



European Space Research
and Technology Centre
Keplerlaan 1
2201 AZ Noordwijk
The Netherlands
Tel. (31) 71 5656565
Fax (31) 71 5656040
www.esa.int

DOCUMENT

GNSS SCIENCE ANNOUNCEMENT OF OPPORTUNITY (AO) -

GUIDELINE FOR SUBMISSION OF PROPOSAL



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1 BACKGROUND

The European GNSS Evolution Programme is an optional programme of the European Space Agency covering technology research, development and verification activities related to GNSS with the objectives to sustain European competitiveness and to prepare for evolutions and upgrades of the European GNSS Infrastructures: EGNOS and Galileo.

One of the objectives of the programme is to stimulate an active dialogue between the scientific community and the Agency, in order to foster the scientific utilization of EGNOS and Galileo and to gather feedback from the scientists to designers and integrators of the next generation navigation satellites with a view to maximize the scientific value of the exploitation of the European GNSS signals and data.

The present GNSS Science Announcement of Opportunity is intended to support the above objective with a number of scientific studies on areas of advanced GNSS science research.

2 OBJECTIVES

The key goals of the GNSS Science Announcement of Opportunity are:

- To raise the awareness of the features of the European Satellite Navigation Systems (EGNOS and Galileo) in the scientific community
- To elaborate concepts and/or design experiments which can improve scientific insights by making use of the European SatNav systems
- To provide feedback from the scientific community using GNSS signals to the European GNSS Evolutions Programme.
- The proposals should therefore demonstrate that they are addressing significant scientific issues by exploiting EGNOS or Galileo and to the European GNSS Evolutions Programme

3 SCOPE OF THE INITIATIVE

The current initiative will support a number of studies (10-15) for a typical value between 70,000 and 150,000 Euros (The maximum cost to ESA should not exceed 200,000 Euros). ESA may consider the continuation of the most relevant ideas in future actions.



4 PROPOSAL SUBMISSION AND SELECTION PROCESS

The initiative will be executed in a two-step process. The first step will require an Outline Proposal. On basis of the Outline Proposals received, ESA will perform a pre-selection. All bidders will be notified individually of the results of the pre-selection.

In a second step the pre-selected bidders will be invited to prepare a Complete Proposal in reply to a Request for Quotation (RFQ) to be issued by the Agency at that time. This RFQ will include the draft contract conditions.

4.1 Outline Proposal

The Outline Proposal has to provide the following information:

- Information about the bidder (ESA Bidder code is not required)
- Title of proposal
- Cost of the activity
- Location of subcontractors (if any)
- Description of Scientific Research and its relevance to the objectives of the A.O.
- Description of the proposed solution in terms theoretical work (modelling) and experimental validation (if applicable)
- Description of the content of the activity, the approach you will take and the expected output
- Description of the background and experience of the team (including all scientific partners and potential partners from industry)
- Justification of the level of funding requested



5 SCHEDULE

The individual steps of the proposal submission and approval process as well as the time schedule (indicative) are described in detail in the following table:

5.1 Step 1: Preparation and Submission of Outline Proposal

Bidders prepare and submit an Outline Proposal via a web application consisting of the following information: <ul style="list-style-type: none"> - Opportunity: description of the scientific research and its relevance to the objectives of this AO. - Solution: description of the proposed solution in terms theoretical work (modelling) and experimental validation (if applicable) - Approach: description of the content of the activity and expected output - Experience: background and experience of the bidding team (including all scientific partners and potential partners form industry - Justification of level of funding 	Start: ITT issue T0 End: T0+ 4 weeks
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5.2 Step 2: Assessment of Outline Proposals

ESA, with the help of members of the GNSS Science Advisory Committee (GSAC) assesses the Outline Proposals and selects the best proposals.	T0+ 8 weeks
ESA informs the bidders of the assessment's outcome. The selected bidders are invited to present their ideas to ESA in individual clarification meetings. Bidders that have not been selected will receive a de-briefing upon request.	T0+ 10 weeks

5.3 Step 3: Submission of Complete Proposal

The Agency issues an RFQ to selected bidders. The selected bidders prepare and submit Complete Proposals in line with the RFQ	Start: T0+ 13 weeks End: T0+18 weeks
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5.4 Step 4: Evaluation, Negotiation and Contract Award

The Complete Proposal will be evaluated with the support of GSAC. It will be the basis for the final selection of the bidders to which a contract will be proposed.	Start: T0+ 19 weeks End: T0 + 21 weeks
Start of activity / Kick-off	T0+ 22 weeks



6 TOPIC AREAS

The AO is open to proposals in all areas of science which are related to GNSS – some examples are provided below:

Earth and Planetary Sciences

- Geodesy and geodynamics**

- Remote sensing using GNSS signals (including planetary missions)**

- Physics of Ionosphere and Magnetosphere, Space weather**

- Physics of the Troposphere, meteorology**

Metrology

- Time and frequency**

- Reference Frames**

- Positioning and Navigation**

Fundamental Physics

- GNSS and Relativity**

- GNSS and Astronomy**

Proposals can also address ideas for payloads or new features for future generations of Galileo and EGNOS within the scientific scope of this call.