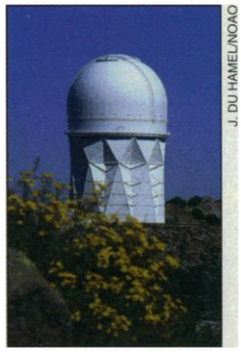
ASTRONOMY

Plan Would Shut Kitt Peak Facilities

Astronomers who use the National Optical Astronomy Observatories' (NOAO's) five telescopes on Kitt Peak in Arizona have known for a few years that money was tight and that some of the instruments might have to be shuttered. But it wasn't until last month that they found out the hit list includes the biggest scope on the mountain—the 4-meter Mayall—and that it could happen as early as 1999. The news has sent a shiver through hundreds of U.S. astronomers, many at small colleges and state universities, who work mostly on these instruments.

One factor behind the crisis at Kitt Peak is a projected flat budget of $26.7 million from NOAO's funding source, the National Science Foundation (NSF), which will dwindle in purchasing power to $22.4 million by 2000. Another is a 1995 National Research Council (NRC) report that gives priority to twin, 8-meter Gemini telescopes under construction in Hawaii and Chile, and NOAO's telescopes in Cerro Tololo, Chile, as well as to larger, unique instruments (*Science*, 20 January 1995, p. 324). The larger telescopes and those in the Southern Hemisphere, the panel said, were less likely to be duplicated by instruments at private observatories.

Working within those constraints, NOAO drew up a plan earlier this year for closing or selling four telescopes at Kitt Peak and two (a 0.6-meter and a 1.0-meter) in Cerro Tololo over the next 3 years. By 1999, if the Mayall telescope were to close, NOAO's only remaining activity on Kitt Peak would be its 40% share of a 3.5-meter telescope that it operates together with three U.S. universities.



J. DU HAMEL/NOAO

Past its peak? Kitt's 4-meter telescope could close in 1999.

The Association of Universities for Research in Astronomy (AURA), which manages the observatory, took these projections to NSF Director Neal Lane in the hope of winning a reprieve. But Lane's reply in March was curt: "In the present budgetary climate we have little alternative." So AURA sent its "budget planning exercise" to its 1000-strong user community to seek suggestions on how to cope with the closings, prompting a stream of alarmed responses. "The concept of taking away a whole national observatory is devastating," says Debra Meloy Elmegreen of Vassar College. Howard Bond, of the Space Telescope Science Institute in Baltimore, is similarly upset: "The plan, if implemented, will devastate U.S. ground-based astronomy."

In particular, many astronomers question the emphasis on south over north and large over small, noting that many scientists study only northern objects or can't afford to bring students to Chile, and that some of the smaller telescopes at Kitt Peak offer a unique wide field of view. "A lot of users are seeing this as pandering to a rather special club of astronomers," say Bill Keel of the University of Alabama.

Keel and others say that contracting out NOAO's software-development work and reducing staff and other support services could buy some time for Kitt Peak. Even the chair of the NRC report, astronomer Richard McCray of the University of Colorado, says that given a grimmer budget outlook than his panel worked with, reassessing the value of small telescopes at Kitt Peak "should be on the table." But Hugh Van Horn, NSF's astronomy division director, says the agency is committed to the report's priorities.

To brighten the grim outlook, NOAO has asked NSF for $21.6 million to build three new, efficient telescopes that would serve some of the same purposes as the instruments to be shut down at Kitt Peak. But short of a rising NSF budget, which is highly unlikely, NOAO may be forced to live within its current allocation. Says Iowa State's Lee Anne Willson, chair of AURA's observatories council, "Unless we can be clever and come up with a substitute, this is the working plan."

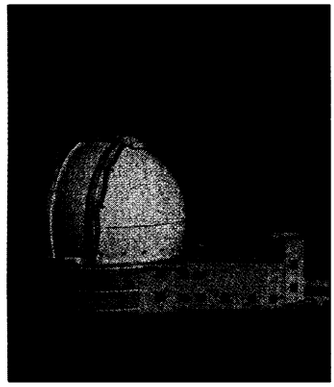
–Jocelyn Kaiser

U.K. ASTRONOMY

Review Threatens Royal Observatories

LONDON—The British government dealt a potentially fatal blow last week to two of Britain's oldest scientific institutions: the Royal Greenwich Observatory (RGO) and the Royal Observatory, Edinburgh (ROE). These two venerable bodies manage most of Britain's ground-based telescopes and develop leading-edge instruments for them. But the government has decided, after a tough review of the observatories' management, that they will now have to compete for this work with other public and private organizations.

The Royal Observatories, which trace their origins to the 17th and 18th centuries, play a key role in Britain's $26-million-a-year ground-based astronomy program. The RGO, now based in Cambridge, manages and builds instruments for the Isaac Newton group of telescopes on Las Palmas, one of Spain's Canary Islands, and the ROE has similar functions at the Joint Astronomy Center (JAC) in Hawaii. But Britain's astronomy budget is under severe strain, in part to pay for Gemini—an international program to build twin telescopes in Hawaii and Chile costing Britain up to $3 million per year—and this has led the government to ask whether the country really needs two separate U.K.-based observatories with a total staff of about 160. "On the basis of current predictions of demand for new instruments, we'd only need about half this number of staff over the next few years," says Ken Pounds, chief executive of the Particle Physics and Astronomy Research Council (PPARC), which has overall responsibility for astronomy research.



ROYAL GREENWICH OBSERVATORY

Changes ahead? RGO's Herschel Telescope at Las Palmas.

One obvious solution would be to merge the two Royal Observatories. Indeed, just such a suggestion was made last year by a committee chaired by astronomer Jim Hough of the University of Hertfordshire, which reviewed the country's optical, infrared, and millimeter-wavelength astronomy options over the next 10 years. Hough argued that merging the two bodies would cut administration costs and release more funds for research. But the suggestion led to a heated Anglo-Scottish squabble and got nowhere.

The observatories were not off the hook, however. The government has since committed itself to a fundamental review of all publicly funded research establishments to determine whether privatization, contracting out work, or closure could save money. The Royal Observatories were one of the first targets of these "prior options" reviews. The report, published last week, endorsed public investment in astronomy, but sees bleak prospects for the observatories as budgets tighten and their workload declines. The review committee, chaired by astronomer Ian Halliday of the University of Wales, Swansea, argues against selling off the overseas telescopes or transferring them to private ownership, but recommends that their management and the provision of their in-