

## Ray Defense For Missiles Is Disputed

By George C. Wilson

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Pentagon weapons specialists last night disputed a claim in the current issue of U. S. News & World Report that Russia has made a breakthrough in missile defense with X-ray radiation.

The magazine, in its issue dated Feb. 6, said "what the Russians have done is perfect an anti-missile weapon that produces so called X-ray effect in intense proportions . . . The shielding on U.S. warheads, it is reported, will fail to halt most of the X-rays."

One Pentagon official working on U.S. anti-missile systems said there is no big mystery about X-ray effects, adding our ICBMs are shielded against them.

This does not mean X-rays could not incapacitate a U.S. missile warhead. But X-rays are just one type of radiation both U.S. and Russian missile experts are counting on to kill ICBMs.

The basic technique of missile defense is to explode a nuclear device as close as possible to the incoming ICBM warhead. It is the radiation from the nuclear blast of the anti-missile which incapacitates the warhead. One type of radiation given off in such a blast are X-rays. Another is neutrons. The radiation is ef-

fective if it is emitted close enough to the warhead.

U.S. News & World Report said that in space "X-rays travel for thousands of miles. They carry enormous pulses of energy—enough to paralyze or disintegrate attacking U.S. missiles before they re-enter the atmosphere and while they are hundreds of miles from their targets."

The magazine said U.S. scientists "stumbled onto the X-ray effect inadvertently long after the Soviets had witnessed its effects in actual tests in 1963."

Dr. Ralph Lapp, a physicist who has worked on U.S. nuclear weapons, said X-ray effects were not a recent discovery.

The X-ray effect "strikes me as decidedly stale news to any scientist" who has worked on nuclear weapons, Lapp said.

Russian progress in anti-missile systems continues to be a focus of interest in Congress. The closed hearings on the fiscal 1968 military budget will be dominated by questions on anti-missile systems.

Russia is deploying what Defense Secretary Robert S. McNamara said is a missile defense limited to Moscow. One estimate is that Russia has spent from \$4 billion to \$5 billion on anti-ballistic-missiles (ABM).

McNamara said in his budget testimony that the U.S. has spent \$4 billion on missile defense research since 1955.

The fiscal 1968 budget calls for spending \$421 million for further U.S. anti-missile research with an additional \$377 million held in reserve in case the U.S. decides it must go into production on the missile defense.

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