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SOVIET CAPABILITIES FOR THE DEVELOPMENT AND PRODUCTION OF CERTAIN TYPES OF WEAPONS AND EQUIPMENT

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SOVIET CAPABILITIES FOR THE DEVELOPMENT AND PRODUCTION OF CERTAIN TYPES OF WEAPONS AND EQUIPMENT

1. Herein is presented an estimate of Soviet capabilities in the development and production, during the next ten years, of certain weapons and equipment, as follows:

The atomic bomb	Fighters
Guided missiles	Radar
Heavy bombers	Submarines

2. Any report of this nature is at best educated guesswork. An estimate of capabilities ten years hence obviously cannot be based on evidence, but only on a projection from known facts in the light of past experience and reasonable conjecture. The estimates herein are derived from the current estimate of existing Soviet scientific and industrial capabilities, taking into account the past performance of Soviet and of Soviet-controlled German scientists and technicians, our own past experience, and estimates of our own capabilities for future development and production.

3. In view of the Soviet Union's relatively low industrial potential, of the evident necessity to devote much of her effort to restoring and developing her transportation system and heavy industry in general, and of her limited technological advancement, particularly with respect to precision instruments and electronic controls, it seems reasonable to assume that during the next ten years she could not carry out advanced development and quantity production simultaneously in all of the fields under consideration. The selection of those fields in which a maximum effort was to be made would be governed by political or politico-military considerations. The common assumption, supported by many indications, is that every other Soviet program has been subordinated to the development of an atomic bomb. It is not clear that the Soviet authorities have yet made a firm determination of other priorities. In any case, it must be understood that the estimates which follow assume a maximum effort in each case, that such an effort is not possible in every case, and that in some cases actual development will fall short of the maximum capability indicated, in accordance with the priorities assigned.

4. *The atomic bomb.* Our real information relating to this subject is meager. It is probable that the capability of the U.S.S.R. to develop weapons based on atomic energy will be limited to the possible development of an atomic bomb to the stage of production at some time between 1950 and 1953. On this assumption, a quantity of such bombs could be produced and stockpiled by 1956.

5. *Guided Missiles.*

a. Ground to ground. The U.S.S.R. is not believed to be capable of carrying out advanced development and quantity production of radically new weapons of this type within the next ten years. However, by making full use of German facilities under Soviet control, the U.S.S.R. is capable of attaining by 1950 quantity production of V-1 and V-2 missiles with increased ranges and some improvement

in accuracy. The possibility that the German A-9, A-10, and associated missiles may be developed to an effective range of 3000 miles within the next ten years is considered remote.*

b. Surface to air. The U.S.S.R. is considered capable of putting into production by 1950 anti-aircraft missiles of the German Wasserfall or Smetterling type.

c. Air to surface. The U.S.S.R. is considered capable of developing to the production stage by 1950 a missile of similar type to the German HS-293, possibly equipped with a proximity or influence fuse.** Fighter or bomber borne missiles with rocket assisted impact power can be expected in quantity within the next ten years.

6. *Heavy bombers.* The U.S.S.R. is capable of developing and producing by 1948 a bomber with the approximate characteristics of the B-29, and of achieving a production rate of 150 per month by 1950. By 1951 the Soviets will be capable of maintaining 2000 operational aircraft of such type supported by a stored reserve of equal strength. The development of new types of destructive agents may reduce the importance of bomb carrying capacity and make range and speed the primary factors in design.

7. *Fighter aircraft.* Within the next five years the U.S.S.R. is capable of developing and producing an effective defense force of jet interceptors of subsonic speed. Fighter aircraft will be almost entirely jet propelled, but it is considered improbable that supersonic speeds will be developed in this period.

8. *Radar.* Within ten years the Soviets will have the construction and operational capabilities in the radar field which existed in the United States in 1945. They will exploit the use of radar in establishing integrated systems of warning networks.

9. *Submarines.* It is believed that the U.S.S.R. will concentrate on building the German type XXI boat, since in feasibility of both construction and further development this type offers the prospect of most immediate returns. Using German facilities, the U.S.S.R. should be capable of constructing up to 300 of these craft by 1950. Thereafter production would be virtually unlimited except by priorities. The U.S.S.R. is capable of developing by 1956 a guided missile launching device for use on these submarines.

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* AC/AS-2 holds that it is "entirely possible that quantities of 3000-mile rocket propelled missiles . . . will be available to the Russians in 1955."

** AC/AS-2 would emphasize the view that by 1950 the U.S.S.R. will also have stockpiled "quantities of missiles similar to the German 'Bomben Torpedo,' equipped with a proximity or influence fuse, which will have lethal capabilities against sea-borne forces."