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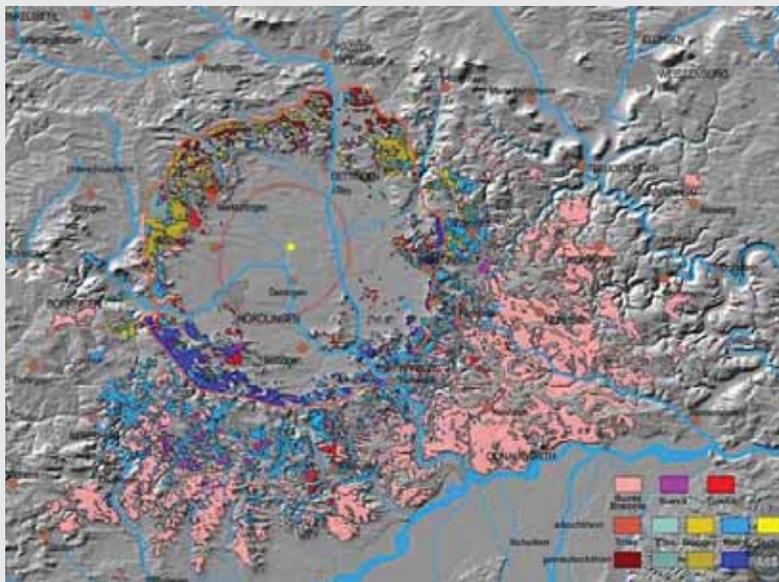


Dawn Mission Outreach E-News

31st Edition May 27, 2011

VESTA, HERE WE COME! NEWS FROM DAWN'S SCIENCE TEAM

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



Ries Crater, location of the May 2011 Dawn Science Team meeting with our German and Italian colleagues. Image credit: NASA

As Dawn speeds ever closer to Vesta, the Science Team is getting ready to start exploring, building upon careful plans, collaborating, and even taking excursions to extend our understanding of craters. Our meeting in Nordlingen, Germany earlier this month was a terrific location for the latter. The historic town in Bavaria is nestled in the Ries Crater, a 25-km impact basin formed about 15 million years ago by a 1-2 kilometer-wide asteroid - which made for great studying and dialogue.

The team also trained on software to analyze Framing Camera images; discussed geological mapping, Visible and Infrared Spectrometer (VIR) and Gamma Ray and Neutron Detector (GRaND) data, and plans for gravity mapping; and conferred

about how the data from all of Dawn's investigations can combine to give us a new and better understanding of Vesta!

Read more about [Dawn's Science Team meetings](#).

DAWN MISSION UPDATES

MISSION STATUS - UPDATES MORE FREQUENTLY!!

May 3, 2011

Dawn Observes Vesta with Camera and Spectrometer

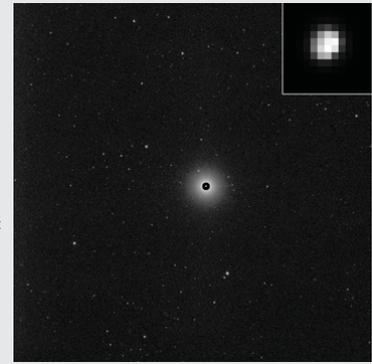
Today Dawn concluded its interplanetary cruise phase and started the Vesta mission phase. The beginning of the approach phase is marked by the spacecraft's first pictures of Vesta. While Vesta appears very small at this distance (3.2 times the average distance between the Earth and moon), measuring its location against the background stars will help navigators pin down the position of Dawn relative to Vesta. Navigation images will be taken

weekly until the middle of June, when the rate will increase.

May 17, 2011

Dawn Completes More Vesta Navigation Observations

Dawn acquired another set of images of Vesta today. Navigators use the pictures of Vesta and the background stars to refine their determination of the spacecraft's trajectory. The results will be incorporated into updates to the plan for thrusting with the ion propulsion system. Meanwhile, the spacecraft is continuing to make good progress, spending most of its time thrusting. Dawn is 810,000 kilometers (500,000 miles) from Vesta today and approaching it at 300 meters per second (670 mph).



Dawn spacecraft's first image of protoplanet Vesta in front of a spectacular background of stars. Image credit: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

- Peruse [JPL's press release](#) to learn about our first image from Dawn of protoplanet Vesta.
- Trace Dawn's journey since launch through its [mission updates](#).

DAWN IN THE COMMUNITY: ROCKIN' VESTA FIESTA!

VESTA FIESTA: WE'RE ON THE MAP!



We've been asking you to save the date - August 5th - 7th - when Vesta is visible in the night sky with a telescope and Dawn is moving into orbit around Vesta. Now, it's Fiesta planning time!

Look for a Vesta Fiesta in your neck of the woods - or host your own! Register your event (large or small, public or private) and have it posted on our interactive map. Check out new resources as well - ranging from how to view Vesta in the night sky to fun activities and games to Vesta Fiesta invitations!

Finally, **Dawn's Flagship Vesta Fiesta** at the Pasadena, California Convention Center **August 6th, 2011** includes **you!** We will be streaming Vesta Fiesta live, starting with Bill Nye the Science Guy at 3:30 p.m. Pacific Time followed by members of the Dawn Science Team at 5 p.m. Pacific Time.

Let the [Vesta Fiesta](#) begin!

- [Host](#)
- [Register](#)
- [Resources](#)

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

Dawn scientists, engineers, and educators celebrated JPL's diverse

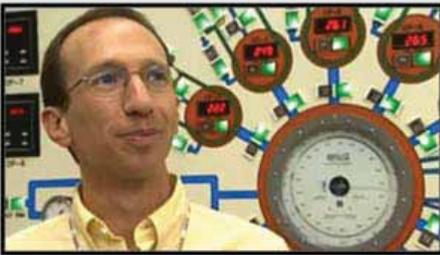
accomplishments with exhibits and demonstrations about the Laboratory's ongoing research and space exploration. Dawn mission staff was on hand to answer questions about how our spacecraft is cruising through the main asteroid belt using its spiffy ion propulsion system and how scientists will utilize Dawn's instrumentation to learn about Vesta. Here's more on [Dawn in Action in Education!](#)



E/PO members with happy JPL Open House fans

DAWNTALIZINGLY CLOSE! MAY 3, 2011

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



Dawn is on the threshold of a new world. After more than three and a half years of interplanetary travel covering in excess of 2.6 billion kilometers (1.6 billion miles), we are closing in on our first destination. Dawn is starting its approach to Vesta.

The interplanetary cruise phase of the mission ends today and the 15-month Vesta phase begins. The first three months are the "approach phase," during which the spacecraft maneuvers to its first science orbit. Many of the activities during approach were discussed in detail in March and April last year, and now we are about to see those plans put into action.

-Excerpted from Dawn Journal, May 3, 2011

- [Watch and listen](#) to Marc speak about Dawn during the Thrill of Discovery workshop.
- Just how does Dawn's attitude get adjusted? Read Marc's complete [Dawn Journal](#).
- Explore more mission concepts in the [Dawn Journal archives](#).

CAREER CONNECTIONS: THE PARTICIPATING SCIENTISTS



There are lots of new faces at the Science Team meetings these days. Who are these people? The Participating Scientists!

Missions take a long time to plan and operate before they actually collect data, and a small focused group of scientists and instrument gurus leads the beginning phases of a mission. But when the time comes to gather data from the mission and to start making new discoveries, as the saying goes...two heads are better than one. In Dawn's case, 48 heads are better than 22!

The science gets broader because experts who weren't a part of the original team - and younger scientists who may even have still been in college when Dawn was proposed - are selected through a competitive proposal process, complementing the original Science Team. Programs like Dawn's participating scientist program ensure that there are fresh perspectives and new ideas at every juncture. Check out our [new team](#)

Members of the Dawn Team explore an exposed Suevite layer, part of the uplifted central ring of the Ries Crater near Nordlingen, Germany.

[members!](#)

EDUCATION SPOTLIGHT: VESTA IN 3-D AND EXO'S DISCOVERY

Activities for New Explorers of the Vesta in the Solar System

We are receiving our very first images from the Dawn spacecraft as we speak - yeah! [Vesta in 3-D](#) offers two hands-on activities using Vesta's images from Hubble that help kids begin the journey to understanding the questions driving the Dawn mission. As kids look close at images to help them **model Vesta**, they wonder: are those shadowy areas craters? Darker minerals? From there they build a **flip book**, observe Vesta's rotation, and are invited to visit our multimedia pages to look at the cool animations. Written for independent explorers, we find these activities also help students access more sophisticated activities for the classroom, like [Veggie Light Curves](#). Join the fun!



Want to gain a better understanding of where Vesta and Ceres are in our solar system? Play [Exo's Discovery!](#) Exo and his spacecraft Disco (almost as charming as Dawn ;)) need your help to find resources to repair Disco. Join them cruising through the solar system - including the main asteroid belt - while solving a mystery!

Vesta and Ceres await!

FOLLOW DAWN: NOW ON TWITTER AS WELL AS FACEBOOK

Tweeting at last! 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!



Follow the Dawn Mission on:

[twitter!](#)
[facebook!](#)

TELL US WHAT YOU THINK, FORWARD OUR NEWS, SUBSCRIBE!!

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](#).

Please feel free to forward this e-mail to others interested in NASA missions. We welcome new subscribers! Visit the [Dawn News and Events](#) page to sign up for the [Dawn e-news RSS feed](#) or to join the Dawn mission e-news mailing list.

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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