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

May 2017

The STAC held its twelfth meeting on 4-5 May 2017 in Hilo, Hawai'i.

STAC Membership

Alberto Rodriguez Ardila (remote)
Thomas Barnes
Guillermo Bosch (remote)
Fabio Bresolin
Marc Buie
Inese Ivans
Paul Martini - Chair
Marcelo Mora (remote)
Laura Parker – Deputy Chair
Abhijit Saha
Andrew Skemer
Eric Steinbring
Gillian Wilson (remote)

12.1 The STAC recommends the following development priorities, which in order are: OCTOCAM, GHOST, GMOS-N CCDs, GS Laser, GN Laser, IUP, NGS2, GNIRS Controller, Altair RTC, A&G, DM0.

12.2 The STAC congratulates the Observatory on the completion of the Gen4#3 selection process and is excited about the scientific opportunities of OCTOCAM. We also greatly appreciated the Observatory's thorough presentation on lessons learned from this and previous instrument procurements.

12.3 The STAC requests that the Observatory present more milestones to help track the progress of the OCTOCAM project in future reports. The timeliness of OCTOCAM remains a very high priority for the STAC, and would like a larger number of milestones to track progress.

12.4 The STAC appreciates the substantial amount of data compiled by the Observatory to evaluate the balance between proposal modes. We do not see a strong scientific case at present to adjust the balance between the Fast Turnaround, Standard, and Large/Long Programs. We request that the Observatory provide us with an updated report at our next meeting.

12.5 The STAC appreciates the analysis of the programs that are block scheduled compared to programs that are observed as part of queue mode. We encourage the Observatory to continue to collect and monitor data to address the scientific impact of these two modes of observations. We expect there will be pressure to increase the amount of block-scheduled time with the increase in visiting instruments. Given the substantially higher program completion rates for queue mode, we recommend that the Observatory investigate creative ways to maintain high program completion rates, such as hybrid block/queue time. We also reiterate our strong support for the queue mode as one of the Observatory's strategic strengths.

12.6 The STAC remains concerned that most or all of the time for the Large/Long Program has already been allocated in some future semesters. We encourage the Observatory to retain on order a third of the Large/Long Program time allocation for new Large Programs that would request a substantial amount of data in their first year.

12.7 The STAC is pleased that the Observatory has completed a long-term agreement for access to GRACES and encourages them to offer GRACES in the next call for Large/Long Programs.

12.8 The STAC considered several options for the use of the Observatory's H4RG detector, most notably the addition of a wider-field mode to NIRI and replacement of the four H2RG detectors in GSAOI with this single, monolithic device. The STAC did not find that any one option stood out, and encourages the Observatory to pursue expressions of interest and white papers from the community on how best to use this H4RG detector.

12.9 The STAC remains supportive of the plan to move GPI to the North, and expects it would be available there in approximately three years. By that time we recommend that the Observatory remove NIRI and/or NIFS. We recommend that the Observatory pursue expressions of interest by the community to adopt one or both of these instruments for their continued use as Visitor Instruments. We also recommend that the Observatory consider the level of additional Visitor Instrument support they could provide if both NIRI and NIFS were no longer Facility Instruments, and Gemini North were instead operated with only three Facility Instruments plus Adaptive Optics.

12.10 The STAC endorses the Observatory's plan to accept visiting instrument proposals on a rolling basis, rather than with fixed deadlines, as well as their intent to have the STAC provide feedback on our biannual meeting cycle. The STAC is also happy to review proposals outside of this cycle as needed.

12.11 The STAC encourages the Observatory to provide a higher level of operational support to Visiting Instruments that prove to have great strategic value and attract a significant level of interest from the community. The STAC also encourages the Observatory to identify Visiting Instruments that have the potential to become Facility Instruments and plan to provide them with a higher level of operational support during a transition period. Additional operational support could include some operation in the queue mode. Instruments that request more support from the Observatory should also go through a more thorough technical review process.

12.12 The STAC carefully considered the Observatory's request to investigate ways to increase the average program size. The STAC did not find strong evidence that larger programs sizes would produce greater scientific output. The STAC also notes that individual partners can best address the average size and recommends that the Observatory discuss ways to address program size concerns with the partner NGOs.

12.13 The STAC endorses the observatory's adjustment of science time in 2017B to 86% for the South, 84% for the North and the goal in 2018A of 92% for the South, 96% for the North.

Redistribute STAC Points of Contact

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Default for other issues: Chair

Future STAC Meetings

The 2017B meeting will be 9-10 November in La Serena, Chile.