

Phoenix Robotic Arm Camera Sees Possible Ice

June 1 2008



Image Credit: NASA/JPL-Caltech//University of Arizona/Max Planck Institute

A view of the ground underneath NASA's Phoenix Mars Lander adds to evidence that descent thrusters dispersed overlying soil and exposed a harder substrate that may be ice.

The image received Friday night from the spacecraft's Robotic Arm Camera shows patches of smooth and level surfaces beneath the thrusters.

"This suggests we have an ice table under a thin layer of loose soil," said the lead scientist for the Robotic Arm Camera, Horst Uwe Keller of

Max Planck Institute for Solar System Research, Katlenburg- Lindau, Germany.

The Robotic Arm Camera on NASA's Phoenix Mars Lander captured this image underneath the lander on the fifth Martian day, or sol, of the mission. Descent thrusters on the bottom of the lander are visible at the top of the image.

This view from the north side of the lander toward the southern leg shows smooth surfaces cleared from overlying soil by the rocket exhaust during landing. One exposed edge of the underlying material was seen in Sol 4 images, but the newer image reveals a greater extent of it. The abundance of excavated smooth and level surfaces adds evidence to a hypothesis that the underlying material is an ice table covered by a thin blanket of soil.

The bright-looking surface material in the center, where the image is partly overexposed may not be inherently brighter than the foreground material in shadow.

"We were expecting to find ice within two to six inches of the surface," said Peter Smith of the University of Arizona, Tucson, principal investigator for Phoenix. "The thrusters have excavated two to six inches and, sure enough, we see something that looks like ice. It's not impossible that it's something else, but our leading interpretation is ice."

Source: NASA

Citation: Phoenix Robotic Arm Camera Sees Possible Ice (2008, June 1) retrieved 25 April 2024 from <https://phys.org/news/2008-06-phoenix-robotic-arm-camera-ice.html>

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