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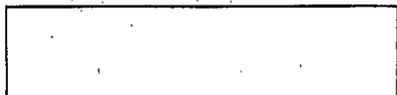
CENTRAL INTELLIGENCE AGENCY
WASHINGTON, D.C. 20505

21 December 1973

MEMORANDUM FOR: The Director of Central Intelligence
SUBJECT : MILITARY THOUGHT (USSR): The Air Defense Aspect
During Operations to Counter an Amphibious
Landing

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article discusses air defense operations of the maritime axis of a front which must contend with an amphibious landing. The author places most emphasis on coordination between field air defense and national air defense troops and between the front and the fleet. The primary weapons of the front are identified as SA-2 and SA-4 missiles, while units have SA-6 and SA-7 missiles and ZSU-23-4 antiaircraft mounts for low-altitude defense. This article appeared in Issue No. 2 (90) for 1970.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.


WILLIAM E. Nelson
Deputy Director for Operations

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Intelligence Information Special Report

COUNTRY USSR

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DATE OF INFO. Mid-1970

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SUBJECT

MILITARY THOUGHT (USSR): Features of the Organization of Air Defense in Conducting Anti-Landing Defense in a Front Offensive Operation

SOURCE Documentary

1970

Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 2 (90) for 1970 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Colonel L. Gavrilsh. This article discusses air defense operations of the maritime axis of a front which must contend with an enemy amphibious landing. The author places most emphasis on coordination between field air defense and national air defense troops and between the front and the fleet. The primary weapons of the front are identified as SA-2 and SA-4 missiles, while units have SA-6 and SA-7 missiles and ZSU-23-4 antiaircraft mounts for low-altitude defense.

End of Summary

[Redacted] Comment:

Col. Gavrilsh was identified in Red Star, 18 October 1967, as a major associated with the Putilovsko-Kirovskaya Guards Antiaircraft Missile Unit. Military Thought has been published by the USSR Ministry of Defense in three versions in the past -- TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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Features of the Organization of Air Defense in
Conducting Anti-Landing Defense in a
Front Offensive Operation

by

Colonel L. Gavrilsh

There are a number of specific features in the conditions under which the air defense of the troops and installations of a front is organized and implemented, when the front is on the offensive on a maritime axis and must simultaneously conduct anti-landing defense of the coast. And to a large extent these features have a considerable effect on the organization of an anti-landing defense on the maritime flank of a front, and they also affect the organization of army and front rear installations.

These features have been discussed with sufficient thoroughness in the article by General of the Army G. Khetagurov. We wish only to emphasize once again two points which are crucial for the resolution of the problem of an anti-landing defense.

First, the air enemy makes use of bodies of water as the most convenient and secure axis for breaking through with his aviation to the objectives in the operational rear of the front and in the interior of the country.

Second, our capabilities for controlling our fighter aircraft are improved when we are operating toward the sea, and we are also spared the necessity of overcoming the enemy air defense system.

The experience of training exercises indicates that in the majority of instances the air defense system on a maritime flank and in the operational rear of the front will be built up during an offensive operation only by using the

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air defense forces and means available in the field. It is this variant which we shall examine in this article. First of all, we must comment on the features of conducting reconnaissance of an air enemy.

The reconnaissance of an air enemy on a maritime axis is organized as a single centralized system and is carried out with the means of the radiotechnical units of the front and fleet. If, in ordinary operations, the greatest density of radar coverage is set up along the line of troop contact, on a maritime axis it must be along the coast.

For the timely detection of low-flying targets, radar companies of the first line must deploy at intervals of up to 30 kilometers, with the second line at intervals of up to 60 kilometers and at a distance of 80 to 90 kilometers from the first line. Calculations indicate that a front advancing on a maritime axis must be reinforced with one or two air defense radiotechnical regiments. We must also use radar patrol ships (KRLD); and in the future we must use radar patrol submarines and aircraft which should be moved out 100 to 200 kilometers from the coast. In this way we can detect air targets at low altitudes when they are 150 to 170 kilometers from the coastline, and targets at medium and high altitudes when they are 300 to 400 kilometers from the coastline.

In air defense exercises in our district, held in coordination with the air defense means of the Twice Red Banner Baltic Fleet, a radar patrol ship was sent out to sea carrying a navigator from fighter aviation and operating simultaneously as a radar patrol and a shipboard control and guidance post for fighter aircraft (KPUNIA); this gave us some experience in the utilization of such ships.

Besides the special radiotechnical forces, reconnaissance of the air enemy must be conducted by all radar stations of aviation, antiaircraft missile troops, and antiaircraft artillery, as well as by the visual observation posts at all command posts, launch and fire positions of air defense units, and subunits of all arms of troops.

Visual surveillance of the air is necessary for bringing fire to bear in time on aircraft in flight which appear suddenly over the ground forces, and also for

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enabling us to reduce losses by taking cover and by camouflaging personnel and equipment.

The fire plan of antiaircraft means. Considering the aggressiveness of enemy aviation from the direction of the sea, it would be desirable to set up a dense zone of destruction by antiaircraft missile forces along the entire length of the coast. If means are limited, however, we do not consider it advisable to set up a dense zone by positioning the fire systems in a line. Such a fire plan can be overcome easily by raids from a few groups (individual aircraft) echeloned in depth.

Judging from the experience of command-staff exercises and operational games conducted in the district in recent years, we consider that it will be more advisable to concentrate the efforts of air defense means on individual axes which are dangerous from the point of view of landings, even if the front is reinforced with one or two Krug antiaircraft missile brigades and two or three S-75 antiaircraft missile regiments.

The experience of combat actions in Vietnam and the Near East also shows that the most effective method is to group the air defense means, thus combining the zonal and direct protection of troops and objectives within the operational depth.

Thus, actual practice demonstrates that the fire plan of antiaircraft means must provide for the mutual overlapping of the zones of destruction of medium-range antiaircraft missile units, both in the areas where anti-landing defense forces are concentrated and on the probable axes of their actions. Part of the antiaircraft missile means of a front (army) must be assigned to the direct cover of important objectives within the operational depth (siting areas of rocket troops, crossings, airfields, and major communications centers of the front).

Regarding the organic air defense means of motorized rifle and tank divisions and regiments (Kub antiaircraft regiments, S-60 antiaircraft battalions, ZSU-23-4 batteries, Strela-1 batteries), they are used for the direct cover of large units and units, thus creating a fire plan to oppose aircraft operating at very low altitudes.

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In our opinion, the direct cover of missile and artillery large units and airfields requires that we also have organic short-range antiaircraft means (ZSU-23-4 or Strela-1).

In areas in which ships are staying, and also when they are participating in an amphibious landing, shipboard antiaircraft missile and artillery means will engage the air enemy in combat and should be taken into account in the overall fire plan for antiaircraft means.

Combat actions of front fighter aircraft. In the ground sectors of a front, the operations of fighter aircraft are paralyzed by the presence of a dense grouping of our antiaircraft missile troops along the FEBA, and also by enemy antiair defense. Separate zones of dense fire will usually be set up along the coast by antiaircraft missile forces and antiaircraft artillery; fighter aircraft can maneuver freely in the gaps between these zones and over the water.

We must not fail to mention that the capabilities of fighter aircraft to intercept targets in the air at maximum distances increase in the sea sector of a front. Such interceptions are facilitated by moving out to sea the radar patrol ships and the shipboard control and guidance posts for fighter aircraft. In addition, earlier warning of the air enemy will assure the timely interception of air targets if we are in a status of "alert at airfields", and this in turn will reduce the expenditure of flight resources.

If a front has two fighter aviation divisions, we consider it advisable to assign one of them to operations in the sea sector.

Some questions of coordination. Coordination among air defense means of a front and a fleet consists of reaching agreement on where and when to employ radar reconnaissance means, shipboard and land-based antiaircraft missiles and antiaircraft artillery, and the methods of mutual warning of the air enemy.

The coordination of antiaircraft missile units with fighter aviation is implemented by allocating their actions according to zones, sectors, axes, targets, and time. The

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main factor here is the principle of action by zones. As a rule, fighter aircraft will operate outside the zones of destruction of the antiaircraft missile troops except for instances in which, because of losses suffered or because of a lack of missiles, the effectiveness of antiaircraft missile fire is lowered to such an extent that it appears inadvisable to limit the actions of fighter aircraft. Furthermore, if the number of air targets exceeds the fire capability of the air defense fire means on the ground, it will become necessary to commit fighter aircraft to the zones of destruction of antiaircraft missiles.

Special coordination signals are established throughout the front. In case of a loss of centralized control over antiaircraft missile troops from the air defense command post of the front, which may happen during a fluid operational situation, fighter aviation has the right to choose targets for attack. In this case, antiaircraft missile units will destroy targets which are not being attacked by the fighters.

Coordination between air defense means and the forces they are covering presupposes that the forces will be warned of the air enemy, and that unit commanders and air defense commanding officers will have a clear understanding of the combined-arms commander's combat plan and of the plan for troop actions; otherwise, timely moves by air defense means are impossible. Coordination is assured by personal contact and stable communications with the combined-arms commander so that there can be timely reaction to situation changes.

Coordination between the air defense means of a front and the air defense troops of the country, in the variant under consideration here, will consist of the mutual exchange of information on the air enemy and on the actions of subordinate means, particularly fighter aviation operating over its full range and making use of adjacent airfields.

Control of all air defense forces and means must, in our opinion, be implemented from the air defense command post of the front, at which there must be an operations group, with its control means, from the air army and, if needed, operations groups from the fleet air defense and the air defense of the country. In other cases, as for example, when a front is carrying out an immediate mission, at the

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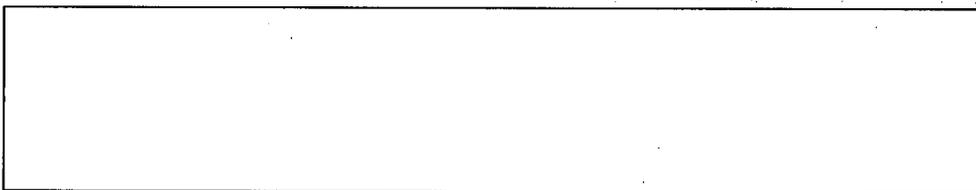
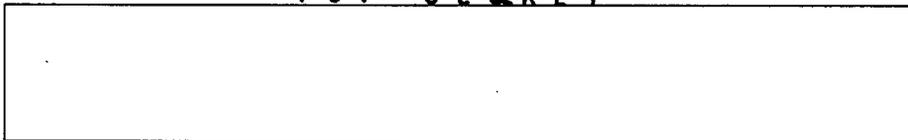
time an anti-landing defense is being conducted on a front of 600 to 800 kilometers, an auxiliary air defense command post may be set up to control air defense means on the maritime axis.

In order to assure close coordination among air defense means and efficiency in the control over them, it is advisable to send out to this auxiliary command post a forward command post of a fighter aviation division operating in the maritime zone. It is advisable to send out auxiliary guidance posts from fighter aviation regiments to the command posts of antiaircraft missile large units or to specially created control and guidance centers within the zones of responsibility of combined-arms divisions, as is done in the air defense troops of the country. In order to accomplish this we must reestablish organic auxiliary guidance posts in each fighter aviation regiment. By setting up organic auxiliary guidance posts in each regiment, we can increase the guidance capabilities of fighter aviation divisions by a factor of 1.5 to 2; and by moving auxiliary guidance posts toward the front (to the coastline), we will enable fighter aviation to operate over its full combat radius.

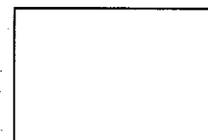
In 1969 our district built up some useful experience in combat work at collocated command posts. Thus, in an exercise with a tank division, we collocated an air defense command post of a combined-arms army with a forward command post of a fighter aviation division of the air army. The commanding officer of the air defense troops of the army and the deputy commander of the fighter aviation division actually carried out the allocation of efforts of ground air defense means and of fighter aviation and the guidance of fighters using the P-40 radar. In a district air defense exercise we collocated command posts of the air defense of an army with forward command posts of fighter aviation divisions, and antiaircraft missile brigade command posts were collocated with guidance posts of fighter aviation regiments of a division of the air defense of the country.

In our opinion, problems of organizing centralized control and coordination among all air defense means in a front zone of responsibility represent the weakest link in field air defense and require that we devote serious efforts to working them out on both a theoretical and a practical level.

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