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Dr. Marissa Tremblay, Associate Editor, *Geochronology*

Dear Dr. Tremblay,

On behalf of Dr. Yang Li and myself, I hereby submit a revised manuscript on "Inverse isochron regression for Re–Os, K–Ca and other chronometers", which addresses all the issues raised by the three reviewers and yourself. I have outlined these in detail in the online discussion. But in short, the new version:

1. shows that the ages obtained by conventional and inverse isochron regression can significantly differ for imprecise datasets. Using a semi-synthetic K–Ca dataset, we show that inverse isochrons produce more accurate results (addresses comments by reviewers Ickert, Davis and yourself);
2. more prominently discusses inverse isochron regression in Ar–Ar and U–Pb geochronology, with additional references (Ickert and yourself);
3. clarifies that correlated uncertainties may also arise from blank corrections and calibration errors (Ickert);
4. removes all but one instance of the word 'spurious' (Ickert and yourself);
5. includes a redrafted Re–Os figure, with double x-axis labelled by $^{187}Re/^{187}Os$ ratio as well as Re–Os age (Davis);
6. removes the basic introduction to Re–Os geochronology (Ickert);
7. stops sort of removing the three-item list of differences between conventional and inverse isochrons, as was suggested by reviewer Ickert; but does rearrange the list in order of decreasing importance according to the reviewer;
8. advocates that inverse isochrons replace conventional isochrons in future Re–Os and K–Ca studies (Davis).

I hope that you will find the revised manuscript suitable for publication in *Geochronology*.

Best wishes,

Pieter Vermeesch