Response to Reviewers - *Insights into the Middle-Late Miocene palaeoceanographic development of Cyprus (E. Mediterranean) from a new $\delta^{18}O$ and $\delta^{13}C$ stable isotope composite record*

I would like to take this opportunity to once again thank both reviewers for their thoughtful evaluation of the article and for providing valuable guidance to improve it. The suggested changes and additions undoubtedly enhance the manuscript's clarity and coherence, and I am grateful for the reviewers' and editor's feedback.

In addition to the specific revisions outlined below, we have made further edits throughout the manuscript to improve its overall readability. Most of these are minor changes aimed at enhancing clarity and flow. Several of these edits also align with Reviewer 2's advice to shorten the introduction and reduce redundancy with the discussion section. We have also corrected and updated several references to ensure the accuracy of the citation details.

Best wishes,

Torin Cannings

R1 -

Point - *A marginal observation regards the calcareous nannofossil biostratigraphy applied in this study: besides the used reference scheme (by Backman et al., 2012), that is appropriate for providing a reliable age model, the Authors could address a more recent biostratigraphic review on nannofossil biostratigraphy in the Mediterranean [the reference is: A. Di Stefano, N. Baldassini, I. Raffi, E. Fornaciari, A. Incarbona, A. Negri, S. Bonomo, G. Villa, E. Di Stefano, D. Rio (2024). Neogene-Quaternary Mediterranean Calcareous Nannofossil Biozonation and Biochronology: a Review. Stratigraphy, 20(4): 259-302. https://doi.org/10.29041/strat.20.4.02]. Anyway, it is not a mandatory suggestion because it will not change the biochronologic results presented.*

Response – A sentence has been added to the methods section (2.4) stating that results are consistent with more up to date scheme.

R2 -

Point - *I recommend that the authors shift at least part of the long climate and ocean introduction (around lines 90-125, possibly also some of sentences in lines 55-60) to the discussion. This minimizes redundancies in the discussion.*

Response - Several sections of the introduction have now been moved to the discussion to remove redundancy. Some parts of these sections were left in order to preserve the flow of the introduction and ensure that all key events are properly introduced. This is important as we hope to interest land-based geologists who may not be up to date with regional to global palaeoceanography. On the other hand, many palaeoceanographers may not be familiar with the sedimentary geology of Cyprus. Where possible the introduction has been shortened and reworded for clarity.

Point - Additional references in the introduction: Cedric John et al., 2003, GSA, on Miocene climate in the Mediterranean.
Response – This reference has been added to the introduction (1.1).

Point - Line 117: see also impact of closure of gateway to the east on Mediterranean isotope records in Jacobs et al., 1996.
Response – This reference has been added to the discussion (4.4.1) (part of introduction moved to discussion) and removed from the introduction (2.1.1) where originally mentioned.

Point - 310 are condensed intervals comparable to phosphorites in the central and western Mediterranean? (see Jacobs et al., hardgrounds 16.9 and 16. 1 Ma). Any evidence for changing deep current intensities?
Response - The 'firmground' interval at Kottahi Hill may be comparable to those observed in Malta. While a detailed analysis of these layers was beyond the scope of this study, a future effort to compare and potentially correlate such intervals across the Mediterranean would be a valuable direction for further research. As these intervals were not studied in detail as part of this work, a detailed comparison with layers elsewhere cannot be made.

Point - 415 onwards: stable isotope values expressed in the d-notation are not "heavier" or "lighter" but more positive/negative.
Response - This phrasing has now been changed in all appearances in the text.

Point - 484 correct the title
Response – This typo has been corrected.

Point - From 499 onwards: Please add isotope events (Mi 3, 3a, 4, MMCT, LMCIS etc.) to your summary figure 10. This will facilitate readers comprehension of your argumentation.
Response - Isotope events have now been added to the figure and caption alongside key events.

Point - 519 delete "n"
Response – This has been edited to say 'in", this was a typo where the 'i' from "in" was missing.

Point - 525-530 > some duplication, see your introduction, lines 65-75
Response – The duplication has been removed as part of the changes made to move parts of the introduction to the discussion. We have shortened and streamlined the text by careful re-editing. Any unnecessary details or minor repetitions were removed.