

## APPENDIX H. Residuals

Figure H1. Residuals for the coseismic models using different data sets (see Fig. 7). (a), (b), (c) GPS residual for the 2007 earthquake from (a) GPS-only model, (b) InSAR-only model, and (c) joint model. Horizontal and vertical residuals are shown as red and blue arrows, respectively. Positive vertical residuals are arrows towards the North and negative vertical residuals are arrows towards the south. (d), (e), (f) InSAR residuals from track 368 for the 2007 earthquake from (d) GPS-only, (e) InSAR-only and (f) joint inversions. (g), (h), (i) InSAR residuals from track 96 for the 2007 earthquake from (g) GPS-only, (h) InSAR-only and (i) joint inversions. Colors and contours (1 cm interval) show magnitude of InSAR residuals. Red represents positive InSAR residuals and blue represents negative InSAR residuals. RMS values (in cm) are indicated. The trench is shown by the black barbed line.

Figure H2. GPS residuals after removal of the model prediction from the data for (a) the largest aftershock and (b) 1-month of post-seismic deformation (see Fig. 7). Horizontal and vertical residuals are shown as red and blue arrows, respectively. Positive vertical residuals are arrows towards the North and negative vertical residuals are arrows towards the South. RMS values (in cm) are indicated. The trench is shown by the black barbed line