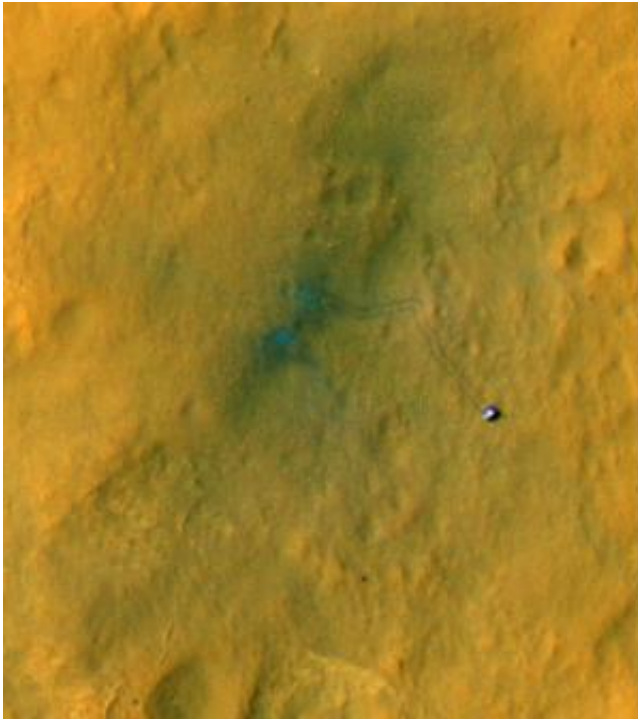


# Visible from space: Curiosity tire tracks on Mars

September 6 2012, by Seth Borenstein

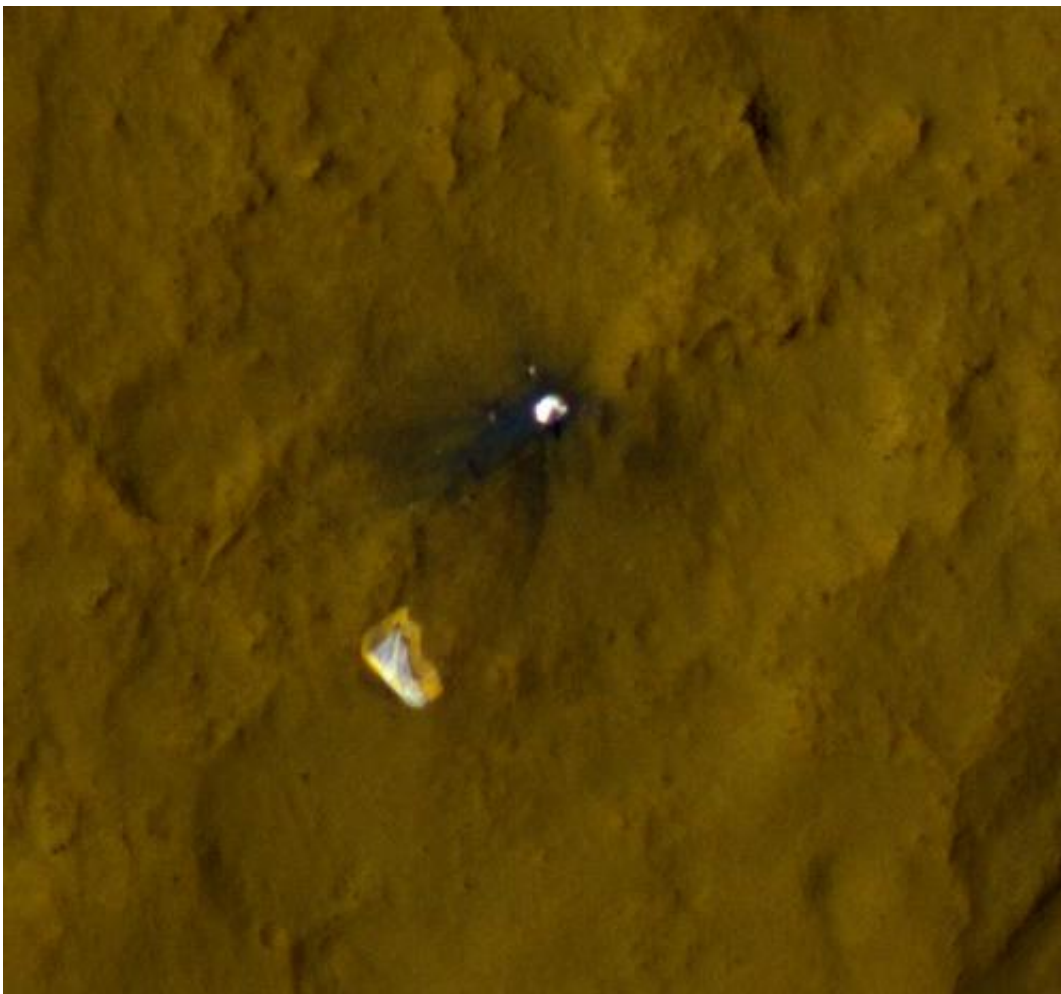
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Tracks from the first drives of NASA's Curiosity rover are visible in this image captured by the High-Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. The rover is seen where the tracks end. The image's color has been enhanced to show the surface details better. The two marks seen near the site where the rover landed formed when reddish surface dust was blown away by the rover's descent stage, revealing darker basaltic sands underneath. Similarly, the tracks appear darker where the rover's wheels disturbed the top layer of dust. Observing the tracks over time will provide information on how the surface changes as dust is deposited and eroded. Image credit: NASA/JPL-Caltech/Univ. of Arizona

NASA's robotic rover Curiosity is making its mark on Mars, in a way so big that it can be seen from space.

In just one month, it's driven 368 feet (112 meters) on the red planet, slightly more than the length of a football field. Curiosity's slightly zig-zaggy tire tracks were photographed by a NASA satellite circling Mars and also from the rover's rear-facing cameras.

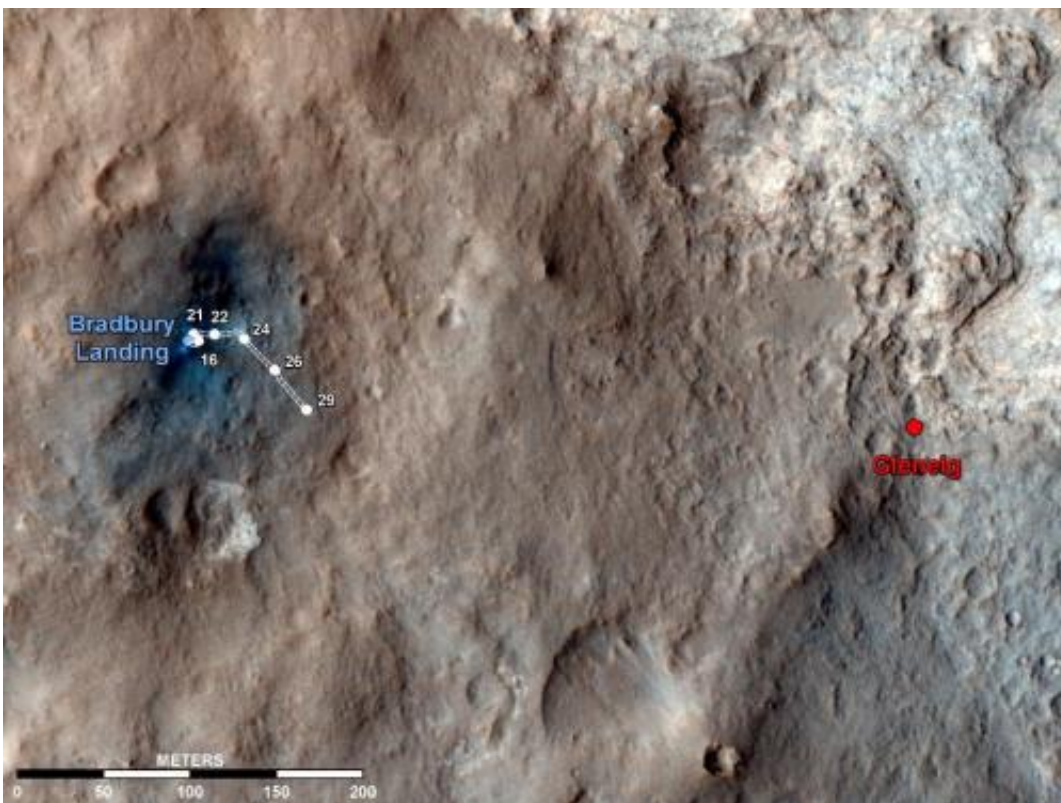


This color view of the parachute and back shell that helped deliver NASA's Curiosity rover to the surface of the Red Planet was taken by the High-Resolution Imaging Science Experiment (HiRISE) camera on NASA's Mars Reconnaissance Orbiter. The area where the back shell impacted the surface is darker because lighter-colored material on the surface was kicked up and

displaced. Image credit: NASA/JPL-Caltech/Univ. of Arizona

The spacecraft landed on Aug. 5 on a mission to look for ingredients in Martian soil and rocks that could support life.

When the images from the Martian satellite showed the rover tracks, there was much celebration, mission manager Michael Watkins said Thursday. He said engineers were thrilled by the idea that "we left tracks on Mars that we can see from orbit" because it gave them a visible sense of accomplishment.



This map shows the route driven by NASA's Mars rover Curiosity through the 29th Martian day, or sol, of the rover's mission on Mars (Sept. 4, 2012). The route starts where the Mars Science Laboratory spacecraft placed the rover, a

site subsequently named Bradbury Landing. The line extending toward the right (eastward) from Bradbury Landing is the rover's path. Numbering of the dots along the line indicate the sol numbers of each drive. North is up. The scale bar is 200 meters (656 feet). By Sol 29, Curiosity had driven at total of 358 feet (109 meters). At the location reached by the Sol 29 drive, the rover began several sols of arm characterization activities. The Glenelg area farther east is the mission's first major science destination, selected as likely to offer a good target for Curiosity's first analysis of powder collected by drilling into a rock. The image used for the map is from an observation of the landing site by the High Resolution Imaging Science Experiment (HiRISE) instrument on NASA's Mars Reconnaissance Orbiter. Image credit: NASA/JPL-Caltech/Univ. of Arizona

Other rovers have left tracks on Mars, but not as deep or wide as Curiosity's, Watkins said.

Curiosity will not be traveling any more for several days. Engineers will spend the next week checking out its crucial robotic arm. At the end of that arm is a "Swiss Army knife" of scientific instruments designed to test rocks and the chemicals in the soil, Watkins said.



This scene shows the surroundings of the location where NASA Mars rover Curiosity arrived on the 29th Martian day, or sol, of the rover's mission on Mars (Sept. 4, 2012). It is a mosaic of images taken by Curiosity's Navigation Camera (Navcam) following the Sol 29 drive of 100 feet (30.5 meters). Tracks from the drive are visible in the image. For scale, Curiosity leaves parallel tracks about 9 feet (2.7 meters) apart. At this location on Sol 30, Curiosity began a series of activities to test and characterize the rover's robotic arm and the tools on the arm. The panorama is centered to the north-northeast, with south-southwest at both ends. Image credit: NASA/JPL-Caltech

After the arm and its tools are given clean bills of health, the rover will continue on a trek of more than a week to its first destination, a point called Glenelg, where three types of terrain meet. The rover will likely stop on the way to test its first rocks.

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