

# Mars Rover Team Sets Low-Power Plan for NASA's Spirit

November 17 2008

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This view shows the southward vista from the location where Spirit has spent its third Martian winter inside Mars' Gusev Crater.

(PhysOrg.com) -- After assessing data received from NASA's Mars Exploration Rover Spirit on Thursday, mission controllers laid out plans for the rover to conserve its modest energy during the next few weeks.

Spirit's solar panels produced 161 watt hours of energy on the Martian day that ended Thursday, under a sky that had cleared appreciably from four days earlier, when a dust storm slashed energy output to 89 watt hours. However, the dust buildup on the panels themselves has worsened. Only 30 percent of the light hitting them gets through the dust and is usable by the photovoltaic cells, down from 33 percent before the storm.

"Spirit is not out of the woods yet," said John Callas of NASA's Jet Propulsion Laboratory, Pasadena, Calif., project manager for Spirit and

its twin, Opportunity. "The storm and all its dust have not gone away completely. And this is the time of the Martian year when storms like this can occur. So the plan ahead is to stay cautious with the rover and work on recharging the batteries while waiting out the rest of the storm's activity."

A four-day plan being transmitted to Spirit today, Nov. 14, tells the rover to keep some heaters turned off and conduct only limited observations and communications. That plan will be followed by similar low-power sequences for the rest of the month.

On Nov. 30, Spirit will begin a two-week period with no new commands sent from Earth, while the sun is between Earth and Mars. Even before the storm that is now subsiding, the rover team did not plan to drive Spirit away from its location at the north end of a low platform called "Home Plate" until after that period of suspended commanding.

Spirit has been operating on Mars for nearly five years in an exploration mission originally planned to last three months. JPL, a division of the California Institute of Technology, Pasadena, manages the Mars Exploration Rover project for the NASA Science Mission Directorate, Washington.

Provided by NASA

Citation: Mars Rover Team Sets Low-Power Plan for NASA's Spirit (2008, November 17)  
retrieved 26 April 2024 from  
<https://phys.org/news/2008-11-mars-rover-team-low-power-nasa.html>

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