

Asia-Oceania Space Weather Alliance: AOSWA

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For our studies of the ionosphere, GPS-TEC data analysis is one of the effective methodologies. More than 6000 GPS data files are independently provided every day from several organizations over the world through the Internet. To create GPS-TEC maps from these GPS data, data file crawling is inevitable. It is not easy, however, since the data publication policies are independently regulated at each organization, and we need to catch up with the change of the policies.

In NICT we have developed a new system to collect such GSP data files automatically. Based on the collected data files, we are successfully creating both global and regional GSP-TEC maps. It should be noted that the system can detect a change of the data publication policy, and we can adjust the data crawling settings and/or parameters.

For more dense and precise GPS-TEC maps, we need to involve more data from new GPS receivers. Since there is no standard and public GSP data format, we have implemented an application to make data suitable for our GPS-TEC maps. We have begun to provide this application, which would help our global and regional GPS-TEC maps with higher spatial resolutions or for the new regions where there have no GPS-TEC maps.

To promote such an application and data exchange, a regional collaboration is important. The Asia-Oceania Space Weather Alliance (AOSWA) was established in 2010 with 13 associated organizations from 7 countries (<http://aoswa.nict.go.jp>) including NICT (National Institute of Information and Communications Technology). The AOSWA has two major objectives; to make progress in collaborative research and practical operations of space weather forecasting.

The AOSWA workshop was held in Chiang Mai, Thailand from February 22nd to 24th as a first regional/international workshop for researchers and operators of space weather forecast in Asia-Oceania countries. The subjects of the workshop are both operational and scientific, including research in ionospheric and magnetospheric science, solar wind and other space weather related phenomena.

Regional workshop in the Asia-Oceania area plays an important role for improvement of space weather forecasting services. The research efforts, operational collaboration, data exchanges, and some competitions will lead to further development of space weather activities; a primary goal of the workshop.

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