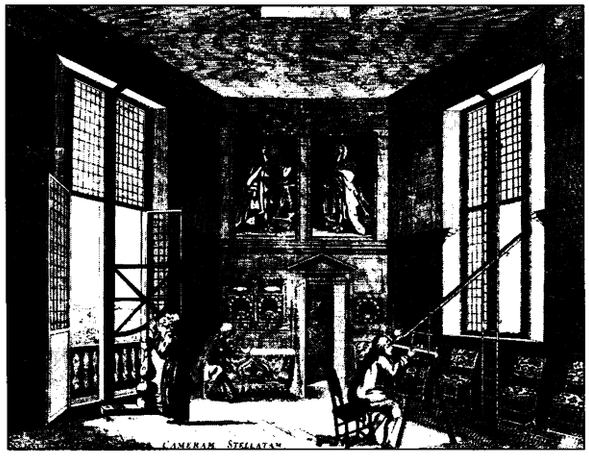
ing astronomical infrastructure—due to participation in the international Gemini project to build twin 8-meter telescopes in Hawaii and Chile—with a stagnant budget. "We have to squeeze a quart from a pint pot," says former ROE director Paul Murdin, who now oversees PPARC's astronomy program from the council's headquarters in Swindon.

Hough, however, points out that his panel's suggestions are not designed just to cut costs. The aim, he says, is to provide the best possible service to the British astronomy community. And that, the Hough panel believes, can be achieved by setting the overseas sites free from their U.K.-based masters. At present, while the Hawaii and La Palma observatories have on-site heads, they report to the director of Royal Observatories, Alec Boksenberg, based at RGO's Cambridge site, who in turn is answerable to PPARC. And that means that decisions must often be referred back to the council for approval, adding layers of red tape.



ROYAL GREENWICH OBSERVATORY

**Rich history.** Observers using quadrant and telescope at the Royal Greenwich Observatory in the late 17th century.

In proposing that the overseas facilities be managed independently, the Hough panel is taking a cue from the Anglo-Australian Observatory, which runs a telescope at Siding Spring, New South Wales, and has its own governing board. It provides a "wonderful example" of how an observatory should be run, says former RGO director Francis Graham Smith, now at the University of Manchester. But while the idea of mimicking its constitution for La Palma and Hawaii is popular among U.K. astronomers, this leaves a thorny question: What would RGO and ROE be left to do if the overseas sites were independent? Indeed, if there is to be just one U.K. technology center, one or both of the two observatories faces closure, or a major shift of direction.

For staff at the observatories, who have only just emerged from a series of reorganizations, that's a demoralizing prospect. In 1990, for instance, RGO was moved to Cambridge from Herstmonceux Castle in Sussex. And only last year, Boksenberg was appointed to the new post of director of Royal Observatories, with the goal of improving coordination among RGO, ROE, and the two overseas sites. "No sooner has one review been completed and implemented than another group of people come into power and start all over again," complains one RGO staff member.

Nevertheless, Boksenberg says he's open-minded about the new proposals: "One would have to contrast the benefits [of change] ... against the clear benefits of the present, integrated model." As yet, no one has done the detailed analysis needed to make this comparison. And the other key issue—the site of the proposed U.K. technology center—is also unresolved. "It could be either of the two [Royal Observatories], or neither," says Hough.

PPARC deputy chief executive Ian Corbett stresses that the research council has yet to form an opinion on that subject. "There is no hidden agenda," he says. Nevertheless, sources close to PPARC's leadership say that one option would be to transfer some of ROE's technology development work to Cambridge and to develop RGO as the technology center. ROE could then be turned over to the University of Edinburgh and merged with its astronomy department to create a Scottish national astronomy institute. This, the argument goes, might be backed by Scottish members of parliament who would otherwise oppose any attempt to shift work from ROE to Cambridge.

But judging from soundings taken by *Science* last week, that solution would not please a sizable section of the U.K. astronomy community. Many researchers argue that ROE's record for instrument development is second to none. "People would be wary of any proposal that damaged ROE" while seeming to favor RGO, says theorist Bernard Schutz of Cardiff University of Wales, who chairs PPARC's astronomy committee.

That leaves PPARC with a headache: finding a way to cut costs without setting the two Royal Observatories and their supporters against one another. If there's one thing that everyone can agree on, it's that a bloody battle between two of Britain's oldest and best known scientific institutes would be the worst possible outcome.

**–Peter Aldhous**

FRANCE

# Research Agency Tries to Balance Books

**PARIS**—To French physicist Guy Aubert, the new director-general of the Centre National de la Recherche Scientifique (CNRS), the past 3 months must seem like a nonstop roller coaster ride. Appointed in July with a broad mandate to reorganize France's largest public research agency, Aubert had no sooner settled into his office than he discovered that CNRS was running a deficit (*Science*, 16 September, p. 1653). And when an audit put the shortfall at over $100 million, Aubert was forced to put a tight cap on research spending for the rest of 1994—a move that prompted thousands of scientists to take to the streets all over France, including some 2500 who peacefully protested outside CNRS's Paris headquarters earlier this month.

But now, thanks to a series of bailout measures announced last week by French research minister François Fillon, Aubert may be able to ride out the budget crisis. About $48 million withheld earlier this year as part of an overall freeze on research spending will be restored. And, as *Science* went to press, a meeting of the CNRS administrative council, scheduled for 27 October, was expected to approve a proposal to borrow about $39 million from CNRS's reserve fund. However, because of the intricacies of French budget accounting, apparently not all these funds will be counted against the deficit—which results from what Aubert described to *Science* as a discrepancy between the "dream money" that laboratories are told they can spend and the "real money" they are actually given. The council was therefore also expected to discuss at this week's meeting a proposal to take out a loan to bridge the gap.

"This is clearly a short-term crisis," Aubert says. And the CNRS chief evidently feels his budget troubles have been a distraction from what he was really hired to do: bring greater efficiency and direction to the organization's research efforts. Aubert is reluctant to discuss his blueprint for change before a detailed plan is completed some time next year. But he did acknowledge that a cornerstone of the reorganization will be a shift from the current laissez-faire approach—in which the CNRS's 1350 labs are given a set amount of money and allowed to decide their own research priorities—to one in which a major part of the agency's budget would be dedicated to predetermined research programs. "If we implement this," says Aubert, "it will be a cultural revolution for the CNRS."

**–Michael Balter**