

**Outer Planets Assessment Group**  
**November 8-9, 2007 Meeting**  
**Marriott Hotel, Greenbelt, MD**

The Outer Planets Assessment Group is a NASA-supported forum for scientists and engineers to discuss exploration of the outer solar system and to enhance communication between community and NASA.

The meeting of OPAG held at the Greenbelt Marriott Hotel, was attended by ~80 people. We heard presentations as follows:

- Flagship studies - report on reviews / next steps - Curt Niebur (NASA HQ)
- ESA Cosmic Visions - Gerhardt Schwehm (ESA)
- Comet Surface Sample Return Study – Hal Weaver, Mike A'Hearn
- Solar Power Study - Scott Benson (GRC)
- Wirtanen Surface Sample Probe: A Comet Surface Mission Design - K.M. Block (Univ AZ) & S.M. Singer (Univ MD)
- DSMCE - Curt Niebur (NASA HQ)
- Probe Workshop report – Jim Cutts
- NASA Astrobiology Institute Icy Worlds Workshop - Ron Greeley (ASU)
- HQ Update – Jim Green (Div. Dir., NASA HQ)
- Titan airplane study – Steve Howe (USRA)

These presentations are available at the OPAG website: <http://www.lpi.usra.edu/opag/reports.html>  
At the conclusion of the meeting OPAG made the following findings:

**1. The four flagship mission studies** – the results of hard work by a large community of scientists and engineers are 4 reports which are now published on the OPAG website. The study teams each made presentations at day-long site visits, with careful, thorough review by science and TMCO review panels.

- We urge NASA HQ to make the written reports from the science and TMCO panels available to the public.
- We recommend collaboration between international space agencies to appoint joint science & engineering teams to study whichever missions are selected to proceed to the next phase. We are concerned about the apparently different timescales on which a such missions are being planned on the two sides of the Atlantic but hope that strong collaborations will find a compromise.
- In the meantime, OPAG recognizes the need to spread the word to the larger planetary science community of the scientific values of each selected mission as well as the process whereby missions were studied, reviewed and selected.

Flagship mission concept reports are being posted on the OPAG website at <http://www.lpi.usra.edu/opag/announcements.html> ESA mission concepts (TANDEM and Laplace) also posted on the OPAG website

**2. DSMCE** - OPAG applauds the creation of the Discovery and SMEX Mission Capability Expansion which opens up the opportunity of carrying out missions that require radioisotope power sources as well as being valuable for testing ASRGs for future outer solar system missions.

**3. New Frontiers:** OPAG has had the following findings at many meetings, which we forward to the NRC committee that is currently completing the NOSSE report:

*OPAG supports an AO for the 3rd New Frontiers mission (NF3) in the 2008 timeframe and encourages NASA to make the scope of the AO broad. OPAG notes that there are several targets in the outer solar system that might be accommodated with New Frontiers missions and encourages NASA to allow such missions within the next AO for New Frontiers missions.*

**4. PI qualifications:** We urge NASA HQ to study the PI qualifications such that NASA and the community have a clear idea of the size of the eligible mission PI pool and its effect on competitive selection of future missions. We are encouraged by plans to train future PIs (e.g. the proposed "PI bootcamp").

**5. Technology:** We are encouraged by the steady progress that has been made by advancements in solar power and the positive implications that this has for outer solar system missions. We encourage continued support for this and other enabling technology development programs.

**6. Small bodies in the Solar System:** OPAG continues to support studies of small bodies within OPAG as a Small Bodies Working Group. Should a separate SBAG be formed (as supported by recent PSS reports) then OPAG sincerely wishes the scientific community studying small bodies the very best for their future.

**7. Support of student projects:** OPAG congratulates the students who completed last summer's mission "bootcamp" at JPL (see report on Wirtanen comet surface mission) and encourages students to report on their activities at future OPAG meetings.

The next OPAG meeting will be held in Boulder, Colorado in late March / early April 2008. Tentative agenda items are:

- Report on progress of the flagship mission studies
- Technology: The OPAG Pathways document lists specific technologies that enable and enhance missions to the outer solar system. The meeting will focus on technologies necessary for flagship missions under study.
- Update of Pathways document to set out a long-term plan for exploration of the outer solar system.

- Update on studies of atmospheres of outer planets and of exoplanets. Recent research was reported at the Planetary Atmospheres workshop that preceded the OPAG meeting. At the next meeting we plan to hear about recent research, theoretical modeling needs and priorities for observations. We will also discuss an OPAG working group to evaluate future mission concepts and necessary technology developments.