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MISSION #17 OMURA "BUNCHBERRY 3"
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HEADQUARTERS XX BOMBER COMMAND

APO 493

HEADQUARTERS TWENTIETH AIR FORCE	
Chief of Staff	
Deputy C. of S. Adm.	
Deputy C. of S. Opr.	
A. G.	

MISSION NO. 17

COPY NO. 1

TACTICAL MISSION REPORT

OMURA AIRCRAFT PLANT

21 NOVEMBER 1944

GENERAL H. H. ARNOLD
COMMANDING GENERAL
TWENTIETH AIR FORCE

2-5239-45

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HEADQUARTERS
XX BOMBER COMMAND
APO 493

TACTICAL MISSION

REPORT

Field Orders No. 17

Mission No. 17

TARGET: OMURA AIRCRAFT PLANT

OMURA, JAPAN

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Prepared by:

Intelligence Section
XX Bomber Command

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HEADQUARTERS
XX BOMBER COMMAND
APO 493

1 December 1944

SUBJECT: Report of Operations, 21 November 1944.

TO : Commanding General, Twentieth Air Force,
Washington 25, D.C.

1. UNITS PARTICIPATING:

All bombardment Groups of the XX Bomber Command were ordered to participate in a daylight attack on D-day against the Omura Aircraft Plant, Omura, Japan. Groups, their locations, and their Commanding Officers, were as follows.

<u>Group</u>	<u>Rear Base</u>	<u>Forward Base</u>	<u>Commanding Officer</u>
40th	Chakulia	Hsinching	Col. W.H. Blanchard
444th	Dudhkundi	Kwanghan	Col. A.L. Harvey
462nd	Piardoba	Kianglai	Col. A.F. Kalberer
468th	Kharagpur	Pengshan	Lt. Col. J.V. Edmundson

2. IDENTIFICATION OF MISSION:

a. Attack No. 17.

b. Targets Planned:

(1) Primary Target: Omura Aircraft Plant, Omura, Japan
(AAF Target No. 90.36-1627).

(2) Secondary Target: Kiangnan Dock and Engineering Works,
Shanghai, China (AAF Target No. 83.1-
117)

(3) Last Resort Target: Wharf Area, Nanking, China (AAF Tar-
get No. 83.1-129).

3. STRATEGY AND PLAN OF OPERATIONS:

a. Importance of Targets:

(1) Primary Target:

(a) The Omura Aircraft Plant is divided into three distinct parts; (a) The old area 2200 feet by 1800 feet extending diagonally back from the main wharfs, (b) The new south plant 2550 feet by 1010 feet extending south along the shore line, and (c) The new east plant which is a continuation of the old plant.

(b) The work involved in these three shop areas consists of repair to Zekes and Jakes, manufacture of the Pote type aircraft as well as the manufacture of the new carrier-borne attack plane Grace. Engines are likewise repaired and built at the Omura Plant.

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(2) Secondary Target;

(a) The Kiangnan Dock and Engineering Works is Shanghai's largest drydock and shipyards installation, and is one of the enemy's most important ship building and repair facilities outside of Japan. The 3 drydocks (650', 580', and 520') are active in repairing Japanese cargo vessels and can accommodate naval ships up to light cruisers. The 4 ship-building ways are at present turning out from 6 to 12 ships yearly, principally ore carriers of from 2000 to 3000 gross tons. In addition small wooden ships are being built. The shops, equipped with modern British machine tools, can make engines of 3000 horsepower or less.

(b) Destruction or damage suffered by this target would represent still another blow at Japan's weakening lifeline of ocean transportation.

(3) Last Resort Target;

(a) The city of Nanking, on the Yangtze River, is one of the enemy's military centers in Occupied China. The city contains a number of large barracks and storage areas. The movement of troops and supplies is accomplished by the excellent transportation facilities serving Nanking. The railroad line from Tientsin terminates at Pukow, across the river from Nanking with which it is connected by ferry. Another railroad line connects Nanking with Shanghai and continues on to Wuhu and the South. Ocean-going vessels are accommodated at the Nanking wharves.

(b) All these transportation services converge in the general target area, at the north of which is the Nanking R.R. Terminal and R.R. ferry wharves. The area contains numerous large warehouses, a power plant, and along the waterfront are large pontoon wharves. Over a period of months an average of 424 cars have been observed in the Nanking rail yards (700 at Pukow) and shipping at the Nanking and Pukow wharves generally amounts to between 20,000 and 30,000 tons, although shipping activity has possibly declined recently.

(c) Damage to this target area would hamper the flow of military traffic and destroy quantities of supplies stored there.

b. Details of Planning (See also Annex N, Field Orders);

(1) Operational Planning;

(a) This mission was originally planned as the first part of a double mission to be run in the latter part of October, the target to be designated by Twentieth Air Force Headquarters. However, it soon became apparent that the delay encountered in running previously planned missions would make it necessary to run this mission later.

(b) Based on the logistical support available, the October-November forward area combat effort was planned as follows; a strike of 120 sorties on or after 25 October with a combination strike of 200 sorties on or after 10 November; or a combination strike of 142 sorties on or after 27 October followed by one strike of 120 sorties on or after 8 November. The former plan was approved by Air Force, but a change in the logistical situation made it necessary to revise these plans. A strike of 110 sorties on 12 November (Mission No. 16 - actually run on 11 November) and one of 110 sorties on 27 November were proposed and the approval of the 12 November strike gave implied approval to the later strike.

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(c) It was later found possible to run Mission No. 17 as early as 24 November. Because weather at the target was forecast as favorable for 21 November and because other circumstances made change possible, it was found desirable to run this mission on 21 November.

(d) The operational plans for this mission were almost identical with those for Mission No. 16, also directed against the Omura Aircraft Plant.

(2) Determination of Bomb Load;

(a) It was specified that both 500-pound general-purpose (TNT or Amatol filled) bombs (fused .1 second nose and .01 second tail) and 500-pound M-76 incendiary bombs (fused instantaneous nose and non-delay tail) were to be carried in each aircraft mixed in the ratio of 2 demolition bombs to 1 incendiary bomb with the incendiaries loaded to release last. Minima of 10 bombs (40th), 11 bombs (444th), 9 bombs (462nd), and 10 bombs (468th) were prescribed for aircraft equipped with center section wing tanks and a minimum of 8 (all Groups) for aircraft not so equipped.

(b) Factors determining the selection of the bombs to be carried, the fusing, and the ratio were the same as those influencing the determination of the bomb load in Mission No. 16 against the same target. (See Annex O, Supplemental Information).

(3) Bombing Data;

(a) The method of bombing and axis of attack were the same as for Mission No. 16.

(b) Aiming points (also the same) were as follows; for the 40th and 462nd Groups, southeast corner of building No. 19 in Area A; for the 444th and 468th Groups, building No. 4 in Area D. Reference was AAF Target Illustration No. 90-36-1627 P4A issued September 1944.

(4) Other Provisions;

(a) Routes and formation to be flown were the same as for Mission No. 16 as were provisions regarding the taking of photographs.

(b) Guns were not to be test fired at night.

4. MOVEMENT TO THE FORWARD AREA (See Annex M);

Of the 139 aircraft (excluding those in the depot and those assigned to photo reconnaissance duties) available in the Groups, 122 were airborne on the trip to the forward area bases. Of these, 7 aircraft returned to their rear area bases and did not complete the trip over the Hump. On D-day minus 2, 98 aircraft landed in the forward area and on D-day minus 1, 17 landed, which, together with 1 combat-equipped aircraft in the forward area prior to the movement, made a total of 116 aircraft in the forward area for the mission.

5. EXECUTION OF THE MISSION (See Annexes A and K);

a. Take-off (See Annex A, Part I);

(1) Times of take-off were planned on D-day minus 1 as follows;
40th - 1839Z; 444th - 1849Z; 462nd - 1837Z; and 468th - 1840Z.

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(2) Take-off was accomplished on D-day minus 1 as follows:

<u>Group</u>	<u>A/C Available</u>	<u>A/C Airborne</u>	<u>First Off</u>	<u>Last Off</u>
40th	30	28	1839Z	1946Z
444th	29	29	1849Z	2017Z
462nd	31	30	1837Z	2003Z
468th	<u>26</u>	<u>22</u>	<u>1841Z</u>	<u>1952Z</u>
Total	116	109	1837Z	2017Z

(3) Two aircraft (included in the foregoing) made delayed take-offs. Excluding these two, the last off for the 444th Group was at 1952Z and for the 462nd Group 1941Z.

(4) One aircraft of the 468th Group became airborne but quickly lost altitude, hit trees near the south end of the runway, and went into a wingover and down on its left wing. The aircraft burned immediately after crashing approximately 1 mile south of the runway at 1903Z. Of the crew of 11 only one seriously injured, survived.

(5) Weather at take-off varied from clear to 2/10 cirro-stratus or scattered cirrus. Visibility was from 3/4 mile to 5 miles in dust and ground fog. Surface winds, reported by only one base, were northwest at 5 mph.

b. Route Out (See Annex A, Parts II and III):

(1) As on Mission No. 16, deviations from the route to the primary target were numerous. In all, 41 aircraft deviated from this route largely because of mechanical difficulties and weather. All of these aircraft failed to bomb the primary target except one that omitted a check point and proceeded directly from the China Coast to the Initial point.

(2) The difficulties in forming at the prescribed assembly points encountered during Mission No. 16 were also encountered during this mission. Several aircraft were unable to locate a formation and bombed targets other than Omura individually. Other aircraft, confronted with the same difficulty, proceeded to and bombed the primary target individually. As a result these and other difficulties on the route out, the planned 12-plane formation was not accomplished and the formations formed varied widely in composition.

c. Primary Target:

(1) Of the 109 aircraft airborne, 61 bombed the primary target at Omura. The first aircraft (a formation of 9 aircraft) released 82 demolition and 37 incendiary bombs on the target at 0047Z and the last aircraft (a formation of 11 aircraft) released 90 demolition and 47 incendiary bombs at 0136Z. During this interval of 49 minutes, 524 demolition bombs (131 short tons) and 286 incendiary bombs (71.5 short tons), a total of 810 500-pound bombs (202.50 short tons), were dropped in the target area.

(2) Bombing altitudes varied from 20,000 to 24,000 feet indicated (as prescribed in the field orders) while axes of attack ranged from 30 degrees to 110 degrees Magnetic. Indicated air speeds varied from 185 mph (1 aircraft) to 210 mph (3 aircraft) with the majority of the aircraft (35) indicating between 195 and 200 mph.

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(3) Weather at the target was not satisfactory for visual bombing. There was 8/10 altocumulus at 12,000 feet, 7/10 altostratus at 17,000 feet, and 5 to 8/10 cirrostratus at 23,000 feet. Dense persistent vapor trails also developed at altitudes above 20,000 feet.

(4) One aircraft was lost over the target as a result of enemy fighter action.

(5) Two formations broke up when an attempt was made to change leaders after the initial point had been passed. One formation composed of at least 12 aircraft experienced its first difficulty when the lead aircraft, due to an inoperative radar, attempted to transfer the lead to aircraft 579 (40th), which after assuming the lead went into a diving turn evidently to make a second run to the target. Only 5 aircraft were able to follow him over the primary target. Two aircraft bombed near-by Omuta and 4 bombed a town south of Nagasaki. The second formation, composed of 9 aircraft, was scattered when the lead aircraft after passing the initial point, attempted to transfer the lead. One element of 3 aircraft bombed Omura, one element of 5 bombed Omuta, and the ninth aircraft (278) was shot down by enemy fighters.

d. Secondary Target:

(1) In all, 13 aircraft bombed the secondary target at Shanghai. The first aircraft over the target (a single plane) dropped 9 demolition and 5 incendiary bombs at 202329Z, while the last aircraft (a formation of 3 aircraft) dropped 35 demolition bombs at 0413Z. During this interval of 4 hours and 44 minutes, a total of 127 demolition and 36 incendiary bombs were dropped in the target area - a total of 40.75 short tons.

(2) Bombing altitudes ranged from 18,300 feet to 27,500 feet indicated. Bombing runs were made on various headings ranging from 170 to 355 degrees Magnetic.

(3) Weather at the secondary target was clear with visibility from 5 to 8 miles in haze.

e. Last Resort Target:

(1) Only 5 aircraft bombed the last resort target at Nanking. All singly, the first at 202242Z, the last at 0150Z. Twenty-eight demolition and 37 incendiary bombs were dropped - total of 16.25 short tons. Bombing altitudes ranged from 20,000 feet to 21,500 feet indicated. Headings were varied.

(2) Weather at the last resort target was clear with visibility 10 miles in haze.

f. Targets of Opportunity (See Annex A, Part IV): Fifteen aircraft bombed targets of opportunity and one of these bombed two different opportunity targets. Types of targets were varied. One formation of 5 aircraft bombed Omuta Airfield as a result of the radar operator mistaking Omuta for Omura in the radar scope. Other targets bombed included railroad bridges and towns on Kyushu. Altitudes ranged from 17,200 feet to 21,300 feet indicated. The first aircraft bombed its target at 202358Z and the last at 0204Z. Headings varied with the targets selected.

g. Route Back:

(1) Deviations from the planned route on the route back

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were numerous with a number of aircraft landing at friendly bases other than XX Bomber Command bases. Enemy action over the target was a contributing cause in several of these cases, resulting in crash landings at these bases. Sixteen aircraft in all deviated from the planned route, 13 of these aircraft landing en route. One aircraft left its route for a short period to search for an aircraft that was reported to have ditched.

(2) Eighty-eight aircraft returned to XX Bomber Command bases and 13 to other bases. Of the latter, 1 aircraft was lost (after having landed at Ankang to refuel) when another aircraft, crippled by enemy action, swerved out of control and crashed into the parked aircraft. In addition to these losses on the return route, 1 crashed 30 miles from Hsinching and 1 crashed 60 miles northeast of Laohokow, both from causes undetermined as yet. One other aircraft crippled by enemy action also crash landed at Ankang and is also reported to be a total loss. Two aircraft are missing.

(3) Weather at the bases on return caused no difficulty. Scattered cumulus prevailed at from 4000 to 6000 feet. Visibility varied from 8 miles in haze to unrestricted. Surface winds were southwest + 5 mph.

5. ENEMY ANTI-AIRCRAFT (See Annex B):

a. Meager and generally inaccurate heavy anti-aircraft fire was reported by approximately 50 per cent of the aircraft over the Omura Area between 0050Z and 0136Z at altitudes ranging from 20,000 to 23,000 feet. As fire was encountered through 8/10 to 10/10 undercast and possible gun-laying radar signals were intercepted by RCM Observers, the use of gun-laying radar is indicated.

b. Continuously pointed fire is believed to have been used, but no more than 9 bursts were reported at any one time. Deviations were generally below and behind with no preponderance shown as to either right or left deviations.

c. Fire was not as accurate in proportion to the number of aircraft engaged as that of Mission Number 16; which was against the same target under almost identical conditions. However, 50 per cent of the aircraft were engaged as compared to 10 per cent for the previous mission.

d. One aircraft reported 4 or 5 phosphorous bursts at 0104Z south of Omura. These bursts were at 10 o'clock and approximately 3,000 to 6,000 feet above the aircraft. Two other aircraft described bursts similar to those of phosphorous anti-aircraft projectiles.

e. Heavy anti-aircraft fire was also encountered at Omura, Nagasaki, in the vicinity of Nagasaki, at Aka Island, Shanghai, Nanking, Kungkiatsi, and in the vicinity of Piyuan. All fire was inaccurate and most was meager, exceptions being at Nagasaki and Shanghai where it ranged to a moderate intensity.

f. Meager and inaccurate heavy anti-aircraft fire was encountered at 3 different locations from a possible cruiser or destroyer, an unidentified ship, and a possible destroyer or destroyer escort.

g. Two smoke generators were observed at 0153Z at Nanking on the

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west bank of the Yangtze River south of the Fukow Railroad Car Ferry Pier.

h. Two barrage balloons were observed in the vicinity of Fowning and 3 "pear-shaped" balloons reported at 24,000 feet altitude some 5 to 10 miles from Omura.

i. One aircraft sustained minor flak damage at 0104Z while over Omura at 21,500 feet altitude.

j. During the hours of darkness no blackout was observed in Occupied China although it is believed the enemy had prior warning; however, not so much as during previous missions.

6. ENEMY AIR OPPOSITION (See Annex C):

a. Enemy air action was rated moderate to strong in the primary target area, but weak elsewhere. Sixty-one of the B-29's reporting met a total of 304 individual encounters, 259 of which were in the primary target area, 7 over the secondary target, 2 over the last resort target, and the remainder, 36, scattered along the routes out and back.

b. One B-29 is known destroyed due to enemy air action, and 4 were damaged by enemy fighters and subsequently lost due to crashes or crash landings in friendly territory. Nine other B-29's sustained damage as a result of enemy air action. Claims against enemy aircraft are 27 destroyed, 19 probably destroyed, and 24 damaged.

c. Encounters on the frontal quarter were still in the majority with 33 per cent. Of the remainder, 27 per cent came from the right quarters, 23 per cent from the rear, and 17 per cent from the left quarter. Of encounters on all quarters, 44 per cent were high, 24 per cent were level, and 32 per cent were low.

d. Enemy pilots opened fire in 67 per cent of the encounters, and B-29's in 84 per cent. Japanese pilots were rated aggressive and skillful with 38 per cent of their encounters pressed to less than 250 yards. Seventy-nine encounters were closed to 100 yards or less.

e. Crews reported 46 aerial bombing attacks, the largest number yet encountered, in most of which phosphorous type bombs were used. The bombs were reported "thrown" or "flipped" from the bellies of many Japanese fighters, rather than dropped. Twenty-five of the 46 attacks came from the frontal quarter, and 13 of these from the 11 o'clock position.

f. Thirty-three coordinated attacks accounted for 88 individual encounters, 29 per cent of the total.

g. B-29's made their first contacts with Jack 11, the new Japanese Navy fighter, and Frank, the new Japanese Army fighter. Two Jack 11's were reported responsible for shooting down a B-29 in the Primary Target Area.

h. Evasive action against enemy fighters consisted of turning into attacking aircraft, or putting the nose down to out-run them.

7. WEATHER (See Annex D):

a. The weather was forecast for the primary target area as 2/10

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fair weather cumulus with a visibility of 25 miles. However, the synoptic situation was dominated by a cold front which slowed down in the target area. Because of this attendant cloud cover had not cleared off by target time. Thus, at altitudes ranging from 12,000 to 23,000 feet there were cloud layers of 5/10 to 8/10 altocumulus, altostratus and cirrostratus with dense persistent vapor trails at altitudes above 20,000 feet. At the primary target visibility was poor and formation flying was made difficult. This with the contributing factor of radar malfunctions caused many aircraft to be diverted from the primary target to others in the vicinity.

b. Temperatures were low enough to cause frosting of the gunner's blister and pilot's windows which made defense of the aircraft uncertain and formation flying hazardous.

c. Weather at the secondary and last resort targets was suitable for visual bombing and formation flying, although visibility was limited to 5 to 10 miles in haze.

d. The weather at the bases upon return was favorable with 1/10 to 2/10 fair weather cumulus at 4,000 to 6,000 feet with visibility from 7 miles to unrestricted.

8. COMMUNICATIONS (See Annex E):

a. Communications were generally satisfactory, although a high noise level was encountered on all frequencies used.

b. Icing conditions on the antennas caused some difficulty in reception and broke several antennas. Unfavorable weather diverted some aircraft which in turn increased the amount of signal traffic.

c. Air-to-air homing was initiated by 5 aircraft representing all the group s. These signals were received by 22 aircraft, of which 12 are known to have effected a successful rendezvous. Much interference was noted on the lower frequency bands which due to excessive needle hunting made homing practically impossible.

d. Some man-made interference was reported on or near the assigned frequencies, but at no time was it strong enough to disrupt communications. No deliberate attempts at jamming were logged.

e. A practice message of 57 groups was sent after the aircraft became airborne. This message was received by 32 aircraft directly and relayed to 3 other aircraft. Failures of receipt may be partially attributed to a low signal level and preoccupation with air-to-air homing.

9. RADAR (See Annex F):

a. Radar Bombing was performed by a large number of aircraft on this mission. The bombing of the target, however, was not as successful as it might have been, due to many flight errors and radar equipment malfunctions.

b. Navigation by radar, identification of the target and check points along the route was substantially the same as on previous Omura missions. Annex F, Section II, Table B lists a number of these check points.

c. Radar scope photographic results were satisfactory. A number of usable sets were obtained. One set of photographs showed excellent photographic results of the Omura Area. Other aircraft obtained a number of photographs of both the target area and check points.

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d. Serviceability of the radar systems was satisfactory on this mission; however, the operating efficiency of the AN/APQ-13 decreased. Twenty-nine radar operators reported identifying interference on the radar scope from other radar equipment. There were 3 SCR-729 and 1 SCR-695 malfunctions.

10. RCM (See Annex G):

a. Seven RCM equipped aircraft, each with one RCM Observer participated in the mission. Their activities were limited to searching for enemy radar stations to and from the targets. Communications were also monitored over Omura and Shanghai.

b. The first radar intercept was encountered at longitude 128° East, but the following aircraft obtained intercepts upon reaching longitude 113° east. This condition suggest that the radar early warning net in Occupied China and the Saishu Island Area is not in continuous operation, but is probably alerted by visual warning nets.

c. The radar intercepts obtained confirm those of previous missions and indicate the type of equipment being used.

d. Occasional intercepts of 200 mc. signals were logged over the target and would ordinarily indicate radar fire control equipment, but the inaccuracy of the flak discounts this.

e. Although the radio operators reported some interference there was no evidence of jamming of communications or interference with our homing aids and ground monitoring stations.

f. Actual pulse photographs of some of the radar intercepts are analyzed and exhibited in Annex G.

11. CENTRAL STATION FIRE CONTROL AND GUNNERY (See Annex H):

a. The mission was intercepted by aggressive attacks including coordinated attacks of the chow line variety. Total rounds of ammunition used numbered 59,755, of which 51,930 were used in combat and 7,825 in test firing. Out of a total of 465 turrets, 11 malfunctions (2.4 per cent) of the CSFC system were reported and out of a total of 930 50-cal. machine guns on the mission 18 malfunction (1.9 per cent) were reported.

b. Difficulties encountered were frosting of the gunners' blisters, collection of dirt on the blisters during take-off, and discomfort of the newly installed safety belts. It was also reported that the belts frequently became unfastened.

12. CAMERAS AND PHOTOGRAPHS (See Annex I):

a. A total of 95 cameras of the K-18, K-20 and K-22 types were installed in aircraft scheduled to participate in the mission. Of these, 16 were in aborting aircraft, 74 were in aircraft completing the mission and the disposition of the remaining 5 is unknown. However, of these 74 completing the mission only 47 photographed targets. Ninety-eight usable negatives were obtained, a smaller number than usual due to cloud coverage and the preoccupation of crew members with fighter attacks.

13. BATTLE LOSSES AND BATTLE DAMAGE (See Annex J and M):

a. Five aircraft were lost wa a result of enemy action. One

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aircraft was seen to go into a spin and fall into Omura Bay after being attacked by 2 Jack 11 type fighters. Three aircraft crash-landed in friendly territory after being crippled by enemy fighters and the fifth aircraft landed at Ankang but crashed into a parked B-29 as a result of having suffered battle damage.

b. Minor damage was inflicted upon 9 B-29's by enemy aircraft and one of these plus an additional aircraft suffered minor flak damage.

c. Expended cartridge cases also caused some damage to the vertical stabilizer of one of the aircraft.

14. FUNCTIONING OF EQUIPMENT (See Annex K and M):

a. Of the 149 aircraft on hand in the groups, 122 were airborne in the rear area, and of these 7 failed to complete the movement forward because of mechanical difficulties. This made (with the one operational aircraft already in the forward area) 116 aircraft available for the mission. However, 7 aircraft failed to become airborne for the mission due to mechanical difficulties, and of the 109 which did become airborne 22 failed to bomb the primary target of Omura because of mechanical malfunctions and 26 failed for other reasons. Of the 22 aircraft that failed to bomb the primary target because of mechanical reasons, 1 bombed the secondary target, 5 bombed the last-resort target, 6 bombed targets of opportunity, 6 jettisoned, and 3 aircraft brought their bombs back.

b. There were 164 malfunctions in flight as follows: power plant and accessory section - 19; propellers and governors - 24; fuel system - 15; oil system - 23; electrical system - 17; instruments 38; and miscellaneous - 28.

c. Comparative group fuel consumptions to the primary target are consistent after making allowances for variations in the routes.

15. TARGET DAMAGE ASSESSMENT (See Annex L):

a. Primary Target:

(1) Damage assessment of Omura is based upon one set of good quality strike photos obtained approximately midway during the attack and must be considered provisional.

(2) Twenty-five aircraft are known to have bombed the target through the undercast prior to the 6-plane formations which obtained the strike photos. These photos show the center of the pattern to have fallen approximately 1000 feet beyond and 1000 feet to the left of the aiming point, which was the large undamaged sub-assembly building in the northwest area of the target. No bursts were identified in the target area proper and no new damage was observed in the Factory Area as a result of these bombings.

(3) A group of 12 craters were seen approximately in the center of the airfield, but no aircraft were damaged and the field remains usable.

b. Secondary Target:

(1) Damage assessment is obtained from strike photos of 2 formations (one consisting of 5 aircraft and one of 3 aircraft) and must be considered provisional.

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(2) The formation of 5 aircraft attacked the warehouse and storage area at the extreme north end of Point Island. Approximately half of the bombs fell just short in the river and the remaining fell on warehouses and the long jetty. The formation of 3 aircraft bombed the Riverside Power Plant with one and probably 2 direct hits. The remaining bombs fell to the south of the plant among several small buildings with a hit or a very near miss observed on the Pah Kong Cotton Spinning Company.


c. Last Resort Target:

(1) Damage assessment which must be considered provisional is based upon excellent quality strike photos obtained by the last of 5 aircraft bombing the target.

(2) All identified damage occurred in a warehouse area immediately west of the Nanking Railway Station. Damage inflicted by the previous aircraft over includes the destruction of the central section of 250' by 75' warehouse, severe damage to a 120' by 100' sawtooth roof warehouse, and damage to an unidentified building. The last aircraft over also attacked the warehouse area scoring at least one and possibly two direct hits on the targets warehouse, a direct hit on a 250' X 75' warehouse, a near miss off the stern of a 150' rivercraft, near misses off several smaller buildings and hits along the dock area.

For and in the absence of:

CURTIS E. LEMAY
Major General, U.S.A.
Commanding


JOHN E. UPSTON
Brigadier General, U.S.A.
Chief of Staff

2-5239-45

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By *SAKARA* Date *11/30*

S E C R E T

A

ANNEX

A

EXECUTION OF THE MISSION

- I - Information on take-offs
- II - Details of Routes
- III - Track and Vertical Flight Path*
- IV - Bombing Data **
- V - Bomb Loading
- VI - Disposition of Bombs
- VII - Formations Flown
- VIII - Navigation Report *
- IX - Mission Operational Losses
- X - Information on Landings

* Prepared by Staff Navigator.

** Page A-IV-1 prepared by Staff Bombardier

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Authority *NND 760063*

By *SM* NARA Date *11/30/05*

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I - INFORMATION ON TAKE-OFFS

Mission No. 17

21 November 1944

Group	First A/C Off	Last A/C Off	Elapsed Time	No. of A/C Taking Off	Average Take-off Interval
40th	1839Z	1946Z	65 min.	28	144 Sec.
444th	1849Z	1952Z	63 min.	28-a	140 Sec.
462nd	1837Z	1941Z	64 min.	29-b	138 Sec.
468th	1841Z	1943Z	62 min.	22	178 Sec.
Over-all	1837Z	1952Z	75 min.	107-a,b	42 Sec.

a - Does not include A/C 423, late take-off at 2017Z.
b - Does not include A/C 248, late take-off at 2003Z.

Note: Take-offs were on D-1, Z time.

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II - DETAILS OF ROUTES

Mission No. 17

21 November 1944

A. Planned Routes

	40th	444th	462nd	468th
Base	Hsinching	Kwanghan	Kiunglai	Pengshan
First Check point	Ankang Airfield (32 35N - 109 14E)			
Assembly point No. 1	33 12N - 118 42E		33 53N - 120 30E	
Assembly point No. 2	32 02N - 128 25E (all Groups)			
Initial point	Oujima Island (32 34N - 128 54E)			
Target	Omura Aircraft Plant (32 55N - 129 56'30"E)			
First return check point	32 12N - 118 42E			
Second return check point	Liangshan Airfield (30 42N - 107 50E)			
Base	Hsinching	Kwanghan	Kiunglai	Pengshan

B. Deviations from Planned Routes

1. 40th Group:

a. A/C 394 had 2 engines shot out by enemy fighters over the PT and was forced to jettison its bombs and leave formation. Under repeated fighter attacks this aircraft set course for Laohokow, proceeding there on 2 engines. After landing and making repairs at Laohokow, A/C 394 proceeded directly to Hsinching.

b. A/C 269 due to an inoperative fuel transfer system bombed the last resort target and returned directly to Hsinching.

c. A/C 407, due to an inoperative fuel transfer system, turned from the briefed course at 32 30N - 124 38E, and flew to Nanking, bombed the last resort target and returned directly to Hsinching.

d. A/C 313 flew as briefed to the first assembly point but was unable to locate a formation. From this point flight was made to 32 30N - 121 44E and from there to Shanghai. After bombing the secondary target return was made to the south end of Hungtze Lake and thence directly to Hsinching.

e. A/C 579 flew the route as briefed, bombing the primary target, but landed en route at Ankang upon return. After refueling, return was made directly to Hsinching.

f. A/C 541 flew the briefed route to the primary target, which it bombed. After leaving the target area, this aircraft descended to 15,000 feet at 32 28N - 124 05E where a search for A/C 394, known to be in distress and thought to have ditched, was instituted. The following route to Suichwan, China, was then flown: 31 58N - 123 23E, altitude 15,000'; to 32 01N - 121 44E, altitude 15,000'; to 32 08N - 120 13E, altitude 15,000'; to Suichwan, where landing was made with one engine feathered.

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g. The following aircraft, on return from bombing the primary target, landed at bases as indicated for refueling, and returned from there directly to Hsinching:

- (1) A/C 319 - landed at Liangshan.
- (2) A/C 322 - landed at Suining.
- (3) A/C 306 - landed at Liangshan.

h. A/C 508 flew as briefed until reaching the position 32 25N - 122 02E. Upon losing #3 engine, bombs were jettisoned and the aircraft returned directly to Hsinching.

i. A/C 363 was forced to turn back at 32 45N - 110 10E due to the loss of one engine. Bombs were jettisoned, and landing was made at Kiunglai. This aircraft returned to Hsinching the same day.

j. A/C 466 flew from the China coast directly to the IP, and bombed the primary target. The rest of the route flown was the planned route.

k. A/C 276, unable to find a formation, bombed the secondary target. The route flown by this aircraft was not reported.

l. A/C 290, which landed en route upon return at Ankang is reported to have been wrecked by collision there. The crew has not been interrogated and the route flown is unknown. This aircraft is reported by members of other crews to have bombed the primary target.

2. 444th Group:

a. A/C 423 flew the briefed route to 32 15N - 121 25E, thence heading 216° to Shanghai. After bombing the secondary target the briefed route was flown to Kwangchow.

b. A/C 510 bombed the primary target and suffered great damage from enemy fighter attacks. A course of 270° was set from the target area, and friendly territory was reached before a crash landing was made near Lachokow.

c. A/C 204 and A/C 321 are known to have crash-landed at Ankang, crippled due to enemy action. Routes flown are not known at the time of this report.

3. 462nd Group:

a. A/C 6213, which developed a gasoline leak, flew from Kiunglai to Liangshan and from there to 32 14N - 118 16E, bombed there a target of opportunity, and flew to Liangshan, landing there. Return to Kiunglai was made the following day.

b. A/C 456, because of a late take-off, could not join a formation, so proceeded to 31 20N - 118 30E. Using 31 50N - 121 25E as an IP, this aircraft bombed the secondary target, returning to Kiunglai by way of 33 20N - 121 25E.

c. The following A/C landed en route from target to Kiunglai. No further information as to route followed was given:

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<u>A/C</u>	<u>Target Bombod</u>	<u>Landed onroute at</u>	<u>Reason</u>	<u>Date of re- turn Kiunglai</u>
(1) 581	T/O at 32 47N-129 32	Liangshan	gas shortage	22 Nov
(2) 484	Primary target	Liangshan	gas shortage	22 Nov
(3) 461	Primary target	Liangshan	gas shortage	22 Nov
(4) 386	Unknown	Chungking	gas shortage	--
(5) 830	Primary target	Hsinching	gas shortage	--
(6) 479	Primary target	Kwanghan	gas shortage	21 Nov
(7) 359	T/O - Omuta	Kwanghan	gas shortage	21 Nov

d. A/C 5213 bombed the secondary target. No details of route followed were reported.

e. The following aircraft bombed targets of opportunity in the vicinity of the primary target. Details of routes flown not reported but it is assumed that they were as briefed, except within the target area.

(1) Bombing Omuta: A/C 463, 505, 506, 316, 329, 362.

(2) Bombing Nagasaki: A/C 728, 6209.

f. A/C 311, because of an inoperative propellor governor, bombed targets of opportunity at 32 40N - 118 01E and 32 58N - 117 23E. No further details as to route flown were reported.

g. A/C 285 returned to Kiunglai, landing after 45 minutes of flight because of a fire in # 4 engine. Bombs were returned.

h. A/C 270 returned to Kiunglai, landing after 4 hours 10 minutes of flight, because of excessive oil temperature. Bombs were returned.

i. A/C 848 is missing.

j. A/C 278 was shot down over the primary target.

4. 468th Group:

a. The following A/C flew the briefed route to the primary target, but because of weather conditions proceeded to the secondary target. After bombing the secondary target they returned to Pengshan, passing over Liangshan: A/C 546, 407, and 542.

b. The following A/C flew the briefed route to the IP, but because of weather conditions proceeded to Shanghai and bombed the secondary target. Return was then made to Pengshan, passing over Liangshan: A/C 355, 454, 356, 354, and 272.

c. A/C 828 flew to the first assembly point, when because of a blown blister turned from the planned route, proceeded to Nanking, bombed the last resort target, and returned to Pengshan passing over Liangshan.

d. A/C 494 flew to the first assembly point, but because of an inoperative fuel transfer system went to Nanking, bombed the last resort target, and returned to Pengshan by way of Liangshan.

e. A/C 284 flew the briefed route to Omura. Fuel liquidometers indicated that gas was very low. Bombs were jettisoned en route to Shanghai and the aircraft landed at Liangshan and then returning to Pengshan.

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f. A/C 265 jettisoned its bombs and returned to Pengshan because of a swallowed valve. No further details as to route were reported.

g. A/C 390 jettisoned its bombs and returned to Pengshan because of a blown blister. No further details of the route flown were reported..

h. A/C 358 is missing.

i. A/C 208 bombed a target of opportunity at 32°58'N-117°22'E because of inoperative oil cooler on #2 engine. No further details of route were reported.

j. A/C 279 flew to Omura but because of weather bombed a target of opportunity in the Omura area. No further details of route were reported.

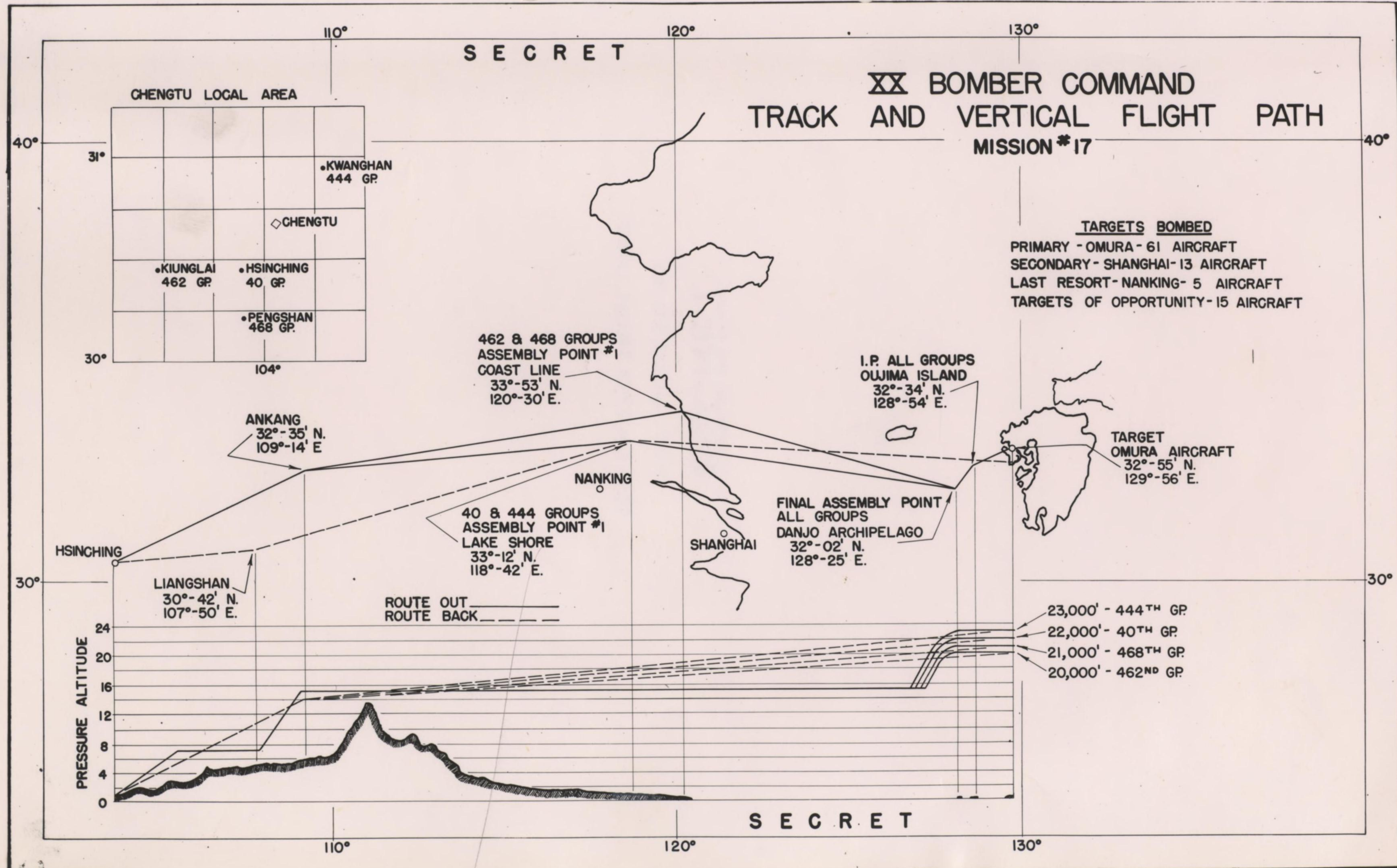
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TRACK AND VELOCITY FLIGHT PATH

69

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Auth: CG XX BC
Date: 26 Nov 44
Initials: J. [unclear]

HEADQUARTERS
XX BOMBER COMMAND
APO 493

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND STAFF BOMBARDIER

Date Prepared: 25 November 1944

Field Order No. 17

Date of Mission: 21 Nov 44

1. Weather conditions at the primary target consisted of 8/10 to 10/10 cloud coverage. This condition resulted in all but one formation dropping by radar, with bombing results unobserved. Weather conditions at the secondary target ranged from CAVU to foggy, bombing was accomplished visually.

2. One formation led by the 40th Group, which remained at the target area a considerable length of time, released their bombs visually on the primary target.

3. Reported difficulties encountered on mission.

a. Heavy dew and dust collected on nose of aircraft during take-off making visibility very poor throughout the mission.

b. Rime ice collecting on bombardier's glass further reduced visibility for the bombardier.

c. Heavy fighter attacks at the primary target were a contributing factor to poor bombing.

4. Radar set in lead aircraft of a 462nd Group formation became inoperative in the vicinity of the target, and the lead was taken over by an aircraft from another group. A second run was then necessary and the formation found it impossible to stay together.

5. Malfunctions which prevented the release of bombs are as follows:

a. 40th Group:

(1) Aircraft #579 failed to release three bombs - cause undetermined as yet.

b. 444th Group - None.

c. 462nd Group:

(1) Aircraft #311 - Failed to release four bombs; cause, bomb relay fuse clip was loose on one end.

d. 468th Group:

(1) Aircraft #828 - Failed to release one bomb; cause, undetermined as yet.

(2) Aircraft #208 - Failed to release one bomb; cause, undetermined as yet.

Prepared by:
Staff Bombardier

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IV - Bombing Data (continued)

A. Times of Bomb Release at P.T.

Z Time	40th	444th	462nd	468th	Total
0040 - 0049	-	9	-	-	9
0050 - 0059	9	2	-	-	11
0100 - 0109	-	3	-	2	5
0110 - 0119	1	-	5	-	6
0120 - 0129	2	12	3	1	18
0130 - 0139	8	1	2	1	12
Total	20	27	10	4	61

B. Bombing Altitudes at P.T.

Altitude (feet)	40th(a)	444th(a)	462nd(a)	468th(a)	Total
20,000 - 20,999	1	-	7	1	9
21,000 - 21,999	2	-	1	2	5
22,000 - 22,999	15(b)	2	2(c)	-	19
23,000 - 23,999	2	25	-	1	28
Total	20	27	10	4	61

Briefed altitudes(d) 22,000 23,000 20,000 21,000

- a. Reported as indicated altitude.
- b. A/C 466 reported true altitude.
- c. Reported as true altitude.
- d. Pressure altitude.

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C. Axes of Attack at P.T.

Axis of Attack (degrees)	40th(a)	444th(a)	462nd(a)	468th(a)	Total
30 - 39	1	-	-	-	1
40 - 49	4	-	-	-	4
50 - 59	-	1	-	-	1
60 - 69	7(b)	3	8	-	18
70 - 79	7	16	1	2	26
80 - 89	-	2	-	2	4
90 - 99	-	3	-	-	3
100 - 109	-	1	-	-	1
Unknown	1	1	1	-	3
Total	20	27	10	4	61

Note: Briefed axis of attack was 73° Magnetic

- a. Magnetic
- b. Two A/C reported true heading.

D. Indicated Air Speeds at P.T.

Miles per hour	40th	444th	462nd	468th	Total
185	-	-	1	-	1
190	2	6	1	-	9
191	1	-	-	-	1
193	1	1	-	-	1
195	9	9	3	2	23
196	-	-	-	1	1
197	2	-	-	-	2
200	1	5	3	-	9
204	-	1	-	-	1
205	1	2	1	-	4
206	1	-	-	1	2
210	1	2	-	-	3
Unknown	2	1	1	-	4
Total	20	27	10	4	61

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TARGETS OF OPPORTUNITY

Mission No. 17

21 November 1944

<u>A/C</u>	<u>Group</u>	<u>Target</u>	<u>Time</u>	<u>GP</u>	<u>Inc</u>	<u>Altitude</u>	<u>Heading</u>
208	468th	Penyu R.R. (32°58'N-117°22'E)	2358Z	-	10	17,200'I	194°M
311	462nd	a. R.R.Bridge (32°40'N-118°01'E)	0006Z	5	-	20,000'I	305°M
		b. R.R.Bridge (32°58'N-117°23'E)	0017Z	4	4	20,000'I	290°M
728	462nd	Town S. of Nagasaki -	0109Z	7	4	20,900'I	202°M
209	462nd	(32°47'N-129°32'E)	0109Z	12	7	21,300'I	200°M
581	462nd		0109Z	10	4	21,100'I	240°M
331	40th	Populated Area on Nagasaki Peninsula	0113Z	8	4	21,000'I	325°M
463	462nd	Omura	0114Z	11	5	20,000'I	180°M
505	462nd		0114Z	9	4	20,000'I	180°M
506	462nd	Omura Airfield	0132Z	10	4	20,000'I	64°M
316	462nd		0132Z	5	2	20,000'I	85°M
329	462nd		0132Z	10	6	20,000'I	66°M
362	462nd		0132Z	9	4	20,000'I	90°M
359	462nd		0132Z	8	4	20,000'I	60°M
279	468th	City of Omura	0148Z	13	-	21,000'I	275°M
6213	462nd	Chuckow Airfield (32°14'N-118°16'E)	0204Z	6	2	20,000'I	110°M

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V - BOMB LOADING*

Mission No. 17

21 November 1944

GP	Inc	40th			444th			462nd			468th			Total		
		A/C	GP	Inc	A/C	GP	Inc	A/C	GP	Inc	A/C	GP	Inc	A/C	GP	Inc
12	7							1	12	7				1	12	7
11	5							2	22	10				2	22	10
10	6							1	10	6				1	10	6
10	5				6	60	30	7	70	35				13	130	65
-	15										1	-	15	1	-	15
10	4	8	80	32				3	30	12				11	110	44
9	5	8	72	40	6	54	30	1	9	5				15	135	75
8	6	1	8	6										1	8	6
13	-										2	26	-	2	26	-
9	4	1	9	4	15	135	60	3	27	12				19	171	76
-	13										2	-	26	2	-	26
12	-										6	72	-	6	72	-
10	2							1	10	2				1	10	2
8	4	10	80	40	2	16	8	4	32	16				16	128	64
-	12										4	-	48	4	-	48
11	-										3	33	-	3	33	-
10	1										1	10	1	1	10	1
9	2										1	9	2	1	9	2
7	4							1	7	4				1	7	4
-	11										1	-	11	1	-	11
7	3							1	7	3				1	7	3
6	4							1	6	4				1	6	4
6	3							1	6	3				1	6	3
6	2							4	24	8				4	24	8
Total A/C		28			29			30			22			103		
Total GP.			249			265		262			160			936		
Total Inc				122			128		125			105		480		

GP per A/C	8.89	9.14	8.73	7.27	8.59
Inc per A/C	4.36	4.41	4.17	4.77	4.40
Total	13.25	13.55	12.90	12.04	12.99

* Based on A/C airborne. "GP" indicates 500-pound (TNT or Amotol filled) bombs, fused .1 second nose and .01 second tail. "Inc." indicates 500-pound M-76 incendiary bombs, fused instantaneous nose and non-delay.

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VI - DISPOSITION OF BOMBS

Mission No. 17

21 November 1944

	40th			444th			462nd			468th			Total		
	A/C	G.P.	Inc	A/C	G.P.	Inc	A/C	G.P.	Inc	A/C	G.P.	Inc	A/C	G.P.	Inc
Total bombing and bombs dropped	25	223	108	28	256	121	25	220	107	16	104	86	94	803	422
A/C bombing Omura and bombs dropped	20	179	88	27	247	117	10	88	44	4	10	37	61	524	286
A/C bombing Shanghai and bombs dropped	2	18	8	1	9	4	2	19	9	8	81	15	13	127	36
A/C bombing Nanking and bombs dropped	2	18	8	-	-	-	1	10	5	2	-	24	5	28	37
A/C bombing T/O and bombs dropped	1	8	4	-	-	-	12	103	49	2	13	10	15	124	63
Jettisoned bombs	3	26	14	-	-	3-a	-	-	-	4	37	13	7	63	30
Returned with bombs	-	-	-	-	-	-	2	16	6	1	9	4-b	3	25	10
Crashed with bombs	-	-	-	-	-	-	1	11	5	1	10	2	2	21	7
Disposition unknown	-	-	-	1	9	4	2	15	7	-	-	-	3	24	11
Total A/C airborne and bomb load	28	249	122	29	265	128	30	262	125	22	160	105	109	936	480

a. A/C 580 dropped 1 incendiary on PT and jettisoned 3.

b. A/C 828 dropped 12 incendiaries on LRT and brought back 1. A/C 208 dropped 10 incendiaries on a target of opportunity and brought back 1.

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S E C R E T

VII. - FORMATIONS FLOWN

MISSION NO. 17

21 November 1944

A. Formations Planned

1. The 12-plane formation as defined in the Command's Tactical Doctrine was the formation required by the Field Orders.

B. Assembly Planned

1. The briefed assembly points and altitudes were as follows:

Group	Assembly Point No. 1	Altitude at Assembly Point No. 1	Assembly Point No. 2	Altitude at Assembly Point No. 2**
40th	33°12'N -	Base altitude* plus or minus odd 1000'	32°02'N -	22,000'
444th	118°42'E	Base altitude plus or minus even 1000'		23,000'
462nd	33°53'N -	Base altitude plus or minus odd 1000'	128°25'E	20,000'
468th	120°30'E	Base altitude plus or minus even 1000'		21,000'

* Base altitude was 13,000' pressure altitude.

** Expressed in terms of pressure altitude.

2. The aircraft were to take off from bases in The Chengtu Area at 2 minute intervals and climb on course to 7,000 feet pressure altitude, cruise for 30 minutes and then climb on course to 13,000 feet pressure altitude.

C. Formations over the Targets

1. Of the 61 aircraft bombing the primary target, 59 bombed in formations of which there were 8. These 8 formations were composed as follows: One each of 15, 11, 10, 9, 8 (only 2 bombing) and 6 aircraft, and 2 formations of 3 aircraft.

2. Some difficulty was experienced in changing lead planes at the last minute. Two formations encountered this difficulty. The first formation which is known to have included at least 12 aircraft at the time it reached the initial point, was broken up when the lead aircraft after having passed the initial point attempted because of a malfunctioning radar to transfer the lead to the deputy aircraft. The second formation which was composed of at least 9 aircraft when reaching the initial point, had substantially the same difficulty. These 2 formations are shown below as they were at the initial point. The diagrams are intended to indicate relative position only ("W" represents an aircraft of the 40th Group; "X", the 444th; "Y", the 462nd; and "Z", the 468th).

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a. Time: 0105Z

Y 463
W 579 Y 505
Y 728 Y 581 Y 461
Y 209 Y 386 Y 484 Y 475
Y 338 Y 830

After leaving the I.P. A/C 463 dropped out of the lead due to an inoperative radar and directed A/C 579 to take the lead. A/C 579 went into a diving turn and the formation broke up trying to stay with him. Various elements then proceeded to bomb Omura, Omuta and Nagasaki.

b. Time: 0120Z

Y 479
Y 393 Y 506
Y 359 Y 316
Y 362 Z 217 Y 329 Y 278

After leaving the I.P. the lead plane found its radar inoperative and fell back. A/C 316 took the lead over the target and began a turn so the formation could catch up. As A/C 479 dropped back the formation was scattered. A/C 393, 217, and 479 bombed Omura at this time and 5 aircraft followed A/C 316 which bombed Omuta. A/C 278 was shot down.

3. Formations at the Primary Target:

a. Time: 0047Z

Alt : 23,000'I X 451
Head: 76°M X 267 X 411
Bombs
Dropped: 82 GP. X 226 X 399
37 Inc. X 204 X 321
X 584 X 375

b. Time: 0050Z

Alt : 22,300'I W 420
Head: 74°M W 275 W 294
Bombs
Dropped: 96 GP. W 466 X 510 W 404
43 Inc. W 276 W 452 W 574
X 462

c. Time: 0058

Alt : 23,300'I
Head: 73°M W 582
Bombs
Dropped: 9 GP.
5 Inc.

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d. Time: 0100Z
Alt : 23,000'I X 353
Head: 76 M
Bombs X 341 X 472
Dropped: 28 GP.
14 Inc.

e. Time: 0104Z
Alt : 21,500'I
Head: 73 M
Bombs Z 284 *
Dropped: 24 Inc. Z 358* Z 546* Z 429
Z 279* Z 407 * Z 409
Z 542*

* Did not bomb the primary target, A/C 284, 358 and 542
jettisoned, A/C 546 and 407 bombed the secondary target
and A/C 279 bombed a target of opportunity.

f. Time: 0115Z
Alt: 20,000'I W 579
Head: 60 M Y 475 Y 461
Bombs
Dropped: 56 GP. Y 464 Y 338
27 Inc. Y 830

g. Time: 0125Z
Alt : 23,000'I
Head: 89 M
Bombs
Dropped: 127 GP.
73 Inc.

X 464
X 262 X 485
X 378 X 524 X 492
X 507 X 538 X 202 W 503 X 360 X 292
X 580 Z 353 W 457

h. Time: 0128Z
Alt : 20,000'I Y 393
Head: 68 M
Bombs Z 217 Y 479
Dropped: 30 GP
11 Inc.

i. Time: 0129Z
Alt : 20,000'I
Head: 68 M Y 382
Bombs
Dropped: 6 GP.
4 Inc.

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j. Time: 0136Z
Alt : 22,000'I
Head: 45°M
Bombs
Dropped: 90 GP.
47 Inc. W 541
W 319 W 396
X 343
W 297 Y 346 Y 827
W 522 W 290
W 306 W 322

4. Formations at the Secondary Target:

a. Time: 2329Z
Alt : 20,000'I
Head: 274°M Y 5213
Bombs
Dropped: 9 GP.
5 Inc.

b. Time: 2332Z
Alt : 21,900'I
Head: 261° T W 313
Bombs
Dropped: 10 GP.
4 Inc.

c. Time: 0020Z
Alt : 27,500'I
Head: 170° M Y 456
Bombs
Dropped: 10 GP.
4 Inc.

d. Time: 0047Z
Alt : 23,000'I
Head: 216° X 423
Bombs
Dropped: 9 GP.
4 Inc.

e. Time: 0052Z
Alt : 20,000'I
Head: 355° M W 303
Bombs
Dropped: 8 GP.
4 Inc.

f. Time: 0348Z
Alt : 20,000'I
Head: 284° M Z 355
Bombs Z 454 Z 356
Dropped: 46 GP Z 354 Z 272
15 Inc.

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g. Time: 0413Z
Alt : 18,300'I
Head: 259° M Z 546
Bombs
Dropped: 35 GP. Z 542 Z 407

5. Formations at the Last Resort Target:

a. Time: 2242Z
Alt : 20,000'I
Head: 326° M W 269
Bombs
Dropped: 8 GP.
 4 Inc.

b. Time: 2256Z
Alt : 20,000'I
Head: 130° M Y 273
Bombs
Dropped: 10 GP.
 5 Inc.

c. Time: 2328Z
Alt : 21,500'I
Head: 263° M Z 494
Bombs
Dropped: 12 Inc

d. Time: 2332Z
Alt : 21,000'I
Head: 39° M Z 828
Bombs
Dropped: 12 Inc.

e. Time: 0150Z
Alt : 20,500'I
Head: 221° T W 407
Bombs
Dropped: 10 GP.
 4 Inc.

D. Other Aircraft

<u>A/C</u>	<u>Group</u>	
251	444th	Missing and formation position unknown.
848	462nd	Missing and formation position unknown
386	462nd	Landed at Chungking. This aircraft was reported to have been in the formation that bombed a town south of Nagasaki.
278	462nd	Reported in formation at the initial point, but was attacked by 2 enemy aircraft. Was seen to leave the formation in a spin and crash into Omuta Bay.
362	468th	Crashed shortly after take-off. Bombs had not been released.

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HEADQUARTERS
XX BOMBER COMMAND
APO 493

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AUTH: CG, XX BC
Initials
Date 28 NOV 44

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND NAVIGATION OFFICER

Date Prepared: 28 November 1944

Field order No. 17

Date of Mission: 21 November 1944

1. In many respects this mission was similar to #16. Assemblies were made in a better fashion in many cases. The problem of navigation at night to a distant assembly point should constantly occupy the attention of Staff Navigators, and crew navigators.

a. Average navigation time out and back:*

	<u>NAV TIME OUT</u>	<u>NAV TIME BACK</u>
40th	5h 56m	8h 10m
444th	5h 42m	7h 56m
462nd	6h 16m	8h 26m
468th	Not Computed	

* To primary target

b. Comments on forecast winds were varied as were reports on computed winds. There was an extreme wind shift over the yellow sea in the vicinity of Saishu Island. This shift caused some trouble in the bombing. In general, winds reported were:

<u>ONE HALF OUT</u>	<u>TARGET AREA</u>	<u>ONE HALF BACK</u>
13000' 305°30k	22000' 275°30-70k	15000' 287° 35k

c. The following statistics are presented as a general indication of the extent to which aids are being used by the various groups:

	<u>BASE NO*</u> <u>OF A/C</u>	<u>CEL</u> <u>LOP'S</u>	<u>RADIO</u> <u>LOP'S</u>	<u>CEL</u> <u>FIXES</u>	<u>RADIO</u> <u>FIXES</u>	<u>QDM'S</u>
40th	25	153	3	43	13	2
444th	28	137	0	35	2	0
462nd	25	145	17	25	10	5
468th	16	90	29	30	5	0
	<u>94</u>	<u>525</u>	<u>49</u>	<u>138</u>	<u>30</u>	<u>7</u>

*No of A/C bombing any target.

d. Comments by groups: None.

Prepared by:
Staff Navigator

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IX MISSION OPERATIONAL LOSSES

MISSION NO. 17

21 November 1944

A. Known Losses

1. A/C 362 (468th) - Crashed one minute after take-off, cause unknown. Ten members of the crew were killed and one, the tail gunner, was seriously injured.

2. A/C 531 (462nd) - Due to a fire under the floor of the radar compartment, the aircraft was abandoned in the air at about 24°18'N-94°50'E during the movement forward, 19 November 1944. All crew members except the tail gunner bailed out and are accounted for. It is believed the tail gunner did not leave the aircraft.

B. Missing Aircraft

1. A/C 848 (462nd) - Took off from Kiunglai at 201848Z and has not been heard from since.

2. A/C 358 (468th) - Reported in formation over the primary target at 210104Z, but did not bomb due to an inoperative radar in the lead aircraft. A radio message was received from this aircraft indicating that a propeller had been feathered. This aircraft has not returned to its base.

C. Aircraft Lost Through Accident

1. A/C 290 (40th) - Landed at Ankang to refuel and was destroyed on the runway when aircraft 321 (444th Group) made an emergency landing and crashed into it.

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X - INFORMATION ON LANDINGS

Mission No. 17

21 November 1944

A. Landed at Home Bases

1. Aircraft bombing assigned targets:

<u>Target Bombed</u>		<u>40th</u>	<u>444th</u>	<u>462nd</u>	<u>468th</u>	<u>Total</u>
1. IT (Omura)	First A/C down	0846Z	0831Z	0947Z	0910Z	0831Z
	Last A/C down	1034Z	1040Z	1015Z	0954Z	1040Z
2. ST (Shanghai)	First A/C down	0503Z	-	0441Z	0854Z	0441Z
	Last A/C down	0635Z	-	0625Z	0930Z	0625Z
3. LRT (Nanking)	First A/C down	0254Z	-	0341Z	0254Z	0254Z
	Last A/C down	0605Z	-	0341Z	0344Z	0605Z

2. Aircraft failing to bomb any assigned target:

a. 40th Group:

- (1) A/C 331 - 210947Z - bombed target of opportunity.
- (2) A/C 508 - 210557Z - jettisoned bombs.

b. 444th Group:

- (1) None.

c. 462nd Group:

- (1) A/C 463 - 211005Z - bombed target of opportunity.
- (2) A/C 505 - 211010Z - bombed target of opportunity.
- (3) A/C 728 - 210951Z - bombed target of opportunity.
- (4) A/C 209 - 211012Z - bombed target of opportunity.
- (5) A/C 506 - 210946Z - bombed target of opportunity.
- (6) A/D 316 - 210949Z - bombed target of opportunity.
- (7) A/C 329 - 211002Z - bombed target of opportunity.
- (8) A/C 311 - 210407Z - bombed target of opportunity.
- (9) A/C 359 - 211001Z - bombed target of opportunity.

d. 468th Group:

- (1) A/C 279 - 210912Z - bombed target of opportunity.
- (2) A/C 208 - 210355Z - bombed target of opportunity.
- (3) A/C 424 - 210117Z - brought bombs back.
- (4) A/C 265 - 210120Z - jettisoned bombs.
- (5) A/C 390 - 210649Z - jettisoned bombs.

B. Landed at other than Home Bases

1. 40th Group:

- (1) A/C 290 landed at Ankang, (time unknown) having bombed the primary target. This aircraft was reported wrecked at Ankang as a result of a collision with A/C 321 of the 444th Group.

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- (2) A/C 306 landed at Liangshan at 0910Z, due to fuel shortage, after having bombed the primary target.
- (3) A/C 319 landed at Liangshan at 0915Z due to fuel shortage, after having bombed the primary target.
- (4) A/C 322 landed at Suining at 0952Z due to fuel shortage, after having bombed the primary target.
- (5) A/C 363 landed at A-5, at 2335Z and returned to its home base at 0916Z. This A/C jettisoned its bombs just before reaching the primary target and turned away with #1 engine feathered.
- (6) A/C 394 landed at Laohokao, at 0225Z, and returned to its home base at 230445Z. This aircraft lost an engine from enemy fighter attack just before "bombs away", salvoed its bombs, and with an additional engine out and low on fuel was forced to make an emergency landing.
- (7) A/C 541 landed at Suichuan, at 0726Z with its fuel transfer system out after having bombed the primary target.
- (8) A/C 579 landed at Ankang, at 0832Z and returned to its home base at 1139Z. This A/C made two bomb runs over the primary target and was short on fuel.
- (9) A/C 275 is reported crashed 30 miles south of A-1, after having bombed the primary target.

2. 444th Group:

- (1) A/C 251 is known to have landed at Ankang, due to fuel shortage. Nothing further is known.
- (2) A/C 311 after bombing primary target had its controls shot away and was involved in a collision with A/C 290 of the 40th Group while attempting an emergency landing at Ankang.
- (3) A/C 204 crashed at Ankang, having bombed the primary target, it was in distress due to enemy action.
- (4) A/C 510 force landed at 0745Z on river beach 45 miles NE of Tenghsian being badly shot up and short of fuel after bombing primary target.

3. 462nd Group:

- (1) A/C 461 landed at Liangshan, at 0835Z and returned to its home base at 220414Z. This A/C bombed the primary target and was low on fuel.
- (2) A/C 475 landed at A-1, at 0951Z, and returned to its home base at 1103Z having bombed the primary target.
- (3) A/C 484 landed at Liangshan at 0832Z and returned to its home base at 220428Z having bombed the primary target.
- (4) A/C 848 is missing, nothing further is known.
- (5) A/C 386 landed at Chungking, nothing further is known.

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- (6) A/C 278 was shot down by enemy aircraft over primary target. Seen to crash in Omuta Bay. Disposition of bombs unknown.
- (7) A/C 362 landed at A-3, at 0949Z for fuel and returned to its home base at 211151Z. This A/C bombed target of opportunity at Omuta.
- (8) A/C 581 landed at Liangshan at 0836Z and returned to its home base at 220428 having bombed a target of opportunity.
- (9) A/C 830 landed at A-1, at 1040Z with two wounded men and low on fuel having bombed the primary target.
- (10) A/C 479 landed at A-3 at 0953Z, for fuel and returned to its home base at 1558Z, having bombed the primary target.

4. 468th Group:

- (1) A/C 284 landed at Liangshan, (time unknown) due to shortage of fuel and then returned to its home base at 1137Z. This A/C jettisoned its bombs.
- (2) A/C 358 jettisoned its bombs and is missing.
- (3) A/C 362 crashed as it became airborne, all bombs exploded.

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S E C R E T

B

ANNEX

B

ENEMY ANTI-AIRCRAFT

* * * * *
* Prepared by: *
* Flak Officer *
* XX BOMBER COMMAND *
* * * * *

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By *SM* NARA Date *11/30/05*

S E C R E T

I - ENEMY ANTI-AIRCRAFT

Mission No. 17

21 November 1944

(Preliminary Report)

A. Antiaircraft Fire Encountered

1. Omura (32° 54'N - 129° 57'E):

a. Meager and generally inaccurate (1 aircraft was struck) heavy antiaircraft fire was reported by approximately 50 per cent (36 out of 80) of the aircraft over the area from 0050Z to 0136Z at altitudes from 20,000 to 23,000 feet. As fire was encountered through 8/10 to 10/10 undercast the use of gun-laying radar is indicated, and RCM Observers did intercept possible gun-laying radar signals in the Omura Area.

b. Continuously pointed fire is believed to have been used, but no more than 9 bursts were reported at any one time. A few enemy aircraft were also reported on the same course and altitude.

c. Following are reports of accuracy, intensity and deviations. The numbers indicate aircraft reporting in the affirmative while percentages are determined from the total number of reports in one direction as above, level or below:

<u>Reports of Accuracy</u>		<u>Reports of Intensity</u>	
Struck	1 (3 percent)	Interse	0 (0 percent)
Rocked	0 (0 percent)	Moderate	0 (0 percent)
Missed	35 (97 percent)	Meager	36 (100 percent)

Reports of Deviations

Above	4 (9 percent)	Ahead	9 (25 percent)	Left	12 (33 percent)
Level	23 (50 percent)	Abreast	4 (11 percent)	In Line	11 (31 percent)
Below	19 (41 percent)	Behind	23 (64 percent)	Right	13 (36 percent)

d. Fire on this mission was not as accurate in proportion to the number of aircraft engaged out of the total attacking as compared to Mission Number 16, 11 November, under almost identical conditions. However, 50 per cent of the aircraft over the area were engaged as compared to 10 per cent for Mission Number 16. The intensity of fire and number of bursts reported also agree with the known defense of 8 heavy anti-aircraft guns.

e. The majority of the bursts were reported as black with some white and a very small number of red. Aircraft 409 of the 468th Group reported 4 or 5 phosphorous bursts at 0104Z south of Omura. These bursts were at 10 o'clock and approximately 5,000 to 6,000 feet above the aircraft.

f. Two aircraft of the 40th Group also reported "very large AA bursts. One crew stated that the bursts were white, and the smoke mushroomed from the top of the burst and was very persistent, retaining

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its general shape for a much longer time than usual." These descriptions, coupled with reports from other headquarters operating against the Japanese, would indicate that the Japanese are using phosphorous anti-aircraft projectiles in Japan as well as other areas. For a complete summary to date, refer to Part II, "Enemy Antiaircraft Defense Bulletin", Number 7, 1 December 1944, this Headquarters.

b. Bombing of Omura was accomplished by 6 formations of from 6 to 15 aircraft and 4 formations of 3 or less with an average time interval of approximately 5 minutes between formations. Times of bomb release were from 0047Z to 0148Z and "in" headings from 45°M to 89°M with a turn to the right by-passing Nagasaki after bombs away. Aircraft bombing Omura and the Nagasaki Areas as targets of opportunity were also considered as passing within range of the Omura heavy anti-aircraft defense which results in a total of approximately 80 aircraft between 0047Z and 0148Z.

2. Omura (33°01'N - 130°27'E):

a. Meager and inaccurate black heavy antiaircraft fire was reported by 3 (of at least 8) aircraft over the area at 0132Z at an altitude of 20,000 feet through a 10/10 undercast. Deviations were reported as above and as left, right and in line with the aircraft. No enemy aircraft were observed on the same course and altitude.

b. RCM Observers also intercepted possible gun-laying radar signals in the Omura Area.

3. Nagasaki (32°43'N - 129°52'E):

a. Meager to moderate and inaccurate to accurate black heavy antiaircraft fire was reported by 9 aircraft over the area from 0109Z to 0132Z at altitudes varying from 20,000 to 23,000 feet through 7/10 to 10/10 undercast. Continuously pointed fire is believed to have been used and no enemy aircraft were reported on the same course and altitude.

b. Following are reports of accuracy, intensity and deviations. The numbers indicate aircraft reporting in the affirmative while percentages are determined from the total number of reports in one direction as above, level or below.

<u>Reports of Accuracy</u>		<u>Reports of Intensity</u>	
Struck	0 (0 percent)	Intense	0 (0 percent)
Rocked	1 (11 percent)	Moderate	1 (11 percent)
Missed	8 (89 percent)	Meager.	8 (89 percent)

Reports of Deviations

Above . 4 (27 percent)	Ahead . . 1 (13 percent)	Left . . 5 (45 percent)
Level . 5 (33 percent)	Abreast . 3 (33 percent)	In Line . 3 (27 percent)
Below . 6 (40 percent)	Behind . . 4 (40 percent)	Right . 3 (27 percent)

c. In addition to the above reports of heavy antiaircraft fire actually encountered crews of 12 aircraft of the 40th Group observed bursts over and in the vicinity of Nagasaki at intervals from 0047Z to 0153Z. "In each instance the bursts were off to the right of our aircraft varying in distance from 1 to 5 miles. No B-29's were observed at the time over Nagasaki and it is believed that the enemy was using radar controlled fire through the overcast, either misinterpreting his range

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indication or firing only as a token of resistance." Intensity in all cases was meager.

d. RCM Observers also intercepted possible gun-laying radar signals in the Omura Area.

4. Ako Island (32°35'N - 128°55'E): Meager and inaccurate black heavy antiaircraft fire was reported by 1 aircraft out of a formation of 6 over the area at 0120Z at an altitude of 21,000 feet under haze conditions. Deviations were reported as level, abreast and to the right. It is believed that continuously pointed fire was used.

5. Shanghai (31°13'N - 121°28'E):

a. Meager to moderate and inaccurate heavy antiaircraft fire was reported by approximately 87 per cent (13 out of 15) of the aircraft over the area between 2330Z and 0430Z at altitudes varying from 17,400 to 23,000 feet under CAVU conditions. In addition to the land based opposition a 330 foot destroyer escort (identified on strike photos) was reported as engaging 1 aircraft of the 444th Group at 0047Z. Exact anti-aircraft armament is not known, but this vessel probably carried from 2 to 4 three-inch guns.

b. Bursts were generally reported as black plus some white and a few red. Aircraft 284 of the 468th Group also reported phosphorous antiaircraft bursts and the crew of another aircraft of the same Group observed black bursts, much smaller than the usual flak bursts approximately 1 mile from Shanghai.

Following are reports of accuracy, intensity and deviations. The numbers indicate aircraft reporting in the affirmative while percentages are determined from the total number of reports in one direction as above, level or below

<u>Reports of Accuracy</u>		<u>Reports of Intensity</u>	
Struck	0 (0 percent)	Intense	0 (0 percent)
Rocked	0 (0 percent)	Moderate	1 (8 percent)
Missed	13 (100 percent)	Meager	12 (92 percent)

<u>Reports of Deviations</u>					
Above . 1 (7 percent)	Ahead . . 0 (0 percent)	Left . . . 4 (57 percent)			
Level . 5 (36 percent)	Abreast . 5 (50 percent)	In Line. 1 (14 percent)			
Below . 8 (57 percent)	Behind. . 5 (50 percent)	Right. . 2 (29 percent)			

d. Enemy aircraft were reported on the same course and altitude and it is believed that continuously pointed fire was used. The number of bursts observed at any one time varied from 4 to 12.

6. Nanking (32°03'N - 118°47'E): Meager and inaccurate black heavy antiaircraft fire was encountered by 3 aircraft over the area from 2328Z to 0150Z at altitudes varying from 19,500 feet to 21,000 feet under haze or CAVU conditions. Deviations were reported as generally level, behind and to the left. No enemy aircraft were reported on the same course and altitude, and it is believed that continuously pointed fire was used. The number of bursts reported at any one time was 3.

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7. Kunskiatsi (32°40'N - 129°48'E): Meager and inaccurate black heavy antiaircraft fire was encountered by 1 aircraft at 0023Z at an altitude of 13,300 feet under haze conditions. Deviations were reported as level, behind and in line. Continuously pointed fire is believed to have been used.

8. Vicinity of Piyuan (32°45'N - 113°00'E): One aircraft observed 1 flash at approximately 32°35'N - 113°00'E, while 10 miles south of Nanyang at 2137Z and at an altitude of 13,000 feet. No bursts were seen in the air with the undercast reported as 3/10.

9. Heavy Antiaircraft Fire Encountered from Shipping:

a. Possible Cruiser or Destroyer at Approximately 32°50'N - 129°40'E:

(1) Meager and inaccurate heavy antiaircraft fire was reported by 3 aircraft, one each at 0050Z, 0100Z and 0115Z at altitudes varying from 20,400 to 22,000 feet through 8/10 to 9/10 undercast.

(2) Deviations were reported as generally level or below, behind and both to the left and right. No decision could be made as to the type of fire encountered. One "Nick" was reported behind the target aircraft at 0115Z, but no enemy aircraft were reported the other two times.

(3) Bursts were reported as black at 0115Z and 0100Z and as white at 0050Z. Although reports concerning the location and type of vessel vary it is believed that fire was encountered in the vicinity of the above coordinates and originated from a possible cruiser or destroyer.

b. Unidentified Ship at 32°25'N - 122°00'E: Meager and inaccurate black heavy antiaircraft fire was encountered by 1 aircraft at 0023Z at an altitude of 13,300 feet under haze conditions. Deviations were reported as level, behind and in line. It is believed that continuously pointed fire was used, and no more than 4 bursts were observed at any one time.

c. Possible Destroyer or Destroyer Escort at Mouth of Yangtze River, (31°25'N-122°00'E):

(1) Meager and inaccurate black and white heavy antiaircraft bursts were encountered from 0338Z to 0344Z by 3 aircraft at altitudes varying from 17,400 to 18,000 feet. Deviations were reported as below, abreast and behind, and to the left, and it is believed that continuously pointed fire was used. Weather conditions were reported as CAWU.

(2) This possible destroyer or destroyer escort was on course towards the mouth of the Yangtze River when first sighted, but had changed course and was broadside to the heading of our aircraft when opposition was encountered. It was reported that fire originated from guns located aft.

B. GROUND-TO-AIR ROCKETS

None reported.

C. SMOKESCREENS

1. As in Mission Number 16, 11 November, an ineffective attempt at a smoke screen was identified on strike photos of Nanking. At 0153Z (40th Group, aircraft 407) 2 generators were just starting operation

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immediately south of the Pukow Railroad Car Ferry Pier on the west bank of the Yangtze River. Four other aircraft had bombed this area singly from 2242Z to 2332Z prior to the arrival of aircraft 407, but no other strike photos were obtained.

2. No other smokescreens were observed visually or identified on strike photos of other areas.

D. BARRAGE BALLOONS

Aircraft 276 of the 40th Group reported 2 barrage balloons at 33°50'N - 120°00'E in the vicinity of Fowning. The left gunner used binoculars to observe the 2 balloons from a distance of 5 to 10 miles and reported that they were round in shape and silver in color.

E. HIGH-ALTITUDE BALLOONS

The crew members of 2 aircraft of the same formation at 0105Z observed 2 "pear-shaped" balloons at 24,000 feet altitude approximately 5 to 10 miles from Omura.

F. DAMAGE FROM HEAVY ANTI-AIRCRAFT FIRE

Aircraft 409 of the 468th Group sustained minor flak damage at 0104Z while over Omura at 21,500 feet altitude on an "in" heading of 75°M. This aircraft was 1 of a formation of 8 and was hit by both flak and enemy fighters. Damage consisted of holes in the fuselage and the horizontal stabilizer, severing of the elevator trim tab cables and damage to the bomb bay door.

G. BLACKOUT

While enroute to the target during darkness, no black-out was observed in effect in Occupied China. "Lights were seen all along the route and no areas were seen to black out on the approach of our aircraft."

H. WARNING NETS

1. The first RCM equipped aircraft to take off (at 1847Z) intercepted no Early Warning radar signals until reaching 129° East. The second RCM aircraft taking off approximately 30 minutes later intercepted Early Warning radar signals at the usual location, 113° East. This fact, coupled with the complete absence of blackout in Occupied China would indicate ineffective functioning of the warning net in that area.

2. Early Warning radar signals were intercepted in the target area and on the return to base until reaching 113° East.

3. It is believed that the enemy had prior warning of our approach, but not as much warning as he has had in the past when aircraft have been tracked from 113° East.

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By *SM* NARA Date *11/3/05*

S E C R E T

C

ANNEX

C

ENEMY AIR OPPOSITION

* * * * *
*
*Prepared By: *
* * * * *
* OPERATIONAL INTELLIGENCE UNIT *
* * * * *
* XX BOMBER OPER AND *
* * * * *
* * * * *

S E C R E T

S E C R E T

I. JAPANESE FIGHTER TACTICS - MISSION NO. 17

TARGET: Omura, Japan.

TIME: Day Mission.

DATE: 21 November 1944

1. General

a. Enemy opposition was moderate to strong and aggressive in the primary target area, weak elsewhere. Sixty-one of the 94 B-29's reporting were intercepted. Three hundred and four encounters developed from 216 single and 33 coordinated attacks. The latter accounted for 88 encounters, 29 per cent of the total. Aerial bombs were employed in 46 attacks (15%). One B-29 is known destroyed due to enemy air action. Four were damaged by enemy fighters and subsequently wrecked after crashes or crash landings in friendly territory and 9 others sustained damage as a result of enemy air action. Two B-29's are missing. Preliminary claims against enemy aircraft are 27 destroyed, 19 probably destroyed, and 24 damaged. The enemy attacking force was estimated at 30-35 Tojos, 20-25 Tonys, 20-25 Zekes, 5-7 Rufes, 20-25 Oscars, 10-12 Nicks, 1 Kate, 5-6 Jack 11's, 1 Frank, 1 Val, 5-7 Hamps, 1 Irving, 2 possible Rufes, and 6 unidentified enemy aircraft.

b. Enemy aircraft were encountered on the routes out and back, but the great majority, 259 encounters, (85% of the total), occurred in the primary target area, within a thirty mile radius of Omura. Air opposition in the P.T. area continued for 1 hour and 49 minutes, from 0045Z to 0234Z, at altitudes from 18,300 to 23,000 feet. One hundred and thirty six encounters were made before bombs away, five during bombs away, and one hundred and eighteen after bombs away. It is evident that the Japanese were alerted in advance as enemy aircraft were alerted and airborne over the Initial Point. The first encounter reported, occurred two minutes before the first report of "bombs away".

c. Seven encounters occurred in the Shanghai (S.T.) area, at altitudes from 18,500 to 21,000 feet, with three attacks made before bombs away, one during bombs away, and three after bombs away. Two attacks were made on a lone B-29, at 0054Z and 0055Z, and five attacks on B-29's flying in formation for a period of four minutes between 0410Z and 0414Z. In the Nanking (LRT) area, two attacks were made on a lone B-29, one before and one after bombs away, at 2327Z and 2333Z respectively, at an altitude of 21,000 feet.

d. Of the remaining encounters, 12 were made enroute to the P.T., the majority in the vicinity of Hungtze Lake and the China coast, and 24 on the route back. The latter encounters were scattered over an area extending from 50 miles west of Omura to Sinyang, in China. All encounters are graphically indicated in Exhibit A.

C-I-1

S E C R E T

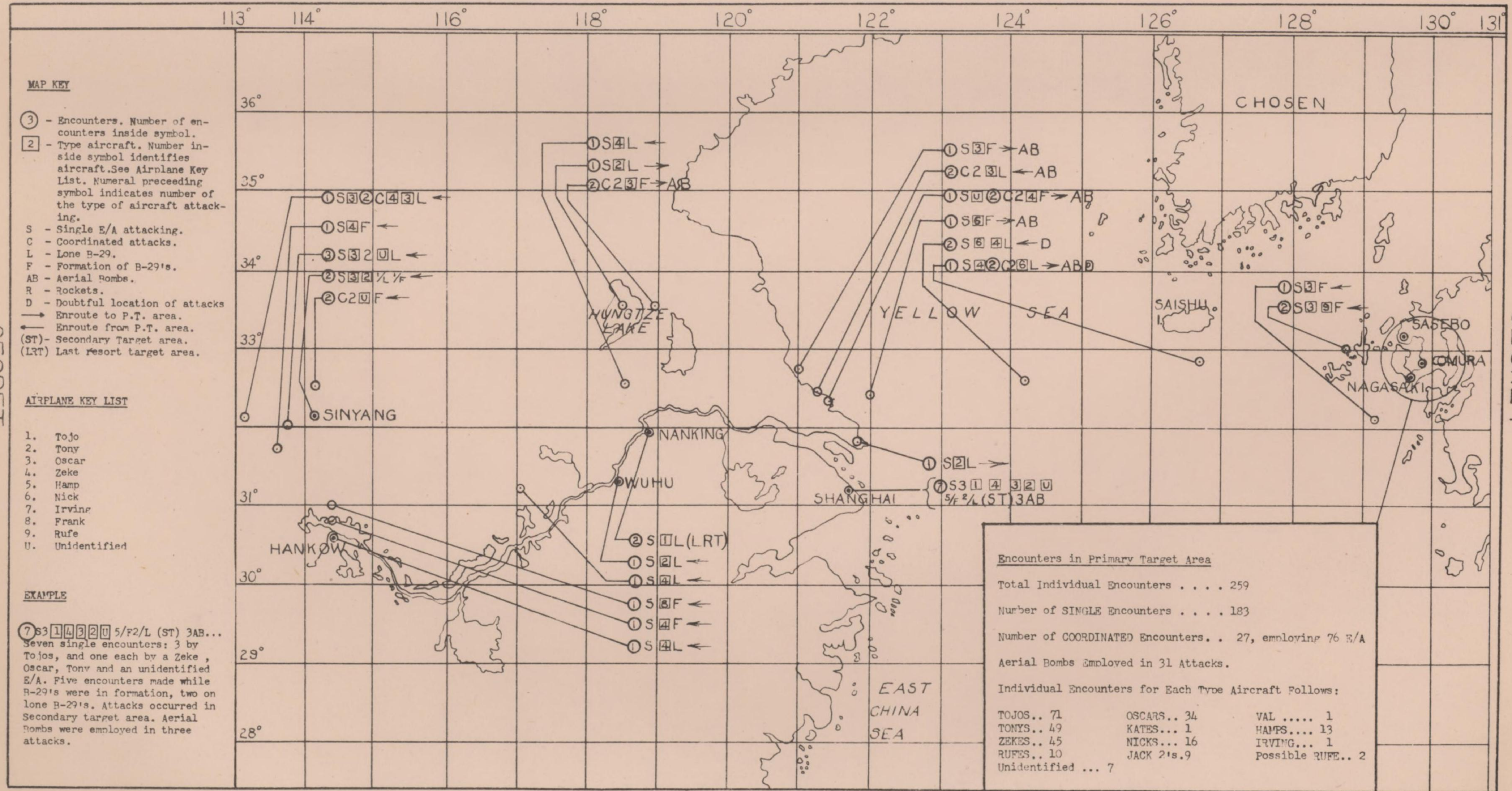
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S E C R E T

2. Directions and Levels of Approach:

a. Encounters on the frontal quarter still in the majority with 33 per cent, closely approximated Mission No. 16 (32%), but, were lower than Mission No. 15 (53%), #14 (85%) and No. 13 (43%). Of the remainder, 27 per cent came from the right quarter, 23 per cent from the rear and 17 per cent from the left quarter. These percentages also compare closely with Mission No. 16, when 29 per cent came from the right quarter, 20 per cent from the rear, and 19 per cent from the left quarter.

b. There were 133 high approaches (44%), 71 level approaches (24%), and 97 low approaches (32%). (Note: 301 encounters are used as a basis for computation, as incomplete data is available on three encounters.) On Mission No. 16, 46 per cent were high, 17 per cent were level, and 37 per cent were low.

c. An examination of Tables No. 1 and No. 2 indicates a decided preference for high frontal approaches, particularly from the 11 o'clock position. High frontal approaches totaled 65, (22% of total encounters) and 37 of these came from 11 o'clock. It is of interest to note that of the total of 46 aerial bombing attacks, 25 (54%) came from the frontal quarter, and 13 of these from the 11 o'clock position.

d. A summary of directions and levels of approach in all encounters is shown in Tables No. 1 and No. 2, and in Exhibit B.

Table No. 1 - Directions and Levels of Approach

Direction of Encounter	Front			Right Side			Rear			Left Side			Total
	11	12	1	2	3	4	5	6	7	8	9	10	
High	37	19	9	14	11	5	5	5	4	5	4	15	133 (44%)
Level	4	7	3	8	5	3	9	9	9	5	7	2	71 (24%)
Low	3	13	5	18	11	5	7	13	8	5	8	1	97 (32%)
TOTAL	44	39	17	40	27	13	27	21	21	15	19	18	301*(100%)
	100			80			69			52			

*Incomplete Data on 3 Encounters.

Table No. 2 - Level of Approach

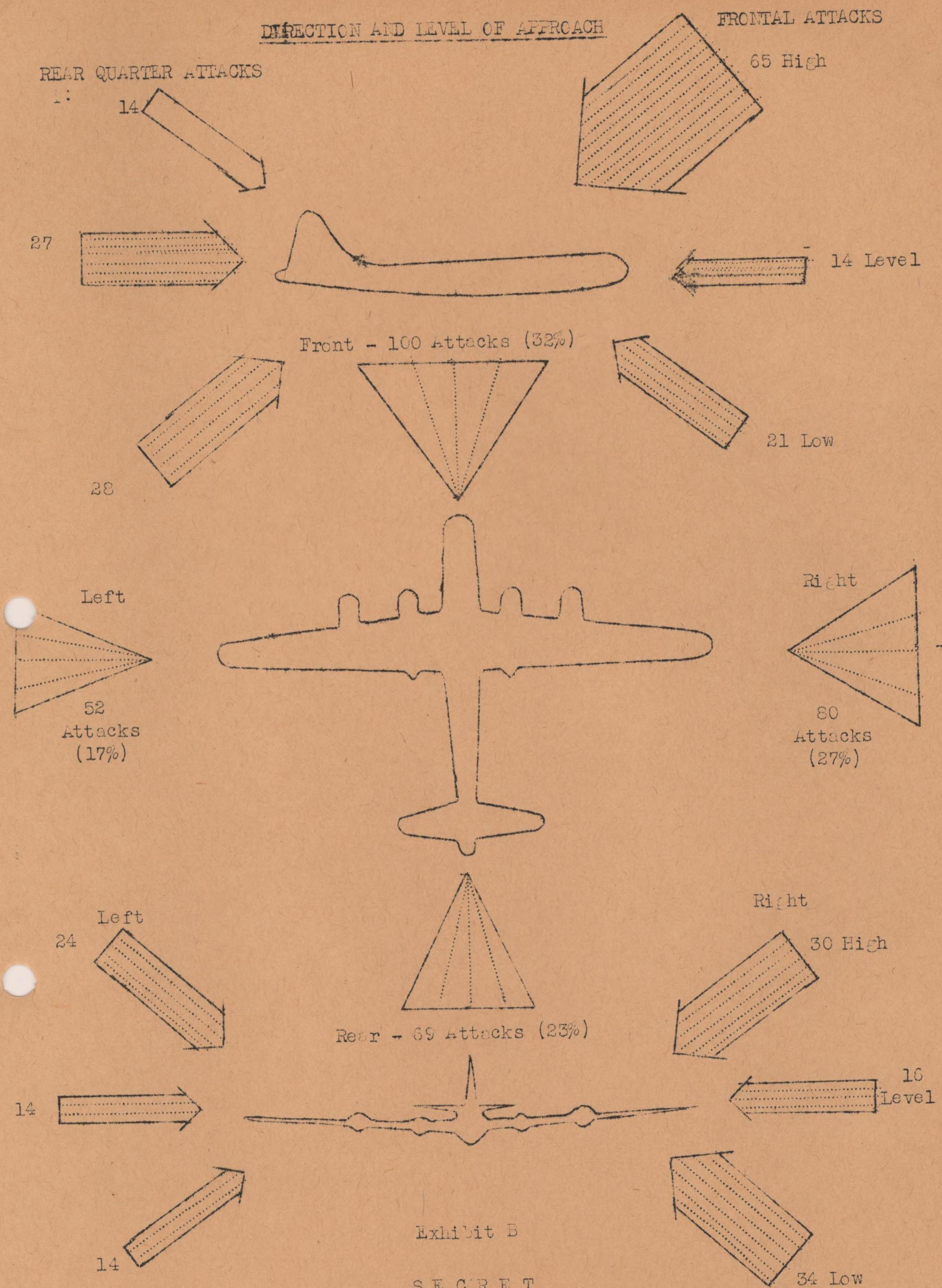
Level of Approach	Front	Right Side	Rear	Left Side
High	65	30	14	24
Level	14	16	27	14
Low	21	34	28	14
	100 (33%)	80 (27%)	69 (23%)	52 (17%)

C-I-2

S E C R E T

SECRET

DIRECTION AND LEVEL OF APPROACH



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3. Exchange of Fire:

a. Enemy pilots opened fire in 205 of the 304 individual encounters, (67%). This compares with Missions No. 16 (66%) and No. 15 (65%), but is higher than Missions No. 14 (42%) and No. 13 (56%). B-29's fired in 255 of the 304 encounters (84%), compared with Mission No. 16 (83%) and No. 15 (88%). In 63 of the 255 attacks (25%) B-29's opened fire at a range of 1000 yards or more. This is considerably lower than in Mission No. 16 (56%), and may have resulted from the high number of encounters in the P.T. area within a comparatively short period of time.

b. The following table shows comparative percentages at various ranges:

Table No. 3 - Distances Opened Fire

Distance (Yards)	Enemy Fire		B-29 Fire	
	No. of Attacks	Per-cent	No. of Attacks	Per-cent
0 to 499	35	20	51	23
500 to 799	57	32	63	28
800 to 999	36	20	48	21
1000 & Over	50	28	63	28
TOTAL	178*	100%	225**	100%

* Enemy pilots fired in 27 additional encounters at unreported ranges.

** B-29's fired in 30 additional encounters at unreported ranges.

4. Aggressiveness of Enemy Attacks:

a. Enemy pilot aggressiveness was again evident. One hundred and thirteen attacks (38%) were pressed to less than 250 yards, and of these, 79 were to 100 yards or less, as follows:

<u>No. of Attacks</u>	<u>E/A Closed to (Yards)</u>
2	8 (reported as 25 feet)
2	10
1	15
9	17 (reported as 50 feet)
1	20
6	25
1	30
19	50
4	75
34	100

C-I-3

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b. Most crew reports indicate that, on the whole, Japanese pilots displayed determination and skill in the majority of encounters. From a few reports, however, it was evident that some either inexperienced or unskilled enemy pilots were also engaged. The percentage of closures to distances under 250 yards, (38%), was lower than those of the past six missions, with the exception of No. 15, Singapore, (30%). On Mission No. 16, it was 53 per cent, on No. 14, 41 per cent, on No. 13, 40 per cent, on No. 12, 75 per cent, and on No. 11, 40 per cent. Considering the comparatively low figure of 38 per cent, the number of aerial bombing attacks on Mission No. 17 (46), should be noted. Aerial bombing closures were reported not pressed to the same distances as gun fire attacks.

c. Distances to which encounters were closed are shown in the following table:

Table No. 4 - Distances to Which Attacks Were Pressed

<u>Distance (Yards)</u>	<u>No. of Encounters</u>	<u>Percent</u>
1000 & Over	23	8
800 to 999	31	10
500 to 799	80	27
250 to 499	51	17
0 to 249	113	38
	<hr/>	<hr/>
TOTAL	298*	100%

* Six encounters excluded due to incomplete data.

5. Aerial Bombs:

a. Crews reported 46 aerial bombing attacks, (15% of total encounters), a greater number encountered than on any previous mission. The majority of bombs were of the phosphorous type, and were reported "thrown" or "flipped" from the bellies of many Japanese fighters, rather than dropped. Twenty-five of the 46 attacks (54%) came from the frontal quarter, and 13 of these from the 11 o'clock position.

b. Some phosphorous bomb bursts were described as being many times the size of the average AA burst. The centers of the bursts varied from white to dark grey to black, and white streamers mushroomed out to distances of 150 to 500 feet. One B-29 reported a phosphorous bomb explosion about 100 feet to the left, with the left wing of the airplane going through the streamers from the bomb without damage.

C-I-4

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c. A possible new type aerial bomb was described as a small black balloon, about 2 feet in diameter, with a cable 2 feet long, at the end of which a small ball was suspended. It was not reported whether an explosion occurred, and the method of release is unknown.

6. Rockets:

One B-29 reported two possible aerial rocket attacks. The first came from an unobserved enemy aircraft, in which a missile, trailing a thin stream of white smoke, passed close to the B-29 and went by without exploding. The second attack was reported as coming from a twin-engine enemy aircraft, flying at right angles to the B-29, about 2000 yards out in front. A small explosion and white smoke was observed under the left wing of the enemy fighter, followed by a loud explosion over the tail of the B-29. The missile, itself, was not observed.

7. Coordinated Attacks:

a. There were 33 coordinated attacks, employing 88 enemy aircraft, and resulting in 88 encounters, (29% of the total). The ratio of coordinated attacks to single attacks is lower than on Mission No. 16, when coordinated attacks accounted for 65 per cent of total encounters. However, total encounters on Mission No. 16 were 65, compared to 304 on Mission No. 17. The majority of attacks were coordinated by two enemy aircraft. Others were reported using three, four and five plane formations, with one using nine aircraft. Most attacks were executed by coming in out of the sun, in trail, and, in many instances, diving through formations of B-29's. Aerial bombs were employed in many coordinated attacks.

b. Some typical coordinated attacks are described and illustrated as follows: (Note: Two of these encounters were observed by crew members flying in nearby formations).

c. Three Oscars were sighted at 1700 yards, coming in from 11 o'clock, high, in trail, out of the sun. They opened fire at 300 yards, closed to 50 feet along side the B-29, then broke away by diving below and out to 5:30 o'clock. The B-29 fired at 75 feet. Damage to the B-29 was received to the extent of a large hole in the radar compartment caused by either an aerial bomb "flipped" by the first Oscar, or an explosive 20mm shell. There were no claims against the enemy aircraft.

Diagram follows on next page.

C-I-5

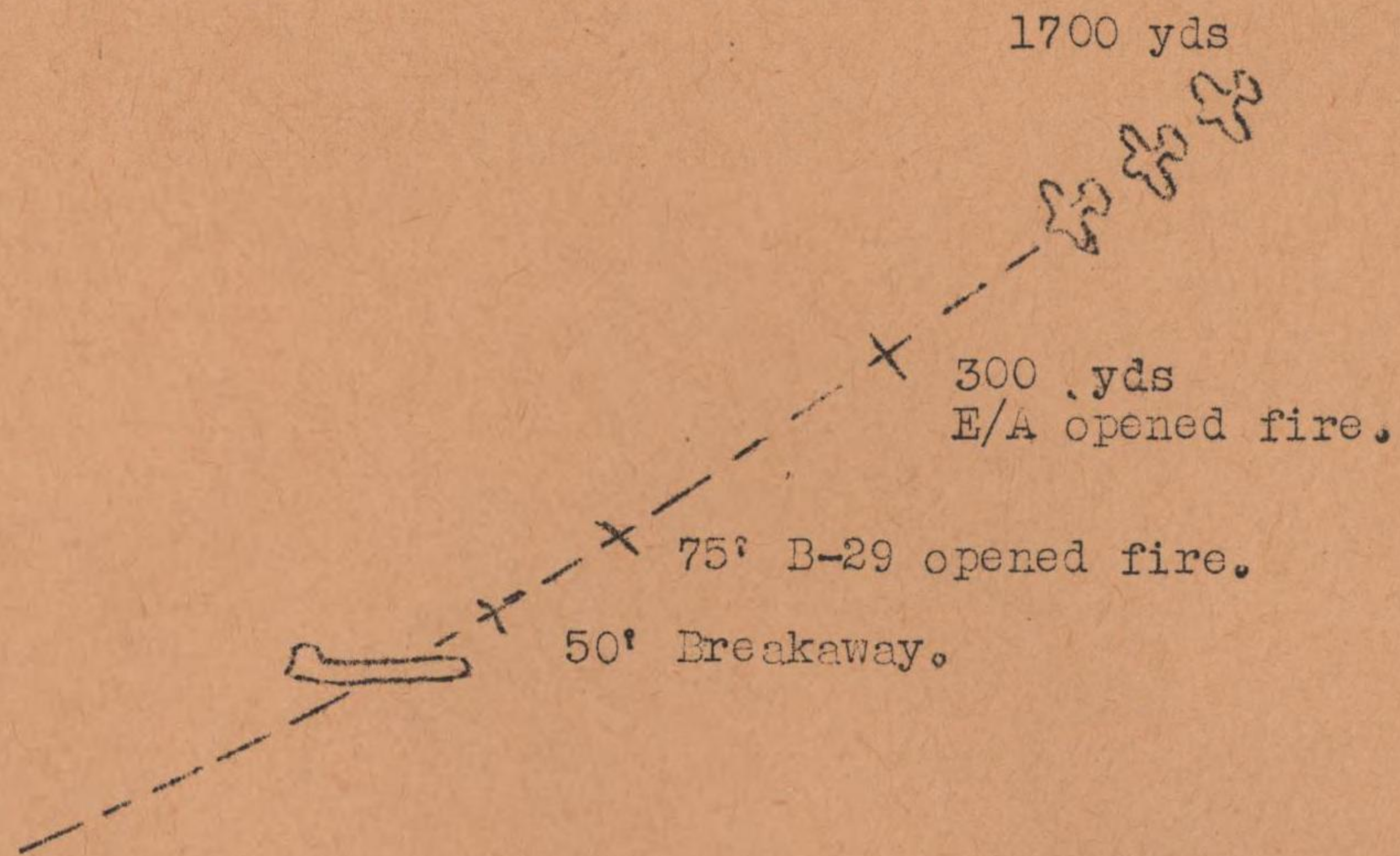
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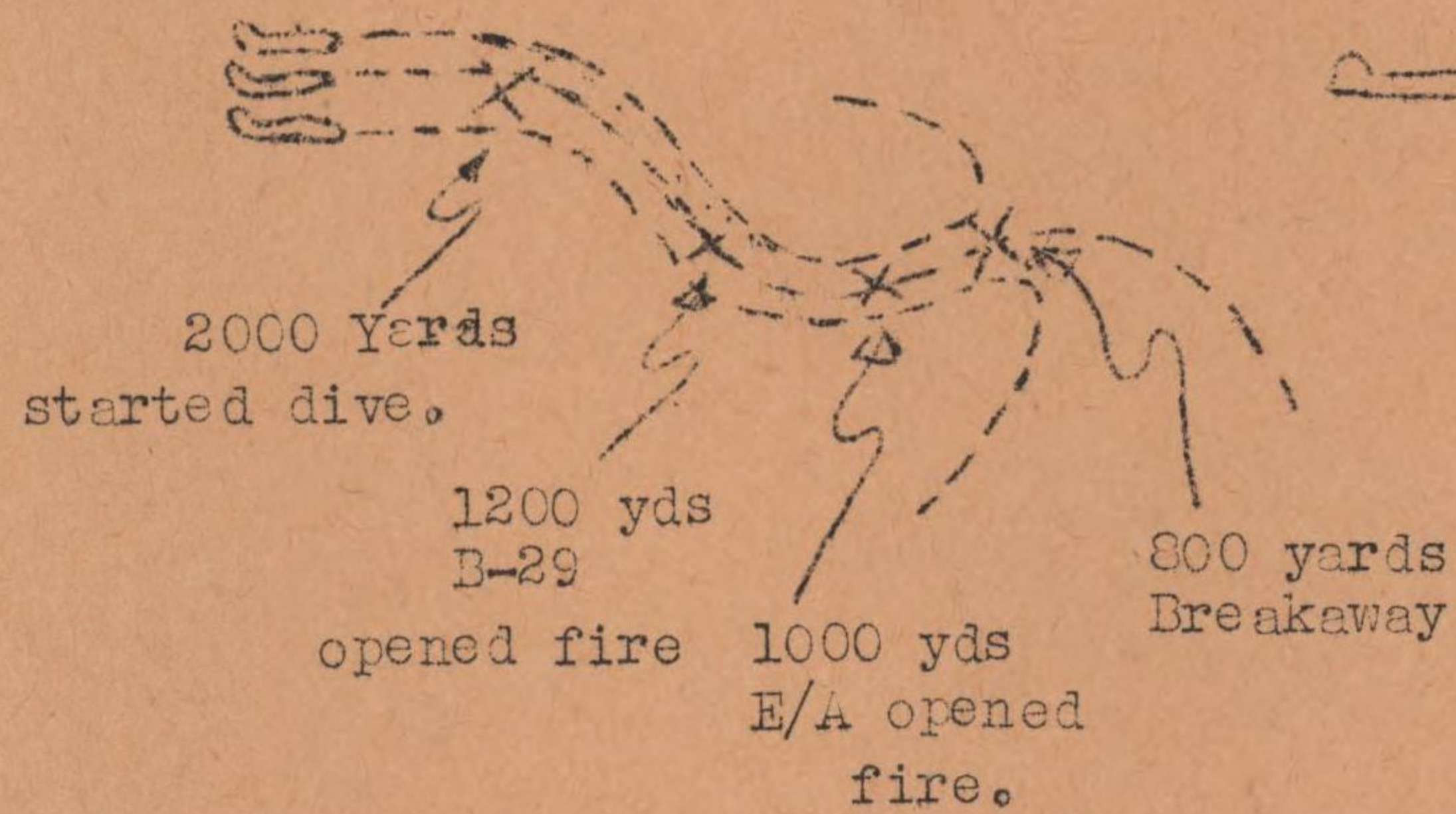
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d. A "Belly Button" attack was reported by one B-29. Three Tojos were sighted at 6 o'clock, level, coming in line abreast. At 2000 yards they went into a dive, then, zoomed for the tail of the B-29, opening fire at 1000 yards. They closed to 800 yards, then broke away with one enemy fighter passing below the B-29, and the others, to the right and left respectively. The B-29 fired at 1200 yards, but made no claims against the enemy aircraft. No damage to the B-29 was reported. Diagram follows:



C-I-6

S E C R E T

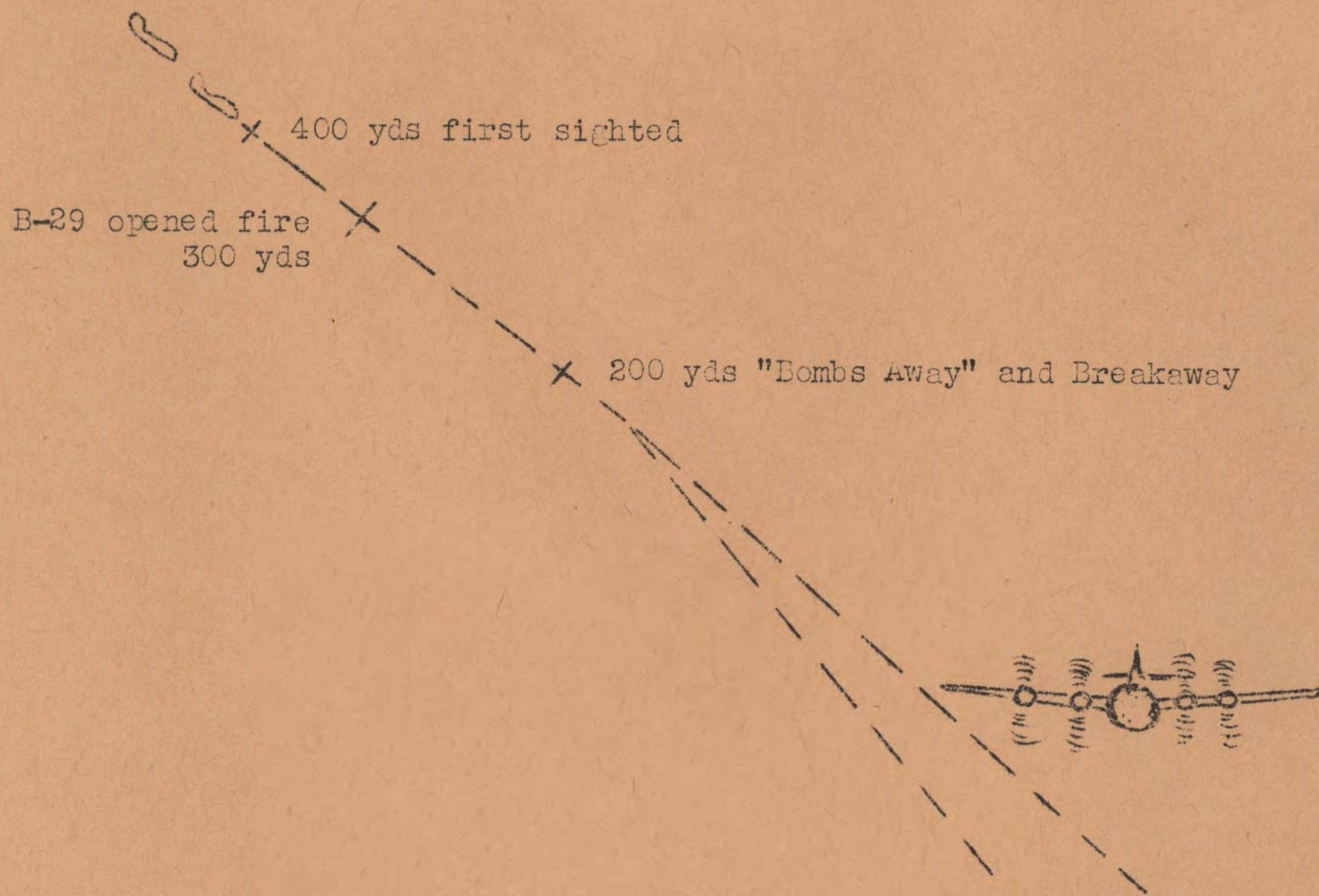
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S E C R E T

e. A coordinated aerial bombing attack was executed by 2 Oscars who came in one after the other from 3 o'clock, high. They were sighted at 400 yards, and closed to 200 yards where they made tight turns and "flipped" their bombs over. They broke away at 200 yards, the first to 11 o'clock, low, and the second, after flying along side the B-29 long enough to "flip" his bomb, to 10 o'clock, low. The B-29 fired at 300 yards and claimed a "probable" on the second Oscar. No damage was reported to the B-29. Diagram follows:



f. A "Chow Line" coordinated attack was witnessed by an observer in a nearby B-29 formation. Seven enemy fighters, possible Oscars, flying line astern, were high, to the right and rear of a formation, and in the sun. One after another they pulled forward toward the front of the B-29 formation, then banked sharply and turned in to attack, coming in high, between 1 and 3 o'clock. Several of the enemy aircraft were seen to fly right through the formations on their breakaways. (Exchange of fire and damage data not available).

Diagram follows on next page.

C-I-7

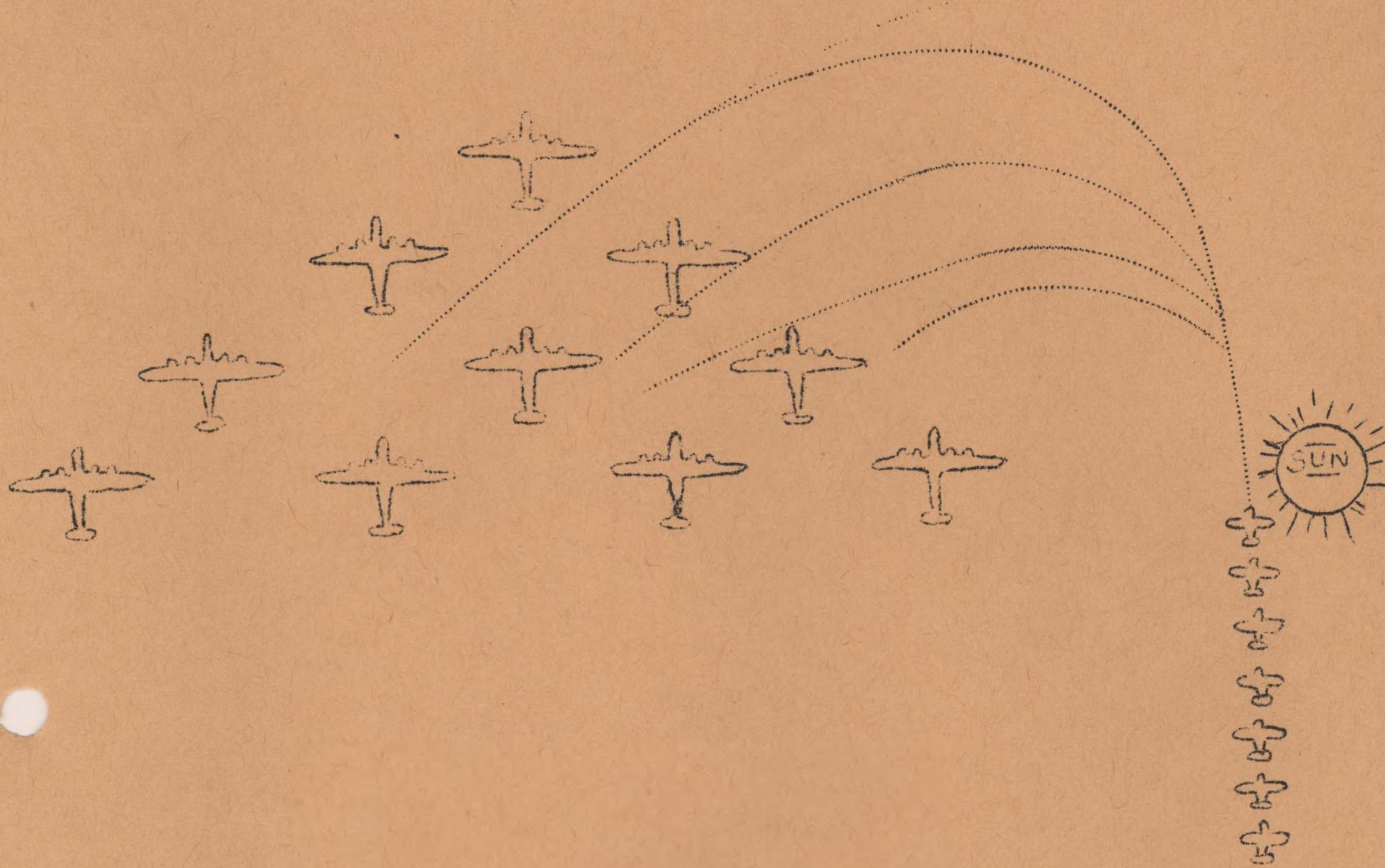
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g. Another observer witnessed a "Chow Line" attack by two unidentified enemy fighters employing phosphorous bombs, while a decoy enemy fighter attacked the front of the formation, coming in high, between 12 and 1 o'clock. The two enemy fighters were flying high, in trail, and to the right and rear of the B-29 formation. As the decoy attacked the head of the formation, these two pulled up abeam of the B-29's, banked sharply, flew over the formation and dropped their bombs. They broke away by diving to 8 o'clock. (Exchange of fire and damage data not available)

Diagram follows on next page.

C-I-86

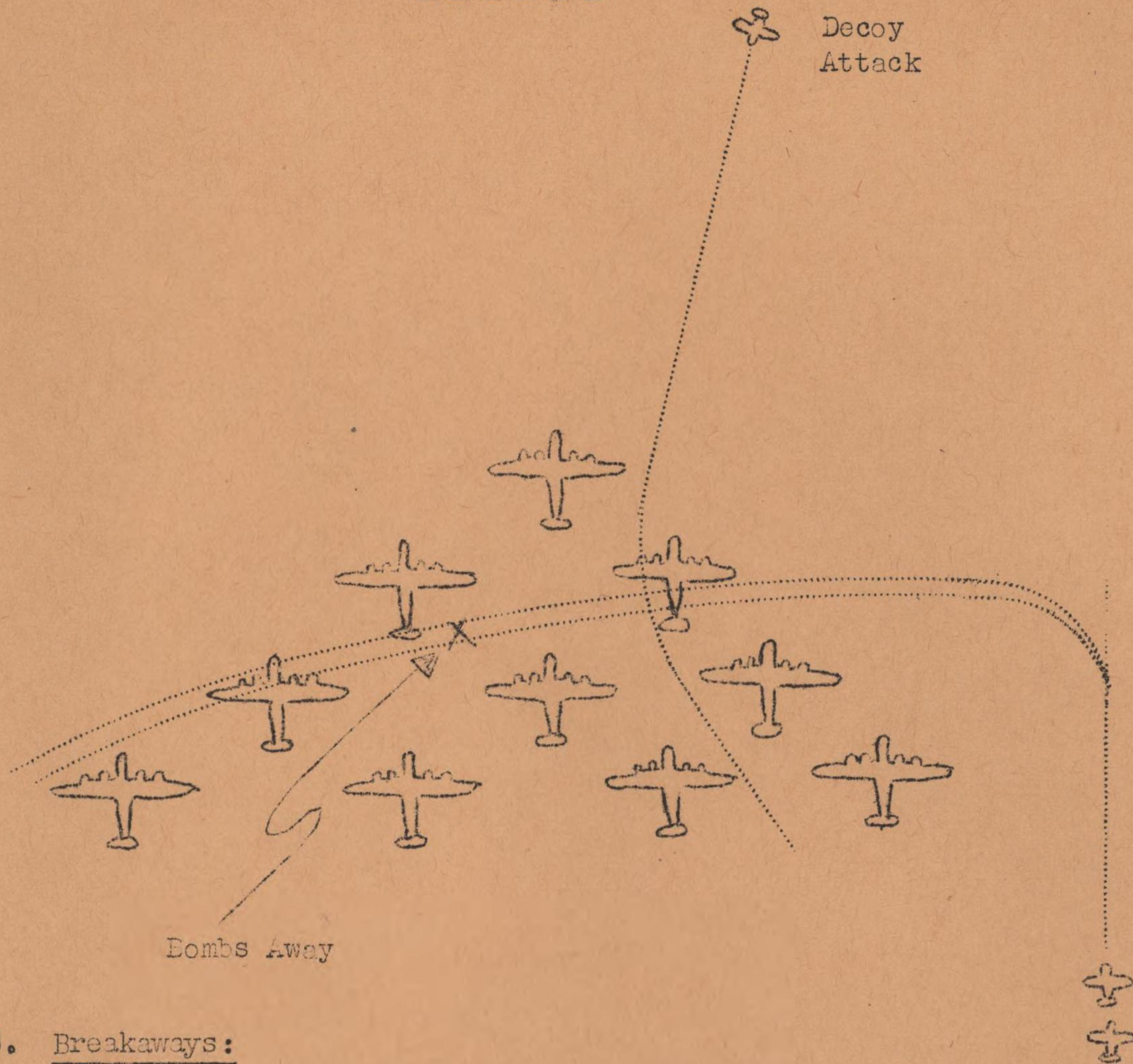
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8. Breakaways:

Dives predominated in the breakaway maneuvers, accounting for approximately one-half of the total. In many instances, enemy pilots, coming in high, continued right through the formations. Half-rolls followed by dives, split S's, peel-offs and wing-overs accounted for the remainder in about equal proportions.

9. New Aircraft:

a. B-29's made their first contacts with Jack 11, the new Japanese Navy fighter. Crews report Jack 11 fast and maneuverable, with a high rate of climb. Nine encounters were made at altitudes from 20,000 to 21,600 feet. It was reported that 2 Jack 11's, in a coordinated attack, were responsible for destroying a B-29 in the primary target area. One contact was made with a Frank which was reported fast and maneuverable at 15,000 feet.

G-I-9

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b. An "over-size" unidentified single-engine enemy fighter was reported in one encounter. The aircraft was unmarked, and was described as having a large radial engine, elliptical wings, and a tail similar in shape to Oscar's. The wing span was estimated at over 50 feet, and the over-all length greater than a P-47. It was reported very fast at an altitude of 21,000 feet.

c. An unidentified twin-boom, twin-engine enemy fighter was sighted and described as having a small finger-nail type rudder.

d. Additional details on the above possible new fighters are being collected, and further data, if significant, will be the subject of a Special Intelligence Report.

10. Armament:

A Tony was reported as having three guns on each side of wing.

11. Evasive Action:

a. Reports on evasive action were very general, and consisted of turning into attacking enemy aircraft, or putting the nose down to out-run them. One B-29 was reported as having lifted its wing over the burst of an aerial bomb.

12. Summary:

a. Enemy opposition rated moderate to strong in the primary target area, weak elsewhere.

b. Of 304 individual encounters reported, 259, (85%), were in the primary target area, 7 (2%) over the secondary target, 2 over the last resort target, and the remainder, 36 (12%) distributed along the routes out and back.

c. One B-29 known destroyed due to enemy air action. Four were damaged by enemy fighters, and subsequently lost due to crashes or crash landings in friendly territory. Nine other B-29's were damaged as a result of enemy air action. Claims against enemy aircraft are 27 destroyed, 19 probably destroyed, and 24 damaged.

d. Majority of attacks from frontal quarter. Of attacks on all quarters, 44% were high, 24% were level, and 32% were low.

e. Enemy opened fire in 67% of the encounters, and B-29's in 84%.

f. Enemy pilots rated aggressive and skillful. Thirty-eight per cent (38%) of encounters pressed to less than 250 yards, 79 encounters to 100 yards or less.

C-I-10

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g. Forty-six (46) aerial bombing attacks (15% of total encounters) employing mostly phosphorous type bombs. Twenty-five of the 46 (54%) came from the frontal quarter. Two possible aerial rocket attacks.

h. Thirty-three coordinated attacks accounted for 29% of the total encounters.

i. Approximately fifty per cent of the breakaway maneuvers were dives.

j. First contacts with Jack 11, new Japanese Navy fighter, and Frank, new Japanese Army fighter.

k. Little evasive action by B-29's.

13. Enemy Aircraft Markings:

<u>Color</u>	<u>Aircraft</u>	<u>Wing and Fuselage Markings</u>	<u>Tail Markings</u>
Silver	JACK 11	3 orange rings around fuselage aft of wing.	
"	TOJO	Black stripe running diagonally across rear of fuselage.	
"	TOJOS	Red ball insignia.	
"	TOJO	Red circle on lower wing.	
"	TOJOS	Red dots.	
"	TONY	Yellow stripes on wings.	
"	ZEKES	No markings observed.	
"	OSCAR	Orange discs on wings	One narrow and one wide yellow stripe diagonally across fin.
Silver and Green	Fighters at Nanking	Green wings, silver fuselage, orange balls on top of wings.	
Camouflaged and Silver	JACKS	Camouflaged on top of fuselage, bottom of fuselage silver, red ball on under side of wing.	
Olive-drab	OSCAR	Orange discs on wings.	White stripes diagonally across fin.
"	OSCAR	No markings observed.	
"	TONY	3 yellow stripes diagonally across cockpit.	
"	TONY	No markings observed.	
"	TOJO	Orange band around fuselage.	

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Enemy Aircraft Markings (continued)

<u>Color</u>	<u>Aircraft</u>	<u>Wing and Fuselage Markings</u>	<u>Tail Markings</u>
Clive-Drab	NICKS	No markings observed.	
"	ZEKE	No markings observed.	
"	ZEKE 32 (HAMP)	No markings observed.	
Tan	HAMP	No markings observed.	
Black	TCNY	White stripes on wings.	
"	TCNYS	No markings observed.	
"	TCJCS	Red dots on fuselage aft of wing.	
"	NICK	No markings observed.	
Grey	RUFE	Red spots.	
Camouflaged	TCNY	Red ball surrounded by red band on fuselage aft of wing.	
"	ZEKE	No markings observed.	
"	TCNYS	No markings observed.	
"	TCJC	No markings observed.	White check mark, thus:
Blue	CSCAR	White & orange circles on fuselage back of canopy.	
"	T/E	Red band around belly.	
None Reported	TCJC	White stripe around fuselage behind canopy.	
"	ZEKE	Orange band around fuselage just behind trailing edge of wing.	
"	CSCAR	No markings observed.	Diamond on tail.
"	FRANK	Yellow spinner, 2 red stripes around fuselage running from just back of canopy on top to leading edge of tail fin on bottom of fuselage, red belly.	

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S E C R E T

D

ANNEX

D

WEATHER INFORMATION

- I - Weather Information
- II - Chart - weather as Forecast and Encountered
- III - Synoptic Map

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I - WEATHER INFORMATION

Mission No. 17

21 November 1944

	As Forecast	As Encountered
Base (Take-Off)	Altostratus overcast at 7000' with scattered stratocumulus at 3000' above surface. Top of layer cloud at 14,000'. Visibility 3 miles.	<u>Hsinching</u> : Clear. Visibility restricted to 5 miles in light fog. <u>Kwangshan</u> : 2/10 cirrostratus. visibility 3 miles. <u>Kiunglai</u> : Scattered cirrus. Visibility 3/4 mile in ground fog and dust. Surface wind NW-5. <u>Pen-shan</u> : Clear. Visibility 4 miles.
Route Out	Clouds in overcast layers to 111 deg. E. with top of highest-layer at 14,000'. Beyond 111 deg. E. cloud layers will become broken and will dissipate by 115 deg. E. except the lowest layer which will be scattered stratus or stratocumulus at 3000' which will persist to the assembly point at the lake and become broken at the coast. Over the sea there will be a broken deck of stratocumulus at 3000' which will become scattered at final turning point and the I.P.	<u>Base to China coast</u> : Clear except for scattered cumulus from Hungtze Lake to coast. Visibility 15 miles in haze. <u>Coast to target</u> : 3/10 Alto-cumulus at 12,000' at the China coast increasing to 5/10 at Saishu Island and to 8/10 in the target area. Broken altostratus at 17,000' and cirrostratus at 23,000' in the target area.
Target Area	2/10 fair weather cumulus. Visibility 25 miles. Altimeter setting: 30.39 inches. Mean temperature to 20,000'; -8 Deg. C. Mean temperature to 23,000'; -9 Deg. C. Altimeter setting: Secondary Target 30.19 inches; Tertiary Target, 30.17 inches	<u>Primary Target</u> : 8/10 alto-cumulus at 12,000'. 7/10 altostratus at 17,000'. 5 to 8/10 cirrostratus at 23,000'. Dense persistent vapor trails at altitudes above 20,000'. <u>Secondary Target</u> : Clear. Visibility 5-8 miles in haze. <u>Tertiary Target</u> : Clear. Visibility 10 miles in haze.
Return Route	No change except cloud layers over hills will thin with top lowering to 12,500'.	Same as route out with the addition of 2/10 fair weather cumulus from mountains to bases

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S E C R E T

	AS FORECAST	AS ENCOUNTERED
Base on Return	Overcast 7000' Visibility 7 miles	HSINCHING; Scattered fair weather cumulus at 4000'. Visibility unrestricted. KWANGHAN; 2/10 cumulus at 5000'. Visibility 7 miles. KIUNGLAI; scattered fair weather cumulus at 5000'. Visibility 8 miles in haze. Surface wind SW-5. PENGSHAN; 1/10 fair weather cumulus at 6000'. Visibility unrestricted.
Freezing Level	7000'. Moderate rime icing in clouds.	

A. WINDS ALOFT - FORECAST

ALTITUDE	TERMINAL	HALFWAY	TARGET
5,000'	40 Deg - 08K		
10,000'	240 Deg - 12K	310 Deg - 17K	300 Deg - 20K
15,000'	270 Deg - 22K	300 Deg - 27K	290 Deg - 32K
20,000'	280 Deg - 40K	290 Deg - 42K	280 Deg - 42K
25,000'	270 Deg - 55K	280 Deg - 55K	270 Deg - 52K

B. WINDS ALOFT - ENCOUNTERED

ALTITUDE	CENTRAL CHINA	TARGET
13,000'	300 Deg - 25K	
15,000'	300 Deg - 40K	
22,000'		270-90 Deg - 45-65K

C. TARGET TEMPERATURES

AS FORECAST

ALTITUDE	TEMPERATURE
5,000'	8 Deg C.
10,000'	4 Deg C.
15,000'	-18 Deg C.
20,000'	-28 Deg C.
25,000'	-35 Deg C.

AS ENCOUNTERED

ALTITUDE	TEMPERATURE	
	Primary Target	Secondary Target
22,000'	-29 Deg C	
27,000'		-34 Deg C.

D-I-2

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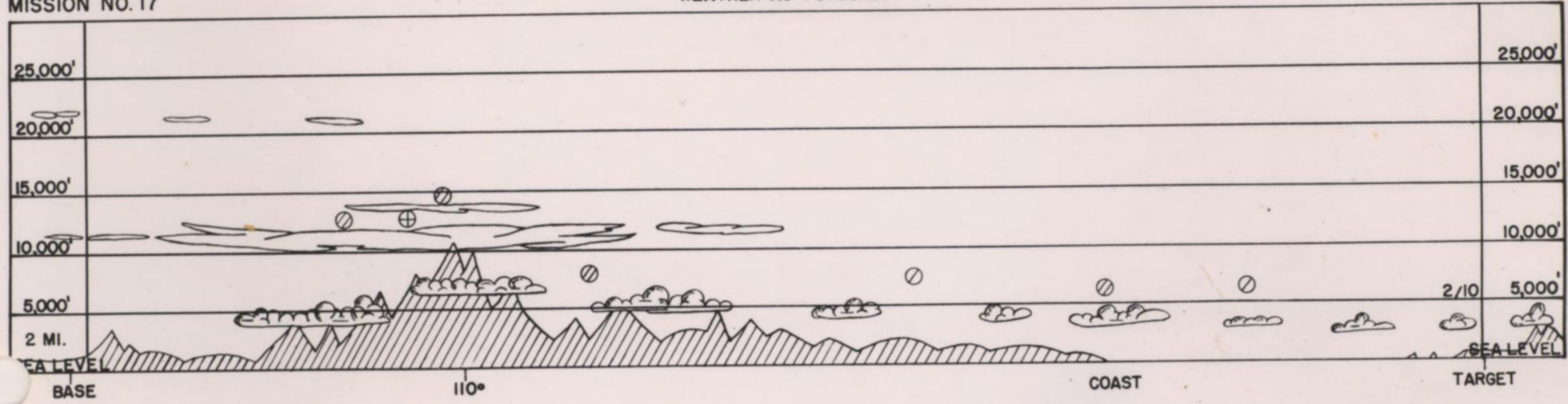
By *SM* NARA Date *11/3/05*

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XX BOMBER COMMAND
WEATHER AS FORECAST

21 NOVEMBER, 1944

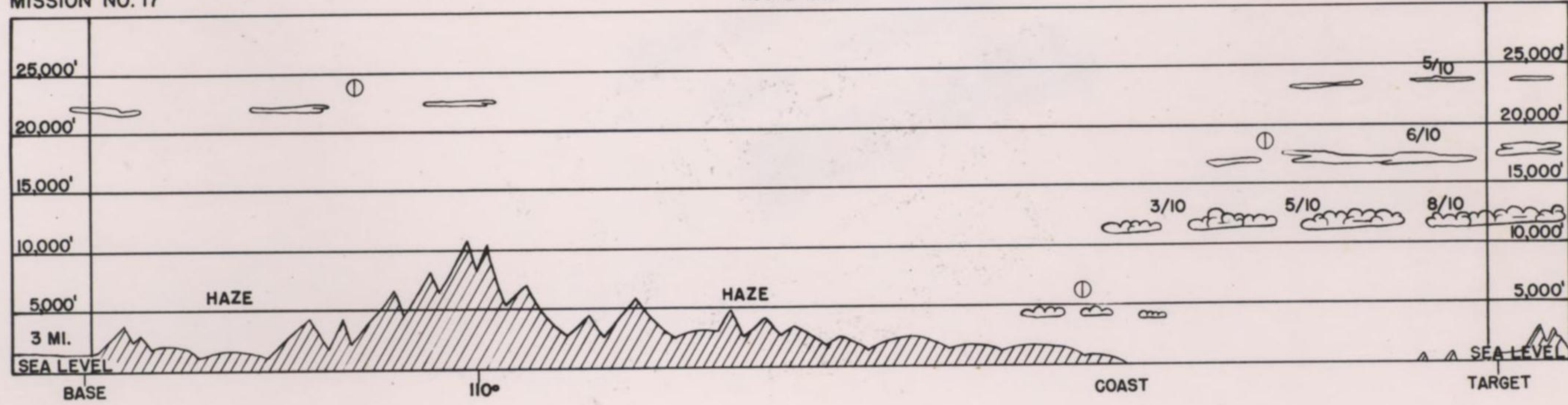
MISSION NO. 17



WEATHER AS ENCOUNTERED
ROUTE OUT

21 NOVEMBER, 1944

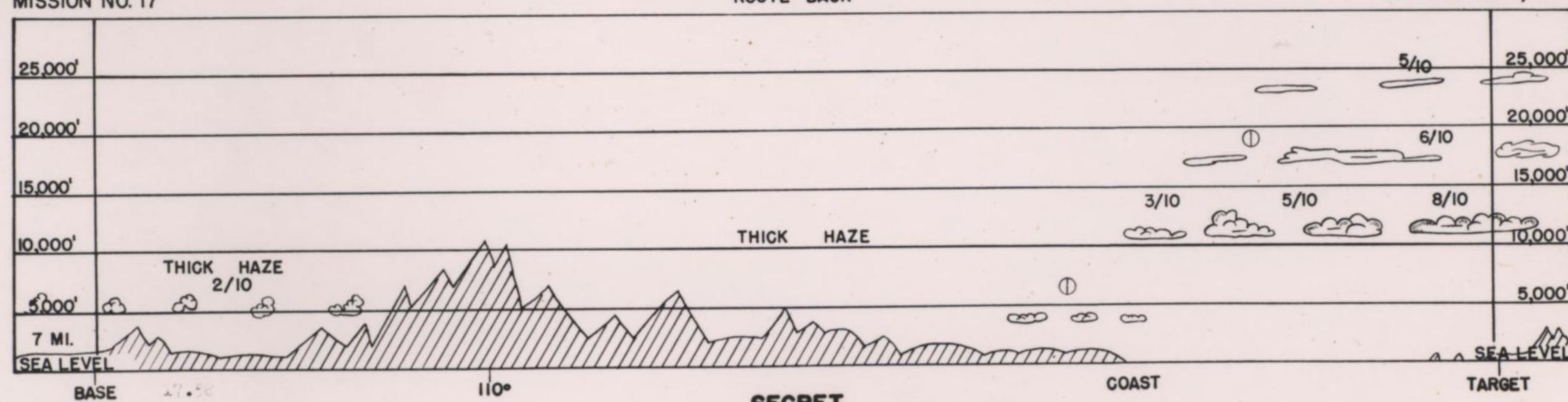
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WEATHER AS ENCOUNTERED
ROUTE BACK

21 NOVEMBER, 1944

MISSION NO. 17



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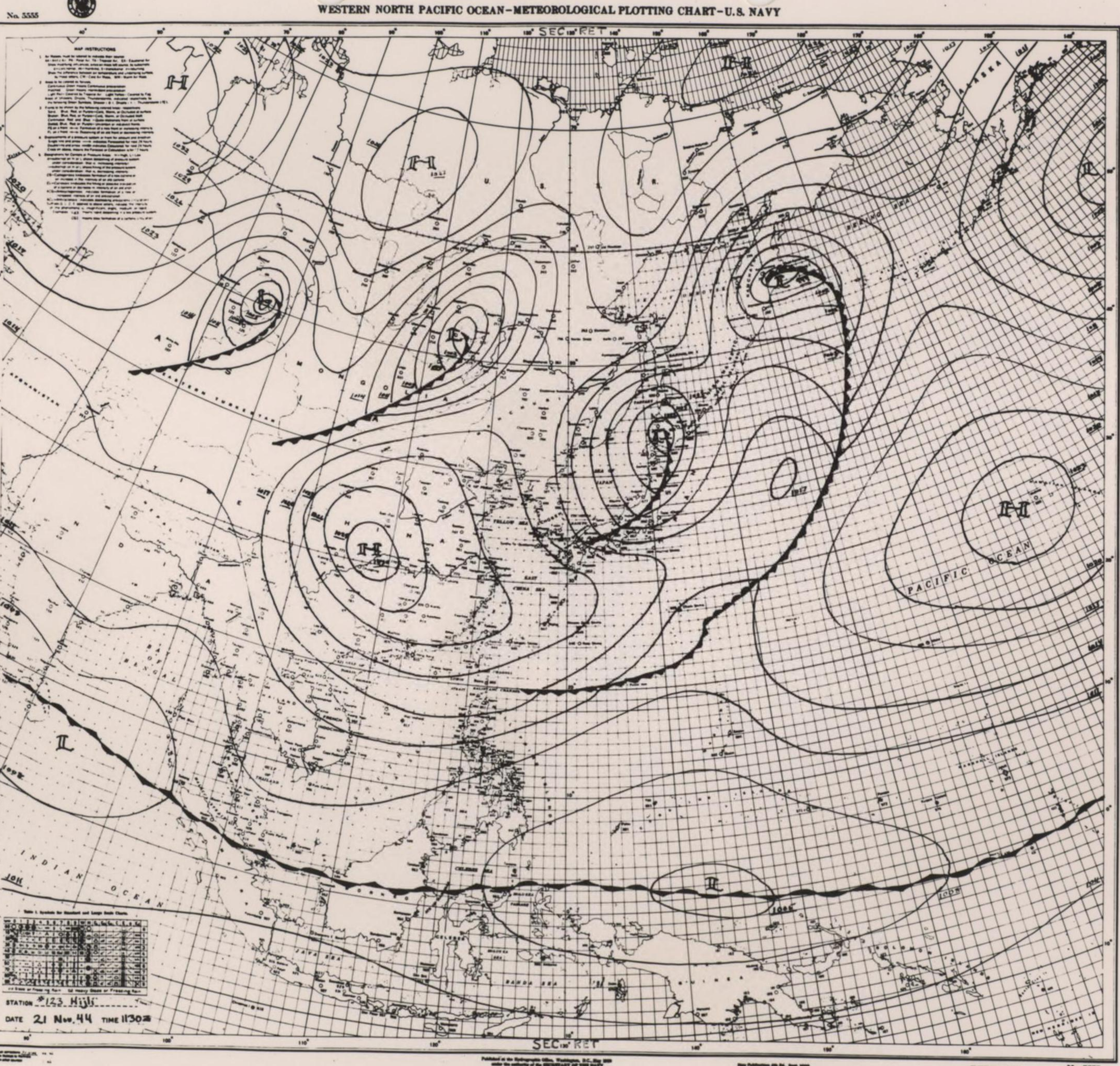
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16

S E C R E T

E

ANNEX

E

COMMUNICATIONS INFORMATION

* * * * *
* Prepared by: *
* * * * *
* Communications Section *
* * * * *
* XX Bomber Command *
* * * * *
* * * * *

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By *CD/MT* NARS, Date *OCT 21* 1975

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By *SW* NARA Date *11/3/05*

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HEADQUARTERS
XX BOMBER COMMAND
APO 493

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND COMMUNICATIONS (RADIO) OFFICER

Date prepared: 27 November 1944

Field Orders No.: 17

Date of Mission:
21 November 1944

1. Communications for mission number seventeen were in general satisfactory. One again a high noise level was encountered on all frequencies used, and icing conditions on antennas caused some difficulty in reception.

2. To acquaint communications personnel with the procedures involved in passing a message from the CP to the aircraft a practice message was sent out. A time study of the handling of this message is contained in Annex Number 1.

3. Inclement weather once again caused a dispersal of aircraft with a consequent increase in message traffic. All such traffic was handled satisfactorily and compliance with the provisions of Tactical Doctrine by both aircraft and ground stations was excellent. A compilation of the number of messages handled is as follows:

	<u>40th Gp</u>	<u>444th Gp</u>	<u>462nd Gp</u>	<u>468th Gp</u>
a. Aborts:	6	0	2	2
b. Bombs away:	7	9	10	10
c. Attack:	2	0	6	6
d. Convoy sighting:	1	6	1	4
e. YYY-position:	16	13	11	13
f. Relay of distress for other aircraft:		1		1

4. Aircraft which did not comply with all of the provisions of Tactical Doctrine and the reasons for non-compliance are as follows:

a. 444th Group

(1) A/C 510 which is missing.

(2) A/C 204 did not send YYY-position report message. Sent "Shot up bad". This aircraft landed at an alternate base.

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b. 462nd Group

(1) A/C 393 did not send convoy sighting message to ground station and did not log time message was transmitted to surface craft.

c. 468th Group:

- (1) A/C 429 did not send number of aircraft in formation when sending bombs away message.
- (2) A/C 358, which is missing. However, A/C 248 relayed to the ground station an encoded message from this aircraft.

5. A comparative study of the readability, signal strength and noise level of the frequencies in use, divided into two (2) hour periods, is as follows. Time indicated is GMT:

GROUND STATION TO AIRCRAFT

<u>Frequency</u>	<u>1830-2030</u>	<u>2030-2230</u>	<u>2230-0030</u>	<u>0030-0230</u>	<u>0230-0430</u>
2675 kc	---	S1 R1 W4	---	---	---
2900 kc	---	---	---	S3 R3 W4	S3 R3 W5
8260 kc	---	S4 R4 W3	S3 R3 W3	S2 R2 W4	S3 R3 W3
8310 kc	S5 R5 W0	S4 R4 W2	S4 R4 W2	S1 R1 W4	S1 R1 W4
8545 kc	S3 R3 W3	S1 R1 W3	S1 R1 W3	S3 R3 W2	S4 R4 W1
12215 kc	---	---	---	S3 R3 W3	S3 R3 W2
12415 kc	---	S3 R4 W1	S2 R3 W2	---	S2 R3 W1

<u>Frequency</u>	<u>0430-0630</u>	<u>0630-0830</u>	<u>0830-0950</u>
2675 kc	S2 R2 W2	S3 R3 W1	---
2900 kc	---	---	---
8260 kc	S3 R3 W2	S4 R4 W2	S5 R5 W1
8310 kc	S3 R3 W2	S5 R5 W1	S5 R5 W1
8545 kc	S4 R4 W1	S4 R4 W1	---
12215 kc	S2 R2 W2	S1 R1 W2	---
12335 kc	Xmitter trouble.		
12415 kc	S5 R5 W2	S5 R5 W2	S5 R5 W0

AIRCRAFT TO GROUND STATION

<u>Frequency</u>	<u>1830-2030</u>	<u>2030-2230</u>	<u>2230-0030</u>	<u>0030-0230</u>	<u>0230-0430</u>
2675 kc	No Signal	S1 R1 W4	---	---	---
2900 kc	---	---	---	S3 R3 W5	S3 R3 W5
8260 kc	---	S3 R4 W2	S3 R3 W3	S1-3 R2 W4	S2-4 R3 W3
8310 kc	S5 R5 W0	S4 R4 W2	S4 R4 W2	S1 R1 W2	S1 R1 W5
8545 kc	No Signal	S1 R1 W3	S1 R1 W4	S2 R3 W3	S4 R4 W3
12215 kc	No Signal	---	---	---	S3 R3 W2
12335 kc	Bad Xmitter				
12415 kc	---	S3 R4 W1	S2 R3 W2	---	S2 R3 W2

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<u>Frequency</u>	<u>0430-0630</u>	<u>0630-0830</u>	<u>0830-0950</u>
2675 kc	---	W2 to W4	---
2900 kc	---	---	---
8260 kc	S3 R3 W3	S4 R4 W2	S5 R5 W1
8310 kc	S1 R1 W5	S3 R3 W2	S5 R5 W1
8545 kc	---	S4 R4 W1	---
12215 kc	S3 R4 W2	W2 to W4	---
12415 kc	S4 R4 W1	S5 R5 W2	S5 R5 W0

Note: Due to conflicting reports submitted by radio operators of the 444th Group, it was impossible for the Group Communications specialists to make a comparative study of signal strengths.

Frequency 12335 kc, assigned to the 462nd Group, was not used due to Transmitter trouble.

6. The following statistical data was compiled regarding the use of aids to air-navigation; all distances in statute miles:

a. Radio Homing Beacons:

<u>Location</u>	<u>No of A/C Reporting</u>	<u>Average Initial Contact</u>	<u>Extreme Initial Contact</u>	<u>Average Track</u>
Ankang (PR)	52	134	256	263
Liangshan (LM)	38	111	179	260
Hsinching (CU)	55	125	246	264
Pengshan (MV)	3	45	75	---
Kwanghan (LK)	12	125	150	262
Kiunglai (OD)	4	85	150	261
Kanchow (MC)	1	50	50	---

b. Radio Range:

<u>Location</u>	<u>No of A/C Reporting</u>	<u>Average Initial Contact</u>	<u>Extreme Initial Contact</u>	<u>Average Track</u>
Hsinching (CU)	28	86	134	--
Kwanghan (LK)	12	85	150	--

c. Requests for D/F aid by station and frequency are as follows:

<u>Station</u>	<u>Frequency</u>	<u>No. of Requests</u>	<u>Class of bearing given</u>		
			<u>I</u>	<u>II</u>	<u>III</u>
40th Gp - 7A3	8545 kc	2	1	1	
444th Gp - 3B8	8495 kc	3		1	2
462nd Gp - 7D3	8310 kc	4	1	2	1
468th Gp - No D/F facilities utilized					

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- d. Air-to-air homing was attempted by all Groups, with results as indicated below:

40th Group - A/C 407 sent homing signals at assembly point. Signals were picked up on an average of thirty-five (35) miles and an extreme distance of eighty-three (83) miles. The Signal was reported by a total of ten (10) aircraft

444th Group- (Flight A) A/C 451 sent homing signals on 1280 kcs for fifteen (15) minutes, giving his altitude and ETA at assembly point. Five (5) A/C reported the signals as "Excellent" and were able to accomplish rendezvous.

(Flight B) A/C 464 sent homing signals on 520 kcs, but no homing was accomplished.

462nd Group- Seven (7) A/C attempted air-to-air homing; of these, five (5) were considered successful, and of the remaining two (2) failing to pick up the signal, one (1) was due to faulty radio compass. No reason was given for the second aircraft's failure.

468th Group- A/C 3355 sent out homing signals at first rendezvous point. Two (2) aircraft accomplished homing. Operators reported that much interference was encountered on the lower frequency band. This made homing practically impossible due to excessive needle hunting.

7. All Groups reported strong atmospherics on all frequencies, and some man-made interference on or near the assigned frequencies. However, at no time was it strong enough to disrupt communications. No deliberate attempts at jamming were logged.

8. No violations of cryptographic security were reported.

9. Malfunctions of equipment were as follows:

a. 40th Bomb Group:

- (1) A/C 420 radio compass antenna broke due to icing. Trailing antenna was used as an expedient.
- (2) A/C 313 lost compass antenna.
- (3) A/C 394 lost both liaison and compass antennas due to icing; used trailing antenna as an expedient
- (4) A/C 404 lost liaison antenna due to icing; used command antenna.
- (5) A/C 407 pilot's microphone shorted out; used hand microphone

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b. 444th Bomb Group.

- (1) A/C 492 had bad tube in command set (VT-136); replaced in flight.
- (2) A/C 375 lost liaison antenna.
- (3) A/C 472 - compass needle stuck.

c. 462nd Bomb Group

- (1) A/C 463 had shorted antenna lead on liaison transmitter; repaired in flight.
- (2) A/C 213 - liaison transmitter out.
- (3) A/C 728 - compass lead in broke.
- (4) A/C 3362 - tuning cable broken on radio compass.
- (5) A/C 475 - loose connection in interphone system.
- (6) A/C 827 - compass out
- (7) A/C 5213 - side tone out, weak radio compass.

d. 468th Bomb Group

- (1) A/C 4542 - liaison transmitter out due to dynamotor failure.
- (2) A/C 454 - command transmitter out.

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SECRET
:Auth: CG XX BC :
:Date: 28 Nov 44:
:Initials: YH :
:

HEADQUARTERS
XX BOMBER COMMAND
APO #93

ANNEX NO. 1

TO

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND COMMUNICATIONS (RADIO) OFFICER

Date prepared: 27 November 1944

Field Order No. 17

Date of Mission:
21 November 1944

1. Following is a time study involving message handling time of the practice message sent on Mission Number 17. The message consisted of fifty-seven groups and was given a precedence classification of Urgent. It is believed that this message was too long, and it is further believed that a message requiring a change of target would not ordinarily consist of this many groups.

2. The message was filed for transmission at 2102Z, and was transmitted via teletype, being receipted for by the various Groups as follows:

<u>40th Group</u>	<u>444th Group</u>	<u>462nd Group</u>	<u>468th Group</u>
2140Z	2125Z	2122Z	2122Z

3. The message was encoded at the Command Post and transmitted to the Groups ready for transmittal to aircraft. A time study showing time of receipt, means by which message was received, and number of aircraft receiving message is as follows:

a. 40th Bomb Group:

Only one aircraft, call sign 470, received the message, by relay from an aircraft of the 462nd Group. Message was sent from 2150Z until 2300Z, during which time the signal strength ranged from a no signal level to S-1.

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b. 444th Group:

<u>A/C Call Sign</u>	<u>How Received</u>	<u>Time of Receipt</u>	<u>Remarks</u>
492	Direct	2238Z	
343	Direct	2238Z	
292	Direct	2238Z	

Time of first transmission - 2130Z. Message was repeated a total of six times between the above time and 2230Z.

No other aircraft from this group received the message. Reason given was that most of the aircraft were monitoring the air-to-air homg frequency at the time message was being transmitted.

It is suggested that in the future, the pilot or co-pilot monitor the air-to-air homing frequency, and that the radio operators be briefed to monitor the air-ground frequency during the two (2) fifteen minute quadrants called for in Section VIII - Communications - current Tactical Doctrine.

A/C Call Sign 462nd Bomb Group:

<u>A/C Call Sign</u>	<u>How Received</u>	<u>Time of Receipt</u>	<u>Remarks</u>
505	Direct	2158Z	
463	Direct	2337Z	
484	Direct	0305Z	
329	Relay	0240Z	
209	Direct	2152Z	
362	Direct	2255Z	
359	Direct	2343Z	
338	Direct	2155Z	
506	Direct	2146Z	
311	Direct	0502Z	
316	Relay	0005Z	
475	Relay	0010Z	
827	Direct	2300Z	
728	Direct	2335Z	
346	Direct	2222Z	
382	Direct	2152Z	
479	Direct	2142Z	
461	Direct	2155Z	
393	Direct	2330Z	
273	Not received		Early Return
456	Not received		Equipment failure
5213	Not received		Equipment failure
6213	Not received		No reason
581	Direct	2225Z	
270	Not received		Early Return
248	Not received		Early Return

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462nd Group (Cont'd)

Time of first transmission - 2125Z
Time received by first aircraft - 2142Z
Time received by last aircraft - 0305Z

d. 468th Bomb Group

<u>A/C Call Sign</u>	<u>How Received</u>	<u>Time of Receipt</u>	<u>Remarks</u>
3828	Direct	2250Z	
217	Direct	2250Z	
3355	Direct	2252Z	
3354	Direct	2300Z	
6390	Direct	2302Z	
279	Direct	2310Z	
284	Direct	2338Z	
4546	Direct	2355Z	
6208	Direct	2357Z	
4494	Direct	0015Z	
353	Direct	2250Z	
429	Not received		No reason
272	Not received		No reason
407	Not received		No reason
525	Not received		Early Return
265	Not received		Early Return

Time of first transmission - 2125Z
Time received by first aircraft - 2250Z
Time received by last aircraft - 0015Z

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S E C R E T

Annex

F

RADAR

- I Radar Information
- II Radar Tables

F

*Prepared by: *
* *
* RADAR SECTION *
* XX BOMBER COMMAND *

S E C R E T

S E C R E T

HEADQUARTERS
XX BOMBER COMMAND
APO 493

.....
.SECRET
.Auth: CG XX BC.
.Initials YD
.Date 29 Nov 44
.....

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND RADAR OFFICER

Date Prepared 29 November 1944 Field Orders No. 17
Date of Mission 21 November 1944

I - Radar Information

A - Radar Bombing

1. Weather conditions over the primary target area made visual bombing difficult if not altogether impossible. Bombing of the primary target by radar was not as successful as it might have been, many errors and troubles contributing to this failure. Aircraft formations and radar equipment malfunctions are believed to have caused the majority of the difficulties. A complete study is being made of the conditions involved.

2. A total of seventy-two (72) or seventy-seven (77%) per cent of the aircraft bombed by radar. Fifty-nine (59) aircraft bombed the primary target of Omura by radar, while a total of five (5) aircraft bombed the secondary and last resort targets by radar means.

B - Radar Navigation

Navigation by radar, identification of the target and check points along the route was substantially the same as on previous Omura missions. The average mapping range for the AN/APQ-13 radar equipment was forty-one and two tenths (41.2) nautical miles. The target, Omura, was identified by a large number of radar operators at an average range of twenty-nine and nine tenths (29.9) nautical miles. Oujima Island, the I.P., was reported identified by thirty (30) operators at an average range of twenty-four and five tenths (24.5) nautical miles. Table B, Section II, Radar Navigational Ranges, lists a few of the important check points reported by the radar operators along the route.

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C - Radar Scope Photography

1. The number of useable radar scope photographs and negatives returned, was not as many as might have been received, considering the number of cameras airborne for this mission. The results, however, from the few photographs obtained were excellent. Aircraft #6331, with a K-24 camera installed obtained excellent photographs of the entire Omura Area. Other aircraft obtained additional photographs of the target and check points.

2. A total of twenty-six (26) cameras were installed. The majority of cameras used were of the K-35 and K-24 types. A total of two hundred and sixty seven (267) negatives were returned of which six (6) sets were useable.

D - Radar Serviceability

1. Radar equipment serviceability was satisfactory on this mission; however the operating efficiency of the AN/APQ-13 decreased considerably. Eighty-three (83) or eighty-seven (87%) per cent of the AN/APQ-13 radar equipment was operational over the target. The unrepairable malfunctions, both total and partial, increased. Twenty-nine (29) radar operators reported identifying interference on the radar scope from other radar equipment. The majority of the interference was considered slight with only a small number of the operators considering the interference great or difficult to operate under.

2. There were three (3) SCR-729 and one (1) SCR-695 malfunctions.

3. Table E, Section II, Radar Malfunctions, lists the types of failures occurring on this mission.

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II - RADAR TABLES

A - RADAR BOMBING DATA

DATA	40th Gp		444th Gp		462nd Gp		468th Gp		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Total A/C Bombing	25	--	28	--	25	--	16	--	94	--
A/C Bombing Omura*	20	80	27	96	10	40	4	25	61	65
Visual Bombing	1	5	0	0	1	10	0	0	2	3
Radar Bombing	19	95	27	100	9	90	4	100	59	97
A/C Bombing Shanghai*	2	8	1	4	2	8	8	50	13	14
Visual Bombing	1	50	1	100	0	0	8	100	10	77
Radar Bombing	1	50	0	0	2	100	0	0	3	23
A/C Bombing Nanking*	2	8	0	0	1	4	2	12.5	5	5
Visual Bombing	2	100	0	0	0	0	1	50	3	60
Radar Bombing	0	0	0	0	1	100	1	50	2	40
A/C Bombing T. of O.*	1	4	0	0	12	48	2	12.5	15	16
Visual Bombing	1	100	0	0	4	33	2	100	7	47
Radar Bombing	0	0	0	0	8	67	0	0	8	53
Total Radar Bombing *	20	80	27	96	20	80	5	31	72	77

* Percentage Based on Total A/C Bombing.
Other Percentages Based on A/C Bombing Target.

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B - RADAR NAVIGATIONAL RANGES

Name of Check Point	40th Gp		444th Gp		462nd Gp		468th Gp		Total	
	Number Reporting	Average Range	Number Reporting	Average Range	Number Reporting	Average Range	Number Reporting	Average Range	Total Number Reporting	Weighted Average Range
Mapping	21	47.1	--	--	22	35.5	--	--	43	41.2
Omura	12	29.2	17	31.0	1	20.0	--	--	30	29.9
Shanghai	2	35.0	--	--	1	40.0	--	--	3	36.7
Banking	4	31.7	3	32.0	1	39.0	--	--	8	32.7
Danjo Archipelago (FR)	1	45.0	7	32.0	1	28.0	6	35.0	15	33.8
(IP) Oujima Island	11	27.4	18	23.0	1	20.0	--	--	30	24.5
Bankang	3	15.3	2	25.0	1	20.0	--	--	6	19.3
Baoying Lake	1	35.0	4	29.0	1	50.0	--	--	6	33.5
China Coast	13	34.2	14	32.0	--	--	20	41.0	47	36.4
Fukue Island	1	20.0	5	32.0	--	--	--	--	6	30.0
Goto Archipelago	3	40.0	3	35.0	--	--	--	--	6	37.5
Han-Tan River	9	24.4	12	22.0	5	26.4	3	24.0	29	23.7
Hungtze Lake	19	37.5	25	32.0	18	27.4	12	39.3	74	33.5
Kayou Lake	3	38.3	10	32.0	1	20.0	--	--	14	32.5
Kialing River	3	20.0	5	18.0	--	--	--	--	8	18.8
Mino Island	3	31.7	4	25.0	--	--	--	--	7	27.9
Omura Bay	1	35.0	--	--	2	32.5	--	--	3	33.3
Saishu Island	8	41.9	12	34.0	4	30.0	4	50.0	28	27.7
Yangtze River	3	41.7	5	28.0	1	30.0	--	--	9	32.8

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S E C R E T

C - PHOTOGRAPHIC RESULTS

Data	40th Gp		444th Gp		462nd Gp		468th Gp		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
No. Cameras Installed	6	--	8	--	7	--	5	--	26	--
C-3 Cameras	0	--	3	--	2	--	1	--	6	--
K-35 Cameras	2	--	2	--	2	--	2	--	8	--
K-24 Cameras	4	--	2	--	1	--	1	--	8	--
H2X Cameras	0	--	1	--	2	--	1	--	4	--
No. Cameras in Abort, Early Return & Missing Aircraft*	1	17	0	0	1	14	0	0	2	8
No. Cameras Completing Mission*	5	83	8	100	6	86	5	100	24	92
No. Cameras In Radar Malfunction A/C#	0	0	0	0	1	17	2-a	40	3	12
Sets of pic. Returned#	3	60	7	87	0	0	0	0	10	42
No. Negatives Returned#	117	--	150	--	0	--	0	--	267	--
Sets of Pic. Useable#	3	60	3	38	0	0	0	0	6	25
Sets of Pic. Tracing Bomb Run#	3	60	3	38	0	0	0	0	6	25

* Percentage Based on Cameras Installed.

Percentage Based on Cameras Completing Mission.

a-A/C 279 (468th) reported AN/APQ-13 out due to enemy action.

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S E C R E T

D - R.D.R SERVICEABILITY

DATA	40th Gp		444th Gp		462nd Gp		468th Gp		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
A/C Airborne	28	--	29	--	30	--	22	--	109	--
AN/APQ-13 Operative at Take-off	28	100	29	100	-b 29	97	22	100	108	95
A/C Bombing*	25	89	28	97	25	83	16	73	94	86
AN/APQ-13 Operative over Target #	23	92	28	100	18	72	-d 14	88	83	88
AN/APQ-13 Unrepairable Failures#					-b					
Totally Unrepairable	3	12	2	7	8	32	2	12	15	16
Partially, but Operative	2	8	4	14	9	36	1	6	16	17
Total	5	20	6	21	17	68	3	19	31	33
AN/APQ-13 Repaired in Flight	0	--	1	--	1	--	0	--	2	--
AN/APQ-13 Operators Reporting Interference	13	--	11	--	5c	--	e	--	29	--
SCR-729 Failures *	2	7	1a	3	0	0	0	0	3	3
SCR-695 Failures *	1	4	0	0	0	0	0	0	1	1

- * Percentage Based on A/C Airborne
- # Percentage Based on A/C Bombing
- a-A/C 226 (444th) repaired in flight
- b-A/C 456 (462nd) Inverter inoperative, changed to auxiliary inverter in flight
- c-All reports on Interference not available from 462nd Gp
- d-A/C 279 (468th) reported AN/APQ-13 inoperative over target due to enemy action
- e-Information not available

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S E C R E T

E - RADAR MALFUNCTIONS

DATA	40th Gp	444th Gp	462nd Gp	468th Gp	Total
Malfunctions at Take-off					
Inverter (Totally)	0	0	1a	0	1
Weak tubes & crystals (Partial)	0	0	9	0	9
Total	0	0	10	0	10
Malfunctions between Take-off & Target (Unrepairable)					
Pressurization (Partial)	1	4	0	0	5
Pressurization (Totally)	0	0	1	0	1
Inverter (Totally)	1	0	0	0	1
Low Voltage Rectifier (Totally)	1	0	1	0	2
Tx Selsyns (Totally)	0	0	0	1	1
Enemy Action (Totally)	0	0	0	1	1
Broken Wave Guide (Totally)	0	0	1	0	1
Modulator (Totally)	0	0	2	0	2
Antenna Phasing Switch (Totally)	0	0	1	0	1
Range Unit (Totally)	0	0	1	0	1
Total	3	4	7	2	16
Malfunctions between Target Landing (Unrepairable)					
Computer Drum (Partial)	1	0	0	0	1
Selsyn Motor (Partial)	0	0	0	1	1
Modulator (Totally)	1	1	0	0	2
Selsyn Motor (Totally)	0	1	0	0	1
Total	2	2	0	1	5
Malfunctions Repaired in Flight					
Synchronizer	0	1	0	0	1
Blown fuse in range unit	0	0	1	0	1
Total Repairable	0	1	1	0	2

a - A/C 456 (462nd) Inverter inoperative, changed to auxiliary inverter in flight.

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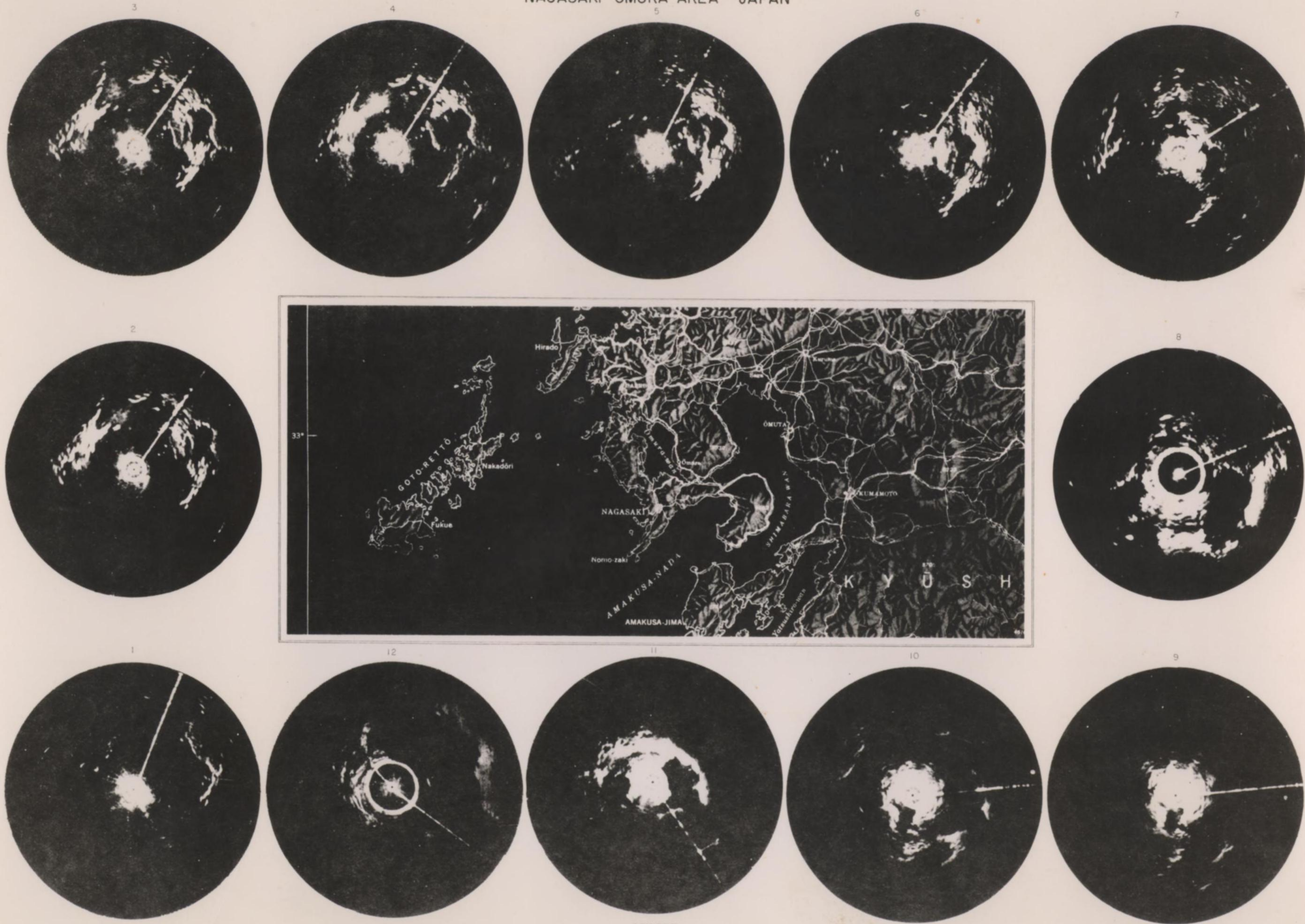
Authority *NND 760063*

By *SM* NARA Date *11/3/05*

40-331-2171/44

SECRET
RADAR SCOPE PHOTOGRAPHS
NAGASAKI-OMURA AREA - JAPAN

SHEET D



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PREPARED BY TARGET UNIT-INTELLIGENCE SECTION - XX BOMBER COMMAND

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By **SMARA** Date **11/30**

40-331-21/11/44

SECRET

SHEET A

RADAR SCOPE PHOTOGRAPHS
YANGTZE RIVER-PAOYING LAKE-CHINA COAST AREA-CHINA



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PREPARED BY TARGET UNIT-INTELLIGENCE SECTION--XX BOMBER COMMAND

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By *SMARA* Date *11/30*

S E C R E T

ANNEX

G

RCM INFORMATION

G

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* * * * *
* Prepared by: *
* * * * *
* RCM Section *
* * * * *
* XX Bomber Command *
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S E C R E T

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SECRET
Auth: CG, XX BC
Initials: *YMP*
Date: 29 Nov. 44

HEADQUARTERS
XX BOMBING COMMAND
APO 493

29 November 1944

SUBJECT: RCM Report - Combat Mission No. 17 - Omura, Japan
21 November 44, Daylight.

TO : Commanding General, Twentieth Air Force
Washington 25, D. C.

A. General

RCM activities were confined to searching for enemy radar stations from take off to target and return. Seven RCM equipped aircraft, each with one RCM Observer, participated in the mission. The frequency assignments and areas searched were as follows:

- 4 - 40-300 Mc. Take off to Omura and return
- 1 - 70-1000 Mc. Take off to Omura and return
- 1 - 40-300 Mc. Take off to Shanghai and return
- 1 - 1000-3000 Mc. Take off to Nanking and return

Communications were also monitored over Omura and Shanghai.

B. Results

1. The first RCM equipped aircraft to take off encountered no radar intercepts until reaching the Longitude of 128° E. Succeeding RCM equipped aircraft made normal radar intercepts upon reaching the Longitude of 113° E. Such a condition would seem to indicate that the Radar Early Warning Net in China and in the Saishu Island Area is not in continuous operation and may be alerted by visual warning nets.

2. Radar intercepts on this mission verify the intercepts made on previous missions and suggest the following Enemy Early Warning Net: (A) The Army "CHI" type radar sites are predominant in the China mainland area. (B) The portable Mk 1 Model 3 type radar site is employed to guard the Shanghai Area. (C) The Saishu Island Area has "CHI", Mk 1 Model 1, and Mk 1 Model 3 type radar sites. (D) The Japanese mainland has "CHI", Mk 1 Model 1, Mk 1 Model 2 and Mk 1 Model 3 type radar sites.

3. Over the target, occasional 200 Mc. signals with small pulse widths, are intercepted. This suggests Radar Fire Control Equipment, but the inaccuracy of the flak disproves such a suggestion.

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C. Radar Intercepts

Attached.

D. Enemy Countermeasures

1. Radio Operators reported some interference but there was no definite evidence of Communications Jamming.
2. The ground monitor stations reported no interference with our homing aids.

E. Equipment

1. A retractable AN/APA-24 D/F Antenna, remotely controlled from the RCM Operator's position, and mounted on the bottom of the aircraft, operated in a satisfactory manner, but due to navigational difficulties, none of the sixty odd cuts obtained were of value.
2. There were no equipment malfunctions.

F. Pulse Photo Exhibit

1. To carefully analyze Japanese Radar, a photo attachment has been manufactured by this Command. Actual pulse photographs of some of the radar intercepts appear in the attached exhibit. Following is a brief explanation of each radar pulse photo.

A. Photo #1: Freq. 73.3 Mc; Prf 500 Pps; Pw 42 Usec; location of intercept, 32°08' 128°02' to 32°30' 128°50'; A steady square pulse of the "CHI" type.

B. Photo #2: Freq. 67.7 Mc; Prf 504 Pps; Pw 56 Usec; location of intercept, 31°36' 121°59' to 31°49' 115°07'; A strong steady pulse of the "CHI" type.

C. Photo #3: Freq. 72.5 Mc; Prf 510 Pps; Pw 56 Usec; location of intercept, 31°35' 121°38' to 31°34' 120°15'; A strong steady pulse of the "CHI" type. Believed to be Nanking Radar.

D. Photo #4: Freq. 76.5 Mc; Prf 512 Pps; Pw 53 Usec; location of intercept, 31°45' 116°21' to 31°37' 111°55'; A strong steady pulse of the "CHI" type. Believed to be the radar site at Nuchang.

E. Photo #5: Freq. 201 Mc; Prf 1550 Pps; Pw 4.9 Usec.
Photo #6: Freq. 201 Mc; Prf 808 Pps; Pw 14.9 Usec.

The pulse in photo #5 would be on for about two minutes and then it would change to the pulse in photo #6 for about two minutes. This continued for a period of ten minutes and occurred in the target area (Omura). It suggests a possible Radar Fire Control Early Warning combination.

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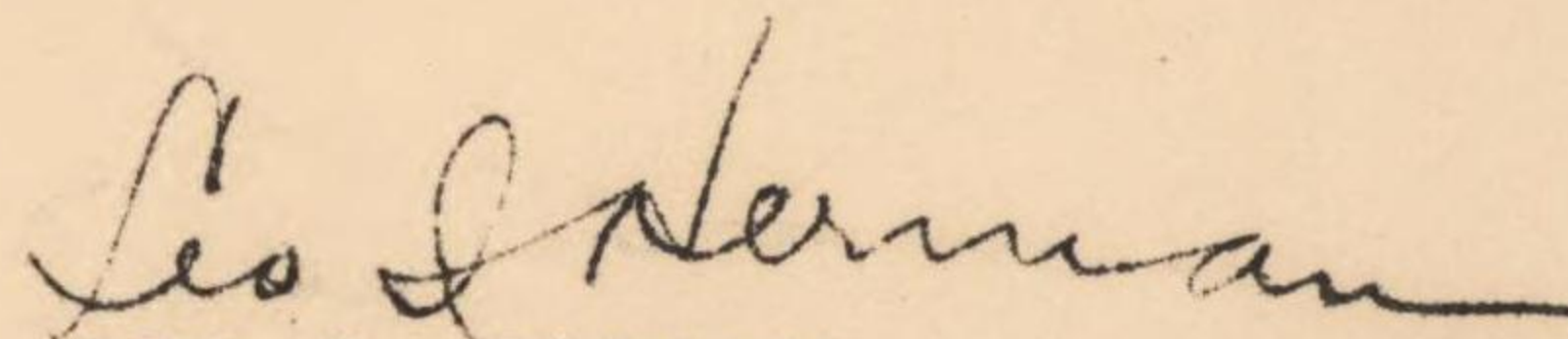
By *SM* NARA Date *11/3/05*

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F. Photo #7 and #8: Freq. 154.5 Mc; Prf 488 Pps; Pw 6.5 Usec. Wide Pulse, Pw 2 Usec. Narrow Pulse; A Mk 1 Model 3 type. There was an occasional double pulse as in Photo #7 but with no regularity. The single pulse, as in Photo #8, was weaker than the double pulse. This occurred in the target area of Omura.

Note: In making up the prints, several of the trace lines were not as clear as they should have been, so in order to bring them out, some retouching was done on the photos. It was done under the close supervision of the RCM Observer and presents the pulse shape just as it appeared on the APA-6X Pulse Analyzer.

For The Commanding General:



LEO I. HERMAN
Colonel, Air Corps
Actg. Adjutant General

- 2 Incls:
Incl 1 - List of intercepts.
2 - Pulse photo exhibit.

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Incl 1

C. *RESULT OF INTERCEPTS

66.5/521/42	Confirm	Radar site at Shasi (Intercepted by two groups from 3101-10944 to 3149-11458
67.7/504/33-56	New	Intercepted by three groups from 3302-11558 to 3133-11959
70.3/510/41	Confirm	Radar site at Anlu. Intercepted by two groups from 3101- 10944 to 3146-11440.
70.3/530/36	New	Oujima Island Area. One group Intercepts from 3207-12805 to 3256-12951.
72/527/24	Confirm?	Probably Chow Kiakow radar site. Intercepted by two groups from 3300-11430 to 3323-11545.
72.5/510/42-56	Confirm	Nanking Radar. Two groups intercepted from 3135-12102 to 3303-12316.
73.3/500/42	New	Oujima Island Area. Two groups from 3207-12805 to 3138-12939.
75.5/520/32	Confirm	Koashun Radar. Three groups from 3136-11727 to 3304- 12316.
76.5/512/32-53	Confirm	Wuchang Radar. Two groups from 3150-11340 to 3255- 11407.
77.6/526/33	New	Two groups. Intercepts from 3203-11333 to 3300-11545.
98/800/28	New	Over target (Omura) Intercept at 3300-13000.
102/800/15	New	Saishu Island Area. One group intercepted from 3220-12614 to 3214-12703.
101.5/784/50	New	China Coast. One group intercepted from 3108-12105 to 3345-12118.
152/539/7.5	New	China Coast. Intercept at 3108-12015.

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158/550/6	New	China Coast. One group, intercepts from 3105-11840 to 3107-12140.
154.5/488/6.5	New	Target Area (Omura). Two groups
187/952/3.3	New	Target Area (Omura) 3242-13004.
198/1150/4-5.5	New	Target Area (Omura) one group.
201/800/15 Switching to 201/1550/4.9	New	Target Area (Omura) two groups. Switching was done at 2 min. intervals.

* Intercepts which represent a confirmation of a previously located site are labeled "Confirm". Radar intercepts not previously located by D/F'ing are labeled "New". The number of Bombardment Groups which intercepted the same signal is included in the remarks under location and the area of interception is given.

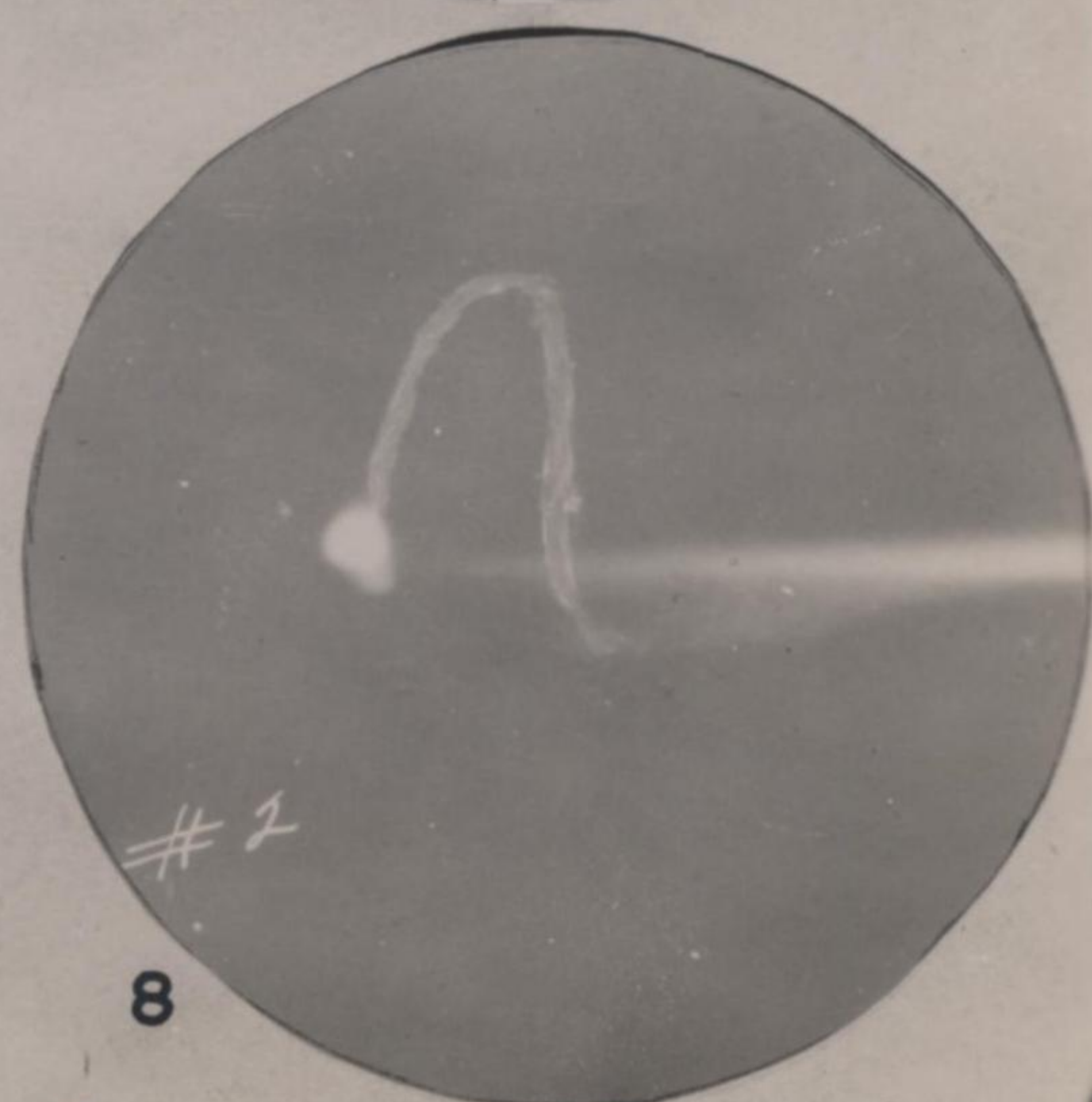
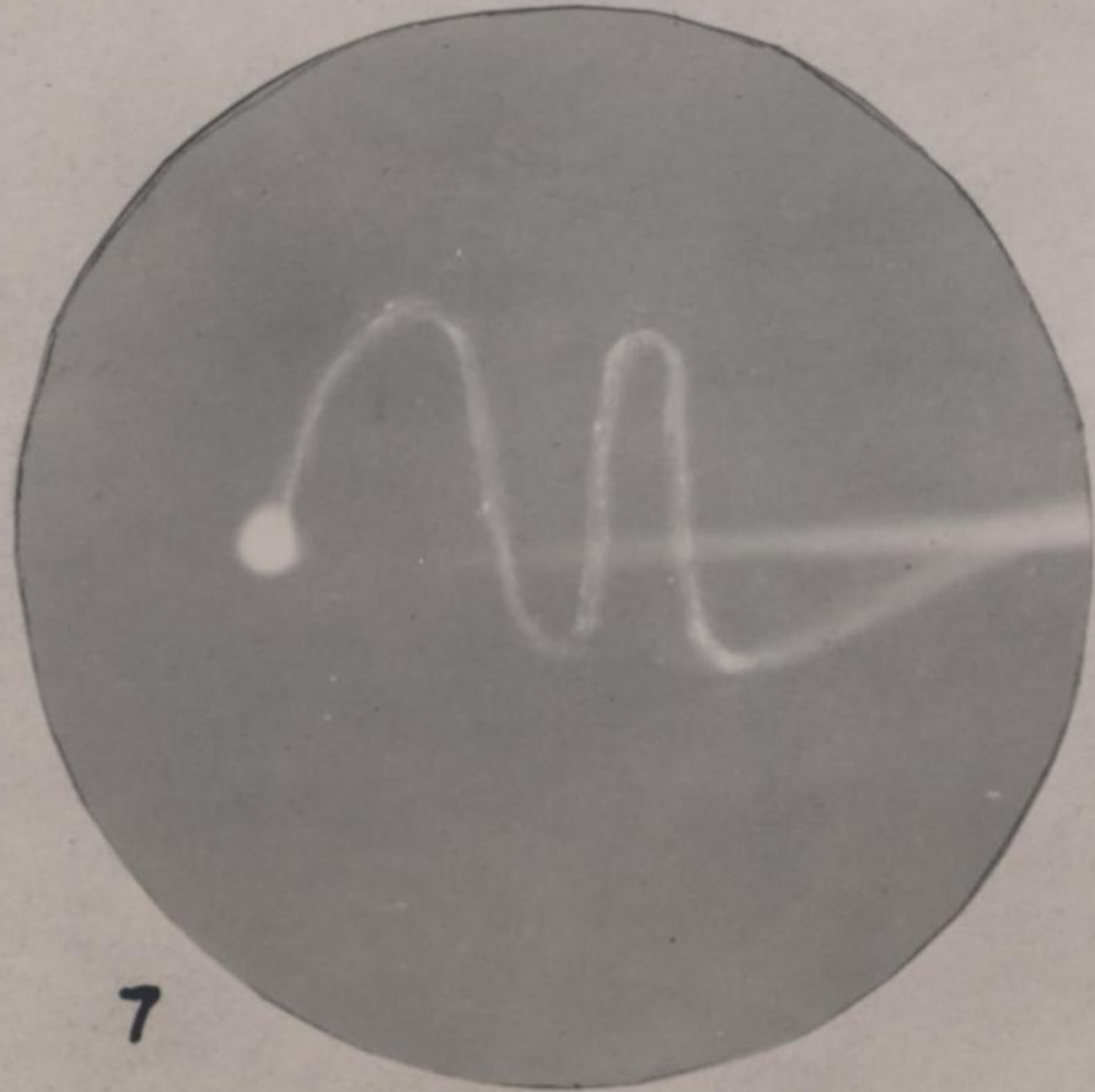
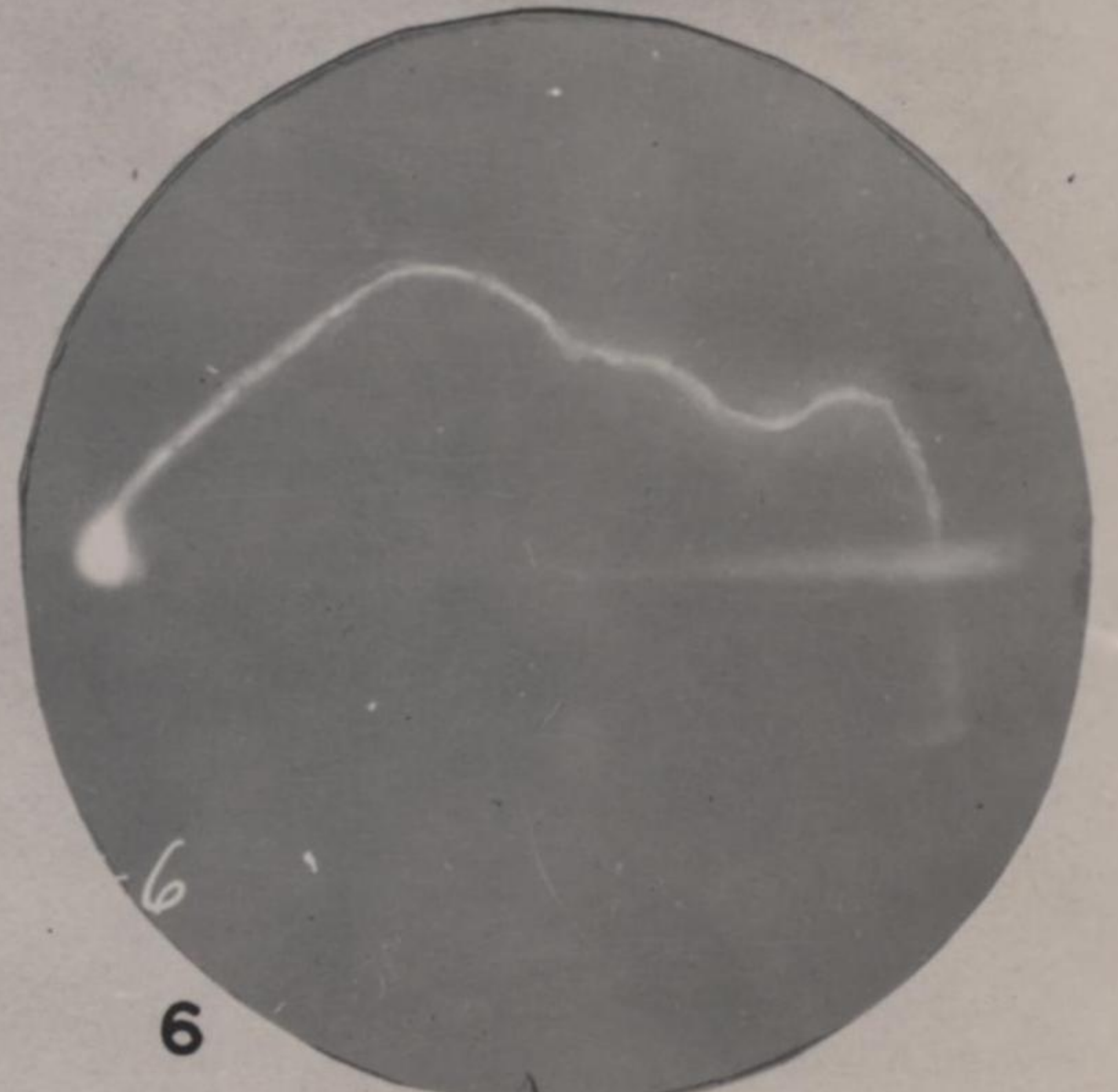
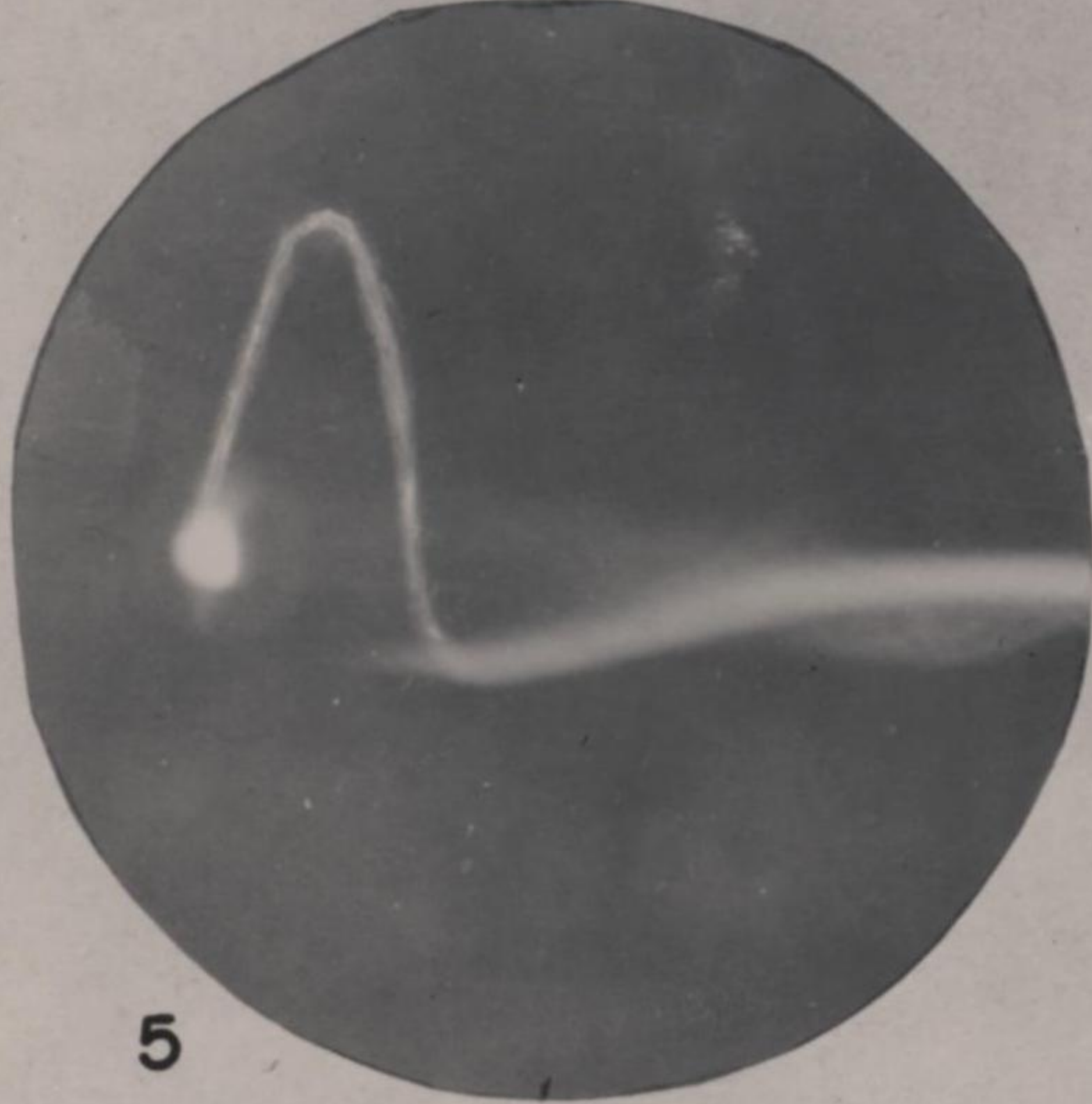
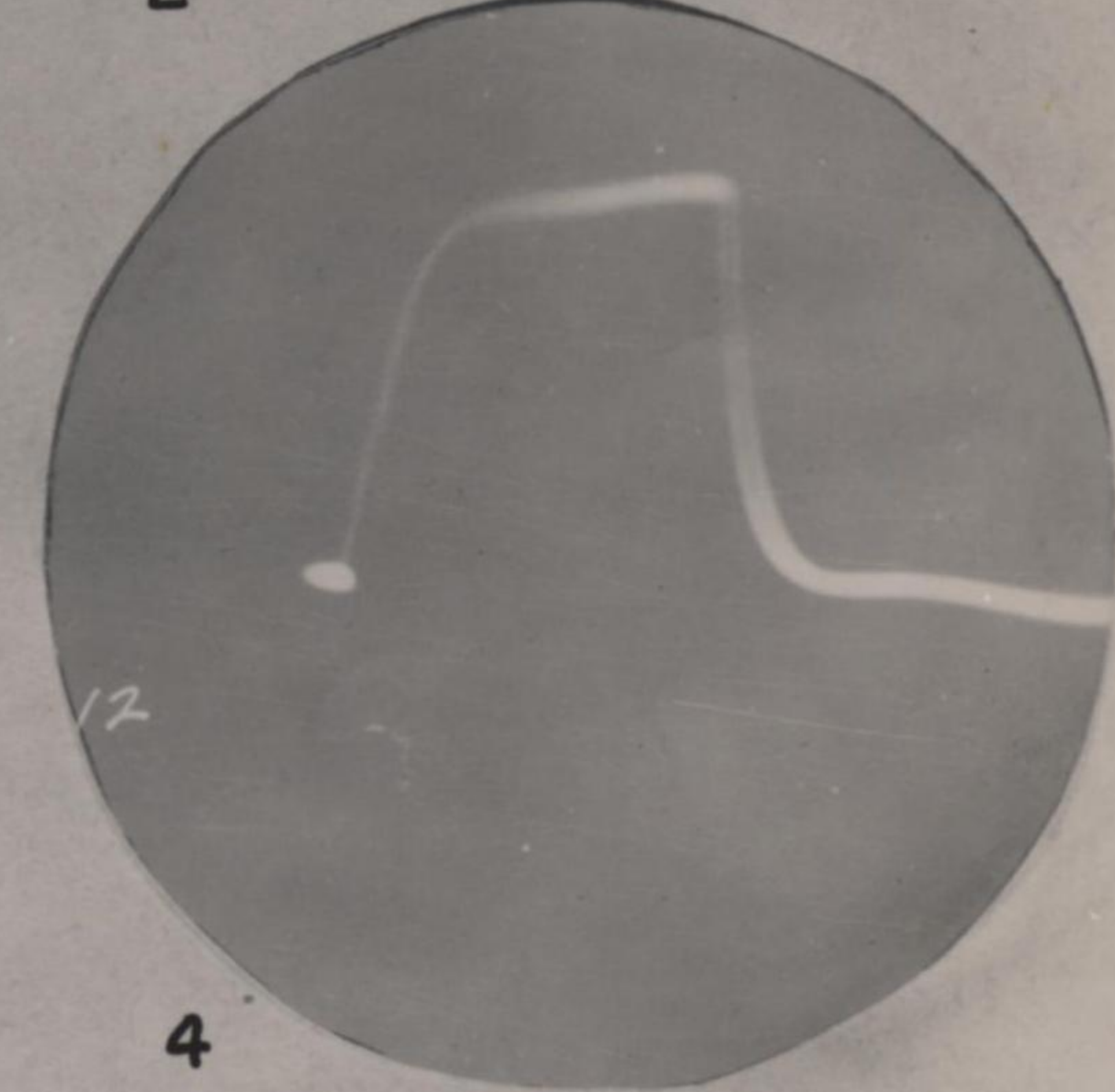
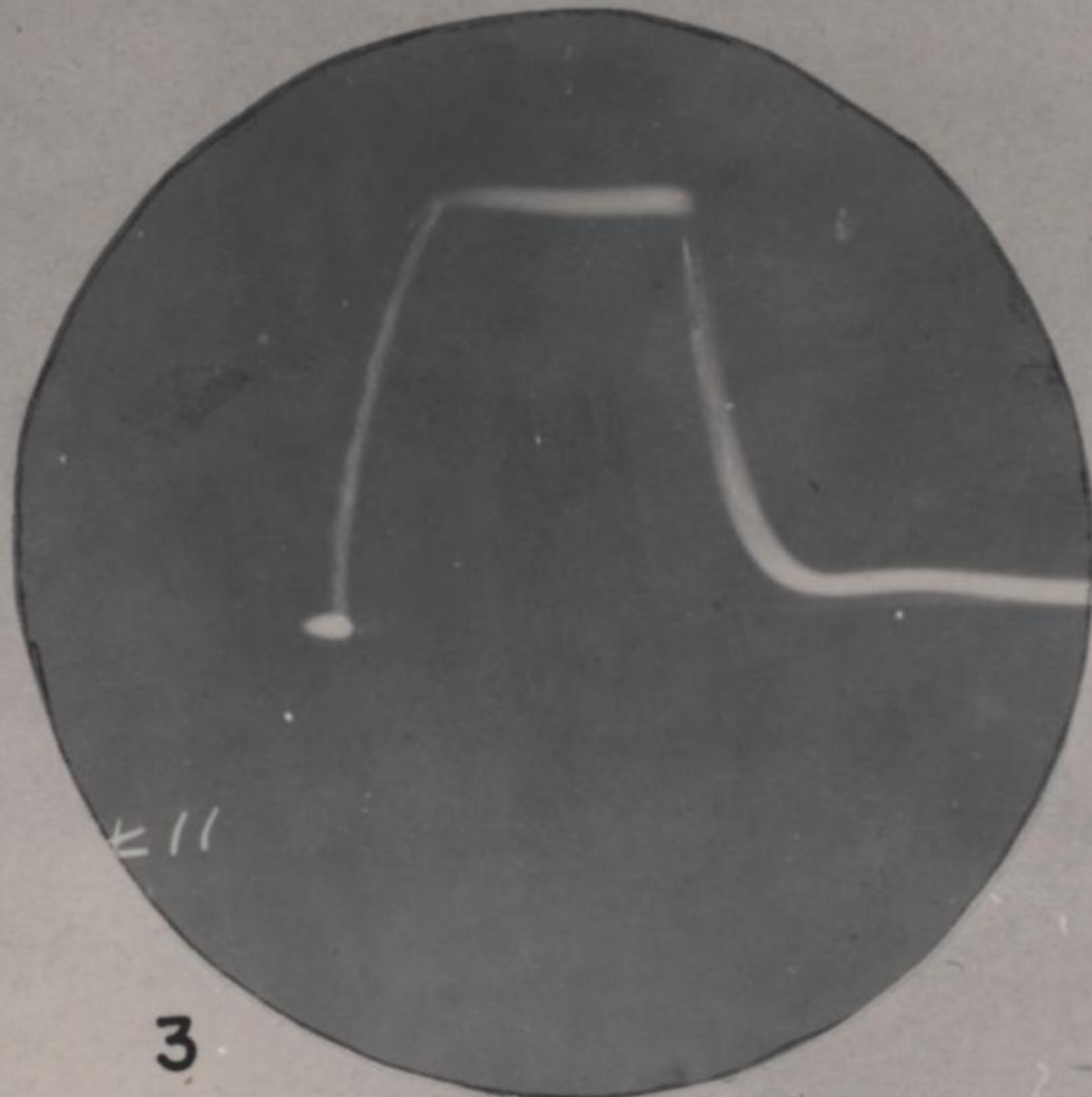
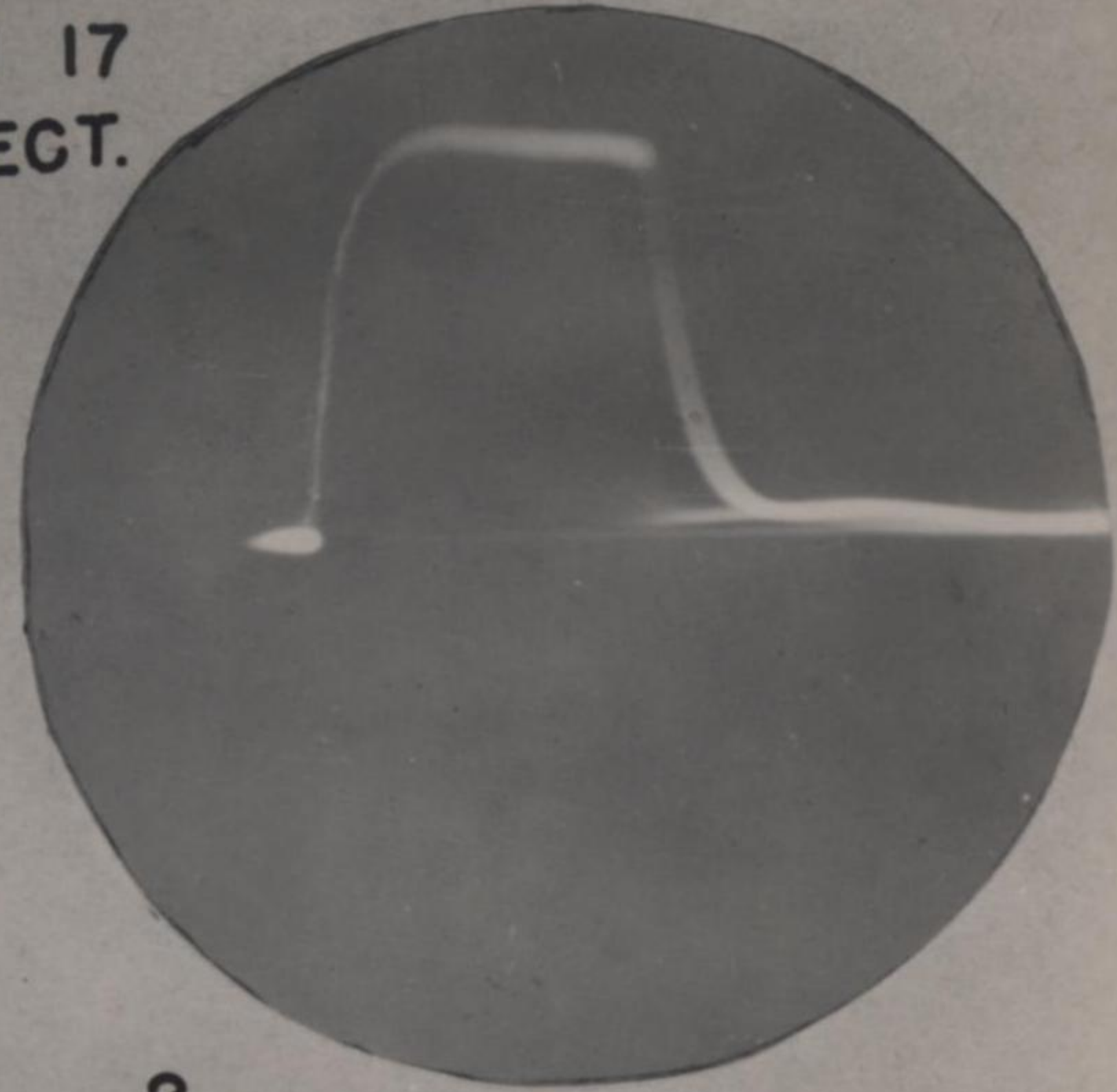
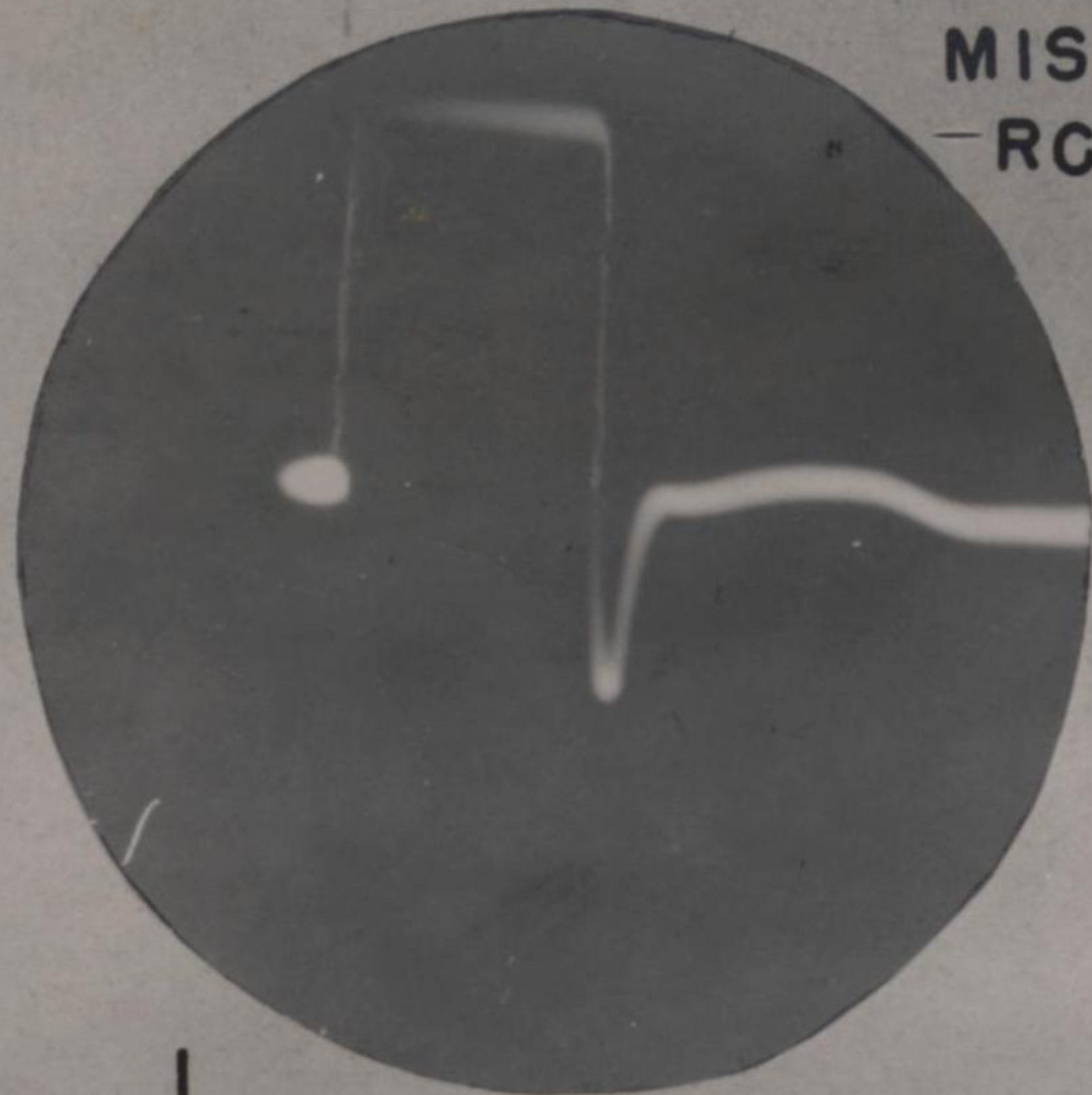
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SECRET
PHOTOS OF ENEMY RADAR PULSES
MISSION 17
-RCM SECT.



17.55

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S E C R E T

ANMLX

E

CENTRAL STATION FIRE CONTROL AND GUNNERY

H

* * * * *
* Prepared by: *
* Staff Gunnery Officer *
* XX Bomber Command *
* * * * *

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Auth: CG, XX BG

Initials: 7PE

Date: 26 Nov 44

HEADQUARTERS
XX BOMBER COMMAND
APO 493

CONSOLIDATED
SPECIALIST MISSION
REPORT OF

XX BOMBER COMMAND STAFF GUNNERY OFFICER

Report Prepared: 26 November 1944

Field Order No. 17

Date of Mission: 21 Nov 44

1. On the mission directed by Field Orders No. 17, our bombers experienced the most intensive opposition by enemy aircraft to date. There were many aerial bombing attacks by single aircraft. Usually each pass culminated some form of in bearing attack. The coordinated attacks were aggressive and were generally of the chow line variety. The enemy made clever use of the sun in its attack causing the gunners severe eyestrain and rendering their defense problem very difficult. One group reported that attacks appeared to be concentrated on stragglers and smaller formations. Several attacks were observed in which attempts were made to strafe the entire formation rather than any one ship. In many cases short bursts at long ranges were effective in warding off the enemy. Many enemy aircraft hovered out of range without attempting to attack. One crew reported a close attack in which a Tony came straight up under the B-29 and seemed to hang on its prop as it fired at the B-29 passing overhead.

2. The opposition was met over a considerable period of time but was strongest over the target area.

3. The special gunnery problems which were noted on this mission were as follows:

a. Apprehending fighter attacks "out of the sun" were very difficult. More suitable sun goggles should be procured or developed.

b. The gunners blisters and the bombardier's window frosted up in several instances. A means for preventing this or a defrosting procedure is necessary.

c. As on several previous missions, dirt collected on blisters during take-off obscuring vision to a limited extent. This difficulty may be eliminated by use of "shedable" wrappers and it is recommended that this method be developed as quickly as possible.

e. Numerous complaints were made by blister gunners that the newly installed safety belts were uncomfortable and had frequently become unfastened. It is recommended that the safety belts be modified.

4. From information available at this time, two of our aircraft were lost on this mission due to attacks by enemy aircraft and ten were damaged. In view of the intensive nature of the opposition this loss is considered relatively small and the performance of the C.F.C. system is regarded as satisfactory.

5. The following statistical data is submitted:

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	40th	444th	462nd	468th
Ammunition used test firing	1,115	2,470	2,630	1,610
Ammunition used in combat	11,680	9,370	22,065	8,815
Malfunction of CFC system	3	3	4	1
Total turrets on mission	140	125	110	90
Malfunction of cal. 50 M.G.	2	10	5	1
Total cal. 50 MG on mission	280	250	220	180
Total airplanes (included in report)	28	25	22	18
Total percent malfunctions all groups.	CFC 2.3% cal. 50 M.G. 1.9%.			
Claims by our gunners:	Destroyed	Probably destroyed	Damaged	
	28	20	25	

6. In conclusion if the enemy maintains the same degree of opposition it will be essential to give more attention to formation control and to keep the efficiency and performance of gunners and their equipment at the peak level.

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S E C R E T

ANNEX

I

CAMERAS AND PHOTOGRAPHS

I

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I - CAMERAS AND PHOTOGRAPHS

Mission No. 17

21 November 1944

A. 40th Group

	K-18	K-20	K-22	Total
No. cameras installed	5	20	7	32
No. in aborting A/C	1	3	1	5
No. completing mission	4	17	6	27
No. photographing targets	4	3	6	13
No. usable negatives	15	5	0	20

B. 444th Group

	K-18	K-20	K-22	Total
No. cameras installed	5	8	6	19
No. in aborting A/C	0	1	1	2
No. completing mission	5	7	5	17
No. photographing targets	5	7	5	17
No. usable negatives	0	0	0	0

C. 462nd Group

	K-18	K-20	K-22	Total
No. cameras installed	6	11	7	24
No. in aborting A/C	0	1	1	2
No. completing mission	5	8	4	17-a
No. photographing targets	3	5	3	11
No. usable negatives	5	0	11	16

a. Information not available for cameras carried in those aircraft landing at other than their home base.

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