

Greenbelt, Maryland, are working on stretching the lifetime of the HST's batteries and gyroscopes, the telescope's weak links, says Weiler. Only four of the six gyroscopes are working, and the HST requires at least three gyroscopes to keep steady. Weiler says

he hopes that by 2005, NASA will have found a way to operate the telescope with only two gyroscopes—which could keep the HST going until 2008. With advice from the scientific community, the STScI is evaluating how to promote proposals that maxi-

mize the HST's current capabilities before the gyroscopes start failing. Says Beckwith, "We have at least two more good years and we are dedicated to making those the best two years of Hubble science."

Paul Guinnessy

National Academies Report Turns Up the Pressure for Large Facility Reform at NSF

NSF created a major research equipment and facilities construction account in 1995 to better manage large scientific facilities, but that hasn't quelled concerns about both the selection process and ongoing oversight of such projects.

Citing a host of concerns about how NSF ranks large research facility projects for funding, a National Academies panel has recommended that NSF "create and implement" a 10- to 20-year road map for such projects that would serve as a guide for both policymakers and scientists. In addition to defining and ranking projects, the report, released in mid-January, recommends the creation of independent oversight committees to monitor both construction and operations of the foundation's scientific facilities.

"This is an opportunity for the Na-

tional Science Foundation to further improve its work in the development of major research facilities by incorporating a more objective and transparent approach to screening and planning into its process," said Princeton University physicist William Brinkman, who chaired the National Academies committee. Brinkman said the committee began with the premise that NSF had to be much more open to the scientific community and others about how it made facilities selections, "and that's when we came up with the idea of road mapping." For the report

and a list of projects under discussion, see <http://www7.nationalacademies.org/NSF-Priorities>.

The report recommends that the road map should "take into consideration the need for continued funding of existing projects" and then "provide a set of well-defined potential new project starts for the near term," defined as the next 10 years. For funding purposes, each project should be ranked against others based on a specific set of criteria developed by the National Academies panel. Proposals for facilities 10 to 20 years in the future "will necessarily be less well defined and ranked qualitatively to yield a vision of the future rather than a precise funding agenda," the report says.

The report is detailed and specific to the point of bordering on micromanag-

Science Policy Museum to Open in Washington

The National Academy of Sciences will be expanding its public outreach operations by launching a new science policy museum. The 557-square-meter Marian Koshland Science Museum, scheduled to open at the end of April in Washington, DC, will attempt to explain the science behind current and sometimes controversial public policy issues (see <http://www.koshland-science-museum.org>).

"The museum will show visitors the excitement of science through exhibits that demonstrate how science impacts their lives on a personal level," says Daniel Koshland, former editor of *Science*. His donation of \$25 million in the name of his late wife, a respected biologist and, like him, an NAS member, made the museum possible. "This museum is a tribute to her devotion to improving public understanding of science and her dedication to promoting the role of women in science," he adds.

Every two years, two of the three exhibits will be sent on tour to other US museums. New exhibits will be installed in their stead. The Koshland Museum's inaugural exhibits will explore global climate change and DNA sequencing. The climate change exhibit will explain the science behind global warming and will allow visitors to simulate rising sea levels and "flood" the Chesapeake Bay so that they can calculate the economic cost to local communities. "We detail various potential consequences . . . if carbon dioxide emission levels are allowed to increase at their current rate," says Jennifer Saxon, a spokesperson for the museum. In the DNA sequencing exhibit, visitors can, for example, match criminal DNA samples—like those stored in the FBI's DNA database—with samples collected at an imaginary crime scene, or see how DNA sequencing was used to track the origin of last year's SARS (severe acute respiratory syndrome) epidemic. A permanent exhibit, the Wonders of Science, will feature animations of groundbreaking research and house an introductory film describing the unanswered questions of science.

"The museum is breaking new ground for the National Academies by taking written reports that are produced for specialists and transforming them into visual and interactive exhibits meant for a much broader public audience," says NAS President Bruce Alberts.

Paul Guinnessy

NATIONAL ACADEMY OF SCIENCES



In this interactive display within the "Global Warming Facts & Our Future" exhibit at the Marian Koshland Science Museum, visitors can decide how much money they are willing to pay now in order to reduce predicted storm damage or water contamination that occurs as side effects of global warming.