



**Proposal Title**

**Investigating topographic stress control on subsurface weathered zone and seismic site conditions in southern California**

Name: Jessica C. Lin Email: JessicaLin29@UCLA.edu  
 University: University of California, Los Angeles Phone: (818) 448-0342  
 Department: Earth, Planetary, and Space Sciences  
 Advisor Name: Seulgi Moon

**Data Collection Summary:**

|                              |  |
|------------------------------|--|
| Collection Dates, # Flights: | 1 flight on March 18, 2017 (DOY 077)   |
| Aircraft, Equipment:         | Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)                         |
| Flight Plan Parameters:      | Flying Height: 900 m AGL (nominal), Swath Width: 840 m, Overlap: >50%, Line Spacing: 400 m |
| Equipment Parameters:        | PRF: 100 kHz per channel (3 channels), Scan Frequency: 32 Hz, Scan Angle: ± 25°            |
| Collected Area:              | 40 Km square, approx. ~5.8 shots per square meter  |

**GNSS Reference Station Summary:**

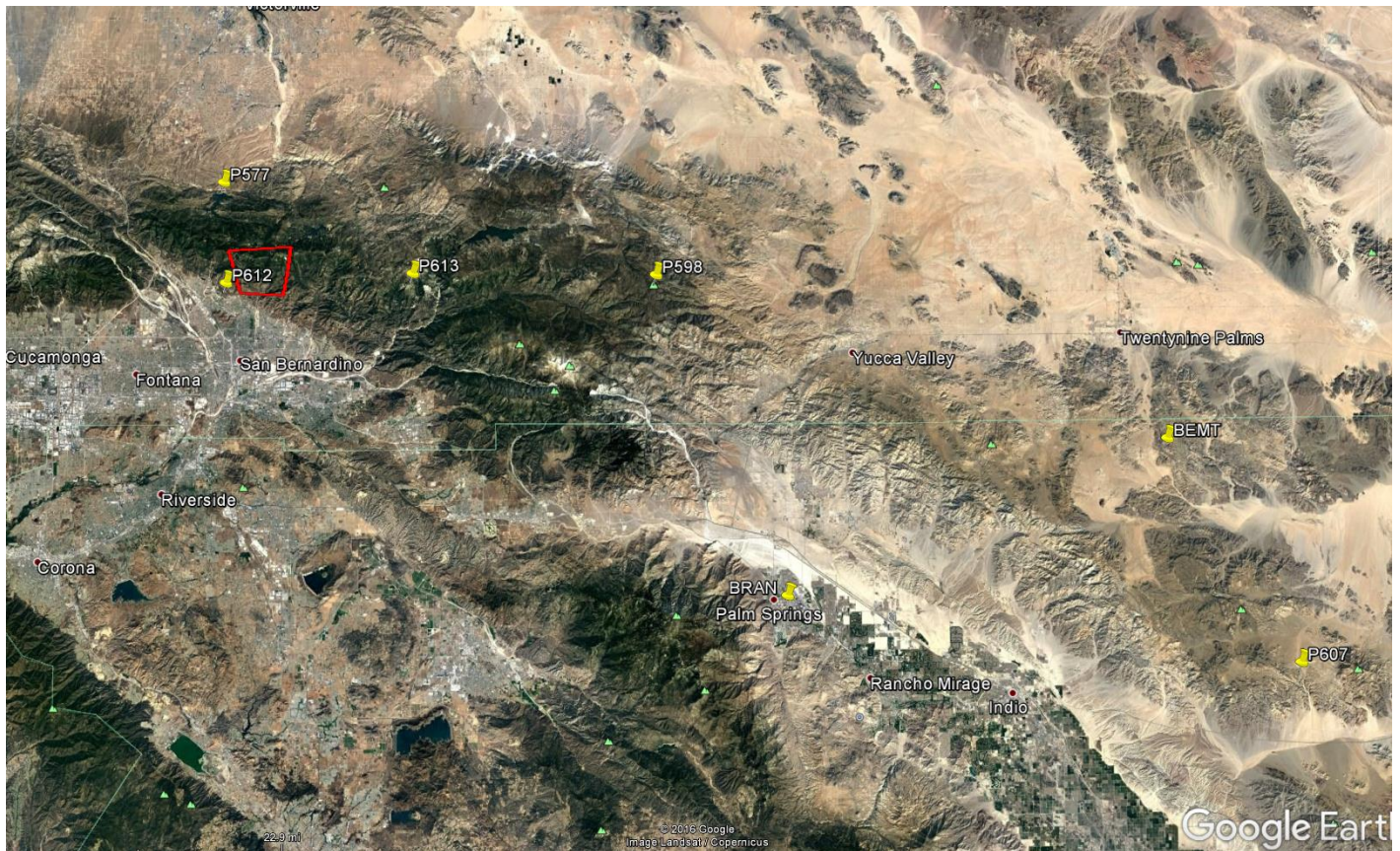
|      |                                    |                                    |
|------|------------------------------------|------------------------------------|
| BRAN | N 33 49 24.62776 W 116 31 48.76609 | 102.386(m) Ellipsoid (NCALM)       |
| P577 | N 34 18 16.56506 W 117 19 8.03974  | 1000.279(m) Ellipsoid (UNAVCO PBO) |
| P598 | N 34 11 32.84877 W 116 42 36.91291 | 2747.210(m) Ellipsoid (UNAVCO PBO) |
| P607 | N 33 44 27.73007 W 115 49 14.30229 | 959.481(m) Ellipsoid (UNAVCO PBO)  |
| P612 | N 34 11 14.56167 W 117 18 55.81287 | 532.447(m) Ellipsoid (UNAVCO PBO)  |
| P613 | N 34 11 46.26913 W 117 2 59.81598  | 2355.895(m) Ellipsoid (UNAVCO PBO) |
| BEMT | N 34 0 1.90866 W 115 59 53.43937   | 1374.409(m) Ellipsoid (UNAVCO PBO) |

**Data Processing Summary:**

|                                |  |
|--------------------------------|--|
| Horizontal / Vertical Datum:   | NAD_83(2011)(EPOCH:2010.0000) NAVD88 via NGS Geoid Model 12B   |
| Projection / Units:            | UTM Zone 11N / meters  |
| Point Cloud Tiles:             | 1000-m × 1000-m tiles in LAS format (Version 1.2), classified as ground or non-ground returns                        |
| Bare-Earth Elevation Model:    | ESRI FLT format @ 1.0 m resolution from classified ground points CH01 (1550 nm) and CH02 (1064 nm) and CH03 (532 nm) |
| Bare-Earth Hillshade:          | ESRI-created raster @ 1.0 m resolution   |
| First Surface Elevation Model: | ESRI FLT format @ 1.0 m resolution from first returns only (all 3 channels)  |
| First Surface Hillshade:       | ESRI-created raster @ 1.0 m resolution   |

A detailed summary of the equipment and processing techniques used by NCALM is included in the Data Collection & Processing Summary.

**Area of Interest:**



**Location of survey polygon (in red) and GNSS reference stations (yellow push pin markers)**

The requested survey area consisted of one polygon located in north of San Bernardino, CA. The polygon enclosed approximately 40 km<sup>2</sup>.