Review of manuscript "Revisiting the surface impacts of the QBO in the Large Ensemble Single Forcing MIP simulations: are teleconnections still too weak?"

This study revisits QBO teleconnections using a large ensemble of four model outputs from LESFMIP mainly to examine the H–T effect and subtropical downward arching, focusing on their modulation of surface temperature and precipitation. It is argued that large ensembles enable the isolation of weak signals that are typically obscured by internal variability and provide better quantification of their magnitude. QBO teleconnections remain an important research topic; however, only marginal improvement is found across the stratospheric route (H–T effect), subtropical route (horseshoe arching), and tropical route (convective pathway), with model signals still weaker than those observed. Accurate isolation of these weak signals, which are hidden by internal variability, could significantly improve long-range forecasting of surface climate. However, in its current form, the manuscript does not yet meet the required standards for publication in terms of clarity of novelty, and technical errors. I therefore return the manuscript for the following revisions:

Novelty of the study:

Thus, the novelty of this work requires further clarification. The authors should explicitly state what is new or improved compared to previous studies. Earlier research has already shown that QBO teleconnections tend to be too weak in models. The present study largely revisits this conclusion using the recent availability of large ensembles from models with spontaneously generated QBOs.

Moreover, the discussion and summary rely heavily on findings from previous studies, with limited new insights. Overall, the manuscript concludes that the use of large ensembles provides a clearer picture of how well models simulate QBO teleconnections; however, this contribution needs to be more clearly articulated in terms of its originality and added value.

Technical errors:

The current study requires technical corrections. The figures appear to have been prepared in a rather casual manner, particularly with respect to font sizes, consistent notation, titles, color bar levels, and axis labels. Also, there is random use of abbreviations in the text without introduce them. The authors should ensure consistency in notation and presentation throughout the manuscript.

Some of these issues have been highlighted in the specific comments; however, it has not been possible to identify all of them due to the large number of inconsistencies.

Specific comments:

Second paragraph 2 (33-43). Also, emphasize the routes associated with these three distinct mechanisms.

L77 Use the QBO E and QBO W instead of eQBO and wQBO .

L118 remove "also"

L119 “NH”, Abbreviations should be defined at first use by providing the full term. Replace “(all but IPSL6)” with “ but except IPSL6”

L125 “the mean meridional circulation of the QBO” with “the QBO mean meridional circulation (MMC)”, and further use of this abbreviation.

L130 “on the other hand”. Move it to the beginning of the sentence.

L148 -149 In ERA5…., rewrite the sentence with more clarity.

L 152, “larger uncertainty in observation”, please specify them briefly.

L171 “ Northern Hemisphere” Please refer to the comment at line 119, where the abbreviation “NH” is used without first defining the full term. Insert a full stop after ‘Europe’ and begin a new sentence.”

L172 North Atlantic Oscillation, the abbreviation NAO has already been introduced.

L173 “previous work…” Include one or two most relevant citations instead of referring to the Introduction.

Corrections in figures:

Fig.1 Interchange the left and right sides of the y-axis, i.e., place the pressure scale on the left side and the height scale on the right side. Also, ensure a clear separation between the y-axis label and the unit text.”

Set the colorbar scale at appropriate intervals to avoid crowding or spacing. In subsequent Fig. 3, the left panel shows only the extreme values on the colorbar, whereas the right panel includes intermediate values as well.

Colorbar scale unit is “m/s per 10 m/s” but for the supplement (Figure S5) “m/s”. Same inconstancy in other figures and their supplementary.

Proper use of title. Text Uzaregress is confusing, do you mean “Uza regression”? Same for Tzaregress ?

In Fig.2 caption “x-es”?

Fig,4 Shift panel (a1)---.. at title level. Revise ‘Uza60N10hPa’ to ‘Uza 60N 10hPa’. The spacing used for longitude- latitude–pressure variables is inconsistent; please ensure a consistent format is maintained throughout the manuscript. Main title should start capital letter i.e. “regression” to “Regression”.

Fig.6 The box size for the calculation can be extended over the entire significant region, rather than being restricted to a very small core region.

Fig. 10 Use the same colour code as in Figure 9

S10 -S12 Display the x- and y-axis labels with adequate spacing for better readability (Figs. 6, 7, 9, 12 too)

The above suggestions are only indicative; please review all figures carefully to ensure consistency and improved presentation.