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2018 ATM-MIRS Conference Abstract

Title: "Daytime Sky-Radiance Model Validation of GEO-belt in NIR-SWIR"

Spectral sky radiance along the GEO-belt (Geostationary orbit +/- 15°) changes as a function of atmospheric constituency, time of day, season and orbital position relative to the observer. This research presents spectral radiance measurements of the daytime sky as seen from Dayton, OH from 0.6-1.1 μ m for various look-angles to the GEO-belt. The experimental data is compared to model results generated by LEEDR using AERONET weather station inputs for the same test date for NIR spectral validation. Using the validated model and relevant literature, band-wise brightness is extended to select SWIR astronomical bands.