

Tuesday, Sept. 17, 2002



ISS experiment tests ultrasound for medical diagnosis from space



▲ **ISS Update:** The fifth resident crew on the International Space Station completed 100 days in space Friday as it wrapped up a week that saw the first-ever on-orbit operational use of ultrasound for medical diagnosis and the first materials science experiment in the Station's new Microgravity Sciences Glovebox.

Expedition Five Flight Engineer Peggy Whitson set up and activated the ultrasound equipment at the Human Research Facility rack in the Destiny laboratory, then guided by flight surgeons in Houston, used it on herself to capture live video images for more than four hours. This capability expands the kinds of medical research that can be conducted in space by scientists on Earth, and could offer physicians an earlier chance to diagnose ailments in Space Station crew members. This could improve the chances of effectively treating the problem without requiring an emergency deorbit of the crew and abandoning the Station.

Whitson completed another research milestone when she removed the last sample of the experiment known as SUBSA (Solidification Using Baffle in Sealed Ampoules), the first science project conducted inside the Destiny lab's new Microgravity Sciences Glovebox. Investigators observed via videotape as semiconductor materials were melted inside a transparent furnace. They are investigating methods for reducing the magnitude of motions in those melting materials as a means of reducing defects in the manufacture of semiconductors. The next MSG experiment, beginning this week, is PFMI (Pore Formation and Mobility Investigation), in which scientists will observe the formation and movement of bubbles trapped in melting metal and crystal samples, which might diminish material strength and effectiveness.

Hispanic Heritage Luncheon planned for Sept. 27

▲ **Cape Canaveral Spaceport Hispanic Heritage Luncheon** – The annual event will be held Sept. 27 from 11:30 a.m. to 1 p.m. featuring a delicious menu of Latin food selected by the Hispanic Employment Program Working Group committee. The featured guest speaker Orlando Figueroa, Mars Program director, will provide an insight to the future of the program. The Debus Center will be the location and live Mariachi entertainment will be provided. You can purchase tickets from the following individuals, or call Ken Aguilar, at 867-9175. Ticket representatives: **Pedro Carrion**, HQ/3257D, 7-0845; **Wanda Petty**, HQ/2545, 7-9165/75; **Lydia Del Rio**, HQ/ 2223A, 7-2575; **Rosalyn Santos-Ebaugh**, O&C/ 3035, 7-8402; **Joe Tellado**, SSPF/3002Q, 7-6064; **Luis Moctezuma**, SSPF/3082E, 7-6595; **Pete Rosado**, OSB/ 5203B, 1-3648; **Henry Bursian**, OSB/5101S, 1-3870; **Luis Saucedo**, OSB/6403R1, 1-5969; **Lina Rosado**, Center of Space, Exploration/Rm.1000, 7-2959; **Jose Lopez**, CCAFS/JPMO, Hangar I Annex Rm.220, 476-4052.

◆ **Did You Know?** The U.S. Department of Energy's Office of Federal Energy Management Programs (FEMP) is offering its successful **Advanced Lighting Workshop** Oct. 21-23 at the Florida Solar Energy Center in Cocoa, Fla. The three-day training course, taught by renowned lighting expert *Nancy Clanton, PE, LC*, provides a hands-on professional development class for those who want more experience with advanced lighting techniques. The course fee is \$195 and includes the CD ROM of the IESNA 2000 Handbook. Scholarships are available for federal government employees. The workshop provides 15 LEUs for NCQLP re-certification. For more information on the course, refer to <http://www.femplights.com/>

KSC Countdown is published every Tuesday & Thursday.

Deadlines: 10 a.m. the day before. Send information, comments or questions to:

* E-mail - Anita.Barrett-1@ksc.nasa.gov * Telephone - 867-2815

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