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Interactive comment on "Iberia01: A new gridded dataset of daily precipitation and temperatures over Iberia" *by* Sixto Herrera et al.

Anonymous Referee #1

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Review of "Iberia01: A new gridded dataset of daily precipitation and temperatures over Iberia"

This paper presents a gridded climatological data product for the Iberian peninsula called "Iberia01" which appears to be a revision of a previous data product called "Spain02", using the same station network and interpolation methods, except including "orography" (elevation?) as covariate in the thin-plate spline step. Iberia01 is compared against a standard (E-OBS), finding more or less similar predictions except in some specific locations for specific climate variables. For precipitation it is found that the higher-resolution Iberia01 predictions show more small-scale variation than the coarse E-OBS product, at least in the case of a specific major precipitation event. The construction and integrity of the dataset appear to be well-done overall, although much

of the methods refer to a previously published paper by the same authors. The figures are well-done as well. As a presentation of a new dataset, I think this paper should suffice (with some major revisions, clarifications, etc), although it is not clear whether any of the techniques or analyses are particularly novel.

specific lines referenced as (pg:line)

Major Issues:

None of the links (p11:4-6) to the data worked for me. The first sent me to a generic landing page in Portuguese. The second sent me to a site where the data was embargoed and required a login account. The third sent an error message. I assume based on the R code that the third access point requires authentication with Santander and requests via a specialized R function. The AEMET link (pg 10) sent me to another landing page where it was unclear how to find the dataset. Either way, I could not access the data.

The authors state that the E-OBS dataset is taken as a benchmark (4:7) but later claim that the dataset is biased for key variables (6:22). It is not clear in the methods how this assessment is made or quantified.

It would be nice to provide some ideas explaining the specific deviations (e.g. along the coast) between Iberia01 and E-OBS in the discussion

The assessment of resolution for the convective rain event is unsatisfying. First, why do the authors present the 20 km product (v17) and not the 10 km product (v17e) for E-OBS, which seems like a much better comparison? Second, the authors claim that the difference in resolution for Iberia01 10 vs 3 km resolution does not matter, but this is not quantitatively examined or explained in any way. Are the authors using gestalt, I assume?

There are numerous grammatical errors, run-on sentences and awkward phrasings throughout. I have noted some below, but not all. The writing is good in terms of

logic, but needs a careful proofread (possibly by a native English speaker) before it is publishable.

The methods frequently refer to Herrera 2011, 2012. However, more brief descriptions of these methods would be helpful, such as the QC protocols.

Minor issues:

Where did the 'orography' dataset come from? Isn't this just elevation?

The R code (pg 11, line 10) Seems to only calculate and visualize climatologies but doesn't actually do any direct comparisons.

(6:10) How exactly?

paragraph (6:29ff) move to methods

(6:30): "can be considered a realization of" seems like an awkward way to phrase it. Why not 'differs significantly from'?

(7:2) "thus questioning" – Move interpretations like this to the discussion and flesh them out. I would tend to disagree with this statement as stands.

Technical issues:

Please remove "In order" from all sentences beginning with "In order to", as this is redundant.

(1:9) Run on sentence

(1:11) omit "As a result"

(1:15) rephrase

(2:6) expands -> includes

(2:11-12) reference for this assertion?

(2:14) omit 'the'

(2:19) 'smooths' awkward term here

(3:6) include 'and' between citations

(3:15) runon sentences

(3:20) Is this really the first? Seems like there are others, referenced in the same sentence (PT02)

(4:8) Replace 'first dataset', 'this one' etc with specific title of each. Confusing

(5:10) "temperature was built"

(6:6) run-on

(6:13) How were clims aggregated?

(6:14) "the main differences being"

(6:29) "we used"

(9:7) on -> of

(9:28) and (9:30) – these sentences are both difficult to understand.