

Solar System Working Group – 10-11 January 2006
Report from the Planetary Missions Division
(Gerhard Schwehm – 9/1/06)

The most important event for the planetary community was the launch of *Venus Express* on 9 November at 3:33 UTC on a Soyuz Fregat from Baikonur. After a nearly perfect injection of the spacecraft onto its trajectory towards Venus, the critical Launch and Early Orbit Phase – with the deployment of the Solar Arrays and the initial check, that the Power, Attitude and Orbit Control System and other crucial flight subsystems are activated and working properly - was conducted by ESOC and completed after about 53 hours. The spacecraft has from the beginning been performing flawlessly and did not provide any headaches to the operations team. In orbit spacecraft commissioning was completed fairly rapidly. One of the first activities of the science payload checkout was the deployment of the Magnetometer boom on 18 November. The Interference and Pointing Campaign has been performed. Instruments performance has been excellent, except for PFS – for which still a number of problems have to be solved, which most probably are due to the still ‘cold’ environment close to Earth. Venus Express will reach Venus on 11 April.

The *Huygens* results have been published in a special issue in Nature on 8 December. The results were presented by the PI teams during a press conference at ESA HQ on 30 November. Data analysis is ongoing taking into account coordinated orbiter observations of Titan and the results from the analysis of the overall system and subsystem performance of the Probe has been fully evaluated and is being documented by the prime and its sub-contractors. This will mark the end of the so-called Phase-1 engineering data analysis; the subsequent Phase-2 data analysis will put emphasis on the coordinated science and engineering performance analysis and lessons learnt.

Mars Express has been performing very well and providing excellent data. The OMEGA Team has published their findings on the history of water on Mars. The publication in Science was presented to the press in the joint Press Conference with Huygens at ESA HQ on 30 November. At this Press Conference the first data from Marsis were shown to the public.

Due to the launch of Venus Express operation, activities for *Rosetta* were kept to an absolute minimum. The spacecraft was monitored about every ten days. The only instrument continuously taking data is the Standard Radiation Monitor, which is running in background mode. Currently the Science Operations Team is reviewing all command procedures and the User Manuals of the Experiments. In close cooperation with the Experiment Teams the Mars Flyby early 2007 is being prepared.

For the 20th anniversary of the Giotto Halley flyby a special event is planned connected to the Rosetta SWTM on 13/14 March 2006 at ESTEC.

For **SMART-1** the first push-broom operations campaign was successfully completed. Results will be presented at the meeting by the AMIE team. Preparations for the end of mission have been started. ESOC Flight Dynamics has studied different scenarios which were presented to the SMART- 1 SWT. The SMART- 1 mission will end mid August 2006 when the spacecraft will crash onto the lunar surface. SMART-1 has been suffering from reduced station coverage for science data downlink due to the priority assigned to Venus Express for the launch and commissioning phases.

The work on the reassessment of the **BepiColombo** mission scenario with the aim to bring it back into a sound budget envelope was successfully completed. The BepiColombo Project will seek approval to issue the ITT for the industrial contract at the February 2006 meeting of the SPC. An update of the payload situation will be given at the meeting by the BepiColombo Project Scientist.

The **ESA-NASA Working Group met at UCLA on 15 and 16 December** – a summary will be presented as a separate Agenda Item.

To prepare for that meeting the interested European Scientists met at CNES HQ on 12 and 13 December to discuss the scientific objectives of potential missions to the Jovian System from a European perspective. The meeting had been excellently prepared and was very well attended (about 80 participants).

A workshop on Venus Atmospheric Probes and on in situ studies of Interplanetary and Interstellar Dust will be held at ESTEC end of January and end of February, respectively.

N.B. The Stardust Samples will return to Earth on 15 January.

Pluto Express has now been scheduled for launch on 17 January