

BSRN STATION DESCRIPTION

STATION MANAGER

Atmospheric Environment Division,
Japan Meteorological Agency (JMA)

Address: 1-3-4 Otemachi, Chiyoda-ku,
Tokyo 100-8122, Japan

Tel : +81-3-3212-8341 (ext. 4136)

FAX : +81-3-3211-4640

E-mail : rrc-jma@met.kishou.go.jp

STATION LOCATION

Latitude : 33° 34.9' (33.5822 deg.) N

Longitude: 130° 22.6' (130.3764 deg.) E

Elevation : 2.5 m (MSL)

Local Time: GMT + 09

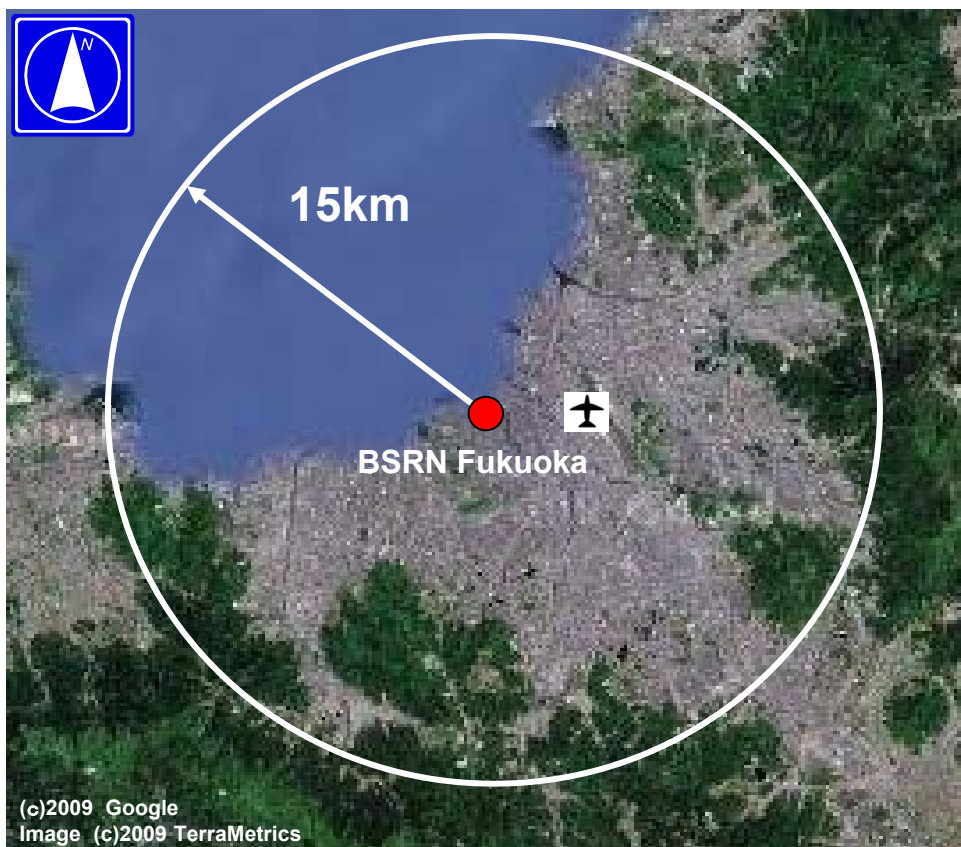
Topography Type: 1 (flat, urban)

Surface Type : 12 (asphalt)

Address : 1-2-36 Ohori, Chuo-ku,

Fukuoka-shi, Fukuoka
810-0052, Japan

PHOTOMAP OF SURROUNDING 15 KM RADIUS



BSRN SITE DESCRIPTION

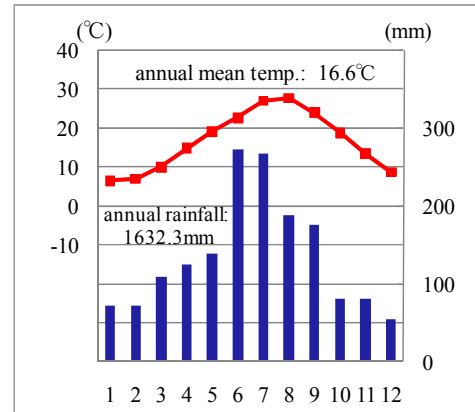
SITE DESCRIPTION



Instruments are installed at the rooftop of Fukuoka district meteorological observatory.

CLIMATE

Köppen climate classification Cfa
(Humid subtropical climate)



DESCRIPTIVE MAP OF SURROUNDING 1 KM RADIUS



- ① A tower at 200 meters distance in ESE direction.
- ② A building at 100 meters distance in SE direction.
- ③ A building at 200 meters distance in SW direction.
- ④ A building at 200 meters distance in W direction.

BSRN SITE DESCRIPTION

INSTRUMENT DESCRIPTION

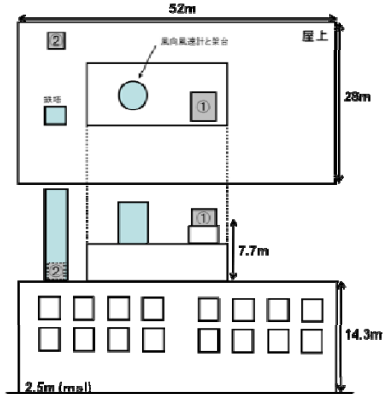
- ① First Tracker (PREDE ASTX-220)
 Kipp & Zonen CHP1 Pyrheliometer
 Kipp & Zonen CMP21 Pyranometer
 (for Global Solar Radiation)
 Kipp & Zonen CMP22 Pyranometer
 (for Diffuse Solar Radiation)
 Kipp & Zonen CGR4 Pyrgeometer

Height from ground level: 22.0 m
 Sampling frequency :1 Hz

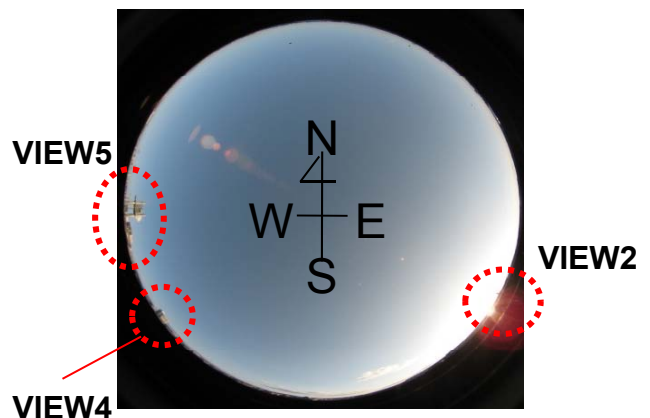
- ② Second Tracker (PREDE ASTX-220)
 Kipp & Zonen CHP1 Pyrheliometer

Height from ground level: 15.9 m
 Sampling frequency :1 Hz

INSTRUMENT LOCATION MAP

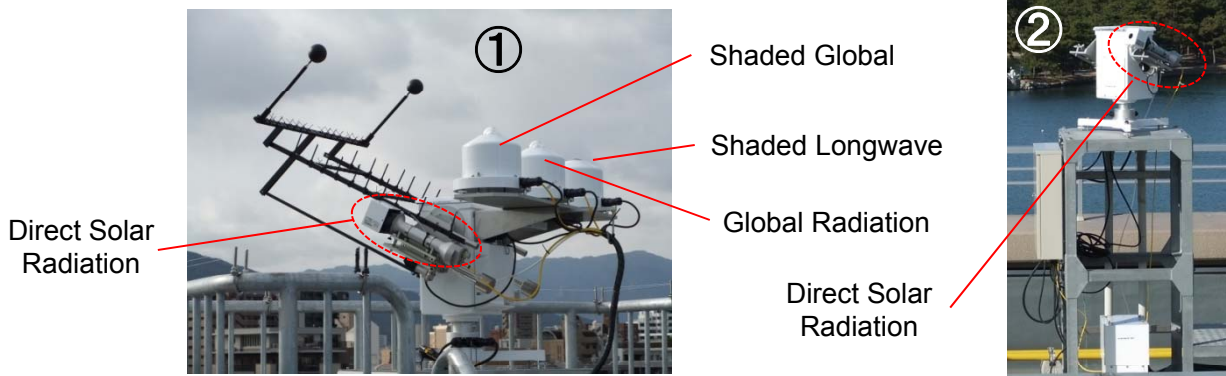


HORIZON MAP OF CENTRAL INSTRUMENT



From the first tracker

DESCRIPTION OF METEOROLOGICAL INSTRUMENTS



For reduction of obstruction effect, the second tracker is installed.
 (⇒ P7 "COMMENT ON THE SITE")

BSRN STATION VIEWS

VIEW1



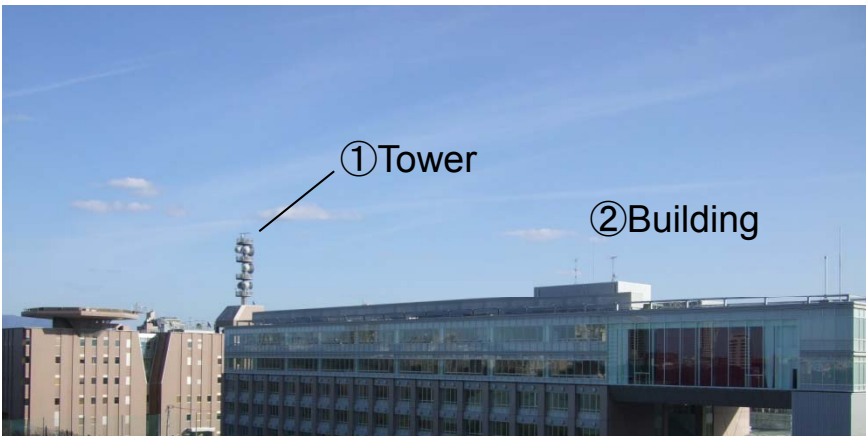
From the first tracker

DESCRIPTION

Eastern View

Azimuth 90 degrees
Inclination ~5 degrees

VIEW2



From the first tracker

DESCRIPTION

Tower and Building View

① Tower
Azimuth 115 degrees
Inclination 8 degrees

② Building
Azimuth 140 degrees
Inclination 5 degrees

BSRN STATION VIEWS

VIEW3



From the first tracker

DESCRIPTION

Southern View

Azimuth 180 degrees

Inclination ~5 degrees

VIEW4



From the first tracker

DESCRIPTION

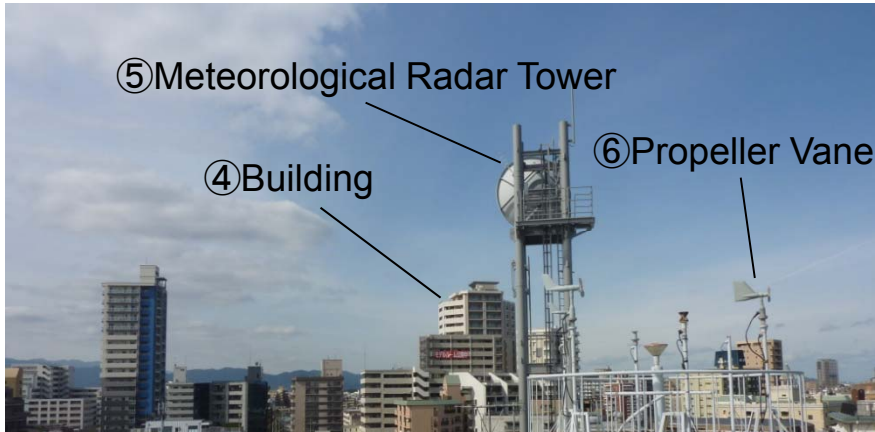
Building View

Azimuth 235 degrees

Inclination 10 degrees

BSRN STATION VIEWS

VIEW5



From the first tracker

DESCRIPTION

Western View

④ Building
Azimuth 260 degrees
Inclination 10 degrees

⑤ Tower
Azimuth 270 degrees
Inclination 24 degrees

⑥ Propeller Vane
Azimuth 285 degrees
Inclination 10 degrees

VIEW6



From the first tracker

DESCRIPTION

Northern View

Azimuth 360 degrees
Inclination ~5 degrees

COMMENT ON THE SITE

● Additional observation programs:

- (a) WMO WWW programme: upper-air observation
surface observations (i.e. surface air temp., air pressure, humidity, wind, cloud amount, etc.)

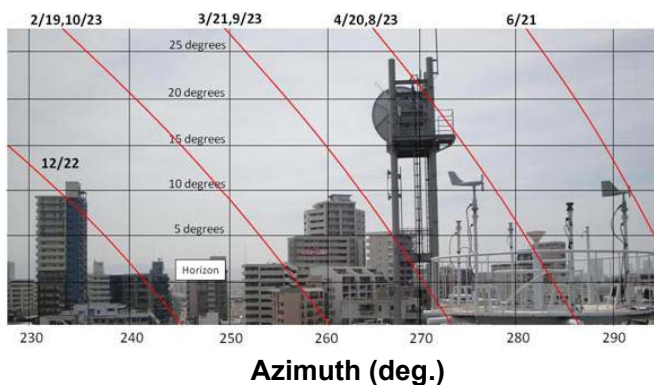
● Calibration:

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.

● Direct solar radiation measurements:

Some obstructions in a westward direction disturb direct beam radiation before sunset in some seasons (see View 5). To minimize missing direct beam data, two pyrheliometers are installed on different trackers and observe direct beam in parallel.

a) the first tracker



b) the second tracker

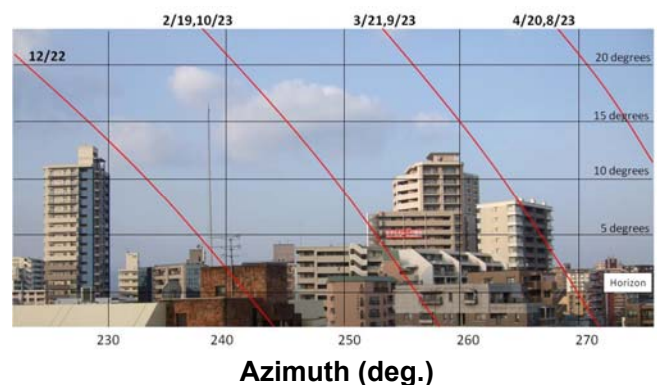


Figure: Horizontal view and solar trajectory (red line) at two pyrheliometers on different trackers. a) the first tracker and b) the second tracker.

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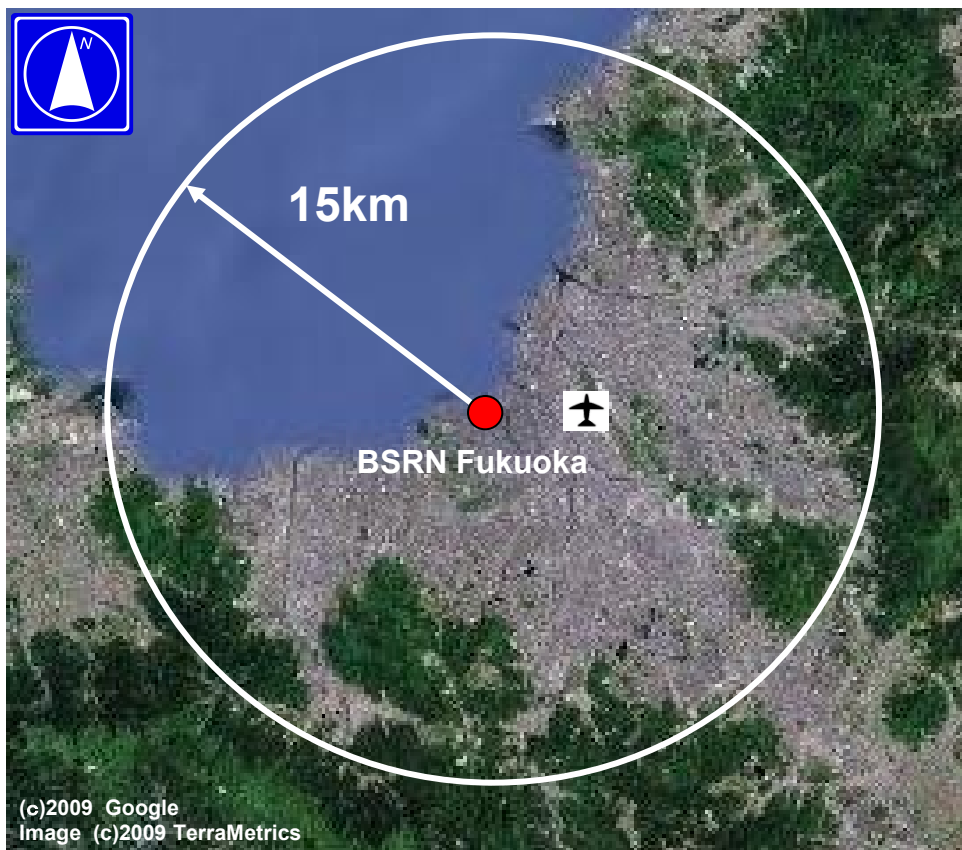
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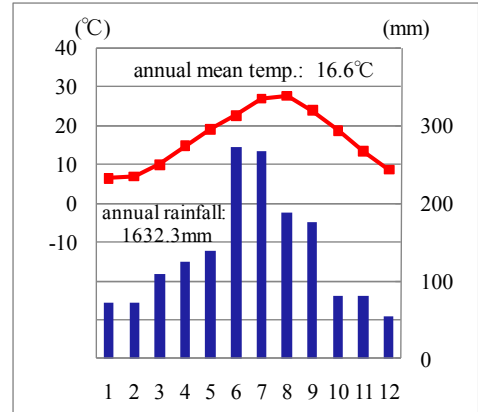
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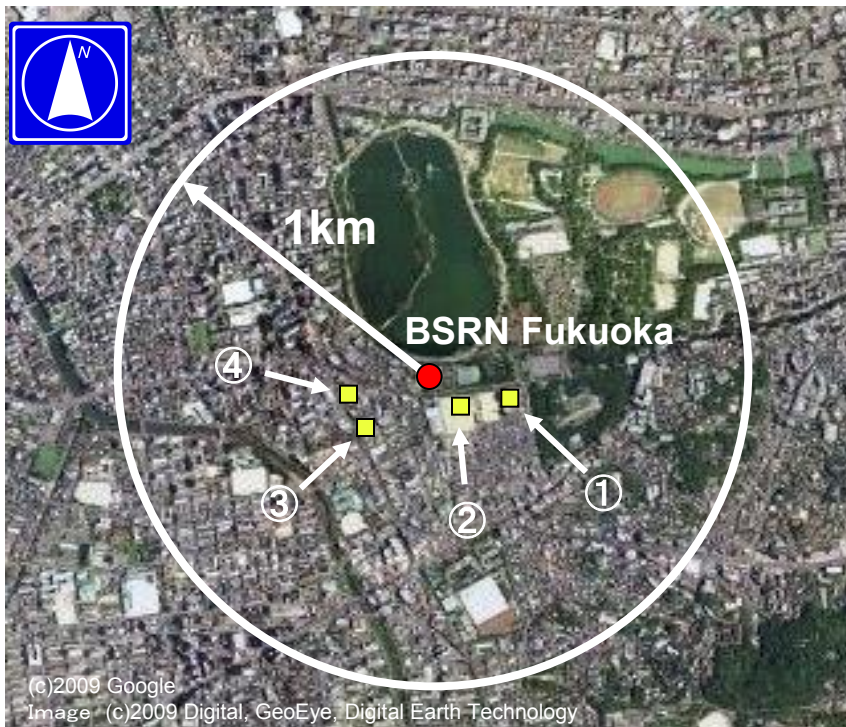
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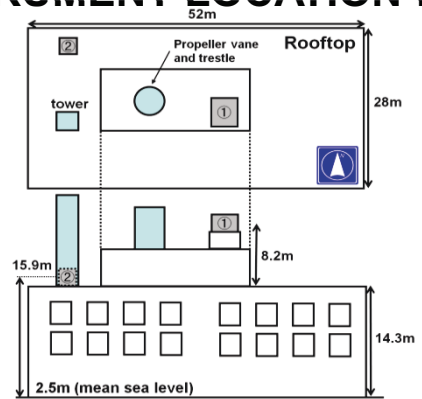
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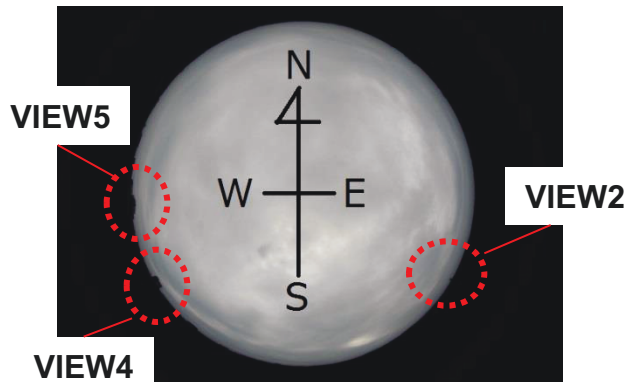
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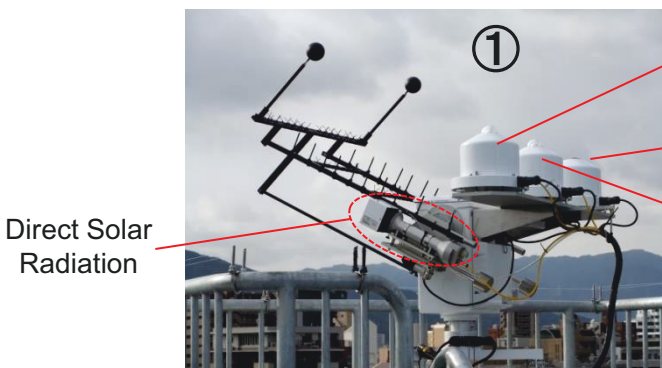


HORIZON MAP OF CENTRAL INSTRUMENT



From the first tracker

DESCRIPTION OF METEOROLOGICAL INSTRUMENTS



- Shaded Global
- Shaded Longwave
- Global Radiation
- Direct Solar Radiation



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 (⇒ P7 "COMMENT ON THE SITE")

BSRN STATION VIEWS

VIEW1



From the first tracker

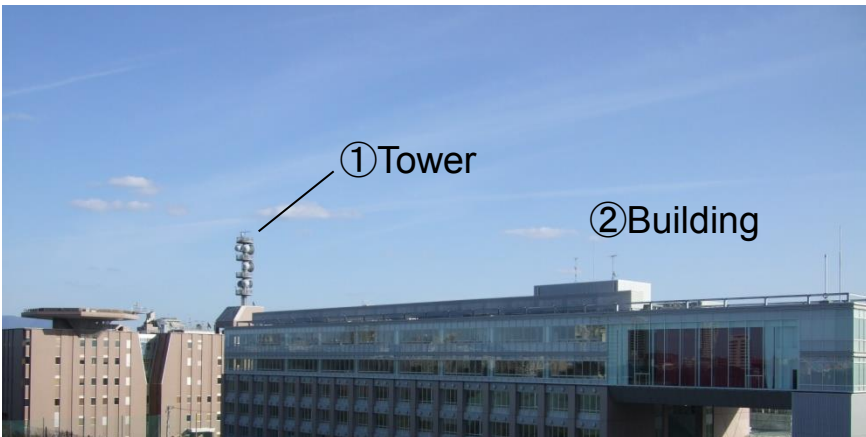
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From the first tracker

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Southern View

Azimuth 180 degrees
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VIEW4



From the first tracker

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Building View

Azimuth 235 degrees
Inclination 10 degrees

BSRN STATION VIEWS

VIEW5



From the first tracker

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Western View

③Building
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Inclination 10 degrees

④Building
Azimuth 260 degrees
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From the first tracker

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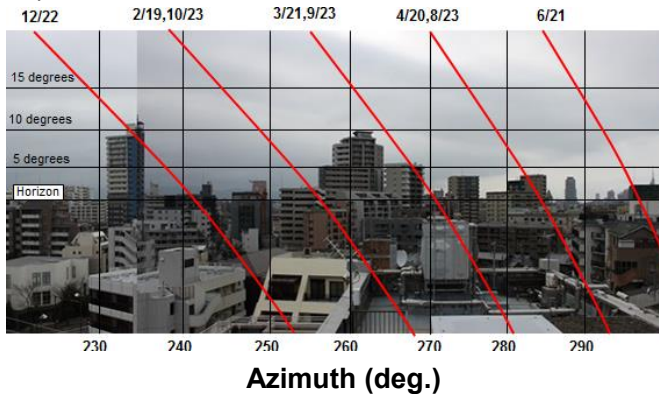
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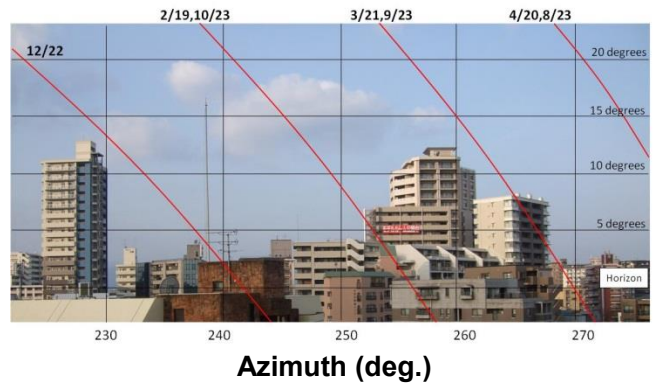


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