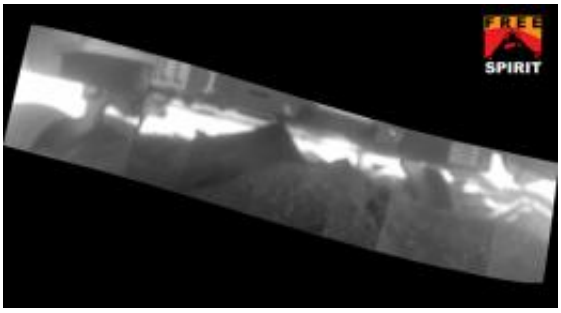
Second Planned Extrication Drive is Straight Ahead Again

November 19 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) -- Because the first extrication drive for Spirit, on Sol 2088 (Nov. 17), stopped as soon as it began due to an exceeded tilt limit, the plan for an extrication drive on Sol 2090 (Nov. 19) will essentially be a repeat of the first drive plan, but with improved rover attitude knowledge. The updated attitude knowledge comes from the rover's measurement of its tilt on Sol 2088.

In the Sol 2090 plan, the rover will be instructed to drive straight ahead in two steps. Each step will be a commanded wheel motion of about 2.5 meters (8.2 feet). As before, not much actual motion of the rover is

expected.

At the conclusion of the commanded motion, the rover will collect three frames from its microscopic imager for a mosaic of the rover underbelly. The rover's panoramic camera will take images of the middle wheels, the navigation camera will take pre-drive and post-drive images for visual odometry, and the front and rear hazard-avoidance cameras will take supporting images.

These commands will be transmitted to Spirit early Thursday morning, Nov. 19. The results from the drive are expected to be received on the ground later Thursday via a Mars orbiter relay. Because of limited data volume available in the rover relay pass, the data downlink will likely be insufficient for the project to conduct a complete analysis of the drive that same day.

Provided by JPL/NASA (news : web)