



Announcement of Opportunity for Membership of the NewAthena Science Study Team

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1 INTRODUCTION

This Announcement of Opportunity (AO) solicits the participation of the European Science Community in the role of member of the NewAthena Science Study Team (NASST).

Athena was selected in 2014 as the mission to implement the science theme “The Hot and Energetic Universe”. During the study and definition phases of the mission it became apparent that the complexity (and associated cost) of Athena was significantly greater than originally identified, such that the mission concept was not affordable within the ESA Science Programme. This led to a re-formulation of the mission, culminating in what is now called NewAthena.

As part of the re-formulation activities, ESA appointed a Science Re-Definition Team (SRDT) to support the definition of the science objectives of NewAthena, and to provide expert advice during the study activities necessary to define the NewAthena mission concept. The SRDT have now completed their mandate, producing a report on potential science objectives for NewAthena.

The NewAthena mission concept and science objectives were presented to the Science Programme Committee (SPC) in November 2023, during which the SPC endorsed the start of the NewAthena study phase.

The role of the NASST is to provide scientific advice during the study phase of NewAthena.

1.1 AO Documentation Package

[AO-D1] New Athena Science Objectives:
<https://www.cosmos.esa.int/web/athena/about-athena>

2 PURPOSE OF THE PRESENT ANNOUNCEMENT

Through the present AO, the Director of Science invites scientists based in ESA Member States to apply for membership of the NewAthena Science Study Team. The NASST will define of the science requirements of the mission and will support the ESA on all aspects of the study phase related to the science return of NewAthena.

The NASST will be established at the start of Phase A, and will remain in place until mission adoption, currently foreseen for end 2026. In addition to the ESA Study Scientist who chairs it, the NASST comprises the following members:

- one representative nominated by the WFI Instrument Consortium;
- one representative nominated by the X-IFU Instrument Consortium;
- up to eight members selected through this AO;
- one member each from international partner agencies;
- up to two “Complementary Scientists”, who are experts in fields relevant for complementary science (e.g., Multi-messenger astronomy), selected through an AO issued by ESA, after the appointment of the core NASST members.

With the exception of members selected by international partner agencies, all NASST members are appointed by the ESA Director of Science. Representatives of the instrument consortia are appointed *ex officio*, while members selected through this AO are appointed *ad personam*. ESA selected NASST members will be appointed for a period of three years, renewable, or until Mission Adoption, whichever comes first.

The NASST should reflect the diversity of the scientific community, hence we encourage applications from early career scientists and historically under-represented groups in astronomy and space science.

A maximum of three face-to-face meetings will take place every year, with additional communications and discussion to take place via video-/tele-conferences and e-mails and a dedicated MS Teams channel.

With the exception of expenses incurred while travelling to in-person NASST meetings, ESA will not fund any of the selected candidates’ activities related to the present appointment. Candidates should clearly state in their proposal the source of their funding for participating to the activities implied by their membership.

The schedule for this AO is given in Table 1.

Table 1: AO schedule and deadlines

Date	Event
5 February 2024	Release of this AO
21 February 2024, 12:00 hrs (noon) CET	Mandatory Letters of Intent due
20 March 2024, 12:00 hrs (noon) CET	Proposals due
April 2024	Appointment of selected scientists

3 THE NASST TERMS OF REFERENCE

The NASST supports ESA during the Study phase of the mission by performing the following tasks:

- provide scientific oversight in the fields associated to the scientific themes of the mission;
- propose the mission scientific requirements;
- assess the scientific aspects of the mission performance;
- assist in making any top-level trade-offs related to the scientific aspects of the mission performance;
- support the preparation of the observing plan and calibration strategy;
- assist in setting-up scientific requirements on the Science Ground Segment;
- advise on the preparation of the Science Management Plan;
- produce the Definition Study report (Red Book);
- act as a focus for the interests of the broad scientific community.

Members of the NASST may be invited to participate as observers in the ESA study phase reviews.

4 LETTER OF INTENT

Prospective proposers must submit a mandatory Letter of Intent (LoI) by the deadline indicated in Table 1. Proposals not preceded by a corresponding LoI will not be considered. LoIs are limited in length to 2 A4 pages (minimum font size 11 pt), and their purpose is to allow ESA to perform an initial assessment of the expected range of proposals, and to prepare for the evaluation process.

Letters of Intent must be structured to contain the following information:

- Name and contact information of proposer;
- Short description of the proposer's expertise and its relevance to NewAthena.

5 CONTENTS OF THE PROPOSAL

Proposals submitted in response to the AO are limited in length to 8 A4 pages (minimum font size 11 pt), and must contain the following information:

- a cover letter stating the proposer's name and affiliation and explicitly mentioning the proposer's title, position, institute, address, telephone number and e-mail address (max. 1 page);
- a brief curriculum vitae also including the 10 most relevant publications (max. 2 pages);
- a description of the expertise relevant to the NewAthena science objectives and a statement concerning the time availability (max. 4 pages);
- a Letter of Endorsement, signed by the proposer's Head of Institute, with the endorsement to the proposer's application and the explicit support with respect to the proposed activities and the availability of resources as needed by the proposer for the accomplishment of the NASST tasks (max. 1 page).

Details of the personal data protection measures that apply to this AO can be found in the privacy notice on the submission website.

6 EVALUATION CRITERIA

The following criteria will be used (in no particular order) in assessing and evaluating individual proposals:

- Candidate's scientific and technical expertise relative to the NewAthena science objectives;
- The level to which the proposal identifies specific competences and addresses the contribution to the tasks described in Section 3.
- Adequacy of the time that the candidate intends to devote to activities related to the NASST role.
- Adequacy of resources available to the candidate to carry out activities related to the NASST role.

7 LETTER OF INTENT AND PROPOSAL SUBMISSION

Letters of Intent and Proposals should be submitted electronically in PDF format (file size not to exceed 10 MB) according to the instructions on the following webpage:

<https://www.cosmos.esa.int/web/AO-for-NewAthena-Science-Study-Team>

and according to the deadlines listed in Table 1.

Applications received after the deadlines will not be considered. Applications that exceed the page limit or that do not respect the structure described above in Section 5 will not be considered.



8 FURTHER INFORMATION AND CONTACT POINTS

Requests for further information should be addressed to:

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