

Broadband infrared radiation

Instrument name: Infrared radiation
 Instrument type: PIR Precision Infrared Radiometer
 Manufacturer: Eppley
 Location: Institute for Geoscience, Section Meteorology, Bonn
 Coordinates: Lat: 50.731233° N, Lon: 7.070733° E, Alt: 76 m asl

The Eppley PIR Precision Infrared Radiometer is measuring the incoming infrared radiation based on a thermopile and two thermistors. By composition the electrical energy from the thermopile with the resistance of the thermistors the infrared radiation (IR) can be calculated. The IR Sensor is mounted on the top roof of the Section Meteorology, Institute for Geoscience, University of Bonn, Bonn since 2006.

Instrument specifications

| Parameter | Specification |
|---------------------|---------------------------|
| Manufacturer | Eppley |
| Data Logger | Campbell Scientific CR23X |
| Temporal resolution | 1 min |

Instrument time-line

01/12/2006 – today top roof at Section Meteorology, Institute for Geoscience,
 University of Bonn, Bonn

Available measurement modes

- Continuous measurements of IR radiance in 1 min intervals

JOYCE-CF Standard Operation Procedures

- Fixed location in Bonn
- Continuous operation with 1 min temporal resolution

Data quality assurance procedures

- Raw data provided by the instrument. Quality control by operator.

Available datasets

Data can be requested via the 'Messdatenportal' (<https://www.ifgeo.uni-bonn.de/abteilungen/meteorologie/messdaten/messdatenportal>).

Additional data or measurement time can be requested via the JOYCE-CF request sheets.

Level 1

- IR radiance in W (average, minimum, maximum, standard deviation):
 - Temporal resolution 1 min
 - File size approx. 150 kB per day
 - ASCII table including header, 1 file per 5 min

Contact

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