Gemini Instrument Feasibility Studies (GIFS) RFP No. 0506720

Bidders Conference

Stephen Goodsell, Cathy Blough, Pascale Hibon & Scot Kleinman
Kayla Hardie

31st October 2014

Teleconference + Videoconference

Agenda

11:00 and 19:00 CLST	Welcome and Introduction
11:10 and 19:10 CLST	Gemini Observatory + Instrumentation Overview
11:30 and 19:30 CLST	GIFS Introduction
11:50 and 19:50 CLST	GIFS Proposal + Study Statement of Work
12:20 and 20:20 CLST	Science Objective, Case and Requirements
12:40 and 20:40 CLST	GIFS RFP Submission, Contract Form & T&Cs
13:00 and 21:00 CLST	Discussion/Q&A Session

Each presentation is planned so as to leave roughly half of each time slot for questions and answers.

Questions / Discussions encouraged

http://www.gemini.edu/sciops/future-instrumentation/gifs-gemini-instrument-feasibility-studies

Connection Details

Phone Connection

Toll free numbers:

- Argentina: +54 (0) 8003450501
- Australia: +61 1800453429
- Brazil: +55 08007611752
- Canada: +1 (877) 273-4202
- Chile: No toll free number was provided
- South Korea: +82 007986517458
- United Kingdom: +44 8000148184
- United States: +1 (877) 273-4202

Conference Room Number: 6873818

Polycom Connections

- Our MCU number: 139.229.33.250##1006

Welcome and Introduction

Gemini GIFS Team



Scot Kleinman
Project Sponsor



Stephen Goodsell
Project Manager



Kayla Hardie
System Tech /
Project Assistant



Pascale Hibon
Project Scientist



Cathy Blough
Contract Officer

http://www.gemini.edu/staff/

Conference Guidelines

Request for Proposals is a competitive process, hence:

- Gemini must provide the same information to all
- We will take an audio recording and host it on website
- 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

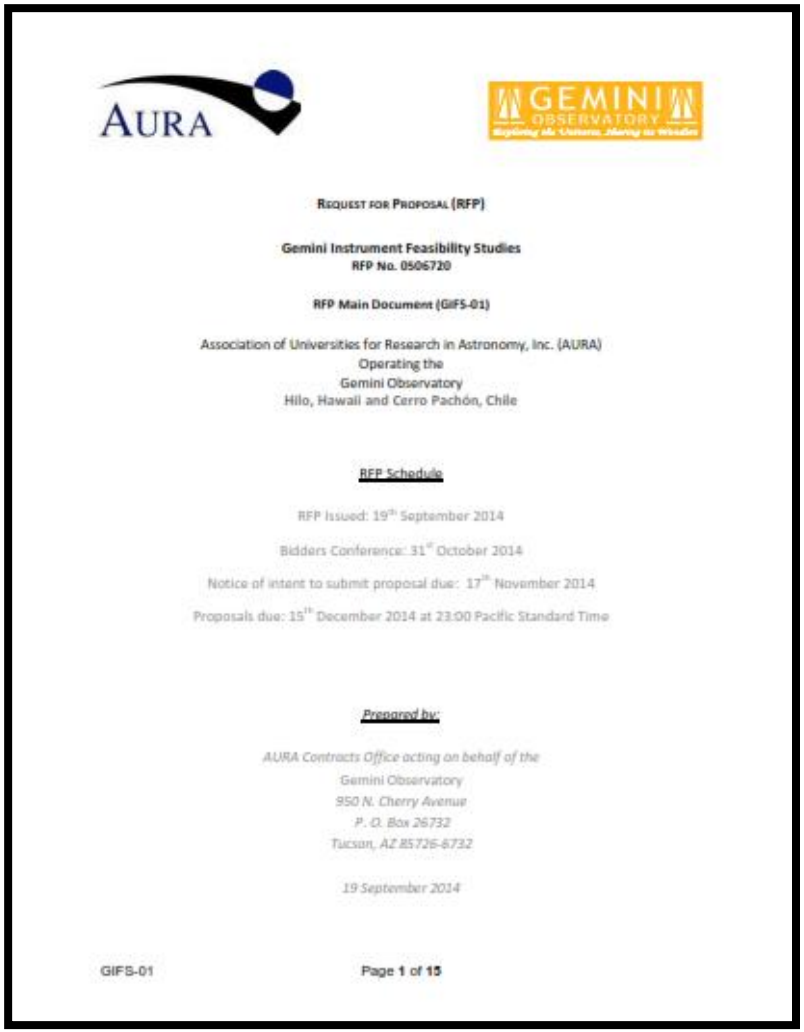
Things to remember:

- If we are speaking too fast during the Bidder's Conference please tell us to slow down or repeat ourselves
- We will repeat any questions asked
- Each slide has a number and we will say which slide we are referring to.
- Please mute when not speaking to eliminate feedback
- Gemini staff – please mute cell phones

Send any post-conference questions to gifs_rfp@gemini.edu (not to individuals)

Some slides contain links to our webpages for further information.

Bidders Conference Overview



AURA

GEMINI OBSERVATORY

REQUEST FOR PROPOSAL (RFP)

Gemini Instrument Feasibility Studies
RFP No. 0506720

RFP Main Document (GIFS-01)

Association of Universities for Research in Astronomy, Inc. (AURA)
Operating the
Gemini Observatory
Hilo, Hawaii and Cerro Pachón, Chile

RFP Schedule

RFP Issued: 19th September 2014

Bidders Conference: 31st October 2014

Notice of intent to submit proposal due: 17th November 2014

Proposals due: 15th December 2014 at 23:00 Pacific Standard Time

Prepared by:

AURA Contracts Office acting on behalf of the
Gemini Observatory
950 N. Cherry Avenue
P. O. Box 26732
Tucson, AZ 85726-6732

19 September 2014

GIFS-01 Page 1 of 15

Aim of the GIFS project

To obtain three or more science-driven instrumentation design study reports to the observatory, conforming to a number of desired principals.

Aim of the Bidders 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/gifs-gemini-instrument-feasibility-studies

Gemini Observatory Overview

Stephen Goodsell

Mission Statement: *'To advance our knowledge of the Universe by providing the international Gemini Community with forefront access to the entire sky.'*

http://www.gemini.edu/

Gemini Observatory Overview

Two Telescopes…



Gemini North

Gemini South

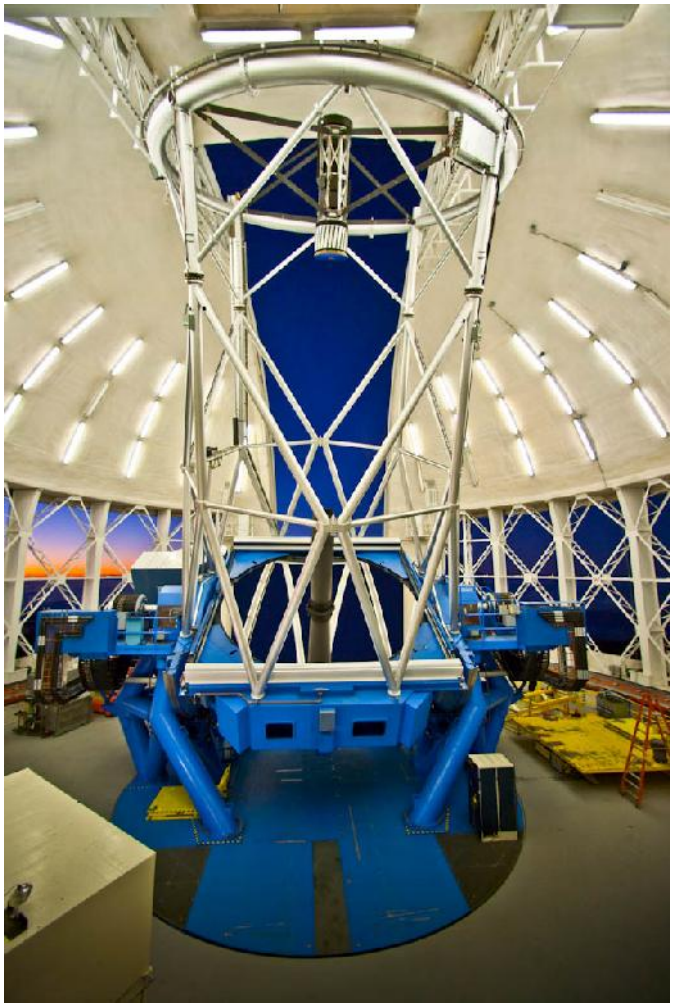


One Observatory

http://www.gemini.edu/sciops/

Gemini Observatory Overview

8-m Cassegrain telescopes





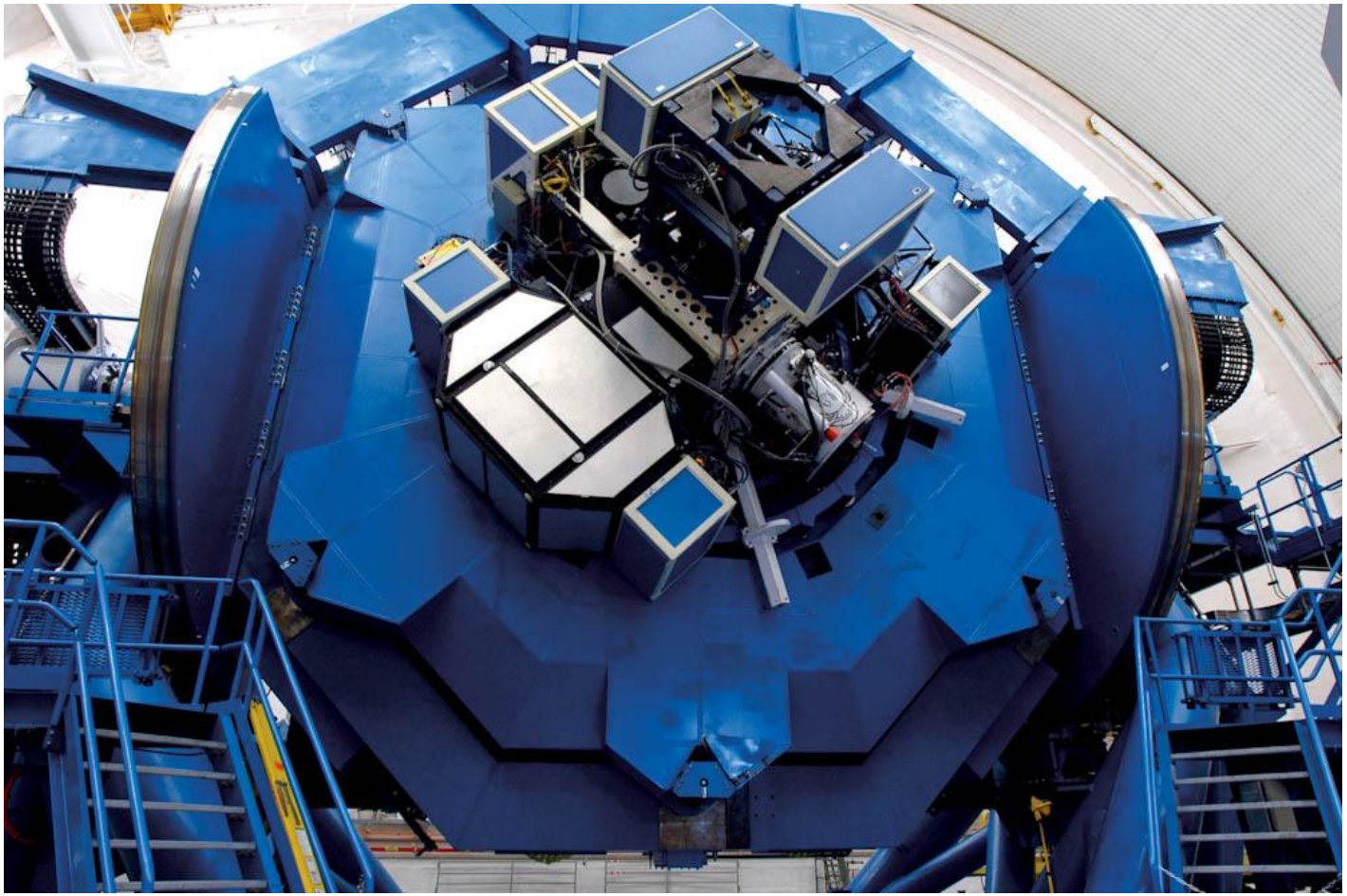
GN

GS

http://www.gemini.edu/sciops/telescopes-and-sites

Gemini Observatory Overview

Instrument Support Structure (ISS) with 5 instrument ports



http://www.gemini.edu/sciops/telescopes-and-sites/instrument-support-structure

Gemini Observatory Overview

Current Partnership

US 65.5%

Australia 6.2%

Canada 18.7%

Argentina 3.1%

Chile*

Brazil 6.5%

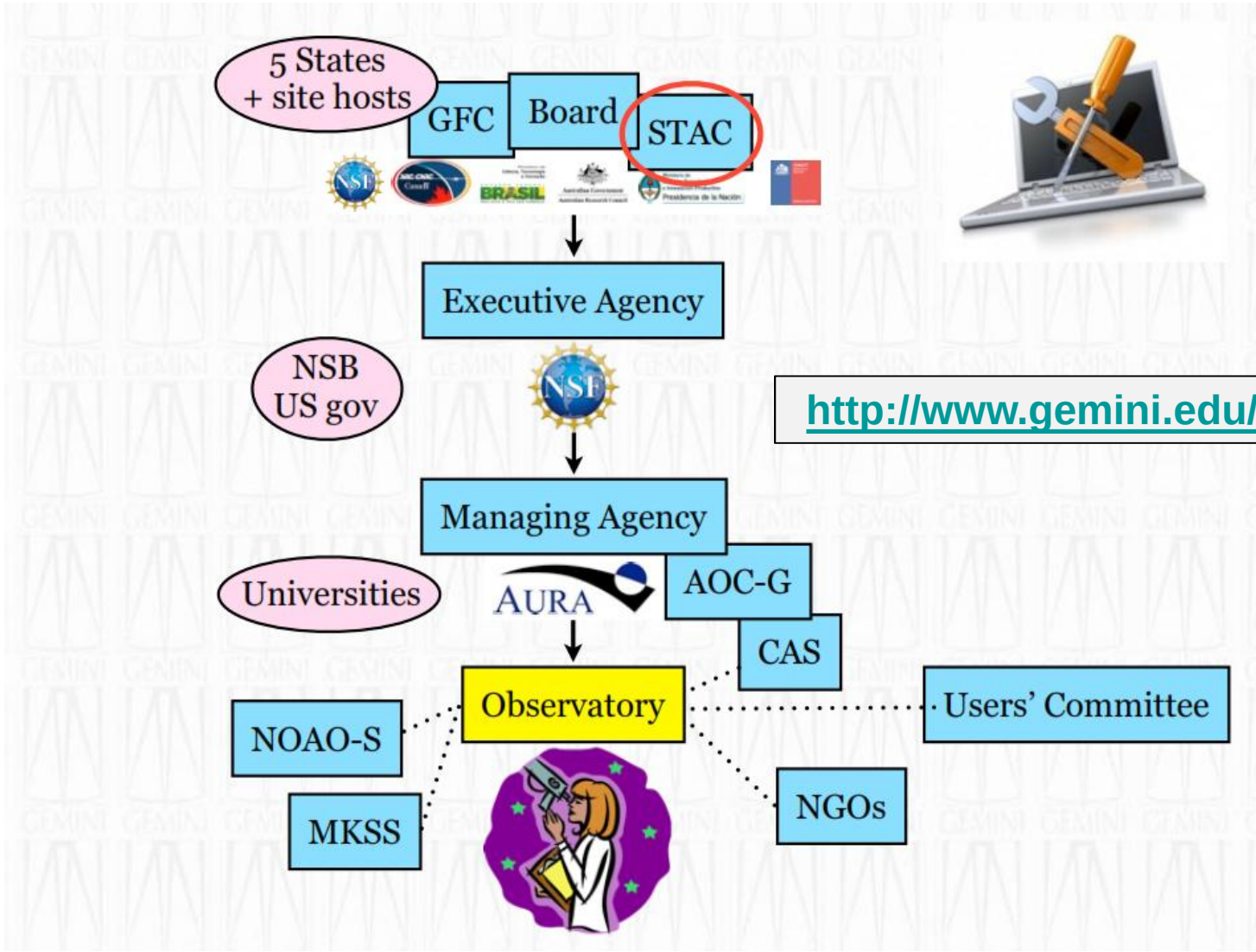


Hawaii*

*Non-funding Partners

http://www.gemini.edu/index.php?q=node/12

Gemini Observatory Overview



http://www.gemini.edu/science/

Gemini Instrumentation Program Overview

Stephen Goodsell

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

Current Instrumentation

4 instruments + 1 AO system at each site

3 instruments and the AO system simultaneously mounted

Site	Instrument		FoV, Mode, Resolution	AO Support
Gemini-N	GMOS-N	360-940 nm	img 5.5 ‘x5.5’ LS, MOS, IFS (5” x7”) R:600-4,000	(ALTAIR)
	NIRI	1-5 µm	img 20” x20” - 120” x120” LS R:500-1,000	ALTAIR
	NIFS	950-2400 nm	IFS (3” x3”) R:5000	ALTAIR
	GNIRS	1-5 µm	LS R:1,800-18,000 (+img)	ALTAIR
Gemini-S	GMOS-S	360-940 nm	img 5.5 ‘x5.5’ LS, MOS, IFS (5” x7”) R:600-4,000	(GeMS)
	GSAOI	950-2400 nm	img 85” x85” with MCAO	GeMS
	FLAMINGOS-2	950-2400 nm	img 6.1’ Ø LS, (MOS) (2’ x6’) R: 1,200-3,000	(GeMS)
	GPI	900-2400 nm	IFU 2.8” x2.8” contrast: 10^7 at 0.4”	XAO
TBC 2018	*(GHOST)*	360-1000 nm	2 IFUs in 7’ Ø R: 50,000 + 75,000	(None)
Visiting	TEXES (GN)	5-25 µm	LS R: 4,000 - 85,000	none
	DSSI (GN)	400-1000 nm		speckle
	(GRACES)	~600-1000 nm	Dual EMCCD imaging, 20 mas resolution@650nm	none

Links included in table

Instrument Interface Control Docs

ISS Mounted Instrument **Bench Mounted Instrument**

Specifications			
G0013	Gemini Environmental Requirements	B	8 Oct 1996
G0014	Gemini Observatory Optomechanical Coordinate Systems	B	8 Sep 2011
Interfaces			
ICD 1.1.1/1.9	Telescope Structure to Science Instruments	1	5 Jun 1995
ICD 1.5.3/1.9	ISS to Science Instruments ICD	C	12 Aug 2014
ICD 1.9/3.6	Science and Facility Instruments to System Services ICD	D	Dec 2005
ICD 50	GIAPI C++ Language Glue API	11	17 Jan 2014

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

Gemini Generation 4#3

1st Gen of Instruments (Abingdon)

- Agreed and decided by partner countries GMOS, NIRI, GNIRS, ALTAIR…

2nd Gen. of Instruments (Ad Hoc)

- NIFS, F2, GSAOI, GeMS, NICI

3rd Gen. of Instruments (Aspen)

- GPI

4th Gen. of Instruments (Spawned by ALTAIR Report)

- GHOST, GRACES, ?No 3?

Instrumentation Development Funding (IDF)

Best effort basis ($8m - $12m)

Gen 4#3: Approach + Benefits

Designing an approach which achieved the following benefits:

- Engage, align and empower the Gemini community in deciding the instrument capability.
- Create more than one instrument capability option for the observatory.
- Encourage collaborations within the community before deciding on a instrument capability.
- Have Gemini collaborate with teams at an earlier stage than before.
- Avoid teams competing against each other to design against the same instrument spec. (Optimize funds)
- Get the best possible science team to lead, evolve and progress the science case.
- Get the best possible team to design and build the instrument.
- Reduce the time and latency to sign/negotiate contracts + reduce the number of competitive down selects.

Two projects: GIFS + then Gen4#3

Gen 4#3: Timeline

Gen4#3 Milestones	Date	Notes
Project Initiation	Apr 14	
GIFS RfP Launch	Sep 14	
Gemini Release FS RfP	Aug 14	
Gemini Receives Proposals	Dec 14	Selects 3+ teams
Feasibility Studies start	Feb 15	
Gemini Receives Feasibility Studies	Sep 15	
Gemini releases Gen4#3 RfP	Q4 15	
Gemini Receives Proposals	Q1 16	
Proposals Selection	Q2 16	Selects 1 or 2 teams
Conceptual Design Study Starts	Q3 16	
Conceptual Design Review	Q4 16	Down select if required

GIFS Introduction

Stephen Goodsell

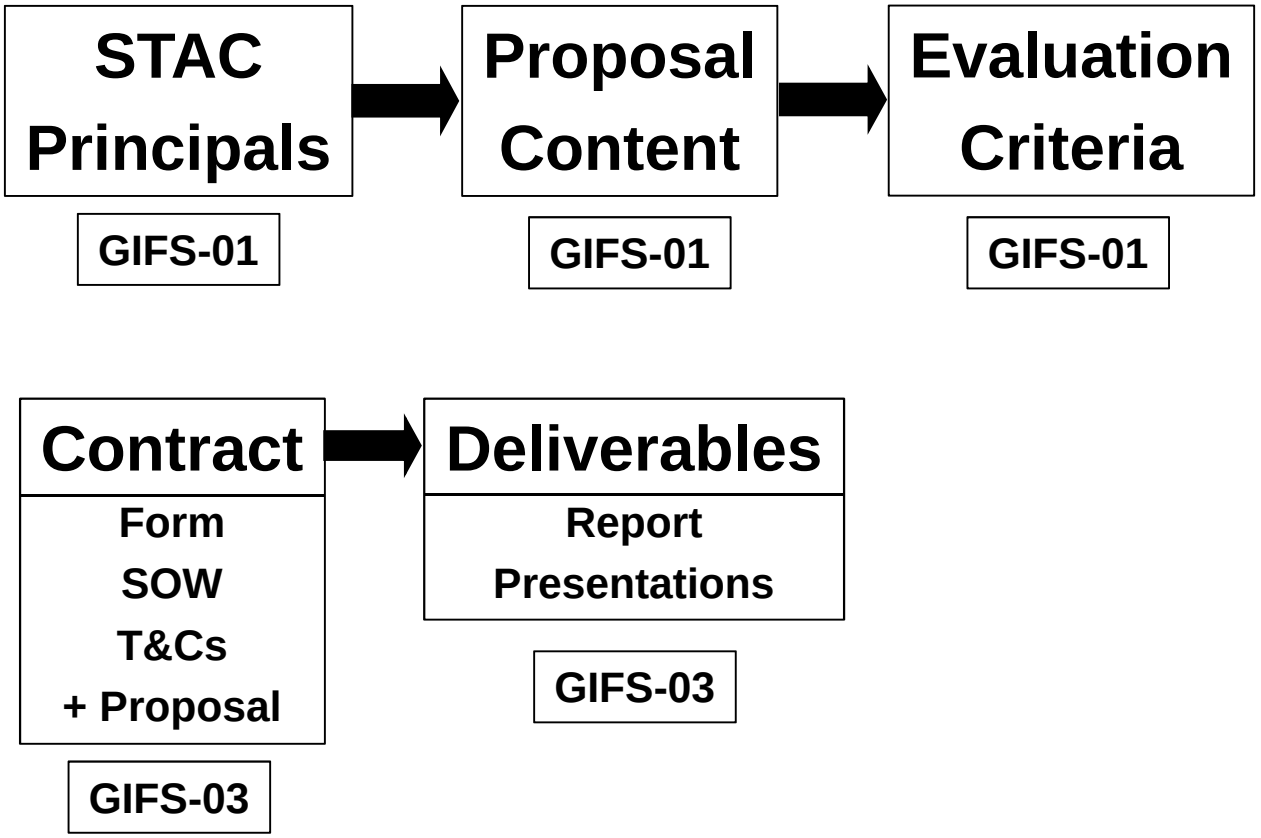
http://www.gemini.edu/sciops/future-instrumentation/gifs-gemini-instrument-feasibility-studies

Request for Proposal Documents

- Request for Proposal (Document GIFS-01)
- Proposal Form (Document GIFS-02)
- Fixed-Price Gemini Instrument Feasibility Study Contract
  - Main Document (Document GIFS-03.1)
  - Statement of Work (Document GIFS-03.2)
  - Terms and Conditions (Document GIFS-03.3)

http://www.gemini.edu/sciops/future-instrumentation/gifs-gemini-instrument-feasibility-studies

GIFS Structure



Gen4#3: STAC Principles

- The instrument should be a **workhorse instrument**, meaning that it has **broad scientific appeal** and enables a **wide range** of **science cases**.
- The proposals should be **science driven** and include **science cases**. Science cases that provide **synergies** with **new capabilities** coming online (e.g. LSST, JWST, ALMA, etc) are highly desirable, especially including capabilities needed to follow up survey discoveries.
- The instrument should fit within the **technical constraints** of the Gemini telescopes as they now exist.
- The expected cost of the instrument shall be capped at a cost that is to be determined as part of the process of defining the RfP. **(i.e Gen4#3 RfP)**
- The **technical risk** of the instrument should be **modest**, i.e. the success of the instrument should not depend upon some not-yet-proven technology.
- The **instrument** should be **highly efficient**, maintaining the 8-m aperture advantage.
- Although proposals for all instruments fitting these criteria will be fully considered, it is the majority opinion of the STAC that a ***wide-bandwidth moderate-resolution spectrograph*** is likely to prove most compelling.

http://www.gemini.edu/science/public/STAC/stac2012b_report.pdf

GIFS: Funding

- Gemini intends to award 3+ GIFS contracts for instrument feasibility studies,
  - Maximum available budget for each contract limited to **USD 100,000**
  - Total budget for this activity is **USD 300,000**
- Gemini welcomes proposals with **partial or no funding** from Gemini.
  - Please submit proposals to allow for internal planning and for the allocation of internal support for each study.

GIFS RfP/Selection Events	**Date / Deadline**
Release RfP	19th September 2014
Bidders Conference	31st October 2014
Notice of Intent to Submit Proposal	17th November 2014
Proposal Deadline	15th December 2014
Proposal Evaluation Review	12th January 2015
Selection Deadline	19th January 2015
Contract Negotiations	26th – 6th February 2015

GIFS Introduction

- The RfP is open worldwide, and not restricted to the Gemini community.
- Gemini encourages collaborations and will provide a **mechanism** for groups to find additional partners to form a complete team for this work. Thus, groups with some interest in GIFS, but lacking the complete expertise needed to complete the work, should still submit a letter of intent and use our system to find additional partners for the work. **Gemini Observatory will host a webpage listing teams seeking to collaborate on proposals.**

- Gemini is looking for science-driven feasibility studies based on a facility instrument costing between **USD 8,000,000** and **USD 12,000,000**
- The preferred duration for such a project is expected to be no more than **6 years**.

GIFS Deliverables

The **three main contract deliverables** will be the:

- Feasibility Study Report
- Feasibility Study 2015 Gemini Meeting Progress Presentation (30 minutes presentation)
- Feasibility Study Review Presentation (0.5 day review)

Contract Events	**Date / Deadline**
Start Feasibility Studies + Kickoff Meeting	week beg. 9th Feb 2015
Midpoint Site Visit	week beg. 11th May 2015
Feasibility Study Progress Presentation at the 2015 Gemini Meeting	15th - 18th June 2015
Submit Initial Feasibility Study Report	13th July 2015
Feasibility Study Review	10th - 12th August 2015
Submit Final Feasibility Study Report	12th September 2015

GIFS
Proposal Content
Statement of Work

Stephen Goodsell

Request for Proposal (Document GIFS-01)

GIFS Proposal Format + Content

We aimed to accommodate a wide range of proposals.

I.e. teams with science case requiring expansion, wanting to build a collaboration to teams with an instrument concept to teams wanting to adapt an existing design or instrument to the Gemini telescope.

The entire proposal must not exceed a total of 50 pages.

This represents a **MAXIMUM** page limit… We didn't want to receive full design details from teams that have an existing instrument.

Your Gemini Instrument Feasibility Study proposal document must include the following named sections (listed in boldface).

There are 6 named sections we are requesting teams to include in their proposal.

There is a comprehensive list of sub-points requesting the inclusion of information for each section.

The evaluation criteria (and weighting) is based on per section rather than per sub-point, with the sub-points helping to guide the proposer and the evaluation panel.

Gemini aimed to be as transparent as possible.

GIFS Proposal Content (1/4)

a) **Executive Summary**: a brief one page summary of proposed project approach.

b) **Science objectives, science case and science requirements:** [Weighting 45%]

- Include the science objectives/questions you will base your study on.
- Include draft/initial science case(s) based on addressing the science objectives/questions.
- Include a description of the science enabled by the instrument.
- Either present a wide range of science cases or a strategy for obtaining a wide range of science cases during the study.
- Give an explanation of the scientific motivation for the proposed instrument design.
- Demonstrate how the draft/initial science case(s) have relevance to astronomers in the Gemini partner communities.
- Demonstrate how the draft/initial science case(s) provide synergies with existing and future capabilities and survey discoveries.
- Clearly derive any provided science requirements from your draft/initial science case(s).
- Propose how you would grow/expand/evolve the science objectives, case and requirements during the feasibility study, maximizing the knowledge of Gemini's international community.
- Describe how you would use study funding to expand, build and strengthen the scientific case for your proposed instrument.

GIFS Proposal Content (2/4)

c) **Feasible Instrument Design and Technical Requirements:** [Weighting 25%]

- Given any science requirements, present any derived top-level (system) requirements for your proposed instrument.
- Present a description of the proposed instrument's design and functionality.
  - Include brief descriptions of the instrument's major subassemblies.
  - Provide any available details about the optical, opto-mechanical, electrical and software designs.
  - Provide any relevant layouts of the instrument's major subassemblies.
- Propose how you would use study funding to create/develop the design.
- Propose how you would demonstrate the feasibility of the design.
  - Gemini would prefer an efficient instrument of modest technical risk. How would you demonstrate the design is technically feasible with today's technology or with a reliable technology roadmap appropriate for the required timescale of the instrument?
- Provide a description of the known risks associated with feasibility of the proposed design along with your plans to address/research and mitigate them.
- Confirm that the proposed specification/design represents an instrument with broad scientific appeal (i.e. a potential "workhorse" instrument) and is highly efficient, maintaining the 8m aperture advantage.
- Consider how you will demonstrate the feasible instrument design will fit within the technical constraints of the Gemini telescopes.
  - The proposed instrument must not require major alterations to the Gemini telescopes and must comply with the Gemini ICDs.

GIFS Proposal Content (3/4)

d) **Project Management Plan and System Engineering**: [Weighting 15%]

- Provide a description of the systems engineering methodology approach and tools that would be used during the feasibility study.
- Provide a description of the project management approaches and tools that would be used during the feasibility study.
- Provide an explanation of how cost, schedule and requirements will be monitored and controlled during the work.
- Provide an organizational chart.
- Provide a description of the overall risk management approach.
- Include a work breakdown structure and Gantt chart for the feasibility study.
- Include and justify your proposed budget for completing the feasibility study.
- Give an explanation as to why the team believes designing, building and testing the instrument can be completed within Gemini's budget range and schedule. (See Section 1k)

GIFS Proposal Content (4/4)

e) **Background Information**: [Weighting 15%]

- Provide an explanation of why the team and their institution(s) are interested in this project.
- Describe the experience, knowledge and strengths the team would bring to Gemini in performing the work.
- Provide a description of the history and structure of the organization(s) and subcontractor(s).
- Provide brief biographies of the key team members and include a description of past projects, highlighting collaborative projects that required scientific knowledge and technical and management skills similar to those required for this work.
- Provide a relevant scientific and technical publication list for key members of the team.
- Provide details of any work that would be subcontracted, including their experience of the proposed subcontractors.
- Provide any available statements of support from the home institution(s) and describe the relative priority of this project relative to others being undertaken.

f) **Contract Form Objections**:

- List all of your objections to the provisions of the contract (GIFS-03). Optionally you can supplement your proposal with a redline version of the contract.

GIFS Statement of Work

Fixed-Price Gemini Instrument Feasibility Study Contract: Statement of Work (Document GIFS-03.2)

Sections

- Scope of Work
- Kick Off Meeting
- Monthly Progress Reports
- Midpoint Site Visit
- Feasibility Study Deliverables
  - Feasibility Study Report
  - Feasibility Study 2015 Gemini Meeting Progress Presentation (30 minutes presentation)
  - Feasibility Study Review Presentation (0.5 day review)
- General Rights and Responsibilities

GIFS Statement of Work: Scope (1/5)

(a) Contractor shall perform all tasks necessary to successfully develop a feasible instrument design for a Gemini instrument following the principles set out by the STAC and as set forth in more detail in this Statement of Work (the "Work"). Contractor shall complete all Work by the Completion Date. (see section 0, Definitions)

(b) Gemini's nominal budget for this instrument is the Instrument Budget amount (see section 0, Definitions). Gemini's goal for completing the instrument (through completion of the Commissioning Stage) is the Instrument Schedule (See section 0, Definitions). Contractor shall prepare the feasibility study so that the studied instrument abides with the STAC Principles and can realistically be completed within the required timescale and budget.

(c) Contractor shall document their full science objectives, science case and science requirements.

(d) Contractor shall fully explain the relevance and value of the science to the Gemini Community.

(e) Contractor shall provide a Concept of Operations to demonstrate how operating at the observatory given typical operation/support resources would be feasible:

- Contractor should provide specific examples of science observations created from the science cases.
- Contractor should describe each of the instrument's operating modes and key operating scenarios.
- The operating scenarios should be described in sufficient detail for a technically and scientifically skilled, but non-expert, audience to understand.

GIFS Statement of Work: Scope (2/5)

(f) Contractors shall include technical requirements and requirement traceability:

- Each technical requirement must identify the source(s) used to derive it.
- Provide a brief description of how the requirement was derived from its source and explicitly state any assumptions made.
- Each requirement should be quantified such that it would be objectively verifiable at some stage in the testing or commissioning of the instrument.
- Demonstrate requirements compliance by providing:
    - A summary of the flowdown of the science cases cross-referenced to the instrument requirements.
    - Compliance summary matrix comparing the requirements and the studied design.

(g) Contractor shall document the rationale behind key design choices and any design flexibilities or design trades:

- Provide a description of priorities involved in any needed science, performance, or management trades.
- Discuss the results and analyses of any performed trades.
- Discuss the basis and results of any simulations used in the study.

(h) Contractor shall develop and document the optical, mechanical, electronic, and software designs of the instrument, including the detector and controller:

- Provide a description of the instrument's subassemblies.
- Demonstrate the instrument concept is feasible given Gemini's interfaces (see Interface Control Documents) and operating environment, including flexure, vibration, windshake, temperature, humidity, dust, etc.
- Provide a summary of the technical high risk items included in a risk register table.

GIFS Statement of Work: Scope (3/5)

(i) Contractors should make sure the optical design covers the following:

- A depiction of the general layout of the optical components.
- Analysis including spot diagrams, flexure analysis, tolerance, etc., as needed, to demonstrate feasibility.
- A description of optical mounting schemes, including the approach used to mount and align all optical components, demonstrating feasibility.
- A description of key risks associated with the optical design, e.g. long-term stability of optical alignment, manufacturability, coating reliability, expected lifetimes, etc.
- A description of any throughput budgets or required optical tolerances.

(j) Contractors should make sure the mechanical design covers the following:

- A schematic overview of all subassemblies in the mechanical layout.
- Designs, (3D models / drawings), for all subassemblies.
- A description of the design elements that is common to multiple assemblies.
- Outline of instrument integration procedure to verify feasibility.
- Analysis showing that there is no significant instrument handling or space envelope issues with the design as conceived.

(k) Contractors should make sure the electronic design covers the following:

- An overview of the electronic systems needed to operate the instrument to verify feasibility.
- Estimate of the number of separate control systems the electronics design must support.
- A summary of the use of commercial versus custom boards.
- A description of the detector and controller including a recommendation of what currently available detectors could be used in the instrument to satisfy as many of the requirements as possible.

GIFS Statement of Work: Scope (4/5)

(l) Contractors should make sure the instrument's software design covers the following:

- The identification of any instrument control software technical risks associated with feasibility.
- A description of the software functional requirements.
- A description of the hardware platform(s) envisioned along with the software architecture and physical layout of major instrument software components to demonstrate feasibility.
- A description of the overall software design including information on existing software that may form the basis of the instrument software.
- A top-level description of any internal interfaces to third party products, with a focus on types of communication between software components and protocols.
- A top-level description of required development platforms and tools, with specific identification of which items will need to be acquired.
- A summary of the algorithms and tools required for developing the software to demonstrate feasibility.

(m) Contractors should make sure the data reduction needs of the instrument are stated and are demonstrated to be feasible.

GIFS Statement of Work: Scope (5/5)

(n) Contractor shall consider the work required to design, fabricate, assemble, test and the deliver the instrument to demonstrate that the instrument could be completed within the Instrument Budget and Instrument Schedule. To demonstrate feasibility your study should include:

- The estimated cost of delivering the instrument the design was based on (including tolerances and assumptions).
- The estimated schedule of delivering the instrument the design was based on (including tolerances and assumptions).
- A draft Work Breakdown Structure.
- Potential management risks.
- Required facilities to execute the project.
- Any special skillsets/knowledge sets to execute project.
- Major and long lead procured items.

(o) Contractor shall track progress of the contract and provide a report that compares the completed work, schedule, and expenditures at the end of the contract to the original planned work, schedule, and expenditures given in the proposal. This report includes any realized deviations from the original plan in terms of planned goals, cost, duration, and risk reduction and describes expenditures in detail. This report will be included as a section in the Feasibility Study Report (see Section 6.1) and conclude with a discussion of any lessons learned.

GIFS Statement of Work

Kick Off Meeting

Monthly Progress Reports

Midpoint Site Visit

Feasibility Study Deliverables

- Feasibility Study Report
- Feasibility Study 2015 Gemini Meeting Progress Presentation (30 minutes presentation)
- Feasibility Study Review Presentation (0.5 day review)

General Rights and Responsibilities

Fixed-Price Gemini Instrument Feasibility Study Contract: Statement of Work (Document GIFS-03.2)

Toronto Meeting



http://www.gemini.edu/fsg15

Science Objectives
Science Case
Science Requirements

Pascale Hibon

Gen4#3: STAC Principles

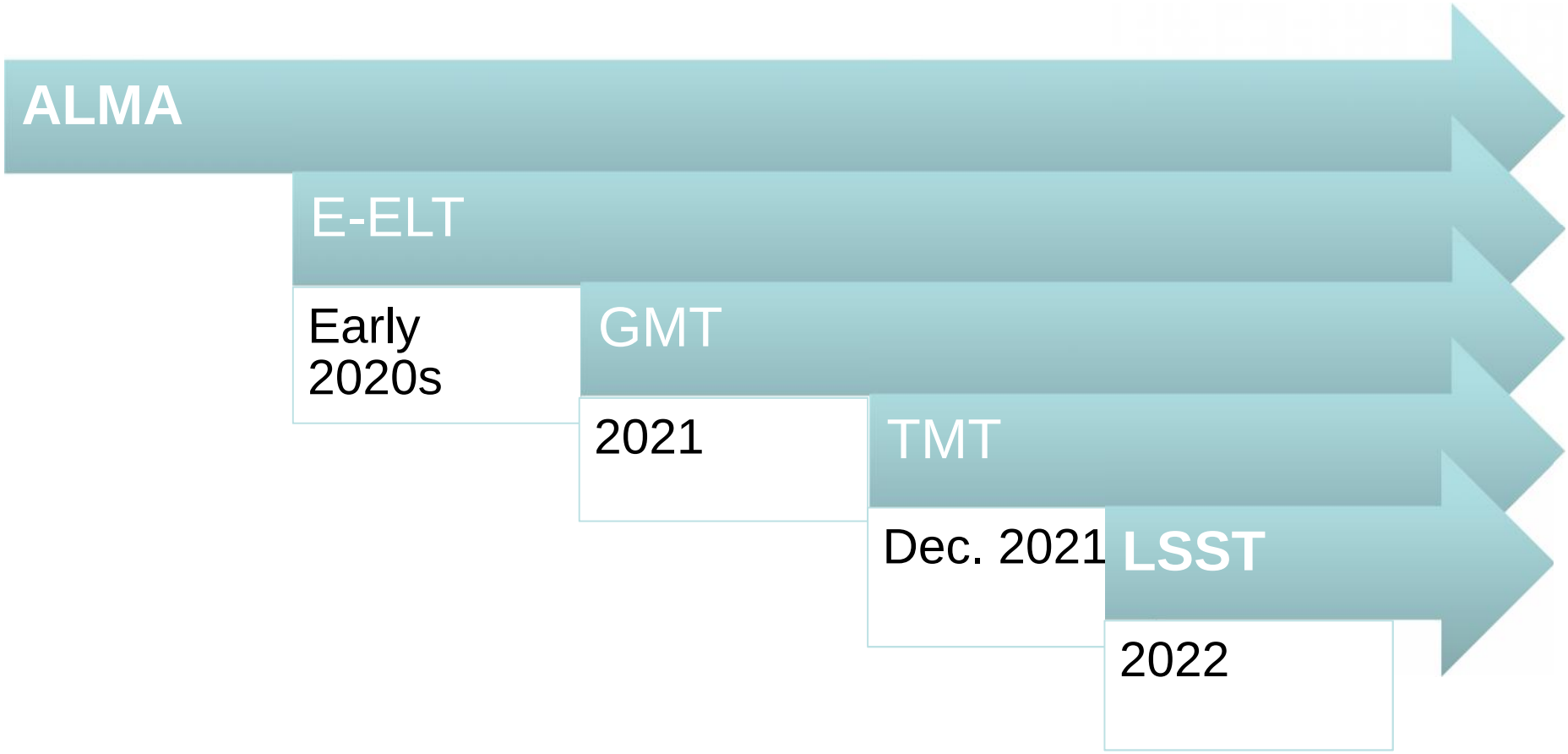
- *The instrument should be a workhorse instrument, meaning that it has **broad** scientific appeal and enables a **wide range of science cases**.*
- *The proposals should be science driven and include science cases. Science cases that provide **synergies with new capabilities** coming online (e.g. **LSST**, **JWST**, **ALMA**, etc) are highly desirable, especially including capabilities needed to **follow up survey discoveries**.*

http://www.gemini.edu/science/public/STAC/stac2012b_report.pdf

GIFS Proposal Guidelines

- Include the science objectives/questions you will base your study on.
- Include draft/initial science case(s) based on addressing the science objectives/questions.
- Include a description of the science enabled by the instrument.
- Either present a wide range of science cases or a strategy for obtaining a wide range of science cases during the study.
- Give an explanation of the scientific motivation for the proposed instrument design.
- Demonstrate how the draft/initial science case(s) have relevance to astronomers in the Gemini partner communities.
- **Demonstrate how the draft/initial science case(s) provide synergies with existing and future capabilities and survey discoveries.**
- Clearly derive any provided science requirements from your draft/initial science case(s).
- Propose how you would grow/expand/evolve the science objectives, case and requirements during the feasibility study, maximizing the knowledge of Gemini's international community.
- Describe how you would use study funding to expand, build and strengthen the scientific case for your proposed instrument.

Future Facilities– Ground Based



Future Facilities– Space Based



Present and Future Surveys

Survey	Sky Coverage Area
UltraVista	1.5 deg^2
VIDEO	15 deg^2
VMC	184 deg^2
VVV	520 deg^2
Viking	1500 deg^2
KIDS	1500 deg^2
VPHAS	1800 deg^2
SDSS MANGA	~ 4000 deg^2
ATLAS	4500 deg^2
Dark Energy Survey	5000 deg^2
PAN-STARRS	> 6000 deg^2
SDSS EBOSS	7500 deg^2
UK Infrared Deep Sky Survey	7500 deg^2
EUCLID	15 000 deg^2
SkyMapper	20 000 deg^2
LSST	**20 000 deg^2**

Science Objectives

Which scientific questions do you want to answer?

- Are there terrestrial planets orbiting other stars?
- How typical is our Solar System? What are the planetary environments around other stars?
- When did galaxies form their stars?
- How many super-massive black holes exist?
- When and where did the stars and the chemical elements form?
- What were the first objects?
- How many types of matter exist? What is dark matter? Where is it?
- What is dark energy? Does it evolve? How many types are there?
- Extending the age of discovery
- etc….

WE ARE OPEN TO ANY SCIENTIFIC RESEARCH AREA!

GIFS RFP
Submission, Contract Forms
Terms and Conditions

Cathy Blough

The NSF-AURA-Gemini Relationship

The NSF cooperative agreement (a contractual relationship)requires compliance with the following:

- NSF Financial and Administrative Terms and Conditions for Cooperative Agreements (FATC)
- Cooperative Agreement Programmatic Terms and Conditions
- Supplemental Financial and Administrative Terms and Conditions for Cooperative Agreements (S-FATC) (different versions for FFRDCs and Large Facilities)
- The Federal Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Title 2 CFR 200 et seq.
- NSF Proposal and Award Policies and Procedures Guide (PAPPG)

Embracing the Environment of Compliance

- To deliver on the promise of a 21st-Century government, the Office of Management and Budget (OMB) is streamlining the Federal government's guidance on Administrative Requirements, Cost Principles, and Audit Requirements for Federal awards.

- The Federal Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards," Title 2 CFR 200 et seq. provides a government wide framework for grants management.

- These modifications are a key component of a larger Federal effort to more effectively focus Federal resources on improving performance and outcomes.

- This final guidance supersedes and streamlines requirements from OMB Circulars A-21, A-87, A-110, and A-122 (which have been placed in OMB guidances); Circulars A-89, A-102, and A-133; and the guidance in Circular A-50 on Single Audit Act follow-up.

Proposal Process

AURA follows policies that ensure a thoughtful and equitable process when issuing Requests for Proposals.

The process involves:

- A clear and detailed announcement of opportunity
- Clear deliverables
  - Feasibility Study Report
  - Feasibility Study 2015 Gemini Meeting Progress Presentation
  - Feasibility Study Review Presentation (0.5 day review)
- A pre-proposal Q&A, the “Bidders Conference”
- Notice of Intent to propose
- Forms that provide information that satisfy the federal requirements
- Proposal evaluation based on the AO criteria

A Successful Proposal

If in doubt, ask

- Ask early, ask often
- Follow the directions regarding formatting your proposal
- Carefully complete the Proposal Form (Exhibit A) and the Representations and Certifications.
- Have the completed Proposal and Proposal Forms reviewed, approved, and signed by the appropriate administration official of your institution or company who has authority to bind your institution or company to contractual obligations.
- If you will have sub contractors, ensure that you have equivalent assurances from all subcontractors.
- Proposals are contractually binding offers. By submitting a proposal you are making an offer to enter into a contract prepared using the Fixed Price Gemini Instrument Feasibility Study Contract (Document GIFS-03) with the Statement of Work (Document GIFS-03.2) portion modified to conform to the specifics of your proposal.

Discussion

Questions & Answers



That's all folks!