Tectonics

Supporting Information for

Testing different tectonic models for the source of the Mw 6.5, 30 October 2016, Norcia earthquake (central Italy): A youthful normal fault, or negative inversion of an old thrust?

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Contents of this file

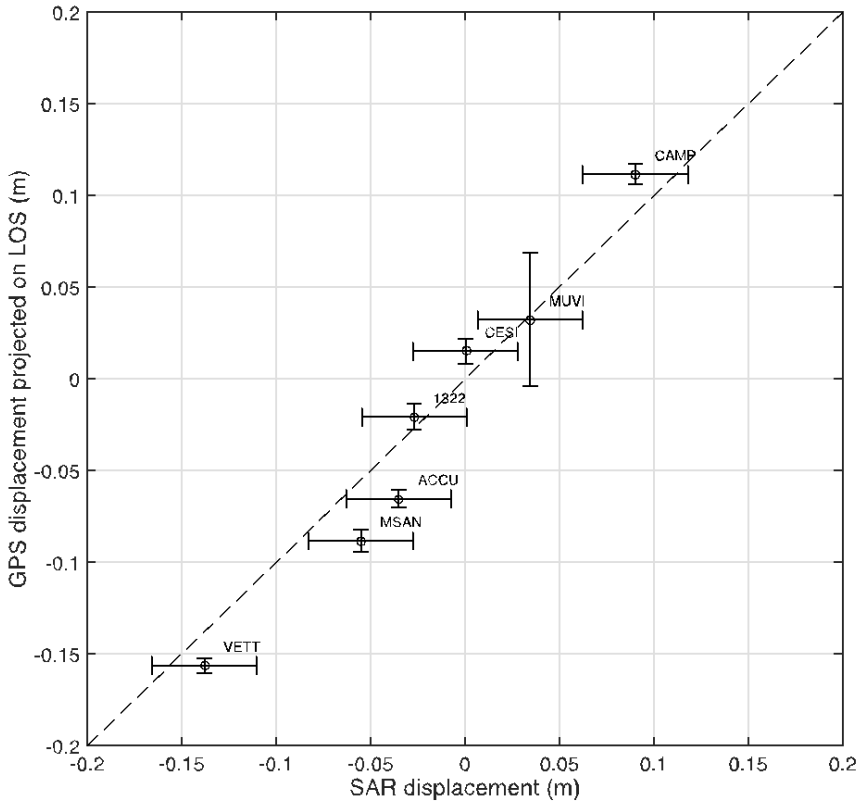


Figure S1. *Comparison between SAR line-of-sight projection of the three-dimensional coseismic offsets recorded by continuous GPS stations (vertical axis) and the corresponding deformations detected by SAR (horizontal axis). Error bars for GPS data are computed from offset uncertainties, while for SAR data correspond to the half of the instrument wavelength assuming a radar frequency of 5.405 GHz.*

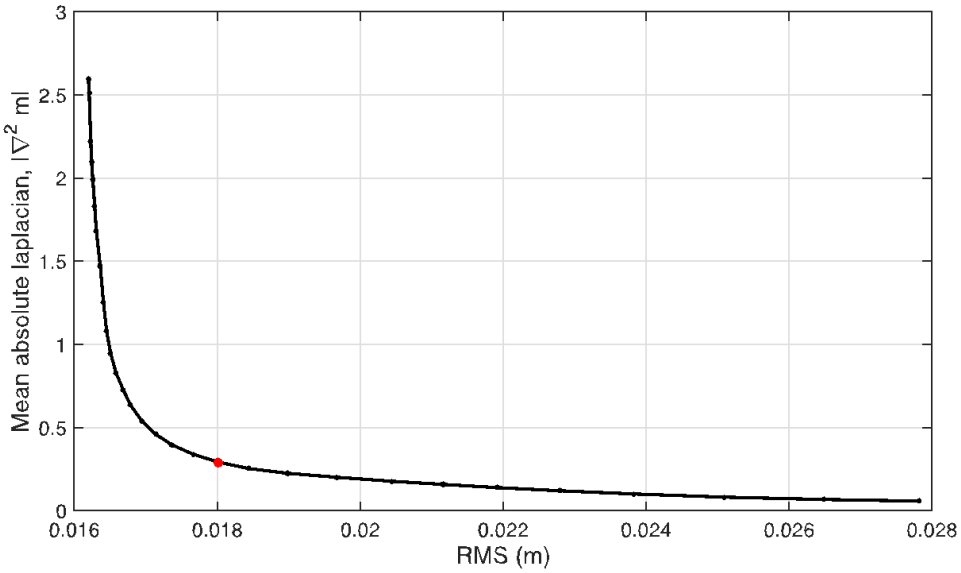
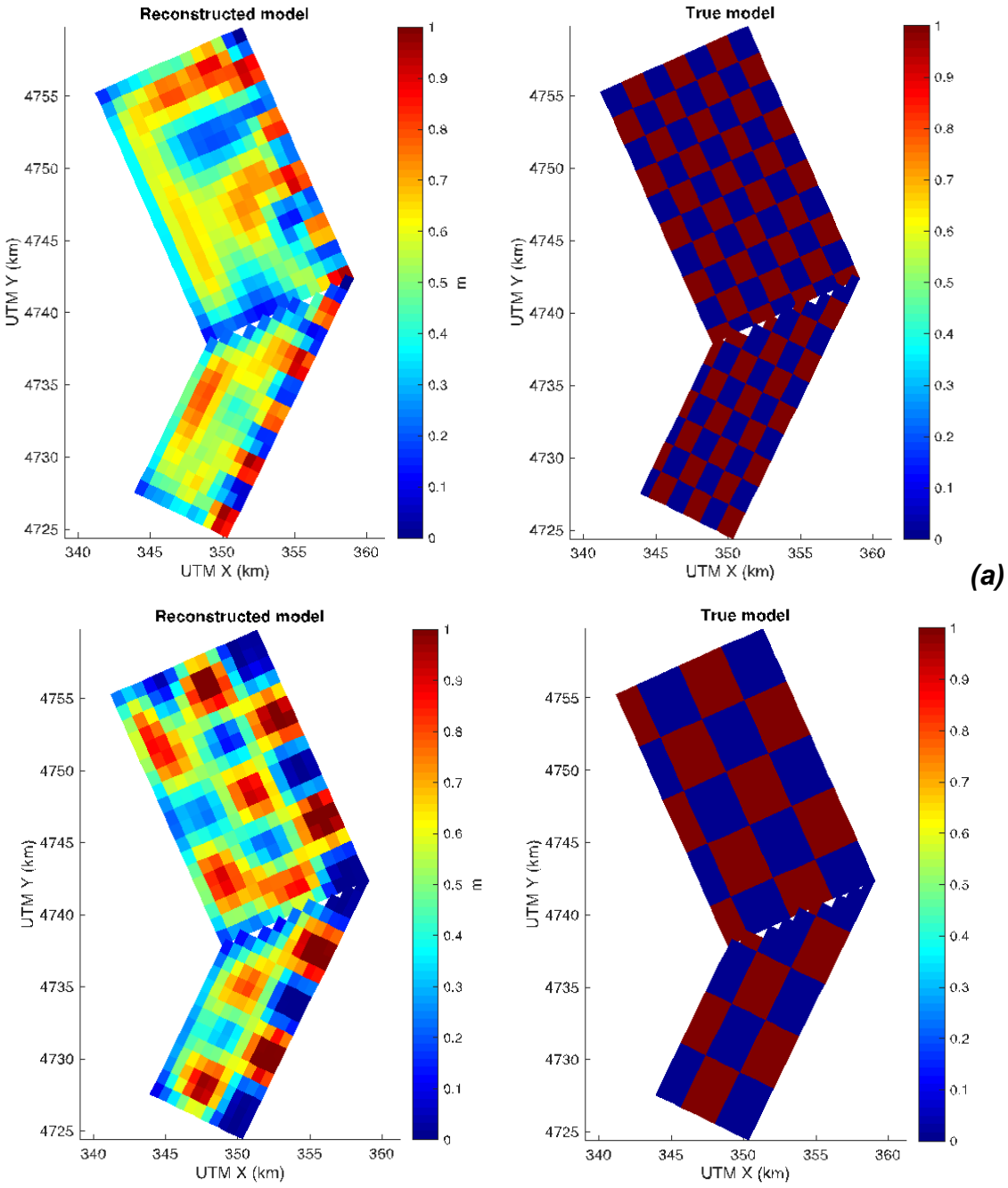


Figure S2. *Misfit-roughness tradeoff curve used for the calibration of the relative weight between the smoothing term and the data term in the linear inversion setup. The red dot marks the weighting factor used in all our analyses.*


Reconstructed model
True model
UTM Y (km)
UTM X (km)
m
4725
4730
4735
4740
4745
4750
4755
340
345
350
355
360
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1

(a)

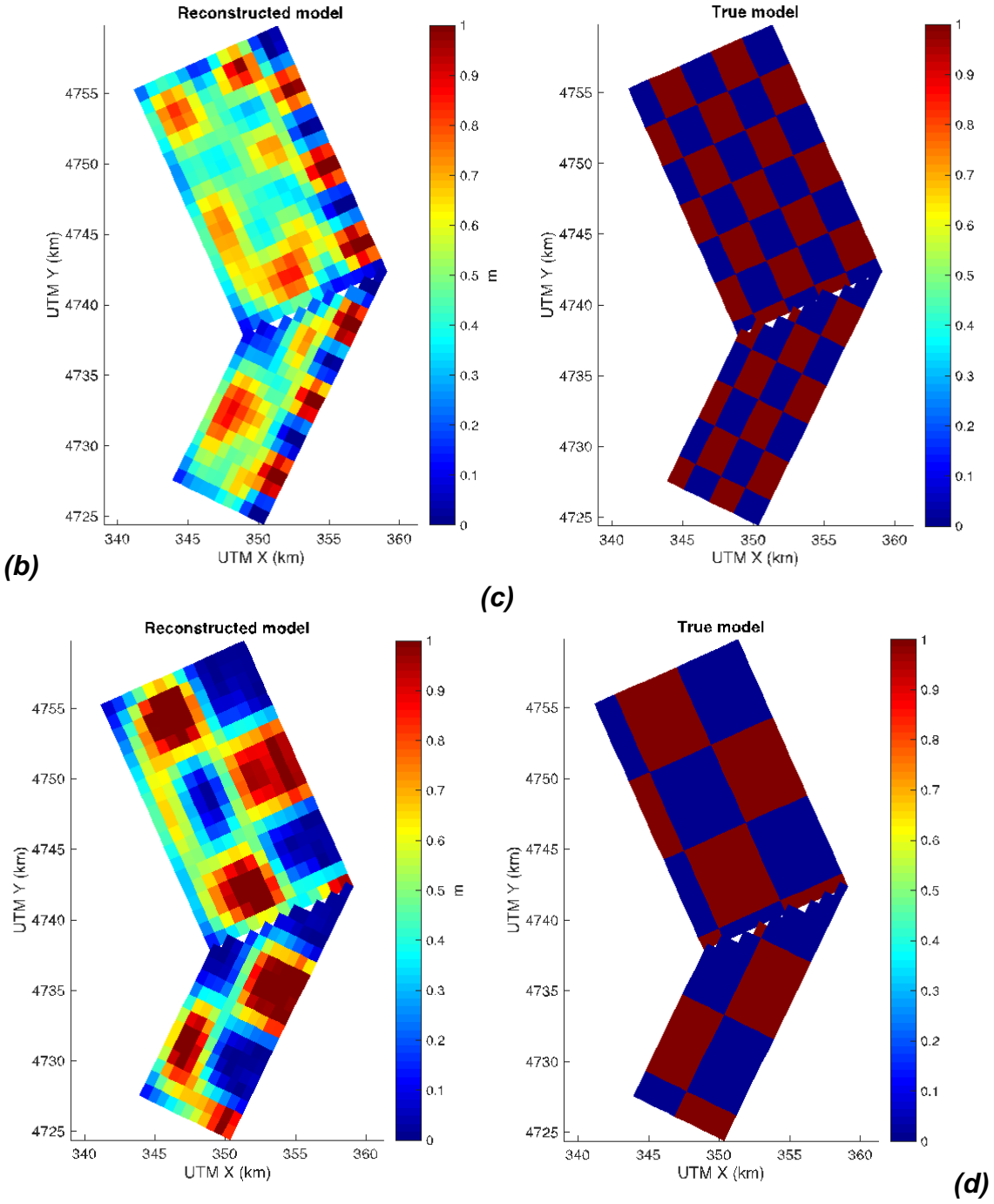


Figure S3. *Resolution tests for the "double-plane" geometry. In each panel, left and right figures show reconstructed and true slip distributions, respectively. Checkerboard size is 2km in panel a, 3km in panel b, 4km in panel c and 6km in panel d.*

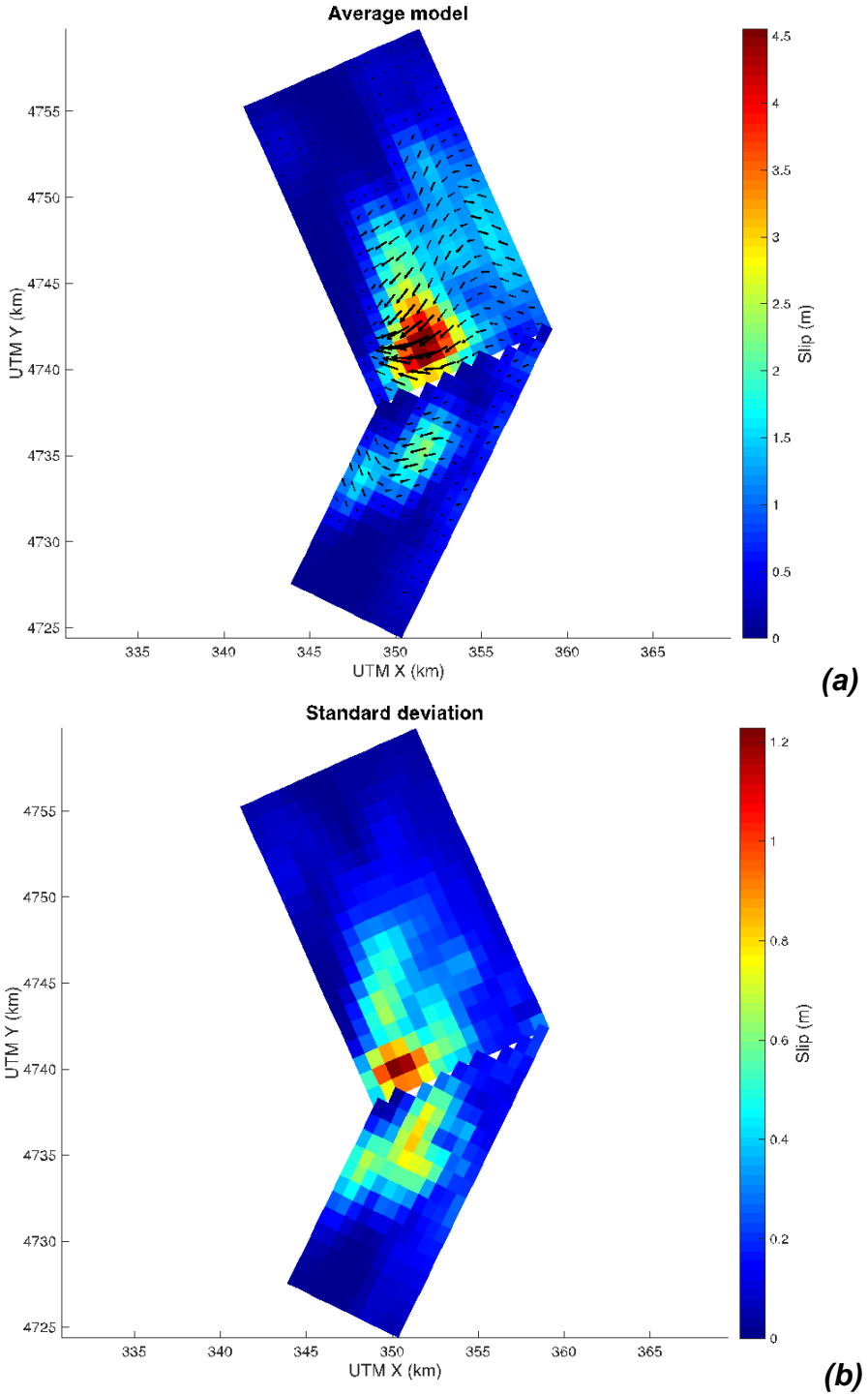


Figure S4. *Average slip model (a) and its standard deviation (b) for the "double-plane" source model, resulting from 10,000 linear inversion of bootstrap samples of coseismic deformation data.*