



Supplement of

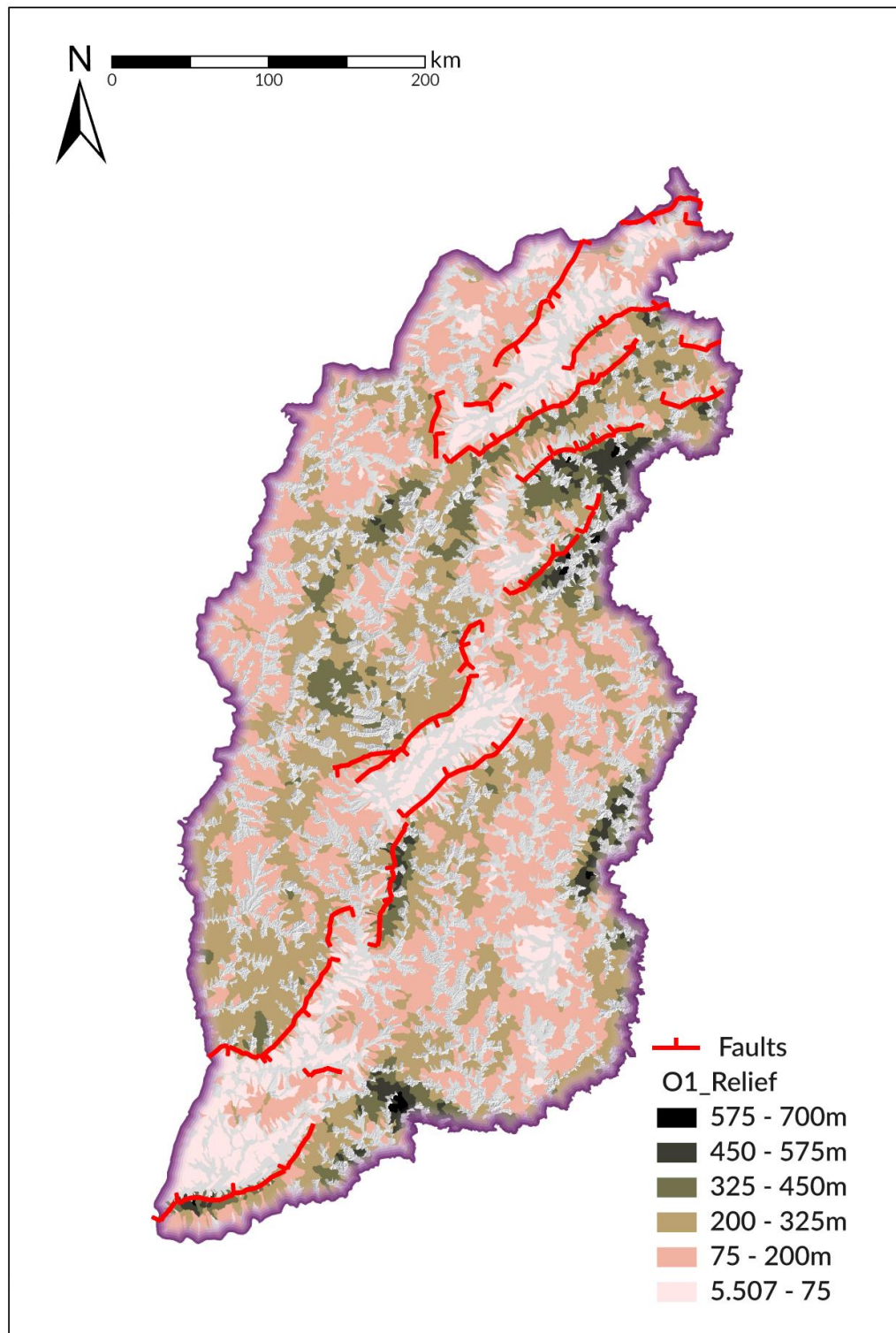
Geomorphic expressions of active rifting reflect the role of structural inheritance: a new model for the evolution of the Shanxi Rift, northern China

Malte Froemchen et al.

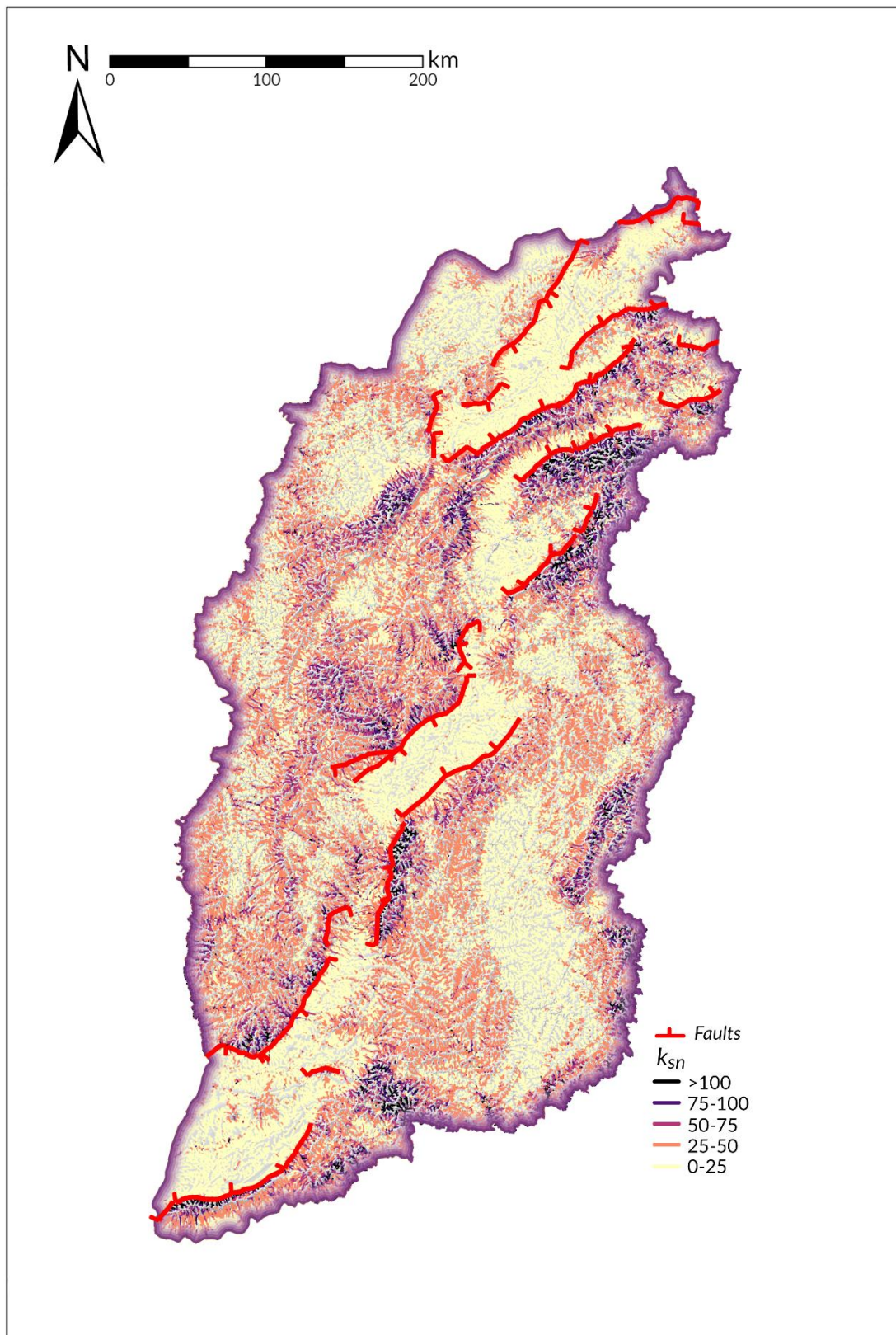
Correspondence to: Malte Froemchen (malte.froemchen@durham.ac.uk)

The copyright of individual parts of the supplement might differ from the article licence.

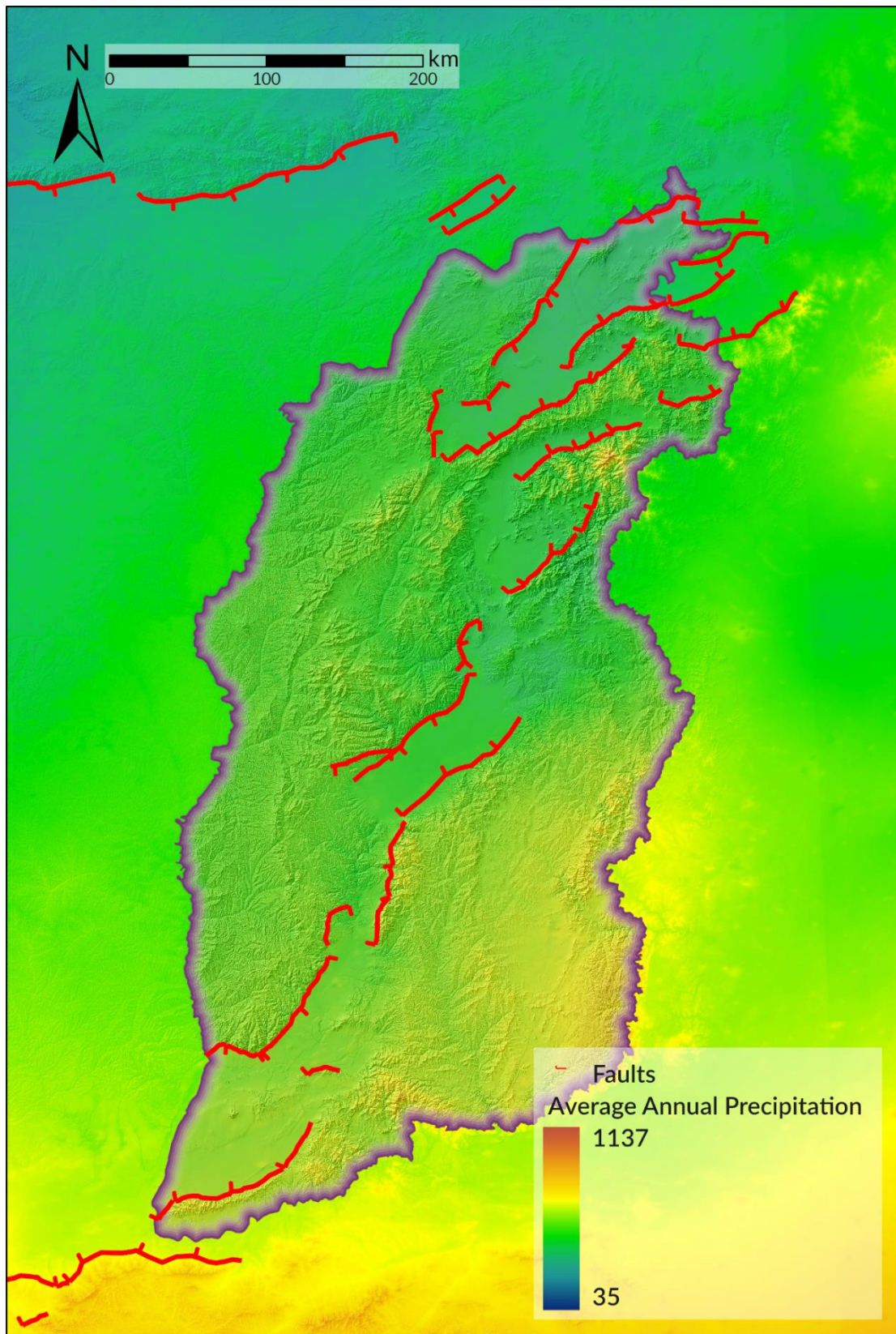
S1 – Map of the averaged local relief (R_l) per first order drainage basin (compare with Fig.6A which shows R_l for a moving window). These values were used to calculate the violin plots of Figure 7 and compare the values for R_l with the k_{sn} and HI values.



S2 – Stream network map of the normalised channel steepness of the Shanxi Rift calculated using Topotoolbox2 (Schwanghart and Scherler, 2014). See Fig. 6B of the main manuscript to compare with the basin averaged k_{sn} distribution.



S3– Average annual precipitation of the Shanxi Rift showing little variation in precipitation across the Shanxi Rift. Data from WoldClim2 (Fick and Hijmans, 2017)



References

- Di Giacomo, D., Engdahl, E. R., and Storchak, D. A.: The ISC-GEM Earthquake Catalogue (1904–2014): status after the Extension Project, *Earth Syst. Sci. Data*, 10, 1877–1899, <https://doi.org/10.5194/essd-10-1877-2018>, 2018.
- Fick, S. E. and Hijmans, R. J.: WorldClim 2: new 1-km spatial resolution climate surfaces for global land areas, *International Journal of Climatology*, 37, 4302–4315, <https://doi.org/10.1002/joc.5086>, 2017.
- Schwanghart, W. and Scherler, D.: Short Communication: TopoToolbox 2 – MATLAB-based software for topographic analysis and modeling in Earth surface sciences, *Earth Surface Dynamics*, 2, 1–7, <https://doi.org/10.5194/esurf-2-1-2014>, 2014.
- Storchak, D. A., Di Giacomo, D., Bondar, I., Engdahl, E. R., Harris, J., Lee, W. H. K., Villasenor, A., and Bormann, P.: Public Release of the ISC-GEM Global Instrumental Earthquake Catalogue (1900–2009), *Seismological Research Letters*, 84, 810–815, <https://doi.org/10.1785/0220130034>, 2013.
- Storchak, D. A., Di Giacomo, D., Engdahl, E. R., Harris, J., Bondár, I., Lee, W. H., Bormann, P., and Villaseñor, A.: The ISC-GEM global instrumental earthquake catalogue (1900–2009): introduction, *Physics of the Earth and Planetary Interiors*, 239, 48–63, 2015.