CORONA

Notes by DCI.

[redacted]

18 SEP 1985

MEMORANDUM FOR: Director of Central Intelligence

SUBJECT: Vulnerability of the CORONA System to Soviet Countermeasures

1. This memorandum is in response to your request for information on the actions that would be taken to enhance the survivability of the CORONA photographic reconnaissance satellite vehicle in the face of Soviet countermeasures.

2. The general responsibility for providing protection systems for the CORONA vehicle lies with [redacted] Space Systems Division [redacted]. There is an [redacted] officer designated with the responsibility of insuring that adequate protection measures are available in the contingency that the Soviets should initiate an active program to interfere with our satellite reconnaissance capability. The Office of Special Projects, DDS&T, is knowledgeable of the status of these vulnerability reduction programs. Also, the DDS&T does at times provide to SSD information concerning the status of the Soviet anti-satellite capabilities. To date, however, these relations have been informal in character. The Office of Special Projects has taken action to obtain an immediate status report on the CORONA vulnerability program and will undertake to keep you informed of any new developments. What follows below is a brief summary of the current status of that study as we understand it.

[redacted]

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[redacted]

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3. There now exists a capability for augmenting the CORONA vehicle with a limited decoy capability on a quick reaction basis. This decoy system will undoubtedly enhance the survivability of CORONA. There has recently been tested a small solid rocket propulsion system which can be strapped on the Agena as required to provide the capability for changing the orbit of the satellite vehicle several times during the course of the mission. This also will increase the probability of CORONA surviving in that it complicates the Soviet's tracking and interception problem. It is currently planned to flight test sometime this fall a chaff dispensing system. If this system proves effective, it too will be placed on the shelf to provide an additional quick reaction vulnerability reduction capability. The DDS&T has no knowledge of the operational plan that will be followed in the face of Soviet anti-satellite actions, nor have we conducted an independent evaluation of the effectiveness of the survivability aids outlined above.

4. At various times in the past the Office of Special Projects has conducted limited studies to identify additional techniques applicable to satellite vulnerability reduction. These studies have covered chaff, decoy, radar cross section reduction, as well as sophisticated electronic jamming systems. There is no doubt that the survivability of low altitude satellites in general can be greatly enhanced by proper choice of equipment and operational techniques. However, it is not clear what performance penalties must be paid in the case of the CORONA system to achieve a satisfactory survivability level should the Soviets elect to initiate an aggressive anti-satellite program.

ALBERT D. WHEELON
Deputy Director
for
Science and Technology

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