

# THOR

## THERMAL & OPTICAL RESEARCH CHAMBER



*Placing the Wide-field Infrared Survey Explorer sun shade in the THOR chamber*

THOR is the Space Dynamics Laboratory's largest thermal vacuum environmental testing and space simulation chamber. The THOR chamber provides the capability to simulate the space environment for thermal balance testing, enables sensors to reach in-flight temperatures, and provides a low-IR background for precise calibration testing.



### SPECIFICATIONS

- High vacuum chamber with a typical cryogenic operating pressure of  $10^{-7}$  Torr
- Large interior accommodates a variety of sensor sizes
  - 4' wide x 10' long cold bench
  - Up to 12' diameter & 17' long cold shroud
  - 5' 7" height from cold bench to top of shroud
- LN<sub>2</sub> shroud provides space thermal environment & low background IR test environment
- Low reflectance interior black paint
- Shrouds can be operated at LN<sub>2</sub> temperatures (77 K) or anywhere from ambient to 100° C
- Bench can be operated at LN<sub>2</sub> temperatures (77 K) or any temperature that is higher than the shroud temperature (Up to a maximum of 100° C)
- Heaters for bakeout & rapid turnaround
- Extensive temperature & contamination monitoring capabilities
- Ten ASA connector ports
- Cryogenic temperature optical testing
- Clean tent enables hardware to be installed in THOR in a Class 100 (ISO 5) clean room



**Space Dynamics**  
LABORATORY  
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