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Currents

In this Issue...

[Dire Budget Projections from NSF AST: Your Input Needed \(Continued\)](#): We [previously described](#) the dire budget projections from NSF MPS Astronomy and the need for community discussion on how we can best meet the budgetary challenges. Readers responded at [our website](#) and here we [summarize some common themes](#) that emerged. The website remains open for further discussion. Read what others have said... and **add your voice!** Importantly, even if you find that others have already expressed your views, please write in to let us know that. Comments received will be made available to the [NSF/AST Portfolio Review Committee](#).

[System Roadmap Survey Launched](#): What observational resources will you need for your research in the years ahead? Help us plan for the future by responding to the [survey](#) launched by the [US Ground-based OIR System Roadmap Committee](#). The committee is charged with assessing the state of the OIR system of observing facilities (i.e., both federal and non-federal facilities). Help us make the case for the facilities and capabilities that you will need! **Survey responses are requested by Friday, December 2.**

[NSF/AST Portfolio Review Committee Invites Input](#): The Portfolio Review has the goal of maximizing progress on the science described in the Astro2010 Decadal Survey report ("New Worlds New Horizons"). The Portfolio Review committee is charged with recommending the *critical capabilities* needed to enable progress on Astro2010 science, as well as the *balance of investments* (in new and existing facilities, programs, and other activities) that would deliver those capabilities within tight budgetary scenarios. The community may provide input directly to the [committee](#) until **31 January 2012**.

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Dire Budget Projections from NSF AST: Your Input Needed (Continued)

The [last issue of Currents](#) described the dire budget projections from NSF MPS Astronomy (AST) and the possibility of drastic changes that would alter the landscape of ground-based astronomy. Because such changes require careful planning and consultation with the community, we created a [website to enable community discussion](#) on how we can best meet the budgetary challenges.

What We Heard

Many people have discussed the importance of NOAO facilities and programs to their research and education programs and the science that is at stake if NOAO facilities are closed. Other comments address funding priorities more generally, describing the need for a balanced, cost-efficient set of facilities that are the engines of

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discovery and enable a robust individual investigator program. Here are some of the common themes that have been discussed, with excerpts from the comments received thus far.

Discovery in astronomy: “There are many more astronomy puzzles than astronomers” and therefore astronomy is “rapidly expanded by small teams or individuals working on many interdependent problems simultaneously.” This calls for “a balanced distribution of large, medium, and small” aperture facilities to enable future discovery. The NOAO 4-m telescopes will remain powerful “engines of discovery” into the future, e.g., “the BigBOSS spectrograph will make the Mayall the best facility in the world for wide-field spectroscopy”.

A robust (and diverse) individual investigator program: Open access through NOAO facilities is an important way to enable the “robust individual investigator program” and “diverse scientific workforce” that is a priority for the NSF. An open access system keeps us on our toes: “Because each run, each visit has to be earned by competition and review, we’ve kept our science sharp. Equally important, the diversity of scientists using and being trained at these facilities has been preserved.” Diversity is further tied to discovery: “We need to continue to provide national facilities and equal access for *anyone* with a great idea to execute that idea.”

Training the next generation of astronomers: Several people describe the impact of potential facility closures on the ability of the community to train the next generation of astronomers. An open access system is valuable because it “allows students to experience the scientific process from end-to-end, i.e., to conceive their own projects, compete for observing time, and carry out the project.” Others note the value of training students through hands-on observing experiences that are not available through queue-scheduled facilities.

Cost efficiency in our age of austerity: Many are concerned that the closure of NOAO facilities would deprive the community of some of its most cost efficient facilities. Pointing to the very high science-per-dollar ratio of the 4-m telescopes, people find “the cost effectiveness and productivity of the 4-m systems...well suited to our current age of austerity.” They also find that being able to “work on myriad unanswered questions with 4-m telescopes on the front lines without spending billions of dollars...is an appealing...back-to-basics approach that would enable the community to weather the budget crisis” while producing strong, potentially ground-breaking science.

It is also pointed out that NSF support for CTIO and KPNO is leveraged to produce a wide array of community science, because these sites host facilities operated by other consortia (e.g., SMARTS, WIYN, SOAR, the Bok telescope, Spacewatch, MDM, SARA, PROMPT, WHAM, ALO, and soon LCOGTN).

Astro2010 and the NSF/AST Portfolio Review: Calling for careful planning, people note that although the Astro2010 priorities were based on optimistic budget scenarios, the declining budget situation we face requires “a careful look at all options.” Many encourage the NSF and the Portfolio Review committee to compare the scientific productivity of all facilities and programs under review because “the dire budget scenario requires an honest look at all programs.” Expressing a view of the future held by others, one person commented, “This is an era of lean budgets that extends into the foreseeable future,” and as a result “we may not realize most of the Astro2010 recommendations in our careers...We need to maintain the necessary core capabilities and the broad health of the astronomy community. Perhaps progress on key questions will be slower than we wish, but the field needs to be positioned to capitalize when times are better.”

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your views, please write in to let us know that. Comments received will be made available to the [NSF/AST Portfolio Review Committee](#).

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System Roadmap Survey Launched

What observational resources will you need for your research in the years ahead? Help us plan for the future by [responding to the survey](#) launched by the [US Ground-based OIR System Roadmap Committee](#). The committee, formed by NOAO, is charged with assessing the state of the ground-based OIR system of observing facilities (i.e., both federal and non-federal facilities).

The System Roadmap Survey will be used to understand how the community intends to use existing facilities to carry out the science described in the Astro2010 Decadal Survey report (“New Worlds New Horizons”, chapter 2) and to identify the needed observing resources that are in high demand or are currently missing from the System. The System Roadmap Committee will use the survey results as input to a white paper on the status of the US ground-based OIR System that will be forwarded to the [NSF/AST Portfolio Review Committee](#).

**Help us make the case for the facilities and capabilities that you will need!
Responses are requested by Friday, December 2.**

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Contact Us

Did something interesting, inspiring, or surprising happen on a recent observing run? Please tell us about it! Is there a topic that you would like to see covered in a future *Currents*? If you are planning a regional astronomy meeting or department internal symposium, would you like someone from NOAO to give a presentation on our new program? Please contact us at currents@noao.edu. We look forward to hearing from you!

Currents is a sparkplug for communication between NOAO and our community. It provides updates—and solicits community input—on NOAO observing opportunities and NOAO programs and policies on a more rapid timescale than is possible with the *NOAO Newsletter*.

NOAO is the national center for ground-based nighttime astronomy in the United States and is operated by the Association of Universities for Research in Astronomy (AURA), Inc. under cooperative agreement with the National Science Foundation.

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