

Soviet Breakthrough Is Reported in Work on an Anti-Missile Beam

Special to The New York Times

WASHINGTON, May 2—The magazine Aviation Week and Space Technology said today that the Soviet Union had achieved a breakthrough in high-energy physics "that may soon provide a directed-energy beam weapon capable of neutralizing the entire United States ballistic missile force."

The weekly publication, which is well informed on weapons systems, added that in addition to the "charged-particle beam device," the Soviet Union was also preparing to test a high-energy laser beam in space to knock out satellites.

A Pentagon statement issued late this afternoon said that it was only a remote possibility that the Soviet Union was on the verge of producing the new beam weapon. The statement said:

"Senior officials of the Department of Defense do not believe that the Soviet Union has achieved a breakthrough in research which could soon provide a directed-energy beam weapon capable of neutralizing ballistic missile weapons. Based on all information now available to the U.S. intelligence community, this possibility is considered remote."

'They're Working on Something'

A Pentagon official termed the Aviation Week article "highly speculative," but added: "There is a possibility this is happening."

"There's no question they're working on something," he said, referring to the Russians.

The report, by Clarence A. Robinson Jr., Aviation Week's military editor, said that the charged-particle beam device was designed to destroy United States ballistic-missile warheads. Development tests, the report went on, are being conducted in Soviet Central Asia.

An editorial accompanying the article said that such a Soviet technical breakthrough in high-energy physics could checkmate "this country's strategic doctrine."

"The hard proof of eight successful Soviet tests of directed-energy beam weapon technology gives new and overriding urgency to bring these developments into the public domain," the magazine said.

Tests and New Radar Cited

Aviation Week said that several recent events had persuaded a number of United States analysts that the weapons were nearing the prototype stage:

Eight successful tests of directed-energy beam weapon technology; preparations to launch the high-energy laser aboard a spacecraft; the opening of a new test site at Azgir, and the deployment of large over-the-horizon radar systems in the northern Soviet Union to track and detect United States intercontinental ballistic missiles.

Most of the beam testing is taking place at a research center about 35 miles south of the city of Semipalatinsk, in Soviet Central Asia, the report said.

In large part the article and accompanying editorial reflected the controversial

views of Maj. Gen. George Keegan recently retired chief of Air Force intelligence, who has maintained for years that the Russians were developing a charged-particle beam weapon and were attaining superiority in all other weapons systems.

Describing the new weapon, the magazine's report said: "A charged-particle beam weapon focuses and projects atomic particles at the speed of light which could be directed from ground-based sites into space to intercept and neutralize [nuclear missiles]."

It added: "Both the U.S.S.R. and the U.S. also are investigating the concept of placing charged-particle beam devices on spacecraft to intercept missile warheads in space."

NEW YORK TIMES
3 MAY 1977

Beam Weapon Threat

The Soviet Union has achieved a technical breakthrough in high-energy physics application that may soon provide it with a directed-energy beam weapon capable of neutralizing the entire United States ballistic missile force and checkmating this country's strategic doctrine.

These developments are described in detail in this issue by AVIATION WEEK & SPACE TECHNOLOGY Military Editor Clarence A. Robinson, Jr., in the story beginning on page 16. There are those in the official intelligence bureaucracy who will challenge our judgment in printing these facts on those Watergate-worn grounds of "national interest." We have been following this story for more than a year and have in fact refrained from printing it earlier because of what were then legitimate matters of intelligence security. But those considerations no longer exist.

The hard proof of eight successful Soviet tests of directed-energy beam weapon technology gives new and overriding urgency to bring these developments into the public domain and rip the veil of intelligence secrecy so that this whole matter of vital national urgency and survival will finally be brought to the attention of the President of these United States, the Congress and the citizens of this republic whose future is at risk. In all of the previous four years that these Soviet developments have been known to the official intelligence community, they have been stifled by a conspiracy of skepticism and silence and never once penetrated to the highest decision-making councils of this country.

Technology Leap Verified

The incredible story of how the Soviets leapfrogged a generation of high-energy physics technology and developed a workable experimental model of a directed-energy beam weapon now has been largely verified by the successive Soviet tests at Semipalatinsk and Azgir and the brilliant work of a small group of extremely young physicists in this country. The fact that this country still has a chance of avoiding a crippling technological surprise that could render its entire strategic missile force ineffective is due to the courageous, dogged and perceptive work of a handful of U. S. Air Force intelligence specialists who polarized around the leadership of Maj. Gen. George Keegan, Jr., recently retired chief of Air Force intelligence (AW&ST Mar. 28, p. 38).

We do not suggest any formal conspiracy to suppress the mounting evidence of a massive Soviet research, development and industrial push aimed at the goal of an anti-ICBM directed-energy beam weapon. Rather it was a combination of smug American assurance that the Soviets were simply not capable of out-reaching us in any technological race and the intellectual arrogance of elderly scientists

who through the ages have spent their twilight years proving that the next generation of breakthroughs is "impossible."

In modern times, we have the continuing examples of Dr. Vannevar Bush, who thundered that the ICBM was a technical impossibility, and the assortment of scientists in the Eisenhower era who firmly believed that manned spaceflight should be abandoned because the human system could not survive its rigors. It was a similar group of high-energy physicists, some heavy with Nobel laurels, who encouraged the natural technical illiteracy of the Central Intelligence Agency to discount the steadily growing stream of Soviet developments and to lead the bitter intramural battles that suppressed the evidence from higher government councils for crucial years.

There is still considerable debate over the real significance of the Soviet tests at Semipalatinsk and Azgir and how long it will take the Soviets to translate their experimental developments into a usable weapon. But there is no longer much doubt among top-level U. S. high-energy physicists that it is feasible to develop a directed-energy beam device.

Initial Skepticism Overcome

There also is an element in the Pentagon that can visualize the eventual Soviet deployment of the directed-energy beam weapon as the end game of an intricate chess exercise that began with the 1972 negotiation of the anti-ballistic missile treaty, which effectively stopped not only U. S. deployment of an anti-ICBM system but also most of its significant on-going research and development. The hypothesis for this chess game, which ends in the early 1980s with the triumphant Soviet shout of "check and mate," involves the U. S. finding its strategic deterrent ballistic missile force stripped of any defensive system, with the Soviets using their anti-ICBM directed-energy beam weapon to negate any U. S. retaliation and a strong civil defense shield to minimize damage from the few warheads that might penetrate.

The race to perfect directed-energy weapons is a reality. Despite initial skepticism, the U. S. scientific community now is pressuring for accelerated efforts in this area.

It is absolutely essential that the remaining chapters of this debate be conducted in public where every American citizen, from President Jimmy Carter on down, is aware of the elements that will determine this nation's future. It is far too important an issue to be cloaked in the obscure bureaucratic in-fighting of the intelligence community.

It could be a fatal error for this country to continue to put its major strategic reliance on a single type weapon for which an effective counter is already looming on the technical horizon.

—Robert Hotz