

Thursday, April 8, 2004

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Three-year Genesis mission to return solar samples in the fall



Latest ISS experiments study bubbles and feet

▲ **Hooks to capture solar spacecraft:** NASA's Genesis mission was launched from Cape Canaveral Air Force Station in August 2001 to amass solar wind particles on hexagonal, wafer-shaped collectors made of pure silicon, gold, sapphire and diamond. The mission has ended and later this month, Genesis will execute the first in a series of trajectory maneuvers that will place the spacecraft on a route toward Earth. On Sept. 8, the spacecraft will dispatch a sample-return capsule containing its solar booty. The capsule will re-enter Earth's atmosphere for a planned landing at the U.S. Air Force Utah Test and Training Range at about 9:15 a.m. EDT. To preserve the delicate particles of the sun in their prisons of gold, sapphire and diamond, specially trained helicopter pilots will snag the return capsule from mid-air using giant hooks. The flight crews for the two helicopters assigned for the capture and return of Genesis are former military aviators, Hollywood stunt pilots and an active-duty Air Force test pilot. To learn more, go to http://www.nasa.gov/home/hqnews/2004/apr/HQ_04113_genesis.html

▲ **ISS experiments:** The Expedition 8 crew's schedule Tuesday included science and maintenance work. Commander Michael Foale completed a session with the **Pore Formation and Mobility Investigation**. This experiment is conducted in the Microgravity Science Glovebox and studies how bubbles form in metal and crystal samples. Foale also prepared for a session with the **Foot/Ground Reaction Forces During Space Flight** experiment. During the session, he will wear a special pair of instrumented leggings that allow researchers to measure forces on the feet, joint angles and muscle activity.

◆ **Photovoltaic solar panel array tour April 21 and 22** – The Space Gateway Support Energy Management is offering a one-hour tour of the Photovoltaic System at Field

Mill Site 18 from noon to 1 p.m. April 21 and 22 during the Environmental and Energy Awareness Week. The Photovoltaic (PV) Array provides 1 kW (energy used to power approximately 10 computer monitors) of clean power to one of NASA's rural weather monitoring field sites. The monitoring sites are an important part of the Spaceport's Launch Pad Lightning Warning System. The PV array replaces a diesel generator with solar energy. It is in a remote location, so long pants and closed-toed shoes are recommended. Vans will pick up participants from the Environmental and Energy Awareness Welcome Tent. Permission from supervisors is needed, and space is limited. To participate, contact Shannah Trout at 867-8443 by April 16.

◆ **EEAW crossword puzzle** – The Environmental & Energy Awareness Team has developed a crossword puzzle this year to challenge your knowledge in the areas of environmental and energy. The puzzle can be downloaded from the EEAW Web site <http://eeaw.ksc.nasa.gov/> prior to the event. Copies will also be provided at the Welcome Table from 9 a.m. to 3 p.m. on April 21 in front of the O&C Building and April 22 at the VAB Area, Parking Lot E. How do you find the answers? Clue cards will be posted at the various exhibitors' tables, so come out and join in the fun. The winners will receive a \$25 or \$50 gift certificate donated by the NASA Exchange Council. Winners' names will be announced April 23.

◆ **Reminder** – The Federal Women's Program Working Group is hosting a 45-minute financial planning presentation, "Long-Term Care," to be given by Nicki Biamonte, a Financial Services executive with Metropolitan Life, at 1 p.m. on April 15 in the O&C Mission Briefing Room. All civil service and contractor personnel are invited. For additional information, contact Kandy Warren at 867-7711.

◆ **Did You Know?** Earth Day is April 22 (*not April 21*).