

Announcement of Opportunity for ESA appointed scientists to the Science Topical Panels of the Einstein Probe mission

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1 INTRODUCTION

1.1 Purpose and scope

This Announcement of Opportunity (AO) solicits the participation of the scientific community in the role of ESA appointed scientists to the Science Topical Panels (STP) of the Einstein Probe (EP) mission.

EP is a small satellite dedicated to time-domain astronomy to monitor the sky in the soft X-ray band. It is a mission led by the Chinese Academy of Sciences (CAS) with international collaboration through ESA and the Max Planck Institute for Extraterrestrial Physics (MPE). Its wide-field imaging capability is achieved by using established technology of the micro-pore lobster-eye X-ray focusing optics. Complementary to this is a deep X-ray follow-up capability enabled by two Wolter-I type X-ray telescopes. EP is also capable of fast transient alerts triggering and downlink, aiming at multi-wavelength follow-up observations by the world-wide community. Its scientific goals are mainly concerned with discovering new or rare types of transients, including tidal disruption events, supernova shock breakouts, high-redshift GRBs, and of particular interest, electromagnetic sources of gravitational wave events.

The Science Programme Committee approved participation in the Einstein Probe mission as a Mission of Opportunity at its meeting in June 2018. EP is scheduled to launch in late-2023.

ESA will appoint up to 10 scientists to represent European scientific interests in the EP Science Topical Panels. The positions will be for a period of three years, renewable. Successful candidates are not eligible for any financial support by ESA to discharge the tasks and responsibilities associated with their role as members of the STPs, and each proposer is responsible for securing his/her own funding from other sources.

The schedule for this AO cycle is given in Table 1.

Table 1: AO schedule and deadlines

Date	Event
21 October 2022	Release of this AO
7 December 2022, 12:00 hrs (noon) CET	Proposals due
December 2022	Appointment of members of the STPs

1.2 AO documentation package

[AO-D1] Einstein Probe Science Management Document;

- [AO-D2] Einstein Probe mission website: <https://ep.bao.ac.cn/ep/>
 [AO-D3] Terms of Reference for the Einstein Probe Science Topical Panels

1.3 Mission summary

A description of the EP science objectives, science measurements, observation strategy, and mission summary can be found in [AO-D2].

The EP Science Management Document (SMD, AO-D1) describes the approach that will be implemented to ensure the fulfilment of the scientific objectives of the EP mission and to optimise its scientific return, science operations and management. The SMD also outlines the data generation approach and data rights.

In summary, an EP Science Team (EPST) composed of scientists appointed by CAS, ESA, and MPE, in an 80:10:10 ratio, forms the single mission science team. The EPST will include a Science Management Committee (SMC) and various lower-level Science Topical Panels (STPs). The STPs comprise of members appointed by CAS, ESA, MPE, and associate members.

The STPs report to the SMC. The STPs will focus on selected science topics, with their activities coordinated by one Chair and up to two co-Chairs. The following STPs have been agreed (more panels may be added at a later time if necessary):

STP1: Tidal Disruption Events (TDEs) and Active Galactic Nuclei (AGNs).

STP2: Fast extragalactic transients (including gamma-ray bursts GRBs and non-GRB transients).

STP3: Multi-messenger astronomy (synergies with gravitational wave events and with neutrino events).

STP4: Compact stellar objects (compact objects including stellar mass black holes, neutron stars, and/or white dwarfs in our Galaxy or in nearby galaxies; ultra-luminous X-ray sources).

STP5: Observatory Science (topics not included in the above panels, e.g., stellar flares, supernova remnants, diffuse emission, Solar System objects; may be split into various subpanels).

STP6: Follow-up observation activities (not a science panel, per se, but rather a structure within the EP Science Team; any STP members can be involved and contribute to the follow-up activities).

2 APPOINTMENT REQUIREMENTS AND CONDITIONS

This call is open to scientists based in ESA Member States.

Candidates will have to describe in the proposals their expertise relevant to EP and to the (up to two) STPs for which they are applying. In addition, candidates will also have to describe their proposed contribution to the responsibilities of the STPs, and the relevance of their contribution to the mission. A declaration of the time commitment to the STP activities and their willingness to take up specific and time-limited tasks as assigned by the STP Chair or co-Chair must be stated. Candidates can also express an interest to Chair, or co-Chair, a particular STP. The proposals should include the explicit endorsement and support from their institutes.

Early career scientists are specifically encouraged to apply.

The successful candidates will be appointed by the ESA Director of Science. The appointment of STP members is *ad personam*. The selected STP members will be required to submit short annual reports of his/her EP related activities to ESA.

3 CONTENTS OF THE PROPOSAL

Proposals submitted in response to the AO are limited in length to 9 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), as well as the STP(s) for which the proposal is intended
- A brief curriculum vitae also including the 10 most relevant publications (max. 2 pages).
- A description of the scientific expertise relevant to the EP/STP science objectives (max. 2 pages).
- A description of the contribution to the responsibilities of the STPs for which the application is submitted, and of the proposed contribution to the scientific exploitation of the corresponding STPs' data (max 3 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 facilities and infrastructure, as needed by the proposer for the accomplishment of the STP tasks (max. 1 page).

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

4 EVALUATION CRITERIA

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

- Candidate's competence and experience relative to the Einstein Probe science objectives.
- The level to which the proposal identifies specific competences and addresses the contribution to the STPs described in Section 1.3.

5 PROPOSAL SUBMISSION

Proposals shall be submitted electronically in PDF format (file size cannot exceed 10 MB) according to the instructions on the following webpage:

<https://cosmos.esa.int/web/ep-stp-members-2022>

and according to the deadlines listed in Table 1.

Proposers will receive confirmation upon successful receipt of their Proposals.

Further queries should be addressed to:

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ACRONYMS

AD	Applicable Document
AO	Announcement of Opportunity
CET	Central European Time
EP	Einstein Probe
EPST	Einstein Probe Science Team
ESA	European Space Agency
SMC	Science Management Committee
STP	Science Topical Panel