From the Director

Jeremy Mould

New Leadership At NOAO South

Malcolm Smith stepped down as director of Cerro Tololo Inter-American Observatory (CTIO) last month after 10 years of service leading an observatory that provides the most unique research opportunity offered to US astronomers—access to the southern hemisphere.

Malcolm passes a transformed institution on to his successor: a newly developed site at Cerro Pachón, an additional four-meter telescope (SOAR), and a campus with twice the scientific staff he inherited in 1993, residing in a city that has become an international resort. An administrative transformation has also occurred in the last five years. AURA Observatories in Chile has become a service organization supporting both CTIO and Gemini South. These transformations have been accomplished with Malcolm's characteristic diplomacy, a skill that has earned him the respect of Cerro Tololo's research scientists, administrators, engineers, technicians, and unique mountain staff—as well as his fellow directors and Chilean government officials at every level.

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Malcolm continues as head of AURA Observatories Support Services, and as the *jefe de mision* of "AURA-O" in Chile. In addition to his responsibilities to AURA-O, research beckons. I join his colleagues in wishing Malcolm continued success, and the just rewards of being able to concentrate a bit more on his scientific pursuits.

NOAO is now very pleased to announce that the AURA Observatories Council has selected Alistair Walker to be the new director of CTIO. Alistair's initial acquaintance with the observatory was as a junior staff member from 1977 to 1979. He then spent seven years at the South African Astronomical Observatory (SAAO), and returned to join CTIO's tenure track in 1987. He served as Deputy Director from 2000 to 2003, and is very familiar with CTIO's current successes and challenges.

Alistair is well known for his work on RR Lyrae stars in the Magellanic Clouds and for his close association with CCD camera development, from the early days of these detectors through to their present full realization. He also has a broad interest in stellar populations research.

I look forward to working with Alistair as he leads CTIO in laying the foundations for the new US telescopes that are surely coming to Chile, while bringing a new generation of instruments to our favorite telescopes on Tololo and continuing to build the scientific community in La Serena.

Users' Committee Report 2003

NOAO Users' Committee members Robin Ciardullo, David Turnshek, Timothy Beers, Steven Majewski, Arlin Crotts, and James Lowenthal visited Tucson in October, with their Chair, Chick Woodward. Nicole Vogt and Todd Henry were unable to attend on this occasion. The committee considered KPNO, NGSC, and CTIO operations and underlined the importance of maintaining fully reliable 4-meter telescopes and a close connection with Gemini operations. According to the committee, the needs of the US observing system should be studied in a Scottsdale-type workshop in the coming year. Blanco and Mayall instrumentation are issues of considerable importance, they added. The Time Allocation Committee process and data archive development got good grades. The Users' Committee report is available at *www.noao.edu/noao_uc.html*.

New Opportunity: GNIRS Science Campaigns

Stephen Strom

NOAO is pleased to announce a pilot program aimed at encouraging long-term proposals for major science campaigns capable of exploiting the powerful capabilities of the new Gemini Near-Infrared Spectrograph (GNIRS).

The goal of this pilot program is to provide opportunities to schedule observations with high scientific potential that require significant blocks of time on Gemini. Successful campaign science proposals will be awarded 15 to 20 nights over the next two to three years. Proposers must agree to make all Gemini data and ancillary information available publicly following a minimal proprietary period (less than six months), a requirement similar to precedents set by the NOAO Survey Program and the SIRTF Legacy Program, among other examples. The scientific merit of these proposals will be evaluated by the Time Allocation Committee (TAC). However, the observing time to support proposals of this magnitude will come from the pool of discretionary time available to the NOAO Director. The Director will use the following criteria in making final time awards:

- intrinsic scientific merit as evaluated by the TAC
- breadth and quality of the scientific team and its demonstrated track record
- enhancement of undergraduate education through involvement in research
- potential value of the archival database to other users
- plans to manage data reduction and archiving, and deliver data products, in a timely fashion

In assembling teams to carry out these programs of scale, Principal Investigators are particularly encouraged to involve scientists and students from four-year liberal arts colleges. NOAO has played an important role historically in providing these scientists and their students with access to facilities. As NOAO transitions to an era when fewer opportunities are available for training via "contact nights" on smaller facilities, we are seeking innovative ways like this to continue to provide opportunities for faculty and students located at institutions that have traditionally produced first-rate students who pursue PhDs in astronomy.

Watch for the 2004B Call for Proposals for more details on this opportunity. For more information on GNIRS, see *www.noao.edu/ets/gnirs/manuals.htm*.

TSIP Begins Its Third Year with New Opportunities

Todd Boroson

The Telescope System Instrumentation Program (TSIP) has now completed two annual cycles. In the program's second year, funds were awarded to the California Association for Research in Astronomy (CARA) for continued development work on KIRMOS, a near-infrared imager and multi-object spectrograph for Keck-II, and to the Smithsonian Astrophysical Observatory (SAO) for the MMT and Magellan Infrared Spectrograph (MMIRS). In addition to providing the resources to create these new capabilities, the awards will provide 12 additional nights for the community on the Keck telescopes and 27 nights each on the MMT and Magellan telescopes.

The rules for TSIP have been modified a bit with the aim of increasing options for telescopes less than six meters in aperture. Such proposals are now permitted for new instrumentation. Two changes have been made to the TSIP guidelines and the review process to encourage such submissions. First, since the number of telescope nights to be made available to the community (equivalent in value to half of the funds awarded) may seem prohibitively large for smaller telescopes, proposers are urged to consider alternate types of access, such as carrying out community-defined surveys. Second, the review panel will develop separate, ranked lists for telescopes above and below the six-meter threshold, before merging these into a single list for funding.

Appeal of NOAO Postdoc Path Appears to Be Growing

Douglas Isbell & Stephen Hopkins

It was named the 10th worst job in all of science by the October 2003 issue of *Popular Science*—a "limbo of… drudgery leading to dashed dreams."

But this pessimistic caricature of post-doctoral fellowships does not seem to reflect the experiences of the current NOAO postdocs. In a series of recent interviews, postdocs in residence at NOAO North cited welcome growth in their total numbers, stronger institutional support for support tasks like data processing, and the active counsel of talented scientific staff members as key factors in making a postdoc fellowship an increasingly interesting and rewarding position at the national observatory.

"My knowledge of astronomy has improved greatly here," said Michael Brown, who is tracing the evolution of galaxies with the NOAO Deep Wide-Field Survey (NDWFS). Collaborating with NDWFS Principal Investigators Buell Jannuzi and Arjun Dey "has been really useful, they've pushed me." Recent additions to the NDWFS data processing team have been extremely beneficial, he added, speeding the progress of the survey and allowing time for research. Michael has been a research associate with NOAO since 2000, after completing his PhD at the University of Melbourne, Australia.

Michael Brown

Several postdocs cited their earlier acquaintance or active research with staff members as keys to their move to NOAO. Lucas Macri, who comes to NOAO after receiving a PhD from Harvard University, credited the flexibility of NOAO science managers such as Steve Strom in working to accommodate his Hubble Fellowship, and the family-friendly atmosphere needed by a "dual career couple in science," as strong factors in his move to Tucson from the East Coast. Lucas, a native of Argentina, is currently studying Cepheid variables in M33, originally discovered by Project DIRECT, to improve the accuracy of the Extragalactic Distance Scale.

Rachel Mason

Most of the postdocs seemed to hear of the opportunity from the AAS job register, though some, like new NGSC postdoc Rachel Mason, were tipped by officemates or previous contact with NOAO scientific staff. Rachel, who received her PhD in August at the University of Edinburgh, Scotland, is working with the NOAO Gemini Science Center on research related to dust in the interstellar medium and in active galactic nuclei, as well as on some NGSC service tasks. "I'm still not sure that I want to be a full-time researcher for the rest of my life, and I like the idea of having a job that involved a little bit of something else, as well as having two-thirds of my time to do exactly what I want" in research, Rachel said.

The postdocs have heard "mixed reports" on the prospects for getting access to immediately useful quantities of data from the Gemini telescopes in areas such as multi-object spectroscopy, they said. But capabilities such as the Phoenix spectrograph and the potential KAOS instrument make it a promising area to explore further. In particular, Lucas Macri has helped with Gemini North queue observations for six nights over the past year in what he termed a "thoroughly positive experience."

NOAO received strong marks in human resources areas such as visa support for the international postdocs. But the city of

continued

Appeal of NOAO Postdoc Path continued

Tucson itself received mixed reviews from the NOAO North crew, with the noted difficulty of getting around the "Old Pueblo" by foot. "My view of Tucson improved radically when I started riding a bike, and seeing some of the neighborhoods," said Jason Aufdenberg, who received his PhD from Arizona State University, and is no stranger to Western cities. Jason is working with Steve Ridgway to improve the temperature scale for O- and B-type stars, measure the mass-loss rates from the stellar winds of the nearest hot supergiant stars, and measure the distorted shapes of the nearest rapidly rotating stars.

"Tucson was very different at first, especially from my previous experiences in Europe," agreed Frank Thim, who received his Master's in Germany and his PhD at the University of Basel, Switzerland. "But I've come to really like it." Frank has been at NOAO since August 2001 working with Abi Saha on, among other things, Cepheid distances, variable stars, photometry, and the Hubble Constant. The postdocs were in agreement that the key to getting the most from Tucson was getting involved in the large variety of outdoor activities that the surrounding areas offer, like hiking and mountain biking.

The quality of the scientific community around NOAO, on the other hand, was universally appealing to the postdocs. "Being able to go across the street and get perspective from the staff at Steward Observatory, where they may have some different specializations that aren't necessarily copied over here, has been really useful," Michael said. "I'm looking forward to the arrival of Mark Dickinson at NOAO—discussing high-redshift galaxies with him is going to be really useful."

The NOAO environment also appears to be welcoming to female astronomers. "The working environment is very nice," Rachel said. "I like the way people say hello and introduce themselves. It's clear that NOAO is making an effort [to attract more women to the scientific staff] with its advertising" and using language that appeals to both genders, Rachel added. "It seems like people here do care."

NOAO's reputation for doing active, high-quality educational outreach was also a factor in some decisions to come here. "One aspect that really pleased me was all the premiere educational programs and dark skies activities that are run out of here," Jason said, "It's a great opportunity to volunteer some time, and learn, since I am interested in doing some teaching as part of my career."

When asked about the prestige of NOAO as a location for postdocs as compared to other astronomical research organizations, the current group said that the national observatory's reputation is on the upswing.

Kate Brand

"Certainly I had some doubts about that when I arrived, but I had a bit of faith," Macri said. "The GSMT, LSST, and NVO are interesting projects, and given enough resources, [the organization] will go up."

NOAO's participation in several large surveys was also mentioned as a sign of its increasing impact in the astronomical community. Indeed, scientific productivity remains the key attraction of any postdoc position. "Being able to get [data on] almost all of cosmic time in one uniform well-understood survey is going be really valuable," Michael added. The appeal of combining NDWFS data with related observations from Chandra, VLA, SIRTF and other sources is what drew new postdoc Kate Brand to NOAO after receiving her PhD at Oxford in September. Kate is working on the NOAO deep wide field survey and looking at the clustering and evolution of AGN.

The long-term effort required by some postdoc positions is reflected by Michael, in his fourth year with the NDWFS. "Research always takes longer than you hope—with [NOAO] Deep-Wide we have just gotten to the point of publishing results." (Michael's paper on the evolution of galaxy clustering and the NDWFS was recently published in the *Astrophysical Journal*.) Michael adds, "I still have important research to do that I was planning when I first arrived at NOAO."

Next issue: the postdoc experience in Chile at NOAO South.