



Cloud types and its radiative forcing during summer monsoon season over South-East Asia

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Clouds play a very important role in sustaining one of the largest monsoon system; Asian monsoon in terms of formation, occurrence and feedback. Most of the previous studies about cloud variability were concentrated over oceans. Though, different cloud types drive the mesoscale circulation, there is still lack of understanding of cloud types and their role in the feedback processes which involve microphysical effect that eventually affect the precipitation patterns. Thus, the dominance of cloud types in terms of occurrence frequency and their radiative forcing estimates become a crucial aspect, and hence are being investigated in this study. We use the NASA A-train satellite, CloudSat data which provide unprecedented 3-dimensional measurements of cloud profiles. CloudSat data is used to study the cloud types (Cirrus, Deep convective, Cumulus etc.) in conjunction with International Satellite Cloud Climatology Project (ISCCP) dataset which also gives diurnal variability. This study focuses over South-East Asia region during the summer monsoon season, June-September of 2008. We also examine clouds by large-scale parameters ω_{500} , OLR, temperature, SST, etc. from this datasets. The impacts of clouds on radiation will also be estimated.