Readiness in DOST-ASTI for SATREPS project for development of extreme weather monitoring and alert system in the Philippines

*Ellison Castro¹, Joel Marciano², Gay Jane Perez³, Kaye Kristine Vergel¹, Yukihiro Takahashi¹

1. Department of Cosmosciences, Graduate School of Science, Hokkaido University, 2. Advanced Science and Technology Institute (ASTI), Philippines, 3. The University of Philippines, Diliman

Advanced Science and Technology Institute (ASTI) in Department of Science and Technology, Philippines (DOST) is the representative of Philippines side in SATREPS project "Development of extreme weather monitoring and alert system in the Philippines". In this project we will construct lightning detection networks in Philippines with ~10 sites in nation-wide and ~50 sites in Metro Manila and operate micro-satellites in order to make stereo imaging of thunderstorm. ASTI has experiences to install water level sensors and automated rain gauges at more than 1000 sites in Philippines. Also ASTI together with University of Philippines, Diliman (UPD) has been contributing to the first Philippine micro-satellite project in development of satellite itself in Japanese universities and in ground operation in Philippines. ASTI and UPD will play essential roles in the development of software to estimate present and future precipitations based on the lightning activities and 3-demensional structure of thunderstorm captured by Philippine satellite "DIWATA-1" and others, as well as in the installation of lightning sensors at 60 sites and satellite operation.

Keywords: lightning, micro-satellite, thunderstorm, typhoon