

~~SECRET SPECIAL HANDLING~~

S-2

INTELLIGENCE - MAPPING AND
GEODETIC CONTROL
SATELLITE SYSTEM

Dec

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101 OBJECTIVES

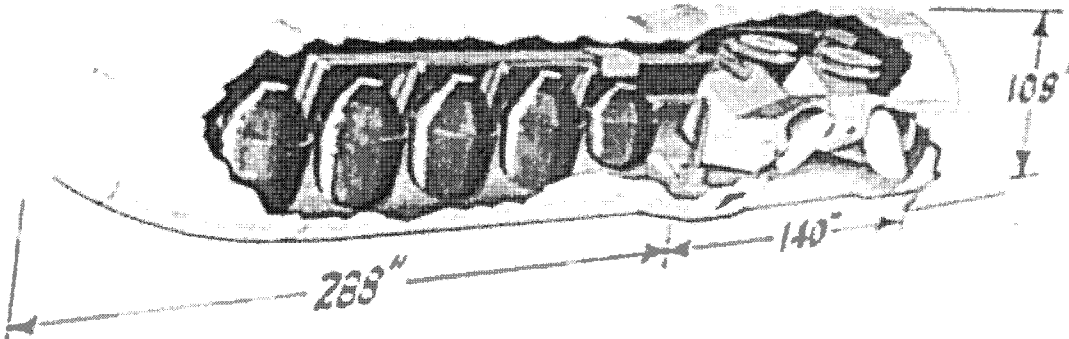
- INTRODUCE GEOMETRIC CONTROL TO
THE INTELLIGENCE PHOTOGRAPHY TO
PRODUCE 1:25,000 SCALE MAPS

- INTRODUCE LOCATION OF LANDMARKS
FOR GEODETIC CONTROL OF THE
1:25,000 SCALE MAPS

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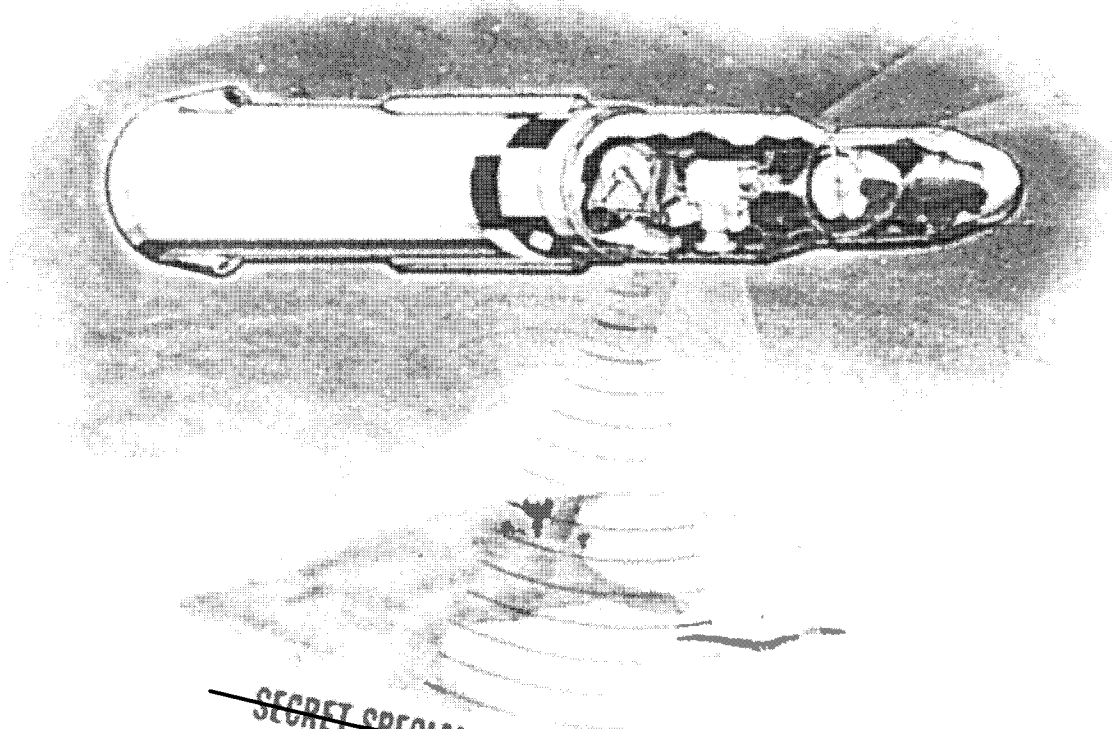
S-2 PAYLOAD



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ORBITAL CONFIGURATION



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10) GOPSS CHARACTERISTICSTERRESTRIAL CAMERA

12" f/6 80° FIELD
56 L/mm ON AXIS } 1.6:1 CONTRAST
36 L/mm MIN. } 20° SUN ANGLE
4 MICRON MEASUREMENT CAPABILITY

STELLAR CAMERA

TWIN 10" f/1.8 25° FIELD
6th MAG. STARS RECORDABLE

AUXILIARY INSTRUMENTS

ALTIMETER, TRANSPONDER, CLOCK
ACCELEROMETER

COVERAGE

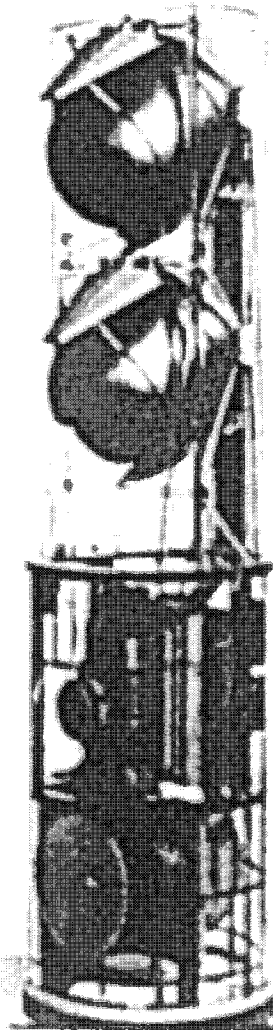
WORLD-WIDE, 15 DAY MISSION @ 160 N.MI.

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10)

GOPSS PAYLOAD



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IV) REQUIREMENTS

- 1 1:25,000 MAPS (CONTOUR INTERVAL 20 FT.)
 - DETAIL IDENTIFICATION - 4-5 FT. RESOLUTION
 - CONTOUR GENERATION - 10 FT. HT. DETERMINATION
 - INDEX PHOTO OF HIGH GEOMETRIC FIDELITY
 - ORIENTATION FROM STELLAR PHOTO (± 10 ARC-SEC.)
- 2 LOCATE MAPS IN WORLD DATUM (450 FT. IN PLANE, 175 FT. IN HT.)
 - PRECISE SATELLITE POSITION DETERMINATION DERIVED FROM ORBITAL REDUCTION PROGRAM
 - PRECISE PHOTOGRAMMETRIC LOCATION OF LANDMARKS FROM SATELLITE POSITION

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CAPABILITY SUMMARY

(METRIC TWIN OBLIQUE)

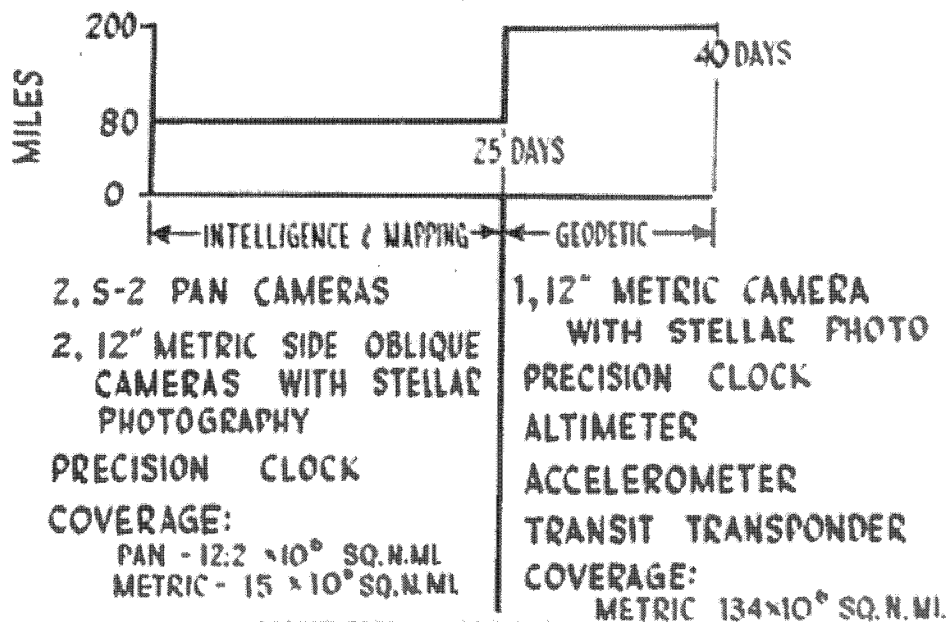
ALTITUDE	80 N.MI.	120 N.MI.	160 N.MI.	200 N.MI.
INTELLIGENCE (GRD-FT)	2.2	3.3	4.5	5.5
S-2 VRD (FT)	1.0	1.5	2.0	2.5
METRIC GRD (FT)	75	110	150	187
METRIC VRD (FT)	15	22	30	37
MAPPING	1:25,000	1:50,000	1:50,000	1:250,000
LANDMARK LOCATION			200 FT. HORZ 40 FT. VERT	200 FT. HORZ 40 FT. VERT

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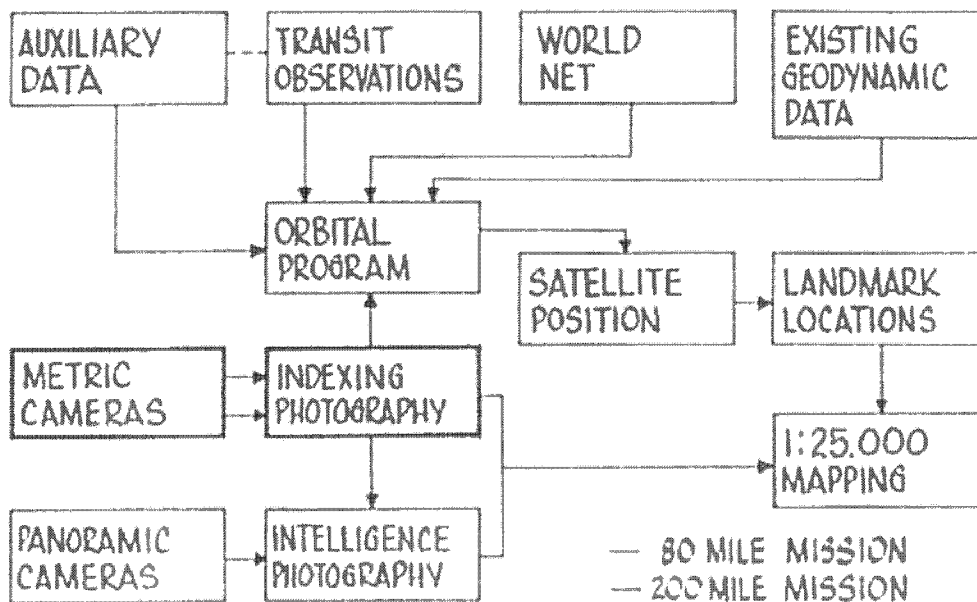
MISSION PROFILE



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INTELLIGENCE-MAPPING & GEODETIC MISSIONS

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~~SECRET SPECIAL HANDLING~~10) CONFIGURATIONPRIME SENSORS

S-2, 30° STEREO CONVERGENT PAN CAMERAS
GOF33- TWIN 12" TERR. CAMERAS, 20° SIDE OBLIQUE
TWIN 10" STELLAR CAMERAS

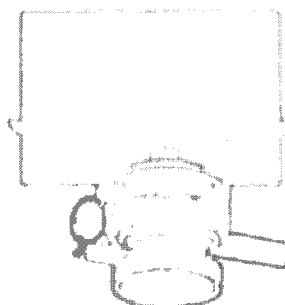
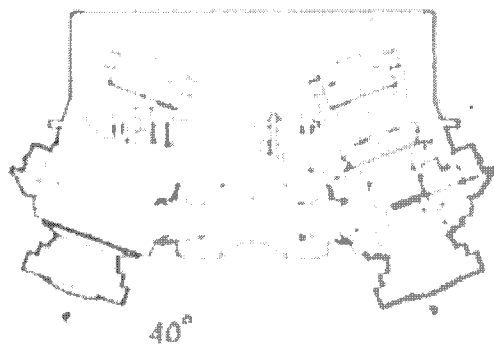
AUXILIARY SENSORS

PRECISION CLOCK
LOW 'G' ACCELEROMETER
RADAR ALTIMETER ±29 METERS @ 200 N. MI.
DOPPLER TRANSFONDER ±10 METERS ORBIT DETERMINATION

RECOVERY VEHICLES

MARK VIII (4)
MARK V (1)

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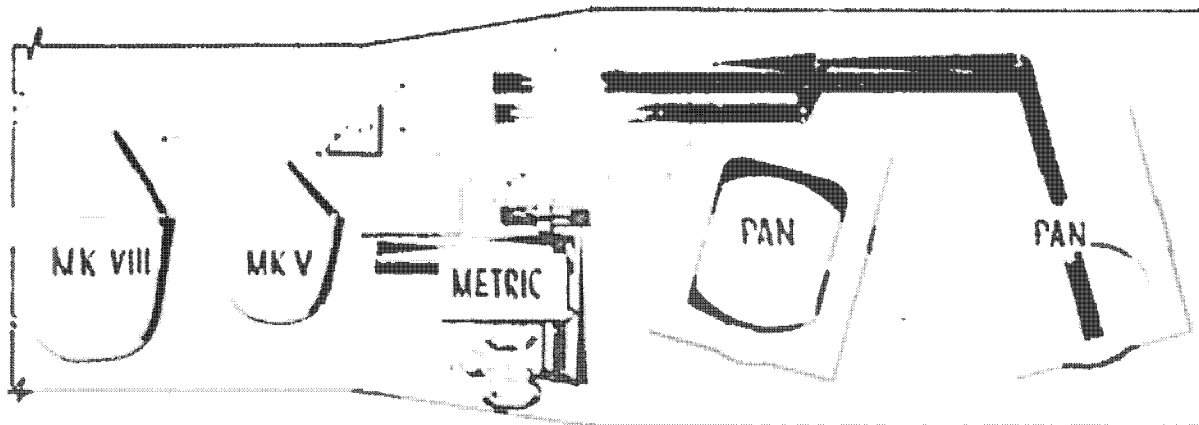
~~SECRET SPECIAL HANDLING~~10) TWIN 12" f/6.0 METRIC SYSTEM

41"

TWIN 10" f/1.8 STELLAR SYSTEM

78"

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~~SECRET SPECIAL HANDLING~~**10) CONFIGURATION**~~SECRET SPECIAL HANDLING~~

~~SECRET SPECIAL HANDLING~~(U) ESTIMATED ON-ORBIT WEIGHT

	DEPLOY ONE S-2 MK VIII FOR GOPSS	ADD ONE MK VII FOR GOPSS
TOTAL S-2 SYSTEM	11,500 LBS	11,500 LBS
GOPSS CAMERAS & ADDITIONAL STRUCTURE	970	1,170
ELIMINATE DISIC	-(110)	-(110)
LOADED MK VIII RV		700
TOTAL	<u>12,360 LBS</u>	<u>13,260 LBS</u>
ADD. EXPENDABLES	—	200 LBS

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Unclassified

Approved for Release: 2016/11/08 C05115817

~~SECRET SPECIAL HANDLING~~**10 CONCLUSIONS**

	INTELLIGENCE	1:25,000 MAPS	GEODETIC CONTROL OF MAPS
S-2	PRIME DATA	DETAIL IDENT. & REL. CONTOURING	—
GOPSS	INDEX	INDEX & CONTOURING	LANDMARK LOCATION FROM ORBITAL DESIGNATION
ALTITUDE	80 N.M.I.	80 N.M.I.	200 N.M.I.

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Unclassified