

Second review of the manuscript submitted by A. Lamothe et al. to GChron.

The revised manuscript is significantly improved compared to the submitted version. Most of the suggestions have been implemented, and for a small number of suggestions regarding minor modifications, the authors provided arguments for keeping the original wording.

The manuscript is suitable for publication after addressing the minor issues listed below.

The authors could one more time check the text in the response letter, listed under 'revision' and the text in the revised manuscript (with track changes), because sometimes they do not correspond and the revised manuscript doesn't contain the changes listed in the letter. For example, the text in the response letter on the first page starting with "After removing the ..." contains sentences in bold that are not in the manuscript.

In general, the addition of a separate subsection of the background flux contributes to the clarification of the different enhancement factors.

The use of the terms: background, baseline, reference, are all these the same?

For example, the sentence on line 320:

"Depending on the chosen **baseline**, the flux enhancement factors during specific events are as follows: for the 190 ka BP event (IBE), the ^{10}Be flux is 1.59 or 2.08 times the **background**; for the 205–215 ka BP event (PFE), the increase is 1.24 or 1.62 on **average**; and for the 240 ka BP event (ME), the peak flux reaches 1.25 or 1.63 times the **reference value**."

What does it mean: 'baseline', 'times the background', 'on average' and 'times the reference value'? Are the reported factors for PFE an average over the period, and the peak flux is 1.25 is reported for ME? These enhancement factors should have the same meaning and always be expressed with respect to the two backgrounds listed before in the text. Thus, is the following simplified sentence correct: "Depending on the chosen baseline, the flux enhancement factors during specific events are as follows: 1.59 or 2.08 for the 190 ka BP event (IBE); 1.24 or 1.62 for the 205–215 ka BP event (PFE); and 1.25 or 1.63 for the 240 ka BP event (ME)."

The number of the identified ^{10}Be minima has been changed from 52 to 40, but 52 is still listed in the abstract and the conclusion sections.

Including Table S1 that lists studies reporting the geomagnetic excursions in the Supplementary material is much appreciated.

The response letter lists two revisions of the caption of Figure 1 (slightly different, on page 2 and 17). The one in the revised manuscript contains the ME excursion, but ME is not reported in Table S1.

The good overall agreement with the model of Lanci et al., 2008 is difficult to judge, as it is not shown. In that case, better to remove this part of the sentence.

If the ratio is unitless, then does $at\ at^{-1}$ cancel out and it is not written, or it is written anyway?

Line 252, reference to Fig 5 was replaced to Fig 1, but the sentence doesn't refer to Fig 1. Please remove.

Eq 1, as written, is not expressed in (%), right? Because the accumulation units cancels out and the factor is 0.2 (from the 20% uncertainty, as explained)

Fig 2 in the response letter is updated, but not in the manuscript.

Typo on line 327: macima => maxima

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