

Texas A&M Reaches for Stars

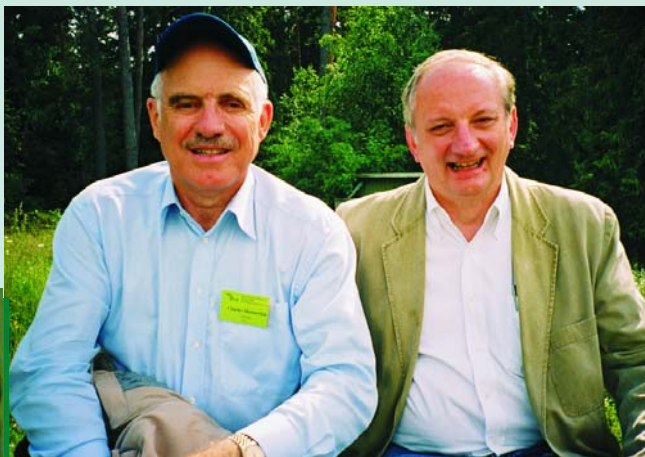
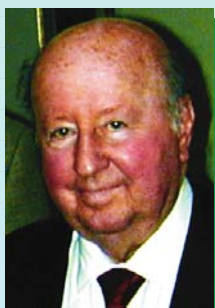
As part of a campus-wide explosion in faculty numbers, the physics department at Texas A&M University in College Station aims to launch a topnotch astronomy program.

Overall, the campus is increasing its faculty size by 450, or 25%, by 2008. Physics faculty will swell from 45 to 60, with at least four of the new positions slated for astronomy and cosmology. "This is the nation's fifth largest university, and our goal is to go from no astronomy program whatsoever to one of the world's leading programs in observational cosmology and astronomy," says Texas A&M physicist Roland Allen.

Two alumni are key to realizing the physics department's astronomy plans. George Mitchell, a real estate magnate and petroleum engineer, has given nearly \$7 million to the department. Charles Munnerlyn, a PhD in optical engineering and a pioneer in the development of laser vision correction, has contributed more than \$3 million.

After hearing Stephen Hawking say on National Public Radio a few years ago that his "biggest disappointment in 25 years was the cancellation of the SSC [Superconducting Super Collider]," says Mitchell, "I talked to people at A&M, and we arranged a meeting [with Hawking]." That led to Hawking's ongoing participation in a series of Mitchell-financed symposia at the university. Mitchell's donations also go toward, among other things, endowed chairs and participation in the Giant Magellan Telescope. Joining the GMT, one of several next-generation telescopes under discussion worldwide, "should help attract smart young people to A&M," says Mitchell. "I want to see A&M in general become a more prestigious university."

Will the university be able to realize its lofty dream of having a top-10 astronomy program? The idea goes back to a recommendation from an external review panel, says physics department head Edward Fry. "I think the university will jump through all sorts of hoops to hire extraordinary people." **Toni Feder**



Gifts from George Mitchell (left) and Charles Munnerlyn (above, left), astronomy enthusiasts and philanthropists, are helping Texas A&M University launch an astronomy program. Munnerlyn is shown with physics department head Edward Fry.

a decrease of \$14 million, or 0.3%.

The research and related activities (R&RA) account, which funds most of the foundation's research activities, was cut \$31 million, or 0.7%, to \$4.2 billion. Congress did increase funding for NSF's major research equipment and facilities construction (MREFC) account to \$174 million, an increase of \$19 million over last year but well short of the \$213 million the administration requested.

Two new projects—Rare Symmetry Violating Processes and Scientific Ocean Drilling—were funded to move forward. The National Ecological Observatory Network was not, although \$6 million was appropriated to keep the design stage going. The IceCube Neutrino Detector Observatory project at the South Pole received an increase from \$42 million to \$48 million. Earthscope and the Atacama Large Millimeter Array also received MREFC funding.

The cuts in most of the NSF research directorates will put more pressure on the already stressed funding of competitively awarded research grants, an issue that Bement said he is very concerned about. The funding rate in some of the directorates has

dropped below 20%, he said, "and that's very wasteful because it not only increases the burden on the investigators in writing proposals, but every proposal has to be evaluated whether or not it is funded. When the foundation was really functioning well, we had funding rates up closer to 30%. Now the average across the institution is more like 21%."

With a declining budget, Bement said, "we have to use management approaches to get the funding rate up." Those approaches include more definitive, focused solicitations and "in some cases we may have to restrict the number of proposals per institution or per department."

Even with restrictions, he said, a lot of proposals in the "very good" and "excellent" categories are not going to be funded. "In 2003, as an example, we left on the table about a billion dollars' worth of unfunded proposals that would have been funded if we'd had the resources," he added.

Department of Homeland Security. Though still a relatively new player in the science R&D funding competition, DHS is clearly a high priority for both the administration and Congress. In an appropriations bill

passed in October, DHS R&D programs received a whopping 19.9%, or \$206 million, increase. That pushes the R&D budget to \$1.2 billion, \$102 million more than DHS asked for.

More than 80% of the R&D money goes to the Directorate of Science and Technology, one of five directorates in DHS. The largest increase goes to biological countermeasures, which will have its budget nearly doubled to \$363 million. Another \$35 million was authorized to continue construction of a National Biodefense Analysis and Countermeasures Center at Fort Detrick, Maryland.

Department of Energy. While DOE's Office of Science emerged with its 4.3% budget increase, the overall increase in DOE R&D is a more modest 1.7% to \$9 billion—\$152 million more than in FY 2004. The total DOE budget is \$24.4 billion, an increase of \$582 million, or 2.4%, over last year.

DOE's defense-related R&D increases, according to AAAS, are up only 1.2% to \$4.3 billion. Congress pointedly did not appropriate requested funding for work related to developing a new generation of nuclear weapons. In a report accompanying the omnibus bill, Senate and House conferees said they