

# The Heliophysics Coalition

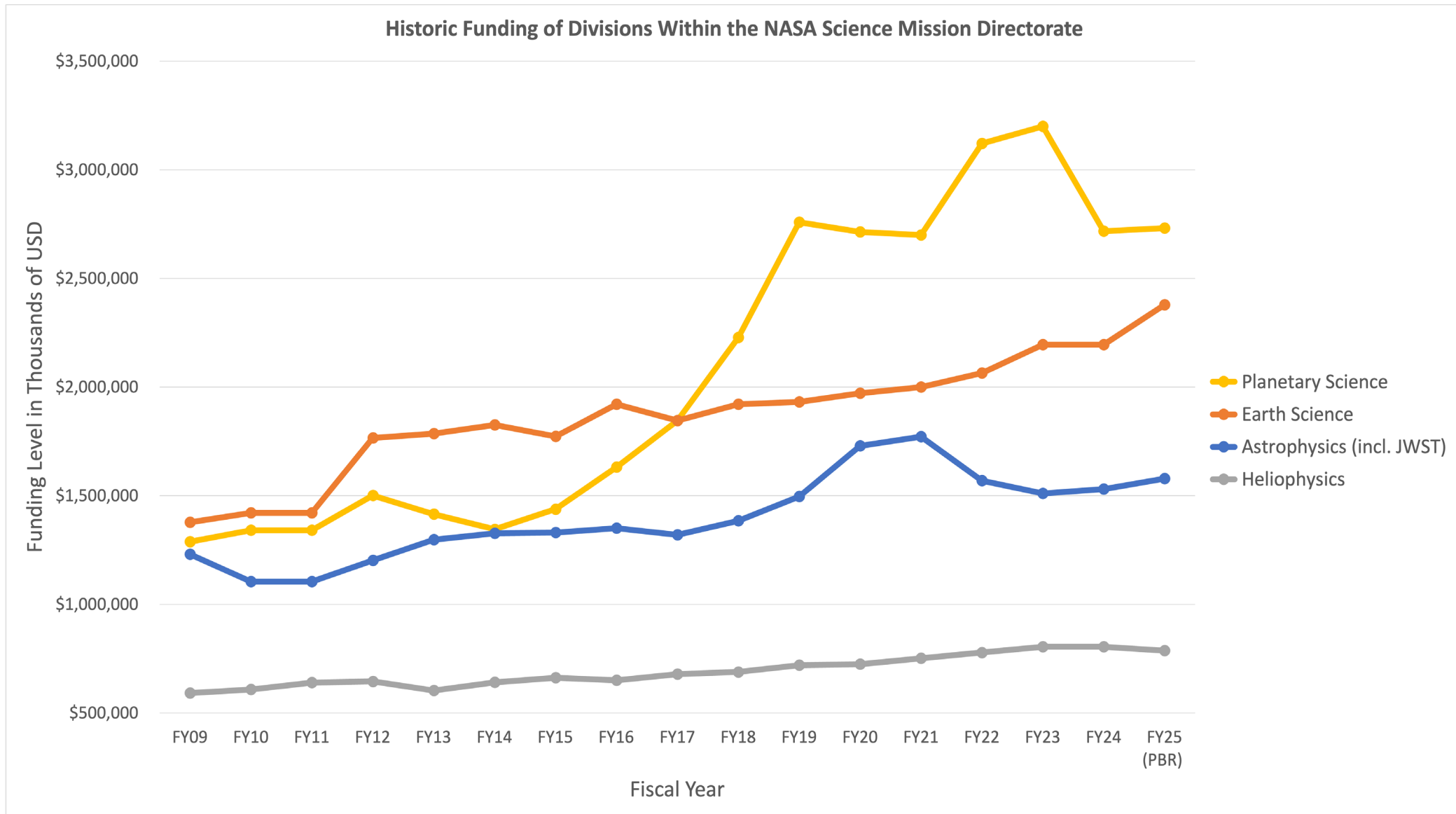
Advancing Heliophysics in the next decade together



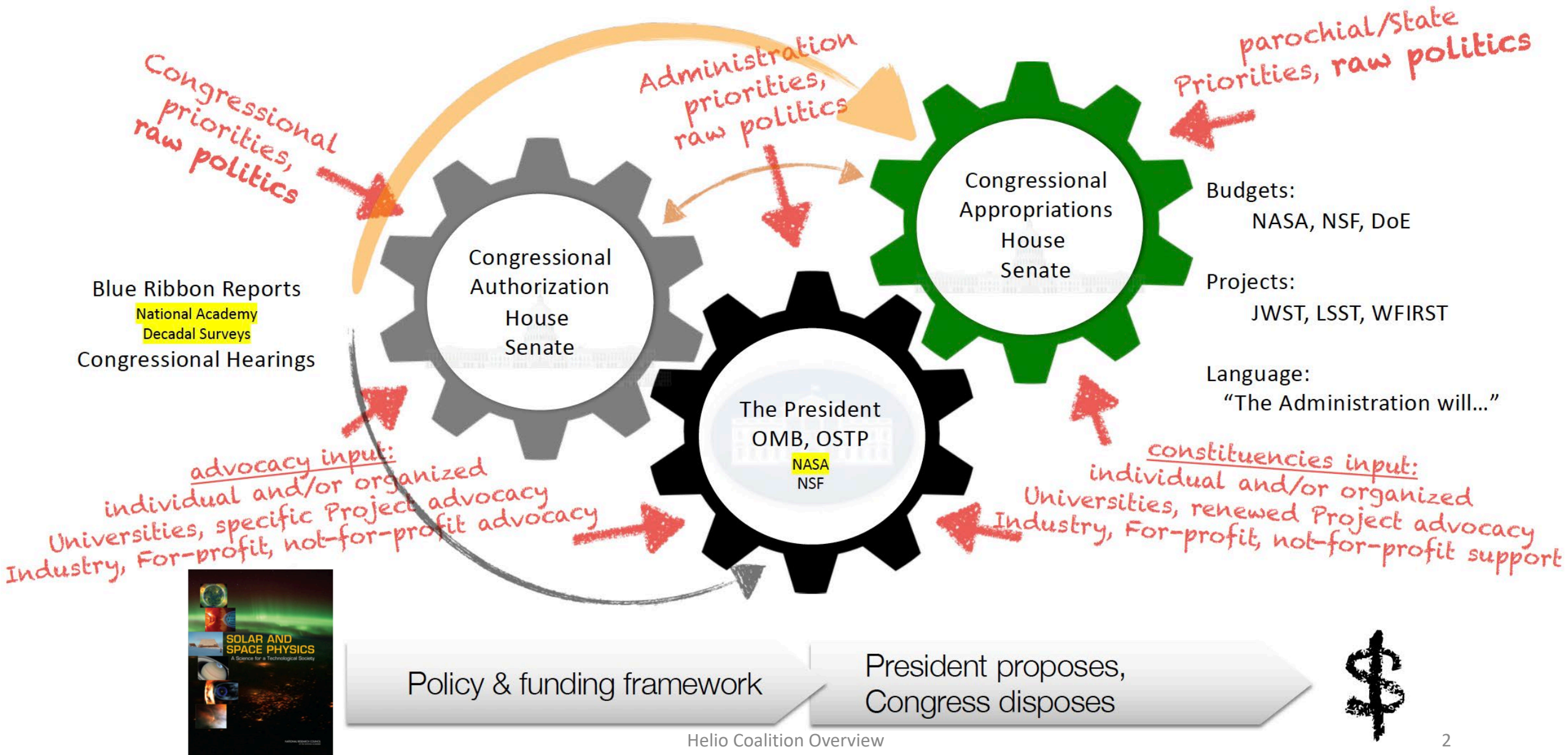




# The Problem



# The Federal Budget Process, simplified





# Advocacy Efforts Started in the Professional Societies

*These groups focus on  
individuals who want  
to support advocacy  
efforts*

## AAS SPD Public Policy Committee

- Gordon Emslie (WKU, Chair)
- Ian Cohen (JHU/APL; AGU SPA Liaison)
- Ofer Cohen, U Mass Lowell
- Nicole Duncan, Ball Aerospace
- Graham Kerr, CUA
- Shea Hess Webber, Stanford
- Brian Welsch, UWGB, CAPP (ex officio)

Started >15 years ago

## AGU SPA Advocacy Committee

- Ian Cohen (JHU/APL; Chair)
- Robert Albarran (UCLA)
- Dan Baker (U Colorado)
- Gordon Emslie (WKU; AAS SPD Liaison)
- Jerry Manweiler (Fundamental Technologies, LLC)
- Ryan McGranahan (JPL)
- Harlan Spence (UNH)
- Brian Walsh (BU)
- Phyllis Whittlesey (UC-Berkeley)

Chartered in 2017





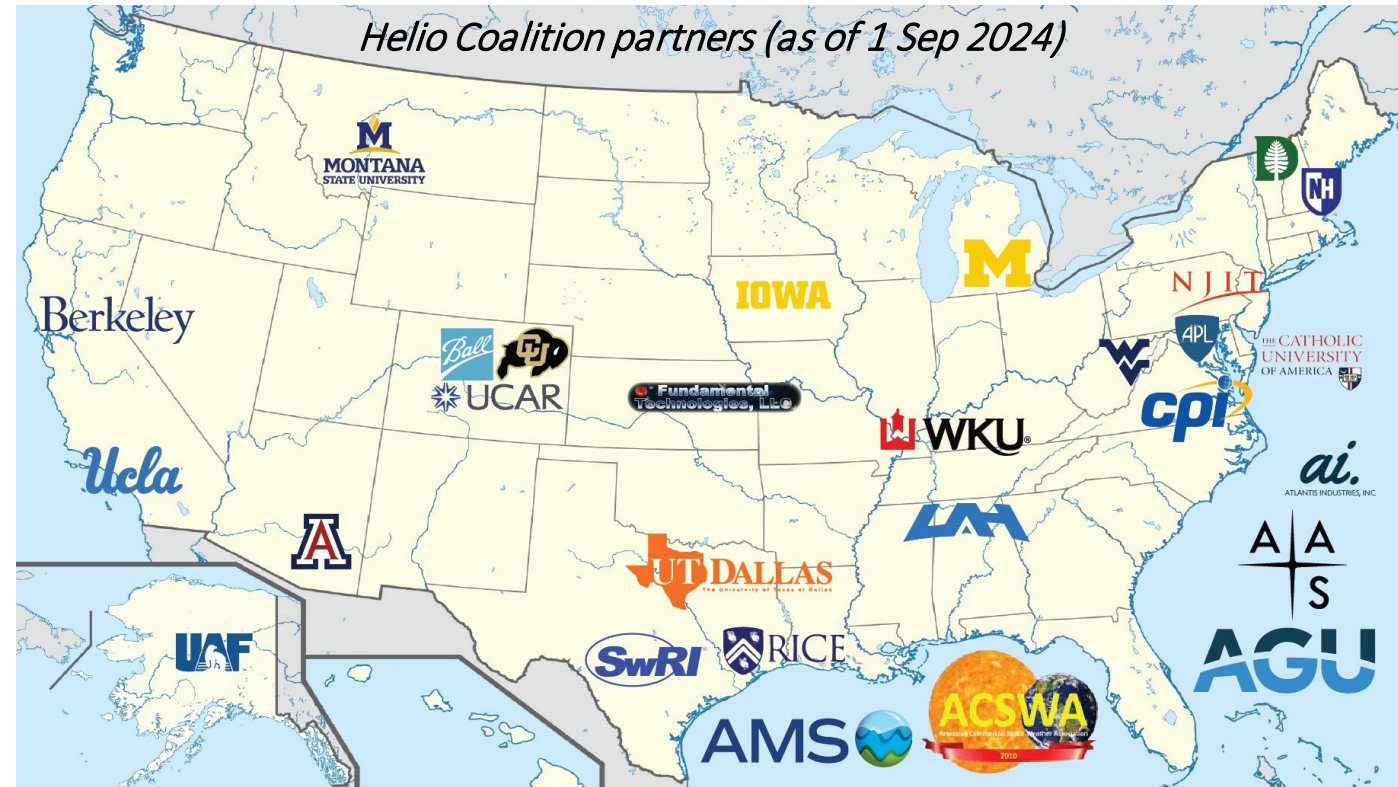
# Motivation

- Over the past ~5 years, the community has leveraged informal coordination between public policy-focused committees of the AAS and AGU with major Heliophysics institutions (e.g., APL, UNH, CU, etc.) to agree upon and amplify Heliophysics asks to Congress
  - This resulted in very strong Appropriation levels and language in FY20 and FY21
- Beginning in Fall 2022, an effort began to engage the community to formalize and expand this initiative
  - *Instead of just looking at the next FY budget, how do we promote an aggressive vision and bold outlook (both in programmatics and budget) for the next decade?*

# The Heliophysics Coalition



- Grassroots effort under AAS and AGU
- Represents **INSTITUTIONAL** buy-in and support for Heliophysics advocacy
- Inspired by The Planetary Society
- Institutions from academia and industry
- Wide geographic diversity







# Proposed Goals

## Build a community coalition to advocate for significant growth in NASA's Heliophysics program

- **Grow awareness with new and consistent messaging** to engage stakeholders (public and Congress) in creative and new ways about excitement in the field
- **Promote priorities** of programs (e.g., LWS, STP, R&A), new mission lines (e.g., SpWx), cadence of opportunities (e.g., Explorers), and related efforts
- **Advocate for growth** in the federal budget to meet the needs of a ***bold*** future program
  - Coordinated engagement and asks with senior administration and Congressional members
  - convincing the community to push for a bold Decadal and reset the budget scale for Heliophysics
- **Develop engagement strategy with new products** (multimedia, strategic leave behind flyers, white papers) that maximizes impact in bringing more awareness to accomplishments and opportunities for the field
- **Organize and execute timely events** for decision makers (e.g., calls to action, day on the Hill)
- **Conduct regular coalition meeting** (in-person and hybrid) to report on existing actions, to define new actions, and to build strategies for upcoming events and opportunities
- **Coordinate all activities with professional societies** – i.e., AAS/SPD Public Policy Committee and AGU/SPA Advocacy Committee



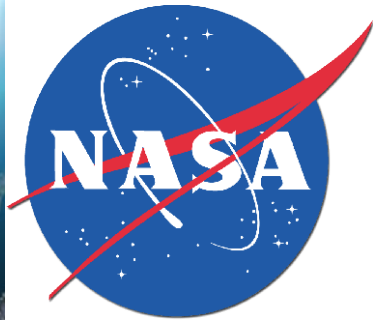
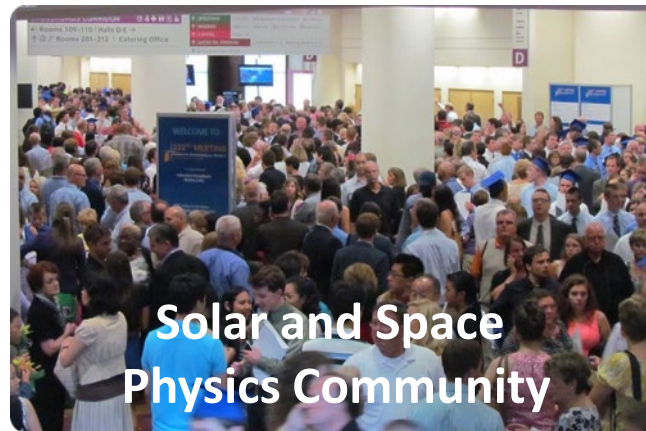
# Strategy

- Develop and agree upon top-level budget targets for each FY
  - *Increasing the overall investment in Heliophysics will allow the field to pursue all of our ambitious science investigations without the need to constantly prioritize and compromised between investments in strategic missions, LWS, STP, Explorers, R&A, etc.*
- Agree upon common high-level talking points for the field that leave room for tailored institutional touchpoints and priorities
- Coordinate common engagement and advocacy strategy that targets multiple stakeholders using common, yet customizable, resources



# Advocacy

We need to do more  
– *actively, broadly,*  
and *publicly*





# What do we *actually* do?

- Hold monthly telecons to share what we are hearing and coordinate engagement efforts
- As needed, draft letters to Congress, OMB, OSTP, etc. advocating for our science and needed funding
- Engage with NASA SMD/Helio leadership to apprise them of our actions
- 1-2x per year visit Congress to advocate for our science and funding

## Revolutionary Research & Results

The Heliophysics community is preparing for release of its next Decadal Survey. Seed funding in FY25 is required to prepare the community to address the highest priority open science questions and implement the bold, new mission required to answer them.

Peer-reviewed awards, for CubeSats, sounding rockets, and research and analysis are all based on the scientific merit and breadth of impact of proposed research. Such funding supports early career development, IDEA initiatives, and basic research that expands our understanding and maximizes the scientific return of missions.

Maintaining the recommended schedule for implementing Decadal-priority large-scale missions including IMAP, GDC, and DYNAMIC is critical to advancing our understanding of how the Sun interacts with near-Earth space. Funding is required to support launch GDC by 2030 and enable a new start for DYNAMIC.

There is a need for investment to develop enabling technology for high-priority bold Decadal missions as well as to formulate concepts for new dedicated space weather missions and instruments to help fill critical observational gaps.

To ensure U.S. preeminence in progress & innovation, we ask that Congress fund sustained, robust growth for science agencies, including the NASA Science Mission Directorate and NSF. These agencies fund students and researchers in all 50 states across academic, industry, government, and nonprofit sectors.

AAS & AGU request FY25 funding that will allow NASA Heliophysics to support a balanced, coordinated, and world-leading program that advances top scientific and technological priorities.

This includes an additional \$150M to implement the Decadal-priority GDC mission.

Account	FY24 Enacted	FY25 PBR	FY25 Ask
Heliophysics	\$805.0M	\$786.7M	\$955.0M
-- GDC	~\$10M	\$0.0M	\$150M



On April 8, 2024, millions of Americans were offered a rare opportunity for science and STEM engagement when a total solar eclipse stretched from Texas to Maine. Heliophysics researchers engaged in special experiments and public outreach efforts across the country.



FY2025

**Leave behind for  
May 2024  
Congressional visits**



March 31, 2023

To Commerce, Justice, Science, and Related Agencies Appropriations Subcommittee Chairs Sen. Shaheen and Rep. Rogers and Ranking Members Sen. Moran and Rep. Cartwright:

We thank you for your continued strong support of America's space program and the central role you play in enabling NASA's critical role in space science—specifically in Heliophysics, the science of our sun and its impact on Earth and the solar system.

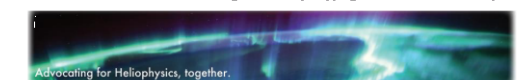
We write to you today to request that Congress provide an FY24 Appropriation of \$935 million for the NASA Heliophysics Division.

In recent years, NASA leadership in Heliophysics research has resulted in the selection and continuing development of missions, such as the Interstellar Mapping and Acceleration Probe (IMAP) and multiple Explorers, that will benefit the nation by advancing our understanding of fundamental aspects of space plasma physics and the drivers of space weather effects.

Despite these achievements across the agency, we are concerned that funding for NASA's Heliophysics Division have not kept pace with the critical needs in this area. For this reason, the heliophysics community across the United States has come together—for the first time in an organized way—to respectfully ask Congress to address this shortfall and to remedy some programmatic decisions reflected in the FY24 NASA Budget Request.

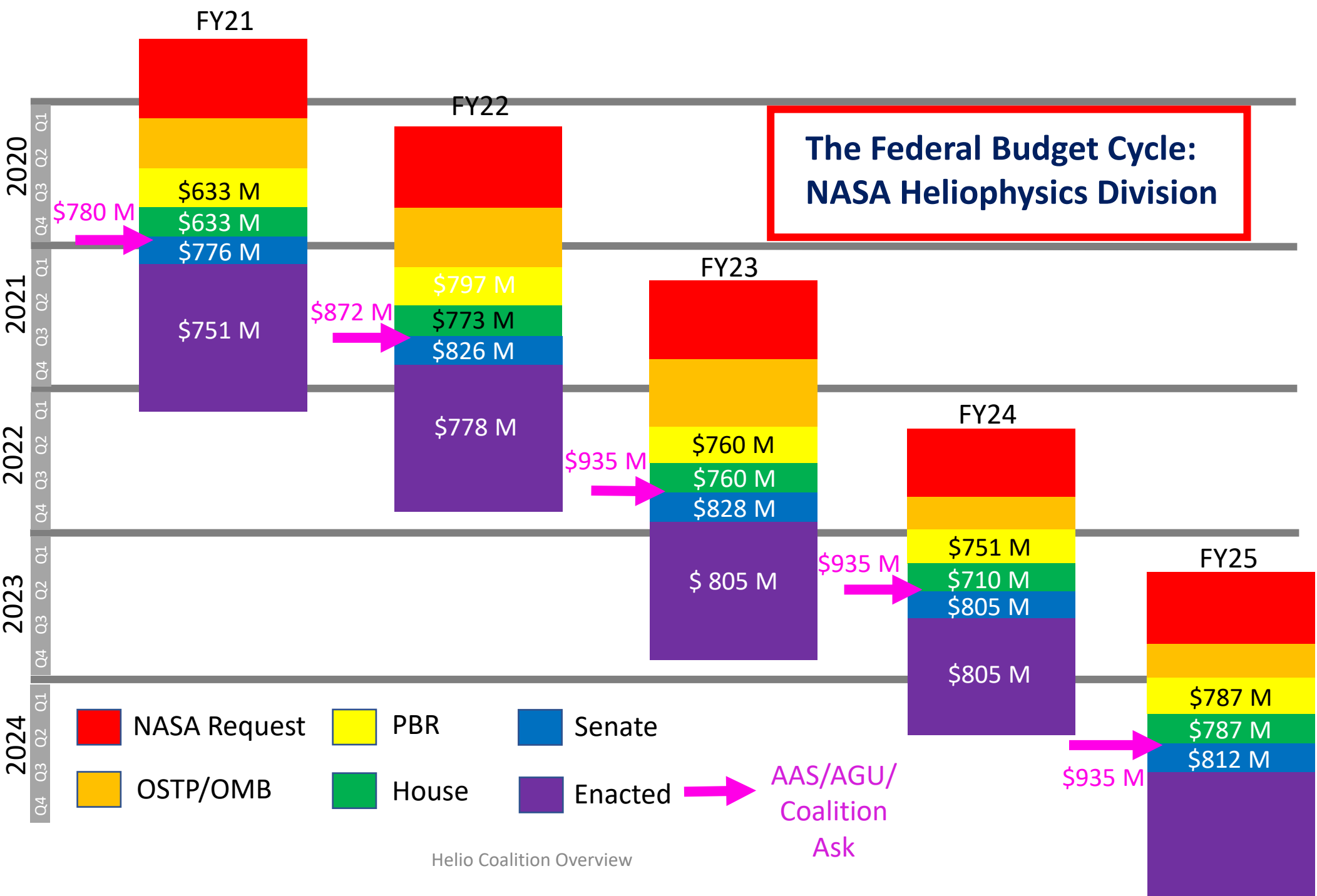
As you know, Heliophysics is a fundamental science discipline that focuses on the understanding of the nature of space itself—from the Sun to the near-space environments and upper atmospheres of Earth and other planets to interplanetary and interstellar space. In addition to addressing critical questions about space physics, Heliophysics also has very real applied implications, both in understanding the space environment into which humans hope to explore (i.e., enabling human exploration) as well as understanding the effects of the space environment on our society and infrastructure (i.e., "space weather"). The latter elements of Heliophysics research are especially relevant to both our economy (e.g., the thermospheric expansion that caused the deorbiting of multiple Starlink satellites) and our national security (e.g., disruption of military communications, possible large-scale internet and power outages).

It is imperative that the U.S. continue its investment in the NASA Heliophysics Division. As the community prepares itself for its next Decadal Survey, FY24 stands as a pivotal turning point. Failure to provide robust levels of support will have a deleterious effect on the nation's preeminence in space science and exploration over the next several decades. In particular, the community is alarmed that the proposed NASA Budget for FY24 announces a pause in the development of the Geospace Dynamics Constellation (GDC) mission that extends through at least 2028. The GDC mission, which has received broad Congressional support in the past, is the next recommended mission for the Living With a Star (LWS) program from the last Solar & Space

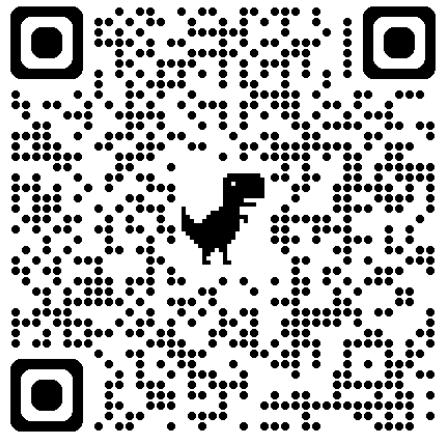


Advocating for Heliophysics, together.





# How others can get involved!



- Consider joining the AAS/SPD Public Policy Committee or AGU/SPA Advocacy Committee (talk to Ian or Gordon)
- Get to know your institutional Government Relations personnel, if you don't already
- Make yourself and your work known to your Representative/Senator

← Sign up for the Heliophysics Action Network!