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## **Coseismic slip modeling of the Kahramanmaras earthquake doublet (Türkiye, 2023)**

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On 6 February 2023, the Mw 7.8 Pazarçik earthquake ruptured the left-lateral East Anatolian Fault in southern Türkiye after initiating in the nearby Narli fault zone. It was followed 9 hours later by the Mw 7.5 Elbistan earthquake that occurred on the nearby Surgu-Cardak fault zone. We model the coseismic slip distributions for these two earthquakes using geodetic data, including Sentinel-2 interferograms and pixel offsets, Sentinel-1 image correlation and GNSS. After computing a least-squares solution, we use it as a prior for Bayesian modeling, using perturbed Green's functions in a 5-layer elastic medium. Most of the slip occurs above 20km. Coseismic slip is quite variable laterally, especially for the Mw 7.8 rupture along the East-Anatolian fault, where we observe multiple stepovers, fault bends and fault junctions.

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