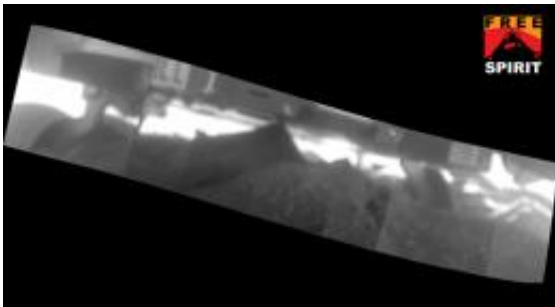


Tilt Parameters End First Extrication Drive for Spirit

November 17 2009



This mosaic of images from the Spirit rover, taken on Sol 1925 (June 2, 2009), helped engineers assess the rover's state and plan Spirit's extraction from the soft soil at the site called "Troy." The images were taken by Spirit's microscopic imager instrument, mounted on the end of the robotic arm. Image Credit: NASA/JPL-Caltech/Cornell/USGS

(PhysOrg.com) -- The preliminary results from the first extrication drive for Spirit on Sol 2088 (Nov. 17, 2009) indicate the rover stopped less than 1 second after it began, sensing more vehicle lateral tilt than permitted.

A tight limit on vehicle roll and pitch of less than 1 degree change was set for this first drive. As the rover began its first move, it sensed that its roll was outside the allowed limit and safely stopped the drive.

The project is starting cautiously, setting initial parameters with very

tight limits with the knowledge that these hair triggers may stop the rover frequently. As the project gains confidence with extrication, these limits may be relaxed. From this limited drive the team now has a more accurate measurement of vehicle roll and pitch that will be used for subsequent drive planning. Analysis is continuing.

Completion of planning for the next drive will be no sooner than Wednesday, Nov. 18.

The attempt to extract Spirit from the Martian [sand](#) trap is expected to take weeks or months, with uncertain probability of success.

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

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