
Dawn Mission Outreach E-News, 19th Edition

May 2008

INTRODUCING ROBERT A. MASE, NASA'S DAWN PROJECT MANAGER

As any sailor knows, steering a sailboat through ever-changing weather conditions is demanding, yet exhilarating. For Robert Mase, new Dawn Project Manager, the challenge of managing the many facets of a spacecraft whose trajectory is constantly changing is similarly exciting. A Florida native, Mase's lifelong interest in math and science led him to Purdue University's Aerospace Engineering program, where he earned a master's degree. Mase, whose specialty is in guidance, navigation, and control, previously worked as the Mission Manager for the Mars Odyssey project, and has contributed to all of the recent Mars missions and several Discovery missions, including Stardust, Genesis and Deep Impact. Mase has worked at JPL for 17 years and is taking over the Dawn project from Keyur Patel, who is moving to another position.

REPORTS, DISCUSSION, AND DATA SHARING FILL 3-DAY VESTA PLANNING WORKSHOP

A Vesta Planning Workshop in Dana Point, CA, on May 12–14, drew members of three teams from diverse institutions in the United States, Italy, and Germany: the science team, spacecraft and operations engineering team, and the instrument team. "Being in the same room at the same time gives everyone a voice in the planning," said Joe Wise, Dawn E/PO manager. Read more at: http://dawn.jpl.nasa.gov/feature_stories/vesta_wkshp.asp

RACE TO THE ASTEROID BELT!

Who will be the first to reach the asteroid belt? Watch out for comets and meteors as you move along the asteroid belt path and find your way to Vesta and Ceres—but *only* within an exact coin toss! A perfect after-school activity or to use in your classrooms, print out this fun game in tabloid size or two 8.5" x 11" sections to learn more about the Dawn mission.

http://dawn.jpl.nasa.gov/dawnkids/board_game_11x17.pdf or

http://dawn.jpl.nasa.gov/dawnkids/board_game_8.5x11.pdf

RIDE ALONG WITH DAWN AS WE JOURNEY TO THE ASTEROID BELT

We are very excited to announce a new feature on our Dawn Web site: "*Where is Dawn?*" Because Dawn uses ion propulsion, designing its trajectory required special software. JPL's Gregory Whiffen programmed the software to create a color-coded trajectory displaying when Dawn is using one of its ion thrusters and when it is coasting, as well as images depicting the location and orientation of the Dawn spacecraft. He, together with Marc Rayman and the Dawn E/PO team, created the "Where is Dawn?" Web page (http://dawn.jpl.nasa.gov/mission/live_shots.asp) where you can find the simulated Dawn trajectory and regularly updated simulated views from the Dawn spacecraft of Earth, the Sun, Mars, and Vesta—a special thanks to Greg and Marc for making this simulated experience available!

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“On April 8, the spacecraft oriented itself as required for the test. Executing the same steps it always does to start a thruster, this time the ion propulsion system's computer controller detected a potential problem and halted thruster operation. Because of the orientation of the spacecraft, the radio signal received on Earth was so weak that data could be returned only very very slowly.” In his latest entry, Dr. Marc Rayman explains how the system engineers updated software to the spacecraft’s main computer to simplify the operation of the science instruments. Read the full journal entry at http://dawn.jpl.nasa.gov/mission/journal_4_22_08.asp

ATTENDEES VISIT THE DAWN EXHIBIT AT THE JET PROPULSION LABORATORY (JPL) OPEN HOUSE, MAY 3–4, 2008

The JPL Open House was held May 3–4 in Pasadena, CA. Dawn was represented with a one-eighth scale model of the spacecraft, an ion thruster, a poster backdrop for photo opportunities, and a table for handouts of kid's activities, bookmarks, and our newly-revised fact sheets. More than 14,000 people streamed by the Dawn display over the two-day event. A big thanks to the mission scientists, engineers, and volunteers who presented the displays: John Brophy, Paul Fieseler, Charles Garner, Robert Gounley, Jeff Levison, Veloris McKay, Ryan Park, Marc Rayman, John Ristvey, Lisa Tatge, and Joe Wise.

PHYSICS TEACHERS: FIELD-TEST A DAWN CONTENT MODULE THIS FALL

Would you like to field-test a module that engages students with real-life applications of physics concepts? The *Ion Propulsion* module is aligned to the *National Science Education Standards* “Structure and Properties of Matter” standards for students in grades 9–12 and contains an interactive simulation in which students design their own ion engine.

Ion Propulsion is ready for field-testing during the Fall 2008 semester. All materials have been thoroughly reviewed and modified based on pilot-test results. Field-test participants will have the opportunity to use and provide additional feedback on these innovative supplemental science materials. To view the entire module visit:

http://dawn.jpl.nasa.gov/DawnClassrooms/2_ion_prop/index.asp

To view the study description and to sign up, visit:

<http://dawn.jpl.nasa.gov/getInvolved/index.asp>

TELL US WHAT YOU THINK

Continually seeking ways to improve the mission Web site, the Dawn Education and Public Outreach team is eager to receive your feedback. Please share your thoughts by completing a brief survey at <http://survey.mcrel.org/scripts/qweb.cgi?4CFEF46>

SUBSCRIPTION INFORMATION

Please forward this e-mail to others interested in NASA missions. Visit our Web site 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.