

\$182 million in 1998—have remained stagnant in recent years, and many customers have complained about the high cost and long wait associated with many NRC studies (*Science*, 9 May 1997, p. 900). In addition, its rigid and complicated structure—the council has seven commissions that oversee most of the work of innumerable boards, task forces, and working groups—is poorly suited to interdisciplinary problems.

The question of restructuring the NRC has been on the table for several years. But a messy fight that resulted in the departure of former NAE president Harold Liebowitz (*Science*, 1 March 1996, p. 1222) and legal wrangling over whether the NRC must abide by a law that requires government advisory committees to conduct their business in public (*Science*, 14 November 1997, p. 1219) left top officials with little time to address possible changes. “We were kept busy with a series of crises, and now things have quieted down,” says Alberts. The task force’s charge, he adds, is to come up with a system that is

“more efficient while providing equal quality.” NAE president William Wulf says that the growing need for crosscutting approaches and the increased role of states in science and technology initiatives demand a review of the NRC’s products, processes, and organization. “Everything is on the table,” says Wulf.

Currently, the NRC’s governing board approves requests for a report, which is then assigned to the appropriate body. A draft report, put together by a committee of outside experts, is typically reviewed by its parent commission, as well as by a separate report review committee that monitors the quality of the draft. Many voices inside and outside the NRC say that the commissions are a weak link in a process designed to ensure accurate and objective reports. “You could take out that layer,” says one former NRC official. Another former official complains about the drain on time, money, and effort from frequent “dog-and-pony shows” performed by staff to keep commissions up to date.

Task force members agree that the commission structure should be revised to enhance the work of the boards. “You cannot mess with the boards—they are the ones in the trenches, the front-line troops,” says member Brad Parkinson, a Stanford University physicist and engineer. Alberts says he would welcome “more standardized procedures” for the commissions. But sources familiar with the task force’s deliberations say

it is unlikely that the commissions—created in the 1982 reorganization that followed the 1981 study—will disappear. That approach was tried unsuccessfully in the policy division, says Alberts.

The scope of the NRC’s work is also under scrutiny. Parkinson says the group is rethinking the mix of core activities in light of a flattening of federal requests. “Less [federal] work comes in over the transom,” says Thomas Deen, a former NRC staffer who sits on the task force. At the same time, he says that the NRC “is uniquely positioned” to help states in such areas as transportation, education, and health care delivery. The NRC derives only about 15% of its revenues from nonfederal sources.



**Tall order.** Choppin’s task force is trying to make NRC more efficient.

The panel is also looking at how to supplement the NRC’s primary diet of reports with roundtables, workshops, fellowship programs, and other activities. “No one is trying to denigrate the studies, but there can be more synergy” in what the NRC accomplishes, Deen says. Creating a body of work in a specific area is another approach, notes IOM president Ken Shine, as the IOM has done to much acclaim with health care issues.

Once the report is submitted, it will fall to Alberts, Wulf, and Shine to win over the membership, volunteer community, and NRC staff. “We have to be strategic,” says Alberts, who plans to start lobbying members this week during the academies’ annual meeting in Washington. “It’s not going to be simple to get members to recognize that changes will be good for the organization in the long run.” One thing that may not change, however, is the academies’ penchant for secrecy. The document outlining the 1982 reorganization remains confidential, and academy officials say there are no plans to release the new report, either.

—ANDREW LAWLER

#### GLOBAL WARMING

### Draft Report Affirms Human Influence

For the past several years, an international panel of climate scientists has been testing alternatives to the idea that people are affecting global climate. They examined climate’s natural variability, changes in solar radiation, and volcanic outpourings, among others. But none of those factors fit the past century’s observed warming as well as the explanation they suggested in 1995: an increase in greenhouse gases generated by human activity. So last week, the group, the

## ScienceScope

**Just Say No?** Prompted by critics who say gene patents are being given out too freely, the U.S. Patent and Trademark Office (PTO) offered to “raise the bar” last year. But some prominent critics say the new standard isn’t high enough.

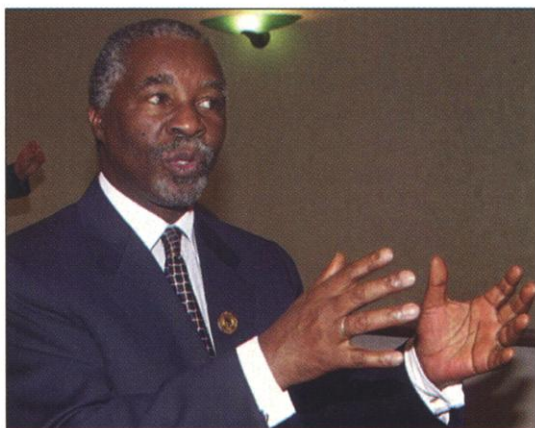
PTO’s proposed new guidelines ask its examiners to demand more information about a gene’s biological function before awarding a patent (*Science*, 18 February, p. 1196). PTO invited comments, which are now available on the Web ([www.uspto.gov](http://www.uspto.gov)). Although most are favorable, an exception comes from the advisory council for the National Human Genome Research Institute, the federal government’s main sequencing funder. Twelve members, including human genome sequencers Maynard Olson and Robert Waterston, wrote en bloc to argue that PTO should issue tighter guidelines that would rule out claims on gene functions not specifically described in an application. For example, the group objects to a broad patent obtained by Human Genome Sciences Inc. of Rockville, Maryland, based on the human CCR5 receptor, which may be useful in AIDS therapy (*Science*, 25 February, p. 1375).

Despite such complaints, the PTO isn’t likely to raise the bar any higher. “We’re taking the guidelines to the executive council” early this summer, one official notes. “My guess is that you’ll see very little change” in the final version, due out in 3 months.

**New Look** The Canadian government says a planned overhaul will restore the luster of Health Canada, its scandal-prone health protection bureaucracy.

Agency officials last week announced a restructuring designed to prevent the repeat of regulatory controversies—involving inadequate oversight of products from silicone breast implants to bovine growth hormone—that have tarnished Health Canada’s reputation over the last decade. The redesign ([www.hc-sc.gc.ca/english/realign.pdf](http://www.hc-sc.gc.ca/english/realign.pdf)) calls for creating new branches to track diseases and regulate products, and appointing a new chief scientist to oversee research and field potential complaints about political or industrial influence. Responding to criticism of its 1997 decision to close in-house scientific labs conducting research on food toxins, Deputy Minister David Dodge said Health Canada will also spend the bulk of some \$230 million in planned funding increases on hiring new scientists and extending its research partnerships with academe.

ed," wrote Mbeki in his 3 April letter. "The day may not be far off when we will, once again, see books burnt and their authors immolated by fire by those who believe that they have a duty to conduct a holy crusade against the infidels."



**Drawing flak.** President Mbeki's questioning of the evidence that HIV causes AIDS has provoked an outcry.

"I think the letter was emotional and irrational," says Malegapuru William Makgoba, an Oxford-trained immunologist who in July became the first black head of South Africa's Medical Research Council. "This man will regret this in his later years. He displays things he doesn't understand."

Makgoba says Mbeki told him and others earlier this year that he became intrigued by the dissidents' views after reading about them on the Internet. In January, Makgoba says Mbeki sent him about 1500 pages of documents that question the so-called "HIV/AIDS hypothesis." "It's pure rubbish," says Makgoba. "They never provided any data and, at the same time, they are taking things out of context." He told Mbeki as much in a letter that also offered detailed counterarguments. "His credibility as an African leader may suffer from this," says Makgoba, who recently edited a book called *African Renaissance*, which has an introduction written by Mbeki.

Parks Mankahlana, Mbeki's spokesperson, stresses that Mbeki has never said that he does not believe that HIV causes AIDS. "We've gone through all of his speeches," says Mankahlana, who points out that Mbeki has increased support for AIDS research, encourages the use of condoms, and always wears an AIDS ribbon on his lapel. Mbeki, says Mankahlana, is simply exploring a range of views on the role that HIV plays in the disease. "The problem that the scientific world has is this: It has to do with human arrogance."

The dissidents' views are expected to be included in a panel of about 30 AIDS "experts" that South Africa's Department of Health is convening to discuss how to ad-

dress the country's epidemic. Duesberg says he has been invited and may well attend the panel's meeting next month. "I think after this letter, I have to go," says Duesberg. "It's getting hot again, just like in the old days, thanks to Mbeki. I'm surprised that there's a place left on this planet where you can ask commonsensical questions."

In part because of Mbeki's stance, some AIDS researchers have threatened to boycott the international AIDS conference scheduled to be held in Durban this July. But Salim Abdool Karim, a leading South African AIDS researcher who chairs the scientific committee for the meeting, says he does not expect Mbeki's views to depress attendance. "In fact, it has encouraged some people to say, 'I will attend the conference,'" Karim says. Karim, who conspicuously was not invited to sit on the health department's panel, hopes Mbeki will quickly declare that he believes HIV causes AIDS. "This should be resolved urgently, rather than making it an international issue," says Karim.

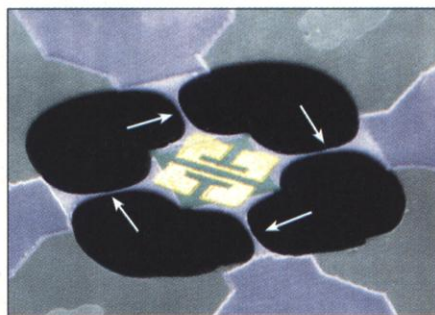
—JON COHEN

## PHYSICS

### Heat Flow Runs Into Quantum Limit

Heat is a symphony of vibrations rippling through a material. But, just like the electrons flowing in an electrical current, the individual vibrations are really quantum mechanical waves. Now a team of physicists has found that they can filter out all but a handful of those vibrations by making them jiggle down a tiny beam only a few billionths of a meter thick. When they do that, the quantum mechanical nature of the vibrations sings out, as the amount of heat the vibrations will carry butts into a fundamental quantum limit.

The findings, reported in the 27 April issue of *Nature*, raise the prospect of observ-



**Quartet.** Four vibrating beams carry heat away from silicon wafer, center.

## ScienceScope

**Ready for Action** With summer just months away, Centers for Disease Control and Prevention (CDC) officials are saying that a "sound public health control plan is now in place" to contain the mosquito-borne West Nile virus (right), which killed seven people in New York last year (*Science*, 24 March, p. 2129). "Last fall, many of our state and local partners were unprepared," CDC West Nile coordinator Stephen Ostroff said at a press conference this week. Now, CDC has spent \$2.7 million to help 19 state and local health departments on the Eastern seaboard and the Gulf of Mexico—where migratory birds are most likely to spread the virus—set up virus surveillance and mosquito-control programs.



Ostroff stressed that the odds of contracting West Nile are very low. An unpublished study by CDC and New York City's department of health found that about 2.5% of over 600 residents of the "Hot Zone"—the area in Queens where most cases occurred—got infected last summer. But the vast majority of those infected suffered mild symptoms or none at all.

**Lobbying for Bargains** AIDS activists are preparing a last-ditch lobbying effort to make cheaper AIDS drugs available to patients in Africa and the Caribbean. A coalition of AIDS groups is backing an effort by Senators Dianne Feinstein (D-CA) and Russ Feingold (D-WI) to amend a pending bill designed to expand trade between the United States, Africa, and Caribbean nations. The amendment would relax patent protections on popular AIDS drugs from major companies, enabling poor nations to import or manufacture them at lower cost. Opponents, including pharmaceutical companies, say the change would open a troubling loophole in international patent law and reduce incentives for R&D. They claim that a lack of doctors, clinics, and planning—not high drug prices—is the major barrier to better AIDS treatment in poorer nations.

The House has already rejected its version of the Feinstein-Feingold measure, leaving proponents to focus on the Senate, which is expected to complete its work on the trade bill early next month. If the AIDS amendment is added, one Republican aide predicts that "it could become very difficult to craft a final bill. It could be a deal killer."

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