

Major points:

- 1) I would suggest moving the ETAS simulations part from the “Discussion” section to the earlier sections (maybe 3.2?) where you present the results. It looks strange to see additional modelling introduced and presented in a section where results should only be commented.
- 2) I find the idea of using the “simpleETAS” model appropriate. However I think you might not be doing it in the way the authors of the model suggest. Reading through Mancini & Marzocchi (2023, MM23), it appears that they impose a set of parameters fixed to specific values that you are not actually using (e.g., $p=1.5$ vs. your $p=1.06$, $c=0.005$ days vs. your $c=0.04$, $b=1$ vs. your $b=0.85$). Therefore, I believe you should estimate again the two free parameters while fixing the other six parameters from the MM23 table, then simulate again the simpleETAS catalogs. Alternatively, you should clarify that you are mimicking the simpleETAS approach, but with a different set of parameters (not desirable, though).
- 3) I am doubtful of how useful it is to plot all the 10k simulated catalogs in Figure 10, and what could be its take-home message? ETAS just does not divide earthquakes into ‘mainshocks’ and ‘aftershocks’, so maybe it is not surprising to see that the spatial distribution is different from Section 3.2? Also, assuming that the map in Figure 10 reflects the smaller square of Figure 9 (if I understand well), why is the imprint of the background seismicity PDF missing in Figure 10? In other words, I would expect background events to be primarily placed where the bg-probability is larger (e.g., at the bottom-left side of the illustrated region) and then aftershocks to cluster all around, instead of the mostly homogeneous (with a few exceptions) distribution of earthquakes that is reported here. The difference between the estimated background seismicity spatial PDF presented in Figure 9 and the calculation sites and the potential seismic sources in and around Xichang (Figure 3) make the ETAS and the Omi-R-J model implementations very difficult to compare, even just conceptually. To fix this you might comment on the issue more thoroughly or try and use the calculation sites of Figure 3 as your background PDF to feed the ETAS simulations.