Dear Troy
you paper is now acceptable for publication in GEOCHRONOLOGY.
However, I have a few requests for technical improvements. Particularly some of the figures are quite poor and could be improved.
Would it be better to use U(superscript)4+ rather than U(IV) , the latter is used to describe coordination of U not charge.
l 292: this sentence is a bit strange. It is fine for a proposal but not a paper.

I deleted this sentence.

Fig 1
why are some terms written with capital first letter (e.g. Rhombs) and other with lower case (e.g. botryoids)?

I changed all to have a capital first letter.

Fig 5 scale invisible

Scale added.

Fig 6: yellow nearly invisible, chose a prettier color, tick marks are small

Changed yellow to green. Made the ticket marks cross the axis so they would be more visible.

Fig 7 scale invisible

Changed the color of the scale bar and words to white. Added the scale to the other images so that it is easily found.

fig 8 abbreviation for second is s not sec in science is U6 the same as U(VI) and you actually mean U(superscript)6+?

Changed.

Fig 9: out of focus?

I replaced this with a photo of the slab that doesn't show the outside of the slab.

Fig 10, very fuzzy, text is almost impossible to read, can you supply a high-res image?

I really want to include this legacy data from the NSLS (never published and really quite a nice dataset) but I am not able to re-process the data- the software needs rates and pixel sizes and I do not have those details. I have cleaned up the text. This figure can be dropped if this isn't good enough.

Fig 13 same issues as Fig 8

Changed.

Fig 14, no scale and fuzzy

Added scale and sharpened slab image.

Fig 15. not acceptable, too fuzzy, text impossible to read, no scale

I changed the color scale to spectrum and instead of exporting the overview, I took the individual maps and changed the fonts to be readable. I left out the Mg and Sr and Mg/Ca, Sr/Ca since the main point is the U/Pb and this allowed me to make those maps larger. I also changed this to be element ppm rather than having the mass number after the element name.

Fig 16: totally fuzzy text

I redid the figures and got rid of the second isochron and probability plot. I made the text larger and tried to scale the maps so that the textures were emphasized. I think this version nicely shows that the criteria I selected for the defined the pooled pixels takes data primarily from the sparry calcite layers. I plotted the tails as different colors but they are not included in the age calculation.

Fig 20: Isotopes are written superscript (Nr)Element, 143Nd not Nd143. They are just pronounced Nd143. Do you show the concentrations of the isotopes here or the element. I think the latter in which case the number needs to be removed. You can mention in the analytical section which isotopes were measured, but here the element abundance would be the preferred value, not the isotope abundance.

True, I was just taking the maps straight from Iolite which is a python code that doesn't allow the numbers to come first (I also corrected this in fig. 16) . I also realized that I do not need to export all of these maps. Some show nothing and others are redundant. I have tightened this up and pasted correct labels on the maps that remain.

Fig 21: isotopes are superscripts, fuzzy images

I changed this to make the text more readable. I got rid of maps that didn't show much, I added a scale bar, and I change the palette to spectrum instead of ion so that the colors are cool-warm (low-high).

Fig 22 same issues as Fig 9, Figure caption missing

I fixed these issues.