

11th GEMINI OPERATIONS WORKING GROUP MEETING

Aug 3,4 2006

Draft Minutes – R. Johnson, 24 August 2006

Present: Tim Davidge (observer), Stephanie Cote (observer), Dennis Crabtree, Max Faundez-Abans, Paul Francis, Rachel Johnson (Chair), Inger Jørgensen, Sebastian Lopez, Bryan Miller (part, by video), Bernadette Rodgers (part, by video), Jean-Rene Roy (by video), Doug Simons (part, by video), Verne Smith, Eric Steinbring (observer), Richard Wainscoat, Mike West

Action Items

*Action 11.1 **Rachel Johnson** will contact Colin Aspin to find out the status of the NGO-observatory mailing groups, and to discuss how to get the groups in use.*

*Action 11.2 **Gemini Observatory** will provide a web page with advice for NTAC and ITAC members from 07A onwards.*

*Action 11.3 **All NGOs** will assess, during the technical assessment of 07A proposals, how feasible it is for them to run duplication checks for each proposal using the current PIT button which checks the Gemini Science Archive. They will report back at the next meeting.*

*Action 11.4 **Inger Jørgensen** will investigate the creation of a web page containing semester by semester completion statistics (with similar data to that in Gemini Focus June 06).*

*Action 11.5 **Bryan Miller** will investigate the feasibility of improving the Phase II skeletons given to the PI, both in the short and in the longer term. Specific suggestion from this meeting were:*

- include a note in the Phase-II skeleton giving the location of the OT libraries*
- include all or part of the relevant OT library(ies) in the Phase-II skeleton*

*Action 11.6 **All NGO reps** will poll their communities for interest in using LRIS on Keck-I, and will provide this information to their countries' GSC members before the October 2006 GSC meeting.*

*Action 11.7 **All NGOs** will take over the responsibility of checking the observation finding charts starting from 07A Phase-II.*

*Action 11.8 **All NGO reps** will send suggestions for people to carry out the NGO review to Jean-Rene Roy.*

*Action 11.9 **All NGO reps** will investigate the procedure to implement long term status for Gemini proposals in their respective partner countries.*

*Action 11.10 **All NGO reps** will define the questions for a user feedback questionnaire to be sent to all users who have been awarded Gemini time.*

*Action 11.11 **Bernadette Rodgers** will estimate the effort required to take the distribution of right ascensions, as well as the observing conditions, into account when the queue is compiled at the ITAC,*

*Action 11.12 **Gemini Observatory and NGO reps** will create a web page containing suggestions on how to improve the chances of observation of Band 3 programmes.*

*Action 11.13 **Gemini Observatory** will provide statistics of programmes that are in the queue after the 07A ITAC, and before the 07A Phase-II.*

Resolutions

Resolution 11.1 The Operations Working Group approves the schedule of instrument swaps proposed by Gemini. The Ops WG agrees that the dates of potential commissioning blocks should be outlined in the Call For Proposals, but that the right ascension range of existing instruments affected by commissioning should not be restricted because of these potential blocks.

Resolution 11.2 The Ops WG discussed and endorsed the Gemini proposal for the capabilities to be offered on Gemini North and South in semester 2007A.

Resolution 11.3 The Operations Working Group agreed the following Phase-II deadlines for semester 2007A: 10 and 22 January (PIs), 31 January and 12 February (NGOs).

Resolution 11.4 The Ops WG clarified the deadline for submission of Gemini joint proposals. The deadline for all Gemini applications, including joint proposals, is that of the country of the institution to which the PI is affiliated. If the PI is not based in a partner country, the deadline will be 23:59 Hawaii standard time on 30th September or 31st March (for A or B semesters respectively).

Resolution 11.5 Gemini presented plans for a review of the National Gemini Offices (NGOs). The NGOs are an essential part of the distributed Gemini support model and it is essential that uniform support is provided to the broad Gemini community. The Operations Working Group supports the proposed review and will work with Gemini to ensure it is successful. Gemini has also proposed to examine each of the National TAC processes while reviewing the NGOs. The Operations Working Group also support this initiative, and will provide details of their various interactions with the National TACs.

Resolution 11.5 The Operations Working Group recommends adoption of a more aggressive strategy to correct accounting imbalances. Beginning in 2007A, the group recommends that the most up to date accounting estimates are used, along with the corrections already introduced for the current semester, as the basis for calculation of corrections to partner shares that should produce 100% corrections by end of the (next) semester for which the call for proposals is about to be issued. (A specific example is given in the main text).

The Operations Working Group recommended that corrections imposed in this way should not decrease partner share by more than one third.

Review of Minutes and Action items

Minutes and Actions of Ops WG meeting #10

The draft minutes from the Feb 2006 meeting (#10) were not received in sufficient time to approve them at this meeting.

The action items from the Feb 2006 meeting were reviewed. Most had been completed. Carried through to this meeting were A 10.2 that is superseded by AI 11.6, and A 10.5 that is now A 11.1.

Board resolutions

Jean-Rene Roy presented the relevant May 2006 Board resolutions, in particular Resolution 2006.A.19 regarding user feedback and an Action Item to investigate the aggregate time imbalance.

ITAC actions and ITAC 2006B report

Bernadette Rodgers presented brief details of the 2006B ITAC meeting.

Possible improvements to the Phase I process were discussed, including standardising the submission statistics produced by the NGOs, improving and automating the generation of NGO feedback, providing NTAC/ITAC instructions on the web (AI 11.2), and providing a tool to do batch duplication checking on a number of proposals.

The optimal time for duplication checking is during the NGOs pre-NTAC technical assessment. During the semester 2007A technical assessment period, the NGOs will assess whether such duplication checks are feasible in the limited time available and with the current software tools. The NGO reps will report back to the Feb 2007 Ops WG meeting (AI 11.3).

Instrument Status review

Doug Simons reviewed the status of Gemini instrumentation.

GSAOI

Pre-ship acceptance tests were recently completed in Canberra. Shipping to Cerro Pachon is nominally planned for September. After post-shipping health and software tests in the lab GSAOI will be stored until MCAO is ready.

Flamingos-2

The first full system cold test was underway and the instrument looked good with no show-stoppers uncovered. The optical image quality is good and flexure is well within specifications. The current estimated date for pre-ship acceptance testing is Nov-Dec 2006, with delivery to Cerro Pachon in early 2007.

NICI

Acceptance testing in the MKIR lab is tentatively planned for late August, after which NICI will move to the Hilo Base Facility for flexure testing. If all goes well first light and the start of commissioning will be in January 2007. There are some mechanism problems that may delay the acceptance tests.

The AO system dynamic performance is very likely to exceed specifications. In the long term it may be desirable to replace the NICI deformable mirror with one with improved stroke. Although the levels have been reduced, NICI is still suffering from light leaks/array problems. The campaign science team have been asked to assess the impact of these leaks on their science goals.

AO programme

Altair/LGS commissioning at Gemini North is temporarily halted due to ill health of critical personnel. The commissioning schedule is currently being re-worked to accommodate this and continue to make progress. The first queue programmes using the laser are now not likely until at least January 2007.

In the South MCAO is progressing on several fronts. The nominal plan is to have the main optical mechanical bench mounted at Gemini South in March 2007, with the first engineering test of the whole system in Q2 2007.

Aspen update

GPI is now under contract, with PDR scheduled for 2007.

PRVS studies are now underway with down-select reviews planned for early October, the results of which will be forwarded to the October GSC meeting for comment and review, with the expectation that a PRVS recommendation be presented to the November Board meeting.

The Mauna Kea turbulence profile site testing is scheduled to start in September 2006.

Due to long term funding issues the WFMOS studies were suspended at the May 2006 Board meeting.

A very successful TEXES demo science run was held in June, and TEXES will be used by the community during a 17 night run in 2006B.

Other

The plan to replace the Michelle array controller has been cancelled, as the array/controller budget will be used instead to reimburse past effort of the WFMOS studies.

No progress has been made on testing the existing broad band coated potential GMOS CCD.

2006B Phase I and Phase II Review

Phase I and II report from observatory

Bernadette Rodgers gave the 06B Phase I and II report from the observatory. The number of proposals increased by ~19% in 06B, but the total time requested remained about the same. Five nights were again exchanged with Keck to give access to HIRES, and also, for the first time, with Subaru to give access to SuprimeCam and MOIRCS (imaging only).

bHROS was undersubscribed. Suggestions to remedy this are to improve the web pages, to publicise the SV results, and to increase NGO outreach. The Subaru exchange was also undersubscribed. It was felt that this was likely due to first semester inertia and would fix itself in the coming semester. Even though poor weather programs were not charged in 06B there were still only a small number of such programs submitted.

In the past, RA ranges have been restricted at the Call For Proposals to take account of commissioning schedules and required instrument removal. The group agreed that this should not be the case in the future as commissioning schedules are prone to slip. However this may lead to some programs being unobservable, because of RA, when commissioning does go ahead. One possibility, if commissioning schedules have become more fixed by the ITAC than they were at the Call For Proposals, would be for these programmes to be removed at the ITAC stage.

NGO semester reports

Each of the NGO reps presented their semester report (these are included in Appendix A). The common issues in each report, and causes and solutions, were then discussed.

Problem: Oversubscription is not high and falling in several partners: Australia, UK, Chile

The group think this is partly due to the complexity of completing Phase-II and to incorrect perceptions of completion rates in each band.

Solutions: Gemini will produce end of semester web pages showing completion statistics (with similar graphs to the article in Gemini Focus Jun 06) (AI 11.4)

Aim to provide less confusing Phase-II skeletons and to better advertise the OT libraries within the skeleton (see item below).

Problem: Users are finding Gemini data reduction difficult: Aus, Brazil, UK

This issue was too complex to be discussed in detail at this meeting. The Data Reduction Working Group should be meeting soon and some of the issues will be within their remit. However, there are other actions that the observatory and the NGOs could take in the near-term, such as improving information provision. It was suggested that the topic 'How we can help and support users reduce their Gemini data' might be discussed in a Gemini Science Staff meeting (which the NGOs are now invited to attend).

Problem: Phase-II skeletons are not useful

Users, especially first time users, are often more confused than helped by the Phase-II skeletons they download. Particular issues are that the Phase-I guide stars included in the skeleton are often useless, and that users do not realise that they have to add calibrations to the skeleton. The latter problem would be reduced if the relevant part of the OT library could be added to the Phase-II skeleton,

Solutions: During the '2007A Process and Schedule' session, Bryan Miller was asked to look at short and long term possibilities for including the OT libraries, or directions to find the OT libraries, as part of the skeleton (AI 11.5).

Also in that session, Bryan presented plans to improve the guide star selection in PIT in the 07B release, which should alleviate the guide star problem.

Problem: Web pages are often out of date and information is hard to find

Solutions: see 'News and Short Updates' for work underway.

2006B telescope schedules

Mike West and Inger Jørgensen presented the telescope schedules for 2006B. They clarified that the blocks designated for bHROS will revert to queue if the observing conditions are not good enough for the bHROS programmes.

Initial discussion of 2007A Call for Proposals

Mike West and Inger Jørgensen reviewed the initial plans and preparations for the 2007A Call For Proposals. The offered instruments and modes have changed little from semester 2006B. Phoenix will only be available until mid-March 2007 (and this will be its last semester on Gemini). There will be likely commissioning and/or SV of NICI and Flamingos-2 in the South.

For semester 2007B, it may be possible to extend the time trade with Keck from five to seven nights, if Gemini offer T-ReCS. In return Keck would offer access to other instruments on Keck-I (but not instruments on Keck-II). In practice, the only instrument on Keck-I of potential interest to the Gemini community is LRIS, because of its blue response. The NGOs will poll their communities to assess interest in LRIS, and pass the results to their GSC members before the GSC meeting in October (AI 11.6).

The likely instrument swaps were discussed. The likely schedule of swaps will be explained in the Call For Proposals, however, the available ranges in right ascension will not be restricted because of potential commissioning blocks.

Canada and Brazil agreed to swap 5 hours between North and South as in previous semesters.

2007A Process and Schedule

Bryan Miller presented planned PIT and OT changes for 07A. In the PIT the guide star selection algorithm has been improved, and the NTAC page will contain a poor weather flag. Changes for the OT include smart calibration settings and some automated Phase II checking. Rachel Johnson commented that it would be useful to be able to tell whether the PI had changed the calibration settings.

Looking further ahead, plans for the 07B OT include acquisitions as part of the science observations, inclusion of the libraries into the OT, and the introduction of OT modules. The latter would allow gmmms and PIT to be modules of OT, and therefore allow for example the PIT to access OT features such as the Position Editor for guide star selection.

There was some discussion as to whether we could make the existence of the OT libraries more obvious for 07A. Possibilities are to include the relevant part of the library into the Phase II skeleton, or to include a note in the skeleton telling the PI what they need to include for each type of proposal, and how to access the OT libraries (AI 11.5). Rachel Johnson commented that if the libraries are included into the skeleton they would definitely need to be ready for when the skeletons are released.

2007A policy changes

From 2007A the NGOs will check the finding charts submitted at Phase II (AI 11.7). There are also plans for the NGOs to take over checking of the GMOS Mask Designs.

Process Deadlines

Bernadette Rodgers presented the process deadlines for 07A. These were agreed by the meeting.

The proposal deadline for joint proposals was clarified.

Tim Davidge commented that, unlike the PIs and the NGO contact scientists, the Gemini staff contact scientists do not have a deadline for Phase II checks. Inger Jørgensen commented that the status of the Phase II are checked on a regular basis, and Gemini staff are asked to check any which are outstanding. Gemini will have an internal discussion about whether they should set a deadline.

NGO training sessions

For 2007A the NGOs may require training into how to check the GMOS mask designs,

Science Operations Update

Inger Jørgensen and Mike West presented the Science Operations update.

The weather loss in 2006A was high for Gemini N at the beginning of the semester, ~60% of the time in the first third of the semester was lost to weather, with a total loss of 33% over the whole semester. In Gemini S 25% of the time was lost to weather over the semester, this was skewed towards the end of the semester.

The completion rates for 2005B and 2006A (as of ~5 days before the end of the semester) were compared with the Board completion rate goals.

Band 1 Goal - 90% or more of programs are complete by end of any rollover period.
Reached for GN-2005B, possible to reach for GS-2005B, GN & GS-2006A.

Band 2 Goal - 75% or more of programs are complete by end of semester
Reached GN-2005B.
Not Reached GN-2006A 65%, GS-2006A 64%, GS-2005B 63%

Band 2 Goal - 80-90% of started programs should have at least 75% of requested data taken (excludes programs with only GMOS pre-imaging)
Reached GS-2006A GN-2005B, GS-2005B
Not Reached GN-2006A: 71%

Band 3 Goal – 80-90% of started programs should have at least 75% of the data taken).
Not Reached GN-2006A 38% GS-2006A 70% GN-2005B 76%, GS-2005B 50%

The completion rates (as a percentage of programs) for each Band, split by partner, were shown for two time blocks, 2003A-2004B and 2005A-2006A. In the first block there is a big difference in Band 3 completion rates with none of UK, AU, AR, CL and UH having any programs with > 75% of the data taken. In the second time block it is noticeable that the completion rates for Brazil are equal highest or highest in each Band. Dennis Crabtree noted that it would be interesting to see completion rates as a percentage of total time.

The nightly queue planning at Gemini has been made easier the new queue planning tool. Semi-automatic creation of the nightly plan will happen in the near future. The queue coordinators check the charged time, and adjust as necessary.

Other planned near-term changes are improving acquisition times by using a single acquisition method for all instruments and modes (this is already in place at Gemini N) and improved probe mapping and mount performance.

Publication statistics

Jean-Rene Roy presented updated publication statistics. The total number of papers is 268, with ~80 so far in 2006 (with a goal of 130).

NGO-Gemini interactions

NGO Review

Jean-Rene Roy presented the initial plans for an NGO review. The goals of this review include

strengthening the interface between the observatory, the NGOs and the users, and addressing some well-known problems (NGO disparities in size, funding and expertise, NGO-Gemini communication).

The observatory also wishes to assess the current multi-TAC process. The NGOs were supportive of both these goals but request that the TAC process assessment should be formally decoupled from the NGO review, as the level of NGO involvement in the TAC process varies, with some of the NGOs providing technical support but having no part in the scientific ranking of proposals. It may be convenient to carry out the TAC assessment and the NGO review by the same group, with much of the data gathering taking place in the same visits,

The plan is for the review committee to have three external members (AI 11.8) and two observers from Gemini, Jean-Rene Roy, and the new Associate Director of science operations. This committee will visit each site, for around two days, meeting with the NGO staff, a funding agency representative, and an NTAC representative. The hope is that this review will take place in early 2007.

Update on Tucson NGO meeting priority list

Dennis Crabtree reviewed progress on the priority list that was drawn up by the NGO-Gemini meeting in Tucson. Several of the items have been completed.

Semester 2006A science operations

Inger Jørgensen and Mike West presented further details of the 2006A science operations.

The average oversubscription was 2.2 on Gemini-S and 2.1 on Gemini-N. For the second semester running, the oversubscription was much higher in the US than in the other partners. Michelle, T-ReCS and bHROS were both either close to or below the 16 night minimum and hence at risk of future decommissioning.

In the South, the actual scheduled science time of 171 nights was higher than the planned time of 127 nights, due to the planned commissioning of NICI and GMOS-S CCDs not occurring. In the North science was scheduled for exactly the planned amount of 157 nights.

Time accounting updates

Details on partner imbalances

The Operations Working Group discussed the imbalances in time accounting for partners that have accumulated over the last several years, and considered possible causes. These include: uneven use of classical time, differences in conditions requested and program length for band 3 programs, the discrete band structure (which leads to quantization effects), under-allocation (at the ITAC) of partner shares in the past, and differences in NTAC policies regarding rollover. The Operations Working Group noted that achieving exact balance in any given semester is not possible due to the discrete sizes of programs, the strong desire to complete a program that has been started, the band structure, unpredictable weather, and uneven distribution of programs over RA.

Beginning with the 2006B ITAC meeting, a new policy was implemented that prevented “banking” of time by partners for future semesters. This change should contribute to a reduction partner imbalances in the future.

The Operations Working Group noted that although they have attempted to make changes to allocated shares (to correct imbalances) in past semesters, the method used to propagate these changes into the queue via the queue assembly program at the ITAC has not been very effective. Additionally, in some cases, old accounting was used as the basis for the changes. The method was changed for the 2006A semester, including use of up to date cumulative accounting, and the new algorithm should be much better at correcting the accounting imbalances.

The accounting corrections made in the past have been conservative, based on a wish to not introduce unstable oscillations in partner imbalances.

The Operations Working Group recommends adoption of a more aggressive strategy to correct accounting imbalances. Beginning in 2007A, the recommendation is that the most up to date accounting estimates are used, along with the corrections already introduced for the current semester, as the basis for calculation of corrections to partner shares that should produce 100% corrections by end of the (next) semester for which the call for proposals is about to be issued.

A specific example follows. At the August 2006 Operations Working Group, preliminary cumulative accounting figures for the end of the 2006A (end July 2006) semester were available. Corrections have already been implemented for the 2006B semester. New corrections were calculated for 2007A such that the sum of the new corrections and the already implemented 2006B corrections should completely correct the partner imbalances by the end of the 2007A semester.

The Operations Working Group recommended that corrections imposed in this way should not decrease partner share by more than one third. Therefore, in the one case (for 2007A) where a partner imbalance had become large compared to the amount of observing time that partner has, the correction to the imbalance should be spread over three semesters.

The Operations Working Group will closely monitor the performance of this new method. In particular, the method should significantly reduce the imbalances by the time of the August 2007 Operations Working Group meeting, and if the imbalances persist at that time, the Operations Working Group will need to further examine the causes, and propose suitable corrective actions.

The Operations Working Group also felt that in some cases, the ITAC members either have been inadequately briefed by the respective NGOs or have not fully understood the briefing. Better cohesion between NGOs, NTACs and ITAC representatives should lead to better advocacy for partner science at the ITAC and help to reduce imbalances. This will also be helped by the observatory suggestion to set up a web page for NTAC and ITAC members outlining the various issues (AI 11.2).

During the discussion Jean-Rene Roy noted that some PIs have requested long term status. The NGO reps will investigate the processes required to initiate this in their various partner countries (AI 11.9).

User-Gemini interactions

Gemini Science 2007 Conference & Users Meeting

Max Abans presented the plans for the Gemini Science 2007 conference and Users meeting which will

be held in Foz do Iguaçu, Brazil. The plan is to have a 4 day meeting, with 1 of these days being a users meeting, followed by a 1 day Gemini-NGO meeting. Meeting dates were discussed, with June 11-14 looking optimal.

User feedback

At its May 2006 meeting the Board asked the Observatory and the NGOs to formalize the procedures for collecting and responding to user input.

The NGO reps outlined the various ways that user feedback is currently collected including national user committees, emails, questionnaires, town meetings. User feedback is also collected via the Gemini helpdesk and user visits to the observatory.

The observatory outlined the various ways they currently set work priorities. The overarching top level strategy is defined in the 5-yearly plan submitted to NSF. When making long term plans the observatory try to follow the GSC top level priorities which are set approximately yearly. The high level software tasks are reviewed internally by the Software Coordinating Group and priorities are set in discussion with the Gemini Science staff. There is often overlap between the software priorities of the science staff and those of the users. Engineering priorities are set internally approximately every 6 months, again aiming to follow the GSC priorities.

The observatory would prefer to get user input and priorities via a single channel, and the preferred channel for them would be the GSC. The NGOs generally agreed with this.

In order to homogenize and improve the feedback collected from users the Ops WG will produce a questionnaire which will be sent automatically to PIs who have been awarded Gemini time (AI 11.10). The questionnaire will address the Phase I and II process for all PIs and the quality of the data and ease of data reduction for those PIs who have received data. It may be sent in two parts – soon after Phase II and then at some period of time after the PI has received their data (AI).

Optimizing the use of telescope and PI/NGO time

Classical/Queue time, handling of classical programs

Inger Jørgensen led a discussion on the role of classical time. PIs choose classical time for a number of reasons: seemingly complicated observations (many of which could actually be handled in the Q), an incorrect perception of classical programs being easier to prepare and allowing flexibility to go ‘off program’ when observing, out of date perceptions of Q completion rates, and attempts to increase the chances of observation of Band 3 programs requiring good conditions. We discussed only allowing classical time for those programs that could not be handled in the queue. The Ops WG members were roughly evenly split on whether they thought this was a good idea. Some of the partners would have to sell the idea to other groups in their communities.

RA distribution and Queue assembly

We discussed whether taking RA distribution, as well as observing conditions, into account when filling the queue might improve completion statistics. Bernadette Rodgers will investigate whether this is possible (AI 11.11)

Discussion of Band 3

Mike West led a discussion of Band 3 programs. There are still programs in Band 3 that are very unlikely to get observed. The PIs of these programs often get frustrated with their lack of data after putting a lot of effort into Phase II. There are also not enough programs for the worst weather conditions.

The Ops WG proposed various actions to alleviate these problems. They will set up a web page with advice for Band 3 PIs, to better communicate the role and realities of Band 3 (AI 11.12). Gemini will provide post-ITAC statistics of the programs in the queue, to provide more information for PIs trying to decide whether their Band 3 program is likely to get observed (AI 11.13). We discussed the possibility of a rolling Phase II deadline for Band 3 programs but decided that this would be hard to plan and implement.

There is some concern from some NGOs that there is a difference in science quality of Band 3 programs, and yet they are all treated as equal in the queue, and also that the Band2/3 divide is very arbitrary in terms of ranking and yet makes a big difference to the likelihood of the program being observed.

News and Short Updates

GMOS mask making

Rachel Johnson reported that transformations to make GMOS masks from non-GMOS images had now been calculated for both GMOS, and that on-sky tests had been prepared and were awaiting observation,

Update on plan to improve web pages

Rachel Mason provided an update on the plan to improve the content and layout of the Gemini web pages. The first stage is to remove out of date and contradictory content before the 07A Call For Proposals. NGO members are editing the web pages to achieve this. The second stage is to move to a new content management system, Drupal, and to re-organize the page layout into a much shallower structure,

Update on non-sidereal guiding

Chad Trujillo provided information on non-sidereal guiding. Work is still required on the mid-level (OCS) and high-level (OT) support. Non-sidereal targets were about 1/10 of the 2006A allocation. Currently all non-sidereal targets require “fudges” to work. The changes required are non-trivial and will require interaction between several sub-systems and multiple software teams. They could be implemented and tested in one 6-month cycle, but this is highly dependent on the amount of work effort available.

Richard Wainscoat commented that some observers have had a tough time defining observations requiring non-sidereal guiding. This could be leading to reduced demand for this mode on Gemini.

The current status of using non-sidereal guiding with the LGS is that the most common mode works – it is possible to track an asteroid whilst propagating the laser. For the low level systems there is no problem. However this is currently a bit difficult in the OT.

APPENDIX A

NGO reports.

Gemini Ops WG, Victoria Meeting Brazilian Report Semester 2006B

Max Faúndez-Abans
Laboratório Nacional de Astrofísica
Brazilian National Gemini Office

1 – Brazilian Proposals 2006B

As for the submitted proposals for Semester 2006B, a total of 33.92 hours at Gemini North have been requested, representing an oversubscription of 2.42. For Gemini South, 59.57 hours have been requested, resulting in an oversubscription of 3.50. Table 1 displays the final allocated time schedule for the Brazilian proposals after ITAC evaluation.

Table 1: Phase I/II – Brazilian 2006B – Final Telescope Time Allocation			
Instrument	Proposals	Requested Time [hours]	ITAC Allocated Time [hours]
bHROS	3	11,45	5,80
GMOS North	7	25,87	17,20
GMOS South	5	14,36	0,60
GNIRS	3	12,70	4,50
NIRI	1	2,05	0,00
NIRI + Altair	1	6,00	0,00
Phoenix	1	5,00	1,95
T-ReCS	3	16,06	5,06
Total	24	93,49	35,11

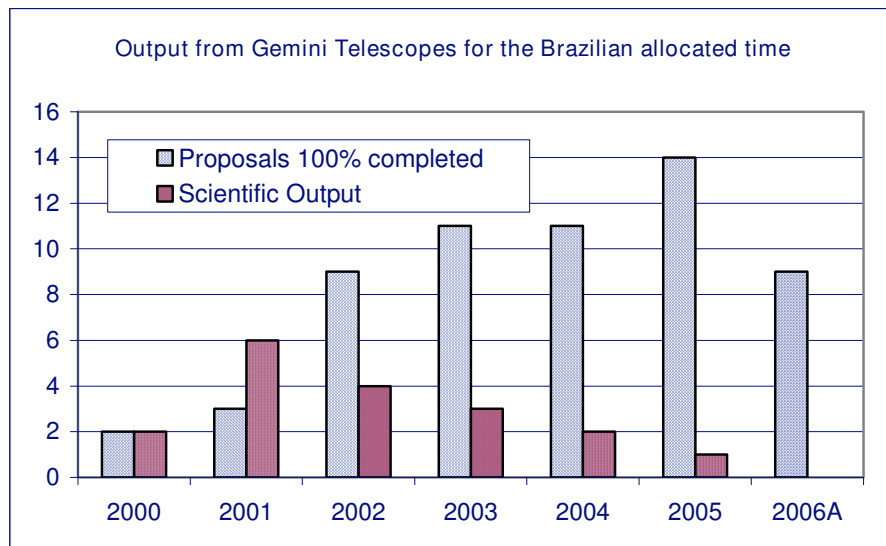
2 – Publication Metrics

Table 2 displays the updated Publication Metrics by Year of the Brazilian community using both telescopes. Only proposals with 100% of completion were considered. The columns display: (1) the year; (2) the number of proposals which had have 100% observed; (3) number of publications “for that year and based on those proposals”; (4) proceedings, product of those proposals; (5) theses originated from those proposals.

Year	Proposals 100% completed	Brazilian papers refereed journals	Proceedings	Theses
2000	2	2	0	--
2001	3	3	1	3
2002	9	4	2	--
2003	11	2	2	1
2004	11	2	1	--
2005	14	--	--	1
2006A	9	--	--	--
Total	59	13	6	5

Figure 1 displays the scientific production (output) per year for Brazilian proposals executed 100% by the Observatory.

Figure 1: Brazilian scientific productivity



The science productivity with Gemini has had a kind of “inertness” explained by the complexity of the data and the complexity of the reduction procedures. It is expected, for the Brazilian community, an interval from one and half to two years for science output after the data reception. Table 2 and Figure 1 show a general good productivity, which could be improved with time through better knowledge of the Gemini “data handling” and the “reduction processes” with IRAF-Gemini packages.

On the other hand, a few PI's are waiting for complementary observations from other telescopes, e.g., X-ray satellite, before being able to produce science together with the Gemini data.

3 – Brazilian Gemini Support, Instrumentation and Operations

3.1 – NGO staff training

Our NGO have been working hard to manage through the bureaucracy to achieve better possibilities of our staff to participate in the NGO staff Gemini Site visiting and training.

3.2 – Wide Field Multi Object Spectrometer (WF MOS)

To the Brazilian community and Team working on the WF MOS, the Board resolution of freezing WF MOS project study was very disappointing. This Team expects to have the opportunity to restart this project. Nonetheless, our NGO understands that the Board acted with good sense about this issue. The important question is how to pressure the partner countries which do not commit themselves and contribute to the 2006 instrumentation funding.

Brazil would have granted US\$ 112,000 for the WF MOS project study.

3.4 – Operations

Brazil has already paid for 2006 operations share.

4 - Staff training

Again, I have to stress that, in spite of our short budget as NGO, we continue to successfully provide the Brazilian Gemini community with instrument support. However, to improve our efficiency even more, the Brazilian NGO is “still trying” to manage to establish a program that envisages its staff training at the Gemini facilities during Phases II processes in 2007.

I would like to state again that, as a small partner, we define our participation in the support/training at Gemini from now on as “Phase II-Support”. That means we wish to concentrate the efforts to improve our expertise to support Phase II. We

are also interested in running queues, but we do not have enough personnel in our NGO for those duties at the present time.

5 – Gemini Science 2007 – Foz de Iguaçu, Brazil



The 2007 Gemini Science Meeting will take place in Foz de Iguaçu city, Brazil, which is located at latitude $25^{\circ} 32' 45''$ S and longitude $54^{\circ} 53' 07''$ W. There are two possible dates for the whole meeting: April 30 to May 2 for the GSM plus May 3 for the Users Meeting, or May 28 – 29 as the second one. We should avoid conflicts with the American Astronomical Society meeting which will be held in Honolulu, Hawaii.

More information will be released in a ppt presentation at the OpsWG meeting in Victoria.

6 – Gemini Public Information and Outreach Network

There has been one full article on Gemini and the Brazilian participation both as partner member and as telescopes user in the MCT publication “Rede C&T”.

Three press releases have been sent to the Brazilian media: two regarding Brazilian Gemini results and one on Gemini results presented at the American Astronomical Society in Calgary, Canada

Seven institutional bulletins concerning Gemini technical and scientific matters have been issued through the Sociedade Astronômica Brasileira's electronic service, and another one appeared at the FAPESP (funding agency of São Paulo State) electronic bulletin since the beginning of the year.

.oOo.

Canadian Report for 2006B

Canadian response to the 2006B Call for Proposals was very good with a record number of proposals received. However, Canadians continued to be modest in their time requests so the subscription rates were 2.1 in the north and 1.55 in the south. Half of the proposals were joint. GMOS continued to be the most demanded instrument with very little interest shown in the mid-IR capabilities.

	Time (Hours)	Proposals	% of Time	% of Props
Gemini North				
GMOS North	242.06	17	54.0%	50.0%
HIRES (Keck)	30	2	6.7%	5.9%
Michelle	32	1	7.1%	2.9%
NIFS	21.45	2	4.8%	5.9%
NIRI	33.1	4	7.4%	11.8%
NIRI-Altair	81.75	7	18.2%	20.6%
TEXES	8.2	1	1.8%	2.9%
	Time (Hours)	Proposals	% of Time	% of Props
Gemini South				
bHROS	2.5	1	0.9%	4.0%
GMOS South	214.19	20	79.3%	80.0%
GNIRS	29.3	3	10.9%	12.0%
T-ReCS	24	1	8.9%	4.0%

Phase I ran smoothly with very few problems. There were more proposals than in previous semesters that are requesting 85%ile and 70%ile CC conditions. However, the people who request this time may not fully appreciate the impact that it may have on observations, especially in terms of sky coverage. The acceptable brightness for WFS stars goes down as IQ and CC degrade, and this lowers the fraction of the sky that can be observed. The bottom line here is that observing conditions have a broader impact on observing than the S/N estimates churned out by the Integration Time Calculators. This might be something worth highlighting to the Gemini community. Phase I questions were mostly about items covered on the Gemini web pages that people either could not find or did not bother looking for.

Each semester PIs are doing better jobs at filling out their Phase 2 skeletons. This semester the majority of PIs (80%) submitted their Phase2s at the first deadline (and on time). As for last semesters, not one single PI was able to submit a correct Phase 2 at their first attempt, even for very simple programs. And PIs who had not completed a Phase2 for 2 semesters or more were back to basics mistakes.

The majority of the PIs did not find the GMOS OT tips & Tricks page, let alone the gcal configurations table. This is the usual problem where PIs get lost in the web maze. Most PIs do not find the OT library examples on their own either, since for the majority of programs most of the calibrations were missing in their first draft.

Again it was clear that the majority of PIs had not even looked at their fields with the Position Editor to choose their guide stars, and consequently had bad choices for the OIWFS guide stars (stars outside the OIWFS FOV etc). It would be better if the Phase1 selected guide stars were deleted from the distributed xml skeleton. This way the PIs would be forced to look up good guide stars.

About a third to a half of the PIs also do not provide the correct calibration information (e.g. telluric standards for spectroscopy etc). These problems may be related to the complex nature of the Gemini web pages. It would be highly useful to have a single page that summarizes Phase 2 requirements for ALL instruments; the GMOS section of the Gemini pages has an excellent Phase 2 requirements page that could serve as a template for this. Perhaps a link to this web page could be embedded in the Phase 2 skeleton. This is reinforced from this feedback received from a first-time user:

““I found that all the instructions I needed were available in the tutorial or in other parts. I think the biggest problem I had was that the first time through the tutorial I missed the part about the OT libraries. Now, if I read it carefully I would have realized that there were libraries of common observations. It was difficult to try and set the observations without having those libraries to look at. I think that for a first time user like myself it would have been better to go through the tutorial just looking at the sample observations to see how things worked. But the libraries aren't mentioned until further down in the tutorial. ”

PIs in Band 3 are now much more realistic than in the past. Many relax their observing conditions without any prodding, and the rest are much more cooperative in doing so when encouraged to do so.

No problems with the database. However with the OT, two PIs who wanted to import an old xml (from 2004) but the OT wouldn't read them. They had to pass through an intermediate 2005 OT version to make it work. We also noticed a BUG with OT 06B that the flats and arcs readout times and science mirror moves in the GMOS sequences are not accounted for in the total time (this was confirmed by Bryan).

Chilean Report on 2006B phase I and II:

1. Phase I:

The Chilean 2006B proposal deadline was on March 1st, and the submission process ran smoothly. The Chilean 2006B statistics of proposals for GS was:

Total number of proposals received: 16

-- Total time requested: 227.5 hours

-- pressure factor=1.66

Number of joint proposals: 6

-- For GMOS: CH+AR; CH+UK+US; CH+CA+US; For GNIRS: CH+US+CA+UK+AU+G;

For Phoenix: CH+BR

Number of classical proposals: 6

--Total classical time requested: 13.5 nights

Time requested GMOS-S: 172.5 h in 12 proposals

Time requested GNIRS: 21.0 h in 3 proposals

Time requested Phoenix: 2.5 ni in 2 proposals

Time requested bHROS: 2.0 ni in 1 proposal

Total 227.5 h in 16 proposals

Pre-TAC technical assessment was done and distributed in advance of the TAC meeting. The TAC finally ranked 13 proposals with a total awarded time of 127.5 hours. All but 1 of these programs were allocated by the ITAC: one queue program in band 1, two in band 2, six in band 3, and three in classical nights.

A wide spread of proposal lengths is observed again, ranging from 1 hour to 4 nights, with an average of roughly 15 hours/proposal.

The TAC was provided with a complete statistics on past Gemini allocations of Chilean proposals, the current status of the programs, and publications. This information was taken into account in the TAC process.

2. Phase II:

Phase II has gone smoothly so far, and there has been a good interaction with PIs. Only two Phase II programs have been submitted by the first deadline of July 12.

3. On band 3 programs

As suggested by the Observatory, PIs usually relax observing conditions. However, since the responsibility is only up to the PIs that the new conditions will still result in data with the S/N required by the science, there is a potential risk that this won't happen: in the effort that their programs will be executed they can end up with useless data. Are we NGOs actually applying a second instance of technical assessment? Should such instance be endorsed by the NTAC?

4. Publications:

An issue that continues to worry us at this NGO is the low efficiency of Chilean observations in terms of papers. As of this writing we only find:

- 1 paper with chilean first author (2 if Courbin et al. 2002 is counted)
- 4 more refereed papers with a Chilean coauthor (but not using Chilean time!)
- 5 more non-refereed with a Chilean coauthor
- At least 3 "in prep"

One would expect publications from completed or nearly-completed programs. From 2005A backwards, out of 50 allocated Chilean programs, 10 appear as executed to 80% or higher percent, but half of the PIs that were consulted said that the quality of the data they received was below their expectations.

5. Others:

S. Lopez participated in 4 nights multi-queue run from June 20 to July 1 2006.

Sebastian Lopez, Luis Campusano
July 30 2006

University of Hawaii Gemini Office Report – August 2006

Richard Wainscoat

Phase 1

A total of 18 proposals were received – 8 queue and 10 classical. This constitutes a marked increase in requests for classical time on Gemini.

GMOS – 2 queue proposals seeking a total of 15.15 hours

GMOS – 9 classical proposals seeking a total of 140 hours (14 nights)

GMOS or NIRI – 1 queue proposal seeking 10 hours

NIFS + ALTAIR – 1 classical proposal seeking 10 hours (1 night)

NIRI – 3 queue proposals seeking 23.4 hours

Michelle – 1 queue proposal seeking 5 hours

NIRI/NIFS +ALTAIR/LGS – 1 queue proposal seeking 10 hours

Total time requested was 213.55 hours, with a total of 141 hours available. The oversubscription factor was 1.51.

2 of the proposals were joint proposals.

Additionally, UH received one proposal for Band 4 (poor conditions) – this proposal sought 14 hours of GMOS observations in poor (but dark) conditions.

Overall, the quality of the proposals was quite high. Several of the proposals make very good use of the queue, seeking observations that could not be obtained using a classically scheduled telescope. Three proposals seek observations of yet to be discovered (or yet to be confirmed) sources – one of these is a GRB/TOO program – the other two represent follow up from observations that are planned with Keck II/LGS and with UKIRT and the UH 2.2-meter telescope, where the other telescopes will be used to pre-select the best sources for observations with Gemini.

None of the classical programs required pre-imaging.

No major problems were encountered with Phase I; UH astronomers seem to be becoming more proficient with use of the PIT.

Interest in the LGS was rather disappointing, particularly because UH astronomers have been eager to use Keck II LGS. Hopefully this will turn around next semester when performance is better understood.

Phase 2

After the NTAC and ITAC processes, 7 queue programs and 4 classical programs remain under UH jurisdiction. Two of the queue programs (one in each of bands 2 and 3) are ready. Two of the band 1 programs depend on future observations (Keck II, UKIRT and 2.2-m) and it is hard to motivate the PI to enter dummy observations, particularly when the performance of LGS is still not fully understood. The other band 1 program and a band 2 program belong to a new user who is experiencing a steep learning curve; mainland trips and vacation on the part of the PI have also slowed down his progress.

UK Report – Aug 06

Phase I

Proposal statistics:

Gemini North			
	#props	hours	% hrs
GMOS-N	23.08	396.5	27.6
NIRI	7.08	110.2	7.7
NIRI/AO	3	33.25	2.3
NIFS	3	37	2.6
NIFS/AO	4	101.62	7.1
Michelle	9.33	137.23	9.6
TEXES	2	32	2.2
HIRES	0	0	0
Total	51.5	847.8	59.1
Gemini South			
GMOS-S	16.75	258.82	18
bHROS	1	35.03	2.4
GNIRS	11.75	193.98	13.5
T-ReCS	2	24.75	1.7
Phoenix	2	72.4	5.0
Total	33.5	584.98	40.6
Subaru			
MOIRCS	0.5	2	0.1
Suprime-Cam	0.5	2	0.1
Subaru	1	4	0.2
Subtotal			

The number of hours available to the UK was 392 in the North and 229 in the South. Hence the oversubscription was 2.2 in the North and 2.6 in the South.

Previous oversubscription		
2004B	2.5	2.6
2005A	3.8	1.9
2005B	2.3	3.6
2006A	2.2	2.2
2006B	2.2	2.6

The UK 8m Users Group were asked for their opinions on the cause of the low number of Subaru proposals. They suggested:

- The time was not well advertised
- People thought it would be oversubscribed
- People got Subaru time through Japanese collaborators

Phase I comments, questions and suggestions

The Phase I process was fairly smooth.

The UK moved the 06b proposal deadline to 3pm on Sep 30th. All UK PI proposals were received by the deadline.

We had the following ITC concerns:

Michelle polarimetry: Does the ITC account for telescope emissivity increase due to the warm wave plate ?

NIFS: ITC does not work for extended source with uniform surface brightness.

NIRI+Altair: ITC is still not fully functional.

All: Confusing to use for extended emission line sources, as there is no surface brightness option for emission line input.

The limit on minimum emission line width makes it difficult to estimate the peak S/N for narrower lines.

The ITC functions that are listed but then crossed out look unprofessional.

For GMOS the guide stars found in Phase I very often are discovered to be useless at Phase II. It's often the NGOs rather than the PIs who discover that they are useless. The PIT guide star selection should either be improved (with an OT style guide star finder) or be removed for those instruments where guide stars are usually available.

Phase II

All UK Phase II for 2006A were submitted by the second deadline apart from one. This was due to a misunderstanding of the strictness of the second deadline. More than 50% of the 2006B Phase II were submitted for the first deadline.

Phase II comments, questions and suggestions

Generally the OT libraries are good, and PIs are using them more often. We particularly liked the NIRI library, and the final version of the GNIRS library. The extensive notes and comments could be used as a template for the other libraries. A PI commented that the Michelle library was better this semester. The GMOS library could contain more examples. We sent lots of comments about the libraries and web pages. Some instrument scientists updated things and some did not.

If the timetable for producing updated web pages and OT libraries for Phase II could be shifted to earlier dates, this would give time for the NGOs to comment, and changes to be made, before the PIs start defining their observations.

First time users are still finding it difficult to find the necessary information on the web pages, and this makes them less enthusiastic about applying for more Gemini time. We are pleased to see the web page re-organization is in progress and that the NGOs are involved.

The observation skeletons initially retrieved by PIs are confusing, especially to first time users. Two PIs who submitted by the 06b first deadline only filled in the skeletons.

We would find it useful if PIs could not change between 'For Review' and 'Phase II'. That way we could be sure they are only editing the observations we asked them to edit.

In the OT, one way of selecting the guide stars has preset annuli for the PWFS and a box for the OIWFS, which often results in no guide stars being found. The PI can check for vignetting by eye, so it would be more useful for searches to return all possible guide stars in the field.

The OT browser is useful for checking programs. It would be very useful if it could also display all the information necessary to check calibrations e.g GCAL filter, exp time etc. For Michelle a polarimetry field could be added.

Two of the UK staff are keen to experiment making an OT video for first time users which shows the basics of cutting and pasting, and how to copy observations from the library (we discovered one UK PI was having real problems with the mechanics of this).

The GMOS Mask Design process should be better documented with more examples.

Other

The various UK Gemini committee members and the UKNGO wanted feedback from the UK community about their use of Gemini. The UKNGO designed a web questionnaire that was available from 11 July. As of 25 July we had received 53 replies. Analysis of the answers to some of the questions posed is given on a separate sheet. A longer report will be prepared before the GSC meeting in October.

Users would find more information about data reduction and the various quirks of Gemini data very useful e.g. how stable are the various biases and darks, what are the GMOS-S zeropoints and extinction coefficients, what is the best way to de-fringe data.....

The UK 8m Users' Group met in March.

Rachel, Marie and Ilona have been Q observing during 06A.

We would like the schedule of NGO visits to be included on the main staff observing schedule, so that we don't take people by surprise. The training aspects of the visits could also be enhanced e.g. mock setups with all instruments, discussions with instrument scientists about data quality. This will require pro-activity on both sides.

We would find it interesting and helpful to hear about changes in observing procedures.

We have begun a program of talks at UK astronomy departments. Four departments were visited before the 06B proposal deadline, and we will try to

visit more before the 07A deadline. Rachel gave a talk about Gemini in the Current Facilities session at the National Astronomy Meeting.

Staff changes: Aprajita Verma joined the UK office in July 2006. She is mainly supporting mid-infrared and near-infrared instruments.

U.S. Report for 2006B

Verne V. Smith

U.S. response to the Gemini 2006B Call for Proposals was excellent, with 237 proposals received and reviewed by the NOAO TAC. Oversubscription remains high, with the ratios of time requested to time available being 3.6 for Gemini-North and 3.7 for Gemini-South. Below is the breakdown of Telescope-Instrument-# Proposals-Time Requested-Percent of time:

Gemini-North	# Proposals	Time Requested (nights)	% of Total (by #) (by time)	
GMOS-N	55	78.8	40.	38.
NIRI	36	53.5	26.	26.
TEXES	14	38.6	10.	18.
Michelle	22	24.1	16.	12.
NIFS	5	6.9	3.6	3.2
MOIRCS (Sub)	3	3.3	2.2	1.5
SuprimeCam (Sub)	3	2.8	2.2	1.3
Total=	138	208.0		

Gemini-South

GMOS-S	35	54.7	35.	31.
GNIRS	25	46.0	25.	26.
Phoenix	13	40.0	13.	23.
TReCS	19	23.4	19.	13.
bHROS	6	9.9	6.9	5.9
AcqCam	1	1.8	1.1	1.1
Total=	99	175.8		

*Keck/HIRES are not included in these statistics, as the US community has additional access through NSF TSIP.

Out of the submitted NOAO proposals, 67 US proposals were forwarded to ITAC (with another 10 having US co-I's but partner PI's) with the following telescope/instrument breakdown for US PI's:

Gemini-North	# Proposals	Time Granted (nights)	(by#)	% of Total (by nights)
GMOS-N	20	29.8	52.	52.
NIRI	5	4.0	13.	7.2
TEXES	4	14.6	11.	26.
Michelle	4	2.2	11.	4.1
NIFS	1	2.0	2.6	3.6
MOIRCS	1	0.6	2.6	1.3
SuprimeCam	2	2.5	5.2	4.5
Keck/HIRES	1	1.0	2.6	1.3
Total	38	56.7		

Gemini-South

GMOS-S	9	8.6	31.	18.
GNIRS	9	19.4	31.	41.
Phoenix	3	11.0	10.	23.
TReCS	6	5.7	21.	12.
bHROS	1	1.0	3.5	2.3
AcqCam	1	1.8	3.5	3.7
Total	29	47.5		

Phase I & Phase II

In general both Phase I and Phase II ran, and are running smoothly; however, our staff have raised some issues or suggestions for improvement.

- There seems to be a near consensus among the NGSC staff that much could be done to improve the Web pages, which would go a long way towards improving the entire process. Specific examples would be too numerous and detailed to put here, but part of this issue is being addressed by the recent e-mail from Rachel Mason.
- There have been suggestions from a number of NGSC staff that the OT libraries are superior to the typical skeleton phase II's that are present when the PI downloads the program for the first time. The skeleton phase II's are incomplete, have bad guide stars, and seem to lull a number of PI's into a false sense that the observations are set. It might be far better to just send the PI the library for the appropriate instrument. These sequences are tested

and work well. All that they would then need to do would be to add targets, instrument configurations, and check the guide stars. The advantage of the current system is that they do not have to type in coordinates of the objects. Seeing the library may be more important and perhaps get the PI's educated more quickly.

- The number of HelpDesk requests that NGSC receives is increasing during Phase II. It has been suggested that it would be good to be able to change categories if necessary, as now the sometimes uninformed selection of a category by the user directs the HelpDesk. We find some of our staff reluctant to escalate because they worry that it will not be directly properly and most efficiently.
- It might be good to have a more detailed list of contact people at Gemini. It is not always clear who to contact, for example, if the database is down, who is in charge of the ITC's, or who can answer OT problems. This issue could presumably be included in the overall improvement of the Web pages.
- Despite suggestions for continuing improvements, there is clear agreement that the OT is becoming more and more stable. The facility to attach finding charts is great, although it might be best to have this on an object by object basis instead of one attachment area at the top.
- In 2006B, 71% of the U.S. queue proposals were forwarded before the first, early Phase II deadline. The NGSC staff continue to work the remainder.

NGSC Support 2006A/B

Seven NGSC staff astronomers attended 8 queue-support/training runs in 2006A for a total of 37 nights (20 in the north and 17 in the south). Plans for 2006B are going forward and we fully expect to shoulder our share of training visits to both sites.

In addition to the normal queue/training runs, NGSC staff supported 26 scheduled classical nights with Phoenix over 3 time-blocks on Gemini-South in 2006A. In 2006B, we have already supported 2 classical Phoenix nights, with 13 more scheduled in 2 time-blocks.

Knut Olsen helped staff the Gemini booth at the AAS summer meeting in Calgary, while Adwin Boogert presented a poster focusing on Gemini's mid-IR capabilities at the "Great Observatories" meeting held in May 2006 at Pasadena.

NGSC Staffing Update

On 1 July 2006, NGSC added two new astronomers to its staff, with both being based at NOAO-South in La Serena, Chile. Susan Ridgway and Jayadev Rajagopal will support NGSC activities: all of Susan's service load is for NGSC, while 50% of Jayadev's service is for NGSC.

As of mid-June, Bob Blum has relocated north from La Serena, Chile to Tucson. Most of Bob's NOAO service is for NGSC.