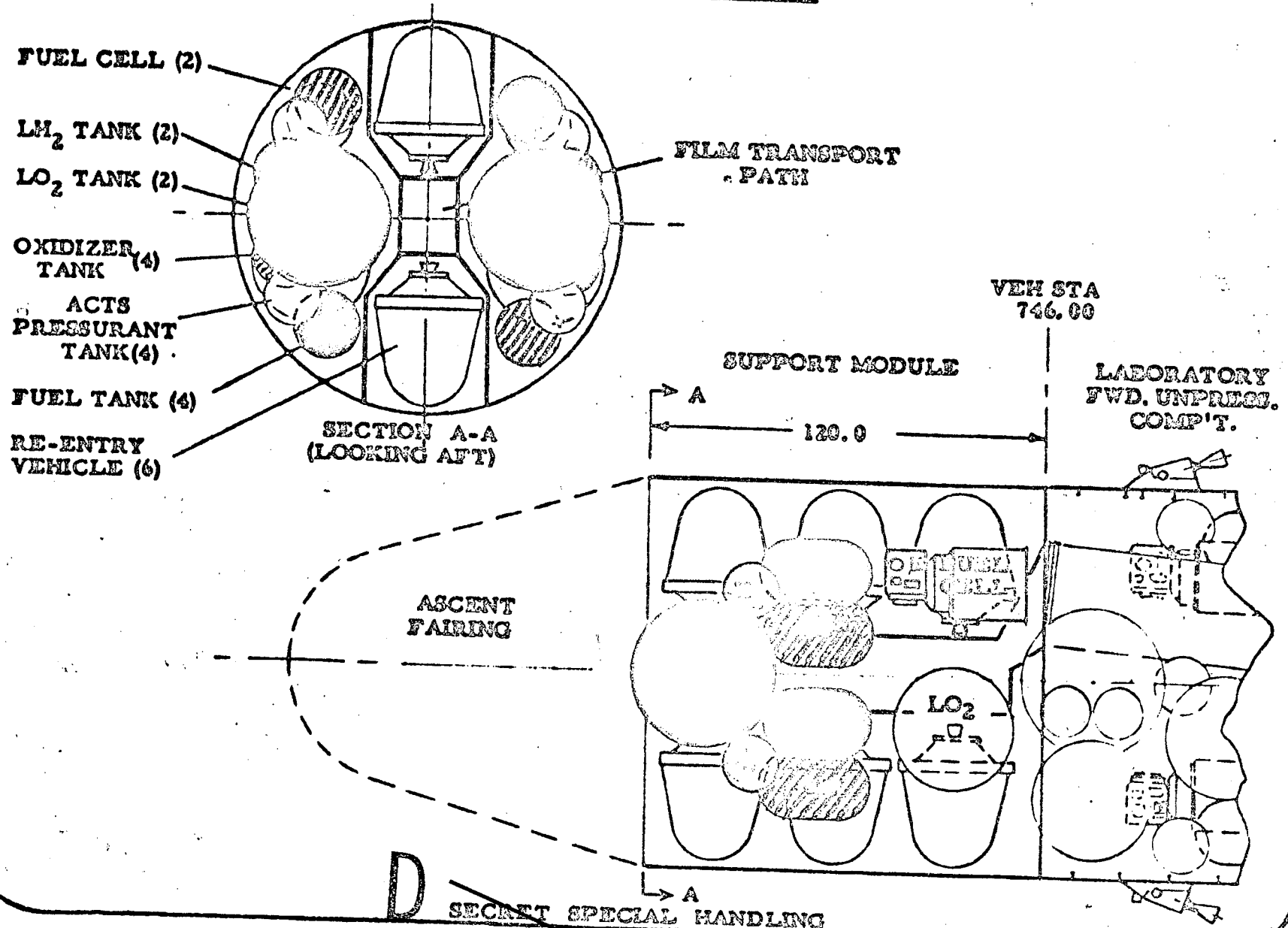


**SECRET SPECIAL HANDLING**

**65 DAY MISSION SUPPORT MODULE**

**INTERNAL ARRANGEMENT**

WHS-311  
Page 113



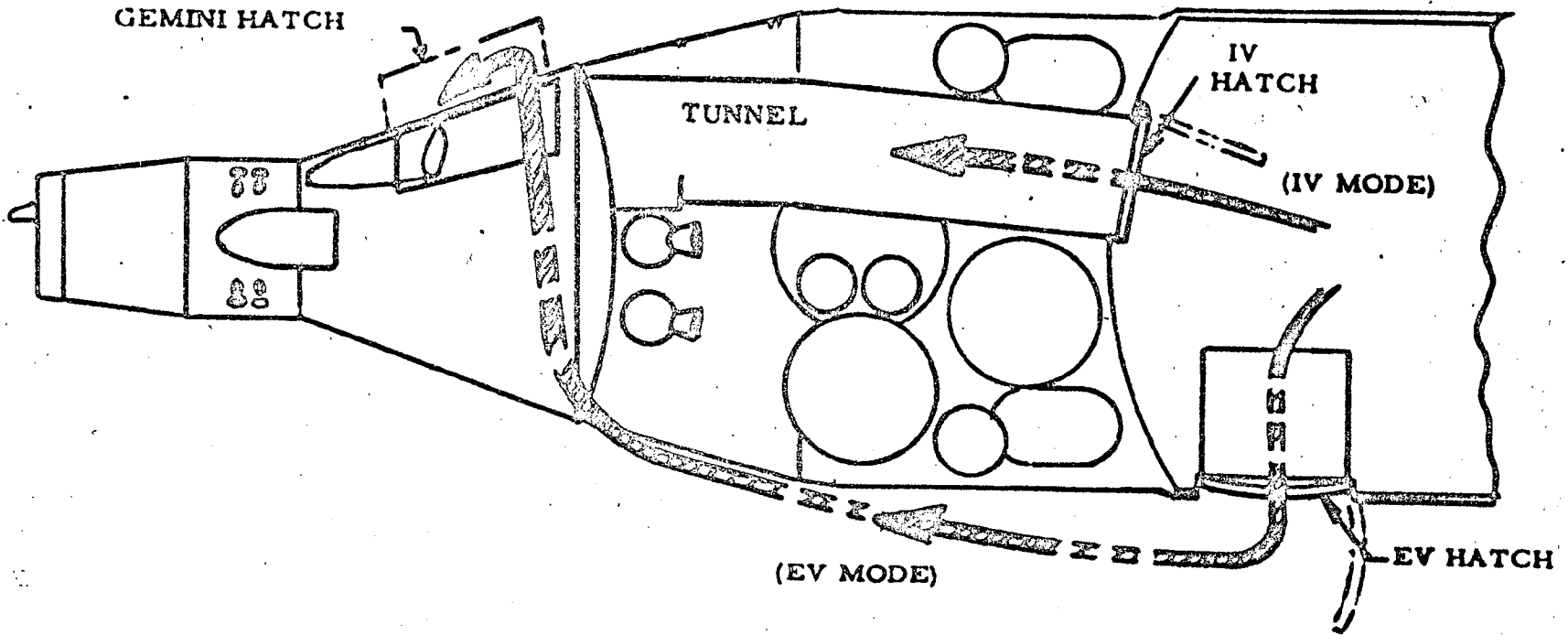
**SECRET SPECIAL HANDLING**

~~D SECRET~~ SPECIAL HANDLING

WHS-311  
Page 123

ACCESS ROUTE PROBABILITIES

(LABORATORY TO GEMINI B)



INTRA-VEHICULAR MODE (IV)

EXTRA-VEHICULAR MODE (EV)

<u>EVENT</u>	<u>PROBABILITY*</u>
⊙ HATCH INOPERATIVE	$3.0 \times 10^{-6}$
⊙ CRUSHED TUNNEL	$.3 \times 10^{-6}$

<u>EVENT</u>	<u>PROBABILITY*</u>
⊙ DRV TUBE HATCH INOPERATIVE	$3.0 \times 10^{-6}$
⊙ PRESSURE SUIT ASSEMBLY INOPERATIVE	$.03 \times 10^{-6}$
⊙ GEMINI B HATCH INOPERATIVE (OPEN)	$6 \times 10^{-6}$

\* PROBABILITY OF OCCURRENCE FOR 30 DAY IN-ORBIT

~~D SECRET~~

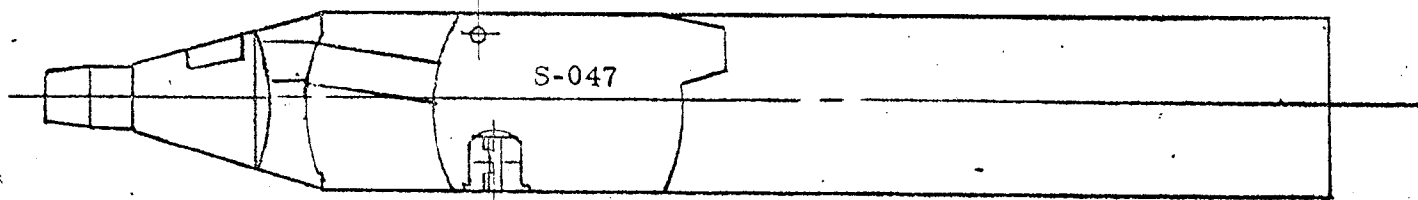
APPROVED FOR RELEASE 10 JUNE 2014

SPECIAL HANDLING

~~CONFIDENTIAL~~

WHS-311  
Page 142

MOL/NASA APPLICATIONS "A"  
FLIGHTS 3, 4, AND 5 (MANNED)  
(30 DAY DURATION)



- S-047 STELLAR REFRACTION EXPERIMENT  
(158 LBS - 74 WATTS OPERATING POWER)  
74
- ✓ MANUAL OPERATION FOR STAR ACQUISITION
- ✓ MINIMUM SUBSYSTEM IMPACT
- ✓ INSTALLATION REQUIREMENTS COMPATIBLE WITH  
VEHICLE DESIGN FEATURES
- ✓ LESS THAN 1 KWH ELECTRICAL ENERGY PER MISSION
- ✓ LESS THAN 4 HOURS OF CREW TIME PER MISSION

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U.S.C., Section 793 and 794, its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~D SECRET~~

SPECIAL HANDLING

~~CONFIDENTIAL~~

CLASSIFIED AT 3 YEAR INTERVALS;  
DECLASSIFIED AFTER 12 YEARS,  
DOD DIR 5200.10

~~D SECRET~~ SPECIAL HANDLING ~~CONFIDENTIAL~~

WHS-311  
Page 143

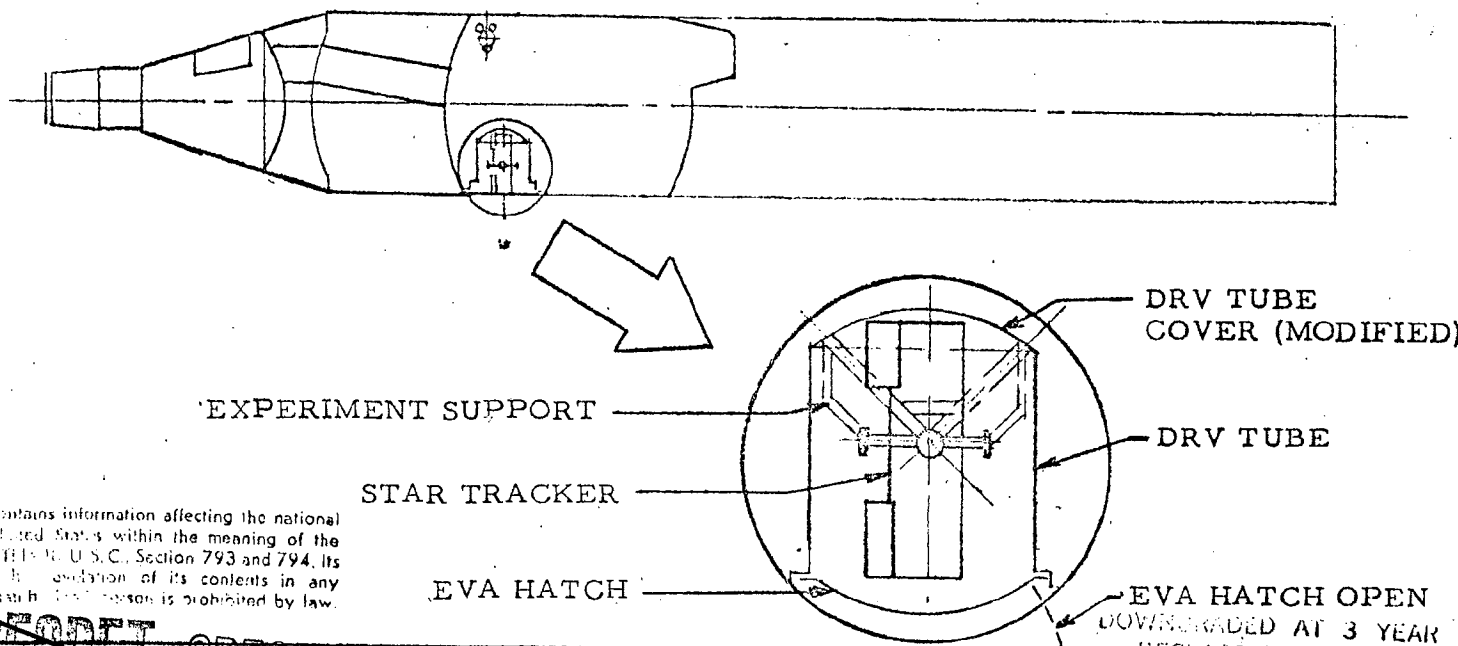
POSSIBLE S-047 EXPERIMENT INSTALLATION

(MOL FLIGHTS 3, 4, AND 5)

- S-047 WEIGHT (INSTALLED) 158 LBS
- S-047 VOLUME (STOWAGE) 4.5 CU. FT.
- S-047 ELECTRICAL ENERGY 9.5 KWH
- S-047 POWER PEAK 74 WATTS
- CREW TIME REQUIRED 20 HRS
- ACTS PROPELLANT REQUIRED 20 LBS

STOW IN SLEEP POSITION FOR LAUNCH

OPERATE FROM DRV TUBE



This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C., Section 793 and 794, its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~D SECRET~~ SPECIAL HANDLING ~~CONFIDENTIAL~~

EVA HATCH OPEN  
DOWNGRADED AT 3 YEAR INTERVALS;  
DECLASSIFIED AFTER 12 YEARS.  
DOD DIR 5200.10

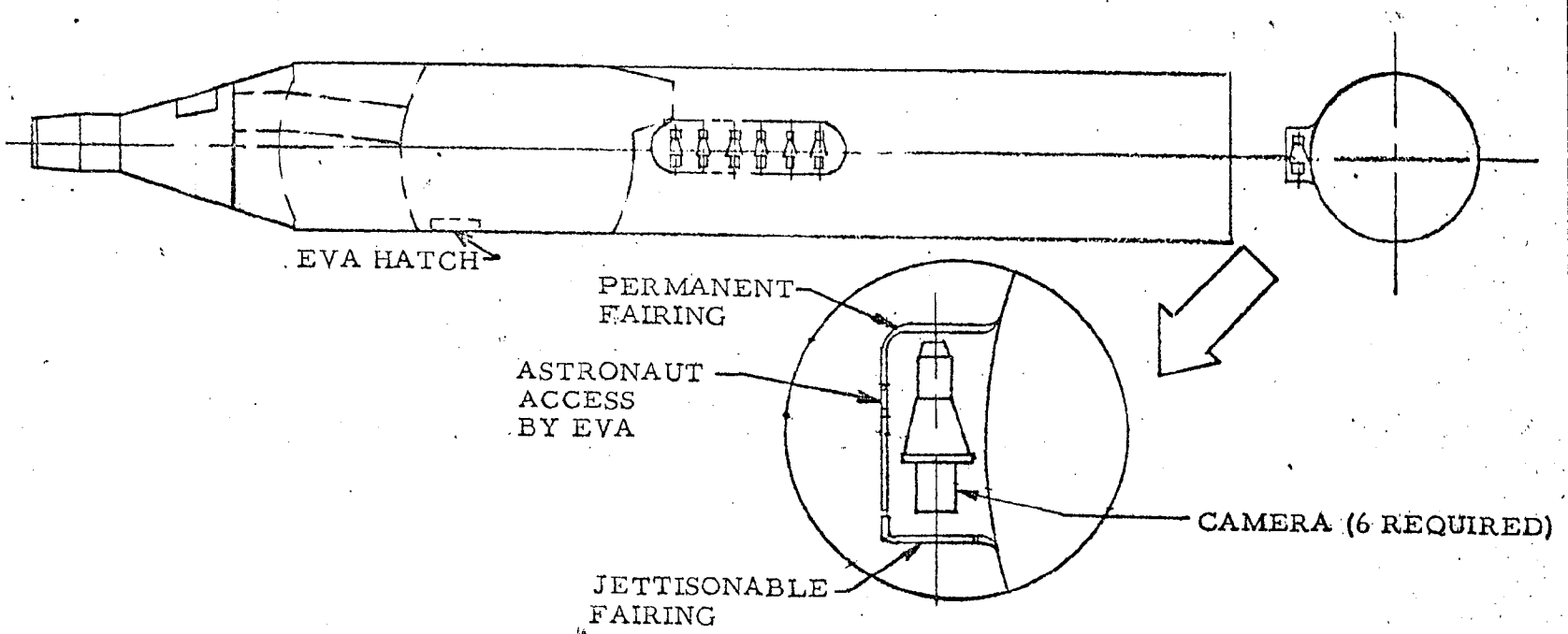
121

~~CONFIDENTIAL~~  
~~D SECRET~~ SPECIAL HANDLING

WHS-311  
 Page 144

POSSIBLE S-042 EXPERIMENT INSTALLATION

(MOL FLIGHTS 3, 4, AND 5)



- S-042 WEIGHT (INSTALLED) ~2000 LBS
- S-042 ELECTRICAL ENERGY 3.2 KWH
- S-042 POWER PEAK 945 WATTS
- EVA REQUIRED FOR EXPERIMENT SUPPORT ~1.5 HRS
- CREW EXPERIMENT OPERATING TIME 2 HRS
- DATA RETURN 200 LBS

The document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U. S. C., Section 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~CONFIDENTIAL~~  
~~D SECRET~~ SPECIAL HANDLING

DOWNGRADED AT 5 YEAR INTERVALS;  
 DECLASSIFIED AFTER 12 YEARS.  
 DOD DIR 5200.10

**D**

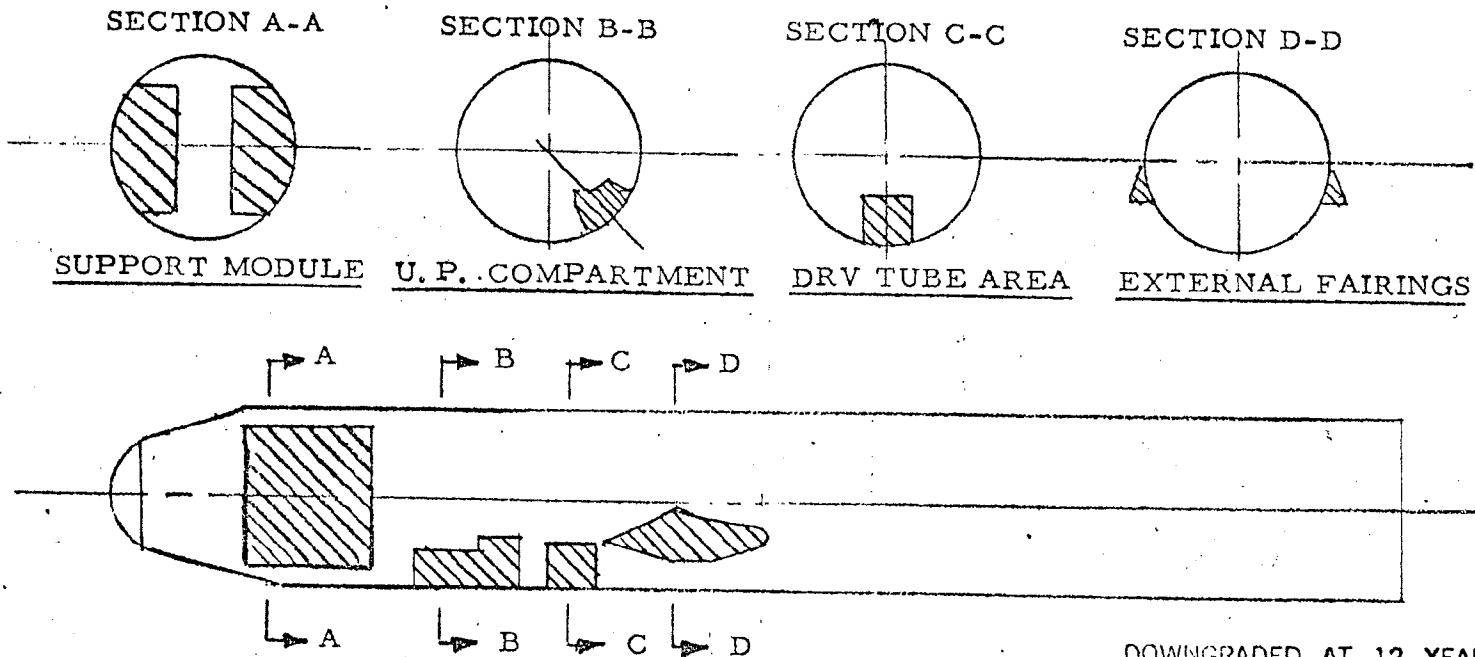
~~SECRET~~

SPECIAL HANDLING

HS-311  
Page 145

AVAILABLE VOLUME FOR EXPERIMENTS

(MOL FLIGHTS 6 AND 7)



o AVAILABLE VOLUME

SUPPORT MODULE	366 CU. FT.
U.P. COMPARTMENT	33 CU. FT.
DRV TUBE AREA	23 CU. FT.
EXTERNAL FAIRING (2)	36 CU. FT.

DOWNGRADED AT 12 YEAR  
INTERVAL; NOT AUTOMATICALLY  
DECLASSIFIED. DOD DIR 5200.10

**SPECIAL ACCESS REQUIRED**  
**CLASSIFIED SPACE PROGRAM**

NUMBER 632a

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U.S.C., Section 793 and 794, its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

**D**

~~SECRET~~

SPECIAL HANDLING

**SPECIAL ACCESS REQUIRED**  
**CLASSIFIED SPACE PROGRAM**

**D** ~~SECRET~~ **SPECIAL HANDLING**

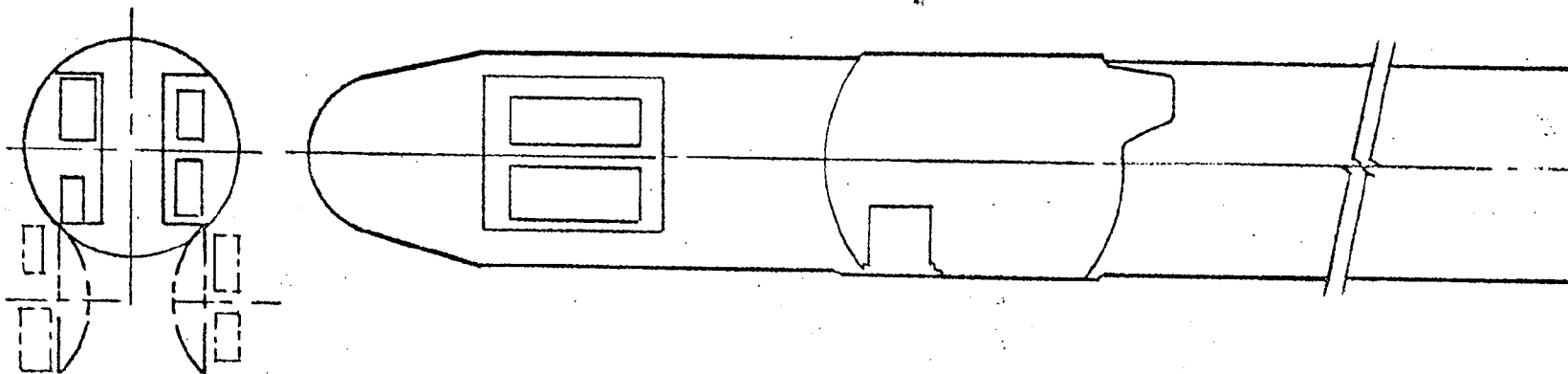
WHS-311  
Page 146

NUMBER 632a

MOL/NASA APPLICATIONS "A"

FLIGHT 6 OR 7 (UNMANNED)

(30 DAY DURATION)



- CAPABILITY FOR ALL EXPERIMENTS EXCEPT S-042 AND S-047
- AMPLE VOLUME AVAILABLE IN SUPPORT MODULE FOR EXPERIMENT INSTALLATION
- ADEQUATE PAYLOAD MARGIN FOR EXPERIMENT WEIGHT REQUIREMENTS
- ADEQUATE POWER AVAILABLE FOR EXPERIMENT REQUIREMENTS
- SYSTEM IMPACT
  - ✓ SUPPORT MODULE DESIGN MODIFICATIONS
  - ✓ DATA MANAGEMENT SUBSYSTEM AUGMENTATION
  - ✓ ON-BOARD SOFTWARE REVISION
  - ✓ SYSTEM TEST FLOW/AGE REVISIONS

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U.S.C., Section 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

DOWNGRADED AT 12 YEAR  
INTERVALS; NOT AUTOMATICALLY  
DECLASSIFIED. DOD DIR 5200.10

**D** ~~SECRET~~ **SPECIAL HANDLING**

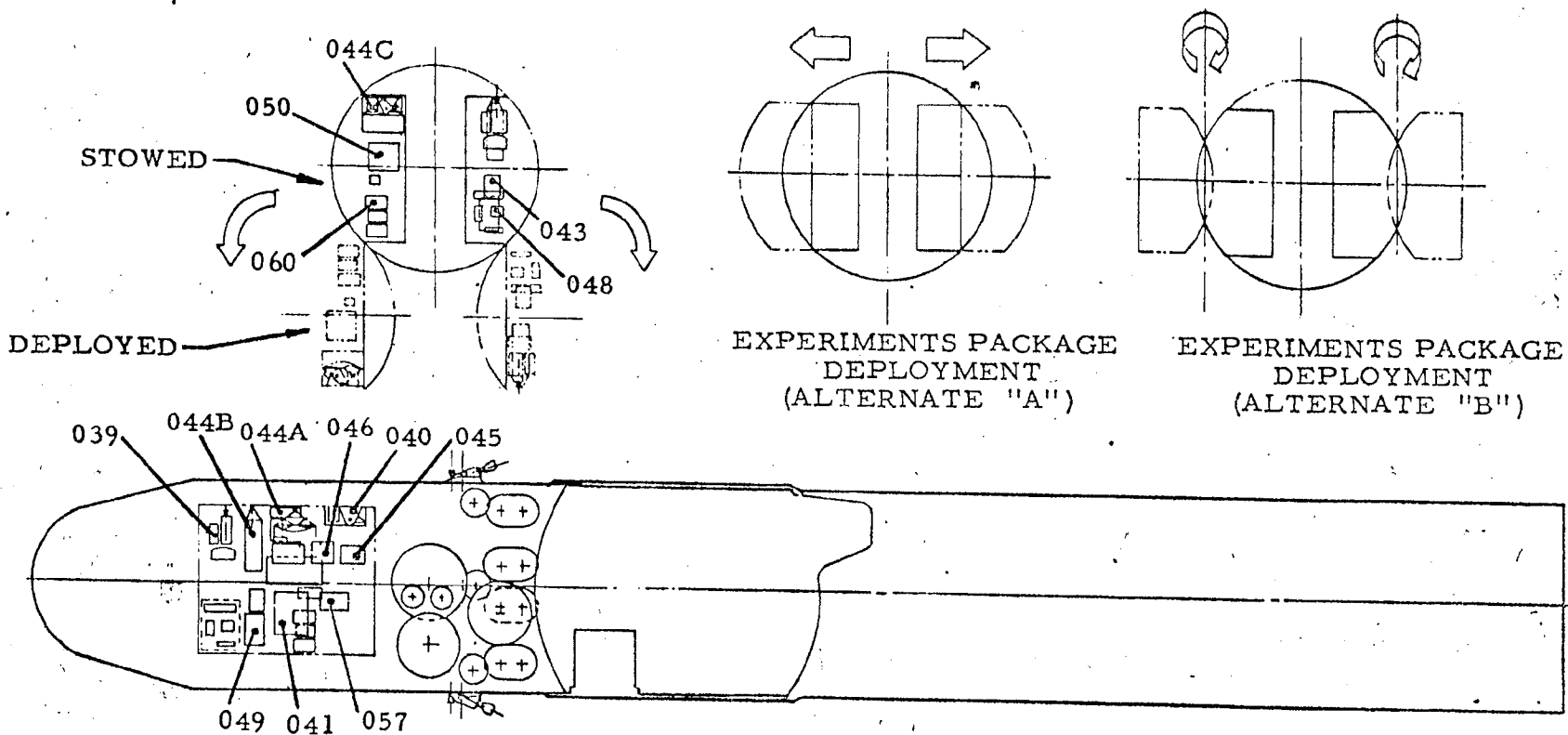
~~SECRET~~  
**SPECIAL ACCESS REQUIRED**  
**CLASSIFIED SPACE PROGRAM**

~~D SECRET~~ **SPECIAL HANDLING** WHS-311  
Page 147

NUMBER 632a

PROPOSED CONFIGURATION

NASA APPLICATIONS "A" EXPERIMENTS ON FLIGHT 6 OR 7



MISSION DURATION	30 DAYS
AVAILABLE PAYLOAD MARGIN	7460 LBS
EXPERIMENTS PAYLOAD WEIGHT	1440 LBS

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18 U.S.C., Section 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~D SECRET~~ **SPECIAL HANDLING**  
DOWNGRADED AT 12 YEAR  
INTERVALS, NOT AUTOMATICALLY  
DECLASSIFIED. DOD DIR 5200.10



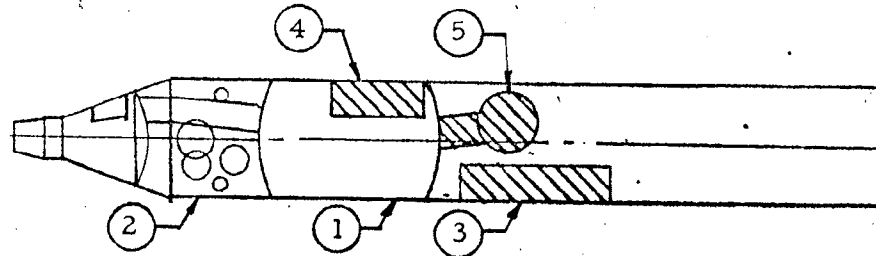
~~CONFIDENTIAL~~  
**D SECRET** SPECIAL HANDLING  
 MOL/NASA APPLICATIONS "A"

WHS-311  
 Page 154

POSSIBLE SEPARATE VEHICLE APPLICATION CONCEPTS

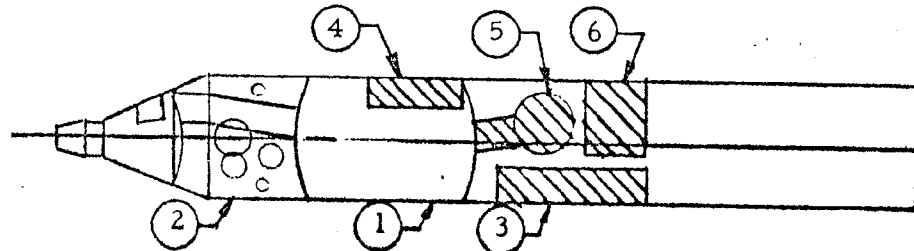
● CONCEPT A

1. BASELINE VEHICLE (LESS MISSION P/L EQUIP)
2. 30 DAY SYSTEMS QUAL
3. APP. "A" PACKAGE
4. BIO-TEST (P11 AND P12)
5. AIRLOCK



● CONCEPT B

1. BASELINE VEHICLE (LESS MISSION P/L EQUIP)
2. 30 DAY SYSTEMS QUAL
3. APP. "A" PACKAGE
4. BIO-TEST (P11 AND P12)
5. AIRLOCK
6. EXTENDED DURATION CAPABILITY ( $\Delta$  30 DAYS)
  - / ✓ ELECTRICAL POWER (CRYOGENIC TANKS AND FUEL CELLS)
  - / ✓ POWER CONDITIONING AND DISTRIBUTION
  - / ✓ EC/LS EXPENDABLES



This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C., Section 793 and 794, its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~CONFIDENTIAL~~  
**D SECRET** SPECIAL HANDLING

DOWNGRADE AT 3 YEAR INTERVALS;  
 DECLASSIFIED AFTER 12 YEARS.  
 GPO DIR 5200.10

~~CONFIDENTIAL~~

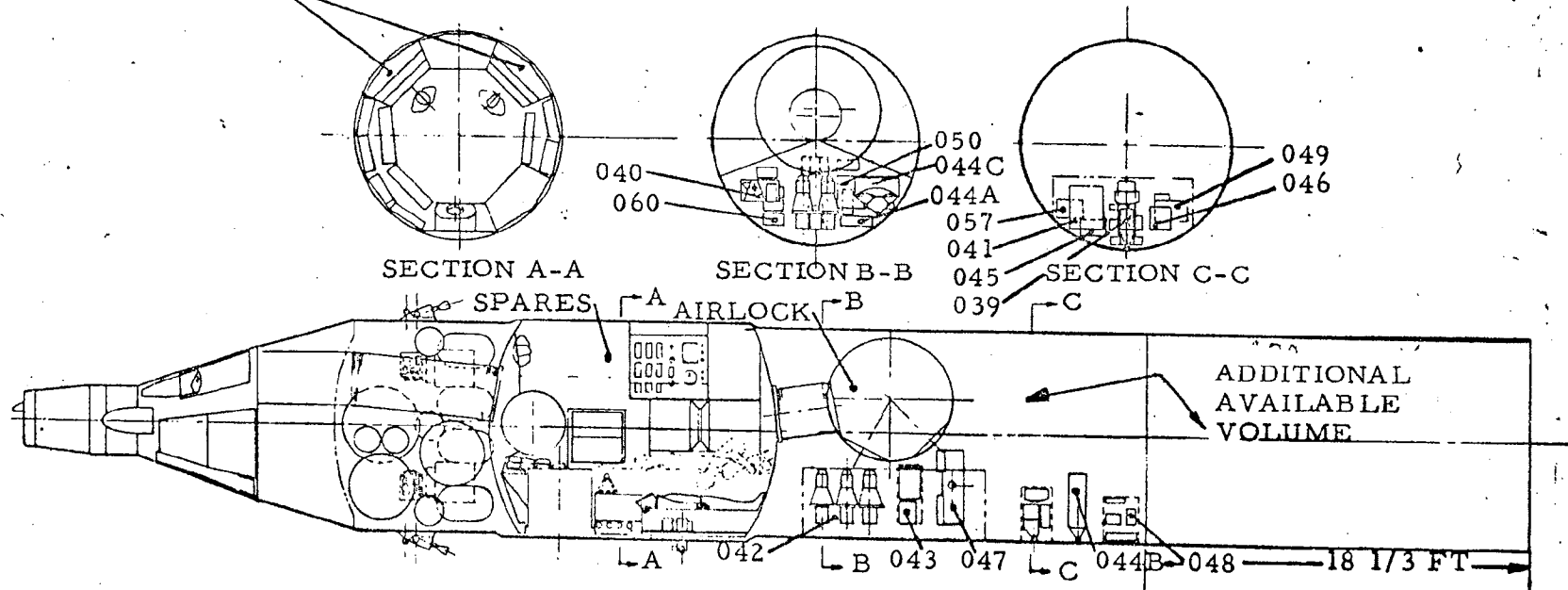
WHS-311  
Page 155

B4

POSSIBLE SEPARATE VEHICLE APPLICATION - CONCEPT A

~~D~~ ~~SECRET~~ SPECIAL HANDLING

EXPERIMENTS P11 AND P12  
(BIOMEDICAL AND PHYSIOLOGICAL  
EVALUATION)



- MISSION DURATION
- PRESSURIZED VOLUME (INCLUDING AIRLOCK)
- EXPERIMENT PAYLOAD
- ADDITIONAL AVAILABLE VOLUME (UNPRESSURIZED)

30 DAY EXPENDABLES *per*  
 1125 CU. FT.  
 NASA APP. "A" + P11 + P12

~ 1700 CU. FT.  
 DOWNGRADED AT 3 YEAR INTERVALS.  
 DECLASSIFIED AFTER 12 YEARS.  
 DOD DIR 5200.10

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C., Section 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~D~~ ~~SECRET~~ SPECIAL HANDLING  
~~CONFIDENTIAL~~

23

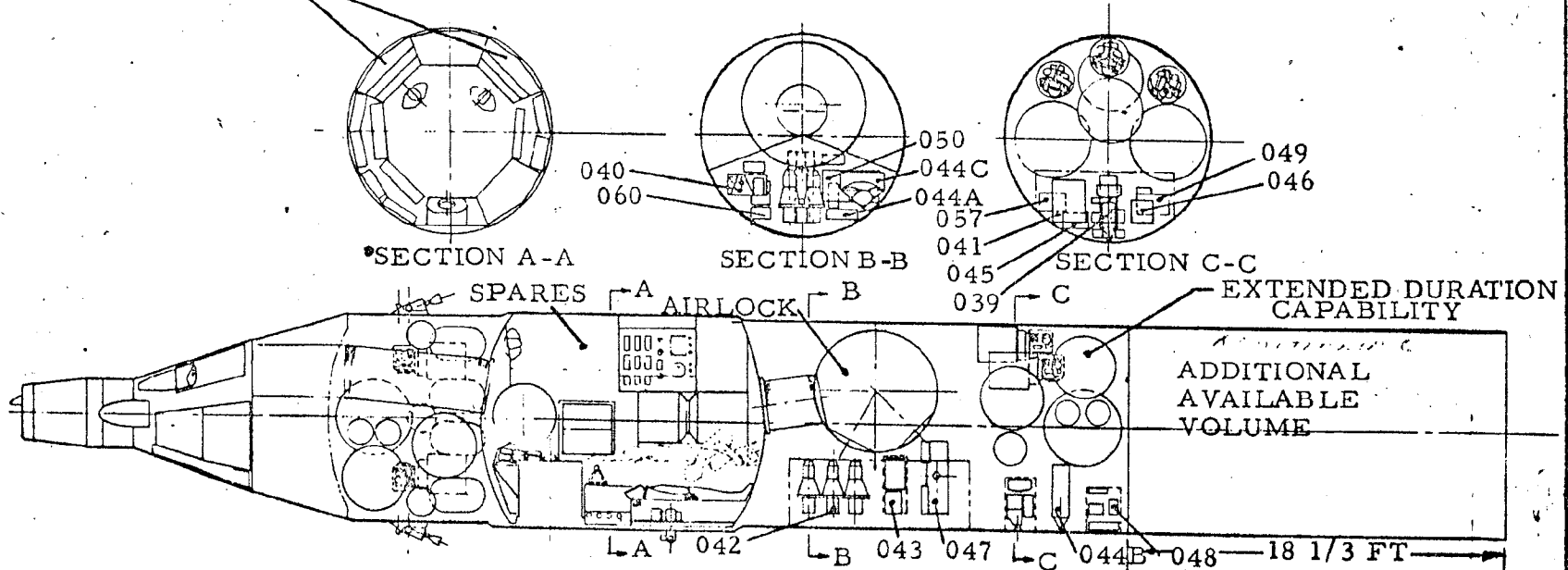
~~CONFIDENTIAL~~

WHS-311  
Page 157

POSSIBLE SEPARATE VEHICLE APPLICATION - CONCEPT B

~~D SECRET~~ SPECIAL HANDLING

EXPERIMENTS P11 AND P12  
(BIOMEDICAL AND PHYSIOLOGICAL  
EVALUATION)



- MISSION DURATION
- PRESSURIZED VOLUME (INCLUDING AIRLOCK)
- EXPERIMENT PAYLOAD
- ADDITIONAL AVAILABLE VOLUME (UNPRESSURIZED)

60 DAY EXPENDABLES  
1125 CU. FT.  
NASA APP. "A" + P11 + P12  
~ 1400 CU. FT.

This document contains information affecting the national defense of the United States within the meaning of the espionage laws, Title 18 U.S.C., Section 793 and 794. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

~~D SECRET~~ ~~CONFIDENTIAL~~ SPECIAL HANDLING

DECLASSIFIED AFTER 12 YEARS  
DOD DIR 5200.10