

Reviewer Response

Reviewer One

Reviewer comments are in **red**. Our responses are in black. Quoted text that are changes to the manuscript are *italicised*.

I want to thank the authors for addressing my concerns adequately. The revised Section 4 has improved tremendously. I still have a few minor comments that should be easy to address.

- Line 63: I suggest explicitly mentioning global temperature 'anomalies' here as well.
- Line 110: I suggest explicitly mentioning that the alkalinity used here is represented by carbonate alkalinity and not total alkalinity (including several other proton donors/acceptors) as is used in more complex models.

Good luck with finishing the manuscript.

We thank the reviewer for their second review of the manuscript. We have made the suggested changes. Line 63 now reads "*global temperature anomalies*" and line 110 reads "*Here Alk represents carbonate alkalinity, not total alkalinity.*"

Reviewer Two

The authors have fully addressed my previous comments, and after having carefully read the revised ms I have no further concerns.

We thank the reviewer for taking the time to review our manuscript.