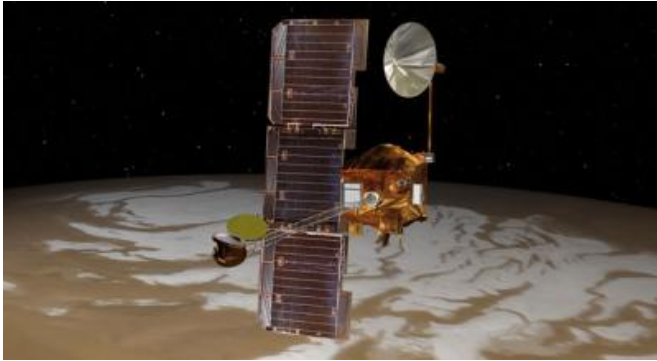


Mars Odyssey Orbiter Puts Itself Into Standby Safe Mode

21 July 2010



Artist concept of Odyssey. Image credit: NASA/JPL

(PhysOrg.com) -- NASA's Mars Odyssey orbiter put itself into a safe standby mode, and the mission team has begun steps to resume the spacecraft's science and relay operations this week.

NASA's [Mars Odyssey orbiter](#) put itself into a safe [standby mode](#) on Wednesday, July 14, and the team operating the spacecraft has begun implementing careful steps designed to resume Odyssey's science and relay operations this week.

Engineers have diagnosed the cause of the [safe-mode](#) entry as the spacecraft's proper response to unexpected performance by an electronic encoder. That encoder controls motion of a gimbal that adjusts the position of the [solar array](#). Odyssey switched to a redundant encoder, and there is no sign of any mechanical problem with the gimbal.

Commands from Earth have switched Odyssey back to using its high-gain antenna. The programmed response to the detected problem on July 14 initially shifted the spacecraft to slower communication via its low-gain antenna.

The spacecraft team recovered downward-pointing

operations, out of safe mode, on Friday, July 16. "We expect to be back to full operations this week," said Odyssey Project Manager Phil Varghese of NASA's Jet Propulsion Laboratory, Pasadena, Calif.

Odyssey has been orbiting Mars since 2001. In addition to its own major scientific discoveries and continuing studies of the planet, the Odyssey mission has played important roles in supporting the missions of the Mars rovers Spirit and Opportunity and the [Phoenix Mars Lander](#).

The rover Opportunity was not able to transmit data to ground controllers via Odyssey while the orbiter was in safe mode. Science activities were delayed, but critical activities have not been affected.

More information:

www.nasa.gov/mission_pages/odyssey

Provided by JPL/NASA

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