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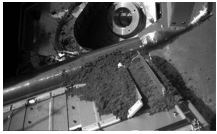


Image of the test oven of the TEGA instrument during the first experiment. None of the soil on top of it seems to have passed through the screen  
NASA/JPL-Caltech/University of Arizona

## **Phoenix Fails to Make First Analysis of Martian Soil**

*Test oven covered with soil, none of which reaches the instrument*

The Thermal and Evolved Gas Analyzer instrument, or TEGA for short, on board the Phoenix Mars Lander, failed to pass its first sample test after the Martian soil delivered by the robotic arm of the lander was unable to reach the instrument. Mission controllers said on Saturday that they would try to determine what went wrong in the days to come. The images show that the test oven of TEGA is almost fully covered with soil (see bottom image of the instrument taken a couple of days before the test), although the sensors do not indicate any of it having fallen on the screen of the oven door. The TEGA instrument is equipped with eight such ovens, which are designed to heat up the soil sample and analyze the resulting gases in order to establish whether or not any organic compounds are present there. William Boynton from the University of Arizona, who is responsible for the oven experiments, says that the sample delivery system appears to be working fine, including the vibrator of the screen, although no soil seems to be passing into the inner chamber. "We think everything is working correctly, although we don't really know for sure. We're a little bit concerned about this but we have some other things to check out", said Boynton in a press conference on Saturday. One of the reasons for the malfunction would be either that the soil is too compact to pass through the screen, or the vibrator of the screen is not working, while the sensors indicate that it is operating properly. Considering that the TEGA instrument carries 7 other such ovens, the failure of one of them is not a major loss for the mission. Until mission controllers establish what has gone wrong with the test oven, scientists will continue to photograph the surrounding surface areas and do some more digging with the robotic arm.