

DRAFT Minutes

Meeting of Gemini Operations Working Group (3rd Meeting)

August 19, 2002 – Hilo, Hawaii, Gemini HBF Conference Room

Participants: D. Crabtree (Chair; Canada), S. Lopez (Chile, by Videocon), A. Bruch (Brazil), T. Armandroff (U.S.), P. Roche (U.K.), W. Couch (Australia), J.R. Roy (Gemini), M. Mountain (Gemini), D. Simons (Gemini), I. Hook (U.K., by Videocon)

Resolutions:

1. Data reduction S/W fundamental to the scientific productivity of the Observatory. While IRAF is the de facto standard in the OIR community it suffers from a small number of significant limitations. The Operations Working Group urges Gemini to work closely with the IRAF group at NOAO to develop efficient data reduction S/W for Gemini instruments.
2. The Operations Working Group felt that it was very important to view the Gemini Board resolutions regarding scientific and science-operations issues in advance of the Operations Working Group meeting. Board resolutions that pertain to operational issues should be available to the Operations Working Group before the Operations Working Group meeting. This will allow the Operations Working Group to provide feedback to the Gemini Science Committee in a timely manner.
3. The Operations Working Group encourages Gemini Observatory to clarify the procedure for Phase-I target submission for multi-partner proposals in order to allow distribution of a unified target list with the Phase-II skeleton.
4. The Operations Working Group recommends a weighted mean rank of the National ranks for joint proposals. Each joint proposal should designate a joint PI. This person will be the PI for the approved program, except in the case that his/her NGO does not approve the joint program. In that case, the partner from the NGO that contributed the most time will serve as PI.
5. The Operations Working Groups recommends that the following instruments be offered on Gemini North for 2003A: NIRI, GMOS, Michelle (late in the semester). On Gemini South we recommend that the following instruments be offered: AcqCam, Phoenix and CIRPASS. CIRPASS must be supported mainly by IoA and there must not be any “payback” for use of the instrument.

Action Items:

1. The Operations Working Group asks Gemini to ensure that the Phase II S/W is available at the time of the ITAC meeting. This will allow NGOs to become familiar with the latest version and give PIs with targets early in the next semester ample time to prepare their Phase II proposals. It will also allow GMOS programs

- to develop the Phase II for pre-imaging early enough that some of these observations could be performed at the end of the previous semester.
2. The IQ bins for the 2003A CfP and on the Gemini web pages should be modified to better match the delivered image quality. The specific percentile divisions should also be revisited to achieve a better distribution across the IQ range.
 3. Clarify the background bins and measurements on the Gemini website. Gemini to work with some of the Operations Working Group members on this issue.
 4. Gemini will produce a web page clearly detailing both the Phase I and Phase II process for joint proposals. This page should highlight the issues surrounding joint proposals such as possible length restrictions and different deadlines.
 5. Gemini and the NGO Operations Working Group representatives will work to clarify the Phase II support process.
 6. Armandroff needs to reserve 10 hotel rooms in Tucson for the next meeting of the Operations Working Group on February 10, 2003.

Crabtree will incorporate the NGO input from the U.K. and Chile into the notes of the January 2002 (La Serena) Operations Working Group meeting. Otherwise, there were no comments on the notes.

Previous action items:

- *Previous action item on NGOs receiving feedback forms:* Gemini has not received any feedback forms, so the NGOs have not been forwarded any forms. Gemini and the NGOs need to encourage feedback from queue-scheduled PIs. This needs to be fed into the Gemini metrics in some manner.
- *Previous action item on possibly moving the semester boundaries by 1 month.* Canada, the U.S., and the U.K., did receive feedback on this issue from their communities. Canada and the U.S. were not in favor of moving the semester boundaries. The issues were:
 - not confusing the communities which now are aware of and accustomed to the current semester boundaries
 - compatibility with the boundaries of other facilities
 - NOAO offers the ability of U.S. proposers to request other U.S. time and Gemini time in the same proposal (e.g., Gemini spectroscopy plus CTIO 4-m imaging), so it is important for the NOAO and Gemini semester boundaries to be identical.
 - cening "Previous action items". Please add something like
 - The Brazilian community was consulted and is indifferent concerning moving the semester boundaries.
 - at its April meeting, the GSC did not wish to see a change in the semester boundaries, although one participant argued that the GSC did not fully appreciate the issue.
 - I. Hook argued that the late release of the Phase-II Tool (approximately July 20 release) has been driving the problem of the tight Phase-II deadline.

- This discussion led to Action Item 1.

There was some discussion of the timeline for proposals from the Phase I proposal deadline through the Phase-II deadline. Armandroff suggested that we might be able to trim off 1 week before the NGOs forward the ranked list and 1 additional week between the receipt from NGOs and the ITAC meeting. ESO and STScI have larger lead times between CfP and start of semester. The time between the ITAC meeting and the start of semester is very short for Gemini. The situation is helped since Gemini has scheduled engineering/commissioning at start of 2003A. Gemini will try and do the same for 2003B. Mountain suggested that we look carefully at the whole proposal timeline. For the next semester that we can fully plan, it will be important to test whether we can "fix" the Phase-II submission deadline problem via such changes.

The Board resolutions (projected on the conference-room screen) relevant to Gemini operations were then discussed.

There was an extensive discussion of the data processing software situation that led to Resolution 1.

J.R. Roy described results from semester 2002A. Gemini North suffered from poor weather. Both GMOS and NIRI are functioning well. While the weather was good for the beginning of the semester at Gemini South, at the end of the semester there were 28 consecutive nights during which the telescope did not open. T-ReCS did not arrive during semester 2002A. Instrument lost time in the South is essentially zero, and the telescope lost time is pleasingly small. Phoenix has worked well, and Mountain reported that it is easy to support. A paper on oxygen abundances in LMC red giants based on the Demo Science data by Smith et al. (Demo Science Team) has been submitted to the *Astronomical Journal*.

A new image quality histogram for Gemini South based on the Flamingos run in June/July 2002 has a median of 0.4 arcsec (combined J, H & K); this excellent image quality pleased the Operations Working Group. The R-band image quality histograms for Gemini North and South were also shown. The worst aspects of the "wall" in the Gemini North image quality distribution are gone. Gemini is looking further into whether the using the PWFS to measure the R-band image quality is causing some problems with the distribution at the good end.

The issue of the timeliness of data distribution then arose. Roche stated that the need to perform Phase II increases users's desires to see their data from the previous or current semester. The Operations Working Group felt that any possible progress on the speed of data distribution would be highly beneficial to the user community. Roy replied that an eventual high-level software enhancement will make nightly e-mail notification and preliminary data distribution possible. Roy also noted the positive fact that all data taken through August 12 has been distributed. This is not reflected in the Queue Status page as of today (for example, many NIRI programs still show "Data in QA").

Roche and Armandroff also advocated restating the distribution of observing conditions to better match the reality of conditions experienced by Gemini. In particular, on image quality, Roche advocated image-quality percentiles at something like 33%, 66%, 85%, and Any. [See Action Item 2]

Roy reported that several staff from NGOs have visited to assist with Queue runs: Hook from U.K. (GMOS), Côté from Canada (GMOS), and Blum from U.S. (NIRI). Additional participation by NGO staff in Queue runs for 2002B is planned. Roy advocated the staff being present for the entire Queue run to see the full process. This will provide the most benefit to both the NGO person and the Gemini staff.

Matt Mountain described high-level software status. Mountain has been concerned about progress on high-level software, such as the Phase II Tool, queue management software, data reduction pipeline software. The Gemini Director convened an external review of Gemini high-level software. The Committee includes C. Mayer (Chair), Hilton Lewis, Pat Wallace and Eric Hansen, Phil Puxley, Jim Kennedy. Two of the long-term goals are to maximize scientific staff observing efficiency and to enable classical visiting observers. The report is due in October. The Operations Working Group suggested that the report be submitted in time for the next Gemini Science Committee. Mountain will look into whether the report can be distributed to the GSC that soon as the Committee is meant to report to the AOC(?)

Roy then described 2002B plans. In the North, about 2/3 of the time is GMOS, then 1/3 NIRI; this is in proportion to the approved programs. The GMOS Nod-and-Shuffle capability has made great progress. The plan is to release GMOS Nod-and-Shuffle to the community in a cautious way in 2002B.

The CIRPASS program happened at Gemini South. They lost the initial block to weather, so the Gemini Director gave them additional nights out of an engineering block to make sure that the run succeeded. Gemini has placed a summary of this run on their website and the CIRPASS Team has placed more of the results of their run on their site. The instrument achieves something like a 7% overall throughput.

Partner Perspectives on the 2002B Process

US

The U.S. Gemini Program (USGP) saw a strong community response to the Gemini Call for Proposals for 2002B. On Gemini North for 2002B, 57 U.S. proposals were received, 36 requesting GMOS (683 hours) and 22 for NIRI (349 hours). Forty-six U.S. proposals requested Gemini South, 21 for Phoenix (382 hours), 18 for T-ReCS (266 hours), 6 for Flamingos (106 hours), and 4 for the Acquisition Camera (28 hours; some proposals requested more than one instrument). In total, 103 U.S. Gemini proposals sought 181 nights on the two Gemini telescopes. The resulting oversubscription factors were 3.0 for Gemini North and 4.0 for Gemini South (3.3 overall).

As expected, U.S. Community interest in Gemini remains strong. The Gemini observing proposal process ran smoothly in the U.S. for semester 2002B. A new interactive tool to monitor the filling of the conditions bins as proposals are added to the forwarding list was developed by David Gasson and David Bell (NOAO). The tool proved quite helpful in our effort to forward a set of proposals that matches the predicted conditions as closely as possible. USGP received one complaint about a formatting error in the conversion of a PIT proposal to the format for the U.S. TAC using NOAO's PIT-to-LATEX conversion tool. The conversion software will be enhanced for semester 2003A.

The U.S. TAC strongly desires more Gemini nights to allocate and a larger number of completed observing programs. The U.S. TAC members are very interested in how the predicted distributions of observing conditions map to Gemini's experience so far.

UK

For semester 2002B, we received 52 proposals requesting a total of 876 hr. This is very similar to the request for 2002A, where we received 54 proposals, and again GMOS on Gemini-N was the most popular instrument, with over half the proposals and more than half the time requested. The oversubscription factors were 4 on Gemini-N and 1.8 on Gemini-S.

The proposal submission process seemed to go fairly smoothly with relatively few requests for help from the community, and apparently fewer problems with firewalls hindering PIT submission. The observing conditions requested by applicants were not always appropriate, and some of those forwarded to the ITAC were modified by NGO staff to more appropriate values.

Canada

Canada has a disappointing response with only 24 proposals. One proposal asked for both GN and GS.

	Hours Avail	Requested Time	OverSub
GN	106	139.93	1.32
GS	54	94.03	1.74
Total	160	233.96	1.46

Proposals

Telescope	Flamingos	GMOS	NIRI	Phoenix	AcqCam	T-ReCS
GN		9	2			11
GS	5			1	1	6
Grand Total	5	9	2	1	1	6

Average request for just over 9 hours of telescope time, which contributed to low oversubscription rate. People conservative with small amount of time available and NIRI difficulties. Based on conversations, several people upset they either didn't apply or ask for more time!

No significant issues with PIT other than the usual requests for better formatting. As I tell people, "PIT happens".

There was a skew towards better than median conditions in the Canadian proposals. This is a difficult issue to address with a low oversubscription rate.

Australia

The whole process went very smoothly, with all parties involved (applicants, technical assessors, and NGO staff) taking it in their stride with few if any difficulties encountered.

In terms of the number of proposals received, these remained at the same level as for 2002A, with a total of 18 received, 11 for Gem-N and 7 for Gem-S. Yet again, the strongest demand on Gem-N was for GMOS, with 8 of the 11 proposals being for this instrument. On Gem-S, Flamingos-1 was the most sought after instrument (4/7 proposals).

The oversubscription factors were slightly higher on Gem-N than they were in 2002A (factor of 2.58 in 2002B compared with 2.35 in 2002A), and much higher on Gem-S (2.75 compared with 1.04). The overall subscription factor was a factor of 2.64.

There was widespread demand for Gemini across most of the astronomy institutions within Australia, which was very encouraging. Multi-partner proposals were also common, making up half of the proposals that were submitted.

No problems were experienced with the technical assessment of proposals; all the assessors seem to be getting to know their instruments well and understand what the issues are in judging the feasibility of proposals. The same can generally be said for the users as well. This is the most likely reason for there being no queries submitted to the HelpDesk for this proposal round.

PIT: The proxy server problem that had prevented users at Sydney and Swinburne Universities submitting their proposals over the last few semesters, appears to have been fixed. Swinburne has complained, however, that they are not included in the "Institution" menu within the PIT. For multi-partner proposals, there was still some confusion as to whether the "PI time requested" should refer to that being requested from the NTAC in question, or the total amount being requested across all the NTACs (despite them also having to fill in "PI total time from all partners").

Chile

The Chilean submission process for 2002B went smoothly once again. This is most probably due to the experience acquired in previous semesters by both the NGO and the PIs. CONICYT received 7 proposals for GS, in total 111 hours or an historical oversubscription factor of 2.5. Four proposals were for FLAMINGOS I and 3 for T-ReCS. The NTAC assigned time to the 4 best ranked proposals (1 T-ReCS, 3 FLAMINGOS). One of the FLAMINGOS proposals was a Chilean-Argentinean joint program. Two of the approved programs (GS-2002B-Q-25 and GS-2002B-Q-14) were resubmissions of previous proposals. These programs had not been executed or the PI felt the achieved data quality did not fulfill the program's requirements.

We keep on using a simple and fast e-mail submission. This means the proposals must be prepared using the PIT and then the .XML file and figures are e-mailed to CONICYT. In addition, our deadline is set 2 or 3 weeks after other observatories' deadlines, so as to provide PIs with time enough to prepare their Gemini proposals.

The proposals were reviewed for their technical feasibility and then sent to the TAC members. By the technical review (made by myself) I have not encountered major problems but in general there are difficulties in: filling in the observing conditions, building and attaching useful figures and their captions, writing references, and calculating time overheads (which are mostly too optimistic). There were no helpdesk queries in 2002B.

The first use of Chilean-time Gemini data is published (Hokupa'a, extragalactic, Courbin et al 2002). Unfortunately, there is a mistake in the acknowledgement to Gemini as pointed out by Jean-Rene in his e-mail.

Brazil

The number of proposals submitted for semester 2002B has dropped catastrophically by about 50% as compared to semester 2002A. The reasons are not quite clear but may be related to frustrations with the results of previous semester. Consequently, the pressure factor was low. Since NTAC finally approved even less time on Gemini North than was available, a second call for proposals was issued to fill the gap. This call apparently woke up the community which now applied for more time than it did in response of the original CfP.

Technically, the proposal process went smoothly. No problems with PIT or Help Desk were reported. However, close to the dead line of the second CfP problems with the GMOS Integration Time Calculator appeared. Frequent last-minute (literally!) e-mail exchanges with Gemini staff helped alleviate the problem.

There is growing concern in the Brazilian community about the overheads which are longer than those of other 8-m class telescopes. In response to these concerns Gemini is urged to furnish information (for instance on the instrument web pages) about the reasons of the large overheads. Understanding the reasons would reduce the unrest in the community.

Phase II

J.R. Roy mentioned that some proposers did not submit Phase II for 2002B (end of semester, other problems). The NGOs will need to be aware of this and get into the loop. Some issues that Gemini has seen thus far are inadequate guide stars and a naive unwillingness to rotate position angle in order to get better guide stars

Hook suggested that we must become very organized for the Phase-II when the NGOs are responsible for this effort. All agreed strongly with this. In particular, the NGOs need to review the instructions that are distributed to the successful proposers regarding the Phase-II process. Also, the approval and transmission process for the Phase-II proposals needs to be clarified.

Couch then raised the issue of the target lists for multi-partner proposals. When the Phase-II skeleton is received by the designated master PI, it currently does not contain the targets from all the partner proposals. Simon Chan was called in and did not have an immediate solution to this issue. This issue will need to be addressed in 2003A when there will be a single PI and a single entry in the queue for joint proposals.

The Operations Working Group then reviewed the ITAC Report from 2002B. The ITAC has requested that the Operations Working Group recommend on the process for ranking multi-partner proposals. Roy presented how multi-partner proposals are handled. Beginning in 2002B, ITAC merged NGO-recommended joint programs into a single program. Each partner is charged in proportion to the number of hours it allocated to the joint program.

The Gemini Observatory, the GSC and the Operations Working Group strongly support and encourage joint proposals. How should the merging of the proposals from the individual TACs be handled? Currently the individual components are merged using the position of the highest individual component. The Lead PI is the PI of the highest ranked individual component. This provides a positive bias to execution of joint proposals. Armandroff suggested that ITAC members are less likely to withdraw their support if a weighted mean is used for the rank. Roche argued that the weighted mean grade is the most respective of the National TAC input. The Operations Working Group recommends that the position of the joint proposal in the queue be determined by a time weighted average of the individual ranked components. The PI of the joint proposal is to be selected by the team and noted in the Phase I proposals. If the PI's NTAC does not award time then the PI will be selected by ITAC as the PI of the component awarded the most time.

Instrumentation Status [Simons]

T-ReCS: Detector noise has been reduced by a factor of 10 and meets specification. Florida is implementing 4-point digital sampling to reduce cross talk. Simons forecasts

acceptance tests in October. Some new baffles have been installed to address light leaks. Florida plans to perform a dry-run of the acceptance test plan in one week.

GMOS-South: The instrument is only one week behind the schedule proposed in March 2002. The instrument is integrated, and static performance tests are complete. GMOS is going into cold-chamber tests, followed by flexure tests. Possibly ready for acceptance tests in October. Note that only 5/6 of the GMOS CCD Mosaic is operational. Simons also informed us that the MIT/LL MBE CCD procurement went bust due to a device fabrication error. GMOS and T-ReCS are very close in predicted delivery date.

bHROS: Simons forecasts acceptance testing during Q1 2003. The issues include delays in integrating fibers with sapphire balls and fibers in image slicer. One-quarter of the CCD mosaic is not working.

GNIRS: Integrated cold testing will begin in September. The NOAO Flexure Test Facility is installed, so flexure testing can begin when GNIRS is fully integrated and cold. Simons is forecasting Q3 2003 delivery.

Altair: Simons forecasts late September delivery from HIA. They plan to have a November run at Gemini, before Michelle arrives, followed by another run in December.

MICHELLE: Gemini still plans to receive MICHELLE in the Gemini North dome in December. Quite a bit of work needs to occur when MICHELLE is received from UKIRT in October, including adding Gemini fore-optics, flipping gratings, and troubleshooting a micro-switch.

Semester 2003A Planning and Preparations

The Operations Working Group then discussed what will be offered in 2003A based on the instrument status from Simons

We quickly reviewed the deadlines and decided that we could likely trim a week off of the deadline for NGOs sending the ranked lists to Gemini.

In order to begin classical observing, and in order to provide relief to high staff demand for queue observing, NGOs should assist in identifying teams for classical observing. There is a three-night minimum allocation, and the instruments must be either NIRI or GMOS. There is some complication / concern to insure that the proper experience be present, possibly via NGO participation, if a GMOS spectroscopic mode is to be used. Armandroff suggested that classical observing with Phoenix would be possible because Phoenix is relatively easy to use, and the NOAO Phoenix Support Team embraces the idea of bringing observers to the telescope for education and interaction. This would bring observers to the telescope but would not alleviate the Gemini staff load as this instrument is supported by the USGO. Mountain supported this idea and suggested that

Puxley and Armandroff discuss this. The NGOs should recommend proposals for the classical blocks. This can also be done as mini-queues run by NGO staff.

For Gemini North, the Operations Working Group supported the instrument-availability plan proposed in the handouts: GMOS, NIRI and Michelle late in the semester. For Gemini South, Phoenix and the Acquisition Camera will be offered. There is great concern about offering either GMOS-South or T-ReCS for 2003A as neither of these has undergone acceptance testing. The Operations Working Group strongly supports commissioning both T-ReCS and GMOS-South in 2003A. The Operations Working Group is very concerned that we not alienate proposers by having them write proposals for T-ReCS and GMOS-South that may not be available. The compromise put forward includes the suggestion to mention in the Call for Proposals that GMOS-North imaging and MICHELLE proposals that have equatorial or southern targets in the June vicinity may be able to be accomplished by GMOS-South and T-ReCS, respectively, if they end up being available. Roche also suggested adding CIRPASS to the mix, without any payback, to allow a greater amount of science to be performed at Gemini South than would be possible with only PHOENIX and AcqCam. The Operations Working Group recommends that the instruments offered on Gemini South for 2003A include: AcqCam, Phoenix, and CIRPASS. CIRPASS should be offered under the conditions that it is mainly supported by IoA and that there be no payback.

We then discussed the concept of MOUs between the NGOs and Gemini. Armandroff suggested that the NGOs receive whatever benchmarking or other information is sent to the funding agencies and/or Gemini Board on that NGO's performance. Mountain agreed and added that the NGO should receive the performance report before its funding agency receives it. Mountain suggested that we not measure Phase-II metrics until the NGO support of the Phase-II process is stably in place. There was significant interest from the NGOs on advanced OT training, over Videocon or using Webcast tools such as VNC.

There were some issues with the tasks in the MOU that are new or relatively unexplored. "Provide eavesdropping and video support capability" is not understood as a clear responsibility of the NGOs. Using the words "explore the potential of" to apply to some of these uncertain tasks is a potential solution.

A subset of the Operations Working Group will meet on modifying the draft MOU (Crabtree, Armandroff, Hook, Puxley, Roy). The next draft of the MOU will be sent to all NGOs.

Gemini Science Archive

The Operations Working Group had a brief update on the status of the Gemini Science Archive (GSA). There will be two contracts with the HIA-CADC, one for the development of the GSA and one for its operation.

Internet Connectivity

The Operations Working Group had a presentation on Gemini's internet connectivity from Jim Kennedy. The Gemini North telescope is connected to the Hilo Base Facility (HBF) at 45 Mbps, while the HBF has a 155 Mbps (max) link to Internet 2. This latter link is shared with UH and the other Mauna Kea observatories. The Gemini South telescope is connected to La Serena via a dedicated microwave link running at 77 Mbps, while La Serena has 10 Mbps (max)/6 Mbps (min) link to Internet 2. This latter link is shared with CTIO and CARSO. The Gemini Science Archive, located at the HIA/CADC is currently connected to Internet 2 vis CA*net at 10 Mbps. This link will be upgraded in early 2003 to 1000 Mbps.

Next Meeting: The next meeting will be held on February 10 in Tucson, Arizona.