Edward Teller's Pitch to President Reagan for SDI

I wish to bring to your attention of a very real and dangerous situation that threatens not only us, the world, but our very existence as a race. For over forty years I have been involved in developing advanced technologies in the defense of this country which would insure our security, freedom, and our form of government from surprise attack. As you must be aware, the Defense Department has initiated several space defense programs of vast proportions and at great expense. But there is a new and alarming development of which I am compelled to inform you of. A menace greater that the nuclear arms race exists. It does not originate here on earth but comes from space itself. The agent of mass destruction has no reasoning psychology other than the ultimate destruction of our civilization and our way of life as we know it.

Obtaining critical information of this menace has been hard and time consuming and the facts seem to be tangled among dark threats of ultimate destruction; our innate fear of the unknown has interfered with our ability to comprehend it. A space attack could be real in the near future bringing with it the truth that our inaction global war could be immensely accelerated. No longer can the United States be in the position which it found itself in 1947. This was realized and in January 1950 President Truman made the decision to go ahead with a defense program exceeding in scope and cost of the Manhattan Project. Late in President Eisenhower's office, several attempts

was made to limit further development by prohibiting the testing of space defense weapons. A moratorium was entered into, a "gentlemen's agreement" whereby Russia and the United States concurred that testing be halted until further notice.

Unfortunately, secrecy and denial has prevented further work of which I now propose. A more detailed proposal is difficult to address in my brief, especially since I want it to be realistic and acceptable. Yet such a proposal is made here, both to give warning of what could happen and to begin a concrete discussion on the Space Defense Initiative program. The Defense Department could continue "classification" of critically key information of knowledge collected in 1947 and, therefore, its secrecy in its present form. Only a small number of documents might need to be kept secret for longer periods, but in those cases a few highly responsible persons would have to certify, year by year, that continued secrecy be maintained. What I wish to impress upon you is the need for absolute secrecy for the real reasons for a space defense. The real danger is the existence of secrecy can not be kept secret for ever. Our scientists will not turn to national defense unless they perceive an actual danger to the United States. A danger was perceived in 1939, only two years before Pearl Harbor. It is vital to the program that scientists should perceive the danger now, before it is too late. What is at stake is not only the prevention of defeat, but the prevention of cosmic war. Nevertheless, convincing the American people that military research is necessary is a difficult thing.

I am not speaking of another arms race, but rather a race of technology. One individual familiar with military technology and engineering of special intelligence, Dr. John S. Foster, Jr., estimates that in 1960 the United States and the USSR spent equal percentages of their military budgets on space defense and research and development, while in 1974 that percentage was three times as high in Russia as in the United States. The quality of future space defense weapons depends more on research and development than on any other factor; the obvious recommendation is that we should spend more on it. Today we spend approximately 10 percent, so this recommendation does not seem too difficult to implement.

Space defense plays important roles in military affairs, particularly in communications and intelligence gathering. Both of these functions apt to become increasingly important in the future. An extension of our information gathering, including continuous surveillance of deep space, should have high priority. This could be done in two ways. One is to increase our ability to launch satellites of all needed varieties within a short time. The other is to provide decoys in space, thereby multiplying the number of targets the enemy would have to knock out. A combination of these two procedures could, indeed, avert the enemy from taking out all our space vehicles. A third possibility is to prepare retaliation against the enemy by destroying their space vehicles. But, at least in regard to the important item of information gathering, the enemy relies on stealth more than their spacecraft than we do; therefore emphasis on the first two

two approaches is recommended. In preparing decoys for space vehicles, the main objective would be for decoys to look like space vehicles that function like real ones. On the whole, this is not too difficult. Usually the main problem with a decoy is its mass. In order for a decoy to be inexpensive it must be light, but usually the light weight gives it away--for instance, in meeting air resistance, a lighter vehicle is more easily slowed down. Exceedingly little air resistance is encountered by space vehicles. Therefore, lightweight decoys for space vehicles are more feasible than decoys for almost any other application.

Remotely piloted vehicles (RPVs) have been developed and tested with marginal success. The possibility of RPVs exist for the enemy as well for us. The use of RPVs was first explored by the U.S. Air Force. It can also be applied to small space objects. An ingenious new circular airfoil design is now in experimental stage. A single wing is used in this design. Another design is also under development. This one uses a single wing as well, pivoting at its center at the fuselage. The wing is at right angles to the plane at takeoff and landing, but as the right wing points forward while the left points backward. A third design is the triangle-shaped wing and is the focus of intense development of which I have personal knowledge of.

There is the possibility that chemical and biological warfare may be used by the enemy. The fact that these forms of warfare may be inflicted upon us from space only fires my

persistence in having the President consider my proposal seriously for a broad and comprehensive Space Defense Initiative.

There are several fronts which must be considered in my proposal to the President. We must boost spending in new, more powerful radar. We must encourage more research programs for lasers. And, we must investigate the use of microwave and pulse energy devices along with directed energy weapons in space defense systems. Particle beams are effective over vast distances and could aid in space defense against intruding enemy spacecraft.

Progress toward such an objective, since the end of World War II, has occurred in discouragingly small steps. Even so, we cannot afford to give up hope; we cannot afford to stop taking small steps. By the same token, we cannot afford not thinking of taking big ones. What I suggest is a big gamble but what if that gamble pays off through a major break through in technology? We have the talent. We have the means. All that is lacking is the political will and determination to succeed. We must not hesitate nor falter. I believe all that I propose is possible and can be done. I ask that you weigh the risks and the benefits and consider what the alternative offers if we fail.

Presidential Approval [ ] Yes
[ ] No