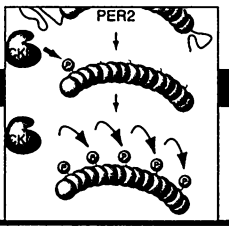
PAGE 226
The first transgenic primate



226
Early-bird gene

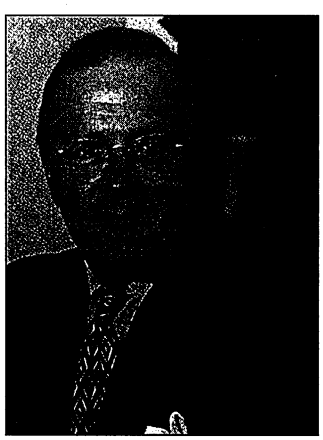
U.S. SCIENCE POLICY

New Faces Please and Puzzle Researchers

Science advocates are reacting with cheers, groans, and puzzlement to a host of recent picks for key science policy–making jobs in Washington. The choices include a new chair of the House spending panel that controls the budget of the National Institutes of Health (NIH); another that oversees research at NASA, the Environmental Protection Agency (EPA), the Department of Energy (DOE), and the National Science Foundation; and the new heads of DOE and EPA.

The appointment prompting the warmest reception is the ascension of Representative Sherwood Boehlert (R–NY) to lead the House Science Committee. He replaces Representative James Sensenbrenner (R–WI), who becomes top dog at the higher profile Judiciary panel. Boehlert, a 10-term lawmaker who is one of the House's most liberal Republicans, "will be a breath of fresh air," predicts physicist Michael Lubell, lead lobbyist for the American Physical Society. Unlike the prickly, highly partisan Sensenbrenner, who relished grilling NASA Administrator Dan Goldin over cost overruns on the international space station and DOE officials on their contribution to CERN's Large Hadron Collider, Boehlert is likely to strike a more measured pose, lobbyists say.

New staff director David Goldston, a longtime Boehlert aide, says his boss is likely to focus on math and science education, alternative energy sources, and environmental research. And he plans to reverse a rule barring scientists coming to Washington for 1-year congressional fellowships from working on the committee. But like Sensenbrenner, Boehlert may oppose a largely symbolic bill that calls for doubling the federal government's spending on R&D. Boehlert believes there may be more effective strategies for boosting science budgets.



E-trading. Sherwood Boehlert, new head of the House Science Committee, is partial to education, energy, and environmental research.

Science lobbyists are still looking into most of the other choices, who benefit from openings caused by a 6-year limit on House committee chairs. Representative Ralph Regula (R–OH), the new head of the House appropriations subcommittee that oversees NIH's budget, has a tough act to follow: retired Representative John Porter (R–IL), who became a science community favorite for leading efforts to double NIH's budget. Although Regula "is no John Porter," says one lobbyist, "he'll be under pressure from the Republican leadership to sustain NIH's budget increases." DOE lobbyists are tracking the moves of Representative Sonny Callahan (R–AL), a relatively unknown quantity who now heads the spending panel that oversees the agency's budget.

Post Porter. Ralph Regula has big shoes to fill as he takes over the House spending panel that oversees NIH.

In the Senate, it appears that Senator Arlen Specter (R–PA) will retain his post as chair of the committee that oversees NIH. Late last year Specter said he wanted a respite from the bitter budget wars. But some observers predict that new power-sharing rules—including putting an equal number of Republicans and Democrats on every committee and allowing panels to move controversial bills to the Senate floor on a tie vote—will make Specter's life more pleasant. "He won't be caught in as much crossfire," predicts one lobbyist.

DOE supporters are looking to a confirmation hearing next week for clues to the thoughts of Michigan Republican Spencer Abraham, chosen to lead DOE, the government's third largest funder of basic research. Defeated in November after a single Senate term, Abraham had taken little interest in energy issues and was one of four senators to sponsor a 1999 bill that called for dismantling the department. By 2000, however, Abraham was calling for increased funding for DOE's $3 billion Office of Science.

Meanwhile, climate scientists hope that President-elect George Bush's pick to lead the EPA, New Jersey Governor Christine Todd Whitman, had only a temporary lapse when she confused the cause of climate change and ozone depletion in a recent interview with *The New York Times*. Global warming science is "still somewhat uncertain," she said, adding that "clearly there's a hole in the ozone that has been identified. But I saw a study the other day that showed it was closing. It's not as clear, the cause and effect, as we would like it to be." –DAVID MALAKOFF

SOLAR, PLANETARY STUDIES

Two Fields Prepare to Take the Long View

Taking a page from a successful playbook written by U.S. astronomers, researchers who study the sun and its interactions with Earth's atmosphere will begin an intense effort next week to set long-term scientific and mission goals. The idea behind this study, and a similar exercise being considered by planetary researchers, is to present a unified front before federal agencies and Congress. But the tactic is a gamble: The diverse interests of the solar community don't fit easily under one umbrella, and some planetary scientists say the technique is not well suited to a small field with only a handful of missions.

Decadal surveys carried out by the National Research Council (NRC) have been very effective tools in winning strong political backing for astronomy and astrophysics.

CREDITS: (TOP TO BOTTOM) LESLIE KOSSOFF/AP; CHARLES TASNADI/AP

230
Challenges to "Out of Africa"

LEAD STORY 232
Special report: Paleontology in China

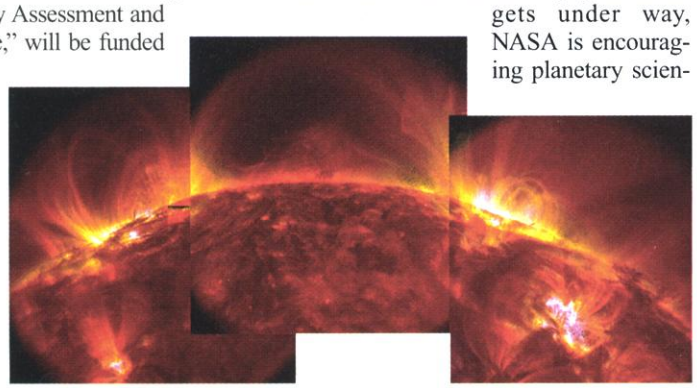
All four large projects recommended in the 1991 survey, for example, became reality, prompting envy from those in other fields that traditionally fare less well. In addition, political attacks on a new NASA solar program called Living With a Star (LWS) (*Science*, 28 July 2000, p. 528) have pointed up the value of having solid backing for any large scientific undertaking. "We need a national perspective," says Lou Lanzerotti, a physicist with Lucent Technologies in Murray Hill, New Jersey, who will chair the 12-member NRC panel. "A fairly broad spectrum of federal agencies, research communities, and industry are interested in this."

In addition to space-based programs like LWS, the panel will also examine ground-based research such as the National Science Foundation's (NSF's) space weather initiative. The committee will establish five subcommittees—each with up to 10 people—to examine theory, modeling, education, and public outreach activities as well as specific missions. The 2-year study, called "Solar and Space Physics: A Community Assessment and Strategy for the Future," will be funded primarily by NASA and NSF, with support from the National Oceanic and Atmospheric Administration and the Defense Department.

A deluge of data from a series of new spacecraft as well as from ground-based experiments studying the sun's current peak of activity have raised the profile of solar researchers. The LWS is supposed to build on that momentum by launching a series of spacecraft around the sun and Earth. But the program drew criticism last year from some members of Congress for being too applied, while some researchers complained about its scientific foundation and about NASA's plan to give substantial control to a Maryland contractor. "LWS popped up overnight, and now we're playing catch-up," says James Burch, a physicist with the Southwest Research Institute in San Antonio, Texas, who will serve on the NRC panel. "It was a little bit of the cart before the horse."

The first LWS mission, to study solar dynamics, is slated for 2006; future missions have yet to be defined. In November, NASA formed a standing committee, led by solar physicist Glenn Mason of the University of Maryland, College Park, to examine the detailed research that LWS should conduct. Mason and Burch say their respective panels will work together on a stronger research plan for LWS, with Mason's panel providing the specifics and the NRC group outlining the broader scientific strategy. Mason acknowledges that LWS has created rifts among scientists. "This is like a family fight over a future inheritance," he says. "The community will only have itself to blame if the program isn't done well." The NRC panel will also try to ease tensions between researchers who conduct primarily space-based work and those focused on ground-based efforts. NASA spends much more on the field than does NSF, but most goes to building hardware. "If you look at how much money is actually going to support scientists, the two agencies are much more balanced," says Robert Rosner, a University of Chicago astrophysicist.

As the solar and terrestrial physics effort gets under way, NASA is encouraging planetary scientists to adopt a similar broad-brush study. "This approach clearly is liked by members of Congress," says NASA space science chief Ed Weiler, who spent 20 years as program scientist for the Hubble Space Telescope. "So let's let the [NRC] decide what is best."



CREDIT: TRACE

Sunny view. Two active equatorial regions on the sun as seen by the 2-year-old TRACE (Transition Region and Coronal Explorer) satellite.

But the community is not unanimous that a survey makes sense. "I'm more and more concerned that the pace of events leaves the decadal model in the dust," says David Black of the Lunar and Planetary Institute in Houston, noting how capitalizing on the recent discovery of a possible ocean on Europa would not have been part of any long-range plan. At the same time, other scientists say that their relatively small field is capable of resolving disputes without a time-consuming and expensive study.

Old hands warn that surveys are no panacea. John Bahcall, the Princeton University astronomer who led the influential 1991 NRC survey, agrees that, "in principle, a survey is a good idea. But ultimately it depends on the strength, will, and leadership in the community to make difficult decisions." In other words, the conclusions of the new NRC panel may be less important than demonstrating that it can speak with one voice.

–ANDREW LAWLER

HUMAN GENOME

NIH Considers Paying to Use Private Database

Officials at the National Institutes of Health are negotiating terms under which NIH scientists can have access to the controversial genome database offered by Celera Genomics of Rockville, Maryland. If the talks are successful, some NIH scientists may soon have their own Celera accounts, at an initial cost of up to $15,000 per user per year.

Some NIH staffers are flabbergasted that such a deal might be in the works—partly because NIH is funding genome sequencing projects that are releasing data free of charge through GenBank, a public database NIH runs. Several NIH scientists have requested access to the Celera database, however, and NIH officials say they've received complaints that academics using Celera's data have "scooped" intramural researchers on discoveries.

National Cancer Institute director Richard Klausner confirms that NCI staffers ran an informal evaluation of the Celera database. "A variety of intramural scientists who are expert" in this field "felt that the database that they were looking at was very useful and very powerful, and that it would add value" to public data, he says. The reviewers, according to members of the team, included NCI staffers J. Carl Barrett, Neal Copeland, Michael Dean, Dean Hamer, Nancy Jenkins, David Munroe, Stephen O'Brien, and Louis Staudt. Klausner says he doesn't know how many other institutes might be interested, but "whatever we do will be available across the NIH."

Celera spokesperson Heather Kowalski declines to comment on the reported negotiations. But she says the current rate for an academic subscription to the genome database—which includes mouse and human sequences