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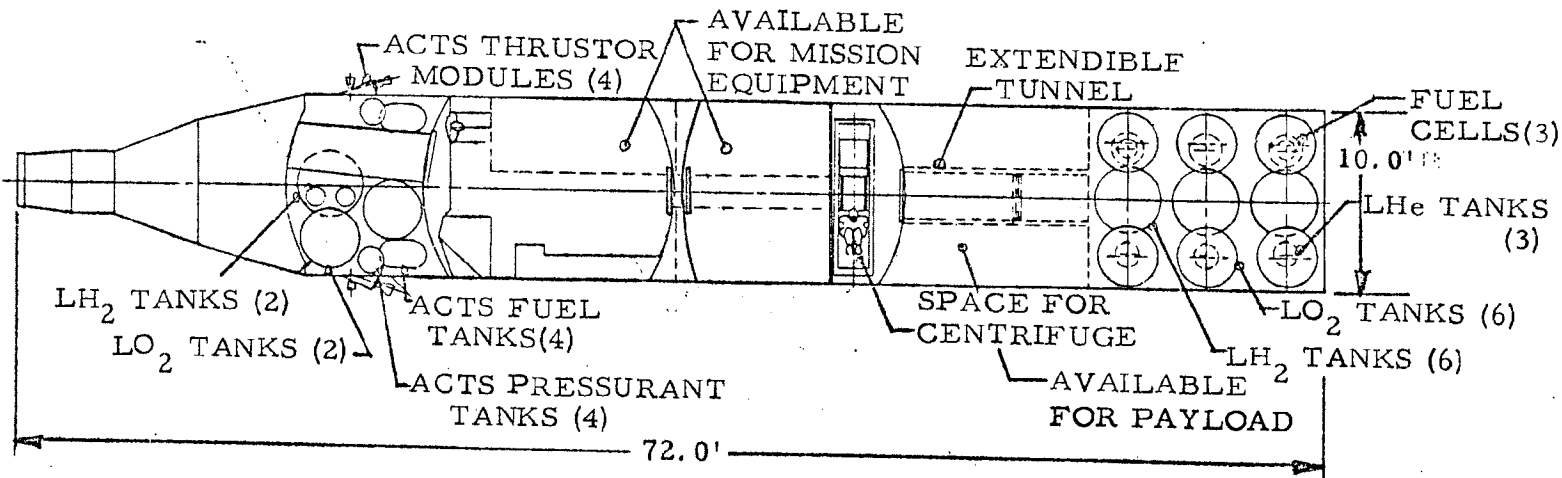
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ETR

INTEGRAL LAUNCH DUAL COMPARTMENT LABORATORY

(CONFIGURATION AND PERFORMANCE)

o CONFIGURATION



o PERFORMANCE

| | |
|---|-----------------------|
| TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT) | 2,000 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR CREW | 1,200 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | 600 FT ³ |
| AVAILABLE UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | ~ 700 FT ³ |
| EXPERIMENT PAYLOAD CAPACITY (ETR, i = 28.5°, 180 N M CIR) | ~ 5,500 LB |
| (WTR, i = 80°, 180 N M CIR) | ~ 1,000 LB |
| ELECTRICAL POWER (AVERAGE) | 1,650 WATTS* |
| MISSION DURATION | 90 DAYS |

*INCLUDES 200 WATTS FOR EXPERIMENTS

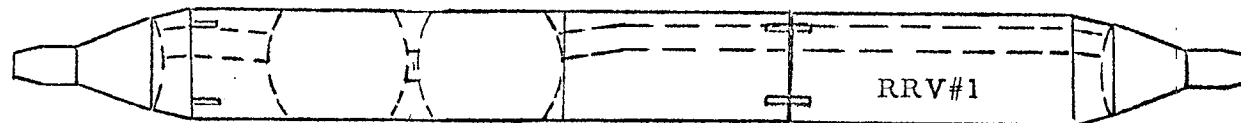
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~~SECRET~~ SPECIAL HANDLING
4 MAN DUAL COMPARTMENT LABORATORY

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● INITIAL LAUNCH CONFIGURATION (2 MAN OPS)



● FIRST RENDEZVOUS RESUPPLY (4 MAN OPS)



● ON-ORBIT CONFIGURATION (4 MAN OPS)

RRV FUNCTIONS

- ACTS PROPULSION
- PRIME ELECTRICAL POWER
- LIFE SUPPORT EXPENDABLES
- EXPERIMENTS
- SPARE EQUIPMENT

LABORATORY FUNCTIONS

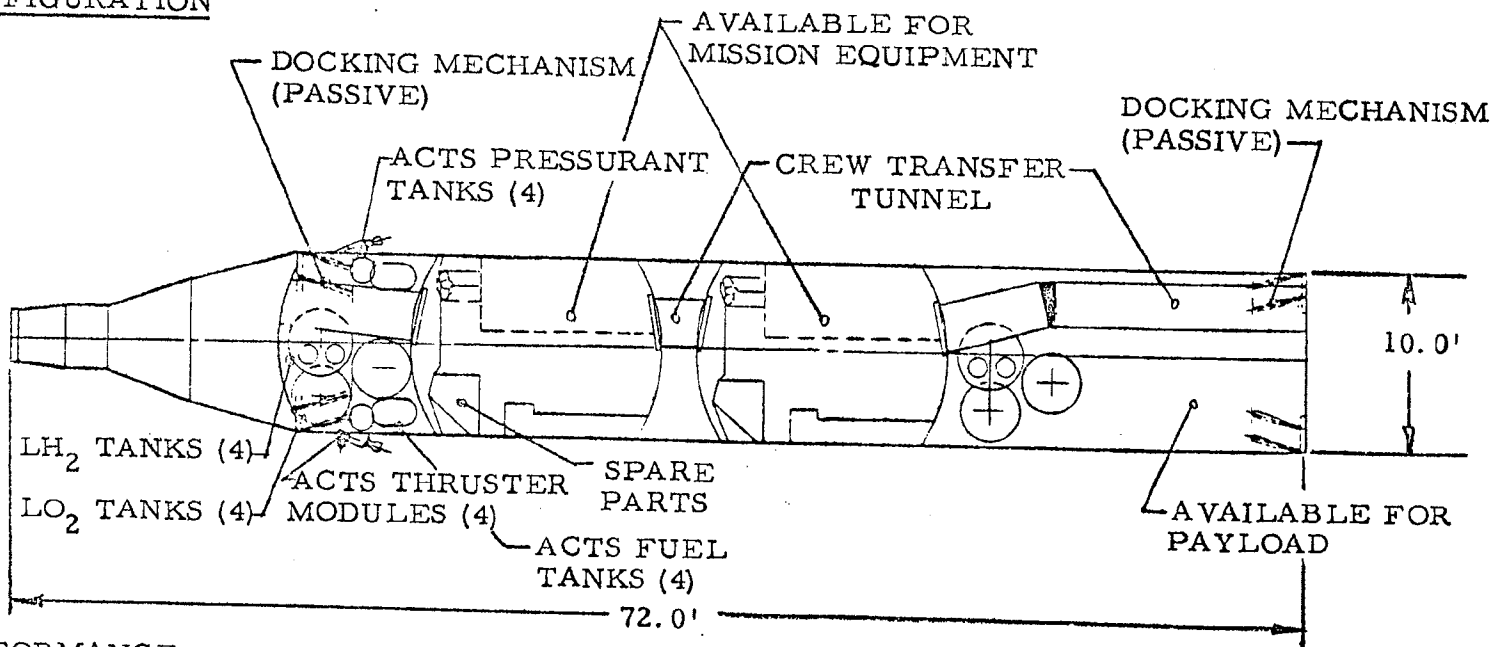
- LIFE SUPPORT/ENVIRONMENTAL CONTROL
- ACTS - REFERENCE
- COMMUNICATIONS/DATA
- BIO-MEDICAL EQUIPMENT
- EXPERIMENTS

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4 MAN DUAL COMPARTMENT LABORATORY

(CONFIGURATION AND PERFORMANCE)

o CONFIGURATION



o PERFORMANCE

| | |
|---|-----------------------|
| TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT) | 2,000 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR CREW | 1,200 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | 600 FT ³ |
| AVAILABLE UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | 950 FT ³ |
| EXPERIMENT PAYLOAD CAPACITY (WTR, i = 80°, 180 N M CIR) | 5,700 LBS |
| ELECTRICAL POWER (AVERAGE) | 2,000 WATTS* |
| RESUPPLY CYCLE | 60 DAYS |

* 200 WATTS AVAILABLE FOR EXPERIMENTS

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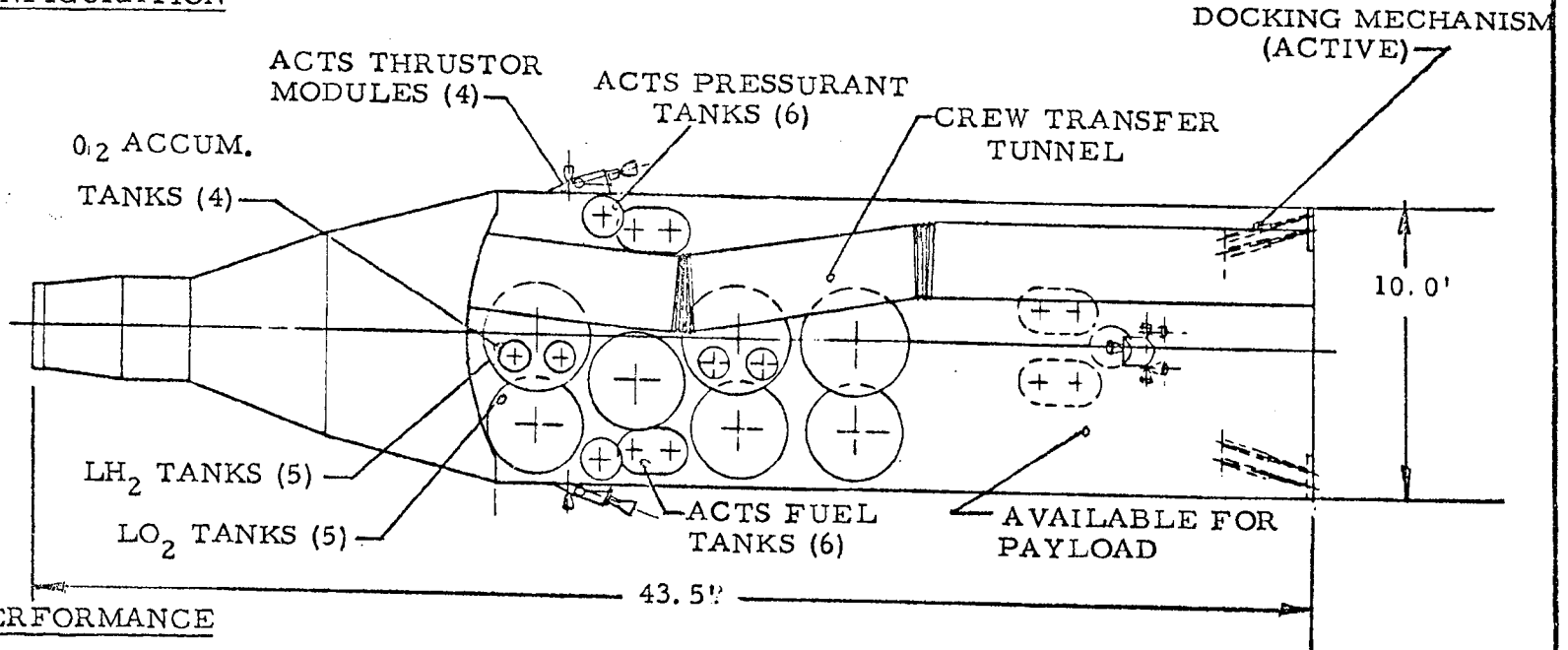
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RENDEZVOUS RESUPPLY VEHICLE

(CONFIGURATION AND PERFORMANCE)

o CONFIGURATION



o PERFORMANCE

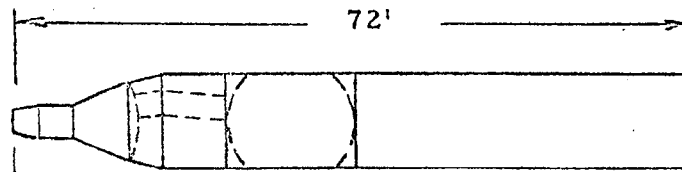
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|--|-----------------------|
| UNPRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | 2,000 FT ³ |
| EXPERIMENT PAYLOAD CAPACITY (WTR, i = 80°, 180° N M CIR) | 10,000 LBS |
| ELECTRICAL POWER (AVERAGE) | 2,000 WATTS* |
| RESUPPLY CYCLE (TO SUPPLY 4 MAN CREW) | 60 DAYS |

*200 WATTS AVAILABLE FOR EXPERIMENTS

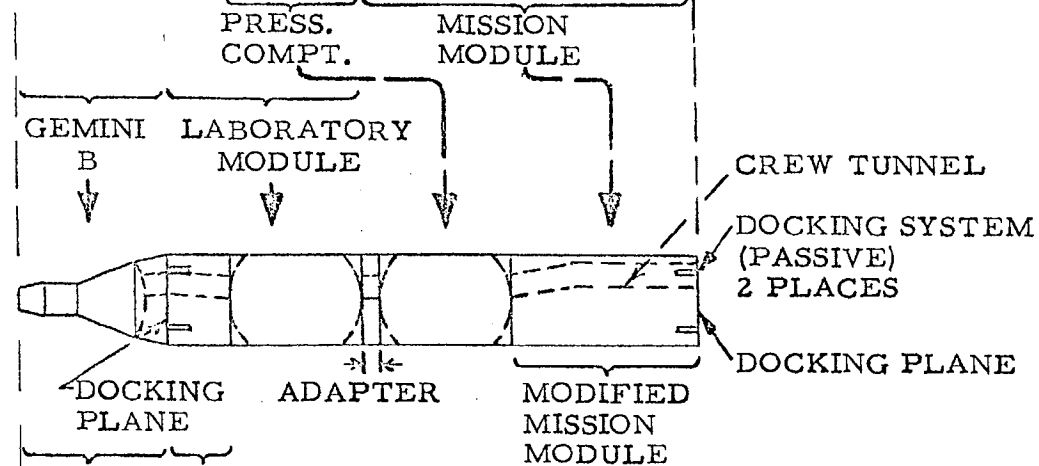
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UTILIZATION OF MOL HARDWARE FOR
4 MAN DUAL COMPARTMENT LABORATORY CONFIGURATION

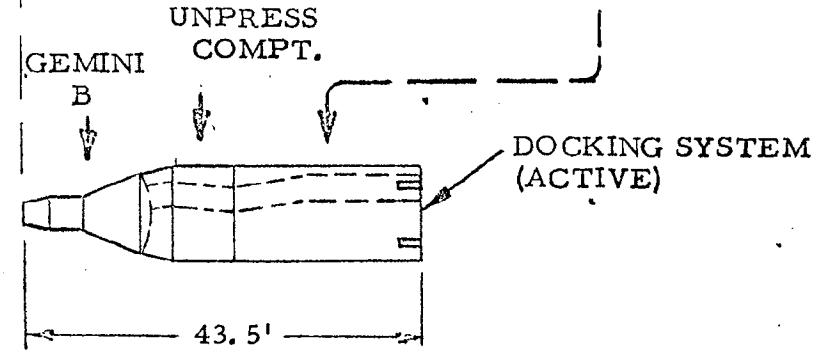
○ MOL BASELINE VEHICLE



○ RENDEZVOUS INITIAL VEHICLE (RIV)

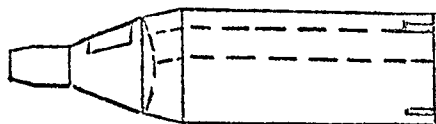


○ RENDEZVOUS RESUPPLY VEHICLE (RRV)

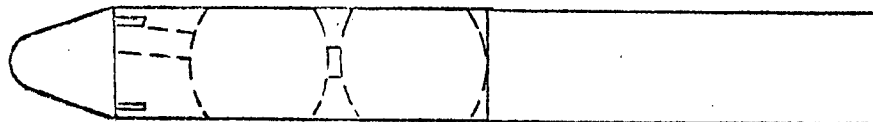


2 MAN DUAL COMPARTMENT LABORATORY CONFIGURATION

(COMBINED MISSION)

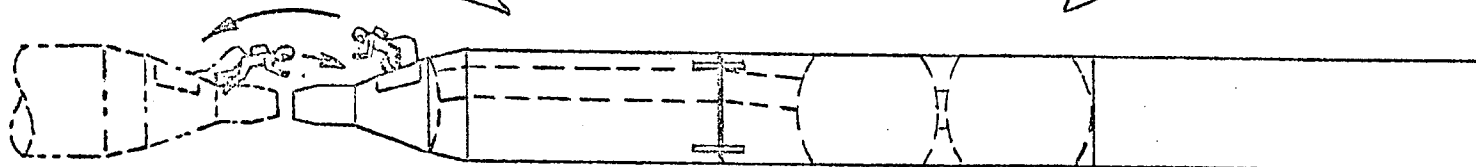


RENDEZVOUS
RESUPPLY VEHICLE
(RRV)



INITIAL LAUNCH RENDEZVOUS
LABORATORY VEHICLE (RIV)

POSSIBLE CREW
TRANSFER FROM
SUBSEQUENT RRV'S



RENDEZVOUS ORBITING VEHICLE
(ROV)

RRV FUNCTIONS

- ⊙ CREW TRANSPORT VEHICLE
- ⊙ ACTS PROPULSION
- ⊙ PRIME POWER
- ⊙ LIFE SUPPORT EXPENDABLES
- ⊙ DATA RETURN SYSTEM
- ⊙ SUBSYSTEM SPARES/REPLACEMENTS

RIV FUNCTIONS

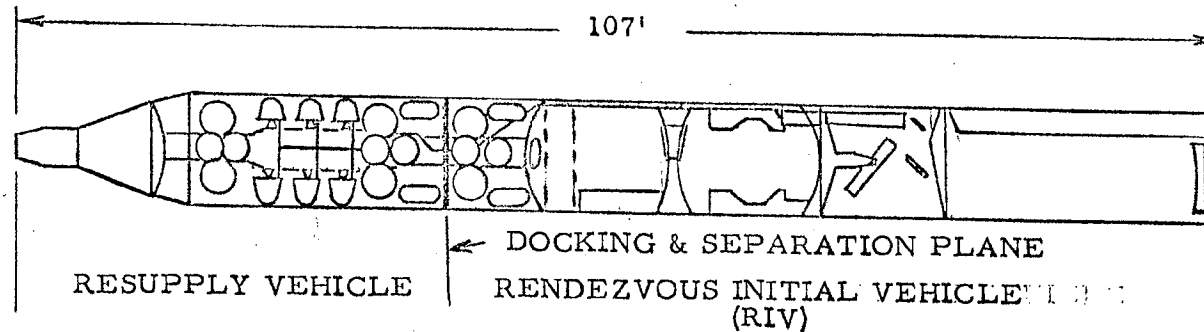
- ⊙ LIFE SUPPORT SYSTEM
- ⊙ ATTITUDE CONTROL REF. ELECTRONICS
- ⊙ COMMUNICATIONS AND DATA HANDLING
- ⊙ ENVIRONMENTAL CONTROL
- ⊙ PERFORMANCE DATA

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2 MAN DUAL COMPARTMENT LABORATORY
CONFIGURATION AND PERFORMANCE SUMMARY
(COMBINED MISSION)

● CONFIGURATION



● PERFORMANCE DATA

| | |
|--|-----------------------|
| TOTAL PRESSURIZED VOLUME (SHIRT SLEEVE ENVIRONMENT) | 2,060 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR CREW | 1,200 FT ³ |
| AVAILABLE PRESSURIZED VOLUME FOR EXPERIMENT EQUIPMENT | 210 FT ³ |
| R. I. V. EXP. PAYLOAD CAPACITY ($i = 96.4^\circ$, 80/180 NM) | 3,000 LBS |
| ELECTRICAL POWER (AVERAGE) | 1,950 WATTS |
| RESUPPLY CYCLE | 60 DAYS |

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APPLICATION OF BASELINE COMPONENTS FOR 2 MAN
DUAL COMPARTMENT LABORATORY
(COMBINED MISSION)

AUTOMATIC MODE VEHICLE (AMV)

