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Russian nuclear forces, 2001

Intercontinental ballistic missiles (ICBMs). Despite limited resources, Russia's Strategic Rocket Forces (SRF) have performed test launches and added new ICBMs in an attempt to keep deployed ICBMs reliable and ready. Six launches took place during 2000.

SS-18s. On September 26, 2000, an SS-18 was launched from Baikonur carrying commercial satellites. The launch provided the SRF with significant performance information, allowing it to extend the service life of its remaining SS-18s to 24 years.

SS-19s. On November 1, 2000, one SS-19 was fired to test its ability to carry a single warhead, as called for in the START II Treaty.

SS-25s. On October 11, 2000, a 16-year-old SS-25 was launched, suggesting that the service life of SS-25 missiles might be extended by a year.

SS-27s. On February 9, 2000, the tenth and supposedly final test-launch of the SS-27 (Topol-M) was conducted. The first training launch of a silo-based SS-27 occurred on September 26, 2000, in Plesetsk; the following day, a mobile SS-27 was launched for the first time. The SRF wants to deploy mobile SS-27s by end of 2002 or the beginning of 2003.

Two silo-based SS-27s were put on "trial service" in December 1997 at the Tatishchevo missile base in southwestern Russia. One regiment of 10 missiles was declared operational in December 1998, and a second regiment in December 1999. A third regiment became partially operational late last December, but because of budget cuts it had only four missiles, one of which may have not been fully operational. All 24 SS-27s are housed in former SS-19 and SS-24 silos at Tatishchevo. In 1998, the SRF hoped to deploy 20–30 SS-27s per year over the next three years and 30–40 per year for the three years following that. Deployments have fallen far short of this schedule, and tighter budgets—coupled with a shift in spending from nuclear to conventional forces—suggest that there will be further delays. By the end of 2005, it is possible that 60–80 missiles will be deployed.

Nuclear-powered ballistic missile submarines (SSBNs). The September 1990 START I memorandum of understanding (MOU) listed 62 SSBNs. Eleven years later, only 17 subs are considered operational: seven Delta IIIs, seven Delta IVs, and three Typhoons. All Yankee, Delta I, and

Delta II subs have been withdrawn from operational service. Of the original 14 Delta IIIs, six have been removed from service, and one has been converted to a Deep Submergence Rescue Vehicle carrier. The Pacific Fleet's five Delta IIIs were to be retired in 2000, but in 1999 it was decided to extend their operations until 2005.

Operational SSBNs in the Northern Fleet are based on the Kola Peninsula at Nerpichnya and Yagelnaya, and in the Pacific Fleet at Rybachiy, 15 kilometers southwest of Petropavlovsk, on the Kamchatka peninsula.

In 1999 the production line of SS-N-23 submarine-launched ballistic missiles (SLBMs) was restarted to keep the Delta IVs in service. Because of slow production, steps are being taken to extend the service life of deployed SS-N-23 missiles.

On March 27, 2000, the Delta IV submarine *Karelia* test launched two SS-N-23s, and on December 27 the Delta IV submarine *Novomoskovsk* fired a single SS-N-23.

The operational tempo of submarine patrols has been reduced dramatically since the end of the Cold War. In 1991 there were 37 SSBN patrols—by 1999 there were only seven.

The keel of the first new Borey-class SSBN was laid in November 1996. However, construction was suspended altogether in 1998. Chief of the Navy Adm. Vladimir Kuroyev announced that the submarine was being redesigned to accommodate a new missile. It is unlikely that any Borey-class subs will join the fleet for at least four years. Despite the Russian Navy's interest in maintaining an SSBN fleet, the future of the Russian SSBN force remains much in doubt.

Bombers. Strategic bombers are part of the Russian Air Force's 37th Air Army. According to the July 1,

Non-strategic forces		
	Launchers	Warheads
Strategic defense		
SAMs (SA-10 Grumbles)	1,000	1,000
Bombers & fighters		
Tu-22M Backfire (120), Su-24 Fencer (280)	400	1,600
Naval Aircraft		
Tu-22M Backfire (70), Su-24 Fencer (70)	140	400
Cruise missiles		
SS-N-9, SS-N-12, SS-N-19, SS-N-21, SS-N-22		500
Anti-submarine		
SS-N-15, SS-N-16, torpedoes	n/a	300
Total		~4,000

2000, START I Treaty MOU, Russia's Tu-95 Bear bombers, including 34 H16s and 32 H6s, are deployed in two locations: 48 at Ukrainka (79th Heavy Guard Bomber Regiment), and 18 at Engels (121st Heavy Bomber Regiment). However, three of the H6s listed as at Ukrainka are damaged beyond repair and are actually located in Ukraine.

In late April 2000, Tu-160 Blackjack and Bear bombers flew from Engels Air Base to test launch cruise missiles at the northern Kanin Nos test range. In mid-August, Tu-95s from Ukrainka flew to northwest Russia to fire cruise missiles as part of Northern Fleet exercises (the same in which the *Kursk* submarine sank). The bombers landed in Belarus before returning to Ukrainka. Early last December, seven Tu-95MS bombers (two from Engels and five from Ukrainka) deployed to three Arctic staging bases to conduct exercises. In mid-February 2001, Blackjacks, Bears, and Backfires (Tu-22s) participated in a major exercise supported by Il-78 Midas tankers along the coasts of Norway and Japan.

As partial payment of its debt to Russia for natural gas, Ukraine sent eight Tu-160s, three Tu-95MSs, and

575 cruise missiles to Russia in late 1999 and early 2000. The Kazan Gorbunov production plant also delivered one new-construction Tu-160 to the Russian Air Force in May. These additions raised the number of Tu-160s deployed in the Russian Air Force from six to 15 in 2000. The Gorbunov plant might produce at least two more Tu-160s. The larger force led to the creation of a new Tu-160 unit, the 22nd Donbass Guard Heavy Bomber Aviation Division (Tu-160s had operated as part of the 121st Heavy Bomber Regiment). There are plans to modernize these Blackjacks and to equip them with conventionally armed long-range cruise missiles.

Non-strategic forces. Assessing the composition and number of Russian non-strategic forces is very difficult. The estimates provided in the table are based on initiatives announced by President Mikhail Gorbachev in October 1991 and President Boris Yeltsin in January 1992, and on various updates regarding dismantlement since then. For example, the number of nuclear-capable ships in the Russian Navy has declined from approximately 400 in 1990 to 140 in 2001. Most, if not

all, non-strategic nuclear weapons are believed to be consolidated at regional or central storage sites.

The Gorbachev and Yeltsin dismantlement initiatives were to be completed in 2000, but whether the schedules were met is unknown. Several thousand tactical nuclear weapons may be retained as spares or reserves. They also could have been retired but await dismantlement.

Some in the government and military have called for a renewed emphasis on tactical nuclear weapons to combat NATO's eastward expansion and to offset the West's superior conventional forces. The reverse argument was proposed almost 50 years ago, when the inferiority of NATO's conventional forces against the perceived Soviet threat was said to be equalized by the introduction of U.S. nuclear weapons in Western Europe. ✱

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Strategic forces

Type	Name	Launchers	Year deployed	Warheads x yield (kiloton)	Total warheads
ICBMs					
SS-18	Satan	180	1979	10 x 550/750 (MIRV)	1,800
SS-19	Stiletto	150	1980	6 x 750 (MIRV)	900
SS-24 M1/M2	Scalpel	36/10	1987	10 x 550 (MIRV)	460
SS-25	Sickle	360	1985	1 x 550	360
SS-27	Sickle	24	1997	1 x 550	24
Total		760			3,544
SLBMs					
SS-N-18 M1	Stingray	176	1978	3 x 500 (MIRV)	528
SS-N-20	Sturgeon	60	1983	10 x 200 (MIRV)	600
SS-N-23	Skiff	112	1986	4 x 100 (MIRV)	448
Total		348			1,576
Bomber/weapons					
Tu-95 MS6	Bear H6	29	1984	6 AS-15A ALCMs or bombs	174
Tu-95 MS16	Bear H16	34	1984	16 AS-15A ALCMs or bombs	544
Tu-160	Blackjack	15	1987	12 AS-15B ALCMs, AS-16 SRAMs, or bombs	180
Total		78			898
Grand total					~6,000

ALCM—air-launched cruise missile; **AS**—air-to-surface missile; **ICBM**—intercontinental ballistic missile, range greater than 5,500 kilometers; **MIRV**—multiple independently targetable reentry vehicles; **SLBM**—submarine-launched ballistic missile; **SRAM**—short-range attack missile; **SSBN**—nuclear-powered ballistic missile submarine; **SAM**—surface-to-air missile.