National Aeronautics and Space Administration



2024 NASA SCIENCE

Heliophysics System Observatory (HSO) Extended Operations Framework

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Agenda

- Extended Mission Policy Activities
- New Framework
- Benefits of New Policy
- Previous HPAC Findings & Recommendations
- Feedback Requested
- Next Steps

Extended Mission Policy Activities

2023 SENIOR REVIEW FINDINGS

Individual extended mission proposals lacked system-level coherence and perpetuated closed communities. The following would strengthen the HPD portfolio and engage broader community:

- Develop opportunities for HSO science working groups
- Expand HSO Guest Investigator funding opportunities
- Expand HSO community frameworks to share and leverage development of code, team science efforts, and coordination with HDRL

RESULTS 12 missions proposed, 4 designated project-funded, 6 designated infrastructure, 2 terminated due to technical feasibility

FRAMEWORK DEVELOPMENT

- Address terminology and definition concerns
- Establish research funding transition and competition processes for missions phasing out of prime phase
- Outline Senior Review criteria for transitioning missions

STAKEHOLDER FEEDBACK

- Solicit feedback from internal and advisory stakeholders on:
 - Overall framework
 - Terminology
 - Metrics for evaluation

POLICY DEVELOPMENT

- Draft written policy to foster open science, healthy competition, and opportunities for early career scientists
 - Incorporate stakeholder feedback
 - Address concerns raised in HDP feedback form

COMMUNITY FEEDBACK

- Share framework at Sept.
 HPD Town Hall
- Answer questions and accept live feedback
- Identify format/method and timeline for formal feedback submission



- Finalize written policy based on stakeholder and community feedback
- Issue policy and guiding direction to operating missions
- Leverage appropriate communication channels to ensure awareness across community
- Feed into 2026 Senior Review and ROSES

New Extended Mission Framework

Prime Phase

Missions in the prime phase are fully funded to complete science and operations objectives

Includes launch through the planned prime phase operations

Transition Phase

A 3-year transition period will start immediately following the end of the prime mission phase

 Exceptions: Strategic missions in the LWS and STP lines will be given specific consideration

Initiates a change in **research** funding from mission science funding to a competed approach awarded through ROSES, etc.

• NASA continues to fund Management, Operations, and Data

Extended Phase

Missions in the extended phase will be funded to support **Management**, **Operations**, and **Data**

Research utilizing mission data will continue in the extended mission phase through competed funding avenues for the majority of missions

The new extended mission framework will not utilize the term "infrastructure"

Senior Review will be simplified for missions in transition and extended phases with evaluation on the following criteria:

- Technical feasibility
- Data documentation and archiving status
- Demonstrated value for data

Benefits of New Policy

Keeping Science Exciting

- Positions NASA on the cutting-edge of science; Continuously bringing in new and outside perspectives
- Introduces opportunities to increase system-level coherence
- Enables missions in operation to continue to produce and expand valuable data for community science
- Incentivizes stakeholders to conduct heliophysics research
- Maximizes scientific return from the HSO fleet while providing research opportunities for scientists at every career stage
- Increases collaboration and new partnership opportunities within the community

Addressing Administrative Challenges

- Provides a longer transition period (3 years) for teams to secure competed funding
- Simplifies the senior review process, enabling projects to focus on science
- Fosters consistency by maintaining management, operations, data, and funding with the program

HSO Feedback: HPAC February 2024

HPAC Findings

- HPAC recognizes that [HSO infrastructure] is a reasonable way to allow missions to keep operating and produce data useful to the community within a limited budget
- We find that there is confusion in the community, resulting in concern, about the implications of the forthcoming changes to the HSO infrastructure mission model/concept

HPAC Recommendation

We recommend that HPD respond proactively to the concerns of the community by clearly communicating information on several topics. These include:

- Details on how this model is being implemented and what changes are being considered
- What extent analysis is allowed to be proposed and conducted using infrastructure mission funding
- The resulting implications and possible pathways for funding of early career researchers
- Whether/how there will be a transition period from the current model to the new paradigm for some missions
- Appropriate venues for communication of this information should be considered.

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Next Steps

- Feedback and input is always welcome!
 - More to come on the feedback and question collection methods
- Aiming to finalize this policy before ROSES 2025 and Senior Review 2026

 Hosting an Operating Missions Town Hall to communicate policy changes to the community
- Leverage results from Senior Review and ROSES to inform future budget planning



Discussion

