

**OPTION NUMBER AND
DESCRIPTION**
ADVANTAGES
DISADVANTAGES

OPTION # I -
high sensitivity,
horizon looking,
minor lobe intercept
system

1. DIRECTED against specific geo-
graphic area out of full POPPY
Swath.
2. Locates Side-Lobe emissions.
3. Less Redundant data taken.
4. Higher accuracy location on
long intercepts, [redacted]
5. Has long term growth &
extends Comb-Filter of 7107.
6. Large area can be searched.

1. Limited RF Range.
2. Sophisticated on-board
Command and control. Must be
synchronized in both cooperating
spacecraft.
3. Reduces emitter scan info.

OPTION # II -
MULTIPLE COLLECTION
[redacted]

1. Large amount of time & Area
collection against priority job.
2. Relative simplicity.
3. Exploits the improved ground
station processing capabilities.
4. Highest cost effectiveness,
(Booster & Ground Station)
5. Inherent reliability thru
redundancy.
6. [redacted] can be launched
launched by less expensive
SCOUT Booster.

1. Production of large number of
spacecraft.
2. Complex Spacecraft-separation
control required.

OPTION # IV:
HYBRID SYSTEM WITH
BASIC [redacted]
DOWNWARD LOOKING SYSTEMS

1. Within its Frequency Range it:
Locates Below Flight Line.
Locates Brief Emissions.
2. Improved Accuracy through use
in conjunction with [redacted]
3. Locates Side Lobe emissions.
4. Provides less Redundant Data.

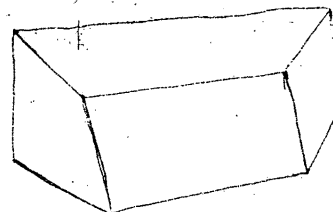
1. Very narrow RF Range (2.6-3.1GHz).
2. Small Instantaneous Search (1/10 of
Main-beam System).
3. Requires Accurate Aspect system
($\frac{1}{2}$ degree)
4. Requires Large Fold-Out Antenna.
5. Sophisticated On-Board Processor
6. Accurate Location requires 3 cooper-
ative spacecraft.
7. Requires Great amount of Power
8. Due to cooperation between 3 separated
spacecraft, common collection time @

OPTION # III
COMBINATION OF
FEATURES OF OPTION I & II

TOP SECRET

Tech Data file P ~~SECRET~~ 11

TOP SECRET

TOTAL VOLUME AVAILABLE
FOR CUSTOMER $\approx 2\frac{3}{4} \text{ ft}^3$ 

$$V_1 = 2 \times \frac{3}{4} \times \frac{1}{2} = \frac{3}{4} \text{ ft}^3$$

$$V_2 = \frac{1}{2} V_1 = \frac{3}{8} \text{ ft}^3$$

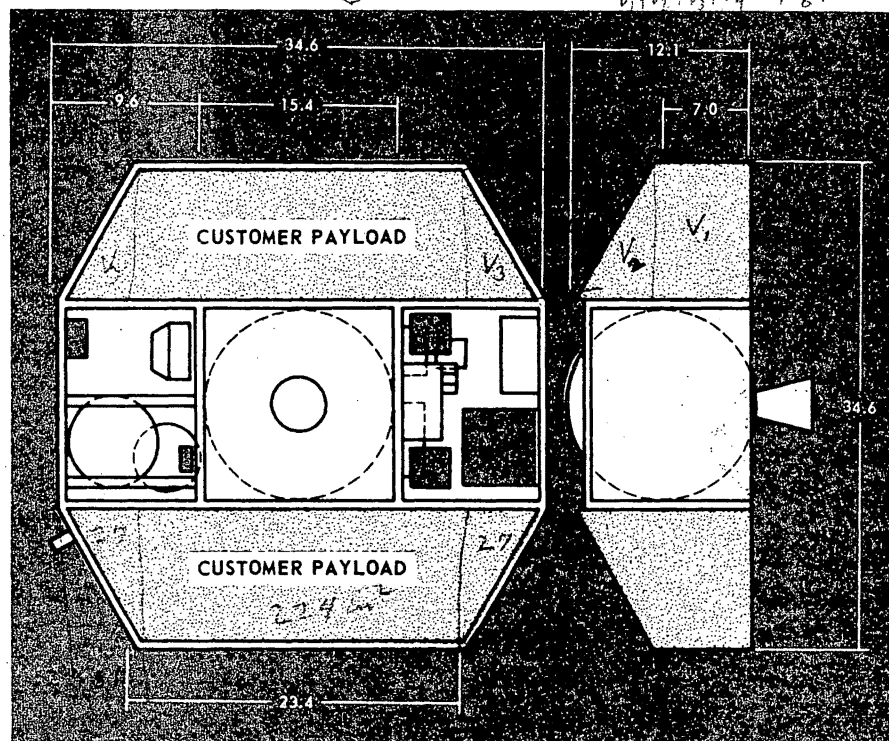
$$V_3 = \frac{3}{16} \text{ ft}^3$$

$$V_4 = \frac{3}{32} \text{ ft}^3$$

$$V_1 + V_2 + V_3 + V_4 = 1\frac{3}{8} \text{ ft}^3$$

TECHNICAL DATA

- Useful Orbital Life: 6 months
- Vehicle Weight: 130 to 250 pounds (including payload)
- Payload Weight: to 200 pounds
- Dimensions: approximately 35 x 35 x 13 inches (rocket motor nozzle extends an additional 4 inches along the thrust axis)
- Method of Stabilization: spin stabilized (60 to 80 rpm)
cold gas ejected through 2 spin nozzles
- Propulsion System: any of 3 solid rocket motors for high and low orbit capability
 - Nominal Total Impulse: 1237 pound-seconds (513 pounds thrust for 2.41 seconds)
 - Model 0207: 17,650 pound-seconds (856 pounds thrust for 20.6 seconds)
 - Model 2207: 800 pound-seconds per motor (1000 pounds thrust for 0.8 second)
- Electrical Power System: solar cells with secondary battery voltage limiter and control circuits for 22 to 29.25 volts dc
power available/day 280 watt-hours
- Launch System: orbital-launched from Agena or other space vehicle
swing-out launching frame incorporating soft-spring system for satellite separation



Volume - inches do not too add

file 224
54
278
58

556 IN D

MAN-TALENT K Y
CONTROL SYS
24" satellite
TOTAL 285.5

TOP SECRET