CURRENT
SPECIAL EDITION

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"Star Wars"

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NEW YORK TIMES 24 MARCH 1983 Pg. 20

President's Speech on Military Spending and a New Defense

Special to The New York Times

WASHINGTON, March 23 — Following is the text of President Reagan's speech tonight, as made available by the White House:

Thank you for sharing your time with me tonight. The subject I want to discuss with you, peace and national security, is both timely and important — timely because I have reached a decision which offers a new hope for our children in the 21st century — a decision I will tell you about in a few minutes — and important because there is a very big decision that you must make for yourselves. This subject involves the most basic duty that any President and any people share — the duty to protect and strenghen the peace.

At the beginning of this year, I submitted to the Congress a defense budget which reflects my best judgment, and the best understanding of the experts and specialists who advise me, about what we and our allies must do to protect our people in the years ahead.

That budget is much more than a long list of numbers, for behind all the numbers lies America's ability to prevent the greatest of human tragedies and preserve our free way of life in a sometimes dangerous world. It is part of a careful, long-term plan to make America strong again after too many years of neglect and mistakes. Our efforts to rebuild America's defenses and strengthen the peace began two years ago when we requested a major increase in the defense program. Since then the amount of those increases we first proposed has been reduced by half through improvements in management and procurement and other savings. The budget request that is now before the Congress has been trimmed to the limits of safety. Further deep cuts cannot be made without seriously endangering the security of the nation. The choice is up to the men and women you have elected to the Congress — and that means the choice is up to you.

Tonight I want to explain to you what this defense debate is all about, and why I am convinced that the budget now before the Congress is necessary, responsible and deserving of your support. And I want to offer hope for the future.

But first let me say what the defense debate is not about. It is not about spending arithmetic. I know that in the last few weeks you've been bombarded with numbers and percentages. Some say we need only a 5 percent increase in defcnse spending. The so-called alternate budget backed by liberals in the House of Representatives would lower the figure to 2 to 3 percent, cutting our defense spending by $163 billion over the next five years. The trouble with all these numbers is that they tell us little about the kind of defense program America needs or the benefits in security and freedom that our defense effort buys for us.

What seems to have been lost in all this debate is the simple truth of how a defense budget is arrived at. It isn't done by deciding to spend a certain number of dollars. Those loud voices that are occasionally heard charging that the Government is trying to solve a security problem by throwing money at it are nothing more than noise based on ignorance.

We start by considering what must be done to maintain peace and review all the possible threats against our security. Then a strategy for strengthening peace and defending against those threats must be agreed upon. And finally our defense establishment must be evaluated to see what is necessary to protect against any or all of the potential threats. The cost of achieving these ends is totaled up and the result is the budget for national defense.

There is no logical way you can say let's spend X billion dollars less. You can only say, which part of our defense measures do we believe we can do without and still have security against all contingencies? Anyone in the Congress who advocates a percentage or specific dollar cut in defense spending should be made to say what part of our defenses he would eliminate, and he should be candid enough to acknowledge that his cuts mean cutting our commitments to allies or inviting greater risk or both.

The defense policy of the United States is based on a simple premise: The United States does not start fights. We will never be an aggressor. We maintain our strength in order to deter and defend against aggression — to preserve freedom and peace.

Since the dawn of the atomic age, we have sought to reduce the risk of war by maintaining a strong deterrent and by seeking genuine arms control. Deterrence means simply this: Making sure any adversary who thinks about attacking the United States or our allies or our vital interests concludes that the risks to him outweigh any potential gains. Once he understands that, he won't attack. We maintain the peace through our strength; weakness only invites aggression.

This strategy of deterrence has not changed. It still works. But what it takes to maintain deterrence has changed. It took one kind of military force to deter an attack when we had far more nuclear weapons than any other power; it takes another kind now that the Soviets, for example, have enough accurate and powerful nuclear weapons to destroy virtually all of our missiles on the ground. Now this is not to say the Soviet Union is planning to make war on us. Nor do I believe a war is inevitable — quite the contrary. But what must be recognized is that our security is based on being prepared to meet all threats.

There was a time when we depended on coastal forts and artillery batteries because, with the weaponry of that day, any attack would have had to come by sea. This is a different world and our defenses must be based on recognition and awareness of the weaponry possessed by other nations in the nuclear age.

We can't afford to believe we will never be threatened. There have been two world wars in my lifetime. We didn't start them and, indeed, did everything we could to avoid being drawn into them. But we were ill-prepared for both — had we been better prepared, peace might have been preserved.

For 20 years, the Soviet Union has been accumulating enormous military might. They didn't stop when their forces exceeded all requirements of a legitimate defensive capability. And they haven't stopped now.

The Soviet Gains

During the past decade and a half,

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the Soviets have built up a massive arsenal of new strategic nuclear weapons — weapons that can strike directly at the United States.

As an example, the United States introduced its last new intercontinental ballistic missile, the Minuteman III, in 1969, and we are now dismantling our even older Titan missiles. But what has the Soviet Union done in these intervening years? Well, since 1969, the Soviet Union has built five new classes of ICBM's, and upgraded these eight times. As a result, their missiles are much more powerful and accurate than they were several years ago and they continue to develop more, while ours are increasingly obsolete.

The same thing has happened in other areas. Over the same period, the Soviet Union built four new classes of submarine-launched ballistic missiles and over 60 new missile submarines. We built two new types of submarine missiles and actually withdrew 10 submarines from strategic missions. The Soviet Union built over 200 new Backfire bombers, and their brand new Blackjack bomber is now under development. We haven't built a new long-range bomber since our B-52's were deployed about a quarter of a century ago, and we've already retired several hundred of those because of old age. Indeed, despite what many people think, our strategic forces only cost about 15 percent of the defense budget.

Medium-Range Nuclear Arms

Another example of what's happened: In 1978, the Soviets had 600 intermediate-range nuclear missiles based on land and were beginning to add the SS-20 — a new, highly accurate mobile missile, with three warheads. We had none. Since then the Soviets have strengthened their lead. By the end of 1979, when Soviet leader Brezhnev declared "a balance now exists," the Soviets had over 800 warheads. We still had none. A year ago this month, Mr. Brezhnev pledged a moratorium, or freeze, on SS-20 deployment. But by last August, their 800 warheads had become more than 1,200. We till had none. Some freeze. At this time Soviet Defense Minister Ustinov announced "approximate parity of forces continues to exist." But the Soviets are still adding an average of three new warheads a week, and now have 1,300. These warheads can reach their targets in a matter of a few minutes. We still have none. So far, it seems that the Soviet definition of parity is a box score of 1,300 to nothing, in their favor.

So, together with our NATO allies, we decided in 1979 to deploy new weapons, beginning this year, as a deterrent to their SS-20's and as an incentive to the Soviet Union to meet us in serious arms control negotiations. We will begin that deployment late this year. At the same time, however, we are willing to cancel our program if the Soviets will dismantle theirs. This is what we have called a zero-zero plan. The Soviets are now at the negotiating table — and I think it's fair to say that without our planned deployments, they wouldn't be there.

Conventional Forces

Now let's consider conventional forces. Since 1974, the United States has produced 3,050 tactical combat aircraft. By contrast, the Soviet Union has produced twice as many. When we look at attack submarines, the United States has produced 27, while the Soviet Union has produced 61. For armored vehicles including tanks, we have produced 11,200. The Soviet Union has produced 54,000, a nearly 5-to-1 ratio in their favor. Finally, with artillery, we have produced 950 artillery and rocket launchers while the Soviets have produced more than 13,000, a staggering 14-to-1 ratio.

There was a time when we were able to offset superior Soviet numbers with higher quality. But today they are building weapons as sophisticated and modern as our own.

As the Soviets have increased their military power, they have been emboldened to extend that power. They are spreading their military influence in ways that can directly challenge our vital interests and those of our allies. The following aerial photographs, most of them secret until now, illustrate this point in a crucial area very close to home — Central America and the Caribbean Basin. They are not dramatic photographs but I think they help give you a better understanding of what I'm talking about.

Largest in the World

This Soviet intelligence collection facility less than 100 miles from our coast is the largest of its kind in the world. The acres and acres of antenna fields and intelligence monitors are targeted on key U.S. military installations and sensitive activities. The installation, in Lourdes, Cuba, is manned by 1,500 Soviet technicians, and the satellite ground station allows instant communications with Moscow. This 28-square mile facility has grown by more than 60 percent in size and capability during the past decade.

In western Cuba, we see this military airfield and its complement of modern Soviet-built MIG-23 aircraft. The Soviet Union uses this Cuban airfield for its own long-range reconnaissance missions, and earlier this month two modern Soviet antisubmarine warfare aircraft began operating from it. During the past two years, the level of Soviet arms exports to Cuba can only be compared to the levels reached during the Cuban missile crisis 20 years ago.

This third photo, which is the only one in this series that has been previously made public, shows Soviet military hardware that has made its way to Central America. This airfield with its MI-8 helicopters, antiaircraft guns and protected fighter sites is one of a number of military facilities in Nicaragua which has received Soviet equipment funneled through Cuba and reflects the massive military build-up going on in that country.

Grenada's Large Airfield

On the small island of Grenada, at the southern end of the Caribbean chain, the Cubans, with Soviet financing and backing, are in the process of building an airfield with a 10,000-foot runway. Grenada doesn't even have an air force. Who is it intended for? The Caribbean is a very important passageway for our international commerce and military lines of communication. More than half of all American oil imports now pass through the Caribbean. The rapid build-up of Grenada's military potential is unrelated to any conceivable threat to this island country of under 110,000 people, and totally at odds with the pattern of other eastern Caribbean States, most of which are unarmed. The Soviet-Cuban militarization of Grenada, in short, can only be seen as power projection into the region, and it is in this important economic and strategic area that we are trying to help the governments of El Salvador, Costa Rica, Honduras and others in their struggles for democracy against guerrillas supported through Cuba and Nicaragua.

These pictures only tell a small part of the story. I wish I could show you more without compromising our most sensitive intelligence sources and methods. But the Soviet Union is also supporting Cuban military forces in Angola and Ethiopia. They have bases in Ethiopia and South Yemen near the Persian Gulf oilfields. They have taken over the port we built at Cam Ranh Bay in Vietnam, and now, for the first time in history, the Soviet Navy is a force to be reckoned with in the South Pacific.

Question of Soviet Intentions

Some people may still ask: Would the Soviets ever use their formidable military power? Well, again, can we afford to believe they won't? There is Afghanistan, and in Poland, the Soviets denied the will of the people and, in so doing, demonstrated to the world how their military power could also be used to intimidate.

The final fact is that the Soviet Union is acquiring what can only be considered an offensive military force. They have continued to build far more intercontinental ballistic missiles than they could possibly need simply to deter an attack. Their conventional forces are trained and equipped not so much to defend against an attack as they are to permit sudden, surprise offensives of their own.

Our NATO allies have assumed a great defense burden, including the military draft in most countries. We are working with them and our other friends around the world to do more. Our defensive strategy means we need military forces that can move very quickly — forces that are trained and ready to respond to any emergency.

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Every item in our defense program — our ships, our tanks, our planes, our funds for training and spare parts — is intended for one all-important purpose — to keep the peace. Unfortunately, a decade of neglecting our military forces had called into question our ability to do that.

Situation in January 1981

When I took office in January 1981, I was appalled by what I found: American planes that could not fly and American ships that could not sail for lack of spare parts and trained personnel and insufficient fuel and ammunition for essential training. The inevitable result of all this was poor morale in our armed forces, difficulty in recruiting the brightest young Americans to wear the uniform and difficulty in convincing our most experienced military personnel to stay on.

There was a real question, then, about how well we could meet a crisis. And it was obvious that we had to begin a major modernization program to insure we could deter aggression and preserve the peace in the years ahead.

We had to move immediately to improve the basic readiness and staying power of our conventional forces, so they could meet — and therefore help deter — a crisis. We had to make up for lost years of investment by moving forward with a long-term plan to prepare our forces to counter the military capabilities our adversaries were developing for the future.

I know that all of you want peace and so do I. I know too that many of you seriously believe that a nuclear freeze would further the cause of peace. But a freeze now would make us less, not more, secure and would raise, not reduce, the risks of war. It would be largely unverifiable and would seriously undercut our negotiations on arms reduction. It would reward the Soviets for their massive military buildup while preventing us from modernizing our aging and increasingly vulnerable forces. With their present margin of superiority, why should they agree to arms reductions knowing that we were prohibited from catching up?

A Change in Direction

Believe me, it wasn't pleasant for someone who had come to Washington determined to reduce Government spending, but we had to move forward with the task of repairing our defenses or we would lose our ability to deter conflict now and in the future. We had to demonstrate to any adversary that aggression could not succeed and that the only real solution was substantial, equitable and effectively verifiable arms reduction — the kind we're working for right now in Geneva.

Thanks to your strong support, and bipartisan support from the Congress, we began to turn things round. Already we are seeing some very encouraging results. Quality recruitment and retention are up, dramatically — more high school graduates are choosing military careers and more experienced career personnel are choosing to stay. Our men and women in uniform at last are getting the tools and training they need to do their jobs.

Ask around today, especially among our young people, and I think you'll find a whole new attitude toward serving their country. This reflects more than just better pay, equipment and leadership. You the American people have sent a signal to these young people that it is once again an honor to wear the uniform. That's not something you measure in a budget, but it is a very real part of our nation's strength.

It will take us longer to build the kind of equipment we need to keep peace in the future, but we've made a good start.

Bombers and Submarines

We have not built a new long-range bomber for 21 years. Now we're building the B-1. We had not launched one new strategic submarine for 17 years. Now, we're building one Trident submarine a year. Our land-based missiles are increasingly threatened by the many huge, new Soviet ICBM's. We are determining how to solve that problem. At the same time, we are working in the Start and I.N.F. negotiations, with the goal of achieving deep reductions in the strategic and intermediate nuclear arsenals of both sides.

We have also begun the long-needed modernization of our conventional forces. The Army is getting its first new tank in 20 years. The Air Force is modernizing. We are rebuilding our Navy, which shrank from about 1,000 in the late 1960's to 453 ships during the 1970's. Our nation needs a superior Navy to support our military forces and vital interests overseas. We are now on the road to achieving a 600-ship Navy and increasing the amphibious capabilities of our marines, who are now serving the cause of peace in Lebanon. And we are building a real capability to assist our friends in the vitally important Indian Ocean and Persian Gulf region.

This adds up to a major effort, and it is not cheap. It comes at a time when there are many other pressures on our budget and when the American people have already had to make major sacrifices during the recession. But we must not be misled by those who would make defense once again the scapegoat of the Federal budget.

Change in Spending Pattern

The fact is that in the past few decades we have seen a dramatic shift in how we spend the taxpayer's dollar. Back in 1955, payments to individuals took up only about 20 percent of the Federal budget. For nearly three decades, these payments steadily increased and this year will account for 49 percent of the budget. By contrast, in 1955, defense took up more than half of the Federal budget. By 1980, this spending had fallen to a low of 23 percent. Even with the increase I am requesting this year, defense will still amount to only 28 percent of the budget.

The calls for cutting back the defense budget come in nice simple arithmetic. They're the same kind of talk that led the democracies to neglect their defenses in the 1930's and invited the tragedy of World War II. We must not let that grim chapter of history repeat itself through apathy or neglect.

Yes, we pay a great deal for the weapons and equipment we give our military forces. And, yes, there has been some waste in the past. But we are now paying the delayed cost of our neglect in the 1970's. We would only be fooling ourselves, and endangering the future, if we let the bills pile up for the 1990's as well. Sooner or later these bills always come due, and the later they come due, the more they cost in treasure and in safety.

Appeals to Congress

This is why I am speaking to you tonight — to urge you to tell your Senators and Congressmen that you know we must continue to restore our military strength.

If we stop in midstream, we will not only jeopardize the progress we have made to date — we will mortgage our ability to deter war and achieve genuine arms reductions. And we will send a signal of decline, of lessened will, to friends and adversaries alike.

One of the tragic ironies of history — and we've seen it happen more than once in this century — is the way that tyrannical systems, whose military strength is based on oppressing their people, grow strong while, through wishful thinking, free societies allow themselves to be lulled into a false sense of security.

Free people must voluntarily, through open debate and democratic means, meet the challenge tha totalitarians pose by compulsion.

It is up to us, in our time, to choose, and choose wisely, between the hard but necessary task of preserving peace and freedom and the temptation to ignore our duty and blindly hope for the best while the enemies of freedom grow stronger day by day.

The solution is well within our grasp. But to reach it, there is simply no alternative but to continue this year, in this budget, to provide the resources we need to preserve the peace and guarantee our freedom.

Hope for the Future

Thus far tonight I have shared with you my thoughts on the problems of national security we must face together. My predecessors in the Oval Office have appeared before you on other occasions to describe the threat posed by

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NEW YORK TIMES
24 March 1983 Pg.1

REAGAN PROPOSES U.S. SEEK NEW WAY TO BLOCK MISSILES

By STEVEN R. WEISMAN
Special to The New York Times

WASHINGTON, March 23 — President Reagan, defending his military program, proposed tonight to exploit advances in technology in coming decades so the United States can develop an effective defense against missiles launched by others.

In effect, Mr. Reagan proposed to make obsolete the current United States policy of relying on massive retaliation by its ballistic missiles to counter the threat of a Soviet nuclear attack.

In a television address from the White House, he coupled his proposal with his strongest appeal yet for his Administration's program to increase military spending.

Decades Away From Reality

Mr. Reagan outlined his vision of a new strategic doctrine, which he said was decades away from reality.

Using charts, graphs and photographs — some of them recently declassified for tonight's speech — Mr. Reagan reviewed in detail what he said was the buildup of Soviet military forces in recent years. His Administration's program, he said, is needed because of "our neglect in the 1970's."

"Sooner or later these bills always come due, and the later they come due,

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Soviet power and have proposed steps to address that threat. But since the advent of nuclear weapons, those steps have been directed toward deterrence of aggression through the promise of retaliation — the notion that no rational nation would launch an attack that would inevitably result in unacceptable losses to themselves. This approach to stability through offensive threat has worked. We and our allies have succeederd in preventing nuclear war for three decades. In recent months, however, my advisers, including in particular the Joint Chiefs of Staff, have underscored the bleakness of the future before us.

Over the course of these discussions, I have become more and more deeply convinced that the human spirit must be capable of rising above dealing with other nations and human beings by threatening their existence. Feeling this way, I believe we must throroughly examine every opportunity for reducing tensions and for introducing greater stability into the strategic calculus on both sides. One of the most important contributions we can make is, of course, to lower the level of all arms, and particularly nuclear arms. We are engaged right now in several negotiations with the Soviet Union to bring about a mutual reduction of weapons. I will report to you a week from tomorrow my thoughts on that score. But let me just say I am totally committed to this course.

Specter of Retaliation

If the Soviet Union will join with us in our effort to achieve major arms reduction we will have succeeded in stabilizing the nuclear balance. Nevertheless it will still be necessary to rely on the specter of retaliation — on mutual threat, and that is a sad commentary on the human condition.

Would it not be better to save lives than to avenge them? Are we not capable of demonstrating our peaceful intentions by applying all our abilities and our ingenuity to achieving a truly lasting stability? I think we are — indeed, we must!

After careful consultation with my advisers, including the Joint Chiefs of Staff, I believe there is a way. Let me share with you a vision of the future which offers hope. It is that we embark on a progam to counter the awesome Soviet missile threat with measures that are defensive. Let us turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today.

Up until now we have increasingly based our strategy of deterrence upon the threat of retaliation. But what if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack; that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?

A Long Effort

I know this is a formidable technical task, one that may not be accomplished before the end of this century. Yet, current technology has attained a level of sophistication where it is reasonable for us to begin this effort. It will take years, probably decades, of effort on many fronts. There will be failures and setbacks just as there will be successes and breakthroughs. And as we proceed we must remain constant in preserving the nuclear deterrent and maintaining a solid capability for flexible response. But is it not worth every investment necessary to free the world from the threat of nuclear war? We know it is!

In the meantime, we will continue to pursue real reductions in nuclear arms, negotiating from a position of strength that can be insured only by modernizing our strategic forces. At the same time, we must take steps to reduce the risk of a conventional military conflict escalating to nuclear war by improving our nonnuclear capabilities. America does possess — now — the technologies to attain very significant improvements in the effectiveness of our conventional, nonnuclear forces. Proceeding boldly with these new technologies, we can significantly reduce any incentive that the Soviet Union may have to threaten attack against the United States or its allies.

An Identity of Interests

As we pursue our goal of defensive technologies, we recognize that our allies rely upon our strategic offensive power to deter attacks against them. Their vital interests and ours are inextricably linked — their safety and ours are one. And no change in technology can or will alter that reality. We must and shall continue to honor our commitments.

I clearly recognize that defensive systems have limitations and raise certain problems and ambiguities. If paired with offensive systems, they can be viewed as fostering an aggressive policy and no one wants that.

But with these considerations firmly in mind, I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace: to give us the means of rendering these nuclear weapons impotent and obsolete.

Tonight, consistent with our obligations under the ABM Treaty and recognizing the need for close consultation with our allies, I am taking an important first step. I am directing a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles. This could pave the way for arms control measures to eliminate the weapons themselves. We seek neither military superiority nor political advantage. Our only purpose — one all people share — is to search for ways to reduce the danger of nuclear war.

My fellow Americans, tonight we are launching an effort which holds the purpose of changing the course of human history. There will be risks, and results take time. But with your support, I believe we can do it.

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Continued

the more they cost in treasure and in safety," Mr. Reagan said. "This is why I am speaking to you tonight — to urge you to tell your Senators and Congressmen that you know we must continue to restore our military strength."

Defends Arms Reduction Plans

Mr. Reagan also used his speech to defend his Administration's arms reduction proposals to the Soviet Union, but for the first time he hinted publicly that he might be ready to modify his proposal for banning all Soviet and American medium-range nuclear missiles from Europe.

Administration officials said today that Mr. Reagan was prepared to modify his so-called "zero-zero" missile proposal and recommend instead new and lower equal limits on Soviet and American missiles. These officials said Mr. Reagan might make his proposal next week in a speech in Los Angeles, and the President said he would address the issue at that time.

The speech tonight was aimed at defending his proposal to increase military spending by 10 percent in 1984. The proposal is under attack from Democrats and Republicans in both the House of Representatives and the Senate.

Just 33 minutes before the President spoke, the House approved by a vote of 229 to 196 the Democratic leadership's 1984 budget proposal, which the Democrats say provides an increase of 4 percent in military spending. In his address, the President contended that the Democrats had actually proposed a military program with growth of only 2 to 3 percent.

Most of the President's speech was devoted to a familiar litany of the Soviet threat as the Administration sees it.

The most innovative part came toward the end, when Mr. Reagan said he had recently begun rethinking the foundation for the American strategic doctrine. That doctrine of massive retaliation is based on the United States ability to counter any Soviet attack with a nuclear attack of its own.

"Since the advent of nuclear weapons," Mr. Reagan said, the United States has based its defense on "deterrence of aggression through the promise of retaliation — the notion that no rational nation would launch an attack that would inevitably result in unacceptable losses to themselves.

"This approach to stability through offensive threat has worked," Mr. Reagan said. "We and our allies have succeeded in preventing nuclear war for three decades."

Recently, however, Mr. Reagan said his advisers "have underscored the bleakness of the future before us" under this doctrine. At the same time, he said, there has been great technological progress enabling the United States to rethink whether "massive retaliation" would remain appropriate in the decades ahead.

"Would it not be better to save lives than to avenge them?" Mr. Reagan asked. "Are we not capable of demonstrating our peaceful intentions by applying all our abilities and our ingenuity to achieving a truly lasting stability? I think we are. Indeed, we must!"

Mr. Reagan then proposed a program to exploit American technology and achieve ways of destroying Soviet or other missiles launched against the United States.

"I know this is a formidable technical task, one that may not be accomplished before the end of this century," he said, adding that he was calling on American scientists to help in the effort.

At a White House briefing, senior Administration officials said the United States now spends about $1 billion a year on ballistic missile technology. They said the Administration would prepare a program for increasing this amount in the next several months.

They said the program might involve such technologies as lasers, microwave devices, particle beams and projectile beams. These devices, most of which are in a very early stage of development, in theory could be directed from satellites, airplanes or land-based installations to shoot down missiles in the air.

Scientists have felt that the beam defenses could revolutionize the concept of nuclear strategy because, up to now, the idea of shooting missiles down after they were launched has been deemed impractical.

More than a decade ago, the Soviet Union and the United States signed and ratified a treaty on "defensive" strategic weapons, then known as the Anti-Ballistic Missile Treaty. At the time many scientists regarded ballistic missile systems as unworkable.

At the time, the rationale for the treaty was seen as an acknowledgement by the two superpowers that there was essentially no defense against a nuclear attack. But many experts felt that if one side acquired such an ability, it might then be tempted to strike first against the other, believing that it could defend itself in return.

'No One Wants That'

Tonight Mr. Reagan made an allusion to this danger, saying he recognized that "defensive systems" lead to "certain problems and ambiguities" and that "they can be viewed as fostering an aggressive policy and no one wants that."

At the White House briefing, a senior Administration official said Mr. Reagan's proposal to embark on research on defensive missile systems represented no threat to the Russians. Nor did it violate the Anti-Ballistic Missile Treaty, he said, because that treaty barred the deployment, but not research and development, of such systems.

He said the United States would consult with its allies and with the Russians before deploying any such system. He and others thus emphasized that Mr. Reagan's proposal tonight should not be seen as an aggressive move. Rather he emphasized that it might lead to eventual arms reductions and less reliance on a policy of "basing your security on threatening others."

The official said Mr. Reagan was aware that the Russians might fear that the United States was seeking a "first-strike" ability by seeking a defensive system. "This is in no sense his intention," the official said. The commitment tonight, he said, was for research to be completed by "the turn of the century."

The bulk of Mr. Reagan's address was devoted to more familiar and less difficult to understand reviews of Soviet and United States military forces.

Although the recent debate in Congress has been over whether to subscribe to Mr. Reagan's request for a 10 percent increase in military spending, as opposed to lesser increases, Mr. Reagan said the debate should not be "about spending arithmetic."

He then challenged his opponents not to counter with lower percentages, but to name specific programs they would delete in cutting the military budget. Despite this challenge, he avoided some of the harsh oratory of the last week. He did not repeat his assertion that the Democratic proposals would bring "joy to the Kremlin," for example.

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WASHINGTON POST 24 MARCH 1983 Pg.15

Missile-Defense Plan Could Bring Breakthrough, Revive Debate

By Michael Getler
Washington Post Staff Writer

President Reagan's proposal to focus U.S. scientific skill on ways to shoot down Soviet missiles represents a bold gamble that could lead to a revolutionary military breakthrough or make his already controversial defense policies even more so.

In announcing his plan last night for an all-out research program to see if "we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies," Reagan sought to raise the notion that the wave of the future could be a shift from offensive to defensive weapons development.

Such an idea could have some popular appeal. It could take some attention away from weapons of mass destruction, such as the new MX missile. It could also take some steam out of the nuclear freeze movement. It might make people feel more secure, the president noted last night, in that it offers an alternative to automatic and instant retaliation if Soviet missiles are fired.

But Reagan's proposal also could reopen the bitter debate that flourished here in 1969 and 1970 over whether this country should try to build an anti-ballistic missile (ABM) defense system.

In 1972 the United States and the Soviet Union finally signed a treaty allowing each country to build a defense around a single city or military base, and banning anything more. The United States did not even activate the one site allowed because it was widely assumed then that ABMs don't work and that the offense can always overwhelm the defense.

The idea behind the ABM treaty was that defense was potentially dangerous and destabilizing because it might lead either superpower to think it could safely attack, then shoot down the other side's remaining missiles when it tried to retaliate. In short, the United States and Soviet Union agreed to leave their countries hostage so as to ensure that neither would strike first.

In his speech last night Reagan acknowledged all the pitfalls. It is still not at all clear that missiles can be shot down, and it may take until the end of the century to figure out if it is possible. And, he said, "I clearly recognize that . . . if paired with offensive systems, they [ABMs] can be viewed as fostering an aggressive policy, and no one wants that."

NEWS ANALYSIS

Nevertheless, it is precisely those issues on which critics undoubtedly will focus: whether it will lead in the end to a breach of the ABM treaty and a potentially destabilizing quest by both superpowers for nuclear superiority based on having a defense as well as an offense.

Such an accelerated program is certain to be even more expensive than the $1 billion already spent annually on such research. There will be charges that countermeasures can always be developed against any defense, and that the program is so long-range that another administration will probably stop it before it can produce much.

On the other hand, Reagan has done something rare. He has launched a new technological crusade, not as specific as the race to the moon, but at least potentially important, to see if American technological prowess can achieve a radical shift in emphasis that might "free the world from the threat of nuclear war."

Because this project was launched from the White House, it is apt to be taken more seriously and to be more controversial than if it came from the Pentagon.

Such a crusade is almost certain to rattle the Kremlin because it tends to emphasize American technological strength. Although the Soviets have always seemed more interested than the United States in ABM systems and have made a more vigorous research and development effort, most technical experts believe that the Soviets do not have an appreciable lead on this country.

Many technical specialists believe that if there were ever an ABM race the United States would win. The questions remain, however, of whether any system will really work and whether a country might miscalculate and launch an atomic attack because it thinks, perhaps mistakenly, that its system will work.

Henry Kendall, a physics professor at the Massachusetts Institute of Technology and chairman of the Union of Concerned Scientists, said last night that "the Soviet Union would not stand idly by while we deploy such a system that might effectively disarm them."

Kendall suggested that the Soviets might even try to attack the system before it is completed.

"It is a very provocative system, and a very dangerous nuclear arms race in space would result," he said.

REAGAN'S VISION

Space-age defense to stop missiles

Special for USA TODAY

USA TODAY
24 March 1983 Pg. 1

WASHINGTON — President Reagan proposed Wednesday a major shift in USA defense strategy: a new high technology system to destroy incoming Soviet nuclear missiles.

Reagan said the new system might change "the course of human history." But Sen. Edward Kennedy, D-Mass., immediately called it a "reckless Star Wars scheme."

In outlining the new defense system, Reagan:

- Did not give specifics on how it would work or its cost.
- Said development might not be completed by 2000.
- Called for a massive scientific development effort similar to A-bomb of the 1940s.

USA policy currently is retaliation — the Soviets know if they attack the USA, it has the weapons to devastate them.

White House officials say a plan advanced a year ago by the conservative Heritage Foundation is the kind Reagan envisioned.

It includes defensive missiles at existing USA missile silos; a network of 432 satellites, armed with heat-seeking missiles to destroy Soviet missiles soon after launch; and satellites, able to destroy Soviet missiles in mid-flight.

Reagan urges development of space defense program

DALLAS MORNING NEWS
24 March 1983
Page 1

By William J. Choyke
Washington Bureau of The News

WASHINGTON — President Reagan, sending a clear signal to the Soviet Union, suggested Wednesday night that the United States turn away from the nuclear policy of offensive deterrence and accelerate research in exotic technology designed to knock out Soviet missiles in space.

The president, who also exhibited pictures of Soviet intelligence and military facilities in the Caribbean as evidence of the growing Soviet threat, said the futuristic defense system is intended to destroy Soviet missiles in flight and render "these nuclear missiles impotent and obsolete."

Less than a half hour before his speech, Reagan received a setback to his requested 9.5 percent increase in 1984 defense growth when the House approved a Democratic budget plan that called for cutting that increase in half. While he didn't dwell on his fight with Congress, he did ask the American people to urge their lawmakers to support his efforts "to restore our military strength."

In a nationally televised speech, the president did not renounce the 11-year-old anti-ballistic missile treaty with the Soviets, but said that "defensive technologies" raise the greatest opportunity to attain world peace.

Currently, the United States has no missile defense system. Rather, the policy is designed to deter a Soviet first-strike by maintaining a survivable, retaliatory strike force through land-based and sea and air launched nuclear missiles.

Reagan said his proposal to undertake the space defense program is intended to "achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles."

"This could pave the way for arms control measures to eliminate the weapons themselves," he continued. "We seek neither military superiority nor political advantage. Our only purpose — one all people share — is to search for ways to reduce the danger of nuclear war."

The suggestion, coming at a critical time in negotiations with the Soviets on both intermediate and strategic missiles, conveys to the Soviets that without significant reductions in nuclear arms the United States would embark on an expensive missile defense program.

It also throws in question whether the administration will seek to renegotiate a space treaty with the Soviets that expired last year. The treaty prohibited the stationing of anti-missile weapons in space.

Senior administration officials, who briefed reporters before the speech under guidelines they not be identified, said the plan envisioned a "full complement" of microwave devices, laser beams, particle beams and projectile beams. They cautioned that such a system probably would not be ready until the 21st century.

The administration officials said in the early years the advanced technology defense program would receive in the vicinity of $1 billion annually. Although details have not been worked out, officials said the project would involve the scientific communities at the Pentagon, other government agencies and the private sector.

Currently, the approximately $220 million budgeted for space defense programs is spent mostly on surveillance satellites, radar and information-processing systems. An air-launched rocket that could be used to intercept Soviet "killer" satellites has been developed by Vought Corp. of Dallas, under an Air Force contract that dates back to 1977, but it is still being tested by the Air Force Space Division.

The concept of the president's suggestion tracks a widely-publicized proposal issued last year by the Heritage Foundation, a conservative Washington-based study group with strong ties to the administration. In its "High Frontier" report, the group said a space defense program of missile-killing satellites designed to detect and destroy Soviet ICBMs as they leave their silos would revolutionize U.S. strategic defense.

Since the president has not made a specific proposal, it is uncertain what, if any, congressional approval he needs to embark on research and development. However, Sen. John Tower, the Texas Republican who directs the Senate Armed Services Committee, said the initiative "holds out a great deal of promise for future deterrence of nuclear war and restoration of stability to the world."

Reagan also resorted to charts and graphs to once again emphasize that the Soviet build-up has placed the United States in a precarious military situation. One photograph showed a Soviet intelligence field, complete with acres of antenna fields and monitors, in Cuba, less than 100 miles from the U.S. coast.

Another picture portrayed a Cuban airfield and its complement of Soviet MIG23s while another showed a 10,000-foot runway built with Soviet backing on the tiny island of Grenada. While three of the four pictures had previously not been made public, they disclosed little that had not been publicly discussed before.

LOS ANGELES TIMES 24 March 1983 Pg. 1

Reagan Orders Search for U.S. Missile Defense

Wants to Develop Technological Shield in Space Against Warheads to Replace Nuclear Deterrence

By ROBERT C. TOTH and GEORGE SKELTON, *Times Staff Writers*

WASHINGTON—Holding out the vision of an America no longer threatened by nuclear holocaust, President Reagan on Wednesday ordered the start of a long-term search for a missile defense system that would use space-age technology to intercept enemy warheads before they reached the United States.

"Tonight we are launching an effort which holds the promise of changing the course of human history," Reagan declared in a television broadcast aimed at rebuilding support for his embattled defense policies. The new approach, he said, "offers a new hope for our children in the 21st Century."

Fundamentally, the President called for developing a technological shield against strategic missiles that would supplant the policy of relying on the relatiatory threat of ever-more-frightening nuclear weapons to deter attack.

Far in the Future

Reagan acknowledged that such a defensive umbrella lies far in the future. "It will take years, probably decades, of effort on many fronts," he said, "to give us the means for rendering these (offensive) nuclear weapons impotent and obsolete."

In the meantime, he asserted, the public must pressure Congress to support his $244.5-billion defense budget, which has run into determined opposition on Capitol Hill. The House on Wednesday voted $9.3 billion less for defense than the President wants.

To "stop in midstream," Reagan said, would "mortgage our ability to deter war and achieve genuine arms reductions. And we will send a signal of decline, of lessened will, to friends and adversaries alike."

The President's call for development of a new strategic missile defense came unexpectedly, near the end of a speech in which he used previously classified intelligence photographs of Soviet military installations in Central America and the Caribbean, including a huge Russian intelligence facility at Lourdes, Cuba, to demonstrate what he called the continuing expansion of Moscow's military might.

After consultations with the Joint Chiefs of Staff, Reagan said, he is "directing a comprehensive and intensive effort to define a long-term research and development program" to devise a non-nuclear missile defense system based on weapons ranging from conventional shrapnel to sophisticated lasers."

"What the President is trying to do," a senior White House official told reporters, "is open the door to the next century so we can get away from these hair-trigger missile systems." The official briefed reporters on condition that he not be identified.

In his speech, the President sought to reassure U.S. allies in Europe as well as the American people that he is a man of peace, who seeks both to reduce the threat of offensive nuclear weapons and to devise new defenses against them.

He promised to report next week on negotiations with Moscow on arms-control talks. There is widespread expectation that, under pressure from Europe, Reagan will modify his present zero-option offer to forgo deployment of 572 new U.S. ballistic and cruise missiles on the Continent if the Soviets dismantle their more than 600 medium-range missiles.

Opposition Is Expected

His call for intensified missile-defense research—which eventually will cost more than the $1 billion a year now being spent on such studies—could erode support in the United States for the nuclear freeze movement and other such positions by offering hope that offensive weapons may one day be made out of date.

But the Administration's push for missile defenses is certain to spark opposition from dedicated arms-control experts, some of whom have long feared that if either side has such a defense, pressure on the other side to mount a surprise attack will be increased, not reduced. The current Soviet-American treaty limiting anti-ballistic missiles to under 100 on each side is based on the belief that defensive missiles would be destabilizing to the nuclear balance.

Reagan promised to comply with the ABM treaty, which presidential aides said does not prohibit the research and development effort he proposed. The Soviets have had a more ambitious effort of this kind, officials said, but have not achieved significant success.

Reagan also said he recognizes "that defensive systems have limitations and raise certain problems and ambiguities. If paired with offensive systems," he said, "they can be viewed as fostering an aggressive policy, and no one wants that."

But he proposed to proceed "boldly" with new technologies toward a missile defense system that would "end the specter of retaliation" and introduce "a truly lasting stability" in superpower relations.

"I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace; to give us the means of rendering these nuclear weapons impotent and obsolete," he said.

Precisely what kind of missile defense programs will be undertaken is not known, senior Administration officials said. "We have avoided endorsing a single potential technology to pursue," one official said, "because there is not enough data yet."

But he named "lasers, microwave (systems), particle beams, projectiles" among the existing concepts that will be candidates for future intensified study.

Included among the projectiles to be studied would be missiles that would, upon exploding, create an umbrella of steel shrapnel or pellets

SEARCH ORDERED. . . Pg. 9

BOSTON GLOBE 28 March 1983 Pg. 4

Weinberger's apparent key role in Reagan's antimissile proposal

By Jeffrey Antevil
Reuter

WASHINGTON – Defense Secretary Caspar W. Weinberger apparently played a key role in bringing the idea of an antimissile system to President Ronald Reagan's attention several weeks before the President publicly embraced it.

NEWS ANALYSIS

Administration officials who confirmed Weinberger's part in shaping the antiballistic missile proposal also said some senior advisers argued unsuccessfully against including it in Reagan's televised speech on defense issues Wednesday night.

But the ABM debate did not simply pit the White House on one side against the Pentagon on the other.

In fact, some Pentagon arms specialists have raised serious questions about the feasibility and cost of defending Americans against a Soviet missile attack, and conservative groups fear the Defense Department may be a major obstacle to the plan.

Reagan told reporters yesterday the idea had been "kicking around in my mind for some time" and he brought it up at a meeting with the Joint Chiefs of Staff several weeks ago.

But senior officials said the military chiefs had raised the subject at a meeting with Reagan, and Weinberger, who was present, knew in advance that they planned to do so.

Asked if in fact the Joint Chiefs had taken their lead from the Weinberger, a Pentagon official replied: "Nothing comes out of here than doesn't have his imprimatur on it."

Senior Administration officials who briefed reporters on the ABM plan said some presidential aides had pointed out "shortcomings" of the proposal and argued it might detract from an appeal for higher defense spending, which they viewed as the major purpose of the speech.

Among the substantive issues they raised was the likelihood of critics asserting that an ABM system would violate several treaties and would create the impression of abandoning US allies in favor of "a fortress America."

But Reagan decided to go ahead with the speech, coupling his call for an intensive scientific search for protection against nuclear missiles with a staunch defense of his proposed $245-billion military spending budget for next year.

Reagan tried in his speech to answer criticism in advance, denying that research on an ABM system without actually deploying one would violate treaty obligations and strongly reaffirming the US commitment to deter a nuclear attack on the allies.

The charge of violating treaties, including the 1972 ABM pact, was duly registered after the speech, by the Soviet news agency Tass among others, but most domestic criticism focused on Reagan's call for a military buildup to match Moscow's "margin of superiority" rather than on the ABM proposal.

In the official Democratic response to the speech, Sen. Daniel Inouye of Hawaii said:

"The President attempted to instill fear in the hearts of the American people, to raise the specter of a Soviet armed nuclear attack and to divert our attention from the dismal failure of his economic policies.

"Indeed, he left the impression that the United States is at the mercy of the Soviet Union," Inouye said, adding: "Most respectfully, Mr. President, you know that is not true."

SEARCH ORDERED...
Continued

through which incoming warheads would have to pass, tearing themselves to shreds in the process.

Lasers are beams of intense light that can quickly make a target so hot that its internal mechanisms fail. Particle beams are essentially "atom-smashers" that shoot neutrons like tiny bullets into a target.

Early missile-defense efforts, including the ABM system that now guards Moscow and the U.S. system that was designed but never built, contained nuclear warheads to obliterate incoming missiles. However, the blast from such weapons would blind the defender's radar and other electronic measures against further use and would cause numerous casualties on the ground.

But non-nuclear ABM schemes also have serious drawbacks, such as being unable to tell the difference between real and decoy warheads as they arrive. Ground-based lasers would lose too much power as the beam penetrated the atmosphere. Particle beam weapons would require energy comparable to the output of the Grand Coulee Dam, according to some defense scientists.

The easiest interception of an enemy missile would take place as it rose from its launching pad, when its rocket exhausts could be tracked and before its multiple warheads separated.

WASHINGTON POST
24 March 1983 Pg.1

President Seeks Futuristic Defense Against Missiles

Speech Says Soviets Building 'An Offensive Military Force'

By Lou Cannon
Washington Post Staff Writer

President Reagan last night called for a futuristic research and development effort aimed at providing a space or ground-based defense against Soviet intercontinental ballistic missiles by the end of the century.

A senior administration official said that the proposal, which was designed to dramatize the president's call for nuclear arms reductions, would take "decades to reach fruition," but Reagan described it as "an effort which holds the promise of changing the course of human history."

"We seek neither military superiority nor political advantage," Reagan said. "Our only purpose—one all people share—is to search for ways to reduce the danger of nuclear war."

The president did not discuss any specific arms reduction proposals in his nationally televised speech, which was devoted mostly to the theme that the Soviets were building "an offensive military force" that could be used to attack the United States or its European allies.

But Reagan said that he would give his views on this issue on March 31, when he is expected in a Los Angeles speech to propose an interim plan for reducing but not eliminating intermediate-range nuclear weapons in Europe.

In his speech last night, Reagan warned that "the Soviets have built up a massive arsenal of new strategic nuclear weapons—weapons that can strike directly at the United States."

He also contended that the Soviets have extended their power to the Western Hemisphere with installations in Cuba and the Caribbean island nation of Grenada and with military aid to Nicaragua.

"They are spreading their military influence in ways that can directly challenge our vital interests and those of our allies," the president said.

Administration officials acknowledged that the president's speech was timed carefully to coincide with the congressional debate on his defense budget. The speech was cast so that it focused not on the increases in military spending that Reagan is requesting but on the nature of the Soviet threat.

Reagan illustrated his talk with graphs showing the dimensions of the Soviet buildup and with aerial photographs—some of them classified until last night—which purported to show Soviet fighter planes and intelligence headquarters in Cuba, Soviet weaponry in Nicaragua and a new airplane runway in Grenada. The Nicaragua photo had been made public previously.

"These pictures only tell a small part of the story," Reagan said. "I wish I could show you more without compromising our most sensitive intelligence sources and methods. But the Soviet Union is also supporting Cuban military forces in Angola and Ethiopia. They have bases in Ethiopia and South Yemen near the Persian Gulf oil fields. They have taken over the port we built at Cam Ranh Bay in Vietnam, and now, for the first time in history, the Soviet navy is a force to be reckoned with in the South Pacific."

Reagan asked rhetorically whether the Soviets would ever use "their formidable military power," and answered his own question by saying: "Well, again, can we afford to believe they won't? There is Afghanistan, and in Poland, the Soviets denied the will of the people and, in so doing, demonstrated to the world how their military power could also be used to intimidate."

Reagan also suggested that the Soviets were willing to wage a nuclear war, saying that "they have continued to build far more intercontinental ballistic missiles than they could possibly need simply to deter an attack."

An administration official said that the televised speech, which has been under discussion in the White House for several weeks, was an attempt by the president to "regain the political offensive" on the defense issue.

Polls taken for the administration show a steady decline of public support for the president's defense stand, with a majority of Americans favoring reductions in the military budget.

Reagan referred obliquely to the growing opposition to his defense policies, and in the process criticized advocates of a nuclear freeze, an issue that will be voted on in the House after the Easter recess.

"... A freeze now would make us less, not more, secure, and would raise, not reduce, the risks of war," Reagan said. "It would be largely unverifiable and would seriously undercut our negotiations on arms reduction."

In a White House briefing before the president's speech, administration officials were vague on the details of Reagan's call for "a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles."

CONTINUED NEXT PAGE

SPECIAL EDITION -- "STAR WARS"

USA TODAY 24 March 1983 Pg. 1

Reagan: USA needs defense buildup

Special for USA TODAY

WASHINGTON — President Reagan Wednesday defended his $1.5 trillion, five-year defense buildup, saying the USA must remain strong while trying to end the arms race.

Reagan's network TV speech was aimed at justifying current massive Pentagon budgets and at showing he is pursuing an eventual end to the nuclear arms race.

But even as Reagan prepared to give the speech, the Democratic-controlled House was rejecting the basic call for increased military spending. By a vote of 229 to 196, it approved a 1984 budget that would trim the defense buildup by $30 billion.

Also, Democratic congressional leaders asked the television networks for equal time to respond to Reagan.

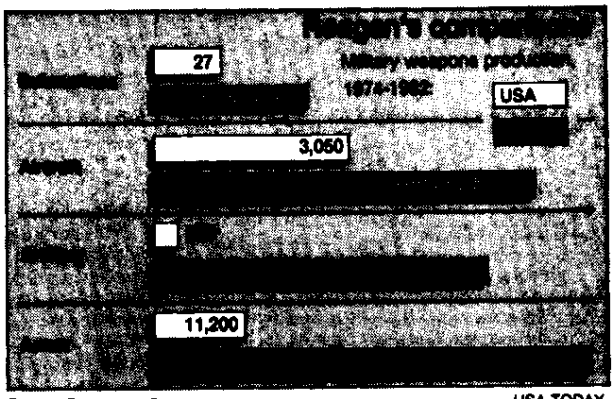
The president bolstered his argument by using some previously secret photographs of a Soviet intelligence-gathering facility in Cuba, the Soviet missile buildup there and in Nicaragua and an airbase under construction in Grenada.

The Soviet arms in Cuba, he said, "can only be compared" to the buildup there during the Cuban missile crisis two decades ago. Such actions, he warned, mean the Soviets "are spreading their military influence in ways that can directly challenge our vital interests."

The president insisted that the Soviets have "demonstrated to the world how their military power could be used to intimidate," and are arming not just for self-defense but to enable "sudden, surprise offensives" against others.

In defense of his military buildup, Reagan said Pentagon spending has already been "trimmed to the limits of safety" and that further cuts would "endanger the security" of the USA.

He warned of the temptation to "ignore our duty and blindly hope for the best while the enemies of freedom grow stronger day by day."



Source: President's TV speech

USA TODAY

The president's call for a new defense policy, his aides said, would not change his intention to negotiate arms reductions now.

The speech, to be followed next week by a proposal for a new arms control negotiating position with the Soviets, is part of a campaign to enlist support for the administration's national security program.

Reagan invited a string of former defense, national security and military officials to the White House Wednesday.

The White House hope is that those officials will not only support Reagan's plans, but publicly aid in the White House lobbying effort to get the country behind the president.

PRESIDENT...Continued

About $1 billion is currently being spent on such efforts by the United States, officials said, and even greater amounts by the Soviet Union.

Officials said that if scientists respond to the president's call they would expect to propose budget increases within the current fiscal year, but gave no estimates on the degree of any stepped-up effort.

They said that the expenditures would be consistent with the anti-ballistic missile (ABM) treaty with the Soviets, which expressly permits spending for research and development. The officials dismissed questions that such defensive measures might be destabilizing because they would encourage a superpower to launch a first nuclear strike, believing they could stop the other side's missiles.

But in his speech, Reagan expressed generalized concern about the problems associated with an ABM system.

"I clearly recognize that defensive systems have limitations and raise certain problems and ambiguities," Reagan said. "If paired with offensive systems, they can be viewed as fostering an aggressive policy and no one wants that."

Last night's speech was carefully orchestrated by White House officials, who have become sensitive both about news leaks and about prior lack of coordination in administration efforts to present the military budget in a positive light.

On Tuesday, network correspondents were informed that there would be "major news" in the speech last night, news that was deliberately kept both from communications director David R. Gergen and White House spokesman Larry Speakes. Yesterday, the president's call for the research and development on ABM was then carefully leaked to some of the same correspondents in an effort to get some, but not all, of the story told on the evening newscasts.

The White House also invited past dignitaries, as well as prominent nuclear scientists, for dinner in the State Dining Room. The list of those who attended included four former secretaries of defense, four former national security advisers and two former secretaries of state, among them Alexander M. Haig Jr. But the most prominent invited guest, Henry A. Kissinger, did not come, nor did the two secretaries of state in the Carter administration, Cyrus R. Vance and Edmund S. Muskie.

House Speaker Thomas P. (Tip) O'Neill Jr. (D-Mass.) and Senate Minority Leader Robert C. Byrd (D-W.Va.) issued a joint statement describing the speech as directed at the defense budget, rather than national security. They asked the major networks for air time to reply.

WASHINGTON TIMES 24 March 1983 Pg.1

Reagan calls for a 'total defense'

By Bill Kling
WASHINGTON TIMES STAFF

President Reagan last night proposed a sweeping United States scientific and technological program to develop a new totally defensive weapons system to"intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies."

Development of such a system, expected to take the rest of this century, would free the United States of reliance solely on the threat of an offensive retaliatory missile strike to deter a strategic Soviet nuclear attack, the president said.

Calling the program "a vision of the future which offers hope" for peaceful resolution of the nuclear arms race, Reagan suggested to a national television audience that the United States "turn to the very strengths in technology that spawned our great industrial base and that have given us the quality of life we enjoy today."

While Reagan's remarks, delivered from the Oval Office in the White House, were not specific on the type of technology he had in mind, senior administration officials told reporters the list could include laser and microwave systems and particle and projectile beams, both space- and earth-based.

Reagan's speech, which a senior White House official earlier in the day said would "launch a new initiative in American strategic policy that offers a hope for dramatically reducing the possibility of nuclear conflict over the long term," underscored administration efforts to win congressional approval of more defense spending in the face of a marked increase in Soviet military and strategic power.

The president made public newly declassified high-altitude photographs showing a huge Soviet intelligence-gathering installation in Cuba, Soviet military equipment in Nicaraugua and a modern Soviet-financed airfield under construction in Grenada as evidence of Soviet expansion in the Western Hemisphere.

Reagan said his proposed defense budget now before Congress "has been trimmed to the limits of safety," and that "deep cuts cannot be made without seriously endangering the security of the nation."

"The defense policy of the United States is based on a simple premise: The United States does not start fights." Reagan said. "We will never be an aggressor. We maintain out strength in order to deter and defend against aggression — to preseve freedom and peace."

The president noted that the United States and the Soviet Union are engaged in arms reduction talks in Geneva.

"If the Soviet Union will join with us in our effort to achieve major arms reduction, we will have succeeded in stabilizing the nuclear balance," he said. "Nevertheless it will still be necessary to rely on the specter of retaliation — on mutual threat — and that is a sad commentary on the human condition.

"Would it not be better to save lives than to avenge them? Are we not capable of demonstrating our peaceful intentions by applying all our abilities and our ingenuity to achieving a truly lasting stability? I think we are — indeed, we must!

Asserting that he has discussed his new initiative with his security advisers, including the Joint Chiefs of Staff, Reagar acknowledged that it "is a formidable technical task, one that may not be accomplished before the end of this century."

"Yet," he said, "current technology has attained a level of sophistication where it is reasonable for us to begin this effort. It will take years, probably decades, of effort on many fronts. There will be failures and setbacks just as there will be successes and breakthroughs. And as we proceed we must remain constant in preserving the nuclear deterrent and maintaining a solid capability for flexible response. But is it not worth every investment necessary to free the world from the threat of nuclear war?"

At a White House press briefing before the speech, senior administration officials declined to speculate on how much money the development of such a new defensive system would cost, nor would they set limits on the scope or type of technological approaches to the development, rather giving the American scientific community free rein in dealing with Reagan's challenge.

The officials did not rule out a defensive weapons system such as High Frontier, a proposed network of satellites capable of intercepting any missiles fired on the United States.

"It (High Frontier) is a concept to look at," one official said.

While Reagan appeared on television, his speech was watched in the president's White House residence by members of his Cabinet and a number of former ranking government officials of his and earlier administrations of both parties.

They included former Defense Secretaries Clark Clifford, Elliot Richardson and Donald Rumsfeld, former Secretaries of State William Rogers and Alexander Haig, and former presidential national security advisers McGeorge Bundy, Zbigniew Brzezinski and Richard Allen.

Deputy White House Press Secretary Larry Speakes said invitations were made to former Secretaries of State Henry Kissinger, Cyrus Vance, Dean Rush and Edmund Muskie, but all could not attend.

BOSTON GLOBE 24 MARCH 1983 Pg. 11

The President and his shift to new defense

By William Beecher
Globe Staff

WASHINGTON – In essence, President Ronald Reagan says he would like to rely more on Buck Rogers and less on Dr. Strangelove to protect the United States from nuclear attack.

NEWS ANALYSIS

Since the Soviet Union acquired strategic weapons, the United States has premised its defense on a threat of massive retaliation if the Russians launched nuclear war against this country or against its NATO allies.

In the argot of strategic planners, this is called "assured destruction," meaning that attacking the United States or its allies would guarantee the destruction of much of the attacker's society.

But last night Reagan announced an ambitious, long-term scientific effort to see whether exotic new defense technologies might hold promise of destroying incoming nuclear weapons, allowing a shift of emphasis to strategic defense.

Senior officials at the White House said this would include such things as high energy lasers and particle beam weapons, technologies the Soviets are known to be working on, too.

"Up until now," the President said, "we have increasingly based our strategy of deterrence upon the threat of retaliation.

"But what if free people could live secure in the knowledge that their security did not rest upon the threat of instant US retaliation . . . that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?"

Reagan conceded this represents a "formidable" task which might not produce working systems "before the end of this century." But he insisted he was determined to try to break the cycle of reliance on ever more devastating offensive systems to deter war.

Senior aides insisted the President has been itching to find a way of de-emphasizing offensive systems since he came to office, and only last month was encouraged by the Joint Chiefs of Staff to place significant new emphasis on advanced defensive technology.

Certainly at a time when both the nuclear freeze movement in the United States and the antimissile movement in Western Europe are questioning whether Reagan is really sincere about arms control and whether he might be contemplating under certain circumstances waging nuclear war, last night's surprising focus on a major new effort at strategic defense is probably good politics.

Whether it will lead to good new strategic systems and doctrine will be determined well after Reagan has left the Presidency.

The President also hinted last night that in one week's time he will make an important announcement on nuclear arms control. It is understood he will make a speech in Los Angeles on March 31 announcing an intention to offer a compromise proposal seeking an interim agreement on medium range missiles in Europe.

Senior officials, in backgrounding reporters before the speech, said the United States is currently spending on the order of $1 billion annually on a whole range of defensive technologies, ranging from antiballistic missiles to lasers and particle beams. These latter technologies are known as directed energy weapons. The Soviets, the officials said, have an even larger overall program in these areas.

For years there had been a rousing debate within the defense and intelligence communities on how big and how successful were the Soviet programs in such far-out fields and whether the United States should move from basic research into weapons applications.

Apparently the debate has now been resolved in terms of taking the Russian effort very seriously and deciding on a greater seriousness on America's part.

In the report on Soviet military power released by the Pentagon earlier this month, the Russians were said to be working on "a very large, directed energy research program including the development of laser-beam weapons systems which could be based either in the USSR, aboard the next generation of Soviet [antisatellite weapons] or aboard the next generation of Soviet manned space stations."

The report said further that a prototype space-based laser system to attack American space satellites could be launched in the late 1980s or "very early" 1990s. An operational system wouldn't be far behind, it was claimed.

"Space-based (antiballistic missile) systems could be tested in the 1990s, but probably would not be operational until the turn of the century," the Pentagon said. The report was prepared by the Defense Intelligence Agency but was concurred in by the Central Intelligence Agency, officials said at the time it was released.

Reagan said he was calling on the nation's best scientists and engineers "to give us the means of rendering [offensive] nuclear weapons impotent and obsolete."

He insisted that success in this effort could "pave the way for arms control measures to eliminate" strategic offensive missiles and bombers.

The President, in a seeming aside, said he recognized the potential hazard that if one side develops an effective defense, in combination with a strong offense this could be seen as threatening by the Soviet Union. He insisted, however, that he had no intention of fostering with such a combination of weapons an "aggressive," destabilizing policy.

WALL STREET JOURNAL 24 March 1983 Pg. 3

President Asks New Anti-Missile Research That Would Make Nuclear Arms 'Obsolete'

By WALTER S. MOSSBERG
Staff Reporter of THE WALL STREET JOURNAL

WASHINGTON—Scrambling to save his arms buildup in Congress, President Reagan said military spending is the key to peace and called for new anti-ballistic missile research to eventually make nuclear weapons "obsolete."

In a nationally televised address that came a half hour after the House voted a deep cut in his defense spending plan for fiscal 1984, the president combined a traditional recital of the need for more arms with some unconventional elements.

He buttressed his remarks with declassified spy-plane photos showing what were described as Soviet-built military installations in the Caribbean, including a huge Russian eavesdropping station in Cuba that Mr. Reagan said was built to spy on the U.S. These and other exhibits were designed to show that the threat from Moscow is severe and must be met.

The president urged his viewers "to tell your senators and congressmen that you know we must continue" the Pentagon buildup.

Calls for New Weapon

By far the most surprising element of the address was Mr. Reagan's call for American scientists to begin "a comprehensive effort" to develop futuristic, non-nuclear devices that could destroy Soviet missiles aimed at the U.S.

"I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace to give us the means of rendering those nuclear weapons impotent and obsolete," he said. Administration officials told reporters before the speech that the president had in mind exotic devices such as lasers or "beam" weapons, possibly based in space, that might be ready around the year 2000.

The president stressed the visionary nature of his appeal, saying it could change "human history." But administration aides conceded it had a baser political purpose as well: to defuse the nuclear freeze movement by offering a long-term plan to end the use of nuclear weapons.

Administration strategists hope that by building new public concern about the Soviet threat, while simultaneously holding out hope of ending the need for nuclear arms, the president can rally enough support to reverse his loss in the House when the Senate votes on the budget.

However, Mr. Reagan's drive to rekindle public support for his military policy comes late in a public relations game he has been losing for months.

Most public-opinion polls show wide majorities believe Pentagon spending has been increased enough already. And even many Republicans in Congress oppose the president's call for a 10% increase in military funding, after inflation, in fiscal 1984, which starts next Oct. 1. The House voted him just a 4% increase and the Senate has seemed headed for only a 5% rise.

Plans Arms Control Speech

The White House expects to keep punching away, however. A week from today, Mr. Reagan said, he will make another speech, this one on arms control.

In that address, he is expected to offer a compromise plan for reducing medium-range nuclear missiles in Europe. The new plan, officials say, is likely to be offered as an "interim" step toward eliminating the missiles altogether, as Mr. Reagan proposed. The plan probably would allow 75 to 100 such missiles on each side, as favored by European leaders. Moscow has rejected the U.S. call for total elimination.

In addition, the administration plans a barrage of news briefings and speeches on defense in coming weeks.

As part of its selling campaign, the White House invited in and fed several former high foreign-policy officials, who also met briefly with Mr. Reagan. Among the guests were former Secretaries of State William Rogers and Alexander Haig; former Defense Secretaries Clark Clifford, Elliot Richardson and Donald Rumsfeld, and former National Security Advisers McGeorge Bundy, Zbigniew Brzezinski and Richard Allen. Mr. Reagan's cabinet members and the Joint Chiefs of Staff also were there.

The riskiest part of the effort, politically, could be the president's bold but vague call for a national drive to develop a whole new class of anti-ballistic missile weapons.

Administration officials told reporters that the idea is to gradually abandon the 35-year-old philosophy of deterring a nuclear attack by threatening to destroy the U.S.S.R. in retaliation. Instead, they said, the president hopes to rely in 20 years or so on attacking only the enemy missiles themselves.

This idea, they said, has been developed by Mr. Reagan personally over the last two years as he has become convinced that "there must be a better way" to defend the U.S.

The president was moved to propose the plan formally, they said, after a similar approach was urged on him last month by the Joint Chiefs of Staff, who were reacting to the failure to find an acceptable way to base the MX missile.

Defense Policy Debate

At its best, the proposal allows the president to assume the high road in defense debate, arguing that defense is better than offense and that the prospect of new anti-missile systems could spur the U.S.S.R. towards real arms control. White House strategists hope this prospect of a fundamentally less dangerous defense system can increase public willingness to go along with the arms buildup for now.

But the proposal could further fuel the national debate over defense policy. The White House expects that some critics will charge that the plan could set off a new round in the arms race, in which many billions would be invested by both sides to perfect space-based lasers that could disarm the other.

A less exotic anti-missile race was avoided in the 1970s when the U.S. and U.S.S.R. signed a treaty limiting each side to 100 anti-ballistic missiles at a single site. The U.S. built such a site at a missile base in North Dakota, but then closed it down. The U.S.S.R. still has a system ringing Moscow, but the Penatagon views it as ineffective.

The White House stressed that its long-range research effort wouldn't violate the treaty. And the officials who briefed reporters refused to estimate how much more money would have to be added to the Pentagon's current billion-dollar-a-year anti-missile research budget to finance Mr. Reagan's new drive.

Administration officials, and the president himself, took pains to head off another criticism they expect: that perfection of an anti-missile system could increase the risk of war by allowing one nation or the other to carry out a first strike nuclear attack with impunity.

The officials said that wouldn't happen, because offensive nuclear weapons would be retired gradually, probably under an arms control pact, as workable anti-missile devices were produced.

BALTIMORE SUN 24 March 1983 Pg. 1

Reagan offers defense-based nuclear 'vision'

By Robert Timberg
Washington Bureau of The Sun

Washington — President Reagan, projecting what he called "a vision of the future that offers hope," last night proposed a broad-gauged technological effort to replace offensive nuclear weapons with an impenetrable defensive curtain by the turn of the century or shortly thereafter.

If successful, he said in a nationally televised address to the nation, the U.S. might be able to abandon its three-decade-long strategy of nuclear retaliation. Instead of depending on the "specter of retaliation," he said, U.S. strategy in the Twenty-first Century might be based on an array of futuristic weapons still to be developed that could intercept and destroy nuclear missiles before they reached their targets.

For the present, however, he said the U.S. must continue its arms build-up, and urged citizens to tell their senators and congressmen to resist attempts to scale back his proposed 1984 defense budget.

"The budget request that is now before Congress has been trimmed to the limits of safety," he said. "Further deep cuts cannot be made without seriously endangering the security of the nation. The choice is up to the men and women you have elected to the Congress — and that means the choice is up to you."

Democratic congressional leaders, upon receipt of an advance text of the speech, fired off a telegram to the television networks demanding equal time to respond to the president, possibly as early as tonight.

They said they were doing so because the president's speech was not directed primarily at national security matters, but congressional consideration of his 1984 budget request.

Mr. Reagan spoke less than an hour after the Democrat-controlled House, on a vote of 229-196, defied his harsh rhetoric of the last several days and passed a budget blueprint that would cut his request for a 10 percent increase in military growth by more than half.

Administration aides insisted that the speech had not been timed to coincide with the House vote, but it clearly was meant to strengthen the president's hand in the Republican Senate, which has been talking of slashing defense nearly as much as the House.

Earlier in his address, Mr. Reagan, armed with secret intelligence information and aerial photographs declassified for the occasion, argued that the Soviets are "spreading their military influence in ways that can directly challenge our vital interests and those of our allies."

One photograph purported to show a 28-square-mile Soviet intelligence collection facility in Lourdes, Cuba, which Mr. Reagan said was manned by 1,500 Soviet technicians and was "the largest of its kind in the world."

He also said the level of Soviet exports to Cuba during the last two years "can only be compared to the levels reached during the Cuban missile crisis 20 years ago."

The president did not back away from his zero-zero option proposal for complete elimination of medium-range nuclear missiles in Europe, but said he would address that issue next week.

He did hint at some flexibility on that score, however. And the Associated Press reported that he would announce March 31 in Los Angeles that an interim cutback — something short of zero-zero — is the only practical way to stop the Soviets from adding to the more than 600 missiles now targeted on North Atlantic Treaty Organization allies.

The president continued to argue against a nuclear freeze, saying a freeze now would leave the U.S. with a nuclear force rapidly growing obsolete at a time when the Soviets have greatly modernized theirs.

"It would reward the Soviets for their massive military buildup while preventing us from modernizing our aging and increasingly vulnerable forces," he said.

Mr. Reagan, in embracing the concept of a defensive strategy, urged scientists to embark on a long-term research and development program for new defensive technologies that eventually could lead to the outright elimination of strategic nuclear weapons.

"I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace," he said, "to give us the means of rendering these nuclear weapons impotent and obsolete."

As a first step toward achieving his goal of replacing nuclear retaliation with an impenetrable defensive curtain, Mr. Reagan said he was directing a comprehensive and intensive effort to determine how to attack the problem.

Mr. Reagan's address, which was heavily promoted in advance by administration aides, contained few if any specifics on the kinds of new weapons he had in mind.

Senior administration officials however, briefing reporters before the speech, said such weapons probably would incorporate laser technology, microwave devices and particle beams, possibly even defensive armaments deployed in space.

The aides also maintained that the "strategic vision" Mr. Reagan advanced last night would not conflict with the 1972 treaty that limited the U.S. and the Soviet Union to a single site each for antiballistic missiles.

To underscore the seriousness of his proposal, and possibly to recruit some high-powered advocates to his cause, Mr. Reagan invited a bipartisan group of former secretaries of

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LONG ISLAND NEWSDAY 24 MARCH 1983 Pg. 15

Space Defense Poses Many Questions

By Roy Gutman
Newsday Washington Bureau

Washington — President Reagan's proposal to develop futuristic antimissile weapons sounds like something out of a Buck Rogers fantasy but probably has its roots among conservative defense strategists who favor developing a "High Frontier" for space-based systems.

Retired generals Daniel O. Graham and George Keegan have warned for many years that the Soviet Union was developing space-based laser and particle beams and urged the United States to develop similar weapons.

ANALYSIS

Up to now, Graham, former head of the Defense Intelligence Agency, and Keegan, former chief of Air Force intelligence, have not been taken seriously by successive administrations. It was not immediately clear last night why Reagan decided to embrace some of their ideas in a speech ostensibly written to win congressional backing for his defense budget. One reason may be the increasing advocacy for proposals to develop defensive weapons by another conservative strategic thinker, Edward Teller, often called the "father of the H-bomb."

In a recent speech, Teller, who was at the White House last night, hinted that scientists at American weapons laboratories had come up with some significant new proposals for such defensive systems. He said the schemes were technically feasible but he was unable to go into any detail because the information was classified.

If the administration decides on a program in the next few months, as a senior official told reporters last night it would, it will have to win funds from a Congress already skeptical about the logic underlying Reagan's defense build-up.

Reagan's last novel weapons proposal, the dense-pack basing scheme for the MX missile, was unveiled in November and killed the following month in Congress.

Questions are bound to be raised about the implications of futuristic weapons for the arms race and arms control as well as whether the technology can be developed, and at what cost.

Officials last night listed four potential weapons: projectile beams, which could amount to small pellets being fired at a target; particle beams, involving subatomic particles or atoms; lasers and microwave devices. Each has its technological promise, each its problems.

One major problem is the energy input needed to power any one of the systems. A particle beam or laser system based in space and with adequate capacity to halt a Soviet nuclear attack would require in six minutes "as much energy as the State of West Virginia uses in one year," according to nuclear physicist John Parmentola, a post-doctoral fellow at the University of Pittsburgh.

Parmentola, coauthor of articles on the subject in Scientific American and Nature, the British science magazine, said last night any space-based system would be "very expensive, very complicated. I'd put it in the same category as building an atomic-powered airplane."

A different sort of question is what strategies the Soviets would develop to counter U.S. defensive systems. Some scientists have suggested as simple a trick as coating a missile with a highly reflective material might be sufficient to counter or weaken a laser attack. Others have said the firing of decoy warheads could defeat any space-based system.

If the history of the nuclear arms race is any example, the Soviet Union is likely to try to match the United States and develop its own arsenal of futuristic weapons.

One question asked repeatedly by reporters at a briefing last night was this: If the United States was first to acquire a defensive weapons system and kept its offensive nuclear missiles, would this not give the U.S. the ability to deliver a knock-out first strike against the Soviet Union while remaining immune from a Soviet counter-attack?

Senior officials said first-strike capability absolutely was not President Reagan's intention. Left unstated was the military verity that threats posed by adversaries are ordinarily assessed by capabilities, not intentions.

The President said that in developing the new technology, the United States would act in a manner consistent with existing arms control treaties, such as the 1972 accord limiting anti-ballistic missile defense. He also said that developing such a futuristic system would give an added incentive to the Soviet Union to negotiate arms reductions.

Without a specific proposal in hand, there is no way of knowing whether it would violate the anti-ballistic-missile treaty, experts say. As to giving an added incentive for arms control talks, the counter-argument is bound to be made that development of such weapons as a high national priority is just as likely to give a new incentive to the arms race.

REAGAN...Continued

state and defense, as well as ex-national security advisers, to the White House last night for a briefing and dinner in the state dining room.

Mr. Reagan employed a total of four aerial photographs of sites in Central America and the Caribbean, all but one declassified for last night's speech, to make his points about Soviet expansionism.

In addition to the intelligence facility in Cuba, they showed, according to Mr. Reagan:

A military airfield in western Cuba and its complement of Soviet-built MiG-23 aircraft. "The Soviet Union uses this Cuban airfield for its own long-range reconnaissance missions and, earlier this month two modern Soviet anti-submarine warfare aircraft began operating from it," Mr. Reagan said.

An airfield in Marxist Nicaragua showing Soviet military hardware "that has made its way into Central America."

Mr. Reagan said the site was "one of a number of military facilities in Nicaragua that has received Soviet equipment funneled through Cuba, and reflects the massive military buildup going on in that country."

An airfield on the tiny Caribbean island of Grenada, 1,000 miles southeast of Cuba, where the 4-year-old pro-Cuban government is building a 10,000-foot runway with Soviet financing.

"Grenada doesn't even have an air force," Mr. Reagan said. "Who is it [the landing strip] intended for?"

CHICAGO SUN TIMES 24 March 1983 Pg. 1

Reagan calls for 'Star Wars' technology

By Jerome R. Watson
Sun-Times Bureau

WASHINGTON—President Reagan committed the nation Wednesday to developing futuristic defense systems such as lasers and particle beams that might be placed in orbit to destroy Soviet missiles in flight.

In his second nationally televised address on defense in four months, Reagan called on the nation's scientific community to join in evolving the new technologies as a step toward reducing the risk of nuclear war and eventually making possible the elimination of strategic ballistic missiles.

Reagan's proposal for developing a "Star Wars"-like technology during the next several decades was coupled with an urgent defense of his military budget, which is under heavy attack on Capitol Hill but which he said already has been "trimmed to the limits of safety."

"Further, deep cuts cannot be made without seriously endangering the security of this nation," Reagan said.

But the House late Wednesday adopted a Democratic budget resolution that would substantially trim Reagan's proposed defense buildup. The action is likely to weaken Reagan's bargaining power in the Senate, where the issue will come up next.

Using charts and newly declassified aerial spy-camera photographs, Reagan sought to document his contention that the Soviet Union is increasingly projecting its military power around the globe as it develops a massive offensive force.

Reagan displayed photos of a Soviet intelligence-collection facility and military airfield in Cuba, and another of a large airfield on the leftist Caribbean island of Grenada. A fourth photo, previously publicized, showed Soviet military equipment at an airfield in Nicaragua.

Reagan also decried—but in more conciliatory language than he sometimes has used—the movement for a U.S.-Soviet "freeze" on nuclear weapons. He said a freeze would increase, not reduce, the risk of war because it would be unverifiable, reduce Soviet incentives to reach an arms accord and prevent the United States from modernizing those of its nuclear forces that are inferior to the Soviets'.

The dramatic proposal for new anti-missile technologies, which he conceded would take decades to reach fruition, appeared designed in part to project an image of Reagan as devoted to peace and ultimate demilitarization of the world at the same time he is insisting on a major upgrading of U.S. military forces.

IT ALSO MAY have been intended to deflect critics who insist that with the MX missile, Reagan is seeking to develop a first-strike capability for the United States—that is, the power to wipe out Soviet missiles sitting in hardened silos.

Senior administration officials who briefed reporters on the vague proposal for developing the new anti-missile defenses said more than a dozen technologies show promise of evolving into anti-missile defense systems. They said funds for a stepped-up research-and-development program probably will be requested in the next fiscal year.

The officials said the research-and-development program would not violate the existing anti-ballistic missile treaty with the Soviets, which limits the anti-missile defenses each side can deploy.

In announcing the proposal, Reagan said: "I know that this is a formidable technical task, yet one that may not be accomplished before the end of this century. Yet, current technology has attained a level of sophistication where it is reasonable for us to begin this effort. It will take years, probably decades, of effort on many fronts."

But, he said, "This could pave the way for arms control measures to eliminate the weapons themselves."

He also said he will deliver an address March 31 in Los Angeles on efforts to reach an agreement with the Soviets on intermediate-range missiles in Europe. Administration officials said Reagan will modify his "zero option" that asks the Soviets to dismantle missiles in exchange for a U.S. pledge not to go ahead late this year with deployment of Pershing II and cruise missiles in Europe.

The administration has been under pressure from Western European allies to modify its proposal, in part to demonstrate its commitment to reaching an agreement with the Soviets.

In arguing for his military budget, Reagan sharply denounced its more vociferous critics. He said that "those loud voices . . . are nothing more than noise based on ignorance."

He said: "Anyone in the Congress who advocates a percentage or specific dollar cut in defense spending should be made to say what part of our defenses he would eliminate, and he should be candid enough to acknowledge that his cuts mean cutting our commitments to allies or inviting greater risk or both."

Conceding that it is hard to ask for major increases in defense spending in a recession, Reagan said: "But we must not be misled by those who would make defense once again the scapegoat of the federal budget."

HE SAID THE tragedy of World War II was invited by the democracies neglecting their defenses. "We must not let that grim chapter of history repeat itself through apathy or neglect," he said.

Reagan said curtailment of his defense program would "mortgage our ability to deter war and achieve genuine arms reductions. And we will send a signal of decline, of lessened will, to friends and adversaries alike."

He urged viewers to signal Congress of their support for his defense buildup, which seeks a 10 percent increase, after inflation, in military outlays for fiscal 1984.

The Democratic proposal adopted by the House just before Reagan spoke calls for a 4 percent rate of growth, while many Republicans and some Democrats in Congress favor a figure somewhere in between.

Also before Reagan spoke, Democratic congressional leaders asked the three major television networks to give them equal time to respond.

House Speaker Thomas P. O'Neill (Mass.) and Senate Minority Leader Robert C. Byrd (W.Va.) made the request for

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SPECIAL EDITION -- "STAR WARS"

AERIAL PHOTOGRAPH of Soviet military equipment in Nicaragua was used by President Reagan in a televised speech Wednesday to bolster his case for a military budget increase. (UPI)

CHICAGO SUN-TIMES 24 March 1983 Pg.1

Soviet jets view U.S. carriers, land in Cuba

NORFOLK, Va. (UPI)—Four Soviet Bear reconnaissance planes flew over three U.S. aircraft carriers participating in a war exercise in the Atlantic Ocean last weekend, and U.S. fighters scrambled to intercept the converted bombers, the Navy said Wednesday.

A spokesman for Atlantic Fleet headquarters said the Soviet jets landed in Cuba after being escorted from the area of maneuvers.

The three carriers—the Vinson, the Eisenhower and the Kennedy—were participating with 33 other U.S. ships in a "war at sea" exercise in the western Atlantic and the Caribbean when the Bear jets appeared in two incidents.

The Navy said two Bears flew over the Vinson Saturday while the carrier was about 1,000 miles southeast of Bermuda.

Two F-14 Tomcat fighter jets from the Eisenhower intercepted the Soviet aircraft and escorted them from the area, the spokesman said.

Later Saturday, two other Bear jets flew within 100 miles of the Eisenhower and the Kennedy. Tomcats from both carriers escorted the Soviet planes from the area.

The four Bears landed in Cuba. The spokesman said two other Bear jets with anti-submarine warfare equipment aboard were sighted on Cuban landing strips.

REAGAN...Continued

time Thursday in a telegram in which they said: "At first we did not intend to request equal time. However, we have seen an advance text of this speech.

"Upon review, it is clear to us that the address is not directed primarily at national security matters but rather it is directed at the current congressional consideration of the fiscal 1984 budget."

Virtually all of the critics concede some buildup is necessary but some oppose specific weapons systems that Reagan wants, and others say modernization can proceed safely at a slower pace.

Although White House aides recognize that Reagan's defense budget will have to be scaled back, his appeal clearly was an effort to minimize trims.

Reagan's defense of his military budget included his familiar recitation of U.S. neglect of its defenses and Soviet military expansion.

Noting that some skeptics ask whether the Soviets ever would use their growing military power, Reagan said: "Can we afford to believe they won't? There is Afghanistan, and in Poland, the Soviets . . . demonstrated to the world how their military power could also be used to intimidate."

LOS ANGELES TIMES 24 March 1983 Pg. 1

Reagan to Offer Interim Plan on Europe Missiles

By OSWALD JOHNSTON,
Times Staff Writer

WASHINGTON—Under growing pressure from America's allies, President Reagan has decided to offer a compromise proposal for limiting mid-range nuclear missiles in Europe, but he continues to insist on total elimination of such weapons as this country's ultimate goal, Administration officials said Wednesday.

Reagan is expected to declare his willingness to accept an interim solution in a speech a week from today, but Administration officials stressed that it has not been decided whether the speech will contain a specific proposal or only a general statement of the President's position.

There has not been a final decision on precisely what to offer the Russians, the officials said.

One-Week Delay

Despite earlier speculation that Reagan might use his televised speech Wednesday night to outline a new position on U.S.-Soviet intermediate-range missile negotiations, he passed up the opportunity and told viewers, "I will report to you a week from tomorrow my thoughts on that score." That is when he is scheduled to address the Los Angeles World Affairs Council at the Century Plaza Hotel.

For nearly a month, the Administration has been actively considering alternate proposals to Reagan's 18-month-old zero-option offer to forgo deployment of Pershing 2 and cruise missiles in Western Europe if the Soviet Union agrees to scrap all of its medium-range missiles, including the modern, triple-warhead SS-20.

Hinting at Flexibility

Reagan and others in the Administration have been publicly hinting at a more flexible approach. And Defense Secretary Caspar W. Weinberger, at a North Atlantic Treaty Organization meeting in Portugal, told reporters Wednesday that the NATO defense ministers showed "consensus in welcoming President Reagan's indications that there could be more than one way to reach agreement."

Most of the new proposals being considered by the Administration are variants of a suggestion discussed last summer by the chief U.S. and Soviet negotiators at the missile-reduction talks in Geneva. According to that suggestion, each side would be allowed 75 launchers.

Those suggestions were rejected by both governments last summer. But in the negotiating climate created by the approaching December date for NATO to begin deploying the new missiles, Washington is now considering proposals that would permit each side about 300 warheads. This would allow the Soviets 100 SS-20s and NATO a mix of 75 to 100 four-missile cruise launchers and single-warhead Pershing 2 launchers.

The March 6 national election in West Germany, in which Helmut Kohl's center-right coalition decisively defeated a Social Democratic Party moving increasingly in the direction of reneging on the missile deployment, was seen by U.S. officials as a crucial turning point in the arms negotiations. It virtually guaranteed that the first Pershing and cruise missile deployments could begin on schedule.

It is widely accepted by arms-control specialists in and out of the government that the Soviets will not negotiate a reduction of their weapons until they believe that there is no chance to forestall NATO's deployment of the new weapons.

The Europeans, led by Kohl, coupled the new political mandate in favor of NATO deployment with a renewed demand that the United States show greater negotiating flexibility by offering to swap a limited deployment of new missiles for a less-than-total removal of the SS-20s.

Both Proposals Rejected

But the Soviets, who have flatly rejected Reagan's zero-option proposal, have also said they will not consider any interim proposal.

In public statements, Administration officials, including Reagan, have increasingly hinted at flexibility. The zero option is preferred, White House and State Department press officers have been instructed to say, but it is not a take-it-or-leave-it offer, and the United States will consider any reasonable Soviet counterproposal.

In recent testimony on Capitol Hill, Assistant Secretary of State Richard R. Burt has carried that hint a step further with the suggestion that missiles deployed by NATO can just as easily be removed and that the talks at Geneva between Paul H. Nitze and his Soviet counterpart, Yuli A. Kvitsinsky, could well continue after the scheduled December deployments begin.

Nitze himself said publicly before the current round of arms talks resumed Jan. 27 that he is "confident that if it becomes wise for the U.S. government to change its position, it will, in fact, so do."

'Ready to Negotiate'

And Reagan, in an interview granted last week to the Sunday Times of London, said of the evolving U.S. policy, "We're ready to negotiate in good faith any reasonable proposal or suggestion on the way to the ultimate goal (of the zero option)."

The stage, accordingly, has been prepared for the announcement Reagan now is expected to make next week in his previously scheduled Los Angeles speech.

The timing is considered ripe for such a move, because the current round of Nitze-Kvitsinsky talks in Geneva is scheduled to end next Tuesday—two days before the speech.

Since the Soviets already have rejected in advance the sort of compromise Reagan is now considering, it is argued that it makes no sense to make a public proposal that would be recognized as a U.S. concession, then to have that proposal rejected by the Soviets, with a probable new round of Soviet demands for yet another concession to follow.

It would better serve U.S. interests to wait until the Geneva talks resume in late April before presenting a new proposal in any detailed, formal way.

But at the same time, by announcing a willingness to make such a proposal ahead of time, Reagan can satisfy European demands for flexibility and probably draw more votes away from the nuclear-freeze resolution in the House.

NEW YORK POST 24 March 1983 Pg. 4

Space arsenal to zap Soviet nukes

PRESIDENT Reagan said yesterday the U.S. will start building a Star Wars-style defense arsenal capable of knocking missiles out of the sky and rendering Soviet "nuclear weapons impotent and obsolete."

He said the strategy switch from offense to defense was the only way to avoid all-out nuclear war in light of Soviet military encroachments around the globe.

The President drew special attention to Cuba, saying Russia has supplied arms at levels that "can only be compared to the missile crisis 20 years ago."

Reagan announced the plan in a nationally televised speech from the Oval Office during which he urged the nation to support his military budget.

By NILES LATHEM and LEO STANDORA

But he suffered a stinging rebuke only a half-hour before delivering the 8 p.m. address when the House passed by 229-196 a Democratic budget plan that would slash his defense buildup by more than half.

During the speech, the President outlined Russian military moves around the world and displayed four black-and-white photos taken by U.S. spy planes of Soviet-supplied weaponry and installations in Cuba, Grenada and Nicaragua.

Pentagon officials said the pictures marked the first time in 20 years that reconnaissance pictures of Cuba had been publicly released.

One picture showed a 28-square mile Soviet communications intelligence facility near Lourdes, Cuba.

Reagan said the complex, less than 100 miles from the U.S. coastline and manned by 1500 Soviet technicians, "is the largest of its kind in the world."

He also pointed out that the facility has grown 60 per cent in the past decade and now "monitors key U.S. military installations and sensitive activities."

Another picture showed Soviet-built MiG-23 aircraft at a field in western Cuba.

Earlier this month Soviet anti-submarine aircraft began operating from the field.

A picture of an airfield in Nicaragua showed Soviet anti-aircraft guns and helicopters. That photograph previously had been made public.

A fourth picture showed a 10,000-foot aircraft runway on Grenada, along with fuel storage facilities and housing for Cuban workers.

Reagan said "the rapid buildup of Grenada's military potential is unrelated to any conceivable threat to this island country of under 110,000 people and totally at odds with the pattern of other eastern Caribbean states, most of which are unarmed."

He said the pictures demonstrate the Soviets "are spreading their military influence in ways that can directly challenge our vital interests and those of our allies."

To answer that challenge without destroying the world in an atomic war, the President said the U.S. must depart from three decades of strategy based on nuclear deterrence and rely more on a devastating arsenal of futuristic defense weapons.

Reagan said it could be the turn of the century before such weapons — based on laser and particle-beam technology that now exists more in theory than fact — could be produced.

He said such a system posed a "formidable technical task . . . Yet current technology has attained a level of sophistication where it is reasonable for us to begin this effort."

The U.S. already is spending nearly $1 billion a year on such space-age weaponry, but it is certain this figure will increase dramatically.

Russia is acknowledged to have a significant but surmountable lead in development of a Star Wars arsenal.

The U.S. and Soviet Union now are virtually banned by treaty from deploying an anti-ballistic missile system (ABM).

Reagan said his proposal was "consistent with our obligations" under the treaty and added that this "could pave the way for arms control measures to eliminate the weapons themselves.

"We seek neither military superiority nor political advantage," Reagan said.

"Our only purpose — one all people share — is to search for ways to reduce the danger of nuclear war."

Reagan said he recognized that defensive systems "have limitations and raise certain problems and ambiguities.

"If paired with offensive systems, they can be viewed as fostering an aggressive policy, and no one wants that.

"But with these considerations firmly in mind," he added, "I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace; to give us the means of rendering these nuclear weapons impotent and obsolete."

". . . Tonight we are launching an effort which holds the promise of changing the course of human history. There will be risks, and results take time. But with your support, I believe we can do it."

SPECIAL EDITION -- "STAR WARS"

PHILADELPHIA INQUIRER 24 March 1983 Pg. 1

Reagan poses futuristic defense plan

By Terence Hunt
Associated Press

WASHINGTON — President Reagan said last night that the United States would begin work on a futuristic defense system that could destroy Soviet missiles in flight and render "these nuclear weapons impotent and obsolete."

The plan, announced in a nationally broadcast speech from the Oval Office, foreshadows a major departure from three decades of strategy calling for deterring nuclear warfare with the promise of massive retaliation.

Reagan said it could be the turn of the century before such defensive weapons could be produced. Apparently, his plan envisions laser and particle-beam technology that currently exists more in theory than fact.

Officials were vague on what type of technology eventually would be employed and gave no estimate of how much such a system would cost.

"Would it not be better to save lives than to avenge them?" Reagan said. He said that after consulting with the Joint Chiefs of Staff and other advisers, "I believe there is a better way ... that we embark on a program to counter the awesome Soviet missile threat with measures that are defensive."

During his speech, Reagan displayed four black-and-white photographs taken by U.S. spy planes of Soviet-supplied weaponry and installations in Cuba, Grenada and Nicaragua.

According to Pentagon officials, the pictures marked the first time in 20 years that reconnaissance pictures of Cuba had been publicly released.

One picture purported to show a 28-square-mile Soviet communications intelligence facility near Lourdes, Cuba. Reagan said the complex, less than 100 miles from the U.S. coastline and staffed by 1,500 Soviet technicians, was "the largest of its kind in the world."

Another picture showed Soviet-built MiG-23 aircraft at a field in western Cuba.

A picture of an airfield in Nicaragua purported to show Soviet anti-aircraft guns and helicopters. The photograph had been made public before.

A fourth picture showed a 10,000-foot runway on Grenada, along with fuel-storage facilities and housing for Cuban workers.

Reagan said the pictures demonstrate that the Soviets "are spreading their military influence in ways that can directly challenge our vital interests and those of our allies."

Reagan said the system he proposes posed a "formidable technical task" that might not be accomplished before the end of the century.

"Yet current technology has attained a level of sophistication where it is reasonable for us to begin this effort," Reagan said. "It will take years, probably decades, of effort on many fronts."

Reagan's proposals came as he renewed his push for a major military buildup, yet just hours after the House approved, by a vote of 229-196, a Democratic budget plan that would cut the increase he wants by more than half.

Currently, the United States and the Soviet Union are virtually banned by treaty from deploying an anti-ballistic missile (ABM) system. But Reagan said that "tonight, consistent with our obligations under the ABM treaty and recognizing the need for close consultation with our allies, I am taking an important first step" that would employ different technologies.

Specifically, Reagan said he was "directing a comprehensive and intensive effort to define a long-term research and development program to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles."

"This could pave the way for arms-control measures to eliminate the weapons themselves," Reagan said.

"We seek neither military superiority nor political advantage," the President said. "Our only purpose — one all people share — is to search for ways to reduce the danger of nuclear war."

Reagan noted the current policy of deterrence through the threat of crushing retaliation. "But what if free people could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack; that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?"

He said that despite the difficulties, "is it not worth every investment necessary to free the world from the threat of nuclear war? We know it is."

Reagan said the United States would continue to pursue nuclear arms reductions, "negotiating from a position of strength that can be ensured only by modernizing our strategic forces."

At the same time, he said, the United States "must take steps to reduce the risk of a conventional military conflict escalating to nuclear war by improving our non-nuclear capabilities."

Reagan said he recognized that defensive systems "have limitations and raise certain problems and ambiguities. If paired with offensive systems, they can be viewed as fostering an aggressive policy, and no one wants that.

"But with these considerations firmly in mind," he said, "I call upon the scientific community who gave us nuclear weapons to turn their great talents to the cause of mankind and world peace; to give us the means of rendering these nuclear weapons impotent and obsolete.

"My fellow Americans, tonight we are launching an effort which holds the promise of changing the course of human history," Reagan said. "There will be risks, and results take time. But with your support, I believe we can do it."

In a briefing before the speech, a senior administration official said the research would be aimed at lasers, particle-beam weapons and other futuristic technologies that might be used to shoot down incoming missiles.

"The generic technologies are by no means mature, but they have been there for years," said the official, who spoke on the condition that he not be identified. "What is being launched today is a search for a plan."

The official said the United States was spending about $1 billion a year on various types of anti-missile devices.

He said the new effort would be "completely independent" of the work by the presidential commission seeking a basing system for the MX missile.

The official said the research effort had been endorsed by the Joint Chiefs of Staff last month, prompted by Pentagon leaders' concerns about the increasing vulnerability of U.S. land-based, long-range weapons.

The official insisted that the program would not violate the ABM treaty, noting that it permits research and development.

SPECIAL EDITION -- "STAR WARS"
LONG ISLAND NEWSDAY 25 March 1983 Pg.5

Aides Advised Against Arms Plan

By Roy Gutman and Susan Page
Newsday Washington Bureau

Washington — President Reagan disregarded the advice of his closest aides when he proposed development of a futuristic antiballistic missile system, senior White House officials said yesterday.

Reagan's advisers warned him that his proposal would detract from the main purpose of the Wednesday night speech, which was to win support for his defense budget, the officials said. But "on balance he felt that it wouldn't," a top official said.

Aides also pointed out several "shortcomings" to the idea: it would prompt questions about violating the 1972 antiballistic missile treaty and might lead to the charge that the United States would abandon its allies and move toward creating a fortress America.

But "in full knowledge of the shortcomings or what would certainly be reported as shortcomings, he asked that we go forward in preparation of last night's announcement," a senior official told reporters at a background briefing.

His remarks constituted the first occasion in memory that Reagan's senior aides formally distanced themselves from the contents of a presidential speech.

This top-level official, who could not be named under the ground rules for the briefing, was joined by two other advisers who sketched out the background and implications of Reagan's speech. As they described it, the idea was new, was Reagan's own and was not closely examined within the government. They did not seem to be in complete agreement about its consequences.

But they left no doubt that Reagan's intention was to reopen a debate closed nearly a decade ago over whether the United States should build an ABM system — an idea rejected then on the grounds it would give a false sense of security and might destabilize the strategic nuclear balance.

"The program we are planning to pursue is an antiballistic missile system, no question," one official said. "We are not proposing to build a Maginot line. We propose to build a flexible system that of course takes into account every conceivable advance we can imagine in ICBM [intercontinental ballistic missile] development . . . "

Under the 1972 ABM treaty, the Soviet Union and United States limited themselves to one ABM system each. The Soviets have built one system around Moscow and the United States could build one in Grand Forks, N.D., site of the U.S. ICBM installation, but decided unilaterally not to. The new controversy is raised by Reagan's call for research and development of space-based lasers, projectile and particle beams and microwave devices, despite the ban in the 1972 accord of development of any space-based or mobile ABM.

The idea of reviving interest in defensive nuclear weapons, or, as a senior official put it, "going from the spear to the shield" was broached to Reagan little over a month ago during a routine meeting with the Joint Chiefs of Staff. The meeting was Feb. 15, three days before Reagan's special commission was supposed to report its recommendation on a basing mode for the troubled MX missile, an offensive missile system that successive administrations have been unable to find a home for. In fact the commission was unable to meet its deadline and is now due to report in April.

The top official said the Joint Chiefs "surfaced" the idea, indicating it was not a formal proposal. Reagan's "interest rose immediately," and he asked for further information, having been concerned for "months if not years" about the "interminable buildup of offensive nuclear arms without much apparent hope of ending or diverting that particular race."

"In the intervening weeks, on a rather close-held basis, this theory was further developed," the official said. Reagan apparently did not have it "staffed out," that is, discussed, criticized or refined by lower level experts. As one official put it, "the President was not bureaucratic in his approach to this."

At the briefing, to which about 20 reporters were invited, the officials stated repeatedly that Reagan's initiative was not prompted by any technological development either in the Soviet Union or the United States.

They said his thinking was motivated by "the very spirit" that prompted retired Gen. Daniel Graham's proposal for space-based weapons — the idea that has evolved in the past 30 years in which the two superpowers base their national security on the threat of mutual annihilation. It is sometimes called "mutual assured destruction." Another strong influence, they said, was Dr. Edward Teller, often called the "father of the H-bomb," who met Reagan two months ago and who has spent "an enormous amount of time" with George Keyworth, presidential science adviser.

As to what will result from Reagan's proposal, the officials seemed themselves to be unsure.

One official said the effort, which may take until the end of the century to bear fruit, was like the Manhattan project which developed the atomic bomb during World War II in that it is a total program that would involve a wide cross-section of the scientific community. But as he spoke, he was interrupted by another official who said it would be a "stretched-out" effort and added "there's no flavor or tension of a crash program." In fact, the administration is now spending about $1 billion a year on research into futuristic defensive weapons and does not plan to ask for more funds this year.

A White House official, in a separate interview, said: "There's only so much money that can be used in research efforts, so much that can be absorbed."

NEW YORK TIMES 25 March 1983 Pg.9

Soviet Sees a Treaty Violation In Arms Proposed by Reagan

By SERGE SCHMEMANN
Special to The New York Times

MOSCOW, March 24 — The Soviet press said today that President Reagan's plan for new antimissile technologies amounted to a new stage in the arms race and that their deployment would violate the 1972 treaty limiting such systems.

Official commentaries also depicted Mr. Reagan's speech as an effort by the Administration to push its arms buildup through the Congress.

The Soviet responses consisted of summaries of the President's televised address, referring to his "beloved theme" of a Soviet military threat and accusing him of using "figures about the Soviet military potential fabricated by the Central Intelligence Agency to try and justify the unprecedented military expenditures."

One commentary, by Tass, the Soviet Government's press agency, focused on Mr. Reagan's proposed program "to counter the awesome Soviet missile strength with measures that are defensive."

Research Consistent With Pact

Mr. Reagan said the research and development of the new technologies would be "consistent with our obligations under the antiballistic missile treaty" and would pave the way for steps to eliminate offensive weapons.

Tass quoted senior Administration officials as having said that the new technologies would be based on land and in space and would include lasers. The press agency added:

"The deployment of such antiballistic missile systems would be a direct violation of the Soviet-American agreement and protocols, according to which the United States had the right to move the existing ABM system from the ICBM base at Grand Forks only to the region of the capital.

"Thus, what is being talked about is a new attempt by the United States to achieve superiority in strategic arms over the Soviet Union and to upset the existing rough balance of power."

When the ABM treaty was signed in 1972, it limited deployment of antiballistic missiles to two sites, including the national capital. A 1974 protocol, or amendment, reduced the two sites to one. However, in accord with a 1975 Congressional directive, the single American site, at Grand Forks, N.D., was deactivated and dismantled.

The treaty limited defensive missile systems on the premise that their deployment might reduce incentives to negotiate limitations on offensive weapons by fostering a sense of security against attack. While the treaty did place restrictions on some forms of research and development, wide areas remained open, including the exploration of new technologies.

Though the treaty was of unlimited duration, the two sides agreed to review it at five-year intervals.

Other Soviet commentaries were less specific, and Western diplomats expected a more authoritative response after closer Soviet study of the President's speech. They noted that Soviet criticism of Mr. Reagan had been comparatively muted in recent weeks, possibly reflecting a re-evaluation of official attitudes toward the United States in light of a growing Soviet feeling that Mr. Reagan will be re-elected.

The Government newspaper Izvestia said that "only in the 24th minute of his speech did Reagan finally begin saying that his Administration, you see, was dedicated to ideas of peace and disarmament."

The paper said the "destabilizing idea" of accelerating research on new defenses against missiles was slipped in "just before the curtain."

"The speech thus underscored that the White House had no desire of retreating from its unrealistic positions," Izvestia said, "and this stubborn unwillingness to get out of the rut of the cold war increasingly transforms Washington into a dangerous breeding ground for thermonuclear confrontation."

'Sermon in Militarism'

Novosti, a feature syndicate, branded the speech as "a sermon in militarism" and declared that his proposal "clearly indicates his intentions to perpetuate the arms race and carry it over into the 21st century."

Novosti and Tass rejected Mr. Reagan's assertion of a growing Soviet military threat, which he outlined to support his request for more military spending. The Soviet Union insists that there is rough parity in military strength between the two sides.

Tass quoted various Congressional critics of the military budget to the effect that the President's sole goal was to "scare the American people and the Congress to death and get even more money for military needs."

"The real aims of the address made themselves especially clear when the President bitterly attacked the Congress, which has lately been making modest attempts to somewhat cut the unprecedented military spending on the ground that it is destroying the United States economy."

NEW YORK NEWS 25 March 1983 Pg.3

Reagan's plan—Would it simply invite attack?

By LARS-ERIK NELSON

Washington—Suppose we were bulletproof. Yes, I know we're not bulletproof, but just suppose. We wouldn't have to walk around in fear of being mugged. We could laugh at robbers who pointed shotguns at us.

We would be totally safe. On the other hand, society could regard us as a threat. If we were bulletproof, we could mug other persons. We could hold up banks and shoot at policemen with impunity. Would society, facing this threat, allow us to become bulletproof? Or would it shoot us first?

This is the dilemma raised by President Reagan's call Wednesday night for a scientific effort that would make the United States invulnerable to Soviet nuclear missiles.

Will his Star Wars, charged-particle beam, laser death rays (if that is what we build) really make us bulletproof? Or will enough Soviet warheads get through to destroy five or six major cities? Or, still worse, will the Russians shoot first, before we can deploy our system?

INVULNERABILITY IS AN alluring idea. As the President put it: "What if free people could live secure in the knowledge that... we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?"

It was equally alluring when Soviet Prime Minister Alexei Kosygin raised it with President Johnson at the Glassboro, N.J., summit in June 1967. The Soviet Union was about to defend itself from nuclear attack by deploying an antiballistic missile system that would intercept and shoot down any attacking American missiles.

Johnson tried to persuade Kosygin that an ABM system was not defensive—that it was a threat. A country that thinks it is invulnerable to enemy missiles might be tempted to use its own missiles in the belief that it is immune from retaliation.

Kosygin could not understand. "ABMs do not fuel an arms race," he said. "They are purely defensive."

Johnson turned to his Defense secretary, Robert S. McNamara. "I'm not getting through to him, Bob," Johnson said.

McNamara took up the argument. "Look," he told Kosygin. "We need a strategic nuclear deterrent against the Soviet Union. If you build an ABM system, we're not going to race you with our own ABM system.

"We are going to expand our offensive missile force so that it will overwhelm your ABMs. You will increase your ABMs and we'll increase our missiles. We'll have an arms race. We'll keep ratcheting higher and higher."

Kosygin exploded. "That's immoral," he told Johnson and McNamara. "We are expanding our defensive systems. We are defending Mother Russia. We are not threatening you."

"You are trying to deprive us of our nuclear deterrent," McNamara said. "And we will not let that happen."

The cruel logic of McNamara's argument finally dawned on Kosygin—and it paved the way for the first U.S.-Soviet arms-control agreement.

SALT-1 was signed in 1972. Accompanying SALT-1 was an ABM treaty limiting each side to an antimissile defense of a single city and a single missile field. The U.S. actually built an ABM site in North Dakota and then scrapped it as useless. The Russians have an ABM system around Moscow.

McNamara's logic still applies today. The only thing that has changed is that a United States President is now making Kosygin's argument.

Reagan is holding out the hope that the U.S. can achieve the technological breakthrough that will make us safe from Soviet nuclear attack.

'...The question: Will the Soviet Union let itself be disarmed?'

"I don't think anyone could disagree with him—if," Gerard C. Smith, who helped to negotiate the SALT-1 treaty, said yesterday. "...if we could guarantee that the system works. But if you had a perfect antimissile defense—except that you lost Chicago, New York and San Francisco in a nuclear attack—it would be pretty dismal."

Prof. Albert Carnesale of Harvard (by way of the Bronx High School of Science and Cooper Union) helped to negotiate the 1972 ABM treaty, which specifically outlaws any Star Wars-type, space-based laser weapons. He supports Reagan's call for research and development on antimissile defense—but he deplores Reagan's "messianic rhetoric" about the Soviet Union.

"What Reagan is proposing is sensible. It's fine. We ought to look at the technology," Carnesale said. "But what he is talking about is well into the future, and it would have to be coupled with arms reductions. Deploying an ABM is the same as disarming the other side."

This raises the question: Will the Soviet Union let itself be disarmed? A second problem is that Reagan's ABM system would have to be perfect.

The Soviet Union has 7,500 nuclear warheads. A defensive system that destroyed 90% of them would allow 750 hydrogen warheads to hit American targets—enough to wipe out this nation.

THE SHARPEST criticism of Reagan came from a former Democratic cabinet officer yesterday who asked not to be identified.

"Reagan's proposal is absurd and it is totally irrelevant to the problems we face today. He is talking about a pie-in-the-sky, end-of-the century, space-based, destroy-on-launch antimissile system.

"That has no relationship whatsoever to the urgent problems we now face with the defense budget and with the arms race. Reagan was displaying the same characteristics as Kosygin. It just amazed me."

LONG ISLAND NEWSDAY 25 March 1983 Pg.25

Debate on Missile Defense Plan

By Earl Lane
Newsday Washington Bureau

In proposing that the United States undertake a futuristic effort to counter Soviet missiles, President Reagan has focused attention on a debate that has engaged scientists and arms-control experts for more than two decades. Here is a look at some of the issues:

Q. What is President Reagan seeking?

He has asked for a major research and development effort on methods of knocking out Soviet intercontinental ballistic missiles before they reach U.S. soil. Leading possibilities include putting particle-beam weapons or lasers on orbiting platforms to destroy Soviet missiles shortly after launch.

Q. How might the Soviets react to such a development?

Reagan and Pentagon planners argue that the Soviets, faced with the certain destruction of their ballistic missiles, would agree to negotiate a reduction in offensive weapons. Critics say that it could be destabilizing. At the heart of nuclear strategy has been mutual assured destruction — the knowledge that each superpower could launch a devastating attack on the other. Without that assurance, the Soviets might launch a preemptive strike rather than allow the United States to finish building an anti-missile system. The United States faces the same uncertainty: The Soviets, too, have been pursuing space-based weapons.

But even if such systems are built, there are possible ways to evade them. Cruise missiles hug the earth's surface and are much less susceptible to damage by space-based lasers. Dust, water droplets and smoke in the air disperse the beams. Submarine-launched missiles that reach their targets quickly on depressed trajectories also would be difficult to stop.

Q. How would space-based weapons work?

In the case of a laser system, a beam of intense light would be used to overheat or bore a hole into a warhead, causing it to malfunction. The laser platform would have several components: A telescope would detect and track missiles as they are launched, and a hinged mirror would be used to point the laser at its target. Kosta Tsipis and his colleagues at the Massachusetts Institute of Technology have estimated that the United States would need at least 50 laser platforms, orbiting at about 600 miles in order to have at least one platform always in position to counter a Soviet attack.

Tsipis has also noted that space lasers would require enormous amounts of energy, complicating their deployment and use. Some defense planners are less pessimistic. They maintain that lasers one-tenth the size of those analyzed by Tsipis are feasible and could be used in an antiballistic missile (ABM) system. They propose launching 300 or more of the platforms.

Q. Are there any breakthroughs that have made such laser systems more practical?

There have been suggestions by Edward Teller and others that the power supply problems are solvable. Compact laser battle systems have been proposed that would produce pulsed X-ray laser beams. The power source would be a small nuclear explosion. The energy from the blast would be directed into narrow, coherent beams of X-rays that would evaporate a target.

Asked whether there had been any major research breakthroughs in recent months, a senior White House official said no. He added, however, that there had been progress in technologies needed for space-based weapons, such as large-scale optics, tracking systems and data processing.

Q. Assuming laser systems are built, would they perform as advertised?

Some scientists are extremely skeptical. They say that the highly sensitive radars needed to track oncoming missiles could be easily blinded. The electronic radiation emitted from a single nuclear blast in space would disable sensitive circuits and radar screens. There are ways to harden such circuits, but the technology is still being developed.

The laser systems also could be countered by launching numerous decoys, or warheads with burn-resistant or mirrored surfaces to diffuse the laser beam. And, of course, the Soviets might launch a strike against the space-based system before it becomes operational.

Q. How would they do that?

With an anti-satellite weapon already under development and tested at least 20 times during the past decade. A killer satellite is sent near the target. It explodes, showering the target with shrapnel. The U.S. is also preparing to test an anti-satellite weapon, to be launched from an F-15 fighter plane.

WASHINGTON POST 25 March 1983 Pg.1

Democrats Charge Reagan Distorted Balance of Power

Speech Also Attacked On Anti-ICBM Issue

By Michael Getler
Washington Post Staff Writer

In an official response to President Reagan's nationally televised speech Wednesday night, Democrats yesterday accused Reagan of presenting a distorted and misleading account of the U.S.-Soviet balance of power in order to protect his "excessive defense budget" and "divert our attention from the dismal failure of his economic policies."

Congressional Democrats chose Sen. Daniel K. Inouye of Hawaii to deliver the party's rebuttal.

At the same time, a number of other Democrats, some liberal Republicans and a Nobel Prize-winning scientist also criticized Reagan's call in his speech for an all-out research effort to see if a high technology defense against missile attack can be developed in the next two decades.

The Democratic charges escalated the widening battle between the administration and its critics over the size of the defense budget, nuclear policy and the best way to preserve national security.

At the White House yesterday, administration officials reinforced Reagan's position that it was his duty to tell the public about the Soviet threat and what the United States must do to meet it, while on Capitol Hill there was a growing consensus that the Reagan defense budget was too big and would be cut.

Senate Majority Leader Howard H. Baker Jr. (R-Tenn.) and Minority Leader Robert C. Byrd (D-W.Va.) said they believe the Senate will approve a defense budget somewhat higher than the one passed by the House Wednesday but far short of the administration request for a 10.3 percent increase, after inflation.

House Minority Leader Robert H. Michel (R-Ill.) said he doubted that an eventual House-Senate compromise will include an increase of more than 6 percent. The current House version allows for a 4 percent increase.

In the Democratic policy rebuttal to Reagan's speech, Inouye said, "The president attempted to instill fear in the hearts of the American people, to raise the specter of a Soviet armed nuclear attack.

"He left the impression," Inouye continued, "that the United States had stood still while the Soviets had accelerated and vastly expanded their nuclear arsenal . . . that the United States is at the mercy of the Soviet Union. Mr. President, you know that is not true. You have failed to present an honest picture."

He said Reagan failed to point out that Soviet land-based missile strengths are "more than offset" by U.S. atomic warheads on missile-firing submarines and bombers. He said the total of such atomic weapons showed 7,339 for the Soviets and 9,268 for this country.

The administration claims that the Soviet land-based missile edge gives them a theoretical first-strike threat against U.S. missiles.

Sen. Sam Nunn (D-Ga.), an influential member of the Senate Armed Services Committee, said in an NBC-TV appearance that the Soviet threat "is real. There is no doubt about that." But he also said, "I would fault the president's speech for not taking into account America's strengths, the strengths of our allies and the weaknesses of the Soviet Union."

Inouye, a member of the Senate Intelligence Committee, said he deplored the selective declassification of intelligence photos used by Reagan Wednesday night to show military installations in Cuba and Nicaragua.

Inouye asked why Reagan chose to highlight the basing of Soviet-built MiG jet fighters in Cuba at this time, when they have been there for years. "Why did he suggest American inferiority. I believe he did so because he is afraid his excessive defense budget will be trimmed by the Congress and because he wants to take our attention off the economic disasters brought on by his policies," Inouye charged.

The big surprise in Reagan's speech, however, was his placing a top national priority on attempting to develop a workable defense against intercontinental ballistic missiles. The president suggested that success in such an endeavor could lead eventually to a dramatic shift in strategy away from reliance on quick nuclear retaliation as the only way to deter attack.

Senior administration officials yesterday portrayed Reagan's emphasis on defensive weapons as "a deep commitment . . . to get off this trail, this interminable route of buildup of offensive nuclear weapons."

But Sen. Mark O. Hatfield (R-Ore.) said, "This is not, as the president suggests, a shifting of our national genius away from war. It is a call to siphon off the meager and inadequate commitment which now exists to rebuild America."

Hatfield, chairman of the Senate Appropriations Committee, said, "The president's advisers must be called to account for these terrifying proposals." Reagan, he said, "has, in effect, called for the militarization of the last great hope for international cooperation and peace—outer space."

Although the administration says it wants to explore many new technologies, there is special interest in exploring lasers and other weapons using highly focused beams of energy as possible space-based interceptors.

These weapons could aim their rays at enemy missiles soon after they were launched and shoot them down before they had a chance to dispense atomic warheads. Administration officials stress, however, that they are also interested in ground-based systems.

In Spain yesterday, Defense Secretary Caspar W. Weinberger said the kind of research and development program called for by Reagan would be "fully consistent with the treaty," Washington Post staff writer George C. Wilson reported, because "the treaty goes only to block deployment." Weinberger pointed out that the president had

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WASHINGTON TIMES 25 March 1983 Pg.2

U.S. hones new anti-missile weapon

By Whitt Flora
WASHINGTON TIMES STAFF

The United States is developing a "lightning bolt" weapon to destroy anti-ship missiles and could have a working model in three years, scientists claim.

The Defense Department has spent several million dollars on the project at the Lawrence Livermore National Laboratory near San Francisco, where scientists now are working out the bugs on a prototype model of the weapon. They say it would work like a Gatling gun, firing up to 2,000 bolts of electricity per second to destroy anti-ship missiles with a lightning bolt effort.

Bill Berletta, the associate administrator for the lab's research in this area, explained the weapon this way.

It would operate at 50 million volts and 10,000 amps to generate and fire the bolts, which would each be only millimeters in diameter and last for only 50 billionths of a second.

But, he said, the bolts would be fired at a rate of 2,000 a second, and that would give the weapon 25 times the power necessary to kill an anti-ship missile.

He said this method of burning up missiles should be better than a laser because it would be instantaneous, while a laser could take up to a half-second to destroy a target.

"This delay gives lasers problems with tracking the new Soviet anti-ship weapons, which are very maneuverable," he said.

Berletta said a prototype of the machines was completed late last year, and scientists there are running it through a battery of tests before turning it up to full power.

He said that first test probably would come later this year, adding, "You have to be very careful with a machine that burns up metal to make sure the metal it burns up isn't the machine."

The prototype isn't usable for military applications, he said, but the labs are planning to have a working model of a military particle beam weapon working within three years.

"This is basically a response to the new generation of Soviet missiles, which are superior to the Exocet missiles the Argentines used in the Falklands war. The Exocet is a very primintive technology compared to what the Russians are developing," he said.

DEMOCRATS...
Continued

committed himself only to study the technology, not to deployment.

But Jeremy Stone of the Federation of American Scientists pointed out that the 1972 treaty does ban development and testing, as well as deployment, of "ABM systems or components which are sea-based, air-based, space-based or mobile land-based."

Administration officials said yesterday that it probably would be another five or 10 years as the research progresses before the president's plan could come into conflict with the treaty and that provides "ample time to discuss this with the Soviets."

Successive administrations have invested billions in ABM research for some 20 years. But no system has proved workable and it has always been reasoned that such defenses could be thwarted by countermeasures or overwhelmed by an enemy who just adds more warheads.

In recent years, however, new technologies have progressed to the point where they may offer some advances for anti-missile work. Weinberger and other officials yesterday acknowledged that while the quest for an answer is old, what is new about the president's action is that he has elevated the goal to a national priority and thus given the program a better chance to succeed.

Many critics, however, argue that the search for an ABM will induce a false sense of security and that this could destabilize the nuclear balance because one side may feel it can launch an attack and safely shoot down the other side's retaliatory force.

In a telephone interview yesterday, Hans Bethe, the Nobel Prize-winning nuclear physicist who was one of 13 scientists invited by Reagan to attend a White House briefing Wednesday, said he was "worried" by the development and that he got no answers when he asked about this potential for destabilization.

Bethe said about the ABM challenge: "I don't think it can be done" and questioned why Reagan announced his plan now when the president acknowledged it might be the next century before such a system could be deployed.

"It will cause a race" between the United States and Soviet Union, Bethe predicted, "but what is worse is that it will produce a star war, if successful," in which each side also will race to develop better anti-satellite weapons.

This, he believes, will inevitably lead to U.S. intelligence-gathering satellites becoming vulnerable to attack. "So we will lose our eyes" and in a crisis or war "we won't know anything."

Administration officials said yesterday they did not know how much more the president's plan would cost beyond the $1 billion annually already spent on such research.

There was also uncertainty yesterday about how the president came to his decision to propose this plan. Officials said that the president's decision was "triggered" during a routine meeting with the Joint Chiefs of Staff six weeks ago. Officials declined to say, however, what it was that the chiefs said that triggered Reagan to act on his supposedly long-held views about the benefits of missile defense.

One source said that at the meeting the chiefs expressed concern about preliminary conclusions of a special commission studying overall U.S. strategic forces, including the MX missile.

Both the chiefs and the commission reportedly believe that retaliatory forces were becoming increasingly vulnerable and that some new effort would have to be made to try to maintain deterrence.

CHICAGO SUN-TIMES 25 March 1983 Pg. 8

Reagan's futuristic defense plan short on details

News analysis

By Patrick Oster
Washington Bureau Chief

WASHINGTON—President Reagan's plan to put increased emphasis on futuristic weapons as deterrents to nuclear war is both a political and a military move. But the political aspects of his new policy are more evident than the military ones—and are likely to remain so.

Senior administration officials told reporters Thursday that it would take at least until the end of the current fiscal year to decide what weapons technology would be pursued most vigorously. Until then, the officials said, the administration could not say how much the president intends to spend on such technology, beyond the $1 billion now budgeted.

The officials, who asked not to be identified, said that once priorities are set, they might be changed as unforeseen developments in research and development occur.

Likewise, pursuit of such technology as anti-ballistic missile defense systems and laser- and particle-beam weapons might have a significant impact on U.S.-Soviet arms control talks. That could produce greater Soviet willingness to reduce offensive weapons, and could elicit Soviet offers requiring a reduction of the program Reagan launched in his nationally televised speech Wednesday night.

Reagan's proposal is merely a pledge to move the United States away from singular reliance on offensive weapons—such as land-based ballistic nuclear missiles—as the U.S. deterrent to a Soviet-launched nuclear attack.

It cannot be said how the president proposes to get the country from here to there. But it is clear that by the time the United States gets there, Ronald Reagan will be long gone. The effort is expected to take decades.

The officials who briefed reporters Thursday also acknowledged that the defensive technology the president wants to pursue will be aimed only at stopping Soviet ballistic missiles, not nuclear-tipped cruise missiles—which are cheap, air-breathing missiles akin to the World War II buzz bombs.

Dealing with that threat "would take a follow-on effort," said one official. The implication of that remark is that the United States would continue to rely on offensive cruise missiles as a deterrent, while de-emphasizing the importance of ballistic missiles.

Reagan's key political gain from the proposal is to illustrate his peaceful intentions, despite his plan to spend an unprecedented $1.7 trillion on the military in the next five years. His Wednesday speech was the first of three addresses the president is to make in the next two weeks.

The principal purpose of the speech was to persuade the public and Congress that Reagan's massive military buildup is justified given the Soviet military threat, which the president went into in detail.

Next on the agenda is a March 31 speech in Los Angeles in which the president is expected to discuss current arms control negotiations. There are reports that the president will announce a new U.S. position on the effort to reduce superpower nuclear missiles in Europe.

The president has favored eliminating such missiles. The Soviets want to limit them to 162—but to include the 162 British and French nuclear missiles. Partly because of pressure from NATO allies to move forward in the talks, a U.S. offer of 100 missiles is under consideration.

The next week, Reagan will speak on his plans for basing the MX missile. There has been much controversy about how to station this 10-warhead, highly accurate weapon so that it is not vulnerable to a Soviet first strike, as Reagan contends the U.S. land-based missile force now is.

The president's message that he wants to rely more on defensive systems and less on offensive ones also plays to those who are concerned about the level of superpower nuclear weapons buildup, including those in the nuclear freeze movement.

It may have some limited impact on members of Congress who have expressed concern about Reagan's real intentions regarding the Soviet Union. This includes members of the House, who voted late Wednesday for a much smaller defense budget than Reagan wants. But until the details of the weapons program become available, it is hard to gauge such impact.

The officials said the unexpected new emphasis on futuristic weapons technology reflected attitudes held by Reagan long before he became president. The proposal to make development of such technology a priority was put forward at a meeting of the Joint Chiefs of Staff about six weeks ago, said one of the officials. It served to trigger Reagan's long-held beliefs, said the official.

The Soviets already have charged that Reagan's idea would violate current arms treaties, including one that limits anti-ballistic missile systems.

The officials acknowledged that the restrictions on development of such systems could create a problem.

One official at the briefing summed up what may be the main practical impact of Reagan's proposal: When laser, particle beam or microprocessor technology comes up in budget discussions in the future, money is more likely to be found for such activities than before.

BALTIMORE SUN 25 March 1983 Pg. 1

Futuristic laser-beam weapons already in works in Pentagon

By Charles W. Corddry
Washington Bureau of The Sun

Washington — Beam weapons, the brand-new forms of defensive weapons envisioned by President Reagan, already are under extensive investigation in the Defense Department, and officials believe the first ones could be in operation in a decade.

They already foresee "a constellation of space laser platforms" that might be able to knock out half the missiles in a large-scale Soviet attack, striking them soon after they left their underground launch sites.

Officials believe that they will be able to decide by 1988 to go ahead with what they call "on-orbit demonstrations" of prototype lasers with the potential for attacking targets at great distances at the speed of light.

Moreover, they believe that another form of "directed-energy weapon" — atomic particle beams — eventually could be used to defend against bombers, low-flying cruise missiles and ballistic missile warheads reentering the atmosphere en route to targets.

President Reagan broadly spelled out Wednesday night his "vision of the future" in which the possibilities of defense against missiles would make possible a dramatic shift away from total reliance on the threat of nuclear retaliation to deter an attack.

White House officials emphasized yesterday that the president's decision had lifted the undertaking out of the bureaucracy, where it competes year-by-year with endless other projects, and given it top priority with a clearly stated goal — the development of defenses by the turn of the century.

The officials said the president probably would issue a directive today putting the project in motion. They did not look for increases in research spending for a year or so. The Pentagon's current outlay for research on exotic defense weapons is about $1 billion a year.

While Mr. Reagan was preparing Wednesday to unfold his plan in his television address that night, the Defense Department's officer in charge of directed-energy weapons, Maj. Gen. Donald L. Lamberson, was by coincidence describing progress and prospects for the Senate Armed Services Committee.

He cautioned that these were "brand-new weapon forms," never before developed or deployed, with no history of use or measurement of effectiveness. In developing the technology for eventual weapons, he said, the Pentagon was trying to learn how feasible such weapons will be and how cost-effective.

He left little doubt, however, about the department's confidence in eventual success, holding out that in another decade the first directed-energy weapons may become operational.

In strategic defense — the aim specified by Mr. Reagan — the "payoff could be particularly high," General Lamberson said.

Directed-energy weapons, he pointed out, generate radiant energy or energetic particles, focused in a narrow beam on targets. The beams of electromagnetic radiation or atomic particles can deliver intense energy on targets almost instantaneously.

Depending on what is learned about propagation of the beams through air, ionosphere or space, the general said in his prepared statement, directed-energy weapons may have as many applications as missiles and guns do today.

Their reach could extend from 6 miles when used in the atmosphere to 6,000 miles or more in space uses. He said they could be based on the ground, the sea, in the air or in space vehicles.

A single weapon, General Lamberson said, could be designed to "negate" tens of targets in a short time. "Negate" means, depending on the form of the weapon and the target, destroying the target, confusing the guidance system, wrecking the warhead — in general, ensuring that an attacking missiles does not accomplish what it was sent to do.

In a defense-in-depth, as the general envisioned it, a constellation of space-based lasers could defend other U.S. satellites and also negate 50 percent of a Soviet missile attack, engaging hundreds of missiles as they were being boosted in the first stage of flight. Those that got through would have to run other gauntlets.

Particle beams appear less certain than lasers to become a reality and sure to take longer if they do. If they are developed, they will be more damaging than lasers. The latter will burn their targets, but warheads might be "hardened" to withstand destruction. The particle beams will penetrate to the innards of targets.

In general, the Pentagon officer said, the directed-energy program is intended to see whether defenses can "more nearly balance the offense-defense scale which has been dominated by the offense since the introduction of nuclear weapons."

It is that intention that President Reagan has raised to high priority.

WALL STREET JOURNAL
25 March 1983 Pg. 2

President Is Accused Of Trying to Scare Up Support for Military

* * *

Democrats Say Speech Aimed To Frighten the Nation, Boost Defense Spending

By a WALL STREET JOURNAL *Staff Reporter*

WASHINGTON – Congressional Democrats accused President Reagan of spreading false fears about Soviet military strength in an effort to scare the public into backing his proposed military budget increases.

Responding on behalf of his party to the president's Wednesday night defense speech, Sen. Daniel Inouye (D., Hawaii) charged that Mr. Reagan "left the impression that the U.S. is at the mercy of the Soviet Union."

The president's aim, he charged, was to "instill fear in the hearts of the American people" and to "divert our attention from the dismal failure of his economic policies."

The senator said Democrats believe national defense "must be strengthened." But he didn't offer any plan for a Democratic defense buildup.

Sen. Inouye asserted that the U.S. still leads the Soviet Union in total strategic nuclear warheads, 9,268 to 7,339, despite a Soviet lead in missiles. These figures, which the Democrats drew from private military analysts, differ sharply from the latest Pentagon count, released this month. That count shows the U.S. with just below 9,000 warheads and the Soviets with 8,500 to 8,850 warheads—nearly at parity.

The senator rejected the president's call for exotic new antimissile devices, calling them "yet another generation of destructive weapons." In any case, he contended such weapons could only be deployed and operated by college-educated soldiers that the Army lacks and isn't likely to attract.

Democrats, like President Reagan, want "a stronger America," Sen. Inouye said. But he said "a defense budget which puts a crushing burden on our economy, which drives us closer to the precipice of economic collapse" makes the U.S. weaker, instead of stronger.

Rejecting as "excessive" Mr. Reagan's request for a 10% rise in military spending, after inflation, Sen. Inouye predicted it would be defeated in Congress by members of both parties. He called instead for spending more money on social programs the president has cut, saying "our national strength does not depend solely on the number of missiles we have."

CHRISTIAN SCIENCE MONITOR 25 March 1983 Pg. 1

Political dynamics behind Reagan's defense speeches

By Richard J. Cattani
Staff correspondent of
The Christian Science Monitor
Washington

President Reagan has embarked this spring on a series of arms speeches and defense initiatives, but he has yet to weld them into a "grand strategy."

This is the view of arms and defense experts who are veterans of Republican administrations, including advisers to the Reagan defense effort.

The President, they say, is largely reacting to separate stimuli, among them:

- **The need to shore up political support on the conservative right. This support brought him to office, and he will need it again if he runs in 1984.**
- **Foundering support for his defense budget in Congress.**
- **Pressure for a nuclear freeze at home.**
- **Ferment in Western Europe for an interim nuclear arms agreement with the Soviets.**
- **The need to build a case for a basing plan in the US for the new MX missiles.**

Add to this the President's inclination, at times, to depict US-Soviet relations in highly moralistic terms — calling Soviet ideology the "focus of evil," for instance – and it is no wonder the public, America's allies, and even the experts are hard put to grasp the overall pattern of Reagan arms policy, the experts say.

Reagan at times gets personally involved in phases of arms strategy decisions that

Analysis

catch his fancy, aides say. He is said to have seized, for Wednesday night's speech, on the idea of a futuristic "defensive" arms era.

Here are the main Reagan positions on arms control and defense:

- **In Orlando, Fla., on March 8, Reagan denounced Soviet ideology as evil, rejected the nuclear freeze movement as a fraud, and insisted in hawkish tones on "peace through strength." Reagan's immediate audience was the National Association of Evangelicals, but he was also seeking to stem the impact of Catholic bishops and, politically, firm up his base among the nation's conservatives.**
- **Reagan's Wednesday address underscored the Soviets' military buildup and their encroachment into this hemisphere. It was intended to help revive Senate backing for his defense spending plans, both in the GOP-controlled upper chamber and in negotiations with the House, which this week passed its own budget.**
- **Next Thursday in Los Angeles, President Reagan is expected to talk about a possible interim agreement for talks on reducing intermediate-range nuclear arms in Europe. American allies in Europe, as well as moderates on Capitol Hill, contend the Soviets are not going to go for Reagan's so-called "zero-option" proposal. They want some immediate promise of progress. Those who oppose an interim pact argue it will in effect become the new "bottom line" for the US, forestalling any later movement toward Reagan's zero-option position.**
- **The second week of April, Reagan will likely respond to the recommendations of his commission on MX missile deployment. Congress last year rejected a dense-pack basing scheme. Rather than risk defeat on the MX, Reagan withdrew his own proposal and appointed a bipartisan panel to study the MX further. The group's recommendation is expected shortly.**

Both hard-line and moderate arms analysts find disquieting questions arising as Reagan moves through this series of public explanations of policy.

A conservative Reagan arms adviser points out that in speeches such as his Orlando talk, the public was given "a genuine insight" into the President's thinking and that of the people around him.

"These speeches seem to be confrontationist, rather than conciliatory," says a moderate defense analyst. "There is already some disquiet about the Reagan administration's defense and arms policies. But the speeches raise more questions. As a result, he's *losing* consensus – both at home and among the allies – not building consensus."

"The only common denominator is Reagan's feeling of urgency that he has to get his separate message across – that he must convey the truth as he sees it," says another GOP arms adviser. "These [arms speeches] have the mark of things that spring from the heart, and not the result of an orchestrated policy development."

BOSTON GLOBE 25 March 1983 Pg. 1

Selection of facts in Reagan's speech

By Fred Kaplan
Special to The Globe

WASHINGTON – The news-making novelty in President Ronald Reagan's defense speech Wednesday night was his announcement of a new program to build defensive weapons that can intercept enemy missiles before they hit American territory.

NEWS ANALYSIS

However, the purpose of the speech was not to address the issues of the 21st century – when Reagan said those new weapons might be ready – but rather to urge the American people to tell their senators and congressmen that the President's $274-billion fiscal 1984 defense budget must be passed in full.

To that end, he spent most of his network time trying to paint an awesome picture of Soviet military might. But very little of what he said was new, and much of it was only superficially scary.

The most heralded moment was when he introduced aerial photographs, "most of them secret until now," to illustrate Soviet military expansion in Central America. The photos revealed a huge spy facility in Cuba, a 10,000-foot runway in tiny Grenada and a previously released picture of rather old Soviet military equipment in Nicaragua.

Although photos from spyplanes or satellites are rarely released to the public, there was nothing of substance in these pictures that was not already widely known.

Comparing Soviet and American nuclear arsenals, Reagan said the United States had not built a new ICBM since the Minuteman 3 of 1970, while since then the Soviets have built five new ICBMs and have upgraded those eight times.

He did not point out, however, that the Minuteman 3 has been upgraded as well – its explosive yield doubled due to new warheads, its accuracy improved by roughly a factor of two, the hardened protection of its silos more than tripled in strength.

While they do not downplay the immensity of the Soviet ICBM buildup, some intelligence analysts believe Soviet production of so many different types of ICBMs reveals their inefficiency as much as anything else. They probably could have achieved the same results by our methods – mass production of just one type.

The President also noted that the Soviets have built more than 200 Backfire bombers, while we "haven't built a new long-range bomber since our B52s were deployed about a quarter of a century ago." This again is true, but the Backfire is considered a medium-range bomber, with about half the range of the B52; most of the Backfires are deployed with the Soviet Naval Aviation Command.

At the same time, Reagan said nothing of the 66 US FB111A bombers that the US produced in the 1970s. The FB111As are classified medium-range, but they can fly 6000 miles compared with the Backfire's 5500, and they all have orders to strike targets inside the Soviet Union in case of nuclear war.

Reagan also did not mention that the B52s have been modified so many times – new bombs, navigational systems, electronics and so forth – that they are not the same planes they used to be.

The President also said the Soviets have 1200 intermediate-range missile warheads, including those on SS20s, while NATO has none. This is true, but he left out of the equation 180 French nuclear missiles, roughly 1000 US and Allied nuclear-equipped planes well within striking range of the Soviet Union, and the 400 US Poseidon submarine-launched warheads explicitly dedicated to NATO's defense.

Reagan cited many types of conventional weaponry – tactical aircraft, tanks, attack submarines and artillery launchers – in which the Soviets have led in production over the past decade. Again, his numbers were correct; left out was any consideration of where the weapons are deployed. The Pentagon has noted that the Soviets devote about 35 percent of their defense budget to the Chinese border. Soviet submarines provide mainly for coastal defense, and are divided among four fleets that, due to geography, cannot be joined together.

Even with these considerations, the Soviets would be ahead in some categories of weapons, but not by so dramatic a lead as Reagan depicted.

Many defense analysts find all such "static comparisons" useless. Anyone, they say, can pick a couple of dozen indicators that seem to reveal one side ahead of the other. Reagan showed only those that show the Soviets ahead. At the request of Sen. Carl Levin (D-Mich.), the Congressional Research Service recently compiled a list showing 24 measures of military power by which the United States and its allies are clearly ahead of the Soviet Union and its allies.

Reagan also made some misleading claims about his defense budget and about congressional criticism of it. As an illustration of the progress the military has made under his Administration, he noted that, in contrast to the empty platters of the past, the United States is now building the B1 bomber, one Trident submarine a year, the M1 tank, modernizing the Air Force and rebuilding the Navy to a 600-ship fleet. However, except for the B1 and the 600-ship Navy, all these programs were inherited from previous Administrations.

Reagan compared congressional demands to cut the budget with the "kind of talk that led the democracies to neglect their defenses in the 1930s and invited the tragedy of World War II."

This comparison seems to ignore the fact that if the House defense budget were passed by the entire Congress it would still allow for 4 percent real growth – less than Reagan's 10 percent, but still a high peacetime rate by pre-Reagan standards – and a $20-billion increase over the fiscal 1983 budget.

NEW YORK TIMES 25 March 1983 Pg. 1

Aides Urged Reagan to Postpone Antimissile Ideas for More Study

By LESLIE H. GELB
Special to The New York Times

WASHINGTON, March 24 — President Reagan went ahead with a proposal to develop new defenses against missiles even though several White House and Pentagon aides suggested that the idea had not been carefully studied, according to Administration officials.

The officials, who were involved in preparations for the speech Wednesday night in which Mr. Reagan made the proposal, said a number of Reagan aides had also argued that it would detract from the main point of the speech — the growing Soviet military threat and the need for the $239 billion Reagan military budget to meet that challenge. Those officials also speculated, along with many on Capitol Hill, that Mr. Reagan decided to make his futuristic proposal as a way of diverting attention from the nuclear freeze movement.

Reacting to the speech, the Soviet press said today that Mr. Reagan's plan for new antimissile technologies amounted to a new stage in the arms race and that deployment of any such weapons could violate the 1972 treaty limiting such systems. [Page A9.]

Some American scientists said the President's proposal might never be technically feasible but would be strategically "dangerous" if it was ever made workable. Other scientists defended the concept. [Page A8.]

Interest Rekindled 6 Weeks Ago

Senior officials told reporters at a White House briefing that Mr. Reagan's longstanding interest in ideas for defense against nuclear attack was reignited six weeks ago when the subject came up at a meeting with the Joint Chiefs of Staff. But because of the White House's desire to keep this element of the President's speech a surprise, strategic experts within the Administration were not given an opportunity to review the proposal before he made his speech, a number of officials said.

The senior officials were careful not to portray the President's call for a "comprehensive and intensive effort to define a longterm research and development program" as even a plan or a proposal.

They said Mr. Reagan signed a formal directive today, calling for a first phase of intensive study of the idea, followed by a second phase of recommendations and possible implementation of new programs. But they emphasized that it was still only an idea, not a program. One referred to it as a way of getting "attention, engendering a debate, posing of an alternative" to exclusive reliance on offensive missiles.

The officials also made clear they were aware that the President's announcement would lead the Administration into a debate about nuclear deterrence and arms control.

They did not pretend to have answers to fundamental questions raised by Mr. Reagan's challenge to the scientific community to find a way of protecting the United States from a nuclear attack. Among such questions are these:

¶Will the proposed strategy violate existing arms limitation treaties, in particular the 1972 agreement limiting Soviet and United States antimissile systems and their development?

¶Can a defensive system be devised that cannot be overcome by the offense?

¶Will deterrence be enhanced or undermined by such a system, which would allow one side to strike first and limit the effects of a retaliatory blow? This last is especially important because such a system could theoretically be developed by the Soviet Union as well as by the United States.

The senior officials responded simply that these questions would have to be explored and that there was time to do so. They stressed that they were talking about such technologies as laser beams and other forms of directed energy, which probably will not be ready for use as weapons until after the year 2000.

They said Mr. Reagan did not envision any action under his effort in the next 5 to 10 years that would raise questions about American compliance with existing arms control treaties.

What Mr. Reagan was seeking, they said, was not a crash program but a change in research emphasis from shooting missiles with missiles to more advanced technologies.

The officials also said the President's speech Wednesday night should be seen as part of a trilogy. He is to deliver an address in Los Angeles next Thursday dealing with arms control. In it, he is expected to unveil a proposal for an interim agreement reducing, but not eliminating, intermediate-range missiles targeted on Europe and Asia.

A week or so later, the officials said, he plans to outline new proposals for deploying land-based intercontinental missiles. This, it is said, will reflect the results of a Presidential commission headed by Lieut. Gen. Brent Scowcroft, retired. It is expected that the Scowcroft plan for missile deployments will be accompanied by a plan for limiting intercontinental-range missiles.

The senior officials said the idea presented by the President Wednesday night called for no new funds in the current fiscal year and perhaps none in the fiscal year 1984. The Pentagon now spends about $750 million on defense against ballistic missiles, they said. About $500 million of this is on the traditional program of shooting down missiles with missiles, and the remainder is devoted to advanced technologies.

Democrats and liberals in Washington have already attacked the proposal as a possible violation of the 1972 treaty, known as the Anti-Ballistic Missile or ABM Treaty, which limits the Soviet Union and the United States to one missile defense site each.

Article II of the treaty defines an antimissile system as "a system to counter strategic ballistic missiles or their elements in flight trajectory." That is a generic definition that would cover laser beams or any other means to intercept and destroy incoming missiles.

Article V, Section 1 states: "Each party undertakes not to develop, test or deploy ABM systems or components which are sea-based, air-based, space-based or mobile land-based." This does not prohibit study or research. The contentious issue is what constitutes research on the one hand and development on the other.

Both the Soviet Union and the United States have research programs to make weapons of laser beams and other forms of directed energy that could be used to intercept missiles. Neither side has challenged the legitimacy of the other's program.

NEW YORK TIMES
25 March 1983 Pg. 8

SCIENTISTS DUBIOUS OVER MISSILE PLAN

By CHARLES MOHR
Special to The New York Times

WASHINGTON, March 24 — Some scientists said today that President Reagan's proposal to develop a defense against nuclear attack may never be technically feasible, but that it would be strategically "dangerous" if it was ever made workable. Other scientists defended the concept.

Dr. Wolfgang Panofsky of Stanford University, who was invited to dine at the White House with Mr. Reagan Wednesday night but declined, said he found the President's request that scientists join in an intensive effort to build a workable defensive shield against ballistic missiles to be "somewhat spiritually troubling."

The President made his request in a speech later Wednesday night.

Dr. Panofsky and a number of other figures in American science said they doubted that scientists could be marshaled into an effort resembling the Manhattan Project that produced the first nuclear weapon in World War II.

In his speech, Mr. Reagan said he was seeking a "vision of hope" that nuclear weapons could be made "impotent" by the development of a practical defensive shield. Aides said the President was not betting on any single technology but wanted intensified research both in space-based stations harboring directed-energy weapons that might shoot down missiles and land-based antimissile systems. The President said it might require decades to achieve workable systems.

Called 'Extremely Dangerous'

Dr. Victor Weisskopf of the Massachusetts Institute of Technology, one of the scientists who did meet with the President Wednesday night at the White House, said he believed the President's goal would be "extremely dangerous and destabilizing."

A number of other scientists and nonscientists took the same view. In contrast to President Reagan's argument that a nuclear warfare defensive system would make for a safer world, these critics argued that any success in developing antimissile defenses would undermine deterrence of nuclear war, lead to a stepped-up arms race and eventually to pre-emptive warfare in space to destroy the proposed defensive platforms there.

Several of the scientists also expressed the view that present "support" or "benign" military uses of space that enhance United States military security would be endangered by moves to place weapons and countermeasure devices in space. Such support applications now include the use of satellites for sensor stations to warn of hostile missile launches, highly detailed reconnaisance and surveillance of the Soviet Union and the rest of the world, and a complex network of communications.

Critics also asserted that the President's plan would endanger the prospects for nuclear arms control agreements with the Soviet Union by undermining the 1972 treaty limiting antiballistic missile defenses and accelerating a race to achieve a workable complex of such defenses.

'Pie in the Sky'

Jeremy Stone, director of the Federation of American Scientists, said "the ABM treaty is not only the most important treaty we have, but it is the foundation for future treaties on offensive weapons."

He added: "If either side thought the other was going to withdraw from the ABM treaty there would be no way at all to get agreement on offensive arms treaties; each side would have to reserve the right to build whatever weapons it needed to penetrate the defense."

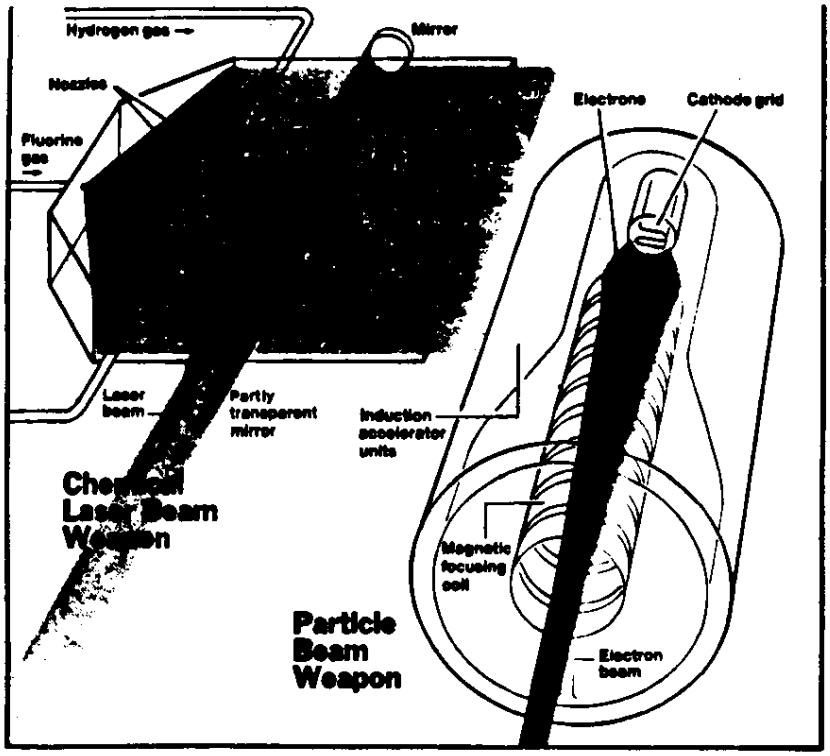
As Secretary of Defense in the 1960's, Robert S. McNamara championed the view that it was against the national security interests of both the United States and the Soviet Union to seek a nuclear warfare defense. In a broadcast this morning he called Mr. Reagan's proposal "pie in the sky."

Dr. Edward Teller, who led the effort to develop thermonuclear weapons, is one scientist who has urged a program much like that discussed by the President Wednesday night. Dr. Teller is close to Mr. Reagan's science adviser, George Keyworth.

Even the critical scientists said they approved of past and continuing research and development efforts to explore ballistic missile defense and space-based military applications so as to prevent "technological surprise" by the Soviet Union.

"But," said Dr. Weisskopf, "I can't understand why the President put it on the front burner with so much fanfare unless his purpose was political, to sell his military budget to Congress."

"I won't exclude that such a system might work," he added, but said it would not be practical for a very long time. He said that if the Soviet Union developed a missile defense first, "we would be completely defenseless." He added, "Either side would have to shoot down what the other side had in space — it would be the beginning of a nuclear war."



The New York Times/March 25, 1983, source, Scientific American (laser) and Aviation Week & Space Technology (particle beam)

When President Reagan raised possibility of intercepting missiles with advanced technology, two major approaches to which he was apparently alluding were the chemical laser beam weapon and the particle beam weapon. Both weapons would generate intense, precisely directed energy that could destroy a missile. With laser, gases — fluorine and hydrogen — are combined to produce energy in the form of light. This light is amplified by mirrors within weapon until it emerges as a powerful laser beam. The particle beam weapon begins with production of electrons at cathode grid. They would be accelerated and focused as electron flow is guided by magnets until that flow emerges as a powerful beam that could be aimed to destroy a target. Most scientists consider the laser beam the more feasible of the two weapons. Most theorists envision satellite delivery of these beams, although airplanes or land-based installations are also being studied.

NEW YORK TIMES 25 March 1983 Pg. 9

Weinberger Says ABM Pact May Ultimately Need Amending

By JOHN DARNTON
Special to The New York Times

MADRID, March 24 — Secretary of Defense Caspar W. Weinberger said today that President Reagan's proposal on Wednesday to look for new ways to defend against missiles "was fully consistent" with the antiballistic missile treaty signed with the Soviet Union in 1972.

But Mr. Weinberger indicated that the treaty might have to be amended when the proposed system was actually deployed.

Mr. Weinberger made his statement in response to a comment by Tass, the Soviet Government's press agency, that a shift of American nuclear deterrent policy from massive retaliation to a new type of effective defense against missiles would violate the 1972 accord.

"The President is very clear that we would do the work we have to do fully consistent with the treaty," Mr. Weinberger said at a news conference. He said the treaty allowed research, study and development of antimissile defenses and blocked only deployment on the scale envisioned by Mr. Reagan.

Development May Be Drawn Out

Mr. Weinberger indicated that the development of the new technologies was likely to be a long process and he expressed confidence that arrangements could ultimately be made with the Soviet Union on deployment.

"There is no violation of the treaty involved in the study, the research, the development, the examination of that, and the best evidence of that is that the Soviets themselves are doing it," he said.

Mr. Weinberger said the proposed new defense system, which he said was technologically feasible although "far out on the horizon," could ultimately eliminate offensive weapons and thus "offer one of the greatest hopes of mankind if it can be realized."

The effort to achieve it would not, he asserted, touch off a new kind of arms race, that of defensive weapons.

"There have been a lot of people," he said, "who have said we should not even look at the possibility of ballistic missile defense because it is destabilizing, a theory to which I have never subscribed."

He said he was "excited and pleased about this initiative because it seems to me this is the one thing that cuts across all of that sterile doctrinal thinking and gets us to the real possibility of something to work on."

Mr. Weinberger said the current thinking was to construct the system, if possible, out of nonnuclear weapons.

"The goal is to destroy these missiles before they can impact on the earth, and if that can be done with nonnuclear weapons, so much the better," he said.

The 1972 treaty allowed the United States and the Soviet Union each to construct two antiballistic missile systems, one of them around the national capital. The Soviet Union is known to have installed a system around Moscow. The United States experimented with antimissile deployment Grand Forks, N.D., but essentially scrapped the project in 1976, putting the missiles in storage.

Mr. Weinberger said that the existing antimissile system was effective only in protecting a small area and that the goal now was to construct a more extensive system, perhaps partly based in space, that would work "not just 50 percent or 60 percent of the time" but be certain enough to render offensive weapons ineffective.

It was a much grander plan than any limited version that might be used to protect closely packed MX missiles and eventually, he said, it could perhaps be extended to cover Western Europe.

NEW YORK TIMES 25 March 1983 Pg.9

Democrats Assert Reagan Is Using 'Star Wars' Scare to Hide Blunders

By FRANCIS X. CLINES
Special to The New York Times

WASHINGTON, March 24 — Congressional Democrats accused President Reagan today of using a "Star Wars scenario" to stir fear of the Soviet Union among the American people and distract them from "the dismal failure" of the Administration's economic program.

The Democrats also accused the President of "selective declassification of information for political effect" in his release of intelligence photographs to bolster his accusations about the Soviet threat.

Delivering the Democrats' response to the President's televised address to the nation Wednesday night, Senator Daniel K. Inouye of Hawaii contended that "the President left the impression that the United States is at the mercy of the Soviet Union."

"Most respectfully, Mr. President, you know that is not true," Mr. Inouye declared. "Our scientists, our engineers, our generals, are not dunces."

'Buck Rogers' Weapons

The Senator said the President, in his description of Soviet and American nuclear strength, "chose not to mention the superiority of the submarine-based missiles we have developed to counter the Soviets."

"You could have, but chose not to mention, our superior, indeed our singular development of cruise missiles which can penetrate all known Soviet defenses," Senator Inouye continued.

Accusing the President of seeking to distract the public with talk of "Buck Rogers" weapons and allegations of American nuclear inferiority, Senator Inouye said:

"In your urgency to defend your defense budget, with its huge increases, against the more moderate proposals which have received bipartisan support in the Congress, we believe that you have failed to present an honest picture."

"Here it is," the Senator continued. "Soviet land-based intercontinental balistic missiles outnumber those of the United States. But the warheads on these missiles are more than offset by our warheaad advantage in sea-based submarine missiles, and our bombers and cruise missiles."

Taking a cue from the President's speech, the Democrats had their own graphs on hand depicting information they chose to highlight. Mr. Inouye pointed to total nuclear warheads, noting that the Soviet Union now has 7,339 while the United States has 9,268.

"Why did he suggest American inferiority?" the Senator asked, addressing the American public at this point. "I believe he did so because he is afraid that his excessive defense budget will be trimmed by the Congress and because he wants to take our attention off of the economic disasters brought on by his policies."

The Democrats, complaining that the President had already deeply slashed social programs for child nutrition and education, contended his defense program would put a "crushing burden" on the nation.

LOS ANGELES TIMES 25 MARCH 1983 Pg. 1

Reagan Missile Plan: Technology and Politics

By ROBERT C. TOTH and GEORGE SKELTON, *Times Staff Writers*

WASHINGTON—Reviving a concept that has been in limbo for a decade, President Reagan's call for futuristic missile defenses to replace current nuclear deterrence policy appears to be based on a combination of promising new technologies and pressing new political needs.

On-board minicomputers and sophisticated infrared sensors have vastly improved the potential for ground-based interceptor missiles, while directed-energy beams of lasers and subatomic particles hold out Buck Rogers-like possibilities for destroying warheads in space, according to defense officials.

And the concept may undercut the efforts of Reagan political foes in Congress to slash the defense budget, impose a nuclear freeze and kill the MX missile by shifting the focus of debate from the arms buildup to its new strategy of replacing the traditional "balance of terror" with a high-tech umbrella.

Officials working to win congressional acceptance of the MX said Thursday that they expect Reagan to reiterate his emphasis on missile defense in two weeks when he unveils the plan of the special MX commission for basing the controversial intercontinental ballistic missile.

"This will help sell the MX," one industry source said, "because it's bound to defuse some of the opposition which saw MX as a destabilizing, 10-warhead mega-monster."

To the White House, Reagan's purpose was much broader. "The President's hope is to redirect thinking away from the strategy of depending on strategic (offensive) missiles to (a strategy to) reduce or even eliminate them completely one day," one aide said.

The new direction emerged from discussions between Reagan and the Joint Chiefs of Staff that began six weeks ago and will be made formal today when the President signs a national security decision directive ordering a study of missile defense technologies and the budget implications of pursuing each of them.

Reagan probably will not ask for significant additional funds for the project until the 1985 fiscal year, which begins Oct. 1, 1984, according to the White House. Roughly $1 billion a year now is being spent on researching the overall concept.

But the program until now has been relegated to the "sub-critical" category by government planners, and Reagan's purpose Wednesday night was to elevate it to "a critical level," with corresponding time and budget priorities, another White House official said, asking that he not be named because of his role as a presidential adviser.

Beyond that, he said, Reagan wanted to generate "a conscious, public policy debate on the issue...to invite consideration."

That debate began immediately.

Offering the Democratic response to the speech, Sen. Daniel K. Inouye of Hawaii, a member of the Senate Intelligence and Appropriations committees, said "the President attempted to instill fear in the hearts

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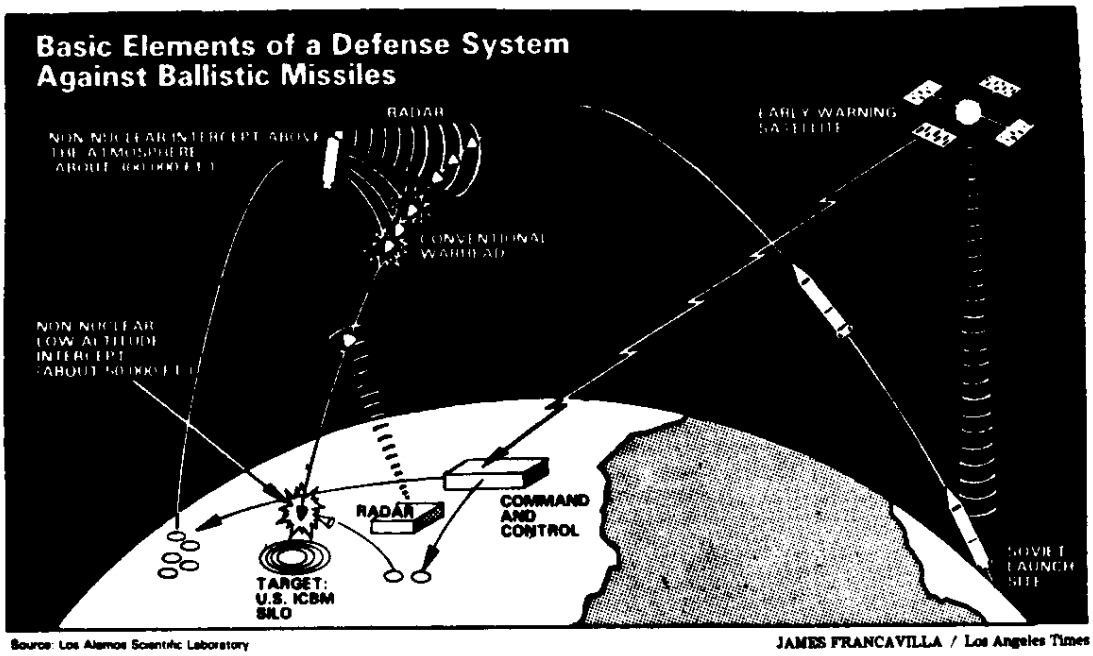

Source: Los Alamos Scientific Laboratory

JAMES FRANCAVILLA / Los Angeles Times

Drawing shows a system that would intercept enemy missiles with conventional anti-missile warheads; President also proposed research on futuristic laser and particle-beam weapons.

PLAN...Continued

of the American people, to raise the specter of a Soviet armed nuclear attack and to divert our attention from the dismal failure of his economic policies."

Sen. Alan Cranston (D-Calif.) said that Reagan went on television "to try to scare the American people and Congress into spending more money than is necessary to defend our country and our allies."

"Ronald Reagan's hope is, in reality, a nightmare of more and more spending that will make us more insecure militarily and weaker economically and increase the danger of a nuclear holocaust," Cranston said.

Beyond such political arguments, the technology of anti-missile defense is itself complex.

Oldest of the current missile defense technologies is the traditional approach of shooting down one missile with another. It is the closest to being made into a weapon, with the U.S. Army's Ballistic Missile Defense program spending about $500 million this year on it.

Basically, it is a two-layer defense scheme, with one system to intercept enemy warheads at long range (above the atmosphere, which ends at 300,000 feet, or some 60 miles in altitude), and the other to kill warheads that escape the first defense line and descend to about 50,000 feet.

Ten years ago, a similar two-tiered system was built and briefly installed at the single anti-ballistic missile site allowed to the United States under the 1972 Soviet-American anti-ballistic missile treaty. But the technical consensus was that it would not work and it was dismantled.

There was also a political consensus that both the Soviet Union and the United States were safer from a surprise attack if neither had an ABM system. Possession of such a system, however imperfectly it worked, would be more likely to tempt leaders to resort to war in a crisis, it was thought.

Using newer technology, one current scheme would rely on early-warning satellites in orbit to detect enemy missile launches and radio their trajectories to ground computer systems that would direct the high-altitude interceptors toward the warheads. Each interceptor would spread out as many as 24 small charges of conventional explosives to destroy incoming warheads with steel pellets or shrapnel.

Surviving warheads would be attacked by the Low-Altitude Defense System (LOADS) with a similar non-nuclear charge, according to one design described in a Los Alamos Scientific Laboratory study.

Reagan's new emphasis on missile defense is viewed primarily as a push for non-traditional defense technologies, however, including laser and particle beams that could be made into weapons. At present, some $250 million is budgeted for such directed-energy concepts (with another $250 million for so-called generic, or nonspecific research in the field).

Lasers are considered the more promising of the two. However, a laser beam must dwell, or stay, on a target a measurable length of time to burn a hole in it or melt its internal mechanisms. It requires enormous quantities of energy and fuel to operate. If based on the ground, its beam would be dissipated as it passed through the atmosphere.

Laser weapons would be initially most effective against satellites, which are usually fragile. Incoming warheads, which are sturdier and protected against re-entry heat, would be extremely difficult to destroy with lasers, at least as they have been developed to date.

Particle beams, which are akin to machine guns shooting billions of subatomic particles, would be far more destructive. The problem with them is that such "machine guns" are basically particle accelerators or "atom smashers," which are huge installations demanding great amounts of energy.

BALTIMORE SUN 25 March 1983 Pg.6

Amending of ABM pact hinted by Weinberger

Madrid (Reuter) — Defense Secretary Caspar W. Weinberger yesterday suggested the 1972 U.S.-Soviet anti-ballistic missile treaty might have to be amended for the deployment of the new ABM system proposed by President Reagan.

But he said the proposal made by Mr. Reagan Wednesday night to shift U.S. defense policy to an ABM nuclear deterrent did not violate the treaty, which limits each side to one ABM system.

Mr. Weinberger, at a news conference midway through a three-day visit to Spain, said Mr. Reagan's proposal might help halt the arms race because it would create a way to destroy incoming ballistic missiles.

And he rejected a charge by the Soviet new agency Tass that Mr. Reagan's proposal, which it said envisioned ABMs based on Earth and in orbit, would violate U.S.-Soviet treaties.

Mr. Weinberger said the proposal was to study and develop new ABM systems, and "the treaty goes only to block deployment."

He added, "We would certainly hope that if we are successful in this in the decades ahead — it may take a long time because the technology is not here yet — we would be able to work out an arrangement under which this great advance could be achieved.

"There is no violation of the treaty involved in the study and research and development, and the best evidence of that is that the Soviets themselves are doing it," he added.

Mr. Weinberger said a new ABM system might very well use nonnuclear weapons, adding "The goal is to destroy these weapons before they enter the atmosphere and if that could be done by nonnuclear weapons, all the better."

Under the 1972 treaty, the Soviet Union built an ABM system around Moscow. America did not deploy its own system, though there were plans for one at a missile base at Great Falls, N.D.

LOS ANGELES TIMES
25 March 1983 Pg. 20

Reagan Plan Won't Violate Pact, U.S. Says

By OSWALD JOHNSTON,
Times Staff Writer

WASHINGTON—A major research effort aimed at developing a future defense system against nuclear missiles, proposed Wednesday by President Reagan, would not violate the 1972 U.S.-Soviet treaty on anti-ballistic missiles, Administration officials insisted Thursday.

But that treaty, which is directed specifically at the 1960s technology of nuclear-tipped missiles designed to track, intercept and destroy incoming warheads, would have to be revised if the proposed futuristic technology of lasers, particle beams and other space weaponry were ever developed to the point of actual deployment, officials concede.

In one of a flurry of Soviet press reports Thursday denouncing Reagan's defense policy speech, Tass, the official news agency, said that "deployment of such systems of anti-missile defense would be a direct violation of the Soviet-American treaty on anti-ballistic missiles and its protocol." Administration officials basically do not disagree that the treaty, as now written, would prohibit deployment.

'No One Wants That'

In his speech Reagan stressed that his project would be "consistent with our obligations under the ABM treaty" and he specifically noted the problem that the treaty was designed to address. "If paired with offensive systems," Reagan said, systems of strategic defense "can be viewed as fostering an aggressive policy and no one wants that."

The ABM treaty, as initially drawn, would have limited each superpower to deployment of a single deployment of 100 anti-ballistic missile launchers and missiles to protect its national capital area and a similar deployment to protect one offensive missile launch site. The treaty was amended in 1974 to allow only one deployment each, and the Soviets have subsequently scaled down the size of their installation defending Moscow. The United States unilaterally dismantled its only deployment, at Grand Forks, N.D., in 1979.

Advanced Technologies

The treaty forbids developing and testing of "ABM systems or components which are sea-based, air-based, space-based or mobile land-based" but the treaty also specifies that an "ABM system" is strictly defined as the kind of interceptor missile under development in the late 1960s and the radars and launchers associated with such technology. The treaty was signed in tandem with the 1972 interim agreement on offensive missiles, widely known as SALT I.

On the question of advanced technologies such as the 21st- Century devices under consideration in Reagan's speech, the treaty is silent. And, in fact, the Pentagon for several years has been spending $1 billion a year on precisely that kind of research. According to Pentagon analysts, the Soviets are devoting many times that to similar research programs.

LOS ANGELES TIMES
25 March 1983 Pg. 1

Scientists Split on Feasibililty of Missile Plan

By GEORGE ALEXANDER,
Times Science Writer

President Reagan's proposal for sustained research to create a futuristic shield against enemy missiles left many scientists skeptical Thursday, but others cheered the idea, saying it has merit as a defense and is scientifically feasible.

"I know of no natural laws (of science) that would have to be violated (to develop) a missile defense system," said one Southern California scientist who favors the President's idea but who declined to be identified by name. "Yet it doesn't automatically follow from that that such a system would necessarily be effective."

Edward Teller, the physicist who has played a major role in the development of the nation's nuclear arsenal, was more positive. In a telephone interview Thursday from his office at Stanford University's Hoover Institute, Teller said: "There are good prospects for defending the nation. I'm talking about ingenious ideas by young people (in the nation's military-industry establishment) and I'm optimistic that these ideas can become reality."

Teller would not discuss these ideas in detail, but he acknowledged that some were the same suggested systems he referred to last autumn in opposing Proposition 12, California's Nuclear Freeze Initiative, which was passed by the voters.

"Those were most definitely included in the President's speech," Teller said, without elaboration. "But don't overstate them; he (Reagan) might have other things in mind that I don't know about."

During the campaign on the initiative last fall, it was learned that the Lawrence Livermore Laboratory—operated for the federal government by the University of California—was exploring the possibility of an X-ray laser system that could shoot down an enemy's ballistic missile before those weapons could fall on American soil.

There also were reports of studies on beams of electrically charged particles and the electromagnetic effects of nuclear detonations, a sort of nuclear flak screen, being used to blunt any missile attacks against the United States. But there has been no official confirmation that these ideas are under development or are being studied.

Issue in Campaign

The question of futuristic technology came up in the campaign when freeze proponents argued that to build such systems would heighten the risk of nuclear war, while others such as Teller argued that they were necessary to restore the East-West balance of power.

The magazine Aviation Week & Space Technology has reported, without attribution to sources, that the United States has been carrying out tests of X-ray lasers at the underground nuclear test station in Nevada.

To get a laser (the name stands for light amplification by stimulated emission of radiation) to emit a beam of extremely powerful X-rays—of the sort that could inflict damage on a ballistic missile hundreds or even thousands of miles distant—requires an initially pow-

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SPECIAL EDITION -- "STAR WARS"

CHICAGO TRIBUNE 25 March 1983 Pg. 8

Space defense plan hailed, hit

From Chicago Tribune wires

PRESIDENT REAGAN'S call for a high-technology missile-defense program that would include space-based weaponry was met with praise by a conservative group, but criticized as a "wonder weapon" by a science group.

The President Wednesday night proposed a long-term research program to develop a "comprehensive" antiballistic missile [ABM] defense system by early in the 21st Century that might involve lasers, particle beams and space-based weaponry.

Implementing Reagan's proposal, to which he attached no price tag, would take years and could be reversed or altered by future Presidents. The Pentagon is spending $1 billion a year on ABM research now.

On Thursday, Reagan asked the National Security Council to begin laying groundwork to seek such a defense system.

Some of the first words of praise for Reagan's proposal came from the Heritage Foundation, a conservative think tank that last year issued a major study on the issue of high-technology defense systems.

REAGAN'S PROPOSAL appeared to endorse parts of the Heritage Foundation's study, which calls for 400 satellites in space to defend the U.S. against a Soviet missile attack.

"We would have preferred a stronger statement, but we can certainly support the thrust of what the President said: Let's turn to using our talents for defense," said foundation spokesman Jack Coakley.

"The important thing is, as opposed to a nuclear freeze, it's something that can be done unilaterally by the United States."

But some science and defense experts criticized the proposal as unfeasible and heightening fears of war.

Dr. Henry Kendall, chairman of the board of the Union of Concerned Scientists, said the desire for a defense against nuclear weapons is understandable, but the Reagan proposal falls short.

"The technical weaknesses are considered so great that it is not reasonable to propose it all," he said, adding that some scientists abandoned the idea of space-based weaponry a decade ago as unfeasible. "The likelihood is, it is technically beyond reach."

KENDALL CALLED Reagan's proposal "another wonder weapon," and said its benefits would be "an illusion."

Robert Bowmans, a retired Air Force colonel who is president of the Institute for Space and Security Studies, said it appears Reagan's proposal was sparked by "a new fascination with high-technology solutions."

He said the proposal "would only increase the fear in the Soviet Union that we were preparing for a first strike," which in turn would "greatly increase the chance for war initiated by fear, or an accidental war."

White House officials tried to portray the President's speech as the beginning of a major departure from three decades of strategy that has deterred attack by threatening a nuclear retaliation unacceptable to the Soviet Union.

Reagan also urged public support for his record peacetime arms buildup now before a reluctant Congress. He showed aerial photographs of Soviet weaponry in Cuba, Nicaragua and Grenada and displayed graphs depicting what he said is the Soviet Union's "margin of superiority" in arms.

EVEN BEFORE THE President went on the air, however, the Democratic-controlled House dealt him a sharp setback by voting 229-196 for a budget that would cut the increase in his fiscal 1984 defense budget by more than half.

But Reagan's speech might have some effect in the Senate, where some Republicans are calling for cuts in the defense budget and Reagan is trying to hold his losses to a minimum.

Edward Kennedy [D., Mass.] said the House Democrats' budget proposal "is a far more responsible answer to the real defense needs of our nation than the misleading Red-scare tactics and reckless 'Star Wars' schemes of the President."

The Democratic leaders of the House and Senate asked the three major television networks for equal time to respond to Reagan.

In Moscow, the Soviet news agency Tass said the proposal would violate the Strategic Arms Limitation Treaties.

The White House received 1,204 telephone calls after Reagan's speech, 948 of them favorable, a spokesman said Thursday.

THE JOINT CHIEFS of Staff, deeply concerned about the increasing capabilities of Soviet offensive weaponry, recommended to the President in February that he commit U.S. resources to developing a better nuclear defense system, administration officials said.

A senior administration official who briefed reporters at the White House said the President wanted to avoid picking any one technology.

SCIENTISTS SPLIT...
Continued

erful energy source to begin with.

The researchers are considering small nuclear explosions for such energy sources. Located very close to the laser, a detonated bomb would flood the laser device with a range of X-rays. Those X-rays would excite the atoms in the laser's material, boosting them to very high energy levels and causing them to put out a sharply focused beam of X-rays. All this would take place in a few billionths of a second before the other effects of the nuclear detonation vaporized the laser device.

Feasibility Unproven

Is this scheme scientifically feasible? Yes, at least in theory, said a number of physicists interviewed about the plausibility of the President's idea. But, they all added, this has yet to be demonstrated. And even if it is, it would still be a long step—if ever—before that could be incorporated into a workable weapon system.

On this point, there is profound skepticism among many scientists.

Wolfgang Panofsky, the director of the Stanford Linear Accelerator Center in Northern California, said in a telephone interview, "I know of no developments, no technical advances, that would change the present balance of terror (between the United States and the Soviet Union) to an umbrella of security for just the U.S. Unless, that is, arms-control agreements bring the total number of missiles down to 100 or so on each side. Then, such a system might have a chance of doing what its builders hope it might do."

Panofsky said that with the number of nuclear warheads now in existence around the world—the figure is usually taken to be 6,000 to 10,000 of all nuclear-equipped nations—there is no way to defend against a determined, concerted, all-out attack.

WASHINGTON TIMES
25 March 1983 Pg.1

Development to be ordered for missile defense in space

By Russell Warren Howe and Bill Kling
WASHINGTON TIMES STAFF

President Reagan plans to sign a national security directive today ordering a broad federal government program to develop highly sophisticated technology for defense against strategic missile attacks, an objective he first outlined Wednesday night on nationwide television.

White House Deputy Press Secretary Larry Speakes said a tally of incoming telephone calls about the president's speech, as of noon yesterday, showed 1,768 "positive" and 514 "negative" — 77 percent in support of Reagan. A similar tally of telegrams to the White House showed 432 "for" Reagan and 82 "against" — 84 percent "positive."

However, Democrats in Congress took a different view of the speech.

House Speaker Thomas O'Neill, D-Mass., said, "The president ... suggested that our military commitments should not be related to overall economic considerations. The key to American military power is not just our strategic weapons but our economic power — and we must never forget that fact."

Sen. Carl Levin, D-Mich., accused Reagan of presenting "an unbalanced view of Soviet military strength with his exaggerated rhetoric and use of one-sided information," referring to Reagan's decision to use top secret intelligence photos to support his arguments.

Rep. Edward Markey, D-Mass., the chief backer of a nuclear-freeze resolution in the House, told his colleagues the president's Wednesday night speech offered new insight to the true Reagan philosophy.

"The force of evil is the Soviet Union and they are Darth Vader," Markey said, referring to the villain in the blockbuster movie. "We are Luke Skywalker and we are the force of good."

Rep. Dan Burton, R-Ind., attacked Markey's speech, "I think he [Reagan] held out an olive branch to the nuclear freeze advocates, and they threw it back in his face."

Rep. Ken Kramer, R-Colo., said he would introduce a resolution calling on the House to support the president's "bold new initiative," and objected that some members were trying "to make fun of what is possibly the greatest hope for mankind."

The messages received by the White House seemed to reflect Kramer's view.

"You can safely say that this is probably among the heaviest responses to *any* presidential speech and among the most favorable reactions," Speakes said.

At a White House briefing yesterday, senior administration officials said no additional funds will be needed for the program in the proposed fiscal 1984 defense budget. No dollar figure has been put on the president's program.

One official told reporters that a request for more funds to finance the program "will first show up in a realistic way" in the budget proposed for fiscal 1985. It will be "a measurable increase" over the $1 billion a year the United States now spends on strategic weapons research and development "but it will not be a substantial increase" in overall defense spending, he said.

Envisioned in the program will be research into the possibility of such exotic futuristic systems as lasers, microwaves and particle or energy beams. They could be earth-based or stationed in space.

Officials said that the program would not be a breach of international treaties and that, in any event, testable systems were still "five or 10 years" away.

Reagan, himself, scoffed at Soviet charges that the proposed program would violate treaty obligations. During a White House "photo opportunity" with Republican Hispanic leaders, a reporter asked the president about such an assertion from Tass, the Soviet news agency.

"Well, I didn't expect them to cheer," Reagan said.

A State Department official was reported to have responded to the Soviet allegations by quipping, "They would've reacted badly if he [Reagan] had read a fudge recipe."

One White House official, referring to weapons that could shoot down a hostile missile in the boost phase before its separate warheads were released, said, "If they are not weapons of mass destruction, they are not a breach."

Some of the directed-energy systems, such as lasers, could be based on the ground and use space-based mirrors to hit their targets, another official noted.

The Outer Space Treaty, drawn up by the United Nations and signed by many countries, including the Soviet Union and the United States in 1967, prohibits the space basing of weapons, "whether for attack or deterrence." It was a follow-up to the Partial Test Ban Treaty of 1963, also signed by both superpowers.

The OST defines "principles governing the activities of states in the exploration and use of outer space, including the moon and other celestial bodies." It forbids "placing in orbit or on celestial bodies any weapons, military bases or fortifications, or the conducting of tests or military maneuvers there."

Both superpowers have simulated anti-satellite warfare, a related activity, by going through all the phases of destroying a space vehicle without actually destroying it.

White House officials said the president's speech was based on a suggestion by the Joint Chiefs of Staff and was "not a new concept." It was an idea in which Reagan had shown "an immediate interest."

Pentagon sources said that anti-missile defenses were regularly reviewed in studies of nuclear warfare options and that the JCS had made no special plea for a new strategy.

The White House officials said the president's aim was to "get off the nuclear buildup trail," partly because of the growing international unpopularity of "building offense for deterrence."

Said one official: "It [anti-missile defense] doesn't threaten other countries or their territories but at least protects us."

He cautioned, however, that "the country has relied for a generation on a doctrine [of offense] and has made commitments based on that doctrine. The Europeans rely on American offensive strategic power, which must continue for some time."

TOM CARHART WASHINGTON TIMES 25 MARCH 1983 Pg. 11

Time for High Frontier

Institutional inertia is a tough obstacle to overcome under any circumstance. When you try to redirect and refocus long term multi-billion dollar defense programs, however, the problem increases, and the situation resembles trying to stop a speeding car with a snowball. That's usually not a good bet — unless, of course, you can use a snowball the size of the White House.

In his speech to the nation Wednesday, President Reagan asserted the need for a national defense system that would protect our population from a Soveit ICBM attack. He then announced a major project to develop such a system, and called upon American scientific genius to join this crusade for true peace — to help build a shield for America rather than just another sharp sword.

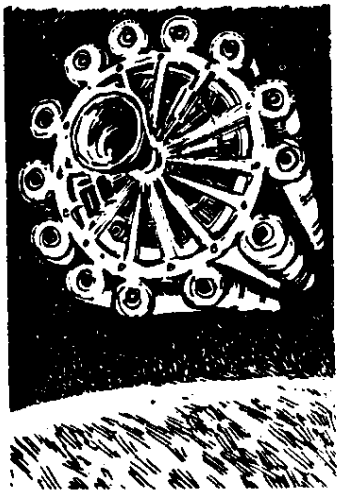
Before he caught President Reagan's eye, retired Army Gen. Dan Graham and his small staff at Project High Frontier had been trying to attract attention to this proposal for some time. Their idea offers a reliable defense of the U.S. against a Soviet ICBM attack using known technology but no nuclear weaponry, promises implementation within five or six years, and all at a low price. If you think that sounds too good to be true, read on.

The High Frontier concept involves three mutually supporting systems that, together, promise to effectively eliminate a Soviet first strike before it reaches its targets. The particular hardware for two of these systems would use off-the-shelf technology, while the third is still in the research phase. Great care has been taken in all cases to avoid violating the ABM or other treaties.

The first system, which would be the last to be used, would be a ground-based point defense of missile silos. It would consist of rapid-fire guns able to launch a cloud of projectiles to destroy incoming warheads before they reach their targets. This system could be in place within one or two years, and would cost about $10 million per silo, or $1 billion for 100 MX silos.

The second system would be a Global Ballistic Missile Defense (GBMD) consisting of 432 satellites, all hardened to minimize the effects of nuclear explosions in space. They would constantly orbit at high speed some 300 miles above the earth, each armed with 40-50 intercept devices similar in concept to the air-to-air missiles with which our fighter aircraft are armed. They would attack Soviet missiles in ascent, and would detonate over Soviet territory using non-nuclear explosives and causing no human deaths. GBMD can be in place within five or six years at a cost of under $15 billion.

The third system would be a second generation GMBD. It might be simply an upgrading of GMBD I, or, depending on the solution to problems of directed-energy beam weapons, could be based entirely on new technology. When President Reagan said that such a defensive



effort might take us into the next century before implementation, this is the only portion of High Frontier for which that's true; GBMD I and a point defense of missile silos can be in place, protecting America from ICBM attack, while he is still in the White House.

ICBMs have been the "Dreadnaughts" of our age, uniformly feared and from which it has always been thought there could be no escape. But the technological discoveries we have made in venturing into space have shown how to build a mechanical mongoose with which to nail those Soviet cobras in their ascent phase, thus leaving the Soviets with billions of dollars worth of useless, obsolete hardware on their hands.

High Frontier has been dismissed by critics with the superficial statement that the Soviets would never allow us to install such a "threatening" system, and would either launch a pre-emptive first strike against us, or would take our GBMD satellites out as we put them in place. But a nuclear first strike is the highest risk venture possible, and it would require the Soviets to play all their cards at once. If we believed they would even consider such a move, then that would mean there is no way we could ever propose to build *any* defense against their ICBMs without bringing Armageddon down on our heads.

But the Soviets know the U.S. never seek a first strike capability—what would be the point? The Soviets have nothing we want, let alone for which we would go to war. And that's the clear, simple reason that President Reagan now seeks to implement a defensive shield of the sort for which High Frontier would answer—to change our national defense system back to one that turly defends, rather than threatens.

Neither would the Soviets attack our GBMD satellites, for such might create an "open season" on *all* satellites, and given our recognized technological edge, the Soviets could only lose.

The far more likely probability is the least risky — that the Soviets would install their *own* High Frontier system — which be the first military move they have made in memory that we might applaud, for it would only add to stability and security. And the, once we both have our shields in place, we could begin to negotiate significant arms reductions — why not?

This is a dramatic new direction in national defense that puts the military back in the business of defending America. And here is the common ground where left and right can join in promoting an unthreatened America, where nuclear-freeze doves can join arms with MX hawks in common pursuit of freedom, for this is a realistic appreciation of American survival into the future.

In an age of political turmoil when the end of life on earth can seem just one button push away, the urgent commitment to this strategy could be Ronald Reagan's finest hour.

Tom Carhart, a Washington attorney, write often on defense-related issues.

CHRISTIAN SCIENCE MONITOR 25 MARCH 1983 Pg. 1

Questions and answers about Reagan's new defensive strategy

By John Dillin
National correspondent of
The Christian Science Monitor

Offense vs. defense.

For nearly 40 years – since the dawn of the atomic age – offense has dominated military strategy. Nuclear-armed bombers and missiles can easily overwhelm the best defenses.

President Reagan, looking beyond the current "balance of terror," now wants to renew the emphasis on defense.

Leading scientists say that Mr. Reagan's proposal for more research into antimissile defenses could eventually tip the balance back in favor of those trying to defend their homeland from an atomic assault.

The Reagan concept is already triggering debate. Here are some of the immediate questions his plan raises, along with answers from leading United States scientists and planners:

● Is an antimissile defense possible?

No one knows.

In the nearterm, the answer is "no." Currently, there is only one method to stop an incoming nuclear warhead. That is with a hypersonic missile armed with its own atomic warhead. The missile, using radar and computers, flies close enough to an incoming warhead to destroy it.

Such a system, however, is easily overwhelmed by simply firing more enemy warheads at it. More offense is cheaper than more defense, so the system can be defeated.

Long-term, however, the answer is less certain. Scientists are looking into a number of options, including such exotic weapons as lasers, particle beams, and microwaves. Lasers, for example, might be fired either from satellites in space, or from ground-based stations, to destroy incoming missiles.

● How far are we from developing some of these exotic systems?

Probably more than a decade. Various scientists say that by quickening the pace of research, the US could score a breakthrough. At the moment, however, they don't see a workable system before the year 2000.

● Is the Reagan proposal, then, "just politics"?

Motives are difficult to judge. However, Albert Carnesale, a Harvard specialist in defense matters, says the Reagan proposal probably comes at about the right time.

For years, spending on defense against missile attack has either held steady or declined. Recently it's gone up a little – to about $1 billion a year. But missile defense has gotten little emphasis. Yet, says Dr. Carnesale:

"The idea of relying forever on deterrence [by mutual destruction] is not good."

● Could an antimissile system make the world more dangerous?

Maybe, and maybe not. Richard Betts, a foreign policy specialist at the Brookings Institution, says it depends on the scenario.

If only the US were developing such a system, for instance, the Soviets might suddenly wake up one morning to find that their missiles were ineffective. That would mean the US could launch a nuclear strike against the Soviets without fear of retaliation.

If the US were in the process of installing an effective system, Mr. Betts observes, the Soviets might feel they were faced with a "now or never" situation and be prompted into a preemptive strike.

However, if each side installed antimissile systems under a carefully drawn timetable, the effect might be stabilizing, experts say.

● What are the Soviets doing?

In the Moscow area, the Soviets operate the new Pushkino Antiballistic Missile Radar, which at present can guide 32 missiles (that will eventually be raised to 100) to destroy incoming warheads. The system is giving the Soviets some useful experience, US scientists say.

The Soviets ABM system, however, could be easily overwhelmed by US missiles. It would be effective only against an accidental US launch, or against smaller missile systems such as the British or Chinese.

Beyond that, the Soviets are deep into research on particle beam and other exotic weapons. Their progress is uncertain.

● Are there moral questions about antimissile systems?

Moral arguments are made on both sides. Some feel a US antimissile system could make the Soviets feel threatened. Others say it would be a positive step to put the US beyond the threat of nuclear weapons. It would, as one physicist noted, bring the US beyond the current world of Dr. Strangelove into the world of Buck Rogers.

WASHINGTON TIMES 25 March 1983 Pg.6

Space-age weapons seen possible

MADRID (UPI) — Defense Secretary Caspar Weinberger said yesterday U.S. know-how which put man on the moon can develop space-age defense weapons capable of destroying incoming Soviet nuclear missiles as envisioned by President Reagan.

"If both sides can acquire the means of rendering impotent these deadly missiles, we would really have advanced the cause of peace and humanity very, very far," Weinberger told a news conference.

He scoffed at suggestions the weapon was a "Star War scheme," saying it would be a "cavalier" description that displayed "a total lack of understanding" of the new plan.

Weinberger said the new superweapon system to counter nuclear attack called for by Reagan in a television address Wednesday "would offer one of the greatest hopes of mankind if it could be realized."

During his 48-hour visit, Weinberger urged Prime Minister Felipe Gonzalez to keep Spain in NATO as a full member. He also discussed the pending sale of 84 F-18A jet fighters and other American military equipment to Spain.

Weinberger gave no details about the new weapon, but said, "I think it would not trigger any kind of arms race at all."

Although "it may be many years, it may be decades," development lay within the potential of U.S. technology, Weinberger said.

"We have done a great many things and the ability to walk on the moon was realized in a very short time," he said. "Man had talked about it for centuries.

"That is a very good example of how quickly America can achieve things that have been felt to be impossible when the full strength of our very considerable resources are deployed behind them."

He said that researchers would look into space-deployed laser beams and other high-technology systems "more vigorously and with more direction than we've done in the past."

Weinberger said the administration had not earmarked any specific budget requests for the next year for the antimissile system. It could be financed "at the moment within the very large amounts we have already programmed" for research and development, he said.

CHRISTIAN SCIENCE MONITOR 25 March 1983 Pg. 1

Rethinking America's strategic posture

By Brad Knickerbocker
Staff correspondent of The Christian Science Monitor

Madrid

President Reagan's dramatic proposal to build a new ballistic missile defense system brings to the public and political domain the growing debate among experts over how a nuclear war would likely be fought and why it may be getting increasingly difficult to prevent.

It is an admission that intercontinental missiles are becoming (paradoxically) so threatening, yet so vulnerable, that a first strike by one of the superpowers is now conceivable, at least among war planners and strategic theorists. It parallels the debate over the MX and increasing calls (most recently from Henry Kissinger) for the United States and the Soviet Union to move to smaller, mobile missiles while working for eventual deep strategic-arms reductions.

The administration sees this as its equivalent to President John F. Kennedy's call to put a man on the moon within 10 years.

"That's a very good example of how quickly America can achieve things that have been felt to be impossible when the full strength of our very considerable resources are deployed behind them," Defense Secretary Caspar W. Weinberger told reporters traveling with him in Spain.

The administration in fact wants to spend very large sums on exploring new ballistic missile defense (BMD) systems. It has already directed much more money than its predecessor on development of ground-based BMD systems and airborne antisatellite weapons as well as lasers, particle beam devices, and other space-based offensive and defensive systems.

It is likely to shift funds within the already proposed 1984 Pentagon budget, and Secretary Weinberger predicts "all sorts of changes in 1985 and 1986" in this regard.

The Soviet Union was quick to charge that the President's proposal would violate the 1972 Antiballistic Missile (ABM) Treaty, which is part of SALT I (the first Stratigic Arms Limitation Treaty). But Washington retorts that the treaty addresses deployment only, not research and development, and notes that the Soviets have been pressing ahead with such systems themselves.

Sources say, however, that if new BMD systems are developed, the ABM treaty might have to be scrapped in favor of "a more comprehensive arms-control regime."

US officials deny that this is an effort to develop a "fortress America" and abandon its European allies. In fact, they say, such systems could protect allied countries from the threat of intermediate-range nuclear missiles aimed at them.

Within Congress -- and in fact within the US Air Force -- there has been considerable debate over the effectiveness of ballistic missile defenses, particularly if they are based in space. Retired Army Lt. Gen. Daniel Graham (former director of the Defense Intelligence Agency) has been pushing what he calls the "high frontier" concept. This is a combination of ground- and space-based nonnuclear antimissile defenses.

It has been greeted with considerable skepticism, however. Some experts say the extreme amount of energy and the precision required for lasers to zap incoming warheads are not attainable.

One government source says he doesn't advocate General Graham's proposal, but "would like to see examination of a wide spectrum" of alternatives.

While acknowledging that "much of the technology needed . . . is not available today," he says, "the rapid rate of evolution of technology today in areas as diverse as electronics, accelerators, lasers, microwave generators, optics, aiming and tracking systems, high-band-width communications, and even advanced materials enable us to begin this effort now."

It is also noted that this fits in with the present effort to shift to long-range, precision-guided conventional munitions to defend against conventional attack.

In the mid-1970s, the Pentagon deployed a ballistic missile defense system employing Spartan missiles to intercept enemy warheads in space and Sprint missiles to destroy those that had penetrated the atmosphere. Both employed nuclear warheads.

Congress questioned the cost and accuracy of these systems (as well as their necessity when nuclear deterrence was supposed to suffice) and scrapped the program.

Government officials say this new effort does not mean the administration is deemphasizing strategic modernization programs such as the MX missile and B-1 bomber. Rather they see the President's proposal as a possibility for the end of the century and beyond.

Nodding to the nuclear freeze movement, officials stress that a new ballistic missile defense wouldn't mean a new type of arms race. They say it could lessen the likelihood of nuclear war, and ought to be "acceptable to all segments of our society."

March 25, 1983 Aerospace Daily Pages 145-146

REAGAN SEEKS BOOST FOR 'SUBCRITICAL' BMD PROGRAM

President Reagan is pushing ballistic missile defense in the belief that current billion-dollar-per-year BMD efforts won't amount to much without higher priority and, probably, more money, senior Administration officials said yesterday.

Reagan sketched his BMD initiative Wednesday night at the end of a speech devoted mainly to promoting his FY 1984 defense budget proposals. He said he was ordering "a comprehensive and intensive effort to define a long-term research and development program" aimed at defending the U.S. and its allies from strategic ballistic missiles.

Briefing reporters yesterday at the White House, officials said Defense Secretary Caspar Weinberger will be responsible for an interagency study, with advice from outside the government, of what BMD technologies seem most promising and how they should be pursued. Completion of this study, expected this fall, will enable Reagan to decide on budgets, schedules and related questions on how to develop the chosen system or systems, they reported.

$1 Billion-Per-Year Effort

The Pentagon and the armed services currently are putting about a billion dollars per year into BMD and related work—about $750 million on "traditional" technologies like interceptors and about $250 million on more advanced concepts, chiefly directed energy weapons, officials estimated.

One official commented, however, that this is no more than an "inertial investment" that will amount to little without the greater emphasis and policy debate Reagan now seeks. There is no clearly stated BMD goal and no strong commitment of the nation's scientific establishment to BMD, he commented.

Today's BMD program is "subcritical," the official said, and Reagan is "trying to drive the program to a critical level."

Officials gave no details on what changes are in store for BMD work—that is what will be studied during the next six months—but they left these general impressions:

—Funding will increase. The current level is considered a "baseline." FY 1983 budget increases aren't expected, but FY 1984 amounts proposed last month are considered "open" and will be "a very early issue." Reagan will be reviewing the study as FY 1985 budget decisions are made. Although BMD won't be turned into a crash program, it probably will become "a stretched-out crash program."

—Priority will be higher. Now, the Defense Department sometimes must pass up promising BMD proposals because of overall budget constraints. As BMD's priority increases, proposals won't drop out as quickly, and more will survive.

—Work will broaden. Most of today's effort is aimed at systems that would defend specific sites—ICBM fields, command posts and the like. Reagan's aim is comprehensive defense, and "that means bold new technologies."

Reagan's initiative isn't prompted by U.S. technical breakthroughs or fears that the faster-paced Soviet BMD program might steal a march on the U.S., officials commented. Though short of breakthroughs, "remarkable advances" have been made by the U.S. in recent years, including work in microprocessors, segmented optics and pointing and tracking systems, one official said. The Soviets aren't considered any more likely to field a BMD system in the near future than the U.S. is, officials reported, and the two nations might wind up developing systems at about the same time.

It's too soon to tell when U.S. BMD work might violate the 1972 U.S.-Soviet anti-ballistic missile treaty, officials said, but this isn't likely for five to ten years.

Reagan's desire for strategic defensive systems and a shift away from constant buildups

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BMD PROGRAM...Continued

in offensive systems predates his presidency, officials said, but his BMD initiative was triggered about six weeks ago by the Joint Chiefs of Staff.

Officials said the chiefs raised the question as a non-agenda item during a meeting with Reagan, who "showed immediate interest," ordered that the idea be developed further, and has been briefed regularly since. The chiefs were said to be "in total community" on BMD.

Officials said Wednesday's speech was the first of three on national security. Next week he is expected to speak on arms control and the following week he plans to announce his decision on MX basing.

In Wednesday's speech, Reagan said he realizes BMD "will take years, probably decades of effort on many fronts," and he warned that the strategic offensive systems he seeks still will be needed as BMD work goes forward.

He also acknowledged fears, prominent when the ABM treaty was negotiated, that BMD capabilities could be destabilizing. "I clearly recognize that defensive systems have limitations and raise certain problems and ambiguities," he said. "If paired with offensive systems, they can be viewed as fostering an aggressive policy, and no one wants that."

By contrast, Reagan said his BMD concept "could pave the way for arms control measures to eliminate the weapons themselves."

March 25, 1983 **Defense Daily** Pages 145-147

PRESIDENT EMBARKS NATION ON QUEST FOR STRATEGIC DEFENSE

First Year Will Define The Goal

The President is expected to sign this morning a directive to embark the nation upon a long-term comprehensive study and development of a program of strategic defense which someday in the future would be capable of destroying missiles fired against the United States and its allies.

"I am directing a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles," the President told the nation Wednesday night.

Calling it a "vision of the future which offers hope," Reagan said he wants to utilize in this goal "the very strengths in technology that spawned our great industrial base."

He said "it will take years, probably decades of effort on many fronts. There will be failures and setbacks, just as there will be successes and breakthroughs."

In briefings with senior Administration officials in the White House yesterday, the project was likened to the Apollo program to put a man on the Moon and there was frequent reference to an inexact timetable of accomplishment, possibly by the year 2000.

The President said of the program, which by its very objective, to "intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies," could of necessity move the major focus of the program into space, that it "may not be accomplished before the end of this century. Yet, current technology has attained a level of sophistication where it is reasonable for us to begin this effort."

'Not Yet A Clearly Stated Goal'

The senior Administration officials stressed yesterday that they do not yet have a clearly stated goal and that for the first fiscal year the plan is to "try to lay out a path to pick the test technologies," to outline "an encompassing R&D program."

This first year, "the Phase I," will contract for studies and outside help to define

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the "promises, the risks and the cost," to prepare for the decision point of "making choices" and "cranking it all into the budget process, or Phase II."

The President showed "immediate interest" in the program when the idea was raised at one of the President's meetings with the Joint Chiefs and members of the National Security Council. His interest increased as the idea developed and he is now deeply committed to the program, the officials said.

In his address to the nation, the President said, "There will be risks, and results take time. But I believe we can do it."

One of the President's senior advisers pointed out yesterday that, as of today, the President is "not confident that we can erect an impenetrable defense." However, the Soviets "are not likely to get there in the near future either," he said.

"We are not looking for a silver or magic bullet," the official added, but "if we do succeed, even partially, the value to arms control is enormous."

$1 Billion Seed Money

The seed money for the program is approximately $1 billion currently in the BMD program. Initially, the study and development leaders in the program are expected to be the Army's Ballistic Missile Division, the Pentagon's Advanced Research Projects Agency and various service programs.

One-fourth of that $1 billion would be used for generic R&D and about one-half for ballistic missile defense, one official explained.

The program will probe "bold new technologies," an official explained, while the foundation technologies to be explored will be concerned with lasers, microwave devices, particle beams and projectile beams.

'High Probability Of Success'

"We believe that the state of technology and all the supporting technologies from electronics to aiming and tracking systems to materials to guidance to data processors to communications has advanced so rapidly in the last ten years that it is possible now to define and begin an aggressive R&D program with a high probability of success toward the end of this century," one official explained.

There is difference of opinion among leading Administrative officials about the relative positions of the United States and the Soviet Union in this field. One senior official conceded that the Soviets are devoting more resources. However, he said he did not think "that the lead--purported lead that the Soviet Union is claimed to have is an overwhelming one. They have a larger effort. The United States has a substantial effort also. Neither one of us possess today the technology to meet the requirements of the goal that the President" has stated.

The officials stress a lack of specificity in defining the approach to be undertaken "because we wish the American scientific community and our entire broad technological expertise to apply itself to this problem and help us develop the strategic vision that the nation needs."

Space/Earth Based Options

Both space and earth basing are options. Also, while the program "is certainly not dependent upon" the High Frontier proposal, "there is one thing in common," and that is the High Frontier proposal began with the objective "of using American superiority in technology and in our industrial base to gain an adequate military capability and adequate defense capability," it is explained. The particular High Frontier "is a concept to look at but not the basis for the President's objectives."

Not A Crash Program

It was emphasized that the effort is not a crash program and it is not an accelerated effort to either develop an ABM system or an anti-satellite system. "Today, we spend a

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billion dollars in R&D across the full spectrum of what we call 'sight defense' to protect a small zone out through generic technologies. Until we can identify how many technologies are worth pursuing towards the system development, I don't think I could make an intelligent estimate" regarding direction, structure or funding of the project, one official said.

Any future deployment of the strategic defensive system would be phased in with negotiations, in a transition phase, avoiding a situation where both offensive and defensive systems were in full deployment at the same time, setting up a possible incentive for a first strike.

Open Door To Next Century

"What the President is trying to do is open the door to the next century so we can get away from these hair-triggered missile systems," a senior official reiterated. The defense system would be phased in and "combined with negotiations on defensive and offensive systems. And an overarching strategic arms agreement could be the ultimate goal, so that both sides could get rid of these arsenals of missile forces that threaten their societies and have more stable forces against some residual ballistic missile force.

"As we try to reduce strategic missiles in SALT and START, we recognize if we'd press the reductions further...some people begin to raise questions whether the deterrence will become unstable. This is because in the present dispensation we depend on the threat of the offensive missiles. So at some point, the present approach gets in the way with arms reductions, more radical arms reductions. And the President wants to open the door to a new approach where we can eventually get rid of these missiles."

Hits Congressional Defense Cuts

Although the President's announcement of his plans to embark on a strategic defense program was the highlight of his address to the nation, he used the occasion, just minutes after the House had approved a budget resolution that slashed his request for real growth in defense spending by more than half, to warn again that his defense budget had already been trimmed "to the limits of safety.

"Further deep cuts cannot be made without seriously endangering the security of the nation," he said. "The alternate budget backed by liberals in the House of Representatives would lower the (defense increase) to two to three percent, cutting our defense spending by $163 billion over the next five years."

He criticized those who deal in numbers of dollars in determining how much defense the nation should have. "Those loud voices that are occasionally heard charging that the government is trying to solve a security problem by throwing money at it are nothing more than noise based on ignorance...Anyone in Congress who advocates a percentage or a specific dollar cut in defense spending should be made to say what part of our defenses he would eliminate, and he should be candid enough to acknowledge that his cuts mean cutting our commitments to allies or inviting greater risk or both."

An 'Offensive' Soviet Force

Using graphs of Soviet weapons production and previously classified photos of Soviet or Soviet-supplied activity in the Caribbean and Central America to illustrate his warning of the continued Soviet military threat, Reagan emphasized that the Soviet Union "is acquiring what can only be considered an offensive military force. They have continued to build far more intercontinental ballistic missiles than they could possibly need simply to deter an attack." Their conventional forces are prepared not so much to defend against attack "as they are to permit sudden surprise offenses of their own."

The President will give two more national security addresses in the next few weeks--the next in Los Angeles on March 31 on arms control, and the following week an address on his MX decision and related matters.

USA TODAY 25 MARCH 83 Pg. 10

JAMES FALLOWS

Guest columnist

Eliminate weapons with dubious value

AUSTIN, Tex. — President Reagan says that when he took office, he was "appalled" by what he discovered about military readiness. Planes could not fly for lack of spare parts; ships were held in port because the budget for "steaming time" was too tight.

Unfortunately, the approach to military spending the president defended Wednesday guarantees a worse surprise for the next commander-in-chief. The most basic rule in the modern military is that the cost of new weapons goes up faster than anything else. Faster than the general inflation rate, and faster than military budgets — including those projected by this administration. The prices of several important systems have gone up so fast that, even with larger military budgets, the Reagan adminstration will buy fewer of certain ships, planes, and missiles than Jimmy Carter projected.

The moment of reckoning comes when soaring weapon prices press up against limited budgets. Then an administration must choose between buying fewer weapons, but maintaining them well, or searching for savings in the maintenance budget. In the late '70s, the military whittled away at operating costs. The result was the shortage of fuel, spare parts, and well-trained soldiers that so disturbed President Reagan.

In the late 1980s, the military will be forced farther down the same path because of the long-run contracts to buy equipment the administration is making now. This is not a partisan point: The staunchly conservative Heritage Foundation is the latest to express alarm about the cycles of unrealistic budgets that lead to deteriorating military readiness.

To illustrate the administration's preference for buying new equipment, rather than building an effective force: To save $250 million in this year's budget, the Navy retired 22 ships, 19 of which had recently been overhauled. With the savings, it continued building five new ships, whose ultimate cost will exceed $4 billion.

Even if Congress voted every penny the president has requested, it wouldn't be enough to meet the full cost of the military programs he has launched. That's why military leaders are begging to recommend that we face our budget problems squarely, instead of ignoring them until it's too late. If we care about American military strength, we must eliminate large projects of dubious value — two nuclear-powered aircraft carriers, the B-1 bomber, and the MX missile — along with other expensive, ineffective systems, such as the DIVAD anti-aircraft gun, or the Bradley Fighting Vehicle.

That is our only chance of ensuring that American forces will be well-trained, and their equipment effective and ready for use.

James Fallows is Washington editor of The Atlantic *and author of* National Defense.

USA TODAY 25 MARCH 1983 Pg. 10

WILLIAM RINGLE

USA TODAY columnist

Anti-missile plan may violate treaty

WASHINGTON — Would the president's anti-missile proposal violate the ABM treaty?

Yes, say arms-control experts. No, insist Reagan administration specialists, who asked that their names not be used.

The Anti-Ballistic Missile Treaty, signed in 1972, precludes developing, testing or deploying of sea-based, land-based or space-based ballistic missile defense systems. Thomas Longstreth, of the private Arms Control Association, said on its face, the proposal seems to violate the treaty.

However, in a 1980 study that generally favored such proposals, Los Alamos Laboratory said few of them would be "consistent with the limitations set by the ABM treaty."

But the plan suggested by the president is so vague and far in the future that measuring it against the treaty is not possible. Reagan called for a system to "intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies."

The ABM treaty restricts the development and deployment of a ballistic missile defense system (BMD, the more recent version of ABM) capable of intercepting enemy missiles before they hit their targets.

By terms of the treaty, which was renewed for five years last year, both superpowers are limited to only one system. The Soviets elected to put theirs around Moscow, the United States around the missiles near Grand Forks, N.D. However, the United States never developed its system because of the prohibitive cost.

The Reagan administration has been flirting with such systems almost since it took office. But BMD research dates back before that; well over $1 billion has been spent on it.

Although past ground-based systems employed radar to identify incoming missiles and send missiles up to destroy them, new proposals envision BMD based on airplanes and satellites which would look down upon enemy missiles and shoot them down shortly after they had left the launch pad.

A BMD system to protect missile fields was one proposal made in conjunction with the so-called dense pack deployment plan for the MX missile. Many argued that that would violate the ABM treaty.

However, Secretary of Defense Caspar Weinberger has said that such a system, with present technology, is only about 50 percent effective. He says that batting .500 is not good enough.

William Ringle is chief correspondent of Gannett News Service.

CHRISTIAN SCIENCE MONITOR 25 March 1983 Pg. 22

Euromissiles: a plan to satisfy the Russians — and NATO

By Dennis M. Gormley and Douglas M. Hart

The Reagan administration finally appears ready to offer a proposal designed to break the deadlock in US-Soviet negotiations on reducing intermediate-range nuclear missiles in Europe. Although continuing to support the "zero-option" as his ultimate goal, the President will likely propose an interim agreement allowing both sides to deploy a limited number of missiles until they are banned completely.

Compared with the simplicity of the President's zero-option plan, which calls for a ban on over 600 Soviet missiles in exchange for US agreement not to deploy 108 Pershing II and 464 cruise missiles in Europe, arriving at an interim deployment level appears more complex. This is especially so because each nation has deployed intermediate-range missiles with different motivations in mind.

How then should we view the choice of intermediate-range deployment levels? Rather than selecting an interim level based on political judgments, a more meaningful military criterion should be used to arrive at missile limits that could well become permanent. We suggest the maximum deployment of Soviet missiles should be a comfortable percentage below what Russian military planners see as their minimum essential need.

Why is this approach important and how does one arrive at estimating basic Soviet needs?

First off, the Soviet approach to developing and deploying intermediate-range nuclear forces differs greatly from the US approach. American decisions regarding weapons like the Pershing II and the ground-launched cruise missile were driven largely by political considerations. The most prominent was the need for a concerted NATO response to an aggressive Soviet SS-20 deployment. Indeed, NATO's proposed numbers of Pershings and cruise missiles (572) bear no close relationship to military targeting requirements.

The USSR, in marked contrast, bases its need for specific numbers of intermediate-range missiles on an assessment of the unique targeting demands in the various geographic regions arrayed along its borders. Requirements for missiles are based on a calculation of the number of enemy targets in these peripheral theaters, the nature of the targets, and, finally, the expected reliability of weapons to destroy their intended targets.

Currently, the Soviets have some 514 intermediate-range missiles trained on Western Europe. The 280 SS-4s and SS-5s are rapidly approaching obsolescence but are probably being held as bargaining chips for the Geneva talks. This leaves some 234 modern, mobile, MIRVed SS-20s, the weapons of most concern to the US and its NATO allies.

For SS-20 units capable of striking Western Europe, Soviet defense planners must consider targets not only within the NATO area, but the Near East and Middle East theaters as well. There are probably 1,000 targets of interest to the Soviets in these regions, roughly 300 of which are "time-urgent." According to Soviet military writings, time-urgent targets – nuclear weapons, installations supporting nuclear weapons, and defensive targets such as surface-to-air missiles or early warning radars – must be destroyed immediately when the decision is made to escalate to nuclear warfare. Ballistic missiles, not slower reacting aircraft, are needed to attack these highest priority targets.

Most of these time-urgent targets would be considered "soft" – not significantly hardened against the effects of a nuclear blast. Being soft and mostly stationary, the vast majority could be effectively destroyed with one warhead per target. For hardened and large-area targets, nuclear-armed aircraft could perform follow-up missions. From a Soviet planner's perspective, roughly 300 SS-20 warheads would thus appear essential to deal with just the highest priority time-urgent targets.

Realistically, a Soviet military planner must assume some degree of unreliability in SS-20 operations. A safe assumption is that 80 percent of the total can effectively reach and destroy their targets. The Soviets then need 375 warheads, or 125 SS-20 missiles (each with three independently targetable warheads), to ensure having 300 effective warheads for time-urgent targets.

How do these calculations of basic Soviet military needs stack up against Moscow's recent arms control initiatives? Last December Soviet leader Yuri Andropov proposed to reduce the SS-20 force arrayed against NATO to 162 missiles, in exchange for no deployment of Pershings and cruise missiles. The rationale for retaining 162 missiles, so claim Soviet writers, is simply to balance British and French missile deployments of around the same number. In fact, the Soviet choice of 162 is more likely derived from their basic military requirement for SS-20s.

With a better understanding of Soviet SS-20 deployment motivations in mind, the US should consider countering the Andropov proposal with a ceiling of around 100 missiles for each side. Such a cap would reduce Soviet missile numbers a comfortable percentage below what they probably believe is their minimum essential need (125 missiles).

To be sure, this approach requires further study. But the method – viewing the problem through Soviet eyes – is fundamental to achieving meaningful arms control. Although a common ceiling of 100 intermediate-range missiles gives the Soviets a three-to-one warhead advantage, French and British nuclear forces tend to balance this asymmetry.

This proposal does not address the problem of refire missiles (either Soviet or US), but refires have utility against the time-urgent targets that determine minimum deployment requirements. This method can also be applied to SS-20s based in the Far East to arrive at deployment levels acceptable to American allies in the western Pacific region.

In the end, if the US can achieve reductions to these levels, the merits would go beyond a historic drop in Soviet intermediate-range missile levels to a more important barometer of arms stability – that of injecting uncertainty into Soviet war planning. And such uncertainty lies at the heart of NATO's principal *raison d'être* – the deterrence of war.

Dennis M. Gormley is an assistant vice-president and Douglas M. Hart is a defense analyst working in the Washington office of Pacific-Sierra Research Corporation.

COLORADO SPRINGS GAZETTE TELEGRAPH 25 March 1983 Pg. 1

NORAD, Springs vital to proposed missile system

From staff and wire reports

The North American Aerospace Defense Command and Colorado Springs will play a vital role in the development of the multibillion-dollar weapons system program that President Reagan announced Wednesday night.

In a nationally televised speech, Reagan called for the immediate "intensive" development of a long-term "comprehensive" defensive weapons plan that could include the use of lasers, particle beams and space-based weaponry. He said the system will be designed "to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles," and could, "pave the way for arms control measures to eliminate the weapons themselves."

In 1982, Col. Jerry May, NORAD's director of space operations, confirmed that a command post that would supervise laser satellite-killing operations was under construction in NORAD's underground complex inside Cheyenne Mountain.

But a NORAD spokesman, Col. Fred Watkins, said Thursday that he could not elaborate on just what the specific roles will be for NORAD and the newly formed Colorado Springs-based Air Force Space Command in the new system President Reagan has proposed.

According to Col. May, the satellite "negation command post," will fulfill one of three functions mandated to the NORAD Space Defense Operations Center. The center, which became operational Oct. 1, 1979, is tasked with providing satellite surveillance, satellite protection, and satellite destruction — when ordered by the president, May said.

Currently, all space-related intelligence and surveillance information gathered by more than 20 radar and space surveillance sites worldwide is funneled through complex computer networks into the Space Defense Operations Center. Once there, May said it is analyzed and made available to military and civilian agencies involved in space-related work.

U.S. Rep. Ken Kramer, R-Colorado Springs, praised Reagan's plan, but other legislators from Colorado were skeptical.

The development of a strategic defensive capability "hopefully will bring an end to the threat of nuclear warfare" and "can create an atmosphere for a new industrial revolution," Kramer said.

But Pat Schroeder, D-Denver, said the plan Reagan announced has been before Congress for several years. "The way I see it, the president is finally supporting what we've been doing in the Armed Services Committee for more than five years.

Schroeder, Rep. Tim Wirth, D-Denver, and Sen. Gary Hart, D-Colo. each said the President was really using his speech as a political mechanism to get support for his defense budget.

"As is so often the case, the president has asked the wrong question. The question is not whether the Soviets are threatening — they are. The question is will the President's proposed defense program effectively answer the Soviet military challenge. The answer is 'No,' " Hart said.

Kramer said he thought "the president is right on target in calling on scientists to make the contributions that will allow (the defensive plan) to take place."

Kramer then reiterated his own plan from a recent speech in Colorado Springs to call for the creation of a unified space command and a directed energy systems agency so that "we can focus on what has been a disorganized, fragmented effort on direct energy weapons."

Kramer also reiterated his belief that what is needed in terms of arms control "is a defensive backdrop — an enforcement mechanism that will allow us to enter into agreement where we don't have to simply rely on good faith from the other side."

The Soviets already have a laser anti-satellite system, which experts estimate will be in full operational orbit by 1990.

The U.S. Air Force Weapons Laboratory at Kirtland Air Force Base, N.M., has been conducting its own research on an airborne laser laboratory system aboard a modified KC-135 tanker. But in a 1981 test, the system was unable to shoot down an airborne Sidewinder missile.

Meanwhile, the U.S. Navy has been developing its own laser system and has successfully tested it on a stationary target, according to congressional reports.

In the March 28 issue of Air Force Times, Richard DeLauer, undersecretary of Defense for Research and Engineering, said actual laser weapons still are far off. DeLauer said, "We have an experimental device . . . To turn it into a weapons system is going to take a long period of time."

In a recent report to a congressional committee, DeLauer filed a request for $29.6 billion for research, development, testing and evaluation of directed energy programs in fiscal year 1984. That's approximately 30 percent more than congress allocated for the programs this year.

Laser-directed energy systems artificially generate beams of light, much the same way a magnifying glass does, to focus onto and burn targets. Particle beam directed energy weapons are made up of sub-atomic particles that violently bombard targets at slower speeds, but which have impacts similar to lightning bolts.

Reagan Administration officials said Wednesday that the United States now spends about $1 billion annually on anti-missile research, but said they could not estimate what Reagan's proposed stepped-up programs will cost.

EDITORIALS

LOS ANGELES TIMES 25 March 1983

Lost in Space?

In trying to judge the significance of President Reagan's dramatic call for the development of a futuristic anti-ballistic missile defense system, the first question is whether the President himself is really serious about the new project.

If the United States actually embarks on an all-out quest for an effective ABM system aimed at making offensive nuclear missiles obsolete, it will mark a profound shift in defense strategy—a shift that many experts believe is impractical or unwise. So it is strange that the President tossed in the announcement near the end of a television appeal for public support against cuts in his defense budget.

The Administration, under the circumstances, should not be surprised if a lot of people wonder whether his proposal is a gimmick designed to distract attention from the nuclear-freeze proposal now before Congress, or to provide a face-saving rationale for backing away from the controversy-plagued MX missile project.

The President, however, is certainly acting like a man who is serious. He gave the National Security Council its marching orders Thursday to press ahead with the development program.

The idea of shifting the emphasis of this country's strategy from offensive nuclear missiles to a non-nuclear defensive system has its attractions. No one can be comfortable with the fact that, as things stand, the avoidance of nuclear annihilation depends on maintaining a delicate balance of terror between opposing forces of missiles on hair-trigger alert.

It is nervousness over this situation that has given birth to the anti-nuclear movements in Western Europe and the United States. How much nicer it would be if we could render offensive missiles obsolete, and therefore facilitate their eventual elimination, through the development of an effective anti-missile defense system.

Unfortunately, things are not that simple.

To begin with, the development of an effective anti-missile defense is an enormously difficult, possibly insurmountable, challenge because it would have to be virtually leakproof. If even 10% of an enemy missile force got through, the system would have failed.

And, to the degree that an adversary thought that a new anti-missile defense system would work, the have-not power could be tempted to launch a preemptive strike before the system was in place.

The ABM treaty, signed by the United States and the Soviet Union in 1972, allows each side to operate one anti-missile defense complex; otherwise, such deployment is prohibited.

However, the ABM treaty does not prohibit research and development on defensive systems. Both the United States and the Soviet Union have maintained R&D programs to guard against technological surprise by the other side.

It is safe to say that most defense scientists remain unpersuaded that an effective ABM system is feasible, now or in the future. But the argument is no longer as one-sided as it used to be, thanks to advances in computer and laser technology.

Administration officials say that four ABM technologies, all of them involving non-nuclear approaches, are in the running. But there isn't much question that space-based lasers are taken the most seriously.

As envisioned by proponents, space-based lasers could destroy attacking Soviet nuclear missiles while they were still in the boost stage, over Soviet territory, by hitting them with highly concentrated beams of light.

The United States has already spent $2 billion on laser-weapons technology, and the Soviets are believed to have spent several times that figure. The Soviets have been testing killer satellites for 14 years, and are now assumed to have the capability of destroying U.S. satellites by maneuvering their space modules close to ours and setting off conventional explosions. The Pentagon says that the Kremlin now is pursuing an ambitious program to put laser weapons in space soon.

Congress has been a willing supporter of laser-weapons research, at times giving the Air Force more money than it requested. A year ago, the General Accounting Office, an arm of Congress, issued a report calling for acceleration of the laser-weapons program; the GAO also suggested that consideration be given to creating a Space Force as a separate branch of service.

Critics take all this with a huge grain of salt. They contend that laser-armed space vehicles would themselves be vulnerable to destruction by nuclear explosives or by other lasers.

The President was careful to note that the development of an effective missile defense system was a difficult undertaking that might take decades. It's noteworthy that even Maj. Gen. Bernard Randolph, the chief of Air Force space research, told a national magazine in November that, "when I look at the technology required for a laser battle station, I break into a cold sweat."

It is essential to continue a sensible level of R&D work on lasers and potential ABM systems in general. But it is far from clear that the crash program proposed by Reagan makes sense.

Razzle-Dazzle Reagan

BALTIMORE SUN
25 March 1983

The president's razzle-dazzle defense of his military buildup needs to be played back in slow motion. To strategize space-age nuclear missile defenses, beat up again on the Russians, unveil pictures of Communist installations in Central America, present a slick slide-show on the Pentagon budget and deflect public attention from an admininistration drubbing in the House — to do all these things in a half-hour of prime-time television is being Ronald Reagan.

Let's start with the Buck Rogers part of his Wednesday speech. Mr. Reagan announced a change in U.S. nuclear strategy from retaliation against an enemy strike to one of intercepting and destroying incoming missiles with laser beams or other futuristic devices. Although such an active defense system is a current favorite among conservative arms specialists, it would be wrong to attach an ideological label to the concept. It is, basically, a reversion to the ballistic missile defense proposals of the Johnson administration, proposals that were all but abandoned under the SALT I treaty because they were basically unworkable. Since then, technology has made such vast strides that Mr. Reagan could envisage an effective missile defense by the end of the century.

Although the president couched his strategy shift in words of peace, critics were quick to revive 1960s warnings that effective missile defenses might tempt a superpower to launch an offensive first strike.

Why did the president speak up now about a system two decades in the future? His more immediate objective may have been to increase the current billion-dollar-a-year program for Star War research. But we suspect he wanted to break out of a sterile military budget debate, where he has been losing ground, in order to identify with a program likely to excite the public's imagination.

The presidential slide-show purporting to prove that the Soviet Union is pulling ahead of the United States in a chilling array of weapons sectors was vintage Reagan — the kind of stuff that swung public support behind the president's impressive 1981 and 1982 boosts in defense spending. With Congress threatening to halve his 10 percent hike for fiscal 1984, Mr. Reagan put pressure on legislators by trotting out classified pictures of Soviet and Cuban military installations in Cuba itself and in Grenada and Nicaragua. This close-in look at the Soviet threat held an added bonus: It put more bite in administration requests for military assistance to El Salvador and other Latin friendlies.

The president's purpose in all this is to get the country behind a military buildup he considers crucial to the nation's security. His goals may be laudable but his methods are something else. If his new missile defense strategy is as epochal as he says, it should have been the subject of a separate speech. If the Soviet threat in the Caribbean is as pressing as he suggested, it hardly warranted being paired with a partisan attack on Hill Democrats. Mr. Reagan, in short, may be overdoing it. Too much razzle-dazzle can ruin the best of shows.

USA TODAY 25 March 1983

Reagan's request can't be defended

Ronald Reagan wrapped himself in the presidential flag Wednesday and marched off to a drumbeat of peace and security, waving a blank check for defense as his standard.

What the president left behind on his march is what's on everybody's mind: In the face of destructive deficits and worrisome waste, why should defense get a blank check while domestic spending is throttled?

These are the issues the president forgot to talk about on TV Wednesday. These are the issues that caused the House, just minutes before he spoke, to cut in half the increase he wanted in defense spending.

What the president forgets is that growth-strangling deficits are dangerous, whether they stem from defense or domestic spending. And the same waste and corruption he frequently cites in domestic programs runs rampant in defense spending, too.

For two years now Defense Secretary Weinberger has allowed defense planners to push through some systems so top-heavy with technology they couldn't accomplish their missions. Pentagon pencil-pushers have written rules on bidding that pushed costs way beyond what consumers pay. Defense Department critics found that a three-cent screw costs the Pentagon 91 cents. A two-bit knob goes for $23. And a $5 bolt brings $96.

Too often, buying the biggest bang for the buck has given way to getting a bang out of the biggest buck. No wonder taxpayers are losing confidence in Pentagon planners.

Many private businesses would welcome a 4 percent increase in revenues, after inflation — that's what the House voted for defense. Why not give the Pentagon an incentive? With real economies and better management, its planners ought to be able to make up most of the difference between what the president wants and the House approved.

Yes, the Soviet menace the president described is real and growing. But our generals wouldn't trade our military strength for theirs. Those Russian weapons the Syrians tried to use against the Israelis in Lebanon last year were devastated by superior American arms.

To keep the peace, both sides must abide by the treaties they have signed, including the 1972 treaty to forego antiballistic missiles. If there were an ABM system in place that could protect us from Soviet attack, we might all feel a little safer. But the president's challenge to science to protect us with a new ABM is somewhat simplistic: The system would take decades to develop and be dreadfully expensive. And it could start a new arms race in space, tempt one side to launch a first strike, and may violate an existing treaty.

That's one more reason why giving the Pentagon a blank check would bounce right back to haunt us.

SAN DIEGO UNION 25 March 1983

Stop The MADness

President Reagan's spirited and persuasive televised appeal for support of his defense program, while important, was overshadowed by his visionary proposal that the United States begin moving from deterrence based on mutual nuclear destruction to prevention — a new national shield.

The long-held American strategy for deterring a Soviet nuclear missile attack has been to have a sufficient number of U.S. missiles to threaten a devastating counterblow against the Soviet Union. By mutual assured destruction (MAD), both superpowers would thereby respect each other and keep the peace, as indeed they have for almost 40 years.

But the refinement of missilery has made MAD an increasingly dangerous concept for mankind. The strategic ice gets thinner with each passing year.

A fatal exchange between the United States and the Soviet Union could, theoretically, be set off by a meteorite blast that was mistaken for a missile attack. It could be triggered by computer error, or even a Kremlin leader deranged by the prospect of world conquest. Whatever the cause, once launched, intercontinental nuclear missiles cannot be recalled.

There has to be a safer defense in the nuclear age. What President Reagan is proposing at last is just that. He would destroy enemy missiles by scientific, stratospheric defense before they could reach American cities. He would shield the American people from nuclear destruction through prevention rather than a deterrence that pledges nuclear death for millions of Russians. He would save millions of human lives instead of avenging them.

Predictably, there has been a hue and cry. The Kremlin reaction was particularly violent and liberals in this country, led by Sen. Edward M. Kennedy, have sought to ridicule the very idea of a high-frontier shield against nuclear destruction as a sort of Star Wars fantasy.

To be sure, some argue that U.S. efforts to develop a high-tech, anti-ballistic missile (ABM) system with some components in space, would only spur the Soviets to install their own missile defense.

But what's wrong with that? If both nations had a shield against nuclear attack, it would end the continual and expensive additions to the nuclear arsenals. And, making shield technologies available to U.S. allies would end the fears of Western Europeans that their homelands could become a nuclear battlefield.

Then there are those who argue that the Soviets would develop a new generation of weapons to pierce the American shield. Undoubtedly, both Soviets and American researchers would try this. But who knows how long it would take to achieve such a breakthrough?

It took 10 years to develop the tank as an answer to the machine gun. Another 40 years were needed for an anti-tank missile. A few years of certain security against unimaginable nuclear destruction would be worth the price.

The Russians' ABM research, as well as their advances in satellite warfare, belie arguments that Mr. Reagan's proposal would lead to militarization of space. It's already happening.

The Soviets, in fact, are ahead in planning exploitation of outer space. Thus, considering such Soviet research advances, the failure to the United States to develop a nuclear defense would be more likely to tempt the Kremlin into an attack.

A U.S.-U.S.S.R. treaty to limit missile defenses was signed in 1972 when ABM technology was still primitive. The treaty could be renegotiated, however, before perfection of the new technologies that include lasers, microwave devices and particle beams. Indeed, as futuristic ABM systems are designed, both nations could negotiate gradual reductions in their offensive nuclear arms.

Meanwhile, the United States has been spending a billion dollars a year on ABM research. And, although the Russians are thought to be ahead in development of anti-missile hardware, this country is ahead in the vital areas of data processing and sensors.

The cost of President Reagan's proposal is not yet known, but Congress should appropriate the necessary funds and point the United States to the new defense threshold Mr. Reagan has plotted. We must not reject this daring initiative that could make the threat of nuclear war obsolete and bring a better hope for the 21st Century.

Reagan's defense 'vision'

CHRISTIAN SCIENCE MONITOR
25 March 1983

President Reagan once again has dramatized a televised speech with a call for no less than a changed national outlook on a long-standing national need. In his State of the Union address a year ago it was the concept of New Federalism to meet the need for governmental efficiency. In his national security address this week it was the concept of "defensive" technology in contrast with threats of massive retaliation to meet the need for deterring war.

Mr. Reagan's New Federalism was seen by many as a diversionary tactic in place of effective response to the economic problems that were mounting at the time. Yet it jarred some entrenched thinking on the subject. The ensuing debate has sharpened the views of Washington, governors, and the public as to the proper balance of state and federal functions and responsibilities.

Similarly, Wednesday's presidential call to go beyond prevailing military assumptions was immediately pegged by some skeptics as another "New Federalism" tactic to enliven one more warning about Soviet arms buildup. Mr. Reagan can disprove such doubts by a vigorous follow-through with specific proposals. These could spark debate helping the nation toward a valuable self-scrutiny on just what its long-term national security strategy should be. Such scrutiny is demanded not only by continuing Soviet nuclear buildup but by the whole range of new mega-weapons at hand or on the horizon.

In simplest terms, Mr. Reagan was asking American scientists to be as effective in developing systems to stop nuclear missiles as they were in developing nuclear arms in the first place. (These antimissile systems presumably could involve lasers, particle beam generators, and other space-age weaponry on which research is already well under way.) Thus the United States and its allies would be safe from an adversary's missiles without having to deter their use by the present threats of retaliation.

By raising the prospect of an alternative to deterrence-by-threat Mr. Reagan may have been speaking to a recently publicized issue: the questioning by religious and other disarmament advocates of the morality of a deterrence based on a doctrine of massive nuclear retaliation. Suppose the deterrent failed and an enemy attacked, they ask, would it then be moral to carry out the threatened retaliation at the cost of global or near-global nuclear destruction? In theory, the question would not have to come up if America could physically deter any weapons from coming in – and thus not be presented with the decision of whether to retaliate. Mr. Reagan cautioned that the day of such defensive security would be far in the future. What he would do as a matter of policy is to hasten that day.

The debate now will have to include the question of whether the development of "defensive" arms would simply lead to a new round in the arms race. Presumably Moscow, which is already said to be moving vigorously on space weaponry, would seek to match anything the US did. If Soviet antimissile defenses became impregnable, the missiles of America's European allies would lose whatever usefulness they now have.

No wonder arms controllers are looking beyond whatever happens in the current nuclear arms talks to the arms control of the future. Quality as well as quantity will have to be a subject of negotiation. Experts don't expect research and development to be brought to a halt. But deployment of their results might be controlled by ensuring that arms control negotiations keep pace with the new weaponry at every stage.

Yes, arms specialists have long been aware of what Mr. Reagan was talking about on Wednesday. But by introducing it to the American people as part of a "vision" for peace in the future, the President calls upon them to join in rethinking the concept of defense they want to have. Will the arsenal of the future be such as not to require a strategy of threats by people against people? To open that possibility is no small thing. It might even make people examine how the thought and conduct in their individual lives can contribute to national attitudes rendering war as well as weapons obsolete.

PITTSBURGH PRESS 25 March 1983

Wrong Nuclear Road

President Reagan's call for massive research into futuristic devices to knock out incoming missiles could mean a costly and dangerous expansion of the Soviet-U.S. arms race.

We now — unfortunately — are locked into an offensive missile-building contest with Russia.

If Congress goes along with the president's plan, which he announced Wednesday night, we would add a defensive arms race to our current burden.

The Pentagon already is spending about $1 billion a year on anti-missile research, and the Kremlin probably more.

The Soviets have made it clear they will not permit the United States to achieve strategic superiority, so any stepped-up spending on our part would be answered by them.

★ ★ ★

Mr. Reagan is confident that American technology would prevail in developing lasers, particle-beam weapons and other exotic missile killers.

But Russia excels in spying, so any breakthrough made by the United States would be in Soviet hands within a few years. The end result would be stalemate at a higher level of weaponry.

Furthermore, if Russia fears being left behind by U.S. anti-missile development, it could decide to build enormous numbers of additional missiles and warheads to overwhelm any defensive system.

That would be destabilizing and move the two nuclear arsenals infinitely closer to hair-trigger.

The president's plan is flawed.

It proposes to be able to destroy around the year 2005 missiles that threaten us today.

But the offense is never static, and by the time the defensive weapons Mr. Reagan envisions would be in place they probably would be rendered useless by new weapons as yet undreamed of.

★ ★ ★

Granted, there was something stirringly idealistic in the president's plea to scientists to build a system to render nuclear missiles "impotent and obsolete."

But, realistically, the technology of death will always be a step ahead of the technology of defense. So sober good sense is needed more than scientific or technological miracles.

Both superpowers are going to have to put as much effort and ingenuity into reliable and verifiable arms control as they now do into weapons development.

Otherwise, both of us may disappear from the earth before Mr. Reagan's — or Yuri Andropov's — perfect defense materializes.

WASHINGTON POST 25 MARCH 1983

Mr. Reagan's New Defense Idea

THE PRESIDENT'S new defense idea is pure Reagan: simple at first glance, complex at the second, running against the grain, sure to arouse a storm. It is the product of Ronald Reagan's peculiar knack for asking an obvious question, one that has moral as well as political dimensions and one that the experts assumed had been answered, or found unanswerable, or found not worth asking, long ago. In this instance, the question is: why are we and the Soviets basing our defense and survival on the terrible and incredible threat of mutual annihilation? Is there not a better way?

To that question, a whole generation of strategists has said no. Defending against nuclear threat has been accepted as tantamount to announcing an intent to bring an offensive threat against the other side. Deterrence—carrying with it the threat of inflicting and incurring mind-numbing damage—has come to be enshrined as the guiding strategic principle. The effort of both Americans and Soviets has been, as variously interpreted, either to gain a margin of superiority or to attain parity or stability.

Deterrence has worked in the sense that nuclear war has been stayed. But the requirement to maintain a usable and invulnerable deterrent, against the rush of technology and the fear of the other side's moves, is precisely what "arms race" means. It has led, in hardware terms, to such tortured constructs as putting huge missiles on a racetrack in the western desert, running them around from one garage to the next, and occasionally opening the ceiling doors to let the other fellow's cameras peek in. That particular scheme was shelved, but no matter what other scheme to maintain a deterrent is finally accepted, it will keep alive the specter of mass death and destruction in a nuclear "exchange."

Against this specter Mr. Reagan now suggests that we slowly start investigating whether in the next century technology may offer a solution to our security that does not rest on the prospect of mass and mutual death.

Is it a good idea? Scarcely was it out of the bottle than it was denounced as an escape from reality to the nirvana of high tech ("Star Wars"), a step toward the militarization of space, a gimmick with which to distract the freeze movement, a calculated assault on the jewel in the arms control crown, the antiballistic missile defense treaty, and, last but not least, a reckless provocation to the Soviets, who could only be expected to take the proposal as a prelude to a nuclear showdown.

Perhaps it is all these things. Perhaps, too, it is none of them. At this point it seems enough to say that President Reagan has given impetus to what is already a major gathering review of the strategic principles this nation and the Soviets have adopted in the last generation. These principles, keep in mind, were not written in stone. They represent merely the best guesses made by harried men groping with the historically unprecedented circumstance—the capacity to end the world as we know it—that technology had put in their hands. Their answers created the uncertainty and peril with which Mr. Reagan, not alone, is attempting to cope now.

CHICAGO SUN-TIMES 25 March 1983

Defense deceptions

President Reagan's speech Wednesday night to rescue his defense budget—with its call for a "new" Star Wars defense system—was an appalling disservice to the public's understanding of serious military issues and the country's real national security needs.

The address was deceptive, lacking in fact and irrelevant to the current important debate on appropriate levels of military spending. For example:

● The futuristic shield of laser and particle beams to destroy Soviet missiles in flight is not new, as Reagan tried to peddle it. Hard research into such systems had been proceeding under earlier administrations for some 25 years; the effort has yet to bring us closer to the development of a practical anti-missile deterrent.

● To inject such Buck Rogers technology into the defense debate at all is misleading. The decades-away system Reagan embraced has nothing to do with the debate on military spending for fiscal 1984. It was a ruse.

● Totally absent in Reagan's proposal was any useful analysis of his over-all military strategy—if he has one. What does his proposed 10 percent hike in arms outlays—after inflation—intend to accomplish? How would that excessively rapid buildup be efficiently integrated, and to meet what threats? The president didn't say.

● To imply that spending less than he proposes will cut defense spending is wrong. Congress accepts the need for a stronger, better financed military. The serious debate is over the *rate of increase* in spending. The new House-passed budget calls for a credible 4 percent rise in military outlays, beyond the rate of inflation, not "2 to 3 percent," as Reagan said.

● His attack on nuclear freeze supporters was unfounded. The only freeze proposal that has widespread support in this country urges "mutually verifiable" steps to prevent cheating. Reagan ignored that wording.

There were other flaws. What emerged clearly is the chilling fact that Reagan is engaging in gross overattention to spending for expensive war gadgets, while paying gross inattention to valid ideas for arms control and arms reduction. The country can only be dismayed that his speech continued such a reckless course.

Star Wars Reality

WALL STREET JOURNAL
25 March 1983

"Let me share with you a vision of the future that offers hope," said President Reagan in his Wednesday night defense policy address to the nation, a clear recognition that in a world threatened with nuclear devastation, hope is a pressing need. The president's proposal, a response to the rising public clamor for nuclear "sanity," was that the United States use its advanced technological skills to set up defenses against nuclear attack.

It was an appropriate response, an assertion that even in a nuclear age, we can control our own destiny if we have the will and courage to do so. We do not solve such problems by painting our faces white and giving free play to our own fears in public demonstrations, but by using our wits to protect ourselves. The old concept of mutual assured destruction (MAD), which has proved so troubling to rational and humane people despite the fact that the U.S. has never deliberately targeted Soviet population centers, will be gradually supplanted with a policy that does not hold us hostage to a balance of terror, or at least so it is hoped.

Of course, this will revive the debate that led to the signing of the anti-ballistic missile treaty with the Soviet Union in 1972. The argument then was that missile defense was "destabilizing," giving one side the possibility of hiding behind a defensive shield while it obliterated the other. If that was ever true, it is not true today in this age of awesome offensive might, and it will be many years before it could become true. Nonetheless, Sen. Kennedy was quick off the mark yesterday criticizing the president's speech. He was joined by Moscow's Tass, charging that the president intended to violate the ABM treaty.

In an era where the Soviets are clearly violating arms agreements, the biological weapons convention for example, this gets to be a bit ridiculous. There is even a possibility that the Soviets themselves are in violation of the ABM treaty, or nearly so, with a missile, the SA-12, soon to be in production that may have the capability of intercepting ICBMs. The Soviets claim that it is designed only to

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PHILADELPHIA INQUIRER 25 March 1983

Reagan's anti-missile plan imperils security and sanity

"I am directing a comprehensive and intensive effort to define a long-term research and development program," President Reagan said Wednesday night, "to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles." A bold new initiative on arms-control negotiations with the Soviet Union?

No.

"Our only purpose — one all people share — is to search for ways to reduce the danger of nuclear war," he added. A call to Americans and others throughout the world to put aside the fears of the past, the momentum of the present and the uncertainties of the future in order to concentrate the principal energies of civilization on reversing the ever-rising threat of a nuclear holocaust?

No.

"If we stop in midstream," he insisted a few minutes earlier, "we will not only jeopardize the progress we have made to date — we will mortgage our ability to deter war and achieve genuine arms reduction." A recommitment of the full faith and force of the United States government to firm, prudent and skeptical agreement on mutual and verifiable weapons-development limitations?

No.

"I have become more and more deeply convinced that the human spirit must be capable of rising above dealing with other nations and human beings by threatening their existence," he said. "Feeling this way, I believe we must thoroughly examine every opportunity for reducing tensions and for introducing greater stability into the strategic calculus on both sides. One of the most important contributions we can make is, of course, to lower the level of all arms, and particularly nuclear arms. . . . I am firmly committed to this course." A dramatic report on progress in the ongoing negotiations with the Soviets, nourished by a convincing reaffirmation of Mr. Reagan's personal commitment to putting that concern above all others in his and his administration's service to both the United States and the human race?

No.

Amid all that language, all that very sensible, persuasive oratory that came near the end of his speech on military spending and diplomatic relationships, Mr. Reagan announced a proposal. If it is allowed to go forward, it will stand as the most ill-conceived and inflammatory act of imprudence by any government in the generation that has passed since nuclear war became a threat to human survival.

That proposal is to launch a massive effort to develop a new system of defense against intercontinental ballistic missiles. That, and its immediate and predictable effect of goading the Soviet Union into doing the same, would begin a major new era of escalation of the nuclear threat.

That proposal would repudiate the spirit, if not every letter, of the treaty signed by Richard M. Nixon and Leonid I. Brezhnev in 1972 in which the United States and the Soviet Union — for reasons of profound self-interest — agreed to forgo the full development of anti-ballistic missile (ABM) systems. It would put aside the delicate balance of terror that somehow has prevented direct military confrontation between the earth's superpowers for a generation — and would replace it with a frantic, incalculably expensive rush toward a new and even more unpredictable balance of fears.

Whether the Reagan initiative were to produce anti-ballistic missiles or other, more exotic devices for destroying missiles in flight — such as lasers, particle beams or whatever — it would not guarantee an end to the Soviet

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ANTI-MISSILE PLAN...Continued

Union's capacity to wage war upon the United States.

To the contrary, it would establish a new plateau of mutual threat, at enormous expense to both societies. If successful, it would build the foundation for another level of escalation, and another beyond. Such has been the perilous course of the arms race.

A year ago, Harold Brown, who had served as secretary of defense under President Carter, celebrated the 10th anniversary of the signing of the ABM treaty by calling it "the most important achievement among all the arms control discussions, treaties, interim agreements and other understandings." He could not be called self-serving or partisan. It had been negotiated by Mr. Nixon and Henry Kissinger.

Mr. Brown explained it well. "By forbidding the deployment of a nationwide urban industrial defense against ballistic missiles in either the United States or the Soviet Union, the ABM treaty contributed, and contributes today, substantially to... stability.... To be sure, that is an uncomfortable kind of stability and an uncomfortable kind of security. But in the absence of a reduction of nuclear armaments to a zero or near-zero level, it is the best security we are likely to know, and it has worked for decades."

And now, adding nothing new to the debate, giving no reason that was not overcome in the decade and more that led to the ABM treaty, Mr. Reagan wants to abandon that security, to cast aside that stability.

Even by proposing that, Mr. Reagan has set others — in Moscow and elsewhere — to considering what to do in response. Inevitably, that has already wrought mischief, for it undermines the fragile foundation of trust — the perishable mutual recognition of mutual need — on which the ABM treaty and its principle rested.

STAR WARS REALITY... Continued

counter tactical missiles.

But that aside, research on ABMs, which both sides have been conducting for years, does not violate the treaty, and that is all the president is proposing for the immediate future, albeit with a higher priority than in the past. However, that misses the point, too.

If the United States found itself able to develop a reliable anti-ballistic missile system it would want to deploy it. That possibility is some time away, as the president indicated in his speech. But when it comes, the ABM treaty will have to be reconsidered. That is long overdue. It was a dubious agreement to begin with, clearly intended by the Soviets to neutralize America's technical superiority while they plunged ahead with their massive arms buildup.

It may well be, of course, that the president has been oversold on the technological possibilities today. Space stations with laser beams to zap incoming missiles are not just around the corner. But the president's aim was not to pull a defense system from a hat, but to set a new doctrinal course, one that would give the U.S. greater flexibility in responding to the Soviet threat. There are some offensive possibilities, touched on only vaguely in the speech, that also hold promise as a deterrent to Soviet adventures. Highly accurate conventional weapons to counter a nuclear-backed Soviet attack certainly deserve high priority as well.

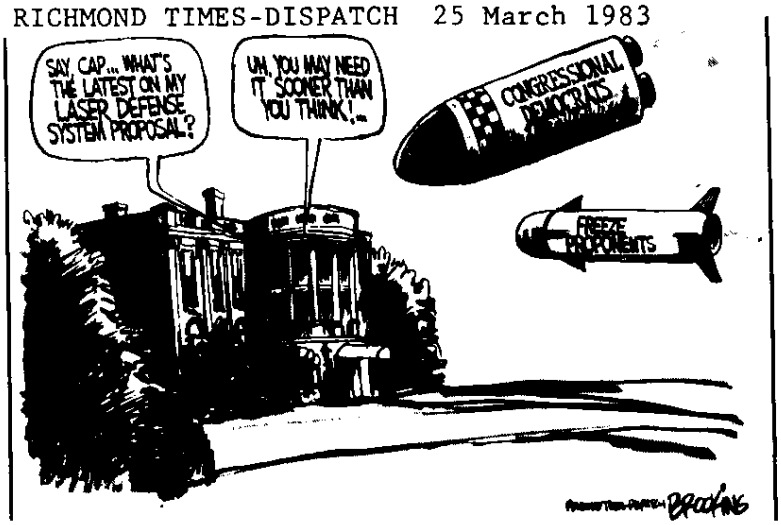
And of course the president's offer of hope was part of a plea to the public to support his efforts to rebuild the nation's military capabilities in the face of opposition in the Democrat-controlled House. Judgments about how much military spending is enough differ widely, of course, and some of the congressmen challenging the Pentagon budget are no doubt honest in their belief that a smaller spending level would meet the nation's needs. But some, we fear, hold to the view that the Soviets will behave themselves if we simply talk to them sweetly enough. Hope is fine. Blind faith is very dangerous.

We ourselves have had some questions about whether the priorities of U.S. defense spending are correct. But we are aware that part of the problem in establishing rational priorities lies in the arms agreements past administrations have signed. Americans have assumed that they were intended to limit arms. The Russians have negotiated agreements that they knew to have enough loopholes to enable them to meet the arms buildup goals they had set for themselves. The results, in terms of Soviet superiority in numbers, were graphically outlined by the president.

We think the U.S. should arm itself in a way that makes the best use of advanced technology and recognizes urgent needs. The underlying message in the president's talk was that he also would like to move us in that direction, toward less costly but more effective means of national defense. He is on solid ground both in a moral and military sense. There is indeed greater cause for hope.

SPECIAL EDITION -- "STAR WARS"

RICHMOND TIMES-DISPATCH 25 March 1983



MILWAUKEE JOURNAL 26 March 1983

New nuclear path to where?

In his address to the nation Wednesday night, President Reagan revealed his support for a drastically new nuclear strategy aimed at "changing the course of human history." As broadly sketched, the bold initiative is attractive, yet it is also fraught with uncertainties and risks. The details need to be fully spelled out and exhaustively debated.

In essence, Reagan proposed to abandon the strategy of nuclear deterrence that has prevailed since the onset of the nuclear era. That strategy is based on the promise of retaliation: Each side knows that any nuclear attack would invariably provoke devastating reprisal.

Indeed, the topsy-turvy logic of stability in the nuclear age *requires* each side to leave itself exposed to the retaliatory power of the other. And, as Reagan noted Wednesday night, "this approach to stability through offensive threat has worked."

Now, Reagan has proposed a futuristic program — remindful of "Star Wars" and evolving over 20 years — to counter the Soviet missile threat with measures that are defensive rather than retaliatory. In other words, US and Soviet cities would be defended, not offered as hostages. The appeal of such a change, of course, is that US and Soviet military efforts would be devoted to the quest for more effective ways to defend lives, not destroy them.

Under the Anti-Ballistic Missile Treaty of 1972, both Washington and Moscow agreed to abandon almost all measures to shoot down attacking missiles. Research on the kind of anti-ballistic-missile defense Reagan seems to have in mind is not prohibited by the ABM treaty. But if the two sides were to seek to deploy an ambitious ABM system, some renegotiation of the treaty would be required. That would be a fateful step. The ABM treaty has been a key ingredient in a deterrence policy that has prevented nuclear war.

Furthermore, the ABM treaty was negotiated largely because both sides had concluded that ABMs won't work. That mutual recognition raises doubts about the Reagan initiative. The scientific problems associated with building an effective ABM system are immense, perhaps insurmountable. Scientists tend to believe that, when it comes to nuclear war, the offense can always overcome the defense.

The most obvious pitfall in the Reagan plan was recognized by the president himself. He acknowledged that if defensive systems are "paired with offensive systems, they can be viewed as fostering an aggressive policy, and no one wants that." What Reagan meant is that US attempts to defend itself could lead the ever-fearful Soviets to conclude that the US might be planning a first-strike and attempting to defend itself against the counterattack. The Soviets might be tempted to pull the trigger pre-emptively.

Hence, the task would be to build defensive systems while simultaneously dismantling offensive weapons, *and* to have the superpowers build and dismantle in concert, lest one side dangerously rattle the other and cause it to act rashly.

Unfortunately, Reagan has shown too little willingness to dismantle offensive weapons. In fact, on Wednesday night he vigorously championed an arms buildup that includes offensive weapons like the MX missile.

Nevertheless, the Reagan plan deserves serious discussion. However elusive, its goal is one that all Americans can support: ridding the planet of offensive weapons that Winston Churchill once called the odious apparatus of modern war.

NEW ORLEANS TIMES-PICAYUNE
25 March 1983

Down-to-earth defense

Although the remarks about developing "Buck Rogers" missile defenses in President Reagan's TV speech to promote his defense budget drew the most attention, they can be dismissed as the speech's gimmick. Presidential speeches designed to go over the heads of the congressional opposition to the people have in recent years developed a form almost as rigid as the sonnet or the limerick, and one requirement is a catchy gimmick slipped in near the finish. Mr. Reagan's four short, generalized paragraphs on future "Star Wars" defenses hardly justify the headlines and reactions. The idea, in any event, was irrelevant to the subject at hand.

That subject was defense spending policy in general and in the 1984 budget in particular. The president again made a detailed presentation of the need to upgrade U.S. forces to face the threat of Soviet buildups. The basic case is still convincing. The Soviets have indeed accumulated a military establishment far beyond their needs for simple defense, and continue to add to it. The United States is thereby constrained to mount a force strong and flexible enough to respond to threats that could come anywhere.

That we are not able to do so, particularly in conventional forces and arms, seems obvious. That our inability to do so gives the Soviets a worrisome latitude in pursuing their expansionist policies seems equally obvious.

But defense spending policy is not exclusively a military matter — it is also political and economic. The political problem comes from proposing hefty increases in defense spending while presiding over hefty cuts in spending for social programs that have broad constituencies and loud political champions. The economic problem comes from the contribution of defense spending to the enormous federal budget deficits that threaten to hamper recovery from a severe recession.

The recession, despite the Democrats' rhetoric, was not caused by President Reagan's economic policies, and Mr. Reagan's attempt to control the bleeding of taxpayers by an ever-expanding client population is sound and, in principle at least, generally supported. Likewise, the need for an effective national defense is generally supported. Since politics is the art of the possible, the task before the national leadership, in and out of the White House, is to get the most defense for the amount of dollars that can be devoted to it without causing offsetting domestic damage.

In view of the Democratic-controlled House's passage of an alternate budget with far less for defense than the president wants, it seems clear that Mr. Reagan is going to have to compromise. There surely is room to do so. Both sides should begin the process in good faith, for a bitter, prolonged wrangle on a matter of such fundamental national interest would give still further aid and comfort to adversaries who flourish on their opponents' indecision and internal struggles.

DES MOINES REGISTER
25 March 1983 Pg.10

Escalating the arms race

Lift that peacekeeper mantle from President Reagan's newest initiative "to free the world from the threat of nuclear war" and there lies a very dangerous proposal.

In 1972, the United States and the Soviet Union reached perhaps their most important arms-control agreement when they signed the Anti-Ballistic Missile Treaty, limiting the deployment of defensive missile systems. It was difficult, given the technological momentum of defensive-weapons research, but the overwhelming sentiment on both sides was that an ABM system (1) could not work and (2) would encourage a first-strike mentality.

Now Reagan wants to revive the illusion that a good defense can end the arms race. In answer to it-can't-work thinking, he offers the hope of new technology. Yet he offers it to a world in which one weapon can destroy a city and hundreds of thousands of people, a world in which only the perfect defense will suffice. What laser can provide that?

As for the destabilizing effect of defensive weapons, Reagan said only that he recognizes "certain problems and ambiguities." These include, presumably, the fact that either superpower, operating under the illusion that it could limit retaliatory damage to acceptable levels, would be greatly encouraged to make a first strike.

How must this look to the Russians? If the United States were to achieve — or think it had achieved — the ability to shoot down retaliatory Soviet missiles, wouldn't the men in the Kremlin have to consider that America might be planning a devastating first strike? Certainly the Pentagon would make that assumption about the Soviets if it were discovered that they had an ABM system.

It is such fears that brought about the ABM treaty, a significant achievement that Reagan now proposes to violate in intent if not in word. With his speech, he has invited the Soviets to embark on yet another surge forward in the arms race, this one still more costly and more dangerous than the last.

BALTIMORE SUN 26 March 1983 Pg. 1

Reagan defense plan comes under attack

By Charles W. Corddry
Washington Bureau of The Sun

Washington — As scientific concern about President Reagan's missile-defense goal began to build yesterday, the president sturdily defended it as promising an eventual end to the superpowers' confronting each other with cocked guns, ready to squeeze the triggers.

The expressed concern of some, including former Defense Secretary Harold Brown, a nuclear physicist, and Hans Bethe, a Nobel physicist who worked on the atomic bomb, is that a defense system could produce a result opposite to that intended.

Under President Reagan's plan, the United States would rely on such weapons as lasers and atomic particle beams to destroy attacking missiles in space, instead of continuing to depend solely on the threat of devastating retaliation to deter a nuclear attack.

In defense of the plan, Gen. John W. Vessey, Jr., chairman of the Joint Chiefs of Staff, contended in a telephone interview that international stability would increase if such defenses could be designed and the nation was "not locked forever into the offensive alone."

As for worries that the Soviet Union might view the U.S. motive for developing such a system as wanting to be able to strike without being struck, General Vessey said: "The Russians know we're not going to attack them anyway."

Mr. Reagan sought to make the same point, emphasizing American restraint during the Cuban missile crisis in 1962 and throughout the period when the United States had unchallenged nuclear superiority.

The president acknowledged at a brief White House news conference that "we don't know how long it will take, or if, or ever," when it comes to inventing the defensive system he has in mind.

"But it is inconceivable to me that we can go on thinking down the future . . . that the great nations of the world will sit here, like people facing themselves across a table, each with a cocked gun, and no one knowing whether someone might tighten their finger on the trigger," Mr. Reagan said.

He thus described a new strategic direction under which the nation would add a search for missile defenses to its current reliance on the threat of retaliation as a deterrent.

As defense secretary in the Carter administration, Mr. Brown approved research on exotic beam weapons. He indicated yesterday that he favored its continuation, notably because the Soviet Union is making such explorations. But dating back to his days as President Lyndon B. Johnson's Air Force secretary, Mr. Brown has had the strongest doubts that defenses can be erected against thermonuclear weapons.

"The worst outcome," he said in a telephone interview yesterday, "would be a deployment, on either side, of a defensive system that was believed by the political leadership to be workable when in fact it was not."

That statement did not prejudge the outcome of the quest the Reagan administration has started, but it argued for great caution.

Mr. Bethe, in an interview with *The Washington Post*, expressed doubt that what Mr. Reagan wants to do can actually be done, and saw in the plan the rudiments of a new race, a "star war, if successful," with anti-satellite weapons at the front of the competition.

A former defense official, who did not want to be named, emphasized the enormous cost facing the United States if it pursues space age missile defenses, arguing that the defense would have to be perfect to be worthwhile against nuclear attack.

"It might produce the first trillion-dollar military system," this former official said.

The Soviets would erect similar defenses, he reasoned. He was chilled by the thought that Soviet military men might be able to convince their political leaders in the remote future that they had an effective defense and that therefore a first strike was feasible because the defensive system would sweep up the American retaliatory strike.

The interest of the U.S. military high command, which strongly backs Mr. Reagan, is obvious to this former official. Military leaders have long felt frustrated by the bind that deterrence theories put them in. Security, under current theory, depends on the possible attacker's calculations of U.S. retaliatory capabilities. An attacker would need the ability to destroy the United States before America could destroy it in return.

Thus, the official continued, there is a spiraling increase of nuclear arsenals, and diminished resources for more probable conventional conflict. Naturally enough, by this reasoning, military leaders want a defense — if one is possible — that will stop missile attacks.

Mr. Reagan argued yesterday that there were two ways to get at the "cocked gun" problem — his arms control proposals, about which he will speak in Los Angeles next week, and his missile defense goal for the turn of the century.

Mr. Reagan also entered a strong new defense of his choice to head the Arms Control and Disarmament Agency, Kenneth L. Adelman, whom the Senate Foreign Relations Committee has recommended the Senate disapprove.

One of the committee's charges against Mr. Adelman, which he has denied, is that he was misleading on the question of whether he intended a personnel shake-up in the agency if confirmed. He received a memo from Edward L. Rowny, the U.S. strategic arms negotiator, advocating a housecleaning.

Mr. Reagan said he thought inquiries about personnel were "perfectly natural." The "fuss" about Mr. Adelman, he said, "smacks of people smaller than the person they are attacking."

WASHINGTON POST 26 March 1983 Pg. 1

President Overruled Advisers On Announcing Defense Plan

By David Hoffman and Lou Cannon
Washington Post Staff Writers

President Reagan personally overruled objections from top Pentagon officials when he announced long-range plans this week to study a futuristic defense system that could destroy Soviet intercontinental ballistic missiles in flight.

"The quicker we start, the better," he said yesterday.

Senior administration officials said the president insisted on making the announcement in his address Wednesday night, even though some officials questioned whether the timing was right and whether Reagan should have brought the issue up at all. "I'd put it out now because, what better time?" the president said yesterday in a 15-minute question-and-answer session with reporters. "I've been having this idea and it's been kicking around in my mind for some time here recently. And constantly I have thought about the fact that the nuclear missile seems to be one of the only major weapons systems in history that has never produced or brought about a defense against itself . . . ."

He added, "And since we don't know how long it will take or if—or ever, that we have to start—the quicker we start, the better."

Administration sources said that two Pentagon officials, Undersecretary for Policy Fred C. Ikle and Assistant Secretary for International Security Policy Richard Perle, had questioned whether Reagan should even raise the issue in his Wednesday night defense speech.

The sources said Ikle, while supporting the general idea of a defensive system, was doubtful about the timing and format of Reagan's proposal. Perle, who led the internal opposition, worried that it would raise concern that the United States was about to adopt an anti-ballistic missile system and was drifting away from the NATO alliance, the sources said.

The idea first came up the week of Feb. 7 in a discussion Reagan had with the Joint Chiefs of Staff, the officials said.

"When they first discussed it, the president immediately captured the idea and asked for a decision" on a closely held basis, said one informed administration official.

Before and during the 1980 campaign, Reagan expressed interest in a high-technology solution to the "interminable" nuclear arms race, the official said. Reagan asked Ikle, among others, about it during the presidential campaign.

Drafted by the National Security Council and the Joint Chiefs of Staff, the speech text dealing with this high-technology proposal was circulated to other Defense and State department officials only last week, the sources said. It then drew objections from Perle and others, which had the effect of watering down the text, making it less specific, officials said.

But Tuesday evening, they added, Reagan decided he wanted to press ahead in this address rather than leave it for two other planned speeches on arms control and the MX missile. Reagan then rewrote the section of the address dealing with the missile defense system, incorporating some of the objections and making the speech more general in nature, the officials said.

George A. Keyworth, the president's science adviser, who favored inclusion of the futuristic system in the speech as did national security affairs adviser William P. Clark, said yesterday it was a "top down" decision coming from the president, rather than being sent up by administration officials.

Most officials in the White House West Wing were unaware of it until the last minute, sources said. Some have since expressed concern that the high-technology defense system has obscured the larger point Reagan wanted to make in support of his planned rearmament.

Yesterday, Reagan signed a directive giving Clark responsibility for the new effort.

Officials have been vague about the cost, but Keyworth said yesterday that the administration is talking about something at least matching what he said is a $2 billion Soviet effort, about twice the current U.S. spending level. Keyworth also said he expects that a new office will be established within a few months to coordinate the effort, which is now scattered among various agencies.

Although much of the speculation about such a defense system has centered on satellites, Keyworth said yesterday that it is more likely to emerge in the form of land-based laser systems. At the urging of Ikle and others, Reagan stopped short of outlining a more ambitious defense system aimed at Soviet bombers and cruise missiles as well, administration sources said.

Reagan said yesterday that he finds it "inconceivable" that "the great nations of the world will sit here, like people facing themselves across a table, each with a cocked gun, and no one knowing whether someone might tighten their finger on the trigger."

The president said he would not violate the anti-ballistic missile treaty with the Soviets, which just underwent a five-year review. The treaty, he added, bars deployment of, but not research on, defensive weapons.

Reagan also defended his nominee to head the Arms Control and Disarmament Agency, Kenneth L. Adelman, following charges from Senate Democrats that Adelman misled the Senate Foreign Relations Committee in earlier testimony. "You bet, I am sticking by Mr. Adelman," Reagan said.

Science Adviser Sees Lasers and Mirrors As a Missile Defense

WASHINGTON POST

26 March 1983

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By Michael Getler
Washington Post Staff Writer

President Reagan's science adviser says that "a very promising" future concept for defending against missile attack involves using huge mirrors in space to absorb intense laser rays beamed from Earth stations and redirect them to destroy Soviet missiles soon after launching.

In an interview yesterday, George A. Keyworth, the atomic scientist who serves as Reagan's chief science adviser, stressed that such a system might be two decades away and that many technical questions would have to be resolved if it is to be made to work.

But he cited it as the sort of idea that could grow out of the president's call this week for an all-out research effort to determine if an effective defense against enemy missile attack could be developed. Such a development, Reagan said, could shift U.S. strategy from instant atomic retaliation to a more defensive posture.

The laser-mirror combination was the only one cited by Keyworth in the interview around which some potential operational concept had developed. He also pointed out that, of all the new technologies that possibly could be used in such futuristic defenses, lasers were the furthest along.

The mirrors, perhaps 100 feet in diameter, would be stored aboard space boosters and launched only upon warning that an enemy missile attack appeared imminent, Keyworth said.

The idea, he said, is to keep these space boosters ready with an instant "pop-up" launch capability so that the mirrors would not have to remain constantly in space, where they could be knocked out in advance of an attack by Soviet anti-satellite weapons.

To deal with a large Soviet missile attack, possibly hundreds of these mirrors would be needed, and hundreds of ground-based stations in which to generate the intense laser light beams, Keyworth said.

The high-energy laser beams would be aimed at the mirrors. Their beams would be allowed to spread somewhat so that the mirrors could absorb their intense heat and energy without burning up. Then the mirror would essentially refocus the beam, reviving its intensity, and aim it at individual missiles as they rose from their launch silos deep inside the Soviet Union.

Ground-based computer stations would tell the mirrors in space where to aim their beams, using information from data-gathering satellites that would sense the engine heat of the newly launched missiles and track them with radar. The United States already has such satellites, but vastly improved ones would be needed for such a defensive system.

The mirrors could be repositioned quickly to shift their aim from one target to another, in hopes of picking off the Soviet missiles some 6,000 miles away within minutes of their launching. This would be well before the Soviet missiles could release the many individual atomic warheads each carries.

Keyworth says it would also be necessary, using the same techniques, to pick off any Soviet missiles that got through the first attempt to destroy them, before they began diving to the U.S. mainland.

Generally it would take a missile about 30 minutes to fly from the Soviet Union to the United States, and the individual atomic warheads would be dispersed during the last few minutes of that flight. The times are shorter for missiles fired from submarines that are closer to U.S. shores.

The advantages of such a system, if it could ever be developed, Keyworth said, is that the biggest and most complex component—the laser beam generator—would be on the ground where it could be serviced and defended. The system also does not involve putting weapons into space, and the pop-up technique would reduce vulnerability to a Soviet pre-emptive attack on the system.

Keyworth stressed that there are many technical unknowns. He acknowledged that "we don't know how to build lasers today" with as much energy as would be needed for the anti-missile role.

One of the problems that have plagued lasers for years is how to transmit them through rain and atmospheric disturbances without weakening them. Requirements for handling massive amounts of electronic intelligence and rapidly reaiming the mirrors also go far beyond today's capabilities.

But Keyworth said extraordinary advances in micro-processor technology have been made in recent years that might solve some of these problems. And, he added, "in most of these areas" of potentially promising anti-missile technology "we have a substantial edge" on the Soviets.

The president's proposal has generated considerable controversy in the scientific community.

Prof. Sidney Drell, a leading physicist who is deputy director of the linear accelerator center at Stanford University and a former White House defense consultant, said, "I see no prospect of deploying on the ground or in space an effective defense."

SPECIAL EDITION -- "STAR WARS"

NEW YORK TIMES 26 March 1983 Pg.4

Transcript of Reagan News Session on Social Security and Missile Defense

Following is a transcript of President Reagan's news conference in Washington yesterday morning, as recorded by The New York Times:

OPENING STATEMENT

Good morning. It's a short statement. I'd like to thank the members of Congress on both sides of the aisle for helping us address two issues of great significance to the American people. For all our senior citizens who worried about receiving their Social Security benefits, and for the present-day workers concerned about the solvency of that system, I think a dark cloud has been lifted.

Shortly after 2 o'clock this morning, the Congress completed action on the bipartisan Social Security solvency program. And by working together in our best bipartisan tradition, we have passed reform legislation that brings us much closer to insuring the integrity of the Social Security System.

As you know, I've pledged repeatedly that no American who depends on Social Security would ever be denied his or her checks. But I warned those who were making this issue a political football that the system did have real problems, and that only through hard work — not demagoguery — would we be able to solve them.

For the sake of our people, I'm gratified that great good sense did prevail over partisan concerns.

I was also pleased to sign last evening a bill that guarantees continued unemployment insurance benefits and that provides funds to expand employment opportunities available in Federal programs during the present Federal year. Now this bipartisan legislation approves supplemental appropriations totaling $4.6 billion for various construction, renovation and repair activities, and it provides authority for humanitarian assistance through food donations and other related efforts.

By accelerating various Government projects already budgeted for future years, this legislation avoids the costly error of creating a multibillion-dollar make-work job program, the sort of expensive mistake the Federal Government made too often in the past. In fact, all of the employment-generating activities funded under this bill will add virtually nothing to the Federal deficit, if the higher spending in 1983 is offset by compensating reductions in future appropriations for these same activities.

Let there be no confusion on one essential point: even as this bill becomes law, the signs are clear that economic recovery is already under way — a recovery that will bring far more jobs to unemployed Americans than could ever be created by new Federal jobs programs. Make-work jobs are just temporary, at best, and we know that from past experience. More Government spending for such jobs will only crowd out private borrowing for private jobs, raise the deficit and reverse our dramatic progress in bringing down inflation and interest rates.

So I'm asking all members of the Congress to work with me to hold down spending and taxes, in the same bipartisan spirit that's brought us such great progress on jobs and Social Security. Working together, avoiding a return to narrow partisanship, we can insure recovery that's strong and long-lasting.

QUESTIONS AND ANSWERS

Butter for Peace

REAGAN: And now, because I believe in the sanctity of contracts, where is Sarah McClendon?

McCLENDON: Right here.

REAGAN: Right there?

Q. Thank you so much for recognizing me. Sir, you're about to embark on a long and complicated scientific exploration for war and death. Why cannot we have just as concentrated a program on trying to solve the mess by seeking better human relations U.S.A.-style with the Soviet Union and other countries? Why don't we sell for cash some of the 190,000 tons of butter we pay to store daily and are daily adding to. The Soviets seek butter desperately; the starving babies in Africa can drink the milk we process into butter. We have other surplus commodities. Why cannot we explore whether better living through sharing of food and consumer goods will make people turn from their warlords and bring about peace?

A. Well, Sarah, I think that what you have been asking, literally, is being answered. First of all, we are going to continue — not only in the area of disarmament but every other way we can — to convince those who seem to be expansionist today that there is a better course, if they're willing to come forth and join the family of nations that want to go forward together in peace and freedom.

With regard to the food, the only restraint on that — we are adding to the commodities that we've held in storage under our own laws and regulations here — we're adding to the number of those, the amount of those that

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NEW YORK TIMES
26 March 1983 Pg. 1

REAGAN SAYS PLAN ON MISSILE DEFENSE WILL PREVENT WAR

By STEVEN R. WEISMAN
Special to The New York Times

WASHINGTON, March 25 — President Reagan said today that he had decided to seek development of an advanced missile-defense system because it was "inconceivable" for the United States and the Soviet Union to continue indefinitely to threaten each other with nuclear destruction.

Mr. Reagan, at a news conference at the White House, said the Soviet Union and the United States had become "like people facing themselves across a table, each with a cocked gun, and no one knowing whether someone might tighten their finger on the trigger."

He acknowledged that the situation had prevented one side from attacking the other for decades. But he said he thought "there is another way" that peace might be preserved — for scientists to "turn their talent to the job of perhaps coming up with something that would render these weapons obsolete."

A Fundamental Shift

Mr. Reagan thus offered some insight into his recent thinking in choosing to embark on what would be, in effect, a fundamental shift from the doctrine of massive retaliation that has governed United States policy since the advent of nuclear weapons.

On Wednesday the President proposed a stepped-up research program to develop new means for neutralizing missiles launched by others. Today, he issued an executive order calling for an "intensive effort" to "define a longterm research and development program" for missile defense. He directed that it be supervised by William P. Clark, the national security adviser.

White House officials said the new program might involve lasers, microwave devices, particle beams and projectile beams, which theoretically could be directed from satellites, air-

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TRANSCRIPT...Cont'd

is going to be redistributed to the people of need, whether here or worldwide. But the one restraint that I mentioned is we have to be sure that in doing that we don't just add further problems to the agricultural community by in that disposing interfering with, or wiping out, their potential markets. So it's a line that has to be walked, and we've been very careful with that. We have internationally made some of these things — and these dairy products available — but at each time we have had to work very carefully so as not to either deprive our own farmers or deprive other allies and friends of ours of their commercial markets.

Nuclear Missile Defense

Q. Mr. President, why did you make that proposal now? In the light of the arms race that is going on with the Soviet Union, so to speak, and the negotiations over in Geneva, at a time when the budget is being beaten up by the Congress because of the higher defense spending that you want, why did you put that proposal on, sir?

A. I put it on now because what better time? I've been having this idea, it's been kicking around in my mind for some time here recently. And constantly I have thought about the fact that the nuclear missile seems to be one of the only major weapons systems in history that has never produced or brought about a defense against itself. And I brought this up one day in a meeting at which the chiefs of staff were present, and others, and we talked about it and discussed it, and then discussed it some more.

And since we don't know how long it will take, or if or forever, that we have to start. The quicker we start the better. But it is inconceivable to me that we can go on thinking down the future — not only for ourselves in our lifetime but for other generations — that the great nations of the world will sit here like people facing themselves across a table each with a cocked gun, and no one knowing whether someone might tighten the finger on the trigger. And there is one way, and the way we're pursuing, which is to see if we can get mutual agreement to reduce these weapons and, hopefully, to eliminate them, as we're trying in I.N.F.

There is another way, and that is if we could — the same scientists who gave us this kind of destructive power — if they could turn their talent to the job of perhaps coming up with something that would render these weapons obsolete. And I don't know how long it's going to take, but we're going to start because I'm going to be signing an executive director very shortly, when I get out of here. Helen?

The Soviet View

Q. Mr. President, the Soviets don't see it your way at all. They say that you are, in fact, accelerating the arms race, that we are violating the ABM treaties, and that it's almost that you've thrown down the gauntlet.

A. Well, maybe they're looking at us in a kind of a mirror image; having us think like they think. First of all, it doesn't violate the ABM treaty, we've just extended that for five years. The ABM treaty has to do with deployment. There is nothing in it that prohibits research, which is what we're calling for. I'm quite sure that whatever time it would take, and whatever President would be in the White House when maybe 20 years down the road somebody does come up with an answer, I think that that would then bring to the fore the problem of, "all right, why not now dispose of all these weapons, since we've proven that they can be rendered obsolete?"

Mutual Deterrence

Q. But the mutual deterrent has kept the peace, the mutual destruction approach for 40 years, and are you moving away from that? The fear of mutual destruction.

A. Yes, but that's it. It's as I say, it's like those two fellows with the loaded guns, cocked and ready. Yes, we have. I think — but remember that for a great part of that period we proved, I think pretty definitely, that we are not expansionist, that we're not aggressive. Because we had, to begin with, a monopoly and then, for a number of those 30 years, we had such a superiority, as witness the Cuban missile crisis. When they blinked, I think it's safe to say it was because our superiority at that time was about 8 to 1.

And, if you will recall, the Russian involved in those — or very high up in the Politburo, involved in that particular incident — said in the hearing of his counterparts on our side that they would never again be caught in that position. And they started their dramatic military buildup.

So you can't say that we have sat here, even with the great amount of weapons that both sides have today, for those 30 years, for a long time — and, as I say again, we proved - - you have to ask yourself how many nations in the world could have had the monopoly that we had and not have taken advantage of it. And we didn't.

Remember what I said about the back of the room? I've got to go — you? Yes? . . .

REAGAN...Continued

planes or land-based installations to knock out hostile missiles after they had been launched.

In Western Europe, Mr. Reagan's proposal for a new defense system against missiles drew cautious praise and considerable criticism, and many of the critics suggested that the plan could hinder talks to reduce nuclear weapons. [Page 4.]

On another matter, the President defended Kenneth L. Adelman, his nominee to head the Arms Control and Disarmament Agency, and said Mr. Adelman's Senate critics were "smaller than the person they're attacking." [Page 3.]

Mr. Reagan also used his news session today to hint again that he might soon modify the United States position in arms negotiations with the Soviet Union on medium-range nuclear missiles in Europe.

The Administration has proposed that such missiles be banned entirely from Europe. But the President was reported by aides this week to have decided in principle to recommend new equal limitations, short of outright elimination, of such missiles deployed by the Soviet Union and the United States.

Mr. Reagan, discussing his plan for a new missile-defense system, dismissed charges made Wednesday in the Soviet press that research into such a system would violate the 1972 Anti-Ballistic Missile Treaty. Under the treaty, the United States and the Soviet Union agreed not to "develop, test or deploy" missile defense systems.

"First of all, it doesn't violate the ABM Treaty," Mr. Reagan said of his proposal. "We've just extended that for five years. The ABM Treaty has to do with deployment. There is nothing in it that prohibits research, which is what we're calling for." Mr. Reagan's mention of "five years" was apparently an allusion to the treaty's being reviewed every five years, as it was last year. The treaty is of indefinite duration.

Article V, Section I of the Anti-Ballistic Missile Treaty states that "Each party undertakes not to develop, test or deploy ABM systems or components which are sea-based, air-based, space-based or mobile-land based." This does not prohibit study or research. At issue is what constitutes research on the one hand and development on the other.

Mr. Reagan added that he was "quite sure" that whenever the defensive system became practical — "maybe 20 years down the road" — the Soviet Union and the United States would then be forced to "dispose of" their ballistic missile arsenals since they would be "rendered obsolete."

Mr. Reagan was then asked to comment on the Soviet suggestion that his Administration had "thrown down the gauntlet" and escalated the arms race.

"Maybe they're looking at us in a kind of mirror image," Mr. Reagan said with a smile. "They're having us think like they think."

The President's proposal comes at a time when the doctrine of mutual deterrence has been under challenge by

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NEW YORK TIMES
27 March 1983 Pg. 1

SOVIET TOLD BY U.S. ABM PACT STANDS

Officials Deny Reagan's Plan Seeks to 'Disarm' Russians

By BERNARD GWERTZMAN
Special to The New York Times

WASHINGTON, March 26 — Administration officials said today that the United States had notified the Soviet Union that the new research in missile defense announced by President Reagan would not violate or abrogate the 11-year-old Soviet-American treaty limiting each side's antiballistic missile defense.

There was no official reaction to comments about the Reagan program by Yuri V. Andropov, the Soviet leader, but officials were reading them within minutes of receipt of the text.

Speaking privately, they disputed the contention that the proposed United States program, which would be aimed at making offensive weapons ineffective, was intended to "disarm" the Soviet Union.

The officials said that there was no likelihood of any concrete results within 15 to 20 years, that the project was Mr. Reagan's personal idea and that probably nothing would be done with any new technology without discussions with the Soviet Union on using it to achieve radical disarmament.

Some officials acknowledged that Mr. Reagan, in publicizing his plan without advance discussion with allied leaders or with the Russians, had probably raised more questions than he could answer. This, officials said, would probably make it more difficult for the United States in what one State Department official called "the propaganda war" with the Soviet Union over the whole issue of medium-range missiles in Europe.

One American senior official, after reading the text of the Andropov interview, said he found it "fascinating" that the head of the Soviet Union would accuse the President of the United States of lying about the continued deployment of SS-20's, the most advanced Soviet medium-range missile.

A year ago, Leonid I. Brezhnev, then the Soviet leader, pledged to halt the further deployment of SS-20's. Mr. Reagan, in his speech Thursday, said that six months after the pledge, the number of warheads on medium-range missiles had risen to 1,200 from 800.

"Some freeze," Mr. Reagan said, adding that the number of warheads was now up to 1,300. He said the United States had no such warheads on medium-range missiles and would have them only when the first of 572 new missiles were deployed at the end of 1983.

Mr. Andropov said Mr. Reagan "tells a deliberate lie, asserting that the Soviet Union does not observe its own unilateral moratorium on the deployment of medium-range missiles." He did not develop this theme further.

Officials Cite Satellite Data

The American official said satellites had detected the continued construction and deployment of new SS-20 missile sites in the European and Asian parts of the Soviet Union.

He said the United States had officially advised the Soviet Union that Mr. Reagan's call for research into new defensive technologies against missiles should in no way be seen as questioning American commitments to the 1972 treaty on limiting antiballistic missiles.

In 1972, President Richard M. Nixon and Mr. Brezhnev signed a treaty limiting each side to two fields of antiballistic missiles, with no more than 100 launchers and missiles could be in either field. In 1974, they signed a protocol amending the treaty to limit each side to only one field. The Russians have their field around Moscow, and the United States decided to dismantle the one it had around Grand Forks, N.D.

In signing the treaty, the two sides acknowledged that modern technology had not devised a way of defending against an all-out missile attack, and that the best way of deterring a war was by maintaining a parity of offensive nuclear weapons.

One official who is involved in policy matters said that at first, he was unhappy with the President's decision to call for the research into defensive technology because he knew it would inevitably raise doubts in Europe and in the United States about the direction of American policy.

"But let me say," he added, "I have done a lot of soul-searching in the past 48 hours, and I think that when we are finished with this latest nuclear debate, we may find that Ronald Reagan has done us a big favor in making us think in different terms. Maybe he is right in saying that piling one offensive system on top of the other is good only up to a point and ways have to be sought to get off the treadmill."

The Soviet side was told of the American commitment to the ABM treaty in conversations here and in Moscow, the official said. Mr. Reagan said both in his speech and at a news conference on Friday that the research program would not violate the ABM treaty.

The most crucial nuclear issue now, officials said, is the carrying out of the plan to deploy the new American missiles in Europe. Under an allied policy decision of 1979, all efforts must be made through negotiations to make it unnecessary to have such a deployment.

The current Soviet-American talks are deadlocked, and Mr. Reagan is planning a speech next Thursday in Los Angeles to discuss the situation.

Officials said he had sent a letter to all heads of allied governments informing them that he was leaning toward modifying the current negotiating approach to test Soviet intentions.

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church groups, such as the National Conference of Catholic Bishops. Questions also have been raised about the so-called counterforce concept, in which the United States would have presumably invulnerable missiles, such as the MX, capable of striking at Soviet missile silos.

Ever since the 1972 treaty limiting ballistic missile systems, both the United States and the Soviet Union have accepted, at least implicitly, the concept that defensive systems would destablize the deterrent balance by raising fears that one side was preparing to attack and then defend itself against a retaliatory attack. This concept is now being questioned by the President's suggestion that the United States should develop defensive systems that would make offensive weapons obsolete.

White House officials sought to emphasize that the United States did not contemplate turning outer space into a new nuclear battleground between the superpowers.

ATLANTA JOURNAL & CONSTITUTION 27 March 1983 Pg. 1D

"Give us the means of rendering these nuclear weapons obsolete."

High-tech 'shield' just a Reagan trick?

By Loye Miller Jr.
Newhouse News Service

WASHINGTON — In the pre-radar days of naval warfare, when warships shot only at targets the gunners' eyes could see, the smoke screen was a most useful defensive weapon.

When a ship was seriously damaged, it could lay a smokescreen (or accompanying ships could lay one for it) to obscure the enemy's aim while it made its escape. In early World War II, for instance, the British battleship H.M.S. Prince of Wales used a smoke screen to keep from being sunk by the superior firepower of the German dreadnaught Bismarck, after the Bismarck had blown up the H.M.S. Hood, largest battleship in the British navy, with one shot.

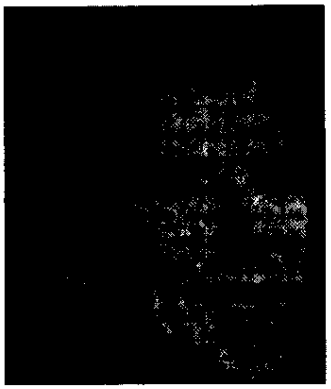
Even though these are more modern times, Washington these days looks somewhat like those geyser-marked waters of the Denmark Straits in 1941.

The Reagan administration is under heavy bombardment from the Democratic Party's fleet, and often receives more than small arms fire from its own large-bore Republican congressional powers.

Last week Reagan's flagship, the fiscal 1984 budget, received a direct hit right in the middle of its military nerve center.

House Democrats, strengthened by their gains of 26 seats in the 1982 elections, adopted a Democratic budget alternative which, among other changes, slashed Reagan's requested defense boost from 10 percent to 4 percent. It was the most severe legislative defeat of his presidency.

Thirty minutes later, the U.S.S. Reagan ducked behind a protective



REAGAN: A smoke screen?

smoke screen, only this time it was a space-age shield of such exotic modern-day phenomena as laser beams, microwaves and rays of highly charged protons and electrons.

In a nationally televised speech defending his defense budget and issuing — for the umpteenth time — dire warnings about the Soviet military buildup, Reagan tried to get fresh attention by proposing, in a surprise conclusion to the speech, a big program to develop weapons of lasers and particle beams, all of which could knock enemy intercontinental missiles out of the sky.

He said the invention of such absolutely dependable defensive weapons should render nuclear ICBMs impotent, thus defusing the current frightening American-Soviet arms race.

The whole maneuver was a good example of how presidents sometimes get their plans and their execution all tangled up.

Reagan is proposing a very radical change in the nation's long-range military strategy, but he made the proposal as a tactical move in a skirmish of the moment.

America's current strategy is called "deterrence," the theory that the United States deters the Soviets from making a first strike with ICBMs by maintaining such a potent ICBM force of our own that there would unquestionably be a retaliatory American strike against the Russians.

Now Reagan proposes that by, say, the year 2000 the United States should invent the exotic defensive weapons of lasers, or whatever, making ICBMs useless and the doctrine of deterrence obsolete.

Then, suggested the president, actual removal of American and Russian ICBMs could be negotiated.

Conservative military thinkers, particularly retired Air Force Gen. Daniel Graham, have been pushing this scheme or variations on it (Graham wants ICBM defenses orbited on space platforms) for years.

It may well be that Reagan would have embraced it eventually regardless of his troubles with the current defense buildup drive.

But from the way in which it was introduced in last week's speech, it's very clear that Reagan unveiled it now, and in that way, because he badly needed a smoke screen, hopefully to shield his embattled 1984 defense budget from congressional attack.

Most probably, it won't work.

Even if it does, the nation's serious thinkers are left to wonder whether Reagan honestly wants replacement of deterrence with Star Wars technology, or whether he frivolously threw out the idea to distract everyone's attention from his short-term astronomical defense demands.

WASHINGTON POST 27 March 1983 Pg. 5B

No, Mr. Reagan, It Won't Work

No technological magic will render nukes obsolete

By Jan M. Lodal

IN HIS SPEECH last Wednesday night, President Reagan urged American scientists "to turn their great talents to the cause of mankind and world peace: to give us the means of rendering . . . nuclear weapons impotent and obsolete."

The world would surely rejoice if such a feat were possible. Unfortunately, it is not. Following the president's proposed course would only create false hopes and, in all likelihood, intensify nuclear dangers rather than diminish them.

There are, to begin with, serious doubts about the technical feasibility of developing a defense against ballistic missiles that the Soviets could not easily counter — doubts that were aired widely in the late '60s and early '70s.

Our nation has overcome many technical challenges in the past, of course, and we certainly should not shrink from another if it would end or seriously reduce the threat of nuclear war. But the president's approach has problems that go far beyond technology. Consider just five:

1. Defending against bombers and cruise missiles. Ballistic missiles are only part of the nuclear threat we face. For example, low-flying bombers and terrain-hugging cruise missiles could pass unaffected through a defense such as the president proposes.

In fact, as unlikely as it may seem, defending against nuclear-armed bombers and cruise missiles is an ever greater technical challenge than defending against ballistic missiles. And if the defense against the bombers and cruise missiles were not perfect, the weapons that "leak through" could destroy the ground-based components of the ABM system itself. Unless a defense can keep out *all* types of weapons, it is useless in a nuclear war.

2. Our allies. President Reagan said that our defense should destroy Soviet missiles before they reach "our own soil or that of our allies." But the Soviets have many ways to launch nuclear weapons against our allies in Europe that would be unaffected by an ABM defense. They could use aircraft, nuclear artillery or even armored vehicles carrying "atomic demolition munitions" with an invading force. It is inconceivable that an effective nuclear defense could be developed for Europe.

3. Treaty commitments. The president says he will carry out his program "consistent with our obligations under the ABM treaty." But that treaty explicity prohibits not only the deployment but even the *development* of any system based in space — the most likely candidate for the technological breakthrough the president seeks.

4. Destabilizing the nuclear balance. One can envision a world in which the nuclear powers have limited offensive capabilities and effective defenses. A small residual offensive nuclear force would still deter some wars, while the defense would eliminate threats from third countries and concerns about accidental attacks, and perhaps even the threat of massive destruction should war occur. But how do we get from where we are to this Nirvana?

Without a complete political reconciliation with the Soviet Union (which Reagan certainly does not anticipate), the initiation of large-scale ABM deployments by either side would be seen as an attempt by the other to enhance its capability to fight a nuclear war successfully. The Soviets would understand this and undoubtedly respond with countermeasures to any ABM we deployed. The result would be a new escalation of the arms race, greatly exacerbated international tensions, and increased risk of nuclear war.

5. Cost. A full-scale ABM program, carried out in combination with the other necessary elements of such a posture (defense against bombers and cruise missiles, civil defense, defense of our allies, and a buildup of conventional weapons to offset the reduction in nuclear deterence) could easily double our current $250 billion-a-year defense budget.

The national could afford this if it had to — defense would still be only about 12 percent of our Gross National Product. But it would call for an overwhelming national effort, requiring all elements of our society to be involved in active preparation for the possibility of war. It is inconceivable that the American public would support such an approach.

The president obviously is sincere in his concern about the risk of nuclear war and in his desire to marshall our scientific strength to reduce or eliminate this risk. But, unfortunately, some problems simply are not susceptible to easy technological solution.

There is no way we can turn the technological clock back on the overwhelming power of nuclear weapons. Our best hope is to negotiate effective arms control agreements that contain the risk and ultimately eliminate it. As we pursue negotiations, we must maintain strong and effective military programs that will deter Soviet aggression. But it is folly to pin our hopes on the chimera of a perfect or safe defense.

Jan Lodal is a former senior staff member and director of program analysis for the National Security Council.

SPECIAL EDITION -- "STAR WARS"
WASHINGTON POST 27 March 1983 Pg. B-8

Reagan's New Idea—What About It?

President Reagan electrified the nation's nuclear debate last week by proposing to study whether an effective system might be developed in the next century to destroy Soviet missiles during their flight through space. The idea is that such a system would allow the current doctrine of deterrence, with its terrifying threat of vast mutual death and destruction, to be set aside. We invited three ranking defense experts to evaluate the president's proposal: Fred C. Iklé from the Reagan Pentagon, and Harold Brown and William J. Perry, who served under Jimmy Carter.

Fred C. Iklé

The Vision vs. the Nightmare

Over the last two decades, two broad views of the future in the nuclear age have been contending in American strategic thought. Both views recognize that our own defense effort must be complemented by internationally agreed policies that will restrain and reduce the nuclear arsenals.

But if peace is to be preserved, according to the first view, mankind must remain locked into permanent hostile confrontation of missile forces poised for instant retaliation. The second view searches for ways to stop a nuclear attack, rather than relying exclusively on the threat of revenge, and seeks to harness science and technology to reduce the role of nuclear arms. In the 1970s, the first view largely dominated our strategic policy.

The first view is like a permanent nightmare; the second view is a vision of the future that offers hope.

According to the first view, we must, for the indefinite future, rely on strategic forces that can revenge a missile attack but not defend against it, on weapons that can destroy cities but cannot protect them, on forces forever poised to avenge but never to save lives.

This view implicitly accepts a world of nations frozen into an evil symmetry: two "superpowers" forever confronting each other with hair-triggered missile arsenals, leashed precariously by the fear of "each side" that its society is threatened by devastating nuclear retaliation. This view of the world imagines that the U.S. and Soviet governments act alike. Indeed, it is the hallmark of this strategic philosophy that "they" and "we" are always interchangeable. If the United States has some legitimate fears about Soviet military policies, "they" must have exactly symmetric fears about us. If we base our defense on a need to deter Soviet military aggression, "they" must be driven by a symmetric objective. Moreover, there is no room in this simplistic view for the fact that more than "two sides" control nuclear weapons, and more nations will yet acquire them. And little allowance is made for the risk of accident and irrational acts.

If we continued to follow this nightmare view of the nuclear age, arms control would hit a dead end. Since "each side" in this view must retain offensive forces able to ensure nuclear revenge, re-

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Harold Brown

It May Be Plausible— And It May Be Ineffective

In June 1980, Geng Biao; the senior defense official of the People's Republic of China, visited the United States. On Geng's Sunday afternoon arrival, President Carter, who was then about to watch "The Empire Strikes Back" in the White House projection room, suggested I bring Geng over to meet him. The group, including spouses, White House staff and their families, watched laser beams, death rays and spaceship destruction on the screen. Afterward, I told Geng that this equipment was not yet ready for consideration for U.S. forces, let alone transfer to the PRC.

What a change three short years have made! President Reagan now "offers a new hope for our children in the 21st century," based on directed-energy weapons, including nuclear weapons, laser beams, particle beams and all the panoply of Darth Vader and Luke Skywalker. Like the nuclear freeze movement, the president's approach is a slogan and a drama, not a program.

But these are serious matters. For over three decades, the prospect of nuclear retaliation against the military forces and urban-industrial strength of a potential attacker has operated as a deterrent to prevent nuclear war, and even to prevent direct conventional conflict between the forces of the superpowers. Yet to rely on the threat of mass destruction to preserve peace is morally disturbing. And military leaders naturally see their functions as being able to prevent an attack, if it occurs, from destroying their country, rather than being able to avenge their country, after it is destroyed in an attack.

For decades there has been a reaction to the destructiveness of nuclear weapons and to the strategy of deterrence, along the following lines. It has again become intellectually and politically influential. This is the position that a

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William J. Perry

An Expensive Technological Risk

The president did not actually describe any specific technology underlying his hope of defending the country against nuclear attack. But administration officials in background briefings after the speech suggested that a primary emphasis be placed on directed energy weapons, one possibility being space-borne lasers. Therefore, it may be illustrative to consider the prospects of this particular technology for providing an effective defense for the country.

A space-borne laser system is by no means the only approach to ballistic missile defense but, among the exotic technologies being considered, it is the most mature and best understood. The Defense Department has invested some $1 billion in high-energy laser technology in the last decade, during which time substantial technical progress has been made. Even more technical progress may be confidently predicted in the coming decade, especially with the projected increase in funding. Still, the most optimistic forecast I can make is that this technology could produce an operational system capable of degrading a nuclear attack, but not capable of protecting the nation from devastation in the event of a massive nuclear attack. To understand this conclusion, it is instructive to consider the operational concept of such a system.

A space-based laser would be designed to attack an ICBM by burning a hole through the rocket during the period that the missile was still under powered flight. The ICBM would thus be destroyed, not only before it reached its target but before it even had a chance to release its multiple warheads. To hit the ICBM target with enough laser energy would require having the laser on a low-altitude satellite "battle station" that must be located over the launch area when it fires its laser beam. Because of the orbital motion of the satellite, not one but a whole constellation of satellites—about 20—would be necessary to shoot down any particular ICBM

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ductions in missile arsenals at some point become destabilizing. Indeed, some people of this persuasion have criticized the arms reductions proposed by President Reagan as endangering the stability of the "mutual" deterrent relationship. If nuclear weapons must remain forever invincible, then arms control could never lead to low levels of nuclear offensive arms since, in a world without defenses, a few hidden weapons could mean a decisive military advantage.

Worse yet, according to some proponents of this nightmare view of the world, arms policy must rig our strategic forces so that they could only be used to kill civilians, not to destroy military targets. Consonant with this attitude is the belief that outer space, rather than the cities we live in, ought to be protected from military competition. Thus, the president's decision to pursue defenses against ballistic missiles is being criticized as "militarizing" outer space. What are the priorities of those who eschew possibilities for increasing the security of the space we live in, just so as to preserve some pristine sanctuary in *outer* space?

The president's decision to remove the doctrinal blinders against strategic defenses cannot overcome our current predicament overnight. But it offers a new hope. To travel the road now being unblocked will call for much careful choice and thoughtful change. Research and development priorities will have to be pursued; and as we realize the vision of a different and safer strategy, we must continue to include our allies in this development.

The scope and opportunities have now been widened for arms control negotiations that can grapple with the fundamentals. There is evidence to suggest that over time the Soviet Union will become receptive to such a new approach. Sixteen years ago, at a U.S.-Soviet summit meeting in Glassboro, N.J., President Johnson argued that arms control negotiations should give top priority to curbing systems that could defend each country against ballistic missiles. The Soviets disagreed: "I believe," Kosygin explained, "that defensive systems, which prevent attack, are not the cause of the arms race, but constitute a factor preventing the death of people."

The nightmare view of the nuclear age has broader implications, going well beyond the question of missile defenses. It becomes an excuse for not improving our conventional defenses, for a reckless reliance on nuclear escalation: "Any major war will 'go nuclear,' any use of a nuclear weapon will mean global holocaust, so why spend more money on conventional forces?" It is symptomatic of the incoherence of the nightmare strategists that they usually hold three incompatible positions: that we can safely cut our conventional defense budget, that we can safely rely on the threat of nuclear escalation, that any use of nuclear arms will mean the end of the world.

The Reagan administration has emphasized conventional force improvement, precisely to reduce our reliance on the threat of nuclear escalation. "We must take steps," President Rea-

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threat produced by technology can be alleviated by a combination of determination and additional technology—that nuclear weapons are simply another form of warfare and that an effective military counter can be found to it, just as to other forms of warfare. There is a major flaw in this approach. It is that a millionfold increase (from tons to megatons) is extremely difficult to overcome, even with the best combination of technology and determination.

If a single weapon can destroy a city of hundreds of thousands, only a perfect defense (which, moreover, works perfectly the first time) will suffice. The extreme destructiveness of nuclear weapons is magnified by the concentration and fragility of urban society. To this must be added the availability to the attacker of the tactic of concentrating its forces to saturate and overwhelm any possible defense, even if an individual defensive weapon can destroy an individual attacking weapon.

In these circumstances, the prospects for a technical solution to the problem of preserving modern society in the face of an actual thermonuclear war—whether that solution calls for laser-antiballistic missile systems in space, elaborate civil defense schemes or combinations of these with counterforce capability (that is, ways of destroying enemy weapons before they are launched) seems to me very poor. The effort to attain such technical solutions could itself be quite dangerous if it created an illusion that such a solution has been achieved or is likely to be.

Deterrence must leave no doubt that an all-out nuclear war would destroy the nation—and the leadership—that launched it. Realistically, we must contemplate deployments by both superpowers, investing huge amounts in such defensive systems. If a clever military briefer, in a time of grave crisis, with such systems in place, can persuade the political decision-makers that the defensive systems, operating together with other strategic forces, had a reasonable chance to function well enough to result in even a severely damaged "victory," the scene will have been set for the ultimate disaster.

There are indeed new ideas for directed-energy weapons aimed from space or from the Earth's surface, which could attack ballistic missiles during their powered phase, in flight, or during reentry. Some of them have been funded by the Department of Defense for five years or more, and hundreds of millions of dollars have been spent on them. Such weapons could involve nuclear explosions, laser beams, charged or neutral particle beams, material pellets, or combinations thereof. Calculations and very preliminary experiments—some of them promising—exist, but these ideas are far (as President Reagan implies, decades) from the stage of deployed systems. Their physical principles may not work. The combination of engineering needs—energy generation, target acquisition, pointing, etc.—may be not be feasible. Or the costs of such systems may be greater than the cost of countermeasures to defeat them.

I believe that one or more of these defects will prevent all such active defenses against

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at any given time that it might be launched.

A few seconds would be required to detect, track, lock on, and dwell on the target long enough to burn a hole through it. Therefore, any given laser is tied up for several seconds in this operation, which has to occur during the few minutes the ICBM is in powered flight. The 20 satellites required for continuous coverage of the launch area could attack in sequence perhaps a few tens of ICBMs that were launched simultaneously, but they could not handle a mass attack of even a few hundreds of ICBMs from one geographical area. Therefore, the base number of 20 satellites would have to be multiplied by about 10 to deal with a mass attack. In other words, several hundred satellites continually orbiting the Earth would be needed to maintain enough laser beams to deal with a mass attack against the United States.

The necessary laser weapons in these several hundred battle stations would be immensely complex. The lasers would require an operational pointing and tracking accuracy of a few inches at a range of a few hundred miles; that is, better than one part in a million accuracy, requiring a feasible but difficult and expensive development program. Once the beam is properly pointed, it must have sufficient energy to burn a hole in the missile skin. This would require a more than tenfold increase in power over what has already been demonstrated for high-energy lasers. Finally, the reflecting mirror of this whole system would need to be several times larger than any that has been built so far, even on the ground. I believe that these problems would eventually yield to a determined and expensive development program, but this new generation technology would have to be demonstrated before we could begin to build the hundreds of operational laser weapon systems and put them in space.

A laser system with these capabilities would likely be too large to be launched from the space shuttle. For each of the several hundred battle stations, four or five shuttle launches may be required to place its components in orbit for assembly in space. (During this assembly phase, the system would be extremely vulnerable to attack or disruption.) My most optimistic view is that such a program would cost well in excess of $100 billion in today's dollars and could not reach a beginning operation status until some time in the next century.

If we spend two decades developing, testing and then deploying a system to defeat the Soviet ICBM and SLBM forces, they certainly have ample time to consider, develop and deploy a variety of countermeasures. Some of these are straightforward. Against lasers, for example, infrared decoys might be used to simulate the heat signatures of missile launches. Another countermeasure would be to rotate the ICBM in flight or coat the ICBM skin with the same kind of heat-absorbent material already used on reentry vehicles so that still higher levels of energy would be required to burn through the skin, requiring increases in laser

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power or in the mirror size of the laser weapon. Direct countermeasures against the space stations also might be possible, including space mines and anti-satellite satellites. The space-based laser perhaps would be most vulnerable to an attack by ground-based lasers.

Even if the technology development is successful beyond my expectations, the ultimate operational problems are a major concern. Whatever exotic technology we finally settle on, we must believe that, like every other weapon system, it will be subject to some countermeasures. And because of the measure-countermeasure contest, our defensive system will have some variable level of effectiveness at any given time. In World War II, the best air defense systems achieved about 10 percent effectiveness. The program manager of the space-borne laser program has estimated that it might achieve 50 percent effectiveness. If by remarkable improvements in defense technology we were able to deploy an antiballistic missile system with 95 percent effectiveness and during this period the Soviets made no changes in their present force of ICBMs, they would still be able to place a residual force of 300 ICBM warheads on our cities, each of which was 30 times larger than the atomic bomb that devastated Hiroshima. Therefore, we would still want some *deterrence* in addition to our defense; that is, we would still want to maintain offensive nuclear forces to threaten retaliation. So, unless a defensive system were perfect—which is as unachievable as the perpetual motion machine—it would not replace offensive, retaliatory forces, only supplement them, and the task of maintaining that deterrent would be made immeasurably more difficult by the existence of a Soviet missile defense built to match ours.

This need for deterrence, not hoping for perfect defense, is the the inevitable consequence of the enormous destructive force of the excessively large numbers of nuclear weapons possessed both by the Soviet Union and the United States. Maintaining our security through the threat of nuclear retaliation puts us in an agonizingly uncomfortable position. If we could find a safe way out, we should seize it. But we should not delude ourselves. Pursuing the unattainable risks diversion from real priorities—better conventional defense (including using our technology as leverage), secure and stable retaliatory deterrence, and the search for arms control.

It has always been tempting to solve the problems posed by nuclear weapons by wishing them away. But we cannot uninvent the nuclear bomb—we cannot repeal $E = MC^2$.

The writer, managing director of Hambrecht Quist, Inc., an investment banking firm, was undersecretary of defense for research and engineering in the Carter administration.

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ballistic missiles from proving practically effective. Moreover, they will not work to defend against air-breathing systems (bombers and cruise missiles)—particularly those using "stealth" technology—that fly low in the atmosphere. Air-breathing systems, however, take hours to reach their targets and thus allow more time for decision in crisis. In that sense, they are less dangerous than ballistic missiles.

In any event, I could be wrong in my negative technical evaluations. Moreover, the United States needs to know what defenses might be deployed against our own ballistic missiles. And a world in which nuclear destruction was not possible would be a greatly preferable one to what we have now. I therefore support research and study of such defensive technologies, and thinking about the systems to which they might be applied. Research and study—but not development, testing or deployment of space-based systems—are permitted by the ABM Treaty of 1972.

But these activities should be carried out in a spirit of skepticism sorely missing in the president's speech, and at a level and pace consistent with their unlikelihood of producing the advertised technical and military revolution. There is da ger of alienating our allies by what may seem an attempt at creating a Fortress America. And we must remember to guard against the most dangerous outcome of all. That would be the deployment of defensive systems on both sides (and we must expect that if one superpower does so, the other will emulate it before long) that are incorrectly thought to be effective in preventing the success of a retaliatory strike.

My concern is that the ideas presented to the president are likely when developed to fall into that category of the plausible but ineffective. Some of his words expressed such cautions, but the enthusiastic tone and especially the context of a major presidential speech will magnify public expectations. To the extent that attention to far-out technological approaches to active defense against ballistic missiles detracts from programs to retain deterrence, or distracts from arms control efforts, the results could be dangerous indeed. The search for technological breakthroughs is no substitute for political and negotiating skill, nor for competent military planning and strategy. The proposed defenses against nuclear attack, which could well become the first trillion-dollar defense system, would then constitute a nightmare rather than a hope we would leave to our children in the 21st century.

The writer, secretary of defense in the Carter administration, is Distinguished Visiting Professor at the Johns Hopkins School of Advanced International Studies and author of a forthcoming book, "Thinking About National Security."

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gan said Wednesday night, "to reduce the risk of a conventional military conflict escalating to nuclear war by improving our non-nuclear capabilities. America does possess—*now*—the technologies to attain very significant improvements in the effectiveness of our conventional, non-nuclear forces."

Given congressional support for the president's defense budget, we can improve and deploy conventional forces that would be effective. Such forces could discriminatingly repel an attack—without destroying ourselves or our allies. In this way, and in this way only, will we have an effective deterrent to conventional aggression.

As the president stressed, we face a formidable task and there will be failures and setbacks. But we can count on the common sense of the American people to reject the permanent nightmare and support the vision that offers hope.

The writer is undersecretary of defense for policy.

WASHINGTON POST
27 March 1983
Pg. 1

Study Raps Laser Arms Funding Lag

By Patrick E. Tyler
Washington Post Staff Writer

A classified government study completed last year criticized the pace at which the United States was funding the development of high-energy laser weapons for use in outer space and concluded that such a weapon could be ready for flight testing in 1993 with a total system price tag of $30 billion.

The Pentagon, through its Defense Advanced Research Projects Agency, now has contracts out for all of the major components of a space-based laser system in a consortium that includes Lockheed Corp., TRW Inc. and Eastman Kodak Co.

Many components of the project are highly classified and carry exotic code names such as Lockheed's "Talon Gold" system for optical pointing and tracking gear that enables the laser to spot and fire on pinpoint targets thousands of miles away. But many details of the laser weapon's three major components are known and have advanced to the engineering stage.

A low-powered version of the laser similiar to the one under development by these companies destroyed an unarmed and stationary Thor nuclear missile in a still-secret Pentagon test last fall, according to knowledgeable aerospace industry and congressional sources.

The test demonstrated that the radiant light energy from current laser systems is adequate to destroy missiles whose thin outer skin is vulnerable to laser heat, especially when the missile is ascending under the stress of its booster engines.

Though the aged Thor was among the first U.S. nuclear missiles, later generations of missiles, including the current fleet of Soviet liquid-fuel missiles, do not have outer skins hardened against laser attack.

In a 1978 test, a similar laser design using sophisticated tracking technology fired upon and destroyed three TOW antitank missiles traveling at 500 miles per hour, according to public Pentagon reports.

The classified study and these tests show that President's Reagan's vision of an ultimate anti-ballistic missile system may not be as far away as some critics have claimed. But even aerospace industry enthusiasts acknowledge that there are formidable technical problems to be overcome if such a system is to be deployed before the next century.

And, if developed, such weapons still face the strategic and political problems posed by U.S.-Soviet treaties. They also may provoke preemptive Soviet strikes to block their deployment or countermeasures to render them ineffective, officials said.

"I think this . . . leads to war in space, not as an alternative to war on earth, but as a prelude to war on earth," said Richard L. Garwin, a physicist and longtime Pentagon weapons consultant who helped develop the hydrogen bomb.

"If I were a Russian planner," said Hans A. Bethe, one of the Manhatten Project physicists who was invited by Reagan to last week's White House announcement, "once I saw these . . . lasers appear in space, I would challenge the United States and say, 'Stop doing that,' and if it didn't stop, I would shoot down all those satellites. I don't see anything else that the Russians can do in that case."

President Reagan and his main defense and science advisers have avoided specific references to various laser weapon designs or concepts under study or development since Reagan announced Wednesday night that he would seek "the means of rendering . . . nuclear weapons impotent and obsolete."

In a Washington Post interview published yesterday, George A. Keyworth, the president's chief science adviser said one "very promising" laser concept for defending against Soviet missile attack involved using a giant ground laser in tandem with large orbiting mirrors to knock down enemy missiles.

Keyworth emphasized that the concept was one of many laser ideas and that it faces many technical obstacles which, if overcome, still would make development unlikely in this century. He added that the field of laser technology, however, was the most advanced for producing high-energy space-based weapons to protect the United States from Soviet missile attack.

In response to Keyworth's remarks, a leading congressional expert on laser weapons, Angelo M. Codevilla, a physicist on the staff of the Senate Intelligence Committee, expressed doubt that the concept Keyworth mentioned would be the most desirable, or attainable, goal for President Reagan's pursuit of a workable anti-ballistic missile system technology.

"There are other missile-killing lasers [than the concept mentioned by Keyworth] which are already well into the engineering phase and which everyone knows can be built," Codevilla said.

The classified study was conducted by a General Accounting Office scientist as a review of the Defense Department's 1981 assessment of laser weapon projects. The GAO report is classified secret because the Pentagon data it analyzed was classified.

The Pentagon study concluded that the deployment of "moderate numbers" of chemical laser satellites with beam energies of five megawatts "would place at risk large numbers of ballistic missiles and aircraft in the current [Soviet] strategic inventory due to their . . . vulnerability."

But the GAO report pointed out that the technology is available now to scale up plans for the satellite to 10 megawatts of beam power using a 40-foot optical mirror. Such a system, generating light energy equal to about 1 percent of a large nuclear power plant's output on earth, could be effective against several Soviet strategic weapons, including the high-altitude Soviet Backfire bomber, the SS20 intermediate-range ballistic missile, low-altitude Soviet satellites and limited numbers of Soviet ballistic missiles, the report said.

An aerospace consultant who has worked on the sophisticated laser and tracking systems, Gerald Oeullette, agreed with the study. "A reasonably good-sized space laser could inflict considerable damage . . . [against Soviet strategic weapons]," said Oeullette, who was one of four scientists who first briefed the Senate Armed Services Committee on the feasibility of space lasers in 1979.

Details of the study first appeared last year in Aviation Week & Space Technology magazine and were confirmed last week by congressional and aerospace industry sources. Since the GAO study, the Pentagon

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LASER FUNDING...Continued

has further delayed the development schedule for the laser satellite, postponing indefinitely the 1991 test flight date set by President Carter. Defense planners say they will not make a decision on a test flight date until 1988.

"Realistically, early generations of space-based laser weapons will not provide the important military capability to achieve defensive dominance, but would represent steps toward developing such a system," the GAO study concluded.

The study said a tripling of the current funding for the space laser program could produce flight tests for a scaled-up satellite system by 1993. The cost of the first satellite was estimated at $5 billion and for each additional satellite, $1 billion. At current levels of funding, the Pentagon's program will not produce an operational system before the year 2000. The report noted that the current developmental pace is limited not by research obstacles, but by funding.

The goal of the chemical laser system that is closest to demonstration is to shoot down 1,000 Soviet ballistic missiles in the first 250 seconds of a surprise nuclear attack, according to the Pentagon study.

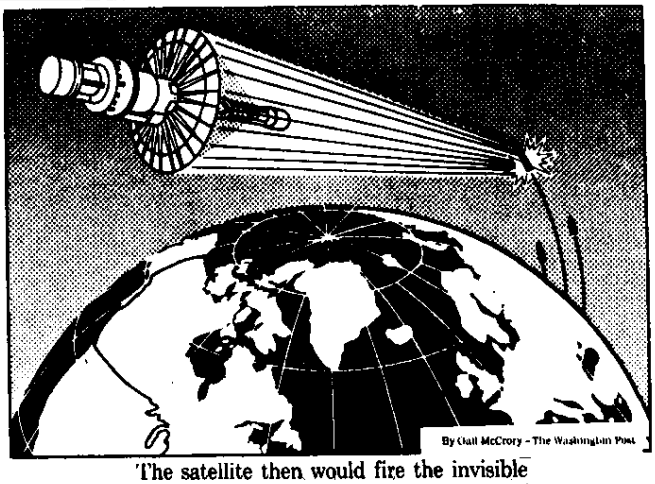
The chemical laser system, which has yet to be given a name, includes:

- An Alpha laser powered by a chemical reaction of liquid hydrogen and flourine, under development by TRW Inc.
- A 40-foot-wide optical mirror that focuses the laser beam on its target, under development by Eastman Kodak, Corning Glass and Lockheed.
- The "Talon Gold" tracking and pointing system, under development by Lockheed.

When integrated for test flight, this is how the system would work, according to congressional and industry sources:

A laser satellite system capable of seriously blunting a Soviet first strike of 1,000 missiles would require at least 24 orbiting laser platforms arranged in three pole-to-pole orbits. Such an arrangement would ensure that at least eight of the platforms were in range of the primary Soviet missile fields at all times.

Infrared telescopes aboard each satellite could "see" enemy missiles seconds after they were launched and identify them by their "signatures" obtained by earlier satellites and stored in the data base of the on-board computer. The "Talon Gold" tracking gun would use a low-powered laser to point to the target, still 3,000 miles away. The reflection from this tracking laser would direct the large laser mirror to rotate into aiming position on the target.



The satellite then would fire the invisible infrared laser beam across the vacuum of space and bathe the thin skin of the Soviet missile with intense thermal energy.

The missile skin would expand from the added heat, buckle and tear apart. Fuel tanks would explode and the missile's deadly nuclear warheads, still unarmed during the booster stage of flight, would fall to earth.

The missile kill, from the moment the satellite identified its target seconds after launch, to destruction, could take as few as four seconds.

A second laser system under study by the Pentagon would be powered by a nuclear bomb in a still-theoretical design to focus the X-ray radiation from its detonation at dozens of rising Soviet missiles. The X-ray laser, as it is called, would be far more powerful than normal laser light and its ultra-high frequency energy waves would penetrate any missile skin and shatter the structure of the missile like glass.

Another laser under study, the Excimer laser design, needs a large electrical power source and achieves a tigher light wave that could penetrate "hardened" missile skins of the future. A third system, called a particle beam weapon, would fire what amounts to lightning bolts at its targets. It would consist of a stream of atomic particles.

While some technologies look more promising than others now, all present formidable technical problems that could delay development at least into the next century.

Even then, such weapons face what would be a historic debate on the wisdom of abandoning the 20-year-old strategic doctrine that offensive nuclear arsenals are sufficient to deter aggression by both sides.

Said Kurt Gottfried, a Cornell physicist and defense consultant: "If such a system can be constructed, it is the equivalent of putting all of the other side's ICBMs in the garbage can; therefore they are made naked; therefore they won't allow it to happen."

SPECIAL EDITION -- "STAR WARS"

BALTIMORE SUN 27 March 1983 Pg. K-1

High Frontier

There is one very vocal advocate for space-based defense, but he gets little attention

By Charles W. Corddry

Now and again some member of Congress on the liberal side raises an alarm about the potential of space warfare, and Danny Graham is gleeful. Maybe the attack will focus on him. He preaches up and down the land that America's best hope for safety against Soviet missiles lies in space-based defenses. But his ideas still need the attention that comes from being assailed.

Danny is retired Army Lt. Gen. Daniel O Graham, former deputy director of the Central Intelligence Agency, former director of the Pentagon's Defense Intelligence Agency and present director of High Frontier, Inc.

He broke a lot of crockery when he was in uniform, and a lot more as an adviser to the Reagan campaign pushing for a technological end-run of the Soviets in space. Now he is pestering the slow-moving establishment quite as much as he is any liberals worrying about weapons in space.

His ideas perhaps got a boost from President Reagan's expressed hope in his speech last Wednesday night that one day U.S. strategy might be based on futuristic weapons that could intercept and destroy nuclear missiles before they reached their targets.

The government establishment is not so much averse to weapons in space as it is, seemingly, to General Graham's proposed brand. His comeback is that the Pentagon and the nuclear-freeze advocates, so disliked by the Pentagon, actually come together on what ought to be an unacceptable thesis: That there is no defense in the nuclear age; that the prospect of assured destruction by offensive weapons is the source of stability and preventer of war.

Mr. Corddry, a member of The Sun's Washington Bureau, covers the Pentagon.

The Soviet Union, judged by its offensive and defensive weapons deployments and its arms negotiating strategies, has never accepted the "mutual assured destruction" thesis, the former intelligence director told President Reagan's commission studying the MX missile and other strategic weapons.

Those attacking his High Frontier space-defense proposal on technical and financial grounds, he further contended, are in reality trying to forestall a change in American strategy. That change would call for a mixture of offensive and defensive weapons, ending entire reliance on offensive weapons for retaliation, along with such passive defense as comes from "boring holes and pouring concrete" to protect the retaliatory missiles.

General Graham's proposal is essentially this:

- The United States should switch from "all-offense, punitive deterrence" to a mixture of defense and offense that would "eliminate the effectiveness" of a Soviet first strike against this country. "Assured survival" would replace "assured destruction." If the Soviets deploy the same sort of space defenses, fine.
- In space, the United States would put up a ring of satellites filled with homing interceptor devices, resembling large cans, that would seek out Soviet missiles within minutes of launch and knock them out. The interceptors, using infra-red, radar or ultra-violet sensing methods to home on targets, would be "kinetic-energy kill systems," destroying missiles with their mass and velocity (20,000 miles an hour). The weapons system would be non-nuclear and "cannot kill a single Russian."
- No claim is made that the satellite ring "can do everything but throw rocks at the bill collector." Some missiles could get through. Therefore, there should be a simple, inexpensive radar-aimed gun defense of each U.S. intercontinental missile silo. These gatling guns would have no area defense mission, in contrast to more elaborate ballistic missile defenses, but would have only one job: to knock out the two or three warheads headed for a missile silo at a distance of, say, 8,000 feet. All they have to do is ensure that the missile could be launched, if it came to that.
- Later on, a more advanced satellite system would be put aloft, equipped with beam weapons or more advanced kinetic-energy devices. As General Graham wryly observes, this is too far off to be contentious now.

The gun — adapted from types used on aircraft and ships — is not much of a challenge to broad strategy either. It is the initial satellite system that "draws the heavy flak," the general says.

Well it might. It tends to boggle the mind, causing National Security Council staffers to busy themselves with more familiar chores and Defense Department technicians to fall into customary negative assessment of that which was "not invented here."

Two things are wrong with High Frontier, says Richard D DeLauer, undersecretary of defense for research and engineering. General Graham underestimates the cost, and he is far too optimistic about when the system could be operating in space.

Mr. DeLauer does not much fault the concept, but he says there is much to be done first to learn about controlling objects in space and gaining pointing and tracking accuracies for space devices. He does not dismiss by any means the idea of kinetic-energy systems.

General Graham says the initial satellite array could be put in orbit within five or six years at a cost of $15 billion — cheaper, he says, than pouring concrete for MX missile shelters. This system would consist of 432 satellites in a 300-mile high orbit, each one carrying 40 to 50 of the kinetic-energy kill devices.

The system could sense and track Soviet missiles, exchange data, deter-

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HIGH FRONTIER
...Continued

mine intercept points and knock out at least 50 percent of a rocket salvo in the first seven minutes of flight, so says the general.

In 10 to 12 years, the higher technology, or beam weapon, system could be put in orbit, again with a 50 percent kill probability, he estimates. These satellites would replace the older ones as they wear out.

Such defense capabilities, combined with improved U.S. offensive missiles, ought to ensure against any Russian notion of striking first with hopes of a knock-out, General Graham says. But the gun defenses at each silo would nail down the case, he thinks, having a 60 percent probability of killing the two or three warheads that might seep through and be headed for a given silo. The guns could be mounted in two or three years.

Where General Graham estimates $15 billion, the Pentagon estimates $50 billion, saying it would take 10 to 12 years to get up the satellites. General Graham and his staff have no argument with this estimate. To them, it just says the Pentagon would take twice as long as necessary in order to "accommodate bureaucratic inertia" and the cost accordingly would indeed then be what the Pentagon estimates.

But this just reflects an "incredibly inefficient" procurement system and ignores the probability that mass-produced satellites would cost much less than today's custom-made types. The nation that got to the moon in seven years from the go-ahead and sent the first Polaris missile submarine to sea in 47 months, the general argues, does not need to spend an average of 11 to 13 years in developing new systems, as it now does.

The High Frontier scheme appears to have played well off-Broadway, but, as General Graham laments, he can't quite get the great controversy that he would like in Congress.

High Frontier may never — almost certainly won't — be realized as set forth in the Graham concept.

If he gets no further, however, General Graham can count these successes:

- He has made people in government think, at least, about the possibilities of defensive strategies;
- And whatever the details of his proposal, he has made many people aware that there may be strategic advantages in space (some would say that there certainly are) — and that "Star Wars," maybe, was not just a very successful film.

NEW YORK TIMES 27 March 1983 Pg. 19E

100% Defense? Hardly.

By George W. Rathjens and Jack Ruina

CAMBRIDGE, Mass. — If President Reagan gets his way, we will soon embark on a major effort to develop an exotic and technologically innovative defense against nuclear attack — one that he suggests may be so effective as "to give us the means of rendering nuclear weapons impotent and obsolete." As former scientific advisers for the Department of Defense, we have to wonder about the basis for such optimism.

"There Is No Defense." That was the title and conclusion of a remarkable paper published in 1948 by a distinguished physicist, Louis Ridenour — a key figure in the development of radar and later the Air Force's chief scientist. His thesis is valid still and seems virtually certain to remain so as far as we can see into the technological future — despite considerable progress in the technology for delivering and defending against nuclear weapons. This follows from the simple fact that thermonuclear weapons give us practically unlimited power of destruction, while cities and populations are extremely fragile. What this means is that a defense consistent with President Reagan's vision would have to be virtually 100 percent effective. Unfortunately, there can be little prospect of this, however exotic the means of destroying missiles or warheads — be it with particle beams or lasers.

These technologies pose intriguing scientific challenges, but developing such weapons would hardly achieve the President's goal of "eliminating the threat posed by strategic nuclear missiles." Much more would be needed: means for coping with the adversary's countermeasures, including discriminating between targets and other objects, means for protecting the antiballistic defense system itself and means for aiming beams, rays or projectiles. Most important, it would require coordinating all the components in a complex system that could defend not just a few isolated points but the whole country against attacks that might come at any time from any direction and that might include bombers, cruise missiles and ballistic missiles.

It is virtually certain that the Soviet Union would be able to offset our efforts by improving its offenses — and would probably be able to do so at a lesser cost. We are likely to see another round of competitive escalation — another example of what happened when Washington decided to develop and deploy thousands of nuclear-armed air-launched cruise missiles and a fleet of B-1 bombers in reaction to the Soviet Union's upgrading of its air defense. The antiballistic defense effort Mr. Reagan proposes is more likely to lead to intensification of the arms race than to pave the way for what he called "arms control measures to eliminate the weapons themselves."

Does this mean that we should forego research on such exotic systems? Probably not. It may even be possible to develop defensive systems that will be partly effective in defending a limited number of isolated targets — command-and-control facilities or other military targets. But this is a completely different and far less difficult problem than that of developing an essentially 100 percent effective defense of the nation's population.

What troubles us is less the expenditure of a billion dollars a year on research than holding out a vision of hope — the hope of an infallible defense — that is virtually impossible to achieve. It is not hard to understand why the Administration found this vision attractive — just as a fountain of youth or a universal cure for cancer is attractive — but it is cruel and misleading to hold out such false hopes.

There is also something deeply troubling about an advisory team that can encourage the President to raise such hopes — false hopes that have been resisted by recent predecessors, including Lyndon B. Johnson and Richard M. Nixon, when they made much more modest claims for the defenses they advocated in the late 1960's.

George W. Rathjens, professor of political science at the Massachusetts Institute of Technology, was deputy director of the Defense Department's Advanced Research Project Agency. Jack Ruina, professor of electrical engineering and computer science at M I T was director of the agency.

COMMENTARY

BOSTON GLOBE 27 March 1983 Pg. 1E

Reagan's strategic surprise

And now, for something different: a bid to repeal 35 years of nuclear deterrence

By Fred Kaplan
Special to The Globe

WASHINGTON – Toward the end of his speech on the defense budget last Wednesday, President Ronald Reagan proclaimed that he was "launching an effort which holds the purpose of changing the course of human history." Rather than deterring nuclear war by threatening to retaliate against aggressors with offensive weapons, the United States would begin work on a new program of *defensive* weapons that can intercept enemy missiles long before they can hit American territory, thus rendering nuclear weapons "impotent and obsolete."

Just what type of program Reagan had in mind was not so clear. At one point in the speech, he said that "current technology has attained a level of sophistication where it is reasonable for us to begin this effort." But later he said, "I am directing a comprehensive and intensive effort to *define* a long-term research and development program. . . ." How the level of technology can be deemed sufficiently sophisticated when the nature of the program has yet to be defined, the President did not explain. Pentagon officials say he was calling more for a general reassessment than for any specific program. Whatever it is, Reagan did say it will take "years, probably decades" to complete.

It sounds good, but. . .

Judging from background briefings and the ideas commonly discussed by advocates of exotic weapons schemes, however, it can be surmised that Reagan was referring to some sort of anti-ballistic-missile (ABM) system based in outer space, using infrared sensors, laser beams or charged-particle beams.

There are two things to note about such programs: First, they will not be seen as purely defensive in nature; second, there is no reason to believe they will ever work.

At first glance, an effort to protect cities and people from the ravages of nuclear attack seems benign. However, the essence of nuclear deterrence for the past 35 years has been the inescapable reality that a first strike would be answered by a devastating retaliatory blow; given that fact, potential aggressors would be much less prone to start a war.

Thus, if the United States truly could shoot down every Soviet missile, we could destroy the USSR threat of retaliation – i.e., its ability to deter attack. The United States could threaten nuclear strikes with impunity, knowing the Soviets were unable to effectively respond – that we could attack the Soviet Union without the Soviet Union's being able to strike back at us. If this scenario seems absurd at first glance, consider what our reaction might be if the Soviets announced that they were embarking upon a similar program.

Beyond that, such a program is practically impossible. If the aim is to make nuclear weapons obsolete, the defense against them must be airtight. Yet nuclear offensive weapons are so cheap to manufacture, especially compared with the cost of a defensive system, that the opposition will always be able to buy enough weapons to counter any defensive effort.

The idea of ABMs has been around for a long time; more than $10 billion has been spent on research and development over the years. There was Nike-Zeus in the 1950s, Nike-X, Safeguard and Sentinel in the 1960s; quite aside from his new idea, Reagan plans to spend about $1 billion a year on R & D for updated derivatives of these systems today. No widespread deployment was ever approved. One of the critical limitations was always the recognition that offense is cheaper than defense, that an offensive attack would thus saturate the defense.

In short, rather than halting the arms race, a serious effort to build ABMs could in fact spur the arms race on to new and greater heights. The sort of program that Reagan is now talking about will involve radically different types of technology, but the problems remain.

Moreover, this new technology may be insuperably difficult, perhaps physically impossible, to develop. Jack P. Ruina, an MIT engineer who has served on weapons panels for 25 years, says, "There is zero promise for this system right now. To mislead, misguide the public – and yourself – is a tragedy."

Two summers ago, a panel of the Defense Science Board (DSB) analyzed several ideas favored by the Pentagon's Advanced Research Projects Agency on space-based ABMs. The DSB concluded that the ideas were so farfetched they were not worth seriously thinking about.

Pentagon officials agree that Reagan's ideas lie well beyond today's technology, but emphasize that the President was discussing a weapons system that could be available two or three decades from now.

This may be true, but analysts familiar with the DSB study note many substantial problems that must be overcome if such exotic ABM programs are to succeed. The laser and charged-particle ideas require placing a beam precisely on target; there is no tolerance for error. And there are several steps in this process: tracking and acquiring the target, beaming and propagating the beam, checking for error, refiring in case of a miss – and doing all of this against a constantly and rapidly moving target, or actually doing this hundreds of times with hundreds of beams against hundreds of targets simultaneously. The coordination of these steps presents insurmountable problems of data processing, especially since everything must be handled through automation with no human monitoring.

Moreover, between each step there is a time lag – just fractions of a second in some cases, but enough so that the target has moved a great distance by the standards of accuracy required. And if the ABM seeks to destroy the enemy missile as it is being launched off the ground, there is another source of error: the distortion caused by refraction and defraction of lightwaves as the ABM's sensor stares down from space into the atmosphere.

Another idea is to use Miniature Homing Vehicles (MHVs), which are guided to their targets by infrared (heat-seeking) sensors. Since the Soviet missiles are hot objects and outer space is very cold, they stand out as ideal infrared targets.

However, the coordination problems are immense. Which MHVs are aimed at which missiles? Moreover, the Soviets could fire up hundreds of hot objects along with the missiles, perhaps releasing them like chaff from the rocket nose cones. The MHVs would take off after these false targets as well, possibly exhausting the ABM system, while many of the real missiles plow through the barricades.

Even if they could finally solve the prob-

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Fred Kaplan writes about military issues for The Globe and is the author of "The Wizards of Armageddon," a book about America's nuclear strategists, to be published in June.

....SUNDAY, MARCH 27, 1983 The Atlanta Journal AND CONSTITUTION 9-D

New space-age weapons system will help guide bombs to targets

By Lennie Siegel
Pacific News Service

SUNNYVALE, Calif. — Even while President Reagan was announcing U.S. plans for dramatic new space-age defense systems, work already was under way here on a futuristic military satellite communications system. Its chief purpose is to ensure that American nuclear weapons can be targeted accurately during and after an enemy attack.

Called MILSTAR, or Military Strategic, Tactical and Relay, the new system is scheduled to begin operations in the late 1980s, at a cost of over $1 billion, and function throughout the 1990s in support of strategies envisioned by Reagan administration planners to cope with protracted nuclear war. Sunnyvale's Lockheed Missiles and Space Co. had been designated the major contractor.

One of MILSTAR'S selling points is that it will be "hardened" to withstand the tremendous destructive force released by nuclear weapons, particularly the enormous burst of energy called electromagnetic pulse, or EMP. The electronic circuits in current systems probably could not survive EMP.

In a report to Congress in February, Defense Secretary Caspar Weinberger said MILSTAR was "designed to provide survivable and enduring command and control communications for those decision-makers who must be able to direct and receive information from their forces through all levels of conflict, including nuclear war."

The Pentagon's priorities for strategic communications were described earlier by one of Weinberger's deputies, Donald Latham, as including the ability to "continue operations over a protracted period of conflict."

To make a protracted nuclear war "thinkable," officials who survive the initial attacks must have a working communications hookup that can still target enemy installations. MILSTAR has been planned to fill that role. It will consist of eight satellites, with four in geostationary orbits (circling the earth high over the equator at the same rotation speed), three in polar orbits and one orbiting as a spare. MILSTAR terminals will be placed at ground stations, in ships, planes and elsewhere as necessary.

In addition to "hardening" the system against EMP, plans call for MILSTAR satellites to be able to maneuver in space to protect against Soviet space mines and other anti-satellite weapons. To reduce their dependence on ground control and relay stations, they will be capable of limited autonomous movement and will relay information directly from one satellite to another.

The network will operate in the extremely high frequency, or EHF, range; this, combined with new electronic hardware, is expected to make it difficult to jam MILSTAR channels.

Since the Soviets know that MILSTAR is designed to help the United States win a protracted nuclear conflict, it is believed that they already are working on countermeasures. The Pentagon is likely to fund programs to develop its own countermeasures against anticipated Soviet moves.

Neither MILSTAR nor its Soviet counterpart system will be foolproof. But their deployment probably will strengthen the views of planners who look upon nuclear war, or the ability to threaten nuclear attack, as useful strategic tools.

REAGAN'S STRATEGIC SURPRISE...Continued

lems, the costs would be immense. At least 300 platforms for space-based ABMs would be needed to counter the Soviet land-based ICBMs alone. That part is relatively easy; at least we know where those missiles are. But what about the Soviet submarine-launched ballistic missiles? They could be launched from beneath any part of the ocean surface. We have sonar systems that can track their general locations – but not their precise movements.

ABM radar systems vulnerable

Another big headache is protecting the ABM system itself. This has always been an enormous difficulty in all the ABM concepts of the past. ABM radar systems have always been particularly vulnerable. If the enemy attacked the radar first, then the ABMs were crippled.

The same principle would apply to these new ABMs. They would still depend on sensors that can be blinded or tricked; they would be connected to command-control-communications networks that are vulnerable to many nuclear effects. Some scientists calculate that one or two H-bombs exploded in outer space would release so much radiation and electromagnetic pulse that every military satellite in orbit – including anything governing the actions of a space-based ABM – would be disabled in minutes or hours.

Still, science and technology do march forward. Who could have guessed, a few decades before their occurrence, that men would walk on the moon, that a hydrogen bomb could be built, that microcomputer chips could have advanced so rapidly? Likewise, for $100 billion or so, an advanced ABM system might be constructed as well. However, these analogies are not quite proper. With the H-bomb, the moon walk and computer chips, scientists were working with inanimate and unwavering principles of physics and engineering. With the ABM, scientists must anticipate a highly animate, purposeful and adaptive Soviet Union that will be very interested in developing counter measures to reduce the ABM's effectiveness.

President Reagan appears to be indulging in what physicist and weapons scientist Herbert York once called "the fallacy of the last step." It is a recurrent delusion of the arms race – the dream of the new superweapon that will finally demonstrate our side's superiority, only to be shattered when the other side builds something that equals or counters it. Reagan may genuinely believe he has produced a vision that "offers a new hope for our children in the 21st century." In fact, the vision offers a very expensive version of the same nuclear despair with which we all live today.

LOS ANGELES TIMES 27 Mar 83 Pg. 5D

Missiles and Moonbeams

By ROBERT E. HUNTER

In his televised address Wednesday night, President Reagan put his finger on the central dilemma of the nuclear age: "I have become more and more deeply convinced," he said, "that the human spirit must be capable of rising above dealing with other nations and human beings by threatening their existence." Yet his solution, advanced weapons to shoot down Soviet warheads hurtling toward the United States and its allies, patently fails to meet his own test.

Bad nuclear doctrine, like a bad penny, has a habit of coming back. What the President has proposed is little more than an extension of proposals made way back in the 1960s to build anti-ballistic missiles to protect our cities and our Minuteman missiles from Soviet attack. After prolonged debate, we recognized that this idea would cause more problems than it would solve, and it was scrapped. The Soviets apparently reached the same conclusion, and the result was the ABM Treaty of 1972, the most successful arms-control agreement ever concluded, which severely limits deployment of such weapons. In fact, we later dismantled the one ABM system that we had built around missile silos in North Dakota, and the Soviets deployed only one set of ABMs, providing a scant fig-leaf of protection for Moscow.

Technology has moved on, however, and the President now wants to have another go at an effective ABM system, presumably to be composed of lasers and particle-beam weapons based high in the stratosphere or in orbit around Earth, waiting to intercept any incoming Soviet nuclear warheads.

Not bad, at first blush. After all, it is surely better to defend against attack instead of threatening to kill tens of millions of people on the other side in retaliation for an attack. But on closer inspection, problems set in that will be there no matter how good the new technology is—and "how good" is itself hotly debated.

To be sure, if a first-class ABM system really could knock out most Soviet weapons directed at our missile silos, we could expect a large fraction of our land-based nuclear force to survive. Hence, we would close "the window of vulnerability" that has plagued the last two Administrations—though this could not be achieved for many years.

Cities, however, cannot now, nor in the future, be adequately defended against nuclear attack. Even a defense system that is 99% effective—and what technology has ever worked that well?—would still let through millions of tons of explosive power and leave countless people dead. Nor will Soviet technology stand still, but will be devoted to ensuring that some nuclear weapons could get through to attack our cities, if not our missiles as well. Hitting U.S. cities wouldn't be difficult, especially those population centers concentrated along three coastlines. Thus, unpalatable as it is, deterring the Soviets' attack on our cities by threatening to destroy theirs will have to remain a part of our nuclear doctrine.

There is a further problem, one identified years ago, of trying to protect missiles with an ABM. The Soviets won't be able to tell whether it is also intended to protect our cities—however improbable—and thus is an attempt to shift the nuclear balance decisively in our direction. The resulting instability could prompt the Soviets in a crisis to use their weapons before our ABM system is completed—a profoundly unsettling prospect. Or Moscow might simply ape our efforts—not, however, leading to mutual reassurances of safety, but to competing fears about attempts to gain lopsided advantages in defending cities. Note, for example, the ballyhoo created by the Pentagon only a few weeks ago over the fact that the Soviets have a single modern radar connected to their Moscow ABM system!

In sum, the President's proposal should be seen not as a serious way to end fears of nuclear war, but rather as an effort to undercut the movement to freeze nuclear developments on both sides, by holding out the chimera of an alternative to deterrence to Americans who (rightly) fear the prospects of nuclear war. It also plays to the American penchant for believing that there must be technological solutions to political problems.

Even if the proposal does not proceed beyond continued research and development, it can even now have serious implications for relations with our West European allies. The President asserted that the new ABM system would protect them, too. But a cursory look at the map reveals that weapons that could destroy high-flying warheads wouldn't stop those that the Soviets can launch against Western Europe by a host of other means. Indeed, the new proposal goes directly against the President's own commitment, in the debate on new medium-range missiles for Europe, to reassure the allies that their security is inseparable from ours. Proposing to defend the United States while Europe must remain almost totally vulnerable is no way to inspire confidence in our reliability—as we discovered the last time that we debated ABM deployment.

There is, of course, a better answer—not to eliminate nuclear weapons, as such, since there is no way to uninvent them, but to halt the current arms race: namely, the vigorous pursuit of agreements on arms control and reductions. By contrast, advancing into the uncharted regions of missile defense offers the prospect of more weapons without relieving the nuclear *angst* that has been with us since Hiroshima.

Robert. E. Hunter is director of European studies at the Georgetown University Center for Strategic and International Studies. He served on the staff of the National Security Council in the Carter Administration.

NEW YORK TIMES
27 March 1983 Pg. 1

ANDROPOV SAYS U.S. IS SPURRING A RACE IN STRATEGIC ARMS

By JOHN F. BURNS
Special to The New York Times

MOSCOW, March 26 — Yuri V. Andropov said today that President Reagan's new proposal for an American defense system against missiles was "a bid to disarm the Soviet Union" that would launch the two nations into "a runaway race" in strategic nuclear weapons and defense systems against them.

The Soviet leader said the United States and the Soviet Union had agreed a decade ago that no progress in limiting offensive nuclear weapons could be made unless there was "mutual restraint" in the field of missile defenses.

Mr. Andropov said that Mr. Reagan, by announcing Wednesday that he favored a research program to find a defense system that could destroy missiles aimed at the United States, had shown that the United States intended "to sever this interrelationship."

'This Would Open the Floodgates'

The Soviet leader added: "Should this conception be converted into reality, this would actually open the floodgates to a runaway race of all types of strategic arms, both offensive and defensive. Such is the real purport, the seamy side, so to say, of Washington's 'defensive conception.' "

Mr. Andropov's response to the President came in the form of an interview that was prepared for publication Sunday in Pravda, the Communist Party newspaper. An English text was distributed in advance by the official press agency Tass.

The interview cast the Soviet leader in an uncompromising mood, and contained none of the conciliatory tone that marked some of his initial remarks on United States-Soviet relations after he succeeded Leonid I. Brezhnev in November.

The atmosphere this time was caught by the Soviet leader's assertion that Mr. Reagan told "a deliberate lie" in his assertion on Wednesday that the Soviet Union had broken its unilateral freeze on the deployment of medium-range nuclear missiles in Europe. Though common in Soviet propaganda, such phraseology is unusual coming from a Kremlin leader speaking of the American President.

Mr. Andropov also spoke of "impudent distortions of the Soviet Union's policy" in Mr. Reagan's speech and said it was unbecoming for those who scrapped the second strategic arms limitation treaty "to try to pose as peacemakers." Mr. Andropov also described Washington's attempts to improve the United States' ability to fight and win nuclear wars as "not just irresponsible, it is insane."

Most of the interview consisted of a reply to Mr. Reagan's claim that the Soviet Union has for 20 years been developing a military might far beyond its defensive needs and that its gains in nuclear and conventional weapons have made it imperative for the United States to increase its own forces.

Mr. Andropov mocked the notion that "the United States is inferior to the Soviet Union," citing figures showing that United States nuclear forces were substantially improved during the two decades of which Mr. Reagan spoke.

But some of the harshest words were reserved for Mr. Reagan's proposal to launch the development of an antimissile system that would, in Mr. Reagan's words, "take years, probably decades" to perfect.

Mr. Andropov said "laymen may find it even attractive" to hear the President speak about an ostensibly defensive system, but he added that this was so only to those unfamiliar with the complexities of nuclear strategy.

"In fact," he said, "the strategic offensive forces of the United States will continue to be developed and upgraded at full tilt and along quite a definite line at that, namely that of acquiring a first-nuclear-strike capability."

"Under these conditions the intention to secure itself the possibility of destroying with the help of the ABM defenses the corresponding strategic systems of the other side, that is of rendering it incapable of dealing a retaliatory strike, is a bid to disarm the Soviet Union in the face of the U.S. nuclear threat."

'An Extremely Perilous Path'

Mr. Andropov said the Reagan Administration had chosen "to tread an extremely perilous path" with its weapon programs, and added: "The issues of war and peace must not be treated so flippantly. All attempts at gaining military superiority over the U.S.S.R. are futile. The Soviet Union will never allow them to succeed. It will never be caught defenseless by any threat. Let there be no mistake about this in Washington."

"It is time," he said, "they stopped devising one option after another in the search of the best ways of unleashing nuclear war in the hope of winning it. Engaging in this is not just irresponsible, it is insane."

The Soviet leader said "all efforts" should be aimed at averting nuclear catastrophe. "We call vigorously on the United States to take this path," he said.

"Everything that the Soviet Union did and does is no evidence 'of its seeking military superiority,' " he said. "Treaties and agreements to which we went and are ready to go with the U.S. side are aimed at lowering the level of confrontation without upsetting parity, i.e., without detriment to the security of both the U.S.S.R. and the U.S.A."

Upgrading of U.S. Arms Cited

Mr. Andropov said that "only naive people" could believe Mr. Reagan's contention that the last two decades had seen an unremitting Soviet military buildup while the United States, in Mr. Andropov's phrase, "has been sitting cross-handed."

The Soviet leader acknowledged that Moscow "did strengthen its defense capability." But he said this had been done to offset the "feverish" efforts of the United States to develop military bases near Soviet borders, to upgrade United States weapons and to upset the "military-strategic parity" between the two nations.

As an example, Mr. Andropov said the United States had decided in the 1970's to place multiple warheads on its strategic missiles, although the Soviet Union had proposed the mutual renunciation of such a move.

As a result, American strategic nuclear warheads had grown from "4 to 10-odd thousand." He asked: "Can an increase of nuclear arsenal by a factor of 2.5 be referred to as inactivity? No, it cannot be called so in any way."

As for Mr. Reagan's description of the deployment of new Soviet missiles in Europe as a bid to gain military advantage, Mr. Andropov said Mr. Reagan "pretends" that the United States does not have "a 1.5 to 1 advantage over the U.S.S.R." in medium-range nuclear weapons systems in Europe.

The Kremlin count is based on aircraft that the United States says are either not deployed in Europe, not assigned to nuclear missions or lack the range and sophistication to penetrate Soviet air defenses.

"The President not only keeps silent about all that, he tells a deliberate lie, asserting that the Soviet Union does not observe its own unilateral moratorium on the deployment of medium-range missiles," Mr. Andropov said.

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Excerpts From the Interview With Andropov

MOSCOW, March 26 (Reuters) — Following are excerpts from an interview with Yuri V. Andropov, the Soviet leader, on President Reagan's proposal to develop a defense against nuclear missiles. The interview is to appear Sunday in the Communist Party daily Pravda and was distributed in translation by the Soviet press agency Tass.

Laymen may find it even attractive as the President speaks about what seem to be defensive measures. But this may seem to be so only on the face of it and only to those who are not conversant with these matters.

In fact, the strategic offensive forces of the United States will continue to be developed and upgraded at full tilt and along quite a definite line at that, namely that of acquiring a first-nuclear-strike capability.

Under these conditions the intention to secure itself the possibility of destroying with the help of the ABM defenses the corresponding strategic systems of the other side, that is of rendering it incapable of dealing a retaliatory strike, is a bid to disarm the Soviet Union in the face of the U.S. nuclear threat.

One must see this clearly in order to appraise correctly the true purport of this "new conception."

Should this conception be converted into reality, this would actually open the floodgates to a runaway race of all types of strategic arms, both offensive and defensive.

Offensive-Defensive Link

When the U.S.S.R. and the U.S.A. began discussing the problem of strategic arms, they agreed that there is an inseverable interrelationship between strategic offensive and defensive weapons. And it was not by chance that the treaty on limiting ABM systems and the first agreement on limiting strategic offensive arms were signed simultaneously between our countries in 1972.

The sides recognized the fact that it is only mutual restraint in the field of ABM defenses that will allow progress in limiting and reducing strategic systems.

The United States intends to sever this interrelationship.

The present Administration is continuing to tread an extremely dangerous path. The issues of war and peace must not be treated so flippantly.

The question prompts itself: What is the President's idea of the standards of conducting relations with other states?

All attempts at gaining military superiority over the U.S.S.R. are futile. The Soviet Union will never allow them to succeed. It will never be caught defenseless by any threat.

Let there be no mistake about this in Washington. It is time they stopped devising one option after another in the search of the best ways of unleashing nuclear war in the hope of winning it. Engaging in this is not just irresponsible, it is insane.

One should come to realize that the U.S. leaders are trying today to turn the European countries into their nuclear hostages. Washington's actions are putting the entire world in jeopardy.

ANDROPOV...

Continued

The Soviet leader did not elaborate. In his speech, Mr. Reagan said that although Mr. Brezhnev declared the freeze a year ago, the Russians were still adding an average of three warheads a week to the armory, which had a total of 1,300 warheads.

Mr. Reagan also ignored the fact that United States medium-range nuclear weapons "are literally at our threshold" in Europe, making them strategic weapons from the Soviet viewpoint, Mr. Andropov said. Referring to the aerial photograph Mr. Reagan showed during his speech of Soviet-supplied aircraft and equipment on a Nicaraguan airfield, Mr. Andropov said sarcastically that the President "did not show photographs showing hundreds of runways thousands of miles away from the United States, runways on which U.S. aircraft with nuclear weapons on board are stationed ready to take off at any moment."

NEW YORK TIMES 27 March 1983 Pg. 1E

Would a Space-Age Defense Ease Tensions or Create Them?

By HEDRICK SMITH

WASHINGTON

IN the 1980 campaign, Ronald Reagan scored points by attacking Jimmy Carter for zigzags in dealing with the Soviet Union. As President, Mr. Reagan himself has oscillated at times between hard-line and more moderate positions. But lately, in his crusade for a $239 billion defense budget, he has given vent to his natural inclination for tough talk, sounding echoes of the Cold War.

Last week on television, he used charts and declassified intelligence photos to draw a stark and menacing picture of growing Soviet offensive weaponry and the threat facing the United States. But he also urged a shift in scientific thinking from offensive arms to devising an esoteric system of lasers or particle beams that, by the next centufy, could render attacking nuclear missiles impotent. This was his "vision of the future which offers hope."

In Congress, Democrats and some Republicans did not share that hope. Neither did some members of the scientific community. Several White House and Pentagon aides acknowledged that the idea had not been carefully studied and that they had opposed presenting it publicly. Senator Edward M. Kennedy, the Massachusetts Democrat, accused President Reagan of employing "misleading Red-scare tactics and reckless Star Wars schemes" to revive support for Pentagon spending.

The President's push for exotic new weapons was partly a response to the jittery feelings in the United States and Europe about growing atomic arsenals. But the tactic could backfire. In Europe, the prospect of more American weapons makes some people feel less, rather than more, secure. And some critics contend that his portrayal of Soviet power may indirectly feed the nuclear freeze movement by increasing fears of nuclear war.

Congressional and scientific critics were fearful that Mr. Reagan was reopening a debate settled a decade ago — on the basis of forswearing nuclear defenses and achieving deterrence in the knowledge that attacking powers would be exposed to awesome reprisal. Some experts contended that such weapons were unattainable or would destroy the 1972 agreements banning missile defense, a cornerstone of arms control. This was also the reaction in Moscow, where Yuri V. Andropov, the Soviet leader, said yesterday that Mr. Reagan was treading "an extremely dangerous path" and was seeking to make the Soviet Union "defenseless."

Mr. Reagan seemed to many experts to be trying to project himself as a man of peace while pushing for a bigger arsenal. For all his militancy, the President has spoken of meeting this year with Mr. Andropov. And officials have leaked word of an imminent new proposal to break the deadlock in the Geneva negotiations on intermediate-range missiles in Europe.

These moves reflect the inevitable political dilemma of American Presidents as the technology of the arms race outruns diplomacy. In a variation of the Carter experience, Ronald Reagan has found that he must constantly prove his dedication to arms control while he presses for new weaponry to offset the Soviet buildup.

Mr. Reagan, more than most recent Presidents, has turned up the rhetoric. With evangelical fervor in Orlando, Fla., this month, he summoned Americans to resist "the aggressive impulses of an evil empire." He derided a nuclear weapons freeze as "a very dangerous fraud"

SPACE-AGE DEFENSE...Next Page

Vulnerability of Missiles Underlies Search for New Ideas

PRESIDENT Reagan's notion that there must be a better basis for American security than the nuclear balance of terror grows partly from apprehensions that the old missile technologies may no longer suffice. The Joint Chiefs of Staff have advised him that no land-based missile system — American or Soviet — would be invulnerable to attack. Lieut. Gen. Brent Scowcroft was expected to say the same about the MX this week when his Presidential commission reports on the puzzling question of where to put the new experimental missile.

But in ordering "a comprehensive and intensive effort to define a long-term research and development program" of "defensive technologies" last week, Mr. Reagan opened the door to a long and costly process. Finding out whether antimissile missiles, laser weapons, military space stations and/or particle beams could be depended on to intercept attacking missiles may take the rest of the century, he admitted. And the $750 million a year now going to this kind of research would have to be increased.

Then there was the question of whether the Soviet response would bring a new spiral in the arms race. Before the missile-killers of the future were deployed, senior officials promised, the Russians, not to mention America's allies, would be consulted. Moscow promptly assailed "military hysteria" that it said would "undermine everything positive that has been achieved in Soviet-American arms control."

Also unenthused were at least three of the American scientists the President had invited to dinner at the White House in a bid to enlist their support for antimissile research. Even if the system worked, said Dr. Victor Weisskopf of Massachusetts Institute of Technology, "either side would have to shoot down what the other side had in space — it would be the beginning of a nuclear war." But another guest, Dr. Edward Teller, the father of the hydrogen bomb, reportedly has been promoting a program much like the one Mr. Reagan proposed.

Back on Square One at Geneva, American and Soviet arms-control negotiators were due home this week for their spring break. Ambassador Edward L. Rowny, the chief strategic arms envoy, had some explaining ahead at the White House and in Congress. The Reagan nominee to become Mr. Rowny's boss as director of the Arms Control and Disarmament Agency, Kenneth L. Adelman, was in trouble — partly because of a memorandum he had identified as "Ed Rowney's very confidential real views on people" at the agency. Senators wanted to know why Mr. Adelman had testified that he had given no thought "at all" to a personnel shaking-out. "Immediately after Ambassador Rowny handed me the paper," Mr. Adelman explained, "I looked at it in a very brief, cursory fashion; I never read it carefully." Supporting his choice, President Reagan wondered "how someone can be hung out to dry for having received a letter from someone else."

"The issue," said Senator Paul E. Tsongas, Democrat of Massachusetts, "is not whether what he did was wrong but why he misled the committee."

NEW YORK TIMES 27 March 1983 Pg. 19E

The President's Fantasy

By Anthony Lewis

BOSTON — "A vision of the future which offers hope," President Reagan called it. He foresaw space devices that would "intercept and destroy strategic ballistic missiles before they reached our own soil." Instead of relying on the fear of retaliation to deter a Soviet nuclear attack, then, we would be safe behind an American technological shield.

"Would it not be better to save lives than to avenge them?" the President asked. "Is it not worth every investment necessary to free the world from the threat of nuclear war? We know it is!"

The vision is so reassuring that it seems a shame to spoil it with facts. But Mr. Reagan's talk of missile defenses in space is fantasy — a mixture of wishful technology and muddled strategy. It is a dangerous fantasy, because it distracts attention from the hard realities of the arms race. Far from ending the threat of nuclear war, it introduces new threats.

Mr. Reagan's own advisers, seeming embarrassed at his enthusiasm, told reporters that he was speaking of ideas many years from the possibility of development. But the technical problems are not only a matter of time, as I learned when I spoke with one of the most respected scientific figures in the field of nuclear arms control, Jerome B. Wiesner, former president of M.I.T. and adviser to Presidents.

"Most technical people doubt that antimissile devices in space will work," Professor Wiesner said. "But even if they do, it's wishful thinking to believe that they would provide impenetrable defenses.

"There are 10,000 or more nuclear weapons on each side. A defense system that would knock out 90 or 95 percent would be a miracle — and the remaining 5 or 10 percent would be enough to totally destroy civilization.

"Even if you could make an antiballistic missile system, cruise missiles would make it obsolete. The idea is to hit ballistic missiles high in the atmosphere or in outer space — Buck Rogers warfare. But the cruise flies at low levels. You'd have to develop an air defense system against it, which we don't know how to do and would be hard.

"And in the air defense game the Soviet Union has important advantages. So many of our cities are on the coast and hence more vulnerable than theirs, which are mainly inland. That's one of the reasons we abandoned the idea long ago."

Loose talk about wonder weapons in space reflects an illusion that has hurt American security before now. That is the belief that the Russians cannot match American technology.

The Johnson and Nixon Administrations went ahead on MIRV's in just such a belief. Henry Kissinger, writing recently in Time, conceded that he and others had doubted the Russians' ability to make multi-headed missiles accurate enough to threaten ours. But they did, and the net effect of the MIRV race was to make us feel more vulnerable.

The United States would have no patent on antimissile weapons in space either. If we plan an intensive research and development program, as President Reagan ordered, the Russians will, too. Professor Wiesner put it in one blunt sentence: "It's really a declaration of a new cycle in the arms race."

Weapons that have not yet been developed are the very ones that ought to be outlawed by treaty — because it is far easier to negotiate agreements before a race has started. Difficulty sets in, once each side fears that the other is ahead.

The illusion that one of the superpowers is on the way to making itself invulnerable is particularly dangerous. At some point in the future it may encourage a reckless leader to risk using nuclear weapons — or the other side to strike first, before it is too late.

Futuristic weapons have already been prohibited in two treaties: against nuclear weapons in space or at the bottom of the sea. And in fact the Soviet Union in 1981 proposed a treaty to ban "weapons of any kind in outer space." Is the United States now going to be in the position of pushing that new arms race while the Russians offer to stop it?

There is no doubt a political point in Mr. Reagan's talk of stopping the missiles in space. It gives Americans the idea that we can assure ourselves peace and safety if only we go on increasing our military expenditure and developing new weapons systems. It is an argument against the proposal for a mutual freeze on testing and deployment of new nuclear weapons.

But what a feeble argument it is, repeating the folly that has brought us to the point of massive, ingenious overkill on both sides. The only hope of reducing that danger is the hard way of negotiation: to stop new systems, not add them, and if possible to cut the numbers of existing weapons.

SPACE-AGE DEFENSE...Continued

(though not a Soviet-dominated movement, the F.B.I said last week). Later, he pictured Soviet proxies on the march in Central America. El Salvador, he said, "will join Cuba and Nicaragua as a base for spreading fresh violence to Guatemala, Honduras, Costa Rica" and beyond. The predatory Soviet design, he said, is "to tie down our forces on our southern border and so limit our capacity to act in more distant places such as Europe, the Persian Gulf, Indian Ocean, Sea of Japan."

As House Democrats passed a 1984 budget providing only 4 percent growth in military spending, rather than the 10 percent he requested, Mr. Reagan warned that the reduction was "a dagger straight at the heart" of rebuilding American security. "Nothing could bring greater joy to the Kremlin," he added. Clearly, one objective was to persuade the public and Congress to give him new weapons as bargaining levers with Moscow. Beyond that, he conveyed genuine alarm at what he sees as Soviet strategic superiority. Aides say Mr. Reagan has drawn haunting parallels with the Allied failure to arm adequately against Nazi Germany in the 1930's.

Washington is uneasy about Central America and the Soviet arms challenge. But most Congressional Democrats and a fair number of Republicans are considerably less alarmed than Mr. Reagan. In El Salvador, some advocate more emphasis on political negotiations; others contend that Mexico's financial troubles are a more immediate worry than falling Latin dominoes. They view Russians in Afghanistan and Poland as bogged down rather than newly aggressive.

There is broad agreement that the Soviet buildup has put American land-based missiles under threat. But many doubt Mr. Reagan's view that Moscow has nuclear superiority. Giving the official Democratic rebuttal, Senator Daniel K. Inouye of Hawaii said the President had glossed over American advantages in submarine-launched missiles, bombers and cruise missiles. He reckoned that Washington was hardly at Moscow's mercy, with 9,268 nuclear warheads to the Russians' 7,339.

Respected pro-defense Democrats such as Senator Sam Nunn of Georgia contend the Administration has put its military needs far too loosely and broadly. Past planning prepared for fighting 1 ½ wars, but some Reagan planners want to cope with 3 ½ — a land war in Europe, another around the Persian Gulf, a third in Korea and a possible naval war in the Pacific. "I think we have too many strategic programs," Senator Nunn said. "We don't need two new bombers." Others question the need for a 600-ship Navy or an expanded air defense force.

"The question is not, 'Do you modernize our forces?' but 'At what pace do you modernize them?' " adds Representative Les Aspin, the Wisconsin Democrat. "If you think there's a likelihood of war or confrontation with Moscow in the next three years, then probably the Reagan budget isn't enough. But if you don't, then our own economic situation would dictate that you slow down."

Senate majority leader Howard Baker, tacitly agreeing with that view, predicted the Senate would pass a military budget well short of the President's target, but above the House figure. Mr. Reagan also took a moderate direction and played on earlier leaked suggestions that he would announce a new interim proposal this week on missiles in Europe, limiting each side to 100 missiles and 300 launchers. When reporters asked, he avoided a hard-line answer and said simply, "Tune in next week."

Arms control negotiations are grindingly difficult at best. They require a certain minimum confidence on each side that the other is serious. What is one to think of the seriousness of an American President who offers his people fantasies as the pass to safety?

SAN JOSE MERCURY NEWS 27 March 1983 Pg.7D

A physicist's response

Reagan space umbrella: another layer of weapons

By Wolfgang K.H. Panofsky

LAST Wednesday, President Reagan made a speech on military spending and a new defense direction. It is this latter subject that has drawn national and international attention. When one reads the actual speech, it seems long on hope but proposes no definite new initiatives.

What did the president actually say? The key phrase was, "Would it not be better to save lives than to avenge them?" In other words, he would like, if possible, to protect the population of the United States by unfolding an "impenetrable umbrella" over the population, rather than by maintaining the balance between the United States and the Soviet Union through mutual deterrence (that is, preventing nuclear aggression by the threat of unacceptable retaliation).

If it were technically possible, this would be a dramatic reversal indeed. But what the president actually said about his plan was this: "I am directing a comprehensive and intensive effort to define a long-term research and development program to begin to achieve our ultimate goal of eliminating the threat posed by strategic nuclear missiles." This means that he does not now know how to convert what he admits to be a "vision" into reality.

The problem is that you cannot coerce technology by a policy decision. It will not do to invoke the analogy with going to the moon, or building a nuclear weapon, where Presidents Kennedy and Roosevelt, respectively, undertook those great initiatives. In both of these cases these decisions were preceded by exhaustive and careful studies indicating these projects to be feasible, albeit at large effort. No study has indicated the feasibility of a massive, impenetrable defense to protect the population of the United States against the combined nuclear threat of missiles, both ballistic and air-breathing, airplanes and other means of delivery.

What is the technical situation? The fact that today the protection of our country from the nuclear threat depends on the balance of terror is not a matter of choice or of policy but is simply technical in nature. It is based on the extreme destructive power of nuclear weapons. The attacker can choose where to place his nuclear weapons, and by what means to deliver them. Thus effective defense of the population has to be complete against *all* means of delivery and has to be massive everywhere.

For these reasons, anyone who has ever studied this problem has always concluded that, however repugnant he may find the present balance of terror, no technical choice beyond mutual deterrence exists as long as the arsenals of the United States and the Soviet Union, which by now contain more than 50,000 nuclear weapons, remain as enormous as we have permitted them to become.

What are the technical opportunities for defending the people of the United States? Ballistic missiles can be shot down from the ground after being detected by radar by various forms of interceptors, including some which may use nuclear weapons. We have learned, starting from the 1969 Anti-Ballistic Missile debate, that such systems cannot possibly protect the entire population in an effective way, although they may be of some use to protect a few selected local targets. The president seems to be relying instead on suggested space-age weapons such as satellite-borne lasers or sources of particle beams, or on the type of X-ray lasers that are fed by nuclear explosions, as recently publicly advocated by Dr. Edward Teller.

In principle, such weapons can be designed and built so they shoot down individual incoming ballistic missile boosters or warheads. But does that constitute the type of impenetrable defense that the president envisioned? Can one build such a defense system at affordable cost? Even more important, how easy would it be for the other side simply to raise its offensive power in order to defeat the system? All previous studies of such questions have led to extremely pessimistic conclusions about whether such a defense is feasible or advisable. Its costs would be enormous; the possible counter-measures are many: the opponent could increase his offensive power and leave the U.S. population in just as much danger as it was before.

The president's proposal, although currently asking only for intensive study and not for an immediate increase in the $1 billion per year that now goes into developing "directed energy weapons," could lead us in an extremely dangerous direction. The danger stems simply from his public advocacy of such a program, not from the technical reality of these weapons. It is dangerous because such a "new technology" initiative may well lead the Soviet Union to match or follow what we do, as it has done in the past. Even more serious, the Soviets may be led to increase their offensive power even further because of the possibility that the president's initiative may lead to at least some limited form of protection. Let me add that we would do precisely the same had Yuri Andropov given the speech that was delivered by President Reagan!

There is no foreseeable technical means to eliminate the mutual hostage relationship that now exists between the people of the United States and those of the Soviet Union. The large arsenals of nuclear weapons have brought this situation upon us. If a nuclear war starts, under any doctrine, in any theater of war, through the first use of nuclear weapons by either the United States or the Soviet Union, then a grave risk to the future of civilization as we know it will exist. This risk will not be ameliorated but will only be increased if we add another layer of weaponry, rather than reducing what we already have.

The president has agreed that reduction of nuclear weapons is the primary goal of his administration. But how to reduce? The answer is through negotiated arms control, but the president implies that increased

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ATLANTA JOURNAL & CONSTITUTION 27 March 1983 Pg.2D

Jack Germond/Jules Witcover

President's new defense plan is an old offense

WASHINGTON — With the bark off, President Reagan's proposal for a massive research effort to develop a foolproof defense against Soviet missiles is a diversion — an attempt to change the context in which his defense budget is being considered in Congress.

It is highly unlikely, however, that the strategy will succeed. It is no longer 1981 and even the Republicans in the Senate are no longer willing to blindly approve a budget that would raise military spending a full 10 percent above inflation.

Anyone of minimal sophistication in defense policy understands that a program to develop such a defensive capability would be extraordinarily expensive if approved.

So what the president's new initiative represents, more than anything else, is an effort to give a different cast to the debate over the defense budget. What he was saying, in effect, is that if Congress will only go along with him now, sometime down the road we might have the assurance of a defense system that would make such spending on offensive weapons unnecessary.

Nor is this Reagan's first attempt to alter the debate. In a highly controversial speech to the evangelicals in Orlando this month, he argued that the Cold War was a "struggle between right and wrong, good and evil" — suggesting that his critics were on the dark side of those juxtapositions.

But that backfired, to the point that the president felt obliged later to explain that all he was trying to do was identify basic differences that might otherwise be swept under the rug in

CONTINUED NEXT PAGE

WEAPONS...Continued

armament is needed first to "bring the Russians to the bargaining table." But we *are* already at the bargaining table with the Russians in the START and Intermediate Range Nuclear Forces talks.

In fact, the Soviets want to be at more bargaining tables than we do. At the end of the previous administration we had signed the SALT agreement and started the INF talks. We were also engaged in negotiations with the Soviets on means to terminate the threat of anti-satellite warfare, to end all nuclear tests and to limit conventional arms transfers. None of these negotiations has been continued by the present administration. The Soviets introduced into the United Nations in late 1981 a request for the beginning of negotiations to eliminate all weapons from outer space, but we have not yet reacted to that initiative.

The use of space has been a boon to mankind, both commercially and to enhance security. Communication satellites are in worldwide use, and the use of outer space for reconnaissance has made this a more open world by permitting all nations to see what others are doing and to verify compliance with arms control agreements. Introducing the threat of making space a battlefield will endanger these achievements.

The Soviets have attacked the president's initiatives as violating the existing Anti-Ballistic Missile Treaty, which has been of great service in enhancing the security of both the United States and our allies. The Soviets are wrong in this charge: The type of research and development now going on both in the United States and the Soviet Union on space ballistic-missile defense is fully permitted under the treaty. The president's initiative, however, does contain the seeds for future abandonment of not only the ABM treaty but also other existing treaties; including the ban on nuclear weapons in space as well as the Limited Test Ban Treaty of 1963, which bans nuclear test explosions in space and the atmosphere and which has been so successful in reducing radioactive fallout levels worldwide.

The president expressed the desire to "render nuclear weapons obsolete." It does not advance that laudable goal to embark upon a path that may lead to yet another level of armaments on top of what we already have. I believe, rather, that the right road is to work toward arms limitations and reductions by direct confrontation of the nuclear threat. The best way to reduce nuclear arms is to reduce nuclear arms, not to say that we must build more arms in order to reduce them. The costs of adding another layer of defense are many: The financial costs are enormous and there are grave risks to present and future arms control agreements.

There is one additional grave risk inherent in the president's announcement. If the concept of a secure defense umbrella proposed by the president were to receive wide credence, then the question of sustained nuclear war fighting could be viewed in a different manner. Specifically, should a secure defense umbrella against nuclear weapons over the entire country be accepted as a realistic concept, then this could support the view that nuclear war fighting under the cover of that umbrella might become acceptable. For all these reasons I consider the presidential initiative to be ill-advised.

Wolfgang K.H. Panofsky is director of the Stanford Linear Accelerator Center at Stanford University. He was on the General Advisory Committee at the White House during the Carter administration; on the advisory committee at Brookhaven National Laboratory from 1968 to 1972; and a member of the high energy physics advisory panel to the Atomic Energy Commission from 1967 to 1970. He wrote this column for the Mercury News.

CHICAGO TRIBUNE 27 March 1983 Pg.6

Reagan cries wolf on defense

Stephen Chapman

In his address to the nation last week, President Reagan used an old debater's trick: If you're losing an argument, change the subject. Having trouble justifying the largest peacetime military buildup in American history, Reagan tried to distract his audience by talking of exotic new defensive weapons. But that "vision of the future which offers hope," as he called it, has little to do with the debate over how much to spend on defense and how to spend it.

What Reagan suggested was a rejection of the strategy of deterrence, which, whatever its flaws, has prevented nuclear war for 38 years. Deterrence rests on each side's knowledge that the other can destroy it; so neither side is tempted to use its weapons.

"But what if free people," asked Reagan, "could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack; that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies?"

A fine idea, but impossible anytime soon. Reagan acknowledged that the task "may not be accomplished before the end of the century." Obviously we always ought to be looking for better ways to counter Soviet weapons and deter their use. But that doesn't answer any of the questions raised by the current battle over defense spending.

Trying to salvage a respectable share of his Pentagon budget, Reagan recited his familiar litany of warnings about Soviet power and American weakness. But his view that the enemy has a "margin of superiority" has few adherents among defense experts, even conservative ones. And many of the facts Reagan uses to make his case are seriously misleading. Consider the following.

●"The Soviet Union built 200 new Backfire bombers [since 1969], and their brand new Blackjack bomber is now under development. We haven't built a new long-range bomber since our B-52s were deployed a quarter of a century ago." We haven't done so only because strategic bombers are rapidly being made obsolete by advances in air defenses—as the administration concedes. Instead we are deploying the cruise missile, which the Soviets don't have and whose military value will far exceed that of their new bomber. And, in any case, we have eight times as many nuclear warheads on bombers as they do.

●"The United States introduced its last new intercontinental ballistic missile in 1969 . . . Since 1969, the Soviet Union has built five new classes of ICBMs, and upgraded these eight times." The Soviets were years behind us in 1969, and had to build rapidly just to attain parity. Our existing Minuteman III missiles are more accurate than their best ICBMs. Given the growing vulnerability of land-based missiles, we have also put half of our strategic force on submarines. The Soviets, lagging behind, have only 25 percent of their warheads at sea.

●"Over the same period, the Soviet Union built four new classes of submarine-launched ballistic missiles and over 60 new missile submarines. We built two new types of submarine missiles and actually withdrew 10 submarines from strategic missions." But the U.S. has a huge edge in submarine-based warheads—about 5,000, compared to their 1,500.

●"When we look at attack submarines, the United States has produced 27, while the Soviet Union has produced 61." But, says the Center for Defense Information, "our attack submarine force is vastly more capable than the Soviet force, which relies more heavily on diesel subs than ours does. The overall U.S. anti-submarine warfare (ASW) capability is far ahead of Soviet ASW."

Reagan didn't mention some other crucial facts: We have 19 percent more nuclear warheads than the Soviets. The combined military spending of the U.S. and its NATO allies substantially exceeds that of the Soviet Union and the Warsaw Pact countries. American defense spending, far from declining, is as high now as it was in 1970, when we were fighting a war in Southeast Asia. American soldiers are generally regarded as far superior to Soviet ones.

For all his effort to achieve Churchillian heights, Reagan's speech was irrelevant to the prosaic issues involved in writing a defense budget. If the President can defend his proposals only by deception, he is bound eventually to see his deceptions exposed. And then, like the boy who cried wolf, he may find that lying about the danger is the most dangerous course of all.

DEFENSE PLAN...
Continued

the debate over defense policy. The episode demonstrated once again that it is unwise for anyone in politics to claim to have the high moral ground because the implication of a lack of morality on the other side inevitably hardens the opposition.

So now Reagan has returned to more conventional politics. His proposal has some obvious political value as another gesture to the Far Right. His plan has some clear similarities to a proposal by the Heritage Foundation, a conservative think tank, for what it calls a "High Frontier" system of building in space a defense against missiles.

But the White House strategy embodied in the new plan is a misreading of the concerns of both parties in Congress now. They are looking at a federal budget and deficits that they consider has its priorities out of whack.

This doesn't mean that they disagree with the thrust of the president's attempt to strengthen national defense. He has clearly convinced most in both parties that this is essential. But they are not persuaded that this means they must fund every weapons system Reagan wants to build or spend every dollar Caspar Weinberger believes can be justified.

In his television speech the other night, Reagan said the choice was "between the hard but necessary task of preserving peace and freedom and the temptation to ignore our duty and blindly hope for the best while the enemies of freedom grow stronger day by day."

But the president's opponents in Congress are not simply a bunch of soft-headed liberals. They believe that (1) there are limits on how much we can afford to increase military spending and (2) there are legitimate questions about whether some of the weapons systems Reagan would finance — the B-1 and the MX are two examples — make any sense, whatever the cost.

In those glory days of his first year in office, the president was able to overcome many similar reservations in Congress. Those were days when his appeals generated instant and irresistible pressure to go along. But he has gone to that well too often.—(c1983.)

NEW YORK TIMES 27 March 1983 Pg.14

Despite 1967 U.S.-Soviet Treaty, Drive for Space Weapons Goes On

With Nuclear Arms Banned, Superpowers Pursue Research on Yet-Unproven Nonatomic Devices

By JOHN NOBLE WILFORD

After the United States and the Soviet Union in 1967 ratified a treaty outlawing nuclear weapons in space, most of the world relaxed under the assumption that its newest frontier was not likely to become a battleground. But military planners and weapons technologists on both sides, never relaxing, quietly pursued visions of space wars fought with nonnuclear weapons.

They have designed and in some cases tested satellites to hunt and destroy other satellites. They have conducted extensive research in space-based laser and particle-beam weapons — reality catching up with the deadly ray guns of science fiction.

Even though the feasibility of such nonnuclear weapons has yet to be proved, President Reagan called attention to them last week in a speech urging American scientists "to turn their great talents" toward developing powerful advanced missile-defense systems that could protect the United States against nuclear attack. He did not specify the weapons he had in mind, but White House aides acknowledged that they involved earth-based and space-based lasers and particle-beam technologies.

Spending Is Up Sharply

Nor did Mr. Reagan call for any immediate crash program for their development and testing. Spending on such systems has already increased sharply, from $200 million for laser work in 1980 to $1 billion annually for laser and particle-beam projects. And this is only part of the growing budget for space military operations in general. In the next five years the Reagan Administration plans to increase military space spending, now about $8.5 billion a year, by more than 10 percent a year, a greater rate of increase than for the rest of the Defense Department budget.

Almost from the beginning of the space age, in 1957 when the Russians launched the first Sputnik, space has been a realm of considerable military activity, but of the passive kind. The United States and the Soviet Union both use satellites for such applications as early warning against nuclear attack, intelligence gathering, navigation, weather forecasting and long-range communications. More than 40 American satellites now in orbit perform these functions.

Thirty seconds after a Soviet intercontinental ballistic missile lifts out of a silo, for example, American satellites with infrared sensors are supposed to be able to pick out its telltale heat trail. Data on the missile's speed and course are transmitted to communications satellites that relay the information instantly to computers and display terminals in an Air Force command center buried in Cheyenne Mountain near Colorado Springs. Further tracking of the missile is also reported by satellite communications.

In addition, Vela satellites 60,000 miles out in space watch for nuclear detonations. Several satellites with highly sensitive cameras are continuously transmitting photographs and other data disclosing military dispositions by friend and potential foe. Satellite reconnaissance, it is generally agreed, has had a stabilizing effect on global politics because it has enabled each adversary to verify the other's conformance to the first strategic arms treaty. The satellites presumably minimize the chances of surprise and miscalculation.

The Space Treaty

In 1967 the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, commonly referred to as the Outer Space Treaty, was signed by 107 nations, including all of the countries active in space. The treaty, which was drafted by the United Nations Committee on Peaceful Uses of Outer Space, governs all activities in the exploration and use of outer space. One provision bans the stationing of "weapons of mass destruction" in orbit or on the moon.

One reason the Soviet Union and the United States were willing to agree to the treaty was that they did not see any advantage to having nuclear weapons in space and had determined that orbiting nuclear bombs seemed much less practical than ballistic missiles.

The common definition of "weapons of mass destruction" is nuclear bombs or warheads, and the research, development and deployment of the kind of nonnuclear weapons now being discussed for placement in outer space would not appear to be restricted by the terms of the Outer Space Treaty.

While reaffirming a commitment to peaceful uses of space, President Reagan said in a directive on space policy last July, "The United States will pursue activities in space in support of its right to self-defense."

What the Administration apparently had in mind was outlined last year in a five-year plan, a document known as a Defense Guidance. Space operations, the document said, "add a new dimension to our military capabilities." The document further ordered "the prototype development of space-based weapons systems so that we will be prepared to deploy fully developed and operationally ready systems should their use prove to be in our national interest."

Concern About Soviet Efforts

This reflected a growing concern among American military analysts over presumed Soviet advances in space weaponry. Since 1968, the Russians have been testing a nonnuclear antisatellite system, or ASAT, which they have used to intercept target vehicles they have sent into space. Small satellites are sent into orbit to hunt a target satellite, hover near it, then explode, shattering the victim craft with shrapnel.

The Air Force has countered with an American ASAT that is scheduled for its first tests in late summer. By all accounts, it is expected to have more capacities and flexibility than the Soviet version. The American antisatellite weapon is a small homing missile, launched into space from a high-flying F-15 aircraft. It seeks out its target with infrared sensors, then explodes near the target or collides with it at high speeds. The Pentagon has directed that the first antisatellite systems be ready for use by 1987.

The impending tests are a point of contention between arms-control advocates and the Administration. Forty-five members of Congress recently sent a letter to President Reagan calling on him to "refrain from testing this ASAT until we have tried in good faith to negotiate a ban on such weapons."

Hope for Mutual Restraint

Dr. Richard Garwin, a physicist at the International Business Machines

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SPACE WEAPONS... Continued

Corporation and a longtime Government adviser on military matters, has said the Russians "show every sign of being willing to give up further testing of their ASAT's" if the United States agrees to do the same.

Perhaps the most effective weapon against the current generation of satellites is in hand. It is an ordinary nuclear warhead that can be exploded in space. Such an explosion generates an electromagnetic pulse that damages or destroys unprotected electronics in satellites at great distances. The problem is that the pulse might wipe out a nation's own satellites as well as the enemy's.

But President Reagan's "vision of the future," as expressed in his speech Wednesday night, extended to technologies that are not yet in hand and, according to many scientists, may not be feasible until well into the next century, if ever. These are the technologies of laser and particle-beam weapons.

The earliest potential space application of lasers, conceivable in the next 5 to 10 years, would be to attack enemy satellites or defend friendly satellites.

Harold Brown, Secretary of Defense in the Carter Administration, wrote recently that a system of space-based lasers to intercept ballistic missiles, which Mr. Reagan was talking about, "would probably not be feasible before the next century, if ever, and would cost on the order of $100 billion."

Countermeasures Expected

Moreover, Mr. Brown said, "by the time it was deployed, countermeasures against it would be possible, at lower cost, to prevent the system from operating as a successful ballistic missile defense."

The most advanced laser under consideration is one that works by combining fluorine and hydrogen to produce energy in the form of light. This light is concentrated by mirrors in the weapon until it emerges as an intense, highly focused laser beam. A brief pulse of 200 billion watts, which might be possible, could vaporize metal and produce destructive shock waves.

Dr. Garwin, the longtime Government adviser, said there was "no indication" that "you can make a big enough laser and point it accurately enough." He is sure, he said, that "I can destroy the system of concentrated large laser satellites and if I'm going to have a war in which I undertake to attack the U.S., I'm certainly going to have arranged space mines next to the laser satellits to destroy them pre-emptively."

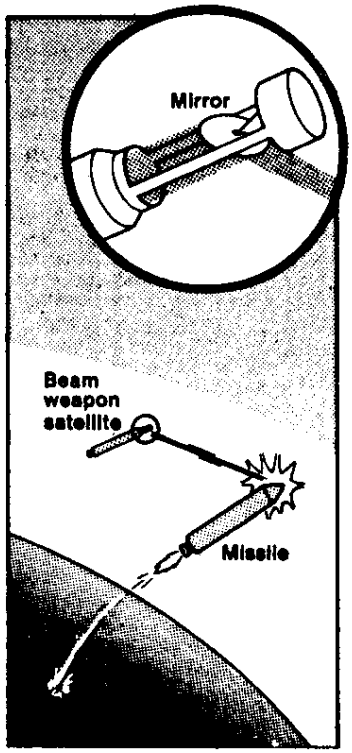
Report on Soviet Effort

Particle-beam weapons are at a more rudimentary stage of development than lasers. Such weapons would use streams of charged or neutral atomic or subatomic particles, accelerated to intense energies, to disable or destroy spacecraft or ballistic missiles. The rays of both weapons would reach a target at or near the speed of light.

1977 article in Aviation Week and Space Technology, a respected trade weekly, reported evidence that the Russians had built a giant particle-beam projector on the ground. The Pentagon, however, said it doubted that the Soviet Union was even close to developing a weapon that could disable missiles.

The atmosphere has a scattering effect on a beam shot from the ground into space. And a major obstacle to deploying a particle-beam weapon in space is the problem of generating enough power to produce a deadly beam. One shot would consume tons of chemical fuel. The only possible practical alternative, scientists suggest, is to operate the weapon with a controlled thermonuclear plant, and this fusion technology is apparently many years away from being operational.

Because of the many uncertainties about laser and particle-beam weapons, scientists generally felt that President Reagan was raising false hopes by suggesting the possibility of their serving as an effective missile defense. Dr. Wolfgang K. H. Panofsky, a Stanford University physicist, said experts in these exotic technologies may be embarrassed by suggestions that the time is ripe to accelerate research, saying, "The practitioners in the field are not anywhere near as gung-ho as the President's speech implies."



The New York Times/March 27, 1983

Theorists say beam weapon orbiting 1,000 miles above earth would attack warheads in their first eight minutes of flight. Guided by radar or sensors, the beam would be aimed at the warhead, in the case of a laser, by a mirror (inset).

But many scientists who criticized the speech nonetheless said they approved of continuing research and development efforts to explore space-based weapons to prevent a "technological surprise" by the Soviet Union.

DENVER POST 27 March 1983 Pg.4B

Reagan's call for a Pac-Man defense

LEONARD LARSEN

Larsen is associate editor of The Denver Post based in Washington, D C

FOR WHATEVER purpose he had in mind, President Reagan did little to bolster his own credibility as an honest broker in disarmament negotiations with his televised secret picture show of Soviet armaments and his call to scientists to get cracking on a Pac-Man defense system in space.

Several things were wrong with the president's warning that the Russians Are Coming, not the least of which was its questionable assumption that world peace and safety from nuclear attack would be achieved by an anti-missile defense system in space to make the Soviet strike force "impotent and obsolete."

Oh yeah?

Turn the thing around and say that the Russians have just declared their national defense goal of establishing a space defense network that would seek out and destroy U.S. missiles after launch, that would render our strategic nuclear attack strength "impotent and obsolete."

Would President Reagan — or any other U.S. president — then announce that the old ballgame is over, scrap our nuclear missiles and sue for peace? Not likely. He would do what the Soviets could be expected to do, order improvements in the U.S. warhead delivery systems to counter and evade the Soviet space defense and make sure our own nuclear missiles could still be delivered on target.

It's a part of the lethal game, and always has been, that as we and the Soviets detect improvements in the weapons of the other side, scientists work at counter-improvements. It's a part of armaments race as certainly as the stockpiling of the missiles themselves.

Another defect in the president's Pac Man lecture on armaments to eliminate armaments is the prospect that it's not actually do able, not all the way.

President Reagan did acknowledge that the space defense system development would be long term, that it might take until the next century to develop and deploy a workable system "to intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies."

That sounds comforting, but wait a minute. One military and intelligence specialist, who offered enthusiastic support for the president's Pac Man thesis, said after the Reagan broadcast that he was confident — in fact, he knew — that "75 percent or more" of the Soviet missiles could be intercepted and destroyed with such a defense system in space.

Let's see now. Supposing the Russians launched 1,000 missiles at us and our Pac-Man intercepted and destroyed 750 of them. That looks like about 250 missiles, with who knows how many multiple warheads, would elude Pac-Man and land on us.

Comforting?

Still another thing wrong with the Reagan order for a "comprehensive and intensive effort" toward the Pac-Man space defense was what he didn't say. He didn't say, for example, that he was asking for a specific funding of the effort.

That could be because of something else he didn't say, that such research has been going on for decades, both among U.S. and Soviet scientists, and it's calculated that on our effort we've been spending about $1 billion a year.

WHATEVER IT WAS he was doing by parading a Red scare on national television and calling for a space defense system that has already been years under study, the president seemed less intent on informing than he was on exciting.

His recommended defense budget, with a call for a 10 percent increase in Pentagon appropriations for next year, has been rejected by majority Democrats in the House and is threatened by majority Republicans in the Senate.

That's why he urged the listening public to "tell your senators and congressmen that you know we must continue to restore our military strength."

And while he pays lip service to "negotiations with the Soviet Union to bring about a mutual reduction in weapons," the president's real stress on disputed new military spending and preparations for space warfare technology into the next century does little to advance peace and security — ours or the world's.

Defense Watch

VOL. 2 NO. 2 MARCH 1983

DEDICATED TO A STRONG FOREIGN POLICY AND NATIONAL DEFENSE

General Graham Calls on U.S. to Deploy High Frontier Program

Active Missile Defense Needed to Protect American Deterrent

On January 28th, Lt. General Daniel O. Graham, USA (Ret.), President of the United States Defense Committee, appearing before a meeting of the eleven member bipartisan Commission on Strategic Forces appointed by President Reagan issued a clarion call for the United States to take a great step forward and immediately begin construction of a workable active missile defense system to safeguard America's future.

In his testimony before the Commission, General Graham pointed out that in light of the huge Soviet advantage in offensive missiles the United States should move immediately to take advantage of American technological superiority to end-run the growing Soviet threat to America's land-based deterrent and install a three-layered non-nuclear ballistic missile defense system.

Over the past twenty years the United States has sat on its hands in terms of strategic defensive systems, and in the last ten years has let our offensive systems wither as well.

Even twenty years ago technical problems in the development of a space-borne missile defense system were believed solvable in much the same way High Frontier would solve them today.

However, 20 years of improved technology now makes the job much easier.

With the rapid development of missile technology and American entry into space, a missile defense that would stop incoming Soviet missiles before they reach American soil is not only possible, but mandatory.

Photo by Ron Ceasar

United States Defense Committee, President, Lt. General Daniel Graham USA (Ret.), in official testimony to President Reagan's Commission on Strategic Forces called for the immediate deployment of both space and land-based non-nuclear strategic defensive systems to safeguard America's land-based deterrent.

Soviets Push for Superiority in Space

Yet, today while Congress delays action on any kind of basing for the Peacekeeper MX or an active missile defense, the Soviets have moved to grasp control of the new frontier of space through the introduction of advanced weapons systems designed to achieve decisive military superiority over the United States.

All areas of the Soviet space program including research and development, test-

"High Frontier" cont. from pg. 1

ing, production and launch facilities are experiencing a relentless build-up.

The Department of Defense in a 1981 publication, *"Soviet Military Power,"* states, "The Soviets have a vigorous and constantly expanding space program.

In the past ten years they have been launching spacecraft at over 74 per year, a rate four-to-five times that of the United States.

The annual payload weight placed into orbit by the Soviets is 660,000 pounds, ten times that of the United States."

Soviets Test Space Weapons

Already, the Soviets have the only tested space weapons and have developed an anti-satellite co-orbital interceptor (ASAT) designed to destroy America's ability to command, control and communicate with American forces around the globe during time of war.

America can counter this threat only by developing new strategies of warfare which will emphasize U.S. superiority in the technological arena.

The threat of Soviet domination of space and the vulnerability of America's nuclear deterrent is the reason why General Graham has argued so forcefully for a missile defense.

Missile Defense Needed to Protect Land-Based Deterrent

Taking the initiative in reviewing strategic alternatives for the defense of the United States, General Graham and a group of the best scientists and aerospace engineers in the country have studied the possibility of an active missile defense, and have concluded that there are no technological obstacles to deploying both space and land-based non-nuclear strategic defensive systems which could safeguard America's land-based deterrent.

Ominously, Soviet technology has advanced so rapidly in offensive missile technology that any American land-based missile without an active defensive system is presently vulnerable to destruction.

Currently, the United States has no ballistic missile defense and is exposed to the full devastation of a Soviet first strike which would destroy over 95 percent of America's land-based missile force.

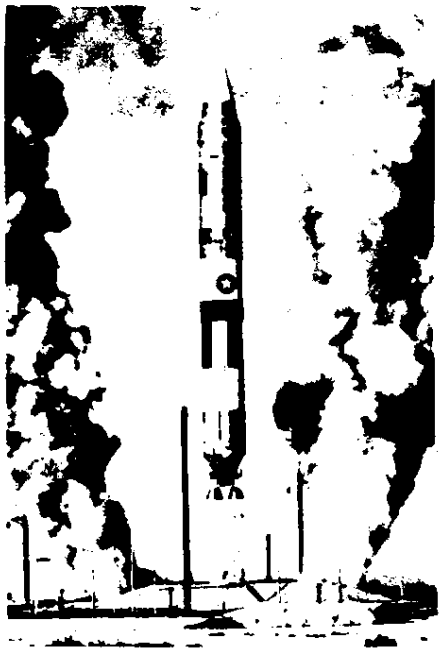
The ever-improving ability of the Soviets to track America's sea-based nuclear deterrent and the questionable ability of the aging B-52 fleet will pose a grave strategic vulnerability for the United States unless something is done to install an active missile defense.

The Soviets have also a reload capability at their hardened missile sites.

Within hours of a first strike against the United States, Soviet missile silos could be reloaded with stockpiled warheads for second and third wave attacks.

In addition to an active missile defense, it is vitally important that the United States deploy the land-based MX missile.

Only the Peacekeeper MX has both the size and accuracy to destroy hardened Soviet missile sites before second and third wave strikes could be launched by the Soviet Union.



The High Frontier program will protect America's land-based nuclear deterrent stationed in Titan and Minuteman silos, by deploying both land-based and space-based non-nuclear defensive systems designed to intercept and destroy Soviet missiles before they impact on American soil.

Non-Nuclear Missile Defense Can Be Quickly Deployed

Fortunately, work on a missile defense can be started immediately because the technology is off-the-shelf or nearly so — already purchased by the United States taxpayer.

In fact, the technology underpinning the work pioneered by General Graham and his High Frontier project is the product of previous advances pioneered by National Aeronautic and Space Administration and the Air Force.

The systems involved would be purely defensive and non-nuclear, and their effectiveness as a deterrent to nuclear war is independent of Soviet concurrence in an arms control agreement, and far more effective than our current posture.

In addition, a system of strategic missile defense would broaden America's options for retaliation against Soviet attack because a large portion of America's land-based strategic missiles would survive for a well directed counter-blow.

General Graham Outlines New Missile Defense Program

The "High Frontier" program detailed by General Graham would consist of two layers of missile defense: the first a satellite based system able to destroy Soviet missiles before they reach North America and second a ground-based system deployed around American ballistic missile silos.

The satellite based defense would be the first layer of the High Frontier program and would destroy the Soviet intercontinental ballistic missiles in the early stages of flight as they are leaving the atmosphere and entering space.

Complete coverage of the Soviet Union would be achieved with 432 satellites circling the earth at an altitude of approximately three hundred miles.

Each armed satellite will be cylindrical in shape and house 40 to 45 self-propelled missiles targeted by advanced computer systems capable of independently commanding and controlling the launch of each of the missiles to intercept an attack against the United States.

Each missile would have two segments: one a booster, and the other a kill vehicle.

The kill vehicle would be propelled towards its target by the booster, and then released after the kill vehicle has established optical tracking of its target.

The satellites would thus have the ability to lock onto Soviet missiles in the initial boost phase of the missile trajectory while its exhaust still appears hot against the cold background of space.

A ground-based point defense would be the second layer of the High Frontier program, and would be designed to destroy incoming Soviet missiles which might leak through the space defenses.

Each Minuteman and Titan silo would be defended by fast firing guns or launchers firing waves of small non-nuclear rockets capable of killing almost all Soviet warheads at a sufficient distance from the silo to prevent its destruction.

Cont. on pg. 8

Satellite Based Defense

High Frontier First Layer Defense

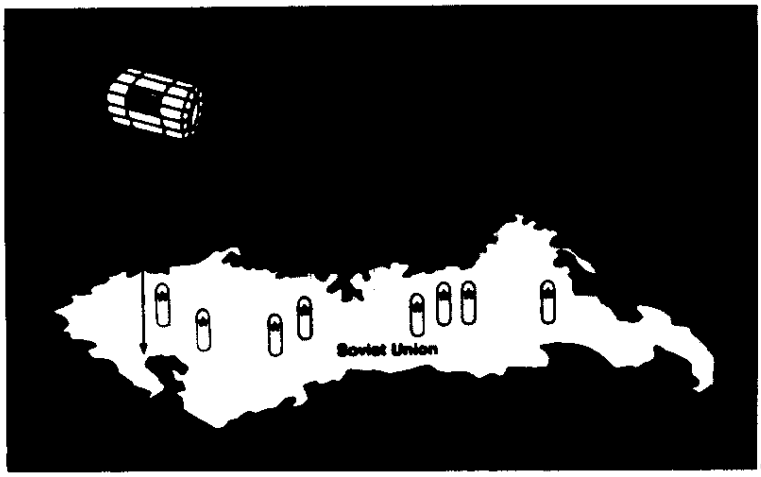


FIGURE 1. The illustration left portrays just one of 432 armed satellites in orbit to provide an active missile defense of the United States.

A web of 432 satellites would constantly circle the globe with some 100 of them in position over the Soviet Union at any given time at an altitude of three hundred miles and would provide a defensive blanket for America against all Soviet missile sites.

The armed satellites would provide America a new layer of defense by intercepting and destroying any offensive Soviet missile that has a trajectory into space, and do that over the Soviet Union.

The offensive Soviet missile would be spotted by infrared sensors while its exhaust still appears hot against the cold background of space.

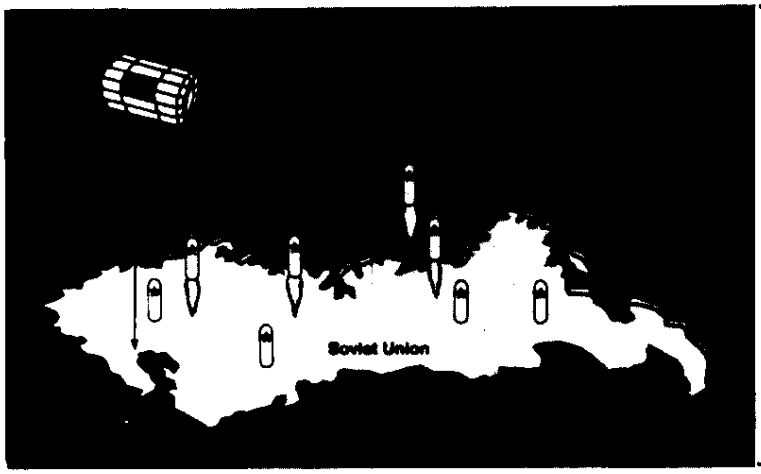


FIGURE 2. The illustration left shows an armed satellite positioned over the Soviet Union detecting the launch of an offensive Soviet missile.

Each armed satellite will carry fuel and be able to maneuver itself in space.

The armed satellite will be cylindrical in shape and house 40 to 45 self-propelled missiles attached to the satellite by a coupling mechanism designed to release the missiles into space so that they can also position themselves and then lock onto their targets.

Each satellite would have advanced computer systems, capable of independently commanding and controlling the launch of each of its 40 to 50 missiles in order to intercept an attack against the United States.

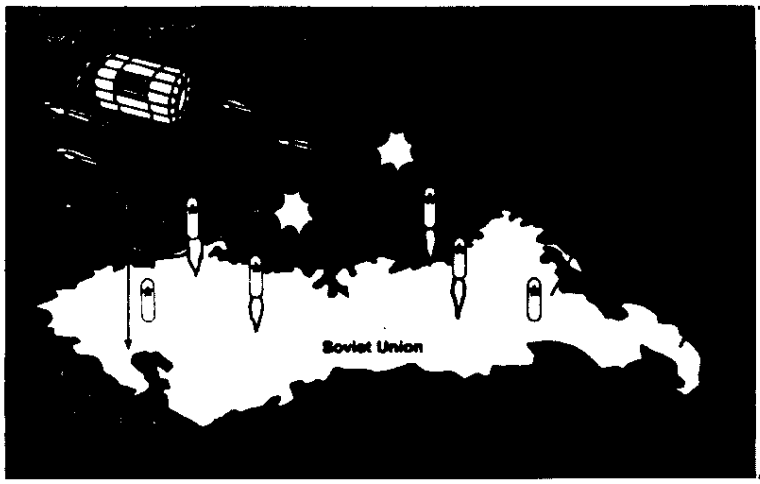


FIGURE 3. The illustration left shows one armed satellite destroying several offensive Soviet missiles in the early part of their trajectory.

Each of the 40 to 45 missiles carried by each satellite would have two segments, one a booster, and the other a kill vehicle.

The kill vehicle would be propelled towards its target by the booster, and then released after the kill vehicles infrared guidance system has locked onto the Soviet missile.

The kill vehicle will be non-nuclear, and capable of obtaining a velocity of 3,000 to 6,000 feet per second.

The interceptors would impact the Soviet missiles at such incredible speed (almost 20,000 miles per hour) that even the impact of something as small as an ice cube could destroy the warhead of a ballistic missile.

Silo Point Defense

High Frontier Second Layer Defense

FIGURE 4. The illustration left shows the active ground-based point defense of an American strategic ballistic missile silo.

Each Minuteman and Titan silo would be defended by fast firing guns or launchers firing waves of small non-nuclear rockets capable of killing almost all Soviet warheads at a sufficient distance from the silo to prevent its destruction.

A ground-based missile defense would be deployed quickly (in 2-3 years) around Minuteman and Titan silos to destroy most Soviet missiles that might attempt to destroy our deterrent on the ground before our space-borne system is deployed (in 5-6 years).

After that, the job of the point defense becomes very easy — destroying warheads that leak through the space defense.

FIGURE 5. The illustration left shows the radar up range from the missile silo detecting an incoming Soviet warhead which has leaked through the satellite based first layer of our active missile defense.

The missile defense system consisting of either rocket firing launchers or fast firing guns are targeted by radar positions stationed down range from the strategic ballistic missile silo.

The radar system would have two arrays of dish antennas, one located approximately fifteen thousand feet from the silo, and the other approximately twenty-four thousand feet.

The radar would then detect, track and calculate the intercept point for the "steel curtain" to be raised against the incoming Soviet warhead.

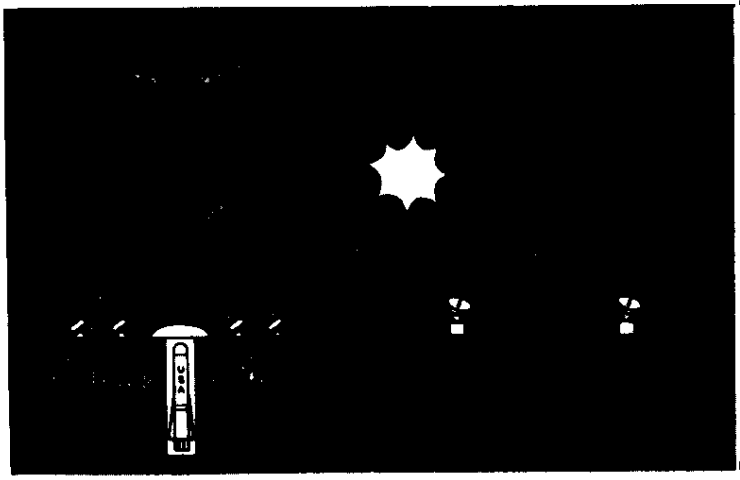


FIGURE 6. The illustration left shows a Soviet warhead being destroyed by either rocket firing launchers or fast firing guns, that are themselves protected against any nuclear blast by concrete bunkers or steel shells.

Soviet warheads would be destroyed at approximately 4,500 feet from the strategic missile silos by a swarm of projectiles, which would form a "steel curtain" to protect our land-based deterrent.

"High Frontier" cont. from pg. 5

Combined, layers of space and ground defense would absorb up to 95 percent of all incoming Soviet warheads, and thus preserve America's nuclear deterrent and our cities and people from destruction in a Soviet first strike.

High Frontier Would Defeat Soviet First Strike

Most important, the High Frontier strategy will destroy any confidence the Soviets could have in a nuclear first strike.

Currently, Soviet military planners using a straight-forward arithmetic would be quite sure of the results of a disarming strike against the United States.

The planner's problem is simply to insure that he can deliver two warheads of current size and accuracy against each item of U.S. strategic weaponry, either missile silos, airfields for B-1B bombers, or submarine pens for the nuclear fleet.

If, on the other hand, the Soviet planner must consider the effects of a strategic defense, especially a space-borne defense which destroys a portion of the attacking missiles in the early stages of their trajectories, he is faced with a problem full of uncertainties.

He does not know how many warheads will arrive in the target area and even more crucial, which ones will arrive over which targets.

This changes the simple arithmetic problem into a complex calculus full of uncertainties; such uncertainties are the essence of deterrence.

High Frontier will Regain U.S. Superiority

Henry Walther, Executive Vice President of the United States Defense Committee, stated that "the importance of the High Frontier program is that it would defend against any first strike attempt against the United States by intercepting and destroying Soviet missiles and alerting the President of an incoming attack.

Furthermore, if deterrence is the ability to prevent an attack by making its outcome uncertain, then High Frontier is an invaluable key to the future security of the United States.

America needs to boldly implement new offensive/defensive strategies and space-borne systems to regain military superiority.

We Americans have always been successful on the frontiers; we will be successful on the new High Frontier of space.

We need only be as bold and resourceful as our forefathers."

★★★

Dear United States Defense Committee Member:

For more information on High Frontier, write to me personally at the United States Defense Committee or at Project High Frontier, 1010 Vermont Avenue, N.W., Washington, D.C., 20005. I really need to know how many of you understand and support this vital effort to get this country defended again.

Lt. Gen. Daniel O. Graham
USA (Ret.)

WASHINGTON POST 1 APRIL 1983 Pg. 15

James J. Kilpatrick

Futuristic —And Impressive

I seem to be in a relatively small minority, but for the record: I thought President Reagan's speech last week was a first-rate effort. He laid out the disturbing facts on Soviet military expansion; he defended his own defense budget; and in his closing few minutes he touched upon the stuff from which "Star Wars" are made. I found it impressive.

But the reaction around here ranged between ho-hum and ho-ho. House Democrats rushed to approve a budget that would make hash of Reagan's defense proposals. Media critics cried "politics!" On the day after the speech, 20 senior correspondents were invited to one of those not-for-attribution briefings at the White House. Their questions curled across the table with a little spin on the ball: "If you were the Soviets, wouldn't you regard the 'Star Wars' stuff as an escalation of the arms race?"

We have heard so many statistics in recent months on comparative levels of U.S. and Soviet arms that most of us have been pretty well numbed. Even so, accepting the president's figures as accurate, we have to regard the situation as deeply disturbing.

The apostles of pooh-pooh may be correct in saying that when the forces of our allies are put on the scales, the apparent imbalance is less dramatic. Still, the Soviet threat to peace in the world is plainly ominous, and the Soviets' deployment of so many intercontinental missiles is especially disturbing.

Reagan's concluding "vision of the future" thus struck me as especially appealing. "Would it not be better," he asked, "to save lives than to avenge them?" He proposed stepped-up research on bold and far-out defenses against the ballistic missile. The two experts who briefed us confirmed that the president is thinking of powerful lasers and of particle physics—devices that would intercept and destroy ballistic missiles before they reached their targets.

Such a program makes great good sense. Our anti-ballistic missile agreement with the Soviet Union prohibits "development" and "deployment," but it does not bar either nation from basic research. We were told at the briefing that it could take "decades" for the research to reach a point at which actual development and assembly could begin. Meanwhile, our intelligence agencies are certain that the Soviets, for all the bluster of their response to the president's speech, are themselves engaged in the identical basic research.

When you consider the breathtaking breakthroughs of recent years in genetics, computers, fiber optics, satellite communications and the like, nothing seems impossible in the realm of technology. We ought almost to welcome a race with the Soviet Union in these defensive systems. If the means could be perfected by which their missiles and ours were rendered equally impotent, surely we would have achieved a step back from the brink of catastrophe.

U.S. NEWS & WORLD REPORT 4APRIL 1983
Pgs. 29-31

Behind Reagan's Star-Wars Strategy

The President is out to stop more than Soviet nuclear missiles. He also has his eye on the freeze movement.

President Reagan is challenging America's scientists to achieve a technological miracle that would make the successful race to the moon child's play by comparison.

He is calling on them to produce a futuristic weapons system that can guarantee absolute defense against an all-out Soviet missile attack.

In making this move, the President has four objectives:

- Enable the U.S. ultimately to abandon a strategy of massive retaliation to deter the Russians and shift instead to reliance on defensive weapons.
- Restore anti-ballistic-missile-defense weapons, virtually taboo since the signing of the U.S.-Soviet ABM treaty in 1972, as a valid option in defense planning.
- Reverse the mounting trend of opposition to increased defense spending in Congress and across the country by holding out the hope of an ultimate end to the nuclear-arms race.
- Seize the moral high ground in the struggle with the nuclear-freeze movement, which he fears could hamper essential modernization of the nation's strategic forces.

The President in a March 23 televised address to the nation spelled out his alternative Space Age strategy that focuses on ways to "intercept and destroy strategic missiles before they reached our own soil and that of our allies."

Reagan says that his plan, if successful, would eliminate "the threat posed by strategic nuclear missiles . . . [and] pave the way for arms-control measures to eliminate the weapons themselves."

Stormy debate looming. The President's proposal is generating a controversy that could become as intense as the 1969-70 anti-ballistic-missile debate. Critics, political and scientific, charge he is embarking on a potentially dangerous course that will entail staggering costs—possibly hundreds of billions of dollars—and end in failure.

Senator Mark Hatfield (R-Oreg.) declared that Reagan "has, in effect, called for the militarization of the last great hope for international cooperation and peace—outer space."

CONTINUED NEXT PAGE

AVIATION WEEK & SPACE TECHNOLOGY 4 April 1983 Pg.13

Washington Roundup

Laser Research

Air Force space laser research will receive more than a twelve-fold increase in funding from Fiscal 1987 to 1988 under a plan prepared by the Dept. of Defense more than two months before President Reagan's call for definition of a space defense program. **The funding would apply to antisatellite weapons rather than antiballistic missile defense mentioned by the President.** The Air Force antisatellite space laser program, currently at a proposed $36 million for Fiscal 1984, would reach $40.9 million in 1987 and then increase to $518.4 million in Fiscal 1988. Air Force space surveillance research also will receive a large funding increase from $38 million in Fiscal 1985 to $106 million in Fiscal 1986, according to the Defense Dept.'s Five-Year Development Plan. The figures will change many times in future planning. The Army's high-energy laser components research program jumps from $42.4 million in Fiscal 1985 to $103.8 million in Fiscal 1986. **Ballistic missile defense system technology research, another Army project, shows an increase from $538 million** requested for next fiscal year to $1.6 billion anticipated in Fiscal 1988.

The plan also shows there was little increase anticipated over the next five years in charged-particle beam research when the plan was prepared by Deputy Assistant Secretary Clyde O. Glaister, **but a Pentagon official said that could increase as a result of the Reagan increased emphasis on space defense.** Particle-beam research by Defense agencies, excluding the military services, was requested at $33 million in Fiscal 1984 and will increase to $54.6 million in 1988—a small change when compared with the anticipated activities in laser technology.

STAR-WARS STRATEGY...Cont'd

The critical reaction of much of the the scientific community was reflected in the comments of William Jackson, Jr., a guest scholar at Washington's Brookings Institution, who called the President's plan "bizarre." "Such a system," he said, "will never work in the Nuclear Age because of the decided advantage the offense has over the defense."

"So much fanfare." While favoring continued research work on ballistic-missile defense, many scientists questioned the wisdom of giving it such prominence at this time. To quote Victor Weisskopf of the Massachusetts Institute of Technology: "I can't understand why the President put it on the front burner with so much fanfare unless his purpose was political, to sell his military budget to Congress."

The President's call for development of a missile-defense program also is being attacked—especially by Moscow—on the ground that it would lead to violation or repudiation of the U.S.-Soviet treaty. The accord and a protocol, which limit each superpower to a single ballistic-missile-defense site, prohibit the development, production or deployment of anything but fixed-site ABM launchers. Space-based weapons are specifically banned.

White House officials acknowledge that the President's proposal involves potential problems and pitfalls, but they insist that these are being exaggerated.

"This is not a crash Manhattan Project," says a top administration aide. "We're not talking about a specific program to develop a silver bullet that we know is out there." The plan, he explains, is to give higher priority and eventually more funds to researching a scheme to defend against a ballistic-missile attack.

As a White House aide put it: "The program today is subcritical, and we're trying to drive it to a critical program."

Under the most favorable circumstances, administration officials say, the new strategy could not conceivably be implemented before the year 2000. Moscow, they stress, will not be taken by surprise and will have ample opportunity to develop a ballistic-missile-defense system of its own if it chooses to divert resources to that purpose.

These officials concede that it will be necessary to renegotiate the ABM Treaty if and when it is decided that the actual development of a space-based missile-defense weapon is feasible.

In fact, the Pentagon has barely begun to tackle the monumental—some say insuperable—obstacles that must be overcome to develop a leakproof defense against thousands of Soviet nuclear missiles.

What is envisioned is a fleet of at least 24 and as many as 100 space battle stations armed with laser or particle-beam weapons. These would require generators capable of producing power on an unprecedented scale.

Durable mirrors bigger than anything yet produced also must be developed to aim the beam, as well as sensors capable of locating distant targets and distinguishing actual missiles from dummies.

Long shot. Says Thomas Karas, author of a forthcoming book on space warfare, *The New High Ground*, "Shooting at a missile from 3,000 miles in space is like aiming from New York at a garbage can over Los Angeles."

For several years, the Pentagon has operated three programs concentrating on the theoretical and technical problems associated with the development of battle stations in space. These are funded this year to the tune of 150 million dollars. The three programs so far have been conducted less with a view to scoring a breakthrough than to insuring that the U.S. is not caught napping by the Soviets in this field.

A presidential directive issued on March 25 to the Joint Chiefs of Staff assigns these projects higher priority, but no increased funds are contemplated for at least a year.

Karas estimates that "a full-scale anti-ballistic-missile system, designed to offer the kind of protection against all Soviet missiles that space-laser enthusiasts endorse, would cost about 500 billion dollars." Defense analysts point out that the U.S. spent 5.7 billion dollars in the 1960s and '70s to develop and build the ground-based Safeguard ABM setup, ostensibly to protect a Minuteman-missile field around Grand Forks, N.D.

Even if a space-based defense barrier were developed, critics in the scientific community insist there still would be a problem in making it leakproof.

Jack Ruina of the Massachusetts Institute of Technology says that, given the large number of Soviet nuclear warheads, leakage would be inevitable and catastrophic.

"A cold sweat." A ranking officer in the Pentagon's space-research program describes the challenge as seen from the inside: "When I look at the technology required for a laser battle station, I break out in a cold sweat. We are talking about pointing accuracy, optics and laser performance beyond anything done to date. It is a frightening prospect."

Whether or not a space-based defense of the entire nation or even major cities against nuclear attack proves feasible, many experts agree that a program to protect limited targets, such as missile silos, is actually within reach. In fact, the President's new policy could have more effect on this project than on the esoteric schemes for placing ABM's in space. The Defense Department is spending on conventional ballistic-missile-defense research and development 519 million dollars, which is scheduled to be increased to 1.6 billion by the end of 1985. The Soviets devote substantial resources to upgrading the 32 ABM sites that defend Moscow.

Progress in the U.S. is such that in February the Army could conduct its first test-firing of a weapon designed to intercept and destroy incoming warheads at an altitude of 60 miles. The Joint Chiefs maintain that a scheme built around this weapon could be operating by the mid-1990s.

Non-nuclear warhead. The new interceptor presumably overcomes the shortcomings that led to abandonment in 1976 of the Safeguard ABM system. It is armed with a non-nuclear warhead and employs infrared sensors that are not vulnerable to a blinding attack.

The Joint Chiefs see an urgent need for a new ground-based ABM to help overcome the vulnerability of America's Minuteman ICBM force and any future deployment of MX missiles to a Soviet first strike. A special presidential commission weighing the fate of the controversial MX is to report in early April.

Some experts who have testified before the group argued that there is no practical way of protecting the MX without ABM. Richard Burt, assistant secretary of state for European affairs and a professional strategist, went on record in support of that view before joining the department. He characterized ABM as "an important solution to the Minuteman vulnerability problem" and implicitly advocated modification of the U.S.-Soviet ABM treaty to permit the United States to take this route.

Reagan's new posture on nuclear defense tends to lend credibility, as well as political respectability, to that argument, which is likely to figure prominently as the debate over MX missiles culminates in the next several months.

Other areas affected. Whatever the impact on the budget debate—and the first signs were not encouraging for Reagan—the President's call for a new defensive, rather than retaliatory, strategy is likely to have a significant effect in two other controversial areas.

For one thing, consideration of ABM, after more than a decade in cold storage, now will be restored to the strategic agenda—even if Reagan's vision of a system for defending the nation proves impractical.

And the President may be in a stronger position to respond to moral arguments on nuclear weaponry advanced by the nuclear-freeze movement. □

By JOSEPH FROMM with ROBERT S. DUDNEY

NEWSWEEK 4 APRIL 1983 Pg. 88

Calling 'Buck Rogers'

MEG GREENFIELD

I suppose one must yield, or at least defer in some way, to the great weight of argument and opinion against the so-called "Buck Rogers" section of the president's speech on defense and nuclear arms. This is the part in which he recommends a stepped-up effort to find technologies for defending against nuclear weapons, for disarming them or rendering them useless.

What's wrong with this seemingly reasonable proposal? Just about everything, to judge from the immediate reaction of scientists and strategic planners. For one thing, they say, the technology isn't even close to being at hand—so it is probably just a pipe dream. For another, even though Reagan said this quest for a nuclear defense was not intended to supplant the pursuit of negotiated arms reductions in the meantime, many people feel that precisely such a falling away of arms-control effort would occur. And even if it didn't (the argument continues), the prospect of our unilaterally achieving a capacity to defuse or disarm strategic nuclear weapons would so threaten the Soviet Union that God knows what it might be frightened into doing before our defenses were perfected—not to mention what we might be emboldened to do if our project succeeded and we had, in effect, a kind of nuclear monopoly once again. The spirit, if not the letter, of the anti-ABM agreement would be violated, we hear. War in space would be all but guaranteed. And, if all this is not enough, the provenance of the proposal in the first place is suspect: its originators and leading advocates are very right wing, very anti-arms-control guys.

Orthodoxy: All right, all right—no mere columnizer could hope to take on all this. Even we aren't that arrogant or foolhardy. So I surrender. But I do not intend to go quietly. My parting yelp comes down to this: whatever the merits of the individual objections being raised, I sense too great a piling-on here, too immediate and total a springing to the defense of old and—I should have thought—at least somewhat questionable ideas. *Maybe* nuclear stability would be threatened by the president's initiative. But *certainly* nuclear orthodoxy has been threatened by his enunciation of it. What we are learning is that a remarkable constituency has grown up around the idea that we and the Russians can hope for no better than a prolongation of the old balance-of-terror politics: guaranteed mutual vulnerability to nuclear annihilation, this vulnerability to be carefully nurtured and maintained until such time as agreements are reached to restrain and/or reduce and/or finally—this is the hope—eliminate nuclear weapons.

I have spent a certain number of hours in my lifetime arguing with my more disarmament-minded friends that the balance of terror has had its indisputable and indispensable uses. But as one who believes this hideous doctrine has, in fact, over the years, had the practical effect of helping to deter nuclear war, I still don't think of it as representing either the most or the best that is possible by way of preventing nuclear incineration.

> I wish the status-quo gang would try to improve on Reagan's thought, not merely satirize it.

Does anyone? And I have argued, too, that, fearsome as it is, the situation on which it is premised (each side's remaining a hostage to utter destruction by the other) is less dangerous than the strategic alternative in which each side attempts to fortify and defend itself and develop a war-fighting capacity. But I am still made uncomfortable by the implications of the preferred, mutual-hostage strategy. Aren't you? Can anyone feel intellectually or morally content with a position that requires us all to assert, as a matter of national policy, that we are willing to obliterate millions upon millions of innocent, helpless human beings and cause others unimaginable suffering for any cause whatever?

At a purely practical level this particular strategy has had its evident peacekeeping value, mainly by two-way intimidation. But it is becoming impractical now. Its logic has marched ahead, unimpeded, toward an obvious end of the line, and its momentum has driven us all—I include the Soviets in this—to a wholly lunatic place. The grotesque numbers of deployed nuclear weapons and their monstrous explosive potential are testimony to this. The almost comic saga of our own MX missile tells the same story. We and the Soviets are both committed to building bigger and bigger and better and better in order to neutralize the other's advantage. And in doing so we have gotten in the position of those overarmored knights in the late Middle Ages, who managed mainly, by the end, to immobilize themselves: one fall and they couldn't get up. Over time, the steel crossbow, the longbow, the cannon got them.

Alternatives: Many people now recognize the end-of-the-line quality of our nuclear assumptions. Perhaps we *can't* create a large, invulnerable, MX-type land-based missile. Perhaps we have to go to something else. Surely we have to think imaginatively, radically, unencumbered about this. There are alternatives: going to sea with our strategic weapons; creating smaller, lighter, more mobile ones; reaching agreements with the Russians (and others) to control these weapons, to reverse the growth of our arsenals.

But I really cannot see how the record concerning any of these alternatives suggests that it alone is the right course or that it would, if pursued to the exclusion of all else, necessarily lead to a good outcome. In particular, there is a sense in which our arms agreements seem invariably to lead to greater armament: each government can get the assent of its military only by pledging to go ahead with the most formidable and lethal weapons allowed under the agreement's terms. And our history of simplifying and rationalizing our cumbersome nuclear arsenal isn't by itself wholly reassuring, either.

It is an astonishment to me that 14 years after our own first landing on the Moon, and in an age habituated to mind-boggling scientific achievement—including 15-minute lead time to rocket-borne nuclear destruction—"Buck Rogers" and "Star Wars" should be dismissive terms of ridicule for a proposal such as Reagan's. Maybe it really is no good; I don't know. But is no such initiative worthy? Is it unfit for contemplation? Historically, invention has succumbed to other invention, science has bested science. I wish the status quo nuclear gang would try to improve on Reagan's thought, not merely satirize it. I wish they, too, would think radically.

NEWSWEEK 4 April 1983 Pgs.16-18

Rethinking the Unthinkable

Just a half hour after the Democratic-controlled House of Representatives voted last week to slash Ronald Reagan's requested increases in the defense budget by more than half, the Great Communicator was back doing what he's always done best—selling his own program on nationwide television. Armed with charts, graphs and recently declassified aerial photographs, the president hammered away at the Soviet Union's "massive arsenal of new . . . nuclear weapons" and insisted that further cuts in military spending "cannot be made without seriously endangering the security of the nation." But it was no ordinary sales job: Reagan's partisan call to arms was tempered by a plea for the scientific community "to give us the means of rendering . . . nuclear weapons impotent and obsolete" by embarking on a research-and-development effort aimed at providing a futuristic defense against Soviet intercontinental ballistic missiles.

House Armed Services Committee member Les Aspin immediately dismissed Reagan's speech as "part Democrat-bashing and part Star Wars." But it was really much more. The president, said a top White House aide, was trying "to stake out some high ground" in the increasingly volatile nuclear debate—and last week's speech was only the beginning. Reagan will continue the effort with an address in Los Angeles this week that is expected to include a proposal for an interim arms-control agreement with the Soviet Union. Then a week or so later, the administration is planning to unveil a plan—based on the recommendations of a presidential commission headed by former national-security adviser Brent Scowcroft—to reduce U.S. reliance on giant land-based missiles with multiple nuclear warheads. Taken together, the initiatives represent a notable redirection of the administration's nuclear policy and—if Reagan's Star Wars vision of the future comes true—could eventually result in what one presidential aide called "a significant new orientation of our strategic-defense program."

Debate: But the administration offered few specifics, and Reagan's nuclear-defense idea—with all its high-tech, space-age imagery—was bound to fuel a new debate over nuclear deterrence and arms control. For example, will the strategy violate existing arms-limitation treaties—particularly the 1972 agreement limiting Soviet and U.S. antimissile systems and their development? Can American technology devise a system that would be impenetrable by the Soviets or another nuclear power (page 18)? And if so, is it desirable to overturn a doctrine of deterrence that, for all its imperfections, has enabled the world to avoid the use of nuclear weapons for more than 35 years (page 20)?

Reagan's speech and his plan for new antimissile technologies—what he called "a new hope for our children in the 21st century"—had immediate political impact. Moscow attacked the president for wanting "to perpetuate the arms race and carry it over into the 21st century," and flatly charged that his ABM plan would be in violation of the 1972 treaty. Closer to home, House Republican leader Robert Michel, who helped to fight the losing battle against the Democratic trimming of $9.9 billion from Reagan's requested Pentagon budget, worried that the president's speech, combined with his other lobbying efforts, could be "a bit of overkill." He openly wondered whether "people are getting a general image of [Republicans] being rather macho on the defense budget." And moderate Republican Rep. Jim Leach, echoing a fear that Reagan's ABM idea might preclude meaningful arms-control talks, suggested that it was "fallacious to assume . . . that scientists can somehow develop new technologies to render harmless the awesome weapons 20th-century research has wrought."

Fallacious or not, the notion of a space-based, antiballistic-missile system has intrigued Ronald Reagan for some time. National-security adviser William Clark—directed by the president last week to take charge of pushing ABM research ahead—has told aides that he remembers Reagan talking about the possibility when he was governor of California, long before New Right leaders started touting a similar concept called "High Frontier." "He's always been concerned about the hopelessness of the strategy of mutual destruction," says a presidential aide. More recently, defense experts like Dr. Edward Teller, the "father of the H-Bomb," have steadily "pumped up" Reagan and some members of his White House staff about the potential of such defensive-weapons systems.

But the real turning point came six weeks ago after Reagan received a routine briefing from the Joint Chiefs of Staff. The chiefs carefully reviewed the strategic and technological facts of life that have made the traditional triad of nuclear forces—land-based missiles, submarine-launched warheads and intercontinental bombers—an increasingly fragile foundation for the nation's defenses. The distressing prospect of having to boost nuclear firepower to preserve the doctrine of mutual assured destruction (MAD) led to a briefing on recent advances which offered at least the vision of erecting impenetrable missile defense systems. The president seized on the notion with such intensity that even the Joint Chiefs were "surprised," says an aide. "He saw this option much more clearly than they did." Reagan's top defense strategists were even more surprised when the president overruled their objections and decided to make his enthusiasm public.

Leap of Faith: Reagan's leap of faith was doubtless speeded by the growing assault on his defense budget—an attack that has had more to do with spending priorities and political posturing than with the complexities of America's military strategy. House Democrats, for example, were simply reasserting traditional party values last week as they passed a budget increasing Pentagon spending by a modest 4 percent, a rate far below the 10 percent that Reagan wants but closer to the 5 or 6 percent that many Senate Republicans regard as reasonable in the face of growing federal deficits. As the president himself pointed out last week, "these numbers . . . tell us little about the kind of defense program that America needs or the benefits in security and freedom that our defense effort buys for us."

Reagan himself, however, is often guilty of the same defense-by-the-numbers rhetoric. In his speech last week he accused "liberals in the House" of trying to reduce defense spending to "2 to 3 percent"—a calculation the Democrats were quick to dispute—and ignored the call for cuts from arch-conservatives in his own party. The president tried to bolster his case with an ominous picture of a nuclear balance tilted in the Soviets' favor, but he

CONTINUED NEXT PAGE

SPECIAL EDITION -- "STAR WARS"

RETHINKING...Continued

failed to mention that a portion of the Soviet missiles are arrayed against China and left out the British and French missiles aimed at the Soviet Union. And he implied that an extended runway being built on the pro-Cuban Caribbean island of Grenada was a grievous threat to U.S. security—even though the British are helping to build it and a Florida firm is handling dredging for the project.

Cynicism: The space-based ABM idea was tacked on to the president's speech just hours before air time. His political advisers pronounced themselves well pleased. "It was reasoned, gentle—there was a lot of peace in it," said a top aide. "It had to be a plus for him." If, in some other quarters, the proposal met with a certain cynicism, that was understandable. Reagan has, after all, spent most of his public life opposing arms-control agreements and has pressed for bigger and better weapons systems. The "warmonger" image (the so-called "button problem") that the Democrats tried to pin on Reagan in the 1980 campaign still lingers and has been reinforced by his cold-war rhetoric and his apparent reluctance to negotiate with the Soviet Union.

But, in a very real way, the president's nuclear-defense notion is vintage Reagan, and totally sincere: once again, in his blessedly simple fashion, he has envisioned taking a national strategic doctrine that has guided the superpowers for more than 35 years and turned it on its head. His opponents will call this simplistic, his friends will call it moral courage. Rather than force technology to remain a slave to the horrifying doctrine of assured destruction, he asks, why not use technology to change the doctrine?

The trouble is that the answer lies far in the future. Reagan's short-range plans—this week's expected modification of the U.S. position on Europe's missile balance (two proposals were still being considered at the weekend) and next week's Scowcroft commission plan to reduce American reliance on the MX—may still be unacceptable to the Soviets. Moreover, the space technology Reagan hopes will obviate the MAD policies that now govern the debate is still 30 years—and perhaps as many as seven administrations—away. One president with a vision cannot change the world's nuclear calculus overnight.

MICHAEL REESE with THOMAS M. DeFRANK, ELEANOR CLIFT, GLORIA BORGER and DAVID C. MARTIN in Washington

NEWSWEEK 4 April 1983 Pgs.18-20

A 'Star Wars' Defense

Legend has it that around 200 B.C., the Greek scientist Archimedes devised engines of war that for three years held the Romans at bay in their siege of his native Syracuse. One such weapon, made of mammoth concave mirrors, focused fiery sunlight onto Roman warships off the coast and set them afire whenever they approached within bowshot of the city's walls. If true, Archimedes had invented the prototype of a weapon that may someday revolutionize war: the laser cannon. Last week President Reagan invoked the idea of using concentrated light as a weapon not against ships, but against the most awesome weaponry of our time—nuclear missiles. Space-based defensive systems, the president suggested, could "pave the way for arms-control measures to eliminate [nuclear] weapons themselves."

The idea is unquestionably alluring: orbiting laser weapons that could intercept aircraft and missiles within seconds after launch, making ballistic warfare all but obsolete and replacing weapons designed to kill people with weapons that kill weapons. The strategic doctrine that underlies the balance of terror would be turned on its head. No longer would the best defense be a good offense. Rather, both the United States and the Soviet Union could emphasize defense in and of itself, and instead of reeling toward mutual assured destruction, might head toward a state of mutual assured survival. The president cautioned that such a plan "will take years, probably decades," and may not be realized until the next century. But Reagan said current technology has attained a level of sophistication that makes such wonders possible, and his aides likened the endeavor to develop them to John F. Kennedy's 1961 commitment to put a man on the moon by 1970.

Technology: Unfortunately, it may well be impossible to achieve. Apart from its staggering costs, the chief obstacle to the "Star Wars" scenario is that the needed technology does not yet exist. Reagan's vision of a brave new anti-ballistic world stretches the limits of scientific credulity. If American technology could produce an ABM system that was 95 percent effective—a rate most experts regard as a practical impossibility—that would still mean that 1 out of every 20 missiles would get through. Moreover, anti-satellite systems and powerful "space mines" could destroy defensive battle stations before they could fire. And like all other weapons systems, a space-based ABM system would be vulnerable to countermeasures—a pre-emptive strike to blind or destroy the space station, for example.

How much progress has been made in laser technology? Research has been under way since the early 1960s, but until very recently, laser-based strategic defense was a "subcritical" issue. The Pentagon is currently working on a three-part space-based project: the development of a powerful chemical laser, a mirror capable of reflecting its beam with precision over thousands of miles and an aiming mechanism for the laser beam. But not until 1987 will the Defense Department find out whether the project is even feasible enough to go forward with a prototype. Among the ABM possibilities on the drawing boards:

- **Chemical lasers.** These would derive their energy from the spontaneous combustion of hydrogen and fluorine—and are the most advanced of the systems now being developed. But they also have the biggest problems: the chemicals used in the reaction are highly combustible and corrosive, and they emit light in a less effective region of the spectrum.
- **Mirrors in space.** Ground-based lasers would send a beam to giant mirrors in the sky, which in turn would reflect the beams at attacking missiles. The problem with this

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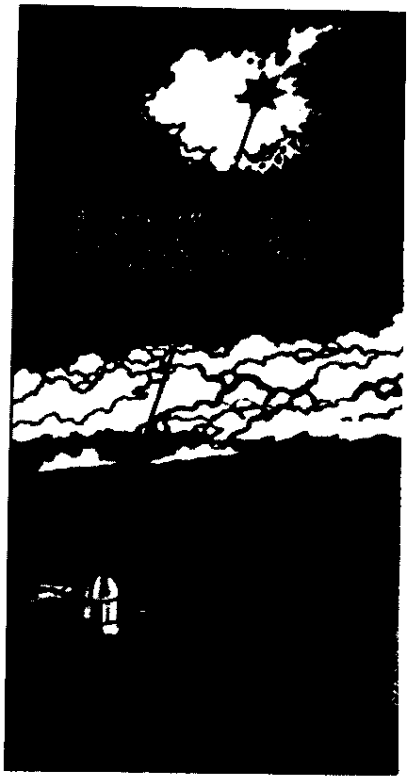

'STAR WARS'...Continued

approach is that when a laser beam operates within the atmosphere, it heats the air through which it passes. The heated air defocuses the beam, causing less energy to reach the target. What's more, such a device would be a fair-weather weapon. What happens when you try to blast an intense laser beam through a heavy rainstorm? Steam.

■ **Particle-beam weapons.** These accelerate protons or ions. Using these charged atomic particles, these weapons could bore into targets, causing structural damage, disrupting electronics and detonating fuel or explosives. These weapons are still in the conceptual stages.

■ **Nuclear-pumped X-ray lasers.** The lasers use energy derived from a small nuclear explosion to slam a brutally intense pulse of X-rays against an enemy missile. Before the detonation, as many as 50 laser rods would be aimed at individual targets; the launched missiles would be obliterated by the impact of the X-rays when the blast occurred. Of all these weapons, the X-ray laser appears to be the most promising and the one President Reagan may well be counting on to "give us the means of rendering these nuclear weapons impotent and obsolete." Although information on the X-ray laser remains classified, the Lawrence Livermore National Laboratory reportedly created an X-ray pulse with the system in a recent underground test in Nevada. The president's chief science adviser, George A. Keyworth II, however, conceded last fall that while it "is an embryonic technology that should be pursued aggressively, I don't see any clear-cut systems application at this time. It's premature. It's at the science stage."

A space-based laser ABM system may, in fact, prove too complex to work. While it may be possible to develop a laser defense against manned long-range bombers, notes Robert S. Cooper, director of the Defense Advanced Research Projects Agency, the problem becomes far more complicated when the targets are ballistic missiles. The defense system would require a surveillance mechanism to detect the launching of enemy salvos, a method to determine whether they were unfriendly and, of course, a highly precise aiming system to zap the target. Long-range bombers, which must spend 5 to 10 hours en route to their targets, give defensive systems plenty of time to zero in; to hit a missile, however, the ABM system would have only a few hundred seconds while the target is being launched. (The individual warheads, which separate from the missile after the boost stage, must be hard enough to withstand re-entry into the atmosphere, and are therefore much more difficult to destroy.) "I've devoted my life to systems and to the technology that goes into systems," said Cooper recently, "and my judgment is that we now cannot manage the complexity of the kind of system that we're talking about."

Verification: There is also the problem of verifying kills—the system's ability to determine whether its laser has destroyed the target. "Do you assume that if the laser has been pointed at the target for a calculated sure-kill time that destruction can be assured?" asks Wallace D. Henderson, vice president for systems integration at BDM International Corp., which does classified laser research for the Defense Department. Henderson points out that to be wholly effective, a laser space station should be able to determine that it has hit one target before re-aiming at another. But that is very difficult, he says. "It may be several seconds before a mortally wounded booster departs sufficiently from a ballistic trajectory to be declared no longer a threat." By that time, the system may have lost its chance to refocus on another threat.

Finally, the space stations themselves

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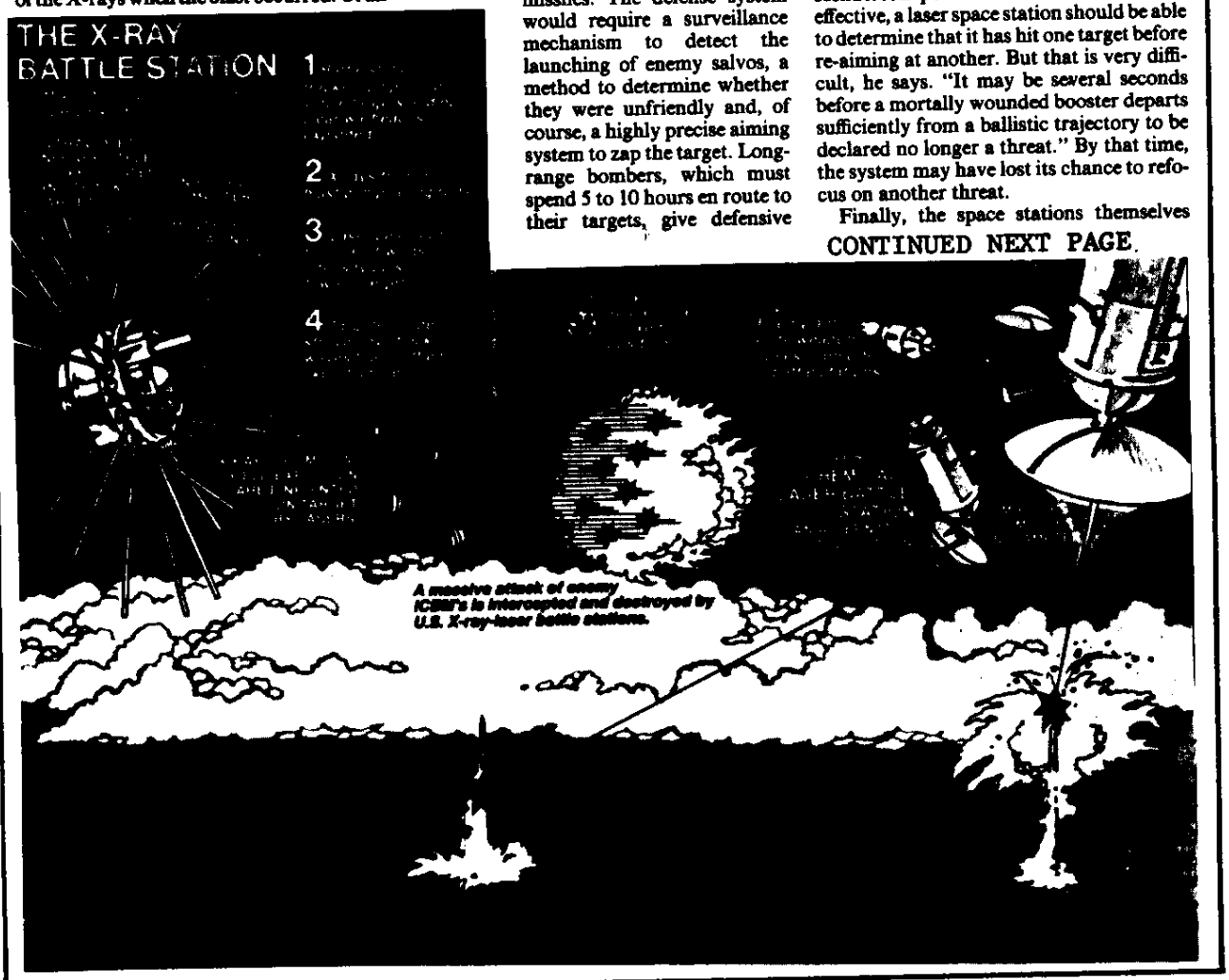

A massive attack of enemy ICBM's is intercepted and destroyed by U.S. X-ray-laser battle stations.

'STAR WARS'... Continued

would be vulnerable. The killer satellite, an orbiting kamikaze designed to destroy enemy satellites by pulling up next to them and exploding, is a formidable weapon against space-based ABM stations as well. The Soviets have had anti-satellite (ASAT) capability for about a decade and are believed to have a considerable lead in satellite and laser technology. (Defense Department officials estimate the Soviet high-energy laser program is three to five times the size of America's.) Although both the Soviet ASAT and the American version now in development are effective only against low-orbiting targets, it is conceivable that an ASAT could be equipped with lasers to attack higher altitude targets such as ABM stations. More simply, each superpower could fire a nuclear warhead into space and explode it, unleashing an "electromagnetic pulse" that might damage whatever was nearby.

Feasibility: The specter of space mines and ASAT's equipped with high-energy lasers greatly complicates the task of operating an ABM system. As Henderson points out, protection of our bases would seem to require the establishment of "keepout" zones in space large enough to negate the effects of space mines. Space stations would have to be hardened to withstand possible laser attack—yet another technological challenge. According to Henderson, "these questions of operational utility and feasibility call for detailed consideration before greatly increasing emphasis on laser-system technology. It could be embarrassing to spend billions to demonstrate the adequacy of technology to support development of a space high-energy laser system that could be operationally marginal or easily defeated."

Still, there are those who believe these technological and operational glitches can be overcome. Edward Teller compares Reagan's decision to push ahead with ABM research to Roosevelt's decision to build the atomic bomb. "In both cases, [the president] took a strong stand which in the former case was decisive and which in the present case I hope will be decisive," Teller told NEWSWEEK's William J. Cook. "This decision, I hope, will convert the cold war into real peace. That is clearly the intention—and it is very much more than wishful thinking because there are real proposals, real possibilities behind it."

That is one view. Another was voiced last fall by a Reagan defense expert who suggested that laser weapons are a highly questionable cure: "The high-energy laser is to warfare what laetrile is to cancer." But Reagan may have reached for the stars because he believed that only a 21st-century solution could break the nuclear deadlock. The question is whether his is a workable dream—or whether the ABM system will remain as mythical as Archimedes's mirror machine.

MICHAEL A. LERNER with WILLIAM J. COOK and MARY LORD in Washington

NEWSWEEK 4 April 1983 Pgs.20-22

A New Nuclear Heresy

The president's proposal to develop an antimissile shield raises profound questions about deterrence.

Ronald Reagan is not the first leader of a nuclear power to propose antiballistic-missile technology as a key to world peace. Soviet Prime Minister Aleksei Kosygin holds that honor: back in 1967, at the U.S.-Soviet summit meeting in Glassboro, N.J., Kosygin argued that ABM systems were "humane weapons" that "defended people" instead of threatening them. At that point, Defense Secretary Robert S. McNamara and President Lyndon Johnson persuaded Kosygin that just the opposite was true: that the first nation to achieve both offensive and defensive capabilities might well be tempted to launch a devastating nuclear first strike. Thus began talks that eventually led to an ABM treaty.

UPI

Brezhnev and Nixon toast treaty signing: Is the ABM agreement undermined?

To the degree that Reagan's speech last week represents a turn away from the Glassboro understanding, it raises profound questions about the direction of America's strategic policy in an increasingly precarious nuclear age. "If we go ahead on this [ABM development] the Soviets are bound to match it," warns former U.S. arms negotiator Gerard C. Smith. "Instead of one arms race, we'll have two." And yet there is an undeniable moral and even intellectual appeal to Reagan's "vision of the future" in which national security no longer rests upon "the threat of instant . . . retaliation." Instead of an Armageddon of mutual assured destruction (MAD, in think-tank parlance), futurologist Herman Kahn sees the prospect of "mutually assured survival." Instead of today's maddeningly convoluted, almost theological "if he—then we" war-gaming, the president suggests a benign, scientific invulnerability.

Moreover, the president's proposal—vague and long-range though it may be—reflects a growing belief among arms experts and some military officials that modern nuclear technology and longstanding U.S. defense strategy have fallen seriously out of step. A shift to primary dependence on antimissile systems would mark a sea change in that strategy, but a more modest step is likely far sooner if the president accepts, as expected, the recommendations of a special White House advisory panel on the controversial MX missile. The panel, headed by former national-security adviser Brent Scowcroft, is expected to propose a historic first step away from the supersize missiles with numerous warheads or MIRV's (multiple independently targetable re-entry vehicles) that once seemed likely to be this nation's most awesome defense. That recommendation could put the future of MX itself very much in doubt.

Strangelovian: The emphasis on ABM technology, and the de-emphasis of MIRV, represent new approaches to the old game of arms control: a continuing effort to structure U.S. and Soviet strategic forces so that neither side has the incentive to launch a first-strike surprise attack. At the outset of

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NEW NUCLEAR HERESY...Continued

the arms race, deterrence consisted solely of having sufficient weapons so that enough would survive an all-out attack to devastate the enemy country in all-out retaliation. Then the nature of nuclear weapons and strategy grew more sophisticated. The new presumption was that each side would try to destroy the other's missiles and war-fighting capabilities without vaporizing civilian populations. But MIRV technology increased the advantages of a first strike—at least on paper. In theory, one missile carrying 10 warheads could wipe out five missiles caught in their silos—each with 10 warheads of its own. (In the Strangelovian nuclear calculus, two warheads are needed to ensure an enemy missile is "killed.") MIRV's also made it less likely that the war could be confined to military targets. Could all those strikes and counterstrikes be carried out with such surgical precision that they did not trigger—or approximate—all-out war? Not even the experts can be sure.

A shift to defense-oriented nuclear strategy, say its proponents, could dramatically alter the shape of the arms race. By the year 2000, says H-bomb pioneer Edward Teller, the United States could be spending 95 percent of its military budget on defensive systems that are far less expensive than the amount of added offensive weaponry the Soviets would need to overcome them. "It's easier to do arms control if the emphasis is defensive, not offensive," says Herman Kahn. But other scientists sharply disagree with that assessment, pointing out that a hi-tech missile defense—even if it could be built some time in the next century—would be far more vulnerable and provocative than the shimmering protective force fields of scifi mags and "Star Trek" spinoffs. "It's a Pandora's box of unprecedented magnitude," argues Cornell University physicist Kurt Gottfried, a member of the Union of Concerned Scientists.

Repudiation: The race to obtain a truly effective antimissile technology—a race the Soviets would certainly enter—could indeed prove to be far more dangerous than the current phase of competition. At some point in the research, both sides would risk abrogating the restrictions on development, testing and deployment that are the heart of the ABM treaty signed by Richard Nixon and Leonid Brezhnev in 1972. Abrogating the treaty would mean an explicit repudiation of the doctrine of assured destruction that for better or worse has enabled the superpowers to escape nuclear war for the past 38 years. It would also cast aside the only example of mutual forbearance in the development of new strategic technology.

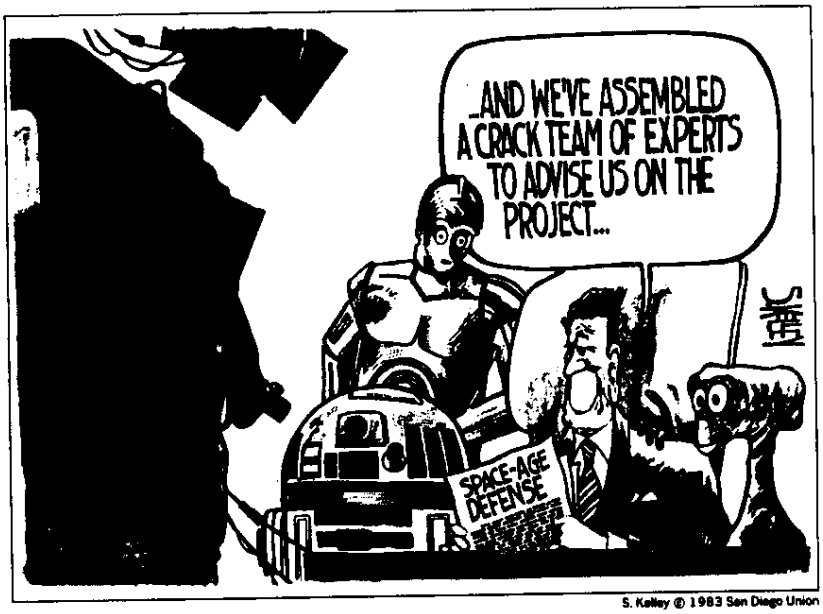
Implicit, too, in the development of an antimissile system would be development of systems to neutralize it: killer satellites, space mines, laser cannons. This would move the deadly chess game of deterrence from the earth's surface (or below it, in the case of missile-armed submarines) to outer space. And all of that would set the stage for a whole new range of flashpoints that could trigger nuclear war. Would the sudden loss of signals from a U.S. antimissile satellite, for example, be construed by America as a Soviet act of war? How would Moscow take the destruction—accidental or otherwise—of a Soviet killer satellite? Would each nation's complex, space-borne defensive network turn into a web of deadly nuclear tripwires?

As President Reagan pictured it, the ABM defense would make offensive weapons useless and therefore dispensable. This might be true with a totally impervious, scifi shield, but proponents of stepped-up research on ABM technology concede that even 95 percent effectiveness would be almost impossible to achieve. "Zero leakage . . . is strictly speaking not achievable, and can only be approached for a very light attack," a deputy director of the Army's ballistic-missile defense program has testified. And the assurance that some of their missiles *would* get through is likely to prompt each nation to build up its force of offensive weapons so that the number of surviving missiles is sufficient to destroy all assigned targets.

As the United States or the Soviet Union approaches the point where its antimissile system seems about to become operative—based on observed testing or other intelligence—the risks of conflict in times of crisis could increase dramatically. The other nation would certainly feel threatened by a realization that much of its offensive arsenal would shortly be neutralized. And the nation with ABM technology would realize that the system could cope far better with a weak retaliatory blow than a massive first strike—perhaps prompting leaders to consider launching a first strike of their own. "It would have to be a 'negotiated transition,' and nobody has really looked at this," says Harvard University arms expert Albert Carnesale, coauthor of a forthcoming book titled "Living with Nuclear Weapons." Would it make sense for the two nations to share their antimissile research so that neither one took a threatening lead? Would a U.S. president agree to significantly reduce or eliminate his offensive arsenal as an American ABM system went into place—to ease predictable Soviet fears and demonstrate that the United States would henceforth base its national security on the new hi-tech defense in *fact*, as well as in rhetoric?

Who Pays the Bill? Quite apart from these strategic conundrums is the staggering cost of a 21st-century ABM system. Futurologist Kahn admits that a comprehensive ABM system even with today's primitive technology would require $200 billion, plus a $50 billion annual maintenance fee. "Where in hell is the money going to come from?" asks Arthur Klein of Washington's Center for Defense Information. Some Pentagon officials fear it will come out of the budget for conventional or nuclear weaponry, undermining Reagan's own controversial defense buildup. But Reagan himself said nothing about reordering defense expenditures—thus leading critics to speculate that any ABM funding beyond current levels would be siphoned from domestic social programs or the capital supply needed for economic recovery. Calling the president's speech "a dangerous hoax," nuclear freeze coordinator Randall Kehler said Reagan's "Star Wars military buildup . . . will take the heaviest toll on those Americans who are already struggling to have decent housing, food and adequate health care."

In the short run, and perhaps the long run as well, a more important contribution to



S. Kelley © 1983 San Diego Union

Alternative to Armageddon: Unfortunately, experts say there is no perfect shield

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NEW NUCLEAR HERESY... Continued

stability in the U.S.-Soviet balance may come from the Scowcroft commission on MX. Rather than undertake new technical studies, the panel concentrated on the political realities and the strategic facts of life as outlined to Reagan by the Joint Chiefs six weeks ago. The current triad of U.S. strategic forces, the chiefs explained, has become an ever-more-dubious proposition: no amount of silo hardening now can protect land-based missiles from their Soviet counterparts, U.S. bombers and cruise missiles face increasingly sophisticated Soviet air defenses—and submarines, while so far able to elude detection, remain the least reliable because of navigation and communication problems.

Interim Measure: To reduce the vulnerability of land-based missiles, the Scowcroft panel is expected to recommend that the president phase out the fixed-site, multiple-warhead missiles that have so complicated the nuclear equation. According to sources on the panel, the plan calls for building a full complement of MX missiles but concedes they cannot be placed in "race tracks" or "dense packs" or *any* land base that can survive an enemy attack. Rather, the panel will propose putting MX in existing, vulnerable Minuteman missile silos mostly as an interim measure, a sop to conservative MX supporters and a bargaining chip to tempt Moscow into eliminating some of its own big missiles. Congress, however, citing the lack of survivability, might well authorize deployment of only a token MX force.

Other MIRVed U.S. missiles eventually would be replaced with a down-sized "Midgetman" (30,000 pounds—compared with MX's 195,000 pounds). It would have only one warhead and be based on a heavily armored mobile carrier tentatively dubbed "Armadillo" because of a drill-like device that would anchor it to the ground in case of a nuclear attack. Because of its mobility and its single warhead, the Midgetman would be a far less attractive target than MX for Soviet missiles—both harder to hit and less of a prize than a target with up to 10 warheads.

If the president accepts the Scowcroft proposals, and if they have the intended effect, Americans may feel somewhat more secure without making Moscow feel less so. And it would be a rare case of putting technology into reverse—to produce a smaller, simpler and consequently more stabilizing weapon. Reagan's ABM proposal, of course, seeks stability through precisely the opposite process—a concerted thrust to the very furthest frontiers of technology. Even if that scientific effort proves as successful as any expert could realistically wish, however, it will require enormous diplomatic skill to avoid the pitfalls of further arms escalation and to transform yet another technological triumph into a real foundation for peace.

DAVID M. ALPERN with DAVID C. MARTIN, MARY LORD and WILLIAM J. COOK in Washington

WASHINGTON TIMES 4 April 1983 Pg.C-2

Commentary

Who can object to obsolescing nukes?

JOSEPH SOBRAN

To paraphrase Shakespeare, we know that we know, but we know not what we may know. In an era when our knowledge has repeatedly outleaped our recent speculations, we would be rash to say in advance what we will be unable to discover over the long haul.

How quaint the science fictions of Jules Verne and H.G. Wells look today; in most cases because their fantasies fall short of realities now familiar. Think of Capt. Nemo's submarine, run by electricity.

President Reagan's call for research and development toward a complete anti-missile defense system is an utter masterstroke.

It is, to begin with, an act of faith in the human mind — a faith fully warranted by American history. It comes at a moment of high-tech buoyancy, offering an exhilarating challenge. It appeals to deep yearnings for peace by seeing security as the final fruit of technology, just when we had come to assume that technological progress can only mean greater risk of annihilation.

Above all, it has the paradoxical effect of making the arms race righteous. The sooner we make ourselves immune from missile attack, the sooner we can avoid the temptation to retaliate against Russian cities.

Politically, Reagan's appeal is also masterful. His opponents have been thrown completely off balance. In their beehive reflex to attack him, his critics, from Moscow to Washington, have put themselves in the position of defending the status quo of mutual terror they have been trying to associate with him. He has trumped the freeze movement. The leftist hive can only argue, with lame dogmatism, that it will never work.

Against his message of hope they offer only a counsel of despair.

The fury of *The New York Times* is exceeded only by that of Yuri Andropov. Surely nobody supposes that Andropov is angry because he is afraid an anti-missile system would never work. The more plausible hypothesis is that he is afraid it will work all too well.

Critics argue that even if we do develop an effective system somewhere down the road, the interim will become more risky, tempting the Soviets to strike while their missiles still have some destructive value. But as long as we also have the ability to retaliate, this is a strained argument, proving only that those who make it have less faith in the good will of the Soviets than they demand of the rest of us.

A more rational argument is that the imminence of American immunity from attack gives the Soviets incentive to engage in serious disarmament negotiations, complete with on-site inspections. It also will make them question the value of any further nuclear buildup with the looming possibility that nuclear weapons will lack value even as bargaining chips and blackmailing devices in the event that the delivery system is rendered totally obsolete.

Obsolete. Think of it. Not just condemned by all decent persons or renounced in dubious treaties, but simply useless.

Even if the "Star Wars" approach to defense ultimately proves unsuccessful, it has the immediate effect of illuminating the political landscape. We are now beginning to see which of the advocates of American disarmament really want a nuclear-free world and which really want something else — empty moral grandstanding, the promotion of Soviet interests, the abasement of America.

Already it is remarkable how many of these intrepid moralists are not even attracted by the Reagan vision and refuse to entertain it for even a fleeting moment.

In many cases it is no doubt a simple reflex assumption that any idea that comes from Ronald Reagan must be bad. A pity they feel this way. They are underestimating this imaginative politician once again. The loss may be theirs.

For the rest of us, that vision is too thrilling to dismiss out of hand. It promises to make our country great, the world blessed, our children safe. Let us pray it will be so.

TIME 4 April 1983 Pgs.20-21

The Risks of Taking Up Shields

In the nuclear age, it may be safer when each side has only spears

To President Reagan, a foolproof system for shooting down nuclear weapons is nothing less than "a new hope for our children in the 21st century." Such an antiballistic missile (ABM) umbrella, he said, would make the U.S. safe from attack, the world free from the danger of cataclysmic conflict between the superpowers, and the doctrine of deterrence more credible—and far more humane—than the traditional reliance on the threat of massive retaliation.

To many experts, however, Reagan's dream of a "truly lasting stability" is a nightmare of a new, and highly destabilizing, arms race. It is part of the paradox and perversity of nuclear weapons—and practically an article of faith among those who must think about how to prevent their use—that defensive systems can be every bit as treacherous as the offensive ones they are meant to counter. The reason is that in theory, strategic defenses would tend to upset the balance of terror and increase the chance of war.

According to the definition Reagan used in his speech last week, "Deterrence means simply this: making sure any adversary who thinks about attacking . . . concludes that the risks to him outweigh any potential gains." The President was speaking just about American deterrence of Soviet attack. "The United States does not start fights," he asserted. "We will never be an aggressor."

But the military planners and political leaders in the Kremlin will never proceed on that assumption, nor can they. They want to feel confident that deterrence works the other way and that they could retaliate effectively against an American attack on them. There is no room in the concept of mutual deterrence for one side to claim, as Reagan did, a monopoly on virtue and peaceful intentions. Sure enough, *Izvestia*, the Soviet government newspaper, launched a rhetorical counterstrike at Reagan, accusing him of turning "Washington into a dangerous hotbed of thermonuclear confrontation." Nor is there any way to exorcise from deterrence what Reagan called "the specter of retaliation." That specter is in the nature of nuclear weapons. As Winston Churchill observed nearly three decades ago: "Safety will be the sturdy child of terror, and survival the twin brother of annihilation."

The buildup of strategic defenses could touch off a chain reaction of negative consequences. If the U.S. tried to erect the sort of protective umbrella Reagan has in mind, the Soviet Union would suspect that the U.S. was seeking the capability of destroying the U.S.S.R. with impunity. To forestall that, the Soviets would no doubt accelerate their own already considerable research into defensive weapons, while simultaneously refining their offensive weapons in order to "beat" or "penetrate" whatever ABM system the U.S. devises. In that sense, the worst sin against strategic stability is a good defense—particularly the sort of "prevent defense" Reagan has in mind. ABMs could also be a troublesome factor in the calculations, and miscalculations, that would determine the outcome of a crisis. If one side felt secure against retaliation thanks to its defensive system, it might bet everything on what Harold Brown has called "the cosmic roll of the dice," an attempt to disarm the other side by knocking out its defensive forces.

Moreover, the gamble might be carried out by using ABMs themselves. Any system powerful, accurate and pervasive enough to destroy all the adversary's attacking missiles after they are launched would also, almost by definition, be capable of destroying those same missiles before they are launched. Or, for that matter, an ABM based in space could be used to zap airfields, factories, bunkers or an office building inside, say, a walled fortress on the banks of the Moscow River. In short, an ABM system cannot be, on the one hand, omniscient and omnipotent while at the same time being purely and exclusively defensive—at least not in the eye of a beholder on the other side.

All these cautionary considerations were dismissed last week by Under Secretary of Defense Fred Iklé as "doctrinal blinders that have been in the way for the past 20 years or so." Iklé, like Reagan, sees ABMs as an "alternative" to a deterrent made up of offensive weapons. But offensive weapons would almost certainly remain and quite possibly increase in response to the surge in defenses.

It was American defense intellectuals who first fully appreciated the perils of an interlocked offensive and defensive arms race, with an escalation in either one driving the other. Back in 1967, the Johnson Administration suggested to the late Soviet Premier Alexei Kosygin the possibility of calling off an ABM race before it began. Kosygin's initial reaction was that it would be grossly irresponsible and even crazy for any nation to forgo a system that would allow it to protect itself and its populace.

During the first Strategic Arms Limitation Talks (SALT I), however, the Soviets accepted sharp restrictions on ABMs. They were moved to do so not just by the philosophical wisdom of the American argument, but by the strength of the American bargaining position. The U.S. had started to build an ABM of its own, despite stiff political opposition, so the Soviets had to ponder the implication of unregulated competition as an alternative to negotiated restraint. They also realized the apparent impossibility of an effective ABM. The 1972 SALT I treaty limiting ABMs is the only nuclear arms control agreement still legally in force between the superpowers. As amended in 1974, it restricts each side to one ABM installation. The U.S. has already retired and put into storage its own Safeguard system that was protecting the Minuteman intercontinental ballistic missile field at Grand Forks, N. Dak. The U.S.S.R. still has an operational ABM system surrounding Moscow. The ABM treaty is generally regarded as the most valuable achievement in the otherwise controversial and, to many, disappointing history of U.S.–Soviet arms negotiations.

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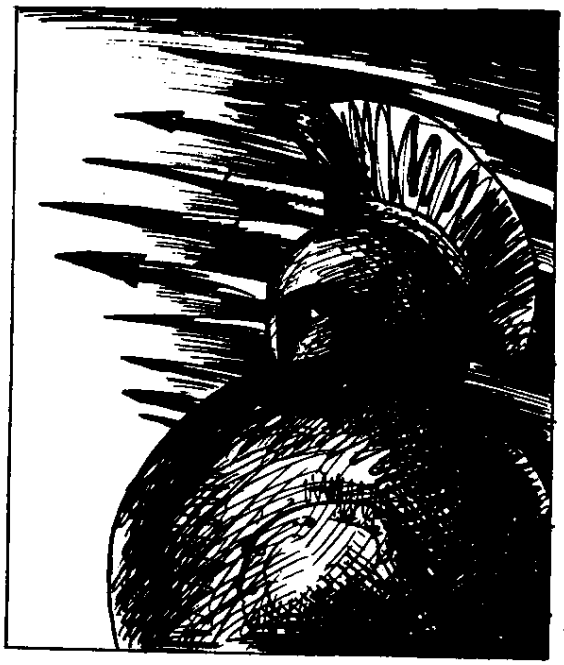
TAKING UP SHIELDS...Continued

Whether the agreement can endure is another question. From the moment it was concluded, U.S. officials made clear that just as a defensive rivalry would fuel an offensive one, so defensive arms control must be accompanied by offensive arms control. In May 1972, Richard Nixon's chief SALT negotiator, Gerard Smith, put his Soviet counterpart, Vladimir Semyonov, on notice that there would have to be a SALT II treaty extending limitations on offensive arms within five years. Otherwise, "U.S. supreme interests could be jeopardized," and the treaty might have to be scrapped.

Jimmy Carter missed Smith's deadline by two years. SALT II was not signed until 1979, and it has never been ratified. Still, the ABM treaty has remained in effect, and Reagan was careful to say last week that his pursuit of a breakthrough in defensive technology would be "consistent with our obligations under the ABM treaty." Making good on that assurance will be tricky, since Article V of the treaty prohibits not just deployment but development of space-based ABMs, as well as more down-to-earth methods.



Reagan's professed adherence to the ABM pact rings a little hollow when examined against the backdrop of his Administration's overall attitude toward, and record in, arms control and defense. In looking for a way to protect the planned MX from Soviet pre-emptive attack, civilian and military officials of the Pentagon have seriously considered various schemes for ballistic missile defenses, or BMD, a land-based system of antimissile missiles that would require drastic renegotiation if not abrogation of the 1972 treaty.

The chief negotiator in the Strategic Arms Reduction Talks (START), Edward Rowny, has voiced skepticism about whether the U.S. should continue to comply with the ABM treaty. In 1972, he says, the U.S. and U.S.S.R. in effect agreed to throw away their shields; since then, the Soviets have acquired an ever more bristling armory of spears; therefore the U.S. must think seriously about picking up its shield again.

Rowny has conveyed a version of this gladiatorial analogy to his Soviet counterpart, Victor Karpov, at the negotiating table in Geneva. Rowny has also reminded Karpov of Smith's warning to Semyonov eleven years ago: the viability of the ABM treaty will depend on progress in offensive arms control.

The Soviet comeback: It is the U.S., not the U.S.S.R., that refuses to ratify SALT II. The Reagan Administration's START proposal would require drastic and immediate cuts in Soviet forces and is unacceptable to the Kremlin for that reason. Therefore, the Soviets argue, the U.S. will have only itself to blame if the ABM treaty collapses and a race to develop defensive superweapons begins in earnest.

Underlying the President's speech and many policies of his Administration is a confidence that the U.S. could win such a race. While decrying what they see as an across-the-board inferiority to the Soviet Union by most measures of military power, Administration officials seem to think that the U.S. enjoys a lasting and at least partially compensating advantage in high technology.

One of the burdens under which the Administration's arms-control negotiators are laboring is an injunction not to trade away, or even accept, significant limitations on weapons systems where the U.S. has a technological lead. For example, American advances in microelectronics and precision guidance put the U.S. cruise missile program well ahead of the U.S.S.R.'s. As a result, cruise missiles have been declared virtually out of bounds for restrictions under START.

This faith in technology as the solution to the country's military problems shone through clearly in Reagan's speech when he called on the American scientific community to "give us the means of rendering these nuclear weapons impotent and obsolete." That faith, however, may be both forgetful about the past and shortsighted toward the future. It is also strangely insensitive to the purely economic costs of opening yet another huge area in the arms race—and, conversely, to the economic benefit of keeping that area closed with arms control.

The Soviets have been able to overcome technology gaps before. The classic, and pertinent, example is multiple independently targetable re-entry vehicles (MIRVs), the warheads on ballistic missiles. MIRVs were an American monopoly in the late '60s. The Johnson and Nixon Administrations decided to proceed with the deployment of Hydraheaded missiles rather than seeking to ban or limit them in SALT I, because MIRVs were a hedge against Soviet ABMs. But the Soviets first caught up with the U.S. in MIRVs, then gained effective superiority by putting them on larger missiles. Now Henry Kissinger and others responsible for the decision of the late '60s wish they had tried harder to cap MIRVs before that genie was out of the bottle.

So it may be with cruise missiles within a few years, and so it may be with exotic ABMs early in the next century, when Reagan is hoping that American children will be safe at last. Today's panacea can be tomorrow's poison, especially if the other side is busily filling the same prescription. Prudence certainly requires that the U.S. continue brainstorming on possible ABM plans, with a wary eye on what the Soviets are up to—but without any illusion that ABMs can make the threats of both Soviet aggression and nuclear war disappear.

The question is not so much whether either the U.S. or the U.S.S.R. can beat the other in a space weapons race. Rather, the danger is that both will lose, each aggravating the insecurity of the other as it strives to keep up. That is a danger that will loom long before the scientists and generals know whether the systems they are so feverishly developing will actually work. And to work, these systems must be 100% effective. Even a tiny percentage of "leakage" (offensive warheads slipping through the defensive net) would mean millions of deaths.

If, in the end, a system did work—if, despite all the skepticism voiced by the experts last week in reponse to Reagan, Yankee faith in Yankee know-how paid off—then a final irony would come sharply into focus. As the U.S. moved closer to actual deployment of any such system, the Soviet Union would be under an increasingly desperate temptation to strike while it still had a chance, to attack before the U.S. not only rendered Soviet weapons impotent, but rendered the Soviet Union itself permanently at America's mercy. There is only one way the U.S. would be able to put its impenetrable, invulnerable antinuclear umbrella in place without the gravest risk of nuclear war: it would have to share its invention with the U.S.S.R. The most striking thing about Reagan's speech last week was his treatment of ABMs as a solution that the U.S. can adopt on its own rather than a problem that must be subject to management with the other superpower. That same instinct for unilateral defense without the benefit of bilateral diplomacy has characterized his custodianship of nuclear weapons more generally.

—By Strobe Talbott

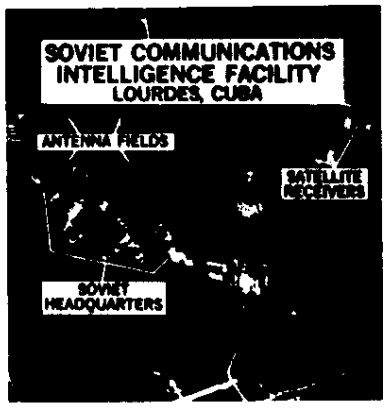
TIME/APRIL 4, 1983 Pgs.8-14, & 19

COVER STORIES

Reagan for the Defense

His vision of the future turns the budget battle into a star war

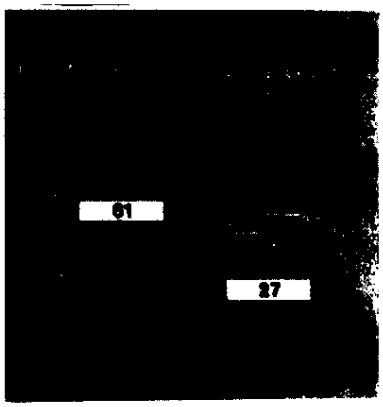
The crusade he has embarked upon requires that he balance two competing messages: the U.S. must resolutely rearm to counter the Soviet threat, but it must project its peaceful intent along with its military might. Congress must be convinced that his $274 billion defense budget for fiscal 1984 ought not to be gutted. The nuclear freeze movement at home and abroad has to be countered so that the U.S. can upgrade its strategic forces and proceed with deployment of NATO missiles. And the Soviet Union needs to be persuaded that the West will not shrink from nuclear competition if its proposals for arms reductions are spurned. In a television address last week, Ronald Reagan confronted this complicated balancing act by graphically depicting what he claims is Moscow's "margin of superiority" while broaching a surprising and controversial idea for preventing nuclear war.

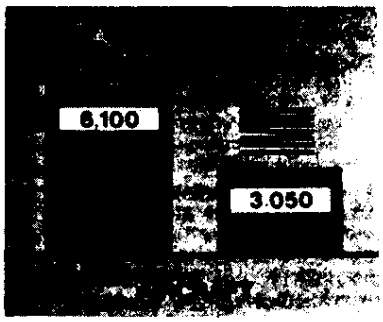


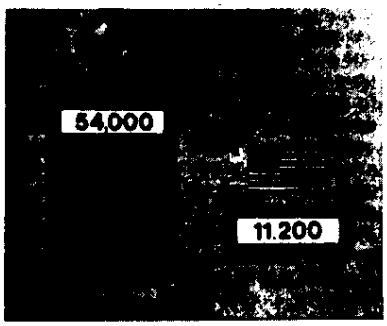
In his speech from the Oval Office last week, Reagan used declassified spy-plane photographs to show the spread of Soviet influence. The communications base, above, is run by 1,500 Soviet technicians. The Soviet helicopters shown in Nicaragua, below, carried the Pope on his recent visit. The Cuban facility pictured behind the President is a landing strip for Soviet MIG fighters. Reagan also used charts like the ones on the far right to show production of conventional arms over the past decade

Reagan refused to retreat an inch in defending what is now proposed to be a $2 trillion, five-year military spending plan. Speaking just 33 minutes after the House voted to cut by more than half his proposed 10% increase in next year's Pentagon budget, the President sharply assailed the arguments of his critics as "nothing more than noise based on ignorance." Said he: "They're the same kind of talk that led the democracies to neglect their defenses in the 1930s and invited the tragedy of World War II." In order to emphasize the offensive threat posed by the Soviet Union, Reagan declassified spy-plane photographs showing Soviet activity in the Caribbean area. His charts showed the five new classes of Soviet ICBMs that have been produced since the U.S. Minuteman was deployed. He compared Moscow's missiles aimed at Europe with the lack of any NATO missiles aimed at the Soviets. And he pointed to a daunting Soviet lead in conventional weapons.

Then, in concluding his down-to-earth defense of his budget, Reagan launched the debate over U.S. military spending into an entirely different orbit. "Let me share with you a vision of the future which offers hope," he began. The President went on to suggest that America forsake the three-decade-old doctrine of deterring nuclear war through the threat of retaliation and instead pursue a defensive strategy based on space-age weaponry designed to "intercept and destroy" incoming enemy missiles. "I call upon the scientific community in our country, those who gave us nuclear weapons, to turn their great talents now to the cause of mankind and world peace: to give us the means of rendering these nuclear weapons impotent and obsolete."







Reagan's video-game vision of satellites and other weapons that might some day zap enemy missiles with lasers or particle beams and the drama surrounding his unexpected an-

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DEFENSE...Continued

nouncement were partly a political ploy to change the context of the debate over defense spending. But if his space-age plan proceeds, or even if the suggestion of a shift in strategy is taken seriously, the implications are staggering. Indeed, as Reagan said, "we are launching an effort which holds the promise of changing the course of human history." Not since 1972, when the antiballistic missile (ABM) treaty was signed as part of the SALT I accords, has the U.S. or U.S.S.R. actively taken steps to set up a defense against nuclear attack.

Embarking on an effort to build shields rather than swords was a characteristic Reagan gesture—a clear and simple assertion from his gut challenging the accepted wisdom that defensive systems are "destabilizing." His notion that missiles could be knocked out in space had a wistful though dangerous appeal; it suggested that the nation could be defended without earthly sacrifice and bloodshed.

As with many of the President's uncomplicated-sounding proposals, the idea of space-age missile defenses masks a swarm of complexities. It raises the specter of an arms race in space, which ultimately could be more expensive and dangerous than the one taking place on earth. In a prompt and strong reaction, Soviet Leader Yuri Andropov personally warned: "Should this conception be converted into reality, this would actually open the floodgates of a runaway race of all types of strategic arms, both offensive and defensive." Even more ominous, the development of a missile defense system could undermine the very foundation of strategic stability, namely, the concept of Mutual Assured Destruction (MAD), which has often been modified, but never abandoned. Under this concept each side is deterred from using its weapons by the fear of cataclysmic retaliation *(see following story)*.

The recognition that defensive systems could upset the nuclear balance was the propelling force behind the 1972 ABM treaty, the only arms-control pact that binds the two superpowers. It declares: "Each party undertakes not to develop, test, or deploy ABM systems or components which are sea-based, air-based, space-based, or mobile-land-based." The Administration says that merely undertaking research into such a project does not violate the treaty. Indeed, the Soviets have been spending perhaps as much as five times the U.S. amount on laser technologies and weapons, although they apparently have not developed such devices for knocking out missiles. Over the past decade, the U.S. has tested lasers against relatively slow-flying drones and antitank missiles. The results were mixed, but good enough to show the concept's potential.

Two retired military intelligence officers, Air Force Major General George Keegan and Army Lieut. General Daniel Graham, have been leading advocates of space weaponry. Graham headed a project, called the High Frontier, which was funded by the Heritage Foundation, a Washington think tank. It reported that technology currently exists to orbit more than 400 "killer satellites" that could knock out Soviet missiles. There were other supporters of the idea, most notably Edward Teller, the hawkish physicist known as "the father of the hydrogen bomb."

Reagan first discussed the question of missile-killing technology with his science adviser, Physicist George Keyworth II, in a conversation two years ago. Keyworth, an admirer of Teller's who helped develop an earlier ABM system, appointed a task force that included Teller, Consultant Edward Frieman and former Deputy Secretary of Defense David Packard. Early this year they informed Reagan that the idea seemed technically feasible, and it was brought up at a Feb. 11 White House meeting with the Joint Chiefs of Staff. Reagan said nothing for the next three weeks, then popped the idea at a morning briefing. He told National Security Adviser William Clark to have the Pentagon and State Department formally consider the project. The Arms Control and Disarmament Agency was left out of the consultation due to the turmoil there resulting from the still unsettled controversy over the nomination of Kenneth Adelman to head the agency.

Reagan felt the need to include a positive element in his speech last week to show that his Administration had a broader vision than simply confronting security problems with greenbacks. So he decided to announce his space-age plan with some public fanfare, rather than simply order that it be studied quietly.* Clark warned Reagan on the day of the speech that he could expect criticism, even from within his Administration, for precipitately suggesting such a radical change in strategy. "It won't be the first time," the President replied. "It doesn't bother me."

In order to preserve an element of surprise in its announcement, the White House restricted discussions of the ABM plan to top officials on what is called a "close held" basis. Most congressional leaders were kept in the dark until the afternoon of the speech. So were most of those on the the political and policy staffs in the West Wing. The paragraphs in Reagan's speech on new defensive technologies were drafted separately and then blended into the speech by the President. The overriding factor in the timing and handling of the issue—one that discomfited a few senior aides—seemed to be the desire for intensive political impact rather than a careful consideration of the subject. The most important ramifications that the Administration has yet to address fully may be geopolitical rather than technological. What course will the Soviets take in response? Moscow, which has a lead in many applications of laser technology, seems unlikely to refrain from exploiting it. If both nations follow parallel roads into space, a new balance of forces could emerge. The President hopes that an emphasis on defensive weapons could be linked to a negotiated reduction in offensive missiles. But the Administration has not even begun to work out the possible contingencies involved in a Soviet-American military space race. If either side nears the point of deploying an ABM system first, the strategic situation could become dangerously destabilized, especially if offensive weapons have not yet been reduced.

What has been dubbed at the White House the "star wars add-on" actually tended to obscure the real substance of Reagan's speech, which was part of a series designed to rally support for his defense budget. In what staffers jokingly call the "Darth Vader" speech, Reagan told evan-

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*Reagan actually proposed such a plan before. It was outlined in a White House position paper on defense in October 1981: "We will expand ballistic missile defense research and development for active defense of land-based missiles. We will develop technologies for space-based missile defense."

THE HIGH FRONTIER

FOR YOUR EYES ONLY
4/4/83

When President Reagan delivered his speech on 23 March calling for development of a system to defend the United States against nuclear missiles, he hastened to add that it would be a project lasting decades. Network commentators reinforced this point. The theory of a defense against nuclear missiles is exactly that, a theory. It is based on technology (lasers, particle beams, etc.) that hasn't been invented, let alone tested, developed, and produced. A network of defensive satellites will cost $1 trillion and take 20 years to build. This, of course, is the message that has been echoed in the media for the last 2 weeks.

There is at least one "think-tank," however, that claims this assessment of the potential for nuclear defense is wrong. The High Frontier Project Office, a branch of the conservative Heritage Foundation, has proposed a two-stage defensive system (known as "High Frontier") that can defend the United States with existing technology. According to their analysis, which is heavily backed up with easily verified facts, the first stage of their system could be tested within 60 days and fully operational in 2-3 years. The second stage could be tested within 2 years and fully operational in 5. The total cost would be considerably less than $50 billion in then-year dollars, and all needed technology already exists, much of it literally sitting in warehouses.

That's a strong statement, but retired Army Lt. Gen. Daniel O. Graham, former head of the Defense Intelligence Agency and now the director of High Frontier, claims he can prove it.

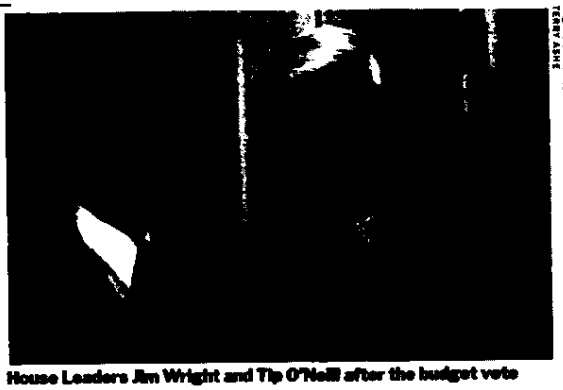
DEFENSE...Continued

gelical Christians meeting in Orlando, Fla., in early March that the Soviet empire was "the focus of evil in the modern world." This Thursday, the President will outline the U.S. position on European-based missiles in an address in Los Angeles and next week will make another speech on the need for the MX missile. In addition to presidential speeches, the Administration has been conducting classified briefings for Congressmen in the White House theater on the Soviet military threat.

Even with this concerted public relations offensive, the Administration will have serious trouble salvaging what it considers to be an acceptable defense budget in Congress. House Democrats last week passed their own version of a budget for fiscal 1984, which begins in October. Depending on how inflation is calculated, the Democratic plan raises defense spending by about 2% to 4%, compared with the more than 10% after-inflation boost that Reagan wants.

The Democratic leadership used various parliamentary maneuvers to ensure that the budget plan it had worked out would be considered as a whole; the only amendment they would permit was a substitute of Reagan's proposed tax and spending package. But no Republican was willing to introduce the Reagan version of the budget on the floor for fear of being politically tainted by its large deficit ($188.8 billion) and whopping increases in defense. The G.O.P. members preferred instead to let the Democratic proposal, which calls for tax hikes of $30 billion and deficits of $174.5 billion, be the focus of debate. Reagan personally lobbied against the budget alternative, mostly with Democratic freshmen. He told Ronald Coleman of Texas that the Democratic plan was "way out of line." Army Secretary John Marsh also called Coleman, subtly reminding the Congressman that Fort Bliss was in his district. Coleman stuck with his party. "Even though I'm a freshman, I think there's enough of us not to let anything happen to Fort Bliss," he said. The 26 seats won by the Democrats last fall tipped the balance: on what was close to a party-line vote, the Democrats budget passed, 229 to 196.

The Democratic budget plan will not pass the Republican-controlled Senate, of course. But the President will have trouble prevailing there too. On defense spending, Republican leaders in the upper chamber are closer to the Democrats in the House than their leader in the White House. They have publicly urged that the growth in the Pentagon budget be cut to about 5%. The more pragmatic members of the President's staff, led by James Baker, are hoping for a compromise at about 7%. For them to persuade the President to come down to that level may be as difficult as getting Republican Senators to come up to it.



House Leaders Jim Wright and Tip O'Neill after the budget vote

Senator Inouye delivering the Democratic response to Reagan

"Most respectfully, Mr. President, you know that is not true."

Underlying Reagan's speech last week was his unwavering contention that questions about the proper level of military spending should be divorced from the nation's overall budgetary and fiscal situation. The determining factor, Reagan insisted, should be the level of threat posed by the Soviets. "Our defense establishment must be evaluated to see what is necessary to protect against any or all of the potential threats," he said. "The cost of achieving these ends is totaled up and the result is the budget for national defense."

Reagan somberly detailed the overwhelming nature of these threats as he sees them. Using red and blue charts marked with the Soviet sickle and the American flag (which inexplicably contained 56 stars), he compared the production of armaments since 1974: 3,050 tactical warplanes for the U.S. *vs.* 6,100 for the Soviets, 27 U.S. attack submarines *vs.* 61 Soviet ones, 11,200 U.S. tanks and armored fighting vehicles *vs.* 54,000 for the U.S.S.R. He also displayed a graph of the unilateral increase in Soviet intermediate-range missiles aimed at Europe, noting the pledges made by Kremlin leaders at each point in their buildup. Critics claimed he did not make clear how the comparisons compelled precisely the spending increase that Reagan proposed, rather than one twice as big or one half the size, since the President was essentially contending the military budget should have nothing to do with the nation's ability to afford the spending.

The question of using spy-plane photographs to bolster Reagan's charges of Soviet involvement in Latin America was debated within the intelligence community. Reagan felt that if the public could see what he sees, it would be more willing to rally around his policies. So, less than two weeks after he signed an Executive Order clamping down on leaks of classified material, he ordered three reconnaissance-plane photographs declassified. He did, however, accede to intelligence agency arguments that the release of additional satellite photographs would reveal too much about U.S. techniques.

Reagan's display of the photographs was not done in a sensational manner, and the evidence revealed in two cases was hardly more than what tourists could have gathered on the ground. Comandante Tomás Borge, a leader in Nicaragua's Sandinista directorate, scoffed at the idea that the Mi-8 Soviet helicopters Reagan pointed out on an airfield at Managua were threats to American security. They are familiar sights at Managua's airport. One was used to transport Pope John Paul II during his visit there in March. Borge told TIME: "You can see them without climbing into a satellite."

The photographs did, however, illustrate an important point that Reagan made: the Soviets are "spreading their military influence" to America's backyard, and doing so in a way that indicates that their aims are far from merely defensive. Pointing to a new 10,000-foot runway on the tiny Soviet-aligned Caribbean island of Grenada (pop. 110,000), Reagan noted: "Grenada doesn't even have an air force. Who is it intended for? The Caribbean is a very important passageway for our international commerce and military lines of communications. The rapid buildup of Grenada's military potential is unrelated to any conceivable threat to this island country." Two photographs of Cuba reveal a communications facility staffed by 1,500 Soviet technicians, which the President said is the largest of its kind in the world, and an airfield from which two modern So-

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DEFENSE...Continued

viet antisubmarine planes are operating. "During the past two years, the level of Soviet arms exports to Cuba can only be compared to the levels reached during the Cuban missile crisis 20 years ago," Reagan said.*

Reagan's figures are technically accurate, and the Soviet buildup has indeed been formidable, but there is still ample room for dispute over what the numbers mean. Daniel Inouye, in the official Democratic response, argued that it is wrong to think that the Soviets enjoy a strategic superiority, as Reagan asserted. Said the Hawaii Senator: "Reagan left the impression that the U.S. is at the mercy of the Soviet Union. Most respectfully, Mr. President, you know that is not true. You have failed to present an honest picture." Inouye said that Reagan failed to point out that the Soviet Union's advantage in land-based missiles is "more than offset" by American warheads on submarines and bombers; the total nuclear warhead arsenal of the U.S. is 9,268, compared with 7,339 for the Soviets. (These numbers, from a Democratic Party study, differ somewhat from the most recent Pentagon reports, which say the U.S. has about 9,000 warheads and the U.S.S.R. has about 8,500.)

*In 1979, President Carter cited with alarm aerial evidence that a 2,000- to 3,000-man Soviet brigade was training and operating in Cuba. He publicly asked that the troops be withdrawn; they are still there.

Some skeptics charged that the speech was part of an increasing Pentagon propensity toward "threat inflation." Explained Congressman Les Aspin of Wisconsin: "We are seeing a more exaggerated and disingenuous presentation of the Soviet threat than we have seen in the past." As an example of how this works, critics point to Defense Department hype two years ago for the new Soviet T-80 tank. It was depicted in briefings and a Pentagon publication as fast, heavily armored and bristling with grenade and missile launchers. That was when the Administration was anxious to secure funding for America's new M1 tank. A recent photograph released by the Pentagon in its latest assessment of Soviet strength shows that the T-80 is actually only a slight modification of its predecessor, the T-72, with similar shape, armor and capability.

Reactions to Reagan's defense of his military spending plans were dwarfed by the debate over his vision of satellite missile killers. "To inject and hurl out this new idea while the whole world is waiting for the U.S. to come up with a reasonable arms control proposal I find bizarre," said Democratic Senator Christopher Dodd of Connecticut. "Can you imagine the reaction here and abroad if Yuri Andropov had made this speech?" Others were appalled at the enormous potential costs of a space race. Said Republican Senator Mark Hatfield of Oregon: "It is a call to siphon off the meager and inadequate commitment

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The Old Lion Still Roars

"The President's statement bears some analogy with President Roosevelt's interest in Einstein's letter about the atomic bomb. In historic importance, the two are comparable."

That may sound like an extravagant appraisal of President Reagan's proposal to develop a defense against nuclear missiles. But it comes from the only man who had a hand in both those decisions, 44 years apart. As a young refugee from Hungary, Edward Teller was part of the group of physicists who persuaded Albert Einstein to draft his famous 1939 letter advising F.D.R. that a nuclear bomb could be designed. Teller went on to help develop it and, in the 1950s, win universal recognition as the "father of the hydrogen bomb." Now, gray and limping at 75 but booming out sharply worded opinions in a voice as powerful and confident as ever, Teller is one of the advisers who convinced Reagan that a missile-killing system based on laser- and particle-beam technology is feasible.

ENKELIS—BLACK STAR

Edward Teller in California: "I tend to be an optimist"

Teller's influence these days is indirect. A senior research fellow at the Hoover Institution at Stanford University, he serves the Government only as a member of the Air Force scientific advisory board. But the highly hawkish views that have made him a suspect figure to many fellow scientists win him respect from the Reagan White House, where he is an honored guest. He was among the 13 scientists who dined at the mansion last week. More to the point, Reagan's science adviser, George Keyworth, 31 years younger than Teller, has long admired the old lion and included him in a group of outside scientists who reviewed antimissile technologies for the President last summer and found them promising. Says Teller about "my President": "He has endorsed high technology as a means by which a more stable world can be created. Such confidence in imaginative approaches . . . is remarkable news."

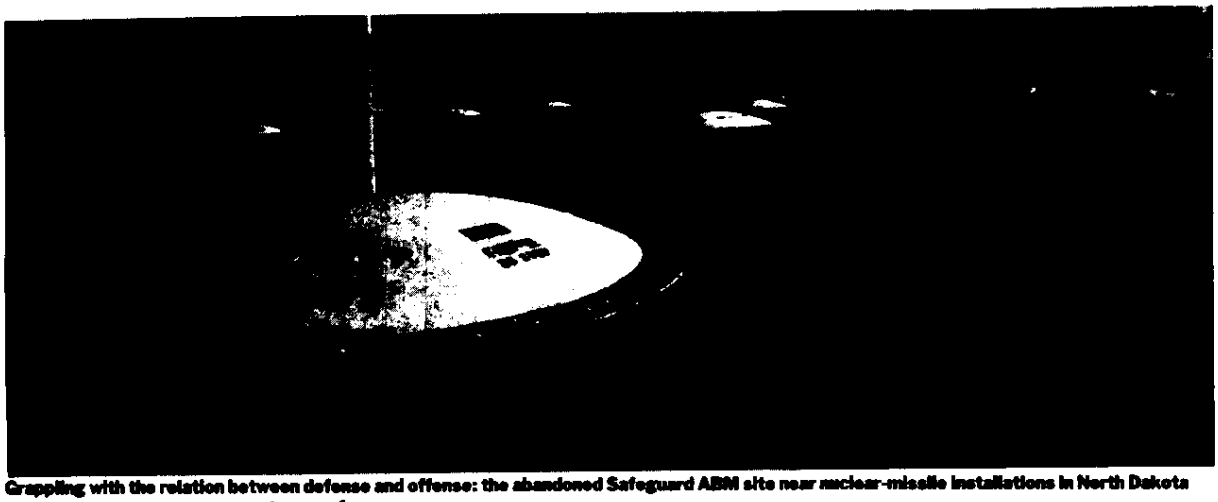
Reagan did not need to consult Teller personally or even through Keyworth; he could have learned the aged physicist's views by picking up a newspaper or magazine. Teller has been arguing for an antiballistic-missile system since the mid-1960s. He fell silent after the signing of the treaty banning such systems in 1972, a grievous mistake, in his opinion, but has taken up the cudgels again in a spate of articles during the past two years. His opinions, as summarized for TIME Correspondent Dick Thompson last week, dismiss contrary opinion as vigorously as ever.

▶ On how long it would take to develop a working antimissile system: "Fission was discovered late in 1938, and the first atomic bomb exploded in the summer of 1945. To my mind, our job today is comparable; perhaps more difficult, perhaps more easy. I tend to be an optimist."

▶ On the necessity for it: "We need to be in a situation where we are not subject to nuclear blackmail, where no matter how other conflicts come out we can at least be safe at home, without allies. I don't believe that the United States can maintain its happy position in the world—I don't even think we can survive—without high technology."

▶ On the balance of nuclear power: "If we have a defensive advantage, the Soviets can be very sure that this is no real danger to them. They know we are not going to use it; we are not going to start a nuclear war. But if the Soviets should have a defensive advantage, that would be dangerous."

▶ On the interim period: "We need a good defense, and a good defense of necessity is preceded by a marginal defense and later by a better defense. We will be able to defend ourselves if we stand behind the President."



Grappling with the relation between defense and offense: the abandoned Safeguard ABM site near nuclear-missile installations in North Dakota

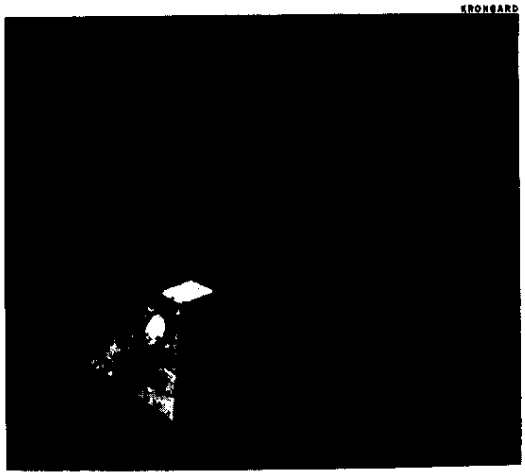
DEFENSE...Continued

which now exists to rebuild America." A few Senators, including Republicans Pete Domenici of New Mexico and Malcolm Wallop of Wyoming, have long been urging such a project. The reaction from most others was guarded curiosity. "It's worth putting out and debating," said Senator William Cohen, a Republican from Maine.

The White House reported an outpouring of supportive calls and telegrams after the speech (80% out of 2,800 in favor). Said Senior Adviser Michael Deaver: "He has had the most favorable response to any speech since he was elected President." But editorial reaction from around the country was more skeptical. The Atlanta *Constitution*, which labeled Reagan's characterization of the Soviet threat as "huckstering misimpressions," said that by "raising the remote possibility of a sci-fi defense against Soviet missiles, he risked destabilizing the U.S.-Soviet military balance—already dangerously tenuous." The Chicago *Sun Times* called the speech "an appalling disservice." Said the Detroit *Free Press:* "Reagan's vision of a 21st century in which the U.S. will be hermetically sealed against all nuclear attack provides no answer to the problem of how our national security is to best be addressed now and in the next couple of decades."

There was some feeling, however, that Reagan's challenge to a system of deterrence that is based on the threat of mutual destruction could be a welcome element in the debate over nuclear policy. "Reagan now suggests that we slowly start investigating whether in the next century technology may offer a solution to our security that does not rest on the prospect of mass and mutual death," noted the Washington *Post*. "It is the product of Ronald Reagan's peculiar knack for asking an obvious question, one that has moral as well as political dimensions and one that the experts had assumed had been answered, or found unanswerable, or found not worth asking, long ago."

Moscow's response was far less generous. For the second time since coming to power, Andropov chose to respond personally to a U.S. initiative through an interview with *Pravda*. He began by conceding that part of what Reagan said was correct: "True, the Soviet Union did strengthen its defense capability. Faced with feverish U.S. efforts to establish military bases near Soviet territory, to develop ever new types of nuclear and other weapons, the U.S.S.R. was compelled to do so." But then he struck back, saying of his American counterpart: "He tells a deliberate lie asserting that the Soviet Union does not observe its own moratorium on the deployment of medium-range missiles [in Europe]." When he addressed Reagan's idea of space-age defensive ABMs, Andropov became heated. "It is a bid to disarm the Soviet Union in the face of the U.S. nuclear threat," he said. The relation between offensive and defensive weapons cannot be severed, he argued. "It is time Washington stopped devising one option after another in search of the best ways of unleashing nuclear war in the hope of winning it. Engaging in this is not just irresponsible, it is insane."



KRONGARD

Pyramid-shaped radar station that would have guided ABMs

Strategic stability now depends on mutual vulnerability.

Reagan invited a group of 52 scientists and national security experts to the White House Wednesday night to view his speech and be briefed by top officials. Some of those who attended, such as Teller and David Packard, a co-founder of the Hewlett-Packard Co., were longtime advocates of ABM research. Said Packard: "Technology has moved ahead to the point where we could design a ballistic missile defense system which could be fully effective. If both sides had a defensive system, it would be stabilizing."

But other scientists who were at the White House briefing, including Victor Weisskopf of M.I.T., Hans Bethe of Cornell and Simon Ramo of TRW Inc., are troubled by the plan. "I don't think it can be done," says Bethe, a Nobel laureate in physics. "What is worse, it will produce a star war if successful." Ramo, one of the developers of the ballistic missile, likes the idea in theory but says, "We don't know how to do it." He also worries about the awesome offensive power that would be inherent in what are conceived of as defensive weapons. Asks Ramo: "Who says that this technique will be used only to knock out missiles in the sky? If

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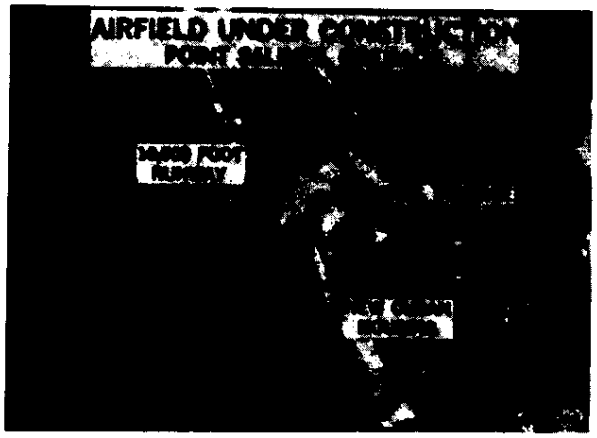
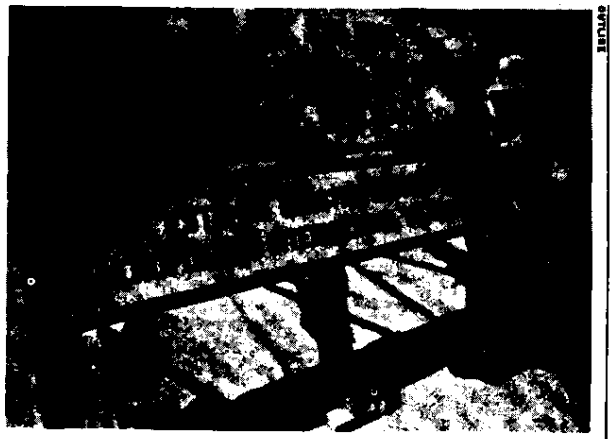
DEFENSE...Continued





Aerial photograph declassified by Reagan showing the airport being built in a small (pop. 110,000) Soviet client state in the Caribbean, and the same field as seen from the ground. Said the President: "Grenada doesn't even have an air force. Who is it intended for?"

it's such a good technique, why not use it to knock out things on the ground?"

Scientists also believe that any satellite antimissile system could lead to more emphasis on low-flying missiles, like the cruise, that would not be vulnerable to space defenses. The satellites could also be vulnerable. "Many potential counters, such as decoys or space mines, have the power to neutralize space-based systems," says Stanford University Physicist and Arms Control Expert Sidney Drell. His colleague Arthur Schawlow, who won the Nobel Prize for his work on developing the laser, agrees: "A laser battle station out in space would be a sitting duck."

The fact that new weapons could probably evade or destroy satellite defense systems makes the technology Reagan envisions incalculably expensive. "The offense can add dimensions to thwart or neutralize the defense for far less money than the cost of defensive systems," says Ramo. "Hence it's economically unsound." Jeremy Stone, director of the Federation of American Scientists, agrees. "The cost is unlimited," he says, "because what we try to do in defending the country, the Russians will attempt to negate by penetrating the system."

Even if such a system could survive, points out another Stanford physicist, Wolfgang Panofsky, it is "infeasible" to design a defense that will intercept all missiles. "It is possible to develop a system that can shoot down one missile, but that is a long cry from developing a system that does not leak," he says. Such shortcomings in a nuclear defense system clearly would be disastrous. Even if a system were 90% effective, the leakage of just a fraction of Moscow's 8,500 or so warheads could be devastating. Says Kosta Tsipis, co-director of a program in science and technology at M.I.T.: "The critical failure of all these defensive systems is that they must be perfect. Less than that and they are ruinous. What the President is offering is a cruel hoax."

Carl Sagan, the Cornell University astronomer and author, and Richard Garwin, a military expert at IBM's Watson Research Center, have prepared a petition of leading scientists opposing space weaponry. Sagan, who listened to Reagan's speech from a Syracuse hospital where he was recovering from an appendectomy, was so agitated that he pressed to have the manifesto completed for release this week. It concludes: "If space weapons are ever to be banned, this may be close to the last moment in which it can be done."

West European political leaders and defense experts were taken aback by Reagan's out-of-the-blue suggestion that the entire deterrent doctrine be reassessed. One main worry: such a strategic shift might "de-couple" America's defense of itself from that of its NATO allies. "I fear this will be an issue that could become extremely divisive between the Europeans and the U.S. because it is tending toward Fortress America," said British Colonel Jonathan Alford of the International Institute for Strategic Studies in London. "The proposal intends to put a bubble over the U.S., and that would be followed by a bubble over the Soviet Union. If we can't threaten to strike the Soviet Union, we Europeans are going to be out in the cold." While the London *Standard* headlined its worry over REAGAN'S RAY-GUNS, the *Times* engaged in soberer hyperbole, calling the initiative "one of the most fundamental switches in American policy since the second World War."

In Bonn, the disarmament spokesman in the opposition Social Democratic Party, Egon Bahr, said Reagan "has broken a taboo, and the new perspective could be fruitful." But Manfred Worner, Defense Minister in the conservative government, called the plan "a program for the next century, not one to tackle the defense problems of tomorrow."

For Western Europe, visions of 21st century satellite weapons could scarcely divert attention from an immediate de-

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A Soviet Tu-95 Bear, above, being shadowed by an American F-14 Tomcat

DEFENSE...Continued

fense concern, the 572 American Pershing II and cruise missiles that NATO plans to begin deploying this year if no agreement is reached with the Soviets on Intermediate-Range Nuclear Forces (INF). For this reason, allied officials are less interested in the speech Reagan gave last week than in the one he is scheduled to deliver Thursday in Los Angeles spelling out the U.S. INF negotiating stance.

So far the U.S. has stood pat on Reagan's zero option, which proposes that NATO forgo its planned deployment if the Soviets dismantle the 613 intermediate-range missiles they now have in place. NATO defense ministers meeting in Portugal were successfully persuaded by Defense Secretary Caspar Weinberger last week to reaffirm support for deployment of NATO's missiles if there is no agreement at the INF negotiations in Geneva. But despite this declaration, West European leaders remain hopeful that the U.S. will adopt a more flexible approach. In this week's speech, Reagan is expected to indicate that the U.S. will consider accepting an interim U.S.-Soviet balance of, perhaps, 300 warheads for each side as a step toward the eventual elimination of Euromissiles. Offering such a compromise would help blunt the intense opposition among many citizens in Western Europe to new missiles. In addition, a good-faith bargaining gesture could neutralize one of Reagan's severest political problems both at home and abroad, the perception that he is not really sincere in seeking arms control.

Reagan's final speech in his current defense crusade is expected to offer a recommendation concerning the much disputed MX missile. A presidential panel has been studying ways to deploy the new ICBMs, which remain homeless after three years of basing proposals ranging from race tracks to dense packs. The panel is expected to suggest that a limited number of the mammoth missiles be built and placed in existing silos used by Minuteman ICBMs. The panel is also considering calling for a new, smaller missile, dubbed Midgetman, that could be made mobile and thus less vulnerable to an enemy strike.

With so many crucial defense decisions looming in the coming months, it was distressing that Reagan chose this particular moment to introduce his star wars vision of missile defense forces. The issue of altering fundamental nuclear strategies is far too important to be tossed about either for temporary political impact, or in the name of getting the levels of defense spending that he feels—rightly or wrongly—the nation so urgently needs. Shifting to a system of satellite defenses would require years of careful planning and sincere negotiations with the Soviets, for the idea can never work as a unilateral pursuit or as merely a hostile escalation of the arms race. *—By Walter Isaacson. Reported by Laurence I. Barrett and Douglas Brew/Washington*

The Presidency/Hugh Sidey

Turning Vision into Reality

J.F.K. with a mock-up of a lunar module

The first question is one of commitment: whether Ronald Reagan understands what it takes to nudge a doubting, cash-short nation into serious consideration of his star wars defense concept. One thing is certain: it will take more than a few speeches.

John Kennedy had a bit of the same problem when he decided it was time to send Americans to the moon. Not everyone was eager to spend $40 billion on a ten-year dream, especially with so many poor and hungry people needing help on earth. There was even fear within Kennedy's White House (as in Reagan's) that J.F.K. was acting before thinking. Critics noted then that the Soviets had a head start.

Kennedy never yielded. Growing weary with the naysayers, he scolded his space experts: "If somebody can just tell me how to catch up . . . I don't care if it's the janitor over there, if he knows how." Kennedy prodded, pleaded and threatened, and managed to launch the Apollo program.

The next question for Reagan is where to turn for the kind of dedicated and selfless work that Franklin Roosevelt won from Government agencies, the military, university scientists and private business to develop the atomic bomb. Reagan does not have the same emergency authority, nor is there the urgency of wartime. The President's proposal appeals to the heart: he is calling for a defense system that renders strategic missiles ineffective. It also appeals to common sense: his plan seems to open up pleasing vistas for arms reduction. But layman's logic often conflicts with the accepted wisdom of experts, whose chorus we now hear. In developing nuclear weapons, Roosevelt moved in secret, sidestepping doubters. (His own naval aide, Admiral William Leahy, said F.D.R.'s project was "the biggest fool thing we've ever done. The atomic bomb will never go off, and I speak as an expert on explosions.") Reagan must confront arms control experts and political opponents in public.

Another question for Reagan is whether the defensive devices he envisions have a reasonable chance of working. Enough scientists accept the theory to make it worth pursuing. Besides, visions of this scope are not necessarily the province of the technical experts. After World War II, one of America's top scientists, Vannevar Bush, delivered this wisdom for the ages: "There need be little fear of an intercontinental missile in the form of a pilotless aircraft." And many of the instant critics of Reagan's idea, like former Secretary of Defense Robert McNamara, were not all that prescient when conducting the public's business.

A determined, skilled President who captures a nation's imagination, energy and know-how can work miracles. Abraham Lincoln understood the enormous strength of American industry even while the country was being torn apart by the Civil War. He unleashed that force to build a railroad to the Pacific. Eighteen hundred miles of track were flung across prairies and mountains in four years.

Theodore Roosevelt bragged, as if he had created the Panama Canal with his bare hands, "I took the Canal Zone, and let Congress debate." Teddy's battering-ram shoulder did wonders, but private concerns had already made attempts to cut through the isthmus, even in failure showing it could be done. T.R. knew the time was ripe. Soil conservation was a science long before Franklin Roosevelt lifted it to the top of the national agenda and we began to heal the washed and windblown land. Ike grasped the importance of a huge interstate highway system. His endorsement helped push 23,500 miles of superhighways across the country in a decade.

Once challenged, and once convinced, this nation has been able to do just about anything it has wanted to do. It may decide, after further consideration, that Ronald Reagan has come up with a bum idea. But it should not rebuff his vision out of timidity.

TIME 4 April 1983 (30 March) Pg. 22

High Tech on the High Frontier

Scientists explore killer lasers and particle-beam weapons

Imagine a nuclear-tipped missile rising from a silo deep inside the Soviet Union, fixed on a target in the U.S. Almost immediately its fiery exhaust plumes trip warning sensors in satellites orbiting overhead. One of those satellites sends a powerful beam of light, or perhaps even a cascade of subatomic particles, bursting down from the heavens like a Jovian lightning bolt. The beam homes in on the ascending missile and fastens onto its nose cone. Burning through, the beam turns the electronic guidance system into silicon mush, sending the missile wobbling off course and totally immobilizing its nuclear warhead. As it plunges back into the atmosphere, no longer protected by the nose cone, most of the missile incinerates in the sizzling heat of re-entry. Only a few harmless fragments reach the ground.

The Soviets fire off other missiles. But again and again, the killer beam appears almost miraculously out of the skies, destroying one rocket after another. The Kremlin is so frustrated that it calls off its multimegaton attack.

When President Reagan last week urged U.S. scientists to develop new high-tech defensive weaponry, this scenario was the sort of thing that he had in mind. It is called directed-energy weaponry and has two main forms: high-energy lasers (HEL) and charged-particle beams (CPB). In the current fiscal year, the Pentagon is spending $1 billion to test the feasibility of these weapons schemes. By all indications, the Soviets are spending even more, perhaps three to five times as much.

What makes these weapons so attractive to strategic planners, at least in theory, is that their "bullets" travel many times faster than even the highest-velocity conventional rockets. In the case of lasers, which send off beams of highly concentrated light of a single frequency (or color), the speed is that of light itself, about 186,000 miles per second. That means the beam arrives at its target literally in a flash. If a missile were traveling at, say, six times the speed of sound (4,400 m.p.h. at sea level), it would have moved only nine feet before a laser beam arrived from 1,000 miles away. High-velocity beams of charged particles would be harder to create. Unlike the massless photons that make up light beams, charged particles (those parts of the atom that carry an electronic charge; electrons most likely would be used in a missile-killing beam) have weight. But, as in the beams used in atom smashers, they could be "energized" in strong magnetic fields to velocities approaching the speed of light.

Because beam weapons are largely unaffected by the tug of gravity, they could be aimed straighter than the proverbial arrow. In space, laser beams would have almost infinite range, as NASA showed when it bounced laser light off small mirrors left behind by the Apollo astronauts on the moon. (At lower altitudes, laser beams, like any light, are readily diffused by clouds and even fog.) Charged particles, on the other hand, would be influenced by the effects of the earth's magnetic field. But researchers are working on machines that shoot particles with no electrical charge, like simple hydrogen atoms, whose trajectory would be unaffected by magnetism.

Such "high frontier" weaponry, as its proponents like to call it, faces enormous technological obstacles. "The theoretical physics for all this is pretty sparse," concedes Robert McCrory, director of the Laboratory for Laser Energetics at the University of Rochester. Victor Weisskopf, professor emeritus at M.I.T., judges that it is a pipe dream.

A laser or particle beam must dwell on its speeding target for more than an instant before it can destroy it. Only a slight wavering in the beam will spread the energy sufficiently over the target so as to blunt the destructive impact. Hence, the beam must be aimed over thousands of miles with truly pinpoint accuracy. That may eventually be possible, thanks to high-speed computers and the spotting ability of new infrared (or heat) detectors. But to date, lasers have been consistently effective only on relatively slow-moving targets. For example, a laser was turned successfully on wire-guided antitank missiles, traveling at a relatively poky 500 m.p.h., as part of an experiment near San Juan Capistrano, Calif., a few years ago.

Another important obstacle is the relatively large power plant needed to generate laser beams. The San Juan Capistrano beam packed only 300 watts, hardly more powerful than a household appliance, yet it required a station as big as several freight cars. Even the space shuttle's large payload bay could not heft such a package into orbit.

No doubt lasers are becoming smaller and more efficient. U.S. Air Force researchers have carried a five-megawatt laser system aboard an aircraft and fired beams at air-to-air missiles speeding across the skies at several thousand m.p.h. Only a few of the targets, however, were downed. On the eve of the President's speech, Air Force officials told a House subcommittee about an unspecified "major breakthrough" in lasers of short wave lengths, possibly high-energy X rays or gamma rays.

Even if a laser weapon could be parked in space, it would not necessarily be an invulnerable Battlestar U.S.A. It would be susceptible to attack from even primitive antisatellite weaponry: at orbital speeds (17,000 m.p.h.), it could be demolished in a collision with an object only a fraction of its weight. The debris and electromagnetic storm from the detonation of a small nuclear weapon also could do the trick.

But even if laser and particle-beam weapons are distant long shots, they bear further examination. "If the potential is there," McCrory says, "we must in our own interests pursue it, if only to find out what our adversaries may be doing." —*By Frederic Golden. Reported by Jerry Hannifin/Washington and Bruce van Voorst/New York*

EDITORIALS

NEW YORK TIMES 27 March 1983

Nuclear Facts, Science Fictions

President Reagan's desire for a missile-proof shield around America and its allies expresses the deepest longing of the nuclear age — for a place to hide. But it remains a pipe dream, a projection of fantasy into policy.

A space-age shield, if stretched from the Sea of Japan to the Berlin Wall and made almost foolproof, might indeed relieve Americans of a cosmic burden and allow them to stop relying on the doomsday machine for defense. And if, at that point, technology could be frozen, to prevent a quest for weapons that could penetrate the shield, the world of the 21st century might indeed find a way to end the terrifying arms race of the 20th.

"What if," the President dared to wonder: What if we retrieved the old invulnerability and could live securely without having to threaten barbaric retaliation? What if this "formidable technical task" could be accomplished in a few decades? What if we poured in "every investment necessary to free the world from the threat of nuclear war"?

Presidents have a duty to ask such questions. What they should not do, without a firmer scientific basis and political examination, is what Mr. Reagan has now done: proclaim a farfetched quest to be the settled, high-priority intention of the United States.

Mr Reagan did not merely urge science on, to see where it might lead; he prejudged the merits of a historic shift in the nuclear arms race, from offensive to defensive weapons. He did not raise the idea merely to warn the Soviets about the costly new competitions their vigorous missile programs might invite; he challenged them to this Star Wars competition even if in the meantime they accept his proposals for deep cuts in weaponry. Decades before anyone can know whether a missile-killing defense is doable, the President casually pronounces it highly desirable.

Perhaps Mr. Reagan has some secret knowledge about the high-energy lasers, charged particle beams and microwave devices with which dreamers hope one day to attack onrushing missiles. Even if the physics are theoretically sound, that's a far cry from a workable system, managed from scores of vulnerable satellites. Anything less than a foolproof system would be worse than useless; nuclear weapons are so destructive that keeping out all but a few dozen cannot sanely be deemed tolerable.

It is this disparity between any nuclear offense and defense that leaves most scientists skeptical about Mr. Reagan's dream. They think the offense will always have the edge.

But even if a foolproof defense were someday possible, it would not automatically be desirable. Until completely built, it would have to coexist with powerful offensive weapons; and as someone alertly wrote into the President's speech, a defense paired with offensive weapons "can be viewed as fostering an aggressive policy and no one wants that."

The long interim years of defense deployments would be dangerously unstable, and put a premium on harassments, feigned attacks to probe for weak spots and costly countermeasures. That is why President Nixon persuaded the Russians to ban antimissile missiles a decade ago, permitting only the research that Mr. Reagan wants greatly expanded.

If either side were making progress in that research, a prudent response would be calm assessment of the obvious risks and benefits of a radical shift in strategy away from deterrence. On reflection, other Administration officials seem now to be saying that is all the President really meant to do.

But more reassurance will be needed, to discourage a panicky reaction in Soviet laboratories and to reassure allies who already suspect that an America vulnerable to nuclear attack will never risk all in their defense. The threat of devastating retaliation is an awesome cloud over all diplomacy. But as the President also observed, it has worked to prevent nuclear war for four decades. Mankind yearns for a better idea, but there's no statesmanship in science fiction.

NEW YORK NEWS 27 March 1983

Leave 'Star Wars' to moviemakers

USING LASER BEAMS and electronic ray guns to destroy an enemy is fascinating stuff—if you're a science fiction fan. But it's something else again when the President of the United States embraces such "Star Wars" technology as the final solution to the Soviet nuclear threat and calls for a program to produce such a shield by the end of the century.

It may be that American scientists can do the job, if they are given the tons of money that will be required. The Defense Department is already spending about $1 billion a year on anti-ballistic missile—ABM—technology, but that's only for research. No one can even hazard a guess on how much a functioning system would cost, but all agree the figure would be astronomical.

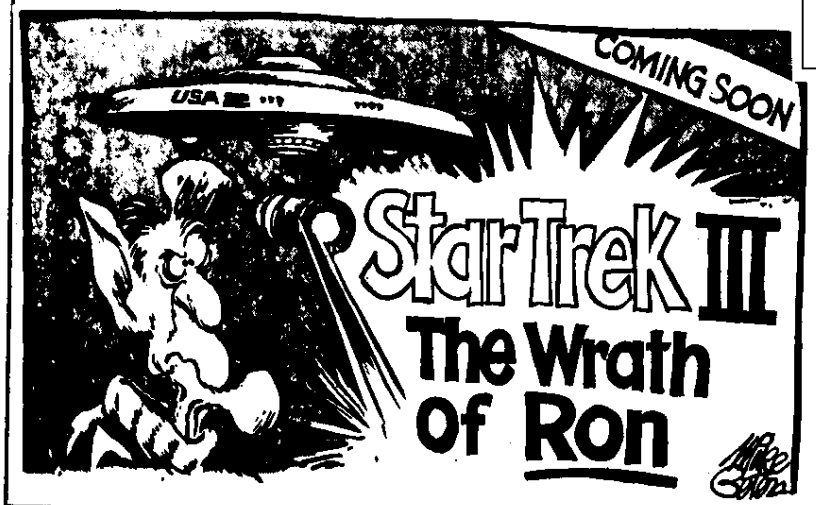
The real trouble, as we see it, is that such a system would not produce the result President Reagan envisioned in his "Star Wars" speech last week.

As things stand now, or so the theory goes, the United States and the Soviet Union are involved in a nuclear standoff. Each possesses so much clout that neither would dare launch an attack for fear of instant retaliation. But fingers on nuclear buttons can become itchy.

In that sense, development of a U.S. ABM system could be extremely destabilizing. A Soviet leadership believing that such an ABM was going into place might very well decide to go for broke before its missiles would be rendered impotent.

And let's not forget that the Russians have at least matched—and bettered, in some cases—every U.S. advance in nuclear technology, from ICBMs to multiple warheads to missile-equipped submarines. There is no guarantee that they will not be the first to develop an ABM system and that even if they don't get there first, they may be able to develop an anti-anti-ballistic missile. That could set the stage for a real-life Star Wars battle in space in which the whole world would be the loser.

In putting forth his ABM ideas, President Reagan glibly brushed over what he called "certain problems and ambiguities," including the fact that the U.S. and the Soviet Union are bound by a treaty restricting ABM systems. He is now treading on extremely treacherous ground by proposing to let yet another genie escape from the bottle.



EDITORIALS

DAYTON DAILY NEWS
27 March 1983

SAN JOSE MERCURY 28 March 1983

Good as fool's gold

WHAT'S good for the Pentagon is gold for Silicon Valley, the local wisdom goes. President Reagan's dream of developing weapons to shoot down Soviet missiles could cost $100 billion. If Congress approves the highly controversial project, much of the research in laser, microwave and radar technology will be done by local defense contractors.

Bad for nuclear deterrence, bad for the federal budget, but a boon for the local economy, right? Yes, yes and no. If a nuclear defense system were safe, practical and affordable, it still wouldn't be good for Silicon Valley. In the short run, some defense contractors would prosper; in the long run, our high-tech economy is healthier without the diverting glitter of military money.

Offering defense contracts to local electronics firms has been like pushing drugs in a schoolyard. During the Vietnam War, half of local companies were high on defense contracts; now about 30 percent are still hooked on Pentagon cash.

There's an undeniable thrill when those DoD dollars flow in, for the companies that get the contracts, but defense dependence isn't healthy in the long run. When the rush fades, many defense contractors find that profits are low, paper work is high and success depends on connections rather than competence.

Engineers become highly specialized in skills that often have no commercial applications; when the military contract runs out, they're out of luck.

If the companies and the workers didn't have anything better to do, that might not be a major drawback. But the managerial and technological expertise that's devoted to missile guidance systems isn't available for profitable, productive work in civilian industry. The more energy and engineers the United States pours into the endless arms race, the less goes into the race for high-tech markets.

While consumer electronics companies compete for scarce technological talent, 30 percent of American scientists and engineers work in the military/industrial complex. (If it weren't for foreign nationals, who aren't eligible for defense work, Silicon Valley would starve for engineers.) While entrepreneurs compete for scarce capital, 46 cents out of every $1 available for capital formation goes to defense. While the Japanese invest heavily in electronics and robotics technology, more than half of federal research and development funds go into military-related research.

Some defense research has commercial applications, but much of the time, talent and resources devoted to weapons work is wasted in economic terms. Its only justification is national security.

Reagan's search for an anti-missile missile system will endanger our security, not enhance it, by fueling the arms race and destabilizing the system of deterrence. And it will drain the brainpower of Silicon Valley, sapping our commercial vitality for military moonshine.

The president paints a pretty rainbow, but it ends in fool's gold.

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