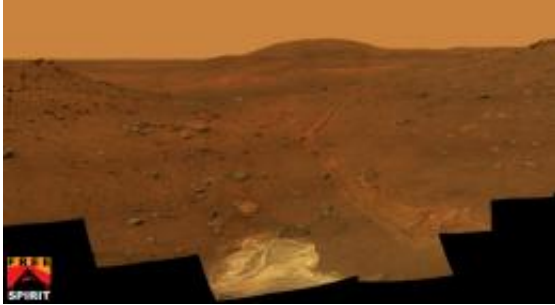


Amnesia-Like Behavior Returns on Spirit

October 31 2009



This full-circle view from the panoramic camera (Pancam) on NASA's Mars Exploration Rover Spirit shows the terrain surrounding the location called "Troy," where Spirit became embedded in soft soil during the spring of 2009.

(PhysOrg.com) -- Until Oct. 24, NASA's Mars Exploration Rover had gone more than six months without an episode of amnesia-like symptoms like those that appeared on four occasions earlier this year.

In these amnesia events, Spirit fails to record data from the day's activities onto the type of computer memory -- non-volatile "flash" memory -- that can retain the data when the rover powers down for its energy-conserving periods of "sleep." The reappearance of this behavior in recent days might delay the start of planned drives by Spirit geared toward extricating the rover from a patch of soft soil where its wheels have been embedded since April.

Spirit sent data Oct. 24 through Oct. 27 indicating that the rover was not using its flash memory. The rover also has alternate memory (volatile,

[random-access memory](#)) where data can be saved for communicating to Earth if the communication session comes before the next sleep period. Spirit remains in communication with Earth, maintaining good power and temperatures.

"We still don't have information about what causes these amnesia events," said [Mars Exploration Rover](#) Project Manager John Callas of NASA's Jet Propulsion Laboratory, Pasadena, Calif. "If they are intermittent and infrequent, they are a nuisance that would set us back a day or two when they occur. If the condition becomes persistent or frequent, we will need to go to an alternate strategy that avoids depending on [flash memory](#). We would only get data collected the same day and any unsent data from an earlier day would be lost. The total volume of data returned by the rover is expected to be about the same."

This week, an independent panel of robotics experts has been reviewing the rover team's tests and plans for getting Spirit away from the site called "Troy," where the rover's wheels broke through a crusty, dark surface layer and became embedded in bright, loose material that had been hidden underneath.

Spirit has worked on Mars for more than 69 months in what was originally planned as a three-month mission.

Provided by JPL/[NASA](#) ([news](#) : [web](#))

Citation: Amnesia-Like Behavior Returns on Spirit (2009, October 31) retrieved 23 April 2024 from <https://phys.org/news/2009-10-amnesia-like-behavior-spirit.html>

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