

# Space Weather activities in Ethiopia

By

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ISWI Streeting Committee Meeting, 5-6 February, 2024

# Space monitoring facilities under installation in Ethiopia

- **Facilities under deployment in Bahir Dar**
  - ✓ **1) Meteor Radar in collaboration with IAP, German.**



Training on assembling Meteor Radar antenna in Germany



PhD students assembled Meteor Radar antenna at Bahir Dar University



Confirmation that we got from IAP that the receiving and transmitting antennas are installed at the right place.

2) **All-Sky Imager** in collaboration with Institute for Space-Earth Environmental Research (ISEE), Nagoya University, Japan.

- It has been installed, but due to current **civil war** in Ethiopia, we are not running it.
- I hope we will run it as Bahir Dar University is being reopened.



# Facility needs updating and upgrading

- Blue Nile Coherent Back-scatter Radar (BNR) (antenna array right image) (deployed by Boston college and BDU).
- BNR is capable to vertical scanning of the ionosphere.
- BNR needs to be upgraded for East-West scanning, too, for detail EEJ study.
- The situation in Ethiopia has delayed upgrading of this radar.
- I hope the situation of Ethiopia will be improved and experts from BC will visit Bahir Dar for upgrading this system.



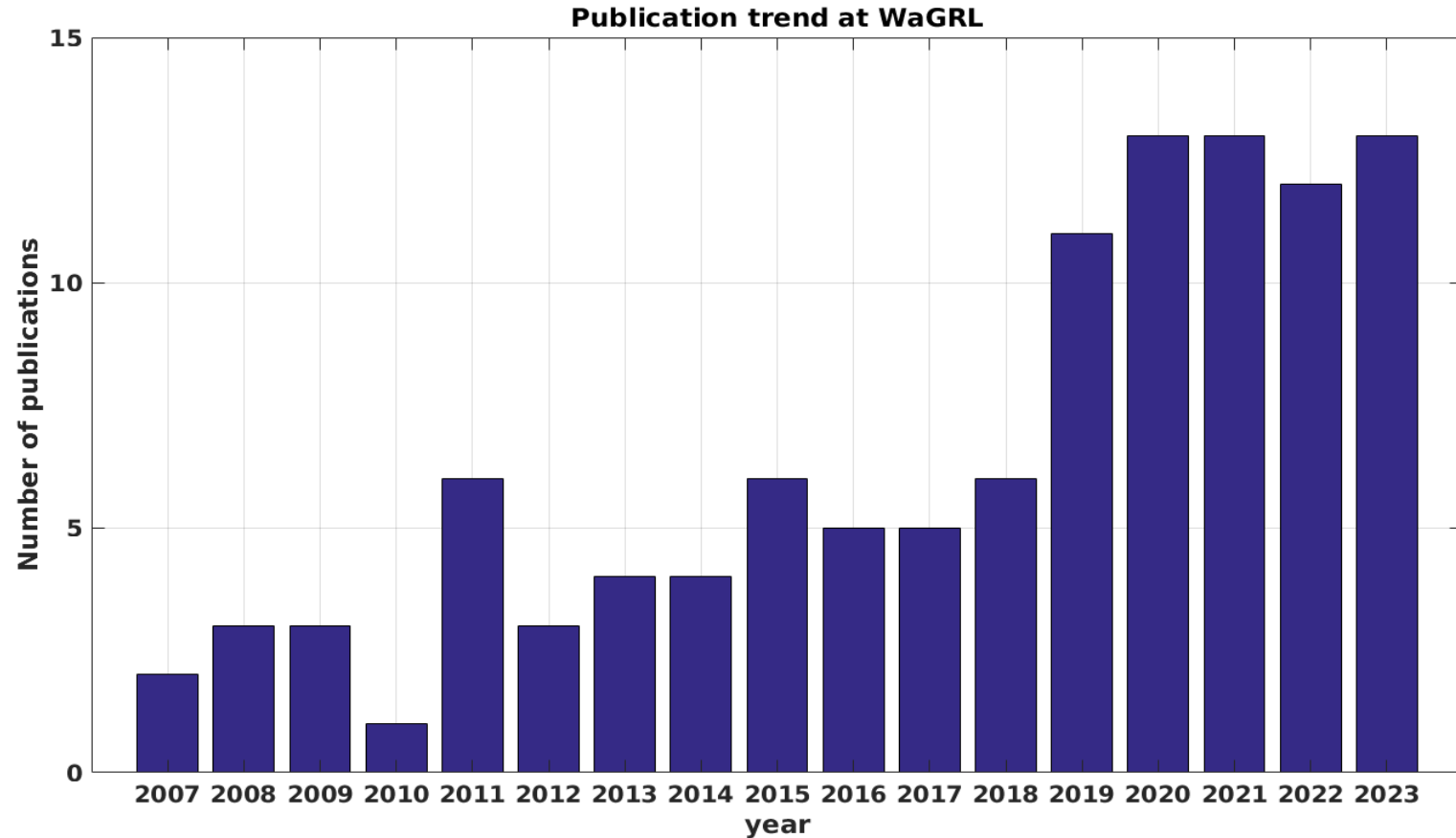
Other perational facilities in Ethiopia:

✓Galileo receiver at Bahir Dar

✓Neutron monitor at EO, Addis Ababa

✓More GNSS receivers installed by other national and international agencies or institutes.

# Space weather related publication trend at Washera Geospace and Radar Science Research Laborator, Bahir Dar University



Thank you very much for listening.