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Author: Ms. Amy Parlett
University of Alabama in Huntsville, United States, akp0011@uah.edu

THE CORONA SATELLITE PROGRAM AND THE BEGINNINGS OF RECONNAISSANCE
SATELLITES

Abstract

The time following the Second World War brought significant international tensions and a demand to covertly acquire what was then sensitive information about the activities in which other countries might be engaged. In June 1959, the United States responded to this need by beginning the CORONA Reconnaissance Satellite program, only a year after the first US satellite, Explorer I, was launched in to space. As the first reconnaissance satellites, the project code named CORONA served the ground breaking purpose of gathering intelligence information from orbit by producing stereoscopic satellite photography using a special 70 millimeter film developed for use in space. From around 150 to 480 kilometers above Earth, the satellites were able to capture images of areas approximately 7.5 meters in diameter, with image resolution improving to as little as 1.8 meters over the record setting 145 missions. This information—more specifically, images of the Soviet Union, China, and their allies to include pictures of the Soviet intercontinental ballistic missile launch sites, missile testing ranges, and strategic force deployment—was delivered back to the United States by the utilization of multiple re-entry vehicles called "film-buckets" which were recovered over Hawaii with C-119 "Flying Boxcars" flown by the US Air Force— a first in the space industry. Although the program ended in 1972, the United States did not acknowledge the use of these reconnaissance satellites until 1978. The images of the 13 year, 132 million dollar project were a well-kept secret until 1995 when US President Bill Clinton signed an executive order to declassify several of the photos taken by CORONA satellites as well as more information about the program.

This paper will discuss the history of the program; and the development of the satellite technology; as well as the recovery technique employed in the retrieval of the intelligence information from the birth of CORONA in 1959 to the program's termination in 1972. The paper will also include a personal interview with retired US Air Force pilot, Colonel D.B. Parker, who flew several recovery missions for CORONA.