Dear editor,

We clarified the table and we added in the text l391-396: "For both, the correlation between parameters was low (table 4) suggesting that the dataset used to optimize the parameters cover a large range of situations. We used soil respiration data obtained after incubations of very different time length (few days to few months) disentangling the effect of each parameter."

Please not that we change the table order. The correlation matrix are now presented in table 4.

We also add the equations representing the fluxes between pools.

Best regards,

Bertrand Guenet

Dear Dr. Guenet
Thanks for submitting a revised version of your manuscript. Unfortunately, your last version suggest a problem with the posterior values of your optimization. Your new Table 5 is odd and extremely unlikely for any Bayesian parameter estimation method. Can you please clarify the zeros in your correlation matrix in Table 5? Please upload a new version of this table with the correct values and an explanation in the main text for the reason of these very small correlations.

Also, you didn't include in the revised version the equations of the Century model as you used it. There are many versions of Century out there, the paper you cite doesn't really have the equations, and we don't know what actually got implemented in Orchidee. For this reason, I also would like you to add the equations in a revised submission.
Regards,
Carlos A. Sierra