

2005 Users Committee Report

NOAO Response to Recommendations

Recommendation 1.1:

The Users Committee recommends that the members of the Committee be rotated off more frequently than they have been: some of its present members have served for six years! By enforcing a 3-year term limit, NOAO NOAO can increase the community representation on the committee and involve more people in the decision making process.

Four members will be replaced in 2006. We appreciate the contributions of our long serving members.

Recommendation 1.2:

The Users Committee (and NOAO) needs as much information as possible from the users themselves in order to address how well their needs are being met by NOAO. Many (most?) members of the community do not know that the Committee exists. Moreover, as NOAO users become more involved in TSIP observations and archival data mining, some traditional methods of feedback (such having the users fill out end-of run report forms), will be insufficient. NOAO has to be pro-active in obtaining feedback at various stages along the application, data collection and data analysis process. (Suggestions for this process were described in last year's Committee report.)

New observer feedback forms will be introduced within the next few months. Observers using TSIP-access facilities are already using these forms, and the feedback is interesting. We have installed a contact button directed to the Users Committee on our homepage. We encourage Users Committee members to contact the major users from the previous semester to get their feedback and will facilitate this.

2. Gemini Issues

Recommendation 2.1:

The Users Committee encourages Gemini to consider the utility of Band 3, and to examine methods which might increase the fraction of Gemini time devoted to completed projects.

Gemini queue policy and practice now considers the likelihood of obtaining >50% completion for a band 3 program before the program is started. For at least the past two semesters every U.S. PI granted time has completed a phase II submission. Gemini needs band 3 because in good weather semesters (e.g. 2006A at Gemini South) bands 1 & 2 are essentially complete.

We now have completion statistics for 2005B:

Completion (>75% data taken)	
GN Band 1	100%
Band 2	100%
Band 3	45%
GS Band 1	67%
Band 2	71%
Band 3	38%

A few points about these numbers. Band 1 currently is set at 20% and Band 2 30%. At the February Ops Working Group meeting, a resolution was passed to increase Band 1 to 30%. Gemini has taken that resolution under consideration and it will be decided at the next Ops Working Group meeting in early August in Victoria. In 2005B, GS was hammered by bad weather and this had a significant effect on the completion rate--2006A has been much kinder, weather-wise on GS, and the anecdotal word in La Serena is that Band 1 and 2 will have ~100% completion for 06A. On the flip side, Mauna Kea has been hurt by weather in 06A and we may see that in the final 06A completion stats.

Recommendation 2.2:

The Users Committee again encourages that Gemini adopt more straightforward and accessible metrics for gauging the efficiency of the telescopes, such as the shutter-open time, the fraction of clear evening hours spent integrating on the sky for proposed science observations (where "clear" is defined by some cloud coverage fraction, say 50% or less).

Gemini shutter-open time is consistent with the efficiency of other 8-10m observatories

- ESO/VLT (*2003 Annual Report*): 73% FORS1/2; 63% ISAAC; 42% NACO
- Keck "best" values (*2003B newsletter*): 85% DEIMOS, ESI, LRIS; 75% NIRSPEC; 63% NIRC, NIRC-2; 22% LWS

Recommendation 2.3:

NOAO must take a strong lead in engaging the community in a discussion of the ramifications of ultra-expensive instruments such as WFMOS, and how the decisions of

the Aspen workshop are currently being implemented. The perception of the Committee is that this news has not reached the general astronomical community.

Probing the dark universe with Subaru and Gemini was a meeting NOAO sponsored in November 2005 <http://www.noao.edu/meetings/>. Most of the U.S. attendees had costs defrayed by NGSC. A similar meeting on Galactic Archaeology will be organized later this year. The U.S. Gemini Science Advisory Committee <http://www.noao.edu/usgp/staff.html> is an ongoing forum for discussion of Gemini instrument policy.

Recommendation 2.4:

NOAO must take a proactive role in preparing the community for the change in the way astronomy is done. This might take the form of a series of workshops, discussions (open houses) at AAS meetings, and an ongoing dialogue in the NOAO newsletter (and website).

[Recommendation accepted.](#)

3. CTIO Issues

Recommendation 3.1:

The Users Committee recommends that NOAO publish a series of graphs or tables showing the current capabilities of the national facilities, and how these capabilities are expected to evolve with time. Various parameters to consider are wavelength coverage, resolution, and signal-to-noise (for spectroscopy) and aperture, field-of-view, and f-ratio (for imaging). These data, along with considerations concerning the number of nights available to the community, can allow the users (and the Users Committee) to better understand the scientific niches that are available (and unavailable), and what alternatives may be around the corner.

[Recommendation accepted. We have developed a website with a system-wide capability <http://www.noao.edu/staging/catch>](#)

Recommendation 3.2:

Currently the NOAO and especially the CTIO webpages are replete with inaccurate information about the observatory's instrumentation. The Users Committee urges that NOAO keep these pages up to date, so that observers can properly understand the current (and future) capabilities of the observatory.

[Recommendation accepted.](#)

Recommendation 3.3:

Given the pressures on NOAO funding, it has become increasingly difficult for NOAO to maintain a vibrant instrumentation program. Consequently, it is now most practical to build instruments in partnerships with universities/institutions and, in exchange for

resources, allow the institution a reasonable amount of access to the telescope. Unfortunately, this places the US community at the mercy of outside groups, in regard to what instrumentation (filters, gratings, etc.) will be available to do science. The Users Committee encourages NOAO to be a strong advocate for the user community in its negotiations with these instrument groups, and endeavor to make these instruments as broadly useful to the scientific community as possible. NOAO should also be as forward-looking as possible, and examine ways to make these instruments interesting and relevant in the coming era of the LSST and instruments such as WFMOS.

The long range plan of the NOAO Major Instrumentation program will be presented at the next meeting. Its internal advisory committee (IPAC) is currently considering new initiatives.

Recommendation 3.4:

NOAO and/or CTIO should be pro-active in soliciting input from the user community on the DEC filter complement. One possible group to target in particular might be MO-SAIC users, who are likely to be interested in the wide-field imaging capabilities of DEC. A workshop, similar to the one that defined the parameters of the Hubble Ultra-Deep Field would also be useful.

We plan to hold a workshop or an AAS Special Session after the DEC MOU is signed.

Recommendation 3.5:

NOAO, CTIO, and Gemini should arrange to get the maximum use out of the Gemini instruments by arranging for their possible use on SOAR. If possible, this should include spectrographic capabilities not (yet) provided by the Goodman spectrograph.

It is important to distinguish between instruments that are mounted on the Gemini South instrument cube and those that are not. Gemini gains efficiency through the flexibility of multi-instrument queue observing. Sharing mounted instruments with SOAR would reduce efficiency. Instruments that are demounted for a semester or more will be considered for the purpose of broadening SOAR's capabilities. The grating needs of the Goodman Spectrograph (for example, the equivalent of GMOS R831) may be more easily filled directly with additional VPH gratings than by using GMOS on SOAR.

4. KPNO Issues

Recommendation 4.1:

The Users Committee continues to strongly support the upgrade of the Bench Spectrograph on WIYN.

As of April 2006, the project is currently working toward a preliminary technical design review of the collimator optical design and concept-design review for the opto-mechanical design. An optical design and initial tolerancing has been completed. Opto-mechanical design and layout is in progress.

Recommendation 4.2:

The Users Committee recommends against replacing HYDRA with the One Degree Imager (ODI) when it comes on-line. The Committee sees both ODI and HYDRA as workhorse instruments, and it does not make any sense to keep swapping them in and out of the instrument port. It is critical that NOAO maintain the capabilities of the HYDRA spectrograph.

[We plan to present some options to the WIYN Director and Board.](#)

Recommendation 4.3:

The Users Committee unanimously and strongly supports the possibility of building a new big spectrograph for the Mayall 4-m telescope using any money that can be made available by Wisconsin/Indiana/Yale (or any other source). This will have the great advantage of allowing ODI to be more commonly available on WIYN without swapping off instruments. It will also go a long way toward reversing the eroding spectroscopic capability on NOAO telescopes.

NOAO's Major Instrumentation Program (MIP) is actively exploring concepts for new 4-m-class instrumentation. Such concepts include three different spectroscopic capabilities for the Mayall. If undertaken, NOAO would expect to support part of the design and construction costs through the MIP's base budget, using resources freed up by the completion of NEWFIRM. The remainder of the costs would require the active participation of one or more partner institutions yet to be identified. Discussion and review of the various concepts are underway through NOAO's Instrument Priorities Advisory Committee (IPAC) with an eye towards selecting the most scientifically and programmatically compelling concept for presentation to the Users Committee at its October 2006 meeting.

Recommendation 4.4:

The Users Committee was asked to comment about the status of the 4-m Mosaic Imager when the WIYN's One Degree Imager comes on-line. The question here is one of pacing – Kitt Peak users should not be without some wide-field imaging capability on a 4-m class telescope. (This is especially true for narrow-band imaging, which is an extremely useful niche for the observatory.) Thus, Mosaic should be maintained until ODI is operational. Once ODI is working and can accept many of Mosaic's filters, then Mosaic can be de-commissioned from the 4-m telescope.

Recommendation accepted. Unlike QUOTA, ODI will need custom filters. When ODI comes on line, we'll need to evaluate proposal pressure for filters not available with ODI.

5. NOAO Science Archive

Recommendation 5.1:

The Users Committee strongly encourages that NOAO advertize its archive to its users, and provide assistance for science problems. On-line tutorials, and videos will help, but links to this material must be prominent on NOAO's main web page.

Operations of the archive, and, indeed, of the entire end-to-end data flow system is a major activity of DPP for which personnel are being hired. Operations will include scientific assistance in the use of the archive and associated tools as well as scientific curation of the data sets in the archive. A help-desk with a simple and friendly user interface is being developed (using a commercial product). Advertising the system will be done in a number of ways, some involving traditional channels such as newsletter articles, AAS meeting presentations, and the NOAO web site. However, perhaps the most effective way to expose the community to the archive will be through the ability of NOAO observers to access their own data (both raw and, in some cases, pipeline reduced) from the archive. This will begin in the second half of 2006.

Recommendation 5.2:

The Users Committe strongly encourages NOAO to keep track of the use of its archive. How often is a particular archive accessed? Who has used it? What programs are most accessed? This information is critical to understanding how useful the archive is to the community, and whether the data mining tools are useful. In the long-term, it is also an

excellent way of assessing the success of the NOAA Surveys program, whose purpose is to produce useful archives to the community.

We do currently track use of the archive and of the NOAA NVO Portal. Standard web tools provide nightly reports on numbers of users and data downloaded or viewed. These statistics are collected and presented in various NOAA reports, and will be presented to the Users Committee in future years. We also track papers that use data extracted from the NOAA Science Archive and list these in the NOAA annual report.