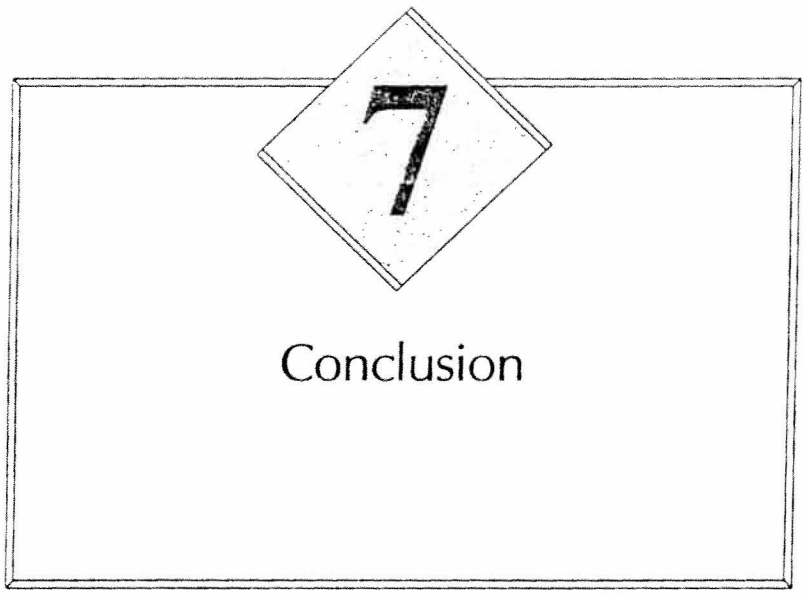
C00190094

Approved for Release: 2013/06/25



Conclusion

U-2 OVERFLIGHTS OF THE SOVIET UNION

Before the first U-2 overflights in the summer of 1956, project managers believed that their aircraft could fly virtually undetected over the Soviet Union. They did not expect this advantage to last very long, however, because they also expected the Soviets to develop effective countermeasures against the U-2 within 12 to 18 months. Recognizing that time was against them, the U-2 project managers planned a large number of missions to obtain complete coverage of the Soviet Union as quickly as possible. At this time, the U-2 program focused solely on the collection of strategic intelligence.

Once operations began, however, project managers found themselves operating under severe constraints. Contrary to the CIA's expectations, the U-2 could not fly undetected. Its overflights led to Soviet diplomatic protests and numerous attempts at interception. Not wishing to aggravate the Soviet Union during periods of tension or to harm relations during more favorable intervals, President Eisenhower placed strict limits on overflights, personally authorizing each one and greatly limiting their number. Yet, the President never went so far as to eliminate the overflight program. As Commander in Chief, he valued the intelligence that the U-2 overflights collected, especially at times when the press and Congress alleged that the United States was falling behind the Soviet Union militarily, first in bombers and then in missiles. As a result of the President's ambivalence toward overflights, the years 1956-60 were marked by long periods during which no overflights occurred, followed by brief bursts of activity.

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

The low level of overflight activity did not prevent the U-2 from accomplishing a lot in the four years it flew over the Soviet Union and Eastern Europe. Twenty-four U-2 missions made deep penetration overflights of the Soviet Union: six by Detachment A from Germany, three by Detachment C from the Far East and Alaska, and 15 by Detachment B from Turkey and Pakistan, including the unsuccessful Powers mission.

The amount of information these missions gathered was impressive. By the summer of 1960, the U-2 project had developed more than 1, 285,000 feet of film—a strip almost 250 miles long. The U-2s covered more than 1,300,000 square miles of the Soviet Union, approximately 15 percent of its total area. Information from U-2 photographs was used to prepare 5,425 separate photoanalytical reports.[1]

Numbers alone cannot describe the importance of the U-2 overflight project. In a 28 May 1960 memorandum, after Powers was shot down, DCI Allen W. Dulles described the program's accomplishments: "Five years ago, before the beginning of the U-2 program, . . . half knowledge of the Soviet Union and uncertainty of its true power position posed tremendous problems for the United States. We were faced with the constant risk of exposing ourselves to enemy attack or of needlessly expending a great deal of money and effort on misdirected military preparations of our own." Dulles went on to describe the U-2's contribution in gathering information on four critical aspects of the Soviet Union's power position: its bomber force, its missile force, its atomic energy program, and its air defense system.[2]

The first major contribution of intelligence collected from U-2 overflights was the exposure of the "bomber gap" as a myth. Contrary to the US Air Force's claims, the Soviet Union was not building a large force of long-range bombers. Armed with information from U-2 overflights, President Eisenhower was able to resist pressure to build a large US bomber fleet to meet a nonexistent Soviet threat.

[1] DCI Allen W. Dulles, Memorandum for Brig. Gen. Andrew J. Goodpaster, "Statistics Relating to the U-2 Program," 19 August 1960, Operation MUDLARK files, OSA records, job 74-B-605, box 2 (TS Codeword).

[2] The original draft of this document was probably written by James Q. Reber. It was then revised by DCI Dulles. "Accomplishments of the U-2 Program," 27 May 1960, Operation MUDLARK files, OSA records, job 74-B-605, box 2 (TS Codeword).

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

The "bomber-gap" controversy was soon followed by a "missile-gap" controversy, provoked by an extensive Soviet propaganda campaign that claimed a substantial Soviet lead in developing and deploying ICBMs. U-2 missions searched huge stretches of the Soviet Union along the rail network, looking for ICBMs deployed outside the known missile testing facilities. These missions enabled the CIA to conclude, as Dulles explained to Congress in May 1960, that "the Soviet ICBM program has not been and is not now a *crash* program; instead, it is an orderly, well-planned, high-priority program aimed at achieving an early ICBM operational capability."[3] As with the controversy over Soviet bomber strength, information from U-2 photography enabled President Eisenhower to resist pressure to accelerate the US missile deployment program by building obsolescent liquid-fueled missiles rather than waiting to complete the development of more reliable solid-fueled missiles.

U-2 missions also gathered considerable data on the Soviet Union's atomic energy program, including the production of fissionable materials, weapons development and testing activities, and the location and size of nuclear weapons stockpile sites. Such U-2 photography also revealed no evidence that the Soviet Union had violated the nuclear testing moratorium.

One of the greatest contributions of the U-2 program was to increase the capabilities of the US deterrent force. Before the U-2 overflights, most target information was based on obsolete materials dating back to World War II or shortly thereafter. With the assistance of U-2 photography, the Defense Department could allocate weapons and crews more efficiently and identify many new targets. U-2 photos also proved invaluable in determining the precise location of targets. One further contribution to the capabilities of the US deterrent force was the information that U-2s collected on the Soviet air defense system. U-2 photography located Soviet fighter airfields and gained intelligence on new fighter models. Special electronic intercept and recording equipment carried on many U-2 missions enabled the CIA to analyze the technical characteristics, operational techniques, and radar order of battle of the Soviet Union's electronic defenses. This information was vital both for planning the routes for US deterrent forces and for developing electronic countermeasures.

[3] Ibid., p. 3 (TS Codeword).

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

The U-2 program not only provided information on individual Soviet weapons systems, but also helped analysts assess basic Soviet intentions, particularly during crisis situations, as Dulles wrote in May 1960:

> *Whenever the international situation becomes tense because of a problem in some particular area, we are concerned whether the situation might get beyond control—that someone on the other side might suddenly and irrationally unleash big war. . . . Our knowledge of Soviet military preparations, however, resulting from the overflight program, has given us an ability to discount or call the bluffs of the Soviets with confidence. We have been able to conclude that Soviet statements were more rhetorical than threatening and that our courses of action could be carried through without serious risk of war and without Soviet interference.*[4]

Dulles closed his report on the U-2's accomplishments by putting the program in perspective as part of the entire national intelligence effort, noting that "in terms of reliability, of precision, of access to otherwise inaccessible installations, its contribution has been unique. And in the opinion of the military, of the scientists and of the senior officials responsible for our national security it has been, to put it simply, invaluable."

The impact of the U-2 overflights on international relations is harder to measure. On the one hand, the intelligence they gathered was a major factor in keeping the United States from beginning a costly and destabilizing arms race in the late 1950s and early 1960s by showing that the Soviet Union was not engaged in major buildups of strategic bombers and intercontinental ballistic missiles. On the other hand, violations of Soviet airspace by U-2s strained relations with Moscow at times and led to the collapse of the 1960 summit meeting. On balance, however, the impact of the U-2 on superpower relations was positive. Without the intelligence gathered by the U-2, the Soviet Union's strategic military capabilities would have remained a mystery, making it very difficult for the President to resist pressure from the military, the Congress, and the public to carry out major increases in strategic weapons, which would have poisoned relations with the Soviet Union far more than the small number of overflights did.

[4] Ibid., pp. 9-10 (TS Codeword).

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

PARTICIPATION OF ALLIES IN THE U-2 PROGRAM

From the very beginning of the overflight project, US Allies provided valuable support. Bases in Germany, Turkey, Pakistan played a major role in overflights of the Soviet Union. Bases in India, Thailand, Japan, and the Philippines greatly assisted operations in Asia. Two Allies—the United Kingdom and Nationalist China—made an even greater contribution to the U-2 program by providing pilots and conducting overflights. British pilots began flying in late 1958 and conducted two important overflights of the Soviet Union in late 1959 and early 1960. After the end of such missions in May 1960, the need for British participation lessened. RAF pilots henceforth flew only training or ferry missions, although their use for operational missions was considered on several occasions.

The end of overflights of the Soviet Union reduced the importance of British participation but resulted in the addition of a new source of pilots when the focus of interest for the U-2 in its strategic-intelligence-gathering role shifted to the People's Republic of China. The United States and Nationalist China had been conducting joint reconnaissance projects over the Chinese mainland since the mid-1950s, and in 1961 the CIA equipped the Nationalist Chinese with the latest in reconnaissance aircraft, the U-2. For the next 12 years, Agency U-2s with Nationalist Chinese pilots brought back large quantities of information on the development of Communist China's armed forces, nuclear technology, and economy. Such information was extremely important to US policymakers. Nationalist China paid a high price in lives for its participation in the U-2 program: seven pilots died (five in training accidents and two on overflights), and another three were captured.

U-2s AS COLLECTORS OF TACTICAL INTELLIGENCE

The low level of mission activity over the project's original target—the Soviet Union—was initially very frustrating for CIA project managers, but the U-2 soon found new missions not originally envisioned for the program. With its strategic-intelligence-collection role often on hold, the U-2 became highly useful as a collector of tactical intelligence during crisis situations.

Beginning with the Suez Crisis of 1956 and continuing with subsequent Middle Eastern wars, a rebellion in Indonesia, Sino-Indian border fighting, and culminating in support to the growing US

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

involvement in Indochina, U-2 photography provided accurate and up-to-date intelligence to US policymakers and field commanders, assisting them in crisis management and the planning of military operations. Agency U-2s also assisted in monitoring cease-fire agreements in the Middle East, with operations occurring after an undeclared war in 1970 and the 1973 Middle East war.

By the time the OXCART became fully operational, manned strategic reconnaissance of the Soviet Union was no longer seriously considered. The political risks were too high, especially since the quality of intelligence from reconnaissance satellites was increasing steadily. Thus, the OXCART's only operational use was for collecting tactical intelligence in the Far East. Like the U-2, the OXCART gathered valuable intelligence during crisis situations. Thus, in January 1968, OXCART photography revealed the location of the USS Pueblo and showed that the North Koreans were not preparing any large-scale military activity in conjunction with the ship's seizure.

ADVANCES IN TECHNOLOGY

One very important byproduct of the CIA's manned reconnaissance program was the many advances in technology that it generated. Thanks to simplified covert procurement arrangements and the lack of detailed and restricting specifications, creative designers such as Kelly Johnson produced state-of-the-art aircraft in record time. The U-2, designed to carry out reconnaissance missions for two years at best, proved so successful that, even after its original area of activity became too dangerous for overflights at the end of four years, the aircraft served the CIA well for another 14 years and still is in service with other government agencies.

The OXCART is an even better example of the technological advances generated by the CIA's reconnaissance program. Although the OXCART was designed almost 30 years ago and first flown in 1962, its speed and altitude have never been equaled. The development of this aircraft also led to the use of new materials in aircraft construction. Unfortunately, the technological breakthroughs that made the OXCART possible took longer than expected. By the time the aircraft was ready for operations, the missions originally planned for it were not practicable. The tremendous technological achievement represented by the OXCART ultimately led to the aircraft's demise by inspiring the Air Force to purchase its own version of the aircraft. The

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

government could not afford to maintain two such similar reconnaissance programs. The elimination of the Agency's OXCART program did not, however, spell the end of the usefulness of the world's most advanced aircraft; its offspring, the SR-71, is still in service.

In addition to the aircraft themselves, many other items associated with the reconnaissance program have represented important advances in technology. The flight suits and life-support systems of the U-2 and OXCART pilots were the forerunners of the equipment used in the space program. Camera resolution improved dramatically as the result of cameras and lenses produced for the CIA's reconnaissance program.

COOPERATION WITH THE AIR FORCE

In this history, which concentrates on the CIA's involvement in overhead reconnaissance, it is easy to overlook the important role that the US Air Force played in the U-2 and OXCART programs. From the very beginnings of the U-2 program in 1954, the Agency and the Air Force were partners in advancing the state of the art in overhead reconnaissance. Air Force personnel served at all levels of the reconnaissance program, from project headquarters to the testing site and field detachments. The Air Force supplied the U-2's engines, at times diverting them from other high-priority production lines. Perhaps most important of all, the Air Force provided pilots for the U-2s after the Agency's original attempt to recruit a sufficient number of skilled foreign pilots proved unsuccessful. Finally, the day-to-day operations of the U-2s could not have been conducted without the help of Air Force mission planners, weather forecasters, and support personnel in the field detachments. The cooperation between the Agency and the Air Force that began with the U-2 and continued with Project OXCART remains a major feature in US reconnaissance programs today.

IMPACT OF THE OVERHEAD RECONNAISSANCE PROGRAM ON THE CIA

CIA's entry into the world of overhead reconnaissance at the end of 1954 ultimately produced major changes in the Agency. Classical forms of intelligence—the use of covert agents and clandestine operations—gradually lost their primacy to the new scientific and

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

technical means of collection. As soon as the U-2 began flying over the Soviet Union, its photographs became the most important source of intelligence available. The flood of information that the U-2 missions gathered led to a major expansion of the Agency's photointerpretation capabilities, which finally resulted in the creation of the National Photographic Interpretation Center to serve the entire intelligence community.

The U-2's tremendous success as an intelligence-gathering system led the Agency to search for follow-on systems that could continue to obtain highly reliable information in large quantities. Thus, the CIA sponsored the development of the world's most advanced aircraft—the OXCART—and also pioneered research into photosatellites. Less than a decade after the U-2 program began, the Agency's new emphasis on technical means of collection had brought about the creation of a new science-oriented directorate, which would ultimately rival in manpower and budget the Agency's other three directorates combined.

The negative aspect of this new emphasis on technology is exploding costs. The Agency's first strategic reconnaissance aircraft, the U-2, cost less than $1 million apiece. With the U-2's successor, the OXCART, each aircraft cost more than $20 million, and the cost explosion has continued with each new generation of reconnaissance satellites.

Perhaps the greatest significance of the CIA's entry into the world of overhead reconnaissance in December 1954 was the new national policy that it signaled. Although US military aircraft had frequently violated Soviet airspace in the decade after World War II, such shallow-penetration overflights, concentrating primarily on order-of-battle data, had been authorized and controlled by US field commanders, not by the President. In the autumn of 1954, however, President Dwight D. Eisenhower—determined to avoid another Pearl Harbor—authorized the construction of a new aircraft designed solely to fly over the Soviet Union and gather strategic intelligence. Peacetime reconnaissance flights over the territory of a potential enemy power thus became national policy. Moreover, to reduce the danger of conflict, the President entrusted this mission not to the armed forces, but to a civilian agency—the CIA. From that time forward, overhead reconnaissance has been one of the CIA's most important missions.

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

— Blank —

Approved for Release: 2013/06/25

C00190094

Approved for Release: 2013/06/25

— Blank —

Approved for Release: 2013/06/25