

Dynamical Neutral Atmosphere-Ionosphere Coupling Frequently Asked Questions

Categories of Questions

Science (S)
Technology (T)
Management and Schedule (M)
Cost (C)
Proposal Evaluation (E)
Proposal Submission (P)
Other (O)

Change Log		
Rev.	Date	Description of Changes
01	10/25/21	Added S-1, M-1, P-1
02	12/07/21	Updated P-1; added S-2, T-1, T-2, M-2, C-1, E-1, E-2

Science

- S-1. The DYNAMIC Acquisition Process Planning Information (released October 19, 2021) references the 2013 Solar and Space Physics Decadal Survey's description of DYNAMIC's goal to "substantially advance understanding of the variability in space weather driven by lower-atmosphere weather on Earth". What specific meaning does "lower-atmosphere weather" have in this context?**

NASA does not intend to conduct any refinement or redefinition of the scope of the DYNAMIC science from the decadal survey. The 2013 Solar and Space Physics Decadal Survey described the meaning of "lower-atmosphere weather" in its discussion of the DYNAMIC science investigation (p. 99 of that document).

- S-2. The Community Announcement (released 10/19/21) states an incentive to accommodate a Government-Furnished Equipment (GFE) auroral imager. If the cost of accommodating the instrument exceeds the incentive, does NASA expect proposals to descope the DYNAMIC science to accommodate the instrument?**

No.

Technology

- T-1. The Community Announcement (released 10/19/21) states an incentive to accommodate a Government-Furnished Equipment (GFE) auroral imager. However, this leads to the following sub-questions:**

1. **Should proposals assume that one or two instruments would be provided?**
2. **Would the instrument provider provide support to the DYNAMIC project?**
3. **How would the instrument data be handled? Would the instrument provider be responsible for processing and delivering the final data products? Would DYNAMIC be responsible for archiving the data products?**

The answers for each of the sub-questions are as follows:

1. Two.
2. Yes. The instrument provider would engage in pre-integration discussions during development, provide on-site support during integration, and provide post-integration support (through operations).
3. The instrument provider would be responsible for data processing and for delivering the final data products. The DYNAMIC project would be responsible for delivering of the downlinked data, and for receiving and archiving the final data products.

T-2. The Community Announcement (released 10/19/21) states that investigations could assume the use of up to two ESPA ports. Can an investigation propose using only one spacecraft?

The Community Announcement does not specify a particular mission implementation. The SALMON-3 AO requires an investigation that would be completed using the accompanying mission implementation. The Community Announcement stated that "[i]nvestigations must propose focused science objectives that they would complete and that would make specific advances on the broad science questions prioritized for the DYNAMIC mission by the 2013 Solar and Space Physics Decadal Survey (p. 100)." Further details on requirements on the proposed DYNAMIC science investigation would be in a draft DYNAMIC solicitation.

Management and Schedule

M-1. The DYNAMIC Acquisition Process Planning Information (released October 19, 2021) describes a two-step solicitation process with a competitive Phase A and down-selection for Phase B. The selection for the competitive Phase A in May 2023 (est.), but when would the down-selection for the non-competitive Phase B occur?

The expected date for the down-selection has not been released; it will be included in any draft solicitation. Interested parties may refer to previous NASA solicitations to understand the range of times between selection and down-selection of recent mission competitions.

M-2 The Community Announcement (released 10/19/21) states that DYNAMIC would be formulated as a rideshare to launch with GDC. How would a delay in the GDC schedule affect DYNAMIC?

The schedule aspects of the DYNAMIC formulation are discussed in the Community Announcement [*Science/GDC constellation, measurements; Technology/Rideshare Payload (RPL) parameters; Technology/Launch considerations; Cost/Storage costs*]. The Baseline Investigation may assume that DYNAMIC launches concurrently with GDC, and Threshold Investigation may assume that DYNAMIC launches within a window relative to the GDC launch. Proposals would also be required to include storage costs that would be incurred due to a launch delay. Schedule delays realized after downselection that are due to rideshare concerns outside of DYNAMIC's control would be handled with the normal processes.

Cost

- C-1. The Community Announcement (released 10/19/21) states a \$10M incentive to accommodate a Government-Furnished Equipment (GFE) auroral imager. How will that \$10M be applied against the cost cap?**

The SALMON-3 AO captures optional components, including incentives, under the Enhanced PI-Managed Mission Cost (Section 4.3.3). Any additional cost requirements specific to this incentive would be included in a DYNAMIC solicitation.

Proposal Evaluation

- E-1. How does accommodating or not accommodating the Government-Furnished Equipment (GFE) auroral imager affect the selectability of a proposal? This question breaks down into the following sub-questions:**
- 1. Is accommodating the auroral imager a requirement?**
 - 2. For proposals that accommodate the auroral imager, how would that accommodation affect the selection criteria?**

The answers for each of the sub-questions are as follows:

1. No.
2. The SALMON-3 AO, Sections 7.1.3 and 7.3, describes the selection process. The Selection Official may take into account programmatic factors; however, as stated in Section 7.3, “the overriding consideration for the selection of proposal submitted in response to this AO will be to maximize science [...] return and minimize implementation risk while advancing NASA's science [...] goals and objectives within the available budget for the program.”.

- E-2. How will the selection process consider proposals restructuring of the 2013 Decadal Survey-identified DYNAMIC science priorities for this solicitation?**

The selection process, as described in Section 7.3 of the SALMON-3 AO, states that "the overriding consideration for the selection of proposal submitted in response to this AO will be to maximize science [...] return and minimize implementation risk while

advancing NASA's science [...] goals and objectives within the available budget for the program".

The decadal survey identified high-level goals (phrased as science questions), which can not be completed by any single mission. The Community Announcement (released 10/19/2021) states that "[i]nvestigations must propose focused science objectives that they would complete and that would make specific advances on the broad science questions prioritized for the DYNAMIC mission by the 2013 Solar and Space Physics Decadal Survey (p. 100)."

The focused science objectives are central to the science return of an investigation.

Proposal Submission

- P-1. The DYNAMIC Acquisition Process Planning Information (released October 19, 2021) describes a two-step solicitation process that uses a Notification Proposal. What is a Notification Proposal and how is it involved in the process?**

The Notification Proposal is a mandatory Notice of Intent. It is used by NASA for planning purposes and is not evaluated for science, technical, or programmatic merit. More information on mandatory Notices of Intent can be found in recent SMD solicitations (e.g., [Geospace Dynamics Constellation](#), [Astrophysics 2021 Mission of Opportunity](#)). The requirements for this submission will be described in any draft solicitation.

Other

[No questions asked.]