

The Gemini Visiting Committee: Response of the Gemini Board of Directors

- We strongly recommend that the completion and streamlining of the ‘end-to-end chain’ be the highest priority: from proposal submission, to undertaking observations, to rapid receipt and archiving of processed data for PIs. The Board should fully understand and commit the resources required to achieve this. The key output of the Observatory is the scientific program, which is maximized by telescope time spent on the scientific program.

These issues were discussed at length in a retreat held by the Board in September 2004, and acted upon at the following Board meeting, held in November 2004. To increase the science productivity, the Board had asked the Observatory to consider what combination of changes in its current staffing profile and additional resources will be required to accomplish this goal. The Observatory has produced such a plan, involving a significant increase in the staffing and, consequently, an increase in the Observatory budget. The Board has endorsed this plan, involving a total staff increase of roughly 27 FTE. Part of this increased staffing will be dedicated to the data pipeline, individualized for each instrument, but with the common goal of removing the telescope and instrumental signature from the data. The advice of the Gemini Science Committee will be sought in terms of the detailed data pipeline requirements for each facility class instrument. The Board and the Observatory agree that a high priority must be the speed with which data reductions are accomplished so that data may be delivered to PIs and to the Gemini Science Archive in effective and timely ways.

Maximizing the scientific program includes three other factors as well. First is the time allocated for the science programs, aside from engineering time and director’s discretionary time. At the May 2004 and 2005 Board meetings, the Gemini North and South telescopes were set science time fractions of 70%, with goals of 80%. (Gemini South was actually recommended for 75%, with a goal of 80%, for the 2005A semester.) Commissioning of new instruments is the primary alternative use for the observing fractions at this point. The second factor is the completion rates for the highest ranked proposals. The completion rates for Band 1 programs have been good, but could be improved, and the Board and the Observatory agree that Band 2 programs deserve similar attention. The third factor is the ensemble of tools required for observing, independent of instruments. At the retreat, the Board asked the Observatory to prepare plans for upgrade of the acquisition and guiding capabilities, and to also collaboratively develop the technology to enable near-IR wavefront sensors to improve sky coverage, especially in star-forming regions, and to increase the numbers of twilight hours to the observing schedules.

- Although the Committee recognizes the structural difficulties, we recommend that

the Board remain committed to the distributed support model, but with some modest midcourse corrections to its structure and implementation. An essential prerequisite for the situation to improve is a firm commitment by the NGOs and Gemini management to the distributed model, based on open, frequent and frank communication.

The Board of Directors agrees that the distributed support model is a unique operational mode, capable of integrating the diverse strengths of the partnership. The Board also recognizes that challenges remain in operational aspects of the model. Two specific actions have been taken to strengthen this operational model. First, a Joint Implementation Agreement has been reached between the Observatory and the National Gemini Offices regarding their respective responsibilities. The Board recognizes that this agreement should be a “living document”, capable of developing according to changing conditions, especially in view of the Board’s commitment to an expanded Observatory staff. Additionally, at its May 2004 meeting, the Board asked the Observatory to take on a greater leadership role in coordinating the activities of the NGOs to solve any new or continuing problems. The Board’s view of the importance of this is revealed by the desire to have such a person appointed at the level of Associate Director. For its part, the Board anticipates regular review of the distributed support model.

The Board also acknowledges that its designated members implicitly agree to provide the necessary resources for resolutions approved by the Board.

- The current staffing level and profile is not adequate to complete all the tasks of the Observatory in a timely fashion. Many factors contribute to this situation. A number of staff positions remain unfilled. Also a clear policy must be developed on the proportion of queue, classical, guaranteed, and engineering observing times, with appropriate support staff funded to achieve these goals.

The Board agrees completely with the need to determine the operational priorities for the Observatory and the need to provide the resources to hire the needed staff. The original staffing model was prepared with the assumption that only 50% of the observing would be done in queue mode, and the Observatory has struggled to provide the staffing to provide for a much larger fraction of queue observing, commensurate with community demand. At its retreat, the Board asked the Observatory to develop a plan that would enable them to provide 100% queue observing as well as remove the 3-night minimum restriction for classical observing. The staff increase plan was presented to the Board at its November 2004 meeting, and the plan has been endorsed. Prior to that, the Board had endorsed a higher ratio of queue to classical (Q/C) observing, 75%, in response to demonstrated community demand (Resolution 2003.B.9). The Board and the Observatory have “taken the next step”.

- The “Aspen process” has provided a wide range of possibilities. The proposed

suite of new instruments carries significant additional cost and resource implications. The Board must establish clear priorities, and ensure these are properly resourced. The new procurement plan promises to be more effective than previously. The commissioning of new instruments should formally involve the instrument builders.

The Board embraced the goals that originally defined the “Aspen process”, including the idea that the partners concern themselves with key science questions. The Board and the Observatory are proud of the depth of the scientific discussions (see Resolution 2003.B.16), the resulting suite of proposed and justified instruments (see Resolution 2004.A.5), and the document that emerged (Scientific Horizons at the Gemini Observatory: A Universe of Matter, Energy, and Life).

The Gemini Science Committee prioritized the resulting list of instruments, with scientific promise as the primary metric, and the Board concurred with the GSC priorities. As the Visiting Committee noted, the Observatory and the Board must now determine the costs of the highest priority instruments and, in at least one case, if construction of one of the largest instruments is even feasible. Budget estimate focus is becoming sharper, and the Gemini Finance Committee has provided recommendations to the Board for planning purposes. The Board remains committed to achieving the scientific goals identified in Aspen, as a collaborative partnership. At its retreat, the Board re-affirmed its pledge to actively pursue efforts to find the resources necessary to construct the new instruments and realize the scientific opportunities. The Board has also asked the Director to seek new partnerships with other observatories that might more effectively enable the construction and use of the new instruments, especially the wide-field multi-object spectrograph.

At its November 2004 meeting, the Board also began discussions regarding prioritization of the new instruments, or at least their possible phasing, that may be required by budgetary realities.

The Board agrees with the Visiting Committee that instrument builders must be involved in commissioning the instruments, and that has become a regular feature of the process with recent instruments. The Board anticipates that future instrumentation will include the “end-to-end” data acquisition, reduction, and archiving.

- AURA management has been efficient and cost-effective and at this time we consider the risk of destabilization outweighs the need for immediate re-competition. However, we feel that this would be an appropriate time for the Gemini Board to consider retaining a management consulting firm to assess in depth both Gemini's management structure and practices and AURA's stewardship of Gemini. Such an assessment, if conducted by a firm with appropriate management experience and background, could provide valuable

independent insights and suggestions.

The Board recognizes AURA's contributions to the effective management of the Observatory, and has requested the Executive Agency to invite AURA to present a proposal for renewal proposal for the operation and management of Gemini (Resolution 2004.A.8).

The Board and the Observatory will consider the suggestion of use of an external management consulting team to improve the functionality of the relationship between Gemini and AURA, as well as between Gemini and the NGOs. However, the Board prefers to await the results of the new staffing model implementation, and the evolving relationships between the Observatory and the NGOs and AURA, before undertaking such an assessment.