



## **Prepared data context sheet: 2010 El-Mayor Cucapah Earthquake Fault Scarp, Baja California**

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*In 2010, a M7.2 earthquake occurred in Southern California and Northern Mexico (epicenter approximately 40 miles south of the US-Mexico border). The surface rupture of the earthquake has been surveyed multiple times using terrestrial laser scanning (TLS) and Structure from Motion photogrammetry. This dataset consists of the TLS point cloud and is intended to introduce students to TLS data. “This particular dataset covers a section of the rupture across a raised alluvial fan surface where displacements are relatively concentrated along a single fault, with some localized antithetic normal and reverse slip. Depending on how the data is processed and visualized, cm- to m-scale fault scarps, fault free-face striations, displacements defined by offset geomorphic features and cm-scale alluvial fan textures are all visible.”*

Location: North: 32.4908554780898° South: 32.4889985783801° East: 115.626381609423°

West: -115.626381609423°

Dataset Details: Surveyors - Peter Gold & Austin Elliot, UC Davis.

Appropriate for exercises: Analyzing High Resolution Topography, Unit 1- TLS

Date collected: 04/16/2010 – 04/19/2010

Instrument: Trimble GX3D DR200 + terrestrial laser scanner

Processing information: LAS Point cloud, Horizontal: UTM Zone 11N WGS84, Vertical:

NAVD88 (GEOID 09) [EPSG: 5703]

Complete archived dataset: The completed dataset is available on OpenTopography.

References: El Mayor-Cucapah Earthquake Rupture Terrestrial Laser Scan-Site 1. Distributed by OpenTopography. <https://doi.org/10.5069/G9B85622> .