

LiDAR Project Summary



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Project Information

Project Name:	NorthernAerodromes2020 (Watson Lake)
Airborne Project Number:	16023
Client:	NavCanada
Project Location:	Watson Lake, Yukon, Canada
Project Size:	18 km ²

Acquisition Projects

Project Number	Project Name	Vintage
1808	NavCanada2020	Aug 2020

Acquisition Parameters

Date (MM/DD/YY)	Mission	Flying Height (m)	Flying Speed (knots)	Pulse Rate Rep (kHz)	Scan Freq (Hz)	Scan Angle (degree)	Side Lap %	Point Density (pts/m ²)	LiDAR System
8/4/2020	3620217a	1000	160	800	270	60	60	11.1	Riegl VQ-1560i

Geodetic Control

Horizontal Datum:	Nad83 CSRS	Vertical Datum:	CGVD2013
		Undulation model:	CGG2013
Note: All positioning was based on the following existing control:			
Station ID	Lat	Long	Ellp Height (m)
180805	60 06 51.48425	-128 49 22.64102	682.709
180806	60 06 54.22916	-128 49 30.13824	682.567

Calibration Methodology

Airborne Imaging performs a complete calibration on every LiDAR acquisition flight. The data is first produced with its predetermined boresight values and then the calibration refined by applying corrections to the attitude of the aircraft (roll, pitch and heading) and fluctuations if necessary. To statistically quantify the accuracy, we compare the LiDAR elevations with independently surveyed ground points

Accuracy

Horizontal Accuracy, 95% or 2σ:	30 cm
Fundamental Vertical Accuracy (on flat hard surfaces), 95% or 2σ:	20 cm

Deliverables	
Projection:	UTM 9
Deliverables Formats	
1m Grids (32Bit Geotiff), DEM and DSM	
Hillshade Images (Geotiffs), DEM and DSM	
Classified Point Cloud (LAZ v1.2, 1km tiles), classes 1, 2, 7, 18	
Unclassified Point Cloud (LAZ v1.2, 1km tiles), class 0	
Outlines of project area and 1km tiles (.shp)	
Ground Truth results (.txt)	
Metadata (.xml format, FGDC compliant)	

