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DICTIONARY OF BASIC MILITARY TERMS

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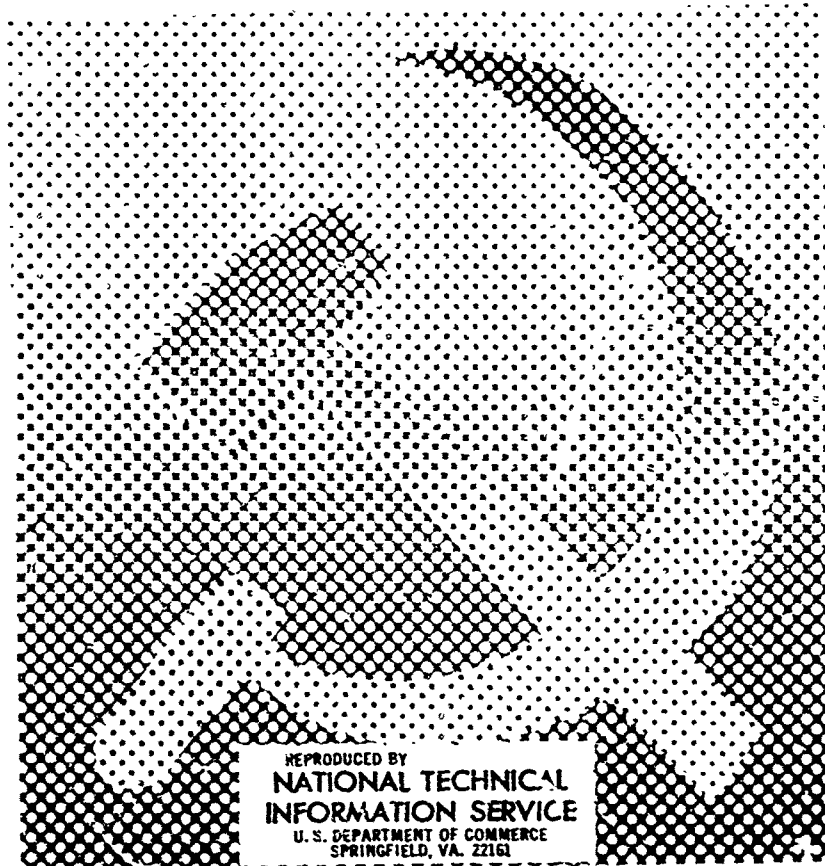
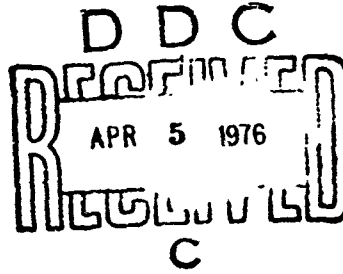
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A Soviet View



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SOVIET MILITARY THOUGHT

Dictionary Of Basic Military Terms

A Soviet View



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American Editor's Comment

In December 1964, Voenizdat, the publishing house of the Ministry of Defense of the USSR, announced that, beginning in 1965, a series of 17 books called the "Officer's Library" would be issued. A *Dictionary of Basic Military Terms* was designated as the third book of the series.

This dictionary was compiled by the faculty of the General Staff Academy and was the only book in the series for which the General Staff was responsible. This academy is the highest military educational institution in the Soviet Union, roughly corresponding to the National War College in the United States and the Imperial Defense College in Great Britain.

The *Dictionary of Basic Military Terms* was typeset in April 1965 and sent to the printers in July of the same year. 27,000 copies were published.

Professor, General-Colonel A. I. Radziyevskiy, senior editor of the dictionary, was the deputy commandant of the General Staff Academy at the time the book was published. Subsequently Radziyevskiy became commandant of the Frunze Military Academy, the second most prestigious military educational institution in the Soviet Union.

Authors of the *Dictionary of Basic Military Terms* acknowledge the use of two earlier dictionaries, the *Naval Operational-Tactical Dictionary*, published in 1957, and the *Concise Dictionary of Operational-Tactical and General Military Terms*, published in 1958. These two earlier works became somewhat outdated in January 1960, when Nikita Khrushchev announced the establishment of the Strategic Missile Forces and the adoption of a new military doctrine. This new doctrine, which the terms in the present dictionary help to explain, has continued without significant change into the mid-1970s.

The *Dictionary of Basic Military Terms* is no ordinary dictionary, rather, in many respects, it is the equivalent of a small military encyclopedia. Its predecessor, the *Concise Dictionary of Operational-Tactical and General Military Terms*, was written by the faculty of the Frunze Military Academy. This earlier work was considered as "the first handbook written for officers of the Soviet Armed Forces and cadets of military schools to define operational-tactical and general military terms found in Soviet military newspapers and journals, and in tactical and military-technical literature." The *Dictionary of Basic Military Terms* accomplishes much the same purpose, but at a higher level. It was written "for officers, generals, and admirals of all services of the Armed Forces," and explains not only tactical and operational terms, as found in the earlier work, but

it also includes terms found in writings on strategy—the highest category of Soviet military art.

This book was 8 years in preparation. Its 1,600 entries will be most useful to the readers of the USAF "Soviet Military Thought" series. Many of the most important Soviet military terms, such as doctrine, strategy, and operational art, have meanings that are much different from those generally accepted in the West. Explanations given in this dictionary should help prevent misunderstandings in the critical study of Soviet military affairs.

American Editor's Note on Soviet Nomenclature and Terms

A number of Soviet terms have no exact English equivalent. The terms listed below are those used frequently in this dictionary.

Vid Vooruzhennykh Sil—Service of the Armed Forces. The Soviet Armed Forces are comprised of five Services: Strategic Missile Forces, Ground Forces, National Air Defense Forces (PVO), Air Force, and Navy. "Service," capitalized, denotes one of these five Services. The Strategic Missile Forces (SMF) have also been called "Strategic Rocket Forces" (SRF). It is believed that "Strategic Missile Forces" is a more accurate designation.

Roda Voysk (Roda Sil)—Branches (or Arms) of the different Services. [See entry under: Branches, Service]

Front—Highest level of an *ob'yedineniye*. A front may be formed from major field forces (strategic formations, *sovedineniya*, and units from the various Services of the armed forces). "Front" may also be used as an adjective when referring to units organic to a front.

Ob'yedineniye—Major Field Forces or Strategic Formation. An operational and organizational entity in the different Services of the armed forces, an *ob'yedineniye* is formed from various service branches (or arms) for the purpose of conducting military operations.

Soyedineniye—Formation. The highest level of military organization: Corps, Division, or Brigade level equivalent. It may be formed from a single branch of various branches and Services, including naval squadrons.

Chast'—Unit. Any administrative, line, or housekeeping unit of regimental size or smaller that is administratively self-contained and has its own designation, number, and banner. It is the basic tactical (combat) and independent organizational unit up to, and including the regiment. Each consists of subunits.

Podrazdeleniye—Subunit. It has a permanent organization and is usually homogeneous in make-up. It does not have its own (subunit) number. Battalions, batteries, companies, platoons and squadrons may all be subunits.

Ruko-odstvo—(1) Direction, if pertaining to the CPSU, e.g. "the direction of the armed forces by the Communist Party of the Soviet Union."
(2) Command, if pertaining to strictly military command, e.g. "centralization of command of the armed forces."

Rukovodstvo voyskami—Military leadership, direction, management.
Voennoye rukovodstvo—Command control.
Upravleniye—Command and control.
Operativnoye upravleniye—Operational control/management.
Upravleniye voyskami—Control of troops/military management.
Yedinonachaliye—Unity of command/one-man management.

Foreword

This dictionary of basic military terms is a reference manual containing tactical, operational and strategic vocabulary. It is intended for officers of all ranks of the Armed Forces, both permanent and reserve.

The aim of this edition of the dictionary is to give a brief definition of basic military terms, including combined-arms terminology and special military terms, thus helping to eliminate the marked lack of coordination in terminology now observed in the military literature. Besides the basic military terms, the dictionary contains the minimum of political, technical, historical and foreign military terms necessary for a proper understanding of questions pertaining to the military art.

Many extremely simple military terms have been omitted from the dictionary in order not to make it cumbersome.

When this dictionary was being compiled, the *Naval Operational-Tactical Dictionary** (Voyenizdat, 1957) and the *Concise Dictionary of Operational-Tactical and Combined-Arms Terms*** (Voyenizdat, 1953) were used as reference works.

The dictionary was compiled by the faculty of the General Staff Academy of the Armed Forces of the USSR.

General of the Army V. V. Kurasov participated actively in the discussion and editing of the dictionary.

General-Lieutenants S. N. Krasil'nikov and A. Ye. Yakovlev were responsible for the preparation of the dictionary for publication.

Discussion and editing of the dictionary was done by a committee of the following membership: General-Major Engineering-Technical Service I. I. Anureyev, General-Major A. D. Bagreyev, General-Major of Artillery G. G. Gusarov, General-Major V. N. Yemelin, General-Major V. A. Ignatenko, Colonel Ye. I. Kalugin, Colonel V. I. Korogod, General-Lieutenant S. N. Krasil'nikov, Colonel A. A. Oleynik, Colonel A. V. Orlov, General-Major of Signal Troops A. Ya. Ostrenko, Vice Admiral V. I. Surabekov, General-Lieutenant A. V. Sukhomlin, General-Major of Aviation B. K. Tokarev, General-Major I. I. Fesin, General-Colonel of Artillery N. S. Fomin, Colonel I. A. Khozin, Colonel Engineer O. B. Tsapenko, Colonel A. M. Tsaritsyr, and General-Lieutenant A. Ye. Yakovlev.

All comments and *desiderata* pertaining to the dictionary should be addressed to the Military Academy of the General Staff.

Colonel A. A. Oleynik prepared the dictionary for publication.

Professor General-Colonel A. I. Radziyevskiy

*Voyenno-Morskoy Operativno-Takticheskiy Slovar'.

**Kratkiy Slovar' Operativno-Takticheskikh i Obshchevovennykh Slov.

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1 AVANGARD (advanced guard)—A detachment proceeding at a fixed distance ahead of the main body of a marching formation (unit) in order to protect the troops making the march, to safeguard them from surprise attack by hostile ground forces, and to ensure suitable conditions for the main body to deploy and enter the battle.

2 AVARIYNO-SPASATEL'NAYA SLUZHBA (Emergency and Rescue Service)—A special technical service coordinating the manpower and facilities designated to render aid to warships, merchant vessels, aircraft or combat vehicles which have sustained damage beyond the crew's repair capability. When necessary, the Emergency and Rescue Service organizes rescue of personnel from damaged warships, merchant vessels, aircraft, or tanks in distress.

3 AVARIYA (collision, crash, wreck)—An accident involving considerable damage to combat materiel, resulting in it becoming unserviceable.

4 AVIANOSETS (aircraft carrier)—A surface warship which is a mobile airdrome and a naval aviation base. The main striking power of an aircraft carrier is its deck aviation. Some very large carriers may have rocket-launching installations. An aircraft carrier is intended to deal blows by nuclear or conventional weapons against coastal targets and objectives in the interior of enemy territory and within the range of its deck aircraft or rocket weapons, and against enemy warships and transport vessels at sea or in port. An aircraft carrier may also render assistance to ground forces. According to their displacement, aircraft inventory, and the mission they are performing, aircraft carriers may be subdivided into strike and anti-submarine categories.

5 AVIANOSNAYA AVIATSIYA (carrier-borne aviation)—Aviation based on aircraft carriers. The role envisaged for carrier-borne aviation is to strike coastal targets, warships, transports and landing ships at sea or in port, and also to cooperate with the fleet.

6 AVIANOSNAYA PROTIVOLODOCHNAYA POISKOVO-UDARNAYA GRUPPA (APPUG) (Carrier Anti-submarine Search and-Strike Group)—In foreign navies a group of surface warships, having an anti-submarine aircraft carrier as its nucleus. The role of such a group is to seek out and destroy enemy submarines.

7 AVIANOSNAYA UDARNAYA GRUPPA (AUG) (Carrier Strike

Group)—In foreign navies, a group of surface warships consisting of one (less frequently two) aircraft carrier, a cruiser, and six to eight escort vessels. A Carrier Strike Group is usually included organizationally in a Carrier Strike Force.

8 AVIANOSNOYE SOYEDINENIYE (carrier force)— In foreign navies, a force of surface warships having aircraft carriers as its nucleus.

9 AVIANOSNOYE UDARNOYE SOYEDINENIYE (AUS) (Carrier Strike Force)—In foreign navies, a force of surface warships consisting of two or three Carrier Strike Groups. The role of such a force is to use nuclear or conventional weapons against targets on the enemy's territory and against his warships and transports at sea. The total strength of a Carrier Strike Force is 2-3 strike aircraft carriers, 2-3 cruisers, and 16-20 escort vessels. At the present time, Carrier Strike Forces and missile submarines are the principal striking forces of the US Navy.

10 AVIANOSNYE SILY FLOTA (naval carrier air arm)—One of the arms possessed by the navies of the USA, Britain and France.

11 AVIATIONNAYA BAZA (air base)—(1) Repair-and-supply base (military unit) servicing aviation units and formations. (2) A large capitally equipped airfield with one or more surface runways, permitting all forms of activity appropriate to the aviation based upon it, materiel maintenance, and quartering of personnel. Such an air base is used only in the armed forces of foreign armies [sic].

12 AVIATIONNAYA BALLISTICHESKAYA RAKETA (air-to-surface ballistic missile)—An "air-to-surface" ballistic missile fired from a missile-carrying aircraft or from any airborne platform, and intended to hit targets on land or water.

13 AVIATIONNAYA GRUPPA (air group)—A group consisting of several aviation subunits, units or formations (from one or more aviation branches), temporarily combined under a joint command to carry out specific combat missions. In some foreign armies, an organic aviation unit (formation) is called an air group.

14 AVIATIONNAYA GRUPPIROVKA (air grouping)—The totality of several aviation subunits, units, formations, and in some cases major formations, of various branches (or one branch) of aviation, intended to carry out a specific combat mission (missions).

15 AVIATIONNAYA KONTRPODGOTOVKA (aerial counterpreparation)—One of the forms of air combat activity, consisting in dealing a series of blows against an enemy who has prepared himself to attack. Aerial counterpreparation is done in conjunction with strikes by rocket forces and artillery counterpreparation, in order to disrupt an attack or to weaken the enemy's initial thrust.

16 AVIATIONNAYA MINA (aerial mine)—A mine of special design, which may be laid from an aircraft or helicopter.

17 AVIATIONNAYA PODDERZHKA (air support)—Air force combat operations conducted for the purpose of helping ground forces to achieve success in battle (in an operation). Air support is provided by the centralized forces and facilities of fighter-bombers, bombers, and winged missiles with a view to annihilating the enemy's nuclear-attack facilities, his nearest reserves and command posts detected by reconnaissance, as well as important objectives on the field of battle which for some reason cannot be destroyed by unit weapons on the ground. In an attack air support begins when our own troops go over to the attack, and in defense, when the enemy troops begin their attack, and it continues throughout the entire period of combat operations.

18 AVIATIONNAYA POISKOVO-UDARNAYA GRUPPA (APUG) (Air-Search-and-Strike Group (ASSG))—The role of such a group is to seek out and destroy the enemy's submarines. An ASSG may include anti-submarine aircraft (helicopters) in both the search variant and the strike variant. An ASSG is capable of performing assigned missions either independently or in cooperation with naval search-and-strike groups.

19 AVIATIONNAYA TORPEDA (aerial torpedo)—A torpedo of special design, which may be launched from an aircraft.

20 AVIATIONNAYA ESKADRIYA (air squadron)—The basic tactical aviation subunit. An aviation squadron may be a separate unit.

21 AVIATIONNAYA YADERNAYA BOMBA (aerial nuclear bomb)—One of the forms of nuclear munitions. An aerial nuclear bomb may be used against underground or underwater targets as well as against objectives located at, or above, ground level or sea level. The aerial nuclear bomb yield may vary from a few kilotons to several megatons.

22 AVIATIONNOYE VOORUZHENIYE (air armament)—Weapons mounted on combat aircraft and other airborne platforms. Aircraft armament is subdivided into missile, gun, bombardment and special categories. Missile armament includes unguided and guided missiles, and also devices on the aircraft for their suspension, firing and guidance. Air gun armament consists of cannon, machine guns, ammunition for them, mountings and sights. In the bombardment category are the various types of aerial bombs, torpedoes and mines, as well as devices for their suspension and release from the aircraft (bomb racks, bomb release mechanisms). Special armament includes electronic and pyrotechnic equipment, training and monitoring instrumentation.

23 AVIATIONNOYE ZVENO (flight—air unit)—A tactical aviation subunit. A flight may perform a combat mission either independently, or as part of a squadron.

24 AVIATIONNOYE KOMANDOVANIYE (foreign) (air command)—A major grouping of air forces, both in the system of a nation's aviation and in a theater of war. According to its designation and the mission to be performed, an air command may be tactical or strategic. Typical appellations are: Bomber Command, Fighter Command, Transport Command, Air Defense Command, Air Maintenance Command.

25 AVIATIONNOYE OB'YEDINENIYE (major air formation)—A large aviation grouping consisting of different formations and units, various arms and branches of aviation, cruise missiles, rear service units, and special units. An air formation may be integrated organically with operational front formations, or it may be independent.

26 AVIATIONNO-KOSMICHESKAYA MEDITSINA (aerospace medicine)—A special branch of medicine including the totality of research and measures pertaining to the medical support of air and space flight safety, safeguarding the health of air crews and astronauts, and maintaining their capacity for work under all conditions encountered, especially in modern high-speed, high-altitude aircraft, space ships, and other airborne platforms.

27 AVIATIONNO-TEKHNICHESKAYA BAZA (air-technical base)—A unit which supports air units with all types of supplies on one or several airfields.

28 AVIATIONNO-TEKHNICHESKAYA DIVIZIYA (air-technical division)—A unit that provides airfield technical services, materiel and medical support, for air formations and units. In individual cases, an air technical division may be tasked with siting, building and reconstructing airfields, and related research.

29 AVIATIONNYE SREDSTVA PORAZHENIYA (air weapons)—Weapons used by combat aircraft, e.g., missiles, shells, bombs, torpedoes, and mines.

30 AVIATIONNYY KORPUS (air corps)—An operational-tactical air force formation consisting of several air divisions and individual units.

31 AVIATIONNYY POLK (air regiment)—A military unit. The basic tactical and administrative unit of the air force. It may be an individual unit, or it may form part of an aviation formation. In the air forces of some countries, there are no air regiments.

32 AVIATIONNYY PREDSTAVITEL' V SUKHOPUTNYKH VOY-SKAKH (air liaison officer with ground forces)—A senior air force officer (chief of an operational group of an air army) sent from the air army or air formation staff to a combined-arms or tank army to organize and maintain coordination with the troops.

33 AVIATSIYA VOYENNO-MORSKOGO FLOTA (naval aviation)

—One of the basic naval arms, intended for combat operations at sea, either independently or in cooperation with submarines. Naval aviation may be also called upon to attack coastal targets or to cooperate with ground forces in maritime sectors.

34 AVIATSIYA VOYSK PVO STRANY (National Air Defense Aviation)—One of the main branches of the National Air Defense Forces. It consists of fighter-aviation units, which form part of air defense groupings and formations. National Air Defense Aviation also includes subunits and units of auxiliary aviation and special-purpose aviation (transport, liaison, reconnaissance).

35 AVIATSIYA SVYAZI (liaison aviation)—Auxiliary aviation to provide liaison between superior, subordinate and coordinating levels of commands and staffs. Liaison aviation consists of individual aviation subunits and units, and organizationally forms part of air force and combined-arms formations and groupings.

36 AVTOMATIZATSIYA UPRAVLENIYA POYEVYMI SREDSTVAMI (ORUZHIIEM) (automation of fire control)—The use of electronic computers and other technical aids for fire-control purposes (in the performance of certain combat tasks).

37 AVTOMATIZIROVANNAYA RADIOTEKHNICHESKAYA SISTEMA (automated radio system)—A complex of radio equipment in which the basic working processes are performed automatically, without human intervention, but under human control.

38 AVTOMATIZIROVANNAYA SISTEMA NAVIGATSII (automatic navigational system)—A system consisting of ground and on-board apparatus which automatically determines the position of an aircraft or warship, with provisions for either automatic or manual piloting (steering) of the aircraft (ship).

39 AVTOMATIZIROVANNAYA SISTEMA UPRAVLENIYA VOYSKAMI (automated troop command and control system)—A system of control in which the processes of collecting, processing, storing and outputting information, and the performance of operational-tactical calculations, are accomplished with the aid of various types of technical equipment (electronic computers, etc.). An automated troop command and control system improves the effectiveness of the work done by commands and staffs.

40 AVTOMATIZIROVANNAYA SISTEMA UPRAVLENIYA VOYSKAMI PVO (automated system for the control of air defense troops)—A complex of technical equipment used for the control of air defense troops in the course of their combat activities, with the aid of modern electronic means.

41 AVTOMATIZIROVANNYYE KANALY VOYENNOY SVYAZI

(automated military communication channels)—Special communication channels, through which connection between users is ensured by means of the comprehensive use of equipment, mechanisms and devices. Thus, contemporary multichannel radio-relay links are equipped with remote-indication systems permitting signals to be sent to the main stations from each intermediate station. In addition, a remote-operation system permits a series of commands to be sent to an unmanned station. With the aid of this system, it is possible to change over communication from one set of equipment to another, to switch the equipment of one or more high-frequency circuits on or off, to switch on masthead warning lights, to effect a changeover in power-supply units as required, and to perform a number of other operations. Automation of radio-relay links raises the quality of communication considerably. For automation purposes, radio-relay links are usually divided into a number of sections, each spanning a distance of 200–500 kilometers. At the ends of a section there are main or terminal stations, which monitor all intermediate stations of the section and control them. Intermediate stations function without operating personnel.

42 AVTOMATICHESKAYA STANTSIIYA RADIOPOMEKHI (automatic radio jamming station)—A jamming station which automatically tunes its transmitter to the wavelength of the radio facility being suppressed, so that jamming is effected without intervention by the operator.

43 AVTOMATICHESKAYA TELEGRAFNAYA VOYENNAYA SVYAZ' (automatic military telegraph communications)—Telegraphic communication by means of start-stop teleprinters, with automatic transmission and reception of telegrams. In the process of automatic retransmission, telegrams in transit pass through all telegraph stations and centers without the participation of telegraphists. Automatic transmission is done from tapes, on which the text of telegrams to be sent is printed (perforated) in advance.

44 AVTOMATICHESKIY AEROSTAT (automatic aerostat)—A lighter-than-air apparatus having automatic devices for controlling flight altitude, releasing cargo in a given region, terminating flight, and recovering the apparatus. An automatic aerostat is used in air streams which have a constant direction at high altitudes. For military purposes, automatic aerostats may be used for reconnaissance, jamming radio or signal communications, and for transporting munitions.

45 AVTOMATICHESKIY RADIOKOMPAS (ARK) (automatic radio compass)—The on-board component of a short-range radio-navigation system. It is used to guide an aircraft to the locality of a radio station, fix the aircraft's position when in flight, facilitate landing, and perform other air navigational tasks.

46 AVTOMATICHESKOYE OPREDELENIYE PARAMETROV

YADERNOGO VZRYVA (automatic determination of nuclear burst parameters)—Determination, with the aid of special automatic apparatus, of the coordinates, altitude and yield of a nuclear explosion. Used as data for such determination are the length of time that the thermal pulse exists, and the height and diameter of the cloud, or the cloud's rate of ascent.

47 AVTOMOBIL'NAYA DOROGA FRONTA (ARMII) (front [army] motor road)—A surfaced or dirt road intended for troop movements, transport of materiel, and evacuation. Front (army) motor roads are subdivided into the main and auxiliary categories. They are serviced by road repair and traffic control troops.

48 AVTOMOBIL'NYYE VOYSKA (motor transport troops)—Special troops intended to transport troops and miscellaneous materiel by motor vehicle. Motor transport troops are organized in units and subunits.

49 AVTONOMNOYE UPRAVLENIYE SREDSTVAMI PVO (autonomous control of Air Defense facilities)—Independent (decentralized) control of the various Air Defense forces and facilities from command posts.

50 AVTONOMNOST' PODVODNOY LODKI (NADVODNOGO KORABLYA) (endurance of submarine (surface ship))—The time (in days) that a submarine (surface ship) can remain at sea continuously, under way and on combat missions, without replenishment of fuel or stores.

51 AVTONOMNYYE SREDSTVA RADIONAVIGATSII (autonomous radio-navigation equipment)—Radio aids for air and sea navigation, not requiring the use of on-shore radio facilities.

52 AVTOPILOT (automatic pilot)—A device for controlling the flight of an airborne platform and automatically maintaining the course and altitude required for given flight conditions, without the direct participation of the pilot.

53 AVTOTRAKTORNAYA TEKHNIKA (motor vehicle and tractor equipment)—Motor vehicle and tractor materiel used for military purposes, which is part of the standard equipment of military subunits, units and formations. Motor vehicle and tractor equipment includes automobiles, trucks, special motor vehicles (passenger cars, trucks, special) wheeled and tracked prime movers, carriers, tractors and trailers.

54 AVTOTRAKTORNOYE IMUSHCHESTVO (motor vehicle and tractor support materiel)—Assemblies, spare parts, materials, electrical equipment, tires and rubber components, accessories, adaptors, tools and accessories for the operation and repair of vehicles and visual training aids.

55 AGENTURNYYE SVEDENIYA (DANNYYE) (Information obtained from agents)—Secret material concerning the organization, armament, strategy and tactics of potential or actual enemies, such material pertaining to theaters of military operations, and also information of a military-political or military-economic nature, obtained by intelligence agents.

56 AGRESSIYA (aggression)—Initiation and conduct of unjust, predatory, imperialistic wars. Aggression is the principal element in the foreign policy of imperialist states and is directed first of all against world socialism. In international law, aggression is defined as an armed attack by one or several states on another state for the purpose of seizing its territory, depriving it of independence, and enslaving its people.

57 AKVATORIYA (water area)—The water area within the limits of a port or harbor (bay); an expanse of sea water used for a specific purpose, e.g., for warships in a commercial port; for merchant vessels in a naval harbor; or set aside for the use of seaplanes.

58 AKTIVNOST' OBORONY (aggressiveness in defense)—The ability to detect and promptly liquidate the enemy's weapons of mass destruction, to strike him with all types of firepower, to make extensive use of maneuvers involving personnel, firepower, and engineer obstacles, and to use counterpreparation, counterattacks and counterblows. Timely and successful counterpreparation not only enhances aggressiveness in defense, but may even lead to a break-up of the enemy's attack.

59 AKTIVNYYE MINNYYE ZAGRAZHDENIYA (active mine fields)—Active mine barriers laid at various depths in waters belonging to the enemy or used by him at the approaches to, and exits from, naval bases and ports, at junctions at sea routes, in straits, etc. The purpose of active mine fields is to inflict shipping losses upon the enemy, to restrict the freedom of movement of enemy warships and transports, to raise tension generally and, in particular, to increase the load on the enemy's mine-sweeping forces.

60 AKTIVNYYE RADIOPOMEKHI (active radio jamming)—Jamming of the enemy's radar facilities, produced by jamming transmitters (stations). Active radio jamming, affecting the enemy's radio receivers, disrupts completely or partially the reception and indication of useful signals. Active radio jamming illuminates large areas of the screen on plan-position indicators of radar stations, hindering target detection, and disrupting target tracking by radars that have an automatic target-tracking capability.

61 ALGORITM MATEMATICHESKIY (mathematical algorithm)—A system of mathematical operations and tested logical conditions executed in sequence according to strictly defined rules. Such a system, after a number of moves, leads unfailingly to the solution of the assigned problem.

The algorithm determines a series of solutions for any one class of problems.

62 ALGORITM OPERATIVNYY (operational algorithm)—A system of logical reasoning and operational calculations done in the process of sequential analysis of a situation with the aim of reaching a decision. An operational algorithm serves as a basis for the formulation of a mathematical algorithm.

63 AL'FA-CHASTITSY (alpha particles)—A form of radioactive radiation. Alpha particles occur as a result of nuclear explosions, and they constitute the nucleus of helium atoms. They have a harmful effect on the human organism, especially if they penetrate it.

64 ANEMOMETRICHESKAYA OTSENKA MESTNOSTI (anemometric evaluation of a locality)—Study and estimation of the effect of a locality on the propagation of a cloud contaminated with toxic airborne substances. This is done on a topographical map or by direct measurement of wind direction and speed in the actual locality.

65 ANTIBIOTIKI (antibiotics)—Substances of microbial, animal or vegetable origin, which depress the viability of micro-organisms. They are used in the practice of medicine.

66 ANTIDOTY (antidotes)—Substances used to render first aid to persons affected by toxic substances.

67 ANTIRADIATIONNYYE PREPARATY (antiradiation preparations)—Medical or chemical preparations which diminish the harmful effect of radioactive radiation on the human organism.

68 ANTIRAKETA (anti-missile missile)—A guided missile intended to destroy ballistic missiles.

69 APPARATURA ZAPUSKA RAKETY I UPRAVLENIYA YEYU (apparatus for launching and guiding a missile)—All ground equipment for adjusting and checking the on-board guidance instruments prior to launching, for checking correctness and accuracy of operation, for switching on the instruments and automatic engine controls, and for launching a missile.

70 APPARATURA TONAL'NOGO TELEGRAFIROVANIYA (audio-frequency telegraphic apparatus)—A complex system permitting multi-channel telegraphy by high-frequency telephone channels for military communication purposes.

71 APPARATURA UPLOTNENIYA (multiplexing apparatus)—Technical equipment permitting creation of several telephone and telegraph communication channels that operate simultaneously.

72 ARMEYSKAYA ARTILLERISKAYA GRUPPA (army artillery

group)—An artillery group directly subordinate to an army commander, and intended to perform fire missions in the interest of the army operation as a whole.

73 ARMEYSKAYA ARTILLERIA (army artillery)—Organic army artillery, directly subordinate to the army commander.

74 ARMEYSKAYA GRUPPA (historical) (army group)—A temporary combined-arms army field force, intended for the execution of particular operational missions.

75 ARMEYSKAYA OPERATSIYA (army operation)—The totality of nuclear strikes, strikes by other weapons, and combat operations of army troops, united by a single concept and conducted in accordance with a unified plan for the attainment of an assigned operational objective. As a rule, an army operation is part of [an army] front operation, and is conducted in cooperation with neighboring armies (army), front artillery and aviation, and—in a maritime sector—with naval forces. In certain cases, mainly in operations in isolated sectors, and under special conditions, an army may conduct an operation independently.

76 ARMEYSKAYA POLOSA OBORONY (historical) (army defense zone)—A local zone prepared by army troops for a defensive battle, and prepared in the engineering sense.

77 ARMEYSKIYE (FRONTOVYYE) ZENITNYYE UPRAVLYAYEMYYE RAKETY (army [front] anti-aircraft guided missiles)—Missiles constituting part of the armament of air-defense missile units subordinate to an army (front).

78 ARMESKIYE REZERVY (army reserves)—Part of the forces and weapons in the tactical order of battle of an army intended: to execute short-notice or emergency missions either in preparation for, or during, an operation; to replace active troops which have lost their fighting capability; and to execute counter-thrusts. Army reserves may be in the combined-arms, anti-tanks, and special-troop categories.

79 ARMEYSKIY KORPUS (AK) (Army Corps)—A combined-arms, operational-tactical unit. An Army Corps may consist of several divisions, missile and artillery formations (units), and special-troop units. An Army Corps is intended to carry out operational-tactical missions in a particular sector, primarily in special theaters of war.

80 ARMEYSKIY TYL (army rear services)—A component part of the operational rear, including army rear services units and materiel-supply establishments which are located in an army rear area and intended for providing rear services support troops to army formations and individual army units.

81 ARMIYA (army)—(1) An operational grouping of one or another Service of the armed forces, consisting of several formations of various

branches and special troops, and intended for the conduct of operations (combat activities); (2) ground troops (forces); (3) sometimes the word army is used to designate the armed forces of a State, e.g., the Red Army or the Soviet Army.

82 ARMIYA VTORZHENIYA (invasion army)—Portion of an aggressor's armed forces especially trained to invade the territory of another country during the initial phase of a war, or in the course of a war.

83 ARMIYA NARODNAYA (people's army)—An army expressing and protecting the interests of the toiling masses in the revolutionary struggle for transformation of the social order, and in armed defense of popular power, socialism and communism.

84 ARMIYA PRIKRYTIYA (historical) (covering army)—Portion of a country's armed forces intended to protect its borders against surprise enemy invasion by land, sea or air, and to permit military mobilization to be carried out, and the country's main forces to be concentrated and deployed. This term was used by us prior to World War II.

85 ARMIYA EKSPEDITSIONNAYA (historical) (expeditionary army)—A part of the armed forces, consisting of several divisions of ground troops and naval and air forces, belonging to one country or a coalition of States, and transferred to the territory of other countries for the purpose of conducting large-scale operations. An expeditionary army is most often used by imperialists to conduct operations in colonial wars and to accomplish military intervention.

86 ARTILLERIYSKAYA GRUPPA (artillery group)—A temporary grouping consisting of several artillery units or subunits under one command for the purpose of executing missions in combat. The composition of an artillery group is determined in each case by the situation.

87 ARTILLERIYSKAYA DIVIZIYA RVGK (Reserve Artillery Division of the Supreme High Command)—A reserve artillery formation at the disposal of the Supreme High Command. It may include several artillery units. This division is intended for use in the most important sectors.

88 ARTILLERIYSKAYA INSTRUMENTAL'NAYA RAZVEDKA (AIR.) (Artillery instrument reconnaissance)—A component part of ground artillery reconnaissance. It is done with the aid of special reconnaissance instruments (apparatus). According to the technology used, artillery instrument reconnaissance is subdivided into optical, acoustic, radio and ground-photography categories. Artillery instrument reconnaissance is used to determine the target coordinates, to support missile and artillery fire, and also to tie in firing positions and observation posts.

89 ARTILLERIYSKAYA KONTRPODGOTOVKA (artillery counterpreparation)—Artillery fire by a defender against an enemy who is preparing or deploying for an attack. Artillery counterpreparation is done in

conjunction with nuclear strikes, and in combination with air counter-preparation, for the purpose of breaking-up an attack or weakening the enemy's initial thrust.

90 ARTILLERIYSKAYA OPORNAYA SET' (artillery control net)—The aggregate of control points and sectors tied into the terrain, the coordinates and directional angles of which are determined in a unified system with sufficient accuracy for artillery purposes.

91 ARTILLERIYSKOYE VOORUZHENIYE (artillery armament; ordnance)—All artillery materiel, including guns and mortars, ammunition, artillery instruments, and various types of auxiliary equipment.

92 ARTILLERIYSKOYE NABLYUDENIYE (artillery observation)—Method of reconnaissance which consists in observing the enemy from ground artillery observation posts.

93 ARTILLERIYA (artillery)—(1) One of the service branches possessing great fire power; (2) a type of weapon, or the aggregate of armament items, including the entire complex of a firearm and all the equipment needed for its effective utilization in combat; (3) the science dealing with the fundamentals of a fire weapon's structure, its properties, and the methods of using it in combat.

94 ARTILLERIYA REZERVA VERKHOVNOGO GLAVNOGO KOMANDOVANIYA (artillery of the Supreme High Command's reserve)—Artillery not included in combined-arms formations or strategic formations. It consists of artillery formations and units intended for quantitative and qualitative reinforcement of organic artillery.

95 AR'YERGARD (rear guard)—March protection element, intended to safeguard troops moving from the front to the rear. The strength, composition, missions and distance of a rear guard (from the main body) will depend on the size of the main body column being guarded and on the situation.

96 ASTROINERTSIAL'NAYA SISTEMA NAVIGATSII (astro-inertial system of navigation)—A system for determining the position of missiles, spacecraft, aircraft or ships, and for controlling their movements. Such a system uses astronomical devices together with mechanical inertial devices. Underlying the system is calculation of coordinates on the basis of measured accelerations, and their correction by astronomical methods. An astro-inertial system of navigation is used primarily in long-range cruise-type missiles.

97 ASTRONAVIGATSIONNAYA SISTEMA NAVEDENIYA (astro-navigational guidance system)—A system for determining a guided object's true position in space by reference to heavenly bodies with the aid of astronomical instruments (astro-sextants, special telescopes).

98 ASTRONAVIGATSIYA (ASTRONOMICHESKAYA NAVIGATSIYA) (astronavigation [astronomical navigation])—Navigation of aircraft, ships, spacecraft or rockets using heavenly bodies for orientation. In use at the present time are astronavigational instruments with automatic tracking of two heavenly bodies, or of one, if the course is pre-programmed.

99 ATAKA (attack)—The most important element in the tactical activities of air, naval and ground forces, constituting a combination of swift maneuver and fire (strike) aimed at enemy personnel and weapons for the purpose of their annihilation. An attack by ground forces is carried out immediately following nuclear and conventional weapons strikes, and is culminated by the utter defeat of the enemy and by capture of his defensive areas and structures. An air attack is a rapid action by aircraft against the enemy for the purpose of firing or striking at close range. Annihilation of hostile aircraft in the air during an air attack is accomplished by fighter aviation. A torpedo (missile) attack is the maneuvering of a warship (aircraft) for the purpose of assuming a favorable position and firing torpedoes (missiles) at the target.

100 ATOMNAYA ARTILLERIYA (atomic artillery)—Artillery intended to fire projectiles having nuclear charges.

101 ATOMNAYA SILOVAYA (ENERGETICHESKAYA) KORABEL'NAYA (SUDOVAYA) USTANOVKA (atomic power plant for ship propulsion)—A special plant converting intranuclear energy into mechanical energy to propel a naval or merchant vessel. Regardless of its design or type, a contemporary atomic power plant for ship propulsion consists of an atomic "boiler," or reactor, a turbine (steam or gas), and electro-mechanical machinery. The application of the atomic power plant to submarines has solved the problem of making them true underwater warships that hardly ever (with rare exceptions) have to surface.

102 ATOMNYY (YADERNYY) BARYER (foreign) (atomic [nuclear] barrier)—Obstacles in the form of radioactive contamination of the terrain, destruction of built-up areas, bridges, junctions, roads, mountain passes and defiles, caused by nuclear weapons to prohibit enemy troop maneuvers, and materiel and technical support.

103 ATASHE (attaché)—Post in a diplomatic delegation (embassy, mission). Special attachés, i.e., military, naval, air, press, etc., obtain information by lawful means, are advisors to the ambassador in their specialty and represent their own army, navy, air force, press, etc., in the foreign country.

104 AERODINAMIKA (aerodynamics)—The science of the motion of air and its effect on the bodies around which it flows. Aircraft aerodynamics is the science of the motion of an aircraft in air under the influence of the forces that so occur.

105 AERODINAMICHESKIY NAGREV (aerodynamic heating)—Heating of the structure of an airborne vehicle (aircraft, missile) due to retardation of the air stream. Air particles coming into direct contact with the airborne vehicle are slowed down by it. As a result, the kinetic energy of these particles is transformed into thermal energy.

106 AERODROM (airfield)—An area of land, prepared from the engineering viewpoint, permitting takeoff, landing, servicing and accommodation of aircraft. An airfield is intended to serve as a base for an aviation unit or subunit. According to their degree of development, airfields are subdivided into permanent and field categories, and are designated as "superclass," first class, second class or third class. According to their purpose, airfields are subdivided into home, maneuver, alternate, regular, operational, advance, staging, rear and dummy categories.

107 AERODROM BAZIROVANIYA (home airfield)—An airfield on which, at a given time, an aviation unit is based. Home airfields may be permanent, or in the field category.

108 AERODROM VTOROGO KLASSA (second class airfield)—An airfield intended to serve as a base for a unit or subunit of frontal aviation or national air defense fighter aviation. A second class airfield, whether in the permanent or field category, has a paved runway 2000 meters long and 50 meters wide. The total length of the main runway of a permanent second class airfield, including the terminal overruns, is 2800 meters. A second class airfield in the field category may be an unpaved airfield with a main runway with a total length of 2200–2400 meters. Such an airfield may also have an equipped, paved runway 1800–2000 meters long.

109 AERODROM ZASADY (historical) (ambush airfield)—An airfield used by frontal and by national air defense fighter aviation, and intended to ensure interception of the air enemy at remote frontiers. An ambush airfield is located 10–15 kilometers from the State border or from the front line, or on probable flight routes of enemy aircraft. In most cases, ambush airfields are unpaved second-class airfields.

110 AERODROM MANEVRA (maneuver airfield)—An airfield on which units of frontal aviation, long-range aviation and national air defense fighter aviation may be based briefly, and from which they may engage in combat operations. From the engineering viewpoint, a maneuver airfield is developed to the same extent as a home airfield. At a maneuver airfield there are radio facilities and an air technical subunit or unit. A maneuver airfield is in constant readiness to receive an aviation unit or subunit that is performing an airfield maneuver, and to support its uninterrupted conduct of combat activities. Maneuver airfields may be especially prepared as such, or they may be reserve airfields or those formerly used as home airfields for aviation units and subunits.

111 AERODROM MATERIAL'NOGO OBESPECHENIYA (supply

and support airfield)—An airfield used for consignment of goods by air transport. As a rule, there are warehouses (specialized groups of warehouses) and medical establishments near a supply and support airfield.

112 AERODROM Pervogo Klassa (first class airfield)—An airfield on which long-range aviation units may be based. A permanent first class airfield has a paved runway and other airfield installations. The dimensions of a paved runway on a first class airfield, whether in the permanent or field category, are 2500 x 80 meters. The total length of the runway must be not less than 3300 meters.

113 AERODROM Podskoka (staging airfield)—An airfield situated nearer to the enemy than major home airfields, used by the air force to increase the depth to which enemy territory may be penetrated for the purpose of reaching objectives. Home and maneuver airfields of other aviation formations, and specially-prepared airfields may be used as staging airfields.

114 AERODROM Tret'yego Klassa (third class airfield)—An airfield intended as a base for military transport aviation units and units having short take-off and landing aircraft. A permanent third class airfield has a main runway of 1300–1600 meters total length, and as a rule has a paved runway 1200 meters long. A third class airfield in the field category will more often than not be an unpaved airfield with a main runway of 1200–1300 meters total length. Such an airfield may have a paved runway 1000 meters long.

115 AERODROMNAYA Set' (airfield net)—The aggregate of airfields on which air force, combined-arms or national air defense aviation units are based, or from which they may maneuver or engage in combat operations. An airfield net includes airfields in the home, maneuver, alternate, advance, rear and dummy categories. Airfields which are components of an airfield net may be united into airfield regions or airfield areas, on which aviation formations may be based. An airfield net may be confined to one country or it may include the airfields of a group of States.

116 AERODROMNAYA Sluzhba (airfield service)—An air force service engaged in the siting, construction, reconstruction, repair and operation of airfields. The airfield service is entrusted with providing engineering and airfield support for combat operations conducted by frontal aviation, long-range aviation, missile-armed naval aviation, and national air defense fighter aviation.

117 AERODROMNO-TEKHNICHESKOYE Obespecheniye (airfield technical support)—Measures taken to keep an airfield in good working order, thus ensuring support for air operations.

118 AERODROMNYY Manevr Aviatsii (airfield maneuver of aviation)—Complete or partial regrouping of aviation units, formations

and strategic formations associated with a change in home airfield. An airfield maneuver of aviation may be executed to create a new grouping of air forces or to shift its effect from one sector to another, to rebase aviation units closer to the front line in preparation for, or during, an operation, to withdraw aviation units clear of a nuclear attack and from a zone of radioactive contamination, and also to conceal the actual areas where aviation is based.

119 AERODROMNYY RAYON (airfield region)—A set of airfields on which it is intended to base a large air force formation. The number of home airfields constituting an airfield region is governed by the composition of the aviation formation (strategic formation) and by the density at which the units are based. An airfield region may contain from two to four airfield areas.

120 AERODROMNYY UZEL (airfield area)—A group of airfields on which it is intended to base an air force formation or unit. The number of home airfields constituting an airfield area is governed by the composition of the formation (unit) and by the density at which units are based.

121 AEROMETEOROLOGIYA (AVIATIONSKAYA METEOROLOGIYA (aerometeorology [aviation meteorology])—The branch of general meteorology dealing with atmospheric processes and phenomena (meteorological conditions) affecting the flight of aircraft, missiles and aerostats.

122 AERONAVIGATSIYA (VOZDUSHNAYA NAVIGATSIYA) (aeronavigation [air navigation])—The science of guiding an airborne vehicle through the air from one point on the Earth's surface to another, or from the place of take-off to the assigned target (object), and then to the landing site. In practical application, aeronavigation is the totality of actions performed on the ground and in the air for the purpose of ensuring that an airborne vehicle follows the prescribed course at the assigned altitude and reaches the designated target at the proper time.

123 AEROFOTORAZVEDKA (aerial photo-reconnaissance)—One of the methods of conducting aerial reconnaissance, accomplished by photographing a locality or objectives from an aircraft or other airborne platform.

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124 BAZA BEREGOVAYA (coastal base)—A military unit used for providing rear services for submariners, missile boats, torpedo boats, etc., and cultural amenities for their crews. Coastal bases are located in ports, harbors and bays. A coastal base has jetty frontage, workshops, warehouses and materiel-handling equipment, and is able to supply vessels with stores, electricity, and steam. A coastal base also has living quarters and

office space, special-purpose rooms and laboratories, hospitals, clubs, and all types of domestic facilities (steam baths, laundries, etc.). A coastal base used by submarines may have pens for their protection.

125 BAZA VYSADKI (landing base)—A facility of the rear services area intended to create favorable conditions for a landing by the main forces, and to supply the troops which have disembarked.

126 BAZA RADIOTEKHNICHESKOY (RADIONAVIGATSIONNOY RADIOPELENGATORNOY) SISTEMY (base of a radio-technical [radio-navigational, radio direction-finding] system)—The distance between the system's two stations, which are fixed geographically. The two stations give a user of the system his position or a position line. Where there are more than two stations in the system, the base of a radio-technical system is defined as the distance between any two stations of the system.

127 BAZA SNABZHENIYA (supply base)—A supply facility, including a group of warehouses with the necessary inventories and handling equipment, intended to provide the troops with materiel support.

128 BAZIROVANIYE AVIATSII (the basing of aviation)—The use, by aviation units, formations and strategic formations of airfields, airfield areas, airfield regions or airfield nets, on whose territory are deployed rear services units and establishments whose role is to support air combat activity. The basing of aviation may be dispersed and mobile.

129 BAZIROVANIYE FLOTA (basing of the fleet)—The distribution of naval forces in a given maritime theater of naval operations.

130 BAZISNAYA VOLNA (base surge)—A swirling annular cloud of water spray formed in the course of an underwater nuclear explosion at the base of the water column as the latter falls. The farther the base surge spreads from ground zero, the more it rises into the air and, having merged with the mushroom-like cloud, acquires the appearance of a stratocumulus cloud. The base surge contains a large amount of radioactive material, which leads to radioactive contamination in the vicinity of the explosion and along the track of the radioactive cloud.

131 BAZOVYYE PLAVUCHIYE SREDSTVA (harbor craft)—Self-propelled and towed vessels intended to service warships, aircraft, and miscellaneous vessels of the navy and other forces in port, in roadsteads, and in harbor (tugs, floating docks, barges, cutters, torpedo-retrieval vessels, gunnery targets, firefighting vessels, degaussing stations, battery-charging stations, floating barracks, bakeries, etc.).

132 BAKTERIAL'NAYA RETSEPTURA (bacterial culture)—A group of substances including pathogenic microbes or toxins and various substances which increase the viability of microbes or the stability of toxins in storage and use.

133 BAKTERIAL'NYYE AEROZOLI (bacterial aerosols)—Small particles of a bacterial culture suspended in a gaseous medium (air).

134 BAKTERIAL'NYYE SREDSTVA (bacterial agents)—Substances causing diseases in man, animals, and plants, and manufactured bacterial poisons, called toxins. Bacterial agents form the basis for the casualty-producing effect of bacteriological weapons.

135 BAKTERIOLOGICHESKAYA VOYNA (bacteriological warfare)—Warfare with the use of bacterial agents. Bacteriological warfare is forbidden by international law and is condemned by all progressive mankind.

136 BAKTERIOLOGICHESKIYE RAKETY (bacteriological missiles)—Missiles filled with bacterial agents.

137 BAKTERIOLOGICHESKOYE (BIOLOGICHESKOYE) ORUZH'IYE (bacteriological [biological] weapons)—Ammunition and devices filled with bacterial agents, intended to infect people, domestic animals, and crops.

138 BALLISTIKA (ballistics)—The science of the laws of motion of missiles, artillery projectiles, mortar rounds, bullets, etc., when fired. Ballistics is divided into two parts, internal and external. Internal ballistics studies the laws of motion of a shell, mortar round or bullet in the barrel and the processes accompanying the firing of a shot from a fire weapon. External ballistics studies the laws of flight of a rocket, artillery projectile, mortar round, bullet, etc., in the air, from the moment when the action of the powder gases on it ceases, until the moment when it reaches the target.

139 BALLISTICHESKAYA RAKETA (ballistic missile)—The most important weapon in nuclear warfare. The trajectory of a ballistic missile consists of an active phase and a passive phase. During the active phase, the missile is propelled by its motor's thrust, and is guided by a self-contained [autonomous] or combined guidance system. During the passive phase, the missile flies along a so-called ballistic curve.

140 BALLISTICHESKIY VETER (ballistic wind)—The theoretical (nominal) wind, used for a particular altitude, which will produce the same deviation of a projectile from the tabulated trajectory as the actual wind, which varies with altitude.

141 BESOPASNAYA VYSOTA VYSOTNOGO YADERNOGO VZRYVA (safe altitude of a high-altitude nuclear explosion)—The minimum permissible altitude ensuring the safety of ground-level objects from the damaging factors of a nuclear explosion.

142 BEZOPASNAYA DOZA RADIATSII (safe radiation dose)—The

radiation dose, receipt of which will not lead to the onset of radiation sickness in an individual.

143 BEZOPASNOST' POLETA (flight safety)—Conditions ensuring preservation of the crew and materiel during the organization and accomplishment of a flight.

144 BEZOPASNYY VREMENNOY INTERVAL (safe time interval)—The time interval between individual aircraft (units) during take-off and in transit which ensures safe take-off and piloting of each aircraft. When bombing with nuclear weapons, the safe time interval between the bomber and the escort aircraft depends on the nuclear bomb yield and on the bombing altitude.

145 BEZOPASNYY REZHIM POLETA (safe flight system)—(1) Flight within the limits of the maximum and minimum speeds laid down for a given type of aircraft; (2) the system established for group flying and for flying in clouds.

146 BEREGOVAYA ARTILLERIYA (coastal artillery)—A type of naval artillery placed on the sea coast. Coastal artillery is intended to be used in the defensive system of naval bases, important coastal regions, and islands against enemy attack by sea or by land. Coastal artillery is subdivided into fixed and mobile (moved by rail or mechanical traction).

147 BEREGOVAYA OBORONA (historical) (coastal defense)—The aggregate of naval combat forces and facilities concentrated on the coast and organized into a special defensive system to provide cover for important operational sectors and to provide protection for particular objectives on the given coastline, islands or skerries (including adjacent waters), against sea, air and land attack.

148 BEREGOVOYE NABLYUDENIYE ZA MOREM (coastal surveillance)—A special system of observation, organized on the sea coast by every navy for the purpose of detecting submarine, surface and airborne objects belonging to the enemy, and other changes in the situation within the range and capabilities of instrumental and visual means of observation.

149 BEREGOVYYE RAKETNYYE CHASTI (coastal missile units)—Naval units and subunits armed with mobile or fixed missile launchers, primarily intended for use in a system for the defense of naval bases and the most important coastal regions and islands against enemy attack by sea; but also intended for use in cooperation with ground forces and with naval forces operating at sea.

150 BESPILOTNAYA AVIATSIYA (drone aircraft)—Aircraft and helicopters which are flown from take-off to landing without a pilot, using instead self-contained, remote, or combined control systems.

151 BESPILOTNYYE SREDSTVA VOZDUSHNOGO NAPADENIYA (unmanned air attack weapons)—Airborne vehicles guided (flown) by self-contained control systems, homing systems, or remote control, so that they need not be manned. Unmanned air attack weapons include ballistic and cruise missiles.

152 BESPRICHAL'NOYE BAZIROVANIYE (offshore berthing)—Berthing a naval unit at an anchorage or at any place where there is no jetty frontage. Offshore berthing is supported by the use of mobile engineering facilities and small-displacement floating craft.

153 BESPRICHAL'NOYE SNABZHENIYE KORABLEY (offshore resupply of warships)—Method of resupplying a warship with various types of stores, without the ship coming to a jetty or to moorings in a harbor (bay). Offshore resupply of warships may be accomplished either when under way or when at anchor. Under way at sea, resupply is done with special equipment, and at anchor in a roadstead, by means of flexible hoses or by tankers or waterboats. Offshore resupply of warships with other types of stores is accomplished by using rear services harborcraft.

154 BETA-CHASTITSY (beta particles)—A form of radioactive radiation occurring as a result of a nuclear explosion, consisting of electrons of nuclear origin. They have a harmful effect on the human organism.

155 BIOLOGICHESKIY EKIVALENT RENTGENA (BER) (roentgen equivalent man [rem])—The quantity of any form of penetrating radiation which is equivalent in biological effect to 1r of gamma radiation. In view of the fact that the radiation dose corresponding to 1 rem varies considerably according to the nature of the irradiation (single, multiple), the rem concept is rarely used as a unit of measurement for radiation dose.

156 BITVA (historical) (battle)—A decisive encounter of the main forces of the belligerent parties, the results of which not infrequently determine the outcome of a campaign or a stage of a war. "Battle" is an ancient Russian term equivalent to the more recent term "general engagement". A battle is the aggregate of a number of simultaneous and successive decisive engagements of the main strategic groupings of the belligerent parties in the most important strategic sectors or theaters of military operations. These engagements are united by singleness of purpose and concept, and distinguished by great intensity; they lead to the destruction of the enemy's main forces in a given strategic sector or theater of war and to the mastery of the most important strategic objectives. A battle on such a scale changes the correlation of forces and creates a turning point in the war. A battle is fought by several coordinated major field forces, supported by a concentrated airpower, considerable artillery reserves, and armored and other troops. World War II saw battles that

were unprecedented in military history: the Battle of Moscow in 1941, Volgograd in 1942, Kursk in 1943, etc.

157 BLANKOVAYA KARTA (blank map)—A topographical map or sea chart printed in one or several pale colors. A blank map is used by staffs to prepare graphic documents.

158 BLIZHAYSHAYA ZADACHA (immediate objective)—That part of the overall combat mission of troops in an offensive operation which must be accomplished first. Depending on the situation, an initial objective may be to annihilate the enemy's means of nuclear attack, break up his basic grouping, or to take possession of regions, lines, or positions, the capture of which will ensure successful execution of a future (the next) mission.

159 BLOKADA VOYENNAYA (military blockade)—One of the methods of conducting an armed conflict, namely, by isolating the enemy State (part of it, or a group of States), particular groupings of the enemy's armed forces, and seaports or important political centers for the purpose of completely preventing the arrival of reinforcements, materiel, supplies and raw materials, thus creating conditions under which the enemy may be utterly defeated or forced to capitulate. A military blockade is imposed by the personnel and weapons of all the armed Services. Depending on the nature of the means used and the geographical location of the blockaded objective, a blockade may be imposed by land, by sea, by air, or by certain combinations of these, i.e., by land and air, by sea and air, or by land, sea and air. Depending on the nature of the tasks to be performed, a military blockade may be strategic, operational or tactical. A military blockade is often preceded by political, economic and diplomatic blockade.

160 BLOKADA MORSKAYA (naval blockade)—Isolation of all or part of enemy territory from the sea, using naval and air forces; isolation of all or part of the enemy's naval forces, curtailment of enemy merchant shipping.

161 BLOKADNYYE SILY (blockading forces)—Forces effecting a blockade. Their composition depends on the nature and conditions of the blockade. Blockading forces may include submarines, naval aviation, surface ships, naval coastal missile units, and sometimes naval coastal artillery units.

162 BLOKIROVANIYE (blockading)—(1) The aggregate of combat activities performed by various services of the ground, naval and air forces for the purpose of imposing a naval blockade. (2) Isolation (encirclement) of a strong point (objective) or a grouping of enemy troops offering continued resistance. Blockading is carried out by limited forces from the first echelon. Annihilation of the blockaded enemy may be effected by

part of the first echelon, by the second echelon, or by reserves. Nuclear weapons may also be used for this purpose. (3) Prohibition of take-off from enemy airfields for a certain period of time. Such blockading is achieved by air attacks on enemy aircraft which are parked, standing by for take-off, or attempting to take off, and also by mining or otherwise damaging runways. Airfields may be blockaded in support of the combat operations by one's own air and ground forces.

163 BOYEVAYA VOZMOZHNOT' (combat capability)—The aggregate of indicators characterizing the combat qualities and technical capabilities of formations (units, subunits), service branches and special troops during execution of their combat mission. Combat capability is determined by the extent to which the unit is up to strength, by its level of training, and by the degree to which it is equipped with armament, combat materiel and quality and quantity of transport facilities.

164 BOYEVAYA GOTOVNOT' VOORUZHENNYKH SIL (VOYSK) (combat readiness of the armed forces [of troops])—The state determining the degree of readiness of each Service of the armed forces (troops) to fulfill the combat missions assigned to it. The basic index of the armed forces' readiness for combat is their ability to undertake combat missions, within the prescribed time limits, having regard to the aim, plan, and situation.

165 BOYEVAYA ZHIVUCHEST' (damage control)—The ability of personnel servicing armament and combat materiel, of ships' crews and air crews, to maintain fighting efficiency and to restore combat effectiveness rapidly in the event of casualties and appreciable damage to armament and combat materiel.

166 BOYEVAYA ZADACHA (combat mission)—A mission assigned to troops (major field forces, formations, units) in order to achieve a definite goal in a battle (operation) by a specific time. In an attack, for example, a combat mission could consist in annihilation (rout) of a principal enemy grouping in a certain zone, to a prescribed depth, or in seizure of particular territory. In a defense, on the other hand, a combat mission could consist in annihilating the advancing enemy, denying him a breakthrough into the defended area, or in holding particular occupied terrain. In an offensive, a combat mission for a major field force is usually subdivided into an initial mission and a subsequent mission. A combat mission for a formation could, in one case, be subdivided into an immediate mission, a subsequent mission, and a mission-of-the-day, or in another case, into an immediate mission, an axis for further advance, and a mission-of-the-day. The content and depth of a combat mission may vary, depending on a number of factors.

167 BOYEVAYA ZASHCHITA KORABLYA (defensive features of a warship)—Special structures to improve a warship's ability to stay afloat,

and to protect personnel, armament and machinery from the various weapons of an enemy.

168 BOYEVAYA MASHINA (combat vehicle)—An armored tracked (wheeled) vehicle with armament mounted on it, used for combat. Combat vehicles include tanks, self-propelled artillery mounts, armored personnel carriers, armored cars, etc. A rocket launcher mounted on an automobile is also called a combat vehicle.

169 BOYEVAYA OBSTANOVKA (combat situation)—The aggregate of the various factors and conditions pertaining to a particular period during which combat or an operation is to be prepared for and conducted. The combat situation includes: the state of the enemy, friendly troops and adjacent units, degree of radioactive and chemical contamination of the terrain and of the air, nature of the terrain and the state of the road network, economic condition of the region, political outlook and morale of the population, weather, time of day and time of year.

170 BOYEVAYA PODGOTOVKA (combat training)—Training provided to various categories of servicemen, subunits, units and staffs for the conduct of military operations, and to the rear services for their support function.

171 BOYEVAYA SKOROSTREL'NOST' (effective rate of fire)—The greatest number of shots which can be fired in a unit of time from a given weapon without damaging it, taking into account the time needed for reloading, changing aim, etc.

172 BOYEVAYA SPOSOBNOST' (BOYESPOSOBNOST') (combat effectiveness)—The ability of subunits, units, formations and strategic formations to perform combat operations and accomplish the missions assigned to them.

173 BOYEVAYA TEKHNIKA (combat materiel)—The totality of all military and technical equipment used in combat and to support troops in combat and operations.

174 BOYEVAYA TREVOGA (combat alert)—A procedure for bringing troops to a state of full combat readiness to complete a combat mission. A combat alert is given by the senior commander, either as a command, or by a prearranged signal transmitted through communication channels, or otherwise.

175 BOYEVAYA USTOYCHIVOST' (combat stability)—The ability of units and formations of the Services to preserve their combat effectiveness under the stress of enemy action.

176 BOYEVAYA CHAST' (na korable) (stations [on a warship])—Subdivision of a warship intended for the performance of particular func-

tions. Included are: battle stations, weapons, instruments, machines, steering gear, communications, lookout posts, and other stations.

177 BOYEVAYA CHAST' RAKETY (missile warhead)—The compartment or nose cone of a missile where the charge and fuze system are located. The charge may be nuclear or chemical, or it may consist of conventional explosives.

178 BOYEVAYA EKONOMICHESKAYA SKOROST' KORABLYA (combat maximum range speed of a warship)—The speed attainable with the least expenditure of fuel per mile run, at normal displacement and with all ordnance and other auxiliary machinery operating in a system ensuring full readiness for combat. A warship must maintain a maximum range speed during the entire time required for execution of a combat mission.

179 BOYEVOYE DEZHURSTVO SREDSTV PVO (combat alert duty at air defense facilities)—Subunits (units) stationed at control centers for air defense forces and fighter aviation being at a certain state of readiness to conduct combat operations. The procedure for carrying out an operational 24-hour tour of [combat alert] duty at air defense facilities is laid down in the senior commander's instructions.

180 BOYEVOYE DONESENIYE (combat report)—A written (graphic) document or verbal report by a subordinate to his superior concerning the progress of a combat mission.

181 BOYEVOYE NAPRYAZHENIYE AVIATSII (combat intensity of aviation)—The number of sorties which an aircrew of a subunit, unit, formation or major formation is capable of flying in a 24-hour period or other specified time. Mean norms of intensity (in sorties per aircrew) are laid down for the various branches of aviation.

182 BOYEVOYE OBESPECHENIYE AVIATSII (combat support of aviation)—A system of measures aimed at providing direct support for the successful completion of combat missions by formations, units, subunits and individual aircraft. Such measures include: target reconnaissance or preliminary target reconnaissance, overcoming enemy fighter opposition in the air, suppressing ground air defense facilities on the flight route and in the vicinity of the target, effecting radio countermeasures, and defending the airfield against nuclear weapons, artillery fire, and air attack.

183 BOYEVOYE OKHRANENIYE (combat security)—One of the types of combat support of troops (navy). Combat security is organized to prevent sudden attack or the penetration of enemy reconnaissance into an area where the protected troops (warships) are deployed, and to provide friendly troops (warships) with sufficient time and advantageous conditions for deployment and for entry into combat in the event of their coming into contact with the enemy.

184 BOYEVOYE PITANIYE (combat materiel supply)—A system for supplying troops with everything needed for combat (weapons, ammunition, etc.).

185 BOYEVOYE RASPORYAZHENIYE (operational instructions)—A combat document (or a verbal presentation of its content) transmitted to the troops in a combat situation for the purpose of assigning them missions for a forthcoming operation. Operational instructions include brief information concerning the enemy, the positions and missions of adjacent units, and the combat mission of the troops to whose commanding officers the combat instruction is issued.

186 BOYEVOY VYLET (sortie)—Flight by an aircraft or helicopter (group of aircraft or helicopters) in connection with the fulfillment of a combat mission.

187 BOYEVOY INFORMATSIONNYY POST NA KORABLE (operations control center on a warship)—A room (place) on a warship, especially equipped to collect and process information (reports) concerning the surface, air and underwater situation, obtained by the ship's own equipment or received from other sources.

188 BOYEVOY KOMPLEKT (unit of fire)—The supply-and-accounting unit adopted for operational and tactical planning with regard to materiel and technical support required by troops (aviation) in order that a particular combat mission may be accomplished.

189 BOYEVOY KURS (attack course)—The course on which a warship or aircraft uses its weapons. The choice of attack course depends on the properties of the weapons used, mission to be completed, and prevailing situation.

190 BOYEVOY PORYADOK (order of battle; combat formation)—A grouping of forces and weapons deployed for battle. A combat formation is drawn up in accordance with the type, nature and concept of a forthcoming battle.

191 BOYEVOY PRIKAZ (combat order)—An order issued by a commander (general officer commanding) in a combat situation (verbally or in writing) to subordinate troops to carry out a plan made by him. Indicated in a combat order are: an evaluation of enemy grouping and actions; missions and procedures for the use of atomic weapons by the superior commander in the zone of operations by a major field force or formation (unit); missions of adjacent units and the dividing lines shared with them; missions and operational concept of the entire major field force or formation (unit); combat missions assigned to subordinates and the time troops are to be ready; location of command posts, time of their deployment, and the sector in which they are to be relocated; deputies.

192 BOYEVOY RASCHET (combat duty assignment)—Assignment of

particular duties to the servicemen of a subunit according to the nature of the combat mission (observer, messenger, member of a patrol, ammunition carrier, etc.). Combat duty assignment is done prior to a combat mission. It may also be done prior to tactical training.

193 BOYEVOY SOSTAV (effective combat strength)—The effective strength of a unit, formation or major field force intended for direct conduct of an operation or battle. Effective combat strength units are: for tactical purposes—missile launcher, tank, gun, aircraft, battalion, battery, squadron, field-engineer company, warship; for operational and strategic purposes—the division (in all Services of the armed forces) or its corresponding unit, but in this case effective combat strength is calculated primarily in terms of missile launchers and nuclear ammunition; for infantry purposes—the total numerical strength of ground forces, the number of machine guns, cannon, tanks; for air force purposes—the number of aircraft; and for naval purposes—the number and types of warships.

194 BOYEVYYE GRAFICHESKIYE DOKUMENTY (graphic combat documents)—Orders, instructions, reports, etc., prepared on a map or blank map, or in the form of a diagram, graph or table.

195 BOYEVYYE DEYSTVIYA (combat operations)—Operations of troops (air force, naval fleet) directed at destroying enemy personnel and combat materiel, seizing his territory, repelling his attacks, warding off his strikes, and retaining one's own territory. Also, operations associated with local movements and disposition of troops while under threat of enemy attack.

196 BOYEVYYE DEYSTVIYA SIL FLOTA PO OBORONE SVOIKH MORSKIKH KOMMUNIKATSIY (naval combat operations conducted to defend sea communications)—Operations conducted by naval forces independently or in cooperation with front troops and maritime national air defense units in order to protect merchant shipping and government-sponsored shipments for military or national-economic purposes from enemy action.

197 BOYEVYYE DOKUMENTY (combat documents)—Staff documents pertaining to preparations for organizing and conducting combat operations, as well as to local movements and disposition of troops. Combat documents include, for example, combat orders and instructions, combat reports, working and position maps, various calculations, diagrams, etc.

198 BOYEVYYE POTERI (combat losses)—Losses of personnel and materiel sustained as a result of enemy action.

199 BOYEVYYE PRIPASY (BOYEPRIPASY) (ammunition)—Missiles of various types, artillery shells, mortar rounds, aerial bombs, naval

torpedoes and depth charges, hand grenades, and cartridges for small arms.

200 BOYEVYYE SVOYSI VA SAMOLETOV (combat characteristics of aircraft)—The aggregate of the flying and tactical characteristics of an aircraft (speed, rate of climb, ceiling, tactical radius of action, etc.), its armament, radio and radar fit, i.e., qualities which determine the probability of successful execution of combat missions.

201 BOYEVYYE STREL'BY (field firing)—Artillery firing or firing from tanks and small arms, carried out using live or practice shells and cartridges. Field firing may be done both in specialized artillery training exercises and in training exercises with other service branches. Field firing may be for training, record, demonstration, or experimental purposes.

202 BOYEVYYE TRADITSII (combat traditions)—The accumulated rules and customs which inspire armed forces personnel to fulfill their sacred military duty to the Motherland selflessly and wholeheartedly. The combat traditions of the Soviet Army and Soviet Navy are traditions of a new type. They are founded on the revolutionary traditions of the working class and the Communist Party, and on the heroic traditions of the Russian people. These combat traditions, gradually developing and becoming enriched with new content, have become an integral part of the everyday routine and life of the Soviet Army and Navy, and have become the standard of conduct for our military personnel. These combat traditions embody the highest qualities of Soviet servicemen, true sons of our people, namely: unbounded devotion to the Motherland, the Communist Party, and the Soviet government; courage and valor; the readiness and ability to overcome any difficulty; and confidence in their strength and certainty of victory over the enemy.

203 BOY (combat)—An organized clash of combatant units with the enemy, using strikes and fire of all types, for the purpose of achieving victory. Only by combat can destruction of the enemy's manpower and weapons, and suppression of his capacity for resistance, be attained. Combat is a decisive test of the moral and physical strength of personnel, and of the effectiveness of combat materiel.

204 BOY ZA VYSADKU MORSKOGO DESANTA (combat for an amphibious assault landing)—An offensive battle in a coastal region, involving penetration of the enemy's anti-landing defense, both on the water and on shore, seizure of a beachhead (port), and landing thereon (therein) all the troops pending assignment of onshore missions to them; combat activities of ground forces or a naval infantry assault force, in coordination with other types of Services (Air Force, Navy, Air Defense), when landed in the enemy's rear from the sea or from the air.

205 BOY PRI OTRAZHENII VYSADKI MORSKOGO DESANTA

(combat to repel an amphibious assault landing)—A defensive action in a coastal region to prevent an enemy landing or, in the event of his doing so, to annihilate his landing force.

206 BOL'SHAYA STRATEGIYA (grand strategy)—A term widespread in foreign literature. It embraces the military policy of the western imperialist states, and their overall practices in conducting war.

207 BOMBARDIROVOCHNAYA AVIATIONNAYA DIVIZIYA (bombardment aviation division)—A tactical formation of bombardment aviation. A bombardment aviation division usually consists of several bombardment aviation regiments, headquarters, and servicing subunits.

208 BOMBARDIROVOCHNAYA AVIATSIYA (bombardment aviation)—A branch of aviation intended to destroy enemy targets at operational-tactical distances in enemy territory by using various weapons in cooperation with missile units and combined-arms major field forces (formations).

209 BOMBARDIROVOCHNYY AVIATIONNYY KORPUS (bombardment aviation corps)—An operational-tactical aviation formation consisting of several bombardment aviation divisions, equipped with bombers.

210 BOMBARDIROVOCHNYY UDAR (bombing attack)—Simultaneous (during a brief time) destruction of enemy targets (target) with aerial bombs of various types

211 BOMBARDIROVSHCHIK (bomber)—An aircraft having an armament consisting primarily of bombs, and intended to destroy ground and sea objectives, either in a region of combat operations or in the enemy's deep rear. According to their design and tactical role, bombers are subdivided into frontal and long-range (strategic) categories.

212 BOMBOVAYA NAGRUZKA (bomb load)—The total weight of bombs with which an aircraft can be armed. A distinction is made between normal bomb load and maximum (overload) bomb load.

213 BOMBOVAYA PLOTNOST' (bomb density)—The density of target destruction by aerial bombs, characterized by the ratio of the weight of aerial bombs (in tons) required to destroy the targets, or which have actually fallen on them, to the area of these targets (in square kilometers).

214 BOMBOVOY ZALP (cluster bombing)—Simultaneous dropping of bombs onto a target from a single aircraft or from a group of aircraft.

215 BOMBOMET REAKTIVNYY PROTIVOLODOCHNYY (rocket-assisted depth-charge thrower and launcher)—An apparatus mounted on the deck of a warship for the purpose of throwing anti-submarine depth charges.

216 BOMBOMETANIYE (bombing)—The aimed release of aerial bombs of various kinds from an aircraft or other airborne platform in order to destroy ground or sea targets. Bombing may be done from a horizontal flight, from a pitch up, or from a dive.

217 BON (harbor boom)—A floating structure (a wooden or metallic raft) placed at right angles to the shore, and equipped to berth warships and merchant vessels of moderate displacement (PT boats, trawlers, submarines, etc.).

218 BONY (boom defenses)—Combat obstructions, namely: floating structures consisting of floats, logs, nets, weights, etc., obstructing the passage of submarines and surface ships into a harbor or anchorage, also preventing enemy torpedoes from reaching their targets.

219 BOR'BA ZA ZHIVUCHEST' KORABLYA (ship damage control [navy])—The aggregate of measures implemented by a ship's crew to deal with ingress of water and outbreaks of fire, to prevent the explosion of ammunition in magazines, to restore damaged services, and armament, thus maintaining the ship's combat capability.

220 BOR'BA S AVIATSIYEVY PROTIVNIKA (combating enemy aviation)—One of the most important tasks of all the Services of the armed forces and arms, accomplished for the purpose of destroying or weakening enemy aviation, creating favorable conditions for the conduct of operations, and safeguarding troops and rear services installations from enemy air attack.

221 BOR'BA S PODVODNYMI LODKAMI PROTIVNIKA (anti-submarine warfare)—One of the basic tasks of modern navies, the essence of which consists in destroying enemy submarines, primarily those armed with nuclear missiles, both at sea and at the points where they are based and built. Missile troops and long-range aviation may be assigned to the task of combating enemy submarines.

222 BOR'BA S RADIOELEKTRONNYMI SREDSTVAMI PROTIVNIKA (combating enemy radio-electronic equipment)—The measures adopted to hinder the enemy's use of his radio-electronic equipment (jamming, destruction, etc.), and ensuring reliable operation of our own radio-electronic equipment while the enemy is trying to suppress it.

223 BRIGADA (brigade)—A formation of troops from different service branches and special troops from the various Services, consisting of several battalions (artillery battalions) and special subunits. There are motor rifle brigades, motor transport brigades, railroad brigades, etc.

224 BRIGADA KORABLEY OKHRANY VODNOGO RAYONA (brigade of ships for the close protection of a sea area)—A tactical task force assigned to guard a particular sea area, and made up of various

kinds of naval vessels (mine sweepers, anti-submarine vessels, patrol vessels, power boats of various types, etc.).

225 BRIGADA MORSKIKH (RECHNYKH) KORABLEY (brigade of seagoing [river] warships)—A tactical force of warships of one "class" *, consisting of individual vessels of Categories 1 or 2 (submarines, destroyers, monitors, etc.), or of divisions of vessels of Categories 3 or 4 (mine-sweepers, torpedo boats, armored cutters, etc.) [*See: # 707 & 709].

226 BRIGADA MORSKOY PEKHOTY (marine brigade)—A separate administrative-tactical unit of the Marine Corps in the naval forces of the USA, and of certain other capitalist countries. In the naval forces of Great Britain, the marine brigade is the basic tactical formation.

227 BRIGADA TRUBOPROVODNAYA (pipeline brigade)—A rear services formation which includes several subunits of main field pipeline troops.

228 BRONEVAYA BASHNYA (armored turret)—Armored cover for guns, machine guns, observation and control mechanisms, shaped in the form of a segment of a sphere, a cylinder, or a truncated cone. According to their design, armored turrets are subdivided into rotating, non-rotating, and self-concealing categories. Armored turrets are mounted on armored vehicles (tanks, armored cars, armored trains), warships, and on permanent fortifications.

229 BRONEKATER (armored cutter)—A warship of moderate displacement (up to 100 tons), intended for operation in coastal and skerry regions (the seagoing armored cutter) or on rivers (the river armored cutter). It has one or two guns (57–85 millimeters caliber) and light armor plating.

230 BRONETANKOVAYA DIVIZIYA (foreign) (armored division)—Combined-arms tactical formation in foreign armies, consisting of tanks, motorized infantry brigades (regiments, battalions), divisional artillery, missile subunits and units, (subunits) of other arms and special troops.

231 BRONETANKOVAYA TEKHNIKA (armored vehicles)—Armored combat and auxiliary vehicles in the armament of ground troops. Armored vehicles include tanks, self-propelled artillery mounts, armored personnel carriers, armored cars, armored recovery vehicles, and combat reconnaissance patrol vehicles.

232 BRONETANKOVOYE IMUSHCHESTVO (armored vehicle support materiel)—Materiel necessary to support the operation, servicing, storage, maintenance and evacuation of armored vehicles. Armored vehicle support materiel includes mechanical equipment, electrical equipment, spare parts, tools, and various materials and accessories.

233 BRONETRANSPORTER (armored personnel carrier)—An ar-

mored vehicle intended for transporting infantry and for combat. It may be used for liaison, reconnaissance, and other special tasks. There are wheeled and tracked armored carriers.

234 BUY RADIOGIDROAKUSTICHESKIY (radiohydroacoustic buoy)—A small floating device containing a hydroacoustic station and a radio transmitter. When a submarine is detected, a radiohydroacoustic buoy automatically transmits prearranged signals.

235 BUKSIRUYEMAYA GIDROAKUSTICHESKAYA STANTSIYA (towed hydroacoustic station)—A hydroacoustic station especially designed for towing by a warship or aircraft (helicopter), and intended for submarine detection.

236 BUCHIL'NAYA USTANOVKA (clothes-decontamination unit)—Apparatus used to decontaminate and disinfect cotton uniforms, garments worn to protect the skin, and tarpaulins. A clothes-decontamination unit may also be used for disinfecting kitchenware.

237 BYSTRODEYSTVUYUSHCHAYA TELEGRAFNAYA SVYAZ' (high-speed telegraph communication)—Transmission of information by means of trains of binary signals of 1 second to 1 minute duration, at the rate of 150–300 bauds (15–30 bits per second).

238 BYSTRODEYSTVUYUSHCHIYE OTRAVLYAYUSHCHIYE VESHCHESTVA (quick-acting chemical warfare agents)—Poisonous substances whose action on the human organism becomes apparent immediately after they are inhaled or ingested or otherwise gain entry into the body (e.g., hydrocyanic (prussic) acid, or SARIN).

239 BYSTROTA SVYAZI (rapidity of communications)—The ability of communications to ensure the transmission (receipt) of orders, instructions, reports and signals within the time limits dictated by the requirements of command. Rapidity is one of the basic demands made on communications.

240 BYSTROKHOODNAYA TRANSHEYNAYA MASHINA (BTM) (high-speed trench-digging machine)—Engineering machinery for digging combat trenches and communication trenches. The working mechanism, which is of the rotor type, is mounted on a heavy artillery tractor chassis. A high-speed trench-digging machine can dig trenches to a depth of 1.5 meters. The machine's productivity depends on soil category and excavation depth, but may reach 500 linear meters of trench per hour.

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241 VAKTSINATSIYA (vaccination)—Method of creating an active immunity to contagious diseases in man by introducing a vaccine into

the human organism. Armed forces personnel are vaccinated at regular intervals or according to the epidemiological situation.

242 VVOD V BOY (commitment to combat)—An organized movement forward, deployment and engagement of units of the second echelon and combined-arms reserve in order to increase the effort along a given axis, to develop the success achieved by the first echelon, to replace the troops of the first echelon when the latter has lost its combat effectiveness as a result of enemy nuclear attack, and also to fulfill new combat missions.

243 VVOD V SRAZHENIYE (commitment to battle)—An organized advance of a formation of the second echelon (combined-arms reserve) of a front (army) into the first echelon, and their deployment in the course of the operation to increase the effort along the axis of the main attack, to develop the success achieved by the first echelon, to take possession of important areas, or to carry out other missions.

244 VVODNAYA (tactical problem)—A situation created in order to work out certain training problems, while conducting exercises both on maps and in the field.

245 VEDENIYE BOYA (conduct of a battle)—The process (course) of a unit's combat activities in the execution of assigned combat missions.

246 VEDENIYE OPERATSII (conduct of an operation)—The process whereby the troops of an operational grouping (several major field forces of one or various Services of the armed forces) execute missions to ensure enemy defeat in battles and engagements that are differentiated frontally, in depth and in time, staged on the ground, in the air or at sea, as a result of which an assigned operational or strategic objective is achieved.

247 VEROYATNOST' VYKHODA NA TSEL' (probability of reaching a target)—The ratio of the number of approaches by aircraft to a target to the total number of sorties flown in the execution of a given aerial bombing mission. Expressed as a percentage.

248 VEROYATNOST' POPADANIYA (PORAZHENIYA) (probability of a hit)—Numerical characterization of the probability of hitting a target under given firing conditions.

249 VERTIKAL'NAYA ZAVESA MIN (vertical mine screen)—A form of mine obstacle intended to prevent the passage of submarines which are proceeding submerged. The mines in a vertical mine screen are placed at various depths, i.e., in tiers, so as to cover the water mass to the sea bottom or to the submarine's maximum diving depth.

250 VERTIKAL'NAYA SKOROST' (rate of climb or descent)—The gain or loss of altitude by an airborne vehicle per unit time.

251 VERTOLET (helicopter)—A heavier-than-air flying machine which flies with the aid of one or more lift rotors. A helicopter possesses the capability of taking off and landing without a run, and of hovering at a fixed altitude above a given point on the ground or water surface. Helicopters are used for carrying airborne units in landing operations, for submarine search-and-strike purposes, for reconnaissance, for artillery spotting purposes, for liaison, for evacuating wounded, etc.

252 VERTOLETONOSETS (foreign) (helicopter carrier)—A surface warship used to base and support helicopters designated for transport and landing operations, and to accommodate marine detachments participating in such operations. In the US Navy, helicopter carriers are in the landing-ship category.

253 VERKHOVNOYE GLAVNOYE KOMANDOVANIYE (supreme high command)—The organ of strategic direction over armed combat and over all armed forces of a country in wartime.

254 VES MAKSIMAL'NYY (PEREGRUZOCHNYY) SAMOLETA (VERTOLETA) (maximum [overload] weight of an aircraft [helicopter])—The greatest weight of an aircraft (helicopter). At such a weight, take-off (unassisted or with the aid of boosters) and safe flight are possible.

255 VES POLEZNOGO GRUZA (payload)—The net weight of cargo, not including the weight of fastenings and other devices used during transportation.

256 VETER V PRIZEMNOM SLOYE VOZDUKHA (surface wind)—“Surface wind,” i.e., the movement of air masses observed at ground level up to a height of 12 meters from the Earth's surface (i.e., the height at which weather vanes [wind socks] are mounted).

257 VZAIMNOYE OPOZNAVANIYE (mutual identification)—Mutual determination of the affiliation of troops, aircraft and warships in order to preclude the possibility of harm to friendly troops, warships or aircraft.

258 VZAIMODEYSTVIYE VOYSK (troop coordination)—Coordination between the various Services of the armed forces and service branches participating in an operation (battle), with respect to missions, sectors, boundary lines, and times of action. Under present-day conditions, troop coordination must be persistent and continuous throughout the course of the entire operation (battle), and must ensure, first of all, coordination of combat operations involving nuclear weapons with respect to target, place and time. Troop coordination is organized between the Services, between major field forces and formations consisting of one or several Services, between service branches and arms and between units and sub-units, as well as between individual groupings of operational concentrations (order of battle). According to the purpose of the actions and the scale of the coordinated groupings, troop coordination may be strategic, operational or tactical.

259 VZLETNO-POSADOCHNAYA POLOSA (VPP) (runway)—A specially prepared and equipped area of an airfield, permitting take-off and landing of aircraft. A runway may be unpaved or it may have an artificial surface (concrete, reinforced concrete, bituminous concrete, metal, etc.). The dimensions of a runway and the thickness and strength of its surface depend on the take-off and landing characteristics of the aircraft for which the given runway is intended.

260 VZRYV (explosion)—Rapid (instantaneous) liberation of energy associated with a sudden change in the state of a substance, accompanied, as a rule, by the formation of a shock wave and its propagation through the surrounding medium. Possible initial forms of an explosion's energy are chemical, nuclear, electric, thermal, and kinetic.

261 VZRYVATEL' AKUSTICHESKIY NEKONTAKTNYIY (acoustic proximity fuze)—Mechanism causing explosion of the primer in the charge of a mine or torpedo under the action of a sound wave propagated in the water. The source of the sound wave which triggers the mechanism is usually the sound of a ship's propellers or main engines.

262 VZRYVCHATYYE VESHCHESTVA (VV) (explosives)—Chemical compounds or mechanical mixtures of substances capable of instantaneous decomposition (explosion) with the liberation of gases, a considerable amount of heat, and the development of high pressures at the shock front (trotyl [trinitro-toluene, TNT], melinite [lyddite], tetryl [tetranitromethylaniline], hexogen [trimethylene trinitramine], mercury fulminate, gunpowder, etc.). Nuclear explosives are substances capable of liberating a huge amount of energy instantaneously as a result of a nuclear (thermonuclear) reaction of an explosive nature. Two types of nuclear explosive are differentiated: fissile materials (for example: uranium-235, plutonium-239) and substances used for thermonuclear reactions (for example: lithium deuteride).

263 VIDEOTELEFONNAYA SZYAZ' (videotelephone communication)—A form of communication based on the use of television technology, permitting documents and the subscriber to be seen during conversations.

264 VIDY AVIATSII (elements of aviation)—The component parts of the Air Force: frontal aviation, long-range aviation, and military transport aviation.

265 VIDY BOYA (types of combat)—The combat activities of subunits, units, and formations, distinguished by their purposes and the troops' methods of operation. The basic type of combat is offensive combat.

266 VIDY VOORUZHENNYKH SIL (Services of the armed forces)—The component parts of the country's armed forces, each intended to conduct combat activities in its own sphere of operation (on land, at sea,

and in the air or space). The Services of the Armed Forces of the Soviet Union are: Strategic Missile Forces, National Air Defense Forces, Ground Forces, the Air Force, and the Navy. Each Service has its own peculiar combat materiel, homogeneous in essence but diversified in its characteristics and potentialities. Each Service has its own organization, recruitment, training, conditions of service, and supply, and also has characteristic methods of using its armament and military materiel on a tactical, operational and strategic scale.

267 VIDY YADERNYKH VZRYVOV (types of nuclear explosion)—Ground, air, high-altitude, surface, underwater, and underground. The choice of one or another form of nuclear explosion is governed by the destructive effect peculiar to it, by the nature of the target, by the desired degree of its destruction, by the permissible scale of the attack, and by the desired degree of radioactive contamination of the area.

268 VIZUAL'NOYE NABLYUDENIYE (visual observation)—One of the methods of reconnaissance, done with the naked eye or with the aid of optical instruments.

269 VNEZAP'NOST' (surprise)—One of the principles of military art, ensuring success in battle and in operations. Surprise makes it possible to inflict heavy losses upon the enemy in short periods of time, to paralyze his will, and to deprive him of the possibility of offering organized resistance. Surprise is achieved in the following ways: by using various types and methods of combat; by misleading the enemy as to one's own intentions; by safeguarding the security of operational plans; by decisive action and skilful maneuver; by unexpected use of nuclear weapons; and by using means and methods with which the enemy is unfamiliar. Surprise may be tactical, operational, or strategic.

270 VNESHNEYE OBLUCHENIYE (external irradiation)—Irradiation by a radioactive source located outside the organism. It may be produced by all forms of radioactive radiation, but only gamma radiation, beta radiation and neutrons are of military significance. The effectiveness of external irradiation depends on the dose, the form of radiation, the radiation energy, the time distribution of the dose of ionizing radiation, and on the nature of the irradiation (the entire organism or regions of individual organs).

271 VNUTRENNEYE OBLUCHENIYE (internal irradiation)—Irradiation originating from radioactive substances which have penetrated the organism. It continues without interruption until such time as the radioactive substance decays or is removed from the organism.

272 VNUTRENNIYE VODNYYE PUTI (inland waterways)—Natural (rivers, lakes) and artificial (canals, reservoirs, locked rivers) watercourses used for mercantile and naval vessels. Inland waterways are an integral

part of a state's unified transportation network, and may be used to maneuver naval forces between various maritime (ocean) theaters of military operations.

273 VNUTRENNYAYA SLUZHBA (internal service)—A type of service organized in military units and subunits to maintain internal order, to provide normal training, working and living conditions for servicemen, to ensure strict fulfillment by each serviceman of his general military and personal service responsibilities, to organize and keep order and do guard duty within the area where the military unit is located (or aboard ship). Internal service encompasses the entire life of a military unit, determining the basic principles governing its arrangement, billeting, supply, servicing and daily routine, the responsibilities of duty personnel and the duties of those in the daily detail of a military unit, the composition of the daily detail, and also the basic measures in sanitation and hygiene necessary to preserve the health of personnel. Internal service is regulated by the *Ustav vnutrenney sluzhby* (Regulations on Internal Service) and by the *Ustav Korabel'noy sluzhby voyenno-morshikh sil* (Regulations for Shipboard Service in the Navy).

274 VNUTRIESKADRENNAYA SVYAZ' (intrasquadron communication)—Communication between warships under way, accomplished by visual or hydroacoustic signalling, and by low-power radio, predominantly in the ultra-short wave band.

275 VODNAYA PREGRADA (water barrier)—A natural or artificial water obstacle (a river, lake, strait, canal, estuary, bay, etc.) substantially affecting the conduct of ground force operations. The principal elements of a water barrier are: width, depth, speed of current, wave state, the nature of the banks, bottom, and approaches to the shore, and the presence of underwater obstacles (rocks, shoals).

276 VODNYYE ZAGRAZHDENIYA (water obstacles)—Artificial water barriers in the form of flooded or swamped terrain created in an operational sector by demolishing dams and dikes on natural and artificial bodies of water, by releasing water from reservoirs, or by damming up rivers to cause them to overflow their banks.

277 VODOIZMESHCHENIYE (displacement)—The weight of water displaced by a floating ship, measured in tons. In the case of warships, a distinction is made between empty, standard, full, normal and maximum displacement, according to the presence on board of the following: fuels and lubricants, drinking water, munitions, provisions, ship's stores, and personnel. In the case of merchant ships and naval auxiliary vessels, a distinction is made between empty displacement and full-cargo displacement.

278 VOYENNAYA ADMINISTRATSIYA (military administration)—

(1) The branch of military science dealing with the organization, maintenance, manning and mobilization of the armed forces, and also with internal service. (2) Military control of territory acquired in the course of combat operations, or occupied as a result of war.

279 VOYENNAYA GEOGRAFIYA (military geography)—The branch of military science dealing with contemporary political, economic, natural and military conditions in various countries, theaters of military operations and particular areas, from the viewpoint of their effect on the preparation for, and conduct of, military operations. Military geography should include naval geography as an independent discipline.

280 VOYENNAYA DOKTRINA (military doctrine)—A nation's officially accepted system of scientifically founded views on the nature of modern wars and the use of armed forces in them, and also on the requirements arising from these views regarding the country and its armed forces being made ready for war.

Military doctrine has two aspects: political and military-technical. The basic tenets of a military doctrine are determined by a nation's political and military leadership according to the socio-political order, the country's level of economic, scientific and technological development, and the armed forces' combat materiel, with due regard to the conclusions of military science and the views of the probable enemy.

281 VOYENNAYA IGRA (war game)—One of the methods of training officers, generals, admirals and staffs, consisting in having the participants in the game solve various tactical, operational and strategic problems on topographic maps or on the terrain. In a war game, each participant fulfils the functional responsibilities corresponding to the position occupied. The theme and scale of a war game are determined by the object of the exercise. In scale, war games are subdivided into tactical, operational and strategic. In form, war games are designated as command, command-staff, or special, whereas organizationally they may be single-stage or two-stage (less frequently three-stage). According to the number of sides playing, a war game may be one-sided or two-sided.

282 VOYENNAYA ISTORIYA (military history)—A branch of historical science, and at the same time a branch of military science, because a research topic in military history is a generalization of the military experience of the past, serving as one of the sources of development for modern military science. In studying the objective laws that govern war, Soviet military history uses the basic tenets of Marxist-Leninist philosophy. The main scientific disciplines of military history include the history of wars, history of military art, and the history of the Services.

283 VOYENNAYA KIBERNETIKA (military cybernetics)—A military-technical science which is a branch of cybernetics. Military cybernetics deals with the structure and laws of operation of systems for the control

of troops and weapons, and also defines the tactico-technical requirements which the technological equipment of such systems must meet.

284 VOYENNAYA MOSHCH' (military power)—The capability of a nation to defend itself and to conduct successful military operations against a powerful enemy. The basis of military power is a nation's political structure, its industrial potential, its level of development of science and technology, and the qualitative structure of its population (with respect to education, political upbringing, and technical training). A nation's military power is vested directly in its armed forces.

285 VOYENNAYA NAUKA (military science)—A system of knowledge concerning the nature, essence and content of armed conflict, and concerning the manpower, facilities and methods for conducting combat operations by means of armed forces and their comprehensive support.

Military science investigates the objective laws governing armed conflict, and elaborates questions pertaining to the theory of military art, which is the basic component of military science, as well as questions pertaining to the organization, training and supply of armed forces, and also deals with military historical experience.

Soviet military science is based on Marxist-Leninist teachings and is guided by the method of materialistic dialectics and historical materialism, taking into account and using the achievements of those other sciences which tend to promote continual development and progress in the military sphere.

286 VOYENNAYA PEDAGOGIKA (military pedagogy)—The branch of pedagogical and military science studying and evolving the most rational methods of Communist education, military education and training for cadre personnel of the armed forces in accordance with the tasks confronting the country's armed forces as a whole, and each Service in particular. Military pedagogy also includes teaching methodologies for individual military disciplines.

287 VOYENNAYA PROPAGANDA (military propaganda)—Ideological indoctrination of the toiling masses in capitalist countries with a view to convincing them of the inevitability and necessity of wars, especially against socialist countries and against colonial people who are striving for liberation.

288 VOYENNAYA PSIKHOLOGIYA (military psychology)—The branch of psychology dealing with the objective laws governing the mental processes of man under conditions of military service, and also the laws governing the formation of a serviceman's personality characteristics. Military psychology studies the consciousness and the emotions of armed forces personnel. Military psychology is used to inculcate the resolute qualities which the fighting man needs.

289 VOYENNAYA RAZVEDKA (military intelligence)—The aggregate

of measures taken to obtain and study information concerning the armed forces, theater of military operations (terrain), state of the economy, and the political motivation and morale in enemy or potentially enemy states. Military intelligence is conducted either by military resources, in which case it is called operational intelligence, or by special organs, in which case it is called clandestine intelligence. According to the scale of the operations in support of which it is organized and conducted, military intelligence is subdivided into strategic, operational and tactical. These types of intelligence are closely interrelated, and supplement one another.

290 VOYENNAYA TOPOGRAFIYA (military topography)—The military discipline which develops and establishes methods and means of representing a locality in such a way as to facilitate combat operations by troops. Military topography includes: studying the terrain from the operational-tactical viewpoint; studying methods of orientation in the terrain under various conditions of combat activity; the taking of measurements by troops in the terrain for the purpose of obtaining the data necessary for the fulfilment of small-arms, artillery, and engineering tasks, and studying questions pertaining to the topographic support of combat operations.

291 VOYENNAYA FILOSOFIYA (military philosophy)—A concept encountered in bourgeois literature. Idealism and metaphysics comprise the methodological-philosophical basis of the views of bourgeois military theorists. From the viewpoint of Marxism-Leninism, there is no special military philosophy.

292 VOYENNO-AVTOMOBIL'NAYA DOROGA (military highway)—A road serviced by road repair and traffic control troops and intended for moving troops and supplies, and evacuations of all types. According to their purpose and standard of servicing, military highways are subdivided into main and secondary.

293 VOYENNO-VOZDUSHNYYE SILY (VVS) (Air Force)—A Service of the Armed Forces of the Soviet Union, including long-range aviation, frontal aviation and military transport aviation. The Air Force is intended for combined operations with the other Services of the armed forces and for air operations.

294 VOYENNOYE ISKUSSTVO (military art)—The theory and practice of engaging in combat, operations, and armed conflict as a whole, with the use of all the resources of the service branches and Services of the armed forces, and also support of combat activities in every regard. Military art, as a scientific theory, is the main field of military science, and includes tactics, operational art, and strategy, which constitute an organic unity and are interdependent.

295 VOYENNOYE POLOZHENIYE (martial law)—An extraordinary situation in a country or in individual regions thereof, usually imple-

mented by decision of the supreme organ of governmental authority in exceptional circumstances (war, disaster, etc.).

296 VOYENNOYE PROIZVODSTVO (war production)—Production of all types of armament, war materiel, and other armed forces supply items needed to conduct an armed conflict (ammunition, fuel, spare parts, means of protection from weapons of mass destruction, means of communication, control instruments, etc.). In peacetime, the production of armament and war materiel is accomplished only by special factories of the military industry to satisfy current requirements of the armed forces, to release experimental prototypes of armament and war materiel, and to create and replenish stocks. In wartime, a considerable proportion of a nation's industry is diverted to war production.

297 VOYENNO-INZHENERNOYE ISSKUSTVO (military-engineering art)—The branch of military art embracing: engineering preparation of theaters of military operations, the theory and practice of engineering support for combat operations of troops, the fundamentals of the organization and combat employment of engineering troops and their coordination with formations and units of service branches and the Services of the armed forces, the design of military-engineering structures, and development of engineering equipment and methods of using them in combat and other operations.

298 VOYENNO-INFORMATSIONNYE ZADACHI (military information missions)—Tasks associated with the systematic collection, processing, storage and output of information with the aid of electronic computer technology.

299 VOYENNO-MORSKAYA BAZA (VMB) (naval base)—The fundamental element of the system for the basing of naval forces. A naval base is an equipped and defended coastal region which has several basing points and which permits dispersed basing and extensive maneuvering of naval forces.

300 VOYENNO-MORSKAYA GEOGRAFIYA (naval geography)—An independent discipline of military geography. In the interest of the military and naval arts, naval geography investigates geographic, economic, demographic, military and morale factors and natural conditions in maritime theaters and countries, and also determines to what extent these factors and conditions may affect operations and combat activities within the limits of the investigated maritime theaters.

301 VOYENNO-MORSKAYA NAUKA (naval science)—A component part of military science, dealing with questions pertaining to the role of the navy in armed conflicts, its organization, and training.

302 VOYENNO-MORSKAYA RAZVEDKA (naval reconnaissance)—The aggregate of measures taken by naval commands and units to obtain

such information about the enemy in theaters of naval operations as is needed to support the day-to-day combat and operational activities of naval forces. According to the affiliation of the personnel engaged in it, naval reconnaissance is subdivided into the air, ship, coastal, radio-technical, clandestine, and special (mine, ice, etc.) categories.

303 VOYENNO-MORSKAYA FLOTILIYA (naval flotilla)—An operational grouping of naval forces intended to conduct operations and combat actions in a separate sector of a theater of naval operations. According to the missions assigned to it, a naval flotilla includes submarine, naval aviation, surface ship, and coastal missile and artillery forces. Organized to support the combat operations of the components of a naval flotilla are naval bases, special services, rear service units and establishments, and communication, observation, armament, ship repair, and other elements.

304 VOYENNO-MORSKOYE ISKUSSTVO (naval art)—A branch of military art and a field of naval science, namely, the theory and practice of organizing and waging armed conflict at sea. Naval art investigates, studies and determines methods of armed conflict at sea, ways of achieving victory in such conflict, and the organization and conduct of naval operations and combat actions. Naval art includes the strategic use of the navy in warfare, naval operational art, the tactics of branches of naval forces, and also questions concerning training the navy for war. Naval art is governed by the general laws of military art, but armed conflict at sea is also governed by the specific laws arising from the unique features of the navy as a Service of the armed forces, the uniqueness of its missions, and the special features of theaters of naval operations.

305 VOYENNO-MORSKOY FLOT (VMF) (Soviet Navy)—A Service of the Armed Forces of the Soviet Union, intended to wage war in water areas. Organizationally, the Soviet Navy consists of operational forces, fleets and flotillas, carrying out combat activity in maritime or ocean theaters of war (or parts of them), on lakes and rivers, independently or in coordination with other Services of the armed forces.

306 VOYENNO-NAUCHNOYE OBSHCHESTVO (Military Scientific Society)—A public organization founded on a volunteer basis in directorates, military educational institutions and establishments, staffs, and army and navy officers' clubs for the purpose of encouraging officers, generals and admirals to participate in military scientific work and in the propagation of military scientific knowledge.

307 VOYENNOOBYAZANNYY (draft-age person)—An individual who is recognized by the Universal Military Service Law as fit for military service, and who is listed as a member of the reserve.

308 VOYENNO-POLITICHESKAYA TSEL' (politico-military goal)—A component part of the overall political goal of the war, which is set by

the political leadership of a nation for the initial and subsequent periods of a war. A politico-military goal is achieved by resolving several strategic missions simultaneously or sequentially. The overall goal of the war is attained as a result of achieving politico-military goals.

309 VOYENNO-TOPOGRAFICHESKAYA SLUZHBA (VTS) (Military Topographic Service)—A special service, having its elements on staffs of formations and operational formations [major field forces]; and also special units and establishments, namely: topographic, aerial phototopographic, and geodesic detachments; cartographic plants and units; map depots; etc.

In peacetime, the Military Topographic Service is engaged chiefly in the preparation of topographic maps and geodesic data on the territory of probable theaters of military operations, in the topographic training of troops, and in scientific research work in the fields of cartography, geodesy, and aerial photography. In wartime, the most important task of the Military Topographic Service is to provide topographic support for the combat operations of troops.

310 VOYENNO-TRANSPORTNAYA AVIATSIYA (military transport aviation)—The element of aviation intended for airborne assault landing operations; for transporting troops and combat materiel; for delivering armament and materiel to troops and bases; and for evacuating sick and wounded personnel.

311 VOYENNO-EKONOMICHESKAYA RAZVEDKA (military-economic intelligence)—(1) Intelligence, concerning the state of the enemy economy insofar as it affects his ability to wage war, gathered for the purpose of acting against enemy economic potential, primarily by force of arms. (2) Intelligence, concerning enemy objectives of economic significance, gathered with a view to the use of such objectives by friendly forces operating in that theater of war.

312 VOYENNO-EKONOMICHESKIY POTENTSIAL STRANY (military-economic potential of a country)—The real capacity of a country to meet the demand for materiel and to satisfy the needs of modern warfare at the front and in the rear. Such capacity stems from the productive forces and politico-economic structure of the warring country. When assessing the military-economic potential of a country, the nature of the war, the scale of its demands, and the degree of coordination of the rear must also be considered.

313 VOYENNYE DEYSTVIYA (military operations)—Operations of the armed forces in wartime, directed at destroying the enemy on land, at sea, and in the air.

314 VOYENNYE SOOBSHCHENIYA (military transport [network])—(1) Land, water and air routes used for military purposes. (2) Authorities engaged in the planning and organization of troop movements, and

also in the use of all forms of transport routes and means of transportation.

315 VOYENNY BLOK (military bloc)—An agreement between capitalist nations (groups of nations) with a view to concerted action for the attainment of common politico-military goals. The activities of such nations are pursued not only in wartime, but also prior to the outbreak of war, in the resolution of economic, political and military problems. Under prevailing conditions, the military blocs of capitalist nations have aggressive goals. At the present time, the following principal aggressive blocs of capitalist nations, headed by the USA, exist: NATO—15 nations (from 1949); CENTO—4 nations (from 1959); SEATO—9 nations (from 1954); ANZUS—3 nations (from 1957); Treaty of Rio de Janeiro—21 nations, 20 of which are Latin American (from 1947). Even in peacetime, some of these military blocs have unified armed forces and a single supreme command and staff.

316 VOYENNY KOMENDANT (military commandant)—(1) In a populated point or in a military camp, the person responsible for ensuring that military personnel conduct garrison and guard duty, observe discipline, maintain order, and carry out the orders of the chief of the garrison. (2) On railroads and water transport, the person responsible for military transportation of personnel or materiel.

317 VOYENNY KOMISSARIAT (military commissariat)—The local military administration office in towns, *rayons*, *oblasts* and autonomous republics, that maintains a register of persons subject to compulsory military service, appoints them as draftees to the Army or Navy initially, assembles them periodically for training or muster, and calls them up in the event of mobilization.

318 VOYENNY OKRUG (military district)—The highest military-administrative level of military units, training institutions, military establishments of the various Services, and local military registration-mobilization offices (military commissariats), disposed in a particular area. A military district is headed by the officer commanding the troops of the district; he takes measures in consultation with the military council, staff of the district, district directorates, and local authorities.

319 VOYENNY POTENTIAL GOSUDARSTVA (military potential of a state)—The actual capability of a state to wage war. The magnitude of this capability at any given time depends on the quantity and quality of its weapons, primarily nuclear weapons, and its means of delivering them to the target, the quality and quantity of combat materiel at the disposal of the armed forces, the production potential of the war industry, the numbers and quality of personnel in the permanent forces and reserve, the level of their military knowledge and organizing ability, and the ability of command personnel for building up, training and using armed forces

strategically, operationally and tactically. The term "military potential of a state" is often understood in a broader context, including the economic and moral potential of the country, which is equivalent to the concept of the military strength of the state as a whole.

320 VOYENNYI SOVET (military council)—A collective body, existing in the Services of the Armed Forces of the Soviet Union, and in military districts, fleets, groups of forces, armies, and flotillas. A military council directs combat and political training, and education of troops, administrative matters and mobilizational activity, working in close contact with local Party and government authorities.

321 VOYENNYI TRIBUNAL (military tribunal)—One of the special courts of the USSR that tries military offenses, as well as other offenses assigned by law to its jurisdiction.

322 VOZHDENIYE VOYSK (troop leadership)—An art, in which mainly military commanders are versed, constituting the most expedient method of leading troops in operations, engagements and battles for the purpose of destroying the enemy and achieving victory rapidly. Troop leadership envisages their creative, organizational and political work. Of these, the main one is creative work, which consists in developing the concepts of operations and battles, and in making decisions to secure their implementation. In their troop leadership activity, military commanders constantly rely on staffs and political authorities, and the latter unreservedly support such activity.

323 VOZDUSHNAYA ARMIYA (air army)—A major formation of aviation, consisting of aviation formations and units, and also of support and servicing units and establishments. An air army is intended for joint combat operations with various Services of the armed forces.

324 VOZDUSHNAYA BLOKADA (air blockade)—Isolating a portion of enemy territory or a town or fortified region from the air by means of aviation. The aim of an air blockade is complete stoppage of air communication with the rest of the territory and with the enemy's main armed forces, and the creation of favorable conditions for his subsequent destruction or capture. As a rule, an air blockade supplements a blockade of the enemy by land and sea.

325 VOZDUSHNAYA OBSTANOVKA (air situation)—One of the most important elements of a situation, characterizing the composition, grouping, and nature of combat operations of friendly and hostile aviation, the use of unmanned equipment, and of air defense facilities. The air situation is assessed when making decisions, and when planning, organizing and conducting operations (combat actions).

326 VOZDUSHNAYA OPERATSIYA (air operation)—The aggregate of combat activities engaged in by major formations and formations of

long-range (strategic) aviation, in coordination with other branches of aviation and with other Services of the armed forces. An air operation is performed in accordance with a single concept and in conformity with a plan of the Supreme High Command for the attainment of major operational or strategic goals in continental or ocean theaters of military operations.

327 VOZDUSHNAYA RADIATIONNAYA RAZVEDKA MESTNOSTI (ATMOSFERE) (aerial radiation reconnaissance of the terrain [atmosphere])—Reconnaissance to determine the degree of radioactive contamination of the terrain (or atmosphere) with the aid of dosimetric instruments installed in helicopters (or fixed-wing aircraft).

328 VOZDUSHNAYA RADIO- I RADIOLIKATIONNAYA RAZVEDKA (aerial radio and radar intelligence collection)—Intelligence collection of data on ground, water and air targets carried out with the aid of airborne radar equipment.

329 VOZDUSHNAYA RADIOTEKHNICHESKAYA RAZVEDKA (airborne electronic intelligence collection)—Intercept of enemy radio transmissions and detection of his radio-communication and other radio-technical equipment with the aid of airborne equipment.

330 VOZDUSHNAYA RAZVEDKA (air reconnaissance)—One of the main types of reconnaissance, which obtains information concerning enemy objects on the ground, in the air, or at sea. Air reconnaissance is done by reconnaissance aviation units, by reconnaissance subunits of aviation units and formations, and also by all crews carrying out combat missions. Air reconnaissance is accomplished both by piloted aircraft and by unmanned means in support of the combat operations of major formations and formations of all the Services of the armed forces. The principal methods of air reconnaissance are visual observation, aerial photography, use of radio-technical facilities, etc. Depending on the character and scale of the missions to be carried out, air reconnaissance is divided into strategic, operational, and tactical. Air reconnaissance carried out in support of aviation and missile forces, according to the plan, the assigned mission and the time of its execution, is subdivided into preliminary, direct ("final") and surveillance categories.

331 VOZDUSHNAYA TREVOGA (air raid warning)—A warning by established signals that there is danger of enemy air attack.

332 VOZDUSHNO-DESANTNAYA DIVIZIYA (airborne division)—The basic combined-arms operational-tactical formation of airborne troops. It consists of several regiments, (artillery) battalions [Divizionnyye Chasti], subunits of the various Services, and special troops. An airborne division is intended to carry out missions in the enemy's deep rear, in coordination with ground troop and missile forces formations, and also with the air force and navy.

333 VOZDUSHNO DESANTNAYA OPERATSIYA (airborne operation)—Actions coordinated and interrelated by a single concept and plan, involving airborne troops, the air force, missile forces, air defense forces, and, in a maritime sector, the navy, in connection with the transfer, landing (dropping) and support of large airborne assault forces in the enemy rear, to attain operational and strategic objectives.

334 VOZDUSHNO-DESANTNYYE VOYSKA (VDV) (airborne troops)—A branch of the ground forces especially trained to be landed from the air into the enemy rear to conduct combat actions here in coordination with missile units, troops advancing from the front, air force formations, and naval forces.

335 VOZDUSHNOYE OPERATSIONNOYE NAPRAVLENIYE (air operational sector)—An air sector affording the shortest air route to objectives of operational or strategic importance, and permitting large aviation units to be based and used.

336 VOZDUSHNOYE SRAZHENIYE (air engagement)—The aggregate of air battles fought by aviation units and formations of operational air formations for the purpose of destroying opposing enemy aviation grouping and seizing the initiative in the air in preparation for, or conduct of, operations by the Services of the armed forces.

337 VOZDUSHNOYE STRATEGICHESKOYE NAPRAVLENIYE (strategic air sector)—An air sector of operations in one or several theaters of military operations, affording the shortest air route to important military-industrial and administrative-political centers, also permitting large air force units to be based and used.

338 VOZDUSHNOYE FOTOGRAFIROVANIYE (aerial photography)—A method of aerial reconnaissance which consists in photographing the earth's surface or objects on it from aircraft or other airborne platforms, with subsequent processing and interpretation of the photographs. Aerial photography permits the acquisition of reliable and objective data concerning enemy targets and the nature of the terrain.

339 VOZDUSHNO-KOSMICHESKIYE OPERATSII (foreign) (aerospace operations)—Offensive operations effected by means of missiles and aviation (manned and unmanned aircraft) for the purpose of destroying (neutralizing) objectives on land, on water, and in the air. Aerospace operations may be conducted from various altitudes and with various weapons.

340 VOZDUSHNO-KOSMICHESKIYE SILY (foreign) (aerospace forces)—A major formation consisting of units and formations armed with the means of aerospace attack. They constitute the basis of the air forces of the USA and NATO, and are the principal strategic weapons.

341 VOZDUSHNO-KOSMICHESKIY SAMOLET (aerospace vehicle)—A vehicle capable of flight in the earth's atmosphere and in space.

342 VOZDUSHNO-KOSMICHESKOYE NAPADENIYE (aerospace attack)—An attack from the air and from space, made with missiles and aviation (piloted and pilotless aircraft) for the purpose of destroying (neutralizing) objectives on land, on water, or in the air. An aerospace attack may be made from any altitude, and with the use of various weapons.

343 VOZDUSHNYY BOY (air combat)—Combat activities by single aircraft or groups of aircraft combining fire and maneuver for the purpose of destroying enemy aircraft, their crews, and unmanned weapons in the air.

344 VOZDUSHNYY DESANT (airborne assault)—Troops airlifted to the enemy rear to conduct combat activities there. According to its scale, an airborne assault may be tactical, operational, or strategic. The assault may be effected either by parachute or from landed aircraft, or by a combination of both.

345 VOZDUSHNYY KORIDOR (air corridor)—A zone of air space through which aircraft (helicopters) may fly in regions having special flying conditions.

346 VOZDUSHNYY REZHIM (air traffic control)—An established order of flights for aircraft, helicopters and unmanned airborne vehicles in certain regions and on air routes for the purpose of ensuring flight safety and safeguarding state sovereignty.

347 VOZDUSHNYY YADERNYY VZRYV (nuclear air burst)—A nuclear explosion in air at an altitude such that the fireball does not touch the surface of the earth (water). It is customary to subdivide nuclear air bursts into low and high yield categories.

348 VOZIMYE (PODVIZHNYYE) ZAPASY (unit reserves)—Reserves of materiel (ammunition, fuels and lubricants, provisions, technical and other movable stores), authorized in relevant norms and tables, and constantly held by military units and formations in organic transport and in proximity to combat materiel. Unit reserves are used for the timely and uninterrupted support of combat activities by the units maintaining them.

349 VOINSKAYA CHAST' (military unit)—An administrative, line, and housekeeping unit of troops, having a number and a banner, for example: a regiment, an individual battalion, an individual artillery battalion, and unit organizations corresponding to them.

350 VOINSKOYE VOSPITANIYE (military indoctrination)—Instilling in servicemen the high political and moral principles and fighting qualities which they need in order to fulfill their military duty, both in peacetime

and under combat conditions. Military indoctrination is inseparable from political education and together they constitute a unified whole, which defines the essence of the Communist education of Soviet servicemen. Military and political education of personnel is accomplished during combat training and in the course of the entire life and activity of the army and navy.

351 VOYNA (war)—A socio-historical phenomenon, characteristic of the antagonistic class society. In its social essence, war is a continuation of the policy of given self-interested powers and the ruling classes within them using forcible means. War is an armed conflict between states (coalitions of states) or between striving antagonistic classes within a state (civil war) to gain their economic and political ends. In the contemporary epoch, war is a complex social phenomenon, affecting all aspects of the life and national security of the people, putting all their moral, political, economic, military and organizational powers to the test. In war, both sides use ideological, economic, diplomatic and other forms and means of strife. According to the politics of the classes concerned, wars may be subdivided into unjust (predatory) wars and just wars. Just wars are waged to protect the interests of the working class and the toiling masses, to liquidate social and national oppression, and to protect national sovereignty against imperialist aggression. The most just wars are those waged in defense of the socialist fatherland.

352 VOYNA NA MORE (naval warfare)—A term which has become widespread in the military literature of capitalist countries. The term "naval warfare" is a farfetched, collective concept embracing the aggregate of military operations conducted during wars in naval theaters of operations. The concept of naval warfare is used by bourgeois historians and military theorists in the USA and Britain for the purpose of exaggerating their sea power, and when describing World War II, creating the false impression that the military operations of the US and British fleets were of decisive significance in that war.

353 VOYSKA VNOS (historical) (aircraft-warning service)—Special troops intended for air observation, warning, and communications, affiliated with the national air defense forces and ground force air defense troops. After World War II, the troops of the aircraft warning service became the radio-technical troops.

354 VOYSKA PVO STRANY (national air defense forces [PVO forces])—A Service of the armed forces intended for anti-aircraft, anti-missile and anti-spacecraft defense of the country. The main mission of national air defense forces, in cooperation with air defense forces and facilities of the other Services of the armed forces, is to repel enemy attack from the air and from outer space, and to prevent enemy means of air attack from penetrating the country's air space, thus ensuring the vital activity of the nation, the operation of industry and transport, and the ability of the

armed forces to wage war. National Air Defense Forces perform their task by destroying the enemy in the air (space) and by jamming his radio-electronic equipment.

355 VOYSKA PVO SUKHOPUTNYKH VOYSK (air defense troops of the ground forces)—A branch of troops intended to protect ground forces and their rear from enemy air attack. This branch consists of anti-aircraft missile, anti-aircraft gun, and radio units and subunits.

356 VOYSKA SVYAZI (communication troops)—Special troops intended to establish and maintain reliable communications, thus ensuring control of troops in all phases of their combat activity.

357 VOYSKOVAYA AVIATSIYA (organic aviation)—Aviation subunits and units forming part of army major field forces or combined-arms formations organizationally, and intended for direct support of their combat activities. Usually, organic aviation is equipped with aircraft (helicopters) for air reconnaissance, artillery spotting, liaison, and transport of wounded, sick, cargo, etc. Sometimes organic aviation is called army aviation.

358 VOYSKOVAYA ARTILLERIYA (organic artillery)—Artillery which forms an organizational part of units. Organic artillery is subdivided into battalion, regimental, division, corps, and army artillery.

359 VOYSKOVAYA MASKIROVKA (military camouflage)—A type of combat support performed by troop subunits, units and formations in all forms of combat operations for the purpose of concealing their positions and activities from the enemy, and confusing him as to their composition and intentions. Military camouflage is accomplished by the troops' use of natural cover, conditions of poor visibility (night time, fog, rain, etc.), and authorized or improvised concealment materials; by constructing dummy military objectives; by using mock-ups of combat materiel; by the use of other camouflage methods; and by observance of camouflage discipline on the march and in troop deployment areas, etc.

360 VOYSKOVAYA RAZVEDKA (operational reconnaissance)—A most important type of support for the combat operations of troops, being the aggregate of measures adopted by commanding officers (commanders) and staffs of units, formations and major field forces of all Services of the armed forces, branches, and special services for the purpose of obtaining intelligence concerning the enemy, the terrain, and the radiation and chemical situations in the region of the forthcoming actions. Operational reconnaissance is conducted by reconnaissance subunits (units) and by troops directly engaged in combat operations.

361 VOYSKOVAYA SISTEMA PVO (ground force air defense system)—The aggregate of air defense measures to be taken by major field

forces, formations and units of the ground forces in various kinds of operations and in combat.

362 VOYSKOVAYA CHAST' (No.) (military unit [No.])—A code designator for any military unit, and a corresponding number with which it is uniquely associated. The code designator conceals the real name of the unit or establishment.

363 VOYSKOVY POSREDNIK (troop umpire)—A person who, during a two-sided or command-and-staff exercise, is appointed to direct the play of combat operations, and to assess the performance of subunit (unit, formation) commanders and staff officers participating in the exercise. Those appointed as umpires are well-prepared generals and officers from units not participating in the particular exercise. Their rank must be not lower than that of the commanding officers of the subunits (units, formations) to which they are assigned.

364 VOYSKOVY TRANSPORT (organic transport)—Transport authorized in accordance with the Table of Organization and Equipment, and available for retention by a division, regiment, battalion, or separate unit.

365 VOYSKOVY TYL (troop rear units)—Rear services units and subunits with reserves of materiel, forming part of troop formations (units, subunits) and providing them with rear services support.

366 VOORUZHENIYE (armament)—(1) A weapon mounted on a combat vehicle, aircraft, warship, etc.; (2) a weapon in the possession of a given military subunit, unit, formation, major field force or service branch; (3) the process of equipping a military subunit, unit, formation or major field force with weapons and military-technical materiel.

367 VOORUZHENNIYE SILY (armed forces)—The aggregate of the various Services of the armed forces. Each Service of the armed forces consists of branches (arms), and also of special troops and services. In capitalist states, armed forces are the weapon of class domination, the means of enslaving small states and colonial peoples, and the principal support for conducting an aggressive foreign policy. The armed forces of the Soviet Union and the people's democracies are the bulwark of peace, and are intended to defend their own people and their national independence against the aggression of imperialist states.

368 VREMENNYE OGNEVYYE POZITSII (temporary firing positions)—Firing positions occupied temporarily by weapons for specific fire missions. By using temporary firing positions, the location of the main firing positions is not compromised. Temporary firing positions are usually prepared in the same manner as main firing positions as regards combat engineering.

369 VREMENNY REZHIM POLETOV (temporary flight procedure)

—A procedure, temporarily in force, for flights by airborne platforms over certain regions.

370 VSPOMOGATEL'NAYA AVIATSIYA (auxiliary aviation)—Aviation intended to facilitate troop command and control and for transporting sick and wounded personnel. Auxiliary aviation includes liaison aviation, transport aviation and medical aviation.

371 VSPOMOGATEL'NYYE KORABLI I SUDA (auxiliary ships and vessels)—Floating submarine bases, torpedo boats, training ships, hydrographic vessels, rescue vessels, hospital ships, armed transports, tankers, waterboats, tugs, icebreakers, floating workshops, etc. They are intended for fleet support and servicing, and they are most important when naval basing is dispersed.

372 VSPOMOGATEL'NYE UZEL SVYAZI (VUS) (auxiliary communications center)—One of the elements of the communications system of an army or a front. An auxiliary communications center is organized in order to enhance the stability and flexibility of communications, to create alternative directions for radio, radio-relay and wire communication in order to increase the effective use of multichannel microwave and line links, and also to provide communication with commanders (staffs) of formations and units located at a considerable distance from the command post or those that are on the move.

373 VSTRECHNOYE SRAZHENIYE (BOY) (encounter battle)—A clash between opposing sides when they are simultaneously striving to fulfill assigned missions by means of offensive actions. An encounter battle may occur during a march (maneuver) or in the course of an attack mounted to repel enemy counterattacks or counterblows, and also when reserves or second echelons move up to counterattack or to inflict counterblows when in defense. An encounter battle is characterized by obscurity of the situation and by abrupt changes in it, by the rapid movement to contact of the two sides and by the decisiveness and dynamic nature of their encounter, by rapid changes in march, approach-march and combat formations, by the swift build-up of effort from depth, by an intense struggle to gain time and to seize and hold the initiative, and by the presence of open flanks, and free maneuver. Present-day sea and air battles are predominantly in the encounter battle category.

374 VTORZHENIYE (invasion)—Aggressive military operations conducted for the purpose of penetrating deeply into the territory of a country under attack by land, sea and air.

375 VTOROY FRONT (historical) (second front)—A strategic front opened during World War II, in the summer of 1944, in Western Europe by American-British forces against Fascist Germany. The principal, decisive front of World War II was the Soviet-German front. Until the sum-

mer of 1944, American and British ruling circles deliberately delayed opening the second front, counting on complete mutual exhaustion of the Soviet Union and Hitler Germany in the war.

376 VTOROY ESHELON (second echelon)—The part of an operational formation or combat formation of troops which is not directly participating in an engagement (battle) at a given moment, but which is intended to be used to build up the force of a strike during an offensive, to increase the stability and aggressiveness of defense, and to replace troops of the first echelon in the event that the latter sustains heavy losses. The existence of a second echelon creates favorable conditions for building up strength, carrying out a maneuver, or rapidly transferring effort from one sector to another during an operation (battle). In contrast to a combined-arms reserve, combat missions for a second echelon are assigned at the same time as those for the first echelon.

377 VTOROSTEPENNYI TEATR VOYENNYKH DEYSTVIY (secondary theater of military operations)—A theater of military operations in which the latter are conducted by limited forces and on a limited scale due to a developing international situation, the small number of important economic, political and military objectives in the theater, and its particular geographic location. Armed conflict in a secondary theater of military operations is subordinate to that in the main theater. However, due to various factors of an economic, political or military nature, a secondary theater of military operations may become of primary importance as the war progresses.

378 VKHODNAYA INFORMATSIYA (input data)—Numerical data, passing through communication channels from the information sources to a computer for subsequent generalization, conversion, storage and output.

379 VKHODNOY FARVATER (entry channel)—A safe route leading into a port or naval base, or to a fairway in a mine field. An entry channel is specially protected by navigation equipment which is screened from enemy observation.

380 VKHODNYYE (VYKHODNYYE) VOROTA DLYA AVIATSII (approach (departure) "gate" for aviation)—A space established for flying through the front line, for observance of air traffic control in a frontier zone or a prohibited zone, and for maintenance of flight safety in the vicinity of airfields.

381 VYGRUZOCHNAYA PRISTAN' (PORT) (off-loading wharf [port])—A waterway counterpart of an off-loading station.

382 VYGRUZOCHNAYA STANTSIYA (off-loading station)—A railway station prepared and used for unloading materiel being shipped by rail to missile-technical units, front and army bases, naval bases, depots, and

also for army front formations, air maintenance formations (units), and national air defense forces.

383 VYZHIDATEL'NAYA POZITSIYA (assembly position)—A sector of terrain prepared as regards engineering, and intended as covered accommodation for combat materiel and personnel of missile subunits and rocket-launching artillery prior to their moving into a launch or firing position.

384 VYZHIDATEL'NYY RAYON (assembly area)—An area of terrain occupied by troops before going over to the offensive. All measures associated with preparation for the offensive are taken in the assembly area. An assembly area must provide good conditions for concealment against ground, air and radar observation by the enemy, and must afford the troops protection against weapons of mass destruction.

385 VYLET AVIATSII (sortie)—Take-off of an aviation unit (combat formation of aircraft) for the purpose of carrying out a combat mission.

386 VYADKA (VYBROSKA) VOZDUSHNOGO DESANTA (airborne assault force landing [dropping])—Method of landing (dropping) an airborne assault force in the enemy rear. The landing variant consists in transporting assault force personnel, combat equipment and other materiel in aircraft and helicopters, and landing them on airfields or landing strips in the enemy rear. In the drop variant, the transported assault force must descend from the aircraft and helicopters by parachute.

387 VYADKA MORSKOGO DESANTA (amphibious assault force landing)—A method of taking possession of a region of enemy coastal territory in order to create a grouping of friendly forces on it. During a landing of an amphibious assault force, troops to be landed and the assault materiel are transported by sea to the enemy coast in assault craft, opposing naval and air forces are destroyed, enemy anti-landing defense is neutralized, troops are debarked and engage in combat actions on shore, combat materiel is unloaded from ships onto the beach, and the operations of the assault landing force are supported.

388 VYSOKIY VOZDUSHNYY YADERNYY VZRYV (high altitude nuclear burst)—An explosion at a height for which radioactive contamination of the locality in the vicinity of ground zero is negligible. Contamination in the wake of the cloud may be disregarded. It is expedient to use a high altitude nuclear burst to destroy troops without cover and to demolish objectives having limited structural strength. Such an explosion may also be used against troops located in very simple cover.

389 VYSOKOCHASTOTNOYE TELEFONIROVANIYE (carrier telephony)—Telephony with the aid of high frequency currents, permitting simultaneous transmission of several telephone conversations on one tele-

phone circuit. In order to do this, the speech currents of low, acoustic frequency emerging from the transmitting telephone apparatus are transformed into high frequency currents. At the receiving station, the high frequency currents are reconverted, with the aid of suitable filters, to low frequency currents which cause sound vibrations that can be perceived by the ear in a conventional telephone. Modern carrier-telephony systems operate in the frequency range from 3000 Hz to several million hertz which, in the indicated range, permit several hundred telephone conversations to be conducted on one circuit.

390 VYSOTA YADEF.NOGO VZRYVA (altitude of a nuclear burst)—The distance from the surface of the earth (water) to the center of the nuclear explosion.

391 VYSOTNOYE TORPEDOMETANIYE (historical) (high level torpedo bombing)—A method used by naval aviation to launch torpedoes. This was done from an altitude of 750 meters or more against warships at sea, in port, or at anchor. In torpedo bombing, the torpedo was aimed and then dropped by parachute. When the torpedo entered the water, the parachute became disengaged automatically, the torpedo's motor started, and the torpedo was directed toward the target by special guidance instruments.

392 VYSOTNYY YADERNYY VZRYV (high altitude nuclear burst)—A nuclear explosion detonated high enough to be harmless at ground level, for the purpose of destroying the means of air attack (aircraft, missiles).

393 VYSSHEYE TAKTICHESKOYE SOYEDINENIYE (higher tactical formation)—Several formations and units consisting of various service branches (naval forces) and special troops, united into a permanent organization (e.g., a corps) and containing the manpower and weapons needed to conduct independent combat operations.

394 VYKHOD ZENITNOY UPRAVLYAYEMOY RAKETY NA TRAYEKTORIYU (departure point of an anti-aircraft guided missile on its trajectory)—The position of an anti-aircraft missile in space after launching, when it is put into a kinematic flight trajectory by the guidance system of the air defense missile complex.

395 VYKHOD IZ BOYA (disengagement)—Withdrawal of troops from the line of close contact with the enemy to a distance which provides them with freedom for subsequent maneuvering. Disengagement is carried out in an unfavorable situation on the decision of the superior commander to withdraw or for the purpose of regrouping forces and weapons for operation in a new, more favorable, sector.

396 VYKHOD IZ OKRUZHENIYA (breaking out of encirclement)—A

special form of combat operation consisting in breaching the combat formation of an encircling enemy front and withdrawing all the surrounded troops and their combat materiel through it. Troops may break out of encirclement independently or with the help of troops operating outside the region of encirclement, and aviation.

397 VYKHOD NA TSEL' (target approach)—The final segment of the flight course of an aircraft (group of aircraft) to the target prior to the moment of its detection, reconnaissance or destruction.

398 VYKHODNAYA INFORMACSIYA (IZ VYCHISLITEL'NYKH MASHIN) (output data [from computers])—The totality of information generated by a computer as a result of processing input data. Output data from a computer may be displayed with visual aids (oscilloscope screens, charactrons, displays) or in the form of text, tables or graphs.

399 VYCHISLITEL'NYY TSENTR (computer center)—A facility engaged in the investigation of various economic and military problems by use of electronic computers, and in the processing, storage and output of information.

400 VYAZKAYA LETSEPTURA (viscous agent)—A poisonous substance mixed with a thickening agent. It is used to cause protracted contamination of an area.

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401 GAMMA-LUCHI (gamma rays)—Short-wave electromagnetic radiation observed during nuclear explosions. Powerful emissions of gamma rays exert a harmful biological effect on living organisms.

402 GARNIZON (garrison)—The aggregate of troop units, military establishments and institutions situated permanently or temporarily in an inhabited locality, or in a separate defensive structure. As a rule, the garrison commander is the commander [i.e. staff, officer-in-charge, department/section head, etc.] who is senior by appointment. Where two or more have equivalent appointment position, then the commander who is senior by military rank becomes garrison commander. However, in some instances, the commander who is senior by military rank may be appointed garrison commander notwithstanding the seniority of other commanders.

403 GARNIZONNAYA SLUZHBA (garrison service)—A system of measures organized and implemented in a garrison, and being of mutual importance for all troops, military establishments and training institutions situated in it. Garrison service consists in maintaining military discipline in the garrison, in providing the necessary conditions for billeting, everyday life, and training of troops, and in conducting a number of activities involving troop participation (parades, firefighting, emergency measures,

participating in demonstrations and meetings, guards of honor, and rendering military honors at funerals).

404 GENERAL'NOYE SRAZHENIYE (historical) (general engagement)—An armed encounter of the main bodies of belligerent parties, exerting a decisive influence on the outcome of a campaign, and sometimes even creating a turning point in the course of an entire war.

405 GENERAL'NYI KURS (general course)—(1) The course leading from the starting point (point of departure) of a warship or transport to its destination (point of arrival); (2) the course, relative to which a ship does a zigzag to avoid a submarine attack or artillery fire.

406 GENERAL'NYI SHTAB (general staff)—The central authority controlling the armed forces of a state. The primary mission of the General Staff of the Armed Forces of the USSR is to work out problems relative to the defense of the USSR against armed attack by imperialist states.

407 GEODEZICHESKAYA SET' (geodetic net)—A system of geodetic control points covering the territory of theaters of military operations. A geodetic net serves as a basis for making topographic maps and creating special-purpose geodetic nets and artillery control nets needed to tie in the elements of combat formations of missile forces and artillery.

408 GEODEZICHESKIY PUNKT (geodetic point)—A point on the earth's surface whose position is determined by geodetic operations in a particular system of coordinates.

409 GERBITSIDY (herbicides)—Chemical substances which, even in very small quantities, are fatal to plants. The USA has used herbicides for military purposes in Southeast Asia.

410 GIDROAKUSTIKA (hydroacoustics)—The branch of acoustics which studies physical phenomena associated with the emission, propagation and reception of sound waves in water, and which deals with the development of technical devices for underwater detection and communication.

411 GIDROAKUSTICHESKAYA ATAKA (hydroacoustic attack)—A submarine attack carried out on the basis of sonar data, without using the periscope.

412 GIDROAKUSTICHESKAYA ZAVESA (hydroacoustic screen)—A zone monitored by ship or aircraft sonar, or shore-based sonar (or both), established for the purpose of detecting enemy submarines in the approaches to a defended objective, in transit by sea, or approaching a coastal area.

413 GIDROAKUSTICHESKAYA NAVIGATSIONNAYA SISTEMA (hydroacoustic navigation system)—The aggregate of sonar stations, fa-

ilities and installations constituting a system for ensuring the safety of underwater and surface navigation.

414 GIDROAKUSTICHESKAYA RAZVEDKA (hydroacoustic reconnaissance; acoustical intelligence)—The activities of reconnaissance forces directed toward obtaining information about enemy underwater objects, as well as data characterizing the efficiency of the emission, propagation and reception of sound waves at various depths in a given region of a maritime or ocean theater of war. This information is needed primarily to support combat operations of the submarine and anti-submarine forces of a fleet.

415 GIDROAKUSTICHESKAYA STANTSIYA (hydroacoustic station)—The complex of instruments and mechanisms based on utilization of the properties of acoustic vibrations in water and intended for search and detection of surface and underwater objects at sea. Depending on their character and mode of operation, hydroacoustic stations are subdivided into sonar, hydrophone, navigational, communication, and recognition categories.

416 GIDROAKUSTICHESKOYE NABLYUDENIYE (hydroacoustic observation; acoustical surveillance)—One of the forms of technological observation, accomplished with the aid of shipboard, airborne and coastal hydroacoustic facilities (hydrophones and sonar stations).

417 GIDROAERODROM (seaplane base)—A water basin (area of water) and the adjacent coastal region with the appropriate buildings and equipment, affording seaplanes room to land and take-off, and serving as a base for them.

418 GIDROGRAFICHESKAYA RAZVEDKA (hydrographic reconnaissance)—The operations of reconnaissance forces directed toward obtaining information concerning navigational-hydrographic conditions in a given region to provide hydrographic support for naval operations and combat actions.

419 GIDROGRAFICHESKOYE SUDNO (hydrographic vessel)—A vessel especially built or converted for hydrographic work at sea (on rivers, lakes), i.e.: soundings; surveys of shores, islands, shoals and coastal landmarks; tidal studies; etc.

420 GIDROGRAFICHESKOYE TRALENIYE (hydrographic sweeping)—The most reliable method of obtaining assurance that there are no navigational hazards (underwater obstacles) in channels or elsewhere, in the region and range of depths investigated. The method involves the use of special sweeps.

421 GIDROGRAFIYA (hydrography)—The science that studies the earth's water surface (oceans, seas, lakes, rivers) for navigational purposes.

422 GIDROLOGICHESKAYA OBSTANOVKA (hydrological situation)

—The aggregate of the elements of the physical state of water as functions of depth (temperature, density, salinity, transparency, etc.), knowledge of which is necessary for the operation of submarines and anti-submarine ships.

423 GIDROLOGIYA (hydrology)—The science of the waters on the surface of the land. Hydrology investigates individual bodies of water (seas, lakes, rivers, etc.), and studies the complex physical processes which take place in them.

424 GIDROLOKATSIYA (sonar)—Detection of underwater objects and determination of their position by sending underwater acoustic signals and receiving those signals as reflected from the objects.

425 GIDROMETEOROLOGICHESKAYA OBSTANOVKA (hydrometeorological situation)—The aggregate of weather components and the state of the sea (wind direction and force, air and water temperature, visibility, cloud cover, wave formation, current, etc.) in a given region, affecting the employment of naval forces.

426 GIDROMETEOROLOGICHESKAYA RAZVEDKA (hydrometeorological reconnaissance)—The activities of reconnaissance forces directed toward obtaining information about weather components and sea state (wind direction and force, air and water temperature, visibility, cloudiness, wave formation, current, etc.) in a given region.

427 GIDROMETEOROLOGICHESKAYA SLUZHBA (hydrometeorological service)—A state organization whose role is to provide the national economy, population and armed forces with data on the country's climate and waters, with information concerning the current weather and the state of rivers, lakes and seas, and with forecasts of future weather and hydrological conditions.

428 GIDROMETEOROLOGIYA (hydrometeorology)—The science dealing with the atmospheric water cycle.

429 GIPERZVUKOVAYA SKOROST' (ypersonic speed)—The speed of a flying apparatus exceeding the velocity of sound by a factor of five (Mach 5) or more.

430 GIROKOMPAS (giroskopicheskiy kompas) (gyrocompass)—An electromechanical navigational instrument based on the property of a gyroscope, whereby it sets itself in the plane of the true meridian under the action of external forces. The gyrocompass is used in ships, aircraft, missiles and other airborne platforms to determine the true course.

431 GLAVNAYA VOYENNO-MORSKAYA BAZA (main naval base)—A system of strong points supporting the combat and operational activity of main naval forces.

432 GLAVNAYA TSEL' VOYENNYKH DEYSTVIY (the main goal

of hostilities)—The basic conceivable result for the attainment of which military operations are conducted or planned. In modern warfare, the main goal of hostilities consists in destroying enemy nuclear-missile facilities, putting his armed forces to rout, annihilating the economic base of the hostile nation's war effort, and disrupting its state system.

433 GLAVNYYE SILY (main elements)—A large proportion of the forces and facilities of a formation or major field force of the Services designated to fulfil the primary (main) mission in a battle or operation. The composition of the main elements is determined by the assigned mission and by the specific conditions of the situation.

434 GLAVNYY BEREGOVOY INFORMATSIONNYY PUNKT (main coastal information post)—A place where all data on the situation, obtained by the navy or received from other sources, are collected and processed.

435 GLAVNYY TEATR VOYENNYKH DEYSTVIY (main theater of military operations)—The theater in which the main strategic groupings of belligerent powers are deployed and operating, both as a result of an emerging international arrangement of forces and by virtue of prevailing economic, military, political, and geographical conditions. The main military-political and strategic goals in the armed conflict are attained in the main theater of military operations, as a result of which there is usually a rapid change in the course of the war.

436 GLAVNYY UDAR (main strike)—The aggregate of nuclear strikes and coordinated strikes, dealt by main elements or naval forces in the sector or region of decisive importance for putting the enemy to rout and completing the combat mission. The main strike is delivered in accordance with the purpose of the operation or battle and the specific conditions of the situation.

437 GLOBAL'NAYA VOYNA (foreign) (global war)—Total war, enveloping the entire world. It is believed that a future world war, in contrast to previous wars, will be waged not only on land, at sea, and in the air, but also in space, which will characterize its universal, global nature even more.

438 GLOBAL'NAYA RAKETA (global missile)—A ballistic missile capable of traveling a distance exceeding half the circumference of the earth, and of hitting a target at any point on earth. A global missile possesses high hitting accuracy, and may deliver an ultra-powerful nuclear charge to the target.

439 GLUBINA DEYSTVIY AVIATSII (depth of air operations)—The maximum depth of operations conducted by military aviation against enemy targets which are remote from the front line. The depth of air opera-

tions is determined by the tactical radius of a single aircraft (or of an aviation subunit or unit), taking into account the distance of home airfields from the front line.

440 GLUBINA NASTUPATEL'NOY OPERATSII (depth of an offensive operation)—The distance from the forward edge of the enemy's position to a given area, with whose seizure the operation is completed.

441 GLUBINA OPERATIVNOGO POSTROENIYA (BOYEVOGO PORYADKA) (depth of a strategic concentration [combat formation])—The distance from the foremost units (subunits) to the rear boundary of the disposition of reserves, missile forces, second echelons, and organic (front) aviation, inclusive.

442 GLUBINA POGRUZHENIYA PODVODNOY LODKI (submarine submersion depth)—The vertical distance from the surface of the sea to the submarine's waterline, when the latter is under water. The depth of submersion of a submarine is measured with a depth gauge. A submarine has a working depth, extreme depth, design depth, periscope depth, and a depth at which it is safe from ramming.

443 GLUBINA RASPROSTRANENIYA ZARAZHENNOGO VOZDUKHA (area of contaminated air)—The distance from the leeward edge of a contaminated region to the line reached by vapors of toxic agents capable of affecting personnel.

444 GLUBINNAYA BOMBA (PROTIVOLODOCHNAYA) (depth charge [anti-submarine])—A bomb intended to damage or destroy submerged submarines. Depth charges are subdivided into the shipborne and airborne categories (the latter may have a nuclear charge). A depth charge is fitted with a special device ensuring that it will explode under the pressure of the water at a preset depth.

445 GLUBOKAYA OPERATSIYA (historical) (deep operation)—An operation which achieves simultaneous effect and involves the advance of offensive troops through the entire operational depth of the enemy's defense, with a build-up of forces and facilities in the course of the operation due to "success-developing echelons."

446 GLUBOKIY TYL (deep rear)—That part of the territory of a state (or states) beyond the range of enemy operational and tactical means of attack. Under conditions of nuclear-missile warfare, the basic elements of the enemy deep rear may include: the economic base of the war; the governmental and supreme command systems; and the strategic nuclear weapons of an armed conflict.

447 GORYACHIIY REZERV RADIOOTEKHNICHESKIKH SREDSTV (standby reserve of radio-technical facilities)—Reserve of radio-technical facilities which is mounted and in position. The apparatus of these facilities is warmed up and ready to be switched on and used at short notice. A

standby reserve of radio-technical facilities is used in a front-line zone (or frontier zone), and also in the depth of friendly territory when there is a possibility of the enemy appearing.

448 GOSPITAL' (military hospital)—A military therapeutic facility intended for qualified in-patient treatment of military personnel, as well as certain categories of civilians (members of the families of generals and other officers). In peacetime, military hospitals exist as unit sick quarters and as garrison and district hospitals. In wartime, field ambulances and evacuation hospitals are formed to render aid to the wounded and sick. Such hospitals are differentiated according to organization, staff, purpose, and activity.

449 GOSPITAL'NAYA BAZA FRONTA (front hospital base)—A group of hospitals having various purposes, unified under the direction of a Front Hospital Base. Each Front Hospital Base may form branches, which deploy sequentially or simultaneously in several regions.

450 GOSPODSTVO V VOZDUKHE (foreign & historical) (air supremacy)—An advantageous situation (possession of the initiative) in the air, enabling friendly ground, naval and air forces to complete the missions confronting them. The term "air supremacy" is not used by us at the present time.

451 GOSPODSTVO V VOZDUSHNO-KOSMICHESKOM PROSTRANSTVE (foreign) (air-and-space supremacy)—Attainment of an advantageous position by a given country (state) in the means of air-and-space attack, and in the use of space for military purposes.

452 GOSPODSTVO NA MORE (foreign & historical) (sea supremacy)—An advantageous situation in an entire maritime theater or in a portion of it, achieved for a definite period of time by one of the warring parties for the purpose of guaranteeing their own naval forces the initiative and successfully completing current missions. The term "sea supremacy" is not used by us at the present time.

453 GOSUDARSTVENNYE REZERVY (state reserves)—The reserves of various kinds of materiel (foodstuffs, fuel, semi-finished products, strategic raw material, oil, etc.), which are controlled by special state authorities and are consumed only with government approval. A proportion of the state reserves is intended for the material and technological support of the armed forces.

454 GOSUDARSTVENNYY KOMITET OBORONY (State Defense Committee)—The supreme State authority created June 30, 1941, to direct the armed forces and the country during World War II (1941–1945). The State Defense Committee was abolished after the war ended (September 4, 1945).

455 GOTOVNOST' K VYKHODU V MORE (operational readiness for

sea)—The specified period within which a formation of warships (or a single warship) must be ready to put to sea for the purpose of performing a combat mission. Operational readiness for sea has the following variants: immediate notice; notice, expressed in hours; and extended notice, expressed in days.

456 GRAVIMETRIYA (gravimetry)—The science concerned with measurement of quantities characterizing the earth's gravitational field, primarily the magnitude of the force of gravity. Gravimetric methods are used to map territory in short periods. Making accurate maps by gravimetric methods requires precise knowledge of the earth's configuration. Artificial satellites permit knowledge of the earth's shape to be refined and the application of gravimetry to be extended. Gravimetric methods may be used to make accurate maps for military purposes, and especially for the geodesic referencing of continents.

457 GRAZHDANSKAYA OBORONA (civil defense)—A system of defense measures applicable to the state as a whole, taken in order to protect the population and the national economy from nuclear, chemical, and bacteriological weapons, and also in order to carry out rescue operations and emergency repair work in centers of devastation.

458 GRAFIK DEZHURSTVA SREDSTV PVO (duty schedule for air defense units)—A document defining the procedure governing maintenance of a 24-hour watch by air defense forces and facilities. Such a document is usually drawn up in air defense units and formations, but when necessary, this is also done in major formations of national air defense forces.

459 GRAFIK PEREPRAVY (river-crossing graph)—An operational-tactical document drawn up by the combined-arms staff with the participation of the unit engineer when planning the forcing of a water barrier by troops. Reflected in a river-crossing graph are the characteristics of the water barrier, the crossing sectors, the types of crossing, the combat (or operational) formation of the troops, the sequence and time limits for the crossing of units (or formations) at each sector, the crossing facilities, and the combat-engineer subunits (or units) enabling the troops to force the water barrier.

460 GRUNTOVAYA TELEZHKA (ground transporter)—A special trailer intended for transporting missiles on paved or unpaved roads.

461 GRUNTOVYY AERODROM (unpaved airfield)—An area of terrain with a natural covering, equipped from an engineering viewpoint, and intended for take-off, landing, parking, and servicing of aircraft. The size of an unpaved airfield depends on its purpose, and the dimensions specified for a first, second, or third class airfield may apply.

462 GRUPPA ARMIY (foreign) (group of armies)—The highest strate-

gic formation of ground forces. The composition of a group of armies is not constant; it depends on the importance of the theater of operations and on the forces present. A group of armies may have two to four field armies and several separate formations, or it may consist of several separate army corps. In operations in a theater of operations, a group of armies is usually coordinated with a Joint Tactical Air Command, and in a maritime sector, with a strategic formation of naval forces.

463 GRUPPA RADIOPOMEKH (radio jamming group)—A temporary organization under a single command of several radio units (or radio sub-units), used to carry out specific radio jamming assignments.

464 GRUPPIROVKA ARTILLERII (artillery grouping)—The composition and disposition of artillery intended to complete missions in combat or in an operation. An artillery grouping is made up of artillery groups or of individual artillery formations and units.

465 GRUPPIROVKA SIL NA OKEANSKOM (MORSKOM) TEATRE (grouping of forces in a naval theater)—The composition and disposition of naval forces intended to conduct military operations in a given naval theater. This term is often used in the sense of the composition of naval forces intended to fulfill a particular operational (or combat) mission.

466 GRUPPOVOYE ISPOL'ZOVANIYE PODVODNYKH LODOK (submarine formation)—One of the methods of using submarines, in which they act against an enemy objective as components of tactical groups.

467 GRUPPOVOYE UPRAZHNENIYE (ZANYATIYE) (group training [exercise])—One of the methods of instructing generals, admirals, and other officers, in the process of their operational and tactical training, characterized by the fact that each officer under instruction is put in turn into the very same role by the exercise director and each performs the functions which would normally be fulfilled by the incumbent of the position in question. Group exercises are conducted on maps in class, in the field, or on a sand table.

468 GRUPPOVOY YADERNYY UDAR (group nuclear strikes)—Strikes delivered simultaneously by means of several nuclear devices. A group nuclear strike is used when the desired degree of damage to the target cannot be achieved with a single nuclear device or when the situation precludes the use of a single, more powerful, nuclear device.

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469 DAL'NEYSHAYA (POSLEDUYUSHCHAYA) ZADACHA (followup objective)—The portion of the overall combat mission in an offensive operation (or combat) carried out on completion of the initial mission. Envisaged in the followup mission are the destruction of any further

nuclear attack capability manifested by the enemy, the destruction of his reserves, and attainment of the goal of the operation (combat).

470 DAL'NOBOYNAYA ARTILLERIYA (long-range artillery)—Artillery with a great firing range, predominantly gun artillery, used to neutralize and destroy important targets located beyond the range of howitzer artillery and mortars.

471 DAL'NOMERNAYA SISTEMA (range finding system)—A radio-technical system operating on the principle of distance measurement. There are high-precision range finding systems, which are used for bomb aiming, geodetic tie-in, navigation, and other purposes. Most widespread is a range finding system in which there is a radar interrogator on a moving object (warship, aircraft), and responders at two geodetically tied-in points on the ground.

472 DAL'NOST' PODAVLENIYA RADIOLOKATSIONNYMI POMEKHAMI MINIMAL'NAYA (burn through range)—The least distance between a radar station and a target equipped with a jamming station (for example, a warship or aircraft with a jamming station), at which the interference masks the target. Upon further reduction of the distance between the radar station and the target, the signal reflected from the target becomes stronger than the interference; it can be seen against the interference background, and the interference loses its effectiveness.

473 DAL'NOST' POLETA (flying range)—The maximum length of the flight path of an airborne platform (fixed-wing or rotary-wing aircraft, missile, aerostat) from beginning to end. Flying range depends on design, fuel capacity, flight conditions, and weather conditions.

474 DAL'NOST' PRYAMOGO VYSTRELA (grazing-fire range, point-blank range)—The firing range at which the height of the trajectory does not exceed the height of the target. The most advantageous conditions for hitting the target occur within the limits of the grazing-fire range (point-blank range), because the target is in the danger space throughout the entire extent of the trajectory corresponding to a given aim.

475 DAL'NOST' RADIOLOKATSIONNOGO OBNARUZHENIYA (radar detection range)—The greatest distance at which any target can be detected by a radar station. Radar detection range depends on the characteristics of the radar station, on the properties of the target, and on conditions for the propagation of radio waves. Radar detection range above the earth's surface increases with target height and radar antenna height up to a value that depends on the qualities of the radar station and the target.

476 DAL'NOST' STREL'BY (range of fire)—The distance between the gun, mortar, or other weapon and the object being hit. In missile units, the

distance between the launcher and the target is called the missile flight range.

477 DAL'NYAYA AVIATSIYA (long-range aviation)—The element of the Air Force intended to carry out missions in accordance with the plans of the Supreme High Command.

478 DAL'NYAYA NAVIGATSIYA (long-range navigation)—Steering or piloting ships or airborne vehicles over great distances with the aid of special equipment. The methods mainly used in long-range navigation are those of radio navigation and astro-navigation.

479 DEBLOKIROVANIYE (raising a blockade)—Combat operations conducted for the purpose of liberating blockaded (or encircled) troops, or of freeing warships and merchant vessels in ports, bays, or naval bases. The combat operations conducted at sea or on land to raise a blockade consist in breaking through the blockade and liquidating the enemy forces which are enforcing it. With regard to aviation, the term raising a blockade means combat activities directed against enemy aviation which is blockading some object or encircled grouping from the air.

480 DEGAZATSIYA (decontamination)—Eliminating toxic agents or rendering them harmless. Decontamination may be accomplished by chemical, physical, and mechanical methods.

481 DEGAZIRUYUSHCHIYE VESHCHESTVA (decontaminants)—Substances capable of rendering toxic agents harmless. They are used to decontaminate terrain, combat materiel, transport facilities, etc.

482 DEDVEYT ("dead weight" [cargo-carrying capacity in tons])—The full cargo-carrying capacity of a freighter (in tons). "Dead weight" represents the difference between full displacement and empty displacement. The term "dead weight" is used only in connection with cargo-carrying vessels, and it is a virtually constant fundamental value characterizing a given vessel.

483 DEZHURNYYE SREDSTVA PVO (duty air defense facilities)—Air defense facilities and forces which are in readiness for immediate use. Duty air defense facilities are intended to engage violators of the Soviet Union's air space and to repel surprise enemy air attack. The composition of duty air defense facilities in peacetime and wartime, and the procedure for their combat service, are determined by the superior commander.

484 DEZHURSTVO V VOZDUKHE (combat air patrol)—One of the basic methods of providing air cover for troops and rear objectives using fighter aviation to ward off reconnaissance and air strikes. Combat air patrol is the method used in those cases where a sortie by fighters from airfields does not ensure interception of the air enemy.

485 DEZAKTIVATSIYA (radioactive decontamination)—Eliminating radioactive substances from clothing, armament, materiel, buildings, and the terrain, and also purifying water and rations contaminated by radioactive substances. Depending on the situation and the degree of radioactive contamination, radioactive decontamination may be partial or full.

486 DEZAKTIVIRUYUSHCHIYE SREDSTVA (radioactive decontamination agents)—Substances used to eliminate radioactive substances from armament, combat equipment, and transport. They include aqueous solutions of detergents, and solvents.

487 DEZINSEKTSIYA (disinfestation)—An independent division of disinfection. Disinfestation is a measure for the control of parasites (predominantly insects and ticks). Disinfestation may be accomplished by physical, chemical and biological methods.

488 DEZINFEKTSIYA (obezvrezhivaniye) (disinfection)—Annihilation of pathogenic microbes, and the toxins produced by them, on contaminated objects.

489 DEZINFITSIRUYUSHCHIYE RASTVORY (disinfectants)—Solutions of special chemical substances used to destroy pathogenic microbes and the toxins produced by them.

490 DESINFORMATSIYA (disinformation)—Propagation of false information about one's forces and plans of action for the purpose of misleading the enemy. Means of disinformation may be: radio, press, simulated troop relocations, etc.

491 DEZORGANIZATSIYA TYLA PROTIVNIKA (disorganizing the enemy's rear)—Military operations directed toward the destruction of strategic nuclear facilities and important objectives in the enemy's deep rear, disruption of governmental and military administration, and demoralization of armed forces personnel and the population.

492 DEYSTVITEL'NAYA DAL'NOST' STREL'BY (maximum effective range of fire)—The distance at which ammunition (a shell, bullet) retains its destructive properties to a degree sufficient for certain destruction of the target.

493 DEYSTVIYA VOYENNO-MORSKOGO FLOTA NA PRIMORSKIKH NAPRAVLENIYAKH (naval activities in coastal areas)—Combat activities by formations and units of all types of naval forces together with troops of a maritime front. The fleet may be assigned the following missions: destroy aircraft carriers and other warship groupings; disrupt (break off) troop transport and materiel shipments to enemy maritime groupings; disembark amphibious assault forces; destroy enemy amphibious assault landing forces at sea and participate in preventing their landing on the beach; safeguard sea transportation of troops and supplies for the friendly maritime front, etc. Specific naval missions are defined by

the Supreme High Command, and are refined jointly with the officer commanding the troops of the maritime front.

494 DEYSTVUYUSHCHAYA ARMIYA (combat army)—The armed forces of a state used to conduct an armed conflict.

495 DEMARKATSIONNAYA LINIYA (demarcation line)—The line, zone, or strip separating hostile troops upon termination of hostilities, pending establishment of a permanent boundary by agreement or peace treaty.

496 DEMASKIROVANIYE (exposure of camouflaged objects)—Violation of camouflage by friendly troops. In order to avoid this, troops must observe strict camouflage discipline, use camouflage methods and facilities correctly, and constantly combat enemy reconnaissance.

497 DEMASKIRUYUSHCHIYE PRIZNAKI (activity indicators)—Characteristic signs of objects and troop activity by which the enemy may detect an object and determine its location, or infer purpose, affiliation, and composition of units, and the nature of their activities (for example, the length of columns of troops on the march, the tracks and noise of machines, etc.).

498 DEMOBILIZATSIYA (demobilization)—Release of service personnel from the armed forces at the end of a war. In a broader sense, demobilization means the transition of the armed forces and all sectors of the economy from a war footing to a peacetime footing.

499 DEMORALIZATSIYA (demoralization)—(1) Demoralization of enemy troops; undermining of discipline. (2) Depression of the morale of troops and population. Demoralization leads to an abrupt decline in troops' ability to resist.

500 DESANT (landing force)—Troops intended for landing, or which have already landed, on enemy-occupied territory, for the purpose of conducting combat operations. According to the transportation method used, a landing force may be amphibious, airborne, or combined; and according to its scale and purpose, such a force may be strategic, operational, or tactical.

501 DESANTNAYA PEREPRAVA (assault crossing)—(1) An operation whereby troops cross a water barrier using assault-crossing equipment. (2) The sector of a water barrier equipped and used by troops to negotiate it on assault-crossing equipment.

502 LETSENTRALIZOVANNOYE OPOVESHCHENIYE (decentralized warning)—Warning troops about the air enemy, such warning being given by command posts of air defense formations and radio-technical units, and also directly by radar subunits, namely companies and bat-

talions. Decentralized warning is by radio or by direct line communication. It is used for the purpose of shortening the time required to pass information concerning the appearance and activities of the air enemy in regions of combat operations by air defense units and formations.

503 DESHIFRIROVANIYE FOTOSNIMKOV (photo interpretation)—Recognition and determination of the number and nature of objects by their images in photographs taken from aircraft, or from ground level at a considerable distance.

504 DIAPAZON RADIOVOLN (wave band)—A region of the electromagnetic spectrum bounded by radio waves of a particular length.

505 DIVERSIYA (sabotage)—Clandestine activities performed by specially trained groups, consisting in the destruction of enemy personnel and demolition of enemy objects, for the purpose of inflicting material losses on the enemy and undermining his morale.

506 DIVIZION KORABLEY (division of warships)—A tactical formation of Category Three warships of the same type, usually forming part of a brigade of warships [See also: #225, 707, and 709].

507 DIVIZIONNAYA ARTILLERIYSKAYA GRUPPA (DAG) (division artillery group)—Artillery at the direct disposal of the division commander, consisting of more than one battalion, created for the duration of combat to fulfill missions on behalf of the division, and united by a common command. A division artillery group is made up of division artillery and attached artillery, and bears the division's number. The main purpose of a division artillery group is to support regiments with fire, and to engage the enemy's tactical weapons, artillery, and mortars.

508 DIVIZIONNAYA ARTILLERIYA (DA) (division artillery)—Artillery forming an organizational part of a division, and directly subordinated to the division commander.

509 DIVIZIONNYY VYLET (divisional sortie)—An operational unit of measure for calculating air combat intensity. A divisional sortie is a one-time operation by aircraft comprising the effective combat strength of an air division, performed simultaneously, or during a definite period of time.

510 DIVIZIONNYY OB"YEDINENNYY SKLAD (consolidated division depot)—A mobile divisional establishment, consisting of stores for various kinds of materiel, clothing and footwear repair workshop, division field [steam] bathhouse, and a security detachment.

511 DIVIZIYA (division)—The basic tactical formation of the various service branches (arms), consisting of several units and subunits. In foreign armies, a ground forces division consists of brigades, combat groups, in-

dividual battalions, and other units and subunits of various branches and special troops.

512 DIVIZIYA KORABLEY (naval squadron)—A tactical formation of warships of the same class (e.g., a submarine squadron) or of various classes (e.g., a naval squadron for the defense of a sea area). Such a force includes brigades of warships, and sometimes divisions of warships as well.

513 DIVIZIYA NARODNOGO OPOLCHENIYA (historical) (division of People's Home Guard)—A military formation made up of volunteers not subject to call-up into the army at times of mobilization. Divisions of the People's Home Guard came into being during World War II in the period of intense defensive battles on the approaches to important political and economic centers of the country (Moscow, Leningrad, and other cities).

514 DIVIZIYA PARTIZANSKAYA (historical) (partisan division)—A formation made up of partisan units. During World War II, a partisan division usually performed missions such as disorganizing the enemy's rear or disrupting his communications.

515 DIVIZIYA PVO (air defense division)—The basic tactical formation of national air defense forces. An air defense division includes units and sometimes even formations of air defense branches. An air defense division fulfils missions in its assigned area of combat activity.

516 DINAMIKA BOYA (dynamics of battle)—The course taken by combat operations in connection with changes in the position of troops and the situation.

517 DIREKTIVA (directive)—A regulatory instruction issued in writing by higher command to subordinate levels. As a rule, a directive of an operational nature indicates: the general goal of the operations, the procedure for its attainment, the missions of troops (or naval forces), and the times when the missions are to be completed in an operation. A directive is usually issued by the Supreme Commander to officers commanding troops of fronts. In the course of an operation, fulfilment of interim missions by the troops is coordinated by the issue of combat orders and instructions. In peacetime, directives are issued by the Minister of Defense of the USSR, the Commanders-in-Chief of the Services, the General Staff, the staffs of the Services, commanding officers and chiefs of staff of strategic formations; directives concern long-range problems of reorganization, operational or combat training, mobilization training, materiel support of troops (or naval forces), etc. On questions of Party and political work in the Army and Navy, directives are signed by the Minister of Defense and the Head of the Chief Political Directorate. In military districts, groups of forces, fleets, and air defense districts, directives bear the signatures of commanding officers, members of military councils, and heads of political directorates.

518 DISLOKATSIYA VOYSK (troop disposition)—The distribution (quartering) of troops in specific parts of the country, and of ships in ports and naval bases.

519 DISPETCHERSKAYA SVYAZ' (control communication)—(1) Telephonic communication by line or radio used to achieve direct communication between one staff (or commander) with a number of other staffs (or commanders), or officers at a control post, for simultaneous issue of instructions, hearing reports, consultations, etc.; (2) communication organization for the purpose of controlling the movements of transport on communications routes.

520 DISTSIPLINA SVYAZI (communications discipline)—Strict observance of the established procedure for the operation of communications, compliance with requirements laid down in regulations, manuals and instructions, and with orders of commanding officers and chiefs, defining the organization of communications and the procedure for their use.

521 DNEVNAYA ORIENTIRNO-SIGNAL'NAYA AVIATION-NAYA BOMBA (DOSAB) (smoke bomb)—An aerial smoke bomb for subsidiary purposes, used by day for indicating (marking) of targets, aircraft control recognition points, and landing (dropping) zones for airborne assault forces. Such bombs may be of various colors.

522 DOZA IZLUCHENIYA (radiation dose)—See DOZA RADIATSII (#523).

523 DOZA RADIATSII (radiation dose)—The fundamental quantitative characterization of the effect of radioactive radiation on the irradiated medium and, in particular, of its damaging effect on living organisms. The radiation dose is defined as the quantity of radiative energy absorbed by one cubic centimeter of the irradiated medium: it is measured in roentgens (r).

524 DOZIMETRICHESKIYE PRIBORY (dosimetric instruments)—Instruments used for carrying out radiation reconnaissance, for monitoring irradiation of personnel, and for determining the degree of contamination of various objects. Dosimetric instruments include radioactive indicators, roentgenometers, radiometers, and dosimeters.

525 DOZIMETRICHESKIY KONTROL' (dosimetric monitoring)—A system of measures for determining the radiation dose received by personnel, and the degree of (radioactive) contamination sustained by personnel, armament, materiel, clothing, food, and water. Dosimetric monitoring is subdivided into irradiation monitoring and radioactive-contamination monitoring. On the basis of irradiation-monitoring data, measures are taken to safeguard personnel from radiation hazards. On the basis of radioactive-contamination monitoring data, the need for com-

plete sanitary processing and radioactive decontamination, or repetition of them, is determined.

526 DOZORNAYA SLUZHBA (patrol duty)—A form of combat support, the purpose of which is to forestall surprise enemy attack on naval forces or coastal targets, and to permit timely deployment of naval forces and facilities in a designated region.

527 DOLGOVREMENNOYE FORTIFIKATIONNOYE SOORUZHENIYE (permanent fortified structure)—A defensive structure affording protection against nuclear weapons, heavy artillery, heavy aerial weapons, and other means of destruction. The strongest materials (e.g., reinforced concrete and armor plate) are used to build permanent fortified structures.

528 DONESENIYE (report)—A written or oral report containing definite information, rendered by commanders and staffs at subordinate levels to higher levels. Each report must be accurate, brief, simple in presentation, and unambiguous. Reports rendered at intervals prescribed in the Table of Routine Reports are called "routine," whereas those which are specially requested by higher authority, or which are rendered on the initiative of subordinate staffs, are called "non-routine."

529 DONNAYA MINA (bottom mine)—A mine which, when emplaced, lies on the bottom of the sea (or river). Bottom mines are used in areas having relatively shallow depths.

530 DOPPLEROVSKIYE RADIOTEKHNICHESKIYE PRIBORY I SISTEMY (Doppler radio-technical instruments and systems)—Radio-technical devices which make use of a phenomenon consisting in the fact that the wavelength of received waves differs from that of emitted waves when the transmitter and receiver approach one another or recede from one another. This same phenomenon occurs when radio waves are reflected, if the distance between the reflecting surface and the receiver of the reflected waves changes. In radar, the Doppler-Belopol'skiy effect is used to detect moving targets against a background of immobile local objects, and to measure the speed of missiles, aircraft, etc. In aviation, Doppler instruments are used to measure the ground speed of an aircraft and the drift of an aircraft due to wind. Such instruments are also used to calculate distance travelled and the coordinates of the aircraft's position.

531 DOPUSTIMAYA (BEZOPASNAYA) DOZA RADIATSII (tolerable [safe] radiation dose)—The radiation dose which, whether received in a single exposure or in repeated exposures, does not lead to loss of combat effectiveness.

532 DORAZVEDKA (supplementary reconnaissance)—Obtaining additional data on a previously investigated objective for the purpose of confirming or amending its position, nature, size, and coordinates.

533 DOROZHNA YA SET' (road network)—The system of intercon-

nected railroads, paved roads, and unpaved roads in existence or under construction in a particular area of terrain. The development of a road network in a specific region or theater of hostilities is defined by the road density, i.e., the average of the total lengths of each type of road per hundred square kilometers.

534 DOROZHNOYE OBESPECHENIYE (highway support)—The complex of measures taken with regard to the preparation and operation of highways, and organization of uninterrupted movement on them. Highway support includes reconnaissance, selection of main and auxiliary highways, their restoration, repair, artificial covering, and deployment of the area road traffic control service. Highway support is accomplished by highway troops and engineer troops. Local civil road-building and road-operating organizations may be enlisted for highway support purposes.

535 DOROZHNO-KOMENDANTSKAYA POLOSA (area road traffic control zone)—A zone of terrain assigned within definite boundaries for convenience in controlling troop movements, moving freight, and implementing various measures pertaining to highway support. An area road traffic control zone is divided, in turn, into area road traffic control regions and sectors. As a rule, area road traffic control zones and sectors are divided in accordance with the offensive sectors of the armies of the first echelon of a front. Their size depends on the number of highways and their condition, on their envisaged traffic intensity, and on the composition of the forces and facilities assigned to highway maintenance.

536 DOROZHNO-KOMENDANTSKAYA SLUZHBA (area road traffic control service)—A system of measures adopted by personnel of area road traffic control units and formations on highways for the following purposes: organization of dispatcher control of troop and supply movements; regulation of traffic; defense, security, and protection of highway objectives; maintenance of military order; and organization of servicing points.

537 DOROZHNYE VOYSKA (highway troops)—Special troops used for the restoration, repair, construction, and operation of highways, and also for carrying out area road traffic control service. Highway troops consist of individual formations and units of area road traffic control troops, road-building troops, and bridge-building troops.

538 DOROZHNYI MINOISKATEL' (road mine detector)—An engineer vehicle intended for detection of mines on roads, airfields, and open terrain. A road mine detector is a cross-country vehicle equipped with a device for searching out mines, that stops automatically when a mine is detected.

539 DOSTOVERNOST' SVYAZI (communications reliability)—Precise correspondence of the received communication to the transmitted one.

Reliability is one of the most important demands made upon communications (a communications system).

540 DUBLIROVANIYE (duplication)—Twofold action. This is widely used in military affairs; for example: duplication of communications, i.e., transmission of a given order, report, signal, etc., by different modes of communication.

541 DUBLIROVANIYE PEREFRAV (duplication of water crossings)—Completion of an additional water crossing capable of replacing existing ones in case of need, or preparation for such an additional crossing so that it could be rapidly effected. Most often, in the organization or course of an operation (or battle), bridge crossings are duplicated. Duplication of water crossings may be accomplished by troops and/or local civil road- and bridge-building organizations, using local materials and floating craft, as well as organizational water-crossing materiel.

542 DUPLKSNAYA SVYAZ' (duplex communications)—Two-way communication, in which two control centers are able to transmit and receive messages simultaneously.

543 DYMOVAYA AVIATIONNAYA BOMBA (DAB) (aerial smoke bomb)—A special-purpose bomb for laying smoke screens, concealing friendly troops, and blinding enemy command posts, observation posts, and weapons.

544 DYMOVAYA ZAVESA (smoke screen)—An artificially-formed cloud of smoke or fog which hinders the enemy in his conduct of visual observation, aimed fire, and precision bombing, and conceals the actions of friendly troops, aircraft, and ships from optical means of reconnaissance. The effectiveness of a smoke screen depends on weather conditions, primarily, the speed and direction of the wind. In order to lay a smoke screen, the following are used: smoke pots, mines, smoke-shells, hand grenades, aerial bombs, and smoke generators installed on wheeled and tracked vehicles, tanks, aircraft, and merchant vessels.

545 DYMOVAYA MASKIROVKA (smoke concealment)—A component part of one of the forms of troop support, namely, camouflage. Smoke concealment is accomplished by creating an artificial cloud of smoke or fog which conceals the objects to be masked from the enemy's optical-reconnaissance facilities.

546 DYMOOBRAZUYUSHCHIYE VESHCHESTVA (smoke-making substances)—Liquid and solid mixtures, as well as phosphorus, used to make concealing and blinding smoke screens. Liquid smoke mixture is used by atomizing it in smoke machines. Solid smoke mixtures are used in smoke pots and smoke hand grenades. Phosphorus is used in aerial bombs and artillery projectiles.

547 YEDINAYA RADIOLOKATSIONNAYA SISTEMA (unified radar system)—A system whereby the radar facilities of the various service branches and Services are subordinated to a common command, in contrast to separate, uncoordinated use of radar facilities; for example, the aggregate of the forces and facilities of radio-technical troops deployed on the territory of the country in accordance with a unified plan for reconnaissance of the air enemy, ensuring guidance of fighter aviation, and assignment of targets to air defense missile troops. Underlying this system are the combat formations of radio-technical units in possession of radio-technical facilities, communications facilities, and automated apparatus for the collection, transmission, and generalization of data on the air situation.

548 YEDINONACHALIE (unity of command)—A most important principle of the structure of the Armed Forces of the USSR. The main essence of unity of command is the personal responsibility of a commander for the morale, discipline, military and political training, combat readiness and combat activity of his subunit, unit, formation, or major field force. Unity of command is developed and reinforced on a Party basis. A commanding officer, making a decision personally in combat, depends on the support of Party organizations and the entire military collective. The Communist Party reinforces unity of command, which is indispensable in the Armed Forces, skilfully combining it with the principle of collectivism.

549 YEMKOST' AERODROMNOY SETI (capacity of an airfield net)—The number of aviation units of one or several types of aviation which can be based on a given airfield net simultaneously. The capacity of an airfield net depends on the total number of airfields which it contains.

550 YEMKOST' NAPRAVLENIYA (support capability of a sector)—The possibility of deployment, operations, materiel and technical support of such and such a grouping of troops (or air forces) in a given sector. The support capability of a sector is characterized by the width of the zone (or air space), depth of the sector, road network (or airfield net), and number of important objectives of operational or strategic significance in the given sector.

551 YEMKOST' TEATRA VOYENNYKH DEYSTVIY (support capability of a theater of operations)—The possibility, in a given theater of operations, of supporting the deployment of any large strategic grouping consisting of several strategic formations of ground, naval and air forces, and formations of other Services, whose military activities may be united by a single strategic concept and plan. The support capability of a theater of operations is determined by its military, political, and strategic importance, by the overall size (width

and depth) of the theater, by its geographical position (by the presence of seas, by the relief of the terrain), by the degree of development and state of the airfield net, ports, communication routes, and by the presence and number of important operational and strategic objectives of military operations.

552 YESTESTVENNAYA DEGAZATSIYA (natural decontamination)—The process whereby toxic agents on contaminated objects are rendered harmless naturally, by weathering.

553 YESTESTVENNYYE MASKI (natural camouflage)—Local features (woods, brush, ravines, buildings, etc.) facilitating concealed disposition or movement of troops, and hindering their detection by the enemy.

554 YESTESTVENNYYE PREPYATSTVIYA (natural obstacles)—Local features and elements in the relief of the terrain (or of a sector or separate region) which slow down or stop movement, thus hampering troop combat actions, especially the use of combat vehicles (tanks, armored personnel carriers, trucks, etc.). On the other hand, natural obstacles facilitate strengthening of a defense. Natural obstacles include rivers, canals, marshes, high ground with steep slopes, ravines, cliffs, dense forests, etc.

555 YESTESTVENNYYE UKRYTIYA (natural cover)—Elements of the relief of the terrain (escarpments, hillsides, canyons, natural caves, forests) which reduce the lethal and destructive effects of nuclear and conventional weapons on personnel and combat equipment, and conceal them from enemy reconnaissance.

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556 ZHELEZNODOROZHNYYE VOYSKA (railroad troops)—Special troops used to restore, construct, and operate railroads in a theater of operations.

557 ZHURNAL BOYEVYKH DEYSTVIY (journal of combat operations)—One of the report and information documents maintained by the staffs of units, formations, and major field forces, used to describe the preparation for, and course of, combat experience, for compiling reports, and for replying to various inquiries. Entries in a war diary are made daily, as the combat situation changes.

558 ZHURNAL NABLYUDENIYA (observation log)—A document for recording the results of battlefield observations. An observation log is usually kept in observation posts. In it are recorded: the date, time, place, the results of observation, and to whom, when, and by what method, the results of observation were reported.

559 ZAVESA (MASKA) (screen [mask])—A camouflage method. It may be done by the smoke-screen method or by suspending regulation (or locally available) camouflage materials to conceal military objectives (structures, armament, positions, stretches of road, etc.) from visual and air observation by the enemy.

560 ZAVESA PODVODNYKH LODOK (screening force of submarines)—A group of several submarines, organized into a common sweep or combat force for the joint completion of a combat mission assigned to them.

561 ZAGRADITEL' SETEVOY (netlayer)—A surface ship of special construction, used to place nets as obstructions against submarines and torpedoes.

562 ZAGRADITEL'NYY OGON' (barrage fire)—A type of artillery fire consisting in laying a fire barrage (frontal or flank.) on a preselected line (or lines) in order to interdict movement by enemy infantry or tanks. Barrage fire is arranged beforehand, and is conducted at a definite rate for a certain period of time.

563 ZAGRAZHDENIYE PUTEY SOOBShCHENIYA (obstruction of transportation routes)—A system of measures, including demolition, mining, and the erection of obstacles on railroads, highways, water and air routes, adopted with a view to precluding or hindering their use by the enemy.

564 ZAGRAZHDENIYA MORSKIYE (obstruction of waterways)—A system of artificial obstacles on probable enemy shipping routes. Means of obstruction used at sea include mines, boom defenses, nets, underwater cribs, sunken vessels, etc.

565 ZAZHIGATEL'NAYA BOMBA (incendiary bomb)—An aerial bomb, used to start areas of fires.

566 ZAZHIGATEL'NYYE BAKI (ZL') (incendiary tanks)—An aerial weapon. Such containers with an incendiary mixture are intended to destroy wooden structures, oil tank farms, ammunition dumps, railroad depots with rolling stock, personnel, materiel, and other targets by fire.

567 ZAZHIGATEL'NYY SNARYAD (incendiary projectile)—A shell filled with thermite and intended to ignite various flammable objects.

568 ZAKREPLENIYE ZAKHVACHENNOGO RAYONA (RUBE-ZHA) (consolidation of a seized region [or line])—Bringing into a defensible state a seized enemy region (or line) of tactical or operational importance, for the purpose of repelling enemy counterattacks and coun-

terblows. Consolidation of a seized region ensures favorable conditions for a further offensive in depth, and also for conducting defensive actions.

569 ZAKREPLENIYE USPEKHA (consolidation of gains)—The aggregate of measures directed toward maintaining constant readiness and capability of troops to repel enemy attempts to halt an offensive or to interfere with the accomplishment of any maneuver which is advantageous to the advancing side. One of the most important measures ensuring consolidation of gains is the retention of seized regions (or lines).

570 ZAKRYTYY MORSKOY TEATR VOYENNYKH DEYSTVIY (enclosed theater of naval operations)—An expanse of sea bordered by the shores of one or several states, and having straits used for access to the ocean (directly or through an adjoining sea). Such a theater is characterized by relatively limited extent in terms of latitude and longitude.

571 ZAKRYTYY RADIOLOKATSIONNYY POST (inactive radar station)—A radar station whose equipment is deployed for operation, but is switched on only under special circumstances.

572 ZAKRYTYY RAYON MORYA (closed area of the sea)—An area of the sea which is out of bounds either to all ships and vessels or to ships of one particular type (areas assigned for gun trials, or exercises involving submarines, surface ships, aviation, etc.).

573 ZAMORSKIYE BAZY (foreign) (overseas bases)—Missile bases, naval bases, air force bases, and supply bases of imperialist states, founded in colonies or on the territory of occupied or dependent countries to suppress national-liberation movements, and to prepare for, and conduct, aggressive military activities. The system of US military bases on foreign territories is a consequence of the aggressive policy and strategy of American militaristic circles that envisages attack on the USSR.

574 ZAMYSEL OPERATSII (BOYA) (concept of an operation [or battle]) —The idea expressing the basic thought and content of the decision of the commanding general (or commander). The concept of an operation (or battle) includes: the objective to be attained in the forthcoming operation (or battle) and the method of attaining it; the zone (or sector) of concentration of the main efforts of the troops and the grouping of forces and facilities by sector; a possible maneuver of forces and weapons in the course of the combat activities, and the measures necessary to ensure timely completion of the operational (or combat) mission.

575 ZAPASNYY AERODROMNYY UZEL (alternate airfield area)—A group of neighboring alternative airfields not occupied by aviation.

These airfields may be used by an aviation formation, or by individual aviation units and subunits. Depending on the situation, an alternate airfield area may be converted to a home airfield area or a maneuver airfield area. In order to do this, aviation-technical units are deployed on the alternate airfield area, together with the radio-technical facilities required for takeoff and landing of aircraft, and necessary action is taken to equip the alternate airfields completely.

576 ZAPASNYI KOMANDNIY PUNKT (ZKP) (alternate command post)—A control post deployed at the same time as the command post, and intended for immediate assumption of control in the event that the command post is put out of action, threatened with destruction, or becomes difficult or impossible to use. Personnel in an alternate command post must know the situation and must be well informed concerning orders and instructions being issued to the troops. Radio facilities of an alternate command post remain on listening watch. An alternate command post is usually organized in a defensive situation.

577 ZAPASNYI RAYON (POZITSIYA) (alternate region [position])—A zone (or sector) of the terrain prepared (or designated) for the disposition of troops or for defense. It is used for changing the grouping of troops with a view to withdrawing them from the area of an enemy nuclear strike, or for attaining greater stability in a defense.

578 ZAPASNYI UZEL SVYAZI (alternate communications center)—An organizational and technical combination of communications forces and facilities deployed in a region intended as the site of a relocated control post should the need arise.

579 ZAPASY MATERIAL'NYKH SREDSTV (supply stockpiles)—The quantity of the various types of materiel in regular supply which is to be maintained in troop units and in various rear services elements. According to their purpose, place of storage, and the unit responsible for them, stockpiles of supplies may be in the following categories: emergency, minimum-level, mobile (transportable and portable), center, front, naval, or army. Mobile supplies (transportable and portable) are sometimes grouped under the general classification "unit."

580 ZAPRAVKA ((1) fuel unit; (2) the fueling process)—(1) The quantity of fuel established for one vehicle (tank, armored personnel carrier, automobile, tractor, missile, aircraft, or warship) as a supply-and-accounting unit for calculating fuel requirements and meeting them. For tanks, self-propelled artillery mounts, tracked armored personnel carriers, tractors, and other tracked vehicles, aircraft, or warships, the fuel unit is determined by the capacity of the tanks (systems, compartments) constituting their fuel system. For wheeled vehicles, the fuel unit must, as a rule, permit the vehicle to travel a certain distance (based on the official fuel-consumption rate). The fuel allowance for units, formations, and

major field forces is reckoned on the basis of all vehicles held, within the limits of authorized strength. (2) The process of filling the fuel tanks and receptacles with fuels and lubricants to the limit of their capacity.

581 ZARAZHENIYE PO SLEDU RADIOAKTIVNOGO OBLAKA (contamination in the wake of a radioactive cloud)—Contamination of the terrain, and the objects and people in it, by radioactive fallout from a cloud of a nuclear burst, along the path of the cloud's motion. The size and configuration of the region (the area of the zone) and the degree of its contamination depend on the yield and type of nuclear burst, on meteorological conditions accelerating or retarding the fallout of radioactive material (dust), on the distances from ground zero and from the axis of the wake, and also on the relief of the terrain and the time which has elapsed since the burst.

582 ZARAZHENIY UCHASTOK (UZ) (contaminated area)—An area of the terrain contaminated by toxic agents and radioactive substances or bacterial agents in liquid-droplet form for the purpose of hindering combat activities and causing injury to personnel. Radioactive areas differ in shape, size, and character.

583 ZARIN (Sarin)—A quick-acting nerve and paralyzant toxic agent. Sarin is a colorless liquid with a barely-perceptible odor. It acts when the air with which it is contaminated is inhaled, or when it penetrates the skin. The gas mask and protective clothing serve as protection against it.

584 ZASADA (ambush)—A type of combat operation used by troop subunits in reconnaissance for the purpose of capturing prisoners, documents, and samples of the enemy's weapons and combat materiel.

585 ZASTAVA (outpost)—(1) The means of guarding troops on the march (march security detachment) and in static deployment (guard outpost). (2) A subunit of border troops (company of border troops) guarding a specific sector of the state frontier.

586 ZASTOY OTRAVLYAYUSHCHIKH VESHCHESTV (stagnation of toxic agents)—The ability of the vapors of toxic agents, under favorable meteorological conditions, to persist for protracted periods in ravines, canyons, river bottomlands, forest massifs, trenches, etc., and still retain their harmful properties.

587 ZAKHVAT INITSIATIVY V OPERATSII (BOYU) (seizure of the initiative in an operation [or battle])—Achieving an advantageous position over the enemy, imposing one's will on him, and depriving him of freedom of action.

588 ZAKHVAT TSELI RADIOLOKATSIONNOY STANTSIIY (locking onto a target by a radar station)—The transition of a radar sta-

tion from searching to automatic tracking of the target according to range and angular coordinates.

589 ZASHCHITA VOYSK OT ORUZHIIYA MASSOVOGO PORAZHENIYA (protection of troops from weapons of mass destruction)—The complex of measures taken for the purpose of preventing injury to personnel and damage to combat materiel and equipment by the weapons and agents used in nuclear, chemical, and bacteriological warfare; preserving the combat capability of troops and the functional capability of the rear, and ensuring successful completion of the missions confronting them. The complex of such measures includes: warning the troops of radioactive, chemical, and bacterial contamination; conducting radiation, chemical, and bacteriological reconnaissance; dispersal, camouflaging of troops, use of the protective features of the terrain, and its engineer preparation; anti-chemical equipment for shelters; periodical change of areas in which troops are located; conducting sanitary-hygienic and special prophylactic measures; providing troops with protective equipment, and taking measures to protect personnel from injury by toxic agents, radioactive substances, and bacterial agents; clearing up the after-effects of the enemy's use of weapons of mass destruction.

590 ZASHCHITA, OBORONA I OKHRANA TYLA (protection, defense, and security of the rear area)—Measures directed toward preserving the functional capability of the rear area, and ensuring successful completion of the missions confronting it. Such measures include: protection from nuclear, chemical, and biological weapons; defense of rear area objectives against attack by air, land, and sea; direct safeguarding of rear area units and establishments: guarding of public works on communication routes, and covering transports on their itineraries; camouflage measures, and fire precautions.

591 ZASHCHITA OT PORAZHENIYA S VOZDUKHA (protection from air attack)—The complex of measures directed toward safeguarding troops and rear area objectives from enemy air action. Such measures supplement the air defense system, which is based on the coordinated efforts of active air defense facilities, and include: warning of danger from the air, dispersal of troops and rear area objectives, use of cover, and employment of camouflage against observation from the air.

592 ZASHCHITA OT RADIOPOMEKH (protection against radio jamming)—The complex of organizational and technical measures adopted to ensure uninterrupted operation of one's own radio-technical facilities in the event of intentional jamming caused by the enemy, or when there is random interference from various sources of electromagnetic oscillations.

593 ZASHCHITNYYE SVOYSTVA MESTNOSTI (protective features of the terrain)—Those features of the terrain which can reduce the effec-

tiveness of nuclear or conventional weapons. Protective features of the terrain are determined by the general character of the relief and by the presence of natural cover, for example: ravines, canyons, cliffs, steep slopes, caves, forest massifs, etc. Skilful use of the protective features of the terrain can reduce losses of personnel and combat materiel, can lessen the volume of engineering work needed to prepare the terrain for combat, and the time needed to perform such work.

594 ZVEZDNO-SOLNECHNYY ORIENTATOR (astro compass)—An astronomical instrument used in navigation for fixing the position of an airborne platform (or ship) according to heavenly bodies.

595 ZVUKOVAYA RAZVEDKA (sound [echo] ranging)—Detection of gun (or mortar) batteries and determination of their coordinates, number of guns (mortars) and their caliber, from their reports. Sound ranging is a part of artillery reconnaissance and is done with the aid of special sound-ranging observation posts.

596 ZVUKOMASKIROVKA (sound masking)—A component part of one of the forms of troop support, namely, camouflage. Sound masking is done within the overall complex of camouflage measures for the purpose of making it difficult for the enemy to detect troops and military objectives by the characteristic noises and sounds which they produce. Sound masking is accomplished by the troops' strict observance of established procedures for vital activities, namely, a procedure which excludes or minimizes noises and sounds, or drowns such noises and sounds by using special means, e.g., loud-speaker equipment, flying aircraft, helicopters, etc.

597 ZVUKOPODVODNAYA SVYAZ' (underwater acoustic communication)—A form of communication used in the navy between submarines which are submerged. It is also used for communication between such submarines and surface ships.

598 ZENITNAYA ARTILLERIYSKAYA GRUPPA (air defense artillery group)—Air defense artillery consisting of more than one unit, under a unified control, assigned to cover troops or important rear area objectives from attack by the air enemy.

599 ZENITNAYA ARTILLERIYSKAYA DIVIZIYA (air defense artillery division)—A tactical formation of air defense artillery, consisting of several air defense artillery units of one or different calibers, and support (servicing) subunits.

600 ZENITNAYA ARTILLERIYA (air defense [anti-aircraft] artillery)—A type of artillery intended for air defense. In exceptional cases, air defense artillery may be enlisted to engage the ground enemy, primarily his tanks, and in coastal regions, to engage enemy warships and transport vessels.

601 ZENITNOYE RAKETNOYE PRIKRYTIYE (air defense missile cover)—A type of cover for targets of national importance, troops, and ships, provided by air defense missile forces, against air attack.

602 ZENITNYE RAKETNYE VOYSKA (air defense missile troops)—One of the principal service branches in the composition of the national air defense forces. Their role is to destroy the air enemy with air defense guided missiles. Air defense missile troops consist of formations, units, and subunits.

603 ZENITNYE RAKETNYE SOYEDINENIYA (air defense missile formations)—Formations of air defense missile troops, consisting of several air defense missile divisions and other subunits.

604 ZENITNYE RAKETNYE CHASTI (air defense missile units)—Units armed with air defense missile complexes. Organizationally, they are part of the air defense troops of the ground forces and national air defense missile forces.

605 ZENITNYE UPRAVLYAYEMYE RAKETY (ZUR) (ground-to-air guided missiles)—A type of missile in the ground-to-air class, intended for anti-aircraft (or anti-missile) defense. The flight of a ground-to-air guided missile is controlled from the ground from the moment of launching until it approaches the zone of the target. The charge is detonated with the aid of a radio-detonator installed in the missile itself. Such a guided missile may be armed with a conventional or a nuclear charge.

606 ZOMAN (Soman)—A toxic agent with a neuroparalytic action. It is a colorless liquid with a faint odor of camphor, two to three times stronger than Sarin in toxicity, and achieves, to a considerably greater degree than Sarin, an effect through the skin by its vapors (resorptive action).

607 ZONA ADMINISTRATIVNAYA (foreign) (administrative zone)—The territory in the depth of a theater of operations, situated behind the zone of combat operations. The administrative zone contains the communication routes, and also the rear area facilities and establishment of the theater of operations.

608 ZONA BOYEVYKH DEYSTVIY (foreign) (combat operations zone)—The foremost part of the territory of operations, on which combat operations of ground forces take place or can take place. A zone of combat operations is occupied by field armies, and in their absence, by army corps. The depth of the zone depends on the numerical strength of the troops in it, the nature of the planned operations, requirements with regard to the material and technical support of the troops, the peculiarities of the terrain, and on the possible actions of the enemy.

609 ZONA BOYEVYKH DEYSTVIY AVIATSII (air combat opera-

tions zone)—A particular part of the air space of a theater of operations within the limits of which aviation is based and conducts combat operations. The size of the zone depends on the numerical strength of the aviation concentrated in the given region, and on the tactical-technical characteristics of the aircraft.

610 ZONA ZAGRAZH DENTY (obstacle zone)—A region (or zone) of the terrain in which various artificial obstacles are created for the purpose of retarding or halting the movement of the enemy, thus creating conditions for destroying him with nuclear weapons and other means. An obstacle zone consists of concentrations of obstacles covering routes, in a given sector, mine fields and other obstacles covering the roadless areas which are traversable by tanks.

611 ZONA MOLCHANIYA (MERTVAYA ZONA) (cone of silence [dead zone])—A waveband in which reception of no radio transmitting station whatever is detected, although normal reception takes place outside this waveband. It is observed when using wavelengths shorter than 70 meters, and is due to the propagation properties of short waves.

612 ZONA NABLYUDENIYA (observation zone)—The air space (when observing air targets) or areas of terrain (when observing ground targets) in which it is possible to observe and detect targets using the means available at the given observation post.

613 ZONA OBORONY (foreign) (defense zone)—The territory on which defensive operations are organized and conducted by major field forces (a field army, a group of armies). A defense zone may coincide with a zone of combat operations.

614 ZONA OGNYA ZENITNOY ARTILLERII (air defense artillery fire zone)—The air space within which a given grouping of air defense artillery can fire on an air target. This air space is a hemisphere with a radius equal to the maximum vertical range of the air defense guns of various calibers.

615 ZONA OZIHIDANIYA ((1) holding zone; (2) staging area)—(1) *air force*—The air space above a definite area of terrain, established by the decision of the aviation commander for a unit or formation for the length of time needed to withdraw the aircraft from an airfield under threat of enemy attack, the aircraft so withdrawn remaining in the air at the holding zone pending receipt of more precise instructions concerning a previously-assigned combat mission, or pending a call to action; (2) *navy*—a limited expanse of water in which warships (or forces or groups) may await orders, or the appointed time for carrying out orders already issued, or favorable conditions for fulfillment of a combat (or training) mission. A staging area is sometimes called a staging region.

616 ZONA PODAVLENIYA RADIOTEKHNICHESKIKH SREDSTV

(zone of suppression of radio-technical facilities)—The air space within the limits of which enemy radio-electronic equipment may be suppressed by a given transmitter with the required effectiveness. The size of the suppression zone depends on the power of the transmitter, background noise, conditions for the propagation of radio waves, the features of the radio equipment being suppressed, etc.

617 ZONA PORAZHENIYA ZENITNOY RAKETNOY CHASTI (impact zone of an air defense missile unit)—The air space in which hitting aerial targets is assured with the necessary degree of probability. The impact zone of an air defense missile unit is comprised of the impact zones of the launching subunits of a given unit, deployed to defend a given objective or region.

618 ZONA, PRIKRYVAYEMAYA RADIOPOMEKHAMI (zone covered by radio-jamming)—The air space in which targets are covered against observation by a given radar station, by a given jamming transmitter.

619 ZONA PROTIVOLODOCHNOY OBORONY (anti-submarine defense zone)—The water expanse, around a mobile objective at sea or at any part of the coast, in which anti-submarine defense forces engage in the search for, and destruction of, enemy submarines and fulfil their mission of protecting the given objective from underwater attack. An anti-submarine defense zone is usually divided into near and distant (sectors).

620 ZONA RADIOAKTIVNOGO ZARAZHENIYA (radioactive contamination zone)—An area contaminated by radioactive substances in the vicinity of a nuclear burst and in the wake of a radioactive cloud. The configuration and size of a radioactive contamination zone may differ according to the number, yield, and types of nuclear burst, the length of time which has elapsed since the bursts, the mutual position of the ground zero locations, weather conditions, and the relief of the terrain. The contamination density and radiation levels in a radioactive contamination zone may vary.

621 ZONA RADIOLOKATSIONNOGO NAVEDENIYA (radar-guidance zone)—The air space in which guidance of missiles or fighters to air targets with the aid of ground or airborne radar guidance stations is assured. The size of a radar-guidance zone depends on the number and disposition of radar-guidance stations, on their capabilities, and on the range of the radio-communication and fighter-control facilities.

622 ZONA RADIOLOKATSIONNOGO TSELEUKAZANIYA (radar target-indication zone)—The air space in which radar determination of the coordinates of air targets may be accomplished with a degree of accuracy sufficient for effective action by air defense missile units and air defense artillery.

623 ZONA SVOBODNOGO POISKA (aviatsionnaya) (zone of free search [aviation])—A region of enemy territory and the air space above it, designated by the air force commander for autonomous combat activities on the part of a group of aircraft or an aviation unit with a view to searching out and destroying important enemy ground and air objectives.

624 ZONA TAKTICHESKOGO RASSREDOTOCHENIYA SIL FLCTA (zone of tactical dispersal of naval forces)—A region in which ships, aircraft, missile launchers and artillery of any naval force whatever are dispersed in order to preclude their destruction by a single enemy nuclear burst. The size of such a zone depends on the expected yield (TNT equivalent) of the enemy nuclear weapon and the nature of its burst, on the character of the objectives, and on the degree of their dispersal and cover.

625 ZONAL'NAYA PVO (zonal air defense)—A method of accomplishing air defense, based on the defense of significant areas (zones) by a particular grouping of air defense troops. This grouping carries out its combat operations at the approaches to the zones (areas) in which the defended objectives are located.

626 ZONAL'NO-OB'YEKTOVAYA PVO (zonal-objective air defense)—A method of accomplishing air defense in which the men and equipment engaged in the conflict with the air enemy are located—and conduct their combat operations—both at the approaches to individual zones (or regions) and at the approaches to the most important objectives situated in the given zone (or region).

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627 IDEOLOGICHESKAYA OBRABOTKA (ideological indoctrination)—The political impact of the bourgeoisie on the consciousness of armed forces personnel and the population (especially young people) of imperialist states in the spirit of militarism and aggression, chauvinism and racism, in the spirit of hatred toward the Communist order (anti-communism) and toward the peoples of socialist countries, and war propaganda against world socialism. The character of the prevailing bourgeois ideology exerts a substantial effect on the psychology of soldiers and officers of imperialist armies, and on the formation of their feelings, moods, and habits. The armies of bourgeois countries are imbued with such psychological qualities as egoism, money-grubbing, aggressiveness, nationalism, and brutal harshness. Special agencies are created to carry out ideological indoctrination of personnel, and the press, radio, television, and religion are also used.

628 IZBYTOCHNOYE DAVLENIYE V UDARNOY VOLNE (overpressure in the shock wave)—The pressure above atmospheric, caused by the shock wave of an explosion. It is usually measured in kilograms per

square centimeter (kg/cm^2). The character of the change in overpressure with time depends on the power of the explosion, the type of explosion, the distance to the site of the explosion, and on the medium in which the explosion took place.

629 IZOLYATSIYA RAYONA BOYEVYKH DEYSTVIY (foreign) (isolation of the area of combat operations)—Measures taken for the purpose of denying reserve forces access to the area of combat operations and prohibiting transport of materiel into this area from elsewhere on the front, or from rear areas. Usually, such measures include: placing nuclear barriers; demolishing road intersections, bridges, defiles, and mountain passes; creating artificial obstacles in enemy rear areas; and also carrying out strikes on troops in areas of concentration, and when they are on the move.

630 IMITATSIYA ((1) simulation, deception; (2) imitation)—(1) A decoy grouping of troops or dummy objects, false movements and disposition of troops, dummy defensive works, etc., for the purpose of misleading the enemy about the true disposition or activities of friendly troops, and of drawing his fire against the dummy objectives. Simulation is carried out with the aid of mock-ups of materiel, dummy works, and also signs of vital activity of the troops being simulated (firing, radio conversations, etc.). Simulation is also done by demonstrative activities, misinformation, etc. Simulation on an operational scale is carried out only on the instructions of a higher echelon of military command. (2) Reproduction, with all possible accuracy, during exercises and maneuvers, of the outward effects of nuclear bursts, explosions of artillery shells, bursts of aerial bombs, launching of missiles, the artillery, tanks, small-arms fire, etc., using less costly and more available means, for example, blank rounds, explosives, combined charges of explosives, fuels, and smoke-making substances, etc.

631 IMMUNIZATSIYA (immunization)—An active, specific prophylaxis for infectious diseases. Immunization is one of the elements of the complex of hygienic-prophylactic measures taken to safeguard the health of troops. Immunization is done with various inoculating preparations (vaccines).

632 IMMUNITET (immunity)—Non-receptivity of the organism to infectious diseases.

633 IMPUL'SNOYE IZLUCHENIYE (pulse radiation)—Radiation of electro-magnetic energy by a radar station or other radio-technical apparatus in the form of pulses, namely, brief packets of radio waves with intervals between them usually having a duration considerably greater than the duration of each pulse. Pulse radiation is used in radar and radio-navigation for measuring distances, and in radio communications for time separation of channels in multi-channel transmissions.

634 IMPUL'SNYY RADIOMAYAK (radiolokatsionnyy mayak) (pulse radio beacon [radar beacon])—A receiving-transmitting station used for determining the position of aircraft and ships relative to the points where the pulse beacons are known to be situated, or for ensuring the precise arrival of aircraft or ships at the point where a pulse beacon is located. A pulse radio beacon is a radar transponder; it receives the pulses of radio waves sent by the aircraft (or ship) radar apparatus (a special interrogator), and emits responding pulses of radio waves which the radar apparatus (interrogator) receives. On the radar screen (interrogator), the distance and bearing of the pulse radio beacon are determined on the basis of the received pulse.

635 INDIVIDUAL'NYYE SREDSTVA ZASHCHITY (individual means of protection)—(1) means of protecting the respiratory organs and eyes against toxic agents, radioactive substances, and bacteriological agents (namely: gas masks); (2) means of protecting the skin (namely: protective clothing, e.g., protective capes, suits, special garments, and underwear).

636 INDIVIDUAL'NYYE SREDSTVA RADIOPOMEKH (individual means of radio jamming)—Means of jamming enemy electronic systems in order to protect an individual aircraft or warship. Individual means of radio interference include stations for jamming: (1) radar air defense missile-guidance stations; (2) fighter-interceptor stations; and (3) air defense artillery gun-laying stations. Other individual means of radio jamming are automatic devices for dropping chaff, and firing antiradar shells against the same radar stations.

637 INDIKATOR KRUGOVOGO OBZORA (plan position indicator)—An indicator on whose screen are observed targets located within the detection range of the radar station associated with the plan position indicator. The blips of the targets persist on the screen during one revolution of the radar station's antenna as a result of afterglow (residual luminescence of the screen). Looking at the screen, it is possible to read off the range and bearing of each target. The plan position indicator is used in many ground and airborne radar stations, for example, in air defense detection systems, and in radar bombsights.

638 INDIKATOR RADIOAKTIVNOSTI (radioactivity indicator)—An instrument intended to detect contamination of the terrain and to measure levels of radiation.

639 INDIKATSIYA OTRAVLYAYUSHCHIKH VESHCHESTV (indication of toxic agents)—Detection of toxic agents in the air, on the terrain, on objects, and on foodstuffs, and also identification of the toxic agent.

640 INERTSIAL'NAYA SISTEMA UPRAVLENIYA (inertial guidance system)—A guidance system for an airborne platform using as data the

measured values of the accelerations sustained by the platform. The sensitive elements used in an inertial guidance system are accelerometers and gyroscopic instruments.

641 INZHENERNAYA PODGOTOVKA VOYSK (troop engineer training)—Training servicemen, subunits, units, and formations of service branches and the Services to be capable of performing certain engineer functions independently, without the aid of engineer troops. Such functions include: implementation of the simplest measures for protecting against means of mass destruction, for adapting the terrain to combat, and for securing the advance of friendly combat formations.

642 INZHENERNAYA PODGOTOVKA ISKHODNOGO RAYONA (engineer preparation of an attack position)—The aggregate of engineer works done to prepare the terrain in the area occupied by troops prior to attack from a position in close contact with the enemy. Engineer preparation of attack position consists in providing trenches, communications trenches, and shelters for attacking subunits, positional areas for missile troops, firing positions for artillery and air defense weapons, assembly and firing positions for tanks, and areas for second echelons (reserves); preparation of airfields, control posts, various depots, and bases; preparation of routes for the advance and deployment of troops; implementation of camouflage measures.

643 INZHENERNAYA RAZVEDKA (engineer reconnaissance)—Obtaining and assembling information on defensive works, obstacles, and nature and degree of engineer preparation on the terrain at the disposal of the enemy; the state of the roads, bridges, river crossings, hydrotechnical works, passability of the terrain, and its protective and camouflaging qualities in the area of impending action; water sources; and the presence of local facilities and materials needed to support combat operations of the troops.

644 INZHENERNAYA TEKHNIKA (engineer equipment)—A component part of engineer armament, including machines, mechanisms, and assemblies used by troops when fulfilling engineer-support missions. Engineer equipment includes: road, river-crossing, bridge-building, earth-moving, lumber milling, electrotechnical, and load-lifting equipment; machines and mechanisms for engineer reconnaissance, mine removal, placing obstacles, and water supplies, etc.

645 INZHENERNO-AVIATIONNAYA SLUZHBA (IAS) (Aviation Engineering Service)—A special service intended to provide aviation engineering support for the combat operations and combat training of aviation units and formations of the air force

646 INZHENERNO-AVIATIONNOYE OBESPECHENIYE (aviation engineering support)—Organizing the operation of aviation equipment, and conducting its timely repair; planning the aviation-engineering ser-

vice; deploying repair units and technical facilities; carrying out engineering calculations, etc.

647 INZHENERNO-AERODROMNOYE OBESPECHENIYE AVI-ATSII (airfield-engineering aviation support)—A type of support for all kinds of aviation, consisting in the implementation of airfield-engineering measures for the purpose of creating, for the air force, conditions of constant combat readiness, successful performance of combat operations, dispersed and mobile basing, and also protection of aviation units and formations against weapons of mass destruction. Airfield-engineering aviation support includes: siting, planning, building, and restoring airfields; equipping them with artificial runways; mining and mine-clearing at airfields and other objectives of the aviation rear areas; providing cover for materiel and personnel at airfields and in dispersal zones; constructing cover and shelters for control posts; implementing camouflage measures, etc.

648 INZHENERNOYE IMUSHCHESTVO (authorized engineering equipment)—A component part of the facilities of engineering armament, including diverse equipment and means of implementing missions associated with engineering support (for example, reconnaissance, placing and negotiating obstacles, camouflage, field water supply, equipping positions, ferrying of troops, electrical supply, etc.); spare parts for engineering vehicles; entrenching and workshop tools; and materials which are issued to formations and units of service branches and engineer troops in accordance with allowance and equipment lists established by the Ministry of Defense.

649 INZHENERNOYE OBESPECHENIYE OPERATSII (BOYA) (engineer support of an operation [or battle])—A type of support for operational and combat activities of troops. It consists in implementing engineer measures for the purpose of creating favorable conditions on the terrain for rapid and covert deployment or concentration of troops, attaining high tempos of attack, and stability and aggressiveness in defense, protecting troops against weapons of mass destruction, and combating the enemy by using engineering techniques. Engineer support of an operation (or battle) includes: preparing routes for movement; equipping water-barrier crossings; placing and negotiating obstacles; equipping position areas of missile units, positions, areas for defense and for disposition of troops, airfields, points for basing warships, control posts; procuring and purifying water; using camouflage measures, etc.

650 INZHENERNOYE OBESPECHENIYE SIL VOYENNO-MORSKOGO FLOTA V OPERATSIYAKH (engineering support of naval forces during operations)—The assemblage of engineering measures adopted for the purpose of creating on the sea coast, with engineer facilities, the most favorable conditions under which naval forces may conduct active combat operations. Engineering support of naval forces during

operations includes: equipping the system of dispersal-basing points for warship formations; equipping naval aviation airfields and ensuring their rebasing in the course of an offensive operation; equipping positional areas for missile units, control posts and regions for storage of materiel stockpiles; preparing a road network to permit maneuver of coastal units and supply of naval forces; using camouflage; and clearing the aftereffects of enemy nuclear strikes.

651 INZHENERNOYE OBORUDOVANIYE MESTNOSTI (engineer preparation of terrain)—Engineering measures taken to fortify and adapt terrain for troop activities.

652 INZHENERNOYE OBORUDOVANIYE POZITSIONNYKH RAYONOV RAKETNYKH GRUPEY (engineer preparation of missile deployment sites)—Engineering measures in the deployment sites for missile units provide various works and maneuver routes and institute camouflage and other measures, thus supporting the conduct of combat operations by missile units, and ensuring their protection against nuclear and conventional weapons. Engineering organization of deployment areas for missile units includes: preparing launching, assembly, and technical positions, control posts, and roads for maneuvering and bringing up missiles and materiel within the area; checking for the presence of mines, and clearing mines from the roads and from the terrain as necessary; and implementing measures for water supply and camouflage.

653 INZHENERNOYE OBORUDOVANIYE POLOS OBORONY (engineer preparation of defense zones)—Engineering measures to fortify and adapt the terrain for defense. Engineer preparation of defense zones includes: preparation of various positions for troops, defense areas, strong points, firing lines, deployment lines, areas (or lines) for location of second echelons and reserves, deployment areas for missile troops, and artillery (or tank) firing positions; preparation of routes for maneuvers, supplies, and evacuation; implementation of camouflage measures; emplacement of engineer obstacles, and preparation of control posts.

654 INZHENERNOYE OBORUDOVANIYE PUNKTA BAZIROVANIYA KORABLEY (engineer preparation of porting facilities)—Engineering measures implemented to ensure that ships have a safe berth, to supply ships with weapons and all types of stores, to effect ship repairs, and also to accommodate and provide various services for their crews.

655 INZHENERNOYE OBORUDOVANIYE RAYONOV RASPOLOZHENIYA (engineer preparation of billeting areas)—Engineering measures, implemented by troops, to fortify and adapt an occupied area for covert billeting, for rapid departure to assigned sectors, and for protection against weapons of mass destruction. Engineering preparation of billeting areas includes: arranging cover for personnel and combat materiel along the main routes; developing the road network within the

filleting area; setting up structures for control posts and equipping water supply points; and camouflaging troops and combat materiel.

656 INZHENERNYYE BOYEPRIPASY (engineering munitions)—A component part of engineer armament, including mines for various purposes and of various types, explosives and the means of detonating them (detonators, fuzes, electrical firing units of all types, etc.), used for mine obstacles, explosive obstacles, destruction, and demolition work.

657 INZHENERNYYE VOYSKA (engineer troops)—Special troops that provide engineering support for combat operations of all the Services and service branches. Engineer troops perform the most complex tasks, requiring special training and the use of various engineering equipment. According to their role, engineer troops are subdivided into the general (combat engineer) and special categories (which includes: pontoon and bridge, assault crossing, highway, works service, camouflage, construction, and other units and subunits). According to their affiliation, engineer troops are subdivided into the organic category, in which case they are a component part of ground force formations and units, or into one of the following categories: army, front, Supreme High Command Reserve, Navy, Air, or one of the other Services of the Armed Forces.

658 INZHENERNYYE ZAGRAZHDENIYA (engineer obstacles)—Artificial obstructions of various types used in a battle or operation for the purpose of slowing down or stopping the movement of enemy troops, of opposing air or amphibious assault-force landings, and of inflicting losses on the enemy. According to their purpose, engineer obstacles are subdivided into anti-tank, anti-personnel, anti-transport, and anti-landing categories. According to the nature of their effects, engineering obstacles are subdivided into the mine-and-explosive category (mine fields, high explosive mines), and the non-explosive category (ditches, scarps, counter-scarps, post obstacles, hedgehogs, tetrahedra, etc.). Engineer obstacles must be covered by artillery, mortar, and machinegun fire.

659 INZHENERNYYE MEROPRIYATIYA PO OPERATIVNOY MASKIROVKE (engineer measures in operational camouflage)—Measures implemented by engineer and other troops in accordance with the overall plan for operational camouflage. These measures include: setting up of camouflage nets to conceal troops and military objectives of operational importance; construction of mock-ups of missiles, artillery, tanks, aircraft, and other items of armament or combat materiel; production of engineering works to show a dummy grouping of troops; creation of dummy operational objectives.

660 INZHENERNYYE PROTIVODESANTNYYE ZAGRAZHDENIYA (engineer anti-landing obstacles)—A variety of engineer obstacles. They are intended to break up and delay enemy amphibious landings as he is putting ashore. They are installed in the water and on the beach. Laid in the water are special anti-landing mines, ordinary anti-tank mines,

and non-explosive anti-tank obstacles (metallic and reinforced concrete post obstacles, hedgehogs, etc.). Laid on the beach are anti-tank mines, directional, splinter, and pressure type; anti-personnel mines, wire obstacles and stone fougasses.

661 INZHENERNYYE SOORUZHENIYA (engineer structures)—Structures built on the terrain as a part of engineer support for combat operations of troops. Engineer structures include fortified structures, bridges, roads, airfields, jetties, dummy objects, etc., built either by the troops themselves, or by engineering troops of the various Services.

662 INZHENERNYY REZERV (engineer reserve)—A unit at the disposal of the commanding general (or commander) of engineering forces and facilities, intended to replace engineering units which have been rendered ineffective, to reinforce the grouping of engineer troops in important sectors, and to perform engineering missions which arise unexpectedly in the course of an operation (or battle).

663 INITSIATIVA KOMANDIRA (NACHAL'NIKA) (initiative of a commander [commanding officer])—(1) A creative, informal solution by a subordinate commander (commanding officer) during an operation (or battle), which is part of a mission assigned to him, and the readiness to take a calculated risk in connection with such a solution. The initiative of a commanding officer (commander) consists in striving to find the best method of fulfilling the assigned mission, in utilizing favorable opportunities, and in taking the most expedient measures promptly, without awaiting orders from one's immediate superior. (2) The ability to impose one's will on the enemy in the course of an operation (or battle).

664 INSEKTITSIDY (insecticides)—Chemical substances used to kill insects.

665 INTEGRATOR (integrator)—An instrument for calculating velocities and coordinates, operating on the basis of measurement of accelerations, and integration of the acceleration with respect to time. The integrator is used in missiles to guide them in flight according to a previously-assigned flight program.

666 INTENDANTSKAYA SLUZHBA (quartermaster service)—A service providing troops with materiel, clothing, and provisions, and managing other services for personnel.

667 INTERVAL SERII BOMB (interval between bombs of a train)—The time (or linear) interval between the bursts of the bombs of one train, dropped on one target (objective).

668 INTERVALY MEZHDU PUSKAMI ZENITNYKH RAKET (intervals between launchings of air defense missiles)—The lapse of time between sequential launchings of missiles, during which time the missile guidance station must be able to lock onto the next missile and guide its flight.

669 INFORMATSIONNO-KHARAKTERISTICHIYĖ TABLITSY (tables of information and characteristics)—A form of presentation of data concerning the position, state, nature of activities, and numerical strength of units, formations, and strategic formations of the various Services and service branches, in a format convenient for loading into a computer memory and subsequent output in the form of information.

670 INFRAKRASNAYA TEKHNIKA (infrared equipment)—Equipment utilizing heat rays. Infrared (heat) rays (electromagnetic waves) have a wavelength of 0.78–400 microns (somewhat greater than the wavelength of visible light). Infrared equipment used for military purposes includes night-vision instruments and thermal direction-finders. Infrared night-vision instruments are used in darkness for reconnaissance, for aiming weapons, for ensuring productivity of engineering work, for driving motor vehicles, and for covert communication and recognition. Thermal direction-finders determine the bearing of heat-radiation sources (e.g., missiles, warships), and are used for reconnaissance, missile guidance, and navigation.

671 INFRAKRASNOYE NABLYUDENIYE (infrared observation)—Observation with infrared instruments. It may be done with ground, airborne or shipboard equipment, or equipment in spacecraft.

672 IONOSFERNAYA SLUZHBA (ionospheric service)—Regular observation of the state of the ionosphere with the aid of ionospheric stations, in order to meet the requirements of short-wave radio communication. Radio waves may be refracted, reflected, scattered, or absorbed in the ionosphere. Observed in the ionosphere are disturbances and magnetic storms associated with the sun's radiation. These change the state of ionization of atmospheric layers markedly, which leads to a considerable change in the conditions for the propagation of radio waves. These changes are taken into account when organizing radio communication and radio navigation.

673 IONOSFERNOYE ZONDIROVANIYE (ionospheric probing)—Investigation of the upper electrically-charged layers of the atmosphere (i.e., the ionosphere) by emitting radio waves and receiving the reflected waves from the ionosphere. Ionospheric probing is undertaken in order to study the earth's atmosphere, to verify the passage of radio waves of various wavebands at different times of the day and year, and to select the most advantageous working waves for radio-technical equipment.

674 IONOSFERNYY PROGNOZ (ionospheric forecasting)—Scientifically based prediction of the future state of the ionosphere and conditions for the passage of short waves. Ionospheric forecasting may be long-term (for a month, quarter, or year) or short-term (for a day, or a ten-day period). Ionospheric forecasting is sent out regularly to the troops, to permit selection of optimum frequencies, to ensure stability, and to achieve radio communication at great distances.

675 ISSLEDOVANIYE OPERATSII (operational research)—A scientific specialization closely associated with cybernetics, dealing with the expedient utilization of equipment and armament, optimal use of economic resources, and analysis of the combat operations of troops. Operational research is based on the use of mathematical methods.

676 ISTORIYA VOYENNOGO ISKUSSTVA (history of military art)—The branch of military science dealing with the forms and methods of armed conflict in various socio-economic formations. It includes problems concerning strategy, operational art, and tactics. It reveals the laws governing the development of armed conflict, and discloses the interrelation between economics, war materiel, and the policies of states. It generalizes the historical experience of wars, and determines the effect of this experience on the preparation for, and conduct of, hostilities under present-day conditions, taking into account the new techniques and organizational forms of the armed forces.

677 ISTORIYA VOYN (history of wars)—A scientific discipline which is virtually the basis of military history as a whole, and of all its branches. The history of wars describes and studies all wars and all events of the military past of mankind in their chronological order. The history of wars may be broken down into: the history of the wars of particular peoples and countries; the history of individual wars (e.g., the history of World War II), etc.

678 ISTOCHNIKI VOYENNOY INFORMATSII (sources of military information)—Staffs and other directing bodies, troop units and subunits, individual warships and aircraft, automatic transmitters, etc., presenting reports and other data.

679 ISTREBITEL'-BOMBARDIROVSHCHIK (fighter-bomber)—A front-line aircraft used against ground targets, and occasionally against air targets.

680 ISTREBITEL' PALUBNYY (deck-based fighter)—A fighter aircraft intended for combat use from aircraft carriers.

681 ISTREBITEL'NAYA AVIATSIYA (fighter aviation)—A branch of air force aviation. Fighter aviation is the most maneuverable means of engaging the air enemy. It is used to destroy enemy aviation in the air, primarily bombers, fighter-bombers, and cruise-missiles, as the most probable carriers of nuclear weapons and other means of mass destruction, and also to support the combat operations of other kinds of aviation. Under favorable conditions of the air situation, fighter aviation may also be used for action against ground (or maritime) enemy objectives, and for conducting air reconnaissance.

682 ISTREBITEL'NO-BOMBARDIROVOCHNAYA AVIATSIYA (fighter-bomber aviation)—A branch of frontal aviation, used to destroy

enemy nuclear facilities and other small and mobile targets in the tactical and near-operational depth of the enemy. Fighter-bombers support combat operations of ground troops, air-assault troops, and the navy, and also engage enemy assault forces. They may be used to engage enemy aviation and unmanned means of enemy air attack, and to conduct aerial reconnaissance.

683 ISTREBITEL'NO-PROTIVOTANKOVAYA ARTILLERIYA (anti-tank artillery)—Artillery intended for use against enemy tanks, self-propelled artillery mounts, and armored personnel carriers. Usually, they deliver direct fire from open firing positions.

684 ISTREBITEL' PEREKHVA'YCHIK (fighter-interceptor)—A specially-equipped fighter aircraft, possessing great horizontal and vertical speeds, great radius of action, a powerful missile and cannon armament, radio-technical flight equipment and an automated guidance system, permitting the detection, and engagement of, an air target beyond its range of visibility by day, by night, and under adverse weather conditions. A fighter-interceptor may be designated to destroy air targets over the entire range of altitudes—from low to medium to high—at subsonic or supersonic speeds.

685 ISKHODNAYA INFORMATSIYA (initial information)—The source data needed to define a problem for an electronic computer. Depending on the nature of the problem to be solved, initial information may be expressed either in the form of numbers, graphs, concepts and judgments, or in the form of signals from automatic sources of primary information.

686 ISKHODNAYA OBSTANOVKA (initial situation)—The position of the forces and facilities of the warring parties and the nature of their combat operations for a specific period of time prior to commencement of a training exercise. The initial situation is depicted on maps when developing instructional materials for conducting a lesson or training exercise in the tactical and operational training of commanding officers, troops, and staffs, and after it has been thoroughly evaluated, is intended to serve as a basis for decision-making by student personnel at the beginning of lessons or exercises.

687 ISKHODNOYE POLOZHENIYE (initial position)—The disposition of forces and facilities on the ground for going over to the attack. In the initial position, the troops are in a deployed grouping in accordance with the plan of the commanding general or the commander, for the forthcoming operation (or battle).

688 ISKHODNYYE DANNYYE DLYA STREL'BY (PUSKA RAKET) (initial firing [or missile launch] data)—The data or settings computed for missile-launching purposes, or to permit artillery firing (or adjustment of fire) on targets or reference points, respectively. Initial firing data are

calculated on the basis of the initial data characterizing the position of the target (objective) and the missile-launcher or gun (mortar) in space, as well as firing conditions that differ from those on which the firing tables are based.

689 ISKHODNYY RAYON (attack position)—An area of terrain allocated to troops for occupation by them prior to going over to the attack from a position of close contact with the enemy. An attack position is prepared in accordance with the concept of the operation (or battle) and the operational formation (or order of battle) of the attacking troops, and is organized in the engineering sense so as to conceal their presence, to facilitate their deployment and transition to the attack, and to protect them from all the weapons at the enemy's disposal.

690 ISKHODNYY RUBEZH (assault line; line of departure)—A prearranged line from which a unit or formation proceeds to fulfill a combat mission (a march, an attack, etc.). An assault line or line of departure is defined by clearly visible landmarks (on the terrain or on a map).

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691 KABRIOVANIYE (pitching)—A maneuver performed by an aircraft when releasing bombs, and accomplished in the vertical plane with a gain in altitude along a straight or curved trajectory. The pitching angle is measured between the longitudinal axis of the aircraft and the horizontal.

692 KALENDARNYY PLAN PODGOTOVKI OPERATSII (BOYA) (calendar plan for the preparation of an operation [battle])—A staff working document defining the time limits for completing the basic measures to be taken in preparing for an operation (battle), the order in which they are to be accomplished, and the officers responsible for their implementation. A calendar plan is worked out by the chief of staff, and approved by the commanding general (or by the commander). A calendar plan is formulated as a graph or table.

693 KAMPANIYA VOYENNAYA (historical) (military campaign)—The stage of a war, in the course of which an interim goal of the war was achieved. The complex of simultaneous and sequential strategic operations and other military activities, unified by the overall strategic concept of the Supreme High Command, and conducted on a strategic front or theater of operations.

694 KANAL SVYAZI (communication channel)—The aggregate of technical facilities permitting conduct of conversations, exchange of signals, and realization of telegraphic, photo-telegraphic, and television transmissions. In unilateral communication, when the transmission of signals takes place in one direction, a communication channel consists of a transmitter, a communication line, and a receiver. In bilateral communication, each of

the correspondents may transmit and receive signals. In this case, transmitting and receiving equipment is established at both ends of the line. Sometimes the term communication channel is understood to mean a band of the spectrum sufficient for establishing communication.

695 KANONERSKAYA LODKA (MORSKAYA I RECHNAYA) (gunboat [seagoing and river])—A surface warship with artillery armament, used to destroy enemy coastal objectives and to suppress enemy fire power. Having a relatively limited displacement, shallow draft, powerful artillery, and limited armor, a gunboat may conduct combat operations in coastal regions, predominantly in shallow water, and in areas which are restricted from the navigational viewpoint, i.e., in skerries, lakes, and rivers.

696 KAPITAL'NYY (ZAVODSKOY) REMONT (capital [plant] repair)—One of the types of maintenance for combat materiel, done both in a country's industrial plants and in theaters of operations, and consisting of repairing or replacing worn or damaged assemblies, sub-assemblies, and components, followed by adjusting and testing of the machine in running condition. Capital (plant) repair may be combined with the modernization of combat materiel, accessories and equipment.

697 KAPITULYATSIYA (surrender)—Cessation of hostilities and surrender of a defeated party to the enemy on the conditions dictated by the latter. Unconditional surrender means surrender of the defeated belligerent party without any conditions or reservations whatever.

698 KARAU'L'NAYA SLUZHBA (guard duty)—Special troop duty for the security and defense of military property, combat materiel, and other military objects, and also for the custody of personnel under detention. The organization of, and the procedure for performing, guard duty in the Soviet Armed Forces are laid down in the Regulation Governing Garrison and Guard Duty in the Armed Forces of the USSR.

699 KARTA LEDOVGY OBSTANOVKI (chart of ice conditions)—A sea, lake, or river chart with ice conditions marked in conventional symbols. A chart of ice conditions facilitates the compilation of ice forecasts, and is an indispensable document for organizing and planning combat operations in freezing regions of a maritime theater.

700 KARTA RADIATIONNOY OBSTANOVKI (map of radiation conditions)—A topographic map on which are represented: nuclear strikes (one's own and the enemy's), with an indication of yield, type, and time of burst; wind speed and direction at various heights, and meteorological data for the layer of air at ground level; the forecast zones of radioactive contamination for the time of the complete decay of the radioactive substances; and also the boundaries of the zones of radioactive contamination with the radiation levels established by reconnaissance at a particular time.

701 KARTA RADIOLOKATSIONNOY KONTRASTNOSTI MEST-NOSTI (map of the radar contrast of the terrain)—A topographic map on which the features that exhibit contrast as far as radar is concerned are singled out. The map is used in aviation to facilitate orientation on the basis of the image of the terrain on the screen of the aircraft's panoramic radar (or bombsight).

702 KATAPUL'TIROVANIYE (catapulting)—(1) Ejecting a member of the crew from an aircraft (or other airborne vehicle); (2) launching an aircraft from the deck of a ship by the assisted take-off method; (3) ejecting any object whatever with the aid of a catapult.

703 KATASTROFA (disaster; catastrophe)—A serious accident in a warship, combat vehicle, or aircraft, involving loss of life, and rendering the warship, combat vehicle, or aircraft unserviceable for an extended period or permanently.

704 KATER (cutter)—(1) A small warship of less than 100 tons displacement, but sometimes more, intended to fulfil combat missions. Depending on its armament, it may be a missile boat, torpedo boat, or minesweeping boat. A missile boat is armed with cruise missiles, air defense machine guns and submachine guns. It is used to destroy surface warships and transport vessels and other floating and coastal objects. A torpedo boat is used to make torpedo attacks on surface warships, transports, and other floating objects. A minesweeping boat is intended to sweep mines in shallow regions of the sea, or in the area of a base or port; it is of small displacement, has limited speed, and is equipped with boat-type sweeps. (2) A small self-propelled vessel displacing up to 40–50 tons. Such craft are subdivided into the ship (or vessel) category and the special-purpose category (sea, river, port, base, harbor, tug, etc.).

705 KVANTO-MEKHANICHESKIY GENERATOR (quantum-mechanical generator)—An instrument emitting electromagnetic waves which are close to one another in both frequency and phase. According to the range of the emitted waves, quantum-mechanical generators are subdivided into the optical and radio categories, called "lasers" and "masers," respectively. The optical category includes the visible and infrared parts of the spectrum. Quantum-mechanical generators are being developed in order to create improved systems of communication, location, and navigation, as well as for military purposes.

706 KIL'VATERNAYA KOLONNA (formation in trail)—A group of warships proceeding in a formation in which each following ship is in the wake of the preceding ship.

707 KLAS S KORABLEY (class of ships)—A homogeneous group of warships which meet certain special requirements with regard to their construction, sea-keeping qualities, and armament, and are therefore eligible for identical combat missions. A ship class is subdivided into sub-

classes according to displacement, armament, armor, speed, disposition of armament and mechanisms, and other characteristics. Sub-classes, in turn, are subdivided into types, which differ in constructional details and technical equipment, reflecting development of naval technology and a change in the methods of combat utilization of the given class of ships.

708 KLASSEFIKATSIYA KART (classification of maps)—Subdivision of maps by content, purpose, or scale. The entire diversity of cartographic depictions is subdivided into two basic types: geographical (or general-geographic) maps, and special maps. On general-geographic maps, all elements of the terrain are depicted, whereas on special maps, depiction of the terrain serves only as a background for exhibition of the special details which constitute the essence of their content. According to their scale, general-geographic maps are subdivided into topographic (1:1,000,000 and larger) and synoptic (of smaller scale than 1:1,000,000). Topographic maps of scales 1:10,000, 1:25,000 and 1:50,000 are called large-scale maps; those of 1:100,000 and 1:200,000 are called medium-scale maps; and those of 1:500,000 and 1:1,000,000 are called small-scale topographic, or synoptic-topographic, maps.

709 KLASSEFIKATSIYA KORABLEY (warship classification)—Assignment of warships to classes*, sub-classes, and types, according to their role or tactical use.

710 KLIRENS (PROSVET) (ground clearance)—The distance from the lowest points of a tank hull or motor vehicle assembly to the ground or horizontal road surface. The amount of ground clearance determines the performance of tanks and automobiles on roads with deep ruts, and on terrain with soft surfaces (snow, swamp, or deep mud), stumps and similar obstacles.

711 KOA'ITSIYA VOYENNAYA (VOYENNO-POLITICHESKAYA) (military coalition [military-political coalition])—A union, military alliance, of two or several states for the purpose of joint action against any other state or group of states. The term "military coalition" was used for the first time in 1792 to denote the alliance between Austria and Prussia against revolutionary France. There were military coalitions in the (last) two world wars. Under present-day conditions, when the fundamental and decisive contradiction in the development of society is manifested in the existence of two diametrically-opposed social systems, namely socialism and capitalism, two basic military-political coalitions have formed: the countries of the imperialist camp, united in a number of aggressive blocks, the main one of which is NATO, and the countries of the socialist camp,

[Editor's Note:

* Soviet and Western notions as to what constitutes a class of ship are at considerable variance. In the West, ships of a class are built to the same drawings and specifications, often by the same builder. In Western parlance, two such ships are "sister ships," and they are, at least in principle, identical twins.]

united in Europe by the Warsaw pact and in the East, by treaties of friendship and mutual aid.

712 KODIROVANIYE (encoding)—Replacement of the usual verbal text by a conventional notation, in the form of words, separate letters, numbers, symbols, and terms, for the transmission of secret information by technological means of communication. Coding is done with the aid of previously-prepared tables (codes).

713 KOZHNO-NARYVNYYE OTRAVLYAYUSHCHIYE VESH-CHESTVA (vesicants)—Toxic agents which attack the skin, eyes, respiratory organs, and digestive organs. They include yperite (mustard gas) and lewisite.

714 KOLLEKTIVNYYE SREDSTVA ZASHCHITY (collective means of protection)—Structures used to protect personnel against the lethal and injurious effects of nuclear bursts and radioactive substances, toxic and bacterial agents, as well as against incendiary and other conventional weapons.

715 KOLONNY PUT' (cross-country route)—A route for the movement of units and formations where there are no roads. A cross-country route is selected on the ground, and is prepared by engineering. The engineer work involved in such preparation includes: reconnaissance and elimination of obstacles; clearing or strengthening the part suitable for vehicles in difficult sectors; organizing drainage; making crossings over creeks; and eliminating other obstacles.

716 KOMANDIRSKAYA PODGOTOVKA (commander training)—A system of measures for operational, combat, Marxist-Leninist, and special training of officers, generals and marshals of the Armed Forces.

717 KOMANDNAYA SVYAZ' V PVO (command communication in air defense)—Communications organized between superior and subordinate commanders and staffs of air defense troops, permitting direction of subordinate troops by means of direct communications, transmission to them of combat orders, instructions, and commands, and also receipt of their reports.

718 KOMANDNAYA SISTEMA NAVEDENIYA RAKET (missile command guidance system)—A system of missile guidance in which the guidance apparatus is located both in ground installations and on board the missile. With the aid of the ground apparatus, control commands are prepared and then transmitted for execution on board the missile.

719 KOMANDNO-NABLYUDATEL'NIY PUNKT (KNP) (command-and-observation post)—A subunit control post from which the subunit receives direction in combat. A command-and-observation post is accommodated in an armored personnel carrier (or tank), and during combat operations it is a part of the combat formation of the subunit,

located in a place from where it may best observe the enemy, the operations of its own and neighboring subunits, and where it may exercise continuous control.

720 KOMANDNO-SHTABNOYE UCHENIYE (command-and-staff training exercise)—One of the main methods of training commanding officers and staffs. Command-and-staff training exercises are conducted for the purpose of improving coordination at the command level, and inculcating mastery of the theory and practice of the organization and conduct of various types of operations and combat activities under the complex conditions of the situation. Command-and-staff training exercises are conducted on maps and in the field. Each participant fulfils the functional responsibilities of the position occupied. Exercises in the field are usually conducted with communications facilities, but in individual cases, troop involvement is arranged. According to their scale, command-and-staff training exercises may be strategic, operational, or tactical; organizationally, they may be unilateral or bilateral, one-level, two-level, or three-level exercises.

721 KOMANDNYY PUNKT (KP) (command post)—The main post for the control of troops in units, formations, and major field forces, from which constant direction of the troops is accomplished, as well as various measures directed toward ensuring successful activities when fulfilling assigned missions. The site of a command post is decided by the commanding general (or commanding officer), and is usually at such a distance and in such a direction from the troops that convenient and continuous command and control of the troops in the operation (or during combat) will be assured. In particular cases, the site of a command post will be decided by the superior command. A command post must be mobile, and highly maneuverable, thus permitting command and control of the troops under conditions of rapid and abrupt changes in the situation. Command posts must be deployed covertly, and dispersed, taking account of all measures of support.

722 KOMANDOS (foreign) (commandos)—Special-purpose detachments of the armed forces of Great Britain, intended to conduct reconnaissance-sabotage activities in the enemy rear areas. In the armed forces of the USA such detachments (or subunits) are called "Rangers."

723 KOMBINIROVANNAYA PEREVOZKA VOYSK (combined troop movement)—A movement of troops by various modes of transport, with simultaneous use of all forms of transport or with sequential transfer of the troops being transported from one form of transport to another (by railroad, water, road, and air). The use of one or another method of conveying troops depends on the road network and that state of the transportation route system, specific conditions of the combat and operational situation during the period of conveyance, availability of transport, destination and number of troops, and the distance they are to be moved.

724 KOMBINIROVANNOYE MINNOYE ZAGRAZHDENIYE (composite mine obstacle)—A mine obstacle consisting of mines of various types.

725 KOMBINIROVANNOYE PORAZHENIYE (multiple damage)—Damage caused by the action of several effects of a nuclear burst.

726 KOMBINIROVANNYYE RADIOPOMEKHI (combined radio jamming)—Simultaneous and coordinated use of active and passive jamming of various types. The use of combined radio jamming leads to more efficient suppression of the operation of enemy radio-technical facilities.

727 KOMENDANTSKAYA SLUZHBA (commandant's service)—The aggregate of measures organized by staffs at all levels for the purpose of maintaining general order in areas where troops are disposed or deployed, and also regulation of traffic and monitoring the observance by troops of camouflage measures. The commandant's service is organized along troop routes, and in the vicinity of the disposition of troops and rear units and establishments, at the safe passages through mine-and-explosive barriers and contaminated areas, at water obstacle crossings, at points where troops are being embarked or disembarked, and under other conditions of the situation.

728 KOMITET NACHAL'NIKOV SHTABOV (foreign) (Joint Chiefs of Staff)—A consultative and executive body of the President and Secretary of Defense of the USA, consisting of a chairman and members, namely, the Chiefs of Staff of the services (Army, Air Force, and Navy), bearing responsibility for the overall control of the formation and strategic use of the armed forces, and also for the formulation of strategic war plans, overall planning of war production and utilization of strategic raw material in accordance with the general strategic line. During wartime, the Chiefs of Staff committee virtually heads the top leadership of the armed forces in a theater of operations. At the present time, Great Britain has such a committee.

729 KOMMUTATSIYA (v tekhnike svyazi) (commutation [in communications technology])—A system of connections for line radio, microwave, and wave communication channels, apparatuses and instruments accomplished at communications centers.

730 KOMPLEKSNAYA AVTOMATIZIROVANNAYA SISTEMA UPRAVLENIYA VOYSKAMI (complex automated system of troop command and control)—A complex of computers, communication facilities, mechanization and automation devices, and equipping of the places of duty at specific command and staff levels, the entire complex being intended to permit command and control of troops and naval forces. A complex automated system of troop command and control ensures observance of the following basic principles: the combination, within reasonable limits, of the creative mental work of command personnel with the

operation of diverse technological equipment; combination of automated and mechanized troop control with the control of combat facilities and weapons; the inclusion of all organs of troop command and control from top to bottom and in all Services; and inclusion of all basic work processes of commands and staffs with regard to command and control of troops.

731 KOMPLEKSNAYA SISTEMA SAMOLETOVOZHDENIYA I BOMBOMETANIYA (composite aircraft navigation and bombing system)—A system based on the use of ground and airborne radio technical facilities, intended for accurate determination of the aircraft's position in flight within the range of the system, precise approach to the target or destination point, and also for aimed bombing with an approach to the target from any direction in the absence of visual contact.

732 KOMPLEKSNOYE ISPOL'ZOVANIYE VSEKH VIDOV TRANSPORTA (combined use of all types of transport)—Coordinated organization and operation of all available forms of transport, with respect to both time and place, accomplished according to a unified plan, and under a single leadership, for the purpose of timely and uninterrupted fulfillment of the entire volume of consignments, and the most rational utilization of communication routes and transportation facilities.

733 KOMPLEKSNOYE PRIMENENIYE SREDSTV SVYAZI (multiple use of communication facilities)—One method of attaining reliability in communications, consisting in simultaneous or sequential use, in one direction, of several communication facilities (radio, microwave, wire, and mobile means).

734 KOMPLEKT TYLOVYKH CHASTEY I UCHREZHDENIY (authorized table of rear units and establishments)—The number of rear units and establishments for each type of support, authorized for peacetime and wartime, in major field forces, formations, and military units.

735 KOMPLEKTOVANIYE VOORUZHENNYKH SIL (manning of armed forces to prescribed strength)—Meeting the armed forces' requirements for personnel and materiel in accordance with the authorized tables for peacetime and wartime. Buildup of armed forces to prescribed strength of personnel is accomplished, in peacetime, by drafting citizens for active service when they become of eligible age, and in wartime, by mobilizing registered reserve personnel. In manning the armed forces to prescribed strength, a territorial system, and an extra-territorial, or mixed, system, are used. Making up short-falls in materiel is accomplished by centralized distribution and supply by the appropriate agencies of the Ministry of Defense, and in event of mobilization, by deliveries from the national economy as well.

736 KOMPONENT TOPLIVA RAKET (component of rocket fuel)—A component part of the fuel used in liquid-propellant rocket engines. The fuel consists of two components: propellant and oxidant.

737 KOMSOMOL'SKIYE ORGANIZATSII V SOVETSKOY ARMI I VOYENNO-MORSKOM FLOTE (Komsomol organizations in the Soviet Army and Navy)—Komsomol organizations, uniting members of the All-Union Leninist League of Communist Youth in units, installations, in military educational institutions, and in establishments; they are active helpers of the organizations of the Communist Party of the Soviet Union by putting into practice the policies of the Communist Party and the Armed Forces for strengthening their military power. The Komsomol organizations in the Soviet army and navy unite young servicemen around the Communist Party and teach them loyalty to Marxism-Leninism, valor, and heroism, selfless devotion to the socialist Motherland, and constant readiness to defend her. They motivate youth to master combat materiel and weaponry, and to successfully complete the tasks of combat and political training, as well as to observe without deviation the requirements of military discipline and the principles of the moral code of a builder of communism.

738 KONVOY (MORSKOY) (convoy [sea])—A group of merchant-type ships organized for joint passage by sea escorted by warships and aircraft. The number of merchant-type ships and the numerical strength of the escort force in a convoy may vary according to the nature and value of the cargo, the degree of threat of enemy attack, and other factors.

739 KONTAKTNOYE TRALENIYE (contact minesweeping)—Minesweeping with the use of towed and cutting sweeps, intended for sweeping anchored mines. Also used in contact minesweeping are net sweeps for picking up floating mines or mines at a given depth.

740 KONTAKTNY VZRYV (contact detonation)—An explosion set off when the fuze comes into contact with the surface of the earth (or water).

741 KONTAKTNY VZRYVATEL' (contact fuze)—A device (mechanism) for setting off a projectile or any other weapon containing an explosive charge (mine, torpedo, bomb, missile, etc.), either when it hits the target directly, or when the object to be demolished acts on the charge. A contact fuze may be a percussion fuze, a nose fuze, a bottom or side fuze, and may be in the mechanical, powder, or chemical category.

742 KONTRATAKA (counterattack)—An attack undertaken by defending troops against an attacking enemy for the purpose of putting him to rout (or destroying him) and achieving complete or partial restoration of the position lost by the defending troops. A counterattack is usually mounted by the second echelons and reserves of units and formations, and also by part of the forces of the first echelon from sectors not under attack.

743 KONTRMANEVR (countermaneuver)—A maneuver undertaken by troops for the purpose of counteracting an actual or expected maneuver by the enemy. The excellent maneuvering capability of contemporarily organized and equipped troops increases the importance of the active

countermancuver for disrupting enemy intentions and achieving success in operations. A most important condition for the success of a countermancuver is forestalling of the enemy, primarily in the use of nuclear weapons, in mancuvres with aviation and ground troops, and in dropping (or landing) airborne assault forces.

744 KONTRNASTUPLIENIYE (historical) (counteroffensive)—Transition from the defensive to a determined offensive for the purpose of putting to rout an attacking enemy who has been weakened in preceding battles and thus deprived of the capability of developing his attack further. A counteroffensive was prepared during defensive engagements when the defender, having exhausted the attacking enemy grouping by attrition to the maximum possible extent, was at the same time able to concentrate sufficient forces for a transition to determined offensive actions. Depending on the situation, a counteroffensive was mounted on a strategic or operational scale.

745 KONTROL' RADIOAKTIVNOGO OBLUCHENIYA LICHNOGO SOSTAVA (personnel radiation screening)—The aggregate of organizational and technical measures taken in military units for the purpose of assessing the degree to which personnel have been affected by radiation.

746 KONTROL' STEPENI ZARAZHENNOSTI RADIOAKTIVNYMI VESHCHESTVAMI LICHNOGO SOSTAVA, VOORUZHENIYA I BOYEVOY TEKHNIKI (monitoring radioactive contamination of personnel, armament, and combat materiel)—Measures taken in military units for the purpose of determining the need for sanitary processing of personnel and special treatment of armament and combat materiel.

747 KONTROL'NOYE TRALENIYE (verification minesweeping)—Minesweeping repeated for the purpose of verifying the results of previously-conducted minesweeping.

748 KONTROL'NO-IZMERTEL'NAYA MAGNITNAYA STANTSIYA (KIMS) (control-and-measurement magnetic station)—A stationary or mobile special station (or the aggregate of measuring instruments and mechanisms) intended to take readings of the magnetic field of a ship (or vessel).

749 KONTROL'NO-ISPYTATEL'NAYA PEREDVIZHNAYA STANTSIYA (KIPS) (mobile air defense testing and control station)—A set of simulating and measuring apparatus intended for complex and autonomous checking of air defense guided missiles, aircraft, etc.

750 KONTROL'NYY POLET (check flight)—A flight for the purpose of checking the air crew's piloting and navigational competence, the performance of the aircraft and its ancillary equipment, and their use for combat purposes. Under combat conditions, a check flight is a flight for the purpose of verifying fulfillment of a combat mission.

751 KONTRPODGOTOVKA (counterpreparation)—A pre-planned, brief, powerful, surprise burst of fire delivered by a defender against enemy groupings which are preparing for an offensive and, in particular, against enemy missile launching positions, radio-technical facilities, fuel and ammunition dumps.

752 KONTRUDAR (counterblow)—A blow inflicted by troops for the purpose of destroying an attacking enemy, restoring a lost position, and creating conditions for going over to the attack. A counterblow is the most important act of defensive engagement, expressing the active and mobile character of present-day defense. During a defensive engagement, several consecutive counterblows may be delivered in one or more sectors.

753 KONTSENTRATSIYA OTRAVLYAYUSHCHIKH VESH-CHESTV (toxic agent concentration)—The quantity of a toxic agent per unit volume of contaminated air. It is usually expressed in milligrams of toxic agent per liter of air (mg/l). A toxic agent concentration capable of producing casualties is called a combat concentration.

754 KOORDINATY TSELI (OB'YEKTA) (coordinates of a target [objective])—The numerical values (magnitudes) determining the position of a target (objective) on the horizontal plane (or in space) relative to the reference axis (or point) taken as the origin of the coordinate system.

755 KOORDINATY EPITSENTRA YADERNOGO VZRYVA (coordinates of ground zero of a nuclear burst)—The numerical values determining the position of the projection of the point of a nuclear burst on the horizontal plane relative to the reference point taken as the origin of the coordinate system.

756 KOORDINATSIYA VOYENNYKH USILII KOALITSII (coordination of the war efforts of a coalition)—The coordination of the efforts of the various states constituting a given military coalition for the purpose of mobilization and the most rational utilization of the common economic and human resources necessary for successful waging of a coalitional war.

757 KOORDINATSIYA DEYSTVIY (coordination of operations)—Coordination of the military (strategic, operational-tactical) efforts of major field forces (or formations) of the various Services for the most effective resolution of common strategic (or operational) missions of an operation in a theater of hostilities.

758 KORABEL'NAYA ARTILLERIYA (naval guns)—One of the types of armament fitted to surface warships and certain auxiliary vessels. According to its purpose, naval guns are subdivided into main armament, which fulfils the basic missions of the warship, and secondary armament, universal or high-angle. As regards caliber, naval guns are subdivided into large caliber (230–400 mm), medium-caliber (100–180 mm), and small-caliber (20–85 mm).

759 KORABEL'NAYA POISKOVO-UDARNAYA GRUPPA (KPUG) (ASW group)—An anti-submarine warfare group is used to search out and destroy enemy submarines. Such a group may include special anti-submarine vessels, and ships having an anti-submarine armament. A warship anti-submarine warfare group is capable of fulfilling the missions assigned to it independently, or in coordination with aviation anti-submarine warfare groups.

760 KORABEL'NAYA RAZVEDKA (shipboard reconnaissance)—A type of naval reconnaissance. It is conducted by submarines and surface ships.

761 KORABEL'NAYA UDARNAYA GRUPPA (KUG) (surface strike group)—A grouping, namely a combat force of warships, intended to fulfill a particular mission in a battle (delivering a blow). Such a grouping is created from ships of one type, or of different types armed with identical weapons, e.g., a torpedo strike group made up of torpedo boats and destroyers. Each surface strike group usually consists of several attack groups and special-purpose groups.

762 KORABEL'NYY POST UPRAVLENIYA I NAVEDENIYA ISTREBITEL'NOY AVIATSII (KPUNIA) (shipboard station for fighter control and direction)—A control room organized in a ship (or ships) for the purpose of directing fighters to a tactically advantageous position relative to the air enemy at a distance of radar or visual contact. The direction of fighter aviation is accomplished with the aid of automated systems, radar systems, and radio stations.

763 KORABLEVOZHDENIYE (navigation)—The applied science which studies and finds practical solutions to all problems associated with the safe sailing and maneuvering of a ship. Navigation includes a number of disciplines: navigation in the narrower sense of position-fixing, radio-navigation, pilotage, mariners' astronomy, the theory of compass deviation, tactical maneuvering, the technical means of navigation, hydrography, hydrometeorology, oceanography and the rules for sailing inland waterways. Navigation must also include the "Rules for the Prevention of Collisions of Ships at Sea."

764 KORABL' NA PODVODNYKH KRYL'YAKH (hydrofoil craft)—A ship having a mechanism in the underwater part of its hull to reduce considerably the water resistance associated with its motion. When under way, the underwater wings (planes), which are positioned at a certain angle to the horizontal, lift the greater part of the ship's hull above the surface of the water, greatly increasing the speed of the ship without increasing the amount of power developed by the propulsion machinery.

765 KORABL' PROTIVOVOZDUSHNOY OBORONY (air defense ship)—A combatant surface warship having as its main armament air defense systems (anti-aircraft guided missiles, high-angle artillery, guidance instruments, and radio-technical facilities for detecting targets and

controlling the flight of missiles). An air defense ship is intended to destroy air targets.

766 KORABL' PROTIVOLODOCHNOY OBORONY (anti-submarine warfare ship)—A warship used to detect and destroy enemy submarines. It has, in its armament, the means of destroying submarines (torpedoes, depth charges), and means of search (sonar, radio-technical facilities, etc.). In addition, it has air defense weapons and equipment, and possesses good maneuvering characteristics.

767 KORABL' RADIOLOKATSIONNOGO DOZORA (radar picket ship)—A warship equipped with radar stations, and intended for long-range detection of air and surface targets. Radar picket ships are used in convoys, and in the system of coastal anti-aircraft and anti-landing defense.

768 KORABL'-RAKETONOSETS (RAKETNYY KORABL') (missile ship)—A warship with launchers for ballistic (or cruise) missiles and for air defense guided missiles. It carries defensive weapons, and is very fast. A missile ship is used to destroy surface warships, transport vessels, and enemy coastal targets.

769 KORABL' SVYAZI (communications ship)—A warship especially equipped with communications facilities, and intended to ensure control on occasions of mobile (dispersed) basing of naval forces.

770 KORPUSNAYA ARTILLERIYSKAYA GRUPPA (KAG) (corps artillery group)—Artillery which is at the immediate disposal of the corps commander, which is so assigned for the duration of a battle in order to fulfil missions on behalf of the corps, and which is united under common control.

771 KORPUSNAYA ARTILLERIYA (corps artillery)—Artillery which is an organizational component of a corps, and which is subordinated directly to the corps commander.

772 KORPUSNOY RAYON BOYEVYKH DEYSTVIY (ISTREBITEL'NOY AVIATSII) (corps region of combat operations [of fighter aviation])—The air space and territory within whose limits a fighter corps (IAK) destroys air targets. In the case of frontal fighter aviation, one part of the corps region of combat operations is disposed above its own territory, whereas the other extends toward the enemy as far as the effective range of air target detection facilities. In the case of national air defense fighter aviation, a corps region of combat operations is designated only above its own territory.

773 KORPUS PVO (air defense corps)—An operational-tactical formation of national air defense forces. It may be a component of a strategic formation, or it may act independently. An air defense corps includes units and formations of air defense arms, as well as support units.

774 KORREKTIROVOCHNO-RAZVEDYVATEL'NAYA AVIAT-SIYA (spotting and reconnaissance aviation)—A component part of reconnaissance aviation, intended to conduct aerial reconnaissance and to adjust the fire of missile troops and artillery. The reconnaissance is accomplished by photography and by observation from fixed-wing and rotary-wing aircraft, with the aid of photographic, optical, television and radio-technical apparatus.

775 KOSVENNOYE PORAZHENIYE PRI VZRYVE (indirect effects associated with an explosion)—Injury to personnel and damage to materiel caused by debris from buildings and structures, by fragments of trees, by stones, and by fire. The indirect effects associated with a nuclear explosion will be considerably greater than in the case of conventional weapons.

776 KOSMICHESKAYA (VOZDUSHNO-KOSMICHESKAYA) DOKTRINA (foreign) (space [aerospace] doctrine)—A doctrine envisaging active hostilities in space, and regarding mastery of space as an important prerequisite for achieving victory in war.

777 KOSMICHESKAYA NAVIGATSIYA (space navigation)—The science of navigating space vehicles in interplanetary space.

778 KOSMICHESKIYE SREDSTVA BOR'BY (military space systems)—Systems used for military purposes in space, namely, to carry nuclear weapons, to conduct reconnaissance, to organize radio-countermeasures, to effect communication and control, and to destroy space vehicles. Military space systems will include various types of artificial earth satellites and space ships, such as missile-armed satellite bombers, manned space bombers, etc.

779 KOSMICHESKIY LETATEL'NYY APPARAT (spacecraft)—A flight vehicle intended for space flight. A spacecraft may be piloted by a person (by an astronaut) or it may be unmanned.

780 KOSMODROM (spaceport)—An area equipped with engineer structures for storage, assembly, preparation, testing, and launching of carrier-rockets for spacecraft (or devices), and control of their flight.

781 KOSMONAVT (astronaut; cosmonaut)—A person who has undergone special selection and a special training program for space flights.

782 KOCHUYUSHCHAYA RADIOLOKATSIONNAYA STANTSIYA (roving radar)—A radar station which changes position periodically. A roving radar is used for concealing the radar system of a strategic formation of national or front air defense forces from enemy radio-technical reconnaissance.

783 KOCHUYUSHCHIYE ORUDIYA (BATAREI) I TANKI (roving guns [or batteries] and tanks)—Guns (or batteries) and tanks attached to

defending troops to fire from various preselected firing positions for the purpose of misleading the enemy concerning the amount and location of artillery in the defense.

784 KOEFFITSIENT ISPOL'ZOVANIYA AVTOPARKA (utilization coefficient of a motor vehicle pool)—A statistical index defining the degree of actual and feasible utilization of the motor vehicles in a pool.

785 KOEFFITSIENT OPERATIVNOGO ISPOL'ZOVANIYA SIL (force operational utilization factor)—The ratio of the number of forces and facilities which may be used simultaneously in an operation during a planned period of time to the total number of forces and facilities.

786 KOEFFITSIENT OSLABLENIYA RADIOAKTIVNYKH IZLUCHENIY (radiation-hazard attenuation factor)—A coefficient indicating by what factor the radiation dose (or level) in a structure or vehicle is less than that on the terrain.

787 KOEFFITSIENT PODAVLENIYA RADIOPOMEKHAMI (radio-interference suppression factor)—The ratio of the minimum power of the interference to the power of the useful signal at the input to the radio-receiver, at which it becomes impossible to utilize the useful signal in the terminal device. The value of the radio-interference suppression factor differs for different types of radio-transmission.

788 KREYSER (cruiser)—A surface warship used to destroy enemy warships and merchant vessels at sea, to neutralize firepower and other targets on shore, and to protect and support friendly forces operating at sea. A cruiser has artillery armament of heavy and medium caliber, is protected by vertical and horizontal armor, and possesses great speed and cruising range. It may carry launchers for cruise missiles and ballistic missiles.

789 KREYSERSKAYA VOYNA (historical) (cruiser warfare)—A term which designated a method of using naval forces in hostilities at sea. It consisted in the operations of individual cruisers (or small groups of them) in particular regions of a maritime theater for the purpose of searching out and destroying enemy transports and warships. Cruiser warfare was used in past wars to disrupt enemy sea communications.

790 KREYSERSKAYA SKOROST' (cruising speed)—The most advantageous speed of a ship or aircraft that can be attained with the least expenditure of fuel, in environment ensuring full combat readiness of all facilities during the entire period of fulfillment of a combat mission. Cruising speed varies from 60% to 80% of full speed, depending on the type of ship or aircraft.

791 KRIZIS OPERATSII (BOYA) (operational [or battle] crisis)—A turning point in the course of an operation or battle.

792 KRITERIY EFFEKTIVNOSTI VOYENNYKH DEYSTVIY ILI ORUZHIIYA (criterion for the effectiveness of military operations or weapons)—A quantitative index permitting a judgement to be made concerning the appropriateness of a given operation to its goal, or concerning the suitability of a particular weapon for the fulfillment of particular military missions. Using the above-defined criterion, it is possible to compare different variants for the conduct of forthcoming combat operations, and to determine the optimum variant.

793 KRITICHESKAYA MASSA (critical mass)—The least quantity of fissionable material with which a self-developing nuclear-fission chain reaction is possible under given conditions. The value of the critical mass depends on the kind of fissionable material, its shape, density, and purity, on the presence, or otherwise, of a neutron reflector, and on the type of such a reflector.

794 KRITICHESKAYA SKOROST' (critical velocity)—The lowest velocity of the flight of an aircraft, at which, at any point whatever on its surface, the velocity of the air flow reaches the velocity of sound. Starting at this velocity, additional wave resistance and changes in the stability and controllability of the aircraft occur.

795 KRITICHESKOYE CHISLO M (M_{kr}) (critical Mach number [M_{cr}])—The ratio of the critical velocity to the velocity of sound at a given altitude.

796 KROSS UZLA SVYAZI (main distribution frame of a communications center)—An installation intended for switching, measuring, and distributing a power supply to circuits, conductors, and channels of line communications, radio and microwave communications. The main distribution frame of a communications center is equipped with line switching and measuring apparatus. The switch of a main distribution frame includes wire-communication lines, and connecting lines from a telegraph station, a long-distance telephone station, an electric-power-supply station, radio groups, and groups of microwave stations.

797 KRYLATAYA RAKETA (SAMOLET-SNARYAD) (cruise missile)—An unmanned airborne vehicle which has lifting planes (wings), and which is guided throughout its entire flight trajectory. As a rule, such a missile has a nuclear charge, a jet engine, and guidance instrumentation. It may be launched from the ground, from aircraft, from surface warships, or from submarines (on the surface).

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798 LAKRIMATORY (SLEZOTOCHIVYYE OV) (lacrimators [tear gases])—Irritants causing irritation of the mucous membranes of the eyes, and lacrimation. They were used as toxic agents in World War I. At the

present time they find application as simulated toxic agents for combat training purposes. In a number of capitalist countries they are used to control demonstrators ("police" gases).

799 LEGENDA (legend)—A brief explanatory note containing information which cannot be depicted graphically on a map or diagram. A legend may be given in the form of textural or graphic explanations clarifying the content of a map (diagram).

800 LEGKIY KREYSER (light cruiser)—A surface warship used to deliver strikes against warships and merchant vessels at sea, and coastal targets, and to cover or escort convoys, assault detachments, etc. A light cruiser is armed with missiles and low-angle artillery, and has a strong air defense armament. Some light cruisers also have a torpedo armament. A light cruiser is very fast (up to 40 knots) and has a large cruising range. It has light armor over the most vital parts of the ship.

801 LEDOVAYA ZASHCHITA (anti-ice protection)—Special measures, equipment, and adaptations for the protection of warships, merchant vessels, and man-made hydrotechnical structures from possible damage by ice. Anti-ice protection may consist of arrangements for strengthening the structural elements of a ship (an ice belt, adaptors for protecting rudders, propellers, Kingston valves, etc.), special works (ice-aprons, protective walls), or measures adopted to free vessels from ice, hinder its formation, etc.

802 LEDOVAYA OBSTANOVKA (ice condition)—The state of the ice cover on seas, lakes, and other expanses of water.

803 LEDOVAYA RAZVEDKA (ice reconnaissance)—Measures taken for the purpose of ascertaining the ice situation and the passability of the ice cover for ships, troops, and other combat materiel; establishing the extent of ice cover and the presence of open water in it; determining the possibility of using the ice for landing strips or airfields, river crossings, engineering obstacles, and for building stations or observation posts; and also for the purpose of detecting the enemy's roads and leads or channels in the ice.

804 LEDOVYY AERODROM (ice airfield)—An area of ice surface (of an ocean, sea, or lake) prepared for take-off, landing, parking, and servicing of aircraft. Depending on climatic conditions, ice airfields may be seasonal (winter) or year-round. The purpose of an ice airfield is determined by the thickness and strength of the ice, and by the size of the main runway. An ice airfield may be used by all types and branches of aviation for long-term basing, maneuver, and for staging.

805 LEDOKOL'NOYE OBESPECHENIYE OPERATSII (icebreaker support of an operation)—A type of special support for a maritime operation being conducted under ice conditions. It consists in warships and

merchant vessels being led by icebreakers, in forcing leads through the ice, and in maintaining these leads in constant readiness for the passage of ships and vessels.

806 LETATEL'NYYE APPARATY (airborne platforms)—Vehicles which are used in air and space. Airborne platforms include aerostatic and aerodynamic vehicles, ballistic rockets and missiles, and spacecraft.

807 LETNAYA PODGOTOVKA (flight training)—The principal form of combat training for air crew personnel. The organization and implementation of flight training ensures constant combat readiness of aviation units and formations, continuous improvement in the state of air crew training, and perfection of the combat qualities and tactics of the branches of the air force.

808 LETNO-TAKTICHESKIYE DANNYYE (aircraft tactical flight data)—The basic indices characterizing the combat qualities of aircraft (or helicopter) of a particular type. Such indices are: speed, range and duration of flight, altitude of flight (practical ceiling), rate of climb, length of take-off run, length of landing run, and handling qualities.

809 LETNO-TAKTICHESKOYE UCHENIYE (tactical flight training)—One of the forms of combat training of aviation units and formations, involving actual flights. The purpose of tactical flight training is to work out or investigate problems pertaining to tactics used by the different branches of aviation and the effectiveness of new weapons, special equipment, etc.

810 LETNYY RESURS (sortie rate)—The number of sorties of a strategic formation (formation, unit) which may be planned for (or assigned to) an operation or combat mission, expressed in army sorties, division sorties, regimental sorties, or individual aircraft sorties.

811 LETUCHKA (short exercise)—One of the forms of operational and tactical training for command cadres, namely, independent solution, by the officers under instruction, of an operational, tactical, or special problem in a limited time. Short exercises are subdivided into command, staff, rear services, and special categories, and deal with specific issues of operational art and tactics. Not more than one or two academic questions are worked out during a single exercise. For short exercises in the command-operational category, student officers usually make decisions on behalf of the officer commanding the troops of a front (or army), whereas during tactical exercises they do so on behalf of the commander of a formation (or unit). For short exercises in the staff category, methods of formulating operational and tactical calculations and particular combat documents are perfected. For short exercises in the rear services category, generals and other officers of the rear services make decisions concerning the rear services support of an operation (or battle). For short exercises in the special category, generals and other officers of different service

branches become more proficient in employing their own particular branch in an operation or battle.

812. LIKVIDATSIYA POSLEDSTVIY PRIMENENIYA PROTIVNIKOM ORUZHIYA MASSOVOGO PORAZHENIYA (eliminating the effects of enemy use of weapons of mass destruction [decontamination])—The aggregate of measures taken to clear up the effects of enemy use of nuclear, biological, and chemical warfare. This is done to restore, in a short period, the disrupted combat efficiency of friendly troops, and to create conditions permitting successful completion of the missions assigned to them.

813. LIMIT RASKHODA (limit of expenditure)—The norms for the expenditure of materiel of all kinds, established for a definite period of time, for an operation, or for a battle, in accounting-and-supply units, or expressed as a weight.

814. LINEYNOYE PROGRAMMIROVANIYE (linear programming)—A mathematical method used in operational research. It permits the finding of the most advantageous (optimum) solution to a number of operational, tactical, and other problems.

815. LINEYNYE KORABLI (ships of the line)—The largest of naval ships having heavy-caliber guns as their main armament, but which have lost their former importance due to the advent of nuclear weapons, and the ascendancy of aviation and the submarine.

816. LINIYA DOZORA (picket line)—A line of patrol vessels or aircraft, or coastal observation posts doing picket duty.

817. LOVUSHKA (decoy for homing weapons [radar, sonar, thermal, and optical categories])—A device used to mislead (attract) homing missiles and projectile guidance stations. It is used to reduce the probability of damage to one's own missiles, aircraft, and warships.

818. LOZHNYE NAVIGATSIONNYE ORIENTIRY (dummy navigational aids)—Navigational aids specially placed so as to mislead the enemy. The dummies used are exact replicas of real navigational aids, but they are put in the wrong places in order to conceal safe channels through mine fields, and entrances to bays, bases, roadsteads, etc.

819. LOZHNYE SOORUZHENIYE (POZITSII) (dummy structures [positions])—Structures intended to simulate troop targets where in fact there are none. They divert enemy fire and nuclear strikes from real targets. Dummy structures used by troops include dummy fire trenches, communications trenches, dugouts, structures and mock-ups of equipment, bridges, roads, shelters for combat materiel, etc.

820. LOZHNYE AERODROM (dummy airfield)—An area of terrain simulating an aviation base. When a dummy airfield is being equipped

from the engineering viewpoint, an unpaved runway is prepared, which permits take-off and landing of single aircraft, simulating the basing of an aviation unit or subunit on the dummy airfield. A dummy airfield is furnished with dummy aircraft and special vehicles, and dummy airfield works are built on it.

821 LOZHNY PERENOS OGNYA (dummy shift of fire)—A shift of fire done for the purpose of misleading the enemy.

822 LOZHNY RADILOKATIONNY OB"YEKT (dummy radar target)—A dummy target which creates blips similar to those produced by real objects (bridges, inhabited points, warships) on the screens of radar stations. Dummy radar targets are created with the aid of corner reflectors, or low-power active emitters, disposed on land or on a water surface.

823 LOZHNY RAYON OBORONY (dummy defense region)—An area of terrain partially equipped with dummy defensive structures, but not occupied by troops.

824 LOZHNY RAYON SOSREDOCHENIYA (dummy concentration area)—An area in which a build-up of troops is simulated. A dummy concentration area must resemble an occupied concentration area by exhibiting several outward signs of occupation by troops. A dummy concentration area is created for the purpose of misleading the enemy and diverting his strikes from carefully camouflaged areas that are really occupied by troops.

825 LOKAL'NAYA VOYNA (local war)—A local, small war unleashed by the ruling circles of imperialist states for the purpose of suppressing a national-liberation movement, enslaving the peoples of small countries, or restoring the capitalist system in any socialist country. A local war is usually waged with limited forces and in a limited area. Under present-day conditions, any local war may develop into a universal, nuclear missile war.

826 LUCHEVAYA BOLEZN' (radiation sickness)—A specific illness caused by the harmful biological effects of ionizing radiations. The principal symptoms of radiation sickness are: above-normal temperature, nausea and gastro-intestinal disorders, lethargy, lack of appetite, bleeding of the skin and mucous membranes, and loss of hair. The latent (incubation) period lasts from several hours to several weeks. Depending on the radiation dose received, radiation sickness may be of the first, second, or third degree.

827 LYUDSKIYE REZERVY STRANY (national human resources)—All able-bodied citizens of the country who can be used in the armed forces, civil defense, industry, agriculture, or transportation during a war for the purpose of achieving victory over the enemy.

828 MAGNITOMETRICHESKAYA RAZVEDKA (magnetometric reconnaissance)—Detection and identification of objects which are camouflaged or concealed underground (or under water), using special (magnetometric) instruments, by determining differences between the magnetic properties of the objects sought and the surrounding medium.

829 MAKET MESTNOSTI (terrain model)—A small-scale relief model of a sector or area of terrain containing all the terrain features that are depicted on a topographic map. In military practice, terrain models with the combat situation represented on them are widely used when organizing combat operations in order to work out problems of troop coordination.

830 MAKSIMAL'NAYA SKOROST' POLETA (maximum flying speed)—The speed attained by an aircraft in straight and level flight, using the maximum thrust (or power) of its engine.

831 MALAYA AVTOMATIZATSIYA I MEKHAIZATSIYA (semi-automation and mechanization)—Facilitating or eliminating the manual work of military administrative personnel by the use of various technical facilities, e.g., key-responsive adding machines, punched-card or punched-tape machines, duplicating equipment, special slide rules, nomograms, stamps, sound-recording apparatus, and other devices and instruments.

832 MANEVR (maneuver)—A transfer of troops or naval forces, or a redirection of weapons (redistribution of material and technical facilities), for the purpose of gaining an advantage over the enemy under conditions for conducting military operations. As a result of a maneuver, a favorable grouping of men and equipment is created in a given sector or theater of operations. According to its scale, a maneuver may be strategic, operational, or tactical.

833 MANEVR V RAYONE TSELI (maneuver in the vicinity of the target)—The organized maneuver of a group of aircraft (or an individual aircraft) in the air with respect to direction, speed, and/or altitude that would create more advantageous conditions for the approach to the target, for precision bombing of it, and for getting through enemy air defense systems.

834 MANEVR MATERIAL'NYMI SREDSTVAMI (logistics operation)—Conveyance (or transmission) of materiel from one sector of operations to another. A maneuver with materiel may be effected either along the front, or from depth.

835 MANEVR OGNEM (maneuver with fire[power])—Redirection of weapons for the simultaneous or consecutive massing (concentration) of their firepower against important enemy groupings and objectives, or dis-

tribution of firepower for the simultaneous destruction of several groupings (or objectives).

836 MANEVR CHASTOTAMI (maneuver with radio frequencies)—The periodic change of working frequencies of one station or of a group of stations for the purpose of disorienting enemy radio reconnaissance, avoiding interference, or obtaining better transmission. When changing frequency, the station's call sign must also be changed.

837 MANEVRENNAYA BAZA (maneuvering base)—A naval base created previously, or in the course of hostilities, and used for maneuvering and concentration of a given strike grouping of naval forces in the appropriate operational sector. A maneuvering base may be permanent or temporary.

838 MANEVRENNAYA VOYNA (maneuver warfare)—A war in which armed conflict is conducted with extensive maneuvering by forces and weapons in space, in the air, on land, and at sea, and in which stable fronts are lacking for protracted periods.

839 MANEVRENNYYE ELEMENTY KORABLYA (handling characteristics of a naval vessel)—Indices characterizing vessel mobility. In the case of a surface ship, they include: speed, range, inertia, and turning radius. In the case of a submarine, the following also apply: how quickly it can effect the transition from surface movement to submerged movement, and *vice versa*; how quickly it can dive deeply and surface from depth; and its maximum permissible depth. The handling characteristics of a naval vessel affect its maneuverability.

840 MANEVRENNYY METOD ISPOL'ZOVANIYA PODVODNYKH LODOK (the "maneuver" method of utilizing submarines)—Under present-day conditions, the most active and expedient method of utilizing submarines consists in an organized move, at sea, of a grouping (or group) of submarines and single submarines, for the purpose of searching out the enemy and bringing their armament to bear on him; or, alternatively, for the purpose of massing submarines in a chosen sector (or region) to deliver a strike against a given enemy objective (formation, convoy).

841 MARSH (march)—An organized movement of troops in column by road and/or cross-country route for the purpose of arriving at a designated region. A march may be made to the front, from the front to the rear, or along the front. The distance covered in a day will depend on the degree of troop effort and the degree to which motor transport is used. The goal of forthcoming combat operations, and the probability of an encounter with the enemy enroute are considered when setting up a marching formation.

842 MARSHEVAYA SKOROST' (rate of march)—The average speed of advance of troops participating in a march. It is expressed in kilometers travelled per hour or per 24-hour day. The rate of march depends on the

technical state of transport facilities, time of day and year, preparedness of the motor transport operating personnel, physical fitness of the troops, state of the roads and the weather, as well as on the radiological and chemical situation in the terrain through which the march is made.

843 MARSHRUTNAYA AEROS'YEMKA (aerial photography of the march route)—Aerial photography of a strip of terrain, resulting in several aerial photographs when done during one pass by an aircraft or other airborne platform. If twin-fanned, triple-fanned or panoramic aerial cameras are used, then a single pass can produce not one, but two, three, or four series of overlapping aerial photographs. Accordingly, simple, duplex, triplex, and quadruplex aerial photography of a route of march are possible. The photographs may be vertical or oblique.

844 MARSHRUTNAYA KARTA (route map)—A topographic map with the itinerary and calculations covering the rate of advance of the troops marked on it.

845 MASKA-POMEKHA (interference-type anti-radar screen)—An anti-radar screen intended to conceal troops and military equipment from observation by ground and airborne radar. An interference-type anti-radar screen is composed of corner reflectors, which produce flickering luminous blips on the enemy radar screen. Troops disposed near such an anti-radar screen, or passing by it, do not change the blips produced by the screen itself, and remain undetected. An interference-type anti-radar screen may be a linear (roadside) or area type.

846 MASKA-EKRAN (anti-radar screen)—An anti-radar screen intended to conceal troop movements and the disposition of military equipment from ground-level radar or visual observation by the enemy, and also from photography and observation with the aid of night-vision instruments. An anti-radar screen is improvised from local materials (felled trees, brushwood and rush mats, etc.), metallic nets, and other materials. An anti-radar screen is placed between the object to be concealed and the enemy radar, thus absorbing or scattering its electromagnetic energy.

847 MASKIROVKA (camouflage)—A form of support for combat operations, its purpose being to conceal the activities and disposition of friendly troops, and to mislead the enemy with regard to the grouping and intentions of such troops. Camouflage measures are also implemented in the deep rear, within the framework of civil defense.

848 MASKIROVOCHNAYA YEMKOST' (camouflage capacity)—The extent of the various natural screens (expressed in hectares or square kilometers) which is to be found in a particular area of the terrain. Knowledge of camouflage capacity permits evaluation of the area to be occupied from the screening viewpoint by comparing this index with the natural-cover requirements of a subunit, unit, or formation.

849 MASKIROVOCHNYYE SREDSTVA (camouflaging facilities)—Authorized unit camouflaging equipment, expendable camouflage materiel, and locally available materials used by troops to implement camouflaging techniques. Camouflaging facilities include: sets of screens for combat materiel and motor transport, capes, suits, nets, covers, and various fabrics, paints, tools and devices, for doing camouflage work, and also locally-available material, i.e., brushwood, twigs, grass, etc.

850 MASKIRUYUSHCHIYE SVOYSTVA MESTNOSTI (camouflaging features of the terrain)—Features of the terrain characterizing the ability of its relief and local objects to conceal troops and military equipment from enemy ground, air, and radar observation. In the event of there being sufficient good natural concealment on the terrain, troops and military equipment may be concealed completely without artificial camouflage.

851 MASSIROVANIYE SIL I SREDSTV (massing of forces and weapons)—The concentration of strikes by all weapons and the main efforts of the troops (or forces) in a chosen sector (or areas) in accordance with a situation that has developed.

852 MASSIROVANNYYE UDARY AVIATSII (massed air strikes)—Simultaneous actions of the main forces of a strategic air formation against one or several groups of objectives, disposed in a very extensive area. Decisive damage may be inflicted upon the enemy in a short period of time by such massed strikes.

853 MASSIROVANNYY OGOŃ ARTILLERII (massed artillery fire)—Fire from all, or the greater part of, the artillery of a combined-arms formation, delivered simultaneously against the most important enemy grouping or objective for the purpose of inflicting considerable damage upon the enemy in the shortest possible time.

854 MASSIROVANNYY YADERNYY UDAR (massed nuclear strike)—A strike made by a large number of nuclear munitions, delivered simultaneously or in quick succession. The purpose of a massed nuclear strike is to annihilate enemy means of nuclear attack that have been spotted, to inflict damage on the main enemy troop groupings, and to disorganize the enemy rear areas, his economy, troop control, and state administration.

855 MATERIAL'NOYE OBESPECHENIYE (materiel support)—A system of measure, adopted to satisfy the needs of the armed forces for all types of supplies for daily use and for combat activity.

856 MATERIAL'NYYE POTREBNOSTI VOORUZHENNYKH SIL (materiel requirements of the armed forces)—The requirements of all Services for combat, transport, and auxiliary materiel, control and communication facilities, ammunition, fuel, means of protection against

weapons of mass destruction; and in reserve units, provisions, etc. In peacetime, the materiel requirements of the armed forces are made up of the requirement for training purposes, activation of new units, creation of reserves for wartime purposes, and for current issues of food and clothing to the troops. In wartime, the materiel requirements of the armed forces are made up of the requirement to activate new units in the course of the war, to replace combat losses, to cover expenditures associated with the conduct of combat activities, and to meet the current requirements of troops (and naval and air force personnel) for food and clothing.

857 MATERIAL'NYE SREDSTVA (supplies)—Supplies needed by the armed forces for daily use and for their combat activity. They include missiles and missile fuel, munitions of all types, armament, diverse technical assemblies, provisions, clothing, and engineering, medical, and other stores.

858 MEZHKONTINENTAL'NYE SREDSTVA VOORUZHENNOY BOR'BY (intercontinental weapons)—Weapons intended for delivering strikes from a given continent against enemy objectives located on other continents. Such means include intercontinental and global missiles, missile-carrying submarines, and long-range (strategic) missile-carrying aviation.

859 MEZHKONTINENTAL'NYI TEATR VOYENNYKH DEYSTVIY (intercontinental theater of military operations)—The territory embracing the parts of two continents which confront one another, and the oceans (or seas) located between them.

860 MESTNYE RADIOPOMEKHI (local radio interference)—Interference with radio-technical facilities due to nearby sources of electromagnetic radiations (electric-welding and X-ray equipment, power stations and substations, electric motors, the ignition systems of internal-combustion engines, various radio-technical facilities, etc.).

861 MESTNYE SREDSTVA (local resources)—Raw materials, industrial and power generation capacity, provisions, forage, fuel, communication and transport facilities, and other material assets which troops (or other armed forces) find in their immediate vicinity, and which may be used to satisfy their needs. Local resources also include industrial, transportation, and therapeutic establishments which may be utilized for the benefit of friendly troops.

862 METEORNAYA RADIOSVYAZ' (meteoric radio communication)—Communication on ultra-short waves, which makes use of the forward scatter of metric waves due to their reflection from meteoric trails which occur when meteoric bodies enter the atmosphere. In contrast to ordinary communication systems, meteoric systems use the principle of intermittent (discrete) transmission of messages. Messages are transmitted rapidly, only when useful meteoric trails exist on the path of radio waves. In their

absence, the equipment operates on a "stand-by" system, continuing to process received information (messages). This method of transmission is affected by the intermittent nature of the meteoric ionization of the atmosphere. Meteoric radio communication may be used on links with a large message volume, where some delay in transmission of messages is not of importance.

863 METEOROLOGICHESKIYE USLOVIYA (meteorological conditions)—The state of the atmosphere at a particular moment or during a period of time in a particular region, conditioned by the processes taking place in it. Meteorological conditions are characterized by temperature, pressure, and humidity of the air; wind speed and direction in the ground layer, and at altitudes; air transparency (i.e., visibility); solar radiation; and thermal radiation of the earth and the atmosphere. Meteorological conditions are also characterized by thunderstorms, storms, snowstorms, and other atmospheric phenomena. Meteorological reconnaissance (weather reconnaissance) is conducted in order to ascertain and forecast meteorological conditions.

864 METODIKA BOYEVOY PODGOTOVKI (combat training methodology)—The ways and means of training troops. Combat training methodology may be general when it deals with training methods applicable to all disciplines, or particular, when it deals with individual disciplines (e.g., the methodology of tactical training or weapons training).

865 METODIKA OPERATIVNOY PODGOTOVKI (operational training methodology)—Ways and means of training generals, admirals, other senior officers, and the staffs of major field forces of the Services, in problems of operational art.

866 METODICHESKIY OGOV' (deliberate fire)—Fire conducted with a constant time interval between rounds. The purpose of deliberate fire is to hold the target in a suppressed state between fire onslaughts, or to maintain the necessary smoke concentration after fire onslaughts when firing smoke projectiles. Deliberate fire may also be conducted independently for the purpose of exhausting the enemy.

867 METODOLOGIYA SOVETSKOY VOYENNOY NAUKI (the methodology of Soviet military science)—The methodology of Soviet military science is dialectic and historical materialism. A profound knowledge of Marxist-Leninist philosophy and its skilful application to military research emerge as important conditions for the rigorous, scientific nature of Soviet military theory. Not only does Marxist-Leninist methodology not exclude special methods of research into specific questions pertaining to preparation for, and conduct of, war but it also proposes such methods. The methodology of bourgeois military science is based on idealism and metaphysics, which accounts for its limitations and inconsistency.

868 METODY ISPOL'ZOVANIYA PODVOJNYKH LODOK (techniques of employing submarines)—Pre-planned techniques considered as the most expedient ones for employing a given grouping of submarines in a specific operational situation, permitting assigned missions to be completed most successfully within the time limits imposed. There are two basic techniques of employing submarines, namely: the "maneuver" technique and the "positional" technique.

869 MEKHAUZATSIIYA INZHENERNYKH RABOT (mechanization of engineering work)—The execution of engineering work with the aid of engineering vehicles (and machinery), thus reducing the number of men engaged in this work, and shortening the time needed for its completion. Mechanization of engineering work is accomplished by troops themselves, with the aid of bulldozer attachments and other equipment, and also by engineering troops, who use special vehicles for various purposes.

870 MEKHAUZATSIIYA POGRUZOCHNO-RAZGRUZOCHNYKH RABOT (mechanization of loading and unloading operations)—Performing loading and unloading work at depots and bases, and reloading materiel from one conveyance to another, with the aid of power equipment especially designed for this purpose.

871 MILITARIZM (militarism)—A reactionary policy involving an intensified arms race and preparation for war for predatory purposes, a feature of capitalist states that enjoyed a great upsurge during the period of imperialism. Militarism implies subordination of the national economy, politics, and social life of the country to the goal of preparing for predatory wars, and entails an inordinate rise in taxes and the military budget in capitalist states. Characteristic of militarism is the supremacy of a reactionary military clique, or in any case, a rise in its influence on the entire policy of the ruling classes. The roots of contemporary militarism are in monopolistic capitalism and in its policy of anti-communism. After World War II, the USA became the center of militarism. The growth of militarism creates and increases tension in the international situation and aggravates conflicts; it intensifies exploitation of the working classes, impoverishment of the masses, fierce attack on political rights of workers by reactionary elements, and in the final analysis, increases the danger of an outbreak of war.

872 MINIROVANIYE (mining)—Mine laying at sea, and placement of landmines (fougasses) on terrain, airfields, and elsewhere, in a passive role. Mining also includes preparing installations for demolition.

873 MINNO-ARTILLERIYSKAYA POZITSIIYA (mine and artillery position)—A previously prepared region, forming part of a defense system created in a maritime theater. A mine and artillery position is the aggregate of sea mine obstacles, consisting of mines of various kinds, covered by fire from coastal missile launchers and artillery batteries, its

purpose being to deny enemy warships access to the defended coast. A mine and artillery position often consists of several lines, one of which is the main one.

874 MINNO-VZRYVNYYE ZAGRAZHDENIYA (mine and explosive obstacles)—Obstacles consisting of mine fields, mined objects, and various fougasses. According to their purpose, mine and explosive obstacles are subdivided into the following categories: anti-tank (mine fields, heavy-duty fougasses, mined bridges); anti-personnel (mine fields, fougasses and booby traps); anti-landing (mine fields in the water and on shore, and underwater fougasses); and anti-transport (road mine, fougasses).

875 MINNOYE POLE (mine field)—A sector (area) of terrain (or the sea) within which mines have been laid. According to their purpose, mine fields may be anti-tank, anti-personnel, mixed, dummy, or anti-ship; according to their method of detonation they may be uncontrolled or controlled.

876 MINNO-ZAGRADITEL'NYYE DEYSTVIYA (mine-laying operations)—Laying large mine obstacles in both friendly and hostile waters.

877 MINNO-TORPEDNAYA AVIATSIYA (mine and torpedo aviation)—A branch of naval aviation armed with mines and torpedoes.

878 MINNYY ZAGRADITEL' (minelayer)—(1) An engineering vehicle intended for rapid laying of anti-tank mines in the ground or distributing them on the surface of the earth. (2) A submarine or surface warship used for laying mine obstacles. Surface mine layers are in either the sea or river category, and are either specially built as such, or are converted from transports or auxiliary vessels. Mines may also be laid by other naval vessels (destroyers, torpedo boats, torpedo-armed submarines, etc.).

879 MINNYY TRAL ((1) mine-clearing attachment; (2) minesweep)—(1) An accessory that can be mounted in front of a tank, or a special engineering vehicle for making safe passages through anti-tank mine fields. The clearing mechanism of a mine-clearing attachment may be in the form of rollers, knives, chains, etc. A roller attachment makes a two-rut channel, leaving an uncleared median strip, which is cleared by a second pass, by detonation, or by other means. (2) The anti-mine device of a ship (or helicopter), used to detect and destroy mines. According to the platform from which it is used, a minesweep may be in the boat, small craft, ship, helicopter, or coastal category. According to its action on mines, a minesweep may be in the contact or proximity category. Proximity minesweeps are subdivided into magnetic, electro-magnetic, acoustic, and hydrodynamic.

880 MINY (mines)—Engineer munitions used as a means of obstruction. According to their purpose, mines are subdivided into the anti-

personnel, anti-tank, anti-vehicle, anti-landing, and special-purpose categories; according to the method of activation—into controlled, detonation of which is effected at the appropriate time by wire, radio, or mechanical device, and uncontrolled (instantaneous or delayed action); according to their design—into pressure, tension, release operated, and magnetic; according to their susceptibility to retrieval—into recoverable and non-recoverable; and according to the possibility of rendering them harmless—into disarmable and non-disarmable. Projectiles of various calibers, used as mortar shells*, are used to destroy enemy weapons and personnel, whereas large-caliber ones are also used to demolish enemy field installations.

§ 31 MINY MORSKIYE (sea mines)—One of the types of naval munitions consisting of a hermetically-sealed explosive charge, furnished with a fuze and devices permitting it to be laid and exploded under water. Sea mines may be laid by submarines, surface ships, or aircraft, and are therefore subdivided into the submarine, surface ship, and aviation categories. According to the firing device used, sea mines are subdivided into contact, proximity, and engineer categories.

§ 32 MNOGOKANAL'NAYA SVYAZ' (multichannel communication)—Communication in which one and the same transmitter, receiver, and communication link permit several conversations to be conducted simultaneously, or several messages to be sent concurrently. Multichannel communication is made possible by various methods of channel differentiation depending on frequency, time, phase, and other differences.

§ 33 MNOGOKANAL'NOYE TELEGRAFIROVANIYE (multichannel telegraphy)—A method of obtaining several telegraph links on one channel of a line or radio-relay link. One of the high-frequency channels of a long-distance telephone link is used for telegraphy. This channel is divided, with the aid of electric filters, into a number of narrower channels, on each of which a telegraph transmission can be passed. Such a system of multiplexing telephone channels is called voice frequency telegraphy.

§ 34 MOBILIZATSIONNAYA GOTOVOST' VOYSK (mobilizational readiness of troops)—Completion of all measures necessary for the transition of a unit, formation or organization from its peacetime to its wartime table of organization and equipment. The time limit for the mobilizational readiness of troops is established on the basis of the operational role of the unit or formation, and the time needed for its mobilizational deployment.

§ 35 MOBILIZATSIONNOYE PREDNAZNACHENIYE (mobilizational role)—The employment envisaged in the mobilization plan for a major field force, formation, unit, or subunit, and the roles of active

*[And also known as mines in Soviet terminology. (Trans.)]

force and reserve personnel when a state of mobilization is declared, according to their wartime tasks or duties.

886 MOBILIZATSIONNOYE RAZVERTYVANIYE (mobilization deployment)—Transition of the armed forces from peacetime to wartime tables of organization and equipment. Mobilization deployment includes: bringing units up to strength with personnel, combat materiel, armament, and transport; providing troops (navy, airforce personnel) with all types of personal belongings, rations and provisions, fuels and lubricants; assigning permanent force personnel to activate new subunits, units, and formations; bringing naval vessels into commission from a state of preservation [i.e. mothballing], and conscripting merchant vessels for naval duty; and also, organizing the prompt departure of mobilized troops for their operational destinations.

887 MOBILIZATSIONNYYE MEROPRIYATIYA (mobilization measures)—Measures associated with mobilization of the armed forces. The principal mobilization measures are: informing armed forces personnel and transport personnel; carrying out mobilizational deployment of troops; appointing permanent force personnel to activate new units and formations; commissioning naval vessels from a state of preservation [i.e. mothballing] and mobilizing merchant vessels; organizing the timely departure of draftees for their units; conducting the necessary mobilization movements, including evacuating the families of servicemen from threatened areas; Party-political work; and providing for mobilization security measures and overall administration.

888 MOBILIZATSIONNYY ZAPAS (mobilization reserve)—Stocks of materiel intended to support the mobilization deployment of newly-activated units, and also to cover combat expenditures and losses of materiel during the initial phase of a war.

889 MOBILIZATSIONNYY PLAN (mobilization plan)—A document that details the procedure for the mobilization deployment of the armed forces as a whole, each of the Services, each military district (or its naval counterpart: fleet or flotilla), and each formation, unit, and organization. Also reflected in the mobilization plan are the measures envisaged for the support of mobilization deployment.

890 MOBILIZATSIYA NARODNOGO KHOZYAYSTVA (mobilization of the national economy)—Reorganization of all sectors of the national economy so as to meet the requirements of the armed forces and the civilian population under wartime conditions. This includes: development of industrial production in accordance with war plans; reorganization of transport operations, communications facilities and agriculture, and redistribution of manpower in accordance with war requirements; and development of the activities of research establishments for military purposes. Under conditions of nuclear warfare, mobilization of the national economy could entail considerable difficulties.

891 MOBILIZATSIYA OBSHCAYA (general mobilization)—The transition of all armed forces, civil defense, and the national economy to a wartime footing.

892 MOBILIZATSIYA CHASTICHNAYA (partial mobilization)—Mobilization which does not encompass the armed forces in their entirety, but merely a portion of them. Partial mobilization is used in those cases when, in order to fulfill the missions assigned to the armed forces, it will suffice to mobilize one or several military districts (or fleets, flotillas), or even individual major field forces, formations, and organizations that form part of them. As a rule, partial mobilization is carried out when there is a local war (or the threat of one), observing that under present-day conditions a local war may become a general one, as aggression started by the imperialists in any region whatever may grow into a world-wide nuclear war.

893 MOBIL'NAYA OBORONA (foreign) (mobile defense)—A type of defense that foresees the destruction of an attacking enemy by nuclear weapons, and maneuvers by troops exploiting the results of using these weapons. In mobile defense, the main emphasis is placed not on firm retention of terrain, or of positions which have been prepared by field engineers, but rather on conducting counterattacks and inflicting counterstrikes following nuclear strikes. In order to do this, the greater part of the forces and weapons (as much as two-thirds) is located in depth, as a component of the so-called mobile counterattacking (strike) group, while the remaining forces (as little as one-third) are disposed in the first echelon in a forward defensive position, or in a forward defensive region.

894 MOLNIYENOSNAYA VOYNA (lightning war [blitzkrieg])—A fast-moving war waged for the purpose of gaining victory over the enemy in the shortest possible time, measured in days and weeks.

895 MONITOR (monitor)—One of the oldest types of armored surface warships, intended to inflict strikes by heavy-caliber gunfire on enemy shore installations, to destroy enemy warships and transports in coastal regions or rivers, and to support ground troops.

896 MORAL'NO-POLITICHESKIY POTENTIAL STRANY (national morale and political potential)—The morale and political potential during a war, resulting from a positive attitude of the popular masses toward the war's political goals. The greater the number of people who support these goals, the better (and stronger) will be the country's morale and political potential. This potential is determined by the nature of the war's political goals and the character of the country's social and political regime, and is strongly influenced by ideological work done among the masses.

897 MORAL'NYY DUKH ARMII (army morale)—The ideological state and morale of the troops, the level of social awareness of military

personnel, resulting from mastery of certain political, legal, moral, philosophical, and other ideas, views and notions, and characterizing the servicemen's attitude to a given war and to its political goals. Troop morale is a component part of the country's ideological potential, is manifested in the conduct and deeds of servicemen, and ensures the strength and combat capability of the army and navy. Army morale is determined by the nature of the state regime and social order, and depends, to a considerable degree, on ideological work done among the masses. The ideological status of personnel of the Soviet Army and Navy, and also of the armies of other socialist states, is immeasurably higher than the ideological state of personnel of capitalist armies.

898 MOREKHODNOST' KORABLYA (seakeeping ability)—A warship's ability to make headway in a marine environment under adverse wind and sea conditions without loss of maneuverability or weapon efficiency. Seakeeping ability is one of the basic operational and tactical properties of a warship, and is a prerequisite for combat effectiveness.

899 MORSKAYA TAKTIKA (naval tactics)—One of the component parts of naval art, dealing with objective natural laws governing sea battle, and developing methods whereby such a battle may be planned and fought by the various naval arms. Naval tactics consists of naval weapon and combat materiel tactics, combined naval arm tactics, and general naval tactics.

900 MORSKIYE (OKEANSKIYE) KOMMUNIKATSII (naval communications)—Lines (sea lanes) of established seagoing (or oceangoing) navigation, including the points of departure and arrival of vessels.

901 MORSKOY BOY (sea battle)—A battle fought at sea by ship or aircraft formations of a fleet, or by units of them. A sea battle consists of one tactical strike or of a system of such strikes inflicted on the enemy by individual ships (or aircraft), or by ship (or aircraft) formations and coastal missile and artillery units, independently or in coordination with one another. Depending on its purpose, a sea battle may be an offensive, a defensive, or an encounter battle.

902 MORSKOY (OKEANSKIY) TEATR VOYENNYKH DEYSTVIY (theater of naval operations)—The water and air space of one or several seas (or oceans), together with its islands and coastlines, where naval operations may take place in wartime.

903 MOSTOVAYA PEREPRAVA (bridge crossings)—(1) One of the methods whereby troops may cross a water obstacle; (2) a bridge, together with the adjoining sectors of terrain, equipped for the passage of troops. A bridge crossing permits continuous movement by troops, and possesses the capacity for a high rate of traffic, and is therefore the best method of troop transit when negotiating water obstacles.

904 MOSTOUKLADCHIK (bridge layer)—A vehicle with good cross-

country performance, furnished with special bridging equipment, and used for the transportation, and rapid erection of bridges over obstacles.

905 MOTORIZOVANNYYE VOYSKA (motorized troops)—Troops having at their disposal motor transport that is used to carry personnel, combat materiel, armament, and the various supplies needed for daily use and for combat.

906 MOSHCNOST' YADERNOGO BOYEPRIPASA (nuclear yield)—The amount of energy liberated during an explosion. It is described by the TNT equivalent. According to their yield, nuclear munitions are conventionally divided into small, medium, and large calibers.

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907 NABLYUDATEL'NYY PUNKT (NP) (observation point)—A specially equipped place from which the activities of friendly and enemy units (or subunits) are observed on the battlefield.

908 NAVEDENIYE AVIATSII NA TSEL' (directing aircraft to the target)—One of the methods of controlling aviation in the course of combat operations, consisting in bringing a group of aircraft (or a single aircraft) to an objective (to the assigned target) with the aid of radiotechnical facilities (airborne, ground). Directing aircraft to ground targets may also be accomplished with the aid of visual signals (artillery projectiles, night orientation-signal aerial bombs, aerial illuminating bombs, searchlights), and by other means.

909 NAVEDENIYE KORABLEY NA PROTIVNIKA V MORE (directing warships to the enemy at sea)—One of the methods of controlling naval forces in the course of combat operations, consisting in bringing a naval striking force toward a designated enemy objective to within range of direct contact, or onto the course which it is following, with a view to subsequent use of weapons. As a rule, direction is accomplished from coastal command posts, and it gives the striking force time to detect the enemy, and to occupy an advantageous position for a strike or attack.

910 NAVEDENNAYA RADIOAKTIVNOST' (induced radioactivity)—Radioactivity of the air, soil, materials, and various objects, arising as a result of their being irradiated with neutrons. It may be considerable in ground, water, and diverse structures and materials containing sodium, magnesium, silicon or aluminum. Induced radioactivity may be especially strong in sea water in the event of a surface or underwater nuclear burst.

911 NAVESNOYE BUL'DOZERNOYE OBORUDOVANIYE (bulldozer attachments)—Bulldozing equipment which may be mounted on a tank or a tracked artillery tractor for mechanized digging of trenches and

covered positions, and also for clearing landslides in mountain areas or earth obstructions in inhabited localities. Bulldozer attachments consist of a blade with a cutting-edge, arms on which the blade is mounted, and a raising-and-lowering mechanism. Bulldozer attachments are authorized in the tables of organization and equipment for tank units and artillery units. Such equipment is transported by truck, or in the space outside the cab of an artillery tractor. The work output capacity of bulldozer attachments of various types ranges from 50 to 150 cubic meters per hour.

912 NAVIGATSIONNO-GIDROGRAFICHESKOYE OBESPECHENIYE (navigational and hydrographic support)—A type of special support for the activities of naval forces provided by the navigational and hydrographic services of a fleet. This support consists in ensuring safety of navigation, and in the precise determination by a warship of its own position, so as to permit use of its weapons.

913 NAVIGATSIONNOYE OBORUDOVANIYE MORSKOGO TEATRA VOYENNYKH DEYSTVIY (navigational organization of a theater of naval operations)—Measures and facilities for ensuring navigational safety during operations by friendly forces, and impeding the activities of hostile forces. It consists in installing coastal and deep-sea navigational aids (radio-beacons, light-house), sirens, electric foghorns, buoys, signs), and in establishing a special system for their operation, to permit covert determination by a warship of its own position in the open sea, in the vicinity of the coast, and in channels.

914 NAVIGATSIONNYY SPUTNIK (navigational satellite)—An artificial earth satellite equipped with radioelectronic devices, and intended to support aircraft and ship navigation, and also to tie in landmarks and missile launching positions to the terrain.

915 NAVIGATSIYA (navigation)—(1) The science of steering ships at sea, and of piloting airborne vehicles in the air; (2) the period during which it is possible for ships and vessels to operate in freezing seas. Widely used in navigation are navigational instruments, radio-technical facilities, topographic maps, and hydrographic charts.

916 NADVODNYY YADERNYY VZRYV (water-surface nuclear explosion)—A nuclear explosion in which the fireball touches the surface of the water.

917 NADEZHNOT' SVYAZI (reliability of communications)—Distinct, uninterrupted operation of communications under any condition of troop combat operations. Reliability of communications is one of the demands made of communications systems.

918 NADKALIBERNYY SNARYAD (over-caliber shell)—A projectile whose caliber exceeds that of the gun from which it is to be fired. The purpose of using an over-caliber projectile is to increase the projectile's effect at the target.

919 NAZEMNYY YADERNYY VZRYV (surface nuclear explosion)—A nuclear explosion in which the fireball touches the surface of the earth.

920 NAPALM (napalm)—Thickened incendiary mixtures having combustion temperatures of 800–1000 degrees centigrade. The thickening agents are used to give the incendiary mixtures great stability (such mixtures do not settle into layers), and great ranges can be obtained when they are used for flame throwing. Napalm is used in aerial bombs, flame fougasses, and light (portable) and tank-type flame throwers, to destroy enemy personnel and combat materiel. It is also used to start fires.

921 NAPRAVLENIYE GLAVNOGO UDARA (axis of the main thrust)—The strip of terrain in which the efforts of the main body and weapons of the attacking troops are concentrated. In the case of naval operations, the axis of the main thrust is determined by the position of the enemy objective whose destruction constitutes the goal of the operation (or battle).

922 NAPRAVLENIYE NASTUPLENIYA (axis of attack)—The strip of terrain in which the troops are attacking. In order to designate an axis of attack, it is customary to indicate several inhabited localities (or distinct local features) along the entire depth of the operational (or combat) mission of the major field force (formation, or unit).

923 NAPRAVLENIYE SVYAZI (communications link)—Method of organizing communications between two commanding generals (or between two commanding officers, or two staffs), whereby communications are established directly between them.

924 NAPRAVLENNOYE RADIOIZLUCHENIYE (directional radio propagation)—The propagation of radio waves in one or several directions by using directional antennas. Directional radio propagation is widely used in radar, radio-navigation, and radio-relay stations, and in remote control installations. The use of directional radio propagation increases the range of operation, improves resistance to interference, and hinders reconnaissance by radio-technical stations.

925 NARODNOYE OPOLCHENIYE (People's Home Guard)—A temporary voluntary military formation made up of persons not subject to call-up into the regular army in the event of mobilization. The People's Home Guard arose under extraordinary circumstances in the most tense moments of the War of 1812 and of the initial phase of World War II.

926 NARUSHENIYE KOMMUNIKATSIY (PUTEY SOOBSHCHENIYA) (disruption of transportation [travel routes])—Military operations directed toward reducing enemy use of transportation by particular routes. Disruption of land, sea, and air transportation is achieved by conducting special operations, or by engaging in systematic combat operations against means of transportation.

927 NASTUPATEL'NAYA OPERATSIYA (offensive operation)—The aggregate of nuclear strikes, coordinated and interrelated with regard to target, time, and place, and the vigorous, offensive actions of the troops of a front (or an army), accomplished in accordance with a unified concept for the attainment of operational or strategic goals. The general purpose of an offensive operation is to destroy enemy means of nuclear attack, break up enemy main groupings, and seize regions of operational or strategic importance. According to its scale and the forces and weapons involved, an offensive operation may be an army operation or a front operation, but in either case it will be conducted by ground troops in coordination with the other Services.

928 NASTUPATEL'NAYA OPERATSIYA GRUPPY ARMIY (foreign) (offensive operation of a group of armies)—The aggregate of engagements and offensive operations conducted in accordance with a unified plan by several field armies and army corps, in coordination with strategic formations of other Services, in an operational or strategic sector of a theater of hostilities. Under the conditions of the initial phase of a war, it is envisaged that an offensive operation of a group of armies would be conducted with the beginning of a nuclear offensive, or would be conducted concurrently with it.

929 NASTUPATEL'NAYA OPERATSIYA GRUPPY FRONTOV (offensive operation of a group of fronts)—A joint offensive operation of several fronts. Essentially, an offensive operation of a group of fronts is the aggregate of a number of simultaneous and sequential front operations directed toward attainment of a single strategic goal or a major operational goal.

930 NASTUPATEL'NAYA OPERATSIYA NA PRIMORSKOM NAPRAVLENIИ (offensive operation in a maritime sector)—An operation accomplished by ground forces, in coordination with the navy and long-range aviation, in order to break up an enemy maritime grouping of land, sea, and air forces, and in order to take possession of the sea coast, the most important naval bases, and strait zones.

931 NASTUPATEL'NYY BOY V MORE (offensive sea battle)—The principal type of sea battle, the purpose of which is to destroy the hostile naval forces that are at sea. This purpose is achieved by means of powerful strikes by nuclear missiles and conventional weapons, inflicted by naval forces independently, but sometimes in coordination with formations of the other Services. An offensive sea battle is characterized by its dynamic nature, by the suddenness and short duration of its strikes, by energetic attacks by mobile forces, and by rapid and decisive actions of the forces throughout wide expanses of sea. Variants of the offensive sea battle are: a battle to destroy a carrier strike group; a battle to destroy a grouping of missile-armed warships; and a battle fought in order to

demolish an enemy convoy under various conditions of the maritime situation.

932 NASTUPLIENIYE (offensive)—A basic type of combat operation, of decisive importance in attaining victory over the enemy. An offensive is conducted in order to secure the prompt and utter defeat of an enemy occupying defensive positions, and in order to take important areas (or objectives). This is achieved by breaking up enemy main groupings and weapons of mass destruction by using nuclear and conventional weapons, energetic attacks by ground forces with high speed and to great depth, coordinated with aviation and airborne assault forces, bold movement by the latter onto enemy flanks and rear, and destroying him piece by piece.

933 NACHAL'NAYA SKOROST' (muzzle velocity)—The velocity of a projectile or mortar round as it passes the muzzle face on its way out of the gun (or mortar) barrel, i.e., their velocity at the origin of fire. Muzzle velocity depends on the weight of the charge, the weight of the projectile, the quality of the explosive, and other factors. Muzzle velocity is one of the fundamental ballistic properties determining the projectile's range and power.

934 NACHAL'NYI PERIOD VOYNY (initial period of a war)—A decisive period of a war, ranging from the outbreak of hostilities to attainment of the short-term strategic goals assigned to the first strategic echelon of the country's armed forces. Under the most favorable conditions, the goals of the war may be attained during the initial period of a war.

935 NEYTRALITET (neutrality)—A policy whereby a state does not participate in military blocs, nor in wars between them. The territory and territorial waters of a neutral state, and the air space above it, are regarded as inviolable, and according to the precepts of international law, belligerent states are categorically forbidden to use them. A neutral state does not have the right to supply belligerent states with weapons, war materials, etc. Changes and additions to the rules and principles of neutrality are fixed in appropriate international agreements. In international relations, neutrality is expressed by abstaining from membership in any of the existing politico-military alliances (blocs). Countries which maintain a policy of neutrality under present-day conditions of intensified formation of aggressive military blocs by imperialists, encounter understanding and support on the part of the peace-loving Soviet Union. Armed neutrality consists in nonparticipation of a given country in a war between other states, accompanied by a readiness to withstand by force of arms any violation of its neutrality.

936 NEYTRON (neutron)—An elementary particle of matter, which is a component of atomic nuclei, and which is neutral, being devoid of electric charge. Due to its lack of an electric charge, a neutron readily penetrates atomic nuclei, and is therefore widely used to initiate various nuclear reactions. In particular, the neutron can cause fission of uranium nuclei.

A free neutron is unstable and disintegrates into an electron, a proton, and a neutrino. The mean "lifetime" of a free neutron is about 13 minutes.

937 NEKONTAKTNAYA MINA (noncontact mine)—A mine which explodes at a certain distance from a ship's hull, without requiring direct contact with it in order to detonate. The burst of a noncontact mine is initiated by an influence fuze, which reacts to the magnetic, acoustic, hydrodynamic, or other physical field of the vessel.

938 NEKONTAKTNOYE TRALENIYE (sweeping of noncontact mines)—Minesweeping with the use of various noncontact sweeps, intended for clearing bottom mines in the noncontact category, having fuzes of various types.

939 NEPODVIZHNYI ZAGRADITEL'NIY OGON' (NZO) (standing barrage)—High density artillery fire (frontal or flank), used on pre-selected lines to obstruct movement of the enemy through them.

940 NEPRIKOSNOVENNIY ZAPAS (NZ) (emergency reserve supplies)—Stocks of weapons, ammunition, fuels and lubricants, provisions, military-technical and other supplies, which are held in established quantities, either in the immediate possession of soldiers, or in depots and bases, or with combat equipment, guns and unit transport vehicles. Emergency reserve supplies are intended for use in special circumstances only, with the permission of the senior commander.

941 NESNIZHAYEMYY ZAPAS (minimum level of supply)—Stocks of various types of materiel intended to meet current requirements. As these are expended, they are promptly replenished to established levels in all the units where they are maintained.

942 NESTOYKIYE OTRAVLYAYUSHCHIYE VESHCHESTVA (nonpersistent toxic agents)—Toxic agents which are low-boiling liquids or gases, and which are used to contaminate the atmosphere. Typical representatives of such toxic agents are hydrocyanic (prussic) acid and phosgene.

943 NESFORMIROVAVSHIYSYA SLED RADIOAKTIVNOGO OBLAKA (unformed pattern of a radioactive cloud)—The pattern of a radioactive cloud at the far boundary of which fallout of radioactive substances is still taking place. The far boundary of the unformed pattern of a radioactive cloud shifts from ground zero with the speed of the mean wind.

944 NEUPRAVLYAYEMYE RAKETY (unguided missiles)—Missiles not having an on-board guidance system. Direction and range are imparted to such missiles by the launcher.

945 NEUPRAVLYAYEMYY REAKTIVNIY SNARYAD (foreign) (unguided rocket shell)—A ballistic shell whose trajectory depends only

on the force of gravity and aerodynamic forces, and which describes a so-called ballistic curve.

946 NIZKIY VOZDUSHNYY YADERNYY VZRYV (low altitude nuclear explosion)—A nuclear explosion detonated at a height which ensures the destruction of a large number of comparatively strong target installations, but which at the same time precludes the possibility of strong radioactive contamination of the terrain in the pattern of the cloud.

947 NIZKOYE TORPEDOMETANIYE (low level torpedo-bombing)—A method of using the torpedo armament employed by naval aviation's mine-torpedo aircraft. This method is used from contour-flying altitudes, and from low altitudes generally, when attacking warships and transports at sea, in bases (ports), and at anchorages. It is also used to destroy hydrotechnical works (docks, jetties, breakwaters, etc.) in enemy naval bases and ports.

948 NOMENKLATURA KAR'I (map nomenclature)—A system of conventional alphabetical and numerical symbols for individual sheets of topographic maps of various scales. The nomenclature of an individual sheet is put in its north margin. The nomenclature of the adjacent sheets is indicated in the other three margins.

949 NORMY MATERIAL'NOGO OBESPECHENIYA (levels of materiel support)—The quantities of materiel authorized for issue to troops and intended for use (or expenditure) during a definite period of time for an operation (or battle) or for retention by individual units or in depots. Levels of materiel support are worked out by the appropriate supply service and promulgated by the Ministry of Defense.

950 NORMY RASKHODA MATERIAL'NYKH SREDSTV (materiel expenditure rates)—The quantities of materiel authorized, temporarily or permanently, per consumer, per unit time or per unit of work done. The materiel expenditure rates for each battle or operation are established by the command for subunits, units, formations, and major field forces on the basis of combat missions actually assigned to them.

951 NOCHNAYA ORIENTIRNO-SIGNAL'NAYA AVIATION-NAYA BOMBA (NOSAB) (Night Orientation-Signal Aerial Bomb; flare bomb)—An auxiliary-purpose aerial bomb used at night for indicating (marking) targets and control landmarks on the terrain, and also for designating the flight courses of single aircraft or groups of aircraft. The fire of such a bomb may be of various colors.

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952 OBESPECHENIYE OPERATSII (BOYA) (support of an operation [or battle])—The aggregate of mutually-coordinated measures taken by the command, staffs, and troops (or forces) for the purpose of creating

the most favorable conditions for combat operations, both in the preparatory stage and in the course of an operation (or battle). The nature of such measures is determined by the actual situation and by the missions assigned to the troops. The basic types of operational support, applicable to all services, are: reconnaissance; protection of troops (or forces) and rear installations from weapons of mass destruction; engineering support; camouflage; radio-electronic countermeasures; and topographic, hydro-meteorological, and rear support.

953 OBESPECHENIYE RAZVERTYVANIYA SIL (deployment security)—A system of measures directed toward creating the most favorable conditions for preserving the combat effectiveness of forces in the process of deployment, minimizing casualties among such forces, and ensuring timely occupation of their assigned regions, lines, and positions.

954 OBESPECHENIYE FLANGOV (STYKOV) (security of flanks [or of limiting points])—Operational (or tactical) measures to forestall surprise strikes by the enemy on open flanks (or limiting points), and to ensure successful repulse of these strikes in the course of accomplishing the main mission. Flank security is achieved by conducting uninterrupted reconnaissance, and by maintaining the forces and weapons assigned for this purpose in a constant state of readiness.

955 OBLAST' PEREKHVATA VOZDUSHNYKH TSELEY (air target interception region)—The air space within the radius of action of fighter aircraft, in which interception of air targets is assured.

956 OBORONA (defense)—A type of combat operation conducted for the purpose of repulsing an attack mounted by superior enemy forces, causing heavy casualties, retaining important regions of the terrain, and creating favorable conditions for going over to a decisive offensive. Defense is based on strikes by nuclear and all other types of weapons; on extensive maneuver with fire, forces, and weapons; on counterattacks (or counterstrikes) with simultaneous stubborn retention of important regions which intercept the enemy direction of advance; and also on the extensive use of various obstacles. Defense makes it possible to gain time and to effect an economy in forces and weapons in some sectors, thereby creating conditions for an offensive in others.

957 OBORONA VOYENNO-MORSKOY BAZY (naval base defense)—The aggregate of measures and combat operations adopted to prevent seizure of a naval base by the enemy, and also to ensure the safety of naval forces in the base, and protection of installations located on its territory (or sea area) against enemy attack by land, sea, and air. The composition of the forces and facilities required for the defense of a naval base, as well as of the necessary reinforcements, will depend on the importance and nature of the missions to be completed, on the ratio of forces in the theater of operations, and on the military-geographical conditions in the region in which the base is situated.

958 OBORONA MORSKOGO POBEREZH'YA (sea coast defense)

—The aggregate of combat operations and measures adopted to prevent seizure of a coast by the enemy and to safeguard coastal installations from enemy attack. Defense of a sea coast includes anti-landing defense, and protection of important maritime objectives from enemy attack by sea. Measures pertaining to defense of a sea coast are planned and partially implemented in peacetime, and are developed and perfected on the outbreak of hostilities, in accordance with the actual situation.

959 OBORONA SOYEDINENIYA KORABLEY (TRANSPORTOV)

NA PEREKHODE MOREM (defense of a formation of warships [or merchant-type ships] during sea transit)—The complex of combat support measures adopted in order to preserve the combat effectiveness (or integrity), and to ensure the safety, of warships (or merchant-type ships) during sea transit. Such defense includes operations of escorting ships and aircraft, and measures adopted by the escorted forces (or vessels) for their own defense. These activities and measures are directed toward anticipation and repulse of enemy attacks from the sea and from the air, and toward destruction of the attacking enemy forces.

960 OBORONITEL'NAYA OPERATSIYA (defensive operation)—

The aggregate of battles fought in individual sectors for the purpose of disrupting an enemy offensive still in preparation or already begun, and also for the purpose of gaining time, and creating favorable conditions for going over to the attack. A contemporary defensive operation is based on the use of nuclear strikes and strikes with all other types of weapons, on the extensive use of maneuver with fire, forces, and weapons, and on counterattacks, imparting an aggressive and decisive character to the defense.

961 OBORONITEL'NAYA POZITSIYA (defensive position)—

A sector of terrain intended for conducting a defensive battle by motorized rifle and tank subunits (or units). Defensive positions have strong points prepared by engineers, disposed at intervals of 1–1.5 kilometers, with firing lines for tank subunits and antitank weapons, trenches for various weapons, shelters for personnel, and with other defensive structures. Various obstacles and dummy objects may also be set up at defensive positions.

962 OBORONITEL'NAYA POLOSA (historical) (defensive zone)—

A zone of terrain prepared by the engineers for defense by formations of the ground forces. A defensive zone could consist of two or three defensive positions. Defensive zones were differentiated in the following manner: forward, main (first), second, army, rear, front, intermediate, cut-off, etc.

963 OBORONITEL'NYY RUBEZH (historical) (defensive line)—

Terrain prepared by engineers for defense and intended for retention by major field forces, formations, or units of the ground forces. Defensive

lines usually consisted of one or two defensive zones, and were called: primary, intermediate, rear, etc.

964 OBORONOS²OSOBNOST' (defensive capability)—The degree of development and readiness of the military, economic, and moral-political forces and potentialities of a country, ensuring reliable defense of the state in modern war, and utter defeat of the aggressor. Defensive capability is determined by the character of the political regime and social order, and depends on the political goals of the war, on the organizational activity of the country's political and military leadership, and on the alertness of the people and the armed forces. The high level of defensive capability in the Soviet Union, and in other countries having a peaceful socialist system, is determined by the guiding role of the Communist and workers' parties.

965 OBSERVATSIYA (observation)—Determining a ship's position by coastal objects, radio-beacons, radio-navigational and hydroacoustic systems, or by heavenly bodies.

966 OBSTANOVKA (situation)—The aggregate of all the factors in the area of hostilities (or of combat operations) and in the rear of units, which to some degree or other affect preparation, course, and outcome of an operation (or battle). The most important elements of the situation are recognized to be the enemy, own troops, neighboring troops, terrain, radiation and chemical conditions in the area of operations, economic state of the region of hostilities, socio-political structure of the population and its mood, climatic conditions, and the time of day. In its scale, the situation may be strategic, operational, or tactical, and general or specific; and in the sphere of hostilities, it may be land-, sea-, air-, or space-oriented.

967 OBKHOD (deep envelopment)—A troop maneuver in depth which is performed in tactical (or operational) coordinated action with troops advancing from the front. Deep envelopment is used for the purpose of inflicting decisive, surprise strikes on enemy flanks (or flank) and rear.

968 OBSHCHAYA TAKTIKA (general tactics)—A scientific discipline dealing with questions related to preparation for, and conduct of, combined-arms combat by units and formations of ground troops, with the participation of the other Services.

969 OBSHCHEVOYSKOVAYA ARMIYA (combined-arms army)—A major field force of ground troops, including combined-arms and special formations (or units), as well as command elements and supply elements. A combined-arms army may also include corps elements. A combined-arms army is usually a component of a front, but it may also function in an isolated operational sector, directly subordinated to the Supreme High Command. In the latter case, it is designated as a separate army.

970 OBSHCHEVOYSKOVY ROY (combined-arms battle)—A battle

fought by a combined-arms formation (or unit) together with its attached formations (or units) of other service branches and aviation; and in maritime sectors, with naval forces as well. The use of nuclear weapons and the participation of the various service branches (or forces), in conjunction with the great mobility of the troops, impart an especially decisive and maneuver-oriented character to a combined-arms battle.

971 OBSHCHEVOYSKOVOY KOMANDIR (combined-arms commander)—The commander (sole commander) of a combined-arms formation, unit, or subunit. He organizes the combined-arms combat of the troops subordinated to him, and leads them in battle. He makes the decision to engage the enemy, assigns combat missions to subunits (units, formations), organizes coordination, coordinates the actions of his own troops with those of neighboring troops, and directs his staff, and the commanders of the service branches and Services.

972 OBSHCHEVOYSKOVOY SHTAB (combined-arms staff)—The staff of a major field force (or of a formation or unit) which includes formations (units, subunits) of various service branches. The combined-arms staff ensures coordination between the staffs of the subordinated and cooperating troops, and those of the service branches, special troops, services, and rear. The combined-arms staff takes all measures necessary to ensure the comprehensive preparation of the troops for their combat missions, and to ensure constant command and control of the troops during the course of battle (or operation).

973 OBYCHNYE VIDY ORUZHIA (conventional weapons)—All types of weapons with the exception of weapons of mass destruction (i.e., nuclear, chemical, and bacteriological).

974 OBYEKTIVNYE ZAKONY VOYNY (the objective laws of war)—The substantial, recurrent, and inseparable associations which are organically inherent in war, and which determine its conduct, course, and outcome. Such laws specifically include: the dependence of the course and outcome of a war on the correlation of the military-economic forces and potentialities of the belligerent states, on the correlation of moral-political forces and potentialities of the adversaries, on the correlation of the military potentialities of the parties in conflict, and the quantity and quality of their armed forces; and dependence of the method of waging a war on the method of production, and in particular, on its most mobile element—the means of production, which have a direct impact on change in the means of armed conflict.

975 OBYEKTIVNAYA PVO (installation-oriented air defense)—One method of organizing air defense, whereby air defense forces and facilities are concentrated in defense of particular installations.

976 OGNEVAYA PODGOTOVKA ((1) preparation fire [softening up]; (2) weapons training)—(1) Powerful prepared strikes with artillery and

aviation delivered prior to the start of an attack, for the purpose of neutralizing and destroying the most important enemy installations which are not to be destroyed by nuclear weapons, and for the purpose of rendering the enemy incapable of offering organized resistance to the advancing troops; (2) a subject in the training curriculum for personnel of subunits and units of the armed forces.

977 OGNEVAYA PODDERZHKA (fire support)—Successive neutralization and destruction of the enemy by concentrated artillery fire and air attacks in the course of an offensive, for the purpose of ensuring a rapid advance by the attacking troops. Fire support is conducted by various means, and to the entire depth of the troops' combat mission.

978 OGNEVAYA SVYAZ' (coordination of fire)—A method of mutual fire support. Coordination of fire may be effected along the front and in depth, between formations, units, and subunits, and between the various weapons (tanks, artillery, combat vehicles).

979 OGNEVOYE VZAIMODEYSTVIYE (mutual fire support)—Coordination of fire on the enemy, achieved by assigning targets to the various types of weapons, combat vehicles, or subunits, and by pre-determining the time of opening and delivering fire.

980 OGNEVOYE NABLYUDENIYE (neutralization fire)—Fire by single rounds or bursts at will, conducted during the intervals between concentrated fire against the same target, but with considerably less density. The purpose of fire observation is to keep the target neutralized.

981 OGNEVOY VAL (rolling barrage)—A method of artillery support for troops on the offensive, consisting of successive shifts of high-density fire from one firing line to another, ahead of the combat formations of advancing troops. A rolling barrage may be single or double.

982 OGNEVOY NALET (concentrated fire)—Method of conducting artillery fire for the purpose of destroying enemy personnel, weapons, and combat materiel, envisaging a high density of fire during a short interval of time. As a rule, concentrated fire begins with fire from more than one weapon, with a subsequent transition to deliberate fire, reckoned on the basis of expending the assigned amount of ammunition in a pre-determined period of time.

983 OGNEVYYE VOZMOZHNOСТИ (firepower)—The sum total of the capabilities of a formation, unit, or fire subunit, to resolve typical fire missions in a definite period of time, using a suitable amount of ammunition.

984 OGNEMET (flamethrower)—A short-range weapon that uses a stream of burning flammable mixture to destroy the enemy in field fortifications, tanks, stone buildings, or trenches. There are light (portable) flamethrowers and heavy (fougasse) flamethrowers.

985 OGNEMETNYY TANK (flamethrower tank)—A combat vehicle equipped with a flamethrower. A flamethrower tank is used to destroy personnel, especially those located under cover, and is used in close support of troops in offensive combat, and to reinforce them in defense.

986 ODINOCHNYYE UDARY AVIATSII (strikes by single aircraft)—Strikes made against enemy objectives by single aircraft. Such strikes are dealt using nuclear, chemical, or conventional weapons, in order to complete particular tactical missions (destruction or neutralization of targets).

987 ODINOCHNYY YADERNYY UDAR (single nuclear strike)—A strike delivered against an objective with one nuclear weapon. It is used in those cases when the yield of a nuclear weapon ensures that the required damage will be inflicted on the target.

988 ODNOVREMENNYE UDARY AVIATSII (simultaneous strikes by aircraft)—One of the methods of combat operations employed by aviation, and used to put the objective (or objectives) out of commission in the shortest possible time.

989 ODNOSTEPENNOYE UCHENIYE (VOYENNAYA IGRA) (single-level exercise [war game])—Training in which only one organizational echelon takes part, for example, the commander and headquarters of a regiment, the commander and headquarters of a division, etc.

990 ODNOSTORONNEYE UCHENIYE (VOYENNAYA IGRA) (one-sided exercise [war game])—An operational (or tactical) exercise in which only one side participates, the enemy being represented by specially-detailed subunits, or by individual soldiers provided with simulating and marking devices (or its actions being determined and introduced to the trainees by the control and umpire apparatus).

991 OKKUPATSIONNYYE VOYSKA (occupation troops)—Troops located in the territory of another state in connection with its temporary occupation, pending fulfillment by the defeated belligerent party of the obligations which it has assumed.

992 OKKUPATSIYA (occupation)—Temporary occupation of the territory of one state by the armed forces of another, without prior acquisition of sovereign rights to it. Military occupations effected by imperialist powers are usually accompanied by contravention of international law and by violence against the peaceful population, etc.

993 OKRUG PVO (air defense district)—The highest operational formation of national air defense forces. Its role is to defend the country's most important industrial-economic regions and administrative-political centers from the air. Concurrently with fulfillment of its primary missions, an air defense district may provide cover for troops, air and sea communications, ports, naval bases, and warships which are within the area of combat operations assigned to it.

994 OKRUZHENIYE (encirclement)—Isolation of a grouping of the enemy from the rest of his troops. Encirclement is most often achieved by troops advancing in convergent directions. Under modern conditions, the encirclement and destruction of the enemy are simultaneous, ensured by effective use of nuclear weapons and by the great mobility of troops.

995 OPERATIVNAYA VOZDUSHNAYA RAZVEDKA (operational air reconnaissance)—A type of air reconnaissance. It is conducted for the purpose of obtaining such data on the enemy, his installations, the terrain and the weather, as is needed by the command of higher strategic formations of all Services to prepare and conduct operations (or combat activities). The depth of operational air reconnaissance depends on the missions to be fulfilled by the strategic formations of the Services, and also on the nature of the theater of operations, and on the capabilities of the means used to conduct operational air reconnaissance, and may reach the depth of a front offensive operation. The means of operational air reconnaissance are usually long-range manned and unmanned aircraft equipped with reconnaissance apparatus. The main efforts of operational air reconnaissance are concentrated on installations located in the operational depth. The data of operational air reconnaissance are supplemented by the data of strategic and tactical air reconnaissance.

996 OPERATIVNAYA GRUPPA (operational group)—(1) A temporary major field force acting in a particular operational sector and completing one operational mission. The composition of an operational group depends on the situation and on the nature of the missions to be resolved. The need to create an operational group arises in connection with the conduct of an operation on wide fronts and in inaccessible terrain, where according to the situation, it may become extremely difficult to organize and maintain coordinated action between the groupings acting in the various sectors. (2) A group of officers with the means of command and control, sent by the staffs of major field forces (or formations) of the Services, to establish and maintain close coordinated action and (tactical) control with them, or to lead a particular grouping of troops (or forces).

997 OPERATIVNAYA MASKIROVKA (operational camouflage)—A type of support for combat operations, conducted for the purpose of misleading the enemy concerning the nature of the forthcoming operations by friendly troops, the concept of the operation, the scale, the time, and the targets against which the enemy may possibly use weapons of mass destruction. Operational camouflage is one of the principal means of achieving operational surprise. The methods of effecting operational camouflage are diversified. They include creation of dummy groupings and objects; misinforming the enemy; wide use of technical camouflaging facilities; utilization of advantageous terrain features and darkness; taking steps to safeguard military security, and adopting covert control of troops, etc. Operational camouflage is effected in accordance with a unified plan formulated by the staff of a major field force.

998 OPERATIVNAYA OBSTANOVKA (operational situation)—The aggregate of all factors which, up to a particular time may, to some degree or other, affect the preparation, course, and outcome of an operation (or battle). The most important elements of an operational situation are the positions of the opposing sides, their composition, condition, the nature of their activities, their combat capabilities, materiel and technical support; also, the correlation of the forces of the warring parties, the nature of the terrain, the economic state of the region of activities, the socio-political composition of the population; and the weather, time of day, and time of year.

999 OPERATIVNAYA PAUZA (historical) (operational pause)—A break between two successive operations, which was needed to bring the troops back up to strength due to the casualties they sustained; to replace lost weapons and to replenish expended ammunition; to regroup forces, to move up the rear, and to bring in materiel and technical facilities. Also meant by the term "operational pause" was a relative lull in a given theater of hostilities, during which both opposing sides, being on the defensive, abstained from offensive operations for some reason or other.

1000 OPERATIVNAYA PEREGRUPPIROVKA (operational regrouping)—A movement of major field forces (or formations) from certain regions to certain others, for the purpose of creating a new grouping and transferring the operational emphasis to a new sector. An operational regrouping may be effected prior to an offensive or defensive operation, or in the course of such an operation, or when it ends.

1001 OPERATIVNAYA PLOTNOST' (operational density)—The average numerical strength of troops and combat materiel per kilometer of front or per square kilometer of area for the zone of combat operations of a major field force (or army, front). The operational density of formations on a front (or in an army) may be determined by the number of kilometers of front per formation (e.g., motorized rifle division, tank division), or by the degree to which such and such an area (in square kilometers) is saturated with troops. Operational density is usually computed both for the entire zone of combat operations of the troops of a front (or army) and for individual sectors.

1002 OPERATIVNAYA PODGOTOVKA (operational training)—A system of training measures adopted for the purpose of perfecting the knowledge and practical skills of senior officers, generals, admirals and the staffs of major field forces of the Services, in the field of organization and conduct of contemporary operations.

1003 OPERATIVNAYA RAZVEDKA (operational reconnaissance)—The most important form of support for the combat operations of troops. Operational reconnaissance is organized by the officers commanding major field forces and by their staffs, for the purpose of obtaining the reconnais-

sance information needed for the preparation and conduct of operations by all the Services.

1004 OPERATIVNAYA SVODKA (operations report)—A combat document compiled by the staff of a major field force (or formation) for a definite period of time on the basis of data on the situation obtained from subordinate staffs, and information from adjacent units. Reflected in this document are all changes in the position and state of friendly and hostile troops which have taken place since the previous report was rendered. An operations report is rendered within time limits set by the higher staff.

1005 OPERATIVNOYE VZAIMODEYSTVIYE (operational coordination)—The actions of major field forces which are coordinated with each other, and with the forces and weapons of other Services, in order to attain the goals of an operation (or combat activities). These coordinated actions are conducted by the major field forces in one theater of hostilities or strategic (operational) sector. Operational coordination is based on the decisions of the officers commanding the major field forces, and on the directives of higher authority.

1006 OPERATIVNOYE VREMYA (operational time)—The hypothetical time (hours, minutes, date) used in war games, command and staff training exercises, in the solution of short exercises, and in tactical training exercises for playing out combat operations of the participating sides, whose position is correlated to a specific time. When determining operational time, the time which might actually be spent on the activities in question by the troops of the opposing sides is taken into account. Operational time may or may not coincide with astronomical time.

1007 OPERATIVNOYE ISKUSSTVO (operational art)—A component part of military art, dealing with the theory and practice of preparing for and conducting combined and independent operations by major field forces or major formations of the Services. Operational art is the connecting link between strategy and tactics. Stemming from strategic requirements, operational art determines methods of preparing for and conducting operations to achieve strategic goals, and it gives the initial data for tactics, which organizes preparation for and waging of combat in accordance with the goals and missions of operations. Besides the general theory of operational art, which investigates the general principles of conducting operations, each Service has its own operational art.

1008 OPERATIVNOYE OB"YEDINENIYE (major field force; strategic formation)—An operational and organizational entity in the different Services, including formations of various service branches (or forces), intended for the conduct of operations. Besides the forces intended to engage in combat operations, a major field force or strategic formation has command and control elements and facilities, rear services, support services, etc.

1009 OPERATIVNOYE POSTROYENIYE (operational order of battle)

—A grouping of the forces and facilities of major field forces or strategic formations, created in accordance with the concept of the operation, and meeting the requirements of their most effective utilization to bring about the utter defeat of the enemy, on land, at sea, and in the air.

1010 OPERATIVNOYE PRIKRYTIYE (operational cover)—Forces and facilities especially detailed, for a specified time, to repulse enemy attacks directed at the main body of a major field force which is preparing to carry out a mission, or is in the course of doing so.

1011 OPERATIVNOYE RAZVERTYVANIYE (operational deployment)—The process of creating operational groupings of forces and weapons, and their movement forward to deliver a strike. Operational deployment is done in accordance with the concept of the operation.

1012 OPERATIVNOYE SOSREDOTOCHENIYE VOYSK (operational concentration of troops)—An accumulation of men and equipment in a particular region, at a particular time, in order to carry out an operational mission.

1013 OPERATIVNO-STRATEGICHESKIY MANEVR (operational-strategic maneuver)—An organized move of large groupings of major field forces of the armed forces within theaters of military operations for the purpose of creating the most advantageous grouping of men and equipment for the completion of assigned missions.

1014 OPERATIVNYYE NORMY (NORMATIVY) (operational standards)—Numerical indices that regulate the activity, in both time and space, of operational groupings of the armed forces engaged in carrying out missions, in peacetime and in wartime (width to front, density, speeds, time limits, etc.). Operational standards are worked out on the basis of careful mathematical analysis, and are verified, as a rule, by experiment (on firing ranges, in exercises, etc.).

1015 OPERATIVNYYE PEREVOZKI (operational movements)—Movement of troops by rail, water, road, or air transport, effected on an operational scale, and associated with the fulfillment of some operational mission. Operational movements may be carried out both in peacetime and in wartime.

1016 OPERATIVNYYE REZERVY (operational reserves)—Combined-arms formations, and also formations (or units) of various service branches (or forces), used to carry out missions which arise suddenly in the course of an operation. Operational reserves are part of an operational order of battle of major field forces.

1017 OPERATIVNYY RADIUS DEYSTVIYA SIL FLOTA (operational radius of action of naval forces)—The greatest possible distance of a grouping of forces (warships, aircraft) from their bases at which these

forces retain their ability to carry out their assigned missions and return to the points where they are based. The operational radius of action of naval forces depends on the tactical-technical features of the kind of force (range, self-sufficiency, speed, etc.), on the nature of the mission to be completed, and on the situation which the operating forces will encounter.

1018 OPERATIVNYY TYL (operational rear)—Rear formations, units, and establishments, with their stockpiles of materiel, that form part of a major field force or strategic formation, used to provide comprehensive rear support for the troops (forces), and located in a particular zone (region) for this purpose. The operational rear includes: the rear of a front, an air defense district, or a fleet; the rear of an army, a flotilla, or naval aviation.

1019 OPERATSII NACHAL'NOGO PERIODA VOYNY (operations of the initial period of a war)—Operations conducted during a period that lasts from the outbreak of hostilities until the first strategic goal has been attained.

1020 OPERATSIONNAYA ZONA FLOTA (VOYENNO-MORSKOY BAZY) (operational zone of a fleet [or of a naval base])—A region of a maritime (or ocean) theater of operations, within whose limits, during a limited period (or throughout the entire war), a naval strategic formation carries out the missions assigned to it, by conducting naval operations or other forms of combat activity. Demarcation of such a zone, its boundaries and dimensions, depend on the general situation in the theater of operations, the ratio of forces, the operational radius of the forces, the nature of the missions to be carried out, and on the physico-geographic conditions of the given theater. Insofar as these factors change, the boundaries and dimensions of operational zones may alter during the course of a war (or in peacetime).

1021 OPERATSIONNOYE NAPRAVLENIYE (operational sector)—A zone of terrain, or of water or air space, and sometimes a combination of these, leading to the objectives of operational activities, namely, to groupings of the enemy or to his important economic centers, and permitting combat operations of major field forces to be conducted within its boundaries. An operational sector, being part of a strategic sector and of a theater of operations, alters with a change in the position of the grouping of enemy opposing forces, or with a change in the goals of the operation, and is always determined by the specific operational-strategic situation in the theater of operations. However, for certain theaters (mountainous, lake-forest-bog, etc.), operational sectors are relatively stable.

1022 OPERATSIYA (operation)—The aggregate of nuclear strikes and combat operations by troops (a fleet), coordinated with regard to target, time, and place, and conducted in accordance with a unified plan by a

major field force or strategic formation, in order to attain an assigned goal. Operations are accomplished by major field forces or ground forces, by long-range aviation, and by the navy. According to the nature of their activities, operations may be offensive or defensive. In maritime sectors, the landing of an amphibious assault force, or the repulse of an enemy amphibious assault force may, in certain cases, assume the form of a landing operation or an anti-landing operation. The landing of a large airborne assault force, and its combat activities, constitute an air-assault operation.

1023 OPERATSIYA PO ZAVOYEVANIYU GOSPODSTVA V VOZDUKHE (historical) (air supremacy operations)—An air force operation aimed at the utter defeat of enemy major aviation groupings, conducted by inflicting a series of powerful strikes on enemy aviation on airfields, and destroying it in air engagements, for the purpose of seizing and holding the initiative in the air, in order to support the activities of friendly armed forces. The operation was conducted in accordance with the unified concept and plan of the General Headquarters of the Supreme High Command in several operational or strategic sectors or in a theater of hostilities, and involved several air armies of long-range and national air defense aviation.

1024 OPOVESHCHENIYE VOYSK (troop warning)—Sending prearranged signals to warn troops to take measures and countermeasures for their protection.

1025 OPOVESHCHENIYE MOBILIZATSII (mobilization notification)—Making known the government's decision regarding mobilization to all interested persons, to army, navy, and air force units, and to military and civil organizations. Notification of mobilization is simultaneously an order to those being mobilized to appear at their units or at the assembly points of military commissariats. The procedure and methods for notification of mobilization depend on the type of mobilization (general or partial, overt or covert).

1026 OPOZNAVANIYE VOZDUSHNYKH TSELEY (air target identification)—Establishing the affiliation of aircraft and unmanned means of air attack to a given state and its air force. Under modern conditions, the main identification of air targets is radar identification. All aircraft of friendly air forces have radar-identification instruments for identification of air targets, and flights by aviation are strictly regulated by definite rules, which always permit the location of friendly aircraft in the air to be known.

1027 OPORNYI PUNKT (strong point)—That part of a defensive position which is most fortified, contains the most weapons, and is most reinforced with obstacles, and which is equipped for all-round defense, primarily against tanks. A strong point is the main defensive position, and is organized in the most probable sector of enemy attack. Strong points

are equipped with trenches, communication trenches, shelters, and other defensive structures. They must be well camouflaged, and connected to each other frontally and in depth by a unified fire and obstacle plan.

1028 ORBITAL'NYY SAMOLET (orbital aircraft)—An aircraft flying within the limits of the earth's atmosphere with the use of aerodynamic forces, and capable of going into temporary orbit. Its speed may be close to the first escape velocity, and its altitude, 60–150 kilometers.

1029 ORGANIZATSIYA OGNYA (organization of fire)—Implementation of measures ensuring completion of fire missions in accordance with the concept of the operation (or battle), including the assignment of forces and weapons to deliver fire; coordination of fire with troop operations as regards mission, place, and time; all-round support of the conduct of fire; and also establishment of a procedure governing calls for fire, opening fire, and cessation of fire.

1030 ORGANIZATSIYA OPERATSII (BOYA) (organization of an operation [or battle])—Measures taken by commanding generals (or by commanders), by staffs, and by control elements of major field forces or strategic formations and formations, directed toward the creation of favorable conditions for completing an operational (or battle) mission. Organization of an operation (or battle) stems from an assessment of the situation and from a study of the mission assigned by higher authority, and includes the decisions made by the commanding general (or commander), the planning of the operation (or battle), issuance of combat missions to the troops, and organization of coordinated action, control points, comprehensive support, etc.

1031 ORGANIZATSIYA PVO (organization of air defense)—Adopting measures directed toward the training of air defense forces and the readying of weapons for the conduct of combat operations. Organization of air defense includes: making the decision to use air defense forces and facilities, planning air defense on the basis of the assigned missions and the decision made; organizing the region of combat operations; creating the necessary grouping of air defense forces and weapons, and determining the procedure for their operations in accordance with the indicated variants, according to the nature of enemy air operations; establishing the procedure for coordinated action, control, and support of all kinds.

1032 ORGANIZATSIYA TYLA (organization of the rear)—Measures taken for the purpose of comprehensive support of troops (or forces) under any conditions of the situation. They consist in preparation, deployment, and relocation of rear formations, units, and establishments; in the preparation and maintenance of communications; and in the protection, defense, and guarding of rear installations.

1033 ORDER (order [formation])—The array or configuration of a group of warships (or merchant vessels), and escort forces, adopted for

combat or cruising purposes, wherein the mutual positioning of the ships is elaborated in detail, the directions, intervals, and distances being governed by precise rules. An order [a formation] is created for the purpose of protection against nuclear weapons and defense against submarines, aircraft, torpedo boats, and mines. Orders [formations] are mainly in the anti-nuclear anti-submarine and anti-aircraft categories.

1034 ORDER UNIFITSIROVANNYY (unified order)—A naval combat formation envisaging the simultaneous use of all basic types of defense and protection by escorted warships (or merchant vessels) and escorting forces, during a sea passage.

1035 ORIENTIRNAYA MORSKAYA AVIATIONNAYA BOMBA (an aerial sea marker bomb)—A special-purpose bomb used to make a bright, readily visible, stain, or a smoke (fire) trace, on the water, i.e., a sighting point permitting navigational measurements to be taken.

1036 ORUZHIE MASSOVOGO PORAZHENIYA (weapons of mass destruction)—Weapons used to inflict heavy casualties. They include nuclear, chemical and bacteriological weapons.

1037 OSADNOYE POLOZHENIYE (state of siege)—An extraordinary measure for the preservation of public order. It is introduced in localities besieged by the enemy, or under other extraordinary circumstances.

1038 OSNOVNOY AERODROM (main airfield)—An airfield having works and equipment of the capital type, a surfaced runway, taxiing strips, and aircraft parking areas. The purpose of a main airfield is to act as a base for aviation units, and as a site for flight training schools and academies in both peacetime and wartime.

1039 OSOBYE REZHIM POLIETOV (special flight procedure)—A flight procedure established for airborne vehicles in frontier zones and in regions of special importance.

1040 OSTATOCHNAYA RADIATSIYA (residual radiation) (foreign)—Radiation consisting mainly of beta and gamma radiation, and acting for some time after a nuclear burst. Residual radiation is due mainly to fission fragments and to neutrons which create induced radioactivity.

1041 OS' SVYAZI (main communications artery)—A method of organizing communications in which communication between a commander (or staff) and subordinate commanders (or staffs) is effected on one link. Main radio-relay and wire communications arteries are set up in the directions that command posts move.

1042 OTDEL'NAYA ARMIYA (detached army)—A combined-arms major field force of ground troops not forming part of a front, but used by the Supreme High Command for conducting operations in an independent operational sector.

1043 OTRAVLYAYUSHCHIYE VESHCHESTVA (OV) (toxic agents)

—Toxic organic and non-organic compounds which, when used in combat, cause large scale injury, in varying degrees of severity, to enemy personnel. Toxic agents can be spread within large volumes of air, over considerable areas, can penetrate shelters, buildings, tanks, and other combat vehicles not provided with anti-gas equipment, and can rapidly cause heavy loss of unprotected personnel. Toxic agents remain dangerous for periods varying from several dozen minutes to several hours or days.

1044 OTRAVLYAYUSHCHIYE VESHCHESTVA NERVNO-PARALITICHESKOGO DEYSTVIYA (NERVNO-PARALITICHESKIYE) (neuromparalytic nerve gases)—Toxic agents that affect the central nervous system, and cause myosis (temporary blindness), respiratory difficulties (asthmatic effect), cramps, and paralysis, depending on the degree of exposure.

1045 OTRAVLYAYUSHCHIYE VESHCHESTVA OBSHCHEYADOVITYYE (nerve and paralyzant toxic agents)—Quick-acting toxic agents which affect the nervous system and the blood, causing general poisoning of the organism. They include hydrocyanic (prussic) acid, and other toxic agents.

1046 OTRAVLYAYUSHCHIYE VESHCHESTVA UDUSHAYUSHCHEGO DEYSTVIYA (choking gases)—A group of toxic agents affecting the respiratory organs (phosgene and diphosgene).

1047 OTRYAD ((1) & (2) detachment; (3) flight)—(1) A temporary unification of ground troop (or naval) units or subunits (sometimes even individual servicemen) for completion of a particular or special mission (security, seizure of a beachhead or bridgehead, reconnaissance, setting obstacles, etc.); (2) in frontier troops, a military unit; (3) in the air force, a tactical subunit.

1048 OTRYAD VYSADKI (landing detachment)—A special temporary formation of forces created to transport and land an amphibious assault force on the enemy coast. A landing detachment includes formations of surface warships of various types, groups of transports, landing craft, security forces, and assault troops, from the moment of their going on board the landing ships until they disembark onto the shore. The main mission of a landing detachment is to fight a battle for a landing by an amphibious assault force in coordinated actions with formations of aviation, formations of air defense troops, airborne assault forces, and other forces.

1049 OTRYAD KORABLEY PODDERZHKI (force of support ships)—Forces intended to provide fire support for assault troops in the battle to effect an amphibious landing, or for ground troop formations engaged in operations on the sea coast. In composition, a force of sup-

port ships includes formations of warships armed with ordnance capable of destroying coastal targets and the forces whose function is the direct security of such targets.

1050 OTRYAD OBESPECHENIYA DVIZHENIYA (OOD) movement-support detachment—A temporarily-created group of engineer subunits (mostly road engineer subunits), together with chemical and radiological reconnaissance subunits, assigned by a combined-arms formation or unit to support the movement of troops. A movement-support detachment carries out reconnaissance, removes obstacles from the route to be used, organizes by-passes around debris and obstacles, marks the route, and also does a limited amount of road repair work.

1051 OTSECHENIYE AVIATSII PROTIVNIKA (fighter protection)—A method employed by friendly fighter aviation to ensure that friendly groups of other kinds of aviation are not attacked by enemy fighters, the method being to contain (cut off) the attacking aircraft by means of an air battle.

1052 OTSECHNAYA POZITSIYA (switch position)—A position created in a defense for the purpose of preventing the enemy from spreading to the flanks. A switch position may serve as a line for hitting the enemy with fire, and for conducting counterattacks.

1053 OTKHOD (withdrawal)—An obligatory type of combat operation, associated with leaving occupied regions (lines, positions). A withdrawal is carried out for the purpose of extricating troops from strikes by superior enemy forces, permitting them to occupy positions more advantageous for subsequent offensive operations, saving time for concentration of forces in a given sector, shortening the front, etc. A withdrawal may be made only with the permission of the senior commander.

1054 OTCHETNAYA KARTA (situation map)—A graphic document composed on a blank map. It is intended to depict the situation and the course of combat operations as a whole, or individual episodes (or events).

1055 OFITSER NAVEDENIYA I TSELEUKAZANIYA AVIATSII (aircraft-guidance and target-designation officer, forward air controller)—An officer detached from an aviation formation (or unit) to a combined-arms formation (or to a naval formation) to ensure coordinated action between the aircraft and the units of this formation, and to perform the functions of target designation and to guide aircraft to ground (or sea) targets.

1056 OFITSKAYA RAZVEDKA (intelligence by officers)—Refining information about the enemy, establishing the position of friendly troops and adjacent units, verifying contradictory data on the situation, and refining data concerning the nature of the terrain in the area of combat activities. It is done personally by officers specially detailed for this purpose.

1057 OFITSERY SVYAZI (officer courier)—An officer employed as a courier to a superior staff or to staffs of subordinate or coordinate formations or units to establish communication with them or to accomplish specific missions. An officer courier is usually provided with transport (a motorcycle, automobile, armored personnel carrier, aircraft, or helicopter) and, when necessary, a radio set. An officer courier may also be sent by a superior commander to a subordinate commander to transmit (or deliver) an order, or perform a supervisory function or other responsible tasks entrusted to him.

1058 OKHVAT (close envelopment)—A troop maneuver accomplished in tactical and fire coordination with the troops acting from the front. Close envelopment is used for the purpose of inflicting decisive and sudden strikes on enemy flanks (or flank) and rear.

1059 OKHRANA VODNOGO RAYONA (OVR) (a defense of a sea or waterway area)—A type of daily combat activity of naval forces, consisting in carrying out patrol duty, and also in organizing and implementing measures and operations directed toward the anti-submarine, anti-torpedo boat, and anti-mine defense of a limited area of the sea. Defense of a sea or a waterway area has, as its purpose, timely detection of the enemy, notification of naval forces, and the protection—within the limits of the guarded area—of ships under way or at anchor from torpedo-boat attack, enemy submarine attack, and the action of mines. Defense of a sea or waterway area may also be an element of combat support (for example, defense of a sea or waterway area of an amphibious landing).

1060 OKHRANENIYE (security)—A type of support for combat operations of troops (or naval forces), effected in order to forestall surprise enemy attacks, and to prevent enemy reconnaissance from penetrating areas occupied by friendly troops (or naval forces). Security also ensures friendly troops time and advantageous conditions for deployment and entering battle. Security on the march, at the halt, and in battle, are called: "march security," "bivouac security," and "combat security," respectively.

1061 OTSENKA OBSTANOVKI (estimate of the situation)—A comprehensive study of all conditions favoring attainment of the goal of the operation (or battle) or hindering it. In estimating the situation, the following are analyzed: the composition of enemy forces and weapons, especially nuclear weapons, his grouping, and the probable nature of his actions; radiological conditions; the state, position, capabilities, and support of friendly troops; the nature of the terrain in the zone of impending action and in the areas adjacent to it; the economic condition of the region of combat operations; weather conditions; and the time of day. The conclusions drawn from an estimate of the situation serve as a basis for decision-making.

1062 OTSENKA RADIATIONNOY OBSTANOVKI (assessment of

the radiological situation)—A comprehensive study of the radioactive contamination of the terrain in an area of military operations. An assessment of the radiological situation includes establishing the nature and scale of radioactive contamination of the terrain, determining the radiation doses which personnel could receive in actions on the contaminated terrain, and calculating the possible losses occasioned by radiation. The conclusions drawn from the assessment of the radiological situation serve as a basis for determining the nature of troop activities, and for the adoption of measures to protect personnel from radiation.

1063 OTSENKA KHIMICHESKOY OBSTANOVKI (assessment of the chemical situation)—Comprehensive study of the probable nature of contamination of the terrain and air by toxic agents in an area of military operations. Assessment of the chemical situation includes: establishing the nature and scale of contamination of the terrain and air by toxic agents; determining the degree of danger presented by this contamination to personnel; and calculating of the possible number of casualties from chemical weapons.

The conclusions drawn from the assessment of the chemical situation serve as a basis for determining the nature of troop activities, and for adopting measures aimed at anti-chemical defense.

1064 OCHAG ZARAZHENIYA (center of contagion)—Territory, together with people, animals, combat materiel, transport, and other objects on it which, having been subjected to the direct effects of bacterial agents, is a source of infectious diseases.

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1065 PARASHYUTNYY DESANT (parachute assault force)—A formation or unit (subunit) of airborne assault troops dropped by parachute to conduct combat operations in enemy rear area(s), or to cover the deplaning of an air-landed assault force.

1066 PARLAMENTER (truce negotiator)—A person empowered by one of the belligerent parties to negotiate with the other. A truce negotiator enjoys inviolability. The distinguishing sign of a truce negotiator is a white flag.

1067 PAVOMNAYA PEREPRAVA (ferry crossing)—(1) A method whereby troops are transported across a water obstacle by ferries. (2) A water obstacle of limited extent, both sides of which are provided with landing stages and approach roads. Depending on the width of the water obstacle, from one to three ferries shuttle between the landing stages. The ferries are assembled from authorized bridge trains, or from among locally available craft (small vessels, barges, boats, etc.). A ferry crossing is intended to carry tanks, artillery with tractors, and other combat materiel which cannot be transported in assault landing craft.

1068 PARTIZANSKAYA BOR'BA (partisan [guerrilla] warfare)—One of the forms of active armed conflict by the popular masses for independence of the Motherland against intruding foreign invaders and reactionary governments which collaborate with them, and also against the forces of an internal counter-revolution which have started a civil war for the purpose of overthrowing popular power. Partisan warfare is waged in enemy rear areas on territory occupied by him.

1069 PARTIZANSKIYE VOYENNYE DEYSTVIYA (partisan [guerrilla] operations)—Military operations by armed groups, detachments, and whole formations of volunteers from the local population, or the armed forces, which are waged in enemy rear areas by making surprise attacks on individual garrisons or columns of moving troops, attacks on control centers (headquarters) and various enemy installations, and individual acts of sabotage, for the purpose of disorganizing rear areas, inflicting personnel casualties and losses of combat materiel on the enemy, and disrupting the normal operation of his communications.

1070 PARTIZANY (partisans; guerrillas)—National volunteers who fight against occupational forces on territory usurped by the enemy, and who rely on extensive support from the local population.

1071 PARTIYNO-POLITICHESKAYA RABOTA (Party-political work)—A most important means of strengthening the moral and political condition of personnel, enhancing the combat effectiveness and combat readiness of troops, and mobilizing personnel to successful completion of combat missions for the purpose of achieving the utter defeat of the enemy. Party-political work is accomplished by all commanders (and chiefs), by political organs, and by Party and Komsomol organizations.

1072 PARTIYNYE KOMITETY V SOVETSKOY ARMII I VOYENNO-MORSKOM FLOTE (Party committees in the Soviet Army and Navy)—Elected guiding Party organs of the Communist Party in the Armed Forces of the USSR, working under the authority of regional committees of the Communist Party of the Soviet Union (CPSU). Party committees are created by the Chief Political Directorate of the Soviet Army and Soviet Navy, with the permission of the Central Committee of the CPSU, in the central apparatus of the Ministry of Defense, and in the staffs and directorates of districts, groups of forces and fleets, and certain military academies, research institutes, and other institutions.

1073 PARTIYNYE ORGANIZATSII V VOORUZHENNYKH SILAKH (Party organizations in the armed forces)—Party organizations uniting Party members in units (warships), in military educational institutions, and in establishments.

The principal task of Party organizations is to implement requirements of the Program of the Communist Party of the Soviet Union, namely, that the Soviet Armed Forces shall be an efficient and coordinated organism, having a high level of organization and discipline, fulfilling in an exem-

plary manner the missions assigned to them by the Party, the government, and the people, and being ready at any moment to inflict a shattering repulsive blow against imperialist aggressors.

1074 PASSIVNAYA RADIOLOKATSIYA (passive radar)—Methods of detecting objects and determining their position, based on reception of the electro-magnetic energy radiated by any object having a temperature above absolute zero (-273°C). In contrast to ordinary radar, passive radar does not require irradiation of the objects being detected. Due to the absence of a transmitter, passive radar is not detected by enemy reconnaissance.

1075 PELENGATSIYA (direction finding)—Finding the angle between the plane of the geographic meridian and an imaginary plane passing through any object whatever and the point of observation. Direction finding may be applied to visible objects, sources of sound, and sources of electro-magnetic waves.

1076 PERVYY ESHELON (first echelon)—That part of an operational order of battle or combat order of troops which is in the first line or in close contact with the enemy, and is used to carry out specific missions.

1077 PEREBAZIROVANIYE AVIATSII (redeployment of aviation)—A change in the established airfield deployment of aviation units, formations, or strategic formations, brought about by the flight of such units, etc., to other airfield areas. Redeployment of aviation may be made necessary by changes in the situation, or by the necessity of a maneuver, redeployment to other sectors, or it may be undertaken as a result of a planned advance in the course of an operation.

1078 PEREBAZIROVANIYE SOYEDINENIY FLOTA (redeployment of naval formations)—Changing the place at which naval formations are based in a maritime theater of operations, for the purpose of creating groupings of forces in new operational sectors or for other purposes relative to the operational situation.

1079 PEREVALOCHNAYA BAZA (transshipment base)—A specially prepared and equipped region (or place) in which rear service elements reload troop trains and freight from one mode of transport to another, or from one railroad gauge to another. A transshipment base usually has warehouses for the temporary storage of freight, and has the necessary labor force, transportation, and cargo-handling equipment.

1080 PEREVOZKI VOYSK (troop transportation)—The movement of troops from one area to another, using various types of transport. According to its scale and purpose, troop transportation may be subdivided into strategic, operational, and mobilization categories. With regard to the mode of transport used, troop transportation may be classified as rail, road, sea, air, or combined. The basic requirements to be met by troop transportation are the timely arrival of the troops in the new area, their

full combat readiness in transit, secrecy of movements, and the ability of the troops to repulse any enemy attack during the move.

1081 PEREGRUZOCHNYY RAYON (transfer area)—A place where troops are transferred, or freight reloaded, from one mode of transport to another, or where there is a change in the gauge of a railroad. Transfer areas are prepared ahead of time.

1082 PEREGRUPPIROVKA SIL (VOYSK) (regrouping of forces [or troops])—Changing the existing operational-strategic disposition of forces and facilities in theaters (or a theater) of hostilities, and in operational sectors, by moving strategic formations (or formations) of aviation and naval forces from one area to another for the purpose of creating a new grouping and transferring operational effort to a new sector. Regrouping of forces is an important component part of maneuver and, depending upon the situation and the impending mission, may be accomplished either before, or during operations in order (a) to strengthen operational groupings during a transition from a defense to an offensive and to exploit successes, or when changing the axis of the main thrust in the course of combat, (b) to restore reserves (second echelons), etc. Regrouping of forces is accomplished by mass transportation and movement of troops (and/or redeployment of aviation and naval forces). According to its purpose and scale, regrouping of forces may be strategic, operational, or tactical.

1083 PEREDNIY KRAY (forward edge)—A hypothetical line joining the weapons of the defending subunits that are closest to the enemy.

1084 PEREDOVAYA POZITSIYA (forward position)—A position that is set up in front of the forward edge in individual sectors for the purpose of misleading the enemy concerning the true location of the forward edge of the defense, to safeguard units (or subunits) of the first echelon from surprise attack, to repulse enemy reconnaissance in force, and compel him to deploy his main body prematurely. Subunits from regiments of the first echelon are usually assigned to defend forward positions.

1085 PEREDOVOY AERODROM (advanced airfield)—An airfield located closest to the front or to the state border. An advanced airfield may be used as a base for aviation or as an alternate airfield.

1086 PEREDOVOY KOMANDNYY PUNKT (PKP) (forward command post)—A major field force (or formation) command post, deployed near the troops of the first echelon, from which the commanding general (or commander) controls the troops in action in the main sector, when control of them from the command post becomes difficult. A forward command post is also used for troop control purposes when the command post is being moved, or has been put out of action.

1087 PEREDOVOY OTRYAD (forward detachment)—(1) A detachment of troops consisting of a tank (or motorized infantry) subunit (or

unit), reinforced by subunits of special troops. In offensive combat, a forward detachment is put out ahead of a combined-arms unit (or formation) to seize and hold important lines and objectives, major road junctions, mountain passes, bridgeheads on the opposite bank of a river, pending arrival of the main body. In defensive combat, a forward detachment is sent out to conduct defensive actions in the security zone. (2) Part of an amphibious assault force used to seize a beachhead on the enemy coast and to support the continuing landing. The forward detachment of an amphibious assault force is usually subdivided into the forces making the first assault and the main body of the forward detachment.

1088 PERENATSELIVANIYE AVIATSII (change of air mission)—Change of an already-assigned combat mission or objective (target) of an aviation strike. This is done for the purpose of carrying out new, unforeseen missions. A change of air mission may be effected prior to the departure of the aircraft concerned, or when they are airborne.

1089 PERENOS USILY V KHODE OPERATSII (BOYA) (transfer of effort in the course of an operation [or battle])—Maneuver with firepower, missile units, second echelons, reserves, combat materiel, and with part of the first echelon, to develop an attack by troops in a new sector; maneuver to repulse an enemy thrust to the flanks; and also to reinforce troops in threatened sectors in the course of a defensive engagement (or battle).

1090 PEREPRAVOCHNYYE SREDSTVA (water-crossing equipment)—Floating equipment (organic, local, and improvised) and bridging structures, used by troops when negotiating water obstacles. Organic water-crossing equipment is subdivided into individual, crossing-and-assault, pontoon-bridge, treadway bridge, and sectional-bridge categories. Individual water-crossing facilities, i.e., flotation suits, pneumatic vests, etc., are used by individual soldiers to negotiate water obstacles, for work in water, and as lifesaving equipment. Local water-crossing facilities include ships, barges, constrained ferries, and boats of various types. Improvised water-crossing facilities include barrels, logs, planks, and other materials which may be used to build rafts to provide extra buoyancy to individual soldiers swimming across a water obstacle with their weapons.

1091 PERERAZVERTYVANIYE SIL FLOTA (redeployment of naval forces)—A change in the position of naval forces for the purpose of occupying a more advantageous initial position for the accomplishment of subsequent combat operations. Redeployment of naval forces is usually associated with a change of the sector of operations, and with the distribution of naval forces in new sectors. It may be strategic, operational, or tactical.

1092 PEREKHVAT VOZDUSHNYKH TSELEY (interception of air targets)—Getting fighter aircraft to an advantageous position relative to

air targets, at a distance ensuring the fighter pilots visual or radar contact with the targets, thus making possible their engagement and destruction on preassigned lines.

1093 PEREKHVAT' IZ POLOZHENIYA DEZHURSTVA V VOZ-DUKHE (combat air patrol intercept)—A type of aerial combat employed by fighter aircraft, whereby a proportion of the fighters is kept on station in the air, the engagement of air targets by such fighters being effected by ground-controlled intercept.

1094 PEREKHVAT' IZ POLOZHENIYA DEZHURSTVA NA AERO-DROME (ground alert intercept)—A type of aerial combat used by fighter aircraft. It involves the interception and destruction of aerial targets in sorties flown by duty aircrews (or subunits, units) which are held on an airfield at a prescribed state of readiness. In addition, such a method may be used to reinforce fighters engaged in combat with the air enemy.

1095 PERIOD VOYNY (period of a war)—A time interval during which major strategic goals are achieved, leading to an abrupt change in the military-political situation.

1096 PERSPEKTIVNAYA AEROFOTOS"YEMKA (oblique aerial photography)—A type of aerial photography in which the optical axis of an aerial photographic apparatus (in an airborne platform), is inclined at an angle of 45° or more to the vertical at the moment of exposure. Oblique aerial photography is done in order to obtain a more graphic representation of the nature of the terrain and local objects, engineering structures, and in order to penetrate camouflage concealing military objectives. It may also be used for reconnaissance under conditions of low cloud cover that precludes the use of continuous aerial photography, and for reconnoitering strongly-protected targets without the reconnaissance aircraft entering the zone of effective air defense fire.

1097 PLAVAYUSHCHIY AVTOMOBIL' (wheeled amphibian)—Assault-crossing equipment that enables infantry to negotiate a water obstacle together with its armament and light combat materiel. Embarkation (and disembarkation) of assault-force troops may be effected on shore or afloat.

1098 PLAVAYUSHCHIY TANK (amphibious tank)—A light tank capable of negotiating water obstacles.

1099 PLAVAYUSCHIY TRANSPORTER (BRONETRANSPORTER) ((1)-amphibious personnel carrier [armored personnel carrier]; (2)-amphibious cargo carrier [armored cargo carrier])—(1) A combat vehicle that can be fired from, used to transport troops on land, and can carry troops across water barriers; (2) assault-crossing equipment used to carry artillery and motor transport (special vehicles) across water obstacles. Combat materiel may be loaded or unloaded on shore or afloat.

1100 PLAVUCHAYA BAZA (tender)—An auxiliary vessel (specially built or converted) used as a base for formations of combatant vessels (submarines, torpedo boats, etc.), and to provide such vessels and their crews with repair and maintenance services, material and technical support, housekeeping and personal facilities.

1101 PLAN VOINSKIKH PEREVOZOK (schedule of military consignments)—The complex of documents pertaining to consignments of troops and freight. A schedule of military consignments is prepared for each type of transport separately. For a front as a whole, a unified schedule of consignments is formulated for all types of transport for the impending operation or for an established calendar period.

1102 PLAN OPERATSHI (operation plan)—An operational document formulated by the staff of a major field force jointly with the chiefs of service branches, special troops, and services, on the basis of a decision by, and on the instructions of the commanding general. Indicated in an operation plan are the grouping of enemy forces and facilities, and the possible nature of his activities, the initial and subsequent missions of the major field force, their depth, the time limits for their completion, and the rate of advance; the sectors of the main, and other, thrusts; the objectives to be destroyed by nuclear weapons at the outset and in the course of the operation; the operational structure, the missions of the troops, and the dividing lines between them; adjacent units and their missions; the disposition of the control posts. Also determined in an operational plan are the distribution of nuclear munitions, of reinforcements and air support, the ratios of forces and weapons, and also the distribution of materiel resources.

1103 PLAN PROTIVOVOZDUSHNOY OBORONY (air defense plan) In major field forces (or formations) of national air defense forces, this is a fundamental operational document; in strategic formations (or formations) of the other Services, it is a component part of the operation plan (combat activities plan). The air defense plan specifies the missions of air defense troops (forces and weapons) and the sequence in which they are carried out; the grouping of air defense troops (forces and weapons), and possible maneuvers by them; methods of combat operations used by air defense troops (forces and weapons), and their variations, procedures for coordination, support, and control of air defense troops (forces and weapons).

1104 PLAN RAZVEDKI (reconnaissance plan)—A staff working document, setting out the organization of reconnaissance for a definite period of time. A reconnaissance plan is a component part of an operation (or battle) plan, and is set out in writing or graphically (on a map). Reflected in a reconnaissance plan are the goal and missions of reconnaissance, who is to carry it out, and time limits for completion of the missions, the deadlines and procedures for rendering reconnaissance reports (the data ob-

tained), and the reserve of reconnaissance forces and facilities. When necessary, reconnaissance plans indicate the methods to be used to complete reconnaissance missions, and the procedure for preparing reconnaissance elements and supporting their activities.

1105 PLAN TYLOVOGO OBESPECHENIYA (rear services support plan)—A document formulated by the rear services staff of a major field force or on the basis of the decision made by the commanding general, his instructions, and instructions from senior rear services authorities.

Indicated in a rear-support plan are the dividing lines between the rear zones; the grouping and locations of rear services formations, units, and establishments; organization of communications; the extent to which the troops are to be provided with materiel and the organization of its delivery; organization of medical support; measures for the protection, guarding, and defense of the rear; and organization of control of rear services.

The rear services support plan is a component of the operation plan and is approved by the front, fleet or army commander.

1106 PLANOVAYA AEROFOTOS"YEMKA (vertical aerial photography)—The basic type of aerial photography, in which the optical axis of an aerial camera, mounted in an airborne platform, coincides, at the moment of exposure, with the vertical, or is inclined to it by a small angle, so that the aerial photograph obtained is an approximate plan of the terrain. It is used to photograph area and point objects, as well as zones (or regions). Vertical aerial photography permits various military objectives to be detected, and their actual dimensions and coordinates to be determined.

1107 PLATSDARM VYSADKI (beachhead)—A sector of coastal territory used for landing and deployment of the main body of an amphibious assault force, in order that such an assault force may complete its operational missions on shore. The size of a beachhead is determined by the composition of the assault force, by its missions, by the condition of the terrain, and by the nature of enemy anti-landing defenses.

1108 PLATSDARM STRATEGICHESKIY (strategic battle area)—An extensive territory, sometimes encompassing an entire state, permitting deployment of a large grouping of armed forces for the purpose of conducting a strategic operation.

1109 PLOSKAYA ZONA PORAZHENIYA (plane zone of impact)—The projection of the zone of impact of an air defense missile complex, or air defense artillery, on the horizontal plane.

1110 PLOTNOST' ARTILLERIYSKAYA (artillery density)—The number of guns, mortars, and rocket artillery combat vehicles involved in a battle, per kilometer of front.

1111 PLOTNOST' ZAGRAZHDENIYA (obstacle density)—The total

extent of obstacles of all types (in kilometers), per kilometer of probable tank approach, for a given sector or line.

1112 PLOTNOST' ZARAZHENIYA (contamination density)—The quantity of toxic agents per unit of contaminated area (or surface), expressed in grams per square meter or in tons per square kilometer.

1113 POVSEDNEVNAYA OPERATIVNAYA DEYATEL'NOST' VOYENNO-MORSKOGO FLOTA (routine operational activity of the navy)—One of the ways in which the fleet resolves the general missions assigned to it. Routine operational activity of the navy is carried on throughout the entire duration of a war, and consists in: ensuring the stability of the system for basing naval forces; organizing observation within the theater; conducting reconnaissance and patrols; securing friendly sea communications; organizing and implementing all forms of defense within the theater; attacking enemy targets that appear suddenly at sea, etc.

1114 POGRANICHNYYE VOYSKA (border troops)—Special troops used to guard the state borders.

1115 PODAVLENIYE PROTIVNIKA (neutralization of the enemy)—Attacking the enemy with various weapons so as to inflict damage on him, thereby reducing his combat capability, limiting or eliminating his maneuvering power, and disrupting his control of his own troops.

1116 PODAVLENIYE RADIOELEKTRONNYKH SREDSTV PROTIVNIKA (suppression of enemy electronic facilities)—Partial or complete disruption of the normal operation of enemy electronic facilities by jamming.

1117 PODVIZHNAYA ARMEYSKAYA BAZA (mobile army base)—An army rear services element, including base administration, dumps with reserves of materiel, and units for servicing the base. The amount of materiel and inventory held in a mobile army base is such as to permit the base to be moved by land from one region to another, using transportation organic to the army.

1118 PODVIZHNYYE ZAPASY MATERIAL'NYKH SREDSTV (mobile stocks of materiel)—Stocks of materiel (all types of ammunition, fuels and lubricants, military and technical equipment, provisions, etc.) kept with transportation elements of formations, units, and subunits, and also with weapons, as well as in the immediate possession of personnel. Mobile stocks of materiel are intended to provide the troops with all the necessities of life and needs for combat operations in the event of a breakdown in supply. Mobile stocks of materiel must be replenished daily, and must always be kept up to established levels.

1119 PODVIZHNYYE SREDSTVA BAZIROVANIYA KORABLEY (mobile naval base facilities)—Naval engineering support facilities. They are intended to permit temporary naval bases to be set up on short notice

on sectors of the sea coast which have not been prepared in the engineering sense. Mobile naval base facilities include: collapsible floating berths; mobile units for supplying ships with weapons, fuel, electricity, water and provisions, and for effecting ship repairs; prefabricated and quickly erected structures for housing control posts and communications centers, for the storage and preparation of weapons, and for personnel accommodation.

1120 PODVIZHNY AVTOREMONTNYY ZAVOD (mobile motor vehicle repair facility)—A military unit of front subordination that undertakes major overhauls of motor vehicles.

1121 PODVIZHNY ZAGRADITEL'NYY OGN' (FZO) (rolling barrage)—A type of artillery fire used in defense. A rolling barrage consists in successive shifts of a powerful curtain of fire from one preselected, observed line to another, during an enemy tank attack.

1122 PODVIZHNY OTRYAD ZAGRAZHDENIY (POZ) (mobile obstacle detachment)—A detachment made up of engineer subunits (or units) with the means of constructing obstacles in sectors which show promise for enemy tank counterattacks (or counterstrikes), and the means of closing breaches caused by nuclear strikes, and of covering troop and limiting points. A mobile obstacle detachment carries out its missions in close cooperation with the anti-tank reserves, with the subunits (or units) in action in the given sector, or independently.

1123 PODVIZHNY REZERV MATERIAL'NYKH SREDSTV (mobile reserve of materiel)—An established quantity of materiel loaded onto transport (rail, road, air, water), and intended for dispatch at short notice, and in the required direction, for the purpose of replenishing an unanticipated expenditure.

1124 PODVODNAYA LODKA (submarine)—A combat vessel intended to cruise and conduct combat operations under water. A submarine is used to destroy surface warships, other submarines, and transport vessels, at sea and in bases (ports), and also to demolish important installations in a wide coastal zone of enemy territory. The basic combat feature of a submarine is the covert nature of its actions. According to their armament, submarines are divided into missile, torpedo, minelaying, and special categories. Special-purpose submarines include those in the radar-patrol, transport, amphibious-assault, and oil-tanker categories. According to their displacement, submarines may be classified as large, medium, or small; and according to their type of propulsion machinery, they may be identified as diesel-battery, gas-turbine, or atomic-powered.

1125 PODVODNAYA LODKA ATOMNAYA (atomic submarine)—A submarine having an atomic power plant for propulsion under water and on the surface. An atomic submarine is capable of moving underwater for a long time, and can thus travel great distances without surfacing.

1126 **PODVODNAYA LODKA RAKETNAYA (PODVODNYY RAKETONOSETS)** (missile submarine)—A submarine whose main armament consists of ballistic or cruise missiles. The number and kind of missiles, their performance data, and the type and power of their charge depend on the type of mission assigned to the submarine.

1127 **PODVODNYYE LODKI FLOTA** (fleet submarines)—One of the main branches of a fleet, which includes strategic formations and formations of submarines of various classes and sub-classes (or types). Fleet submarines are used to destroy enemy warships and transports, and to demolish installations on enemy territory, both independently and in coordinated action with other branches of the fleet. Fleet submarines may also be used to conduct reconnaissance, lay mines, land reconnaissance-sabotage groups clandestinely on the enemy coast, guide friendly strike forces to enemy targets at sea, transport personnel and important cargoes, etc.

1128 **PODVODNYY YADERNYY VZRYV** (underwater nuclear explosion)—A nuclear explosion which takes place under water.

1129 **PODGOTOVKA ISKHODNYKH DANNYKH DLYA PUSKA RAKET** (preparation of initial missile launch data)—Determination of the required settings for the guidance and control instruments to ensure a given direction and range of a missile flight.

1130 **PODGOTOVKA ISKHODNYKH DANNYKH DLYA STREL'BY ARTILLERII** (preparation of initial artillery firing data)—Selection of projectile, charge, fuze, sheaf, and type of trajectory, in accordance with the nature of the target; and determination of sight settings, taking all corrections (ballistic, topographic, meteorological, etc.) into account.

1131 **PODGOTOVKA KARTY** (preparing a map)—Trimming the sheets, gluing, highlighting the designations of the kilometer grid and the depictions of the terrain features which are most important in the given situation, folding the map for convenience in use.

1132 **PODGOTOVKA OKEANSKOGO (MORSKOGO) TEATRA VOYENNYKH DEYSTVIY** (fitting out of an ocean [or maritime] theater of operations)—A system of measures effected in peacetime and wartime within the limits of a given theater for the purpose of creating favorable conditions for combat operations by a friendly navy in its execution of wartime missions, and for the purpose of hindering enemy operations. The fitting out of an ocean (or maritime) theater of operations consists in building and equipping naval bases and dispersed basing facilities for naval forces, airfields, positions for coastal missile units and coastal artillery; in deployment, on the coast, of a system of technical facilities for communications, observation, navigation, and radio reconnaissance; in the organization of all types of defense and protection against enemy attack by sea and by air, including anti-submarine, anti-

mine, and anti-aircraft defense, and anti-nuclear protection of regions where naval forces are based; in the organization of anti-landing defense of the more important sectors of the coast; and in the creation of materiel and technical reserves.

1133 PODGOTOVKA OPERATSII (preparation of an operation)—The system of measures implemented by the command, staffs, Party-political elements, and troops (or by aviation, the fleet) in preparation for an operation, to ensure its comprehensive support. The principal measures associated with preparing an operation are: decision making; assignment of missions to major field forces or strategic formations (or formations); planning the operation; organizing the delivery of nuclear strikes, coordination, and comprehensive support for the combat operations of troops (or of aviation, the fleet) in the operation; preparation of formations and staffs; organization of control and communications.

1134 PODGOTOVLENNAYA OBORONA (prepared defense position)—A defense fully prepared in the engineering sense, and occupied by troops. It is characterized by the following features: an organized fire plan, based on nuclear-missile strikes, supplemented by air strikes and artillery fire; thoroughly-organized coordination between forces and weapons; and stable control.

1135 PODDERZHIVAYUSHCHAYA ARTILLERIYA (supporting artillery)—Artillery which, while remaining subordinated to the senior artillery commander, carries out fire missions assigned by the commander of the combined-arms formation (or unit) being supported. Artillery temporarily drawn from second echelons to support combat operations of units or formations of the first echelon is also regarded as supporting artillery in relation to such units or formations.

1136 PODZEMNYY YADERNYY VZRYV (underground nuclear explosion)—A nuclear explosion which takes place below the earth's surface.

1137 PODLETNOYE VREMYA (approach time: enroute time)—The time of flight of an enemy air target from the moment of its detection until the moment when it enters the zone of our air defense weapons (including the zone of activity of fighter aviation); or the time of flight of an aircraft from its airfield to the target (objective) which it attacks.

1138 PODFYV MORAL'NOGO POTENTIALA (undermining of national morale)—The impact of various methods, including means of a military nature, on the morale of the population of a hostile state or bloc of states, leading to loss of confidence among the people in the successful outcome of the war, and to their unwillingness to make further sacrifices and suffer further deprivations for the sake of the unjust goals of an aggressive war. The development of anti-military attitudes, culminating in the people's refusal to support the government which is waging the

war, is always considerably accelerated by military defeats, and by heavy losses in personnel and materiel.

1139 PODKYV EKONOMICHESSKOGO POTENCIALA (undermining economic potential)—Activities directed toward a substantial reduction in enemy economic resources. Economic potential may be undermined both by hostilities and by other means.

1140 POD"YEM KARTY (highlighting a map)—Strengthening the contour lines and intensifying the colors of the conventional symbols on maps and plans for the purpose of enhancing their clarity when the map or plan is used for terrain study. Highlighting is especially important in the case of black-and-white maps. The pencils used for color intensification should conform to the color convention adopted for topographic maps, namely: brown and red for roads; green for vegetation; dark blue and light blue for hydrographic symbols; and black for building contours and inhabited localities. Under field conditions, only those parts of a map which are relevant to the given mission are highlighted.

1141 POZITSIONNAYA VOYNA (POZITSIONNYY PERIOD VOYNY) (historical) (positional warfare [the positional period of a war])—A war (or period of a war) in which the military activities in all, or the principal, theaters were distinguished by the formation of continuous fronts, by their protracted stability, and by slow, methodical, but largely ineffectual, attempts to break through them (for example, the positional period of World War I).

1142 POZITSIONNAYA OBORONA (historical) (positional defense)—Defense in which one of the main goals was tenacious retention of particular zones of the terrain, well prepared in the engineering sense, and occupied by troops.

1143 POZITSIONNYY METOD ISPOL'ZOVANIYA PODVOD-NYKH LODOK (the positional method of using submarines)—The method of employing submarines in a particular sector of the sea (i.e., in a particular position), within the limits of which they await the appearance of the enemy or observe his activities and the situation. This method is used in those cases where the enemy will be obliged to pass through the given region (sector) of the sea. The dimensions of a position are determined by the feasibility of the submarines detecting and attacking an enemy passing through it. The positional method of utilizing submarines is passive.

1144 POZITSIYA (position)—A sector of terrain either organized or not—in the engineering sense—for occupation by troops. Positions occur in the following categories: forward, primary, switch, assembly, launching, firing, temporary, alternate, dummy, etc.

1145 POISK ((1) & (2) search; (3) raid)—(!) Searching out enemy objectives on land and at sea from aircraft (or helicopters); the quest for such

objectives at sea by surface ships or submarines. (2) Detection of air targets and operating enemy radio-technical facilities with the aid of radio-technical reconnaissance equipment. (3) One of the methods of ground reconnaissance when in close contact with the enemy. A raid consists in a covert approach by a reconnaissance group to a selected and previously studied objective, in enemy-held terrain, and in a surprise attack on it to seize prisoners, documents, and samples of weapons and equipment.

1146 POISKOVO-UDARNAYA GRUPPA PLO (korabel'naya, aviatsionnaya) (antisubmarine warfare search-and-strike group [naval, aviation])—A group especially made up of surface ships and aircraft (or helicopters) used to seek out and destroy enemy submarines.

1147 POLEVAYA POYEZDKA (field trip)—One of the forms of operational training, which pursues the following goals: (1) study by generals (admirals) and below, in the field (or at sea), of individual operational-tactical or military-historical subjects, as well as study of a theater of operations, or of an individual operational-strategic sector; (2) training and coordination of staffs in districts (or in groups of forces, fleets) and in armies for their functions as control organs.

1148 POLEVAYA SLUZHBA SHTABOV (staff field service)—The aggregate of regular duties and activities of staffs, and of the individuals composing them, ensuring the commander firm and uninterrupted control of his troops under combat conditions.

1149 POLEVOY AERODROM (field airdrome)—An airfield which may be used for basing units of army and naval aviation. Some field airdromes have an unpaved runway, and some have a paved runway. The size of a field airdrome depends on its purpose.

1150 POLEVOY MAGISTRAL'NYY TRUBOPROVOD (field trunk pipeline)—A system of pipes and pumping facilities intended for transporting fuel (gasoline, kerosene, diesel fuel, etc.). A field pipeline may be used most effectively in a front link for supplying fuel from front service area bases to the sections of front on-ground fuel dumps, and also to mobile aviation bases, of air armies. Starting points for deploying a field pipeline may be: fuel dumps located on the route of a permanent trunk pipeline; large covered fuel bases with reserves permitting protracted operation of the pipelines; and also points on rail and water transportation routes, with uninterrupted deliveries of fuel from areas in the deep rear.

1151 POLIGON ("polygon" [range])—A sector of terrain with auxiliary installations, especially equipped for conducting tests on technical equipment and armament, artillery firings, and troop training exercises. According to their purpose, such ranges are subdivided into the following categories: artillery, tank, engineer, motor vehicle, and others.

1152 POLITIKO-MORAL'NYYE I BOYEVYYE KACHESTVA LICHNOGO SOSTAVA VOORUZHENNYKH SIL (political-moral fighting qualities of armed forces personnel)—The moral-political, combat, psychological, and intellectual qualities which are needed by a serviceman in modern warfare. Political-moral combat qualities that are cultivated in the Soviet Armed Forces include a high level of social awareness and devotion to the Motherland and to the ideals of Communism; proletarian internationalism; faithfulness to the oath and to military comradeship; hatred of enemies; alertness; consciousness of military duty; heroism; willingness for self-sacrifice for the sake of victory over the enemy; a high level of discipline; a sense of military honor; courage; initiative; respect for combat materiel; etc.

1153 POLITICHESKAYA PODGOTOVKA LICHNOGO SOSTAVA SOVETSKIKH VOORUZHENNYKH SIL (political training of Soviet Armed Forces personnel)—A system of measures for the ideological and political education of personnel. It includes: political sessions with soldiers, sailors, sergeants, and senior NCO's; training of generals, admirals and officers in the tenets of Marxism-Leninism; political education of servicemen and their families, and of Army and Navy civilian workers and employees (evening courses in Marxism-Leninism, Party schools, groups, and seminars).

1154 POLITICHESKAYA RABOTA V BOYEVOY OBSTANOVKE (political work in a combat situation)—The system of measures in propaganda, agitation, and political education, implemented by political organs, Party and Komsomol organizations, commanders, and political workers, among servicemen and the civilian population in the zone of combat operations, and also among enemy armed forces personnel and population.

1155 POLITICHESKIYE OTDELY (UPRAVLENIYA) (political departments [directorates])—The leading Party organs of the Communist Party of the Soviet Union (CPSU) in the Armed Forces of the USSR in the field of Party-political work. It is an obligation of political departments to devote all their work to strengthening the combat might of the Soviet Army and Navy, ensuring the daily and undivided influence of the Communist Party on the entire life and activity of the Armed Forces, and the solidarity of personnel around the CPSU and the Soviet government. Political departments are created in the army and in the fleet by the Ministry of Defense and the Chief Political Directorate in accordance with the structure established by the Central Committee of the CPSU.

1156 POLKOVAYA ARTILLERIYSKAYA GRUPPA (PAG) (regimental artillery group)—Artillery consisting of more than one artillery battalion, at the direct disposal of a regimental commander, assigned at the time of a battle to carry out missions on behalf of the regiment, and unified by a common command.

1157 POLKOVAYA ARTILLERIYA (regimental artillery)—Artillery and mortar subunits, organizationally part of a motor rifle (or tank, or air assault) regiment, and directly subordinated to the regimental commander.

1158 POLKOVY UCHASTOK OBORONY (regimental defense sector)—A sector of terrain defended by a combined-arms unit (i.e., a regiment), and bounded as follows: to the front, by the forward edge; to the rear, by the depth of the combat formation of the regiment; and to the flanks, by the boundaries with adjacent units.

1159 POLNAYA DEZAKTIVATSIYA (complete radioactive decontamination)—Removal of radioactive substances from the entire surface of the contaminated object. It is done at special processing points or directly in subunits, using issued or improvised means, upon completion of combat missions by the troops.

1160 POLNAYA SANITARNAYA OBRABOTKA (complete personal decontamination)—Removal of toxic agents, radioactive substances, and bacterial agents from the entire surface of the human body. It is done only in those cases where the degree of personal contamination after partial processing still exceeds the permissible levels. Complete personal decontamination is done in an uncontaminated area at special processing points or directly in subunits, upon completion of combat missions, by those concerned.

1161 POLNAYA SPETSIAL'NAYA OBRABOTKA (complete special decontamination)—Sanitary decontamination of personnel; radioactive and chemical decontamination, and disinfection of combat materiel, uniform, accoutrements, protective clothing, and personal protective equipment. It is done once the troops have completed their assigned missions, on instructions from the commander of the formation (or unit), at special decontamination points deployed by chemical subunits, or directly in subunits using issued or improvised means.

1162 POLOSA NABLYUDENIYA (observation zone)—A zone of terrain in which reconnaissance by observation is conducted from several posts. An observation zone is bounded to the right and to the left by local terrain features.

1163 POLOSA NASTUPLIENIYA (offensive zone)—A zone of terrain assigned to an advancing major field force, formation, or unit, bounded to the right and to the left by hypothetical dividing lines with adjacent units, such lines passing through local terrain features, which are given inclusively or exclusively to the given unit.

1164 POLOSA OBESPECHENIYA (security zone)—A zone created ahead of the forward edge of defending troops. A security zone is created when there is no close contact with the enemy, and usually consists of

several positions, covered by obstacles and defended by the troops in action in the security zone. The depth of a security zone depends on the concept of the defense, the nature of the terrain, and the availability of time for its preparation.

1165 POLOSA OBORONY (defense zone)—A zone of terrain defended by a combined-arms army (or a combined-arms formation), and bounded to the front by the forward edge; to the rear, by the depth of the operational order of battle (or combat formation) of the defending troops; and on the flanks, by the dividing lines with adjacent units.

1166 POLOSA PREDUPREZHDENIYA (warning zone)—A radar zone created for the purpose of giving air defense troops early warning that the air enemy is approaching. Warning zones are created mainly above sparsely-populated areas and in maritime sectors, in order to ensure timely detection of the air enemy at remote approaches to important industrial-economic regions of the country, defended by air defense troops. A warning zone may be created by radar picket ships, by submarines in the same role, or by radar reconnaissance aircraft, operating in accordance with a definite plan.

1167 POLOSA PRIYEMA (PEREDACHI) TSELEY (track transfer zone)—An agreed upon zone at the limiting point of adjacent radio-technical units, formations, or strategic formations of air defense troops, above which transmission and reception of air targets must take place between cooperating formations (or units) and strategic formations of air defense troops.

1168 POLOSA PRIKRYTIYA (screening zone)—A zone of terrain organized in the engineering sense, and occupied by individual units (or subunits) for the purpose of covering the withdrawal or disengagement of the main body of a given formation or major field force.

1169 POLOSA RAZVEDKI (reconnaissance zone)—A zone of terrain at the disposal of the enemy, bounded to the right and to the left by hypothetical demarcation lines within which reconnaissance must be conducted by the forces and facilities of a major field force (formation, unit). It is usual to assign a reconnaissance zone which is wider than the zone of action of the entire major field force (formation, unit), and no less deep than the depth of the operational (or combat) mission of the major field force (formation, unit).

1170 POLOS Y VOZDUSHNYKH PODKHODOV K AERODROMU (airfield approach zones)—The sectors of airfield territory adjoining the ends of the runways, paved or otherwise, and ensuring aircraft safety during takeoff and landing. The dimensions of the airfield approach zones are governed by aircraft takeoff and landing characteristics.

1171 POMEKHOZASHCHISHCHENNOST' (resistance to counter-

measures)—The ability of radio-electronic equipment to perform despite countermeasures.

1172 POMEKHOUSTOYCHIVOST' (stability under countermeasures)—The ability of a radio-electronic system to perform the tasks for which it was designed, despite the action of countermeasures directed against its individual component networks.

1173 PONTONNYY PARK (bridge equipment)—Authorized items issued to engineer troops, and intended for erecting pontoon bridges and arranging ferry crossings. Bridge equipment is made up of various materials, and is of diverse design and load-carrying capacity. Bridge equipment is transported on motor vehicles. When afloat, it may move under its own power, or be towed.

1174 PORAZHAYUSHCHIYE FAKTORY YADERNOGO VZRYVA (injurious effects of a nuclear burst)—The shock wave, flash, penetrating radiation, and radioactive contamination of the terrain.

1175 PORT (MORSKOY, RECHNOY) (port [sea, river])—A sector (or region) of sea coast (or river bank) with harbors and basins which are not only used for loading and unloading (operations), but also provide warships and merchant vessels with shelter from foul weather.

1176 POSADOCHNAYA PLOSHCHADKA (landing area)—(1) A sector of terrain organized in the engineering sense, and permitting formation of a base for units of light aviation (medical, liaison), and helicopters; (2) a sector of terrain intended to permit aircraft to land in enemy rear areas, thus permitting a landing by an air assault force.

1177 POSADOCHNAYA RADIOMAYACHNAYA GRUPPA (radio-beacon landing group)—A group of radio-technical facilities, including localizer and glide-path transmitters, intended to ensure safe landings by aircraft under adverse weather conditions, by day and night.

1178 POSLEDOVATEL'NOYE SOSREDOCHENIYE OGNYA (PSO) (successive fire concentration)—A type of artillery fire used in artillery support of advancing troops, consisting in successive neutralization, by artillery fire, of enemy weapons, personnel, tanks, and other combat materiel, along the front and on the flanks of advancing motor rifle and tank units. Successive fire concentration is conducted against targets which are located separately or in strong points, and which are arbitrarily grouped into sectors for neutralization. Such sectors are projected on the basis of previously-reconnoitered targets, the presence of which, in the given sector, is known.

1179 POSLEDOVATEL'NYYE OPERATSII (consecutive operations)—A series of operations conducted consecutively, one after another, in connection with designated and sequentially attainable goals, each of which emerges directly from the preceding one.

1180 POSLEDOVATFL'NYYE UDARY (successive strikes)—Strikes delivered by aircraft sequentially against the same, or various, installations (or areas), for the purpose of producing a sustained impact upon the enemy.

1181 POSLEDUYUSHCHAYA ZADACHA (subsequent mission)—The part of the combat mission which must be fulfilled by troops in offensive combat after completion of the initial mission. It is determined by the purpose of the battle, and presupposes, for its execution, partial changes in the combat formation (for example, commitment to battle of the second echelon), and in coordination (for example, re-subordination of artillery, etc.).

1182 POSPESHNO ZANYATAYA OBORONA (hasty defense)—A defense created by troops in the course of combat operations. At the beginning of its organization, such a defense is characterized by: incomplete readiness and consequent reduced stability; an insufficiently developed and organized fire plan; hurriedly-organized coordination; insufficient development of the system of engineer structures; weak exploitation of the terrain; and insufficiently stable control. A hasty transition to defense, under modern conditions, may stem from the need to repulse counterstrikes by superior enemy forces in the course of offensive operations as a result of an unsuccessful meeting engagement (or battle); the efforts of a defender to halt, with his reserves, further advance of enemy troops which have broken through on some intermediate line; and also, in a withdrawal, when the retreating side, defended by rear-guard elements on an intermediate line, tries to extricate the main body under attack.

1183 POSTOYANNYY AERODROM (permanent airfield)—An airfield having airfield structures and equipment of a capital type. A permanent airfield is intended for permanent basing of aviation units, aviation academies, and schools, in both peacetime and wartime.

1184 POSTROYENIYE OBORONY (structure of a defense)—A troop structure, a fire plan, and engineer organization of the terrain. The structure of a defense must be in accord with the concept of the operation (or battle) and the plan of conducting it. The organization of a defense must be deeply echeloned, ensuring wide maneuver of forces and facilities, both frontally and in depth, ensuring concentrated and effective use of nuclear missiles and other weapons against the most important groupings of the attacking enemy, and delivery of counterstrikes (or conduct of counterattacks) by second echelons and reserves.

1185 POKHODNAYA ZASTAVA (march security patrol)—An element of march security. The march security patrol is detailed from the advance guard, or directly from subunits (or units) for which security is provided. A march security patrol may be in the forward or flank category.

1186 POKHODNOYE OKHRANENIYE ((1) march security; (2) screening of ships in passage)—(1) The safeguarding of troops on the march, this being accomplished by advance guards, rear guards, detachments, outposts, and patrols. (2) The screening of ships during passage by sea, either singly or in formation, such protection being organized to include timely detection of enemy presence; appropriate warning of the escorted ships; repulsing enemy attacks; and the use of reconnaissance counter-measures. The screening force is a component part of the cruising formation and may consist of several screens: an outer one, for warning, and interference with enemy forces; and an inner one, for repulsing attacks by enemy forces which have penetrated the outer screen.

1187 POKHODNYI PORYADOK ((1) march formation; (2) tactical formation [of warships])—(1) A troop formation, consisting of columns, for use on a march. It must ensure the following: high speed of advance and maneuver; rapid deployment for combat; the least possible vulnerability to the effects of enemy weapons of mass destruction; conservation of strength of personnel and vehicles; and ease of troop control. (2) The mutual positioning of warships in passage, as a group, by sea, ensuring their safety, rapid reforming into a battle formation, and ease in controlling forces.

1188 PRAKTICHESKAYA DAL'NOST' POLETA (practical range of an aircraft)—The distance flown by a single aircraft from take-off to landing, having expended its entire fuel supply, not counting the emergency reserve (allowing for changes in the weather and combat situation).

1189 PREVENTIVNAYA VOYNA (preventive war)—An attack by imperialist aggressors who count on the unpreparedness of the country (or countries) which is (or are) the object of aggression. The theory of preventive war is a militaristic theory; it makes propaganda concerning the necessity of a "preventive" war against the Soviet Union and other countries of the socialist system, although everyone knows that the Soviet Union does not intend to attack anyone. Proponents of preventive war openly proclaim an expansionist course in politics and strategy. The theory of preventive war is based on the notion of a sudden, unexpected attack on the USSR using weapons of mass destruction. Basically, this theory is adventuristic, as it contradicts the objective laws governing victory or defeat in war under the conditions of the developing crisis of capitalism. A preventive war would merely accelerate the complete downfall of imperialism.

1190 PREVOSKHODSTVO V VOZDUKHE (foreign) (air superiority)—Possession of air superiority consists in having an air force whose capabilities are such as to ensure a high level of activity and freedom of action during a definite period of time, either throughout the theater of operations as a whole, or in individual sectors.

1191 PREVOSKHODSTVO V SILAKH I SREDSTVAKH (superiority in men and equipment)—A correlation of men and equipment in which one side is superior to the other, thus enjoying conditions that ensure fulfillment of assigned missions in an operation (or battle). Under present-day conditions, superiority in men and equipment means primarily a pre-eminence in nuclear weapons, and in the means of delivering them any distance, and also in the qualitative and quantitative superiority of the various Services of the armed forces. Superiority in forces and weapons is achieved in individual sectors, or in regions, by the following methods: concentration of forces in the main sector; deep organization of operational formations, ensuring rapid and flexible maneuver of men and equipment from depth; continuous intensification of the force of strikes, especially by nuclear weapons; timely commitment of second echelons and reserves; depriving enemy reserves of freedom of maneuver; destruction of enemy materiel, and disruption of enemy rear operations.

1192 PREGRADY (barriers)—Natural barriers which are vast, frontally and in depth (e.g., wide rivers, maritime straits, roadless mountain ranges, well-nigh impassable jungles, etc.); or artificial obstacles (extensive flooded and swamped areas, minefields and zones of radioactive contamination, mined narrows at sea), which markedly hinder the conduct of operations.

1193 PREDJOYEVOY PORYADOK (approach-march formation)—A troop grouping, differentiated frontally and in depth for the purpose of ensuring less vulnerability to enemy nuclear weapons, artillery fire, and air strikes; rapid maneuvering of troops on the field of battle; rapid deployment of troops into battle formation and rapid reversion to the march-formation; high speeds of movement and rapid negotiation of zones of contamination and devastation.

1194 PREDVARITEL'NOYE RASPORYAZHENIYE (warning order)—An order issued before a decision on the impending action is made. A warning order permits major field forces, formations (or units), to become familiar with the nature and content of the new operational (or combat) mission, and with the method of combat operations.

1195 PREDVIDENIYE (VOYENNOYE) (foresight [military])—The ability to anticipate correctly the future course of development of military operations, and of impending events. Military foresight is possible only where there is comprehensive study, taking into account all the elements of the situation; a profound understanding of the goals and missions of impending military operations; knowledge of, and allowance for, factors which can influence the development of events; and above all, an excellent knowledge of the enemy, and the absence of bias in assessing his activities. The ability to foresee is a necessary quality for every commanding general (or commander, staff officer), and is one of the basic elements determining his organizational ability.

1196 PREDEL'NAYA SKOROST' POLETA (maximum speed of flight)

—The highest speed which a given airborne vehicle is allowed to develop in flight, having regard to strength considerations (permissible strain or deformation), aerodynamic heating, vibration, and the stability or maneuverability of the design.

1197 PREDPROLIVNAYA ZONA (RAYON) (pre-strait zone [region])

—A sector of water with islands, and also with part of the sea coast, directly adjoining a strait zone, and constituting the entrance to it (or exit from it). An outer pre-strait zone and an inner pre-strait zone are differentiated, according to their position relative to the strait zone, the closed sea, and the probable enemy.

1198 PREDOLENIYE VODNYKH PREGRAD (negotiating water obstacles)—The crossing of water obstacles by troops, accomplished either with combat (i.e., an assault crossing), or without combat activities.

1199 PREDOLENIYE OBORONY (overcoming a defense)—Offensive actions by ground troops, conducted at high speed, and directed toward the utter defeat of a defending enemy in a short time. When overcoming a defense, complete defeat of the enemy is achieved by destroying him with nuclear weapons, inflicting decisive strikes on him for the purpose of fragmenting his forces and destroying them piecemeal, or emerging onto the flanks and into the rear, of the defending troops, with subsequent destruction of them. In all cases, an energetic in-depth movement is the main prerequisite for successfully overcoming enemy defenses.

1200 PRESLEDOVANIYE (pursuit)—An attack on a withdrawing enemy, undertaken in the course of an operation (or battle) for the purpose of finally destroying or capturing his forces. Destruction of a withdrawing enemy is achieved by hitting his main body with strikes from missile units and aircraft; by artillery fire; by relentless and energetic parallel or frontal pursuit; by straddling his withdrawal route; and by the pursuing troops attacking his flank and rear. Pursuit is conducted in march or approach-march formation (or in combat formation). For deep penetration into the enemy's withdrawal route, tank troops are used in the first instance, but airborne assault forces may also be employed.

1201 PRIVYAZKA POZITSIIY RAKETNYKH VOYSK I ARTILLERII (site survey for missile and artillery units)—A part of the topographic preparation for fire in missile units, and a part of topographic preparation in artillery. A site survey for missile units consists in determining the coordinates of the point where the launcher is located, and the bearing angles of the zero line and the control line. According to the situation, a site survey may be done on a geodesic basis, or on a map (or aerial photograph). In the case of artillery, a site survey consists in determining the coordinates of the battery's main guns, registration guns,

and other elements of the combat formation. It is done on a full topographic basis, or on a map (or aerial photograph).

1202 PRIGRANICHNAYA RADIOLOKATSIONNAYA ZONA (frontier radar zone)—A space along a state frontier in which detection of air targets is by radar.

1203 PRINTSIPY VOYENNOGO ISKUSSTVA (principles of military art)—The fundamental propositions which follow from the objective laws of war, and which determine trends in the preparation for, and conduct of, armed conflict, corresponding to given historical conditions. In contrast to the objective laws, the principles give recommendations for action. Use of the principles of military art by commanders and staffs at all levels, taking the actual situation into account, gives the highest possible assurance of successful attainment of the goals of the armed conflict, operation, or battle. Soviet military science considers that principles of military art are a concentrated scientific generalization of combat experience. Soviet military science denies the existence of eternal, immutable principles of military art. Such principles may be modified and perfected according to the specific military-political situation, the state of military technology, etc.

1204 PRINYATIYE RESHENIYA (planning)—The process whereby a commanding general (or commander) does the work of organizing an operation (or battle). Prior to making a plan, he must study the received mission, define measures directed toward preparing the troops to carry out the assigned mission, and evaluate the situation. In his plan, the commanding general (or commander) defines the concept of the activities of the major field force or strategic formation (or formation, unit), the combat missions assigned to subordinates, coordination procedures, and the organization of control.

1205 PRISTRELKA (adjustment of fire)—A method whereby settings suitable for hitting a given target are sought and determined by firing. Depending on the situation and the conditions for observation, adjustment of fire is done by firing directly at the target, or by firing at a registration point, with subsequent transfer of fire from it to the target. The latter method is advantageous in that the possibility of surprise is not compromised. Fire data adjustment are made more precise when firing for effect.

1206 PROVODKA VOZDUSHNYKH TSELEY ((1) tracking air targets; (2) plotting air targets)—(1) The process of continuous radar observation of an air target; (2) depiction of the tracks of air targets on the plotting boards of air defense command posts and control posts, according to data obtained from various types of reconnaissance, primarily radar.

1207 PROVODKA KORABLEY ZA TRALAMI (piloting ships behind sweeps)—A method of anti-mine security for ships, used in the event that

it is not feasible to carry out a systematic or preliminary reconnaissance sweep, and also to eliminate any residual risk of being blown up by mines. In waters controlled by the enemy, this is one of the basic measures for anti-mine defense. It may be conducted behind contact sweeps or non-contact sweeps.

1208 PROVODNAYA SVYAZ' (lit.: communications)—Communications accomplished by field and permanent cable and overhead lines. With the aid of line communication facilities and the corresponding station equipment, several types of communication may be effected, namely: telephone, telegraph, photo-telegraph, and television communication. Line communication facilities ensure high-quality telephone, telegraph, and photo-telegraph communications, regardless of the time of day or year and atmospheric interference, and also ensure convenience in operation, relative security of conversations and transmissions, and the possibility of multiplexing to obtain several channels on one circuit.

1209 PRODOLZHITEL'NOST' OPERATSII (duration of an operation)—The period of time during which a strategic formation or a major field force accomplishes the utter defeat of a particular enemy grouping and attains the goal of the operation. The duration of an operation is the quotient of the planned depth of the final mission (in kilometers), divided by the planned (or achieved) rate of advance of the troops (in kilometers per day).

1210 PROLIVNAYA ZONA (strait zone)—A zone including the vicinity of a maritime strait (or straits), with its shores and islands, and also the water expanses of the pre-strait regions, which adjoin it on both sides.

1211 PRONIKAYUSHCHAYA RADIATSIYA (penetrating radiation)—One of the injurious factors of a nuclear explosion. Penetrating radiation is a stream of radioactive radiations (gamma rays and neutrons), capable of penetrating considerable thicknesses of various materials. The duration of the injurious effect of penetrating radiation on the human organism is measured in seconds from the moment of a nuclear burst.

1212 PRORYV (breakthrough)—A method of offensive action used when conducting an offensive operation (or battle), directed toward penetrating a continuous front, which is prepared in the engineering sense, echeloned, and occupied by enemy defense troops, by making breaches (gaps) in it for the purpose of subsequent maneuver into the depth or toward the flanks.

1213 PRORYV MINNO-ARTILLERIYSKOY POZITSII NA MORE (historical) (breaking through a mine-artillery position at sea)—The aggregate of combat operations conducted by naval forces in order that warships might negotiate a mine obstacle that is covered by fire from coastal batteries and shipboard ordnance.

1214 PROTIVOVOZDUSHNAYA MASKIROVKA (air defense camouflage)—A component part of one of the types of support for an operation (or battle), namely, camouflage. It includes a system of measures for concealing the true disposition of troops, aviation, naval forces, and various installations from all means of reconnaissance used by the air enemy, i.e., visual and radar observation, photography, etc.

1215 PROTIVOVOZDUSHNAYA OBORONA (PVO) (air defense)—Defense against the air enemy. A distinction is made between unit air defense, naval air defense, and national air defense. Unit air defense is the complex of combat operations of the various air defense forces and weapons at the disposal of strategic formations or major field forces (or formations) of ground troops, conducted for the purpose of repulsing strikes by enemy aviation and missile units against troops and their rear installations, in coordinated action with national air defense forces. National air defense is the aggregate of nationwide measures to provide active protection for vitally important regions and installations of the country against air attack. The air defense of the country is accomplished primarily by national air defense forces who carry out the mission of defeating the enemy in the air in coordinated action with all the other Services. Naval air defense is accomplished by national air defense forces and air defense weapons of ships, in coordinated action with the forces and facilities of ground troop air defense units. Under contemporary conditions, air defense includes anti-aircraft, anti-missile, and anti-space defense.

1216 PROTIVOGIDROAKUSTICHESKAYA MASKIROVA (anti-hydroacoustic masking)—One of the types of submarine camouflage, consisting in the implementation of measures hindering enemy use of hydroacoustic facilities to observe a submarine which is submerged.

1217 PROTIVODESANTNAYA OBORONA POBEREZHYA (anti-amphibious defense of the sea coast)—A system of measures implemented for the purpose of frustrating any invasion of national territory by enemy troops from the sea. Anti-amphibious defense of the sea coast consists in the timely preparation of the coast, and seaward approaches to it, in preparing positions for ground troops, primarily missile units, in deploying troops on the terrain, in arranging obstacles on land and in the water, in organizing a fire plan, and in joint combat operations by ground troops, naval, and air forces to repulse landings by enemy amphibious assault forces.

1218 PROTIVODESANTNAYA OPERATSIYA (anti-amphibious operation)—A defensive operation by strategic formations of the various Services, conducted for the purpose of preventing an enemy landing operation. An anti-amphibious operation consists in the utter defeat of enemy assault forces by destroying his troops, warships, and landing facilities at

points of concentration and embarkation (loading), during passage by sea, and in the region of disembarkation.

1219 PROTIVODESANTNYYE ZAGRAZHDENIYA (anti-assault obstacles)—Obstacles arranged on shore and in the water at places accessible to amphibious or airborne assault forces, for the purpose of hindering or preventing their landing. They consist of obstacles in the following categories: anti-assault ship (mines, fougasses, cribs, steel-beam post obstacles, nets, etc.); anti-tank (mines, hedgehogs, post obstacles, ditches, etc.); anti-personnel (mines, anti-boat obstacles, barely perceptible obstacles, etc.); anti-airborne assault (mines, knife rests, steel-beam post obstacles, etc.).

1220 PROTIVOZENITNY MANEVR (anti-air defense maneuver)—A method of overcoming the countermeasures of enemy air defense facilities, used by groups of aircraft (or by a single aircraft) when flying over enemy territory. An anti-air defense maneuver is accomplished by periodic changes of course, altitude, and speed.

1221 PROTIVOKOSMICHESKAYA OBORONA (anti-space defense)—A component part of air defense. The main purpose of anti-space defense is to destroy space systems used by the enemy for military purposes, in their orbits. The principal means of anti-space defense are special spacecraft and vehicles (e.g., satellite-interceptors), which may be controlled either from the ground or by special crews.

1222 PROTIVOLODOCHNAYA AVIATSIYA (anti-submarine aviation)—One of the branches of naval aviation used to seek out and destroy enemy submarines at sea. Anti-submarine aviation is subdivided into the short-range and long-range categories.

1223 PROTIVOLODOCHNAYA OBORONA (PLO) (anti-submarine defense)—Anti-submarine defense is a component element for engaging enemy submarines, and is one of the types of naval defense. Anti-submarine defense is the aggregate of combat operations of formations (or groups) of warships and units (or subunits) of naval forces, as well as certain special measures directed toward safeguarding warships, transports, and important coastal installations from submarine-inflicted strikes, and toward denying enemy submarines the opportunity to conduct reconnaissance, lay mines, land amphibious assault forces, or engage in other activities. As a result of the development of submarines, and the increasing sophistication of their armament, the role of anti-submarine defense has grown considerably.

1224 PROTIVOMINNAYA OBORONA (PMO) (anti-mine defense)—The aggregate of combat operations of formations (or groups) of warships and units (or subunits) of naval forces, directed toward safeguarding warships and transports against the danger of mines, as well as certain special measures adopted for this purpose. Anti-mine defense is

organized and conducted in order to eliminate the mine threat, and to ensure safety of navigation to warships and transports.

1225 PROTIVOPKHOТNYYE ZAGRAZHДENIYA (anti-personnel obstacles)—Artificial obstacles erected on the battlefield, mainly in sectors of the terrain which are not traversible by tanks, for the purpose of impeding movement by enemy infantry, and inflicting casualties. Anti-personnel obstacles include mine fields, barbed-wire, hidden obstacles, concertina wire, log obstacles intertwined with barbed-wire, and strengthened with land mines, etc.

1226 PROTIVORADIOLOKATSIONNAYA MASKIROVKA (anti-radar masking)—A component part of electronic countermeasures. Anti-radar masking embraces measures adopted to conceal ground objects, landmarks, the movements and disposition of troops, naval forces, and aviation from enemy radar reconnaissance by using natural and artificial anti-radar screens, as well as by prohibiting or limiting the use of radar.

1227 PROTIVORADIOLOKATSIONNYY SNARYAD (RAKETA) (anti-radar projectile [missile])—A means of combating radar stations. Three types of projectile are used: (1) projectiles (or mortar rounds) or missiles loaded with anti-radar reflectors, to create passive interference with radar stations of various kinds; (2) missile-decoys with corner and other reflectors for diverting missiles of the "surface-air," "ship-air," "air-air," and "ground-space" types from aircraft, warships, cruise-missiles, and ballistic-missile warheads; (3) missiles which home in on the emissions of operating enemy radio-technical facilities.

1228 PROTIVORAKETNAYA OBORONA (anti-missile defense)—A component part of air defense. It is intended for detection and destruction of enemy ballistic missiles on their flight trajectories, and for subjecting them to electronic countermeasures. The basic means of anti-missile defense are anti-missile missiles and special electronic countermeasures.

1229 PROTIVORAKETNYY MANEVR (anti-missile maneuver)—Maneuver by an aircraft in flight (change of course, altitude, or speed) for the purpose of disrupting or hindering enemy guidance of air defense missiles, or reducing their effectiveness.

1230 PROTIVOTANKOVAYA AVIATSIONNAYA BOMBA (ITAB) (aerial anti-tank bomb)—An aerial bomb designed to destroy tanks, self-propelled weapons, armored personnel carriers, and other armored targets by direct hit.

1231 PROTIVOTANKOVAYA OBORONA (PTO) (anti-tank defense)—The sum total of measures used to ensure success in combating tanks, including a fire plan conducted by anti-tank weapons, used in conjunction with obstacles for the purpose of repelling enemy tank attacks in a defense. Anti-tank defense is organized throughout the entire depth of an

operational defense, primarily in the sectors of probable tank approach. An anti-tank plan includes company strong points containing anti-tank weapons; tank ambushes; firing lines prepared for occupation by tank troops and by anti-tank reserves; tanks of second echelons and of reserves, (anti-tank reserves); artillery located in sectors of probable tank approach; and anti-tank obstacles.

1232 PROTIVOTANKOVAYA PLOTNOST' (anti-tank density)—In a defense, the number of anti-tank guided missile launchers, guns, self-propelled artillery mounts, and tanks, per kilometer of front.

1233 PROTIVOTANKOVYYE ZAGRAZHDENIYA (anti-tank obstacles)—Artificial obstacles set up on the battlefield for the purpose of stopping or slowing an advance by enemy tanks, and rendering them un-serviceable. Anti-tank obstacles make it easier to inflict strikes on enemy tanks with artillery fire and other anti-tank weapons. The main types of anti-tank obstacles are the mine field and the fougasse. Also used are ditches, escarpments, counter-scarps, (steel-beam) post obstacles, abatis, landslides, and flooded or marshy terrain; and in wintertime, besides, snow banks and icy slopes. As a rule, anti-tank obstacles are covered by artillery, mortar, and machine-gun fire.

1234 PROTIVOTANKOVYYE UPRAVLYAYEMYYE REAKTIV-NYYE SNARYADY (PTURS) (anti-tank guided missile)—A powerful weapon used to engage tanks, which is in the armament of ground troop units. An anti-tank guided missile possesses great penetrating power. It is fired from combat vehicles or from portable direct-laying mounts.

1235 PROTIVOTANKOVYY REZERV (anti-tank reserve)—Part of the anti-tank weapons especially detailed to engage enemy tanks, and directly subordinated to officers commanding a front or an army (commanders of units, formations).

1236 PRYA 'AYA NAVODKA (direct laying)—A type of gunlaying performed by sighting at the target. Direct fire is delivered from open firing positions and from tanks, against stationary or moving targets. Direct fire is delivered at short range, and is distinguished by the high accuracy and speed with which the assigned fire mission can be accomplished.

1237 PSIKHOGENNYYE OV (psychogenic toxic agents)—Toxic agents which act on the central nervous system, causing disruption of mental activity (hallucinations, confused thinking, etc.). A typical representative of such toxic agents is: lysergic acid diethylamide (LSD).

1238 "PSIKHOLOGICHESKAYA VOYNA" (psychological warfare)—A term widespread in the bourgeois press, meaning the sum total of all subversive measures of a political and ideological nature, effected by various civil and military elements of imperialist states against the people and armed forces personnel of socialist countries, primarily the Soviet Union.

The basis of "psychological warfare" is falsehood, slander and misinformation, propaganda in favor of the capitalist system, and distortion of the peace-loving policy of socialist countries.

1239 PUNKT VODOSNABZHENIYA (water supply point)—A source of water and the sector of terrain adjoining it, equipped with special facilities, and intended for organized supply of fresh water to troops, warships, and naval units. Water is obtained, purified, stored, and distributed at a water supply point. Water supply points are deployed in the vicinity of artesian wells, dug wells, drilled wells, springs, surface sources of water (rivers, lakes and ponds), or at reserves of water which have been brought in.

1240 PUNKT NAVEDENIYA I TSELEUKAZANIYA (ground forward air controller)—An auxiliary post for controlling aircraft from the ground, set up in formations of ground troops, airborne-assault troops, or naval forces engaged in coordinated action with aviation.

1241 PUNKT POSADKI DESANTA (assault-force embarkation point)—The area (or place) where an assault force boards ships or aircraft (helicopters).

1242 PUNKT SPETSIAL'NOY OBRABOTKI (PUSO) (special decontamination point)—A point set up by subunits of chemical troops in order to carry out complete sanitary decontamination of personnel, as well as radioactive and chemical decontamination and disinfection of armament, combat materiel, and transport.

1243 PUSKOVAYA USTANOVKA (launcher)—A mobile or stationary device for launching missiles.

1244 PUTEPROKLADCHIK (bulldozer)—An engineering vehicle; intended for excavation work, and for removing various non-explosive obstacles in connection with the clearing of cross-country routes. Bulldozers are used when clearing cross-country routes in moderately difficult terrain, in brush, and in thickets of low or half-grown trees, clearing snow from cross-country routes, levelling sites, building roads on hillsides, grading river banks, filling in ditches, craters, and pits, felling trees, and clearing tree stumps.

1245 PUTI PODVOZA I EVAKUATSII (supply and evacuation routes)—Roads especially established in the operational rear and troop service areas, suitable for motor vehicles and other forms of transport, used for supplying troop units with materiel, and for evacuating wounded and sick, and equipment that is not needed. Supply and evacuation routes are subdivided into main, controlled, and reserve categories. The number of them depends on the situation, the state of the road network in the rear area, the possibility of maintaining them, and the demand for them.

1246 RABOCHAYA KARTA (situation map)—A map of an area of combat operations which, besides the position of friendly troops, contains essential data on the enemy, and other information. A situation map is used to prepare a plan, give combat instructions, compile combat documents, illustrate verbal reports to the senior commander, facilitate exchanges of information, etc. Each officer marks on his own situation map only those data which are needed by him in the course of his duties.

1247 RADIATIONNAYA OBSTANOVKA (radiation situation)—The situation created on land, on water, and in the air, as a result of the use of nuclear weapons. The radiation situation is defined in terms of radiation levels and the dimensions of zones of radioactive contamination, which in their turn depend on the number, yield, types, and time of nuclear bursts, the mutual disposition of ground zeroes, the mean velocity of the wind, meteorological conditions, and the relief of the terrain.

1248 RADIATIONNAYA RAZVEDKA (radiation reconnaissance)—Reconnaissance conducted in order to ensure timely detection of the onset of radioactive contamination and rapid identification of contaminated areas, and to determine the nature of contamination. Radiation reconnaissance is conducted by special reconnaissance patrols, aircraft (or helicopter crews), certain observation posts, and by reconnaissance subunits of all service branches, using dosimetric instruments.

1249 RADIOAKTIVNOYE ZARAZHENIYE MESTNOSTI (radioactive contamination of the terrain)—One of the injurious effects of a nuclear explosion. Radioactive contamination of the terrain occurs as a result of fallout of radioactive substances from the cloud of a nuclear explosion, and their formation in the soil under the action of neutrons (induced radioactivity). Neutrons that penetrate the nucleus of chemical elements in the soil make them radioactive, thus increasing the radioactive contamination of the terrain in the vicinity of a nuclear explosion.

1250 RADIOAKTIVNOYE OBLAKO (radioactive cloud)—The cloud which forms as a result of a nuclear burst. It consists of radioactive dust raised from the earth, and condensing water vapor, and moves in the direction of prevailing air currents.

1251 RADIOAKTIVNYYE VESHCHESTVA (radioactive substances)—Substances in which spontaneous decay of the atomic nuclei takes place, accompanied by nuclear radiations.

1252 RADIOVOYNA (foreign) (electronic warfare)—Measures directed toward prohibiting or diminishing the effective use of radio-electronic facilities by the enemy, and conversely. Radio warfare includes: radio-technical reconnaissance; creation of active and passive jamming of en-

emy radio-electronic facilities; radio camouflage; radio misinformation; protection of organic radio-electronic facilities from enemy jamming, etc.

1253 RADIOVOLNY (radio waves)—Electromagnetic oscillations classified according to the distance associated with one cycle, i.e., the wavelength, and used for radio communication, radar, radio navigation, etc. Radio waves are divided into the following categories: ultralong (with a wavelength of 10,000 meters, or more); long (10,000–1000 m); medium (1000–100 m); short (100–10 m); and ultrashort, which are subdivided into metric (10–1 m), decimetric (1–0.1 m), centimetric (10–1 cm), millimetric (10–1 mm), and sub-millimetric (less than 1 mm) waves.

1254 RADIOGEODEZICHESKAYA PRIVYAZKA (radio-geodesic tie-in)—Determining the geodesic coordinates of any object whatever by using radio-technical equipment.

1255 RADIODEZINFORMATSIYA (radio deception)—One of the elements of operational camouflage, carried on to mislead the enemy concerning the state, grouping, intentions, armament, and activities of our own troops; it is accomplished by broadcasting false messages by radio.

1256 RADIOLOKATSIONNAYA KONTRASTNOST' (radar contrast)—The difference between the reflection of radio waves from a given object and the reflection of radio waves from the background and other objects surrounding it. Radar contrast is used in radar to distinguish objects against the background which surrounds them.

1257 RADIOLOKATSIONNAYA RAZVEDKA (radar reconnaissance)—Obtaining reconnaissance data on targets (objectives) in the air, on land, and at sea, with the aid of radar. Radar reconnaissance permits determination of the composition and location of targets (objectives), and the nature of their activities, by day, by night, and under conditions of poor visibility; determination of mortar round, shell, and missile trajectories, and the whereabouts of enemy firing and launching positions; adjustment of fire, location of ground zero of nuclear explosions by the intersection method, etc.

1258 RADIOLOKATSIONNAYA SISTEMA (radar system)—A system in which the basic facilities are radars, for example: an air defense radar system; a missile-defense radar system; or a radar system for aircraft landing purposes. An air defense radar system is the sum total of the forces and facilities of national air defense forces, or of a front, deployed to reconnoiter the air enemy, and for radar support of combat operations.

1259 RADIOLOKATSIONNAYA STANTSIYA (RLS), **RADIOLOKATOR** (radar station [radar set])—Equipment used to detect and locate various objects that operates on a principle consisting in irradiation of these objects with radio waves, and reception of the waves reflected by them.

1260 RADIOLOKATSIONNOYE NABLYUDENIYE (radar observation)—Observation of land, sea, air, and space, with the aid of radar stations.

1261 RADIOLOKATSIONNOYE OBESPECHENIYE (radar support)—A type of special support for combat operations of the various branches and Services. In national air defense units, radar support is a component part of operational support, its purpose being to give units and formations of air defense missile troops and fighter aviation the most complete information possible concerning the air enemy, such information being necessary for decision-making and bringing the troops to a high state of combat readiness, for target designation, and for guiding fighters to air targets.

1262 RADIOLOKATSIONNOYE OPOZNAVANIYE (radar identification)—Establishing the affiliation of aircraft and warships to the friendly armed forces with the aid of radar interrogators, usually co-located with radar stations, and responders, which are located in the objects to be identified, namely, aircraft and warships.

1263 RADIOLOKATSIONNOYE POLE (radar field)—The electromagnetic field created in space by radar stations in order to detect aerial targets in it. Among air defense personnel, the term "radar field" is usually understood to mean the space in which reliable radar detection of air targets, and continuous tracking of them, is assured. Use of the term "radar field" is most widespread among air defense troops.

1264 RADIOLOKATSIONNYY ORIENTIR (radar landmark)—A feature of the earth's surface which, by virtue of its reflecting properties, stands out sharply against the background of the surrounding terrain and is therefore readily noticeable on the screen of a radar station. Radar landmarks include towns, rivers, the sea coast, lakes, islands, etc.

1265 RADIOLOKATSIONNYY POST (radar post)—A primary radar subunit and a component of radio-technical units of a front or of an army, intended to conduct reconnaissance of the air enemy by using the radar stations at its disposal.

1266 RADIOLOKATSIONNYY UZEL (radar complex)—A group of radar stations and means of communication, united by a single control post, intended to detect aerial targets and to guide fighters toward them.

1267 RADIOLOKATSIYA (radar)—Detection of objects and determination of their position based on reflection of radio waves from obstacles in the path of their propagation. In order to determine the direction of an object, the reflected radio waves are received with a directional antenna, which ensures reception of signals from a narrow sector of space.

1268 RADIOMASKIROVKA (radio camouflage)—The complex of organizational and technical measures directed toward hindering enemy conduct of radio reconnaissance. Such measures include prohibiting or

restricting the use of radar and radio equipment; operating on reduced power; changing operating frequencies and call signs; entering into communication without using call signs; etc. Special measures directed toward misinforming enemy radio reconnaissance may also be used for radio camouflage purposes.

1269 RADIOMAYAK (radio beacon)—A transmitting land (ground) radio-technical station of known position, used for ship (aircraft) navigation. There are radio beacons of the continuous-emission and pulsed-emission types. A radio beacon permits the direction to it, and in some cases, its distance, to be determined.

1270 RADIOMOLCHANIYE (radio silence)—One of the methods of radio camouflage. It consists in prohibiting the use of radio equipment for making transmissions.

1271 RADIONAVIGATSIONNAYA SISTEMA (radio navigation system)—The complex of ground (or shore) facilities and airborne (or ship-borne) equipment used for determining the geographical position of an aircraft (or a ship) and for navigation. Radio navigation systems are subdivided into systems for short-range and long-range navigation.

1272 RADIONAVIGATSIYA (radio navigation)—(1) Determination of the geographical position of an airborne craft in flight, or of a ship in passage, by the air crew or ship's crew, respectively, using radio-technical facilities and methods; (2) a branch of the science of navigation, dealing with the piloting of aircraft, and the steering of ships, with the aid of radio-technical facilities.

1273 RADIONAPRAVLENIYE (two-station net [point-to-point radio net])—A method of organizing radio communications between two commanding officers (or commanders, staff), whereby each has a radio station operating according to data (wavelength and call sign) established just for this net.

1274 RADIOPELENGATSIYA (radio direction-finding)—Determining the direction of an emitter (transmitter) of radio waves with the aid of radio receiving equipment. Radio direction-finding is widely used for reconnaissance of radio-technical facilities.

1275 RADIOPEREKHAVAT (radio intercept)—Reception of enemy radio transmissions with the aid of special radio-reconnaissance receiving apparatus, for the purpose of disclosing the content of the radio transmissions and obtaining reconnaissance data.

1276 RADIOPOISK (radio search)—Detection of operating radio stations and other radio-technical objectives with the aid of conventional or special radio-receiving equipment.

1277 RADIOPOMEXHI (radio interference)—Radio signals, emanating from special or natural sources, which preclude or hinder the operation of

radio-technical facilities. Radio interference also includes interference created by reflection of signals produced by radio-technical means from natural or special reflectors.

1278 RADIORAZVEDKA (radio reconnaissance; communications monitoring)—Obtaining information about the enemy and his radio-communication facilities by reception and analysis of radio transmissions, and by determining their content.

1279 RADIORELEYNAYA SVYAZ' (radio-relay communications)—Communications accomplished with the aid of radio-relay stations, which emit electromagnetic energy in a given direction. In order to effect radio-relay communications, metric, decimetric, and centimetric wavebands are used. In accordance with the conditions of propagation of ultra-short waves, radio-relay communications are usually possible only where there is direct (optical or geometric) visibility between the antennae of the corresponding stations.

1280 RADIOSVYAZ' (radio communications)—Communications used for direct conversation, transmission of radiograms, orders, signals, and also for transmission and receipt of graphic documents by photo-telegraphy. Radio communications may be simplex, where the transmission of information takes place in one direction only, and duplex, where there is a bilateral exchange of information. The principal methods of organizing radio communications are the two-station net (point-to-point radio net), and the radio net. Radio waves of all wavebands are used for radio communications.

1281 RADIOSET' (radio net)—A method of organizing radio communications between several (three or more) control posts or staffs, whereby each of them has a radio station (radio receiver) to be used with the operating data (wavelength and call sign) established for this radio net. The composition of a radio net is determined by its purpose.

1282 RADIOSFT' OPOVESHCHENIYA (warning net)—A radio net on which warning signals are transmitted. As a rule, transmission of warning signals is done unilaterally and circularly.

1283 RADIOTELEUPRAVLENIYE (radio remote control)—A method of controlling stationary and mobile objects at a distance by radio. In military affairs, it is widely used to guide missiles of various classes to their targets, and to control explosive devices, etc.

1284 RADIO"TEKHNICHESKAYA RAZVEDKA (electronic intelligence)—Detection of enemy radio-technical facilities and determination of their characteristics by reception and analysis of their signals.

1285 RADIOTEKHNICHESKAYA SISTEMA BLIZHNEY NAVIGATSII (short-range radio-technical navigation system)—A navigation system including radio-technical facilities located on land (in an airborne vehicle or on a ship), and having a limited radius of action, i.e. of the

order of several hundred kilometers. Such a system, operating in the ultra-short waveband, is usually very accurate.

1286 RADIOTEKHNICHESKAYA SISTEMA DAL'NEY NAVI-GATSIH (long-range radio-technical navigation system)—A navigation system including radio-technical facilities located on land (in an airborne vehicle or on a ship), and having a large radius of action, i.e. several thousands of kilometers. Such systems usually operate in the medium, long, and ultra-long wavebands. However, a long-range radio-technical navigation system may include equipment on artificial earth satellites in which case it may also operate in the short and ultra-short wavebands.

1287 RADIOTEKHNICHESKIYE VOYSKA (radio-technical troops)—Special troops intended to conduct radio-technical reconnaissance of the land, sea, and air enemy, to create interference with his radio-technical facilities, and to ensure radio remote control of weapons and airborne vehicles. Radio-technical troops consist of units (or subunits), and constitute part of the various Services, service branches, and special troops.

1288 RADIOTEKHNICHESKIYE SREDVSTVA (radio-technical facilities)—Facilities in which the principles of radio technology are used. Usually included among radio-technical facilities are radar, radio remote control, and radio navigation.

1289 RADIOTEKHNICHESKOYE OBESPECHENIYE (radio-technical support)—A type of special support in the air force, including the support of air navigation, aircraft landing, bomb aiming, aerial photography, etc., with the aid of ground radio-technical and illumination-engineering facilities.

1290 RADIOELEKTRONIKA (radio electronics)—A complex of many branches of knowledge, widely used in military affairs, which developed on the basis of radio technology and electronics. Radio electronics includes: radio communications, television, radar, sonar, radio navigation, infrared technology, radio astronomy, radio meteorology, radio telemechanics, electronic data processing, electronic technology, semiconductor technology, etc.

1291 RADIUS DEYSTVITEL'NOGO PORAZHENIYA (radius of effective destruction)—The radius of the circle within which not less than 50% of targets will be destroyed by the explosion of a single projectile, bomb, or mortar.

1292 RADIUS ZONY PORAZHENIYA YADERNOGO VZRYVA (radius of the casualty zone of a nuclear burst)—One of the characteristics of the casualty effect of a nuclear burst, determined by the shock wave, penetrating radiation, flash, and radioactive contamination of the terrain, air, installations, and materiel. The radius of the casualty zone of a nuclear burst may characterize either the combined effect of the various factors, or any factor individually.

1293 RADIUS SPLOSHINGGO PORAZHENIYA (radius of complete destruction)—The radius of the circle within which not less than 90% of targets will be destroyed by splinters from the explosion of a single projectile, bomb, or mortar round.

1294 RAZVEDKA AGENTURNAYA (covert intelligence)—A type of intelligence conducted with the aid of secret agents who have infiltrated into the country to be reconnoitred, or who have been recruited locally, for the purpose of obtaining secret data concerning the armed forces, war potential, and other information which is needed for studying the preparations for war of possible enemies, and which constitutes a state or military secret.

1295 RAZVEDKA ARTILLERIYSKAYA (RAKETNO-ARTILLERIYSKAYA) (artillery [missile-artillery] reconnaissance)—The aggregate of measures adopted by artillery commanders and staffs to obtain and process such information concerning the enemy, the terrain, and state of the atmosphere as is necessary to ensure the successful use of missile units and artillery in an operation (or battle).

1296 RAZVEDKA BOYEM (reconnaissance in force)—One of the methods of reconnaissance, in which data on the enemy are obtained by the combat operations of subunits especially detailed for this purpose. Reconnaissance in force is done only in those cases where the necessary information about the enemy cannot be obtained by other means.

1297 RAZVEDKA (VOYSKOVAYA) (troop-unit reconnaissance)—The acquisition of intelligence information concerning the location, grouping, composition, numbering, armament, combat capability, and intentions of the enemy, as well as the nature of his activities with respect to an operation (or battle).

1298 RAZVEDKA ZASADAMI (combat reconnaissance patrol)—A method of reconnaissance accomplished by surprise attack, from cover, on solitary or small groups of enemy servicemen, for the purpose of seizing prisoners, documents, and samples of weapons, equipment, and combat materiel.

1299 RAZVEDKA MARSHRUTOV (route reconnaissance)—Measures taken to study the roads (cross-country routes) in a zone of impending action, and to determine their state, traffic capacity, vulnerable sectors, camouflage conditions, degree of demolition and contamination, and the availability of materials for road and bridge repair, so as to ensure the movement of troops, and combat and other materiel.

1300 RAZVEDKA MESTNOSTI (terrain reconnaissance and intelligence)—Measures taken for the collection and refinement of information on the character and peculiarities of the relief, hydrography, built-up areas, roads, soil, and plant cover, and the degree to which these conditions

affect the arrangement and combat operations of friendly and enemy troops; on the presence and character of natural cover and obstacles; on the protective features and passability of the terrain; on conditions for orientation, camouflage, and observation; etc.

1301 RAZVEDKA S POMOSHCH'YU INFRAKRASNOY TEKHNIKI (infrared reconnaissance)—Detection of enemy installations and determination of the coordinates of targets with the aid of instruments which are sensitive to invisible infrared (heat) rays emitted by objects (installations).

1302 RAZVEDKA TELEVISIONNAYA (television reconnaissance)—Obtaining data on the enemy with the aid of television reconnaissance equipment, permitting commanders (chiefs) to observe, from points located at a considerable distance from the enemy, his installations and activities. Television reconnaissance equipment may be installed in airborne platforms, motor vehicles, or ships, and may also be outlying.

1303 RAZVEDYVATEL'NAYA AVIATSIYA (reconnaissance aviation)—A branch of the air force, intended to conduct aerial reconnaissance. It has at its disposal both piloted and unmanned airborne vehicles that are used to obtain data on the grouping of enemy forces and facilities, and on various installations at tactical, operational, and strategic depth.

1304 RAZVEDYVATEL'NAYA GRUPPA (reconnaissance group)—An element of troop reconnaissance sent out by formations or units to conduct reconnaissance of the enemy and terrain in mobile types of combat, on the march, and in a defensive situation when there is no contact with the enemy.

1305 RAZVEDYVATEL'NAYA SVODKA (intelligence estimate)—A report-informational document describing the position, state, and activities of the enemy during a definite period of time, including conclusions concerning his impending actions or intentions. The time of rendering a reconnaissance estimate is governed by the schedule of Routine Reports or by the command's orders. Reconnaissance estimates are formulated not only by superior staffs for the information of subordinate staffs and the staffs of cooperating (supporting, adjacent) major field forces or strategic formations (or formations), but also by subordinate staffs for submission to a superior staff.

1306 RAZVEDYVATEL'NOYE DONESENIYE (periodic intelligence report)—A report reflecting changes which have occurred in the position, status, and activities of the enemy during a definite interval of time, and rendered to a superior staff by a specific time (a routine reconnaissance report), or one containing important information which must be reported without delay (a non-routine reconnaissance report).

1307 RAZVEDYVATEL'NOYE TRALENIYE (reconnaissance mine-sweeping)—One of the methods of mine reconnaissance at sea. It is

conducted by special ships, namely minesweepers, and helicopters, for the purpose of detecting enemy minefields, and determining their location, boundaries, and nature.

1308 RAZVEDYVATEL'NYY DOZOR (reconnaissance patrol)—A reconnaissance element which is sent out from a reconnaissance detachment to the front, to the flanks, or to the rear, for the purpose of conducting reconnaissance of the enemy and the terrain.

1309 RAZVEDYVATEL'NYY OTKYAD (reconnaissance detachment)—An element of troop-unit reconnaissance sent out by formations and major field forces or strategic formations to conduct reconnaissance of the enemy and the terrain in mobile types of combat, on the march, and also in defense. A reconnaissance detachment is made up of reconnaissance subunits or motor rifle (or tank) subunits, from company to battalion strength, and reinforced by artillery, tanks, field engineer subunits, and chemical subunits. A reconnaissance detachment is assigned a reconnaissance zone or axis.

1310 RAZVERTYVANIYE VOORUZHENNYKH SIL (VOYSK) (deployment of armed forces [troops])—(1) Creation of the groupings of missile troops, ground troops, air forces, naval forces, and national air defense forces and facilities, needed to carry on an armed conflict; (2) adoption of an operational structure and combat formations for conducting an operation or fighting a battle; (3) implementation of mobilization measures for the assembly of major field forces or strategic formations, and for regrouping formations and units into larger entities; (4) occupation of areas in a sector of impending action; (5) a change in structure, i.e., a transition from one state to another. Deployment of armed forces (troops) may be strategic, operational, or tactical.

1311 RAZVERTYVANIYE SIL FLOTA (deployment of naval forces)—The process whereby naval forces assume the initial position (designated areas, lines, and positions) for the commencement of activities, in accordance with the plan of an operation. Depending on its nature and scale, deployment of naval forces may be strategic, operational, or tactical.

1312 RAZGRANICHITEL'NYYE LINII (dividing lines)—Hypothetical lines on the terrain, constituting the boundaries between the zones (or areas) of action of adjacent major field forces or strategic formations (or formations, units, subunits). Dividing lines are defined (or changed) upon assignment of missions.

1313 RAZMAGNICHIVANIYE KORABLYA (demagnetizing a ship)—An anti-mine defense measure, consisting in artificial alteration (reduction) of the ship's magnetic field strength for the purpose of protecting it against magnetic and magnetic-induction mines.

1314 RAZMAKH NASTUPATEL'NOY OPERATSII (scale of an offensive operation)—This concept is expressed in terms of the width and depth

of the zone of the offensive, the average daily rate of advance by the troops, and the duration of the operation. The scale of an offensive operation is determined by the goals of the operation and depends on the quantity and quality of the forces and facilities of the warring parties, the peculiarities of the theater of operations, climatic and meteorological conditions, the levels of materiel and technical support of the operation, etc.

1315 RAZMINIROVANIYE (mine disarming)—Disarming or removing mines and other explosive devices used in mine obstacles.

1316 RAZRESHAYUSHCHAYA SPOSOBNOST' RADILOKATSIONNOY STANTSII (discrimination of a radar station)—The ability to distinguish between targets which are close to one another in space. A distinction is made between a radar's discrimination in terms of distance, velocity, and angular coordinates.

1317 RAYON BOYEVYKH DEYSTVIY (combat area)—The sector of terrain (or sea area) in which a formation, unit, or subunit of ground troops (or their naval counterparts) is fighting.

1318 RAYON VOYENNYKH DEYSTVIY (combat zone)—In a broad sense, the territory (or sea area) encompassing part of a theater of hostilities in which the warring parties conduct operations or fight in accordance with the concept and plan of an armed conflict.

1319 RAYON VYSADKI MORSKOGO DESANTA (amphibious assault force landing area)—The part of the sea coast, and the sea area adjoining it, where an assault force disembarks, and the warships supporting the landing operate. The size of an amphibious assault force landing area depends on the composition of the forces attacking the coast, and on the geographical features of the terrain. Each amphibious assault force landing area includes one or several landing sectors.

1320 RAYON RASSREDOTOCHENIYA KORABLEY (ship dispersal area)—A sector of the coast, within the limits of the operational zone of a naval base, equipped for dispersed berthing of ships.

1321 RAYON SOSREDOTOCHENIYA (assembly [staging] area; concentration area)—An extensive territory on which a major field force or strategic formation (or formation, unit) is disposed prior to carrying out a combat mission. An assembly area permits dispersal of the troops, thus ensuring their protection against weapons of mass destruction.

1322 RAKETNAYA BAZA (foreign) (missile base)—Specially-equipped territory, set aside for missiles, the means of guiding them when in flight, technical facilities for preparing them for launching, and missile storage facilities.

1323 RAKETNOYE TOPLIVO (rocket fuel)—Fuel used for rocket engines. Rocket fuel is of two types—solid and liquid. The solid and liquid

types of rocket fuel are used in solid-fuel rocket engines and in liquid-fuel rocket engines, respectively.

1324 RAKETNO-TEKHNICHESKOYE OBESPECHENIYE (missile support)—The aggregate of measure directed toward providing units with missiles and rocket fuel, on the one hand, and providing missile maintenance, technical servicing, and repair, on the other. The term missile support also covers evacuation.

1325 RAKETNO-YADERNAYA VOYNA (nuclear missile warfare)—Warfare in which the decisive means of attaining victory in battle, in an operation, and in armed conflict as a whole, is the nuclear missile—used without restraint by all Services—and above all, the strategic nuclear weapon.

Moreover, final victory, even in nuclear missile warfare, is achieved by the united efforts of all Services, using conventional means of armed conflict as well.

1326 RAKETNO-YADERNYY UDAR (nuclear missile strike)—A strike dealt by missile formations and units in order to inflict heavy casualties on an operational grouping of enemy troops, and to cause decisive damage to installations in the enemy's operational or deep rear areas. Nuclear missile strikes may be massed, grouped, or solitary.

1327 RAKETNYYE VOYSKA STRATEGICHESKOGO NAZNACHENIYA (Strategic Missile Forces*)—The principal Service of the Armed Forces of the USSR, intended to execute the most vital strategic missions of a nuclear missile war. In the USA and Britain, strategic missiles are a component of the Air Force. (*Also known as "Strategic Rocket Forces").

1328 RAKETONOSNAYA AVIATSIYA (missile-carrying aviation)—Aviation consisting of missile-carrying aircraft, armed primarily with air-to-air, air-to-ground and air-to-ship missiles.

1329 RAKETY (missiles)—The principal means of delivering nuclear charges to the objects to be destroyed; missiles are unmanned airborne vehicles, either guided or unguided while in trajectory, and moved by reactive force. According to their roles, missiles are subdivided into the following classes: air-to-air, air-to-ground, ground-to-ground, ship-to-ship, etc. Air-to-air missiles are armed missiles installed in airborne vehicles, and used against aerial targets. According to their guidance systems, air-to-air missiles are divided into the guided and unguided categories. Air-to-air guided missiles may use autoacoustic guidance, remote control, homing or a combination of these. Air-to-ground missiles are armed missiles launched from airborne vehicles, and intended to destroy ground targets. According to their design, air-to-ground missiles are divided into the cruise and ballistic categories. Air-to-ship missiles are armed missiles launched from airborne vehicles, and used to destroy warships. Missiles of the ground-to-ground class may be strategic, operational-

tactical, and tactical armed missiles, intended to destroy ground targets from the ground. Ship-to-air missiles are armed missiles launched from shipboard launchers to destroy enemy air targets. Ship-to-shore class missiles are ballistic or cruise missiles fired by submarines and surface ships to destroy enemy coastal installations. Ship-to-ship missiles constitute the armament of missile-armed vessels (submarines and surface ships), and are used to destroy enemy warships and merchant vessels. Ship-to-ship missiles have a homing system. Sometimes they are used to destroy coastal installations.

1330 RAKETY OPERATIVNO-TAKTICHESKOGO NAZNACHENIYA (operational-tactical missiles)—Combat missiles of the ground-to-ground class, in the armament of major field forces or strategic formations and formations of the Services, and intended to resolve missions of operational or tactical importance.

1331 RAKETY STRATEGICHESKOGO NAZNACHENIYA (strategic missiles)—Armed medium-range, intercontinental and global missiles capable of destroying installations of strategic importance in enemy deep rear areas.

1332 RAKETY TAKTICHESKIYE (tactical missiles)—Armed missiles used by combined-arms formations to destroy objectives at tactical and operational depth.

1333 RASPORVADITEL'NAYA STANTSIYA (regulating station)—A railroad junction or large railroad depot situated at the rear boundary of a front, and used for the reception, processing, and onward transmission, by destination, of incoming freight consignments destined for the front. Regulating stations are designated by General Staff directive. Detraining and entraining of troops, unloading and loading of military cargoes, and protracted halting of echelons in transit, are all prohibited at regulating stations.

1334 RASSEIVANIYE RAKET (SNARYADOV, BOMB) (dispersion of missiles [projectiles, bombs])—The phenomenon of scattering of missiles (projectiles, bombs) when they are launched (fired, dropped) under identical conditions. Dispersion takes place for various reasons: deviations from the nominal weight and designed shape of the missile (projectile, bomb); variations in fuel temperature; aiming errors; changes in air resistance; etc. Dispersion obeys a recognized law called the law of dispersion.

1335 RASSREDOTOCHENIYE VOYSK (dispersal of troops)—Dispersal of troops frontally and in depth, thus ensuring their rapid deployment for combat operations, and diminished vulnerability to nuclear strikes, air attack, and artillery fire. According to its scale, dispersal of troops may be tactical, operational, or strategic.

1336 RASKHOD BOYEPRIPASOV (ammunition expenditure)—The number of projectiles (or bombs, mortar rounds, bullets) allotted for, or

actually expended on, the fulfillment of a particular fire mission. However, for a considerable number of fire missions performed during a specified period of time (for example, in the course of an air bombardment, in preparatory fire, in a day of combat), ammunition expenditure is expressed in units of fire.

1337 RASCHETNO-SNABZHENCHESKAYA YEDINITSA (supply and accounting unit)—The conventional measure of supply items in terms of which the item requirements for troop-support purposes are calculated. Supply and accounting units are the unit of fire; fuel load; daily ration; the set, kit, or unit; load; charge, ammunition load; the numerary adjunct "piece(s)"; and the usual units of weight and volume.

1338 REAKTIVNAYA ARTILLERIYA (rocket-launching artillery)—A type of artillery intended to fire rocket projectiles (or rocket mortar rounds). Direction of motion is imparted to such projectiles by directing devices. The launchers of rocket-launching artillery are mounted on tanks, armored personnel carriers, and cross-country motor vehicles. Rocket-launching artillery is intended to destroy personnel and combat materiel in concentration areas, and to destroy defensive structures.

1339 REGISTROVYY TONNAZH (register tonnage)—A conventional volumetric measure of cargo vessels, which is expressed in register tons (one register ton is equal to 100 cubic feet, or 2.83 cubic meters). A distinction is made between gross register tonnage and net (commercial) register tonnage.

1340 REZHIM OGNYA ((1) rate of fire [per piece]; (2) fire control)—(1) The maximum number of rounds which can be fired in a specified time from a given type of weapon (gun, mortar), without substantial detriment to it, and without prejudice to firing safety; (2) the precisely established procedure for conducting fire from artillery guns (or mortars) which the commander decides to employ, having regard to the mission and the nature of the target.

1341 REZHIM PLAVANIYA NA MORSKOM TEATRE (navigational discipline in a maritime theater)—A system of measures implemented for the purpose of ensuring the safety of warships and merchant vessels when under way, and also while in bases or ports. The essence of navigation procedures consists in the creation of a system of channels and formulation of rules for their use; in the adoption of a strict procedure for the entry of ships and vessels into bases, ports, and other points, and for exit from them; in the establishment of recommended courses and routes for the movement of ships and vessels in a theater (especially in coastal areas); and in the organization of a continuously-operating identification and warning system.

1342 REZHIM POLETOV (flight procedures)—A system of rules governing flights through a given air space, such rules being dictated by

instructions, by the flight manual, and by the basing conditions in the given territory.

1343 REZHIM TRALENIYA MIN (mine-sweeping procedures)—The established method of using contact and noncontact sweeps, defining the frequency of sweeping, the sweeping speed, and other parameters associated with the use of sweeps, such parameters being established to ensure the most effective action of the sweeps on the mines.

1344 REZERVNYE VOYSKA (reserve troops)—Military echelons not included in the composition of fronts, fleets, major field formations or strategic formations of national air defense forces, or strategic missile forces. Under modern conditions, the role and importance of reserve troops has increased considerably in comparison with the past.

1345 REZERVY (reserves)—(1) Human and material resources which may be used in a war as a whole, or in an operation (or battle); (2) part of the operational structure of a major field force or strategic formation, or part of the combat order of a formation (or unit).

1346 REYDER (raider)—A warship or armed merchant vessel (auxiliary cruiser), operating in wartime on enemy sea transportation routes for the purpose of destroying his merchant shipping.

1347 REKOGNOSTSIROVKA (commander's ground reconnaissance)—Reconnaissance of the enemy and terrain in the vicinity of troop combat operations, conducted by commanders or staff officers. A commander's ground reconnaissance is accomplished in order to verify, on the terrain, decisions already made by map, and missions already assigned to the troops, or carried out prior to making plans. Participants in a commander's reconnaissance are the commanders of subordinate, attached, and supporting formations (or units), the chiefs (or commanders) of service branches, and chiefs of special troops and services.

1348 REKOGNOSTSIROVOCHNAYA GRUPPA (reconnaissance party)—A party detailed by the commander or staff to reconnoitre an area of impending combat operations, or the disposition of troops, combat materiel, control posts, etc.

1349 RENTGEN (roentgen)—The unit of measurement of gamma-radiation dose, used to calculate the level of radioactive radiation permissible or dangerous to the organism. The roentgen is that dose which, in 1 cc of dry air (at a temperature of 0°C and a pressure of 760 mm Hg), forms about two billion ion pairs.

1350 RENTGENOMETR (geiger counter)—An instrument for measuring radiation levels in contained areas. Using a geiger counter, radiation levels as high as several hundred roentgens per hour can be measured, and the limits of a contaminated area, and sectors of heavy or dangerous contamination, can be determined.

1351 RESURSY VOYENNYE (military resources)—A country's armed forces, and also its civilian contingents with military training, stockpiles of various kinds, economic and state reserves, all of which may be used to conduct a war.

1352 RESHENIYE NA OPERATSIYU (BOY) (operations [or battle] plan)—Definition, by the commanding general (or commander), of the forces, facilities, and methods to be used to complete an assigned mission in an impending operation (or battle). A plan is the basis for organizing troop control, coordinated action, planning, preparation, conduct, and comprehensive support of an operation (or engagement, battle).

1353 FODA AVIATSIH (branches of aviation)—The component parts of the Air Force, each of which has homogeneous materiel and armament, an appropriate organization, and its own tactics and methods of combat. The branches of aviation are: bomber aviation, fighter-bomber aviation, fighter aviation, reconnaissance aviation, liaison aviation, and medical aviation.

1354 RODA VOYSK PVO STRANY (branches of national air defense forces)—The component parts of the national air defense forces. Each branch is armed or equipped with one type of combat materiel. The branches of national air defense forces include: air defense missile troops, fighter aviation, and radio-technical troops.

1355 RODA SIL VOYENNO-MORSKOGO FLOTA (branches of the navy)—The structurally and qualitatively different component parts of the fleet, intended to conduct combat operations in the appropriate physical environment, both independently and in coordinated action with one another. The branches of the navy are: submarines, naval aviation, surface ships, and coastal missile-artillery troops.

1356 RODA SUKHOPUTNYKH VOYSK (branches of the ground forces)—Components of the ground forces, differing from one another in their organization, armament, and role in combat. In each branch, subunits, units, and formations have the same basic armament, and the appropriate organization and tactics. The branches are missile troops and artillery air defense troops, motor rifle troops, tank troops, and air-assault troops. Besides the branches, the ground forces also include special troops, namely: engineer, chemical, communications, radio and radio-technical, motor-transport, highway, and others.

1357 ROKADA (lateral road)—A railroad, paved highway, or dirt road, running parallel to the front line. Lateral roads are necessary for regrouping and moving troops in an operation (or battle), for materiel and technical supply purposes, and for getting from one frontal route to another when bypassing areas of devastation, and radioactive contamination.

1358 RUBEZH ATAKI (assault position line)—A sector of terrain,

designated by the commander of a formation (unit, subunit), from which the troops begin their attack on the enemy.

1359 RUBEZH BEZOPASNOGO UDALENIYA VOYSK OT TSEN-TROV (EPITSENTROV) SVOIKH YADERNYKH VZRYVOV (nuclear safety line)—A hypothetical line defining a safe distance for friendly troops from the planned centers (ground zero) of nuclear bursts. The safe distance for troops is made up of the minimum distance at which the shock wave, or other casualty producing factors of a nuclear burst, will not result in casualties, and of the possible deviation of the actual centers (ground zero) from the planned ones.

1360 RUBEZH (RAYON) VVODA V SRAZHENIYE (BOY) (reserve concentration area)—The line (or area) from which strategic formations (or formations, units) of the second echelon or reserve are committed to battle (or combat) to fulfill an assigned operational (or combat) mission. The reserve concentration area is designated approximately by the commanding general (or commander) when making the plan to attack and is defined more precisely in the course of the offensive.

1361 RUBEZH (POLOSA) VZAIMODEYSTVIYA SREDSTV PVO (air defense zone)—The line (or zone) of terrain (or water) in the air space above which the forces and weapons of cooperating air defense strategic formations, formations, or units, engage the air enemy, and exchange data concerning air targets between themselves.

1362 RUBEZH PROTIVOLODOCHNOY OBORONY (PROTIVOLO-DOCHNYY RUBEZH) (anti-submarine defense area [anti-submarine area])—The aggregate of positional facilities and mobile naval forces that are echeloned in depth and act in a particular water area for the purpose of preventing enemy submarines penetrating into a given area of the sea (or ocean).

1363 RUBEZH RADIOLOKATSIONNOGO OBNARUZHENIYA (radar detection line)—The line on which enemy weapons become detectable by radar stations.

1364 RUBEZH RAZVERTYVANIYA (deployment line)—The sector of terrain on which troops deploy from march formation, or approach-march formation, into combat formation.

1365 RUBEZHI REGULIROVANIYA (control lines)—Terrain lines, designated in advance by the senior commander, which the troops must reach or go through at a certain time and in a certain formation.

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1366 SAMOLET-ZAPRAVSHCHIK (tanker aircraft)—An aircraft having special equipment and a supply of fuel for refuelling other aircraft in flight.

1367 SAMOI ET NAVEDENIYA (guidance aircraft, reconnaissance and strike control aircraft)—An aircraft used for conducting aerial reconnaissance of land, sea, and air targets (or enemy installations), observing them, transmitting data concerning them to the air command, and guiding the aircraft sent out to destroy them.

1368 SAMOLET—NOSITEL' YADERNOGO ORUZHIYA (nuclear weapon carrying aircraft)—An aircraft having special equipment and fittings for the use of nuclear munitions.

1369 SAMOLET PROTIVOLODOCHNOY OBORONY (anti-submarine defense aircraft)—An aircraft used to engage enemy submarines.

1370 SAMOLET RADJOLOKATSIONNOY RAZVEDKI (samolet dal'nego radiolokatsionnogo obnaruzheniya) (radar reconnaissance aircraft [long-range radar detection aircraft])—An aircraft equipped with a long-range detection radar, and used for the reconnaissance of aerial and above-water targets, and to guide friendly weapons to them.

1371 SAMONAVODYASHCHAYASYA TORPEDA (homing torpedo)—A torpedo having, in its warhead, a homing device which guides it to a (underwater or surface) target. Such devices are either active or passive, and are further subdivided into the monoplanar (horizontal) and biplanar (horizontal and vertical) categories.

1372 SAMOKHODNYY PAROM (self-propelled ferry)—A means of crossing water barriers, intended to convey heavy combat materiel across such barriers. Such a ferry is capable of moving independently (under its own power) without cargo when on land, and with cargo when afloat. When military freight is being ferried, a landing stage is not needed, as the self-propelled ferry has ramps which permit it to unload (or load) combat materiel directly onto the shore or into the shallow bank portion of the water barrier.

1373 SANITARNAYA AVIATSIYA (medical aviation)—Aviation intended to evacuate the sick and wounded and to transport medical personnel for the purpose of rendering urgent medical aid to servicemen. Medical aviation consists of individual aviation subunits and units, and organizationally is a part of air force and combined-arms strategic formations.

1374 SANITARNAYA OBRABOTKA (decontamination)—The removal of radioactive substances from personnel, and rendering harmless and eliminating toxic and bacterial agents. Decontamination may be partial or complete.

1375 SANITARNAYA (MEDITSINSKAYA) RAZVEDKA (sanitary [medical] reconnaissance)—Acquisition of information on the sanitary-hygienic and anti-epidemic situation on the territory of impending combat operations, in the regions where friendly and hostile troops are disposed,

and in rear areas, etc. Sanitary (medical) reconnaissance establishes the sanitary-hygienic and epidemiological state of water sources and the water supply, of built-up areas and dwellings, and establishes the presence, or otherwise, of contagious diseases among the population, and so on.

1376 SANITARNYYE POTERI (casualties)—Military personnel who must be evacuated and treated in medical establishments. Casualties are subdivided into the combat and noncombat categories. To the former belong wounded, shell-shocked, burned, and injured servicemen, and those rendered ineffective as a result of combat injuries; and to the latter, those who have fallen ill, or have sustained traumata, burns, or frostbite not associated with combat activity.

1377 SBORNYYE FORTIFIKATSIONNYE SOORUZHENIYA (prefabricated fortificational structures)—Structures built by assembling standard elements which have been prefabricated either by the troops or industrially. They include shelters, dug-out shelters, and other structures made of corrugated iron, reinforced concrete, plywood, or sandbags, and light frame structures. The use of prefabricated fortificational structures markedly reduces building time, cuts down the expenditure of manpower, increases the possibility of mechanizing such work, and simplifies its organization.

1378 SVERKHBYSTRODEYSTVUYUSHCHAYA TELEGRAFNA-YA SVYAZ' (burst communications)—Automatic transmission of information by means of binary packages, in periods of one hundredth of a second to one second duration, at a rate of six hundred to twelve hundred symbols per second.

1379 SVETOVOYE UZLUCHENIYE (flash)—One of the casualty-causing factors of a nuclear explosion, being a powerful stream of luminous energy emitted by the fireball associated with such a burst. A flash can cause burns on exposed parts of the human body, and is also capable of igniting, charring, or liquifying various materials. The casualty-producing capability of a flash is determined primarily by the magnitude of the light pulse.

1380 SVETOVOY IMPUL'S (light pulse)—The amount of luminous energy imparted by the fireball of a nuclear explosion, during the entire time of its existence, to one square centimeter of a surface oriented at right-angles to the direction of propagation of the flash. The light pulse is expressed in calories per square centimeter.

1381 SVETYASHCHAYASYA OBLAST' (OGENNY SHAR) (fireball)—The region of incandescent gases associated with a nuclear air burst, consisting of air and the volatilized materials of the nuclear weapon itself. The fireball is a powerful source of light radiation, which continues for several seconds.

1382 SVETYASHCHIYE AVIATIONNYE BOMBY (SA3) (flare bombs)—Aerial bombs used to illuminate the terrain when bombing or visual reconnaissance is done at night. They are also used in support of ground troop activities.

1383 SVOYEVREMENNOST' USTANOVLENIYA SVYAZI (timeliness of establishing communications)—The readiness of communications to ensure troop control by the time ordered. This is one of the basic requirements to be met by communications in battle.

1384 SVYAZ' VZAIMODEYSTVIYA (command and control communications)—Communications organized between cooperating major field forces or strategic formations (or formations, units) of the various Services, branches, special troops, and adjacent units. Command and control communications are organized on instructions from the commanding general or commander (staff) organizing the coordinated action of the troops in the operation (or battle). The principal means of communication used between cooperating formations (or units) is radio.

1385 SVYAZ' PODVIZHNYMI SREDSTVAMI (communication with the aid of mobile facilities)—Communication effected by aircraft, helicopter, motor transport, armored personnel carrier, motorcycle, liaison vessel, dispatch boat, and also by skiers. Such communication is widely used in all types of troop combat activity for delivery of combat documents and official correspondence, and depending on the situation and availability of forces and facilities, may be organized by sector, by circular route, or along an axis.

1386 SDERZHIVAYUSHCHIYE DEYSTVIYA (foreign) (delaying operations)—Combat operations conducted by troops on a series of successively defended lines for the purpose of gaining time, inflicting the greatest possible number of casualties on the enemy, and creating the most favorable conditions for themselves, without regard to loss of ground, and without becoming involved in decisive battles.

1387 SELEKTORNAYA SVYAZ' (selective telephony)—Central control telephony, permitting any subscriber to be called individually (selective call), permitting a particular group of subscribers to be called (group call), or permitting all subscribers to be called simultaneously (conference call). A selector (an electromagnetic device) is used as the call receiver.

1388 SELEKTSIYA DVIZHUSHCHIKHSYA TSELEY (SDTS) (selection of moving targets)—Discrimination, with the aid of special equipment, of radar signals reflected from moving objects (missiles, aircraft, ships, tanks, etc.), against the background of signals reflected from stationary or slowly-moving objects (local terrain features, dipole reflectors, clouds, etc.). The equipment used for selection of moving targets enables a radar station to detect and track targets which are moving on land, on

water, or in the air, against the background of the surrounding medium, and against a background of passive interference (reflectors).

1389 SET' SVYAZI (communications net)—The aggregate of the communications centers, lines, and channels of the various ministries and departments on the territory of a front (or a military district, or the country as a whole). The communications net of a front (or a military district), consists in communications centers in command posts; communications centers in forward (or alternate) command posts; communications centers in rear control posts of major field forces or strategic formations, formations, and units, of the front (or military district); wire and radio-relay links; axes and sectors of signal communications; lateral and connecting links; auxiliary communications centers; control-and-testing posts, and monitoring posts.

1390 SIGNALY OPOVESHCHENIYA (warning signals)—Pre-arranged signs (or signals) transmitted by various means of communication to give the troops timely warning of radioactive, chemical or bacterial contamination of the terrain, and of enemy air attack.

1391 SIGNALY OPOZNAVANIYA (identification signals)—Pre-arranged signs (or signals), transmitted by various means of communication, to establish the affiliation of ground troops, aircraft, or ships.

1392 SIGNAL'NYYE SREDSTVA (signaling methods)—The simplest means of communication, used in all types of troop combat operations for transmitting brief orders and reports, for mutual identification, target designation, to identify friendly troops, to ensure coordinated action of troops, and for warning purposes. Visual, acoustic, and electronic signaling methods are used.

1393 SILY I SREDSTVA (forces and facilities; men and equipment)—The personnel of major field forces or strategic formations, formations, units, and subunits of all Services and branches (or arms of the navy), together with their armament and combat materiel, for example: ground troop forces and facilities; naval forces and facilities; aviation forces and facilities; air defense forces and facilities; the forces and facilities of an army; etc.

1394 SIMPLEKSNAYA SVYAZ' (simplex operation)—Communications in which reception and transmission are done by turns: at first, one station only transmits, and the other only receives; then the second station transmits, and the first receives.

1395 SISTEMA BAZIROVANIYA SIL VOYENNO-MORSKOGO FLOTA (naval basing system)—The aggregate of naval bases and airfield areas mutually interconnected by transportation routes and communications facilities, as well as the enterprises, establishments, and elements of the rear services, ship-repair and ordnance-repair facilities, medical and

sanitary services, etc., existing in a given maritime (or oceanic) theater of hostilities for the purpose of ensuring the conditions necessary for the deployment of naval forces and maintaining them at the appropriate state of readiness to resolve the missions confronting them. A distinction is made between permanent and temporary basing.

1396 SISTEMA VOORUZHENIYA (armament plan)—A scientifically founded distribution of armaments between the Services and branches for the purpose of maximizing the combat power of the armed forces as a whole, using all types of armament most effectively, simplifying the organization of units, formations, and major field forces or strategic formations, and facilitating their control. The military doctrine of a state is substantially reflected in its armament plan.

1397 SISTEMA ZAGRAZHDENIY (obstacle plan)—The aggregate of various engineering obstacles (mine fields, mined sectors of roads, individual objects prepared for demolition, obstacle concentrations, obstacle zones, etc.), created for the purpose of hindering enemy advance, delaying him while repulsing his counterstrike, inflicting losses on him, and creating conditions for defeating his troops with nuclear and other weapons.

1398 SISTEMA NABLYUDENIYA (observation plan)—The combination of observation posts and observation points of all service branches and special troops, disposed on the terrain in a particular configuration, ensuring the best possible surveillance of objectives, enemy disposition, and the terrain.

1399 SISTEMA NAVEDENIYA ISTREBITELEY (fighter control and reporting system)—The aggregate of measures and technical facilities ensuring guidance of fighters to the air enemy. A fighter control and reporting system includes: ground detection-and-guidance radar stations; equipment for obtaining the coordinates of air targets and fighters, for transmitting these coordinates and displaying them in a command post; intercept control equipment; equipment for transmitting guidance commands from the ground and receiving them in the fighters; flying and navigational instruments; airborne radars for intercept and aiming purposes; and identification equipment.

1400 SISTEMA NAVEDENIYA PUSKOVOY USTANOVKI (fire control system)—A system whereby a launcher is laid and trained to a given bearing and angle of site, respectively. Such a system may be automatic or nonautomatic.

1401 SISTEMA OGNYA V OBORONE (defensive fire plan)—A combination of pre-arranged fire strikes on the approaches to a defense, and the creation of zones of continuous multi-tiered fire of all types ahead of the forward edge, on the flanks, and in the depth, of the defense, and also concentration of fire, in brief periods of time, on any threatened axis or sector. A defensive fire plan is formulated in accordance with the concept

of the operation (or battle), taking into account nuclear and chemical attacks, and envisaging close coordination of fire from all types of weapons and air support, in conjunction with obstacle plans, and natural barriers.

1402 SISTEMA PROTIVOVOZDUSHNOY OBORCNY (air defense system)—The aggregate of all measures adopted in engaging the attacking air enemy, implemented in strategic formations of national air defense forces, and in a front, for the purpose of repelling enemy air strikes, prohibiting enemy air reconnaissance, and providing air cover for rear installations. An air defense system includes radar reconnaissance of the air enemy, anti-aircraft missile cover and fighter cover, radio counter-measures against the air enemy, and an established procedure for the control and coordinated action of all air defense forces and facilities. An air defense system adopted by a strategic formation of national air defense forces must be in accord with those of adjacent, cooperating strategic formations of the other Services. Moreover, an air defense system is supplemented by measures taken to protect troops and rear installations against air attack.

1403 SISTEMA SVYAZI (communications system)—The aggregate of communications centers and stations, interconnected by communication lines in a particular order, and in accordance with the type and nature of hostilities (or combat activities), and with the way in which troop control is organized.

1404 SKRYTYYE PODSTUPY (covered approaches)—Approach routes to enemy positions, concealed from enemy observation by dead ground, vegetation, or other local features.

1405 SLED RADIOAKTIVNOGO OBLAKA (pattern of a radioactive cloud)—The zone of terrain on which radioactive contamination occurs as a result of fallout of radioactive substances from the cloud of a nuclear explosion.

1406 SLEZOTOCHIVYYE OTRAVLYAYUSHCHIYE VESHCHESTVA (lachrimators)—Toxic agents which act on the mucous membrane of the eyes, causing the excessive secretion of tears. They include, for example, chloracetophenone.

1407 SLUZHBA VESHCHIEVOGO SNABZHENIYA (clothing and equipment supply service)—One of the rear services of the Armed Forces, responsible for supplying troops with personal clothing and equipment.

1408 SLUZHBA VOYENNYKH SGOBZHCHENIY (VOSO) (military transportation service)—Elements of the Armed Forces intended: (a) to plan movements of troops and military cargo in peacetime and wartime, and to direct them within the limits of the country and theaters of hostilities; (b) to train troops in effecting such movements by the various modes of transport, in peacetime and wartime; (c) to define and submit to transport ministries and departments, requirements to be met by transport for

wartime operation in all types of transportation envisaged in theaters of hostilities.

1409 SLUZHBA PRODOVOL'STVENNOGO SNABZHENIYA (food supply service)—One of the rear services of the Armed Forces. The food supply service implements measures associated with providing food for army, navy, and air force personnel; establishes ration scales; procures (and receives) foodstuffs and ware from state and cooperative establishments; organizes the operation of kitchens, mess halls, bakeries, refrigeration facilities, and ration dumps; and organizes accounting, storage, timely replenishment, and freshening of stocks, insofar as these activities pertain to the foodstuffs, ware, and inventory in its depots.

1410 SLUZHBA RAKETNO-ARTILLERIYSKOGO VOORUZHENIYA (missile and artillery supply service)—A service engaged in the supply of missile and artillery armament, and infantry arms, missiles and their warheads, projectiles (mortar rounds), small-arms ammunition, and other types of missile and artillery equipment.

1411 SLUZHBA SNABZHENIYA GORYUCHIM (fuel supply service; POL supply)—One of the services of the Armed Forces, engaged in providing the troops (aviation) and naval forces with missile propellants, fuels, oils and greases, special fluids, etc.

1412 SLUZHBA FINANSOVOGO DOVOL'STVIYA (financial service)—One of the services of the Armed Forces, dealing with questions of financial economy. The functions of the financial service include: applying for funds; issuing pay and allowances to personnel; financing, within the limits of approved estimates, military construction, government procurement, and other measures taken in the Services (army, navy, air force, and military establishments and institutions); accounting, rendering returns, and control pertaining to the financial economy of the Armed Forces.

1413 SMENA VOYSK (relief of troops)—Organized takeover and hand-over by troops, of occupied lines, positions, areas, and zones, in a combat situation.

1414 SMESHANNAYA SISTEMA KOMPLEKTOVANIYA (mixed system of building up to prescribed strength)—A method of building the armed forces up to the prescribed (numerical) strength, in which the extra-territorial system of bringing up to prescribed strength is used concurrently with the territorial system.

1415 SNABZHENIYE VOYSK (VMF, VVS) (supply of troops [naval forces, air forces])—A system of measures directed toward satisfying all requirements of the armed forces for materiel, organized and implemented by the rear services.

1416 SNABZHENCHESKIYE PEREVOZKI (supply movements)—Shifting materiel reserves, intended to satisfy the requirements of the

armed forces, from one area to another by all means of contemporary transport.

1417 SOOTNOSHENIYE VIDOV VOORUZHENNYKH SIL (correlation of the Services of the armed forces)—A scientifically founded qualitative and quantitative correlation between the various Services in the composition of the armed forces as a whole, dictated by specific historical and military-political conditions, by the nature of an impending war, by the strategic possibilities of one of the Services, by the accepted military doctrine of the state, etc. The correlation of the Services of the armed forces is not constant. It changes with changing conditions, and especially in connection with changes in the political goals of the war, and in armament itself.

1418 SOOTNOSHENIYE RODOV VOYSK (RODOV AVIATSII I RODOV SIL NA FLOTE) (correlation of service branches [or their naval or air force counterparts])—A scientifically founded qualitative and quantitative correlation of the service branches (or their counterparts) in each Service, dictated by the nature of the basic missions assigned to the Service in question, and within it, to its component parts, namely, the branches (or their equivalents). Those branches (or their counterparts) which are capable of resolving the basic missions of their parent Service constitute the combatant nucleus of that Service. The remaining branches (or their equivalents) fulfil missions in a subordinated combat role or in a support role. This circumstance determines the specific correlation of the arms.

1419 SOOTNOSHENIYE SIL I SREDSTV (correlation of forces and facilities)—The aggregate of indices permitting evaluation of the relative strength of friendly and hostile troops, by comparative analysis of the quantitative and qualitative characteristics of troop organization, performance data on armament and combat materiel, and other indices that define the combat readiness and combat capability of the troops.

1420 SOSREDOUCHENIYE SIL I SREDSTV (concentration of forces and facilities)—Assembly of forces and facilities in a particular area, and at a particular time, in order to fulfil an operational (or combat) mission in accordance with the command's concept. Under present day conditions, concentration of forces and facilities must be done quickly and covertly, and only with due observance of the requirements for the deployment and dispersal of troops (aviation, naval forces). Dense formations and accumulations of troops (aircraft, ships) are inadmissible. Concentration of forces and facilities is accomplished by regrouping either prior to an operation (battle) or in the course of it.

1421 SOSREDOUCHENIYE STRATEGICHESKIKH USIL'Y (concentration of strategic efforts)—The delivery of strikes by strategic missile forces and other Services in important areas of the theater of operations, in order to attain the assigned strategic goals as rapidly as possible. Ground troops and national air defense forces operate within the limits of

the area (zone of concentration of strategic efforts), while positional areas of strategic missile forces, long-range aviation's airfield areas, and naval bases may be located at a considerable distance from the area of concentration of the basic (main) efforts.

1422 SOTSIALISTICHESKOYE SOREVNOVANIYE V VOORUZHENNIYKH SILAKH SSSR (socialist competition in the armed forces of the USSR)—One of the important methods of communist education of Soviet servicemen, and a way of resolving the problems of combat and political training. Socialist competition in the armed forces of the USSR is directed toward the preparation of proficiency badge holders and class specialists in military affairs, and also toward increasing the number of outstanding subunits and units.

1423 SPAD UROVNEY RADIATSII (drop in radiation levels)—Diminution of the radiation levels on the terrain with time due to the decay of the radioactive substances.

1424 SPETSIAL'NAYA OBRABOTKA (special decontamination processing)—Sanitary decontamination processing of personnel; radioactive decontamination, chemical decontamination, and disinfection of armament, combat materiel, transport, uniform, accoutrements, footwear, and anti-chemical defense facilities. It may be done directly in troop subunits, or at special decontamination processing posts (PuSO), and may be partial or complete.

1425 SPETSIAL'NYYE VOYSKA (foreign) (special forces)—Special units and formations of the armed forces of the USA and other imperialist states, intended to be dropped, in wartime, in enemy rear areas, for the purpose of conducting sabotage and terrorist operations and subversive activities. Special forces consist mainly of parachutist-saboteurs who know the enemy country and are fluent in the local language. Among them are traitors who have deserted socialist countries, and also natives of these countries, who collaborated with Hitlerites and have found asylum with the American military. No small proportion of the officers and enlisted men of these units are adventure seekers and persons with a criminal background.

1426 SPETSIAL'NYYE METODY VOYNY (foreign) (unconventional warfare)—A term used in the American press, meaning methods of conducting combat operations which combine sabotage-terrorist operations in enemy rear areas with "psychological" impact on his troops and civilian population. The unconventional warfare concept is the brain child of imperialist militarists, playing its role in their plans for ideological diversion against socialist countries.

1427 SPOSOBY BOYEVYKH DEYSTVIY AVIATSII (air force combat methods)—According to the purpose of the activities, the nature of the target installations, and the situation, some ways in which air forces

conduct combat activities are: (a) in action against land and sea targets: simultaneous strikes, successive strikes, individual strikes, free search for and destruction of targets; (b) in actions against air targets and when providing fighter cover for troops and rear installations: ground alert intercept; combat air patrol intercept, as well as free search for and destruction of targets.

1428 SPOSOBY VEDENIYA VOORUZHENNOY BOR'BY (methods of conducting armed conflict)—Various ways in which armed forces conduct combat activities to resolve strategic missions and to attain strategic goals. Under modern conditions, methods of waging armed conflict include: simultaneous use of weapons against enemy deep rear areas and against the main grouping of his armed forces, by conducting simultaneous or successive deep operations on land, at sea, in the air, and in space, and by inflicting massed, grouped, and isolated nuclear strikes against enemy strategic installations, etc.

1429 SPOSOBY PREDOLENIYA ZON RADIOAKTIVNOGO ZARAZHENIYA (methods of negotiating zones of radioactive contamination)—The actions of troops upon encountering extensive zones of radioactive contamination. The principal methods are: (a) to negotiate them by routes having the lowest radiation levels; (b) to wait until the radiation intensity drops to levels at which the troops will not be subjected to overexposure; (c) to negotiate the contaminated zones using air transport; and (d) combined methods.

1430 SPOSOBY RAZVYAZYVANIYA VOYNY (ways of unleashing war)—Methods of assault used by aggressors, consisting in surprise, massed, nuclear attack; military provocation leading to local war, with possible subsequent growth into a world war; waging undeclared war under the guise of a local conflict; etc.

1431 SPUTNIK-RAZVEDCHIK (reconnaissance satellite)—A space vehicle specially equipped with reconnaissance instruments, injected into a given orbit for intelligence purposes. A reconnaissance satellite may be launched into space in order to reconnoiter enemy ground installations and to determine their coordinates; to detect launchings of intercontinental ballistic missiles; to detect submarines and nuclear explosions; to identify enemy satellites in orbit; etc. The reconnaissance information obtained may be returned to earth in containers or may be transmitted automatically.

1432 SRAZHENIYE (engagement)—The aggregate of nuclear strikes and battles, united by a common operational concept, and conducted in one or several sectors simultaneously or sequentially. According to the environment in which the major proportion of the battles takes place, it may be an engagement by land, by sea, or by air.

1433 SREDNESUTOCHNYY RASKHOD (mean daily expenditure)—The amount of materiel expended, on the average, during one 24-hour period. The mean daily expenditure is usually reckoned, for the basic types of materiel, in fractions of the appropriate supply-and-accounting units, namely: the unit of fire; the fuel load; the daily ration; and the unit.

1434 SREDNIY VETER (mean wind)—The wind, averaged for speed and direction, for all air layers from the ground layer to a given altitude. Mean wind data are used when evaluating the radiation situation.

1435 SREDNIY REMONT (intermediate overhaul)—One of the types of overhaul of combat materiel and equipment, consisting in dismantling-assembly and adjustment work, in assembly and engine repair or engine replacement. During an intermediate overhaul, damage, defects, and deficiencies are made good, so that the service life of the unit is prolonged.

1436 SREDSTVA VOZDUSHNOGO I KOSMICHESKOGO NAPADENIYA (means of air and space attack)—Weapons used to inflict strikes from the air (or from space), on above-ground (or underground) and above-water (or underwater) objectives, and to destroy targets in the air or in space. Means of air and space attack include: fixed-wing aircraft; cruise missiles; helicopters; rotary-wing aircraft; missiles; orbital and aerospace craft, carrying, or capable of carrying, various munitions (means of destruction).

1437 SREDSTVA INZHENERNOGO VOORUZHENIYA (engineer facilities)—The aggregate of machines, munitions, equipment, and materials used in constructing engineer works, and for engineering support of an operation (or battle).

1438 SREDSTVA POVYSHENIYA PROKHODIMOSTI (means of improving the passability of terrain)—Attachments and equipment used to facilitate the passage of wheeled and tracked combat, special, and transport vehicles in the absence of roads or on difficult terrain.

1439 SREDSTVA PROTIVOKHIMICHESKOY ZASHCHITY (means of anti-bacteriological protection)—Individual and collective means of protection against infection, and bacterial preparations which increase the immunity of personnel to infectious diseases, namely: antibiotics and other medicinal preparations used for emergency prophylaxis; instruments and apparatus for conducting bacteriological reconnaissance; machines and instruments for decontamination and for disinfection.

1440 SREDSTVA PROTIVOKHIMICHESKOY ZASHCHITY (means of anti-chemical protection)—Means intended to protect troops against weapons of mass destruction. They may be individual or collective.

1441 SREDSTVA RADIATIONNOY RAZVEDKI I DOZIMETRICHESKOGO KONTROLYA (radiation reconnaissance and dosimetric monitoring facilities)—Dosimetric instruments, intended for radiation

reconnaissance, monitoring the irradiation of personnel, and determining the degree of radioactive contamination of various objects. They include: radioactivity indicators, geiger counters, radiometers, and dosimeters.

1442 SREDSTVA STRATEGICHESKOGO NAZNACHENIYA (strategic facilities)—Weapons and the means of delivering them to the target, permitting destruction of strategic installations. Such facilities include nuclear weapons and their carriers, namely: medium-range, intercontinental, and global missiles, bombers of long-range aviation, missile-armed submarines, and aircraft carriers.

1443 SREDSTVA USILENIYA (reinforcements)—A subunit, unit, or formation, not organic to a unit, formation, or major field force or strategic formation, respectively, but attached to it by higher authority for a certain time to reinforce it quantitatively and qualitatively, thereby ensuring more successful accomplishment of missions in an operation (or battle).

1444 STAVKA VERKHOVNOGO GLAVNOGO KOMANDOVANIYA (historical) (supreme high command general headquarters)—The highest military authority, formed by the Central Committee of the Communist Party of the Soviet Union and by the Presidium of the Supreme Soviet of the USSR for direct command and control of the Armed Forces during World War II.

1445 STANTSIYA NAVEDENIYA RAKET (missile guidance station)—A radio-technical facility used to guide a missile or to keep it directed toward the target throughout a particular sector of its trajectory.

1446 STANTSIYA OBNARUZHENIYA I NAVEDENIYA (detection and guidance radar)—A radar station used to detect air targets and to guide one's own fighters to them.

1447 STANTSIYA ORUDIYNOY NAVODKI (SON) (fire control radar)—A radar station intended to detect air targets and to determine precisely their changing coordinates (to track such targets). The changing coordinates are fed into a computer (anti-aircraft director), which processes the data for air defense fire-control purposes.

1448 STANTSIYA PEREKHVATA I PRITSELIVANIYA (interception and aiming system)—A radar set installed in fighter-interceptors, used to detect air targets and to generate the data for fire-control purposes, or to guide air-to-air missiles.

1449 STANTSIYA RADIOPOMEKH (jamming station)—A radio-technical facility intended to disrupt the operation of enemy radio-technical facilities by emitting radio waves.

1450 STANTSIYA RAZVEDKI I TSELEUKAZANIYA (SRTS) (filter center)—A radar station used to detect air targets and to designate them to batteries of air defense missile troops and air defense artillery.

1451 STANTSIIYA SLEZHENIYA ZA SNARYADOM (RAKETOY) (projectile [missile] tracking station)—A radar station used to determine, automatically, the coordinates of an air defense projectile (missile) and to transmit them to a computer which performs the task of getting the projectile to the target.

1452 STANTSIIYA TSELERASPREDELENIYA (target distribution station)—A radar station and computer intended to distribute air targets between the launching batteries of an air defense missile unit, and to guide the battery missile-guidance radars to the targets assigned to them.

1453 STARTOVAYA BATAREYA (launcher battery)—The firing subunit of missile troops and air defense missile troops, intended to launch missiles.

1454 STARTOVAYA POZITSIIYA (launching position)—A sector of terrain occupied, or ready for occupation, by missile launchers. Launching positions may be main or alternate.

1455 STATIONARNYY TRUBOPROVOD (permanent pipeline)—A system of pipes and pumping facilities used to transport petroleum products. It is used in the national economy and in the armed forces at depots, bases, and [industrial] plants, and also to transport fuel over great distances.

1456 STEPEN' GOTOVNOSTI ZAGRAZHDENIY (degree of readiness of obstacles)—The state of combat readiness of obstacles. Thus, depending on the situation, mine-explosive obstacles may be at the first degree of readiness (full combat readiness), or at the second degree of readiness. In the latter case, the obstacles are made ready for rapid upgrading to full combat readiness, namely: in the case of mine fields, it remains only to remove the safety fences; in the case of objects selected for demolition, all is ready, but the detonators are not inserted in the charges; in the case of delayed-action mines, the mechanisms are not switched on; in the case of controlled mines, it remains only to apply power to the circuit or to transmit the command by radio.

1457 STEPEN' RADIOAKTIVNOGO ZARAZHENIYA (degree of radioactive contamination)—A quantity that defines the contamination of surfaces or volumes by radioactive substances. The degree of radioactive contamination of the terrain is evaluated in terms of radiation level, and of individual objects, in terms of the disintegration of the radioactive cloud per square centimeter of surface, or per cubic centimeter of volume.

1458 STEPEN' TYAZHESTI SVETOVOGO OZHOGA (degree of gravity of a flash burn)—A quantity that defines the casualty effect of the flash associated with a nuclear explosion. It depends on the magnitude of the light pulse and on its duration.

1459 STOYKIYE OTEAVLYAYUSHCHIYE VESHCHESTVA (SOV)

(persistent chemical agents)—Toxic agents which retain their casualty effectiveness for several hours or days. They include slowly-evaporating liquid toxic agents such as yperite (mustard gas), lewisite, etc.

1460 STOYKOST' OTRAVLYAYUSHCHIKH VESHCHESTV (persistence of chemical agents)—The ability of chemical agents to exert a casualty effect on personnel who remain in a contaminated sector for some time. The persistence of chemical agents depends on their physical-chemical properties, the method of use, meteorological conditions, and the nature of the terrain.

1451 STOROZHEVOYE OKHRANENIYE (security at the halt or in bivouac)—A term used to describe the elements providing the service and the service provided, namely, guarding troops while they are resting under the threat of possible attack by enemy ground forces. The principal role of such security elements is to prevent enemy ground reconnaissance from penetrating the area occupied by the resting troops, to warn them of the threat of air or ground attack, to forestall surprise enemy attack, and in the event of an attack, to halt it until deployment of the guarded troops has been completed.

1462 STRATEGICHESKAYA AVIATSIYA (foreign) (strategic aviation)—A type of air force which is directly subordinated to the supreme command and used to conduct aerospace operations in accordance with its plans.

1463 STRATEGICHESKAYA VOZDUSHNAYA ARMIYA (foreign) (strategic air army)—A strategic formation of long-range aviation consisting of several formations of aviation and several units of surface-to-surface intercontinental ballistic missiles.

1464 STRATEGICHESKAYA GRUPPIROVKA (strategic grouping)—Strategic formations or major field forces and formations of various Services, concentrated for the purpose of fulfilling strategic missions in an operation, and in order to achieve decisive goals by armed conflict in a strategically important sector of the theater of operations.

1465 STRATEGICHESKAYA ZADACHA (strategic mission)—A mission whose fulfillment in the course of an armed conflict leads to an abrupt change in the operational-strategic situation in a strategic sector or area of a theater of operations. Successful accomplishment of a strategic mission usually results in attainment of numerical superiority over the enemy, in seizure of important areas and installations on his territory, and in occupation by groupings of the armed forces, of the most advantageous operational and strategic position with respect to the enemy, thereby creating favorable conditions for further conduct of hostilities.

As a rule, a strategic mission is carried out by a major field force or a strategic formation of one Service, but it may be carried out in coordinated action (and sometimes jointly) with other Services.

Successful accomplishment of a series of strategic missions leads to attainment of intermediate and ultimate strategic goals.

1466 STRATEGICHESKAYA OBORONA (strategic defense)—A type of hostilities used by armed forces to achieve strategic goals in the event of surprise attack, or when enemy superiority in forces and weapons has occurred in the course of the armed conflict in a theater of operations.

Strategic defense is organized deliberately or as a matter of necessity for the purpose of repelling an enemy nuclear attack (or offensive); preventing his invasion during the initial period of a war, by land, sea, and air; frustrating his advance in the course of hostilities; weakening enemy forces and facilities by attrition; and creating conditions for going over to a strategic offensive in the given, or another, theater of hostilities.

1457 STRATEGICHESKAYA OBORONITEL'NAYA OPERATSIYA (historical) (strategic defensive operation)—An operation in the course of which defensive missions of strategic importance were assigned and completed. During World War II, strategic defensive operations were usually conducted by the forces of several fronts, supported by formations and major field forces or strategic formations of other Services. Strategic defensive operations were conducted under the guidance of the General Headquarters of the Supreme High Command.

The goals of a strategic defensive operation were: to repel the advance of large enemy strategic groupings; to hold strategically important lines (or areas); and to create conditions for going over to the offensive. The strategic defensive operation has lost its significance in the nuclear environment.

1468 STRATEGICHESKAYA OBSTANOVKA (strategic situation)—The aggregate of conditions affecting the conduct of armed conflict during a particular period of time, in a theater of hostilities as a whole, or in individual strategic areas (or sectors). The strategic situation includes: the prospects for using nuclear weapons and the capability of doing so, having regard to both friendly and hostile forces; the status and position of friendly and hostile forces; the correlation of forces at the beginning of the war and in the course of it, in general, and by theaters of operations (in connection with the conduct of strategic operations); the nature of the terrain, climatic and meteorological conditions; the preparedness of the theaters of hostilities in general, and with regard to materiel and technology in particular.

1469 STRATEGICHESKAYA OPERATSIYA (strategic operation)—An operation planned and conducted under the direct guidance of the Supreme High Command in order to achieve major strategic goals. The basis of a strategic operation is the delivery of massed nuclear strikes. A strategic operation is accomplished jointly by several Services. Its purpose may be to destroy strategic and operational nuclear-attack facilities, to destroy the main grouping of enemy armed forces in the theater of operations, and to seize important strategic installations.

1470 STRATEGICHESKAYA PAUZA (historical) (strategic pause)—A more or less protracted halt to fighting in a theater of operations, arising as a result of political reasons, and due to attrition of the warring parties, and usually associated with the need to restore and regroup forces. A strategic pause did not mean complete cessation of troop reconnaissance and operational activity, and not infrequently included hostilities with a limited goal.

1471 STRATEGICHESKAYA RAZVEDKA (strategic intelligence)—The sum total of those activities conducted by state agencies which are directed toward systematic collection, in both peacetime and wartime, of political, military, economic, scientific, and technological data about foreign states, i.e. probable enemies. These data are collected for the purpose of studying the war potential of possible enemies, and of revealing their political and strategic intentions.

1472 STRATEGICHESKAYA TSEL' (strategic goal)—A goal of the hostilities, the attainment of which results in a radical change in the military, political, and strategic situation during a war as a whole, or in a theater of hostilities.

Strategic goals may be assigned to the armed forces of a country or to individual Services. They are achieved in the course of hostilities, in the first nuclear strike delivered by strategic means, or during some period of the war, or during a strategic offensive operation in a theater of operations (a strategic offensive in a theater of operations).

Depending on their nature and on the time they are achieved in the course of hostilities, strategic goals may be intermediate or final. On the way to attainment of a strategic goal, the armed forces fulfil, simultaneously or successively, a number of missions of strategic character and importance.

1473 STRATEGICHESKIYE PEREVOZKI (strategic movements)—Major troop movements using various types of transport, and movements of formations and major field forces or strategic formations under their own power, for the purpose of altering existing strategic groupings, or creating new ones. As a rule, strategic movements are effected prior to the outbreak of war (during the period when war is imminent), or at the beginning of a war, in order to ensure strategic concentration and deployment; and also in the course of an armed conflict, to effect strategic regroupings.

1474 STRATEGICHESKIYE PEREGRUPPIROVKI (strategic regroupings)—Relocations of major field forces or strategic formations and formations of the Services within the confines of one or several theaters of operations, and also in the depth of the country, in order to reinforce existing strategic groupings, and to create new ones, for the purpose of achieving an advantageous correlation of forces in the course of an armed conflict. One of the main reasons for the need to conduct strategic re-

groupings is the impossibility of completing diversified strategic missions in the course of an armed conflict with the strategic grouping that was created in the first instance.

1475 STRATEGICHESKIYE REZERVY (strategic reserves)—Reserves consisting of military-trained contingents and materiel stockpiles, under the control of the Ministry of Defense or the Supreme High Command, and intended for use as supplementary resources in both peacetime and wartime. Besides these reserves, in the course of a war, strategic reserves are created in the form of reserve components of the various Services.

1476 STRATEGICHESKIY KONTRMANEVR (strategic counter-maneuver)—Measures adopted in response to enemy actions, i.e. counteraction to the enemy's already accomplished or expected maneuver, which has led, or would lead, to an abrupt change in the strategic situation. In content, a strategic countermaneuver is a regrouping of forces and facilities to the threatened sector. Under contemporary conditions, a strategic countermaneuver may be effected primarily by transferring the efforts of nuclear missile weapons to threatened sectors, for the purpose of disrupting the enemy maneuver and permitting a subsequent transition of friendly troops to an active role.

1477 STRATEGICHESKIY MANEVR (strategic maneuver)—The aggregate of the Supreme Command's measures implemented in the course of an armed conflict by regrouping forces and facilities and reinforcing friendly strategic groupings, by their occupying an advantageous position with respect to the enemy, by redirecting nuclear strikes and shock groupings, by skilfully using these in place and time, and also by using other favorable conditions to secure the rapid and complete destruction of major enemy groupings, and to attain a significant strategic success.

1478 STRATEGICHESKIY OB"YEKT (strategic objective)—An objective of strategic importance. Under present-day conditions, a strategic objective may be: nuclear weapons; major groupings of ground, air, or naval forces; administrative-political and economic centers; major ports, naval and air force bases; power-engineering systems; etc. The strategic importance of one or another of these objectives may change in the course of a war in connection with changes in the military-political and strategic situation.

1479 STRATEGICHESKIY FRONT (strategic front)—A common front, created in a theater of hostilities, or in several adjoining theaters of hostilities (for example, the Soviet-German front in World War II). During the last war, several groups of fronts (groups of armies), fronts and individual armies conducted hostilities within the limits of a strategic front.

1480 STRATEGICHESKOYE NAPRAVLENIYE (strategic sector)—A wide strip of land or sea, and the air space above it, within the limits of a particular theater of operations, leading the armed forces of one warring party to the other's most important administrative-political and industrial-economic centers, the struggle for which may be the content of a strategic operation. Because of its geographic and economic conditions, a strategic sector usually permits coordinated military activities to be conducted by many strategic formations of various Services. As a rule, there are several operational sectors within a strategic sector.

1481 STRATEGICHESKOYE NASTUPLIENIYE (strategic offensive)—A basic type of military activity used by armed forces to achieve the principal goals and missions of armed conflict.

Successful conduct of a strategic offensive results in utter defeat of enemy armed forces, neutralization of his military-economic potential, seizure of the territory of member states of a hostile coalition, and their withdrawal from a war. This leads to radical changes in the military-political situation and the course of a war, and, under present-day conditions, to its rapid conclusion.

A strategic offensive reflects the active, decisive character of a state's military doctrine and strategy. It is accomplished by delivering nuclear strikes by strategic means, and by conducting simultaneous and successive strategic offensive operations with the participation of all Services in one or several continental and maritime theaters of operations.

1482 STRATEGICHESKOYE OBE SPECHENIYE (strategic support)—The complex of measures planned and directed toward creating favorable conditions for conducting war and fulfilling missions assigned in strategic operations. The main forms of strategic support are: strategic intelligence; security of the flanks and rear of armed forces in a theater of operations; defense of sea coasts and naval bases, and expansion of naval and air force basing; camouflage; materiel and technical support; and preparation of the theater of operations for war.

1483 STRATEGICHESKOYE SOSREDOUCHENIYE VOORUZHENNYKH SIL (strategic concentration of armed forces)—One of the principal elements of strategic deployment of armed forces. Strictly, it is the process whereby forces and facilities are assembled in theaters of operations in accordance with their operational-strategic role. Strategic concentration of armed forces may be partially accomplished in peacetime, too, by the appropriate disposition of forces on the eve of a war (during the period when war is imminent), and by strengthening the forces already in a theater of hostilities upon the outbreak of a war, or during its course, when creating a new front of armed conflict. Strategic concentration of armed forces is usually associated with a shift of troops using their organic facilities, while ships and aircraft make their own way to the new areas; but is also associated with massed movements of troops and materiel from the depth of the country by rail, motor transport, water, and air.

1484 STRATEGICHESKOYE SYR'YE (strategic raw material)—Raw material for the production of military goods (ferrous, non-ferrous, and rare metals; dispersed elements; chemical products; fuel; etc.).

1485 STRATEGICHESKOYE ESHELONIROVANIYE (strategic echelonnement)—Deployment of the armed forces of states into a series of strategic echelons (groupings), which enter a war successively, according to their strategic role, taking into account their readiness for mobilization and combat.

1486 STRATEGIYA (VOYENNAYA) (military strategy)—The highest level in the field of military art, constituting a system of scientific knowledge concerning the phenomena and laws of armed conflict.

On the basis of the tenets of military doctrine, the experience of past wars, and analysis of the political, economic and military conditions of the current situation, military strategy investigates and elaborates on problems pertaining to the training of the armed forces as a whole and the individual Services, and their strategic use in war; the forms and methods of conducting and directing war; and also problems pertaining to comprehensive strategic support of the combat operations of the armed forces.

At the same time, military strategy is a field of practical activity for the higher military command in training the armed forces for war and providing leadership in armed conflict. Military strategy exerts an influence on the preparation of a country for war in such a way as to ensure victory.

1487 STRATEGIYA GIBKOGO REAGIROVANIYA (foreign) (strategy of flexible response)—A strategy envisaging development of the armed forces, so that they would be adaptable for waging either total, worldwide nuclear warfare or limited wars, using nuclear or conventional weapons, respectively. The strategy of flexible response is being promoted by American militarists instead of the untenable strategy of "massive nuclear retaliation," even though the strategy of flexible response is just as adventurist, and no less aggressive or hazardous to peace.

1488 STRATEGIYA PERIFERIYNAYA (foreign) (peripheral strategy)—The strategy to which the NATO command adhered prior to creation of the West German Bundeswehr. It was intended, in the event of war being unleashed, to conduct active operations at sea and in the air, but to confine ground-troop activities to delaying operations to ensure subsequent transition to a counteroffensive. With the inclusion of West Germany in NATO, the peripheral strategy was superseded by the "shield and sword" strategy or the "front-line strategy."

1489 STRATEGIYA SOKRUSHENIYA (historical) (strategy of annihilation)—A former concept characterized by a striving to attain the goals of a war by means of one crushing blow inflicted by superior forces on enemy armed forces and territory, and rapid occupation of that territory.

1490 STRATEGIYA SHCHITA I MECHA (foreign) ("shield and

sword" strategy)—A term used by the NATO command to characterize its doctrine. By "sword" is meant the means of strategic nuclear attack (intercontinental and medium-range missiles, missile-carrying submarines, attack carriers, strategic aviation), and by the "shield," the ground troops of the European NATO countries, whose striking power is vested in the Bundeswehr, which has been supplied with nuclear weapons.

1491 STRELKOVAYA DIVIZIYA (historical) (rifle division)—The basic tactical formation of Soviet ground troops during World War II and the first years after its conclusion, consisting of three rifle regiments, artillery and other units.

1492 SUMMARNAYA DOZA RADIATSII (total radiation dose)—The radiation dose received by a person during the entire time spent in terrain contaminated by radioactive substances.

1493 SUTOCHNAYA DACHA (daily ration)—The quantity of foodstuffs allowed per serviceman in accordance with the norms of daily nutrition. The daily ration of a subunit, unit, or formation is the amount of foodstuffs required to feed all personnel of the subunit, etc., for one day. The daily ration is the conventional unit used to calculate the troop's requirement for foodstuffs, and to account for provisions.

1494 SFORMIROVSHIYSYA SLED RADIOAKTIVNOGO OBLAKA (final pattern of a radioactive cloud)—The pattern of the cloud associated with a nuclear explosion at the time when radioactive fallout has ceased completely at all its points.

1495 SKHEMA MARSHA (march diagram)—A graphic document formulated on a map. The following are indicated on a march diagram: the grouping of the troops before the march begins; the zone (march route) through which the major field force or strategic formation (formation, unit) is to move; lines (or points) of departure; check-point lines and probable deployment lines, and the time they are to be passed; areas of long halts, day rests (night halts), and areas of concentration; lines (or points) occupied by forward detachments and security detachments; the positions of march-route (or sector) commandants, commandant posts, control posts, etc. A diagram of the march formation is depicted by troop staffs on the march diagram, or separately.

1496 SKHEMA OGNIA (fire chart)—A sketch, drawn to scale and with conventional symbols, depicting the fire missions of an artillery unit (subunit, group). It is customary to mark the following on a fire chart: the forward edge of friendly defenses, the disposition of the enemy, and the fire missions of artillery in the form of specific sectors of fire. Each target (sector of fire) is given its own number (or designation).

1497 SKHEMA ORIENTIROV (reference point diagram)—A free-hand drawing on which local features selected as reference points are

depicted. The reference points are numbered from right to left, and from one's own lines to enemy lines. The reference-point numbers assigned by the superior commander are not changed. Plotting reference points on such a diagram and timely determination of their ranges facilitates target designation, delivery of fire on targets, and memorizing the reference points. Only the reference points designated by the superior commander are used in reports to the superior commander, and in coordinated action with supporting and adjacent units.

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1498 TABEL' SROCHNYKH DONESENIY (schedule of periodic reports)—A document that lays down the procedure for rendering periodic reports (i.e. reports which are to be rendered by a certain date) to the superior staff. The schedule is prepared by the staff organizing the battle (or operation) in which troops subordinated to it will participate. A schedule of periodic report indicates: who is to render a specific report and by what date; to whom the report is to be rendered; and what is to be reported.

1499 TABEL' NYE SREDSTVA (table of allowance items)—Articles of troop equipment, allowed by scale, type, size, and quality. Table of allowance items include: organic river crossing equipment (boats, ferries, bridges); camouflage equipment; entrenching tools; observation equipment; etc.

1500 TABLITSA VOLN I POZYVNYKH (frequency and call sign schedule)—A list of wavelengths (or frequencies) and call signs for radio stations, compiled in a special table which is used by the chief signal officer of the formation (major field force or strategic formation) when allocating them prior to an impending operation (or battle).

1501 TABLITSA OGNYA ARTILLERII (artillery capabilities chart)—A document containing, in a form convenient for use, data on the procedure for conducting artillery fire. It is prepared by the staffs of artillery groups, units, and subunits when planning the combat activities of artillery.

1502 TABLITSA SIGNALOV VZAIMODEYSTVIYA (schedule of coordination signals)—A list of established signals transmitted by various means of communication and used during coordinated combat operations of formations, units, or subunits, of all branches (or Services) when they are carrying out a joint operational (or combat) mission.

1503 TABUN (tabun [non-persistent nerve gas])—A quick-acting, nerve and paralyzant toxic agent, that attacks the blood and nervous system. Tabun is a reddish-brown liquid with a faint odor of fruit (bitter almonds). The field mask and protective clothing serve as protection against it.

1504 TAKTIKA (VOYENNAYA) (military tactics)—A special field in the theory and practice of military art which studies the objective laws of combat and develops methods of preparing for combat and conducting it, on land, at sea, and in the air. Military tactics occupies a subordinate position with respect to operational art and strategy, acting in their interests, and serving to achieve the goals set for it by the operational art. Each Service and branch, by virtue of its intrinsic peculiarities, has its own theory and practice for the organization and conduct of combat and, consequently, its own tactics too, which are called Service tactics or branch (arms) tactics.

1505 TAKTIKA VIDA VOORUZHENNYKH SIL (Service tactics)—The branch of military art appropriate to a particular Service, encompassing problems pertaining to the theory and practice of preparing for, and waging, combat in which use is made of the various service branches (branches of aviation, arms of the navy) of the given Service. Service tactics determine the role and place of each of the branches (or their naval or air force equivalents), and the procedure for their coordinated action in combat, and also establish the methods for using them in the various types of battle, and under various conditions of the combat situation.

1506 TAKTIKA RODA VOYSK (RODA AVIATSII, RODA SIL FLOTA) (tactics used by a service branch (branch of aviation, arm of the navy))—That part of Service tactics dealing with the laws of combat appropriate to a particular service branch (branch of aviation, arm of the navy). It develops methods whereby combat may be prepared for, and waged, by similar subunits, warships, units (or formations) of the given service branches, branch of aviation, or arm of the navy, under various conditions of the situation, taking into account their combat capabilities.

1507 TAKTICHESKAYA VOZDUSHNAYA ARMIYA (foreign) (tactical air army)—A strategic formation of tactical aviation, consisting of several aviation formations (or units), and cruise-missile units. A tactical air army may be independent, or it may form part of a tactical air command, or of a combined tactical air command.

1508 TAKTICHESKAYA GLUBINA OBORONY (tactical depth of a defense)—The strip of terrain which is occupied and defended by divisions of the first echelon of an army.

1509 TAKTICHESKAYA GRUPPA PODVODNYKH LODOK (tactical submarine group)—Two or three conventionally-powered submarines of the same class on the same combat mission under the command of the group commander.

1510 TAKTICHESKAYA PLOTNOST' (tactical density)—The mean numerical strength of troops and combat materiel per kilometer of front in the zone of action of combined-arms formations, usually expressed in battalions, tanks, guns, and mortars.

1511 TAKTICHESKAYA PODGOTIVKA VOYSK (tactical troop training)—A most important branch of combat training of troops, its purpose being to teach them the methods of organizing and conducting combat. Tactical troop training includes: study of the theory of combat and its application to specific conditions of the combat situation; practical study of the methods of using nuclear weapons and various combat materiel in battle; instruction in exploiting terrain features when in combat; instructing commanders and staffs in troop command and control under complex conditions of the situation; and perfection of combat coordination between formations, units, and subunits.

1512 TAKTICHESKAYA RAZVEDKA (tactical reconnaissance)—A component part of military reconnaissance. It obtains such information about the enemy, terrain, weather, and the area of impending action as is needed to support the combat operations of troops. Tactical reconnaissance is organized by the commanders and staffs of formations, units, (subunits) of all service branches to the depth of their own combat mission, or to the depth of the entire disposition of enemy combat formations.

1513 TAKTICHESKIY RADIUS DEYSTVIYA SAMOLETA (tactical radius of action of an aircraft)—The extreme distance which an aircraft can fly (i.e. its range), from an airfield to its objective, allowing for the return flight to the airfield of departure (with a specified reserve of fuel for aerial combat, or a change in the situation).

1514 TAKTICHESKIY RADIUS PLAVANIYA KORABLYA (tactical cruising radius of a warship)—The greatest distance which a warship can go from its base at economical operational speed, while allowing enough fuel for completion of the assigned mission and for return to base. The tactical cruising radius of a warship is usually three- to four-tenths of its range.

1515 TAKTICHESKIY USPEKH (tactical success)—Success achieved on a tactical scale. A characteristic sign of tactical success is timely and exact completion of assigned combat missions by subunits, units, and formations.

1516 TAKTICHESKOYE AVIATIONNOYE KOMANDOVANIYE (TAK) (foreign) (tactical air command)—An Air Forces strategic formation, which may include several wings of fighter-bombers and fighters, being intended for coordinated action with ground troops.

1517 TAKTICHESKOYE UCHENIYE (tactical training exercise)—One of the forms of practical training for formations, units, and subunits of all branches, special troops, and rear services, as well as their commanders and staffs, in the conduct and support of contemporary combat. Troop tactical training exercises are subdivided into combined-arms and special (rear services, communications, etc.). In scale, tactical training exercises

are subdivided into the battalion, regiment, division, and corps categories; and in participation, into one-sided and two-sided exercises.

1518 TANKOVAYA ARMIYA (tank army)—A major field force or strategic formation of ground troops, consisting of several tank formations, and used in operations to complete operational missions, and in a number of cases, operational-strategic missions, as well.

1519 TANKOVYY KORPUS (historical) (tank corps)—The highest tactical formation of armored and mechanized troops of the Soviet Army during World War II. A tank corps usually consisted of three tank brigades, and individual units.

1520 TANKOOPASNOYE NAPRAVLENIYE (probable avenue of tank approach)—A strip of terrain in which the enemy may use tanks en masse.

1521 TEATR VOYENNYKH DEYSTVIY (theater of operations)—A particular territory, together with the associated air space and sea areas, including islands (archipelagos), within whose limits a known part of the armed forces of the country (or coalition) operates in wartime, engaged in strategic missions which ensue from the war plan. A theater of operations may be ground, maritime, or intercontinental. According to their military-political and economic importance, theaters of operations are classified as main or secondary.

1522 TEATR VOYNY (theater of war)—The territory of any one continent, together with the sea areas adjoining it and the air space above it, on which hostilities may develop (for example, the European theater of war). A theater of war usually includes several theaters of operations.

1523 TEKUSHCHIY REMONT (routine maintenance)—A type of maintenance used for combat materiel and military equipment, consisting in rectifying defects that occur during its operation, correcting malfunctions, and replacing individual parts.

1524 TELEVISIONNAYA SVYAZ' (television communication)—A type of communication accomplished with the aid of television equipment and special telecommunication channels, permitting stationary and moving objects to be seen at a distance by reception of their images on a screen. Television communication is used to transmit observations of the disposition and movements of friendly and hostile troops, combat and special materiel, and observations of nuclear, artillery, and bombing strikes. It is also used to transmit combat documents, fields of view of the terrain, and the images of the persons conducting conversations.

1525 TELEGRAFNAYA SVYAZ' (telegraphic communication)—A type of communication permitting rapid transmission, at a distance, of various textual (alphanumeric) traffic in the form of telegrams or radiograms. The essential features of electronic telegraph communication by

wire or radio are: the documentary nature of the traffic; the rapidity of their exchange; transmission and delivery of telegrams on the instructions of the originators; and also the direct personal exchange of documentary communications between commanders, staffs, establishments and organizations.

1526 TELEFONNAYA SVYAZ' (telephone communication)—A type of communication permitting verbal conversations directly between two subscribers. At control posts, telephone communication is divided into internal and long distance.

1527 TEMP NASTUPLENIYA (rate of an offensive)—A most important index of the pace of an operation or battle. The rate of an offensive is the average daily forward movement of troops in the course of an offensive. It is measured in kilometers per day. In certain cases, e.g., in the event of overcoming enemy defense, it is measured in kilometers per hour of combat.

1528 TEMPY VOSSTANOVLENIYA ZHELEZNYKH DOROG (rate of restoration of railroads)—An expression of the rapidity of restoration of damaged railroads in kilometers per day.

1529 TERRITORIAL'NYYE VODY (territorial waters)—The strip of sea of a certain width along the shores and outer boundary of inland seas of a coastal state, being under the sovereignty of the given state, and constituting part (a continuation) of its national territory. The system and boundaries of territorial waters are established by the national legislature of a maritime state on the basis of economic and state security considerations, and in certain cases, by international agreements. There are no universally-binding international rules governing the width of the territorial waters of states. The width of the territorial waters of states varies considerably, ranging from 3 to 12 and even as much as 200 nautical miles. Soviet territorial waters have a width of 12 nautical miles (22.2 kilometers), reckoned from the lowest tide line, both on the mainland and on islands, with the exception of certain cases stipulated by international agreements.

1530 TEKHNICHESKAYA POZITSIYA RAKET (missile-servicing position)—The area of terrain on which a missile-servicing unit (or sub-unit) is deployed for the purpose of carrying out the technical preparation of missiles for launching.

1531 TEKHNICHESKOYE ZAMYKANIYE KOLONN (technical maintenance echelon)—Repair-and-evacuation facilities and fuel supply service components, which move at the rear of a march column, being intended to render assistance to stragglers or damaged vehicles.

1532 TEKHNICHESKOYE OBESPECHENIYE (technical support)—The complex of measures that includes the organization and accomplish-

ment of technically correct use, technical servicing, and maintenance (including preventive maintenance) of missile, artillery, and chemical-warfare armaments; armored-vehicle, automotive, aircraft, and warship engines; as well as arranging for their timely repair and evacuation.

1533 TOKSINY (toxins)—Poisons of bacterial, animal, or vegetable origin.

1534 TOKSICHNOST' (toxicity)—The strength of the casualty effect of a toxic agent. The degree of toxicity is assessed in terms of the value of the concentration of the toxic agent at corresponding time of action (exposure). The toxic dose is expressed in milligrams per minute per liter or in milligrams per second per liter.

1535 TOPOGEODEZICHESKAYA PODGOTOVKA (topogeodesic preparation)—Creation of an artillery control net in a unified system of coordinates, and topogeodesic tie-in of launching and firing positions, observation points and posts of artillery-reconnaissance subunits. Topogeodesic tie-in includes determination of the coordinates and heights and orientation of launchers (or guns, instruments). Topogeodesic preparation may be done on a geodesic basis, or on a map (aerial photograph).

1536 TOPOGRAFICHESKAYA RAZVEDKA (topographic reconnaissance)—Acquisition of data on the terrain and disclosure of changes in its nature which have taken place since the last topographic survey of the given area. Topographic reconnaissance is conducted with the facilities of the topographic service, in cooperation with reconnaissance aviation.

1537 TOPOGRAFICHESKOYE OBESPECHENIYE VOYSK (topographic support of troops)—A system of measures ensuring that troops have an uninterrupted supply of topographic maps, and ensuring preparation and duplication of special maps and other topographic documents. Topographic support of troops also includes: topographic reconnaissance; correcting and supplementing outdated maps; development of a geodesic control net for missile units and artillery; and topographic training of troops.

1538 TORPEDA (KORABEL'NAYA, AVIATSIONNAYA) (torpedo [shipborne, aerial])—A self-propelled, self-guiding, cigar-shaped, underwater projectile, with an explosive charge in its warhead, intended to cause heavy damage to the underwater part, i.e. the most vulnerable part, of a warship or transport vessel. The torpedo is the main armament of torpedo-armed submarines, torpedo boats, torpedo-armed aircraft, and certain classes of surface ships.

1539 TORPEVO-BOMBOVYY UDAR (torpedo-and-bomb attack)—A term sometimes used to mean an air attack on the enemy, using torpedo armament and aerial bombs.

1540 TORPEDOMETANIYE (torpedo bombing)—Aimed dropping of

torpedoes from an aircraft, directed toward various marine targets. A distinction is made between low-level and high-level torpedo bombing.

1541 TOTAL'NAYA VOYNA (foreign) (total war)—An all-embracing imperialist war, waged by all manner of means, not only against enemy armed forces, but against the entire population of a nation, with a view to its complete destruction. Characteristic of total war are the methods by which it is waged, namely, the most perfidious and the most brutal methods, inhuman with respect to the world's population. The theory of total war constitutes one of the foundations of fascist and all other imperialist military ideology.

1542 TRALENIYE (mine sweeping)—The most effective method of eliminating mine fields, constituting the basis of anti-mine defense.

1543 TRAL'SHCHIK (minesweeper)—A surface warship especially intended for the detection and destruction of mines with the aid of sweeps, and for conducting warships (vessels) behind the sweeps. According to their displacement, speed, seaworthiness, and armament, minesweepers are subdivided into the fleet, coastal, inshore, small inshore and river categories.

1544 TROTILOVYY EKVIVALENT YADERNOGO BOYEPRI-PASA (TNT equivalent of nuclear munitions)—The quantity of TNT whose explosive energy is equal to the energy which would be liberated in the explosion of a given nuclear charge. The TNT equivalent may be expressed in tons, in thousands of tons (kilotons), or in millions of tons (megatons).

1545 TYL VOORUZHENNYKH SIL (rear services of the armed forces)—The forces and facilities forming an organizational part of the Armed Forces, as well as those put at the disposal of the military command by the state, for comprehensive material, technical, and medical support, and servicing of missile forces, ground forces, national air defense forces, the air force, and the navy. The rear services of the armed forces are divided into central and operational rear services, and troop rear units.

1546 TYLOVAYA OBSTANOVKA (rear area situation)—Part of the overall military situation. It defines the state and position of rear services formations, units, and establishments; the state of materiel, technical, medical, and other types of rear services support of the troops, transportation routes, and means of transport; conditions for bringing up materiel; the social-political composition and mood of the population; the economy of the area of activities, and the prospects for using local resources; the state of the security, defense, and protection of the rear, control of rear services and communications; the nature of the terrain, and climatic and weather conditions.

1547 TYLOVAYA POLOSA FRONTA (ARMII) (rear area zone of a front [or army])—Territory with railroads, highways, and waterways,

airfields, pipelines, lines of communication, and local facilities. The rear area zone of a front (or army) is bounded to the right and to the left by dividing lines; to the rear, by the rear boundary of the front (or army); and in a forward direction, it reaches the vicinity of mobile army bases and divisional depots.

1548 TYLOVAYA KAZVEDKA (rear area reconnaissance)—Collection of data on the state of the rear area, its economy, and its main installations. Observing that conveyance of materiel and evacuation will depend to a considerable degree on the state of transportation routes (railways, waterways, and roads) and the airfield net these installations must be reconnoitered with special care. When conducting rear area reconnaissance, a study should also be made of the sanitary-epidemic and veterinary-epizootic state of the area, and the state of water sources.

1549 TYLOVOYE OBESPECHENIYE (rear services support)—The complex of measures related to the organization of rear services, to the preparation and utilization of all types of transportation routes and transport, to material, technical, medical, airfield engineering, airfield-technical, and other types of support and servicing; and in the navy, besides, to engineering, emergency and rescue, and chemical support of forces.

1550 TYLOVOY PUNKT UPRAVLENIYA (TPU) (rear services control point)—A control post organized to direct the rear services of a major field force or strategic formation, formation, or unit.

1551 TYLOVYYE CHASTI I UCHREZHDENIYA (rear services units and establishments)—Units and establishments intended to fulfill missions related to material, technical, medical, and other types of rear services support and servicing of troops (aviation, navy). Rear services units and establishments include supply depots, bases, transport units, repair workshops, hospitals, etc.

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1552 'UGOLKOVYY OTRAZHATEL' (corner reflector)—A reflector of electromagnetic waves, usually consisting of three mutually-perpendicular plane reflecting surfaces. It possesses the capability of reflecting electromagnetic waves in the direction from which they came, so that blips appear on the screen of the radar set or station irradiating the reflector. Corner reflectors are used to create false targets (objects), and to camouflage real objects and reference points or landmarks. Besides this, corner reflectors are used to simulate targets on land, on water, and in the air.

1553 UGROZHAYEMOYE POLOZHENIYE (UGROZHAYEMY PERIOD) (threat situation [threat period])—A period of direct preparation of a country and its armed forces for war, established by decision of

the government in moments of an especially tense international situation. Grounds for declaring a threat situation may be: a change in the political interrelationships between states, or an abrupt strain in them; outbreak of local armed conflict; introduction of civil defense measures in countries of the imperialist bloc; raising the combat readiness of the armed forces, etc.

1554 UDARNAYA VOLNA (shock wave)—A region of strong compression of the medium (air, ground, water), which is propagated at extremely high velocity in all directions from the center of an explosion.

1555 UDARNAYA VOLNA YADERNOGO VZRYVA (shock wave of a nuclear explosion)—One of the injurious effects of a nuclear burst. The shock wave of a nuclear explosion causes personnel casualties and destruction of materiel and various structures. Its casualty-producing and destructive capability is determined by overpressure and throwing action.

1556 UDARY PO SKHODYASHCHIMSAYA NAPRAVLENIYAM (strikes along convergent axes)—Strikes inflicted, by groupings of forces, on enemy flanks, with a view to his encirclement and defeat. Use is made of the favorable configuration of the front and the conditions of the terrain.

1557 UDLINENNYY ZARYAD (elongated charge [Bangalore torpedo])—A charge used for making passages through mine fields and other obstacles. An elongated charge consists of individual lengths of metallic pipe (1–2 meters long), or of flexible tube, charged with explosives. The charge is moved onto the mine field (obstacle zone) by a tank equipped with a mine clearing attachment, or by other special means.

1558 UZEL ZAGRAZHDENIY (obstacle complex)—The complex of various types of engineer obstacles, arranged on a probable avenue of enemy approach, at a convenient and tactically expedient point to stop him. An obstacle complex usually includes structures which have been prepared for demolition, e.g., bridges and other highway works, or intersections and road sectors passing through bottlenecks, forests, marshes, etc., and may include mine fields and other obstacles placed on detours around demolished structures.

1559 UZEL SVYAZI (communications center)—An organizational and technical grouping of communication facilities deployed in a particular place to facilitate troop control. According to their purpose, communications centers are divided into command post communications centers and auxiliary communications centers.

1560 UKOMPLEKTOVANIYE VOYSK (manpower and logistics administration)—Manning of ground, naval, and air forces, and replenishing their armament and combat materiel to the levels prescribed in the tables of organization and equipment, in both peacetime and wartime. Manning is accomplished by the routine draft of young citizens who have not served

previously, and in event of declared mobilization, by call-up of the reserve subject to compulsory military service. Replenishment of armament and combat materiel is done in peacetime by centralized supply from the war industry and civil enterprises, and in wartime, as well, by deliveries from the national economy. In bringing the armed forces up to strength, the territorial system, the extraterritorial system, or the mixed system may be used.

1561 ULTIMATUM (ultimatum)—A categorical demand, permitting neither argument nor objection, for the fulfillment of a stipulated condition under threat of the use of force (e.g., a demand for cessation of resistance on the part of a grouping of troops, a garrison, etc.), or any repression whatever (e.g., threatening to declare war, break of diplomatic relations, establishment of a boycott or blockade, etc.). An ultimatum is usually accompanied by an indication of the precise period during which it must be accepted.

1562 UPI OTNENIYE LINII SVYAZI (multiplexing a communications line)—Using one telephone circuit to accomplish several communications by using the apparatus of carrier telephony equipment and that of audio-frequency telegraphy.

1563 UPRAVLENIYE VOYSKAMI (troop command and control)—Constant direction on the part of commanders and staffs of all phases of activity of subordinated troops (naval or air forces), directed toward fulfillment of assigned missions. The basic requirements of troop command and control are: continuity, firmness, flexibility, and quickness of reaction to changes in the situation.

1564 UPRAVLENIYE OGNEM (fire control)—The aggregate of organizational measures and activities performed by commanders and staffs for the purpose of effective use of fire to destroy the enemy under the specific conditions of the situation. Fire control includes: use of target reconnaissance data; transmission of target designations; assignments of fire missions; determination of initial settings for conducting fire; call for fire (or "cease fire"); adjustment of fire; maneuver with fire; and checking the results of firing.

1565 UPRAVLYAYEMAYA AVIATSIONNAYA BOMBA (UAB) (guided aerial bomb)—An aerial bomb having an apparatus which permits it to change its flight trajectory after being dropped from an aircraft. The bombing accuracy attainable with guided aerial bombs is considerably greater than that attainable with ordinary bombs. The guided aerial bomb is used against small but vital targets.

1566 UPRAVLYAYEMYYE RAKETY (guided missiles)—Missiles which are guided in flight with the aid of special guidance systems (autonomous, remote-control, homing, and combined systems).

1567 UPRAVLYAYEMYYE REAKTIVNYYE SNARYADY (foreign) (guided rocket projectiles)—Rocket projectiles equipped with apparatus for guiding their flight on a trajectory.

1568 UROVEN' RADIATSHI (radiation level)—A quantity characterizing the intensity of radioactive contamination. It is measured in roentgens per hour.

1569 USTOYCHIVOST' OBORONY (stability of defense)—The ability of defending troops, using modern fire power, maneuver, and advantageous terrain features, to inflict a defeat on superior enemy forces, and to hold the occupied area or defense zone.

1570 UCHASTOK VYSADKI MORSKOGO DESANTA (amphibious assault force landing sector)—A part of an amphibious assault force landing area, within the limits of which the landing of a unit or formation of an amphibious assault force usually takes place. A main sector is that part of an amphibious assault landing sector where landings take place by the forces designated to fulfil the main mission. Each sector contains several landing points.

1571 UCHASTOK FORSIROVANIYA (forced crossing sector)—The sector of a river, together with the adjacent terrain on the near bank, designated by a commander for a forced crossing by the formation, unit, or subunit under his command. Such a sector includes main and alternate crossing points, an initial assembly area for crossing means, an assembly area, artillery and tank firing positions, and control posts.

1572 UCHEBNO-BOYEVYYE OTRAVLYAYUSHCHIYE VESH-CHESTVA (combat training toxic agents)—Relatively weak toxic agents (or special preparations) used in troop combat training.

1573 UCHENIYE (VOYENNOYE) (military training exercise)—One of the basic methods of combat training for troops (naval or air forces) and the staffs of units, formations, and major field forces or strategic formations, of the various Services, as well as for rear services elements, and special troops. According to their scale, military training exercises are subdivided into tactical, operational, and strategic. According to the manner in which they are conducted, they are subdivided into the following categories: troop (naval, air force), with or without field firing (or bombing); command; command and staff; staff; rear services; experimental; research; and special. According to their organization, they are one-sided or two-sided; and single-level, two-level, or multilevel.

1574 UYASNENIYE ZADACHI (mission plan analysis)—A most important step in the work of a commander when making his plan. Mission plan analysis consists of thoroughly understanding the mission of the senior unit, formation, major field force or strategic formation, and the concept of the superior commander (or commanding general) for con-

ducting the battle (or operation). Moreover, it consists in analyzing the combat mission of his own unit, formation, or major field force or strategic formation, and its role in the fulfillment of the overall mission of higher authority. Furthermore, it consists in a knowledge of the activities of adjacent units in the impending battle (or operation). All the subsequent work of a commander (or commanding general) will depend on how correctly he has analyzed the combat mission assigned to him.

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1575 FAKTORY OPREDELYAYUSHCHIYE KHOD I ISKHOD VOYNY (factors bearing on the course and outcome of a war)—The decisive forces without the presence and continuous action of which it is impossible not only to win, but even to wage, a war. They include: material and technical support of the armed conflict; the morale of the people and of armed forces' personnel; the training level of personnel, units, and formations of the armed forces; the quantity and quality of nuclear weapons, the means of delivering them to the target, conventional weapons, and war materiel; correct direction of the armed conflict, which depends on the organizing ability, military knowledge, and skill, of commanders of all ranks. The status of all these factors depends entirely on the character of the social order and state regime, as well as on the country's economy. In spite of the fact that war does not stem from the nature of a socialist society, such a society creates conditions which favor the development of all factors promoting a country's defensive power.

1576 FIL'TROVENTILYATSIONNYY KOMPLEKT (filter-ventilation set)—Special apparatus for cleansing air of toxic, radioactive, and bacterial matter: fitted in shelters; command, observation, and medical posts; communications centers; etc.

1577 FINANSIROVANIYE VOYNY (financing of a war)—Planned wartime creation and distribution of all monetary fund resources in a state (savings, wages, credits, etc.) for the purpose of conducting a war.

1578 FLAGMANSKIY KORABL' (flagship)—The warship on which the commander of a formation, or the flag officer commanding a strategic formation or fleet, has his official location.

1579 FLANGOVYY MANEVR (flank maneuver)—An organized shift of forces and facilities toward one of the flanks for the purpose of creating the most advantageous grouping and occupying the best position with respect to the enemy, with a view to inflicting decisive damage on him by fire, and defeating his grouping by strikes against his flank and rear.

1580 FLANGOVYY MARSH (flank march)—A movement of troops under their own power, parallel to the front line.

1581 FLANGOVYY UDAR (flank attack)—An attack directed at the flank of an operational (or combat) or march formation of troops. A flank attack is one of the types (methods) of maneuver.

1582 FLOT (fleet)—A naval strategic formation intended to conduct hostilities in a given maritime (or ocean) theater. A fleet consists of formations and strategic formations of various branches of the navy (flotillas, squadrons, divisions, brigades, and individual units). A fleet includes naval bases, one of which is a main naval base. The operational activity of a fleet is supported by the rear elements and special services which form part of it.

1583 FLOTILIYA (MORSKAYA, RECHNAYA, OZERNAYA) (flotilla [sea, river, lake])—A naval strategic formation in a given area of the sea, on a river, or a lake. A flotilla may be an independent naval strategic formation, subordinated to the Commander-in-Chief of the navy, or it may form part of a fleet.

1584 FORMA OPERATIVNOGO MANEVRA (historical) (form of operational maneuver)—One of the variants of the method of action used in operations by strategic formations with a view to inflicting heavy blows on the enemy in a chosen sector. The forms of operational maneuver in offensive operations were: a frontal attack for the purpose of breaking through enemy defenses; operational deep envelopment and close envelopment of an enemy grouping; attacks in convergent directions with a view to encirclement and destruction of a large grouping; attacks for the purpose of pinning the enemy against almost insurmountable barriers. Frontal attacks were effected in a number of sectors for the purpose of fragmenting enemy defenses, breaking up his groupings, and making a deep split in the defense front.

1585 FORSIROVANIYE VODNYKH PREGRAD (forcing water barriers)—An offensive involving forcing a water barrier which is defended by the enemy. Forcing a water barrier is usually effected from the march. At the beginning of an offensive operation (or battle), when the forces and facilities of the warring parties are disposed on opposite banks, forcing is effected through prompt systematic preparation.

1586 FORSIROVANIYE MINNOGO ZAGRAZHDENIYA (forcing a mine obstacle)—Negotiation of a mine obstacle by submarines or surface ships. Forcing a mine obstacle may take place under conditions of active opposition on the part of enemy forces defending the mine obstacle, or in the absence of opposition.

1587 FORSIROVANIYE S KHODU (crossing-in-force from the march)—The basic method of negotiating water barriers in an offensive. With this method of crossing-in-force, the troops, reaching the water barrier and having obtained the latest reconnaissance data on the nature of the water barrier and enemy defense, proceed, as a rule, to cross it in force

without delay, in the same combat formation. Of great importance under these circumstances is seizure of existing bridges and local crossing facilities.

1588 FORTIFIKATSIONNYE SCORUZHENIYA (fortification structures)—Structures intended to facilitate conducting fire, and intended for: observation of the battlefield and troop control; protection of personnel, combat materiel, and vehicles from enemy fire; covert disposition of the troops, and for their maneuver along the front and from depth.

1589 FORTIFIKATSIYA (fortification)—Branch of the military engineering dealing with means and methods of construction, and with protective properties of various fortificational structures suitable for use in a theater of operations or in the deep rear. Such structures are built in order to create, on the terrain, conditions for the best possible use of the combat materiel at the disposal of the Services; in order to ensure troop control; and in order to afford protection against nuclear weapons, chemical weapons, and conventional means of destruction, to service personnel, the civilian population, and materiel, not only in areas of combat activities, but also within the civil defense system. Fortifications are divided into field and permanent categories.

1590 FOTORAZVEDKA (photographic reconnaissance)—Acquisition of information concerning enemy installations and the nature of the terrain by photographing them from the air or from ground level, and interpreting the photographs.

1591 FOTOTELEGRAFNAYA SVYAZ' (phototelegraphic communications)—A type of documental electric telegraphic communication used for transmission (and receipt) of combat documents, maps, diagrams, and other graphic or textual documents.

1592 FRONT (front)—(1) The highest strategic formation of armed forces. It may include units, formations, and major field forces or strategic formations of ground troops, air forces, and sometimes even naval forces (river flotillas, etc.); (2) a term used to designate the forward zone of a country at war where armed conflict is taking place. Under modern conditions of nuclear-missile warfare, the distinction between front and rear has virtually disappeared.

1593 FRONT OKRUZHENIYA (front of encirclement)—A front created around encircled enemy troops for the purpose of isolating them and subsequently destroying them. During World War II, a distinction was made between the inner front of encirclement, created directly around the encircled grouping, and the outer one, isolating the surrounded enemy from the remainder of his troops, due to the action taking place there.

1594 FRONTAL'NAYA DOROGA (frontal road)—A road running in the direction from the rear to the front line.

1595 FRONTOVAYA AVIATSIYA (frontal aviation [tactical aviation])—A type of aviation forming part of a front (or air army of a front), and intended for joint combat activities with the ground troops of the front and the other Services engaged in coordinated action with them. Frontal aviation includes various branches of aviation and cruise-missile units.

1596 FRONTOVAYA BAZA (TYLOVAYA, PEREDOVAYA) (front [rear, forward] base)—The rear services element of front supply. A front base includes a base administration, materiel depots, and base servicing units (labor, motor transport, engineer, communications).

1597 FRONTOVAYA NASTUPATEL'NAYA OPERATSIYA (front offensive operation)—An operation conducted by the forces and facilities of one front in coordinated action with other Services, and having an important operational (or strategic) goal. A front offensive operation is conducted in one or several operational sectors of a theater of operations.

1598 FRONTOVAYA OBORONITEL'NAYA OPERATSIYA (front defensive operation)—The sum total of interrelated combat operations of formations and major field forces or strategic formations of the various Services, these formations being components of a front, and pursuing the goal of holding important defense areas in the theater of operations and inflicting damage on a main enemy grouping when it is preparing for an offensive or is in the course of the offensive.

1599 FRONTOVOY EVAKUATIONNYY PUNKT (FEP) (forward medical and evacuation facility)—A group of medical treatment and evacuation transport facilities operating, as a rule, in a forward rear services area.

1600 FRONTOVYYE REZERVY (front reserves)—Units and formations, at the disposal of the officer commanding the troops of a front, which did not receive definite missions when the operation being conducted was planned. Front reserves are used to increase effort, to reinforce or replace troops of the first echelon, and to complete other unforeseen missions.

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1601 KHARAKTER OPERATSHI (BOYA) (characteristics of an operation [or battle])—The aggregate of general traits peculiar to a given operation (or battle) that determines its properties and features. The character of an operation (or battle) changes continuously and depends on the degree to which troops are equipped with the means of combat, and on their training. Contemporary operations are characterized by: decisiveness of goals and great spatial scope; widespread use of weapons of mass destruction, especially nuclear weapons; participation of large numbers of personnel and a large quantity of combat materiel; the pos-

sibility of troops and rear installations being struck at great depth and simultaneously; drastic, frequent, and rapid changes in the situation; the diversity, rapidity, and great mobility of combat operations of troops; and by great expenditures of materiel and heavy casualties.

1602 KHARAKTERISTIKI RADIOPOMEKH (radio jamming characteristics)—The quantitative and qualitative indices of jamming signals: frequency, power, signal shape, directivity, etc.

1603 KHIMICHESKAYA RAZVEDKA (chemical reconnaissance)—A special kind of reconnaissance, its purpose being to establish the presence and type of toxic agents in the air, on the terrain, or on various objects.

1604 KHIMICHESKIYE VOYSKA (chemical troops)—Special troops whose role is to implement measures for protection against weapons of mass destruction.

1605 KHIMICHESKOYE NAPADENIYE (chemical attack)—The use of chemical weapons against enemy troops and rear installations for the purpose of destroying or neutralizing personnel.

1606 KHIMICHESKOYE ORUZHIE (chemical weapons)—Toxic agents and the munitions in which they are used.

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1607 TSVETNAYA ORIYENTIRNO-SIGNAL'NAYA AVIATSION-NAYA BOMBA (TSOSAB) (aerial colored flare)—An auxiliary-purpose aerial bomb used at night to designate assembly areas for groups of aircraft or coordinated branches of aviation, to mark aircraft control recognition points along a flight course, or mark the direction of troop movements. These aerial bombs may burn with various colors.

1608 TSELERASPREDELENIYE (target distribution)—The distribution, between units or subunits, of targets earmarked for destruction. Target distribution is done by the senior commander, either directly or with the aid of an automated control system.

1609 TSELEUKAZANIYE (target designation)—Indicating the location of a target. It is done in the course of command and control of combat operations.

1610 TSEL' OPERATSII (BOYA) (goal of an operation [or battle])—The end result which must be attained in a given specific operation (or battle). The goal of an operation (or battle) is the utter defeat of the enemy main opposing grouping. To this may be added, in the case of an offensive, the taking of an important area or line, thus ensuring further development of the offensive; and in defense, frustrating the enemy attack, holding occupied areas, and creating conditions for going over to the offensive.

1611 TSENTRALIZOVANNOYE UPRAVLENIYE (centralized command and control)—The command and control principle recognized in the armed forces. Essentially, it consists in the fact that the commander retains command and control of all subordinated and attached troops in his own hands, being thus able to concentrate the troops' efforts to attain the common goal of the operation or battle in accordance with the adopted plan.

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1612 CHASTICHNAYA DEZAKTIVATSIYA (partial radioactive decontamination)—Removal of radioactive substances from all contaminated surfaces of armament and equipment in order to secure a partial reduction in their degree of contamination. Partial radioactive decontamination is done by the troops themselves, directly in subunits, immediately after leaving a contaminated area, using authorized and improvised means.

1613 CHASTICHNAYA MOBILIZATSIYA (partial mobilization)—Mobilization which applies not to all, but only the required number of military districts, fleets, and flotillas. In the event of partial mobilization, call-up of those reserves subject to compulsory military service, and deliveries of various materiel from the national economy, involve, as a rule, not the entire country, but only certain administrative and economic regions.

1614 CHASTICHNAYA SPETSIAL'NAYA OBRABOTKA (partial special decontamination)—Removal of toxic and bacterial agents, and radioactive substances from the exposed parts of the body, and neutralization of liquid-drop toxic agents which have fallen onto the uniform (clothing). Partial special decontamination is done directly in troop combat formations, without interrupting completion of the combat mission.

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1615 SHTAB (staff)—The organ of command and control of troops (or naval or air forces). It is responsible for timely organization of the combat operations of troops, as well as firm and uninterrupted command and control of them under all conditions of the situation. A staff does all its work on the basis of the decisions and instructions of the commander (or commanding general), and also the orders of the superior staff.

1616 SHTABNA'YA TRENIROVKA (staff training)—One of the methods of instructing generals and officers, and preparing staffs, its purpose being to give training and practice to each general and staff officer in the discharge of his functional responsibilities. During staff training sessions, no attempt is made to elaborate on the entire complex of staff service questions related to the organization of an operation or battle, or troop

command and control in the course of an operation, but merely certain of them, at the choice of the commanding general (or commander) and the chief of staff. Staff training is subdivided into general (combined), and specific.

1617 SHTURM (assault)—A decisive attack by subunits, units, or formations, on an enemy occupying built-up areas, strongly reinforced positions, separate buildings, etc., and offering stubborn resistance.

1618 SHTURMANSKOYE OBESPECHENIYE (navigational support)—The aggregate of measures conducted by a commander, staff, and services pertaining to the organization, preparation, and implementation of aircraft navigation, guidance to aerial targets, bombing (or launching of missiles), and other tasks, for the purpose of most effective completion of an assigned combat mission.

1619 SHTURMOVYYE DEYSTVIYA AVIATSII (ground-attack operations by aviation)—An attack by aviation from a minimum distance and altitude (point-blank), against optically visible land (or sea) targets, with the use of simple and complex types of maneuver, and various means of destruction.

1620 SHUMOPELENGATORNAYA STANTSIYA (hydrophone station)—The complex of instruments and mechanisms with the aid of which it is possible to seek and determine (acoustic direction-finding) the direction of noise created by ships under way or by self-propelled underwater projectiles. Hydrophone stations are divided into the shipboard, airborne, and coastal categories.

1621 SHKHERNYY RAYON (skerry region)—A coastal water area with a very rugged coastline, numerous rocky islands of diverse size, and underwater navigational hazards. A skerry region usually has a very involved network of transverse and longitudinal navigable channels.

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1622 EVAKOPRIYEMNIK (EP) (evacuation receiving station)—A mobile, field medical facility intended for reception of the wounded, sick, and contaminated, for subsequent evacuation. Evacuation receiving stations are deployed in the vicinity of railroad junctions and highway intersections, and at points of transshipment from one mode of transport to another (ports, river crossings, airfields, railroad stations).

1623 EVAKUATIONNOYE NAPRAVLENIYE (evacuation axis)—An axis from the front to the rear along which troops may withdraw and all else may be transported, namely: the sick, wounded, and contaminated; civilians, prisoners of war; unneeded troops; military equipment; damaged combat materiel; captured enemy equipment; and industrial equipment threatened with destruction or seizure by the enemy.

1624 EVAKUATSIONNYY PUNKT (evacuation [clearing] point)—A grouping of medical treatment and evacuation-transport facilities created to treat and evacuate the sick, wounded, and contaminated.

1625 EVAKUATSIYA VOYENNAYA (military evacuation)—Conveying the sick, wounded, and contaminated to the rear, as well as freeing the troops of equipment which has become unnecessary, or which is in need of repair.

1626 EKONOMICHESKIY RAYON KAK OB"YEKT VOYENNYKH DEYSTVIY (an economic region as an object of hostilities)—A territory having industrial enterprises of military importance, transport junctions, and other installations which it is expedient to destroy in order to weaken enemy industrial potential.

1627 EKSPEDITSIONNYYE VOYSKA (expeditionary troops)—Troops intended to conduct military operations (expeditions) on a comparatively limited scale, and predominantly in remote parts of the world. Expeditions usually take the form of small colonial wars and interventions by capitalist states. The composition and organization of expeditionary troops are usually adapted to the distinctive situation in a given theater of operations and to the conditions of combat.

1628 EKSTERRITORIALNAYA SISTEMA KOMPLEKTOVANIYA (extraterritorial system of bringing the armed forces up to strength)—A system of troop replenishment whereby manning is done not from the local manpower resources of the given district, but from other regions (union republics) or military districts, by sending the called-up contingents to the points of disposition, deployment, or assembly of units and formations.

1629 EPIDEMIYA (epidemic)—A massive spreading of an infectious disease among the troops or the population.

1630 EPITSENTR YADERNOGO VZRYVA (ground zero of a nuclear explosion)—A point on the surface of the earth (or water), being the projection of the center of an air (underwater, underground) burst.

1631 ESKADRA (squadron)—(1) An operational-tactical naval formation, including warships of one basic branch of the navy; (2) in some capitalist countries, the basic tactical formation of identical warships.

1632 ESKARP (scarp)—An anti-tank obstacle consisting of an earth excavation of triangular or trapezoidal profile made on a slope or river bank facing the enemy by cutting the slope in such a way as to increase its steepness so much that an enemy tank cannot negotiate it at speed. Obstacles of the same type, but much steeper (almost vertical), on a slope or river bank facing the defender, are called counterscarps.

1633 ESKORT (escort)—Military convoy, guard, escort; for example: the escort (accompaniment) of a group of transport vessels; the honor

guard associated with the accompanying of foreign statesmen; and also with the burial of servicemen.

1634 ETAP OPERATSII (historical) (stage of an operation)—The part of an operation, a particular stage of it, in which a strategic formation or major field force completed some intermediate operational mission, or a final one (for the culminating stage), in the interests of the entire operation, as a result of which the operational situation changed substantially, as did the character of subsequent troop activities. At each stage of an operation, the following were decided in the planning phase: missions of the troops; grouping of forces and facilities; procedure for coordinated action of troops; measures to support their activities; and organization of control and communication. In addition, the depth, duration, and rate of advance were decided for each stage of an operation. The depth of a stage of an operation was determined by the grouping of the enemy to be defeated, and by a line, the seizure of which would create favorable conditions for subsequent development of the operation.

1635 ESHELONIROVANIYE VOYSK (SIL I SREDSTV) (echeloning of troops [forces and facilities])—Deployment of units, formations, and major field forces or strategic formations in depth (in the case of aviation, also by altitude), in accordance with the concept of the plan for the impending combat operations or maneuver.

1636 ESHELONIROVANNYYE DEYSTVIYA AVIATSII (echeloned air operations)—Successive strikes by individual aircraft or small groups of aircraft against one or several targets, delivered in order to have a prolonged effect on the enemy.

—Ya—

1637 YADERNAYA VOYNA (nuclear warfare)—A war in which nuclear weapons are the principal means of destruction.

1638 YADERNOYE NASTUPLIENIYE (foreign) (nuclear offensive)—The first air-and-missile operation in the initial period of a war, conducted simultaneously in all theaters in accordance with a unified strategic plan, involving the greatest possible quantity of strategic and tactical weapons of nuclear attack.

1639 YADERNOYE ORUZHIE (nuclear weapons)—The general term for weapons whose action is based on the utilization of intranuclear energy liberated as a result of nuclear reactions, namely, fission, fusion, or both simultaneously. Nuclear weapons include missiles and aerial bombs having a nuclear charge, etc.

1640 YADERNOYE PREVOSKHODSTVO (foreign) (nuclear superiority)—Quantitative and qualitative superiority over the enemy with regard to stockpiles of nuclear munitions and the means of delivering

them to the target, in conjunction with more advantageous conditions for their deployment, and better prospects for their effective use than those enjoyed by the enemy.

1641 YADERNYYE BOYEPRIPLY (nuclear munitions)—The warheads of missiles of various types and purposes, aerial bombs, projectiles, warship torpedos, depth charges, and fougasses, with nuclear charges.

1642 YADERNYY VZRYV (nuclear explosion)—The explosion of a nuclear munition (device). A nuclear explosion differs from a conventional explosion in the huge amount of energy liberated, in its exceptionally high concentration, and in such injurious factors as a powerful shock wave, flash, penetrating radiation, and radioactive contamination of the terrain.

1643 YADERNYY ZARYAD (nuclear charge)—A charge of nuclear material, used in nuclear munitions. A nuclear charge may consist of uranium or plutonium isotopes, and thermonuclear substances. In the latter case, the munitions are called thermonuclear.

1644 YADERNYY FUGAS (nuclear mine)—A land mine containing a nuclear charge, and emplaced at a particular location ahead of time.

1645 YADOVITODYMNAYA VOLNA (toxic smoke wave)—An artificial smoke cloud containing a toxic agent. It is created by burning poisonous smoke pots, or by atomizing and dispersing liquid mixtures from special devices. Its speed and direction of motion depend on the velocity and direction of the wind.

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