

## 12/21/11 PSS Telecon

Committee Members Present: Jim Green (HQ), Jonathan Rall (HQ), Sarah Noble (HQ), Jim Bell (chair), Julie Castillo, Tom Cravens, David Des Marais, John Grant, Will Grundy, Greg Herzog, Sanjay Limaye, Louise Prockter, AnnaLouise Reysenbach, Chip Shearer, Jim Slavin, Paul Steffes, Jessica Sunshine, and Mark Sykes

### Goal of the meeting:

The purpose of this telecon was to update the community on a number of issues including the status of budget and potential programmatic impacts, the status of the Joint NASA-ESA Mars Program, and provide updates on the de-scoped Europa mission study and on the upcoming extended mission Senior Review

The next PSS meeting will be a telecon shortly after the President's budget is released in February.

### Jim Green - PSD update:

Jim provided an update on PSD's FY12 budget, which has been passed, and provides \$1.5B, which includes no less than \$587.1M for Mars and \$43M for outer planet flagship missions (additional details in slides). Paul Steffes asked about the wording in the appropriation bill on outer planet flagship, noting that \$43M is a lot for "studies". Jim said that the outer planets flagship line currently includes Cassini, CDAP, OPR, and studies and that we would be expanding beyond the Europa flagship studies to look at the other flagship priorities from the decadal, Uranus, Venus and Enceladus. Bill McKinnon asked if there was an agreed upon plan in place for spending that \$43M, Jim said not yet, but we are in the process of completing that plan and sending it to OMB.

While \$15M is provided in NASA's FY12 budget for Pu238 restart (same as last year), no money was provided in the DoE budget. This money will be enough to complete the necessary studies to prepare for eventual restart.

Jim discussed the recent (Dec 7<sup>th</sup>) trilateral in Paris with ESA and Roscosmos regarding the Mars program. Further technical discussions will continue over the coming months to confirm the interest of all three partners. Any NASA decisions on this matter will be based on the outcome of these technical discussions and following the release of the President's FY2013 budget, in February 2012. Jim Bell noted that ESA has come to the table with considerable money and he wondered if their timetable was compatible with our timeline. Jim Green replied that ESA has been more than generous and that we are really pushing the outer limits, there is in fact a time limit, which may or may not accommodate waiting for the delivery of the President's budget in February. Jim Bell also asked about the 2016 mission, which has instruments that have already completed PDR and will need to start building hardware soon. Should those teams still be pressing on? Jim Green said that,

although in both ESA and NASA's mind, the 16 mission is linked to 18, at this time we have no other guidance or direction than to proceed as originally planned.

Jim wanted to let the community know that the Senior Review was going to be delayed due to the uncertainty in the budget for the years FY13-14. Draft SR guidelines were sent out to the Mission teams on Sept. 30 (without budget guidance) and update emails with further guidance were sent out Oct. 31, Nov. 4, and Dec. 20, but final guidance will be delayed. We expect it to be sent out on or before the President presents the FY13 budget to Congress. Jim is assuming the February budget release will have the 5 year budget runout and from that we will be able to issue guidelines. Once we have the budget information, the guidelines will be out the next day and then proposals will be due 120 days later.

This delay will impact GRAIL, as their prime mission begins in March and is due to end in June. Jim was therefore seeking PSS's recommendation to request GRAIL's proposal and conduct its Senior Review earlier, separate from the others, as we did with MESSENGER. (This was discussed further later, see GRAIL discussion below.) Mark Sykes asked about the approach to the review and where the guideline numbers come from, with the understanding that as some level, a mission will become not worth funding anymore. Jim said that, yes, we understand where those points are. John Grant asked if the budget ends up being less, would Jim consider delaying Discovery or some other option to provide more for extended missions. Jim said that we were not at the stage to look at those trades yet.

Louise Procter asked about developing technology for Titan. Jim said that that would be developed through a competitive process within the technology wedge, noting that we are planning to broaden PIDDP to work towards higher TRLs, and that we may consider providing specific direction in a future call for Titan technology.

Julie Castillo asked about the status of our participation in the ESA Marco Polo mission. Jim said that upon ESA's request, we have provided information on the role that we would like to play, which included several specific aspects, plus some open-ended things. We are waiting for them to say yes so that we can begin a dialogue.

Paul Steffes asked if Jim has spoken to the new AA, John Grunsfeld. Jim has not had the opportunity to speak with him yet, but is eagerly awaiting his arrival in early January. Jim notes that when he arrives, "He'll be thrown in the deep end, but with his experience, he'll be able to float."

#### **Discussion of GRAIL extended mission senior review:**

John Grant asked if it would be possible to ask for the GRAIL proposal early (so the team wouldn't be trying to write it while their mission is in its prime mission), but review it along with the other extended missions, so that it doesn't have an unfair advantage or disadvantage by being isolated from the others in a separate review. Jim said that there is unlikely to be enough time to allow this. Jim also pointed out

that any GRAIL extended mission would start in FY12 and finish in FY13, meaning it would be pretty much out of the way by the time many of the other missions extended phases start. It was noted that, unlike many of the other missions requesting extensions, GRAIL has a finite lifetime, if they survive the eclipse, this would be their only extended mission as they will run out of fuel.

The consensus of the participating members of the subcommittee was to support requesting the review as soon as possible. They would prefer that the mission was reviewed along with the others rather than in a separate review, if at all possible, but understand that the timing may not allow for that.

#### **Michael New - Analysis of Proposer & Reviewer Workloads:**

In response to claims that the planetary community is overburdened writing and reviewing proposals, Michael, with the help of Dr. Susan Keddie at NRESS, has compiled an excellent dataset looking at the community workloads for those activities.

It was found that the evidence does not support those claims (see slides for details).

Dave Des Marais noted that there has also been considerable discussion that the program managers are overburdened. Michael had no info on that, but for himself and anecdotally, yes, he agreed that running a program is a lot of work. Dave added that this really seems to be the bigger problem.

Mark Sykes noted that 15% of reviewers are reviewing 10 or more proposals/yr, that's a lot of people. Michael pointed out that those people accepted those reviews when they could have turned them down, "you cannot legislate generosity."

Anna-Louise Reysenbach noted that NSF reviewer workloads are significantly higher, and agreed with Dave that the bigger problem is the workload on the HQ program officers. Anna-Louise also noted that NSF collects similar data and it might be worth looking to see which of our community members are also writing and reviewing NSF proposals. Michael said he would look into finding someone at NSF that might be willing to help in such an endeavor.

#### **Jonathan Rall – update on PSS report (Assessment of the NASA Planetary Science Division's Mission-Enabling Activities):**

The final version of the PSS report was recently distributed to PSD staff. They will review it, incorporating Michael's data and the latest budget picture and provide a detailed response at the Spring PSS meeting. Jonathan also noted that the R&A team had an offsite recently to plan for the current budget outlook of ~\$200M/yr for the foreseeable future. Mark Sykes noted that that \$200M was a back-of-the-envelope calculation, but now seems to be a magic number. Jonathan responded that the number may be up for some modification, but we can't base the future on this year's (historic all-time high) budget, that would be naïve. Mark asked if the PSS will have the opportunity to offer input or comment on the plan, Jonathan assured him that

any plan would be vetted through the PSS. It was noted that it is difficult to get information on selection rates for the various ROSES elements, the SARA website is often behind, and doesn't provide any explanations about why selection rates go up and down. Jonathan agreed, and said we would try and improve that. The PSS has asked for an official, more detailed, HQ update on the status of the R&A programs, including selection rates, trends, and funding levels, at our next (spring) meeting.

#### **Curt Niebur – Europa Flagship Mission:**

Curt discussed the de-scoped Europa mission study called for by the Decadal. He praised the work of the SDT, which he described as “cutthroat (but in a good way)”. The SDT divides the goals of the original mission into an orbiter concept and a fly-by concept (there is also a third concept being explored at NASA's request, a lander option, but that study isn't finished yet). All three options provide a great science return and are designed to be independent of each other. See slides for further details.

#### **Joan Salute – ESA's JUICE mission**

Joan provided a quick update on the ESA JUICE (JUper ICy Moons Explorer) mission, which is basically an upgraded version of JGO (Jupiter Ganymede Orbiter). The JUICE mission would consist of a multi-purpose orbiter that is designed to operate first in orbit around Jupiter, then in orbit around Callisto after two Europa flybys, and finally in orbit around Ganymede. Dave Des Marais asked if there has been any discussion about integrating the JUICE mission with our potential Europa mission. Joan said not at this time, we are still too busy talking about Mars.

#### **Assessment Group Updates:**

##### ***Dave DesMarais – MEPEG:***

Dave noted that the final report of the End-2-End International SAG (E2E-iSAG), which addresses MSR science objectives, landing sites, sample types, sampling priorities, Earth-based labs, etc. and provides a solid foundation for the Joint Science Working Group (JSWG), serving as the Science Definition Team for 2018 was released in Nov 2011 and can be found here: [mepag.jpl.nasa.gov/reports/index](http://mepag.jpl.nasa.gov/reports/index)

##### ***Sanjay Limaye – VEXAG:***

Sanjay noted that Sue Smrekar stepped down as Co-Chair at the end of September 2011, so he is looking for a new co-chair. VEXAG is excited to be a part of the upcoming [Comparative Planetology Conference](#), 25-28 June 2012, in Boulder CO, noting that it is the first meeting ever to be sponsored by all four science divisions, and he encouraged everyone to spread the word, particularly to the Mars, Titan and exo-planet communities. Also, the last Venus transit of our lifetime will happen June 5-6, 2012.

##### ***Mark Sykes – SBAG:***

SBAG continues to develop their Small Bodies Exploration Roadmap, currently being condensed by a roadmap action team. They are also producing a whitepaper on the

concept of a Small Bodies Science Institute, prompted by a discussion at SBAG5 on whether NLSI should expand to include NEOs (their finding was, no, it should not, the goals are too different).

#### ***Bill McKinnon – OPAG***

OPAG strongly endorsed the science of the Cassini Solstice Mission, and urged that NASA fund the Cassini Solstice Mission at the level the Cassini Team requires to safely operate the spacecraft and to obtain and analyze the data that are required to accomplish the science objectives of the Cassini Solstice Mission. Bill also noted the successful launch of Juno, and lauded the great work of the Europa SDT.

#### ***Chip Shearer – LEAG***

Chip announced two new Specific Action Team activities - GAP-SAT: Analysis of Strategic Gaps in Knowledge for a Moon-Next Human Exploration Scenario (Kick off Dec 15-16, 2011 at LPI); and L2-SAT: Analysis of potential science, resource, technology and exploration investigations that can be best performed from an Earth-Moon L2 facility (Charter in preparation). He also noted two successful LEAG-cosponsored workshops last summer, a Wet Vs. Dry Moon in June, and a Google Lunar X-Prize Science workshop in July.

#### ***Jim Bell (on behalf of Mini Wadhwa) – CAPTEM***

As per the NASA-JAXA MOU, a random subset of the Hayabusa samples (10%) will be transferred to NASA soon. An allocation subcommittee has been assembled and a draft of the curation, handling and allocation policies document has been completed and approved by CAPTEM with the first Hayabusa samples expected to be allocated through CAPTEM by spring of next year. Jim Bell also noted that the Office of the Inspector General completed audit of “NASA’s Management of Moon Rocks and Other Astromaterials Loaned for Research, Education, and Public Display”; report available online at: <http://oig.nasa.gov/audits/reports/FY12/IG-12-007.pdf>. As a consequence of this report, the JSC Curation Office – in consultation with CAPTEM, the Meteorite Working Group (MWG), and the NASA Office of General Counsel – will be revising and instituting new procedures governing samples loaned to researchers (to be implemented during 2012).

#### ***Louise Procter – the Mercury community***

At our last PSS meeting, Louise was asked to discuss with the Mercury community whether they felt that they needed a Mercury Assessment Group, either dedicated or merged with an existing AG. At this time, they do not feel that it is necessary. Right now, the MESSENGER team is roughly equal to the Mercury community and they are already meeting 3-4 times a year, thus they see no need or benefit from an AG, though that may change in the future. They would like to ensure that Mercury science is adequately represented on the NASA PSS, e.g., by ensuring that at least one member has a strong involvement in Mercury science. They would like to revisit this question in 2-3 years.