

Briefings

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Déjà Vu in NASA Reorganization

Barely a week after receiving a critical review by the White House-backed Augustine commission (*Science*, 21 December 1990, p. 1654), NASA administrator Richard Truly announced that his agency had decided to comply with one of the commission's recommendations: namely, to create a high-level Office of Exploration that will develop "well thought out" options for future moon-Mars exploration.

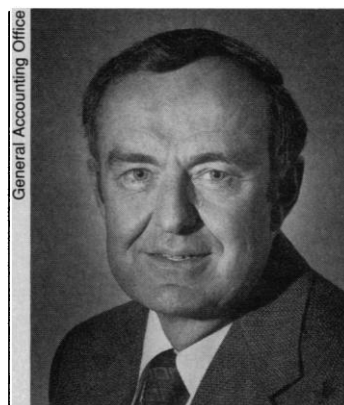
Truly is treading familiar ground. NASA created an Office of Exploration in August 1987 at the suggestion of a commission headed by former astronaut Sally Ride. But last year, after President Bush declared his own moon-Mars initiative, Truly rolled the exploration office into the Office of Aeronautics and Space Tech-

nology. While it was in business, the office conducted "paper studies" of manned solar system exploration without considering costs, and was widely considered a haven for space cadets.

Will the new exploration office fare any better? NASA spokespersons say it will be a "beefed-up" operation with responsibility for major exploration initiatives. But it is Congress that will probably decide whether the office will be a real force at NASA: Last year, legislators zeroed out the President's request for \$290 million in moon-Mars funding.

Sandage Wins Crafoord Prize

When Alfred Nobel, the inventor of dynamite, established his famous prizes for physiology for medicine, physics, and chemistry, he managed to overlook a number of scientific disciplines. Eighty-one years later, Holgerd Crafoord, another Swedish inventor, remedied at



Allen R. Sandage

least some of the deficiency by establishing prizes for mathematics, astronomy, the geosciences, and the biosciences, to be awarded each year in rotation. This year it is astronomy's turn, and the Royal Swedish Academy of Sciences, which bestows the award, has selected Allan R. Sandage, an astronomer at The Observatories, a California facility maintained by the Carnegie Institution of Washington.

Sandage, who once worked under the "father of observational cosmology," Edwin Hub-

ble, was cited for developing methods to determine the age of globular clusters; deriving a distance scale for the universe; and refining measurements of a cosmological variable known as the "Hubble parameter," which has a bearing both on the age of the universe and the speed with which it is expanding. He will receive the \$260,000 prize on 25 September.

Science Initiatives in the 1992 Budget

According to presidential science adviser D. Allan Bromley, 1992 will be a banner year for Bush Administration science initiatives. In a meeting with *Science* editors, Bromley described two new programs in the 1992 budget, which will be delivered to Congress on 4 February: a coordinated federal program for education and human resources and a program emphasizing high-performance computing and communication. Both initiatives will be presented as focused, multi-

NASA's House Is Falling Down

The Hubble Space Telescope apparently isn't the only major piece of NASA hardware in urgent need of repair. According to the General Accounting Office, the agency's own buildings and utility systems have degenerated to the point that they "could pose safety hazards or threaten missions."

Among the problems GAO identified in its report*:

- At the Marshall Space Flight Center, "[t]he roof of a laboratory building leaked so badly that electricians working with 440-volt electrical equipment had to be moved...because of a severe shock hazard."

- The roof of the 52-story vehicle assembly building at the Kennedy Space Center, where the space shuttle is mated to its external tank prior to launch, has "leaked for several years," so badly rusting the roof deck's reinforcing bars that pieces of concrete "from small chips to 8-inch pieces weighing one-half pound or more" frequently break loose and fall. (NASA has erected nets beneath the roof to catch the falling concrete.)

- Loose electrical connections have caused a fire in a mission control building at Marshall.

- A cooling tower at Lewis Research Center partially collapsed under the weight of accumulated ice because water valves didn't work.

- Lewis also suffered over \$1 million in explosion damage when a steam shutoff valve braced by "deteriorated piping supports" ruptured.

These problems have a simple solution, says GAO—NASA should spend more money on maintenance. In its reply, NASA retreats into a familiar litany: The agency's \$13.9-billion budget is too small. "NASA headquarters did not always have sufficient funds available to give to the centers [for maintenance]," wrote assistant deputy administrator John O'Brien.



Get the cleanup crew. Aftermath of the Lewis steam explosion; a chunk of concrete from the vehicle assembly building at Kennedy.

*NASA Maintenance: Stronger Commitment Needed to Curb Facility Deterioration, U.S. General Accounting Office, GAO/NSIAD-91-34, December 1990.