



# Data Collection & Processing Report for 2015 Seed Project: Earthquake Hazard Assessment of Late Quaternary Faults Within the San Bernardino Mountains, CA

PI: William Cochran ([cwill13@vt.edu](mailto:cwill13@vt.edu))

Virginia Polytechnic Institute and State University, Department of Geosciences  
800 Washington St, SW, Blacksburg, VA 24061

## Data Collection Summary:

Collection Dates, # Flights:	1 flight on June 3, 2016 (DOY 155)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 700 m AGL, Swath Width: 800 m, Overlap: 50%, Line Spacing: 400 m
Equipment Parameters:	PRF: 75 kHz, Scan Frequency: 25 Hz, Scan Angle: $\pm 30^\circ$
Collected Area:	146 km <sup>2</sup>

## GNSS Reference Station Summary:

KPSP	User (Palm Springs International Airport)	33°49'24.62596" N, 116°31'58.03097" W, 102.284 m (Ellipsoid)
P585	UNAVCO	34°01'09.65283" N, 116°32'44.69363" W, 958.158 m (Ellipsoid)
P598	UNAVCO	34°11'32.86280" N, 116°42'36.96833" W, 2746.481 m (Ellipsoid)
P609	UNAVCO	34°03'45.67256" N, 116°53'34.15048" W, 2721.246 m (Ellipsoid)

## Data Processing Summary:

Horizontal / Vertical Datum:	WGS84 epoch: 2016.42 / ellipsoid
Projection / Units:	UTM Zone 11N / meters
Point Cloud Tiles:	1000-m $\times$ 1000-m tiles in LAS format (Version 1.4), classified with ground and non-ground returns
Bare-Earth Elevation Model:	ESRI FLT format @ 1-m resolution from classified ground points
Bare-Earth Hillshade:	ESRI-created raster @ 1-m resolution
First-Surface Elevation Model:	ESRI FLT format @ 1-m resolution with canopy and buildings included
First-Surface Hillshade:	ESRI-created raster @ 1-m resolution

A detailed summary of the equipment and typical processing techniques used by NCALM is included in the [Data Collection & Processing Summary](#).

**Area of Interest:**



**Location of survey polygons (in red), aircraft trajectory (in green), and GNSS reference station**

The requested survey area consisted of three polygons located northwest of Palm Springs, CA. The polygons enclose approximately 40 km<sup>2</sup> (15 mi<sup>2</sup>).