

# Report of Gemini's Science and Technology Advisory Committee (STAC)

October 2014

The STAC held its seventh meeting on 29-30 October 2014 in La Serena, Chile.

## STAC Membership

Jacob Bean	Sarah Martell
Guillermo Bosch (remote)	Paul Martini - Chair
Fabio Bresolin	Tom Matheson (remote)
Tim Davidge – Vice Chair	Laura Parker
Don Gavel (remote)	Thaisa Storchi-Bergmann
Paulina Lira	Gillian Wilson (remote)
Kevin Luhman	

## Development Priorities

7.1 The STAC endorses the Observatory's prioritization of GHOST as the highest development priority, and GIFS/Gen4#3 as the second highest priority.

7.2 The STAC endorses the Observatory's goal to install the GMOS-North Hamamatsu upgrade in July 2015. The Observatory noted a potential resource conflict between this effort and the LGSF. Should such conflicts arise, the STAC recommends that the Observatory prioritize the CCD upgrade.

7.3 The STAC endorses the relative priorities of the remaining items, which were in order: GRACES, the Current Instrument Upgrade Program, and then followed by the GNIRS controller upgrade, ALTAIR RTC upgrade, NGS2, DM0, and A&G.

7.4 The STAC reiterates its support for the Observatory's small and midscale project funds, and encourages the Observatory to adopt a regular proposal deadline to help manage the review process. We encourage the Observatory to solicit the input of the STAC on their list of desired projects, and advertise this list at the 2015 meeting in Toronto. We endorse the Observatory's desire to always remain open to unsolicited projects at the project proposal deadlines.

7.5 The STAC learned that Gemini data led to more AO-based publications last year than any other observatory. The STAC congratulates the Observatory on this excellent outcome, and encourages the Observatory to consider ways to trumpet this strong indication of the vitality of their AO program.

## Archive

7.6 The STAC endorses the Observatory's actions to save costs by proceeding to an in-house archive, although the STAC is concerned about any disruption in data access or level of service for users. The STAC stresses the importance of the archive, and encourages the Observatory to proceed very deliberately with this transition via an extended overlap period with the current archive.

### **GIFS/Gen4#3**

7.7 The STAC is pleased with the release of the call for feasibility studies for Gen4#3, and the plan to have the feasibility study teams present at the Toronto meeting. The STAC encourages the Observatory to continue to devote the resources necessary to maintain the proposed schedule for Gen4#3.

### **GPI**

7.8 The STAC is pleased with the status of GPI, and encourages the Observatory to complete the integration of GPI into Observatory operations so that it may be offered as a regular part of the multi-instrument queue.

7.9 The STAC discussed when it would be reasonable to move GPI to Gemini North and concluded that it should stay in the South at least until the campaign is completed, likely in 2018. Should Gen4#3 go to Gemini South, delivery of Gen4#3 is foreseen to be a natural upper limit to the time GPI will remain at Gemini South.

### **GRACES**

7.10 The STAC endorses the Observatory's plan to offer GRACES as a Visitor Instrument in 2015B, as well as their proposed minor performance improvements.

### **GHOST**

7.11 Provided GRACES is available and works as expected, the STAC recommends placing GHOST in the South based on the scientific advantage of high-resolution spectroscopy over the entire sky. The STAC further places a higher priority on GHOST relative to GSAOI with regard to the available spots for instruments at Gemini South. We do not advocate permanently decommissioning GSAOI, but feel that F2 could be used with GeMS until a slot re-opens for GSAOI in the instrument complement. If GRACES does not continue to perform as indicated by early observations (competitive in the red with similar spectrographs on other large telescopes), then the STAC is neutral on the scientific advantages of the sites, and recommends the North based on the desire for new instrumentation in the North.

### **Proposal Modes**

7.12 The STAC reaffirms our endorsement of the Fast Turnaround Program and the Large/Long Program.

### **Gemini Science and Future Meeting 2015**

7.13 The STAC endorses the proposed mix of science and future discussion planned for the 2015 meeting.

7.14 The STAC strongly encourages the Observatory and SOC to incentivize attendance from groups that have not been significant Gemini users, as well as early career researchers. The STAC particularly emphasizes that early career researchers should be involved in the discussion on the future of the Gemini Observatory.

### **Strategic Vision**

7.15 The STAC endorses the idea of no longer requiring strict partner balance be maintained between sites, RA range, and moon phase.

7.16 The STAC encourages changes in the ITAC process that would minimize iterations at the ITAC level and improve the flexibility of the Observatory in scheduling programs from the partners.

7.17 The STAC does not endorse moving to a single science TAC at this time. Some partners prefer to retain control of the relative scientific rankings of proposals from their communities, as they are best able to judge the relative strategic value of proposals to their communities.

7.18 While the STAC sees the value in using oversubscription to assess how time should be distributed between observing modes (LLP, regular, FTP), the STAC does not want this to be the only metric employed to make these decisions. The STAC recommends careful consideration of rebalancing between proposal categories.

## **Science Time**

7.19 The STAC endorses the observatory's proposal for science time fractions (85% for the South, 88% for the North) in 2015.

## **Redistribute STAC Points of Contact**

Chair: Paul Martini

Vice Chair: Tim Davidge

GHOST: Sarah Martell

GRACES: Fabio Bresolin

GMOS: Laura Parker

F2: Kevin Luhman

GeMS: Tim Davidge

GPI: Jacob Bean

ALTAIR & Gemini North AO: Don Gavel

Gen4#3: Nathan Smith

Archive: Paulina Lira

Default for other issues: Chair

## **Future STAC Meetings**

The 2015A meeting will be May 7-8, 2015 in Hilo, Hawaii.

The 2015B meeting will be Oct 29-30, 2015 in La Serena, Chile.

The STAC thanks Tom Matheson and Thaisa Storchi-Bergmann for their many years of thoughtful advice.