

Reply to individual comments:

Figure 4: why are there error bars for only a subset of the points on each curve? If I understand correctly, rows a-c in figure 4 correspond to rows a-c in Figure A8, which has error bars for each time-since-burn-year point. Is this a figure plotting error with Figure 4, or is there a reason that some of these error bars are not shown in Figure 4 (and if so, why?).

Reply: As stated in the caption of Figure 4, the error bars represent the standard deviation across all fire scars within each time-since-burn year. Therefore, the error bars can only be calculated for time-since-burn years for which multiple fire scars per time-since-burn year are available. In addition, Figure A8 provides further InSAR-specific uncertainty indicators, as described in Section 4.5.

We added following to the caption of Figure 4 to make this clearer: ...” and are therefore shown only for time-since-burn years for which multiple fire scars are available.”

Figure 5: I wonder if it is possible to make this figure larger in the final version of the manuscript? There is a lot of information in each figure, and it can be quite difficult to visually resolve everything (particularly in panel c). Furthermore, there is a lot of unused ‘blank white space’ where the legend is; maybe this could be a vertical 3-panel figure that would accommodate larger subpanels of the important plots a-c?

Reply: We enlarged the figure so that it still fits on the page together with the caption and minimized the blank spaces by rearranging the elements.

-Line 509: “However, the residual standard error based uncertainty band suggests that some individual fire scars may nevertheless fall within the recovery time ranges reported by previous studies.” – Rather than focusing on the behavior of individual fire scars (which you’ve shown to exhibit considerable variability), the more important point here (I think) is that the recovery times reported in previous studies fall within the uncertainty bands of the recovery time ranges proposed in this study. The 15 ± 7 recovery time (Michaelides) and 27-36 year recovery time (Cao) both respectively fall within the recovery time uncertainty envelope presented in the current manuscript (Figure 5a).

Reply: We changed the sentence to: “However, the residual standard error based uncertainty band encompasses the recovery times reported by previous studies.”

-line 658: “our study incorporated a larger amount of fire scars and covered a longer temporal span of fire event years, which enabled a more comprehensive reconstruction of the system’s temporal evolution and may contribute to differences observed between the studies.” - It may be worth mentioning here that the present study covered more fires than the Michaelides et al. 2019 and Cao and Furuya 2025 studies for all investigated study regions (I believe); This could also contribute to the broad RSE uncertainty reported here, as it appears that the deviation of individual fire scars from the aggregate recovery curve is the primary driver of uncertainty for several of the investigated regions (see also comment above).

Reply: We added this information to an earlier section of the manuscript as part of the revisions made in line 509 in response to the previous comment: “The larger number of fire scars investigated in our study across all regions may also contribute to the broader uncertainty range observed here.”

We also added the following statement at the suggested line 658: “The larger number of investigated fire scars across most study regions compared to previous studies may also contribute to the broader RSE-based uncertainty envelope observed in our study.”