

Phoenix Lander Prepares for Microscopy, Wet Chemistry on Mars

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This color image, acquired by NASA's Phoenix Mars Lander's Surface Stereo Imager shows the so-called "Knave of Hearts" first-dig test area to the north of the lander. Credit: NASA

NASA's Phoenix Mars Lander has delivered a scoop of Martian soil from the "Snow White" trenches to the optical microscope for analysis tomorrow, June 24, the 29th Martian day of the mission, or Sol 29.

And the Phoenix lander will position its Robotic Arm to deliver some of

that same scoop of soil for its first wet chemistry experiment on the Red Planet in the next day or two.

Scientists did a diagnostic run today that melted ice to water for Phoenix's first wet chemistry experiment. The water is part of the wet chemistry laboratory and comes from Earth.

The laboratory, not yet used on Mars, is designed to test soil for salts, acidity and other characteristics, much like garden soils are tested on Earth. Phoenix's wet chemistry laboratory is part of the suite of tools called the Microscopy, Electrochemistry and Conductivity Analyzer, or MECA.

"The water in the wet-chemistry cell is frozen, and before we do an experiment we have to make sure that it's totally thawed," Phoenix co-investigator Sam Kounaves of Tufts University, wet chemistry laboratory lead, said. "It's like pouring a known amount of water from a beaker when you're doing a chemistry experiment -- you have to use all the water for your experiment to work."

"We are good to go," said Michael Hecht of NASA's Jet Propulsion Laboratory, lead scientist for Phoenix's MECA instrument. "We made liquid water on Mars for the first time for our test."

Source: NASA

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