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The Role of Nuclear Weapons and Aerospace Forces in China's Military Doctrine

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Abstract. The author describes the history of creating nuclear weapons in the PRC and discloses the essence of its present nuclear doctrine. He also characterizes in detail the Missile Forces of the People's Liberation Army of China and makes certain conclusions concerning the development prospects of the PRC armed forces.

Keywords: *People's Liberation Army of China, nuclear weapons, Aerospace Forces, intercontinental ballistic missile, intermediate-range missiles, medium-range missile, mobile surface-to-air missile system.*

History of Nuclear Weapons in the PRC

The PRC is the fifth official member of the nuclear powers club. This status of China was set forth in the Treaty on the Nonproliferation of Nuclear Weapons signed and ratified by Beijing in 1992. Due to the fact that in recent decades China has been coming to the fore second after the United States on many indices of its development, Beijing's policy is giving clear signals that it positions itself now as the second superpower on the globe with all rights ensuing from this status, and it intends to play a key role in tackling not only regional, but also global problems of world development. China has always regarded its nuclear status as a necessary component of a great power. In the present conditions, when the PRC claims the role of a superpower capable to challenge the U.S. global hegemony, the issues concerning the stand of the Chinese leadership on nuclear weapons acquire special timeliness.

Work on the program of creating nuclear weapons in China began in the mid-1950s, with the active participation of the Soviet Union, which by the time of the break-up of Soviet-Chinese ties in the scientific and technological and mil-

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itary spheres transferred to Chinese specialists a considerable part of documents on creating nuclear weapons and their delivery means, and rendered tangible assistance in forming the foundation of the nuclear industry of the PRC. This enabled China to complete its nuclear project independently, which was crowned by the successful test of the first Chinese nuclear device in 1964.

In order to better understand the present position of the PRC on nuclear weapons, it is necessary to trace its development from the start, that is, the adoption of a political decision by the Chinese leadership on its creation. It was adopted, as it seems, during the Korean War, when the regular units of the People's Liberation Army of China took part on the side of North Korea in combat actions against the so-called UN forces headed by the United States. This prevented the United States to score a quick and decisive victory in that war with moderate losses.

Realizing that the enormous political and military efforts of the United States in the war against North Korea, given the active military support of the U.S.S.R. and the PRC with its actually unlimited manpower resources would not lead to the desired results, Washington was seriously examining the question of using nuclear weapons against China. The United States adopted a plan of dealing nuclear strikes not only at groupings of Chinese people's volunteers in North Korea, but also at cities in China. Naturally, in such conditions the main motive for the Chinese leadership to create nuclear weapons was not only the problem of the existence of the CPC regime, but the survival of the Chinese nation. One should not agree with the view of certain Western experts that Mao Zedong, in contrast to Soviet and American leaders never regarded nuclear weapons as the key military factor which could exert the decisive influence on the course and result of war and, therefore, its use in military operations was never envisaged. The narrowmindedness of this contention becomes clear if one remembers the statement of the Chinese leader at the Meeting of Communist and Workers' Parties in Moscow in 1957, when he called the atomic bomb a "paper tiger," and said that it would make it possible to do away once and for all with imperialism. As a result, it would be possible, freely and without obstacles build communism on the entire planet.

Nevertheless, it should be admitted that at the time the military aspect of the Chinese leadership position with regard to nuclear weapons was not dominating. But the formation of such view was largely due to the inferiority complex of China as a state which had come about as a result of its unequal contacts with Western countries which always regarded it as an object of their expansion, giving them an opportunity to plunder China and exploit its resources gaining enormous profits. This complex came into being in the period of Opium War, its peak was during the Boxer Rebellion, and it strengthened in the period of the Japanese aggression in the 1930s.

The said inferiority complex was also bolstered up by the Chinese leadership's feeling that their country was sort of a "younger brother" of the U.S.S.R.,

that is, it was in a subordinate position in the Soviet-Chinese alliance in the 1950s. As one Chinese scientist said in a private conversation, "Soviet assistance in the period of flourishing Soviet-Chinese friendship was insulting to China, which, historically has always positioned itself as the great power and the center of the world." This explains why Chinese historians kept silent about the significance of Soviet aid in the anti-Japanese war of the Chinese people and in victory of the CPC forces over Kuomintang, as well as in the postwar development of China. Quite a few Chinese scholars, among other things, deny the role of the Soviet Union in the industrialization of China, creation of nuclear weapons and their delivery means, and implementation of the outer space program.

China's Modern Nuclear Doctrine

The nuclear doctrine is a component part of the military doctrine of a state that expounds its official position concerning the entire complex of nuclear weapons problems, their use, development, basing, security, control over proliferation, transfer (sale) of nuclear technologies and materials.

It should be noted that there is no official document under the title "Military or nuclear doctrine…" which would present in detail the official position of China's leadership on nuclear weapons. Nevertheless, it can be drawn up in a form full enough on the basis of materials of the CPC congresses, official statements of Chinese leaders, *White Papers* published by the PRC Ministry of Defense, articles by military scientists, etc.

International treaties touching on the nuclear weapons of the PRC exert serious influence on the formation of China's nuclear doctrine. In 1996, the PRC signed the Comprehensive Nuclear Test-Ban Treaty. Despite the fact that the treaty has not yet been ratified, China adheres to it. In 1992, China signed the Treaty on the Nonproliferation of Nuclear Weapons. In accordance with its premises, the PRC assumed an obligation not to transfer nuclear weapons or nuclear devices to any state, as well as control over such weapons or devices, in no way help, encourage or prompt any nonnuclear state to produce them or acquire nuclear weapons or nuclear explosive devices.

While supporting the efforts of the U.S.S.R. and the U.S.A., and then Russia and the U.S.A. on the reduction of offensive nuclear weapons, China refuses to join this process until the nuclear arsenals of these two biggest nuclear states are comparable with the Chinese stockpiles.

The main premises of the modern nuclear doctrine of China concerning the use of nuclear weapons boil down to the following:

- First. China will not be the first to use nuclear weapons. Never and under no circumstances will it use nuclear weapons and will it threaten nonnuclear states or states situated in the nuclear weapon-free zones with its use.

Adherence of the present China leaders to this principle means that they regard nuclear weapons rather as a political instrument ensuring containment of potential adversaries from using the weapons of mass destruction (WMD) against the PRC, rather than a real instrument of warfare ensuring its victorious end. China has the world's largest armed forces equipped with sufficient quantities of conventional arms, and it can score victory over any potential adversary in all sections of its national borders without using nuclear weapons at an acceptable level of their manpower and material losses. The use of nuclear weapons by a potential adversary deprives the PRC of its advantages. Moreover, in the conditions of the existing quantitative and qualitative superiority in nuclear weapons, the massive disarming nuclear strike throws into question not only the achievement of victory, but the very survival of the PRC as a state.

- Second. As a means of deterrence, the nuclear potential of the PRC should have the ability to deal a potential adversary a damage in the retaliatory blow unacceptable to him.

To follow the second principle means that China's nuclear weapons, even after the first disarming blow, should retain their combat stability.

Dealing a retaliatory blow should ensure solution of the following tasks: suppress the will of the adversary to continue hostilities, disrupt the system of its government and military management, render impossible or considerably difficult any military operations of the adversary, and weaken as much as possible its economic and military potential necessary for waging war.

All this should persuade the political leadership of the adversary in the inability to score victory in the war and force it to abstain to continue it on conditions acceptable to China.

In the view of China's political and military leaders, the raising of combat stability of nuclear weapons in the conditions of probable massive disarming blow of a would-be adversary both with the use of nuclear and high-precision conventional weapons should be supported with the following measures:

- Standing by at high alert of mobility assets – mobile surface-to-air missile systems and combat rail-based missile systems;
- increase of number and combat capabilities of naval strategic nuclear forces;
- increased reliability of cover of the positioning areas of nuclear forces by means of Army Air Defense (AD) and strategic antiballistic missile defense systems;
- increased security guard of positioning areas of nuclear forces and assets against special operations units of the adversary and terrorists;
- increased defense of ballistic missile silo-based launchers, as well as deployment and positioning areas of mobile missile systems;

– greater reliability of combat control of nuclear forces;
– creating and making operational systems opposing the global antiballistic missile (ABM) defense system created in the United States;
– greater efficiency of camouflaging silo-based launchers, intercontinental ballistic missiles, and mobile missile systems.

Assessment of Military Threats to the PRC by the Chinese Leadership

The problem of a mutual threat in relations between Russia and China has been removed from the agenda at the official level once and for all. This is stated in the Joint Declaration on the Fundamentals of Relations between the Russian Federation and the PRC of December 18, 1992, which emphasizes that all disputed questions between the two countries will be solved by peaceful means. They will not resort to force or a threat to use force in any form in relation to each other, including with the use of territories, territorial waters, and airspace of third countries … not one of the two states will take part in any military and political alliances aimed against the other party, sign any treaties and agreements with third countries detrimental to the state sovereignty and interests of security of the other party.

The signing of the Joint Statement on Mutual Detargeting of Nuclear Weapons and Nonuse of Nuclear Weapons at Each Other on September 3, 1994, was a practical confirmation of the absence of the mutual threat factor.

Another important step toward greater trust in the military sphere was the signing of the Agreement on Mutual Informing about Ballistic Missile Launchings signed during an official visit to China of the Chairman of the Russian government V. Putin in October 2009.

The signing of the Treaty on Good-Neighborliness, Friendship and Cooperation between the Russian Federation and the PRC on July 16, 2001, marked a qualitatively new stage in the development of partnership relations between the two states.

In the Moscow Joint Statement of the heads of state of the two countries of July 16, 2001, the treaty was named a “programmatic document determining the development of Russo-Chinese relations in the new century. It sealed in a legal form the peaceful ideology of the two states and their peoples: “friends for ever, foes – never.”

China’s leaders, as can be seen from statements of its official figures, materials of the CPC congresses and works by Chinese military theorists, regard the United States at the present stage as a nuclear superpower presenting the main threat to the PRC. The political and military leadership of China proceed from the premise that the U.S.A., in an attempt to preserve its global hegemony reached as a result of the geopolitical defeat of the Soviet Union, which ensured

it favorable conditions for prosperity and development at the expense of exploitation of other countries' resources, including China, will use all means possible to preserve and consolidate such situation.

Due to the fact that China in the recent decade made a powerful leap forward in the economic, technological, and military spheres, and is now catching up with the United States in basic indices, Washington, in the view of the Chinese leadership, regards the PRC the only country of the modern world capable to rival with the U.S.A. in world hegemony. In the eyes of the American ruling elite, it makes China one of the main objects of hostile foreign policy, economic, and military actions of Washington, as well as its allied countries.

It is believed in Beijing that as the last-ditch method of bringing pressure to bear on China, the United States may resort to blackmailing it with the threat of using nuclear weapons and in exceptional cases to use against the PRC nuclear or conventional high-precision weapons, especially in the situation of deployment of highly efficient silo-based global system of antimissile defense capable to ensure its own security reliably enough. The joint use of the antimissile defense system and conventional high-precision weapons, to speak nothing of nuclear weapons, makes it possible to score victory even over a powerful nuclear state. The reality of such scenario is confirmed by results of the military exercises carried out in the United States, which have demonstrated that with being the first to deal massive blows at a big well-industrialized country with the use of conventional high-precision weapons (3,500-4,000 units) for several hours, that country will suffer irreparable losses and will be deprived of the ability to resist.[1]

The Role and Significance of the PLA Missile Forces

From the moment of the creation of China's nuclear weapons, the PRC political and military leadership has considered ballistic missiles as the most effective and reliable means to deliver it to the target. Nuclear planning is dominated by Missile Forces which are regarded the main instrument of deterring aggression against the PRC. The Missile Forces of the PLA is another name of the 2nd Artillery Corps, which they received on December 31, 2015. Simultaneously, their status was raised and they became an independent PLA service. As Chinese military experts note, these changes reflect the primary importance of the Missile Forces of the PLA in the system of deterrence of aggressive encroachments of possible adversaries, the main one is unequivocally named the United States of America.

These forces, as previously, include both strategic, operational-strategic, and tactical missile systems.

Politically, Missile Forces should deter potential adversaries, preventing them to undertake attacks against the PRC with the use of weapons of mass destruction (WMD) or high-precision conventional ones. Militarily, their main task in an event of aggression against the PRC, is to deal blows with the use of

nuclear or high-precision weapons, at the adversary's assets, jointly with the naval strategic nuclear forces and long-range aviation. They also have to play one of the main roles in the missile attack warning system, constant surveillance and control of the near-earth space, destruction of aerospace vehicles and adversary ballistic missiles, space reconnaissance, maintenance and functioning of multilevel information and communication network, communication systems, reconnaissance, target acquisition, and computer systems.

The PLA Missile Forces Command and Control System

Within the reform of the defense system carried on in the PRC, the command and control (C2) system of the armed forces, including the Missile Forces, has been changed essentially. The latter were withdrawn from under the command of the PLA General Staff and placed under direct subordination of the Central Military Commission (CMC) of the PRC. As a result, the time required by issuing and fulfilling orders is shorter now due to curtailment of the vertical structure of the armed forces command. Previously, orders were passed via special communication channels to a corresponding department of the PLA General Staff, whereas now they get directly to the General Staff of the Missile Forces. It should be emphasized that the prerogative of issuing the order on combat employment of the Missile Forces and their combat readiness belongs exclusively to the CMC of the PRC as the main body of controlling the defense system of the country. Such order should contain concrete aims for dealing missile blows, their coordinates, time of launchings, and intervals between launchings for each unit. Instructions are given concerning the routes of movement of surface-to-air missile systems to dispersal districts after launchings.

The PLA Missile Forces' Alert Stages

The system of bringing the Missile Forces to alert stages as a result of the reform has not been changed apparently. There are three of them, as before. The third stage presupposes planned daily activity of the troops, their usual regime of training and studies. The second stage of the PLA Missile Forces is announced in case of receiving information from the PRC CMC about a possibility of the use by probable adversary of nuclear weapons or conventional high-precision weapons. It requires that crews of ballistic missiles should be ready for launching. Mobile surface-to-air missile systems and C2 and maintenance systems should be ready for deployment in positioning areas in previously prepared underground shelters.

The first is the highest alert stage of the Missile Forces. Upon receiving an order of the CMC of the PRC on the first alert stage, the teams of the missile

units should be deployed and standing by on high alert for the immediate launchings of missiles on receiving such order of the CMC of the PRC. After launchings, the mobile surface-to-air missile systems and the systems servicing them are dispersed and wait for the reconnaissance data on the strikes' results.

The PLA Missile Forces Concept of Use

The PRC political and military leaders maintain that China as a great power of the modern world should have the full-fledged triad of nuclear forces complemented with high-precision conventional weapons. Quantitatively and qualitatively, this potential should be able to preserve in combat readiness a definite quantity, above all, of nuclear weapons sufficient for dealing a retaliatory blow causing unacceptable damage to an aggressor, that is, after the massive use by the adversary of nuclear or conventional high-precision weapons against entities on the territory of the PRC. Due to a still low effectiveness of the missile attack warning system (information means of missile launching detection), systems of their escort, guidance systems, and the very means of destroying missiles and their warheads, the use of the PLA Missile Forces is planned only for a retaliatory blow. As noted above, the Chinese political and military leaders believe that the PRC should have a nuclear potential ensuring it the possibility to preserve in combat readiness the quantity of nuclear weapons sufficient to dealing a retaliatory blow and inflicting an unacceptable damage on the adversary after the massive use by the latter of nuclear or high-precision conventional weapons against entities on the PRC territory.

All nuclear capabilities of China, which survived after such sudden disarming blow of an adversary, should be used in a retaliatory blow practically simultaneously – intercontinental ballistic missiles (ICBMs), submarine-launched ballistic missiles (SLBMs), long-range cruise missiles – surface-to-air, sea- and airborne. Ballistic intermediate-range missiles should be used on the territories of East Asia countries, where military bases and assets of an adversary are deployed.

Due to the unequal worth of the components of the presently existing triad of the nuclear forces of the PRC, the retaliatory blow is based mainly on the PLA Missile Forces. The ultimate aim of such retaliatory blow, as it was noted previously, is to convince the political leadership of the adversary of the impossibility to score victory in war and force him to stop it.

The major political task of the Chinese nuclear potential is to deter an adversary from direct aggression against the PRC with the use of weapons of mass destruction, as well as high-precision conventional weapons.

Chinese specialists believe that the threat of using the nuclear potential of the PRC may force an adversary to renounce the use of nuclear arms in case of unfavorable course of hostilities with the use of conventional weapons.

With the creation of a highly effective missile attack warning system, Chinese experts do not exclude the use of nuclear weapons in a retaliatory-meeting engagement. Some of them put forward the question of justification of delivering a preventive blow on entities on the adversary territory upon receiving reliable intelligence information about a forthcoming attack on the PRC with a broad-range use of nuclear or high-precision conventional arms.

Target Selection for Retaliatory Strike

For dealing unacceptable damage to an adversary by a considerably reduced nuclear weapons survived after a sudden disarming strike by an adversary the set of targets to be demolished by the retaliatory blow should be determined. These targets include political and economic centers of the aggressor, and big cities. It is believed that dealing nuclear blows at metropolitan cities, which will result in great human losses and destruction of the urban infrastructure, will break the spirit of the population and undermine its will to continue the war. Among the primary targets are the most important entities of the infrastructure, which ensure the people's ability to wage war.

Special place on the list of targets to be destroyed first and foremost belongs to potentially dangerous assets: chemical enterprises, nuclear power plants, water reservoirs, hydropower plants, dams, and oil and gas tanks. Destruction of such assets greatly increases human losses.

Along with the global antiballistic missile defense system developed by the United States capable to neutralize the potential of China's nuclear Missile Forces, which remained effective after the sudden disarming blow, the list of the main targets of retaliatory blow includes the key assets of this system.

In the context of the implementation of measures to raise the combat stability of China's nuclear forces mentioned in documents and materials of its nuclear doctrine, the PRC puts the main emphasis on deploying mobile missile systems. Each year the PLA Missile Forces increase the number of mobile surface-to-air missile systems of new modifications. Quite soon, the PLA Missile Forces will receive combat rail-based missile systems. According to the American publication *Washington Free Beacon*, which referred to the U.S. Intelligence Agency, on December 5, 2015, China's armed forces carried out a test launching of the Dongfeng-4 intercontinental ballistic missile from a railway mobile platform.[2]

Chinese specialists pay serious attention to the problem of greater protection of missile systems both from the point of view of their combat stability in relation to the impact of nuclear explosion, and also from the position of greater cover-up and inaccessibility for aerospace reconnaissance of the potential adversary. In the districts of permanent deployment of units of mobile surface-to-air missile systems there are underground tunnels or specially equipped mine openings and caves, including those used during the anti-Japanese war. These under-

ground covers are now used as boxes for mobile surface-to-air missile systems and their service systems.

Work is under way to increase protection of silo-based launchers. With this aim in view, transport-launching containers for intercontinental ballistic missiles are improved. The Missile Forces develop their own superheavy machines for moving systems, improve roads, including railway lines, from bases of deployment to protected positioning areas equipped with specially camouflaged covers and installations. Quite a few railway lines are doubled. The method of missile systems transportation is chosen depending on the condition of the road network after the use of nuclear or conventional high-precision weapons by the adversary.

After the tests of rail-based missile systems, the railway lines of the PLA will be joined with the country's railway network, which will make it possible to move them under the guise of ordinary civilian asset across the entire territory of the PRC and remain unnoticed by the adversary's aerospace reconnaissance.

Great importance is attached to the problems of operational deception and measures to mislead the potential adversary. The PLA Missile Forces, their deployment areas, and roads leading to them are camouflaged. During exercises the movement of these forces takes place at night, and electronic silence regime is strictly observed.

Serious measures are undertaken for more reliable protection of the PLA Missile Forces assets from subversive groups of the adversary. Electronic means and technical equipment of protection and reconnaissance units are improved and robotic systems of protection and drones are introduced.

Research, design, and development work for creating new and improving the existing antimissile defense system is under way in China. This problem has been under close attention in working out new missile systems. Chinese specialists believe that the most promising fields in tackling the problem to overcome the antimissile defense system are curtailment of the boost active phase of the flight trajectory of the intercontinental ballistic missiles, increase of the number of the multiple independently targetable reentry vehicles, creation of new types of combat-equipped missiles with hard-to-predict trajectory equipped with false warheads and devices protecting from electronic interference, the use of various dispensers which render difficult detection of intercontinental ballistic missiles or their warheads.

China has scored considerable successes in all these fields. One of the latest and the most important achievements is the creation of hypervelocity "glider" WU-14, whose test was successfully carried out over Chinese territory on January 9, 2014. According to estimates of US experts, it is launched by an intercontinental ballistic missile, then it is detached and continues its flight in gliding regime at a height of about 100 km from the Earth surface. On its way to the target the glider manoeuvers in the near-Earth area at a speed exceeding the speed of sound by tenfold, that is, 11,000 km/h, or Mach 8-12 indicator. For target acquisition it uses onboard radar.[3] As noted by American experts, the prospective

antimissile defense system of the United States is designed to intercept targets flying at a speed of up to Mach 5, that is, WU-14 can easily overcome the American ABM system remaining invulnerable.[4]

Quantitative and Qualitative Composition of the PLA Missile Forces

According to the data of the International Institute for Strategic Studies (IISS, London), the PLA Missile Forces had only 458 ballistic missiles by the end of 2015. Of them 66 intercontinental ballistic missiles: DF-4 (CSS-3) – 10 units, DF-5A (CSS-4 Mod 2) – 20 units; DF-31 (CSS-9 Mod 1) – 12 units; DF-31A (*CSS-9 Mod 2) – 24 units. Ballistic missiles of intermediate range DF-3A (CSS-2 Mod 2) – 6 units. Medium range missiles – 134 units: DF-16 (CSS-11) – 12 units; DF-21/DF-21A (CSS-5 Mod 1/2) – 80 units; DF-21C (CSS-5 Mod 3) – 36 units; antiship ballistic missiles DF-21D (CSS-5 Mod 5) – 6 units. Short-range ballistic missiles – 252 units, including DF-11A/M-11A (CSS 7 Mod 2) – 108 units; DF-15M-9 (CSS-6) – 144 units. Surface-to-air missiles DH-10 – 54 units.[5]

According to information from the U.S. Intelligence Agency, the PLA Missile Forces are armed with about 75-100 intercontinental ballistic missiles, including DF-5A (CSS-4 Mod 2) and DF-5B (CSS-4 Mod 2) silo-based; mobile surface-to-air missile systems DF-31 (CSS-9 Mod 1) and DS-31A (CSS-9 Mod 2) with solid-fuel intercontinental ballistic missile range and intermediate range missiles DF-4 (CSS-3).[6]

This arsenal is complemented by mobile surface-to-air missile systems DF-21 (CSS-5 Mod 6) with solid-fuel ballistic missile of medium range DF-5 (CSS-4) – liquid-fuel intercontinental silo-based missile. It is the first of the family of the Chinese intercontinental ballistic missiles. It has been in the service of the PLA Missile Forces since 1981. Its initial weight is 183,000 kg, it is equipped with one nuclear warhead weighing 3,900 kg, power 1-3 megatons, range – 12,000 km.[7] This missile is the first from the arsenal of the Chinese nuclear weapons which can hit targets on the entire territory of the United States. The inertial targeting system ensures sufficient high-precision for the nuclear warhead of such power. Its circular probable error is 800 meters. The subsequent modification of this intercontinental ballistic missile DF-5A (CSS-4) is an air and antimissile defense penetration vehicle. It has greater precision and longer range. Its CPE is 300 m and long range with the warhead weighing 3,200 kg reaches 13,000 km. Part of the missiles of this type is equipped with 4-6 multiple independently targetable reentry vehicles of 150-300 kilotons each.[8]

On the basis of the intercontinental ballistic missile DF-5, the missile-carrier Great March-2C was evolved which was widely used in the implementation of the PRC space program. The intercontinental ballistic missiles DF-5 and DF-5A are taken out of service and replaced with DF-31/31A (CSS-9 Mod 1/CSS-9 Mod 2)

mobile surface-to-air ballistic missiles. Part of intercontinental ballistic missiles DF-5 is supposed to be replaced in the near future with the superheavy railway-based missile systems DF-41 (CSS-X-10) with the warhead weighing 2,500 kg and range of 12,000-15,000 km. DF-31 is the first Chinese solid-fuel three stage mobile intercontinental missile (8,000 km). It is equipped with one warhead weighing 1,050 kg and power of one megaton. In the DF-31A modification has longer range reaching 11,700 km which enables it to hit any target on U.S. territory. It has 3-4 multiple independently targetable reentry vehicles weighing up to 1,750 kg each.[9]

Mobile missile launcher for intercontinental ballistic missiles DF-31A is the modified copy of the Soviet mobile ballistic missile SS-20 on the undercarriage of the Minsk automobile plant. This undercarriage has a whole number of advantages as compared with the platform of Chinese make used in the basic modification DF-31; it enables the installation to move on dirt roads without special cover, which considerably raises the mobility of the missile system and has greater capacity and stability.

The arsenal of Chinese intercontinental ballistic missiles is complemented with ballistic missiles of intermediate range DF-3A (CSS-2). The missile of this type is equipped with one warhead weighing 2,200 kg and has a range of 4,750 km.[10]

Chinese specialists pay much attention to the elaboration of conventional high-precision weapons systems. These are ballistic and cruise missiles capable to make pinpoint strikes on small and well-protected targets. At present, the PLA took on board a whole series of conventional ballistic and cruise missiles. The U.S. military bases in Japan, including Okinawa, and South Korea are in the zone of their range. The recently taken on board by the PLA Missile Forces mobile high-precision ballistic weapon of medium range DF-26 can hit the assets of the American base on Guam.

It should be specially noted that Chinese scientists and engineers have succeeded to create the mobile high-precision ballistic missiles DF-21D and DF-26, which have no analogues in the world specially for hitting big sea-going vessels, including aircraft carriers. DF-21D missiles have been taken on board of the PLA Missile Forces and deployed on combat positions. Their range to hit sea and ground-based pinpoint targets reaches 2,000 km. More effective missiles of the DF-26 class are now produced, and they are planned to be equipped with hypersonic multiple independently targetable reentry vehicles. Such missile can penetrate the US ABM defense system and hit sea-going vessels and ground-based targets at a distance up to 4,000 km. China is working on the production of the independently targetable warheads for the DF-21D missiles. One missile can hit not one, but two or three ships or pinpoint assets on land. For more reliable target designation, apart from sputniks, horizon long-range radar systems will be used.[11] High-precision ballistic missiles present a serious threat to the U.S. airborne attack carrier groups in the western part of the Pacific.

Certain Russian and foreign experts doubt estimation data of the numerical strength of the Missile Forces of the PRC contained in the annual IISS issues, the Stockholm International Peace Research Institute (SIPRI), and the U.S. Department of Defense reports to Congress. Well-known Russian experts A. Khramchikhin and A. Arbatov hold similar views. In an interview published in the *Argumenty i fakty* weekly the latter says that one can safely name only the figure 300-odd warheads, which can be traced by sputniks on land and at sea. But according to other estimates, in real fact the PRC has already over 1,000 warheads. Chinese have dug huge tunnels in central districts of the country, thousands-of-miles-long; this has been done by men of the "second artillery," as the Strategic Missile Forces are named. Dozens and hundreds mobile missile systems can be hidden in those tunnels, which cannot be detected from outer space.[12]

In our view, these doubts confirmed by rather weighty arguments, can hardly be disputed. China indeed possesses a powerful potential of the production of nuclear materials necessary for creating nuclear weapons and means of their delivery.

Simple calculations of the PRC possibilities to produce nuclear munitions and ballistic missiles by years lead us to the conclusion that quantitative estimates of the nuclear arsenal of the PRC based on the data of the U.S. outer space reconnaissance are considerably understated. The real quantity of China's missile and nuclear assets does not lag behind the Russian and American level too much. With its scientific and technological, as well as industrial potential, China can catch up with both Russia and the U.S.A. within several years, as far as the quantity and quality of these weapons and their delivery means are concerned.

To confirm this conclusion, it should be noted that in the conditions of the creation of a multi-tiered global antimissile defense system by the United States such increase of China's nuclear forces looks quite justified. China's nuclear doctrine, as noted earlier, presupposes the use of nuclear missile weapons, especially intercontinental ballistic missiles, in the retaliatory blow after a massive disarming blow delivered by the adversary. In that case, the number of nuclear weapons remained unharmed directly depends on their total number. Given 75-100 intercontinental ballistic missiles before the strike, the remaining few after it can be intercepted by the U.S. global ABM defense system. The deterring effect by a limited arsenal of strategic long-range nuclear weapons will, therefore, be minimal.

Along with the strengthening of its economic and military potential, Beijing is resolutely protecting its national interests in the international arena. Anticipating a possibility of a strong opposition to this course on the part of the United States, which does not exclude, under certain conditions, the implementation of a policy of strength toward China, including nuclear blackmail and even a sudden disarming blow with the use of nuclear weapons or conventional high-precision weapons, the Chinese leadership devotes the most serious attention to

improving the country's nuclear potential in order to contain such aggressive pretensions. In doing this, the main emphasis is laid on the broadening the possibilities to neutralize the growing threat from the United States in connection with the development of the US prospective strategic systems, such as aerospace attack weapons, high-precision weapons, and multi-layered global antiballistic missile defense system.

NOTES:

1. *Voyenno-promyshlenniy kuryer,* #25(640), 2016.
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3. *Ibid.*
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10. *Ibid.*
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