September 25, 1958

SED First Secretary Walter Ulbricht to Soviet Leader Nikita Khrushchev

Citation:

"SED First Secretary Walter Ulbricht to Soviet Leader Nikita Khrushchev", September 25, 1958, Wilson Center Digital Archive, DY 30/3733, SAPMO-Bundesarchiv, Berlin-Lichterfelde. Translated by Paul Maddrell.
https://wilson-center-digital-archive.dvincitest.com/document/110396

Summary:

Cover letter and information note from Walter Ulbricht to Nikita Khrushchev on ideas of German scientists Manfred von Ardenne about encasing missiles in a radar absorbing case to evade detection and defeat a missile defense system.

Original Language:

German

Contents:

25 September 1958To the First Secretary of the CC of the CPSUComrade N. S. KhrushchevDear Comrade Nikita Sergeyevich!On the occasion of the international congress on electron microscopy in West Berlin our Professor Manfred von Ardenne spoke with the former head of radar of the West German enterprise Telefunken, as well as with American experts on electronics. Their conversations touched on defense against long-range ballistic rockets. Professor von Ardenne is of the view that it would be necessary to make a protective surface for the rocket hull, which switches off the radar detection. In the enclosure I pass on to you the thoughts of Professor von Ardenne.With friendly greetings,W. Ulbricht.EnclosureHighly confidential!Subject: Defense against long-range ballistic rockets with nuclear payloadsAt an international scientific congress, conversations took place with leading scientists from Washington in the field of radar technology and electronics. In these conversations the Americans talked very openly about the above topic. It transpires that there exists in leading scientific-technical circles in the USA the view that, in approximately 5 to 8 years, a defense against long-range ballistic rockets will be possible, using counter-rockets charged with atomic explosive. The idea is that both the incoming ballistic rocket and its flight path are detected in good time by “long-range” radar sets. Then, in fractions of a second, electronic calculating machines calculate all the quantities which are necessary for the unerring control of the defensive rocket. That is as far as the American information goes, which in view of the current state of technology reveals very natural development trends. The following technical conclusion, drawn by us from these conversations, seems important, since taking it promptly into account could be crucial for future military potential. This technical conclusion is [that] we must expect the opposing side to introduce the following developments. That is to say, [we must] make our own study of these questions, and we should begin the following developments at once: Structuring long-range ballistic rockets in such a way that during their flight outside the Earth's atmosphere they can no longer be detected by “long-range” radar sets. This could be achieved if, from the time the rocket broke out of the atmosphere until it re-entered it—therefore during its flight in a vacuum—a screen, equipped with a surface which absorbed the radar waves, were automatically to appear and open up on the rocket's head. Such surfaces are in fact already known. However, owing to their structure, [the screen] would be destroyed by air friction as the rocket broke out of the atmosphere. Hence, the suggestion that the screen first be opened out after breaking out of the atmosphere. The method described would make a sufficiently-precise analysis of the flight path of an incoming rocket impossible.15 September 1958