



## Precipitation climatology over Southeast Asia during the winter monsoon: Comparison between different rainfall datasets

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Recently, some kinds of rainfall datasets, which were mainly derived from satellites, have been provided. However, large differences were found between these datasets. In this study, we compare these datasets over the Southeast Asian monsoon region during northern winter. We used TRMM-PRV6 (Tropical rainfall measuring Mission - Precipitation radar Version 6), GSMAp-MWR (Global Satellite Mapping of Precipitation - microwave radiometer product), TRMM-3B42, and ground-installed rain-gauge data. We calculated rainfall amount, rainfall frequency, and conditional rainfall intensity (rainfall  $> 0$  mm/hr), to understand rainfall characteristics over the region.

Results showed that TRMM-PRV6 was relatively less over the whole region, compared with rain-gauge data. On the other hand, TRMM-3B42 was overestimated over the coastal regions and ocean, compared with TRMM-PRV6. In addition, the spatial distribution of rainfall of TRMM-3B42 was probably affected by the advection of anvils. Hence, their distributions were not consistent in regional scale. GSMAp was underestimated over land and significantly underestimated along the coastal lines.