Dear Editor,
Thank you for your kind words on the manuscript se-2020-30. We have tried to address all the issues raised by you in our replies below and have modified the manuscript accordingly.

Editor's comment: *"Thank you for the corrections and justifications made which improve the quality of the manuscript. I still have a significant issue with the value of tensile strength you propose. Tensile means negative by definition in the geological terminology (which is opposite to the mechanical convention). Then your value should be negative (e.g. -14 MPa for basalts in Schultz 1995, Rock Mechanics and Rock Engineering), since you consider the compressive stresses as positive. So why do you have a positive value for T (12 MPa)? Please, also consider that the compressive stress applied in BTS is necessarily positive since the tests are compressional (these are not extensional experiments), then check if the confusion comes from this. Otherwise you have to consider the value derived from the BTS to be negative in the geological convention and to integrate this negative value in your sigma 3 interpretation. Please provide clarifications, clear explanation for this and the relevant revisions in the manuscript."*

Authors' response: We are extremely thankful to you for pointing out this issue again. It helped us to think more deeply and revise the manuscript considerably. After reading your comments, we have decided to exclude the portion which deals with the determination of σ_3 from BTS values. However, we prefer to determine σ_3 using the empirical approach by McGarr (1980) and Mazzarini et al. (2019). It has been suggested that, at crustal depth < 7km, the differential stress ($\Delta\sigma$)= $2\tau_m$; where τ_m is the shear stress at depth z (in km): $\tau_m = 5.0 + 6.6z$. Therefore, at ~2.4 km depth the minimum compressive stress (σ_3) is found to be 21.82MPa. We think this approach is more logical to infer σ_3. Please see the relevant changes are made in line number **294-297** of the revised manuscript. Accordingly, figure 7, 8 and 11 are modified.
Since the tensile strength values are used to determine the mode of failure, we prefer to keep section 4.2 "Tensile strength determination" unchanged.
Please note that the relevant changes regarding the above issues are made in the manuscript in green color.

Editor's comment: *"A last minor point : I understand that the fractures you draw in the last figure are not wing cracks, thank you for the clarification. However the geometry you draw is very similar (systematic, not random) and then it will apper as counter intuitive with respect to the sense of slip for any structural geologists reading this figure. Then the geometry drawn is kind of clumsy and one can wonder if it really reflects field observations. Then my question is: do the field observations reveal this counter intuitive geometry or a more random one? If they are more random, I would recommend to be more respectful of this in the figure."*

Authors' response: Again, we would like to thank you for raising this issue. In accordance with your suggestion the figure 11 has been modified which increases its clarity.

With the above revisions, I hope that all the issues raised by you have been addressed.
Thanking you
Yours sincerely
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