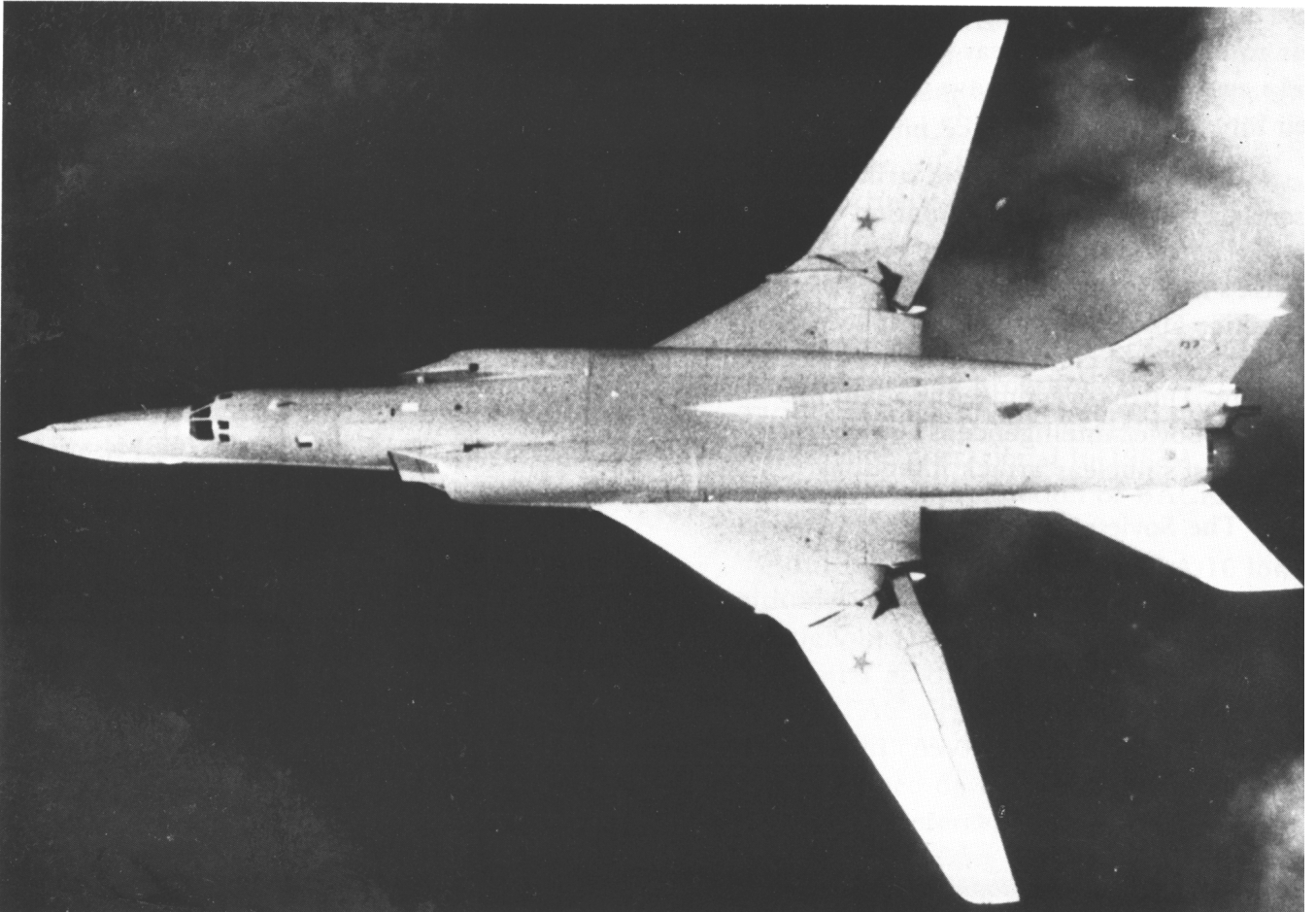


CIA's Analysis of Soviet Science and Technology



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By the 1950s it was clear that the USSR possessed both nuclear weapons and long-range delivery methods. But key questions remained for US policymakers. How advanced and how effective were these capabilities? Could they be used against the continental United States and its Allies on the USSR's periphery? The answers were fundamental to the US strategic deterrent position.

Technical intelligence was the primary tool used to address these questions because the USSR, Eastern Europe, and China were "denied areas" that presented difficult challenges to traditional human and military reconnaissance collection. These countries were repressive police states that severely restricted internal movement and foreign contacts; they also had effective air defenses. This meant traditional espionage and reconnaissance methods were too limited to provide the access or the information needed by the West to monitor Soviet Bloc weapons and remote test sites. To counter this, the CIA and the Intelligence Community (IC) invented innovative collection approaches using remote sensors. A lack of "hard" intelligence was the key driver in developing US satellite imaging and signals intelligence collection systems. In addition to the actual technical collection, it was necessary to develop ways of deriving analytical results from the raw products of these new collection sources. The IC's challenge was not only to create new collection methods but to derive useful information from the data.

The CIA's Office of Scientific Intelligence, and later the Directorate of Science & Technology (DS&T), led technical intelligence collection and analysis activities. Those who had been involved in analyzing activities such as the Berlin Tunnel taps of Soviet military headquarters in East Germany, formed the original nucleus. Also included were analytical components dealing with science, technology, and weapons. These analysts had to answer key questions about Soviet strategic weapons: How many weapons did the USSR have? What were their capabilities? Where were they located?

The intelligence reports and estimates selected for this volume from the early 1950s through the mid-1980s reflect the impact of advancements in technical collection and analysis. NIE 11-5-59, "Soviet Capabilities in Guided Missiles and Space Vehicles," reflects a basic agreement within the Intelligence Community on Soviet capabilities. By October 1964 (NIE 11-8-64), however, there were debates within the IC about Soviet ICBM capabilities and the number of deployed sites. These disagreements were primarily the result of the fact that, while the United States now had more data, there were now more opportunities for different interpretations of the information. Similarly, in the defensive missile area, IC analysts disagreed over Soviet ABM capabilities. NIE 11-3-65 addresses the beginning of the SAM upgrade issue. These strategic offensive and defensive missile concerns stayed in the forefront of the challenges facing IC analysts well into the 1970s. The selected documents reflect these issues.