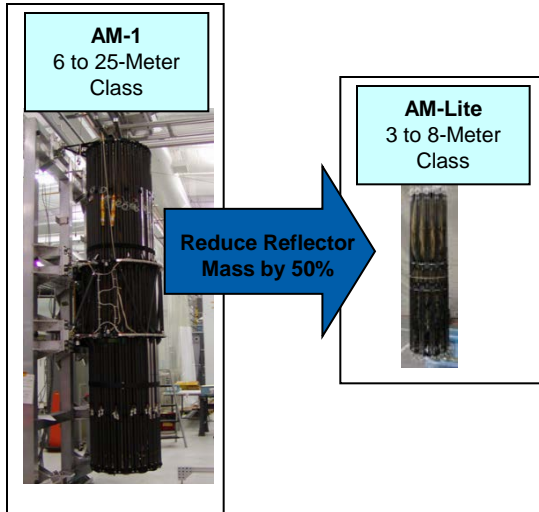


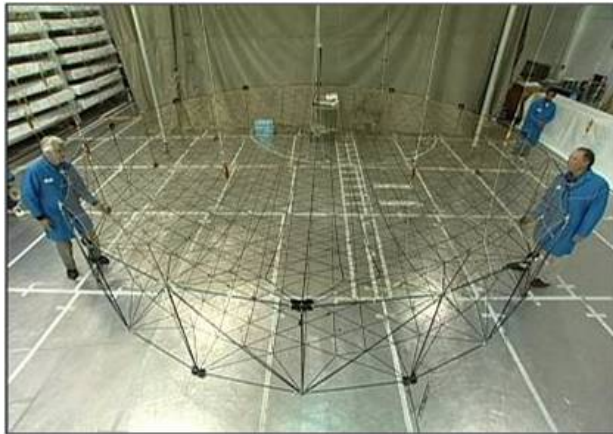
# **AstroMesh-Lite (AM-Lite)**



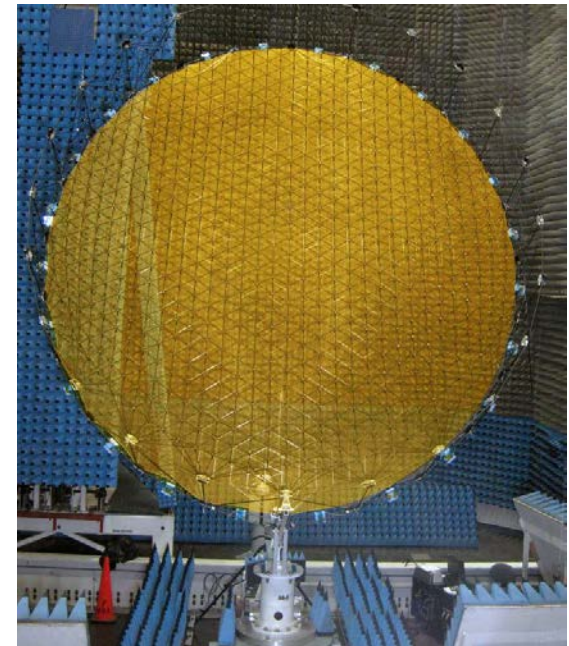
# AM-Lite Configuration



- Optimized Mass Design for 3 to 8-Meter
  - 50% reduction over AM-1 heritage configuration
- Same deployment kinematics as AM & AM-1 designs
- Swivel Axis Hinge minimize the non-recurring cost for changes in reflector optics
  - The shape of the ellipse is determined by the webs in the reflector surface and the rim truss follows that shape. The rim does not require radial stiffness.
  - Detailed parts remain the same regardless of F/D or aperture between 3 and 8 meters.
  - Allows the truss to stow in a circular shape so that all stowed trusses can use the same tie downs.



**27 lbs 6-Meter Reflector**  
Light enough to lift with one finger



# High Frequency Performance Independently Tested

Northrop Grumman Near Field  
Range at Space Park



- **NGST Near Field Testing**

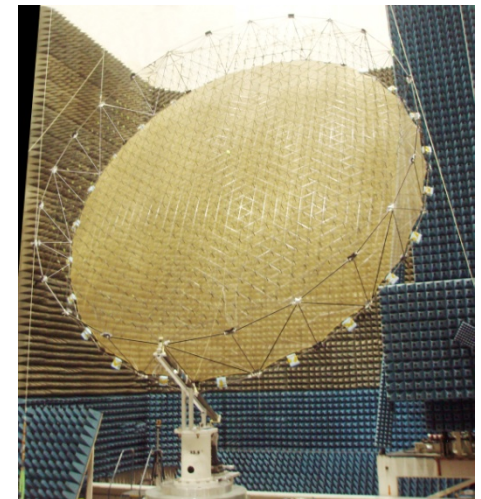
- Fixed Truss with 20 & 30 OPI Mesh
- Frequency Range 18 to 65 GHz
- Measured beam location and beam width match predictions
- Antenna efficiency\*: 66% at 32 GHz, 61% at 40 GHz for 5-meter reflector

- **NASA Glenn Research – Independent Test Verification**

- Deployable Truss, 40 OPI mesh
- Pre & Post Deployment Measurements
- Frequency Range 30 to 50 GHz
- Laser Radar Surface Mapping
- Antenna efficiency\*: 55% at 31 GHz & 45% at 50 GHz for 5.2-meter reflector

\* Antenna efficiency includes feed performance

NASA Glenn Research Center Near  
Field Range in Cleveland, OH



***NORTHROP GRUMMAN***

