

Satellite derived precipitation estimates over Indian region during southwest monsoons

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ABSTRACT

Quantitative Precipitation Estimates (QPE) derived from Kalpana-1 Satellite and Tropical Rainfall Measuring Mission (TRMM) rainfall have been compared with observed gridded rainfall over six representative regions of India during southwest monsoon 2009 & 2010. The results have shown that no single satellite precipitation estimates are close to the gridded actual rainfall over all the regions in the same year and over the same region in two different types of monsoon, though good correlation coefficients (CC) exist between the satellite precipitation estimates and actual rainfall. While cumulative seasonal TRMM rainfall for June to September is an under-estimation during deficient monsoon year 2009 by about 6 cm, cumulative seasonal QPE is very close to the actual seasonal rainfall. In a normal monsoon year 2010 cumulative seasonal TRMM rainfall was very close to observed seasonal rainfall whereas the difference between the cumulative seasonal QPE and actual rainfall was large.

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