

We thank the handling editor for providing valuable comments which, in our opinion has improved the quality of the manuscript. Here will outline all changes we have added to the previously revised manuscript. In particular, the following major change have been implemented:

- Vertical axis in Fig. 3 has been adjusted and the quality of the figure is now improved.
- Individual sub-figures have been labelled and rearranged in Fig. 5-8 to position the legends in one singular place.
- In Fig. 2, line type has been formatted for better visibility
- Title of Fig. 1 and Fig. 5-8 has now been revised.
- Included Table S1a in the supplementary file with the geographic coordinates of the ground stations.

We added a response to the Handling Editor's individual comments below.

## Response to the Handling Editor's Comments

1. **Comment:** Fig.1: The explanation of the horizontal and vertical alignment of groundstations is still not clear.

**Response:** The stations were aligned into (an almost) regular grid by the state authorities/institutions for the study period (2003-14), which makes the districts selected “ideal” study areas for this evaluation study. The daily data was provided by the Public Works Department (PWD) of Tamil Nadu, which collects and maintains meteorological data for the entire state.

The above explanation has been added to the Figure heading (L 177-179) in the revised manuscript. Further, the geographic coordinates of the ground stations has been included in the Supplementary document ([Table S1a](#)).

2. **Comment:** Fig 2 a & d. Line types are not consistent with the line type in the figure legend (e.g. Fig 2 a matches perfectly with PERSIANN-CDR, which is not possible).

**Response:** As the differences between the station data and the precipitation product values for extreme precipitation were very small (less than 0.5 mm), the IDF curves overlapped.

In the Coimbatore district, MSWEP and PERSIANN CDR had the closest precipitation intensity estimation with respect to the station data, as shown in [Fig. 2a](#). The intensity of precipitation produced by station data was 16.056 mm/hour and 1.929 mm/hour for 1 hour and 24 hour duration, respectively. PERSIANN CDR produced 15.952 mm/hour and 1.917 mm/hour for 1 hour and 24 hour duration, respectively. In Madurai, the precipitation intensity of GPM-IMERG was very close to the station data. The intensity of precipitation produced by station data was 26.033 mm/hour and 3.128 mm/hour for 1 hour and 24 hour duration, respectively. GPM-IMERG produced 25.93 mm/hour and 3.117 mm/hour for 1 hour and 24 hour duration, respectively ([Fig. 2b](#)). In Tuticorin, ERA5-Land produced the closest precipitation intensity estimation with respect to the station data. Station data's precipitation intensity was 20.406 mm/hour and 2.452 mm/hour for 1 hour and 24 hour duration, respectively. ERA5-Land produced 20.269 mm/hour and 2.436 mm/hour for 1 hour and 24 hour duration, respectively ([Fig. 2c](#)). As the products produced closest estimate to the station data, the lines were closely plotted in the figure.

To improve the visibility of products with similar patterns, the line types were adjusted in [Fig. 2 a-d](#) and the above explanation has been added in the Results section (L370 – L373, L374 -L 376, L381-L383).

3. **Comment:** Fig.3: The vertical axe titles are not uniformly edited, and often superseeds the grid values. The quality of these figures should be improved.

**Response:** We thank the Editor for the suggestion. The figure has been improved in the revised manuscript (L 468 – L522).

4. **Comment:** Fig 5-8. Legend should positioned clearly at one singular place.

**Response:** Based on the Editor's suggestion, legend position in [Fig. 5- 8](#) has been altered to one singular place in the revised manuscript.

5. **Comment:** Fig. 5-8. The dots (circles) on the figures should be explained in detail.

**Response:** In the station data spatial map, the distribution of ground station points and their respective linearly interpolated grids are plotted to understand the precipitation variation across the grids. The red circular dots represent the locations of ground stations from which precipitation data was collected for the period 2003–2014. The black stars indicate the linearly interpolated  $0.1^\circ$  grids. For the evaluation, only grids surrounded by at least one rain gauge were considered.

The above explanation has been added to the Results (L 567 - L570) and Figure captions (Fig. 5-8) in the revised manuscript.