Large and Long Programs

Gemini Observatory announces the opportunity for Large and Long Programs, beginning with observations in the 2014B semester.

Full proposals for new Large and Long Programs are due March 31, 2014, 23:59 HST (Hawaii-Aleutian Standard Time). Investigators must have previously submitted a letter of intent by the February 2014 deadline. Proposals for Large and Long Programs will be accepted annually.

The announcement text below is also available as a separate PDF document.

Large and Long Programs at Gemini Observatory

Large and long programs (hereafter "large programs" or LPs) are Principal Investigator-defined and -driven programs that, as a guideline, either require significantly more time than a partner typically approves for a single program or extend over two to six semesters, or both. Large programs are expected to promote collaborations across the partnership's communities, to have significant scientific impact, and normally to provide a homogeneous data set, potentially for more general use. Proposals for Large and Long programs will be accepted annually.

The participating partners (US, Canada, Australia, and Argentina) will make available for LPs up to 20% of their time at each Gemini telescope over each of the next 6[*] semesters from the start of LP execution. Principal Investigators (PIs) of LPs must be based in an institution of one of the participating partner countries. There is no restriction on Co-Investigators. Potential investigators shall be encouraged to collaborate across the participating partnership. The LPs are designed to enable large multi-partner collaboration programs and/or programs running across multiple semesters to be reviewed within a single time allocation process.

All instruments and their modes that are fully commissioned at the time of this announcement are eligible for LPs. See FAQ Question #1 for a complete list. All observing modes are eligible for LPs, including the new priority visiting observing mode and targets of opportunity.

PIs who propose for LPs have additional requirements, including submission of a letter of intent, development of a management plan, and consideration of added value to the astronomical community through data products, software, or other outcomes; Successful PIs must additionally report on their progress annually.

*: Australia agrees to participate in the LP process through 2015, and Australian PIs are eligible for programs that will conclude by the end of 2015.

Questions and Answers

All questions concerning proposals, or any other subject, should be made using the Gemini HelpDesk. This web-based system will send the request to your National Gemini Office staff in the first instance who will then escalate it to Gemini staff if necessary.

Comments and suggestions on the format and content of this page and supporting pages are welcome, and should be sent to Steve Margheim (smargheim@gemini.edu).

Contents:

LP Proposal Process

Letters of Intent

Letters of Intent to propose a LP must be received by email to largeprograms@gemini.edu by **February 3, 2014.** Letters should include the information below, formatted as follows.

- Title of Project
- PI with full name of institution and contact information (phone and email)
- Co-Is with full names of institution
- Broad scientific overview of the program (500 word limit)

The Letters of Intent are intended to allow for the selection of the allocation committee with minimal conflict of interest and applicable scientific expertise. Secondly, the description of the proposal program will allow for a review of the program in light of technical and operational constraints. Please keep this in mind when composing a Letter of Intent to ensure that relevant material is included.

Proposals

Proposals for LPs are due **March 31, 2014, 23:59 HST (Hawaii-Aleutian Standard Time)** . Investigators must use the Gemini Phase I Tool for creating and submitting LP proposals. A new Phase I Tool (PIT) is released each semester. Information on how to download and install the Tool is given on the semester's installation page. Help on the PIT is available via the PIT help page and video tutorials. The list of instruments available for LPs is given in FAQ Question #1. Further information about target availability, instrumentation, etc., for the 2014B semester is available in the 2014B Call for Proposals.

The proposal narrative is submitted as a pdf attachment to the PIT. Latex and Word templates are available to create the pdf attachment. The proposal narrative must include:

- a discussion of the primary **scientific justification** of the project;
- a description of the **experimental design**, including sample selection, scheduling requirements, calibration, etc.;
- a statement of the time requested each semester, including required instruments and observing conditions in the **technical case**;
- a description of the **mode of observation** (see below) and explanation of required mode for classical and fully queue mode requests;
- a **management plan** that describes staffing and resources available to complete the science program and the expected contributions of each participant;
- a discussion on **added value** to Gemini Observatory and the broader astronomical communities through the public release of data products, catalogs, software, public outreach, or other outcomes beyond the proposed science results . This should also include a description of any delivered products and the timeline for their release;
- Program considerations if allocated in band 2, included in the **experimental design**;
- Supplemental proposal information, such as previous time allocations, relevant PI publications, etc;
- Sample, relevant Integration Time Calculator (ITC) output supporting time request.

Other required information, entered directly into the PIT:

- title, abstract, TAC category, keywords, and the investigators' names and institutions;
- a list of targets, observing conditions, and instrument configurations for the 2014B semester request;
- Scheduling constraints if there are time-critical or synchronous observations involved, or impossible dates for classical programs in the 2014B semester.

The proposal narrative is limited to a total of 10 pages, and the science justification cannot exceed 5 pages, including figures and references. The page limit does not include ITC attachments.

Proposal Evaluation and Acceptance

A separate Large Program Time Allocation Committee (LPTAC) will evaluate the submitted LP proposals, assessing them for scientific excellence and program feasibility, including program management. The LPTAC will base their evaluations of proposals on the criteria listed here in descending order of importance.

1. The overall scientific merit of the proposed investigation and its potential contribution to the advancement of scientific knowledge.
2. The technical feasibility of the proposed observations.
3. The ability of the proposing team to carry out the proposed research to a successful conclusion within the proposed timeframe, as established by the management plan.
4. Added value to the Gemini and broader astronomical communities beyond LP team science results, as demonstrated by the planned public release of reduced data products, catalogs, software, public outreach, or other outcomes.
5. The extent to which the observations can be accommodated within routine Gemini operations and the extent to which the overall science program enables an efficient use of the observatory.

The LPTAC process will occur prior to the normal 2014B ITAC process. Successful LPs will have the equivalent of either Band 1 or Band 2 status, which applies to the whole program. These bands have the same meaning and expectations of completion as regular queue programs.

Observing Modes

The Large Program PIs and Co-Is are expected to visit Gemini a) for Gemini to learn from them and to optimally support them, b) for them to learn about Gemini operations in order to optimally plan their observations and their data reduction, whatever mode of observation they are using.

Three modes of observations are available to LPs:

Priority visiting observing : The PI or team member comes to Gemini, prepared to observe either their own program if the conditions are sufficiently good, or to execute approved queue programs if the conditions are too poor for the LP. The LP will be charged only for time devoted to the program, and additional observations may be made by Gemini staff or other observers of the queue during the semester. (See additional information here)

Queue: LP observations are executed only as part of the regular queue, observed by Gemini staff or other observers. Queue mode must be justified, requiring infrequent conditions or monitoring on an infrequent basis, for example.

Classical: The program is scheduled on specific dates, and the PI or a team member comes to Gemini to observe that program on those dates, accepting the variability of weather.

Priority visiting observing will be the default mode for LPs.

The LP PI must certify that classical and priority visiting observers have sufficient observing experience to execute the program. Gemini staff will not provide basic training about observing techniques.

Additional Requirements on LPs

Successful LPs will require an annual program review, led by the LPTAC. Each LP will submit an annual progress report containing (at a minimum) a summary of the observing time used thus far, comments on the quality of the data and whether the data quality is sufficient to meet the scientific goals of the program, a summary of the activities of each team

member, the status of reduction of the data, and detailed plans for the next year of the project. The report should also indicate any science results arising from the project, whether published or in preparation. The committee's recommendation and Gemini Director's approval will be required before allocations for an ongoing LP can continue.

Successful LPs will also be required to submit detailed target, observing constraint, and instrument configuration details in advance of each semester's ITAC process.

Additional Information on Priority Visiting Observing Mode Scheduling

Each semester, priority visiting programs are expected to schedule as visitors at least the amount of time of the program. They may request more time to take advantage of the selection of conditions during runs. Gemini may set an upper limit on the amount of additional summit time a priority visiting program will be allocated. Approved targets of opportunity may interrupt a priority visitor program. Priority visitor runs will be scheduled in advance to avoid extended time-critical observations.

Visiting Observers will be encouraged to meet with the observer support scientist assigned to the program, and obtain necessary familiarization on Gemini and instrument specific procedures ahead of the run. The alternative queue during priority visiting will be planned to facilitate execution by a visiting observer. The number of instruments used will be minimized and ideally match the visitor's plans and experience. Difficult acquisitions will be avoided. The facility support Science Operations Specialist who will be present will also be a trained observer.

Advantages of priority visiting observing

A visitor may schedule more time than their program requires in a block, and select the best conditions during that time. e.g., a PI with a 40-hour allocation in the semester could plan to be the visiting observer for six nights, and execute their own program during the best 40 hours, even if the conditions exceed the program requirements. Once the summit run is complete, the program carries on in the regular queue. A visitor may also make decisions in real time about the program. A visitor may decide that catching the targets before they set for the semester is more important than formally meeting the original plans for image quality, or may trade off exposure time for conditions to reach the true signal/noise requirement.

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Large and Long Programs - Frequently Asked Questions

1. What instruments are available for LPs?

Any currently commissioned instruments are available for LPs. In the South, this includes, GMOS-S, Flamingos-2 (imaging and long-slit spectroscopy), and GSAOI. GPI and Flamingos-2 MOS mode are not available. In the North, this includes GMOS-N, NIRI, and NIFS. Adaptive optics systems may be used (though be aware that laser operation is limited at both sites). Further updated information about instrument availability and scheduling will be released with the normal 2014B Call for Proposals.

2. Are visitor instruments available for LPs?

Any instrument previously commissioned as a visiting instrument may be considered for a LP. However, any LP proposal to use a visitor instrument must have a commitment from the PI of the visitor instrument that the instrument will be available for use on Gemini during the lifetime of the LP execution.

3. The last item of the proposal evaluation criteria contains "the extent to which the observations can be accommodated within routine Gemini operations." What are the limits on LP proposals to not be negatively evaluated?

An individual LP need not request a balanced program across North/South, RA range, observing conditions, etc. However, the ensemble of approved LPs must not overly impinge on other observing programs. Therefore, the ensemble of approved LPs should not exceed 25% of any relevant parameter, such as hemisphere, RA range, and observing condition bins. See http://www.gemini.edu/node/10781 for further information on observing condition constraints.

For example, the best image quality, IQ20, in photometric conditions, CC50, only occurs approximately 10% of the time. For the total time available on Gemini South in 2014A, one would expect these conditions to occur for only ~100 hours during the semester.

4. What is the proprietary period for data obtained in a LP?

Data obtained as part of an LP shall have the standard proprietary period, 18 months from the date of an individual observation, although PIs are encouraged to consider a shorter proprietary period, or waiving it altogether.

5. How much time is available for these programs?

Up to 20% of the total time allocation from participating partners is available for LPs. Note that the maximum allocation from the US may be initially less than 20% of the calculated US time, given existing obligations to long-term programs. The expected allocation will be released as part of the regular 2014B Call for Proposals.

The time available for 2014A can be used for an estimate on the upper limit available. The total time available to participating partners in 2014A is 1332 hours in the North, and 1103 hours in the South. This would correspond to LP allocations of 266 and 220 hours or less. The exact time available will depend on instrument commissioning, engineering, campaign science, etc.

6. Will only one LP be approved each year?

There is no set limit on the number of LPs that may be approved each year. Our expectation is that multiple programs will be approved, provided they are scientifically compelling.

7. Why is there a restriction on LP PIs, leaving out astronomers from Brazil and Chile?

Brazil and Chile elected not to participate in these Gemini LPs at this time, a decision confirmed at the Board level.

8. Does a proposal need to have "added value" beyond the science results to be successful?

No, a successful proposal does not need to have added value beyond the scientific results. This is merely one of the criteria by which all proposals will be judged (See Section 2.3). A statement on added value, even if only to acknowledge there is none, is required by all proposals.

9. Will LPs be subject to review by the National TAC of the PI?

No. LP proposals will only be reviewed by the LPTAC. However, there may be overlap between a partner's National TAC and their representation on the LPTAC.

10. Who will select the members of the LPTAC?

The LPTAC will have 10 'partner' members, six from the US, two from Canada, and one each from Australia and Argentina. These members are nominated by the corresponding designated Gemini Board members, or their delegates, and approved by the Gemini Director. Additional members may be appointed by the Observatory in order to balance the scientific expertise in the committee. Any qualified, unconflicted scientist may serve in these 'at-large' positions; they do not need to come from the Gemini partnership or participating LP partners.

11. What is the purpose of "considerations if allocated in band 2" requirement in the proposal narrative?

All awarded LPs will be given allocations in either band 1 or 2. The expected completion rates are different in each band and PIs may wish to consider this impact upon a band 2 allocation. Possible considerations are a relaxing of the observing constraints and potential corresponding increase in allocation request, greater flexibility on targets and/or instrument configurations, or other consideration that would give greater flexibility in scheduling the science observations.

12. Are their supporting funds available from Gemini Observatory for successful LPs?

No. Gemini will not offer supporting funds for LPs.

13. What CCDs can I assume are available in GMOS?

The new Hamamatsu CCDs with improved red response are expected to be available in GMOS-South from the start of large programs in 2014B. The 2014B call for proposals will confirm their availability. The upgrade to GMOS-North will happen later. For proposals, you can assume that GMOS-North can be used with the existing (improved) e2v detectors now, and will be upgraded from 2015B. Because the timing of the GMOS-North upgrade is uncertain, your proposal should address feasibility with the current detectors or contingency plans if the upgrade is further delayed.

14.Is the Target of Opportunity (ToO) observing mode available for LPs?

Yes, PIs are welcome to propose LPs using the ToO observing mode. The guidelines for ToO observations at Gemini Observatory will generally apply to LPs using this mode.

15. Can I change the co-I list from the original I submitted on my letter of intent?

Yes, you may adjust the co-I list. You do not need to inform Gemini of the change, just provide the complete and correct list with the final proposal submission.

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