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Composite Scans

Composite Scans are global irradiance spectra provided in comma-separated ASCII format. There are two header rows, followed by solar data:

- **Header line 1:**
  Start Time, End Time, Duration
- **Header line 2:**
  Number of rows of solar data, solar zenith angle, solar azimuth angle
- **Line 3 - last line:**

  Wavelength in nm, spectral irradiance in μW/(cm^2 nm), **TSI** reading (only every 10th row).

Composite scans have the following naming convention

SCYYHHMM.DDD with:

- S = site code (A = McMurdo Station; B = Palmer Station; C = South Pole Station; D = Ushuaia; E = San Diego; F = Barrow)
- C = Scan type (C stands for solar "composite" scan)
- YY = Year
- HH = Hour at start of scan
- MM = Minute at start of scan
- DDD = Julian Day

Composite Scans are given in the same wavelength increments as the measured raw (i.e. uncalibrated) data. Wavelength increments are 0.2 nm for wavelengths below 344 nm, 0.5 nm for wavelengths between 344 and 404 nm and 1 nm for wavelengths above 404 nm.

A complete description of composite scans can be found in **Section 6.3 of our latest Operations Report**. Note that the file format of composite scans has changed since the beginning of network operation. Please consult Operations Reports for details.

Remark:
TSI stands for "Total Scene Irradiance" sensor. The sensor consists of a filtered photodiode that is an integral part of the system. TSI measurements give an indication of the change of solar irradiance during the duration of a composite scan, for example due to clouds. For more information, see **Section 2.1.2 of our latest Operations Report**.

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