

Reality of Soviet 'SDI' comes into the open

by Carol White and Charles B. Stevens

Last year began with an open factional battle on whether or not the United States is to deploy a Strategic Defense Initiative (SDI) capability. The debate appeared to center on an interpretation of what form of research and development is allowed under the 1972 ABM Treaty. Supporters of the so-called narrow interpretation wished to restrict the program to an impotent research profile, while Defense Secretary Weinberger urged a broad interpretation of the treaty, and called for early deployment of at least a first-stage system.

The Weinberger proposal would have relied heavily upon kinetic energy weapons, as opposed to directed energy weapons. While *EIR* in general opposed such a concession to Lt. Gen. Danny Graham's notion that we could have a workable SDI using off-the-shelf missile technology, we recognized that the defense secretary was motivated in part by a desire to break out of the stultifying terms of the debate on how the ABM Treaty was to be interpreted, and make the SDI an unstoppable reality.

Throughout the year, the reality of the Soviet commitment to their own "SDI"—a program based upon the most advanced technologies, using laser and radio frequency waves—was admitted by numerous sources and even filtered into the popular press. U.S. congressmen saw the evidence of Soviet violations of that element of the ABM treaty which restricted the use of radar facilities, when they visited the Soviet radar facility at Krasnoyarsk. The Pentagon used the occasion of the visit to publicly document how the Soviets were putting in place a radar system whose purpose was to coordinate an anti-missile defense of the Soviet Union. Thus matters stood until, on his summit visit to the United States, Secretary Gorbachov revealed that the Soviets indeed have their own advanced SDI capability under development, and were confident that they would be ready to deploy it in the

near future.

While the question of how the ABM Treaty is to be interpreted was left open at the summit, Congress had already represented the Soviet case, by imposing the "narrow" interpretation of the treaty as a condition for any further funding of the SDI—after they had cut the funding for the program to practically half that requested by the Department of Defense.

The following is a calendar of how the U.S. SDI has been sabotaged over the last year.

Jan. 21: SIPRI space weapons expert, Bhupendra Jasani, reports that Soviet scientific publications bear out the efficacy of space-based missile defense and that such systems have long been a part of Soviet defense policy thinking.

Feb. 2: The *Washington Post* reports that Defense Secretary Weinberger is asking for a near-term development of missile defenses and authorization for planning of space-based SDI experiments.

Feb. 4: In his testimony before the Senate Armed Services Committee Secretary of State George Shultz warns against early deployment of SDI: "The U.S. must wait until it is certain SDI works before deploying it."

Feb. 6: In a letter signed by House Speaker Jim Wright and other House Democratic leaders, President Reagan is warned that any move for early SDI deployment will lead to a congressional cutoff of funding for the program.

Feb. 25: A panel of leading scientists, assembled by the Marshall Institute, report that SDI could begin deployment by 1992 and be fully deployed by 1994 at a total cost of less than \$121 billion.

Feb 26: Former Vice President Walter Mondale calls on Norway to denounce the U.S. SDI program.

March 9: Six former U.S. defense secretaries send tele-

gram to President Reagan calling for continued U.S. adherence to ABM Treaty.

March 10: President Reagan reports to Congress that "conclusive evidence" shows that the Soviets are carrying out serious violations of the 1972 ABM Treaty.

March 19: The *London Times* reports that three British SDI scientists have died or disappeared under very suspicious circumstances. Democratic Sen. Ernest Hollings supports the Reagan administration broad interpretation of ABM Treaty and charges that Sen. Sam Nunn is being "used by those who want to kill" the SDI program.

March 24: In an official release the Italian Red Brigades state that General Giorgeri was killed because of his work with the U.S. "Star Wars" program.

March 26: TASS denounces the 1987 edition of the Pentagon's *Soviet Military Power*, saying that the report contains "allegations" of "mythical Soviet plans to militarize space."

March 31: Fourth British SDI scientist reported killed under mysterious circumstances.

April 2: The *London Times* reports that the toll of mysterious deaths of British SDI scientists has risen to six.

April 3: The House Armed Services Committee's R&D Subcommittee takes \$2 billion off the \$5.3 billion Reagan request for SDI.

April 20: The American Physical Society issues a special report attacking the SDI program and concluding that the science and technology of directed energy weapons will need "a decade or more of intensive research" before it can be determined that they can work.

April 22: The Fusion Energy Foundation, a leading proponent of the SDI, is seized by U.S. federal marshals.

April 28: Leading British defense expert, John Erickson, tells *EIR* that the zero-option deal "fits in perfectly well" with new directions in Soviet military strategy. "The big mistake of many people in the U.S. is to say that the Russians are advocating abolishing nuclear weapons, to be able to use conventional weapons. What the Soviets really want to do, and what all this *perestroika* has to do with, is to make a quantum leap from ICBMs to space warfare.

May 9: In a San Francisco speech Secretary of Defense Weinberger reports that there are no major technical roadblocks to prevent initial U.S. deployment of the first phase of SDI.

May 14: Gorbachov hails the military space program at Baikonur and calls for "conquest of space" by Russia. He emphasizes that such work epitomizes his *perestroika* program.

May 18: James Oberg, the well-known expert on the Soviet space program, warns that with the successful launch of the Russian heavy lift rocket *Energiya*, the Soviets have developed the potential capability for deploying space weapons and keeping the United States out of space.

May 20: Radio Moscow brags that the U.S.S.R. is outstripping the United States in space.

May 27: The Xinhua Red Chinese news agency reports "that the Soviet Union may be ahead of the U.S. in developing deadly, non-explosive weapons that would use special radio frequencies. . . ."

June 9: *La Stampa* reports that the Soviets are ahead in efforts to develop radio frequency weapons.

June 28: The *New York Times Magazine* reports on a secret, giant laser weapon research facility located south of Dushanbe in the Soviet Union.

July 7: 14 of 17 authors of the American Physical Society report on directed energy weapons (see April 20), denounce the general press release accompanying the report which had made attacks on the SDI: "We object to being included in the council's statements on matters neither which we nor they studied."

July 21: The *Washington Times* reports that the Soviets have carried out missile tracking tests from their manned space station as part of the Russian "SDI" program.

July 25: The Soviet Union successfully orbits the largest "civilian" Earth-studies radar satellite. Cosmos 1870 weighs between 15 and 20 tons and is up to 10 times heavier than any such Western satellite.

Aug. 28: Soviets launch Cosmos 1873, which is reported by many leading Western experts to be a chemically fueled anti-satellite laser weapon.

Sept. 9: U.S. congressmen visit Soviet Krasnoyarsk radar.

Sept. 10: Acting Assistant Defense Secretary Frank Gaffney gives a Pentagon briefing which presents the "clear evidence" that the Soviet Krasnoyarsk radar "is a battle management detection and tracking radar for ballistic missile defense" and which "is a clear-cut violation of the ABM Treaty." In Geneva, U.S. Arms Control Adviser Gen. Edward L. Rowny accuses the Soviet Union of developing technology to attack ballistic missiles in space, while holding up talks on long-range nuclear weapons with demands that Washington abandon the U.S. SDI.

Sept. 11: The *Washington Post* in an editorial admits that the Soviet Krasnoyarsk radar facility is a clear violation of the ABM Treaty and "should be dismantled."

Sept. 12: President Reagan expresses "profound disappointment" in a letter to Sen. Robert Dole, that the senate had added an amendment to restrict testing and development of the SDI to the Defense Authorization Bill for the next year. The President characterized the testing curbs as "unilateral restrictions on the United States that are not enforceable."

Sept. 13: President Reagan reports that the Soviets are better positioned than the United States to abort the ABM Treaty and deploy missile defenses.

Oct. 6: Soviet leader Gorbachov warns in a speech delivered at the dinner for Finnish President Koivisto that "we have an inexpensive and effective reply" and "we will develop it" if the U.S. SDI is deployed.

Oct. 12: New Defense Department assessment concludes that the Soviet Union will "dramatically increase" its total

tonnage of space hardware over the next 5-15 years.

Oct. 23: U.S. Space Command Chief Gen. John Piotrowski warns that the Soviets have already developed ground-based lasers powerful enough to destroy low-orbiting satellites and damage those farther away.

Oct. 26: French satellite pictures confirm U.S. Pentagon reports that the U.S.S.R. has built at least two new ABM, ground-based laser testing stations.

Nov. 15: Leading West German SDI proponent and INF Treaty opponent Jürgen Todenhoefer resigns from all official posts.

Nov. 19: The Club of Rome's Council on Economic Priorities issues a report which concludes that the SDI will undermine the American economy.

Dec. 1: In a nationally televised interview on NBC, Gorbachov admits that the Soviet Union has an SDI program.

After Weinberger, an uncertain future for SDI

by Robert Gallagher

Despite some promising advances in the development of the free electron laser (FEL) this past year, it is likely that, as it did in late 1986, the laser program will again suffer a setback, when the Strategic Defense Initiative Organization (SDIO) reprograms its funding for 1988. Congress has cut SDI funding from the \$5.9 billion that the administration requested, to a mere \$3.9 billion. With Caspar Weinberger's resignation as defense secretary, and Gramm-Rudman automatic budget-cutting in force, even that \$3.9 billion is not secure.

Weinberger resigned after failing to reverse administration policy in three areas directly related to SDI: 1) the defense budget, 2) the treaty with Moscow on intermediate-range nuclear missiles in Europe, and 3) whether to interpret the ABM treaty the way Moscow wants, or the way it is written. With Weinberger gone, the SDI has lost its most intelligent spokesman within the administration. As he resigned, the past year's trend away from research in directed energy weapons continued.

In October 1986, after Congress slashed the Defense Department's budget request for SDI from \$4.8 billion to \$3.2 billion, SDI management decreased the portion of research and development funding going into directed energy weapons from 30% to 25% of the research budget, in order to shift limited resources into engineering technology required for early deployment of a partially effective defense based on miniature space-based rockets, known as "kinetic energy weapons." Then, in its budget request for 1988, SDIO dropped the directed energy portion of its R&D funding to 21%.

Now that Congress has passed what amounts to a "zero growth" budget for SDI (a total of \$3.9 billion for 1988, compared to \$3.75 in 1987), it is expected by the national labs and defense contractors, that the directed energy program will get short-changed even more.

Over the past year and a half, SDI management gave priority to developing and deploying a poor man's version of Danny Graham's "High Frontier" system of kinetic-kill weapons to intercept Russian ballistic missiles in the boost phase of their trajectory, where the missiles are most vulnerable. The system is being designed to be able to destroy at most 10% of the missiles Russia would fire in a preemptive strike against U.S. military targets. SDIO hopes that the system will be able to destroy 50% of the heavy Russian missiles, those capable of destroying fortified military targets like missile silos. They hope to accomplish this by selective targeting of heavy missiles, such as the SS-18s and SS-19s, something that may be difficult on their shoestring budget.

The Pentagon plans on deploying about 3,000 space-based interceptors in the system. That is less than one-third the number that the Marshall Institute reported would be required in December 1986. The space-based portion of the system is to be complemented with ground-based anti-missile missiles for destroying warheads while they are in the mid-course phase of their trajectory, or as they are reentering the atmosphere, the so-called "terminal" phase of their trajectory.

Last summer, the Pentagon planned to take the system into production in 1990 and begin deployment in 1993. By 1995, they plan to have deployment of this initial system completed.

In the meantime, funding for directed energy is getting the axe. It appears that the program to develop the x-ray laser, primarily funded by the Department of Energy SDI program, will be the hardest hit by ongoing budget cuts. Congress slashed funding for the Department of Energy SDI from \$514 million in 1987 to about \$300 million for 1988.

One can only guess how the cuts will affect the free electron laser program. Last year's cuts led to cancellation of one project and a decision to take only one type of FEL technology to a larger scale engineering phase at White Sands Missile Testing Range. Which of the two FEL technologies is chosen for the engineering phase, presently depends on a "horse race" between Lawrence Livermore and Los Alamos between now and July 1988.

All this is occurring despite some very promising laboratory results during 1987.

Free electron laser results. In February 1987, scientists at Stanford University High Energy Physics Lab and TRW, Inc. produced coherent blue-green laser light, the shortest wavelength of radiation ever generated from an FEL powered by a high power linear electron accelerator. In June, Boeing Corp. achieved lasing at the same wavelength with their FEL. At Stanford, the peak power achieved inside the laser was 260 megawatts at the blue-green wavelength of one-half one