Integrating high-precision aftershock locations and geodetic observations to model coseismic deformation associated with the 1995 Kozani-Grevena earthquake, Greece

Phillip Resor
Wesleyan University, presor@wesleyan.edu

David Pollard

T.J. Wright

G C. Beroza

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Correction to “Integrating high-precision aftershock locations and geodetic observations to model coseismic deformation associated with the 1995 Kozani-Grevena earthquake, Greece”


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[1] In the paper “Integrating high-precision aftershock locations and geodetic observations to model coseismic deformation associated with the 1995 Kozani-Grevena earthquake, Greece” by P. G. Resor, D. D. Pollard, T. J. Wright, and G. C. Beroza (Journal of Geophysical Research, 110, B09402, doi:10.1029/2004JB003263, 2005) the units of the unwrapped coseismic interferogram (section 4.1 and Figure 7) are radians rather than centimeters, as reported in the original paper. To correct for this error, all reported displacements should be multiplied by a conversion factor of 2.83/2π to convert radians to centimeters. The maximum range increase in the hanging wall is thus \( \sim 32 \) cm, and maximum range decrease in the footwall is \( \sim 4.5 \) cm. This error propagates into the modeled slip magnitudes (section 4.3 and Figure 8) and moment values (Table 1), which should also be corrected by a factor of 2.83/2π. The preferred model thus results in a maximum slip of 2.2 m on the lower fault segment, 1 m on the western segment, and 0.4 m on the upper, surface-breaking segment. The RMS of this model is 1.4 cm, and the predicted moment is \( 6.5 \times 10^{18} \) N m. The corrected displacement and moment values are consistent with previous radar interferometry based studies of the Kozani earthquake [Meyer et al., 1996; Rigo et al., 2004] rather than the GPS/triangulation results of Clarke et al. [1997] as reported in the original paper. The interpreted fault geometry and relative distribution of modeled slip are unaffected by this error in magnitude.

References