

APS Star Wars study given prominent coverage in US press

"A group of leading American physicists said in a report Wednesday that it may take 'a decade or more' to determine whether lasers and other high-energy devices can be used in a Star Wars anti-missile defense. The 422-page study... also warned against accelerating the research for political reasons to deploy a system quickly, as suggested recently by some Reagan Administration officials. Going too fast, it said, 'would freeze the technology at levels inadequate for the ultimate goals and absorb resources that could otherwise be used for research on more promising approaches.'"

Thus began the Associated Press's wire story about the APS study on directed-energy weapons, which was released on 23 April (see PHYSICS TODAY, May, page S1). A precise and concise summary of the study's most important conclusions, the AP report was representative of stories that appeared in many US newspapers around the country, including most major papers. Such stories appeared promptly and prominently in many newspapers within a day or two of the study's release. But follow-up has been weaker so far and supporters of the Star Wars program have been quick to counterattack. At this writing it is not clear how the study ultimately will affect public opinion.

The *New York Times* ran its story on the DEW study in the upper left corner of the front page with a bold headline reading, "Physicists express Star Wars doubt; long delays seen." Philip M. Boffey, a Pulitzer prize-winning writer for the *Times*, reported that "so many breakthroughs are required to develop laser and particle beam weapons for the proposed Star Wars anti-missile system that it will take a decade or more of intensive research just to determine whether the job can be done."

The *International Herald Tribune* reprinted Boffey's story on 24 April in the center of the front page under a headline that said, "To experts, Star Wars is a dud; physicists see laser,

particle arms in far future—if ever."

The *Washington Post*, *Los Angeles Times* and *The Boston Globe* gave the story only slightly less prominent coverage, all stressing the report's central conclusion that the prospects for a missile defense system based on directed-energy weapons could not be properly assessed for at least a decade. While *The Wall Street Journal* did not run a story as such, it did give the report a paragraph high up in its front-page summary of world news.

Fred Kaplan of the *Globe* made a particular point of saying in his lead that this was "the first assessment of SDI by scientists who have taken no apparent political stance on the nuclear arms race" and that the panel responsible for the report "contained five scientists from four US weapons laboratories, including MIT's Lincoln Lab."

Television and magazine coverage of the report was spottier and more erratic, generally speaking, than coverage in the daily press. CBS evening news, for example, devoted more time to a rebuttal of the report by the Strategic Defense Initiative Organization than to the report itself. CBS correspondent David Martin ended his report with a statement that whatever scientists might say, whether we have Star Wars or not ultimately will depend on whether Congress appropriates money for the program.

The DEW study did not receive—and at this writing has not received—special treatment on the more respected television magazine shows such as "The MacNeil-Lehrer News Hour" or Ted Koppel's "Nightline." Several of the national newsmagazines ignored the report during the week following its release. No story appeared, for example, in *Time*, *Newsweek* or *Business Week*. *US News*, on the other hand, ran a story that opened with a quote from an SDIO official saying, "There was nothing in their report that says we're completely out of our minds."

"That observation by the SDI agency's deputy director said it all," *US*

News commented. "Only by a tortured reading could Administration officials find a glint of good news in the study."

Writers for the *Los Angeles Times* consoled the Reagan Administration with the thought that the President had been "right the first time," in the words of the headline on an editorial that appeared on 26 April. In a "little noted nor long remembered" passage of his famous Star Wars speech on 23 March 1983, President Reagan said he recognized that "this is a formidable technical task, one that may not be accomplished before the end of this century," the paper reminded its readers.

Newspaper opinion has covered a range fairly well defined by lead editorials in *The New York Times* and *The Wall Street Journal*. In an editorial that appeared on 26 April under the headline, "The Star Wars chip: Use it or lose it," the *Times* said: "Mr. Reagan's vision of a Strategic Defense Initiative may never be achievable in space but it has packed a powerful diplomatic punch.... But now the dream and the punch are fading, fast. Congress expects to cut the Star Wars funding request in half. Equally devastating, a group of leading American physicists now concludes that it would take ten years even to assess whether critical Star Wars components would work.... If Mr. Reagan ever expects anything for Star Wars at the negotiating table, he had better try for it soon. If not—if he still insists it is not a chip at all but a practical strategic program—he needs a prompt, persuasive answer to the physicists' doubts."

Taking a diametrically opposite approach, *The Wall Street Journal* argued that "the naysayers' report"—as the headline to the editorial called it—"had nothing to do with near-term prospects [for Star Wars]. Its purpose was to study the long-term prospects of the most futuristic concepts; it didn't take up near-term possibilities, in particular kinetic-kill devices that destroy missiles and warheads by the force of midair collision."

In reading the report, the editorial writers for the *Journal* said, "we couldn't help but wonder what purpose is served by having 17 physicists with other full-time jobs trying to second-guess the Pentagon's multibillion dollar, 2000-person-strong SDI effort. . . . Are such reports undertaken out of curiosity about lasers and particle beams? Or are they perhaps undertaken to appease vocal political activists within the physics profession?"

Leading opinion magazines have been relatively reticent about the DEW study—neither *The New Republic* nor *The Nation* has seen fit as yet to comment on it, for example, and William Rusher, publisher of *The National Review*, commented not on the report or its authors but rather on the recep-

tion it could be expected to get.

Rusher's method was to declare The American Physical Society's DEW panel guilty by association with "political lefties like the notorious Union of Concerned Scientists" and Carl Sagan, who, Rusher said, has been warning Americans for years that "failure to follow his advice on various political subjects such as arms control might well result in what he lipsmackingly calls 'the extinction of the human race.'"

"As more and more scientific subjects . . . have begun to have political implications," Rusher wrote in a piece syndicated by Newspaper Enterprise Association, "a great many scientists who ought to know better have succumbed to the temptation to increase

the pressure for certain political results by threatening dire scientific consequences if the body politic doesn't obey their instructions. As usually happens with people who cry 'Wolf' too often, they got a gratifying reaction the first few times, but in due course people have learned to ignore them."

Well before the release of the DEW study it seemed apparent that much of the press and public was loath to accept pessimistic evaluations of Star Wars from scientists, weapons experts and arms control specialists. It remains to be seen whether the DEW study will have a strong and lasting impact on general public opinion or whether, after one day's intense coverage and some instant analysis, it will be largely forgotten.

—WILLIAM SWEET

Research reactor closed at Berkeley for mixed reasons

The University of California at Berkeley announced in January that it would close a 1-MW research reactor that had been a subject of some controversy for several years. The previous month, Berkeley physicist Charles L. Schwartz had charged that the reactor had been used for military research by private contractors such as Lockheed and Aerospace in violation of a university rule that no classified research be done on campus. Schwartz has said that the closing of the reactor could be "properly called a victory for antinuclear sentiment in the community and is of interest elsewhere."

University officials say that the decision to shut down the reactor was motivated primarily by low usage of the reactor for research and by the university's need to house the computer science unit of its electrical engineering department in a new building over the reactor. A secondary reason for closing and dismantling the reactor, university Vice Chancellor Roderic Park has conceded, was to "get rid of all the political hassling that goes along with it. If the faculty wanted to keep it, we would have kept it."

Thomas Pigford, chairman of the nuclear engineering department and director of the reactor, says that the department did not oppose the decision to shut down the reactor. In fact, he says, the department pointed out to the university administration about four years ago that use of the reactor by faculty and students for research was very small. That set a review process in motion, and in the end the department took the position that it would prefer to keep the reactor open but recognized that its low usage might not justify the space it occupied.

In Pigford's opinion, opposition from Schwartz, like-minded students and faculty, and the Berkeley city council figured "not at all" in the decision. The city council has opposed the reactor for over 10 years, Pigford says, and "we are all quite accustomed to that."

Decommissioning. Dismantling and removal of the 1-MW reactor is expected to cost about \$3 million. The university regents have pledged \$625,000 toward decommissioning costs, and the nuclear engineering department is seeking funds from other sources to cover the remainder of the costs.

To date, according to Pigford and sources at the Nuclear Regulatory Commission, five research reactors of 1 MW or greater power have been decommissioned. Each case is different, however, and so the estimated cost of dismantling the Berkeley reactor is quite approximate.

The NRC rule requiring conversion of university and industry research reactors to low-enriched uranium was not a factor in the decision to close the

Berkeley reactor, which already ran on low-enriched uranium. When the NRC rule first was proposed nearly three years ago, some predicted that many other reactors would be closed as well (PHYSICS TODAY, December 1984, page 47).

The NRC rule went into effect last March, and so far NRC officials have detected no case in which a reactor was closed strictly because of the rule. According to Robert E. Carter, a project manager in the NRC licensing division, a handful have been closed, including small reactors at the University of California in Los Angeles and Santa Barbara and at Virginia Polytechnic Institute, but university administrators have said that this was only partly because of the conversion rule, and partly because of low usage and general lack of support for the reactors.

"It is not always clear to us what the reasons are," Carter says. "One day people say it's mainly one thing, one day another."

—WILLIAM SWEET

US and EC conclude fusion agreement

US government and European Community officials signed an agreement between the US Department of Energy and EURATOM on 15 December providing for cooperation in magnetic confinement fusion. US and European researchers have cooperated on specific topics in fusion for years, both informally and under the aegis of the International Energy Agency in Paris, but this is the first time the United States and the European Communities have concluded an umbrella agreement

providing general guidelines for cooperation in magnetic confinement fusion.

With exchanges in fusion growing quickly, the new agreement is significant because it provides a legal mechanism that covers any cooperative activity in fusion and a forum in which management issues can be aired regularly and resolved.

The agreement is virtually identical to the agreement the United States negotiated with Japan in 1979 and