



Prepared data context sheet: 1992 Landers Earthquake Fault Scarp, Emerson Fault, California

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The M7.3 Landers earthquake occurred in 1992 and was more powerful than the well-known Northridge earthquake of 1994. The Landers earthquake ruptured in the Mojave Desert, so damage and loss of life was minimal in comparison to the Northridge earthquake. Several strike slip faults oriented NW-SE ruptured including the Johnson Valley, Landers, Homestead Valley, Emerson, and Camp Rock faults with a 43-mile long surface rupture. This data collection site, located ~45 km north of Yucca Valley, covers a segment of the Emerson Fault. These data may be used for Unit 3 for fault scarp profile analysis.

Location: South of Barstow, CA on Galway Lake Road

Dataset Details: Data set does not contain ground control points or other georeferencing information beyond the camera GPS locations. However, for the purposes of learning how to process SfM data it works well. The model warping that may develop in the absence of ground control points should not hinder a fault scarp analysis.

Appropriate for exercises: Units 1, 3, and 5

Date collected: 10/26/2012

Instrument: Unknown camera

Processing information: Photos are in WGS84. We have cropped the photo set to a usable size for an undergraduate class.

Complete archived dataset:

https://cloud.sdsc.edu/v1/AUTH_opentopography/hosted_data/SfM_GalwayLakeRd_1.23.2014/

References:

<http://opentopo.sdsc.edu/datasets?id=OTEXT.052014.32611.1&host=community>

https://en.wikipedia.org/wiki/1992_Landers_earthquake