

There are only a few comments from the head editor to respond to in this accepted round of reviews. We respond in-line with blue text below.

I agree with the associate editor that this is suitable for publication. I have a few final comments:

-- This could be published either as a 'research article' or a 'technical note.' There is no size limit on a 'technical note', although this is confusing on the Gchron website because 'technical notes' and 'short communications' are largely described together. Personally, I would lean toward 'technical note' because for the most part this paper reviews data and mathematical methods that are already known, but the authors should use their best judgement. Please note that 'technical notes' at GChron have exactly the same review and bibliographic treatment as 'research articles' -- they are not considered a less rigorous category. If the authors wish to publish this as a 'technical note,' please contact the Copernicus editorial staff with a copy to myself and the AE.

We appreciate being given the option here. Our preference is to leave this article as a “research article”.

-- Please carefully check all the equations in the paper during typesetting and production.

We have checked the equations again prior to this submission and found no errors. We will also check again during the formatting process.

-- One theme of the reviews and responses for this paper is the tension between providing a mathematically concise description of the error propagation scheme and providing a description that can easily be understood by students or others with a less extensive mathematical background. In this paper the authors have argued in favor of the latter, which is totally reasonable in light of the intended purpose of the paper. However, a potential problem with this approach, that appears to be recognized but not explicitly discussed in the correspondence, is that the authors of this paper are, at least implicitly, proposing that the approach described in the paper should be adopted as a standard in the field. This leads to the risk that a more mathematically concise error propagation scheme (e.g., calculation of uncertainties in log rather than by Monte Carlo), even though it is also correct, might not be accepted in future publications because it would be viewed as noncompliant with the more simplistic standard proposed here. However, (i) the authors have been very good about keeping prescriptive remarks and recommendations out of the paper (this is good), and (ii) the purpose of this paper is, as articulated by the authors, to explain the method to students. Thus, I don't think any action is needed to address this.

This is a nice observation of one of the main points raised in review that we don't think was ever stated explicitly. We did notice that the first line of the abstract had the potential to seem as if we wished to be prescriptive in this method. We have therefore slightly altered (and shortened) the first line to read: “Although rigorous uncertainty reporting on (U-Th)/He dates is key for interpreting the expected distribution of dates within individual samples and for comparing dates generated by different labs, the methods and formulae for calculating single-grain uncertainty have never been fully described and published.”