

Space experiment rack receives flight time

A new space experiment rack under development by Kennedy Space Center and Space Florida recently received some flight time. On Sept. 9 and 10, the FASTRACK Space Experiment Platform took off from Ellington Field near Johnson Space Center in Houston aboard NASA's first commercially-provided research flights on Zero Gravity Corporation's reduced gravity aircraft.

The experiment rack is designed to support two standard lockers that fit inside the space shuttle's crew middeck. It is being developed jointly by Kennedy and Space Florida to facilitate NASA and commercial use of reusable U.S. suborbital flight vehicles currently under development.

The rack also will accommodate experiments aboard reduced gravity aircraft such as Zero Gravity's modified Boeing 727 jet, and may also be adapted in the future for orbiting vehicles and facilities.



NASA/Troy Cryder

Technicians in the Life Science Building at Kennedy Space Center work on the FASTRACK Space Experiment Platform, which is designed to support two standard lockers that fit inside the space shuttle's crew middeck.

FASTRACK will enable investigators to test experiments, apparatus and analytical techniques in hardware compatible with the International Space Station, and perform science that can be carried out during the reduced gravity available for brief periods during aircraft parabolas.

It is designed to accommodate two single middeck lockers or one double locker, and other compatible experiment accommodations developed for use on the space shuttle and International Space Station.

Kennedy's FASTRACK project team will use NASA's commercial flight services contract with Zero Gravity Corporation to install and test a prototype rack along with three science investigations to verify interfaces, procedures and performance characteristics prior to fabrication of the FASTRACK flight units.

Among the science investigations performed on the test flights were baseline characterization data of the microgravity environment in the FASTRACK payload accommodations using

instrumentation provided by NASA's Glenn Research Center; a fluid dynamics experiment by the University of Central Florida to study Faraday wave interfaces in microgravity; and tests of a biomedical sensor to evaluate its effectiveness in performing continuous, non-invasive monitoring and recording of human hemodynamics, or the movement of blood, during changes in gravity.

Despite Hurricane Ike canceling the final two days of tests flights, engineers were able to obtain good results from the on how the racks performed.

Another potential group of customers will be those participating in NASA's Facilitated Access to the Space Environment for Technology Development and Training, or FAST, Program. The FAST Program, which is managed by the Innovative Partnerships Program, will provide reduced-gravity or suborbital testing opportunities for emerging technologies developed by small

businesses and others in partnerships with NASA.

With the expected emergence of commercial suborbital flights over the next few years, FASTRACK will support investigations that can benefit from longer exposure - between 2-3 minutes - of microgravity time, as well as actual spaceflight conditions.

The flights are sponsored and funded by NASA's Strategic Capabilities and Assets Program under the agency's commercial microgravity services contract with Zero Gravity Corporation.

The FASTRACK project has received support from the NASA Innovative Partnerships Program Office and the NASA Science Mission Directorate.

It is being jointly developed under a Space Act Agreement between Kennedy and Space Florida, both of which have contracted with the Bionetics Corporation to accomplish design, fabrication and testing of the experiment rack.

Kennedy, CCAFS open doors to families Oct. 18

By Kate Frakes
Spaceport News

In celebration of NASA's 50th Anniversary, Kennedy Space Center, Cape Canaveral Air Force Station and contractor employees are invited to attend the 2008 Family Day, as well as a festival-style celebration featuring concerts, food and entertainment for employees and their guests at the Kennedy Space Center Visitor Complex.

Friends and family can participate in Family Day from 9 a.m. to 3 p.m., but gates will close by 2:30 p.m. Kennedy and CCAFS will allow self-guided tours of designated areas and badged employees can escort guests throughout the day's activities. The Visitor

More online

For more information on 2008 Family Day, visit <http://familyday.ksc.nasa.gov>

Complex's main campus will be open throughout the day, free to employees who bring their badge to the will-call booth.

Access to the complex includes IMAX movies and the Shuttle Launch Experience.

Kennedy is anticipating special guest appearances by active NASA astronauts who will be available to sign autographs and meet with guests at specific facilities and times.

Cafeterias in the Multi-Func-

tion Facility, in the Launch Complex 39 area, the Space Station Processing Facility, and Operations and Checkout Building in the Industrial Complex will be open from 10 a.m. to 3 p.m. serving lunch for employees and guests.

The snack bar in the Launch Control Center will be open from 9 a.m. to 3 p.m. There also will be three mobile refreshment trailers open from 10 a.m. to 3 p.m. in the Launch Complex 39 area.

NASA Exchange stores will be open for souvenirs, T-shirts and complimentary 2008 Family Day collectors' coins.

The Operations and Checkout Mission Briefing Room will offer educational exhibits displayed by NASA and contractor organizations.

At CCAFS, Hangar F will offer exhibits and activities for children.

The Space Museum at CCAFS will be open for guests to gain firsthand insight into the history of space exploration at Kennedy.

After the on-center events, employees and guests are invited to a celebration honoring NASA's 50th Anniversary at the Visitor Complex.

The symbolic Rocket Garden will provide the backdrop for the entertainment starting at 3 p.m. with Big Head Johnny and the Eskimos.

At 5 p.m., Rockit takes the stage. The popular rock band Survivor headlines the celebration with its hits "Eye of the Tiger" and "Is This Love" at 7 p.m.

Guests will be treated to a fireworks show after the concert.