Messenger Sets Course For Earth Flyby

June 29 2005

A short maneuver on June 23 kept Messenger on track for its Aug. 2 flyby of Earth – the major gravity assist that starts the next leg of the spacecraft's journey toward Mercury.

Mission controllers at the Johns Hopkins University Applied Physics Laboratory verified the start of the maneuver within 48 seconds, when the first signals indicating spacecraft thruster activity reached NASA's Deep Space Network tracking station outside Madrid, Spain.

The maneuver, which started at 10:30 a.m. Eastern Daylight Time and lasted just over 174 seconds, slowed the spacecraft by about 2.5 miles per hour (1.1 meters per second).

At the time Messenger was about 8.9 million miles (14.3 million kilometers) from Earth, moving around the Sun at nearly 69,200 miles (110,720 kilometers) per hour.

Today's was the fourth trajectory correction maneuver since Messenger launched last Aug. 3. Early post-maneuver analysis shows that Messenger is on track for a closest approach some 1,458 miles (2,347 kilometers) over Mongolia in central Asia on August 2 – though the team has two opportunities in late July to carry out another small course correction if necessary.

The Earth flyby sends the spacecraft toward Venus; the first of two Venus flybys is planned for October 2006.

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