

Operations Working Group Meeting #16

(Gemini-S Base Facility, La Serena, Chile: 27-28 January 2009)

Attending: Dennis Crabtree (Gemini), Tim Davidge (Canada), Sebastian Lopez (Chile), Bryan Miller (Gemini), Bernadette Rodgers (Gemini), Stuart Ryder (Australia), Marilia Sartori (Brazil), Ilona Soechting (U.K.), Verne Smith (Chair-U.S.A.)

Partial attendance: Jean-Rene Roy (Gemini), Doug Simons (Gemini)

Attending via video: Colin Aspen (Hawaii), Paul Hirst (Gemini), Joe Jensen (Gemini), Inger Jorgensen (Gemini), Sandy Leggett (Gemini)

New Action Items & Resolutions

Action Item 16.1: NGO heads will notify ITAC when programs under their purview are withdrawn.

Done.

Action Item 16.2: The procedure for arranging NGO site visits will be simplified. Carol Chirino will be in charge of the process.

Done.

Action Item 16.3: Gemini will e-mail the heads of NGOs when updates are made to the OT libraries.

Done.

Resolution 16.1: For Semester 2009B, there will be one deadline for the initial submission of approved Phase II programs for both queue and classical programs.

Implemented.

Review of Minutes and Action Items from Meeting #15

The draft minutes from OpsWG meeting #15, held in July 2008 in Tucson, Arizona, were approved.

The action items from meeting #15 were reviewed and the review is summarized below for each item.

Action Item 15.1: OT libraries will be checked for completeness, with a complete library being defined as an entire observational sequence for a particular instrument configuration. This would include the Acquisition/Science Observation/Calibration sequences. The list for each instrument will be checked. This is an ongoing task for Inger, Bernadette, and the NGOs.

Done.

Action Item 15.2: For the NGOs and NTACs: make sure that PIs check the Band 3 box, indicating whether they would accept their program into Band 3. Also, double check that the conditions are set in the box, not just in the text.

Being done.

Action Item 15.3: A committee will investigate the statistics of the various, currently defined observational bins and whether their statistical likelihoods are realistic. This committee may also discuss whether the bins should be re-assigned. Dennis will draft the committee charge, with suggested members being Ilona Soechting as chair, Tim Davidge, Bryan Miller, Paul Hirst, Bob Blum, and someone who also works as a Gemini queue coordinator.

In progress. Committee has formed.

Action Item 15.4: For the NGOs and NTACs: ensure that the communications between NTAC and ITAC are such that the Band 3 conditions and times are realistic, with approved Band 3 programs being able to complete their science objectives within the constraints of the semester, for example RA range and time needed.

Noted. Recommendations implemented with efforts to improve their implementation.

Action Item 15.5: The PIT will be changed to indicate clearly to the NTACs if the proposal is part of a Ph.D. thesis.

Done.

Action Item 15.6: By the end of September Verne will send Dennis future AAS meeting dates.

Done.

Action Item 15.7: Dennis will oversee the creation of an e-mail exploder account to improve communication between the NGOs and Gemini.

Done?

Resolution 15.1: Target of Opportunity triggers will be sent during classical runs, with the expectation that the observer will observe the ToO. Time lost to the classical program will be added as payback.

Done.

Resolution 15.2: Notify the partner NGO about both Poor Weather programs and DD requests that originate from that partner's user community. The Phase II for the Poor Weather proposal will be handled by the respective partner NGO from which the proposal originates.

Done.

Resolution 15.3: Time oversubscription factors on the Gemini telescopes will be calculated in a similar manner as ESO computes these quantities. In the case of Gemini, the oversubscription will be defined as the total time requested divided by the sum of classical, Band 1, and Band 2 time.

Noted.

REVIEW OF PRESENTATIONS AND DISCUSSION ITEMS

--Board Resolutions

--ITAC Summary & Actions

--2008B Phase I/Phase II Review and Telescope Schedules

--NGO Reports

--Instrument Review

--Discussion of 2009B Call for Proposals

--2009B Process and Schedule

--2008B Science Operations

--Science Software

Board Resolutions (Dennis Crabtree)

The Gemini Board resolutions from the 13-14 May meeting in Hilo, Hawaii that are relevant to OpsWG issues were presented and discussed. These resolutions are included below.

2008.B.1. The Board notes and endorses the new statement of purpose of the Gemini Observatory, “Exploring the Universe, Sharing its Wonders; Explorando el Universo, Compartiendo sus Misterios.”

2008.B.2. The Board notes the report of the AOC G and thanks this committee for their efforts at identifying management issues. The Board encourages the AOC G to focus on management issues related to Observatory operations and planning in their future deliberations.

2008.B.3. The Board commends the efforts of the Observatory Engineering and Software teams to improve the overall efficiency of the Laser Guide System (LGS) on Gemini North and to provide the Gemini user communities with an important capability that is reliable and robust. The Board appreciated the milestones achieved.

2008.B.4. The Board approves the proposed minimum science fraction times of 85% for Gemini North and 80% for Gemini South for 2009B with goals of 90% for Gemini North and 85% for Gemini South.

2008.B.6. The Board considered the Observatory’s proposal to introduce a new “prevention of time banking” policy, whereby partner countries who under filled the queue would forfeit their unsubscribed time. The Board regards this proscription to be too draconian an action to take in the first instance. Instead, the Board requests the Observatory facilitate time trades between partners who have significant imbalances in demand for Gemini North or South time, as the first course of action taken to maximize the science efficiencies. This activity should occur prior to the International Time Allocation Committee (ITAC) meeting. The Board also advises the Observatory to note the intent of the GBOD Resolution 2007.B.6 regarding under subscription and advises the Observatory to continue collaborative efforts with the NGOs to rectify under subscription and time imbalances.

The Board notes that time forfeiture should be considered only if a partner is unwilling to participate in time trades or demonstrates a clear pattern of under subscribing the queue (by a margin of more than 5%) over consecutive or alternate semesters. In such cases, forfeiture of time will proceed at the discretion of the Board in consultation with the Observatory.

2008.B.7. The Board notes the report on Gemini Planet Imager (GPI) campaign issues provided by the Board appointed subcommittee of Drs. Howard Yee, Isobel Hook and Megan Urry, and will ask the Observatory to eventually proceed with the GPI Call for Proposals for campaign science teams following the principles described in that report. In particular the GPI Call for Proposals should state the Board’s action to allocate up to \$0.6M USD from the existing Aspen Support Budget over a three to four year period, to hire one or more NICIpostdoctoral researchers (GPI Science Fellows) in order to help achieve the important scientific goals of the GPI campaign. Although these individuals will be employees of the Observatory, the Board notes their recruitment will be done collaboratively between the Observatory and the successful GPI campaign team. The Board expects this GPI Science Fellow opportunity

and process to be widely advertised within the partnership. The individual(s) may be based either with the campaign team or at an Observatory site. However, these positions are intended to be full time research positions to support GPI campaign science and would not involve regular Observatory support duties.

The Board notes the desire of the Observatory to rapidly proceed with a GPI Call (GBOD Resolution 2007.B.10). The Board will provide additional guidance regarding the GPI Science Fellow position(s) and the GPI Call. The Board's GPI sub committee is tasked to address these and other implementation details (as discussed during the November 2008 Board meeting) in a brief for the Board by 01 January 2009. The Board will consider this document and provide instructions to the Observatory regarding the issuance of a GPI Call for Proposals by 15 January 2009.

2008.B.8. The Board reiterates GBOD Resolution 2005.B.19 that the NICI campaign offers an opportunity for the Observatory and the partnership to learn how Aspen science campaigns will be best carried out.

The Board reaffirms the total number of hours to effect the NICI campaign shall not exceed 500 hours. The Board instructs the Observatory to request that the NICI team immediately reassess their observational strategy and target requirements based on actual instrument performance. The Observatory and the NICI team shall communicate revised observing needs in a report to the Gemini Science Committee (GSC) by 15 December 2008 for validation. The Board will review the GSC report and recommendations regarding the total number of hours necessary to conduct a successful NICI planet finding campaign by 15 January 2009.

2008.B.9 The Board determines that the NICI campaign will be charged to the major partners and the Gemini staff by the following percentages (US 46.7%; UK 23.42%; Canada 14.75%; Australia 6.09%; Gemini staff 9.0%) of the total campaign hours. The Board emphasizes unequivocally that the NICI campaign science time principles do not set a precedent for any future campaign science programs, including those related to disposition of Guaranteed Time discussed in the Observatory's 2008 NICI campaign document provided to the Board as privileged background reference material. The Board will address the Guaranteed Time as part of a comprehensive policy on campaign science during the May 2009 meeting.

2008.B.10. The Board notes that Gemini achieves acquisition times that are similar or better than those at other observatories, but is concerned that the acquisition times used in the Phase I process are significantly longer. The Board requests the Observatory, in consultation with the Operations Working Group, to implement changes that allow proposers to use realistic acquisition times in the 2009B Phase I process, and to alert potential users to these changes as part of the Call for Proposals. The Board tasks the Observatory to insure that these revisions are properly propagated into all web documentation and time estimation calculators used by the community by the time of the 2009B call.

2008.B.11. The Board encourages the Observatory to work closely with the NGOs to utilize newly implemented user feedback forms, promote Observatory capabilities, disseminate Observatory successes, and inform the user community about the Gemini issues.

2008.B.13. The Board considers the implementation of the current instrumentation suite as the highest priority of the Observatory. The Board also notes the recommendations contained in the 2008 GSC report. To enhance science opportunities for the Gemini user community the Board directs the Observatory to: (1) expedite GNIRS recovery and commissioning; (2) procure, without delay, Hamamatsu red sensitive CCDs for GMOS on Gemini North; and (3) institute an

aggressive Flamingos 2 commissioning schedule. The Board wishes to be apprised of Observatory progress no later than the May 2009 Board meeting.

2008.B.22. The Board warmly thanks and commends Dr. Joe Jensen for his dedicated service to the Gemini Observatory and exemplary leadership with regards to the Gemini instrumentation program.

2008.B.23. The Board warmly thanks Dr. Jean René Roy for his dedicated service to the Gemini Observatory. His long association with the Observatory, as a member of the GSC, Gemini Board member, and as a leader with senior management, have left an indelible mark of success oriented culture and advanced the scientific opportunities of all the Partners who utilize the world class Gemini 8 m telescopes.

2008.B.24. The Board warmly thanks Simon Morris for his tireless commitment, passion, and exemplary service to the Partnership as Chair of the GSC.

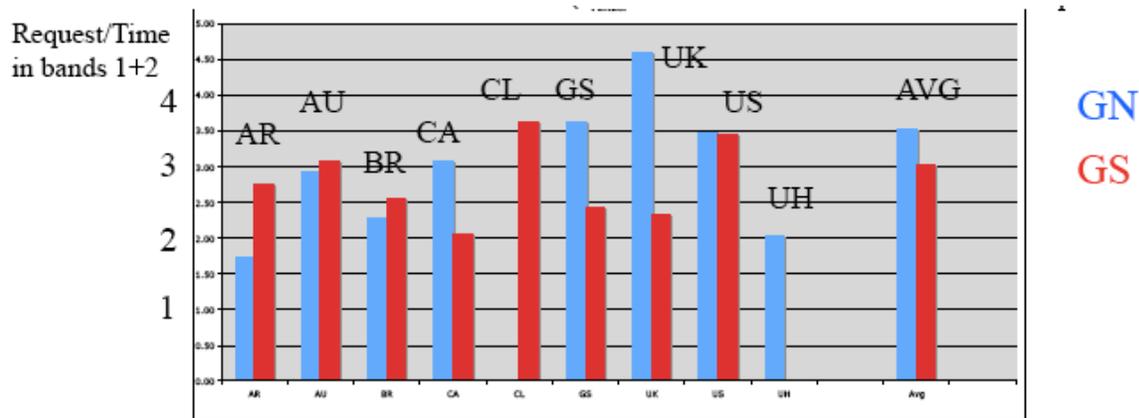
2008.B.25. The Board deeply thanks Dr. Wayne van Citters for his decade long public service, leadership, and vision as a Designated Member of the Gemini Board and his participation on the Gemini Finance Committee. His significant and tireless advocacy for a truly collaborative Gemini Partnership with international scope, exemplary scientific productivity, and effective education and public outreach engaging our collective communities has helped engender a true sense of Partnership among the international agencies that support Gemini, the Gemini staff who implement our vision, and our users of the facilities. His thorough knowledge of the history of the Gemini partnership has greatly aided the Board's deliberations and his ability to forge consensus among the Partners have enabled the Observatory to progress and achieve transformative science accomplishments. Dr. van Citters mentoring of Gemini staff and management, leadership within the Partnership, and advocacy of the Observatory will have a lasting legacy affecting the conduct of international scientific endeavors for decades.

ITAC Summary and Actions (Sandy Leggett)

The 09A ITAC meeting was held in Tucson on November 24-25, 2008. The BR, CA, CL, Staff, UK, US and UH representatives were in Tucson; AU and AR attended via videocon from Australia and Chile.

- Demand for Michelle was so low (10 hrs) that it was decided not to offer it in 09A. Two Michelle programs were moved to T-ReCS.
- Demand for LGS was lower than previous semesters: 220 hrs cf. 310 hrs and 470 hrs in 08B and 08A respectively.
- As in 07A, there was a large peak in demand at the North for RA=11-14 hours. To mitigate this, programs were moved to the South, alternative targets were found, observing constraints were relaxed, and where possible other programs were scheduled. Options for the last were very limited as there were insufficient highly ranked programs; this should change when GNIRS is available in 10A.

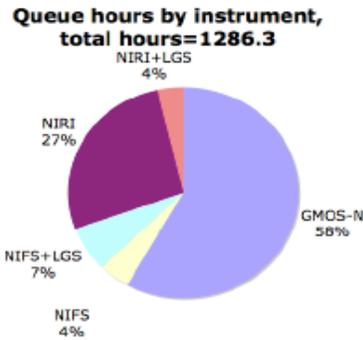
- We continue to receive incorrect observing constraints for many programs at ITAC; the NTACs do not handle this or technical comments very well.
- PI notification, web publication and access to Phase II skeletons occurred December 11, 2008, one day later than advertised due to some database problems.
- The Keck and Subaru TACs requested 2 and 6 nights on Gemini respectively. We could fill the Keck nights easily but unfortunately demand for Subaru was low (probably a reaction to high demand in 08B) and we could only fill 5 nights on Subaru. The US got one Keck night, AU one Keck and one Subaru night, and the UK four Subaru nights. The Keck and Subaru 09A classical nights on Gemini consist of: 1 night GMOS-N, 1 night NIFS+LGS, 5 nights T-ReCS.
- Oversubscription for 09A, using the old formula, ranged from 1.0 (AR) to 2.8 (UK) for the North, and 1.3 (CA) to 2.3 (CL) for the South. The average was ~2 for both telescopes, or 3 using the new formula. Rollover time was estimated at 40 hrs for the North and 80 hrs for the South (3% and 6% of the advertised time respectively).



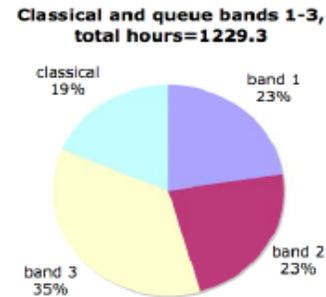
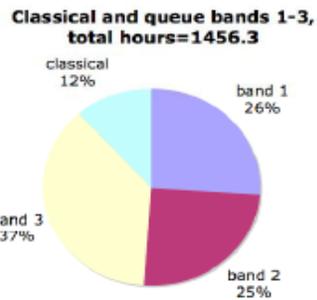
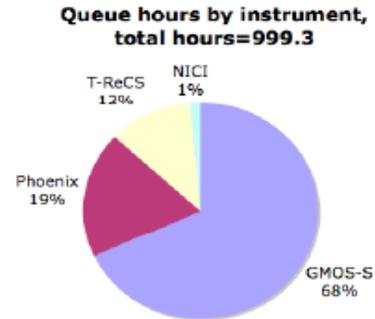
Sandy Leggett - Operations Working Group, January 2009

ITAC Summary – 2009A : Final Allocation

NORTH



SOUTH



Sandy Leggett - Operations Working Group, January 2009

2009A ITAC Feedback

- The smaller partners expressed a in half exchange nights on Keck and strong interest Subaru. The larger partners thought it was possible that they could find suitable half-night requests for pairing, especially the US with HIRES on Keck. Initially Joint programs should be encouraged while the observatory support implications are considered.
- There is concern regarding Michelle's future. It was suggested that ESO might be interested in exchange access to Michelle for Northern hemisphere mid-infrared work.
- There was significant interest and some concern regarding the GMOS detector upgrades. It was requested that information on the detectors and the work schedule, for both North and South, be posted on-line as soon as possible. There was some concern about data handling for programs that end up with data from different detectors.
- Band 3 continues to be a concern. The UK NTAC wanted to split larger band 3 programs into ~10 hour long pieces thinking these would be more likely to be started. However split programs can be difficult to manage, and in any case this issue should be taken care if the PI and Queue Coordinators

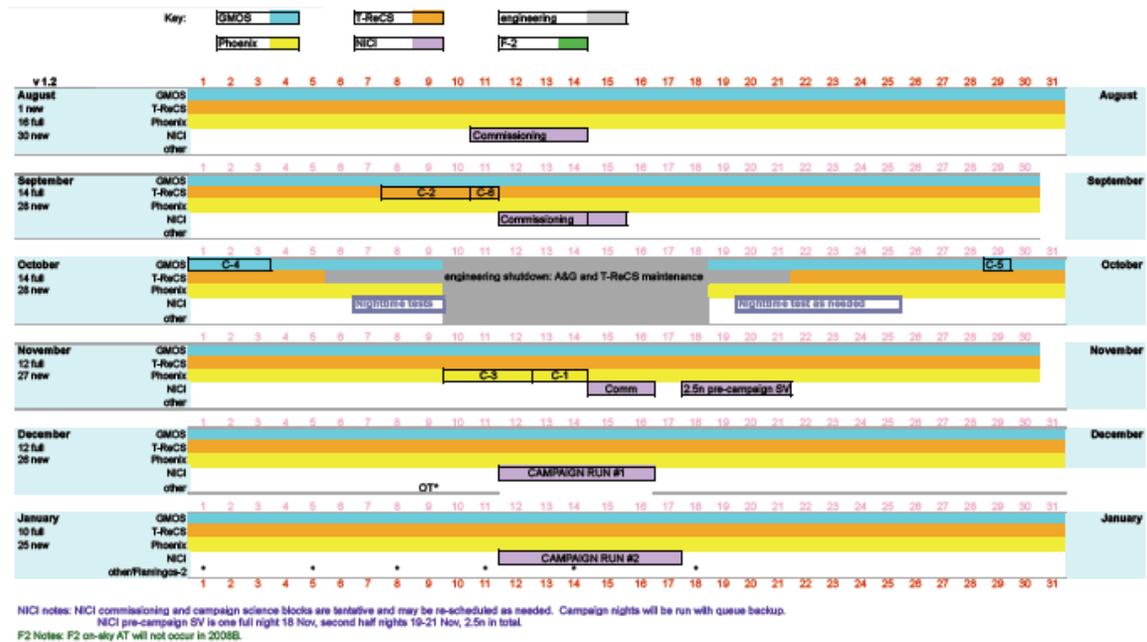
pay attention to the “minimum time” stipulation.

- Various software issues on the phase tool (PIT), the phase 1 TAC interface and the proposal database are being discussed with Bryan Miller.

2008B Phase I and Phase II Review plus Telescope Schedules

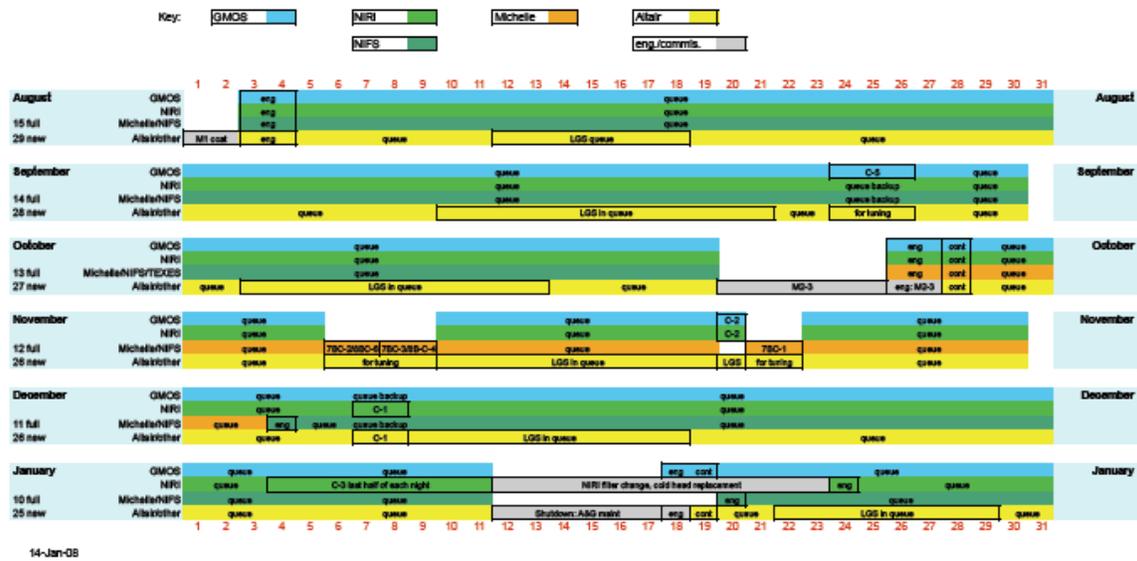
Gemini-South:

Telescope schedules for 2008B are shown below.



Gemini-North:

Telescope schedules for 2008B are shown below.



NGO Reports

Each NGO representative presented a brief update on the Phase I/Phase II processes for 2008B and any changes in their respective partner offices. There was no report from Argentina. A few points from each of the various reports are summarized below.

Australia:

A total of 24 Gemini proposals were received by ATAC for Semester 2009A, compared with 28 in 2008B and 23 in 2008A. The oversubscription factors were 2.25 for Gemini-North (including Keck and Subaru exchange time), and 1.70 for Gemini-South, with an overall oversubscription of 2.0. Just over half of all proposals were joint with other partners. Among the 24 2009A proposals, 15 (or 62%) requested either GMOS-N or GMOS-S, with the other multiply-requested instruments being NIFI (3 proposals) and Phoenix (2 proposals). Single requests were for NIFS, Michelle, HIRES, and SuprimeCam.

Dr Christopher Onken took up the position of Deputy Gemini Scientist based at the Australian National University's Research School of Astronomy & Astrophysics in Canberra in September 2008. Chris has experience with both GMOS and NIFS, and has taken over Tier 2 support of NIFS from Paul Francis. Chris will be staying on after this OpsWG meeting for training and queue observing at Gemini South.

Dr Terry Bridges has resigned as Deputy Gemini Scientist at the AAO and returned to his native Canada for personal reasons. We are very sorry to lose Terry's expertise and enthusiasm so soon after his arrival, but wish him well in his future endeavours. Terry was instrumental in getting the Australian GMOS Imaging Contest (see below) off the ground, and we are grateful that he has agreed to stay involved in this project. We have nevertheless been fortunate to secure the services of Dr Simon O'Toole at short notice as Terry's replacement. Simon has been the Anglo-Australian Planet Search Research Fellow based at the AAO since late 2005. Simon was rapidly brought up to speed on all the various modes of GMOS by Terry before his departure.

Brazil:

Brazil's response to the Gemini 2009A Call for Proposals was typical: a total of 13 proposals were received, with 7 for GN, 6 for GS, but none for time exchange. The instrument request distribution was not typical: we had fewer GMOS proposals (~54% total) than usual and more NIFS and T-ReCS proposals, which has shown that Brazilian community interest in other Gemini instruments is increasing. The oversubscription factors were 1.42, or 2.38 for Gemini-N (in the old and new definitions, respectively) and 1.30 or 2.17 for Gemini-S.

Canada:

The number of proposals for 2009A continues to be well below the peak semester of 2008A. 45 proposals were received for 2009a, and this can be compared with 50 in 2008B, and 63 in 2008A. As in previous semesters, the majority of the proposals were for GMOS, with NIRI being the second most requested instrument for Canadian programs. Also, following the trend from previous semesters, the Canadian proposals for Gemini South are almost exclusively for GMOS-S.

The Canadian community continues to be most interested in Gemini North, with roughly 60% of proposals requesting time at that site, and this level of interest has stayed more-or-less constant over the past few semesters. This is probably due to the diverse range of instruments offered on GN, coupled with a traditional interest in the northern skies arising from Canadian involvement with the CFHT. Some of the schedule burden on GN was relieved by CTAC, who opted to shift some proposals from GN to GS.

Canadian users take a pragmatic approach to using Gemini, and seem

willing to adapt their programs in ways that might boost the chances of success in a multi-partner queue-scheduled environment. Joint proposals account for almost half of all Canadian Gemini proposals, and the vast majority of all Canadian proposals requested IQ 70 and IQ 85%iles, and a large number requested CC 70%ile.

This was the second semester that Canadian proposals were reviewed by a discipline-oriented TAC that deals with proposals for Gemini, CFHT, and JCMT. If there is one downside to this process it is that CTAC has been expanded, and this has made it more difficult to find a common date that satisfies all CTAC members in the narrow time frame between when proposals are reviewed by external referees and when the program information must be transmitted to Gemini.

A major Gemini-related media event this past semester was the announcement of the first exo-planet images with ALTAIR+NIRI by Marois et al. There was tremendous interest in this discovery in Canada, and this continues to the present day. In fact, on January 21 the Canadian members of the Marois et al. team were named 'Scientist(s) of the Year' by Radio-Canada, which is the French-language version of the Canadian Broadcasting Corporation.

The Canadian community has now been submitting proposals to Gemini for 17 semesters, and the typical Canadian PI is a seasoned PIT user. In addition, a number of proposals are to continue programs that have already been started on Gemini. It is for both of these reasons that the CGO receives only a modest number of emails and help desk requests when PIs are preparing proposals with the PIT. Typically only 10% of programs are found to have technical issues that are brought to CTACs attention, such as the selection of inappropriate observing conditions or exposure times that are greatly in error.

As for Phase 2 preparation, the majority of PIs continue to use the instrument libraries, which can be accessed from the OT, when designing there programs. This has resulted in a significant drop in the number of errors in the preparation of the Phase 2's. A potential problem for 2009A is that PIs were very slow completing their Phase 2s. While the reason for this is not clear, it has been suggested that this likely reflects the growing confidence that PIs have in completing Phase 2s, such that they do not feel the need to submit their programs for review until near the deadline. Finally,

some PIs have expressed the desire to have the 'undo' feature returned to the OT, so that flubbed modifications can be reset.

Chile:

- The 2009A proposal process ran smoothly. Sixteen proposals were received, of which 5 were joint and 2 classical.
- The total time requested was 307.8 hours, with 145 hours requested for GMOS-S and 162.8 hours for Phoenix. This represents a subscription factor of 2.26 (using the old definition), the highest factor in the last 6 semesters. We believe that this good response from the community is partly due to a number of actions that the Chilean NGO is carrying out in order to better advertise Gemini within the Chilean community (visits to 5 Astronomy departments in early 2008, first user's meeting in January 2009).
- The NTAC recommended 12 proposals, and the ITAC allocated 11. For 3 proposals the NTAC recommended splitting into two parts, each of them landing in different ranking bands.
- The NGO provided the NTAC with technical help on proposal feasibility and PI past allocations. Also a summary of ongoing Chilean programs and publications was presented.
- The 2009A phase II is going smoothly and as of this writing we expect to have met the January 30 deadline for all programs.
- On January 13 2008, the first meeting of Chilean Gemini users was held in Santiago. Though the participation of Chilean PIs could have been greater, overall the meeting was very well received, and a new version next year was suggested.
- The goal of the meeting was to provide the National astronomical community with an informal environment to:
 - share experience working with Gemini data. (six science talks were given by Chilean PIs)
 - know about Gemini-S operations and future instrumentation (talks kindly given by Rodrigo Carrasco and Percy Gomez from Gemini)
 - discuss aspects of the Chilean use of Gemini-S (talk by SL on 18semesters statistics of instrument use, execution rates, papers productivity, etc).
- Some broad conclusions from this meeting were:
 - Users are aware of the distributed model of NGOs, and its fundamental differences with other observatories based in Chile.
 - The interest in using Gemini has remained stable in time
 - There is interest in contributing to the Gemini LRP

- Some PIs with access to similar instrumentation on Gemini and VLT claim Gemini performs better under same conditions, some claim the opposite.
- Completion rates of Chilean programs have improved a lot. B1 completion rates lag slightly below the partnership average, but B2 and B3 rates are even better than the averages.
- The fraction of Gemini papers involving Chilean astronomers is close to 5% of the total number of Gemini papers, thus comparable to the telescope time share.
- Although papers using Chilean time still lag behind of what is expected, in 2009 we should see an important increase in productivity, given what is was shown in the meeting.

Staffing

Dr. Jose Gallardo's appointment will be finalizing in mid2009.
A new call to fulfill this position will be issued in March.

Studentships

Since this year our office is coordinating two studentships for Chilean astronomy students: The STFC Gemini studentship for PhD studies in the UK, and the Claudio Anguita fellowship for PhD studies in the US.

U. Hawaii:

Staffing

Colin Aspin and Richard Wainscoat share UHNGO responsibilities.

Phase 1 - 2008B

A total of 22 proposals were received (all for Gemini North). The breakdown

of the Gemini-North programs by instrument are detailed below:

GMOS-N — 6 proposals requesting 74.5 hours

NIRI — 6 proposals requesting 83 hours

NIRI/Altair — 3 proposals requesting 28.5 hours

NIFS/noAO — 0 proposals

NIFS/Altair — 0 proposals

Michelle — 1 proposals requesting 10 hours

LGS — 2 proposals requesting 13 hours

One proposal was for classical observing, and the remainder were for queue observing.

There were 3 proposals for follow-up observations of Pan-STARRS-1 targets (allocated a total of 72 hours). The time requested over all proposals ranged from 2 hour to 30 hours.

No major problems with the Phase I process were reported by UH astronomers.

As in previous semesters, UH astronomers preferred to use Keck II LGS (NIRC2/OSIRIS) producing very high demand for those instruments. The main reasons remain that Keck has: i) larger tip-tilt star distance from target, ii) more efficient setup, iii) a fainter guide star limit, and iv) better FWHM and higher sensitivity.

Phase 2 - 2008B

The NTAC did not recommend any UH programs for classical observing time.

After the NTAC and ITAC processes, UH had 5 programs in band 1, 6 programs in band 2, and 3 programs in band 3. Progress has been good in getting most of these ready and all were set at “For Review” (at least once) by the 16th Jan 09 deadline.

U.K.:

Oversubscription Rates

UK received 85 proposals, 56 for Gemini-North, 25 for Gemini-South, 4 for Subaru, and none for Keck. GMOS was again by the far the most subscribed instrument (34 GMOS-N and 23 GMOS-S) followed by NIRC2 (13 NIRC2 plus 7 NIRC2-Altair). 4 proposals requested Michelle, 2 NIFS and 2 TReCS. Both NIFS and two of the NIRC2-Altair proposals requested LGS.

Staffing of UKGSG

The rolling grant supporting the UKGSG has been renewed by STFC at 4 FTE level. The fraction of Gemini support remains 70% per FTE. Currently, we have one PDRA position open with a deadline for applications on 16 March. The temporary contract of Kyle Lane is extended until the longterm position can be filled.

Observing training of PhD students

Visits of UK PhD students to both Gemini telescopes are now an established feature. 4 students enjoyed the observing training in each semester 08A and 08B and already 4 students are scheduled for 09A. The returning students gave excellent feedback. The only aspect with some scope for improvement is the supervision at the sea-level office. The Gemini contact would need to be more pro-active in passing the student on to SSAs, QC or who ever is doing something interesting on a day. PhD students are very keen to learn about ALL aspects of the operations of a major observatory, however, they try to stay well behaved and are unlikely to enter people's offices on their own initiative.

Phase I and Phase II issues

The technical quality of the submitted Phase I and II has further improved indicating that UK community is now well acquainted with PIT and OT including the OT Libraries. Nevertheless, the work duplication of technical assessment during phase I and checking of phase II definitions is very frustrating. The question is if it could be more efficient to define the observations in OT already for proposal submission replacing the "technical" pages in PIT. For example, Spitzer observations need to be defined already at the proposal level and nobody is complaining. OT is a very mature software with excellent image and plot facilities. Also the overheads calculated by OT are correct in most cases. UK is supporting 47 programs at phase II.

Outreach activities

The UK NGO started the IYA early. In November, Marie gave a presentation to 900 school students on Martinique about being an Astronomer and working with Gemini Telescopes. This presentation was broadcasted by the local TV station.

In December, Kyle and Ilona hosted a bus load of 17 year olds for afternoon of virtual Gemini Observatory. This included a presentation by Kyle and hands-on activities in the astro-computer lab. The feedback we received from the pupils and teachers is excellent. Kyle took also active role in organisation and delivery of activities for 100+ 10-11 year olds who visited the physics department mid January.

Ilona and Kyle became members of STEMNET as science and eng. Ambassadors approved to work with children (includes police background checks etc.), thus we expect more school days to come.

The UKGSG is planning on having a Gemini stand at NAM'09 plus run

presentations and activities on the school day of NAM.

U.S.:

U.S. response to the Gemini 2009A Call for Proposals was good, but not as high as in previous semesters. Oversubscription measured by time requested divided by time available was 2.18 for Gemini-N and 2.11 for Gemini-S. Below is the breakdown of telescope and instrument requests, as both number of submitted proposals and time requested.

North

- GMOS-N: 48 proposals, 713.1 hrs.
- NIRI: 20 proposals, 219.0 hrs.
- NIRI-Altair: 15 proposals, 102.5 hrs.
- NIFS: 2 proposals, 24.0 hrs.
- NIFS-Altair: 11 proposals, 111.3 hrs.
- Michelle: 6 proposals, 45.8 hrs.
- (LGS: 10 proposals, 58.1 hrs.)
- Total Requested=1215.7 hrs.
- Oversubscription=2.18

South

- GMOS-S: 28 proposals, 351.6 hrs.
- Phoenix: 16 proposals, 332.3 hrs.
- TReCS: 11 proposals, 176.3 hrs.
- Total Requested=860.2 hrs.
- Oversubscription=2.11

Time Trades

- HIRES (Keck): 17 proposals, 295.5 hrs.
(HIRES time is available both as Gemini or TSIP time)
- SuprimeCam (Subaru): 2 proposals, 30.0 hrs.
- MOIRCS (Subaru): 2 proposals, 13.2 hrs.

The general decline in demand for Gemini time by the U.S. community was one of the issues explored by the NOAO ALTAIR (Access to Large Telescopes for Astronomical Instruction and Research) committee, which has met three times since June 2008 and is now writing a final report. Based on some 585 responses to a detailed survey, the recent decline is likely due to two major factors that touch on operations issues:

- 1) the instrument suite on the Gemini telescopes is viewed as becoming less competitive and somewhat limited in scope, especially given the loss of GNIRS.

2) there is a not-insignificant and vocal fraction of users who have gone through the entire Phase II process and have not gotten a significant fraction of their requested data (almost certainly these are dominated by Band 3 programs).

The return of GNIRS, the CCD-upgrade to GMOS-N, the availability of NICI, and the eventual deployment of Flamingos-2 plus MCAO will not doubt have an impact on U.S. demand.

Phase I , Phase II, and Classical Observing

The Phase I and Phase II processes both ran smoothly. There were no major issues that were identified by NGSC staff. The situation has evolved to the point where target RA distributions are the biggest issues being discussed by NGSC staff as they work on Phase II implementation.

In 2009A all of the U.S. queue proposals were forwarded before the Phase II deadline. A number of programs continue to be worked on via iterations with the PIs.

With a continuing effort to increase classical usage of Gemini by U.S. observers, the 2009A schedule finds that 22% of U.S. programs will be classical, accounting for 33% of U.S. scheduled time.

NGSC Staffing Update

Bob Blum, whose major functional duties within NOAO were NGSC support (50% of his time), became interim Deputy Director of NOAO as of 1 October 2008. As interim, this position is nominally for ~1 year, but may become permanent. Bob's NGSC duties, primarily NIRI, NIFS, plus LGS support, have been taken up for the near-future by Knut Olsen and Susan Ridgway. During the 2009A time period, Dr. Lori Allen will begin work at NOAO (1 April 2009) with some of her functional duties being with NGSC (amount to be discussed).

David Silva has completed one semester (2008B) as the new NOAO Director. Dave has taken an active role in communicating with the Gemini Board, the U.S. GSC members, the NOAO Gemini SAC, and the NOAO ALTAIR committee.

Instrument Review

Joe Jensen provided a report on the status of various instruments and programs as listed below. Highlights of Joe's presentations are noted and more detailed descriptions can be found in the presentation on the website.

GNIRS:

- Two Aladdin-3 replacement arrays were received, but returned to Raytheon for rework on wire bonds.
 - Array testing will be performed at NOAO.
- Cryocooler and vacuum testing under way now.
- Electronics and software progressing.
- Optics realignment in optical subassemblies started.
- OIWFS repair is taking longer than expected.
 - Mechanisms have been repaired and tested cold.
 - Replacement array and mount trouble-shooting now.
 - Change and align optics for use with Altair will be done next.
 - Should be ready for installation in the GNIRS dewar in about one month.
- Installation and commissioning on the telescope in 2009A, continuing into 2009B as needed.

NICI:

- Array controller work mostly complete.
- Operational software and procedures are working, albeit at somewhat lower efficiency than we would like (~70% open-shutter).
- Campaign observations began in late November (PI M. Liu, UH IfA).
- Routinely getting good results and good weather; H-band Strehl routinely 20-40%.

--*The NICI Science Campaign:*

- Campaign team is preparing the final list of "protected" targets for publication prior to the 2009B CfP.
- Campaign strategy hasn't changed, but the NICI WFS doesn't go as faint as originally expected, so target list has been modified to adapt to NICI performance as measured during commissioning.
- All other targets and observing modes are open for observations in 2009B.

FLAMINGOS2:

Current Issues:

Elevated background in K-band spectra requires installation of an additional

deployable baffle and associated electronics and cooling
MOS mask wheel and decker wheel modified for better thermal performance and smoother operation
Detector showing increasing number of bad pixels in one corner (Gemini-furnished item)
Cracked R3000 grating discovered just after AT—commissioning of the high-resolution mode will be delayed

GMOS CCDs:

GSC Recommendation:

- Obtain high-QE red-sensitive devices for both GMOS-N and GMOS-S, if possible

Schedule:

- Competitive procurement of detectors started
- Bids expected from E2V, Hamamatsu, LBNL
- Hardware and controller work will be scheduled when the detector selection is made
- If possible, install in a ~6 week period mid-2009 (ie., between 2009A and 2009B, depending on detector delivery dates)
- GMOS-S to follow in 2010

MCAO:

Status

- Extensive GSAOI lab testing and commissioning in Nov. and Dec.; completed a number of open tasks on the punch list
- Laser acceptance testing expected May/June
- Laser support structure and enclosure in fabrication
- Canopus cooling system is being redesigned
- Canopus bench static aberrations corrected, static Strehl of 94% to 97% at H band
- LGS WFS flexure and temperature performance within performance specification

Schedule

- Canopus will move to CP sometime around August, depending on cooling work
- Beam transfer optics needs additional work for beam stabilization and alignment, scheduled for April

- GS laser scheduled for post-delivery AT on Cerro Pachón end of June
- Chances of further slips are still high
- Keck laser AT coming up in a couple of months; should learn more then
- Laser launch telescope ready for reinstallation on the telescope

Discussion of the 2009B Call for Proposals

The instrument availability, engineering, and commissioning plans are as follows:

Instruments for 2009B – Gemini South

- | | |
|--|---|
| <ul style="list-style-type: none"> • GMOS <ul style="list-style-type: none"> ▪ Imaging, long slit, MOS, IFU ▪ Nod & shuffle ▪ Queue and classical all modes • T-ReCS <ul style="list-style-type: none"> ▪ Imaging, spectroscopy ▪ Queue and classical all modes • <i>NICI</i> <ul style="list-style-type: none"> ▪ <i>Campaign Science, AND community access</i> ▪ <i>On-axis coronagraphic imaging; additional modes on a "shared risk" basis</i> ▪ <i>Protected campaign targets to be made public at time of Call for Proposals</i> | <ul style="list-style-type: none"> • Phoenix <ul style="list-style-type: none"> ▪ High-resolution NIR spectroscopy ▪ Queue and classical ▪ <i>Availability may be limited second half of semester due to GeMS commissioning</i> • <i>FLAMINGOS-2</i> <ul style="list-style-type: none"> ▪ <i>Commissioning, possibly SV</i> • <i>MCAO/GSAOI</i> <ul style="list-style-type: none"> ▪ <i>Commissioning only</i> |
|--|---|

- Propose 80% science time = 147 nights
 - Board requirement is 80%, goal is 85%
 - ~12n NICI campaign (~1/4 of campaign) => 18n off the top
 - Flamingos-2 SV: 6n
- *Highlighted items are new in 2009B*

2009B Engineering – Gemini South

- Plan 37 nights = 20%
- Probable use of nighttime engineering:
 - A&G, Cass-Rotator and GMOS maintenance [*9n, shutdown+contingency*]
 - Flamingos-2 Commissioning [*up to 18n, depending on 09A progress*]
 - MCAO+GSAOI commissioning [*~15n, including contingency*]; *Requires good conditions*
 - “Queued engineering” [*2 to 3n*], including but not limited to:
 - Instrument on-sky checkouts after maintenance or instrument swaps
 - Image quality tests
 - Routine and emergency hardware/software maintenance and repairs, including instrument maintenance [*as needed, instrument maintenance done with other instruments operating in queue*]
- Total commissioning time will not exceed ~25 nights
- Unused commissioning/engineering returned to science

Instruments for 2009B – Gemini North

- | | |
|---|---|
| <ul style="list-style-type: none"> • NIRI <ul style="list-style-type: none"> ▪ Imaging f/6, f/14, f/32 ▪ Spectroscopy f/6 ▪ Queue and classical all modes ▪ Altair 1-2.5um and L-band ▪ LGS (available 7-14n/month in queue, band 1 and 2, only; $\epsilon > 40\text{deg}$) • GMOS <ul style="list-style-type: none"> ▪ Imaging, long slit, MOS, IFU ▪ Nod & shuffle ▪ Queue and classical all modes • GNIRS <ul style="list-style-type: none"> ▪ <i>Commissioning + SV only</i> | <ul style="list-style-type: none"> • Michelle <ul style="list-style-type: none"> ▪ Imaging and spectroscopy (R=200 – 3000, and echelle) ▪ Queue and classical all modes ▪ Imaging polarimetry ▪ <i>Spectropolarimetry not available</i> • NIFS <ul style="list-style-type: none"> ▪ AO and non-AO ▪ Queue and classical all modes ▪ LGS (same constraints as NIRI+LGS) |
|---|---|

- Propose 85% science time = 157 nights
 - Board requirement is 85%, goal is 90%
 - GNIRS SV: 15 nights
- *Highlighted capabilities not being offered*

2009B Engineering – Gemini North

- Plan 27 nights = 20%
- Probable use of nighttime engineering:
 - A&G and Cass-Rotator maintenance [10n]
 - LGS upgrade testing [2n]
 - Engineering in queue [5n]
 - Instrument on-sky checkouts after maintenance or instrument swaps
 - Image quality work
 - Remaining GNIRS commissioning [4n, in queue] *Commissioning w/ Altair requires better than average conditions, thus 6n taken off the science time to make room for 4n commissioning in good conditions*
 - GMOS-N red CCD commissioning [4n]
 - Routine and emergency hardware/software maintenance and repairs, including instrument maintenance [as needed, instrument maintenance done with other instruments operating in queue]
 - Unused engineering time will be returned to science

2009B Exchange Time

- HIRES on Keck
 - Classical only; 5n exchange
 - Pre-scheduled, integer nights only
 - Dates TBD
 - Keck community has access to Michelle, NIRI, T-ReCS
- Suprime-Cam and MOIRCS on Subaru
 - Classical only, 5n exchange (can be 4-6n depending on demand)
 - Pre-scheduled, integer nights only
 - Dates TBD
 - MOIRCS imaging and spectroscopy (MOS)
 - Subaru community has access to GMOS-N, NIRI, NIFS, Altair/NGS, Altair/LGS (with suitable backup programs), T-ReCS, GMOS-S
 - Subaru community has access to ToO in queue, 7.5h in queue for 1 classical night on Subaru. No GRB Rapid ToOs from Subaru. Program time gets charged for all calibrations and Rapid ToO interruptions.

2009B Process and Schedule

The following Process Dates were adopted for the 2009B Call for Proposals:

- **27 February 2009 (Friday):** 2009B Call for Proposals issued.
- **31 March 2009 (Tuesday):** Proposal submission deadline.
- **Set by Partners:** NTAC Meetings.
- **12 May 2009 (Tuesday):** E-transmission of NTAC proposals to Gemini due.
- **13-15 May 2009:** E-mail iterations with ITAC members on draft queue and classical schedules.
- **19 May 2009 (Tuesday):** ITAC meeting in Kyoto (tentative), during the Gemini-Subaru Science Meeting.
- **5 June 2009 (Friday):** Final queue, feedback sent to NGOs.
- **10 June 2009 (Wednesday):** Results online, OT and skeletons released.
- **13 July 2009 (Monday):** PI Phase II deadline for submission to NGOs.
- **27 July 2009 (Monday):** Programs checked by NGOs.
- **1 August 2009 (Saturday):** Start of semester 2009B.
- **17 August 2009 (Monday):** Queue loaded.

Semester 2008B Science Operations

Summaries of various 2008B statistics follow on the next few pages. The numbers are complete through mid-January 2009.

Completion Statistics as of 15 January 2009:

Completion rates are shown below in tabular form.

Band #	1	2	2	3	3	3
Site Semester	1	2	3	4A	4B	5
Completion	Completion	75% of req data, started prgs, excl preim	75% of PI min, started prgs, excl preim	100% of PI min, started prgs, excl preim	75% of req data, started prgs, excl preim	
Req	90%	75%	85%	80%		
Goal	100%	90%	100%		80%	80%
GN 2005A	90%	39%	65%			86%
GS 2005A	87%	67%	75%			44%
GN 2005B	81%	96%	96%			83%
GS 2005B	91%	78%	83%			56%
GN 2006A	73%	67%	80%			43%
GS 2006A	100%	86%	95%			71%
GN 2006B	87%	56%	67%			73%
GS 2006B	82%	64%	73%			73%
GN 2007A	90%	54%	80%			78%
GS 2007A	92%	56%	65%			44%
GN 2007B	73%	56%	85%	87%	73%	87%
GS 2007B	96%	83%	90%	92%	92%	80%
GN 2008A	80%	64%	86%	83%	83%	77%
GS 2008A	86%	67%	76%	96%	96%	91%
GN 2008B	59%	44%	73%	65%	61%	57%
GS 2008B	68%	25%	53%	75%	67%	63%

Earthquake, GNIRS, NGP queue filling

Will improve w/ rollover & balancing time

Goal is met
 Requirement is met
 Performance is within 10% of requirement
 Performance is 10% or more below requirement

OpsWG mtg Jan 27-28, 2009

Science Software Status

Data Management and Data Flow (*Paul Hirst*)

A future dataflow system was presented, which would be simpler than the current dataflow system, but would rely on both a quality assurance pipeline and a science quality pipeline.

PIT and OT Changes (*Bryan Miller*)

Phase I Tool Changes for 09A

- Bug fixes
 - Typo in PDF
 - Non-sidereal target and TAC minimum time entry
 - Default directory for Open/Save
- New backend for proposals from Keck
 - Re-designed Submit tab
 - Proposal checks always on
- Identify thesis proposals/Ph.D. students in coinvestigator

list (Action 15.5)

- Check that Band 3 conditions equal/worse than default conditions
- Fix broken catalog queries

Planned PIT changes in 2009

- Severely resource limited
 - Hiring not successful, now hiring freeze
- 09B minimal release (March 09 CfP)
 - Update Brazilian institution list
 - No RA/Dec checks for DD/PW/SV programs
- 10A release (Sept 09 CfP)
 - Compare total requested time on submit tab with summed time from Observations tab
 - Enforce text word limits
 - Add Flamingos 2 to GS resources
 - Add GNIRS to GN resources

Phase I Tool – Look Ahead

- 2010B (March 2010 CfP)
 - Add missing information to PDF export
 - GMOS-N/S move check box
 - Open/Close (esp. Mac) UI improvements
- 2011A (Sept 2010 CfP)
 - Guide star visualization for GeMS/GSAOI
 - Add GeMS and GSAOI resources
- Proposal for PIT keyword changes to be added.

OT Changes for 09A

- Bug fixes
 - Drag/drop
 - Problems with cut or save (WFS/elev. const./DTA-X)
 - Notes not being lost on store
 - Saving UTC for non-sidereal targets
 - Simbad/NED coordinate system set to J2000
- Skeleton note with Phase II advice
- Improvements to data transfer to the GSA
- Display of thesis/rollover flags
- PIs can edit elev. constraints (after approval)
- GNIRS component updated, moved to GN list

Planned OT changes in 2009

- 2009B OT (June release)
 - F2 updates for commissioning/SV
 - Phase 1 and 2 GeMS
- GeMS/GSAOI components
- New guide star types and manual guide star selection and visualization
- Canopus offset limits
 - Phase 2 check updates (NICI, ...)
 - Bug fixes
- 2010A OT (December release)
 - Phase 3 GeMS
- Automatic selection of GeMS guide star constellation
- GSAOI offset limits
- Improved magnitude extraction from catalog queries
 - Update Phase 2 checks (F2, ...)

Next Meeting

The next OpsWG meeting will be held on 29-30 July 2009 in the United Kingdom, probably in Warwick, hosted by the U.K. Gemini Office.