

The future role of the National Observatory for Gemini science support

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Abstract

The US National Gemini Office (US NGO) at NOAO is presently supporting the US Gemini Community through the phases of the astronomical observing cycle, from proposal preparation through data analysis. Other groups and individuals support Gemini science at NOAO through the TAC, and participate in committees that deal with Gemini operations, science and technology, program selection, and the users' committee. What should be the future role at the National Observatory for Gemini science support? What does the US Gemini community need? Topics of importance to the US Gemini users span a broad range from observing modes, metrics, data analysis, science themes, and instrumentation.

The international Gemini Observatory originated in 1991 with a Memorandum of Understanding between Canada, the UK, and the US. The Gemini Observatory consists of twin 8.1-meter diameter optical/infrared telescopes located on two excellent observing sites, collectively accessing the entire sky. From its inception, the project has been international. Each of the Gemini partner countries agreed to set up a national project office to "act as a focus for national scientific and technical interests within their countries." The US National Gemini Office (US NGO) is part of NOAO.

Over the years since the founding of the international Gemini project, there have been numerous changes in Gemini partner membership, partner percentages, and NSF funding levels. Both telescopes saw first light around 2000. As the Gemini Observatory matured the emphasis of the US NGO has shifted from development to productivity with a focus on interaction with the community on technical questions, proposals, and data reduction.

The US share of the Gemini Observatory twin telescopes is funded by the NSF and currently consists of ~150 nights per year per telescope. The US is now the majority partner. The US NGO supports Gemini users in the various phases of science program planning and execution, from proposal preparation to data analysis. In this capacity, US NGO members triage all initial Helpdesk requests for the US partner (i.e., tier 1), which is especially important at crucial times of the proposal calendar and supports specific tier 2 queries. US NGO members liaise with Gemini Instrument Scientists for problem-solving activities, and keep the community informed about Gemini opportunities and new observing capabilities through the NOAO Newsletter, the Currents, and through the US NGO webpage, which is updated frequently.

A few years ago, Gemini and the US NGO reached an agreement for Gemini to support US phase 2 programs, and the NGO to support data reduction and analysis. We are still

working under this agreement, which will transparently flow through the next organization phase, at least initially. Typical US NGO work packages include data-reduction manuals, cookbooks for specific Gemini instruments, data-reduction examples, Question & Answer forums, and organization and support for Gemini-specific workshops or meetings (usually held in conjunction with AAS meetings).

At the heart of US NGO activities should be the guarantee that Gemini provides the best service to the US astronomical community. In carrying this out there is a need to gather feedback from the community on Gemini activities. One of the functions of the US NGO should be a forum for US Gemini users within the future organizational structure. Ten years ago, the ALTAIR committee focused on understanding both the current and future role of the Gemini telescopes in the large-aperture part of the US ground-based O/IR system. ALTAIR found major community concerns with a lack of alignment between Gemini and the needs of the US community. The root cause was seen as the limited role that the US community had in setting scientific goals for Gemini. The committee recommendations included maintaining a transparent roadmap for development based on regular input from the US community with NOAO as an active advocate.

A decade after ALTAIR we find ourselves on the verge of major changes in US astronomy with the advent of LSST, increased fiscal stress on the NSF, and the reorganization of the management structure of US federally funded ground-based observatories. The ALTAIR message that the community needs a communications conduit to Gemini is more important than ever. At the US NGO we feel that we should identify (1) the activities that the users want to see continued and enhanced, and (2) the support activities that from the users' viewpoint are duplicated by NOAO and Gemini. We aim at saving resources from (2) to inject new impulse into (1). Finally, in the spirit of the ALTAIR committee, we need to be proactive in having the users give us feedback on what they want to see in the future in term of science support, including liaison between Gemini support and other facilities in the 2020's landscape.