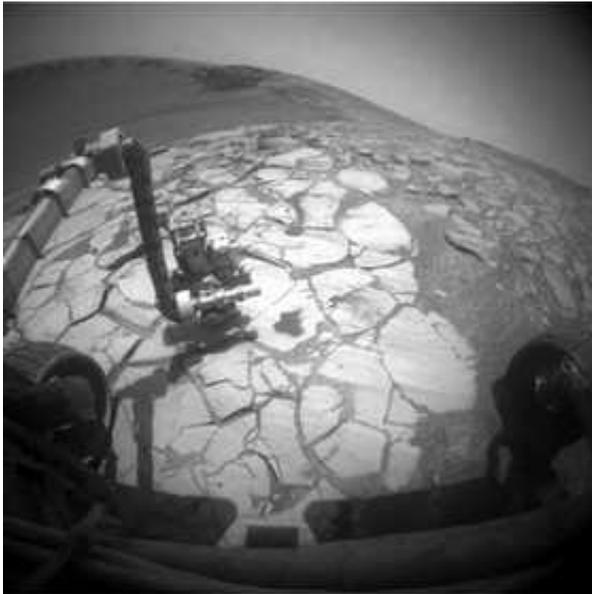


NASA Extends Operations for Its Long-Lived Mars Rovers

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NASA Mars Exploration Rover Opportunity used its front hazard-identification camera to capture this wide-angle view of its robotic arm extended to a rock in a bright-toned layer inside Victoria Crater. Image credit: NASA/JPL-Caltech

NASA is extending, for a fifth time, the activities of the Mars Exploration Rovers Spirit and Opportunity. The decision keeps the trailblazing mobile robotic pioneers active on opposite sides of Mars, possibly through 2009. This extended mission and the associated science are dependent upon the continued productivity and operability of the rovers.

"We are extremely happy to be able to further the exploration of Mars. The rovers are amazing machines, and they continue to produce amazing scientific results operating far beyond their design life," said Alan Stern, associate administrator for NASA's Science Mission Directorate, Washington.

The twin rovers landed on Mars in January 2004, 45 months ago, on missions originally planned to last 90 days. In September, Opportunity began descending into Victoria Crater in Mars' Meridiani Planum region. At approximately a half mile wide and 230 feet deep, it is the largest crater the rover has visited. Spirit climbed onto a volcanic plateau in a range of hills that were on the distant horizon from the landing site.

"After more than three-and-a-half years, Spirit and Opportunity are showing some signs of aging, but they are in good health and capable of conducting great science," said John Callas, rover project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif.

The rovers each carry a suite of sophisticated instruments to examine the geology of Mars for information about past environmental conditions. Opportunity has returned dramatic evidence that its area of Mars stayed wet for an extended period of time long ago, with conditions that could have been suitable for sustaining microbial life. Spirit has found evidence in the region it is exploring that water in some form has altered the mineral composition of some soils and rocks.

To date, Spirit has driven 4.51 miles and has returned more than 102,000 images. Opportunity has driven 7.19 miles and has returned more than 94,000 images.

Among the rovers' many other accomplishments:

- Opportunity has analyzed a series of exposed rock layers recording

how environmental conditions changed during the times when the layers were deposited and later modified. Wind-blown dunes came and went. The water table fluctuated.

- Spirit has recorded dust devils forming and moving. The images were made into movie clips, providing new insight into the interaction of Mars' atmosphere and surface.

- Both rovers have found metallic meteorites on Mars. Opportunity discovered one rock with a composition similar to a meteorite that reached Earth from Mars.

Source: NASA

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