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Dawn Mission Outreach E-News

30th Edition April 20, 2011

DAWN MOVES INTO ORBIT AROUND VESTA - FIESTA TIME! HOLD THE DATES!

In late July and August, Dawn moves into orbit around Vesta and we begin to explore this exciting new world up close. After four long years in flight, it's party time!

Or rather, it's **Vesta Fiesta** time! Taking advantage of three nights when Vesta is nearly full (near its opposition) for night sky observation with a telescope, Dawn is inspiring fiestas across the nation. Learn about the Vesta flagship fiesta in Pasadena, California, find out where other Vesta Fiestas are being held, join a party near you - or start your own Vesta Fiesta!

In the coming weeks, explore maps and get ideas at our [Vesta Fiesta](#) web page!



Vesta Fiesta!
August 5-7, 2011

DAWN MISSION UPDATES

MISSION STATUS: Dawn Conducts Final Checkouts Before Vesta: March 31, 2011

Dawn spent most of the month thrusting toward its Vesta rendezvous but stopped for the week of March 14 in order to perform several final tests. All of the science instruments were powered on and checked out, and each one proved to be in excellent condition. In addition, controllers updated the software in the two identical science cameras. One of the gamma-ray sensors was carefully heated for five days to restore its sensitivity after years of exposure to radiation in space.

Read more about how Dawn's team put the spacecraft through its paces and trace Dawn's journey since launch through its monthly [mission update](#).

[Download](#) a super cool poster that highlights Dawn's instrumentation!

NEWS FROM DAWN'S SCIENCE TEAM

From Dawn Education and Public Outreach Science Team Liaison, Dr. Britney Schmidt

It's an exciting time for the Science Team as we grow ever close to Vesta! Dawn is approaching Vesta at roughly 1000 mph, and is now inside 5 times the Earth-Moon distance from Vesta.



The Science Team is working on plans for mapping Vesta, searching for moons, characterizing the surface, and finally answering some of the important questions laid out in the mission's goals.

The team will be meeting in May in Nordlingen, Germany, within the Ries impact crater, to review Dawn's progress and get ready for the encounter with Vesta. The team will also take field trips to the Ries crater to learn from an impact on Earth what might be in store at Vesta.

Check out the [instrumentation](#) the Science Team is using to gather data, including two intriguing interactives, as well as [Dawn's mission goals](#).

CONNDAWNSSEURS MARCH 31, 2011

From Dawn's Chief Engineer, Dr. Marc Rayman:



Following its usual pattern, the Dawn spacecraft spent most of the past month gently thrusting with its ion propulsion system. Ever since Dawn's trajectory was first being designed, however, it has included coast periods for activities that require orientations incompatible with routine thrusting. One such time was the week of March 14.

After a successful week full of instrument and ion propulsion tests, Dawn resumed its familiar routine, propelling itself to Vesta. If you were onboard now, you might be hungry, cold, and hypoxic, but you also would recognize the destination as the brightest starlike jewel in the beautiful display of celestial gems. Soon, the patience that Dawn has demonstrated in its remarkable journey will be rewarded, as the glowing pinpoint of light will grow to reveal a world full of exciting secrets ready to be unveiled.

--Excerpted from Dawn Journal, March 31, 2011

[Read more](#) about Dawn's instrument and ion propulsion tests.

Dr. Rayman explains more mission concepts in the [Dawn Journal archives](#)--check 'em out!

CAREER CONNECTIONS SAMI ASMAR, JPL: DAWN GRAVITY SCIENCE

Does Vesta have a core? A mantle? If Dawn is not landing on Vesta and taking a core sample, how can we possibly learn about the asteroid's internal composition - one of Dawn's key science objectives? Through gravity science, that's how!



Dr. Sami Asmar unpacks the power of gravity science for us in his interview. "Our technique is to measure the gravity by tracking the radio signal that the spacecraft transmits to a ground station on Earth. When a spacecraft flies by a body, or orbits a planet, its gravitational forces literally pull and push on the spacecraft." Measuring those minute perturbations in the radio signal caused by Vesta's gravitational forces acting on Dawn can tell scientists - including Sami and his colleague Alex Knopliv - a great deal about the composition of Vesta.

Sami sheds more light on his unique work for Dawn in his interview. A musician and writer as well as a planetary scientist, he also offers tips for aspiring scientists.

[Read Sami's complete interview](#) and get a feel for gravity science!

DAWN IN THE COMMUNITY: VISIT US AT JPL'S OPEN HOUSE

National AfterSchool Association Annual Convention: *A Bright New Day* April 16-18, Orlando, FL

The National AfterSchool Association is a leading voice of the afterschool profession dedicated to



development, education, and care of children and youth during their out-of-school (OST) hours. NASA's Discovery Program offered a set of workshops and presentations highlighting Education and

Public Outreach efforts. This included Dawn materials that fit well in out-of-school time settings, like hands-on *Vesta in 3-D* and one of our cool computer interactives, such as *Find a Meteorite*.

Explore our OST activities on [Dawn's Education](#) page!

Jet Propulsion Laboratory (JPL) Open House May 14-15, Pasadena, California

Join Dawn scientists, engineers, and educators in a celebration of JPL's diverse accomplishments with exhibits and demonstrations about the Laboratory's ongoing research and space exploration. Dawn mission staff will be on hand to answer questions about how spacecraft are sent to other planets, how scientists utilize space technologies to explore Earth, and how researchers are searching for planets beyond the solar system.



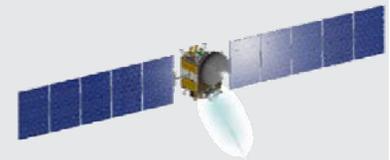
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Get on-the-minute mission and science updates during this exciting year as Dawn zips along in its trajectory to Vesta in the main asteroid belt!

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The Dawn Education and Public Outreach team is continually seeking ways to improve the mission website and is eager to receive your feedback. Please share your thoughts by completing a brief [survey](#).

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Dawn Mission Outreach E-News features information about the mission, its outreach Web site, and products, services, and materials available from the Dawn Education and Public Outreach (E/PO) team. Dawn is the ninth Discovery mission in NASA's Science Mission Directorate and is a collaborative partnership made up of the University of California, Los Angeles; Jet Propulsion Laboratory; Orbital Sciences Corporation; Los Alamos National Laboratory; German Aerospace Center; Max Planck Institute for Solar System Research; Italian Space Agency; and Italian National Institute of Astrophysics. Dawn outreach materials are developed under contract by Mid-continent Research for Education and Learning (McREL), Denver, CO.

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