



**GEMINI BOARD MEETING
HILO, HAWAI'I – 12 - 13 MAY 2009**

**Resolutions Arising from the 12-13 May 2009
Gemini Board Meeting**

2009.A.1. The Board acknowledges receipt of the results of the WFMOS design studies in a report from the Observatory. The Board also acknowledges receipt of a draft of the Memorandum of Understanding between NAOJ and the Gemini Partnership describing the obligations and expectations of implementing and operating the WFMOS instrument on Subaru, the principles guiding the execution of WFMOS science (both campaign and PI driven) opportunities, and the mechanism for time exchange and access to the Gemini telescopes both North and South.

The Board recognizes there is strong science support in the Gemini community for the development of WFMOS, intense interest in developing an effective collaboration with NAOJ, and strong science motivation for the project. However, WFMOS has significantly increased in cost, and the Gemini Partnership can identify neither the necessary resources to proceed to WFMOS PDR, nor the totality of funds required in the out-years to successfully complete the instrument. The Board regretfully terminates the WFMOS Aspen initiative.

The Board unequivocally endorses the GPI project as the completion of the Aspen program.

The Board wishes to express its deep appreciation for the extraordinary effort of the Gemini Observatory, our partner communities, as well as our colleagues at NAOJ. The Board does recognize the engagement between the Gemini partnership and NAOJ and the communities they represent as being enormously beneficial to the expanding international nature of astronomy, and more importantly, the development of strong friendship and aspiration for collaborations to advance science. The Board greatly values the developing scientific partnership between the Gemini and Subaru communities, as manifest in the first ever joint Gemini/Subaru science conference in May 2009, and remains open to exploring areas of mutual interest and benefit to further strengthen this partnership.

2009.A.2. The Board continues to have serious concerns about the Data Flow project (GBOD Resolution 2006.A.14, GBOD Resolution 2007.A.18, GBOD Resolution 2008.B.5).

The Board recognizes the need for efficient data flow systems and tools that ensure the proper functioning of the Observatory. The Board also recognizes the need for Gemini to provide users with instrument-specific software tools. Following the failure of the Data Flow project to pass PDR, the Board directs the Observatory to stop work on the current data pipeline infrastructure effort.

The Observatory Director should deliver detailed requirements for a pipeline infrastructure, developed in consultation with the Data Reduction Working Group, SSAs, and Observatory science staff, which include detailed scoping of personnel effort, deliverables, cost, and



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schedule. This document will be delivered to the Board by 30 June 2009. Once the Observatory has prepared, in collaboration with the internal staff and scientific user community, an adequately defined effort that will yield tangible outcomes at a controlled cost, the Board will work with the Observatory to implement the desired full pipeline processing.

Independent of the pipeline infrastructure effort, Gemini must continue to improve the Observing Tool, Phase II tools, and new instrument IRAF or PyRAF scripts to allow both efficient data acquisition and quality assessment at the telescope and reduction of data by the users.

2009.A.3. The Board thanks the Third Gemini Visiting Committee (3GVC) for producing a report that is carefully considered with detailed actionable items for the Observatory and the Board to use as a catalyst for improvement. In particular, the Board notes the 3GVC's observation that *"[the 3GVC] is impressed with the work of the observatory. It is a very complex operation, with a large number of instruments spread over two widely separated sites, and its success is a testament to its many highly skilled and motivated staff members."*

Of great importance to the Board and stakeholders within the Partnership is the 3GVC finding *"Gemini has turned the corner in completing commissioning of two world-class telescopes and moving fully into operations. Both telescopes have a full set of instruments and have continued to push development of unique adaptive optics (AO) capability. We find that Gemini has achieved scientific productivity and impact that are comparable with other 8-10 m class telescopes. The staff of the Gemini Observatory [are to be] congratulated on their achievements to date."* The Board views this as a major milestone in the Observatory's development, and encourages wide dissemination of these statements to all appropriate organizations and communities within the Gemini Partnership and beyond.

The Board recognizes that the Observatory must act upon recommendations contained within the 3GVC report in an effective and timely manner. The Board notes that suitable metrics must be developed and applied to enable outcomes assessment of Observatory activities linked to 3GVC findings (GBOD Resolution 2008.B.14). The Board instructs the Observatory to promptly release their response to the 3GVC report and present to the Board a status report of response outcomes at the November 2009 meeting.

2009.A.4. A plurality of the Board, the Gemini Science Committee (GSC), and the Third Gemini Visiting Committee desire large, as well as key, programs to be accommodated within the current multi-TAC system.

The Board instructs the Observatory, in consultation with the Operations Working Group, the GSC, and the National Gemini Offices (NGOs) to develop a plan to foster large/key programs. The plan should be delivered to the Board in time for consideration at the



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November 2009 Board meeting, and be ready to be implemented for the proposal call following that Board meeting.

2009.A.5. The Board approves the proposed minimum science fraction of 90%, with a goal of 93%, for Gemini North and a minimum science fraction of 75%, with a goal of 85%, for Gemini South for semester 2010A.

2009.A.6. The Board notes the report of the AURA Oversight Council for Gemini (AOC-G) and thanks this committee for their efforts. The Board welcomes the changes introduced by AURA to the membership structure of the AOC-G to better focus on AURA and Observatory management issues.

2009.A.7. The Board notes the concerns expressed by Gemini staff and the Partnership regarding the “Future of NOAO” White Paper submitted to the U.S. Astro2010 Decadal Survey. The Board calls AURA’s attention to its responsibility for advocating and supporting policy visions consistent with the broad community represented in the International Gemini Partnership.

2009.A.8. The Board notes the changes AURA instituted in the AURA Observatories Support Services (AOSS) management structure. The Board notes that Gemini is a major AOSS client, and asserts that Gemini needs to be fully consulted and respectfully engaged by lead AURA and AOSS personnel to insure successful outcomes.

The Board supports AURA’s plan to carry out an independent review of AOSS and wishes to be informed of the review findings and other AOSS changes and developments at the November 2009 Board meeting.

2009.A.9. The Board commends the recent efforts of the Observatory to responsibly manage resources and prioritize or eliminate non-essential expenditures (for example, curtailing management training, minimizing travel, instituting controls on utility expenditures, and deferring capital construction projects).

2009.A.10. The Board notes receipt of the Observatory’s contingency budget scenarios outlining the impacts of either a 5% or 10% reduction in current O&M commitment authority. The Board, consulting with the Gemini Finance Committee, shall review the repercussions of implementing such contingency planning. Although the Board, at this juncture, does not envisage enacting reductions, it cautions the Observatory to be reserved in out-year commitments, especially regarding numbers of full-time-equivalent personnel.

2009.A.11. The Board acknowledges receipt of the letter of inquiry from Argentina requesting permanent loan of select components of bHROS to enable an instrument development program within this Gemini partner. The Board notes that bHROS was permanently removed from the Gemini instrument suite and stands decommissioned.



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Disposition of Observatory assets is outlined in the Gemini Agreement (GA), Section 2. The Board instructs the Observatory to develop a partner-wide Announcement of Opportunity (AO) mechanism to permanently dispose of bHROS or future instruments, infrastructure, or intellectual assets of the partnership consistent with terms specified in the GA. However, the Board establishes that the Observatory has the right of first refusal to identify and to retain any components, subsystems, electronics, optics, filters, etc. that the Observatory deems of value to operation and maintenance, inventory spares, or general utility.

2009.A.12. The Board notes the continued progress made on MCAO and urges the Observatory to move forward as soon as possible, consistent with meeting other instrumentation and operational priorities, to make this capability available to the community. The Board wishes to be informed of significant changes to delivery schedules for the laser from Lockheed Martin Coherent Technologies (LMCT) or other critical assemblies.

2009.A.13. The Board notes with enthusiasm the impending delivery of Flamingos-2 to Gemini South. Use of this instrument by the Partners has long been anticipated and the Board urges the Observatory to consider implementing scientific use of Flamingos-2 as soon as basic commissioning activities are complete.

2009.A.14. The Board is encouraged that the GMOS CCD upgrade activity is now awaiting delivery of detectors from the vendor and acknowledges the Observatory's planned schedule to complete the GMOS-N refurbishment. The Board also notes that the GNIRS recovery, while delayed, is expected to be completed, and the instrument re-commissioned, towards the end of 2009.

2009.A.15. The Board appreciates the new emphasis that the Observatory has placed on rapid dissemination of exciting scientific discoveries and other Observatory activities to the members of the partnership communities and well as the general public. The Board also notes the recent science highlights, including the detection of planets and the infrared photo-z measurement of gamma ray burst sources, the statistics of Gemini science publication in the peer-reviewed literature, as well as the Observatory's progress at Education and Public Outreach (EPO) activities. The Board encourages the Observatory to continue prompt public dissemination of Gemini science.

However, the Board notes that scientific investigators and teams that utilize Gemini capabilities are significant contributors to the success of the Observatory. Their efforts must be properly acknowledged. The Board therefore requires that use of images, graphics, animations, illustrations, and textual summaries derived from Gemini programs that are reproduced for use in other formats or presentation, including press releases and annual reports, properly credit the science team or at a minimum the principal investigator and their institutional affiliation, in addition to the standard Gemini acknowledgement.



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2009.A.16. The Board notes the results of the recent Gemini User Survey and comments that many of the concerns expressed by Gemini User Survey respondents mirror those identified in independent surveys conducted within individual partner countries. Although basic satisfaction is high, especially from individuals who have had the opportunity to execute their science programs at the telescopes, general instrumentation capabilities are found to be not wholly supportive of certain scientific aspirations found within our diverse communities. The Board shall continue to pursue with the Observatory mechanisms to provide alternative access to desired instrumentation through time exchanges or other mechanisms to address this latter issue.

The Board considers the Gemini User Survey to be valuable and requests that the Observatory conduct an assessment cycle commensurate with Gemini Visiting Committee activities, whose results shall be publically disseminated after Board review.

2009.A.17. The Board notes that the NICI science campaign is proceeding rapidly. The Board asks the Observatory, through the Gemini Science Committee and the Planetary Finding Working group, to assess the campaign's completion needs and to report back to the Board in time for the November 2009 Board meeting.

2009.A.18. The Board instructs the Observatory to use, as a planning envelope, a five-year budget (2011-2015) outlook that includes a provisional 2.5% indexing per annum.

Included within this envelope would be creation of an instrumentation budget line averaging between 10-15% of the yearly total base budget to accommodate refreshment or refurbishment of the instrument suite. The growth of this Observatory instrument development fund (IDF) line with time should be commensurate with the reduction of engineering effort directed toward internal instrumentation projects, such as MCAO as they are completed. The objective of this instrument development fund is to ensure the Observatory's ability to provide to the user community instruments that are relevant, timely, and cost effective.

The Partners' contributions to Aspen instrumentation activities during the last 5 years has been of the order \$6 million dollar (USD) per year. The Board anticipates ongoing support of this magnitude for instrumentation development line is feasible. The Board establishes that this \$6 million dollars, combined with the above mentioned IDF, will establish a robust instrument development fund for the acquisition of moderate scale next-generation instruments and the maintenance of current capabilities as necessary. IDF funds shall be dedicated solely to the purpose and task of improving available instrumentation on Gemini unless explicitly approved otherwise by prior consent of the Board.

The Board recognizes that there may be additional effective value added to this IDF through in-kind or cash contributions to the delivery of instruments by the Partners to the Observatory. The Board expects to discuss more fully such opportunities as they arise.



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2009.A.19. The Gemini Board approves the final (close-out) 2008 Operations Budget.

2008.A.20. The Gemini Board approves the revised 2009 Operations Budget, subject to receipt of the outstanding United Kingdom's 2009 share payment from the Science, Technology, and Facilities Council (STFC).

2009.A.21. The Board notes receipt of the timeline prepared by the Executive Agency setting forth for planning purposes the actions which extend the current Cooperative Agreement and lead to a new international Gemini partnership arrangement. The Board reminds the Partnership that the November 2009 Board meeting is the Assessment Point at which time the current Partners and Parties must express their intent regarding continuing participation within Gemini consistent with terms enumerated in Articles 4.1 through 4.4 of the Gemini Agreement. The Board notes its intent to subsequently convene a Board-level retreat early in first quarter 2010 to initiate deliberations on the structure, governance, management, and operations of Gemini as a prelude to formalizing a new Gemini Agreement no later than 2015.

2009.A.22. The Board notes the receipt of the memo from Mr. Tim Kashmer, Senior Grants and Agreements Officer, National Science Foundation (NSF), providing an explanation of, and the anticipated outcome of, the NSF's Business Systems Review (BSR) that examined the administrative business systems supporting the Gemini Observatory. The Board anticipates release of the BSR findings in late July 2009, and will discuss the recommendations and findings at the November 2009 Board meeting.

2009.A.23. The Board warmly welcomes Dr. René Walterbos as a U.S. member of the Board.

2009.A.24. The Board warmly welcomes Dr. Anibal Gattone as the designated Argentina member of the Board.

2009.A.25. The Board warmly thanks Dr. Warrick Couch for his four years of service to the Gemini Board and to the Gemini community.

2009.A.26. The Board warmly thanks Dr. Eileen Friel for her 9 years of service to the Gemini Board and the Gemini community. We also congratulate her on her appointment as the new Director of Lowell Observatory.

2009.A.27. The Board warmly thanks Dr. Megan Urry for her service to the Gemini Board and the Gemini community.



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**Actions Arising from the 12-13 May 2009
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2009.AA.1. To the Board. The Board notes the impending delivery of a new five-year budget planning envelope by the Observatory to the Board on 31 July 2009, and acknowledges the need for consensus approval of the budget by the Board within approximately 21 days or less.

2009.AA.2 To the Board. The Board should develop a vision for the Observatory to frame the next five years as the Observatory prepares its proposal for 2011- 2015. This statement should be developed by the Board and delivered to the Observatory by 30 August 2009.

2009.AA.3 To the Board. The Board Chair, in consultation with Board members, shall establish a Board sub-committee on Data Flow by 30 June 2009.

2009.AA.4 To the Board. The 2009 November 11-13 Board meeting in La Serena, Chile will be a minimum of two and one-half days in length, commencing at 08:30 on 11 November and concluding approximately at 13:00 on 13 November. Travel arrangements by Board members should consider this schedule.

2009.AA.5 To the Designated Members. The Board requests that the Designated Members finalize identification of the individuals to serve as members of the Gemini Finance Committee, designating also the Chair, by 30 June 2009. The Board Chair should be informed through the Executive Secretary.

2009.AA.6 To the Executive Agency. The Board requests the Executive Agency alert the Board Chair of any developments in the receipt of Partner 2009 O&M contributions.

2009.AA.7 To the Executive Agency. The Board asks the Executive Agency to relay to AURA the Board's concerns over recent AOSS changes in Chile, and advise AURA of the importance of productive, advanced, engagement of senior Gemini South management to ameliorate misunderstandings and conflict.

2009.AA.8 To the Observatory. The Board tasks the Observatory to deliver a concise statement of requirements for the data flow pipeline Q&A infrastructure, which includes scoping of effort, cost, and schedule, to the Board by June 30, 2009.

2009.AA.9 To the Observatory. The Board approves the release of the 2008 Third GVC report to our communities, and instructs the Observatory to provide on-line access to the entire un-redacted contents of the report and the Observatory's response via prominently displayed web links on the main homepage of the Gemini website.



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2009.AA.10 To the Observatory. The Board instructs the Observatory to make publically accessible and prominently display all approved Board resolutions on the Gemini webpages with a direct link to these documents from the main homepage of the Gemini website. However, it is the Board's privilege to redact budget resolutions deemed procurement sensitive or proprietary. The Executive Secretary shall provide the Observatory a version of the Board resolutions that are acceptable.

2009.AA.11 To the Observatory. The Board tasks the Observatory, in consultation with the Gemini Science Committee and the National Gemini Offices, to provide to the Board a notional instrument composition plan, balanced between Gemini North and Gemini South, that could be achieved in light of the IDF funding wedge over the next five year period. The plan should be conveyed to the Board by 1 August 2009. This plan also should be included as part of the Observatory's pending proposal to the National Science Foundation.

2009.AA.12 To the Observatory. The Board tasks the Observatory to issue, by 15 June 2009, an announcement of opportunity related to the permanent disposal of bHROS components and subsystems, consistent with Article 2 of the Gemini Agreement related to disposal of Capital assets to the Partnership. Said Announcement of Opportunity (AO) should have a response deadline of 30 days for receipt of interest. The Board Chair should be informed of the results, and absent other conflicts or claims, the Observatory is instructed to expeditiously dispose of the bHROS components as requested by Argentina in their letter dated 01 March 2009.

2009.AA.13 To the Observatory. The Board instructs the Observatory to reengage the Data Reduction Working, augmented by a sub-committee of the Board (2009.AA.3), to review and comment on the Observatory's plans with regard to the Data Flow activities (see GBOD 2009.A.2).