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Press Release

The journey of VIR-MS in the NASA mission DAWN continues with success

Further successes also for VIRTIS in Venus Express

After the successful launch of the interplanetary space probe DAWN on the 27th of September 2007 from Cape Canaveral, the VIR-MS (**Visibile InfraRed – Mapper Spectrometer**) instrument was switched on for the first time. The VIR-MS was designed and entirely manufactured by Galileo Avionica, under commission of the Agenzia Spaziale Italiana (ASI), the Italian Space Agency.

VIR-MS (Visibile InfraRed – Mapper Spectrometer) is a key instrument of the mission: most of scientific the goals of DAWN – such as to acquire further information on the overall conditions of Solar System and on the planets at the beginning their evolution – will be reached thanks to this spectrometer operating in the visible and near infrared.

VIR-MS is a simplified version of the VIRTIS instrument, also made by Galileo Avionica, and selected by ESA to fly as orbiter payload for the Rosetta mission and for the Venus Express Mission. VIR-MS will be carrying out in DAWN a hyperspectral mapping and a spectroscopic analysis of the asteroids Vesta and Ceres that the probe should reach respectively in October 2011 and in August 2015.

From the 15 to 19th of October 2007, NASA has carried out a check of all the main scientific instruments which have been switched on and verified. The instruments – essential for the success of DAWN- were working perfectly.

In particular, on the 17th of October, the commissioning operations have been carried out for the VIR-MS (**Visibile InfraRed – Mapper Spectrometer**). The instrument - currently exposed at a temperature of – 130°C, 4 million Km from Earth, has made in complete autonomy a sequence of operations lasting about 8 hours.

The next functional tests are foreseen for December 11, when the VIR-MS spectrometer will carry out an external calibration, taking as target a Star and observing its spectrum of radiation.

By January/ February 2008, it is also scheduled a measure of the co-alignment between VIR-MS and the Framing Camera (FC), an other instrument on board of DAWN. Focusing on the same external light source, NASA will verify the precision with which VIR and FC are aligned after the launch.

Starting from 2011, the Galileo Avionica instrument will send data related to the geophysical and geochemical properties of Ceres and Vesta.

And yesterday, the European Space Agency (ESA) presented the last scientific findings obtained by the Venus Express probe. Since May 2006 when Venus Express entered in its final operational orbit, Galileo Avionica **VIRTIS- Visible and Infrared Thermal Imaging Spectrometer** is assembling large-area temperature maps, up to 100 km altitude, of the southern hemisphere of the inhospitable surface of Venus. Passing through the dense cloud curtain and the deepest atmospheric layers, **VIRTIS finally succeeded in looking through the thick carbon dioxide curtain surrounding the planet Venus**. A few month ago, a fascinating discovery was also made by ESA scientists when the surface of Venus revealed a resembling portrait of a woman.

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