Gemini Science Committee
Meeting Resolutions
Meeting #15, October 1999
RESOLUTION 15.1: Progress with Gemini-North

The GSC congratulates the Gemini Observatory team on the outstanding first results obtained with Gemini-N, and presented at the dedication in June. The breathtaking images obtained with the University of Hawaii instruments, Hokupa'a and QUIRC, demonstrate the potential of the telescopes in dramatic fashion. We appreciate the hard work, skill and dedication of the whole Gemini staff, the University of Hawaii AO team, and the forbearance of their families.

We also congratulate the Observatory on the continuing progress in integration and commissioning of the northern telescope and the impressively rapid assembly of the southern telescope.

RESOLUTION 15.2: Partner Participation

The GSC is gratified to have representatives from all the Gemini partners participating in this meeting. The involvement and participation of all the partners in the setting the scientific perspective for the Gemini Observatory is essential. We would also like to welcome Luis Campusano as the Gemini Project Scientist for Chile and look forward to his involvement in the Gemini activities.

RESOLUTION 15.3: Availability of NIRSPEC

The GSC welcomes the availability of Keck/NIRSPEC time to the Gemini community.

The GSC recommends that there be no upper limit to the amount of time that can be requested in an individual Keck/NIRSPEC proposal, and that the scientific assessment be the responsibility of an external TAC, with the Gemini staff providing technical feedback and managing the proposal process.

The GSC recommends that both Gemini and the national project offices advertise the availability of the Keck/NIRSPEC time.

The GSC expects that a large number of proposals will be received, creating a significant burden on the Gemini staff involved in this program. In the future, the GSC recommends that similar agreements be implemented such that time can be allocated through the NTACs.

RESOLUTION 15.4: Polarization Module

The GSC recommends that IGPO proceed with negotiating the development phase workscope for the Polarization modules with the UKGPO. The initial implementation should consist of Polarization modules for both Gemini telescopes and a single set of 95mm half wave plates covering 0.3 to 2.5um and L-band. We encourage the project team to pursue an accelerated schedule for development.
RESOLUTION 15.5: GNIRS Restart

The GSC is pleased that GNIRS has been restarted. This spectrograph will provide the Gemini community with a very competitive capability for 1—5 μm spectroscopic observations when it is delivered in July 2002.

RESOLUTION 15.6: Coronagraphic Imager

The GSC is very pleased that the $4.6M NASA funding of the Coronagraph/Imager is accomplished and that the CoD is underway. The GSC endorses the scientific perspective outlined in the Ron Probst memo of 5 October with the following recommendations:

- Extend dual channel capability to the M band
- Consider polarimetric capability as the highest priority of the second priority capabilities
- Evaluate the cost, schedule, and performance trades of the coronagraph utilizing the proposed Gemini MCAO design compared to an internal AO system.

RESOLUTION 15.7: AO Program

Multi-conjugate adaptive optics (MCAO) offers a unique and exciting science opportunity for Gemini to deliver diffraction-limited IR images over a 2 arcmin field. The GSC strongly recommends proceeding with the Conceptual Design of the MCAO system, leading to a CoDR in early 2000.

The CoD study should include a development of the science case for MCAO with an optimized instrument complement as well as a cost, schedule and management plan to completion together with risk assessment. It should culminate in a CoD Review by an independent panel with attendance from the partner countries.

We recognize that building the MCAO system would imply over-committing funds if no other changes are made to the IDF/FDF. Changes to the IDF would likely also be required in order to ensure adequate instrumentation to exploit the MCAO. In order to address these issues, we recommend the following process: (1) the FlamingosII/IRIS-2g Conceptual Design studies assess how their instruments would exploit MCAO; (2) the performance of GMOS, GNIRS, PHOENIX and the Coronagraph with the MCAO system be assessed, and (3) after the CoD studies and other instrument assessments are completed; a GSC/IF meeting be held in order to reassess the entire IDF/FDF content including the AO program. This reassessment may involve canceling some elements of the IDF/FDF program, and will recommend which IDF/FDF projects should proceed. Subsequent reassessment would be required during the execution of the MCAO program.

The MCAO development is potentially of great strategic importance to the Gemini communities, and it is essential to keep them informed about progress in this exciting program. We propose that the AO team develop a web page and provide approximately monthly updates to the NPOs.
At all phases of the MCAO program, the IGPO should actively pursue technical and scientific partnerships with groups in the national Gemini communities that have interest and expertise in AO science and technology.

**RESOLUTION 15.8: Guaranteed Time for Instrument Builders**

The GSC endorses the draft Guaranteed Time Policy and requests that the Project Scientist team develop an implementation plan for consideration by the national SACs and the GSC. A list of instruments for consideration should be provided.

**RESOLUTION 15.9: First Semester**

The GSC endorses the instrument and operational modes to be offered for use in the first, shared-risks semester. These are NIRI, in both queue and classical modes, and Hokupa'a + QUIRC and OSCIR in classical mode. An assignment of 50% of the time for engineering, with the remaining time distributed in blocks between queue and classical modes, would provide good scheduling flexibility during early use and management of community expectations.

**RESOLUTION 15.10: Gemini Staff Proposals**

The GSC endorses a process for Gemini staff proposals that includes proposal submission and processing on a timeline which parallels the partner activities and for assessment by a Gemini TAC comprising the Director, Associate Directors and external representatives. Recognizing that telescope time is a scarce resource we encourage feedback on the usage of staff time via the ITAC and GSC.

**RESOLUTION 15.11: Terms of Reference for the ITAC**

The GSC endorses the Terms of Reference for the ITAC, as follows:

The International Time Allocation Committee (ITAC) will consist of one representative from each NTAC and the two Gemini Associate Directors (or their designates). The chair will cycle between the Gemini Associate Directors.

The ITAC will advise the Director on resolving any conflicts that arise during assembly of the draft queue and classical schedule. The ITAC will recommend resolution between what it decides constitute identical programs in accordance with Gemini Observatory policy. In seeking resolution between duplicate programs, collaboration between groups will first be encouraged. If that is not possible, (a) for classical programs duplicate observations may be made, or (b) for queue programs the data will be taken once and distributed to all parties.

The ITAC will recommend the cut for the overfilled, merged queue and the position of the scientific ranking bands. The ITAC will report on the balance in the historical usage of time.
RESOLUTION 15.12: Archiving Data from Visiting Instruments

While the GSC recognizes that Gemini is unable to mandate that visiting instruments conform completely to Gemini standards, we urge Gemini to explore the options for archiving data from visiting instruments in an accessible and scientifically useful way that does not put an extraordinary load on the visiting instrument team.

RESOLUTION 15.13: Terms of Reference for the GSC

The GSC endorses the following Terms of Reference for the GSC:

The Gemini Science Committee (GSC) will provide the Gemini Director with strategic and near-term advice on scientific issues. This will include the content of the on-going instrumentation program and scientific performance requirements for Gemini instrumentation. The GSC will also recommend or endorse changes to the Science Requirement Document and the Science Operations Plan.

The GSC should also assess the Observatory's responsiveness to the national scientific communities and evaluate the Observatory performance from a scientific point of view.

The GSC Chair shall submit a formal annual report to the Gemini Director which will be made generally available.

The GSC consists of a total of fifteen active astronomers from the Gemini partnership; six from the US, three from the United Kingdom, two from Canada and one each from Chile, Argentina, Brazil and Australia. The members of the GSC are generally expected to be users of the Gemini Telescopes’ and are appointed by the partner countries through a mechanism determined by them. The scientific representatives to the Committee of Gemini Offices (generally the National Project Scientists) are expect to be members of the GSC. The scientific representatives to the CGO, in consultation with the Gemini Director, will appoint the Chair of the GSC from the membership of the GSC for a two-year term. The Gemini Director and the Gemini Associate Directors for Development and for Gemini-North and Gemini-South shall be ex-officio members of the GSC.

The GSC shall attempt to develop a consensus on major issues. In the event that a consensus cannot be achieved, the chair will communicate the partner perspectives to the Director.

The GSC recommends that the Director clearly articulate the interrelationships of the various Gemini committees (IF, OF, GSC, CGO, AOC-G, Gemini Visiting Committee, etc.)

RESOLUTION 15.14: Todd Boroson

The GSC wishes to express its deep sense of appreciation for the major contributions to the development and success of the Gemini Observatory that Todd Boroson has made during his tenure as U.S. Gemini Project Scientist. We look forward to working with the new U.S. Project Scientist, Bob Schommer, when he assumes his position February 1, 2000.