

BIAS-CORRECTION OF GLOBAL DAILY RAIN GAUGE MEASUREMENTS

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Up to the present global precipitation climatologies based on rain gauges have been corrected for systematic measurement errors using monthly correction factors only. We present a statistical correction model, which could be applied to daily measurements. It was developed in the framework of BALTEX using results from the WMO Solid Precipitation Measurement Intercomparison and adapted for the GPCC to correct global, routinely via GTS transmitted, daily rain gauge data.

First results of a two years (1996 – 1997) model run will be presented at the conference. We focus on regions of the GEWEX continental scale experiments BALTEX (Europe), GAME (Asia), LBA (South-America) and GCIP (North-America). Results include comparisons with the correction factors of the widely used precipitation climatology of Legates (1987).

In the BALTEX region our averaged daily correction factor is about equal to the monthly correction given by Legates during the summer months, while Legates estimated higher corrections for snow (up to 50 %). In the regions of GAME and LBA the corrections given by Legates are also generally higher (50 - 100 %) than our corrections. This is opposite to the corrections calculated for GCIP rain gauges, which are not significantly different.