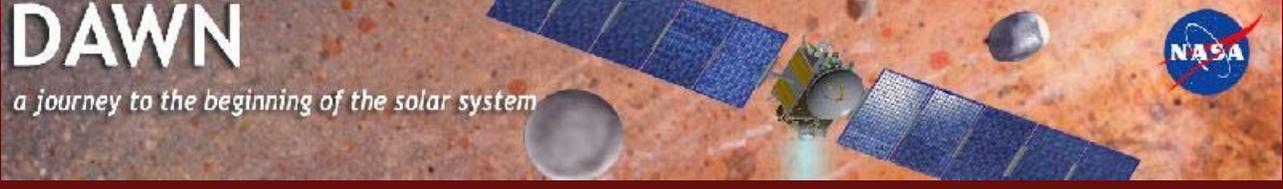


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DAWN
a journey to the beginning of the solar system

DAWN Mission Outreach E-News 29th Edition December 2010

**HEAR YE, HEAR YE!
DAWN'S NEW WEBSITE TO BE LAUNCHED!**

January 2011
Here's a Sneak Preview!



Jet Propulsion Laboratory
California Institute of Technology

DAWN

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Home
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Team
Science
Technology
Multimedia
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Kids
Education
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Feedback Tell us what you think.

Take a Walk Through the Solar System
The inaugural month of the Year of the Solar System focuses on solar system basics—walk through a scale model of a solar system and learn about the places along the way.
- The Journey Begins

Images
Dawn Spacecraft Gallery

Quick Links
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Target
Vesta 7:21:2011
218 Days
Dawn will investigate two of the largest proto-planets in the main asteroid belt, Vesta and Ceres.
Countdown to Dawn's Arrival at Vesta - Where is Dawn?

Inside Dawn
Dawn's Active Accretion Activity
Learn about asteroids and planets while burning off energy!
- Teacher Guide | Role Cards
Interactives Featuring Dawn Instrumentation
- GRAND Interactive
- VIR Interactive
Maria Cristina De Sanctis
is an INAF scientist working with the VIR spectrometer
- Learn more
How Captain Kirk Changed the World
Science Fiction swoops into reality!
- Dawn vs. the Enterprise
Dawn Journal
- Read latest Journal
- See Archive
- Read Interview

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Whoa! Gorgeous, huh!?

The Dawn website is getting a brand spanking new look to herald its arrival at Vesta in 2011. We will tell the Dawn story month by month in activities, journal entries, and compelling news as the spacecraft draws closer to Vesta, as well as make accessible all those entrancing Dawn details, like where it is in its trajectory and mission and science highlights.

You Won't Want To Miss It!

Until then, Dawn is ever faithfully represented on its existing website: <http://dawn.jpl.nasa.gov/>

PLZ BE MY FRIEND?



Yes! Follow the Dawn Mission on [facebook](#)!

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!

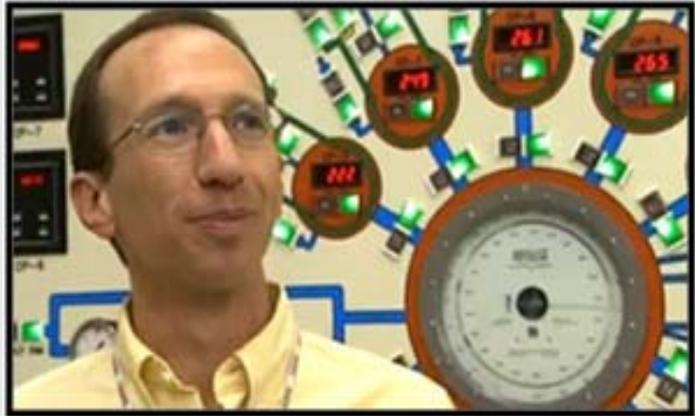
See you [online](#)!



DAWNIZENS OF THE SOLAR SYSTEM NOVEMBER 30, 2010

From Dawn's Chief Engineer, Marc Rayman:

Dawn is maintaining its smooth and steady course through the solar system as it gradually closes in on Vesta. With the utmost patience and persistence, it continues thrusting with its ion propulsion system, heading toward its July rendezvous with the second most massive member of the main asteroid belt. Even as the spacecraft climbs farther from the sun, Earth's orbit is beginning to bring the planet closer to the probe.



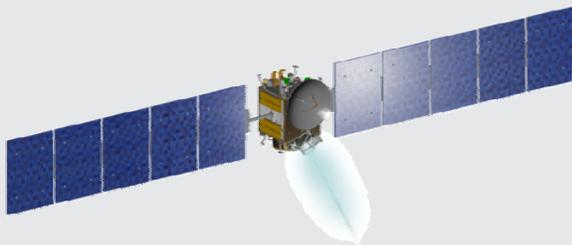
-Excerpted from Chief Engineer Marc Rayman's

Dawn Journal, November, 30, 2010

[Read about](#) on the interplay between Dawn's ion engines and its hydrazine jets.

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

MISSION UPDATES



MISSION STATUS: Upgrades Allow Reduced Hydrazine Consumption

November 30, 2010

Dawn devoted most of the month to continuing to thrust with its ion propulsion system. Mission controllers radioed new parameters to the spacecraft to allow it to use less of its hydrazine propellant. Hydrazine is fired through the small reaction control jets to help the spacecraft hold stable or rotate in the zero-gravity of spaceflight. Even before powering off the reaction wheels in August, at which point the reaction control system took over, engineers began working on methods to use the hydrazine more efficiently. The successful operation with the new parameters this month was the culmination of that work.

Trace Dawn's journey since launch through its monthly [mission updates](#).

NASA'S YEAR OF THE SOLAR SYSTEM: A FAMILY AFFAIR

Our solar system is a family of planets, dwarf planets, comets, and asteroids (one jewel in that family - Dawn's Vesta!) orbiting our Sun. They share many common features, but each has unique personality traits.

Join NASA during December and January in exploring our planetary



family tree. Conduct the [Explore the Celestial Neighborhood ... in Your Neighborhood!](#) activity and others that examine what a planet is and how we investigate planets. Observe the total lunar eclipse in December or simply note the change in lunar phases over the course of a month. Attend an observing session and view Jupiter through a telescope. There are many opportunities for you to find out more about our solar system's family tree!

Visit the [Year of the Solar System website](#) to find activities for classroom and informal learning environments, night-sky viewing events and mission milestones, recommended resources, downloadable materials, and more!

Check out December and January's YSS theme page, [It's a Family Affair](#).

DAWN IN THE COMMUNITY



Dawn Mission Science Team

Albuquerque, New Mexico November 15 - 19, 2010

The entire Dawn team - scientists, engineers, and educators - met for a planning meeting last month. Participants shared status reports, team updates, presented and listened to papers on key topics, and discussed planning strategies.

Highlights included the induction of twenty new participating scientists from all over the world, and a visit to the University of New Mexico's Meteoritics Lab.

It was a terrific opportunity to prepare for the exciting months ahead!

Visit our [Science Features](#) for more details!

Total Lunar Eclipse December 21, 2010

Did you know Vesta is believed to be dry, differentiated (distinct mantle, crust, etc.) body whose surface has been resurfaced by basaltic lava flows possibly possessing an early magma ocean - like our very own Moon? The last lunar eclipse of 2010 is especially well placed for observers throughout North America. The total eclipse begins at 2:41 a.m. and ends at 3:53 a.m. (EST).

Gaze at the Moon and dream about Vesta!

Learn more about the [last lunar eclipse](#) of the year!

Comets and Asteroids Educator Conference at NASA's Jet Propulsion Laboratory
February 5, 2011
8:00 a.m. - 4:30 p.m.

Recommended for Grades 5-8 Educators

Comets, asteroids, and protoplanets are the leftover building blocks of planets,



Credit: Brian Karczewski/SpaceWeather.com



which may have contributed water and organic material to ancient Earth, aiding the start of life. By observing these small bodies up close, scientists better understand the formation and evolution of our solar system and how life came to exist here on Earth.

Here's a workshop heralding our solar system's small bodies (Vesta and Ceres are among 'em!), held at JPL - [learn more!](#)

Stardust-NExT is returning to the nucleus of comet Tempel 1, pictured, flying by 2/14/2010 Image courtesy NASA/JPL/UMD

TELL US WHAT YOU THINK

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](#).

SUBSCRIPTION INFORMATION

Please forward this e-mail to others interested in NASA missions. We welcome new subscribers! Visit our website and join the Dawn mission e-news mailing list at http://dawn.jpl.nasa.gov/DawnMedia/e_news.asp

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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