

BSRN STATION DESCRIPTION

STATION MANAGER

Ozone and Radiation Division,
Aerological Observatory,
Japan Meteorological Agency (JMA)

Address: 1-2 Nagamine, Tsukuba-shi,
Ibaraki, 305-0052 JAPAN

Tel : +81-29-851-2572

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STATION LOCATION

Latitude : 36° 03.5 ' (36.0581 deg.) N

Longitude : 140° 07.6 ' (140.1258 deg.) E

Elevation : 25.2 m (MSL)

Local Time: GMT + 09

Topography Type: 1 (flat , urban)

Surface Type: 15 (grass)

Address : 1-2 Nagamine, Tsukuba-shi,
Ibaraki, 305-0052 JAPAN

TOPOGRAPHIC MAP OF SURROUNDING 15 KM RADIUS



Tateno BSRN Station is located in the center of the Tsukuba city. The site of station is broad , and ground surface around is grass or forest.

BSRN SITE DESCRIPTION

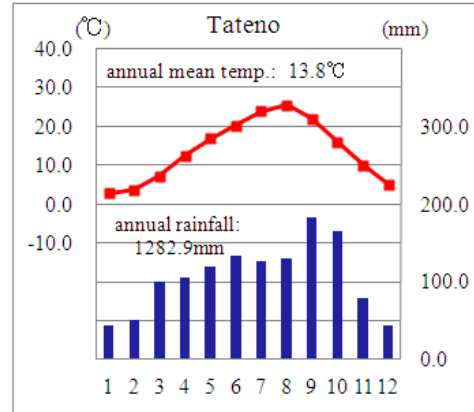
SITE DESCRIPTION



The Instruments except for instruments for Upwelling Infrared Radiation and Reflected Solar Radiation is located at the roof top of Aerological Observatory

CLIMATE

Köppen climate classification Cfa
(Humid subtropical climate)



DESCRIPTIVE MAP OF SURROUNDING 1 KM RADIUS



BSRN SITE DESCRIPTION

INSTRUMENT DESCRIPTION

- ① Tracker(PREDE ASTX-220)
Kipp & Zonen CHP1 Pyrheliometer
Kipp & Zonen CMP21 Pyranometer
(for Global Solar Radiation)
Kipp & Zonen CMP22 Pyranometer
(for Diffuse Solar Radiation)
Kipp & Zonen CGR4 Pyrgeometer

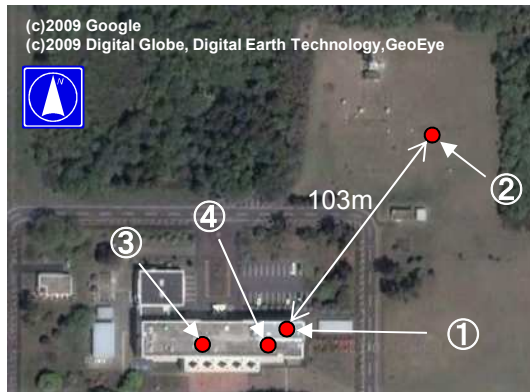
Height from the ground 18.2m.

- ②
Kipp & Zonen CGR4 Pyrgeometer
(for Upward Longwave Radiation)
Kipp & Zonen CMP21 Pyranometer
(for Reflected Solar Radiation)

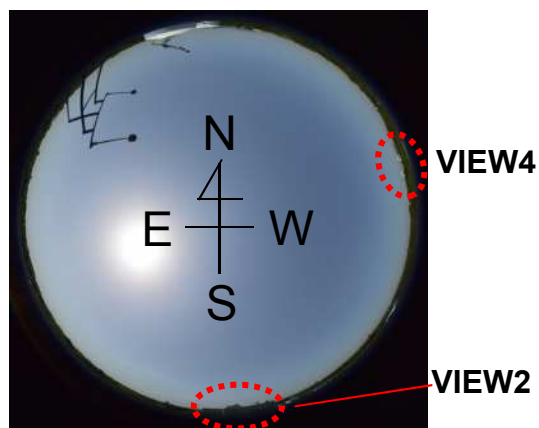
Height from the ground 2.5m.
Sampling frequency 1Hz (① and ②)

- ③Kipp & Zonen MKIII
Brewer Spectrophotometer
- ④Beck Dobson Spectrophotometer

INSTRUMENT LOCATION MAP



HORIZON MAP OF CENTRAL INSTRUMENT



DESCRIPTION OF METEOROLOGICAL INSTRUMENTS

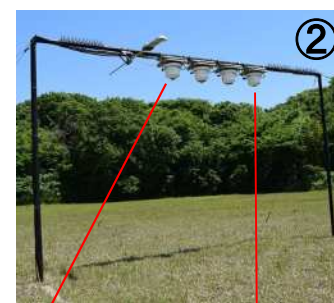
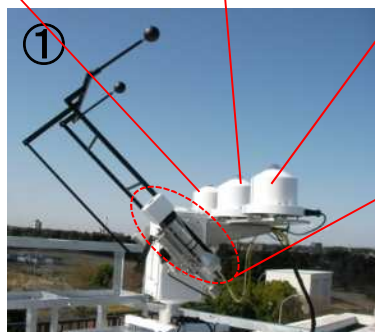


③Brewer Spectrophotometer



④Dobson Spectrophotometer

Downward Longwave Global Solar Diffuse Solar



Direct Solar Radiation

Reflected Solar Upward Longwave

BSRN STATION VIEWS

VIEW1

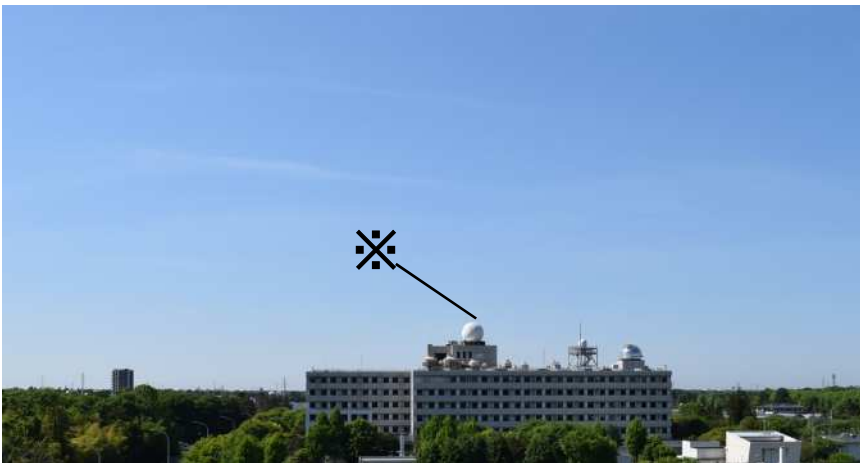


DESCRIPTION

Eastern View

Azimuth 90 degrees
Inclination ~5 degrees

VIEW2



DESCRIPTION

Southern View

Azimuth 180 degrees
Inclination ~5 degrees

※Inclination of the
radome is 4 degrees.

BSRN STATION VIEWS

VIEW3



DESCRIPTION

Western View

Azimuth 270 degrees

Inclination ~5 degrees

VIEW4



DESCRIPTION

Obstruction View

②Buildings

Azimuth 290 degrees

Inclination 5 degrees

BSRN STATION VIEWS

VIEW5



DESCRIPTION

Northern View

Azimuth 360 degrees
Inclination ~5 degrees

VIEW6

DESCRIPTION

BSRN STATION VIEWS

● Additional observation Programmes

- (a) GCOS Reference Upper Air Network (GRUAN): upper-air observation
- (b) GCOS Surface Network (GSN): surface observation
- (c) WMO-GAW programme: UV observation by the Brewer spectrophotometer
ozone observation by the Dobson spectrophotometer
ozone observation by ozonesondes

● Calibration

All radiometers are calibrated every 5 years. Pyrheliometers and pyranometers are traceable to the WRR, and pyrgeometer is traceable to the World Infrared Standard Group (WISG). The trackers will be overhauled every 5 years by its manufacturer.