Agreement for International SKYNET Data Center (ISDC) data users (Data Policy).

The following document describes the data produced by the ISDC and governs their rules of use.

a) Data products

ISDC develops two data analysis flows **for all the sites**:

- **SR-CEReS** uses as core the Skyrad5.0.pack.
  Aerosol Products: Aerosol optical depth (AOD), Angstrom exponent, single scattering albedo, volume size distribution, refractive index.
  Gas Products: None.
  Calibrations: solar calibration constants F_0 from XIL Method (Nakajima et al., 2020), and solid view angles $\Delta\Omega$ (original values from Prede company, values calculated by the disk scanning method, or the lamp method, depending on the instrument).
  Cloud screening: using the method of Khatri and Takamura (2009) but global irradiance data from a pyranometer are not used for consistent analysis over as many observation sites as possible. It corresponds to the combination of 1) spectral variability test (Kaufman et al., 2006) and 2) statistical analysis test (same as the method of Smirnov et al. (2000) but without triplet stability criteria test), including a) check the number of data, b) diurnal stability check, c) smoothness criteria, and d) three standard deviation criteria.

- **ESR-MRI** uses the SUNRAD.pack, Skyrad_MRI_v2.pack and Skyrad4.2.pack.
  Aerosol Products: AOD and Angstrom exponent from SUNRAD.pack; single scattering albedo, volume size distribution, refractive index, phase function, asymmetry factor from Skyrad_MRI_v2.pack.
  Gas Products: None.
  Calibrations: F_0 from Improved Langley Method (ILM, Campanelli et al, 2004, 2008) using as core the Skyrad4.2.pack and $\Delta\Omega$ (original values from Prede or from disk scanning depending on the instrument).
  Clouds screening: performed using a procedure based on the methodology developed by Smirnov et al. (2000) for SUNRAD products. Performed using the methodology described in Momoi et al. 2020 for Skyrad_MRI_v2.pack products.

Technical table (for typical instrument)

Technical note	**SR-CEReS**	**ESR-MRI**
angular range of processed data	[0-160]	[0-180]
Typical wavelengths used in the inversion for aerosol products	[340,380,400,500,675,870,1020]	[340,380,400,500,675,870,1020]
Wavelengths used for Angstrom exponent calculation	All	[400,500,675,870,1020]
Non-sphericity	Not	yes

AOD and Angstrom exponent time resolution	10 min	1 min
Inversion products time resolution	10 min	10 min
F_0 release time resolution	daily	1 month
$\Delta\Omega$ release time resolution	Only one value	Only one value
Near-real time processing	Yes	Yes

b) Data Release

- **SR-CEReS**
  ISDC will release the near-real time data as L2.

- **ESR-MRI**
  ISDC will release the following Levels of data for ESR-MRI:
  L2A: provided only for ESR-MRI products; obtained using the previous month calibration constants. They will be released in near-real time.
  L2: data products obtained reprocessing L2A data with the updated calibration constants. They will be released at the beginning of each month, together with the Calibration constant values.
  Calibration constants: will be available for the Principal Investigators (PIs) of the instruments, and anyone who will explicitly request them to ISDC.

c) Data management and public access

- **L1** data will be archived both in the Regional Skynet Data Centers (RSDC), if available, and mirrored to the ISDC and will be accessible only to the PIs of the instruments, and the managers of RSDC and ISDC.

- **L2A** and **L2** data will be freely opened on the ISDC website (http://www.skynet-isdc.org) after the rules acceptance explained in the "Notice to users":

  "Notice to users:
  The processed data you are about to download are produced by the ISDC. Each site has a PI(s), responsible for deployment and maintenance of the instrument of data collection. The PI has priority use of the data collected at the site. The PI is entitled to be informed of any other use of that site data. The PI(s) and Co-Investigator(s) of this site is displayed in the header of the site page. If you intend to use the following data please consult with him/her/them via e-mail. Recommended guidelines for data use and publication:

  Using SKYNET data:
  Please consult with the PI(s) of the data to be used.
  Referencing:
  Always cite the appropriate key SKYNET papers for any publications.
  Publishing SKYNET data from a "few" sites:
  Please consider authorship for the PI(s) and/or the following acknowledgement, "We thank the PI(s) for (its/their) effort in establishing and maintaining (site name(s)) sites."
  Publishing data from "many" sites:

A general acknowledgement is typically sufficient and may read, “We thank the PI(s) and their staff for establishing and maintaining the (site name(s)) sites used in this investigation.”

However, if the SKYNET data are a principal component of the paper then co-authorship to PI would be appreciated to be offered.”

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