



countdown

September 27, 2007

Vol. 12, No. 70

Dawn seeks secrets of the universe

◆ **Dawn Launch:** The skies over Merritt Island should have rumbled after 7:20 a.m. today as the Dawn spacecraft was launched aboard a Delta II rocket. At press time late Wednesday, there was a chance of coastal showers.

At the moment of liftoff, the Delta II's first-stage main engine, along with six of its nine solid-fuel boosters, will ignite. The remaining three solids are ignited in flight following the burnout of the first six. The first-stage main engine will burn for 4.4 minutes. The second stage will deposit Dawn in a 185-kilometer-high (100-nautical-mile) circular parking orbit in just under nine minutes. At about 56 minutes after launch, the rocket's third and final stage will ignite for approximately 87 seconds. When the third stage burns out, actuators and push-off springs on the launch vehicle will separate the spacecraft from the third stage.

After separation at 62 minutes after liftoff, the spacecraft will go through an automatic activating sequence, including stabilizing the spacecraft, activating flight systems and deploying Dawn's two massive solar arrays. Then the spacecraft will energize its transmitter and contact Earth. Acquisition of a signal is expected to occur anywhere from one-and-a-half hours to three-and-a-half hours after launch.

Dawn will venture into the heart of the asteroid belt, where it will document in exceptional detail the mammoth rocky asteroid Vesta and then the even bigger, icy dwarf planet Ceres.

◆ **Shuttle Update:** At press time, space shuttle Discovery was scheduled to roll out to Launch Pad 39A on Saturday,

Discovery moves to pad Saturday evening

beginning at 8 p.m. While on the pad, the prime payload, the U.S. Node 2 module (called Harmony) will be installed in Discovery's payload bay from the payload changeout room in the rotating service structure. Launch is still targeted for Oct. 23 at 11:38 a.m.

◆ **NASA Update:** On Oct. 4, NASA TV will broadcast highlights of NASA Administrator Michael Griffin's visit to Moscow and others attending events there to commemorate the 200th anniversary of U.S.-Russian diplomatic relations and the 50th anniversary of the launch of the first satellite, Sputnik 1. The events and planned broadcasts include (all times approximate, EDT):

Today: Noon – Video file of the Expedition 16 crew and spaceflight participant departure ceremony as they travel from Russia to Baikonur to prepare for launch.

3 p.m. – Live coverage of the Expedition 15 Soyuz relocation (undocking is scheduled at 3:18 p.m., redocking is scheduled at 3:43 p.m.).

Oct. 3: Noon – Video file of the arrival of the Expedition 16 crew and spaceflight participant in Baikonur, and the Soyuz spacecraft fit check.

Oct. 4: Noon – Video file of Sputnik 50th anniversary events in Moscow and pre-launch activities of the Expedition 16 crew and spaceflight participant crew in Baikonur.

■ **KSC Library Archives Photo Display Through Mid-October** — The KSC Library Archives has a new exhibit and is featuring the 45th anniversary of the first

time that President John F. Kennedy toured the Launch Operations Center with Dr. Kurt Debus, first center director, on Sept. 11, 1962. The display case is located between rooms 1533 and 1537 in the east wing of the Headquarters Building across from the post office. Further information may be obtained by calling the Library Archives at 867-2407.

■ **The KSC Engineering Academy** — The KEA will host a discussion panel on the History of Command & Control Systems at KSC from 9 to 11 a.m. **today** at the KSC Training Auditorium. The focus will be a technical discussion of KSC Command and Control Systems including considerations for Commercial Off the Shelf (COTS), Launch Processing System (LPS), Core Electronics Contract, Check-out and Launch Control System (CLCS) and a trade study on the command and control system approach for Constellation. The panel will be led by Ric Hurt, director of Applied Technology. Other panelists tentatively include Kirk Loughheed (LX), Chris Best (USA), John Wilkinson (NE), Rick Dawson (NE), Rich Nelson (KT), Craig Jacobson (NE), Terri Herst (NE) and Lennis Beardon from Harris Corporation. NASA and contractor personnel are invited to attend this event. If you have any questions, please contact Gisele Altman, gisele.altman-1@nasa.gov, 867-4000.

Countdown is published every Tuesday & Thursday for NASA KSC employees. Deadlines are 10 a.m. Mondays & Wednesdays. E-mail news to anita.barrett@jpsc.ksc.nasa.gov. For questions or information, e-mail or call 321-867-2815. You can also find *Countdown* on the Web at nasa.gov/centers/kennedy/news/countdown/countdown-toc.html.