Sandia National Laboratories
PO Box 969, MS 9159
Livermore, CA 94550
csafta@sandia.gov

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Geoscientific Model Development
European Geosciences Union

Dear Editor:

We herewith submit our revised manuscript, "Global Sensitivity Analysis, Probabilistic Calibration, and Predictive Assessment for the Data Assimilation Linked Ecosystem Carbon Model", by Safta, Ricciuto, Sargsyan, Debusschere, Najm, Williams, and Thornton for publication in the Geoscientific Model Development. The original manuscript had been returned to us after a second round of reviews, with requests for minor revisions.

To address the reviewer's and editor's request we have assembled a supplemental package that will be uploaded to the GMD website. This package contains the C++/C/Fortran codes as well as Python and shell scripts used to generate the results presented in the manuscript. It also contains instructions on how to download data (from ORNL DAAC archive) containing the site drivers and NEE observations. Other auxiliary data files are included in the package.

While assembling and testing the supplemental package, we discovered an error we had in pre-processing the site driver data. Essentially all simulations employed daily temperatures that were 3 degrees Celsius higher than the correct values. We fixed this error and performed all calculations with the correct data. We found minor, quantititive only, differences compared to previous results. These differences, itemized on the next page for completeness, did not impact the existing narrative and conclusions of the paper.

We respectfully ask the Editor to reconsider the revised paper.

Sincerely,

Cosmin Safta

A brief outline of changes in results compared to the previous version of the paper.

- **Table 3** Changes of 10% or less in some of the distance correlation values.
- **Table 4** Changes smaller than 2×10^{-2} in CRPS and CRPSS values
- **Fig. 12c** Slightly higher converged l_c values. Currently around $l_c = 4.4$ compared to $l_c = 4$ before.
- **Fig. 13** The most likely values for pair (gdd_min,gdd_max) are smaller. The correlation structure remains the same.
- **Fig. 14** A shift of 0.2 degrees C towards sliglty smaller temperatures for tsmin.
- **Fig. 16** Some permutations between parameters that exhibit similar Kulback-Leibler divergence values