Supplementary Material for "Application of Neural Networks for Estimating Coseismic Slip Distribution Using Synthetic GNSS Data"

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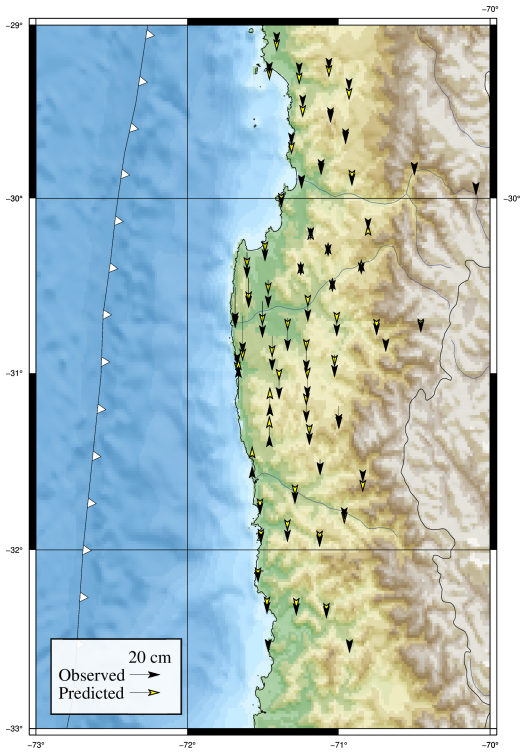

Figure S1: Vertical displacement vectors for Illapel: predicted (yellow) and observed (black).

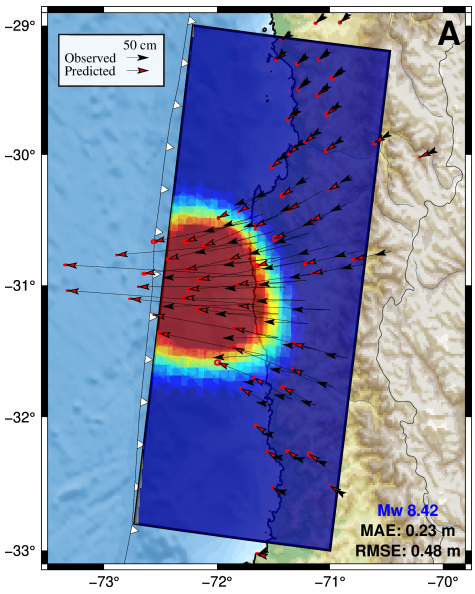

Figure S2: *
(a) ReLU

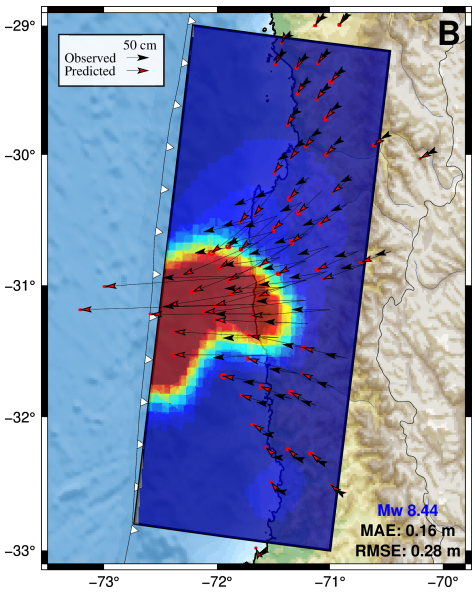

Figure S3: *
(b) SELU

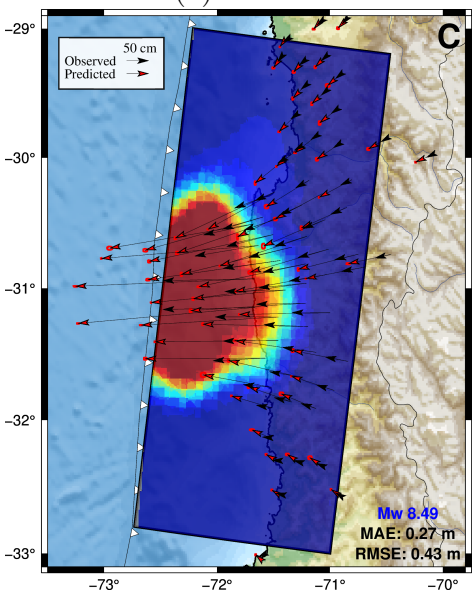

Figure S4: *
(c) Swish

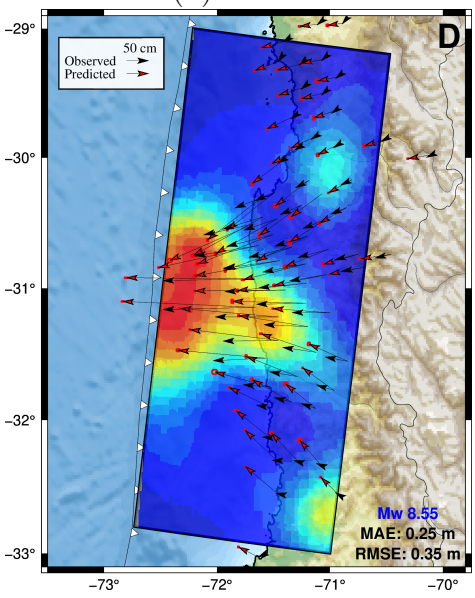

Figure S5: *
(d) Mish

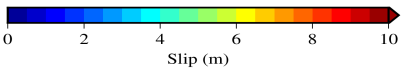

Figure S6: Impact of different activation functions on the hidden layer: (a) ReLU, (b) SELU, (c) Swish, (d) Mish. Red vectors: predictions, black vectors: data.

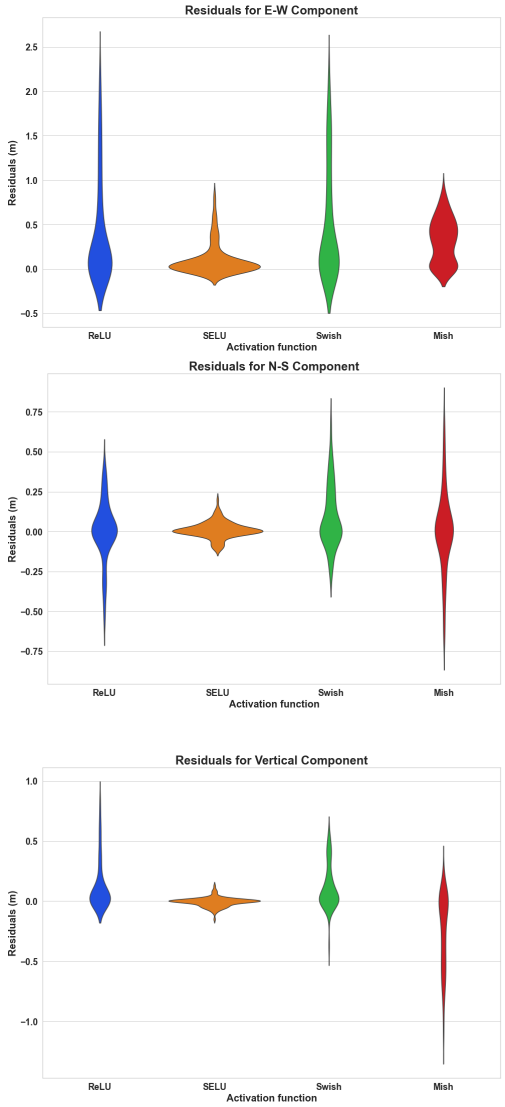

Figure S7: Residuals with different activation functions for: up (E-W component), middle (N-S component), and above (Vertical component).

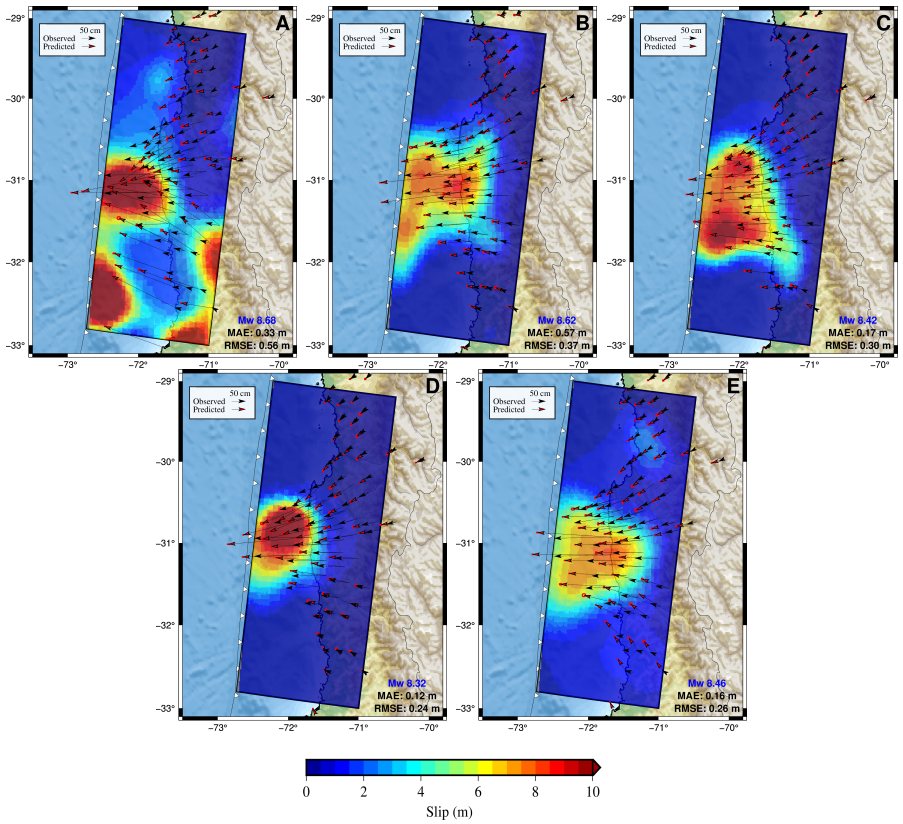

Figure S8: Impact of dropout rates on slip distribution: (a) 10%, (b) 20%, (c) 30%, (d) 40%, (e) 50%

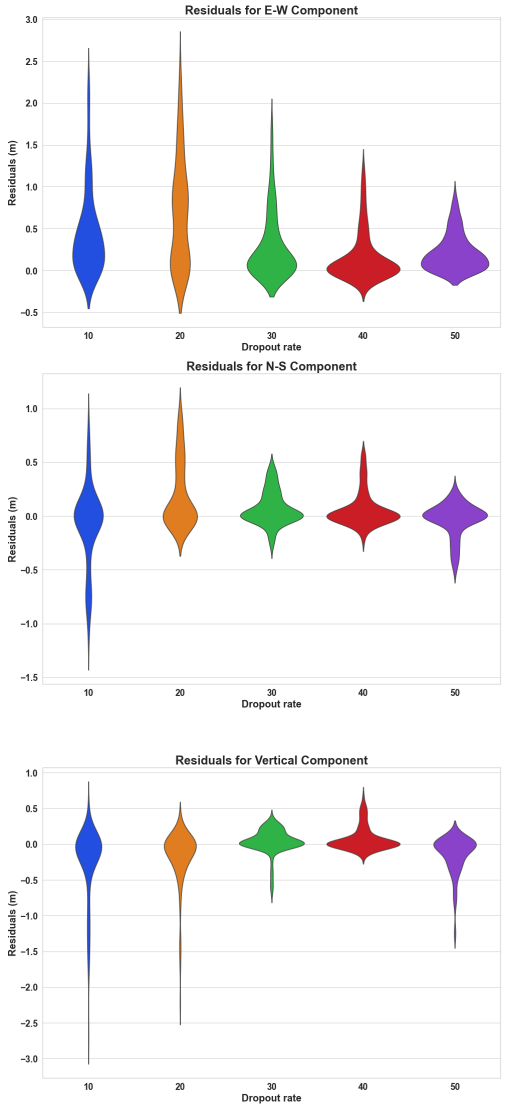

Figure S9: Residuals with varying dropout rates for: up (E-W component), middle (N-S component), and above (Vertical component).

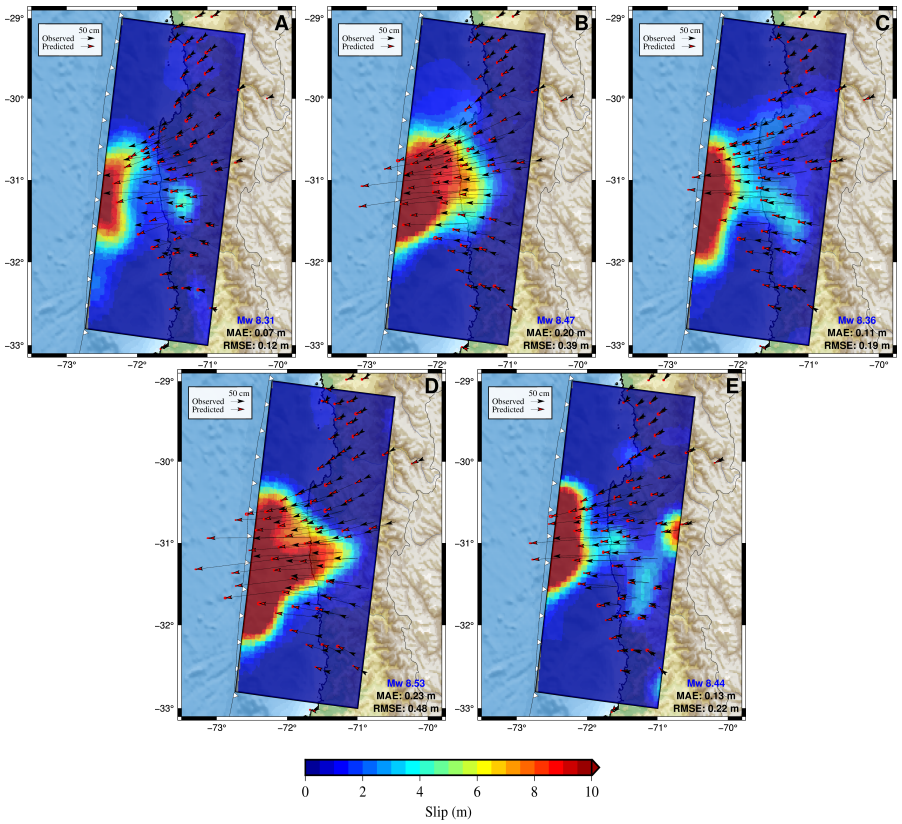

Figure S10: Impact of training epochs on slip distribution: (a) 20, (b) 30, (c) 50, (d) 80, (e) 100 epochs.

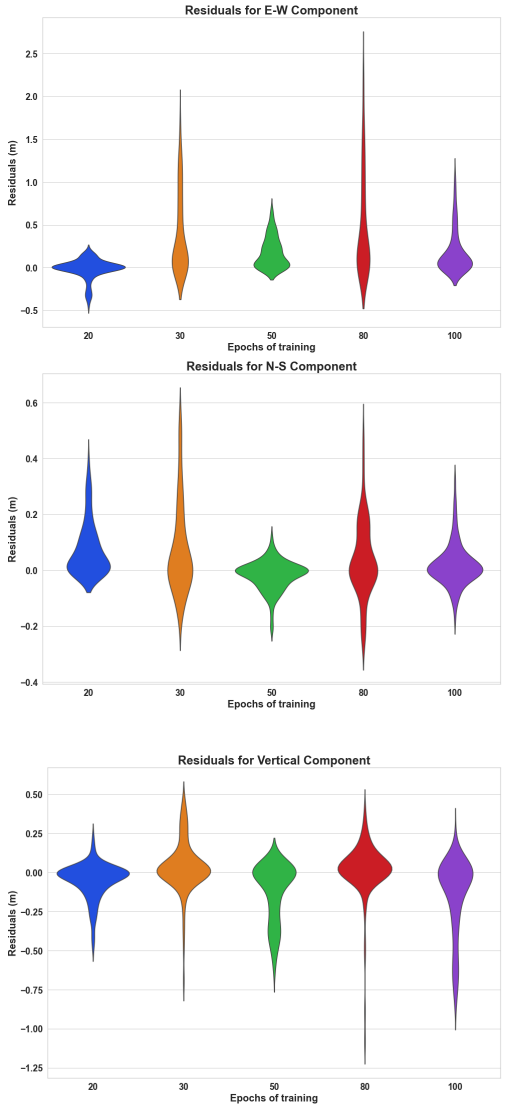

Figure S11: Residuals for different epochs displayed as: up (E-W component), middle (N-S component), and above (Vertical component).

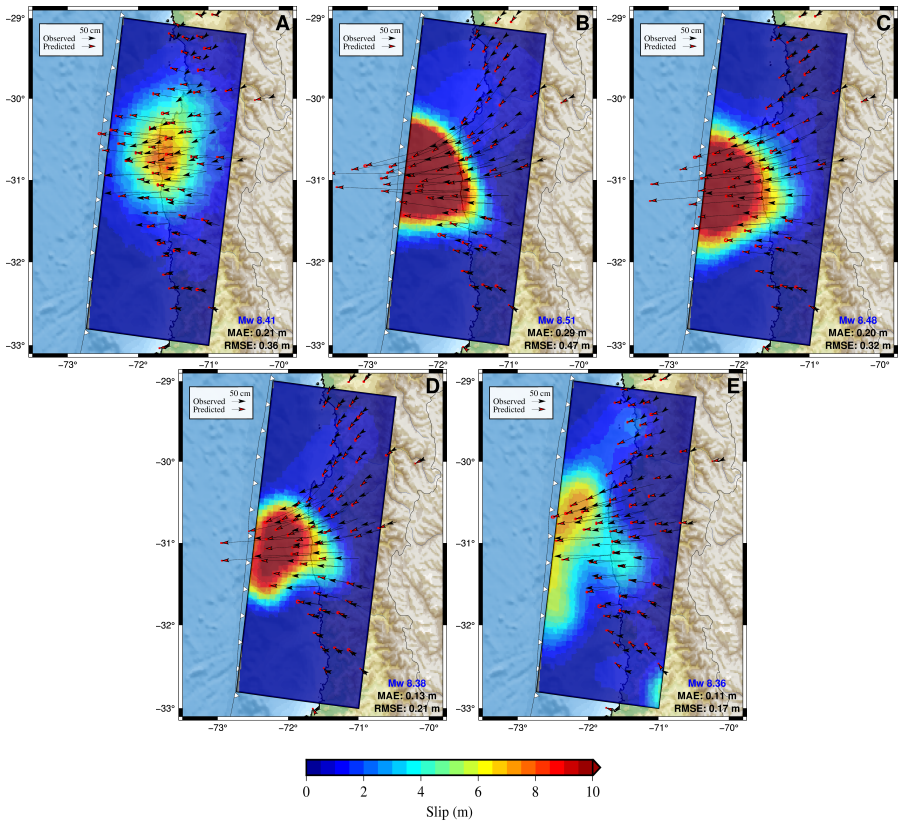

Figure S12: Impact of synthetic cases on slip distribution: (a) 5,000, (b) 15,000 (c) 50,000, (d) 100,000, (e) 200,000 cases.

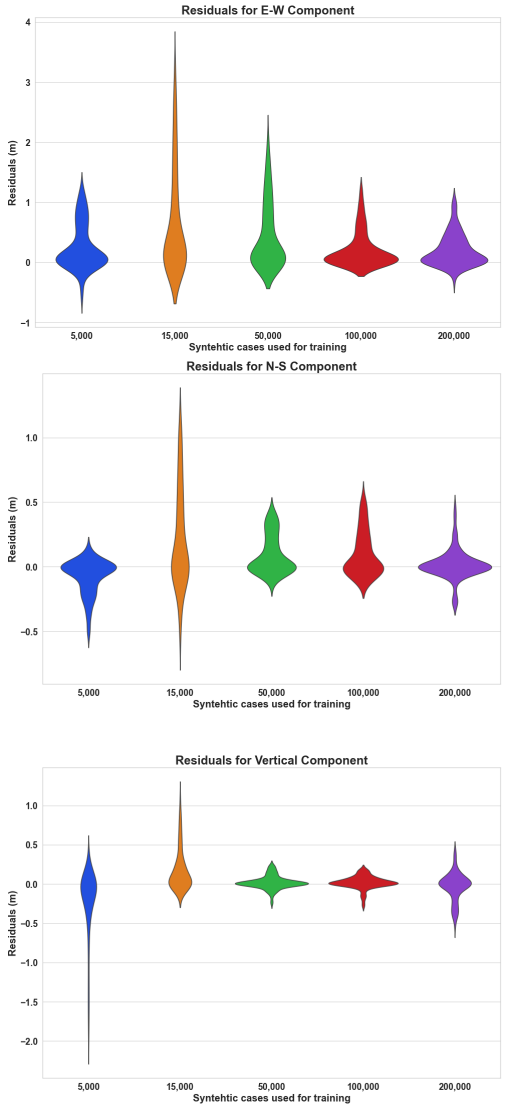

Figure S13: Residuals with different numbers of synthetic cases used for training: up (E-W component), middle (N-S component), and above (Vertical component).

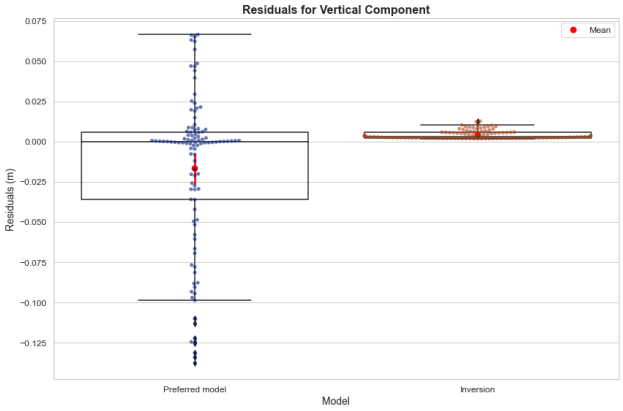

Figure S14: Comparison of vertical residuals: preferred model vs. least squares inversion.

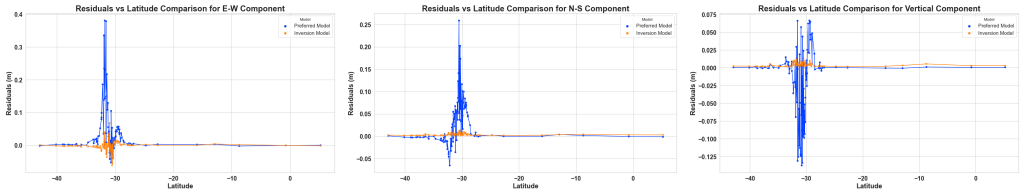

Figure S15: Comparison of residuals in terms of latitude: preferred model vs least squares inversion: left (E-W), center (N-S), right (Vertical component)