



Inter-comparison and accuracy assessment of TRMM 3B42 products over Turkey

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Accurate estimation of precipitation, especially over complex topography, is impeded by many factors depending on the platform that it is acquired. Satellites have the advantage of providing spatially and temporally continuous and consistent datasets. However, utilizing satellite precipitation data in various applications requires its uncertainty estimation to be carried out robustly. In this study, accuracy of two Tropical Rainfall Measurement Mission (Version 3B42) products, TRMM 3B42 V6 and TRMM3B42 V7, are assessed for their accuracy by inter-comparing their monthly time series against ground observations obtained over 256 stations in Turkey. Errors are further analyzed for their seasonal and climate-dependent variability. Both V6 and V7 products show better performance during summers than winters. V6 product has dry bias over drier regions and V7 product has wet bias over wetter regions of the country. Moreover, rainfall measuring accuracies of both versions are much lower along coastal regions and at lower altitudes. Overall, the statistics of the monthly products confirm V7 product is an improved version compared to V6. (This study was supported by TUBITAK fund # 114Y676).