

50



YEARS

of

VIGILANCE

FROM

ABOVE



NATIONAL RECONNAISSANCE OFFICE



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NRO HISTORY AND HERITAGE

FOUNDING THE NRO

In the 1950s, President Dwight D. Eisenhower approved reconnaissance systems that included high-altitude balloons, airplanes, and satellites to gain strategic intelligence on the Soviet Union, China, and other potential threats to the United States. On August 31, 1960, Secretary of the Air Force Dudley C. Sharp established the Office of Missile and Satellite Systems to direct the Air Force satellite reconnaissance program. On September 6, 1961, Acting Director of Central Intelligence General Charles P. Cabell and Deputy Secretary of Defense Roswell L. Gilpatric officially established management arrangements for the National Reconnaissance Program. These arrangements consolidated many of America's national space and aerial reconnaissance projects under a covert, highly compartmented National Reconnaissance Office.

NOTABLE RECONNAISSANCE SYSTEMS

GRAB AND POPPY

On August 24, 1959, President Eisenhower authorized the Naval Research Laboratory to develop the GRAB (Galactic Radiation and Background) experimental satellite to collect Soviet air-defense radar emissions. Ten months later, GRAB-1, America's first signals intelligence satellite, launched from Cape Canaveral Air Force Station, Florida. GRAB operated from 1960-1962; its successor, POPPY, operated from 1962-1977.

CORONA

On August 18, 1960, the United States launched the first CORONA imagery intelligence satellite that successfully returned a photo from space. A cooperative venture between the CIA and U.S. Air Force, CORONA photographed "denied territories" and returned the exposed film to earth in capsules, which Air Force planes recovered in mid-air over the Pacific Ocean. The CORONA program flew 145 missions and produced over 800,000 images. When the program ended in 1972, it boasted a significant list of firsts in space history:

- + First man-made object retrieved from space
- + First photograph taken from space
- + First recovery of an intelligence payload from orbit
- + First mid-air recovery of an object from space
- + First mapping of the earth from space
- + First use of multiple reentry vehicles

KH-7 AND KH-9

Developed in the 1960s, the KH-7 and KH-9 film-return satellites provided imagery of Soviet and Chinese nuclear installations, missile sites, and other activities in "denied territories." Between July 1963 and June 1967, the NRO operated 38 KH-7 missions, with durations ranging from one to eight days. Only 30 missions obtained usable imagery, totaling about 43,000 linear feet, with resolutions that improved from four to two feet. Between March 1973 and October 1980, 12 KH-9 Mapping Camera System (MCS) missions, with durations ranging from 43 to 119 days, collected 48,000 linear feet of film, with resolutions typically between 30 and 20 feet. The U.S. Geological Survey and Defense Mapping Agency used this KH-9 MCS imagery for mapping and digital terrain elevation data.

ADVANCED RECONNAISSANCE: KH-11

On December 19, 1976, the NRO launched the KH-11 near real-time electro-optical satellite, which transmitted its images to earth via a relay satellite. As demand for satellite reconnaissance grew, the NRO developed increasingly sophisticated technology to collect signals and imagery intelligence from space. These systems contributed to the verification of arms control treaties, global transparency, and the end of the Cold War.

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