



countdown

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STS-127 crew arrives Tuesday for Saturday's launch



◆ Shuttle Update:

Space shuttle Endeavour's STS-127 mission to the ISS is scheduled to lift off at 7:39 p.m. EDT on Saturday. Endeavour's seven astronauts are scheduled to arrive at KSC about 2 p.m. today. NASA TV will provide live coverage as Commander Mark Polansky makes a brief statement to reporters.

◆ **ELV Update:** The Solar Dynamics Observatory, or SDO, will arrive at KSC from Goddard Space Flight Center on Thursday. SDO will undergo final testing in preparation for its anticipated November launch.

Engineers will perform a battery of comprehensive tests to ensure SDO can withstand the stresses and vibrations of the launch itself, as well as what it will encounter in the space environment after launch.

SDO is the first space weather research network mission in NASA's Living With a Star Program. The spacecraft's long-term measurements will give solar scientists in-depth information about changes in the sun's magnetic field and insight into how they affect Earth.

■ **NASA Science** — With NASA's Fermi Gamma-ray Space Telescope, astronomers now are getting their best look at those whirling stellar cinders known as pulsars. In two studies published in the July 2 edition of *Science Express*, international teams have analyzed gamma-rays from two dozen pulsars, including 16 discovered by Fermi. Fermi is the first spacecraft able to identify pulsars by their

gamma-ray emission alone.

A pulsar is the rapidly spinning and highly magnetized core left behind when a massive star explodes. Most of the 1,800 cataloged pulsars were found through their periodic radio emissions. Astronomers believe these pulses are caused by narrow, lighthouse-like radio beams emanating from the pulsar's magnetic poles.

Radio telescopes on Earth can detect a pulsar easily only if one of the narrow radio beams happens to swing our way. If not, the pulsar can remain hidden.

A pulsar's radio beams represent only a few parts per million of its total power, whereas its gamma rays account for 10 percent or more. Somehow, pulsars are able to accelerate particles to speeds near that of light. These particles emit a broad beam of gamma rays as they arc along curved magnetic field lines.

The new pulsars were discovered as part of a comprehensive search for periodic gamma-ray fluctuations using five months of Fermi Large Area Telescope data and new computational techniques.

■ **Reminders** — EAP's July Lunch and Learn, "Adapting Well in the Face of Adversity," will be held in the OHF Library **today** from noon to 12:30 p.m.

Tomorrow, the KSC Fitness Centers will host their annual National Employee Health and Fitness Day from 10 a.m. to 2 p.m. in the O&C Mission Briefing Room.

Thursday, RehabWorks will present an educational lecture on MRSA: The Super Bug, Know the Facts from 10 to 11 a.m. in the Fitness Center's Aerobics

Spacecraft to study sun arrives at KSC Thursday

Room in the O&C. For more information, please contact Erik Nason at 867-7497 or at Erik.T.Nason@nasa.gov.



■ **PM Challenge 2010 Call for Speakers** — Submit your speaker proposal for PM Challenge 2010 by

Aug. 7. Find out more at:

<http://pmchallenge.gsfc.nasa.gov/Speaker2010.htm>.

■ **Space-Ops 2010 Conference Call For Papers** — Hosted by the Marshall Space Flight Center, the SpaceOps 2010 Conference, "Delivering on the Dream," is scheduled for April 25-30 in Huntsville, Ala. The technical committee's goal is to attract more papers on Launch Operations, especially from KSC, for its own track at the 2010 conference.

The abstract submission deadline is Aug. 1. This biannual conference is organized by an executive committee made up of representatives from space agencies around the world and supported by AIAA.

Please visit these links for details:

<http://www.spaceops.org/content.cfm?pageid=7> and

<http://www.aiaa.org/content.cfm?pageid=230&lumeetingid=2129&viewcon=overview>.

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