

Second Review of: Mid-Pliocene not analogous to high CO₂ climate when considering Northern Hemisphere winter variability (Oldeman et al., 2023)

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This is my second review of this study. I congratulate the authors on strengthening their manuscript. I found the overall study had a much more coherent storyline, the figures were easier to read, and I thought the added tropical Pacific discussion was interesting. I have only a few minor comments remaining before this study is accepted for publication.

Energy budget: In your response to the Editor you mentioned you would be completing an energy budget analysis to respond to his concern about why SAT changes in response to changing BCs. I either missed this, in which case it needs to be made more obvious, or it wasn't included. Either way, I think this concern needs to be addressed more clearly.

L321 & L333: I didn't follow why you think the changes in precipitation around Greenland are related to sea ice.

Figure 3: This isn't major, but I suggest flipping the color axis on the contours so that blue is wetter and red is dryer for panels b and c. I think it's then a bit more logical to quickly read the plots.

Figure 6: I had a hard time differentiating between bold and not bold font in these squares. I suggest using underlines or asterisks to show the $p < 0.005$ values instead.

Typos:

L203: Should be a colon rather than a semicolon.

L349-350: "a lot more" and "a bit less" are both qualitative phrasings. You have statistical significance here, I suggest sticking to the quantitative descriptors.

L370: "differences are that" is awkward grammar.

L378: "the northern node is retreated polewards" is awkward. Maybe it should be "has retreated" instead.

L394-396: I got confused with your use of parentheses here and missed the message you were trying to make. This isn't a case of "the mode is positively (negatively) correlated with..." sort of use you use slightly later in the manuscript. Please revisit this sentence.

L400-401: Similar strange parenthetical structure as comment above.

L476: "a jet stream weak in strength" should be "a weak jet"?

L478: Similarly, "a jet less variable in strength" and "a jet more variable in latitude" is strange phrasing.

L483: "indexc"

L485: "WEP is established before" should be "WEP has been established"

L498: "summarizing 2. - 4b." -- what are you referring to? Figures?

Figure 9 Caption: "correlation coefficient in the caption" -- I think you mean in the legend.

L510: "that shows" rather than "that show" since the subject of that sentence is the "study."

L577 & L281: You've referred to it as "Supplementary" material more throughout, so I suggest changing "Supplement" here.

L654: I feel like there should be a "can" or "should" between "climate" and "be" in this sentence.

L679: "might not be" is rather weak language compared to the rest of your conclusion which says the Mid-Pliocene should not be used as an analogue.

L683: "we think that it might" can just be "it may"

Supplementary Material S6: I believe the second Figure S10 at the end of the section should be Figure S11.