



# New proposed BSRN stations in the Western Pacific region: **Mt. Jude** and **Orchid Island**

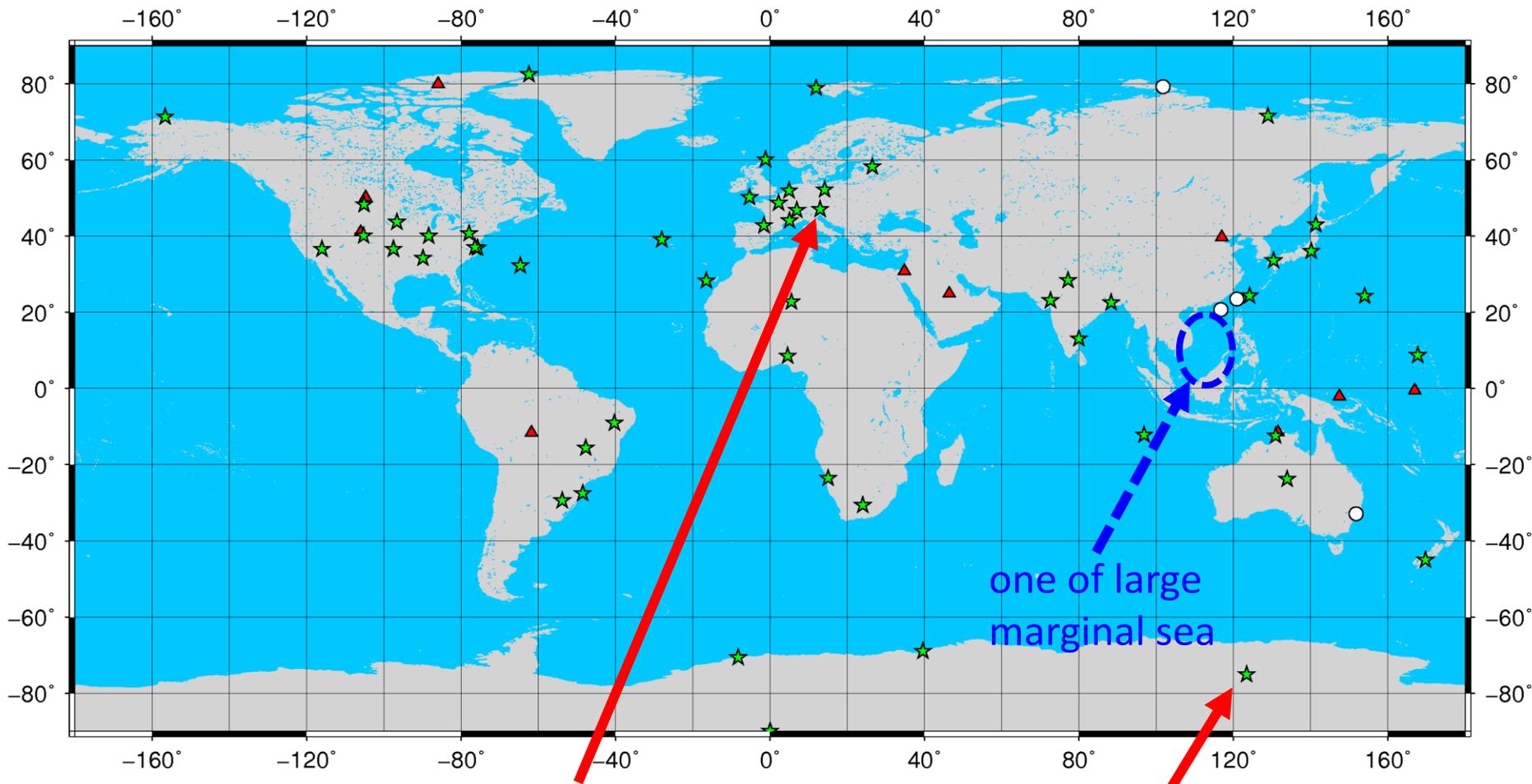


**Carlo Wang<sup>1</sup>, Kun-Wei Lin<sup>2</sup>, Yu-Chi Lee<sup>2</sup>**

<sup>1</sup>*Department of Atmospheric Sciences, National Central University, Taiwan*

<sup>2</sup>*Central Weather Bureau, Taiwan*

# Running, planned, and closed BSRN Stations, April 2018

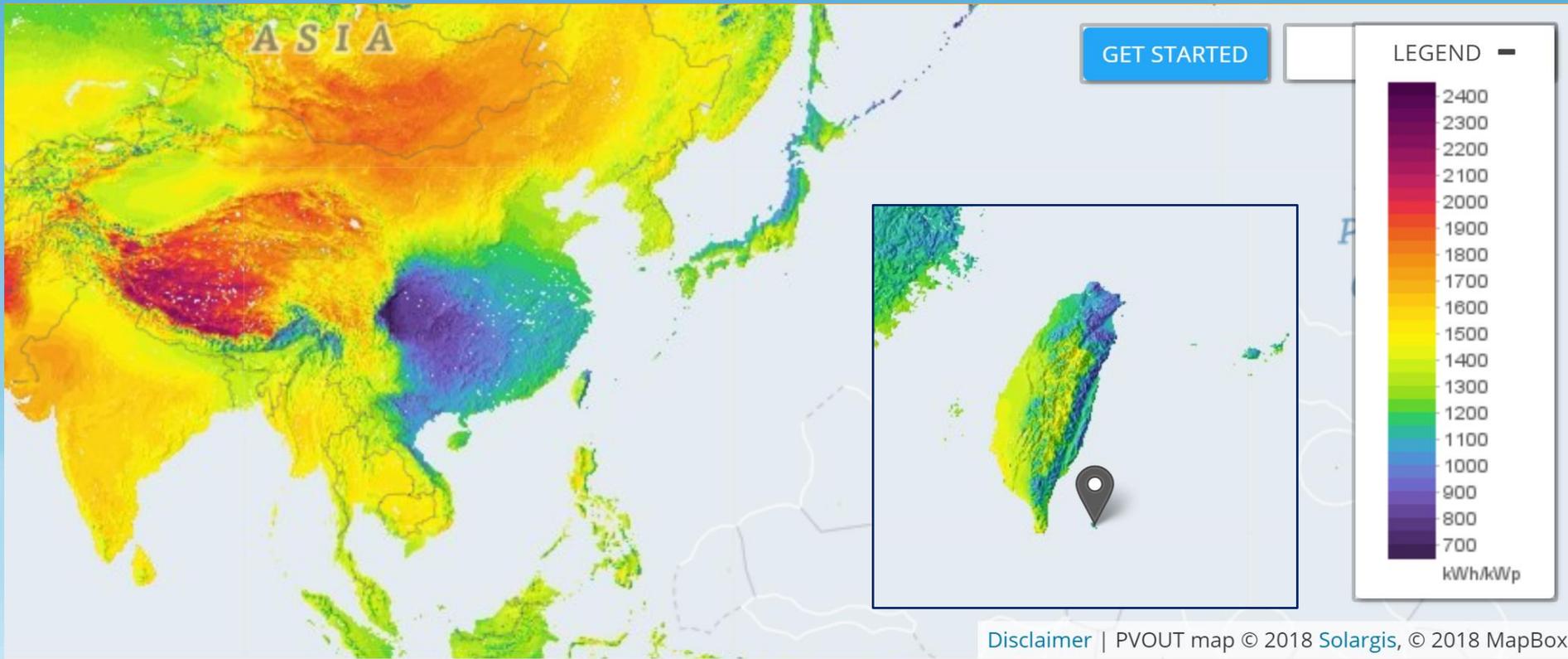


Second highest station: Sonnblick,  
Austria (3109m)

Highest station: Concordia Station,  
Dome C, Antarctica (3233m)

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

# Solar energy map



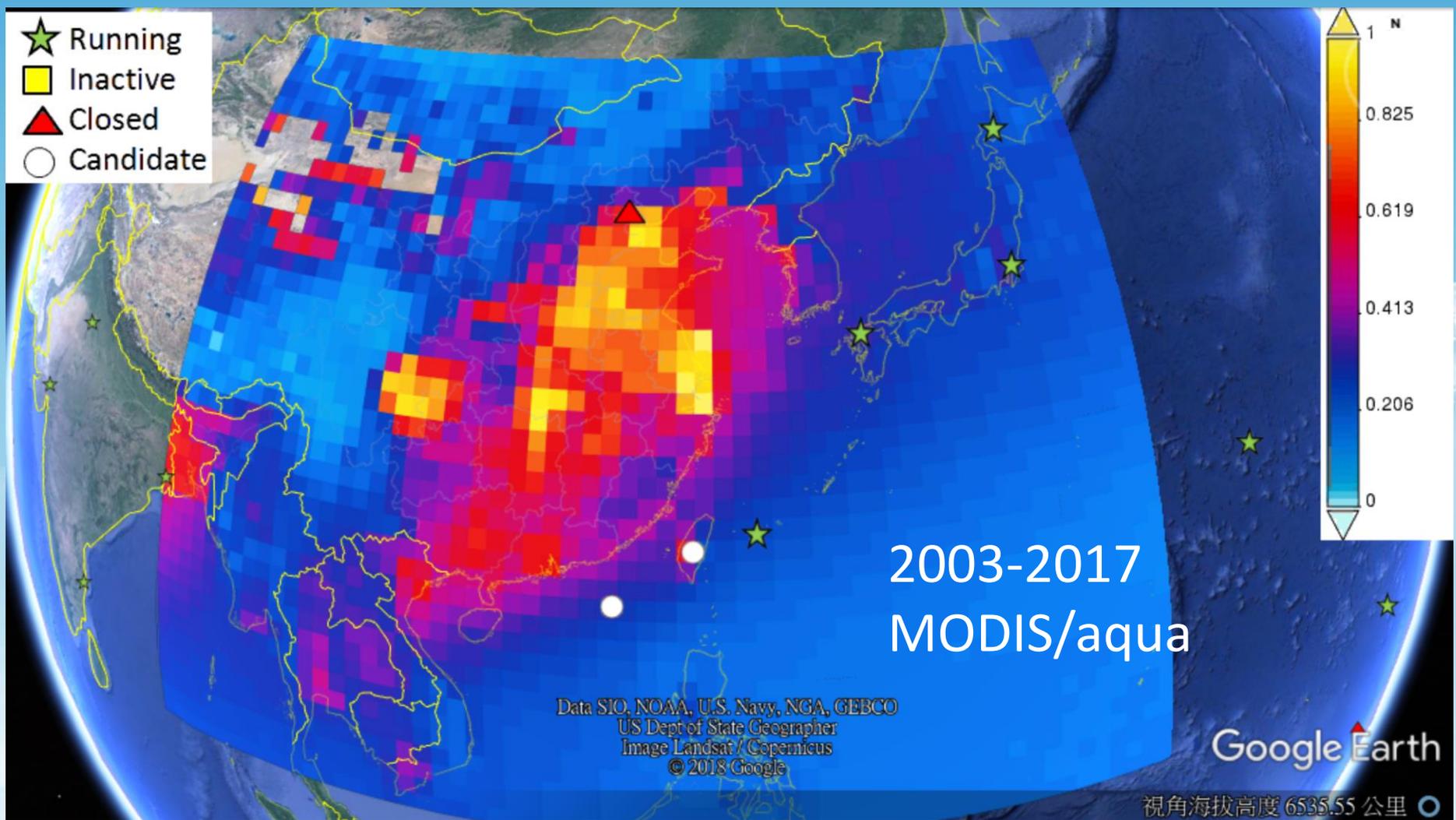
[Disclaimer](#) | PVOU map © 2018 Solargis, © 2018 MapBox

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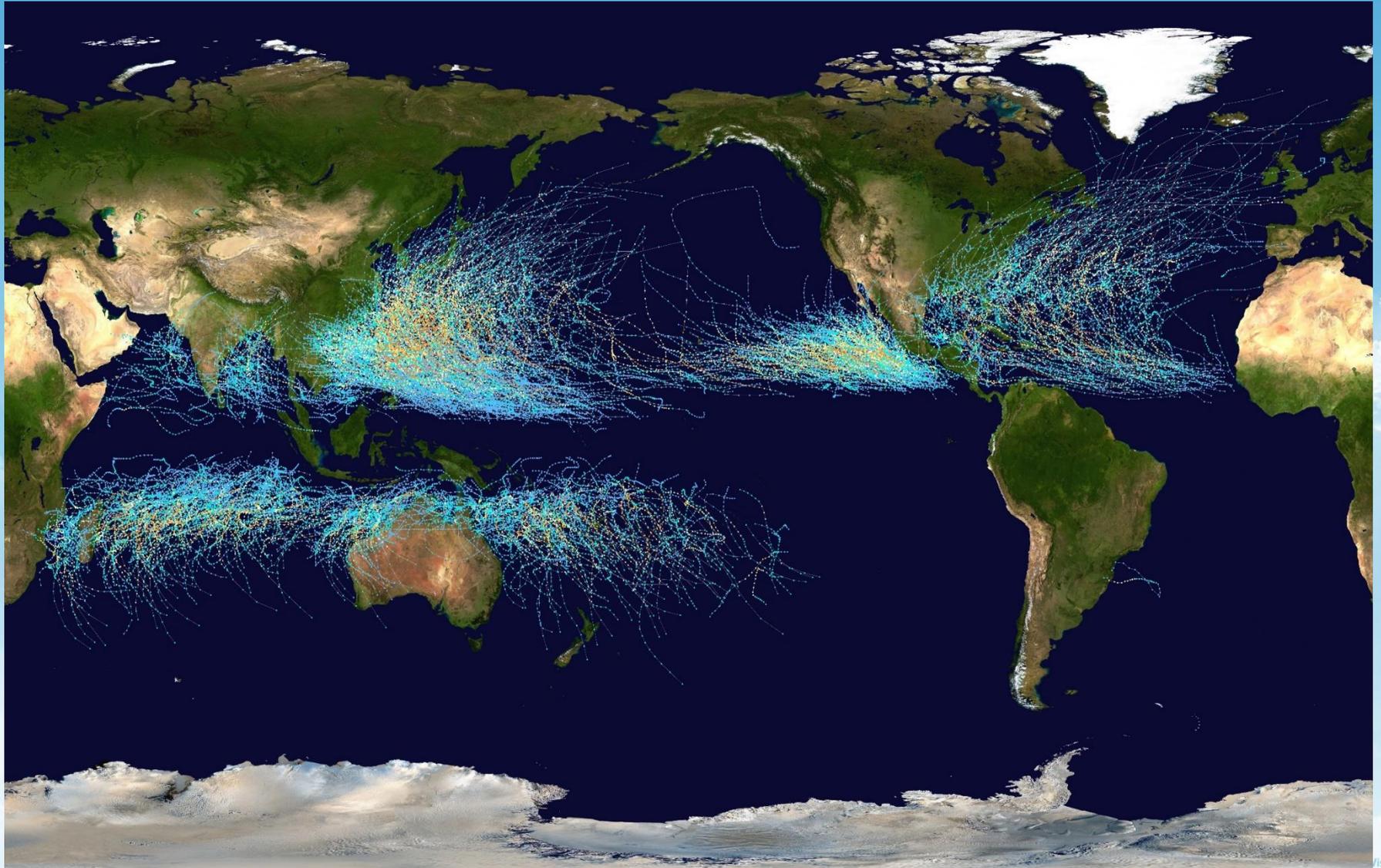
## Cloudy due to East Asia monsoon!



# Regional aerosol climatology



# *Historical Typhoon Tracks*



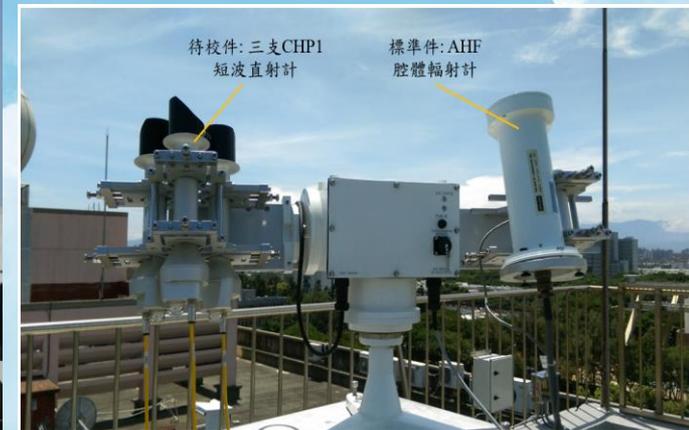
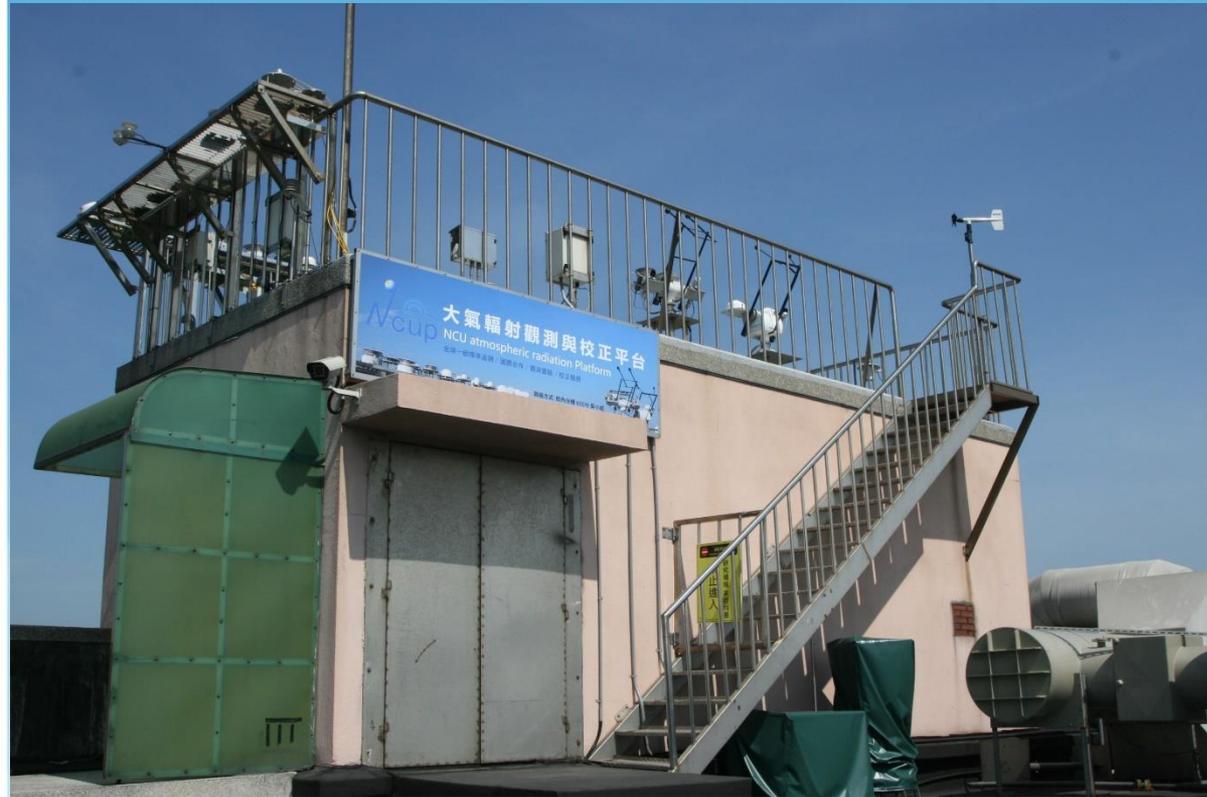
# NCU solar radiation calibration



WMO standard

NCU solar radiation  
Platform & Lab

ISO 9059、9846、9847





# *New BSRN Sites Proposal*

- 1. Mt. Jude:** Yushan Meteorology Station (3858 m)
- 2. Orchid Island:** Lanyu Meteorology Station (324 m)



# Yushan Meteorology Station (3858 m)

*Since 1943*

23.49°N; 120.95°E



Obs. field

South

Solar panel array



# Logistics



*Instrument issues  
at clod climate*





# instruments installed and data recording since April 23, 2018

- ✓ Total SW
- ✓ Diffuse SW
- ✓ Direct SW
- ✓ Total IR
- ✓ PAR
- ✓ All sky imager



Mt. Jude peak



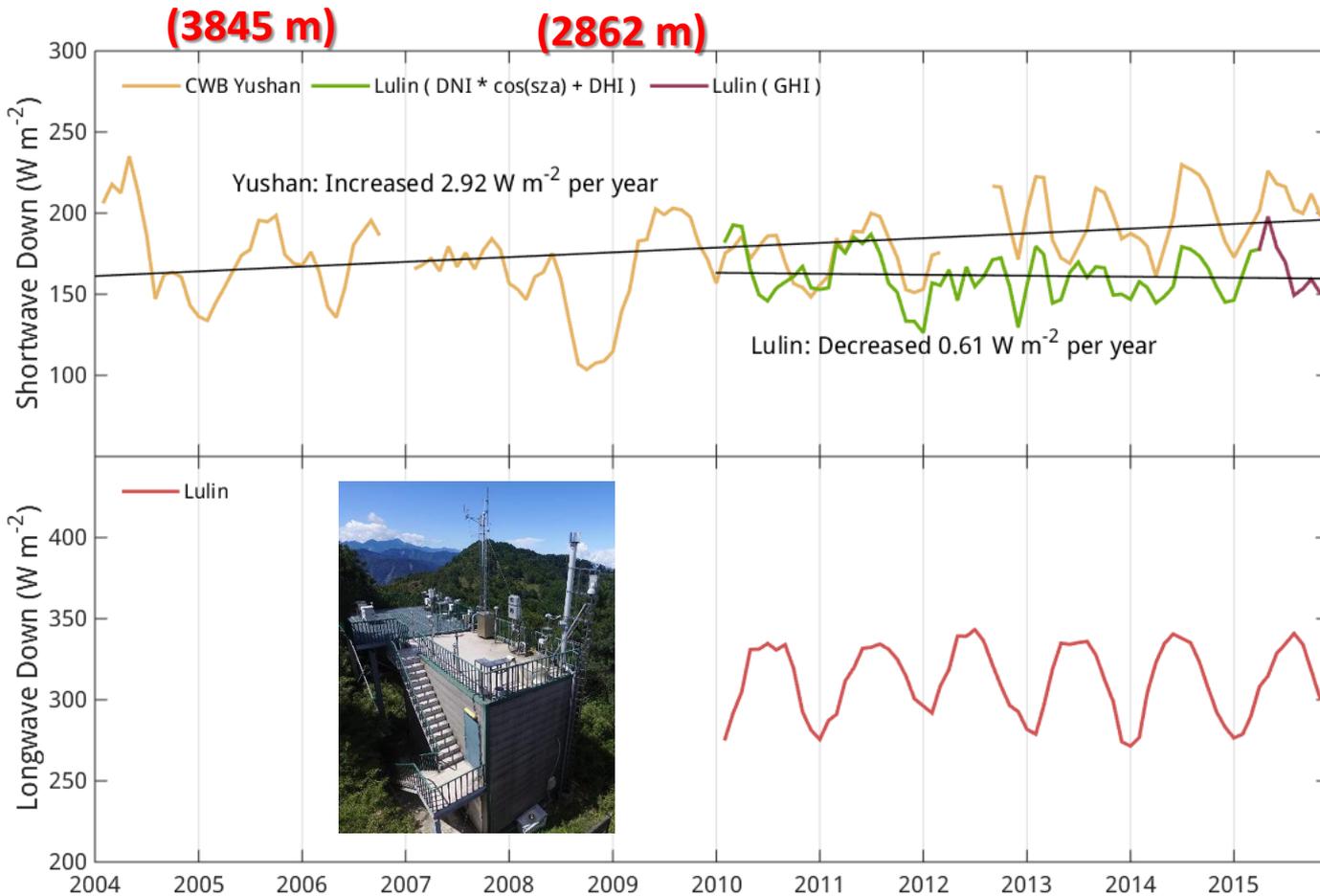
Anemometers



Radiation platform



# Long-term trend of SW/LW radiations



# *Lanyu Meteorology Station (324 m)*

*Since 1947*



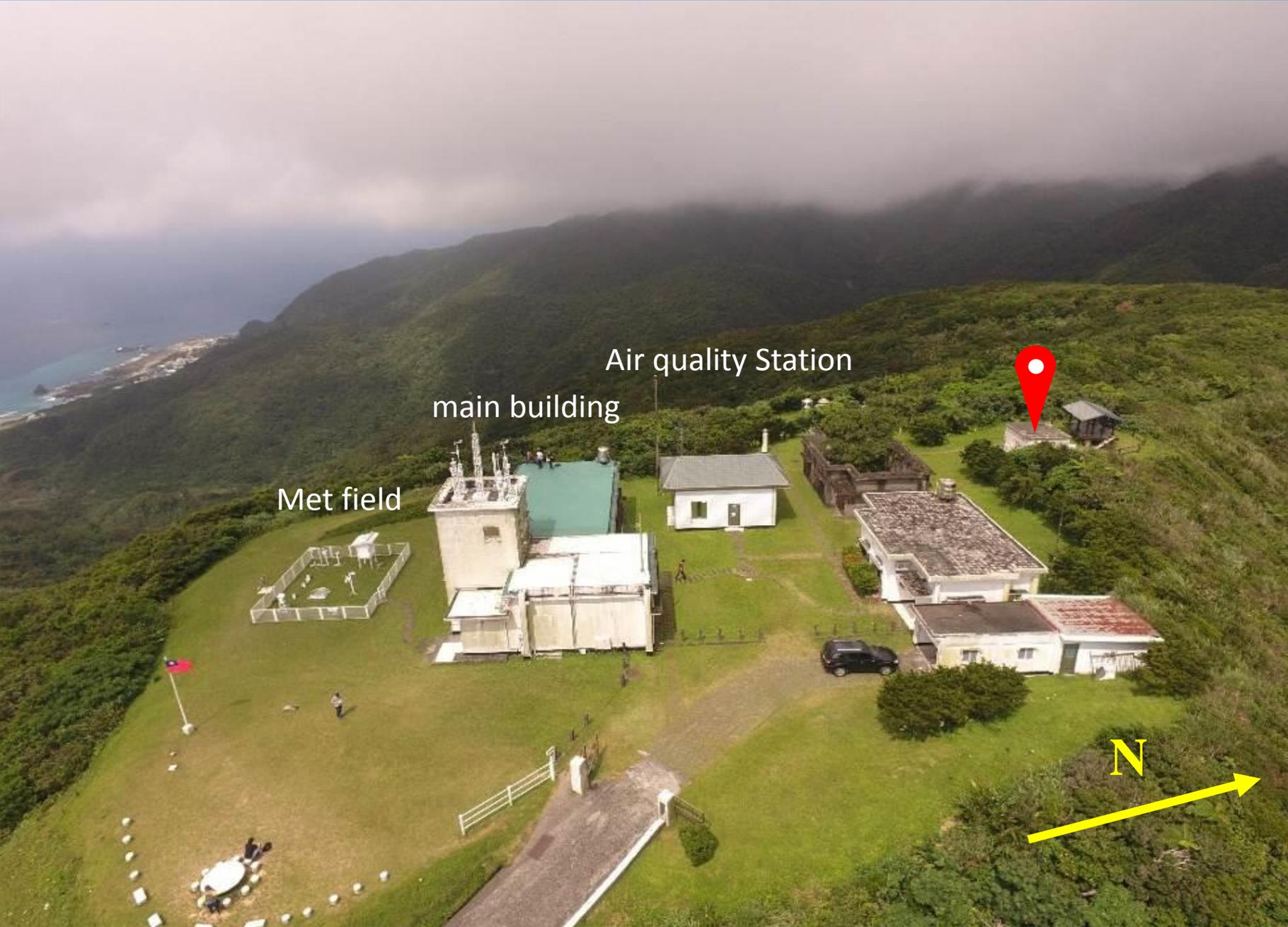


# Orchid Island



# Logistics





Air quality Station  
main building

Met field



N



instruments installed and data  
recording since March 14, 2018



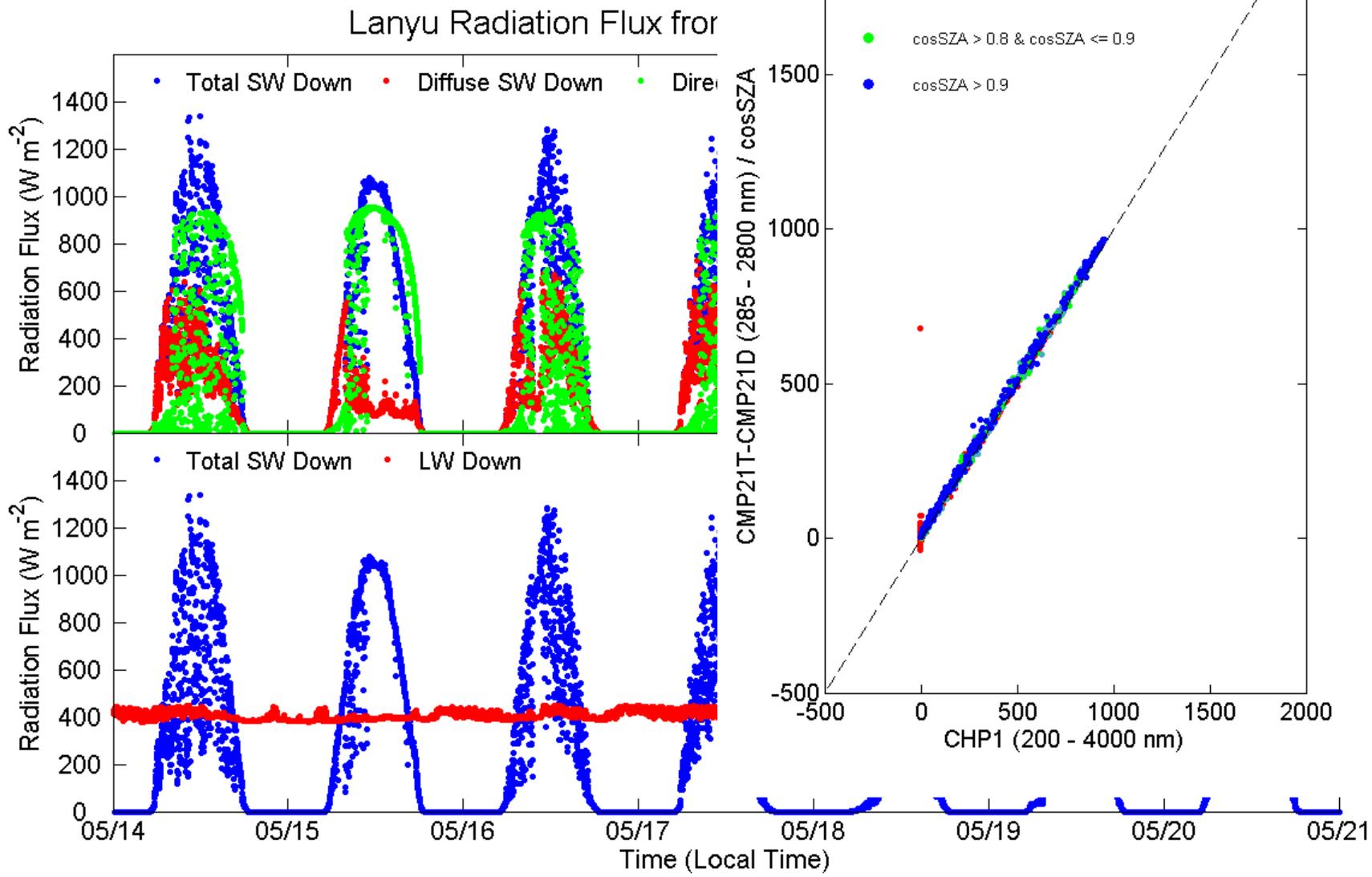
- ✓ Total SW
- ✓ Diffuse SW
- ✓ Direct SW
- ✓ Total IR
- ✓ PAR
- ✓ All sky imager



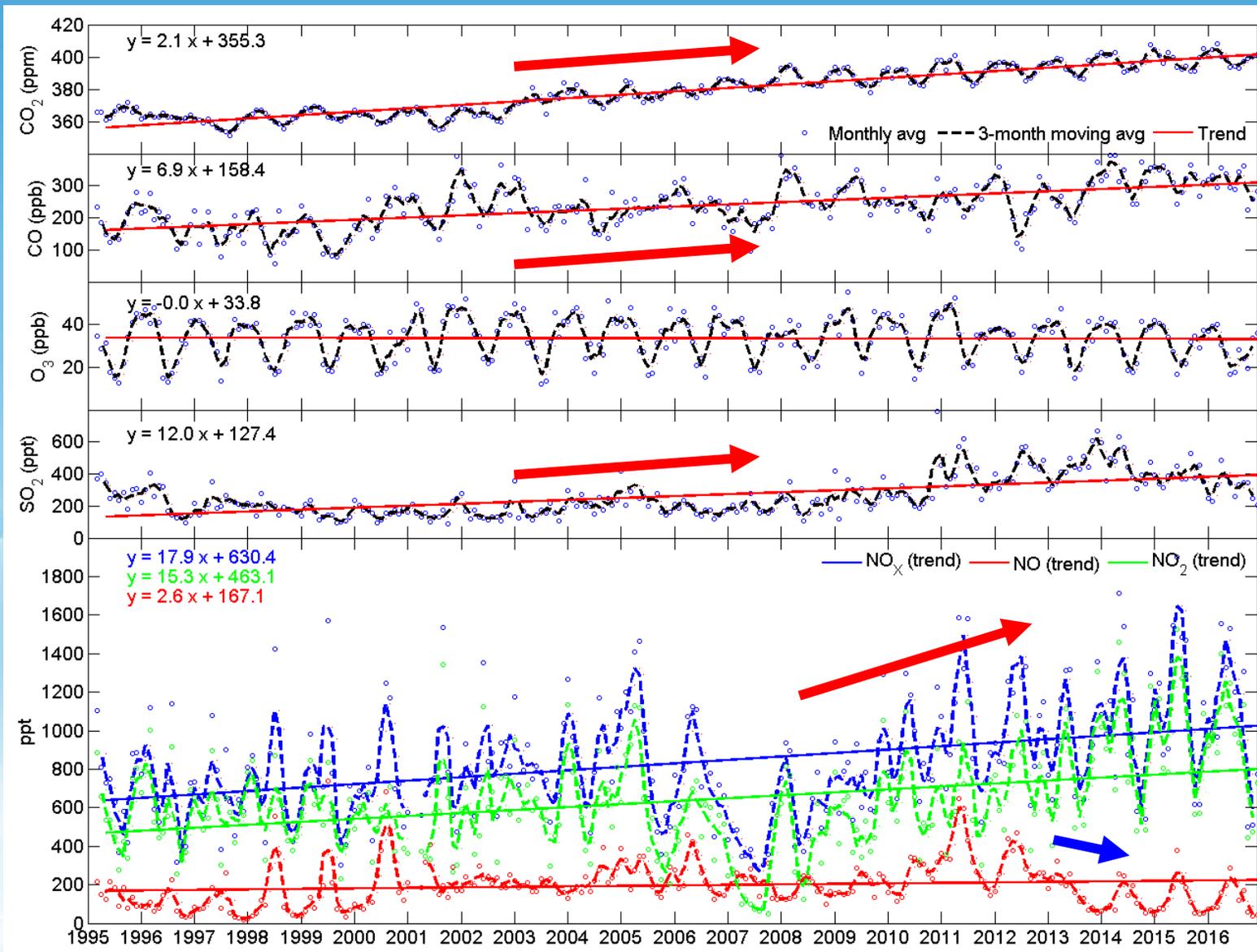


**Your Instruments**

Comparison of CHP1 and CMP21 in the Afternoon from 20180514 to 20180520 at Lanyu



# Background Air Quality and GHG



# Four BSRN sites in Taiwan

Site	Elevation	maintenance	Instruments	Scientific Potentials
<b>Yushan</b>	3858 m	Manned station; daily	Kipp&Zonen <i>Solys2, CMP21, CGR4, CHP1</i>	<ul style="list-style-type: none"> <li>• Aerosol-radiation interaction in free troposphere</li> <li>• stratospheric volcanic aerosol and climate</li> </ul>
<b>Lanyu</b>	324 m	Manned station; daily	Kipp&Zonen <i>Solys2, CMP21, CGR4, CHP1</i>	<ul style="list-style-type: none"> <li>• Radiation budget and typhoon genesis</li> <li>• Maritime environ. radiation</li> <li>• Marine clouds and aerosol interaction</li> </ul>
<b>Lulin</b>	2863 m	Unmanned station; weekly	Kipp&Zonen <i>Solys2, CMP21, CGR4, CHP1</i>	<ul style="list-style-type: none"> <li>• Aerosol-radiation interaction in free troposphere</li> </ul>
<b>Dongsha</b>	5 m	Manned station; weekly	Kipp&Zonen <i>Solys2, CMP21, CGR4, CHP1</i>	<ul style="list-style-type: none"> <li>• Radiation budget over marginal sea</li> <li>• linkage with oceanography researches</li> </ul>

# On-going plans

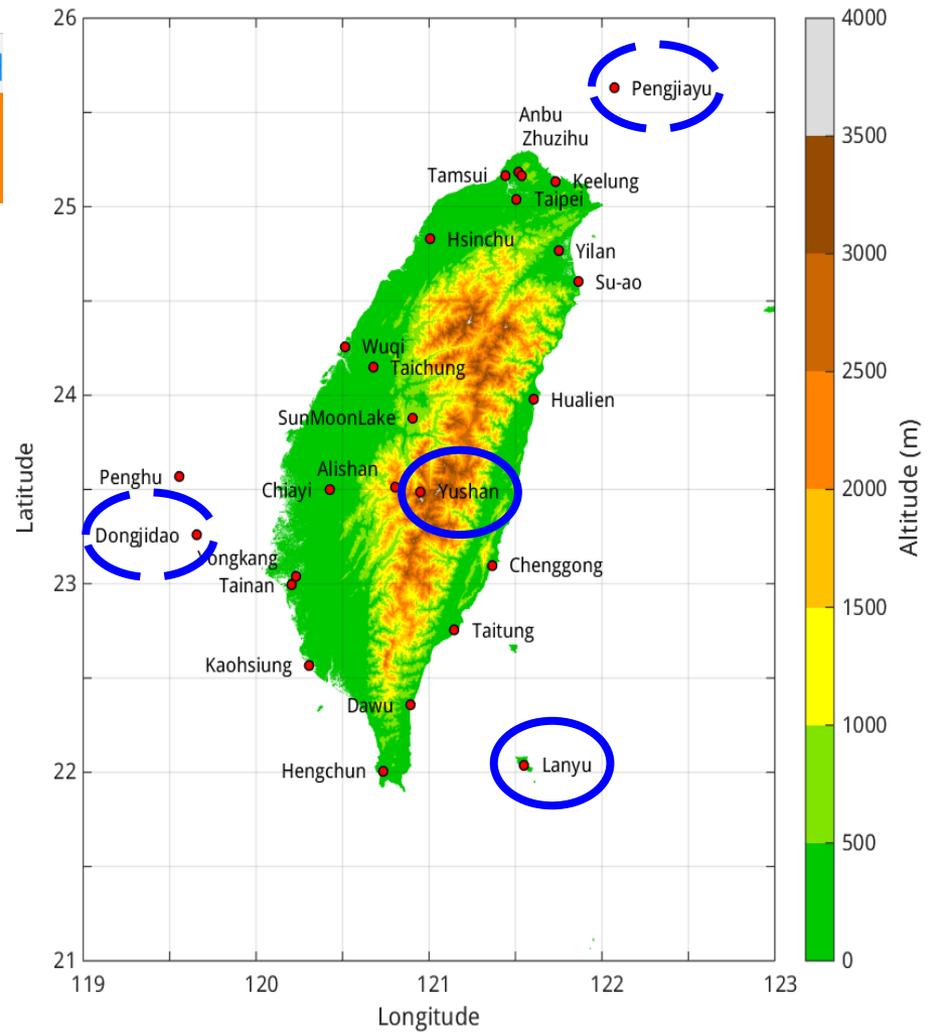
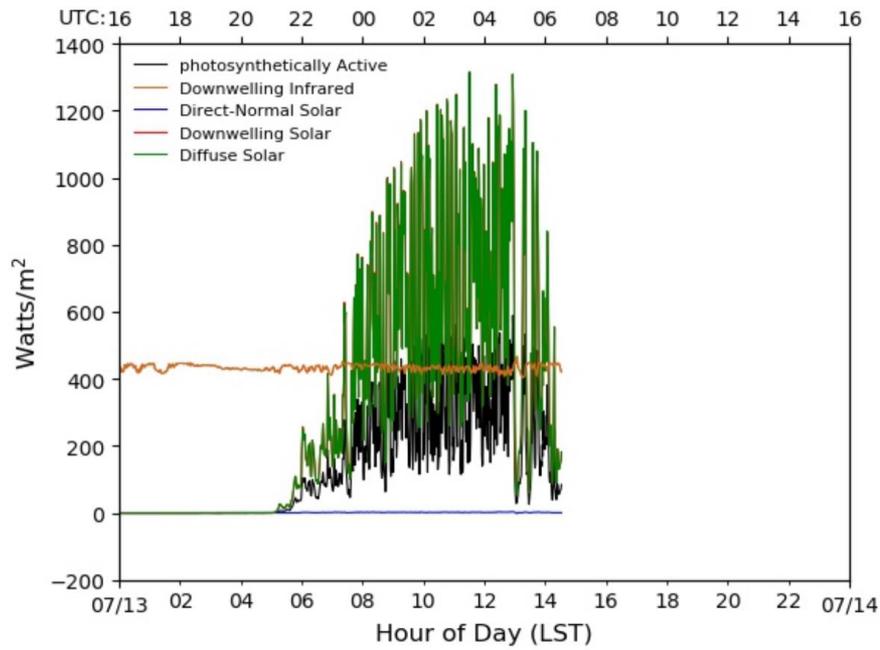
bsrn.atm.ncu.edu.tw/?date=2018-07-13

應用程式 Facebook feedly 鄉鎮預報 PM2.5全台即時概況 EPA

**BSRN Taiwan** 輻射資料 天空影像 測站資訊

Date: 2018-07-13 < > Latest Date Rad Sys Met

Lanyu Atmospheric Radiation data : 2018-07-13



# Thank you!



--call for idea exchange--  
Site operation in strong wind, sea salt, cool  
weather conditions.

