

A rare earthquake in the upper mantle of subcontinental lithospheric mantle of North America: Supplementary Information

Benedict Fitton  * ¹, **Timothy J. Craig**  ¹, **Sebastian Rost**  ²

¹COMET, School of Earth, Environment and Sustainability, University of Leeds, Leeds, LS2 9JT, UK., ²School of Earth, Environment and Sustainability, University of Leeds, Leeds, LS2 9JT, UK.

1

*Corresponding author: ed20bjcf@leeds.ac.uk

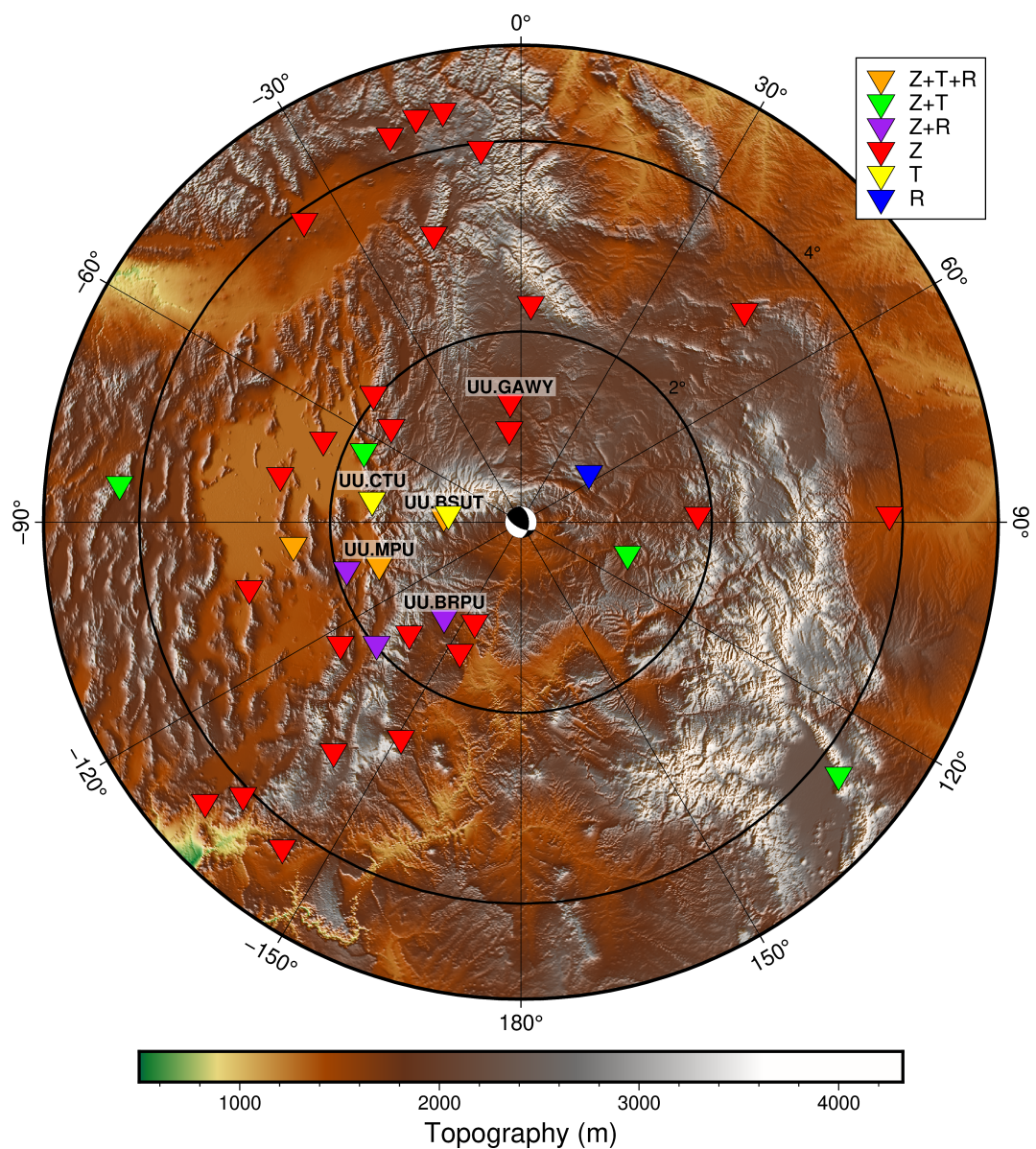


Figure 1 Map of the stations coloured by components used for the regional waveform inversion with the stations from which waveforms are taken for figure 2C labelled. The focal mechanism of the 10/09/2025 Utah earthquake plotted at the centre.

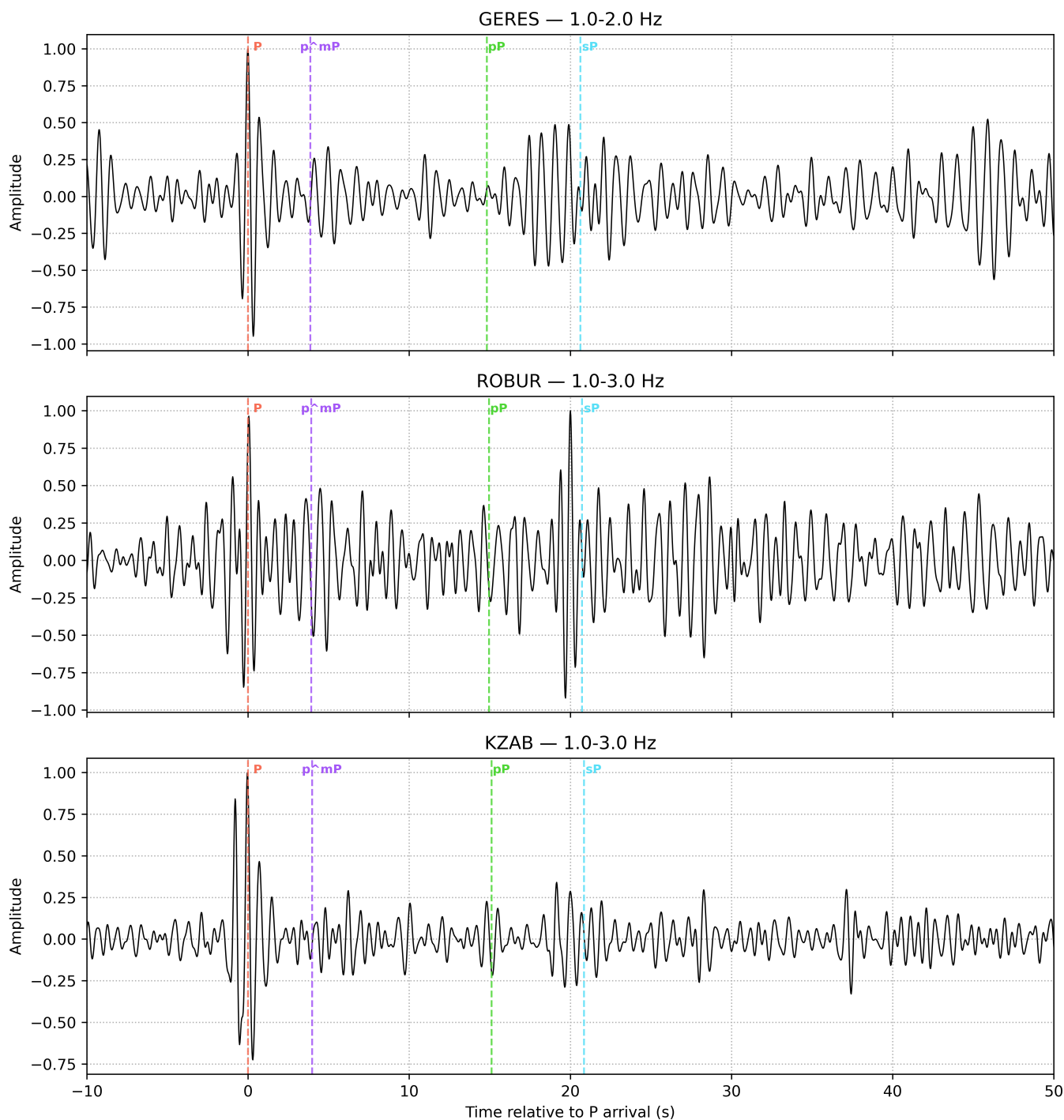


Figure 2 Beamformed traces, computed as described in section 2.2, showing potential *pmP* arrivals. Dashed lines show predicted arrival times using the AK135 1-D velocity model.

2 **Regional Waveform Inversion Fits**

3 For all regional waveform inversion waveform fits see Zenodo repository: [10.5281/zenodo.20341682](https://zenodo.org/record/20341682)