

WRMC Status 2024

Status,
challenges,
tasks

Amelie Driemel, Christian Lanconelli, Laura Riihimaki in Tokyo, Japan

Current staff



Amelie Driemel
(Data Curator/Director)
~10% for BSRN



Wolfgang Cohrs
(Technical coordinator)
~1% for BSRN
retires end of 2024

Infrastructure



1. ftp server:

<ftp.bsrn.awi.de>

station-to-archive files

Dateiname	Dateityp	Zuletzt geändert	Berechtigungen	Besitzer/Gruppe
..				
abs	Dateiordner	2022-06-07 15:04:20	drwxr-xr-x	bsrnadm bsrn
ale	Dateiordner	2021-06-02 10:27:51	drwxr-x---	bsrnadm bsrn
asp	Dateiordner	2021-06-02 10:33:31	drwxr-x---	bsrnadm bsrn
bar	Dateiordner	2022-05-03 13:08:09	drwxr-x---	bsrnadm bsrn
ber	Dateiordner	2022-05-03 12:08:39	drwxr-x---	bsrnadm bsrn
bil	Dateiordner	2021-06-02 10:53:11	drwxr-x---	bsrnadm bsrn
bon	Dateiordner	2021-06-02 10:55:27	drwxr-x---	bsrnadm bsrn

2. PANGAEA:

<https://dataportals.pangaea.de/bsrn/>



PANGAEA.

Data Publisher for Earth & Environmental Science

Baseline Surface Radiation Network – Status

[BSRN homepage] - [Staff | Stations | Stations, sortable | Parameters | Methods] - [**LR0100** | LR0300 | LR0500 | LR1000 | LR1100 | LR1200 | LR1300 | LR3010 | LR3030 | LR3300 | All | latest datasets | latest snapshot | timeliness]

Click on a number shows a list of all datasets for selected year and station.

Station	Short name	Station scientist 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	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	All	
Abashiri	ABS	SASAKI Shun (rrc-jma@met.kishou.go.jp)																																				
Alert	ALE	** Station closed/no longer maintained **														5	12	12	12	12	12	12	12	12	12	6							10	12	12	3	X	
Alice Springs	ASP	Matt Tully (m.tully@bom.gov.au)						12	12	12	12	12	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	8	5							X	
Barrow	BAR	Laura Riihimaki (laura.riihimaki@noaa.gov)		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	9	12	12	8	3	12	12	12	12	X	
Bermuda	BER	Laura Riihimaki (laura.riihimaki@noaa.gov)		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	2	8								X	
Billings	BIL	Laura Riihimaki (laura.riihimaki@noaa.gov)			4	12	12	12	12	12	12	12	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	7							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	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		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	12	12	12	12	12	12	12	12	12	12	4							X
Boulder	BOU	** Station closed in July 2016 **		12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	6									X	
Brasilia	BRB	Andre R. Goncalves (andre.goncalves@inpe.br)															8	10	4	12	12	12	7	12	12	12			11	4						X		
Budapest	BUD	Dénes Fekete (fekete.d@met.hu)																												4	7	12	12	12	9		X	
Cabauw	CAB	Wouter Knap (knap@knmi.nl)														11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	2	X	
Camborne	CAM	Grant Hodgetts (grant.hodgetts@metoffice.gov.uk)										12	12	12	12	12	12	12	12	12	12	4	12	12	12	12	12	12	7								X	
Cape Baranova	CAP	Olga Sidorova (olsid@aari.ru)																										12										X
Carpentras	CAR	** Station closed in December 2018 **						4	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12								X	
Chesapeake Light	CLH	** Closed in Dec 2016, structural issues **										8	12	12	12	12	12	12	12	12	12	12	12	12	12	11											X	
Cener	CNR	Xabier Olano (xolano@cener.com)																			6	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12		X
Cocos Island	COC	Matt Tully (m.tully@bom.gov.au)													3	10	8	12	12	12	12	12	12	9	4	12	12	12	12	12	8	4					X	
De Aar	DAA	Katlego Ncongwane (Katlego.Ncongwane@weathersa.co.za)										7	6	12	11	12	1										8	12	12	12	12	1					X	

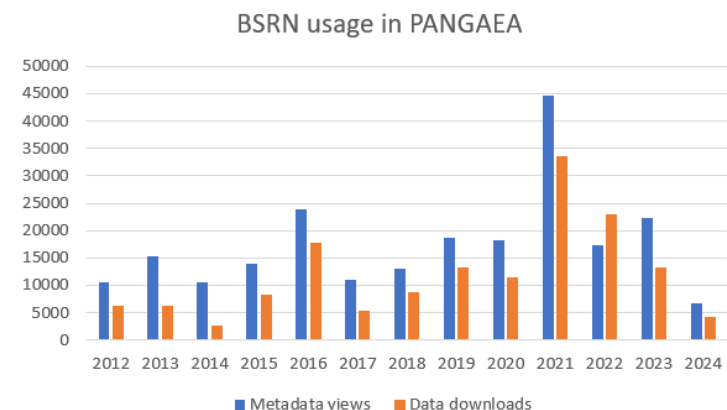
Infrastructure 1 – ftp Server news

- **sftp** transfer to incoming now possible (ftp still working)
- „legacy LR4000“ – plans
- „raw“ system fully set-up

Infrastructure 2 – PANGAEA news

- 36 **collections** created up to now – more following <https://www.pangaea.de/?q=%40BSRNcollection>
- Access restrictions removed (PANGAEA)
- **View/Download statistics** for individual datasets/collection

more than 11 000 downloads per year (only PANGAEA)





PANGAEA.

Data Publisher for Earth & Environmental Science CONTACT

Amelie Driemel  

SEARCH SUBMIT HELP ABOUT

Citation:


Maturilli, Marion (2020): Basic and other measurements of radiation at station Ny-Ålesund (2006-05 et seq) [dataset publication series]. *Alfred Wegener Institute - Research Unit Database PANGAEA*



License: Baseline Surface Radiation Network License 1.0 (BSRN-1.0)










Size: 215 datasets

Download Data

 Download ZIP file containing all datasets as tab-delimited text — use the following character encoding:

Datasets listed in this publication series

<< PREV | **1** | 2 | 3 | NEXT >>

1. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-05).  <https://doi.org/10.1594/PANGAEA.676823>
2. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-06).  <https://doi.org/10.1594/PANGAEA.676824>
3. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-07).  <https://doi.org/10.1594/PANGAEA.676825>
4. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-08).  <https://doi.org/10.1594/PANGAEA.676826>
5. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-09).  <https://doi.org/10.1594/PANGAEA.676827>
6. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-10).  <https://doi.org/10.1594/PANGAEA.676828>
7. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-11).  <https://doi.org/10.1594/PANGAEA.676829>
8. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2006-12).  <https://doi.org/10.1594/PANGAEA.676830>
9. **Maturilli, M (2008):** Basic and other measurements of radiation at station Ny-Ålesund (2007-01).  <https://doi.org/10.1594/PANGAEA.695551>

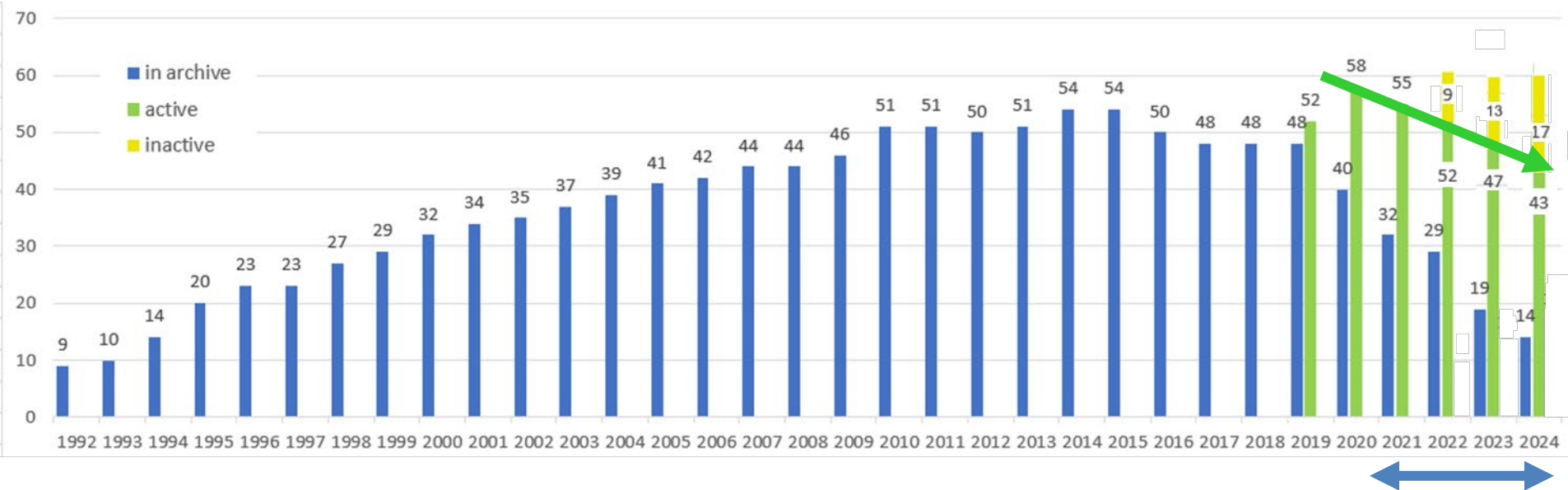
Data overview, status 07-2024



1	LR 0100: Global, Diffuse, Direct, Long-wave down	77 stations
2	LR 0300: Reflex, Long-wave up	19 Stations
3	LR 0500: UV	13 Stations
4	LR 1000: Synops	16 Stations
5	LR 1100: Upper air soundings	33 Stations
6	LR 1200: Total ozone	9 Stations
7	LR 1300: Ceilometer data	3 Stations
8	LR 30x0: Radiation measurements from tower	13 stations
9	LR4000: Pyrgeometer raw data	18 stations

Status Juli 2024 **~13400 monthly datasets** (~1116 years)

Stations with data in the WRMC



1. Number of active stations declining
2. Number of inactive stations going up
3. Time lag for data submission often >2 years

2024: of the 77 stations: 43 active, 17 ,inactive', 17 closed stations

Usage statistics

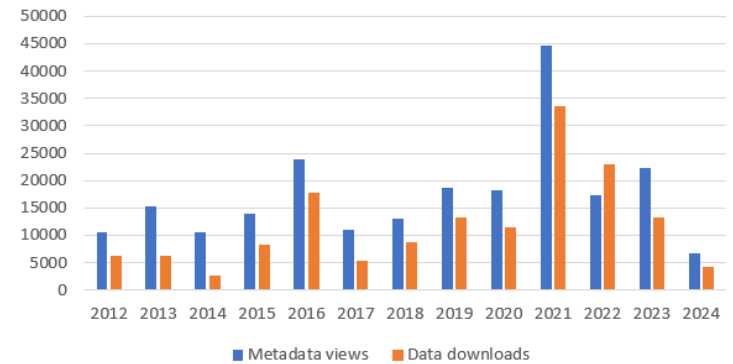


Requests from ~60 countries so far
 New data requests ~140 per year

=> only for ftp server



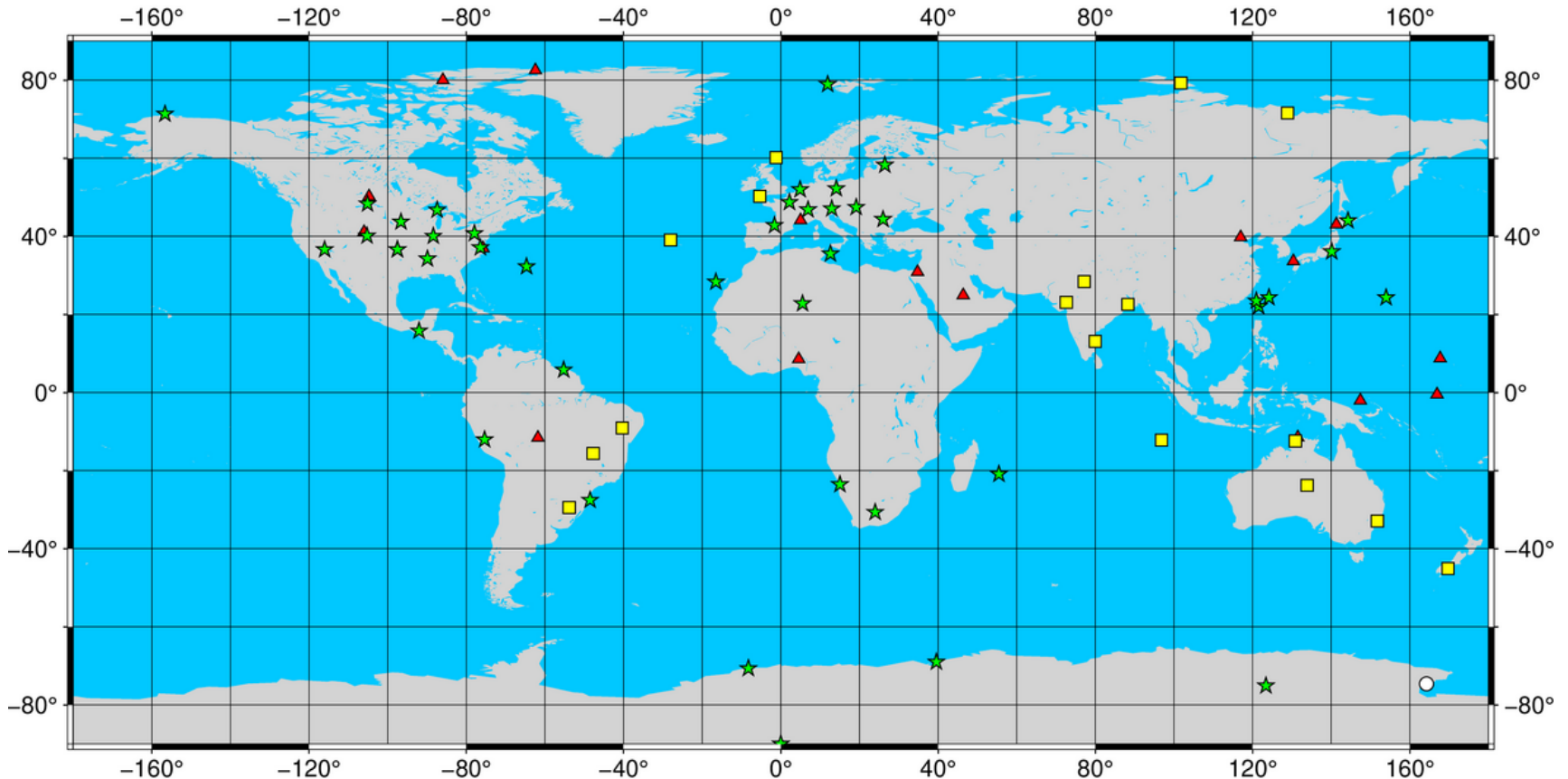
BSRN usage in PANGAEA



>11 000 downloads/year

Changes in stations

Running, inactive, planned and closed BSRN Stations, July 2024



- Stations**
- ★ Running
 - Inactive
 - ▲ Closed
 - Candidate

Changes in stations

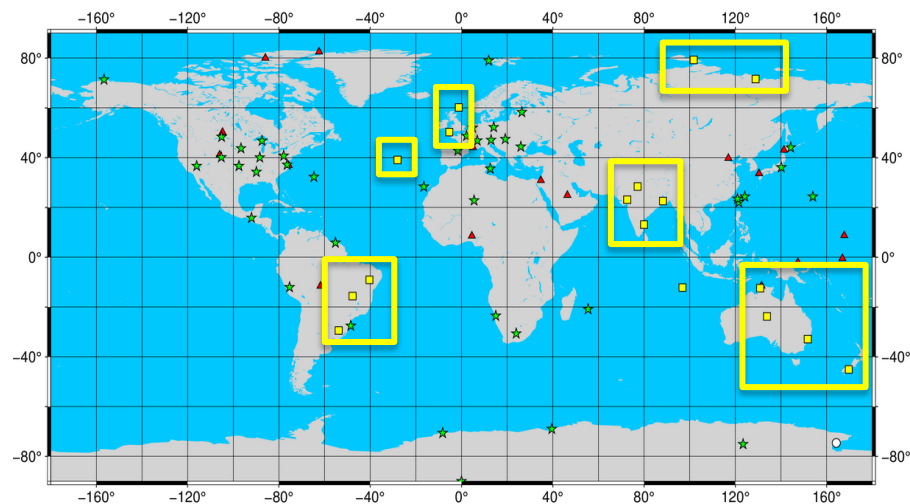


Since 2022:

- 1 station declared as closed
- 8 more stations declared as inactive, now in total 17
- 1 new station (welcome Lampedusa!)
- 1 still candidate (Terra Nova Bay, already submitted raw data)
- A few pending (from Ireland, Chile, Cyprus, Indonesia, Thailand..)

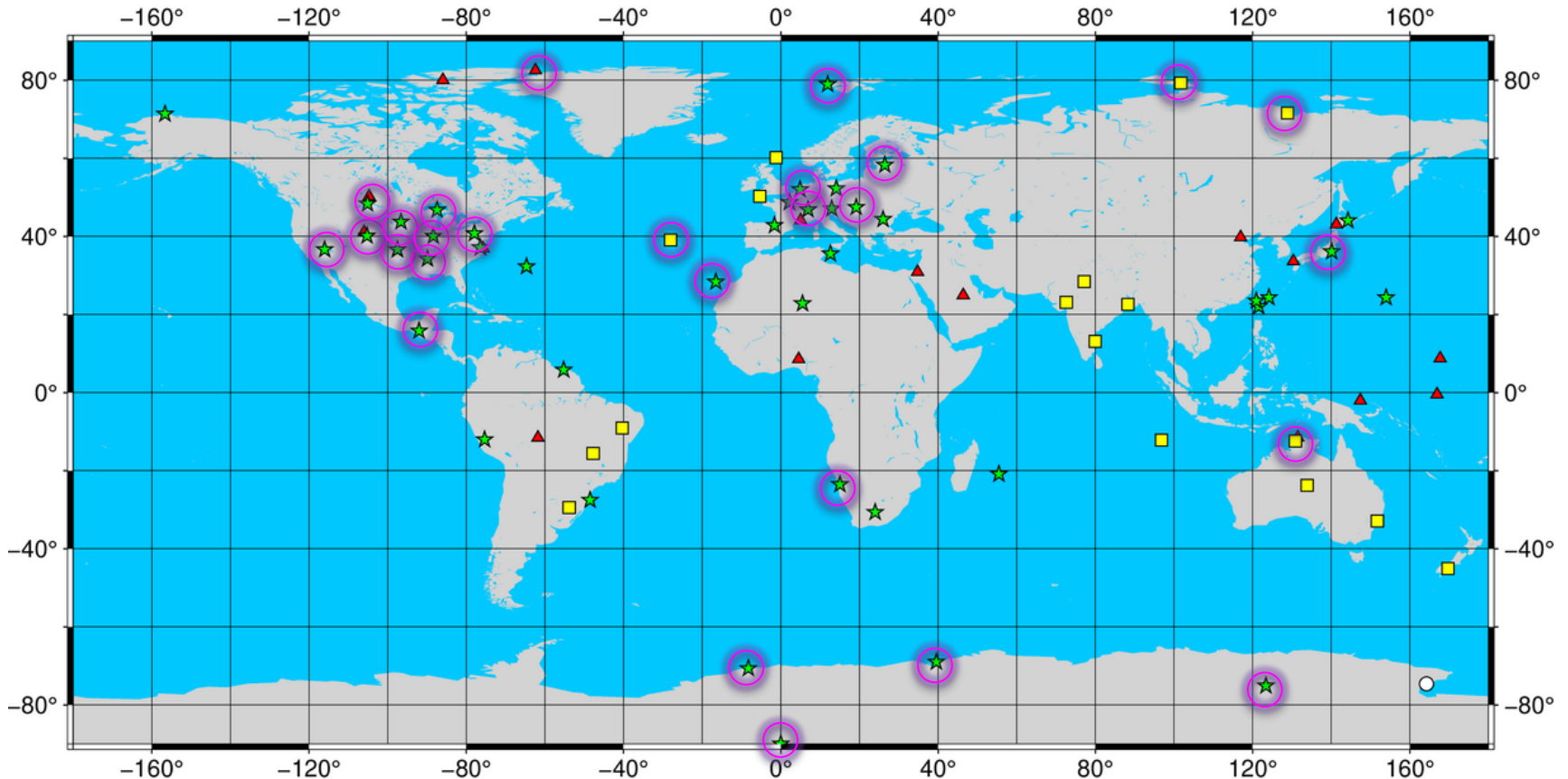
Inactive stations - status

- GUR, GAN, HOW, TIR (India)
During the COVID period, all the stations were shut down little to no contact with station representatives ☒
- PTR, SMS, BRB (Brazil)
Lack of trained technicians, funding issues. Team will be partially restored July 2022. Close contact to station scientists ✓
- CAP, TIK (Russia)
CAP: Data quality issues, no personell for processing, TIK: the whole system will be changed, no contact to station scientist for a longer time ☒
- ENA: Data submission on hold ⚡
- ASP, LAU, DWN, NEW (Australia/NZ)
COVID related, financial issues
close contact to station scientists ✓
- CAM, LER (UK)
no progress since change of station scientist in 2018? Contact to station scientist in 2023 ⚡



27 Stations with complete budget

Running, inactive, planned and closed BSRN Stations, July 2024



- Stations**
- ★ Running
 - Inactive
 - ▲ Closed
 - Candidate

Toolbox programmer no longer available @AWI.
I can only program basic things and only for the windows version



⇒ We need to **completely re-do the BSRN Toolbox**

⇒ We need to plan: in which language/environment, which functionalities do we need etc



⇒ Find funds to pay a company, or find someone within BSRN with some spare time ;)

Cooperation with Data Quality WG

Current Workflow:

Data on ftp/incoming

WRMC checks data

Data overall ok

Inconsistencies detected

Data is uploaded to ftp/PANGAEA

Data is uploaded to bsrn-qc.net

contact to station scientist

Wouter checks with his Tool, contact to station scientist

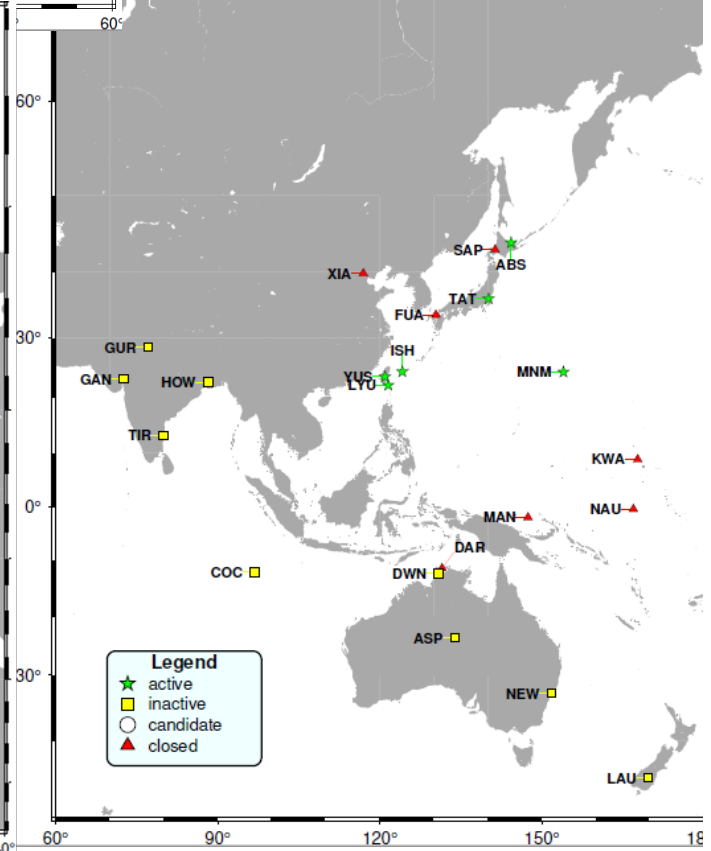
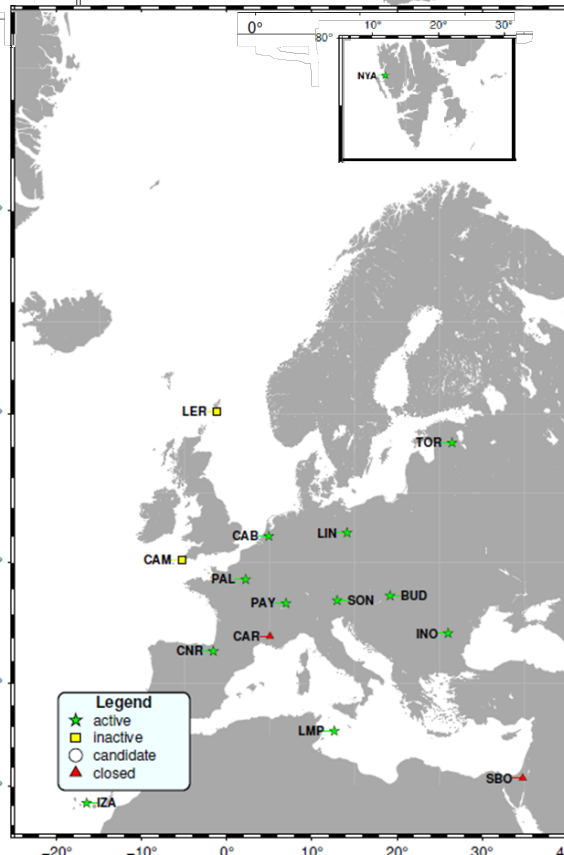
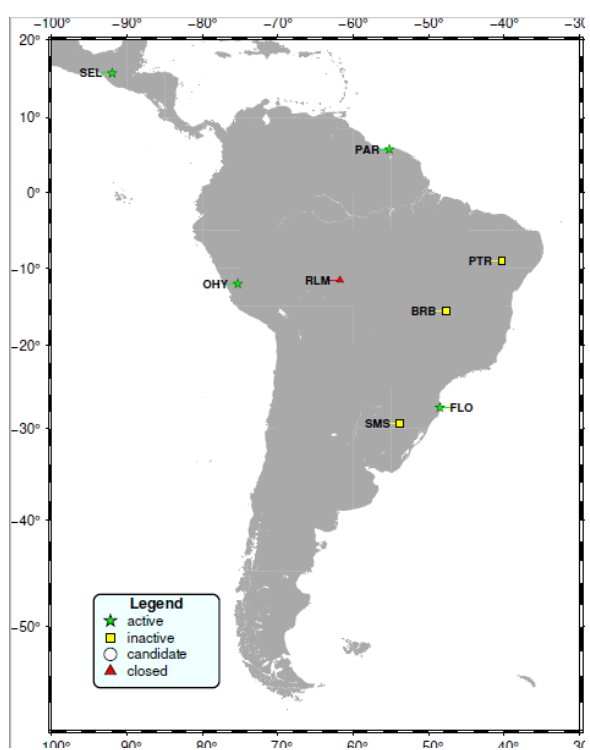
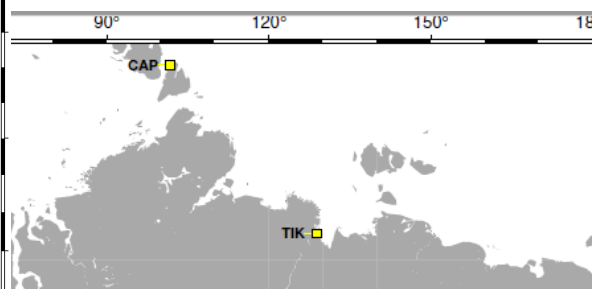
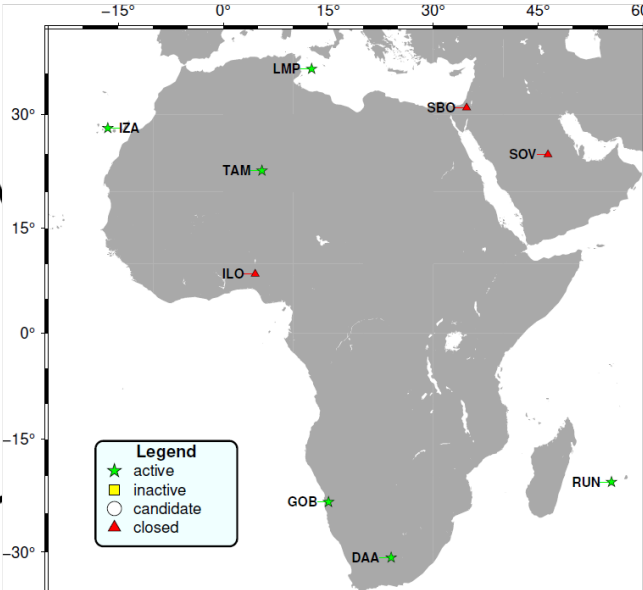
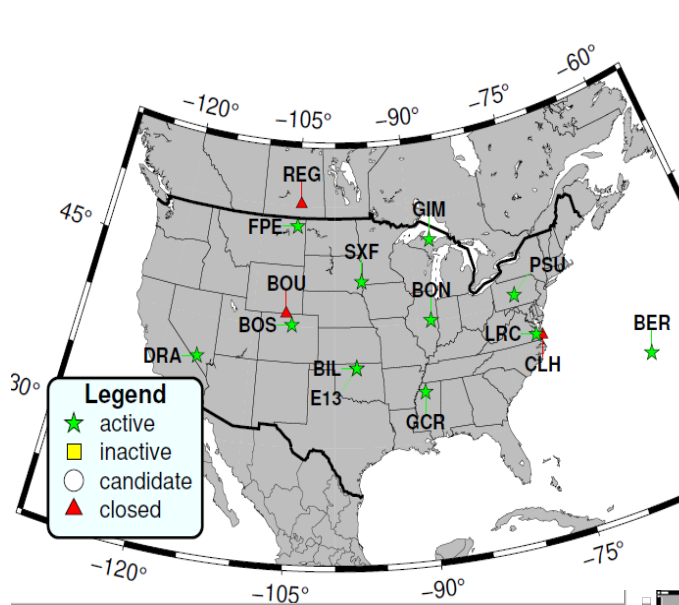


<https://bsrn-qc.net/>

Current issues / TO DOs



- (1) Inactive stations – how to get them running again?
- (2) Centralized data quality tools – can we do that?
- (3) Long-term pending stations – what can we do to help? Supporting document for new stations needed?
- (4) ftp archive future: change to a cloud solution someday?
- (5) Data quality document needed? („most common issues and ways how to solve them“)
- (6) LR4000 – include all active stations, collect legacy LR4000





ありがとうございます
Arigatō gozaimasu