

~~SECRET~~

VAULT NUMBER	CLASSIFIED CONTROL NUMBER	COPY
D19870	AS65-0000-00308	3

TITLE MOL MISSION POTENTIAL

AEROSPACE CORPORATION
P R E S E N T A T I O N

AUTHOR B.P. LEONARD, H. BERNSTEIN DATE JAN. 16, 1965

AUDIENCE DR. E. FUBILI, DR. H. BROWN, DR. B. MCMILLAN,
ET AL.

LOCATION WASHINGTON, D. C.

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CCC: 2120

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NOTE

NRO APPROVED FOR
RELEASE 1 JULY 2015

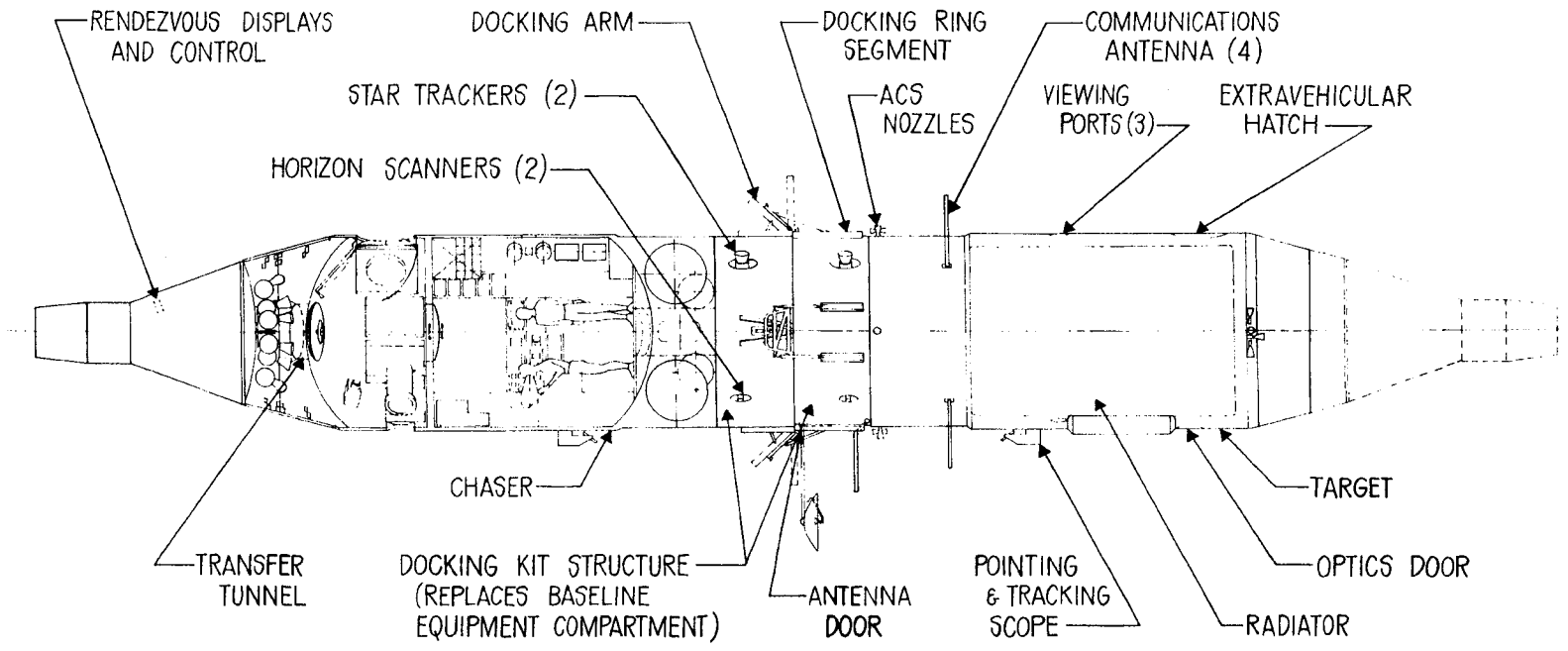
V19803

MOL

MISSION POTENTIAL

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BASELINE RENDEZVOUS CONFIGURATION GENERAL ARRANGEMENT




~~CONFIDENTIAL~~ EXPIRES 30 SEP 77
CLASSIFIED BY 3000
DECLASSIFIED BY 3000
DATE 09-12-2000

~~SECRET~~

MOL-40-Y18808-R-
AD 64 0000 03775 003

MISSIONS

- HIGH RESOLUTION SPOT PHOTOGRAPHY
- GEODESY (PRECISE TARGET LOCATION)

- 
- ELECTROMAGNETIC SIGNAL DETECTION AND ANALYSIS
 - REQUEST/OPPORTUNITY TARGETS (DIRECT VIEWING AND/OR MODERATE RESOLUTION PHOTOGRAPHY)
 - BROAD COVERAGE PHOTOGRAPHY
 - OCEAN SURVEILLANCE

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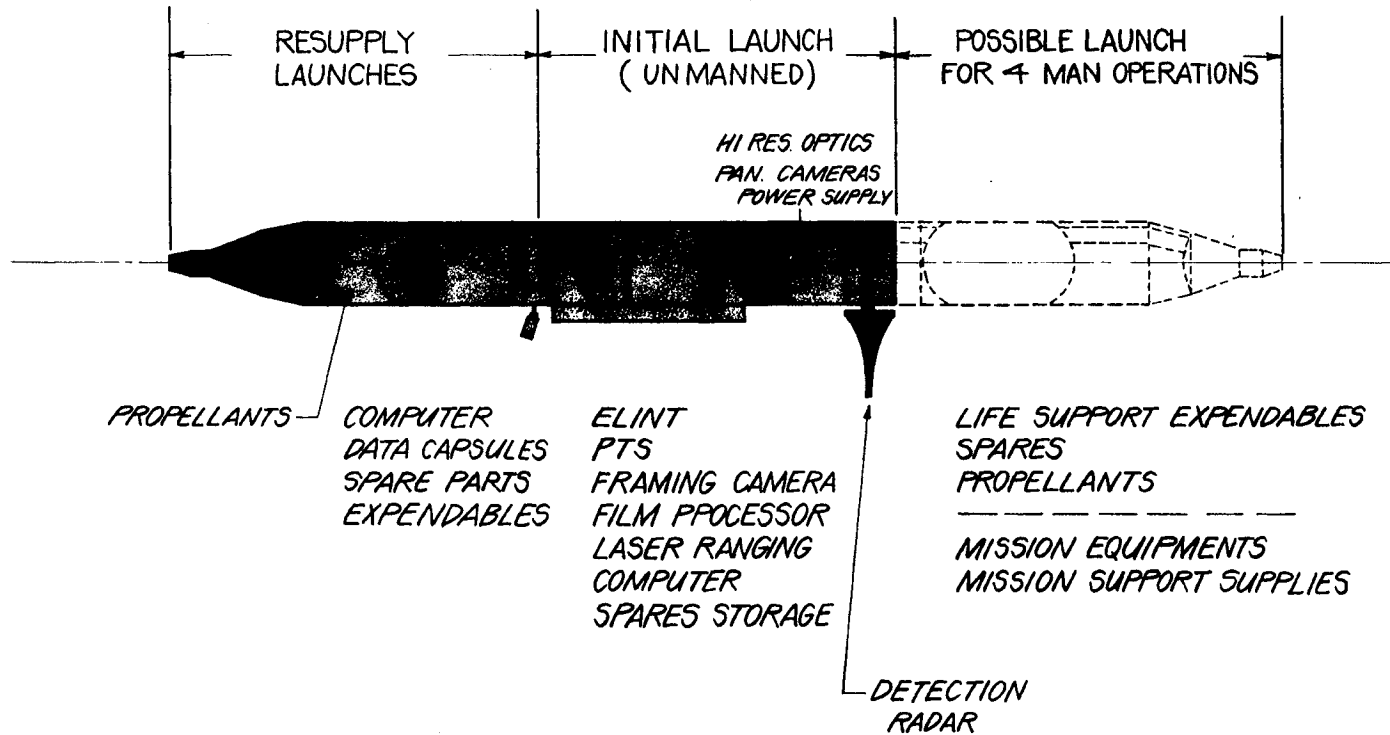
11 19 83

AEROSPACE CORPORATION



~~SECRET~~

VEHICLE CONFIGURATION



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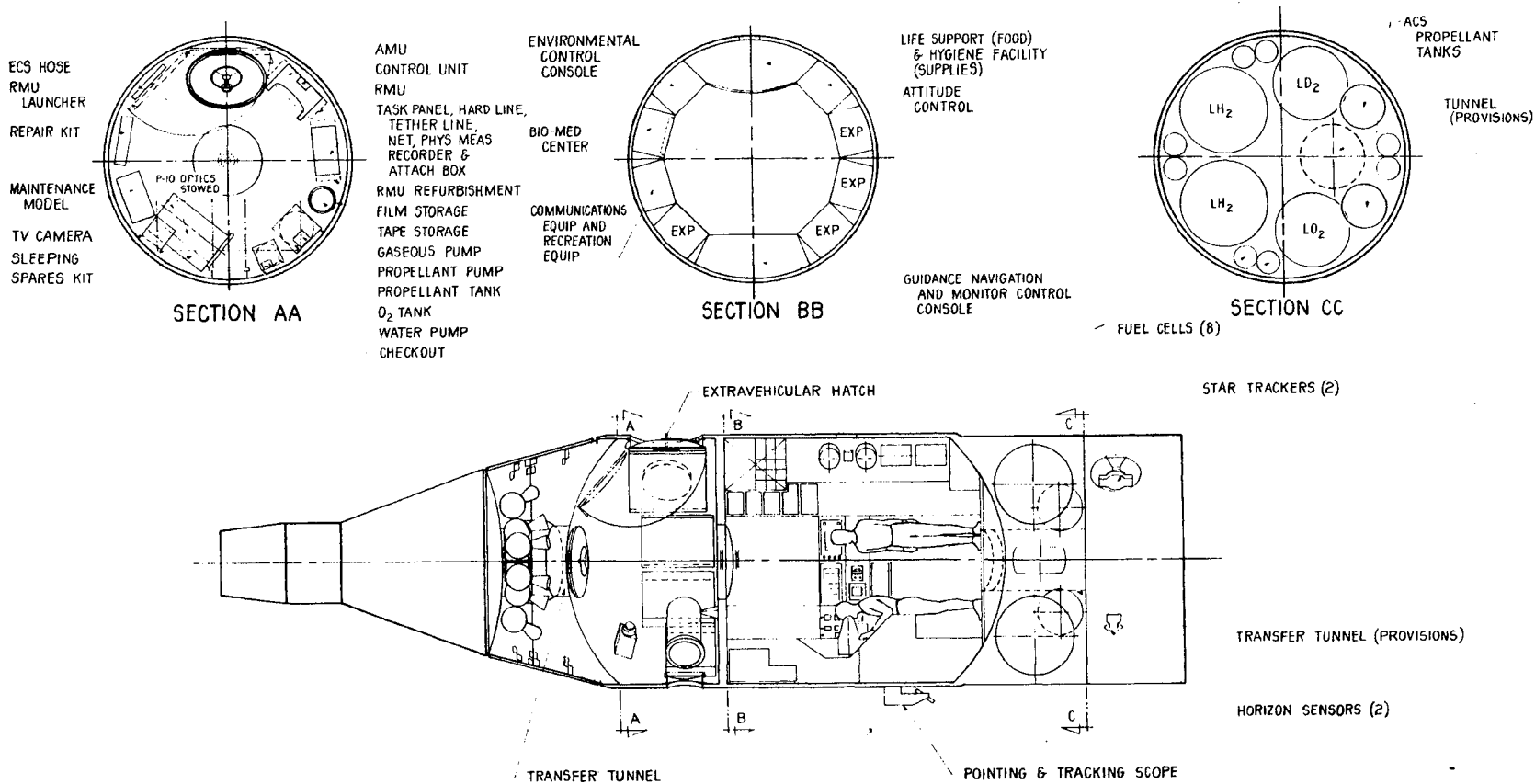
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LABORATORY VEHICLE INTERIOR ARRANGEMENT



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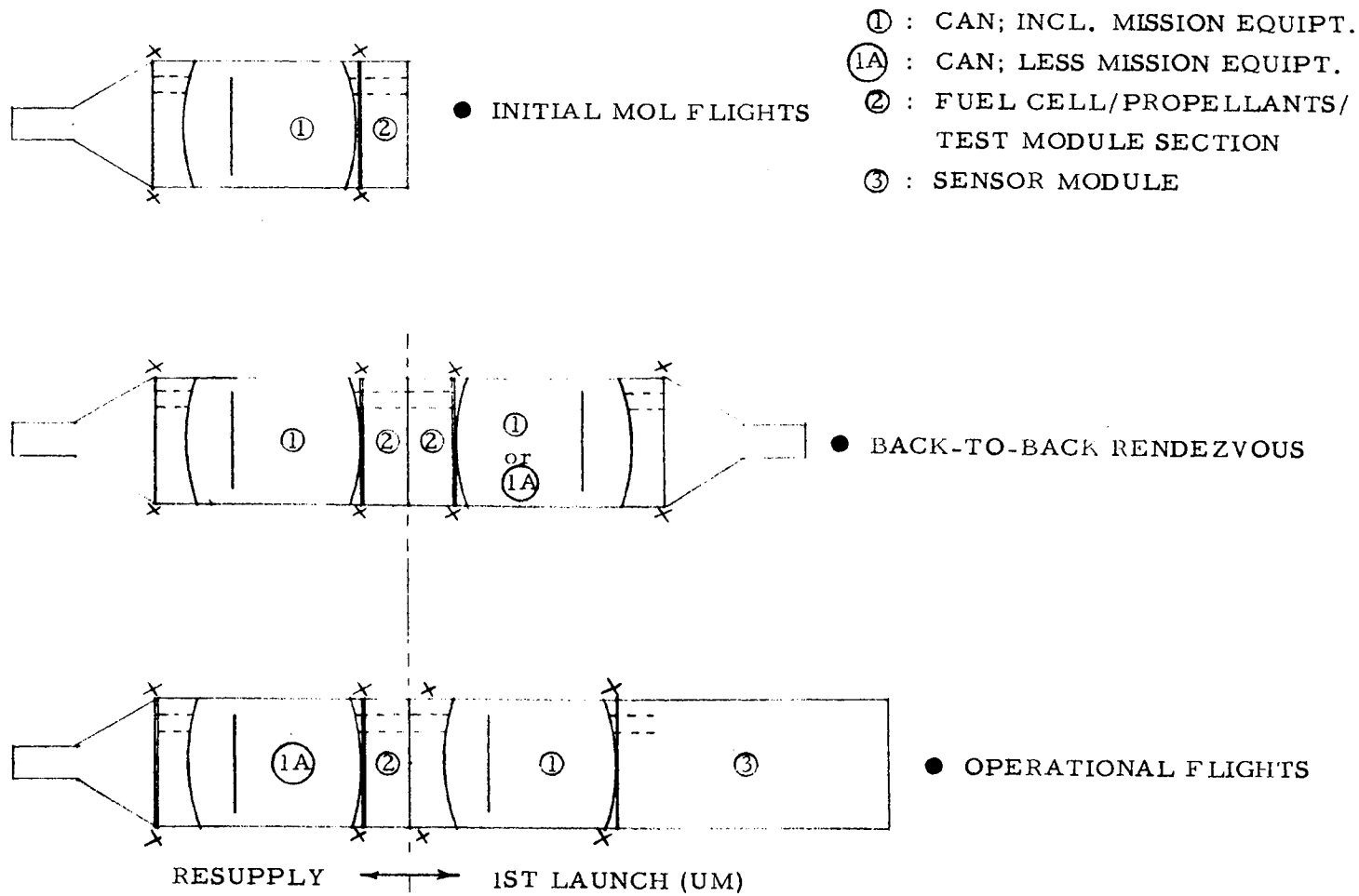
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AEROSPACE CORPORATION 

20

MODULAR CONCEPT



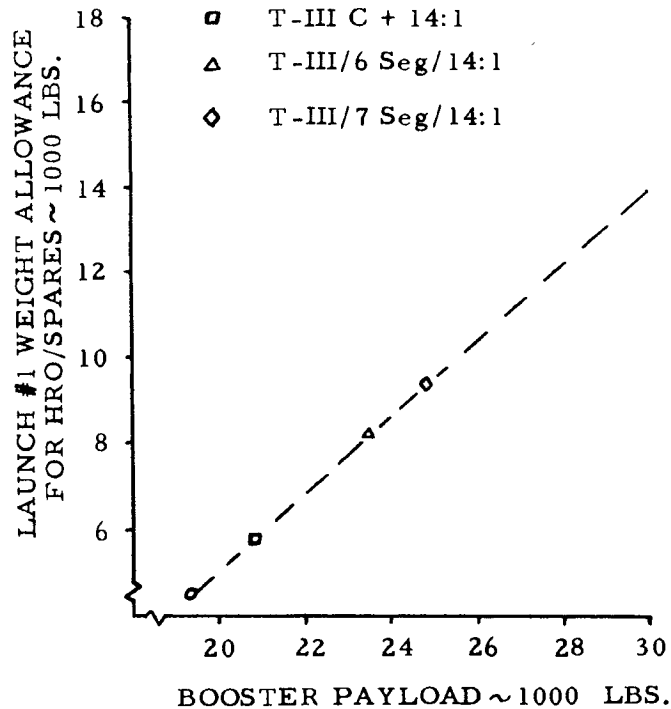
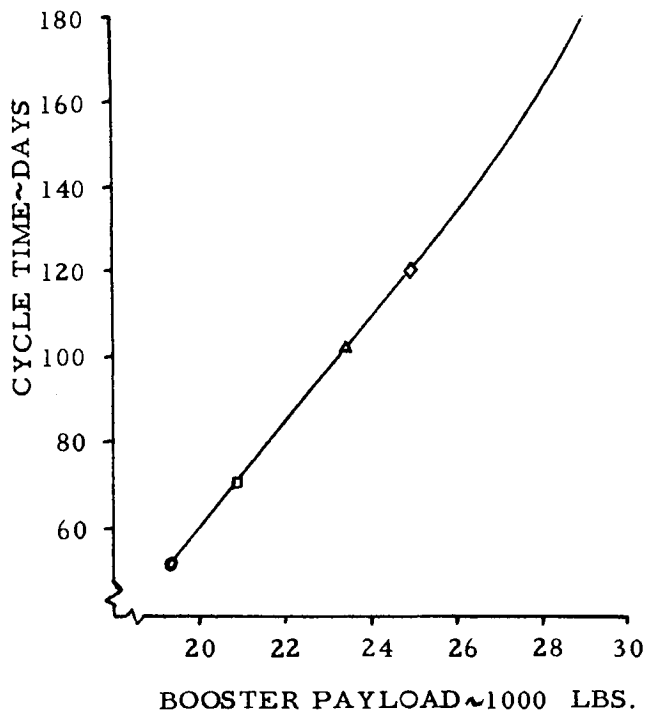
V19813

WTR PERFORMANCE

GROWING T-III
RADIOISOTOPE POWER (3 KW)

h = 125 N. M.
i = 83° Retrograde

- T-III C
- T-III C + 14:1
- △ T-III/6 Seg/14:1
- ◇ T-III/7 Seg/14:1



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V19827

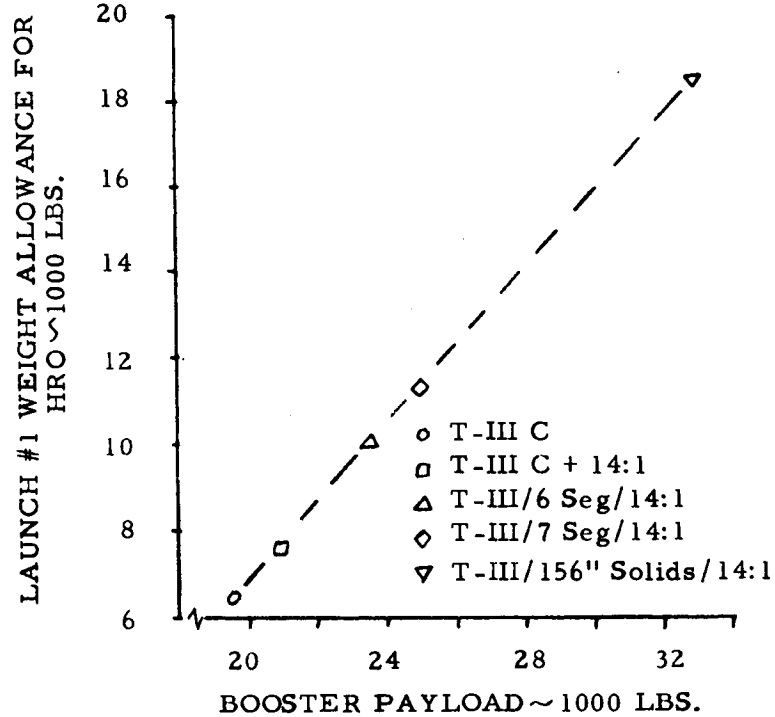
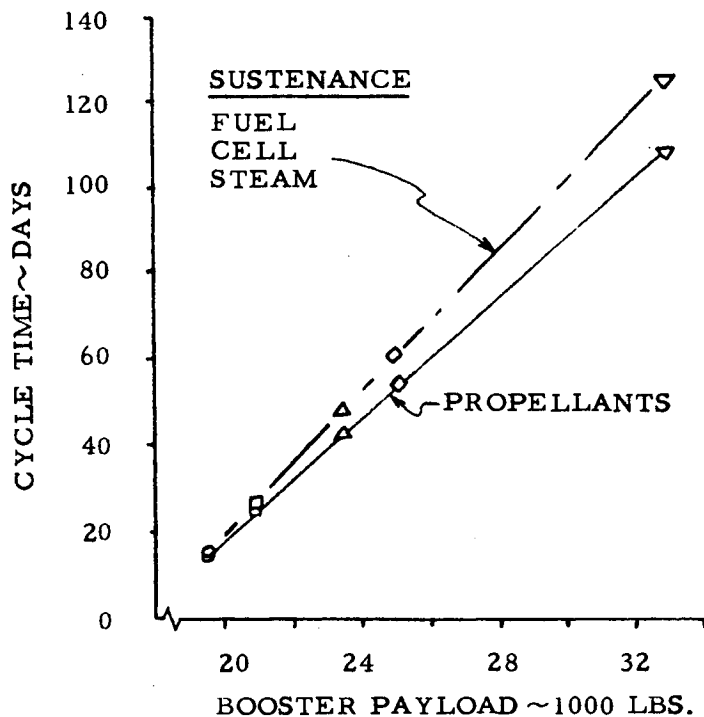
WTR PERFORMANCE

GROWING T-III

FUEL CELLS (2.5 KW)

h = 125 N. M.

i = 83° RETROGRADE

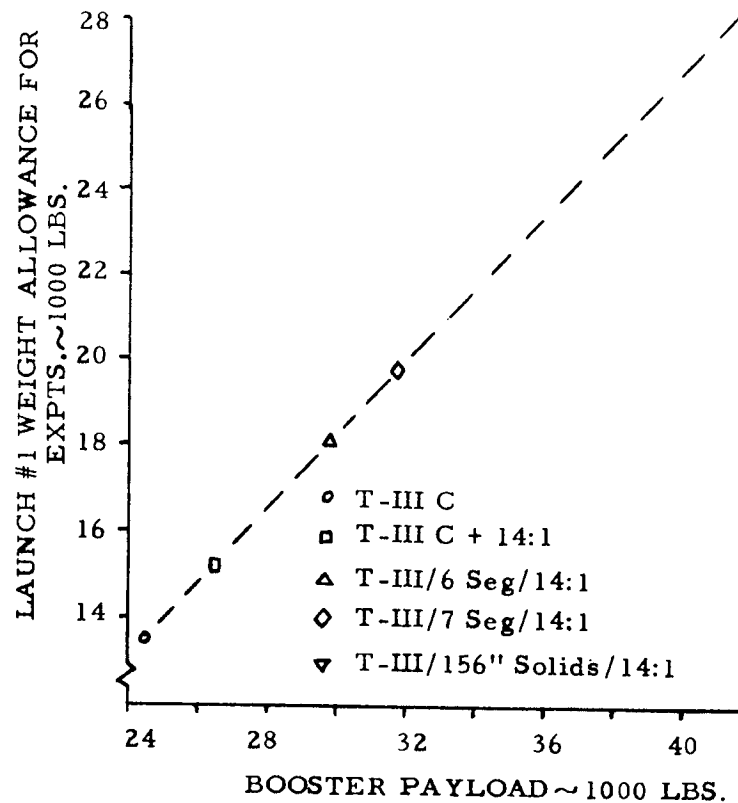
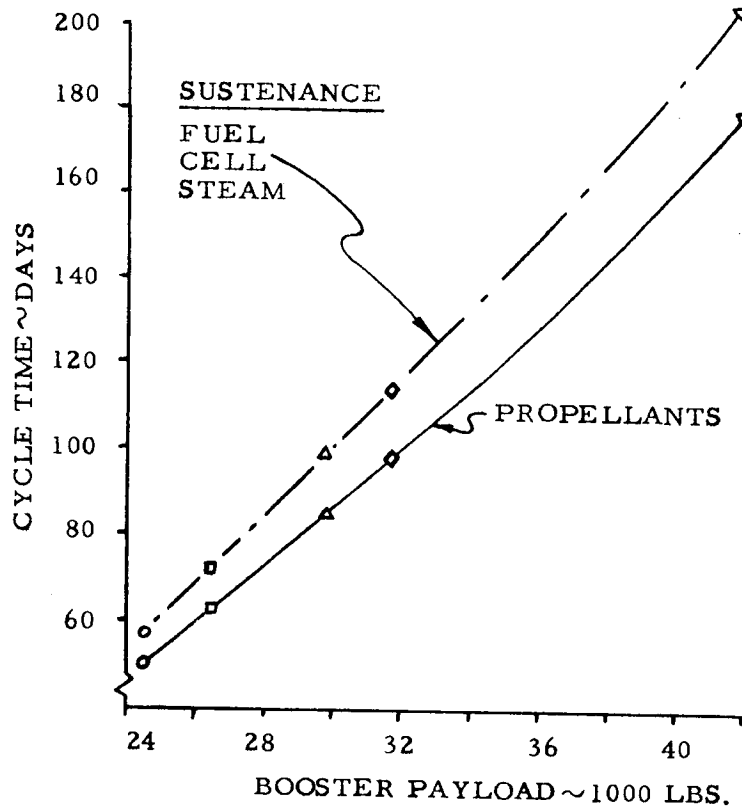


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ETR PERFORMANCE
GROWING T-III
FUEL CELLS (2.5 KW)

h = 125 N. M.
i = 32.5°

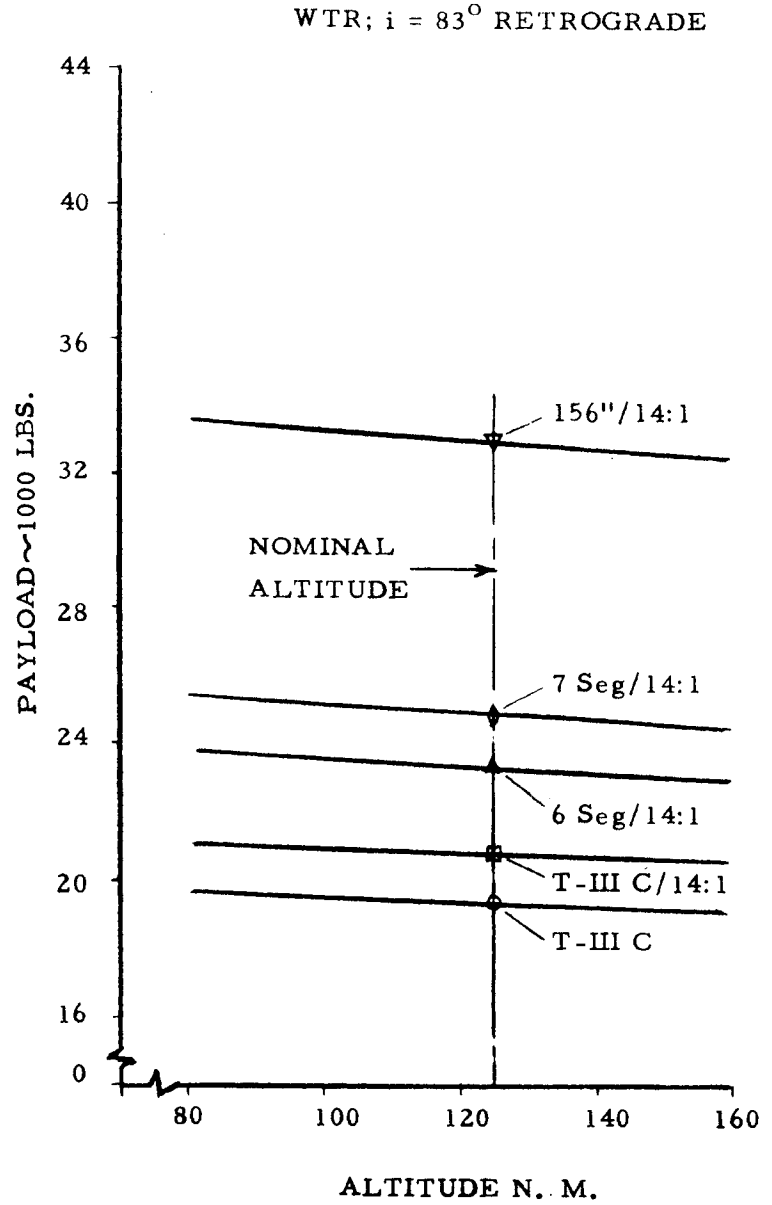
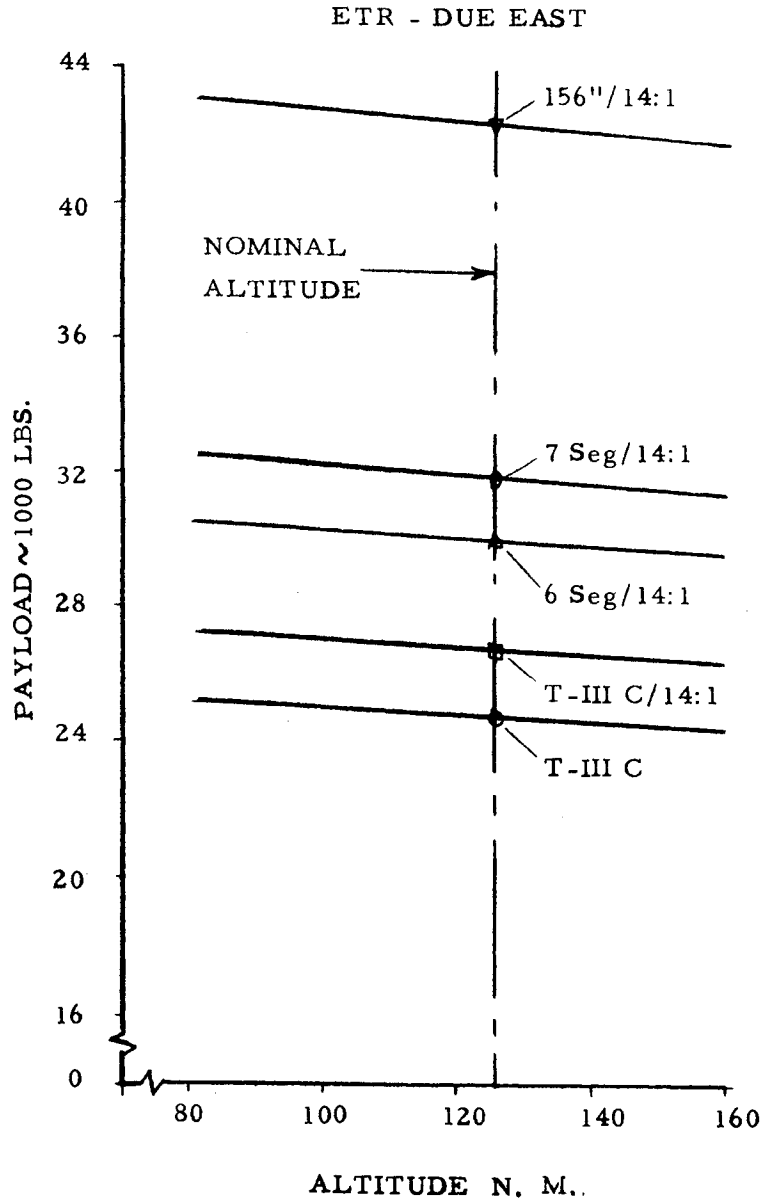


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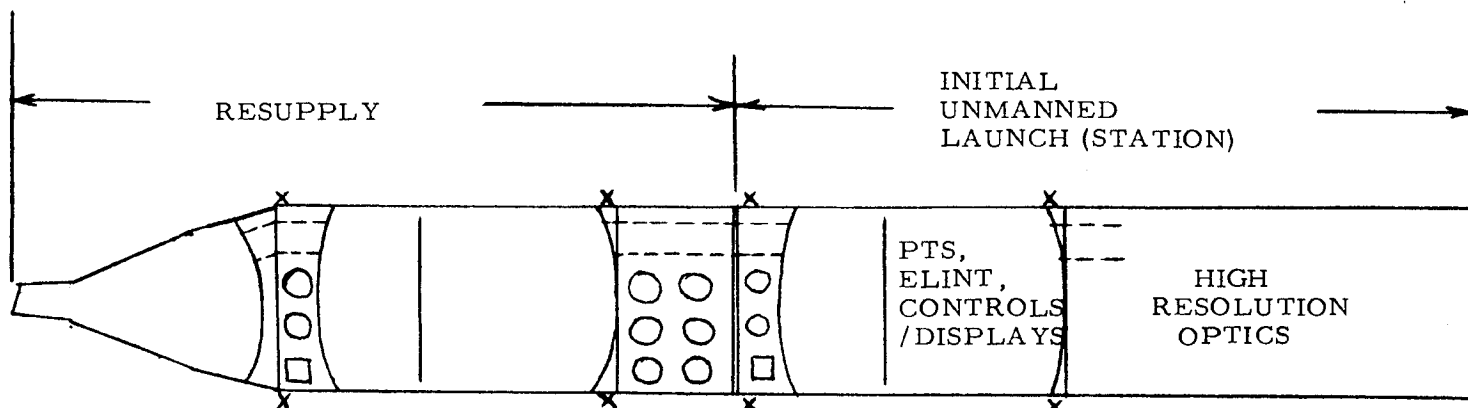
DATE 10-10-80 BY SP-6/STW/STW
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DOD OR 5200-108

BOOSTER PERFORMANCE



V19809
AD65-0000-00259-003

OPERATIONAL CONFIGURATION CONCEPT



- ATTITUDE CONTROL/SUSTENANCE
- POWER (FUEL CELLS)
- LIFE SUPPORT (ECS + EXPENDABLES)
- MISSION SUPPLIES (E. G. FILM)
- DATA CAPSULES
- REACTANTS & PROPELLANTS

← OR →

- ATTITUDE CONTROL/SUSTENANCE
- (RADIOISOTOPES)
- LIFE SUPPORT (ECS)
- SENSORS
- INFORMATION SUBSYSTEM
- CONTROL/DISPLAYS


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V19805
AD65-0000-00255-003

SUMMARY OF MISSIONS/SENSORS

- | | | |
|---|---|---|
| <input type="radio"/> HIGH RESOLUTION PHOTOGRAPHY | } | POINTING & TRACKING SCOPE, |
| <input type="radio"/> GEODESY | | HIGH RESOLUTION OPTICS, |
| <input type="radio"/>  | | STAR TRACKERS, INFRARED, |
| <input type="radio"/> DIRECT VIEWING | | EXPERIMENT INFORMATION SUBSYSTEM |
| <input type="radio"/> THERMAL MAPPING | | |
| <input type="radio"/> ELINT (T. I. & E. O. B.) | | ELECTROMAGNETIC SIGNAL DETECTION
EQUIPMENT |
| ----- | | |
| <input type="radio"/> MODERATE RESOLUTION PHOTOGRAPHY | | FRAMING CAMERA |
| <input type="radio"/> BROAD COVERAGE PHOTOGRAPHY | | PANNING CAMERAS |
| <input type="radio"/> OCEAN SURVEILLANCE | | RADAR |

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V19804
AD65-0000-00254 - 003

WEIGHT BREAKDOWN

(2-MAN CREW: T-III/W/156" SOLIDS: H = 125 N MI: I = 83° RETROGRADE)

	<u>LAUNCH #1</u>	<u>LAUNCH #2</u> (95 Day Resupply)
<u>GEMINI B</u>	—	(6,600)
<u>NOSE FAIRING</u>	(40)	
<u>STATION</u>	(10,970)	(5,785)
Structure	4,350	2,800
Attitude Control/Maneuver	690	760
Power Supply (5 KW Sr 90)	3,450	300
Commun., Data Mngmt. Instrumentation	720	70
Environment. Control/Life Support (w/o tanks)	690	690
Crew Accommodations & Personal Gear	350	480
Star Trackers Installation	110	0
Rend. & Docking Prov. (less propellants)	610	725
<u>CONTINGENCY</u>	(4,260)	(2,120)
<u>MISSION EQUIPMENT</u>	(13,620)	(400)
Sensors		
(High Res., Panning & Framing Optics)	[10,110]	—
(Other Sensors: PTS, ELINT, RADAR, LASER)	2,960	—
Computer & Signal Conditioning	400	400
Film Processing	150	—
<u>MISSION SUPPORT SUPPLIES</u>	—	(2,800)
Film, Data Capsules, System		
<u>SPARES</u>	(3,000)	(1,160)
<u>LIFE SUPPORT SUPPLIES</u>	—	(2,850)
<u>PROPELLANTS & TANKS</u>	(1,110)	(10,305)
Rendezvous (in transtage)	0	2,300
Stabilization	30	180
Orbit Sustenance	380	1,600
Maneuvering (600 fps)	0	4,800
Tanks	700	1,425
TOTAL	33,000	32,060

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