About the Baseline Surface Radiation Network BSRN

Gert König-Langlo¹, Chuck Long², Rainer Sieger¹, Amelie Driemel¹, Holger Schmithüsen¹, Wolfgang Cohrs¹, Bonnie Raffel¹

¹Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, GERMANY
²NOAA ESRL GMD/CIRES, Boulder, CO, USA

The BSRN supports climate scientists to...

- monitor the background of the short- and long-wave radiative components as well as their long term changes,
- validate and evaluate satellite-based measurements of surface radiative fluxes,
- prove climate model (GCM) results and develop local radiation climatologies.

Available datasets

- The typical average interval for radiation data is 1 minute.
- The parameters offered: Global, diffuse, direct, long-wave down, reflex, long-wave up, UV, synoptic observations, upper air soundings, total ozone, ceilometer data, radiation measurements from tower.
- More than 8200 months (~ 700 years) of high quality radiation measurements submitted by 59 stations since 1992 are available.
- All data can be retrieved directly by any registered scientist from our ftp-server (ftp.bsrn.awi.de) and PANGAEA (http://www.pangaea.de/search?q=BSRN).

Brief History

- The BSRN was conceived and implemented in the late 1980s by the World Climate Research Program (WCRP).
- In 1992 the World Radiation Monitoring Center – the central archive of the BSRN - was established at ETH Zurich.
- Since the early 2000s the WRMC/BSRN is part of GEWEX, GAW, and GCOS.
- In July 2008 the Alfred Wegener Institute in Bremerhaven took over the WRMC (http://www.bsrn.awi.de).
- For the coming 3 years the service of the WRMC at the Alfred Wegener Institute is guaranteed.