Data Collection & Processing Report for Lidar Survey Over the San Gabriel & San Jacinto Mountains in California
PI: Dr. Roman DiBiase (rdibiase@psu.edu)
Pennsylvania State University, Department of Geosciences
503 Deike Bldg, University Park, PA 16802

Data Collection Summary:

<table>
<thead>
<tr>
<th>Collection Dates, # Flights:</th>
<th>7 flights on June 18–24, 2015 (DOY 169–175)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft, Equipment:</td>
<td>Piper PA-31-350 Navajo Chieftain (N154WW), Optech Gemini (06SEN195)</td>
</tr>
<tr>
<td>Flight Plan Parameters:</td>
<td>Flying Height: 900 m AGL, Swath Width: 480 m, Overlap: 50%, Line Spacing: 480 m</td>
</tr>
<tr>
<td>Equipment Parameters:</td>
<td>PRF: 50 kHz, Scan Frequency: 60 Hz, Scan Angle: ± 15°</td>
</tr>
<tr>
<td>Collected Area:</td>
<td>329 km²</td>
</tr>
</tbody>
</table>

GNSS Reference Station Summary:

<table>
<thead>
<tr>
<th>GNSS Station</th>
<th>Reference Station</th>
<th>Latitude / Longitude / Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSSC</td>
<td>UNAVCO</td>
<td>33°43’59” N, 116°42’43” W, 1661 m (Ellipsoid)</td>
</tr>
<tr>
<td>HIX1</td>
<td>USER</td>
<td>34°40’37” N, 118°09’42” W, 694 m (Ellipsoid)</td>
</tr>
<tr>
<td>P574</td>
<td>UNAVCO</td>
<td>34°17’12” N, 117°38’01” W, 2874 m (Ellipsoid)</td>
</tr>
<tr>
<td>P575</td>
<td>UNAVCO</td>
<td>34°12’55” N, 117°32’31” W, 1929 m (Ellipsoid)</td>
</tr>
<tr>
<td>P585</td>
<td>UNAVCO</td>
<td>34°01’09” N, 116°32’44” W, 958 m (Ellipsoid)</td>
</tr>
<tr>
<td>PIN1</td>
<td>UNAVCO</td>
<td>33°36’29” N, 116°27’29” W, 1258 m (Ellipsoid)</td>
</tr>
</tbody>
</table>

Data Processing Summary:

| Horizontal / Vertical Datum: | NAD83(2011) / NAVD88 (GEOID12A) |
| Projection / Units:          | UTM Zone 11N / meters |
| Point Cloud Tiles:           | 1000-m × 1000-m tiles in LAS format (Version 1.2), 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 processing techniques used by NCALM is included in the Data Collection & Processing Summary.
Area of Interest:

The requested survey areas consisted of two polygons located near Riverside, CA. The polygons enclose approximately 248 km² (96 mi²).