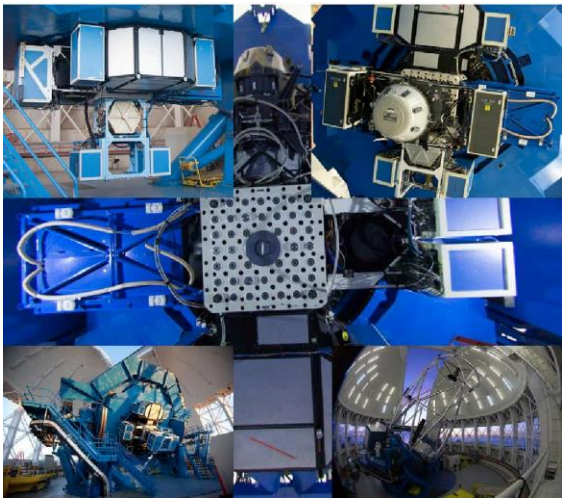
Request For Proposals (RFP) –N75388C

Gemini Instrument Upgrade Program



Association Of Universities For Research In Astronomy, Inc.
Operating The Gemini Observatory
Hilo, Hawaii and La Serena, Chile

RFP Issued:
September 28, 2016
Proposals due:
December 16, 2016, 3:00pm MST

Prepared by:
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Introduction

The Gemini Observatory consists of two 8-meter telescopes; one located on Maunakea in Hawaii, USA (Gemini North), the other on Cerro Pachón, Chile (Gemini South). The Association of Universities for Research in Astronomy, Inc. (AURA) is the managing organization of the Gemini Observatory under a cooperative agreement with the National Science Foundation (NSF). Gemini Observatory partner nations are the United States of America, Canada, Brazil, Argentina, and Chile. For more information, visit the Gemini Observatory website at www.gemini.edu. For the purposes of this RFP, AURA and Gemini are used interchangeably.

Gemini Observatory is overseen by the Gemini Board of Directors (GBoD), which is advised by the Science and Technology Advisory Committee (STAC). The STAC endorsed Gemini's guidelines for the Instrument Upgrades Program (IUP) activity in its 2015A and 2016A reports.

AURA and Gemini Observatory are committed to providing its community a continually enhanced instrumentation suite. Gemini's development program will provide funding to upgrade existing operational instrumentation to create new instrument capabilities at the Gemini North and/or Gemini South telescopes. Gemini also welcomes proposals to perform instrument upgrades with minimal or no funding from Gemini. Funds to support the IUP are made available through the Instrument Development Fund (IDF) as defined in the Gemini International Agreement.

The ongoing Instrument Upgrade Program releases an annual call for proposals. The budget for the 2016 call is 600,000 USD. The baseline plan is to fund one project of approximately 500,000 USD and one smaller project of approximately 100,000 USD. The Observatory will consider other distributions of funds and welcome requests for amounts between no funding from Gemini to the full 600,000 USD budget. Gemini seeks community-created, science-driven instrumentation upgrade proposals that fit within the total available budget.

This RFP is open to all institutions or companies from Gemini partner nations. The RFP is also open to non-partner country Principal Investigators who have significant and relevant experience in using, designing, and/or building a Gemini instrument. Small businesses, minority-owned firms, and women's business enterprises that meet the minimum qualifications are encouraged to apply.

Gemini encourages collaborations and will provide a forum for those seeking additional partners to develop a team for this work. Groups interested in the IUP call, who are looking for additional partners or want to offer their services to other potential proposers, should email Gemini as soon as possible.

All information provided by AURA in this RFP is offered in good faith. Individual items are subject to change at any time. AURA makes no certification that any item is without error.

Schedule of Events

The following schedule applies to this RFP. It may change in accordance with AURA's needs. AURA will send further updates to this RFP and process through a mailing list and web site updates. We recommend all proposers request membership on our email mailing list to ensure prompt notifications of any changes to this RFP.

Event	Date / Deadline
Release RFP	September 28, 2016
Proposers Conference	October 28, 2016 3pm MST
Notice of Intent due	December 2, 2016
Proposal due	December 16, 2016 3pm MST
Contract negotiations begin	February 2017*

*Date is flexible and subject to change

Proposers Conference
AURA will hold a Proposers Conference via videoconferencing to provide a forum to review the RFP material and encourage potential proposers to ask questions regarding the RFP. The conference will be held October 28, 2016, at 3pm MST. Information regarding the Proposers Conference agenda and video conferencing connection details will appear on the IUP RFP web page10 days prior to the Proposers Conference.

Notice of Intent
Notice of intent to submit a proposal should be emailed to the AURA Contracts Officer by the date in the event table above. Include in the email the following:

- A synopsis of the Proposed Project (an abstract of 500 words or fewer).
- A Point of Contact for communications.
- A list of proposed Key Personnel, including the PI(s) and Project Manager.
  A list of the proposed project team member organizations including potential subcontractors, collaborators, and partnering institutions and their roles in the project.

AURA will use the Notices of Intent to ensure reviewers have the appropriate expertise and are not demonstrably conflicted. Not receiving Notices of Intent may delay the evaluation and selection process.

Reference Documents
The Gemini facility operational instruments information website provides instrument details and fact sheets to help inform teams' proposals.

Requirements
Proposed projects must provide new or enhanced scientific capability to one of Gemini's existing facility (Flamingos-2, GMOS-N, GMOS-S, GNIRS, GPI, GSAOI, NIFS, and NIRI) instruments and GRACES. Visiting Instruments are not available for upgrade through this opportunity. The upgrade's scientific value must be clearly described in the proposal. Each proposal must include top-level science requirements for the upgrade clearly motivated by or derived from the project's science cases.

Gemini will only consider proposals for instrument upgrades of minimal to moderate technical risk. The proposal must thoroughly identify and suggest the mitigation of key risks and expected instrument downtime. Proposals must demonstrate the designed upgrade is achievable with existing technology.

The proposed instrument upgrade must not require major alterations to the Gemini telescopes and must comply with the Gemini Interface Control Documents (ICDs). The project plan must include readiness testing prior to going on-sky and full characterization of the upgrade after going on-sky.

The proposal must clearly state the Gemini documentation and Gemini resources needed for project completion. The project should require a minimal level of effort from Gemini staff. Gemini will assess the impact of the project and the outcome against the resources needed to support the project. Gemini will assign the relevant resources, pending availability, to support the team in its work to help facilitate successful completion of each upgrade.

The project must provide any necessary updates to Gemini-supplied data reduction software, procedures, and the existing instrument documentation resulting from the upgrade. The proposal must clearly state what documentation will be delivered as part of the upgrade.

The proposal must include a description of the proposed instrument upgrade and the resulting new or enhanced capability. The description must adequately describe the optical, opto-mechanical, electrical, and software elements of the proposed instrument upgrade.

The project must produce an Acceptance Test Plan and Acceptance Test Report and provide measured results for the tests contained in the Acceptance Test Plan. The report must also provide baseline measurements, where applicable, for all tests prior to the upgrade. The proposal should demonstrate that meeting the acceptance test requirements is sufficient for producing the expected performance.

The proposing team may request up to 10 hours of on-sky telescope time to demonstrate the scientific capability of the upgrade. The proposal must describe how the requested telescope time would be used to demonstrate the new scientific capability.

Statement of Work and Contract Deliverables will be extracted from the proposal upon selection and should be appropriate to the scale of the project. Post-selection, Gemini and the Contractor shall agree to the full list of project deliverables and milestones and will be extracted from the proposal in accordance with the specific aspects of the upgrade and subsequent contract negotiations.

How to Propose

Each proposal must have a lead institution. AURA prefers proposals from a single contractor. AURA encourages groups of institutions to submit a joint proposal in which they are all listed as partners, but with one institution identified as the lead institution for contract negotiation and project oversight.

If selected, proposers must submit any objections their signing authority has to the Contract and Terms and Conditions using change-tracked versions of those documents included in the RFP package before contract negotiations. To facilitate that process, AURA requests but does not require proposers submit the Contract and Terms and Conditions to their legal departments for review and include their objections to the Contract and Terms and Conditions as part of their proposal.

The proposal shall be no longer than 25 pages including a one page Executive Summary highlighting the driving science cases and identifying the instrument and the proposed upgrade, project schedule, and total cost.

The entire proposal must be uniformly paginated with margins in all directions of at least one inch. Proposal text must be in a standard, single-column format with a minimum 11pt. font size. All included figures, tables, and other attachments must be **easily** readable when printed on standard sized paper.

Proposals must be submitted as a single electronic document in Adobe Acrobat PDF format. Where signatures are required in the Proposal Form, proposer may sign by electronically signing a PDF file using the Adobe Acrobat Digital Signature Tool or signing a hard copy, scanning the signed page to PDF, and attaching the signature page to the main document.

Proposals are to submitted by email to the AURA Contracts Officer. All proposals must be received by AURA on or before the due date and time stated on the cover page of this document. AURA may reject any contractor's response if it does not contain the required signatures on the proposal form.

Acknowledgement of Proposals
Receipt of proposals will be acknowledged by email within three (3) working days following the deadline for submitting proposals. Please contact the AURA Contracts Officer if an acknowledgement has not been received. AURA reserves the right to accept proposals submitted after the deadline if it can be documented that the failure to meet the deadline was due to technical problems with the transmission of the proposal by email.

Modification of Proposal No oral, telegraphic, or telephonic modifications to proposals will be considered. Modifications to proposals submitted may be made electronically if the modified proposal is delivered to AURA before the proposal due date. Proposals that have already been submitted may only be modified by means of submitting a replacement proposal before the deadline for receipt of proposals. Proposals may not be modified after the due date.

Proposal Representations
By submitting a proposal the institute is representing that it has carefully examined this RFP and its referenced documents, understands all aspects of the work, and is not aware of any ambiguities in the requirements that may affect the proposed price or schedule. Submitting a proposal binds the proposer to good faith negotiations during the identified negotiation period.

Evaluation Criteria
Scientific Justification for the instrument upgrade and science requirements 40%

- Is the proposed scientific benefit of value to the Gemini community?
- Has the proposal included clear and comprehensible science objectives/questions that the work will address?
- Does the science case clearly include a description of the science enabled by the instrument upgrade?
- Is the scientific motivation for the proposed instrument upgrade relevant and well justified?
- How well have the science requirements been derived from the science case?
- Are well-defined metrics proposed for assessing the outcomes?

Technical Requirements and Design Changes 30%

- Is the proposed work technically feasible with an acceptable level of risk and lifetime support from Gemini staff?
- Has the team demonstrated that the proposed upgrade design will achieve the objectives

described in the scientific justification?

- Are the top-level technical specifications clearly linked to the science requirements and science case?
- If appropriate, does the proposal provide details of the optical, opto-mechanical, electrical, and software design of the proposed instrument upgrade, detailing the subassemblies to be changed? Are they appropriate given the intended upgrade?
- How well does the proposal describe any known technical risks associated with the proposed instrument upgrade and present mitigation plans?
- Does the proposed instrument upgrade fit within the technical constraints of the Gemini telescopes?
- Does the proposed upgraded instrument comply with the Gemini ICDs?
- Has updating the relevant documentation been included in this proposal? Is it appropriate given the scale of the project?
- Are the documentation and technical resources requested from Gemini available?

Project Management, System Engineering, and Team Experience 30%

- Can the envisioned instrument upgrade be completed within Gemini's cost and schedule envelopes?
- Does the project plan consider the impact on Gemini resources and required Gemini staff level of effort?
- Will the project adequately monitor and control cost, schedule, and scope?
- Does the project propose adequate system engineering methodology, project management approach, and tools to be used during the project execution?
- Is the team well qualified and supported for successful completion of the proposed work?
- Have key project members demonstrated relevant scientific work in the proposed areas?
- Has the proposal identified sufficient institutional support for the project ?
- How reasonable and realistic is the proposed installation schedule?
- How well does the proposed installation schedule meet AURA's expectations?
- Are the expected ongoing operational and maintenance needs for the upgrade acceptable to Gemini?
- Is the proposed scientific use of the requested observing time well justified?

Evaluation Panel

Gemini will select a team of non-conflicted experts to serve on the Evaluation Panel. The Evaluation Panel will assess each proposal based on the Evaluation Criteria, producing a ranked list of proposals to consider funding.

Selection

Gemini will make a best value selection after considering, in relative order of precedence, the following: the Evaluation Panel report, Price analysis, Cost analysis, Gemini's ability to support the work, resolvable contract objections, and the proposals.

AURA reserves the right to: (1) accept or reject any or all proposals, (2) withhold an award of the contract for any reason, in its sole discretion, (3) delay an award of a contract for any reason, in its sole discretion, (4) cancel the Request For Proposal; and/or (5) waive any deviations, irregularities, or informalities in the proposals.

Communications and Questions

Questions and requests for clarification can be directed to and only to:

Karen Godzyk
AURA Contracts Officer
Association of Universities for Research in Astronomy, Inc.
950 N. Cherry Avenue
Tucson, AZ 85719
Email RFPIUP@gemini.edu
(520) 318-8357 (US Mountain Standard Time)

General procedural questions may be handled by telephone. Questions or requests for clarification regarding requirements or specifications must be submitted by email and must be received at least 10 working days before the proposal due date. Answers and clarifications that modify or clarify any of the documents included in this RFP will only be made in writing; proposers shall not rely on verbal answers or clarifications. AURA may decide to share any questions and their answers with all of the proposers by issuing an addendum to the RFP.

If addenda are issued to this RFP, all information contained in an addendum is binding on all proposers who respond to this RFP. Changes/additions will be highlighted with new language underlined and marked in **blue bold** (i.e., **word**) and language deleted marked with a strikeout (i.e., ~~word~~). AURA will make a good faith effort to provide a written response to each question or request for clarification that requires addenda within five (5) working days.

To ensure that all proposers receive the same information, clarification or direction by persons other than the AURA Contracts Officer is not permitted during the RFP process. Proposers may not contact any other person at AURA or Gemini regarding this procurement without express permission from the AURA Contracts Officer. Proposers may be disqualified from participating in this procurement if they attempt to communicate about this procurement with AURA or Gemini personnel other than the AURA Contracts Officer.