State of the art irradiance measurements at SIRTA

SIRTA observatory contributes to the Baseline Surface Radiation Network (BSRN), which is the world’s reference for irradiance measurements since 2003 (Station: PAL).

Measured parameters:
1. Global, diffuse and direct downwelling solar irradiance
2. Downwelling infrared irradiance
3. Upwelling infrared and solar irradiances
4. Ground albedo
5. Solar spectral irradiance (range: 350-1050 nm)

One-minute measurements are available in daily files from our site (sirta.ipsl.fr).

These measurements at located at two sites (zone1 and zone2, 700 m apart) on the Ecole Polytechnique Campus.

SIRTA’s BSRN data extract for July 2012:

Other radiative measurements at SIRTA

More than 20 radiative-related sensors are currently operating.

Daily solar irradiation in 2012

Day-to-day as well as summer/winter changes in daily solar irradiation can be as large as 7 kWh/m²

Solar irradiance at SIRTA statistics (period 2003-2014)