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Supporting Information for

The 11th January 2018, Mw 6.0 Bago-Yoma, Myanmar earthquake: A shallow thrust event within the deforming Bago-Yoma Range

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Contents of this file

Introduction

This file includes the velocity model used in the earthquake relocation and CAP focal mechanism inversion, InSAR processing steps, the mainshock grid search results as an example for the earthquake epicenter relocation, complete CAP focal mechanism and depth inversion results for the mainshock and four aftershocks highlighted in the main text, static slip inversion results for the NE-dipping fault, and a record section of the mainshock waveforms for stations up to 300 km.

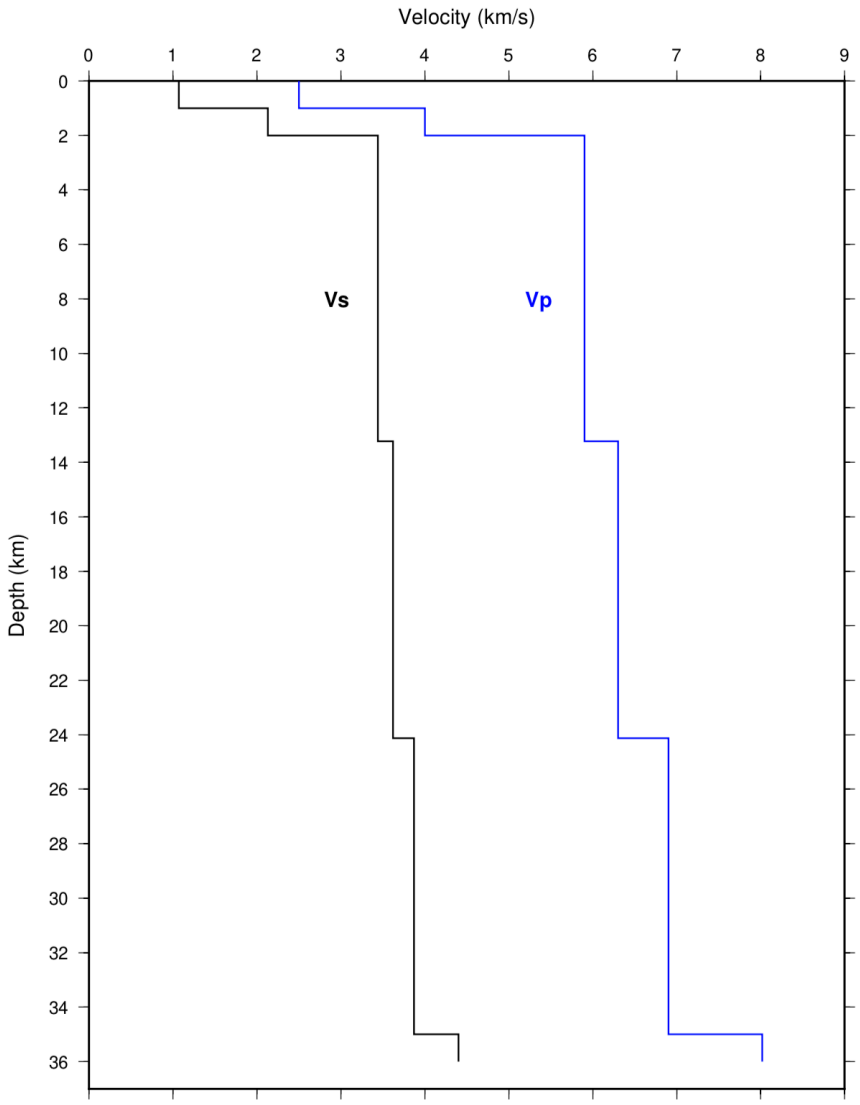

Figure S1. 1D velocity model from CRUST1.0 at the mainshock source location (18.5˚N, 96.5˚E).

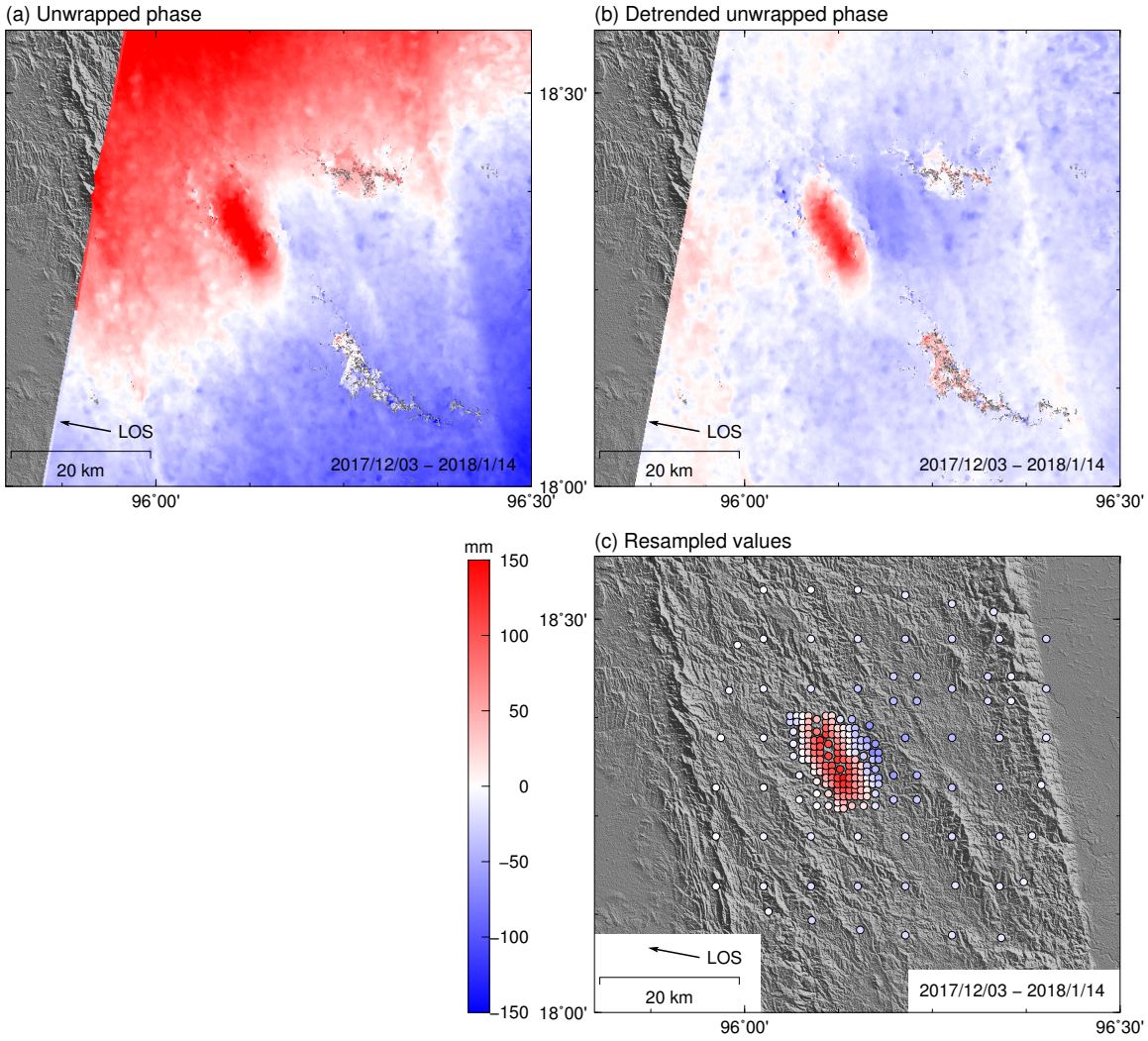

Figure S2. InSAR processing steps. (a) Filtered, unwrapped phase from ALOS-2 Path 41, Frame 3250, subswath 3. (b) Unwrapped phase after gaussian highpass filtering at 100 km wavelength and removing the topographically correlated atmospheric delay. (c) Unwrapped, detrended phase after quadtree resampling with a variance threshold of 12mm.

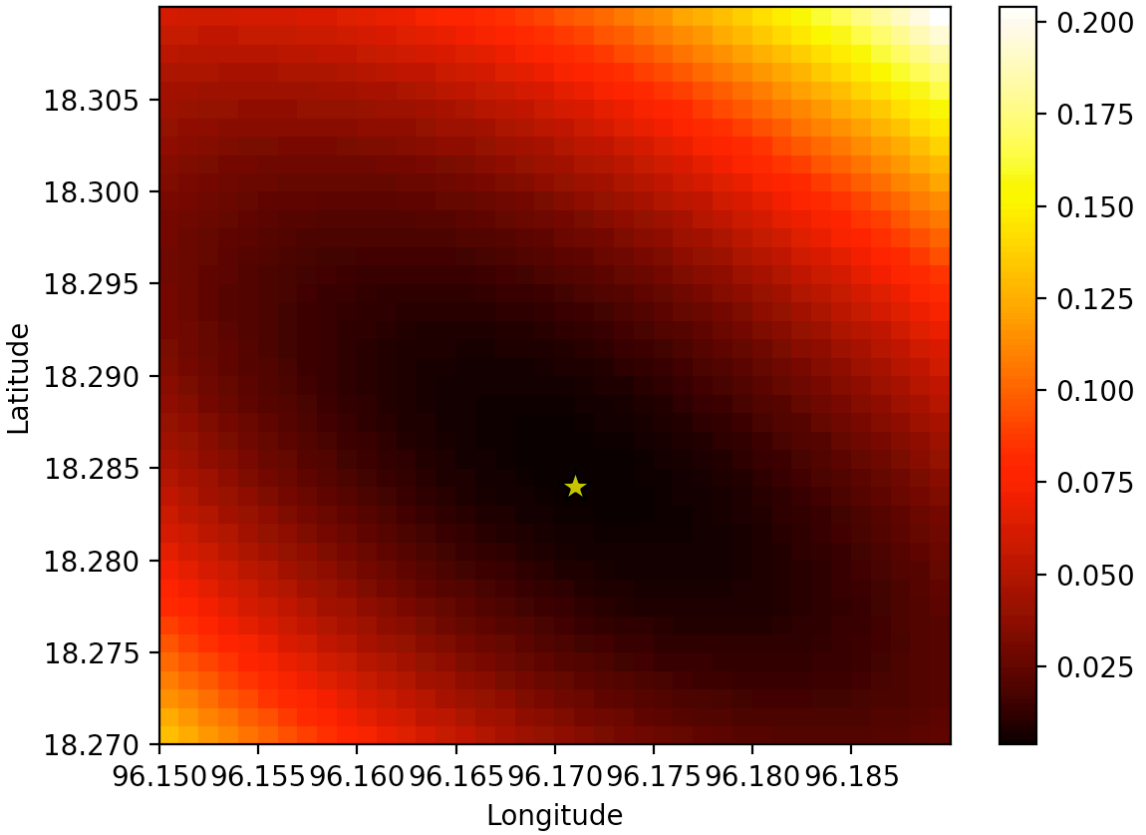

Figure S3. Plot of error values (L2-norm) within the grid search area. Yellow star shows best epicenter with minimum error. Error values indicate that the location uncertainty is largest in the NW-SE direction, due to the distribution of stations used in the grid search.

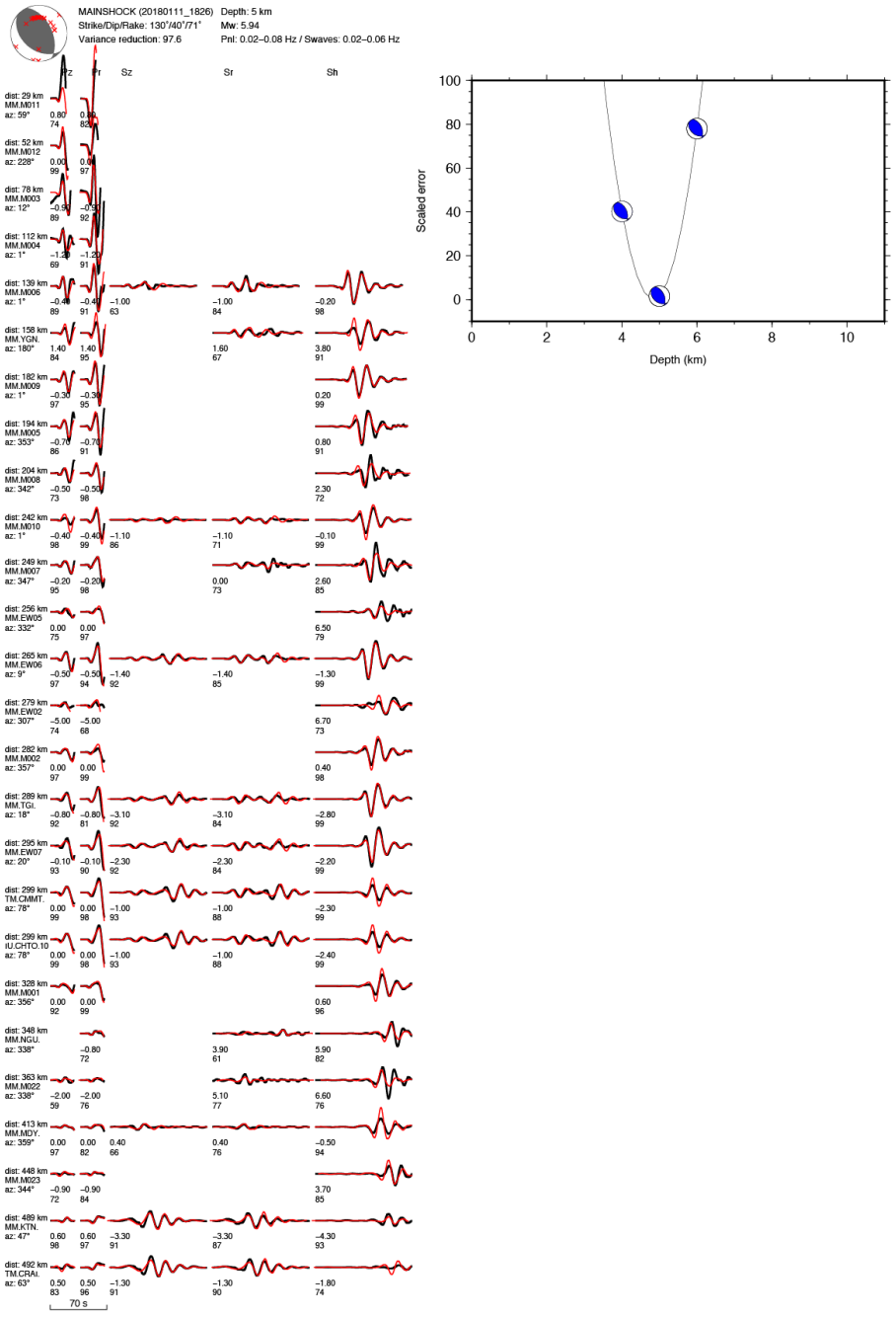

Figure S4(a). Focal mechanism inversion results (CAP) for the Mw 6.0 mainshock. (Left) Waveform fits between data (black) and synthetics (red) produced by the focal mechanism with minimum misfit (indicated in top left), at the stated frequency range for Pnl- and S-wave segments. Station name, distance and azimuth are indicated at the leftmost column of each station waveform, followed by the Pnl – Z component, Pnl – Radial component, S-waves – Z component, S-waves – Radial component, S-waves – Tangential component. The first number below each segment indicates the time shift (sec) followed by the waveform cross-correlation coefficient (%). (Right) Plot of errors for a range of focal depths normalized to the minimum error, showing the best depth at ~4.8 km.

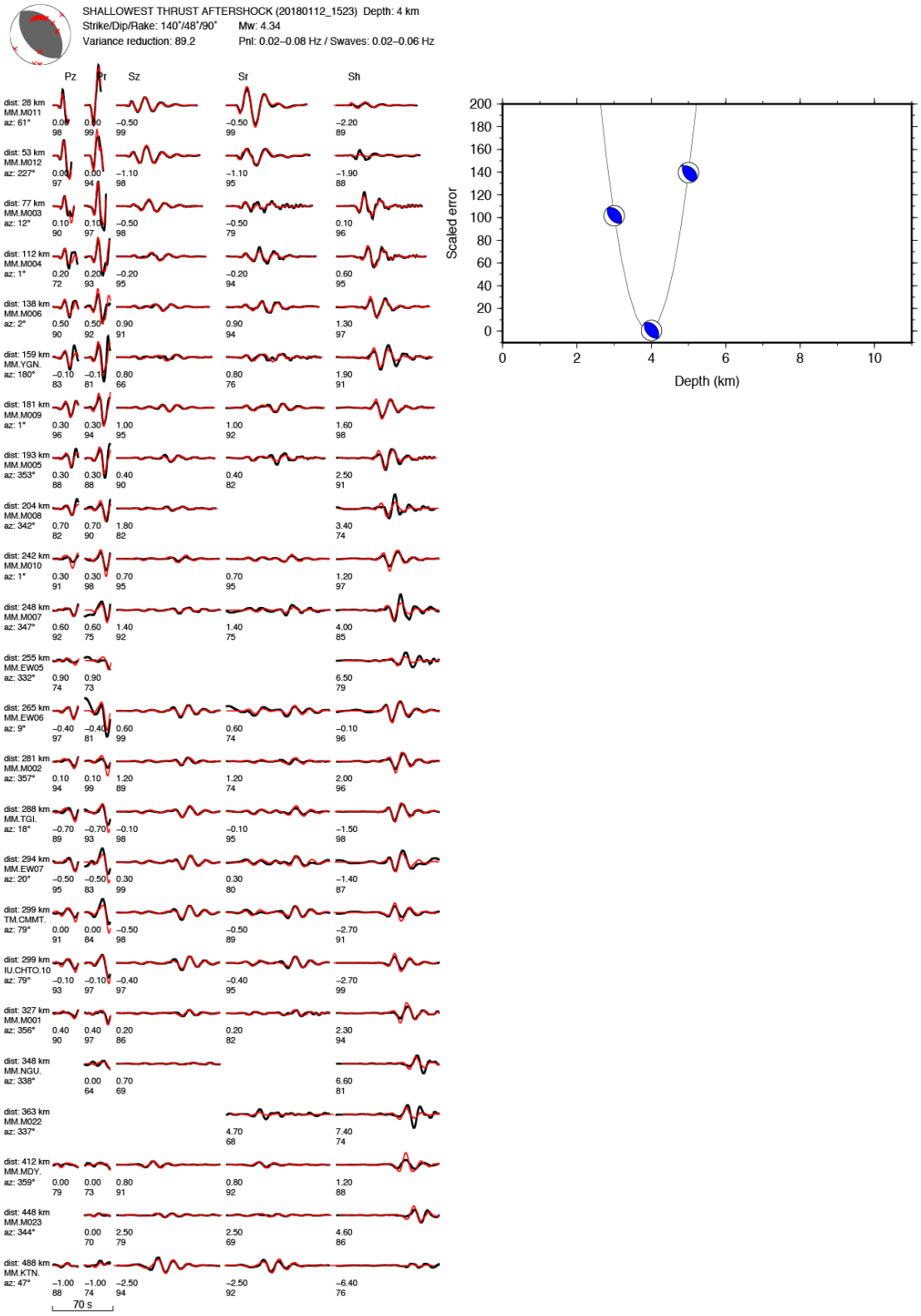

Figure S4(b). Focal mechanism inversion results (CAP) for shallowest thrust aftershock.

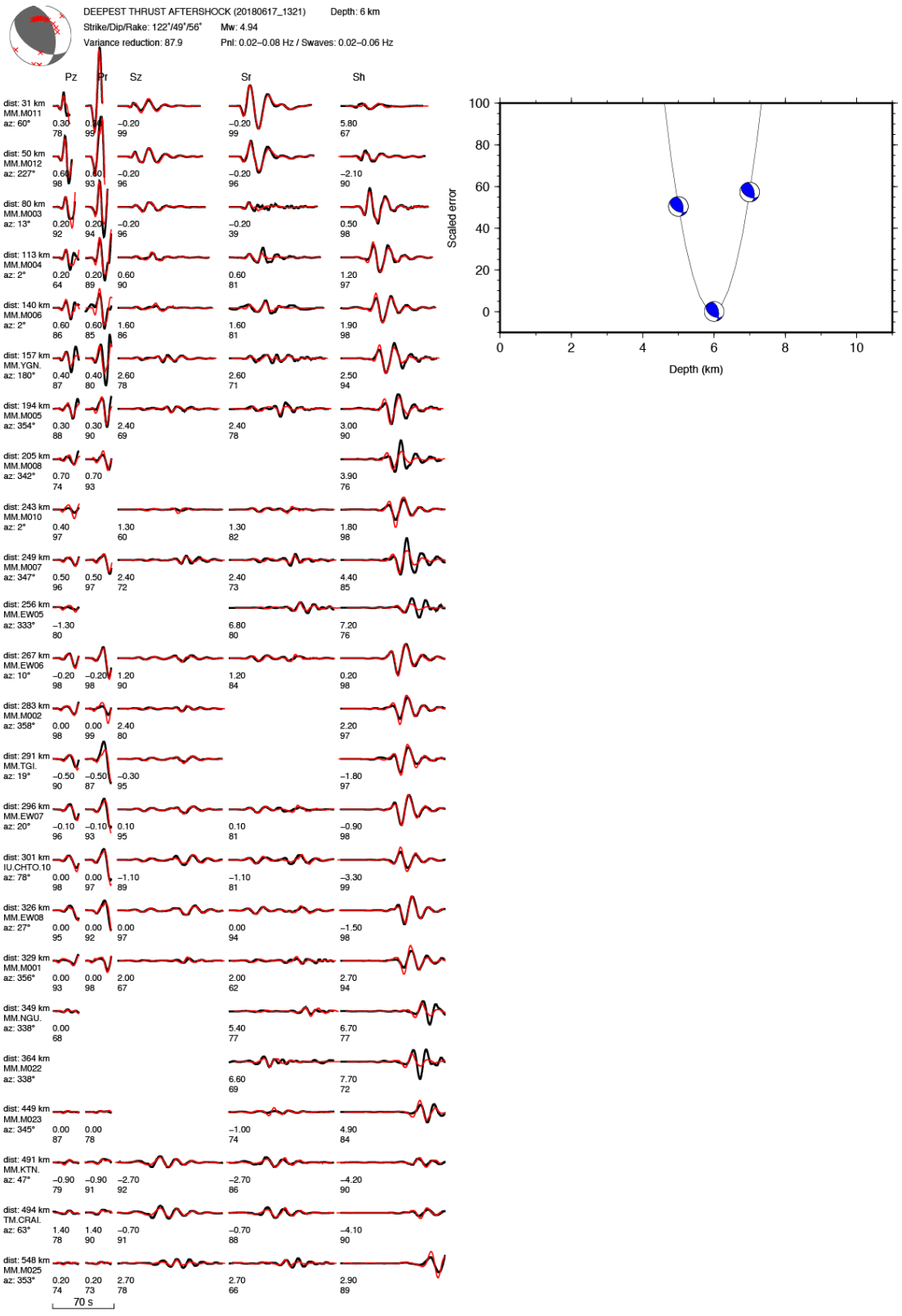

Figure S4(c). Focal mechanism inversion results (CAP) for deepest thrust aftershock.

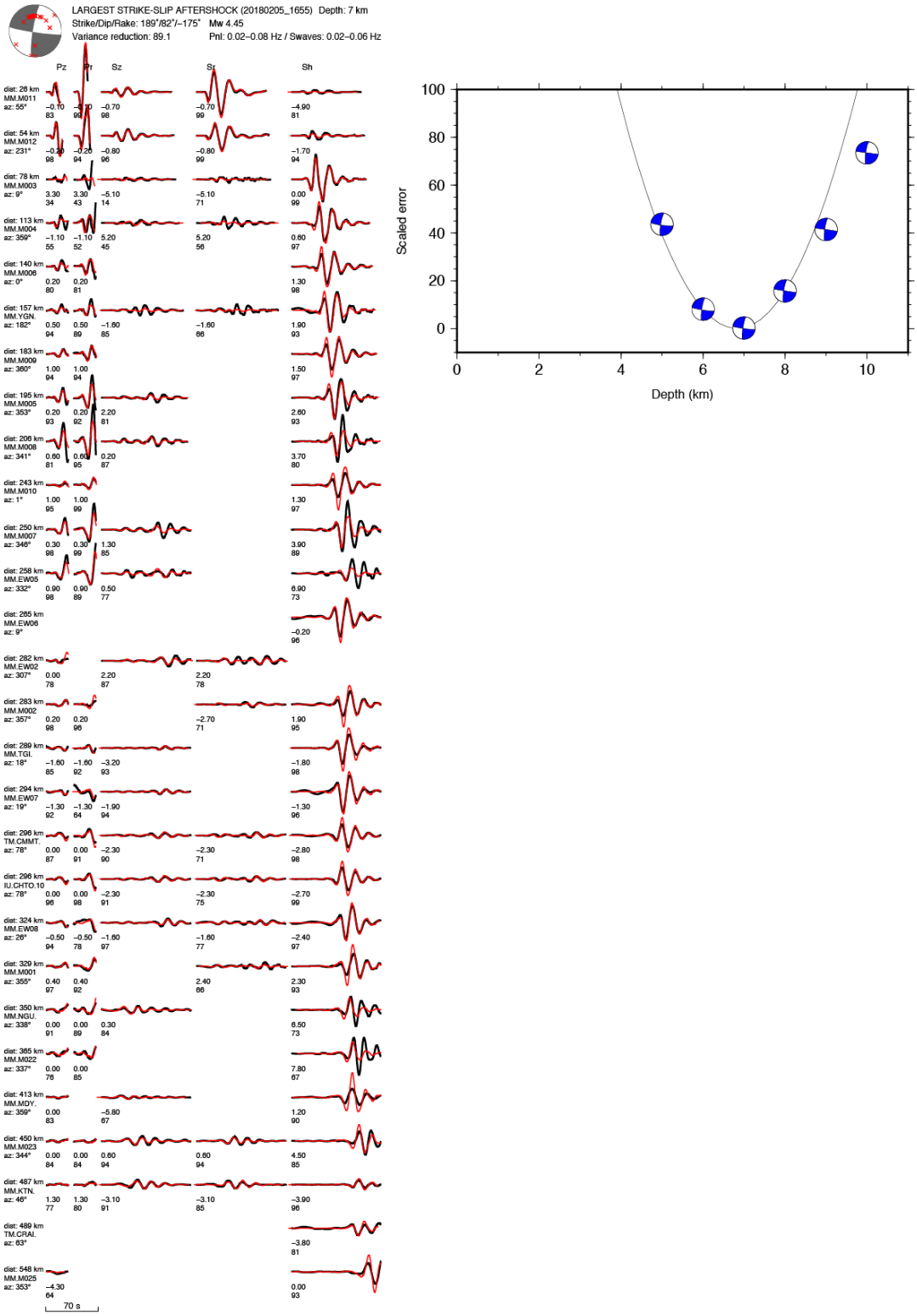

Figure S4(d). Focal mechanism inversion results (CAP) for the largest strike-slip aftershock.

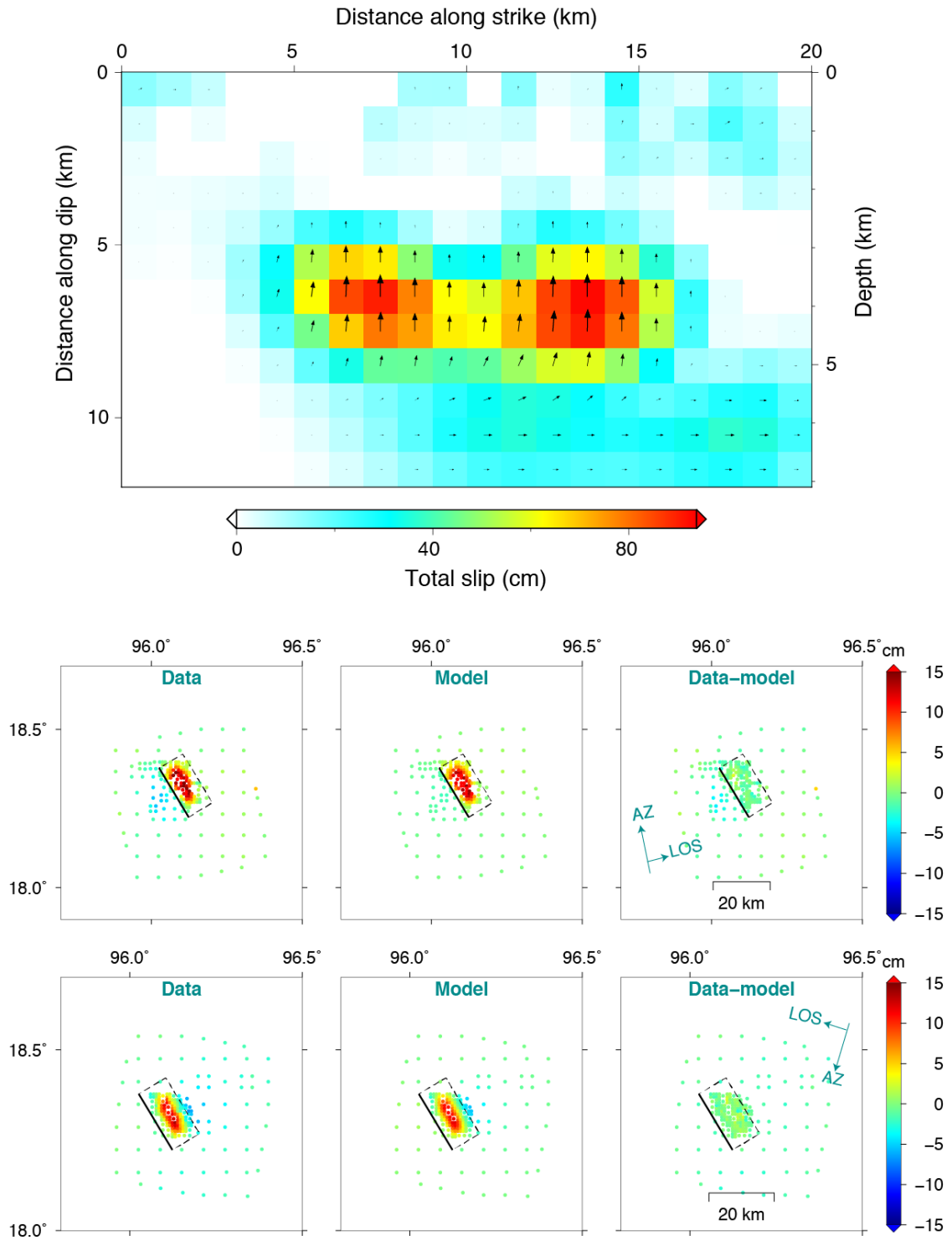

Figure S5. Static slip inversion results for northeast-dipping fault. The top panel shows the slip model in depth and along dip profile for the northeast-dipping fault. The InSAR data fitting for the ascending (upper) and descending (lower) tracks are showed in the lower panel.

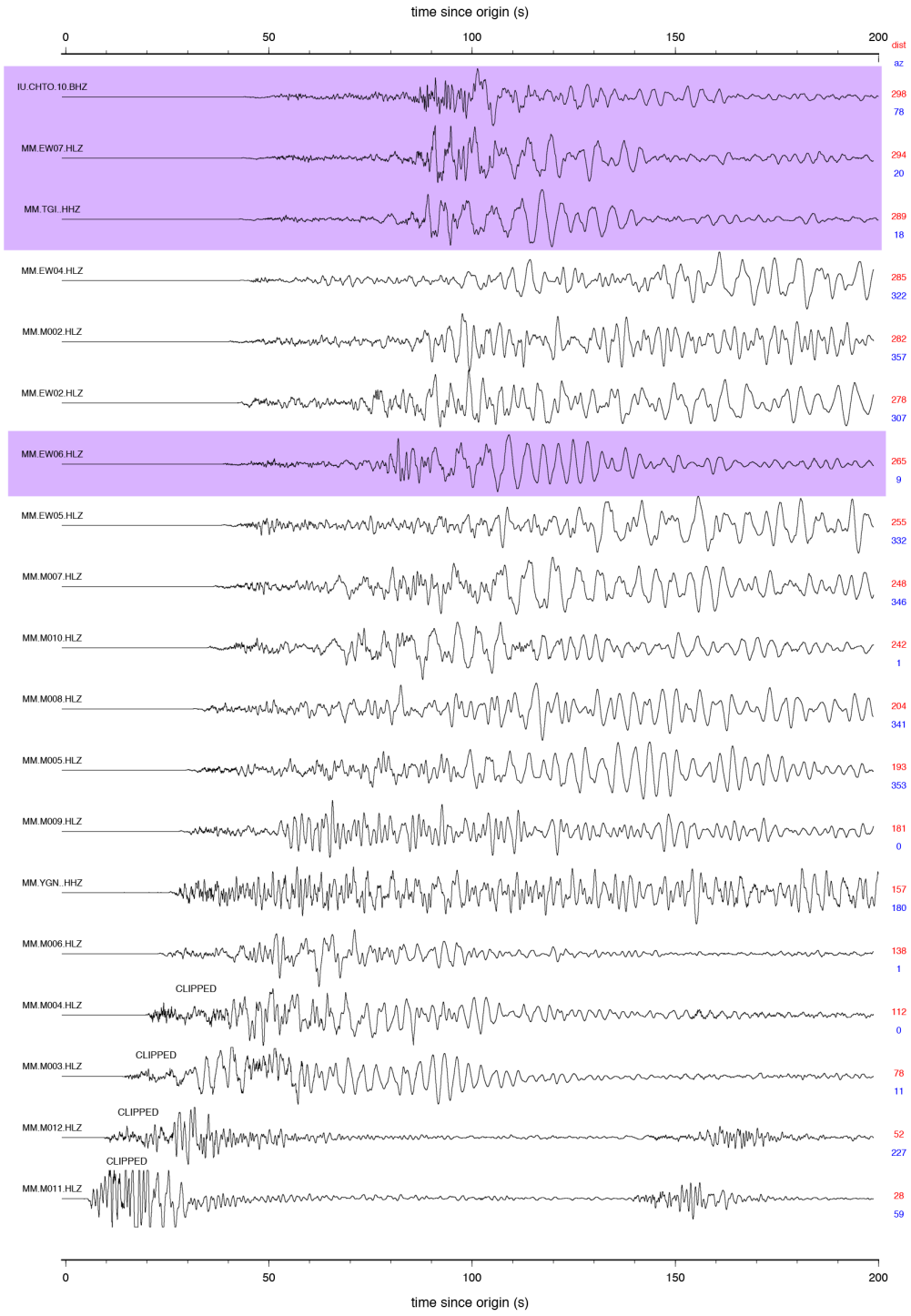

Figure S6. Record section of vertical component of the Mw6.0 mainshock recorded by the regional seismic stations, showing high amplitude and long-period surface wave coda. Waveforms highlighted in purple are recorded at hard rock stations. Distance (red) and azimuth (blue) are indicated for each station.