

U.S. Defense Leaders Convinced of American Rocket Lead Over Russians

Editor's note: Every time an American test missile explodes on its launching pad or goes off course and has to be blown up, questions inevitably follow. Why do we seem to be having so much trouble? Are the Russians ahead of us in the missile race? Are their missiles better than ours (as Soviet Premier Nikita Khrushchev has so often boasted)? This dispatch, by a veteran Pentagon reporter who has covered the missile story from its early days, provides a balance sheet on the basis of known facts.

By DARRELL GARWOOD
UPI Correspondent
Washington - (UPI) - U. S. defense leaders are firmly convinced that, despite the present missile lag, American rocket experts have already gained three or four years on the Russians in history's most fantastically complicated technological race.

The contention is that the Soviets started an all-out drive to produce intercontinental ballistic missiles at least four years sooner than the U.S.

And yet, these officials add, if it hadn't been for recent difficulties in the testing of America's Atlas ICBM, the U.S. and Russia would now be almost neck-and-neck in the race to deploy such missiles at bases for war purposes. Here is the situation:

Where We Stand
The best U.S. intelligence is that the Soviets will have 10 ICBMs in the hands of their troops and ready to fire by the end of 1959. Intelligence reports are subject in interpretation - conflicting and inexact information is thrown in along with an occasional report that may be exactly right - but 10 is the estimate of Defense Secretary Neil H. McElroy after analysis of the highest military advice.

Then missiles would be the equivalent of one American squadron. If the Soviets have these by Dec. 31, 1959, they will be on almost precisely the same schedule laid down for U.S. troops after the Atlas performed perfectly for the first time last Nov. 29, rumbling 11 a w lessly 6,300 land miles from Cape Canaveral, Fla., far past Ascension Island in the South Atlantic. (A so-called 5,500-mile missile has a range of 6,300 land miles, because the military services use nautical rather than statute or land miles.)

But U.S. optimism that followed the Nov. 29 test ebbed away as the Atlas failed in five successive launching attempts during the first half of 1959, and the U.S. program was set back at least two months.

It is possible at this moment that the Soviets may have the first operational ICBM. But another successful Atlas test was completed July 21 and still another one week later. So, if two more successful launchings can be chalked up this summer, the U.S. may yet have 10 or more of the intercontinental missiles in the hands of its troops by the end of 1959.

So far as the first year of ICBM development is concerned, America is like a baseball club that is running behind at mid-season but still has a chance to win the pennant.

Where We Started
Missiles were assigned a minor role in U.S. military thinking during the first eight years after World War II. Half of those years were spent enjoying a monopoly of the

atomic bomb, and the other half in a belief that the enormous expense of intercontinental missiles could never be justified by the amount of explosive payload they could carry.

Serious U.S. thinking about the production of ICBMs began in October, 1953, when a committee headed by the late Atomic Energy Commissioner Dr. John Von Neumann reported that H-bomb warheads could be made small enough to be carried by the ICBM.

The U.S. ICBM program began to move into high gear after Von Neumann's predictions were verified in a series of H-bomb tests in the Pacific in 1954, and the present management setup for the ICBM was completed in 1955.

There is ample evidence that there was no similar lag in the Russian ICBM effort. The Soviets are believed to have turned intensive attention to big missiles as soon as they achieved the atomic bomb in 1949, which would give them a starting advantage of at least four years.

Part of the reason may have been that American military thinking was patterned after the British, while the Russians followed the German line. The British during World War II were inclined to pooh-pooh the German V2, the first true space missile, and a common American theory was that the Germans could have better spent their money on jet planes. But the Germans and Russians never lost respect for the 3,000-mile-an-hour V2, and the Soviets ended the war with every intention of elaborating on this weapon as soon as possible.

One odd result of the earlier Russian start, American officials believe, is the large Soviet Sputniks. Since the Russians did not wait for the development of small nuclear warheads, they built bigger rockets, and thus they were able to put up big earth satellites, according to the theory. When American ICBMs are ready, they may equal past sputnik performances, but by that time the Soviets may be creating still larger moonlets.

The Difficulties
The 82-foot Atlas consists of 100,000 parts which, if performance is to be satisfactory, must not fail more than once in 100,000 times.

That kind of reliability may be easy enough to obtain in certain parts, such as nuts, bolts and sections of the casings. But there are 12,000 different electronic components, and there is a total of between 36,000 and 37,000 functioning parts.

Maj. Gen. Donald N. Yates, as commander of the Missile Test Center at Cape Canaveral, has said that "in order to insure satisfactory operation of three out of four missiles - using an arbitrary figure - the failure of any single electronic item must be limited to once in about 10,000 times."

Yates stated that during test firings radio telemetry reports are received on 175 different missile functions. Dr. Joseph Charyk, Air Force Chief Scientist, recently added a touch to the picture of complications by noting that the loss of one second of

thrust near burn-out would cause a missile to miss its target by 300 miles.

The functioning parts are

like old-fashioned lights for a Christmas tree - if one fails the others fail with it. An accuracy of all but once in

100,000 times is bound to involve a certain amount of will have an over-all reliability to "go the route" of not

chance. McElroy has said he expects to even after missiles are declared operational they more than 50 per cent. And he said that half of those that go the route probably will miss the target.

Do the Russians have the same problems as to chancy performance due to complicated mechanism? This cannot be answered for certain. But if the Russians have followed their usual methods, U.S. experts believe, they probably have produced missiles that are somewhat less "sophisticated" and complicated, and more rugged than the American types.

Obviously, however, the complications and failures would be only a matter of degree and would not prevent the Soviets from running into the same kind of setbacks. The key point, U.S. officials

believe, is that the Russians have had more time in which to make - and correct - mistakes, with complete secrecy covering their failures. We hear only of their successes. Our failures are publicized along with the successful tests.

From what little is known, the Soviets have a better record for accuracy in firings, thus far. The Soviet Sputniks, for example, came closer to the orbital paths originally sought by the scientists than our satellites did.

The Fears
Top-level American military thinking at present is that the Soviets would never launch a missile attack on the U.S. unless they had several hundred ICBMs emplaced, enough so they could hope to

knock out America's ability to retaliate.

If that is true, the deployment of 10 Soviet ICBMs during the remainder of 1959 would not be significant except as a start. There would be a breathing spell of several years to improve defenses before a Pearl Harbor-type attack might be feared.

In the present state of affairs and for some time to come, the Soviets would have no reason to fear retaliation with American intercontinental missiles. So the theory contains an assumption that U.S. security still rests largely on an ability to put 2,000 or more nuclear bombing airplanes over Soviet soil in the first few days after an attack - plus some intermediate range missiles that are being

mounted in Europe. The Soviets cannot follow up missiles with bombers in large numbers, since, in their concentration on missiles, they did not build a big bomber fleet. Some of our military men believe the Soviets might think their defenses against manned bombers were sufficiently good to risk an attack by the U.S. air fleet - but this not the official line. Within a few years, a fleet of submarines carrying 1,500-mile Polaris missiles will be added to the U.S. retaliatory threat.

Meanwhile, scientists are working on missile defense with some hope of building an effective anti-missile weapon. And some U.S. leaders believe that, even if defense proves impossible, the terrible destruction that would occur on both sides will indefinitely prevent the outbreak of nuclear war.

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Washington - (UPI) - Here are the facts and figures on U. S. long-range missiles:

U.S. Missile Lineup

Name	Height (in ft.)	Takeoff Weight (in lbs.)	Speed (in mph)	Fuel	Status
Atlas	82½	260,000	Over 15,000	liquid	Operational this year
Titan	90	200,000	Over 15,000	liquid	Early test stage
Minuteman	Not released (reportedly about 30)	Not released	Over 15,000	solid	Research & development
Thor	65	110,000	Over 10,000	liquid	Deployed in Britain
Polaris	28	Not released	Over 10,000	solid	Development
Jupiter	60	110,000	Over 10,000	liquid	Operational

(Note: The ranges of the Atlas, Titan and Minuteman are given as 5,500 nautical or 6,300 statute miles. The ranges of the Thor, Polaris and Jupiter are officially listed as 1,500 nautical or 1,725 statute miles, although it is known that early models of the submarine-launched Polaris will be limited to a range of 800 to 900 miles.)

Senate Near Vote On Veto Override

Washington - (UPI) - Senate Democrats, under adverse odds, came to a showdown today on overriding President Eisenhower's veto of their \$1,375,000,000 multi-program housing bill.

Democratic leader Lyndon B. Johnson (Tex.) told newsmen he did not expect the vote before mid-afternoon or later. He would not predict the result but said he would vote to override.

Prospects for victory were dimmed by a statement from five Republicans that they would support the veto even though they had voted for the controversial measure in original passage.

YMCA CHAIRMAN DIES
Ridgewood, N.J. - (UPI) - Vivian C. McCollom, 57, chairman of the National Board of the Young Men's Christian association of the United States and president of the Allentown Converting Co., Allentown, Pa., died Tuesday night.

'NO POLITICS' VISIT

Concord, N.H. - (UPI) - Vice President Richard M. Nixon plans an "entirely non-political" trip to New Hampshire next month to attend groundbreaking ceremonies for a federal flood control project. Nixon accepted the invitation of the Merrimack River Valley Flood Control Commission Wednesday. But he dampened speculation that he would use the occasion to launch a drive to win the state's March presidential primary - the first in the nation - by stressing that the visit would be "entirely non-political."

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