

Interactive comment on “Global gridded precipitation over land: a description of the new GPCC First Guess Daily product” by K. Schamm et al.

Anonymous Referee #1

Received and published: 14 September 2013

The GPCC provides global monthly precipitation fields based on the most comprehensive data collection. Now the first daily precipitation fields, provided in near real-time, are available and described in this paper. The scientific community was waiting for a long time for such data needed for many applications. Due to the lack of other operational daily precipitation products it will be used frequently. Nevertheless, it should be noted that the relatively low number of observations available in real-time results in a relatively low accuracy of the daily precipitation product. The authors account for this by using the term “first guess”, originally introduced by Cressman (1959) for atmospheric data analysis. Thus, the precipitation fields may be improved using further information

C117

(observations) when available. This improvements described by the authors comprise a full data product and a satellite-gauge product under development. I recommend the paper for publication after some minor improvements of the text, which should be generally revised.

Here some suggestions for the abstract and the introduction:

Page 436, line 13: The formulation of the abstract section “However, the purely GTS-based data ...” should be improved. For example: “However, the purely GTS-based data processing lacks an intensive quality control as well as a high data density and is therefore denoted as “First Guess” referenced under doi:10.5676/DWD GPCC/FG D 100. Two further products, the “Full Data Daily” and a merged satellite-gauge product, are currently under development at GPCC. These additional products will not be available in near real-time, but based on significantly more, strictly quality controlled, observations. All GPCC products will be provided free of charge via the GPCC webpage: [20 ftp://ftp-anon.dwd.de/pub/data/gpcc/html/download_gate.html](ftp://ftp-anon.dwd.de/pub/data/gpcc/html/download_gate.html).”

Page 436, line 1: The first section of the introduction “Besides evaporation ...” is too general and should be cancelled. The introduction may start with “The Global Precipitation Climatology Centre (GPCC) was founded ...”.

Page 437, line 21: A better formulation of “However, for many applications such as ...” may be: “However, for many applications such as the statistics of extremes, the monitoring of heavy precipitation events and the evaluation of numerical weather predictions or satellite estimates a time resolution higher than one month is required.”

Page 438, line 17: The statement “Gridded products of rain gauge measurements also have their disadvantages, namely a coarse distribution that results in an underestimation of the true precipitation amount by about 5% (Legates and DeLiberty, 1993).” should be clarified. What is a “coarse distribution”? Do the authors mean that some grid areas are under-sampled (covered by no or few observations)?

C118

Page 438, line 28: Improve the formulation: “This paper describes the new product which has been released in April 2013 providing daily precipitation fields for the period 1 January 2009 to present.”

Page 439, line 2: cancel: “In addition to the precipitation estimation of the “First Guess Daily” product an estimation of the uncertainty is provided.” Improve Line 7: “Therefore, only SYNOP data reported via Global Telecommunication System (GTS) are used.” cancel “and undergo . . .”), Line 12: “The calculation of the “First Guess Daily” precipitation fields comprising also an uncertainty measure is depicted . . .”

Page 452, line 11: Cancel “13th International Symposium on Acoustic Remote Sensing of the Atmosphere and Oceans, Garmisch-Partenkirchen, GERMANY, 11–20 July 2006,”.

Interactive comment on Earth Syst. Sci. Data Discuss., 6, 435, 2013.