
To: Head of the Military Academy of the General Staff,
Marshal of the Soviet Union
Comrade M. V. Zakharov

To your [request] # 24762s

Following your request, I am sending you the material on the development of the military art in the conditions of nuclear war, according to current notions

Attachment: . . . as mentioned in the text only for the addressee

Colonel General P. Ivashutin

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Strategic Operations of the Nuclear Forces

Strategic operation is the main form of use of strategic nuclear forces and ammunition in a thermonuclear war. It is prepared as a response to the threat of unexpected nuclear attack by the imperialists for the contingency where, in violation of common sense, the imperialists decide to start a thermonuclear war. This is a forced measure on the part of the socialist countries resulting from the aggressive policy of the global imperialist reaction . . .

The strategic operations of the nuclear forces will involve massive nuclear strikes by the strategic missile forces, nuclear strikes of strategic aviation, and nuclear strikes of nuclear submarines. Such strikes will be targeted according to one plan and strategic command. Strategic operations of nuclear forces will be characterized by unprecedented spatial expanse. They will instantaneously cover all continents of the earth, all main islands, straits, canals, i. e. the entire territory of the countries-participants of the aggressive coalition. However, the main events in all probability will take place in the Northern hemisphere—in Europe, North America and Asia. In this hemisphere, essentially all the countries, including the neutral countries, will suffer destructive consequences of massive nuclear strikes (spread of radiation) to some extent. . .

The strategic operation of nuclear forces is a new phenomenon in the military art. The history of wars does not know anything like it. . .

Such operation will rely on the decisive use of the highest achievements of scientific and technological thought to ensure security of the socialist countries, and a complete defeat and physical annihilation of the aggressor, if he rushes into the abyss of thermonuclear war having lost his head. This operation will involve organized use of complex and powerful technological means—ballistic missiles with nuclear warheads, strategic aircraft with nuclear ammunition, and nuclear submarines with nuclear warheads—for the defeat of the aggressor.

The preparation of the strategic operation of nuclear forces poses a complex scientific and technological task. In addition to accumulation of strategic forces and ammunition, creating a group of those forces and means, and preparation of their positions, it would be necessary to choose and define the targets, organize reconnaissance of the targets, conduct complex calculations for their destruction, and ensure unconditional accuracy and the fulfillment of the final objective of the strikes.

In the United States, all this work is conducted by the directive of the President and the National Security Council. The Joint Chiefs of Staff and the Strategic Air Command are directly in charge of preparation of the strategic nuclear forces for their use in the war. The Strategic Air Command created a special administration for planning strategic targets, headed currently by the head of the Strategic Air Command, General Power. 180 generals, admirals and other officers work in this administration. A special computing center is in charge of processing data for the targeting. The administration and the computing center are engaged in planning the targets, obtaining reconnaissance data on the targets, and the detailed characteristics of the latter up to the radiological defense of the target.

It is known what importance the United States affords to the intelligence on the targets for nuclear strikes. The American government is trying to use every international event for the purposes of gathering intelligence information. In the United Nations and at various international commissions, American representatives repeatedly try to introduce plans, which would make reconnaissance of targets easier.

The entire intelligence system of the United States—the Central Intelligence Agency—works for the Strategic Air Command. Such institutions as the Rand Corporation, the Hudson Institute, and other scientific organizations are involved in the selection and evaluation of targets for nuclear strikes. In all probability, all major work for preparation for use of the strategic nuclear forces has been already completed in the United States. . .

The fact that the strategic nuclear forces of the United States are kept in the constant state of readiness for use presents a great danger for the cause of peace. . . . The launching sites of intercontinental missiles are staffed around the clock, and some missiles are even outfitted with nuclear warheads.

The question of the method of conducting the strategic operation of nuclear forces represents a new and very complex issue. The United States has developed the following principles of employing strategic nuclear forces: launch of missile and aviation nuclear strikes according to one strictly centralized design and plan, coordination in time and place of the targets of the strikes by intercontinental missiles, strategic bombers and nuclear submarines. Not all missiles will be used in the first strike, part of the Minuteman missile force will be left in reserve; repeated launches from the same launchers are improbable; each launcher is targeted at a specific object. . .

The Strategic Air Command of the United States conducts systematic training of the command and communication centers. Such training represents a grave threat to peace, because it entails the possibility of an accidental start of the war. Games played by the generals from the Strategic Air Command of the U.S.A. could lead to a global catastrophe.

Our retaliatory nuclear strike will mark the beginning of the strategic operations of our nuclear forces. The structure of our retaliatory strike will be determined by the situation. We will have to be ready for most unexpected actions, because the initiative in starting a thermonuclear war will come from the aggressor . . .

In responding to the launch of the strategic missiles of the aggressor, the Soviet Union is capable of retaliating with an even more powerful launch of its own strategic missiles, and not merely one . . .

It has to be considered that the enemy will try to conduct nuclear strikes against the launching positions of our strategic missiles. This can create a very complicated situation, which must not be ignored.

Actions of the strategic aviation, which is capable of conducting nuclear strikes from the air at the same targets on the ground, will become an important supplement to the strikes of the strategic missile forces. However, in addition to that, the long-range aviation can also conduct strikes against nuclear submarines, aircraft carriers, and other naval targets, conduct reconnaissance of the results of nuclear strikes in the territory of the enemy, and search new targets subject to destruction.

Because the long-range aviation will require some time to fly to the area of the targets, a simultaneous strike by missile forces and the aviation is unlikely. It would be inexpedient as well. Strikes by missile forces will inevitably undermine the air defense system of the enemy, which will create favorable conditions for actions of the long-range aviation . . .

The operations of strategic aviation in a thermonuclear war will also have other special features. In addition to the unavoidable destruction, fires, high levels of radiation in the areas of deployment, strategic bombers will often have to fly over the epicenters of nuclear explosions with clouds of radioactive dust, with dangerous levels of radiation rising high above them. They will have to go around such clouds . . .

The nuclear submarines will have to be deployed to their firing positions before the launch of the nuclear strike, which will require considerable time. The American command plans to account for this by constant patrolling in certain areas. However, that does not solve the problem, because only part of the submarines could simultaneously participate in the patrolling; the rest of the submarines would have to be deployed in the firing positions, which is impossible to conceal in modern conditions.

The deployment of nuclear submarines to the area of firing positions could turn out to be a complex measure, because it will be necessary to overcome the anti-submarine defenses of the enemy and ensure the survivability of submarines in the areas of missile launch. The task of ensuring the navigational guidance of nuclear submarines, i. e. ensuring the precise deployment of the nuclear submarines to the firing positions, is no less complicated . . .

Launches from nuclear submarines will most likely be coordinated in time and place with the strikes by nuclear missile forces and strategic aviation.

The following tasks could be set for a strategic operation of nuclear forces: the destruction of the military-economic potential of the aggressor coalition; the disruption of state administration and all activity of the aggressor countries; the destruction of the armed forces, missile aviation and naval bases, warehouses and arsenals of nuclear weapons; the defeat of the formations of armed forces in the theaters of military action, i. e. a complete breaking down of the combat readiness of the enemy coalition.

The question arises by itself: would setting such tasks for one or several strategic operations of nuclear forces in the beginning of a thermonuclear war be realistic?

Such question arises because in a global thermonuclear war, the countries of the socialist commonwealth would be confronted by the camp of imperialism comprised by a large number of imperialist states, including big states, which possess great military and economic potential and substantial territory; large accumulation of strategic nuclear forces and considerable conventional military forces. If the new world war were waged with conventional means, the planning for a complete military defeat of the imperialist coalition in short time would be pure gamble. However, the nuclear weapons change the situation completely. Using the nuclear weapons that are available at the present time in the world, one can turn up the earth itself, move mountains, and splash the oceans out of their shores. Therefore, the tasks that can be set for the strategic operations of nuclear forces in response to an aggression are realistic, even though they may seem to be based on fantasy.

The most aggressive forces of imperialism engaged in preparing a thermonuclear war against the socialist countries count on their ability to effectively paralyze socialist countries with an unexpected first strike, destroy their nuclear forces, and thus achieve a victory while having saved their countries from a devastating retaliatory nuclear strike. However, there are very few people left—even among the most rabid imperialist military—who would believe in the feasibility of such plans. In the age of an unprecedented development of electronics, it is impossible to achieve a genuine surprise strike. The very first signs of the beginning of a nuclear attack by the imperialist aggressor will be discovered, which would give sufficient grounds for launching a retaliatory strike. The time will be measured in minutes, but it will be quite sufficient for making most of the combat-ready missiles airborne even before the first explosions of the enemy nuclear missiles in the territory of socialist countries.

Lately the United States has been increasingly concerned by the rapid weakening of its nuclear and missile power relative to that of the Soviet Union. [Secretary of Defense Robert S.] McNamara has been forced to admit that the superiority in the power of nuclear warheads belongs to the Soviet Union . . .

Let us suppose that the United States is actually capable of destroying the Soviet Union several times over. Does this mean any kind of military superiority? No, it does not, because the USSR possesses such strategic capabilities that ensure a complete destruction of the United States in the second strike. It does not matter how many times over the United States will be destroyed. One does not kill a dead person twice or three times.

In the second nuclear strike, the socialist countries will have to target their missiles and aviation at the objects that represent the basis of the economic and political power of the aggressive imperialist states. We do not have any alternatives, because the imperialist aggressors will mainly launch their nuclear strikes against analogous objects. The imperialist camp is much more sensitive to the strikes against such objects than the socialist commonwealth. McNamara's effort to try to persuade us to accept his . . . 'rules' of conducting a thermonuclear war, i. e. to abstain from nuclear strikes against cities and industrial centers, cannot be seen as other than the admission of the greater vulnerability of the imperialist camp in this respect . . .

To disable the economy and disrupt the daily life of all the imperialist member states of the aggressive coalition, it will not be necessary to target our second strike at all the centers, regions and plants. Such strike could be targeted at the main aggressors and at the most vulnerable objects, which would lead to most disastrous consequences. Everything else could be destroyed by subsequent strikes.

In the territories of the socialist countries we also have large regions with high concentration of industrial enterprises and high density of population. However, overall, the economy and the population of the

socialist countries are more evenly dispersed compared to the biggest capitalist countries; and the economy of the socialist countries is less dependent on the world market.

The second most important task of the strategic operation of the nuclear forces is to destroy missile, aviation and naval bases, strategic and tactical nuclear ammunition, and armed forces in general. To what extent is this task realistic?

The entire system of military bases of the imperialist countries turned out to be very vulnerable to nuclear strikes, which puts the stability of the entire military machine of the imperialist camp, and its armed forces, in doubt. The overwhelming majority of military bases located in foreign territory are within the range of medium-range missiles and bombers. They can be paralyzed by the very first launch of missiles. Such a launch will become terminal for many states that allowed building of foreign military bases in their territory, which does not contribute to the stability of the imperialist camp.

The main military bases are located mainly in the territory of the major imperialist states—in the territory of the United States, Great Britain and the Federal Republic of Germany. Because of the size of their territory (and maybe also because of economic considerations), the majority of the military bases are located close to cities and other large communities. Nuclear strikes at such bases will inevitably lead to deaths of millions of civilians. But that is not the only issue.

The vulnerability of military bases of US strategic aviation is well known, and now even military figures in the United States admit that . . .

The 6-12 launching sites [of the Atlas missiles] are located around the command and control center or the central base. In order to destroy such a base, one or two high-yield nuclear explosions will be sufficient . . .

Therefore, the fact that the imperialist states possess a large number of military bases does not give them any kind of military superiority; to the contrary, these bases will become a kind of magnets, attracting missiles with nuclear warheads. To a large extent, they simplify the task of undermining the nuclear strength of the imperialist camp and of annihilating its armed forces.

One of the tasks of the strategic operation of the nuclear forces will be the destruction of the groups of forces, airfields, launching positions of tactical missiles, naval forces, command and control centers, and both the ground forces and the naval forces in the theaters of military action . . .

Strategic nuclear forces of the socialist countries possess the military capabilities to ensure the fulfillment of all the main tasks of the strategic operation of the nuclear forces in a thermonuclear war, regardless of how unbelievable these may seem . . .

What will be the likely consequences of the strategic operations of nuclear forces?

It is impossible today to give a precise answer to this question. However, it is clear that a strike of several dozens of missiles with 50 to 100-megaton nuclear warheads will lead to a terrible devastation even in the territory of a country the size of the United States. If so, then what would be the scale of devastation resulting from the strikes of hundreds and thousands of megaton nuclear warheads? Most likely, the main countries of the enemy coalition will suffer such destruction, fires, floods, and the radioactive contamination

of the territory that all these countries will be paralyzed. It is very unlikely that they would be able to continue the war.

Of course, great devastation will also occur in the territory of socialist countries, and in the territory of countries not taking an immediate part in the military actions (because of the radioactive fallout). Thermonuclear weapons destroy everything in their way without discrimination. However, the imperialist camp assumes more risk. This is the merciless logic of the thermonuclear war.

In order to preserve life on earth, the centers of world civilization and culture, one has to prevent the fire of a thermonuclear war. This is a common interest of all peoples of the world, of every single person regardless of which camp he belongs to.

Operations of the Anti-ballistic and Air Defenses

Operations of the anti-missile and air defenses represent a sum of the combat actions of the operative units and the combination of troops of anti-missile and air defenses, which would be conducted following a single design and aimed at the destruction of incoming missiles and aircraft of the enemy, and a complete breakdown of enemy air and space operation. The main goal of the operation is to defend the country from the nuclear strikes of the enemy and to ensure the survivability of the socialist countries and combat readiness of their armed forces.

Defense of the socialist countries from the nuclear strikes of the aggressor is a highly complex task requiring the ultimate responsibility. It can be fulfilled in the conditions of the maximum use of all capabilities of the forces and means of the anti-ballistic and air defenses, along with a decisive use of the attack forces. The anti-ballistic and air defenses of the Soviet Union have presently achieved such a level that today we could set the most decisive goals for an operation of the anti-ballistic and air defense forces of the country.

Currently there is an intense discussion in the West about the balance of the means of offense and defense. . . . The most aggressively inclined military ideologues of the imperialist camp see preventive war—the nuclear first strike—as the only solution in the current situation. . . .

Military ideologues of the imperialist camp spread shameless slander against the Soviet Union, accusing it of preparation of a preventive strike, although they know very well that preventive strike is not compatible with the peaceful policy of a socialist state. The Soviet government has repeatedly stated that the Soviet Union would never be the first to use nuclear weapons, and that those weapons could only be used if the aggressor forces us to do it. This is the common policy of all the socialist countries.

It is very clear that, in launching a retaliatory nuclear strike, one cannot count on full annihilation of the means of nuclear attack of the enemy on their bases. Some of those means the enemy would be able to keep in the air and use for a strike against the targets in the socialist countries. All this forces the socialist countries to apply great effort to create effective anti-ballistic and air defense systems.

It is generally conceded that the Soviet Union is significantly ahead of the United States in this sphere. American Senator Strom Thurmond has warned U.S. military that "the Russian defense systems have

reached such a level that the Russians could destroy our Polaris and possibly even Minuteman missiles in the air." . . .

The operations of our anti-missile and air defense forces will be directed at deflecting nuclear missiles and nuclear aviation strikes of the enemy. These defense operations. . . should not be confused with a defense operation in the conventional sense, in which ground troops act against the enemy attacking on the ground. Operations of anti-missile and air defenses will take place in the air, with the participation of active means of anti-ballistic and anti-airplane defenses. The basic features of such an operation were born as a result of World War II as an organized use of means of air defenses to repel the air attacks of the enemy. However, the modern operation of anti-ballistic and air defense forces will not be like the air defenses of the last war. It will also represent a new phenomenon in the military art.

The Soviet armed forces possess military systems of various kinds, including long-range means capable of striking at practically all modern means of the enemy air and space attack.

What will an operation of anti-missile and air defense forces in a thermonuclear war look like?

First of all, it is necessary to ensure an early warning about the enemy's preparations for an attack. This task will be carried out by the entire system of strategic intelligence, in which radio communications troops and anti-missile and air defenses forces will play an important role. Massive preparations for missile launch, for aircraft deployment, and the moving nuclear submarines to their destination cannot be effectively concealed; therefore, our preparations for the enemy attack will be detected. . . .

Then active anti-missile defenses will begin their action. Their tasks include interception and destruction of enemy ballistic missiles in the active stretch of the trajectory, when the engines are still working and the missile could be relatively easily discovered, or in the main part of the trajectory in space, or during the descent part of the trajectory, during its approach to the target, but not below a certain altitude, in order not to allow destruction of the target by the explosion of the missile itself or the anti-missile. The level of development of the anti-ballistic forces allows setting and successfully fulfilling such complex tasks already at the present time.

Finally, the anti-aircraft forces and means will enter into action. The use of long-range fighters and long-range anti-air missile complexes, capable of intercepting and destroying aircraft early during the approach to the borders of socialist countries, before they can launch the air-to-ground missiles, and also interception of aircraft and missiles at distant approaches to the targets will assume special importance. Those aircraft and unmanned aircraft, which will be able to penetrate the zone of long-range interceptors, will be destroyed by fighter-interceptors and anti-air missile complexes along the routes of their flights and near defense targets, but at safe distances. The exceptionally high effectiveness of the anti-aircraft forces will allow us to successfully fulfill the task of destruction of all incoming aircraft and cruise missiles of the enemy.

During the operation, the combat actions of the anti-ballistic and air defense forces of the country will be characterized by high activity, fast pace and absence of breaks in action. It is important to ensure persistent impact against the attacking missiles and aircraft of the enemy until their complete annihilation in any possible circumstances. This can be achieved by a tight interaction of all forces and means—the anti-ballistic forces, fighters, anti-aircraft missiles, and radio communications means. It is quite possible that the regions of action of the anti-ballistic and air defense troops will suffer from explosions of the enemy nuclear weapons, huge fires, destruction, and high levels of radioactive contamination. Entire defense units could be

wiped out. Therefore, high level of preparation of our anti-ballistic and air defense forces, their ability to maneuver and quickly restore the disrupted parts of the defense system in any location will be very important for a successful conduct of such an operation.

Operations of our anti-ballistic and air defense forces will be conducted in close coordination with operations of other forces—operations of the strategic forces, ground troops, and the Navy. By destroying the enemy missiles and aircraft in the air, not allowing nuclear strikes against vitally important objects, against forces and means of armed struggle, the troops of anti-ballistic and air defenses thus assure decisive conduct of other operations, and first of all, of the strategic operations of nuclear forces. This is the place of operations of anti-ballistic and air defense forces within the system of all the operations, which would be carried out by the Armed Forces in a thermonuclear war with the goal of defeat or physical annihilation of the aggressor.

One of the decisive conditions for a successful conduct of the operations of the anti-missile and air defenses is constant combat readiness of all forces of the Warsaw Treaty Organization at a very high level. . . .

The air defenses of the United States are structured mainly as anti-aircraft defenses. The Northern and Western flanks are most heavily covered. As far as the Southern flank is concerned, it is not covered even with radio communication means, not even mentioning any active means. This is the weak part of the U.S. air defense system, which becomes even more vulnerable with the creation of the global missile capable of striking from any direction. American military leaders confess that US air defenses are powerless against ballistic missiles. However, even their anti-aircraft defense system has many weak spots: a lack of long-range fighter-interceptors, and an insufficient coverage of certain important directions. American experts estimated that the U.S. air-defense system could let through 25 to 30% of the attacking aircraft. Each of those planes, as is well known, could carry a megaton load capable of producing huge devastation. The extremely expensive air-defense system of the United States turned out to be less than effective.

At the present time, the United States is making concerted efforts to create a single global air defense system, which would be capable of destroying ballistic missiles, piloted aircraft, and intercontinental unmanned aircraft. However, construction of such a system is a question of the future.

The anti-ballistic defense plays the most important role in the existing situation. The system of anti-ballistic defenses in the modern conditions should include the means of early detection of missiles with powerful radars or other means of automatic technical support (selection of the targets), calculation of the current trajectory of the missile flight; a system of information and targeting, anti-missile means; electronic countermeasures. . . .

McNamara has openly admitted the drawbacks of the Nike-Zeus system [of anti-missile defense]: the selection of targets [incoming missiles] is not ensured, and the system is not capable of destroying a ballistic missile at a secure distance from its target, therefore, a dangerous radioactive contamination of the area of explosion is created; and the cost of the missile is too high. Therefore, they are changing the program of production of the Nike-Zeus system. They are speedily building a new system, "Nike-X." ("Spring"). . . . However, this system could only be created by the end of the 1960s. . . .

They [the United States] are conducting research to create the so-called screen system, which would consist of many earth satellites capable of hitting missiles; there is also research on using lasers, gamma-rays, neutrons, and so on. All this research, which is conducted in the United States with the goal of developing an anti-ballistic defense system, deserves our attention.

The solution to the problem of destruction of the ballistic missile in flight is a great achievement of the Soviet Union—the evidence of the high level of development of our science and technology. The anti-ballistic defense deals with an insignificant in size and reflecting surface target, which is moving with a space speed. For example, the head part of the Atlas missile has a reflecting surface of only 0.5 square meters, travels with the speed of 25 thousand kilometers an hour, and reaches the altitude of 1,300 kilometers. First of all, this target has to be discovered at a very large distance. Then, the selection of targets presents a very difficult task, i. e. the identification of the genuine head section among false targets. This task is technologically feasible: by the spectrum of the reflected signal—the Doppler shift of the frequencies, by the speed of travel, by the phenomena accompanying the head part's entry into the atmosphere, and so on. Then it is necessary to launch an anti-missile (or another active means) on the trajectory of the enemy missile's flight, and ensure interception and unconditional destruction of the target. All this must take minutes, and even seconds. We also have to seriously take into account the fact that the enemy will be trying to confuse our anti-ballistic system, divert the anti-missile, and organize electronic resistance. It is also known that nuclear explosions at high altitude can seriously interfere with the work of the radio-electronic means of detection, interception, targeting, and administration. And still, all these complex technological problems can be solved at the present time.

The air defense system of the socialist countries is based on the combination of the power of anti-missile troops and fighter aviation armed with air-to-air missiles. The creation and procurement of the long-range anti-air missile systems and long-range fighter-interceptors represents an important achievement of the Soviet Union. The high effectiveness of the anti-air missiles, the combination of the supersonic speed and high maneuverability with the accuracy of the fighter-borne missiles ensure the destruction of aircraft, cruise missiles and the air-to-ground missiles at the required distances and in the entire spectrum of altitudes. The effectiveness of the air defense system is improved by the use of nuclear warheads. An explosion of a nuclear warhead at high altitude considerably increases the combat effectiveness of the air defense instruments—the aircraft or the missile is destroyed tens of kilometers away from the epicenter [target?]

The means of the air defense system have achieved such a level of development that they ensure reliable destruction of high- and low-altitude aircraft and cruise missiles traveling straight or maneuvering in flight, even in the conditions of strong interference.

Already at the present time, the space-based defense systems have acquired practical meaning. . . .

Disregarding the agreement prohibiting the placement of means of nuclear attack in outer space, the United States and other imperialist countries have been persistently conducting research on the military use of outer space. . . . Some military representatives of the United States directly pointed out that the best 'defensive' system in outer space would be a "space-based bombing system"

Regardless of how reliable the system of active defense is, it alone cannot fully protect a country from suffering from the enemy nuclear strikes. Penetration [of the defense] by several missiles with nuclear warheads would be sufficient to incur enormous devastation. Therefore, it is important to have ready forces and means of Civil Defense available for quick liquidation of consequences of the enemy nuclear strikes. The system of Civil Defense consists of special formations charged with putting out the fires, cleaning up the debris, providing medical assistance to the population, evacuation of the population from the areas of impact, organization of defense and maintenance of order, and also other tasks in the wartime. Local population under the leadership of local administration, troops stationed in the rear, means of transportation etc. should

be engaged in the implementation of the civil defense tasks. The population of the socialist countries should be taught to act in an organized fashion to clean up the consequences of the enemy nuclear strikes.

Such countries as the United States and the FRG believe that preparation of civil defense is very important. Governmental bodies, units and forces of civil defense of the member countries of the aggressive NATO military bloc are regularly involved in all of the important maneuvers of NATO troops. Such maneuvers create a tense atmosphere and increase the war hysteria. Often such maneuvers lead to panic among the civilian population.

All this points to the need to prepare the civilian population of the socialist countries to be able to act skillfully and in an organized fashion in the conditions of massive nuclear strikes of the enemy.

Operations of the Ground Forces

Notwithstanding the fact that the strategic nuclear weapons will become the decisive means of combat in the nuclear war, and consequently the means of fulfilling the main tasks of the war, the armed combat in the main ground theaters of military action will most likely still be extensive in such a war. The aggressive NATO bloc maintains substantial ground troops in the state of constant readiness in Europe, especially in the Central-European theater. State leaders of the West have repeatedly stated that the NATO countries possessed stronger ground troops in Europe than the countries of the Warsaw Treaty. It was stated, in particular, by U.S. Defense Minister McNamara in the fall of 1963.

The command of NATO prepares the ground troops and the tactical aviation deployed in Europe primarily for the action in the conditions of use of nuclear weapons. They devote special attention to implementing measures for protecting the groups of ground troops and tactical aviation from the impact of nuclear weapons. For this purpose, the groups of troops are kept in a dispersed order, with prepared directions for maneuver, and with construction of all kinds of covers, etc. NATO military plans are being developed on the basis of the calculation that that bloc would be able to preserve the necessary groups of troops and aviation in the situation of nuclear strikes and to use them for forward action after the so-called nuclear offensive, which would be carried out over the course of several days. In adopting the so-called forward strategy, the NATO chiefs, along with other considerations, count of their ability to move their troops out of the regions, which could fall under the strikes of the medium-range strategic nuclear forces, and therefore to save them from annihilation in the very first minutes of the war. But those are mere pipe dreams. The medium-range missiles are now capable of striking the enemy in any region while ensuring safety of our troops. In addition, the socialist countries have a sufficient quantity of theater and tactical nuclear means, which represent a serious supplement to the strategic forces.

The presence of large groups of ground forces in addition to powerful strategic nuclear forces in the imperialist camp may be explained by the following reasons. NATO leaders are making their bets on the local wars, in which they would use primarily ground troops. However, the imperialists are not convinced that they will be able to achieve their main war aims by using nuclear forces only. It is possible that they would need to deploy large forces of ground troops after the nuclear strike to invade the territory of socialist countries, or use those troops to repel attacks by the socialist troops if the war the imperialists had unleashed were to turn against them. . .

In such a situation, the socialist countries will have to prepare comparable groups of ground troops and tactical aviation capable of following up the retaliatory nuclear strike of the strategic forces by decisive military operation with the objective of defeating the aggressor as quickly as possible and achieving their war aims. Such groups will be prepared primarily in order to conduct forward operations in the complex conditions of nuclear war.

The operations of ground forces in the thermonuclear war will not be like the analogous operations of the past war either in character or in methods. The means of armed struggle have changed, and the ground troops developed new combat qualities; the character of war itself has changed drastically. One can say with assurance that the operations of ground troops in a nuclear war will assume principally new features, qualities and characteristics.

The main instrument of fulfilling the main objectives of war in the ground theater—the defeat of the groups of the aggressor forces—will be the nuclear weapons, nuclear strikes launched first of all and mainly by the strategic forces, and also by the theater and tactical missile forces and by the front aviation. Tanks and the mechanized rifle formations and units would use the results of the nuclear strikes for the completion of the defeat of the still surviving groups of enemy troops and for fast movement in the depth of the enemy territory. During the offensive, combat confrontations with the advancing troops of the enemy could take place; fighting with the use of both conventional and nuclear weapons is a possibility. As far as the scale of combat in the theaters of military action is concerned, it is unlikely that it will be as extensive as during World War II.

The character of the armed struggle in the theaters of military action will change. Such tasks as penetration of the enemy front, defeat of his group of forces in the tactical and theater zones, encirclement of large masses of troops, which used to require considerable forces and weapons, and intense efforts of the troops, cease to be the tasks of the day. Any group of forces, whether close to the front, or deep in the territory, can be quickly destroyed by several nuclear strikes. The advance of [our] troops can be slowed down not so much by the resistance of the enemy troops, but by the enemy nuclear strikes, which could inflict great losses on the advancing troops, and also produce destruction, debris, flooding and zones of radioactive contamination, which will emerge as a result of nuclear strikes. The need to maintain an uninterrupted line of action along the entire front, as well as the elbow connections between units and formations recedes to the past, and at the same time it would be impossible to do so due to the low density of troops in the theater. Combat actions will develop along defined directions, simultaneously to various depths (including substantial depths), and will be characterized by frequent maneuvers, dynamic movements, and sharp changes in the situation.

Operations of the ground troops and the front aviation in the theaters of military action will be conducted with the purpose of completing the defeat of the surviving groups of the enemy troops in the entire theater, overtaking the enemy's territory, and cleaning up the consequences of the nuclear strikes in the entire theater, and not letting the enemy troops into the territory of the socialist countries.

In order to achieve these goals, we would have to conduct offensive operations on the strategic scale, covering the entire theater of military action. One should not exclude the possibility that in the process of an offensive operation of a strategic scale, unfavorable situations could develop in some of the zones, and force the troops in those zones to turn to defensive operations. In such a case, the main objective of the defense would be to repel counterstrikes, a counteroffensive, or an offensive by the enemy on some directions, weakening of his group of troops, and creation of the conditions for a successful development of the

offensive on the main directions, and the subsequent start of the offensive in those zones where the troops were forced to turn to the defense.

In order to conduct an advance operation in the main theater of military action, we could engage several front units and units of airborne troops, military transport aviation, the border units, and units of anti-missile and air defenses, and in the maritime zones—forces and means of the Navy. One has to keep in mind that objects and groups of troops in the theater of military action will be subject to nuclear strikes from the strategic missile forces, long-range aviation, and nuclear submarines. The strategic nuclear forces will not be engaged in an offensive operation in the theater of military action in a direct sense—they will act by the plan of the Supreme Command. However, they will carry out the main tasks of the armed struggle in the theater of military action. By the forces and means involved, and by its results, an offensive operation in the main theater of military action can be fully classified as a strategic offensive operation; in the process of such an operation, strategic tasks of armed struggle will be pursued.

In the other, secondary theaters of military action, forward operations will be conducted primarily by one front formation with assistance from units of airborne troops, and troops of our anti-ballistic and air defenses. Such theaters will also experience nuclear strikes of the strategic forces. Therefore, forward operations in such theaters could also be classified as strategic, even though they cannot be compared with the operations in the main theater of military action in their scale.

Forward operation in the theater of military action will not be conducted in isolation. The advancing troops will be using the results of strikes of the strategic nuclear forces, i.e. the results of the strategic operation conducted in a given theater. In order to make a forward operation in a given theater of military action a success, it would be important to conduct operations of anti-ballistic and air defense troops—it will primarily encourage the arrival of reserves and material resources from the rear of the socialist countries, which is very important taking into account the inevitable great losses in the theater. . . .

As far as such regions as Western Europe are concerned, the possibility of localization of war, in essence, does not exist. The interests of the states are ultimately interwoven—economic, political, strategic, and all others—and there exist complex systems of alliances with numerous branches. In such conditions, even a local conflict can involve many other states very quickly. The sides will act upon their alliance obligations, and all kinds of concerns about their and other states' security. Some states could simply use the local conflicts for their own aggressive purposes. In such circumstances, any local conflict could very well grow into a global war with the use of nuclear weapons.

Forward operations in the theater of military action in a thermonuclear war will be conducted in conditions different from the period of World War II.

The forward action of the front will be preceded by the retaliatory nuclear strike of strategic forces, including missile forces, long-range aviation, and nuclear submarines, against targets in the entire territory of the aggressor, including targets and groups of forces of the enemy and the entire theater of military action.

The retaliatory strike by theater and tactical nuclear forces will essentially signify the beginning of the forward operation. The beginning of the operation cannot be determined by the time "X" (which is the beginning of the attack by the ground forces); the timing of the beginning of the attack, and therefore the beginning of the forward operation as it had been during World War II, has now assumed a new meaning and it will be determined by the timing of the launch of the missiles with nuclear warheads.

Retaliatory nuclear strike of theater and tactical weapons will be targeted at the launching positions of missiles and nuclear artillery, airfields of tactical aviation, tank and ground forces divisions, warehouses and arsenals of nuclear weapons, command centers, communications centers, river crossings, rear bases and other objects covering the entire depth of the enemy's operative order.

The enemy will also be trying to launch nuclear strikes; moreover, he will be trying to launch an unexpected preventive strike. During numerous exercises, the NATO troops and the US strategic forces have been systematically practicing a first nuclear strike by all the forces of the aggressive imperialist military bloc. . . . If one were to generalize from the experience of the NATO troop maneuvers, it would not be difficult to imagine what the first nuclear strike of the aggressor could look like. Strategic nuclear forces are targeted at the political and economic centers, bases of nuclear weapons, and other objects located deeply in the territory of the socialist countries. As far as the nuclear weapons of the groups of armies are concerned (tactical aviation, unmanned aircraft Mace and Matador, missiles Pershing, Corporal, Sergeant, Honest John, and the nuclear artillery), deployed in the theaters of military action, can be used for strikes against objects and groups of troops in the entire depth of operative order of the socialist countries troops, i. e. approximately up to 1,000 to 1,200 kilometers. The experience of the NATO maneuvers shows that those nuclear strikes could be targeted at the launching positions of theater and tactical missiles, airfields of front aviation, our divisions, etc. The NATO military command devotes special attention to the preparations for annihilation of our nuclear forces, and most of our divisions by their nuclear strikes. A large number of nuclear strikes have already been prepared against the regions of the deployment of our nuclear forces and divisions. It is suggested that as a result of the nuclear strikes, all the airfields, launching positions of the missiles, and combat-ready divisions throughout the entire theater would be destroyed. That is supposed to ensure a drastic change in the correlation of forces in the theater in favor of the imperialists. It would be dangerous to underestimate such aggressive plans.

Our retaliatory nuclear strike should be aimed first of all at thwarting the nuclear strike of the aggressor. This task is quite realistic in modern conditions. Of course, it will be necessary to demonstrate high art in launching the retaliatory nuclear strike to ensure survivability of nuclear forces and troops in the conditions of nuclear war. Survivability of the nuclear forces and troops could be achieved by keeping their location immediately before the war disguised by means of maneuvers, by reliable cover-ups, and by other measures. Ensuring combat readiness of the troops and other forces during the nuclear war is the ultimate demonstration of the military art.

The U.S. military command is not sure that the NATO troops deployed in the European theaters would be able to preserve their combat readiness after our retaliatory strike. In this connection, they plan to engage units of strategic aviation, nuclear submarines, and aircraft of forward Air Force units to launch nuclear strikes against the objects in the theater—which, according to their calculations, should compensate for the losses in the nuclear means. To repair the losses in the troops, they plan to airlift troops from the United States and Canada. Those plans are being tested during numerous maneuvers. In particular, in 1963, they conducted maneuvers the Big Lift, and the Swift Strike III, during which they practiced airlifting the troops. If one makes a realistic assessment of the situation, it is unlikely that those measures of the American command would bring any substantial results. Strategic aviation, nuclear submarines, and the aircraft carriers will be the primary targets of nuclear strikes. As far as airlifting the troops, the Big Lift maneuvers have shown how ineffective such a measure could be. Airlifting just the personnel of the Second Armored Division (14,000 men) without the heavy equipment, required 240 transport aircraft, and the airlift itself took three days. During such a long period of time (three days), the NATO European countries could simply cease to exist.

According to the American press, by the end of 1962 the United States had approximately 500 military transport planes, of which only 20% were modern jet aircraft with intercontinental range, the rest being old, of limited range and cargo capacity. . . . The present U.S. airlift capability does not ensure quick transportation of troops to Europe. The troops transported by air would only arrive in Europe when the entire Western European theater would have suffered such destruction and radioactive contamination that it would be difficult to land and organize them for combat. . . .

As a result of the mutual exchange of nuclear strikes, an exceptionally difficult situation would emerge in the theater of military action. Numerous fires, destruction, flooding, and high radiation levels will most likely slow or completely stop any kind of movement of the troops that survived nuclear strikes on a number of directions, especially immediately after the nuclear strikes. However, one would suppose that the situation would not be the same everywhere. Some of the directions will suffer from high levels of radiation, substantial destruction, and huge troop losses, precluding forward movements of the troops; on other directions, the radiation levels and destruction could be less dangerous. It is quite probable that there would be a sufficient number of directions on the theater, where the troops, which preserved their combat capability, could conduct forward operations at least some time after the nuclear strikes, and we should be able to use such directions.

Upon starting an offensive, the troops of the fronts could be confronted with at least two possible operations of the enemy—with an organized defense, or with his offensive.

At the outset, many NATO maneuvers usually practice defense (or the so-called 'mobile' defense, which is essentially a retreat). It is not too hard to discern a simple propaganda trick here. By no means are NATO forces preparing for defense. The command of this aggressive bloc figures that after the nuclear strike its troops would immediately be able to rush deep into the territory of the socialist countries without any obstacles. Therefore, it is most likely that our forces will confront the advancing enemy troops that have suffered enormous losses from nuclear strikes, which means that at very beginning of the operation there may be mutual encounters in several directions. Gaps between the directions of actions of the troops will be inevitable, because the nuclear strikes will lead to great devastation in the groups of troops on both sides.

At the same time, it is possible that the enemy troops will conduct defensive operations in some zones. The type of defense could vary: prepared defense, hastily organized defense, and mobile defense.

One has to account for the following important fact. In the past, the NATO command prepared the main line of defense on the Central-European theater 50 to 120 kilometers away from the borders of the socialist countries. Recently, NATO adopted the so-called 'forward' strategy. This term disguises the plans to deploy NATO troops directly along the borders of the socialist countries.

All this has to be taken into account in organizing a forward operation aimed at defeating the aggressor in the theater of military action.

The main means of striking and defeating the aggressor, and therefore the main means of fulfilling the main tasks of the forward operation, will be the strategic nuclear weapons used in a given theater as well as the tactical nuclear weapons of the ground troops units and the aviation. The success of forward operation in a nuclear war will primarily depend on the skill of using the nuclear weapons, on knowing how to select the targets, define their precise location, and launch timely (quick) and effective nuclear strikes.

What is the main purpose of using nuclear weapons in a forward operation, what should be the targets of nuclear strikes at various stages of the operation, and what methods of using nuclear weapons should be employed?

All these questions have been in the center of attention of military theorists and practitioners of many countries for a long time now. In the very beginning, when nuclear weapons were just starting to arrive in the ground troops, some military officials in the West were inclined to consider these weapons as powerful instruments of fire support of the ground troops. It was suggested that massive nuclear strikes could help to "cut out" extensive areas in the enemy defense, destroy its troops and ammunition in the tactical zone, as if opening gates in the defense of the enemy for forward movement of one's own troops, and then to create a nuclear "carpet"—a kind of firewall by persistent strikes in order to ensure an unobscured movement of troops into the depth of the enemy defense.

Here it is not difficult to discern the desire to adopt the new powerful weapon to the old methods of warfare, to use this weapon as a means of fire support of advancing troops. Some of our military officials also shared similar views.

As nuclear weapons developed, and the experience of their use accumulated, the inexpedience of their use as means of fire support of ground troops and tanks has become more and more apparent. First of all, the nuclear forces are capable of independently destroying any groups of troops and any objects (fortified positions, airfields). Secondly, the tactical zone of defense became thinner, the troops were dispersed throughout the battlefield, targets became fewer, and therefore, it became even easier to destroy them by nuclear strikes of theater and tactical nuclear forces. Thirdly, forward movement of troops through the areas of nuclear strikes turned out to be undesirable and dangerous because of big fires, destruction, and the high levels of radiation.

As a result, the views on using nuclear weapons in operations in the theater of military action have been changing. According to the American views, the main purpose of using theater and tactical nuclear weapons is to reduce the nuclear power of the enemy, and win the nuclear superiority. They started to select missile launchers, airfields of the front aviation, storage sites of nuclear weapons, command centers, and the main groups of troops (especially tank troops) as targets. Changes have been occurring also in the ways of using nuclear weapons. Nuclear artillery is being gradually retired, the portion of theater and tactical missiles is growing; new improved systems are replacing the older outdated missile systems. . . . The Davy Crockett [tactical missile] is not an effective means of general nuclear war, although it could be appropriate for a local war where tactical nuclear weapons will be used. Strategic and theater nuclear weapons are being prepared in the United States for a general nuclear war.

Recent American views on using nuclear weapons on the battlefield are more dangerous [than the earlier ones]. We have to counter them with new methods of using our nuclear forces to fully exploit the great combat potential of these weapons for a quick defeat of the aggressor. It is quite clear that the use of these weapons for pushing forward the combat formations (ground troops and the tanks) no longer fits these requirements. Nuclear weapons should be used to fulfill the main tasks of the operation, for annihilation as far as it is possible of all the troops and ammunition of the enemy. The latter should include first of all the nuclear forces of the enemy—tactical aviation on the airfields, unmanned aircraft, missiles, and nuclear artillery on their firing positions, storage and assembly sites of nuclear ammunition. All these means are dispersed in great depth, but at the same time they are located within the range of not only strategic nuclear

medium-range forces, but even our theater and tactical nuclear weapons. No forward operation in the modern conditions can be successful without prior destruction the nuclear weapons of the enemy.

However, the struggle against the nuclear forces of the enemy is not the only task that would be fulfilled by the nuclear weapons in a forward operation. The tasks of eliminating the enemy units and formations in the areas of their concentration, on the lines of deployment, in the areas of defense and in combat orders during forward operations will be equally important. Along with the troops, their nuclear weapons will be destroyed also. The troops are affected by the shock wave, light emission, and penetrating radiation, and their actions are constrained by the radioactive contamination of the territory. In addition, nuclear weapons can be used to destroy fortifications with headquarters, command centers, bases of the rear, river crossings, hydro-constructions, ports, and other objects.

Ground troops are armed with various nuclear means: theater and tactical ballistic missiles, unmanned aircraft, and front aviation. They should be used according to their combat capabilities. Theater missiles of long range and powerful loads could be successfully used to destroy nuclear weapons deployed throughout the entire theater of military action, reserves, groups of troops, headquarters, and so on, if those are not destroyed by the strategic forces. Front aviation can deliver strikes against airfields, firing positions of missiles and artillery, and against the troops—both in the areas of deployment, and on the move (offensive, march). Tactical missiles can be used to strike at concentrations of troops, within the tactical zone, and within the range, the centers of resistance, and firing positions of tactical missiles and the artillery.

A question could arise here—would the front nuclear weapons be sufficient to destroy the numerous targets in the process of a forward operation?

If one relies only on the nuclear weapons of the front, it might not be enough. However, the main tasks of the armed struggle will be fulfilled by the strategic nuclear forces. The main targets—the main groups of troops and nuclear forces of the enemy in the theater—will be destroyed by medium-range missiles during the retaliatory strike before the beginning of the forward operation of the front. In addition, the strategic missile forces and the long-range aviation will also deliver nuclear strikes during the front operations until the complete defeat of the aggressor. In conducting front operations, one has to take into account not only the nuclear forces of the front, but also the strategic nuclear forces in the first place.

Nuclear strikes—massive, group, and single—will be the main method of using nuclear weapons in an operation. The methods used in artillery—artillery preparation for the attacks, artillery support of forward movement of troops (firewall, consistent concentration of the fire) —are not appropriate to use with these [nuclear] weapons.

As has been stated above, the nuclear forces of the front will be involved in the retaliatory nuclear strike of the strategic forces. Nuclear strikes of the front in this case will become a part of the general second nuclear strike. This cannot be seen as fire preparation in its usual meaning.

Taking into account the difficult radiation situation, which will inevitably result from the retaliatory nuclear strike, the troops will most likely be unable to immediately begin a forward operation on all the directions; they will have to wait for some time for the levels of radiation to come down. It is quite possible that it would become necessary to launch additional nuclear strike against the newly discovered nuclear forces, groups of troops, centers of resistance, and other objects immediately before the offensive, or even during the forward operation. The most important principle of using nuclear weapons during a forward operation is

speed, accuracy of the strike, and targeting of these weapons against the most sensitive enemy spot depending on the developing situation.

Because the enemy will use nuclear weapons extensively, both at the beginning and during the operation, the question arises of what will be the result of mutual use of nuclear weapons—which side will be superior?

This question occupies the center of attention of military and political leaders. Some military theorists in the West limit this problem to the arithmetic calculations of the quantitative correlation of nuclear forces of the sides, and thus come to a conclusion of an alleged superiority of NATO over the forces of the Warsaw Treaty. Certainly the quantitative side plays an important, but far from the dominant role in the correlation of nuclear forces. The qualitative side, and the level of readiness of nuclear forces for combat use in different circumstances will have the utmost significance.

If one were to seriously examine the question of correlation of nuclear forces in the European theater, the conclusions would inevitably be quite different. In Central Europe, NATO possesses approximately 800 missile-bearing aircraft and approximately 80 launchers for unmanned aircraft Mace and Matador. The vulnerability of those weapons to modern means of air defenses is widely known. The nuclear artillery—which, according to statements made by Americans themselves, is characterized by low combat quality, and high vulnerability—accounts for the main part of the NATO theater and tactical nuclear forces

The NATO command calculates that they would be able to compensate for the deficiencies of their theater and tactical nuclear weapons with the use of their strategic forces for strikes against objects in the theater of military action—with means of strategic aviation, aircraft carrier aviation, and nuclear submarines with the Polaris missiles. However, those means cannot be compared either in the quantitative, much less in the qualitative sense with our medium-range missiles . . . Our medium-range missiles are invulnerable in flight, have powerful payloads, and are highly accurate in hitting their targets. The majority of theater and tactical nuclear forces and troops formations deployed on the theater will be vulnerable to the strikes of these missiles.

Therefore, the overall correlation of forces in nuclear armaments in the European theaters is not at all in favor of NATO. The readiness of nuclear forces and their invulnerability is, of course, a matter of the skill of the command and of the troops.

Notwithstanding the use of nuclear weapons, many important tasks of armed struggle on the theaters will be fulfilled by motorized and tank units and formations. However, their role in the war has changed.

In the wars of the past, the ground and tank forces fulfilled their tasks on the battlefield by their own fire resources, attacks, the caterpillar tracks of the tanks, and in some cases in by face-to-face combat of the personnel. It is true that the artillery fire, and strikes of the air forces, inflicted significant damage on the groups of the enemy. However, after the strikes of the artillery and the air strikes, those groups of troops as a rule preserved their ability to fight, and put up resistance against the advancing troops; therefore they had to be destroyed in combat or taken prisoners, which required actions by large numbers of ground troops and tanks with the support by large number of artillery pieces.

In the modern conditions, the main forces and weapons of the enemy will be destroyed by nuclear strikes. This is the fastest and the most reliable road to victory in any kind of military actions. The tank and motorized units and formations will be left with the task to exploit the results of nuclear strikes in order to

complete the defeat of those enemy troops that still preserved their combat ability, to quickly move forward, and to capture important regions and objects. Tactical nuclear forces will be used to fulfil the most important combat tasks set to a unit. However, it could happen that a given unit would find itself without nuclear weapons, and the situation will not allow using the army or front nuclear forces. If such a unit were confronted with a strong enemy center, it would be better to move around such a center. If moving around [the center] is impossible, then the unit would have to enter into combat, i. e. defeat the enemy with conventional means and methods, which usually mean combat, as a face-to-face confrontation of sub-units, units and formations. The methods of combat are changing. Gone into the past are human-chain attacks; the troops will attack and move forward primarily mounted on the tanks, armored personnel carriers, armored vehicles, using fire means of those machines along with hand-held rifles, guided anti-tank missiles, and individual anti-air missiles. Their action in combat will be supported by the artillery fire—primarily the jet artillery—and the actions of the aviation.

The danger of the enemy nuclear strike will be constantly hanging over our troops. Therefore, the combat formations of our units should be dispersed along the front and in depth; it would be safer if the troops were constantly on the move, maneuvering and using defensive features of the local territory to the maximum, had their individual and group means of protection against the light wave and radiation ready to use, and were able to protect themselves against the shock wave of nuclear explosions.

Advancing as a front on an extensive distance is no longer necessary. Forward operations will be conducted along the directions with gaps between units and formations. Such directions will have to be selected beforehand, but often they will be selected in the process of an offensive, using primarily the regions with low levels of radiation.

Forward movement groups will be created in the depth, at significant distance from direct contact. They will be moving in dispersed marching columns, then assume pre-combat and combat orders at certain distances, and begin the forward action using the results of nuclear strikes, or with the support of the aviation and the artillery. The enemy defense, damaged by nuclear strikes, should be taken over by vehicle-mounted troops. The troops will be overcoming the enemy defenses primarily using the areas where the enemy was destroyed by nuclear strikes from the air. It would be expedient to avoid the defense centers of the enemy, which remained intact, and which for some reason it would be impossible to destroy by additional nuclear strikes; they will be destroyed by the next echelons.

There could be such enemy defense centers, which we would not be able to avoid. If for some reason they could not be destroyed with a nuclear strike, they should be suppressed by the strikes of the aviation, artillery, tanks, anti-tank guided missiles, and by the attack of the troops. Conventional means of destruction became so effective that they are capable of reliably suppressing the enemy's fire means and personnel in such centers in short time, and to clear the way for the tanks and motorized ground troops.

As is widely known from the numerous [military] exercises, and maneuvers extensively covered in the press, and also from the [military] charters and various instruction manuals, the NATO forces are predominantly taught forward operations. The forces of the United States and the FRG are especially actively trained for forward actions. They are prepared to begin forward operation immediately after the nuclear strikes, and to use airborne troops landing on a large scale.

After the retaliatory nuclear strike, our troops will also begin advancing. They will be advancing against an advancing enemy—a most difficult but entirely feasible kind of attack. One has to keep in mind that nuclear

strikes inevitably will cause great devastation in the ranks of the enemy, and create gaps in the combat order of his troops. That situation should be used for fast movement of our tank and mechanized rifle units as deeply as possible to outflank the surviving enemy groups—for a decisive attack and the defeat of the enemy.

Combat in such conditions will represent first of all elimination of the advancing enemy troops and their nuclear weapons by nuclear strikes, and also decisive movement of the tank and mechanized rifle units and formations into the depth of the enemy's operative order, strikes against the flanks and the rear of his moving troops, and defeat of those troops in interaction with the landing airborne troops. Protracted front combat should not be allowed.

However, one has to keep in mind that any kind of forward operation, including advancing against an advancing enemy, or advancing combat, requires careful preparation and support [in order to] reliably suppress and defeat the enemy. Unprepared attack without annihilation of the enemy with nuclear strikes and without his suppression with the artillery fire, tanks and aviation, will not be successful. One should also constantly increase the effort of the troops by introducing units and formations arriving from the rear. In this regard, the socialist countries enjoy significant superiority if one looks at the Western theater.

The front aviation will play an important role in combat in the theaters of military action. . . Air reconnaissance, which remains one of the most important tasks of the front aviation, has assumed a special importance today. . . .

Airborne troops will play a special role in advance operations. In the future war, the most serious challenge to the troops will be whether they would be able to use the results of the nuclear strikes of the strategic forces in order to capture important areas and objects in substantial depth before the enemy recovers from the nuclear shock. It is quite understandable that mechanized rifle and tank units will not be able to arrive in such areas very quickly. The airborne troops will be able to carry out such a mission faster and better. They are better equipped for action under nuclear conditions.

The task of landing of airborne units in substantial depth immediately after nuclear strikes is becoming entirely feasible. The enemy air defense will be disrupted after a massive nuclear strike.

The strategic airborne landing forces can be charged with the task of taking over military bases and nuclear weapons sites, as well as political centers, economic regions, ports, islands, and other enemy assets. . . .

A very old principle of forward operations emphasized a correct choice of the direction of the main strike and skillful concentration of forces and ammunition on that direction. This principle should be applied in a new way in the modern conditions.

During the past war, the direction of the main strike represented a relatively narrow zone, where all the efforts of the troops, their fire capabilities were concentrated, including ground troops, tanks, artillery, aviation, and other forces and means. Their actions were strictly coordinated in time on the chosen direction. This assured the required striking force of the forward group, destruction of the enemy defenses, and development of forward action in depth. Defenses then represented a thick wall of firepower, personnel, and fortification.

In the modern conditions, the defense will be structured on the new principles. The main power of the defense will consist of nuclear forces, which will be dispersed in depth and along the front. Tank and ground troops units will not be deployed along the front in tight combat orders, but will be dispersed along the front and in depth as well, while the armored units and formations will most likely be deployed in the depth of the defense ready to maneuver. In this connection, it will not be useful to create a narrow gap in the enemy defenses, as it was done in the past war by the artillery and aviation. Now such action will not be able to ensure that the advancing troops would be able to break through the enemy defenses. Such a gap would be very likely used as a trap for the troops, because the enemy could very easily destroy the troops concentrated in a narrow zone with nuclear forces located away from the direction of the main strike.

Nuclear strikes will have to destroy, first of all, the launching sites of missiles and nuclear artillery, airports, depots, and bases of assembly of nuclear warheads, and also the main groups of troops, primarily the tank troops. These targets will not be concentrated in one small area, but will most likely be dispersed. . . Enemy troops in the zone of advance of our troops should be destroyed, first by tactical nuclear weapons and, if necessary, also by conventional weapons, if they were capable of putting up resistance to our advancing troops.

Thus, the efforts of nuclear forces should be concentrated on targets and regions in the zone of advance, and not at all on the directions as such.

Tank and mechanized rifle divisions can act only on the directions. Their efforts cannot be evenly pulverized over the entire zone of advance; they will form forward groups, but they will be dispersed along the front and in depth. It is important to ensure fast movement of forward groups in the depth, to the flanks and to the rear of the surviving groups of the enemy, which are subject to destruction, or to the object or region assigned for capture. For those purposes, one should use the weakest spots in the enemy combat order, which emerged after the nuclear strike, or the areas that were not occupied by the enemy. Enemy troops on the directions of advance of our troops should be destroyed first of all by theater and tactical nuclear weapons, and when necessary by conventional means. In these conditions, one can expect that the advancing troops would be able to exploit the results of nuclear strikes for a fast completion of the defeat of the surviving groups of the enemy with the maximum effectiveness.

Thus, in a nuclear war there will be no direction of the main strike in the forward operations, with the concentration of the main forces and ammunition in the ordinary sense. The efforts of the nuclear forces will be concentrated at the most important groups of nuclear means and troops of the enemy, destruction of which will ensure fulfillment of the goals of the operation in the shortest time, and the troops will be moving fast along the directions in dispersed orders ensuring fast use of the results of nuclear strikes for the completion of the defeat of the enemy.

At the first glance, one could see a contradiction here: it looks as if the nuclear strikes are separated from the actions of the troops. This is just an imaginary contradiction—it emerges because [the new principles] do not fit into the time-tested and habitual scheme of force structure in an operation. However, since the new means of combat have emerged, one has to look for appropriate methods of their effective use.

Questions of interaction between troops during the forward operation should be decided in new ways. The essence of interaction is now limited to coordination of nuclear strikes and the actions of the troops. However, this coordination will be built on principles different from those that were used in coordination of actions of the ground forces and the artillery in the past war. The main task of a given combat or of an

operation—destruction of the enemy, his personnel, nuclear forces, and fortifications—will be fulfilled by the nuclear strikes. The troops will exploit the results of the nuclear strikes to complete the defeat of the enemy. It would be expedient to launch nuclear strikes against enemy objects or groups of troops long before the arrival of [our] troops in those areas, and if possible from the biggest distance within the firing range of the missiles. If an accurate nuclear strike hits a launching site of missiles, an airport, an enemy formation or unit, even from the maximum distance, they will be destroyed or damaged to such an extent, that they would be unable to restore order before the arrival of the advancing troops. It is not at all necessary, and often even undesirable for the advancing troops to enter the area that suffered a nuclear strike. Any movement of troops through such regions will be impossible for a certain period of time. The troops should destroy targets and object, which could not be destroyed by nuclear strikes, and also capture regions and objects. Organized interaction built on such principles can ensure uninterrupted forward movement of troops with substantial speed.

Forward operation will be conducted in extremely difficult circumstance, which the troops never encountered in the past.

Nuclear weapons will incur damage on the troops by the shock wave, light emission, and radioactive emission. These are very dangerous harmful factors, and it is very difficult to protect oneself against those. And still, we can soften the impact of nuclear explosions. Tanks, trenches, dugouts, shelters, natural hills—all represent good protective covers from the shock wave; they will substantially reduce the damage. One has to protect his eyes, as well as face, and open parts of the body from the light emission. Each soldier should have dark eyeglasses, or a mask with dark glasses, and gloves. A closed car, tank, gas mask, or an overcoat will help protect from the penetrating radiation.

Radioactive contamination of the territory represents a great danger. Surface explosions on large territory create high levels of radiation, causing death or radiation sickness. NATO troops devote special attention to creating nuclear barriers—extensive regions of radioactive contamination, forest blockages and fires. For those purposes they plan to launch nuclear strikes against river crossings, defiles, road intersections, mountain passes, and to use nuclear fougasses, surface and underground nuclear explosions. At the same time they plan to create various obstacles with conventional means, whose capabilities have sharply increased. New mines with plastic body, with directed action, and with large radius of explosion were invented. Vehicles and helicopters are being used to deploy the mines.

If we do not undertake special measures to ensure overtaking those zones and barriers, our offensive will be inevitably slowed down and maybe even halted altogether. First of all we should organize reconnaissance of the zones of contamination, destruction, and minefields. The level of radioactive contamination can be determined in the fastest and most accurate fashion with the help of planes and helicopters. It would be necessary to warn the troops about the danger in a timely manner.

The troops should always equipped with means of protection and special treatment. Prophylactic measures should be undertaken in advance in order to improve the natural resistance of human bodies, hermetization of combat and transport vehicles, careful packaging of food products and water.

The troops should be capable of passing the zones of contamination and destruction. For that purpose, they should be always ready to change the direction of the offensive, quickly pass through such zones in helicopters and protected vehicles, especially tanks. It is necessary to assemble powerful clearing teams that would be able to quickly clear passages through the contaminated territory or through fortifications. The

fastest way to put out the fires is by way of explosions. Deactivation might be necessary in the areas with high level of radiation. There is no need to carry out general deactivation; in most cases it would be sufficient to clear passages. In order to do this, it would suffice to shave the upper level of soil from the surface in a given territory, cover the contaminated area with new soil or plow it over. Hard-surface roads can be cleaned with the help of vacuum vehicles, irrigation vehicles, street-sweeping vehicles operated from a distance. All these measures will encourage an uninterrupted advance movement.

Forward operations of the fronts in a nuclear war will be characterized by fast-pace, uninterrupted movement into a great depth. The main form of troops maneuver will be offensive on several directions. It is unlikely that such forms of maneuver as offensive along the directions toward a single center, or encirclement of large groups of enemy troops with subsequent methodical annihilation of those would find extensive use.

Therefore, the main form of a modern forward operation will use nuclear strikes aimed at destruction of nuclear forces and troops of the enemy, and fast forward movement on the directions, which use the results of nuclear strikes to complete the destruction of the enemy.

In the process of a forward operation on the theater, armed struggle will take place simultaneously with ... and will often assume a multifocal mode. Units and formation will often have to act independently, separated from other units and formation, in the absence of communications with a superior commander. Therefore, the initiative, courage, and ingenuity of commanders of all levels will play an important role in achieving the goals of the operation.

Defense

There is a discussion currently going on among military leaders of many countries as to whether defense is appropriate in modern conditions. Some of our comrades—trying not to repeat the situation of 1941, when our troops were unprepared not only for an attack but not even for defense, and were forced to retreat deep into the country under the assault of the German fascist troops—insist on the need to prepare our country for strategic defense, i. e. for a defensive war. They do not account for the fact that in the situation where the probable enemy possesses considerable nuclear forces, any passivity on our side in the very beginning of the war—putting our bets on defense with slow initial motion, and accumulation of forces for counterattack—would inevitably lead to a catastrophe. Our state equips the armed forces with powerful means of armed struggle—the nuclear forces—which are designed for conducting offensive, not defensive war. Those weapons are less appropriate for defense than they are for offense.

Many military figures have often neglected defense, and had to pay for that. However, now the situation has changed. Inappropriateness of defense and the extremely hazardous character of defensive war have become objective phenomena regardless of the subjective wishes of political and military leaders. Defending the security of our Motherland will only be possible on the condition of our being ready to wage a decisive offensive war against the aggressors.

The imperialist states are engaged in preparations for a war, which is not at all defensive. The substance of their military doctrine is a surprise nuclear attack and offensive war against the socialist countries. The imperialists are trying hard to disguise the true nature of their doctrine by defensive phrases, but they cannot put peoples' vigilance to sleep. Some of the military ideologues of the imperialism are trying to use the negative attitude of our military science toward strategic defense in order to accuse the socialist countries of

preparing for a preventive war and for the launching of a pre-emptive strike. They are hypocrites, for they know very well that the socialist countries do not intend to attack anybody. The Soviet Union and other socialist countries follow consistently a policy aimed at the prevention of war. However, if the imperialists succeed in unleashing a new war, then socialist countries will not sit out in defense; they possess powerful offensive weapons, which will be put to use decisively to ensure fast defeat of the aggressor.

And still, it is still too early to relegate the defense on the tactical and theater scale to the archives. During a forward operation, the troops could stop, or lose speed. It could happen in such cases where the enemy succeeded in inflicting serious damage on our troops with his nuclear strikes, organized a counterstrike or counteroffensive, and where our troops have used all of their nuclear firepower, were not re-supplied with nuclear ammunition; where reserves were late in arriving, or where the forward group of our troops was weakened by huge losses from nuclear strikes or from transfers of units to other direction and so on. In such conditions, the advancing troops on that direction will be forced to revert to defense as a temporary, imposed form of military action.

The issue of organization and building of modern defense is a complicated one.

In the past war, defense was build along the forward lines on an uninterrupted front with high density of troops, especially on those directions, where they expected an enemy offensive. Each forward line consisted of positions, the position defense was based on battalion regions, which were immediately adjacent to each other. The main effort of the troops was concentrated on defending the front line. But already in World War II such defense was shown to be insufficiently stable. The advancing forces concentrated a great mass of artillery and aviation, and suppressed the defense on the positions. Then it was necessary to increase the depth of the defense, intensify combat orders of the troops, and create a number of defense lines in the depth, and man them with the troops. Such defense often was capable of withstanding the pressure of the advancing troops.

In the conditions of use of nuclear weapons, such linear defense, with high density of troops, created with the purpose of holding the front line cannot be stable. An advancing enemy can create several gaps in such a defense with nuclear strike, and quickly overwhelm it. One has to look for different principles of organizing defense in modern conditions.

Defense of the armies of socialist countries should be based on holding to the most important regions and lines of defense, on the unconditional premise of not allowing enemy entry into the territory of socialist countries. It will be based on the combination of nuclear strikes with the use of conventional firepower and troops maneuvers, and also on a wide use of man-made obstacles.

In the wars of the past, the system of firepower had the utmost importance for the stability of defense. This premise preserves its importance in the modern conditions as well. Regardless of how difficult the conditions were when the troops would have to turn to defense, their first concern should be the organization of the firepower system, of fire damage to the enemy.

The defense system should now be built in a new way. Nuclear strikes of tactical and theater missile forces and the front aviation will serve as a basis of defense; strategic nuclear forces could be also used if necessary. Nuclear weapons should be directed to destroy nuclear forces of the enemy and his main groups of troops. Defense will predominantly use surface nuclear explosions, which would strengthen the damaging effect of nuclear weapons.

Since nuclear weapons are weapons of the offense, they will be used primarily by the troops that are advancing. In this situation, the defense will be using mainly the of conventional means of combat . . . The high effectiveness of the conventional means now allows to quickly create a tight fire system capable of inflicting damage on the advancing enemy formations, especially to the tanks, fire means, aviation and unmanned aircraft.

In the past, the strongest fire system was created before the front line of defense. Today, it would not be able to ensure the necessary stability of defense.

An unexpected strike using nuclear weapons, even on a limited scale, against an enemy formation prepared for an offensive can undermine that offensive. In the situation where the troops are equipped with nuclear weapons, one does not need to concentrate a large artillery mass in a limited area for a counter-preparation. Nuclear weapons of the enemy in the first place, and formations of armored units will become main targets in counter-preparation.

Modern defense should be anti-nuclear. Protection from the nuclear weapons is achieved primarily by dispersing of troops, forces and equipment. One should deploy defense forces in such a way as to make selection of targets for nuclear strikes difficult for the enemy. However, the dispersal of troops also has its limits. The positions should be occupied by the troops with sufficient density so that the fire connection between them could be preserved. Shelters should be constructed for the troops and military equipment, beginning from simple trenches, dugouts, ditches to hermetic metal-assembled, cement and wooden underground shelters, which should be built by the defense forces with the use of machinery depending on the situation.

A defense operation should begin with fire strikes against the advancing enemy, or the enemy who assumed his starting positions. The main concern of the defending troops will be timely destruction of the nuclear forces of the enemy. Upon the beginning of the enemy offensive, it would be necessary to take measures to destroy his tanks. Our anti-tank weapons assigned to the combat units, if they are dispersed along the front and in depth and used skillfully, are capable to repel an attack of a large mass of tanks. Counterattacks and counterstrikes should be organized against the enemy units that succeeded in breaking through [our defense]. The beginning of a counterattack or counterstrike will be signaled by a nuclear strike against the advancing forces of the enemy and his nuclear weapons, and by conventional fire suppression of the enemy. Immediately after that the reserve units will direct their strikes mostly on the flanks and the rear of the enemy [who penetrated our defense]. The success of the counterattack and counterstrikes will be accumulated by nuclear strikes and developed by introduction of the reserves with the subsequent beginning of a counterattack. . . .

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The unprecedented scientific and technological progress achieved in our country and in many other countries of the world in the recent years, the development of the economy, the creation and procurement of new instruments of war of colossal powers of destruction and penetration—nuclear weapons, missile technology, nuclear energy, electronics—along with the fundamental changes in the international political situation as a result of the arrival in the armed forces of a new technologically literate generation—all this has resulted in the most profound revolution in the history of the military art in all its branches.

Nuclear war is replacing the old predominantly ground war, and if the imperialists succeed in unleashing such a war, it will result in entirely new warfare. Even a local war, in which nuclear weapons might not be used, will require the introduction of many new elements in the military art, because even conventional forces have undergone important changes. Besides, any local war with the participation of nuclear powers will inevitably grow into a global nuclear war as the danger of a surprise nuclear strike will constantly be hanging over the armed forces.

The fundamental revolutionary changes have affected the most important areas of warfare.

If in past wars fighting was limited by the mutual destruction of the armed forces in the theaters of military action; in the modern conditions, the presence of nuclear weapons of vast range and colossal destructive force allows for the instantaneous annihilation of any objects in the enemy's territory, up to the annihilation of entire countries. A nuclear strike against the vital centers of a country, against its economy, its system of state administration, its strategic nuclear forces, and other armed forces is the fastest and most reliable way of achieving victory over the aggressor. The objective of the military struggle has thus changed; the strike will encompass the entire territories of the belligerent countries—all that amounts to the basis of the political, economic and military power of a state will be exposed to such a strike. . .

Nuclear war cannot be long; it will inevitably be short, quick as lightning, because each side would have to use all its might to defeat the enemy in the shortest time. The initial stage of such a war will have the decisive importance [for the outcome] as it would be the stage of most intense massive nuclear strikes. However, because we cannot exclude the possibility that local wars using only conventional forces will emerge in the modern conditions, it would be also necessary to prepare the country and its armed forces for a relatively prolonged war.

[Translated from the original Russian by Dr. Svetlana Savranskaya, Reserach Fellow, National Security Archive, George Washington University.]