

Responses to the editor's and reviewer's comments after the second review

We thank the reviewer for their assessment and especially the editor for their careful review of the manuscript. We proofread the manuscript and amended all issues identified by the editor. Below is our point-by-point response to the reviewer's and editor's comments.

Reviewer: I carefully checked the rebuttal provided by Adloff et al., GMD 2020 233). I think the authors have done a careful review of their manuscript, answering part of my questions, and adding more discussions in their revised version for the unsolved questions. I think it can be published as it is now.

Our response: We thank the reviewer for their second assessment and are pleased that our revisions met their expectations.

Editor: Code availability section:

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The DOIs provided to the code archive are only place holders and have to be replaced by the actual ones. Please notice that we prefer that authors to give the references to the code in form of a citations
- see <https://www.geoscientific-model-development.net/submission.html>
- "Prepare your Assets" - "Software and model code". References include more information than the bare DOIs and may thus be helpful in case the DOIs have errors. Reference to a code can be included as a BibTeX @Misc entry, if you use BibTeX. Zenodo allows you to generate such a reference (please start typing "Copernicus Publications", without the quotes, as the citation style into the citation style search field, currently in the right-hand column in the "Share/Cite as" box close to the bottom), then click on "BibTeX" in the "Export" box below and download the citation, where it is sufficient to replace the @Software type by @Misc - @Software is not yet supported by our bibstyle). This way, the citations of your code will be kept updated on the Zenodo page.

Our response: We obtained a DOI for our model version and added all experiment protocols to this new model release. We updated the code availability section accordingly

Editor: Throughout: "n yrs" should read "nn yr" (units never take a plural 's') or write out "years".

Our response: We replaced 'yrs' with 'yr' as suggested.

Editor: Throughout: "von Strandmann" should read "Pogge from Strandmann" (the family name is "Pogge von Strandmann" - one of your co-authors ...)

Our response: We went through all citations and corrected author names.

Editor: p. 2, l. 20: "having become" or "becoming" instead of "have becoming"

Our response: We corrected the grammar as suggested

Editor: p. 2, l. 21: "under under" should read "under"

Our response: We removed the superfluous 'under'

Editor: p. 3, l. 10: "3 - 4" should read "three to four" (write out numerals lower than 10)

Our response: We spelled out single digits as suggested.

Editor: p. 3., l. 22: "Hodell et al. (1989) estimate" (not "estimates")

Our response: We corrected this error accordingly.

Editor: p. 3., l. 26: Strange sentence construction ("although" does not make sense here).

Our response: We removed the word 'although' and changed the sentence structure to make more sense.

Editor: p. 5, l. 10: "although" does not make sense here either (this means "obwohl" in German). Perhaps simply split the sentence here, or replace by "and" or "and accordingly"

Our response: We removed the 'although' and split the sentence into two.

Editor: p. 6, ll. 26/267: "Hathorne and James (2006)" should read "(Hathorne and James, 2006)"

Our response: We added the missing brackets.

Editor: p. 10, ll. 301/31: why not "in ^7Li " instead of "in isotopically heavy Li" ?

Our response: We replaced 'isotopically heavy Li' with ' ^7Li ' as suggested.

Editor: p. 12, l. 4: "as well a" should read "as well as a"

Our response: We added the missing 'as'.

Editor: p. 21, l. 2: "too big" would better read "too large"

Our response: We replaced 'too big' with 'too large'.

Editor: p. 22, l. 21 "(see figures B6b)" should probably read "(see Fig. B6)" as there is no Fig. B6b - well there are two panels in Fig. B6, but they are not labelled.

Our response: We added labels to all subpanels.

Editor: p. 25, ll. 2/3: "with tuned and un-tuned marine Sr reservoir": missing article "with the tuned and the un-tuned ..." or use plural for "reservoir" or reformulate.

Our response: We reformulated the sentence with the plural for 'reservoir'.

Editor: p. 28, l. 15: "ceased" should read "ceases" - the rest of the sentence is in the present tense.

Our response: We corrected this mistake.

Editor: Table 5: References for NBS987 and L-SVEC ?

The reported $^{88}\text{Sr}/^{86}\text{Sr}$ is not the value certified for NBS987 which is 8.37861 +/- 0.00325 (see <https://www-s.nist.gov/srmors/certificates/987.pdf>, ref.: L. J. Moore, Murphy, T. J., Barnes, I. L., Paulsen, P. J. Absolute Isotopic Abundance Ratios and Atomic Weight of a Reference Sample of Strontium, Journal of Research of the National Bureau of Standards, 87(1):1-8, 1982, doi:10.6028/jres.087.001) The figure cited is, as far as I know, that of the Eimer and Amend standard (Nier, A.O. The Isotopic Constitution of Strontium, Barium, Bismuth, Thallium, and Mercury. Phys. Rev. 54(4):275-278, 1938, doi:10.1103/PhysRev.54.275). 8.375209 is the inverse of 0.1194, i.e., the $^{86}\text{Sr}/^{88}\text{Sr}$ ratio most often used to normalise $^{87}\text{Sr}/^{86}\text{Sr}$ ratios, and that 0.1194 is generally said to derive from Nier (1938). Perhaps unimportant, but nevertheless incorrect and thus confusing. Please check and correct.

Our response: Thank you for pointing out this wrong label. The $^{88}\text{Sr}/^{86}\text{Sr}$ standard in cGENIE is taken from Nier et al. 1938, however the user can change that value. We corrected the reference in the table and mention in the text that this number can be changed.

Editor: Figs. 1, 2, 7, B1:

please notice that we recommend not to use green and red/orange colours in parallel on a graph (see <https://www.geoscientific-model-development.net/submission.html> - "Figures & Tables", point 7)

Our response: We adjusted the colour palettes we used to avoid green and red curves in the same panel.

Editor: Bibliography:

It is sufficient to provide either URL or DOI, the more since both are often duplicates of each other. As URLs are at the discretion of the publisher and may thus change at any time, it is best to resort to DOIs.

Our response: We deleted URLs from the reference list.

Editor: p. 49, l. 20: "Earth and planetary science letters" should read "Earth and Planetary Science Letters"

Our response: We corrected the spelling mistake.

Editor: p. 50, ll. 5-6: The DOI for Broecker and Peng is bogus - please discard.

You may provide the following, currently valid, URL:

https://www.ldeo.columbia.edu/~broecker/Home_files/TracersInTheSea_searchable.pdf

Notice, however, the volatility of URLs ...

Our response: We removed the DOI and added the suggested URL instead.

Editor: p. 51, l. 12: "von Strandmann, P. A. P." should read "Pogge von Strandmann, P. A."

Our response: We corrected the name.

Editor: p. 51, ll.15-16: "Reviews in mineralogy and geochemistry" should read "Reviews in Mineralogy and Geochemistry"

Our response: We corrected this spelling mistake.

Editor: p. 51, l. 18: "Geochimica et cosmochimica acta" should read "Geochimica et Cosmochimica Acta"

Our response: We corrected this spelling mistake.

Editor: p. 52, l. 28: in Gehler et al.: "CO2" should have the '2' in index position.

Our response: We corrected this spelling mistake.

Editor: p. 52, l. 35: "my" does not make sense as 'm' would mean 'milli' - use either "My" (best) or "MY"

Our response: We corrected this spelling mistake.

Editor: p. 52, l. 36: "American journal of Science" should read "American Journal of Science"

Our response: We corrected this spelling mistake.

Editor: p. 53, l. 6: "von Strandmann, P. A. P." should read "Pogge von Strandmann, P. A."

Our response: We corrected the name

Editor: p. 54, l. 32: idem

Our response: We corrected the name

Editor: p. 55, l. 3: the '7' of $\delta^7\text{Li}$ should be in exponent position

Our response: We put the '7' in the exponent

Editor: p. 55, l. 29: full list of authors required.

Our response: We completed the author list.

Editor: p. 57, l. 12: "von Strandmann, P. A. P." should read "Pogge von Strandmann, P. A."

Our response: We corrected the name.

Editor: p. 58, l. 10: idem

Our response: We corrected the name.

Editor: p. 60, l. 17: "Geochimica et cosmochimica acta" should read "Geochimica et Cosmochimica Acta"

Our response: We corrected this spelling mistake.

Editor: p. 60, ll. 26-27: reference Talley (2002) is incomplete (this is in the Encyclopedia of Global Environmental Change, Volume 1, The Earth System: Physical and Chemical Dimensions of Global Environmental Change) which has editors, a publisher etc. ... please complete.

Our response: We completed the reference.

Editor: p. 61, l. 25: erroneous and incomplete reference ("von Strandmann" should read "Pogge von Strandmann"; only initials for the names ...) please correct and complete

Our response: We corrected the reference.