



Semester 2007B Call For Proposals

Gemini Observatory invites its community to propose scientific investigations for the 2007B semester, 1 August 2007 - 31 January 2008.

The submission deadline is MONDAY APRIL 2nd, 2007 for all partners. Applications should be submitted via your national Gemini proposal process. Submission times and other details vary by partner; please consult your [National Gemini Office pages](#) for more information. Joint proposals must adhere to the deadline (and other requirements) applicable to the partner country of the institution to which the Principal Investigator is affiliated.

The purpose of this page is to highlight the most relevant information for the 2007B call. Significant additional information is contained on supporting pages; users are encouraged to follow the links for more detailed information.

Highlights for 2007B

General

The Phase I Tool (PIT) is updated for 2007B; See [PIT Help](#) for downloads and important information. New features include a "Band 3" tab in which the proposer must specify how the program can be optimized for execution in Band 3; a new guide star assistant; and improved help pages. [Requests for time from multiple telescopes](#) in a single proposal is no longer permitted, and the PIT will not allow resources from multiple telescopes to be selected.

Proposals requesting classical observing time must specify the observing conditions required to achieve the science goals of the program. [Alternative observations](#) utilizing poorer observing conditions can also be specified. During a classical observing run, if conditions are worse than those required by the (main or alternate) classical program, the time may be used for eligible queue observations. In this case, the classical time will not be re-scheduled, but the partner responsible for the classical program is not charged for time spent executing the queue.

Relevant milestones for 2007B can be found in the [2007B Phase I/Phase II schedule](#). **The one and only deadline for PI submission of Phase II definitions is 10 July 2007.**

Mask making from non-GMOS images for GMOS multi-object spectroscopy (MOS) observations may be available in 2007B, however proposers are currently still required to include time for pre-imaging in their proposals. When other means are available, the PIs will be contacted and any time not used for pre-imaging will be returned to the program (as always).

As in 2007A, both Rapid response and Standard response [Target of Opportunity](#) (ToO) programs must be identified as such in the PIT. [Poor weather proposals](#) are again invited on both Gemini North and Gemini South.

Gemini North

Expect 90% of the semester to be available for science, or 166 nights [distributed across the partnership](#). A list of offered instruments and capabilities is given [below](#).

The Laser Guide System (LGS) is now fully commissioned for Altair observations with NIRI and NIFS. The target elevation restriction has been lowered to >40 degrees. LGS observations must request good conditions (Cloud Cover = 50%; Image Quality = 70%) and specify "Laser guide star" in the Adaptive Optics resources section in the PIT. Users should consult the [LGS web pages](#) for further information. The LGS mode is expected to be available approximately 7-14 nights per month in queue mode only. Because of the limited availability and the need for good weather, only LGS programs ranked in bands 1 and 2 will be approved by the ITAC.

The visitor instrument [TEXES](#) will be offered again in 2007B for a single dedicated observing block in October of up to 16 nights. As before, proposals to use TEXES must include a member of the TEXES instrument team as a collaborator. Contact John Lacy (lacy@astro.as.utexas.edu), Dan Jaffe (dtj@astro.as.utexas.edu) or Matt Richter (richter@physics.ucdavis.edu) for team member information.

Gemini South

Expect 75% of the semester to be available for science, or 138 nights; 114 nights are [distributed across the partnership](#) with the remaining nights reserved for system verification (NICI and Flamingos-2) and [NICI campaign science](#). A list of offered instruments and capabilities is given [below](#).

Phoenix and bHROS are **not** offered in 2007B. See this [bHROS announcement](#) concerning future plans for bHROS.

NICI and Flamingos-2 are **not** being offered for community use at this time. Flamingos-2 is expected to begin commissioning in 2007B; NICI will complete commissioning and begin campaign science. Separate calls for system verification for one or both instruments may be made at a later date.

Exchange

HIRES: Up to 5 nights of classical time is available with the [HIRES](#) optical spectrograph on Keck. The requested nights must be bright or grey time within the following windows: 19-26 August (1 night); 16-24 October and 24 November - 2 December (2 nights each). Requests must be full nights with a minimum of 1 night. Proposals should be submitted via the normal process. [\[more information\]](#)

Subaru: At least 40 hours is available on Subaru for [Suprime-Cam](#) (wide field optical imaging) and [MOIRCS](#) (near-infrared imaging and multi-object spectroscopy). All time is offered as service observing except for MOIRCS MOS mode which will be classically scheduled. For all modes, a minimum request of 5 hours is recommended and larger programs are encouraged; for MOIRCS MOS mode, integer night requests are required. Proposals should be submitted using the Phase I Tool. There is no restriction on available dates or conditions; service observations will be scheduled to meet demand as much as possible. [\[more information\]](#)

Additional Information

Details of the capabilities available at each telescope are given below. Please see the page of [supporting information](#) for additional general Phase I information.

Gemini North: Facilities

- All instruments are offered in queue and classical mode, except where noted.
- Facility instruments:
 - [NIRI](#) - **near-IR imager and low-resolution spectrograph**: imaging and spectroscopy fed with the direct or AO-corrected beam.
 - [NIFS](#) - **near-IR integral field unit spectrograph**: IFU spectroscopy fed with the direct or AO-corrected beam.
 - [Altair](#) - **facility AO system**: for use with NIRI (except M band imaging and L & M band spectroscopy) and NIFS.
 - Natural Guide Star AO: Traditional adaptive optics guiding on a nearby star.
 - [Laser Guide Star AO](#): See web page for important performance information and restrictions
 - [GMOS North](#) - **optical imager and spectrograph**: imaging and long-slit, multi-object and integral field spectroscopy
 - [Michelle](#) - **mid-IR spectrograph and imager**: imaging and R=100-3000 and echelle spectroscopy at 10 and 20um. Imaging (but not spectro-) polarimetry is available.
- Visitor Instruments:
 - [TEXES](#) - high-resolution mid-IR spectrograph, on loan from U. Texas for collaborative use (see above); 16-night queue mode observing block in October.
- See the [target accessibility page](#) for important information regarding instrument availability and a plot of accessible RAs and Declinations. The [elevation restriction](#) for Laser Guide Star observations is no greater than 40 degrees elevation.

Gemini South: Facilities

- All facility instruments are offered in queue and classical mode.
- Facility instruments:
 - [GMOS South](#) - **optical imager and spectrograph**: imaging and long-slit, multi-object and integral field spectroscopy
 - [T-ReCS](#) - **mid-IR imager and spectrograph**: imaging and moderate resolution (R=100 and R=1000) spectroscopy
 - [GNIRS](#) - **near-infrared spectrograph**: long-slit, cross-dispersed and integral field spectroscopy with a range of resolutions.
- See the [target accessibility page](#) for important information regarding instrument availability and a plot of accessible RAs and Declinations.

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.



Semester 2007B Important Dates

Key dates and events in the proposal process are shown below. The Phase I and Phase II deadlines are highlighted.

<i>Date</i>	<i>Event</i>	<i>Comments</i>
2 April 2007	Proposal deadline	For receipt of proposals by National Gemini Offices (NGOs) - see partner-specific pages for details
early May	NTAC meetings	Separate scientific and technical assessments by each Gemini partner ("National TACs")
No later than 16 May	E-transmission	Electronic transmission of proposals to Gemini from NTACs
24 May	Draft queue and classical schedule	Drafts generated by operations staff and distributed to ITAC members
30 May	ITAC	International Time Allocation Committee meets to resolve issues and recommend 2007B programs
5 June	Final schedule/queue plus ITAC & Gemini feedback to NGOs	After approval by Gemini Director
8 June	Announce queue and classical schedule on web	Phase II programs ("skeletons") available in Observing Database; 2007B OT released
11-15 June	Gemini Science Conference	and Users Meeting, Iguazu Falls, Brazil
10 July 2007	Phase II deadline	Final PI Deadline for submission of completed Phase II Science Programs to National Offices (earlier submission is encouraged)
24 July 2007	Phase II Review Complete	Goal for electronic transfer of checked Phase II programs from National Offices to Gemini
1 August 2007	Start of semester 2007B	
14 August 2007	Queue fully loaded	Goal for activation of all Phase II programs

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Instrument Availability and Target Accessibility: 2007B

This page provides best estimates, at the time of the Call for Proposals, of instrument availability and corresponding target (RA, dec) restrictions for 2007B.

General

Instrument Changes: As there are more instruments than the number of available ports on each telescope, instrument swaps will be required. Therefore **not all instruments will be available for the entire semester**. However, whenever possible instrument swaps will be scheduled to minimize impact on the queue. In other words, instrument swaps will be driven by demand as much as possible and so the final schedule will not be made until after the 2007B programs are known. Nevertheless, *it may be the case that certain targets or entire programs will not be feasible once the final schedule is determined, at ITAC or thereafter*. This is especially true at Gemini South, where a significant fraction of the schedule is reserved for new instrument commissioning.

No instrument changes are permitted during classical runs.

Gemini North

At Gemini North, NIFS and Michelle share the up-looking port. It is expected that Michelle will be mounted at the start of the semester, NIFS will occupy the middle of the semester and Michelle will be re-mounted near the end. The exact dates of these swaps will be driven largely by consideration of the targets in the queue, and so there are no special restrictions on target availability for either instrument.

The visitor instrument [TEXES](#) will have a single observing run during the month of October. Targets to be observed with TEXES must be observable during this time. The allowed RA and DEC ranges are shown by the solid black line in the figure below.

Observations requiring the [Laser Guide Star \(LGS\) system](#) are restricted by the limitation that the LGS must be used at or above 40 degrees elevation. How this translates into RA and dec restrictions is indicated in the figure below.

In addition, because of the requirement to obtain advance approval of all telescope pointings, it is not possible to use LGS with Rapid Response Target of Opportunity observations. Standard ToO LGS observations are allowed; however, targets must be defined at least 8 days in advance of the start of the LGS observing block in which the observations are desired.

Figure 1 displays the accessibility of targets as a function of RA (horizontal axis) and Declination (vertical axis) at Gemini North for the 2007B semester. The dark gray area indicates the restriction on LGS observations, and the solid black line encircles the coordinates available for TEXES observations. The larger light gray area indicates sky positions that are above 2.5 airmasses for at least 2 hours on at least 7 days of the semester. Targets outside this area should not be requested in 2007B. However, these represent the *minimum criteria* for scheduling an observation in the queue (or classically), and proposers with targets very close to the extremes are advised to consider carefully other factors such as the amount of time needed on the source, the observing conditions required and the likely weather at the time, and the maximum airmass acceptable for the observation.

Gemini North 2007B

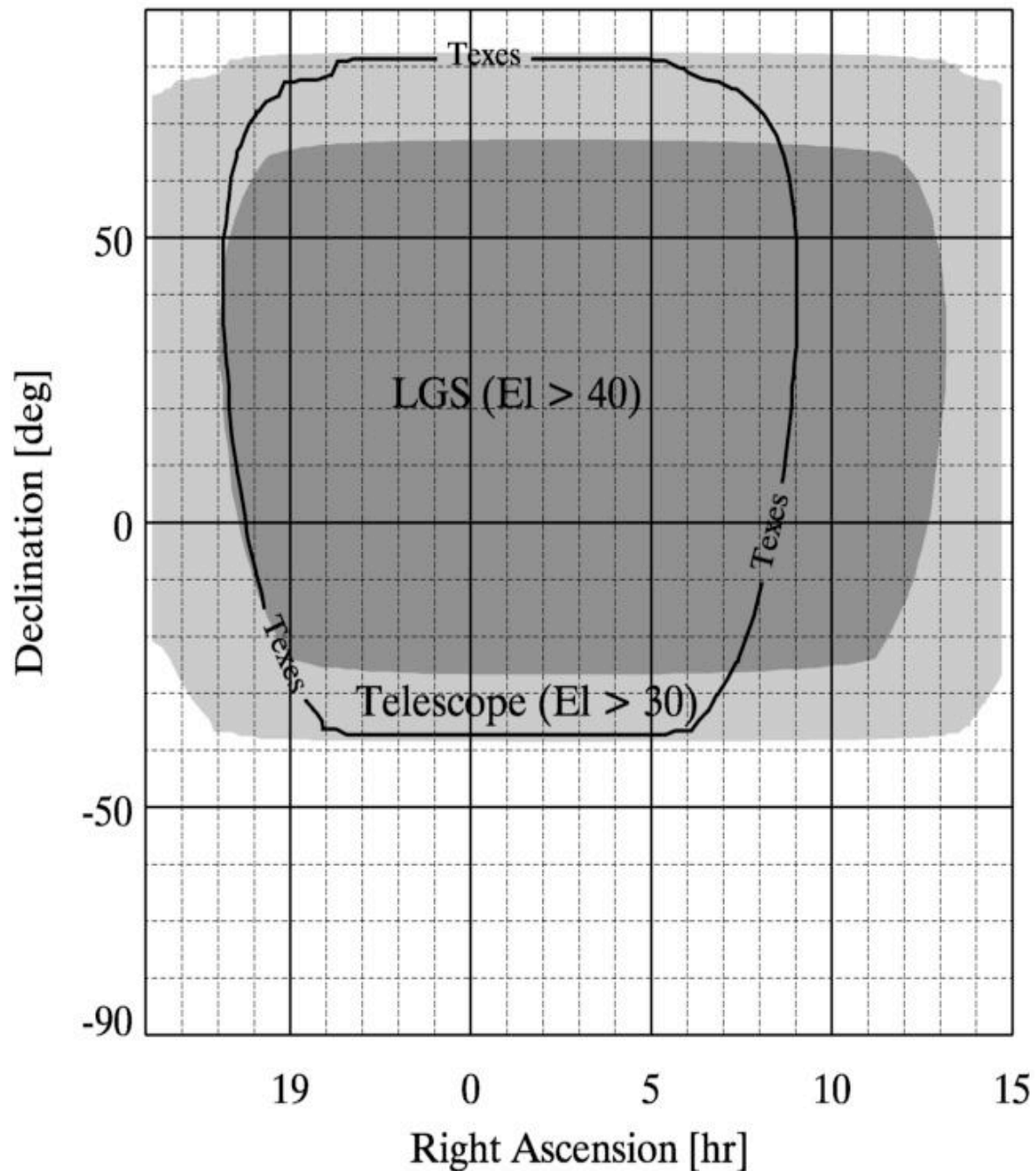


Figure 1: Target accessibility at Gemini North during semester 2007B.

Gemini South

At Gemini South, 25% of the semester is reserved for engineering, including new instrument commissioning (both NICI and Flamingos-2) and the start of multi-conjugate adaptive optics (MCAO) commissioning. NICI will share the up-looking port with T-ReCS and Flamingos-2 will share a side

port with GMOS-S. As of this writing, it is not known when the instrument swaps will occur, although every effort will be made to accommodate the queue, particularly Band 1 & 2 programs. Programs requesting GMOS-S or T-ReCS that can specify targets covering a range in R.A. are encouraged to do so. However, given the uncertainty of new instrument commissioning schedules, no special target restrictions are being placed on any Gemini South instruments in 2007B.

Figure 2 displays the accessibility of targets as a function of RA (horizontal axis) and Declination (vertical axis) at Gemini South for the 2007B semester. The large gray area indicates sky positions above airmass 2.5 for at least 2 hours on at least 7 days during the semester. Targets outside this area should not be requested in 2007B. However, these represent the *minimum criteria* for scheduling an observation in the queue (or classically), and proposers with targets very close to the extremes are advised to consider carefully other factors such as the amount of time needed on the source, the observing conditions required and the likely weather at the time, and the maximum airmass acceptable for the observation.

Gemini South 2007B

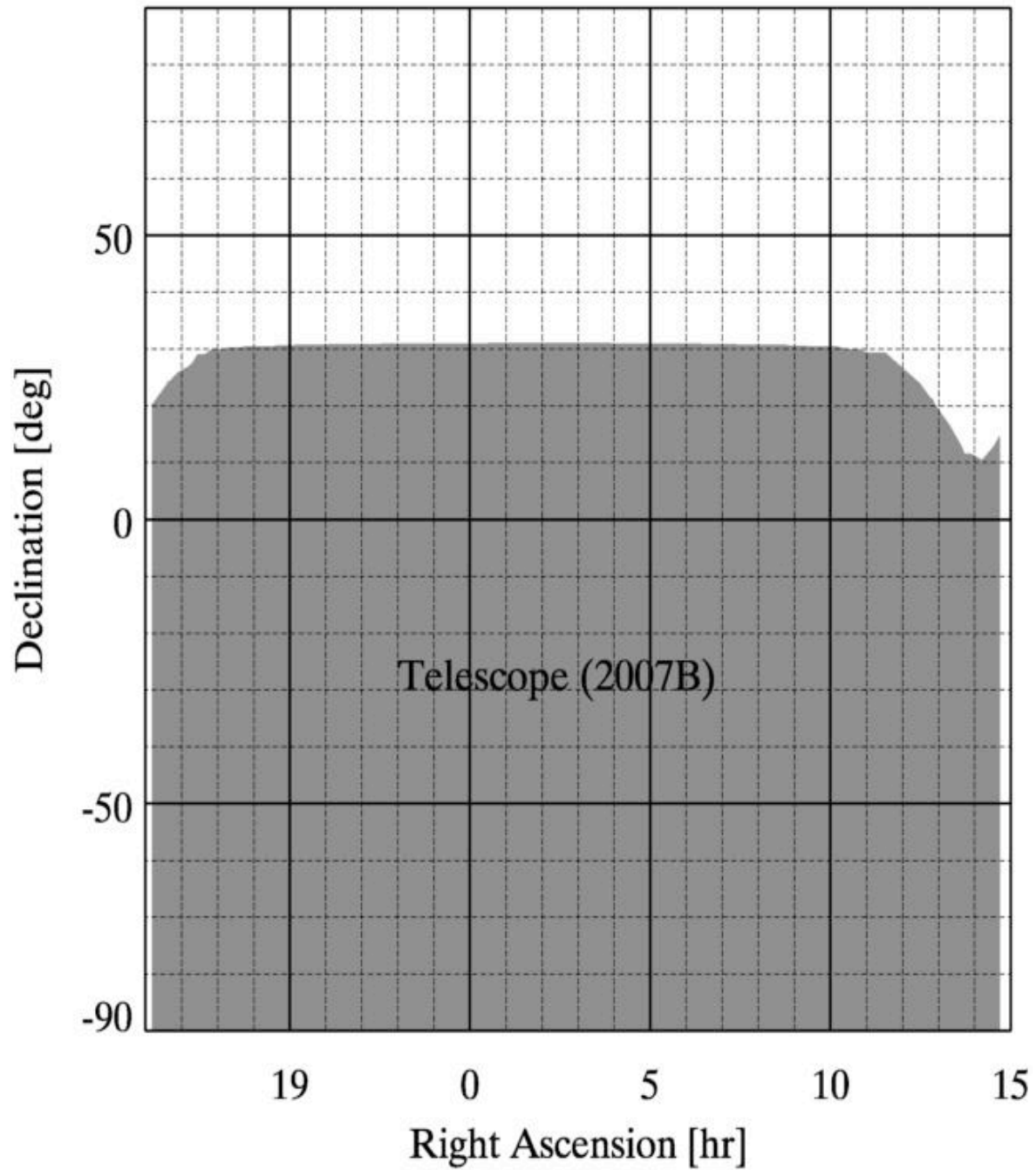


Figure 2: Target accessibility at Gemini South during semester 2007B.

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Semester 2007B Time Distribution

Gemini North: Time Availability and Distribution

A minimum of 90% of the time will be available for science use on Gemini North in 2007B. This amounts to 166 nights, and includes ~5 nights of "Compensatory Time" to the UK in return for the long-term transfer of Michelle to Gemini, and a Gemini staff allocation. No additional system verification or demo science time is currently planned for Gemini North in 2007B. The number of hours allocated to each partner is given in the following table.

Partner	Estimated Hours Available
US	652
UK	414
Canada	236
Australia	46
Argentina	39
Brazil	15
Univ. of Hawaii (host)	126
Gemini Staff	130
Total	1658 (=166n)

Gemini South: Time Availability and Distribution

Due to the major instrument commissioning activities continuing on Gemini South in 2007B, a minimum of 75% of the time will be made available for science use, or 138 nights. This fraction includes 18 nights reserved for the start of the NICI Planet Search Campaign, 6 nights for Flamingos-2 (and/or NICI) system verification, and the Gemini staff time allocation. The number of hours allocated to each partner is given in the following table.

Partner	Estimated Hours Available
US	434
UK	266
Canada	107

Australia	47
Argentina	28
Brazil	18
Chile (host)	161
Gemini Staff	80
NICI Campaign Science	180
Flamingos-2 SV	60
Total	1381 (=138n)

Time Adjustments

To maintain overall balance amongst the partnership, the values shown above for both Gemini North and South have been adjusted from the nominal partner shares as a result of actual time charged through 2006B. Time trades between partners are also included. The time allocations shown here were approved at the Operations Working Group meeting in January 2007. The number of nights is approximated by $\text{int}(\text{hours}/10)$.

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Call For Proposals

Supporting Information

This page contains information on the following topics relevant to applying for time on Gemini. The information is general in nature, for details specific to the upcoming semester, please see the [current call for proposals](#).

- [Time Allocation Process](#) (National and International Time Allocation Committees)
- [Submitting for time on both telescopes](#)
- [Queue Rollover](#)
- [Electronic PIT Submission](#)
- [Joint Proposals](#)
- [Under-utilized Instruments](#)
- [Rapid Response or Target of Opportunity](#)
- [GMOS Mask definitions](#)
- [Poor Weather Programs](#)
- [Exchange Time](#)
- [Target information](#) (guide stars, non-sidereal objects, time-specific observations)
- [Duplicate Observations](#)

- [Return to current Call for Proposals](#)

Time Allocation Process

The assessment and ranking of proposals within each partner country will be via National Time Allocation Committees (NTACs) supported by the National Gemini Offices. Assembly of the final semester schedule and queue, definition of scientific ranking bands and resolution of conflicts and joint proposals between partners is done by the International Time Allocation Committee (ITAC), following the procedures described in the [Phase I overview](#).

Submissions to use multiple telescopes

Each observing proposal may request resources from a single telescope only (Gemini North, Gemini South, Keck or Subaru). Proposals for multiple telescopes are no longer permitted, and the Phase I tool will not allow resources from multiple telescopes to be selected. Proposals may include the use of multiple instruments on the same telescope. If a program requires resources from multiple telescopes, separate proposals must be submitted for each telescope; in this case, each proposal should clearly reference the other(s). The proposals will be ranked and scheduled independently. Proposals that can be carried out with either GMOS (note that they have different capabilities) must nevertheless specify one of them; the NTACs or ITAC may make changes.

Queue Rollover

Programs assigned by the ITAC into Band 1 are eligible for rollover into the next semester, for no more than two consecutive semesters, in order to increase the likelihood of program completion. Rollover status will be assigned by the ITAC. Programs with rollover status will automatically be

carried forward for up to 2 semesters until their time allocation is exhausted, i.e. PIs need not re-apply if the currently approved allocation is sufficient to reach the science goals of the program. Rapid response TOO programs are generally not given rollover status. National policies that affect eligibility are defined by the relevant NTAC.

Electronic submission

All partners support electronic submission of proposals from within the Gemini Phase I Tool (PIT). In the US, submission of non-joint proposals using the NOAO web form continues to be supported. A [new version of PIT](#) is available, including new features described in [PIT Hot News](#). If re-using a previous proposal, please read the joint proposal instructions on how to reset the submission flag.

Joint Proposals

If you submit the same proposal to several partner countries (a "joint proposal") you must do so using PIT. The PIT software, and backend servers installed at each National Office, allow automatic ("one-click") submission of the same proposal to multiple partners. Joint proposals must be submitted by the deadline applicable to the institution of the Principal Investigator (PI); if the PI is not based in a partner country, the deadline will be the same as the Gemini staff deadline. Likewise, joint proposals must adhere to the proposal guidelines (regarding format and page length for example) of the same partner (that of the PI).

See the [joint proposal instructions](#) for more details including how to reset the submission status if re-using a (single or joint) proposal from previous semesters.

Under-utilized instruments

Community demand is a critical factor in determining instrument availability. Gemini maintains as a "minimum goal" that any instrument must be awarded at least 160 hours (approx 16 nights) in order to be mounted on the telescope. As each instrument introduces significant overhead to the Observatory, and access to instrument ports is at a premium, Gemini reserves the right to not schedule any instrument that consistently falls short of the minimum.

Rapid Response or Target of Opportunity programs

We continue to encourage [Target of Opportunity](#) (ToO) programs (formerly called "Quick Response"), intended to allow observation of targets that cannot be specified in advance but which have a well defined **external trigger** (e.g., Supernovae or Gamma Ray Bursts which will be identified throughout the observing semester by non-Gemini programs).

"[ToO](#)" mode may be requested with any facility instrument. Proposals for ToO mode should be made via the normal proposal process and must select the type of trigger in the PIT and summarise the *trigger event* (e.g. identification of a target brighter than a pre-determined threshold) in the proposal abstract. *ToO covers trigger types from several months to minutes in response time*. Two types of ToO triggers are defined: "Rapid Response" and "Standard" which differ by [response time](#) and [activation mechanism](#). Rapid response programs must be allocated time in Band 1.

Gamma Ray Burst (GRB) programs: in previous semesters many separate proposals for Gamma Ray Burst follow-up studies were submitted to the NTACs and a subset were forwarded to ITAC. As in those semesters, the ITAC and Observatory will seek to combine or otherwise substitute such proposals, e.g. by forming partnerships or time-division strategies, so that only one proposal is active on each telescope at any time. Applicants for GRB studies are strongly

encouraged to coordinate their proposals before submission. The Observatory and ITAC reserve the right to form umbrella programs based on the proposals forwarded by the NTACs.

GMOS Mask Definition

As of this writing, multi-object spectroscopy (MOS) masks must be defined from GMOS images and sufficient pre-imaging time should be included in the proposal if the images do not exist already. For classical programs, pre-imaging will be scheduled in the queue. MOS Mask generation from non-GMOS images may be available during 2007B, if this is the case any unused pre-imaging time will be returned to the program. When this is available, GMOS PIs will be contacted.

Poor weather proposals

Often the queue contains insufficient proposals for the poorest conditions, despite the best efforts of the National TACs to pass on a balanced package of proposals to Gemini. To encourage submission of more proposals in this category, those with the observing condition constraints specified below will receive special consideration at the TACs. If the programs are ranked lower than band 3 they may be placed in a "Poor Weather Queue" and neither the PI nor partner country will be charged for any time used. Poor weather programs are lower in priority than scientific ranking band 3. To qualify as a poor weather proposal, the observing constraints must match one of the following:

- Image Quality of "any" and Cloud Cover of 70%-ile or worse (non-photometric)
- Cloud Cover of 90%-ile (typically 2 magnitudes of cloud cover and unusable in the mid-IR) and any other combination of conditions

Water Vapour constraints for all poor condition proposals need to be set to "any". The Sky Background constraint can be specified and it is acceptable for these programs to request dark time.

Poor weather programs may be submitted for any facility instrument. The ITAC reserves the right to limit the number or type of poor weather proposals depending on the specific make-up of the queue.

Exchange Time

Gemini Observatory encourages fruitful exchanges with other major observatories in order to expand the instrument capabilities available to the Gemini community. In 2001-2002, the Gemini community had access to 12 nights of NIRSPEC time on Keck II in exchange for the long-term loan of an InSb Gemini detector to be used on NIRSPEC. At present, the Observatory has two exchange programs in place. The first agreement, initiated several semesters ago, is an exchange of classical nights for HIRES time on the Keck I telescope in exchange for Michelle time on Gemini North or T-ReCS time on Gemini South. See the [Keck time application](#) page for information on applying for the Gemini time through Keck. The second agreement, established in 2006B, is for service observing time on Subaru in exchange for queue observing at Gemini. The Subaru instruments currently available to the Gemini community are Suprime-Cam and MOIRCS (imaging and multi-object spectroscopy). In exchange, the Subaru community has access to both GMOS instruments (North and South) and NIFS, in queue mode only. See the [Subaru call for proposals](#) for more information on applying for the Gemini time through Subaru. [Joint proposals](#) for Gemini time between the Japanese community and Gemini partners are permitted and encouraged.

We are still “experimenting” with the exchange of time. Following the community demand, we hope to expand the number of nights exchanged and the number of instruments available.

The details of the amount of time currently available and other restrictions are provided in the [current call for proposals](#).

Target information

Time-specific (including periodic monitoring and follow-up) programs may be accepted on a best-efforts basis. Proposers should specify these time constraints in the PIT. Note that the instrument scheduling may impose additional restrictions on this class of programs.

All observations require the use of one wavefront sensor (WFS) star for fast guiding, primary mirror active optics control and/or as an adaptive optics wavefront reference source. The specific requirements for each instrument are given in the relevant science instrument web pages ("performance and use" section). As the technical feasibility of proposals relies in part on the availability of WFS stars, **all proposals with well-defined targets must include suitable WFS stars**. Proposals to observe non-sidereal objects should indicate the likely availability of WFS stars in the technical justification but are not required to supply specific stars. Target of Opportunity programs do not need to define WFS stars.

[Non-sidereal tracking](#) is available for all instruments. Non-sidereal tracking with GMOS is fully supported with the peripheral wavefront sensors and partially supported with the OIWFS (see [GMOS non-sidereal information](#)).

Duplicate Observations

Proposers should check their observations against the Gemini Science Archive to ensure that similar or identical observations have not already been executed. The Phase I Tool includes a function to facilitate this. Any duplicate or seemingly duplicate observations should be well-justified in the proposal. The NTACs will consider duplication of existing observations as part of the proposal evaluation.

The ITAC evaluates and resolves any duplication of targets (or potential duplication in the case of ToO observations) between proposals from different partner countries.

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