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WHILE OPPOSING REAGAN'S SDI, MOSCOW PUSHES ITS OWN STAR WARS

INTRODUCTION

At the Iceland summit with Soviet General Secretary Mikhail Gorbachev, Ronald Reagan chose not to trade away the Strategic Defense Initiative (SDI) for a reduction of nuclear arms that, while substantial, would still leave the U.S. vulnerable to nuclear attack. A major reason for Reagan's decision not to give up SDI is the knowledge that the Soviet Union has been working on its own strategic defense program for years. Moscow, in fact, deploys the only operational anti-ballistic missile (ABM) system in the world. Since 1970 it has spent roughly $80 billion more than the U.S. on building strategic defenses against ballistic missiles, bombers, and cruise missiles,[1] and today spends ten times more than the U.S. on strategic defense. The Soviet Union already may have built ground-based laser weapons capable of interfering with low-altitude U.S. satellites.

By contrast, the U.S. only recently has begun accelerated research into the weapons capabilities of directed energy devices. It has virtually no continental air defense system, and it has dismantled the only ABM site allowed by the 1972 ABM Treaty to demonstrate its faith in the doctrine of mutual assured destruction (MAD).

All in all, the USSR is ahead of the U.S. in many key areas of strategic defense. The Soviet ABM system gives Moscow valuable operational experience and keeps the production lines of anti-ballistic missiles and radars open to allow rapid production expansion. The Soviets have outinvested the U.S. in research on laser

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1. The $80 billion figure includes the cost of active ballistic missile defenses, concrete hardening of silos, civil defense, and proliferation of command and control centers.

and particle beam weapons capable of use against ballistic missiles, satellites, aircraft, and cruise missiles. They have invested more heavily than the U.S. in protecting their strategic forces with concrete hardened silos and their population with civil defenses. Moreover, they have deployed new mobile missiles which will vastly complicate U.S. nuclear targeting policy. And unlike the U.S., in addition to maintaining and upgrading an existing ABM system, they have built radars and tested surface-to-air missiles (SAMs) in a way that suggests they may be planning to deploy rapidly a nationwide anti-ballistic missile defense system.

It is precisely this Soviet potential to "break out" of the ABM Treaty by quickly building a nationwide strategic defense system that worries many U.S. defense experts and prompts them to support the Strategic Defense Initiative. What if the U.S. were to discover that the Soviet Union had begun deploying large numbers of anti-ballistic missiles and tracking radars that had been secretly manufactured and hidden in warehouses? What if U.S. intelligence indicated that these deployed ABM systems were being tied into the existing Soviet strategic defense network, which includes the Moscow ABM site, a massive air defense system possibly capable of destroying ballistic missiles, and the vast array of early warning and tracking radars that could become the basic surveillance and battle-management infrastructure for a nationwide ground-based strategic defense system? And what if all these developments occurred and the U.S. was left completely undefended and incapable of building a strategic defense system for a number of years?

The consequence of such a "breakout" by Moscow would be a strategic nightmare for the U.S. The very basis of the American deterrent--mutual assured destruction, the ability to threaten nuclear retaliation against the Soviet Union--would be called into question. Left completely undefended, the U.S. would be unable to retaliate adequately against a Soviet first strike. Not only would much of U.S. nuclear forces be destroyed if the Soviets launched a first strike, but much of what was left over would be unable to penetrate a nationwide Soviet strategic defense system. The upshot would be a United States checkmated in a strategic game of chess.

This nightmare need not occur. To prepare against a sudden Soviet breakout of the ABM Treaty the U.S. should begin preparations for the deployment of a single ground-based ABM system at the old Safeguard ABM site at Grand Forks, North Dakota, as a first installment on a nationwide strategic defense system. Building such a site is permissible under the ABM Treaty. The system chosen should be capable of defending the largest territory possible. A good candidate is the Exoatmospheric Reentry Interceptor Subsystem (ERIS), an anti-ballistic missile system currently under study that is capable of

providing partial defense of the entire North American continent by the early 1990s, for a relatively modest $3.5 billion.[2]

Announcing that the U.S. would deploy ERIS at Grand Forks would hedge against a Soviet ABM Treaty breakout. It would provide near-term limited defense of the most likely targets of Soviet nuclear attack with collateral protection of the U.S. population. As the technology becomes available, more technically sophisticated systems would be added to an ever more comprehensive and effective strategic defense system. And in the meantime, preparing for deployment would strengthen Reagan's hand at the arms control table by showing the Soviets once and for all that stalling on offensive reductions, as witnessed in Iceland, cannot pressure the U.S. into giving up its right to deploy defense weapons.

THE ROLE OF STRATEGIC DEFENSE IN SOVIET STRATEGY

Ballistic missile defense is an integral part of Soviet nuclear strategy. Soviet military planners believe that even less than perfect ballistic missile defenses can minimize the damage caused by a nuclear attack on leadership command centers, military installations, and industrial sectors of the economy.[3] They also help to protect against limited nuclear strikes launched by accident or by smaller nuclear powers such as China, France, or Great Britain. By defending strategically important targets, Soviet ballistic missile defense protects the very means by which the USSR wages war.

Offensive and defensive forces thus serve the same end in Soviet military strategy: to win a war. While this mixture of offensive and defensive strategic forces is often viewed in the West as undermining the doctrine of mutual assured destruction, in the Soviet Union it is considered the preferred warfighting force posture. On the one hand, the offensive "counterforce" doctrine to launch preemptive strikes against Western forces before they can be used against the Soviet

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2. Information provided by Lockheed Corporation.

3. Sayre Stevens, "The Soviet BMD Program," in Ashton B. Carter and David N. Schwartz, eds., Ballistic Missile Defense (Washington, D.C.: Brookings Institution, 1984), pp. 186-88.

Union serves the dual purpose of limiting damage against the homeland and reducing the Western capacity to wage war.[4] On the other hand, such passive defenses as concrete hardened silos and civil defense are intended to minimize war damage and protect the leadership, military forces, and industrial resources to achieve a military victory over the West. Thus according to Soviet military doctrine, the military mission of ballistic missile defense may be tactically defensive, but in a larger context it is strategically offensive.

This offense-defense strategy to destroy U.S. military forces while protecting the Soviet capacity to wage war serves two very important strategic purposes: 1) it promises to provide Moscow with sufficient military leverage to terminate hostilities on terms favorable to the Soviet Union; and 2) by minimizing the damage caused by U.S. attacks, it serves the larger offensive purpose of enabling Moscow to fight a protracted nuclear war against the United States. While the U.S. historically has understood nuclear strategy in terms of stability, mutual restraint, and deterrence, the Soviet Union has viewed it as a means to achieve military victory.[5]

SOVIET STRATEGIC DEFENSES

Pre-ABM Treaty Developments

The Soviet Union apparently began research on ballistic missile defense (BMD) in the late 1940s or early 1950s. In April 1960 a U-2 reconnaissance flight discovered an anti-ballistic missile testing

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4. The term counterforce refers to the ability of nuclear weapons to attack an opponent's military forces. The President's Commission on Strategic Forces (the Scowcroft Commission) reported in 1983 that the Soviet Union currently possesses a theoretical first-strike capability against U.S. land-based ICBMs. The Soviet Union's large force of prompt hard-target-kill ICBMs gives Moscow the capability to destroy with 80 percent effectiveness all the some 1,500 "value" targets in the United States (including ICBM silos, command and control centers, airfields, and submarine ports) in a preemptive strike. With their land-based ICBM force alone the Soviets could hit each of these 1500 U.S. targets with three warheads apiece. See Report of the President's Commission on Strategic Forces, (Washington, D.C.: Department of Defense, 1983). p. 4. Also see Zbigniew Brzezinski, Game Plan (Boston and New York: Atlantic Monthly Press, 1986), p. 106; and Bruce Russett & Fred Chernoff, eds., Arms Control and the Arms Race: Readings from Scientific American (New York: W. H. Freeman & Co., 1985), p. 110.

5. Stevens, op. cit., pp. 186-87. Also see Jack L. Snyder, The Soviet Strategic Culture: Implications for Limited Nuclear Operations (Santa Monica, California: Rand Corporation, 1977), p. 29.

range at Sary Shagan, Siberia, and observed BMD-related activities at a small village on the edge of Lake Balkash in Central Asia.[6] U-2 flights revealed that a major BMD program was underway by 1960 and that progress had been made on a very large radar that could track missiles for an ABM system. By 1958 an independent organization had been established within the Soviet Air Defense Forces to manage the BMD program.[7]

The first successfully deployed Soviet anti-ballistic missile was the "Galosh," first publicly displayed in 1964.[8] This was a nuclear-armed missile designed to intercept incoming ballistic missiles outside the atmosphere. The "Galosh" had a range of more than 100 miles and was first deployed in a ring 40 to 50 miles outside Moscow.[9] It depended on a network of radars: "Hen House" early warning radars around the periphery of the Soviet Union for locating targets, "Dog House" and "Cat House" radars for battle management, and "Try Add" radars for tracking and guiding the interceptors to their targets. In 1968 the Moscow ABM system consisted of four "Galosh" complexes with a total of 64 missiles.

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6. Stevens, op. cit., p. 191

7. David B. Rivkin, Jr. & Manfred R. Hamm, "In Strategic Defense Moscow is Far Ahead," Heritage Foundation Backgrounder No. 409, February 21, 1985, p. 5.

8. The first Soviet attempt to deploy a BMD system possibly came in 1962 with the preparation of launch sites around Leningrad for the "Griffon" surface-to-air missile. However, doubts about whether the "Griffon" was intended for use against ballistic missiles or high-altitude bombers such as the B-70 have led some analysts to question whether the "Griffon" had BMD capabilities. The same holds true for the SA-5 surface-to-air missile, which was first deployed in 1963. It, too, may have been intended for defense against high-altitude aircraft but may have had some capability against the U.S. Polaris A-1 sea-launched ballistic missile as well. Although the BMD capabilities of the "Griffon" and SA-5 are uncertain, one thing is nonetheless very clear: Both of these missiles were developed at the Sary Shagan BMD center. Thus if they were not eventually deployed for use against ballistic missiles, the reason possibly was technological failure and not doubts in the Soviet high military command about the utility of ballistic missile defense as such.

9. Stevens, op. cit., n. 1, p. 199; Mark Miller, Soviet Strategic Power and Doctrine: The Quest for Superiority (Bethesda, Maryland: Advanced International Studies Institute, 1982), n. 15, p. 101.

The ABM Treaty

In 1972 the Soviet Union signed the Anti-Ballistic Missile Treaty with the U.S. limiting the development, testing, and deployment of certain types of BMD systems.[10] This did not represent a total Soviet abrogation of ballistic missile defense in practice. Unlike the U.S., which dismantled its single permissible ABM system at Grand Forks, North Dakota, the Soviet Union retained its ABM system around Moscow.

Nor is it correct to assume that the Soviet Union agreed to the ABM Treaty because it accepted Western concepts of stability and deterrence. Moscow most likely agreed to the ABM Treaty for three basic reasons:

1) At the time the ABM Treaty was signed, the U.S. was about to deploy the "Safeguard" ABM system, which was more capable than the Soviet "Galosh." Moscow probably believed that a U.S. BMD system would reduce the effectiveness of the emerging Soviet "counterforce" strategy that required the capability to threaten a preemptive strike against U.S. strategic and military forces.[11]

2) The Soviets were aware that the U.S. could very likely beat them in a race in BMD technologies. Thus they probably agreed to the ABM Treaty to retard U.S. BMD research and development while they caught up in areas of technology applicable to an advanced strategic defense system.

3) In the late 1960s the U.S. for the first time was about to deploy multi-warhead missiles, known as MIRVs (multiple independently targeted reentry vehicles). A U.S. MIRVed missile force protected by a vast ballistic missile defense system would have complicated Soviet plans to develop a counterforce strategy against U.S. military forces.

In all three cases the differences between Soviet and U.S. motivations are clear: Unlike the United States, which signed the ABM

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10. The ABM Treaty allowed the United States and the Soviet Union to build two ABM sites comprising no more than 100 interceptors each. A 1974 protocol limited deployment to one ABM site. The Treaty also limited deployments of large-phased array radars for ballistic missile target acquisition, the development of mobile land-based BMD systems or components, and the development and testing of air defense missiles and radars for purposes of ballistic missile defense. See the text of ABM Treaty and the 1974 protocol in Roger P. Labrie, ed., SALT Handbook: Key Documents and Issues 1972-1979 (Washington, D.C.: American Enterprise Institute, 1979, pp. 15-22, 246-48.

11. Stevens, op. cit., pp. 203-04.

Treaty largely for fear that defensive forces would undermine strategic stability, Moscow entered into the treaty to gain strategic leverage over the United States.

Post-ABM Treaty Developments

The signing of the ABM Treaty in 1972 limited future deployments of Soviet ABM systems, but it did not end Soviet strategic defense activities. Since 1975 the Soviet Union has spent slightly more on strategic and air defenses than on its nuclear offensive forces.[12] Moreover, since 1970 Moscow has spent at least $80 billion more than the U.S. on strategic defense procurement, which includes air defense, passive defenses, and the proliferation of command and control sites.[13]

The Soviets are currently modernizing the ABM system around Moscow. The new ABM-X-3 system will have two layers of defenses: silo-based "Galosh" missiles (SH-11s) for long-range interceptions outside the atmosphere and silo-based high acceleration missiles (SH-08s) which can discriminate between real reentry vehicles and decoys inside the atmosphere. The new system will have the full allotment of 100 anti-ballistic missile launchers permitted by the ABM Treaty. It will also have an improved warning system consisting of new launch detection satellites and a new network of phased-array radars for detection and tracking that will stretch in a gigantic arch from the Caucasus mountains in southern Russia to Krasnoyarsk in eastern Siberia.

The large phased-array radar station at Krasnoyarsk is a clear violation of the ABM Treaty. It is located in the interior of the country and is pointed not outward, as required by the Treaty, but inward. The Krasnoyarsk radar's central location and orientation suggest strongly that it is intended for coordinating a defense against ballistic missile attack and not early warning as the Soviets claim. Krasnoyarsk completes a nationwide network of large phased-array radars that could be linked with existing BMD tracking radars to form a rapidly deployed nationwide ABM radar system. Another controversial Soviet radar is the "Flat Twin" tracking radar

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12. Keith B. Payne, Strategic Defense: "Star Wars" in Perspective (Lanham, Maryland and London: Hamilton Press, 1986), p. 47.

13. Moreover, while in Fiscal Year 1986 Congress funded only 74 percent of the Pentagon's request for SDI, the Soviets continued to spend ten times the U.S. level of effort on strategic defense. Report of the Secretary of Defense Caspar W. Weinberger on the FY 1987 Budget (Washington, D.C.: Government Printing Office, 1986), pp. 59-60, 75.

for the new Moscow ABM system, which potentially violates the ABM Treaty's ban on mobile radars.[14] The "Flat Twin" radar is not fixed, as is required by the ABM Treaty, but is transportable and capable of being disassembled, moved, and reassembled in a few months.

The Moscow ABM system, moreover, has been supplemented by an indeterminate number of SA-10 surface-to-air missiles, which could be used to defend against cruise missiles, and the new SA-X-12 SAM, which has the potential to intercept certain types of ballistic missiles.[15] Moscow currently has over 60 SA-10 sites operational with roughly 520 launchers and is working on at least another 30 with approximately 175 more launchers.[16] Both of these SAM systems could be used against missiles and bombers. They are mobile and could be upgraded as part of a nationwide point defense ABM system. Intelligence sources estimate, in fact, that the new SA-X-12 SAM could be used to defend SS-25 mobile missile bases, SS-18 ICBM silo complexes against submarine-launched ballistic missiles, or to intercept intermediate-range nuclear missiles such as the Pershing II.[17]

The Soviet Union launched a large research program on advanced strategic defense technologies in the late 1960s. Moscow currently has over 10,000 scientific and technical personnel working at a half-dozen research and development centers on four important areas of technologies applicable to ballistic missile defense: 1) high energy lasers; 2) particle beams; 3) radio frequency weapons; and 4) kinetic energy weapons.[18] While the U.S. is ahead of the Soviet Union in BMD-related technologies that can be applied to strategic defense in the distant future (such as microelectronics, sensors, and high-speed data processing), the Soviets are ahead in technologies which have a potential near-term application to ballistic missile defense system (such as anti-tactical ballistic missiles, radars, some lasers and particle beams).

The Soviets are ahead of the U.S. in laser weapons research and development. In 1984, Robert Cooper, then Director of the Pentagon's Defense Advanced Research Projects Agency (DARPA), claimed that Soviet

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14. U.S. Arms Control and Disarmament Agency, Soviet Noncompliance (Washington, D.C.: Government Printing Office, February 1, 1986), pp. 3-4.

15. Soviet Military Power 1986 (Washington, D.C.: Department of Defense, 1986), p. 57.

16. Soviet Military Power 1985 (Washington, D.C.: Department of Defense, 1985), p. 50.

17. Payne, op. cit., p. 56.

18. Soviet Military Power 1986, pp. 47-8.

spending on laser research was around three to five times greater than that of the U.S.[19] The Soviets built the world's first excimer laser in 1970.[20] Moreover, Moscow began work on an x-ray laser before the U.S. and may already have built one or more underground testing facilities. Intelligence reports suggest that the Soviets have begun deployment of the world's first operational ground-based laser anti-satellite system, which could also be used against ballistic missiles.[21] The Soviets have also conducted weapons tests in space from a ground-based laser stationed at Sary Shagan in Kazakhstan, a test prohibited under the 10-year ban on SDI testing proposed by the Soviets at the Iceland summit.[22] The Pentagon estimates that a Soviet ground-based laser defense against ballistic missiles could be deployed as early as the late 1990s or shortly after the year 2000.[23] If Moscow skipped some steps in testing, they could deploy a ground-based laser system against ballistic missiles by the mid-1990s.[24]

It is highly likely that the Soviet Union would deploy a laser weapon system before it was thoroughly tested. In the USSR the time between laboratory development and deployment of weapon systems is normally far less than in the U.S. While the U.S. tends to field weapons of greater technological maturity in comparatively smaller numbers, the Soviet Union often deploys weapons before they are technologically perfect. Soviet "firsts" include the first deployed intercontinental ballistic missiles (ICBMs), the first deployed submarine-launched ballistic missiles (SLBMs) and the first deployed

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19. U.S. Senate, Committee on Armed Services, Department of Defense Authorization for Appropriations for Fiscal Year 1985, 98th Congress, 2nd Session, March 8, 22, April 24, 1984, p. 2974.

20. Roger P. Main, "The USSR and Laser Weaponry: The View from Outside," Defense Systems Review, vol. 1, no. 3 (1985), pp. 67-8, 71, 76-77.

21. According to intelligence reports, the U.S. Air Force imaging reconnaissance satellite has photographed two new large high-technology facilities under construction which could be involved in developing laser weapons. One site is near Dushanbe in Soviet Central Asia. It may include both laser and microwave weapons systems. Both sites are reportedly in an advanced state of construction. See "White House Assesses Reports of Soviet Asat Laser Facilities," Aviation Week and Space Technology, September 15, 1985, p. 21.

22. "Experts Say Soviet Has Conducted Space Tests on Anti-Missile Weapons," The New York Times, October 15, 1986.

23. Soviet Military Power 1986, p. 47.

24. Soviet Military Power 1985, p. 44.

ABM, even though research on these weapons systems was at the time more advanced in the U.S.[25] Thus even though the U.S. has a more advanced general technology base than the Soviet Union, it may trail actual strategic defense deployments by the Soviets because of its penchant for deploying only highly tested, mature military weapons.

The USSR devotes at least 70 percent of its space launches to military purposes.[26] According to a 1980 U.S. Senate report, the launch tonnage capacity of Soviet rockets is about nine times greater than the annual level for the U.S.[27] Moreover, Soviet space technicians are already designing powerful rocket boosters that can carry heavy payloads into space. This puts Moscow in a far better position than the U.S. to launch lasers, sensors, and other advanced strategic defense systems quickly into space once they are developed.

SOVIET POTENTIAL FOR BREAKING OUT OF THE ABM TREATY

The considerable pace of Soviet ballistic missile defense activities suggests that Moscow may be planning to break out of the limits imposed by the ABM Treaty and deploy a nationwide strategic defense system. Breaking out could entail rapidly deploying very large numbers of ballistic missile interceptors and radars to provide significant coverage of national command, military, and industrial targets in the Soviet Union. If the Soviets alone were to construct a ballistic missile defense system, the threat of a U.S. retaliatory attack after a Soviet first strike no longer would be credible as a deterrent. Unable to respond to Soviet ABM deployments for at least a few years, the U.S. would be left with a window of vulnerability unmatched by any other threat in its history.[28]

The Soviets have the potential to deploy strategic defenses very rapidly. The Pentagon calculates that in the near future the Soviet Union could build ABM sites consisting of engagement radars, guidance radars, ground-based ABM launchers, and high acceleration interceptors

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25. Stephen M. Meyer, "Space and Soviet Military Planning," in William J. Durch, ed., National Interests and the Military Use of Space (Cambridge, Massachusetts: Ballinger Publishing Company, 1984), p. 81.

26. Soviet Military Power 1986, p. 51.

27. Testimony in 1977 by Malcolm A. Currie in Soviet Space Program: 1976-1980 (Washington, D.C.: Government Printing Office, 1982), Part 1, p. 13.

28. Stevens, op. cit., p. 316

in a matter of months rather than the years required of more traditional ABM systems.[29] The Central Intelligence Agency concludes that the Soviets "could undertake rapidly paced ABM deployments to strengthen the defenses at Moscow and cover key targets in the western USSR, and to extend protection to key targets east of the Urals, by the early 1990s."[30] The Soviets could choose to begin breaking out of the ABM Treaty tomorrow. An infrastructure of large phased-array radars for detection and guidance of ballistic missiles already exists. Moreover, if the Soviets have secretly manufactured large numbers of ABM radars and ABM-capable surface-to-air missiles, deployment of a nationwide ABM system could begin immediately and proceed quite rapidly.

If the Soviet Union decides that it can win a technological race with the U.S. in strategic defense technologies, or indeed if it believes that the U.S. will never build strategic defenses of its own, then it will have an enormous incentive to deploy at least a limited ballistic missile defense system beyond what is allowed by the ABM Treaty. This is because as the U.S. deploys counterforce systems such as the MX missile and the yet to be deployed D-5 submarine launched missile, the Soviets may want to protect their own missiles. The Kremlin may want to build a nationwide strategic defense system in order to retain the first-strike capability edge it currently enjoys.

THE U.S. RESPONSE: THE CASE FOR NEAR-TERM DEPLOYMENT

The most sensible U.S. response to this Soviet ABM Treaty breakout potential would be to prepare as soon as possible for the deployment of a U.S. ABM system. Research on far-off strategic defense technologies is necessary, but not sufficient. The Soviets could gain as much as a five-year lead over the United States in strategic defense deployments if they should decide to deploy a nationwide ABM system very quickly. U.S. deterrent forces would be blunted by the deployment of a nationwide Soviet ABM system.

Many near-term options exist for building a limited ground-based, non-nuclear U.S. ABM system in the next five to six years. Dr. James Fletcher, chairman of the 1983 commission on SDI technologies, concluded that "point" defenses of U.S. ICBM silos could be deployed immediately and that other layers of strategic defenses could be available in the near future. The U.S. could begin deployment of the

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29. Soviet Military Power 1986, p. 45

30. "Soviet Strategic Force Development," testimony before a joint session of the Senate Armed Forces Committee and the Defense Subcommittee of the Senate Committee on Appropriations, June 26, 1985, by Robert M. Gates and Lawrence K. Gershwin, pp. 5-6.

one ABM site permitted under the Treaty if it had the political will to do so. This single site, built to maximize the protection of U.S. missile sites and population centers, could be seen as a down payment on the more comprehensive strategic defense system envisioned by the Strategic Defense Initiative planners. With it the U.S. could gain valuable operational experience and a hot production line for ABM components to cope with the possibility of a Soviet breakout from the ABM Treaty.

To provide the greatest protection of American territory the U.S. could build a single ABM site with 100 ground-based launchers capable of intercepting missiles in space. The best candidate for such a defense is the Exoatmospheric Reentry Vehicle Interceptor Subsystem (ERIS), currently under development by the U.S. Army. The ERIS system will consist of a solid-fuel ground-launched interceptor rocket placed on a wheeled vehicle. It will be light-weight and capable of hitting incoming warheads at an altitude of 60 miles and 2,500 miles down range from the launch site. 100 ERIS launchers could be deployed beginning in 1993 at the old U.S. ABM site at Grand Forks, North Dakota, for a total cost of $3.5 billion (in fiscal year 1986 dollars).[31] To make ERIS even more effective, the U.S. could link the ground-based interceptor system to advanced early warning satellites and airborne optical tracking systems already under development.[32]

To ensure that a single ABM site is a step toward a more comprehensive system the Reagan Administration should:

1) Announce that the ABM site at Grand Forks represents a mere first installment on the strategic defense system that will expand as the technology becomes available. Moreover, the Administration should ensure that all references to the ABM site in arms control statements and negotiating positions refer to the need to counter the single Soviet ABM system around Moscow and the emerging Soviet potential to break out of the ABM Treaty in a relatively short period of time.

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31. This price includes the cost of missiles, upgraded radars, and battle management systems.

32. The SDI program office is currently looking at an advanced early warning satellite system called the Boost Sensor Tracking System (BSTS), which could very quickly identify ballistic missiles in their boost phase and turn data on their flight path over to a mid-course tracking system. Another candidate sensor system is the U.S. Army's Strategic Defense Command's Airborne Optical Adjunct, an early warning surveillance sensor system that could identify and track ballistic missile warheads in the mid-course. The cost of these sensor systems is not included in the listed price of ERIS. For more on near-term deployment options, see the October 1986 issue of The Heritage Foundation's National Security Record.

2) Ensure that funds for construction of the ABM site come from strategic weapons accounts or the military services' budget and not from the SDI budget for research on advanced strategic defense technologies. This would not only enable advanced strategic defense research to continue unabated but put the onus of funding an operational defensive system precisely where it belongs, namely, in the context of the clear military mission of defense and deterrence, and not on weapons research and development.

3) Base any arms control agreement with the Soviets involving SDI on the assumption that moratoriums on ABM deployments should gain time for discussing how deployment should take place, not whether it should. The Reagan proposal for a ten-year moratorium on full-scale SDI deployment made at the Iceland summit is acceptable only if the U.S. gets an unequivocal Soviet statement on the inevitable deployment of strategic defenses at the end of that period.

CONCLUSION

Since the ABM Treaty was signed in 1972 the momentum in strategic defense activities has been greater in the Soviet Union than in the United States. These activities include maintaining and modernizing the Moscow ABM system, testing air defense surface-to-air missiles against ballistic missiles, developing radars and other ABM components capable of mobility, constructing illegal large early warning radars possibly for a nationwide ABM system, and research and development of advanced directed energy weapons. Also important to Soviet strategic defense capabilities are concrete hardened ICBM silos and communication and command centers, an extensive civil defense program, and hot production lines for ABM systems which could be used to rapidly produce components of a large strategic defense system. As these BMD activities clearly demonstrate, Moscow has maintained its steadfast confidence in the military utility of limited ballistic missile defenses and has done so notwithstanding its signing the ABM Treaty.

Soviet ballistic missile defense activities are so extensive that Moscow now has the potential to break out of the ABM Treaty much more rapidly than the U.S. can respond. The deployment of a Soviet nationwide BMD system in the absence of comparable defenses on the U.S. side would render America's retaliatory nuclear deterrent largely ineffectual.

The United States, therefore, must begin building a ballistic missile defense system as soon as possible to counter not only existing Soviet missiles but the threat of a Soviet breakout of the ABM Treaty. The technology for near-term deployment already exists. All that is required is the political will to begin construction of a single ABM site at Grand Forks and the acceleration of the development and testing programs for those BMD technologies that show the most promise for near-term deployment.

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