

Star Wars?

The arms race of the future is now

Duke Skywatcher

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Related: see “Technology and the State: An Introduction” in this issue.

While the attention of the world remains, as it has now for over thirty years, on the proliferation of conventional land, air, and sea-launched nuclear-warheads and delivery systems, recent breakthroughs in the areas of theoretical and applied physics are bringing us radically new and even more frightening weapons of global catastrophe. Most people, unaware of these developments, have assumed that the technology of space warfare is still decades, or perhaps centuries, in the future. A series of seemingly unrelated anomalies, however, suggest that space warfare between the U.S. and the USSR is not only being developed for the immediate future, but that the opening battles may have already occurred.

The history of the nuclear arms race between East and West has involved a delicate balance of terror, maintained by the relative equality of speed with which each side advanced the state of the art. In the beginning, the contest was simply for possession of the bomb itself—that is, the atomic bomb, and then a little later the hydrogen bomb. Once both sides had achieved the same technological breakthroughs necessary to construct the explosive devices, the contest shifted to the realm of the intercontinental ballistic missile and the various delivery systems made possible by advances in rocketry. As these systems diversified, the race spread to include defensive objectives, through the development of monitoring devices and anti-delivery system systems.

While the military was conducting this research, the space race, under nominally civilian direction, also got underway in the wake of the successful Soviet launching in 1953 of the first earth satellite. Many elements of space research had, and continue to have, peaceful applications. But like the “peaceful atom” we were sold for so long, the Space Race immediately began to yield further breakthroughs which were essential to the arms race. The orbital earth satellite, with which space exploration began, at the present remains the primary tool of earthbound nuclear arms theoreticians to have grown out of the Space Race.

Few people outside of the top levels of government, industry, universities and the military have any conception of the extent to which satellites affect our daily lives and survival. Literally thousands of satellites have been launched into earth orbit since Sputnik I; many of these are destined within a few months or years to suffer decaying orbits, burning up in the earth’s atmosphere, or crashing to the earth’s surface. What are the purposes to which these devices have been put?

The single most important use of the satellite can be summed up in one word: surveillance. This surveillance includes an incredible diversity of technological capabilities. The public, not surprisingly, is treated to the most beneficial aspects of the satellite program: the weather satellite. Orbiting meteorological outposts send back constant information, including pictures of cloud formations, storm centers, and so forth.

What the public is less aware of are the truly awesome capabilities of military and civilian intelligence satellites. For example, in the realm of optical surveillance, the Superpowers possess orbiting cameras with a resolution sufficient to identify objects less than two feet in size. The current debate is whether these cameras are yet able

to identify people's faces; if they aren't now, they soon will be. Those who suffer from feelings of paranoia about a Big Brother future where cameras are mounted on the streets of our cities should be alarmed to find out that the cameras are already there.

Another optical device which was under development at the end of the Vietnam war was a device to see through dense foliage. Although its immediate application was (or is) as a component of the earthbound electronic battlefield, if it is successfully developed into a device to see through opaque surfaces such as walls, its use on board satellites is receiving substantial funding for research.

The uses of this surveillance capability in the realm of domestic repression and counter-insurgency is fairly obvious, and that the military and police have this use in mind already cannot be doubted. But of more interest is the potential which spy satellites have in the realm of nuclear war. Both the U.S. and the U.S.S.R. were quick to realize that satellites could keep constant track of the size and location of missile sites, as well as providing extensive and immediate details of trajectory and numbers of missiles launched in a nuclear war. The quality of such information in many respects far surpasses that of other older detection methods such as radar.

A second, and no less important use of satellites relates to communications. Again, we are treated to the peaceful uses of satellites; thanks to Telstar and its descendants, we now have the benefits of a worldwide telecommunications system, and the natives of Bangladesh enjoy the dubious privilege of being able (at least theoretically) to watch "Happy Days" on their village television sets. For the military hierarchy of the superpowers, with their worldwide commands though, instant communications to any point in the world is an increasingly vital necessity in the event of war.

A third possible use for satellites, for which according to international arms agreements made by the two superpowers is not being developed, involves the use of satellites as launch points for nuclear warheads. In view of the many lies told by the military spokesmen of both sides on a regular basis, the use of which is at least open to question. Orbital weapons systems contain the undeniable advantage over land-based systems that they cannot be defended against with a first-strike by ICBMs; instead missiles can be launched from various, continually moving positions overhead, from satellites the precise character of which is more difficult to determine than with surface based launch systems. Whether orbital launching bases are presently being constructed at this time is difficult to say with any assurance, but it is certainly one possibility to be kept in mind in view of the anomalies to be discussed below.

These three satellite capabilities—surveillance, communications, and launching platform—have brought us to the dawn of Space warfare. At this point in our history, before inter-planetary or interstellar space travel, the weapons of Space Warfare remain limited to the role of support for nuclear war strategy on the earth's surface. It may not be so limited for long, but at any rate, two distinct areas of competition have now emerged. The first is in the area of satellite-to-satellite combat; the other is in the development of light-speed, beam or "death ray" weapons.

Very little information is available on the beginnings of satellite-to-satellite combat. In the last year, however, disturbing rumors have begun to appear in the press which mention the term "hunter-killer" satellite. The strategic significance of such devices, capable of destroying one side's surveillance and communications capabilities, is obvious. A breakthrough in developing such a weapon by one side would present the other side with little ability to defend itself against an I.C.B.M. attack; if done slowly, over time, intelligence-gathering would be seriously disrupted, and if done in a concerted fashion all at once, it could be a necessary defensive prelude to a first strike.

What is known thus far is that the "hunter-killer" can be maneuvered in its orbit, to bring it alongside its target. The actual method of destruction is less clear. One possibility which has been suggested, though, is that the "hunter-killer" carries on board a neutron bomb. Because of the vacuum in space, it is not the explosive force which destroys the targeted satellite, according to this theory. Instead, the radiation released at close quarters is the important factor. Satellites contain extremely delicate electronics which are necessary to their functioning. High levels of radiation at close range would theoretically be quite sufficient to ruin any such electronic equipment.

The "hunter-killer" represents the most advanced applications of today's applied physics, operating in the realm of near space. With the revelations of May 2, 1977, on the prospects for beam weaponry, however, an entirely new principle of weaponry, dreamed of by soldiers for centuries, appears to be already on the drawing boards. Perhaps, indeed, it has already been actualized, at least in prototype form.

Charged Beam Particle Weaponry

In an article appearing in the May 2, 1977 issue of *Aviation Week and Space Technology*, it was revealed for the first time that the Soviet Union had achieved important breakthroughs in eight separate areas of theoretical and applied physics which experts in the U.S. agreed were essential for the development of a charged particle beam weapon. The article, obviously written with the close collaboration of high ranking officials in U.S. Air Force Intelligence, suggested that the Soviets also had numerous facilities of otherwise undetermined purpose which appeared to be related to beam weaponry development.

The charged particle beam in some respects resembles the laser. Both devices feature highly energized beams which travel at the speed of light. The essential difference, according to the article, is that the laser functions by concentrating light into a very narrow ray which does not spread as with ordinary light. The charged particle beam weapon, on the other hand, features a stream, not of light, but of charged atomic particles. The resulting stream could focus enormous quantities of power and radiation on a target at great distances.

In the article, several possible uses for such weaponry—both charged particle and laser—were suggested. The primary use of the charged particle beam which was suggested was as a neutralizer of the other side's ICBMs. ICBMs because of their high altitude trajectories, must return to earth through certain "windows." By setting up as many as 150 of these beam weapons in silos throughout the USSR, Air Force officers suggested, one could rapidly plot the windows for any U.S. ICBMs launched toward the Soviet Union. Then by merely aiming the charged particle beam weapons at the windows, the warheads could be destroyed within a few seconds of firing.

This is what makes beam weaponry so attractive to military officials. Unlike all previous weapon systems in history, the delivery system functions at light speed. Even over tremendous distances, a target can be destroyed not in days, or hours, or minutes, but in the blinking of an eye.

The article also discussed advances in laser technology affecting the strategy of nuclear warfare. Interestingly enough, it too related to Space Warfare. It was suggested that a highly charged laser of the sort now under development could be used to blind or destroy surveillance and communications satellites essential to the coordination of a nuclear war. This hypothesis includes the potential for both earth and orbiting locations for the laser weapons.

One other facet of the article which should be mentioned with respect to the anomalies to be noted below concerned underground testing now being conducted in the Soviet Union. Some officials believe that the use of liquid hydrogen in huge quantities is a necessary pre-requisite of charged particle beam weaponry. Its uses include cushioning the nuclear explosive generating sphere which would be required, and cryogenic pumping of large tubes through which the beam would be tested underground. In both cases, large quantities of gaseous hydrogen are formed and released into the atmosphere, where they drift upward carrying with them large quantities of radioactive debris. These discharges could then be detonated in the atmosphere. According to the officials, such discharges are being detected with regularity from Soviet experimental facilities.

Anomaly No. 1 and Some Hypotheses

In late January 1978, a Soviet satellite plummeted to earth in the Northwest territories of Canada. Although satellites crash to earth with some regularity, what differed about this incident was the fact that the satellite was carrying over 100 pounds of Uranium-235. Uranium-235 is a highly radioactive, weapons grade metal, used primarily for nuclear power plant fuel and nuclear weapons.

Almost a month later, it's possible to sort through the reports and find a wealth of contradictory and inconclusive stories. Both the US and the USSR agreed that the satellite was a "spy-satellite," and that the nuclear fuel was an on-board reactor to provide energy for its equipment. Yet news reports also contained opinions by independent scientists that challenged the official statements as to the purpose of the satellite and its nuclear fuel.

The most perplexing question was why a spy satellite would require such a large quantity of nuclear fuel. Solar energy collectors are tremendously effective sources of energy outside the earth's atmosphere; sending nuclear power into space to provide energy for which suggested that rotting garbage off New York City was disintegrating

into clouds of methane gas which then detonated spontaneously in the atmosphere. Very few people gave this theory any credence and the absence of such deposits in the Gulf of Mexico casts further doubt on this hypothesis.

The other theory was the sonic boom hypothesis. This also seemed somewhat incredible. The blasts were measured at a strength exceeding 100 tons of dynamite, far beyond the power of sonic booms from military aircraft. Furthermore, the FAA consistently denied that any aircraft were in the vicinity of the booms at the times when they occurred.

The absence of any serious attempt by the government to explain or investigate these blasts, however, is the most astonishing aspect of the mystery. No such phenomenon is known to have ever occurred before. Yet the media, the government, and the military do not seem the least interested in discovering the source of these blasts.

An attempt to synthesize the developments in Space Warfare with what is known about the blasts, though, presents us with two very credible explanations. The first hypothesis can be deduced from an interview with an unnamed Air Force general which was conducted during the early mystery over the blasts in December, and reported in several East Coast papers.

A reporter asked this general whether the US was testing any neutron bomb type hunter-killer satellites at the present time. The general replied that we were not. The reporter then asked whether, if we were testing such a device, it would create an atmospheric disturbance of the sort which had been occurring. The general replied in the affirmative.

Was the general deceiving the public in stating that we were not using or testing such a device? Of course, we have no way of knowing for certain. But we might consider, by referring back to Anomaly No. 1, the fact that US officials maintained that they had known for approximately one month that the Soviet satellite which crashed in the Canadian wilderness was suffering a decaying orbit. One month prior to the crash was precisely the time at which the mystery blasts were occurring. Is it possible that the mystery blasts were the result of a hunter-killer attack on a Soviet satellite? This is certainly a reasonable hypothesis.

Our second hypothesis is based on the information now known about the testing of charged particle beam weapons. As mentioned above, one by-product of the testing and use of a charged particle beam weapon is the release of huge invisible clouds of radioactive waste and hydrogen gas. The gas floats up into the air, where it is detonated to alleviate possible contamination on the planet's surface. This phenomenon sounds suspiciously like "methane gas", doesn't it?

This hypothesis might also include the downing of the Soviet satellite, as a byproduct of having actually used a charged particle beam weapon, or perhaps the two were totally unrelated. But what is certain is, that, in the space of less than two months, the population of this planet has been exposed to two anomalous phenomena—the mystery blasts and falling radioactive satellites—for which no satisfactory explanation has been advanced by the agencies supposedly responsible for protecting the public from disasters. And not only has there been no explanation—there doesn't appear to be any interest on the part of the government in investigating or explaining the phenomena to the public.

The fact of extensive research in space warfare is no longer a secret, but the dangers to which this warfare will expose the people of this planet are still shrouded in bureaucratic obfuscation and mystery. If we are to survive the sources of new, ever more deadly machines of carnage and destruction, and the dangerous by-products of their research and development, we must begin to anticipate the next generation of crimes which society's "leaders" are perpetrating upon us, while we carry on the struggle against the last. We must begin to ask for answers to these mysteries, and more importantly, we must make sure that we get them.

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