

*We would like to thank the reviewer and the co-editor for their assessment of our manuscript and for their recommendations for improvements. Responses to the comments and the proposed revisions to the manuscript are included below, along with the Line numbers at which the suggestions are incorporated. All line numbers refer to the tracked-changes version of the manuscript.*

The author has addressed my previous comments, especially the additional explanation in Section 3.1 of how 2021-2022 differs from previous nIOD events is particularly helpful and highlights the uniqueness of the 2021–2022 nIOD event.

I still have one suggestion regarding the relationship between WWBs and La Niña forcing (details below), along with a few minor comments/edits for your reference. All line numbers below refer to the tracked-changes version of the manuscript.

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In the revision (L243–248), you suggest that the unusual WWB in January 2021 may be related to cyclonic circulation over peninsular India and Sri Lanka. This is an interesting point that may be worth mentioning in the conclusion section.

*Response: Now included at Line 387.*

I also feel that the statement, “Out of the eight WWB events during 2021–22, five occurred when SOI was greater than +10, suggesting the role of La Niña forcing (conclusion #5),” is a bit too strong, as five out of eight does not constitute strong evidence. In my view, within this study, the drivers of WWBs remain somewhat ambiguous (as you note, cyclonic circulation may also have contributed to the unusual WWB). Accordingly, the extent to which La Niña forcing “plays an important role” in maintaining WWBs, relative to other factors, remains uncertain, and you may wish to soften some of these statements.

*Response: Thank you for the suggestion. We have incorporated the following changes to reflect this.*

*Line 12: “westerlies were **possibly** supported by the background...*

*Lines 399-403: “WWBs played an important role in sustaining the multi-year nIOD event. La Niña forcing played an important role in maintaining conducive conditions for WWBs. Out of the eight WWB events during 2021-22, five occurred when SOI was greater than +10, suggesting the **possible** role of La Niña forcing. Some of the peaks in SOI match well with the peaks of anomalous westerly wind activity, while in other instances, the WWB activity occurred during the strengthening/mature phase of the SOI. A more quantitative assessment of the impact of La Niña on WWBs requires further investigation.”*

*Lines 414-415: “The La Niña modulated Walker circulation, **thus providing favourable conditions** for WWBs in the TIO.”*

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L28: “pIOD” has not been defined.

*Response: Defined now at Line 25 of the revised manuscript.*

L248: Why specify the WWB on 13th January 2021 when a WWB is at least a 4-day event (as defined in Section 2), if not longer?

*Response: Thanks for noticing this. This is now reworded to “led to the unusual occurrence of the WWB centred around 13<sup>th</sup> January 2021”*

L334: It was the number and duration that were unusual compared to other years – would it help to refer to Figure 2c here?

*Response: Now referred to at line 301 of the revised manuscript.*

L344: Out of the eight WWBs during 2021-22, six out of eight events were ... – delete the second out of eight to avoid duplication.

*Response: Deleted at line 311.*

Figure 5. I can't tell the BSISO phase in event #7.

*Response: The BSISO phase is 2; Fig. 5 is now slightly modified to show it clearly.*

L379-380: Please explain why “The large sub-surface heat content during DJF and MAM 2021 was therefore not reflected in the SST.”

*Response: Now provided at lines 347 – “The large sub-surface heat content during DJF and MAM 2021 was therefore not reflected in the SST due to the negative coupling between SST and D20 (Fig. 9).”*