

BSRN Station of Carpentras (France) Status & News

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Carpentras Radiometric Centre

CARPENTRAS is a small city in the south-east of France, close to the Mediterranean sea (50km), 20km away from Avignon and 100km away from Marseille. Carpentras Radiometric Centre building was built in the countryside, between vineyards and orchards (cherries, apples, ...) several kilometers south of the Mont Ventoux. Since 1968 the building houses a meteorological station belonging to Meteo France as well as the Radiometric Centre; it has a large roof-top (10mx22m) where sensors and trackers are installed.

Carpentras Radiometric Centre (CAR) is integrated within the "sensor" division of the Direction of Observation Systems of Meteo France. Most of the centre activities around the maintenance and calibration of radiance sensors used by the French national network (Pyranometers, Pyrhemometers, Pyrgeometers and UV-B Pyranometers). Calibration operations of pyranometers and pyrhemometer are performed using as reference an Absolute Cavity Pyrhemometer PMO6, calibrated in the World Radiation Center (Davos) on a regular basis.

The climate is of Mediterranean type with strong contrasts between years and a marked seasonal variability with little frequent precipitation (only 80 to 100 days a year) and a very bright sky thanks to the prevailing wind the Mistral (Mistraou, master in "Provençal"). Blowing between 70 and 120 days a year it purifies and dry out the atmosphere, allowing the sun to shine completely an average of 2800 hours a year, July by counting more than 350 hours to him only.

The BSRN Station

The Centre joined the BSRN at the beginning of the experience, thanks to the participation of Mr Jean OLIVIERI to the Zurich meeting in September 1994. The first data transmission happened in September 1996 and has continued since, about 22 years of uninterrupted data. The transmitted data have belonged to the LR100 group since the beginning; the LR500 group (UV) has been added in 2013.

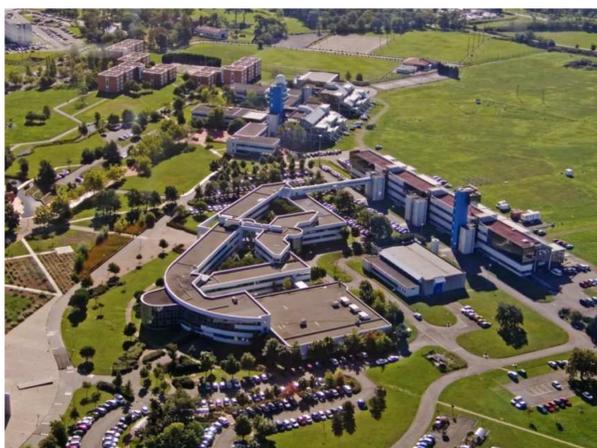


Bad News

As the two last members of the radiometric center of Carpentras retire in 2019, it has been decided to close the current center in 2019. Its pyranometer calibration activities will be resumed in Toulouse, within the team centralizing maintenance and calibration of all surface observation sensors (barometers, thermometers, hygrometers, rain gauges...).

With this prospect of closure, Carpentras site will no longer meet the requirements necessary for participation in BSRN after 31/12/2018. **Its data will therefore no longer be provided to BSRN from 01/01/2019.**

Suggesting **Toulouse** as a new measurement site for BSRN will be studied as soon as the radiometric activity is well established.



About Toulouse

A terrace hosting various radiation sensors (direct, global, ultraviolet and infrared radiation) is being set up in Toulouse.

Toulouse site has an insolation climatology that is less favorable to calibrations in natural (solar) light than Carpentras. In annual average over the period 1981-2010, Carpentras recorded 2812 hours of sunshine, against 2031 hours for Toulouse.

This is why a calibration bench under artificial light is being developed in Toulouse in a blind room, in addition to the outdoor calibration platform.