

Reviewer #2 suggested calculating the multivariate potential scale reduction factor. You stated in your response to reviewer #2 that your “MCMC chains are univariate”. This is not the case. Please refer for example to Brooks and Gelman (1998). Multivariate just refers to the aim of the multivariate potential scale reduction factor to assess “convergence of several parameters simultaneously”. Brooks and Gelman (1998) state that “given a large number of parameters, the univariate graphical approach soon becomes impractical”. In my opinion, this really applies to your problem. It would be great if you could spend some additional minutes and calculate the multivariate potential scale reduction factor, for example like this:

**Response:**

Thanks for the suggestion. The multivariate psrf is 12.04. We have added this information in the revised manuscript for reference purpose only, because it does not violate any of our conclusions. The high multivariate psrf was due to the fact that some of the model parameters are not well converged, which we have clearly acknowledged and fully discussed in the manuscript.

Technical corrections: Line 451: I think you mean “initial values” instead of “prior values” Line 453: Should read “equifinality” instead of “equafinality”

**Response**

Thanks. We have corrected them in the revised manuscript.