

Radiation Measurements

Parameters of the installation site:

Full location name: Ocean Science Centre Mindelo (OSCM)

Short location name: OSCM

Country of location: Cabo Verde

Location latitude [deg]: 16.877772

Location longitude [deg]: -24.995374

Altitude [m]: 30

DATETIME (START): 00:00

DATETIME (STOP): 23:59

INTEGRATION TIME [sec]: 60

Description of Radiation Measurements

The actinometric platform, consisting of a Kipp & Zonen SOLYS2 sun tracker and a number of broadband Kipp & Zonen instruments, as well as a net radiometer were provided by NOA and installed in June 2022 at the OSCM, Mindelo, in the framework of the ASKOS Campaign. NOA and PMOD/WRC were responsible for the calibration, quality assurance and control and data processing.

Measurement parameter	Instrument	Comments
Total Shortwave irradiance (GHI)	Pyranometer (280-2800 nm)	1 min frequency
Direct Shortwave irradiance (DNI)	Pyrheliometer (280-2800 nm)	1 min frequency Sun pointing
Diffuse Shortwave irradiance (DFI)	Pyranometer (shaded) (280-2800 nm)	1 min frequency
Net radiation	300-2800nm (SW) 4500-42000nm (LW)	Upwelling & Downwelling

Data Format Description

A comma-separated string for each measured parameter contains the information in each case as described in detail below.

- Column 1: Timestamp (MJD2K)
- Column 2: Direct Irradiance (Average) in W/m^2
- Column 3: Global Horizontal Irradiance (Average) in W/m^2
- Column 4: Diffuse Irradiance (Average) in W/m^2
- Column 5: Shortwave top irradiance (Average) in W/m^2
- Column 6: Shortwave bottom irradiance (Average) in W/m^2
- Column 7: Longwave top irradiance (Average) in W/m^2
- Column 8: Longwave bottom irradiance (Average) in W/m^2
- Column 9: Albedo (shortwave)
- Column 10: Measurement Quality flag (1: Quality assured)

Value -999= measurement not successful.