

Response to Reviewer #2:

[Comment 1] My concerns raised in the last round review are well addressed in this revision, I thus recommend accepting as is.

Response: We greatly appreciate the reviewer's recognition of our work. Thank you very much for the comments and for taking the time to read our manuscript and reply again.

Response to Reviewer #3:

[Comment 1] The authors have adequately answered all the points I had raised. I appreciate in particular the addition of Fig. 9, and the systematic comparison with erosion data whenever the erosion field is altered, before describing the effect on weathering.

The few modifications in the structure of the manuscript, to some extent in response to the other reviewers' comments, are relevant, and the revised manuscripts reads well.

As far as I'm concerned, I consider that this manuscript does not need another round of review, and can be accepted as it is, save only a few minor corrections:

Response: We sincerely appreciate the time and effort that reviewer has dedicated during the review process, and we are very grateful for the positive feedback on our work. We will carefully address and revise the issues that reviewer has raised in preparation for submitting the final manuscript.

[Comment 2] A mere suggestion: caption of Table 1 could specify "2nd set of experiments" (as described lines 427–439) rather than "main experiments".

Response: Thank you for your suggestion. We have modified the name of Table 1 into "Summary of 2nd Set of Experiments" in the revised manuscript.

[Comment 3] The experiment "R_Yves_s2_global_Etotal" referred to lines 660 and 667 is not described in Table 1, nor in the Supporting Information. Based on Fig. S10, I believe it should be "R_Yves_s2_LAI_global" line 660 and "R_Yves_s2_LAI_old_global" line 667.

Response: We apologize for the error here and many thanks to the reviewer's suggestion. We have fixed them in the revised manuscript.

[Comment 4] Line 559, line 691 and line 50 of the Supporting Information, there is no Fig. 11c and d. It should likely be 11a and b.

Response: Thanks for pointing these out. We have fixed them all.