



European Space Agency

ESA Science & Technology

06-Nov-2006 11:12:32

No. 55 - Mission End

14 Aug 2006

Report for Period 17 July to 13 August 2006

This is the last SMART-1 operations report. The SMART-1 lunar impact will take place on 3 September 2006.

The Operations during July have been nominal. All spacecraft subsystems are working well and it is expected not to have any problem until the moon impact. The Star Trackers have behaved well after the anomaly reported in July.

Periodic updates and last minute information about the moon impact can be found at the following internet address.

<http://sci.esa.int/smart1impact>

SMART-1 has presented, on 18 August at ESOC, the first operational Ground Operations Automation System (SMART-1 GOAS). This system has been developed with Rhea in the framework of the GAMOS study and is intended to acquire operational experience to feed into future ESOC automation infrastructure developments. For more information contact octavio.camino@esa.int.

The SMART-1 Mission Operations Team wants to take this opportunity to thank all industrial partners led by the Swedish Space Corporation, all the engineers at ESTEC and ESOC involved in the mission, the instruments investigators and the Science and Technology Control Centre (STOC) at ESTEC for contributing to the success.

Future Activities

Future activities are focused on the following:

- Lunar Impact
- Lessons Learnt preparation and presentation in ESTEC
- Implementation of SMART-1 Closure Plan

Spacecraft Status

The spacecraft status is good with all functions working nominally.

AOCS

The AOC subsystem has done well in the period covered by this report. The only AOCS related special operation Ground had to do was the recovery from Safe Mode on 17 July.

TT&C

The performance of the TTC subsystem has been nominal during this period.

EP, Power and Thermal

The performance of the Power and Thermal Subsystems during the reporting period was very good.

Data Handling

The Data-handling Subsystem has performed well during the reporting period.

Payload

Payload operations have been nominal during this period.

Mission Planning System

The performance of the MPS has been nominal during this period.

Operations Automation

The operations automation system has been in routine operational throughout this period. The system has taken control of all platform and payload download activities inside working hours and no significant anomalies have been observed.

Orbital Information

SMART-1 OD466 Close to Apolune 2829
Epoch (UTC) 2006/08/10 05: 10: 18.9

Elements WRT Moon and its equator of date

Pericentre Distance (km)	1794.092789
Apocentre Distance (km)	5133.805543
Semi Major Axis (km)	3463.949166
Eccentricity	0.482067
Inclination (°)	90.992550
Ascending Node (°)	239.685337
Argument of Pericentre (°)	217.785759
True Anomaly (°)	180.000002
Osculating Orbital Period (h)	5.081741

The changes in four parameters since apolune 2796 are:

- semi-major axis -0.2 km
- perilune height -53.0 km
- apolune height +52.7 km
- orbital period -0.0 minutes

For further information please contact: SciTech.editorial@esa.int

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