

# Mission to Mercury

With its launch on Aug. 2, the Messenger spacecraft will begin a seven-year journey to get a detailed look at the Sun's nearest neighbor.

**Magnetometer** measures the planet's magnetic field from a 12-foot boom to avoid the probes' field

**Laser altimeter** bounces lasers off the planet's surface to measure elevation

**X-ray spectrometer**

**Dual digital imager**

**Atmospheric and surface spectrometer**

Rocket thruster

Star trackers

**Solar shield**

The sun will be 11 times brighter in Mercury's orbit, requiring this ceramic quilt to fend off up to 700 degree temperatures

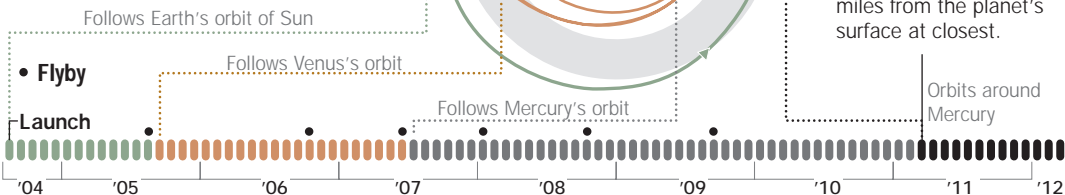
\*Drawings are schematic

**Solar panels**

Power the probe, creating a 20-foot wingspan

## The path of a probe

Messenger will spiral toward Mercury, circling the sun 15 times. It will complete close-range flybys of Earth once, Venus twice, and Mercury three times, using the planets' gravity to slow its speed.



Earth at launch and flyby

Venus at flybys

Mercury at flybys

Sun

Messenger begins elliptical orbit around Mercury, passing 124 miles from the planet's surface at closest.

Orbits around Mercury