
SESSION 1: Mature Aerospace Coolers**Paper 1.2****Tuesday ORAL Session****8:30 AM**

***Landsat 8 & 9 TIRS Instrument
Cryocooler On-Orbit Performance and
Long-Term Trending***

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NASA has now flown two versions of the Thermal Infrared Sensor (TIRS) on the Landsat 8 and Landsat 9 missions. The two instruments used very similar Ball SC235 two-stage Stirling cryocoolers, with very successful operations on orbit for both cryocooler systems. We provide an overview of the two instruments and the cryocooler systems, analysis of the operating experience for both cryocooler systems, and long term on-orbit performance trending.