

**R005-62**

**Zoom meeting C : 11/3 AM2 (10:45-12:30)**

**11:45~12:00**

## **Scope and progress of ULAT/SATREPS project for extreme weather monitoring in Asia**

#Yukihiro Takahashi<sup>1</sup>, Mitsuteru SATO<sup>1</sup>, Hisayuki Kubota<sup>1</sup>, Jun Matsumoto<sup>2</sup>, Algodon Mery<sup>1</sup>

<sup>(1)</sup>Hokkaido Univ., <sup>(2)</sup>Tokyo Metropolitan Univ.

ULAT/SATREPS is for realizing precise real-time monitoring and issuing alert for extreme weather, such as torrential rainfall or typhoon. We are developing a ground observation network with lightning sensors and trying to establish semi real-time operation of micro-satellites to capture the typhoon and thunderstorms. In this project, we apply two technologies, 1) the lightning activity monitoring with the ground-based lightning networks with 12 sites for VLF radio wave measurement in nation-wide of Philippines and with 50 sites for electrostatic field measurement in Metro Manila together with infrasound sensor and automated weather station, and 2) the 3 dimensional capturing of thunderstorms by the on-demand operation of 50-kg micro-satellites. ULAT project was started in 2017 and the installation of the ground lightning observation station with automated weather station was completed by about 70 percent of the original plan and the continuous recording was started. About satellite observation, we succeeded in making detailed 3-D cloud structure model near the center of the typhoon with micro-satellite and aircraft. We plan to carry out the coordinated observation using the ground networks and micro-satellite for the quasi real time monitoring of extreme weather in the next summer season. This research was supported by Science and Technology Research Partnership for Sustainable Development (SATREPS), Japan Science and Technology Agency (JST) / Japan International Cooperation Agency (JICA).