

# Solar resource measurements at SIRTA

J. Badosa<sup>1</sup>, M. Haeffelin<sup>2</sup>, J.-C. Dupont<sup>2</sup>, M.-C. Gonthier<sup>2</sup>

1) LMD, Ecole polytechnique, France 2) IPSL/LMD, CNRS

Contact: jordi.badosa@lmd.polytechnique.fr

## 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:

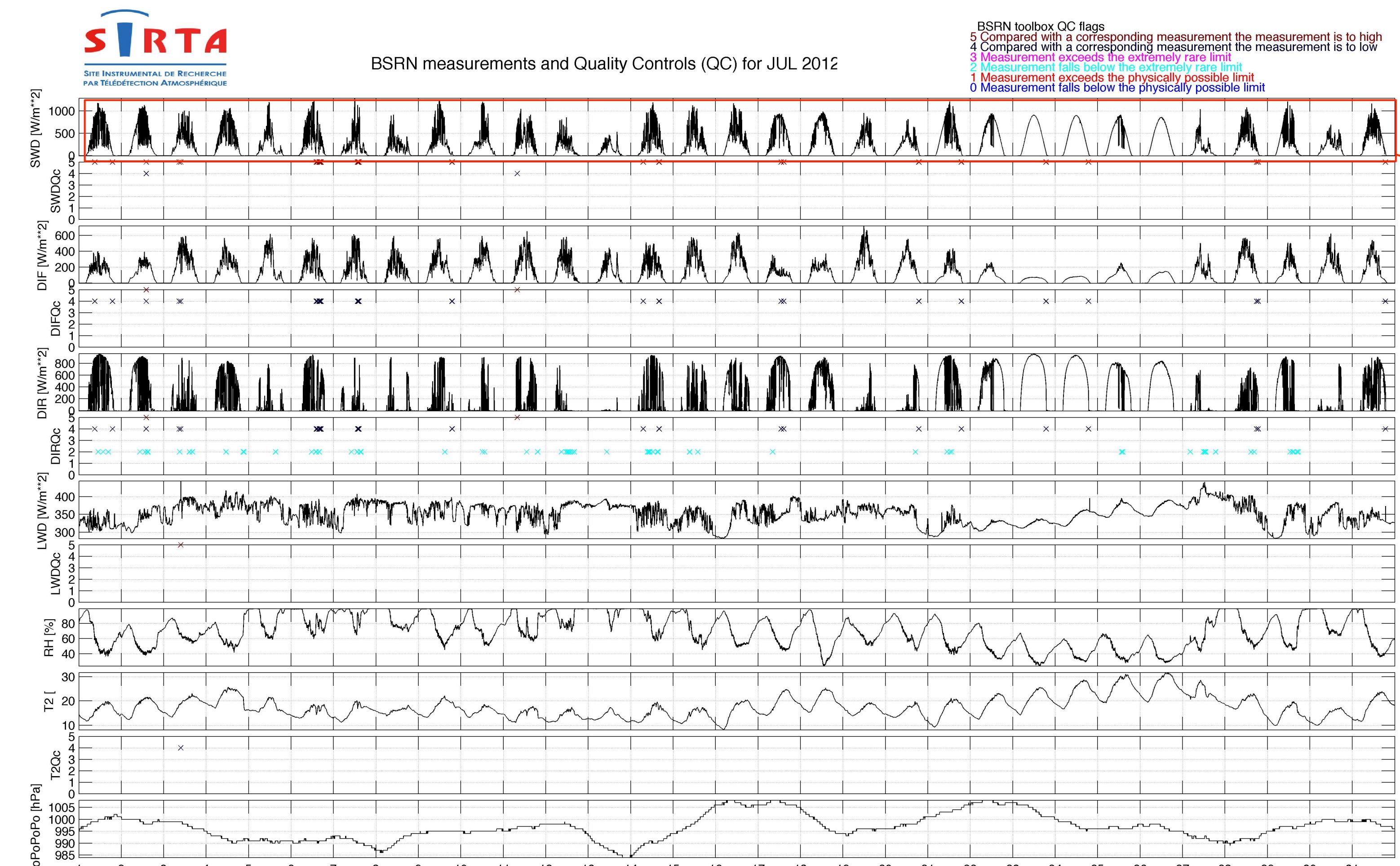
1. Global, diffuse and direct downwelling solar irradiance
2. Downwelling infrared irradiance
3. Upwelling infrared and solar irradiances
4. Ground albedo
5. Solar spectral irradiance (range: 350-1050 nm)

One-minute measurements are available in daily files from our site ([sirta.ipsl.fr](http://sirta.ipsl.fr)).

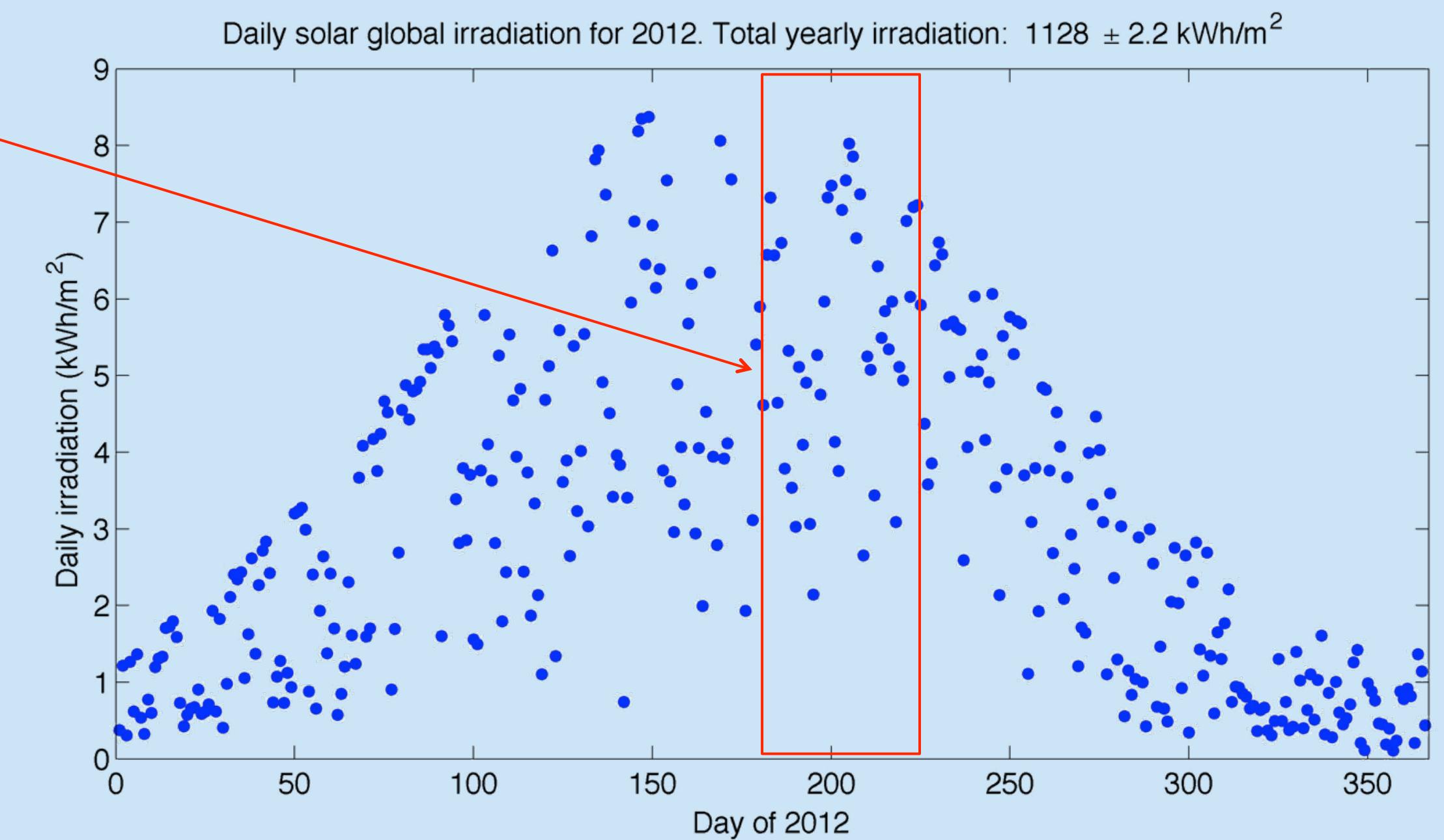
These measurements are located at two sites (zone1 and zone2, 700 m apart) on the Ecole Polytechnique Campus.



## SIRTA's BSRN data extract for July 2012:



## 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/m<sup>2</sup>

## Other radiative measurements at SIRTA

More than 20 radiative-related sensors are currently operating.

	1999	CIMEL	2010-12	UVS-AE-T, UVS-B-T,	2010	SPN1 (x3)	2012	PQS-1	2014	SP Lite2	2014	6 PV panels (I-V, T)	2015	MS-700 (350-1050nm)
Since: Label:														

## Solar irradiance at SIRTA statistics (period 2003-2014)

