

National Aeronautics and  
Space Administration



# NASA Heliophysics Division PROSWIFT Update

James Spann  
Space Weather Lead,  
Heliophysics Division, NASA HQ

NASEM CSSP

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A vertical banner on the left side of the slide features a collage of celestial bodies: Saturn at the top, followed by Mars, the Moon, and a portion of Earth at the bottom. The background is a deep blue space filled with stars and nebulae.

# NASA HPD & PROSWIFT

PROSWIFT allows NASA to focus on what NASA does best in space weather: Pushing the limits of our understanding the Sun-Earth system including space weather phenomena and leading the evolution of the space-based network of Heliophysics observatories – and the science behind them – through new missions, technology development, and cutting-edge research and modeling. In this sense, NASA Heliophysics:

- **Pioneers new techniques, technology, observations,** and advances knowledge relevant to space weather.
- **Launches space investigations** that solve scientific questions to remove barriers to improved space weather forecasting.
- **Funds research** that uses observations and advances models to predict and understand the variability of the space environment.
- **Transitions techniques, technology, models, and knowledge** to operations.
- **Collaborates with other agencies and international partners** to advance space weather knowledge and operations to meet national and societal needs.

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# NASA HPD PROSWIFT Actions

*Steps underway at NASA that are in line with responsibilities delineated in the PROSWIFT act include:*

- 1.) Participation in the new **Space Weather Interagency Working Group** established under the National Science and Technology Council;
- 2.) Collaborating with NOAA to establish the **Space Weather Advisory Group** for the Interagency Working Group and a **Space Weather Roundtable** at the National Academy of Science
- 3.) Strengthening our partnership with ESA and other international and interagency partners to ensure maintained operations of the **SOHO/LASCO** satellite, and other space weather monitoring satellites still in operations, including the ACE, DSCOVR, GOES, SDO, STEREO, and Wind observatories to ensure operational contingency plans that provide continuous space weather forecasting in the event of an unexpected SOHO/LASCO failure;
- 4.) Planning for **space weather monitoring capability** on future NASA missions including the Geospace Dynamics Constellation;
- 5.) Working with other federal agencies including NOAA and DOD to build new space-based monitoring missions, like the **NOAA-NASA SWFO-L1** mission (currently in development), to ensure the government has backup capability among our observatories to sufficiently maintain space weather forecasts

A vertical banner on the left side of the slide features a cosmic scene. At the top is a yellow planet with a ring system. Below it is a reddish-brown planet. Further down is a dark, cratered moon. At the bottom is a view of the Earth's horizon with a bright sun or star on the left. The background is a deep blue space filled with stars and nebulae.

# NASA HPD PROSWIFT Actions Cont.

- 6.) Carrying out **basic research in solar and space physics**, and space weather, including joint interagency research and modeling solicitations with NSF and NOAA;
- 7.) Developing a **robust partnership with NOAA, NSF, and DOD** with the completion of an **interagency Framework** document that describes the process to transition federally funded space weather research to benefit operational and applied usage, and to ensure that the insights garnered from operations and applications can inform the future direction of NASA-sponsored research
- 8.) Supporting competitively awarded grants for multidisciplinary **Space Weather Centers of Excellence**, for the purpose of advancing solar and space physics and space weather research-to-operations, and which could eventually develop products to be transitioned through the Framework process
- 9.) **Collaborating with international partners** to improve our understanding and advance forecasting for space weather both in the near-earth regions and deep space beyond the protective cocoon of Earth's magnetosphere – (e.g. Artemis/Gateway, Lagrange). Partners include, ESA, Canada, Japan, Korea, India, and Brazil.