EARTH



Credit: Planetary and Space Science Centre, University of New Brunswick
<http://www.passc.net/EarthImpactDatabase/Worldmap.html>

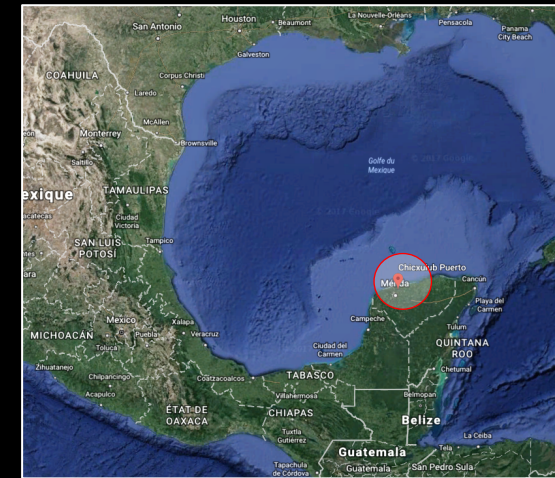
FAMOUS CRATERS



Meteor Crater, Arizona



Manicouagan Crater,
Quebec



Chicxulub, Mexico