Response to Reviewers

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Contents

1   Response to Gwendal Rivière

The authors have deeply and adequately considered my questions and suggestions. I am very satisfied with the revised version of the paper. Congratulations! Before submitting the final version, I would encourage the authors to check consistencies in the notations.

Thank you very much for your detailed and very thorough review. We appreciate the time and effort a lot you put into the review.

- Line 170 Φ^L, hence variable Φ with the superscript L, is said to be the low-frequency geopotential height anomaly. But line 191, q'_L, hence with the subscript L and the prime, is used to denote the low-frequency PV anomaly. Line 253, q'^L, hence with the superscript L, is used to denote the same quantity. It is important to have a homogeneous notation throughout the paper to denote the low-frequency anomaly. One possibility is to use the operator L when both the low-pass filter is applied and the climatological mean is subtracted, this will avoid to have primes and L at the same time. For variables for which only the climatological mean is subtracted, you could use the prime as it is already the case. Indeed this is inconsistent. We added a prime for the geopotential height anomaly in L170 to make this clear and decided to use everywhere the subscript L.

- Section 2.3.2: the prime appearing in that section does not mean the same thing as in section 2.3.1. Please find another notation for that section. Maybe a hat ? Again, good point. We even mentioned that the prime is associated with deviations from a climatological background state and hence followed your recommendation to use a hat in Section 2.3.2. to avoid confusion.

2   Response to Reviewer 2 and 3

As well, we would like to thank Review 2 and 3 for their time, effort and ideas to improve our manuscript.