Hydrology and
Earth System
Sciences
Discussions

Interactive comment on "Precipitation Pattern in the Western Himalayas revealed by Four Datasets" by Hong Li et al.

Anonymous Referee #2

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Precipitation data are a key input in hydrologic modeling and the present paper compares four precipitation datasets which include data obtained by ground based measurements, interpolation, and reanalysis data. The paper addresses an important issue faced by hydrologists. I have the following comments on the paper. 1. The strengths and weaknesses of the four type of gridded precipitation datasets explained in lines 15 to 30 on page 2 can be better explained by means of a table. Each row of this table may correspond to a particular dataset and the columns could the how the data is obtained, its strengths, and weaknesses. 2. In this paper, IMD dataset at 1 degree grid has been used. Currently, data at 0.25 degree resolution are also available. 3. There is a view that the precipitation data obtained from instrumented stations does not reveal the actual values over a catchment in Western Himalaya because the network of sta-

tions does not have the desired density and most stations are located in valleys. Thus, the actual precipitation in the hill tops is not known. 4. Authors mention that the four datasets are similar in terms of spatial and temporal variation but there is very large variation in absolute values from 497 to 819 mm/year. Given this, a reader would expect clear view from the authors: a) what is their assessment of mean annual rainfall, and b) which dataset(s) can be used in applications such as water yield assessment, flood forecasting, climate change impact assessment, and so on.

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