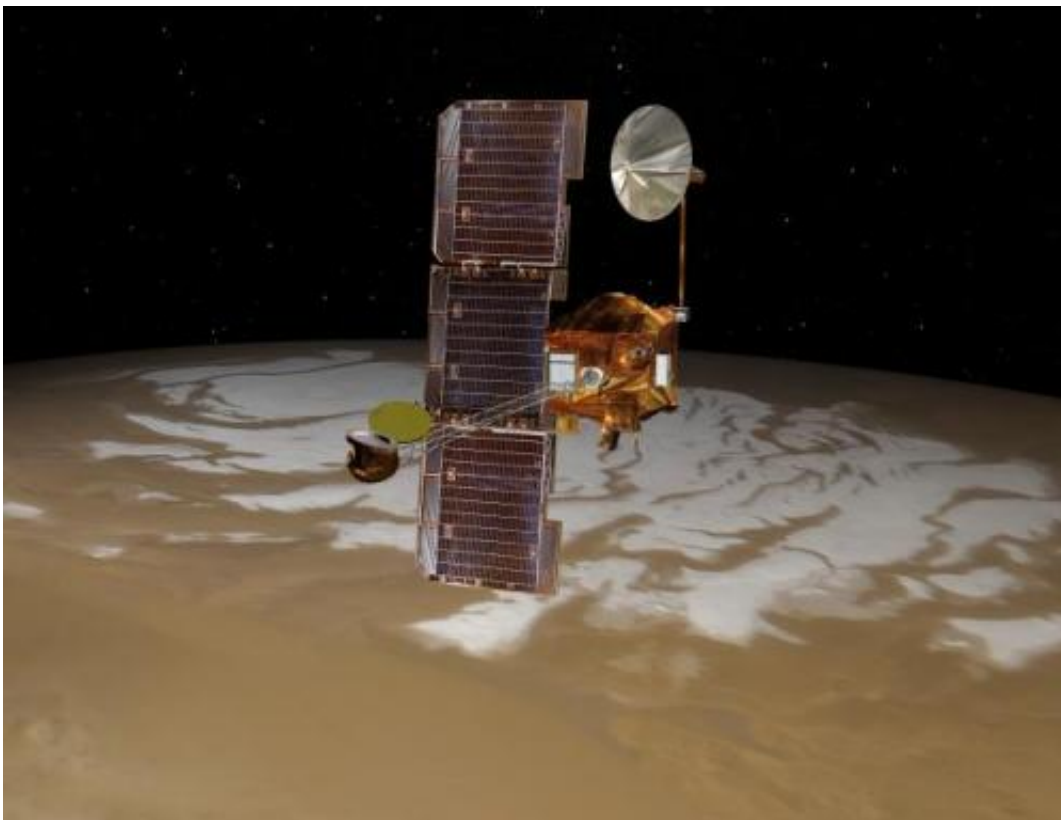


Orbiter enters, then exits, standby safe mode

July 16 2012, By Guy Webster



NASA's Mars Odyssey spacecraft passes above Mars' south pole in this artist's concept illustration. The spacecraft has been orbiting Mars since October 24, 2001. Credit: NASA/JPL

(Phys.org) -- NASA's Mars Odyssey orbiter experienced about 21 hours in a reduced-activity precautionary status ending at about 10 a.m. PDT (1 p.m. EDT) on Thursday, July 12.

The orbiter put itself in the precautionary, Earth-pointed status called safe mode, at about 1 p.m. PDT (4 p.m. EDT) on July 11, as it finished a maneuver adjusting, or trimming, its orbit. Odyssey's computer did not reboot, so diagnostic information was subsequently available from the spacecraft's onboard memory. Based on analysis of that information, the mission's controllers sent commands yesterday morning taking Odyssey out of safe mode and reorienting it to point downward at Mars.

"We are on a cautious path to resume Odyssey's science and relay operations soon," said Gaylon McSmith, Odyssey project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "We will also be assessing whether another orbit trim maneuver is warranted."

The thruster burn for Wednesday's orbit-trim maneuver lasted 1.5 seconds, as planned, which was shorter than any previous orbit-trim maneuver of the mission's decade at Mars. The spacecraft's onboard capability for maintaining orientation during the burn put unexpectedly high demand on a reaction wheel in the attitude control system, which prompted the change to safe mode.

NASA launched the [Mars Odyssey spacecraft](#) on April 7, 2001, and it arrived at Mars Oct. 24, 2001. It has worked at Mars longer than any other [Mars mission](#) in history. Besides conducting its own scientific observations, it serves as a communication relay for robots on the [Martian surface](#). NASA plans to use Odyssey and the newer [Mars Reconnaissance Orbiter](#) as communication relays for the Mars [Science Laboratory](#) mission during the landing and Mars-surface operations of its Curiosity rover.

More information: mars.jpl.nasa.gov/odyssey

Provided by JPL/NASA

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