Author's response

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I have made all the changes promised in the response to the reviewers. In brief:

1. A synthetic Ar-Ar example has been added to illustrate the utility of model 3a and model 3b isochron regression (Figure 2).

2. I have added a feature to IsoplotR, which allows the horizontal axis of the inverse isochron to be labelled with units of time (Figure 2 and Section 10).

3. I have changed my mind and decided to follow Dr Davis' suggestion to change the title of the paper to "Errorchrons and anchored isochrons in IsoplotR".

4. I looked into Dr. Rudge's suggestion to provide an explicit gradient function to model 3b regression algorithm and came to realise that this would not fix the slow convergence rate. As explained in Appendix D, model 3a regression is fast because the fitted points ($\hat{x}_i$ in Equation D3) can be calculated in one step. This is not the case for model 3b regression. Even an efficient search algorithm for $\hat{x}_i$ would still be an order of magnitude slower than the model 3a solution.