

Imager sends ultra high-res photo from Mars

October 9 2013



This image of a U.S. penny was acquired Mars Hand Lens Imager (MAHLI) aboard NASA's Curiosity rover in northern Gale crater on Mars. At 14 micrometers per pixel, this is the highest resolution image that the MAHLI can acquire. The image shows that, during the penny's 14 months (so far) on Mars, it has accumulated Martian dust and clumps of dust, despite its vertical mounting position. Credit: NASA/JPL-Caltech/MSSS/Planetary Science Institute

(Phys.org) —An instrument aboard NASA's Curiosity rover has sent back to scientists on Earth an ultra high-resolution image of a penny the

rover carried to Mars.

The coin was photographed by the Mars Hand Lens Imager (MAHLI) aboard Curiosity in northern Gale crater on Mars. The penny, a 1909 VDB penny minted in Philadelphia during the first year that Lincoln cents became available, is part of the MAHLI calibration target and came from Earth. The images were acquired on Oct. 2, on sol 411 – the 411th Martian day – of the mission.

"I'm so proud of how beautifully this camera has performed on Mars," said R. Aileen Yingst, Planetary Science Institute Senior Scientist and deputy Principal Investigator for MAHLI. "I can't wait to apply this newly available capability to real geologic targets on our way to Mt. Sharp."

At 14 micrometers per pixel, this is the highest resolution image that the MAHLI can acquire, Yingst said. This image was obtained as part of a test; it was the first time that the rover's robotic arm placed the MAHLI close enough to a target to obtain MAHLI's highest-possible resolution. The previous highest-resolution MAHLI images, which were pictures of Martian rocks, were at 16-17 micrometers per pixel. A micrometer, also known as a micron, is about 0.000039 inches.

NASA's Mars Science Laboratory Project provided funding for MAHLI.

The gold medal for highest resolution photographs on Mars goes to NASA's Phoenix Mars Lander's optical microscope. As a microscope, though, fine-grained samples had to be delivered to it, whereas MAHLI can be deployed to look at geologic materials in their natural setting.

Provided by Planetary Science Institute

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