Authors' response to referee comments by Holger Stünitz (Referee #2)

Dear Editor,

Please find below the response on behalf of all authors to the comments posted by Holger Stünitz (Referee #2) on our manuscript "Epidote dissolution—precipitation during viscous granular flow: a micro-chemical and isotope study" (MS id: egusphere-2022-311).

To make the response easier to read and to assess, we have posted our own comments next to/below each comment in the PDF review file posted by the Referee.

We thank Holger Stünitz for his constructive feedback, and hope that you will find this response and the revised manuscript satisfactory.

Yours sincerely,

Veronica Peverelli, on behalf of all authors



EGUsphere, referee comment RC2 https://doi.org/10.5194/egusphere-2022-311-RC2, 2022 © Author(s) 2022. This work is distributed under the Creative Commons Attribution 4.0 License.



#### Comment on egusphere-2022-311

Holger Stunitz (Referee)

Referee comment on "Epidote dissolution–precipitation during viscous granular flow: a micro-chemical and isotope study" by Veronica Peverelli et al., EGUsphere, https://doi.org/10.5194/egusphere-2022-311-RC2, 2022

Comments on the manuscript: «Epidote dissolution–precipitation during viscous granular flow: a micro-chemical and isotope study» by Peverelli et al.

The manuscript describes observations and geochemical data of a deformed vein in granitoid rocks. The data and observations are of good quality and are presented in a clear and concise way. The material is novel and original and of great importance for the inference of deformation processes in granitoids and other plagioclase-bearing rocks. I have not checked the geochemical details and isotopic parts, as these are not my field of expertise. However, the arguments presented make a lot of sense to me. From my point of view, the manuscript should be published after minor revisions. Some points in detail are listed below, some points are only suggestions:

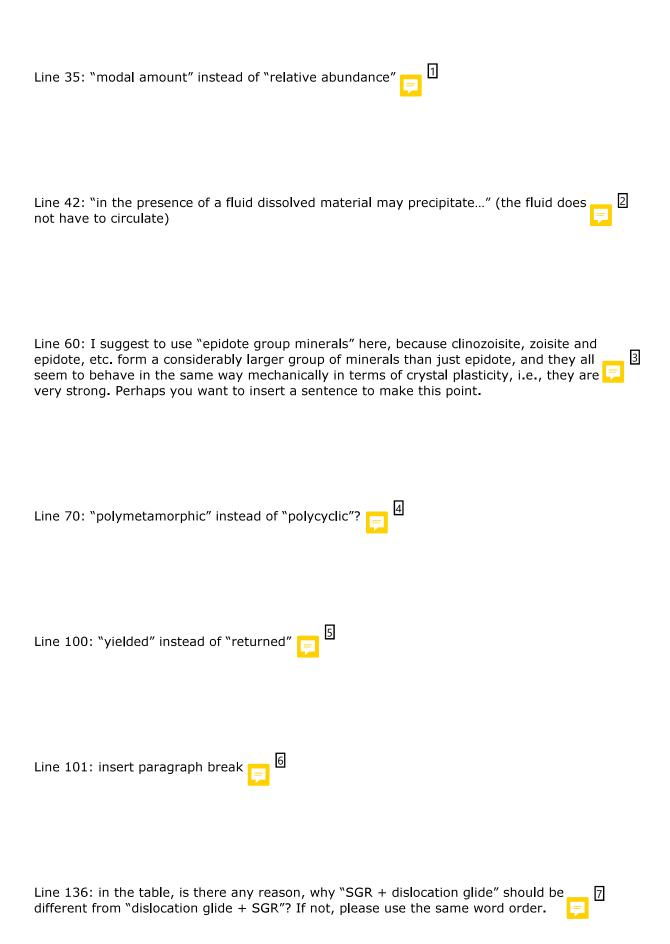
Line 17: "Recrystallization" instead of "This"  $\boxed{1}$ 

Line 20: «ones» instead of «one»

Line 34: "... and strain rates" (not only temperature). "Interpretations" instead of interpretation".

# Summary of Comments on egusphere-2022-311-RC2\_VP.pdf

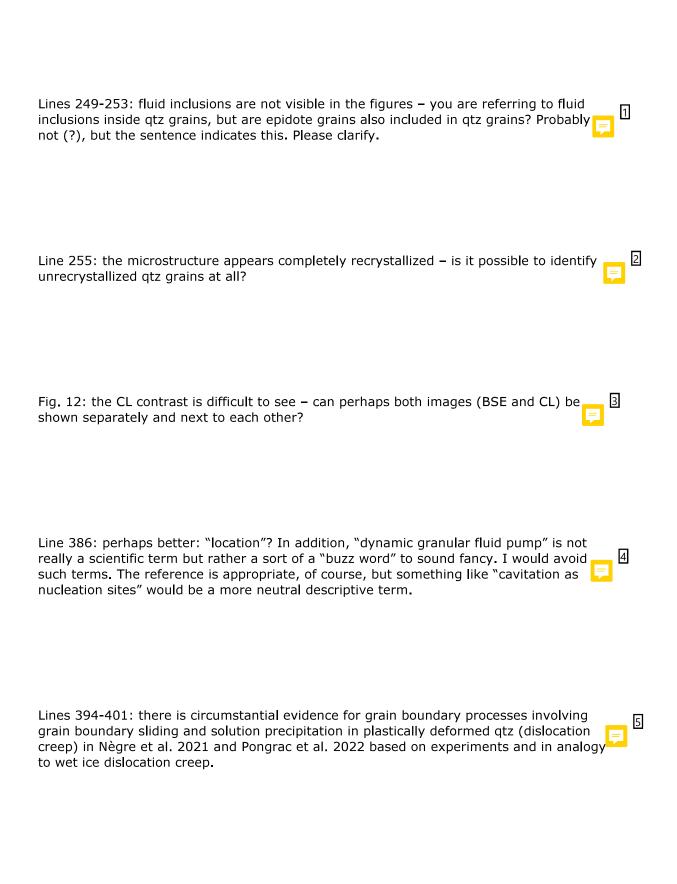
Page: 1				
Number: 1 Done	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:48:10 PM	
Number: 2 Done	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:48:16 PM	
Number: 3	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:49:17 PM	



# Page: 2

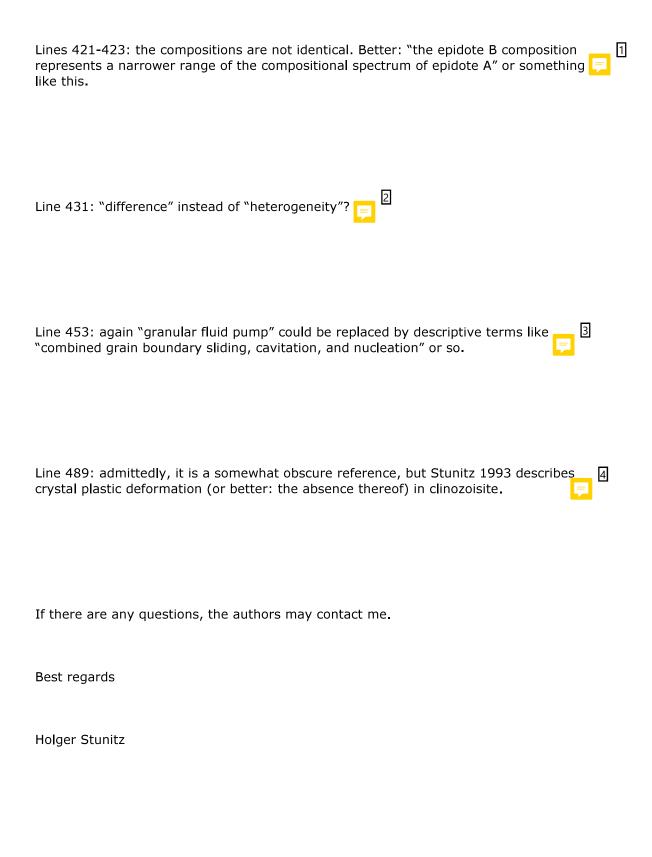
Number: 1	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:50:03 PM
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Number: 2	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:51:24 PM
Done			
Number: 3	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:54:38 PM
Agreed: rephrase	ed and the divided sentence	to make the point	
Number: 4	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:55:16 PM
Indeed. Done			
Number: 5	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:55:56 PM
Sentence remov	ed following comments of R1	and MKS	
Number: 6	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:57:57 PM
Done			
■ Number: 7	Author: Veronica Peverelli	Subject: Sticky Note	Date: 8/5/2022 7:46:33 AM
It was meant to	indicate which is dominant ar	nd which is minor, but I s	hould have specified it in the caption. This column has been

It was meant to indicate which is dominant and which is minor, but I should have specified it in the caption. This column has been removed following R1's comments, and the recrystallization mechanisms are described directly in the text



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Number: 1	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 5:59:57 PM			
Added panels to Fig. 6 showing epidote and fluid inclusions in quartz grains						
Number: 2	Author: Veronica Peverelli	Subject: Sticky Note	Date: 8/5/2022 7:48:17 AM			
Unrecrystallized grains are minor; panels have been added to Fig. 5 showing relicts						
Number: 3	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:06:19 PM			
Done						
Number: 4	Author: Veronica Peverelli	Subject: Sticky Note	Date: 8/5/2022 7:49:07 AM			
Done and rephrased. The alternative phrase "dynamic granular fluid pump" is now in parentheses close to the reference to Fusseis et al. 2009						
Number: 5	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:14:46 PM			
Added reference	s					



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Number: 1	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:19:17 PM			
Rephrase following the suggestion						
Number: 2	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:20:07 PM			
Done						
Number: 3	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:21:11 PM			
Done						
Number: 4	Author: Veronica Peverelli	Subject: Sticky Note	Date: 7/22/2022 6:28:50 PM			
Rephrased to take this comment into account						