

as well as North America. The deadline for entries is 31 December. If you're intrigued, you can either log in directly through Internet, use electronic mail, or ask the Santa Fe Institute to mail you a disk with the data. To request information, electronic mail should be sent to [tserver@sfi.santafe.edu](mailto:tserver@sfi.santafe.edu).

Winners will be identified "where appropriate," says Gershensfeld, but there will be no monetary prizes as the organizers don't want the contest to get bogged down in squabbles. The entrants will be invited to a workshop at the institute next spring to explore the results.

## Chatting With ETs

It has taken two decades of lobbying for funding, planning, and engineering, but on Columbus Day 1992, NASA scientists with the agency's SETI (search for extraterrestrial intelligence) project expect finally to activate the network of microwave receiving dishes for the most ambitious such search ever conducted. But with the radio-telescopes revved and the electronic equipment tuned, NASA still has some nagging philosophical details to address: If astronomers actually do detect a signal from a civilization Out There, should that signal be answered? And what kind of reply is in order?

Last week NASA convened a 3-day conference to ponder these matters. Crafting a response, astronomers feel, is more complicated than simply beaming, "Hi, we got your message!" into the cosmos. To begin with, they want to have an international consensus on just what to do. Why has it taken so long? "The scientists and engineers have been so consumed with getting the technical studies done, we haven't really had the time," says John Billingham, chief of SETI at NASA's Ames Research Center at Moffett Field, California. A report of the NASA workshop will be released next year.

Scientists have good reason

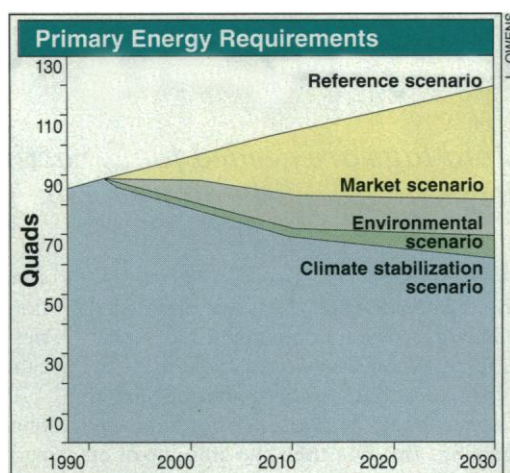
## Looking 40 Years Ahead on Energy

Four nonprofit groups have banded together on a new analysis of alternative energy futures for the United States extending to the year 2030. Under current policies, says the report, \* released last week by the Union of Concerned Scientists, the Natural Resources Defense Council, the Alliance to Save Energy, and the American Council for an Energy-Efficient Economy, national energy consumption will rise by 41%. The report proposes 3 alternative scenarios based on an energy modeling system designed by the Tellus Institute in Boston. Under the "climate stabilization scenario," (see chart), emissions of carbon dioxide would be cut by 70% and overall energy use would be half of what is now projected 40 years hence. The "market" and "environmental" scenarios posit more gradual adoption of energy-efficient and renewable energy technologies.

The groups say that the economy as well as the environment would benefit from the measures they propose, which include revision of utility pricing, establishment of energy efficiency standards in new construction, tax credits for renewable energy supplies, and the use of biomass-derived transportation fuels.

The report comes on the eve of congressional debate

\* **America's Energy Choices**, available for \$15, plus 20% for shipping, from the Union of Concerned Scientists, 26 Church St., Cambridge, MA 02238.



Climate crystal ball. Divining energy usage.

over an Administration-supported bill introduced by Senators Bennett Johnston (D-LA) and Malcolm Wallop (R-WY). A bipartisan filibuster is planned in response to the bill's most controversial provision—opening Alaska's Arctic National Wildlife Refuge to oil and gas drilling.

to be prepared: Earth could receive an answer to a SETI-transmitted reply within a mere millennium. Because SETI is confining its search to the Milky Way, explains Billingham, it's likely that an incoming signal will have been broadcast within the last 1000 years, which means the communicating civilization might still exist. There's a thought to reckon with.

## "All the [Science] That's Fit to Print"

How do doctors and scientists get their news of medical breakthroughs? Most people probably assume that biomedical professionals learn of discoveries in their fields through professional channels—like journals and colloquia. Well, they're wrong, says sociologist David Phillips of the University of California at San Diego (UCSD). Biomedical researchers get most of their information on medical breakthroughs from reading the paper. In fact, according to a new study by Phillips and his colleagues, researchers use newspapers as a "filter" to help them decide which scientific ar-

ticles are worth reading.

The UCSD team reached its conclusions after looking at the number of scientific citations for articles appearing in 1979 in the *New England Journal of Medicine (NEJM)* and comparing that with articles picked up by *The New York Times*. They found that when the *Times* published a story about an article published in *NEJM*, it received significantly more scientific citations—73%—for 10 years after publication than did the articles that appeared only in *NEJM*. The researchers ascertained that the newspaper wasn't just publicizing articles that would gain a lot of attention anyway. When the *Times* was on strike in 1978,

it kept a record noting *NEJM* articles that it normally would have written up. Those articles, which never reached the newspaper's audience, were cited far less than those that did.

Phillips plans to pursue the topic by exploring whether press coverage prompts researchers to overemphasize some published findings, and whether the lay media distort the transmission of medical information to the biomedical community. Incidentally, the findings were published in the 17 October issue of *NEJM*. Which raises an interesting question—will most researchers learn of Phillips' study by reading *NEJM* or the daily paper?

## Errata

Could it be the thinning of the ozone layer (see p. 645) that has indirectly caused our baffling *faux pas* in recent issues? In reporting the formation by the National Academy of Sciences of a Committee on Environmental Research to be headed by Cornell President Emeritus Dale Corson (11 October, p. 192), we inexplicably fused the distinguished careers of physicist Corson and former Dartmouth president John Kemeny. It was the latter who headed the President's Commission that investigated the accident at Three Mile Island, whereas Corson's distinctions include heading the NAS's "Corson Panel" on scientific communications and national security and founding the Government-University-Industry Research Roundtable. Three weeks earlier (in "Mycomummy," 20 September, p. 1353), we misspelled *Coccidioides*, a fungus whose petrified spores were found in the ancient skeleton of a Sinaguan indian.