NIST BLACKBODY CALIBRATION REFERENCE

Updates for GSICS Annual Meeting

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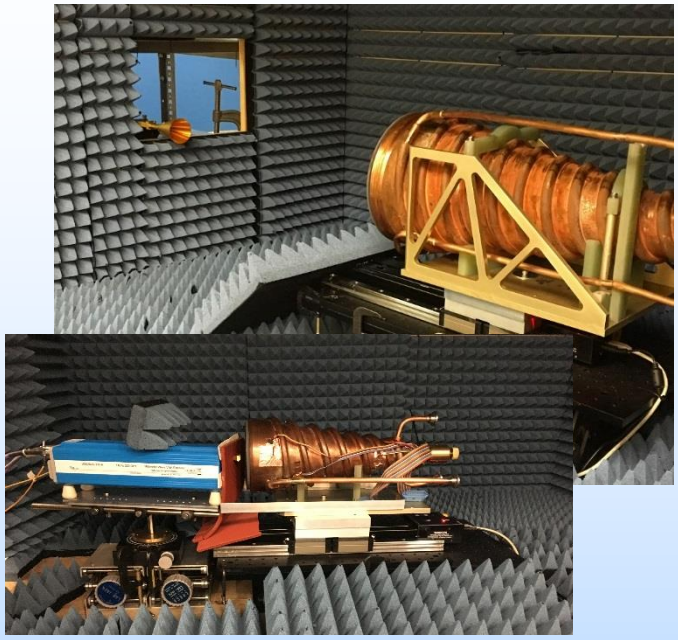
Current Status



- Two blackbodies
  - LF - 10.8 cm radius
    - 18 GHz - 110 GHz
  - HF - 6.8 cm radius
    - 50 GHz – 230 GHz
- LF at MIT Lincoln Labs
  - Completed vacuum compatibility test
  - Cycled down to 150 K
  - Currently preparing LN2 testing
- HF at NIST
  - Recently completed reflectivity to 230 GHz (ARFTG ‘17)
  - Angular reflectivity dependence (MicroRad ‘18)
- Traceable uncertainty propagation method recently developed (TGRS paper in review)

ATMS on JPSS-2

- Plan to pre-launch calibrate JPSS-2 ATMS instrument
- Northrop Grumman & NASA GSFC
- EDU or flight unit
- Transfer standard to pre-launch pyramidal cold targets and internal target
- Non-linearity requirement
  - 12 temps 80 K to 330 K

Reflectivity