

# University Group Seeks to Reclaim the Space Shuttle's External Tanks

Taking a unique approach to the management of science in space, the University Corporation for Atmospheric Research (UCAR) has opened negotiations with the National Aeronautics and Space Administration (NASA) for rights to the space shuttle's expended fuel tanks.

UCAR is a nonprofit consortium comprising 55 universities and research institutions, with headquarters in Boulder, Colorado. It manages the National Center for Atmospheric Research in Boulder, the National Scientific Balloon Facility in Texas, and the Institute for Naval Oceanography in Mississippi.

The shuttle's external fuel tank is the huge aluminum pod that rides on the underside of the orbiter during launch. Each one is slightly wider than a Boeing 747 airliner and weighs about 30 tons when empty, which is about equal to the shuttle's conventional cargo capacity. However, the separate, pressurized hydrogen and oxygen vessels in each tank encompass some 2000 cubic meters of space, or about seven times the volume available in the shuttle's payload bay. In all shuttle launches to date—and presumably when the shuttles start flying again—the tanks have been boosted to 99% of orbital velocity and then jettisoned to burn up over the Indian Ocean.

UCAR's argument is that this practice wastes a large and essentially free resource: NASA's own engineering studies have shown that the tanks could be taken all the way to orbit with a very small penalty in shuttle payload weight. The consortium is thus proposing a "Space Phoenix" program analogous to the 19th century land grants. NASA, for its part, would collect the tanks in orbit. UCAR, through its newly chartered External Tanks Corporation, would then take possession, outfit the tanks with life support, power, and other amenities, and lease them out as laboratory space to researchers from universities and private corporations. The accommodations would be spartan, and in that sense complementary to the far more sophisticated laboratories that NASA hopes to maintain on its space station. But the tanks would be much larger, and much cheaper. Moreover, any profits from the venture would flow back through UCAR to help support further space research.

"This should make the scientists happy, it should make NASA happy, and it should make everybody happy who's getting tired of waiting in line for NASA to decide to do

this or that," says External Tanks Corporation chairman Thomas F. Rogers, who originated the idea in 1984 when he headed a study of space station options by the Office of Technology Assessment. "Ultimately, you could have in residence scores of researchers and other professionals."

At NASA, meanwhile, a high-level com-

mittee has been formed to negotiate with UCAR on the proposal. The agency has some obvious concerns, such as making sure that the tanks do not reenter the atmosphere uncontrollably the way Skylab did in 1979. "But it's certainly a viable enough idea that it should be studied further," says NASA general manager Phillip E. Culbertson, who chairs the committee. "UCAR has access to a very large body of very smart people in the universities. When a group like that comes to us, we have to give the idea serious consideration." ■ **M. MITCHELL WALDROP**

## Briefing:

### OMB Slashes NIH Budget for FY 88

The White House Office of Management and Budget, looking for cuts in the federal budget for fiscal year 1988 that the President will soon submit to Congress, has reportedly taken funds from the budgets of the National Institutes of Health and the Alcohol, Drug Abuse, and Mental Health Administration. The OMB version of the NIH budget would apparently leave the institutes with \$600 million less than Congress appropriated for this fiscal year. The total for FY 1987 is \$6.2 billion. OMB wants the President to ask for \$5.5 billion in FY 1988. It would reduce resources at ADAMHA from \$1.4 billion for FY 1987 to \$1.1 billion next year.

This exercise suggests that everything is normal here in Washington where there is a long tradition in which the Administration tries to cut the health research budget, only to have Congress come to the rescue later on. ■ **B.J.C.**

### French Research Minister Resigns

*Paris*

The French minister for research and higher education, Alain Devaquet, has resigned in the wake of widespread student demonstrations against his proposals for the reform of the French university system.

Devaquet's resignation was accepted by President François Mitterrand on 8 December, soon after Prime Minister Jacques Chirac had announced that his government had withdrawn the proposals from parliamentary debate.

Following an escalating series of protests, which culminated in a march by more than 500,000 through the streets of Paris, the

Minister of Education, René Monory, said that the government would withdraw those parts of its proposals which had generated the strongest hostility from university and high school students.

This would have left intact other sections of the planned reforms aimed at increasing the powers of senior academic staff on university administrative committees, and the autonomy of individual university faculties with respect to their umbrella institutions.

However, after discussion with President Mitterrand, Chirac decided that the whole bill should be withdrawn for further discussion. ■ **D.D.**

### EEC to Cut Animal Use

The 12 member countries of the European Economic Community have agreed to introduce a common system for licensing laboratories that use live animals in experiments. The new animal welfare rules, which were approved at a meeting of environment ministers, are intended to reduce by one-third the 30 million animals that the EEC Commission estimates are used for experiments every year. The EEC countries have also agreed that each will only permit experiments that "avoid unnecessary pain and suffering," and they will ban the laboratory use of endangered species. ■ **D.D.**

### Comings and Goings

**Shervert H. Frazier** resigned as of 12 December after 2 years as head of the National Institute of Mental Health. "I found out that it's a job for a much younger person," says Frazier, 66. He is returning to Harvard's McLean Hospital. NIMH deputy director **Frank Sullivan** is now acting director. **Rex Cowdry** of the intramural research branch is deputy director. ■ **C.H.**