

Interactive comment on “Switching deformation mode and mechanisms during subduction of continental crust: a case study from Alpine Corsica” by Giancarlo Molli et al.

Anonymous Referee #2

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The submission by Molli et al. is a well-documented case of subduction-related deformation, specifically the sequence of microstructure development that is correlated with HP/LT conditions. The authors describe sequential deformation attributes at a subduction interface that persuasively argue for both brittle and viscous behaviour. The techniques and methodology applied are well established, and I could find no error in them.

My criticisms are minor. I would argue for caution in assigning all ductile localization to brittle precursors. Although this is an extremely common case, it only takes one counter example to disprove it. Also, the reliance on quartz microstructures as typically LT or HT warrants care; I have no general problem with the conclusions, but mineral

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response will be a combination of T, stress, imposed strain rate, etc.

Detailed comments are supplied on the appended MS. These are mainly of a "technical" or editorial nature, and are intended to aid the authors' in strengthening their presentation and arguments. To the best of my ability, I have attempted to maintain the voice and tenor of the paper. The authors' can take these comment under advisement as to how and if they can benefit an very interesting study.

Please also note the supplement to this comment:

<http://www.solid-earth-discuss.net/se-2017-11/se-2017-11-RC2-supplement.pdf>

Interactive comment on Solid Earth Discuss., doi:10.5194/se-2017-11, 2017.

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