Data Collection & Processing Report for 2015 Seed Project: Coupling of a High Resolution Base DEM and Ultra-High Resolution Terrestrial DOMs to Inform Correlation of Fluvial Strata in the Straight Cliffs Formation, South-Central Utah

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Data Collection Summary:

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Collection Dates, # Flights:	1 flight on October 5, 2016 (DOY 279)
Aircraft, Equipment:	Piper PA-31-350 Navajo Chieftain (N640WA), Optech Titan (14SEN340)
Flight Plan Parameters:	Flying Height: 700 m AGL, Swath Width: 500 m, Overlap: 50%, Line Spacing: 250 m
Equipment Parameters:	PRF: 100 kHz, Scan Frequency: 38 Hz, Scan Angle: ± 21°, Aperture: 8.0+ 2/3
Collected Area:	66 km²

GNSS Reference Station Summary:

KBCE	User (Bryce Canyon Airport)	37°42'01" N, 112°09'23" W, 2295 m (Ellipsoid)

Data Processing Summary:

Horizontal / Vertical Datum:	NAD83(2011) / NAVD88 (GEOID12A)
Projection / Units:	UTM Zone 12N / meters
Point Cloud Tiles:	1000-m × 1000-m tiles in LAS format (Version 1.4), classified with ground and non-ground returns
Bare-Earth Elevation Models:	ESRI FLT format @ 1-m resolution from classified ground points
Bare-Earth Hillshades:	ESRI-created rasters @ 1-m resolution
First-Surface Elevation Models:	ESRI FLT format @ 1-m resolution with canopy included
First-Surface Hillshades:	ESRI-created rasters @ 1-m resolution
Aerial Images:	Radiometrically corrected 8-bit TIFF files @ 300 dpi with timestamp and trajectory information

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

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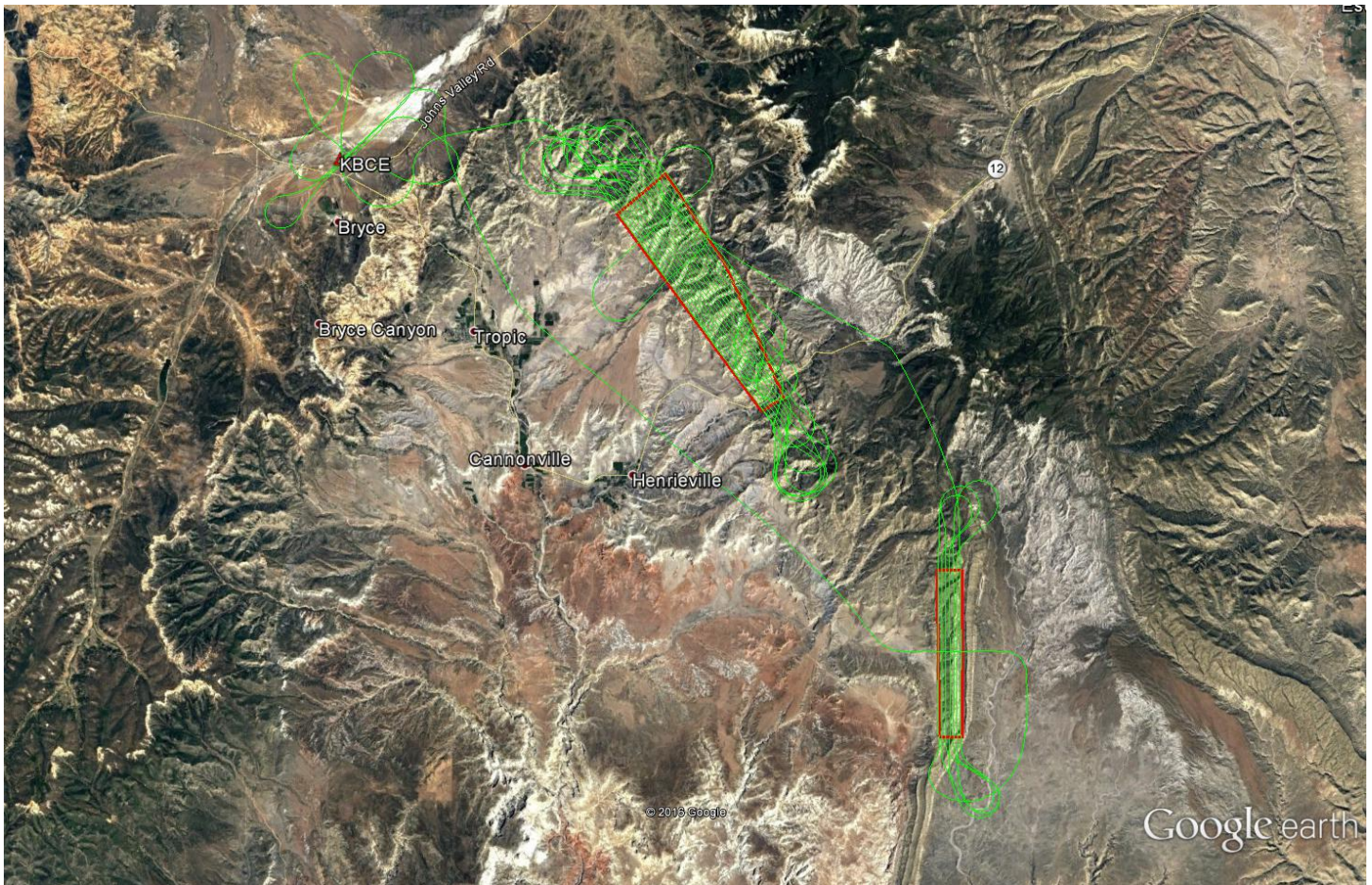
Location of survey polygons (in red), aircraft trajectory (in green), and GNSS reference station

The requested survey area consisted of two polygons located east of Bryce, UT. The polygons enclose approximately 39 km² (15 mi²).