In accordance with AROA directives of December 1959, this program, originally known as the Advanced Reconnaissance System or W-117, has been reoriented and split into four programs.

Development plans for these programs have been prepared. Basic reasons for the split, according to AROA, are funding and management considerations.

The Programs:

1. **THOR-EXPLORER.** THOR-boosted satellites on a low altitude (150 n.m.-nominal) polar orbit, launched from Vandenberg. Launches to start in January 1959. Purpose of flights is to prove orbital capability, engineering testing and evaluation of components, scientific data gathering, and biomedical experiments. Flights will have recoverable capsules, which the satellite will eject, to be picked up by G-119 air recovery teams in the vicinity of Hawaii, on the 17th orbit. Satellite tracking stations located in Alaska, California,
and Hawaii will be used for all phases of the program. Total of 19
flights authorized in 1960:

13 are NASA funded.

2 are NASA funded, payload not specified.

4 are Air Force funded.

2. **ATLAS.** ATLAS-launched probes of reconnaissance satellite,
with higher orbits than DISCOVERER and with research and develop-
ment payloads. Resistant program (visual, electronic sensor) and
a recoverable capsule program/mapping capability with high accuracy
and long focal length, high-resolution payload are planned. Flights
start: Readout version, March 1960; resovable version, January
1961.

3. **MIDAS.** Missile Defense Alarm System. ATLAS-launched
infrared attack alarm, formerly carried as subsystem "0" of DI 117.
To be performed in phases. Phase I begins in November 1959 with 4
flights from Patrick (AF funded with AF assistance). Phase II
begins in July 1960 with 6 flights from Vandenberg (AF funding with
AFPA assistance). Phase III (all AF funded) begins the operational
phase. Launched from Vandenberg beginning in July 1961 at the rate of 2-3 a month until 30 are on orbit, after which this total will be maintained.

b) APPROVED. More than once, AF satellite program with special payloads. Launches from Vandenberg will be ZOR-boosted with recoverable capsules, designed to provide the AF with experience. Schedule starts in April 1960, at rate of 2 per month until a total of eight flights are made. An AF funded program.
Program Objectives.

A vital requirement for the defense of the United States is the earliest possible warning of a Soviet intention to attack. This system, employing an orbiting satellite, will provide on a reasonably timely basis, surveillance of the whole Soviet Union. The use of optical quality devices in the satellite system will reveal Soviet preparations for a possible attack well in advance of the event.

Timeliness of receipt of the intelligence information is essential, with daily reconnaissance coverage at high resolution the ideal. As a result of the requirement for constant availability of the advanced reconnaissance system, the engineering program will be from the lesser to the greater resolution.

Information from surveillance satellites will be integrated into the USAF Intelligence Data Handling System and disseminated to operational military agencies. Wide band, high speed transmission will be used.

It is expected that equipment will permit the following:

- Terrain and mapping coverage.
- Detection of new and hitherto unknown targets and verification of known targets.
- Determination of electronic signal characteristics.
- Location of targets and defenses.
- Collection of data on technological improvements.
- Evaluation of military and industrial strength.
- Monitoring of electronic emissions.
- Surveillance of enemy build-up indications.
- Warning of attacks under way or pending.
- Assessment of high-yield weapons' damage.
- Reconnaissance of military movements.
- Location of naval forces throughout the world.
- Collection of world-wide weather data. (Primarily Cloud Cover)