

## **Bimodality in Ensemble Forecasts of 2-Meter Temperature: Identification**

by C. Bertossa et al.

Dear Cameron Bertossa and colleagues

Many thanks for your latest revisions and for addressing the points raised by the reviewers in more detail. I am happy to accept your paper for publication in WCD subject to technical corrections, as suggested below. Congratulations and thank you for submitting your paper to WCD! Your paper very nicely illustrates and discusses the importance of bimodality in extended-range ensemble predictions.

Line 44: "... are shown in Fig. 1." To me it would be helpful to add something like "at selected grid points". Also maybe mention in the figure caption or in the text whether you look at 6-hourly T2m values or daily means.

Line 50: I am not a native speaker and therefore some of my language suggestions might be inappropriate. I just mention a few sentences where I found the wording not ideal. A first example is on line 50. Here I would prefer "... whereas in another forecast for/at the same location ..." and in line 52 "... which show the same forecast but at different locations."

Caption Figure 1 last line "times which" → "times when"

Line 74: describe → described

Eq. 2: in latex use  $\log$  instead of  $\log$

I would like to come back to one of the original comments from reviewer 2 about Sect. 2. The reviewer mentioned that this section, although very interesting, is not directly related to main story of the paper. Now reading the entire revised paper I had a similar impression. After the introduction I was curious to see where bimodality occurs (i.e., I was curious about the results shown in Sect. 4) and I could not fully understand why I need to go through a relatively long and complicated section about ensemble scoring. Or in other words, maybe it would be easier for me as a reader to absorb this material after having seen where bimodality occurs (and how often, etc.). I ask you to reconsider whether Sect. 2 should remain where it is or whether shifting it to an Appendix would be more appropriate for the WCD readership. I leave this decision up to you and just wanted to share with you my impressions about Sect. 2 when reading the paper from A to Z.

Line 192: either “itself; thus” or “itself. Thus”

Line 210: Fig. 3 → Fig. 3a

Line 220: you explain the notation  $N$  (Gaussian distribution) here, but you already used it in Fig. 2.

Section 3 is long and contains different aspects. I suggest introducing subsections, with new subsections starting at lines 205, 264 and 290.

Line 267: “relative to one another”

Caption Fig. 5: I think this should read “... timesteps when the ensemble has two modes”

Line 307: dates should be in format 03 December 2015 etc.

Caption Fig. 6: why “versus”? I suggest “... times, (b) in weeks 2-3, and (c) in weeks 4-5 ...”

Caption Fig. 7: strange wording, I suggest “(a) is for lead times in week 1, (b) in weeks 2-3, and (c) in weeks 4-5 ...”

Lines 340 and 343: no need to start new paragraph

Figure 8: These panels are identical to the ones shown in Figs. 6b and 7b! I am not sure if maybe the intention was to show the entire year in Figs. 6 and 7? If not, then there is no need to include Fig. 8.

Line 357: not sure, is “as pronounced of a seasonal dependence” proper English?

Line 358: should read “... this may be affected to some extent (with t) ...”

Line 365: ; should read .

Line 395: should read “8 and 9”. Then: “Tamarin-Brodsky et al. (2019) depicted ...”

Line 400: should read “... found in Tamarin-Brodsky et al. (2019, their Fig. 1c) ...”

Line 420: not sure, are the formulations “a property opposite most the globe” and “ITCZ position based off rainfall climatology” proper English? (At least I don’t understand these sentences.)

Line 435: “can not” → “cannot”

References: Copernicus journals use journal abbreviations and include a DOI. Please check in published WCD papers and adapt your list of references accordingly.

I am looking forward to receiving the final version of your manuscript.

With best regards,

Heini Wernli