

Comments to the editor:

Dear Dr. Sandells,

Many thanks for this update and the positive outcome of our revisions. We are happy to address the mentioned corrections below.

Thanks again for a smooth and fair review process, we appreciate it.

With best wishes,

Nico

Line 156, 157. Change $R > 1$ to $R_{GB} > 1$, similarly for $R < 1$

Both cases changed to R_{GB} (l. 156 +157).

Line 211-222. Join into one paragraph. 'From now on, we will always refer to a grain boundary thickness of 300 μm ' - please repeat justification here e.g. 'for consistency with Eichler et al., (2017)'

The addressed lines are now one single paragraph (l. 211-223). The sentence was changed to "From now on, we will always refer to a grain boundary thickness of 300 μm for consistency with Eichler et al. (2017)." (l. 219-220).

Line 237. State null hypothesis (which I think is that impurities are no more likely to be found in the vicinity of the boundary). Line 238 is ambiguous and seems to ignore the case where $R_{GB} < 1$ and $p < 0.05$ (at 514.44 m depth).

We state the null hypothesis as follows: " A_{GB} and I_{GB} were used to perform null hypothesis significance testing for ten samples with an alpha of 0.05 as the cutoff for significance. The null hypothesis states that micro-inclusions are preferentially located in the vicinity of grain boundaries compared to the grain interior. If the p-value is smaller than 0.05, we reject this null hypothesis." (l. 238-240).

We now specifically mention the case at 514 m of depth: "A small p-value often correlates with a high R_{GB} (except at 514.44 m) while a high p-value usually correlates with a low R_{GB} ." (l. 243-244).

Figure 7 caption. 'less inclusions' -> 'fewer inclusions' (sorry I did not catch this before)

Changed to "fewer inclusions" in Figure 7 caption.

Section 4.2.2. Refer to 'number of inclusions' or 'proportion of inclusions' rather than 'amount' and in that case the text should probably read the 'majority are' rather than 'majority is'.

We changed "amount of inclusions" to "number of inclusions" and "majority is" to "majority are" throughout the text.

Line 317. 'chosen grain boundary' -> 'chosen grain boundary'

Changed to "grain boundary" (l. 316).

Line 372, 377: 'pining' -> 'pinning'

Changed to "pinning" (l. 373+ 376).