

Interactive comment on “Hydroclimatic Variability and Predictability: A Survey of Recent Research” by Randal D. Koster et al.

Anonymous Referee #2

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The paper “Hydroclimatic Variability and Predictability: A Survey of Recent Research” provides an overview of recent research in large-scale hydroclimatic variability. This includes general variability, droughts, floods, land-atmosphere interactions and hydroclimatic prediction. For each of these subcategories a summary of recent research and examples from a recent symposium are presented. The paper has a very clear and instructive outline that makes the paper interesting and understandable. The authors also do a good job of providing an overview of recent research without it becoming overwhelming. However, there are two key weaknesses that need to be addressed before the paper is published.

First, the examples from the symposium are poorly constructed and the lack of detail makes them seem unimportant and irrelevant to the overall paper. For example, section 2.1.2 presents 6 different and seeming unrelated figures in only 13 lines of text. There

C1

needs to be more discussion in the paper about each of the figures and how it relates to the section theme. It would be helpful if there was a short summary at the end of each example section that discussed the connection between figures. It also seems that the authors tried to compensate for the lack of discussion in the text by making the figure captions overly detailed. This is cumbersome to read and makes the figures disconnected from the paper. For example, the caption for Figure 10 consists of 262 words while the example section 2.3.2 which references the figure only contains 87 words. The paper would be greatly improved if the authors revised all the example sections to include a more coherent structure that offers more detail and connection to the section. This may require cutting the number of examples for some sections, but fewer well discussed figures that integrate with the rest of the paper would be more useful and interesting than simply listing numerous examples.

The second aspect that needs to be improved is the final summary (section 3). The current summary serves little purpose other than complying with the normal writing convention that dictates papers end with a summary. Given that the motivation of this paper was a recent symposium, it seems that the summary should tie all the presented examples together to illustrate the overall thesis of the paper, which seems to be the last sentence in the abstract. While the literature review supports this thesis, the examples presented do not. Also, given that the authors are leading researchers in the subject, the summary would be greatly improved by discussing challenges and future directions for the field.

Overall, this paper is interesting and meaningful and should be published, however, given the two major weaknesses discussed, it still needs revisions that range between minor and major.

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C2