

to restore a \$200 million cut imposed by the House to the agency's \$1.3 billion Mission to Planet Earth (MTPE) program. But the panel ordered NASA to slice \$100 million from its \$5 billion science, aeronautics, and technology budget, which includes MTPE funding. It would be up to NASA officials to decide where the cut would fall. The Senate also rejected the House proposal to halt funding for Bion, the joint U.S.-Russian experiment to launch monkeys into orbit (*Science*, 12 July, p. 175). A NASA official said he is confident Bion will survive, because the House

vote came before a recent independent review gave the program high marks.

NSF officials have few complaints with the funding levels set by the Senate panel. The agency's research account would rise by 5% to \$2.43 billion—the same as in the House-passed bill and only \$40 million below the president's request. The committee also added \$5 million to an existing competitive grants program to help small states and rejected the House's plan to cut NSF's operating budget by \$9 million.

Meanwhile, a House panel cut the \$220 million budget for the Commerce Depart-

ment's Advanced Technology Program in half and included language to halt the program's expansion by limiting it to small companies. About half of current funds now go to companies with more than 500 employees. Republicans have tried unsuccessfully since last year to kill the program, which they label "corporate welfare." The panel's more compromising approach is a clear sign that they are abandoning that effort.

—Andrew Lawler

With reporting by Eliot Marshall and Jeffrey Mervis.

ELECTRONIC PUBLISHING

APS Starts Electronic Preprint Service

For the past 5 years, the American Physical Society (APS) has listened to physicists extol the virtues of the electronic preprint archives located at the Los Alamos National Laboratory. The society has also been beset with predictions that its print journals will soon go the way of the dinosaurs, the victim of Los Alamos's brand of fast, virtually free, electronic distribution (*Science*, 9 February, p. 767). Now the APS has decided that the way to beat the unbeatable is to imitate it.

"We simply need to learn how to do this stuff," says Smith, "and we need to be involved just for the vitality of the journals themselves. We don't know what direction we'll be going in the long run, but having a system in house allows us to test these things from the author end and then allows us to bring them into the publishing process in the future."

Among other things, the APS server will accept a broader range of word processing formats than the Los Alamos archives does, a nod to those physicists who still prefer to use Word Perfect or Microsoft Word rather than PostScript or TeX, the preferred formats of the Los Alamos system. And physicists who want to submit their articles to APS journals from its server will be able to do so with the click of a button. The APS server will also not be an archive: After a set amount of time articles not accepted by journals—either APS journals or others—will be removed. "We don't want to have all these useless publications that never made it into a refereed journal," says

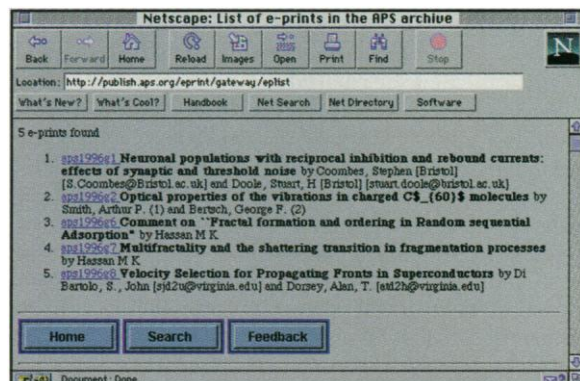
here about how much easier it has been to consult one source and be satisfied that everything is readily available in a consistent format without having to search multiple places," says Ginsparg. "This is one of the prime advantages that we'll have in physics, namely a unified database, and we're not about to let that slip away just because the APS has belatedly joined the 1980s." Ginsparg adds that if the APS system does prove easier to use, he could incorporate its features into the Los Alamos archives "in a nanosecond."

The APS task force agrees that unification is a virtue in the electronic world. Ideally, the two servers would be cross-linked, says Tony Johnson, head of the task force and a physicist at the Stanford Linear Accelerator Center. "To the end user, they will be transparent. You should be able to go to one central search engine and pull up a paper on the screen, and it shouldn't matter who published it" or in what database it resides.

Whether or not the APS e-print server will someday take the place of its print journals is something not even the APS administrators are willing to speculate on. "Our intent is to always play a role in whatever peer review evolves into," says Bob Kelly, APS director of journal information systems. "As far as publishing print journals, the market will decide how that flows."

Kelly and his APS colleagues want to emphasize that what's running now is a prototype—"a beta version," says Bodenschatz—and that they are asking physicists to use it, comment on it, and allow it to evolve. They plan the official version to go on line 1 October. In the meantime, they'll see if the physics community embraces it. "The APS is for the advancement of science," says Bodenschatz, "and it's supposed to be helping physicists. If a preprint server does that, we should have a preprint server. Ginsparg's is a one-man operation. If he decided tomorrow to turn all his machines off, they're gone. And who guarantees he doesn't? ... The idea was that this is probably done better through a society than through one individual."

—Gary Taubes



The first five. In its first 2 weeks, the APS preprint server received just five submissions.

On 1 July, after a year and a half of cogitation and debate, and the formation of an e-print archive task force, the APS went on-line with its own prototype preprint server (<http://publish.aps.org/eprint/>). In its first 2 weeks of operation, it has garnered all of five submissions, which suggests it has a long way to go to catch up to the nearly 300 submissions the Los Alamos archive gets per week, but the APS says that overtaking Los Alamos is not the point. The society started its archives to serve not just as a repository of un-peer-reviewed preprints but also the point from which articles are submitted to any APS journal for review and publication. The APS also views it as a learning exercise and a test bed for technological innovations that might fit its needs and those of physicists better, says Arthur Smith, the physicist who created the APS e-print archive.

Eberhard Bodenschatz, a Cornell University physicist and a member of the APS task force.

The initial reaction of the physics community has been mixed. One University of Virginia graduate student, who was submitting his first paper to both e-print servers and described himself as "an incompetent layperson," said the APS system seemed easier to use. He said he could submit a text file directly without having to convert it to anything, and that accompanying figures were easier to submit as well. But physicists used to the Los Alamos archive worry about a proliferation of e-print sources—what physicist Paul Ginsparg, who initiated and runs the Los Alamos archive, calls "Balkanization," requiring physicists to submit preprints to two distinct servers and browse two different databases every morning for new submissions.

"We've already received many comments