VARIABILITY OF THE CLOUD COVER IN LAOAG, ILOCOS NORTE

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ABSTRACT

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Clouds are one of the most important factors in meteorology and forecasting since clouds are directly linked to weather phenomena. The variation of cloud cover affects the amount of energy received and released by the Earth which results in the variation of other weather parameters. Cloud cover impact varies over different regions which makes it harder to understand. In this study, the variability of cloud cover over the northern Luzon region was investigated.

The following data were used: Cloud cover from the ERA-5 reanalysis cloud products, interpolated outgoing longwave radiation (OLR) and monthly climate index data from NOAA, and 850-hPa wind from ERA-5 reanalysis data on single levels.

Composite analysis was used to investigate the variability of cloud cover. It was found that cloud cover exhibits a seasonal cycle with its peak during June-August, corresponding to the occurrence of southeast monsoon or Habagat. ONI are found to be strongly correlated in the colder months which correspond to peaks in anomaly values in the annual cycle. High TCC can also be seen on seasons with prevalent south-western winds. The spatial distribution of TCC and OLR were also investigated and found to have a negative correlation.

Keywords: total cloud cover; variability; spatial variability; temporal variability; ENSO

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