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.

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We greatly appreciate the reviewer's comments and good suggestions that helped to improve this contribution. Please see our specific answers to each comment.

Comment: There is a terms' growth bands' which I first assumed to mean 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.

Answer: We agree and will correct this confusing terms to 'spots array targeting growth zone' and 'perpendicular to growth zone'. We will also improve Figure 2 with close-up image of the two transects.

Comment: I have made some suggestions and comments in the text.

Answer: all suggestions will be corrected in the revised paper, many thanks for thorough reading.

Comment: 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.

Answer: Currently all the information is available in the methodology section; however, we agree that some footnotes should be included in the Excel tables and we will make sure to include them in the revised manuscript.