

Expedition 9 crew studies fitness, weightlessness in first week aboard ISS

▲ ISS Update: Last week members of the new crew of the International Space Station wrapped up their first full week in orbit by themselves. They concentrated on life science research, spacewalk preparations and



settling into their new home.

Expedition 9 NASA ISS Science Officer Mike Fincke and Commander Gennady Padalka (above) focused on learning how the human body responds to extended periods without gravity. The crew members completed the first sessions of a series of Russian biomedical experiments measuring body mass and calf volume and drawing blood to measure red blood cell mass.

They also performed operations with two European Space Agency experiments, looking into adaptation of the vestibular system to weightlessness. The vestibular system provides

the body's sense of balance and sensations of up and down.

Padalka and Fincke also completed their first periodic fitness evaluation and received a briefing on upcoming Station payload operations from ISS Program Scientist Don Thomas, Lead Increment Scientist Janice Voss and Increment Payload Operations Director Lamar Stacy.

For more details on the experiments, see the news release at <http://www.nasa.gov/audience/formedia/features/index.html>

▲ New ELV missions: Two NASA missions to explore the boundaries of Earth's atmosphere with space are scheduled for launch in 2006. Both have recently completed preliminary design phases and are ready to proceed with hardware fabrication, integration and testing.

The Aeronomy of Ice in the Mesosphere (AIM) Small Explorer will determine the causes of Earth's highest-altitude clouds, which occur on the very edge of space. These clouds form in the coldest part of the atmosphere, about 50 miles above the polar regions, every summer. Recorded sightings of these silvery-blue, noctilucent or "night-shining" clouds began in the late 1800s at high latitudes. They have been increasing in frequency and extending to lower latitudes over the past four decades.

New ELV missions in 2006 to study high-level clouds, lights in Earth's polar regions

The second mission is the Time History of Events and Macroscale Interactions during Substorms (THEMIS) mission. A Medium Explorer mission, it will fly five small spacecraft through explosive geomagnetic disturbances to solve the mystery of what triggers the colorful eruptions of the Northern and Southern lights.

◆ **Briefing on TV about KSC's role in supporting Space Vision** — Craig Steidle, NASA's associate administrator, Office of Exploration Systems, and Center Director Jim Kennedy will brief the media **today** on the Vision for Space Exploration and KSC's role in supporting the Vision. Employees can view the briefing from 10:45 - 11:20 a.m. on NASA TV (channel 7) and also on the internal home page at <http://www.ksc.nasa.gov/nasa-only/internal.html>

◆ **Did You Know?** The KSC Employee Safety & Health Pocket Guide (Rev A) provides a quick reference to NASA and KSC safety & health policies and requirements. Copies are available by contacting Florence Smith at 867-2532, or e-mail Florance.Smith-1@nasa.gov.

