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ELINT REPORT OF MISSION 3025



TTC/O/ELT/SPEC-05-61

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CENTRAL INTELLIGENCE AGENCY

Office of Scientific Intelligence

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PREFACE

This report is the product of Headquarters, ELINT Processing Center and is based on a mission over the SOUTH CHINA SEA, LAOS, SOUTH VIET NAM and NORTH VIET NAM.

The acquisition of additional information from this mission or from the area covered will be published as it becomes available.

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1. GENERAL:

a. Mission 3025 was flown on 16 January 1961. The countries of LAOS, NORTH VIET NAM and SOUTH VIET NAM were overflown in the course of the mission. The accompanying map depicts the flight path of the intercept vehicle with the times noted at various intervals.

b. The System VI Collection Configuration was employed which operates in the frequency range from 50 mc/s to 14 kmc/s. This range is covered by four separate receivers the limits of which are given in the intercept summaries of the individual bands.

c. The take-off time was 0030, 16 January 1961. (All times stated herein are ZULU.) Two minutes after the take-off the intercept equipment was activated. The total flight time was seven hours and ten minutes. The equipment was in operation for six hours and 33 minutes of this period.

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2. EQUIPMENT PERFORMANCE:

The equipment functioned properly throughout the entire mission with no serious malfunctions or loss of sensitivity in any band.

3. INTERCEPT SUMMARY:

a. P-Band (50 mc/s-300 mc/s)

(1) The first signals intercepted in the P-band occurred six minutes after the take-off. The intercepts, possibly from British vessels in the SOUTH CHINA SEA, gave indications of originating from an area close to the flight path of the vehicle. The signals were intercepted for a period of one hour and eighteen minutes. These intercepts also had some of the characteristics of the ChiCom SCR-270 radar which have been received from locations at sea in the past. No sightings of the shipborne SCR-270 have been made, although intercepts continue to be reported of radars of this type in the east CHINA coastal area. The parameters of the signal during this mission were approximately those listed for the SCR-270 with the exception of the scan time which was somewhat fast. In this case, a time of eight seconds was obtained. Previous intercepts have usually been between eleven and thirteen seconds.

(2) The intercepts in the INDOCHINA area indicated that the SCR-270, KNIFE REST A and KNIFE REST B types are the principal radars used in detecting and tracking aircraft. The SCR-270 types appear to be the most widely used of the three and usually are intercepted for longer periods and at higher signal strengths than the KNIFE REST types.

(3) The ELINT derived from the mission indicates that the vehicle was probably first detected by the HAINAN sub-sector at approximately 0147 when 90 NM south of P'AN-SHIH SHU in the PARACEL ISLANDS. Tracking appeared to be lost in the same area when the aircraft was on the return flight. The nearest known location of an SCR-270, which was the type intercepted in this area, is at LINGSHUI on the island of HAINAN. Coverage from this point was by two SCR-270 radars until 0230 just prior to the northward turn in southern LAOS. A KNIFE REST B radar was intercepted at 0152 and continued to be intercepted during the

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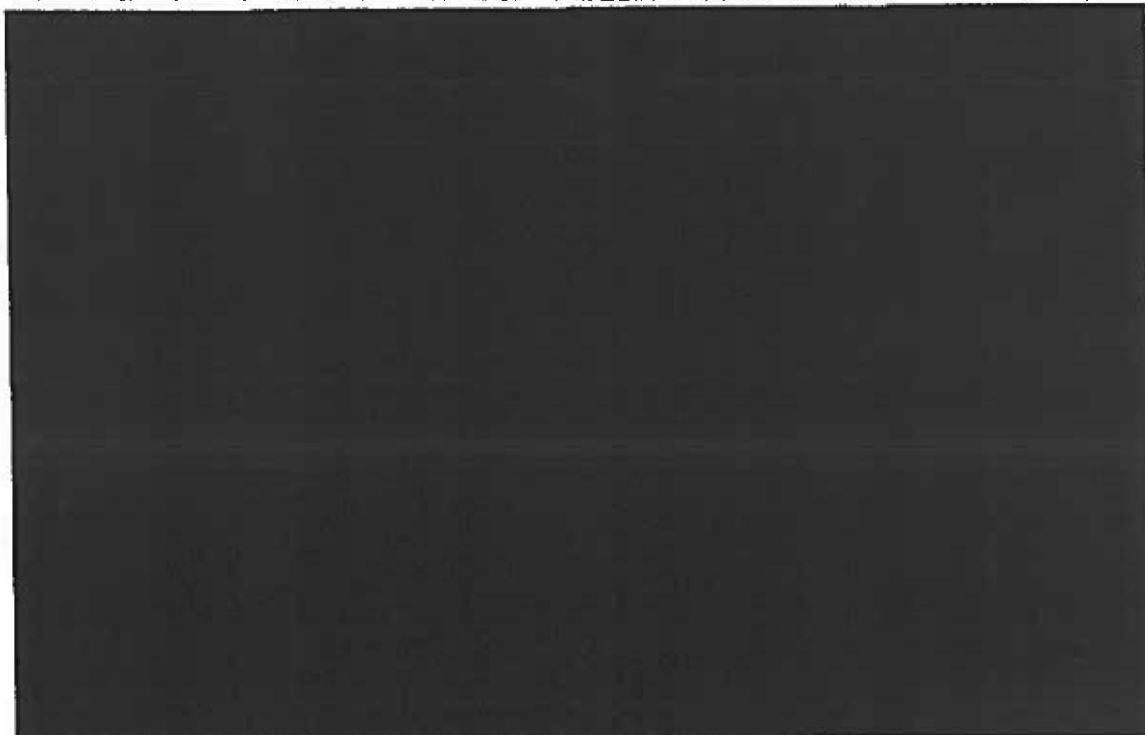
first turn and remained active until the aircraft was in the area directly west of HAINAN. Also intercepted shortly after the turn were two additional KNIFE REST Bs and two SCR-270 radars. Coverage from this point northward was very dense. As many as nine P-band radars were received simultaneously in several areas.

(4) At the point near the NORTH VIET NAM border a very strong signal was heard and continued until 0440 when the vehicle was near PHUC NHAC, NORTH VIET NAM. The radar was tentatively identified as an SCR-588, known to be possessed by the ChiCom's. The signal indicated that the plane was being manually tracked for long periods of time but on several occasions the set would break lock and go into an irregular scan rate. Intercepts of signals of this type have been received on past missions in the same area but never of the high strength of this intercept.

(5) The following is a list of the signal intercepts in the P-band.

SIG NO.	*ANT	TIME UP	TIME DOWN	PRF	SCAN TIME	RADAR TYPE
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4. CONCLUSIONS:

a. The mission verified previous estimates of the number of long range P-band radars in NORTH VIET NAM and the South and Southwest Air Defense Districts of CHINA. Judging from the strength of the intercepts, detection was probably made prior to the entry of the aircraft over the coast of SOUTH VIET NAM on the first leg of the flight. At the time of the entry near BONG SON, SOUTH VIET NAM, two SCR-270 and two KNIFE REST B radars were illuminating the vehicle. In the areas over NORTH VIET NAM and LAOS the vehicle was covered by several radars at all times.

b. No tracking by NORTH VIET NAM or the Southwest CHINA Air Defense District was evident on the mission.

c. The lack of S-band ChiCom equipments in either NORTH VIET NAM or LAOS is further illustrated by the results of this mission. The failure to intercept the TOKEN in the SOUTH CHINA area which had been intercepted on previous missions is not particularly significant since this set appeared to be at a great distance and probably had not seen the mission aircraft on these previous missions. The question of the identity of the two signals in S-band similar to the AN/APS-20 is interesting. It is, however, of relatively low importance unless further intercepts or collateral information prove these sets to be other than friendly which they now appear to be.

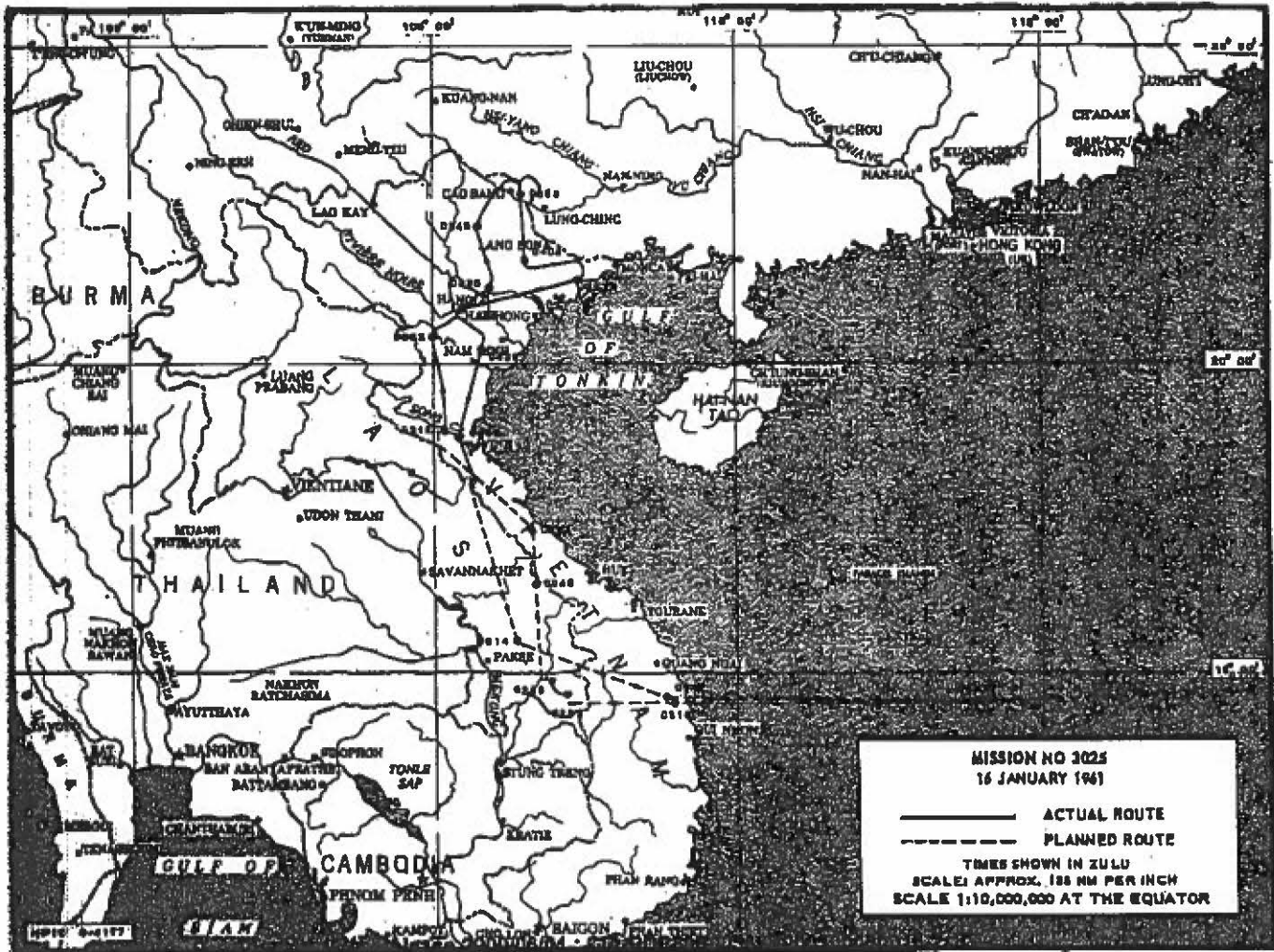
d. The ELINT gave no indication of fighter reaction to the flight.

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