

~~TOP SECRET~~

499Z

CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D.C. 20505

17 June 1977

MEMORANDUM FOR: The Director of Central Intelligence

FROM : William W. Wells
Deputy Director for Operations

SUBJECT : MILITARY THOUGHT (USSR): The Role and
Cooperation of the Aviation, Rocket Troops
and Artillery of a Front in Combating Enemy
Nuclear Weapons in an Offensive Operation

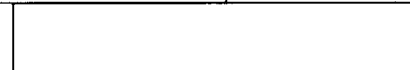
1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article assesses front capabilities for combating an army group's operational-tactical and tactical nuclear weapons. The capabilities of various front air and missile weapons and artillery in destroying several different targets are tabulated for these categories, with the conclusion that fighter-bombers and artillery with conventional ammunition are best used against individual nuclear weapons targets, while nuclear warheads should be employed only when conventional weapons cannot meet the requirement. This article appeared in Issue No. 5 (66) for 1962.

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. For ease of reference, reports from this publication have been assigned

William W. Wells

~~TOP SECRET~~

~~TOP SECRET~~



Distribution:

The Director of Central Intelligence

The Joint Chiefs of Staff

The Director, Defense Intelligence Agency

The Assistant to the Chief of Staff for Intelligence
Department of the Army

The Assistant Chief of Staff, Intelligence
U. S. Air Force

Director, National Security Agency

Deputy Director of Central Intelligence

Deputy to the Director of Central Intelligence
for National Intelligence Officers

Deputy Director for Intelligence

Director of Strategic Research

~~TOP SECRET~~



~~TOP SECRET~~



Intelligence Information Special Report

Page 3 of 24 Pages

COUNTRY USSR

DATE OF INFO. Late 1962

DATE 17 June 1977

SUBJECT

MILITARY THOUGHT (USSR): The Role and Cooperation of the Aviation, Rocket Troops and Artillery of a Front in Combating Enemy Nuclear Weapons in an Offensive Operation

SOURCE Documentary
Summary:

The following report is a translation from Russian of an article which appeared in Issue No. 5 (66) for 1962 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is General-Major of Artillery V. Kuznetsov. This article assesses front capabilities for combating an army group's operational-tactical nuclear weapons, such as delivery aircraft, Mace and Pershing missiles, and tactical nuclear weapons such as Lacrosse missiles and various heavy field guns and rocket launchers. The destruction capabilities of various front air and missile weapons and artillery are tabulated, with the conclusion that conventional means are best used against individual nuclear weapons targets, while nuclear warheads should be employed only when conventional weapons cannot meet the requirement. The role and importance of reinforcement by the Supreme High Command is emphasized. The author also discusses the relationship of air and nuclear superiority, and examines in some detail the cooperation of the air army and rocket troops in combat zones as well as reconnaissance and combat at the division level.

End of Summary

Comment:

The author is a Doctor of Technical Sciences and a professor at the Military Air Engineering Academy.

~~TOP SECRET~~

~~TOP SECRET~~

[REDACTED]

[REDACTED]

Page 4 of 24 Pages

The Role and Cooperation of the Aviation, Rocket Troops,
and Artillery of a Front in Combating Enemy Nuclear Weapons
in an Offensive Operation

by
General-Mayor of Artillery V. Kuznetsov

In modern warfare one can count on the success of an offensive operation only with the reliable and timely destruction of enemy nuclear means. Because of this, effective combat with the indicated means is considered -- and quite rightly so -- an indispensable condition for the conduct of combat actions both by the ground forces of a front as well as by aviation. Much has been written about this in our military literature, but, unfortunately, few concrete statements have been put forth about the role of different means in combating enemy nuclear weapons and about how to organize this combat.

The complexity of this problem is caused primarily by the difficulty of reconnaissance of enemy nuclear means, by the ground coverage of their location with modern air defense means, and by the relatively brief stay of a launcher at a launch position or of a delivery aircraft on an airfield before a sortie.

Without citing here the generally known tactical-technical specifications of the nuclear weapons of the enemy, let us merely note that the stock of nuclear means is quite diversified and the role of each of them in an operation is different. Still, one can distinguish two main groups: operational-tactical and tactical nuclear means. Among the first of these we class delivery aircraft, the Mace and Matador cruise missiles, and guided missiles of the Pershing, Redstone, Sergeant, and Corporal types. They can fulfil such tasks as destruction of operational-tactical nuclear means, troop concentrations and, in particular, operational and tactical reserves, large staffs, control posts, and major installations of the operational rear. In practice, these means, with the exception of the Sergeant and Corporal guided missiles, are capable of acting against the full depth of the operational disposition of the troops of a front.

[REDACTED]

~~TOP SECRET~~

~~TOP SECRET~~

Page 5 of 24 Pages

In the second group we class guided and unguided missiles of the types Lacrosse, Honest John, Little John, 280-mm guns, 203.2-mm howitzers, and Davy Crockett launchers. They can hit tactical nuclear means, forward units of first-echelon divisions, and part of the tactical reserves.

Consequently, the operational-tactical nuclear means, by virtue of their long range and the high yield of the nuclear warheads employed, can have a decisive effect on troops and other targets of a front throughout the entire operation. But, as for tactical nuclear means, by virtue of their short range of fire, only the part of these that are located in the first-echelon divisions will be used. All the remaining tactical nuclear means, belonging to divisions of the second echelon of army corps and the operational reserves of the field army and army group, cannot affect our troops until the encounter of these divisions with them. One must not fail to consider this situation in the planning of combat with enemy nuclear means.

What is the relative proportion of each of these groups in the overall grouping of nuclear means of an enemy who may oppose the troops of a front?

To simplify calculations, let us assume that an enemy army group is operating in the offensive zone of a front. It is completely understandable that its composition can vary. However, to bring in more or less concrete material, let us turn to the experience of NATO troop exercises. In one of the 1961 exercises, within the nuclear grouping of the Central Army Group there were 54 operational-tactical launchers of the surface-to-surface type (four Redstone, 20 Corporal, and 30 Mace and Matador) and 254 tactical launchers and guns (60 Honest John, 20 Lacrosse, 18 280-mm guns, and 156 203.2-mm howitzers). In addition, the allied tactical air force had 560 fighters and light bombers -- and all of these can, in practice, be nuclear bomb carriers. The group of operational-tactical nuclear means was represented by a total of 54 launchers and 560 aircraft -- or 614 items altogether; the group of tactical weapons -- by 254 launchers and guns.

We may be accused of overstating the number of delivery aircraft, of which there could be considerably fewer. However, these very important points should be made: 1) The equipping of

~~TOP SECRET~~

~~TOP SECRET~~

Page 6 of 24 Pages

any fighter or fighter-bomber as a carrier of nuclear bombs takes no more than one hour, and it can be done by the forces of airfield workshops. 2) Delivery aircraft are deployed at airfields together with conventional aircraft of the same type. 3) In flight, there is virtually no way to distinguish a delivery aircraft from the other aircraft accompanying it. All this gives us the right to regard every enemy fighter and fighter-bomber as a delivery aircraft just the same as regarding every 203.2-mm howitzer also having conventional high-explosive shells in its armament as an atomic gun.

If one takes the maximum one-time strike capabilities of these groups, then the strike of the operational-tactical nuclear means may be equivalent to 195 thousand kilotons, while the strike of the tactical nuclear means is only 5,170 kilotons (about 2.5 percent of all the nuclear might of the enemy army group). The figures cited, even without any commentary, give a vivid enough picture of the scale and importance of combat with enemy nuclear means.

The data cited allow us to draw the following conclusions. First, the group of operational-tactical nuclear means is the most numerous and powerful and, consequently, destruction of these means first occasions the success of an offensive operation. Second, the main part of this group of nuclear means is made up of delivery aircraft (surface-to-surface launchers do not exceed nine percent) and, consequently, the task of destroying the entire group of operational-tactical nuclear means is accomplished primarily by destroying the delivery aircraft of the enemy.

Inasmuch as, under present-day conditions, virtually all aircraft can be carriers of nuclear weapons, it can be said without exaggeration that air superiority is at the same time superiority in nuclear weapons. Here, the necessary air superiority is to be understood as the balance of aviation forces of the sides whereby the enemy is incapable with his remaining forces of having a substantial influence on the course of the offensive operation of the front, i.e., he is deprived of the capability of fulfilling operational tasks to disrupt the offensive.

~~TOP SECRET~~

~~TOP SECRET~~

[REDACTED]

[REDACTED]

Page 7 of 24 Pages

Finally, the basis of the group of tactical nuclear means is atomic artillery and, in particular, 203.2-mm howitzers (when the US Army goes over to the new T/O&E, the most numerous subgroup will be Davy Crockett smooth-bore guns), consequently, destruction of the group of tactical nuclear means is accomplished primarily by destroying most of the enemy's 203.2-mm batteries (and, in the near future, also the Davy Crockett guns).

Let us now try to ascertain the capabilities of a front in combating the enemy nuclear grouping. In order to work on the basis of concrete data, let us take the following composition of the front: three combined-arms armies of five divisions each, a tank army of four divisions, and an air army of three fighter air divisions, two fighter-bomber air divisions, a bomber air division, and two regiments of KR-180 cruise missiles. Let us also assume that the front is reinforced by two separate R-550 missile battalions and an artillery division of the reserve of the Supreme High Command.

Let us first of all look at the capabilities for combat with the group of operational-tactical nuclear means. Let us state right away that by combat with enemy nuclear means we shall understand destroying them primarily on the territory and in the airspace of the enemy. The destruction of unfriendly delivery aircraft over our territory with air defense means is a defensive measure and does not secure us against the strike, if only unaimed, of a nuclear aerial bomb against the troops and other installations of the front. As a consequence of this, as active means of combating the operational-tactical nuclear weapons of the enemy, we shall consider only the operational-tactical missiles and the aviation of the air army in the front.

The front composition we have taken will have available the following forces and means: three army R-170 missile brigades (18 launchers), a front R-300 missile brigade (nine launchers), two separate R-550 missile battalions (six launchers), and two KR-180 regiments (18 launchers). Thus, in all there are 51 launchers and up to 700 fighters, fighter-bombers, and bombers.

The airfield basing areas of the delivery aircraft, the main nuclear force of the enemy, lie outside the range of the missiles of the front, with the exception, of course, of missiles of the R-550 type. However, the capabilities of these missiles, due to

[REDACTED]

~~TOP SECRET~~

~~TOP SECRET~~

Page 8 of 24 Pages

their limited number, are quite insignificant. The siting areas of cruise missiles of the Mace and Matador types usually lie out of range of missiles of the R-170 and KR-180 type and can be hit only by R-550 missiles or, under favorable conditions (i.e., when the enemy siting areas are located no more than 200 kilometers from the forward edge) -- by R-300 missiles. Only the enemy units having in service missiles of the Redstone, Corporal, and Sergeant types, which altogether constitute four percent of the operational-tactical nuclear means of an army group, can be hit by all the operational-tactical missiles available to the front.

And what are the capabilities of the front aviation in combat against the operational-tactical nuclear means of the enemy? Practically speaking, all the forces of the front air army can carry on combat with them.

Lying within the operating radius of the bomber aviation (considering the distance to its airfield basing areas) are both the airfields of the delivery aircraft of the enemy and the siting areas of the cruise missiles and operational-tactical ballistic missiles.

Within the operating radius of the fighter-bomber aviation are the siting areas of the cruise missiles and operational-tactical ballistic missiles. Most of the airfields will, as a rule, be located deeper, and therefore, destruction of the delivery aircraft of the enemy with the forces of the fighter-bomber aviation, as well as of the fighter aviation, is possible only in the air, both over enemy territory and in our own airspace.

To calculate the capabilities of a front to hit the enemy nuclear grouping, let us take the following norms of forces and means (Table 1).

~~TOP SECRET~~

Table 1

Targets of destruction	Means of destruction	
	Aviation	Rocket troops
Squadron of delivery aircraft at airfield	Bomber air squadron with an aerial bomb of 50 kt and up	Launch battery with R-550 missile of 100 kt yield
Delivery aircraft in the air	Fighter or fighter-bomber	--
Pershing guided missile group in position	Fighter-bomber air squadron	Two launch batteries with R-550 missiles 100 kt each
Detachment of Mace and Matador cruise missiles	Same	Launch battery with R-550 missile of 100 kt
Redstone guided missile group in position	Same	Two launch batteries with R-300 missiles of 100 kt each
Corporal guided missile battalion	Same, or a KR-180 cruise missile of 30 kt yield	Launch battery with an R-170 missile of 40 kt

~~TOP SECRET~~~~TOP SECRET~~

~~TOP SECRET~~

Page 10 of 24 Pages

From the data cited in the table, it is interesting to note the overall high effectiveness of destruction of individual targets by fighter-bomber aviation with the employment of conventional weapons in the form of rockets. At the same time, the employment of these means against large-area targets, for instance against troops in concentration areas, has relatively little effect and necessitates the allocation of a large number of forces. Thus, to destroy a motorized infantry battalion in a concentration area requires up to one divisional sortie. Hence, a basic conclusion suggests itself: it is most advantageous and advisable to employ fighter-bomber aviation mainly against individual targets. To hit area targets, on the other hand, it is more advantageous to employ nuclear warheads, which in all cases should be expended economically and only when conventional means cannot produce the desired effect.

The approximate norms cited in the table are drawn from the fire capabilities of the means when tasks are fulfilled under the most favorable conditions. However, inasmuch as the enemy also has the capability to destroy our nuclear means, we think it necessary to have at least a 1.5:1 superiority over the enemy, that is, to multiply these norms by one and a half. We note that a 1.5:1 superiority in the forces of our aviation allows us to count on complete destruction of the enemy aircraft in air battles, taking into consideration our average losses from the fire of unfriendly surface-to-air guided missiles and anti-aircraft artillery. On this condition, the capabilities of a front to destroy operational-tactical nuclear means will look approximately as follows (Table 2).

~~TOP SECRET~~

Table 2

Targets of destruction	Number of targets	No. destroyed by <u>front means</u>	Forces and means
Mace and Matador cruise missile detachments	8 (30 launchers)	8 (30 launchers)	8 x 1.5 = 12 fighter-bomber air squadrons
Redstone guided missile groups	2 (4 launchers)	2 (4 launchers)	4 x 1.5 = 6 R-170 or R-300 launchers
Corporal guided missile battalions	10 (20 launchers)	10 (20 launchers)	20 x 1.5 = 30 R-170 and KR-180 launchers
Delivery aircraft:			
a. on airfields	Up to 50 squadrons	6 squadrons at 6 airfields 4 squadrons at 4 airfields	6 x 1.5 = 9 bomber air squadrons with 9 nuclear bombs 4 x 1.5 = 6 R-550 launchers
b. in air battles		18 squadrons 4 squadrons	18 x 1.5 = 27 squadrons (three fighter air divisions) 4 x 1.5 = 6 fighter-bomber air squadrons
		In all, 32 squadrons can be destroyed; 18 undestroyed squadrons remain.	

~~TOP SECRET~~~~TOP SECRET~~



The forces and means cited in Table 2 do not exceed the capabilities of the front that we indicated above. Analyzing the calculations, it has to be stated that a front, as a rule, does not have available the means to ensure complete destruction of the operational-tactical nuclear weapons of the enemy on his territory or in the airspace over it. Having decisive importance for the success of this combat is the degree to which the means of the General Headquarters of the Supreme High Command are used for these purposes in the offensive zone of the front. A massed strike with strategic missiles against enemy aviation at airfields may be the main condition for the achievement of total air supremacy by the front aviation and, consequently, of total nuclear weapons superiority in the zone of the front.

Considering all that has been said above, as well as the strength of the operational-tactical missile units and the air army of the front, the following rather obvious conclusions can be drawn:

-- the main force of the front in combat with the operational-tactical nuclear means of the enemy, both in respect to tactical-technical specifications and in respect to numbers, is aviation and, to be specific, the air army of the front. That being the case, since the main forces of enemy aviation are destroyed in the air by the aircraft of the front using cannon fire and rockets, it follows that the main means of destroying operational-tactical nuclear means are conventional weapons;

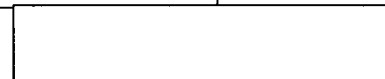
-- the operational-tactical rocket troops of the front play an auxiliary role in this combat and their capabilities are extremely limited;

-- the successfulness of the combat of the forces of the front with the operational-tactical nuclear means of the enemy largely depends on the participation of the means of the General Headquarters of the Supreme High Command in this combat.

Let us now examine the capabilities of a front in combating the tactical nuclear means of the enemy.

All the tactical nuclear means of the enemy are situated within four to 15 kilometers from the line of contact of the troops of the sides, and the bulk of them (the 203.2-mm





howitzers) are still closer, within four to eight kilometers. Hence it follows that the tactical nuclear means usually will be situated within the range of fire of our artillery and tactical missiles. What are the capabilities of the tactical missiles and artillery to hit these nuclear means of the enemy?

The tactical-technical specifications of our artillery and tactical missiles are such that the authorized nuclear warheads of tactical missiles ensure the destruction not only of individual enemy guns and launchers but of whole subunits (batteries, battalions). The indicated means of the enemy also are located in the zone of fire of both our heavy gun artillery belonging to the army gun artillery brigade and the gun regiments of the artillery divisions of the reserve of the Supreme High Command. Only the 203.2-mm howitzers and the Davy Crockett launchers are located in the zone of fire of the divisional artillery.

Thus, the main force in combating the tactical nuclear means of the enemy is tactical missiles and heavy gun artillery. This conclusion is based on an evaluation of the tactical-technical specifications of these missiles and heavy gun artillery. True, it must be stated that the numerical strength of these forces in a front may induce certain corrections.

A front of the composition we are examining will have at its disposal 38 tactical missile launchers (when the front has a total of 12 divisions) and the following numbers of artillery: divisional artillery of 15 motorized rifle divisions (122-mm and up) -- 720 guns, divisional artillery of four tank divisions (122-mm and up) -- 144 guns, army heavy gun artillery of three armies -- 216 guns, and artillery of the artillery division of the reserve of the Supreme High Command (excluding mortars) -- 198 guns. The total is 38 launchers and 1,278 guns.

To determine the capabilities of these means, we should take some norm of forces and means that ensure the destruction of one enemy nuclear item. We cite the currently existing norms in Table 3.

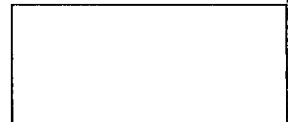


Table 3

Targets of destruction	Tactical rocket troops	Artillery	Aviation
280-mm gun	1 launcher with 3-10 kt missile	At least 3 artillery battalions of 122-130-mm guns and 3,000-4,600 shells	Flight of fighter-bomber aviation with rockets
203.2-mm howitzer	Same	At least 3 artillery battalions of 122-152-mm howitzers and up to 3,000 shells	Same
Honest John free-flight rocket launcher (Lacrosse guided missile launcher)	Same	At least 3 artillery battalions of 122-130-mm guns and 1,500-2,000 shells	Same

~~TOP SECRET~~

~~TOP SECRET~~



To supplement this table, it should be indicated that the basic means of detecting enemy nuclear means is aerial reconnaissance. Fighter-bomber aviation carrying out free hunting actually destroys a target immediately after detecting it, either in firing position or on the march.

The rocket troops and artillery can set about the destruction of a target only after receiving specific data on its position and nature: the coordinates of the target's center, and the dimensions of its area along the front and in depth. If these data are lacking or their accuracy is low, final reconnaissance of the target is required, which may take from 40 minutes to one and one-half hours. Destruction of the target with a strike by a tactical missile battery on alert is possible in 10 to 15 minutes after receiving the initial data. Artillery can open fire in five to ten minutes; however, the actual destruction of the target will go on for 25 to 40 minutes, depending on the forces allocated.

Thus, the quickest and most effective means of destroying enemy nuclear means is again the fighter-bomber aviation, although it is to be noted that hitting enemy nuclear means at an overall distance of four to eight kilometers from the forward edge and located in the zone of employment of tactical missiles and artillery is extremely complicated for aviation, and, during fluid combat actions, it is impossible.

It is most advisable to destroy and neutralize the tactical nuclear means of the enemy with the fire of artillery, which has a wealth of experience from counterbattery bombardment in the last war. Let us note in passing that the ever growing role of atomic artillery in the group of tactical nuclear means of the enemy is inevitably leading to a merging of the problem of combating tactical nuclear means with the problem of counterbattery bombardment.

In the event atomic warheads are put in service for the 155-mm, and then also for the 105-mm howitzers, any artillery battalion of the enemy will, in the near future, have to be regarded as a possible means of nuclear attack. The role of counterbattery bombardment will grow to an unprecedented scale, and the norms for the allocation of the artillery to hit one launcher, which were cited in Table 3, will turn out to be





virtually inapplicable.

According to these norms, to destroy enemy tactical nuclear means numbering 254 launchers and guns will require at least 762 artillery battalions or 13,716 guns, i.e., ten times what a modern front formation has available to it.

Obviously, we should seek forms of combat that could be based on the actual capabilities of a front. We think it is possible to hit enemy nuclear means, especially those most closely situated, as was done during the Great Patriotic War, by the method of neutralization by fire right up until the advancing troops or special groups reach the fire positions of the target being neutralized and seize it. In this case again, turning to the experience of the Great Patriotic War, we can adopt this norm: for each enemy battery (the tactical nuclear means of the enemy are positioned by batteries) allocate one battalion, i.e., have a superiority of three to one. Incidentally, it should be noted that the allocation of these forces will also permit destroying the targets, though it is true in this case that the process of destruction will take a little more time.

In hitting enemy nuclear means with tactical missiles, a 1.5:1 superiority over the enemy should be adopted, as we did in respect to operational-tactical means, which will guarantee fulfilment of the task assigned. Under these conditions, the capabilities of a front in combating tactical nuclear means will be the following (Table 4).

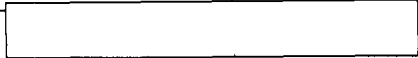


~~TOP SECRET~~

Table 4

Designation of targets to be hit with tactical missiles and artillery	Number of targets	Forces and means required	Immediately available
203.2-mm howitzer batteries	39 batteries (156 guns)	39 x 3 = 117 batteries or 702 guns of divisional artillery	864 guns
280-mm gun batteries	3 batteries (18 guns)	3 x 3 = 9 batteries or 54 guns of heavy artillery	} 414 guns
Honest John free-flight rocket batteries	15 batteries (60 launchers)	15 x 3 = 45 batteries or 270 guns of heavy artillery	
Lacrosse guided missile batteries	5 batteries (20 launchers)	30 launchers	38 launchers

~~TOP SECRET~~



From an analysis of the data in this table the following conclusions can be drawn. 1) A front has available sufficient means for combating the tactical nuclear means of the enemy; however, in so doing, the artillery of the front is almost completely diverted from the fulfilment of its other tasks (hitting enemy infantry, tanks, and conventional artillery), which raises the question of the essential increase of the artillery in the front. 2) The most distant enemy nuclear means are hit mainly with tactical missiles. 3) The more closely situated enemy nuclear means, i.e., the overwhelming mass of his tactical means, are hit with artillery employing conventional warheads. It should be noted that, when nuclear warheads are put into service with artillery, its capabilities will grow immeasurably.

What overall conclusions about the role of the various means of destruction in combating enemy nuclear means can be drawn on the basis of the material cited?

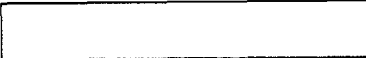
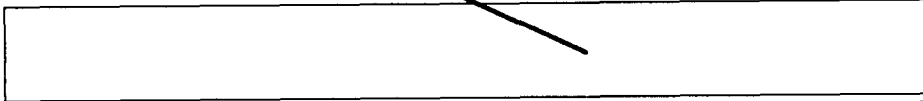
X First conclusion: the main role in combating enemy nuclear means which usually appear as individual targets is played in a front* by conventional types of armament -- aviation employing cannon fire and rockets, and artillery employing chemical and high-explosive fragmentation shells. N

Second conclusion: nuclear warheads, as a means of mass destruction, should be employed in combat with enemy nuclear weapons only in those instances when conventional types of armament cannot fulfil the task assigned.

Third conclusion: along with further development of the rocket troops, there should be the greatest possible development of aviation and artillery, which will play the decisive role in the outcome of a war after the warring sides have used up their nuclear means.

*We emphasize that this conclusion is true for a front; the main role in combating enemy nuclear means with the forces of the General Headquarters of the Supreme High Command is played by nuclear weapons.





* * *

Under present-day conditions wherein the enemy's predominant means of delivering a nuclear warhead to target is aviation, and the main means of hitting this aviation from our side also is aviation, the main idea in combat with operational-tactical means comes down to gaining air superiority and maintaining it during the course of the offensive operation. Air superiority, which under present-day conditions is acquiring a completely new significance and content as opposed to the past, pursues the goal primarily of achieving nuclear superiority over the enemy for the time during which the troops of the front are fulfilling the most important tasks during the operation.

The successful achievement of air superiority is possible, in our opinion, primarily by systematically hitting enemy aviation on airfields with the means of the General Headquarters of the Supreme High Command, first and foremost with medium-range missiles, as well as with the means of the front itself -- the bomber aviation with the employment of nuclear bombs, and separate missile battalions of the R-550 type. To successfully achieve air superiority, it also is necessary to destroy enemy aviation guidance and control posts, the air defense means and primarily the surface-to-air missile launchers of the types Hawk, Nike Hercules, etc., as well as those surface nuclear means of the enemy within range of which the airfield basing areas of our aviation are located.

Naturally, besides the conditions indicated, air superiority also is achieved by establishing the aviation grouping that would ensure superiority of forces on the most important axes of the front in the shortest time.

Let us examine in more detail the question of cooperation of the rocket troops of the front with the air army in combat with enemy nuclear means.

Combat with the nuclear means of the enemy is organized by the front commander. To this end, it appears advisable to us for each army of the first echelon to be allocated a definite complement of fighter-bomber aviation and to designate an army zone of combat with nuclear means up to 200 to 250 kilometers deep for each day of the operation. Beyond the limits



~~TOP SECRET~~

Page 20 of 24 Pages

of this zone may lie a front zone to the depth of the operating radius of the operational aerial reconnaissance of the front, and beyond this is the sphere of actions of the General Headquarters of the Supreme High Command. The boundaries of the front zone in terms of days of the operation (for the depth of the immediate, and then of the subsequent task of the front) are indicated by the General Headquarters of the Supreme High Command. The boundaries of the army zones are determined accordingly by the commander of the front.

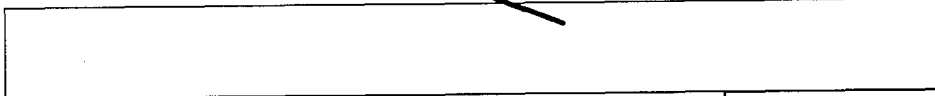
With such an organization of combat with nuclear weapons, forces and means are allocated efficiently and armies can display more independence; they are freed from the wardship of the front, which is very important under the conditions of a fast-changing operational situation, though help from the higher level is not excluded.

In the army zone of combat with enemy nuclear means, the cooperation of the rocket troops, the aviation operationally subordinated to the commander of the army, and the artillery is organized by the commander of the army. Cooperation is manifested primarily in the allocation of tasks between the aviation and the rocket troops, and in the establishment of a common system of target indication and control signals. The most important condition for success in combat with enemy nuclear weapons, as we have repeatedly mentioned, is air superiority. Only on this condition is effective aerial reconnaissance of the enemy means of nuclear attack and, consequently, effective combat with them, possible.

It is in place here to emphasize once again the role of the means of the General Headquarters of the Supreme High Command and the front in destroying the main forces of enemy aviation and ensuring superiority of our aviation over the enemy in the army combat zones as well. In the interests of achieving air superiority the most important task of the rocket troops of the army and also of the cruise missile units of the air army will be to hit the surface-to-air missile batteries, primarily those of the Hawk type, which are capable of destroying aircraft at the lowest altitudes.

In assigning such a task, the army commander assesses the disposition of the enemy surface-to-air missile troops and marks

~~TOP SECRET~~

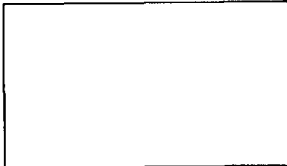


those targets the destruction of which will make a breach in the enemy air defense system and allow our aviation to penetrate into the depth of enemy territory on the selected axes. Missile strikes against the surface-to-air missile batteries are coordinated by time with the approach of aviation to the zone of fire of these batteries. Another important task of the rocket troops in support of the aviation should be considered the destruction of large detection radar stations and aviation control and guidance posts of the enemy, which are still the main means of delivering his nuclear weapons to target.

As a result of the destruction of the above-mentioned targets, favorable conditions are established for our aviation -- for destroying delivery aircraft in the enemy's airspace and conducting free hunting for nuclear means of the Corporal, Sergeant, and Redstone types. Together with this, in case of heavy coverage of these targets by air defense means, destruction of them with nuclear strikes by the rocket troops of the army can be organized at the decision of the army commander. Such a "division of labor" between the aviation and rocket troops is based on the well-known dependence of the rocket troops on aerial reconnaissance means, which are for now the main source of obtaining reconnaissance data, and on the desire to make maximum use of conventional means of combat to hit the enemy nuclear means, which permits increasing the strength of missile/nuclear strikes on the grouping of enemy troops on the ground, the importance of which must not be underestimated in any way.

Occupying a special place in the army zone of combat with nuclear means is the destruction of the tactical nuclear means of the enemy. Whereas these means belonging to the large units of the second echelons or reserves are hit by fighter-bomber aviation detecting them by the method of free hunting on the march or in concentration areas, the tactical nuclear means of the large units of the first echelon of enemy army corps are hit mainly by artillery, and the immediate organizers of this combat are the division commanders.

To detect the nuclear means of the enemy, primarily helicopters, but also sabotage-reconnaissance groups sent into the enemy disposition on the instruction of the division commanders, are used.



~~TOP SECRET~~

[REDACTED]

[REDACTED]

Page 22 of 24 Pages

We picture the organization of combat with nuclear means in the tactical zone as follows: in a division, as is known, a divisional artillery group is established that has the main purpose of conducting combat with enemy artillery, primarily atomic artillery, while the regimental artillery groups are mainly intended for combat with guns and launchers of the Davy Crockett type and with mortars.

Here it should be emphasized that any division of ours as currently organized requires considerable artillery reinforcement, since an enemy division, particularly of the US Army, is greatly superior to it in artillery and mortars (by more than 100 pieces), as well as in means of nuclear attack. Suffice it to say that just the Davy Crockett launchers alone in an enemy division number more than 30.

The division commander, after assessing the situation and probable areas of deployment of the enemy nuclear means, assigns tasks to the sabotage-reconnaissance groups and prepares special tank groups to destroy the detected nuclear means of the enemy. These tank groups, having received the necessary instructions, make use of gaps in the battle formations and, without becoming involved in battle with tanks and infantry, move out under concealment to the positions or lines of withdrawal of the detected enemy nuclear means and destroy them.

Here is what, in our view, the scheme for the destruction of nuclear means should be. The data on the detection of enemy nuclear means come in from a helicopter or sabotage-reconnaissance group collectively to the division staff, the division artillery staff, and the divisional artillery group. The last immediately prepares the data and, with the permission of the chief of artillery, opens fire to neutralize the detected target and, under favorable conditions -- to destroy it. Further, depending on the situation and the decision of the division commander, the following actions are possible: 1) The sabotage-reconnaissance group that called for and if necessary spotted the artillery fire, after brief neutralization of the target, gives the signal to cease fire and confidently attacks the target, utilizing the results of the artillery fire. 2) The divisional artillery group will conduct fire to neutralize the target until it is reached by the forward units of the division or by a tank group specially sent out to destroy it. 3) The

[REDACTED]

~~TOP SECRET~~



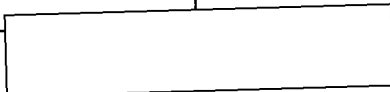
divisional artillery group will conduct neutralization fire until such time as the target is destroyed by a tactical missile with a nuclear warhead, which may require from 10 to 40 minutes to prepare for launching. The duration of neutralization of the target, depending on its distance and the rates of advance of the troops (or the movement of the tank group), can be, as calculations show, from 25 minutes to 1.5 hours, with the expenditure of 150 to 800 shells. The cooperation of sabotage-reconnaissance or tank groups with regimental artillery groups can be organized analogously when destroying launchers and guns of the Davy Crockett type.

In a front zone of combat with enemy nuclear means, cooperation of the rocket troops of front subordination and the main forces of aviation is organized by the front commander. This organization is to an even greater degree permeated with the idea of achieving air superiority. Gaining and holding air superiority is achieved by joint systematic strikes by the rocket troops and the bomber aviation of the General Headquarters of the Supreme High Command and the front, with the employment of nuclear warheads against enemy aviation on airfields and cruise missiles at launching positions, and by the destruction of aircraft in the enemy's airspace.

On receiving data on the landing of some group of delivery aircraft at certain airfields, the commander of troops of the front organizes their destruction in such a way as to destroy the group before they fuel up and take off, i.e., in the course of two to four hours. In conformity with the decision of the front commander, the front chief of staff together with the chief of rocket troops and artillery and the chief of staff of the air army, refine the targets and the procedure for hitting them for the rocket troops and aviation. Here, the targets most solidly covered by surface-to-air missile troops are assigned to the rocket troops (mainly to the units armed with R-550 missiles). In addition, the front missile brigade (in the front zone), and the army KR-180 cruise missile brigades and regiments of the air army (in the army zones) are allocated to destroy the control posts (mainly those of the enemy fighter aviation and surface-to-air missile batteries) on the axes of flight of the front bomber aviation to targets of destruction. Thus, hitting enemy aircraft on airfields with the joint strikes of the rocket troops and the aviation is quite a complex matter.



~~TOP SECRET~~

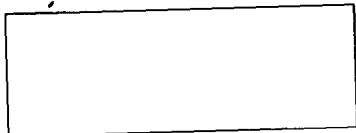
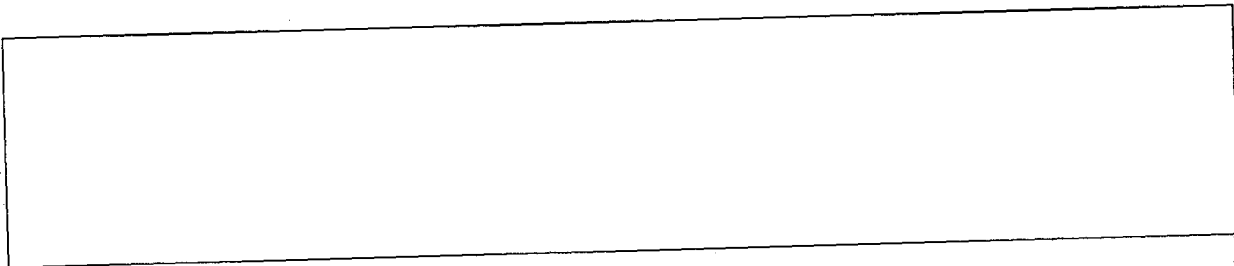


Page 24 of 24 Pages

Cooperation of the rocket troops and aviation when hitting aircraft, especially delivery aircraft, in the enemy's airspace is manifested above all in hitting the aviation control posts and surface-to-air missile batteries, by which a certain freedom of action is attained for our own aviation.

Other enemy operational-tactical nuclear means in the front zone (Pershing, Matador, Mace) are hit predominantly by the fighter-bomber aviation, or, in case there are not enough of these forces or enemy air defense is strong -- by the rocket troops of front subordination. In all cases, to assess the results of a hit, the strike areas are photographed.

/// All that has been set forth, it seems to us, permits an important conclusion to be drawn: the carefully thought-out and extensive use of conventional means of destruction -- aviation and artillery -- can successfully solve the problem of destroying enemy nuclear weapons with a minimum expenditure of nuclear warheads in an operation.



~~TOP SECRET~~

