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*The first photographic
reconnaissance satellite*

CORONA

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When the U-2 began operating in the summer of 1956, it was expected to have a relatively short operational life in overflying the Soviet Union—perhaps no more than a year or two. That expectation was based not so much on the likelihood that the Soviets could develop the means of shooting it down, as on their ability to develop a radar surveillance network capable of tracking the U-2 reliably. With accurate tracking data in hand, the Soviets could file diplomatic protests with enough supporting evidence to generate political pressures to discontinue the overflights. As it turned out, the United States had underestimated the Soviet radars, which promptly acquired and continuously tracked the very first U-2 flight over Soviet territory. The Soviets filed a formal protest within days of the incident, and a standdown was ordered.

For nearly four years, the U-2 ranged over much of the world, but only sporadically over the Soviet Union. Soviet radar was so effective that each flight risked another protest, and another standdown. Clearly, some means had to be found to accelerate the initial operational capability for a less vulnerable successor to the U-2. Fortunately, by the time Francis Gary Powers was shot down near Sverdlovsk on 1 May 1960 (fortunate for the intelligence community, that is—not for Powers), an alternative means of carrying out photographic reconnaissance over the Soviet Union was approaching operational readiness. On 19 August 1960, just 110 days after the downing of the last U-2 overflight of the Soviet Union, the first successful air catch was made near Hawaii of a capsule of exposed film ejected from a photographic reconnaissance satellite that had completed seven passes over denied territory and 17 orbits of the earth. The feat was the culmination of four years of intensive and often frustrating effort to build, launch, orbit, and recover an intelligence product from a camera-carrying satellite.

At about the time the U-2 first began overflying the Soviet Union in 1956, the U.S. Air Force was embarking on the development of a strategic reconnaissance weapons system employing orbiting satellites in a variety of collection configurations. The program, which was designated WS-117L, had its origins in 1946 when a requirement was placed on the RAND Corporation for a study of the technical feasibility of orbiting artificial satellites. The first real breakthrough had come in 1953 when the USAF Scientific Advisory Board reported to the Air Staff that it was feasible to produce relatively small and light-weight thermonuclear warheads. As a result of that report, the ATLAS ICBM program was accorded the highest priority in the Air Force.

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Corona

In 1970, CORONA was called on to provide proof of Israeli-Egyptian claims with regard to cease-fire compliance or violation. CORONA Mission 1111, launched on 23 July 1970, successfully carried out the directions for this coverage, which brought the following praise from Dr. John McLucas, Under Secretary of the Air Force and Director, NRO, who said in a message to the Director of Special Projects, DD/S&T, on 25 August 1970:

I extend my sincere thanks and a well done to you and your staff for your outstanding response to an urgent Intelligence Community requirement.

The extension of . . . Mission 1111 to 19 days, without benefit of solar panels, and the change in the satellite orbit to permit photography of the Middle East on 10 August provided information which could not be obtained through any other means. This photography is being used as a baseline for determining compliance with the Suez cease-fire provisions.

CORONA's Decade of Glory is now history. The first, the longest, and the most successful of the nation's space recovery programs, CORONA explored and conquered the technological unknowns of space reconnaissance, lifted the curtain of secrecy that screened developments within the Soviet Union and Communist China, and opened the way for the even more sophisticated follow-on satellite reconnaissance systems. The 145th and final CORONA launch took place on 25 May 1972 with the final recovery on 31 May 1972. That was the 165th recovery in the CORONA program, more than the total of all of the other U.S. programs combined. CORONA provided photographic coverage of approximately 750,000,000 square nautical miles of the earth's surface. This dramatic achievement was surpassed only by intelligence derived from the photography.

In placing a value on the intelligence obtained by the U.S. through its photographic reconnaissance satellite programs between 1960 and 1970, a first consideration, on the positive side, would be that it had made it possible for the President in office to react more wisely to crucial international situations when armed with the knowledge provided by these programs. Conversely, it can be said that without the intelligence which this program furnished, we might have misguidedly been pressured into a World War III.

The intelligence collected by the reconnaissance programs makes a vital contribution to the National Intelligence Estimates upon which the defense of the U.S. and the strategic plans of the military services are based. Principal among those estimates are the ones which deal with the Soviet and Chinese Communist strategic weapons, space, and nuclear energy programs.

The intelligence from overhead reconnaissance counts heavily not only in planning our defense, but also in programming and budgeting for it. It helps to avoid the kind of floundering that occurred during the time of the projection of the "Missile Gap." Without the kind of intelligence which the CORONA program provided, the U.S. budget for the defense of our own territory, and for military assistance to our allies, would doubtless have been increased by billions.

The total cost for all CORONA activities of both the Air Force and the CIA over the 16-year period was [REDACTED]

The CORONA program was so efficiently managed that even the qualification models of each series were refurbished and flown. As a result, there was little

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