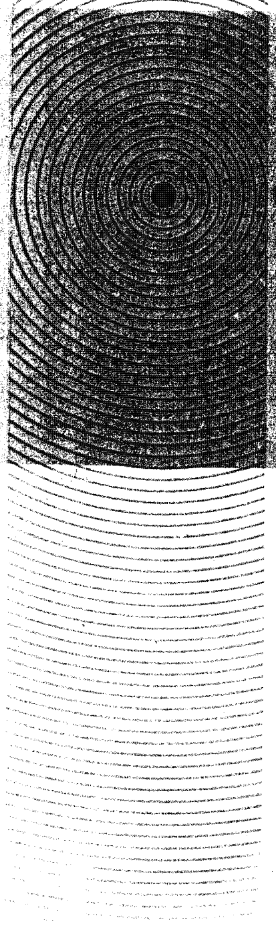

SUBSATELLITES

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PROJECT EARPOP

SUBSATELLITE SEQUENCE OF LAUNCH EVENTS

1. SUBSATELLITE LAUNCHED BY TIIID ON HOST VEHICLE
2. SEPARATION SEQUENCE INITIATED BY HOST VEHICLE STORED COMMAND THAT MAY BE PROGRAMMED FROM THE GROUND
3. FIRST BURN INITIATED BY SUBSATELLITE STORED COMMAND
4. SECOND BURN INITIATED BY SUBSATELLITE STORED COMMAND
5. DEPLOYMENTS INITIATED BY A COMBINATION OF SUBSATELLITES STORED COMMAND AND REAL-TIME GROUND COMMANDS

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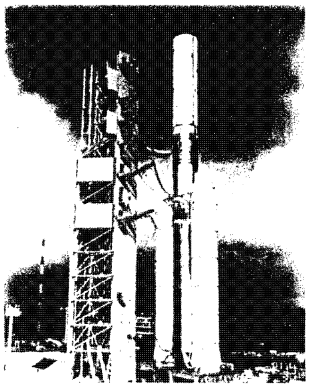
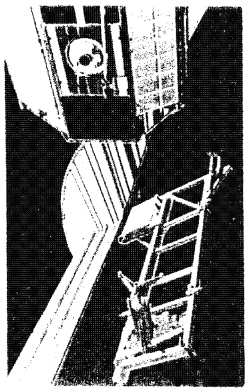
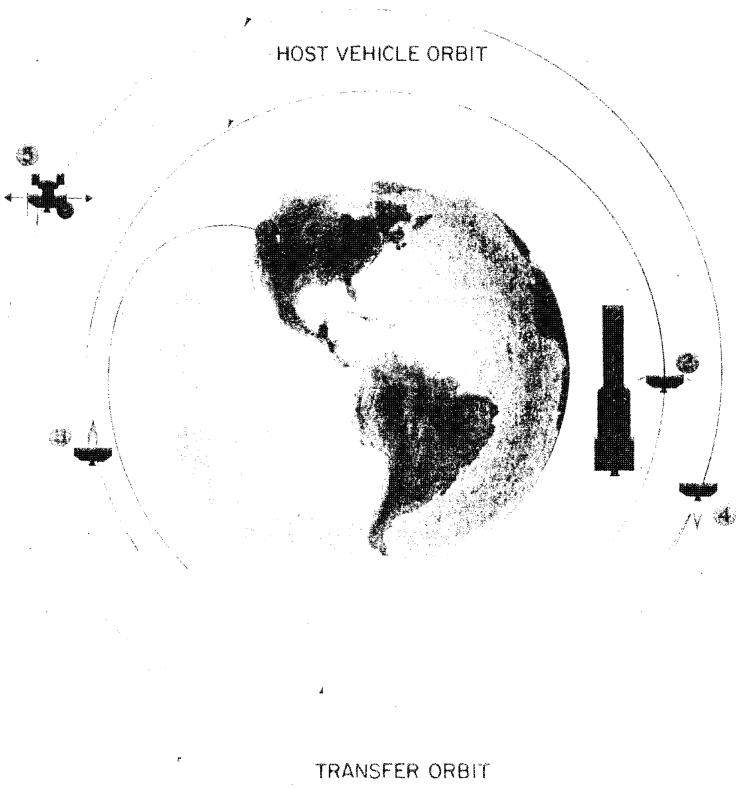
PROJECT EARPOP

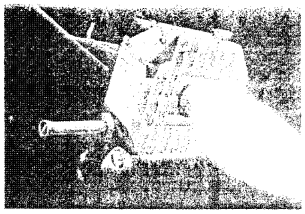


1 LAUNCH

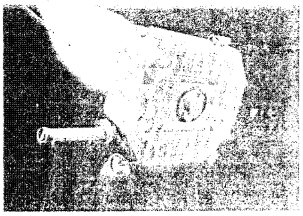


2 SEPARATION & SPIN

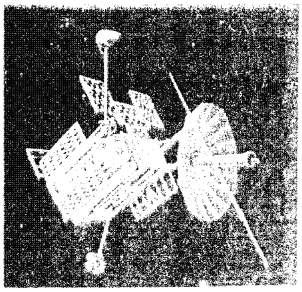




3 1ST BURN



4 2ND BURN



5 DEPLOYMENT

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PROJECT EARPOP

SUBSATELLITE MISSION

- GENERAL SEARCH

  IDENTIFY NEW SIGNAL – 450 TO 1000 AND 1500 TO 1800 MHz

- ELECTRONIC ORDER OF BATTLE (EOB)

  UPDATE LOCATION OF KNOWN RADARS
  TIME CRITICAL REPORTING

- TECHNICAL INTELLIGENCE

  ASSESS RADAR CAPABILITY (PRIMARILY ABOVE 8 GHz)

- COMINT MAPPING

  LOCATE COMMUNICATIONS LINKS FOR PRIME COLLECTORS

- INTERCEPT AND GEOPOSITION [redacted] EMITTERS

25X1

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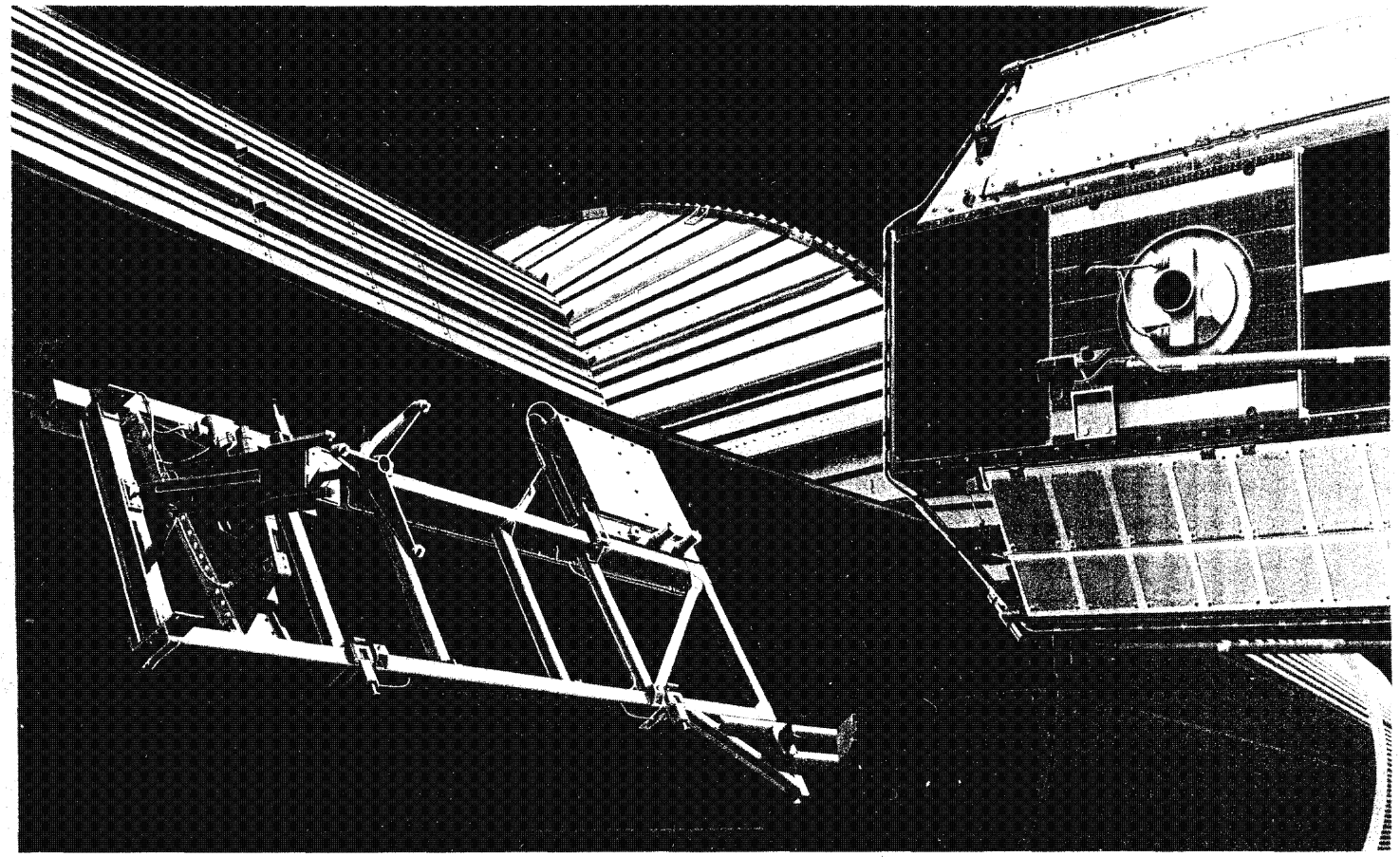
PROJECT EARPOP

SUBSATELLITE MISSION



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PROJECT EARPOP

SUBSATELLITE SPACECRAFT DESCRIPTION

1. TRANSMITTERS, 4 (CONIC)
2. SRCS COIL (LMSC)
3. TAPE RECORDERS, 3 (LEC)
4. SOLAR ARRAY PANELS, 5 (LMSC)
5. PAYLOADS
   RAQUEL (E-SYSTEMS)
   URSALA (MOTOROLA)
6. OMNI-ANTENNA, 12-18 GHz (LMSC)
7. PAYLOAD ANTENNA, 12-18 GHz (LMSC)
8. PAYLOAD ANTENNA, 8-12 GHz (LMSC)
9. -Y TT&C ANTENNA (LMSC)
10. OMNI-ANTENNA, 4/8-8/12 GHz (LMSC)
11. PAYLOAD ANTENNA, 4-8 GHz (LMSC)
12. ACS COIL (LMSC)
13. +Y TT&C ANTENNA (LMSC)

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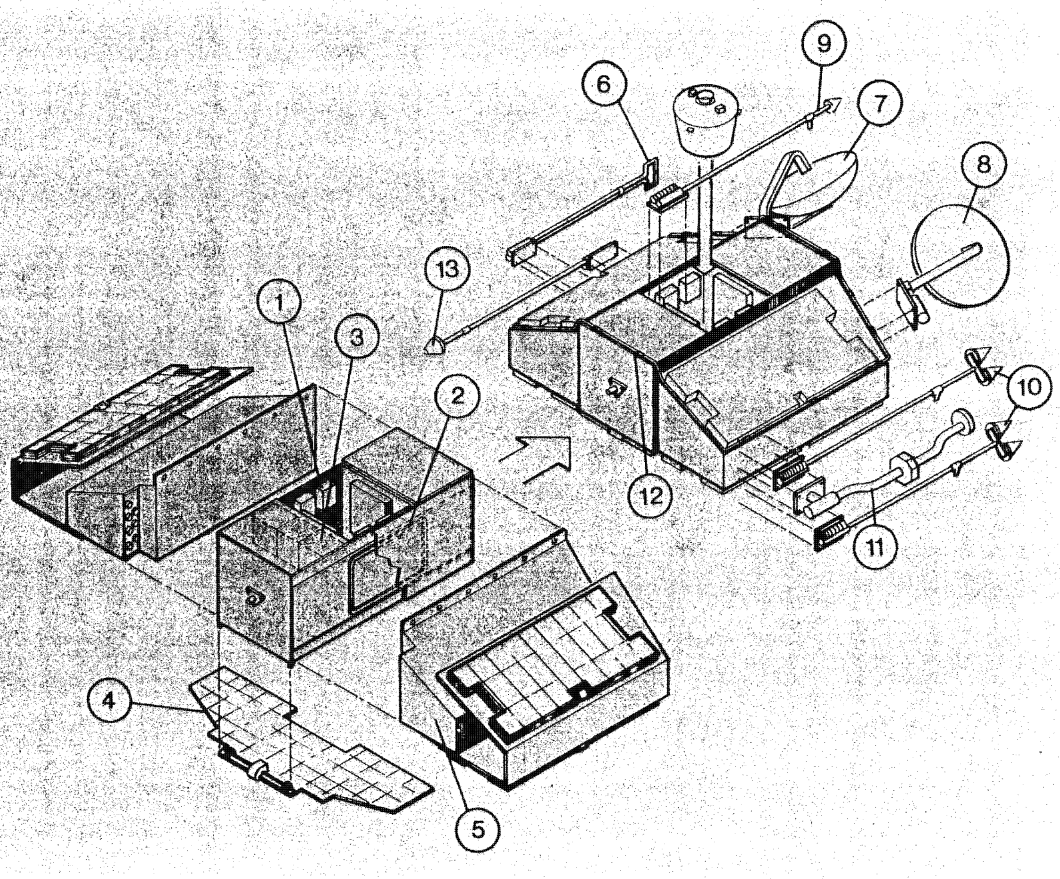
PROJECT EARPOP

SUBSATELLITE SPACECRAFT DESCRIPTION



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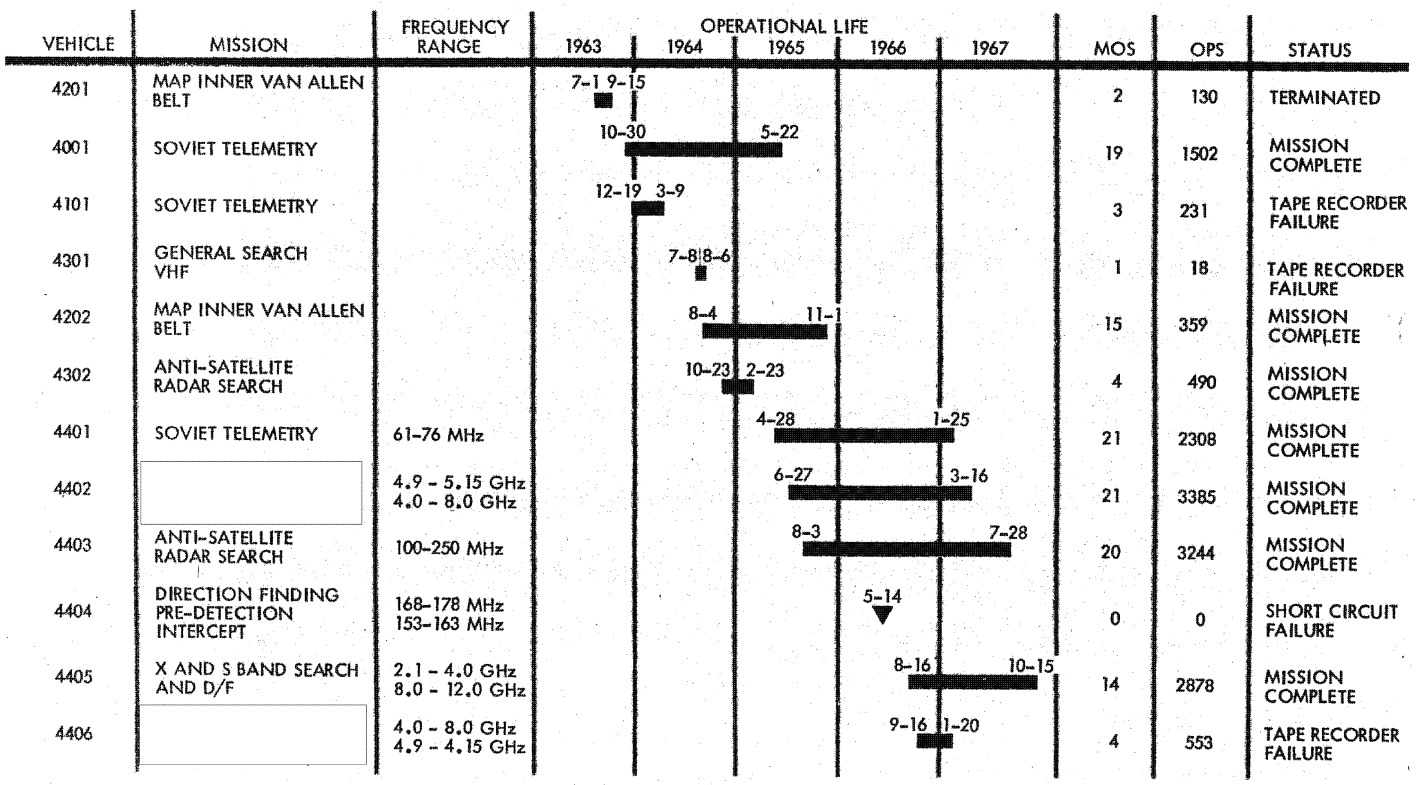
PROJECT EARPOP

FLIGHT SUMMARY



VEHICLE	MISSION	FREQUENCY RANGE	MOS	OPS	STATUS
4201	MAP INNER VAN ALLEN BELT		2	130	TERMINATED
4001	SOVIET TELEMETRY		19	1502	MISSION COMPLETE
4101	SOVIET TELEMETRY		3	231	TAPE RECORDER FAILURE
4301	GENERAL SEARCH VHF		1	18	TAPE RECORDER FAILURE
4202	MAP INNER VAN ALLEN BELT		15	359	MISSION COMPLETE
4302	ANTI-SATELLITE RADAR SEARCH		4	490	MISSION COMPLETE
4401	SOVIET TELEMETRY	61-76 MHz	21	2308	MISSION COMPLETE
4402	[redacted]	4.9 - 5.15 GHz 4.0 - 8.0 GHz	21	3385	MISSION COMPLETE
4403	ANTI-SATELLITE RADAR SEARCH	100-250 MHz	20	3244	MISSION COMPLETE
4404	DIRECTION FINDING PRE-DETECTION INTERCEPT	168-178 MHz 153-163 MHz	0	0	SHORT CIRCUIT FAILURE
4405	X AND S BAND SEARCH AND D/F	2.1 - 4.0 GHz 8.0 - 12.0 GHz	14	2878	MISSION COMPLETE
4406	[redacted]	4.0 - 8.0 GHz 4.9 - 4.15 GHz	4	553	TAPE RECORDER FAILURE

25X1

25X1

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PROJECT EARPOP

FLIGHT SUMMARY

VEHICLE	MISSION	FREQUENCY RANGE	OPERATIONAL LIFE	MOS	OPS	STATUS
4408		4.9 -5.15 GHz 154-162 MHz	5-9 8-11	3	872	NO RESPONSE
4409	SOVIET TELEMETRY	60-62 164-166 60-67 180-182 70-72 239-241 75-77 MHz	6-16 10-22	16	2255	RE-ENTERED
4410	GENERAL SEARCH SOVIET ABM AND AES RADAR	250-2200 MHz	11-2 2-9	3	837	PAYLOAD FAILURE
4412	DIRECT SEARCH AND PRE-DETECTION ANAL OF ABM AES RADAR	0.1 - 4.0 GHz	1-24 4-10	15	1714	TAPE RECORDER FAILURE
4411	GENERAL SEARCH SOVIET ABM AND AES RADAR	2.1 - 4.0 GHz 1.0 - 2.0 GHz	3-14 3-7	12	3068	TAPE RECORDER FAILURE
4420	GENERAL SEARCH AND EOB	4.0 - 8.0 GHz 8.0 - 12.0 GHz	6-20 1-13	18	4645	RE-ENTERED
4413	GENERAL SEARCH SOVIET ABM AND AES RADAR	0.1 - 1.0 GHz	9-18 9-28	12	3327	RE-ENTERED
4418	DIRECT SEARCH AND PRE-DETECTION ANAL OF ABM AES RADAR	0.5 - 4.0 GHz	3-19 9-24	18	2656	DORMANT
4417	GENERAL SEARCH SOVIET ABM AND AES RADAR	2.1 - 4.0 GHz 1.0 - 2.0 GHz	5-1 2-16	10	2308	RE-ENTERED
4419	SOVIET TELEMETRY	61-76 MHz 145-248 MHz	9-22 5-16	20	3436	RE-ENTERED
4407	DIRECT SEARCH OF COMMUNICATIONS	60-70 MHz	9-30 8-17	11	1032	KILLED

25X1

PROJECT EARPOP

FLIGHT SUMMARY

VEHICLE	MISSION	FREQUENCY RANGE	OPERATIONAL LIFE	MOS	OPS	STATUS
4422	GENERAL SEARCH AND DIRECTED SEARCH – SOVIET ABM AND AES RADARS	50–4020 MHz	3–4 to 11–9	20	5355	RE-ENTERED
4421	GENERAL SEARCH AND EOB MISSION FOR PULSED RADARS	4000–8000 MHz 8000–12000 MHz	5–20 to 1973	32	4240	MISSION COMPLETE
4423	LOCATION AND TECHNICAL INTELLIGENCE TROPOSPHERIC SCATTER COMMUNICATION LINKS	450–1000 MHz	11–18 to 1974	42	12,607	CARETAKER
4427	MICROWAVE LOCATOR DETERMINE FREQUENCY FORMAT, BEAM DIRECTION	1.2 – 2.2 GHz 3.4 – 3.9 GHz	9–10 to 11–11	1	190	P/L FAILED
4424	ABMR DIRECTED SEARCH AND TECHNICAL INTELLIGENCE POLARIZATION AND POWER	151–165 MHz 387–526 MHz 860–960 MHz 1500–2500 MHz	1–20 to 1974	28	8451	OPERATIONAL
4425	GENERAL SEARCH AND EOB FOR PULSED AND CW RADARS	2000–12000 MHz	7–7 to 1974	22	5725	OPERATIONAL
4426	GENERAL SEARCH AND EOB PULSED AND CW RADARS	2000–12000 MHz	11–10 to 1974	5	1665	OPERATIONAL
4428	LOCATION AND TECHNICAL INTELLIGENCE TROPOSPHERIC SCATTER COMMUNICATION LINKS	450–1000 MHz	4–10 to 1974	1	323	OPERATIONAL

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PROJECT EARPOP

TOPHAT II

MISSION
GENERAL SEARCH AND LOCATION OF TROSPOSPHERIC SCATTER COMMUNICATION LINKS

FREQUENCY RANGE
450 TO 1000 MHz

PHYSICAL CHARACTERISTICS
WEIGHT: 378 POUNDS

ANTENNAS: 2 SETS OF EXPANDABLE OMNI UNITS
3 TELEMETRY AND COMMAND

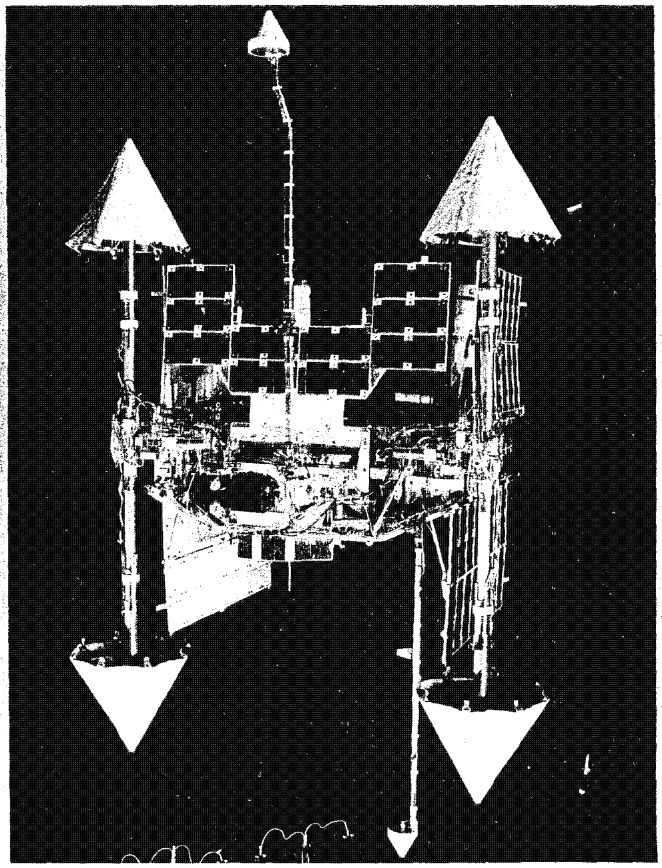
INCENTIVE LIFE
18 MONTHS

ORBITAL ALTITUDE
267 X 290 NM (NEAR CIRCULAR)

Handle Via BYEMAN

PROJECT EARPOP

TOPHAT II



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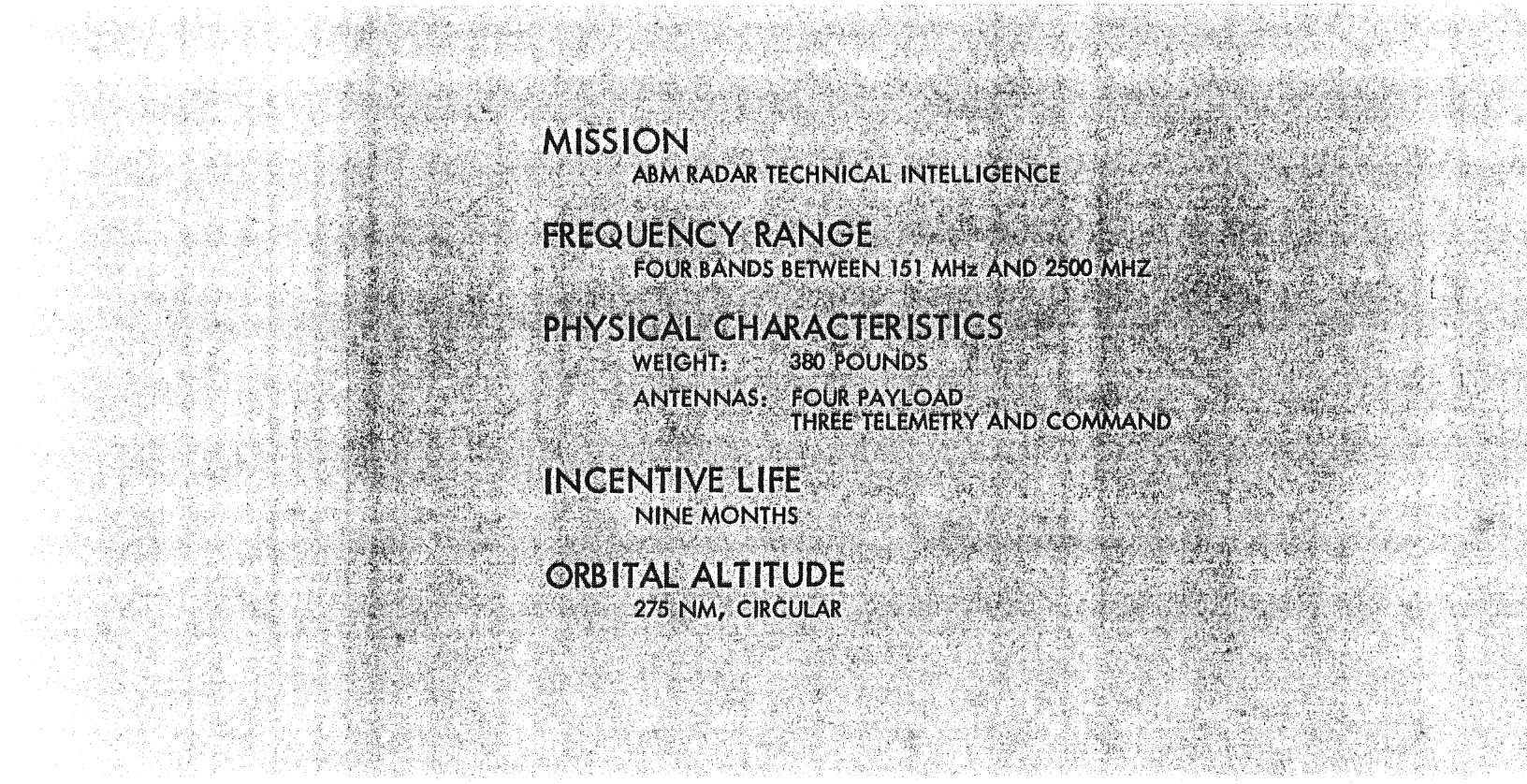
BYE: 17024-74

PROJECT EARPOP

MABELI I



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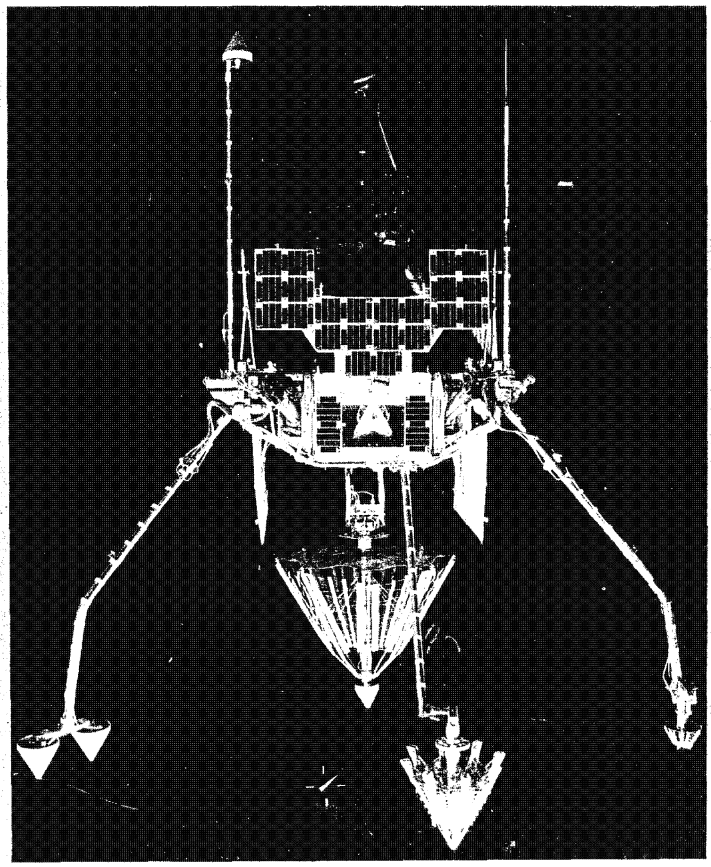
PROJECT EARPOP

MABELI I



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PROJECT EARPOP

URSALA I & URSALA II

MISSION

GENERAL SEARCH AND ELECTRONIC ORDER OF BATTLE FOR PULSED AND CW EMITTERS

FREQUENCY RANGE

2 TO 12 GHz

PHYSICAL CHARACTERISTICS

WEIGHT: 393 POUNDS

ANTENNAS: 2 PAYLOAD DISHES
2 PAIR OMNI INHIBITS
3 TELEMETRY AND COMMAND

INCENTIVE LIFE

9 MONTHS

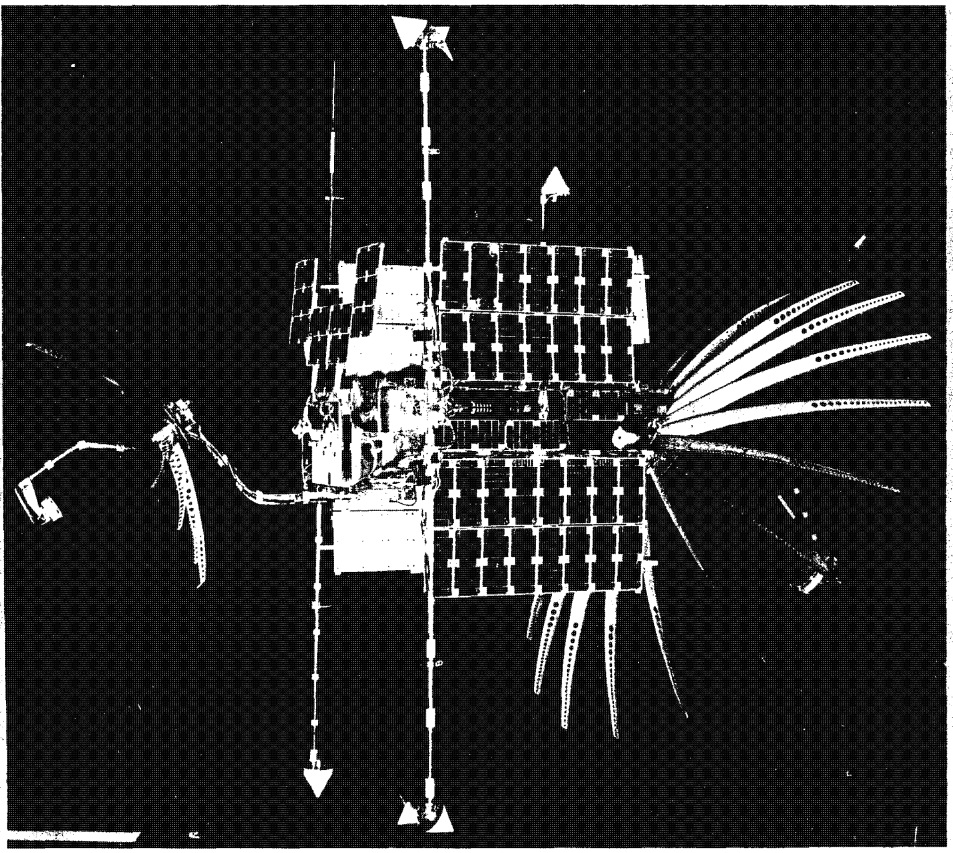
ORBITAL ALTITUDE

275 NM, CIRCULAR

Handle Via BYEMAN

PROJECT EARPOP

URSALA I & URSALA II



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PROJECT EARPOP

URSALA III &URSALA IV

MISSION
GENERAL SEARCH AND ELECTRONIC ORDER OF BATTLE
FOR PULSED AND CW EMITTERS

FREQUENCY RANGE
2 TO 12 GHz

PHYSICAL CHARACTERISTICS
WEIGHT: 570 POUNDS

ANTENNAS: 2 PAYLOAD DISHES
2 PAIR OMNI INHIBITS
2 TELEMETRY AND COMMAND

INCENTIVE LIFE
18 MONTHS

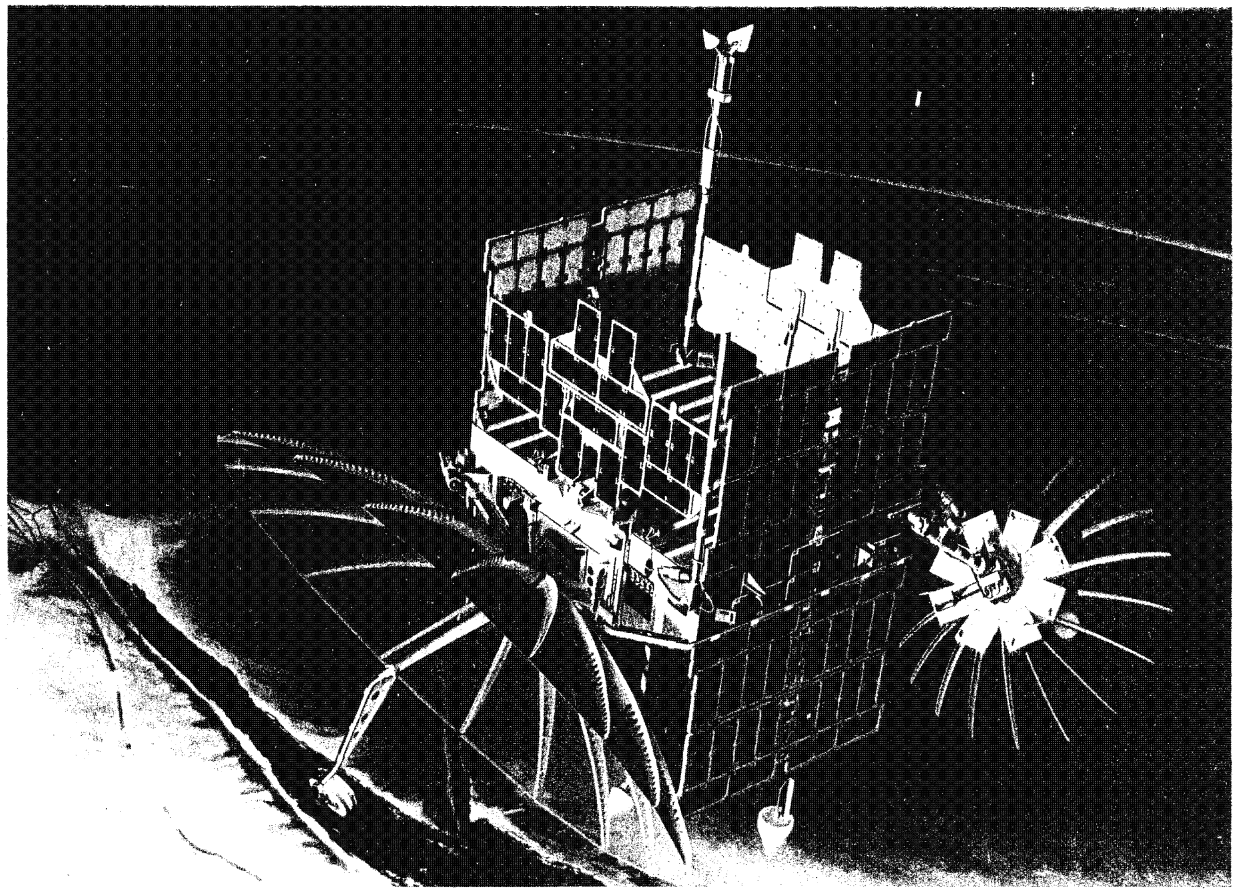
PLANNED LAUNCH
SEPTEMBER 1975 AND SEPTEMBER 1977

ORBITAL ALTITUDE
275 NM, CIRCULAR

Handle Via BYEMAN

PROJECT EARPOP

URSALA III & URSALA IV



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BYE: 17024-74

PROJECT EARPOP

RAQUEL I

MISSION

GENERAL SEARCH AND TECHNICAL INTELLIGENCE FOR PULSED AND CW RADARS

FREQUENCY RANGE

4 TO 18 GHz

PHYSICAL CHARACTERISTICS

WEIGHT: 565 POUNDS (FIRST OF NEW BLOCK OF INCREASED CAPABILITY, HIGH RELIABILITY SPACECRAFT)

ANTENNAS: 3 PAYLOAD DISHES
3 PAIR OMNI INHIBITS
2 TELEMETRY AND COMMAND

INCENTIVE LIFE

18 MONTHS

PLANNED LAUNCH

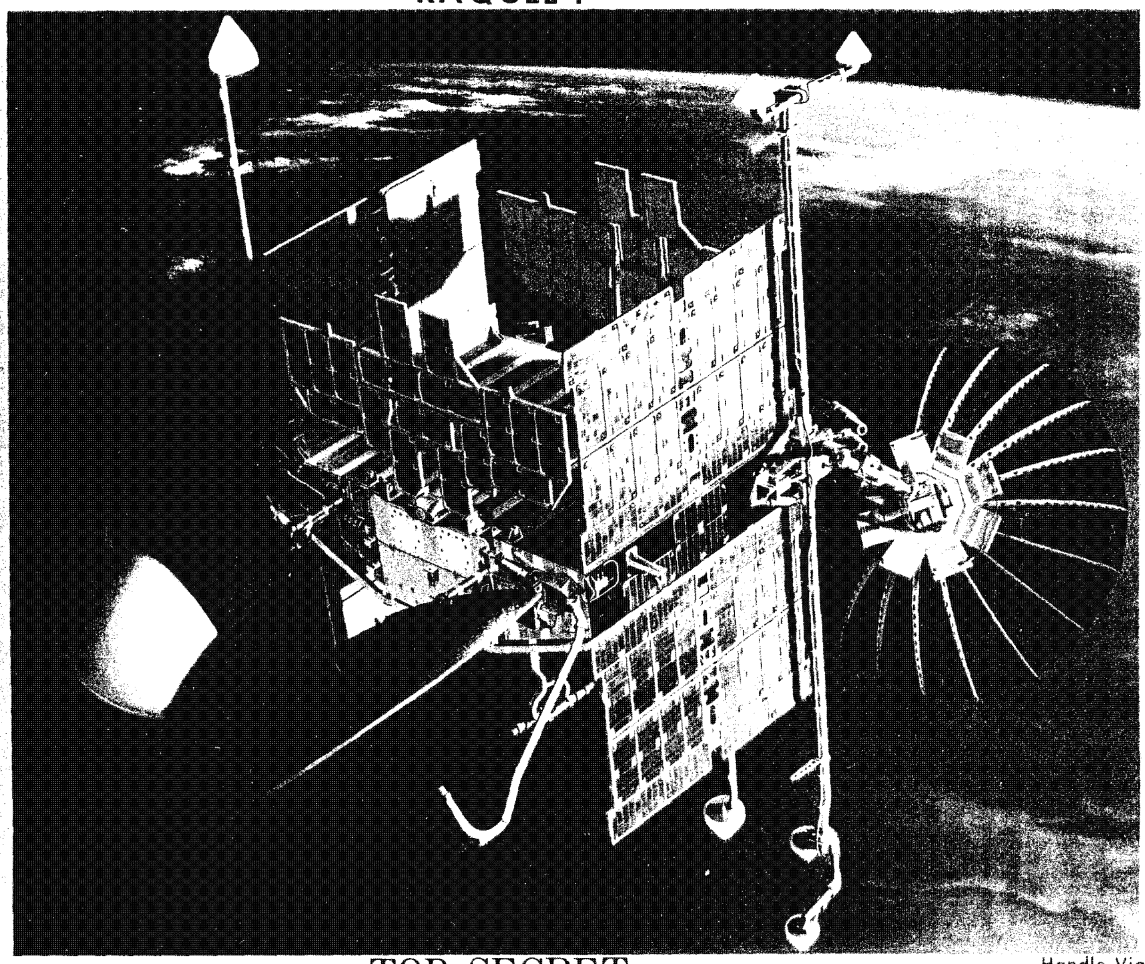
OCTOBER 1974

ORBITAL ALTITUDE

PLANNED 274 X 282 NM (NEAR CIRCULAR)

PROJECT EARPOP

RAQUEL I



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