Review of “Multivariate stochastic bias corrections with optimal transport” by Yoann Robin et al.

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This is a review of a revised manuscript that I have evaluated previously. I will keep my comments short thereof.

As stated earlier, the paper is interesting and should be published.

In the revisions, the authors have addressed all my comments. They have also included a simple univariate example to make the method more accessible to readers unfamiliar with the underlying theory, in response to the first reviewer. This improves the paper.

However, during the revision a few expressions were introduced that might be misunderstood. These should still be improved, for better readability, if possible.

Details:

- Figure 1, caption: The figure in b) shows probability levels p_{x1}, p_{y1}, p_{x2}, etc. on the vertical axes - these are difficult to read and more confusing than illuminating. I suggest to remove them. Also consider changing "indicate how the realizations of x_1 are distributed between each y_j" to "indicate the possibilities for how the probability of obtaining the value x_1 for X can be distributed among the possible values y_j of Y". Maybe also picture even less than 100 arrows in panel d), as it is still quite crowded visually.
- page 4, line 15: Consider "Let p_{xi} be the number ... in the interval representing x_i" instead of "Note p_{xi} the number ... in the interval x_i", and similar for the next sentence.
- page 4, line 22: Consider "The black arrows represent the number of realizations γ_{1j} that are transferred ..."
- page 5, line 21: Change "we note ... the set" to "let ... be the set"?
- page 5, line 22: Remove "=" sign after “is”
- Explanation in Section 2.1: This example uses realizations and the transport γ is given in terms of *number* of realizations that are moved from a set of realizations of X to a same-size set of realizations of Y. In the next section the general theory is described, where the transport Γ is now moving probabilities (e.g. such as to be independent of the number of realizations) between the laws of the random variables X and Y. This change from a set of realizations to random variables and their probability densities (actually probability measures, to be more correct) could confuse readers. It would be worth to use one sentence somewhere, e.g. at the end of Section 2.1, to explain this difference.