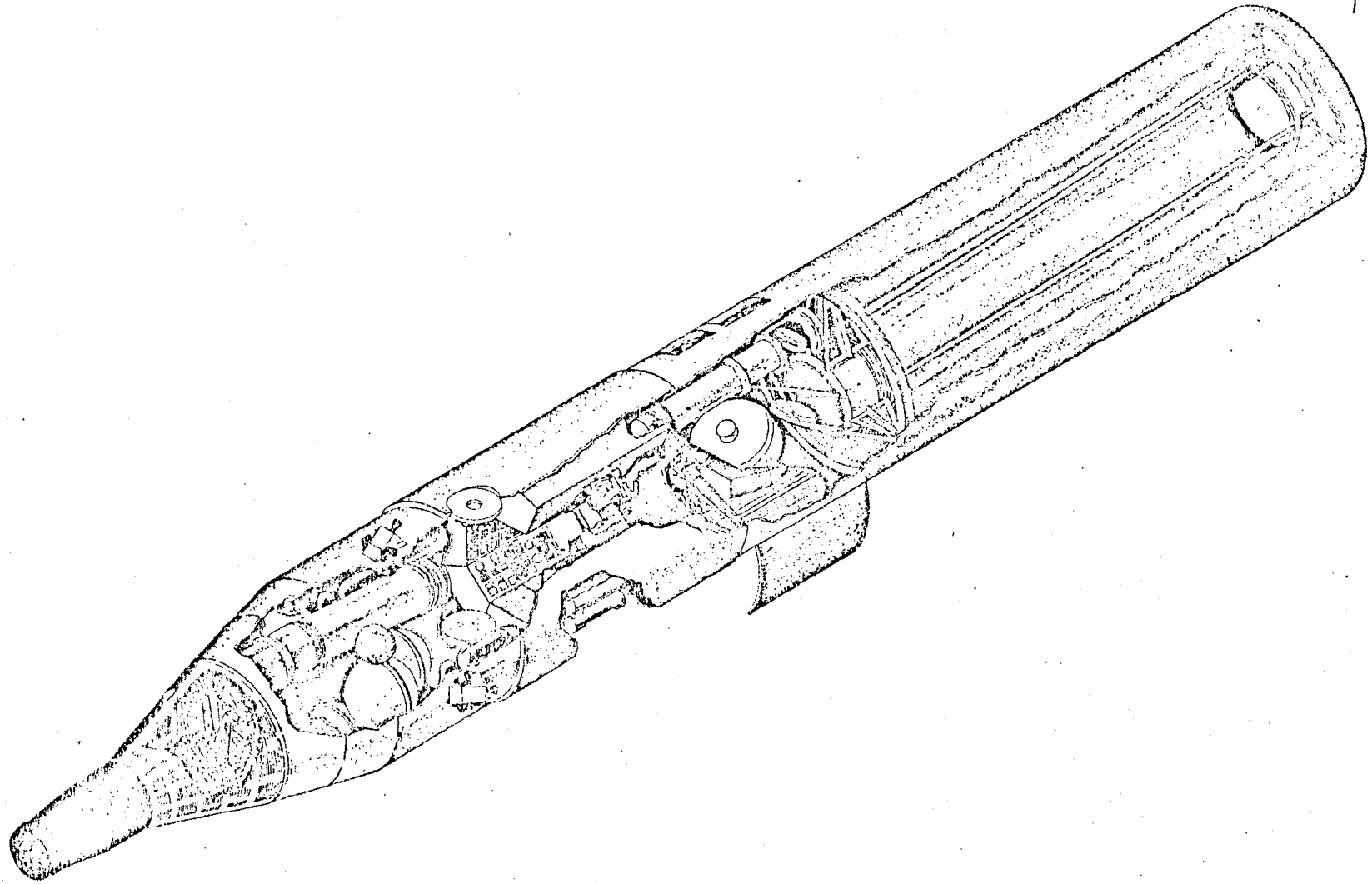


~~SECRET SPECIAL HANDLING~~

~~SECRET~~  
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pg 3

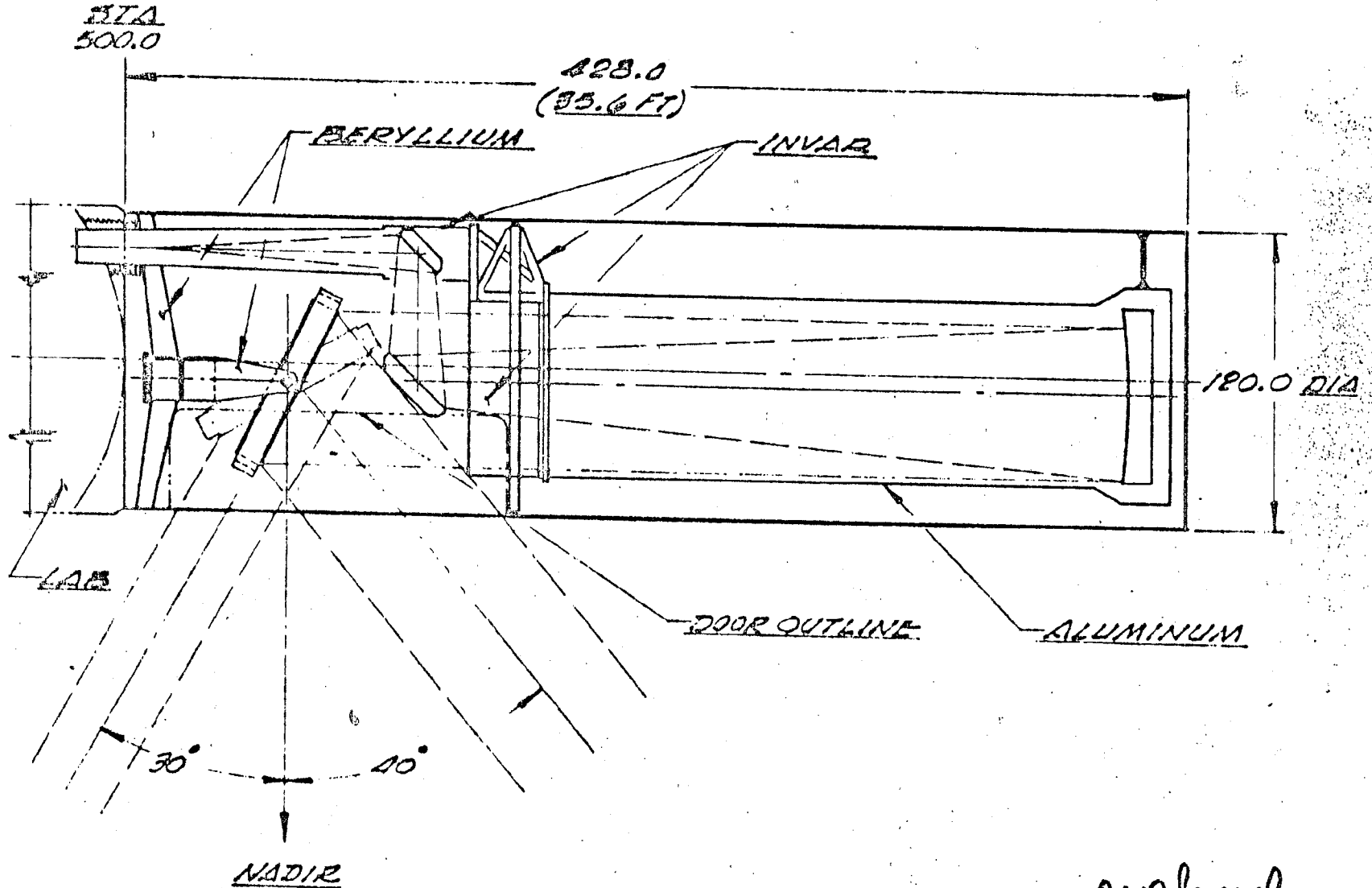


~~SECRET SPECIAL HANDLING~~

~~SECRET/SPECIAL HANDLING~~

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p94

MISSION MODULE



~~SECRET/SPECIAL HANDLING~~

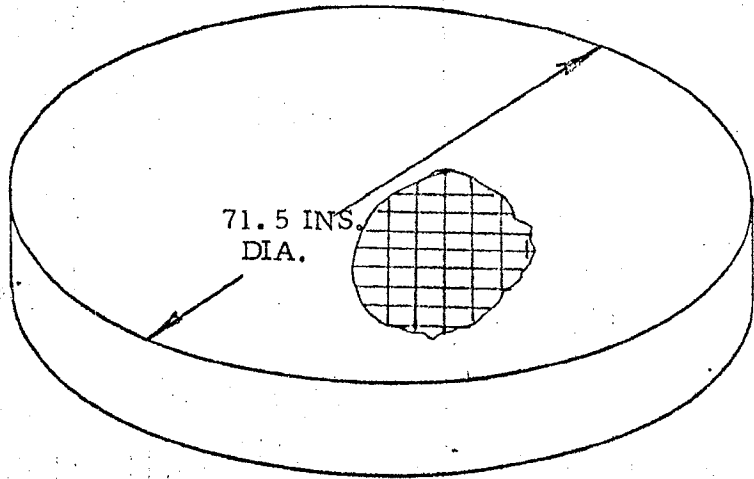
replaced  
w/ color chart



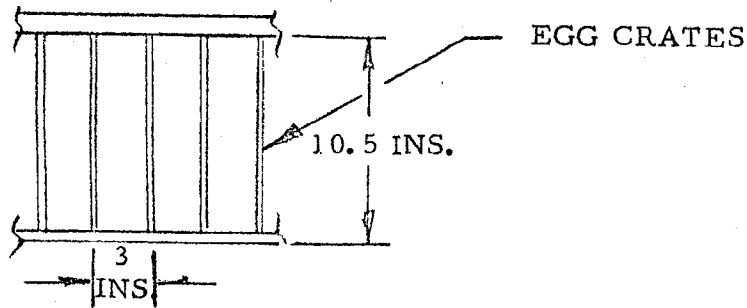
~~SECRET~~ - SPECIAL HANDLING

WHS-184  
p9.6

MIRROR TECHNOLOGY



- PRIMARY AND TRACKING MIRRORS
- "EGG-CRATE" CONSTRUCTION
- MATERIAL - FUSED SILICA
- WEIGHT - 1020 LBS. EACH
- THICKNESS -
  - FACE PLATE 0.9 INS.
  - BACK PLATE 0.5 INS.
  - CORE 0.22 INS.
- OPTICAL TOLERANCE -  
1/10 WAVE LENGTH



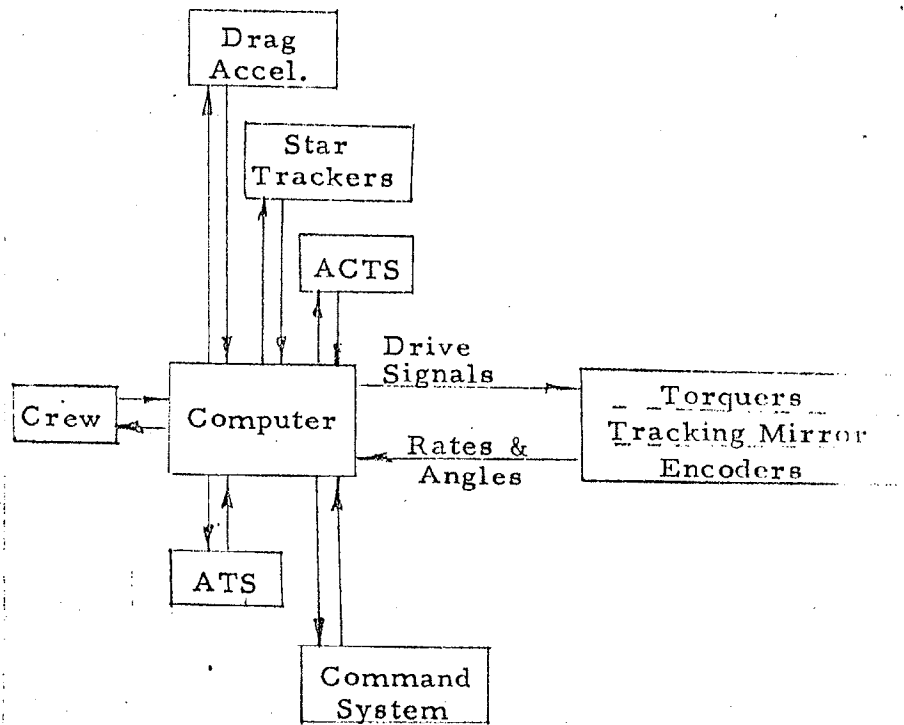
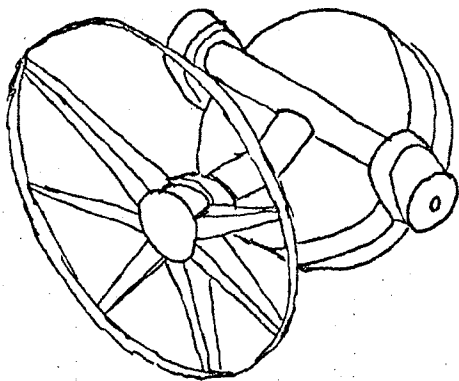
~~SECRET~~ - SPECIAL HANDLING

ST-1059

~~SECRET~~ SPECIAL HANDLING

WJHS-184  
p47

TRACKING MIRROR GIMBAL SYSTEM



ACTS - ATTITUDE CONTROL/TRANSLATION SYSTEM

ATS - ACQUISITION & TRACKING SCOPE

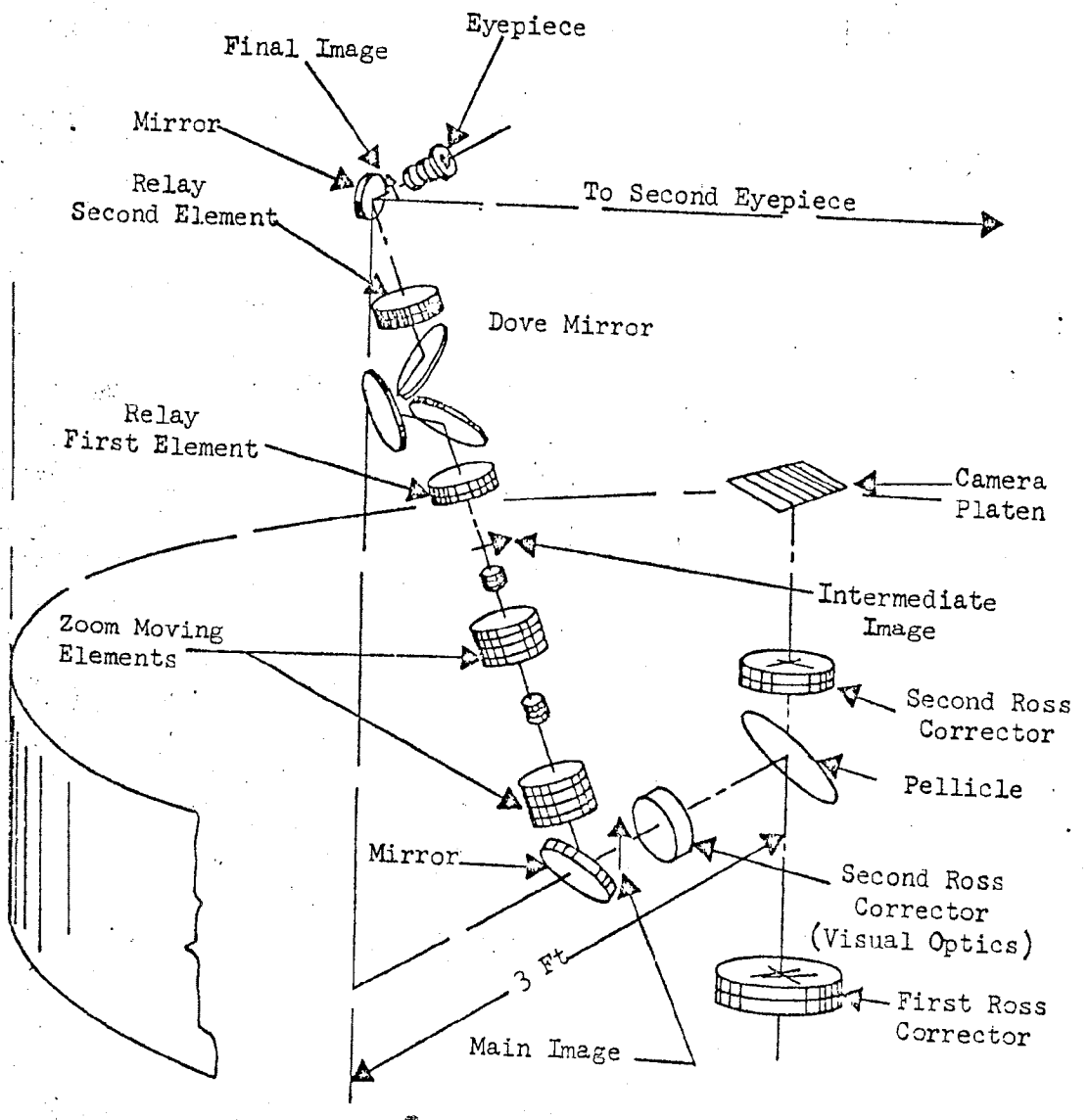
BLOCK DIAGRAM

~~SECRET~~ SPECIAL HANDLING

~~SECRET - SPECIAL HANDLING~~

WHS-184  
pg 8

DIRECT VIEWING AND TRACKING SYSTEM



CHARACTERISTICS

FIELD OF VIEW - 40°

ZOOM RANGE - 100X to 1000X

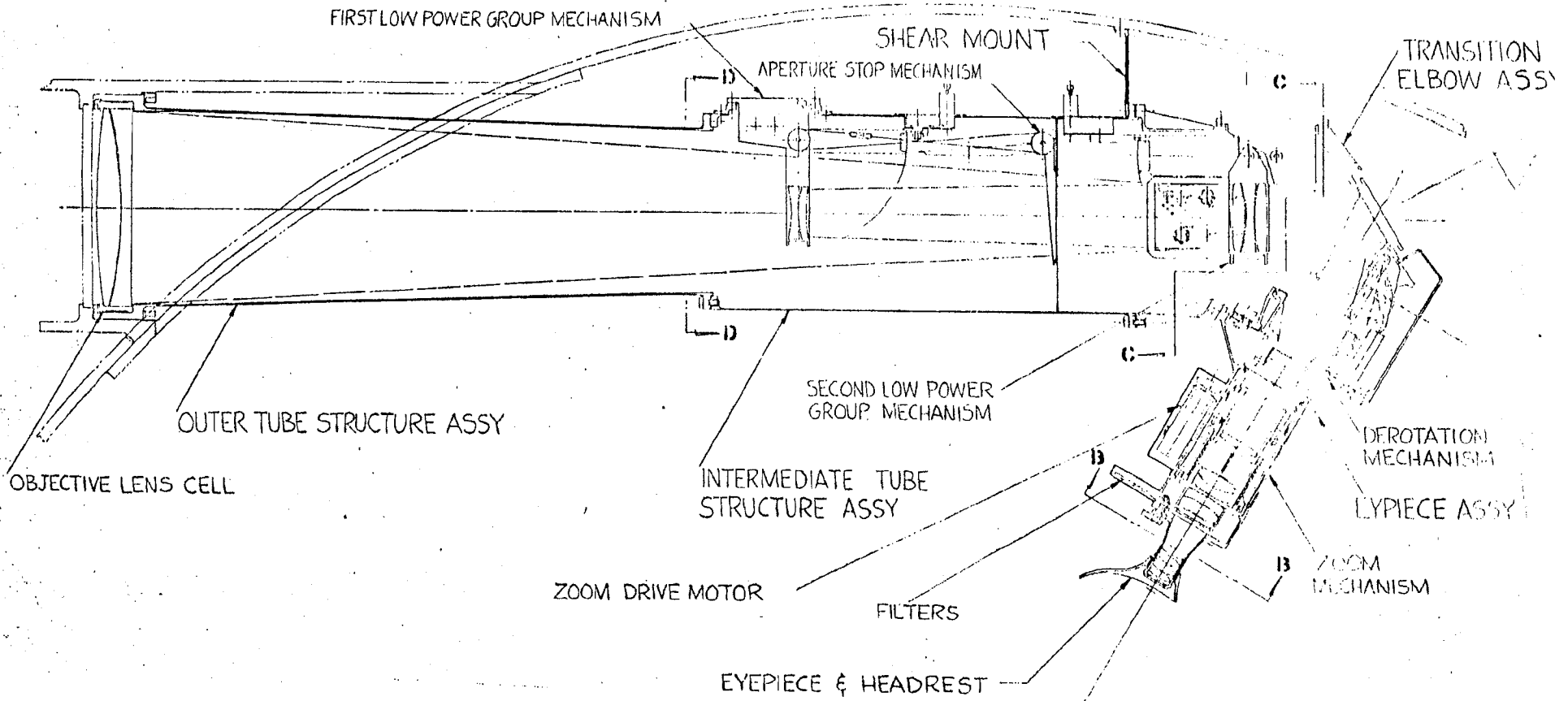
GROUND RESOLUTION - 4'

~~SECRET - SPECIAL HANDLING~~

ST-1057

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p99

ACQUISITION AND TRACKING SCOPE



**CHARACTERISTICS:**

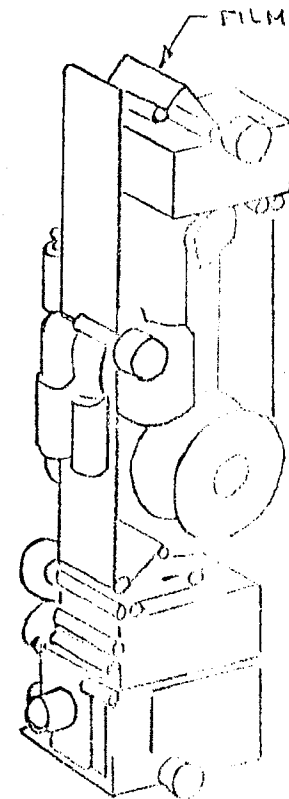
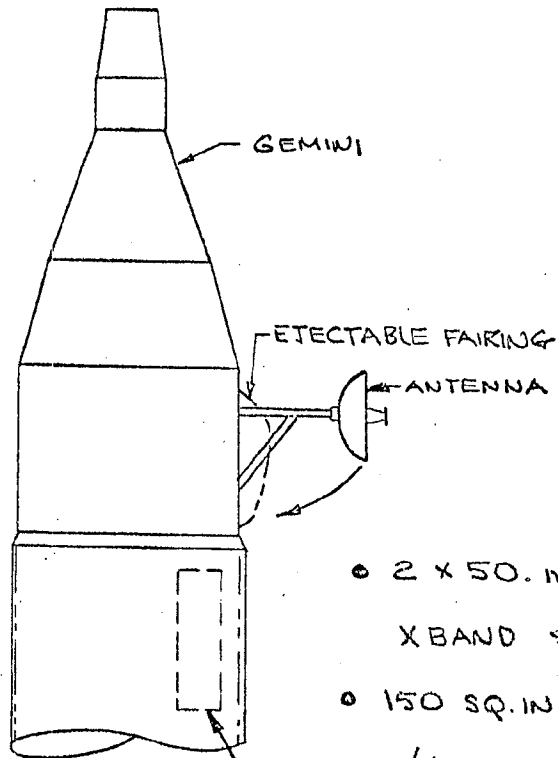
APERTURE 8" - 10"  
ZOOM RANGE 60X - 120X  
FOV 15X - 4°  
120X - 0.5°

MAX. GROUND RESOLUTION ~ 3'  
WEIGHT ~ 500 LB  
PEAK POWER ~ 500W

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pg 10

WIDE BAND READOUT



- 2 x 50. mhz VIDEO CHANNELS
- X BAND STEERABLE ANTENNA - 3 FT. DISH
- 150 SQ. IN. / MIN. FILM READOUT  
(6 IN. SCAN WIDTH)
- SINGLE ZI GROUND STATION
- WEIGHT ≈ 500 LBS
- PEAK POWER ~ 630 W

WIDE BAND ANALOG  
READOUT

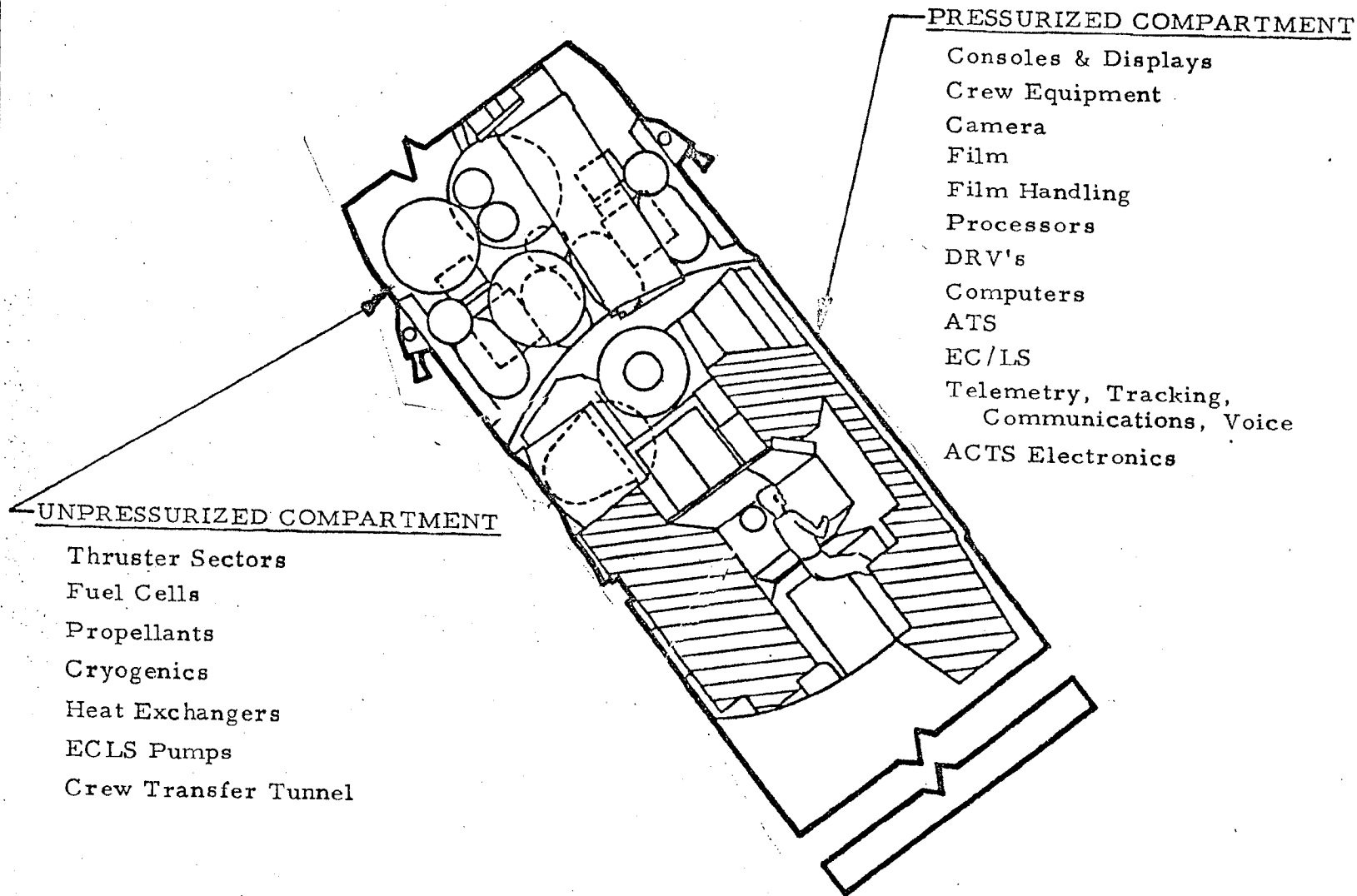
~~SECRET~~ - SPECIAL HANDLING



~~SECRET~~ SPECIAL HANDLING

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pg 12

LABORATORY VEHICLE ARRANGEMENT



~~SECRET~~ SPECIAL HANDLING

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p9 13

REF-65 Y21479-RTH

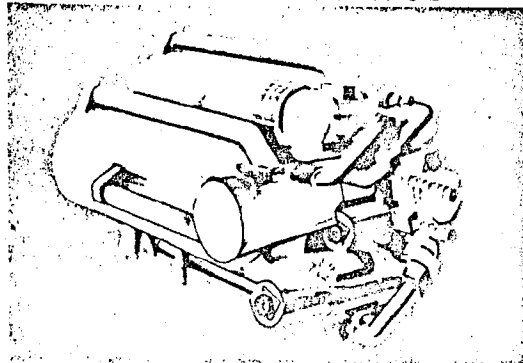


~~CONFIDENTIAL~~

# ENVIRONMENTAL CONTROL AND LIFE SUPPORT BASELINE LABORATORY VEHICLE

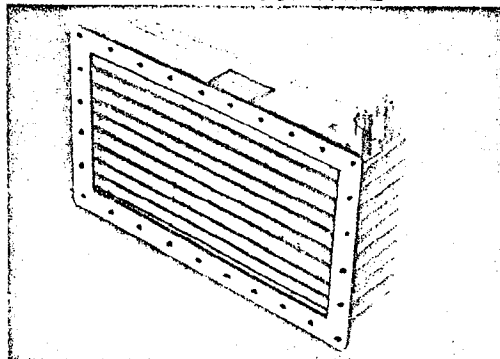


## ATMOSPHERE CONTROL



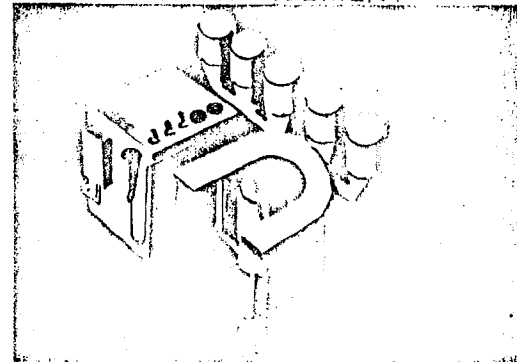
- DUAL GAS ATMOSPHERE, O<sub>2</sub> BACK-UP
- 5 PSIA O<sub>2</sub>/He, "SHIRTSLEEVE"
- SUPERCRITICAL O<sub>2</sub> STORAGE
- MOLECULAR SIEVE FOR CO<sub>2</sub> CONTROL
- 5 MINUTE COMPARTMENT REPRESSURIZATION
- OPEN SUIT LOOP FOR EMERGENCY

## THERMAL CONTROL



- HEAT EXCHANGERS & COOLPLATES
- INNER WALL HEATING
- SPACE RADIATOR

## WASTE MANAGEMENT



- COLLECT METABOLIC WASTES
- PROCESS & STORE WASTE MATTER
- VACUUM DEBRIS COLLECTION

DOWNGRADED & DECLASSIFIED  
DECLASSIFIED AFTER 10 YEARS  
DOD DIR 5200.10

~~CONFIDENTIAL~~

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AEROSPACE CORPORATION



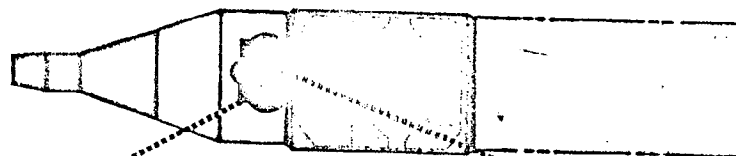
WHS-184  
PA 14

REF-65- Y21481-R-11

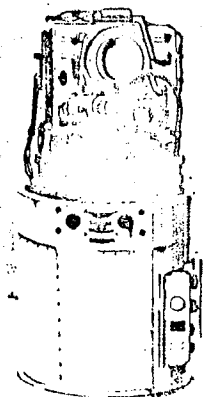
MOL

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# ELECTRICAL POWER SYSTEM BASELINE LAB VEHICLE



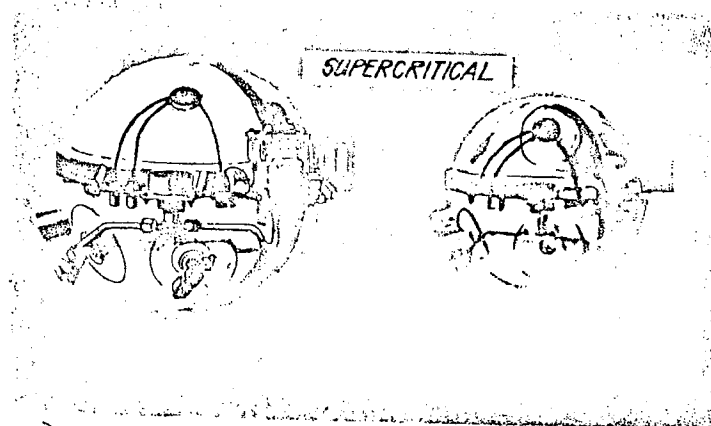
FUEL CELL



APOLLO TYPE

- ① THREE 1,000 HR. FUEL CELL MODULES
- ② 2.0 KW AVERAGE POWER
- ③ 4.5 KW PEAK POWER

CRYOGENIC STORAGE



- ④ TWO H<sub>2</sub> AND TWO O<sub>2</sub> TANKS
- ⑤ 30 DAY CAPACITY

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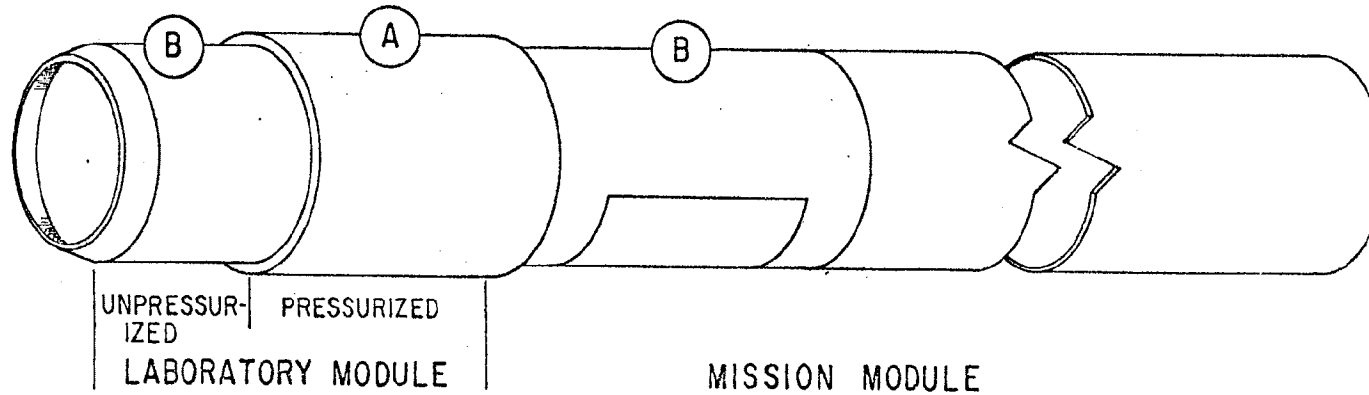
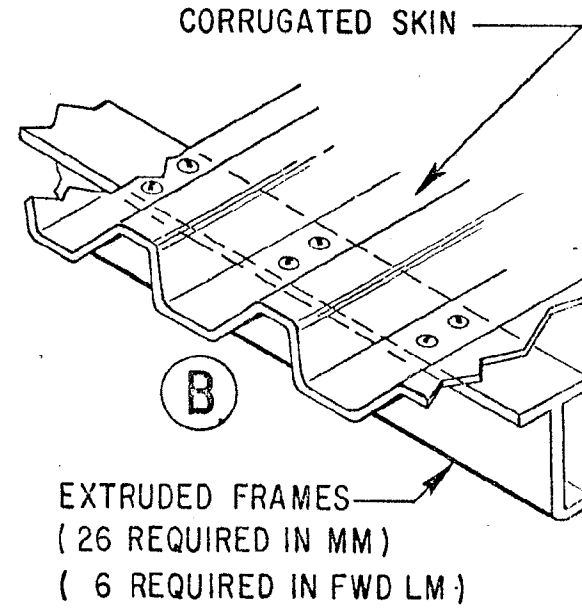
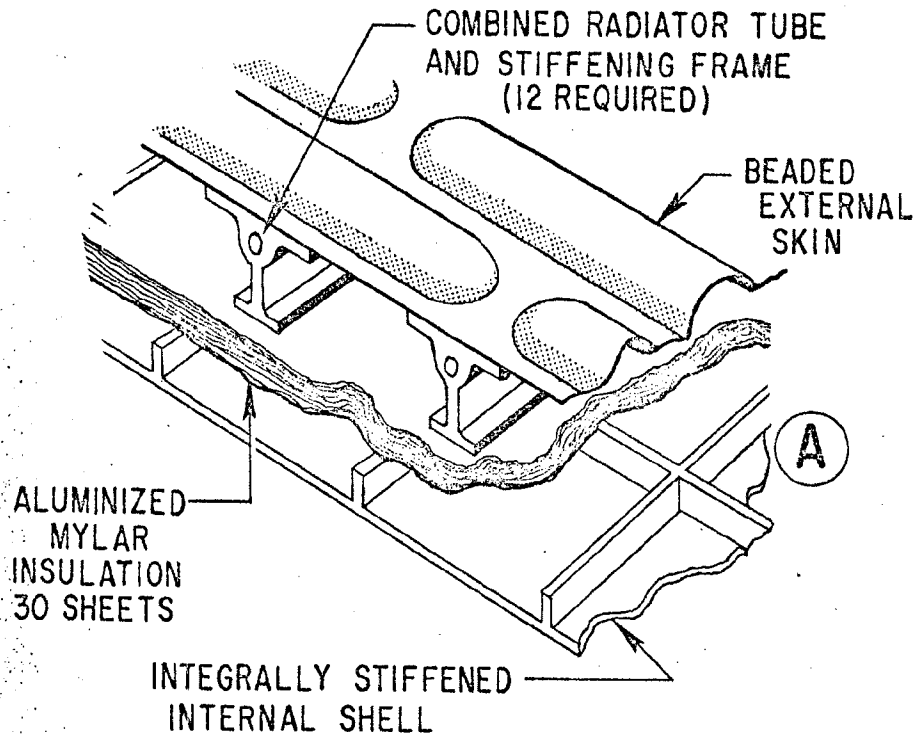
DECLASSIFIED AT 3 YEAR INTERVALS  
EXCEPTED AFTER 2 YEARS  
DOD DIR 576010

AEROSPACE CORPORATION



# STRUCTURAL ARRANGEMENT

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p9 15



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Pg 16

~~SECRET~~ SPECIAL HANDLING

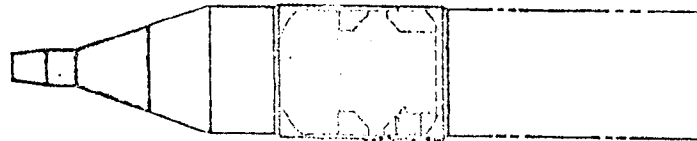
MOD

~~SECRET~~

REF ID: A65000-0174025

# COMMUNICATIONS / DATA HANDLING

## BASELINE LAB VEHICLE



SGLS

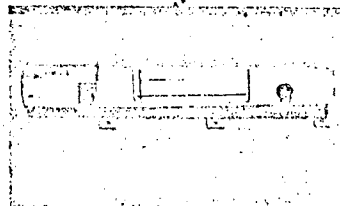
- TRACKING - R, R, A
- TELEMETRY

REAL TIME - 64 KBPS  
STORED - 1024 KBPS

- COMMAND - 1 KBPS

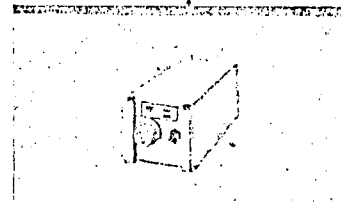
REAL-TIME  
STORED DATA

- VOICE - DUPLEX



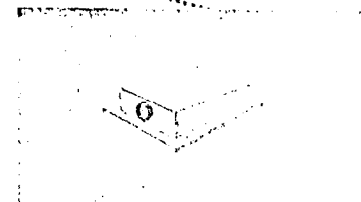
WIDEBAND DATA

- 20 MBPS



BACK-UP TELEMETRY

- STATUS DATA



BACK-UP COMMAND

- 1 KBPS

SECURITY

CONDITION / MULTIPLEX / RECORD  
MONITOR / ALARM  
TIMING

TELEPRINTER

DISPLAYS

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EXCEPT WHERE SHOWN OTHERWISE  
DDO DIA 130210

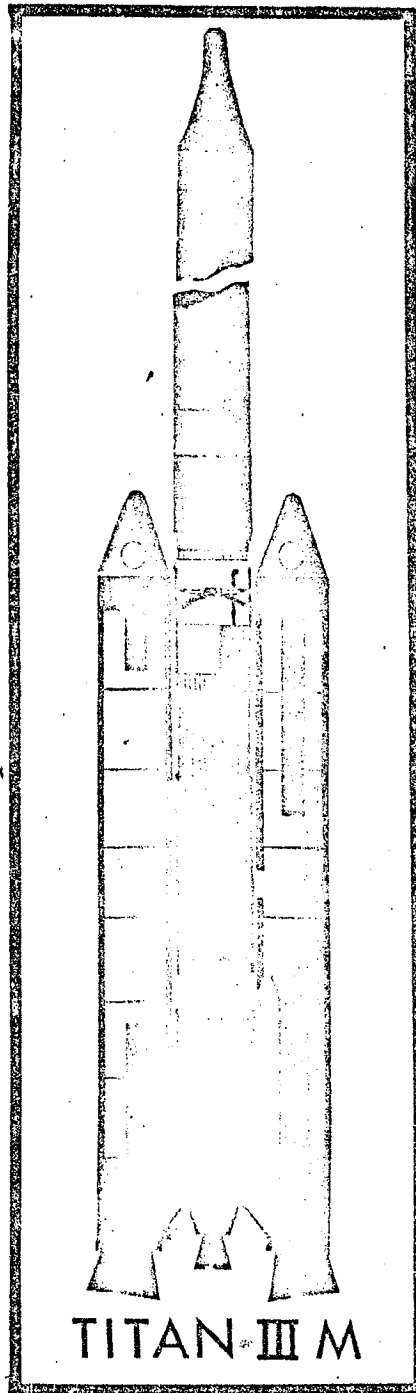
REF ID: A65000-0174025

~~SECRET~~ SPECIAL HANDLING

AEROSPACE CORPORATION







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TITAN IIIM DESCRIPTION

MAJOR FEATURES

- PERFORMANCE  
32,800 LBS @ 80°-80/130 N. MI.
- TOTAL THRUST AT LIFTOFF - 3 MILLION POUNDS
- 7 - SEGMENT SOLIDS
- CORE - 2 STAGES  
NO TRANSTAGE  
STAGE 1 ENGINES - 15:1 NOZZLE EXPANSION RATIO
- REDUNDANT FLIGHT CONTROL SYSTEM
- BOOSTER INERTIAL GUIDANCE SYSTEM DURING ASCENT  
(BIGS)
- GEMINI INERTIAL GUIDANCE SYSTEM BACKUP  
(GIGS)