

SUBJECT: Community Announcement on Astrophysics Explorer AO

**NNH16ZDA014J**

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**December 16, 2015**

The National Aeronautics and Space Administration (NASA) Science Mission Directorate (SMD) is releasing this Community Announcement concerning its intention to solicit investigations for the Astrophysics Explorer Program. The Astrophysics Explorer Program conducts Principal Investigator (PI)-led space science investigations to advance NASA's strategic goals in astrophysics, which are to discover the origin, structure, evolution, and destiny of the Universe and search for Earth-like planets. Additional information concerning these areas of investigation is provided through appropriate links found on the SMD homepage at <http://science.nasa.gov/>.

The current state of planning calls for NASA SMD to release an Announcement of Opportunity (AO) in the late summer/early fall of 2016 that will solicit proposals for Medium Explorer (MIDEX) missions to accomplish Astrophysics Explorer Program science objectives. NASA also plans to release simultaneously a solicitation for Astrophysics Explorer Missions of Opportunity (MO) through the NASA Announcement of Opportunity NNH12ZDA006O, Second Stand Alone Missions of Opportunity Notice (SALMON-2). A draft MIDEX AO and draft SALMON-2 amendment are expected to be ready for release for comment in Spring 2016.

The PI-managed mission cost cap for an Astrophysics MIDEX mission is expected to be no greater than \$250M in Fiscal Year (FY) 2017 dollars, not including the cost of the Expendable Launch Vehicle (ELV) or any contributions. Standard launch services on an ELV will be provided for MIDEX missions at no charge against the mission cost cap. Only the launch services described in the Explorer Program Library's launch services document will be provided (see <http://explorers.larc.nasa.gov/APMIDEX2016>). There will be a charge against the mission cost cap for mission unique and special launch services beyond the standard launch services offered.

The PI-managed mission cost cap for an Astrophysics Explorer MO is expected to be no greater than \$70M or \$35M in Fiscal Year (FY) 2017 dollars. NASA expects to solicit MO science investigations that are defined in the SALMON-2 AO as Partner MOs, New Missions using Existing Spacecraft MOs, or Small Complete Mission MOs, including investigations requiring flight on the International Space Station. Suborbital-class MOs have a \$35M PI-managed mission cost cap; this includes missions on ultra-long duration balloons, suborbital reusable launch vehicles (RLVs), and CubeSats. Other (not suborbital-class) MOs will have a \$70M PI-managed mission cost cap.

The currently approved Astrophysics Explorer Program planning budget is sufficient to select and execute one MIDEX mission and one MO.

The current planning is for the selection process to be done in two stages. In Step 1, it is anticipated that two or three MIDEX missions and one to three MO missions may be selected for nine-month Phase A concept studies. Each MIDEX concept study would be funded up to \$2M in

real year dollars, and each MO concept study would be funded up to \$500K in real year dollars. For Step 2, NASA will conduct a detailed review of the Phase A concept study reports. As a result of this second evaluation, NASA expects to select one MIDEX mission and one MO mission to proceed into Phase B and subsequent mission phases. NASA desires to launch the MIDEX mission before the end of 2023.

Proposals in response to this AO will be due 90 days after its formal release. Participation will be open to all categories of U.S. and non-U.S. organizations, including educational institutions, industry, not-for-profit organizations, Federally Funded Research and Development Centers, NASA Centers, and other Government agencies.

The schedule for the solicitation is intended to be:

- Release of draft AO: Spring 2016 (target);
- Release of final AO: Late summer/early fall 2016 (target);
- Preproposal conference: ~ 3 weeks after final AO release;
- Proposals due: 90 days after AO release;
- Selection for competitive Phase A studies: Summer 2017 (target);
- Concept study reports due: Summer 2018 (target);
- Down-selection: Early 2019 (target).

The Astrophysics Explorer Program MIDEX AO and SALMON-2 amendment may contain provisions that differ substantially from this preliminary notice, in which case the provisions in the AO and SALMON-2 amendment will take precedence. The Astrophysics Explorer AO will be based on the Standard PI-led Mission AO Template available at [http://soma.larc.nasa.gov/standardao/sao\\_templates.html](http://soma.larc.nasa.gov/standardao/sao_templates.html). Proposers should read the Draft Astrophysics MIDEX AO and SALMON-2 amendment carefully when they are released.

NASA has not approved the issuance of the Astrophysics MIDEX AO or SALMON-2 amendment and this notification does not obligate NASA to issue the announcements and solicit proposals. Any costs incurred by prospective investigators in preparing submissions in response to this announcement are incurred completely at the submitter's own risk.

Further information will be posted on the Explorer Program Acquisition website at <http://explorers.larc.nasa.gov/APMIDEX2016> as that information becomes available. Questions or comments about this intention to release an Astrophysics MIDEX AO may be addressed in writing or by E-mail to the Astrophysics Explorers Program Scientist: Dr. Wilton T. Sanders, Ref.: Astrophysics MIDEX AO, Astrophysics Division, Mail Stop 3U23, Science Mission Directorate, National Aeronautics and Space Administration, Washington, DC 20546-0001, E-mail: [wilton.t.sanders@nasa.gov](mailto:wilton.t.sanders@nasa.gov) (subject line to read "Astrophysics MIDEX AO"). Responses to all inquiries will be answered by E-mail and also posted weekly at the Frequently Asked Questions (FAQ) location of the Explorer Program Acquisition website; anonymity of persons/institutions who submit questions will be preserved.