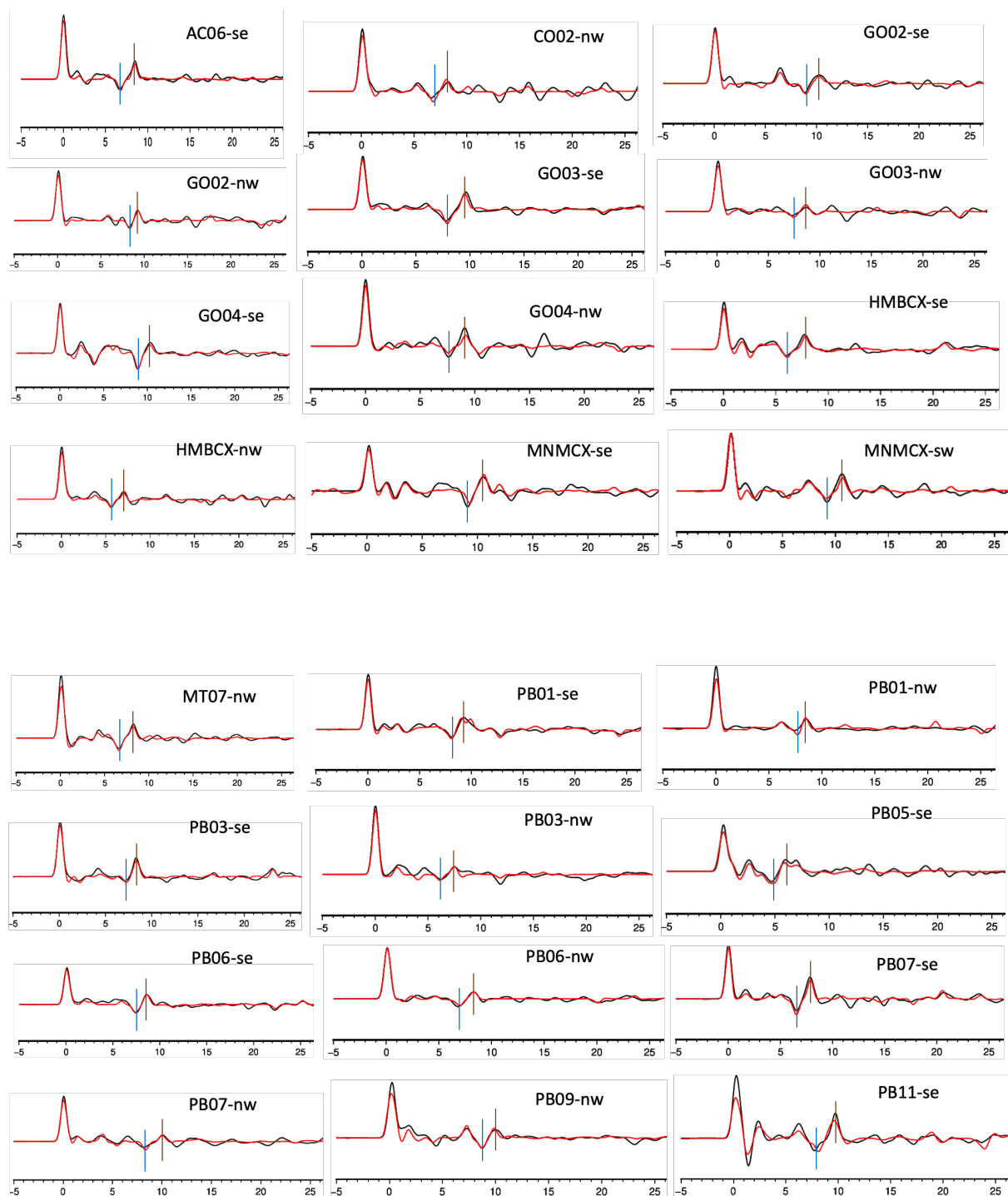
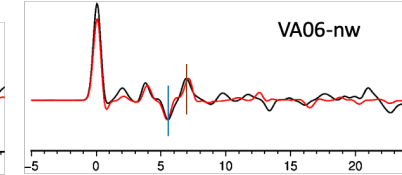
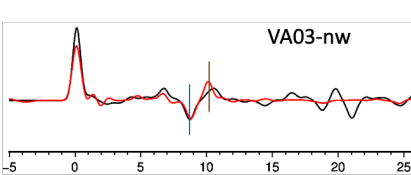
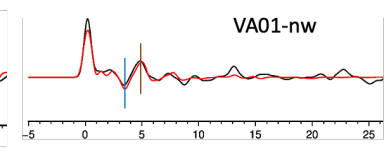
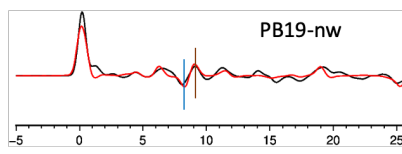
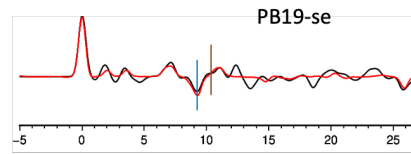
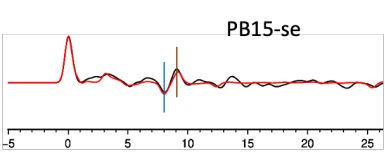
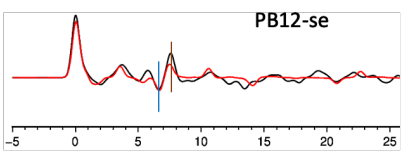


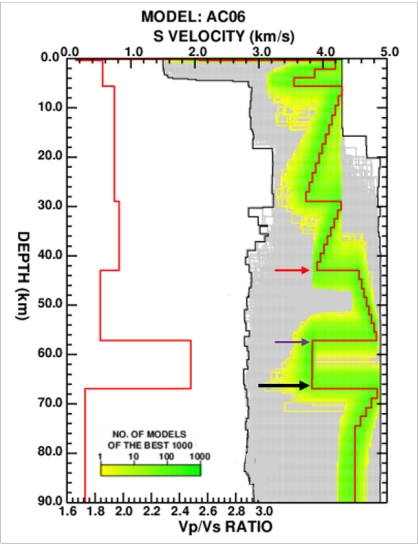
Supplementary 1: Observed (black) and synthetic (red) stacked receiver functions. The top of subducted oceanic crust (blue line) and oceanic Moho (brown line) are indicated; se= South East, nw= North West



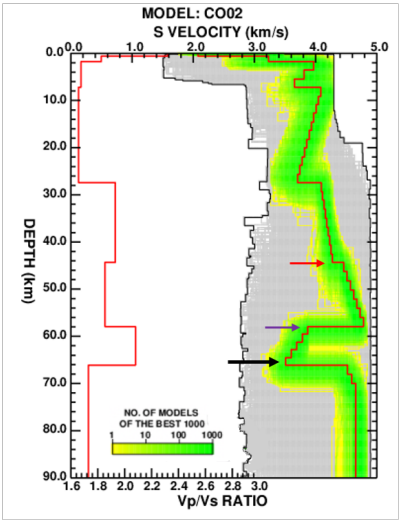


Supplementary 2: Velocity Inversion plots

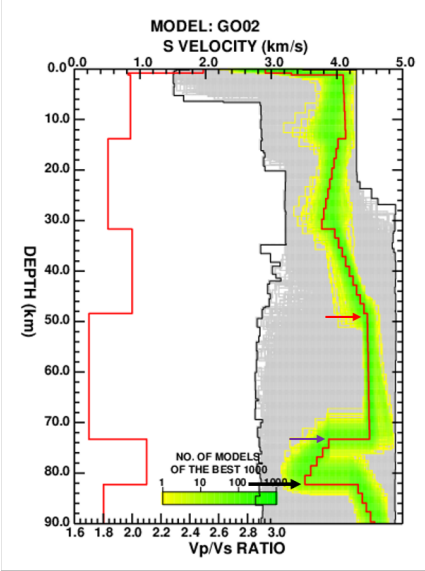
SouthEast



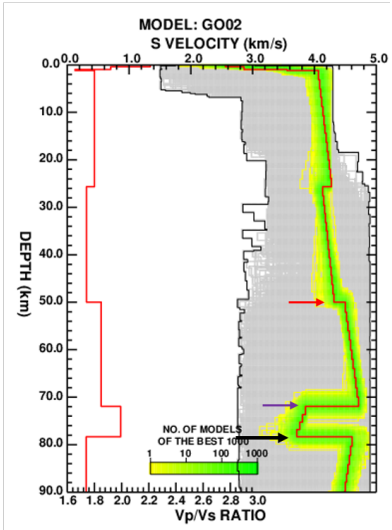
North West



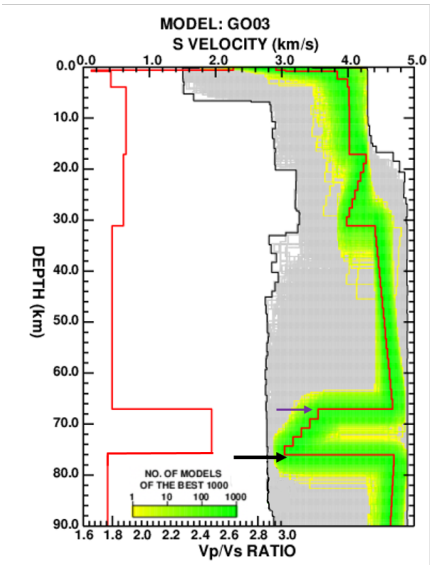
SouthEast



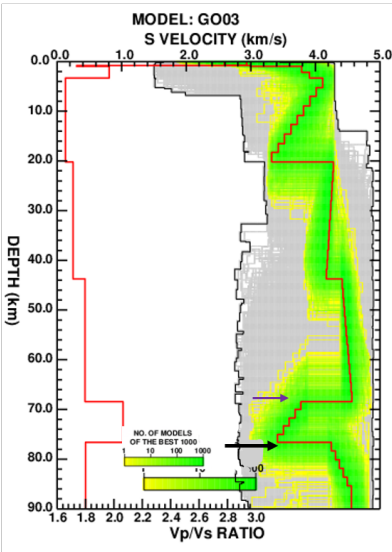
North-West



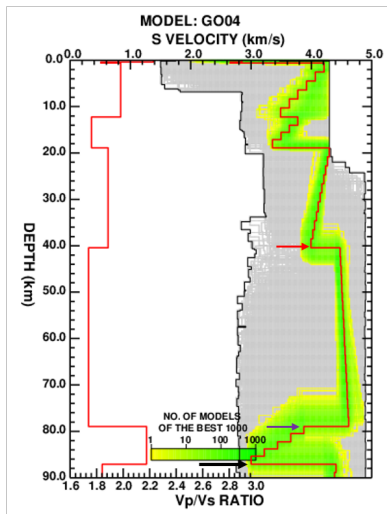
SouthEast



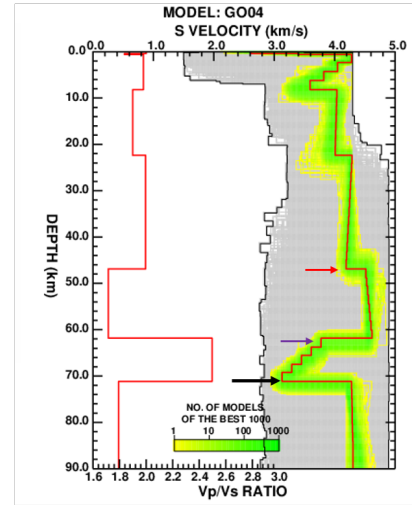
North West



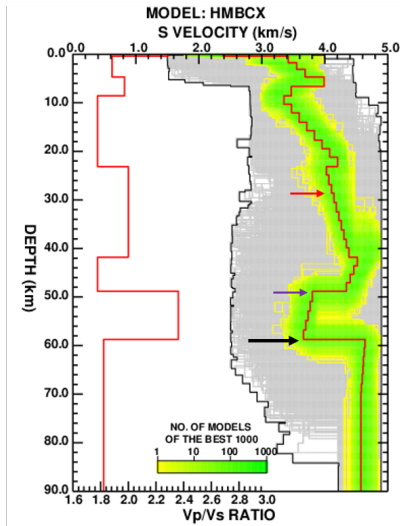
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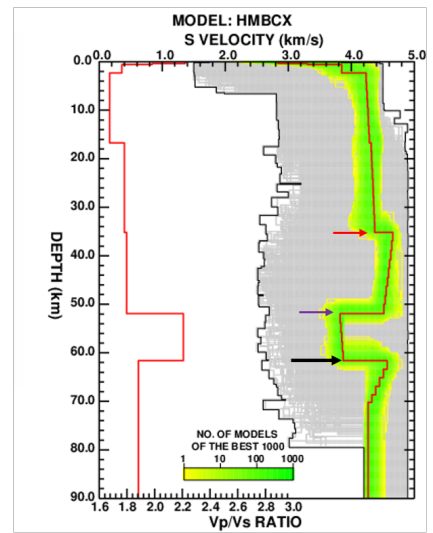
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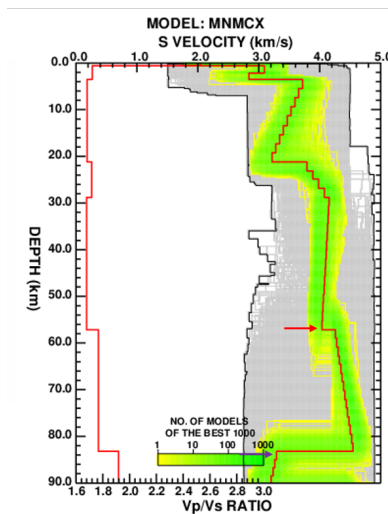
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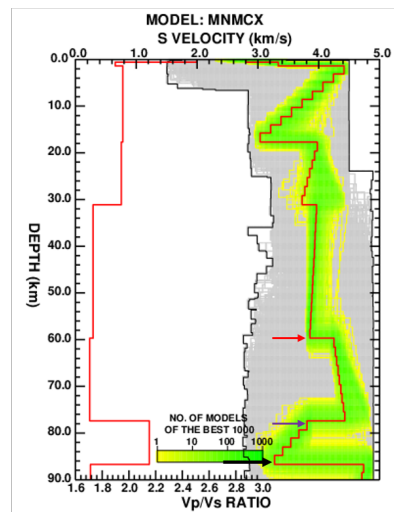
North West



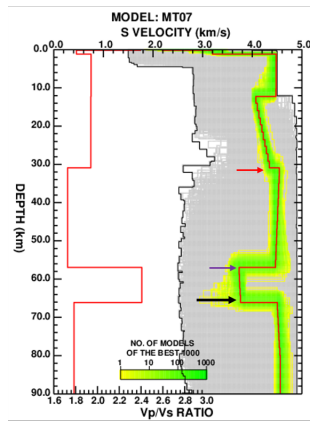
SouthEast



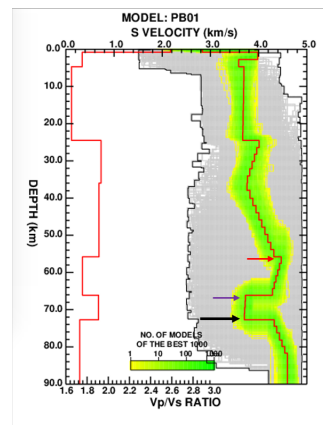
North West



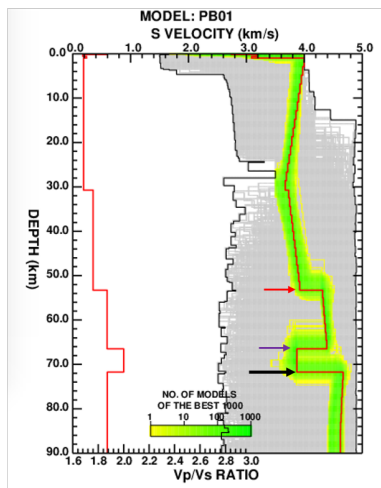
North West



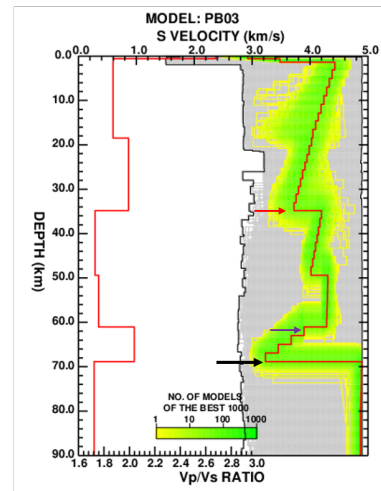
South East



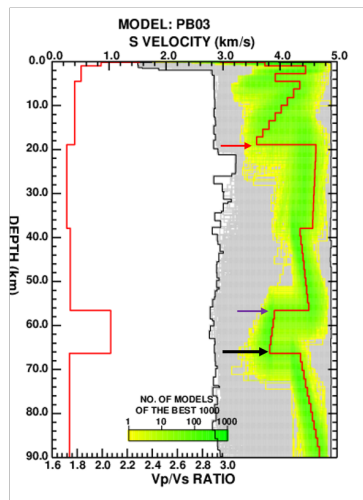
North West



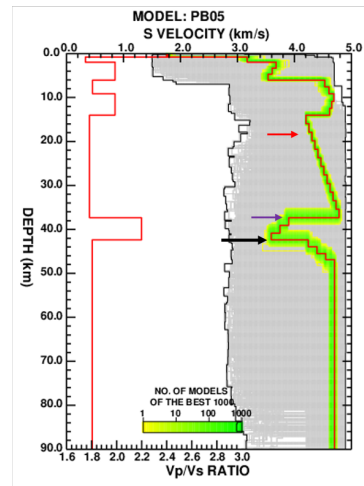
South East



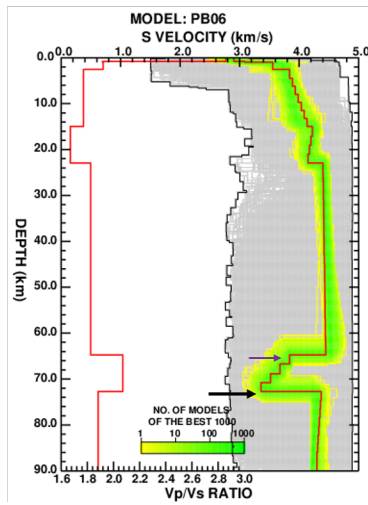
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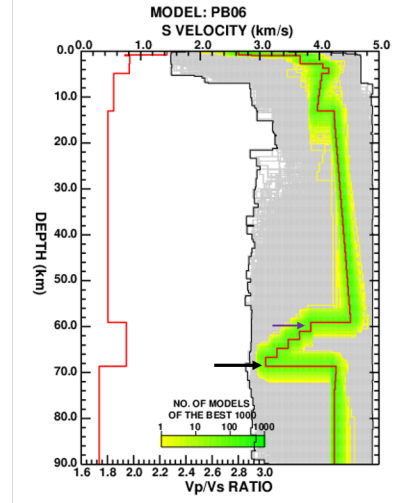
South East



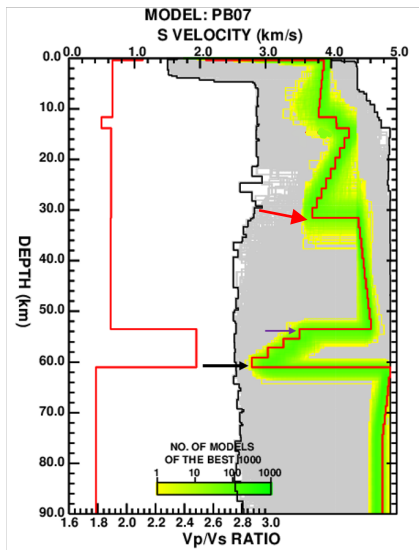
South East



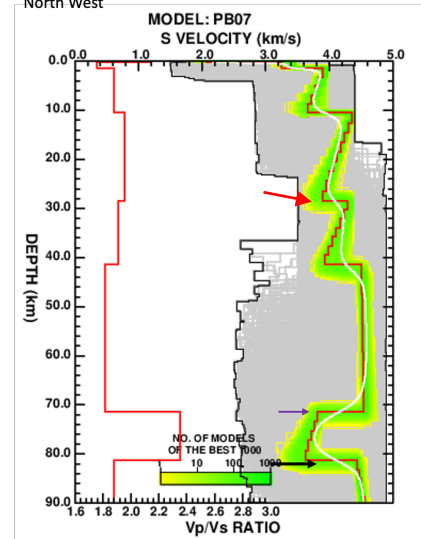
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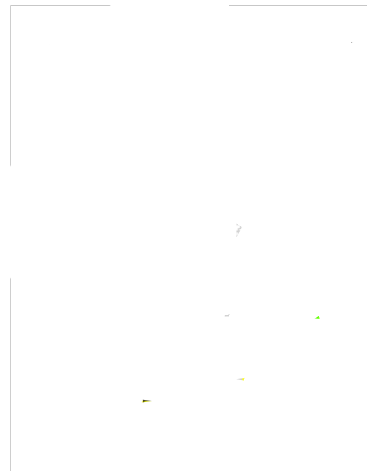
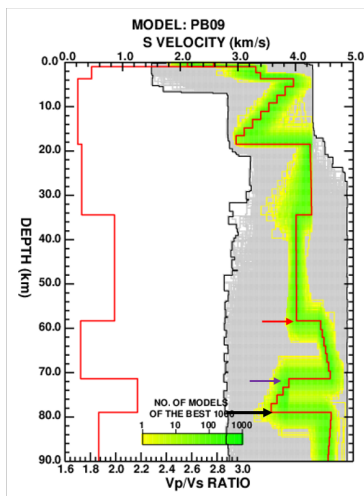
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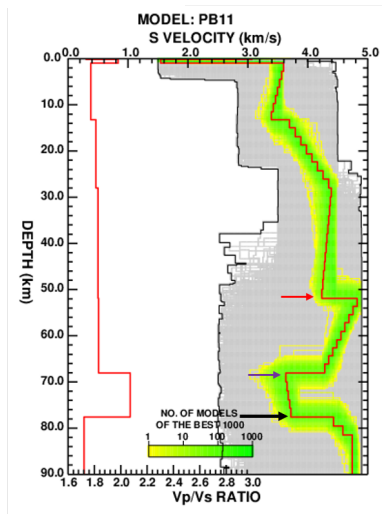
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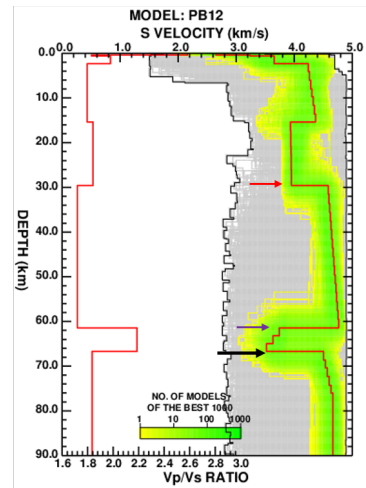
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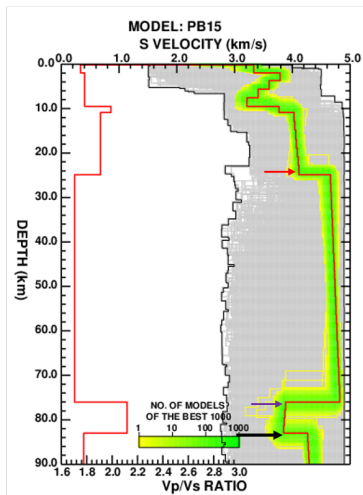
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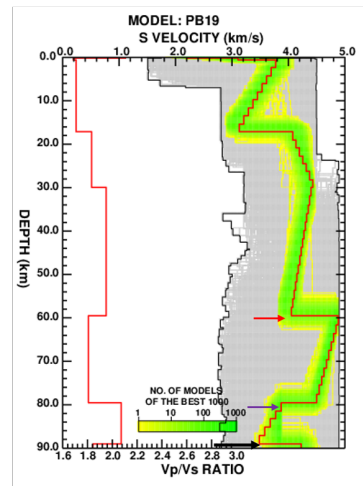
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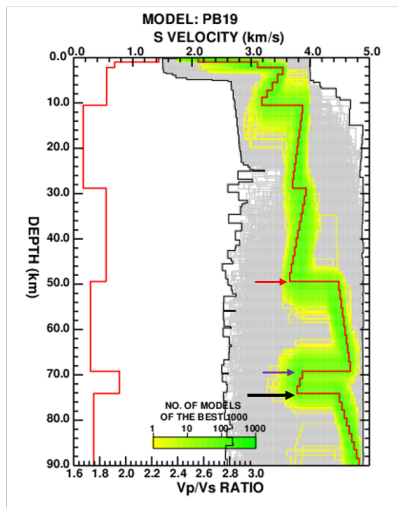
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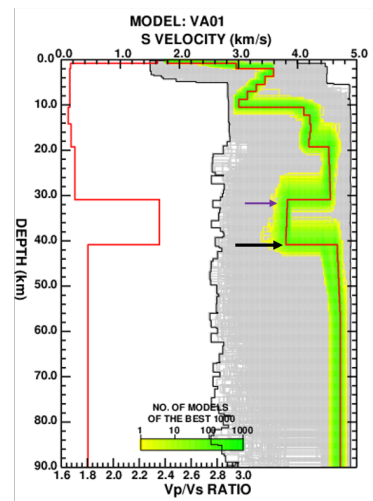
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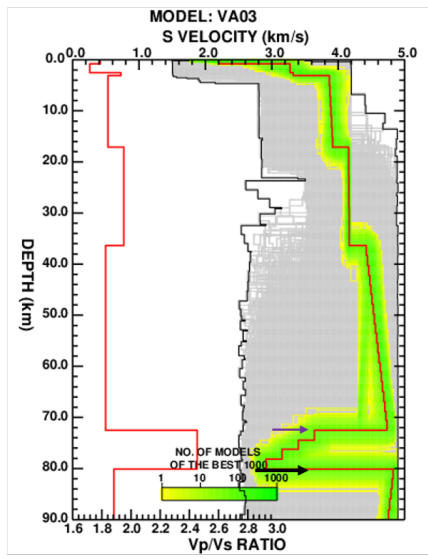
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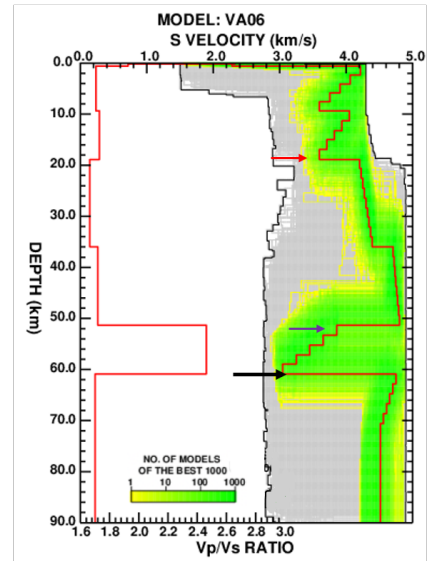
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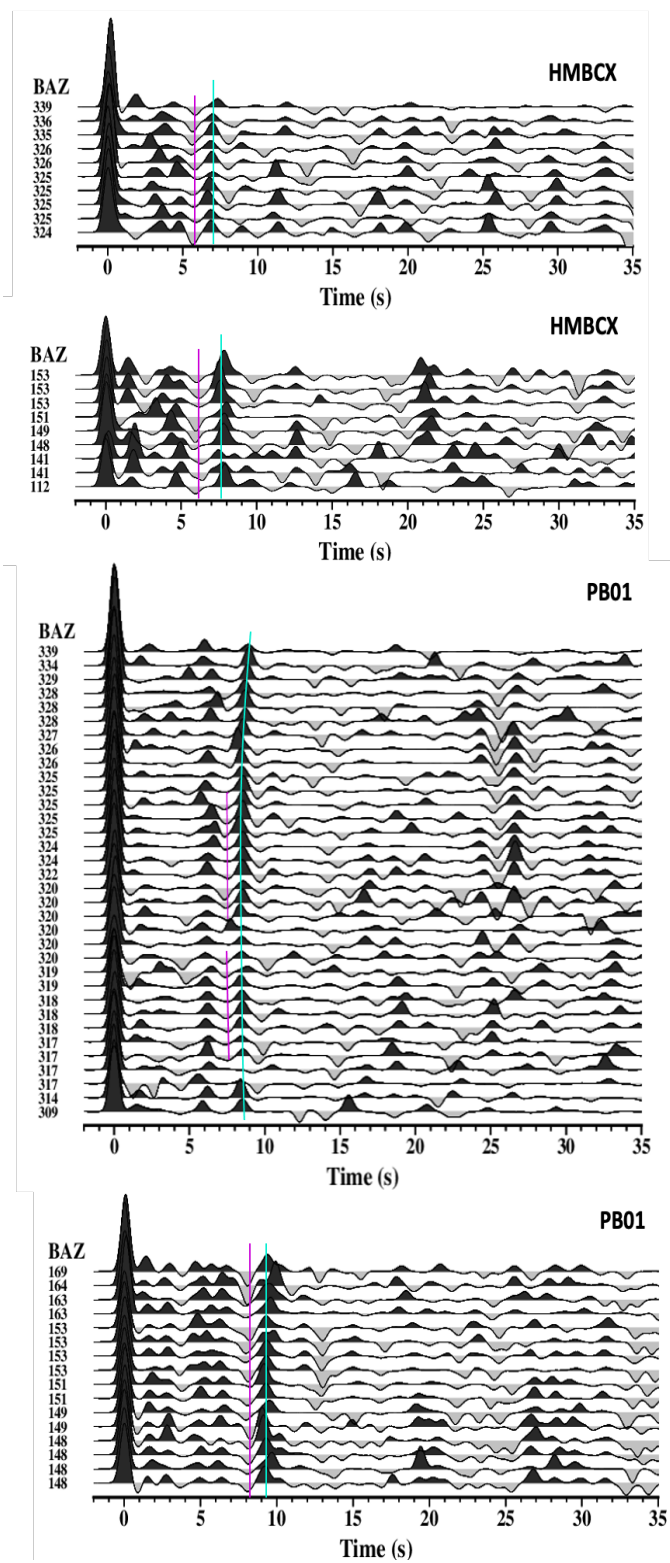
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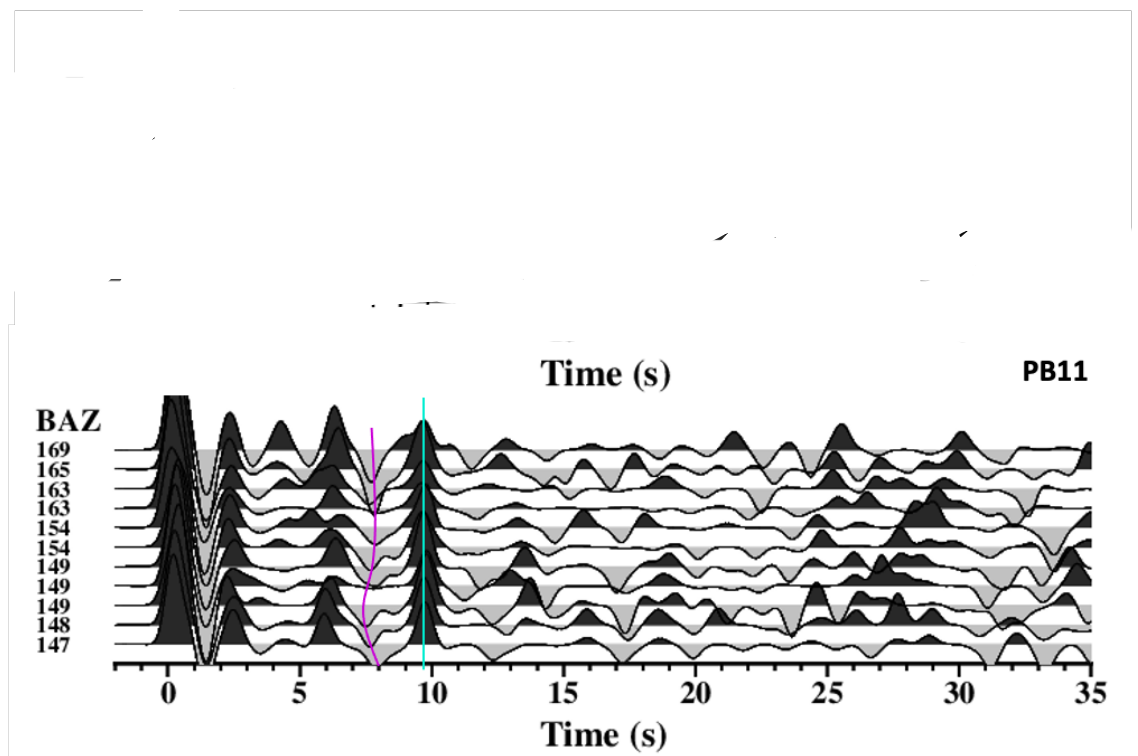
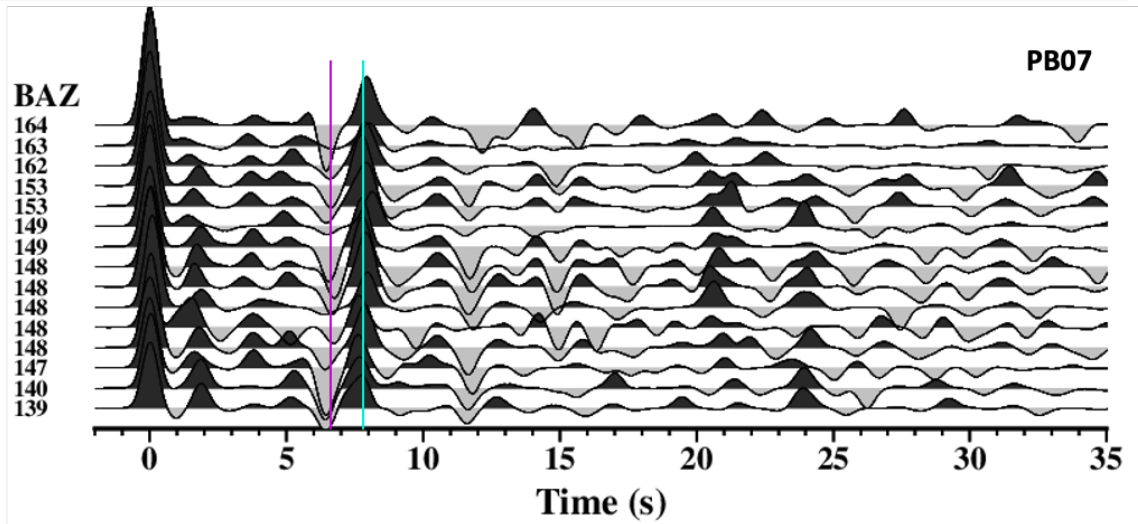
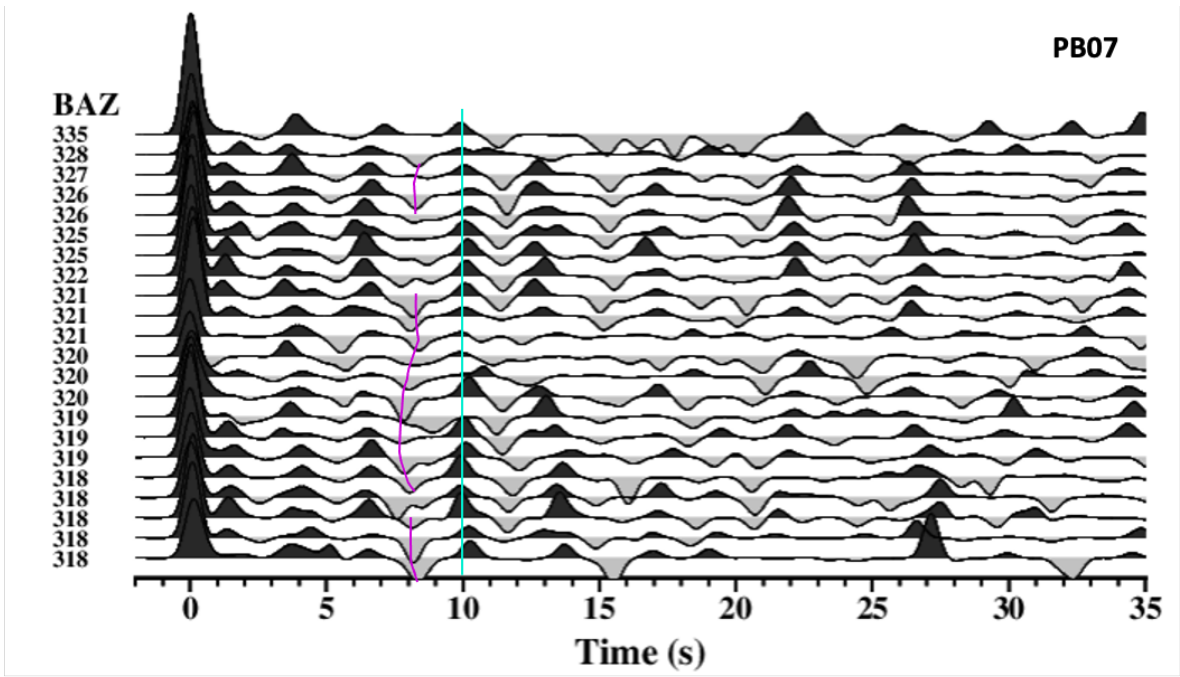


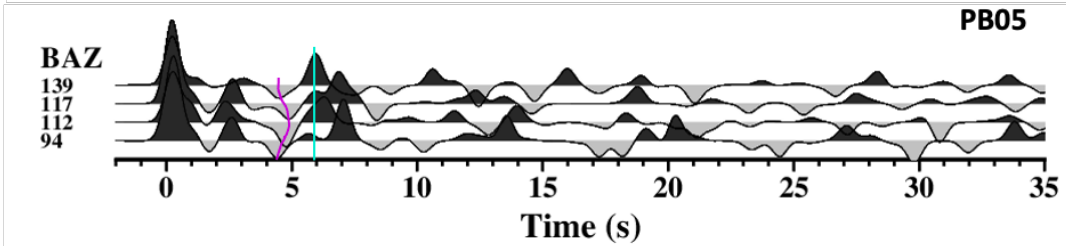
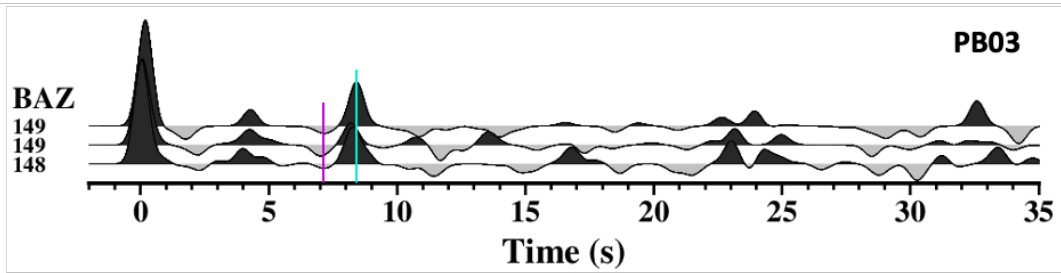
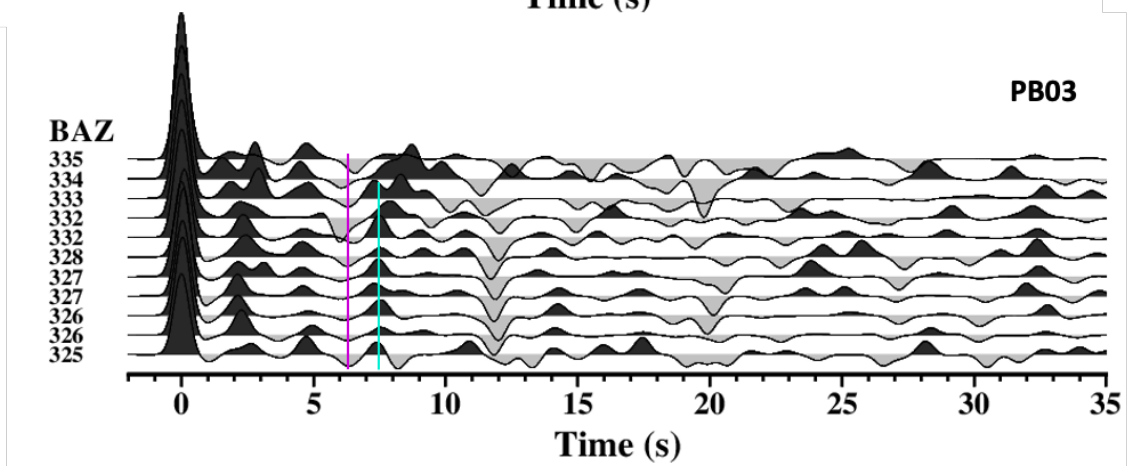
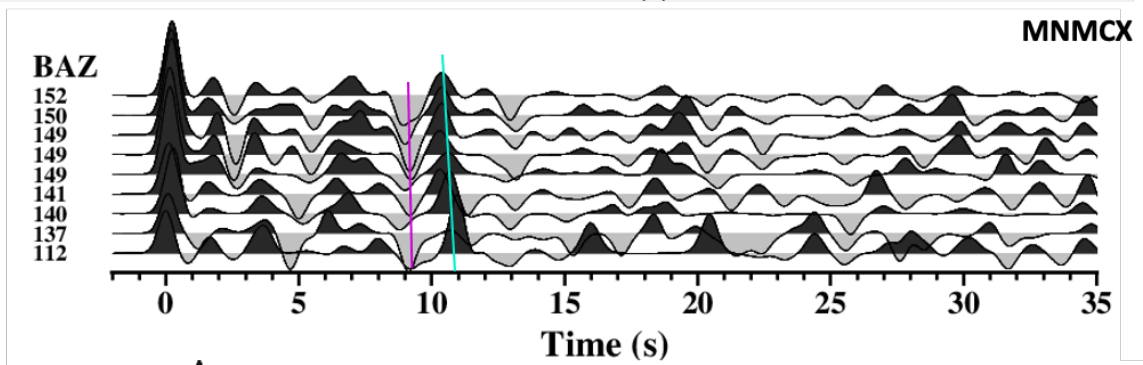
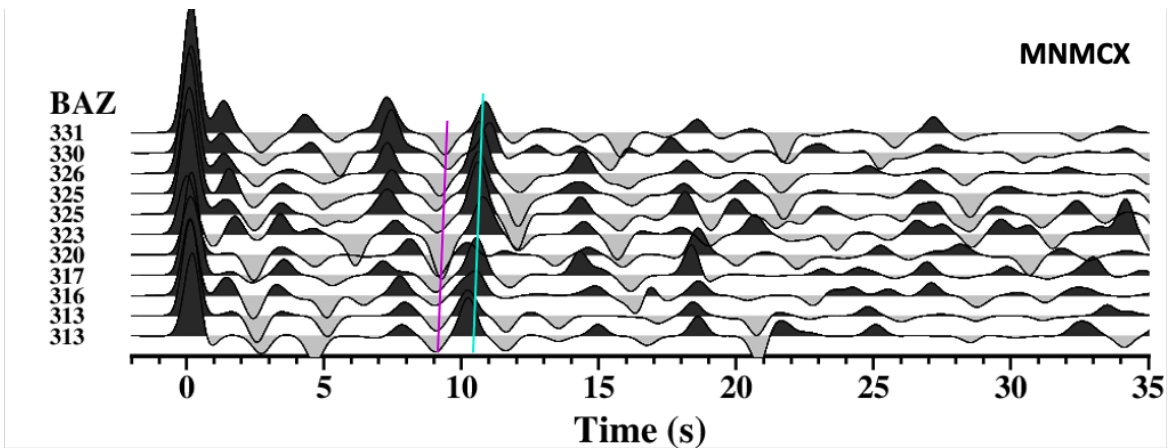
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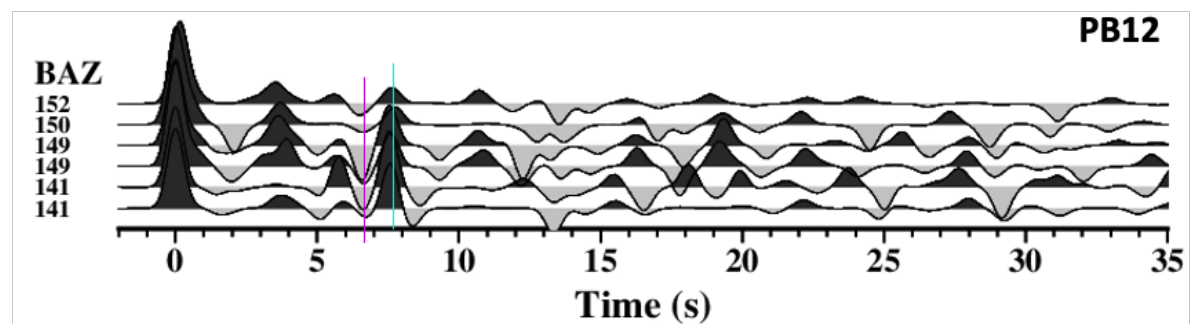
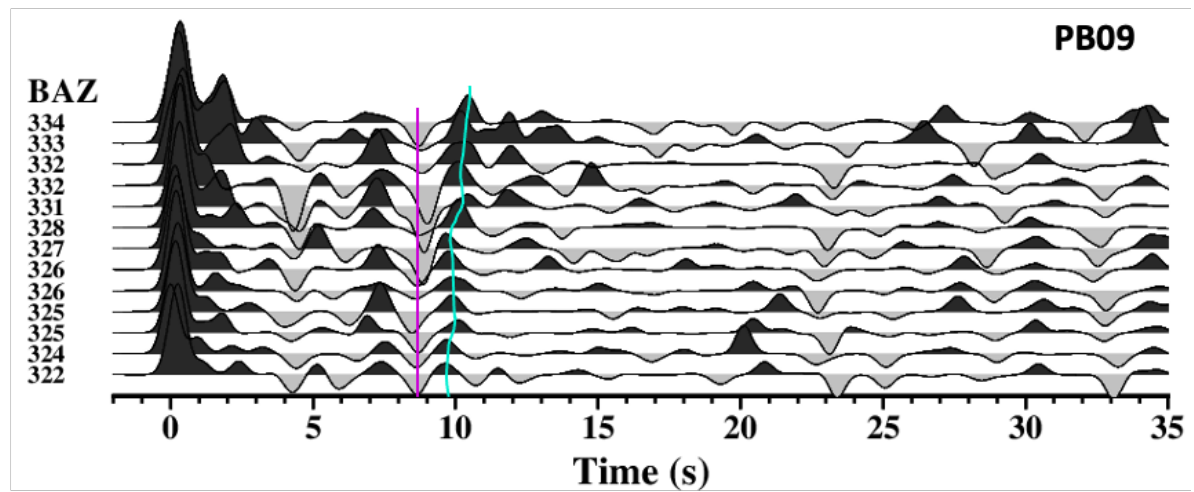
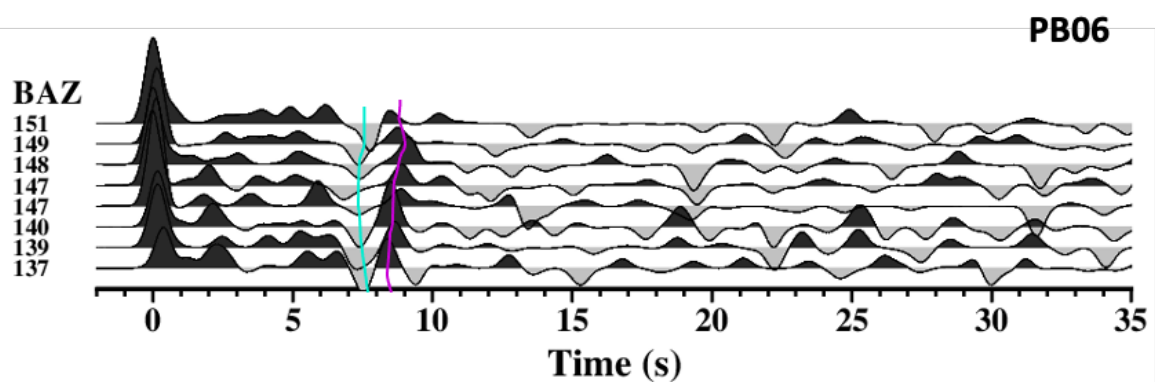
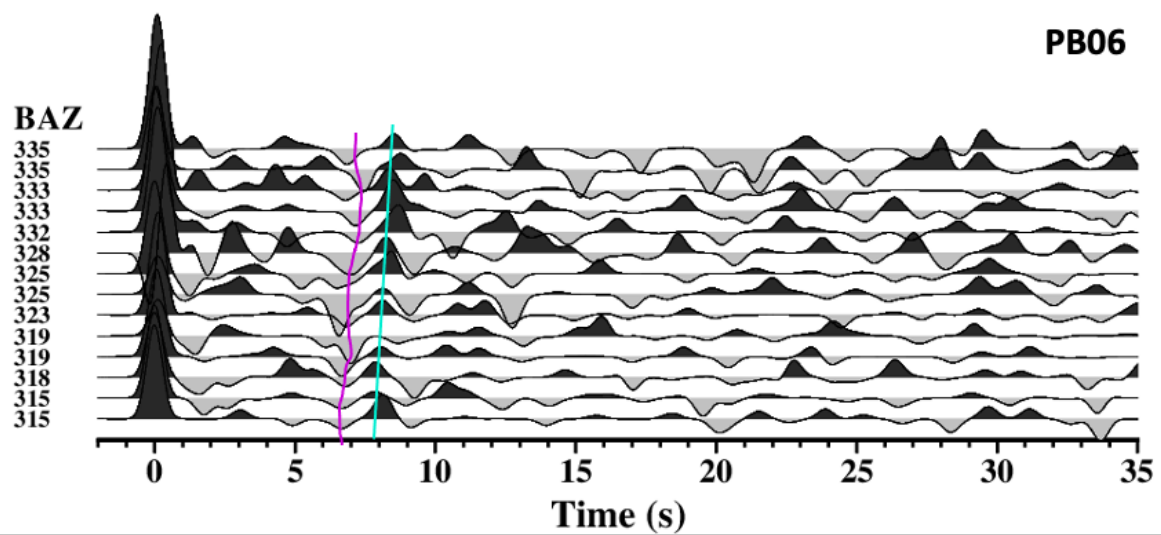


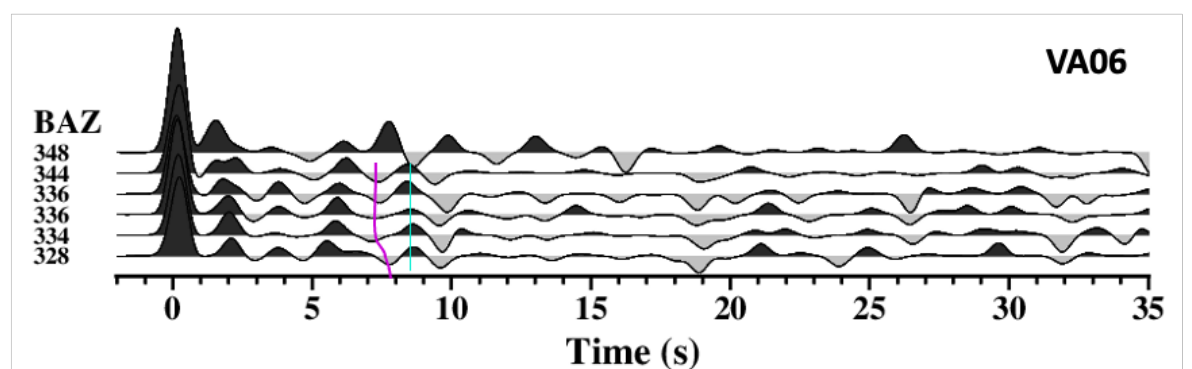
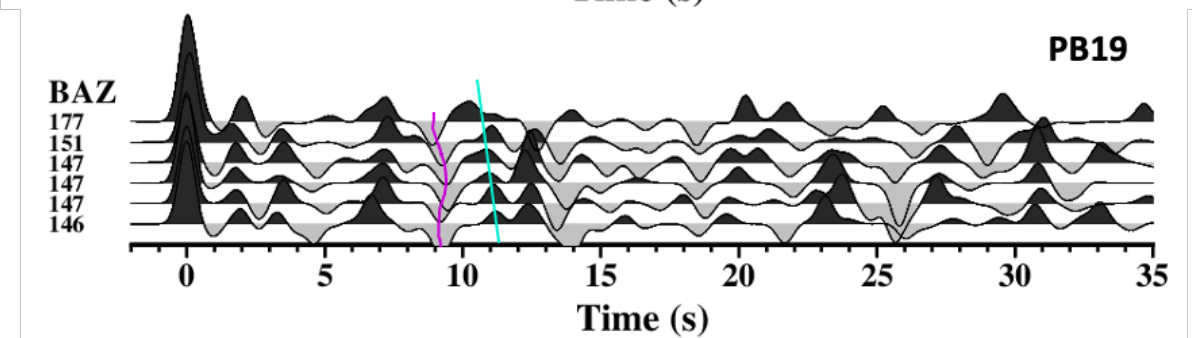
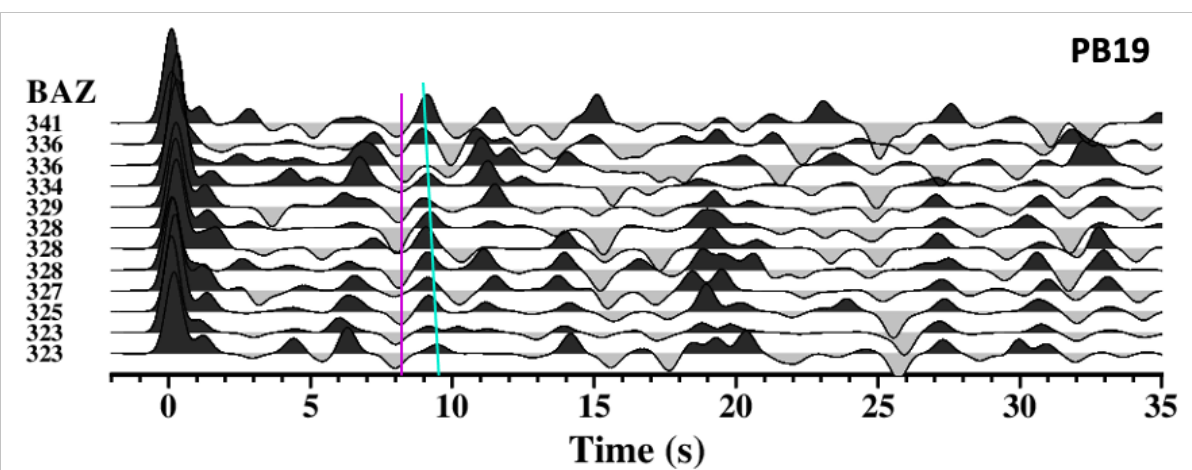
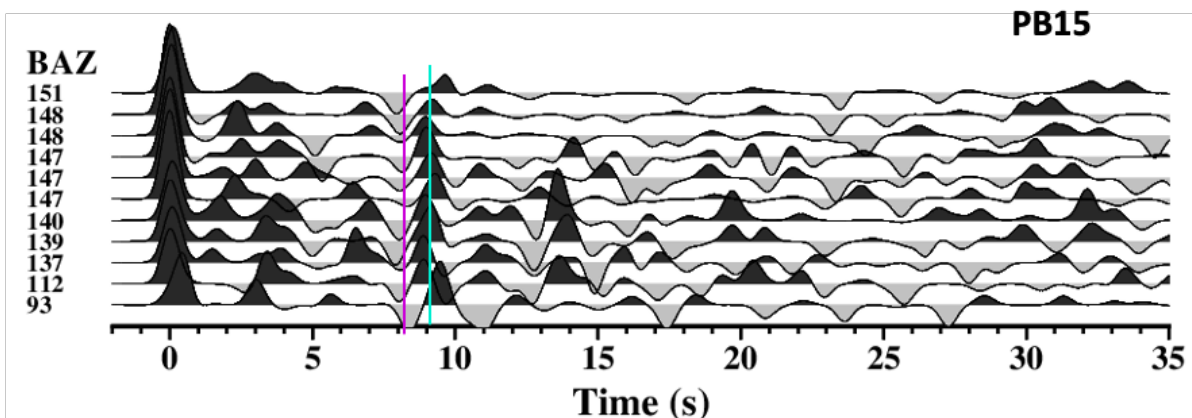
Supplementary 3 : Receiver Function plots from different segments considered in the study.
 Top of subducted oceanic crust (magenta line) and oceanic Moho (cyan line) are shown.

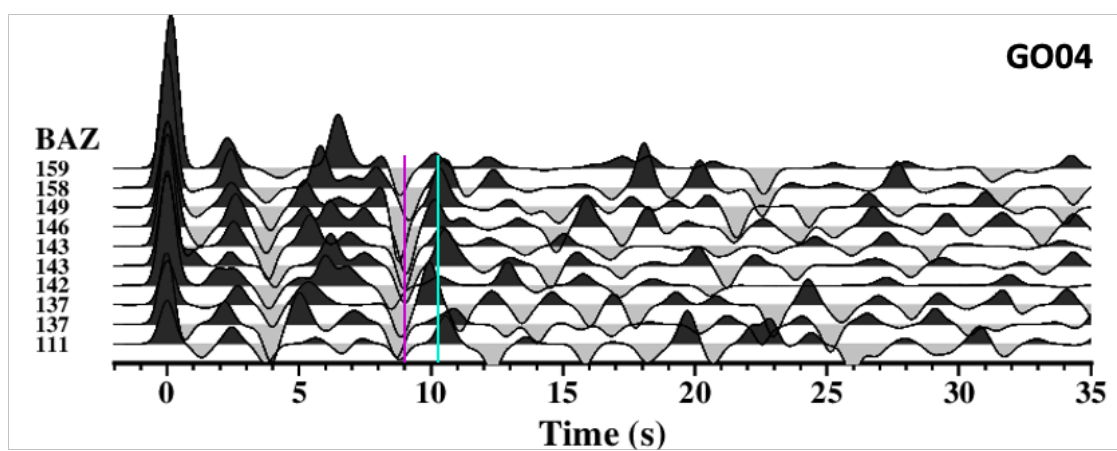
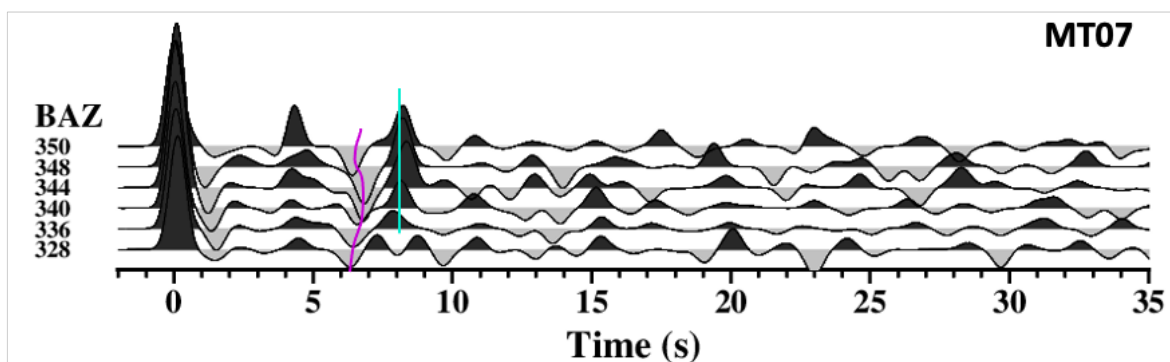
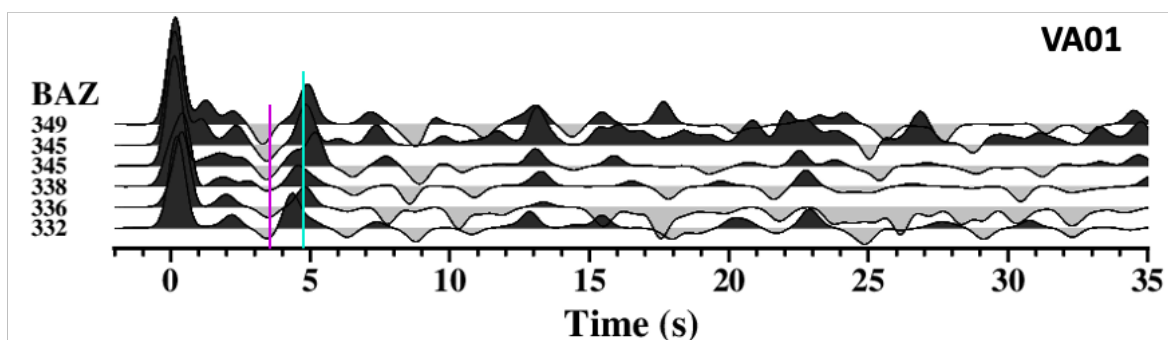
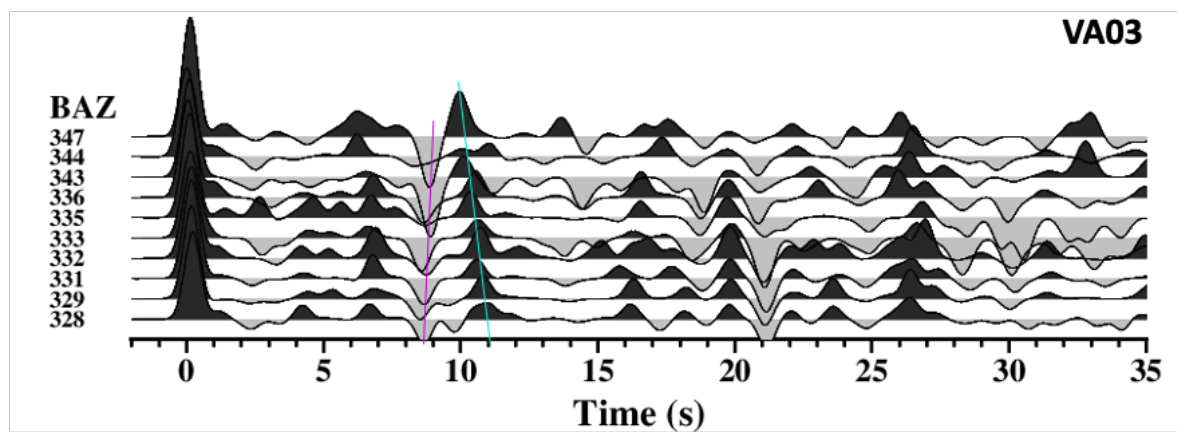


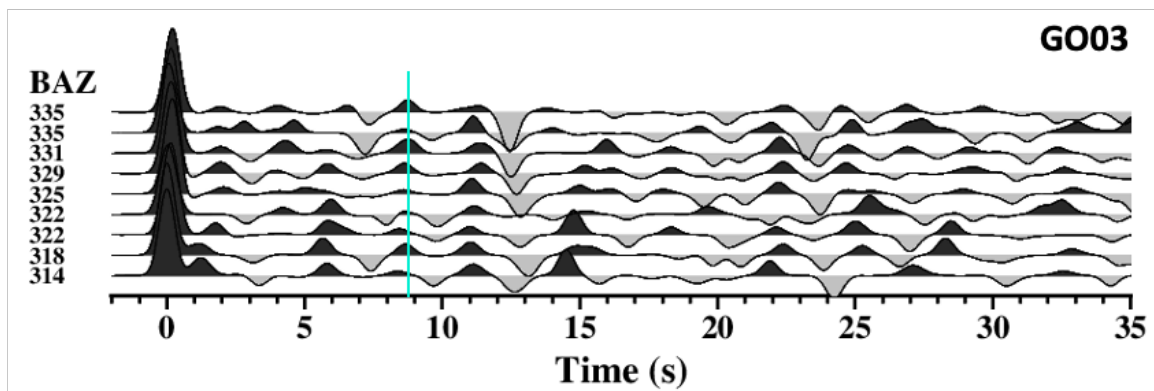
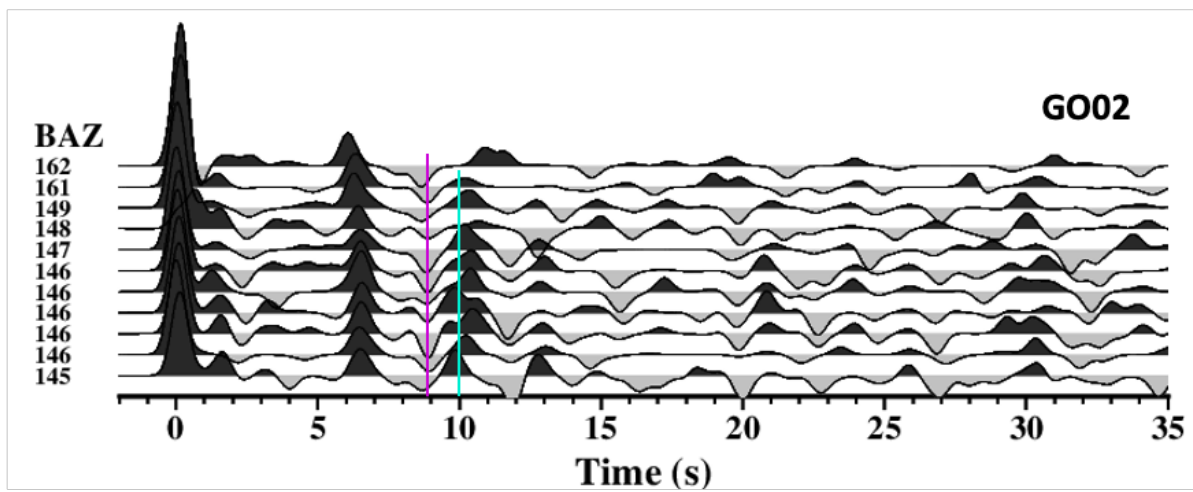
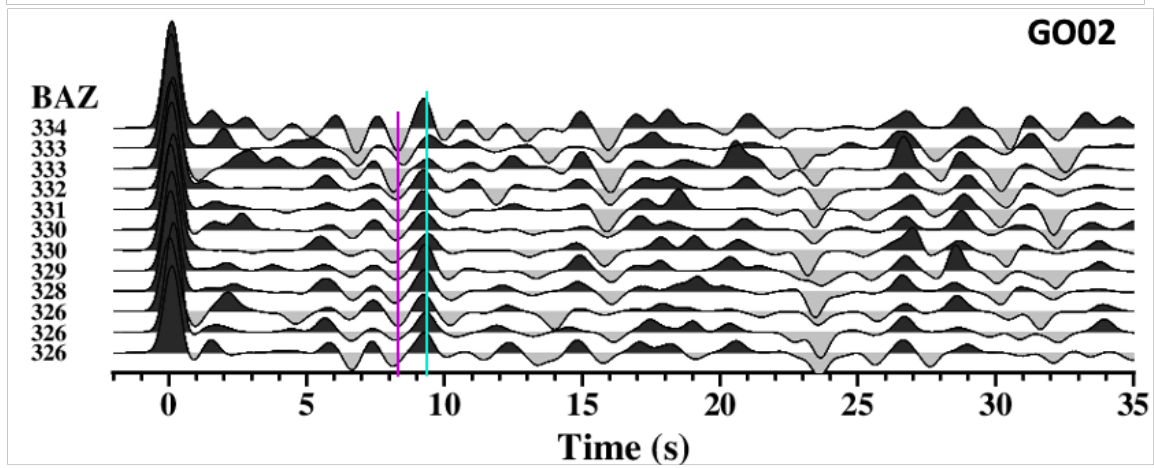
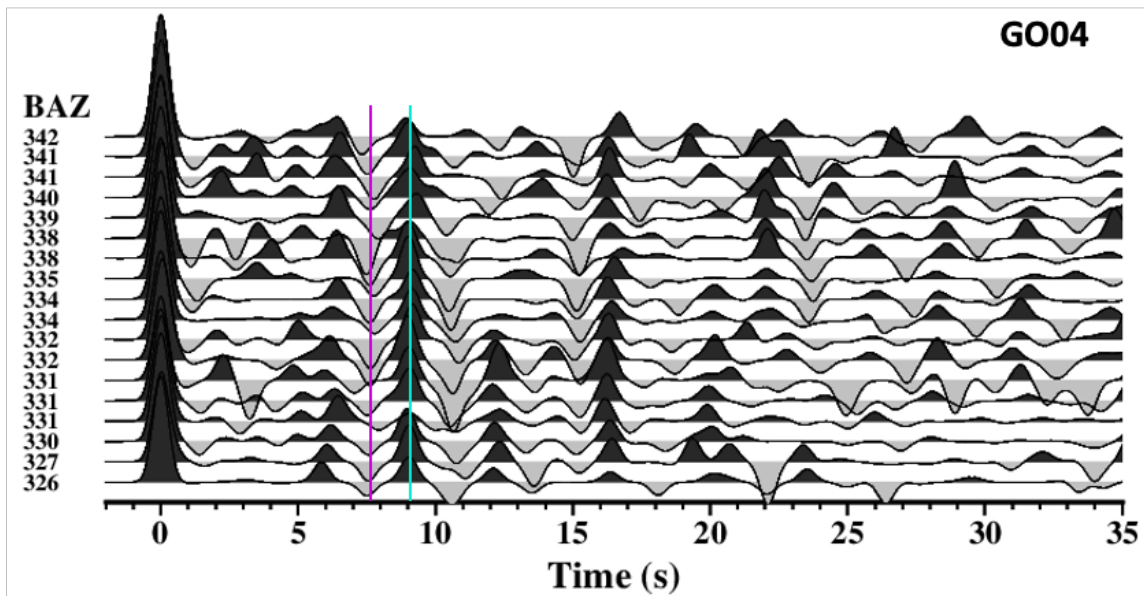


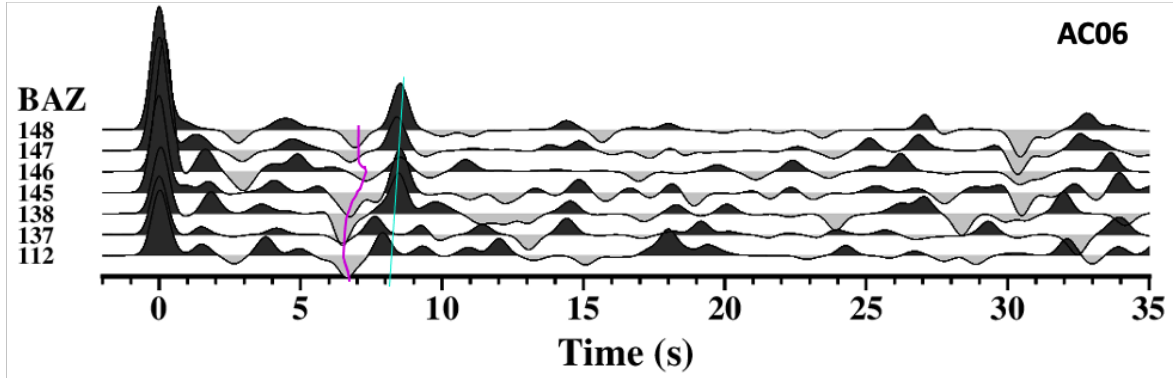
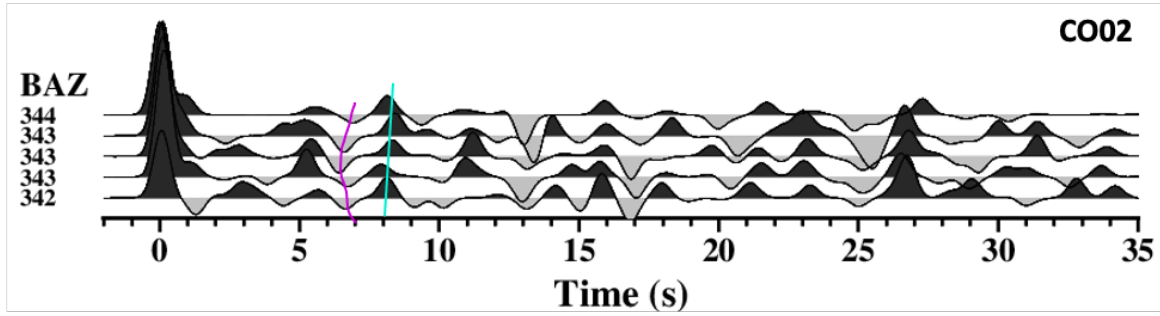
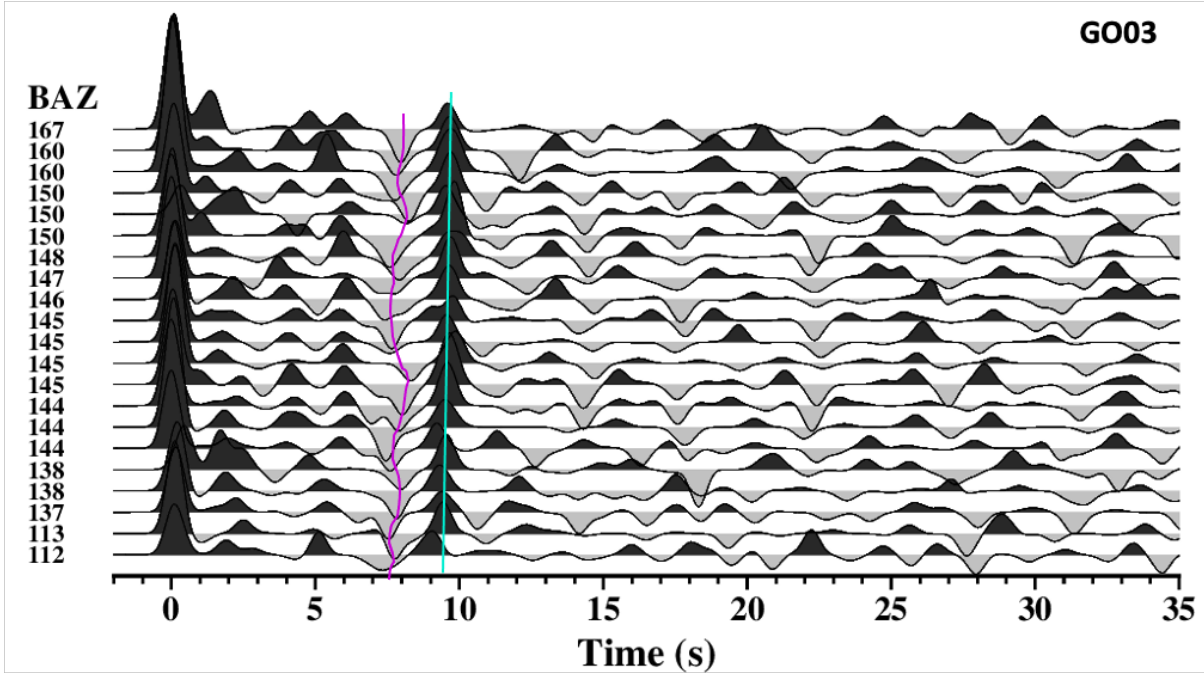






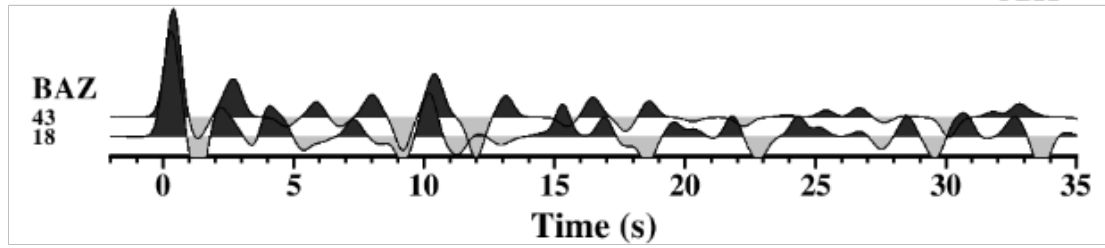




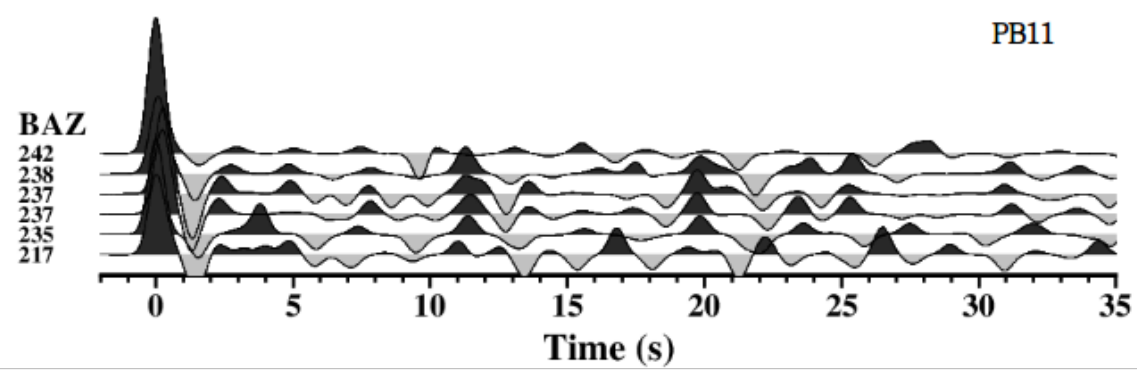


Supplementary04: Examples of poor quality receiver functions in the discarded segments.

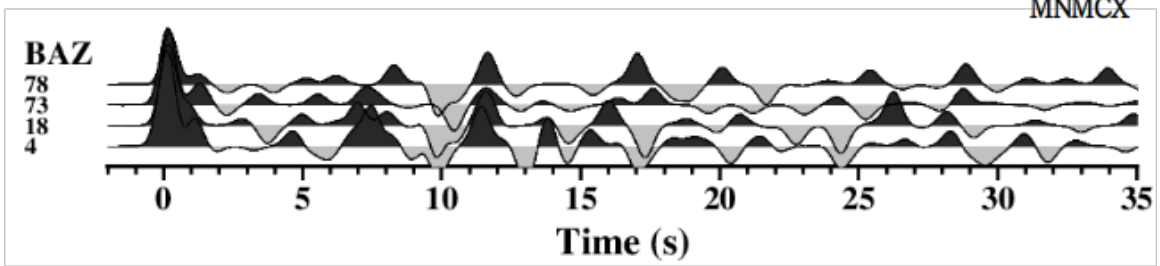
PB11



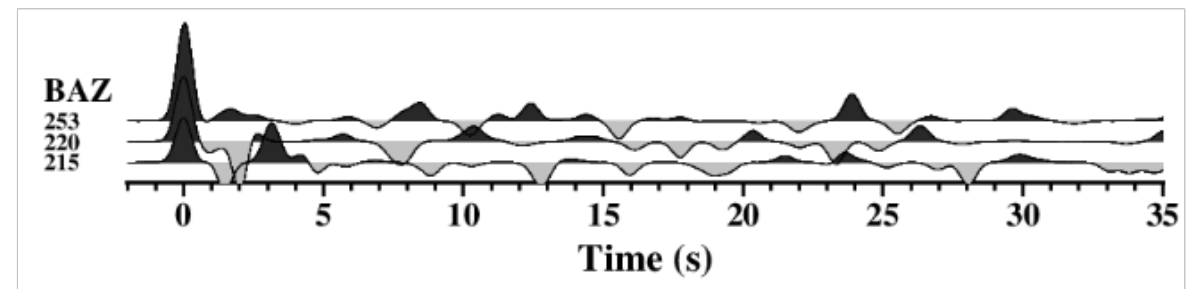
PB11



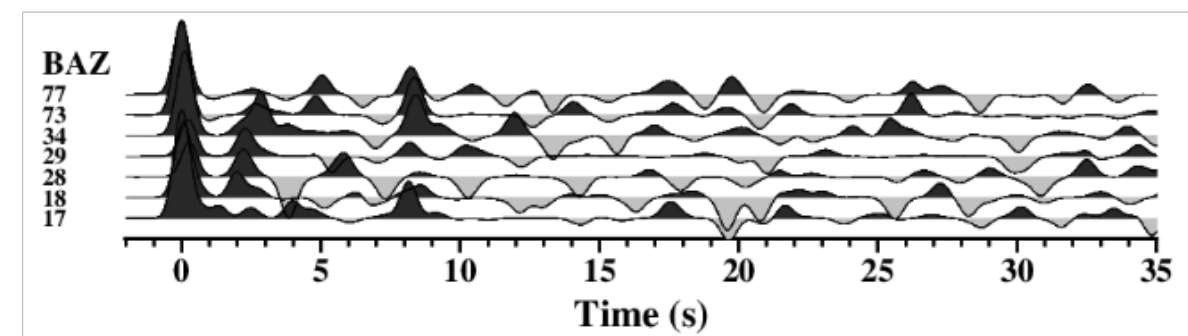
MNM CX

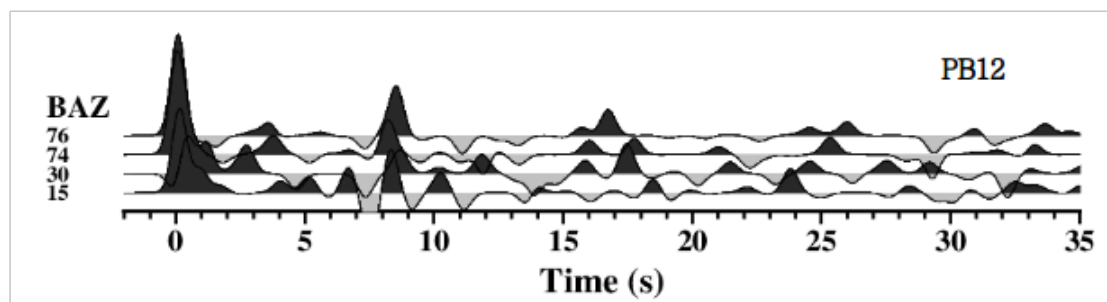
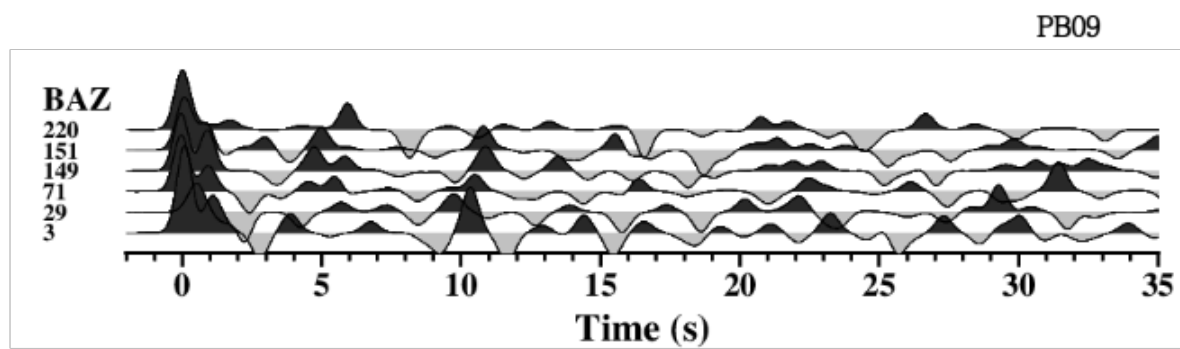
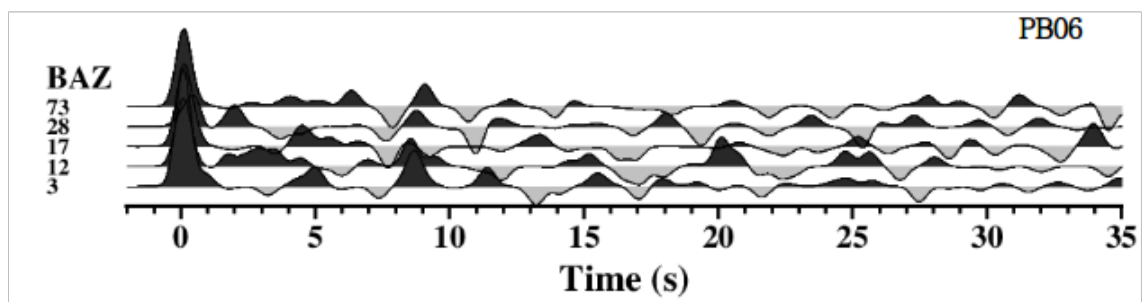
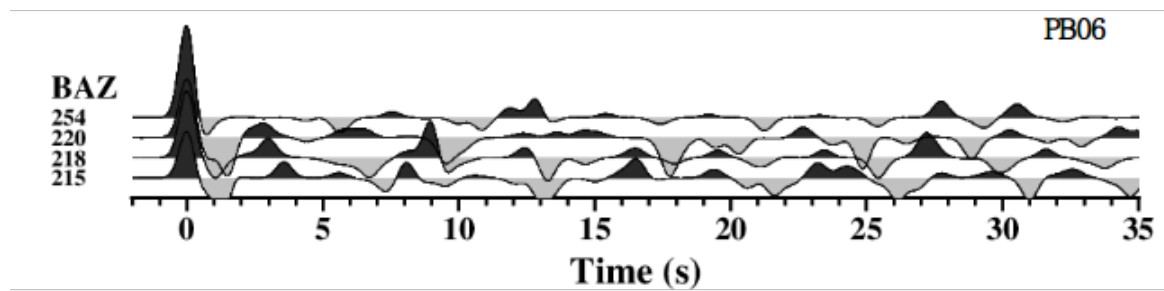
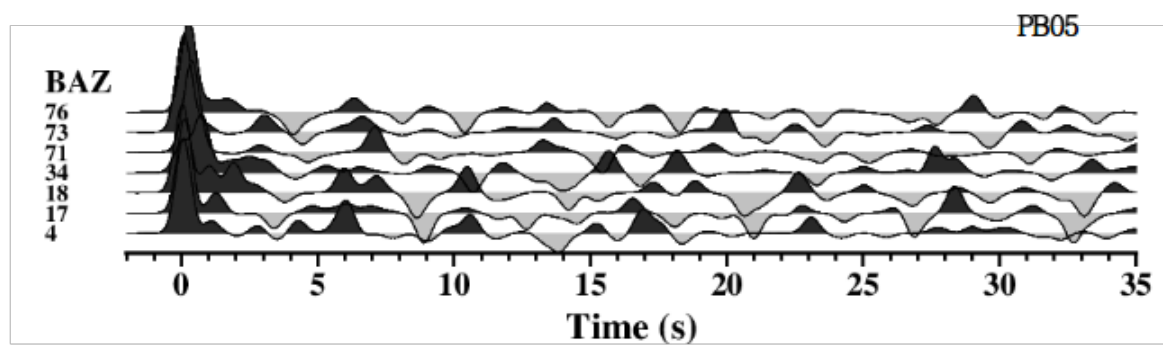


PB03

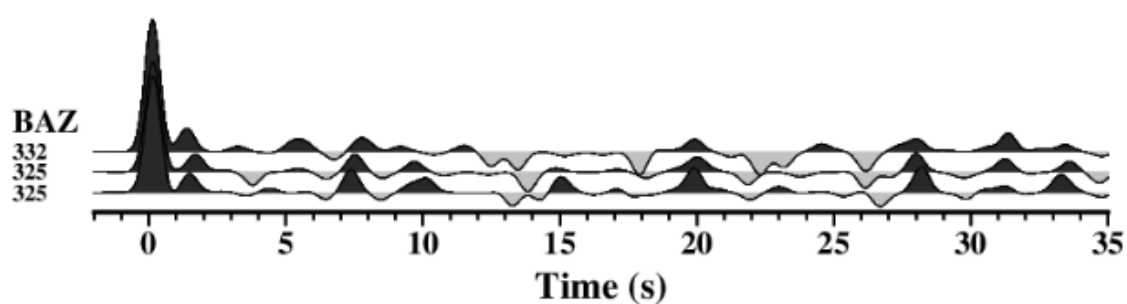


PB03

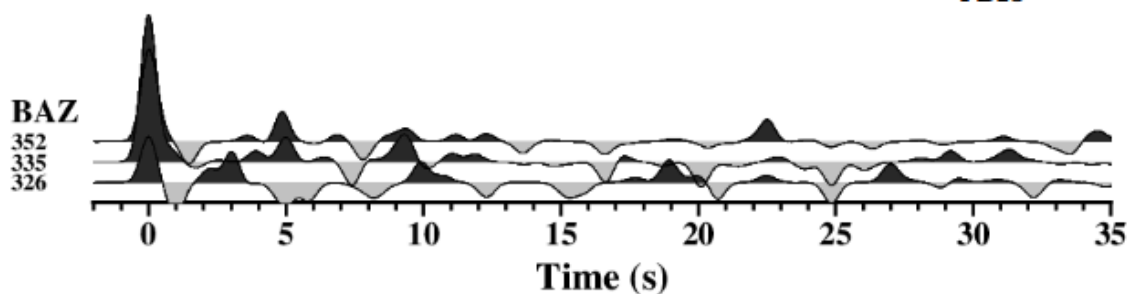




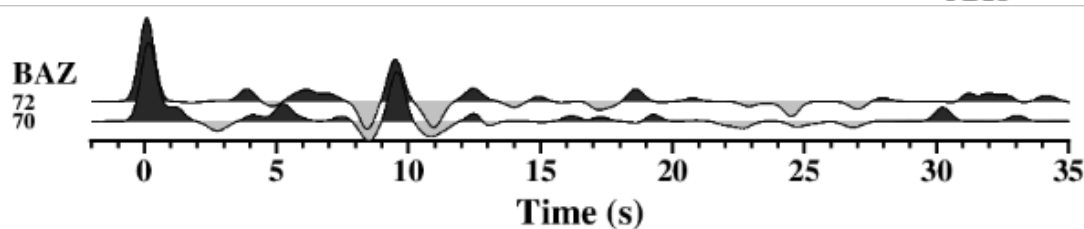
PB12



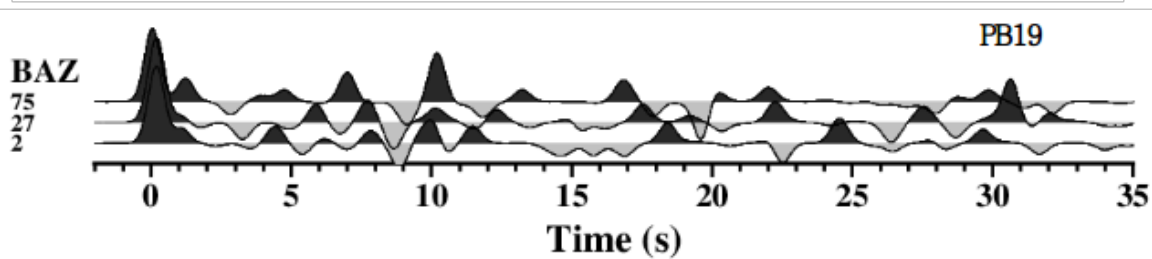
PB15



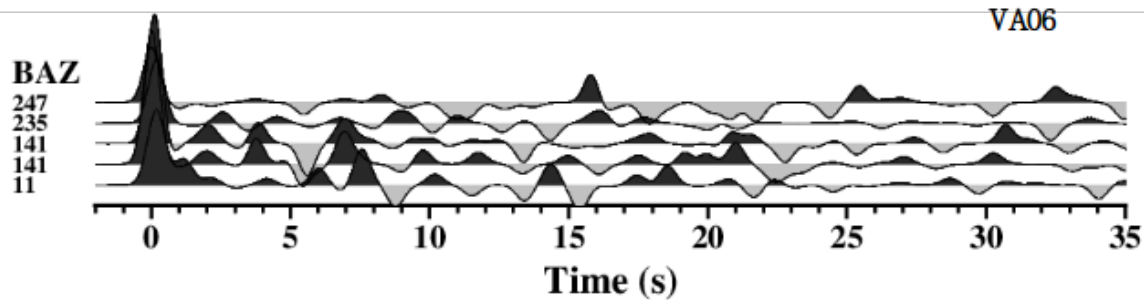
PB15

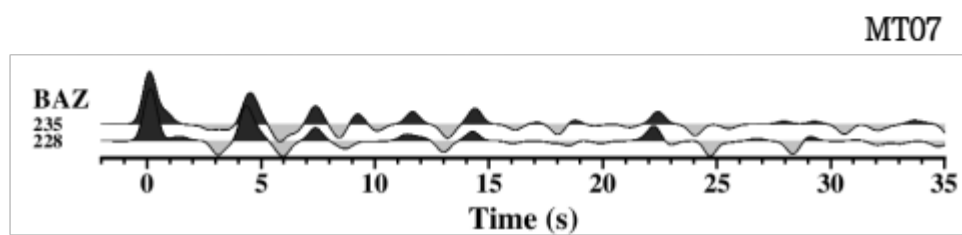
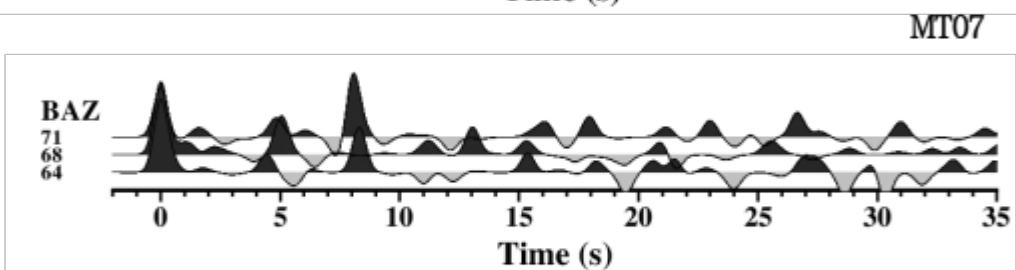
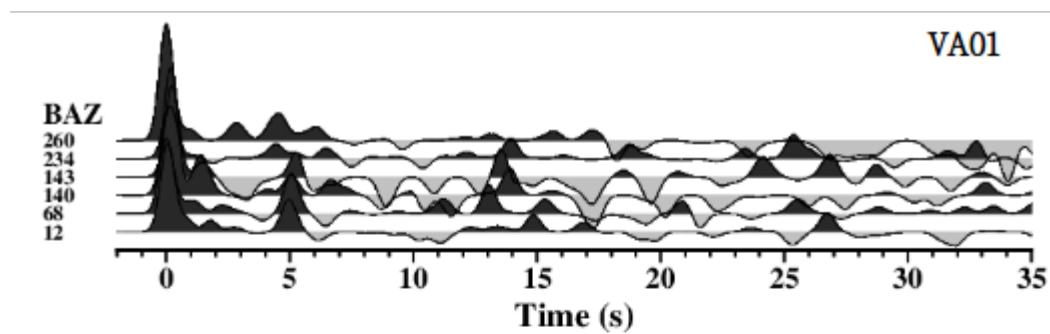
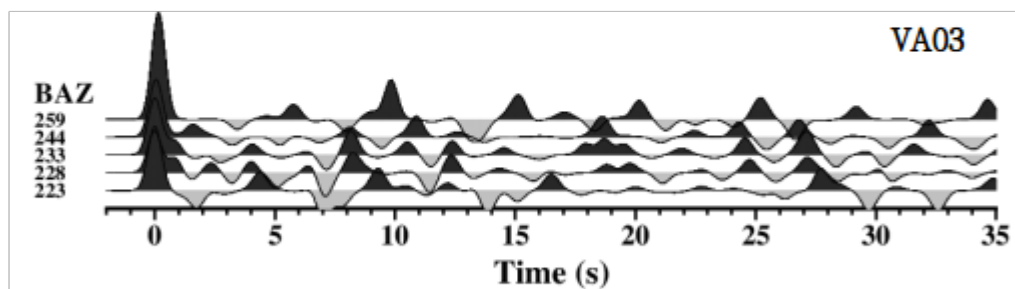
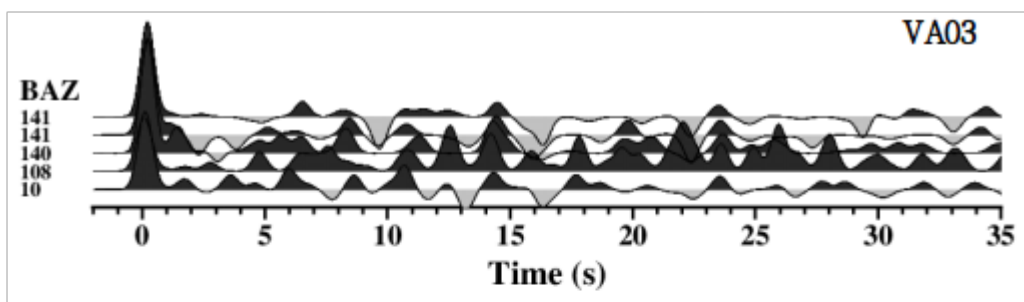


PB19

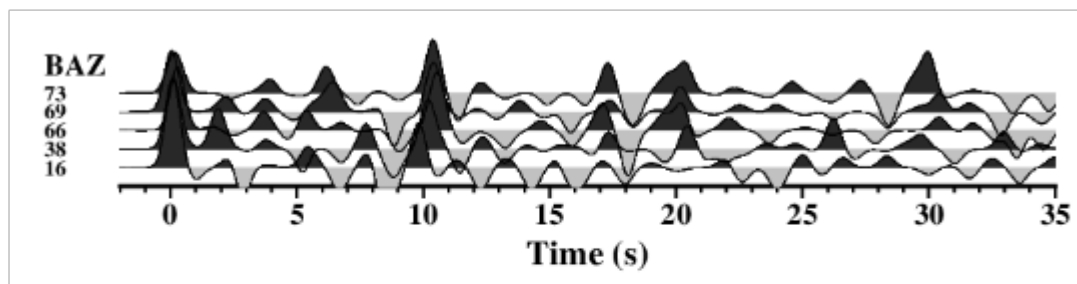


VA06

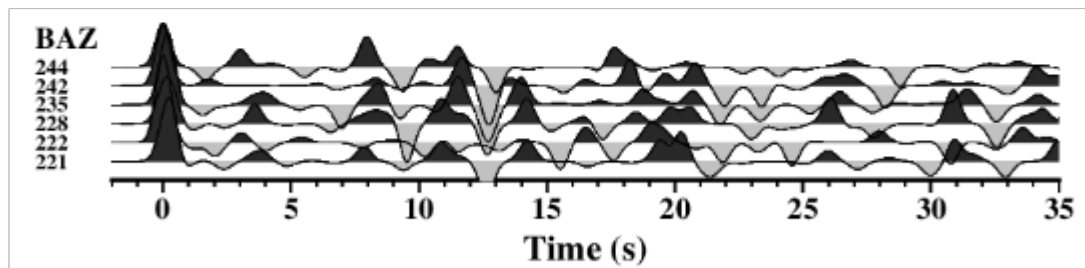




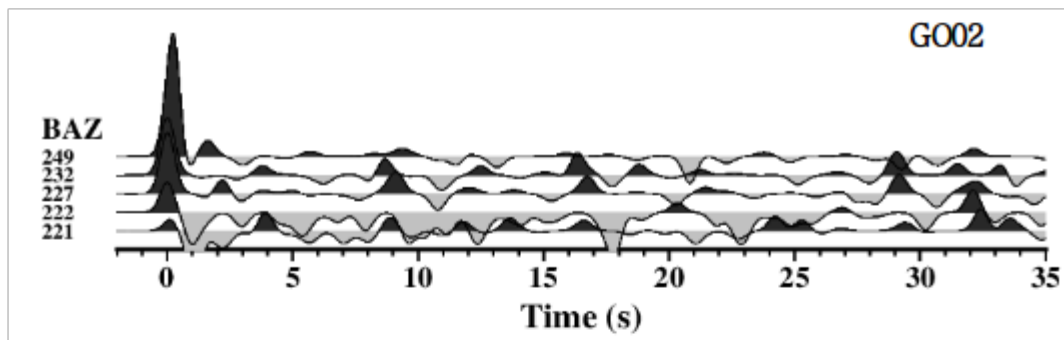
G004



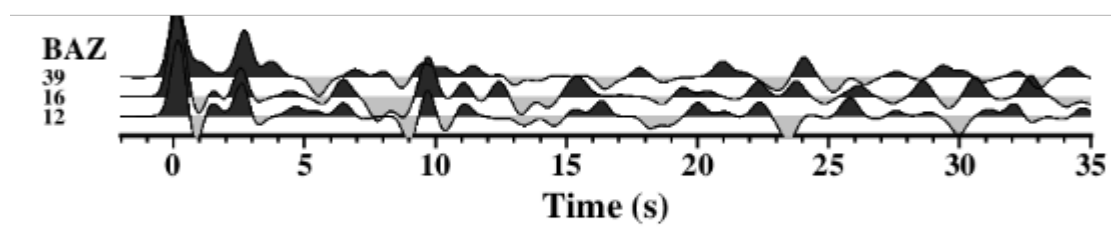
G004



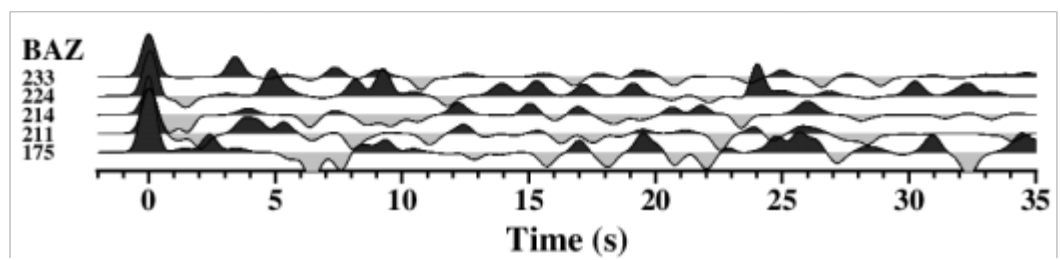
G002

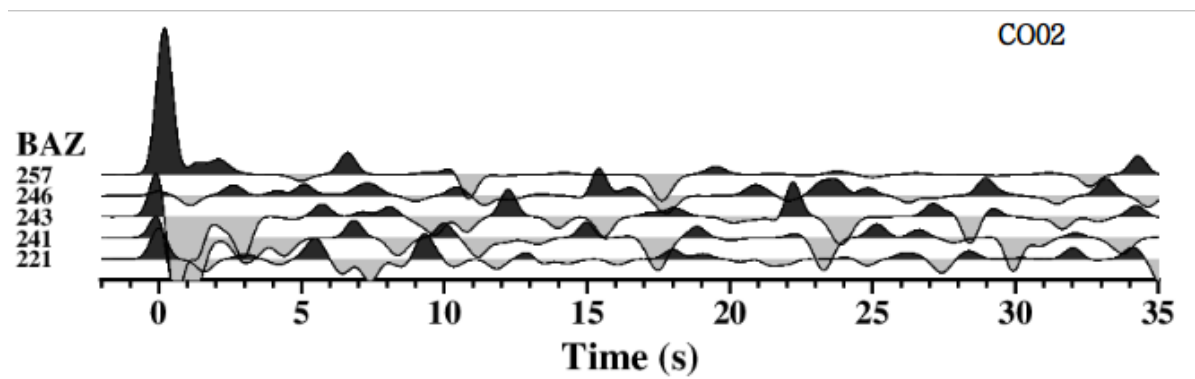
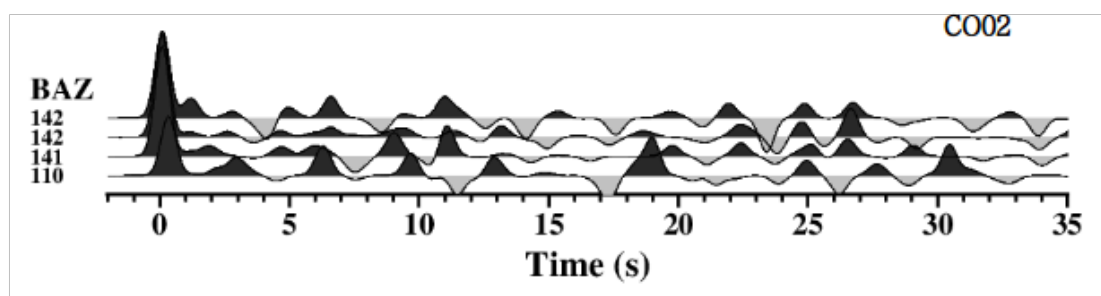
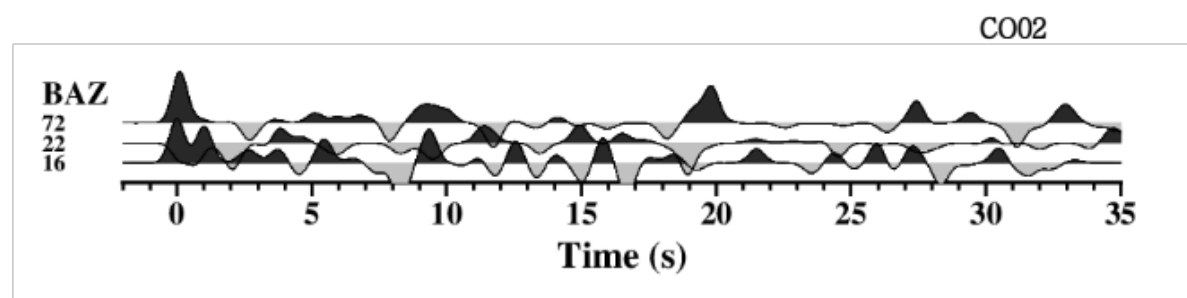
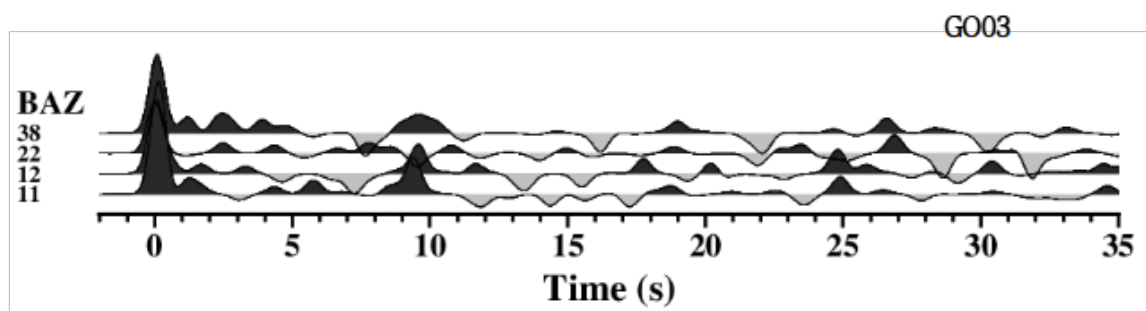


G002

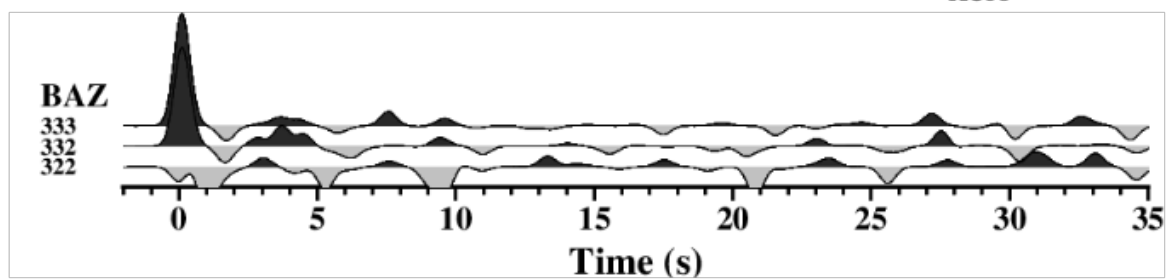


G003

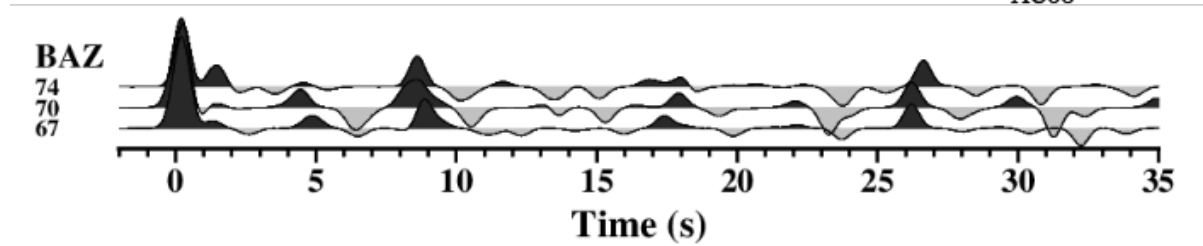




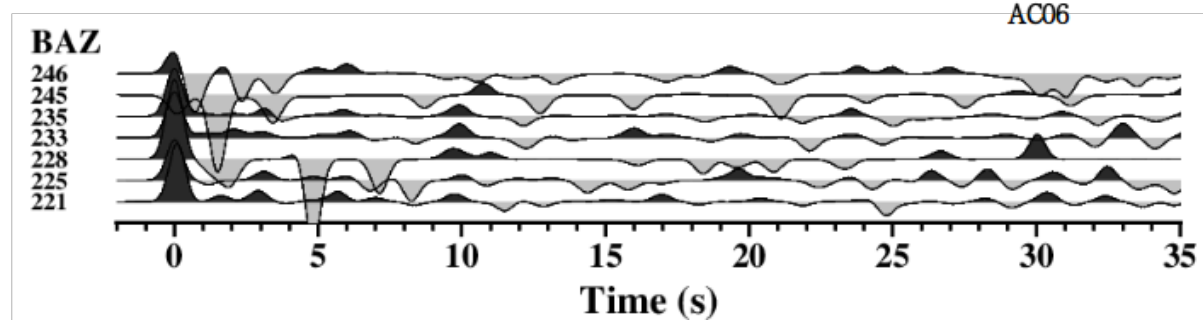
AC06

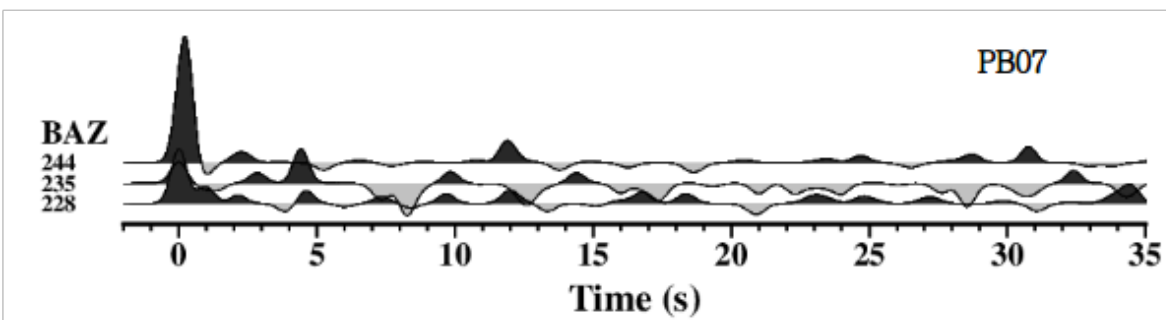
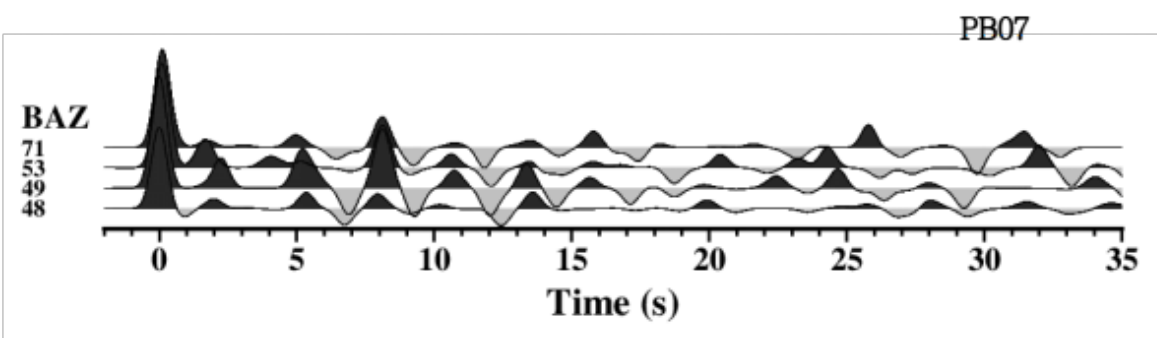
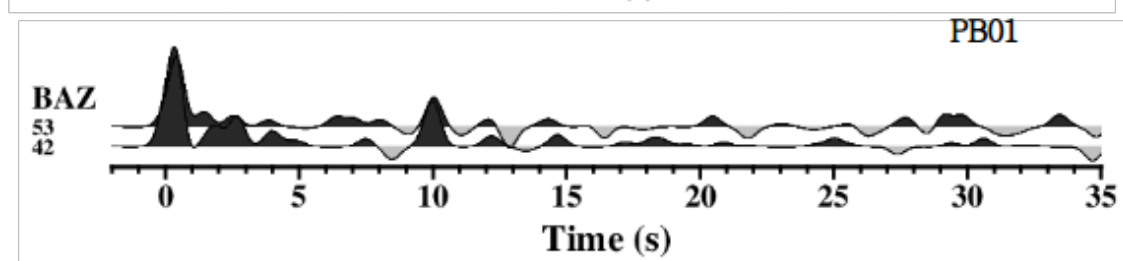
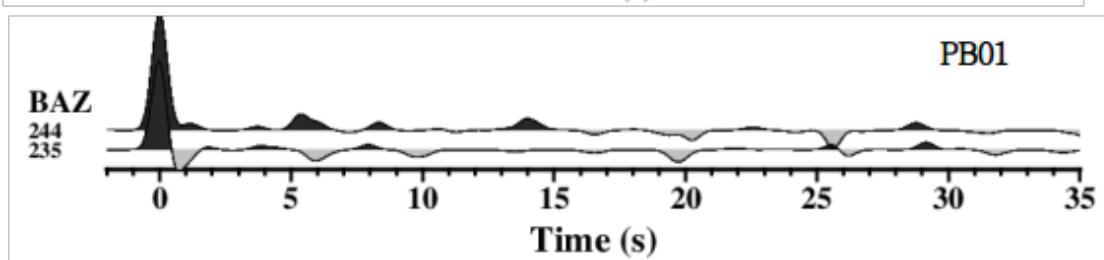
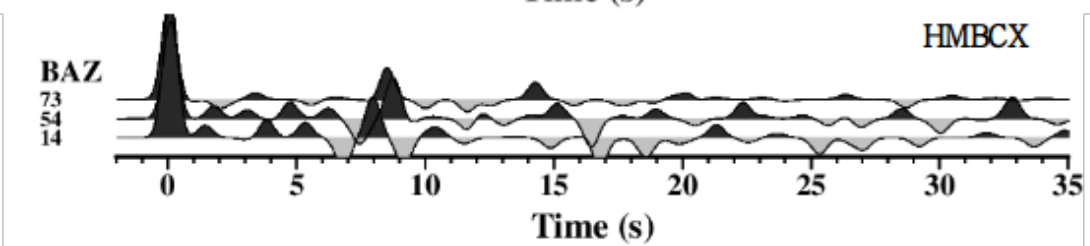
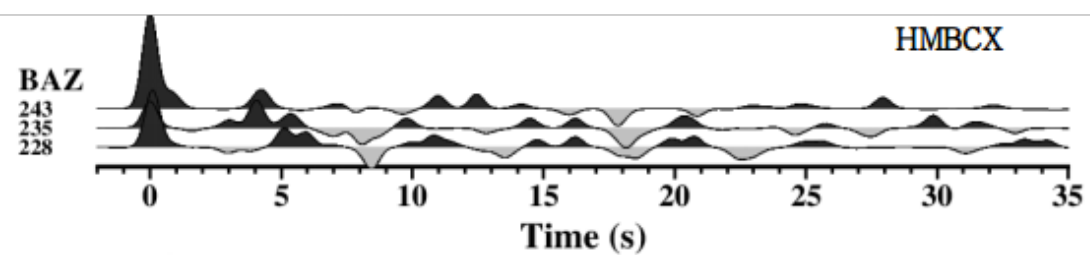


AC06



AC06

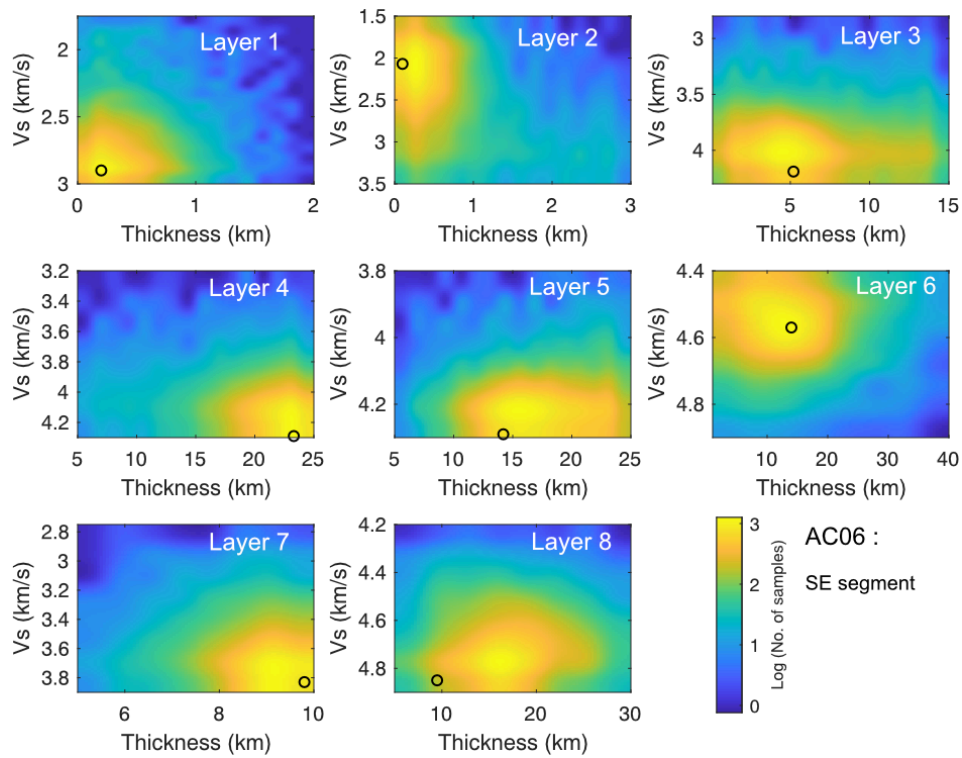


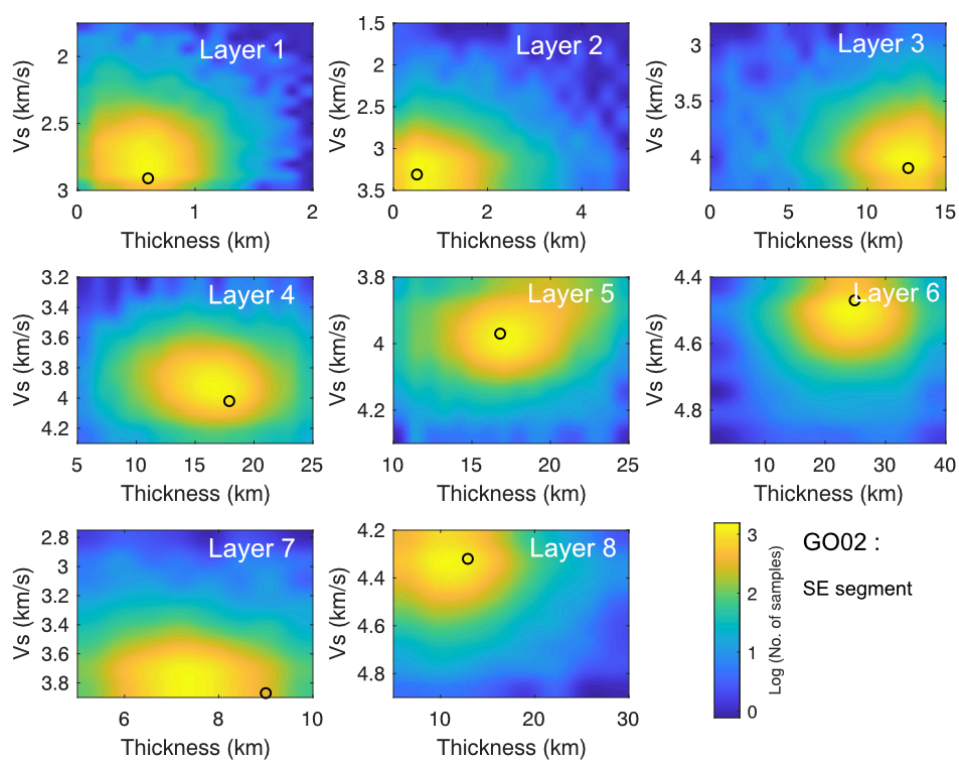
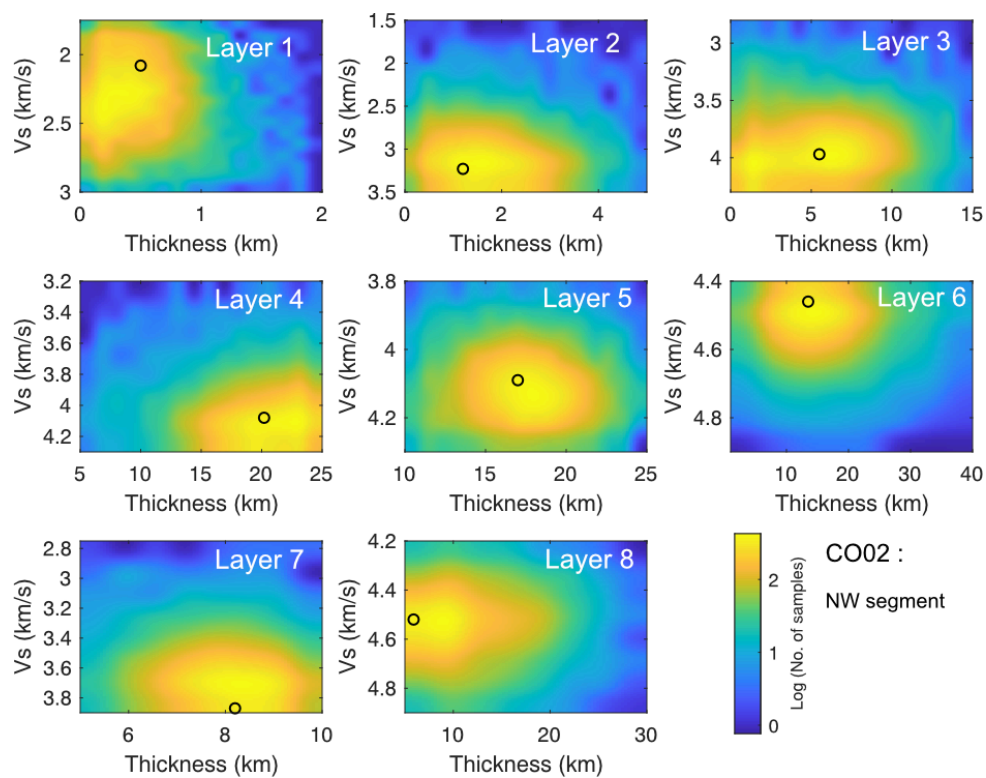


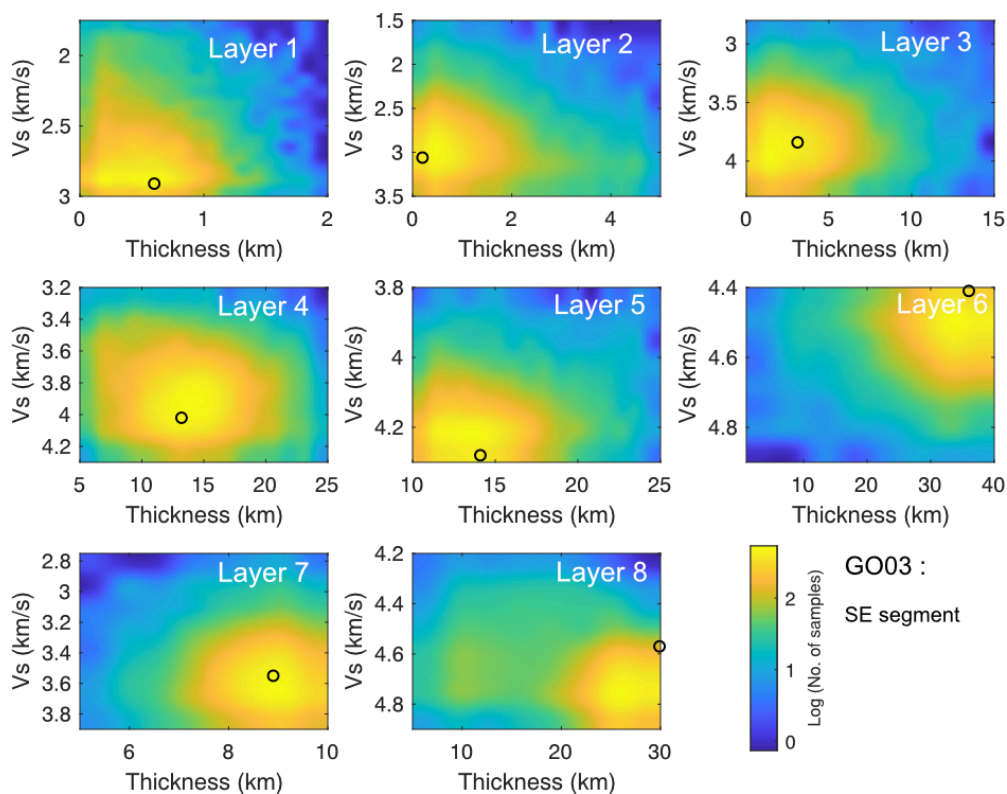
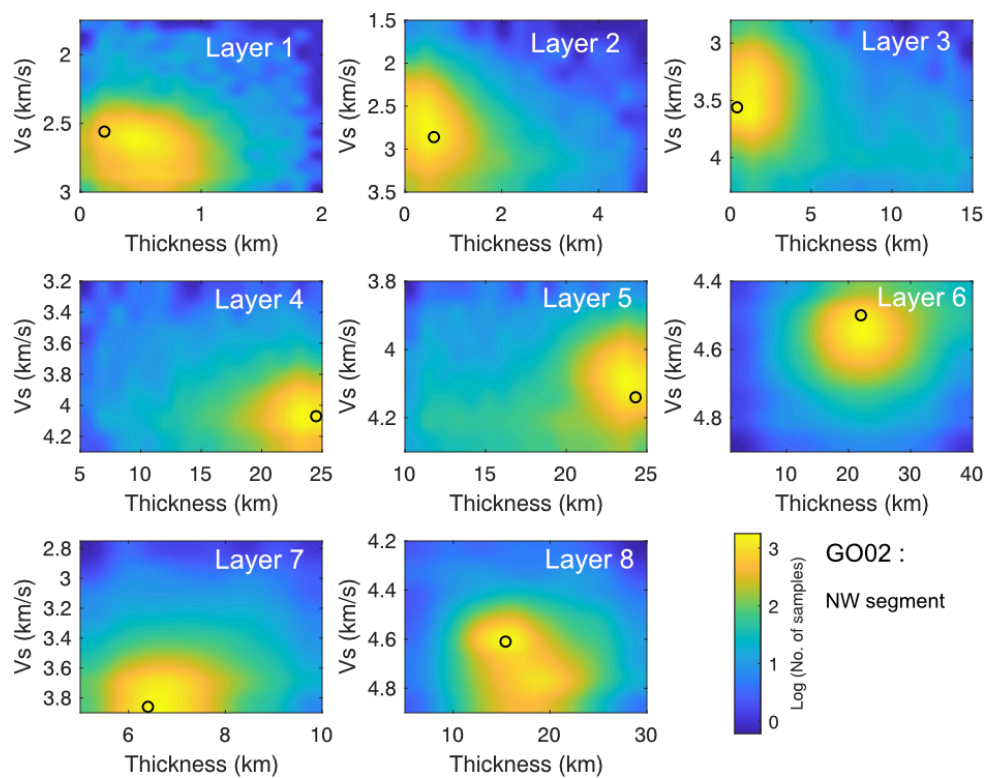
Supplementary 05

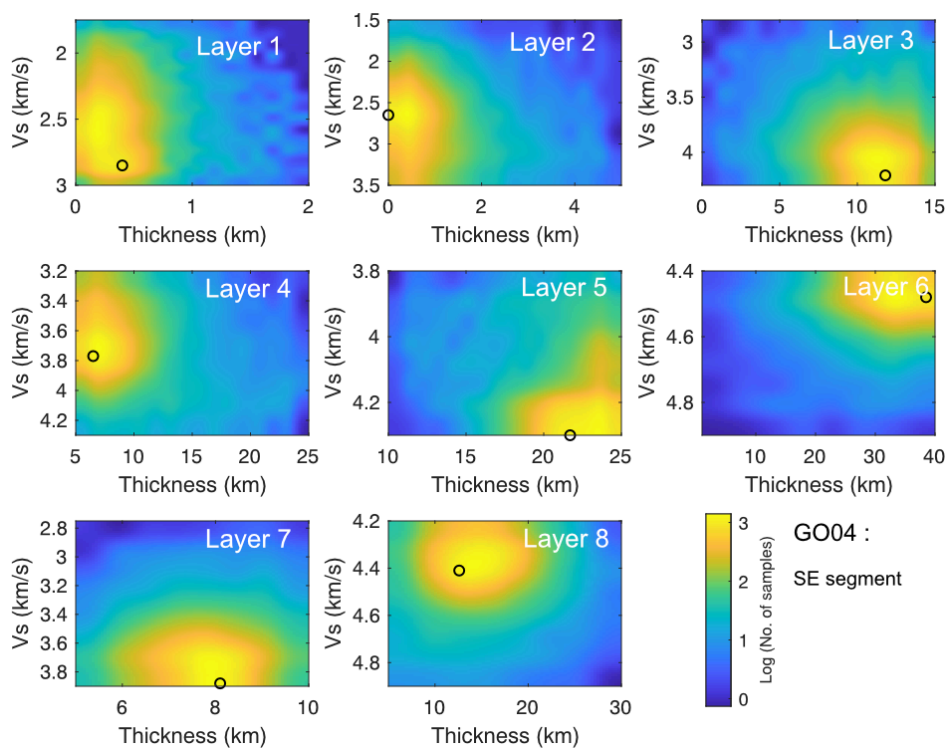
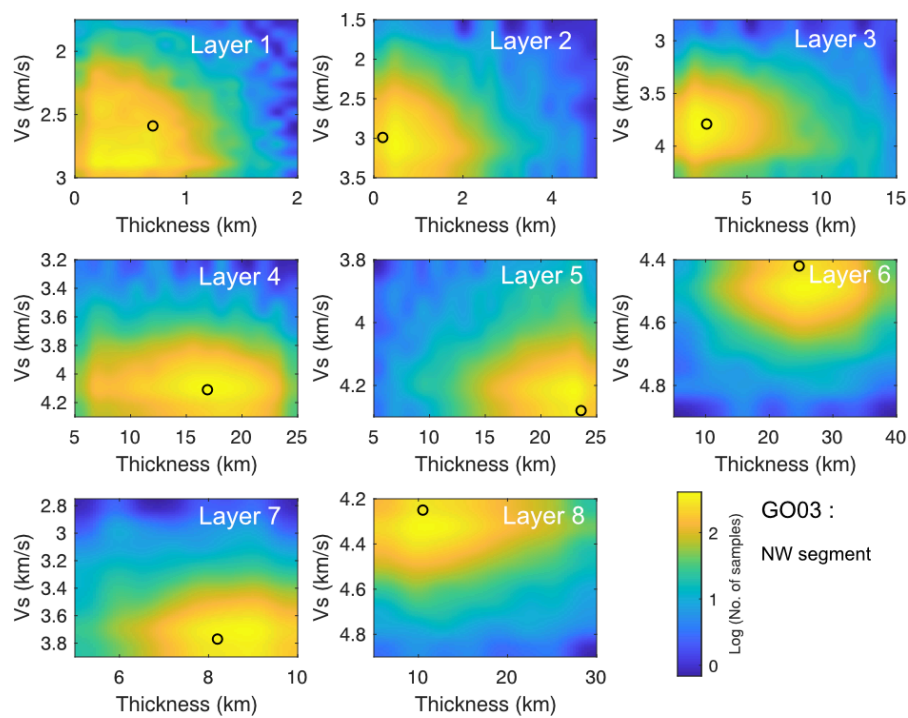
Estimated parameters intensity figures from Neighbourhood Algorithm for all stations. Station name and segment is at the bottom right of each figure. Details of layers are –

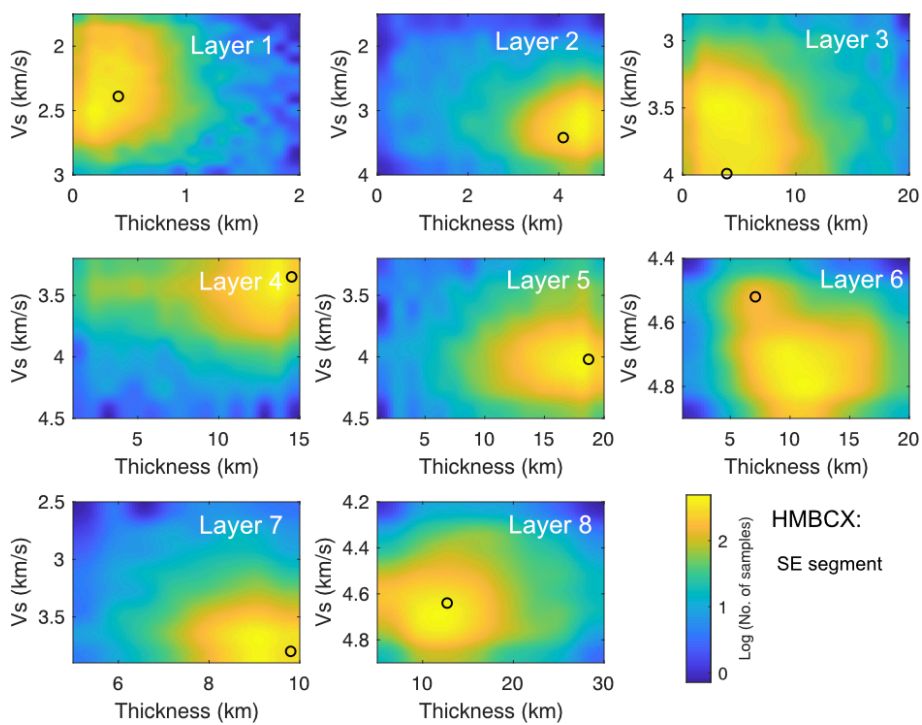
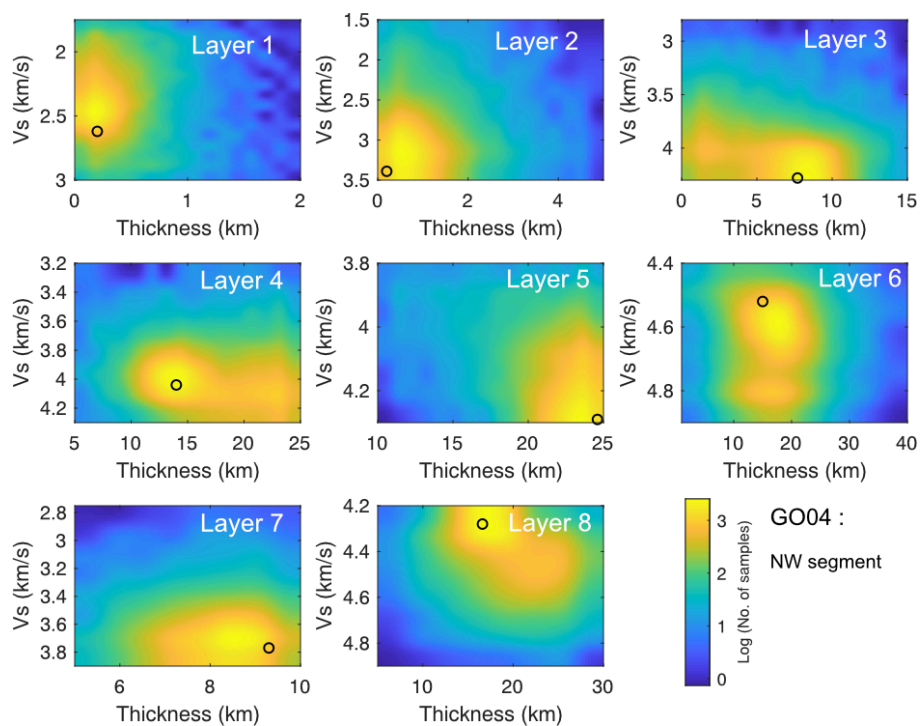
1:sediment, 2:basement, 3: upper crust, 4: middle crust, 5: lower crust, 6: continental mantle, 7: oceanic crust, 8: top layer of oceanic mantle

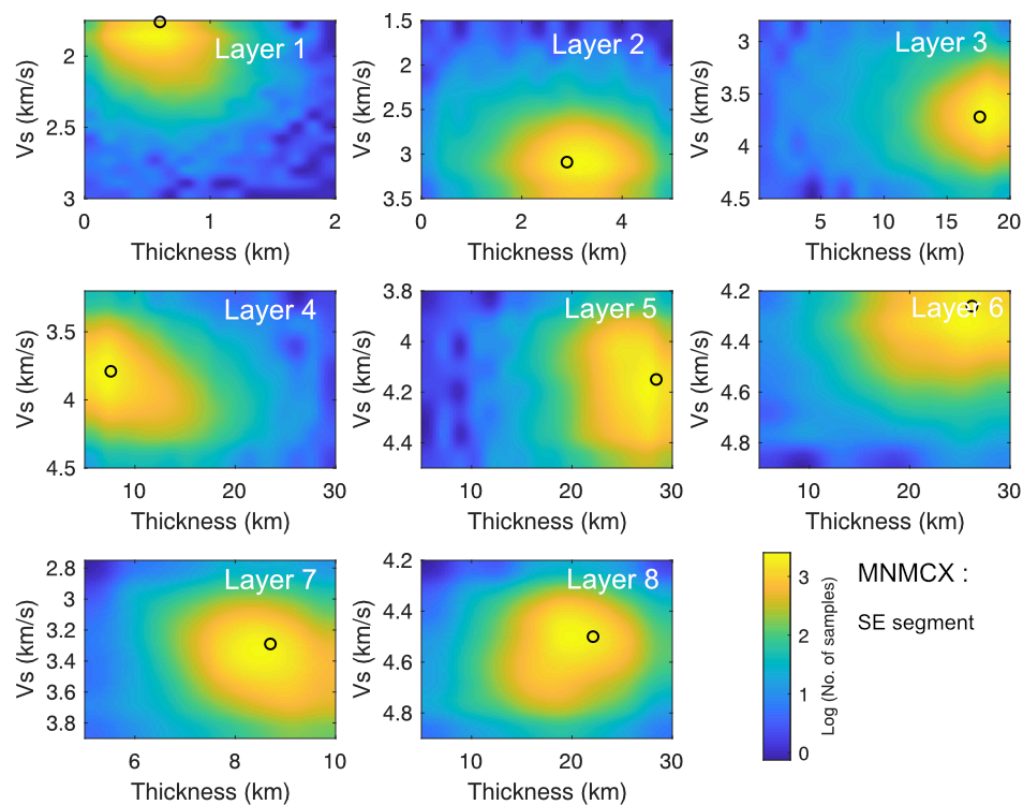
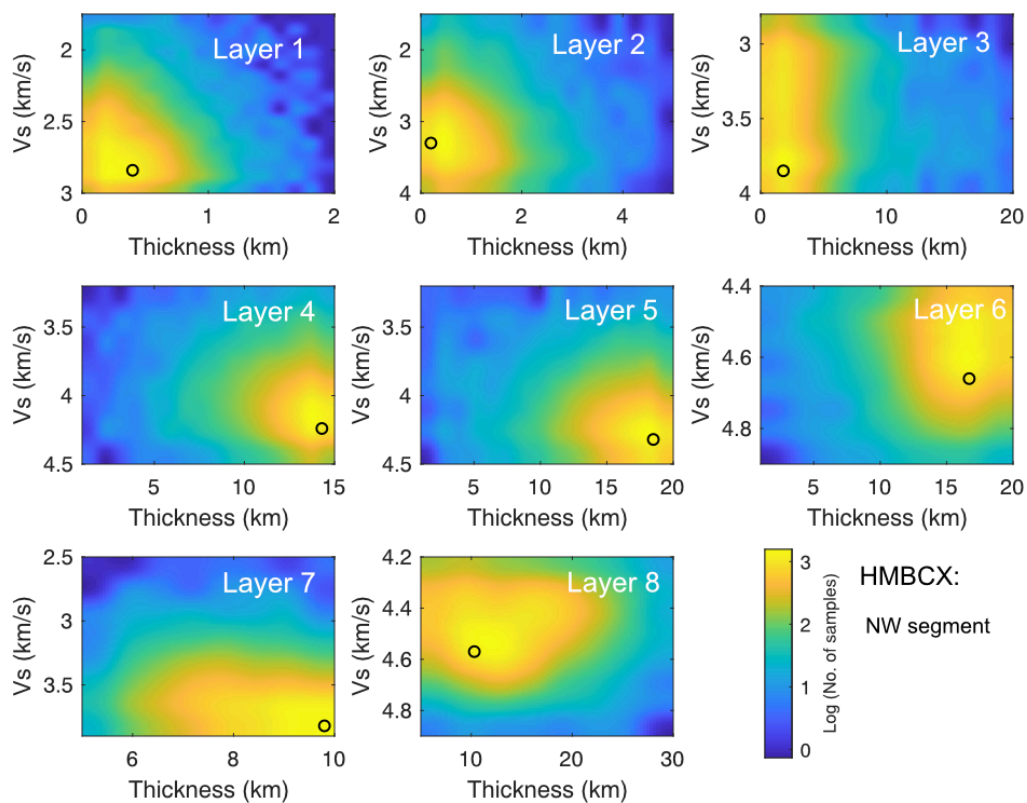


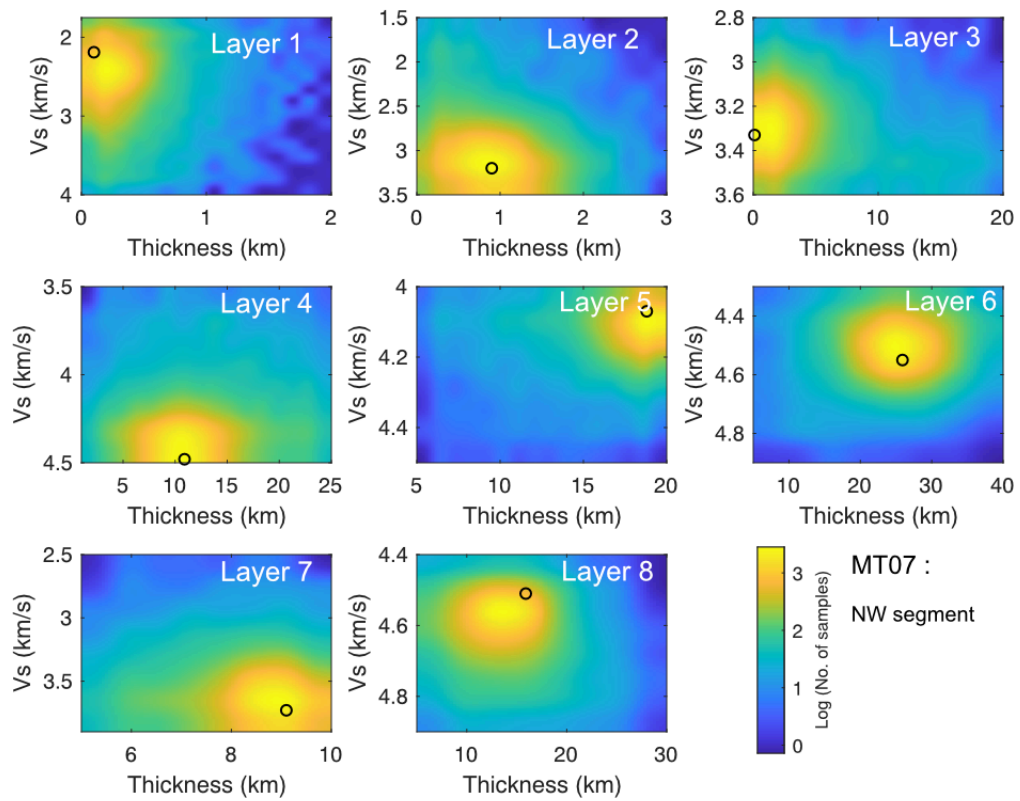
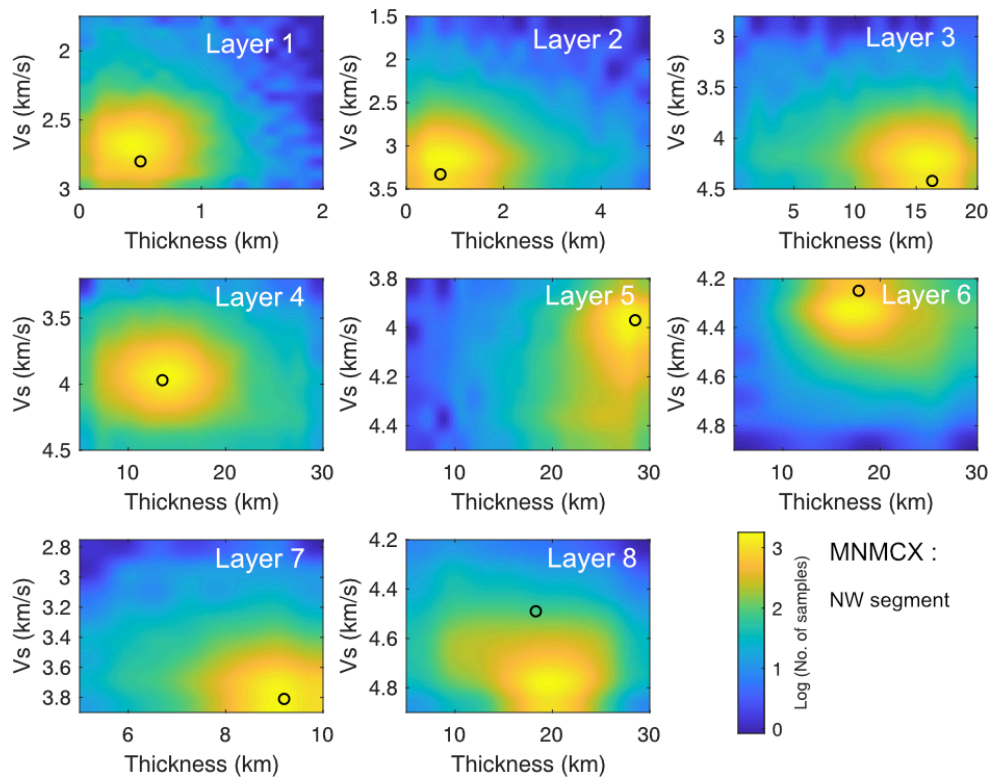


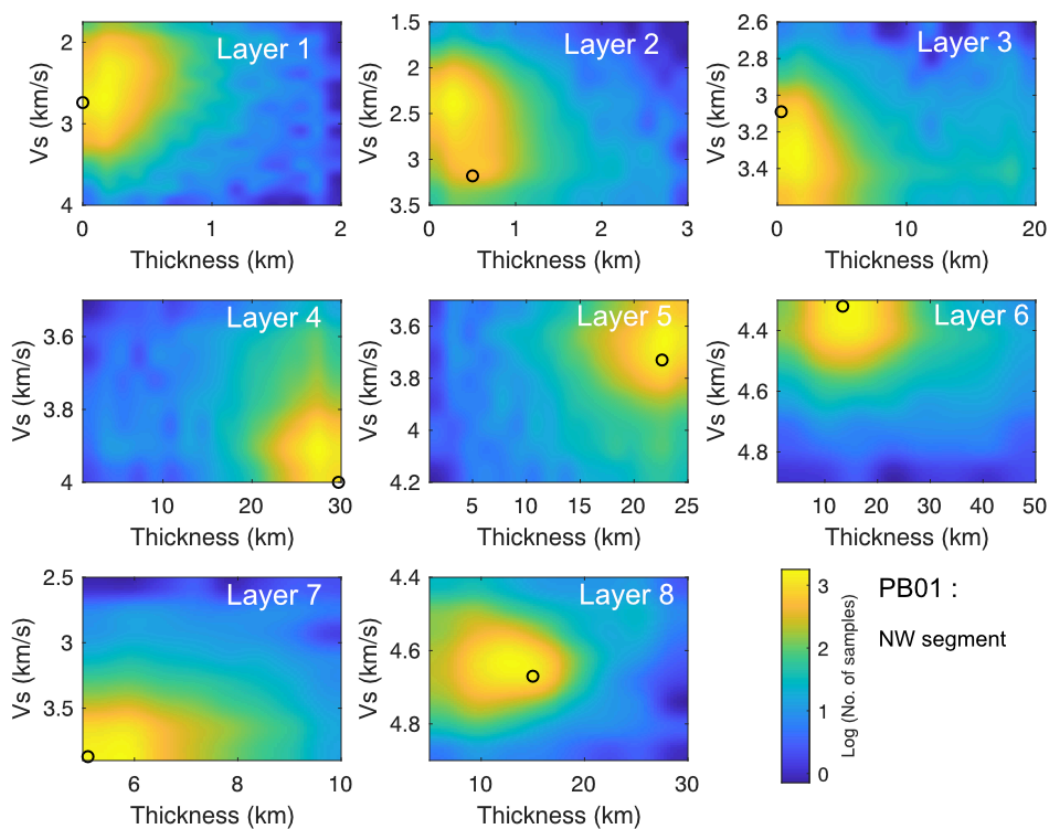
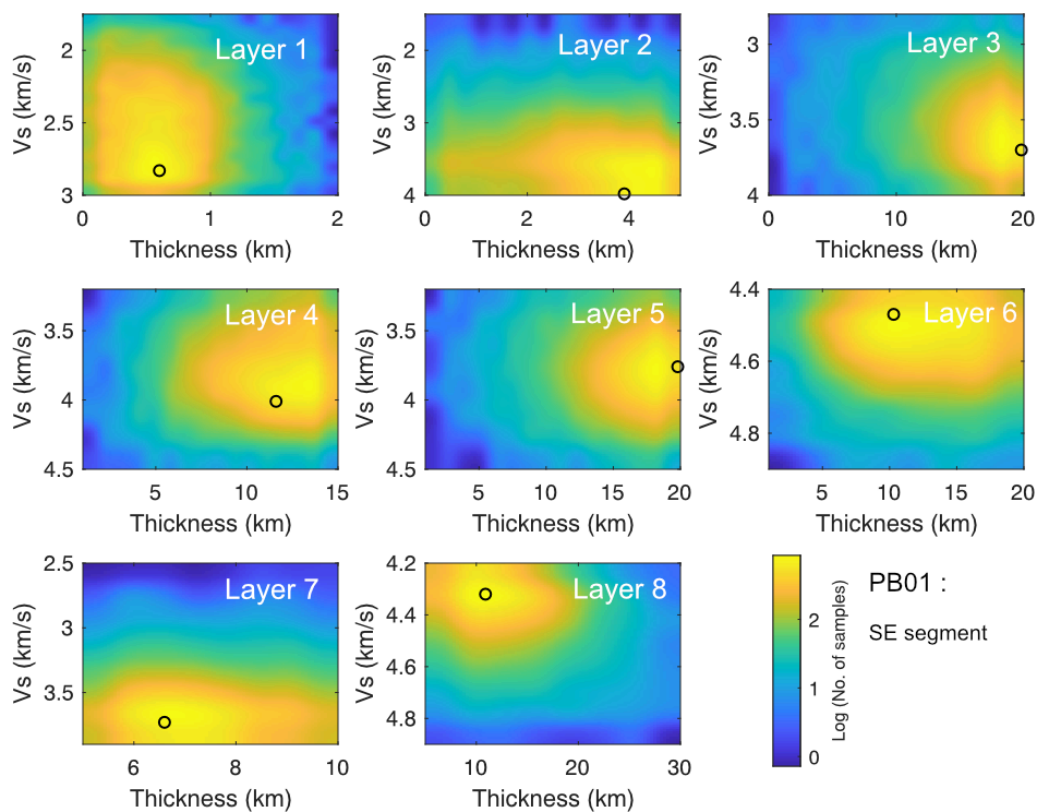


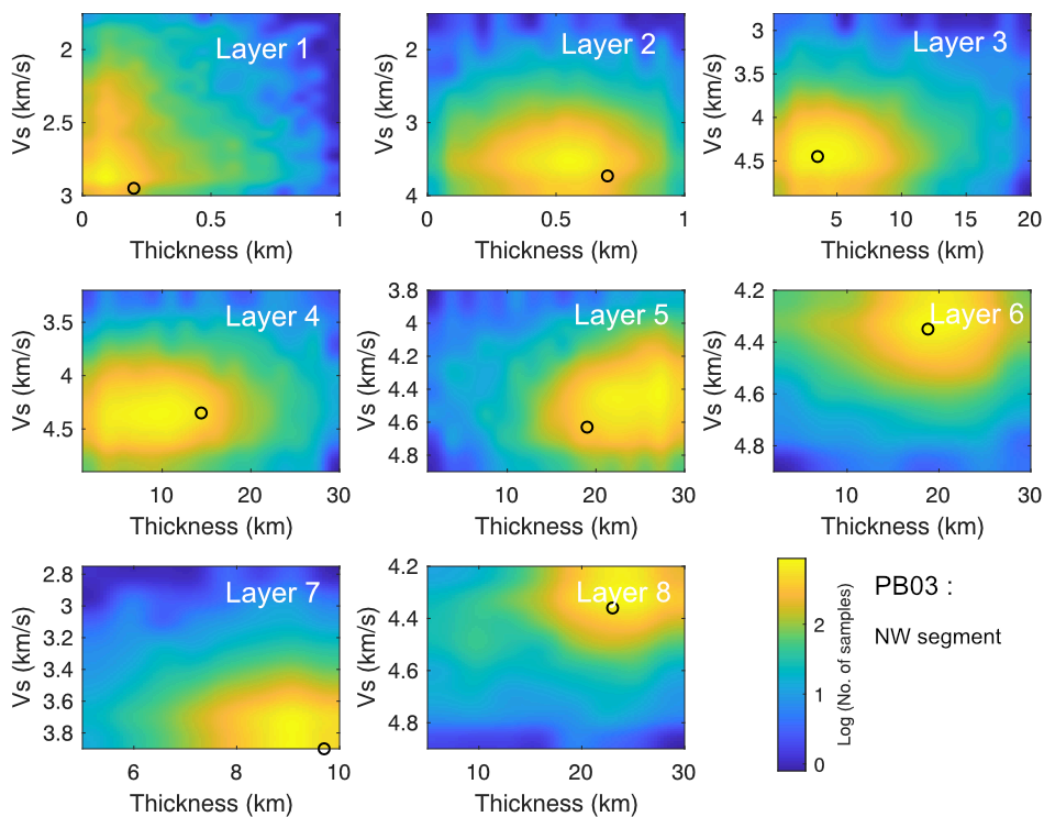
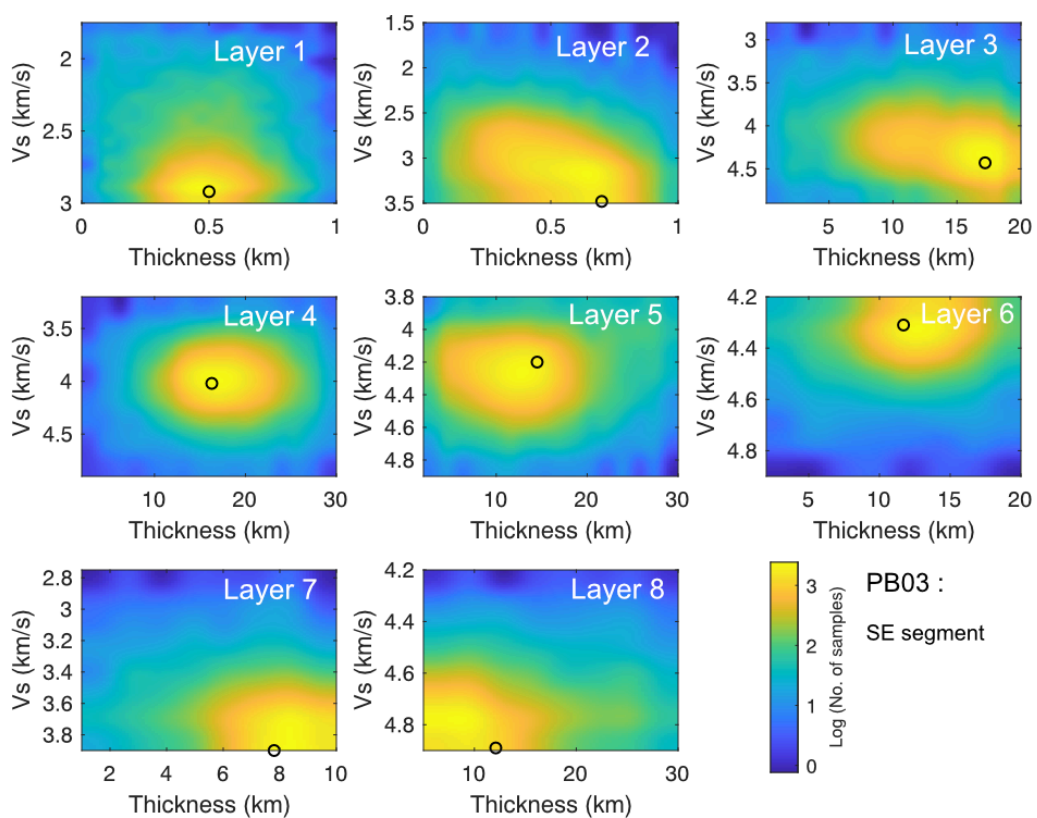


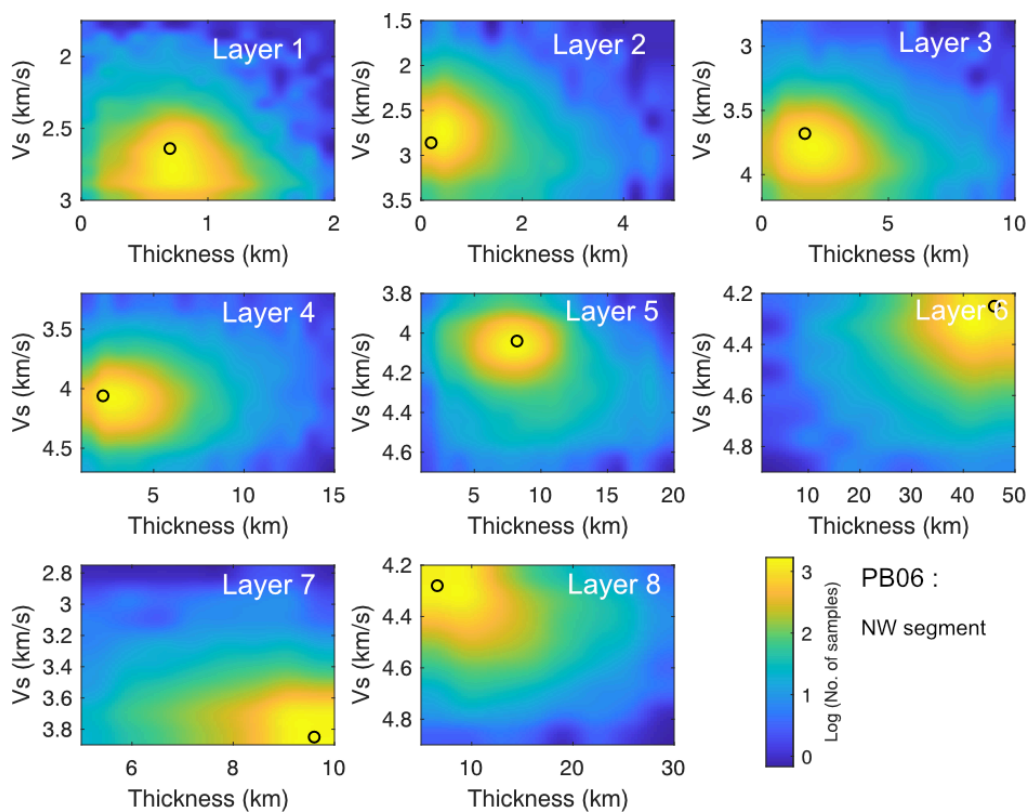
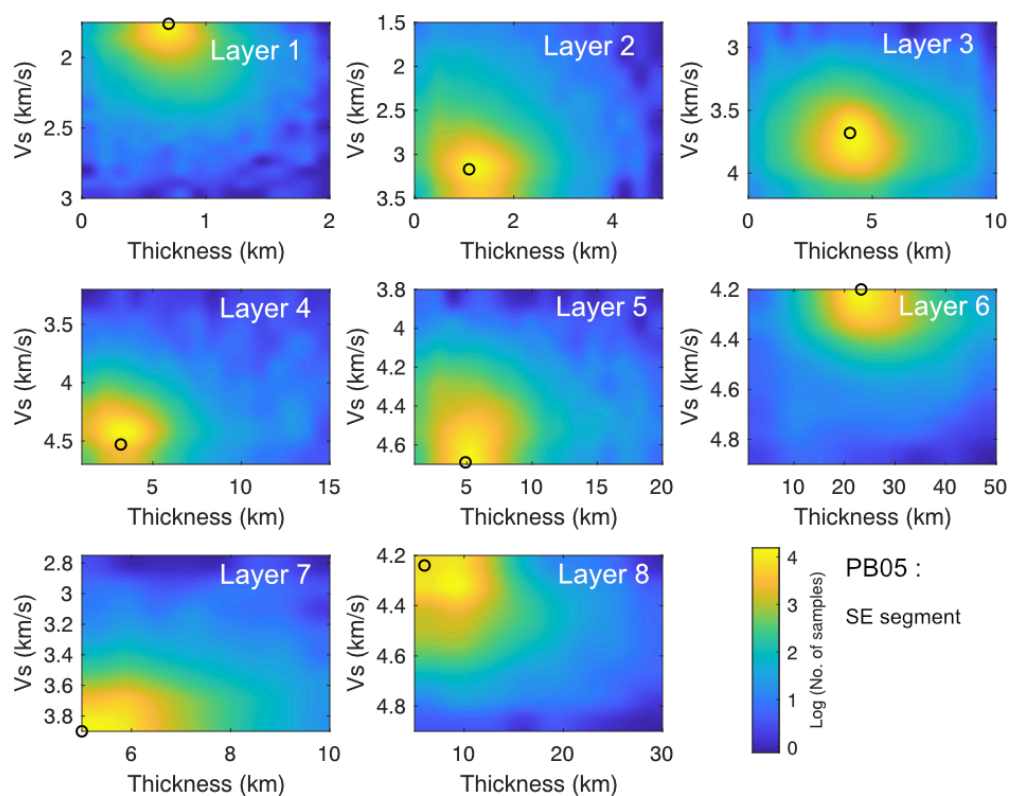


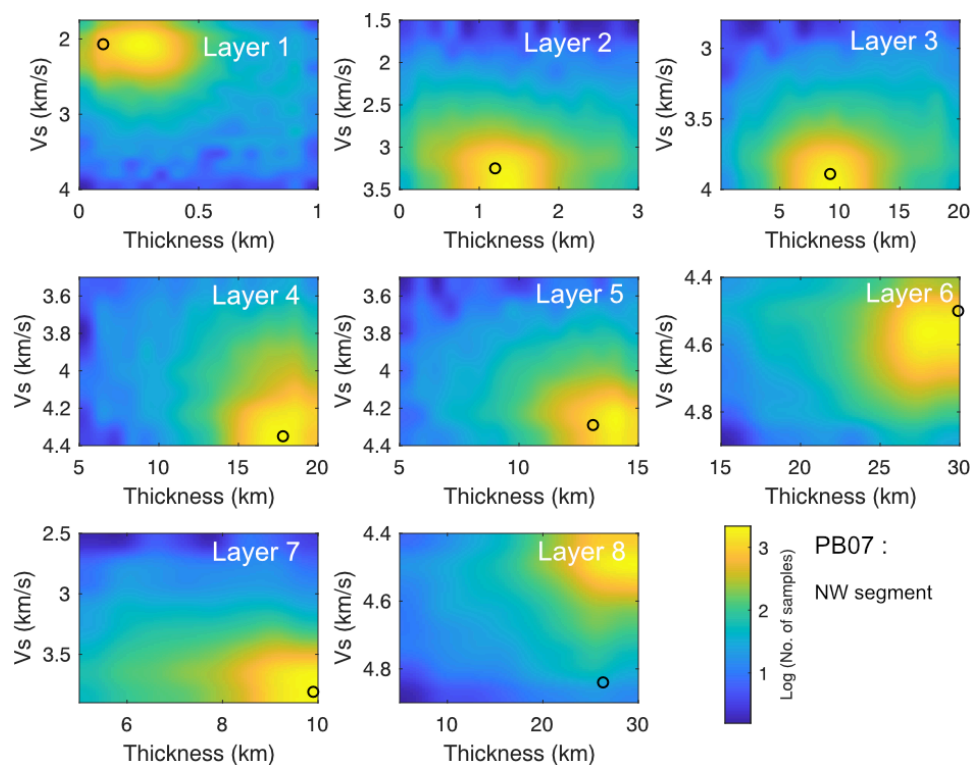
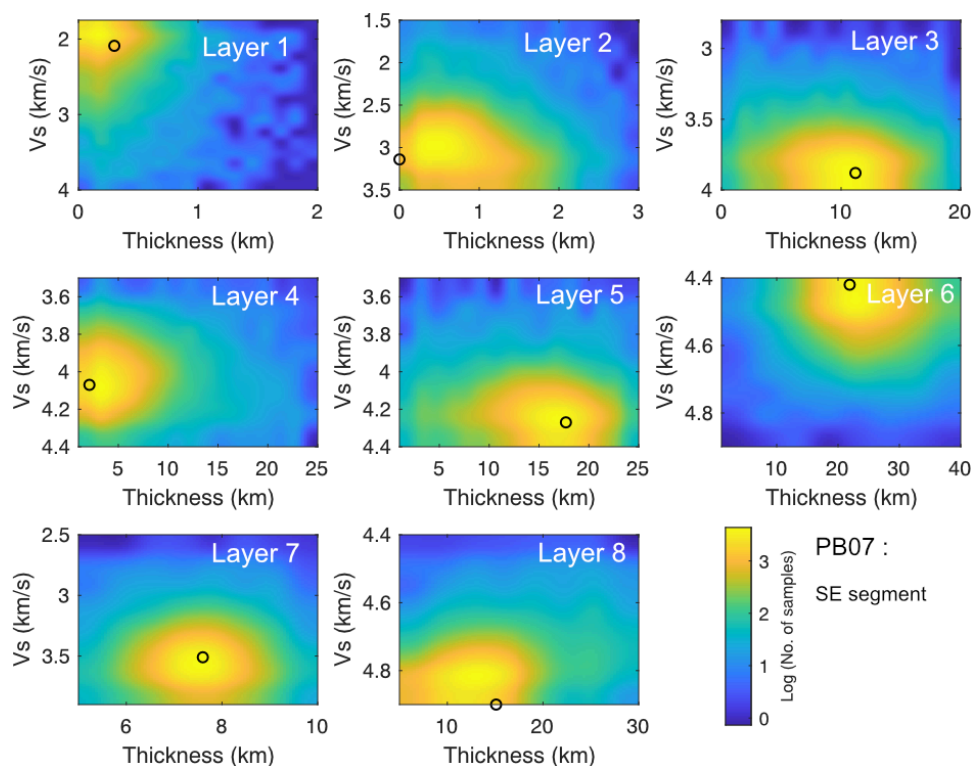


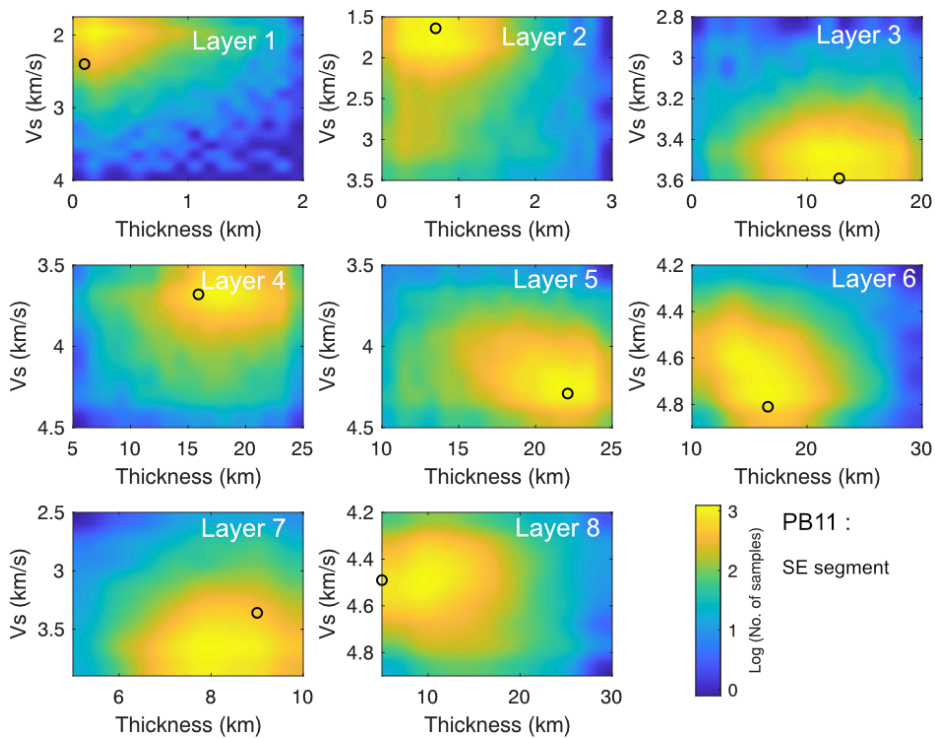
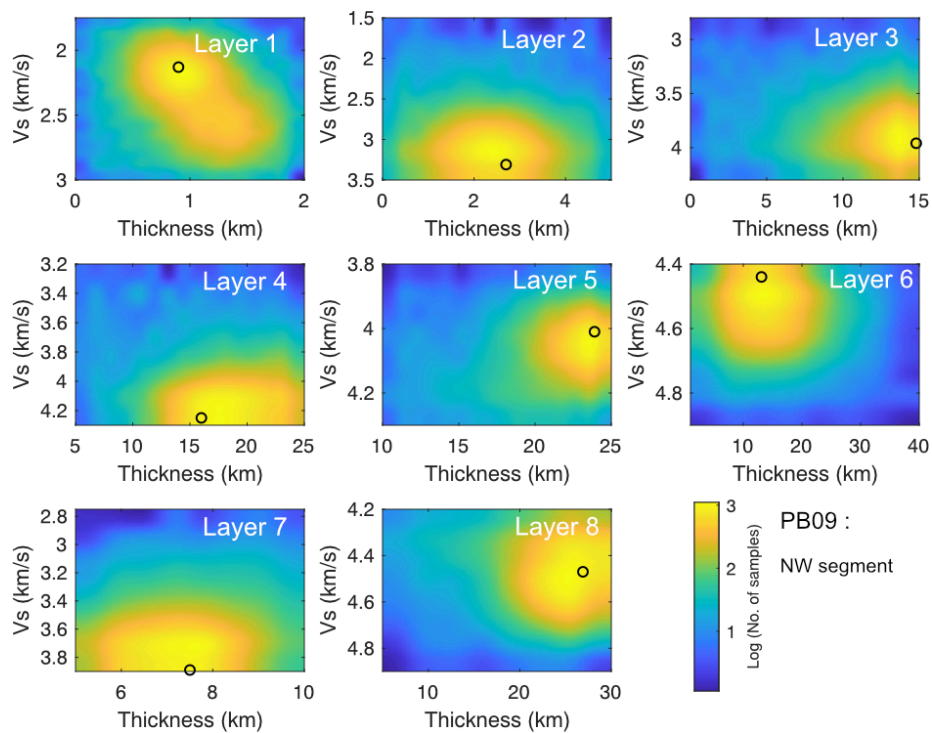


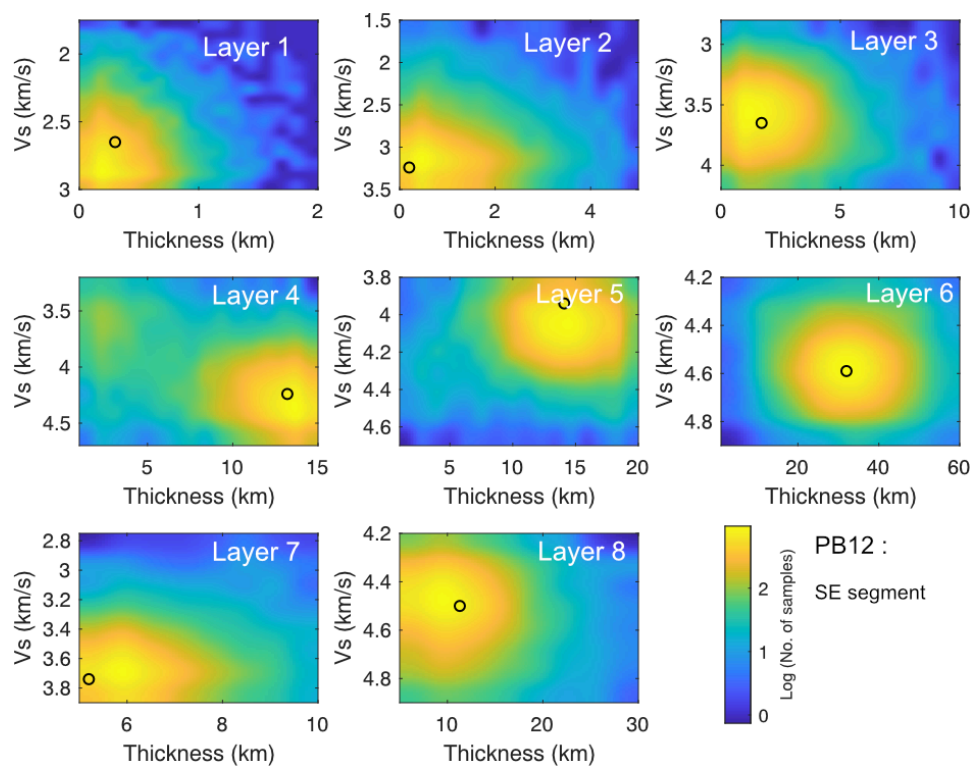


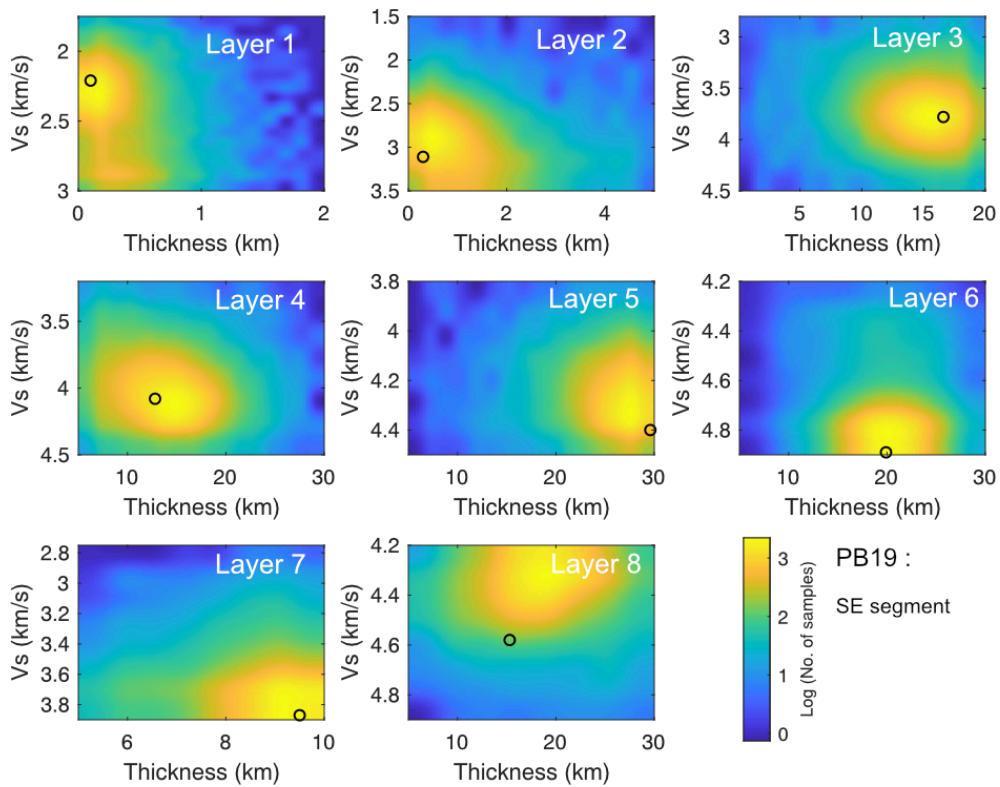
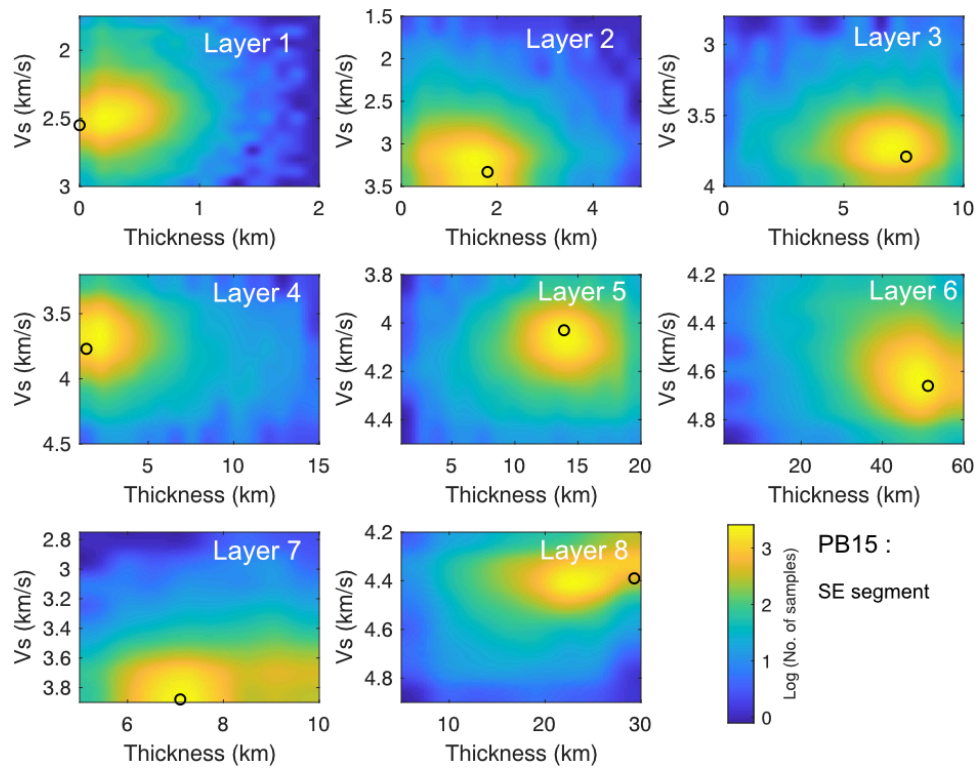


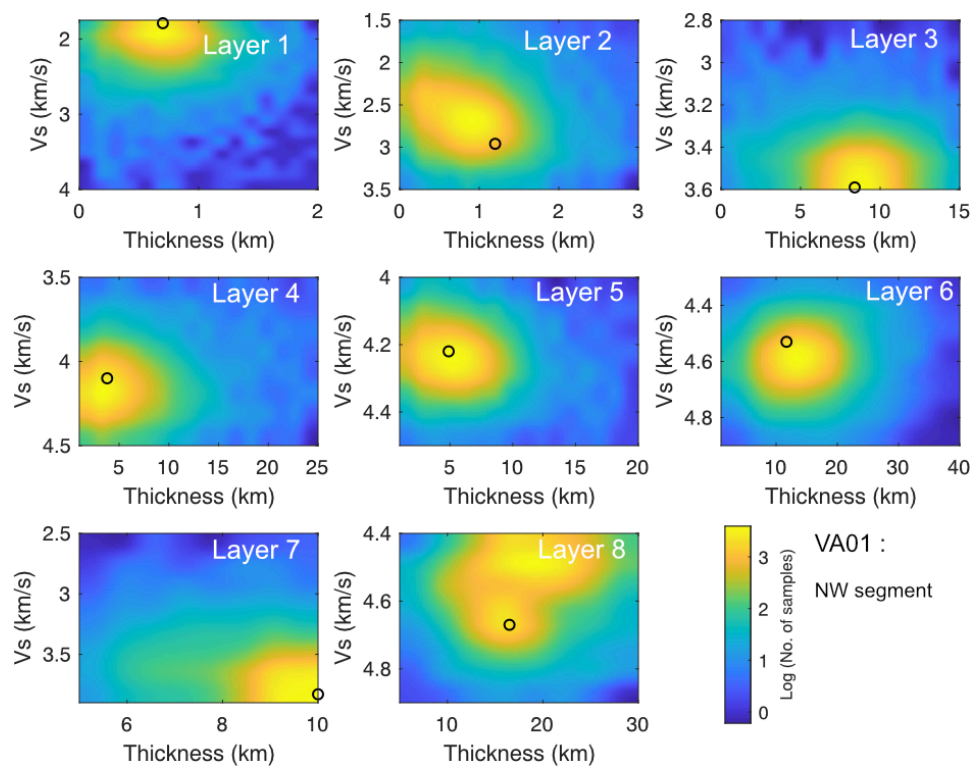
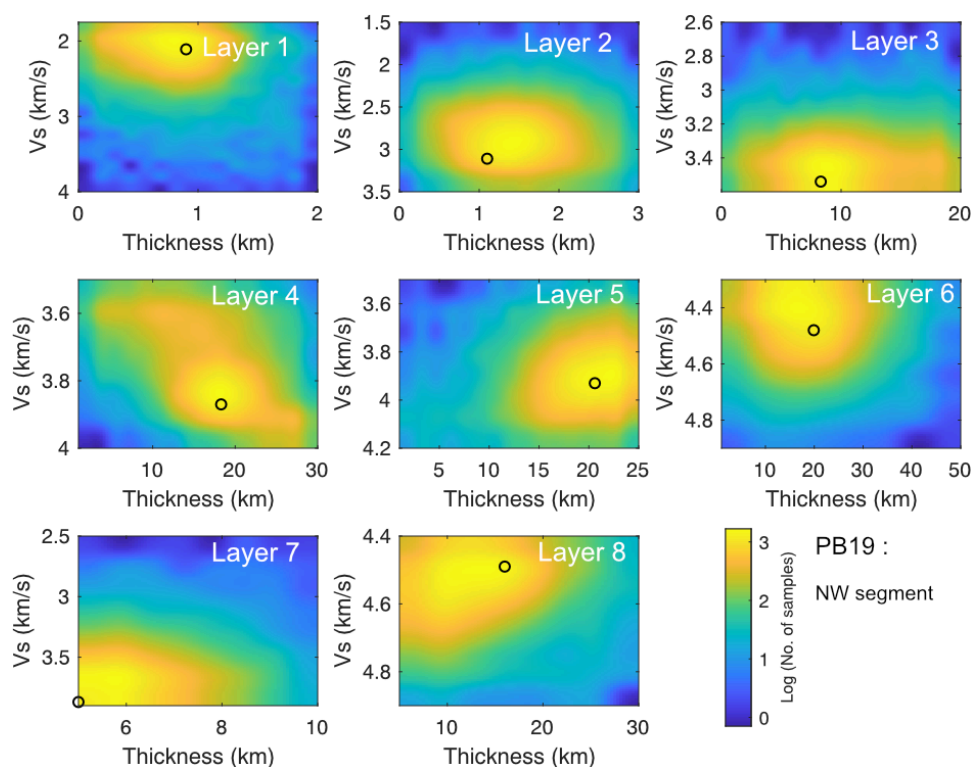


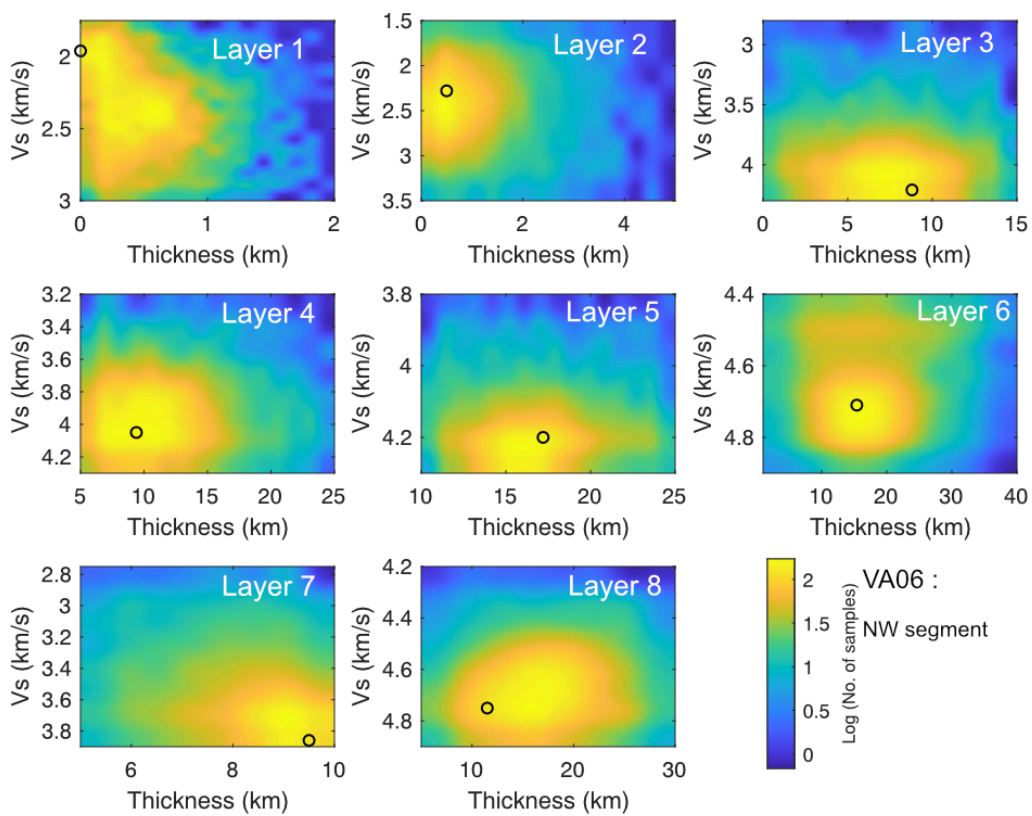
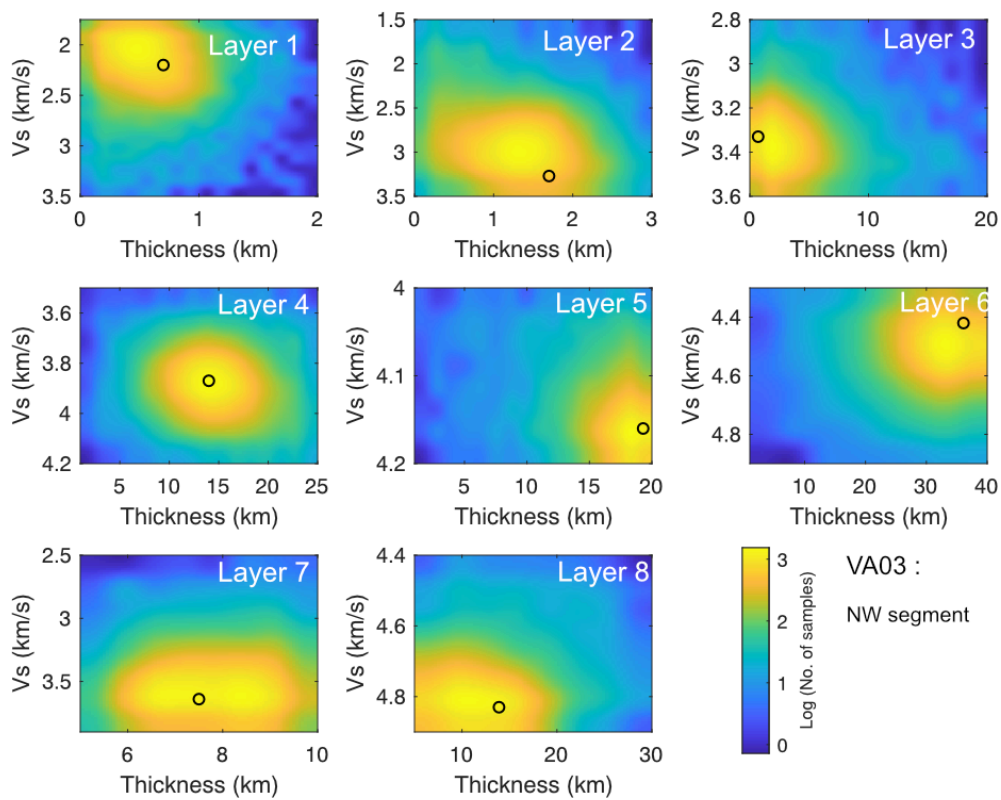








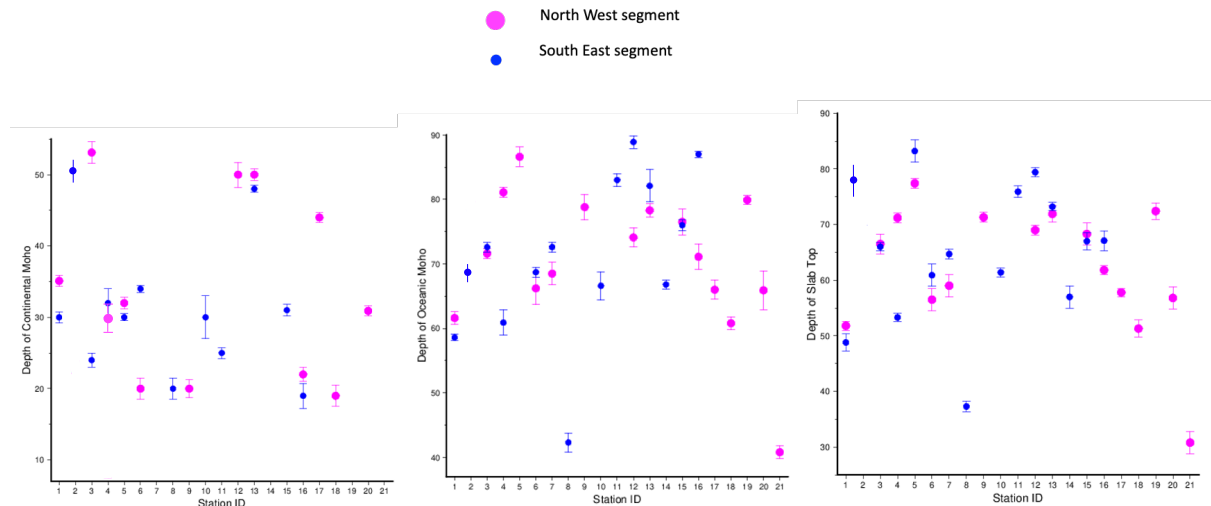




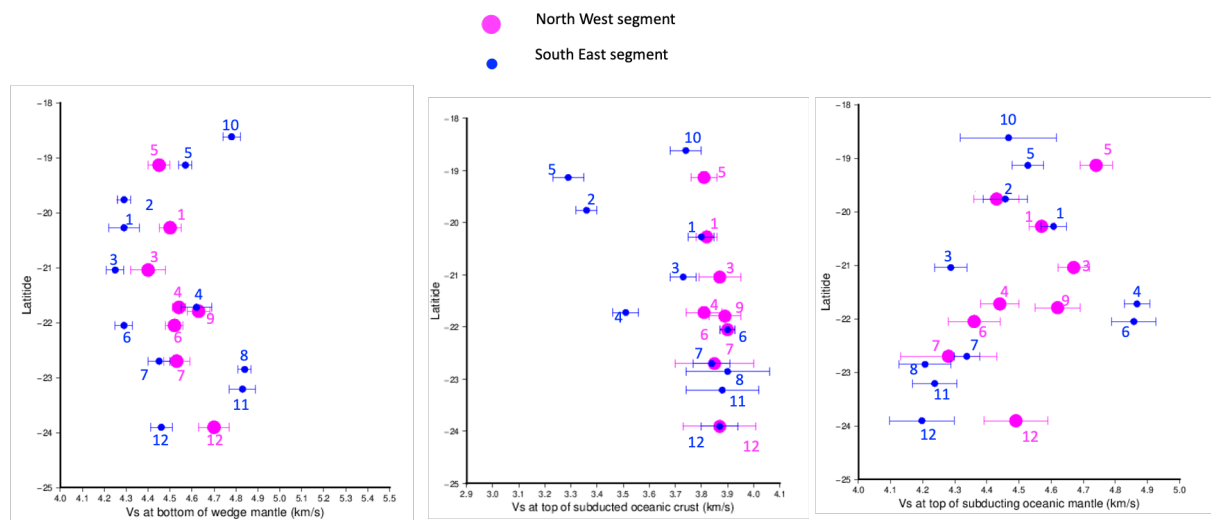
Supplementary 06

Lithospheric parameters with error bounds from bootstrap and changing bound limits

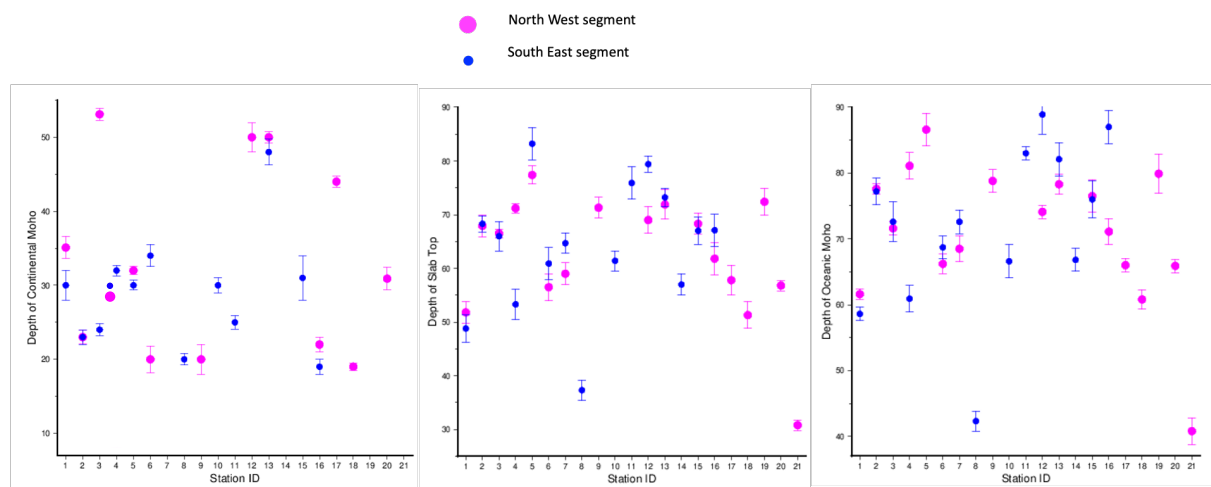
We computed the second way of sensitivity analysis of the different lithospheric parameters, namely the depth of the continental Moho, depth of slab top, depth of oceanic Moho, velocities around the plate interface region (Supplementary 06). The corresponding estimations with the varied range of model input parameters in the Neighbourhood Algorithm noted. This involved changing the bound limits in the Neighbourhood Algorithm inversion (range of the thickness, shear velocities at the top and bottom of the layers) and performing the inversion for the data sets.



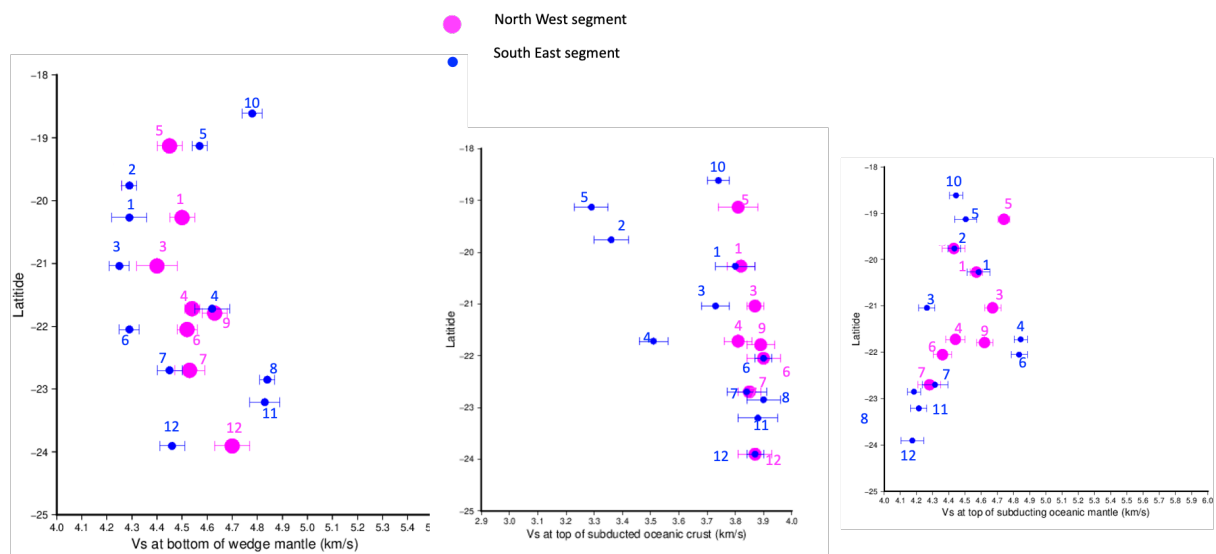
Bootstrap



Bootstrap



Changing bound limits



Changing bound limits