



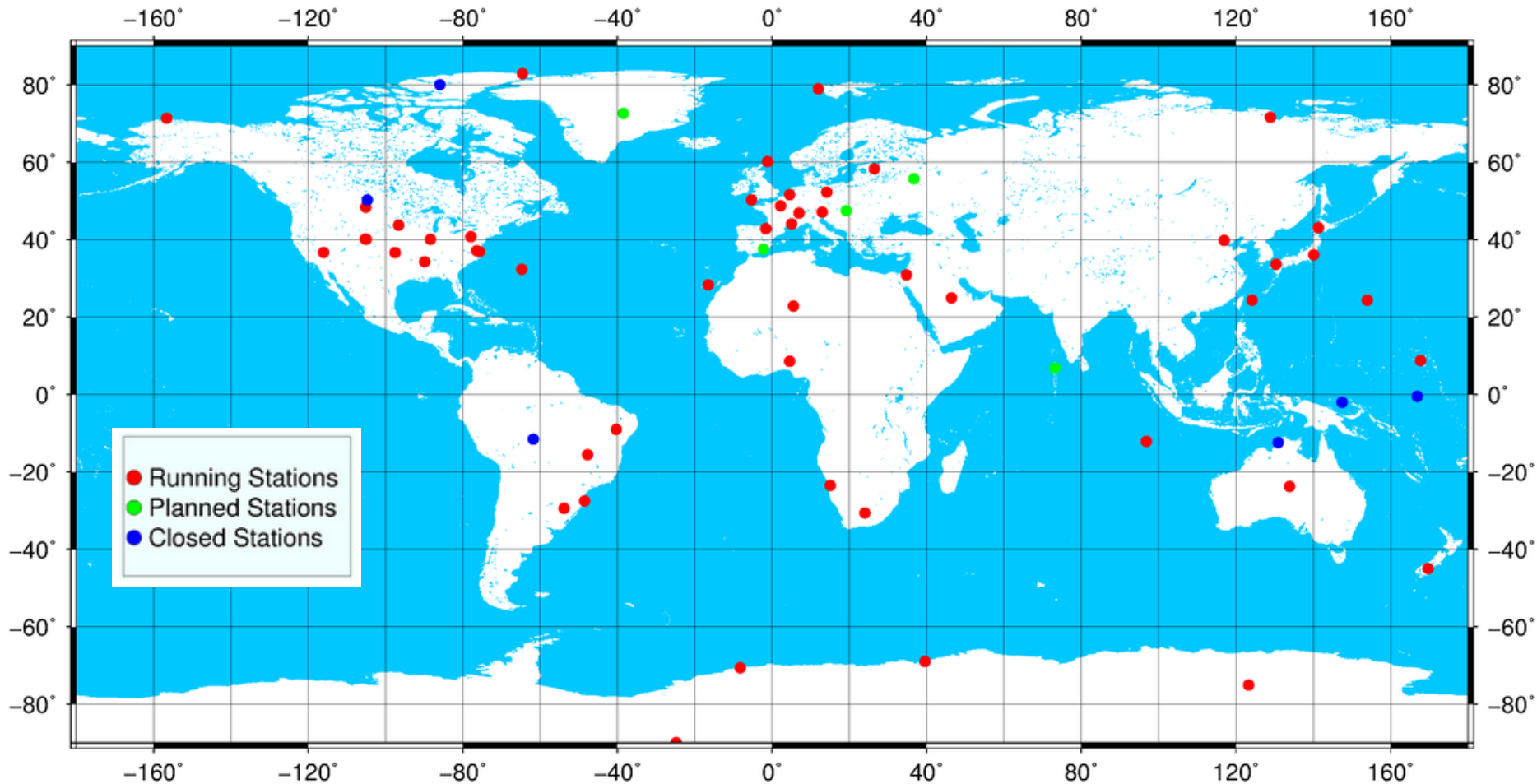
Current state of the World Radiation Monitoring Center





Present State of the WRMC:

59 stations provided data





Present State of the WRMC: Station Month: 8761

The typical average interval for radiation data is 1 minute:	Stations
	2016 (2012)
1. LR 0100: (Global, Diffuse, Direct, Long-wave down)	59 (54)
2. LR 0300, 3010: (Reflex, Long-wave up)	23 (19)
3. LR 0500: (UV)	14 (12)
4. LR 1000: (Synops)	13 (12)
5. LR 1100: (Upper air soundings)	30 (29)
6. LR 1200: (Total ozone)	9 (9)
7. LR 1300: (Aerosol optical depths) (under construction)	(14)
8. LR 1300: (Ceilometer data)	3 (3)
9. LR 30x0: (Radiation measurements from tower)	13 (13)



Present State of the WRMC: 8391 (6719) station-months available

Station	Short name	Station manager currently in charge	pre BSRN	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	All
Alert	ALE	David Halliwell (David.Halliwell@ec.gc.ca)																							
Alice Springs	ASP	Bruce Forgan (B.Forgan@bom.gov.au)					12	12	12	12	12	12	11	12	12	12	12	12	12	12	12	12	12	12	12
Barrow	BAR	Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Bermuda	BER	Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)		12	12	12	12	12	12	12	12	12	12	12	10										X
Billings	BIL	Charles Long (chuck.long@pnl.gov)			4	12	12	12	12	12	12	12	11	12	12	12	12	12	12	12	12	12	12	12	X
Bondville	BON	John Augustine (John.A.Augustine@noaa.gov)					12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	6			X
Boulder, SURFRAD	BOS	John Augustine (John.A.Augustine@noaa.gov)					5	12	12	12	12	12	12	12	12	12	12	12	12	12	12	6			X
Boulder	BOU	Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	2			X
Brasilia	BRB	Enio Bueno Pereira (eniobp@cptec.inpe.br)															8	10	4	9	12	12	5		X
Cabauw	CAB	Wouter Knap (knap@knmi.nl)															11	12	12	12	12	12	12	4	X
Camborne	CAM	Patrick Fishwick (patrick.fishwick@metoffice.com)										12	12	12	12	12	12	6						X	
Carpentras	CAR	Jean-Philippe Morel (jean-philippe.morel@meteo.fr)								12	12	12	12	12	12	12	12	12	12	12	12	12	12	5	X
Chesapeake Light	CLH	Fred M. Denn (Frederick.M.Denn@nasa.gov)										8	12	11	12	12	12	12	12	12	12	12	12	6	X
Serra																									
Solar Village	SOV	Naif Al-Abbadi								3	12	12	12	12											X
South Pole	SPO	Ellsworth Dutton		12	12	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	2			X
Syowa	SYO	Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)				12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	11		X
Sioux Falls		John Augustine (John.A.Augustine@noaa.gov)													7	12	12	12	12	12	6			X	
Tamanraks		Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)										10	12	12	12	12	12	12	12	12	12	12	4		X
		Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)							11	12	12	12	12	12	12	12	12	12	12	12	12	12	4		X
		Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)																				7	9		X
		Ellsworth Dutton (Ellsworth.G.Dutton@noaa.gov)									12	12	12	12	12	12	12	12	12	12	12	12	5		X
	XIA	Xiangao Xia (xiangaoxia2000@yahoo.com)															12	12	12	8					X
Arctic station	Eismitte		1																						X
	All			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
			pre BSRN	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	All

~ 730 (560) years of radiation measurements

WRMC-BSRN

World Radiation Monitoring Center- Baseline Surface Radiation Network

hosted by 

Redesign of:

<http://www.bsrn.awi.de>

WRMC-BSRN
World Radiation Monitoring Center-
Baseline Surface Radiation Network

Contact | Imprint | Sitemap

[Home](#)
[Project](#)
[Stations](#)
[Data](#)
[Products](#)
[Meetings](#)
[News](#)
[Software](#)
[Other](#)

WRMC-BSRN
World Radiation Monitoring Center- Baseline Surface Radiation Network

Welcome

to the World Radiation Monitoring Center (WRMC), the central archive of the Baseline Surface Radiation Network (BSRN). All radiation measurements are stored together with collocated surface and upper-air meteorological observations and station metadata in an integrated database. These pages offer both: Information for all scientists who will use BSRN-data as well as information to any station scientist who delivers data.

BSRN is a project of the [Data Assimilation Panel](#) from the [Global Energy and Water Cycle Experiment \(GEWEX\)](#) under the umbrella of the [World Climate Research Programme \(WCRP\)](#) and as such is aimed at detecting important changes in the Earth's radiation field at the Earth's surface which may be related to climate changes.

The data are of primary importance in supporting the validation and confirmation of satellite and computer model estimates of these quantities. At a small number of stations (currently 58) in contrasting climatic zones, covering a latitude range from 80°N to 90°S (see [station maps](#)), solar and atmospheric radiation is measured with instruments of the highest available accuracy and with high time resolution (1 to 3 minutes).

In 2004 the BSRN was designated as the global baseline network for surface radiation for the [Global Climate Observing System \(GCOS\)](#). The BSRN stations also contribute to the [Global Atmospheric Watch \(GAW\)](#). Since 2011 the BSRN and the [Network for the Detection of Atmospheric Composition Change \(NDACC\)](#) have reached a formal agreement to become cooperative networks.

Project	Stations	Data	Products	Meetings
Background	Listings	Data retrieval via PANGAEA	Averages	2014
Objectives	Join BSRN	Data retrieval via ftp	International Polar Year	2012
The state of affairs	Maps	Station-to-archive file format	Quality code	2010
	Google Earth overlay	Data input	GEWEX Time Series	2008
	Google Maps overlay	Quality checks		2008

Contact persons

Related pages

Gert König-Langlo, 14th BSRN Workshop, 2016



Mailing Lists

- [*bsrn-stations@listserv.dfn.de*](mailto:bsrn-stations@listserv.dfn.de)

Communication between the BSRN/WRMC administration and all BSRN station scientists. Only persons included in this group are allowed to use it.

- [*bsrn-user@listserv.dfn.de*](mailto:bsrn-user@listserv.dfn.de)

Communication between the BSRN/WRMC administration and all BSRN user. To avoid spam and too much mails the use of this list is restricted to the BSRN/WRMC administration.



Typical Customers

About 150 account requests in 2016

- **Satellite Validation**

Remote Sens. **2015**, 7, 8067-8101; doi:10.3390/rs70608067

OPEN ACCESS

remote sensing

ISSN 2072-4292

www.mdpi.com/journal/remotesensing

Article

Digging the METEOSAT Treasure—3 Decades of Solar Surface Radiation

Richard Müller *, Uwe Pfeifroth , Christine Träger-Chatterjee, Jörg Trentmann and Roswitha Cremer

Deutscher Wetterdienst, Frankfurter Str. 135, D-60387 Offenbach, Germany;
E-Mails: Uwe.Pfeifroth@dwd.de (U.P.); Christine.Traeger-Chatterjee@dwd.de (C.T.-C.);
joerg.trentmann@dwd.de (J.T.); roswitha.cremer@dwd.de (R.C.)

* Author to whom correspondence should be addressed; E-Mail: richard.mueller@dwd.de;
Tel.: +49-69-8062-4922; Fax: +49-69-8062-3759.

Academic Editors: Dongdong Wang and Prasad S. Thenkabail

Received: 23 February 2015 / Accepted: 2 June 2015 / Published: 18 June 2015

Typical Customers

About 150 account requests in 2016

- *Satellite Validation*
- *Climate Research*



[Climate Dynamics](#)

June 2015, Volume 44, [Issue 11](#), pp 3393-3429

Open Access

Article

The energy balance over land and oceans: an assessment based on direct observations and CMIP5 climate models

Martin Wild, Doris Folini, Maria Z. Hakuba, Christoph Schär, Sonia I. Seneviratne, Seiji Kato, David Rutan,
Christof Ammann, Eric F. Wood, Gert König-Langlo

First online: 11 December 2014

Received: 19 February 2014 | Accepted: 24 November 2014

DOI: 10.1007/s00382-014-2430-z

Citations: [14](#)

Typical Customers

About 150 account requests in 2016

- *Satellite Validation*
- *Climate Reseach*
- *Solar Energy*

Title:	Energy Loss Due to Irradiance Enhancement
Author(s):	M. Zehner, T. Weigl, S. Thaler, O. Schrank, M. Czakalla, B. Mayer, T.R. Betts, R. Gottschalg, K. Behrens, G. Koenig Langlo, B. Giesler, G. Becker, O. Mayer

Keyword:	<p>ESTIMATING OVERALL MPP TRACKING LOSSES USING WEATHER STATISTICS</p> <p><u>Matthias Egler</u>, Sam Gordon OST Energy Ltd, Nile House, Second Floor, Nile Street, Brighton (UK), BN1 1HW Phone: +44 (0)1273 819 429, e-mail: matthiasegler@ostenergy.com</p>
Topic:	<p>ABSTRACT: In energy yield studies for PV systems, MPP tracking losses are often neglected. EN 50530:2010 introduced a methodology for the measurement of static and dynamic MPPT efficiencies. Typically, the influence of the MPP tracker under static environmental conditions is accounted for by using a fixed and location-independent factor.</p>
Subtopic:	<p>The performance of the inverter's MPP tracking system decreases under dynamic conditions, and therefore depends on the input variability, i.e. the weather conditions experienced by the PV plant. Differences in the statistics of the irradiance slopes experienced at different locations means that MPP tracking losses can vary significantly from one location to another.</p>
Event:	<p>In this paper, high-quality irradiation time series have been analysed against adapted EN 50530:2010 irradiance slopes. The results indicate an annual fraction of static conditions ranging from approx. 40% to 90%. When combined with typical MPP tracking performance found in the market, this leads to a variation of the overall MPP tracking losses of 0.9% to 0.4%, indicating location-specific data should be applied to increase accuracy in PV energy yield studies.</p>
	<p>Keywords: Energy yield, MPPT performance, Energy meteorology</p>



BSRN in Web of Science (2016)

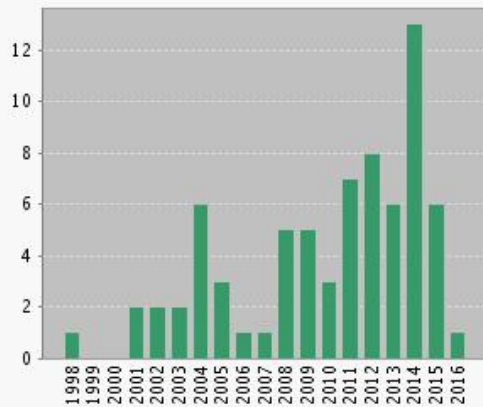
Citation Report: 72

(from All Databases)

You searched for: TOPIC: (BSRN) [...More](#)

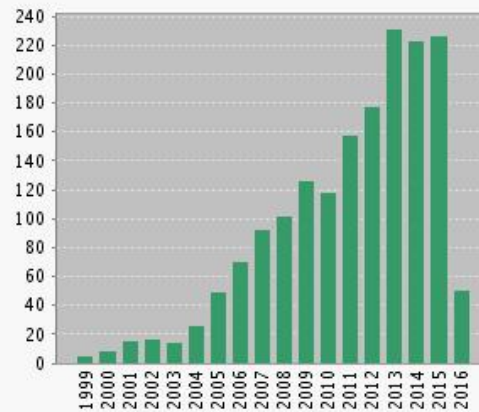
This report reflects citations to source items indexed within All Databases.

Published Items in Each Year



The latest 20 years are displayed.

Citations in Each Year



The latest 20 years are displayed.

Results found: 72

Sum of the Times Cited [?]: 1716

Sum of Times Cited without self-citations [?]: 1593

Citing Articles [?]: 1274

Citing Articles without self-citations [?]: 1218

Average Citations per Item [?]: 23.83

h-index [?]: 21
















Web Statistics: Jan – March 2016

Visits per day



Name	Wert
Visits	2.842
Actions	11.368

Web Statistics: Jan – March 2016

Land	Visits	Actions	Aktionen pro Besuch	Durchschnittszeit auf der Website
 Vereinigte Staaten	1.190	4.632	4	00:03:29
 Deutschland	268	1.209	5	00:04:31
 Spanien	177	773	4	00:03:41
 Frankreich	172	719	4	00:02:24
 China	158	684	4	00:05:37
 Japan	148	399	3	00:02:06
 Vereinigtes Königreich	134	535	4	00:03:02
 Brasilien	107	257	2	00:02:55
 Südkorea	90	480	5	00:05:43
 Italien	61	258	4	00:05:09
 Russland	39	134	3	00:01:57
 Niederlande	36	159	4	00:04:41
 Australien	26	118	5	00:04:19
 Estland	26	117	5	00:05:36



Web Statistics: Jan – March 2016

Visits per continent

Kontinent	Visits	Actions	Aktionen pro Besuch
Nordamerika	1.202	4.698	4
Europa	1.063	4.555	4
Asien	416	1.607	4
Südamerika	117	332	3
Ozeanien	27	122	5
unbekannt	16	19	1
Afrika	1	35	35



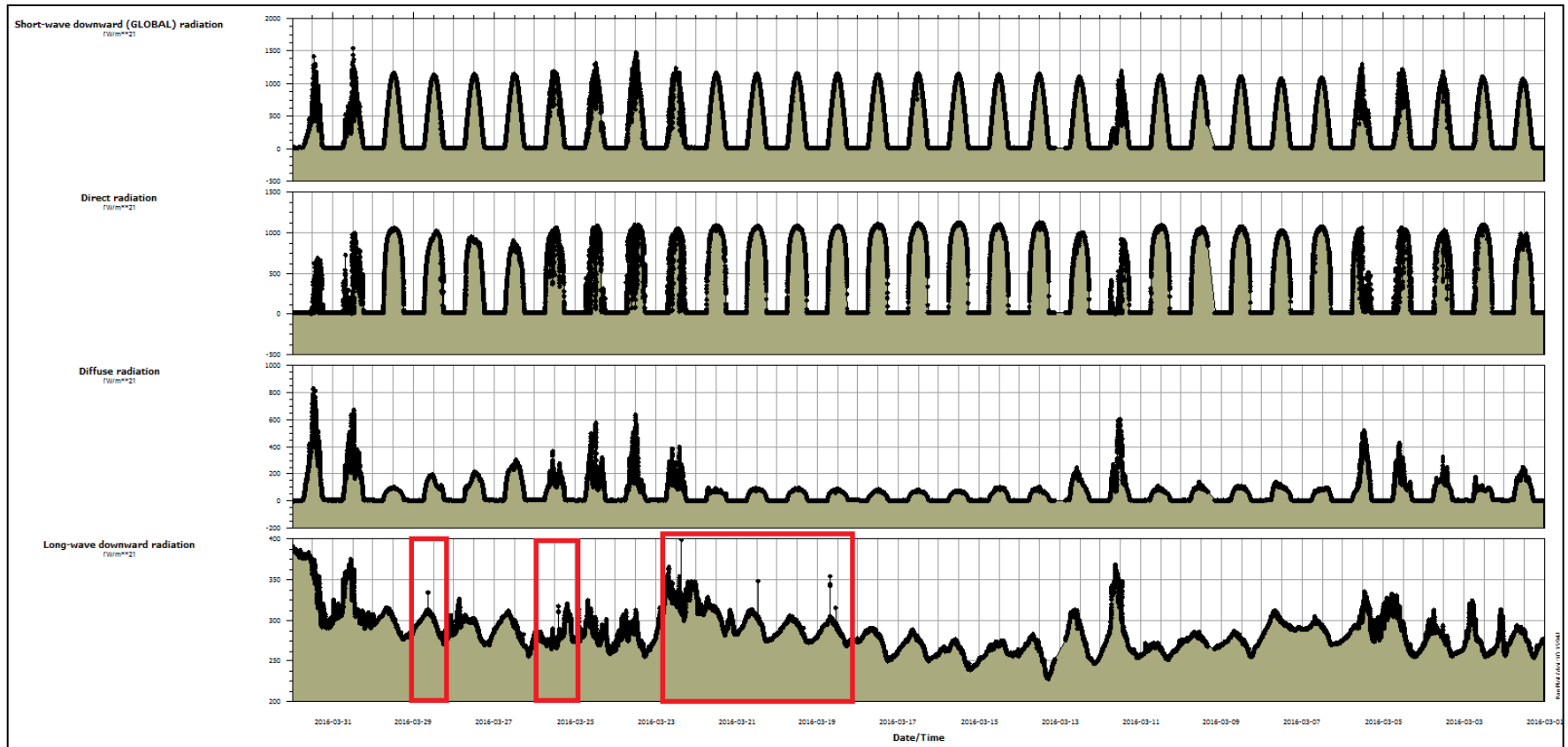
FTP Statistics: ftp.bsrn.awi.de

TOTALS FOR SUMMARY PERIOD MARCH 2016

Files Transmitted :	16.229
Bytes Transmitted:	16.728.110.291 (16 GB)
Average Files Transmitted Daily:	560




Current Staff of the WRMC



Current Staff of the WRMC

- Amelie Driemel (Bücker) (postdoc, data curator)

Dr. Amelie Driemel



Division Infrastructure/Administration | Computing and Data Centre
[Related page >](#)

Email ✉ [Amelie Driemel](mailto:Amelie.Driemel@awi.de)

Phone ☎ +49(471)4831-1091

Fax 📠 +49(471)4831-1977

Address Alfred Wegener Institute
Van-Ronzelen-Str. 2,
D-27568 Bremerhaven
(Room Bathymetrie-DG 11)

ORCID <http://orcid.org/0000-0001-8667-5217>

Responsibilities

Data Editor of PANGAEA - Publishing Network for Geological and Environmental Data [PANGAEA](#)

Data Curator of BSRN - Baseline Surface Radiation Network [BSRN](#)



Current Staff of the WRMC

- Holger Schmithüsen(postdoc, BSRN-Toolbox, QC)





Current Staff of the WRMC

- Wolfgang Cohrs (technical coordinator)



Current Staff of the WRMC

- Rainer Sieger (PANGAEA administrator)


Dr. Rainer Sieger

Data curator



Division Geosciences | Marine Geology and Paleontology
[Related page >](#)

Email  [Rainer Sieger](mailto:Rainer.Sieger@awi.de)

Phone  +49(471)4831-1189

Fax  +49(471)4831-1977

Address Alfred Wegener Institute
Van-Ronzelen-Str. 2,
D-27568 Bremerhaven
(Room Bathymetrie-04)

ORCID <http://orcid.org/0000-0002-9175-884X>

Responsibilities

Data curator of PANGAEA - Publishing Network for Geological and Environmental Data - Software development



Current Staff of the WRMC

- Gert König-Langlo (director of the WRMC)





Staff of the WRMC from May 2017 onward

- **Successor** (student, data curator)
- Amelie Driemel (Bücker) (**director of the WRMC**)
- Holger Schmithüsen (**station scientist: GVN**)
- Wolfgang Cohrs (technical coordinator)
- Rainer Sieger (PANGAEA administrator)
- ~~Gert König-Langlo (director of the WRMC)~~
- **Marion Maturilli (station scientist NYA)**



Director of AWI Karin Lochte:

“AWI will continue to host the BSRN network at present level”