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CIA HISTORICAL-REVIEW PROGRAM

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SOVIET CAPABILITIES FOR STRATEGIC ATTACK

THE PROBLEM

To estimate probable trends in the strength and deployment of Soviet forces for strategic attack and in Soviet capabilities for such attack through mid-1970.

SCOPE NOTE

This estimate covers those Soviet military forces which are suitable for strategic attack. Other major aspects of the Soviet military strength are treated in separate estimates on air and missile defense, on theater forces, on the nuclear program, and on the space program. Trends in the USSR's overall military posture and in Soviet military policy are examined in an annual estimate, the next issuance of which will be in the first quarter of 1965.

SUMMARY AND CONCLUSIONS

A. Major changes in Soviet programs for the development of strategic attack forces have become apparent during the past year. In 1962-1963, certain ICBM and ballistic missile submarine programs came to an end, and a pause ensued in the growth of these forces. At the same time, the pace of ICBM research and development increased markedly. More recently, the USSR has resumed ICBM deployment in a new and improved configuration, and the probable advent of a new submarine which we believe is designed to carry ballistic missiles probably marks the start of yet another deployment program. (*Para. 1*)

B. Soviet military policy in recent years has been to build up strategic offensive and defensive capabilities, maintain and improve large general purpose forces, and pursue research and development

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programs in advanced weapons. In our view, the primary concern of Soviet military policy for the next several years will continue to be the strengthening of the USSR's strategic deterrent. The evidence to date does not indicate that Soviet deployment programs are directed toward a rapid numerical buildup. We do not believe that the USSR aims at matching the US in numbers of intercontinental delivery vehicles. Recognition that the US would detect and match or overmatch such an effort, together with economic constraints, appears to have ruled out this option. (*Paras. 2-4*)

C. A stress on qualitative factors suggests that the Soviets see technological advance in weapons as a means by which they can improve their strategic position relative to the West. In the ICBM force, for example, major qualitative improvements currently being achieved include hardening and dispersal (which will sharply increase the number of aiming points), as well as better accuracy and larger payloads. (*Paras. 4-5*)

D. By the end of the decade, Soviet intercontinental attack capabilities will rest primarily upon an ICBM force of some hundreds of launchers, supplemented by a sizable missile-submarine fleet and a large but reduced bomber force. These forces will represent a marked improvement in Soviet retaliatory capability and a considerable strengthening of the Soviet deterrent. In the light of current and programmed US military capabilities, however, we do not believe that the Soviets will expect to achieve, within the period of this estimate, strategic attack capabilities which would make rational the deliberate initiation of general war. (*Para. 5*)

The ICBM Program

E. Major developments since mid-1963 include a proliferation of test facilities at Tyuratam, flight-testing of two third-generation ICBM systems (the SS-9 and SS-10), and the beginning of construction of hard, single-silo ICBM launchers, probably for one or both of the new systems. The deployment of second-generation ICBMs has probably ceased, and a pause between the second- and third-generation programs has slowed deployment. We believe that the Soviets now have about 200 operational ICBM launchers, and that the total number of operational launchers in mid-1965 will approximate the low

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side of the 250-350 range previously estimated. These figures do not include R&D launchers at Tyuratam.¹ (*Paras. 6-8, 10-18, 31*)

F. Research and development on third-generation systems has been generally successful. The SS-9 system appears to be an outgrowth of the SS-7 with improved accuracy and a larger payload. We have little information on the characteristics of the SS-10. Both new systems could enter service in 1965. We believe that work is underway on still other ICBM systems, which we cannot as yet identify. We continue to believe that the Soviets are developing a very large ICBM, capable of delivering { } We estimate that it could enter service in the period mid-1966 to mid-1967. In addition, the Soviets might be developing a new, small ICBM employing improved propellants. If they are, it could become operational as early as 1967. (*Paras. 19-26*)

G. The Soviets are now emphasizing deployment of single-silo hard launchers for ICBMs, and we expect this emphasis to continue. We expect third-generation deployment to include the expansion of both second-generation complexes and the initiation of additional new complexes. (*Paras. 9, 27*)

H. The growth of the Soviet ICBM force over the next several years will be influenced by a number of factors. In economic terms, the program must compete for funds with other military and space activities and with the civilian economy. In the technical field, we believe that research and development is proceeding on additional, follow-on ICBM systems, and we doubt that with these in the offing the USSR will fix upon any one or even two existing systems for urgent deployment on a large scale. We are also mindful that the interruptions that marked second-generation deployment programs may recur. In strategic terms, the Soviets evidently judge that an ICBM force in the hundreds of launchers, together with their other strategic forces, provides a deterrent. On the basis of the evidence now available, to us, we do not believe that they are attempting to deploy a force capable of a first-strike which would reduce the effects of US

¹ The Assistant Chief of Staff, Intelligence, USAF, considers the estimate of the numbers of launchers operational now and expected in mid-1965 is too low. He estimates that the Soviets now have about 240 operational launchers, including about 20 at Tyuratam and a 10 percent allowance for unlocated launchers. He believes the total number in mid-1965 will be between 275 and 325. See his footnote, page 11, para. 10.

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retaliation to an acceptable level.² At the same time, we expect them to continue a vigorous R&D effort in the hope of achieving important technological advances, in both the offensive and defensive fields, which would alter the present strategic relationship in a major way. (Para. 30)

I. We estimate a Soviet ICBM force of 400-700 operational launchers for mid-1970; in our previous estimate, we projected this force level for mid-1969. By mid-1970, we believe that the force will include most or all of the launchers now deployed, some 125-200 single-silo SS-9/10 launchers, and 10-20 launchers for very large ICBMs. We believe that the attainment of as many as 700 operational launchers by mid-1970 would be likely only if the Soviets begin deploying a new, small ICBM at a rapid rate about 1967. The Soviet ICBM force which we estimate for mid-1970 will represent a substantial increase in numbers and deliverable megatonnage. Further, the trend to single silos will increase the number of aiming points represented by individual launch sites from about 100 at present to some 300-575 in mid-1970, the bulk of them hard. This will greatly improve the survivability, and hence the retaliatory capability, of the force.³ (Paras. 32-37)

J. In the past few years the Soviets have improved the readiness and reaction time of their ICBM force. Our evidence now indicates that from the normal state of readiness, the soft sites which constitute the bulk of the present force would require 1-3 hours to fire. Hard sites would require about half an hour or less. A higher state of alert (i.e., 5-15 minutes to fire) can be maintained at most soft sites for a number of hours and at most hard sites for days. (Paras. 38-40)

K. There is ample evidence that the Soviets designed their soft ICBM systems to have a refire capability. We have re-examined the

² The Assistant Chief of Staff, Intelligence, USAF, considers that the Soviets may already have directed their intensive military R&D effort toward achievement of an effective first-strike counter-force capability before the close of this decade. Considering the length of time covered by this estimate and the number of unknowns involved, he believes this is a possibility which should not be disregarded.

³ The Assistant Chief of Staff, Intelligence, USAF, considers the ICBM force by mid-1970 could range from approximately 600 to as high as 900 operational launchers depending on whether a new, small, easily deployed system is introduced. (See his footnote to table on page 18.) An ICBM force of this size would increase the number of aiming points represented by individual launch sites to approximately 400-700 in mid-1970.

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factors likely to affect refire time, and conclude that it would require little longer to fire the second missile than the first. Our present estimate of refire time is 2-4 hours, considerably less than previously estimated. We believe that, on the average, two or more missiles are provided per soft launcher for initial firing, refire, and maintenance spares. We believe that hard ICBM sites do not have a refire capability. (Paras. 41-43)

L. We have little evidence on the hardness of Soviet ICBM sites. Given the many uncertainties in this area, only a very tenuous estimate can be made, but our best judgment is that Soviet hard ICBM sites have a hardness in the 300-600 psi range. This implies a design overpressure in the 200-400 psi range, somewhat higher than previously estimated.⁴ (Paras. 49-50)

M. Qualitative improvements in the force can be expected as new ICBM systems enter service. Currently operational ICBMs have CEPs on the order of 1-2 n.m. The SS-9 will probably have an accuracy of 0.5-1.0 n.m. with radio assist, or 1.0-1.5 with all-inertial guidance. By mid-1970, the Soviets could achieve accuracies on the order of 0.5 n.m. or better. The SS-9 will probably carry a payload [] as compared with [] for second-generation ICBMs. We do not believe that the Soviets have yet developed penetration aids or multiple warheads, but they may do so in the future, particularly if the US deploys antimissile defenses. (Paras. 44-48)

MRBMs and IRBMs

N. Deployment programs for the 1,020 n.m. MRBM and the 2,200 n.m. IRBM are now ending, and almost certainly will be completed by mid-1965. We estimate that at that time the MRBM/IRBM force will have a strength of about 760 operational launchers, 145 of them hard. The bulk of the force (about 90 percent) is deployed in western USSR, with the remainder in the southern and far eastern regions of the USSR. This force is capable of delivering a devastating first strike or a powerful retaliatory attack against targets in Eurasia, and can attack such areas as Greenland and Alaska as well. Some of the

⁴ The Assistant Chief of Staff, Intelligence, USAF, considers that, given the uncertainties involved, no meaningful estimate of the hardness of Soviet hard sites can be made. However, he believes that the design overpressure of Soviet hard sites is no greater than the 100-300 psi previously estimated.

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MRBM/IRBM launchers are probably intended to support ground operations. (*Paras. 51-55*)

O. We doubt that the Soviets will expand their MRBM/IRBM force during the period of this estimate. It is possible, however, that operational capabilities will be improved by the introduction of a new missile system, which probably would be deployed in single-silos. Such a system, employing improved propellants, could become operational in the 1966-1968 period and would probably replace some of the soft launchers now operational. (*Paras. 56-59*)

Missile Submarine Forces

P. The Soviets now have operational some 40-50 ballistic missile submarines, including 8-10 nuclear powered. Most of these submarines are equipped with 350 n.m. missiles and must surface to fire. One or two are equipped with a new 700 n.m. submerged-launch missile, and others will probably be retrofitted. The USSR also has operational about 30 cruise-missile submarines, including 11-14 nuclear powered. The majority are equipped with 300 n.m. missiles designed for low altitude attack, primarily against ships. The remainder carry a newer 450 n.m. version of this missile, which probably has an improved capability to attack land targets. Current Soviet missile submarines carry relatively few missiles: the ballistic missile classes, two or three, and the cruise missile types, up to eight. The entire present force has a total of 120-140 ballistic missile tubes and 135-150 cruise-missile launchers. (*Paras. 60-71*)

Q. We believe that the Soviets have under construction a submarine which we estimate to be the first of a new nuclear-powered, ballistic missile class. We estimate that it will employ the submerged-launch 700 n.m. missile, and have a few more missile tubes than current classes. The first unit will probably become operational in 1965. Beyond this new class, we consider it unlikely that the Soviets will develop an entirely new follow-on ballistic missile submarine system within the period of this estimate, although they will probably continue to improve existing systems. We believe that they will also continue to construct cruise-missile submarines. By mid-1970 the Soviet missile submarine force will probably number 100-130 ships, about half of them cruise-missile submarines and about half ballistic. (*Paras. 72-75*)

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R. In the past year, limited numbers of Soviet missile submarines have engaged in patrols in the open oceans. We expect a gradual expansion of this activity. By the end of the decade, Soviet missile submarines will probably be conducting regular patrols throughout the North Atlantic and Pacific, and possibly into the Mediterranean. (Para. 76)

Long-Range Bomber Forces

S. We have no recent evidence of major changes in the capabilities and structure of Soviet Long-Range Aviation (LRA). The force now includes some 190-220 heavy bombers and tankers and 850-900 mediums. It is being improved primarily through the continued introduction of Blinder supersonic dash medium bombers and through modification of older bombers for air-to-surface missile delivery, for aerial refueling, and for reconnaissance. Use of both medium and heavy bombers of the LRA in support of maritime operations has increased. (Paras. 80-86)

T. Considering noncombat attrition factors and the requirements for Arctic staging and aerial refueling, we estimate that the Soviets could put somewhat more than 100 heavy bombers over target areas in the US on two-way missions. Recent trends lead us to believe that medium bombers do not now figure prominently in Soviet plans for an initial bomber attack against North America. Nevertheless, should they elect to do so, we believe that at present the Soviets could put up to 150 Badgers over North American target areas on two-way missions. We have serious doubt about how effectively the Soviets could launch large-scale bomber operations against North America. We consider it probable that initial attacks would not be simultaneous, but would extend over a considerable number of hours.⁶ (Paras. 91-97)

U. The Soviets will probably maintain sizable bomber forces, which will decrease gradually through attrition and retirement. Although continued Soviet work on advanced transports could be applied to military purposes, we think it unlikely that the Soviets will bring any follow-on heavy bomber into operational service during the period

⁶ The Assistant Chief of Staff, Intelligence, USAF, considers this paragraph seriously underestimates the manned aircraft threat to the continental US. In the event war should eventuate and the USSR attacks the US with nuclear weapons, he believes this will be an all-out effort aimed at putting a maximum number of weapons on US targets. He therefore estimates that the number of heavy and medium bombers, including BADGERS on one-way missions, could exceed 500. See his footnote on page 32, para. 94.

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of this estimate. We believe that Blinder medium bombers, some equipped with advanced air-to-surface missiles, will be introduced during much of the period of this estimate. By mid-1970, Long-Range Aviation will probably include some 140-180 heavy bombers of present types and 300-500 mediums, mostly Binders.* (*Paras. 87-90*)

Space Weapons

V. Although the USSR almost certainly is investigating the feasibility of space systems for use as offensive and defensive weapons, we have no evidence that a program to establish an orbital bombardment capability is seriously contemplated by the Soviet leadership. We think that orbital weapons will not compare favorably with ICBMs over the next six years in terms of effectiveness, reaction time, targeting flexibility, vulnerability, average life, and positive control. In view of these considerations, the much greater cost of orbital weapon systems, and Soviet endorsement of the UN resolution against nuclear weapons in space, we believe that the Soviets are unlikely to develop and deploy an orbital weapon system within the period of this estimate. (*Paras. 98-103*)

*The Assistant Chief of Staff, Intelligence, USAF, believes the Soviets will continue to consider manned strategic aircraft an important adjunct to their ICBM force. He estimates that the USSR will introduce a follow-on heavy bomber. He further estimates the heavy bomber force will remain at about 200 or somewhat larger, depending on the timing of the expected follow-on bomber, and that by mid-1970 the medium bomber/tanker force will probably still include about 650-850 aircraft. See his footnote to table on page 31 following para. 90.