2018 Heliophysics Mission of Opportunity (MO) Pre-Proposal Conference

Welcome

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August 24,2018

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These solicitations are forefront initiatives by the Heliophysics Division of the Science Mission Directorate to energize NASA's heliophysics science program with strong incentives for ***innovation***.

Mission of Opportunity Recommendation: Decadal Study

- ***Solar and Space Physics: A Science for a Technological Society - 2013 NRC Decadal Strategy for Solar and Space Physics***
  - "Solar and space physicists will accomplish high-payoff, timely science goals with a revitalized Explorer program, including leveraged Missions of Opportunity."
  - "Regular selections of Missions of Opportunity will … allow the research community to respond quickly and to leverage limited resources with interagency, international, and commercial flight partnerships. For relatively modest investments, such opportunities can potentially address high-priority science aims identified in this survey."
  - "The survey committee recommends that, as part of the augmented Explorer program, NASA should support regular selections of Missions of Opportunity, which will allow the research community to quickly respond to opportunities and leverage limited resources with interagency, international, and commercial partners."

The Evolution of Mission of Opportunity: 2013 Decadal Study

- ***Solar and Space Physics: A Science for a Technological Society - 2013 NRC Decadal Strategy for Solar and Space Physics***
  - "NASA's primary means of utilizing alternate platforms is via Missions of Opportunity and the current Stand Alone Missions of Opportunities Notices (SALMONs). However, the challenge of multi-organization coordination and the short time line for response to commercial opportunities call for a regular cadence and an expeditious mission proposal, review, and selection process. The survey committee concluded that a SALMON line needs to evolve in response to both community input and short-term opportunities more rapidly than the cadence of decadal surveys or even that of larger Explorers (MIDEX and SMEX). It needs to be flexible enough to allow proposal topics ranging from instruments on hosted payloads to a university-class Explorer satellite."

2018 Heliophysics MO Solicitations Expand Programs Leveraged by MO Investigations

1. **Explorers Program**
   - Traditional Mission of Opportunity
2. **Solar & Terrestrial Probes Program**
   - Interstellar Mapping and Acceleration Probe (IMAP)
   - Evolved Expendable Launch Vehicle Secondary Payload Adapter (ESPA)
   - Solicit MO investigations to:
     i. aid in addressing Heliophysics science objectives and
     ii. serve the needs of technology demonstrations

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- These solicitations are forefront initiatives by the Heliophysics Division of the Science Mission Directorate to energize NASA's heliophysics science program with strong incentives for ***innovation***.
- Missions of Opportunity, in general, solicit higher-risk for higher-reward investigations
- Leveraging the Solar & Terrestrial Probes (STP) Program with MOs increases the opportunities for innovative, near term science investigations.
- The IMAP ESPA Rideshare is a pathfinder for the newly established SMD intent to implement rideshare opportunities wherever possible for strategic NASA space launches.
- The TechDemo MO specifically solicits lower technology readiness systems in order to increase the development pace of technologies that enable the new capabilities needed to address the NASA Heliophysics Objective & Goals.

Conference Goals

Goals today are to:

- Provide an overview of the 2018 Heliophysics MOs
- Provide an overview of the evaluation, categorization, and selection process
- Address questions

Delay in Due Dates

- Ride-share is still new territory for NASA SMD.
- The level of detail that has been requested in the Q&A concerning the IMAP ESPA is greater than anticipated.
- Additional time is required to resolve these questions
- Therefore the Proposal Notification Due Date and the Full Proposal Due Date have been delayed as noted below to allow resolution to questions relevant to investigation feasibility.
- A Q&A and SALMON-3 Amendment will be released to formalize this change.

	TechDemo MO PEA-L	Science MO PEA-M
Notification Proposal Due Date	Oct. 1, 2018	Oct. 1, 2018
Due Date of Electronic Full Proposals in NSPIRES	Nov. 30, 2018	Nov. 30, 2018
Due Date of Full Proposal CD-ROMs	Dec. 6, 2018	Dec. 6, 2018

Agenda

8:45	**Welcome and Introductions**	**Peg Luce, NASA HQ**
9:00	Overview of the 2018 Heliophysics MO Solicitations	Dan Moses, NASA HQ
9:20	Overview of the Evaluation, Categorization, Selection Process	Dan Moses, NASA HQ
9:40	Technology Demonstration MO Scientific and Technological Evaluation	Roshanak Hakimzadeh, NASA HQ
10:00	Technology Demonstration MO Technical, Management, and Cost Evaluation	Andrea Salas, NASA LaRC
10:20	Break and Questions	All
10:40	Science MO Science Evaluation	Dan Moses, NASA HQ
11:00	Science MO Technical, Management, and Cost Evaluation	James Florance, NASA LaRC
11:20	Break and Questions	All
11:40	Program Requirements	Mike Delmont, NASA GSFC
12:00	Break and Lunch	All
12:30	International Participation	Jake Parsley, NASA HQ
12:45	Export Control	Ken Hodgdon, NASA HQ
1:00	Mission Operations and Communication Services	John Hudiburg, NASA HQ
1:20	Heliophysics IMAP Rideshare Approach	Alan Zide, NASA HQ
1:30	IMAP ESPA Grande Accommodations	Garrett Skrobot, NASA KSC
2:00	CubeSat Investigations	Anne Sweet
2:20	International Space Station Investigations	Kenol Jules, NASA JSC (presented by Dan Moses)
2:40	Balloon Investigations	Debora Fairbrother, NASA WFF
3:00	Wrap-Up	All