

Authors' comments and replies to Reviewer 1

I thank the authors for their responses to the reviewers and the revisions made to the manuscript. Overall, these revisions enhance the presentation of the results. As I noted initially, these results will enable the consideration of RE data while the method is being standardized.

However, two points still raise questions for me.

First, regarding the differences between correction methods: Are the discrepancies between corrected LAS and RE, and among the different corrections, statistically significant if they fall within the combined margins of error of both methods?

We have included paired T-tests comparing the Disnar corrections and the SVM correction that we propose. These clearly demonstrate the difference between the two corrections. When it comes to the margin of error of the two carbon-estimation methods, the proposed corrections, both Disnar's and ours, aim at removing a general bias that is widely known to exist. It is the authors' opinion that the sample-wise corrections might sometimes fall within the margins of error, however the systematic bias that exists in the population of samples still needs to be corrected.

Second, the final sentences of paragraph 3.2 seem disconnected from the results presented. The conclusion of a technical note may not be the best place to categorically assert that post-acquisition statistical correction is preferable to modifying the analytical protocol to improve measurement.

We thank the reviewer for this comment. We have rephrased this statement and placed it in the Methods section so as to be more coherent with the format of the publication.