

Dear Colleague:

This is the third newsletter to the community regarding SolarSystem2012, the planetary science decadal survey. The key points in this newsletter are these:

1. The steering group and all of the panels have been meeting, and work on the decadal survey is proceeding at a good pace.
2. Nearly 200 white papers were received from the community, and assessment of those white papers has begun.
3. The first set of mission candidate studies has been identified by the panels and approved by the steering group. More studies will be initiated once the white papers have been assessed.
4. Decadal survey sessions are planned for the upcoming Fall AGU, LPSC, and AbSciCon meetings.
5. More information is available on the SolarSystem2012 web site:
http://sites.nationalacademies.org/SSB/CurrentProjects/ssb_052412

The schedule of steering group and panel meetings is well underway. The first meeting of the steering group took place on July 6-8, and each of the panels has met at least once. The full meeting schedule as it now stands is available from the SolarSystem2012 web site. The web site also provides the agendas for each meeting, links to video archives of past meetings, and links to live webcasts of upcoming meetings.

Near-term upcoming meetings are as follows:

Inner Planets Meeting 2, 26-28 October, Beckman Center, Irvine, California
Giant Planets Panel Meeting 2, 26-28 October, Beckman Center, Irvine, California
Primitive Bodies Panel Meeting 2, 28-30 October, Beckman Center, Irvine, California
Mars Panel Meeting 2, 4-6 November, California Institute of Technology, Pasadena, California
Steering Group Meeting 2, 16-18 November, Beckman Center, Irvine, California

The most important activity for the steering group and all of the panels will be assessment of the white papers submitted by the planetary science community. The response to the call for white papers was tremendous: 199 white papers were received, with a total of 4935 authors and endorsers. This response represents an enormous amount of thought and effort by the community, and clearly shows your commitment to making the decadal survey process a success.

The steering group and panels are now reading all of the white papers, and assigning actions to be taken regarding each. In some cases, these actions may involve initiating studies of the ideas presented, or inviting white paper authors to future decadal survey meetings. We expect the white papers to be very important in formulating the decadal plan, and the agendas for future steering group and panel meetings will be largely driven by the white paper inputs.

All of the white papers that were received are posted on the SolarSystem2012 web site, where they can be downloaded and viewed.

Prior to receiving the white papers, each panel met to identify a first set of candidate missions for study. Mission candidate studies were then reviewed and approved by the steering group, and an organization (APL, Goddard, or JPL) was chosen to conduct each study. These studies are just getting underway. **IT IS IMPORTANT TO NOTE THAT THESE ARE JUST THE FIRST SET OF MISSION CANDIDATE STUDIES**, selected before the white papers were received. There will be many more that have been motivated by the white papers once the white papers have been assessed.

Six of the studies are of the type known as “Rapid Mission Architecture” studies. These are high-level studies of overall mission architecture that we expect to take a few weeks. The purpose of these studies is to explore the trade space for a mission candidate, and identify a “point

design” for possible subsequent study in much greater depth. The six Rapid Mission Architecture studies are:

- * Mercury lander mission (APL)
- * Venus near-surface mobile explorer mission (Goddard)
- * Mars 2018 sky crane capabilities study (JPL)
- * Uranus system mission (APL)
- * Neptune/Triton mission (JPL)
- * Enceladus flyby/sample return mission (JPL)

There are also two full mission studies. These will be more time-consuming and labor-intensive, and are intended to take these mission concepts to the point where they are ready for a full independent cost estimate. The two full mission studies are:

- * Mars trace gas orbiter mission (Goddard)
- * Titan lake mission (JPL)

There is also one small study to be conducted by JPL that doesn't fit any of the above categories; this study will identify possible targets for Near Earth Object missions.

In addition to the eight studies listed above, two mission concept studies have been identified that have already been done to a level of maturity such that an independent cost estimate should be possible. Independent cost estimates for each of those will be performed as soon as the company performing the cost estimates is under contract. Those two mission concepts are:

- * Mars trace gas orbiter mission studied to date by JPL
- * Comet surface sample return mission studied to date by APL.

Note that undergoing an independent cost estimate is a necessary but not sufficient condition for a mission candidate to be included in the final SolarSystem2012 plan. Again, I stress that most of the studies will be commissioned once the white papers have been assessed!

Finally, we are continuing to organize a number of sessions at major scientific conferences where discussion of the decadal survey among the community will take place. A “town hall” session took place at the DPS meeting in Puerto Rico, and was very well attended. Several of the panels also held town hall workshops. Future sessions are planned for Fall AGU, LPSC, and AbSciCon.

As always, more details on all of this are available at the SolarSystem2012 web site: http://sites.nationalacademies.org/SSB/CurrentProjects/ssb_052412

We've still got a long way to go, but work on the decadal survey is now well underway. All of your hard work on the white papers is very much appreciated!
Best wishes,

Steve Squyres
SolarSystem2012 Chair