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Dear Dr. Mark

Please find attached a revised version of our manuscript for consideration in *Geochronology*. Since you have seen our line-by-line responses to reviewers, we are not resubmitting those, but instead highlight all the changes briefly below. In the end, we made all the changes that we said we'd consider making in the responses, especially since they were highlighted in your feedback. This has resulted in some significant edits and additions to our manuscript, which include:

1) We have changed language in the paper to honor Dr. Sprain's wishes for clarification regarding the original intent of their paper. We think we've struck a balance between attempting to clarify misconceptions that have been drawn from the paper (esp. their Fig. 4) and highlighting the achievement that has been made between the high level of agreement between the two datasets.

2) A new section 2 that highlights the benefits and drawbacks of both the U-Pb and Ar approaches used in Schoene et al. (2019) and Sprain et al. (2019) as applied to dating flood basalts. Without going too deeply into analytical aspects that would detract from the focus of the paper, we note the importance of a series of uncertainties and statistical models used for each dataset, such as the geologic uncertainties inherent with using redboles as ashbeds and the assumptions required for achieving high precision with weighted-means in Ar dating of plagioclase.

3) As an expansion of the geologic uncertainties explored in the new section 2, an additional section 6 was added that explores in more detail the stratigraphic correlations used to build the composite section in Schoene et al. (2019). As part of this, we added a new figure that demonstrates what would have to happen to the existing stratigraphy to make the pulsed eruption model go away (assuming eruption ages are accurate). In the end, there's no great reason to believe that these correlations are more accurate, but it seems possible given the existing geology. Regardless, it poses interesting and testable hypotheses for future work that will help document the eruptive history of the Deccan Traps.

We think the revised manuscript covers much more ground and provides a balanced and accurate view that gives readers a way to interpret the datasets side by side, suggests paths forward for improvement in the future, and ultimately lets readers see behind the curtain of what went into these studies.

Sincerely,

Blair Schoene