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Discussions

Interactive comment on "SPREAD: A high-resolution daily gridded precipitation dataset for Spain" *by* Roberto Serrano-Notivoli et al.

Anonymous Referee #2

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General comments: This manuscript is devoted to the development of a new high-resolution daily gridded precipitation dataset for Spain using a large number of stations (12 858) and over the period from 1950 to 2012 (peninsular Spain) or from 1971 to 2012 (Balearic and Canary Archipelagos). Data is available over a 5 km grid. The dataset is publically available to users and the authors provide not only precipitation estimates, but also their corresponding uncertainties. The dataset is properly validated with observational data. The methodology is adequate and based on previous studies from the authors, namely on their R-package 'reddPrec'. Furthermore, a number of precipitation indices is also analysed, including indices of extremes. The text is generally clear and well written. The high-resolution dataset produced by this study is of

major relevance for impact assessments over a wide range of socioeconomic sectors and for decision-making. Therefore, I recommend the publication of this manuscript after some very minor revisions detailed below.

Specific comments: 1. The title should explicitly mention that a climatological analysis is undertaken, including an analysis of precipitation extremes.

2. Section 2: I would like to see here more discussion regarding the implications of the data gaps on the results. As the authors mention, only 17 stations actually cover the full period. Although the station density remains reasonably high throughout the whole period (please revise Y-axis labels in the bottom panels of Fig. 1), some important limitations/uncertainties are expected to arise from this lack of data. Please enhance this discussion.

3. Page 5, Lines 9-11: the definitions of suspect wet and dry days seem to be reversed.

4. Section 3: from my viewpoint, this section should provide further details concerning the followed methodology. I understand that there are limitations in the paper extent, but a deeper description of the methods should improve the readability of the text and may prevent readers from reading preceding papers.