Comments on the resubmitted manuscript

"Hybrid implicit–explicit XFEM simulation of injection-induced seismicity: resolving multi-scale rupture nucleation and dynamics"

The authors adressed most of my points, however, some important things are not yet fixed. I thus recommend a minor revision before publication. Please find my comments below, I am using the same numbering as in my first report and the original comments from my first report are printed in blue.

5. Equation (4): Please define $\boldsymbol{\sigma}$ and $\boldsymbol{t}$. Furthermore, it would generally improve the readibility if you could use different names for the test functions, somthing like $\boldsymbol{v}$ and q instead of $\delta\boldsymbol{u}$ and δp.

   The definitions of $\boldsymbol{\sigma}$ is still missing, and as it is now the names for the test functions are even more confusing for me, please either call them $\boldsymbol{v}$ and q or $\delta\boldsymbol{u}$ and δp.

8. Equation (5): Please define $\boldsymbol{q}$ and Γ_w and derive it in more detail.

   Eq. (5) was not derived in more detail, please explain how you get there from (2).

13. Line 119: Please change "cap omega to the prime" to a formula.

    The fix is fine in general but please remove the "discontinuous" since the domain itself is not discontinuous.

14. Equation (7): Please define $\langle\cdot\rangle$ and $[\cdot]$. Also, why is there a w^3 while in (6) there only was w^2?

    Can you give a reference for the appearance of w^2?

20. Equation (16): Please explain in more detail how to get from (15) to (16).

    Should there not be a term like $(n+1)\zeta^n - n\zeta^{n-1}$?

21. Equation (18): Give a reference or explanantion for this law and why you chose it.

    Please add some part of your answer from your response letter here.

22. Equation (19): This only holds if V is scalar, since you are considering 2-dimensional problems later it should also be correct for vector-valued V's.

    Please write explicitly that this formula only holds for a one-dimensional fault since in your work everything else looks as if it also holds in higher dimensions.

25. Line 188: Should be "where $\mathcal{N}$ denotes the number of all nodal points".

    It should be "denotes *the* number"

34. Equation (33): Please define $\mathbb{D}$.

    I did not understand your response here since in line 283 neither $\mathbb{C}$ or $\mathbb{D}$ are defined, furthermore $\mathbb{C}$ is also not defined before or after (34).

35. Line 249: Mathematically it's the Dirac delta distribution (not function) since it is not a function.

    The word order in the new part is not correct, it should be "where $\mathbf{m} = [110]^\top$ is the Voigt representation"

40. Equation (48): What happened with the sgn terms in (47)? Is K_T different from k_T? And please give a more detailed derivation of this equation, since it is not obvious to me how to derive it from (20) and (47).

    There are still K_T and k_T in (50) and (51).

47. Line 393: What is "the cubic law"?

    But the term in (63) is quadratic and not cubic, please fix or explain that.

48. Lines 416-417: Since you mention it here, it would also be nice to show 2d plots of your simulations later, not only evaluations at four points.

    Going through your appendices I realized that the figures there should be called B1, B2, ..., C1, C2, ... and not all starting with an A.