

Title: Evaluation of instantaneous rain rates estimates of FY-3G PMR Products with rain gauge dataset in four rain regions over China

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Text: Instantaneous rain rates estimates products of FY-3G PMR are evaluated with minutely rain gauge datasets in four rain regions over China, they are separately Guangdong province, Anhui province, Hebei province and Nyingchi city in 2024. Precipitation rate at the surface level is compared with rain gauge measurements at 5-minutes later than the satellite visit and with a space distance less than 5km. For all match-ups when satellite and rain gauge value are not zero, the bias of PRES in Anhui is -29.169% and correlation coefficient is 0.499 while is a litter better than PRES in Guangdong and Hebei. What's more, the bias of PRES in Nyingchi is the largest among the four which corresponding to a match-ups number of 51. In addition, at incidence angles smaller than 3 degrees, the correlation coefficient is significantly lower than at other incidence angles which are similar with GPM/DPR.