1 Response to Editor's comments

1.1 Dear Authors,

One issue raised by one of the reviewers concerns the use of climate models without coupled chemistry to evaluate the relationship between ENSO and tropospheric ozone concentrations, with which I agree. I cannot find a clear explanation for the use of those models, which do not generate ozone and are constrained by observations (that are likely highly uncertain from 1850).

In order to sort out this issue, I suggest that you only use the multi-model mean variables from models that have coupled chemistry (2,3,4,5,6,7,8, and 9 in Table 1) for Figures 1,2 and 4.

Your conclusions will be more robust if you include only 8 rather than all 12 models in the multi-model mean.

Please modify the multi-model mean to estimate the probabilities of no Granger causality and produce new plots for figures 1,2 and 4. You may leave all 12 models in Fig 3, to show the different response, if you consider valuable.

Best regards,

Graciela Raga, handling editor

Response: We thank editor Graciela Raga for raising this point. We modified figures 1,2 and 4 and the corresponding text. In the new figures, we only include 8 models in the computation as your suggestion. Similarly, we also modified figures S1 and S5 to S7 in the supplement.