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27 April 1970
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UNITED STATES INTELLIGENCE BOARD

MEMORANDUM FOR THE UNITED STATES INTELLIGENCE BOARD

SUBJECT : Quarterly Report on Overhead Reconnaissance

REFERENCES : a. [redacted],
6 January 1969, Limited Distribution
b. [redacted],
22 June 1965

1. Attached is the quarterly report on the subject by the Chairman of the Committee on Imagery Requirements and Exploitation (COMIREX) which is circulated for the information of the United States Intelligence Board (USIB).

2. Unless a Board Member requests that this item be placed on the agenda of a USIB meeting prior to the close of business 15 May 1970 it will be recorded as having been "noted" by the USIB.

[redacted]
Executive Secretary

Attachment

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27 April 1970
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QUARTERLY REPORT ON OVERHEAD IMAGERY RECONNAISSANCE

1. This report summarizes the status of manned, satellite, and drone imagery reconnaissance collection for the three-month period January - March 1970.

2. The report is limited primarily to overhead reconnaissance under the cognizance of COMIREX. Overflight activities of other agencies or countries are included, however, when COMIREX targets have been covered and this office has been advised of the results.

3. The cut-off date for information contained in this report is 31 March 1970 unless otherwise stated.

[redacted]
Chairman
Committee on Imagery Requirements and Exploitation

Attachment
Subject Paper
Tab A

QUARTERLY REPORT ON OVERHEAD IMAGERY RECONNAISSANCE

January - March 1970

CONTENTS

Attachment [redacted]

27 April 1970
Limited Distribution

CORONA - Background for Mission Management

1. The United States Intelligence Board has directed use of the medium-resolution, wide-swath KH-4 satellite photo-reconnaissance system primarily for intelligence area-search purposes[a]. The function of area search is to acquire photographic coverage on broad areas of territory of intelligence interest for early detection or continuing negation of the existence of activity, installations, deployments and other developments of concern to the national security.

2. As outlined below, KH-4 missions are tasked world-wide against areas designated for each mission under three general collection categories: standing periodic area search requirement; priority current intelligence requirements; and mapping, charting and geodesy (MC&G).[b]

3. Standing Search Requirement (General Search). In order to achieve, on a regularly planned and programmed basis, a minimum acceptable assurance for detection or negation of significant new Communist activity, the USIB standing requirement for area search calls for imagery coverage at specified minimum periodicity of designated areas of the Communist land mass. For purposes of the requirement, areas of the Soviet bloc and Communist China are delineated as either built-up or undeveloped. The requirement stipulates that usable photography should be acquired as follows:

a. About 80 to 90 percent of the built-up areas (some 6.8 million sq. n.m.) of the Soviet bloc and Communist China semiannually.

b. About 75 percent of the undeveloped areas (some 2.8 million sq. n.m.) of the Soviet bloc and Communist China annually.

Accomplishment for the quarterly period January - March 1970 against the standing search requirement is given in paragraphs 4 and 5, pages 5 and 6.

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[a] Memorandum for Holders of [redacted] 8 November 1966 and [redacted] 4 February 1969

[b] Acquisition of stereoscopic cloud-free (about 90 percent) photography is stipulated for satisfaction of the requirements. In meeting the search requirement, however, monoscopic photography is included when judged adequate for search purposes.

CORONA - Background for Mission Management cont.

4. Priority Current Intelligence Requirements (Directed Search). In addition to the standing area search requirement, areas and targets of current intelligence interest are specifically designated on a mission-to-mission basis. These targets may require a priority of "Extraordinary" requiring the camera to be turned on each time over the target regardless of weather or altitude, or they may be selected in lower priorities but designated for CORONA coverage because they may be effectively covered by medium resolution photography. The status of current intelligence targeting and results of CORONA missions during the quarter are summarized in paragraphs 7, 8, and 9 on pages 6 and 7.

5. MC&G. The USIB guidance stipulates that mapping, charting, and geodesy area coverage support by the KH-4 system will be provided by allocation of a portion of the mission film on the basis of non-interference with priority intelligence requirements when weather opportunities permit. The status of requirements and coverage is given in the separate MC&G section of this report, pages 13 through 16.

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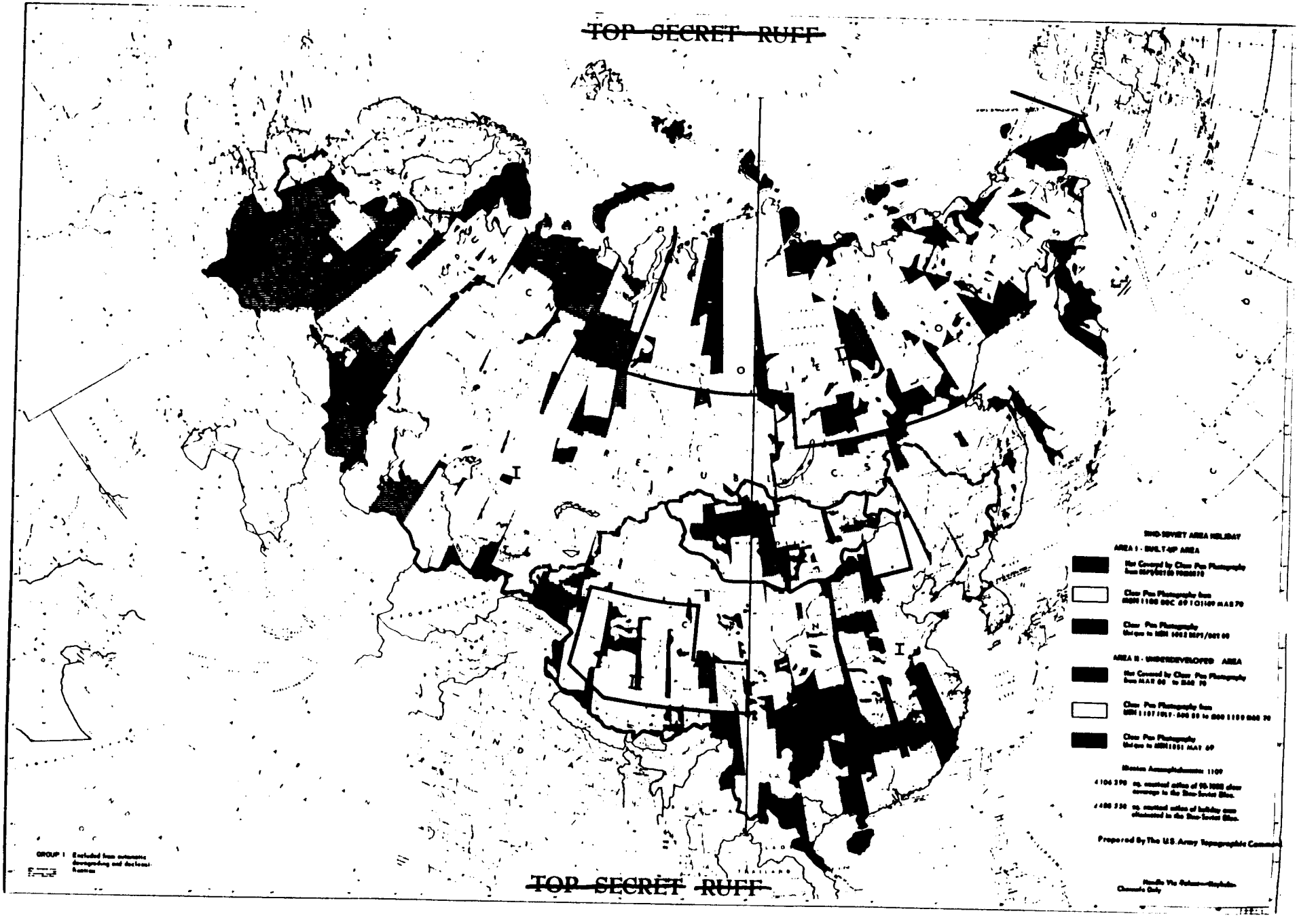

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CORONA - Activity and Coverage

Activity During Period

1. Mission 1109, 5 - 23 March 1970, was the only KH-4B mission flown during this quarter. It was considered quite successful, both in terms of area search and target coverage. Specific highlights are noted below and in the appropriate regional sections of this report. Readout of the mission continues.

2. 1109, the first of four KH-4B missions scheduled during CY 1970, was originally due for launch on 19 February. Because of difficulty with the UTB film load, the launch date was postponed and the mission flown with STB film. The three missions remaining for 1970 are scheduled for 20 May, 19 August, and 18 November.

Status of Search Coverage

3. The following is the current status of the intelligence search requirements reported in terms of clear, usable panoramic photography of the USSR, East European Satellites, Communist China and North Korea. Coverage is expressed in millions of square nautical miles and as a percentage of the total areas designated for search as shown below and on the map facing this page.

4. Semiannual Search - Accumulated coverage of the built-up areas against the six-month requirement period 1 October 1969 - 31 March 1970 was 5.45 million square nautical miles, representing 80.1 percent of the area designated to be photographed at least once every six months. Mission accomplishment data for the period is given below.

	Mission	Gross* (%)	Net (%)	Accum (%)
Built-up Areas (1 Oct 69 - 31 Mar 70)	1109	2.88 (42.4)	.86 (12.6)	5.45 (80.1)
	1108	2.86 (42.0)	1.78 (26.2)	4.59 (67.5)
	1052	2.81 (41.3)	2.81 (41.3)	2.81 (41.3)

*See next page (Definition of Terms).

CORONA - Activity and Coverage cont.

5. Annual Search - Coverage of the undeveloped areas achieved during the 12-month search period 1 April 1969 - 31 March 1970 was 1.95 million square nautical miles or 62.5 percent of the total designated annual search area. Mission achievement was as follows:

	Mission	Gross* (%)	Net (%)	Accum (%)
Undeveloped Areas (1 Apr 69 - 31 Mar 70)	1109	1.22 (43.6)	.87 (31.1)	1.75 (62.5)
	1108	.43 (15.4)	.24 (8.6)	.88 (31.4)
	1052	.19 (6.8)	.17 (6.1)	.64 (22.8)
	1107	.36 (12.8)	.34 (12.1)	.47 (16.7)
	1051	.13 (4.6)	.13 (4.6)	.13 (4.6)

6. Accomplishment against the six-month area search requirement is the highest that has been achieved for a number of months. The twelve-month requirement, however, remains below the USIB-required level for this reporting period.

Priority Current Coverage

7. Approximately 77 targets and areas of current intelligence interest were designated for priority attention on Mission 1109. No extraordinary priorities were designated for the mission; however, the NRO was requested to take special note of the high degree of interest attached to the MR/IRBM problem, particularly those complexes associated with known or suspected SS-11 ICBM deployment. The need for complete cloud-free coverage of the Pervomaysk IRBM and Derazhnya MRBM complexes was

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*Definition of Terms:

Gross - Total amount of 90-100 percent cloud-free pan photography collected by each mission.

Net - That portion of gross coverage which represents non-redundant coverage, i.e., the newly observed area not covered by a previous mission during the reporting period.

CORONA - Activity and Coverage cont.

stressed. ICBM deployment has been confirmed at these two complexes but the extent is still undetermined due to incomplete coverage. Emphasis was also placed on the acquisition of coverage in the Middle East, particularly Egypt, to determine deployment of the SA-3 SAM system and the introduction of additional military equipment.

8. Mission 1109 provided fair-to-excellent (75-80 percent cloud-free) photography on numerous areas of high intelligence interest. The mission was quite successful against the Soviet strategic missile threat, acquiring coverage on nearly all ICBM complexes. Much of the central USSR and Sino-Soviet border was covered on clear photography. The first good KH-4 coverage of the entire Moscow area since May 1967 was obtained and all ABM facilities in the vicinity were seen. 1109 was one of the best missions for coverage of the Sino-Soviet border; a total of 109 of the 159 primary Soviet border installations were covered. In Egypt a variety of activity in widely dispersed areas was seen, including SA-3 SAM activity near Alexandria and additional possible sites near the Suez Canal. In China, the first surface-to-surface missile launch site detected outside the regular test range area was identified at Wu Chai and some coverage of military activity in southwest Yunnan Province near the Burma border was obtained. Nearly all of North Korea was covered on the first bucket and parts of North Vietnam and Laos on the second.

9. Despite 1109's generally excellent accomplishment, several priority areas were not seen because of unfavorable weather. The dearth of coverage on the IR/MRBM belt in the Western USSR continued; Derazhnya complex was completely cloud covered on all passes and only partial coverage was obtained on Pervomaysk. In the Middle East, coverage was poor on the Cairo and Aswan areas of Egypt and Israel was completely cloud covered. The chronic bad-weather belt again prevented significant coverage of the South China area. These areas, along with intensified China search for surface-to-surface missile deployments, continue to be of primary COMIREX concern for priority targeting on future missions.

NOTICE OF REMOVED PAGES

Pages 8 through 12 are not provided because their full text does not contain CORONA, ARGON, LANYARD programmatic information.

MAPPING, CHARTING, AND GEODESY

Background

1. The KH-4 is presently the primary satellite imagery collection vehicle tasked for MC&G collection. [redacted]

2. The present requirements for mapping, charting, and geodesy coverage are based on a 1965 estimate of needs[a], some re-evaluation of needs in 1966[b], and a refinement aimed specifically at the role of the [redacted] system, submitted to the Board 22 July 1968, and noted, with some further clarification by DIA, on 1 August 1968[c]. An amplifying statement on [redacted] requirements was submitted to the Board 10 November 1969[d]. In sum, the general USIB guidance to the NRO[e] is to allocate a modest percentage of film on KH-4 missions to mapping and charting requirements when weather opportunities permit and without interfering with the specific intelligence collection requirements for the mission. The current MC&G requirement calls for cumulative acquisition of stereo, cloud-free photography on approximately 6.1 million square n.m. (as of March 1970) of territory outside the Communist land mass.

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a [redacted], 18 March 1965, as amended by Memo for Holders dated 15 April 1965,

b [redacted] 11 July 1966 and Memo for Holders,

c [redacted] 22 July 1968 and Memo for Holders, 1 August 1968

d [redacted] 10 November 1969 and Memo for Holders, 1 December 1969

e [redacted] and Memo to Director, NRO, 28 February 1969 [redacted]

MAPPING, CHARTING, AND GEODESY cont.

3. In further support of MC&G needs, a 20 November 1968 Board Memorandum for Holders[a] agreed that NRO might use intelligence collection vehicles to meet DoD world-wide positioning requirements through addition of a Doppler beacon to five KH-4B vehicles, [redacted] Subsequently, on 30 December 1969, the NRO was advised that the Board had no objection to adding Doppler beacons on the additional remaining KH-4B missions equipped with the DISIC camera[b].

Activity During Period

4. During the quarter, [redacted] and KH-4B Mission 1109 (5 - 23 March) provided limited photographic coverage for mapping and charting. Additionally, Mission 1109 carried the first of the Doppler beacons authorized in paragraph 3 above. This initial Doppler operation proved highly successful.

Status of Coverage

5. For Mission 1109, COMIREX-approved MC&G collection guidance again was aimed at filling critical gaps within target areas already partially covered by usable photography, but where successful collection would facilitate completion of a large number of priority maps and charts. The gap areas generally consist of scattered "sliver" areas in Africa, South America, Saudi Arabia, and Mexico. About two percent of the mission film, amounting to some 138,000 square nautical miles in gross coverage, was expended against MC&G requirements, with a net usable return as shown below of some 9,000 square n. m. coverage of

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[a] Memorandum for Holders of [redacted] 20 November 1968

[b] [redacted], 12 December 1969 and Memorandum for Holders, 30 December 1969

MAPPING, CHARTING, AND GEODESY cont.

Communist territory and 17,000 square n.m. coverage of territory outside the bloc. Satisfaction of the MC&G requirements remains difficult due to a reduced KH-4 launch rate and the continuing press of high priority intelligence requirements.

6. The status of cumulative MC&G area coverage as of 31 March 1970 stands as follows (all figures in square nautical miles):

Region	Total Coverage Required	Mission 1109 Collection	Estimated Net Usable Photography Held	Remaining for Collection
USSR/EuSats/Chi	8,513,000	9,000	8,070,000	443,000
Equatorial Belt*	5,903,000	-	1,367,000	4,535,000
Remaining Territory	11,168,000	17,000	9,134,000	2,031,000

Note: Due to the continuing reassessment of usable photography held by TOPOCOM it will not be possible to correlate the above totals with the previous reports' totals.

7. The MC&G requirement for Doppler coverage over the USSR and China on KH-4 missions is directed to satisfaction of the DoD targeting objectives for U.S. long-range missile systems. The objectives require that by 1970 positioning data on Sino-Soviet targets be accurate to within 450 feet horizontal and 300 feet vertical, with 90 percent assurance relative to the World Geodetic System. The requirement presently comprises a total of 5,877 targets, of which 1,124 are designated as Category I and 4,753 as

*The Equatorial Bad-Weather Belt (Equatorial Belt) is shown in shading on the opposite page (Chart 2). It has been isolated because of perennial bad weather which makes photographic coverage extremely difficult.

MAPPING, CHARTING, AND GEODESY cont.

as Category II. Mission 1109 attempted coverage on 5,219 of the total positioning targets. Initial mission assessment indicated cloud-free coverage acquired on 3,281 of the targets programmed. Analysis thus far rates the coverage obtained as acceptable and certifies achievement of the required coordinate accuracies for 3,100 of these. Data on the net achievement for Mission 1109, representing successful coverage on 79 percent of the mission's Category I targets, and 46 percent of those in Category II, are given in the table below.

	Required	Attempted	Cloud Free Coverage	Acceptable
Category I	1,124	1,077	901	893
Category II	4,753	4,142	2,380	2,207

8. [redacted]

[redacted]

TOTAL

*Since Mission [redacted]

NOTICE OF REMOVED PAGES

Pages 17 through 19 are not provided because their full text does not contain CORONA, ARGON, LANYARD programmatic information.

MIDDLE EAST AND ALGERIA

Background

1. The KH-4 and [redacted] satellite imagery systems are the only National Reconnaissance Program assets presently providing overhead photography on Middle East targets. Generally the Middle East is taken to include the area extending from Iraq to Morocco. The primary area of high intelligence interest for imagery collection, however, is defined as Syria and Jordon (west of 38° east) Israel, Lebanon and Egypt (east of 29° east).

USIB Requirement

2. On 1 April 1964[a] the Board approved the principle that intelligence needs for imagery on the Middle East were to be met by the CORONA and [redacted] programs. At present there is no USIB statement of unique standing requirements for Middle East coverage. Starting with Mission 1042 (16 June - 1 July 1967), however, the primary intelligence interest area of the Middle East as defined above has continually been a high priority area for all CORONA search missions and currently is Priority 1. On 2 June 1969 the Director of Central Intelligence directed that [redacted] coverage be obtained for all of Israel and this effort continues.

3. Targets and priorities for KH-4 and [redacted] collection are also regularly established for each mission in response to current priority intelligence needs. There are currently 285 COMIREX targets in the Middle East and Algeria requiring some periodic high-resolution coverage by overhead photographic reconnaissance.

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[a] Memo to Holders of [redacted] 1 April 1964,

MIDDLE EAST AND ALGERIA cont.

Current Requirements

4. In view of increased Arab-Israeli clashes and the anticipated arrival in Egypt of new types of Soviet weapons, Middle East requirements received high-priority emphasis throughout this quarter. CORONA search in the area was specifically directed to detection of SA-3 SAM or other missile deployments in Egypt and introduction of any additional new military equipment.

Authority for Reconnaissance

5. No approval has been sought for coverage by manned aircraft.

Activity and Coverage During Period

6. During the quarter overhead photography of the area was provided on two satellite missions, [redacted] and KH-4 Mission 1109 flown [redacted] and 5 - 23 March respectively. [redacted] returned usable high-resolution imagery on some 57 COMIREX Middle East targets including coverage of Israeli military activity and facilities in the Sinai. 1109, as noted earlier in this report (page 7) achieved extensive coverage of Egypt and observed a wide range of activity there. Five SA-3 sites, four of them occupied, and three possible SA-3 sites were found in the Alexandria area. 19 new areas of probable military-related construction were seen, four in the Cairo area and 15 within 20 n.m. of the Suez Canal and a new airfield was observed under construction at Siwa Oasis in western Egypt. Satisfactory coverage on several important target areas was not obtained, however, due primarily to unfavorable weather conditions. Only sparse coverage was obtained on the Cairo area, the Aswan area was not seen and Israel was completely cloud-covered.

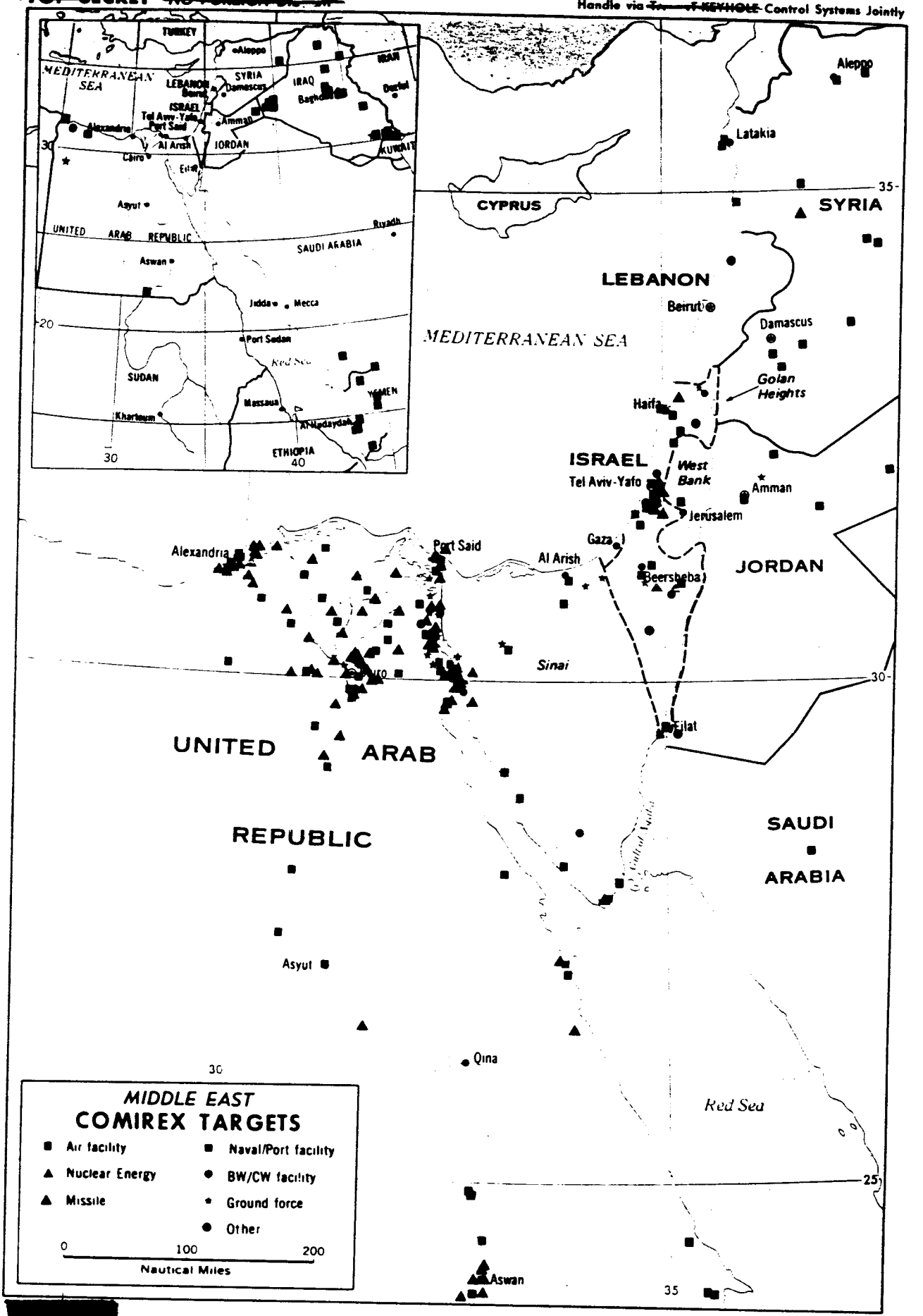
MIDDLE EAST AND ALGERIA cont.

7. The significant activities observed on 1109, along with the key areas not seen by that mission, were to be targeted for priority coverage on the next satellite mission, [redacted] Since the high intelligence interest area of the Middle East is relatively small and usually only two to three accesses are available per mission, a special effort was made by COMIREX to carefully weigh relative priorities and target conflicts in order to optimize target coverage by Mission [redacted]

Target Deck Status

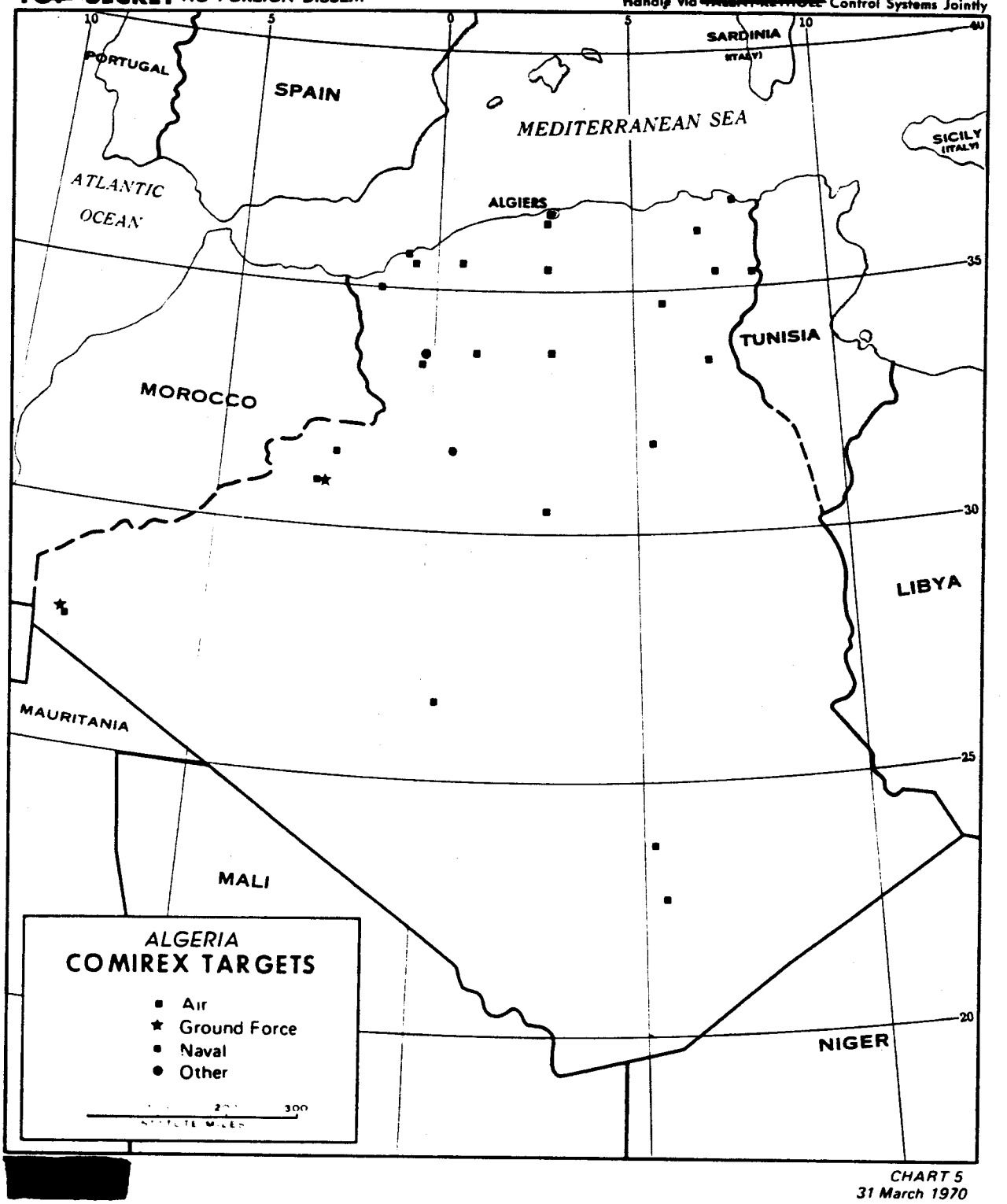
8. There are currently 285 COMIREX targets in the Middle East and Algeria as shown on the two maps (Charts 4 and 5) following this page. By category the targets are:

Missiles	90
Airfields	128
Nuclear	2
Naval	23
BW/CW	2
Military	26
Other	14
TOTAL	285



[redacted]

CHART 4
31 March 1970



[redacted]

CHART 5
31 March 1970

COMMUNIST CHINA

Background

1. Over the past two years CORONA and [redacted] have served as the primary collection systems for overhead photography of mainland Communist China. Drone coverage of targets in the South China area bordering North Vietnam, Laos, and Burma has been attempted sporadically, but the net contribution of imagery on the area by drone overflights has been small. [redacted] U-2 missions, although regularly flown along the maritime periphery of Communist China, are restricted to areas beyond 20 nautical miles from the mainland and provide only minimal returns to the national imagery base.

USIB Requirements

2. The Board's standing requirement for CORONA periodic general area search of Communist territory (page 3) applies to Communist China and defines the "developed" and "undeveloped" areas of China requiring semiannual and annual coverage respectively.

3. The COMIREX Collection Requirements for Planning (CCRP) provisions on high-resolution imagery collection for intelligence surveillance purposes (page 8), approved by USIB on 4 April 1968, also apply to Communist China. Some 1,067 specific targets in China designated of continuing intelligence interest are contained in the current CCRP target base.

4. In addition to the above, the USIB has from time to time approved standing imagery collection requirements directed to intelligence problems specifically concerning Communist China.[a] Only the two most

[a] [redacted]
2 June 1965
18 October 1965
19 January 1966
4 March 1966

COMMUNIST CHINA cont.

important and currently active of these are summarized below. All, however, are still outstanding on the record as Board requirements and all are now under review by COMIREX for revision and consolidation into a new and current restatement for USIB consideration.

a. The "Long Range Program for Overhead Image Forming Sensor Reconnaissance in the Far East"[a], approved by the Board 28 January 1966, was intended primarily for planning purposes in the context of the then existing mix of imagery reconnaissance vehicles overflying China. It stipulates a required frequency of repetitive high-resolution coverage for some 19 specified primary targets in China and for a range of regional priority targets in the country.

b. On 3 March 1966 the Board approved an overhead photographic reconnaissance program[b] designed to acquire, on an urgent basis, high-resolution baseline photography of military installations and lines of communication in South China and North Vietnam and to maintain surveillance as needed. This represented an enlargement of coverage requirements in the January 1966 long-range program. The targets, of which currently 101 are in South China, were selected because of their pertinence to possible Communist Chinese involvement in North Vietnam and achievement of baseline/surveillance coverage is reported to COMIREX each week. The acquisition of baseline[c] coverage of priority objectives has been successfully achieved and current needs for surveillance[c] are, as noted above, under COMIREX review.

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a [redacted]
b [redacted] 19 January 1966
c 4 March 1966
The requirement states that acceptable baseline photography must provide complete coverage of the objectives adequate to determine order-of-battle status, while subsequent surveillance coverage must be adequate to detect changes.

COMMUNIST CHINA cont.

8. Interpretable high-resolution imagery on approximately 400 COMIREX targets in Communist China was obtained by [redacted] including surveillance coverage on 20 of the special targets designated under the 3 March 1966 USIB requirement as pertinent to the introduction of ChiCom forces into North Vietnam. Significant intelligence highlights from the mission segment included the following:

- Construction at Launch Pad B-1 at the Shuang Cheng Tzu missile test center, which is capable of supporting an ICBM-sized booster, appeared complete. Also two rail tank cars (one fuel and one oxidizer) were observed for the first time at the propellant storage area.

- Extensive construction activity was observed at the Pai Yuan explosives and solid propellant plant. This plant produces explosives for conventional munitions and probably solid propellant boosters for surface-to-air missiles.

- Ssu Mao Airfield in South China was observed in final stages of construction. Construction has been under way since December 1968.

9. Mission 1109's coverage of China was generally better than the average for a CORONA mission. Approximately 1.3 million sq. n.m. of coverage, on 31 passes, was attempted, of which approximately 700,000 sq. n.m. was unique 90 percent or better cloud-free photography. Coverage of the South China area, however, was again limited due to unfavorable weather. Significant highlights from the mission included:

COMMUNIST CHINA cont.

- The first surface-to-surface missile launch site detected outside Shuang Cheng Tzu was identified about 225 miles southwest of Peking and approximately 600 miles east of the missile range. Initial excavation for the site was begun as early as August 1967. No equipment was observed at the pad on this mission, although the site appears to be complete. The launch pad is similar to the two MRBM complexes at Shuang Cheng Tzu. A large unidentified excavation within a mile of the site may become a new launch site or a support facility for the existing site.

- In southwestern Yunnan Province, the gradual increase in military facilities was observed to be continuing. A new road leading to the Burma border was identified, and several new roads are under construction near the Burma border. Two airfields are being expanded: Lu Liang where major reconstruction and expansion are occurring, and Ping Yuan Chieh where a new runway and tunnels are being added.

- No indications of preparations for a nuclear test at either Lop Nor or the Singer underground nuclear test area were detected.

10. Three peripheral [redacted] missions were flown during the first quarter of 1970 on 14 February, 17 March, and 26 March. The 14 February mission flew from a point in the East China Sea approximately East of Shanghai to about 24 degrees North opposite Taiwan. The 17 and 26 March missions, scheduled for coverage of the East China and Yellow Sea coastal areas, encountered heavy cloud cover over most of their route. No new activity of intelligence significance was noted on any of these missions.

COMMUNIST CHINA cont.

Target Deck Status

11. There are now 1,729 targets in China, a reduction of 94 since the last quarterly period ending 31 December 1969.

Category	South	Manchuria	Central	Formosa Strait	Total
Missiles	8	12	58	3	81
Aircraft	36	51	125	8	220
Nuclear	2	-	30	-	32
Naval	47	12	34	34	127
BW/CW	5	9	6	-	20
Electronic	24	4	51	9	88
Military	281	213	424	77	995
Complexes and L.O.C.	40	14	66	3	123
U/I Facilities	2	2	39	-	43
TOTALS	445	317	833	134	1,729

NOTICE OF REMOVED PAGES

Pages 29 through 33 are not provided because their full text does not contain CORONA, ARGON, LANYARD programmatic information.

NORTH KOREA

Background

1. The primary overhead reconnaissance vehicles for imagery collection on North Korea are the KH-4 (medium-resolution) and [redacted] satellites and manned aircraft of the [redacted] (SR-71) program (high-resolution).

USIB Requirement

2. The USIB standing requirements for CORONA area search[a] and [redacted] CCRP target coverage[b] (page 3 and page 8) apply to North Korea. There are 157 North Korea targets in the current CCRP target listing.

3. The remaining USIB standing requirement on North Korea is contained in the "Long-Range Program for the Far East"[c], approved by the Board 28 January 1966. It calls for high-resolution photographic coverage on a sampling basis of 50 percent of the North Korea targets (then numbering 60) quarterly and coverage on essentially all targets semi-annually. As shown in paragraph 8 below, the COMIREX targets in North Korea now number 488. This requirement is due for early COMIREX review and updating.

Current Priority Requirements

4. In view of the standing threat posed to U. S. forces in the ROK, the military posture of North Korea is of continuing current intelligence concern, particularly with regard to targets and areas of potential indications and warning intelligence significance and those related to the possible introduction of advanced weapons systems.

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a [redacted], 16 September 1966 and Memo for Holders, 8 November 1966

b [redacted], 27 March 1968 and Memo for Holders, 4 April 1968

c [redacted] 19 January 1966

NORTH KOREA cont.

Authority for Reconnaissance

5. For the first quarter 1970, the 40 Committee authorized one [redacted] mission over North Korea in February and one in March, both subject to the proviso that an intelligence need existed. No mission was authorized for January.

Activity and Coverage During Period

6. During the quarter ending 31 March 1970, two GIANT SCALE missions were flown over North Korea; Missions [redacted] on [redacted] and [redacted] on [redacted]. The first mission aborted due to failure of navigation equipment after completing one of three scheduled passes over the country. No defense reaction was noted against either mission. The two missions obtained satisfactory coverage of approximately 140 and 175 COMIREX targets respectively. Although no significant new developments were noted, this coverage did provide considerable good current baseline and order-of-battle information.

7. [redacted] Mission segment [redacted] and KH-4 Mission 1109 (5 - 23 March) also operated against North Korea targets during this period. Of the approximately 100 targets programmed for [redacted] 24 were successfully photographed. CORONA Mission 1109 programmed the entire country approximately 95 percent of which was reported as cloud free. No significant new activity was detected from the satellite coverage in this quarter. As of 31 March satisfaction of the USIB requirement (paragraph 3 above) was as follows:

Requirement	Accomplishment
50 % of targets quarterly	67.7% seen
100 % of targets semiannually	72.9% seen

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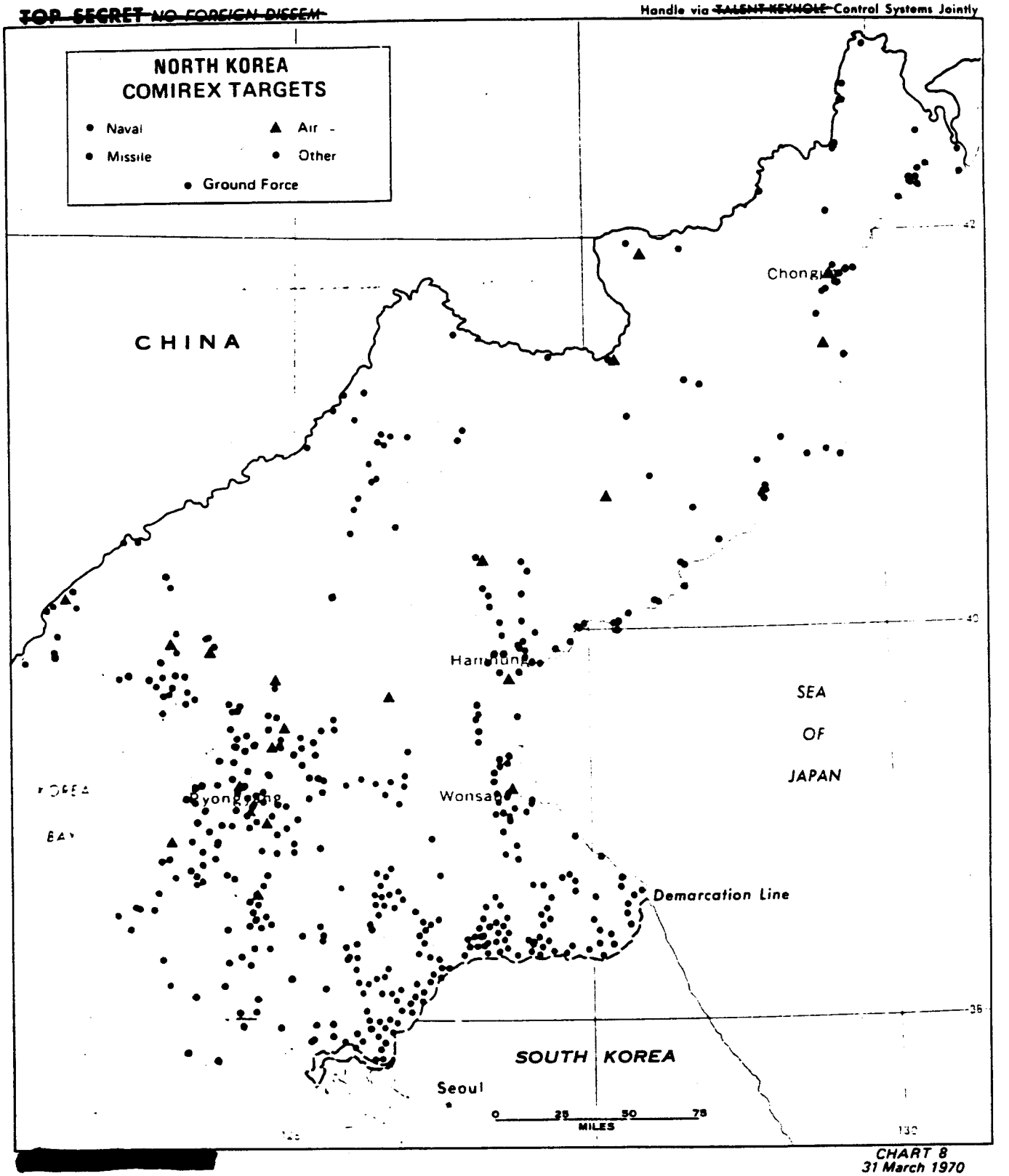


CHART 8
31 March 1970

NORTH KOREA cont.

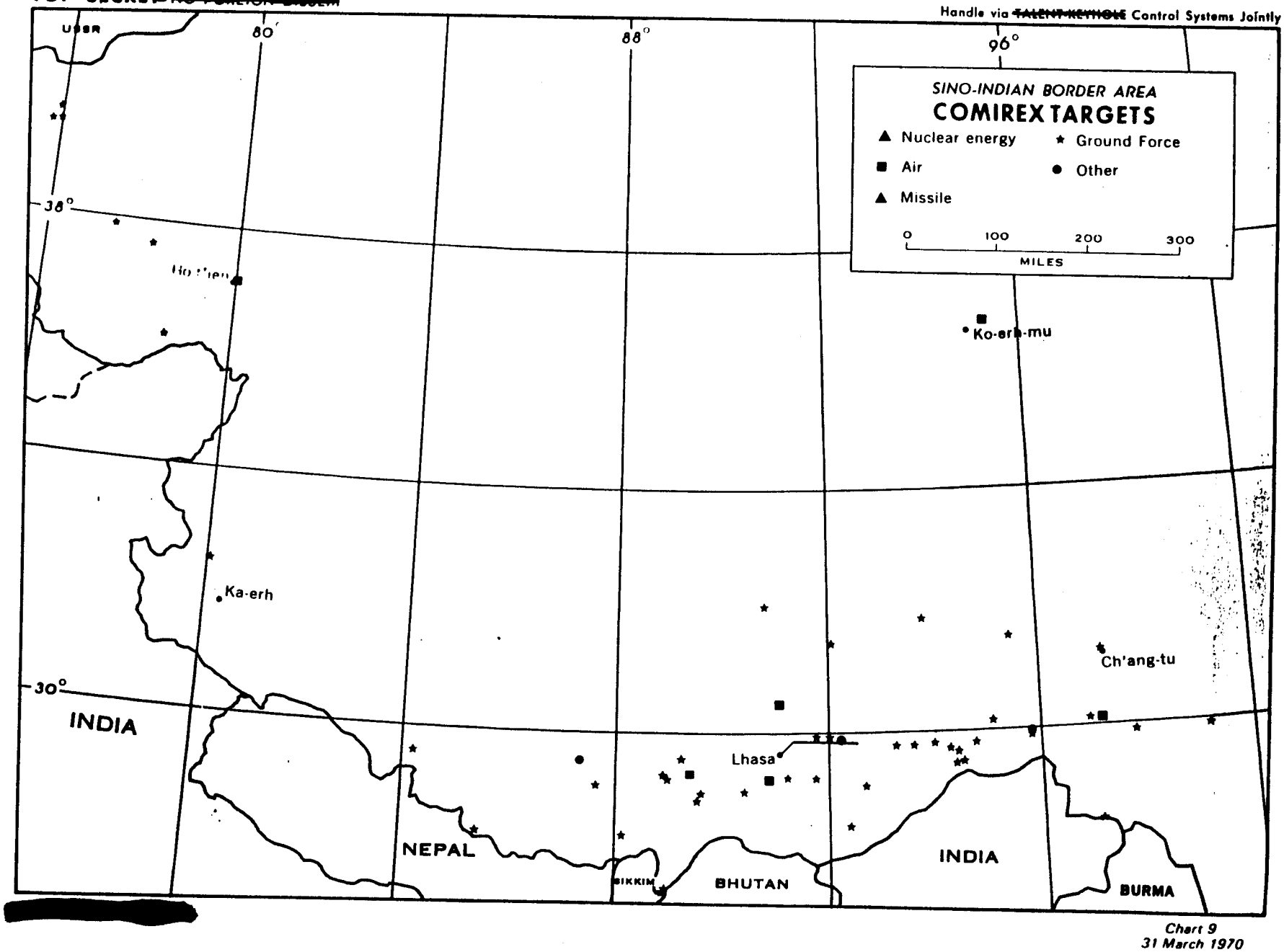
Target Deck Status

8. The 488 targets in North Korea are shown on the map (Chart 8) on the opposite page. This is a decrease of 113 targets from the total held as of 31 December 1969 and results primarily from the delections for collection of collocated targets. By category the targets are:

Missiles	36
Airfields	19
Naval	44
Military	265
Other	124
TOTAL	488

~~TOP SECRET~~ ~~NO FOREIGN DISSEM~~

Handle via ~~TALENT KEYHOLE~~ Control Systems Jointly



[redacted]

Chart 9
31 March 1970

SINO-INDIAN BORDER

USIB Requirement

1. The border area contains 51 COMIREX targets over a 1,500-mile area stretching from the NEFA to the southwest corner of Sinkiang Province. The map (Chart 9) on the facing page shows the target distribution.

2. The standing USIB requirement for the area is based on the previsions of the "Long-Range Program for the Far East"[a], approved by the Board 28 January 1966, calling for high-resolution photographic coverage of targets on a semiannual basis. This was subsequently modified to area coverage by CORONA approximately annually, with the proviso that special missions would be sought and attempts at satellite coverage would be intensified if there is a threat of hostilities. The distribution of targets enables [redacted] missions to provide routinely an adequate sampling of the entire border area with the frequency required under present conditions.

Authority for Reconnaissance

3. None requested.

Activity and Coverage During Period

4. Both satellite reconnaissance missions flown during the quarter provided some coverage of the area, but no new activity of intelligence significance was noted. The Sino-Indian Border area receives routine coverage as part of the CORONA six and 12-month search requirement. KH-4 photography is useful for monitoring major changes to known installations and/or new military construction in this area. On Mission 1109 in March parts of three passes were programmed over the Sino-Indian Border area. During the past 12 months 37 of the 51 targets in the area have been seen by [redacted] Mission [redacted] photographed 15 targets, 12 ground force installations, two airfields, and one electronic facility.

5. In view of the static situation long prevailing in this area, the status of coverage will no longer be regularly included in this Quarterly Report. The data will be maintained current by COMIREX, however, and available on call.

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a [redacted], 19 January 1966

Attachment [redacted]
27 April 1970
Limited Distribution

USSR AND EAST EUROPEAN SATELLITES

Background

1. Overhead photography of the USSR/Communist East Europe[a] land mass is provided exclusively[b] by satellite imagery reconnaissance vehicles. The present operational systems, CORONA and [redacted] and the on-coming [redacted] system have been developed for the primary purpose of providing for the National Reconnaissance Program a constant and reliable capability to maintain regular imagery search/surveillance of Soviet bloc territory to detect and monitor developments of national intelligence significance. As a standing rule, satellite missions are directed and operated so as to optimize coverage of Soviet bloc targets.

USIB Requirements

2. As summarized earlier in this report (pages 3 and 8) the Board's standing requirements and guidance for present operation of the CORONA[c] and [redacted][d] systems as well as for future [redacted] operations[e] focus extensively on imagery collection against the Soviet bloc and in large measure are specifically designed to assure consistent mission responsiveness to the community's paramount need for intelligence on this primary area of strategic threat against the U.S. and Western allies. Periodic review and amplification of these standing requirements are regularly conducted by COMIREX for the Board's interim current guidance to the NRO for planning.[f]

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[a] For purposes of territorial designation, the USSR/EE area is hereafter referred to as the Soviet bloc.

[b] The [redacted] program operating in the Berlin Corridor is not considered in this general context.

[c] [redacted], 16 September 1966, and Memo for Holders, 8 November 1966

[d] [redacted], 27 March 1968, and Memo for Holders, 4 April 1968

[e] [redacted], 10 November 1969, and Memo for Holders, 1 December 1969

[f] [redacted], 4 February 1969 (approved 17 February 1969), 7 August 1969, and Memo for Holders, 13 August 1969

[redacted], 2 February 1970 (approved 17 February 1970)

USSR AND EAST EUROPEAN SATELLITES cont.

Current Priority Requirements

3. As previously noted, in addition to USIB standing requirements, current priority intelligence requirements dealing with problems of most pressing immediate community concern are regularly developed for each satellite mission.

Authority for Reconnaissance

4. The original satellite reconnaissance schedule for this quarter called for two [redacted] missions -- one in [redacted] and one in [redacted] -- and one CORONA mission in February. Due to technical problems, however, the missions approved by the 40 Committee and actually flown during the period were one [redacted] in [redacted] and one CORONA in March (1109).

Activity and Coverage During Period

5. Of the approximately 1,900 individual Soviet targets programmed for [redacted] Mission segment [redacted], 670 COMIREX and 90 bonus targets were successfully photographed. This included coverage on targets in the following categories: strategic missile 216, air 86, naval 33, ground force 167-- 30 East Europe targets were also covered. Highlights from the mission included:

- First identification of a major SA-5 radar and launcher checkout facility near Kovylkino, about 175 miles south of Gorkiy.

- Detection of late-stage preparations for an underground nuclear test at the Degelen test area of Semipalatinsk.

USSR AND EAST EUROPEAN SATELLITES cont.

- Identification at Severodvinsk of the probable 12th Y-class submarine to be launched from that yard.

6. KH-4 Mission 1109 (5 - 23 March) provided good coverage of Soviet strategic missile deployments, the Moscow area, and the Sino-Soviet Border area. Mission highlights included:

- Continuing evidence of ABM development at the Sary Shagan Missile Test Range. A new 22-foot high Galosh-type launcher and a 16-foot high launcher were observed at Complex A, which prior to late 1968 had been associated only with air defense missile systems. Also, additional construction on the large modified Try-Add Building at Complex D suggested a new type of ABM radar is under construction.

- Coverage of all ABM facilities on the Moscow area. A total of about 46 Galosh canisters, the largest number to date, were observed at the four active ABM launch complexes and the Borovsk Support Facility.

- Nine additional SS-11 ICBM sites were identified in existing groups at the Pervomaysk IRBM Complex. Only about 25 percent of the complex was observed due to heavy cloud cover, however.

- Two ICBM groups and 41 launch sites were newly identified.

USSR AND EAST EUROPEAN SATELLITES cont.

Status of Target Deck

7. As shown below, 5,685 of the current 8,611 COMIREX targets fall within the USSR and European Satellites. This represents a decrease in the target totals of 142 and 682 respectively since the last quarterly period ending 31 December 1969. Any significant number of targets outside of the USSR is noted in parentheses.

Missiles	Number of Targets	
ICBM	1,323	
IR/MRBM	401	
R&D	116	
Production	56	
Submarines	77	
ABM	7	
Other Missile	214	(2 E. Germany; 1 Poland; 8 Bulgaria)
Total Missiles	2,194	
Airfields		
Long Range Bombers	62	
Other	615	(49 Poland; 37 E. Germany; 34 Czechoslovakia; 17 Bulgaria; 14 Hungary; 15 Rumania)
Total Airfields	677	
Other		
Nuclear	159	(6 E. Germany; 2 each, Rumania, Czechoslovakia and Hungary; 1 Bulgaria)
Naval Bases, Port	90	(3 Rumania; 4 E. Germany; 8 Poland)
BW/CW Facilities	50	(7 Poland; 2 E. Germany; 3 Czechoslovakia
Radar/Elec. Facilities	374	(70 Poland; 33 E. Germany; 14 Czechoslovakia; 13 Hungary)
Military	1,862	(20 E. Germany; 164 Poland; 100 Hungary 66 Rumania; 130 Czechoslovakia; 71 Bulgaria)
Urban/Industrial	248	
U/I	31	
Total Other	2,814	
TOTAL TARGETS	5,685	

Status FY 70 Basic Support Exploitation Program as of 31 March 1970

A summary of basic third-phase targets exploited and reports/briefs produced thus far in FY 70 is given below:

TARGETS EXPLOITED
(1 Jul 69 - 31 Mar 70)

	Initial	Update	Total
Facilities			
Installations	517	151	668
Complexes/Areas	77	28	105
Topics	17	2	17
Weapons			
Objects	19	-	19
Systems	-	-	-
			809

BASIC REPORTS/BRIEFS
(1 Jul 69 - 31 Mar 70)

Reporting Organization	Report	Brief	Total
CIA/IAS	5	-	5
DIAAP-9	276	49	325
USAIIC	1	2	3
NRTSC	11	-	11
FTD	2	-	2
NPIC	187	79	266
			612

27 April 1970
Limited Distribution

Tab A

Satellite Reconnaissance Missions
Launched or Recovered in
Fiscal Year 1970

1000 Series are CORONA (KH-4A), 2 buckets, medium resolution
1100 Series are CORONA (KH-4B), 2 buckets, medium resolution
[redacted]

Mission Number	Date	Remarks
1109	5 Mar - 23 Mar 70	Second successful 19 day mission. Achieved good results for both area search and target coverage -- all cameras operated satisfactorily throughout the mission. Interpretability generally ranged from fair to good, however at magnifications above 25X most imagery appears out of focus. Mission was approximately 80-85 percent cloud free. Snow, however, hampered search for new ICBM starts. The first Doppler beacon in support of MC&G requirements was successfully operated on this mission.

[redacted]

Tab A

Satellite Reconnaissance Missions
Launched or Recovered in
Fiscal Year 1970 cont.

Mission Number	Date	Remarks
1108	5 Dec - 21 Dec 69	Highly successful mission in terms of satisfaction of requirements. Image quality generally ranged from good to fair. 800 feet of color film (SO-242) was exposed on one camera.
[redacted]	[redacted]	[redacted]
1052	22 Sep - 7 Oct 69	Overall coverage was comparable to that of an average KH-4A mission--interpretability ranged from poor to good. This mission was highlighted by the discovery of additional SS-11 silos at Pervomaysk and Derazhnya.
[redacted]	[redacted]	[redacted]

Tab A

Satellite Reconnaissance Missions
Launched or Recovered in
Fiscal Year 1970 cont.

Mission Number	Date	Remarks
1107	24 Jul - 11 Aug 69	Longest KH-4 mission flown to date--19 days. Mission was maintained on orbit for one extra day to obtain coverage of the Lop Nor Nuclear Test Site. Lack of stereo, due to the failure of one of the primary camera systems, reduced mission effectiveness. Mission was flown at 100 nm perigee rather than the noraml 85 nm perigee for the J-3 system to increase amount of area photographed.