



Semester 2008B Call For Proposals

Gemini Observatory invites its community to propose scientific investigations for the 2008B semester, 1 August 2008 - 31 January 2009. Currently the Call is open to all partners, however the UK participation in semester 2008B is provisional pending a definitive resolution of outstanding issues. A statement clarifying the availability of time for UK proposals will be issued prior to the deadline for submitting proposals.

The submission deadline is **MONDAY MARCH 31ST 2008** 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 2008B call. Significant additional information is contained on supporting pages; users are encouraged to follow the links for more detailed information. If hardcopy is preferred, the primary pages are available in a single [14 page pdf document](#).

Highlights for 2008B

General
Relevant milestones for 2008B can be found in the 2008B schedule . Poor weather and Director's Discretionary Time proposals are both accepted at any time via the Phase I Tool, otherwise the deadline for Phase I submission is March 31st 2008 , and for successful proposals the Phase II submission deadline is July 14th 2008 .
The Phase I Tool (PIT) is updated for 2008B; See the PIT Help for downloads and important information. New features include updated filter lists for Phoenix and NIRI, a visibility check on target Right Ascension and Declination, and clearer error messages associated with use of the band 3 tab.
Starting in 2008B, stricter target accessibility limits will be imposed, so as not to bias the queue at the start or end of the semester. Targets for Gemini North should be limited to 0 < RA < 13.5 and 17 < RA < 24, and -37 < dec < +79 , and for Gemini South targets should be limited to 0 < RA < 12.5 and 16 < RA < 24, and -89 < dec < +28 . Exceptions will only be made for very short observations, or those with very relaxed observing constraints. The Laser

Guide System has more [restricted constraints](#).

Mask making from non-GMOS images for GMOS [multi-object spectroscopy \(MOS\)](#) observations is available, but GMOS pre-imaging is recommended for MOS programs using slits narrower than 1.0" and for programs requiring very long observations of faint targets.

An **under-utilised instrument** is now defined as an instrument that is requested for less than 6% of the Bands 1+2 time. The Observatory reserves the right to limit the RA range available to programs using such instruments, or to not schedule the instrument.

Gemini North

It is expected that 86% of the semester will be available for science, or 159 nights [distributed across the partnership](#). A list of offered instruments and capabilities is given [below](#).

The Laser Guide System ([LGS](#)) is fully commissioned for NIRI and NIFS. 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. Because of the limited availability and the need for good weather, only LGS programs ranked in bands 1 and 2 will be recommended by the ITAC. LGS mode is expected to be available 7-14 nights per month, in queue mode only. Target lists are generated for approval by [Space Command](#) approximately a week before each LGS run, using only "ready" observations. Therefore, while observations must be defined by the usual phase II deadline, any additions or alterations must be in place by [the LGS target preparation dates](#). Limited LGS observations of Band 1 and 2 Targets of Opportunity triggered less than a week before, or during, an LGS run, are supported. Only two such targets can be observed during any LGS run, and only one on any given night. All effort will be made to approve and observe a target within 24 hours, however a delay of two or three nights is possible.

Gemini South

Including [NICI campaign science](#), 82% of the semester is expected to be available for science, or 150 nights [distributed across the partnership](#). A list of offered instruments and capabilities is given [below](#). Due to the need to balance the queue, and the traditionally high demand for GMOS-S dark time programs, **bright time programs on Gemini South are particularly encouraged**.

[Phoenix](#) (an NOAO instrument on loan to Gemini) is offered in 2008B. NICI and Flamingos-2 are **not** being offered for community use at this time.

Exchange

HIRES: Up to 5 nights of classical time is available with the [HIRES](#) optical spectrograph on Keck. The requested nights must be within the following **windows: 6-20 August (1 night), 8-22 October (up to 2 nights) and 3-16 December (up to 2 nights)**. Requests must be **full nights** with a minimum of 1 night. Proposals should be submitted via the normal process. **For Semester 2008B all proposers for Keck time must also complete the [Keck cover page](#)**. Email this page to your [NTAC chair](#). [\[more information\]](#)

Subaru: Up to 6 classical nights are available on Subaru for [Suprime-Cam](#) (wide field optical imaging) and [MOIRCS](#) (near-infrared imaging and multi-object spectroscopy). The requested nights must be within the following **windows: 10-18 September (1 night, bright), 24 October**

to 2 November (up to 2 nights, dark) and 3-7 or 17-21 December (up to 2 nights in one of these periods, grey). Requests must be **full nights** with a minimum of 1 night. Proposals should be submitted via the normal process. [\[more information\]](#)

Additional Information

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

Gemini North: Facilities

- All instruments are offered in [queue](#) and [classical](#) mode, except for Laser Guide Star AO which is queue mode only.
- Facility instruments:
 - [GMOS North](#) - **0.36-1.10 micron imager and spectrograph**: imaging and long-slit, multi-object and integral field spectroscopy. 5σ one hour point source sensitivities are approximately $R=26$ for imaging and $R=21-23$ for spectroscopy.
 - [NIRI](#) - **1-5 micron imager and low-resolution spectrograph**: imaging and spectroscopy fed with the direct or AO-corrected beam. 5σ one hour point source sensitivities are approximately $K=23$ for imaging and $K=18$ for spectroscopy.
 - [NIFS](#) - **0.95-2.40 micron integral field unit spectrograph**: IFU spectroscopy fed with the direct or AO-corrected beam. 5σ one hour point source sensitivities are approximately $K=18.7$.
 - [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
 - [Michelle](#) - **7-26 micron spectrograph and imager**: imaging and $R=100-3000$ and echelle spectroscopy; imaging polarimetry is also available. 5σ one hour point source sensitivities are approximately $N=11$ for imaging and $N=6-9$ for spectroscopy.
- See the [target accessibility page](#) for important information regarding instrument availability and a plot of accessible RA and Declination. **For Semester 2008B targets should be limited to $0 < RA < 13.5$ and $17 < RA < 24$, and $-37 < dec < +79$,** the LGS system has a stricter [elevation constraint](#) of >40 degrees.

Gemini South: Facilities

- All instruments are offered in [queue](#) and [classical](#) mode.

- Facility instruments:
 - [GMOS South](#) - **0.36-1.10 micron imager and spectrograph**: imaging and long-slit, multi-object and integral field spectroscopy. 5σ one hour point source sensitivities are approximately $R=26$ for imaging and $R=21-23$ for spectroscopy. GMOS South has slightly better sensitivity in the UV and blue than GMOS North.
 - [T-ReCS](#) - **8-26 micron imager and spectrograph**: imaging and moderate resolution ($R=100$ and $R=1000$) spectroscopy. 5σ one hour point source sensitivities are approximately $N=11$ for imaging and $N=8$ for spectroscopy.
- Visitor instruments:
 - [Phoenix](#) - **1-5 micron high spectral resolution ($R\sim 50000 - 75000$) spectrometer**. 5σ one hour point source sensitivities are approximately $K=12.5$.
- See the [target accessibility page](#) for important information regarding instrument availability and a plot of accessible RA and Declination. **For Semester 2008B targets should be limited to $0 < RA < 12.5$ and $16 < RA < 24$, and $-89 < dec < +28$.**

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 [Sandy Leggett](#).

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Last update 19 February, 2008; Sandy Leggett



Semester 2008B Time Distribution

Gemini North: Time Availability and Distribution

A minimum of 86% of the time will be available for science use on Gemini North in 2008B. This amounts to 159 nights, and includes a Gemini staff allocation. The remaining time will be used for various observatory maintenance tasks, and any unused engineering time will be returned to science. The number of hours allocated to each partner is given in the following table.

Partner	Estimated Hours Available
US	661
UK	317
Canada	202
Australia	72
Argentina	34
Brazil	16
Univ. of Hawaii (host)	157
Gemini Staff	131
Total	1590 (=159n)

Gemini South: Time Availability and Distribution

A minimum of 82% of the time will be available for science use on Gemini South in 2008B. This amounts to 150 nights, and includes 2 nights of NICI Science Verification, 18 nights of NICI campaign science, and a Gemini staff allocation. The remaining time will be used for various observatory maintenance tasks, and Flamingos-2 and/or MCAO commissioning activities. Any unused engineering time will be returned to science. The number of hours allocated to each partner is given in the following table.

Partner	Estimated Hours Available
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US	533
UK	252
Canada	151
Australia	55
Argentina	27
Brazil	19
Chile (host)	162
Gemini Staff	101
NICI Verification and Campaign	200
Total	1500 (=150n)

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 2007B. Time trades between partners are also included. The time allocations shown here were recommended by the Operations Working Group in January 2008. The number of nights is approximated by $\text{int}(\text{hours}/10)$.

The UK participation in semester 2008B is provisional, pending a definitive resolution of outstanding issues. A statement clarifying the availability of time for UK proposals will be issued prior to the deadline for submitting proposals.

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Instrument Availability and Target Accessibility: 2008B

This page provides best estimates, at the time of the Call for Proposals, of instrument availability and corresponding target (RA, dec) restrictions for 2008B.

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 2008B 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*. If an instrument is requested for less than 6% of the Bands 1+2 time, the Observatory reserves the right to limit the RA range available to programs, or to not schedule the instrument. During classical runs, no instrument changes on the Instrument Support Structure are permitted.

Gemini North

At Gemini North, NIRI and GMOS-N will remain on their side-looking ports and be available throughout the semester. NIFS and Michelle share the up-looking port. It is expected that NIFS will be available from August to September, and from mid-December to the end of January. It is expected that Michelle will be available between late-September and mid-December. Approximately week-long maintenance engineering will most likely occur during the semester, but this should not impact queue observing. In summary, there are no special restrictions on target availability for GMOS-N, NIFS, NIRI or Michelle, apart from sky visibility described 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. Standard ToO LGS observations are allowed; however target lists are generated for approval by [Space Command](#) approximately a week before each LGS run, using only "ready" observations. Therefore, while observations must be defined by the usual phase II deadline, any additions or alterations must be in place by [the LGS target preparation dates](#). We do offer limited LGS observations of Band 1 and 2 ToOs that are triggered less than a week before, or during, an LGS run. The observations must be made during a planned LGS run at the telescope. Also, only two such targets (for all programs) can be observed during any typically week-long LGS run, and only one such target (for all programs) can be observed on any given night. All effort will be made to approve and observe a target within 24 hours, however this cannot be guaranteed, and the observation may occur two or three nights after the trigger is made.

Figure 1 displays the accessibility of targets as a function of RA (horizontal axis) and Declination (vertical axis) at Gemini North for the 2008B semester. Green and orange regions offer easy and restricted access during the semester, respectively. The smaller hatched areas indicate the more restricted LGS regions. Although target elevation does not follow a strictly rectangular RA/dec region, these are the limits at which

the Phase 1 Tool will issue warning and error messages. Proposers with targets close to the limits are advised to consider carefully the amount of time needed on the source, the observing conditions required and the maximum airmass acceptable for the observation. Targets outside of these regions should not be submitted in 2008B, unless the observations are extremely short and have relaxed observing constraints.

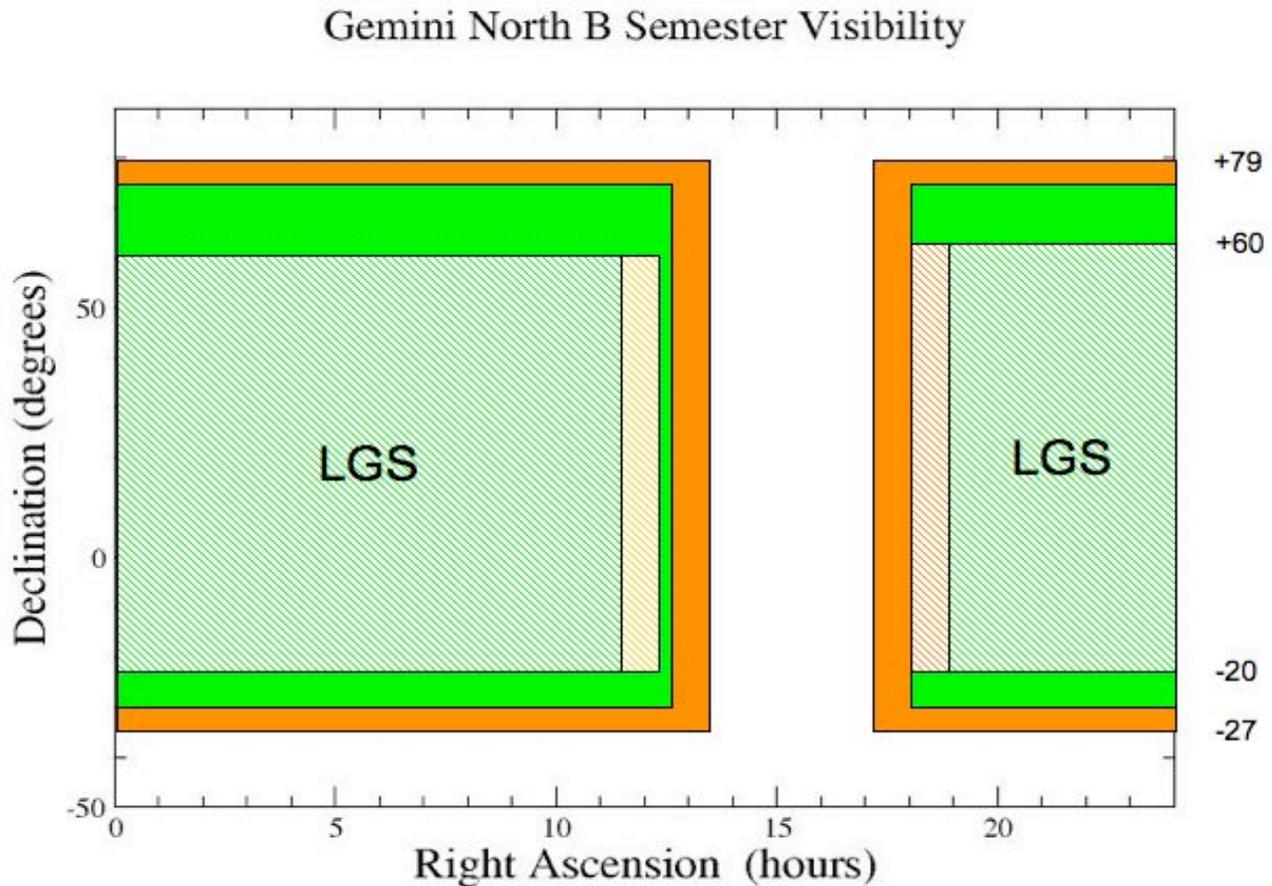


Figure 1: Target accessibility at Gemini North during semester 2008B. Green and orange regions offer easy and restricted access during the semester, respectively. The smaller hatched areas indicate the more restricted LGS regions. Targets outside the orange region should not be submitted in 2008B.

Gemini South

At Gemini South, GMOS-S, Phoenix and NICI be mounted on side-ports, and T-ReCS on the up-looking port, throughout most of the semester. Scheduling of the Flamingos-2 and MCAO/GSAOI commissioning is uncertain at this time; Flamingos-2 may be swapped with GMOS-S and/or T-ReCS, and GSAOI with Phoenix and/or NICI. Approximately week-long maintenance engineering will most likely occur during the semester, but this should not impact queue observing. No RA restrictions on any of the instruments are envisioned at this time, apart from sky visibility described below.

Figure 2 displays the accessibility of targets as a function of RA (horizontal axis) and Declination (vertical axis) at Gemini South for the 2008B semester. Green and orange regions offer easy and restricted access during the semester, respectively. Targets outside of these regions should not be submitted in 2008B, unless the observations are extremely short and have relaxed observing constraints. Proposers with targets close to the limits are advised to consider carefully the amount of time needed on the source, the observing conditions required and the maximum airmass acceptable for the observation.

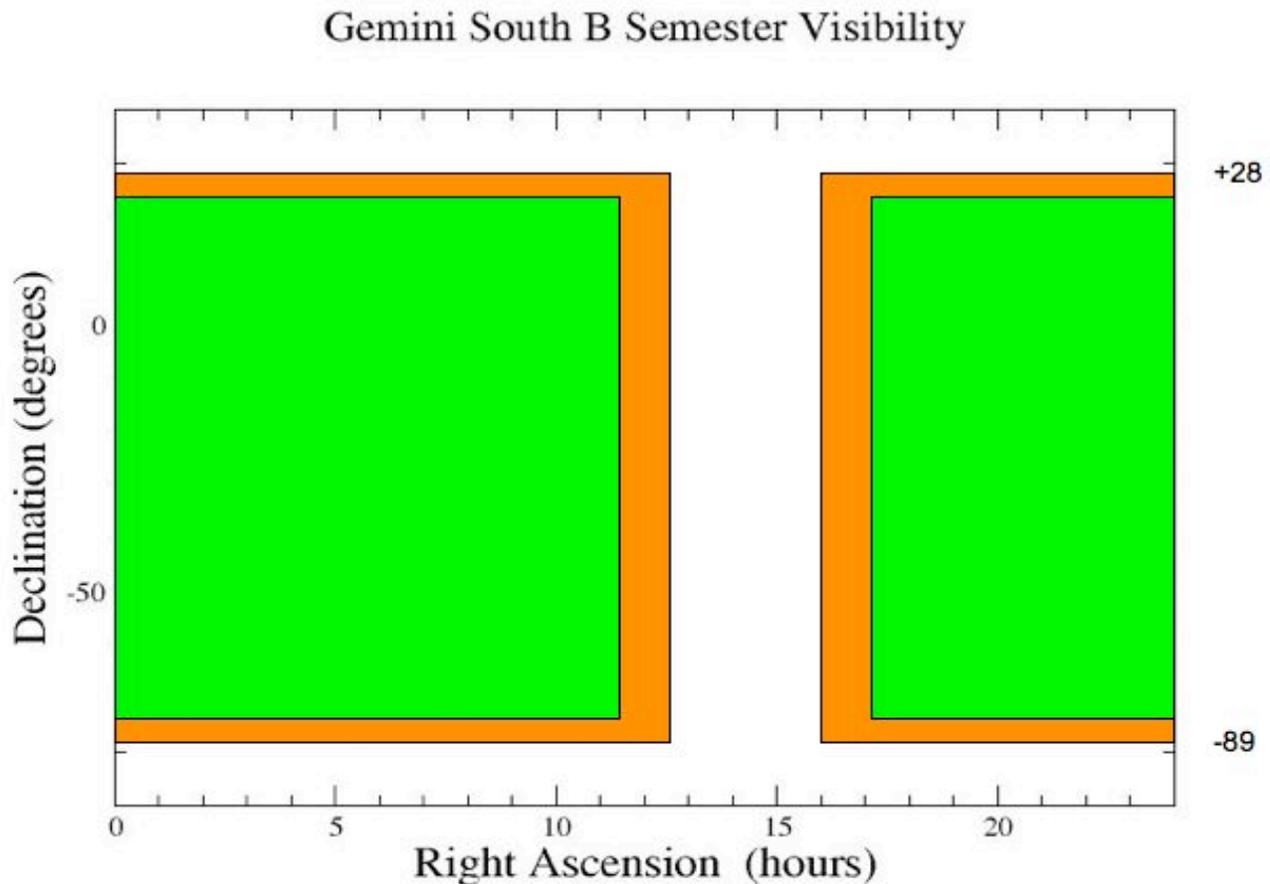


Figure 2: Target accessibility at Gemini South during semester 2008A. Green and orange regions offer easy and restricted access during the semester, respectively. Targets outside the orange region should not be submitted in 2008B.

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Semester 2008B 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>
31 March 2008	Proposal deadline	Proposals received by National Gemini Offices (NGOs) - see partner-specific pages
Set by partner	NTAC meetings	Separate scientific and technical assessments by each Gemini partner ("National TACs")
No later than 15 May	E-transmission	Electronic transmission of proposals to Gemini from NTACs
21-26 May	Draft queue and classical schedule	E-mail iterations with ITAC members of preliminary allocations
28-29 May	ITAC	International Time Allocation Committee meets to resolve issues and recommend programs
9 June	Final queue/schedule, and ITAC & Gemini feedback to NGOs	After approval by Gemini Director
13 June	Queue and classical schedule on web	Phase II programs ("skeletons") available in Observing Database; 2008B OT released
14 July	Phase II deadline	Final PI deadline for submission of completed Phase II Science Programs to National Offices (earlier submission is encouraged)
28 July	Phase II review complete	Goal for electronic transfer of checked Phase II programs from National Offices to Gemini
1 August 2008	Start of semester 2008B	2008B programs may be observed earlier to fill queue nights
15 August 2008	Queue fully loaded	Goal for activation of all Phase II programs

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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. Starting in 2007B, ToO programs are 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. Each instrument introduces significant overhead to the Observatory, and access to instrument ports is at a premium. If an instrument is requested for less than 6% of the Bands 1+2 time, the Observatory reserves the right to limit the RA range available to programs, or to not schedule the instrument.

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](#). Rapid response programs must be allocated time in Band 1. Starting in 2007B, ToO programs will not be given rollover status.

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

Mask making from non-GMOS images for GMOS [multi-object spectroscopy \(MOS\)](#) observations is available, but GMOS pre-imaging is recommended for MOS programs using slits narrower than 1.0" and for programs requiring very long observations of faint targets. If pre-imaging is required, then sufficient pre-imaging time should be included in the proposal. For classical programs, pre-imaging will be scheduled in the queue. Any unused pre-imaging time will be returned to the program.

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" (Band 4) and neither the PI nor partner country will be charged for any time used. Note however that poor weather programs are lower in priority than scientific ranking band 3. Poor weather programs may be submitted for any facility instrument but 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 weather 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 can now be submitted at any time in the semester. Use the [Phase I tool](#) to submit your proposal, selecting "Poor weather" from the drop down menu in the Submit tab. Such programs will be automatically placed in the Band 4 "Poor Weather Queue".

Exchange Time

Gemini Observatory encourages fruitful exchanges with other major observatories in order to expand the instrument capabilities available to the Gemini community. At present, the Observatory has two

exchange programs in place. The first agreement is an exchange of classical nights for HIRES time on the Keck I telescope in exchange for classical nights with Michelle on Gemini North or T-ReCS on Gemini South. See the [Keck time application](#) page for information on applying for the Gemini time through Keck. The second agreement is for observing time on Subaru in exchange for observing at Gemini. Previously the Subaru nights were carried out in service mode, and the Gemini nights in queue; starting in 2008A the exchange is classical nights for classical nights. 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), NIRI, NIFS and T-ReCS. 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. 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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