



Space Dynamics

LABORATORY

Utah State University Research Foundation



SDL's test and evaluation facilities are housed in a 6-building, 200,000 square-foot research complex near the Utah State University campus in Logan, Utah. The research complex includes a 43,000 square-foot Calibration and Optical Research Laboratory.



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Test & Evaluation Facilities



EMI / EMC Test Chamber

- 15-foot long x 11-foot wide x 9-foot high working space
- Will soon be certified to perform MIL-STD-462 testing

Vibration Test Facility

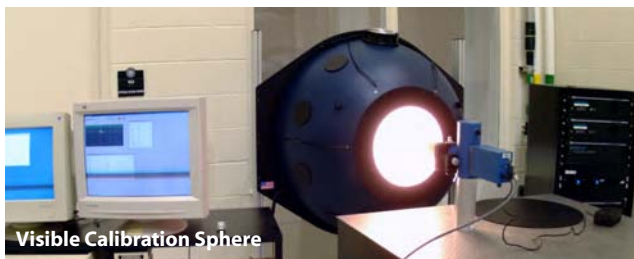
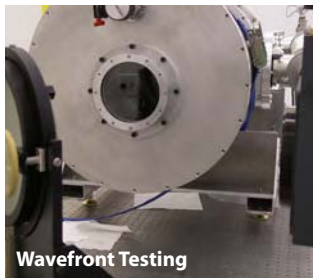
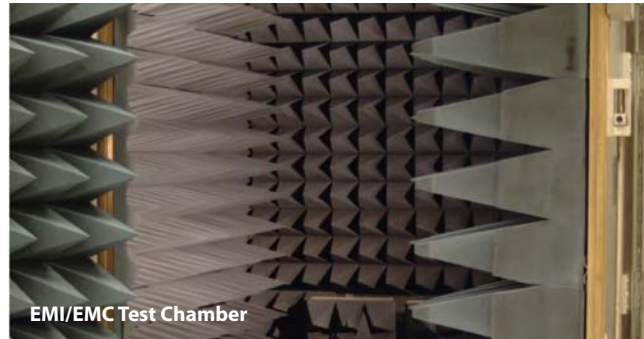
- 5,000 lbf rating
- Capable of sine, random, classical shock, sine-burst, and signal analysis
- Slip table for three-axis testing of large volume payloads

Visible Calibration Test

- 40-inch diameter integrating sphere
- 14-inch diameter output port
- Tungsten-halogen lamps

Infrared Calibration Test (MIC 2)

- Low background (down to 10 K)
- Collimator with steerable output beam
- Flood sources
- Radiometric traceability through NIST BXR



Wavefront Testing

- Zygo - 632.8 nm
- Sensitivity: 1/10th wave up to 4", ¼ wave up to 12"
- Ambient
- Cryo down to 20 Kelvin

Spectral Testing

- Cryo down to 100 Kelvin
- F-cone matching
- Angle of incidence matching
- Spatial variation

Stray Light

- Black Hole setup
- 100 ft dark/clean room
- Analysis with ASAP

Small Thermal Vacuum Test Chambers

- 36" diameter x 48" long
- 1 E-8 Torr
- -125 C to +125 C

Large Thermal Vacuum Test Chamber (THOR)

- 7-foot diameter x 12-foot long LN2 cooled shroud
- 1E-6 Torr vacuum

Contamination Measurement Equipment

- Diagnostic capabilities include RGAs, QCMs, scavenger plate analysis
- Materials Characterization
 - ASTM 595
 - DRIFTS
 - GC/MS
 - ASTM 1559
 - TGA

