

# Agenda of the 18<sup>th</sup> WRCP/BSRN Scientific Review and Workshop

## July 1-5, 2024, Tokyo, Japan

Version 2024-06-27

All times are in UTC+9: <https://time.is/Tokyo>



### Monday – 1 July 2024 ([MS Teams link](#))

#### 13:00 – 14:00 Registration

Welcome and management reports (Chair: Lanconelli)			
14:00 – 14:10	<b>Lanconelli</b> BSRN	Setup and BSRN Project Manager Greetings	
14:10 – 14:20	<b>Hiraishi</b> JMA Director Env./Ocean Division	Welcome and Opening remarks	
14:20 – 14:50 (30 min)	<b>Tsuboi</b> JMA GAW Senior Coordinator	The activities of JMA on the global atmospheric environment observations (greenhouse gases, ozone, aerosol, and radiation)	
14:50 – 15:00	<b>Riihimaki</b> CIRES/NOAA	In memoriam: Frank Vignola (1945-2023†)	
15:00 – 15:30 (30 min)	<b>Lanconelli/Riihimaki</b> BSRN Management	BSRN status, current challenges, and perspectives	
15:30 – 15:50	<b>Driemel</b> AWI	BSRN/WRMC update – status, challenges, tasks	

#### 15:50 – 16:10 Coffee break

GCOS and keynote presentations (Chair: Augustine)			
16:10 – 16:30	<b>Oakley</b> GCOS/WMO	BSRN in the wider WMO GCOS community	R
16:30 – 16:55 (25 min)	<b>Ramaswamy</b> NOAA/GFDL	Earth's radiative heat balance and climate change: Importance of surface fluxes	K
16:55 – 17:20	<b>Trentmann</b> DWD	Using BSRN data for the evaluation of the satellite derived surface radiation climate data records from the EUMETSAT CM SAF	K, R
17:20 – 17:45	<b>Jensen</b> DTU	Availability of solar radiation measurements outside the BSRN	K, R
17:45 – 18:00	<b>All</b>	Discussion	

(Legend last column: K = keynote speech, R = remote talk, T or empty = talk, P = poster/incvited to give a short summary)

**18:00 – 20:00 Icebreaker Welcome, hosted by GEWEX at JMA-HQ**

## Tuesday – 2 July 2024 ([MS Teams link](#))

9:00 – 9:05	<b>Lanconelli</b> BSRN	Intro to Day 2	
<b>GEWEX/GDAP (Chair: Lanconelli)</b>			
9:05 – 09:30	<b>Masunaga</b> GEWEX/Nagoya University	GEWEX GDAP status and BSRN engagement	

<b>Reference (Chair: Knap)</b>			
9:30 – 9:50	<b>Vuilleumier</b> MeteoSwiss	Future changes of primary radiation references at PMOD/WRC	
9:50 – 10:10	<b>Habte/Sengupta</b> NREL	Overview of International Radiometric Standards	
10:10 – 10:30	<b>Sengupta/Habte</b> NREL	Towards Developing Accurate Long-term Solar Irradiance for Climate Studies	

### 10:30 – 10:50 Coffee Break

10:50 – 11:10	<b>Lin</b> CWA	Indoor calibration of pyranometer in Taiwan	R
11:10 – 11:30	<b>Habte</b> NREL	Development of Test methods for Radiometer Specifications	
11:30 – 11:50	<b>Vuilleumier</b> Meteoswiss	Homogeneity of Downward Thermal Infrared Radiation Series	
11:50 – 12:10	<b>Wacker</b> DWD	30 years of observations of radiative fluxes at the Lindenberg BSRN site	R
12:10 – 12:30	<b>All</b>	Discussion on References	

### 12:30 – 14:00 Lunch Break

<b>Data quality &amp; Uncertainty (Chair: Vuilleumier)</b>			
14:00 – 14:50	<b>Knap</b> KNMI	Review of BSRN data quality and report from the working group (2022-2024) and open discussion	
14:50 – 15:10	<b>Lanconelli</b> BSRN	The BSRN RAW system: a tool in support of timeliness	
15:10 – 15:30	<b>Riihimaki</b> CIRES/NOAA	Ensuring Consistency for the NOAA Remote Observatory Stations: An Update on Operations at NOAA GML Polar Stations	

### 15:30 – 15:50 Coffee Break

15:50 – 16:10	<b>Meloni/Di Sarra</b> ENEA	Irradiance measurements at the Lampedusa Oceanographic Observatory: strengths and disturbances	R
16:10 – 16:30	<b>Wilcox/Habte</b> SRS, NREL	Determining the Expanded Uncertainty of Three-Component Solar Radiation Measurements	
16:30 – 16:50	<b>Urraca</b> EC JRC	Uncertainty budget of BSRN shortwave radiation measurements	R
16:50 – 17:10	<b>Ohmura (*)</b> ETH	Decadal variation of longwave downwelling surface radiation and its effect on net radiation: Based on pyrgeometer measurements at the surface.	R
17:10 – 17:40	<b>All</b>	Discussion (moderators Knap & Vuilleumier)	

(\*) Due to timezone constraints, this presentation anticipates the session of Wednesday morning pertaining to "Applications"

**Group dinner (18:30 - 20:30) – Official event, offered by JMA**

Wednesday, 3 July 2024 ([MS Teams link](#))

<b>Applications (Chair: Riihimaki)</b>			
8:55 – 9:00	<b>Lanconelli</b> BSRN	Intro to day 3	
9:00 – 9:25	<b>Augustine</b> NOAA	A probable cause of multidecadal brightening and dimming and recent effects from greenhouse gas warming	
9:25 – 9:50	<b>Zhang</b> NASA	The Use of the BSRN Data as A Benchmark for the POWER hourly DHI and DNI and In Validating Derived Hourly GTI	
9:50 – 10:15	<b>Knap</b> KNMI	The use of BSRN data for meteorological and solar energy applications	
10:15 – 10:35	<b>Lanconelli</b> BSRN	BSRN Temporal aggregation and Operational “Long and Ackermann” Clear-Sky parameters (current status)	

**10:35 – 10:45 Coffee Break**

<b>Instruments and methods (Chair: Hodges)</b>			
10:45 – 11:05	<b>Ohkawara</b> JMA	Development of a new ground based spectral radiometer system for albedo and flux (GSAF)	
11:05 – 11:25	<b>Wang</b> NCU	Estimation of solar radiation using all-sky camera and validation with BSRN data	
11:25 – 11:45	<b>Burnett</b> EKO	Solar radiation measurements with an ISO9060:2018 Class A pyranometer coupled with a rotating shadow band	
11:45 – 12:05	<b>Fabbri</b> NASA LRC	The Component Summation Technique for Measuring Upwelling Longwave Irradiance in the Presence of an Obstruction	
12:05 – 12:25	<b>Urraca</b> EC JRC	Characterizing and correcting the spatiotemporal mismatch between in-situ and satellite solar radiation measurements.	<b>R</b>

**12:30 – 21:00 Lunch and Excursion to Tateno, Dinner on the way back**

<i>PM</i>		
<b>12:30 – 21:00</b>	<b><i>Lunch and Excursion to Tateno</i></b>	more information
12:30 ~ 13:15	<i>Lunch</i>	
13:15 – 14:30	Trip to Tsukuba by bus	
14:30 – 15:30	Sightseeing at "Ushiku great Buddha"	<a href="https://www.japan-guide.com/e/e6242.html">https://www.japan-guide.com/e/e6242.html</a>
15:30 – 17:00	Visiting Tateno station (TAT)	RIC(regional instrument center Tsukuba) also will kindly give a short explanation(about 10min).
17:30 – 19:30	Excursion Dinner near TAT	
19:30 – 21:00	Return to Tokyo by bus	

(\*) Return to Tokyo JMA-HQ

## Thursday, 4 July 2024 ([MS Teams link](#))

### Station status, review of the pending sites and NEW SITES

8:55 – 9:00	Lanconelli	Intro day 4	
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Operational stations (Chair: Driemel/Riihimaki)			
9:00 – 9:20	<b>Sasaki</b> JMA Radiation Staff	Status of BSRN stations in Japan (ABS, FUA, ISH, TAT)	T
9:20 – 9:40	<b>Bonifaz</b> UNAM	Status of the “SELEGUA” BSRN Station in Chiapas, México (SEL)	T
9:40 – 10:00	<b>Goncalves</b> INPE	Update on PTR, BRB and SMS stations operated by INPE in Brazil (PTR, BRB, SMS)	T
10:00 – 10:20	<b>Baika</b> National Meteorological Office of Algeria	Results of measurements at GAW station Tamanrasset/Assekrem (TAM)	T
10:20 – 10:40 (*)	<b>Morel/Delsaut</b> Reunion Univ.	Status and operations of Reunion Island (RUN) BSRN station (RUN)	P
	<b>Vuilleumier</b> MeteoSwiss	Status of the Payerne BSRN station (2024) (PAY)	P
	<b>Starke</b> UFSC	Status of the BSRN station # 3, located in Florianopolis (Brazil) (FLO)	P
	<b>Geyer</b> Geosphere	Status update of BSRN station Sonnblick (SON)	P

(\*) Submitted as a poster presentation, required to give a short introduction to the poster. Approx. 5 min.

### 10:40 – 11:00 Coffee Break

11:00 – 11:20 (*)	<b>Lin</b> CWA, NCU	Status and Operations of the BSRN Stations (Yushan and Lanyu) in Taiwan (YUS and LAN)	P
	<b>Fabbri</b> NASA LRC	Status and Operations at the Granite Island, Michigan (GIM) BSRN Station, Status and Operations at the Langley Research Center (LRC) BSRN Station	P
	<b>Fekete</b> HungaroMet	Status of BSRN station Budapest-Lorinc - past, present and future (BUD)	P

(\*) Submitted as a poster presentation, required to give a short introduction to the poster. Approx. 5 min.

New Stations (1) (Chair: Lanconelli)			
11:20 – 11:45 11:45 – 12:00 (discussion)	<b>Yang</b> Harbin Univ.	Shortwave radiometric measurements under a cold climate during winter (QIQ)	T

Regional networks			
12:00 – 12:25	<b>Vitale</b> ISP CNR	Improve Radiation measurements in Antarctica: the Antarctic Radiation Regional Network (ARRN) Initiative	

### 12:25 – 14:00 Lunch Break

Training session				
14:00 – 14:25	<b>Driemel</b> AWI	<a href="#">BSRN Toolbox</a>	The official BSRN tool to produce quality flags	
14:25 – 14:50	<b>Knap</b> KNMI	bsrn-qc.net	A pilot effort developed by Wouter to produce quality check plots and flags, table report and temporal trends	
14:50 – 15:15	<b>Delsaut</b> Reunion Univ	Pybsrnqc	A library for BSRN Quality Control (QC) <a href="https://pypi.org/project/pybsrnqc/">https://pypi.org/project/pybsrnqc/</a>	
15:15 – 15:40	<b>ALL</b>	Discussion on QC tools	Discussion about the need for BSRN official QC tool updates/ other QC initiatives/ station-to-archive formatters/ collecting feedback/	

### 15:40 – 16:00 Coffee Break

General Discussions				
16:00 – 17:00	<b>Hodges</b> NOAA	BSRN Manual Review committee report and discussion		
	<b>Driemel</b> AWI	Next Meeting venue: Collecting Expression of interests		
	<b>ALL</b>	Any Other Business		

(\*) Please note that the former session scheduled in this timeslot, dedicated to pending stations review was withdrawn. A short recap will be given by Lanconelli/Driemel on Day 1.

New Stations (2) (Chair: Lanconelli)				
17:00 – 17:25 17:25 – 17:40 (discussion)	<b>Witthuhn</b> TROPOS	Mindelo (Cape Verde) - TROPOS ACTRIS Radiation Observatory (TARO)		R

## Friday, 5 July 2024 ([MS Teams link](#))

Working group reports (Chair: Riihimaki/Lanconelli)				
9:00 – 10:20 Group breakouts	<b>Vuilleumier</b>	<b>Uncertainties</b>		
	<b>Knap</b>	<b>Data Quality</b>		
10:20 – 10:40 Coffee break	<b>Riihimaki/Vitale</b>	<b>Ocean</b>		
	<b>Lanconelli</b>	<b>Value Added Products</b>		
	<b>Goncalves/Badosa</b>	<b>Use of BSRN in SRE</b>		
10:40 – 12:00 Reporting	<b>Lantz</b>	<b>Spectral/UV</b>		
	<b>Wang</b>	<b>Albedo/Satellite</b>		R
	<b>Wacker</b>	<b>Infrared</b>		R
	<b>McComiskey (interim)</b>	<b>Broadband</b>		R

Remarks: Working group chairs are free to organize on-line meetings before the BSRN workshop, or during the week at alternative/informal venues, to summarize their achievements. The first part of the morning is meant for any in-person breakout session for those WG with enough local attendees. The second part of the morning is dedicated to the WGs' reports. Grey cells refer to remote participation of the chair.

## 12:00 – 13:00 Concluding Remarks and Adjourn

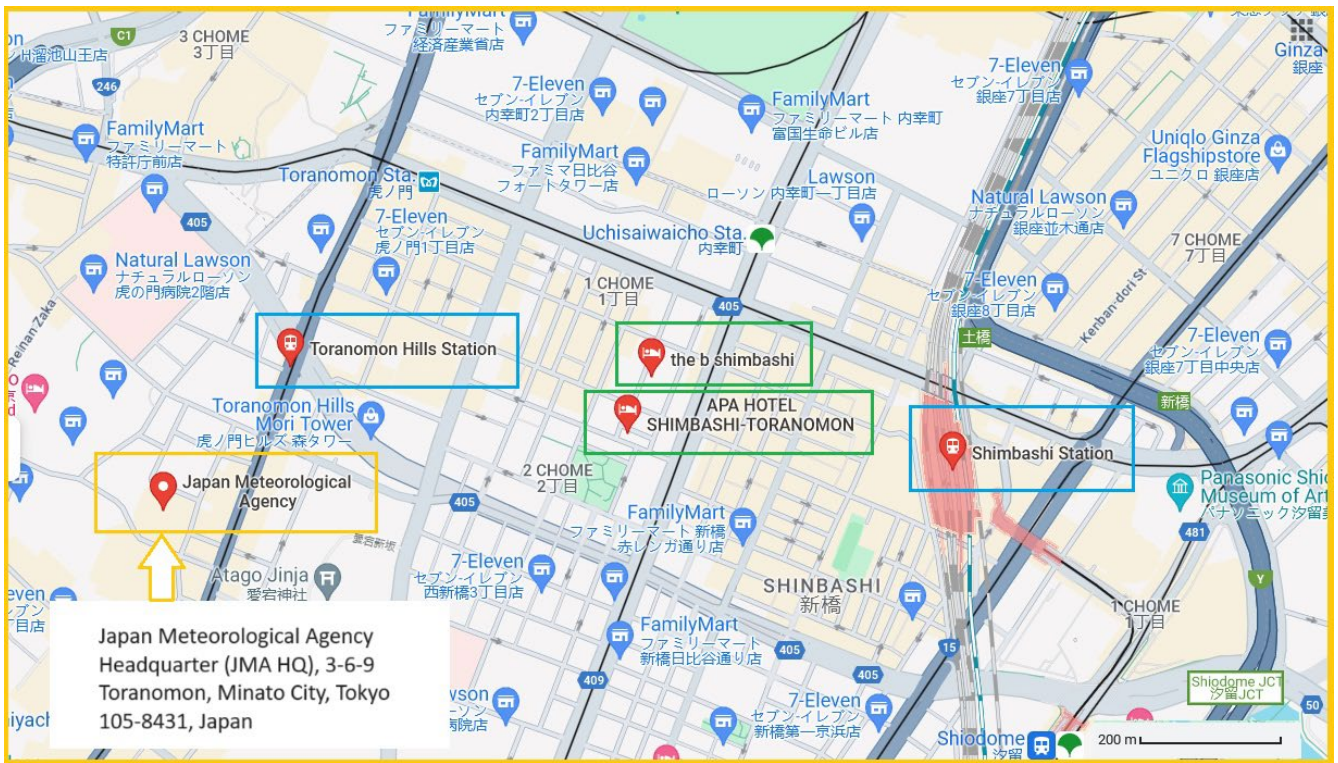
**Poster session (whole week) [A0 – portrait – max size 800x1550mm]**

<i>Whole week</i>	<b>All subjects</b>		
	<b>Lupi</b> CNR	Ship cruises as an opportunity to obtain surface radiation flux measurements in a marine polar environment	P
	<b>Kawahara</b> EKO	Novel concept for Solar Duration measurements	P
	<b>Hodges</b> NOAA	New SURFRAD 10 m Tower	P
	<b>El Shahat Badawy</b> Egyptian Meteo Authority	Impact of the dust and sandstorm on the Global Surface Radiation over Egypt ( <i>to be confirmed</i> )	P
	<b>Station status (*)</b>		
	<b>Morel (RUN)</b> Reunion Univ.	Status and operations of Reunion Island (RUN) BSRN station	P
	<b>Vuilleumier (PAY)</b> MeteoSwiss	Status of the Payerne BSRN station (2024)	P
	<b>Starke (FLO)</b> UFSC	Status of the BSRN station # 3 (FLO), located in Florianopolis (Brazil)	P
	<b>Lin (YUS and LAN)</b> CWA, NCU	Status and Operations of the BSRN Stations (Yushan and Lanyu) in Taiwan	P
	<b>Fabbri (GIM, LRC)</b> NASA LRC	Status and Operations at the Granite Island, Michigan (GIM) BSRN Station, Status and Operations at the Langley Research Center (LRC) BSRN Station	P
	<b>Fekete (BUD)</b> Hungarian Meteo Service	Solar radiation measurements at Budapest-Lorinc station - past, present and future	P
	<b>Cabrera (IZA)</b> Meteorological State Agency of Spain	Status of the Izaña BSRN station (IZA)	P
	<b>Geyer (SON)</b> Geosphere	Status update of BSRN station Sonnblick (SON)	P

(\*) The authors of the poster illustrating BSRN station status are invited to summarize their achievement in Thursday morning session from 10:20 to 11:20 (~5 min presentation).



## Maps that might be useful for orientation:



orange rectangle: venue; blue rectangles: train stations; green rectangles: two of the hotels on the list

