

EM27/SUN Measurements – Salt Lake Valley Summer 2024

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Overview

EM27/SUN instruments are sun tracking spectrometers described in Gisi et al (2012). These instruments measure solar radiance, and the GGG2020 algorithm (Laughner et al. 2024) is used to retrieve total column concentrations (X_{gas}) of CO₂, CH₄, CO, and H₂O every ~8 seconds when the sun is out. We collected data in the Salt Lake Valley from July 15 to September 8, 2024 during the USOS and SLC-SOS campaigns.

Data

Data is available upon request. Collected and processed datasets include:

- Raw interferograms
- Converted spectra
- Averaging kernels
- Retrieval results from GGG2020 including .oof and .nc output files.

Two instruments were run during the campaign. Details are found in the table below.

Instrument ID	HA45	UA35
Owner	Harvard (J. Franklin)	LANL (M. Dubey)
Location ID	WBB	UUSYR
Latitude, Longitude	40.766, -111.848	41.089, -112.119
Meters above sea level	1465	1286
Dates of data collection	20240715 20240716 20240717 20240720 20240721 20240722 20240723 20240726 20240728 20240729 20240730 20240731 20240801 20240802 20240805 20240806 20240807 20240814 20240815 20240816 20240820 20240821 20240826 20240827 20240828 20240829 20240830 20240904 20240905 20240906	20240726 20240728 20240729 20240730 20240731 20240801 20240802 20240805 20240806 20240807 20240815 20240816 20240820 20240821 20240826 20240827 20240828 20240829

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References

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