

List of Relevant Changes

- Decreased the length of the introduction. Sections 1.3 and 1.4 were merged together, and about half the length of the new section 1.4 as well as 1.5 has been removed.
- Added a short explanation of river routing at the location identified by Reviewer #1.
- Added a sentence to describe how close to equilibrium our spinup run was after 10,000 model years. We do not believe it relevant to include a timeseries of the model reaching steady-state.
- Added a paragraph in section 4 to further discuss the uncertainty relative to the formulation of NPP.
- Added a sentence to better explain GEOCLIM at the location identified by Reviewer #2.
- Added a sentence to address Reviewer comment at page 15, line 14-17.
- Added a few sentences to address Reviewer comment at page 21, line 2-8.
- Added a sentence to address Reviewer comment at page 21, line 13-16.
- Added a sentence to address Reviewer comment at page 24, line 23.
- Replaced “CaCO₃ buried mass” with “sediment carbon budget” in figures 3b, 6b, and 8b.
- Added paragraph to address Reviewer comment at page 26, lines 20-22.
- Added a sentence to address Reviewer comment at page 27, line 2-3.
- Added a sentence to address Reviewer comment at page 28, line 1-4.
- Added a sentence to address Reviewer comment at page 28, line 9-12.
- Added reference to address Reviewer comment at page 35, line 1-4.
- Some of the other recommended changes by the reviewers (but not indicated by the editor) have also been addressed.