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SUBJ: KNOWLEDGE OF THE DSP SYSTEM

1. DURING THE FLIGHT 9 JUSTIFICATION BRIEFING TO AIR STAFF ON 26 AUG 1980, THE INTELLIGENCE REPRESENTATIVE ASKED THE FOLLOWING QUESTION: "WHAT DO WE THINK THAT THE SOVIETS KNOW ABOUT THE CAPABILITIES/VULNERABILITIES OF THE DSP SYSTEM?" THE PURPOSE OF THIS MESSAGE IS TO PROVIDE AN ANSWER TO THAT QUESTION. THIS MESSAGE REFLECTS THE JOINT ADCOM J-2/J-3 RESPONSE TO THE ABOVE QUESTION.

2. THERE IS NO EVIDENCE TO DETERMINE THE EXTENT TO WHICH THE SOVIETS UNDERSTAND DSP; HOWEVER, WE MUST ESTIMATE THAT THE SOVIETS HAVE A VERY GOOD UNDERSTANDING OF THE DSP SYSTEM BASED ON THE SIGNIFICANT AMOUNT OF OPEN-SOURCE LITERATURE THAT HAS BEEN PUBLISHED ON DSP. A STUDY OF OPEN-SOURCE LITERATURE ON DSP LEADS US TO BELIEVE THE SOVIETS HAVE THE FOLLOWING TECHNICAL DETAILS:

A. PRIMARY MISSION IS TO PROVIDE EARLY WARNING AGAINST BALLISTIC MISSILE MASS ATTACK; THAT IS, DETECT AND RECOGNIZE THE SIMULTANEOUS

PAGE 2 RWMTQAD025
LAUNCH OF HUNDREDS OF MISSILES.

B. THE LOCATION OF THE MISSION GROUND STATIONS.

C. SECONDARY MISSIONS ARE: TO PROVIDE ACTIVITY 8/

ON INDIVIDUAL MISSILE AND SATELLITE BOOSTER LAUNCHES AND TO DETECT NUCLEAR EXPLOSIONS IN THE ATMOSPHERE AND IN SPACE.

D.

b1

E.

b1

F. DETECTIONS OF MISSILE AND SATELLITE LAUNCHES HAVE APPARENTLY BEEN SUCCESSFUL, ALTHOUGH ACTUAL DATA WAS NOT PROVIDED.

G. PRIMARY SENSOR IS A NEAR-INFRARED TELESCOPE, WHICH DETECTS MISSILE EXHAUST PLUME RADIATION- b1

H. SPACECRAFT CONFIGURATION TO INCLUDE UPLINK AND DOWNLINK FREQUENCIES.

I. OPEN SOURCE LITERATURE ALSO POINTS OUT THE FOLLOWING LIMITA-

ROUTINE

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ROUTINE
MSG 89 PAGE 02 204 1044

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**PAGE 3 RUMTNOADDZS
TIONS AND VULNERABILITIES OF DSP:**

- A. b1
- B. b1
- C. b1
- D. b1
- E. b1
- F. b1

4. **IN SUMMARY, OPEN-SOURCE LITERATURE DOES NOT INCLUDE PRECISE ORBITAL PARAMETERS. HOWEVER, THE SOVIET OPTICAL SPACE TRACKING SYSTEM IS AS CAPABLE OF TRACKING THE DSP SATELLITES IN GEOSYNCHRONOUS ORBIT AS OUR BAKER-MUNN SYSTEM. THEREFORE, IT IS REASONABLE TO ASSUME THAT THE SOVIETS WOULD AT LEAST KNOW THAT DSP INFORMATION OBTAINABLE THROUGH THEIR OPTICAL TRACKING NETWORK AND THAT MADE AVAILABLE IN**

**PAGE 4 RUMTNOADDZS
OPEN-SOURCE LITERATURE. A SUBSTANTIAL AMOUNT OF DSP INFORMATION IS CONTAINED IN OPEN-SOURCE LITERATURE. MUCH OF THIS LITERATURE IS THE RESULT OF A CONSIDERABLE U.S. DECISION TO RELEASE INFORMATION ON OUR GENERAL MISSILE DETECTION CAPABILITY SO AS TO PROVIDE ADDITIONAL DETERRENCE TO A SOVIET FIRST STRIKE.**

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