

Summer monsoon experiment in Metro Manila of Philippines in 2019

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The Philippines is an archipelago country which is located in the western side of tropical western Pacific. There is a distinct summer monsoon in the western side of the country. This study focuses on the mature stage of summer monsoon in the western Philippines during July to August in 2019. We conducted four times a day upper-air observation at Tanay PAGASA weather station and installed 23 automatic weather and lightning observation systems called P-POTEKA in Metro Manila under the ULAT (Understanding Lightning and Thunderstorm) of SATREPS (Science and Technology Research Partnership for Sustainable Development) in the Philippines.

When the low-level southwesterly wind was intensified moistening air was induced in the Philippines and convection became active in the western side of the Philippines. Strong low-level southwesterly wind was observed every few days to 14 days in interval and continued from few days to two weeks during July and August in 2019. It was strongly influenced by the activities of tropical cyclones in the Philippine Sea. Continuous rainfall was observed widely in Metro Manila when the low-level southwesterly wind was intensified. Heavy rainfall tends to observe from nighttime to early morning. Many stations reached more than 100 mm/day on 1st and 2nd Aug. 2019. On the other hand, when the low-level wind was weak, rainfall was limited in a small area and tends observe during the afternoon.

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