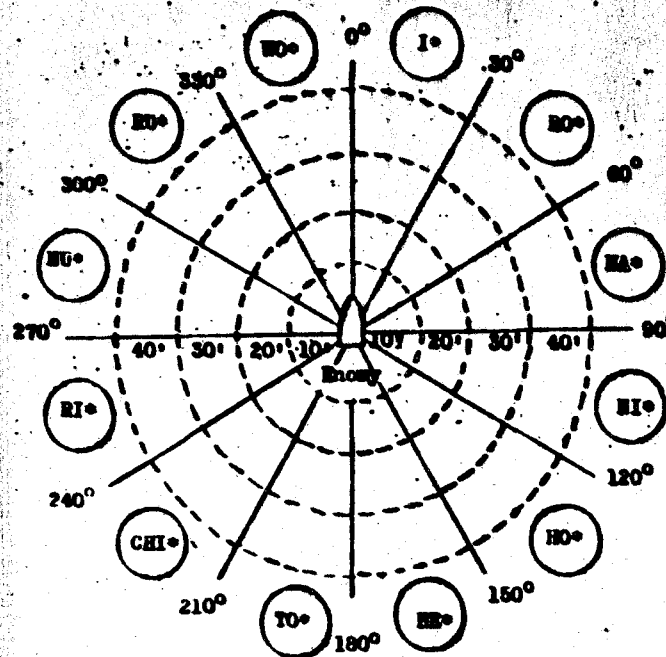


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(a) The standard disposition for tracking is established in the following table:

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POSITIONS FOR TRACKING		DIVISION OF DUTIES				REMARKS
In the case of two airplanes	In the case of four airplanes	In the case of two airplanes	In the case of four airplanes	1 TRACKING PLANE	2 TRACKING PLANE	
	 Our forces 	1. Report on enemy situation. 2. Report on weather. 3. Long-wave radio transmission.	1. Long-wave radio transmission. 2. Report on weather. 3. Report on enemy.	1. Report on enemy situation. 2. Long-wave radio transmission.	Report on enemy situation.	1. Although the division of reconnaissance duties is established as shown in this table, in an anomalous situation each airplane will by itself carry out all the duties of reconnaissance. 2. Although the positions for tracking are established as shown in this table, suitable and advantageous positions will be taken in accordance with the weather and other conditions. 3. Disposition of the scout plane unit after the reconnaissance action will conform to this table.
		1. Report on enemy situation. 2. Report on weather.	1. Report on weather. 2. Report on enemy. 3. Report on weather.	1. Report on enemy situation. 2. Long-wave radio transmission.		
The fourth plane will take a suitable and advantageous position.						
Our forces 						

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(The Exact tracing from the original document.)

Note:

Assignment of Different Symbols

1. Starting with the true course as 0°, divide the 360° around to the right into 12 sections. Assign the symbols (I) (HO) (HA) ... (HU) to each division.
2. Indicate distance from the enemy in units of 10 nautical miles and show the position of the airplane under the above symbols.

Example: when the tracking position is 40 nautical miles from the enemy bearing 20° and the code designation is 9 AMA-1, the signal will be 9 AMA-1.(I-4).

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d. Night scouting and tracking

(1) Night scouting involves the use of radar in sea search. The normal altitude for night scouting is 1,000 to 2,000 m. When night scouting is done by visual methods, the altitude will be based on day scouting procedure.

(2) An airplane will report (communicate) discovery of the enemy immediately. At the same time it will begin tracking, communicate its altitude to fighter escorts and direct them by long-wave radio. If necessary, it will facilitate tracking by dropping two or three navigation marker lights behind the enemy parallel to his course.

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Note: The symbol * indicates an exact ROMAJI transliteration of the original KANA.

(4) Outline for tracking

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(a) The object is to track without being discovered. In general, large airplanes will operate at high and extremely low altitudes and light, fast airplanes at extremely high altitudes. In both cases the airplanes will take up their positions at a range of 50 to 100 nautical miles from the enemy. However, if there is a possibility of losing contact with the enemy because of inclement weather or other conditions, the tracking range will be shortened. It is to be noted that when the sun is low and light is weak, particularly just before and after sunrise and sunset, it is not easy to identify forces on the sea from an extreme altitude. Consequently, discovery of the enemy is frequently retarded.

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(b) Generally, the tracking plane will proceed in the direction of the enemy every hour or half hour; it will verify the presence of the enemy and report necessary facts relating to changes in the enemy situation. When proceeding toward the enemy, care will be taken to change direction periodically and utilize weather conditions. The reconnaissance must be made quickly and at high speed. It is necessary to remember when using radar that the enemy can detect its use and obtain the bearing of the plane using it.

(c) Just before an attack is made or when accurate details of the enemy situation are required, particular care will be taken to look out for enemy patrol planes in the enemy sector. The necessary reconnaissance will be made by close-in observation at high speed (or by photographs). Every advantage will be taken of the weather.

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(d) When a friendly attack force attacks, tracking planes will reconnoiter the battle (taking photographs for the most part) and will report the results. At this point it is particularly important to report accurately the number, class and movements of enemy operational carriers.

(e) Other airplanes will be dispatched at appropriate times so that tracking planes may be alternated. If necessary, the airplanes which are relieving will communicate the time they expect to arrive; the advance airplanes may direct them by radio. The advance airplanes will return at the appointed time.

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(f) Radio direction for tracking planes will be generally as follows:

1. When directing an attack force or another such unit, airplanes will broadcast on long wave for four or five minutes before reaching the scene of battle or they will broadcast for periods of five minutes at intervals of two minutes when requested.

2. For long-wave radio the symbols which indicate the tracking position of the airplane in relation to the enemy are shown encircled in the following sketch. They are broadcast together with the code for the airplane itself.

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(5) Night tracking planes (units) generally will attempt to maintain contact with the principal enemy targets until dusk. When it becomes too dark to see, radar will be used and a suitable altitude and position will be taken. Enemy scout planes will be avoided and suitable close-quarter tracking will be carried out.

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(6) During tracking the following points will be observed:

(a) Airplanes held in reserve will follow the situation as it is communicated by the airplanes on duty and in case of an accident will immediately take over the tracking.

(b) Airplanes which lose contact will undertake independent scouting by use of pyrotechnics. They will signal (communicate) their intentions and escort planes will co-operate in determining the enemy position.

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(c) If the enemy is lost due to elusive tactics, clouds, squalls, etc, the commanding officer of the night tracking plane unit will immediately order scouting and report this fact.

(7) Alternation of tracking planes will be handled as follows:

(a) Airplanes which are coming to replace those on duty will communicate to the advance airplanes the time they expect to reach the scene of action.

(b) When alternating, one or two of the advance airplanes will remain and the other tracking planes will go up to a suitable standard altitude and report it before the arrival of the airplanes which are coming to replace them.

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(c) The replacement airplanes (or reserve airplanes), relying on the radio direction or the pyrotechnics of the advance airplanes, will proceed at an altitude of 200 m or more below the standard altitude for the current tracking. When contact is established, this fact will be reported.

(d) When the relieving airplanes establish contact, all of the airplanes being relieved will leave the scene of action and report (communicate) this fact.

(e) When the airplanes being relieved have left the scene of action, the airplanes which are taking over will reach the most suitable standard altitude.

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2. Attack

a. General regulations

(1) Principal targets of attack will be aircraft carriers and transports. Each base air force commander as a general rule will designate the target of attack.

(2) The standard use of torpedoes and bombs is established in the following tables:

(a) Depth settings for torpedoes

TARGET	DEPTH SETTINGS (METERS)
Aircraft carriers (heavy cruisers, battleships)	5 (7 m when using Type 3 Warhead)
Transports (light cruisers, destroyers)	3

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(3) Outline for approach to target

(a) The time for the start of the approach to the target is the time when the airplanes leave the rendezvous point.

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(b) Each air force will assemble and then proceed to the rendezvous. Except in specially designated instances the airplanes will circle to the right within 5 km of the rendezvous point. The altitude for rendezvousing will be 1,000 m for the guide unit. When it is cloudy, the rendezvous will be made under the clouds.

(c) At the fixed time for starting the approach to the target, the commanding officer of the attack unit will circle above the rendezvous point and will start out on the attack course. Each unit, following him, will proceed on the attack course. The airplanes will complete the closing of the formation on the way to the attack.

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(4) When advisable, window will be used. When this is to be used, the commanding officer of the attack unit will detach a part of the unit or will indicate by radio direction to the tracking planes the place where window is to be dropped. He will communicate this to the other units.

(5) The distribution of targets for different types of airplanes will be as follows:

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(a) Enemy aircraft carriers: As a general rule, the bomber unit will attempt to inflict medium damage and neutralize the target. Eight airplanes will attack one carrier. The torpedo unit will attempt to sink the target. Eight airplanes will be used for each carrier.

(b) Enemy transports: The bomber unit will attempt to inflict medium or heavy damage; the torpedo unit will attempt to sink the target. Four airplanes of each type will be allotted to one ship.

(6) Regrouping generally will be as follows:

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(a) After attacking and observing the results, the advance units will retire quickly so that they will not interfere with the attack of the units following. The units following will carry out their task quickly in order to join the first unit as soon as possible.

(b) The attack unit will start back as soon as the main force of the units has assembled. The rendezvous point will be about 100 nautical miles from the enemy position.

(c) The attack plane unit will give particular attention to rejoining fighter planes. Before the attack the return course will be communicated by radio telephone.

(d) At the rendezvous point or at a fixed place on the return route navigation marker flares or smoke bombs will be dropped to help the airplanes following.

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b. Day attack on task force

In day attack on an enemy task force, reconnaissance planes will be used to ascertain the over-all enemy situation and the enemy will be tracked constantly. Our forces will utilize opportunities skilfully, surprise the enemy whenever possible and destroy him by swift and persistent attacks. With a view to the enemy situation, weather conditions and the forces to be used, our forces

will employ various tactics and all the strength possible to attain their objective in one attack. The following are examples of tactics:

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(1). Standard organization of air attack SHUDAN

CLASSIFICATION		STRENGTH	DUTIES
Command plane		One land reconnaissance plane	Command, lead and regroup fighter planes
Reconnaissance unit		Four land reconnaissance planes	Sweep path of advance, reconnoiter immediate front, lead tracking, foign, an attack and observe results of fighting
Air Control Units	1 Air Control Unit	Two lead planes (suitable type)	Lead
		KO Fighters - about two CHUTAI	Air control and strafing
	2 Air Control Unit	Same as 1 Air Control Unit	Same as 1 Air Control Unit
Attack Units	Dive bombing unit	KO Fighters - about two CHUTAI	Cover and strafing
		Carrier-borne bomber (Used as fighters or bombers) (one element)	Neutralisation of AA fire Confuse firing by radar
		About two CHUTAI (Major part)	Dive bombing (if necessary, skip bombing)
	Skip bombing	Fighter-bombers - about one CHUTAI	Skip bombing and strafing
	Level bombing unit	Army Type 2 Fighter - about two CHUTAI Army Type 4 Fighter	Cover and strafing
		Army Type 1 Fighters - about one CHUTAI	Neutralisation of AA fire (strafing and bombing)
		Army heavy bombers - about one or two CHUTAI	Neutralisation of AA fire (level bombing)
	Torpedo bomber unit	KO Fighters (OTSU Fighters) - about two CHUTAI	Cover and strafing
		Torpedo bombers - about two CHUTAI	Torpedo attacks

(2) General outline of combat

(a) While the reconnaissance unit goes forward to reconnoiter the immediate front, the air control unit will meet and destroy the enemy fighter units. Meanwhile, the dive bombing and skip bombing units will attack the enemy aircraft carriers and force them out of the action. While the level bombing unit neutralizes enemy antiaircraft fire, the torpedo bomber unit will deliver the finishing blows.

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(b) The reconnaissance units, with a view to the existing field of vision, will swoop and scout the path of advance at a suitable altitude. The command plane and the air control unit will make an attack about 30 minutes later. Then, at suitable intervals, the dive bombing, skip bombing, level bombing and torpedo bomber units will attack in this order.

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(c) At a suitable time prior to their arrival in the battle zone, the air control unit, dive bombing unit and level bombing unit will attain an altitude near the absolute ceiling and be on the alert for enemy fighter planes. The skip bombing unit and the torpedo bomber unit will attack, evading enemy radar by flying at minimum altitudes. The command plane will ascertain the enemy situation by collating the reports which it has received. About 45 minutes before the attack unit reaches the battle zone, one element of the reconnaissance unit will scatter window to conceal the direction of approach.

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(d) When the reconnaissance unit discovers an enemy surface force, after suitable maneuvering it will reconnoiter the enemy situation, track the enemy and lead the attack units. If the reconnaissance unit discovers that enemy fighter planes are advancing to intercept our forces, it will report their dispositions immediately.

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(e) The air control unit will attain domination over enemy intercepting fighter plane units and will seek to destroy them. Then, having achieved mastery of the air, it will attack the enemy surface force, strafing the bridges and antiaircraft mounts of the various ships. Acting on orders of the command plane or on the basis of reports by the reconnaissance unit concerning the enemy situation, the attack unit will dodge enemy intercepting fighter plane units and maneuver around them to attack from the flanks.

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(f) The attack unit will then join the battle, acting in concert with the air control unit. First, the dive bombing unit will switch to the attack, taking advantage of the absence of enemy fighter planes. While one element is neutralizing enemy antiaircraft fire with Mk 31 Bombs, the main force will seize its opportunity and dive bomb the enemy. The skip bombing unit will co-operate in this action, attacking from minimum altitudes. The level bombing unit will bomb and strafe the enemy, neutralizing his antiaircraft fire and thus paving the way for the torpedo bomber unit. The latter will take advantage of the enemy confusion and swoop in on him.

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(g) When the dive bombing, skip bombing and torpedo bomber units proceeding to attack reach a point about 70 nautical miles from the enemy, each unit will take up an inverted V formation in order to envelop the deployed enemy and will approach the enemy in that formation. Once the enemy is sighted, the airplanes will attack simultaneously. While Type 1 Fighters of the level bombing unit neutralize enemy antiaircraft fire by bombing and strafing, the heavy bombers will carry out a level-bombing attack. In this attack, the heavy bombers will also use Mk 31 and similar bombs and will seek principally to neutralize enemy antiaircraft fire.

The escorting fighter planes of the various units will be divided into diversion attack units and direct cover units. They will maintain close liaison with the attack units and provide cover for them. The reconnaissance unit will co-operate in the assault of the attack units and scatter window to deceive enemy radar. The airplanes of the attack units and the airplanes neutralising antiaircraft fire will also seek to confuse enemy radar-controlled fire by scattering window.

(h) After the attack by the attack units, it will be the duty of the reconnaissance unit to ascertain the results and to join with the command plane in regrouping the fighter planes.

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(i) The priority of targets in attacking a task force generally will be as follows:

1. Bombing and torpedo attacks

a. Large-type aircraft carriers

b. Medium and small-type aircraft carriers

To the extent possible, carriers which are getting airplanes ready on their flight decks will be attacked first. Undamaged carriers will be the next objective. To do so, however, sometimes it may become necessary to attack the screening vessels and the principal target simultaneously.

2. Neutralisation of enemy antiaircraft fire

a. Aircraft carriers and the battleships and cruisers which are directly screening them

b. Screening vessels stationed on the line of attack of the torpedo bomber units

c. Night attack on task force

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(1) Standard organisation of attack SHUDAN

CLASSIFICATION	STRENGTH	DUTIES
Tracking unit	Land attack planes (heavy bombers or carrier-borne attack planes) Four airplanes	Tracking, leading, illuminating, deceiving radar and observation of battle results.
Containing unit (KENSEITAI)	(Same as above) Two airplanes	Neutralisation of anti-aircraft fire
Torpedo bomber unit	(Same as above) One SHOTAI	Torpedo attacks After the attack, illumination and tracking.

(2) General outline of combat.

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(a) The tracking unit will depart about one and one half hours before the torpedo bomber unit and will sweep and search by means of radar. Guided by the tracking planes already deployed, the unit will join in the tracking. Afterwards, it will report on the enemy situation and lead the attack units. In addition, prior to the arrival of the attack units in the battle zone, it will scatter window to deceive the enemy concerning the direction of approach of the attack units.

The containing unit (KENSEITAI) and the torpedo bomber unit will be led by the tracking unit when they make their

attacks and they themselves will seek to discover the enemy through the use of radar. The standard altitude for proceeding to attack will be 500 m. It is desirable, however, to drop to an altitude of less than 100 m in order to avoid enemy radar and to facilitate observation, as well as to make possible immediate firing even when the enemy is spotted at close range.

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(b) When the attack units spot the enemy, the containing unit (KENSEITAI) will assume a suitable altitude and, aided by the illumination of the tracking unit, will act in unison with the torpedo bomber unit. They will carry out a bombing attack prior to the attack of the torpedo bomber unit, using Mk 31 bombs to neutralize enemy antiaircraft fire.

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(c) Night torpedo attacks generally will be carried out with the aid of illumination. After the tracking unit has dropped several parachute flares directly above the enemy, it will take evasive action and will continue to drop flares every two or three minutes. The torpedo bomber unit will circle the parachute flares in single file and at a distance of about 8,000 m. After the over-all enemy situation has been ascertained, the unit will make single-plane attacks on the aircraft carriers. After the torpedo planes have delivered their attack, they will continue to track the enemy and will provide illumination to assist the attacks of other torpedo planes.

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(d) Before and after the attack of the torpedo planes, the tracking planes and the containing unit (KENSEITAI) will disperse widely to deceive the enemy radar and to upset radar-controlled firing. Also, in addition to containing enemy night fighters, they will observe the results immediately following the torpedo bomber attack.

(e) In night torpedo attacks, no matter how intense the antiaircraft fire, it is absolutely necessary to determine the type of ship and to press home attacks on the aircraft carriers. If the airplanes penetrate the enemy circular formation boldly, they may find, contrary to expectations, enemy fire weak and the attainment of their main objective easy. In attacking a heavily protected enemy task force, it is not necessarily the best policy to penetrate suddenly. Sometimes it is best to circle the enemy continuously and to avoid the enemy task force with the aid of the tracking unit, the illumination and bombing of the containing unit (KENSEITAI) and the torpedo attacks of airplanes just ahead. In this case the airplanes will carry out persistent, flexible combat in which bold thrusts are made when an opportunity presents, such as exposure of the flanks of aircraft carriers through a change in the relative positions of the aircraft carriers and the screening vessels.

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d. Day attack on ships at anchor

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(1) When an enemy invasion force has attacked and anchored, an attack SHUDAN will be organized from available types of army and navy airplanes in accordance with the situation of the attack on the enemy task force.

(2) General outline of combat

(a) When an enemy invasion force has attacked and anchored, the reconnaissance unit immediately will make a thorough search of the surrounding sea area. It will endeavor especially to secure detailed information concerning those invasion ships anchored close to shore. It is essential that no error be made in selecting and allotting the targets of the attack units. When reconnoitering the immediate front at time of attack by the attack units, the reconnaissance unit particularly will determine and report the bearing of the formation of the anchored ships.

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(b) If aircraft carriers covering the ships at anchor are nearby, an attack SHUDAN of superior airplanes will seek to destroy the carrier force. At the same time, depending on circumstances, one element of the air control unit will be used to destroy the enemy fighter planes in the air above the anchored ships.

(c) Other attack SHUDAN will throw their full strength into the attack on the anchored ships. If the enemy anti-aircraft fire is ineffective, a simultaneous attack will be made by the attack SHUDAN. When the enemy counterattack weakens, the tempo of the attack will be speeded up by continuous attacks by all types of airplanes.

(d) In attacking ships at anchor, ships not yet loaded and those being loaded will be the prime targets. If landing craft are detected on the move, fighter planes will strafe and destroy them.

c. Night attacks on vessels at anchor

(1) The strength employed in a night attack will more or less be the same as that employed in a day attack.

(2) General outline of combat

Procedure will be the same as that for a night attack on a task force, except for the following:

(a) On account of the surrounding terrain, it often is difficult to spot the ships even on moonlit nights. Therefore, it is best to carry out torpedo attacks with the aid of illumination. In attacking an anchorage, furthermore, it is best to divert the enemy by using illumination and to confuse him regarding the direction of approach.

(b) In attacks on ships at anchor, it is often best to silhouette the target and then carry out a torpedo attack. The torpedo bomber planes will come in to attack whenever possible at a 90° angle to the length of the anchored ship. The tracking unit will stay on a course as nearly parallel as possible to the length of the enemy ship and will take suitable evasive action. At a distance of 5,000 m from the target and from an altitude of 1,000 to 1,500 m, the airplanes of the unit will drop parachute flares one after the other at intervals of 500 to 1,000 m. When the torpedo bomber unit identifies its targets, it will make successive attacks at short intervals on one flank.

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D. Base Air Combat

1. General regulations

In base air combat the initiative will be kept before a decisive engagement, and passive interception will be avoided, thereby bringing about flexibility in combat. While avoiding battles of attrition whenever possible, major emphasis will be placed on raids against enemy bases and on skilful interception. The raids gradually will wear down the enemy and thus frustrate his offensive plans.

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Air strength will not be entirely distributed at forward bases; for the present only fighter planes sufficient to prevent domination of the air by enemy base airplanes and required numbers of reconnaissance airplanes will be based there. To the extent possible, the main strength will be disposed in depth at rear bases from which raids may be carried out at opportune times. Meanwhile preparations will be made for decisive engagements.