



## **Observatory Response to the Report from the Users' Committee for Gemini February 4, 2013**

We thank the members of the Users' Committee for Gemini (UCG) for their thoughtful report and appreciate the commendations as well as identification of areas to improve. Here we address some of the key themes of the report, noting recent relevant work and future plans that we expect will help the international Gemini user community. We encourage the UCG to continue to monitor the needs of the users and to help us prioritize the work that will best support their scientific progress.

### **1. Website and Communication**

We recognize that users sometimes have difficulty finding information on the Gemini webpages. We have planned some minor modifications over the next few months that should better summarize the instruments and show the organization of the detailed information. We will give particular attention to the area for data and results, to assist users through the process from downloading data from the Gemini Science Archive through data reduction.

We are working to use the [General Announcements](#)<sup>1</sup> and [Science Operations Announcements](#)<sup>2</sup> more frequently; links to their RSS feeds are now more prominent, so users who want regular news can get it easily. Although inelegant, a practical solution remains the site search tool, which is available near the top of every page. We encourage the UCG to continue to make specific suggestions for reorganization of the web pages and improvements. Additional input from any Gemini users can be sent via the HelpDesk or by email to specific instrument scientists, Nancy Levenson, Andy Adamson, Inger Jørgensen, or Bernadette Rodgers.

### **2. Data Reduction and User Tools**

The data processing package continues to be developed, with recent releases including IRAF package support for GSAOI and FLAMINGOS-2.

The Data Reduction (DR) Forum is actively being developed. It should be released before the end of 2013Q1. We encourage the UCG to help solicit interest among users to post their software and participate to make this a useful forum. We will advertise this forum broadly when it becomes available.

A development version of the quality assessment (QA) pipeline will be released in 2013Q3. This will include at least GMOS and NIRI imaging modes. It will not be supported software at this stage and will provide only quick-look reductions consistent with the QA application that is used at the summit.

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<sup>1</sup> <http://www.gemini.edu/news/general-announcements>

<sup>2</sup> <http://www.gemini.edu/news/science-operations-announcements>

We agree with the UCG on the value of data reduction cookbooks and will work with the National Gemini Offices (NGOs) or a contractor to produce a GMOS cookbook during 2013. We recognize the quality of the GNIRS cross-dispersed [cookbook](#)<sup>3</sup> and will aim to produce a similar quality in the GMOS version. In the meantime, we encourage users to visit the ["getting started"](#) page<sup>4</sup>, which contains a significant amount of information. We also note that all of the example scripts were rewritten to run under either IRAF or PyRAF, and step-by-step instructions are provided for each. (See "help" in the IRAF package or refer to the getting started page.)

We are on the verge of releasing a new version of the GMOS Mask Making Software (GMMPS). We will invite the UCG to experiment with the development version before it is finalized for general use. Following this release and its use in the community, we encourage the UCG to provide additional feedback, especially with specific suggestions for different features or other software that could be used for this task. The new version, in addition to supporting FLAMINGOS-2 and new GMOS CCDs, also includes significant interface and slit placement improvements. In particular, the better organization of screens and use of previous settings will make mask design iteration more efficient and require fewer mouse clicks. The improved algorithms will make better use of the detector, to simplify expansion of slits and concentrate them toward the center of the field to maximize wavelength coverage.

We anticipate working with the Canadian Astronomy Data Centre (CADC) to provide better calibration association for archive users this year. We will keep the UCG informed of these developments.

### 3. Technical Issues

The UCG commented on Gemini overhead values and their use. The acquisition times and overheads listed in each instrument web page are averages based on measurements in 2008, and these are the values included in the Observing Tool (OT). More recent measurements are shown in Figure 1. The new data show

no significant change from the 2008 data, for the modes with older data. Some modes are newly measured as of 2011. We will review the web pages to ensure that they reflect the latest information and that the same values used in the OT. The posted [statistics](#)<sup>5</sup> will be updated with this information, and we will also provide consolidated information about instrument overheads at the website. As far as we know, these overhead values are comparable to those of other large telescopes. We remind users

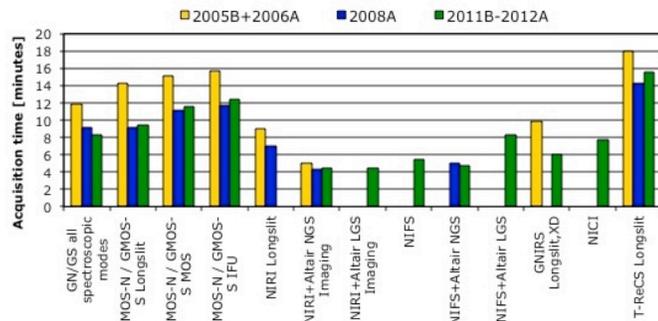


Figure 1: Acquisition times for different modes. These values do not include time (6 minutes) to slew to target and begin guiding.

<sup>3</sup> <http://www.gemini.edu/sciops/instruments/gnirs/data-format-and-reduction/reducing-xd-spectra>

<sup>4</sup> <http://www.gemini.edu/sciops/data-and-results?q=node/10883>

<sup>5</sup> <http://www.gemini.edu/sciops/statistics#acqtimes>

that the average values given and used in the OT are for planning purposes; programs are charged actual time spent, which will vary.

A partial solution to the request for real-time decision-making is eavesdropping, described more below (§5).

#### **4. Instruments**

Gemini welcomes visiting instruments to offer more diverse capabilities to our community. Additional information for prospective visitors is posted with the [visiting instrument policy](#).<sup>6</sup> We expect the Differential Spectral Survey Instrument (DSSI) and the Texas Echelon Cross Echelle Spectrograph (TEXES) on Gemini North to be open to all PIs through the regular 2013B call for proposals, with DSSI visiting around mid-year and TEXES around November. Information about these instrument capabilities will be available from the Gemini website with the call for proposals. The facility instrument suite must be limited, however. Users are encouraged to communicate with the Science and Technology Advisory Committee (STAC), which advises on these strategic decisions. They have [recommended](#)<sup>7</sup> that Gemini retire the current facility mid-infrared instruments.

#### **5. Eavesdropping**

Eavesdropping tests have been under way since December 2012, with numerous Principal Investigators (PIs) having taken part in night-time observing remotely. Essentially the mode appears to work as planned, and pending the results of feedback from staff and PIs, we do not anticipate significant changes. The mode is fully described on the queue observing web [pages](#)<sup>8,9</sup>. Because the test was carried out after the 2013A call for proposals, we will do eavesdropping in 2013A with an ad-hoc list of PIs (probably based on priority band), and implement fully in 2013B. PIs will be invited to state their interest in eavesdropping in the technical case section of their proposal.

#### **6. Fast, Peer-Reviewed TAC**

The suggestions of the UCG to protect the integrity and value of the evaluation process in a fast, peer-reviewed TAC are helpful. Gemini is not immediately implementing this proposal mode, and when it does, the available time will be a small fraction of each total telescope use, so the overall priority of existing programs will not be distorted.

#### **7. Survey Results**

The Observatory appreciates the UCG's efforts in polling the community and agrees with the UCG that this information be made available. Gemini will post to the UCG web space a summary report of the 2012 survey when provided by the UCG, along with a report of the older survey referenced in the UCG report.

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<sup>6</sup> <http://www.gemini.edu/sciops/instruments/visiting-instrument-policy>

<sup>7</sup> [http://www.gemini.edu/science/public/STAC/stac2012b\\_report.pdf](http://www.gemini.edu/science/public/STAC/stac2012b_report.pdf)

<sup>8</sup> <http://www.gemini.edu/sciops/observing-gemini/observing-modes/queue-mode/remote-eavesdropping>

<sup>9</sup> <http://www.gemini.edu/sciops/observing-gemini/observing-modes/queue-mode/eavesdropping-contact-notes>

## 8. Specific Recommendations

- *Activate and promote a Users' Forum, to help create a sense of community and enable access to the expertise of users and the observatory community. This should take advantage of the success of iraf.net, and UCG encourages Gemini to migrate as much support as possible from Helpdesk to the Users' Forum. The preliminary design shown to the UCG looked excellent.*

We expect to release the Data Reduction forum in the first quarter of 2013 and encourage all users to participate (§2).

- *Promote the UCG as an ally for the broader user community in advocating for improvements in Gemini operations.*

We will enlist the UCG for feedback as changes in Gemini operations are planned and implemented.

- *Ensure that users are aware of multiple problem-resolution pathways beyond the Helpdesk.*

In the near term, we will continue to use the Helpdesk, with support from the NGOs, as one path to resolve problems. The DR Forum may provide another avenue for “self-help.” We also remind users of some existing web pages that may be useful: video tutorials for the [Phase I Tool](#)<sup>10</sup> and [Observing Tool](#)<sup>11</sup>; and for data reduction, “[known problems](#)”<sup>12</sup> and “[data reduction frequently asked questions](#)”<sup>13</sup> pages.

- *Capture more details from the data-reduction workshops.*

We will work with the NGOs who have organized and hosted the workshops to identify additional detail that could be made available, and we will encourage that future workshop materials be more explanatory for later use.

- *Make available the real-time data reduction software QAP to the user community, even if not formally supported. (This could be especially useful for astronomers trying to interpret data during the eavesdropping mode.)*

We will release a development version of the QAP this year (§2).

- *Compile, document and make easily available a standard set of calibration data for quick-look analysis, for each instrument.*
- *Ensure that all the specific calibration files necessary to process each observation are easily available (i.e., clearly identified) in the archive.*

We expect the better calibration association with science data (§2) will provide the most useful information, so we will concentrate effort to complete this work.

- *Ensure that the user community can readily remove instrumental signatures from the data and perform appropriate calibrations. Create cookbooks sufficient to allow users to do these tasks. Continue developing and updating data reduction software.*

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<sup>10</sup> <http://www.gemini.edu/sciops/observing-gemini/overview-proposal-submission?q=node/11784>

<sup>11</sup> <http://www.gemini.edu/?q=node/11846>

<sup>12</sup> <http://www.gemini.edu/?q=node/10886>

<sup>13</sup> <http://www.gemini.edu/sciops/data-and-results/processing-software/data-reduction-support/faq>

We will provide a GMOS cookbook this year and will continue to develop data reduction software (§2).

- *Update the actual estimates of the overheads on the Gemini web-site for Phase I proposing, and promote Gemini's success in reducing overheads.*

We will update the website with the latest overhead measurements (§3).

- *Assemble a small committee of experienced mask-making users to discuss in detail what is so problematic with GMMPS, and how it can be improved.*

We will make the latest version of GMMPS available to the UCG before release, and we invite them to establish a working group to provide specific suggestions for further improvements (§2).

- *Promote mid-IR visiting instruments.*

We are scheduling TEXES for a visit during 2013B and we welcome visiting instruments to expand the capabilities we can offer to the user community (§4).

- *Work with the UCG to distill the 2012 survey results and make them publicly available.*

We will work with UCG to make these survey results available from the Gemini website (§7).