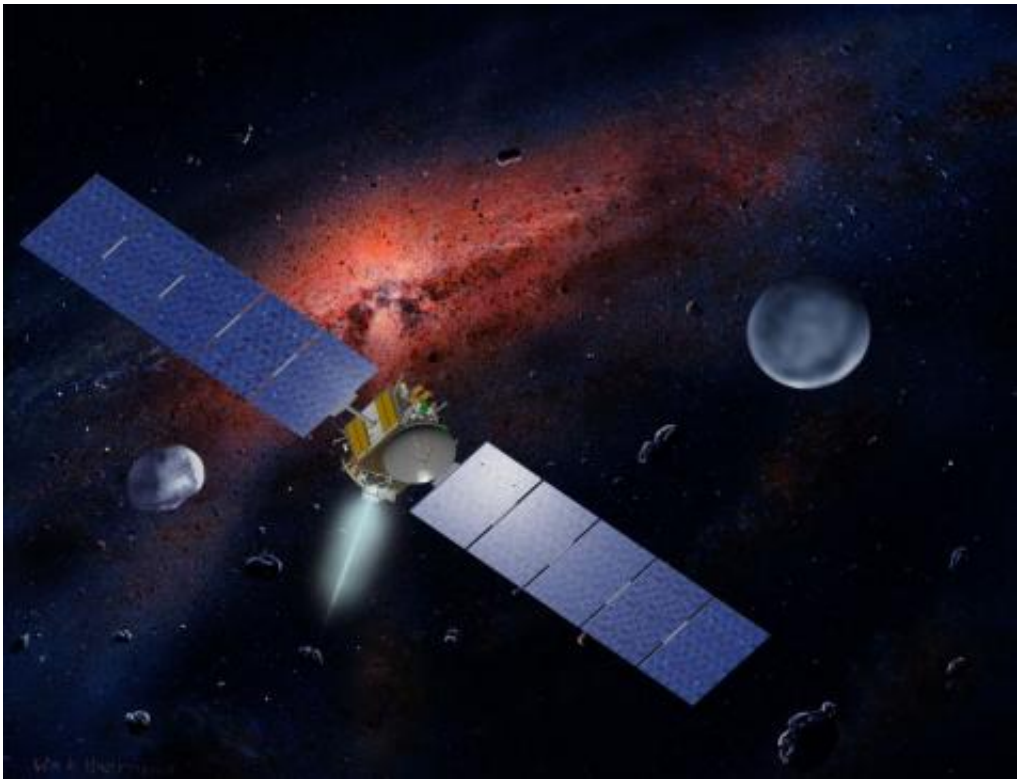
Dawn opens its eyes, checks its instruments

March 22 2011, By Jia-Rui C. Cook



NASA's Dawn spacecraft, illustrated in this artist's concept, is propelled by ion engines. Credit: NASA/JPL

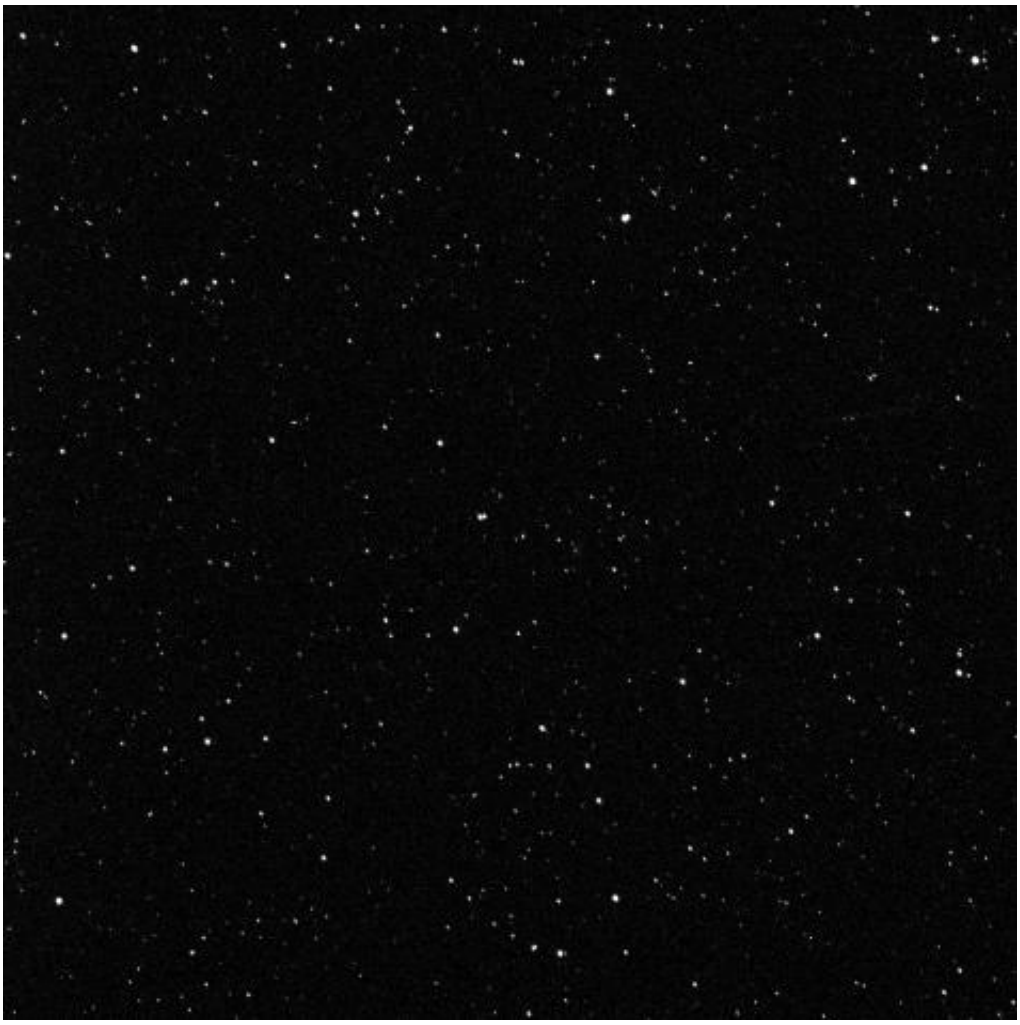
(PhysOrg.com) -- After a hibernation of about six months, the framing cameras on board NASA's Dawn spacecraft have again ventured a look into the stars. The spacecraft also powered up its visible and infrared mapping spectrometer, which investigates surface mineralogy, and the gamma ray and neutron detector, which detects elemental composition. The reactivation prepares the instruments for the May approach and July

arrival at Vesta, Dawn's first port of call in the asteroid belt.

"Last week, we gently 'woke up' Dawn's three science instruments, which typically spend most of their time sleeping during the three-and-a-half-year journey to Vesta," said Robert Mase, Dawn project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. "This activity confirms that Dawn is on track for the first close examination of one of the last unexplored worlds of the inner solar system."

The framing camera activities were led by scientists from the Max Planck Institute for Solar System Research in Katlenburg-Lindau, Germany. "The camera system is working flawlessly. The dry run was a complete success," said Andreas Nathues, lead investigator for the framing camera, based at the Institute.

The international team of Dawn scientists and engineers in Germany and the United States spent three days interacting with the camera system, confirming the excellent health of the mechanical and electrical components and updating the software.



This image taken by framing camera 2 demonstrates, that the framing cameras on board NASA's Dawn spacecraft are functioning flawlessly. Credits: NASA/JPL-Caltech/UCLA/MPS/DLR/IDA

In the months to come, the camera system will provide images needed to navigate the spacecraft to its rendezvous with Vesta, and will begin to image the asteroid's surface. These early images on approach will be the start of a campaign to systematically map Vesta's surface in detail and will provide tantalizing clues as to its mineralogical composition. In addition, the framing cameras will search for moons in Vesta's vicinity and look for evidence of past volcanic activity.

The Dawn mission to Vesta and Ceres is managed by the Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, for NASA's Science Mission Directorate, Washington.

Provided by JPL/NASA