



# countdown

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## Shuttle work preps Atlantis, Endeavour for rollovers



### ◆ Shuttle Update:

On **Atlantis**, heat shields are being installed around the space shuttle main engines.

On **Endeavour**, work includes payload testing and installing space shuttle main engines. The mobile launcher platform will be moved Wednesday into the VAB to support stacking of Endeavour's external tank and SRBs, which is scheduled for July 11.

◆ **Mars Update:** NASA's Phoenix Mars Lander placed a sample of Martian soil in the spacecraft's wet chemistry laboratory for the first time Friday. Results from that instrument, part of Phoenix's Microscopy, Electrochemistry and Conductivity Analyzer, are expected to provide the first measurement of the acidity or alkalinity of the planet's soil.

The analysis of this and other soil samples will help researchers determine whether ice beneath the soil ever has melted, and whether the soil has other qualities favorable for life.

The Phoenix team is discussing what sample to deliver next to the lander's other analytical instrument, which bakes and sniffs soil to identify volatile ingredients. Engineers have identified possible problems in the mechanical and electrical operation of that instrument, the Thermal and Evolved-Gas Analyzer, or TEGA.

■ **Upcoming KEA Event** — The Kennedy Engineering Academy will be hosting "Lunar Launch and Landing" at 10:30 a.m. July 9. NASA and contractor personnel are invited to attend this event. If you have any questions, please contact

Gisele Altman at [gisele.altman-1@nasa.gov](mailto:gisele.altman-1@nasa.gov) or 867-4000. To view past KEA events or presentations, please visit: <http://kea.ksc.nasa.gov/>.

■ **NASA Spinoff** — Ovens designed for the International Space Station use air impingement technology. Jets of hot air at the top and bottom of the oven are focused on the food, rather than heating the oven cavity, as in a traditional thermal oven. By heating the food directly, foods cook faster and more consistently, retaining flavor and texture.

■ **NASA, NSBRI Select Proposals To Support Crew Health On Missions** — NASA's Human Research Program and the National Space Biomedical Research Institute, or NSBRI, of Houston will fund a group of research proposals to help investigate questions about astronaut health and performance on future space exploration missions. The 33 selected proposals represent 21 institutions in 12 states.

The purpose of the Human Research Program is to provide knowledge and technologies to improve human health during space exploration, as well as possible countermeasures for problems. Goals include the successful completion of exploration missions and the preservation of astronauts' health throughout their lives. The program quantifies crew health and performance risks during spaceflight and develops strategies that mission planners and system developers can use to monitor and mitigate health risks.

■ **Solar Power at Kennedy** — NASA and FPL signed an agreement Tuesday as part of a new initiative that will cut reliance on fossil fuels and improve the envi-

ronment by reducing greenhouse gas emissions.

The agreement will permit FPL to lease 60 acres of Kennedy's approximately 140,000 acres for a solar photovoltaic power generation system. The major facility will produce an estimated 10 megawatts of electrical power, which can serve roughly 3,000 homes. A separate one-megawatt solar power facility will support the electrical needs of the center.

FPL refers to the large solar plant at Kennedy as the space coast facility. The company estimates the plant will prevent more than 227,000 tons of greenhouse gas emissions from entering the atmosphere during the life of the project. According to the Environmental Protection Agency, that is the equivalent of eliminating the emissions from more than 1,800 cars every year.

■ **NASA Science** — In 1967, Surveyor 3 landed on the Moon. Two years later, Apollo astronauts visited the little unmanned spacecraft and brought pieces of it home to Earth. Now, a portion of Surveyor's robotic arm, the scoop it used to sample moon dust, is teaching researchers some long-lost secrets. Read the full story at:

[http://science.nasa.gov/headlines/y2008/20jun\\_apollorelie.htm?list947891](http://science.nasa.gov/headlines/y2008/20jun_apollorelie.htm?list947891).

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