National Aeronautics and Space Administration

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ROSES-25 B.2 Heliophysics Foundational Research (HFR) Proposer's Telecon

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Submit Your Questions

https://forms.gle/6WvqaqB2nd1c8NhG9

Agenda

01 **OPENING REMARKS**
Therese Moretto Jorgensen
John McCormack

02 **NASA HELIOPHISCS PROGRAM OFFICERS**

03 **HFR SOLICITATION**
Review scope & New Aspects

04 **Q&A**

05 **NEXT STEPS**

OPENING REMARKS

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ROSES-25 HFR Solicitation

Review scope & New Aspects

HFR Program – Overarching Objectives

HFR Program Goals: Aligned with Heliophysics Decadal Survey

1. Address key foundational challenges in Heliophysics that require coordinated, multidisciplinary efforts.

2. Bring together complementary expertise (observations, theory, modeling, and data science) to operate as integrated scientific teams rather than collections of loosely coupled projects.

3. Establish shared frameworks, datasets, tools, or methodologies that benefit the broader community.

4. Set of specific topics targeted for strategic science teams (SSTs).

Strategic Science Teams (SST)

SST Topic	Focus Area	Proposal Budget	Duration
SST 1: Solar Dynamo State Estimation	Internal magnetic engine & cycle prediction	Up to $3M per award	3 Years
SST 2: Cross-Regime Coupling	Causal pathways between heliophysical regions	Up to $4M per award	4 Years
SST 3: Lunar Working Environment	Cis-lunar plasma, radiation, & dust	Up to $1M per award	2 Years

ROSES-25 HFR: Implementation Schemes

Proposers have the option to use any (or all) four (4) Implementation Schemes to address science objectives. Priority will be given to proposals that adequately demonstrate the use of these Implementation Schemes Proposal can still be fully responsive to HFR without the use of Implementation Schemes.

1. Observing System Simulation Experiment (OSSE) – Investigations demonstrate the compelling nature of their scientific objectives with mature models, which could be used for development of potential mission concepts.
2. Constellation Data Analyses (CDA) – science investigations are addressed using existing constellations of simple measurements from one or several existing datasets.
3. New Operating Mission (NOM) – science investigations are addressed using data sources from recently launched operating missions, including sounding rocket experiments, if the data proposed for investigation satisfy the requirement of being publicly available at least 30 days prior to the Step-2 proposal deadline.
4. Heterogenous Data Sources (HDS) – use of non-traditional and heterogenous data sources to constrain models or to use in data assimilation.

Pre-ROSES-25 Mapping

Implementation Schemes enable proposers to generate research proposals that address 1 of 3 topics utilizing analytical techniques that were previously program specific.

HGIO
(Data Analysis)

↓

HFR
New Operating Mission (NOM)
Heterogeneous Data Sources (HDS)

HSR
(Modeling Research, Archived data)

↓

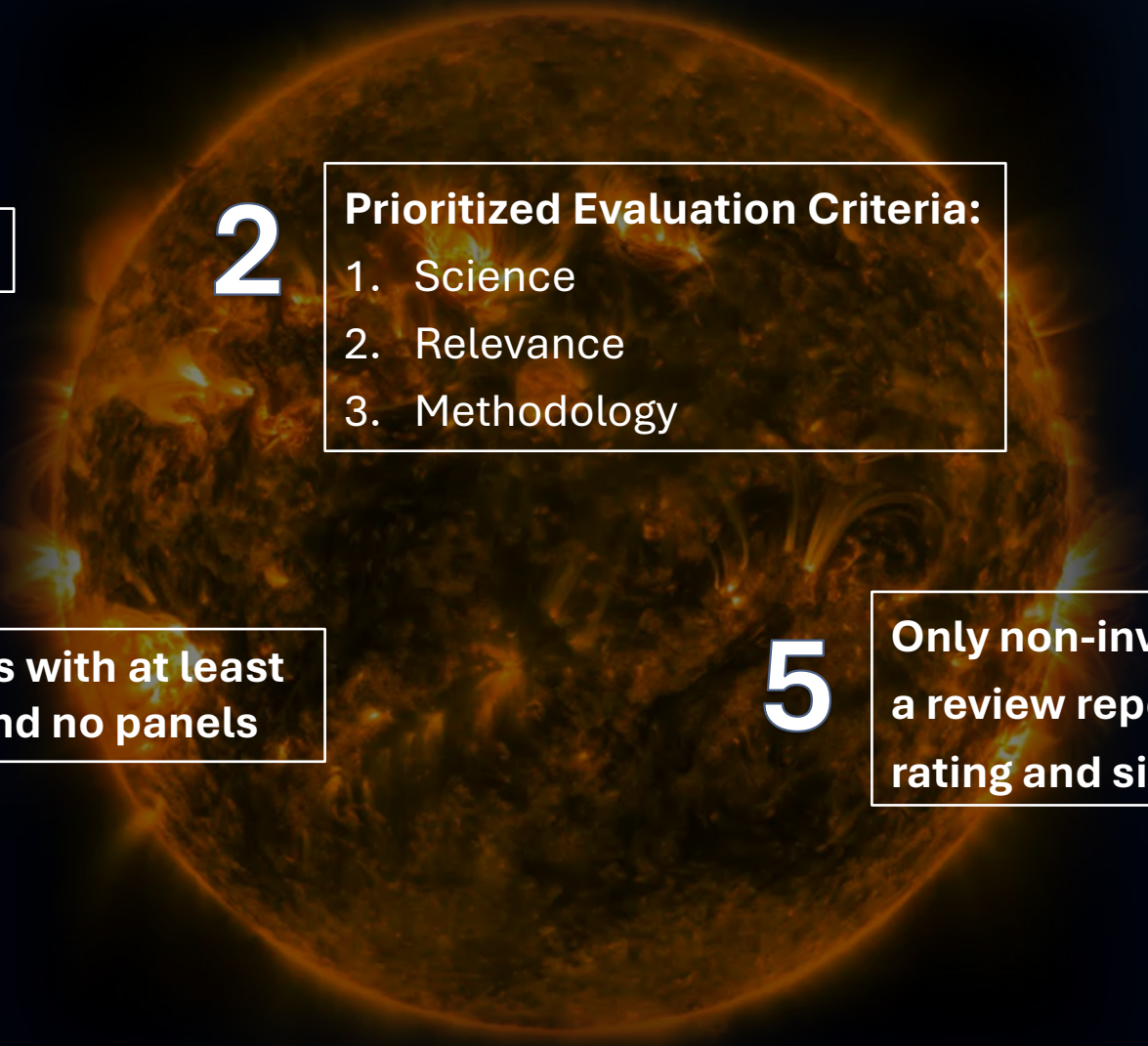
HFR
Observing System Simulation Experiment (OSSE)
Heterogeneous Data Sources (HDS)

HTMS
(Theory, Modeling, Simulation)

↓

HFR
Observing System Simulation Experiment (OSSE)
Constellation Data Analysis (CDA)
Heterogeneous Data Sources (HDS)

ROSES-25 HFR: Binding Step 1



1 **Dual Anonymous**

2 **Prioritized Evaluation Criteria:**
1. Science
2. Relevance
3. Methodology

3 **3-page limit**
Amendment issued Feb. 11, 2026, should make that requirement consistent throughout the solicitation

4 **Peer reviews with at least 3 Mail-ins and no panels**

5 **Only non-invitees will receive a review report that consists of rating and simplified feedback**

ROSES-25 HFR: Self-Defined Success Criteria

1 **Proposers must develop their own metrics for successful research project**

2 **Go beyond publication count**

3 **Solicitation identifies several high-level examples**

- Establishing validated physical framework
- Develop community-adopted datasets or standards
- Demonstrate closure of key knowledge gaps
- Generate measurable advances in system-level understanding
- Each SST has additional suggestions for their respective example proposal topics

4 **Succes criteria will be evaluated as component of Methodology.**

- **Step 1's anticipate initial identification.**
- **Step 2's include how achievement will be accomplished.**

5 **Failure to provide success metrics may be considered programmatic reason to decline funding**

ROSES-25 HFR: End of SST Award Showcase

Intention

Report on success of NASA investment in advancing specific science goals.

Expectation

- Report on research highlights and demonstration of how the research addresses HFR relevance and/or community contributions through achievement of success criteria.
- Additional context of presentation material is still TBD.

Location & Dates

- Both are TBD.
- Each SST has different duration. Plan according to respective SST.

Estimated costs based upon following assumptions

- Held at NASA Center
- Assume Center location is 1 time zone away from PI institution
- $5,000 maximum, do not be concerned about impacts to your total budget

Mandatory Step 2 inclusion (no budgeting needed for Step 1).

Questions & Answers

Question: Budgets

Can you please clarify the anticipated award size?

For example, in Section 2.3.5 the text suggests that the award size is "**for each award**", however this does not seem consistent with the Table in Section 6, which states "**Expected annual program budget for new awards**".

Answer: Budgets

An amendment was issued on Feb 11, 2026, to clarify that the annual award amounts cited are indeed "**per award**".

Further, the budget amounts cited in B.2 are upper limit estimates. Thus, proposers may appropriately scale their budget to address research objective with smaller teams.

For example, if a researcher plans to address SST 2 with a small cadre of graduate students, then the budget should be scaled accordingly.

If a review panel finds the concept to be compelling with a feasible and appropriate methodology and the self-defined success metrics demonstrate favorable scientific contribution towards SST 2 goals, then it could be funded.

Question: FTE Time Commitment

Part 1

Will proposals that include well-justified Co-I participation levels below 0.25 FTEs still be considered for an award, or would such a proposal be non-compliant?

Part 2

If a proposal includes a PI and a Science PI, do both need to contribute 0.25 FTEs?

Part 3

What is the interpretation for the budget of the 0.25 FTE requirement?

Answer: FTE Time Commitment

Part 1
Yes, Co-Investigators are expected to commit 0.25 FTE as a requirement for key research contributors. However, over the duration of the grant, the Co-I involvement may average to 0.25 FTEs if the variable level of effort is warranted. Otherwise, the proposal may be declined based upon programmatic factors.

Part 2
PIs (or Science PIs) must maintain an 0.25 FTE commitment throughout the duration of the grant. If the proposal declares a Science PI to lead the project and the PI serves only a supervisory role (e.g., institutional requirements for non-tenured researchers) then only the Science PI must meet the 0.25 FTE commitment).

Part 3
Key participants must commit (or "invest") 0.25 FTE of their time to the project, and the requirement can be met by any combination of budgeted and/or committed cost sharing from their respective institution. Any FTE changes during the period of the award should be approved by the program officer.

Please consult Section 9.1.3 in the March 2025 GCAM for definitions of proposal participants.
https://www.nasa.gov/wp-content/uploads/2025/03/gcam-mar-2025.pdf?emrc=982b64

Question: Regimes (SST 2 specific)

Part 1
Are proposals addressing processes/regimes in the solar atmosphere and inner heliosphere eligible for SST 2?

Part 2
IMAP observes interstellar neutral atoms and energetic neutral atoms created in the outer regions of the heliosphere; while IMAP is mentioned in the solicitation, it is not clear whether these topics are eligible for this solicitation (1.1 Solicited Investigations).

Part 3
Do NASA-supported ground-based observations count toward the requirements of the use of NASA datasets, as long as the observations meet other requirements stated in the solicitation?

Answer: Regimes (SST 2 specific)

Part 1

Proposals addressing processes/regimes in the solar atmosphere and inner heliosphere are eligible for SST 2 as long as the case is presented for the scope of cross regime coupling.

- Be aware that changing proposed SST choices after Step 1's is not allowed.

Part 2

Proposals for SST 2 that utilize IMAP or the outer heliosphere regime are also eligible for SST 2 if the case is presented for the scope of cross regime coupling.

- The limiting factor for the data analysis application of this particular question resides in the availability of IMAP data 30 days prior to Step 2 deadline.
- At this time, a current active link for IMAP data can be found at Space weather observations - I-ALiRT Science Data Center, but future data may become available in time for the Step 2 deadline as the mission continues with commissioning phase.

Part 3

Yes, ground-based observations are an allowable dataset for SST 2. In general, this also applies to all SSTs if the usage is adequately demonstrated. Further, any planetary body within our Solar System could be considered as a regime.

Question: Leadership

How much will past leadership experience be valued for PIs of SSTs in comparison with being early careers looking to seek their first true leadership position?

Answer: Leadership

HFR will be run as a DAPR review; thus, aspects such as leadership experience and career status are not part of the evaluation process. However, the suitability and effectiveness of the proposed approach of Management Plans will be evaluated as Step 2 methodology (see B.2 Section 3.3.3).

Award selections will be based primarily upon the results of the peer review ratings and how well the proposal addresses the HFR science goals. Programmatic factors that can affect the selection include assessment of the availability of necessary expertise and resources.

Please review the Guidelines for Proposers to DAPR Programs (https://science.nasa.gov/researchers/dual-anonymous-peer-review/) for additional guidance on how such aspects are validated as part of DAPR reviews.

Question: Success Rates and Coverage of subdisciplines

Part 1
Based on the available budget and anticipated proposal volume, is it accurate to expect an acceptance rate in the 2-3% range for this HFR round?

Part 2
Can you clarify the expected number of awards specifically targeted for ITM (Ionosphere-Thermosphere-Mesosphere) science proposals for this cycle?

Answer: Success Rates and Coverage of Subdisciplines

Part 1
Anticipated success rates are unknown and will be dependent on the number of submissions.

The standard calculation of success rate is based upon the number of Step 2 proposals, but that value is also unknown at this time.

Part 2
There is no specific target for number of awards focused on ITM or other subdisciplines.

Award selections will be based primarily upon the results of the peer review ratings and how well the proposal addresses the respective SST science goals. Programmatic factors that can affect the selection include variability of target objectives and approaches.

Question: Step 2 Invitations

Part 1
How many Step 1 proposals do you expect will be invited for Step 2 for each of the SSTs?

Part 2
When do you expect to announce Step 1 results and the Step 2 deadline?

Answer: Step 2 Invitations

Part 1

The precise number of Step 2 invitees is not yet determined as there are several budgetary and programmatic factors to consider relative to each SST. HPD is targeting to invite 2-3 times the number of expected awards in each respective SST.

Part 2

Specific dates for announcing Step 1 results are not known and will be dependent on the volume of submissions as well as the implementation time of a new process.

Step 2 due date will be at least 60 days after the announcement of Step 1 results (see 2nd paragraph of B.2).

Question: Implementation Schemes (In general)

Can you please clarify the statement "Priority will be given to proposals that adequately demonstrate the use of these Implementation Schemes"?

Answer: Implementation Schemes (In general)

Instructions to review panels regarding how to evaluate Implementation Schemes in Methodology will be:

- Major strength for proposal that successfully demonstrates an enhancement in the scientific returns from use of Implementation Schemes;
- Minor strength for proposal that demonstrates an adequate usage of any Implementation Scheme with minor correctable issues;
- Minor weakness for proposals that include Implementation Scheme(s) but do not demonstrate sufficient application of Implementation Schemes (e.g. "lip-service" only);
- Major weakness will not be applied as usage of Implementation Schemes is optional.

Question: Metrics

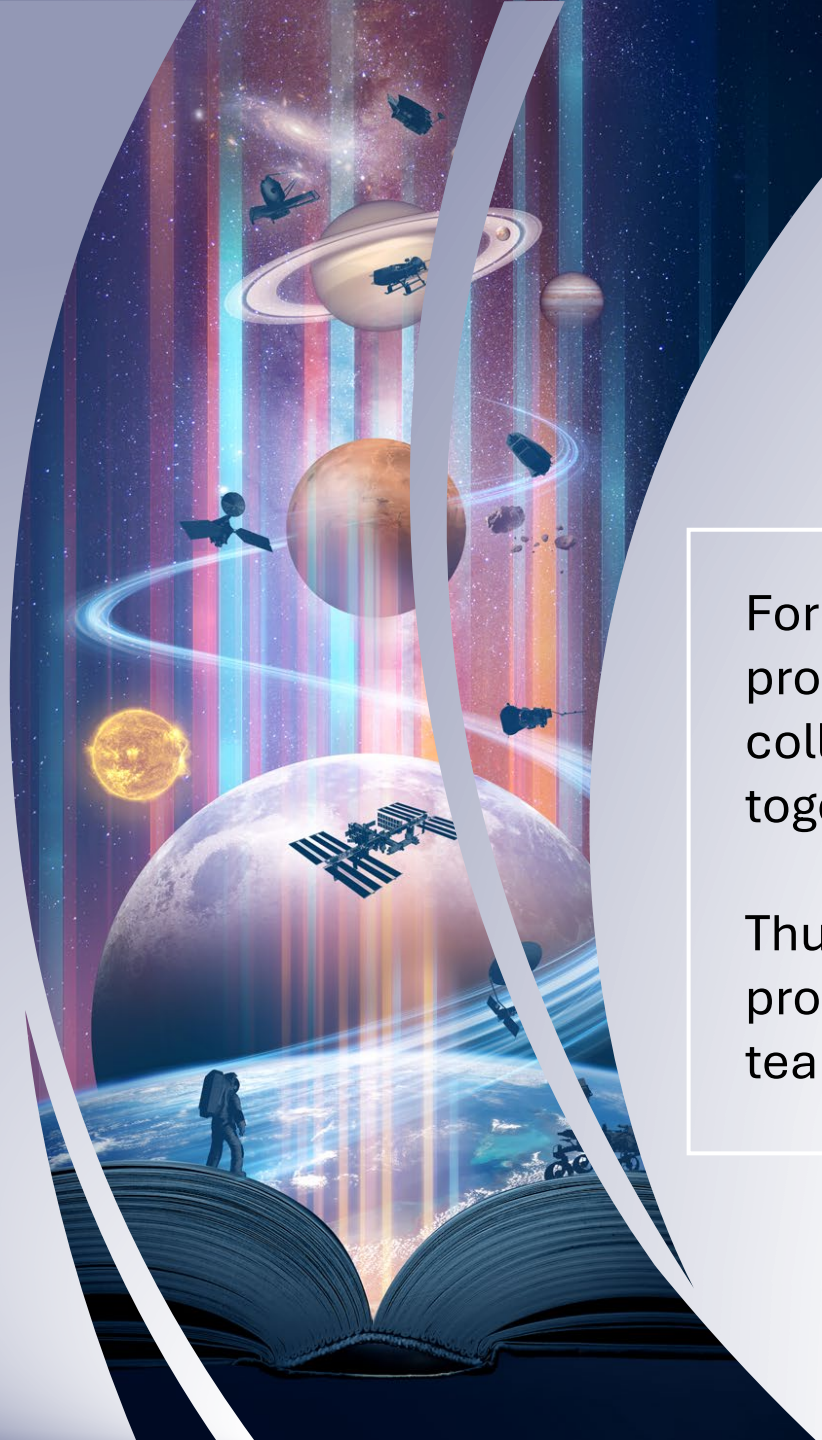
In the limited space of the step-1 proposal are we required to articulate the self-defined success metrics?

Answer: Metrics

Initial identification of self-identified success metrics must be included with methodology (see Section 3.3.1).

Question: SST Proposal Teams Structure

Are different proposal teams within the same SST expected to work together on coordinated projects?



Answer: SST Proposal Team Structure

For HFR, proposing teams are formulated within respective proposals. While NASA would encourage similar SSTs to collaborate, there is no expectation for various teams to work together.

Thus, HFR is distinct from LWS team structuring, and each proposal team is considered independent of other proposal teams

Question: Mission Science Funding

For Mission Science Teams that have a phase ending (prime or current extended) around the time of the HFR submission deadlines are likely to have uncertainty about their science funding levels going forward, are they eligible to participate?

Answer: Mission Science Funding

Researchers involved with Mission Science Teams are encouraged to submit to any SST on the assumption of no mission science funding.

If both mission science funding gets extended and their HFR proposal is selected for an award then they must choose one or the other funding source, but they cannot be on both.

Current involvement in Mission Science Teams should be reported on your Current & Pending declarations.

Question: Implementation Schemes (OSSE Specific)

Could you please clarify the scope of investigations related to utilizing OSSEs in the proposal methodology?

Answer: Implementation Schemes (OSSE specific)

The usage of OSSEs (and/or any other Implementation Scheme) are optional.

Thus, individual proposers should determine the scope of their own investigation as to the usage of OSSEs. As part of this solicitation NASA is encouraging proposers to seek innovative applications of this analytical technique.

A broad definition of OSSE usage may include, but is not limited to, the demonstration of potential mission concepts.

NASA cannot define the scope of individual investigations, but proposers may introduce their own methodological purpose of OSSEs as long as the proposal addresses the SST topic to which it is submitted.

Question: Civil Servants

Are Civil Servants (CSs) eligible to lead a proposal? Can they otherwise be Co-I's?

Answer: Civil Servants

Civil servants at NASA Centers are allowed to participate (as PI or Co-I) as long as they are not currently a PI on large or medium ISFM task.

There are no restrictions on CSs from other government agencies.

However, due to the ongoing delays in NASA's ability to process Interagency Agreements (IAAs), HPD will consult with CSs to resolve IAA issues before any potential award is finalized.

Have More Questions?

Use the Question Submission Form.

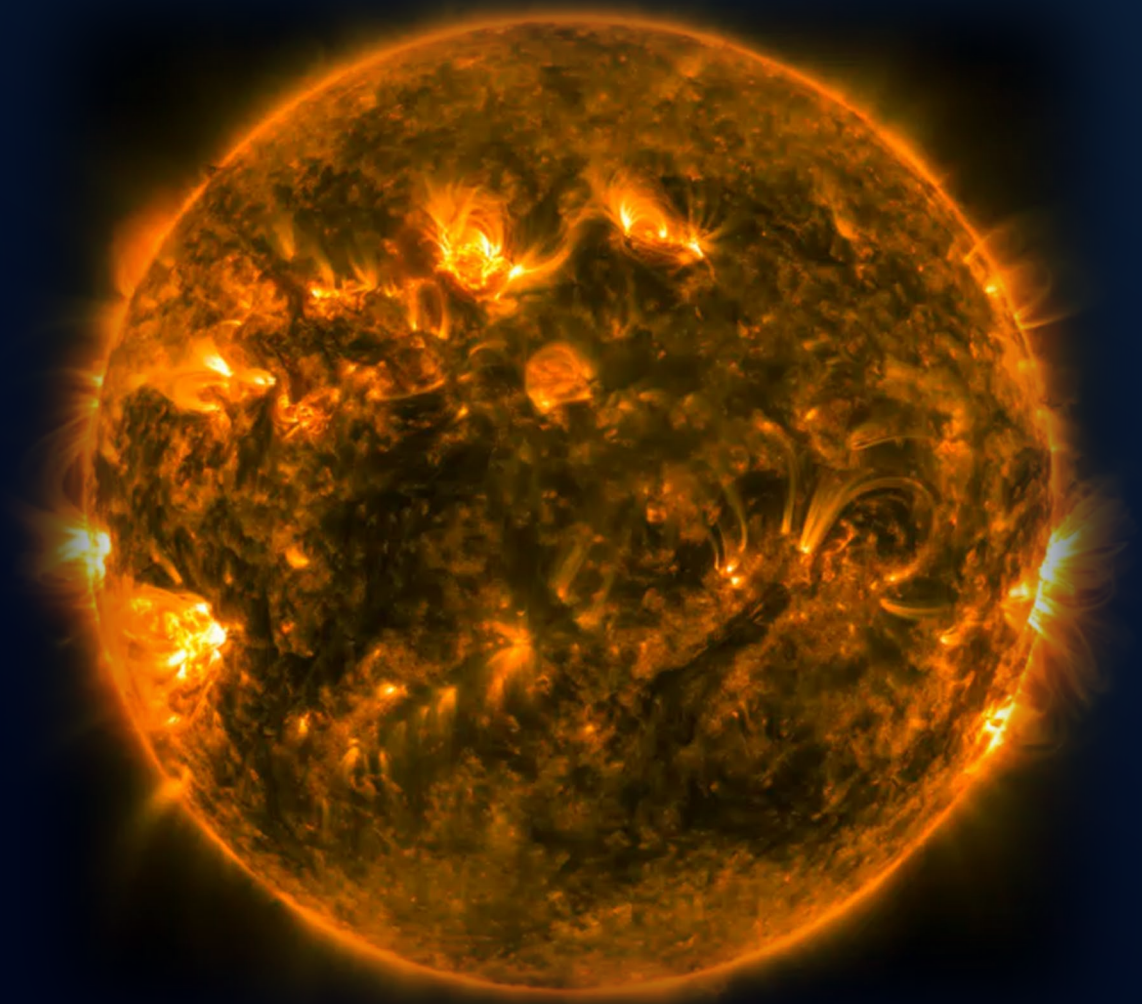
The link to the Q&A form will remain active until April 24, 2026, and we will continue accepting and answering questions related to ROSES-25 HFR.

ROSES-25 HFR Question Submission Form (https://forms.gle/7Zxqz7HD85wBDwBA6)

Please feel free to submit and we will continue to update the FAQ response as needed.

https://forms.gle/6WvqaqB2nd1c8NhG9

More Info

Presentation Slides, Meeting Replay & FAQs

The slides and recording of today's presentation along with a list of FAQs will be available on the ROSES-25 B.2 Heliophysics Foundational Research page on NASA NSPIRES under *Other Documents*.