

NOAO Response to the 2009 User's Committee Report

NOAO thanks the Users Committee for their thoughtful report and hard work on behalf of the users of Cerro Tololo, SOAR, Kitt Peak, WIYN, Gemini and the TSIP facilities. Community feedback and input are the lifeblood of the National Observatory.

NOAO thanks new committee Chair, Angela Speck, for her dedicated efforts on behalf of NOAO and the User's Committee.

1-KPNO and CTIO

Recommendation 1.1

We encourage NOAO to maintain its action plan for renovations at KPNO and CTIO to be funded by ARRA and to actively seek funding to make progress on remaining deferred maintenance needs as expeditiously as possible.

NOAO received final approval of its ARRA proposal (\$5.6M) from NSF in August 2009. We will work first to complete the full set of projects listed in the proposal, which were identified as highest priority. Part of our planning involved identification of an even larger set of important deferred maintenance projects throughout the observatory. We will continue to review and update this list in preparation for future proposals.

2-ReSTAR

As a preface to this section, we note that NSF has funded NOAO \$3M for ReSTAR in FY09 with no guarantee of additional out-year funding. However, NSF has indicated they will try and find out year funding at the \$1-3M per year. The Users Committee was invited to comment on NOAO's likely response to NSF for what would be done in this reduced (i.e. \$3M) envelope on the NOAO director's Connection Point web forum.

Recommendation 2.1

We recommend that NOAO pursue strategies that will allow longer term (5-10 year) commitments to partnerships with non-federal facilities in order to facilitate building a community of users for the new parts of the NOAO System.

We agree that long-term, stable partnerships on non-NOAO facilities should be developed where significant capability can be added to the open access US O/IR system. Current financial constraints suggest we will have to develop these partnerships at a slower rate than otherwise desired. Our initial agreement with Palomar is for 3 yrs and 25 nights per year (MOU signed in October 2009).

Recommendation 2.2

ODI is essential to NOAO's capability in wide field optical imaging, the highest priority of the ReSTAR report (which assumes a fully functioning ODI). We encourage NOAO and its partners to complete ODI as rapidly as practicable. It is also important to deploy a fully functional ODI, with complete OTA functionality. The Users Committee considers a fully functional reduction and scientific software pipeline to be an integral part of the deployment of such a complex instrument.

We agree that ODI must be a success and NOAO is committed to finishing the ODI opto-mechanical system with its WIYN partners including full functionality. There is still considerable uncertainty in the cost and schedule of ODI, and NOAO must balance potential cost overruns on ODI with the rest of its portfolio. The Kitt Peak and NOAO Directors have been working on ways to pay for NOAO's share of ODI while remaining within budget. At the time of this writing, we are hopeful that the current estimates for completion from the project are accurate, and our current planning accounts for NOAO's share of the cost. At the same time, NOAO is being vigilant and watching closely for any indications that ODI is not on track to completion. We are working closely with the project and WIYN director to bring this phase to a successful conclusion.

NOAO agrees that ODI must have a working pipeline. We are currently exploring options with our WIYN partners and internally to produce a working pipeline to support the community use of ODI.

Recommendation 2.3

We recommend that MOSAIC on Mayall be maintained even after ODI comes online on WIYN. This is due to the large number of unique filters available for imaging with MOSAIC.

We agree. Furthermore, NOAO intends to upgrade the ccd's and controllers on Mosaic1 to greatly improve the reliability and decrease substantially the readout time. This will be done within the \$3M ReSTAR funding envelope.

Recommendation 2.4

NOAO should continue supporting graduate student instrumentation fellowships in future phases of the ReSTAR implementation plan.

We intend to do so. We are grateful to AURA for supporting half the cost of a graduate fellowship for each ReSTAR instrument program. For the current program, this includes Ohio State/OSMOS. Future ReSTAR instrument projects will include an associated graduate student fellowship.

Recommendation 2.5

We recommend participation in the LCOGTN network at ~20–30% level for US community, possibly higher depending on the demand from users and quality of the science.

A significant investment from NOAO in the LCOGTN is not possible at this time (e.g., development of the 2m telescope component). We will continue to work with LCOGTN on supporting deployment of their 1m and 0.4m systems at CTIO later this year, but full-scale engagement is not yet possible scientifically given current budget constraints. Some access to the network is still possible at this reduced level of participation and we will explore this with LCOGTN.

Recommendation 2.6

We recommend NOAO regularly re-examine its partnerships with WIYN, Hale, DCT, and other non-federal facilities in the NOAO System. This will be especially important if ODI increases the oversubscription rate at WIYN as predicted.

Accounting for community needs within the US O/IR system is a regular part of NOAO's long-term planning activity.

Recommendation 2.7

We recommend that an optimal oversubscription rate of 2–3 be maintained on the 2–4 meter telescopes to ensure reliable community access as well as high-quality science.

There will always be some tension between a high oversubscription that shows relevance and lower which promises ample access to the community. We agree the optimum is over 2 and perhaps would ideally be near 3 in steady state. We recognize the rate can be over 3 at times when particularly interesting capabilities are deployed.

Recommendation 2.8

We recommend that NOAO plan ahead to hire additional scientific staff at KPNO, CTIO, and NSSC that will be required to handle the commissioning stages and subsequent instrument and user support required for successful operations. Personnel appointment should be made with sufficient overlap periods for new staff to gain expertise.

We currently have two science staff positions advertised at CTIO and have just hired two new scientists, Lori Allen (KPNO) and Jayadev Rajagopol (CTIO). Given our continuing tight budget outlook, it is not clear we will hire more than one new scientist at CTIO, though we agree there is a need at CTIO to support DECam and other activities there. We believe there is currently a sufficient level of science support in the North to handle support for KPNO and NSSC.

Recommendation 2.9

We continue to endorse NOAO's three-phase plan to implement the ReSTAR initiatives and reinvest in KPNO and CTIO.

We will continue to revise our planning within this structure as current phases of ReSTAR development take shape. Given that our planning continues to outpace our level of funding, the long-term plan is likely to stretch out.

Recommendation 2.10

While we understand the expediency of the approach taken in Phase I to acquire spectro- graphic capabilities, we encourage NOAO to pursue a transparent and open peer-reviewed instrument selection process as Phases 2 and 3 come into play. This should include broad discussion with the users community and careful review of competing options.

We will endeavor to gain as broad a spectrum of input as possible, consistent with timely deployment of new capabilities. We will make open calls for new capabilities beyond Phase 1.

3-Surveys and the 4m Telescopes

Recommendation 3.1

We recommend that NOAO allow at least 6–8 weeks of lead-time between the announcement of opportunity and solicitation of letters of intent, in order to get maximal participation from the community.

We are drafting a call at the time of this writing and intend to give at least 8 weeks time to respond with a letter of intent and likely more.

Recommendation 3.2

We recommend that the time promised in exchange for an instrument be carefully considered, such that the scientific value of open access retained by users is at least as good as it would be without the new instrument. This may be achieved either through the formation of new telescope partnerships or creative integration of the major science project with community access.

We agree this is a very important consideration. NOAO will seek to maximize the combination of science, open-access, and new capability through this initiative.

Recommendation 3.3

We recommend that NOAO ensure that any proposed survey make its data public on a reasonable timescale.

We agree. NOAO will seek to make survey data public on the same timescale as for other programs using NOAO facilities. We plan a review of the Survey program in 2010 and will specifically look at ways to make dissemination of data to the broad community most effective.

Recommendation 3.4

We recommend that the proposal review committee have a member from Users Committee in addition to the proposed membership of ReSTAR and ALTAIR committee members.

This is a good idea. NOAO will include a member of the Users Committee on the review panel, subject to availability and other requirements (e.g. institutional conflicts of interest, technical area of expertise, project management experience, etc).

Recommendation 3.5

We encourage NOAO to ensure that any survey instrument should be compatible with a versatile suite of complementary instruments.

NOAO will seek to maximize the operational efficiency of any new survey instrument so that the Mayall remains scientifically productive when the survey is not in operation. We will seek to develop complementary and versatile capability into the US O/IR System of northern facilities (whether on KP or elsewhere) in order to ensure an expanded set of instruments and access exist for the community.

Recommendation 3.6

NOAO should keep open their legal right to back out of the agreement for as long as possible before the formal agreement is signed.

NOAO will not commit to any survey unless it is certain the survey has every chance of success and fulfills the goals of the survey call.

4-Gemini

Recommendation 4.1

We encourage NOAO/NGSC to follow the ALTAIR recommendations and facilitate action towards procurement of new high resolution spectroscopic instruments for the Gemini telescopes.

NOAO considers high-resolution spectroscopy a priority for US Gemini users. NOAO is

actively working with Gemini to move the procurement process forward as rapidly as possible. NOAO will attend the GSC October 2009 meeting to prioritize instrument needs and the NOAO attendance will include one community member of the ALTAIR committee, as well as one member from our User Committee and US Gemini SAC. At the same time, we have carried out a US user survey (ala ALTAIR) to gain input on desires prior to the GSC meeting. The results of this survey will be published in Currents.

Recommendation 4.2

We urge NOAO/NGSC to push Gemini to make and keep available the templates for observing in order to reduce the burden of Phase 2.

NGSC scientists have communicated this to Gemini in the past and will continue to do so as long as it is an issue.

Recommendation 4.3

We recommend that NOAO modify the Phase-I Tool (PIT) in order to facilitate upload of target coordinates. Users would like to be able to upload files containing their target coordinates, rather than having to input each object individually.

NGSC will suggest this to Gemini who maintains the PIT (NOAO has no control over the PIT). We are sympathetic with the desire to use file uploads in this way.

Recommendation 4.4

Gemini remains the premier open access observatory capable for US mid-IR observers. With results from Spitzer (and other IR space observatories) still appearing, and new observations from Herschel soon to be available, the need for ground-based mid-IR access remains important. Therefore we recommend that NOAO/NGSC engage US users to encourage use of the mid-IR capabilities of Gemini.

NOAO will continue publicizing all Gemini capabilities through the NGSC, our booth at the AAS (including handouts and user discussion), newsletter articles, and our web site.

5-LSST

Recommendation 5.1

We recommend a review of the process by which new science collaborations are proposed in order to define the path more clearly.

We will review the process and attempt to convey more clearly how LSST will execute its survey in order to facilitate increased participation by the community. A first call for new collaborations will be held in November. Feedback from the selection panel

will be used to improve subsequent calls.

Recommendation 5.2

We recommend that communication between potential LSST users and the scientists running the simulator be improved.

In 2009, NOAO has engaged a group of scientists in an "NOAO science working group" for LSST. The group is led by NOAO LSST project scientist Abi Saha. Among the activities of this group, is a comprehensive look at the simulator. Steve Ridgway is leading the effort and we expect a much improved understanding of the simulator and LSST survey execution which we will communicate to potential users.

6-NSSC

Recommendation 6.1

We recommend that NOAO complete the creation of an NSSC to serve as an interface between the user community and the non-NOAO facilities available for national use through TSIP, ReSTAR and Gemini.

This has been done. FY10 planning includes the NSSC as described in the User Committee meeting presentations and includes the NGSC activity. We are planning to engage with Palomar support scientists in preparation for offering time on the 200 inch in 2010.

Recommendation 6.2

We recommend that there be some mechanism for NSSC staff to coordinate with KPNO and CTIO user support to ensure that the NOAO users receive as uniform an observing support experience as possible.

We will ensure good communication between KPNO/CTIO and the NSSC staff.

Recommendation 6.3

We recommend that the NOAO director carefully balance the strongly endorsed goal of expanding NSSC with the priorities of maintaining the support and health of the currently supported facilities.

Support and development of capability at NOAO and Gemini facilities remains our highest priority.

7-Science Data Management

Recommendation 7.1

We recommend that all available MOSAIC data be run through the pipeline and made available through the Science Archive as resources allow.

We have committed to doing this and are poised to begin as soon as possible. First, archived images on tape will be read onto disk and ingested into the archive in large blocks as time permits. This should take a number of months once we begin. At the same time we will begin processing Mosaic data on disk that has not yet been pipelined starting with the newest data first. Apart from data sets with no calibration files available, we will process all data available.

Recommendation 7.2

We encourage NOAO to make all archival data available via the NOAO Portal.

All data from NOAO instruments are captured by the NOAO Archive and available to users through the Portal (since 2008). Adding older data to this access point is a good goal for large coherent data-sets, and we will consider doing it within the scope of our other priorities.

Recommendation 7.3

We encourage NOAO to ensure that full cookbooks for data reduction are made available for all new instruments coming online, and where possible pipelines should also be available.

We are fully committed to providing cookbooks and data reduction tools for all new instruments. Pipelines, where possible, will be provided as a goal.

8-Overall Balance

Recommendation 8.1

We encourage NOAO to view deferred maintenance as a critical part of the balance in the near and far term.

We concur. In the next three years, we will be concentrating on carrying out the large program of infrastructure upgrades and maintenance comprised in the ARRA stimulus proposal. At the same time we will seek to build more maintenance into our planning and execution as appropriate and in the context of other high priorities. We will continue to work with NSF to provide sufficient funding to carry our critical maintenance.

Recommendation 8.2

We endorse pursuing more partnerships, while also reiterating our strong belief

that NOAO facilities should remain available for open access for the great majority of the time.

We view partnerships as opportunities to engage the broader community and develop capabilities we would otherwise be unable to realize. Partnerships are also a natural means of accomplishing major new experimental science as well as keeping the suite of capabilities offered on NOAO facilities vital and up-to-date. We are keenly aware of the need to balance these positive aspects with the need to provide ample time to the community in support of exploratory or PI science.

Recommendation 8.3

We encourage NOAO to cooperate with the efforts to develop a funding source to ground-based observational studies and remove the necessity to apply for telescope time and data analysis funding separately.

We have been a long time supporter of this approach, but place it at a lower priority than new instrument and access development. In 2009, we supported a white paper submitted to the Decadal Survey committee by Alicia Weinberger with data on the cost of travel and publication support.

9-Telescope Proposal Process

Recommendation 9.1

The capabilities search page should be linked directly from the proposal information pages. If possible, it should be updated to specify the range of wavelengths covered by each instrument (only some offer this information) and to allow multiple boxes to be checked for a given category (e.g. both Small and Medium sized telescopes).

These are excellent suggestions and we will work toward implementing them.

Recommendation 9.2

The NOAO proposal form should be augmented to allow proposers to specify explicitly a “second choice” combination of telescope/instrument/number of nights in case the first choice is already unavailable when time is being assigned.

We will explore this possibility. Implementing this suggestion also requires that the TAC approve the second choice, which might be viewed at a lower priority than the main proposal.

10-Time Allocation Committee Review

Recommendation 10.1

If possible, the instructions given to TAC members should be made public, so that proposers know the criteria on which their proposals will be judged.

We have placed instructions to the TAC on the public side of our TAC web pages, under the heading "NOAO Policies for the Allocation of Observing Time" on <http://www.noao.edu/noaoprop/help/policies.html>

Recommendation 10.2

NOAO should publicize widely the invitation to volunteer for the TAC that appears at <http://www.noao.edu/gateway/tac>.

NOAO will make periodic reminders on our webpage and News Letter about opportunities to serve on the TAC. NOAO is proactive in searching for new TAC members and uses a host of channels to solicit suggestions for TAC participation from the community.

Recommendation 10.3

NOAO should clarify, in the TAC instructions, LaTeX template, and Policies for Time Allocation, whether the "Use of Other Facilities or Resources" box is part of the TAC evaluation. Any part of the proposal that is not supposed to be reviewed by the TAC should appear on a separate page that can be removed before the TAC sees it.

The intent of this section is to show the TAC how other resources are being used to benefit the overall science of the proposal. This is described in the proposal form instructions and we feel this information should be available to the TAC.

11-Communications between NOAO and its User Community

Recommendation 11.1

NOAO should recalibrate its communications efforts to focus on full online documentation that gets updated dynamically (the NOAO Data Handbook is an excellent example), with Newsletter/Currents focused on drawing attention to updates.

We have begun a long-term effort to revitalize and improve our web presence. The goal is to provide better communication to our users and the public. Currents will likely remain a vehicle for promoting significant new initiatives and communicating status for major on-going initiatives such as ReSTAR and ALTAIR. More routine updates may need another channel. We will explore this (see R11.2).

Recommendation 11.2

NOAO should consider sending targeted emails to groups of users most likely to be interested, e.g. announcing the MOSAIC data reduction pipeline to all recent MOSAIC run PIs. Even email sent to all users is more likely to be read by those interested if it covers a single topic with a related subject line.

We have traditionally tried to avoid mass mailings to our users, but it may be time to take another look at this policy. Users are retraining themselves to receive targeted information from a host of electronic means, and it may be time for NOAO to change the way we interface to users on different topics.

Recommendation 11.3

NOAO should consider publishing the Newsletter once per semester, to coincide with the Call for Proposals when users naturally begin looking for info on new instruments, last semester's proposal statistics, etc. NOAO should also provide an online list of recent Newsletter (and Currents) article titles with links to PDFs of the articles, so that astronomers can skim the list or search the HTML for e.g. "NEWFIRM" and/or "2009A."

We agree publishing once per semester is the right frequency for the News Letter. Look for this change in 2010.

The News Letter and Currents both have on-line archives of previous issues:

<http://www.noao.edu/currents/>

<http://www.noao.edu/noao/noaonews.html>

Both links are available from "News and Reports," which is available from the NOAO front page.