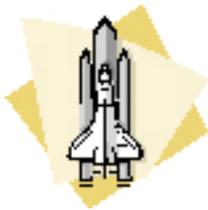


Atlantis control system installed



▲ **Shuttle Update:** The forward reaction control system is being installed in **Atlantis**. The system sits behind

the nose cap, in front of the orbiter windows. This control system provides the thrust for attitude maneuvers, pitch, yaw and roll, and for small velocity changes along the orbiter axis.

▲ **ELV Update:** At Launch Complex 41, the **New Horizons** launch vehicle, Atlas V, was successfully tested Dec. 5 during a launch pad "Wet Dress Rehearsal." This was a countdown test with the launch vehicle fully loaded with RP-1 fuel, liquid oxygen and liquid hydrogen.

The fifth and last solid rocket booster was mated to the Atlas V on Nov. 29. At the Payload Hazardous Servicing Facility, Spacecraft Autonomy Testing -- the ability of the New Horizons spacecraft to function without commands from Earth -- has been successfully completed.

The spacecraft will be mated to the Boeing third stage, delivered Dec. 1, on Friday. Hydrazine fuel for attitude control and course-correction maneuvers was loaded into the spacecraft on Sunday. The "wet" spin-balance test with fuel aboard was conducted Dec. 6-7.

Tanking test complete on New Horizons' Atlas V

Encapsulation of the spacecraft into the Atlas V fairing is scheduled to occur Dec. 12, followed by transportation to Complex 41 on Dec. 16.

The **Space Technology 5**, or ST5 spacecraft, arrived at Vandenberg Air Force Base on Dec. 5 to begin processing at NASA Hangar 836. ST-5 consists of three miniaturized, autonomous micro-satellites to be installed in a stacked configuration within the fairing of the Pegasus XL rocket. They will be launched into a 2,800-mile-high polar orbit Feb. 28. Using data collected from the ST5 constellation, scientists can begin to understand and map the intensity and direction of the Earth's magnetic field, its relation to space weather events, and the effects on our planet.



VENUS

■ **NASA Science** — The planet Venus is growing so bright, it's actually casting shadows. You may be able to see them this week. Read the full story at http://science.nasa.gov/headlines/y2005/28nov_venusshadows.htm?list29875.

■ **Save Lids To Save Lives Breast Cancer Project** — FEW is collecting pink lids to send in to Yoplait. **The deadline for collection is Dec. 13.** Bring lids to one of the following: *Vickie Hall*, 867-9100, HQ/2640F; *Karen Dubois*, 867-

2309, HQ/2688F and B.O.B. Building (M6-339) Snack Room/1219; or *Eve Stavros*, 867-5791, SSPF/2064J.



■ **Healthy Holiday Eating Workshop** — The December N.E.W.S. (Nutrition Education for Workers at the

Spaceport) workshop on Healthy Holiday Eating will be held from 11:30 a.m. to 12:30 p.m. on Wednesday in the OHF Library Conference Room. The Nutrition Education for Workers at the Spaceport (N.E.W.S.) Program was created to educate workers at the spaceport about nutrition. The program includes a comprehensive Web site with an e-mail mechanism to ask nutrition questions, monthly lectures, and special events. Check out the current N.E.W.S. Web site at http://hewp.ksc.nasa.gov/Content/N_EWS/NEWS.htm.

■ **Did You Know?** Massage therapist Valerie is offering a holiday discount through Dec. 23: a 30-minute massage is only \$20. Contact Valerie, (L.M.T. #19362) at 867-4762 or *JaramVS@kscems.ksc.nasa.gov*. Massage therapy is available Tuesday to Friday in Room 1023 in the O&C Building, and hours are flexible. Gift certificates are also available and make great holiday gifts.