ASTROPHYSICS EXPLORER PROGRAM
ANNOUNCEMENT OF OPPORTUNITY
2026 ASTROPHYSICS SMALL EXPLORER

QUESTIONS & ANSWERS

Please submit your Questions regarding the 2026 Astrophysics Small Explorer (SMEX) Announcement of Opportunity (AO) to **Dan Moses, Hannah Jang-Condell,** ~~John Wisniewski~~, Lucien Cox, Omar Torres, and Chauncey Wu by email at:

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We will work to develop Answers to your Questions and post those Answers to this document. Please check back for the latest version, as you may not be notified that your Question has been answered.

Change Log

Rev.	Date	Description of Changes
01	16 Aug 2024	Posted Q&A 1
02	27 Aug 2024	Posted Q&As 2 – 4
03	17 Sep 2024	Posted Q&As 5 – 10
04	01 Oct 2024	Posted Q&A 11
05	15 Oct 2024	Posted Q&A 12
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12	11 Feb 2025	Posted Q&A 19
13	04 Mar 2025	Amended Q&A 1, Posted Q&A 20 – 24
14	14 Mar 2025	Posted Q&A 25
15	24 Mar 2025	Posted Q&A 26-29
16	11 Apr 2025	Amended Q&A 4, Posted Q&A 30 – 31
17	21 May 2025	Posted Q&A 32
18	02 Feb 2026	Posted Q&A 33-36
19	10 Feb 2026	Posted Q&A 37
20	27 Feb 2026	Amended A32. Posted Q&A 38-41
21	13 Mar 2026	Amended A41. Posted Q&A 42-44
22	30 Mar 2026	Posted Q&A 45-48
23	17 Apr 2026	Posted Q&A 49, Amended A42
24	05 May 2026	Posted Q&A 50-53

25	**28 May 2026**	**Posted Q&A 54**
26	**11 June 2026**	**Posted Q&A 55. Updated POC information**

Additions are in bold text and deletions are struck through in amendments.

Q55: The AO lists conflicting Launch Readiness Dates. The Foreword (page i), as well as Requirement 98 (page 58) state that the selected mission must be ready to launch no later than September 30, 2031. However, Section 3, Proposal Opportunity Period and Schedule, states an LRD of NLT December 5, 2031. Which LRD should proposers assume?

A55: The required LRD is NLT December 5, 2031. The conflicting date in the Foreword and in Requirement 98 is an error and will be corrected in a future amendment to the AO.

Q54: Is the submitting organization required to be the home institution of the PI or PM?

A54: No, personnel locations are at the proposing team's discretion and do not need to be at the same institution. However, the proposal must clearly and sufficiently describe the proposed management approach.

Q53: Given that the LEGS program is on hold, what alternative telecommunications infrastructure is currently available or planned to support missions operating in the lunar and cislunar regions it was intended to serve?

A53: NASA is actively pursuing alternate solutions to provide the telecommunication and navigation services that were previously planned under the LEGS GOCO (Government-Owned, Contractor-Operated) architecture.

While the specific configurations of these new systems have not yet been fully defined, SMD recognizes the need for guidance during the proposal process. For the purposes of developing current concept designs, proposers are instructed to use the existing LEGS GOCO parameters and information in the LEGS brochure currently available the Program Library as their baseline.

For the purposes of APSMEX26, SMD will not update this guidance prior to selection.

Additionally, for proposal budgeting purposes, proposers that plan to use LEGS should calculate their telecommunications costs using the new anticipated rate of $56 per minute. This cost figure supersedes the costs in the MOCS v5 document available in the Program Library.

The official announcement that places the hold on the LEGS procurement can be found on the SAM.gov website at https://sam.gov/opp/78a2877d601e42cbb15616a90e92bf4a/view.

Q52: Is the use of NTIA's Ka-Band Space Research Service (SRS) frequency allocation (25.5 GHz – 27 GHz) permissible for APSMEX26 missions?

A52: An allocation exists in the band 25.5 GHz – 27 GHz for the purpose of "Space Research." The band is 1500 MHz wide, and it is reserved strictly for Downlink (Space-to-Earth). The document titled "*Available Spectrum and Channel Limits by Allocated Service"* (https://explorers.larc.nasa.gov/APSMEX26/SMEX/pdf_files/Prog05b_Spectrum-Data-Space-Communication-Bands.pdf) in the Program Library shows other bands that are available for "Space Research" uplink (Earth-to-Space).

The complete table of frequency allocations can be found here: https://redbook.ntia.gov/view/4-2. Please contact the SCaN POC for assistance interpretating the applicability of the footnotes in the table of frequencies (e.g. 5.536A, US258) to your mission.

Refer to the guidelines posted in the Program Library.

Q51: What spectrum coordination or licensing obligations should proposers anticipate, and should associated coordination costs be included in the PIMMC?

A51: All NASA missions that plan to use the Radio Frequency (RF) spectrum are required to follow the U.S. spectrum regulatory rules and processes as referenced in the relevant NASA Policy Directives (NPDs) and NASA Procedural Requirements (NPRs). NPD 2570.5 sets forth NASA policy and responsibilities for obtaining approval for the use of the spectrum for any NASA mission, project, or other activity. NPR 2570.1 sets forth the requirements for establishing and governing NASA's RF usage.

Every SMD mission must obtain a RF Authorization from a regulatory agency. The use of commercial telecommunication services (either earth station or relay provider) does not forgo the regulatory requirement for NASA missions to be certified by a regulatory agency. An NTIA authorization or an FCC license is needed prior to use of any transmitter.

For missions that use SCaN for telecommunication services, the costs of spectrum services for the initial NTIA submission will be treated as part of SCaN nonrecurring costs. Note that modifications to the mission that results in updates to the original submission incur additional costs that must be covered under the unencumbered cost reserves.

Missions that plan to contract commercial telecommunication services to meet their mission needs must cover the costs associated with spectrum certification and licensing under the PIMMC.

Obtaining an RFA to operate a telecommunication system or an instrument is the last step of a multi-step process (frequency pre-coordination, certification, and licensing) that may take as long as 12 months from the submission of the application to the granting of the

license. Proposers are encouraged to contact the SCaN POC to inquire about spectrum considerations for their missions as early as possible to avoid potential pitfalls.

Q50: Historically, space missions that use SCaN services have been charged for non-recurring services (e.g., Mission Planning & Integration, Non-recurring Engineering). These costs are not detailed in the SCaN Mission Operations and Communications Services (MOCS) document in the Program Library, nor are they described in the draft Announcement of Opportunity (AO). How should proposers account for these costs in their budgets?

A50: Non-recurring activities (MP&I and NRE) are listed in Section 3 of the MOCS document in the Program Library. While the costs associated with these activities are typically unknown at pre-phase A, APSMEX26 proposers planning to use SCaN services should budget for these non-recurring costs using standardized, pre-established estimates. Two scenarios with representative costs apply:

a. $1.2M for a simple, low-data-rate case.
b. $2.5M for a complex, high-data-rate case.

These costs will be the same whether the mission uses the Near Space Network (NSN) or the Deep Space Network (DSN).

For the APSMEX26 single-step competition, the cost of non-recurring services will be treated as a reduction to the AO Cost Cap. Proposers must consult SCaN to confirm the data-rate scenario applicable to their mission.

For proposals of missions that use SCaN services, a signed Letter of Acknowledgement (LoA) from SCaN is required as part of the proposal to confirm that the concept can be supported within SCaN capabilities.

Q49: What are the launch vehicle insertion errors that should be assumed for each Scenario?

A49: The spacecraft propellant budget must include a margin for LV insertion errors, based on the orbit type. While a unique, mission-specific orbit may drive a need for additional assessment, the general 3-sigma injection variability for the anticipated class of LVs is as follows:

a. LEO (Scenario 1 and Scenario 2): Perigee +/-20 km, Apogee +/- 20 km, Inclination +/- 0.1 deg, RAAN +/- 0.15 deg, Argument of Perigee +/- 0.3 deg
b. High Energy (Scenario 2): C3 +/- 0.1 km^2/s^2
c. Note these are commonly used parameters, but are not intended to be all-encompassing or fully needed for every orbit.

Q48: The draft AO does not describe how Level-1 and Level-2 requirements will be treated in the evaluation or how they should be organized within proposals. Given that these

requirements were not present in the draft AO, can proposers rely on the Draft APSMEX26 Criteria and Requirements (C&R) document for guidance on how to address these requirements when preparing their submissions?

A48: The descriptions associated with Factor B-6 and Requirement CS-21 in the draft APSMEX25 C&R will apply with some notable differences (~~deletions~~ and **additions**):

Maturity of proposed Level 1 science requirements and **driving** Level 2 project requirements. This factor includes assessment of whether the Level 1 science requirements are mature enough to guide the achievement of the objectives of the Baseline ~~Mission~~ **Investigation** and the Threshold ~~Mission~~ **Investigation**, and whether the Level 2 requirements are consistent with the Level 1 requirements. The Level~~s~~ 1 ~~and 2~~ requirements will be evaluated for whether they are stated in unambiguous, objective, quantifiable, and verifiable terms that do not conflict and for whether they are traceable to the science objectives. ~~They~~ **The driving Level 2 requirements** will be evaluated for ~~the adequacy, sufficiency, and completeness, including~~ their utility for evaluating the capability of the **mission profile**, instruments and other systems to achieve the mission objectives. ~~The stability of the Level 1 science requirements and Level 2 project requirements will be assessed to determine whether the requirements are ready, upon initiation of Phase B, to be placed under configuration control with little or no expected modifications for the lifecycle of the mission.~~

In addition, APD anticipates including the intent of Requirement CS-21 in the Final AO to address the definition of Level 1 science requirements and the definition of Level 2 project requirements. The draft language under consideration is similar to the following:

> On Level 1 Science Requirements: "Proposals shall provide a set of proposed Level 1 science requirements that will achieve the objectives of the Science Investigation. Both Baseline Science Requirements and Threshold Science Requirements shall be identified. The Level 1 science requirements shall be unambiguous, quantifiable, objective, verifiable, and traceable to the mission objectives."
>
> On Level 2 Project Requirements: "Proposals shall provide the driving Level 2 project requirements that will guide the design and development of the mission. These requirements shall be provided to the extent that they are necessary to explain and justify the design concept, including instrument capability, instrument performance, and other aspects of the system architecture that enable the accomplishment of the investigation Level 1 science requirements."

Proposers should note that final wording may be further refined prior to the release of the Final APSMEX26 AO. In addition, any guidance provided in the Final AO and this Q&A document, particularly Q&A39 regarding the expectations and guidance on Level-2 requirements, takes precedence over descriptions and expectations found in prior documents.

Level 1 science requirements should be addressed in the body of the proposal. The page allocation for proposal Sections D and E will be increased in the Final AO consistent with Q&A41. Proposal appendix J.15 entitled Draft Mission Definition Requirements Agreement (MDRA) will be added in the Final AO for description of the driving Level 2 project requirements.

Q47: Will the selected project be required to submit a CSR at the completion of Phase A?

A47: No, a CSR will not be required as part of the combined Phases A&B. The selected project will be expected to prepare for an appropriate gate review at the completion of Phase A, consistent with NPR 7120.5.

Q46: Are mission concepts with non-standard or unusual orbits allowed (e.g., Earth-trailing/Earth-leading, Lagrange Points, Lunar resonant, heliocentric)?

A46: Yes. The APSMEX AO is open to mission concepts employing any orbital configuration, provided that the mission's launch requirements fall within the scenarios described in the Launch Services Information Summary (LSIS) included in the Program Library.

Q45: Will the use of Deep Space Network (DSN) be allowed for Astro Explorers missions near or beyond the 2 million km threshold?

A45: Mission concepts in orbits beyond 2 million km are encouraged to plan for alternatives to the DSN for routine operations. Use of the DSN may still be proposed provided the proposal offers a compelling and well-justified rationale demonstrating that DSN support is required and that alternate mission concepts cannot meet the science objectives. Proposers should also recognize that other NASA space assets take precedence over SMEX missions. Accordingly, concepts proposing the use of DSN must plan for unplanned, frequent and extended gaps in DSN coverage.

The Program Library includes Communication Services Project (CSP) brochures describing available commercial services. Proposers are also encouraged to consult with SCaN at *hq-scanmissioncommitment@mail.nasa.gov* for guidance on alternate telecommunication solutions.

These restrictions do not apply to station hand-offs, critical event coverage, safe mode or other emergency services, radio science measurements, or navigation observations (e.g., delta differential one-way ranging [delta-DOR]).

Q44: Will procurement of long-lead items be allowed in the non-competitive Phase A?

A44: No, procurement of long-lead items will not be allowed prior to the completion of Phase A.

Q43: Will NASA consider initiating development of international agreements soon after selection?

A43: Yes. NASA will initiate development of international agreements immediately after selection.

Q42: Will the Final APSMEX26 AO update the guidance on the EVM implementation requirements for contracts?

A42: Guidance on Earned Value Management in section 5.3.7 of the Draft AO remains effective. The NASA FAR Supplement (NFS) places Earned Value Management (EVM) requirements on NASA contracts in clauses NFS 1852.234-2 and NFS 1834.201, amended by Procurement Class Deviation PCD 15-05. The requirements apply to all cost or fixed-price incentive contracts for development or production work, with specific levels of validated compliance with the ANSI/EIA-748 guidelines required for contracts above $50M (RY) and for those above $100M (RY). Full NFS compliance is required for all contracts. Amended April 17, 2026.

The EVM reimbursement does not apply to this opportunity, consistent with Q&A4 in the "Questions & Answers" section of the acquisition webpage.

Q41: Will page limits be adjusted to reflect the additional requirements introduced in the community announcement?

A41: Yes. Page limits will be adjusted to allow responses that describe compliance with the additional requirements in the Final APSMEX26 AO. Table B0 in the Draft AO "Proposal Structure and Page Limits" will be updated in the Final AO as follows: **Amended to fix error in labeling in left column of the table. 3/13/26**

	Content	Page Limits (+ Additional pages for 1-step conversion)
A	Proposal Summary Information	As per NSPIRES
	Graphic Cover Page	1
	Export-controlled material statement (Section 5.8.3)	0.5
	Optional Restriction on Use statement*	0.5
B	Fact Sheet	2
C	Table of Contents	None
D	Science Investigation	**29+2.5**
E	Science Implementation	(Note additional pages in Requirement B-4)
F	Mission Implementation	**15+1**
	Schedule Foldout(s)	(Note additional pages in Requirement B-4)
G	Management	
H	Cost and Cost Estimating Methodology	**5+1**
		(Note additional pages in Requirement B-4)
	Cost Table B3	(Cost Table Foldout(s) do(es) not count against limit)
I	Optional Student Collaboration Plan	N/A (deferred to Phases A&B)
J	Proposal Appendices (no others permitted; do not re-number if not applicable):	
J.1	Table of Proposal Participants	None
J.2	Letters of Commitment	Sufficient to satisfy Requirement B-62
J.3	Resumes	Sufficient to satisfy Requirement B-63
J.4	Summary of Proposed Program Cooperative Contributions	Sufficient to satisfy Requirement B-64
J.5	Draft International Participation Plan Discussion on Compliance with U.S. Export Laws and Regulations	Sufficient to satisfy Requirement B-65, Requirement B-66, and Requirement B-67.
J.6	Open Science and Data Management Plan	**Page-Limited (limt will be in Final AO)**
J.7	Draft Sample and Space-Exposed Hardware Curation Plan	N/A
J.8	Planetary Protection Plan	2
J.9	Discussion of Limiting the Generation of Orbital Debris and End-of-Mission Spacecraft Disposal Requirements	**0+3**
J.10	Infusion Plan for NASA-Developed Enabling TDO	N/A
J.11	Compliance with Procurement Regulations by NASA PI Proposals	None
J.12	Master Equipment List (MEL)	None, spreadsheet only
J.13	Heritage	15, limited to a table that can include narrative text
J.14	Classified Materials	10 (submitted separately)
J.15	Draft Mission Definition Requirements Agreement	**0+8**
J.16	Citizen Science Plan	N/A
J.17	Planned NPR 7120.5 Requirements Tailoring (optional)	5
J.18	Certifications Amendments (optional)	None
J.19	List of Abbreviations and Acronyms	None
J.20	List of References	None

Q40: Given the planned transition to a single-step selection process for APSMEX26, will the minimum unencumbered cost reserve (UCR) requirements be adjusted relative to those specified in the Draft APSMEX25 AO?

A40: Yes. The minimum UCRs for Phase E will be increased to 20%. The UCRs for Phases A-D will remain fixed at 25%.

Q39: Will a full MDRA be required as part of a single-step submission?

A39: A simplified draft Mission Design and Requirements Analysis (MDRA) will be accepted for proposals submitted in response to the APSMEX26 AO. The level of detail and rigor expected in this MDRA will be reduced compared to what is typically provided for a Concept Study Report (CSR).

The MDRA will be limited to 8-pages. The expected set of Level 2 requirements should describe the key performance drivers and constraints for the mission. Requirements should minimally:

a. define the performance requirements for each proposed instrument and the spacecraft; and
b. identify the mission design constraints that bound the feasible trade space.

For further guidance, proposers should consult the MDRA-guidelines document that will be made available in the program library in the near future.

Q38: Are there restrictions on the use of non-NASA providers of communication services?

A38: The use of non-NASA telecommunications service providers is permitted for proposals submitted in response to the APSMEX26 AO. Proposers may include non-NASA-managed communication, tracking, and navigation solutions.

Proposers should provide a cost estimate that identifies the recurring and non recurring costs associated with these services.

In addition, if non NASA services are proposed, the private communications vendor must be treated as a major partner, consistent with Q&A28 guidance.

Q37: Will the cost cap be adjusted to reflect the delay in the publication of the Final AO?

A37: Yes. The AO Cost Cap will be increased to $190M in FY 2026 dollars (FY26$) from $170M in FY 2025 dollars (FY25$) in the draft AO. An upcoming APSMEX26 Community Announcement will also communicate this update.

Q36: Will the selected mission be able to propose student collaboration and/or science enhancement options during the non-competitive phase A&B?

A36: Yes.

Q35: With the combined Phases A&B, will teams be able to perform trades and update costs typical of a competitive Phase A?

A35: Yes, teams will have the opportunity to perform limited trades and cost updates during the combined Phases A&B. The PIMMC may not increase by more than 20% from that in the proposal during the entirety of Phase A&B, and, in any case, must not exceed the AO Cost Cap or Adjusted AO Cost Cap.

Q34: Given the shortened schedule, are there plans to reduce programmatic or technical burdens?

A34: APSMEX26 proposals must comply with NPR 7120.5F requirements for spaceflight mission management. Proposers are strongly encouraged to identify adjustments to tailorable NPR 7120.5 requirements for consideration by NASA after selection. Rationale must be provided in the proposal as part of Appendix J (see Section 4.1.4 Project Category and Payload Risk Classification Policy, Section 5.2.3 Deviations from Recommended Payload Requirements and Section 5.2.4 Accepted Management Processes and Practices in Draft APSMEX25 AO for more information).

Q33: Will an updated Draft AO be released before the final version, given the significant changes outlined in the community announcement?

A33: No additional Drafts to the AO are planned. NASA will continue to provide updates through at least one more Community Announcement and Q&As posted to the APSMEX26 Acquisition page. Proposals will be due approximately 90 days from release of the Final APSMEX26 AO. **[Q&A33 supersedes Q&A32]**

Q32: Considering the delay of the release of the APSMEX AO, will NASA publish an updated Draft AO to alert proposers of expected changes from the draft published in January 2025?

~~**A32:** NASA will issue an updated Draft APSMEX AO if modifications are planned for the final version of APSMEX AO that are expected to result in significant changes in the content of proposals.~~ **[Superseded by A33].**

Q31: The Draft 2025 APSMEX AO states that NASA grants a deviation from NFS EVM requirements for investigations with a proposed PIMMC of $120M (FY25$) or less. What are the expectations for investigations with proposed PIMMCs greater than $120M (FY25$)?

A31: Proposed investigations with PIMMCs greater than $120M (FY25$) must comply with NFS and NPR 7120.5 requirements for ANSI/EIA-748-compliant EVM.

Q30: Should the budget for NEPA compliance be included in the PIMMC?

A30: When responding to an AO, proposers must include NEPA schedule needs into their estimates. NEPA-related costs for the 2025 APSMEX are covered by the Explorer program.

Q29: Section 5.2.6.1 of the 2025 Astrophysics SMEX AO states "This AO allows for investigations to baseline use of radiological sources for science instrumentation. No radioactive material may be used for supplemental heating or power." Can this statement be interpreted as that only low-activity radioactive sources (i.e., with an A2 mission multiple less than 1, as defined in Appendix D of NPR 8715.26) are permitted?

A29: Yes. Only low-activity radioactive sources (i.e., with an A2 mission multiple less than 1, as defined in Appendix D of NPR 8715.26) are permitted for missions proposed as a result of the 2025 Astrophysics SMEX AO. This information will be reflected in the final 2025 Astrophysics SMEX AO.

Q28: The program library offers brochures for private vendors of communication services, but these services are not listed in the current NSN catalog. For the purposes of the 2025 Astrophysics SMEX AO, are these services considered future NASA capabilities that must be secured through SCaN, or should proposers treat these options as private services that must be purchased outside NASA?

A28: Proposers are encouraged to discuss mission-specific needs with SCaN to explore NASA-provided solutions. In the event a NASA-provided solution exists, the cost of SCaN services is considered a reduction to the cost cap. Alternatively, proposers have the option to contract the use of communication services outside NASA. If this option is exercised, the proposal must treat the private communications vendor as a major partner in the proposal and the costs incurred for such services must be reflected in the PIMMC.

Q27: The orbital characteristics of a 2025 Astrophysics SMEX mission impose specific and varying demands on the data downlink requirements necessary to meet the mission objectives. While the documents in the program library offer an overview of the operational services available through SCaN, these documents contain limited information on the applicability and flexibility of these SCaN services to meet specific mission needs. How do I confirm the compatibility of a 2025 Astrophysics SMEX mission with the communication services offered by NASA?

A27: The information on communication services available to 2025 Astrophysics SMEX proposers through the program library offers a complete overview of the operational services available through SCaN. This information is intended to inform proposers on current capabilities, but it does not intend to cover all possible mission scenarios. To best understand the compatibility of a specific mission with SCaN services, proposers are advised to contact the 2025 Astrophysics SMEX SCaN POC at exploration-

enabled@lists.hq.nasa.gov to discuss compatibility and operational coverage of specific missions.

Q26: 2025 Astrophysics SMEX AO proposing teams may benefit from the capabilities of the Lunar Exploration Ground Sites (LEGS) for mission concept planning. What timeline can proposers assume for LEGS sites to be at full operational capability? Where can proposers obtain more information on LEGS plans?

A26: SCaN plans to have the LEGS GOCO sites (LEGS 1-3) available for use NLT Q3 CY28. Information about LEGS functional performance capabilities beyond what is available in the program library may be discussed with the 2025 Astrophysics SMEX SCaN POC at exploration-enabled@lists.hq.nasa.gov.

Q25: Will NASA adjust the 2025 Astrophysics SMEX calendar in the event of a government shutdown?

A25: In the event of a government shutdown, upon reopening, the Astrophysics Division will assess the resulting impact to the 2025 Astrophysics SMEX calendar and adjust key dates to alleviate any significant negative effects to the proposing community.

Q24: The draft 2025 Astrophysics SMEX AO Requirement B-3 seems to constrict the horizontal spacing (in characters per inch) of the text within tables and figures. Does NASA plan to update the requirement to reflect a spacing that aligns with standard text and enables improved readability?

A24: Yes. The requirement will be updated in the final APSMEX AO to state that "Type fonts within tables shall be no smaller than 10-point and no more than 18 characters per horizontal inch (5 characters per horizontal centimeter). Fonts used within figures shall be no smaller than 8-point and no more than 22.5 characters per horizontal inch (4 characters per horizontal centimeter)".

Q23: SPD-48 establishes an increased streamlining of the formulation and development approach for SMD Cat 3/Class D projects. What's the cost cap in FY25$ that makes SPD-48 applicable to APSMEX proposals?

A23: For the purposes of the 2025 Astrophysics SMEX AO, proposers should assume that SPD-48 applies to projects with a proposed PIMMC of less than $120M (FY25$).

Q22: The draft 2025 Astrophysics SMEX AO states that the down-selected team will be required to submit a communications plan in Phase B. As NASA HQ and program office personnel provide necessary support, what aspects of the communications budget should be included in the PIMMC?

A22: Proposed budgets are expected to include the cost of the investigation team's effort to implement a Communications Plan. NASA HQ and the program office efforts in the implementation of the Communications Plan will not need to be funded by the selected mission.

Q21: Is it acceptable for the primary payload to be comprised of multiple spacecraft that separate upon deployment? What options are available for multiple spacecraft deployment, and who bears responsibility for orbital phasing?

A21: Yes, it is acceptable for the primary payload to be comprised of multiple observatories that separate upon deployment. Each observatory will likely be required to provide the entirety of its needed delta-V for orbit phasing. Guidance on the ability of the launch service to accommodate particular missions requires details of the specific design and Concept of Operations. Contact the 2025 Astrophysics SMEX AO LSP mission manager for information on availability and compatibility of deployment scenarios that apply to your specific mission.

Q20: Are the launch vehicle environments provided for Scenario 2 in the LSIS applicable to investigations with payload masses in the 300 kg range?

A20: No, an updated LSIS has been posted to the Program Library (Prog04_APSMEX25_LSIS-20250219.pdf) with the sine vibration environment and enveloping design load factors for payloads under 500 kg.

Q19: Our spacecraft was designed with a specific-sized separation system. What are the options for an LV-provided separation system that would support the interface? Also, would there be any mission unique costs associated with a Payload Processing Facility (PPF) required to support hydrazine fueling operations?

A19: LSP recommends that proposers not specify an explicit brand of separation system to maintain flexibility and allow the LV provider to propose a solution that is compatible and flight qualified. The separation system, PPF, and hazardous support are considered standard services covered by the Astrophysics Explorer Program, with the recommendation that PPF occupancy be no more than 30 days.

Q18: In the draft 2025 Astrophysics SMEX AO, Requirement 44 states "Investigations with proposed orbit altitudes between 400 km and 1200 km shall discuss the resources and capabilities needed to be capable of executing at least three collision-avoidance maneuvers during their prime mission (see Requirement B-31.6)." Does that mean spacecraft must have a propulsive capability to meet Requirement 44?

A18: No, a propulsive capability is not required to satisfy the collision avoidance maneuver requirement. OCE-51, *NASA Spacecraft Conjunction Assessment and Collision Avoidance Best Practices Handbook*, discusses spacecraft collision mitigation capability

and recommends various specific practices, some of which do not require a spacecraft to possess propulsive capability. OCE-51 states, "spacecraft operators should choose a mitigation option when they select their mission orbit and ensure that the capability is built into the system appropriately…". For additional information regarding CARA, including potential input on orbit and trajectory trade studies, proposers may contact Dr. Alinda Mashiku (Telephone: 301-286-6248; email: alinda.k.mashiku@nasa.gov).

Q17: What is the impact on the 2025 Astrophysics SMEX AO of the recent Executive Orders on DEI activities?

A17: Pursuant to the Executive Order dated January 20, 2025, and its revocation of Executive Order 13985, factor B-6 "Merit of the Inclusion Plan…" will not appear in the final 2025 Astrophysics SMEX AO. Inclusion Plans will not be required. The final AO, anticipated in April, will be revised, and updated appropriately.

Q16: With the release of the draft 2025 Astrophysics SMEX AO occurring after the planned date of December 2024, will the release date of the final SMEX AO and the due date of the proposals also be later than planned?

A16: Yes, the final 2025 Astrophysics SMEX AO planned release date will now be April 2025, and the due date for proposals will be no earlier than 90 days after the release of the final SMEX AO.

Q15: NASA SMD has recently changed its policy on what is required for Class D mission proposals by no longer deferring the naming of the Project Manager (PM) and Project Systems Engineer (PSE) until Step 2. The draft 2025 Astrophysics SMEX AO states that the naming of the PM and PSE are deferred until Step 2. Since the SMEX AO solicits Class D missions, will the naming of the PM and PSE still be deferred to Step 2 in the final SMEX AO?

A15: No, in the final 2025 Astrophysics SMEX AO, the PM and PSE will be required to be named in the Step-1 proposal. The policy change occurred after approval was provided for publication of the draft SMEX AO, but the policy change will be implemented in the final SMEX AO.

Q14: When will the draft 2025 Astrophysics SMEX AO be released on NSPIRES?

A14: The draft 2025 Astrophysics SMEX AO is currently in the release process and publication is forthcoming.

Q13: What is the timeframe for SCaN to provide a technical assessment of the mission needs and the estimated cost?

A13: Proposers should allow 9-12 weeks to receive technical and cost information from SCaN. Proposers are encouraged to contact the SCaN Mission Commitment Office (MCO) to facilitate conversation and review of the proposed mission's needs, and to provide the opportunity for SCaN to give preliminary guidance on possible network support, using the following point of contact (POC): exploration-enabled@lists.hq.nasa.gov.

Q12: For the upcoming 2025 Astrophysics SMEX AO, can NASA provide any guidance on the expected performance scenarios to be offered? Do proposers need to demonstrate compatibility with all launch service scenarios, or is demonstrating compatibility for one launch service scenario sufficient?

A12: NASA plans to publish the Astrophysics SMEX Launch Services Program (LSP) Information Summary with the upcoming draft 2025 Astrophysics SMEX AO. The Astro SMEX LSP Information Summary will describe the launch services scenarios that NASA anticipates will be available at the time of the launch vehicle procurement. This Astro SMEX LSP Information Summary is currently in development and details are not available for public release. Due to the volatility of the launch services market, NASA cannot ensure which launch vehicles will be available at the time of the launch vehicle procurement. Accordingly, proposers are advised to plan for compatibility with vehicle families that provide the required performance and are expected to be available through spacecraft Preliminary Design Review. It is recommended that payload designs accommodate launch environments for these vehicle families. NASA is considering requiring proposers to define the required launch vehicle capability and demonstrate that the mission is compatible with at least one of the specified launch service scenarios. NASA is also considering requiring proposers to discuss compatibility with the launch vehicle characteristics and capabilities of all scenarios, noting that it is not required that the investigation be compatible with all scenarios.

Q11: Will there be a limit on the percentage of the PIMMC that projects may spend prior to KDP-C (confirmation)?

A11: NASA is considering not setting a limit on the percentage of the PIMMC that projects may spend prior to KDP C in the upcoming 2025 Astrophysics SMEX AO. However, proposers will be required to justify any significant spending before KDP C.

Q10: Will NASA consider relaxing the proposal due date, so that proposal teams have a few more months to produce compelling proposals?

A10: The intended timeframe published in the CA for the Astrophysics SMEX AO is NASA's best available estimate. Until the release of the final AO, the proposal due date is unknown. The date will be No Earlier Than (NET) 90 days after the release of the final AO. Proposers should expect the duration between final AO release and proposal due date to be similar to past Explorer AOs.

Q9: Will the services of the Lunar Exploration Ground Sites (LEGS) be available and which of its capabilities will be offered in this AO?

A9: NASA is considering offering LEGS in the upcoming 2025 Astrophysics SMEX AO. Proposals for missions operating above geostationary Earth orbit (GEO) and below two million kilometers, should be compatible with the LEGS. The capabilities offered will be similar to those offered in this LEGS brochure.

Q8: What communication and navigation capabilities will be available from the Near Space Network (NSN), and from which sites, for the mission duration (CY2031 and onward)?

A8: For the upcoming 2025 Astrophysics SMEX AO, NASA is considering offering services similar to those offered in this NSN brochure.

Q7: The Astrophysics Probe AO specified that the use of mission funds for new network infrastructure or facilities was strongly discouraged. Will it be the same for this AO?

A7: NASA is considering prohibiting the use of mission funds for the construction of new communications network infrastructure or facilities; mission-unique and duplicative assets run counter to wider Agency cost and efficacy objectives.

Q6: For commercial communication services such as ground network services, may proposers directly work with commercial providers for a proposal estimate, or do proposers need to go through the Space Communications and Navigation (ScaN) Program Office during Step 1 for proposing the use of commercial providers?

A6: For the upcoming 2025 Astrophysics SMEX AO, NASA is planning to encourage proposers to engage with SCaN as early as possible, using the following point of contact (POC): exploration-enabled@lists.hq.nasa.gov. When the use of non-NASA communication services is proposed, NASA plans to reserve the option of contracting for those services directly through its SCaN office. Further information may be obtained from the SCaN POC.

Q5: The CA states that the AO Cost Cap is $170M. Is it possible that the Cost Cap will be increased to $175M?

A5: No, the $170M AO Cost Cap is the approved funded amount and NASA is not considering increasing the amount for the upcoming 2025 Astrophysics SMEX AO, which NASA is not obligated to issue.

Q4: Will the AO offer a reimbursement on the cost of implementing ANSI/EIA-748-compliant Earned Value Management (EVM) for contracted work? If so, will there be any limits to PI-Managed Mission Cost (PIMMC) to be eligible for this reimbursement?

A4: No, the limited reimbursement does not apply to the 2025 Astrophysics SMEX AO. This is a change from the Draft 2025 Astrophysics SMEX AO and will be reflected in the final AO. ~~Yes, in order to ensure fair competition between NASA in-house and contracted efforts, the Astrophysics Explorers Program will provide a limited reimbursement to projects with a PIMMC greater than $120M in Fiscal Year 2025 dollars (FY25$). The reimbursement will be up to $1.5M (FY25$) and will not exceed the difference in cost between implementation of validated EVM and application of the performance measurement basic best practices referenced in the document SPD-48: *NASA Science Mission Directorate (SMD) Category3/Class-D Projects Implementation Policy*, available at https://soma.larc.nasa.gov/StandardAO/ClassD.html.~~ [Amended April 11, 2025]

Q3: The CA states that the AO will be based on an AO Template that is available on the SOMA website. However, the template currently available appears outdated relative to recent NASA Science Mission Directorate (SMD) AOs. Is there a more recent version of the template to use as reference until the Astrophysics SMEX AO is finalized and published?

A3: The Standard AO Template (SAOT) available on the SOMA website is the most recent version approved by NASA for public release. Proposers may review recent Explorer AOs (https://explorers.larc.nasa.gov) that reflect updates to the SAOT, however any changes may be specific to a particular AO and may not be reflected in the upcoming 2025 Astrophysics SMEX AO.

Q2: The CA did not specify required minimum unencumbered reserves for development and operations. Will there be required minimum percentages for unencumbered reserves in the AO?

A2: Yes, there will be minimum unencumbered reserves percentages for Phases A-D and Phase E required in the AO. The minimum percentage has not been determined, but proposers should expect them to be comparable to past Astrophysics SMEX AOs.

Q1: The Community Announcement (CA) says that the "standard launch performance capability will be consistent with the available certified Launch Vehicles on the NASA Launch Services II (NLS II) contract." Should proposers assume the launch performance will be consistent with previous Astrophysics SMEX solicitations which only offered the smallest expendable launch vehicle on NLS II?

A1: No, two performance scenarios ~~compatible with all available certified Launch Vehicles on the NLS II contract~~ will be offered~~, but there may be adjustments to the AO Cost Cap associated with the various scenarios~~. ~~These AO Cost Cap adjustments will not be set until the release of the draft 2025 Astrophysics SMEX AO.~~ The draft 2025 Astrophysics SMEX AO, Requirement 106 requires the discussion of an investigation's compatibility with both scenarios but does not require an investigation to be compatible with both. The *Launch Services Information Summary* (*LSIS*) provides performance curves for several

possible SMEX investigations which are not meant to cover every possible situation. Proposers should contact the Launch Services Program (LSP) Point Of Contact (POC) listed in the *LSIS* for guidance on their access to space needs if those needs are not covered in the *LSIS*. [Amended March 4, 2025]