

***Interactive comment on* “The use of ASH-15 flowstone as a matrix-matched reference material for laser-ablation U-Pb geochronology of calcite” by Perach Nuriel et al.**

Fernando Corfu (Referee)

fernando.corfu@geo.uio.no

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The paper reports the results of a calibration of carbonate to be used as reference material. Measurements were done with various ICP instruments and operators, and by two ID-TIMS laboratories. The data are good and important, considering the type of material and the very young age of the samples, and considering the purpose of the study. I find the fundamental elements of the paper to be correct. At the same time, some of the terms used and descriptions of the material and sample targets are confusing and I recommend that the authors consider using better terms and correct some of the confusing parts. There is a terms' growth bands' which I first assumed to mean

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growth zones (line in an onion) only to find out that it designated zones perpendicular to growth zones. Then there are two transects for ICP spot analyses, the two being perpendicular to each other. Even enlarging Fig. 2 I can only see a row of spots, so I cannot really understand where the layer-parallel transect would be. Eventually after reading to the end one gets the idea, but it would simplify matters if the text and figures would not create confusion in the first place. I have made some suggestions and comments in the text. The data are reported in sheets of an excel file, which is fine. The ID-TIMS data are given in great detail, and have good footnotes explaining the nature of all the entries. By contrast the ICP tables have essentially no explanations. They seem to be working table just thrown in without bothering to format them properly, explaining what the data mean and how/where they were treated and produced. I suppose this is all evident for the authors. The readers do not count? Please make sure the tables are well prepared and informative.

14-8-2020 F. Corfu

Please also note the supplement to this comment:

<https://gchron.copernicus.org/preprints/gchron-2020-22/gchron-2020-22-RC1-supplement.pdf>

Interactive comment on Geochronology Discuss., <https://doi.org/10.5194/gchron-2020-22>, 2020.

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