



GEMINI BOARD MEETING

LA SERENA, CHILE – 10-11 NOVEMBER 2005

Resolutions Arising from 10-11 November 2005 Meeting of the Gemini Board of Directors

2005.B.3 The Board welcomes the thorough and helpful report of the GSC and its many observations of impressive progress in science availability, observing efficiency, science productivity, and queue completion. The Board notes the significant gains that have been made in completion statistics for proposals in Bands 1 and 2 and endorses the Observatory's strategy and goals for continuing improvement in completion in all Bands. The Board is also pleased to see and commends the Observatory for the implementation of the multi-instrument queue and the unique capability it provides for Gemini's efficient and effective operation.

The Board congratulates the Gemini staff on their efforts in all these areas, and recognizes that the significant gains have come through their careful analysis and thorough understanding of telescope performance and operation and their persistence in pursuing every opportunity for improvement in the telescope's scientific and engineering use.

2005.B.4 The Board congratulates the Observatory on the recent outstanding improvements in imaging capability enabled by the conjugation of Altair to the ground layer. With this success, the Board looks forward to further enhancements in capability provided by MCAO and GLAO.

2005.B.5 The Board notes and endorses the commissioning priorities recommended by the GSC, in particular placing the highest priority on installing new, red CCDs on GMOS at Gemini North and South.

2005.B.6 The Board notes with pleasure the increasing number and rate of publications based on Gemini data, in particular the target of 80 papers being published in 2005 looking likely to be achieved. The Board looks forward to seeing the continued increase of number and impact of scientific results from Gemini telescopes.

2005.B.7 The Board recommends a minimum of 85% with a goal of 90% of science availability of nights for Gemini North and a minimum of 75% with a goal of 80% for Gemini South in semester 2006B. The Board understands that these fractions are determined by the instrument and adaptive optics commissioning activities which will follow as closely as possible the recommended commissioning prioritization of the GSC.

2005.B.8 The Observatory presented to the Board an outline describing a Data Flow Software Program initiative directed at improving access to and prompt delivery of



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Gemini data products. However, there was not a clear articulation of the program sufficient for the Board to understand its scope, metrics, outcomes, optimum strategies and requisite FTE requirements. The Board acknowledges the critical role which data-processing software plays in the scientific productivity of the Observatory and requests that the Observatory, through the GSC and its Data Reduction Working Group (DRWG), develop a series of detailed principles and priorities regarding instrument-specific software development, quality assurance methodologies, and definitions to enable productive use of Gemini science data products. The Board invites the Observatory to present the outcome of this exercise at the May 2006 meeting.

The Board notes that considerable experience and expertise may exist among the members of instrumentation development teams and the staff at the NGOs. We encourage the Observatory to outsource development whenever possible.

Finally, the Board reiterates its stance that future instrument contracts explicitly include the development of software for producing the baseline data products as defined by the DRWG and the principles and priorities reported to the Board.

2005.B.9 The Board notes and endorses the AOC-G's remarks on the need for enhanced interfaces between the Observatory and the NGO's. The Board recognizes that the current management arrangement in this period of transition to a new Director temporarily leaves unfilled the high-level management position with responsibility for the NGO interactions, but strongly recommends that this situation be rectified with the arrival of the new Director as one of his/her highest priorities.

2005.B.10 The Board thanks the AOC-G for its report and its comments on the challenges to the procurements and management of the Aspen instruments Gemini Planet Imager (GPI, formerly known as ExAOC) and WFMOS. With regard to GPI, the Board agrees with the AOC-G's endorsement of the need for an experienced manager to be engaged with the GPI program and encourages Dr. Simons to implement the AOC-G recommendation and to take all necessary action within his budget authority to exercise appropriate oversight of the complex contractual situation arising from the selection of LLNL as the lead organization for the GPI.

2005.B.11 The Board endorses the Observatory's plan to exchange time (approximately 5 nights) with Subaru beginning in semester 2006B, with Gemini users having access to MOIRCS and Suprimecam. The Board is particularly pleased to see that these time swaps will have no restriction on scientific topic.

2005.B.12 The Board notes the proposal for the *Joint Development and Operation of WFMOS Between Subaru and Gemini Observatories* and endorses the principles it



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expresses about the formation of the collaboration. The Board encourages the Observatory to look at ways to enable PI science with WFMOS in parallel with the survey needs, and to continue the principle of having no protected science themes. The Board urges the Observatory to continue work on defining an MOU for the collaboration with Subaru.

The Board is concerned that the proposed management structure for the design study phase, and in particular the construction phase, of WFMOS does not offer the necessary oversight and management control over the project phases to ensure that they remain within budgets and schedules. The Board charges the Observatory to work with the Executive Agency and the designated members of the Board to develop a management structure in which Gemini and Subaru jointly design, construct, and operate WFMOS through a unified management team.

2005.B.13 The Board is pleased to note the formal establishment of the Fund for the Development of Chilean Astronomy. The Board welcomes future reports on the Fund's activities.

2005.B.14 The Gemini Board approves the revised 2005 Operations Budget of \$37,086,025.

2005.B.15 The Gemini Board approves the 2006 Operations Budget \$38,612,844.

The budget for Aspen instrumentation is approved with the understanding that some partner contributions are subject to confirmation, which is expected to be provided by the time of the May 2006 Board meeting.

2005.B.16 In approving the 2005 and 2006 budgets the Board re-affirmed its previous resolution on the high priority status of GPI within the Aspen program. The Board authorizes the Observatory to proceed with the contract negotiations and make the necessary commitments, based on total cost of \$25,202,606, including all contingencies. The Board also authorizes the Observatory to proceed with the design studies for WFMOS, PRVS and with the site tests for GLAO. In making this commitment the Board recognizes that while it has the commitment authority to proceed, there is an element of risk given the current uncertainty surrounding the guaranteed partner contributions to the Aspen instrument program.

In approving the 2006 operations and Aspen budgets the Board notes that current funding commitments from partners provide the 2.5% ramped contributions on operations and \$7.801M for Aspen instrumentation, of which \$4,387,774 is earmarked for GPI. The Board recognizes that if none of the partners is able to commit funds to Aspen in 2007 and beyond, the risk to the Observatory budget in proceeding with the design studies and



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GPI is approximately \$23M. The Board recognizes that this would place an intolerable burden on the operations budget and would almost certainly be unacceptable. The Board notes, however, that in the worst case situation an alternative would be to withdraw from the GPI contracts. While the precise costs of this cannot be determined at the moment, it is estimated that the total expenditure would be approximately \$9M, i.e. approximately \$5M in excess of the funds available. This would have to be found from the operations budget in late 2006 and early 2007 and therefore would be a burden that the partners must share in accordance with partner shares. The Board considers that there is a very low risk of all the partners failing to contribute funds to Aspen in the period beyond 2006. Therefore, the Board believes that an exposure of approximately \$5M is an acceptable risk to the Observatory, particularly as the alternative would be to delay delivery of GPI resulting in further cost escalation.

In making this recommendation the Board instructs the Observatory to ensure that the GPI contracts have withdrawal clauses that minimize the financial exposure should the contracts have to be subsequently canceled.

2005.B.17 The Board approves the Observatory proceeding with the planning process for the construction of the expansion of the Hilo Base Facility and the Cerro Pachon Dormitory. The Board notes and welcomes the offer of AURA to use its corporate funds to proceed with design work on the CP dorm that will provide a more complete and current estimate of costs for its construction. The Board expects to revisit the schedule for construction of the Hilo Base Facility expansion at its May 2006 meeting, when it anticipates a clarification of future partner contributions.

2005.B.18 The Board takes note of the Long Range Plan for 2007 – 2010 and regards it as generally responsive to the Board's direction for the operation of the Observatory and the execution of the Aspen program. However, the Board cannot approve the Long Range Plan until such time as partner commitments are clarified. With this in mind, the Board will revisit the Long Range Plan at its May 2006 meeting.

2005.B.19 The Board recognizes that the NICI campaign offers an opportunity for the Observatory and the partnership to begin to explore the processes by which Aspen science campaigns will be carried out. However, the Board considers the NICI campaign to present an exceptional case that necessitates a special arrangement with the smaller partners and agrees that neither Argentina nor Brazil will be charged for NICI campaign time. The Board emphasizes that former exceptional action is not, nor should be construed to be, a practice or precedent for future campaign science initiatives.

The Board notes and concurs with the GSC's remarks in their October 2005 meeting report concerning the requirement to monitor and re-evaluate as necessary, the campaign



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execution plan once information on NICI performance is available. The Board agrees that the 50-night target for the program be considered an upper envelope for the campaign. The Board requests the Observatory to include updates on the campaign's progress at each of its semi-annual meetings. While the NICI campaign is unique, the Board recognizes that decisions on partner engagement in the large future campaigns enabled by the Aspen program must be made soon. The Board expects to resolve this issue at its May 2006 meeting.

2005.B.20 The Board appreciated the discussions by Warrick Couch and Doug Simons on the calculation of the partner shares in the IDF expenditures and how they will apply to the Aspen program. The Board clarifies the process by noting that partner shares should be applied to the sum of all IDF expenditures made since January 2001, when the partner shares were re-zeroed, plus the \$75M set as the target commitment for the Aspen program.

2005.B.21 The Board thanks Bruce Carney for his service on the Gemini Board, and as Chair for the past two years. His careful guidance and leadership was a crucial element as the partnership found its way through the Aspen process, the Oxford retreat, and the first procurements of the Aspen instruments.

2005.B.22 The Board also wishes to thank Gillian Knapp for her service over the past three years. With the future scientific direction of the Observatory including large surveys whose data will be of use in many areas of astronomy, the Board has found her advice, based on extensive experience with the SDSS, to be particularly valuable.



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Actions Arising from the Meeting of the Gemini Board of Directors – November 2005

To Gemini Observatory: The Board requests that the list of risks and Observatory priority of projects being prepared and developed with the AOC-G be reported on at the May 2006 Board meeting.

To Gemini Observatory and Designated Members: The designated members from the US, UK, and Canada will work with the Observatory staff to refine the management model for the WFMOS collaboration with Subaru in the design study and project construction phases.

To the Gemini Observatory: The Board requests the Observatory to include regular updates on progress on NICI performance and the execution of the science campaign at the May 2006 and subsequent Board meetings.

To the Gemini Observatory: The Board requests that the Observatory finalize its accounting of IDF partner shares and to make these available as soon as possible to the Board. They also reiterate the request from the GFC to provide an annual statement and explanation of movements in partners' shares in the IDF.

To the Gemini Observatory: The Board requests that the Observatory post the slides prepared as a summary of the recent Dark Energy Workshop on the Board web site.

To the Gemini Board Chair: The Chair will circulate to the Board a request for their input into the appropriate timing for the next Gemini Visiting Committee meeting, originally scheduled for the March/April 2006 timeframe.