

**Supplemental File 5 Table 1. Definitions of attributes used in in all supplemental material.**

Attribute Field	Definition
Domain	EMC rupture domain in which measurement was collected.
Segment	EMC fault rupture segment or accommodation zone in which measurement was collected. Segments labeled "Laguna Salada Fault 1892" indicate measurements of EMC rupture that reactivated fault scarps formed in 1892 event along the Laguna Salada fault.
Section	Kinematic section within EMC fault segment or accommodation zone in which measurement was collected (See Supplemental File 6 for description of fault sections).
Transect	ID of measurement transects in which multiple measurements were integrated (See explanation in Appendix A). Transect ID indicated by integer, and entries containing integrated slip estimates have whole number ID and individual measurements of transects numbered sequentially in decimal part of transect ID.
Data Type	"Master fault", measurement from master fault plane; "Scarp", measurement from single fault scarp or ground fissure; "Multiple Scarps", measurement across multiple scarps recorded with a single waypoint by observer; "Integrated Slip", displacement components integrated from multiple fault scarp measurements.
Dip Source	For Supplemental File 4, see explanation in Appendix A.  For Supplemental File 6, "assumed^1", dip based on assumption that Laguna Salada fault is a subvertical fault; "assumed^2", dip is interpolated using nearest observations from adjacent fault sections; "assumed^3", dip is extrapolated using observations from nearest fault sections.
Strike	Follows right-hand rule.
Slip Rake	Angle between striae and strike measured on the slip plane and counter-clockwise to strike of slip plane. Follows geologic convention; 0, sinistral strike-slip; 90, normal dip-slip; 180, dextral strike-slip; -90, reverse dip-slip.  For field data (Supplemental File 4), rake measured on free face of fault scarp with respect to local strike.  For fault section data (Supplemental File 6), rake derived from the three components of coseismic slip with respect to master fault dip and overall strike of fault section.
Slip Azimuth	For field data, slip azimuth is the trend of striae measured on free face of fault scarp (generally observed on bedrock fault scarps; see Figs 9 and 10g) or trend of horizontal line linking matching piercing points.  For fault section data (Supplemental File 6), direction of slip derived from the three components of coseismic slip determined for each fault section.
Slip Plunge	Plunge of striae measured on free face of fault scarp or slope of line linking matching piercing points.
Finite Slip Component	Indicates which of the measured slip components are most representative of the net coseismic slip vector. "1 L & V", both lateral and vertical components; "2 L only", only the lateral component; "3 V only", only the vertical component; "4 none", neither of the vertical and lateral components. Number prefixes facilitate sorting.
Slip Summary	Text field containing summary of slip magnitudes (lateral, net vertical and total) and sense of slip.
Criteria	Type of offset marker used to measure displacement across a fault scarp.
Slip Sense	Sense of vertical and/or lateral displacement. Vertical sense: "E", east side down; "W", west side down. Lateral sense: "R", right-lateral; "L", left-lateral.
Vertical Synthetic	Vertical displacement in direction similar to overall displacement of the associated master fault. Measurement errors reported in field labeled "VS error" as +/-.
Vertical Antithetic	Vertical displacement in direction opposite to overall displacement of the associated master fault. Measurement errors reported in field labeled "VA error" as +/-.
Lateral	Strike-slip component of reported slip magnitude. Measurement errors reported in field labeled "L error" as +/-.
Net Vertical	Integrated synthetic and antithetic vertical displacements. Measurement errors reported in field labeled "NV error" as +/-.
Heave	Strike-perpendicular component of coseismic slip derived using net vertical displacement and master fault dip (see explanation in Appendix A). Measurement errors reported in field labeled "H error" as +/-.
Total	Total coseismic displacement derived from the measured components vertical, lateral and heave (see explanation in Appendix A). Only derived for entries where both vertical and lateral components of slip were measured in the field. Measurement errors reported in field labeled "T error" as +/-.