



Validation of the first years of GPM operation over Cyprus

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Global Precipitation Measurement (GPM) high-resolution product is validated against rain gauges over the island of Cyprus for a three year period, starting from April 2014. The precipitation estimates are available in both high temporal (half hourly) and spatial (10km) resolution and combine data from all passive microwave instruments in the GPM constellation. The comparison performed is twofold: first the GPM data are compared with the precipitation measurements on a monthly basis and then the comparison focuses on extreme events, recorded throughout the first 3 years of GPM's operation. The validation is based on ground data from a dense and reliable network of rain gauges, also available in high temporal (hourly) resolution. The first results show very good correlation regarding monthly values; however, the correspondence of GPM in extreme rainfall varies from "no correlation" to "high correlation", depending on case. This study aims to verify the GPM rain estimates, since such a high-resolution dataset has numerous applications, including the assimilation in numerical weather prediction models and the study of flash floods with hydrological models.

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