

Diurnal variation of mesoscale precipitation systems during monsoon period in and around Bangladesh

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Diurnal variation of mesoscale precipitation systems are studied in and around Bangladesh using six year (2000-2005) radar data. The data were obtained from Bangladesh meteorological department. Over the study period diurnal variation of precipitation systems revealed that arc, line and scattered shaped precipitation systems show maximum peak at 18-21 LST (03-06 LST), 15-18 LST (03-06 LST) and 03-06 LST (12-15 LST), respectively during the pre-monsoon (monsoon) period. Dominating pre-monsoon arc shaped precipitation systems are classified as symmetric type precipitation systems (STPS), asymmetric type precipitation systems (ATPS), combination of symmetric and asymmetric type precipitation systems (CSATPS) and unclassified type precipitation systems (UTPS). The maximum occurrence frequency of STPS, ATPS, CSATPS and UTPS shows the peak at 15-18 LST (18-21 LST), 03-06 LST (03-06 LST), 18-21 LST (03-09 LST) and 18-21 LST (15-21 LST) respectively during the pre-monsoon (monsoon) period. Overall, the occurrence frequency of precipitation systems shows double peaks: primary maximum at 03-06 LST and secondary maximum at 12-15 LST. The primary maximum dominates in pre-monsoon while secondary maximum dominates in monsoon season.