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PAYLOAD 177 (Proposed)

Purpose:

1. to supplement the four primary operational payloads with unusual operational ELINT systems or redundant ELINT systems (i.e. ocean surveillance coverage).
2. to allow previously un-flight tested hardware items to be fully tested and evaluated under actual flight conditions

Description:

1. stabilization by a 3 axis gravity gradient system. This gravity gradient is a new design which should have improved performance over previously used systems. This cannot be effectively evaluated by ground tests.
2. for detailed information contact:
2. an improved aspect sensing system may be employed. This would utilize an [redacted] This cannot be effectively evaluated by ground tests. for info[redacted]tact: Fred Raymond
3. ~~The~~ [redacted] Payload 177 will contain [redacted] thruster to allow positioning of the satellite. This arc thruster will be a totally new design

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[redacted] SECRET [redacted] utilizing no valves. This should make the arc thruster a much more reliable unit. This cannot be evaluated by ground tests.

for information contact:

4. Payload 177 could be used to evaluate (life-test) a newly designed DC brushless reaction wheel.

for information contact:

5. Payload 177 will have an extremely versatile command system. The command system will allow a thorough evaluation of the different types of command techniques which might be utilized by [redacted]. This following command system is designed to allow cost-efficiency tradeoffs to be established for several different modes of operation:

A) [redacted]

B) " " " with stored commands and sequences in satellite

C) AM-FM

D) AM-FM with stored commands and sequences on satellite [redacted] SECRET

E) [redacted] with stored sequences on the ground.

contact Bob Eisenhower for information.

6. Payload SL-7 [redacted] be capable of transponding ELINT data back to the ground station on ~~several~~ at least two different frequencies. This should supply valuable experience at the different frequencies.

for information contact: Len Hearton

7. Payload 177 could contain two general search receivers.

A) 103-125 MHz

B) ~ 35 GHz

8. Payload 177 could contain duplicate ocean surveillance bands as well as any other very important bands. This will give this program a redundant satellite in case of a primary satellite failure. The 5th payload could be positioned to allow [redacted] coverage in event of a primary failure.

9. Payload 177 will be capable of measuring the frequency of incoming [redacted] over certain bands of interest. For details see the HRB proposal. This would also require a SLX package.

TOP SECRET [redacted]

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CONTROL SYSTEMS JOINTLY

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Summary of 177

Purpose

(1) AUGMENT SYSTEM (2) EVALUATE HARDWARE

Description

(1) 3 AXIS PASSIVE GRAVITY GRADIENT SYSTEM

(2) ~~ARC THRUSTER (VALVE LESS)~~

(3) VACUUM ARC THRUSTER (VALVE LESS)

(4) DC BRUSHLESS WHEEL

(5) VERSATILE COMMAND SYSTEM

(6) NEW D/L FREQ

(7) GENERAL ELINT SEARCH

(8) DUPLICATE O.S. BANDS

(9) RF FREQ. MEASUREMENT