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Space shuttle update

A status report on the space shuttle program's efforts to fly the second post-Columbia test flight, including changes to the external fuel tank, is provided in this news conference from Kennedy Space Center on Feb. 28. The participants are Wayne Hale, shuttle program manager, Mike Leinbach, shuttle launch director, and Tim Wilson, external tank tiger team lead.



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NASA employee briefing

Space science funding, the Vision for Space



Exploration and the recent controversy over public affairs clashing with agency scientists. These topics and more are discussed in this NASA employee question and answer session with Administrator Mike Griffin and Deputy Administrator Shana Dale held Feb. 27 from agency headquarters in Washington.

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Lockheed's CEV plans

As part of Lockheed Martin's plans for the Crew Exploration Vehicle, the company has announced that final assembly and testing of the capsules will be performed at the



A shocking surprise in Stephan's Quintet

NASA/JPL PHOTO RELEASE

Posted: March 3, 2006



Credit: NASA/JPL-Caltech/Max Planck Institute
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This false-color composite image of the Stephan's Quintet galaxy cluster clearly shows one of the largest shock waves ever seen (green arc). The wave was produced by one galaxy falling toward another at speeds of more than one million miles per hour. The image is made up of data from NASA's Spitzer Space Telescope and a ground-based telescope in Spain.

Four of the five galaxies in this picture are involved in a violent collision, which has already stripped most of the hydrogen gas from the interiors of the galaxies. The centers of the galaxies appear as bright yellow-pink knots inside a blue haze of stars, and the galaxy producing all the turmoil, NGC7318b, is the left of two small bright regions in the middle right of the image. One galaxy, the large spiral at the bottom left of the image, is a foreground object and is not associated with the cluster.

The titanic shock wave, larger than our own Milky Way galaxy, was detected by the ground-based telescope using visible-light wavelengths. It consists of hot hydrogen gas. As NGC7318b collides with gas spread throughout the cluster, atoms of hydrogen are heated in the shock wave, producing the green glow.

Spitzer pointed its infrared spectrograph at the peak of this

Fallen Heroes special patch

This special 12-inch embroidered patch commemorates the U.S.



astronauts who made the ultimate sacrifice, honoring the crews of Apollo 1, Challenger and Columbia.

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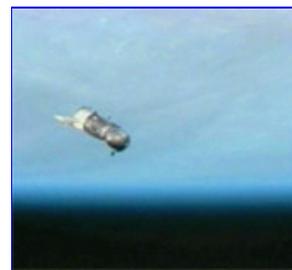
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Video clip of the day



The Russian Soyuz TMA-7 capsule undocks from the International Space Station on Saturday to bring the Expedition 12 crew back to Earth.

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Kennedy Space Center's Operations and Checkout Building. Lockheed Martin officials, Florida's lieutenant governor, the local congressman and a county economic development leader held this press conference Feb. 22 to unveil the plans.

- [Play video](#)

Mars orbiter briefing

With two weeks until its arrival at the red planet, NASA and Lockheed Martin officials hold this Feb. 24 news conference on the Mars Reconnaissance Orbiter. The briefing explains how the MRO spacecraft will fire its engines to enter into orbit around Mars and the mission's scientific goals to examine the planet like never before.



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STS-8: Night launch

The space shuttle program performed its first dazzling nighttime launch with Challenger's August 1983 mission. A cockpit camera mounted beside commander Dick Truly captured amazing footage of night turning to day inside the shuttle from the brilliant flame of ascent. STS-8 also featured the first African-American astronaut, Guion Bluford. Challenger's astronauts tell the story of their six-day mission, which deployed an Indian satellite, used the robot arm to look at the orbiter's belly and examined the glow around the shuttle, during this narrated post-flight film.



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shock wave (middle of green glow) to learn more about its inner workings. This instrument breaks light apart into its basic components. Data from the instrument are referred to as spectra and are displayed as curving lines that indicate the amount of light coming at each specific wavelength.

The Spitzer spectrum showed a strong infrared signature for incredibly turbulent gas made up of hydrogen molecules. This gas is caused when atoms of hydrogen rapidly pair-up to form molecules in the wake of the shock wave. Molecular hydrogen, unlike atomic hydrogen, gives off most of its energy through vibrations that emit in the infrared.

This highly disturbed gas is the most turbulent molecular hydrogen ever seen. Astronomers were surprised not only by the turbulence of the gas, but by the incredible strength of the emission. The reason the molecular hydrogen emission is so powerful is not yet completely understood.

Stephan's Quintet is located 300 million light-years away in the Pegasus constellation.

This image is composed of three data sets: near-infrared light (blue) and visible light called H-alpha (green) from the Calar Alto Observatory in Spain, operated by the Max Planck Institute in Germany; and 8-micron infrared light (red) from Spitzer's infrared array camera.

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Spaceflight Now is pleased to present our new Mission Report Minute video podcast, a free service to bring you the latest news from the space program in a short one-minute bulletin!



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Next space shuttle patch

The official crew patch for the next space shuttle mission, scheduled for launch in May 2006, depicts Discovery docked to the International Space Station and the gold astronaut emblem emblazoned behind.



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Fallen Heroes special patch

This special 12-inch embroidered patch commemorates the U.S. astronauts who made the ultimate sacrifice, honoring the crews of Apollo 1, Challenger and Columbia.



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Mercury-Gemini pin collection

This framed pin collection features each manned Mercury and Gemini space mission, plus the Mercury Seven logo, the Gemini project logo and the NASA logo. A central plaque features the original seven



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Mercury astronauts.

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