

Diurnal Variability of the Cloud and Precipitation Around the Himalayan Region

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It is generally said that atmospheric convection around the Himalayas plays an important role in sustaining the monsoon through the release of latent heat. Therefore, it is important to understand the variability of convective activities in this region. The aim of this paper is to characterize cloud and precipitation systems around the Himalayas. Multi-satellite analyses are performed (Meteorological Satellite (METEOSAT-5), Tropical Rainfall Measuring Mission (TRMM), Moderate Resolution Spectroradiometer (MODIS)) to examine the climatological diurnal and seasonal behavior of the cloud and precipitation. Analysis of the TRMM data allowed us to identify small-scale features and their horizontal and vertical distribution. There is substantial seasonal and diurnal variation of precipitation over the southern slopes of the Himalayas. The midnight-early morning maximum of precipitation and cloud activity in the summer monsoon season and its southward progression appeared in TRMM, METEOSAT-5 and MODIS data. Results from METEOSAT-5 and MODIS will be presented.