

Response to editorial review of manuscript:

## **Validation of Terrestrial Biogeochemistry in CMIP6 Earth System Models: A Review**

We thank the editor for his time in reviewing our manuscript. The editor comment is presented in *red italicized text*, while the author response is in regular font, and the relevant change to the manuscript is in *blue*.

### **Editor Comments:**

*In response to one of the Reviewers comments about the additional concerns regarding analysis of coupled model simulation time series, you respond with: "Caution is warranted however in the evaluation of fully coupled model output due to the inability of fully coupled models to reproduce the timing of internal climate variability phenomena such as El Niño-Southern Oscillation (ENSO) and volcanic eruptions (Flato et al., 2013)." This response is good, except that most ESMs DO specify major volcanic eruptions so in principle one should be able to evaluate carbon cycle responses to major volcanic eruptions in ESMs. I'd just remove that last part of the statement.*

*Other than that, the responses to the reviewer comments are good and I find the revised paper acceptable for publication.*

We have adapted the manuscript as follows:

Lines 352-354: "Caution is warranted however in the evaluation of fully coupled model output due to the inability of fully coupled models to reproduce the timing of internal climate variability phenomena such as El Niño-Southern Oscillation (ENSO) ~~and volcanic eruptions~~ (Flato et al., 2013)."