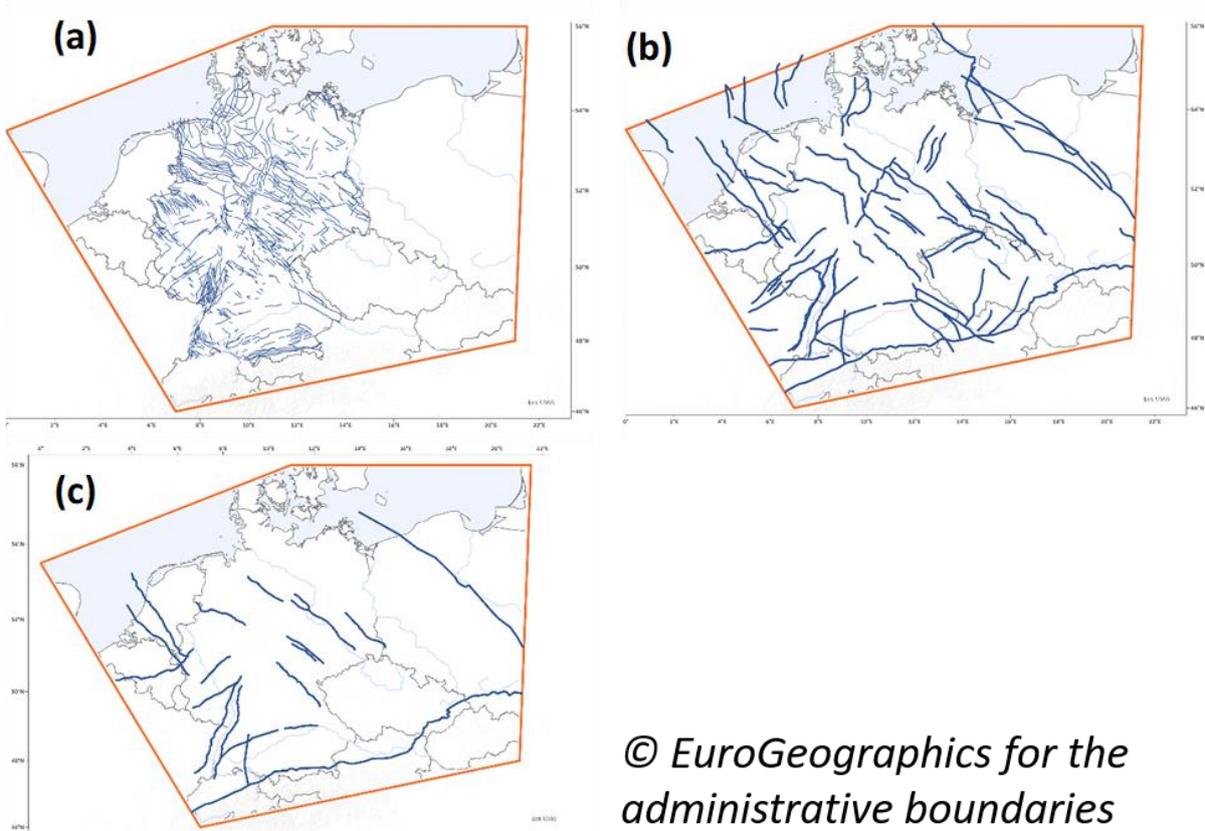
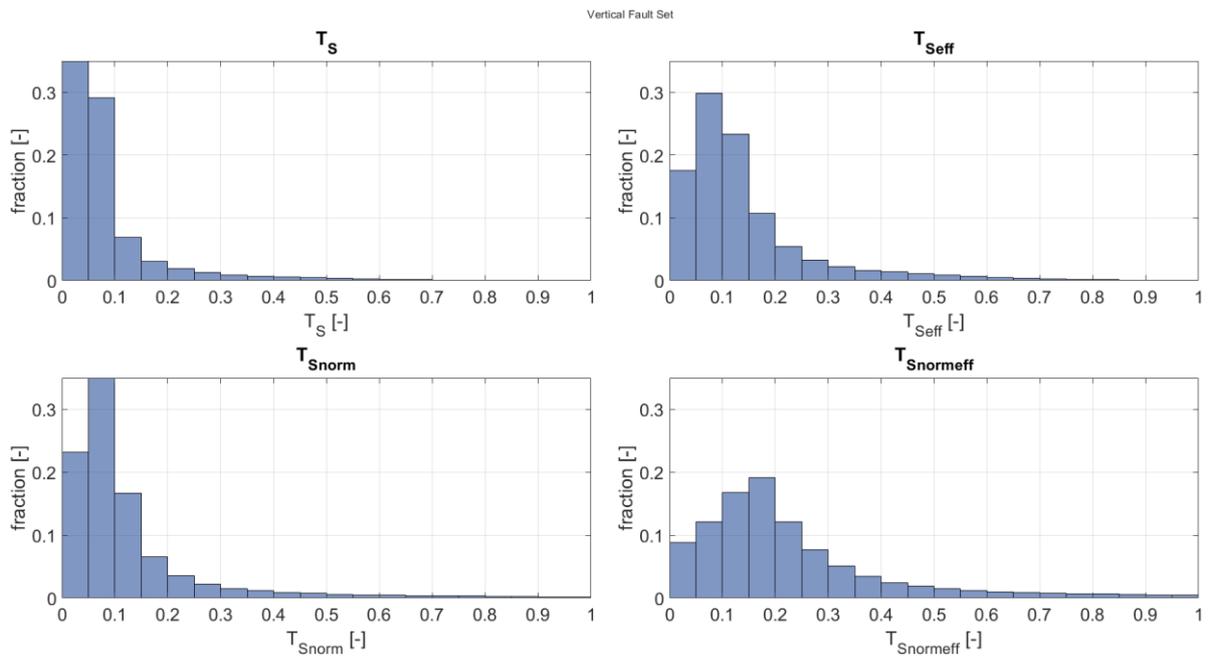


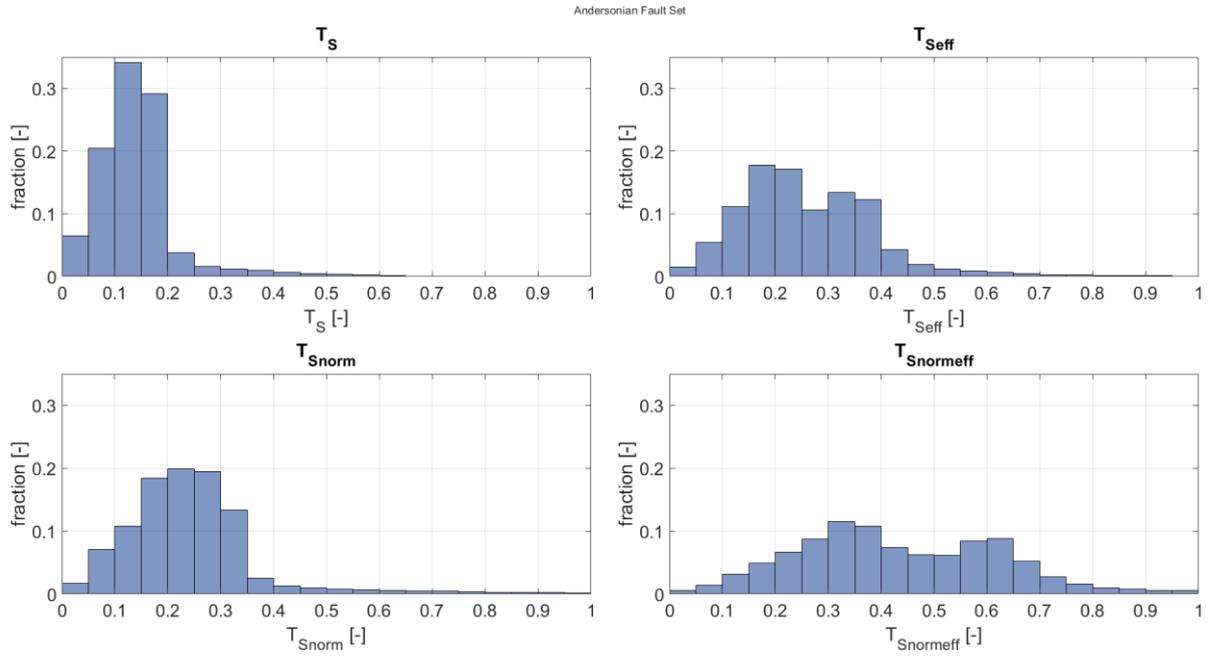
## Supplements



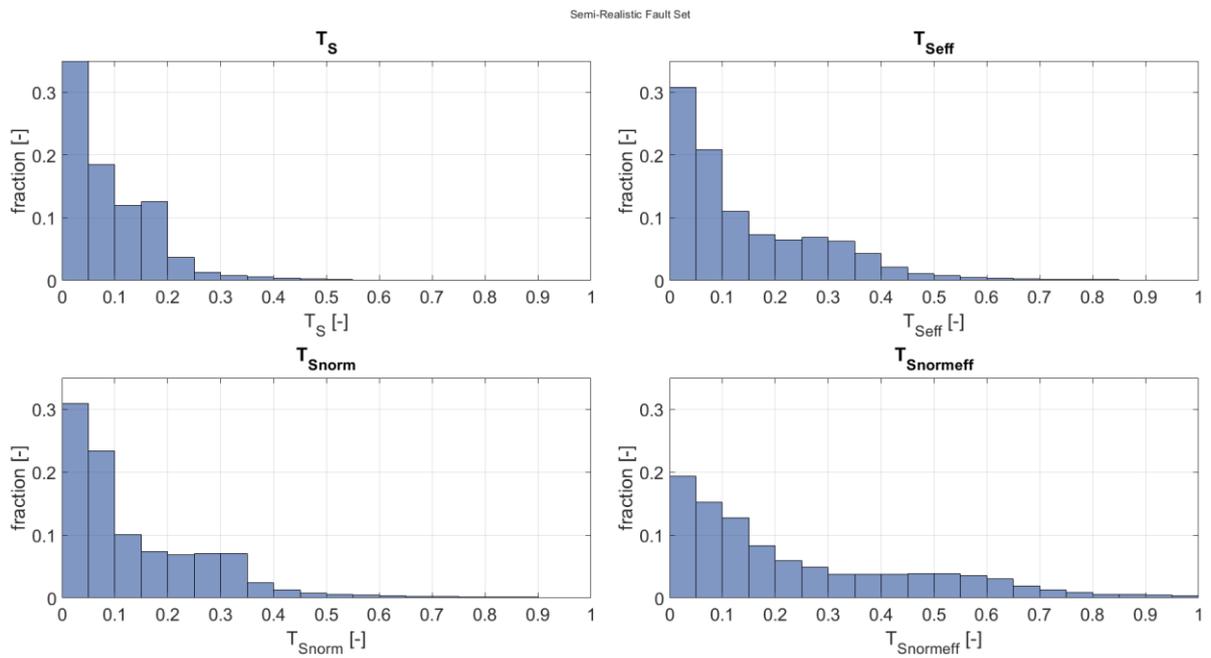
**Fig. S1:** Map view of the lineaments of the selected faults: (a) the Vertical fault set; (b) the Andersonian fault set; (c) the Semi-Realistic fault set. The contour of the Germany model (Ahlers et al. 2021a) is indicated by the orange frame.  
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**Fig. S2:** Histograms showing the frequency of the four slip tendency types as fractions of 1 for the Vertical fault set. Values greater than 1 are not shown. Bin size is 0.5.



**Fig. S3:** Histograms showing the frequency of the four slip tendency types as fractions of 1 for the Andersonian fault set. Values greater than 1 are not shown. Bin size is 0.5.



**Fig. S4:** Histograms showing the frequency of the four slip tendency types as fractions of 1 for the Semi-Realistic fault set. Values greater than 1 are not shown. Bin size is 0.5.

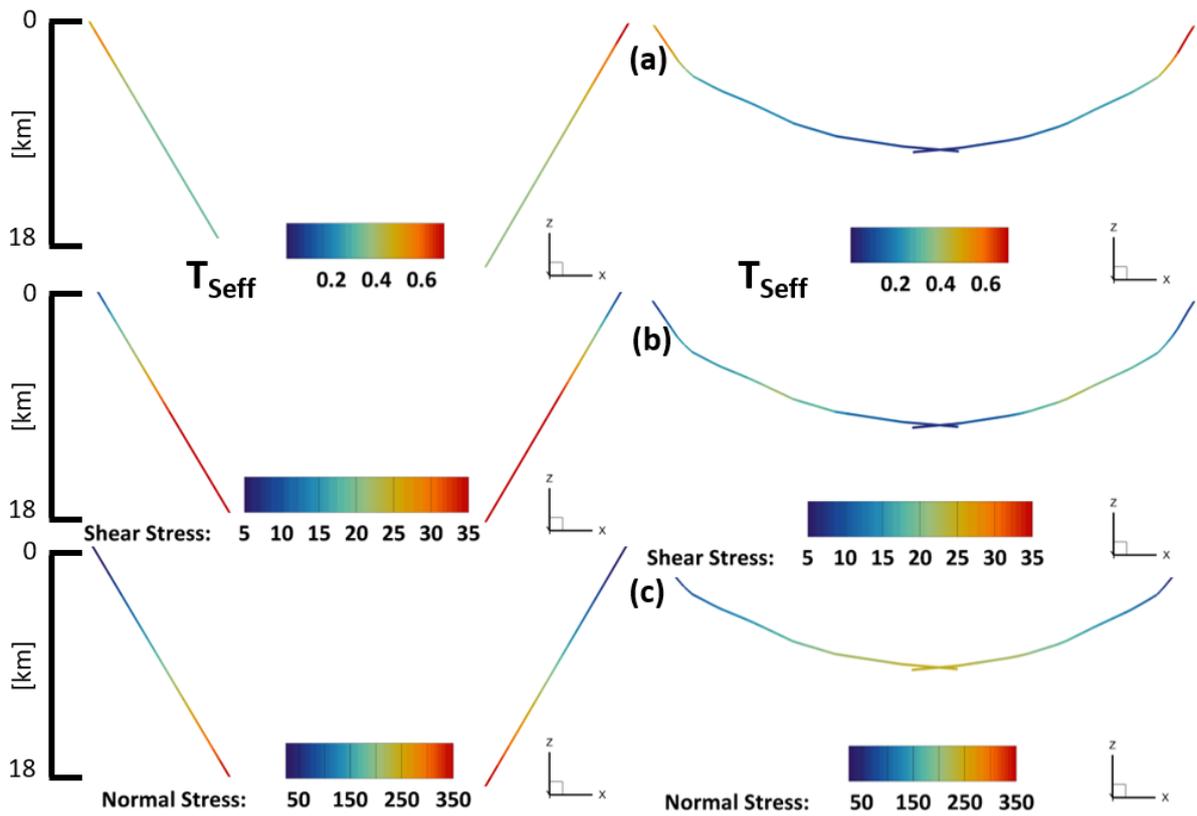


Fig. S5: E-W cross Section through the Upper Rhine Graben boundary faults from the Andersonian fault set (left) and the Semi-Realistic fault set (right). (a)  $T_{Seff}$  [-] of the boundary faults; (b) The shear stress  $\tau$  [MPa] derived from the Germany model. (c) The normal stress  $\sigma_n$  [MPa] on the faults. Note the different extends of the colors bars of (b) and (c).

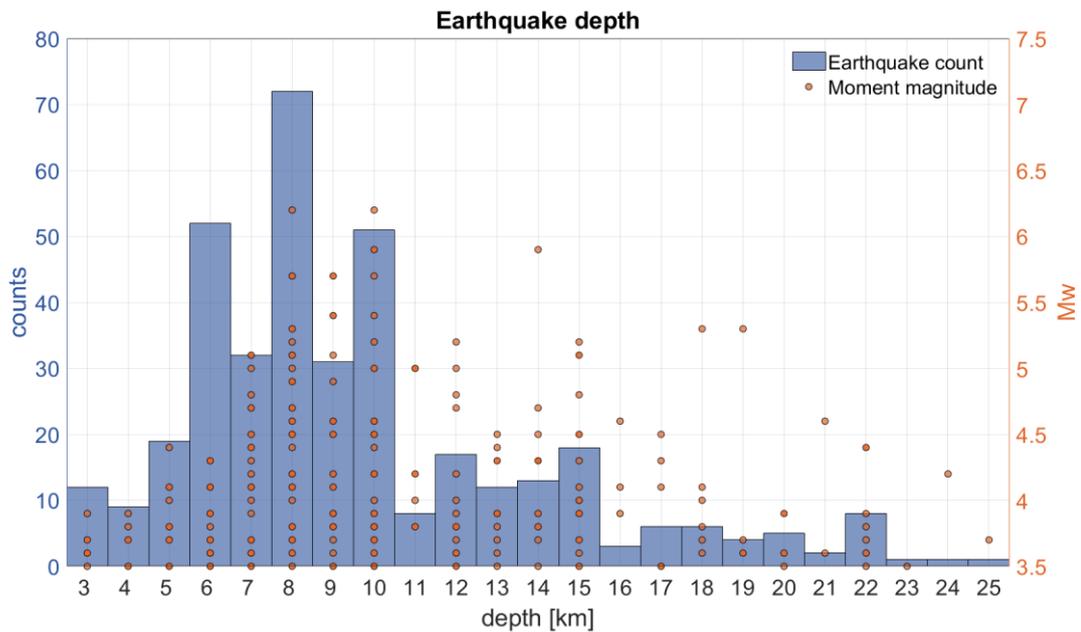


Fig. S6: Histogram for the depths of the seismic events selected from Grünthal and Wahlström (2012) shown as blue bars. Only events within the investigation area and with a moment magnitude of 3.5 and greater have been selected. Events without depth information are not shown. The magnitude of the events in the respective bin are shown as orange circles.