



2018 Heliophysics Mission of Opportunity (MO) Solicitation

Pre-Proposal Conference IMAP Rideshare Approach

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Why Rideshare?

- Science Mission Directorate, led by Dr. Zurbuchen, has set a policy to include an EELV Secondary Payload Adapter (ESPA) on future missions that have excess mass to orbit available
 - Rideshare fosters an evolved response and a more rapid cadence to the changing needs of the community
 - Rideshare enables higher priority science, with a higher acceptable risk, for a modest investment
 - IMAP is the next Heliophysics mission and we will implement this approach
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Heliophysics Innovation

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- Announcing missions of opportunity before the primary mission requirements are solidified is a first
- Calling for a flight technology demonstration that demands a large TRL advancement in future science collection is a first
- Utilizing an ESPA on an Heliophysics mission is a first
- Developing a mission unique system interface specification for an ESPA is a first
- Utilizing an ESPA-specific secondary payload integrator is a first



Challenges

- We are so early in the Primary Mission timeline, requirements are still in the development phase
- Secondary Payload Integrator approach is not solidified
- Launch Vehicle provider is not selected
- An SMD-wide Rideshare policy is in development



ESPA Grande 5-Port Fully Populated

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- Technology Demonstration: 1-2 Ports
- Science Mission(s): 1-2 Ports per mission
- Other Government Agency: 1 Port
- Based on the merit of proposals received, the configuration will be selected



ESPA Integrator

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- SMD/Heliophysics will shortly be releasing a Request For Information related to the ESPA Integrator role
- Based on the responses, Heliophysics will separate out necessary inherent government functions and potentially compete the functionality of:
 - integrating the secondary payloads to the ESPA
 - integrating the complete ESPA Flight System to the launch vehicle
 - and much more as described in the RFI
- This is a challenging role as the Integrator will have to interface with potentially 5 payload providers, NASA project office, Launch Service Program and Launch Vehicle Contractor



Summary

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- SMD and Heliophysics recognize the value of adding the IMAP ESPA and secondary payloads to create more science opportunities for the community
- Along with this new and exciting opportunity brings challenges to NASA, the science community and all parties involved
- We must create a mindset that we will be working through these tasks real time necessitating the need for flexibility, adequate margin, and planning for the unexpected