

# The ESA Workshop on GNC for Small Body Missions

## PROGRAMME

Last update: 13 January 2009

### Wednesday, 14 January 2009

09:00	Registration
09:45	Opening and Welcome <i>Rémi Draï (ESA/ESTEC, Netherlands) – Control Engineering Section</i>
10:00	Assessment of AOCS in-orbit performance during Rosetta flyby at asteroid Steins <i>Mathias Lauer (ESA/ESOC, Germany)</i>
10:40	Marco Polo ongoing ESA assessment study <i>David Agnolon (ESA/ESTEC, Netherlands) – Planetary exploration studies section</i>
11:20	Coffee Break
11:40	GNC architecture options for missions to small bodies <i>Sébastien Clerc (TAS, France)</i>
12:20	Asteroid proximity operations autonomous GNC concepts based on novel gravitational field modelling and estimation techniques <i>Luis, F. Peñín (DEIMOS, Spain)</i>
13:00	Lunch Break
14:00	Vision-based navigation for approach and landing on small bodies <i>Cyril Cavel (ASTRIUM, France)</i>
14:40	Autonomous GNC Systems Applied to Interplanetary Missions: the NEO Descent and Landing case <i>Jesus Gil (GMV, Spain)</i>
15:20	Mathematical Aspects in Estimating Rotational Parameters of Small Celestial Bodies <i>Karlheinz Spindler (Fachhochschule Wiesbaden, Germany)</i>
16:00	Navigation and Motion Control of the Phobos-Soil S/C during Approach and Landing <i>A. Zhakarov (IKI, Russia)</i>
16:40	Wrap-up discussion day 1
17:30	Adjourn

### Thursday, 15 January 2009

09:00	Registration
09:30	Planet Surface Simulation for Testing Vision-Based, Autonomous Planetary Landers <i>Martin Dunstan (U. of Dundee, UK)</i>
10:10	Proximity Operations at Small Bodies - Findings of the ASTEX Study <i>Sven Schaeff (Astos, Germany)</i>
10:50	NEO Mission Analysis and Design at Delft University of Technology <i>Jeroen Melman, (DUT, The Netherlands)</i>
11:30	Coffee Break
11:50	Guidance and Navigation Scheme for HAYABUSA Asteroid Exploration and Sample Return Mission <i>Takashi Kubota (JSPEC/JAXA, Japan)</i>
12:30	Orbital Dynamics at Binary Asteroid Systems: Opportunities, Challenges and Constraints <i>Julie Bellerose (JSPEC/JAXA, Japan)</i>
13:10	Discussions day 2 – Round table
13:45	Lunch - Adjourn