

Instrument Upgrades 2017 (IUP-2017) RFP No. N75388X

Proposers Conference

**Ruben Diaz, Karen Godzyk, Cathy Blough, Scot Kleinman,
Paul Hirst, Marie Lemoine-Busserolle and John Basset**

24th August 2017

Teleconference + Videoconference

The Request for Proposals is a competitive process, hence:

- Gemini must make the same information available to all.
- We will take a recording on the session.
- We will capture questions and document answers.
- We will post Q&As on website.
- We will host the details of any team looking for partners.

After the meeting, send any questions to RFPIUP@gemini.edu (not to individuals).



Request For Proposals (RFP) –N75388x
Gemini Instrument Upgrade Program



Association of Universities for Research In Astronomy, Inc.
Operating the Gemini Observatory
Hilo, Hawaii and La Serena, Chile

RFP Issued:
July 24, 2017
Proposals due:
October 5, 2017, 3:00pm UTC-7/MST

Prepared by:
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Aim of the IUP Program

To invest funds to upgrade existing operational instruments, to keep them scientifically competitive and create new instrument capabilities at the observatory. To seek community-created science-driven instrument upgrade proposals.

Aim of the IUP Proposers Conference

To engage attendees. To communicate and clarify aspects of the RfP. To place information into context. To answer questions.

<http://www.gemini.edu/sciops/future-instrumentation-amp-current-development/instrument-upgrade-projects-0>

- 13:00** Welcome and Introduction.
- 13:05** IUP RfP Key Topics.
- 13:10** Evaluation.
- 13:12** How to submit a proposal.
- 13:15** Questions and Answers.
- 14:00** End of the Proposers Conference.

Questions / Discussions encouraged!

Instrument Upgrades Team



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of Development



Karen Godzyk
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Ruben Diaz
Instrument Program Scientist



Cathy Blough
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Instrument Upgrades Team



Paul Hirst
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Communicate through rfpiup@gemini.edu

Round 'virtual table' introductions

- Name,
- Institute,
- What you would like to get from today's conference?

RFP Documentation Set:

http://www.gemini.edu/sciops/instruments/future-instrumentation/rfpiup2017/2017IUP_finals.zip

K2F2 Project

The 2015 Small Project (~100k USD) award went to Casey Papovich and his team from Texas A&M University, plus astronomers from the University of Toronto, Swinburne University of Technology, Leiden University, and Macquaire University.

K2F2 is upgrading Flamingos-2 by designing and providing two medium band filters for splitting the range 1.9-2.5 microns. The main science cases are based in high redshift demography and synergies with current and forthcoming surveys, however the proposal envisions other applications as census of low mass stars in high extinction environments.

In addition to funding the design, procurement, and testing of the filters, Gemini has awarded the team with 10 hours of telescope time to demonstrate the scientific benefits of the new capability.

The filters were installed in the first half of 2017 and will be offered to our user community in 2017 Q4.

RAMSES Project

During the 2016 program cycle, Gemini awarded Professor Denise Gonçalves and her team involving astronomers from Federal University of Rio de Janeiro (Brazil), University of La Serena (Chile), Sejong University (Korea), National Observatory of Brazil, Institute of Earth and Space Sciences (Argentina), and Columbia University (USA).

The small project “Raman OVI narrow-band imaging with Gemini/GMOS” envisions a promising new technique to discover symbiotic stars in the Local Group of Galaxies by providing a special set of narrow band filters for both GMOS-S and GMOS-N instruments. In addition to funding the procurement and testing of the filters, Gemini has awarded the team with 10 hours of telescope time to demonstrate the new capability. The filters will be commissioned in 2017 Q4 and the new capability will be offered to users in 2018 Q2.

A medium size project was also awarded from the 2016 RfP and is currently under contract negotiation.

IUP 2017 Key Topics

<http://www.gemini.edu/sciops/future-instrumentation/rfpiup2017>

Request for Proposal (RfP) Documents

- RfP Main Document (IUP2017_RFP_F)
- Proposal Form (IUP2017_Proposal_Form)
- Sample Contract (N75388x_USP contract. f)
- Budget narrative form
- Budget worksheet template

Interface Control Documents and Specifications

<http://www.gemini.edu/sciops/instruments/specifications/>

Instrument Webpages and Instrument Fact Sheets

<http://www.gemini.edu/sciops/instruments/>

Scope

AURA is soliciting proposals to design, fabricate, assemble, test, deliver, and commission upgrades to its facility instruments (Flamingos-2, GMOS-N, GMOS-S, GNIRS, GPI, GSAOI, NIFS, and NIRI) and GRACES. Gemini seeks community-created, science-driven instrumentation upgrade proposals that fit within the total available budget and involve minimal to moderate technical risk.

In this call Gemini offers an H4RG detector and its controller package.

Schedule

Gemini intends for the awarded work to start by April 2018 and to be completed within 12 to 24 months of the contract execution date, depending on the work package.

Event	Date / Deadline
Notice of Intent due	September 14, 2017
Proposal due	October 5, 2017, 3pm MST
Evaluation Process starts	October 2017
Contract Negotiations start	December 2017

Budget

Gemini has a maximum available budget of USD 600k for the 2017 call. The baseline plan is to fund two projects of approximately 500k and 100k USD, but the Observatory welcomes proposals for any amount between no funding from Gemini up to the total budget. ***The H4RG detector and controller package cost is covered by Gemini.***

RfP Open

The RfP is open to all institutions or companies from Gemini partner nations. The RfP is also open to non-partner country PIs who have significant or relevant experience in using, designing and/or building an instrument for Gemini. The IUP contract can be awarded to profit or non-profit organizations or companies.

Collaborations

Gemini encourages collaborations and has opened a forum for those seeking additional partners to develop a team for this work:

<http://www.gemini.edu/sciops/future-instrumentation-amp-current-development/instrument-upgrade-projects/now-open-2017-req-1>

Telescope Time

The proposing team can request up to 10 hours of on-sky telescope time to demonstrate the scientific capability of the upgrade, describing how the time would be used to achieve this goal.

Evaluation and Selection

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. Include in the email the following:

A synopsis of the Proposed Project (an abstract of 500 words or less).

- A Point of Contact for communications.
- A list of proposed Key Personnel, including the PI(s), Project Manager and all senior personnel expected to be involved in the project.
- A list of the proposed project team member organizations including all 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.

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.

Evaluation Criteria

The Evaluation Panel will make recommendations to the Gemini Observatory following the evaluation scores and the questions in pages 6 and 7 of the RfP Main Document:

- **Scientific justification for the upgrade and science requirements: weighting 40%.**
- **Technical requirements and design changes: weighting 30%.**
- **Project management, system engineering, and team experience: weighting 30%.**

Selection

Gemini will make a best value selection after considering the following the Evaluation Panel report, price analysis and cost analysis, as needed, Gemini's ability to support the work and any additional information in the proposals themselves.

Once a team is selected, both parties will enter a period of contract negotiation. If all differences can be resolved, the agreement will be sent for approval.

Other proposers will not be notified of the results of this procurement until all relevant contracts have been fully executed.

How to submit a proposal

REQUEST FOR PROPOSALS (RFP) –N75388X
For
GEMINI Instrument Upgrades
Proposal Form (IUP)

ASSOCIATION OF UNIVERSITIES FOR RESEARCH IN ASTRONOMY, INC. (AURA)
OPERATING THE GEMINI OBSERVATORY
Hilo, Hawaii and La Serena, Chile

- The Proposal form is a Word document rather than PDF.
- Section 2 requires basic contact information, organizational type, and information regarding organizational performance.
- A “yes” response to questions in Sec. 2 require detailed responses.
 - Has the undersigned failed to complete any project or work under any contract in the last five years? _____
 - Are there any judgments, claims, arbitration proceedings, or lawsuits pending or outstanding against the undersigned or its officers? _____
 - Has the undersigned filed any lawsuits or requested arbitration with regard to a contract in the last five years? _____
- Note that there is a “Partner Names” Box.

Section 3 – Provide summary financial/pricing information for each Stage listed in Milestone Event table.

- Provide Total proposal price.
- Milestones are AURA's minimum milestones.
- You may propose alternative/additional milestone payments.
- Answer all questions in this section.

- Consider: Budgeted Labor Cost, Budgeted Equipment and Supplies Cost, Budgeted Contracted Services and Budgeted Summary.

5. Contract Terms

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.

Section 6. Surety Plan

- Proposers **MUST** submit a surety plan to protect AURA from either non-completion of the work or non-payment of subcontractors, It is not to ensure performance of the instrument.
- This is different than the insurance/warranty clauses. The questionnaire with examples of complying documentation is provided in the document set.

SURETY PLAN

The Surety Plan must describe the methods the Contractor shall use to guarantee the successful performance and completion of this Agreement and the mitigation of risk of the Contractor's non-payment of subcontractor invoices. The intent of the surety plan is to assure AURA it will be made whole in the event of problems with payment or performance.

Elements of a surety plan may include but are not limited to:

- Providing a performance bond;
- Providing the payment schedule set forth in the Contract;
- Providing purchase money security interest (e.g., a security agreement and financing statement as described in Article 9 of the Federal Uniform Commercial Code);
- Providing insurance; and
- Providing security, safety, and work procedures as well as physical devices that protect the hardware.

Please respond to the following questions:

- 1) What methods will proposer use to guarantee successful performance and completion of the Work?
- 2) How will proposer mitigate the risk of non-performance and non-payment of subcontractor invoices?

If Proposer is chosen to complete the Work, the Surety Plan will be subject to negotiation and final approval by AURA and Gemini. The final approved version of all such plans shall be incorporated by reference into the Contract.

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Section 7. Representations and Certifications

- You must complete all parts of this section.
- DUNS numbers are required.

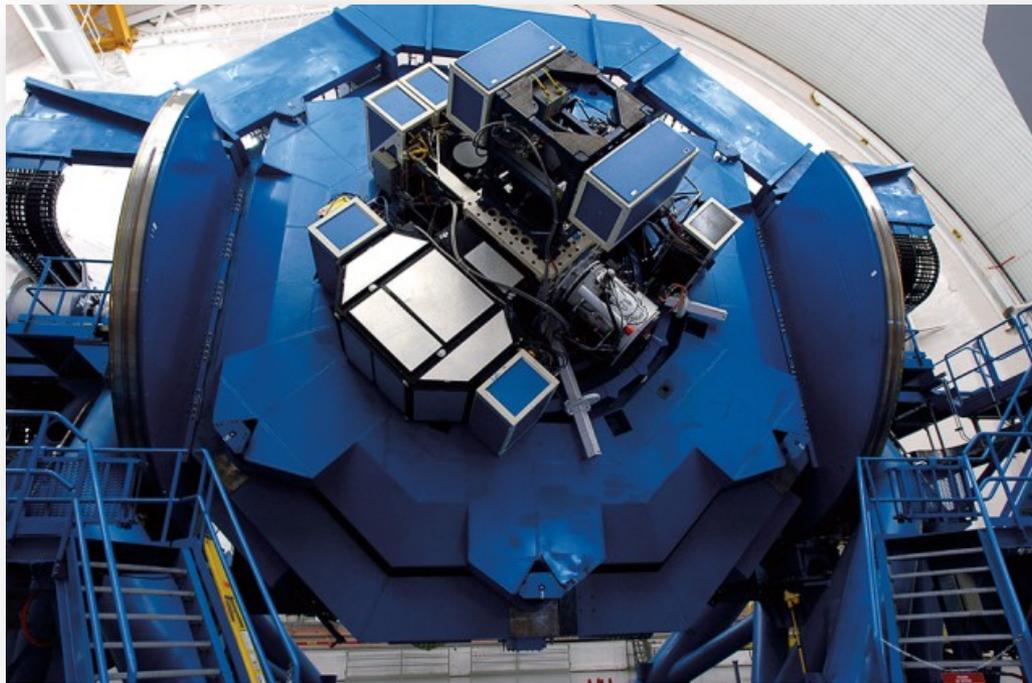
Questions & Answers

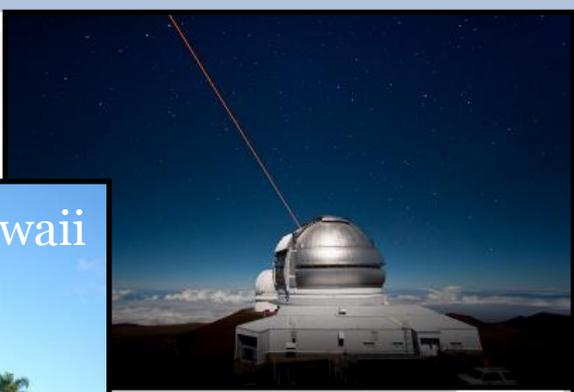




Thank You

APPENDIX





Gemini Observatory:
Operating twin 8m telescopes
on Mauna Kea and Cerro Pachon:
providing access to the entire sky



Hilo, Hawaii



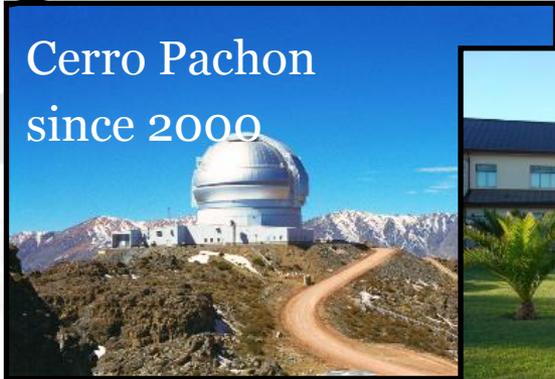
We are Here



We are Here

We are Here

We are Here
We are Here
We are Here



Cerro Pachon
since 2000



La Serena, Chile



Gemini is an International Partnership

International Agreement *2016-2021* includes as partners:
USA, Canada, Brazil, Argentina, and Chile



Ministerio de
Ciencia, Tecnología
e Innovación Productiva
Presidencia de la Nación



Shares **2016-2021:**
(Budget ~27+x \$M/year)

US 70 %
CA 20 %
BR 7 %
AR 3%
AUS+KOR +x%



KASI (Korea) is a limited-term partner since *2015*, aspiring to become a full partner.



Australia did not remain a full partner beyond *2015*, but is continuing in *2016* as limited-term partner.

Gemini serves a broad partnership and strives to meet their diverse needs by hosting a variety of instrument capabilities, fed by state of the art facilities and being operationally innovative.

Operations

Obtain time 4 ways:

- Standard TAC.
- Long and Large.
- Fast Turnaround.
- Director's Discretion.

Observe how you like:

- Queue.
- Classical.
- Priority Visitor.
- Base Facility Operations.

Gemini serves a broad partnership and strives to meet their diverse needs by hosting a variety of instrument capabilities, fed by state of the art facilities and being operationally innovative.

Instrumentation

Facility Instruments (4 + AO):

- Typically broad capability or appeal.
- Internal and external upgrade programs.

Visitor Instruments:

- Initial technical assessment.
- Apply through standard channels.
- Observe once (typically PV) or,
- come back again and offer to the community.

Funding:

- Can compensate in cash and telescope time.
- Can support funding efforts.

Instrumentation 2016+



Site	Instrument		FoV, Mode, Resolution	AO Support
Gemini-N up to 2018	GMOS-N NIRI NIFS GNIRS	360-940 nm 1-5 μm 950-2400 nm 1-5 μm	img 5.5'x5.5' LS, MOS, IFS (5"x7") R:600-4,000 img 20"x20" - 120"x120" IFS (3"x3") R:5000 LS R:1,800-18,000 (+img)	(ALTAIR) ALTAIR ALTAIR ALTAIR
Gemini-S GN in 2018	GMOS-S GSAOI FLAMINGOS-2 GPI	360-940 nm 950-2400 nm 950-2400 nm 900-2400 nm	img 5.5'x5.5' LS, MOS, IFS (5"x7") R:600-4,000 img 85"x85" with MCAO img 6.1' \varnothing LS, (MOS) (2'x6') R: 1,200-3,000 IFU 2.8"x2.8" contrast: 10^7 at 0.4"	(GeMS) GeMS (GeMS) XAO
~2018 2023	GHOST Gen4#3 (TBD)	360-1000 nm Visible + NIR	2 IFUs in 7' \varnothing R: 50,000 + 75,000 aimed to be an LSST complement instrument	(None)
Visitor INS 2017 2018 2018 2019 (TBC) 2020 (TBC)	TEXES (GN) DSSI (GN/GS) GRACES (GN) Phoenix (GS) POLISH2 (GN) IGRINS (TBC) HIPPI (TBC) TIKI (GS) pre-IRMOS (GS)	5-25 μm 400-1000 nm ~500-1000 nm 1-5 μm optical H+K optical mid-IR IR	LS R: 4,000 - 85,000 Dual EMCCD imaging, 20 mas resolution@650nm see CFHT/ESPaDOnS - high-res. spectrograph LS R: 50,000 - 80,000 high precision polarimetry LS R: 40,000 high precision polarimetry high-contrast, mid-infrared planet imager deployable IFUs	no AO speckle no AO no AO no AO no AO no AO own XAO GeMS

Main Requirements

- Provide new or enhanced scientific capability to one operating facility instrument or GRACES, fitting the available budget and schedule.
- The upgrade must be clearly motivated by the project science cases.
- The upgrade has to have minimum to moderate technical risk.
- The upgrade must not require major alterations to the Gemini telescopes and must comply with the Gemini Interface Control Documents (ICDs).
- The project should require a minimal level of effort from Gemini staff for achieving completion.

Telescope Time and Acceptance Test

The proposing team can request up to 10 hours of on-sky telescope time to demonstrate the scientific capability of the upgrade, describing how the time would be used to achieve this goal. Once the proposal is awarded, the PI must submit a DD proposal in order to follow the normal Phase II observation process at Gemini.

This awarded telescope time is not the same as the Acceptance Test telescope time, which would cover the on-sky observations sufficient to measure performance, as described in the Acceptance Test Plan. The Acceptance Test Report must provide baseline measurements, where applicable, for all tests prior to the upgrade. Gemini can assist with the requested baseline measurements prior to the upgrade changes.

Statement of Work

The Statement of Work as well as Contract Deliverables will be extracted from the proposal upon selection. Post-selection, Gemini and the selected team shall agree to the full list of project deliverables and milestones in accordance with the specific aspects of the upgrade.

Communication and Reporting

The project oversight will be performed through communications to the lead institution identified in the Proposal. Gemini will assign a technical representative for communications with the Project Principal Investigator.

In addition to the proposal deliverables, a set of intermediate deliverables may be required by AURA in each stage. They include:

- Kickoff Meetings: Presentation report.
- Monthly Progress Reports: Written report.
- End-of-Stage Review: Review documentation.

Document submission checklist

- Provided primarily as an aid to help you ensure you have submitted all required documents. We strongly recommend you use it to double check your submission.

Format requirements

- Paginate entire proposal as one document. Do not paginate each section individually
- Use 1" margins, single-column format, minimum 10pt font. A *sans serif* font is preferred.
- Combine all sections and documents into one PDF. You can save space by saving it as PDF/Reduced.
- Signatures may be electronic or signed as hard copy and scanned to PDF.

Submission

- Submit one copy via email to rfpiup@gemini.edu
No later than October 5, 2017, 15:00 MST (Arizona time)