



The large earth satellite project (Air Force #117L) has certain implications for intelligence, disarmament, scientific, and psychological programs of the nation which suggest its elevation to a priority national effort.

The technical feasibility of a reconnaissance-scientific satellite with a one ton payload on a stable orbit 300 miles high has been established by eleven (11) years of system studies and experimentation with satellite components. The propulsion, launching vehicle, and all other key elements of the satellite system are nearing technical realization and will be available directly from the ICBM and other Air Force programs.

Initial flight tests could be made in 1960 and a continuous over-flight program maintained thereafter without interfering with ICBM capability



- if this satellite project is administered by the same group administering the ICBM program, and
- if its funding is accelerated to a continuing annual rate of about \$100 million by FY 1959.

Post-war advances in photographic and electronic arts have been such that the fully developed reconnaissance version will produce information equivalent in detail to average high-altitude World War II photography.

Reconnaissance satellites need not suffer from the political vulnerabilities of other over-flight systems. While an accompanying political-action program must yet be detailed, it can make the satellite as invulnerable to Soviet political countermeasures as it is to military countermeasures.

Preliminary study suggests a first political-action phase where the large satellite is presented as a follow-on to the IGY scientific satellite, carrying much more instrumentation and cameras to photograph cloud cover and the earth's appearance (such a limitation on photographic performance at 300 miles will be most credible). This consideration suggests that the security governing the high resolution reconnaissance components must be very tight during at least this first phase. Depending on successes with international arms control agreements, a possible later political-action phase would reveal its actual photographic performance as "improvements" and present the project as part of an international arms control system.

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INFORMATION



To collect warning and arms information for intelligence and disarmament purposes, the political and military invulnerability of the satellite is a unique characteristic, compared with covert intelligence, unauthorized aerial over-flight, and mutual ground and aerial inspection.

The very existence of this invulnerable space system would not only supplement other approaches, but would inevitably weaken Soviet incentives to block or retract other methods for gathering arms information.

From the scientific viewpoint, this satellite with its ton payload would not only back-stop VANGUARD, but would also permit unprecedented experimentation and bring rapid increases in our space know-how, with all the immediate implications for national security and longer term values for a growing variety of peaceful purposes. As with VANGUARD, information would be shared with all nations.

Psychologically, it would enable us to demonstrate technical supremacy while lending substance to our avowed aim to use space for peaceful, non-military purposes. A "space-for-peace" campaign can be envisioned with impact not unlike "atoms-for-peace".

The costs of the large satellite project conducted on a high priority basis would run about 1/4 of 1% of the current security budget after 1959. Taking due account of the demands of other security projects, a preliminary judgment indicates that the value of this satellite to intelligence, disarmament, scientific and psychological programs may well justify the expenditure.

The governmental actions required would appear to be

- an evaluation by a small group of Presidential advisors of the national worth of the AF large satellite project in relation to its costs and the demands of other projects,
- a Presidential decision on the level of effort justified by the over-all national interests involved,
- the organization by OCB of a political-action program (as other reconnaissance over-flight experience has proven, this aspect is critical to success; while the reconnaissance satellite does not pose as difficult a problem as other systems, skillful handling of political actions is nonetheless essential),
- as a cover operation, cancellation of Project 117L in name only, and substitution of a large AF scientific satellite project, with high resolution reconnaissance aspects carried out under strictest security control.

May 16, 1957

