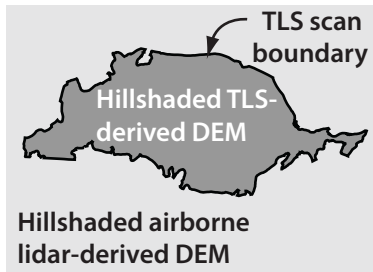


Metadata	
Dataset Name:	El Mayor-Cucapah earthquake rupture terrestrial laser scan dataset-Site 2 (EMC_TLS_s2)
Collected by:	Peter Gold, Austin Elliott (UC Davis)
Project PI:	Dr. Mike Oskin (UC Davis)
Funding:	Southern California Earthquake Center (NSF+USGS)
Geographic location:	Northern Baja California, Mexico, 2010 El Mayor-Cucapah earthquake rupture, northern Borrego segment. (lat 32.492161 lon -115.627825)
Acquisition date(s):	20 April 2010
Instrumentation:	Trimble GX3D DR200+ terrestrial laser scanner; Dell Latitude 6200 ATG laptop; Topcon GS1000 GPS receivers; Leica TCR400 Total Station.
Power source:	1000 W generator
Field software:	Trimble PointScape
Post-processing software:	Trimble RealWorks; LidarViewer (KeckCAVES.org)
Total lidar returns:	21702602
Ground returns:	20041305
Vegetation and other returns:	1662388
Data format:	.las, x,y,z,intensity (E,N,Z,intensity)
Vegetation classification method:	Performed manually in the UC Davis KeckCAVES 3D immersive virtual reality CAVE environment.
Scan footprint area:	15334 m ²
Averaged point density:	~1200 pts/m ²
Number of scan stations:	4
Registration Method:	Target-based using square, flat panel reflective targets. Targets were installed over ground control points that were surveyed prior to scanning with a total station (for a more complete description see Gold et al., 2012)
Number of targets:	5
Number of targets measured from each scan station:	between 4 and 5
Assessment of scan registration errors:	Residual target mismatches and point cloud mismatched are around 2-4 cm.
Georeferencing method:	Topcon GS1000 GPS receivers set to collect in rapid-static mode for 5-8 hours at 3 target locations. Georeferencing of point clouds performed using Trimble RealWorks.
Field survey methods and workflow:	Following workflow outlined in Gold et al., 2012
References:	Gold, P. O., Cowgill, E., Kreylos, O., and Gold, R. D., 2012, A terrestrial lidar-based workflow for determining three-dimensional slip vectors and associated uncertainties: <i>Geosphere</i> , v. 8, no. 2, p. 431-442.

El Mayor-Cucapah TLS Site 2 Survey Details

Key:



- ◆ Registration target
- TLS scan position
- Remotely mapped faults and fractures
- $X-X'$ Schematic topo profile line
- Field photo view

