

(U) Appendix A - GRAB ELINT Satellite

*(Appendix A is UNCLASSIFIED in its entirety)*³¹

General information concerning the fact that GRAB was the first operational U.S. intelligence satellite can be acknowledged. The following information is releasable:

The project began as a U.S. Navy ELINT satellite system in 1959, launched its first satellite in June 1960, and the project operated until August 1962. Its mission was to obtain information on Soviet air defense radars inside the country that could not be observed by Air Force and Navy ferret aircraft flying ELINT missions along accessible borders in Europe and the western Pacific.

The Naval Research Laboratory (NRL) proposed an ELINT satellite collection system in the spring of 1958. President Eisenhower approved full development on 24 August 1959. Initially called Project TATTLETALE, after the President's approval it was put in a tighter security control system named CANES. Access was limited to less than 200 persons in the Washington D.C. area.

The first launch occurred from Cape Canaveral on 22 June 1960 on Thor Able Star booster number 283 as a piggyback payload accompanying the Navy's TRANSIT II navigation satellite. With initial launch a success, GRAB subsequently became the world's first operational reconnaissance satellite.

The GRAB satellite carried two electronic payloads, the classified ELINT package and scientific instrumentation to measure solar radiation (SOLRAD). A legitimate experiment, the SOLRAD payload was publicly disclosed in DOD press releases and served as a cover for the undisclosed ELINT payload.

GRAB was inserted into polar orbit at 500 nm with a ground swath of 3500 nm. Its antennas intercepted radar pulses of a certain bandwidth within the S-band, and transponded a corresponding signal to collection ground sites within GRAB's field of view.

GRAB was controlled by a series of Earth Satellite Vehicle (ESV) huts deployed worldwide. However, only information revealing the following U.S. ESV hut locations is approved for release:

- a. Wahiawa, Hawaii;

b. The NRL hut at the Coast Guard Communications Station in Hybla Valley, Virginia.

The Director of Naval Intelligence exercised overall control. Operators in the ESV huts recorded GRAB's transponded information onto magnetic tape and couriered it to NRL for evaluation. The NRL then duplicated and forwarded the tapes for processing and analysis to the NSA in Maryland, and to the Strategic Air Command (SAC) in Nebraska. Processing revealed the radar's antenna scan rate, its pulse repetition frequency, the type of radar, the radar disposition, and permitted analysis of the threat, and approximate location. SAC's processing was aimed at defining the characteristics and locations of air defense equipment to support preparing the single integrated operations plan (SIOP), a war plan responsibility of the Joint Strategic Targeting Planning Staff at Offutt AFB, Nebraska. The NSA searched the tapes for new and unusual signals, and discovered the Soviets were already operating advanced radars that might support a capability to destroy ballistic missiles.

Photographs of the GRAB satellite are unclassified and releasable.

All other information pertaining to the GRAB satellite, its operating details and related data processing and dissemination, remains classified.