



**Data Collection & Product Report for 2019 Seed Project:
3D Fuel Structure and Plant Community Composition in Relation to
Prescribed Fire at the University of California Sedgwick Reserve**

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Data Collection Summary:

Collection Dates, Flights:	1 flight on November 4, 2020 (DOY 309)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 600 m AGL, Speed: 150 kt, Overlap: 50%
Equipment Parameters:	PRF: 100 kHz, Scan Frequency: 26 Hz, Scan Angle: $\pm 30^\circ$
Collected Area:	65.9 km ²

GNSS Reference Station Summary:

Station Name	Operating Agency	Control Coordinates (WGS 84/Ellipsoid)
BBDM	UNAVCO	34° 34' 55.92191" N, 119° 58' 53.46916" W, 204.895 m
FGST	UNAVCO	34° 43' 58.84187" N, 120° 00' 33.79338" W, 904.103 m
GSE4	NCALM	34° 53' 29.08046" N, 120° 27' 19.33672" W, 37.487 m
ORES	UNAVCO	34° 44' 20.62478" N, 120° 16' 42.83090" W, 143.668 m
P514	UNAVCO	35° 00' 38.57944" N, 120° 24' 35.11584" W, 140.944 m
P515	UNAVCO	34° 52' 14.00160" N, 120° 14' 23.48200" W, 290.649 m

Data Processing Summary:

Scan Angle Cutoff:	$\pm 1^\circ$
Intensity Normalization:	600 m
Data Adjustments:	Line-by-line/channel-by-channel roll/elevation correction, project elevation shift of -0.21 m
Ground Classification:	Two iterations of moderate ground determination, manual classification of misclassified ground
Elevation Model Generation:	Elevation values calculated from Kriging

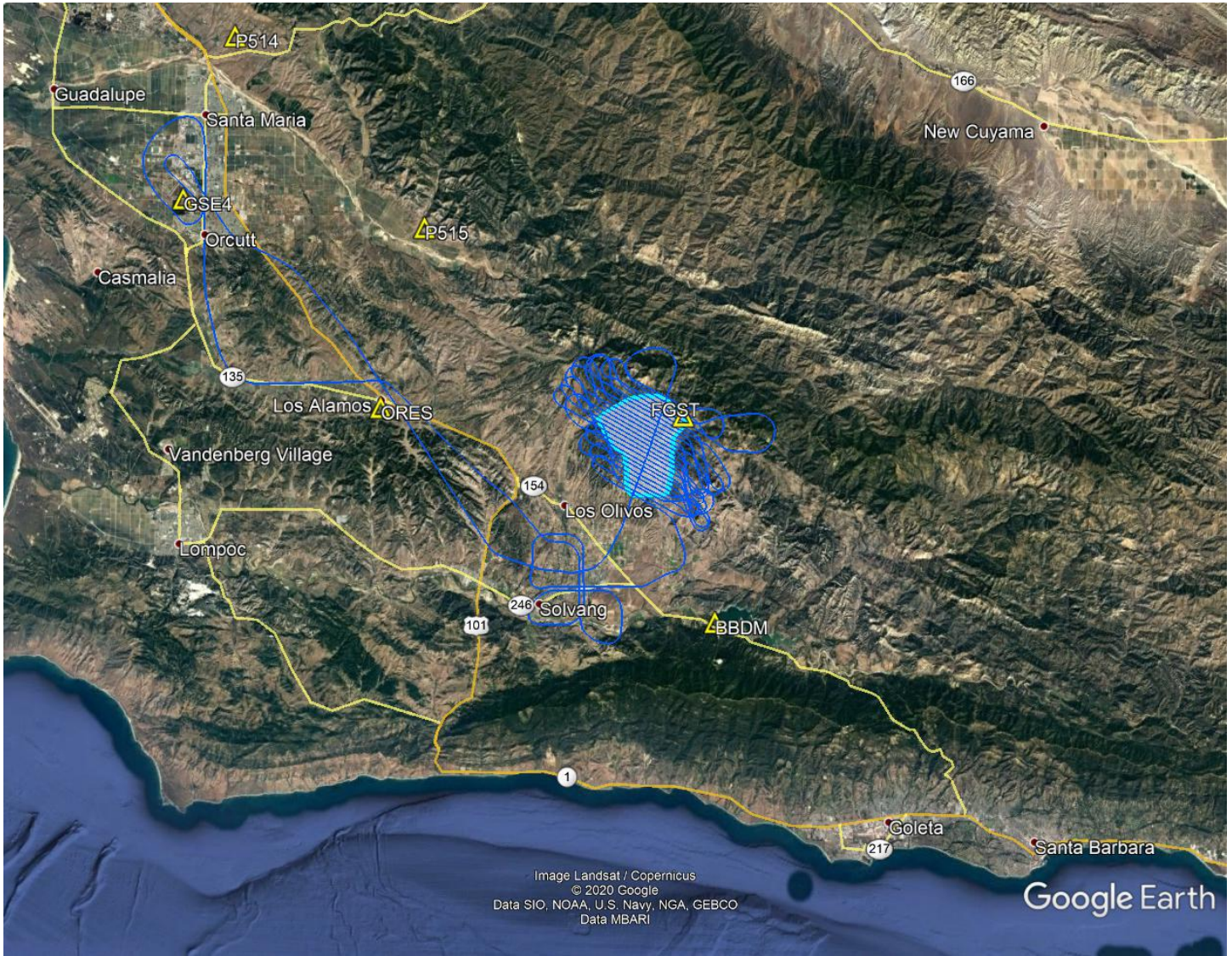
Data Accuracy Summary

Strip-to-Strip Average	0.054 m
GCP Residual RMS	N/A

Data Product Summary:

Horizontal / Vertical Datum:	WGS 84 / ellipsoid
Projection / Units:	UTM Zone 10N / meters
Point Cloud Tiles:	1000-m \times 1000-m tiles in LAS format (Version 1.4) with non-ground (1), ground (2), and outlier (7) 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
First-Surface Hillshade:	ESRI-created raster @ 1-m resolution

Area of Interest:



Location of survey polygons, aircraft trajectory, and GNSS reference stations

The requested survey area consisted of one polygon located between Santa Maria, CA, and Santa Barbara, CA. The polygon enclosed approximately 37.5 km² (14.5 mi²).