COULD A SILVER LINING LURK IN CLOUD OF UNIVERSITY OF CALIFORNIA CUTS?

Given the adverse conditions affecting physics that we all know about, hearing bad news or not so good news has become rather the norm. Still, even by the prevailing national and international standards the news from California has been exceptionally disquieting.

Two rounds of retirement incentive packages at the University of California, with another big one in the offing, have left the physics departments at several campuses depleted. At the same time, faculty morale has taken a pummeling from budget cuts and an across-the-board pay cut of 3.5%, which came after two years of no cost-of-living adjustments. Now, on top of all the grumbling about dwindling supplies, increased workloads and smaller remuneration comes concern that the university system as a whole may be acquiring a poor image—that applicants to graduate school may see it as not quite the mecca it has seemed as long as most of us can remember.

The good news in all this, if there is any, is that the net result may be more positions opening up, at least at some campuses, for newly minted PhDs.

At Berkeley, to take one of the extreme cases, 19 members of the physics department have retired during the last two or three years (see box, page 60). Most took advantage of the first two retirement incentive offers; another 20 or so will be eligible to retire when the third and most appealing of the packages takes effect next July. While the number of full-time-equivalent positions at Berkeley has "never been carved in stone," according to the department's summer chair Peter Yu, it is 48 now, as compared to 66 two years ago.

Yet at the same time, the department has been able to make five new offers during the last two years, which is much above the usual rate. Three of the department's top choices already have accepted the jobs offered (see box).

"This is one of the most successful recruiting periods we've ever had," comments Marvin Cohen, who has been deeply involved in the department's staffing decisions for upwards of two decades. Cohen helped broker an agreement with the University of California about 15 years ago that enabled the Berkeley physics department to recruit on an accelerated basis, mortgaging hires against future retirements. That background, together with recent successes in hiring, makes the situation at Berkeley less grim than it seems at first glance.

The general picture

At an opposite extreme from the situation at Berkeley is that at the University of California, Los Angeles, where the large physics department has not been greatly affected by the four retirements that have occurred so far, with maybe four more individuals eligible to take advantage of round three.

Roberto Peccei, the chair of the UCLA department, reports that the department has been hiring aggressively for seven or eight years, also borrowing against retirements expected in the 1990s. As a result, he says, the department has more full-time-equivalent positions today than it had in 1985, and as far as he is concerned, "UCLA would just as soon have had an even more aggressive retirement program."

Judging from interviews with department chairs at all the other major campuses, the situations at most of them fall somewhere between the Berkeley and UCLA cases. A couple—Riverside and San Diego—have been rather severely affected by the first two rounds of retirements, but the rest have not. All, however, with the possible exception of Santa Barbara, are quite concerned about what the third round will bring. At Davis, for example, about a quarter of the faculty are eligible for round-three retirement, and the results could leave the department in an untenable position.

This is the prospect already looming at Riverside. The department chair Liu Nai-Li reports that round three could result in a net total drop of nine, or 40%. "We cannot maintain a healthy program with so few members," she says.

San Diego also worries it may be getting into a position in which there is just not enough faculty to cover the teaching areas essential to a full-fledged graduate physics program. It has lost 13 members in the first two rounds, including six members of the National Academy of Sciences—Keith Brueckner, Margaret Burbidge, George Feher, Norman Kroll, Marshall Rosenbluth and Harry Suhl.

The department was able to fill three assistant professorships last year—it hired Kim Grieft, Scot Renn and Elizabeth Jenkins—and it fended off three raids successfully. But if it loses, say, five members in the third round and is not permitted to replace them, that would amount to a net drop of 15.

Roger Dashen, the chair at San Diego, notes that even as staff has contracted so sharply, both undergraduate and graduate enrollments have continued to rise—premeds by a factor of three. And so, Dashen observes, referring to the budget cuts as well as to the increased teaching loads, while "there are no catastrophic effects from the budget cuts as yet, if you nickel and dime people enough, it starts to get on their nerves." At some campuses, faculty complain they can't get paper for examinations.

Prospects for replacements

Everybody at every campus is in the dark as to how many positions departments ultimately will be permitted to retain and refill.

Complicating expectations is a widespread cynicism toward the

Retirements and New Hires at the University of California, Berkeley

Retirements
Kinsey Anderson
Geoffrey Chew
William Chinowsky
Frank Crawford
Kenneth Crowe
Sumner Davis
Robert Ely
Gerson Goldhaber
Ervin Hahn
J. D. Jackson
Carson Jeffries
Leroy Kerth
Wulf Kunkel
Rainer Sachs
Charles Schwartz
Howard Shugart
Lynn Stevenson
Robert Tripp
Eyvind Wichmann

Hires
Seamus Davis (a Berkeley PhD and postdoc with Richard Packard, experimenter in low-temperature physics)
Paul McEuen (a Yale PhD and MIT postdoc, experimenter in nanostructures)
Z. Q. Qui (a Johns Hopkins PhD and Argonne postdoc, experimenter in magnetism in metallic superlattices)

president's office, which often is described as "remote" and operating "in a rarefied atmosphere." While some hopes attach to the arrival of Walter Massey as provost and senior vice president, one department chairman (not a physics chair, per se) characterizes Massey as "rather disconnected from a lot of things that he's going to have to learn."

Physicists at Santa Cruz are pleased that Massey has chosen to make their department his academic affiliation: While this is a mere formality, it would seem to assure at least that their voices will be heard. They also take heart from statements Massey has made about the importance of teaching—a matter of especially acute concern at Santa Cruz, which has the largest undergraduate physics population after Berkeley, and where the physics department is highly geared to its teaching responsibilities, drawing recruits largely from the ranks of its own graduates.

It may help California physicists generally that Massey is a physicist himself. Yet everybody also appreciates that the Massey factor is a sword that can cut both ways: As heir apparent to the presidency of the sprawling state university system, Massey will not want to be seen as favoring the interests of his physicist friends.

Describing the role of the president's office in the restructuring of individual departments, Massey told PHYSICS TODAY that the central administration will not initiate changes at that level. But it will carefully review proposals for restructuring of departments from the campuses, and if, for example, consolidation or elimination of programs would result in a significant loss to the system as a whole, then the president's office probably would exercise a veto, probably in consultation with the regents.

Massey said that as the California economy starts to turn around, the overall situation should improve. He noted that this year's budget was better than expected and that the preliminary budget for next year anticipates a modest increase, including modest salary increases.

Mitigating factors

A retirement does not necessarily or even usually mean the total loss of a physicist to a department, of course. Berkeley's Cohen points out that when Charles Townes retired several years ago, just before the incentive programs were introduced, it made hardly any difference to his work habits at all. An emeritus physicist often will continue with research and will take students for dissertation work.

The worst-case scenario, Myron Bander of the Irvine department points out, is that retiring physicists will take new jobs and double- or triple-dip. Then indeed they are a total loss to their departments, if not to the world at large.

At the end of July it was announced that the physical chemist Yuan T. Lee, a Nobelist, would take early retirement from the Berkeley chemistry department and return to his native Taiwan to help further science there.

Even the physicists who continue to work and guide research cannot be expected to shoulder much in the way of teaching and administrative responsibilities. And so there is especially great concern at most campuses about losing senior people who have been active in every dimension of a department's affairs.

—WILLIAM SWEET

WILLIAMS IS NEW DIRECTOR OF SPACE TELESCOPE INSTITUTE

Robert E. Williams, previously director of the Cerro Tololo Inter-American Observatory in Chile, took office in August as the new director of the Space Telescope Science Institute in Baltimore, Maryland. He succeeded Riccardo Giacconi, the institute's first director, who left to be director general of the European Southern Observatory, headquartered in Garching, Germany, outside Munich (see PHYSICS TODAY, October 1992, page 113). Giacconi had led the institute since 1981.

Williams takes office at a time of high anxiety about the Hubble repair mission scheduled for this fall and inherits an institute that has suffered some criticism from astronomers for having excessively cumbersome, rigid and bureaucratic procedures. Even if the repair mission goes perfectly, Williams still will have the task of making the institute more user-friendly—though the institute also is credited with having good peer-review procedures, with having improved the space telescope's efficiency and with doing a good job of dispatching data rapidly upon request.

Williams reminded PHYSICS TODAY that the space telescope is inherently a very complex instrument and that any big and expensive operation of this kind—and one that has a national mission—is bound to attract some criticism. Aspects of personal and organizational style may also have aggravated matters in the past, he said.

Williams said that having been in his new job only a couple of weeks, he is just beginning to evaluate criticisms of the institute, but he certainly would like to simplify proposal procedures.

Williams earned his bachelor's degree at the University of California, Berkeley, in 1962 and his PhD at the University of Wisconsin, Madison, in 1965. He did his thesis under Donald E. Osterbrock, who is now at the University of California, Santa Cruz.

From 1965 to 1983 Williams taught at the University of Arizona, where he became a full professor in 1978. He was a visiting research associate at ESO in Garching in 1983–84 and a National Research Council senior research fellow at the NASA–Ames Research Center in 1984–85. He joined Cerro Tololo, which is part of the National Opti-