Diurnal-scale signatures of monsoon Precipitation over India

D. Rajan and G.R. Iyengar
Indian Journal of Radio & Space Physics (accepted)

The pattern of diurnal-cycle signatures of precipitation varies with season and region. This study focuses on spatio-temporal variations in numerical model based forecasts of the rainfall amount and its intensity over Indian region during the monsoon season 2013 and some specific days of monsoon season 2017. Spatial patterns of 3-hourly rainfall during the season, as seen in day-1, day-3 and day-5 predictions of two numerical weather prediction models viz NGFS and NCUM are examined here. Temporal changes in the frequency distribution of hourly rainfall amounts studied. It is noted that NGFS model predicts more rain than NCUM model during all the hours of the day. Maximum rainfall over the land and oceanic region is predicted during the late afternoon and early morning hours respectively.

Keyword: Southwest monsoon, NGFS, NCUM, Indian land mass, active, break, rain fraction, convection and precipitation