



MS: egusphere-2026-889

On some factors controlling fission-track etch rates in apatite
(On the effects of ageing and annealing on the apatite and fission-track
etch rates)

R. Jonckheere, F. Trilsch, J. Liu, P. Zhai, T. Nagel

Dear editor,

We made the changes detailed below to our manuscript GC 2026-889 to comply with your latest suggestions. Can you see to it that - if it comes to that - it is not translated to US English, but to UK English?

Sincerely,
The authors

The following changes that you refused to make are required in a revised submission. The revised submission may be subject to re-review. In your revised submission, you will document where you have made the required changes by reference to line numbers in the revised manuscript.

Changes requested previously in the editorial recommendations:

- P2L51: Please provide a short description or reference that provides context for what “Durango apatite” is. For example, see what was done on P11L267-269.

Page 2; lines 49-53.

- All figures: Ensure all of the axis labels, including those that indicate the values of the tick marks are *outside* of the bounds of the figure. The parts of the axis labels that indicate the units are inside of the figures, creating confusion. I note that you refused this advice previously and you will not be permitted to publish these figures in Gchron without making these changes. This change was largely due to figure 3, which is extremely difficult to read due to the use of your “house style”. I have confirmed with the senior editorial staff that it was an error that you were permitted to publish this way in GChron previously.

Figures 3, 5, 6, 7, and 8.

- Delete “amorphous is amorphous”.

Page 17; lines 419-420

Requirements by the journal that were not followed previously.

Data Availability:

Please see https://www.geochronology.net/policies/data_policy.html for the full data policy. You must make the raw data available so that it can be evaluated during the editorial

process, prior to acceptance. You must include a statement in the manuscript on how your underlying research data can be accessed. This must be placed as the section "Data availability" at the end of the manuscript. If the data are not publicly available, you must make embargoed data available to reviewers (and editors). The data can be restricted via an embargo, but the policy of Gchron is that it must be made available to editors and reviewers during the review process, and there must be a clear plan for public publication written into the manuscript text.

Page 18; lines 477-478.

Author contributions:

The mandatory section "Author contribution" is missing. Please see "15. Author contribution" at <https://www.geochronology.net/submission.html#manuscriptcomposition> and add the section accordingly. Please make sure to only use initials instead of full author names in this section.

Page 18; lines 479-481.

The following comments specifically refer to sections of the reviews that declined to use to help improve the manuscript. For Review #1 the "line number" indicated first is the line number that the reviewer referred to in the original review. For reviewer 2, I have used the first section of text to indicate which portion it comes from. You are required to make the following revisions:

Author response #1 to review #1

Reviewer 1: comment B) It's unclear if this discussion made it into the manuscript. E.g the Copeland manuscript is not cited. Please add the discussion into the manuscript.

Page 10; lines 244-248.

L26: You cannot ignore comments that point out incorrect statements in your manuscript. Correct the error in the text.

Page 2; line 26.

L43-L44: Provide text responsive to the reviewers suggestion.

Page 2; lines 40-42.

L51: Provide text responsive to the reviewers suggestion.

Purpose: lines 28-35 and 44-48; design: lines 53-81 and Figures 1 and 2. How can this not be clear?

L114-L115: I think it's fine to only retain the explanation in the figure caption. However, in the main text (probably in the paragraph starting on Line 113 in the revised manuscript) please explicitly refer readers to the figure caption for that explanation.

Page 5; line 134.

L125: On revised manuscript line 128, either define variables in dE/dx and explain it, or delete the reference to the variables and just call it stopping power and retain the references to Tamer and Ketcham/Ketcham and Tamer. Similarly on revised manuscript line 132, unless you clarify the dE/dx expression just refer to it as stopping power.

Page 5; lines 144 and 148.

L205: In or around L208 of the revised manuscript, please provide the context that you wrote in the reply to the reviewer. If the reviewer is confused about something in the manuscript, the reader will be as well, so you should take appropriate measures to clarify, even if you believe your explanation is clear.

Page 7; lines 217-220.

L260-262: While I appreciate that you included an additional statement on revised manuscript L271-273 that is responsive to this comment, it is far less clear than the response you wrote to the reviewer. It looks like you just appended an i.e., and then an e.g., to the original comment. Instead, please revise the entire last part of the paragraph so that the writing is clearer, like the explanation you provided in your response to the reviewer.

Page 11; lines 303-309.

L272: Since you list the apparent alpha dose for FC1, a reader will wonder where the relevant data is for AS3. I appreciate that data does not exist, but that's not obvious to a reader. Please add a comment along the lines of "we are not aware of equivalent data for AS3".

Page 12; lines 317-318.

Author response #1 to Reviewer #2

Comment starting with "It's noteworthy that the assumption". It's not clear to me that your response is adequate. The reviewer appears to point out that there is an assumption that appears to be violated by the data. I accept that this may not undermine any of the interpretations, and that you may not have an adequate explanation, but I agree with the reviewer that this deserves discussion and explanation. Please provide this in the text of the manuscript.

Page 6; lines 154-157.

Comment starting with "The intersection point distribution". The reviewer points out what appear to be reasonable alternative explanations, and the response engages thoughtfully with the reviewers comment but then declines to incorporate this discussion stating "Until we have a better understanding, we prefer to present our data but refrain from speculation". It is perfectly reasonable to discuss multiple working hypotheses for data in a manuscript, even when they cannot be readily distinguished given the data. The standard is not whether the understanding is complete, but whether it is relevant and useful to a reader. Given the interest by the reviewer and the lengthy engagement of both the reviewer and the author in the paper discussion, it is clear to me that this is valuable and should be included in the manuscript. Please provide this level of engagement of the suggestions of the reviewer in the main text of the manuscript.

Page 7; lines 180-194.

Comment starting with "To conclude my comments". The response by the authors appears to be a thoughtful engagement, but it is not clear if the authors include it in the revised text (I cannot find it). Please include engagement with the comment of the reviewer in the main text of the manuscript, or clearly indicate to me where this has been included, if I missed it.

Page 17; lines 421-430.
