Dear Julie,
Dear Alastair,
Dear Anonymous Reviewer

Once more, thank you for your thorough comments and suggestions, which have greatly helped us to improve our manuscript.

We have followed all suggestions and corrections proposed by reviewer 1 to render our text more concise and intelligible. We have also been more careful and precise in using certain words (sample, distribution) with the same objective.

Reviewer 1 raised the issue of the uncertainty associated with the dose rate, which we did not address in the first version of the manuscript. We have studied this issue from a mathematical point of view and have provided a detailed answer in the "Discussion". Indeed, this is an important point that was missing from the discussion.

In the discussion, we also elaborate more on the reasons for testing the effectiveness of the De_Dr approach on simulated datasets. As Reviewer 2 (Alastair) rightfully pointed out, it will be necessary to test the relevance of the De_Dr model further as soon as more reliable D_r distributions of samples are available. We understand that not having this included renders a weak point in our manuscript because, with such data, many of the questions raised by Alastair might be tested. Unfortunately, such distributions are not readily available and will need significantly more resources, if not an own project dedicated to it. Here, the additional context (many degrees of freedom to consider) likely distracts from the key message of our study. Hence, intentionally, we had decided to provide this first concise manuscript, a transcription of the underlying Bayesian approach and the process for identifying outliers. It contains the model and the R code freely accessible to the luminescence community, something to further build on in the future.

On behalf of all co-authors,

Norbert Mercier