



## Arrival of Pluto spacecraft on the horizon

## ISS experiment aids in bone loss measurement

▲ **ELV Update:** The Pluto New Horizons spacecraft (artist rendering at left) is set to arrive aboard a C-17 cargo plane Saturday at the KSC Shuttle Landing Facility. It will be transported to the Payload Hazardous Servicing Facility for checkout.



The Atlas V launch vehicle for New Horizons will begin stacking on Cape Canaveral Air Force Station's Launch Complex 41 next week.

New Horizons is designed to help us understand worlds at the edge of our solar system by making the first reconnaissance of Pluto and Charon – a "double planet" and the last planet in our solar system to be visited by spacecraft. The mission will then visit one or more objects in the Kuiper Belt region beyond Neptune. New Horizons is scheduled to launch from Launch Complex 41 in January.

▲ **ISS Update:** Last week, hardware for the Foot/Ground Reaction Forces During Spaceflight experiment was set up on the station. NASA Science Officer John Phillips conducted his fifth and final session of the experiment, which investigates the differences between use of the body's lower extremities on Earth and in space, as well as changes in the musculoskeletal system during

space flight.

During the session, Phillips wore the instrumented Lower Extremity Monitoring Suit, or LEMS, which measures joint angles, muscle activity and forces on the feet during the exercises. During the final run, a special exercise protocol was used to measure forces Phillips experienced on the cycle ergometer and the Resistive Exercise Device.

Taking force measurements while running through the range of settings with each piece of exercise equipment helps determine the settings necessary to match the forces that bones experience during exercise on Earth. Matching those forces during exercise is critical to reducing the amount of bone lost while in weightlessness.

■ **Special September Nutrition Workshop** — The Nutrition Education for Workers (N.E.W.S.) at the Spaceport and Employee Assistance Programs (E.A.P.) present a special brown-bag/lunch-n-learn nutrition workshop **Sept. 28**, hosting a guest registered dietician, David Trinkle, Parrish Medical. From 11:30 a.m. -12:30 p.m. in the Occupational Health Facility (OHF) Training Room (west end of OHF), Trinkle will present *Nutrition for Diabetes*. Education materials will be distributed to all attendees. Feel free to bring your lunch; drinks and sugar-free treats will be provided.

■ **Annual Silent Auction** — Sponsored by the Office of Procurement and open to all KSC employees, the auction is being held Oct. 21 in Headquarters, room

2229. Items to bid on vary from works of art to Christmas decorations. Bidding opens at 9 a.m. and closes immediately at 1 p.m. For more information, please contact Nancy Harvey at 867-2115 or Tina Landes at 867-1500.

■ **Reminder** — The KSC Fitness Centers are sponsoring the Intercenter Walk/Run Sept. 27 at the Shuttle Landing Facility. The 2-mile walk/run, 5K run or 10K run are **free** for all spaceport employees. Stop by either Fitness Center by Friday to preregister. Late registration takes place at the race. T-shirts should be ordered at any NASA Exchange store by Tuesday to be delivered before the race. If you are interested in being a volunteer, please call Deb at 867-7829 or send e-mail to [orrindl@kscems.ksc.nasa.gov](mailto:orrindl@kscems.ksc.nasa.gov).

■ **Did You Know?** Massage therapy is available 10 a.m. - 4 p.m. Tuesday to Friday in the O&C Building, room 1023. To schedule an appointment, contact Valerie at 867-4762 or [JaramVS@kscems.ksc.nasa.gov](mailto:JaramVS@kscems.ksc.nasa.gov). Packages are available at \$1 per-minute, as well as gift certificates.