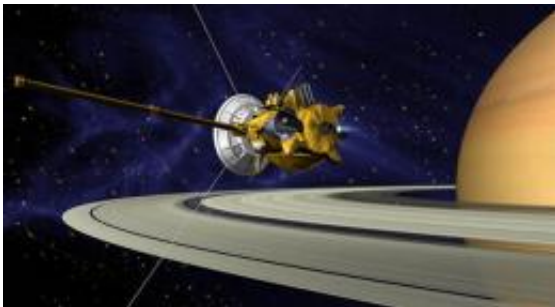


Cassini plasma spectrometer resumes operations

March 19 2012



Artist concept of Cassini spacecraft. Image credit: NASA/JPL

(PhysOrg.com) -- The Cassini plasma spectrometer instrument (CAPS) aboard NASA's Cassini spacecraft at Saturn has resumed operations. Mission managers received confirmation on Friday, March 16, that it was turned on. They plan to monitor the instrument for any unusual behavior.

Last June, short circuits in the instrument led to unexpected voltage shifts on the spacecraft. As a precaution, mission managers turned off the CAPS instrument while engineers investigated the issue. The investigation led to the conclusion that tin plating on electronics components had grown "whiskers."

The whiskers were very small, less than the diameter of a human hair, but they were big enough to contact another conducting surface and

carry electrical current. Researchers are still trying to understand why whiskers grow on tin and other metals, but they know now that whiskers can grow in space and on Earth. It is believed that these or additional tin whiskers that may grow on Cassini cannot carry enough current to cause problems, but will burn out on their own like a lightweight fuse.

Cassini launched in 1997 and has been exploring the Saturn system since 2004. The project completed its original prime mission in 2008 and has been extended twice. Cassini is now in its solstice mission, which will enable scientists to observe seasonal change in the Saturn system through the northern summer solstice.

Provided by NASA

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