
Military Debate

Which ABM systems can offer defense?

Colonel Marc Geneste, vice-president of the Paris Center for the Study of Total Strategy, and Arnold Kramish, for many years the Rand Corporation expert on Soviet nuclear-weapons development, one of the authors of the High Frontier study, and a former associate of Gen. Daniel Graham, published an article in the January issue of the French monthly strategic and military journal *Defense Nationale*. Headlined "From Terror to Defense: the Change of Umbrella," the article concludes that directed-energy-beam weapons would be the most effective defense system.

Citing President Reagan's March 23, 1983 address on ballistic-missile defense, the article states: "The creation in 1982 of a 'space command' was quite significant. But the way the President has presented his decision—which reminds us of Kennedy's pledge, 20 years ago, to conquer the Moon—is undoubtedly the sign of a 'great project' around which the administration will commit itself. . . . No argument will ever convince the Americans that they should remain indefinitely hostages at the mercy of the Soviet Union, and tomorrow, perhaps, of other nations. . . .

" . . . The most spectacular tools of the offense, the missiles, have weaknesses. . . . Everybody knows the boost phase: . . . the most minor incident is enough to offset the system and destroy the device.

"In their re-entry phase, which goes extremely fast but still lasts for a period of minutes, [the rockets'] speed is such that any hard object in their trajectory is able to throw them off."

The authors described the "High Frontier" project to put "hunters" into orbit in order to shoot anti-missile missiles against the rockets as they come out of their silos. However, they stress that a very large number of hunters is needed. "It seems obvious that if a space 'hunter' by chance is at a good range from the missiles, then interception is not a very difficult problem, given the extreme vulnerability of the device during this very sensitive phase. But chance does not always make things work so well, and a salvo of a great number of rockets would offset the system, even if a great number of them could be destroyed at the beginning. Defense would be 'saturated' by the number of invaders, and this has been the most serious flaw of all defense systems in all times, i.e., the

danger of succumbing to large numbers of assailants.

"We would have to complete, or maybe to replace, the system by another one whose features could remedy this grave weakness: arm the space 'hunters,' or shoot from the ground (or from the sea surface) projectiles whose range, initial speed, and shooting rate would be sufficient so that no attacker could pass through, whatever the number. . . . Only 'beam weapons,' lasers, for example, can solve this problem thanks to the differential leap of their intervention speed compared to that of the targeted object. The shooting rate can reach, for some lasers, 1,000 shots per second. The initial velocity of the projectiles (particle bunches, protons, electrons, neutral particles, and so forth) is essentially the speed of light and 40,000 times faster than that of the most difficult targets: the reentry vehicle during the space trajectory (when it moves at about five to seven kilometers per second)."

Geneste and Kramish explain that, in a first-generation system, it is not really necessary to destroy the target: if the missile can be made to deviate a few miles from its course, this will obliterate the effect of targeting industrial and demographic centers.

The article goes on to examine the strategic implications of beam weapons. "Presently, a massive and surprise Soviet attack against the United States, which has no civil defense, would cause more than a hundred million casualties; and, in the case of extreme tensions, the temptation might become irresistible to 'shoot first.' In that sense, 'assured vulnerability,' the mutual suicide pact on which the intellectuals of the MAD [Mutually Assured Destruction] doctrine wanted to base peace was an invitation to a 'first strike.' . . ."

Stressing that the "ultimate weapon" of any war is the soldier who will occupy the conquered territory and that the role of all other weapons is to prepare this action by land forces—and emphasizing that the Soviets have never forgotten this basic strategy—Kramish and Geneste insist on the necessity for tactical nuclear weapons in the European theater such as the neutron bomb.

"On the tactical side, Soviet thinkers are known to acknowledge that, without having first destroyed the nuclear defensive batteries, military operations are impossible; hence the need to open the blitzkrieg with a preemptive strike against the adversary's capabilities, and specifically its nuclear launchers. The famous SS-20 has this specific goal, with a precision which is assumed to be formidable. Yet, it is clear that the threat of a 'surgical strike' which some people fear, and whose success could already be made questionable with some precautionary measures (camouflage, deception, protection of launchers, and so forth), would be set aside if the SS-20s could be fully or partly shot down with the anti-missile defense mentioned earlier. . . . And in the event of attack, the enemy divisions could easily be obliterated with the adequate 'neutron bath.' . . ."

"President Reagan has given the kickoff, and wished the Soviets to follow . . . in the interest of a new security for all."