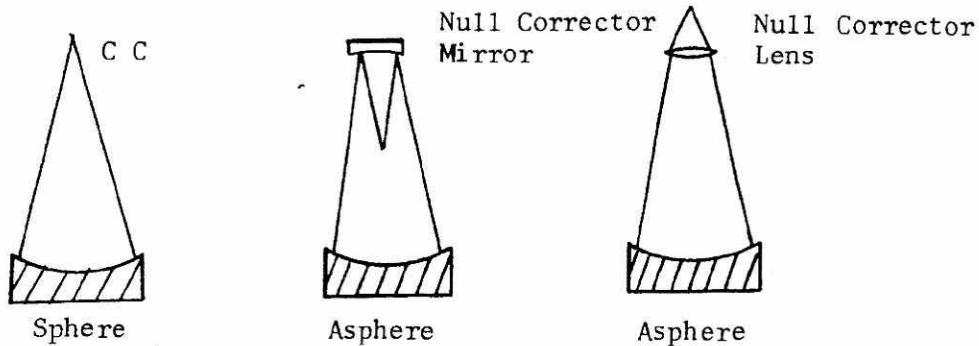
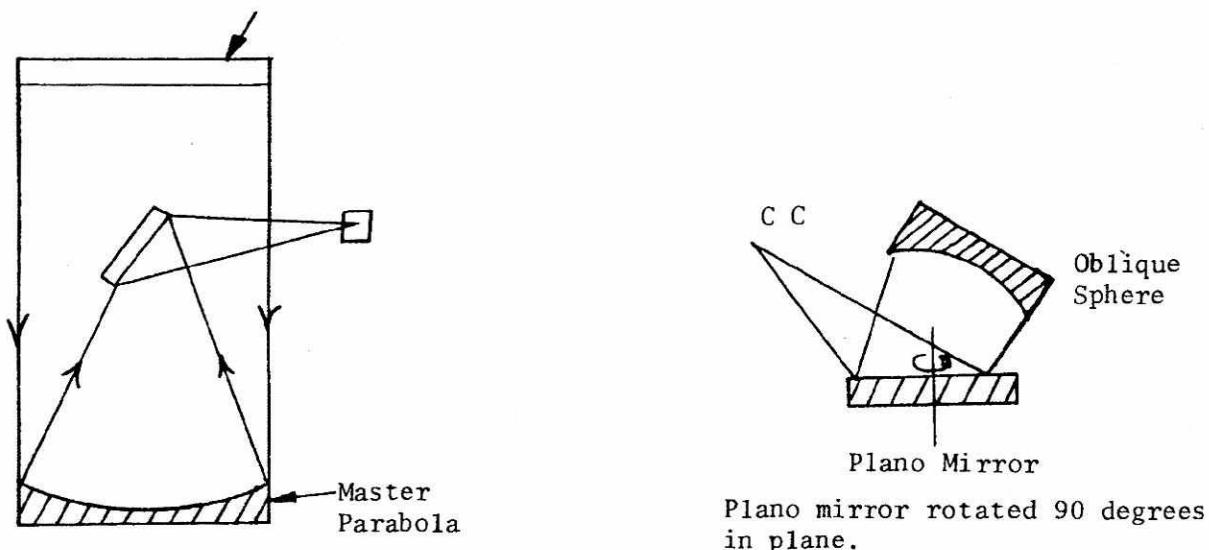


~~SECRET~~ DBIF-008- F-035081-RH -68
(Control Number)

(a) Optical Test Configurations for Mirrors with Power

Fixed 72-Inch-Diameter Plano



(b) Plano-Mirror Test Configurations

Figure 6.1-1. Mirror Test Configurations

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BIF-008- F-035081-RH

-68

(Control Number)

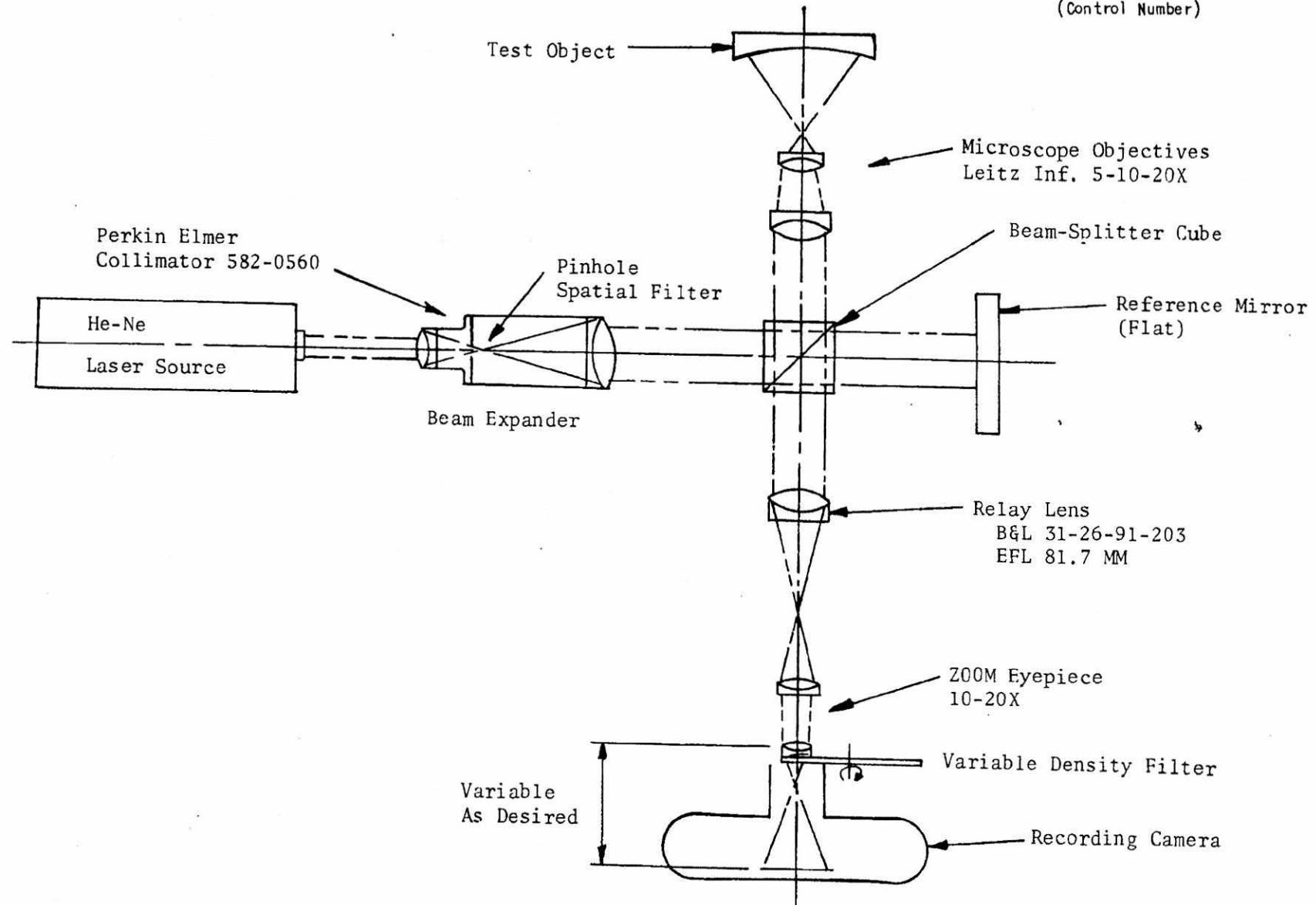


Figure 6.2-2. MOD II Twyman-Green Interferometer Schematic

Handle via BYEMAN
Control System Only~~SECRET~~

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(Control Number)

9-18

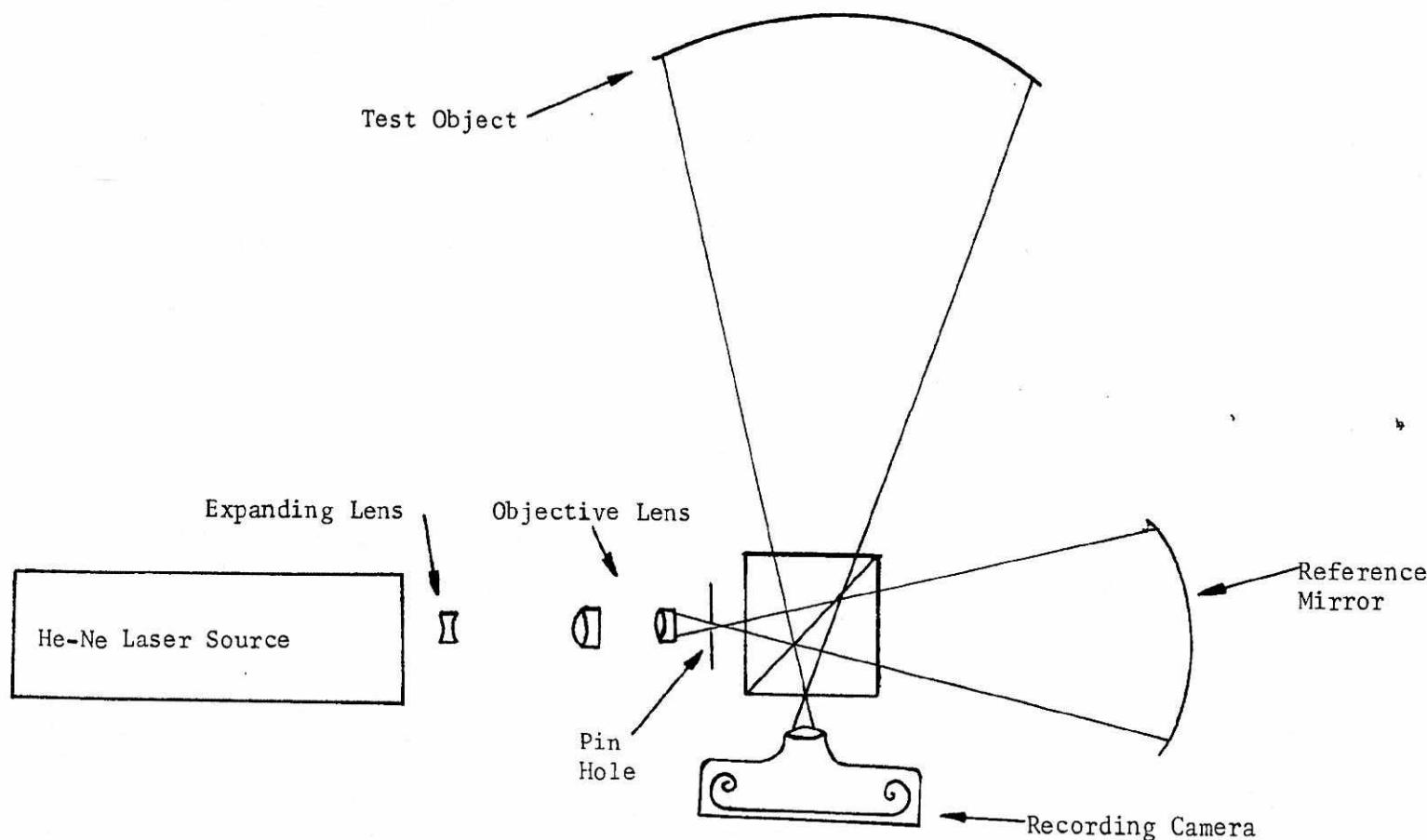
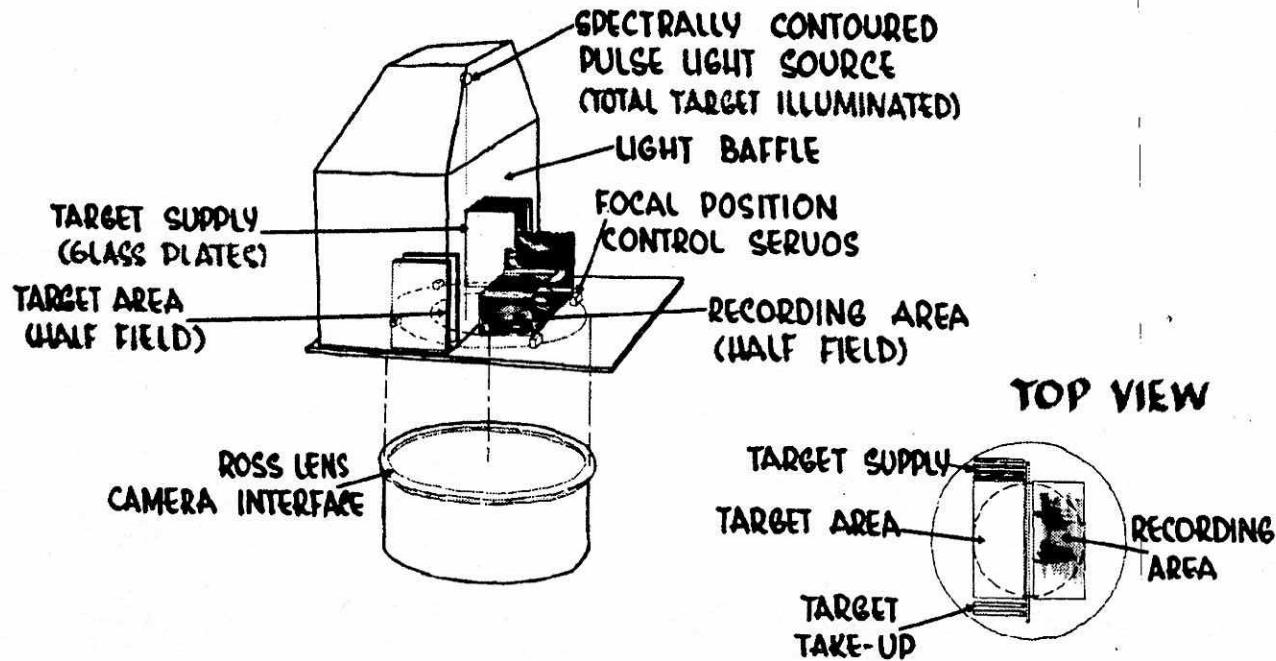


Figure 6.2-4. Williams Interferometer Schematic

Handle via BYEMAN
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(Control Number)

6-22

Figure 6.2-6. Photographic Test Equipment

Handle via BYEMAN
Control System Only~~SECRET~~ D

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(Control Number)

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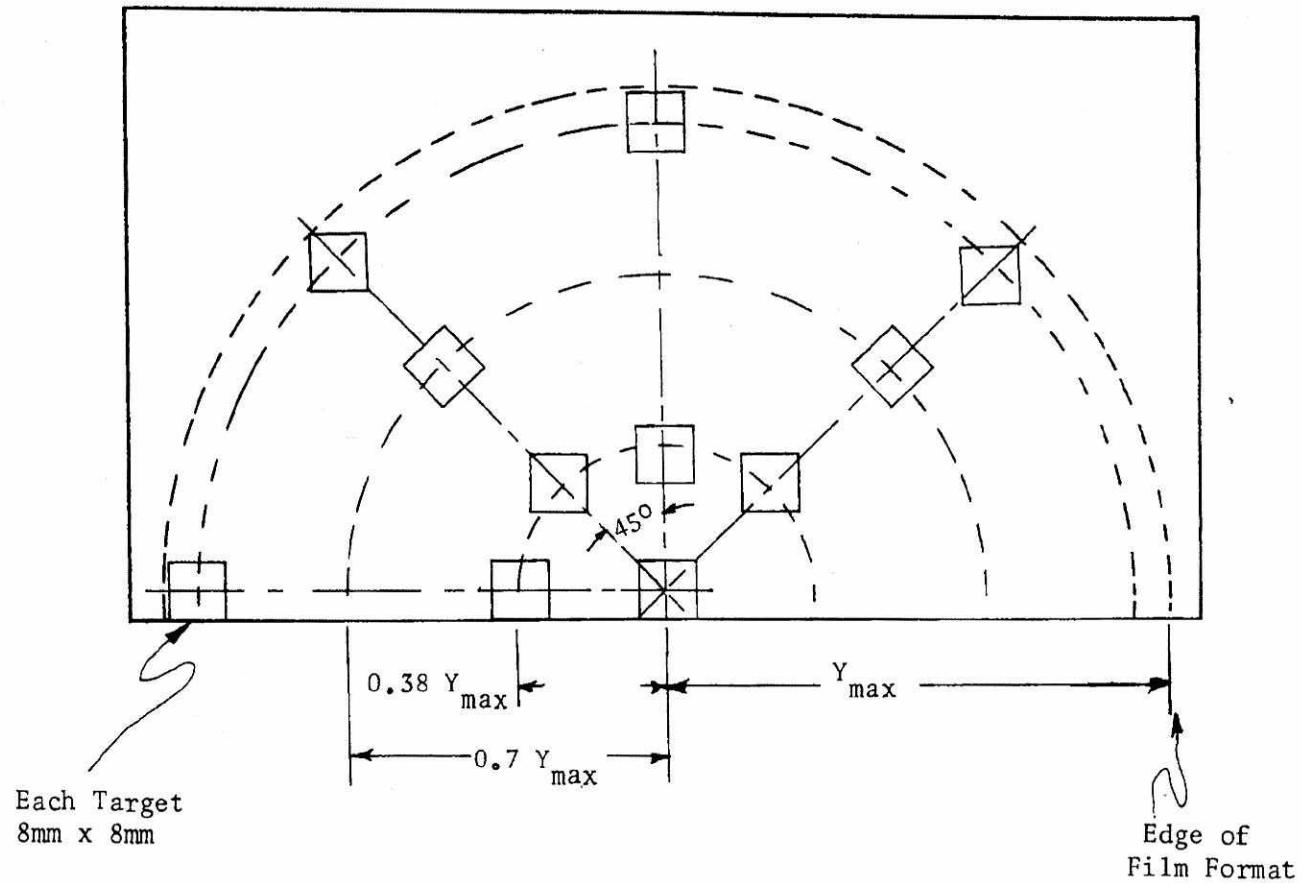


Figure 6.2-7. Photographic Target Format

Handle via BYEMAN
Control System Only~~SECRET~~ D

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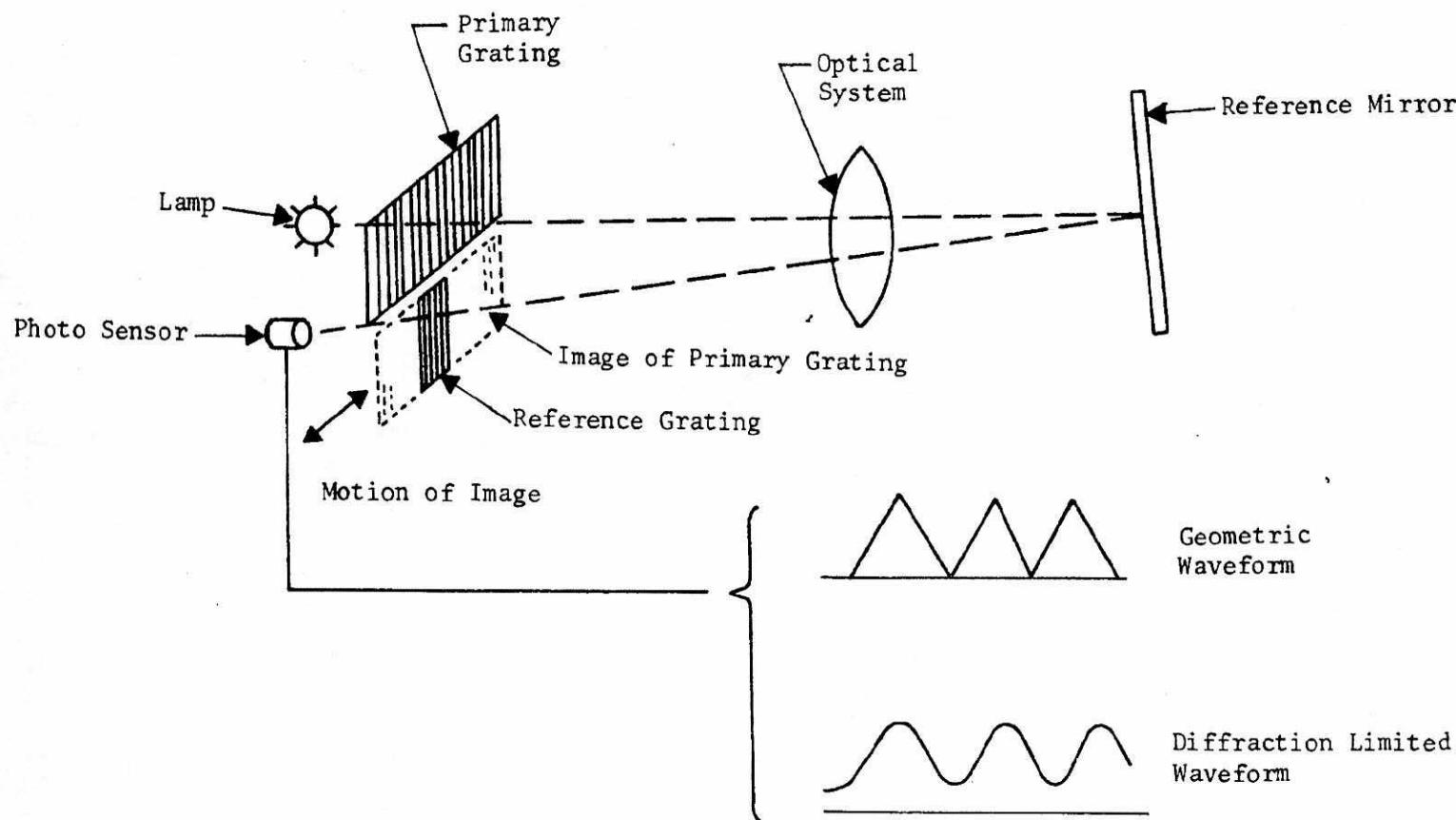


Figure 6.2-8. Optical Measurement of Image Smear.

Handle via BYEMAN
Control System Only

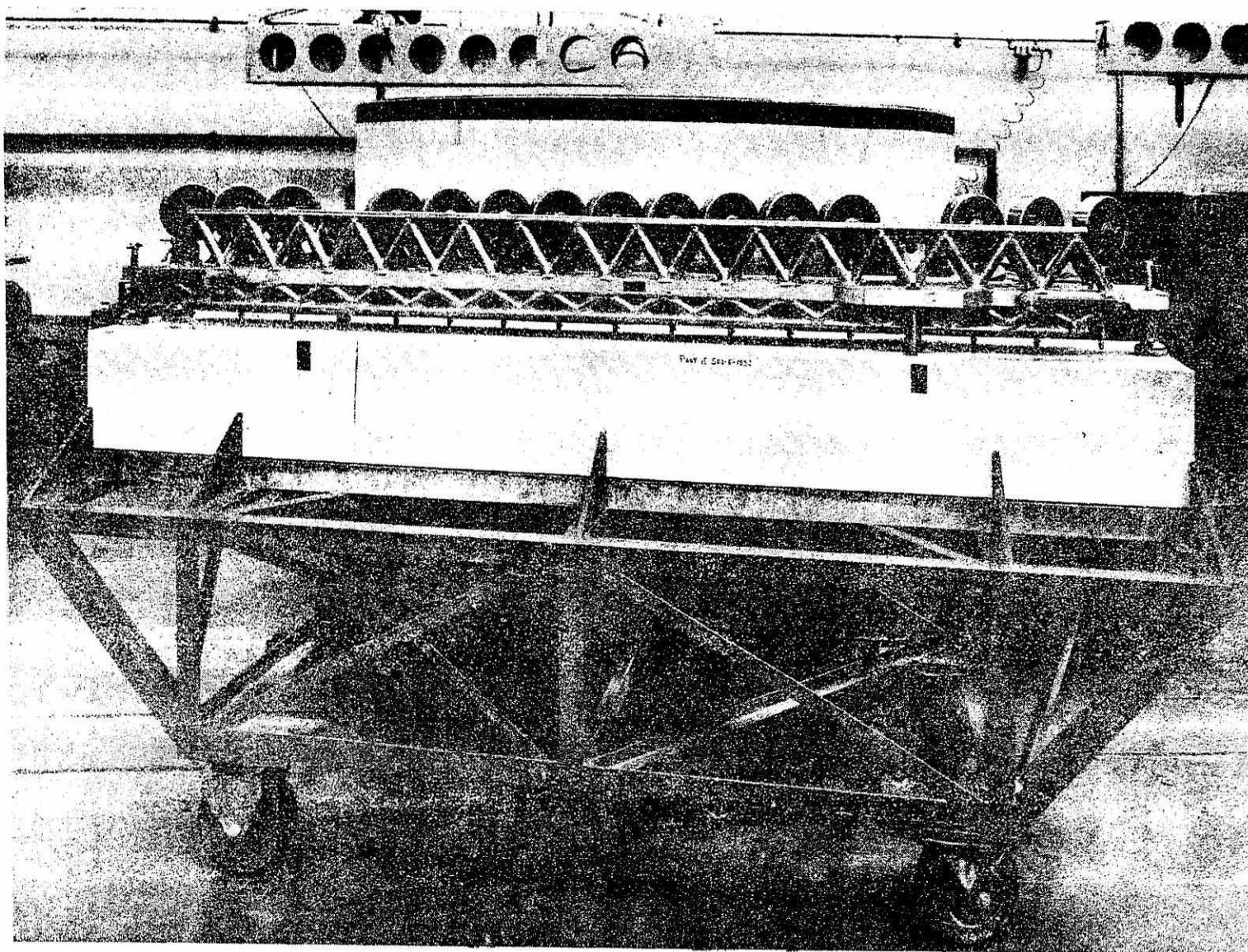
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BIF-008- F-035081-RH

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(Control Number)



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Figure 6.2-15. Profiling Spherometer on Pyroceram Master

Handle via BYEMAN
Control System Only

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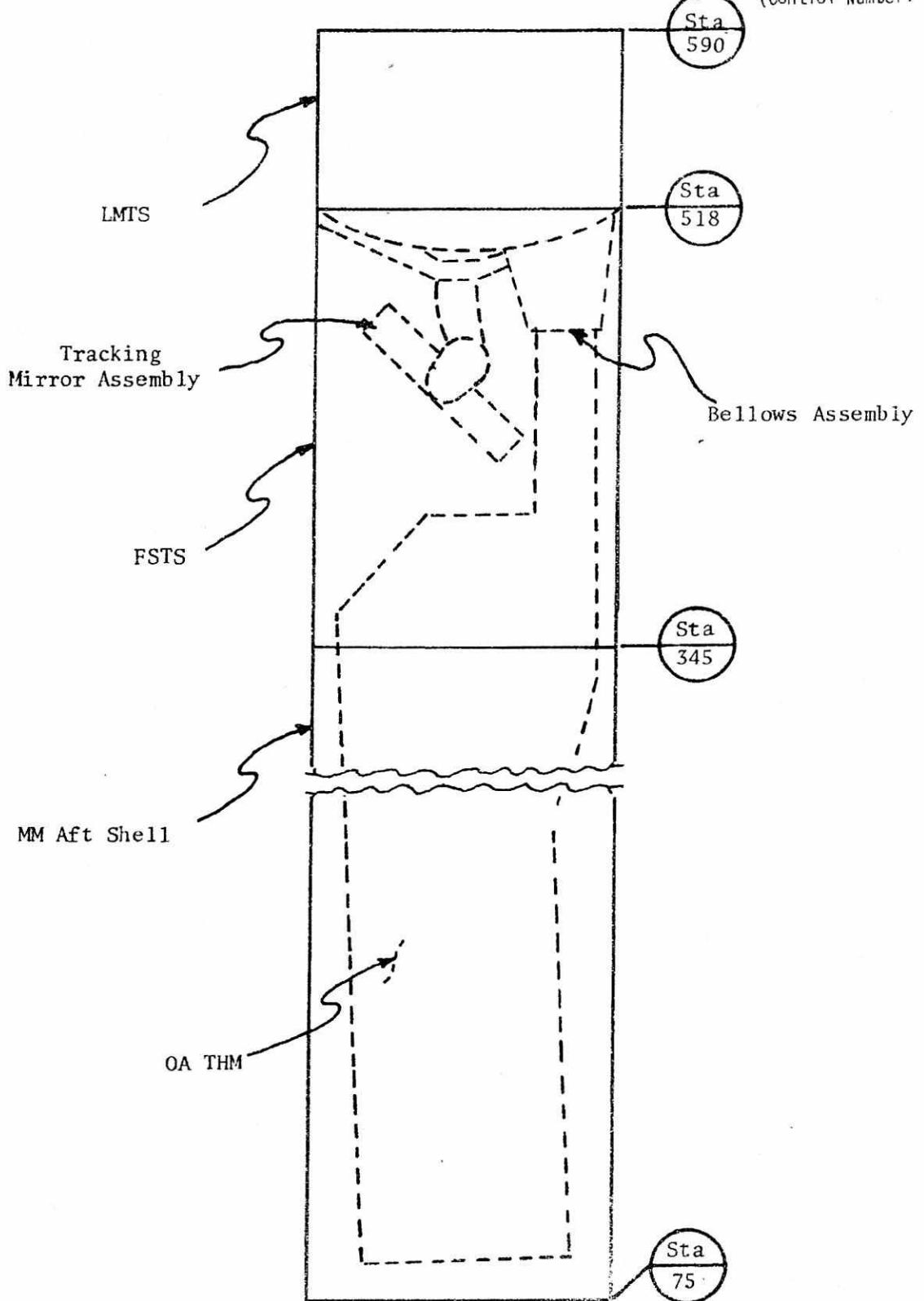
~~SECRET~~ DBIF-008- F-035081-RH -68
(Control Number)

Figure 6.3-1. MMTHM Assembly Schematic

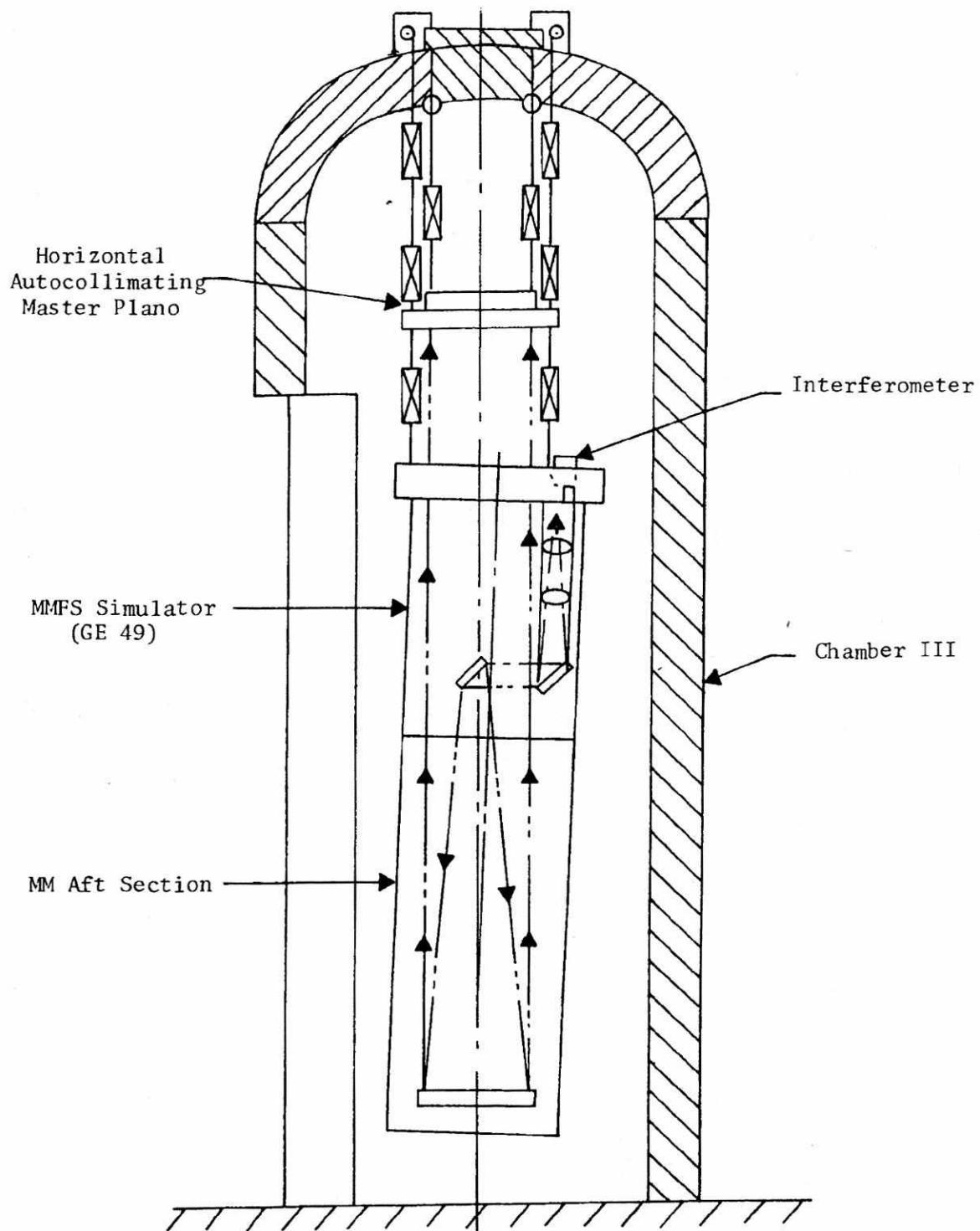
~~SECRET~~ DBIF-008- F-035081-RH -68
(Control Number)

Figure 6.4-1. Mission Module Aft Section Isothermal Optical Quality Test Configuration in Chamber III

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BIF-008- F-035081-RH -68
(Control Number)

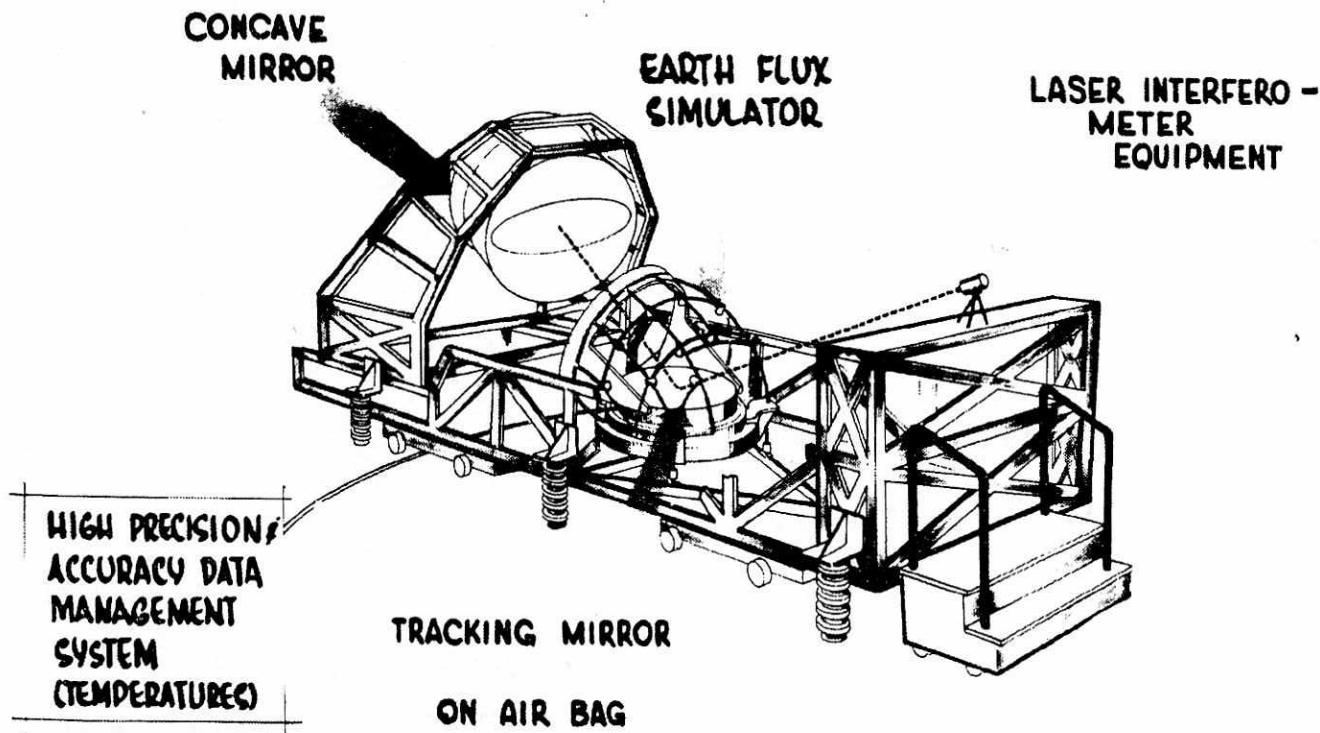


Figure 6.4-2. Tracking Mirror Thermo-Optical Tests

Handle via BYEMAN
Control System Only

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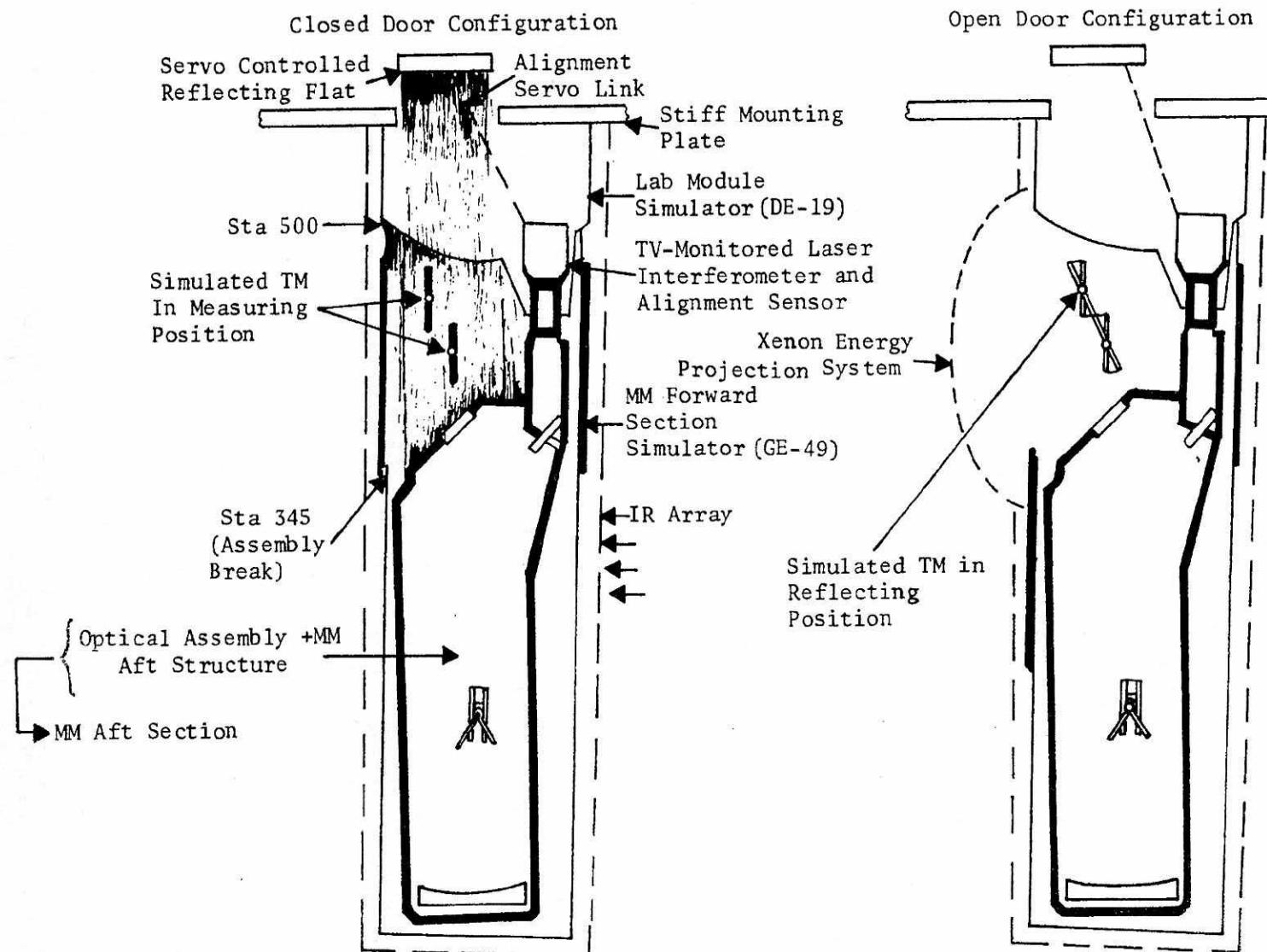
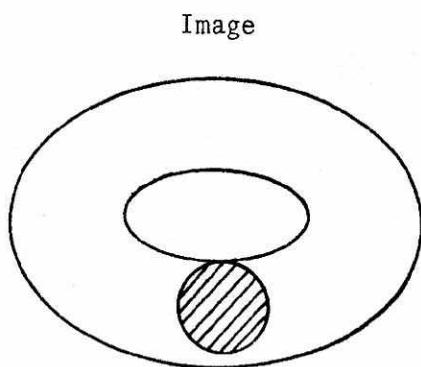
~~SECRET~~ DBIF-008- F-035081-RH -68
(Control Number)

Figure 6.4-3. MMAS Thermal/Optical Test Configuration Chamber A

Handle via BYEMAN
Control System Only~~SECRET~~ D

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(Control Number)

6-72
System Apertures
With Sub-Aperture
Interference Pattern
Superimposed (Typical
Location)

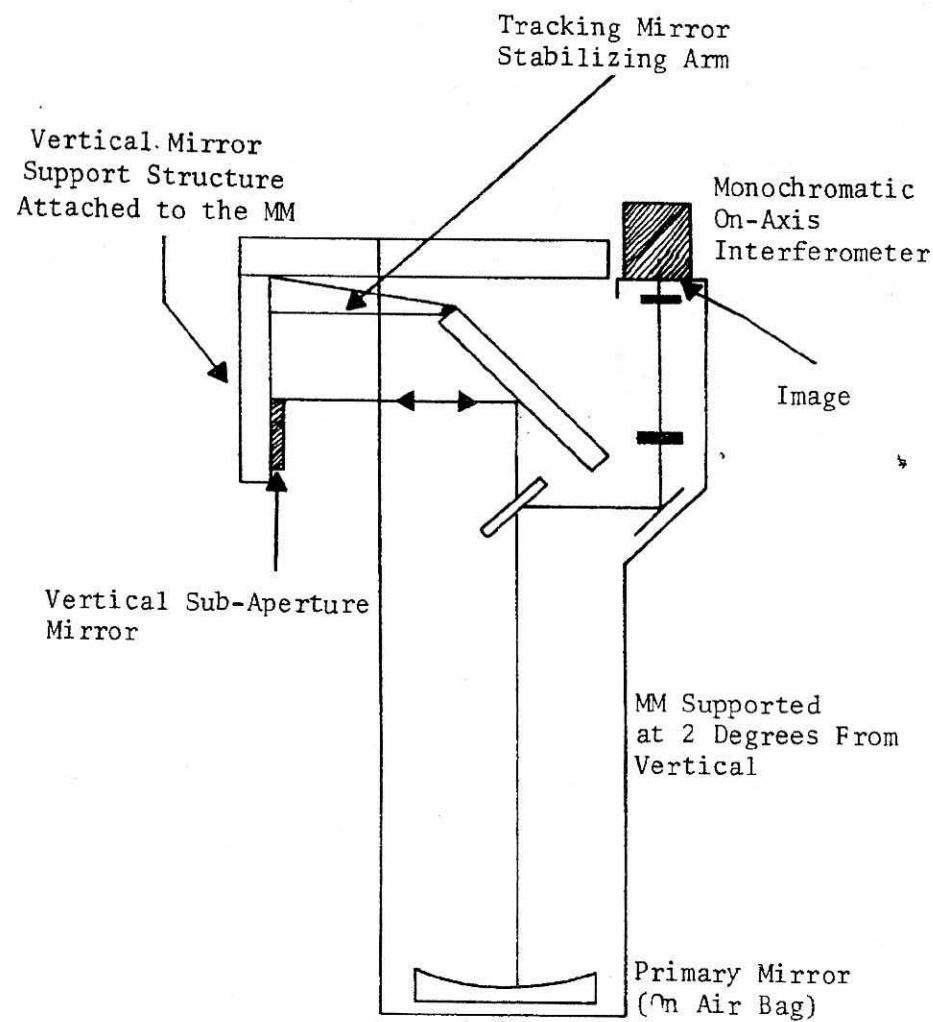


Figure 6.4-4. Sub-Aperture Optical Test Configuration

Handle via BYEMAN
Control System Only

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B1F-008- F-035081-RH

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(Control Number)

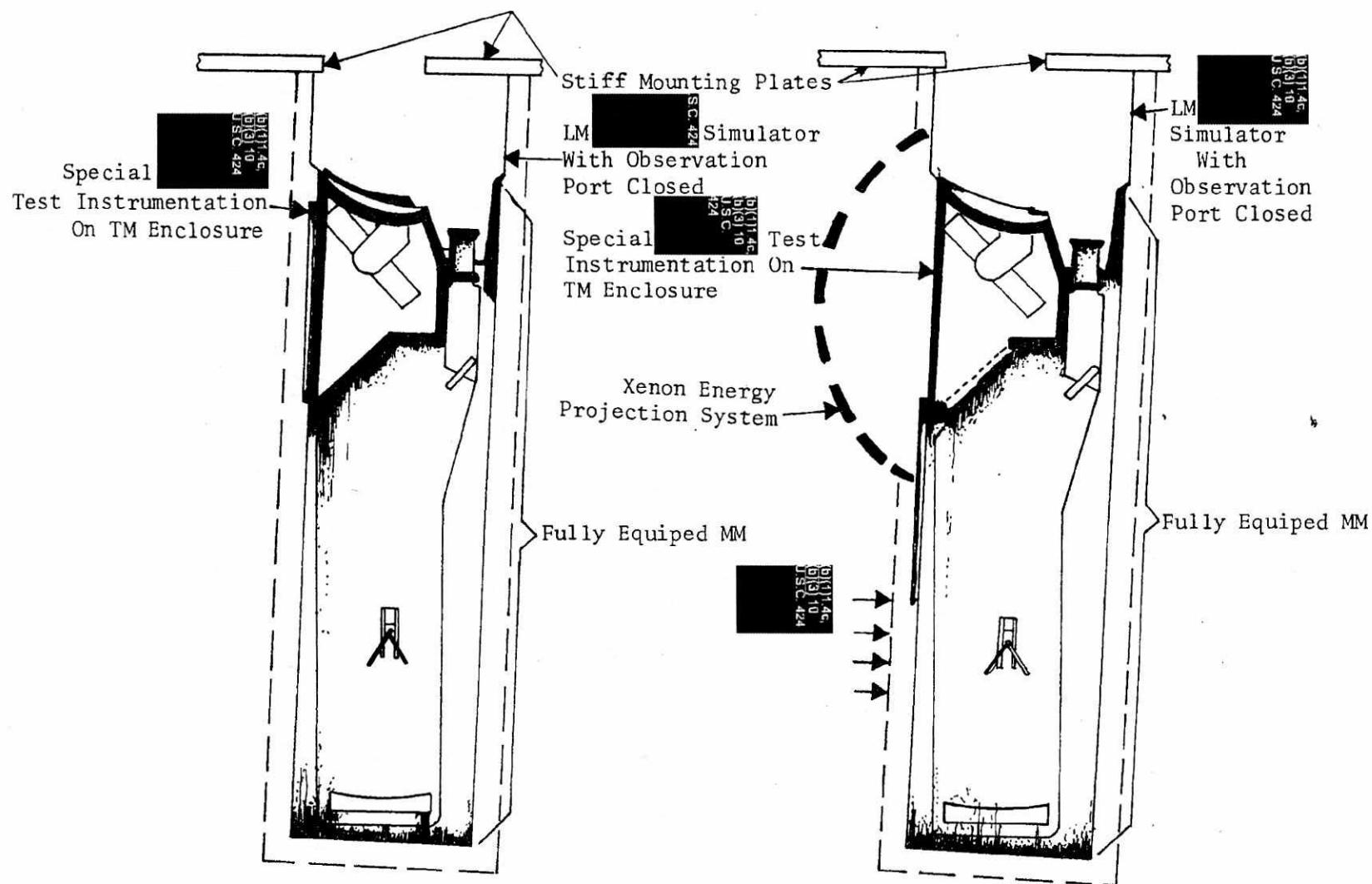


Figure 6.4-5. MM

Vacuum Test Configuration in Chamber A

Handle via BYEMAN
Control System Only~~SECRET~~

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(Control Number)

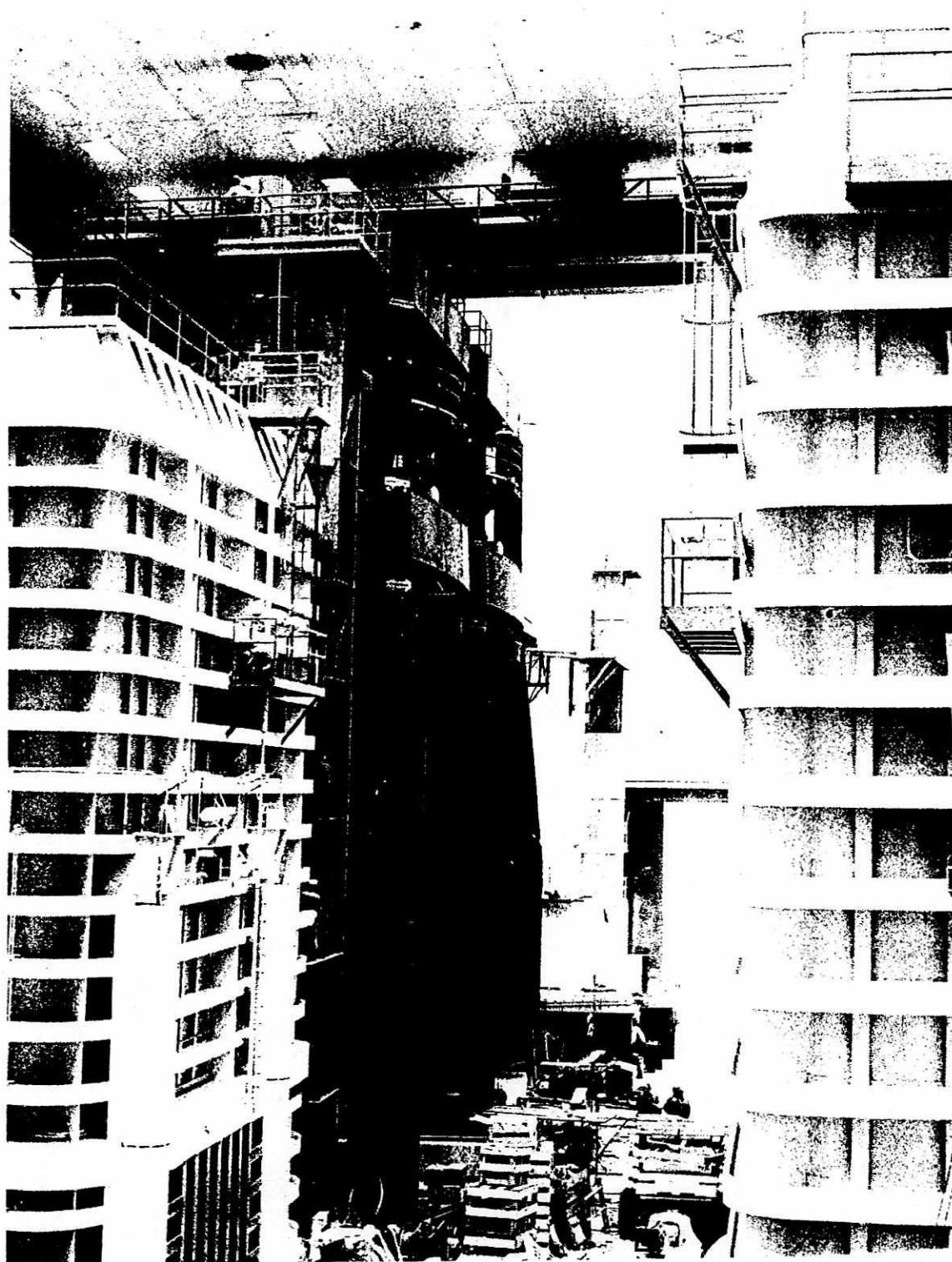
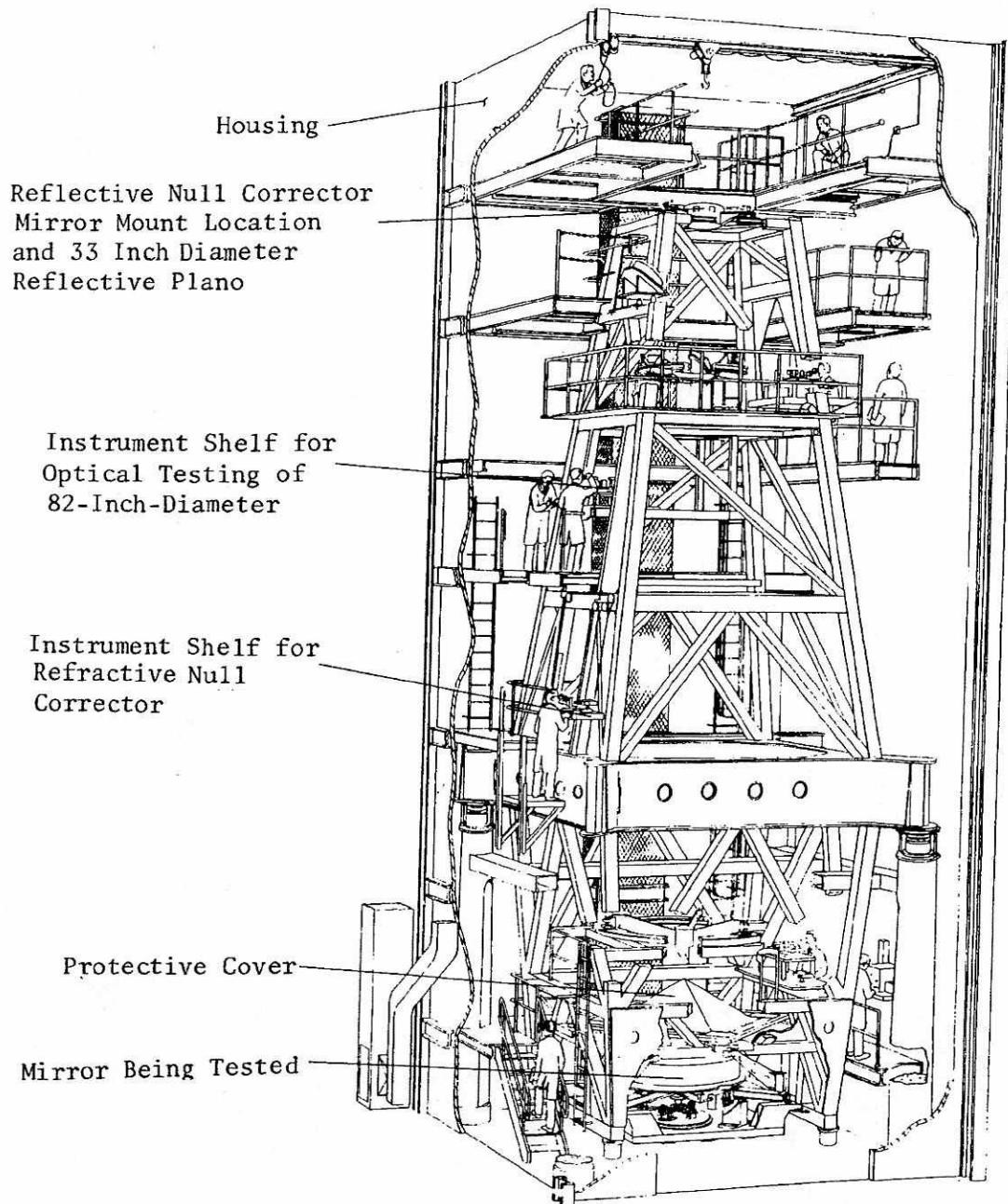


Figure 6.5-1. Test Facility - High Bay Area

6-79

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Handle via BYEMAN
Control System Only

~~SECRET~~ DB1F-008- F-035081-RH -68
(Control Number)Figure 6.5-2. Chamber I_{em}

6-83

~~SECRET~~ DHandle via BYEMAN
Control System Only

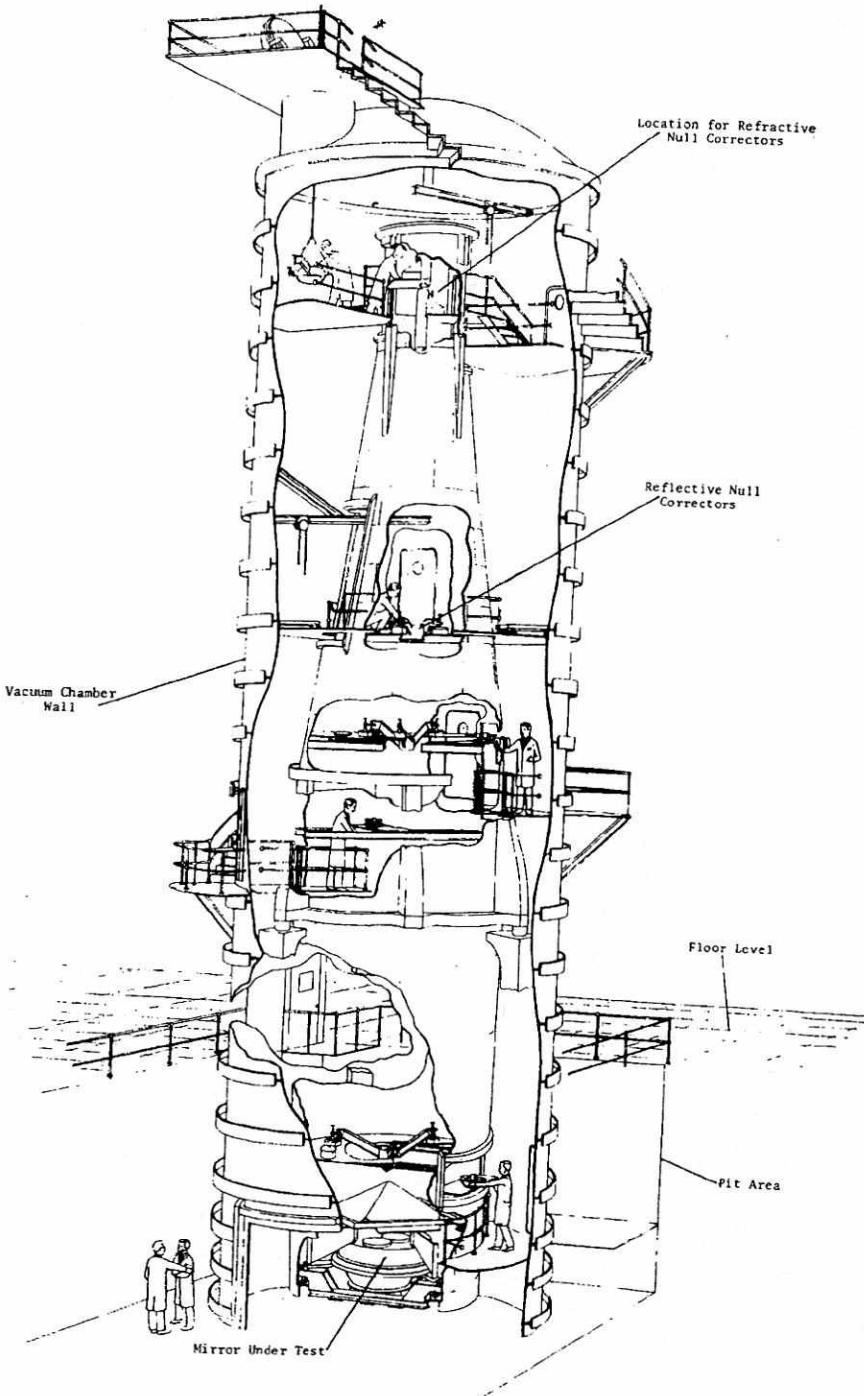
~~SECRET~~BIF-008- F-035081-RH -68
(Control Number)

Figure 6.5-3. Chamber I

~~SECRET~~ D

BIF-008- F-035081-RH -68
(Control Number)

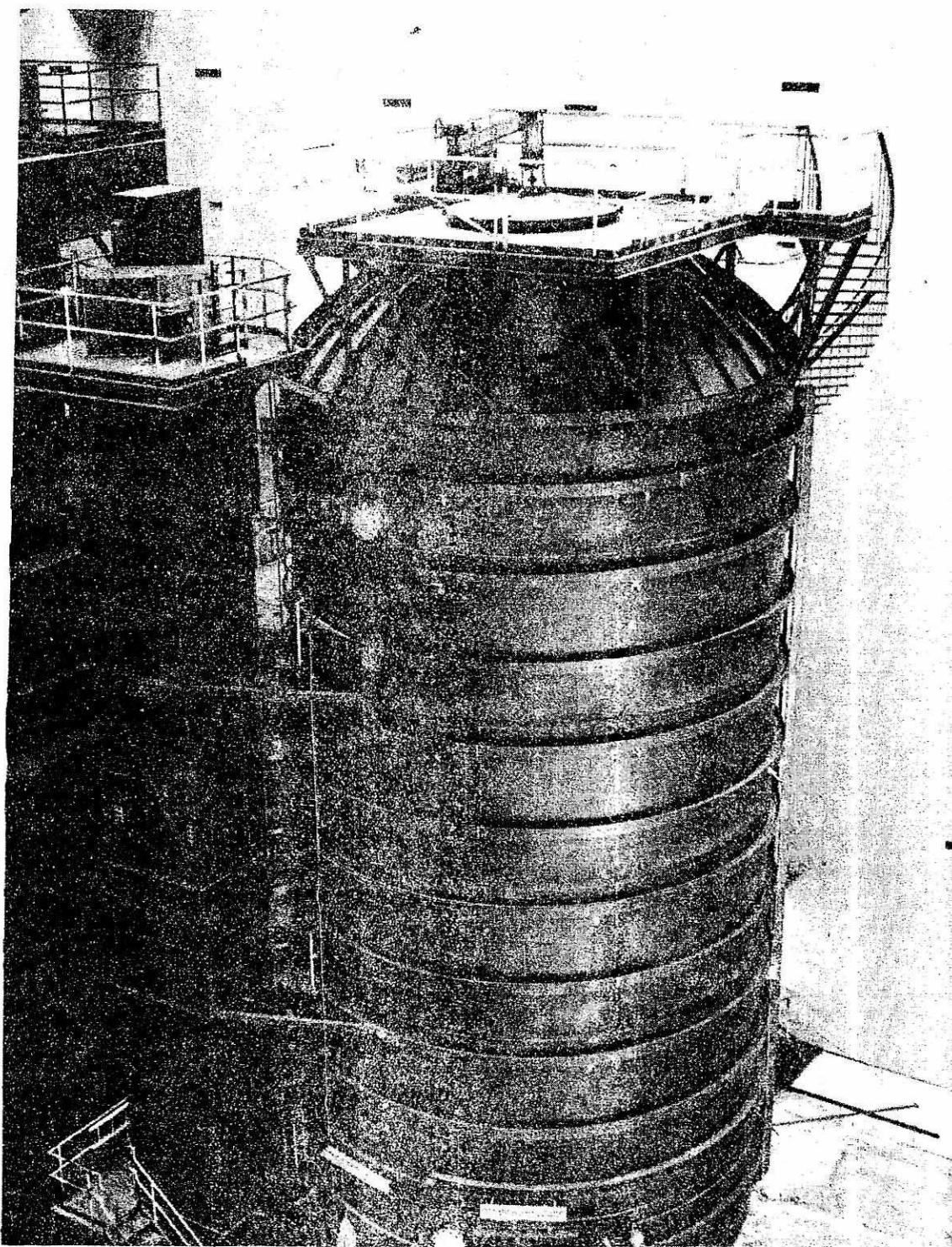


Figure 6.5-4a. Chamber I

6-86

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Handle via BYEMAN
Control System Only

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(Control Number)

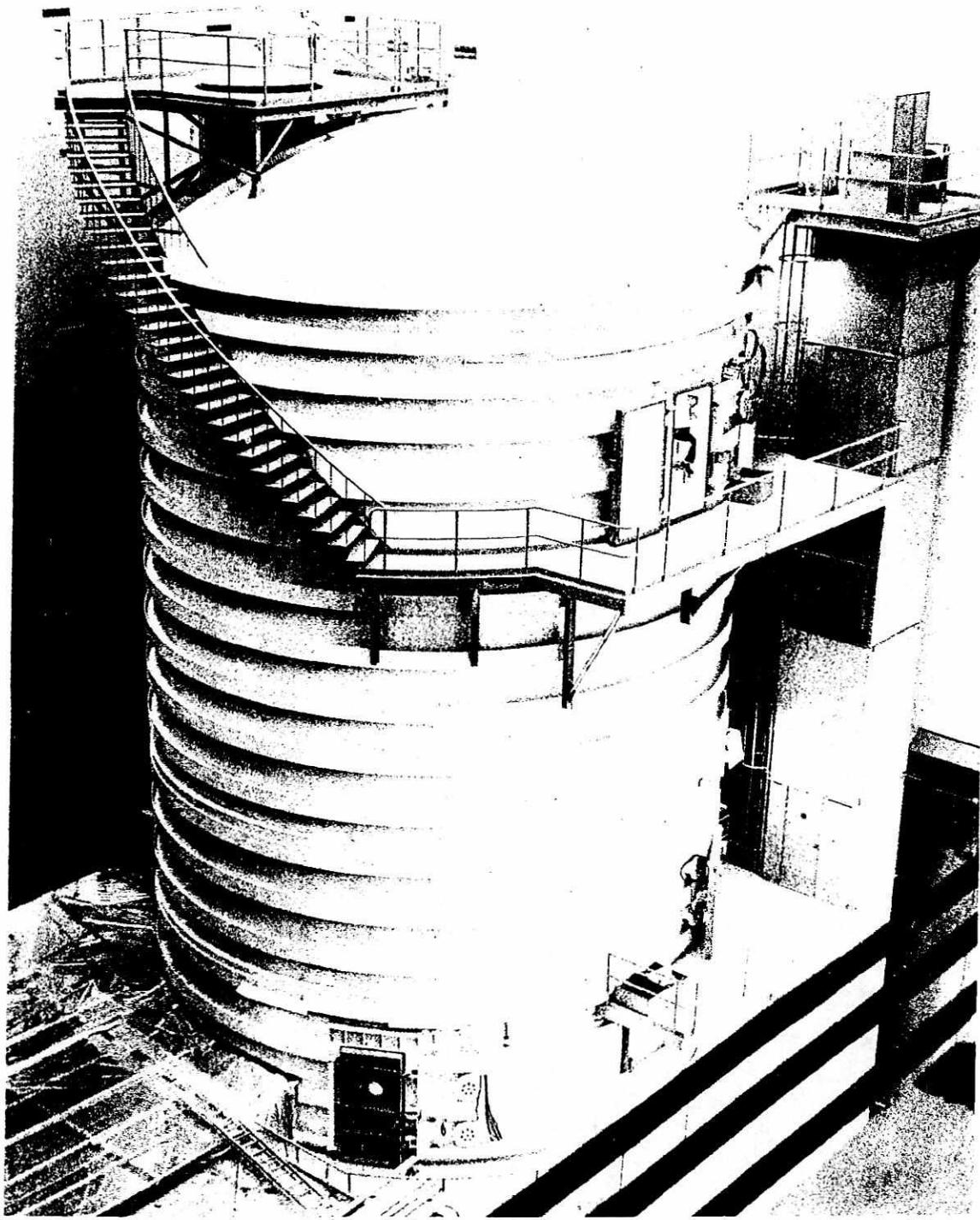
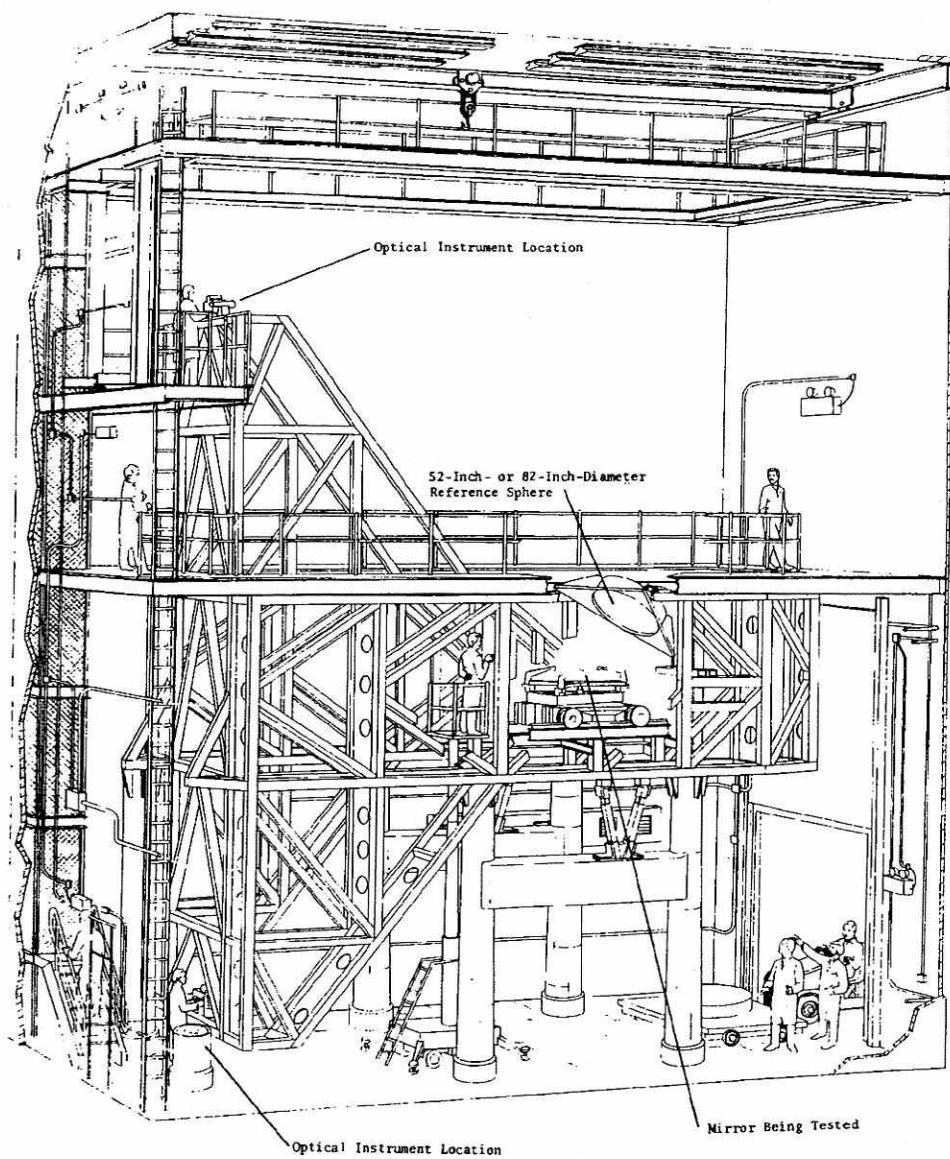


Figure 6.5-4b. Chamber Ig

~~SECRET~~ DB1F-008- F-035081-RH -68
(Control Number)Figure 6.5-5. Chamber II_{em}

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BIF-008- F-035081-RH -68
(Control Number)

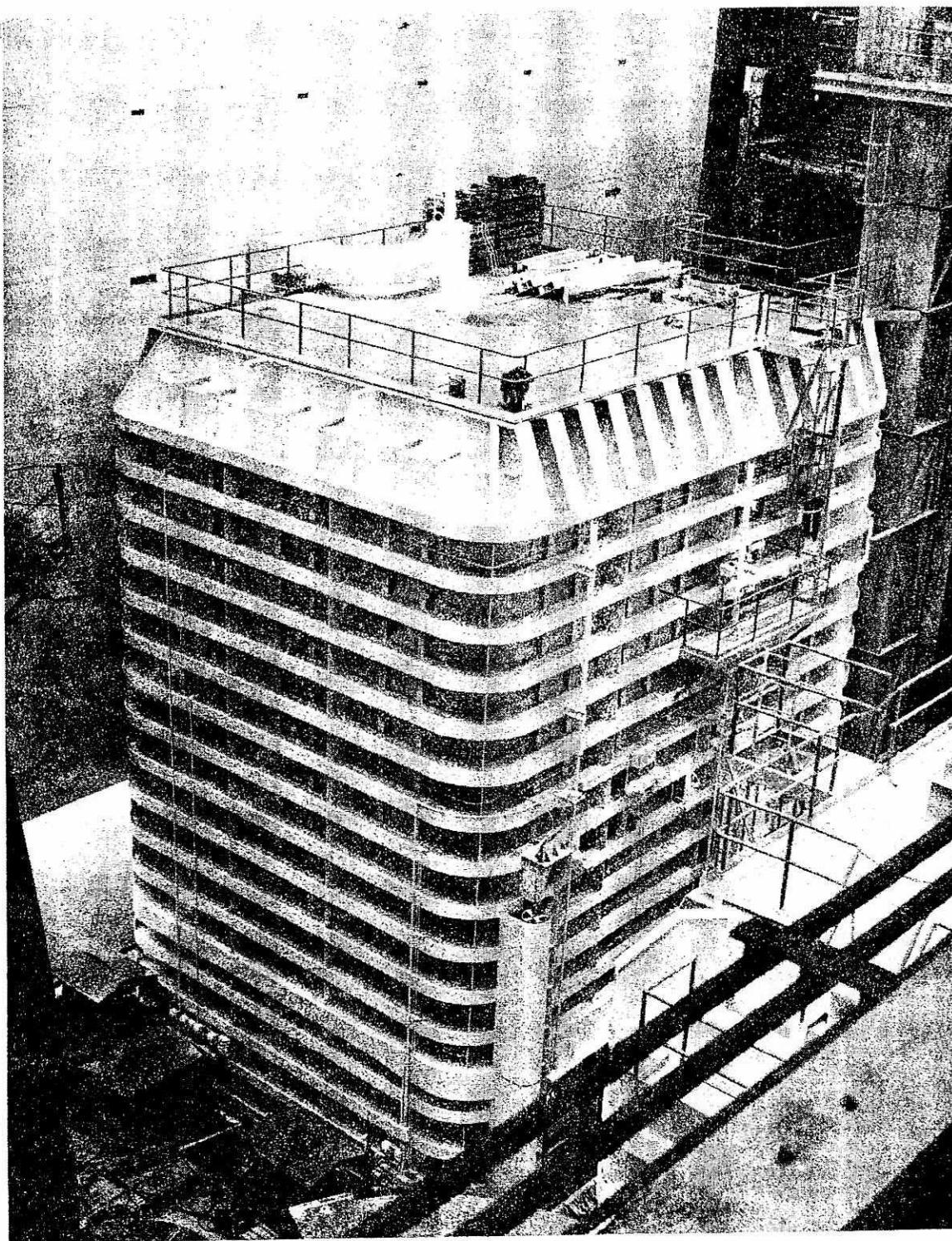


Figure 6.5-6. Chamber IIg

6-91

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Handle via BYEMAN
Control System Only

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B1 F-008- F-035081-RM -68
(Control Number)

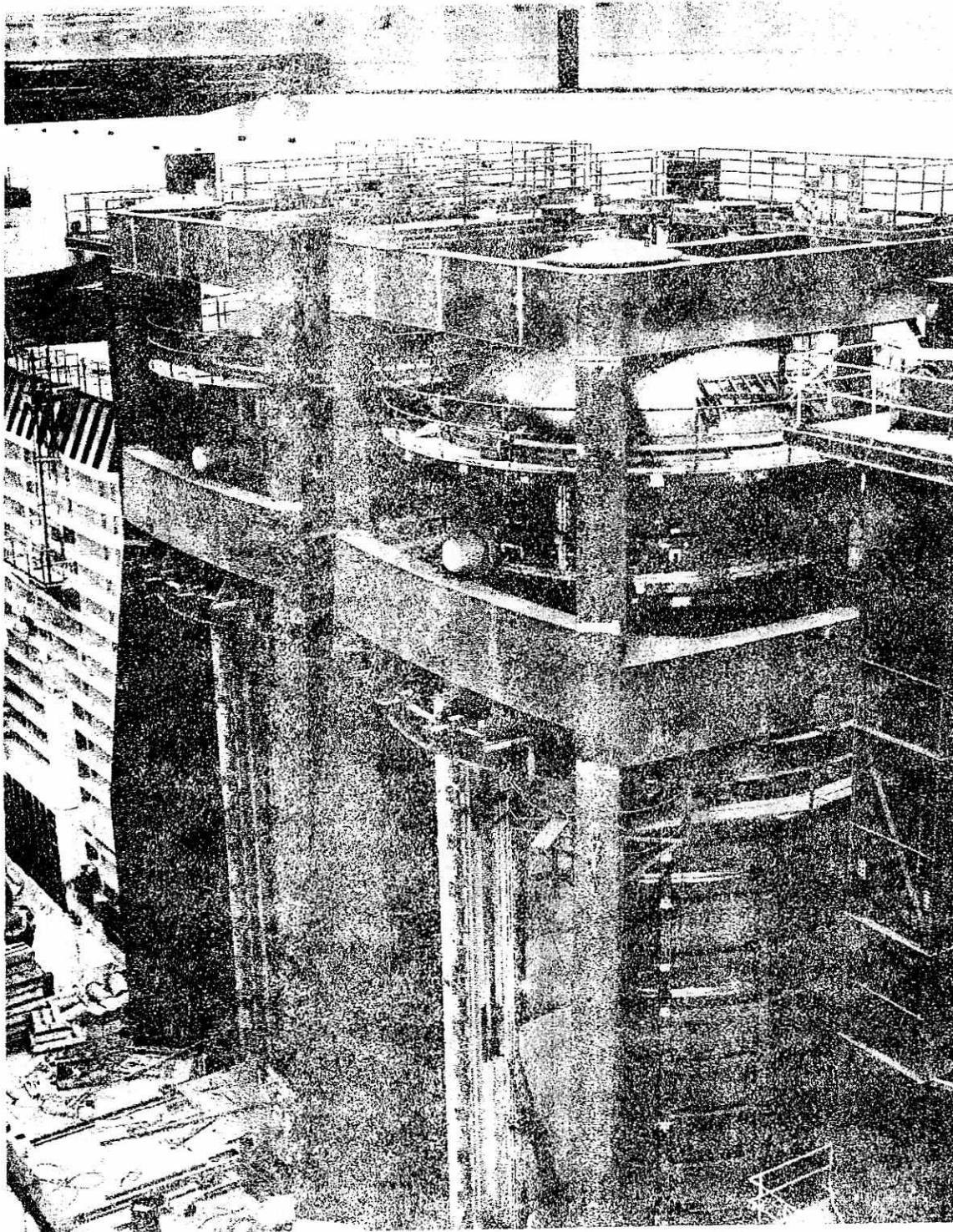


Figure 6 C-7. Chambers IIIa and b

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Handle via BYEMAN
Control System Only

~~SECRET~~ DB1F-008- F-035081-RH -68
(Control Number)

6-94

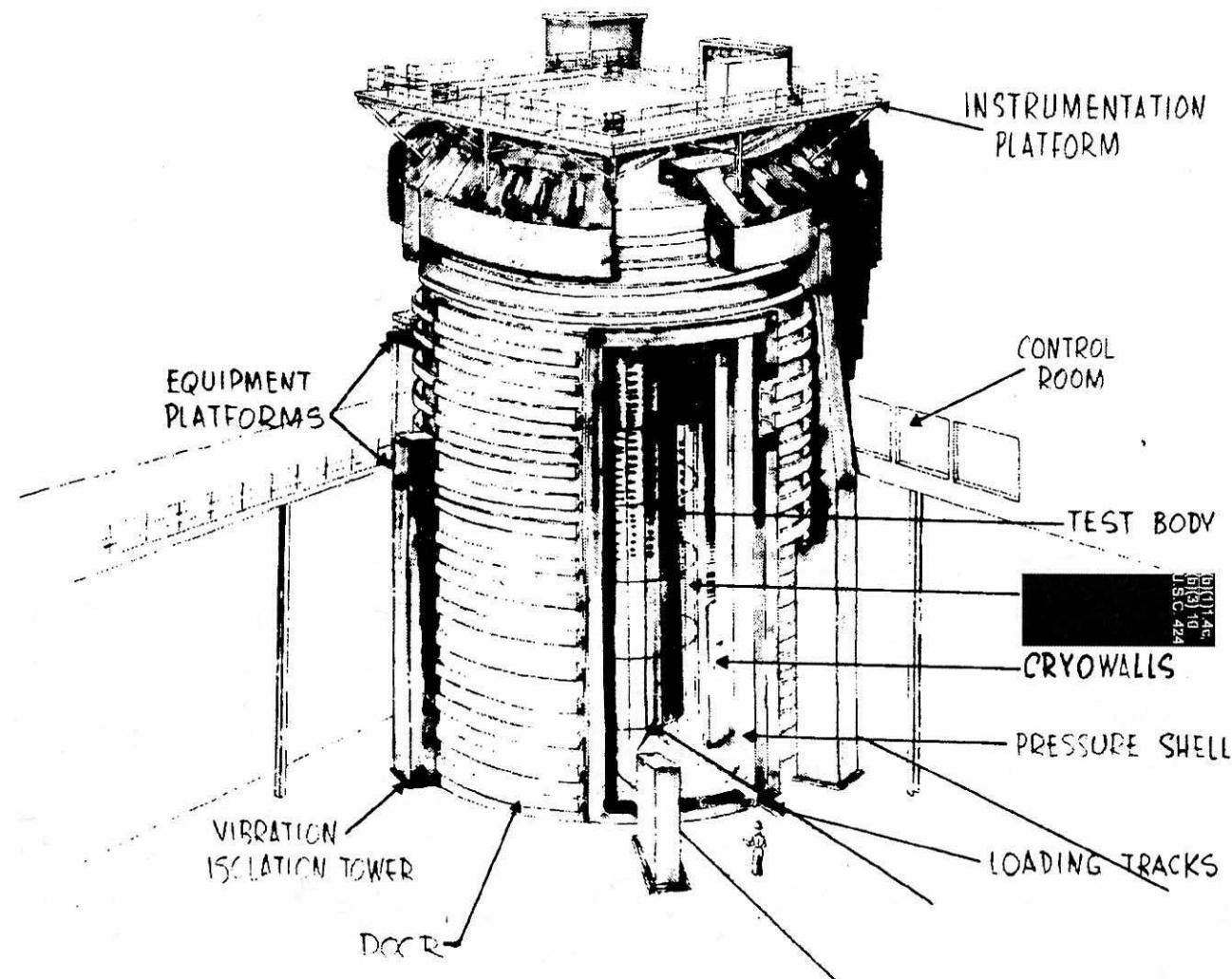


Figure 6.5-8. Chamber A

Handle via BYEMAN
Control System Only~~SECRET~~ D

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D

BIF-008- F-035081-RH -68
(Control Number)



Figure 6.5-9. Chamber A

6-95

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Handle via BYEMAN
Control System Only

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(Control Number)

869

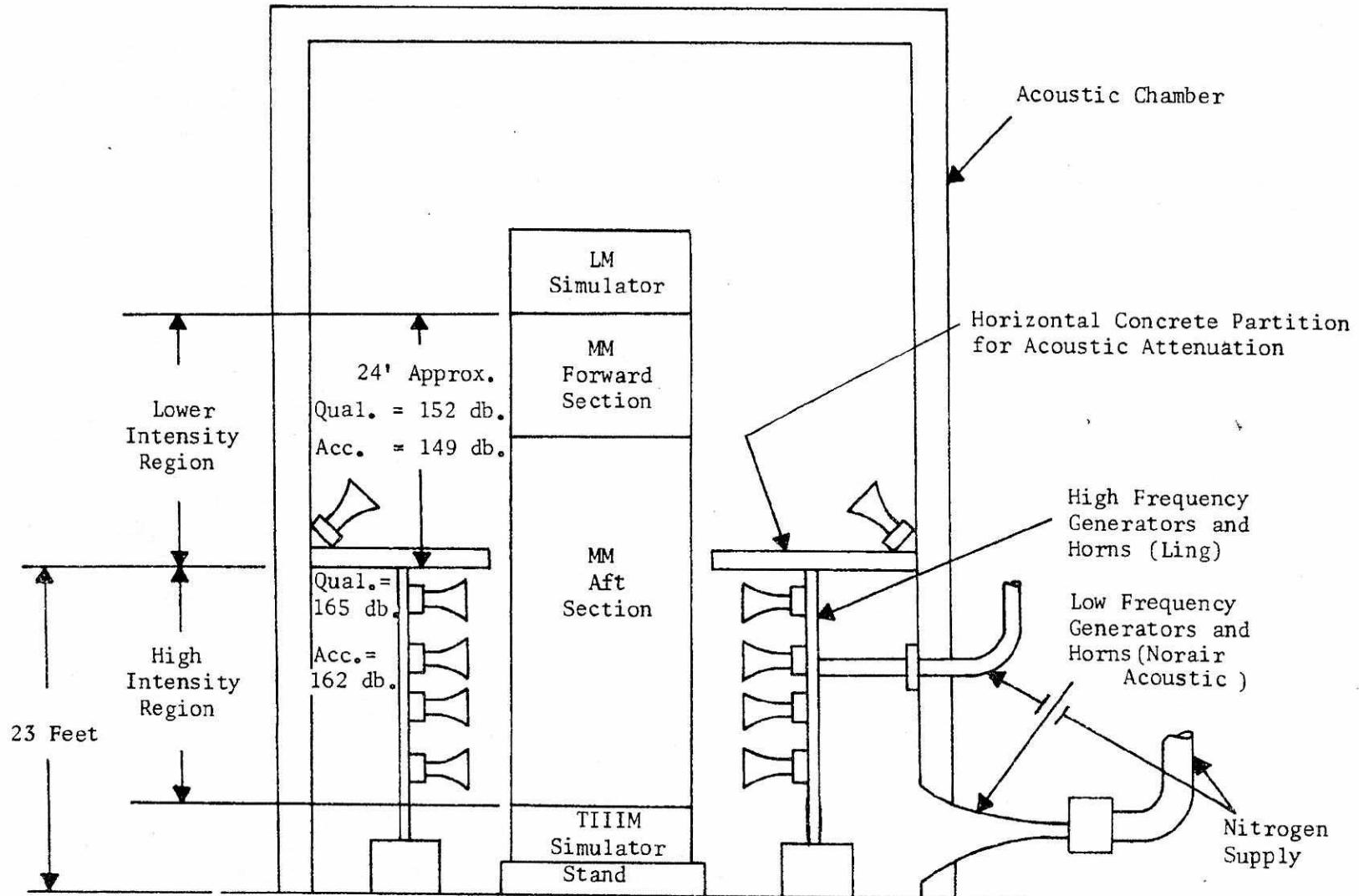


Figure 6.5-10. MM Acoustic Vibration Test Configuration

Handle via BYEMAN
Control System Only~~SECRET~~ D

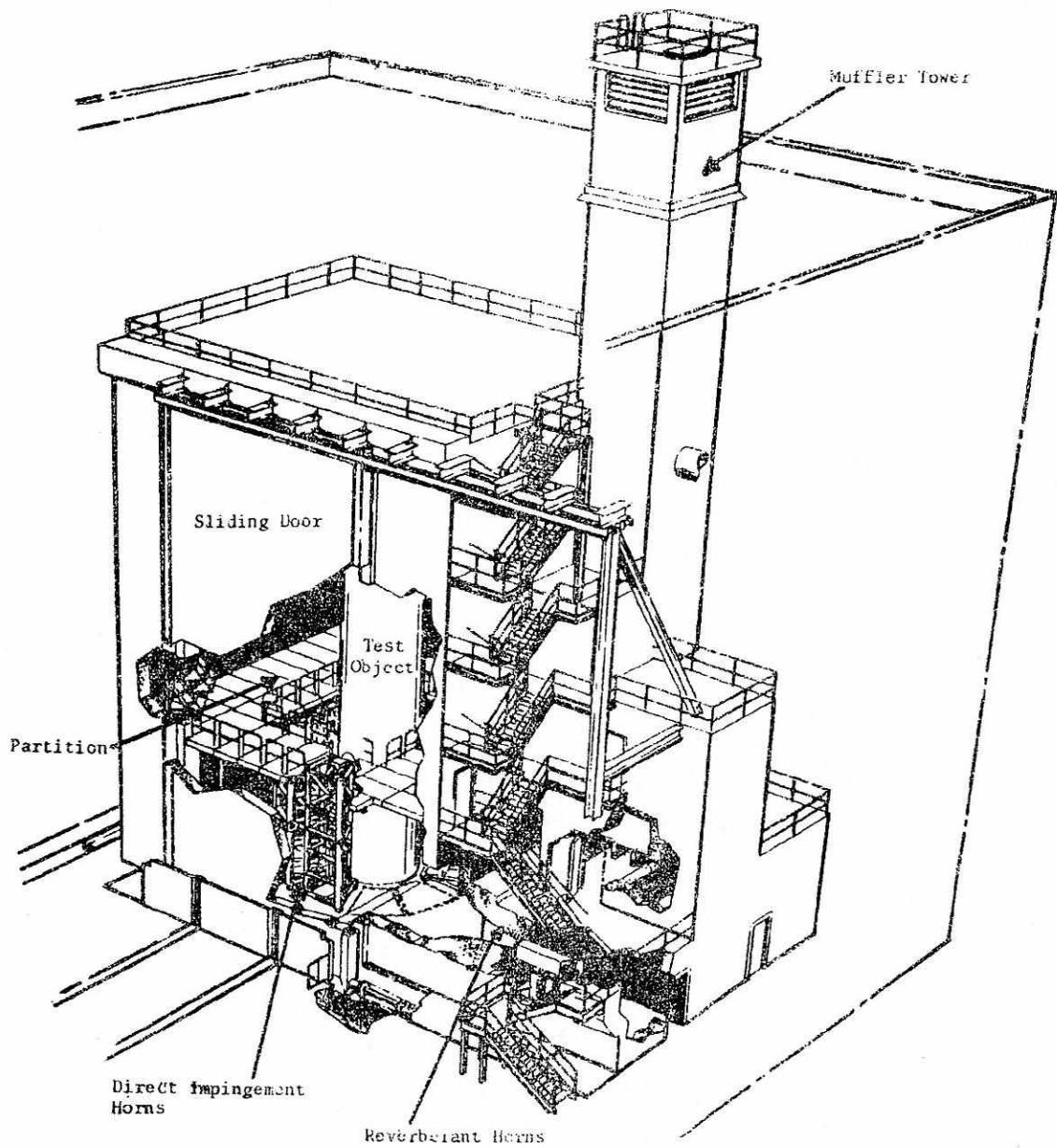
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(Control Number)

Figure 6.5-11. Acoustic Test Chamber

6-99

~~SECRET~~Handle via BYEMAN
Control System Only

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BIF-008- F-035081-RH -68
(Control Number)

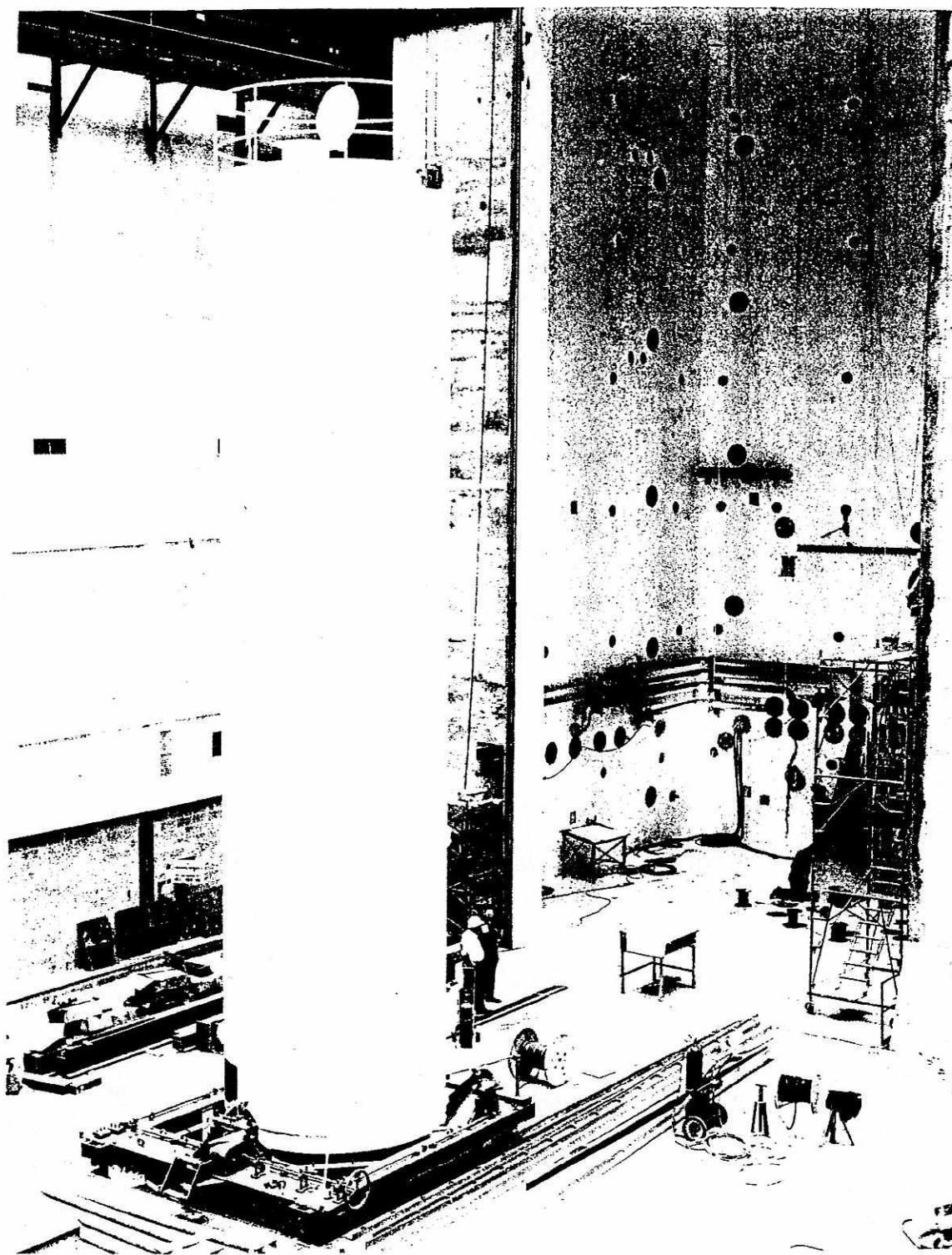


Figure 6.5-12. Acoustic Test Facility

6-101

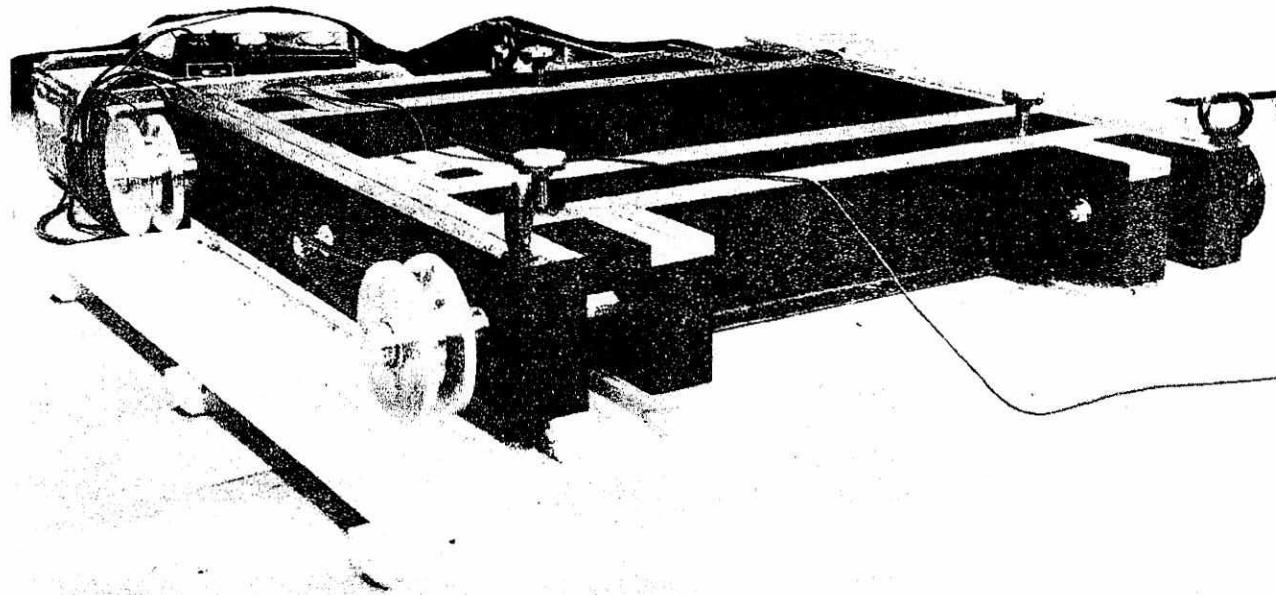
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Handle via BYEMAN
Control System Only

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(Control Number)



6-107

Figure 6.6-1. Positioner Dolly, Chamber II_{EM}

Handle via BYEMAN
Control System Only

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(Control Number)

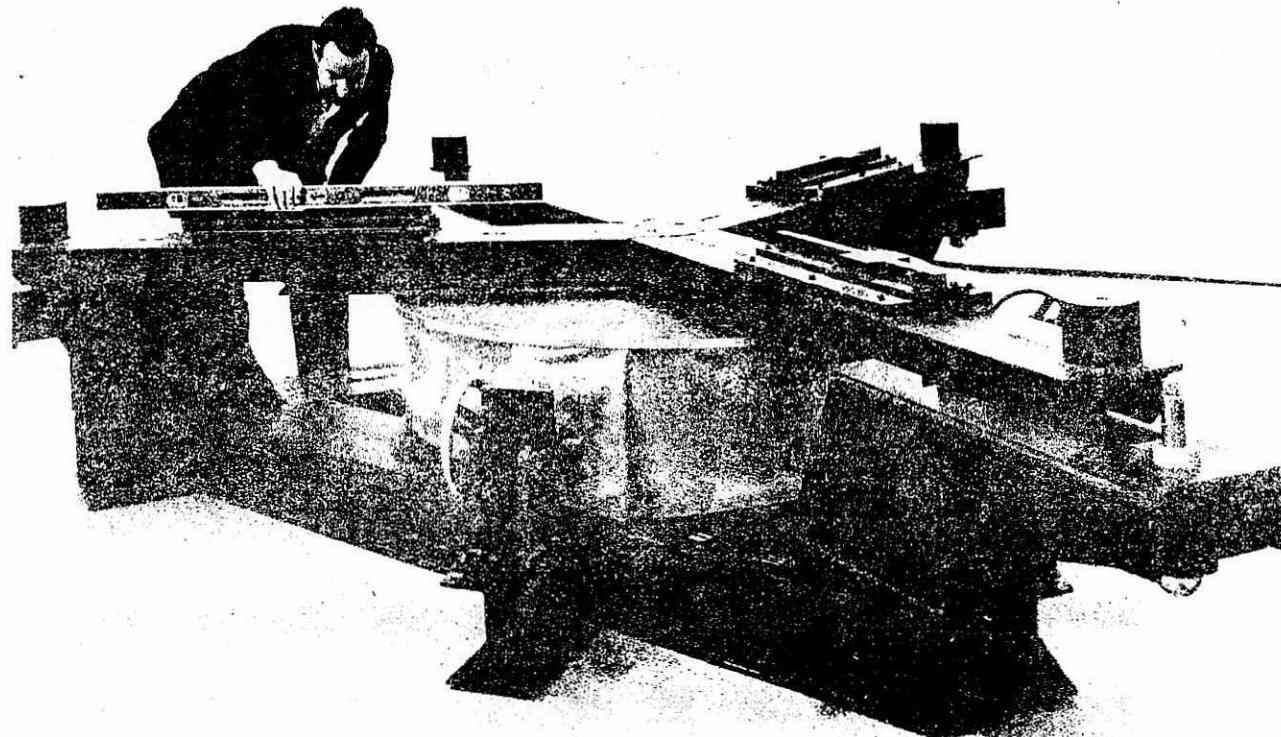


Figure 6.6-2. Upright Adjustable Mirror Support, Chamber I_{EM}

Handle via BYEMAN
Control System Only

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(Control Number)

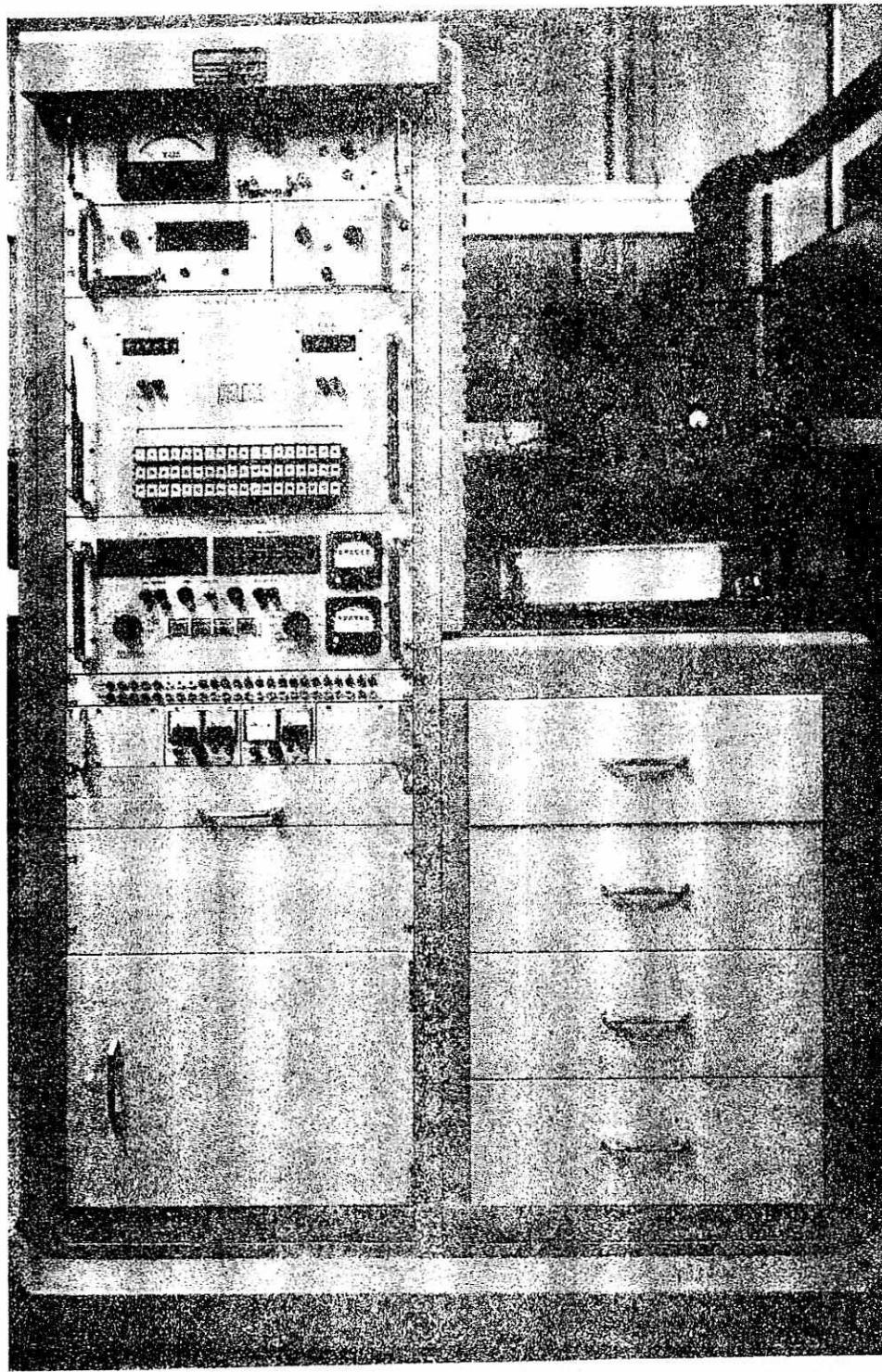
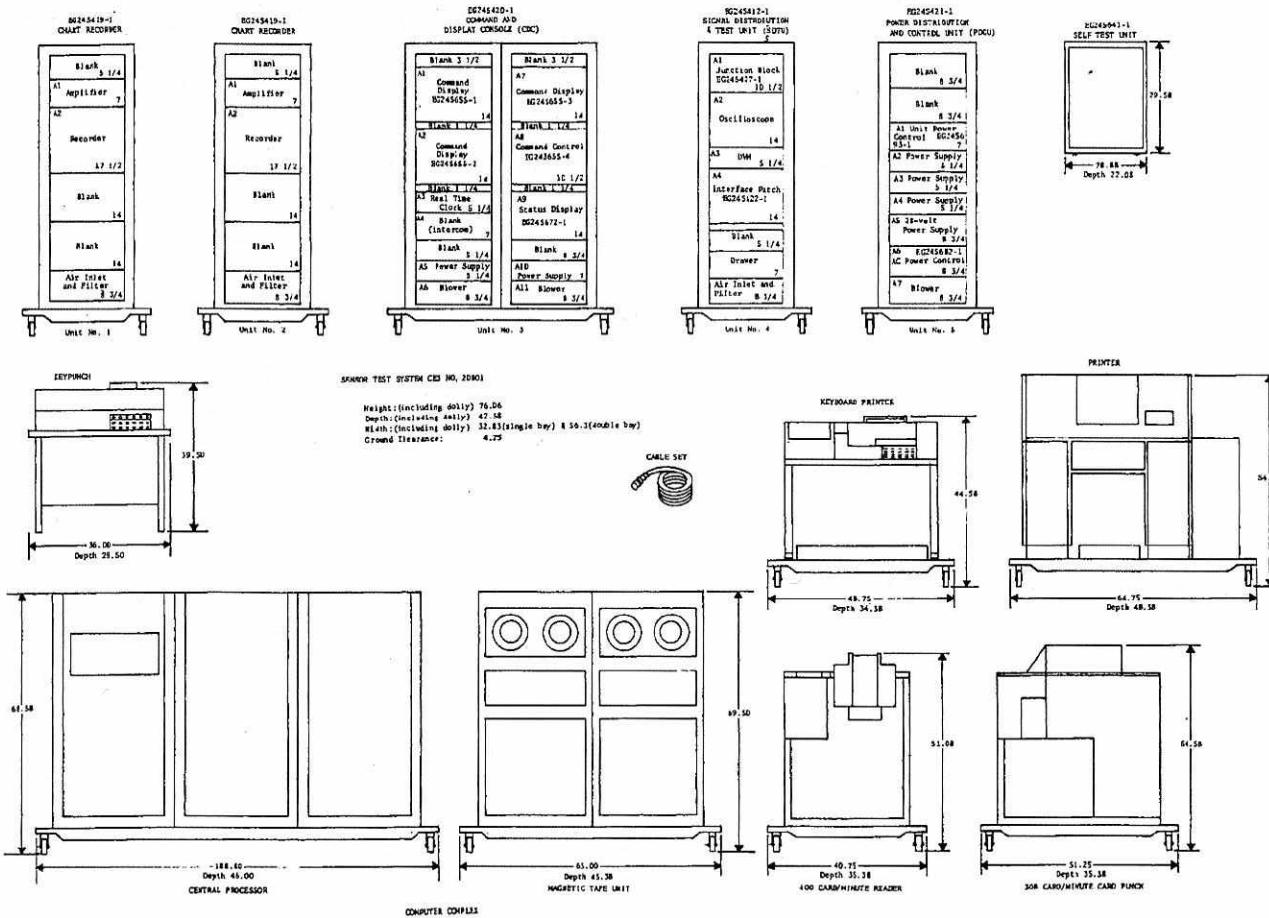


Figure 6.6-3. Instrumentation Processor Test Set
Front Panel View

6-109

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Handle via BYEMAN
Control System Only

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(Control Number)

Handle via BYEMAN
Control System Only

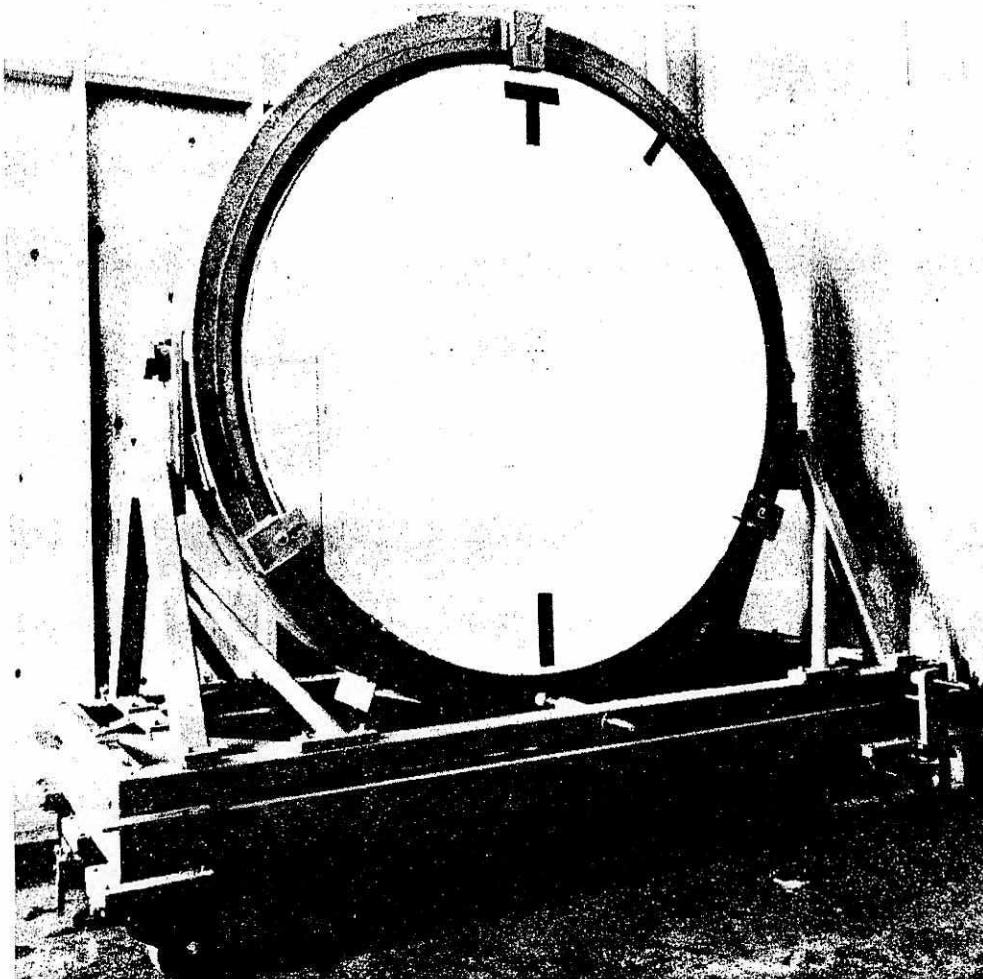
Figure 6.6-4. Layout Drawing of Sensor Test System

6-111

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BIF-008- F-035081-RH -68
(Control Number)



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Figure 6.6-6. Horizontal Test Stand Setup

Handle via BYEMAN
Control System Only

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(Control Number)

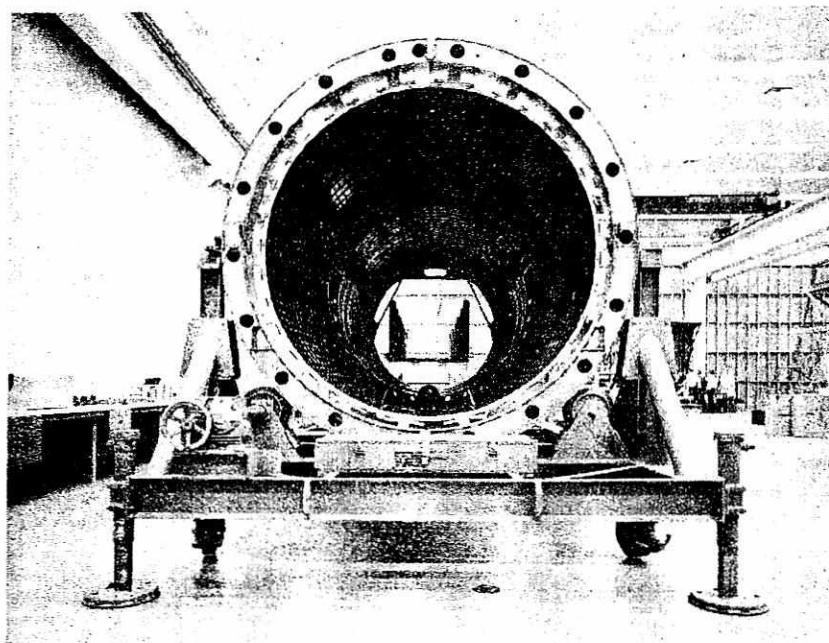
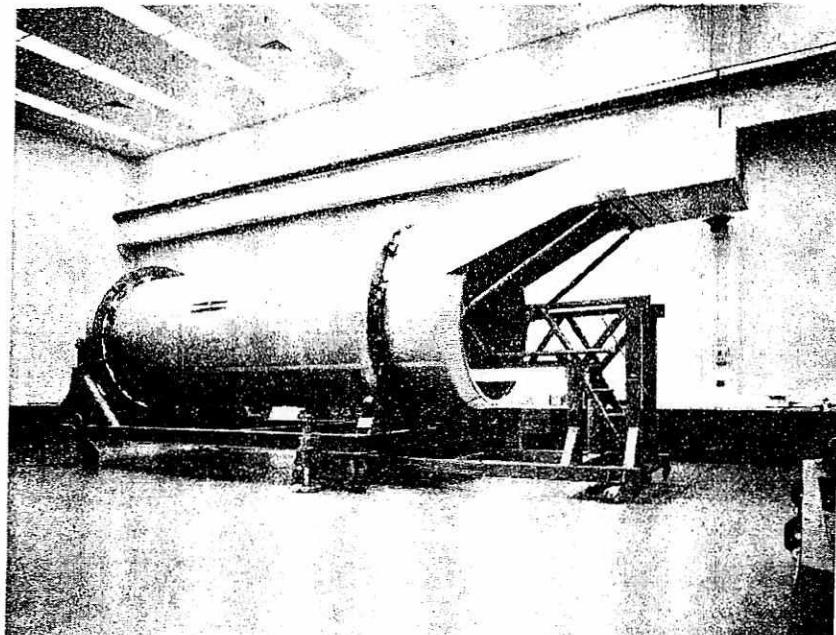


Figure 6.6-7. Checkout Cradle and Cantilever Catwalk
(With SDM Aft Structure)

6-117

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Handle via BYEMAN
Control System Only

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BIF-008- F-035081-RH -68
(Control Number)

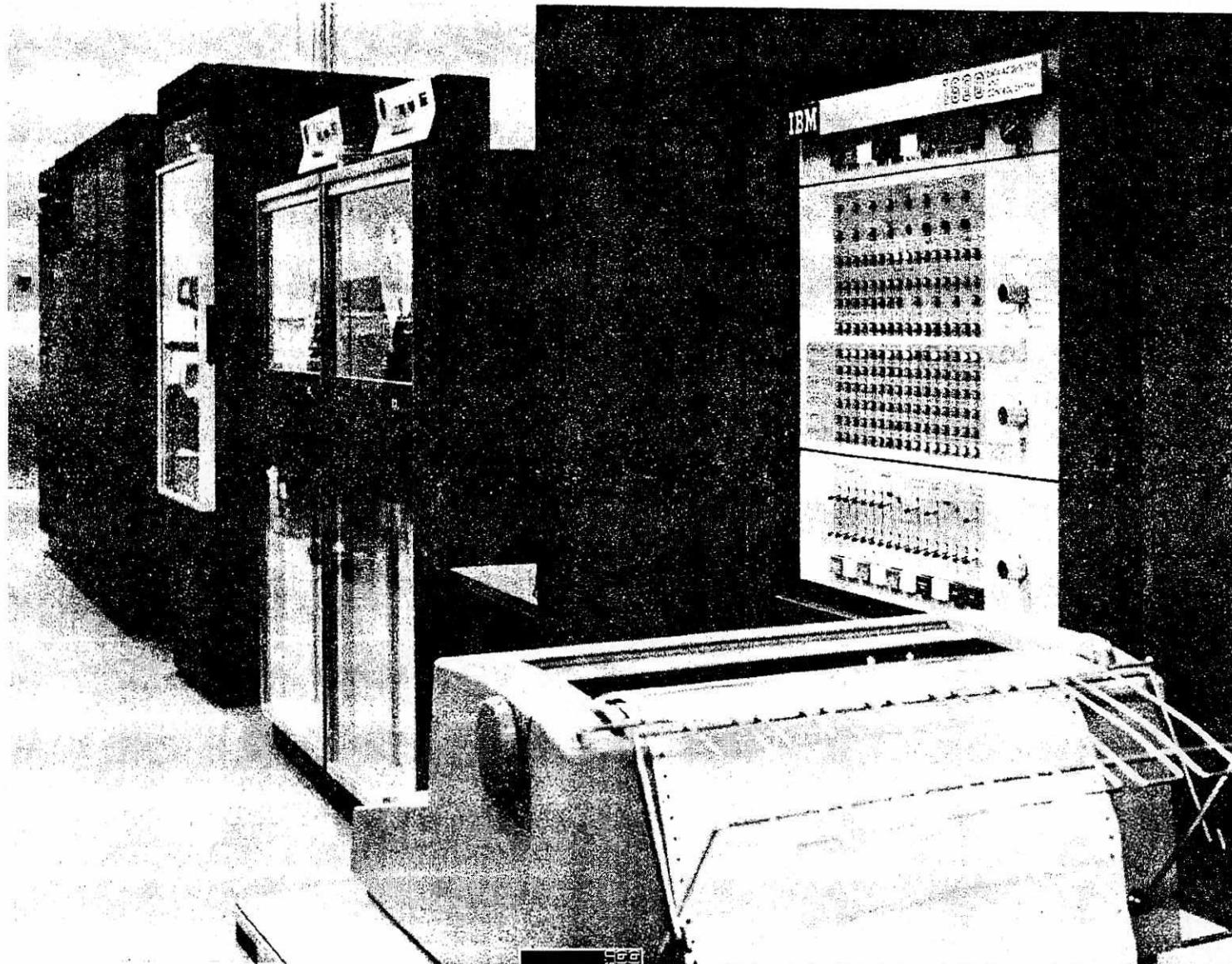


Figure 6.6-8. Data Management System
Central Computer (IBM)

Handle via BYEMAN
Control System Only

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(Control Number)

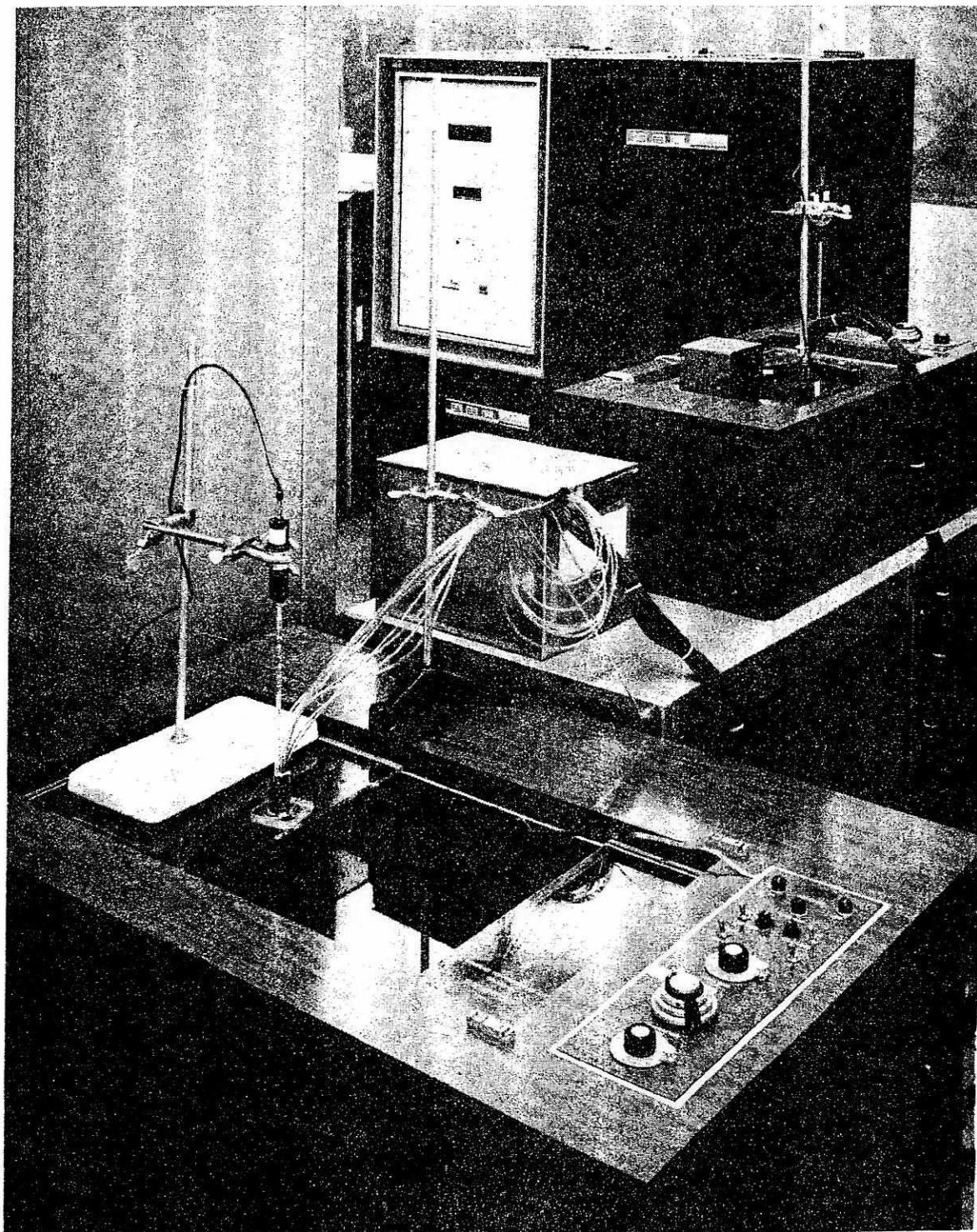


Figure 6.6-9. (b)(1)1.4c, (b)(3) [REDACTED] Data Acquisition Equipment Breadboard (Systems Engineering Laboratories), Shown Being applied in Thermocouple Calibration.

6-121

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Handle via BYEMAN
Control System Only

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BIF-008- F-035081-RH -68
(Control Number)

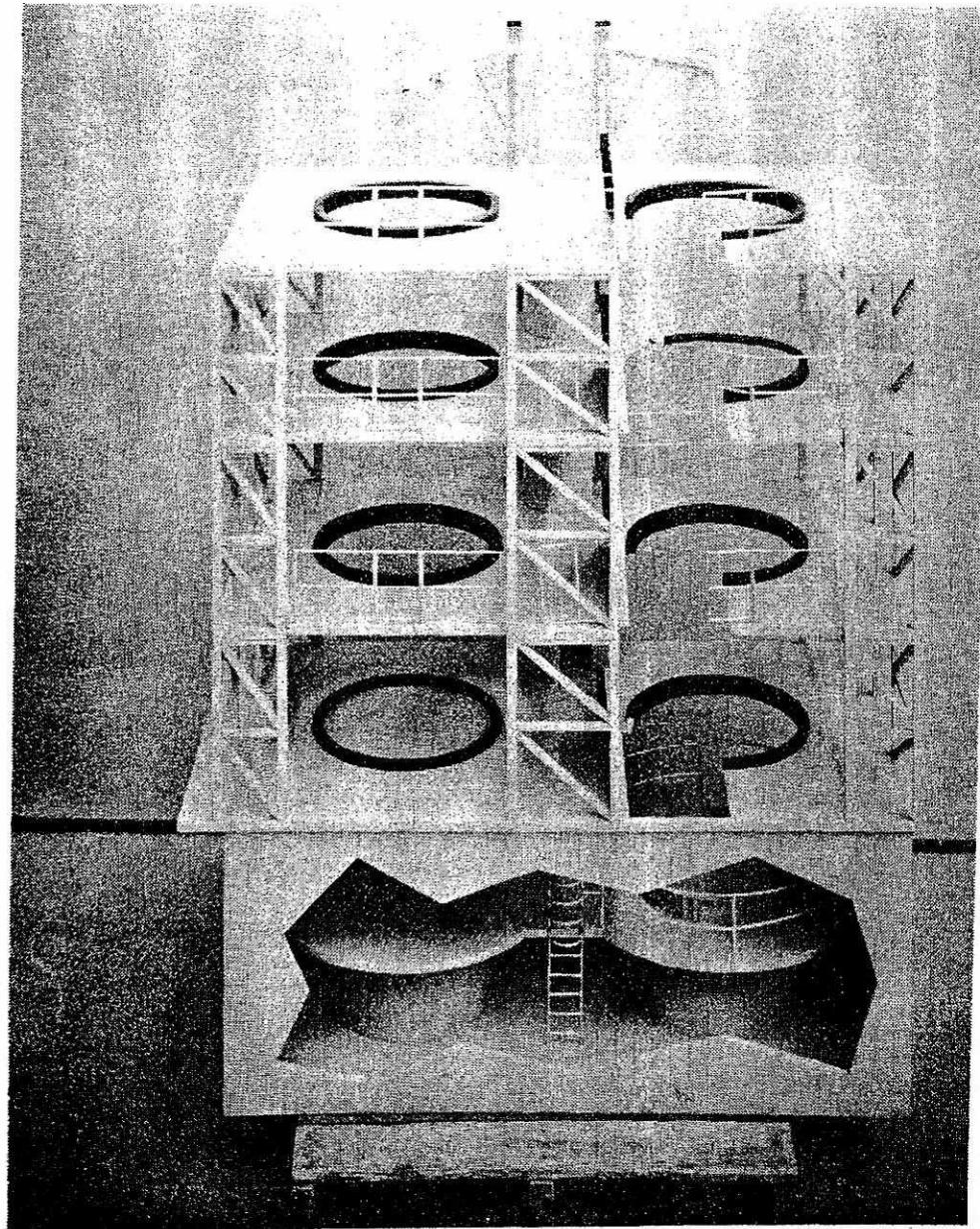


Figure 6.6-10. Mission Module Assembly Stand Scale Model

6-123

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Handle via BYEMAN
Control System Only

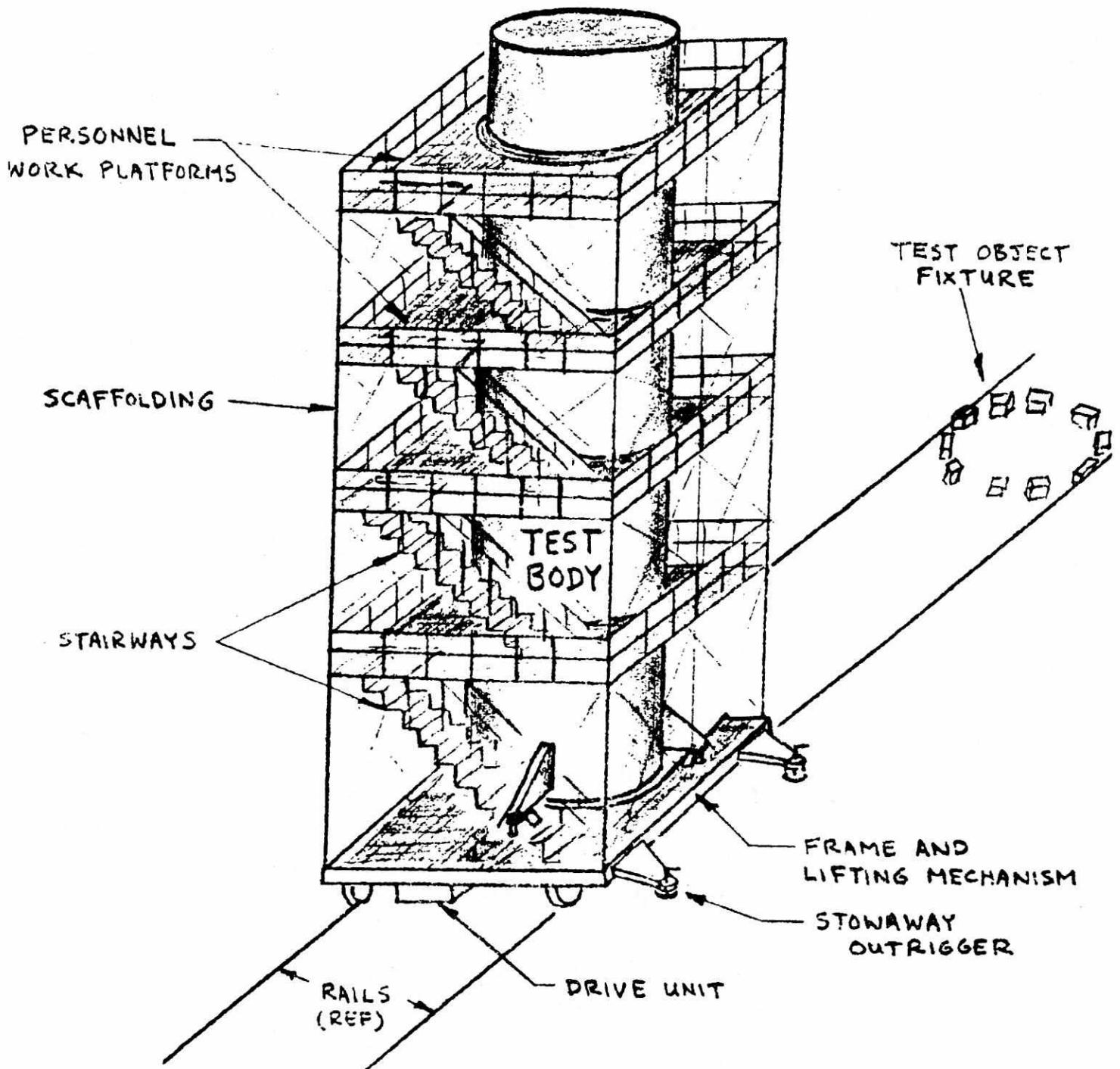
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(Control Number)

Figure 6.6-11. Test Body Transporter and Scaffolding Unit

6-125.

~~SECRET D~~Handle via BYEMAN
Control System Only

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(Control Number)

α_0 - magnitude of \bar{q}_0 , and
 \bar{q}_0 - unit vector defining the direction of \bar{q}_0 .

The unit vector \hat{q}_0 is given by:

$$\hat{q}_0 = \begin{bmatrix} \sin\alpha_0 \\ -\cos\alpha_0 \sin\Omega_0 \\ \cos\alpha_0 \cos\Omega_0 \end{bmatrix}. \quad \text{Equation A.2-1}$$

A.2.2 Vehicle Coordinate System (VCS)

The VCS is defined in Figure A.2-2.

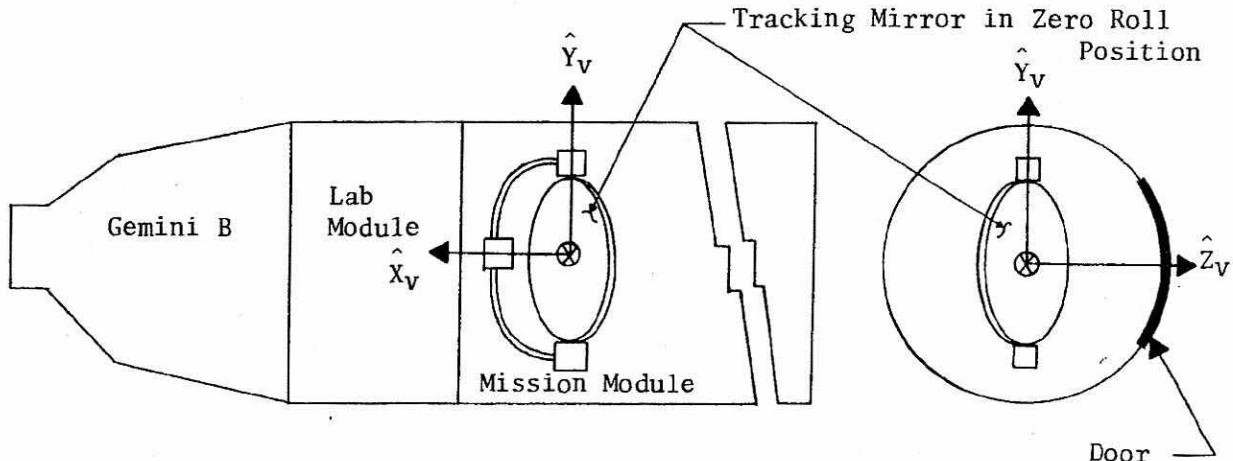


Figure A.2-2
Vehicle Coordinate System

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D

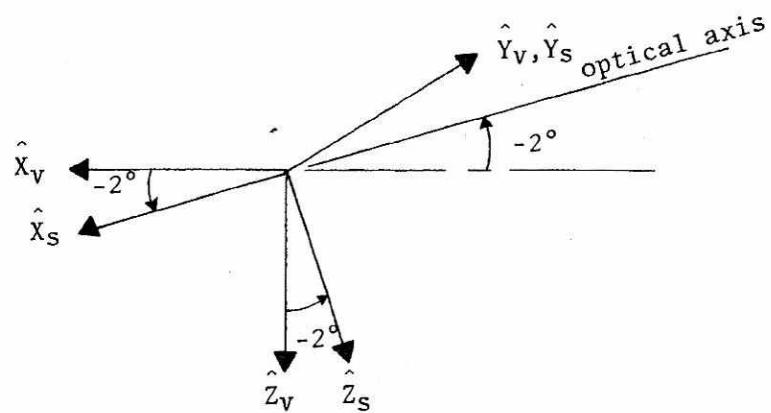
BIF-008- F-035081-RH -68
(Control Number)

Figure A.2-3
Optical Sensor Coordinate System

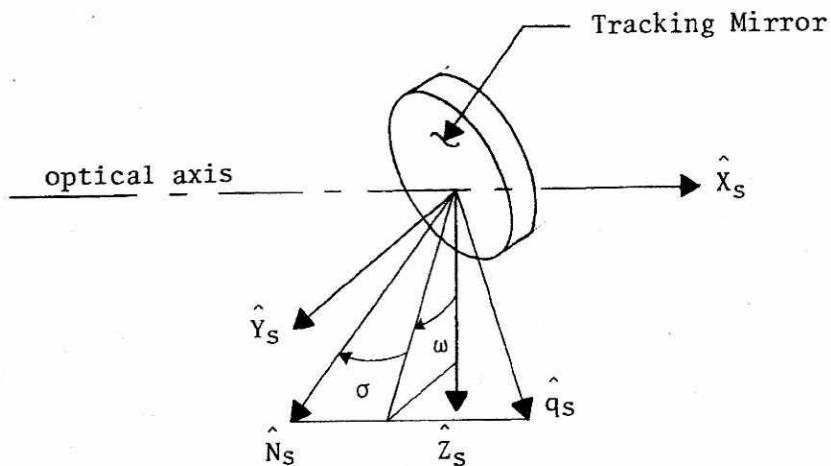


Figure A.2-4
Tracking Mirror Gimbal Angles