Eastern Central Maine 2017 QL2 LiDAR Project Report

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1. Summary / Scope

1.1. Summary

This report contains a summary of the Maine 2017 LiDAR acquisition task order, issued by the state of Maine under their contract issued on February 22, 2017. The task order yielded a project area covering approximately 8,743 total square miles over eastern central Maine. The intent of this document is only to provide specific validation information for the data acquisition/ collection, processing, and production of deliverables completed as specified in the task order.

1.2. Scope

Aerial topographic LiDAR was acquired using state of the art technology along with the necessary surveyed ground control points (GCPs) and airborne GPS and inertial navigation systems. The aerial data collection was designed with the following specifications listed in Table 1 below.

Table 1. Originally Planned LiDAR Specifications

AOI	Average Point Density	Flight Altitude (AGL)	Field of View	Minimum Side Overlap	RMSEz
AOI 1	2 pts / m^2	1,524-2,478 m	36°-60°	30%	≤ 10 cm
AOI 2	8 pts / m^2	1,060 m	34°	30%	≤ 10 cm
AOI 3.1	2 pts / m^2	2,100 m	36°	30%	≤ 10 cm
AOI 3.2	8 pts / m^2	1,100 m	32°	30%	≤ 10 cm
AOI 3.3	16 pts / m^2	900 m	21°	30%	≤ 10 cm
FEMA R1	2 pts / m^2	2,100 m	36°	30%	≤ 10 cm

1.3. Coverage

The LiDAR project boundary covers approximately 8,743 square miles and encompasses the following areas of interest.

- AOI 1: 8,736 square miles over Aroostock, Hancock, Penobscot, Piscataquis, Somerset, and Washington Counties
- AOI 2: 5.4 square miles over Madawaska in Aroostock County
- AOI 3.1, 3.2, and 3.3: 2 square miles over an archaeological site at Merrymeeting Bay in Sagadahoc County
- AOI FEMA R1: 442 square miles over Southern Aroostock County

A buffer of 100 meters was created to meet task order specifications. LiDAR extents are shown in Figure 1.

1.4. Duration

LiDAR data was acquired from April 30, 2017 to May 30, 2017 in 51 lifts and from November 4, 2017 to December 4, 2017 in 15 lifts for a total of 66 lifts. See "Section: 2.5. Time Period" for more details.

1.5. Issues

There were no issues to report for this project.

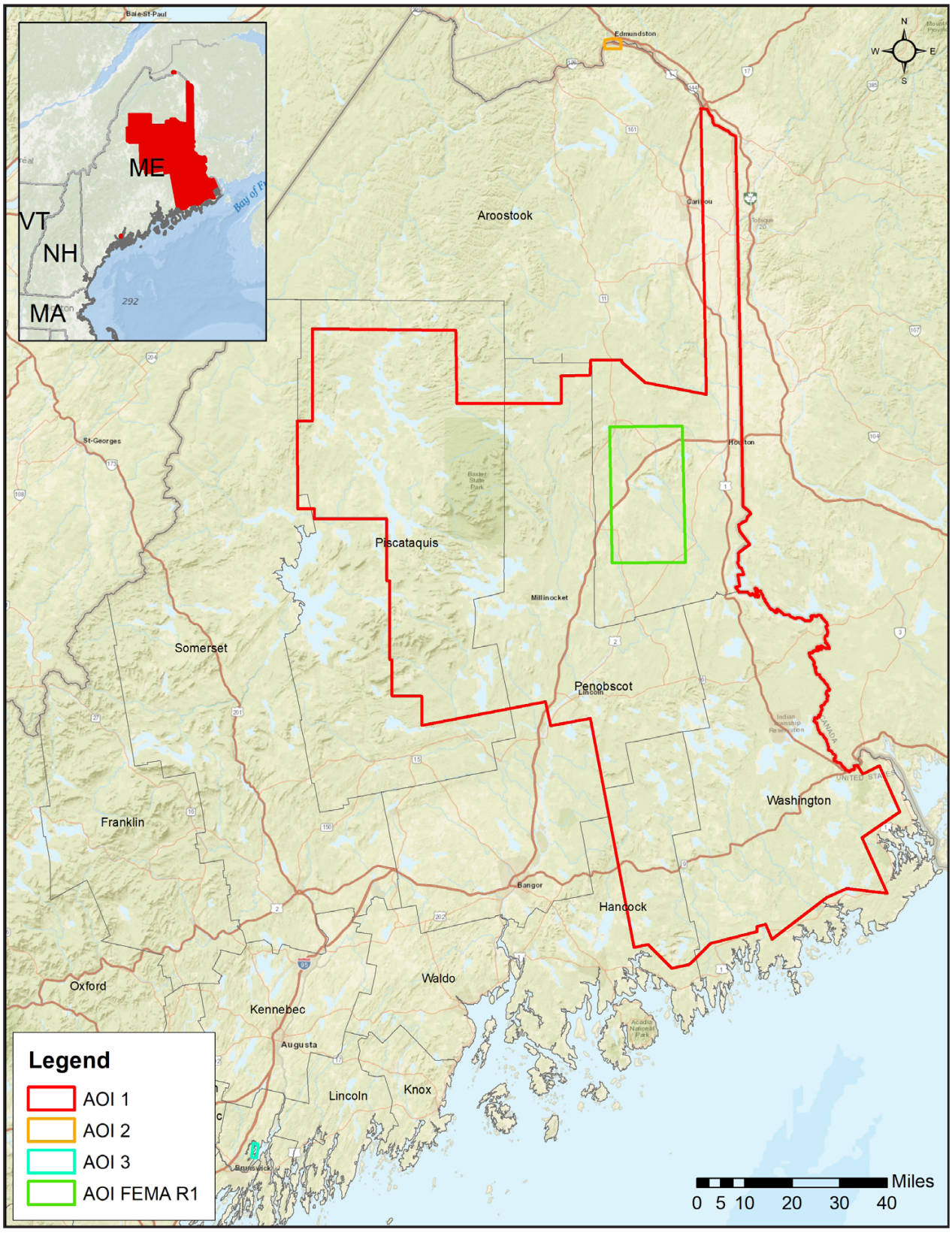
1.6. Deliverables

The following products were produced and delivered:

- Raw LiDAR point cloud data swaths in .LAS 1.4 format
- Classified LiDAR point cloud data, tiled, in . LAS 1.4 format (additional .LAS for each Merrymeeting Bay point density)
- 0.5-meter (QL1) and 1-meter (QL2) hydro-flattened bare-earth DEM, tiled, in ERDAS .IMG format (additional hydro-flattened DEMs for each Merrymeeting Bay point density at 1-meter for 2ppsm, 0.5-meter for 8ppsm, and 0.25-meter for 16ppsm)
- Continuous hydro-flattened breaklines in Esri file geodatabase format
- 0.5-meter (QL1) and 1-meter (QL2) intensity imagery, tiled, in GeoTIFF format
- Calibration and QC checkpoints in Excel and Esri shapefile formats
- Processing boundary in Esri shapefile format
- Tile index in Esri shapefile format
- Project-, deliverable-, and lift-level metadata in .XML format

All geospatial deliverables were produced in UTM 19N NAD83 (2011) EPOCH 2010.00, meters and NAVD88 (GEOID 12B). QL2 tiled deliverables have a tile size of 1,500 x 1,500 meters. QL1 tiled deliverables have a tile size of less than 750 x 750 meters. Tile names are derived from the US National Grid.

Figure 1. Project Boundary



2. Planning / Equipment

2.1. Flight Planning

Flight planning was based on the unique project requirements and characteristics of the project site. The basis of planning included: required accuracies, type of development, amount / type of vegetation within project area, required data posting, and potential altitude restrictions for flights in project vicinity.

Detailed project flight planning calculations were performed for the project using Leica MissionPro planning software. The entire target area was comprised of 509 planned flight lines measuring approximately 17,405 total flight line miles (Figure 2).

2.2. LiDAR Sensor

Quantum Spatial utilized a Leica ALS 70 LiDAR sensor (Figure 3): serial numbers 7161, 7178, a Leica ALS 80 LiDAR sensor (Figure 4): serial numbers 8119, 8237, and a Riegl 1560i LiDAR sensor (Figure 4): serial number 2221256.

The Leica ALS 70 system is capable of collecting data at a maximum frequency of 500 kHz, which affords elevation data collection of up to 500,000 points per second. The system utilizes a Multi-Pulse in the Air option (MPIA). The sensor is also equipped with the ability to measure up to 4 returns per outgoing pulse from the laser and these come in the form of 1st, 2nd, 3rd and last returns. The intensity of the returns is also captured during aerial acquisition.

The Leica ALS 80 system is capable of collecting data at a maximum frequency of 1,000 kHz. The system utilizes a Multi-Pulse in the Air option (MPIA). The sensor is also equipped with the ability to measure up to 6 returns per outgoing pulse from the laser. The intensity of the returns is also captured during aerial acquisition.

The Riegl 1560i system has a laser pulse repetition rate of up to 2 MH. The system utilizes a Multi-Pulse in the Air option (MPIA). The sensor is equipped with the ability to measure up to an unlimited number of targets per pulse from the laser.

A brief summary of the aerial acquisition parameters for the project are shown in the LiDAR System Specifications in Tables 2 and 3.

Figure 2. Planned Flight Lines

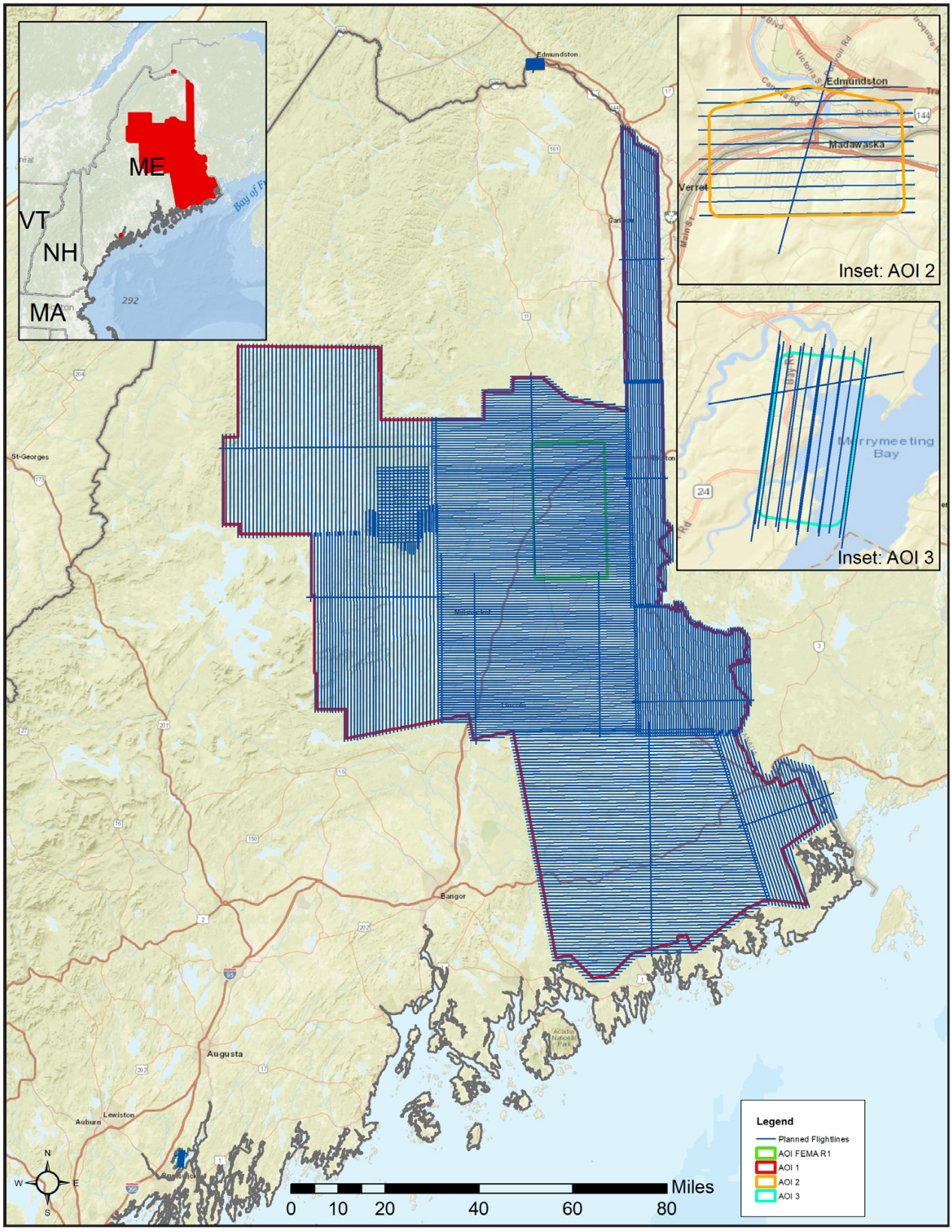


Table 2. QL1 Lidar Collection Parameters

		Leica ALS 70
Terrain and Aircraft Scanner	Flying Height (m)	1060
	Recommended Ground Speed (kts)	135
Scanner	Field of View (deg)	34
	Scan Rate Setting Used	57.3 Hz
Laser	Laser Pulse Rate Used (kHz)	500
	Multi Pulse in Air Mode	Enabled
Coverage	Full Swath Width (m)	648.15
	Line Spacing (m)	429.78
Point Spacing and Density	Avg Point Spacing (m)	0.30
	Average Point Density (pts / m^2)	11.11

Figure 3. The Leica ALS 70 Sensor

Table 3. QL2 Lidar Collection Parameters

		Leica ALS 70	Leica ALS 80	Riegl 1560i
Terrain and Aircraft Scanner	Flying Height (m)	2100	2478	1829
	Recommended Ground Speed (kts)	140	140	150
Scanner	Field of View (deg)	36	36	58.52
	Scan Rate Setting Used	56 Hz	33.5 Hz	210 LPS
Laser	Laser Pulse Rate Used (kHz)	262.6	484	700
	Multi Pulse in Air Mode	Enabled	Disabled	Enabled
Coverage	Full Swath Width (m)	1364.66	1610.30	2049
	Line Spacing (m)	955.26	1127.21	1434.3
Point Spacing and Density	Avg Point Spacing (m)	0.61	0.42	0.95
	Average Point Density (pts / m^2)	2.67	1.55	2.95

Figure 4. The Leica ALS 80 (Left) and Riegl 1560i (Right) LiDAR Sensors

2.3. Aircraft

All flights for the project were accomplished through the use of customized planes. Plane type and tail numbers are listed below.

LiDAR Collection Planes

- Piper Navajo (twin-piston), Tail Numbers: N73TM, N262AS
- Cessna Stationair, Tail Numbers: N915WC, N916WC
- Cessna Centurion (single-piston), Tail Number: N1007Q
- Cessna 310H, Tail Number: N1107Q

These aircraft provided an ideal, stable aerial base for LiDAR and orthoimagery acquisition. These aerial platforms has relatively fast cruise speeds which are beneficial for project mobilization / demobilization while maintaining relatively slow stall speeds which proved ideal for collection of high-density, consistent data posting using a state-of-the-art Leica and Riegl LiDAR systems. Some of Quantum Spatial's operating aircraft can be seen in Figure 5 below.

Figure 5. Some of Quantum Spatial's Planes

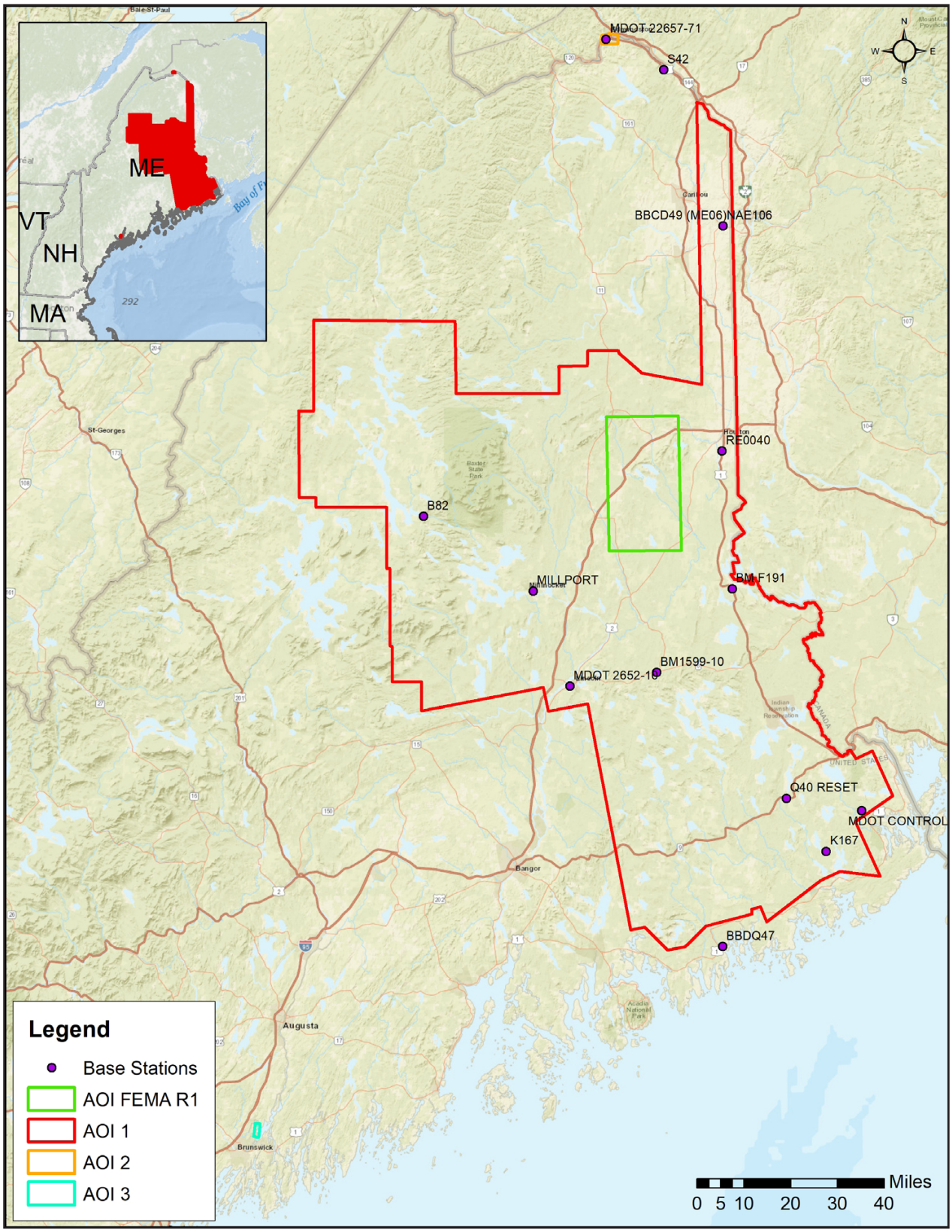
2.4. Base Station Information

GPS base stations were utilized during all phases of flight (Table 4). The base station locations were verified using NGS OPUS service and subsequent surveys. Base station locations are depicted in Figure 6. Data sheets, graphical depiction of base station locations or log sheets used during station occupation are available in Appendix A.

Table 4. Base Station Locations

Base Station	Easting (X)	Northing (Y)	Ellipsoid Height (m)
B82	486369.79	5080716.23	287.16
BBCD49 (ME06)	589295.730	5180508.97	115.130
BBDQ47	589132.386	4932911.25	3.286
BM F191	592466.97	5055807.28	182.02
BM1599-10	566451.95	5027061.99	141.96
K167	624788.69	4965574.54	32.97
MDOT 22657-71	549099.490	5244712.06	176.940
MDOT 2652-10	536646.17	5022351.02	67.03
MDOT CONTROL	636964.32	4979612.87	38.39
MILLPORT	524004.84	5055081.43	122.14
NAE106	589293.390	5180510.11	115.150
Q40 RESET	611092.96	4983842.57	52.55
RE0040	588961.644	5103158.042	176.996
S42	568971.900	5234174.45	167.290

Figure 6. Base Station Locations



2.5. Time Period

Project specific flights were conducted over two months. 66 sorties, or aircraft lifts were completed. Accomplished sorties are listed below.

- April 30, 2017-A (N73TM, SN7178)
- May 4, 2017-A (N73TM, SN7178)
- May 4, 2017-A (N262AS, N7161)
- May 4, 2017-A (N916WC, SN8119)
- May 4, 2017-B (N73TM, SN7178)
- May 4, 2017-B (N262AS, N7161)
- May 5, 2017-A (N73TM, SN7178)
- May 5, 2017-A (N262AS, SN7161)
- May 5, 2017-A (N916WC, SN8119)
- May 13, 2017-A (N73TM, SN7178)
- May 13, 2017-A (N262AS, N7161)
- May 13, 2017-A (N916WC, SN8119)
- May 13, 2017-B (N262AS, N7161)
- May 16, 2017-A (N73TM, SN7178)
- May 16, 2017-A (N262AS, N7161)
- May 17, 2017-A (N916WC, SN8119)
- May 17, 2017-B (N916WC, SN8119)
- May 18, 2017-A (N73TM, SN7178)
- May 18, 2017-A (N262AS, N7161)
- May 18, 2017-A (N916WC, SN8119)
- May 18, 2017-A (N1007Q, SN2221256)
- May 20, 2017-A (N262AS, N7161)
- May 20, 2017-A (N915WC, SN8237)
- May 20, 2017-A (N916WC, SN8119)
- May 20, 2017-A (N1007Q, SN2221256)
- May 20, 2017-B (N73TM, SN7178)
- May 20, 2017-B (N262AS, N7161)
- May 20, 2017-B (N915WC, SN8237)
- May 20, 2017-B (N1007Q, SN2221256)
- May 20, 2017-C (N73TM, SN7178)
- May 20, 2017-C (N1007Q, SN2221256)
- May 21, 2017-A (N73TM, SN7178)
- May 21, 2017-A (N262AS, N7161)
- May 21, 2017-A (N915WC, SN8237)
- May 21, 2017-A (N916WC, SN8119)
- May 21, 2017-A (N1007Q, SN2221256)
- May 21, 2017-B (N73TM, SN7178)
- May 21, 2017-B (N262AS, N7161)
- May 21, 2017-B (N915WC, SN8237)
- May 21, 2017-B (N1007Q, SN2221256)
- May 21, 2017-C (N1007Q, SN2221256)
- May 24, 2017-A (N73TM, SN7178)
- May 24, 2017-A (N262AS, N7161)
- May 24, 2017-A (N1007Q, SN2221256)

Lifts Continued

- May 25, 2017-A (N262AS, N7161)
- May 25, 2017-A (N915WC, SN8237)
- May 25, 2017-A (N1007Q, SN2221256)
- May 28, 2017-A (N262AS, N7161)
- May 30, 2017-A (N262AS, N7161)
- May 30, 2017-A (N915WC, SN8237)
- May 30, 2017-A (N1007Q, SN2221256)
- Nov. 4, 2017-A (N1107Q, SN2221256)
- Nov. 4, 2017-B (N1107Q, SN2221256)
- Nov. 8, 2017-A (N1107Q, SN2221256)
- Nov. 8, 2017-B (N1107Q, SN2221256)
- Nov. 11, 2017-A (N915WC, SN8237)
- Nov. 11, 2017-B (N915WC, SN8237)
- Nov. 14, 2017-A (N1107Q, SN2221256)
- Nov. 15, 2017-A (N915WC, SN8237)
- Nov. 15, 2017-B (N915WC, SN8237)
- Nov. 18, 2017-A (N915WC, SN8237)
- Nov. 21, 2017-A (N915WC, SN8237)
- Nov. 21, 2017-B (N915WC, SN8237)
- Nov. 22, 2017-A (N915WC, SN8237)
- Nov. 30, 2017-A (N915WC, SN8237)
- December 4, 2017-A (N915WC, SN8237)

3. Processing Summary

3.1. Flight Logs

Flight logs were completed by LIDAR sensor technicians for each mission during acquisition. These logs depict a variety of information, including:

- Job / Project #
- Flight Date / Lift Number
- FOV (Field of View)
- Scan Rate (HZ)
- Pulse Rate Frequency (Hz)
- Ground Speed
- Altitude
- Base Station
- PDOP avoidance times
- Flight Line #
- Flight Line Start and Stop Times
- Flight Line Altitude (AMSL)
- Heading
- Speed
- Returns
- Crab

Notes: (Visibility, winds, ride, weather, temperature, dew point, pressure, etc). Project specific flight logs for each sortie are available in Appendix A.

3.2. LiDAR Processing

Inertial Explorer/Applanix + POSPac Mobile Mapping Suite software was used for post-processing of airborne GPS and inertial data (IMU), which is critical to the positioning and orientation of the LiDAR sensor during all flights. Inertial Explorer/POSPac combines aircraft raw trajectory data with stationary GPS base station data yielding a "Smoothed Best Estimate Trajectory (SBET) necessary for additional post processing software to develop the resulting geo-referenced point cloud from the LiDAR missions.

During the sensor trajectory processing (combining GPS & IMU datasets) certain statistical graphs and tables are generated within the Inertial Explorer/Applanix POSPac processing environment which are commonly used as indicators of processing stability and accuracy. This data for analysis include: Max horizontal / vertical GPS variance, separation plot, altitude plot, PDOP plot, base station baseline length, processing mode, number of satellite vehicles, and mission trajectory. All relevant graphs produced in the POSPac processing environment for each sortie during the project mobilization are available in Appendix A.

The generated point cloud is the mathematical three dimensional composite of all returns from all laser pulses as determined from the aerial mission. Laser point data are imported into TerraScan and a manual calibration is performed to assess the system offsets for pitch, roll, heading and scale. At this point this data is ready for analysis, classification, and filtering to generate a bare earth surface model in which the above-ground features are removed from the data set. Point clouds were created using the Leica CloudPro software and the Riegl RiPROCESS software. GeoCue distributive processing software was used in the creation of some files needed in downstream processing, as well as in the tiling of the dataset into more manageable file sizes. TerraScan and TerraModeler software packages were then used for the automated data classification, manual cleanup, and bare earth generation. Project specific macros were developed to classify the ground and remove side overlap between parallel flight lines.

All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Global Mapper was used as a final check of the bare earth dataset. GeoCue was used to create the deliverable industry-standard LAS files for both the All Point Cloud Data and the Bare Earth. In-house software was then used to perform final statistical analysis of the classes in the LAS files.

3.3. LAS Classification Scheme

The classification classes are determined by the USGS Version 1.2 specifications and are an industry standard for the classification of LIDAR point clouds. All data starts the process as Class 1 (Unclassified), and then through automated classification routines, the classifications are determined using TerraScan macro processing.

The classes used in the dataset are as follows and have the following descriptions:

- Class 1 – Processed, but Unclassified – These points would be the catch all for points that do not fit any of the other deliverable classes. This would cover features such as vegetation, cars, etc.
- Class 2 – Bare-Earth Ground – This is the bare earth surface
- Class 7 – Low Noise – Low points, manually identified below the surface that could be noise points in point cloud.
- Class 9 – In-land Water – Points found inside of inland lake/ponds
- Class 10 – Ignored Ground – Points found to be close to breakline features. Points are moved to this class from the Class 2 dataset. This class is ignored during the DEM creation process in order to provide smooth transition between the ground surface and hydro flattened surface.
- Class 17 – Bridge Decks – Points falling on bridge decks.
- Class 18 – High Noise – High points, manually identified above the surface that could be noise points in point cloud.

3.4. Classified LAS Processing

The bare earth surface is then manually reviewed to ensure correct classification on the Class 2 (Ground) points. After the bare- earth surface is finalized; it is then used to generate all hydro-breaklines through heads-up digitization.

All ground (ASPRS Class 2) LiDAR data inside of the Lake Pond and Double Line Drain hydro flattening breaklines were then classified to water (ASPRS Class 9) using TerraScan macro functionality. A buffer of 3 feet was also used around each hydro flattened feature to classify these ground (ASPRS Class 2) points to Ignored ground (ASPRS Class 10). All Lake Pond Island and Double Line Drain Island features were checked to ensure that the ground (ASPRS Class 2) points were reclassified to the correct classification after the automated classification was completed.

All overlap data was processed through automated functionality provided by TerraScan to classify the overlapping flight line data to approved classes by USGS. The overlap data was identified using the Overlap Flag, per LAS 1.4 specifications.

All data was manually reviewed and any remaining artifacts removed using functionality provided by TerraScan and TerraModeler. Global Mapper is used as a final check of the bare earth dataset. GeoCue was then used to create the deliverable industry-standard LAS files for all point cloud data. Quantum Spatial proprietary software was used to perform final statistical analysis of the classes in the LAS files, on a per tile level to verify final classification metrics and full LAS header

information.

3.5. Hydro-Flattened Breakline Creation

Class 2 LiDAR was used to create a bare earth surface model. The surface model was then used to heads-up digitize 2D breaklines of Inland Streams and Rivers with a 100 foot nominal width and Inland Ponds and Lakes of 2 acres or greater surface area.

Elevation values were assigned to all Inland Ponds and Lakes, Inland Pond and Lake Islands, Inland Streams and Rivers and Inland Stream and River Islands using TerraModeler functionality.

Elevation values were assigned to all Inland streams and rivers using Quantum Spatial proprietary software.

All ground (ASPRS Class 2) LiDAR data inside of the collected inland breaklines were then classified to water (ASPRS Class 9) using TerraScan macro functionality. A buffer of 3 feet was also used around each hydro flattened feature. These points were moved from ground (ASPRS Class 2) to Ignored Ground (ASPRS Class 10).

The breakline files were then translated to Esri file geodatabase format using Esri conversion tools.

3.6. Hydro-Flattened Raster DEM Creation

Class 2 LiDAR in conjunction with the hydro breaklines were used to create 0.25, 0.5, and 1-meter Raster DEMs. Using automated scripting routines within ArcMap, an ERDAS Imagine .IMG file was created for each tile. Each surface is reviewed using Global Mapper to check for any surface anomalies or incorrect elevations found within the surface.

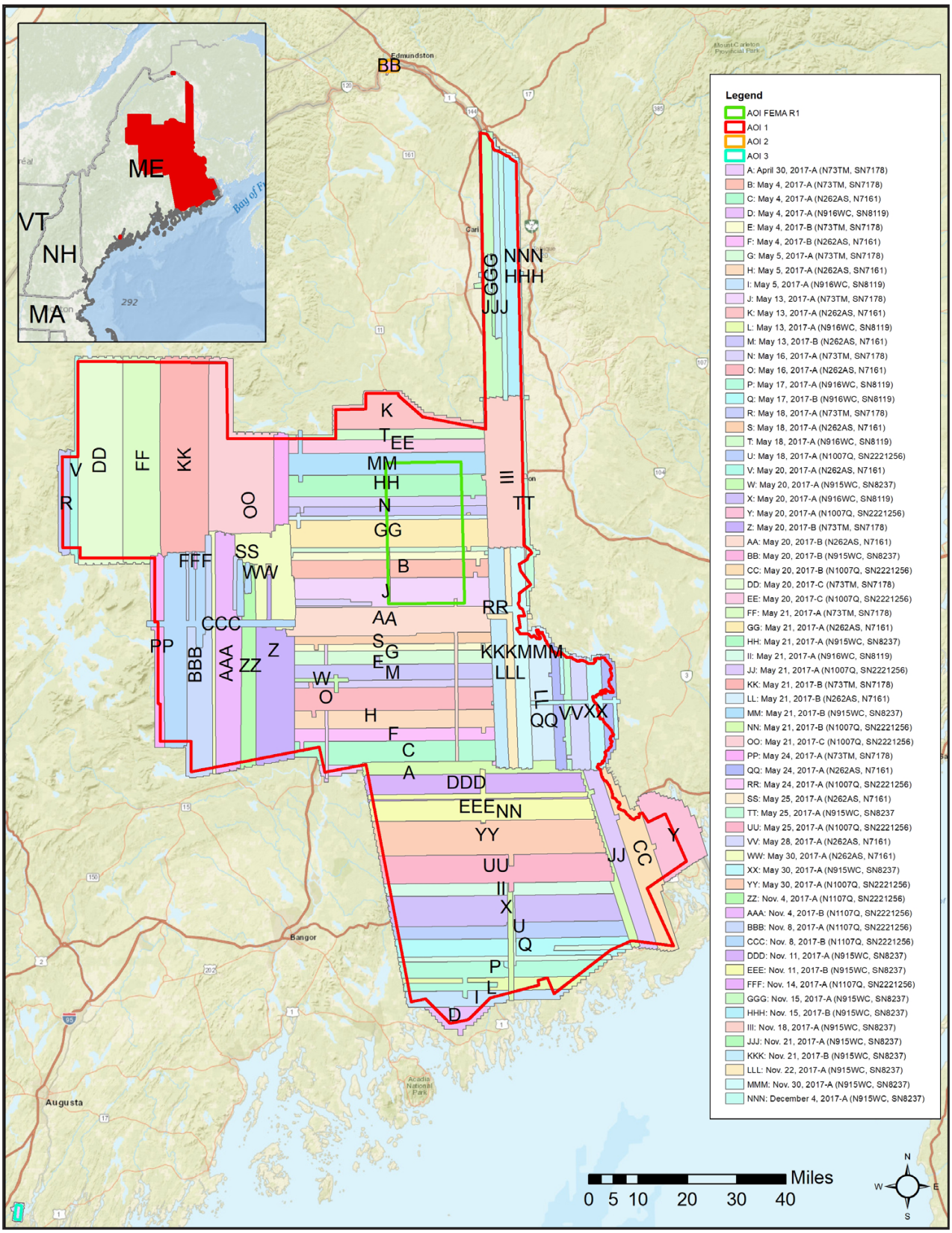
3.7. Intensity Image Creation

GeoCue software was used to create the deliverable Intensity Images. All overlap classes (ASPRS class 17/18/25) were ignored during this process. This helps to ensure a more aesthetically pleasing image. The GeoCue software was then used to verify full project coverage as well. GeoTIFF files were then provided as the deliverable for this dataset requirement.

4. Project Coverage Verification

Coverage verification was performed by comparing coverage of processed .LAS files captured during project collection to generate project shape files depicting boundaries of specified project areas. Please refer to Figure 7.

Figure 7. Flightline Swath LAS File Coverage



5. Ground Control and Check Point Collection

Quantum Spatial completed a field survey of 182 ground control (calibration) points along with 299 blind QA points in Vegetated and Non-Vegetated land cover classifications. 15 published control points were also collected for a total of 496 points.

A combination of precise GPS surveying methods, including static and RTK observations were used to establish the 3D position of ground calibration points and QA points for the point classes above. GPS was not an appropriate methodology for surveying in the forested areas during the leaf-on conditions for the actual field survey (which was accomplished after the LiDAR acquisition). Therefore the 3D positions for the forested points were acquired using a GPS-derived offset point located out in the open near the forested area, and using precise offset surveying techniques to derive the 3D position of the forested point from the open control point. The explicit goal for these surveys was to develop 3D positions that were three times greater than the accuracy requirement for the elevation surface. In this case of the blind QA points the goal was a positional accuracy of 5 cm in terms of the RMSE.

For more information, see the Survey Report in Appendix B.

The required accuracy testing was performed on the LiDAR dataset (both the LiDAR point cloud and derived DEM's) according to the USGS LiDAR Base Specification Version 1.2 (2014). In this document, horizontal coordinates for ground control and QA points for all LiDAR classes are reported in UTM 19N NAD83 (2011) EPOCH 2010.00, meters.

5.1. Calibration Control Point Testing

Figure 8 shows the location of each bare earth calibration point for the project area. TerraScan was used to perform a quality assurance check. Note that these results of the surface calibration are not an independent assessment of the accuracy of these project deliverables, but the statistical results do provide additional feedback as to the overall quality of the elevation surface.

5.2. Point Cloud Testing

The project specifications require that only Non-Vegetated Vertical Accuracy (NVA) be computed for raw lidar point cloud swath files. The required accuracy (ACCz) is: 19.6 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSE of 10 cm in the bare earth and urban land cover classes. The NVA was tested with 176 checkpoints located in bare earth and urban (non-vegetated) areas. These check points were not used in the calibration or post processing of the lidar point cloud data. The checkpoints were distributed throughout the project area and were surveyed using GPS techniques. See survey report for additional survey methodologies.

Elevations from the unclassified lidar surface were measured for the x,y location of each check point. Elevations interpolated from the lidar surface were then compared to the elevation values of the surveyed control points. AccuracyZ has been tested to meet 19.6 cm or better Non-

Vegetated Vertical Accuracy at 95% confidence level using RMSE(z) x 1.9600 as defined by the National Standards for Spatial Data Accuracy (NSSDA); assessed and reported using National Digital Elevation Program (NDEP)/ASRPS Guidelines. See Figure 10.

5.3. Digital Elevation Model (DEM) Testing

The project specifications require the accuracy (ACCz) of the derived DEM be calculated and reported in two ways:

1. The required NVA is: 19.6 cm at a 95% confidence level, derived according to NSSDA, i.e., based on RMSE of 10 cm in the bare earth and urban land cover classes. This is a required accuracy. The NVA was tested with 176 checkpoints located in bare earth and urban (non-vegetated) areas. See Figure 10.

2. Vegetated Vertical Accuracy (VVA): VVA shall be reported for forested, shrubs, and tall weeds land cover classes. The target VVA is: 29.4 cm at the 95th percentile, derived according to ASPRS Guidelines, Vertical Accuracy Reporting for Lidar Data, i.e., based on the 95th percentile error in all vegetated land cover classes combined. This is a target accuracy. The VVA was tested with 123 checkpoints located in tall weeds/crops and brushlands/low trees (vegetated) areas. The checkpoints were distributed throughout the project area and were surveyed using GPS techniques. See Figure 11.

See survey report for additional survey methodologies. AccuracyZ has been tested to meet 19.6 cm or better Non-Vegetated Vertical Accuracy at 95% confidence level using RMSE(z) x 1.9600 as defined by the National Standards for Spatial Data Accuracy (NSSDA); assessed and reported using National Digital Elevation Program (NDEP)/ASRPS Guidelines.

A brief summary of results are listed below. For more information, see the FOCUS on Accuracy Report.

Table 5. Summary of LiDAR Acccuracy

Category	Target	Measured	Point Count
Raw NVA	0.196 m	0.100 m	176
NVA	0.196 m	0.099 m	176
VVA	0.294 m	0.255 m	123

Figure 8. Calibration Control Point Locations

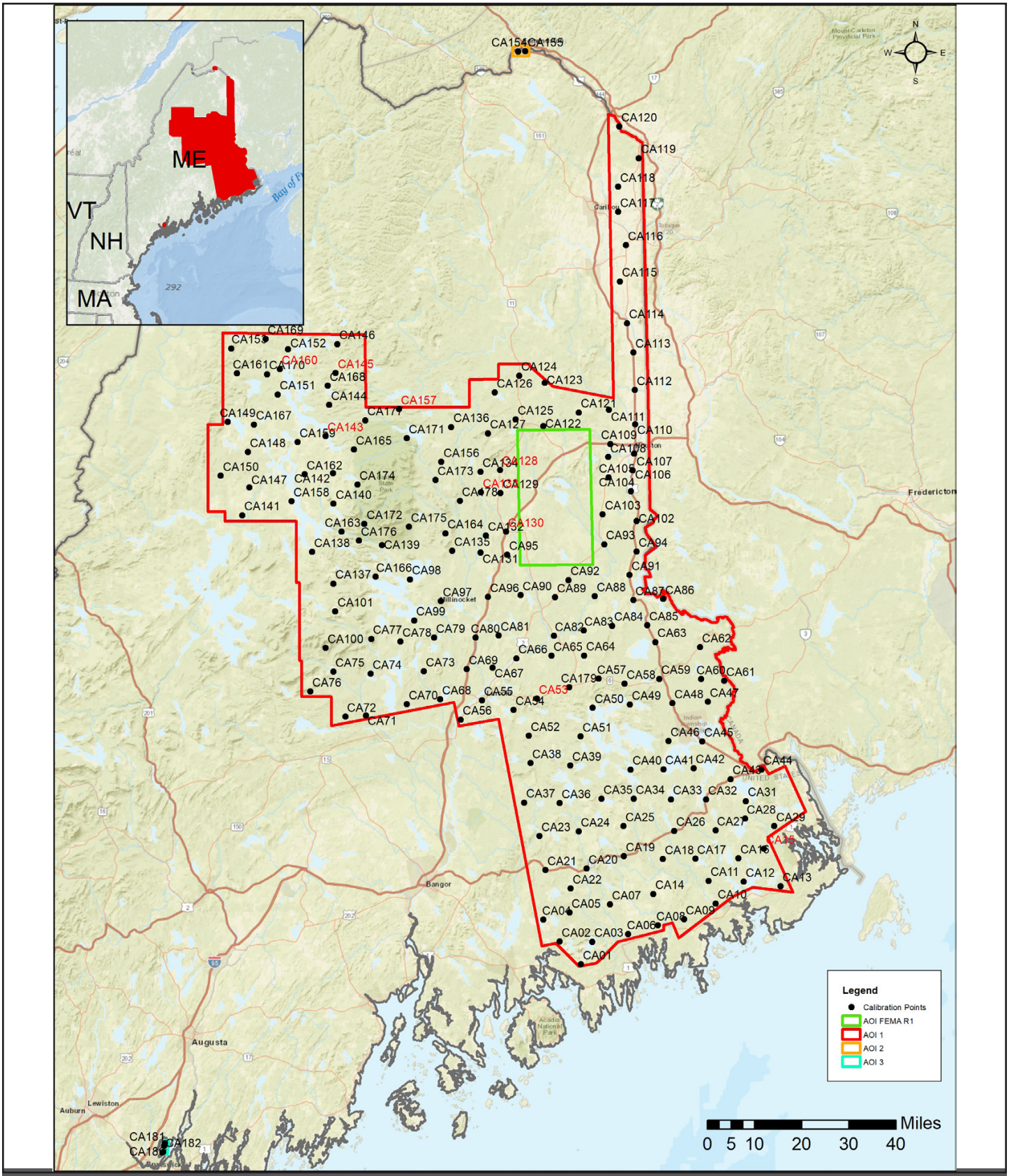


Figure 9. QC Checkpoint Locations - Raw NVA

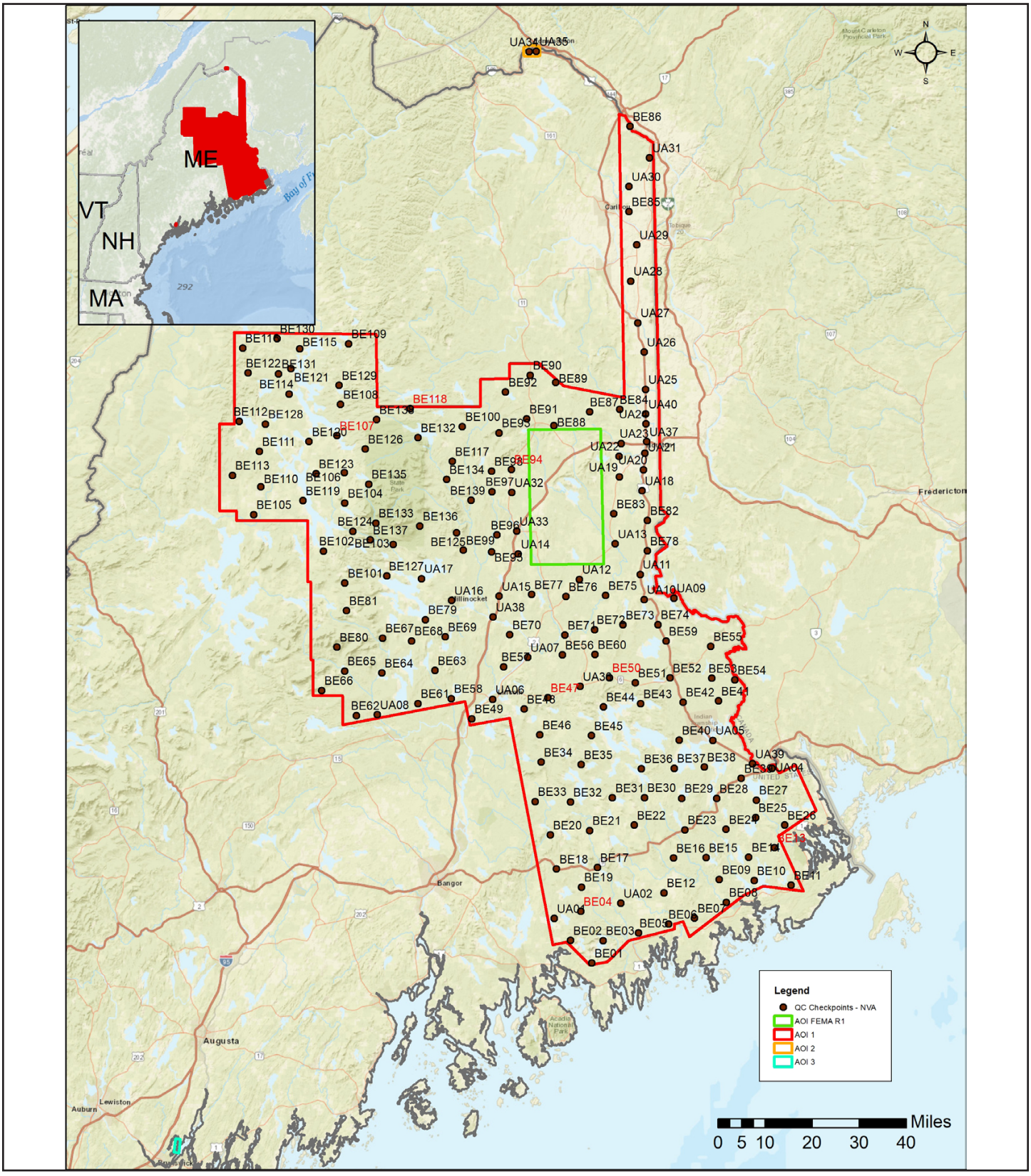


Figure 10. QC Checkpoint Locations - NVA

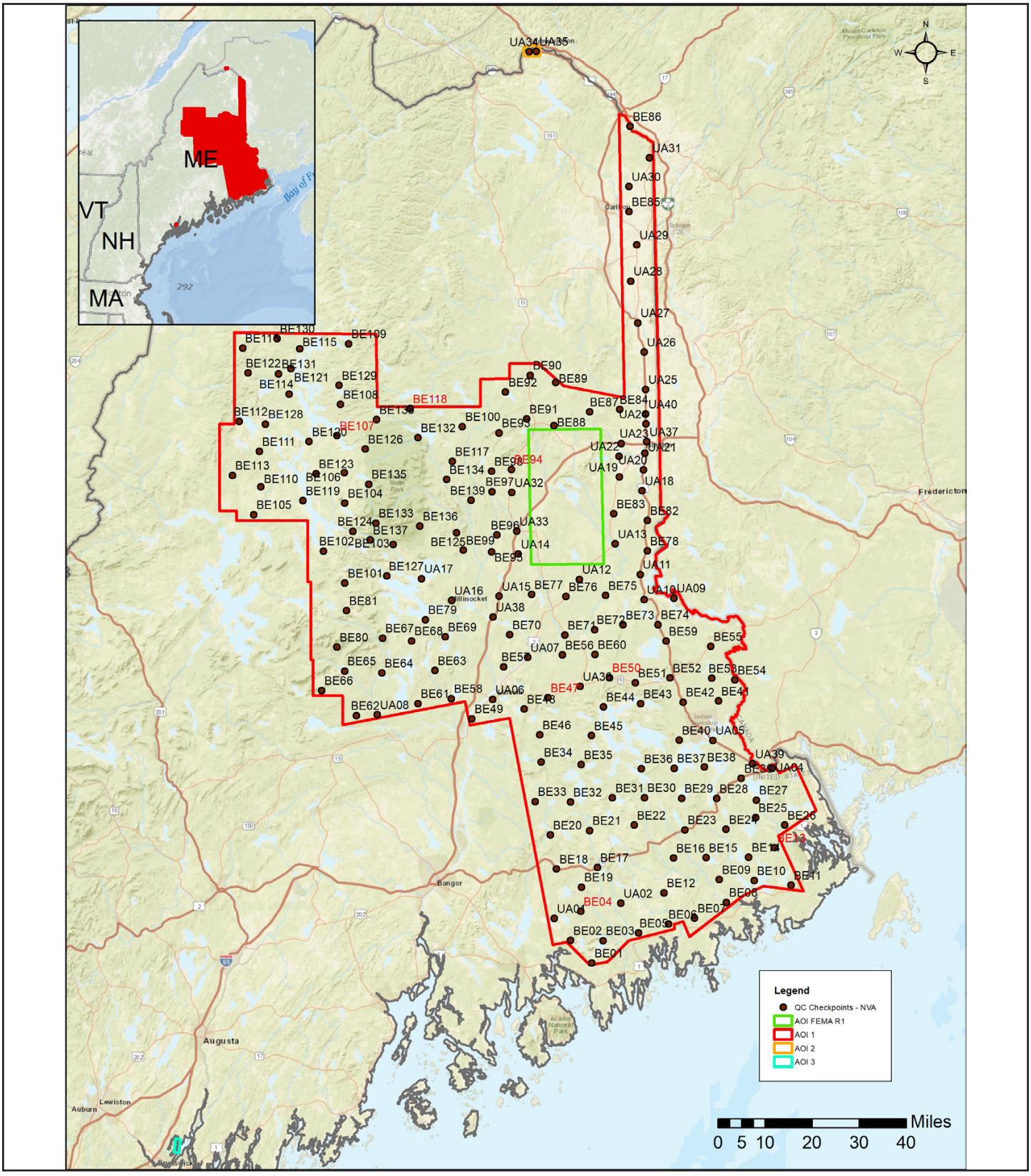
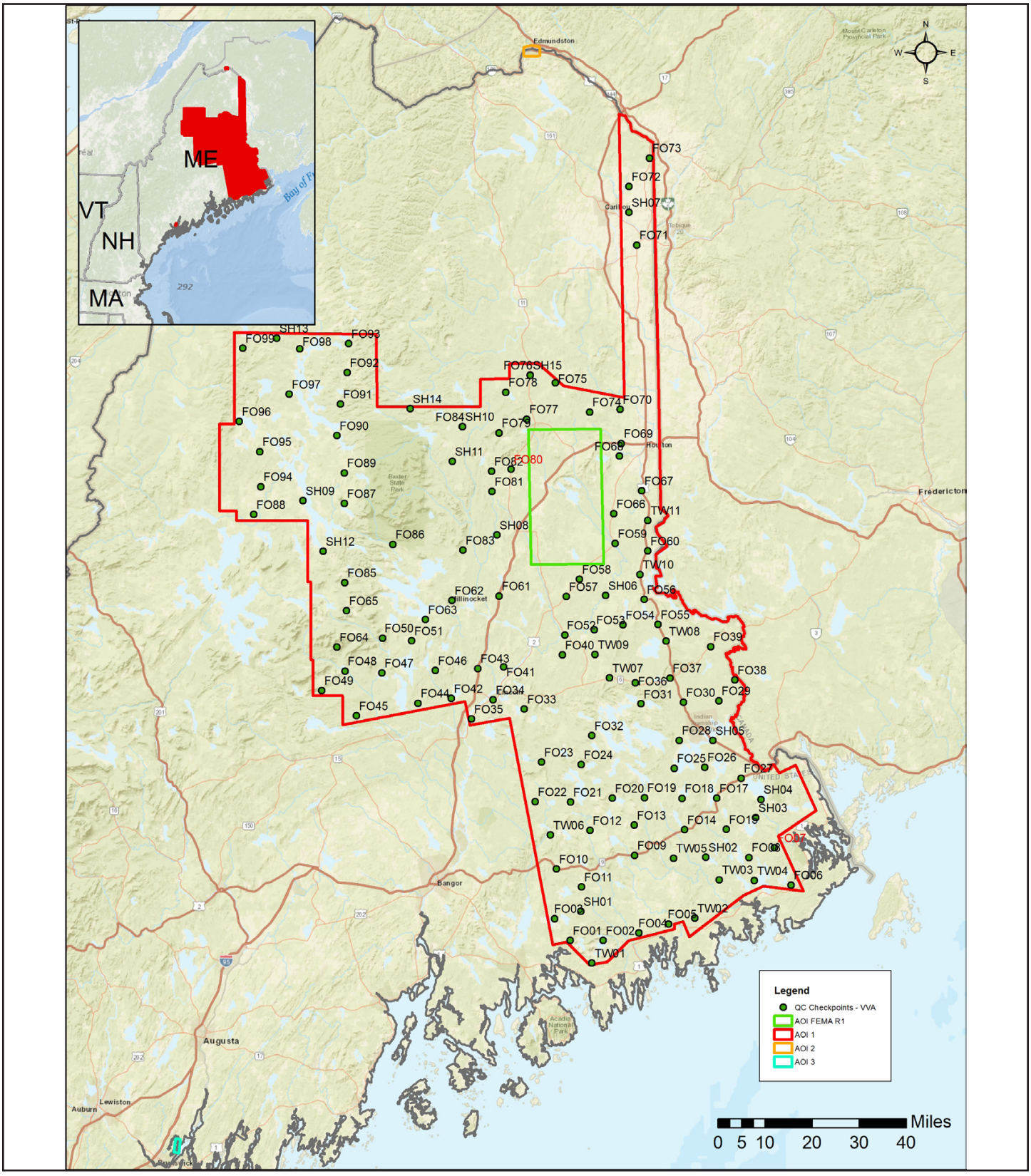


Figure 11. QC Checkpoint Locations - VVA



Project Report Appendices

The following section contains the appendices as listed in the Eastern Central Maine 2017 QL2 LiDAR Project Report.

Appendix A

GPS/IMU Processing Statistics
Flight Logs
Base Station Logs

There were 66 total lifts. Graph reports generated from processing software and flight logs are found on the following pages.

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Flight Log 87
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May 20, 2017-A (N916WC, SN8119) 191
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Flight Log 269
May 21, 2017-A (N916WC, SN8119) 270
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Flight Log 282
May 21, 2017-B (N73TM, SN7178) 283
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May 21, 2017-B (N262AS, N7161) 291
Flight Log 299
May 21, 2017-B (N915WC, SN8237) 300
Flight Log 307
May 21, 2017-B (N1007Q, SN2221256) 308
Flight Log 312
May 21, 2017-C (N1007Q, SN2221256) 313
Flight Log 317
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Flight Log 326
May 24, 2017-A (N262AS, N7161) 327
Flight Log 335
May 24, 2017-A (N1007Q, SN2221256) 336
Flight Log 340

There were 66 total lifts. Graph reports generated from processing software and flight logs are found on the following pages.

May 25, 2017-A (N262AS, N7161) 341
Flight Log 349
May 25, 2017-A (N915WC, SN8237) 350
Flight Log 357
May 25, 2017-A (N1007Q, SN2221256) 358
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May 28, 2017-A (N262AS, N7161) 363
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Nov. 4, 2017-B (N1107Q, SN2221256) 398
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Nov. 8, 2017-A (N1107Q, SN2221256) 403
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Nov. 8, 2017-B (N1107Q, SN2221256) 408
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Nov. 11, 2017-A (N915WC, SN8237) 413
Flight Log 420
Nov. 11, 2017-B (N915WC, SN8237) 421
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Nov. 15, 2017-A (N915WC, SN8237) 434
Flight Log 441
Nov. 15, 2017-B (N915WC, SN8237) 442
Flight Log 449
Nov. 18, 2017-A (N915WC, SN8237) 450
Flight Log 458
Nov. 21, 2017-A (N915WC, SN8237) 459
Flight Log 466
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Flight Log 475
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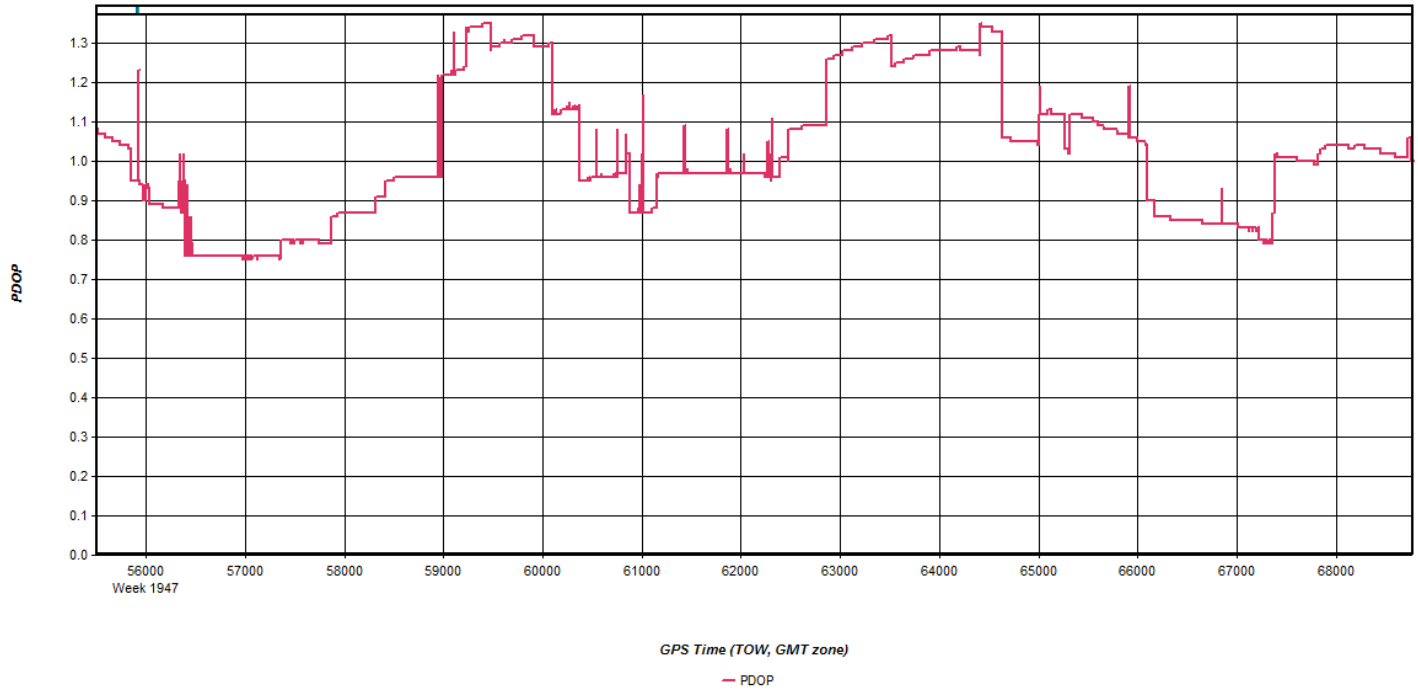
Nov. 30, 2017-A (N915WC, SN8237) 485
Flight Log 492
December 4, 2017-A (N915WC, SN8237) 493
Flight Log 500

April 30, 2017- N73TM, SN7178

MEOW
10 km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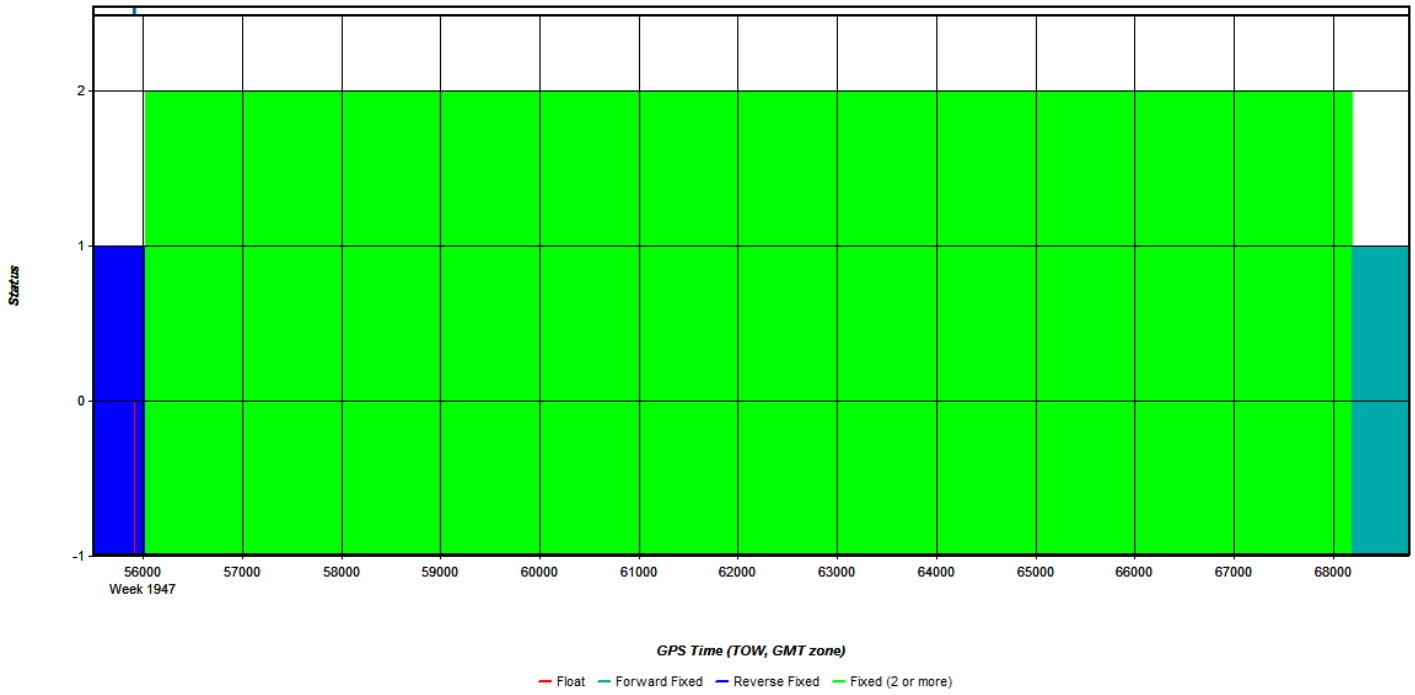
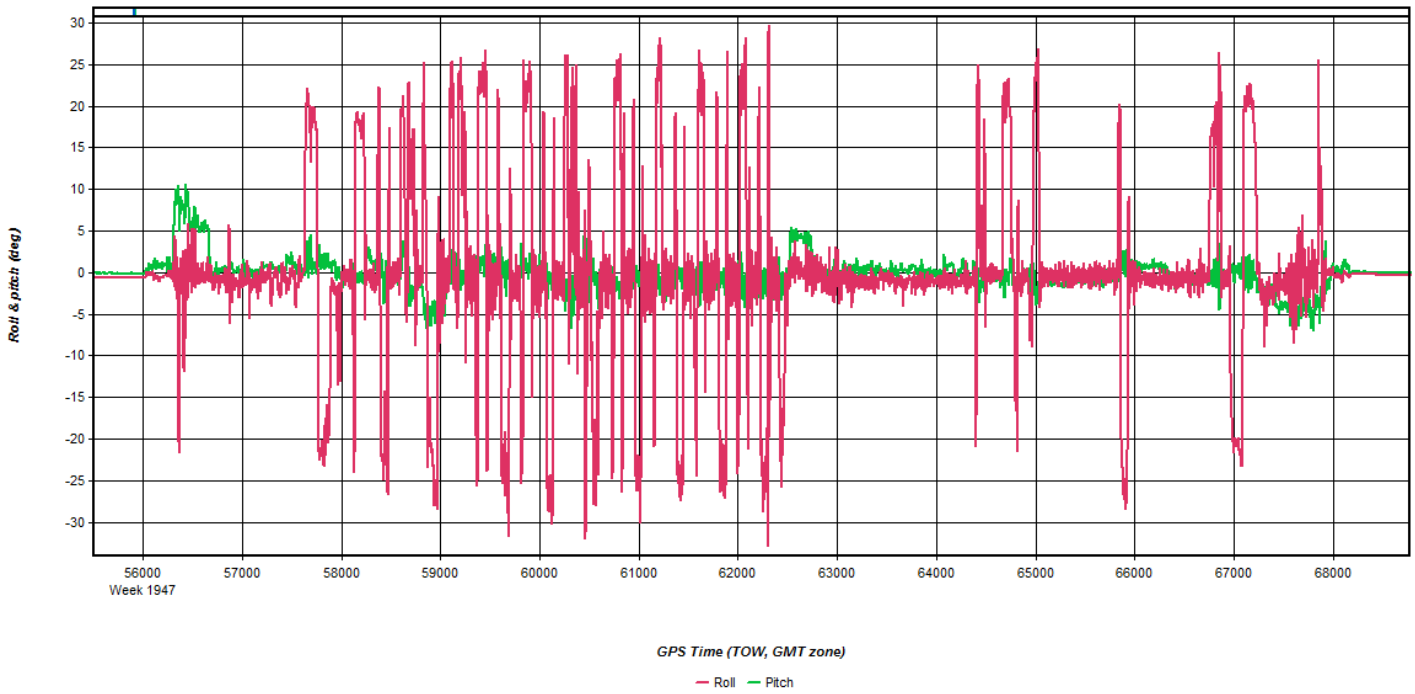
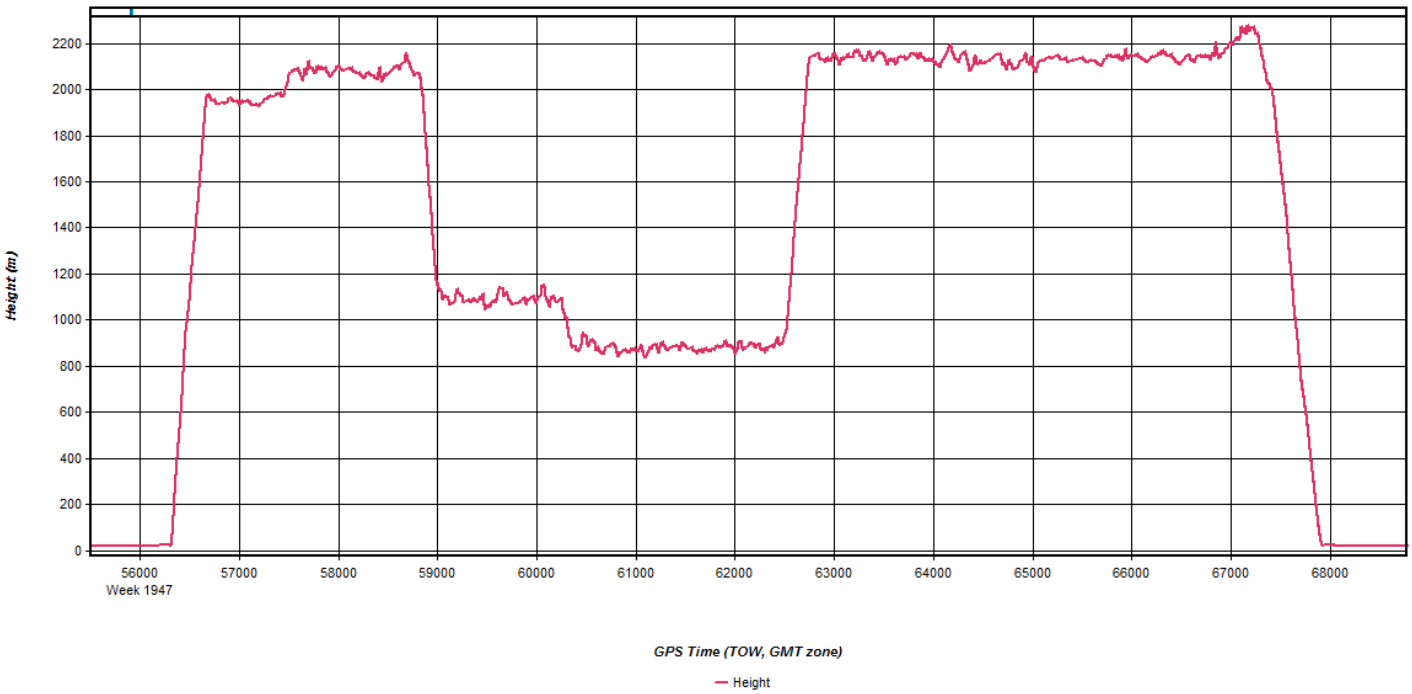
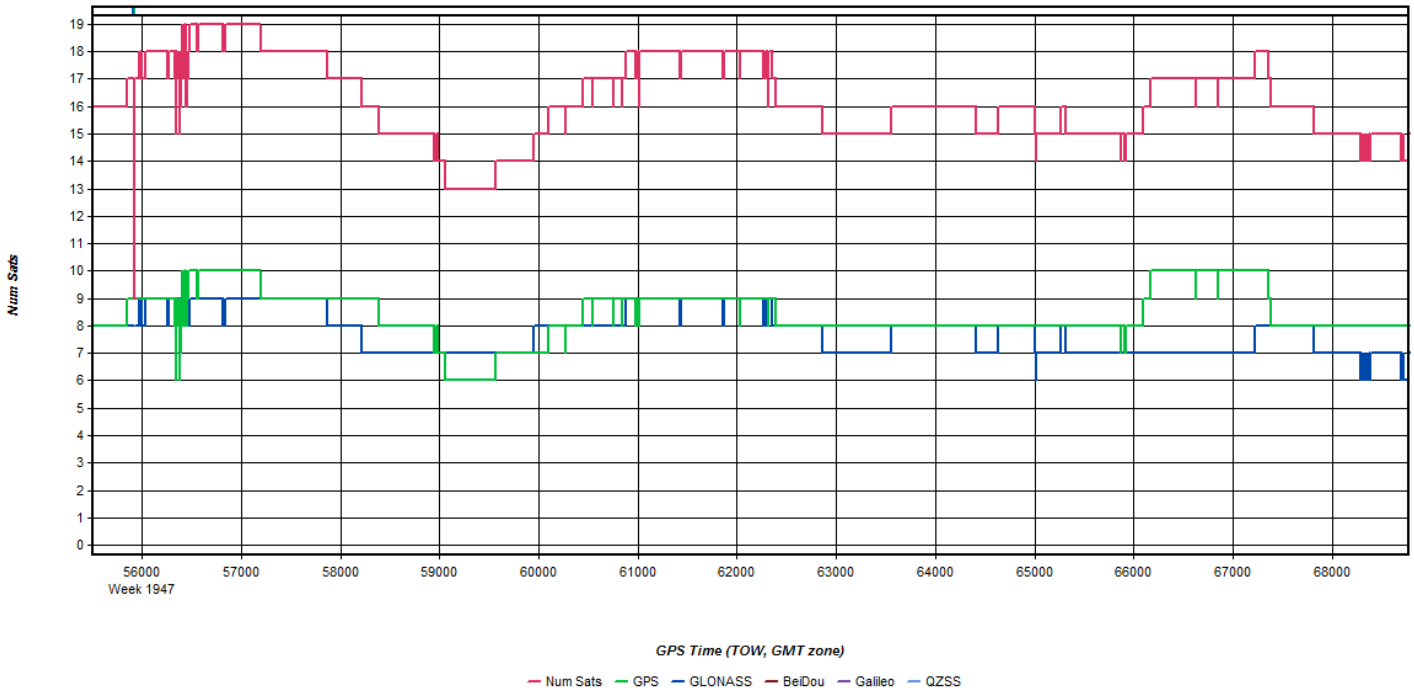
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
PDOP

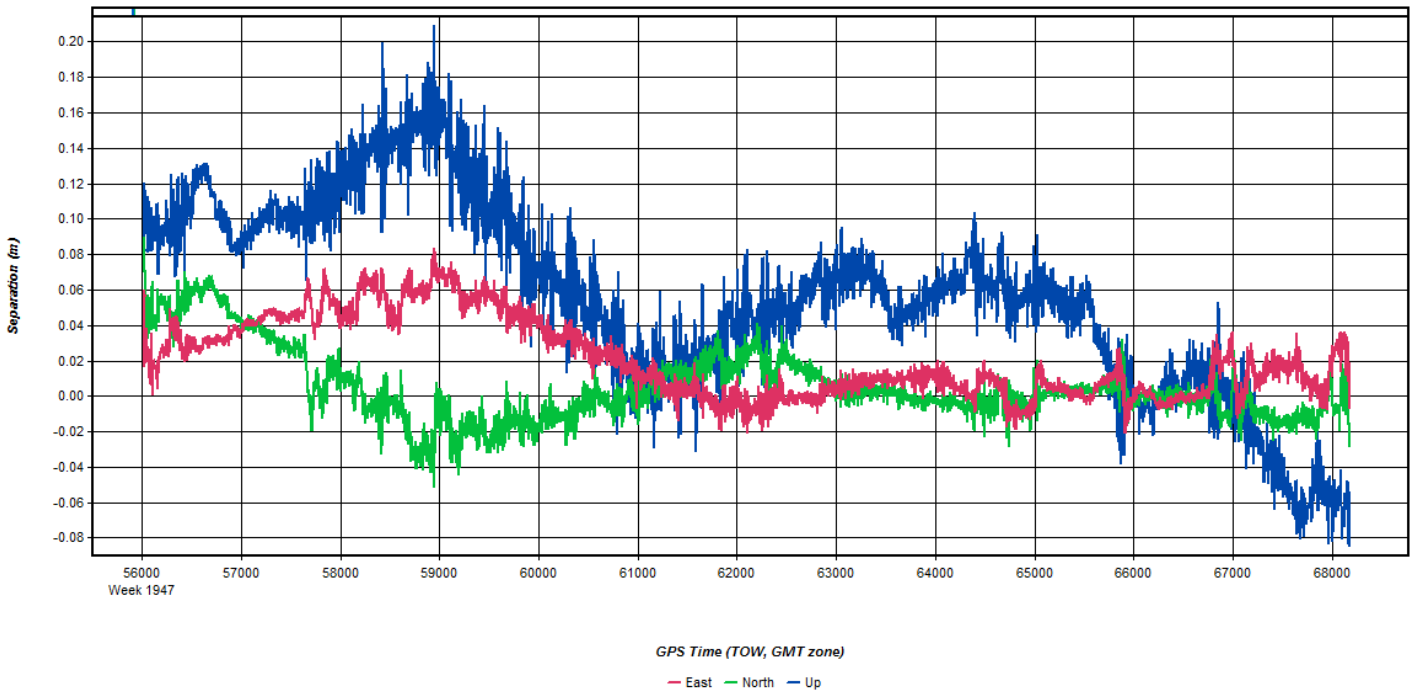

Status
2
1
0
-1
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Roll
Pitch

RMS (m)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
RMS
SD


Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
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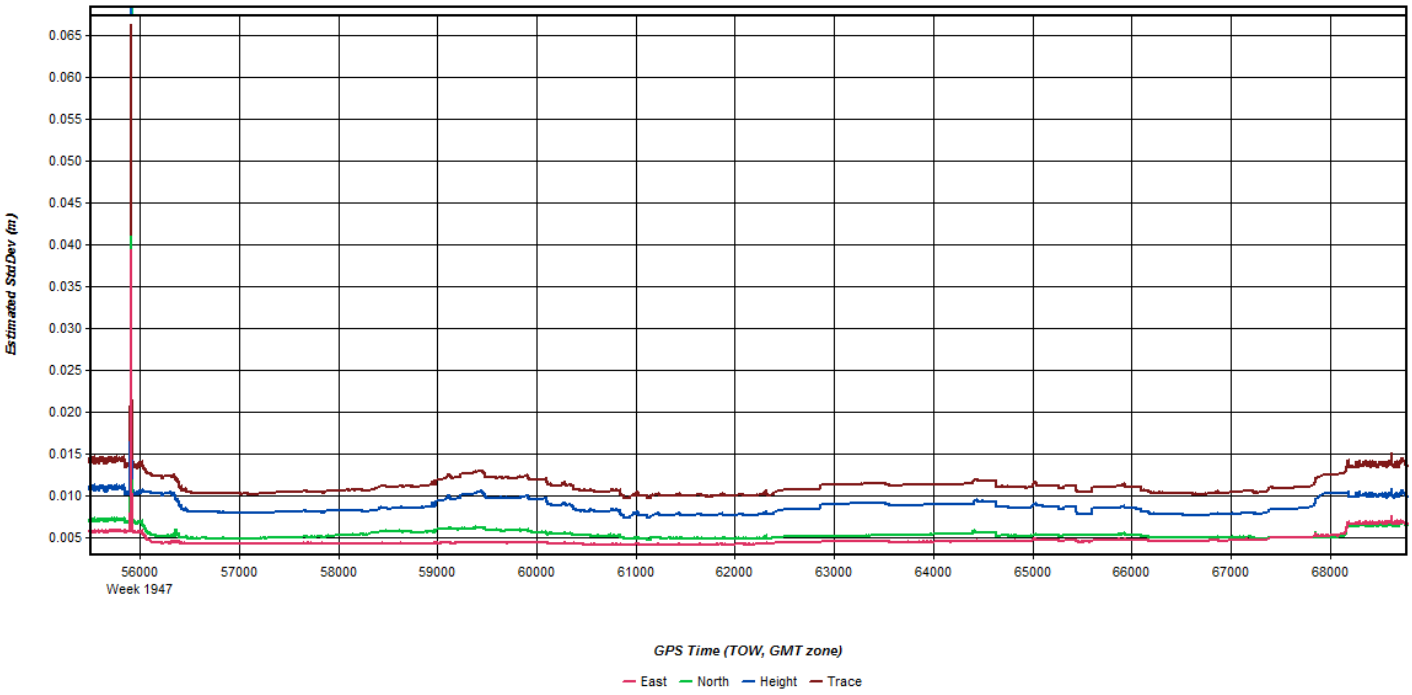
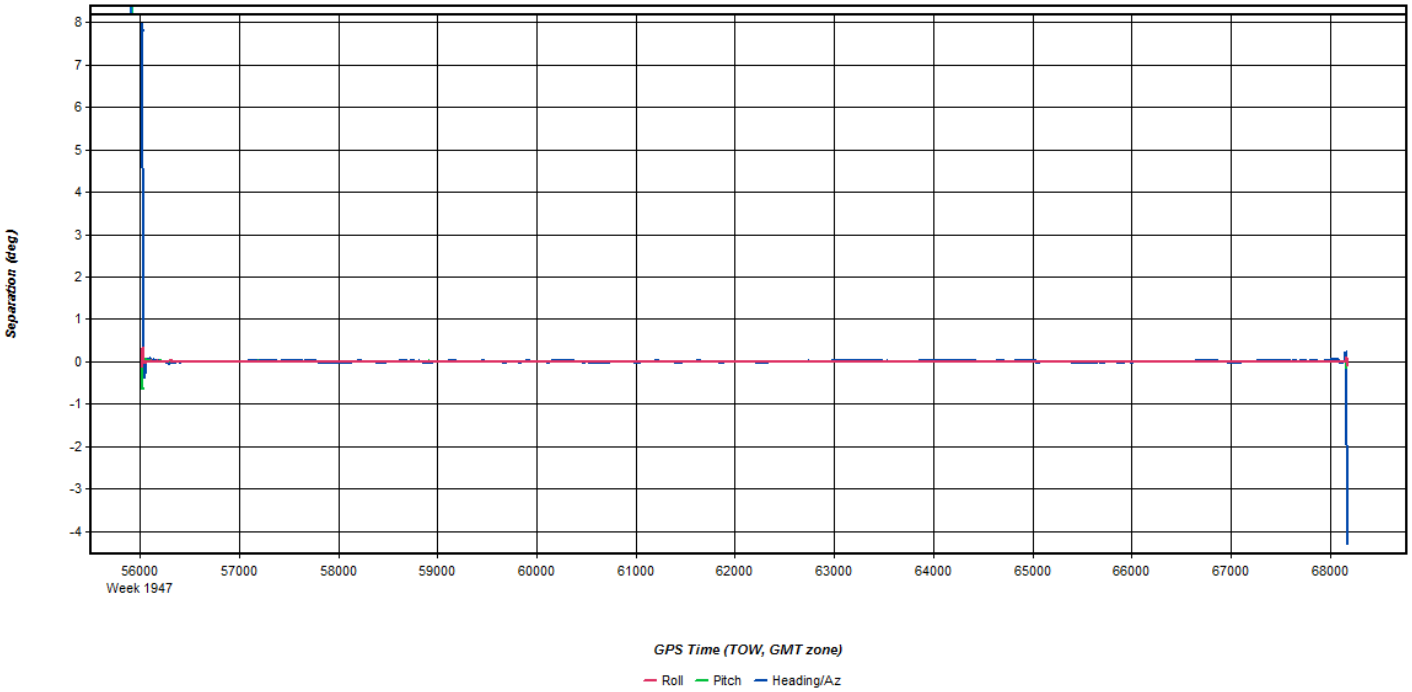
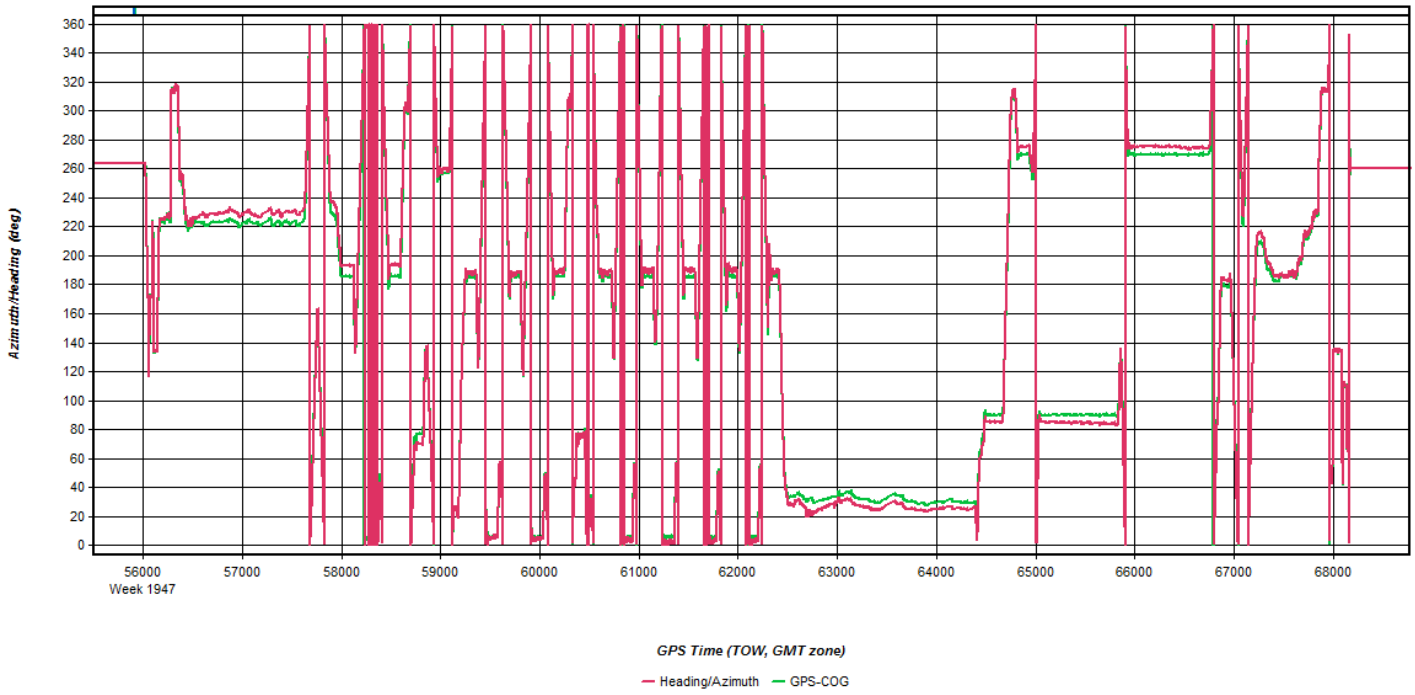
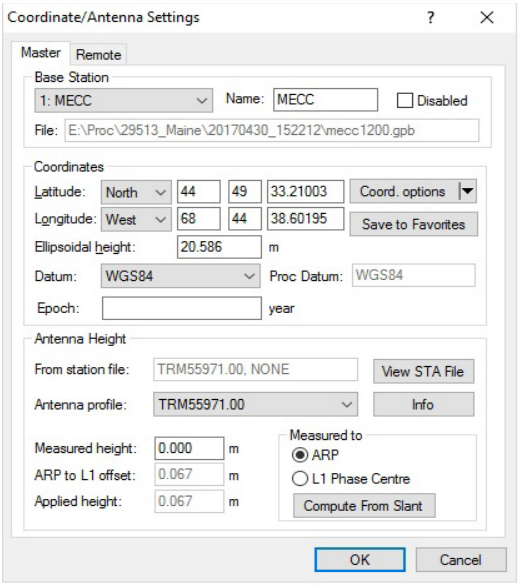
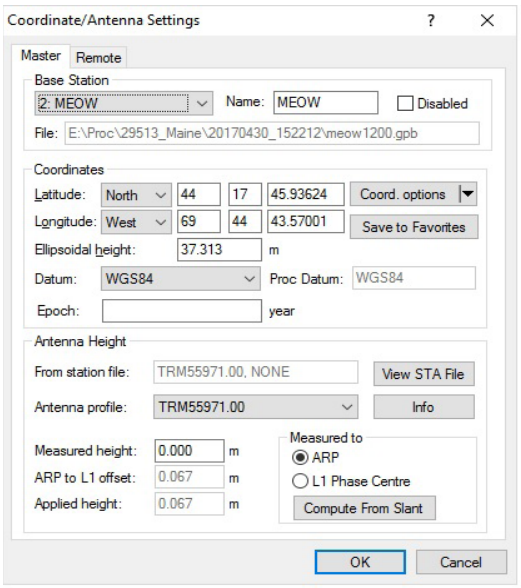
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Separation (deg)
8
7
6
5
4
3
2
1
0
-1
-2
-3
-4
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
56000
Week 1947
57000
58000
59000
60000
61000
62000
63000
64000
65000
66000
67000
68000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MECC
Name: MECC
Disabled
File: E:\Proc\29513_Maine\20170430_152212\mecc1200.gpb
Coordinates
Latitude: North 44 49 33.21003
Coord. options
Longitude: West 68 44 38.60195
Save to Favorites
Ellipsoidal height: 20.586 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MEOW
Name: MEOW
Disabled
File: E:\Proc\29513_Maine\20170430_152212\meow1200.gpb
Coordinates
Latitude: North 44 17 45.93624 Coord. options
Longitude: West 69 44 43.57001 Save to Favorites
Ellipsoidal height: 37.313 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log A1

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 4-30-2017

Lift: A B C D E Pg 1 of 2

Project: Maine Proj #: 29513 Flight Mgmt File: 29513_Maine_ALS70sp3-Hpps_M4

Aircraft: 73TM Begin Hobbs: 6691.2 End Hobbs: 6694.4 Total: 3.2 Pilot: Billington Co-Pilot: Tech: Cox

Dep Apt: BGR Dep Time (Lcl): 11:35 (Z): 15:35 Arr Apt: BGR Arr Time (Local): 7:50 (Z): 18:50 Tot Time Aloft: 3.15

CORS: (Y) N Sta 1: MECC Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

Gd Temp beg: °c End: °c OAT beg: °c End: °c Altimeter begin: end: 3025

	Type	Serial #		Alt AGL		Alt AMSL		Avg Terr Ht	Max Gdspd	Avg Pt Spacing
LIDAR	ALS70	7178								
	FOV 36°	Scan Freq 56	MpiA (Y) N			Pulses In Air		Pulse Rate 265	Power 100%	PPSM

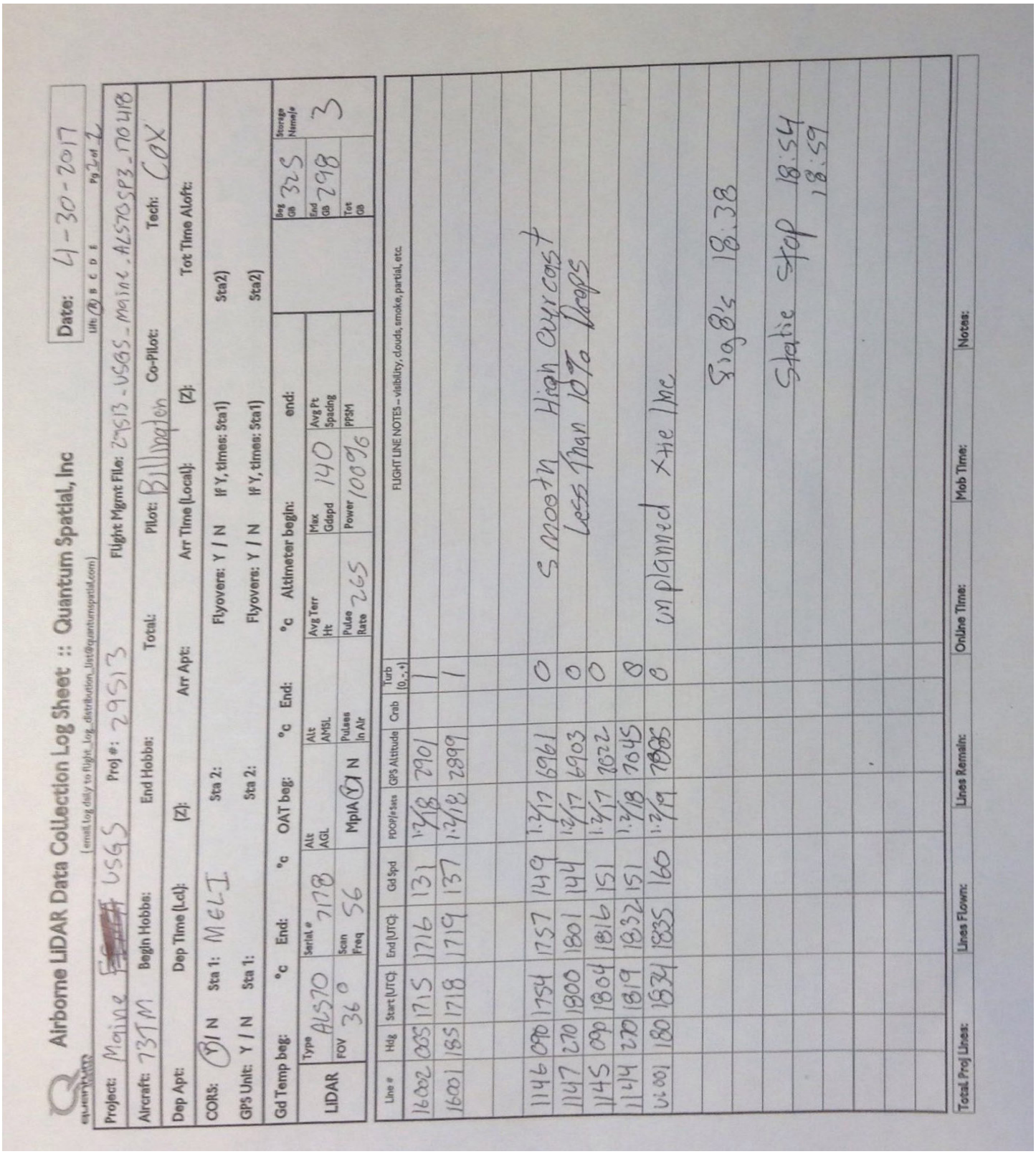
Bag GB	325	Storage Name/#
End GB	298	3
Tot GB	27	

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/Notes	GPS Altitude	Crab	Turb (0,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
2003	185	1607	1608	155	1-1/19	6853		0	Test Fire 15:45 Static Start 15:26 15:31
2002	005	1611	1612	144	1-1/19	6791		0	Smooth Current Flight 16:00
2001	185	1614	1616	145	1-1/18	6799		0	
Extra	077	1619	1620	152	1-1/19	6791		0	
Extra	257	1623	1624	148	1-1/18	3595		1	Lite Chop
3005	185	1627	1628	148	1-1/18	3545		1	
3004	005	1631	1632	150	1-1/19	3488		1	
3003	185	1635	1636	153	1-1/19	3520		1	
3002	005	1639	1640	153	1-1/18	3532		1	
3001	185	1642	1643	146	1-1/19	3558		1	
Extra	077	1644	1647	134	1-3/18	2813		1	
16009	185	1650	1651	134	1-1/18	7808		1	
16008	005	1653	1655	130	1-1/18	2845		1	
16007	185	1657	1658	137	1-1/18	7830		1	
16006	005	1700	1702	128	1-1/18	2910		1	
16005	185	1704	1705	133	1-3/18	2930		1	
16004	005	1708	1709	130	1-1/18	2850		1	
16003	185	1711	1712	136	1-1/18	2916		1	

Total Proj Lines: Lines Flown: 25 Lines Remain: Online Time: 2.30 Mob Time: .45 Notes:

SWR 6689.5 - 6691.2 1.7

Flight Log A2



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to Flight_Log_distribution_list@quantumspatial.com)

Date: 4-30-2017

Life: A B C D E Pg 2 of 2

Project: Maine USGS Proj #: 29513 Flight Mgmt File: 29513 - USGS_Maine_ALS70SP3_170418

Aircraft: 737M Begin Hobbs: End Hobbs: Total: Pilot: Billington Co-Pilot: Tech: COX

Dep Apt: Dep Time (Lcl): (Z): Arr Apt: Arr Time (Local): (Z): Tot Time Aloft:

CORS: (Y) N Sta 1: MELI Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

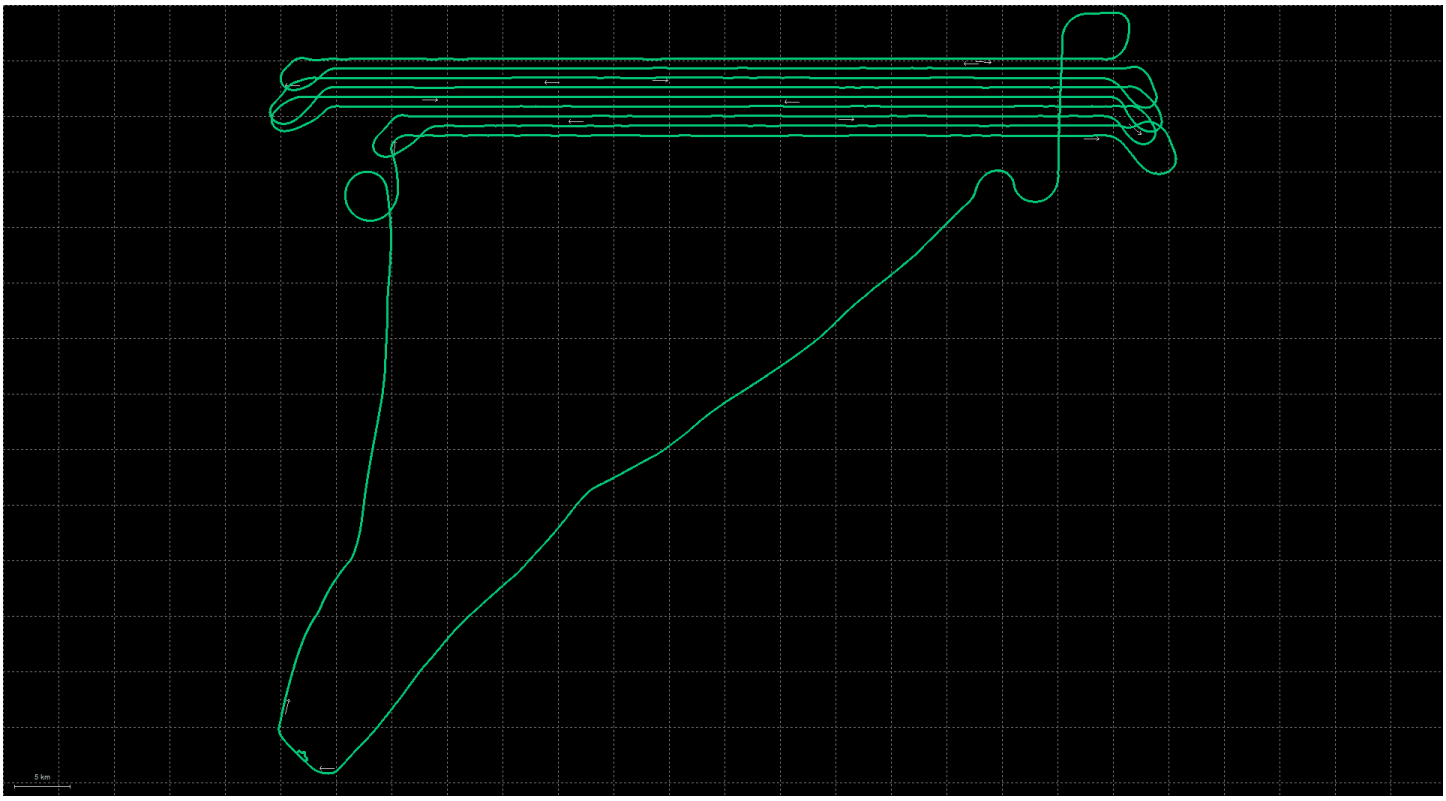
Gd Temp beg: °c End: °c OAT beg: °c End: °c Altimeter begin: end:

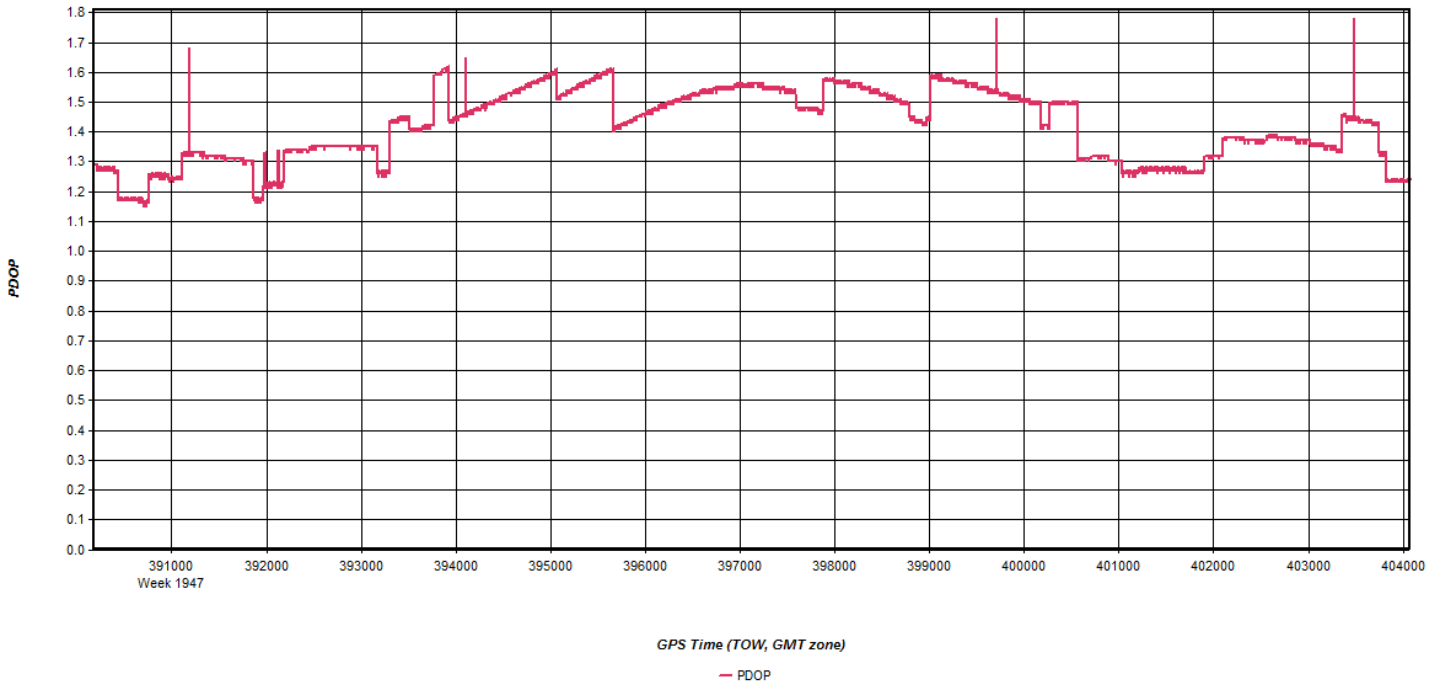
LIDAR	Type	ALS70	Serial #	2178	Alt AGL		Alt AMSL		Avg Terr Ht		Max Gdspd	140	Avg Pt Spacing		Beg GB	325	Storage Name/#	3
	FOV	36°	Scan Freq	56	MpIA (Y) N		Pulses in Air		Pulse Rate	265	Power	100%	PPSM		End GB	298		
															Tot GB			

Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/#Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES -- visibility, clouds, smoke, partial, etc.
16002	005	1715	1716	131	1.7/8	7901		1	
16001	185	1718	1719	137	1.7/8	7899		1	
1146	090	1754	1757	149	1.7/7	6961		0	Smooth High cirrost
1147	270	1800	1801	141	1.7/7	6903		0	Less Than 10° Drops
1145	090	1804	1816	151	1.7/7	7022		0	
1144	270	1819	1832	151	1.7/8	7045		8	
1001	180	1834	1835	160	1.7/9	7885		8	unplanned xtie line
									Sig Bk 18:38
									Static stop 18:54 18:59

Total Proj Lines: Lines Flown: Lines Remain: Online Time: Mob Time: Notes:

May 04, 2017-A
N73TM, SN7178




PDOP
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1.6
1.5
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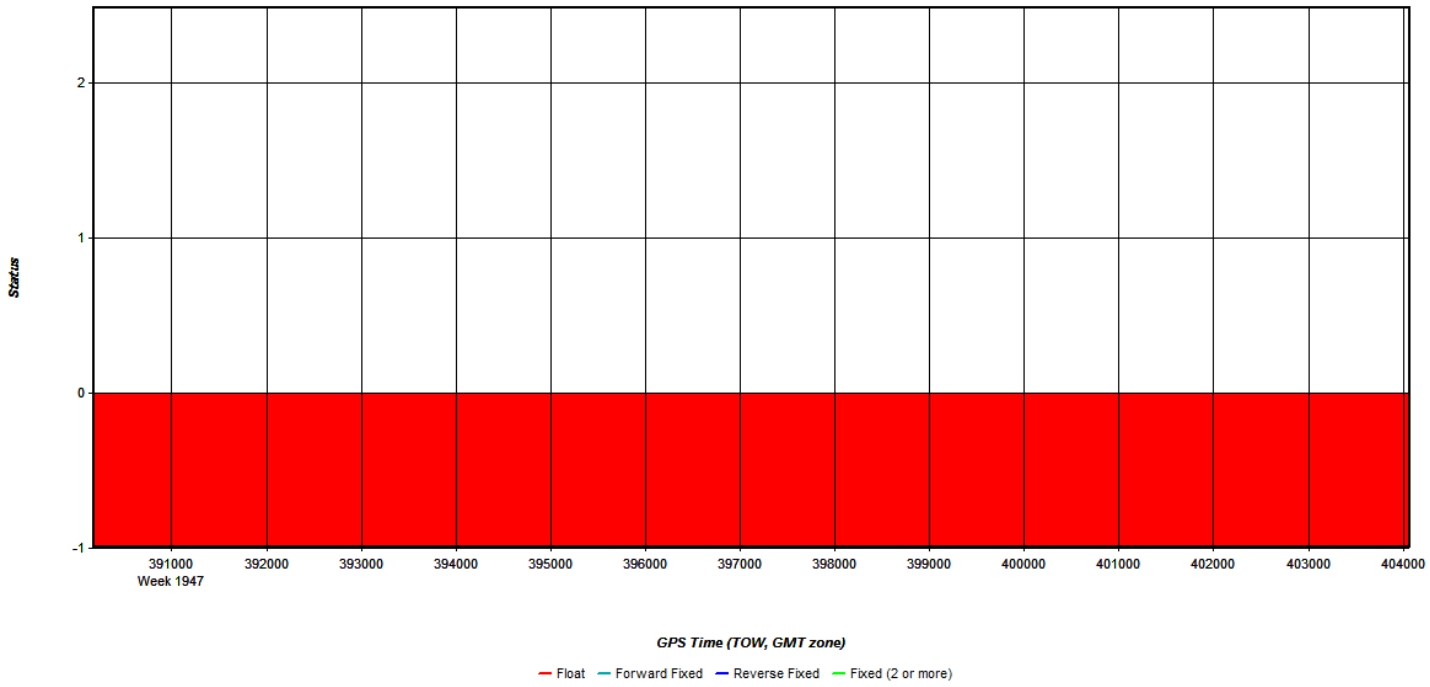
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
PDOP


Status
2
1
0
-1
391000
Week 1947
392000
393000
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395000
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397000
398000
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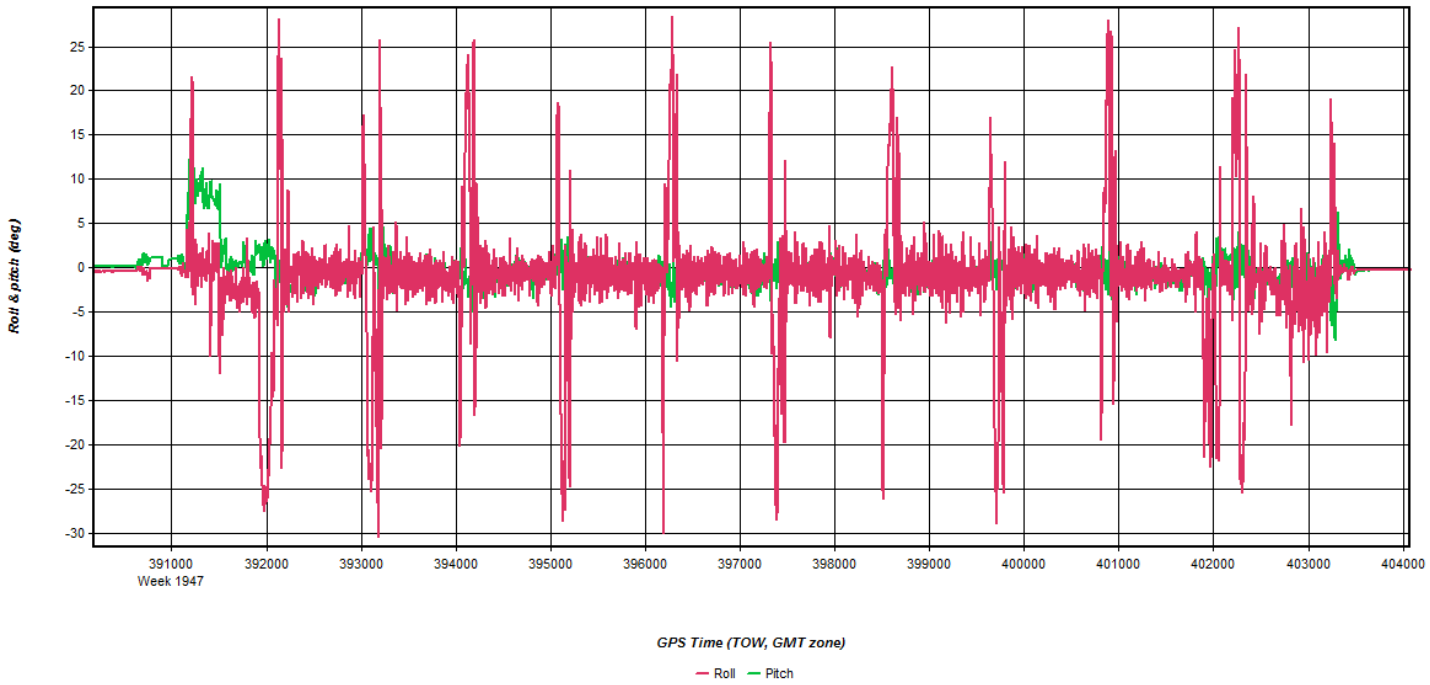
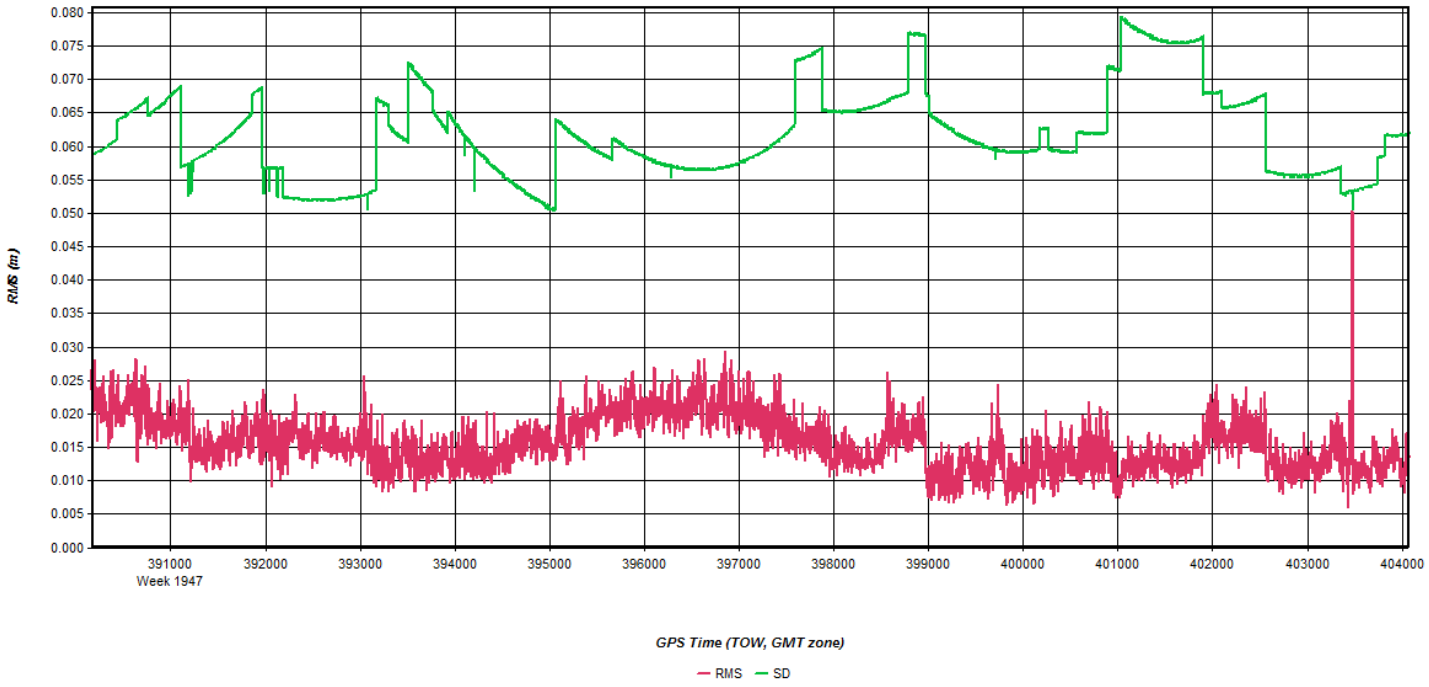
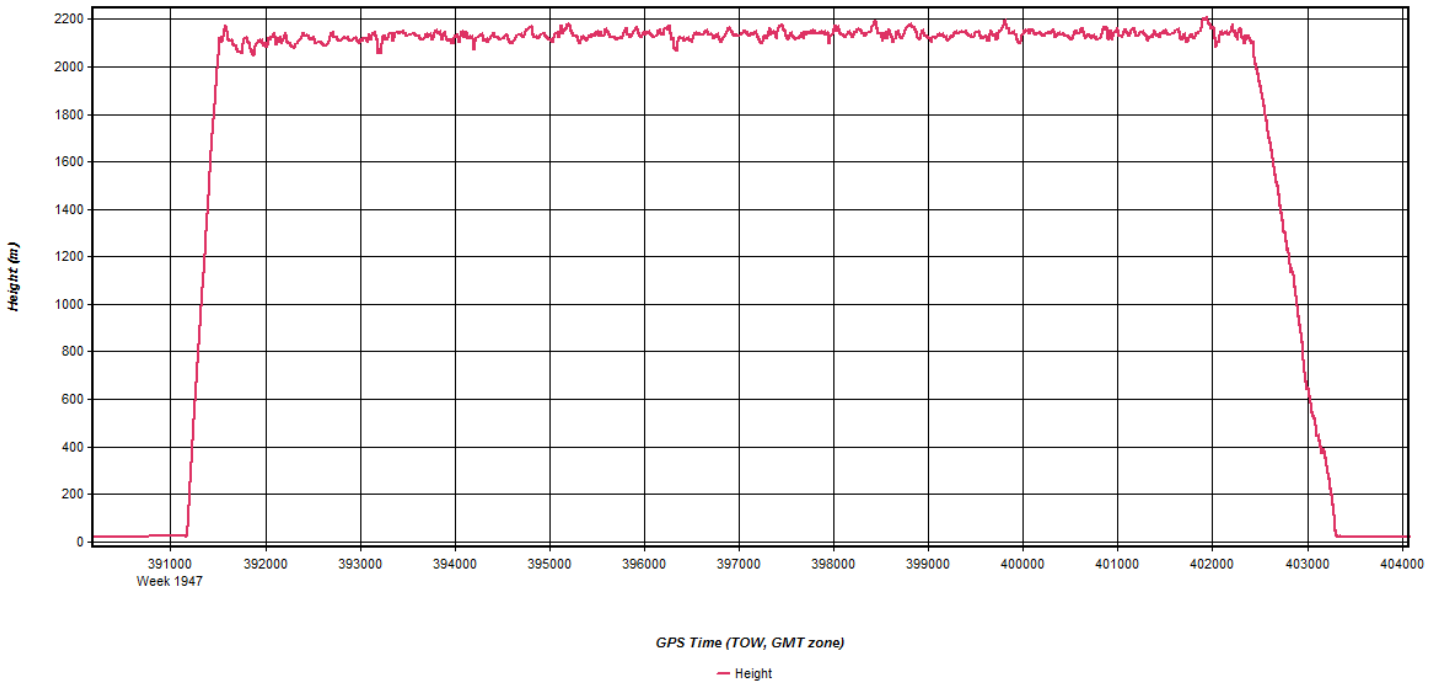
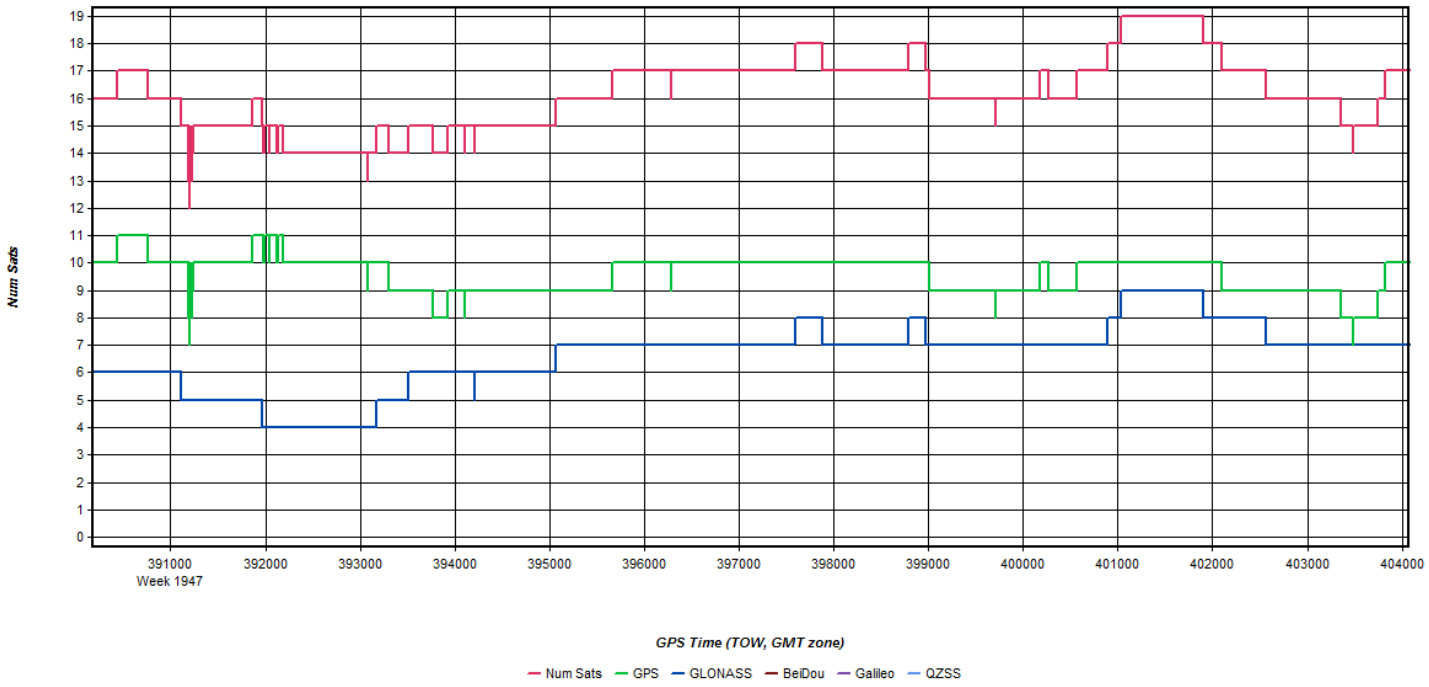
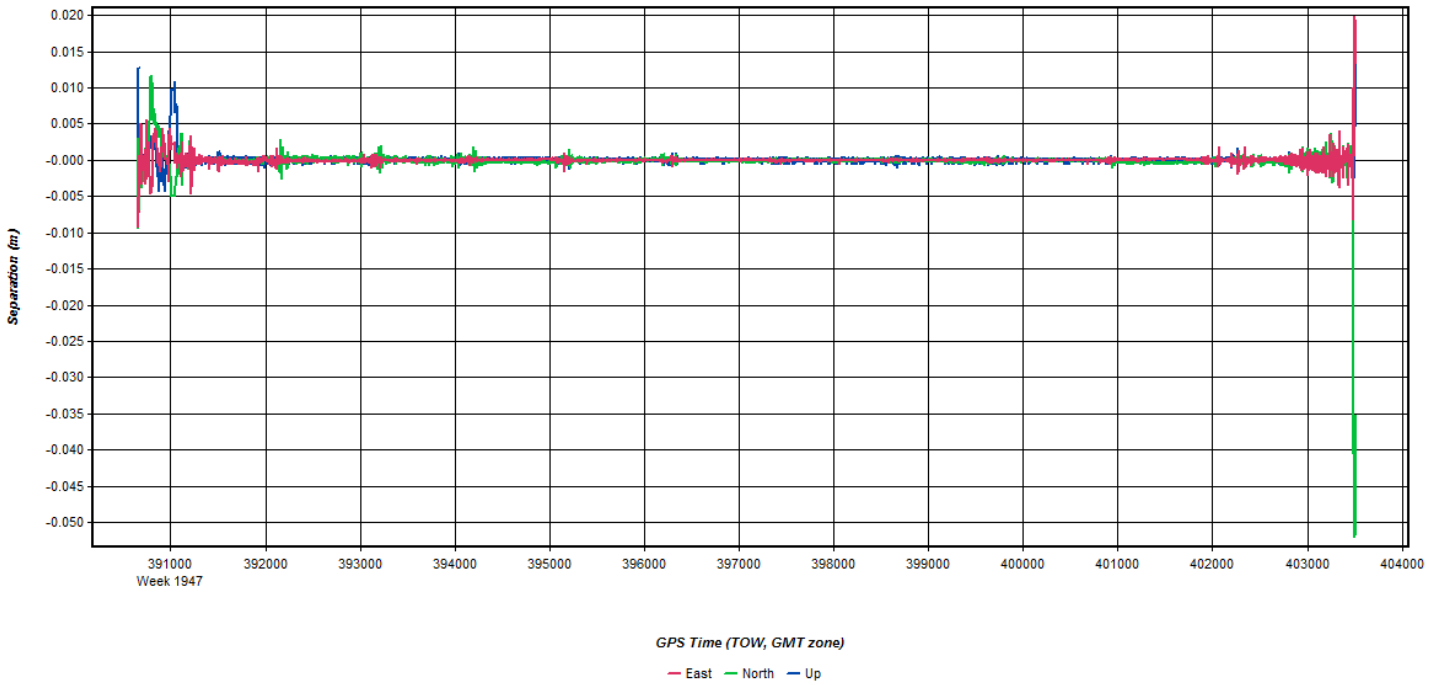
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

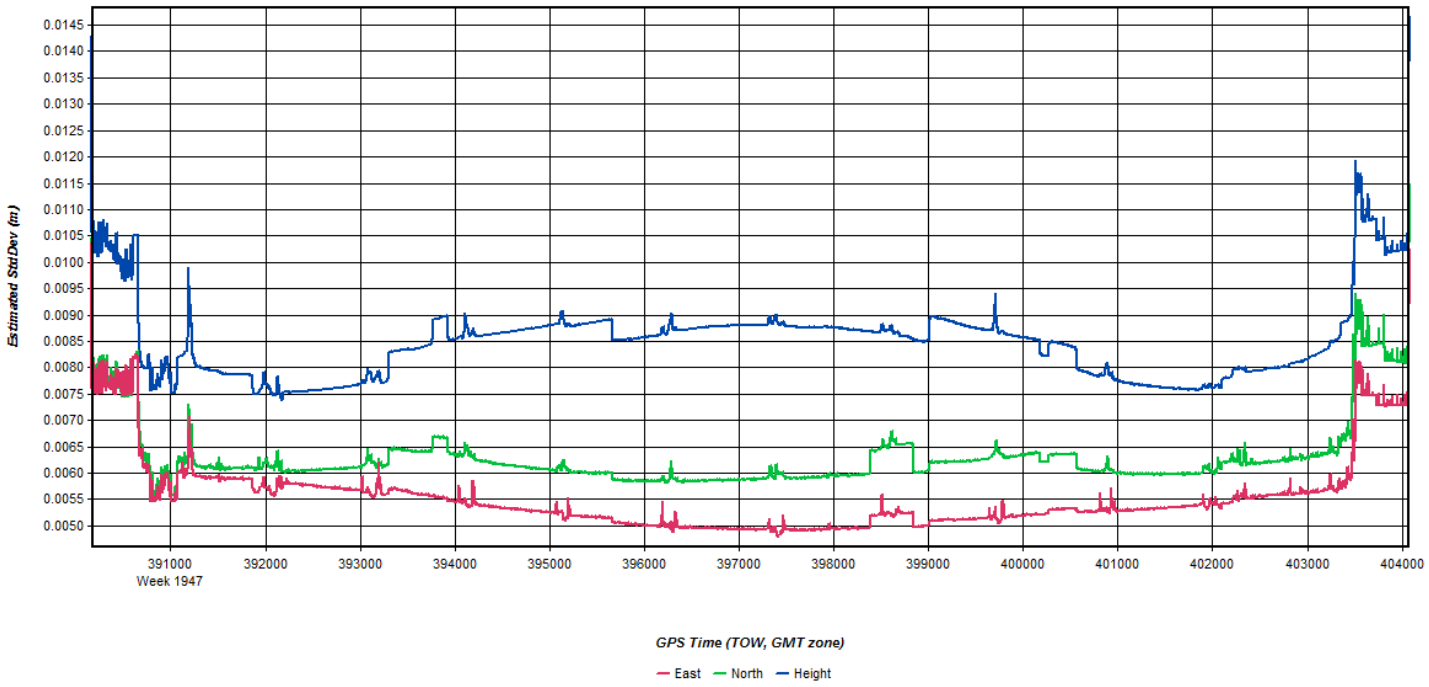

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Roll
Pitch

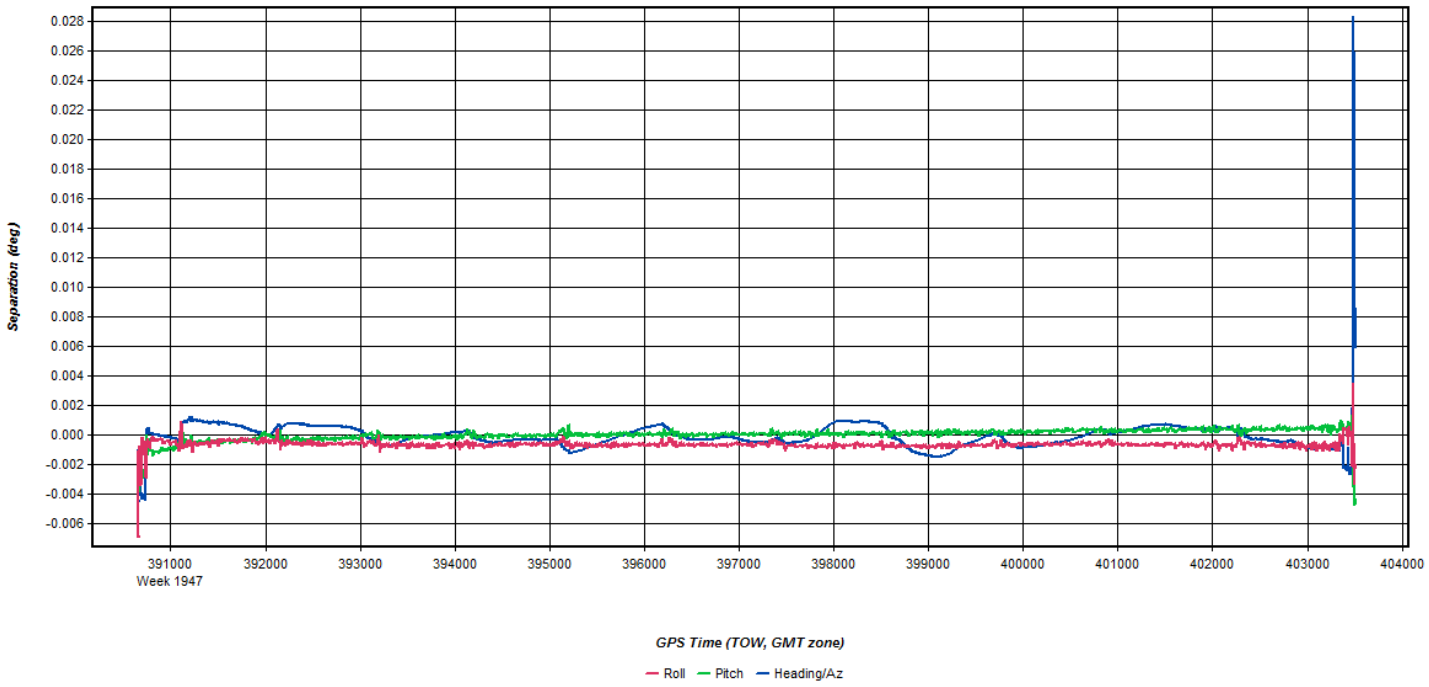

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
RMS
SD

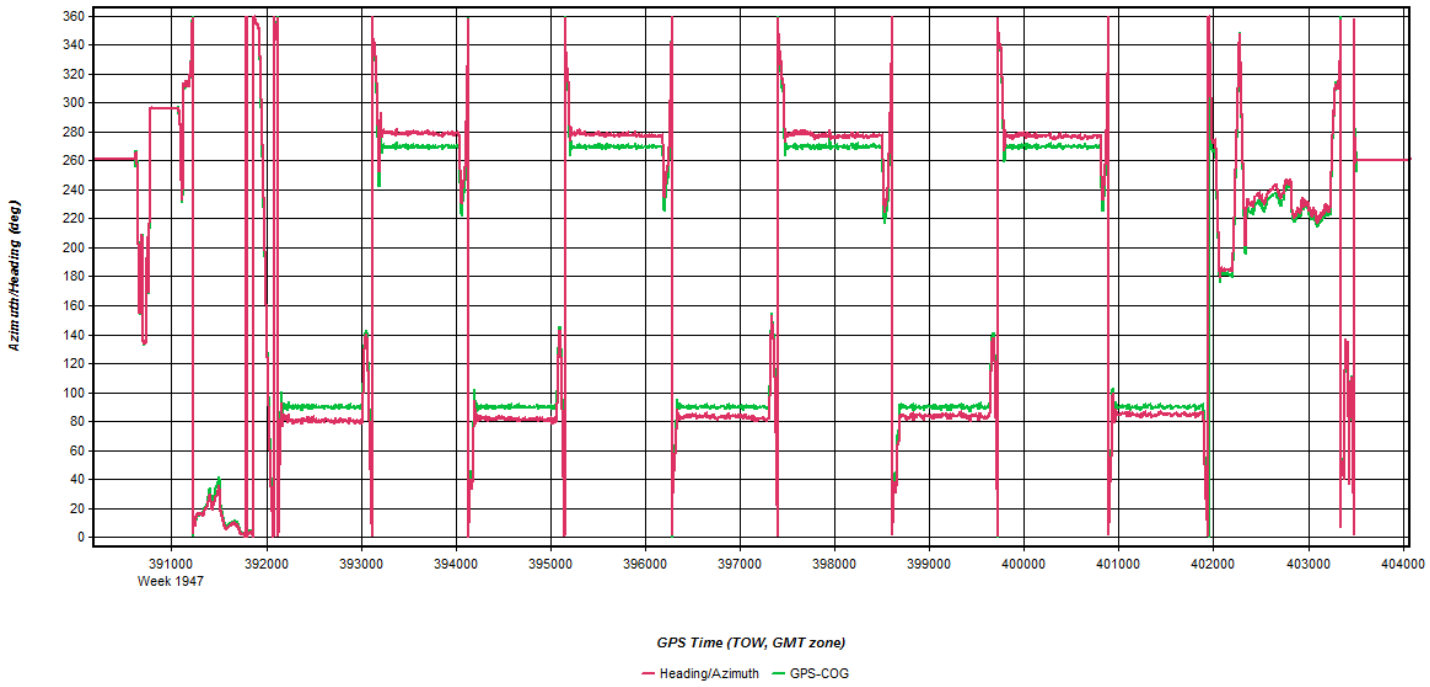

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
391000
Week 1947
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-4-2017 Life: A B C D E Pg 1 of 1

Project: Maine USGS Proj #: 29513 Flight Mgmt File: 29513_maine_usgs_AL570_FS_20170504

Aircraft: 737M Begin Hobbs: 6694.4 End Hobbs: 6697.8 Total: 3.4 Pilot: Folak Co-Pilot: GS Inglett Tech: Cox

Dep Apt: BGR Dep Time (Lcl): 8:40 (Z) 12:40 Arr Apt: BGR Arr Time (Local): 12:00 (Z) 16:00 Tot Time Aloft: 3:15

CORS: (Y) N Sta 1: MECC Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Units: Y / (N) Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

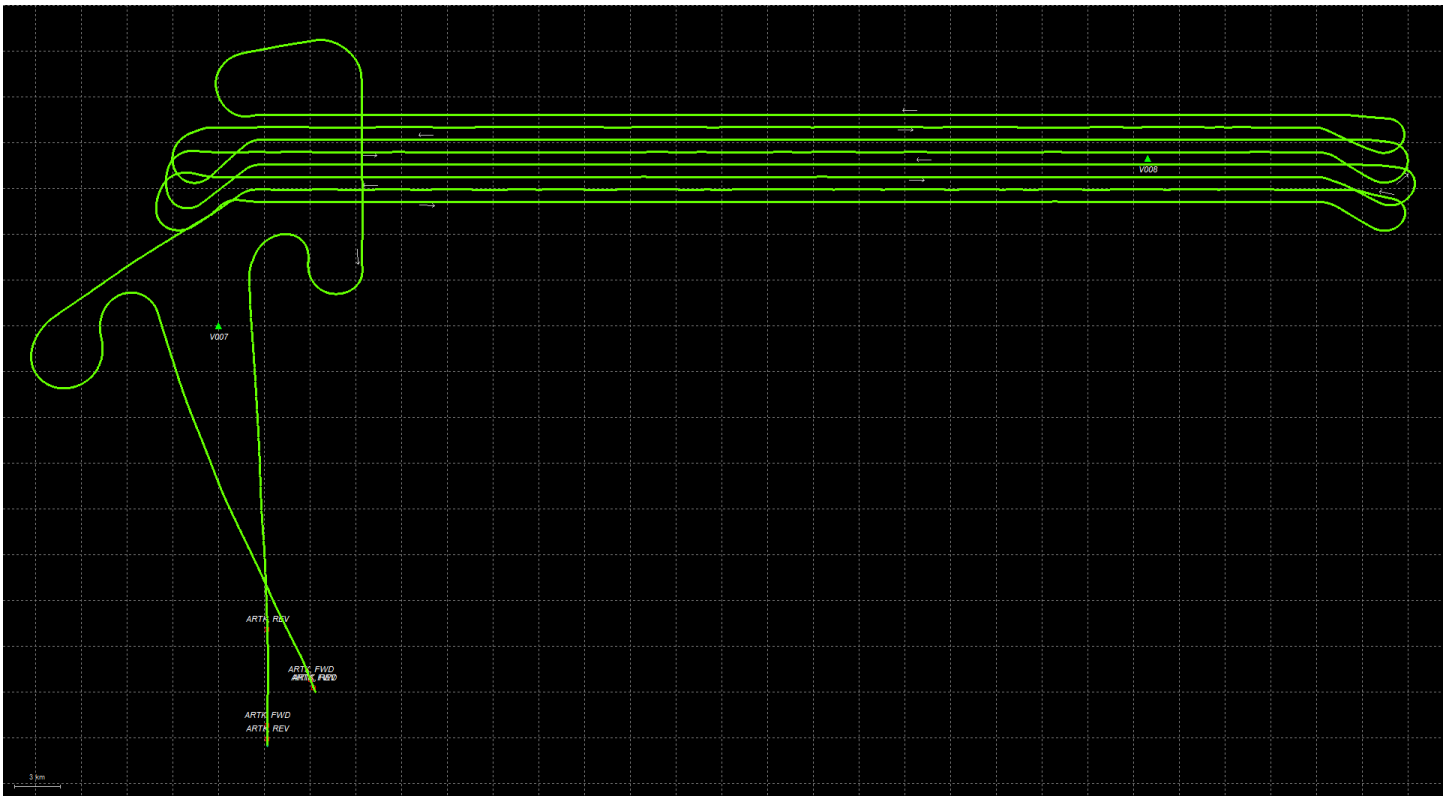
Gd Temp beg: °c End: °c OAT beg: °c End: °c Altimeter beg: end: 30.25

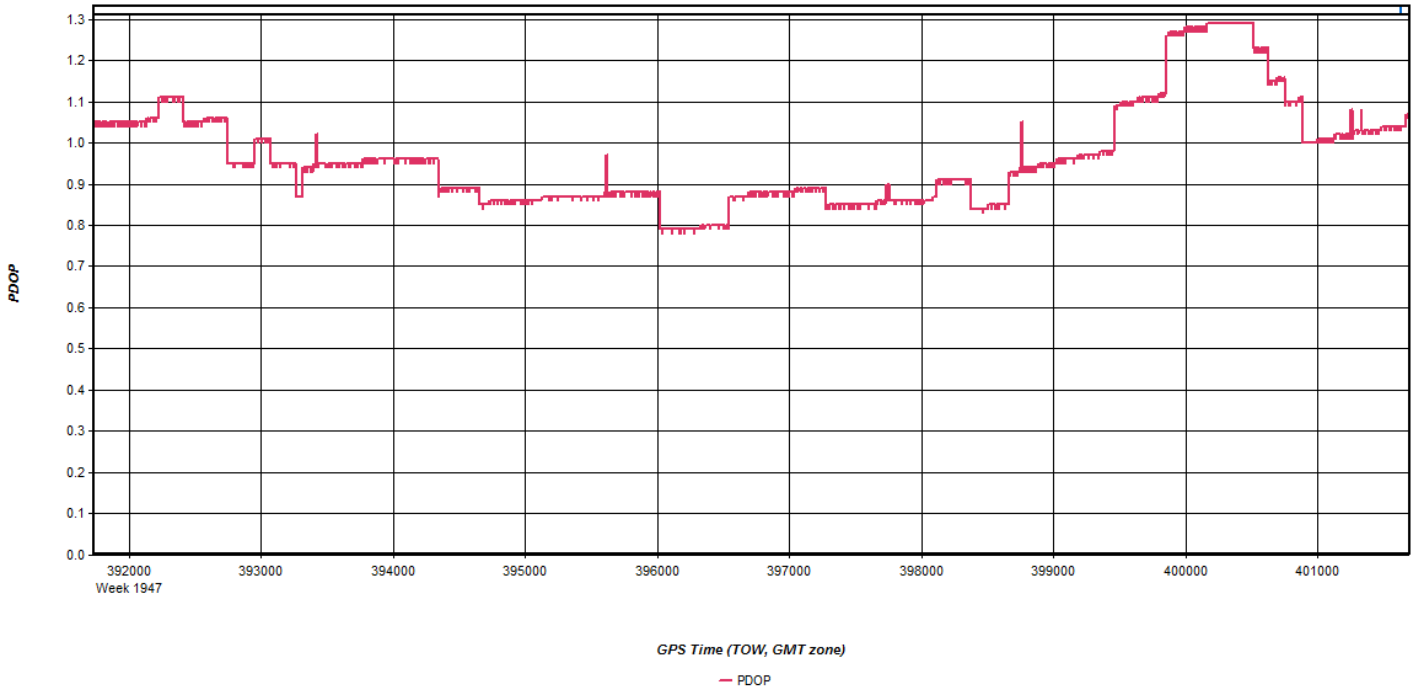
	Type	AL570	Serial #	7178	Alt AGL		Alt ANSL		Avg Terr Ht		Max Gdspd	140	Avg Pt Spacing		Beg GB	298	Storage Name/#
LIDAR	FOV	36°	Scan Freq	56	MpiA (Y) N		Pulses In Air		Pulse Rate	265	Power	100%	PPSM		End GB	253	3
															Tot GB	45	

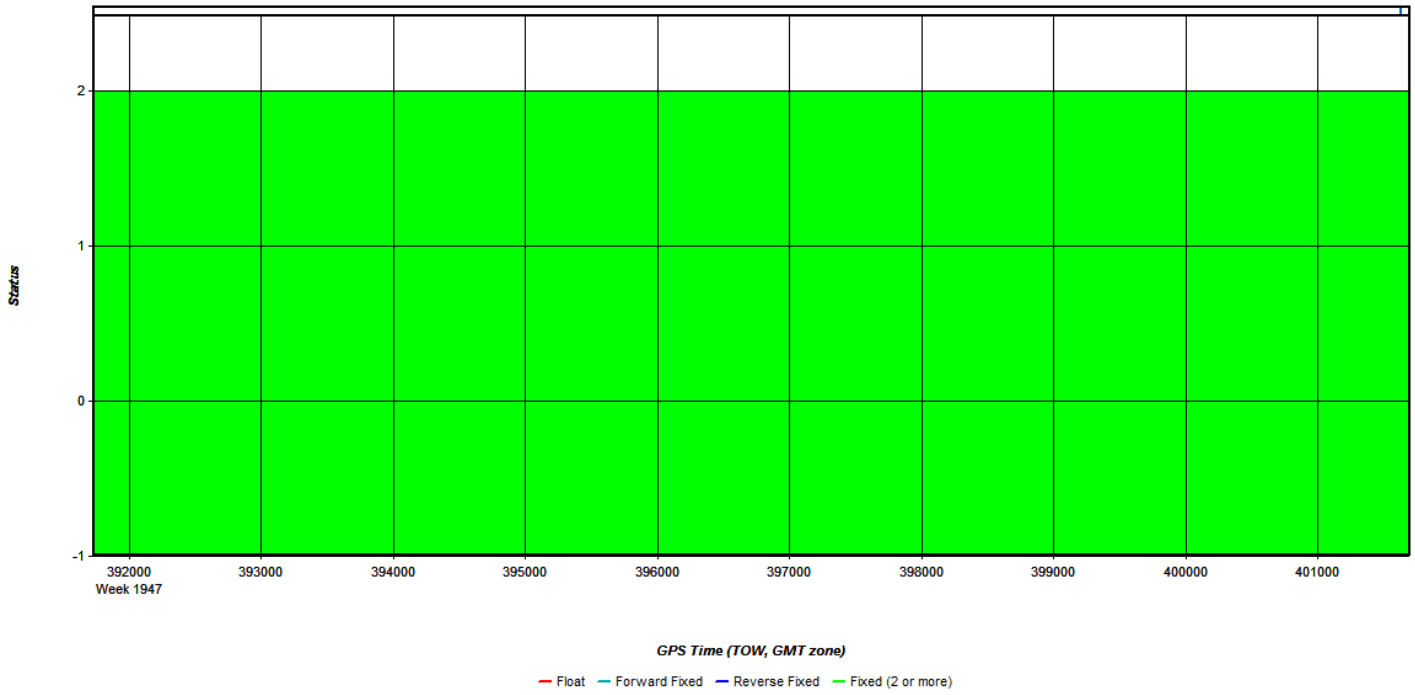
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/Sats	GPS Altitude	Crab	Turb (0,+,-)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
1143	090	12:56	13:09	147	1.0/20	7017		0	Smooth Clear Start 12:24
1142	270	13:13	13:26	147	1.1/18	6988		0	Engs 12:53 12:29
1141	090	13:30	13:44	143	1.1/17	6999		0	
1140	270	13:47	14:02	148	1.3/17	6984		0	
1139	090	14:05	14:21	139	1.2/18	6980		0	
1138	270	14:25	14:42	127	1.2/19	7030		0	
1137	090	14:45	15:00	148	1.1/19	6990		0	
1136	270	15:03	15:19	149	1.1/19	7025		0	
1135	090	15:22	15:37	152	1.1/19	7030		0	
1134	181	15:41	15:43	170	1.2/19	7015		0	Unplanned Xtie line Engs 15:44
									Static Stop 16:04 - 16:09

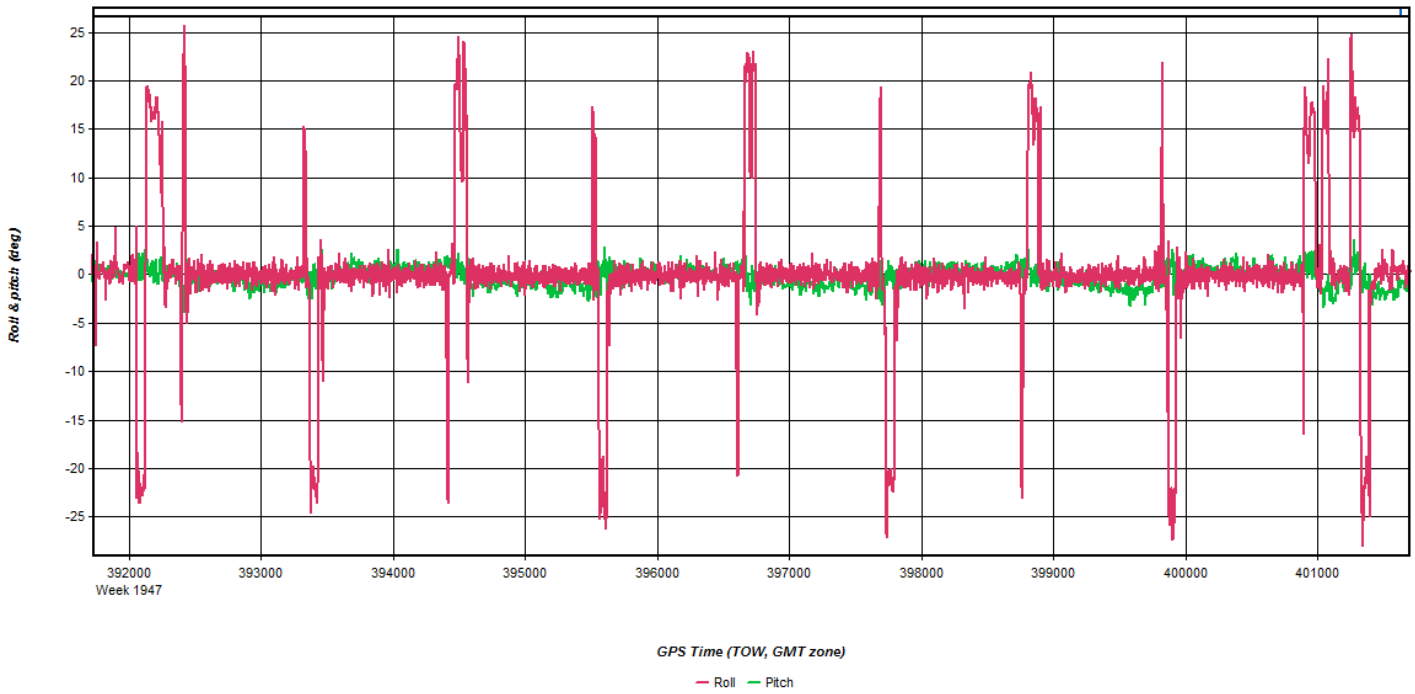
Total Proj Lines: Lines Flown: 7 Lines Remain: Online Time: 2.38 Mob Time: .45 Notes:

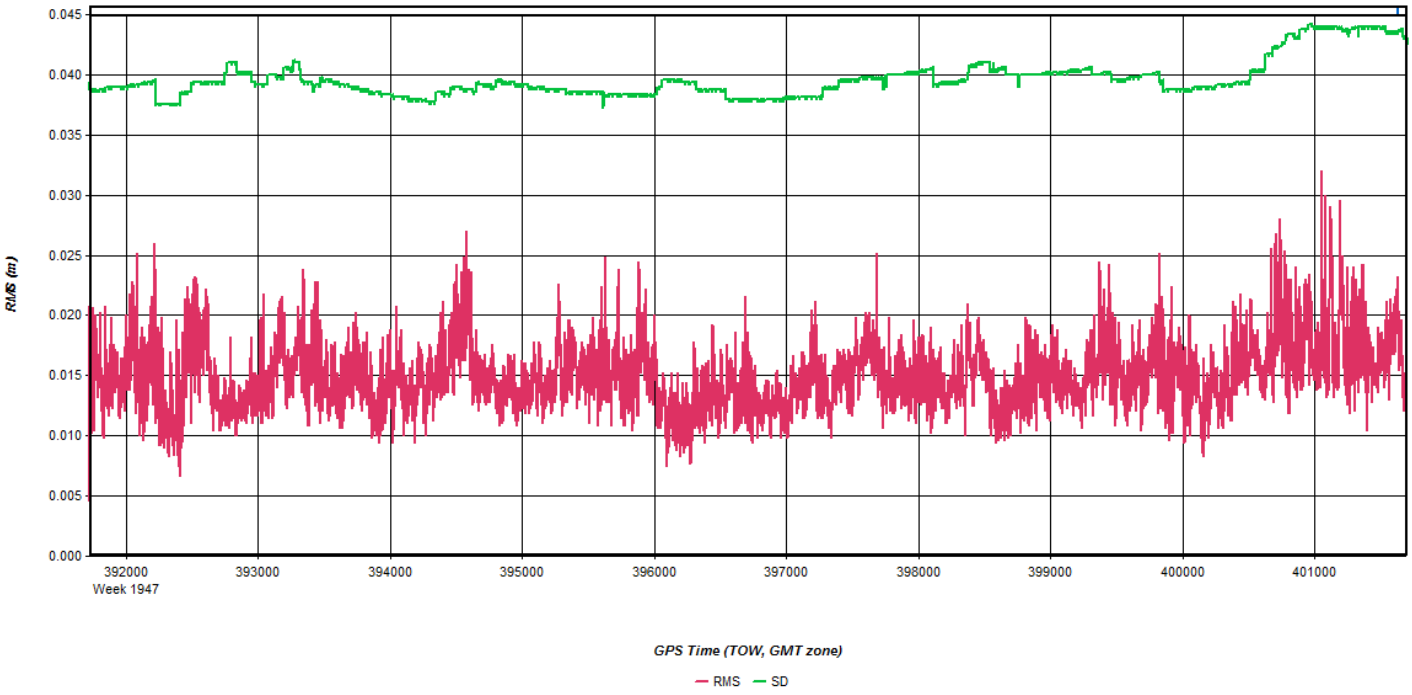
May 04, 2017-A
N262AS, SN7161

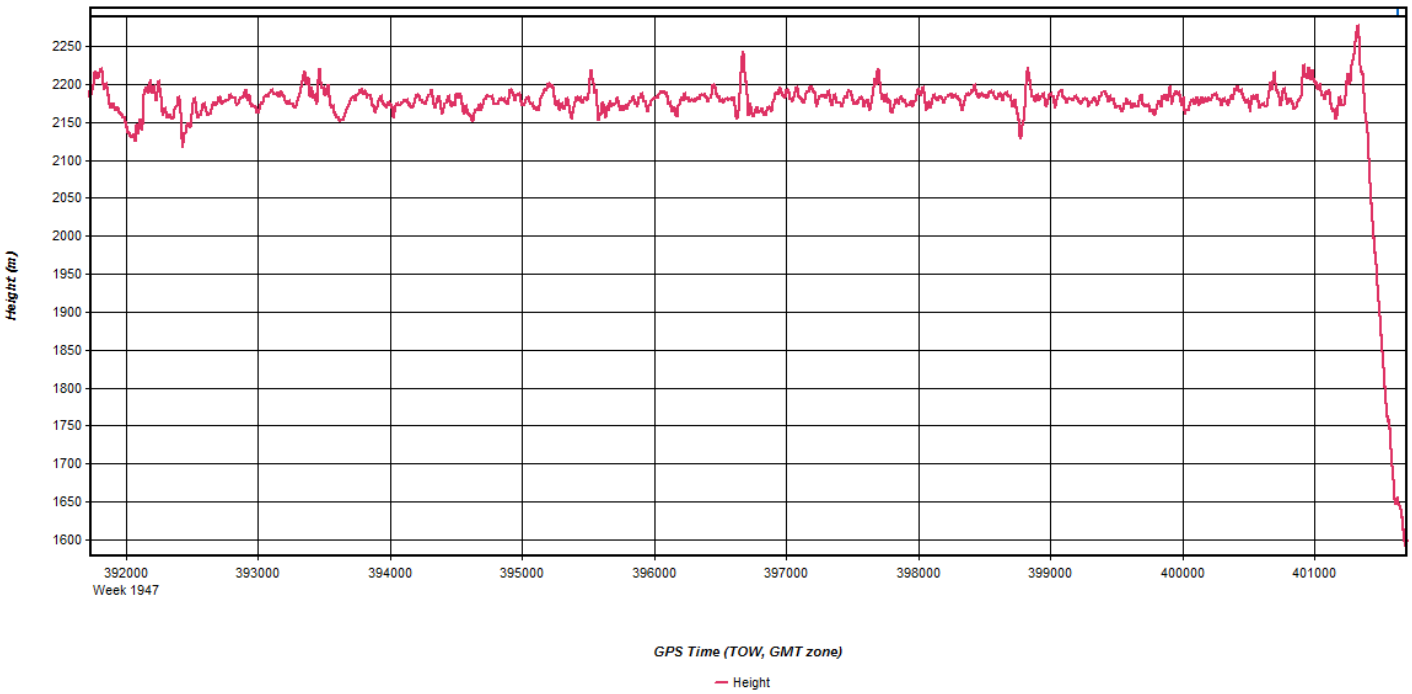

V007
V008
ARTx REV
ARTx FWD
ARTx FWD
ARTx REV

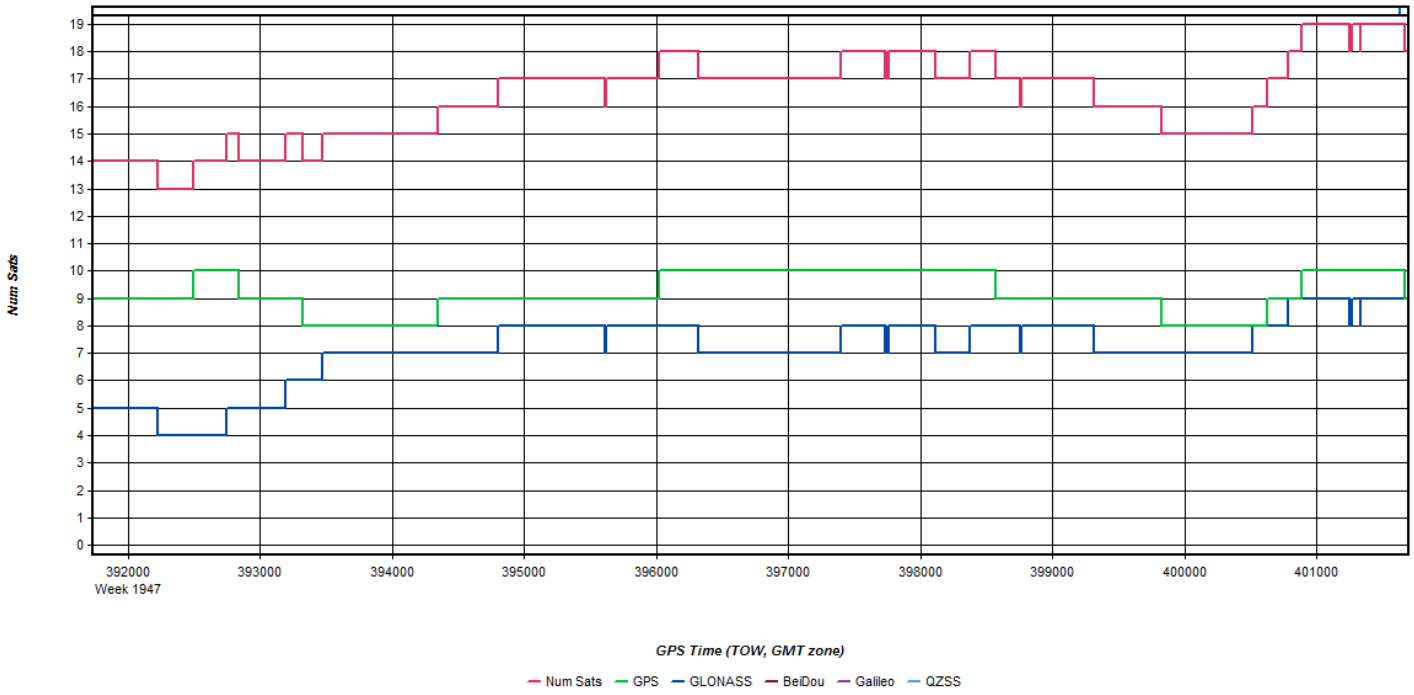

PDOP
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
PDOP

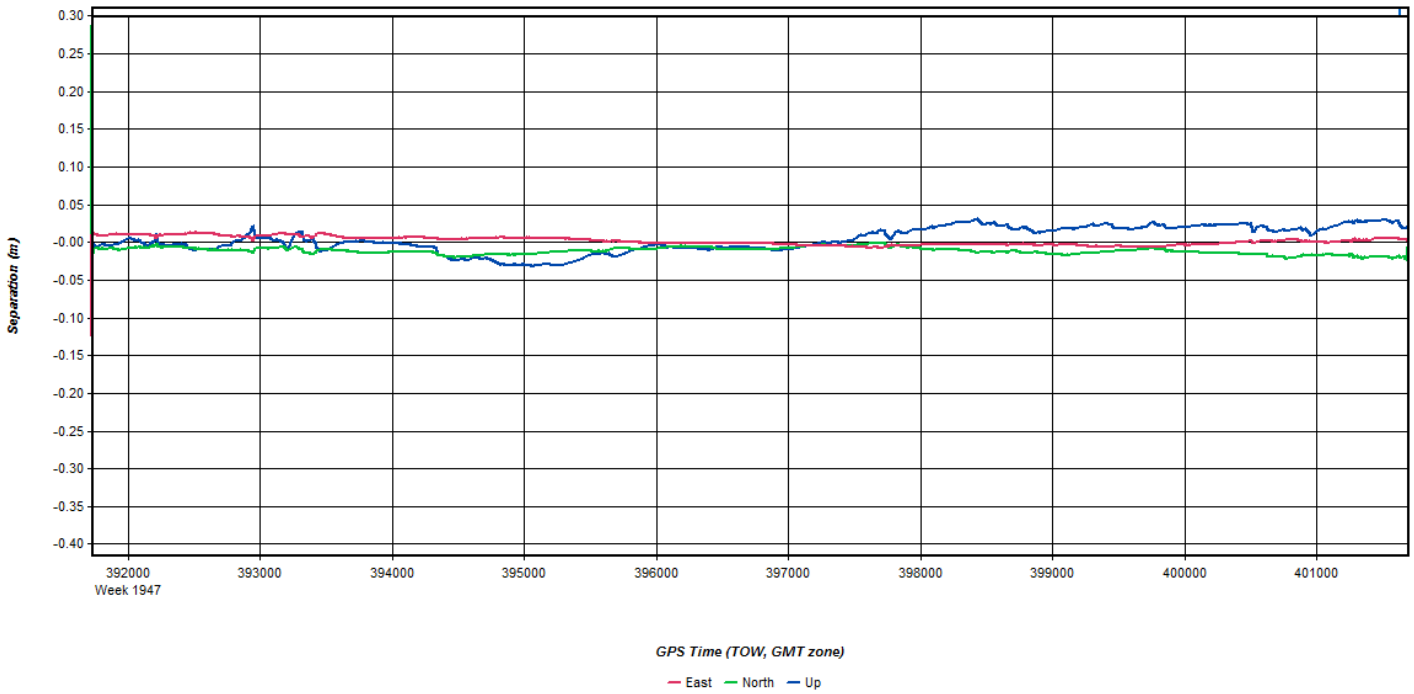

Status
2
1
0
-1
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

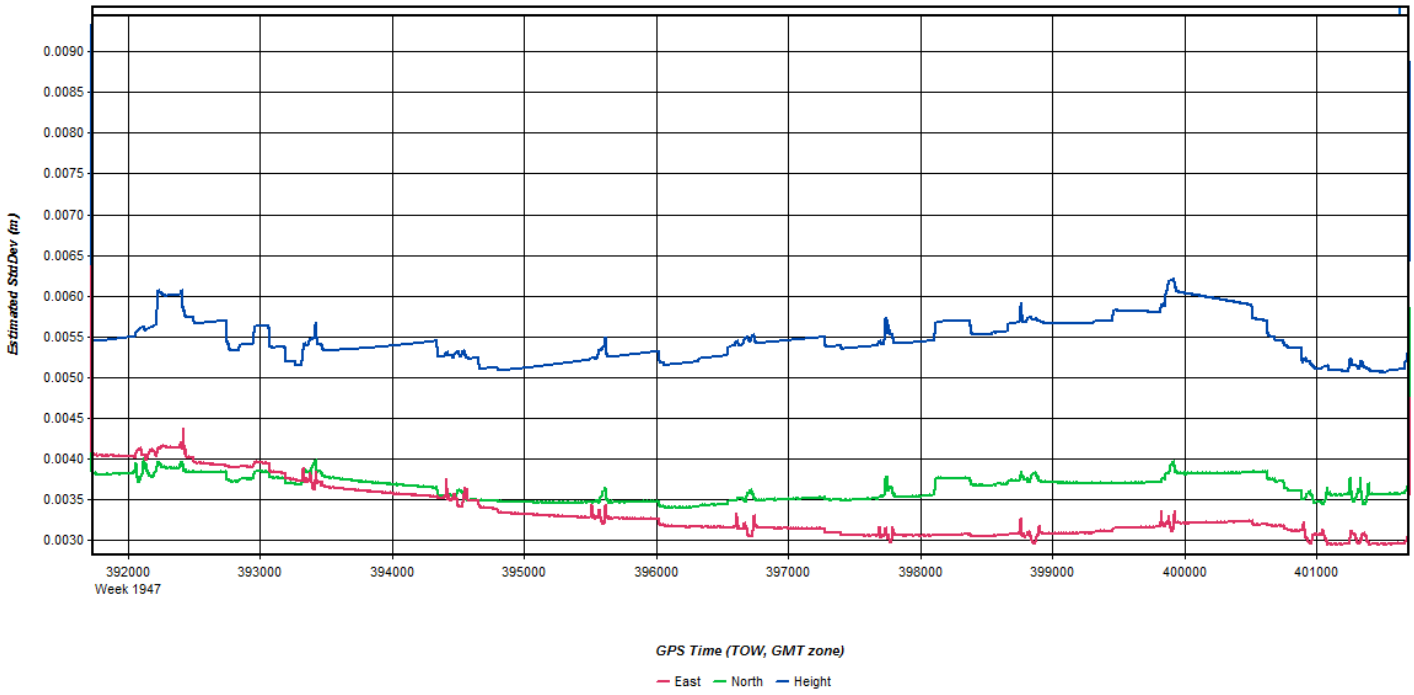

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Roll
Pitch

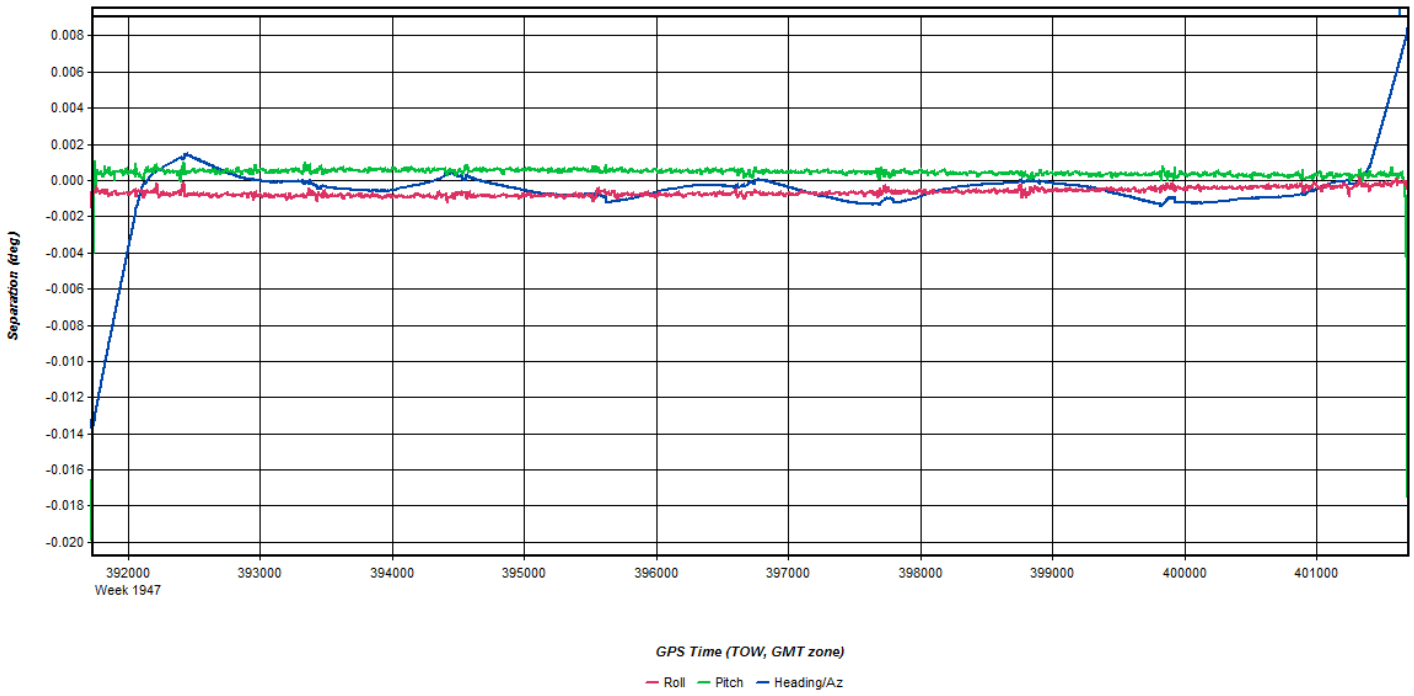

RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
RMS
SD

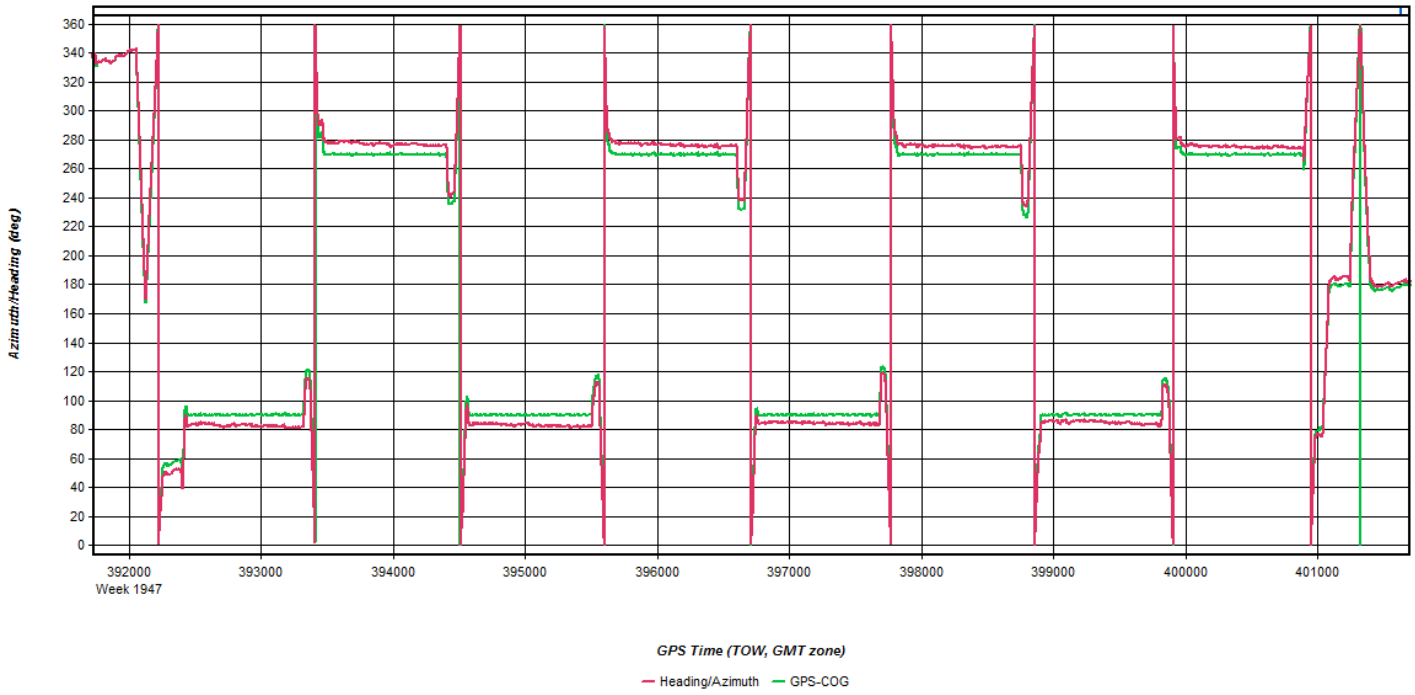

Height (m)
2250
2200
2150
2100
2050
2000
1950
1900
1850
1800
1750
1700
1650
1600
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Height

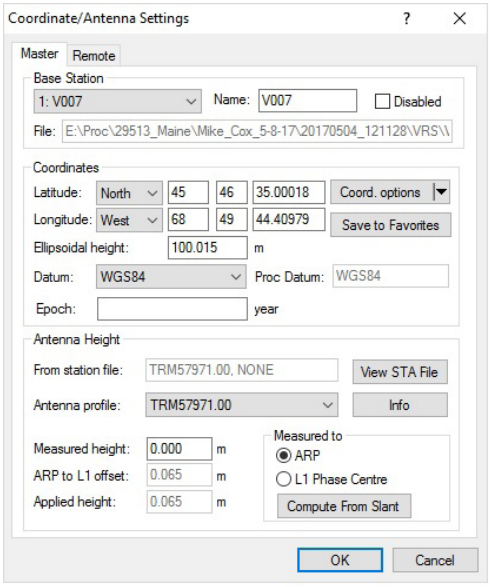

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

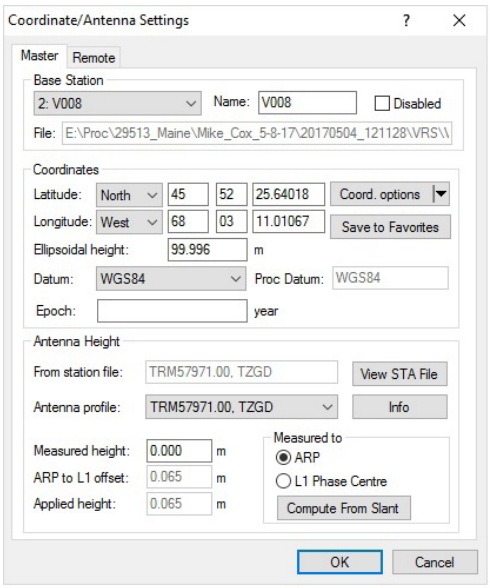

Separation (m)
0.30
0.25
0.20
0.15
0.10
0.05
-0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az

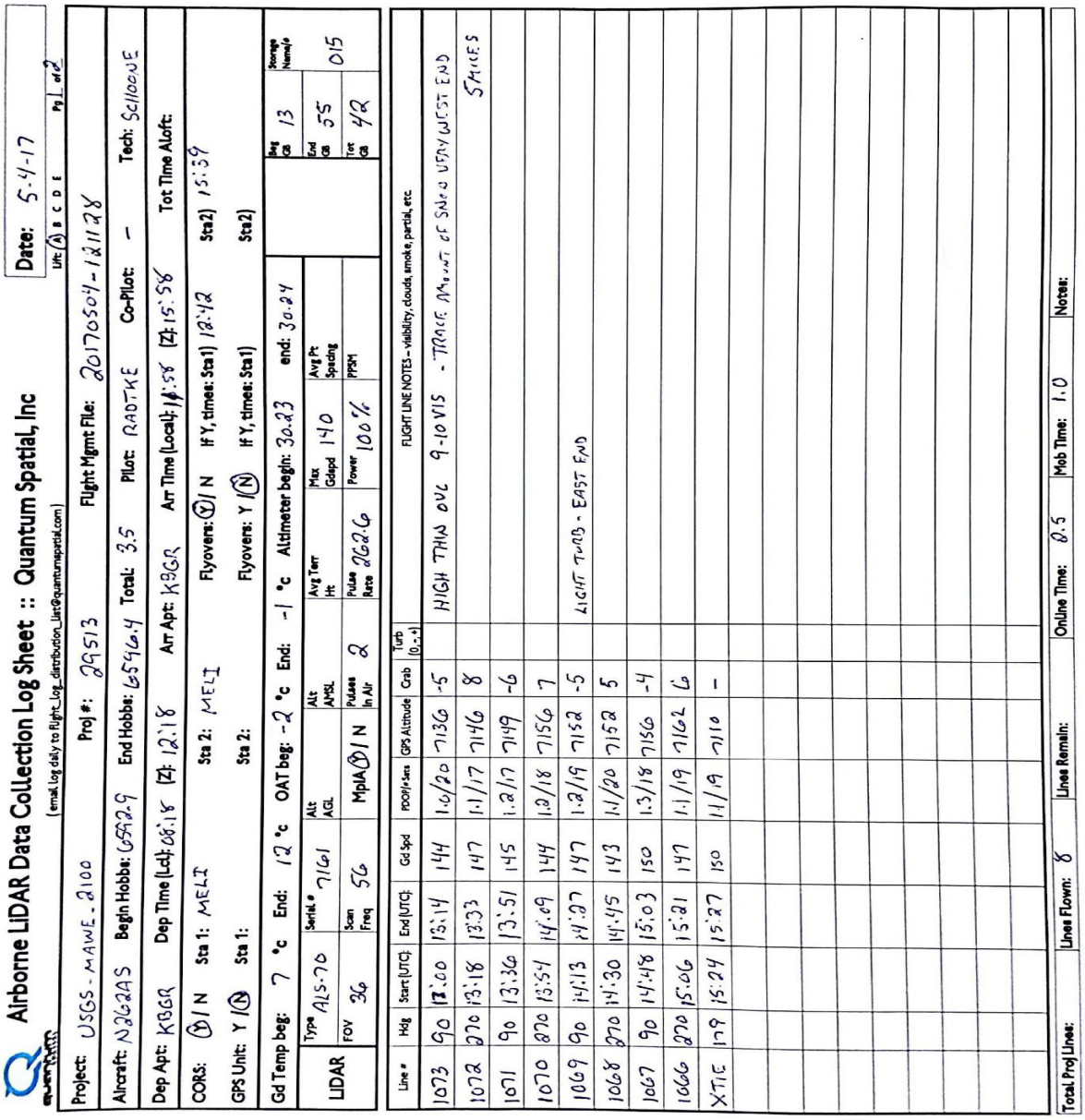

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
392000
Week 1947
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V007
Name: V007
Disabled
File: E:\Proc\29513_Maine\Mike_Cox_5-8-17\20170504_121128\VRS\\
Coordinates
Latitude: North 45 46 35.00018
Coord. options
Longitude: West 68 49 44.40979
Save to Favorites
Ellipsoidal height: 100.015 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V008
Name:
V008
Disabled
File:
E:\Proc\29513_Maine\Mike_Cox_5-8-17\20170504_121128\VRS\\
Coordinates
Latitude:
North
45
52
25.64018
Coord. options
Longitude:
West
68
03
11.01067
Save to Favorites
Ellipsoidal height:
99.996
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, TZGD
View STA File
Antenna profile:
TRM57971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_log_distribution_List@quantumspatial.com)

Date: 5-4-17 List: A B C D E Pg 1 of 2

Project: USGS-MAWE_2100 Proj #: 29513 Flight Mgmt File: 20170504-121128

Aircraft: N262AS Begin Hobbs: 6592.9 End Hobbs: 6596.4 Total: 3.5 Pilot: RADTKE Co-Pilot: - Tech: SCHOOVE

Dep Apt: KBGR Dep Time (Lcl): 08:18 [Z]: 12:18 Arr Apt: KBGR Arr Time (Local): 11:58 [Z]: 15:58 Tot Time Aloft:

CORS: (Y) / N Sta 1: MELT Sta 2: MELT Flyovers: (Y) / N If Y, times: Sta1) 12:42 Sta2) 15:39

GPS Unit: Y / (N) Sta 1: Sta 2: Flyovers: Y / (N) If Y, times: Sta1) Sta2)

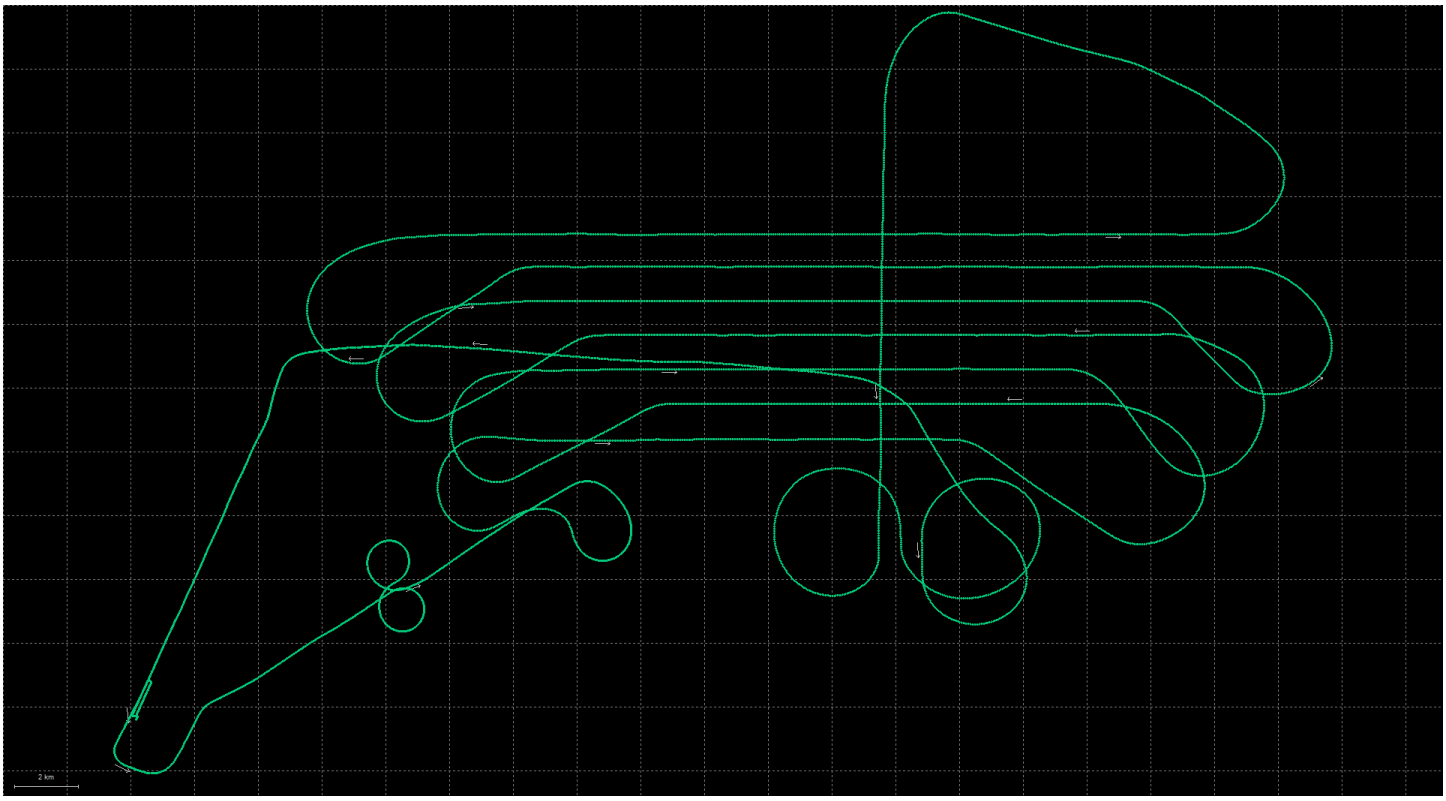
Gd Temp beg: 7 °c End: 12 °c OAT beg: -2 °c End: -1 °c Altimeter begin: 30.23 end: 30.24

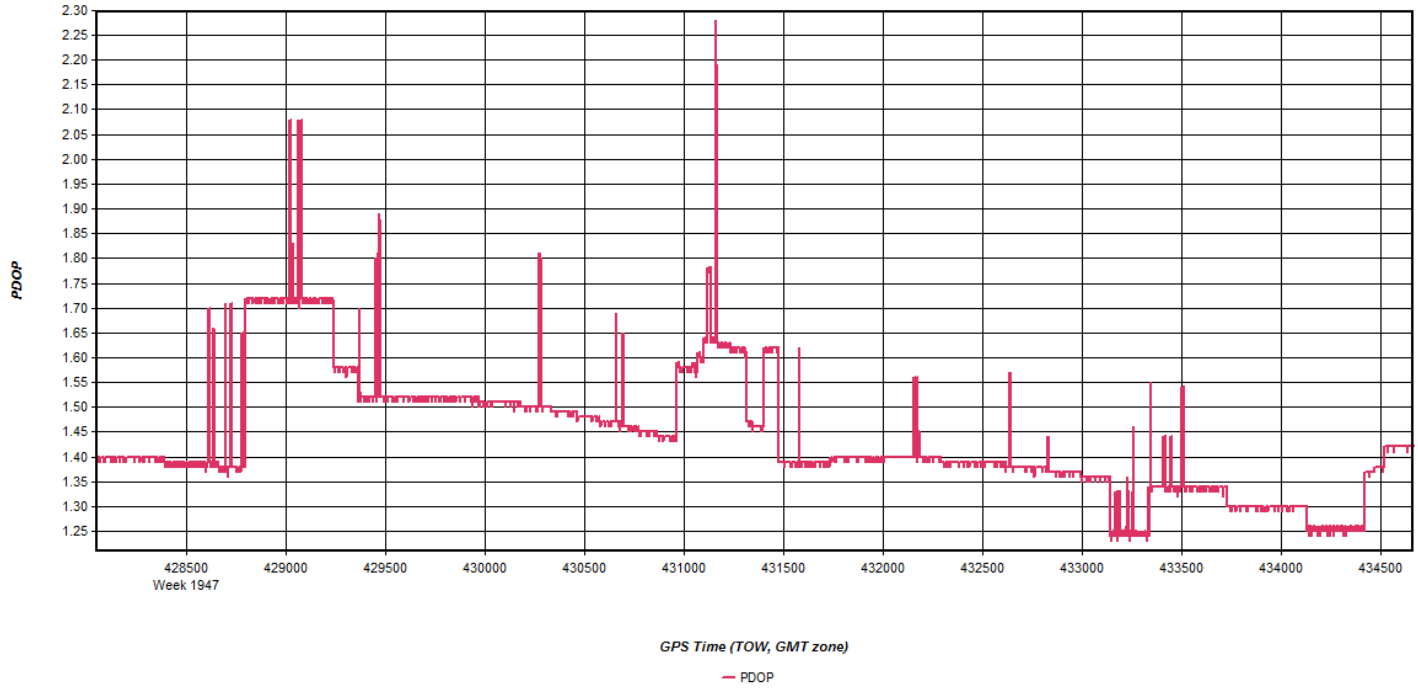
	Type	AS-70	Serial #	7161	Alt AGL		Alt AMSL		Avg Terr Ht		Max Gdspd	140	Avg Pt Spacing		Beg Ca	13	Storage Name/s
LIDAR	FOV	36	Scan Freq	56	MpIA (D) / N		Pulses In Air	2	Pulse Rate	266.6	Power	100 %	PPSM		End Ca	55	015
															Tot Ca	42	

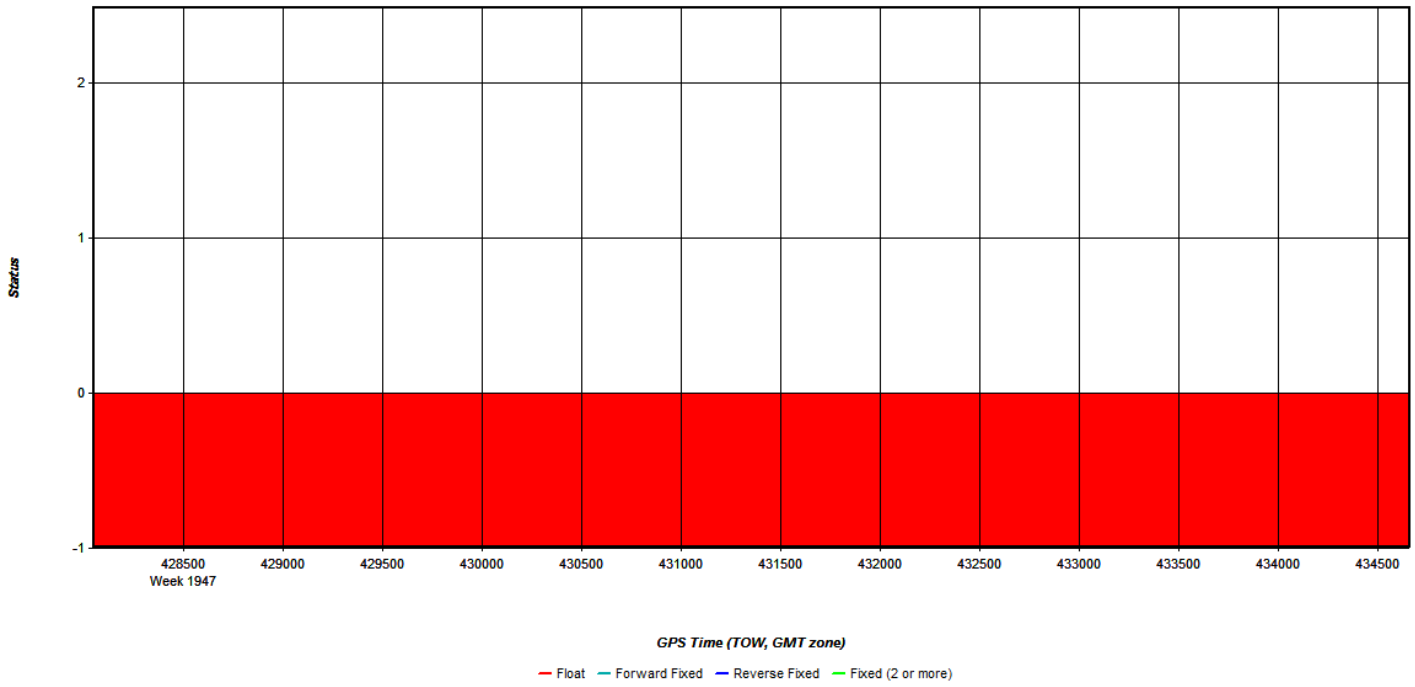
Line #	Hdg	Start [UTC]	End [UTC]	Gd Spd	PDOP/#Sats	GPS Altitude	Crab	Turb (0-4)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc
1073	90	13:00	13:14	144	1.6/20	7136	-5		HIGH THIN OVC 9-10 VIS - TRACE AMOUNT OF SNOW WEST END
1072	270	13:18	13:33	147	1.1/17	7146	8		SPARSE
1071	90	13:36	13:51	145	1.2/17	7149	-6		
1070	270	13:54	14:09	144	1.0/18	7156	7		
1069	90	14:13	14:27	147	1.2/19	7152	-5		LIGHT SNOW - EAST END
1068	270	14:30	14:45	143	1.1/20	7152	5		
1067	90	14:48	15:03	150	1.3/18	7156	-4		
1066	270	15:06	15:21	147	1.1/19	7162	6		
XTIE	179	15:24	15:27	150	1.1/19	7110	-		

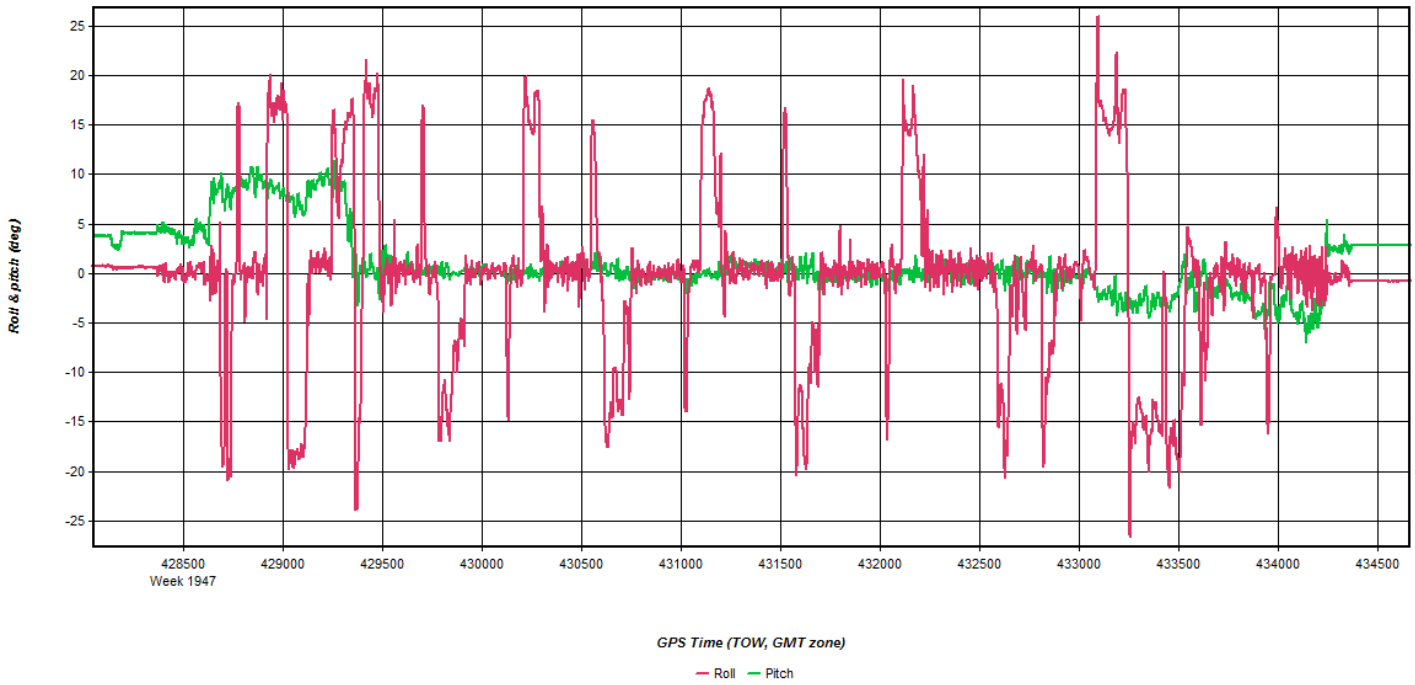
Total Proj Lines: Lines Flown: 8 Lines Remain: Online Time: 0.5 Mob Time: 1.0 Notes:

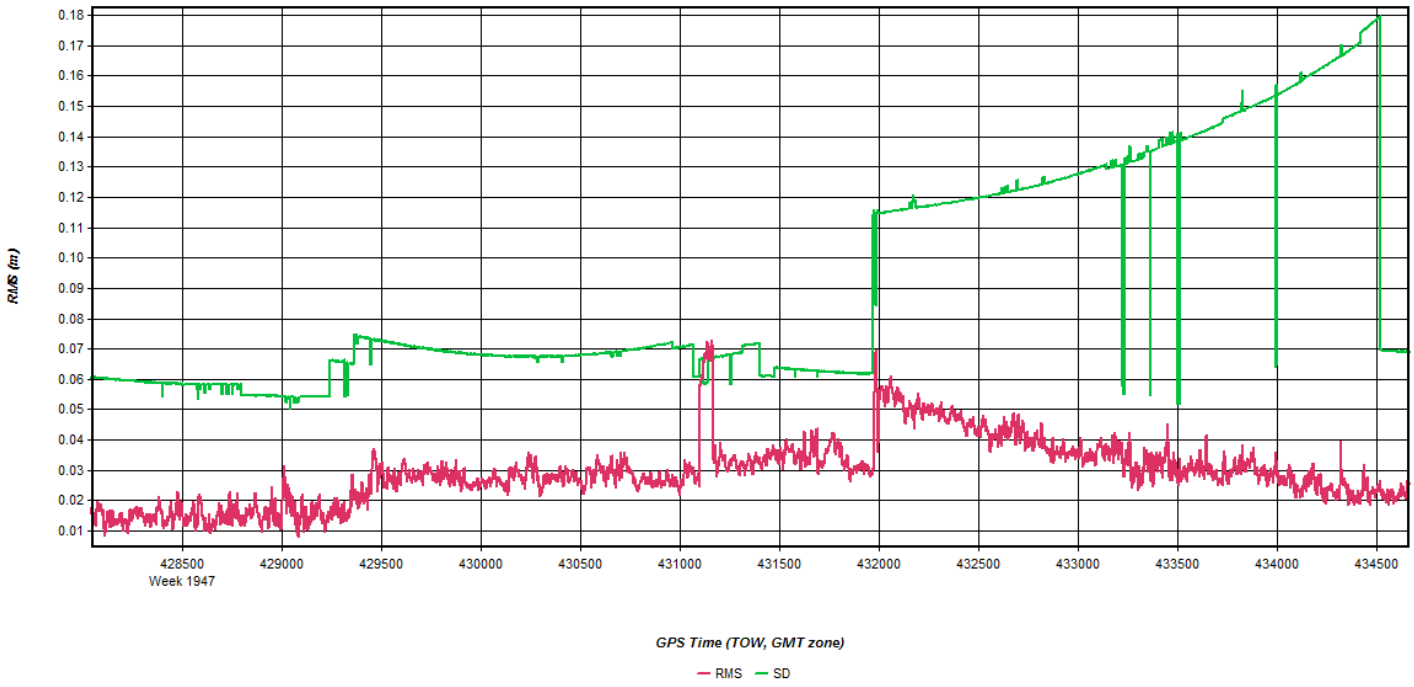
May 04, 2017-A
N916WC, SN8119

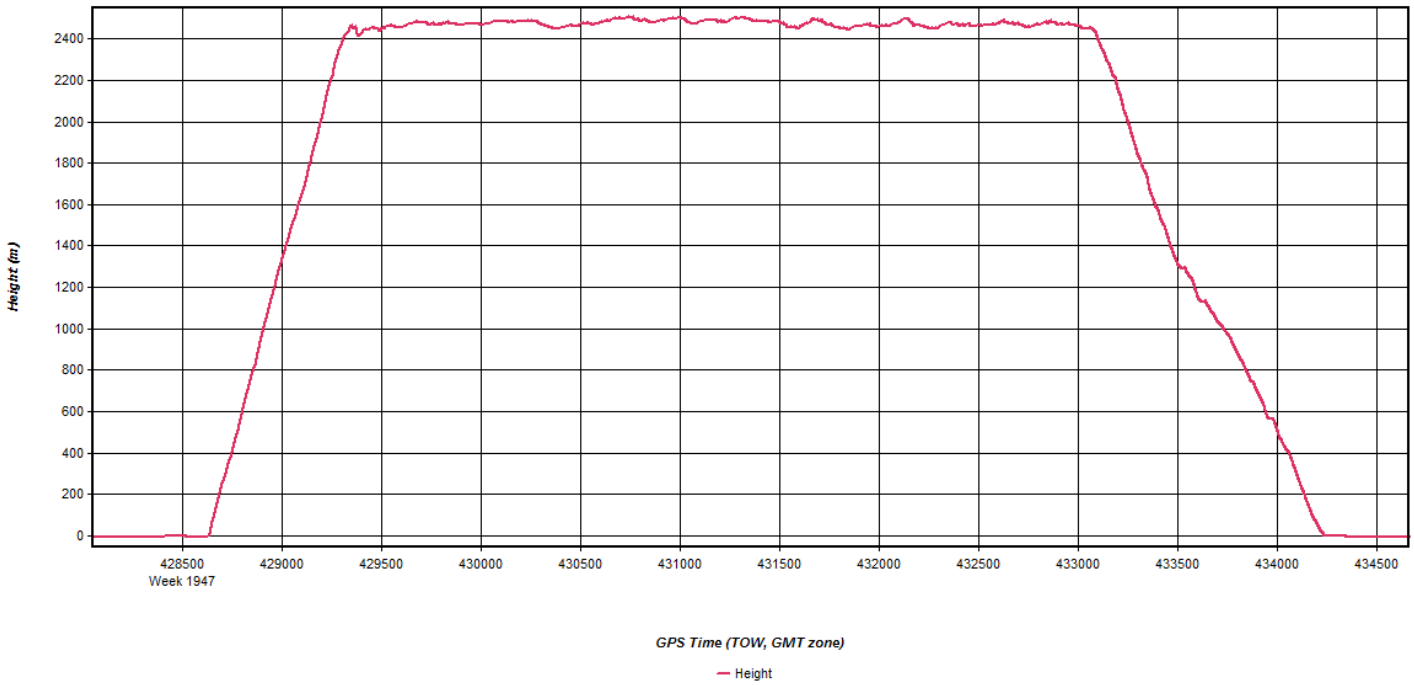


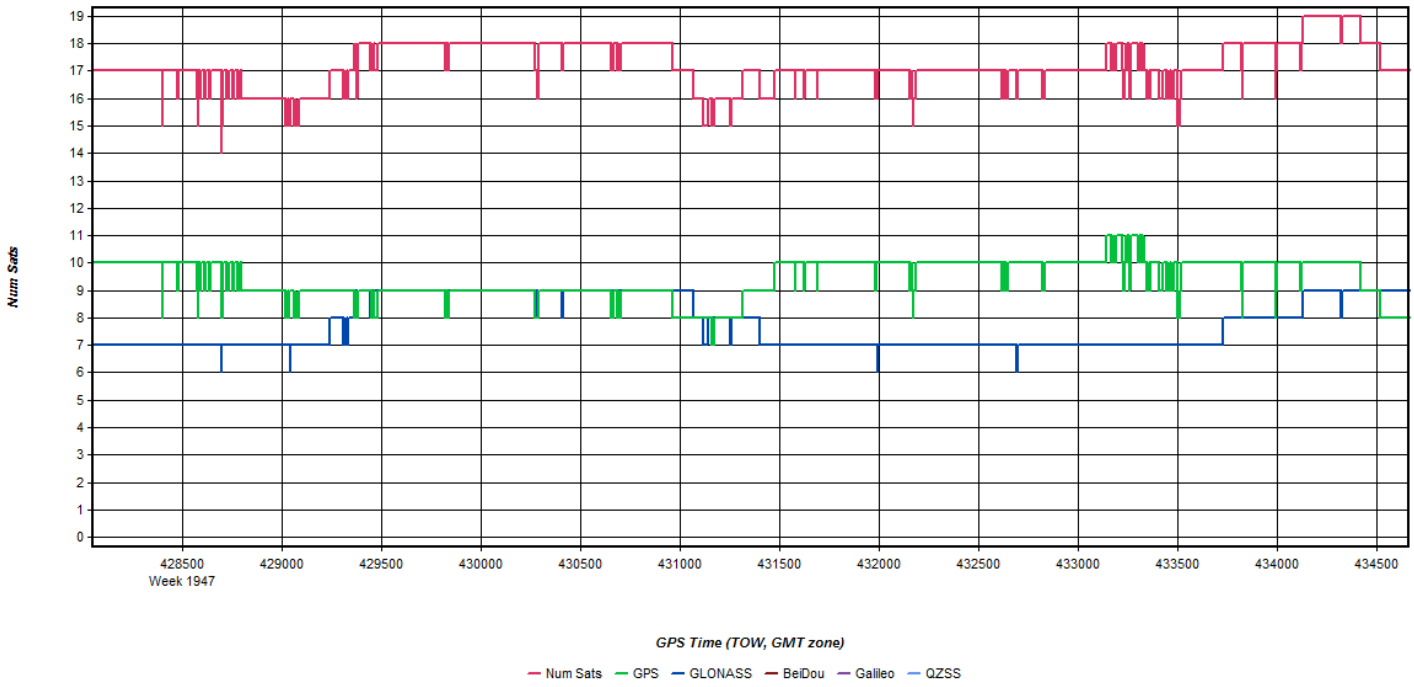

PDOP
2.30
2.25
2.20
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
PDOP

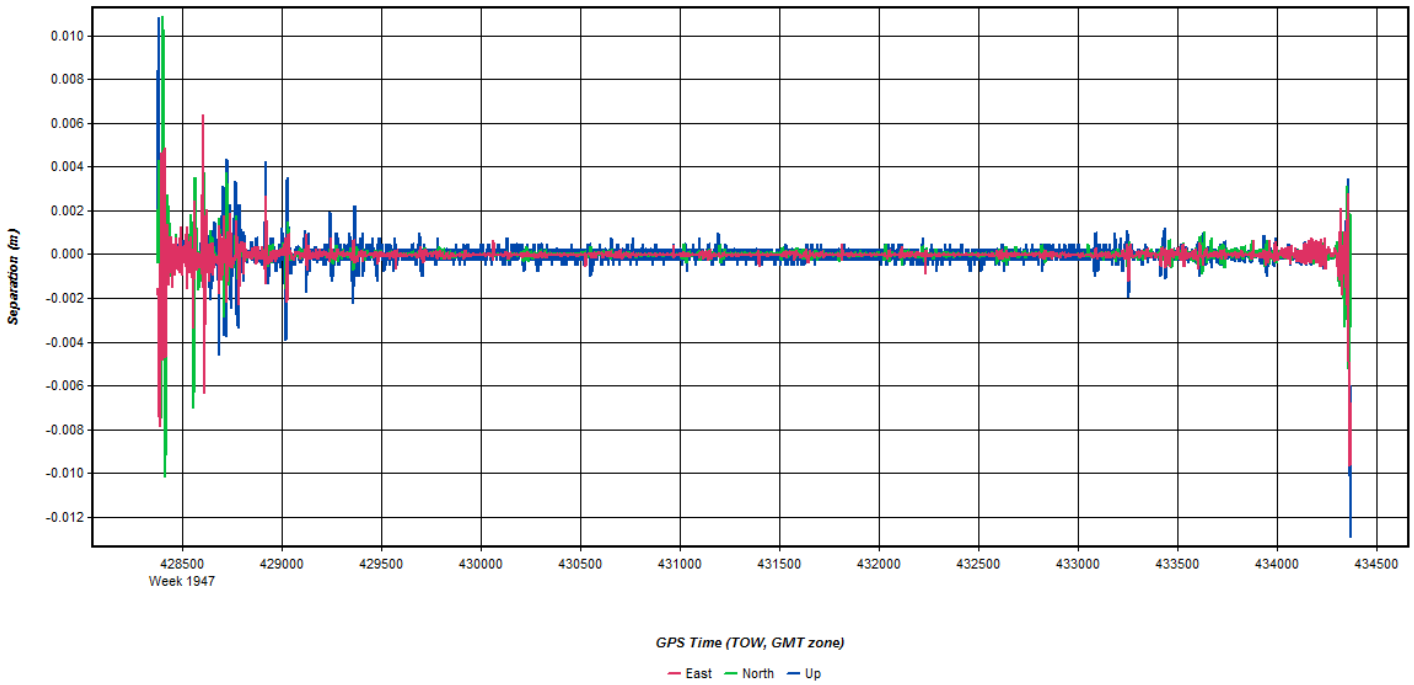

Status
2
1
0
-1
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

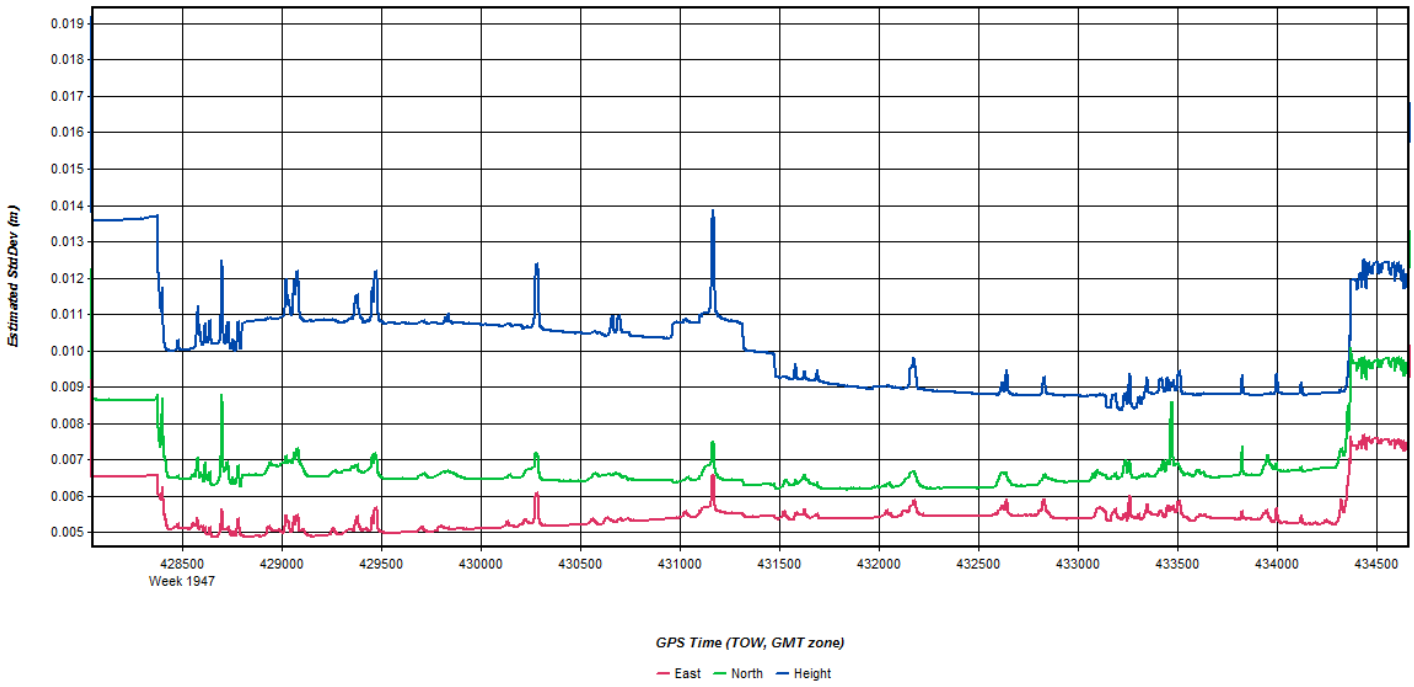

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Roll
Pitch

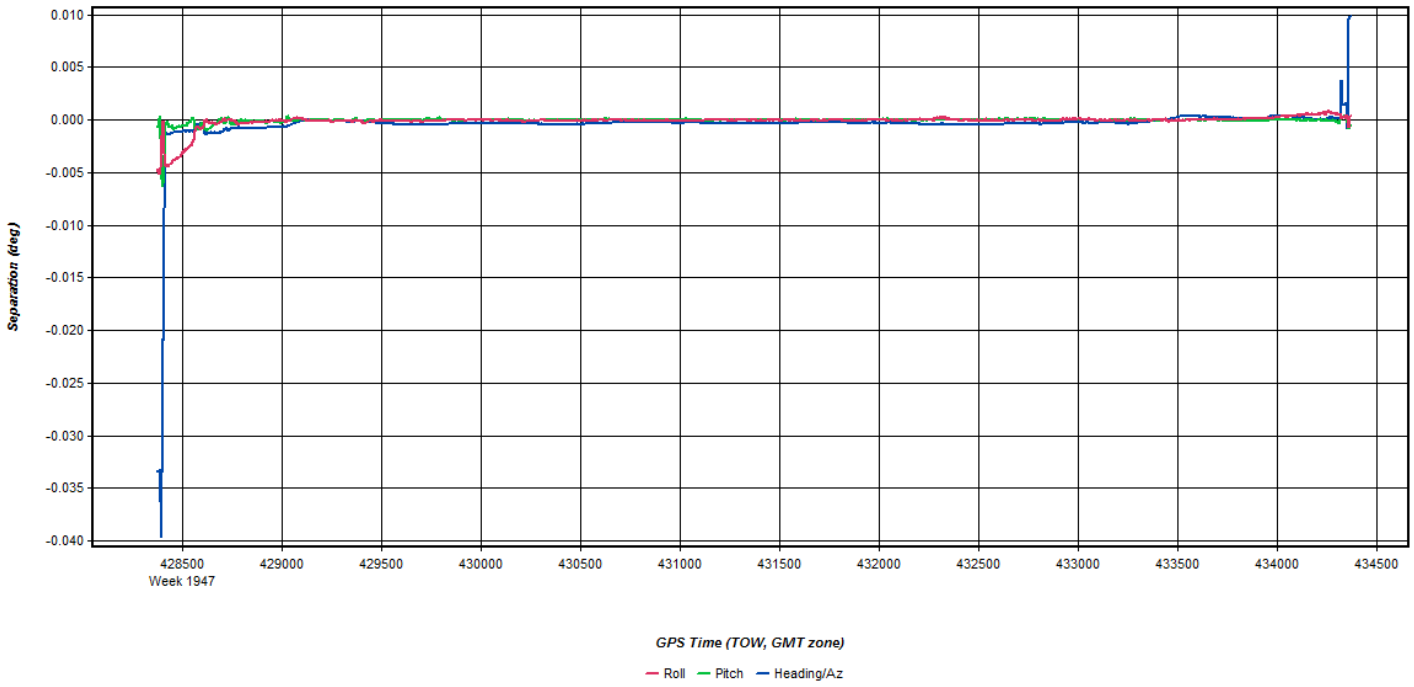

RMS (m)
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
RMS
SD

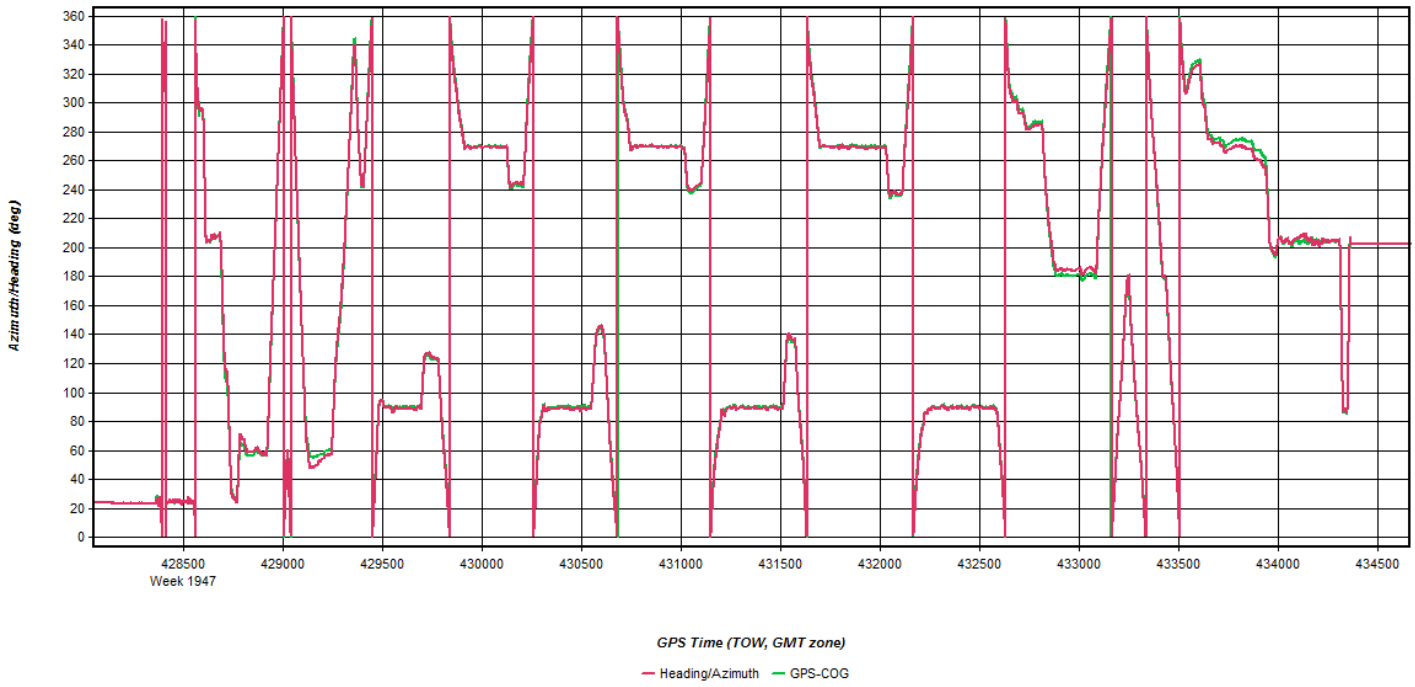

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

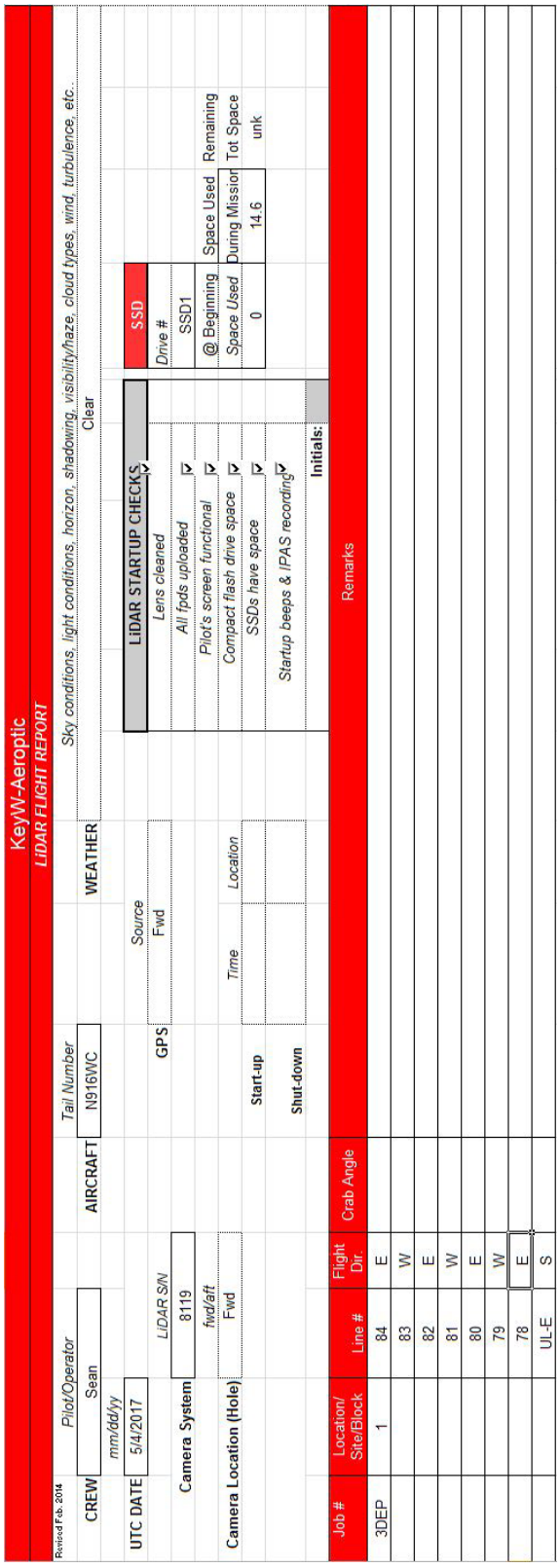

Separation (m)
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
428500
Week 1947
429000
429500
430000
430500
431000
431500
432000
432500
433000
433500
434000
434500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

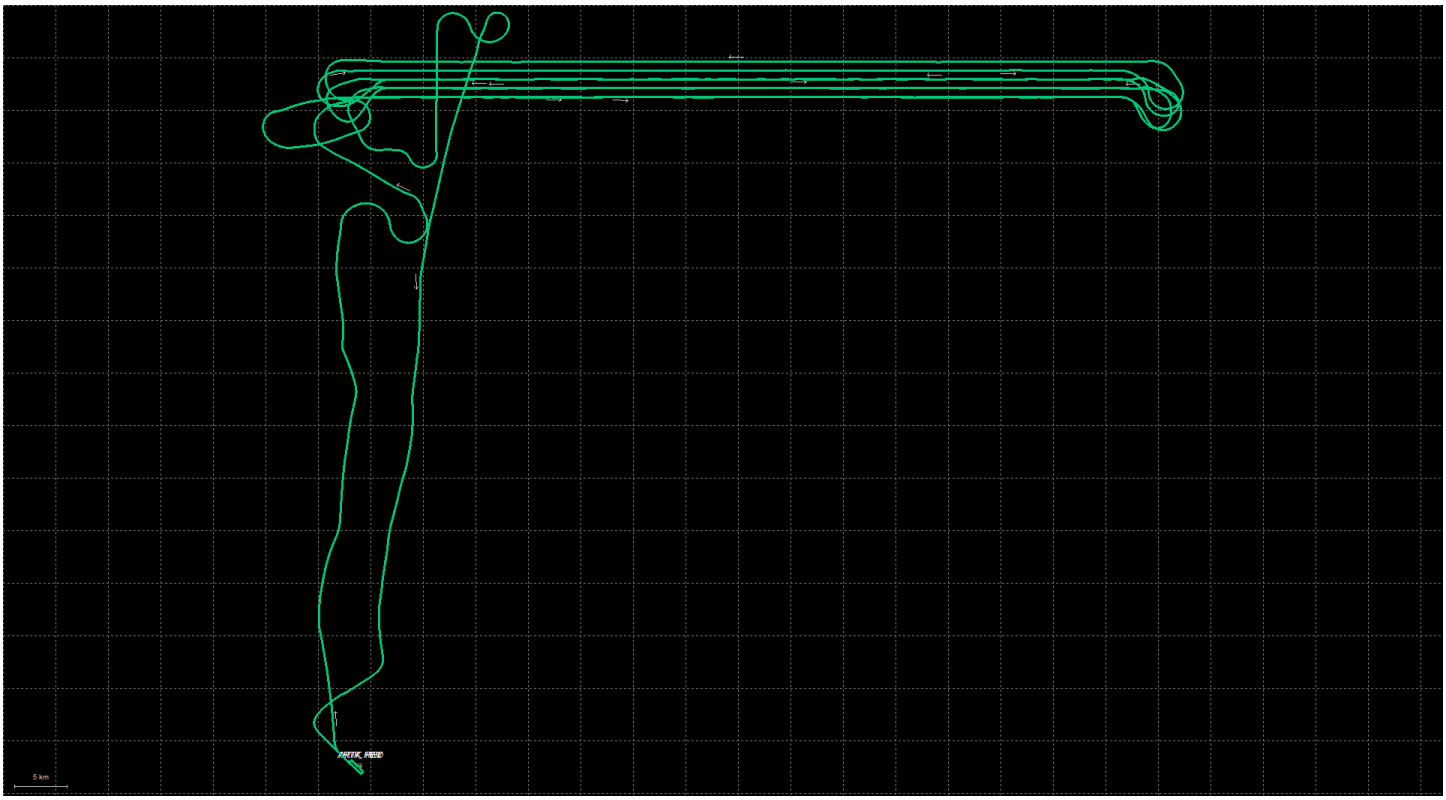


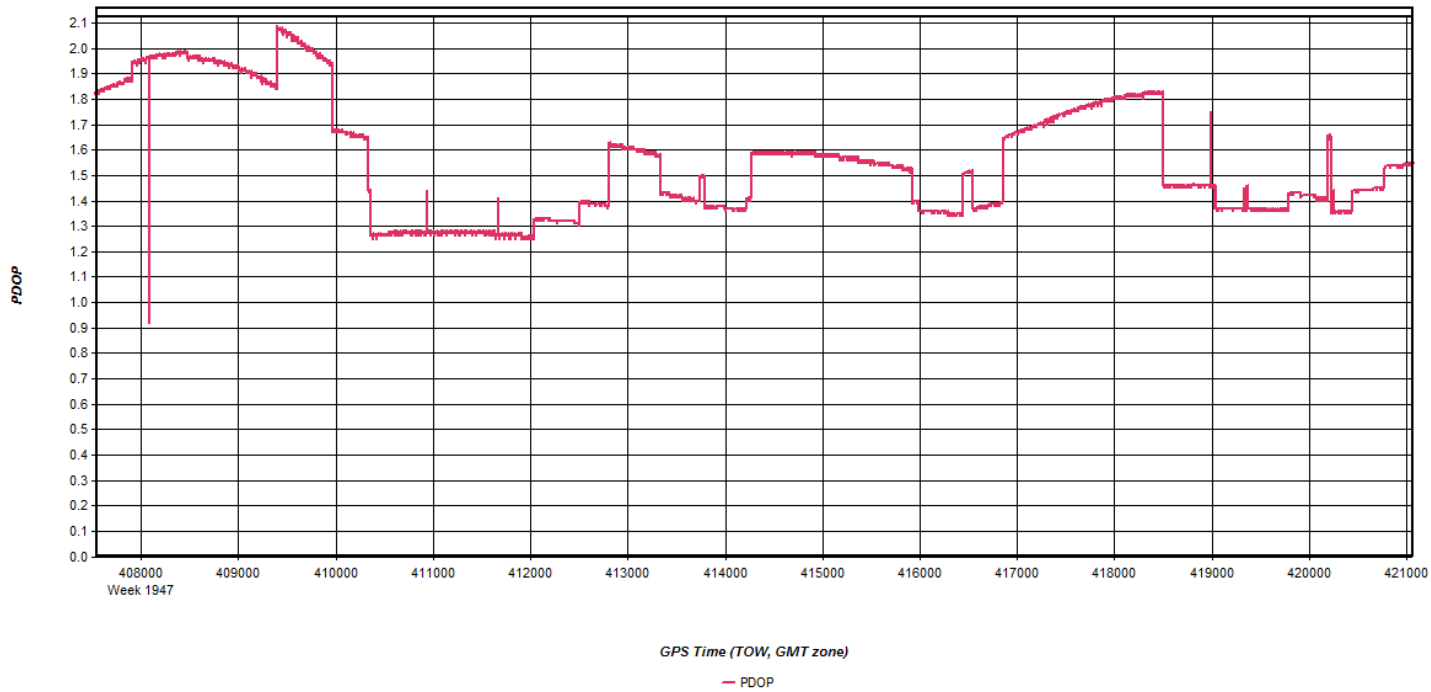
KeyW-Aeroptic
LiDAR FLIGHT REPORT

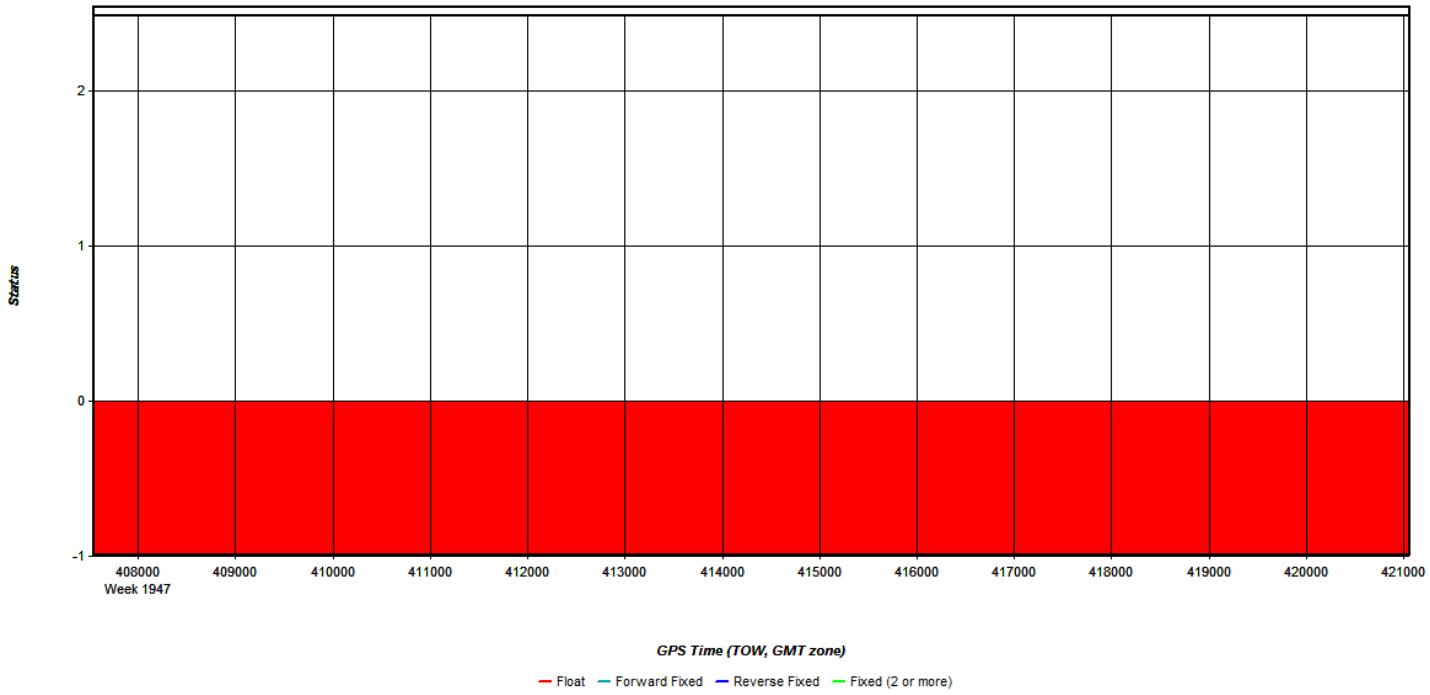
Revised Feb. 2014

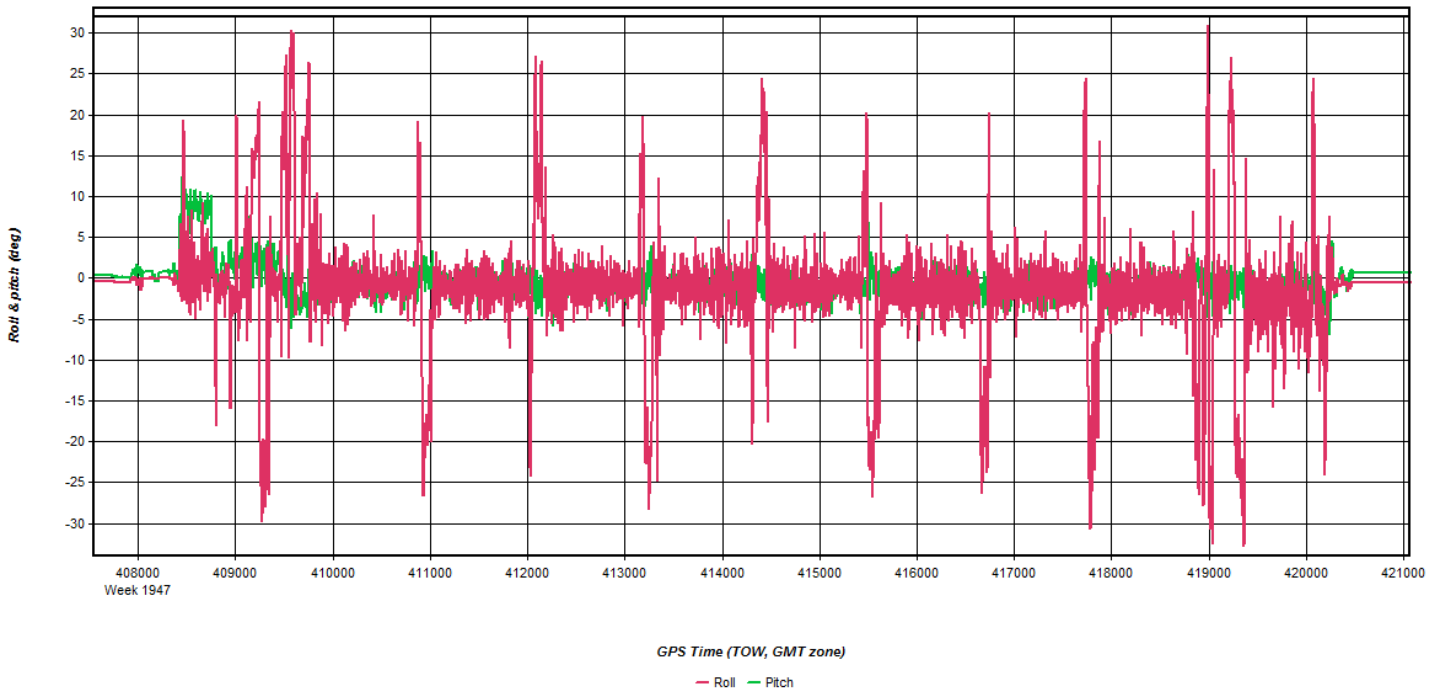
| | | |

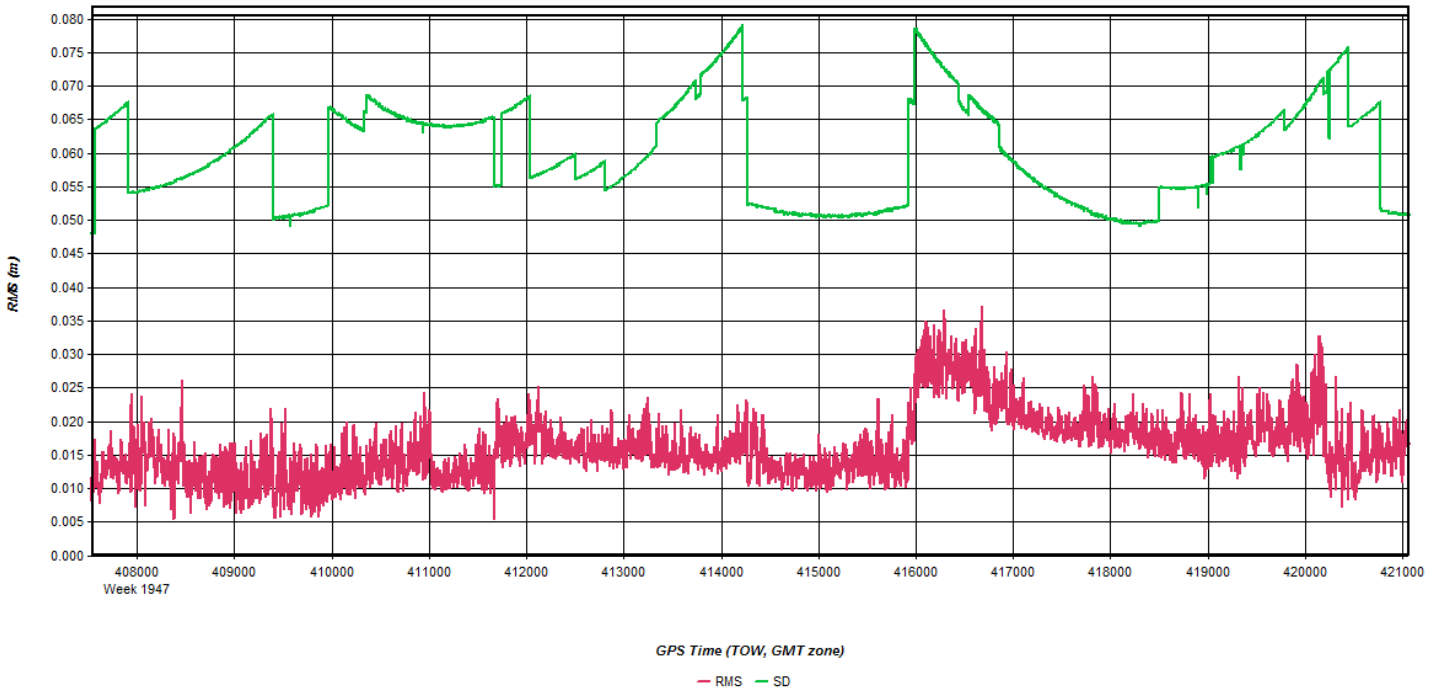
May 04, 2017-B
N73TM, SN7178

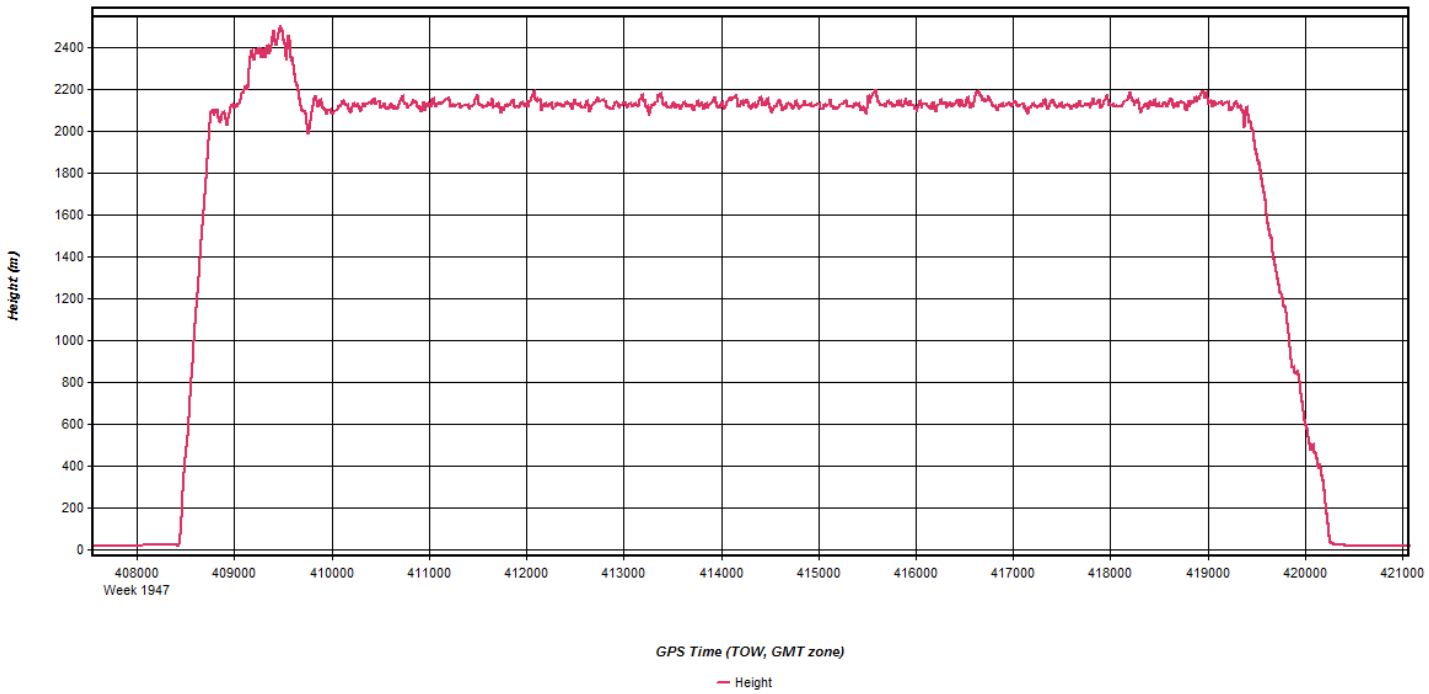


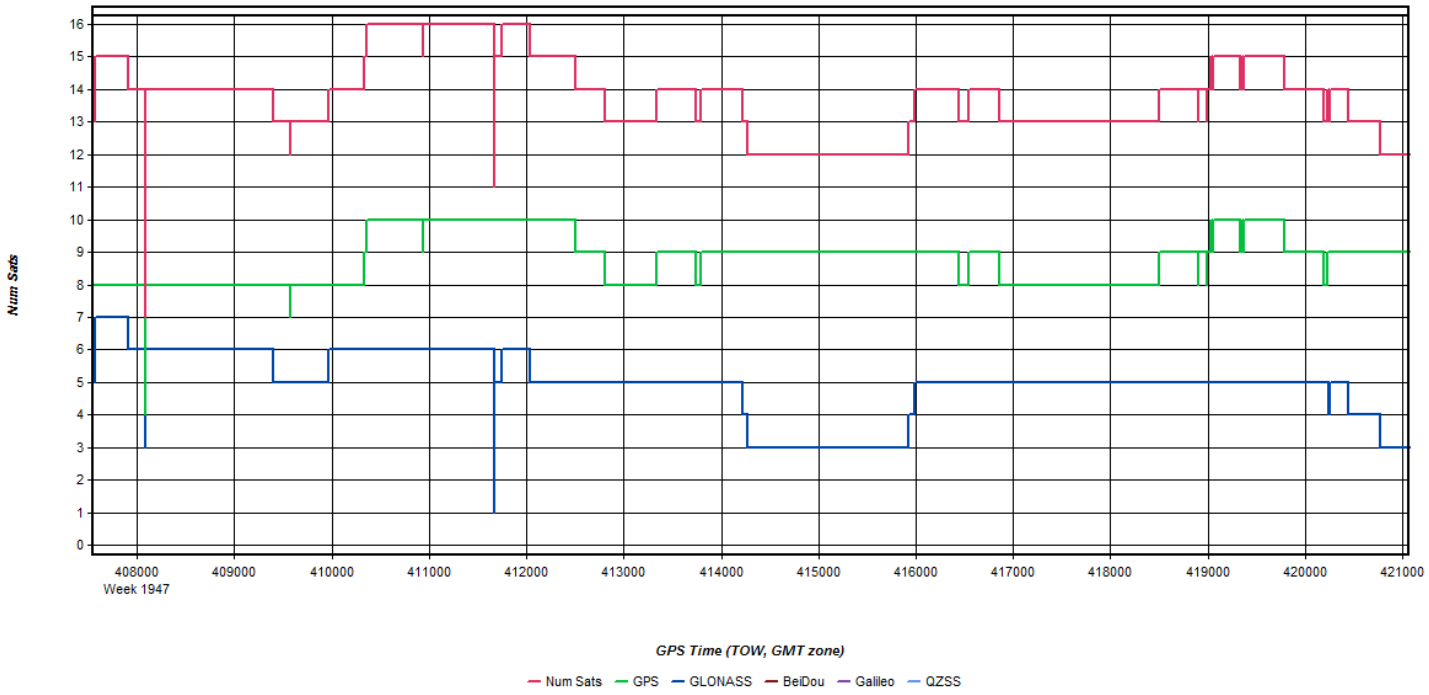

PDOP
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
PDOP

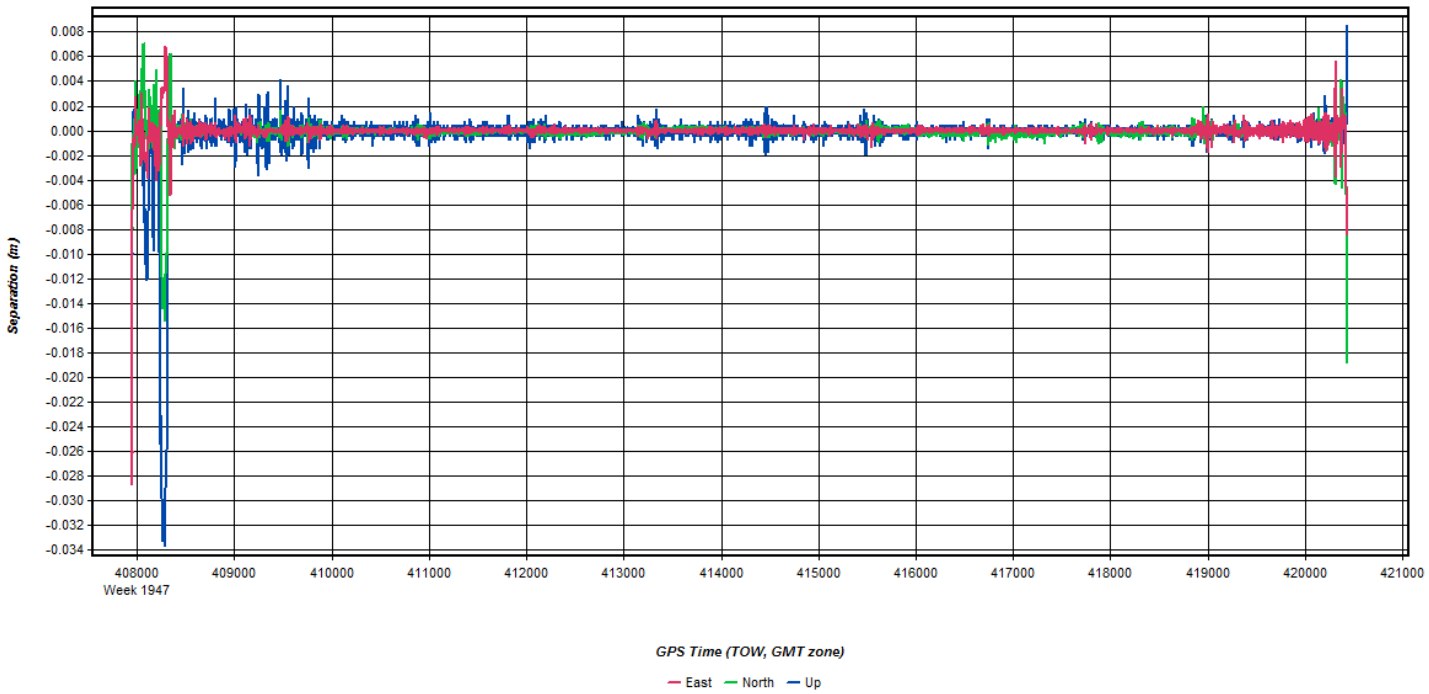

Status
2
1
0
-1
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

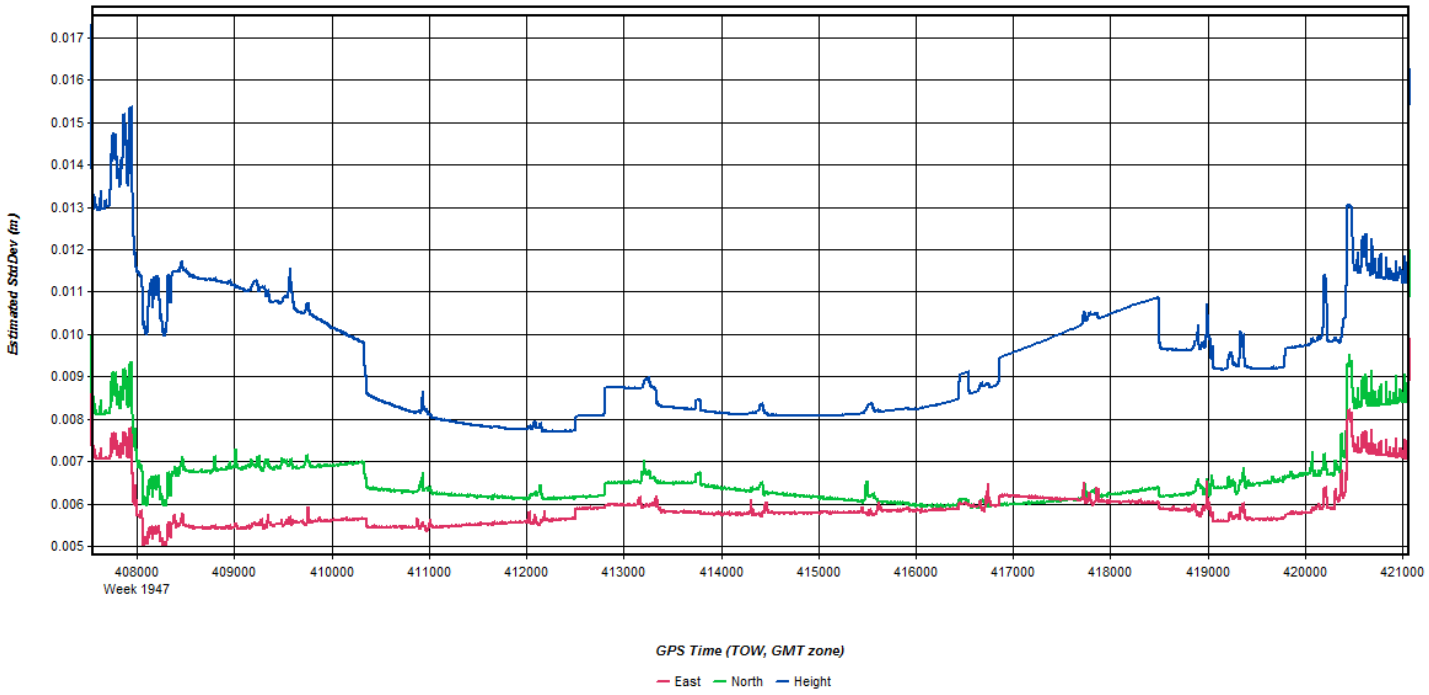

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Roll
Pitch

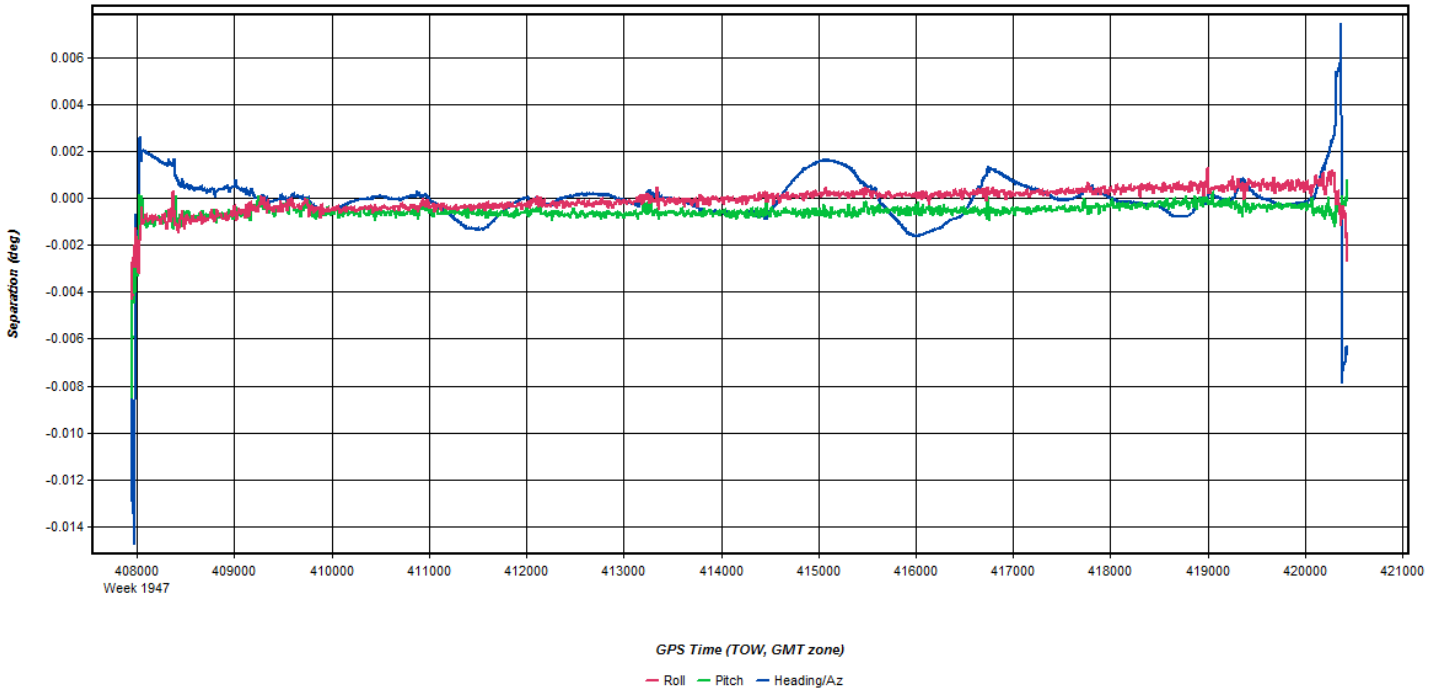

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
RMS
SD

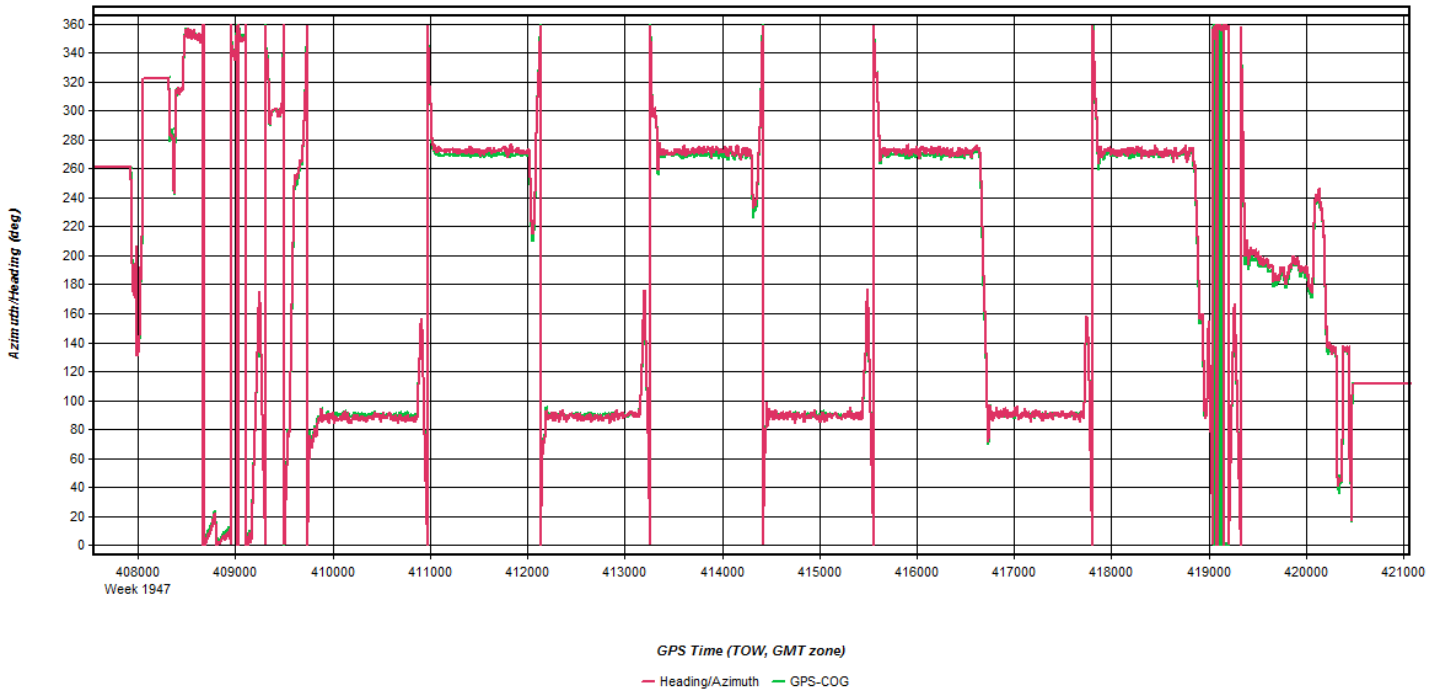

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Height


Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

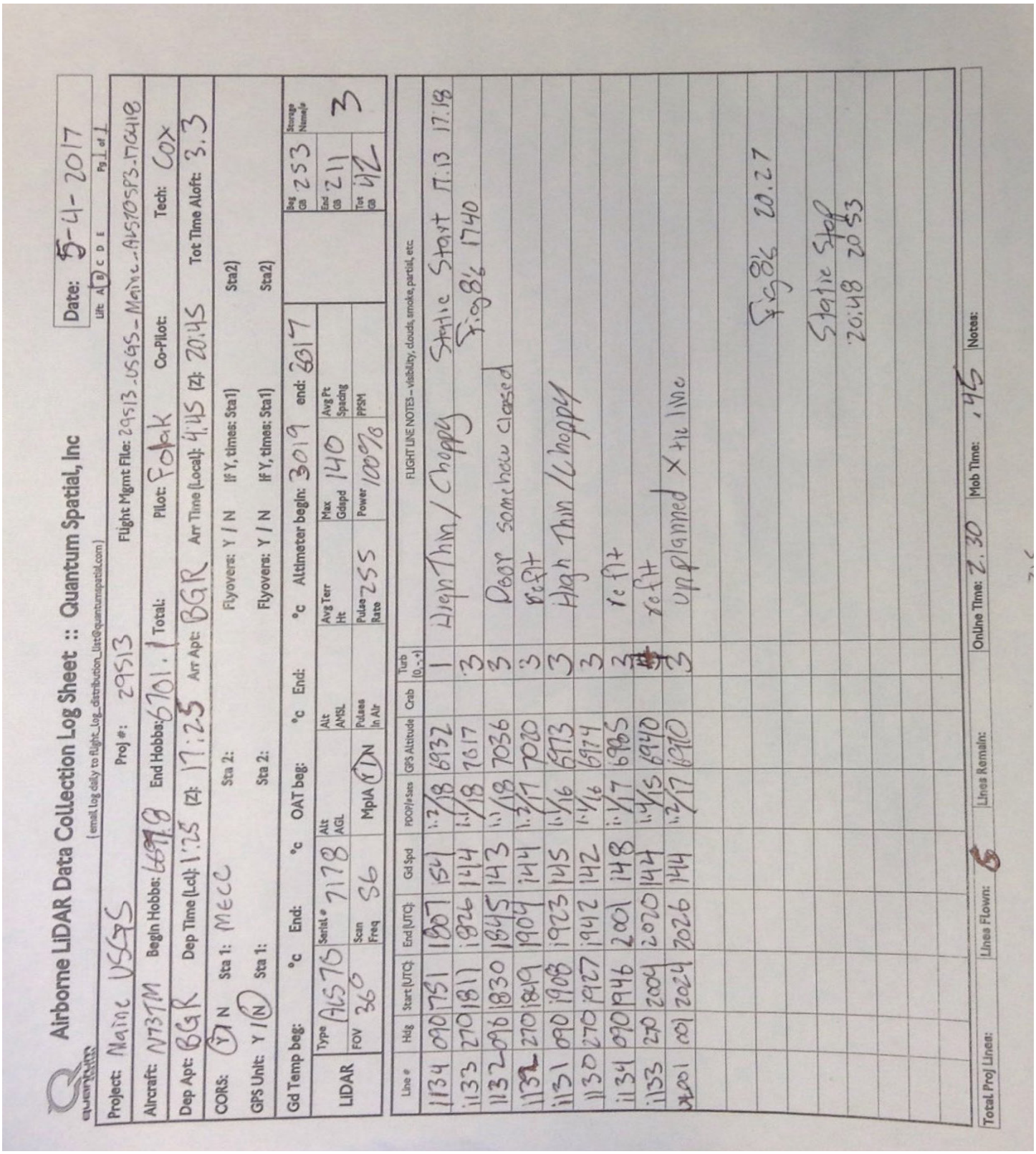

Separation (m)
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
-0.022
-0.024
-0.026
-0.028
-0.030
-0.032
-0.034
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
408000
Week 1947
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
419000
420000
421000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-4-2017

Lift: A B C D E Pg 1 of 1

Project: Maine USGS Proj #: 29513 Flight Mgmt File: 29513-USGS-Maine-AVS10SP3-170418

Aircraft: N731M Begin Hobbs: 6879 End Hobbs: 6701.1 Total: Pilot: Fobak Co-Pilot: Tech: Cox

Dep Apt: BGR Dep Time (Lcl): 1125 (Z): 17:25 Arr Apt: BGR Arr Time (Local): 4:45 (Z): 20:45 Tot Time Aloft: 3.3

CORS: (Y) N Sta 1: MECC Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / (N) Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

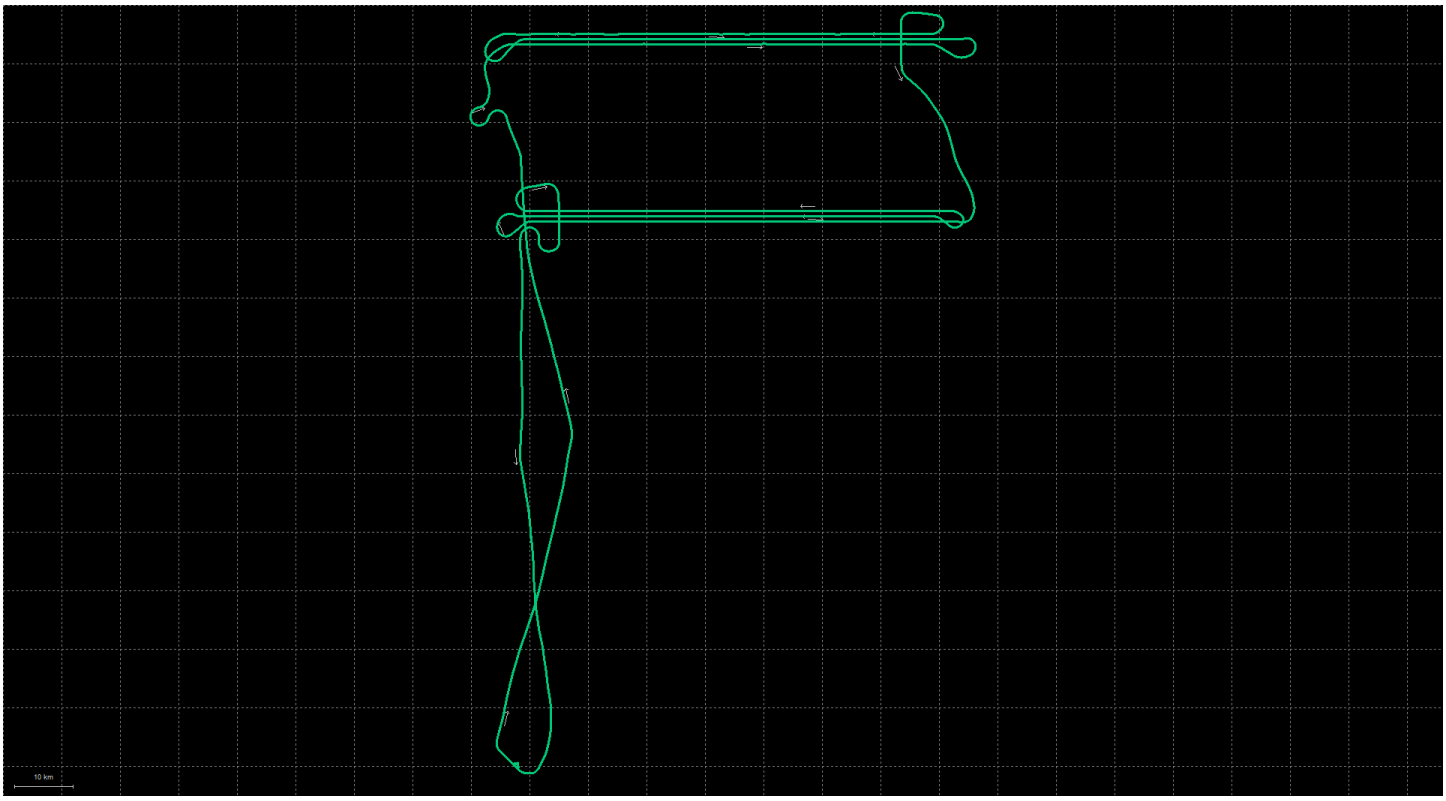
Gd Temp beg: °c End: °c OAT beg: °c End: °c Altimeter begin: 3019 end: 3017

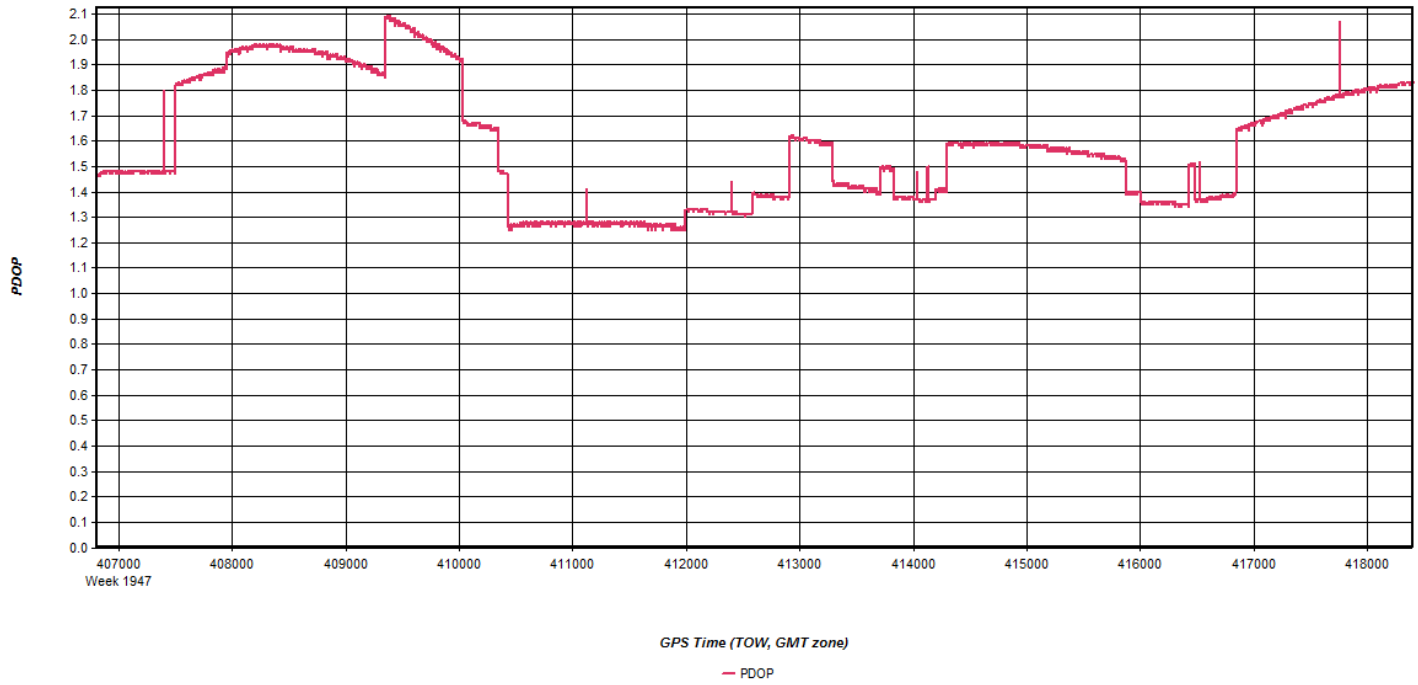
	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing	Bag GB	Storage Numb's
LIDAR	AS75	7178				140		253	
	FOV 36°	Scan Freq 56	MpIA (Y) N	Pulses In Air	Pulse Rate 255	Power 100%	PPSM	End GB 211	3
								Tot GB 462	

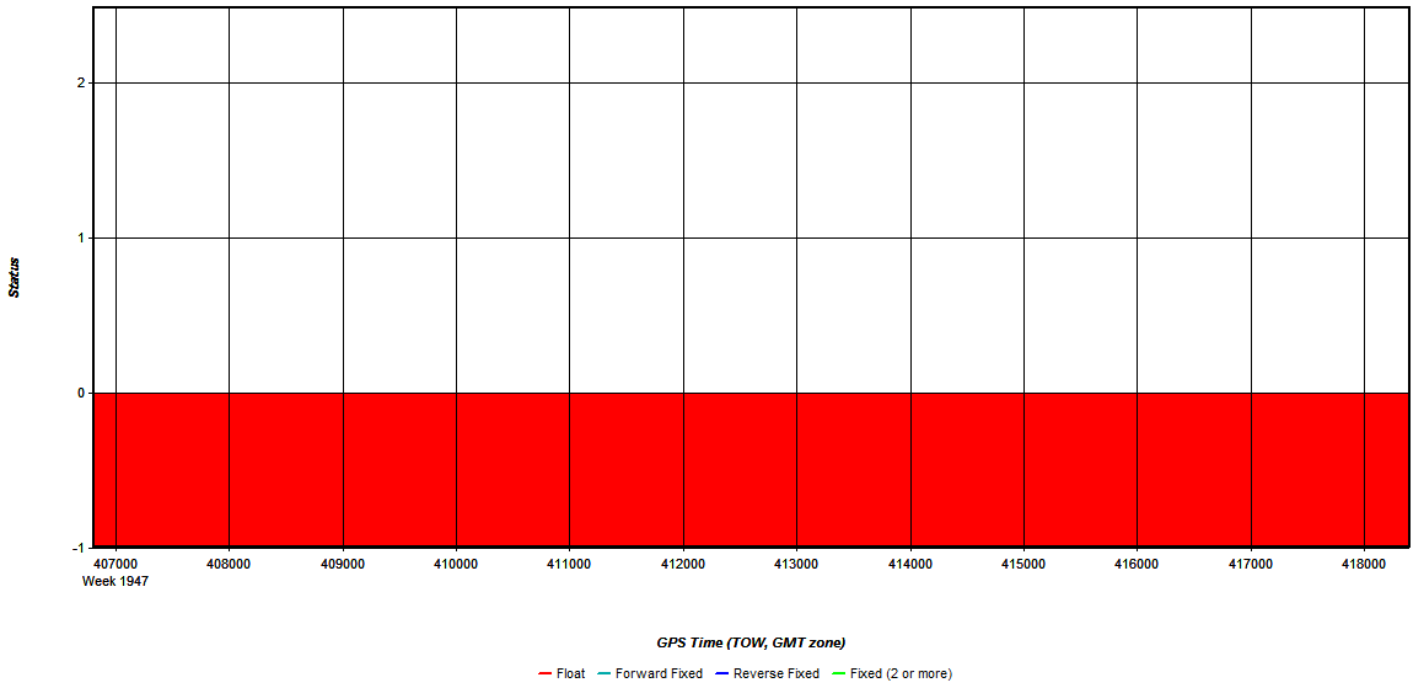
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES -- visibility, clouds, smoke, partial, etc.
1134	090	1751	1807	154	1.7/8	6932		1	High Thin / Choppy Static Start 17:13 17:18
1133	270	1811	1826	144	1.1/8	7017		3	Fog 1740
1132	090	1830	1845	143	1.1/8	7036		3	Door somehow closed
1132	270	1849	1904	144	1.3/11	7020		3	Right
1131	090	1908	1923	145	1.1/16	6973		3	High Thin / Choppy
1130	270	1927	1942	142	1.1/16	6974		3	
1134	090	1946	2001	148	1.1/17	6985		3	Right
1133	270	2004	2020	144	1.1/15	6940		3	Right
1201	001	2024	2026	144	1.2/17	6910		3	Unplanned X-Line
									Fog 20:27
									Static Stop 20:48 20:53

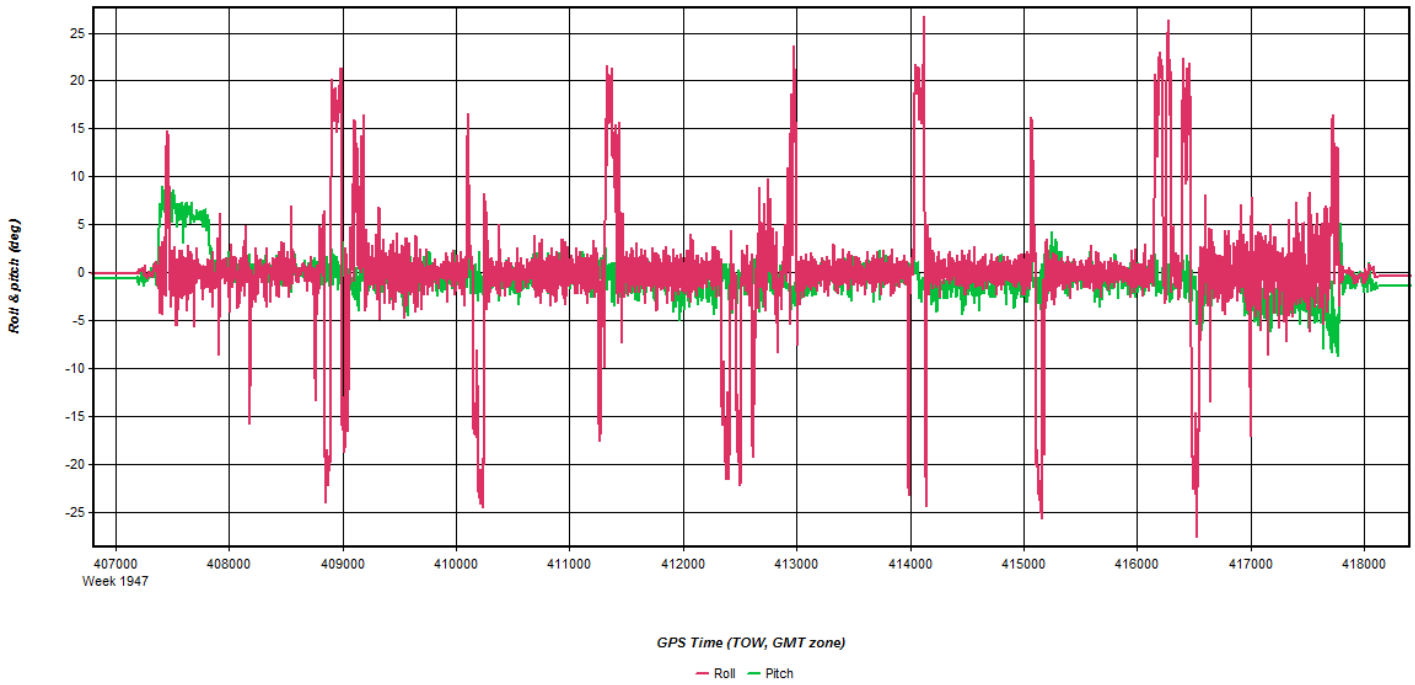
Total Proj Lines: Lines Flown: 6 Lines Remain: Online Time: 2:30 Mob Time: :45 Notes:

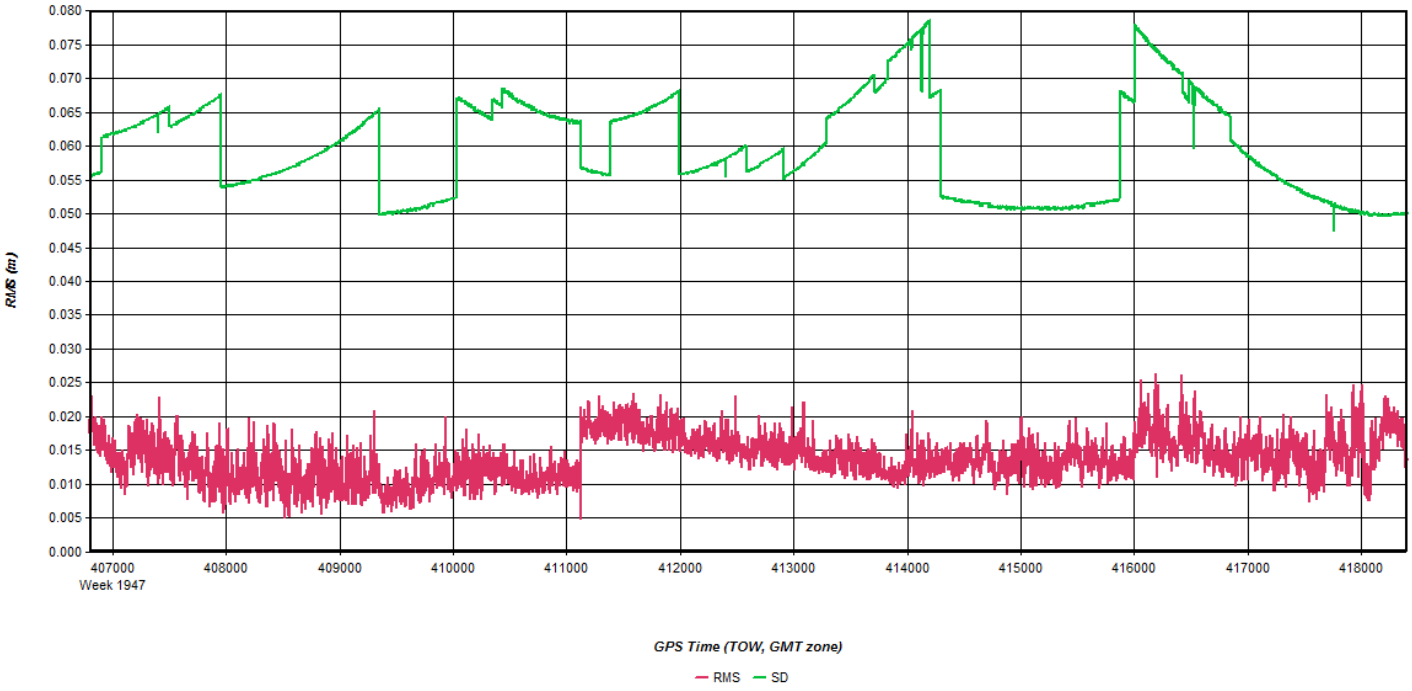
May 04, 2017-B
N262AS, SN7161

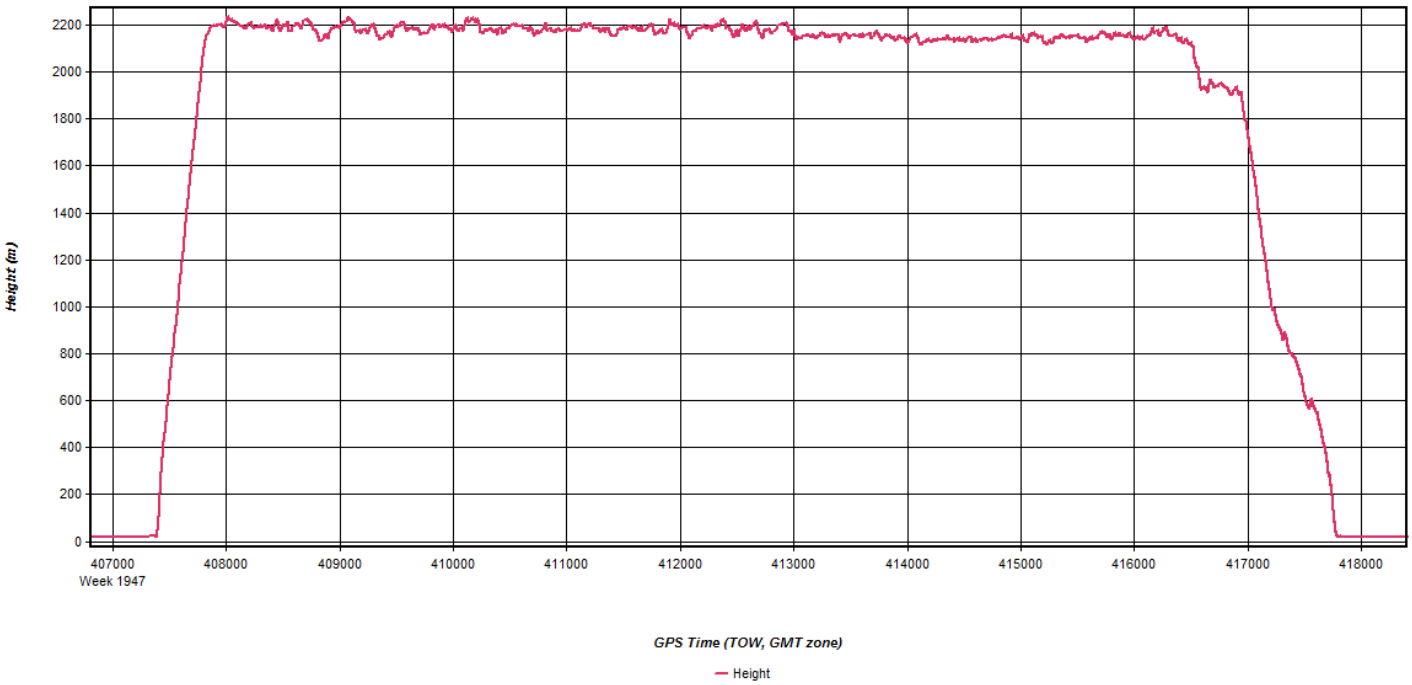

10 km

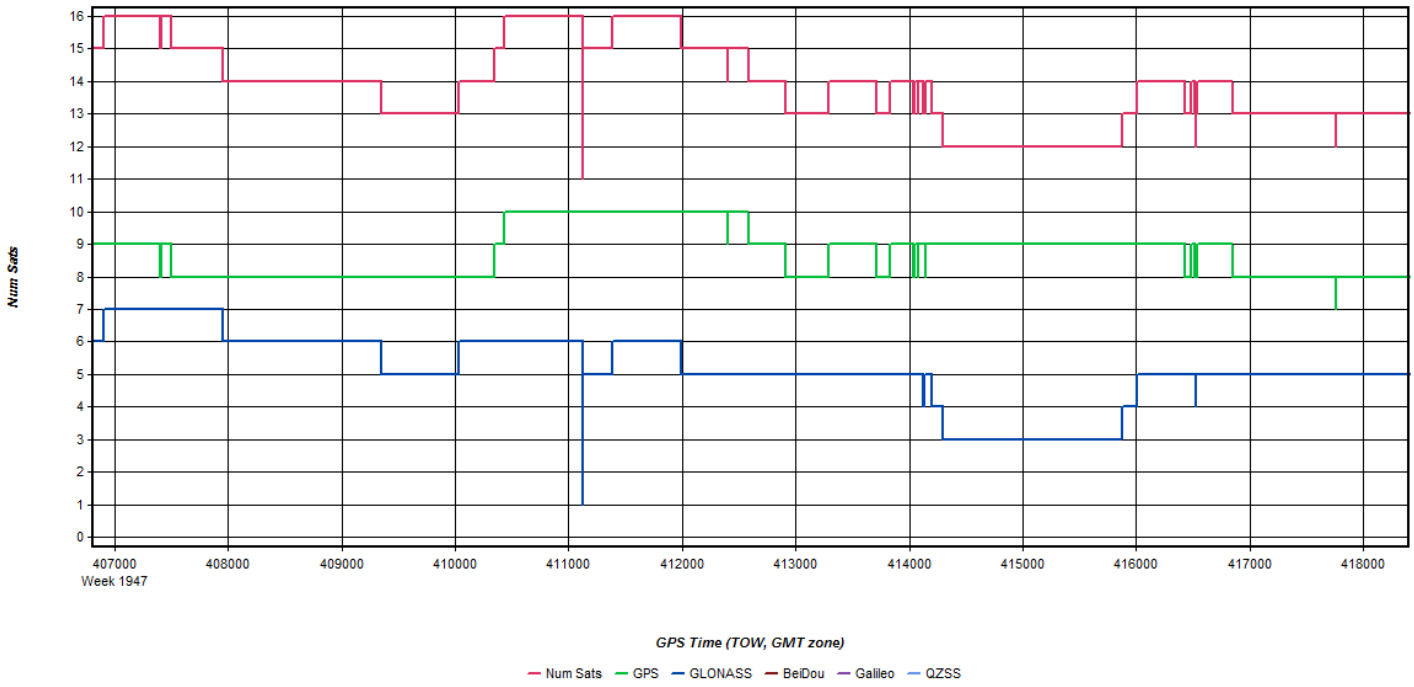

PDOP
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
PDOP


Status
2
1
0
-1
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

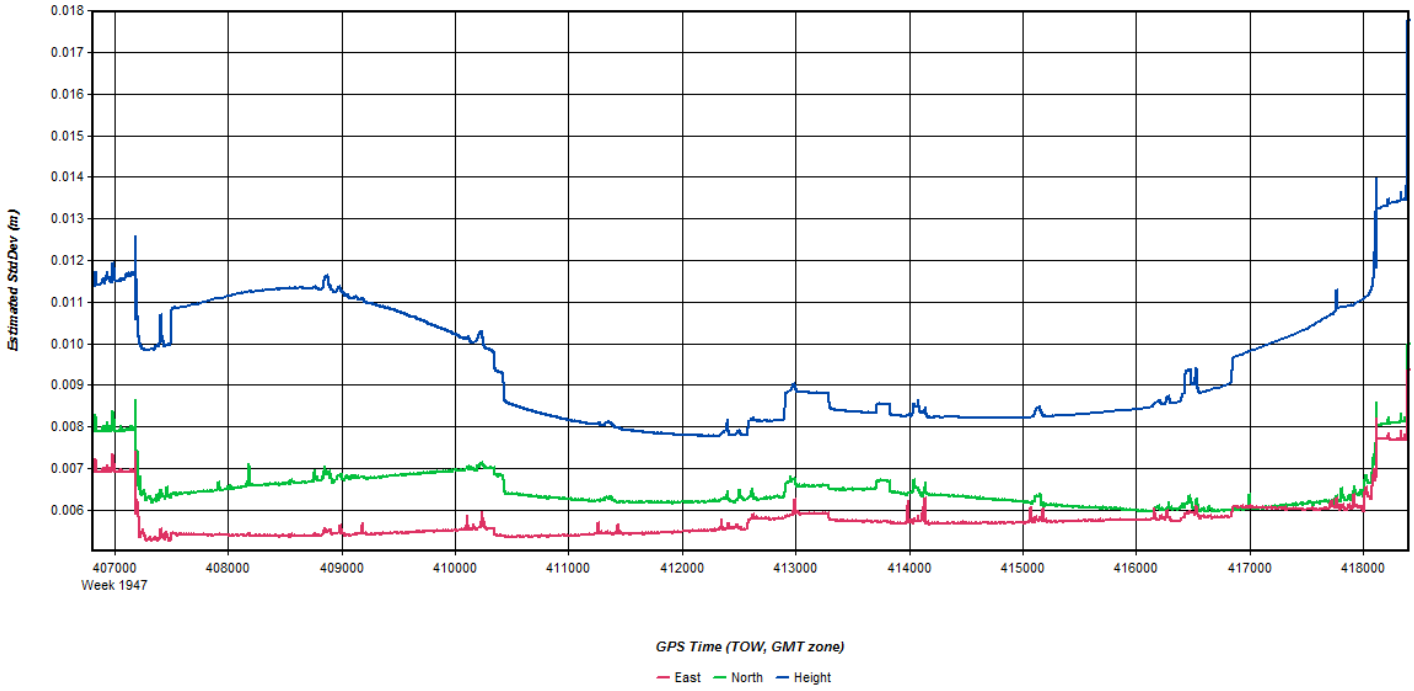

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Roll
Pitch

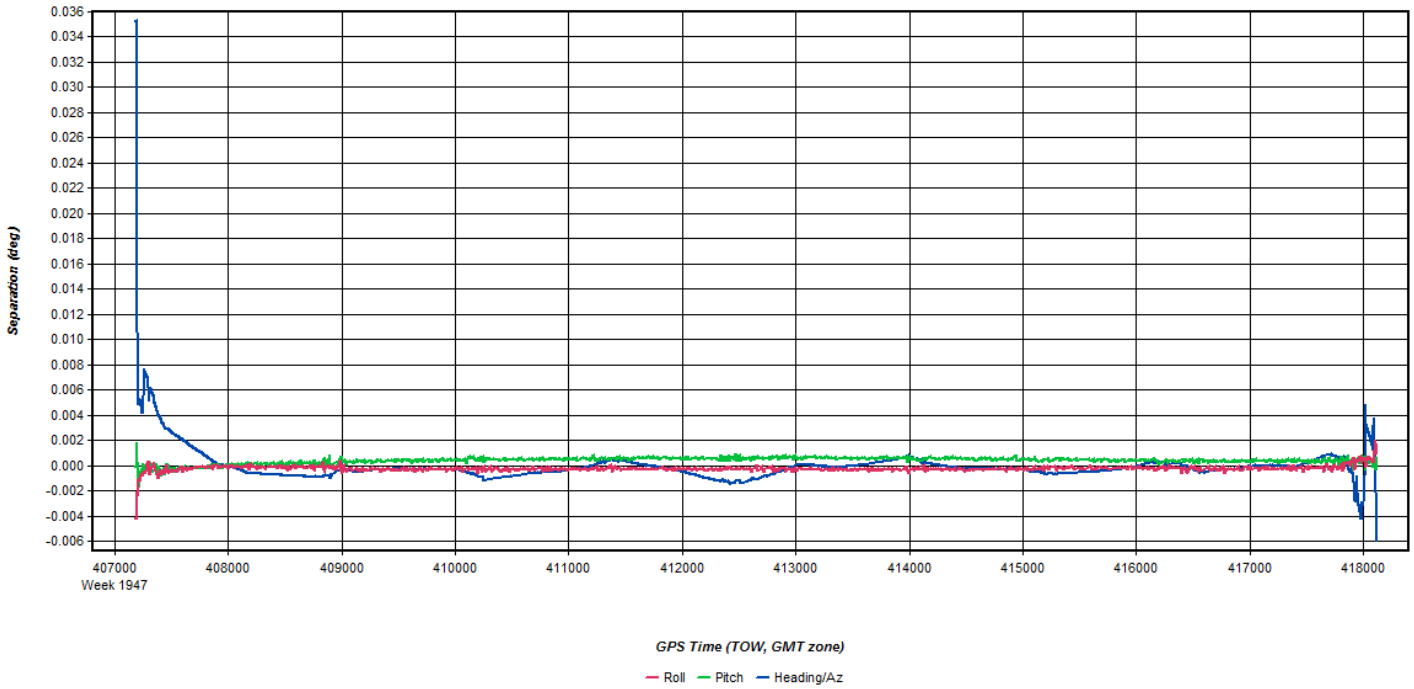

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
RMS
SD

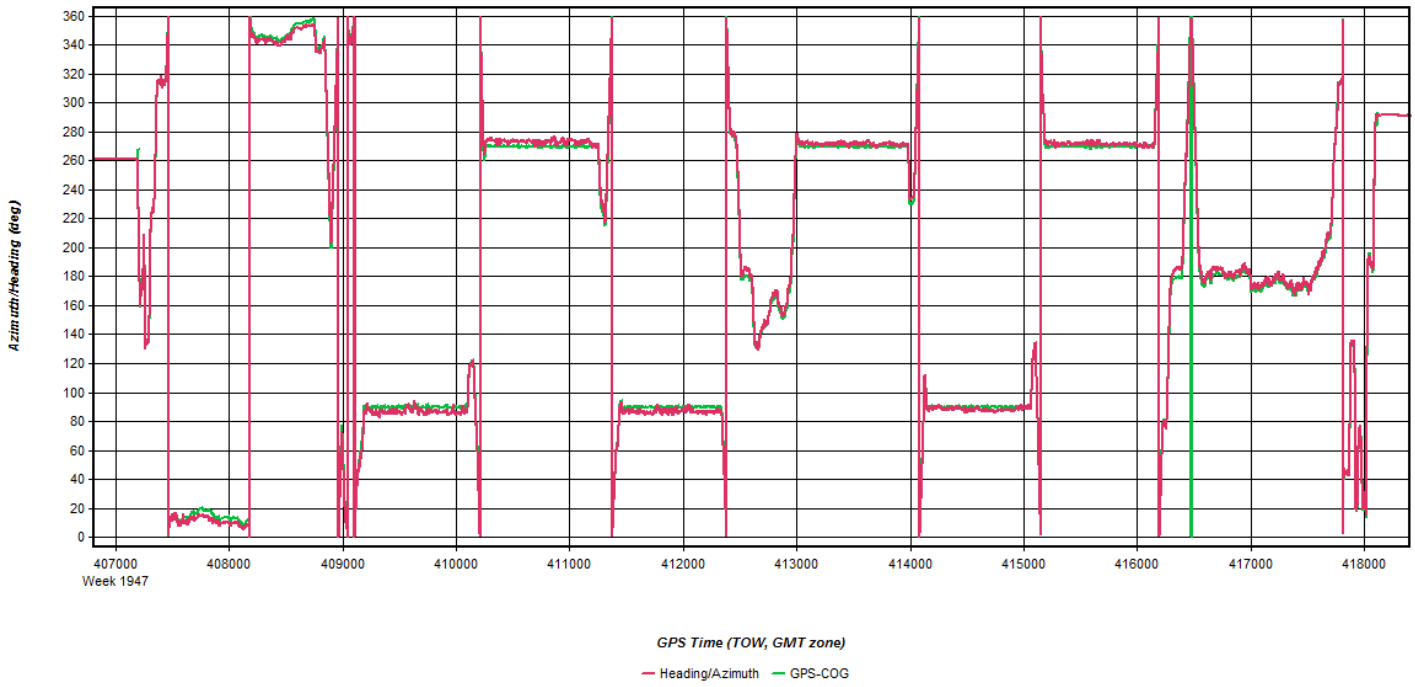

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Height


Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

Separation (m)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
East
North
Up

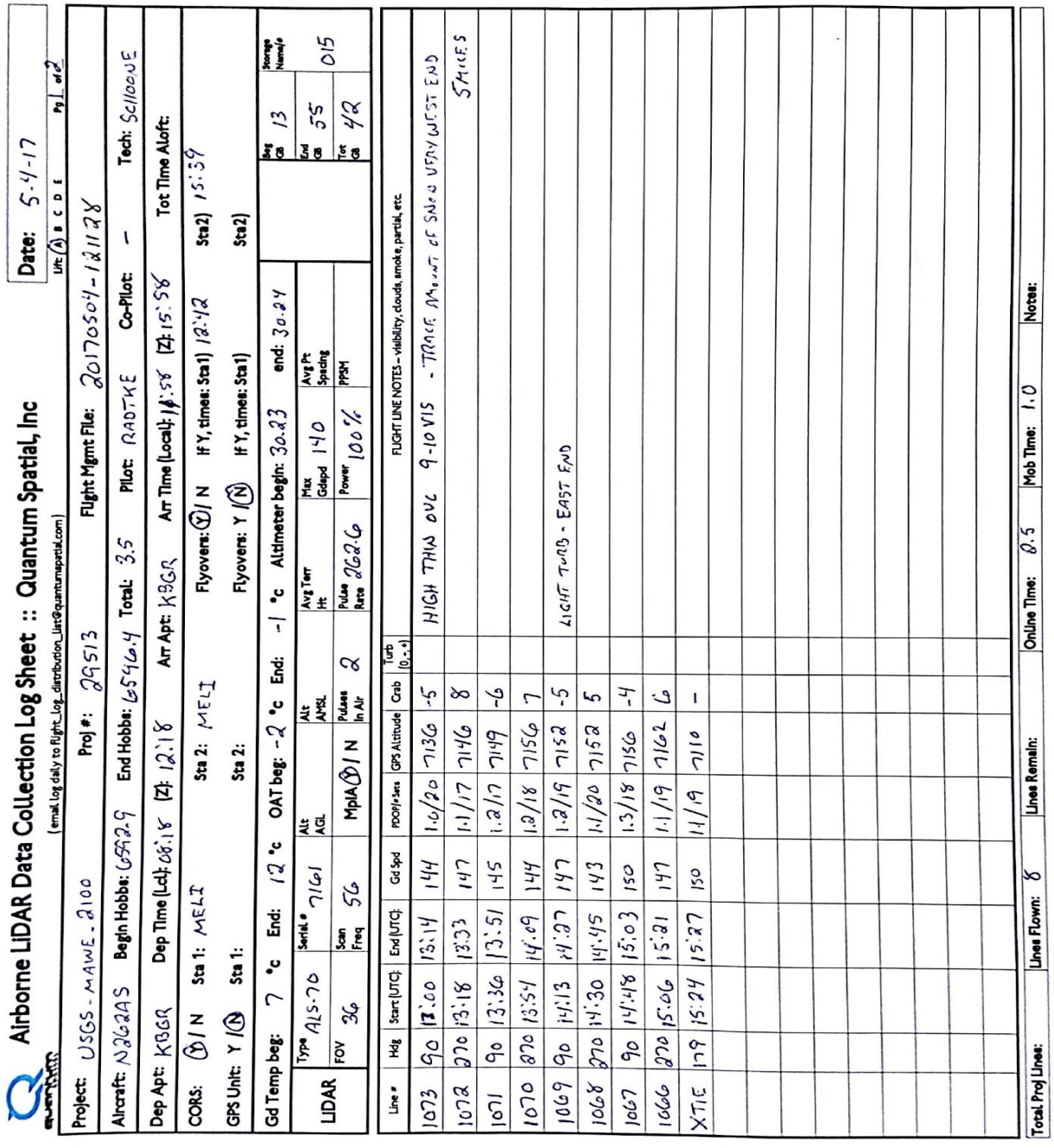

Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
407000
Week 1947
408000
409000
410000
411000
412000
413000
414000
415000
416000
417000
418000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-4-17 Utc: A B C D E Pg 1 of 2

Project: USGS - MAINE_2100 Proj #: 29513 Flight Mgmt File: 20170504-121128

Aircraft: N262AS Begin Hobbs: 6592.9 End Hobbs: 6596.4 Total: 3.5 Pilot: RADTKE Co-Pilot: - Tech: SCHOUSE

Dep Apt: KBGR Dep Time (Lcl): 08:18 (Z): 12:18 Arr Apt: KBGR Arr Time (Local): 16:58 (Z): 15:58 Tot Time Aloft:

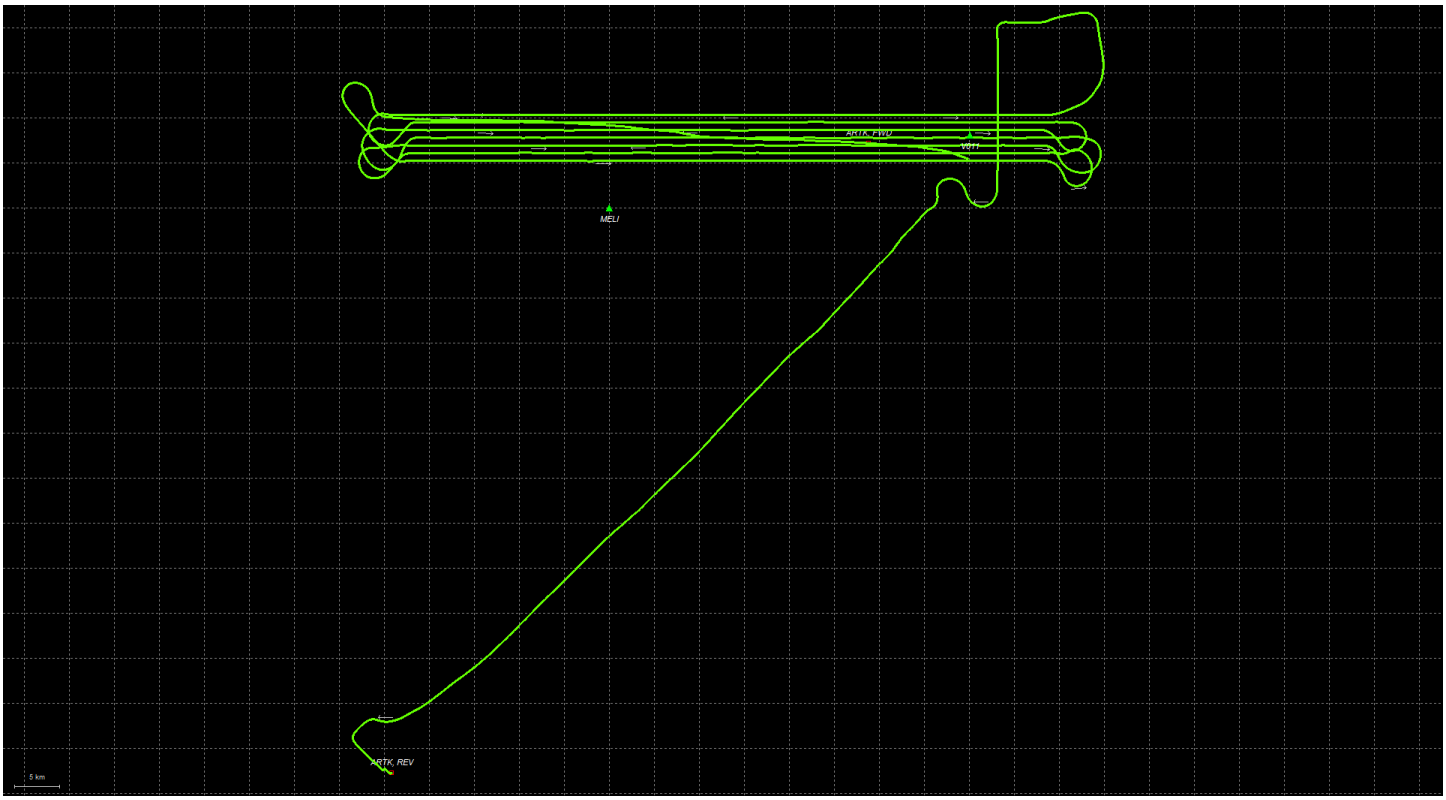
CORS: Y / N Sta 1: MELT Sta 2: MELT Flyovers: Y / N If Y, times: Sta1) 12:42 Sta2) 15:39

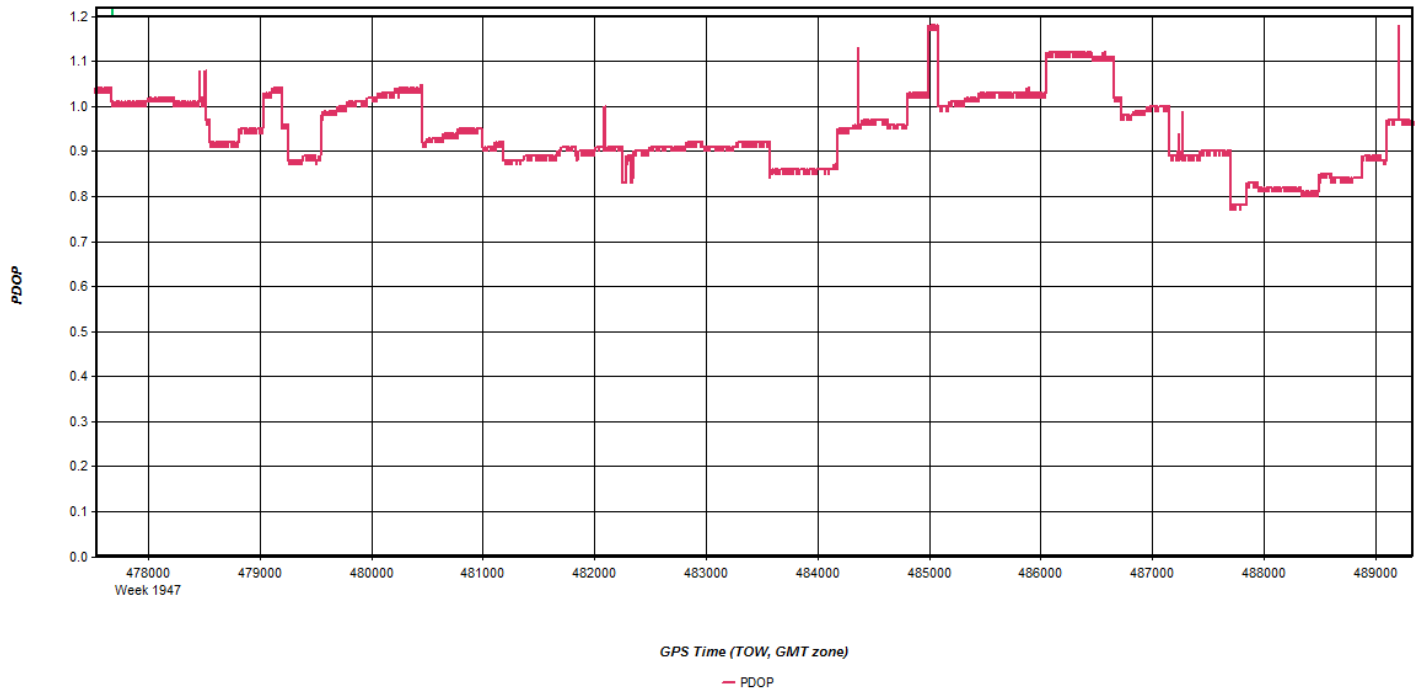
GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

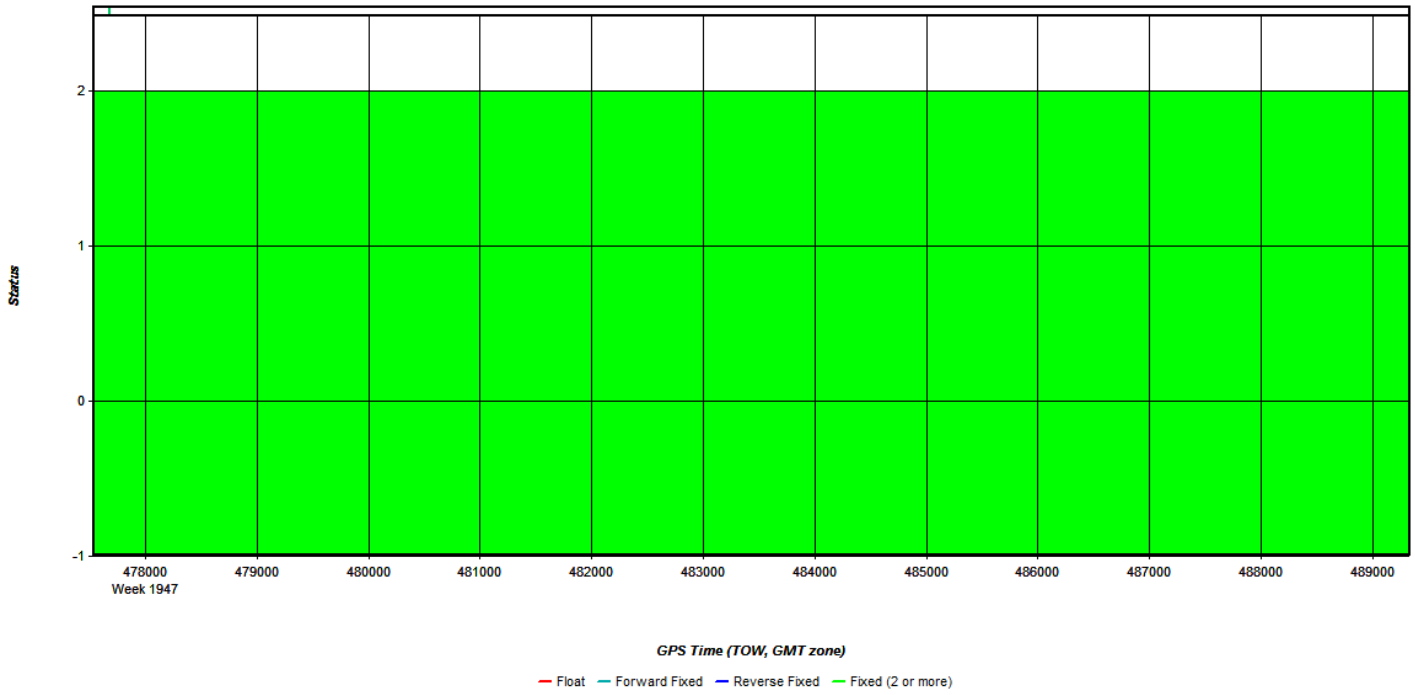
Gd Temp beg: 7 °c End: 12 °c OAT beg: -2 °c End: -1 °c Altimeter begin: 30.23 end: 30.24

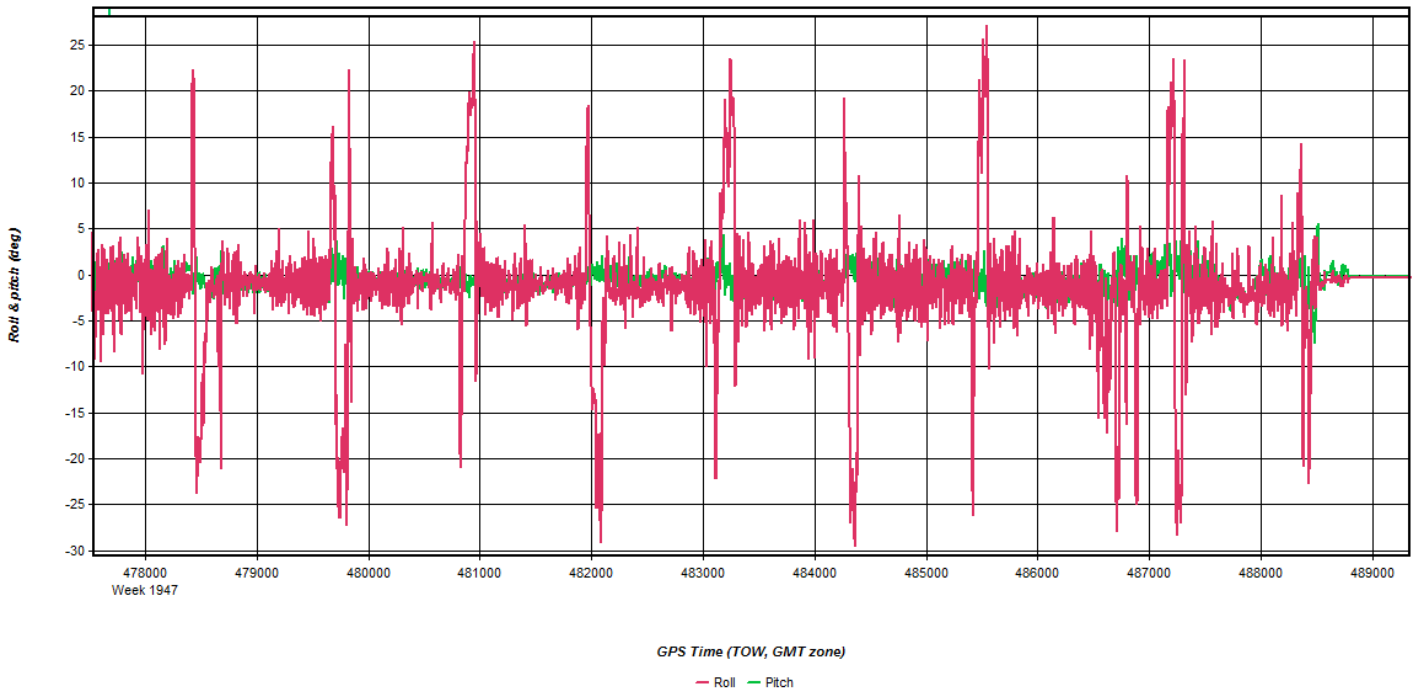
| | | |

May 05, 2017-A
N73TM, SN7178


ARTK_FWD
MEU
ARTK_REV
5 km

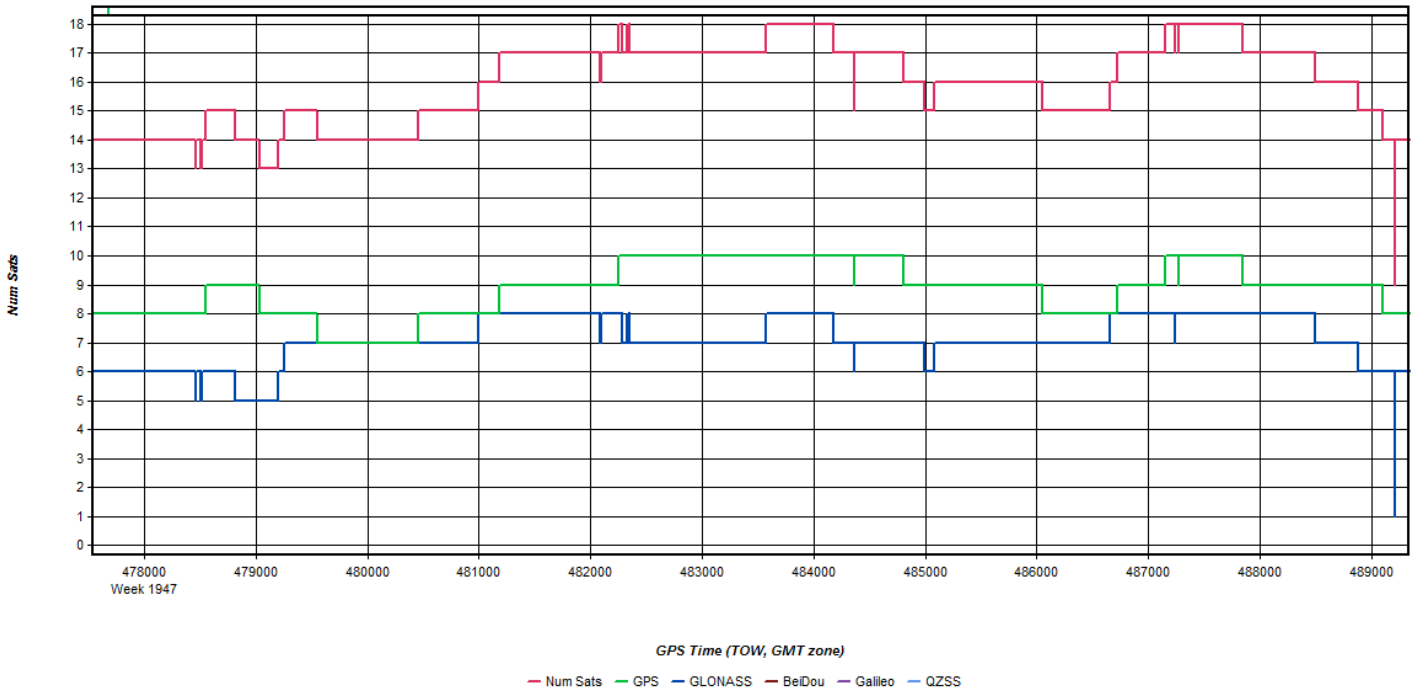

PDOP
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
PDOP

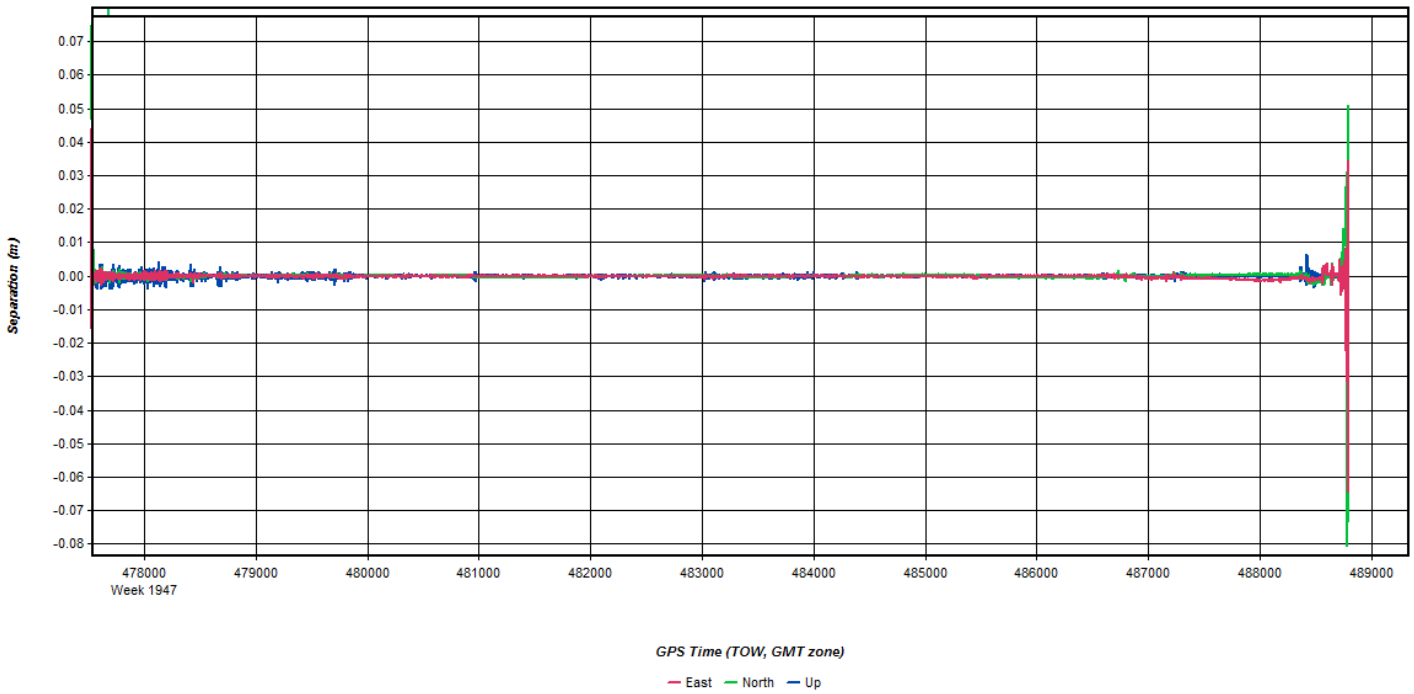

Status
2
1
0
-1
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

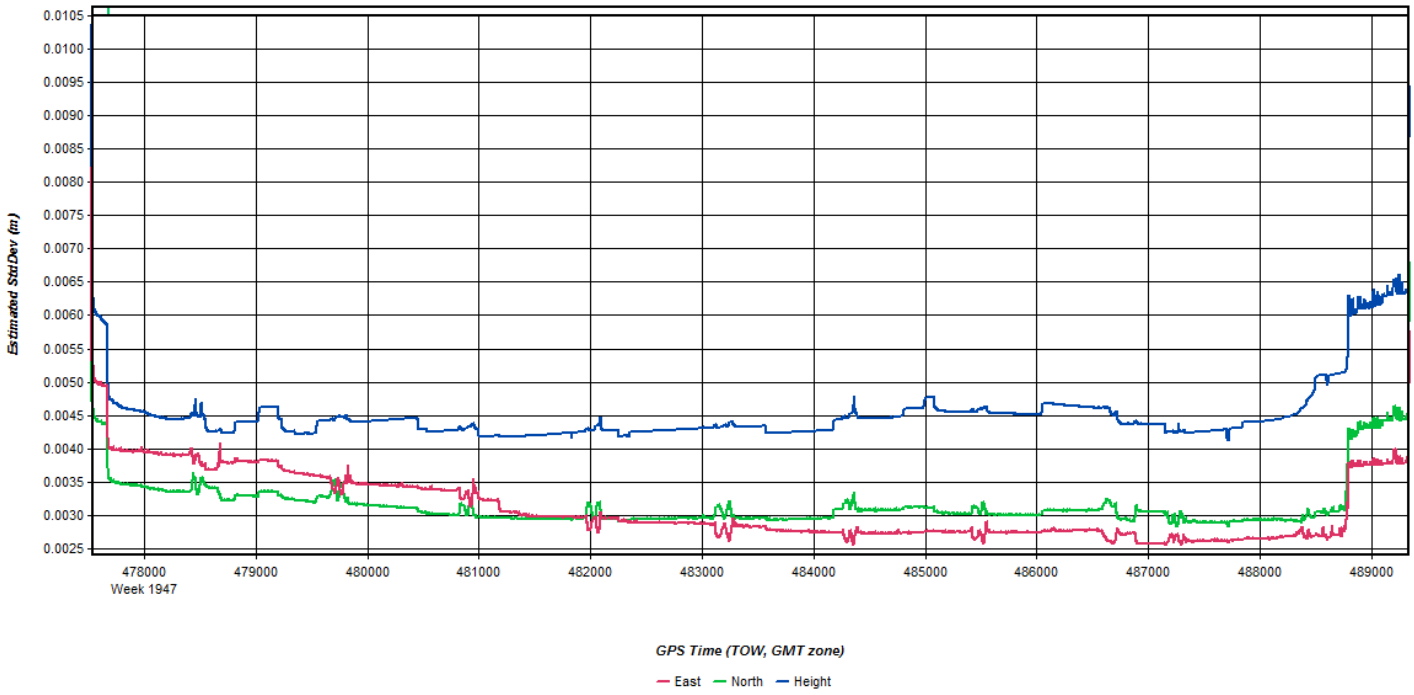

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Roll
Pitch

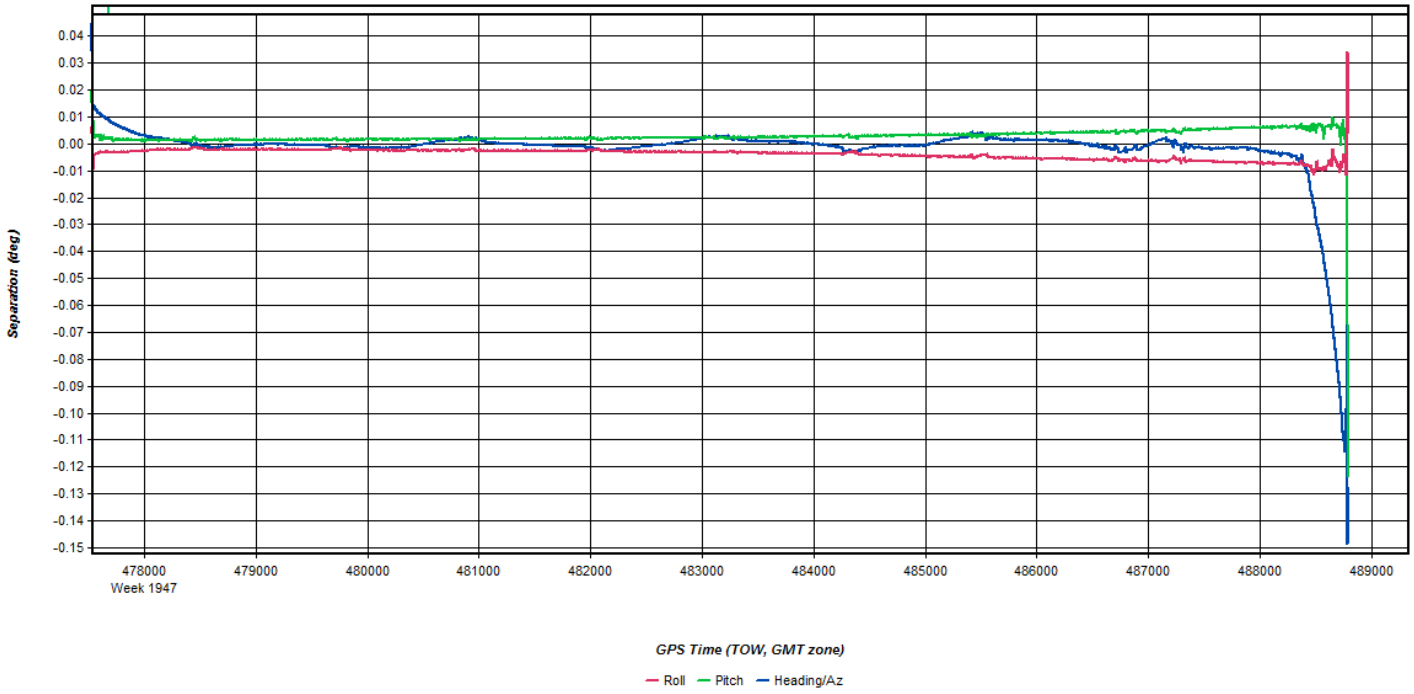
RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
RMS
SD

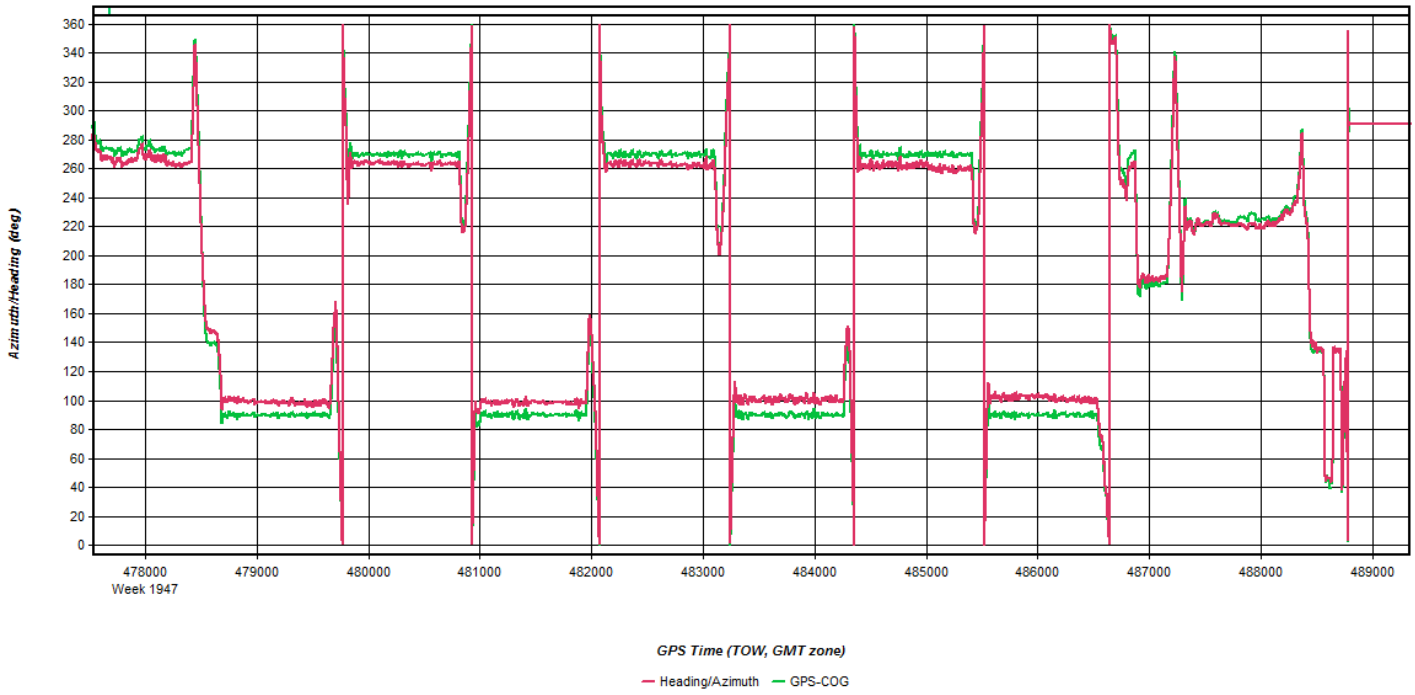
Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Height

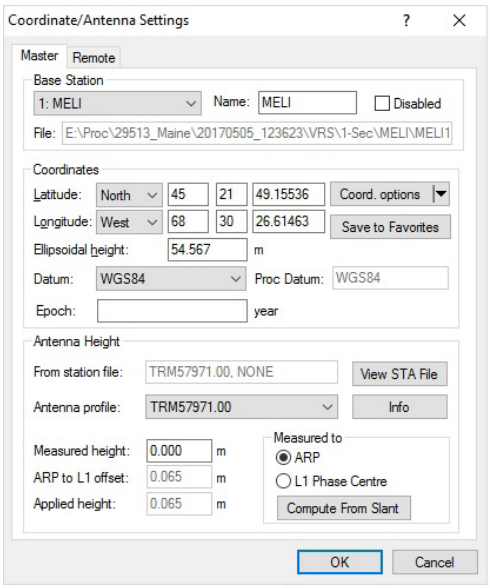

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

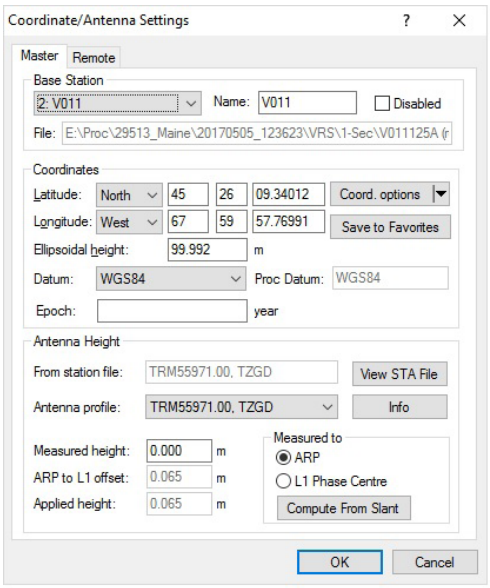

Separation (m)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
East
North
Height

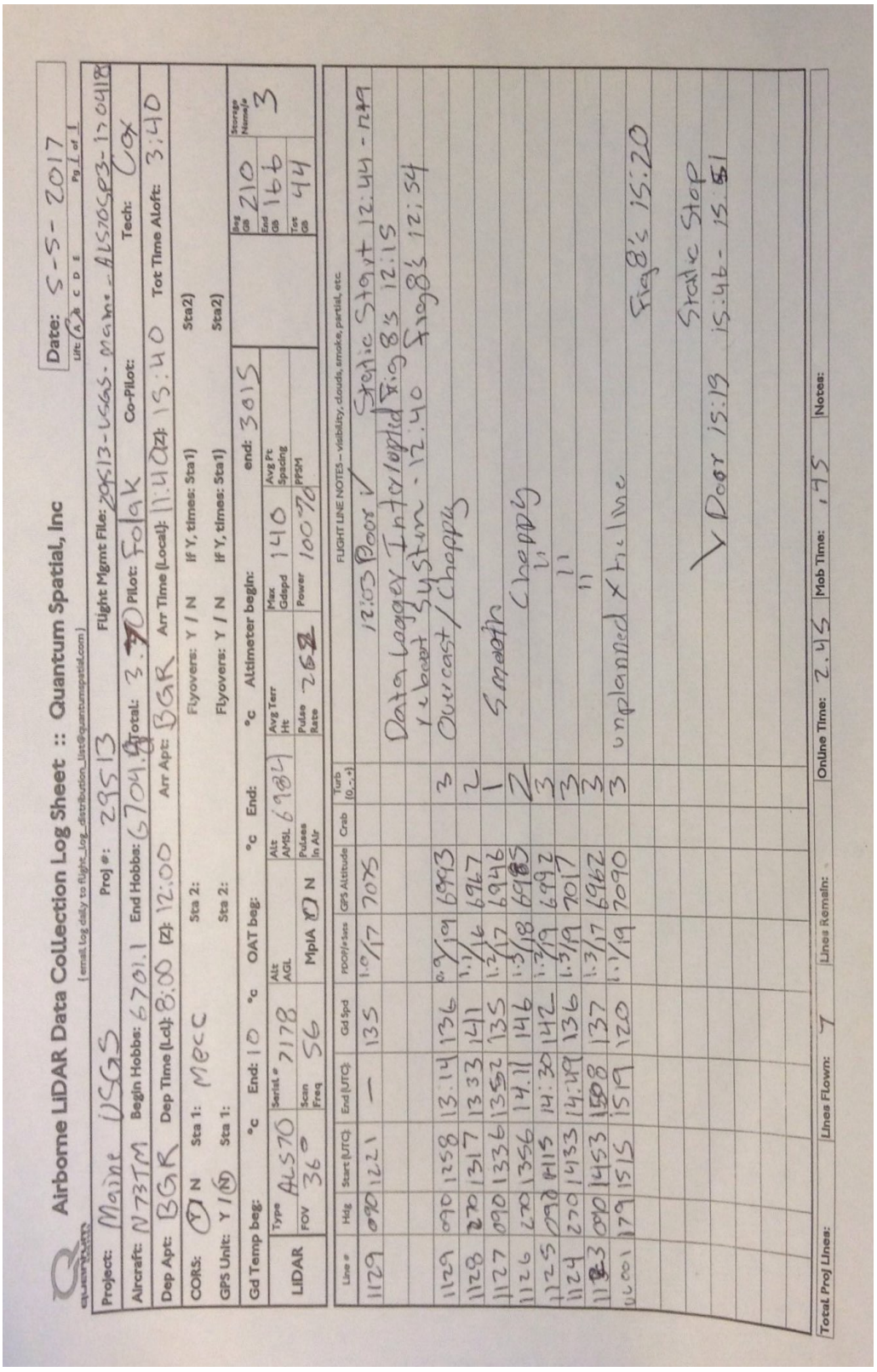

Separation (deg)
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
-0.15
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
478000
Week 1947
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
489000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\20170505_123623\VRS\1-Sec\MELI\MELI1
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V011
Name:
V011
Disabled
File:
E:\Proc\29513_Maine\20170505_123623\VRS\1-Sec\V011125A (r
Coordinates
Latitude:
North
45
26
09.34012
Coord. options
Longitude:
West
67
59
57.76991
Save to Favorites
Ellipsoidal height:
99.992
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM55971.00, TZGD
View STA File
Antenna profile:
TRM55971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-5-2017

Project: Maine USGS | Proj #: 29513 | Flight Mgmt File: 29513-USGS-Maine_ALS70SP3-170418

Aircraft: N737TM | Begin Hobbs: 6701.1 | End Hobbs: 6704.9 | Total: 3.70 | Pilot: Folak | Co-Pilot: | Tech: Cox

Dep Apt: BGR | Dep Time (Lcl): 8:00 (Z): 12:00 | Arr Apt: BGR | Arr Time (Local): 11:40Z 15:40 | Tot Time Aloft: 3:40

CORS: Y / N | Sta 1: MECC | Sta 2: | Flyovers: Y / N | If Y, times: Sta1) | Sta2)

GPS Units: Y / N | Sta 1: | Sta 2: | Flyovers: Y / N | If Y, times: Sta1) | Sta2)

Gd Temp beg: °c | End: 10 °c | OAT beg: °c | End: °c | Altimeter begin: | end: 3015

LiDAR: Type ALS70 | Serial # 7178 | Alt AGL | Alt AMSL 6984 | Avg Terr Ht | Max Gdspd 140 | Avg Pt Spacing
FOV 36° | Scan Freq 56 | MpiA Y / N | Pulses in Air | Pulse Rate 266 | Power 100% | PRM

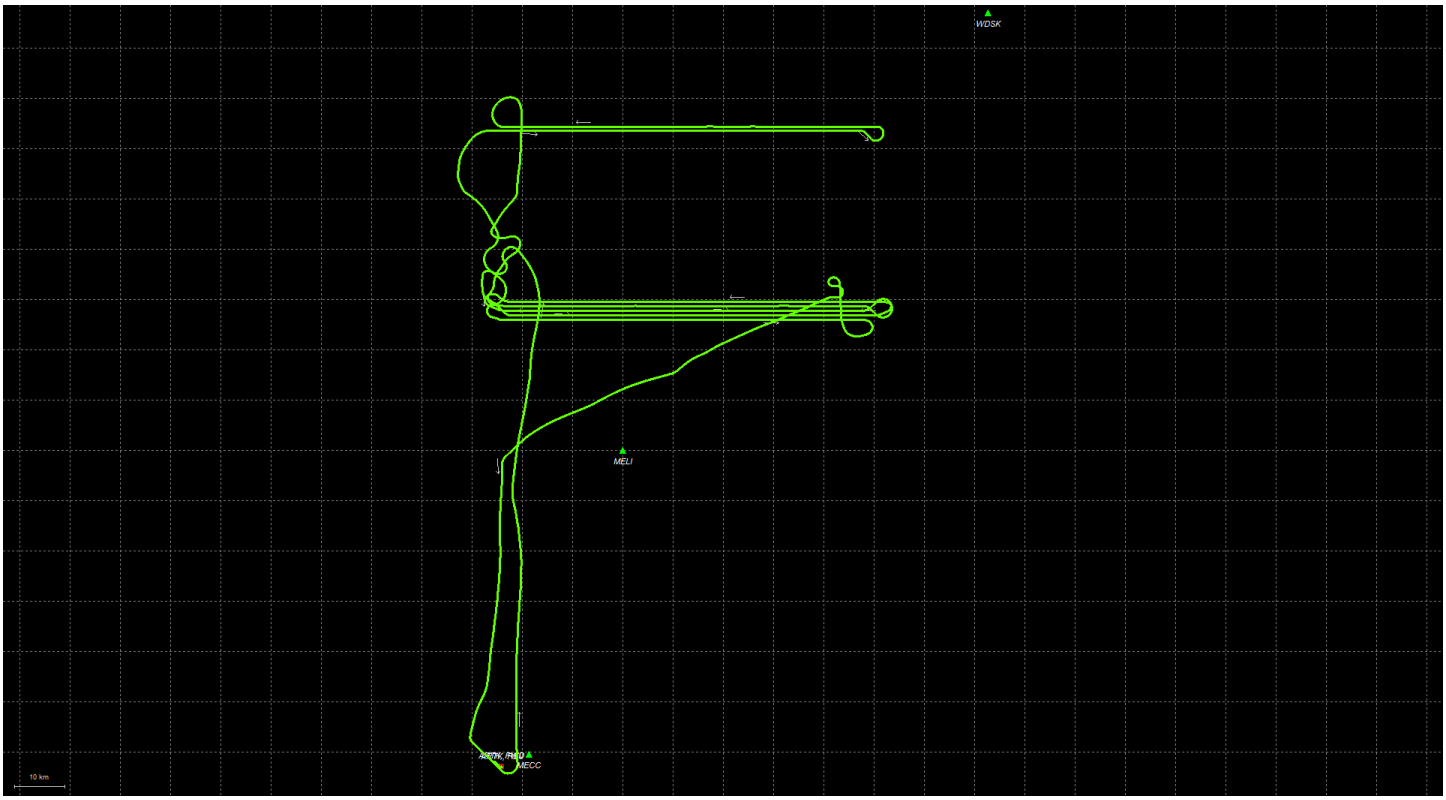
Data Storage: Beg Gb 210 | End Gb 166 | Tot Gb 44 | Storage Name/# 3

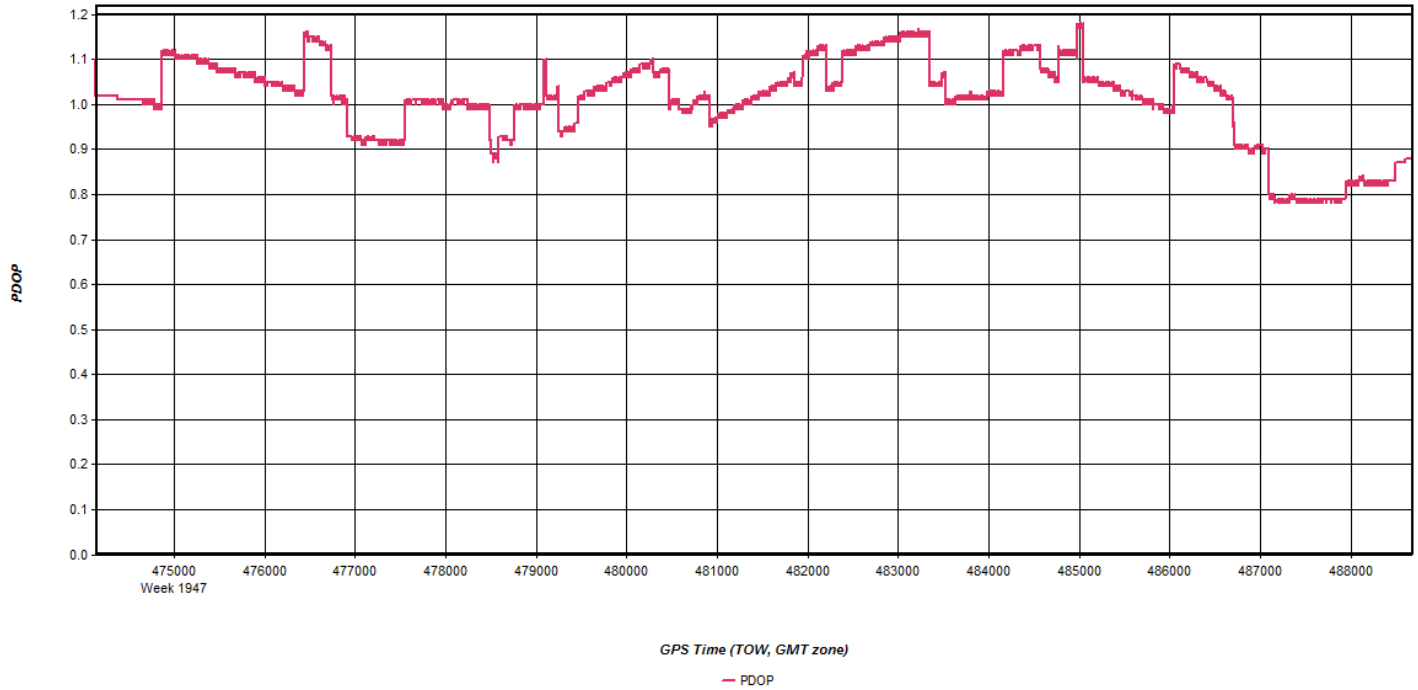
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	AGL	POOF/+sec	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES -- visibility, clouds, smoke, partial, etc.
1129	090	1221	—	135		1.0/17	7075			12:03 Door ✓ Strobe Start 12:44 - 12:49
										Data Logger Interrupted Fig 8's 12:15
										reboot System - 12:40 Fig 8's 12:54
1129	090	1258	13:14	136		0.9/19	6993		3	Overcast / Choppy
1128	270	1317	13:33	141		1.1/16	6967		2	
1127	090	1336	13:52	135		1.2/17	6946		1	Smooth
1126	270	1356	14:11	146		1.5/18	6985		2	Choppy
1125	090	1415	14:30	142		1.2/19	6992		3	
1124	270	1433	14:49	136		1.5/19	7017		3	"
1123	090	1453	15:08	137		1.3/17	6962		3	"
0001	179	1515	1519	120		1.1/19	7090		3	Unplanned X Line
										Fig 8's 15:20
										Strobe Stop
										Y Door 15:13 15:46 - 15:51

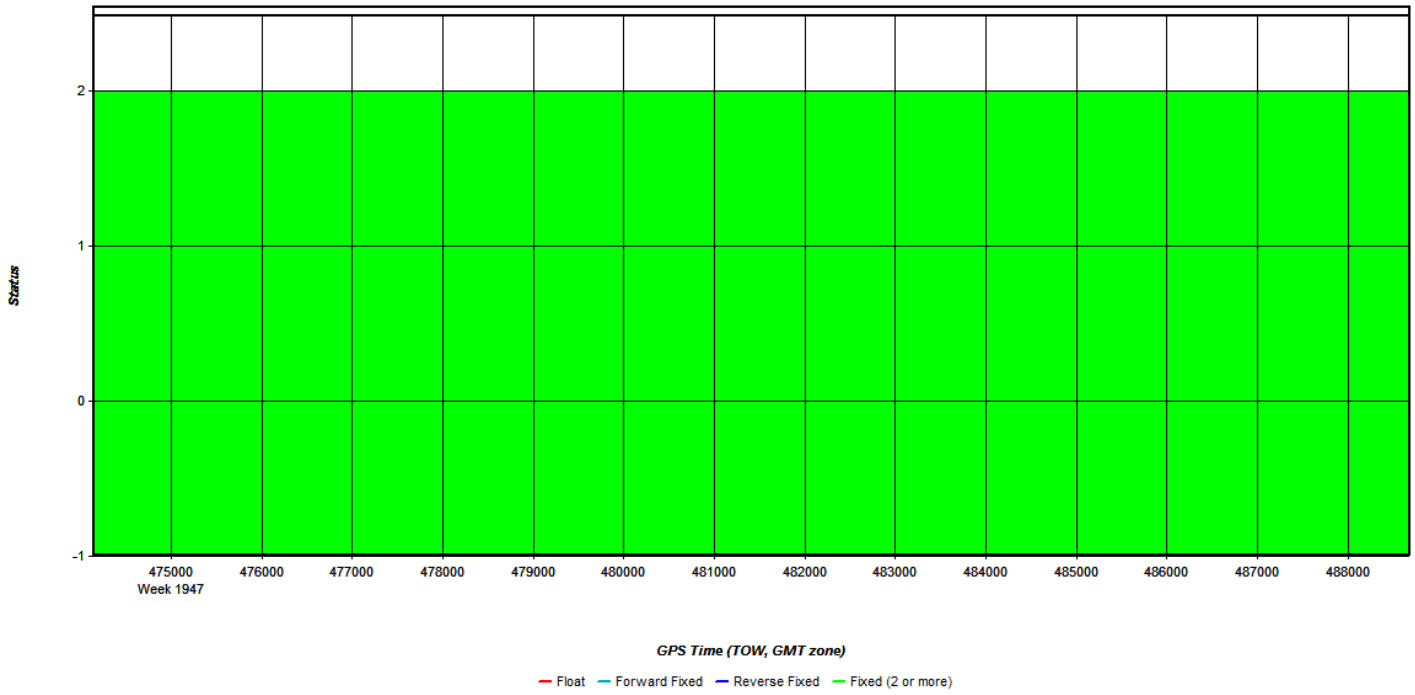
Total Proj Lines: | Lines Flown: 7 | Lines Remain: | OnLine Time: 2.45 | Mob Time: .75 | Notes:

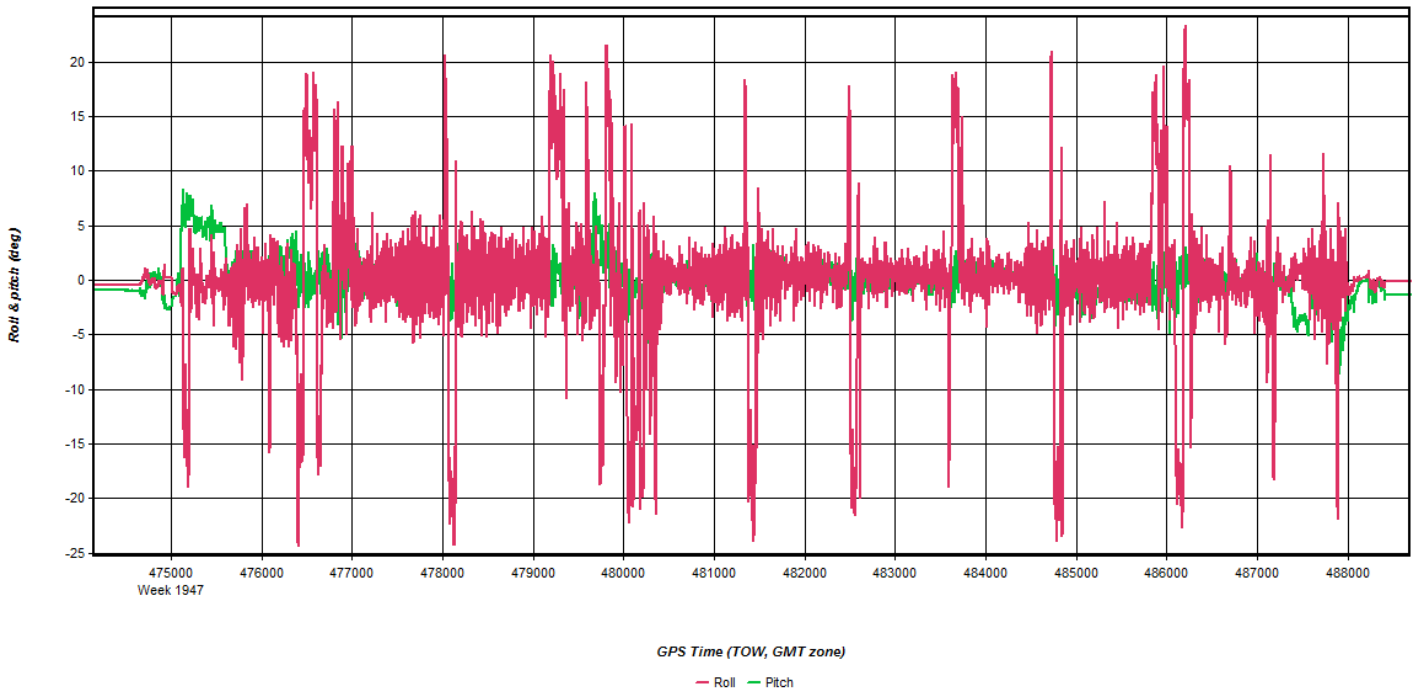
Scanned by CamScanner

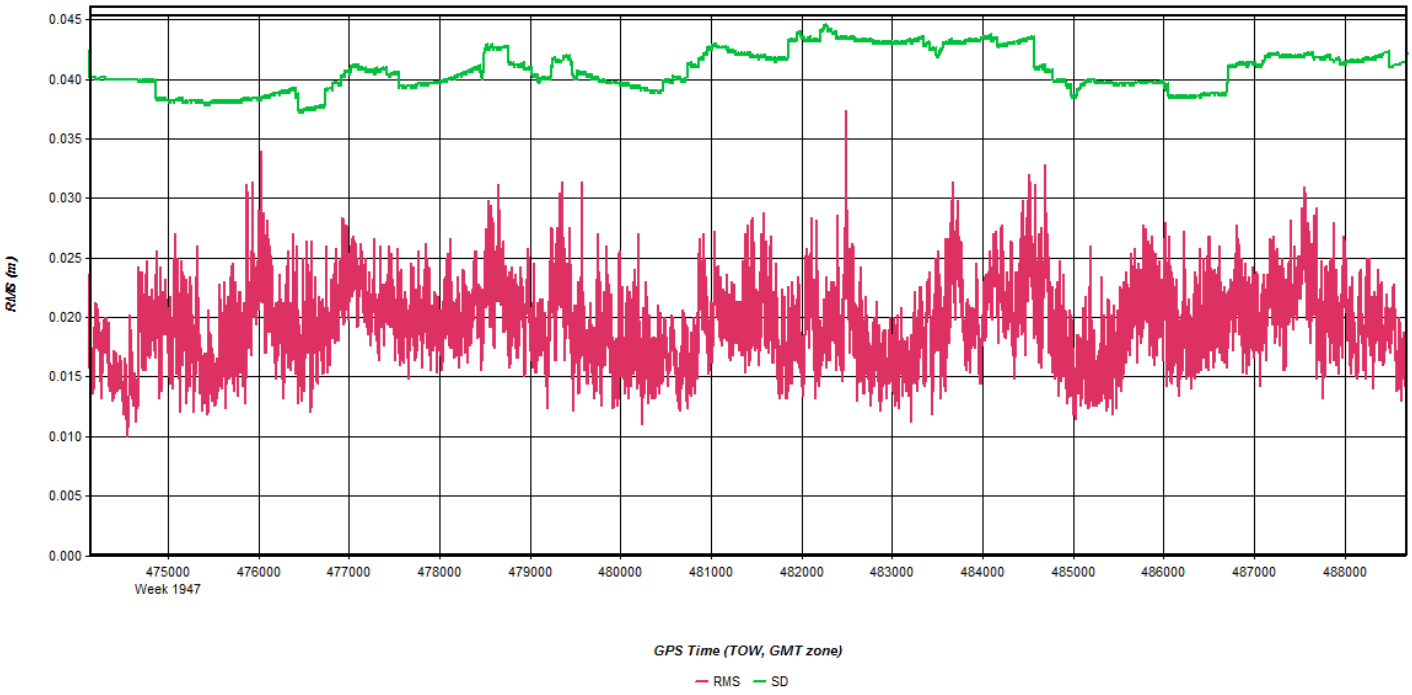
May 5, 2017-A (N262AS, SN7161)

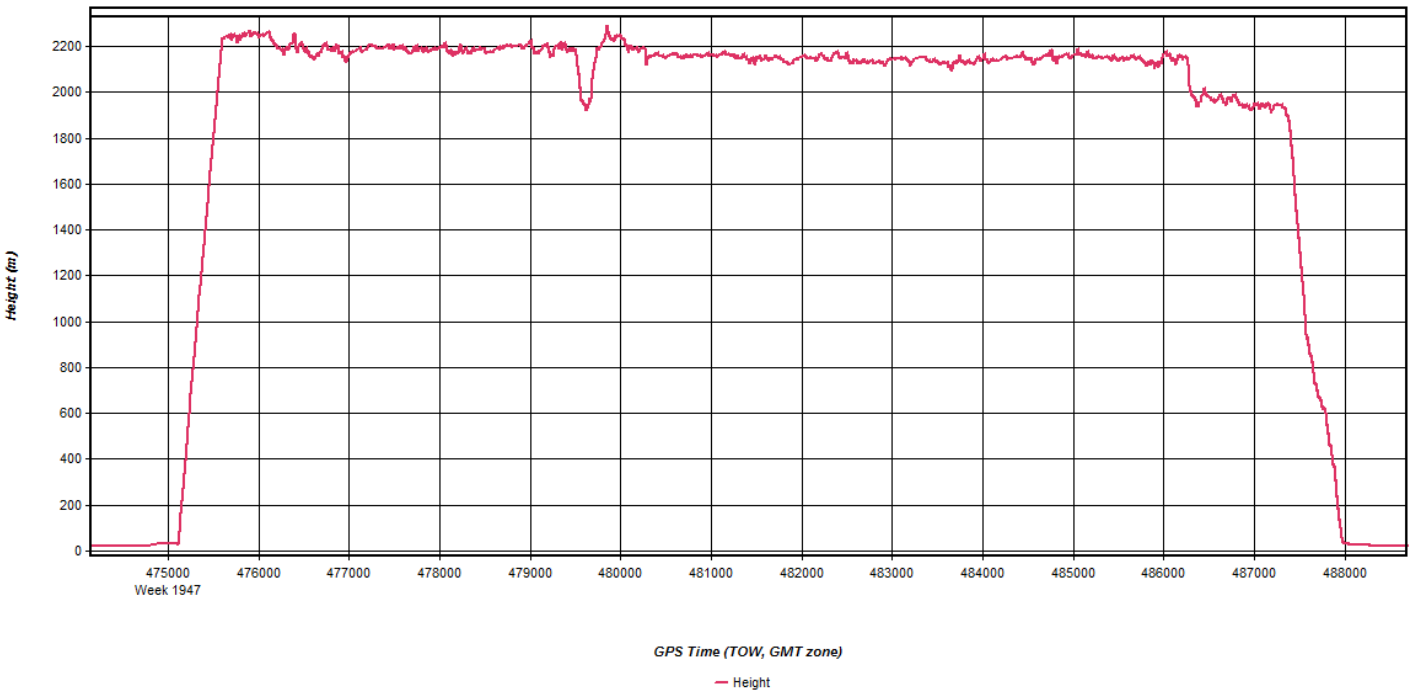

WDSK
MELI
10 km

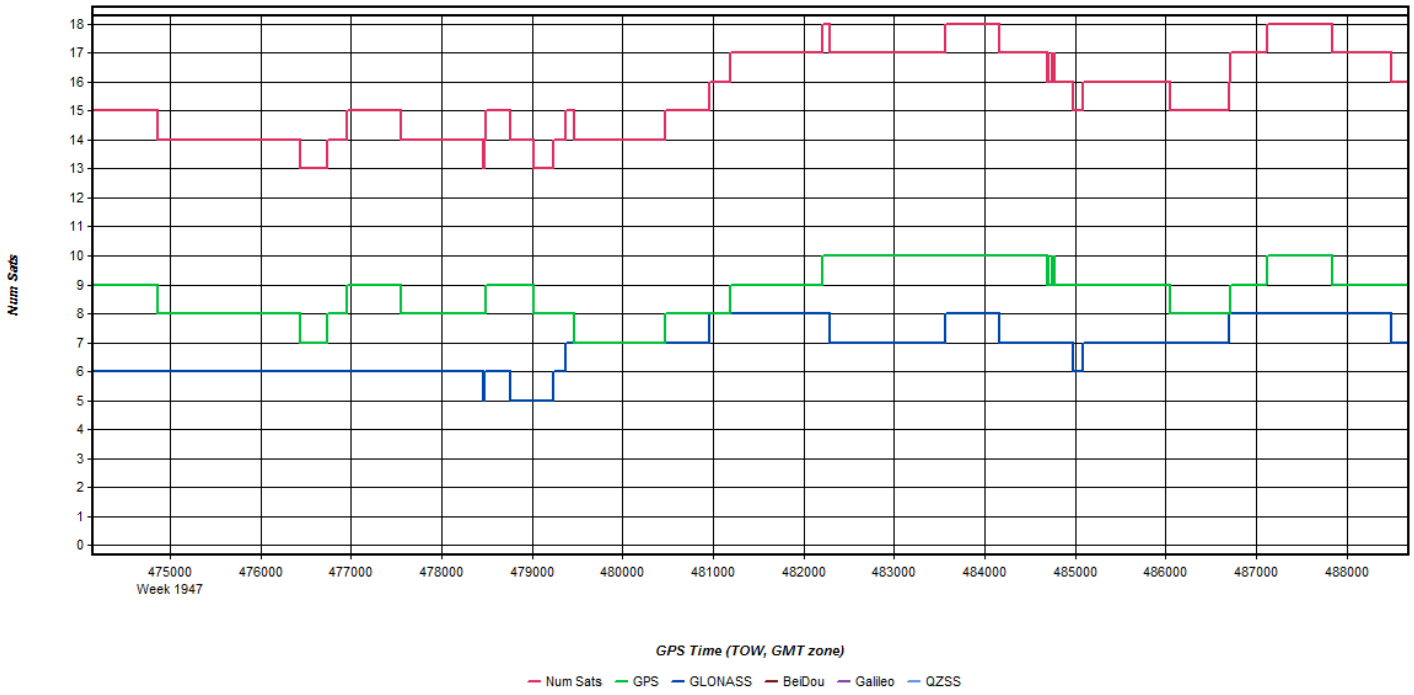

PDOP
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
PDOP

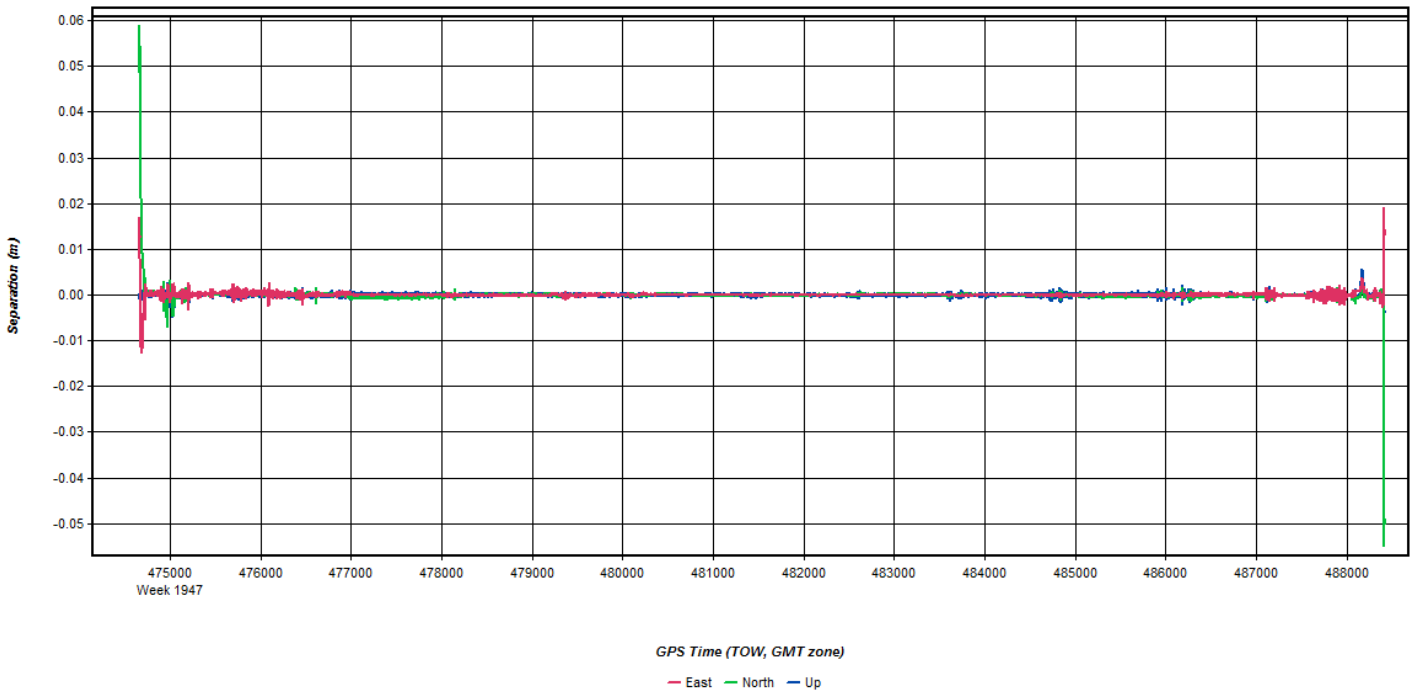

Status
2
1
0
-1
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

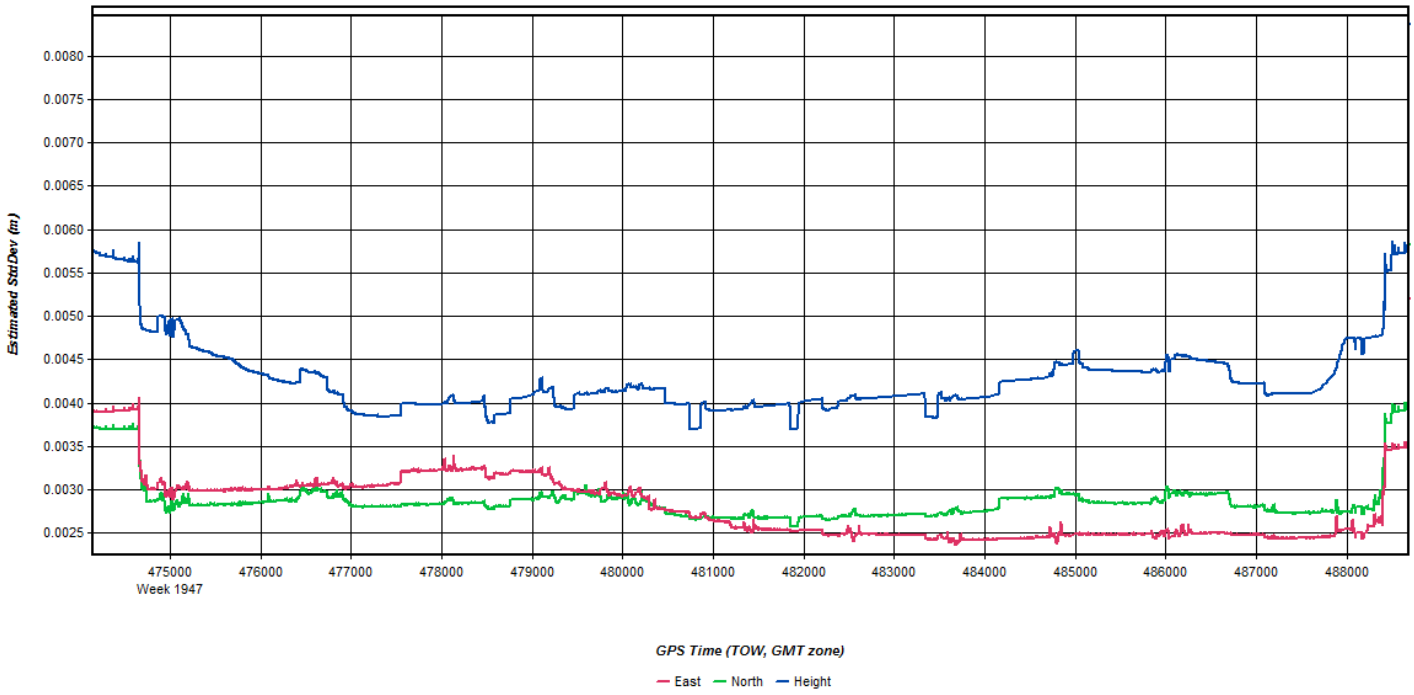

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
-25
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Roll
Pitch

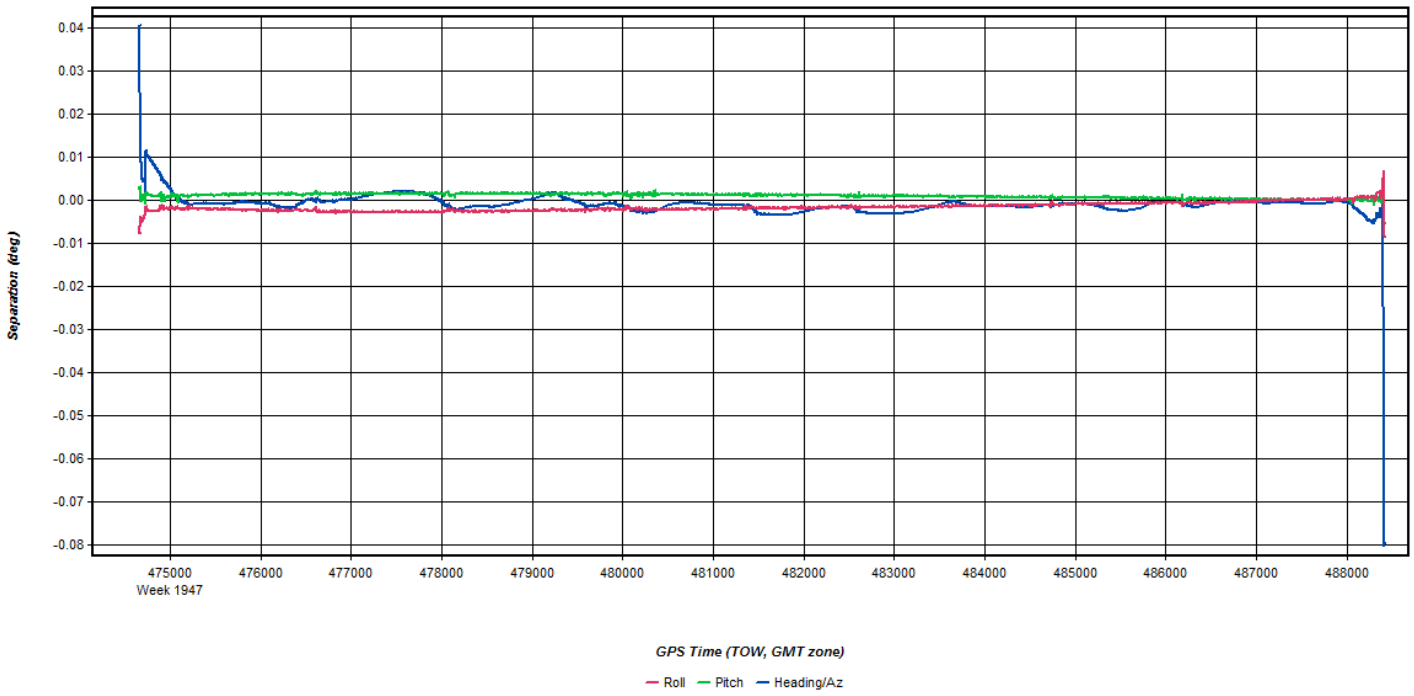

RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
RMS
SD

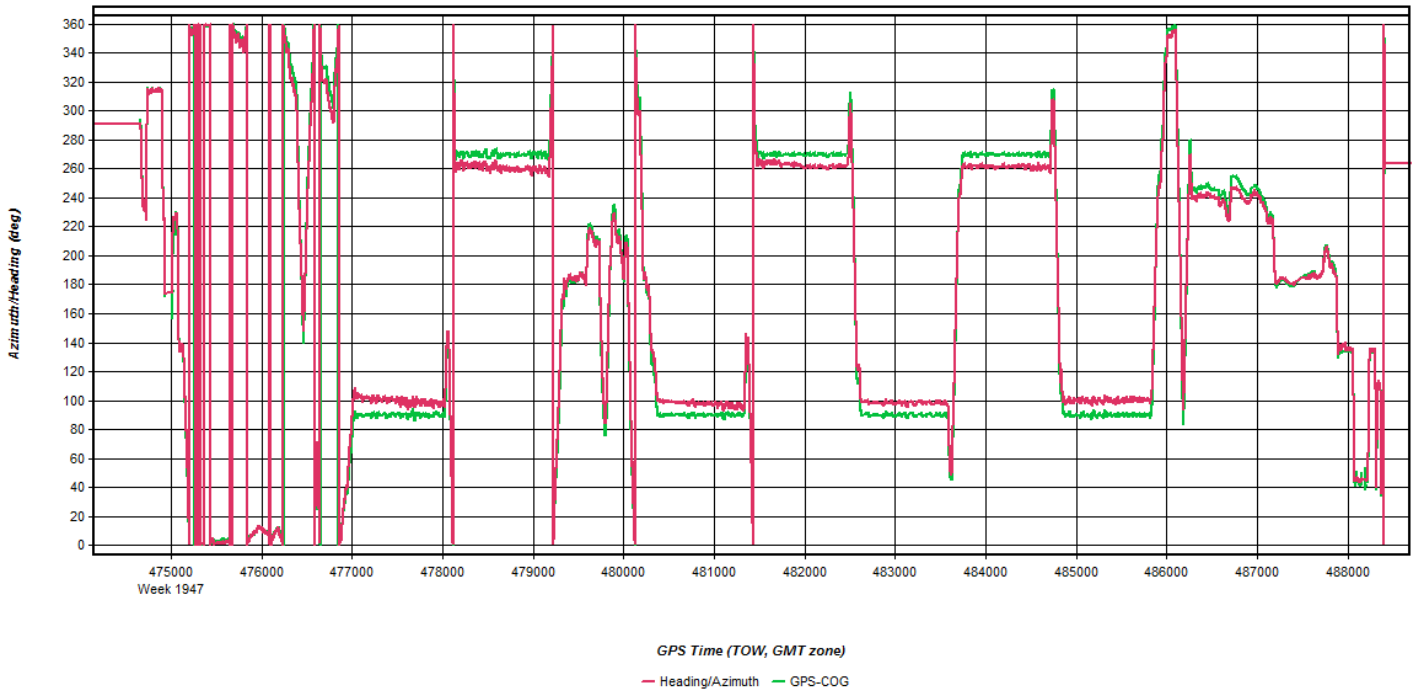

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Height

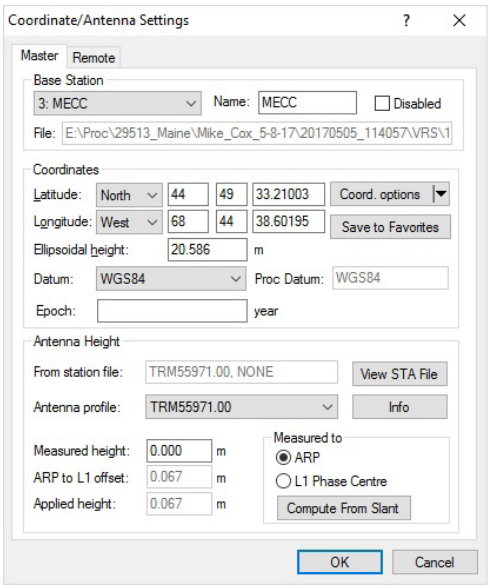

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

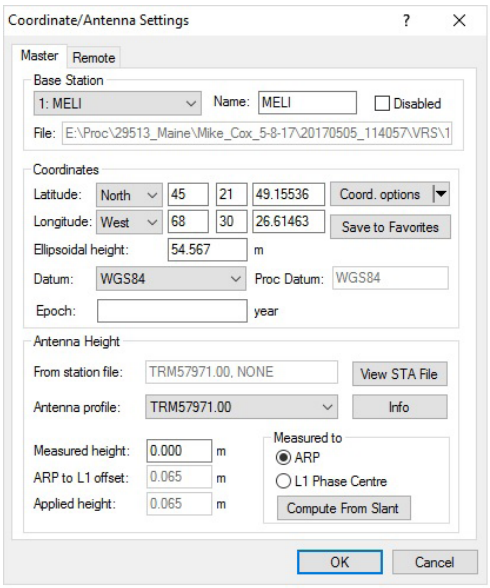

Separation (m)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
East
North
Up

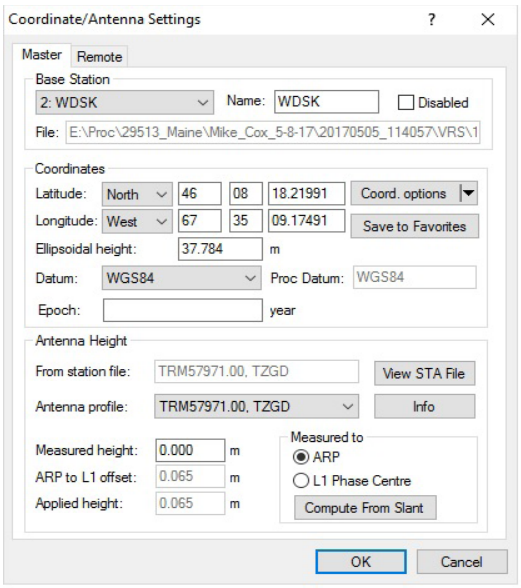

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
475000
Week 1947
476000
477000
478000
479000
480000
481000
482000
483000
484000
485000
486000
487000
488000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

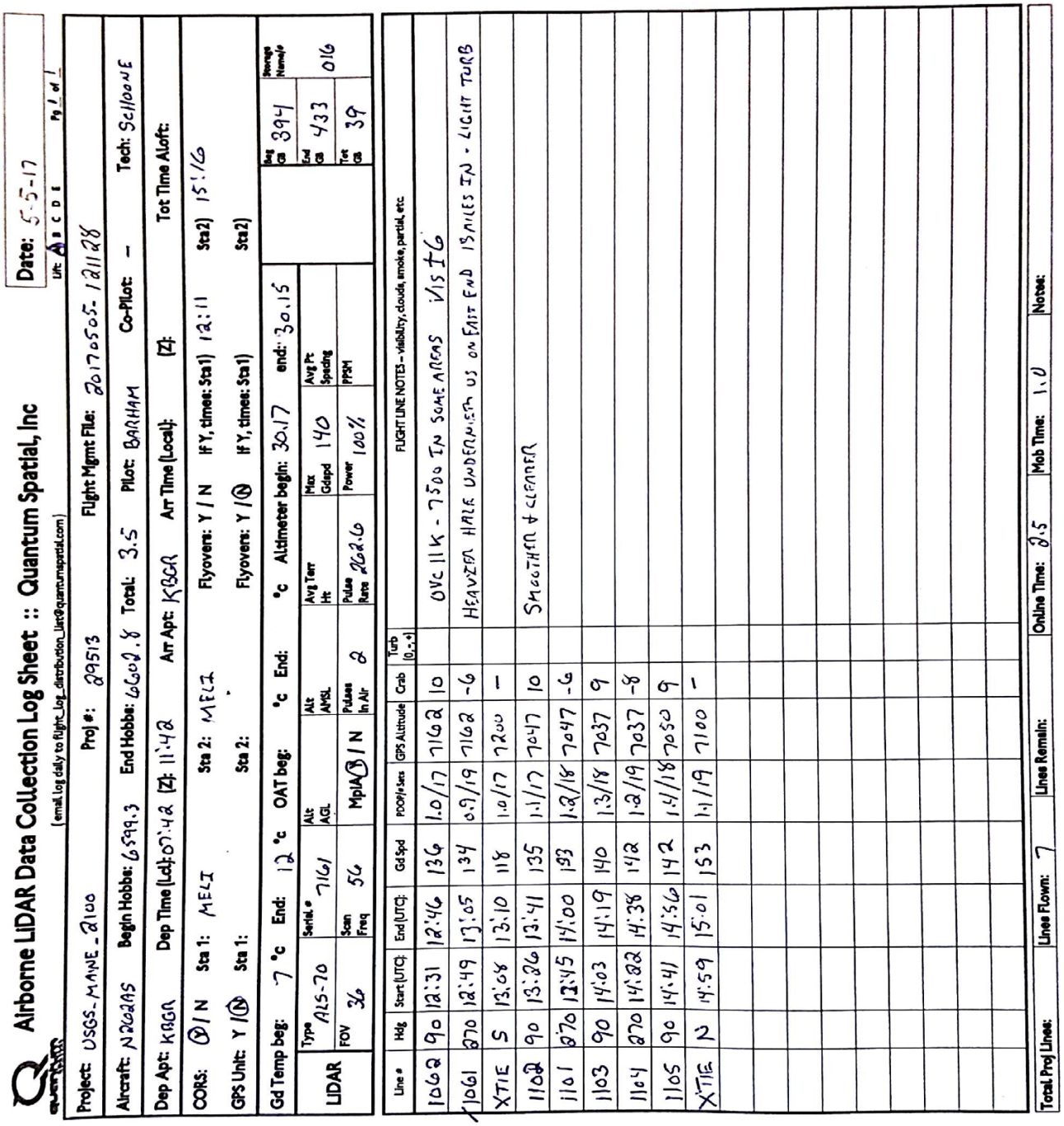

Coordinate/Antenna Settings
Master
Remote
Base Station
3: MECC
Name: MECC
Disabled
File: E:\Proc\29513_Maine\Mike_Cox_5-8-17\20170505_114057\VRS\1
Coordinates
Latitude: North 44 49 33.21003
Coord. options
Longitude: West 68 44 38.60195
Save to Favorites
Ellipsoidal height: 20.586 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\Mike_Cox_5-8-17\20170505_114057\VRS\1
Coordinates
Latitude: North 45 21 49.15536 Coord. options
Longitude: West 68 30 26.61463 Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: WDSK
Name: WDSK
Disabled
File: E:\Proc\29513_Maine\Mike_Cox_5-8-17\20170505_114057\VRS\1
Coordinates
Latitude: North 46 08 18.21991 Coord. options
Longitude: West 67 35 09.17491 Save to Favorites
Ellipsoidal height: 37.784 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, TZGD View STA File
Antenna profile: TRM57971.00, TZGD Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_log_distribution_List@quantumspatial.com)

Date: 5-5-17 Ver: A B C D E Pg 1 of 1

Project: USGS_MAINE_2100 Proj #: 89513 Flight Mgmt File: 20170505-121128

Aircraft: N2624S Begin Hobbs: 6599.3 End Hobbs: 6609.8 Total: 3.5 Pilot: BARHAM Co-Pilot: – Tech: SELLOUKE

Dep Apt: KBGR Dep Time (Lcl): 07:48 (Z): 11:48 Arr Apt: KBGR Arr Time (Local): (Z): Tot Time Aloft:

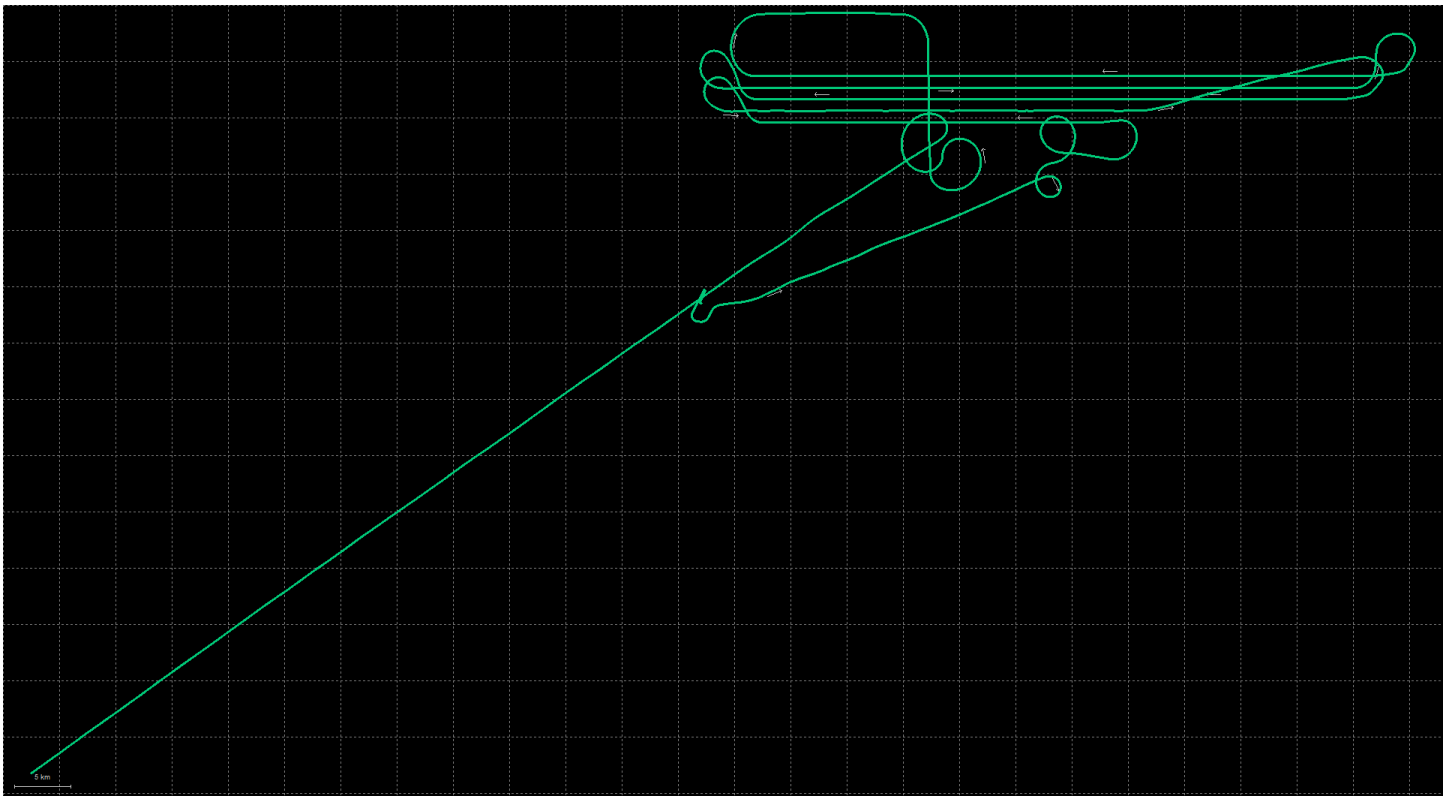
CORS: Y / N Sta 1: MELI Sta 2: MELI Flyovers: Y / N If Y, times: Sta1) 12:11 Sta2) 15:16

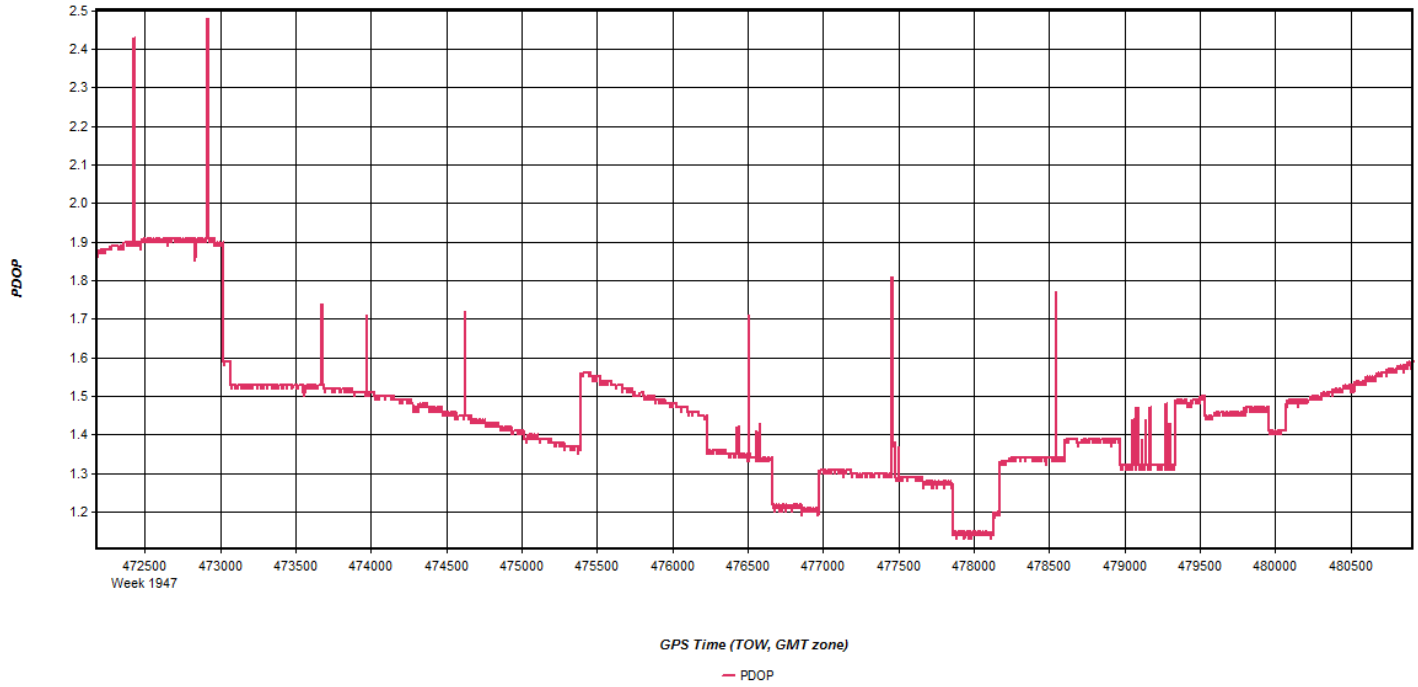
GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

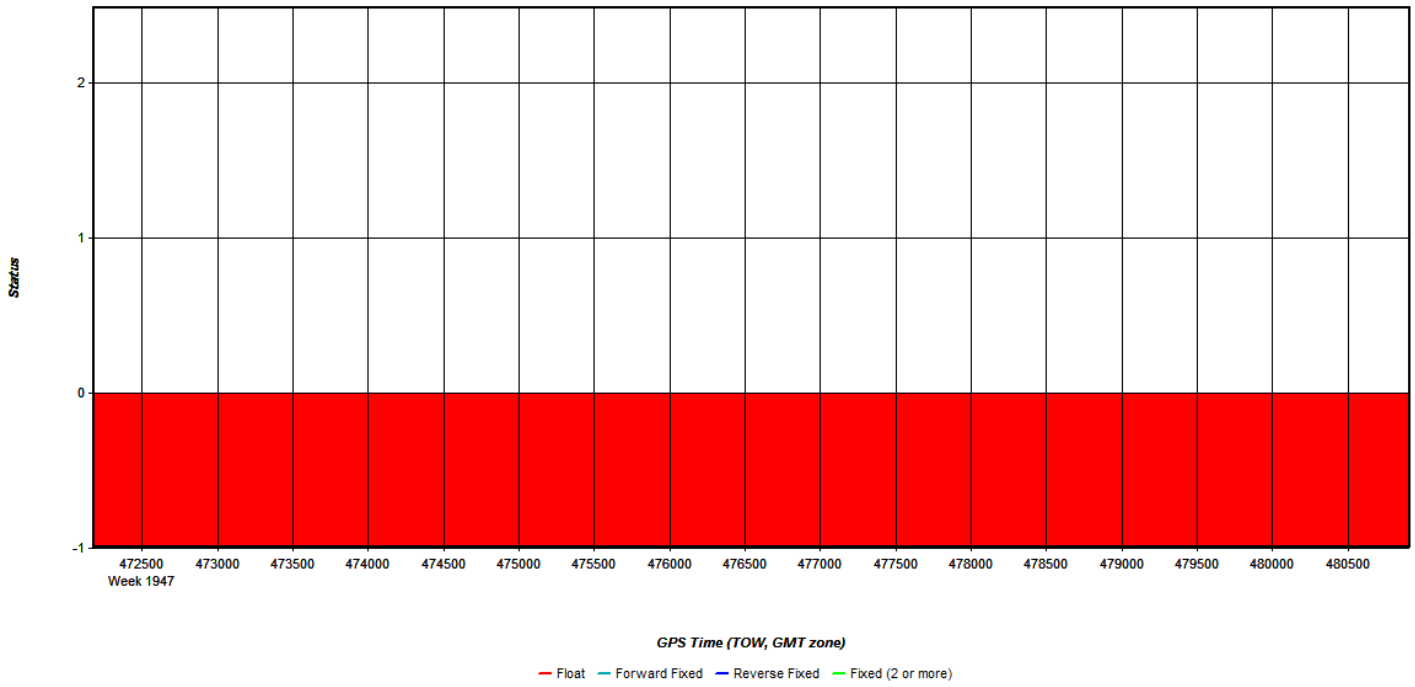
Gd Temp beg: 7 °c End: 12 °c OAT beg: °c End: °c Altimeter begin: 30.17 end: 30.15

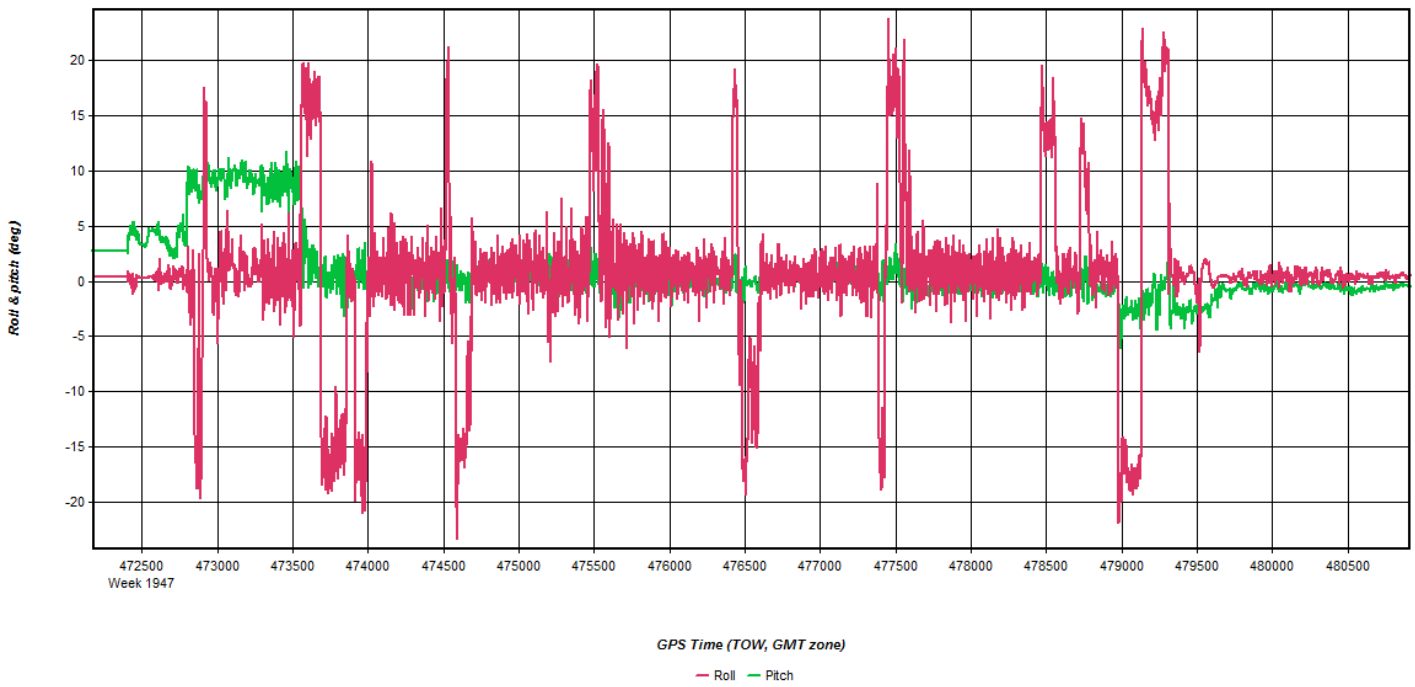
| | | |

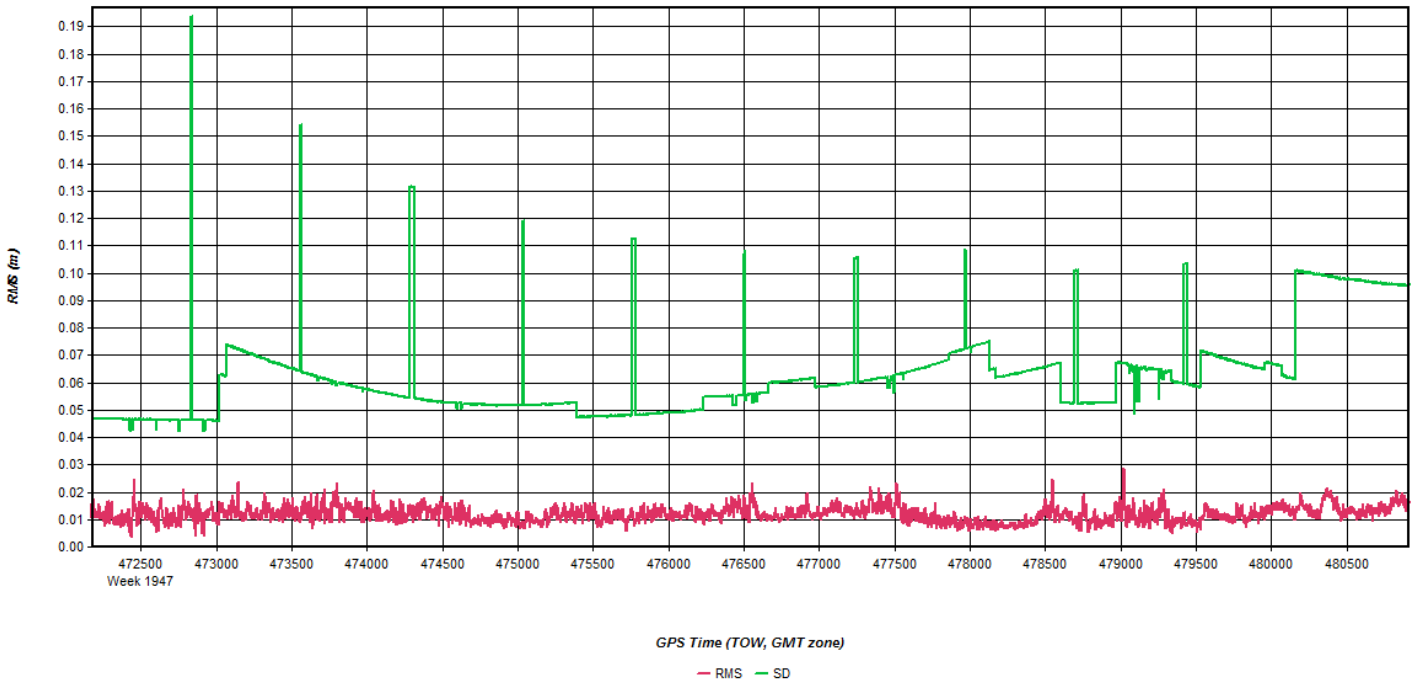
May 5, 2017-A (N916WC, SN8119)

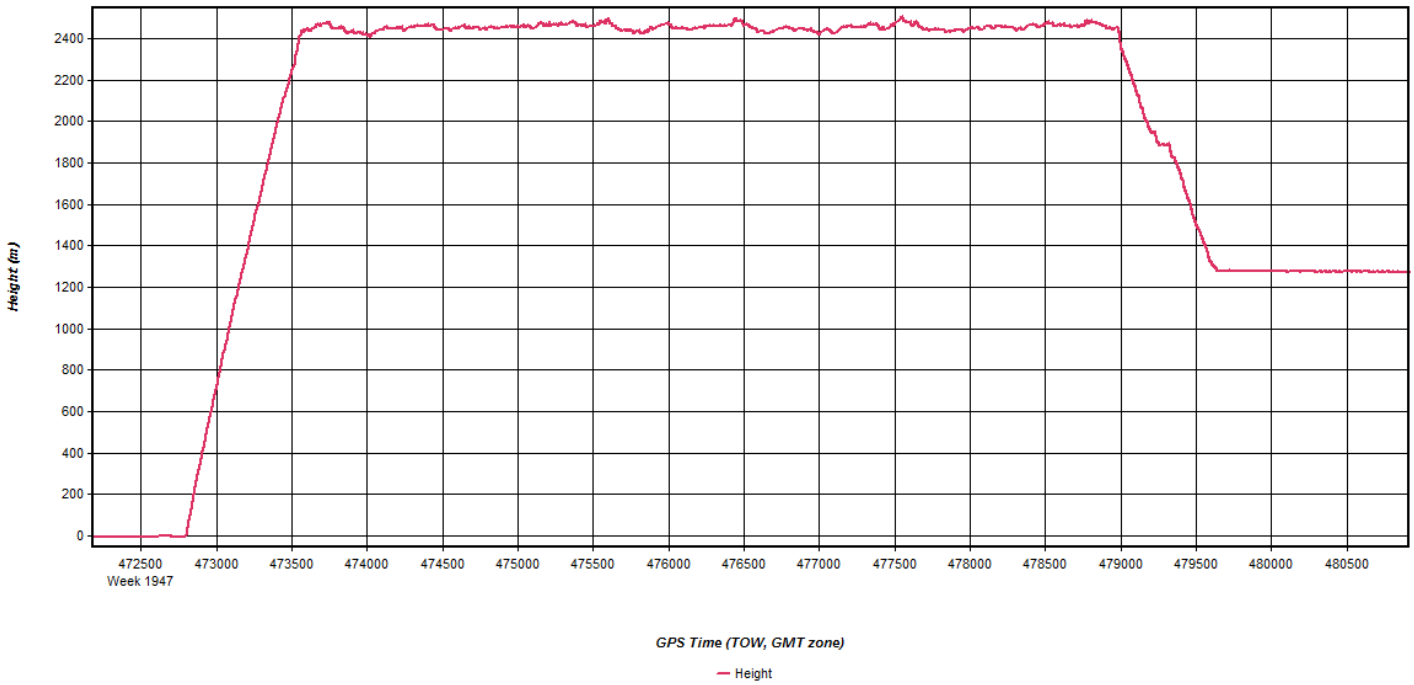


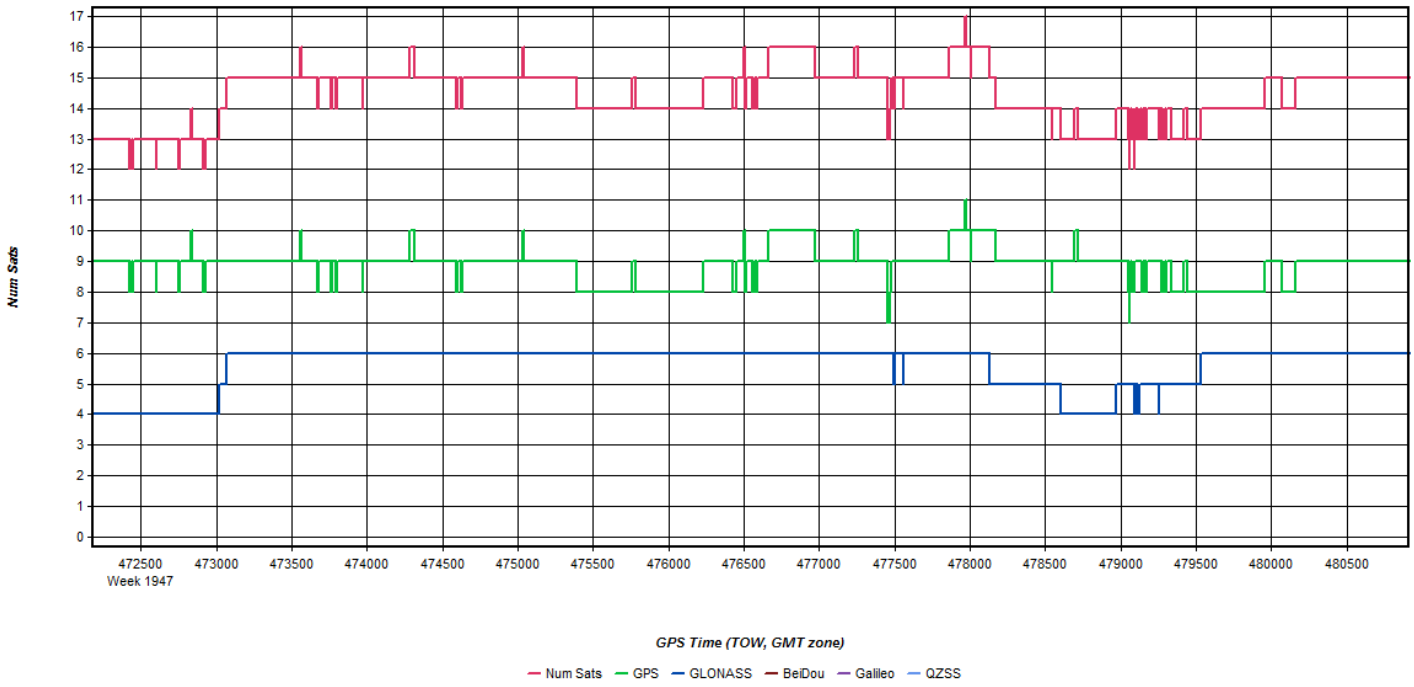

PDOP
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
PDOP

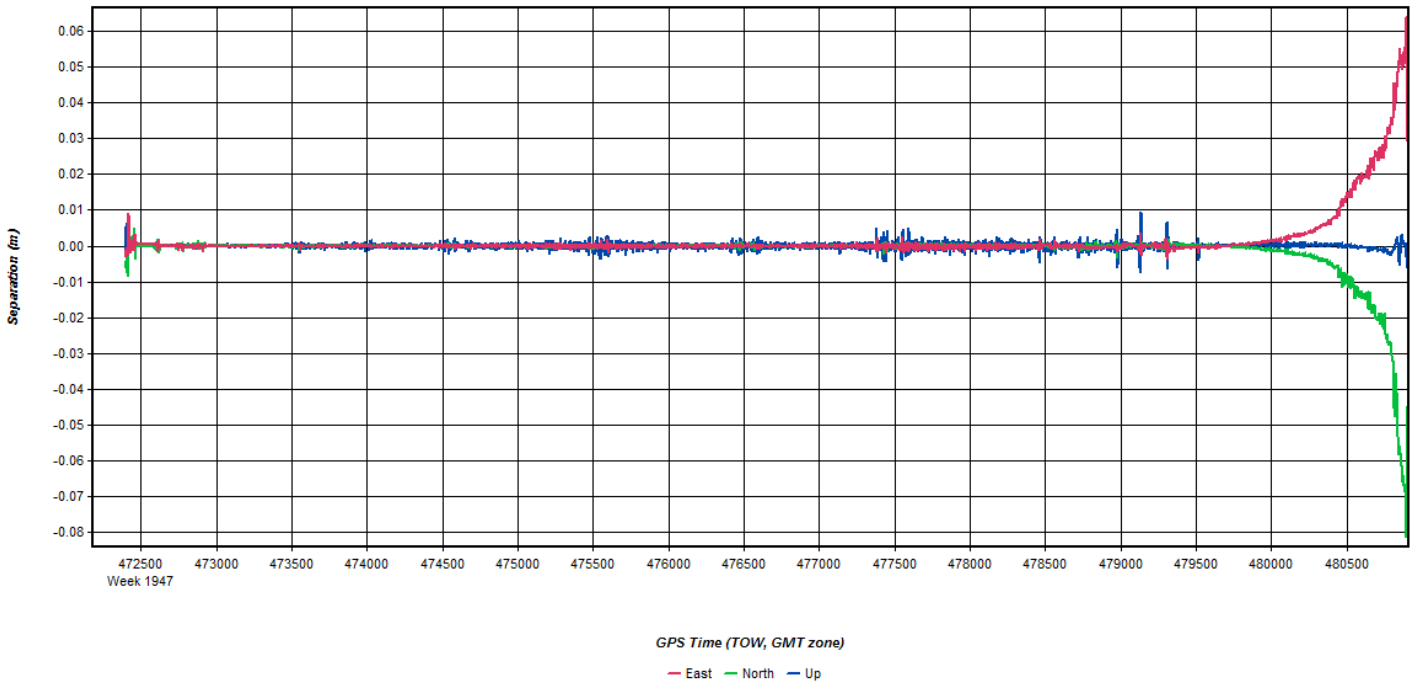

Status
2
1
0
-1
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

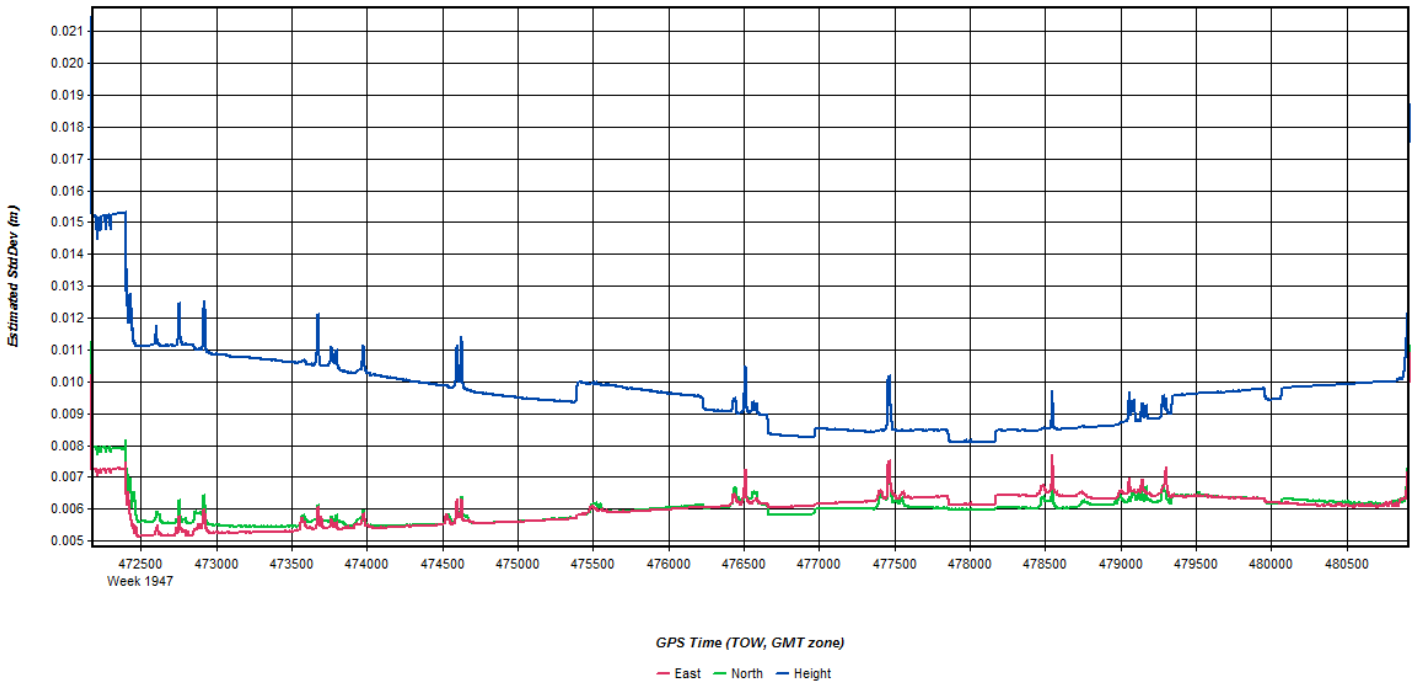

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Roll
Pitch

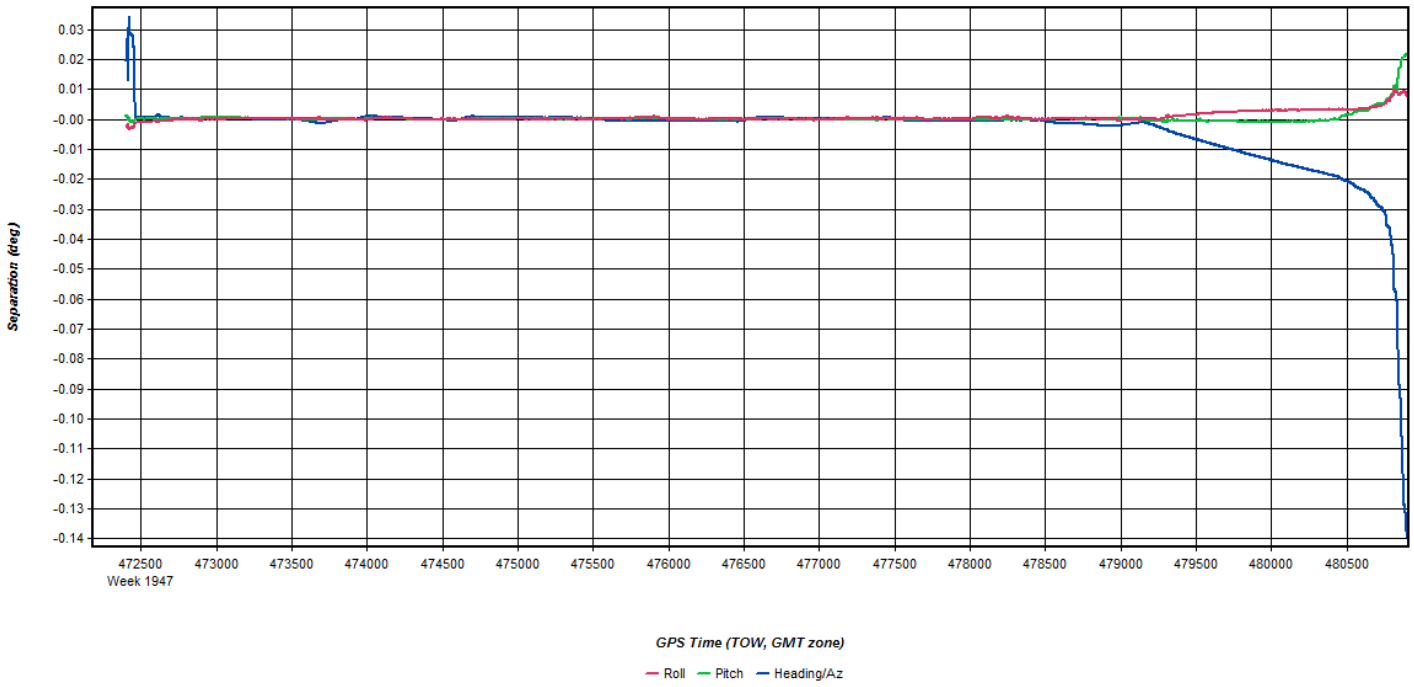

RMS (m)
0.19
0.18
0.17
0.16
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
RMS
SD

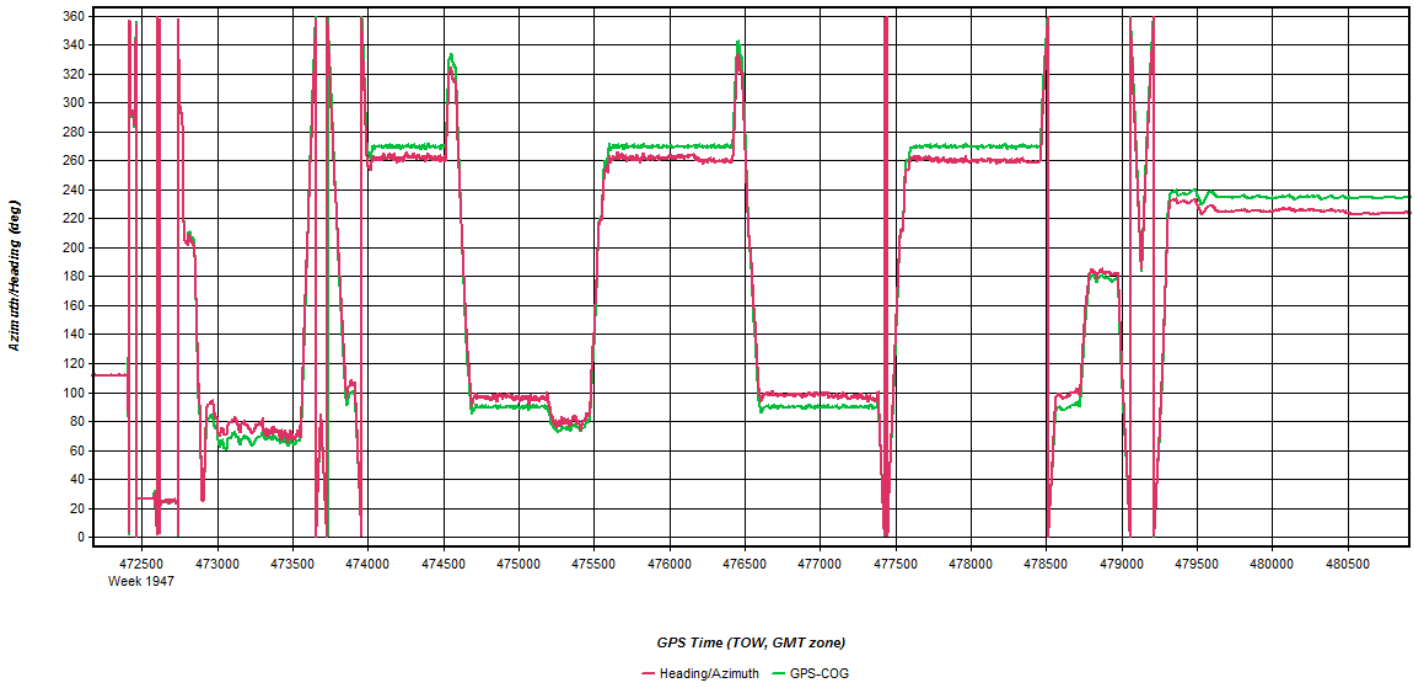

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Height


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

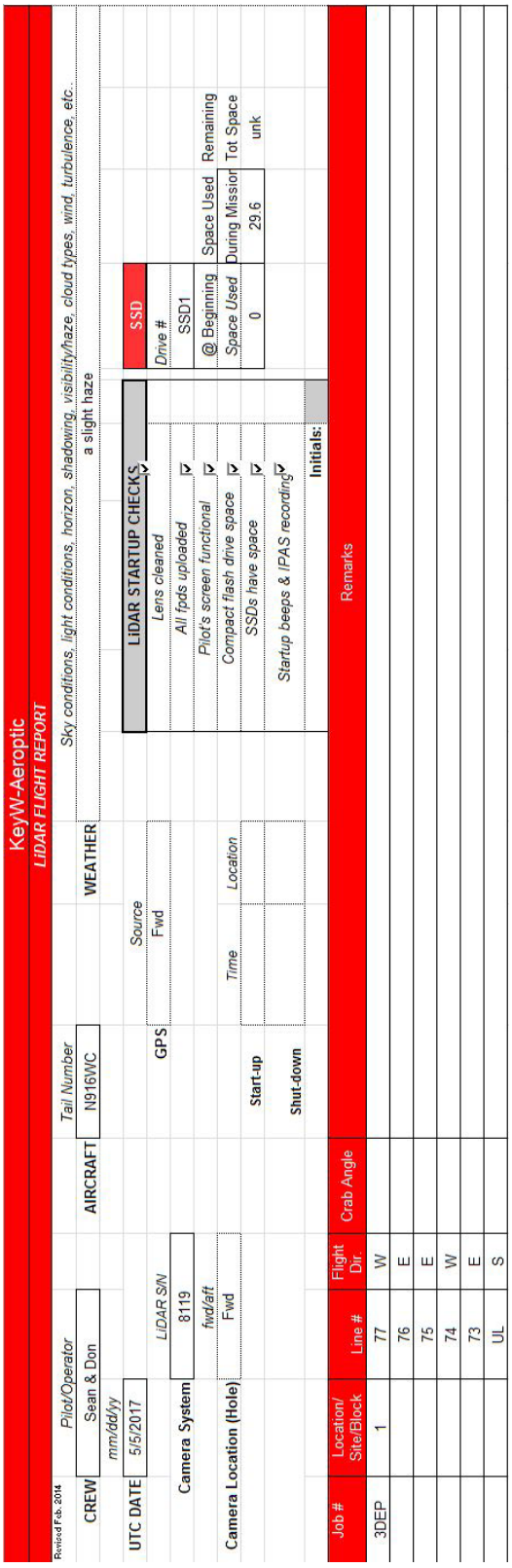

Separation (m)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
472500
Week 1947
473000
473500
474000
474500
475000
475500
476000
476500
477000
477500
478000
478500
479000
479500
480000
480500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW: Pilot/Operator: Sean & Don | AIRCRAFT: Tail Number: N916WC

UTC DATE: mm/dd/yy: 5/5/2017

Camera System: LiDAR S/N: 8119

Camera Location (Hole): fwd/aft: Fwd

WEATHER: Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.: a slight haze

GPS: Source: Fwd

Start-up: Time: | Location:

Shut-down: Time: | Location:

LiDAR STARTUP CHECKS

- Lens cleaned
- All fpds uploaded
- Pilot's screen functional
- Compact flash drive space
- SSDs have space
- Startup beeps & IPAS recording

Initials:

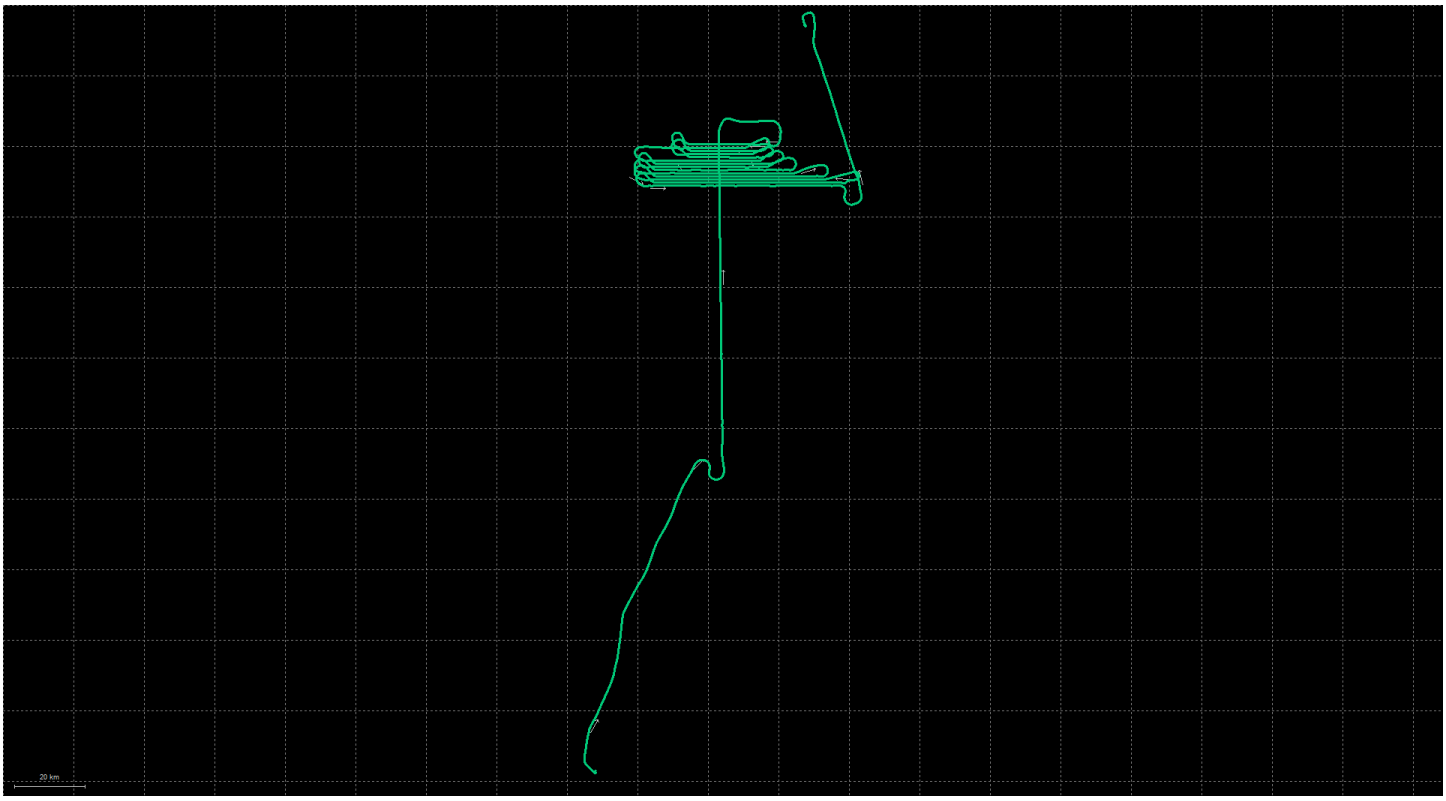
SSD

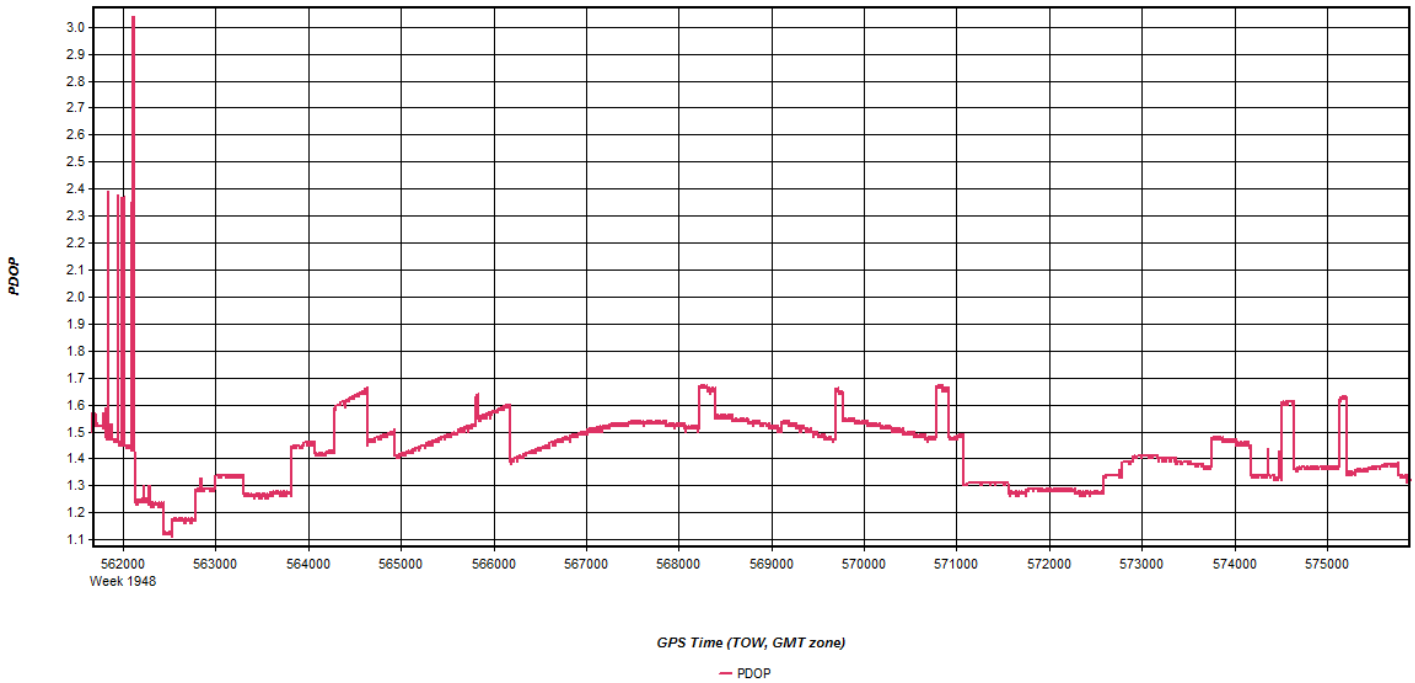
Drive #: SSD1

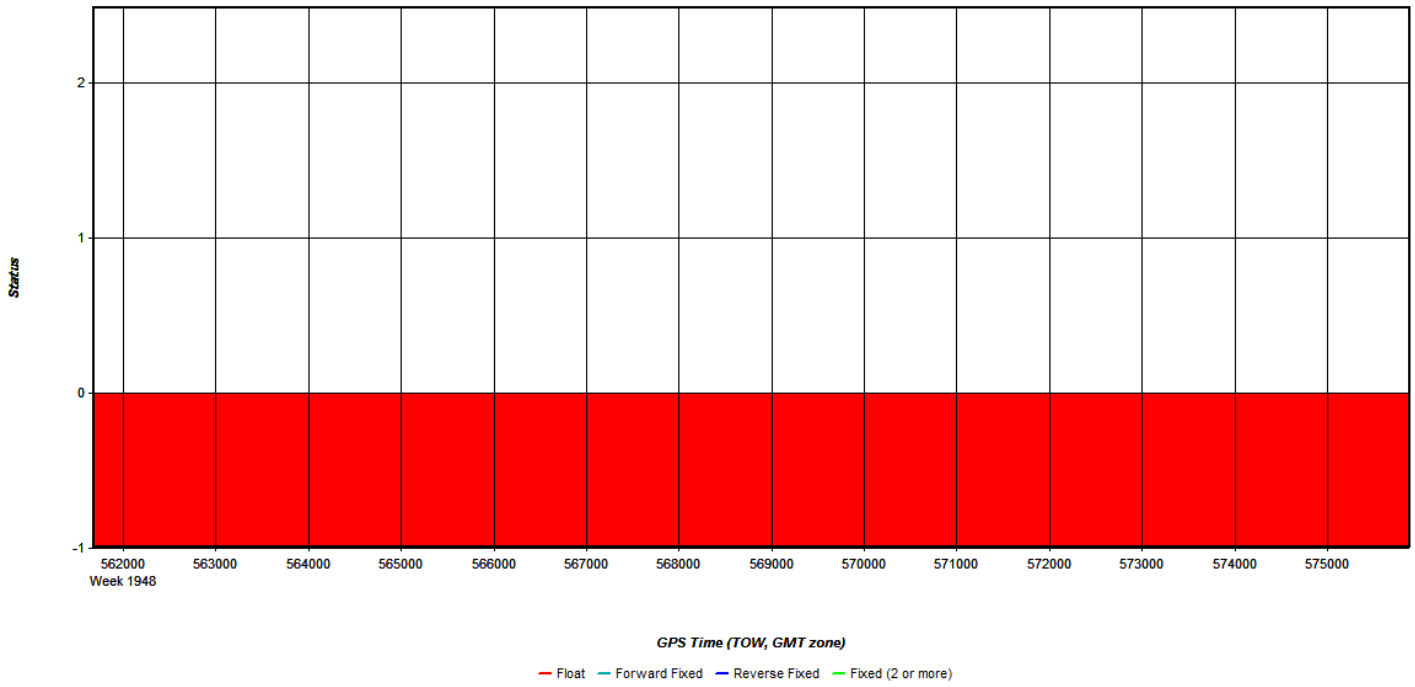
	@ Beginning	Space Used	Remaining
Space Used	0	During Mission: 29.6	Tot Space: unk

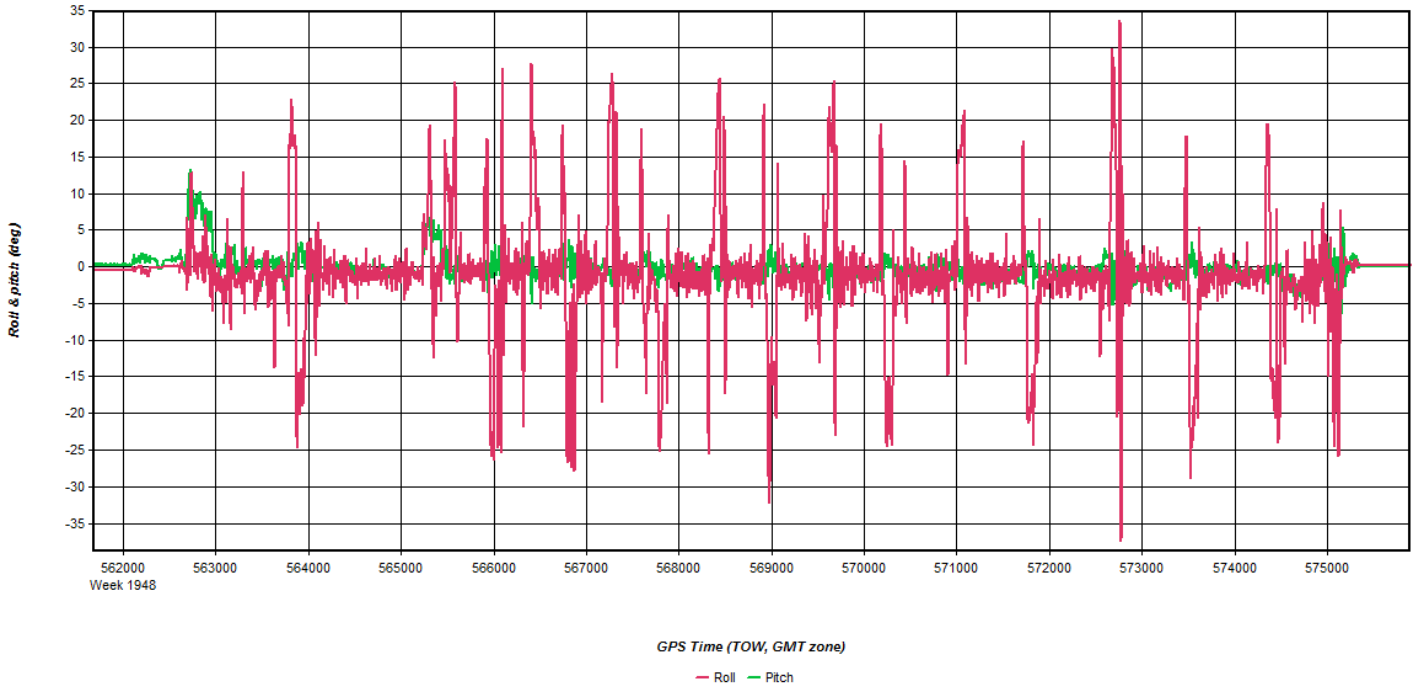
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	77	W		
		76	E		
		75	E		
		74	W		
		73	E		
		UL	S		

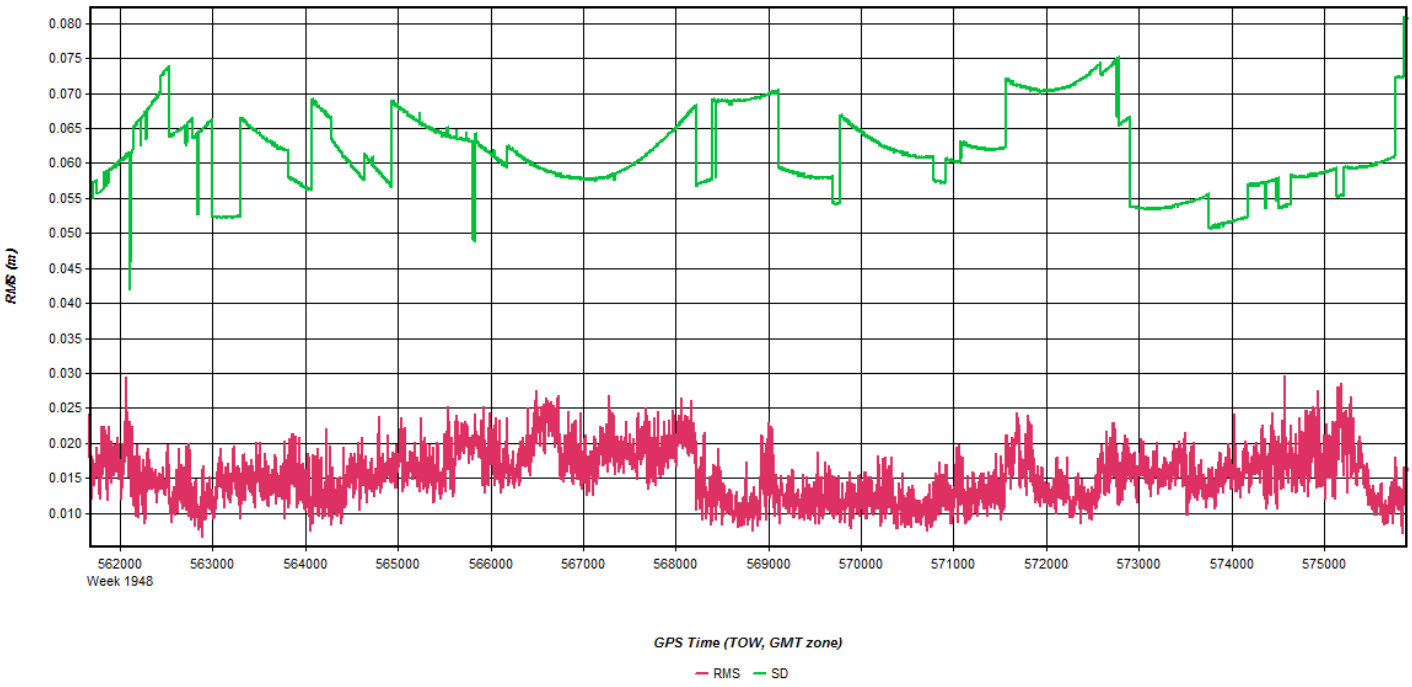
May 13, 2017-A (N73TM, SN7178)



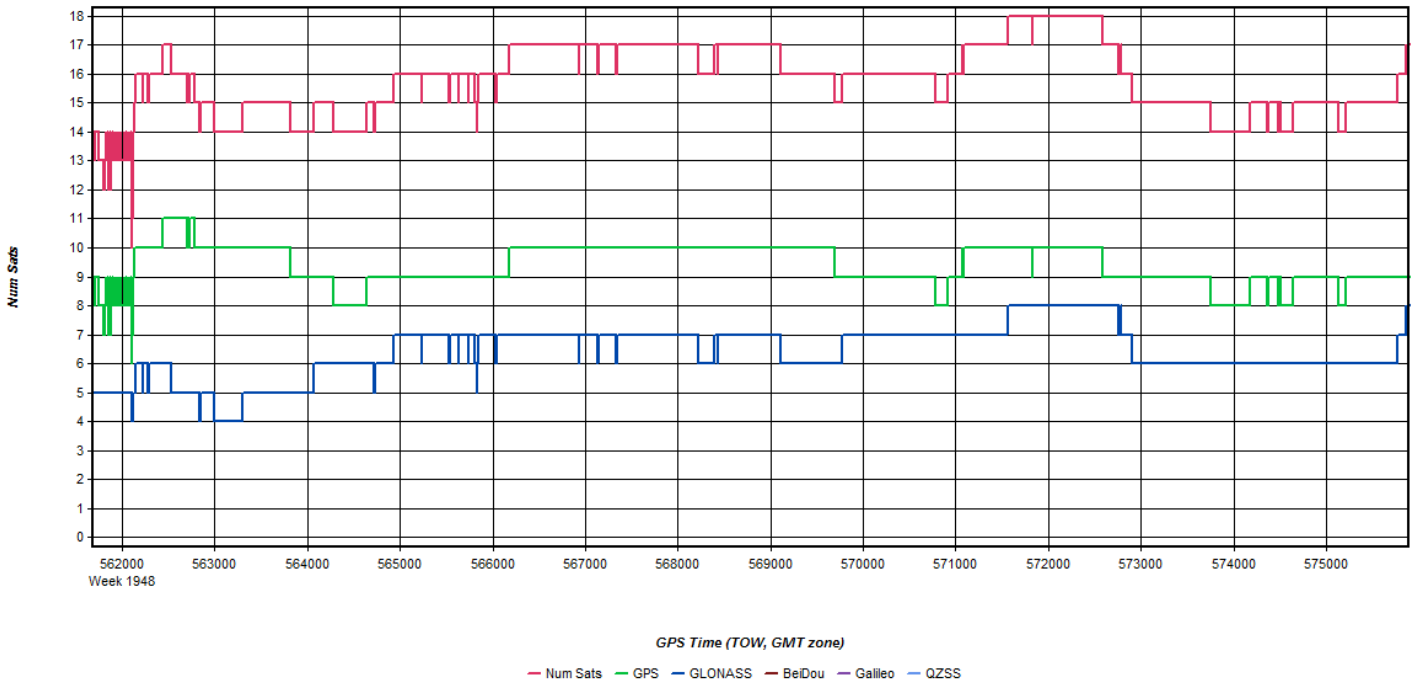

PDOP
3.0
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
PDOP

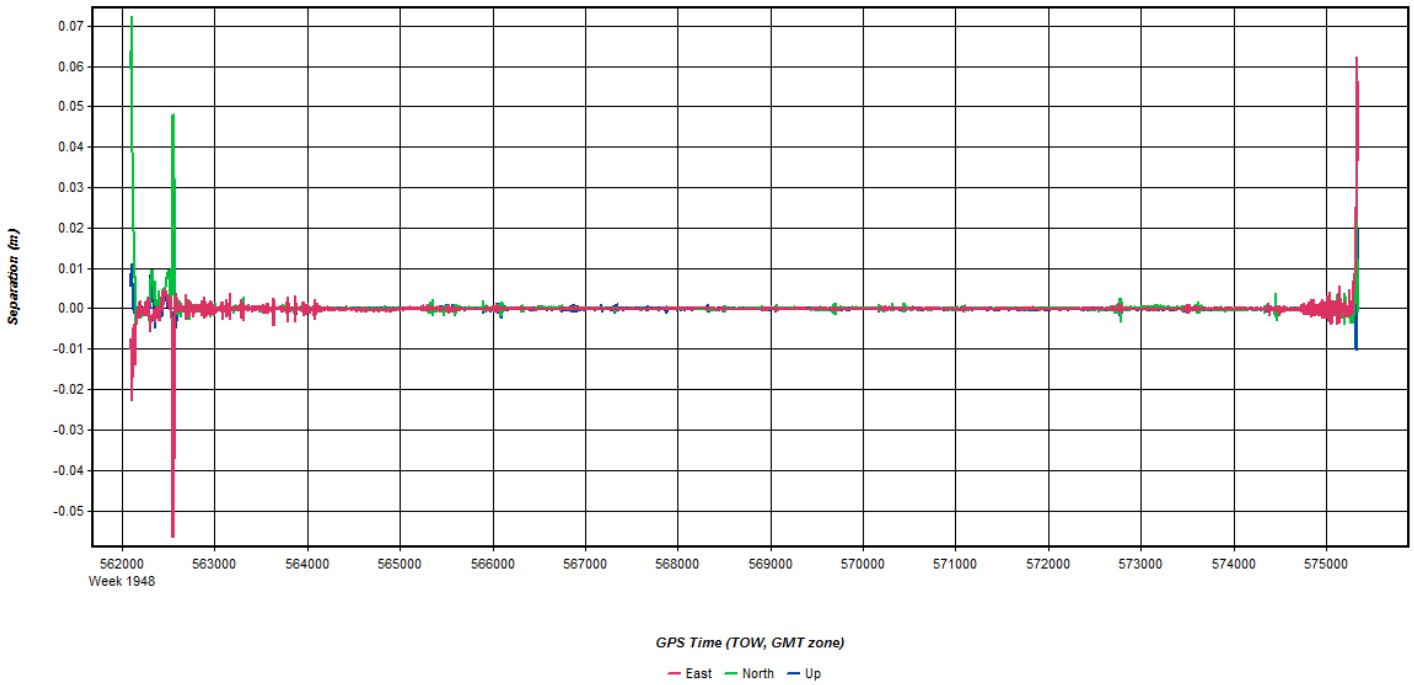

Status
2
1
0
-1
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

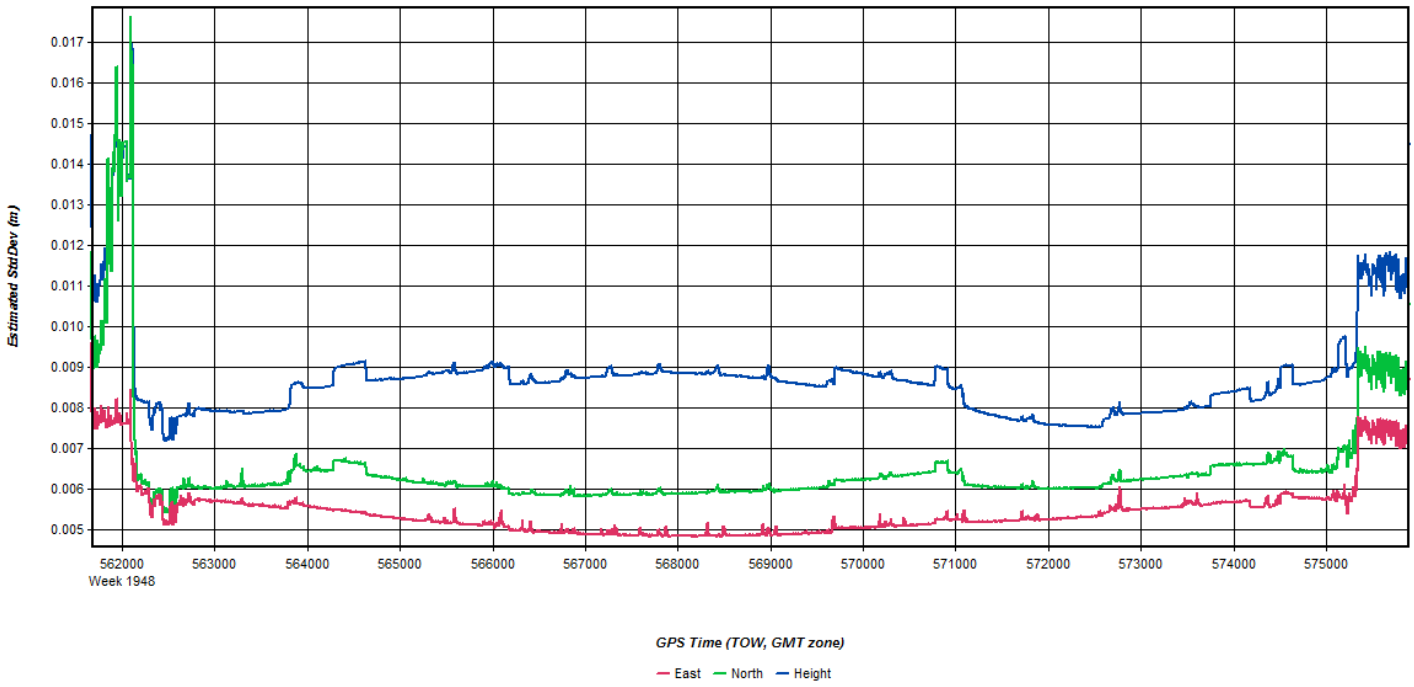

Roll & pitch (deg)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Roll
Pitch

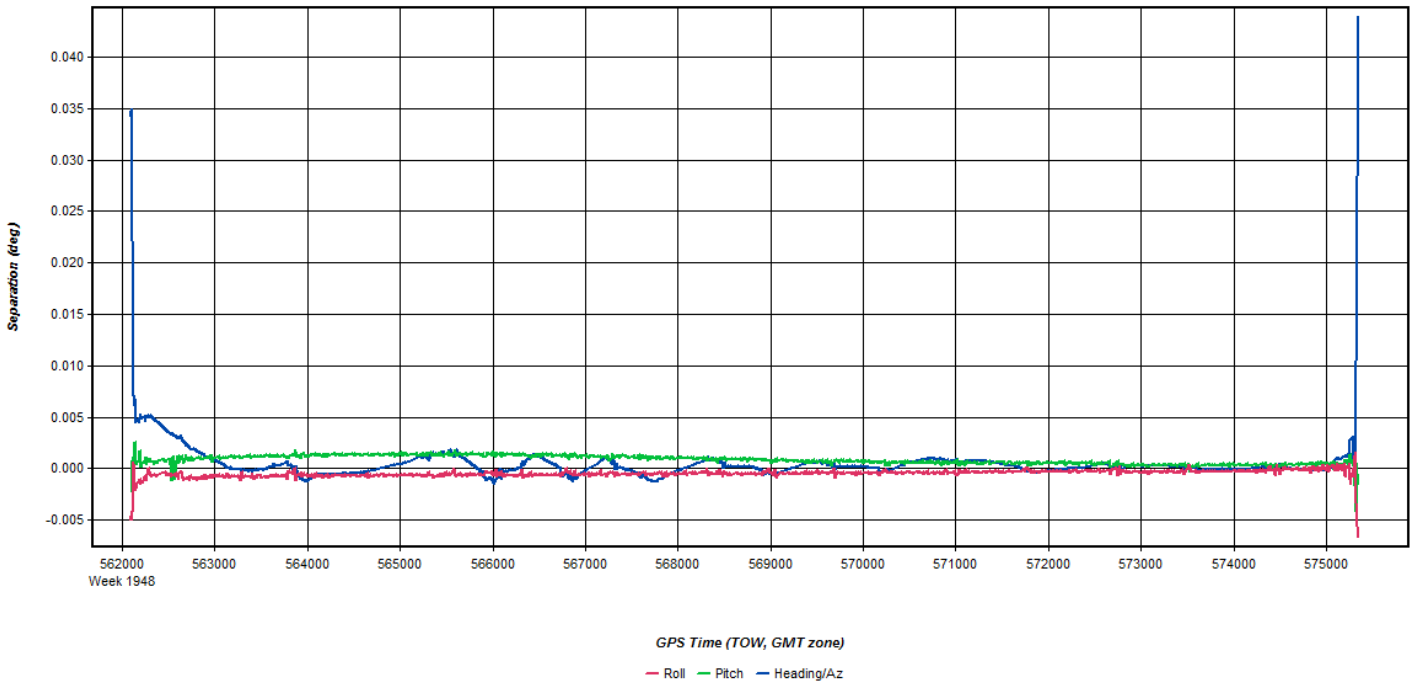

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
RMS
SD

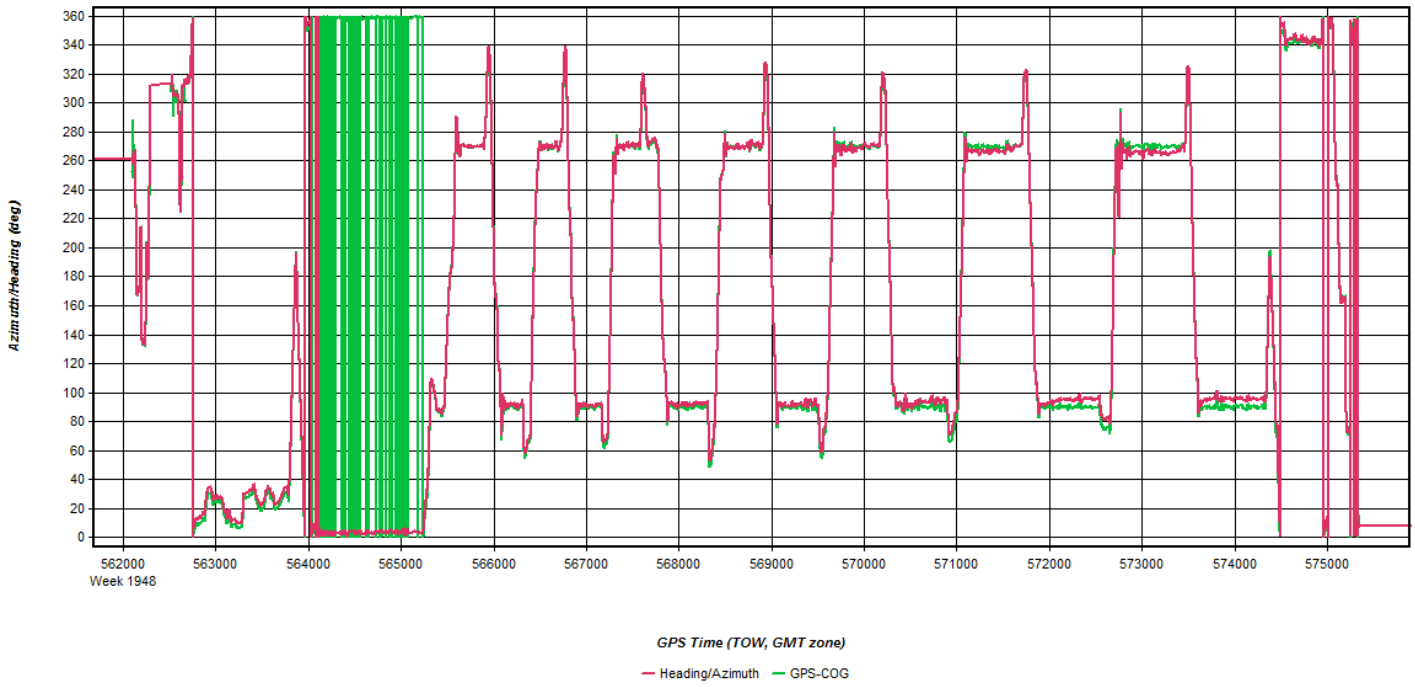
Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
562000
Week 1948
563000
564000
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-13-2017

(email log daily to flight_log_distribution_list@quantumspatial.com)

Lift: (A) B C D E Pg 1 of 1

Project: Maine USGS Proj #: 29513 Flight Mgmt File: 29513-USGS-Maine-ALS70SP3-170418

Aircraft: N73TM Begin Hobbs: 6704.8 End Hobbs: 6708.1 Total: 3.3 Pilot: Falgout Co-Pilot: Tech: Cox

Dep Apt: BGR Dep Time (Lcl): 8:15 (Z): 12:15 Arr Apt: PQI Arr Time (Local): 11:45 (Z): 15:45 Tot Time Aloft: 3:30

CORS: (Y) N Sta 1: MECC/MEPI Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

Gd Temp beg: 8 °c End: 17 °c OAT beg: °c End: °c Altimeter begin: 3054 end: 3003

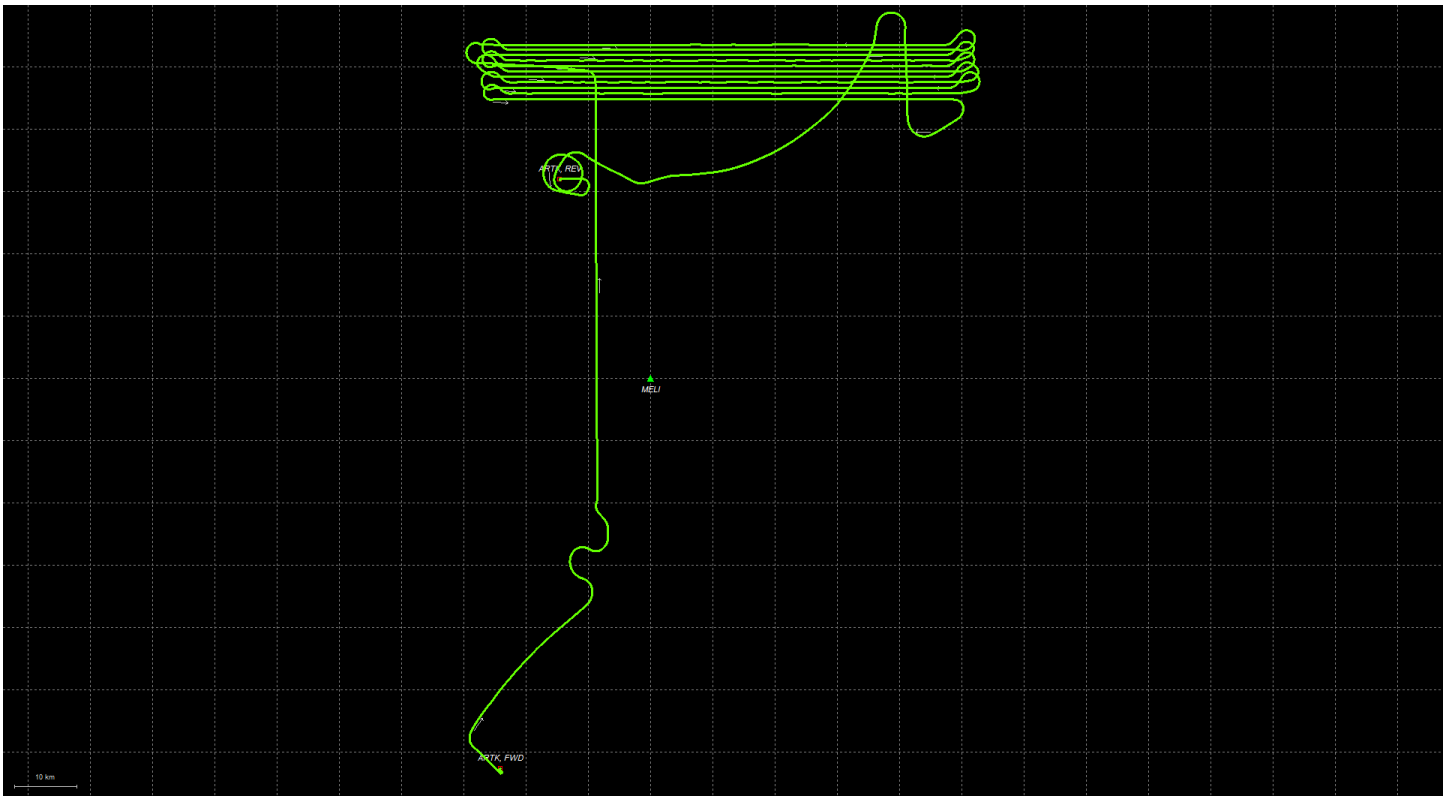
LiDAR	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing
	ALS70	7178		6985		140	
	FOV	Scan Freq	MpiA (Y) N	Pulses In Air	Pulse Rate	Power	PPSM
	36°	56				100%	

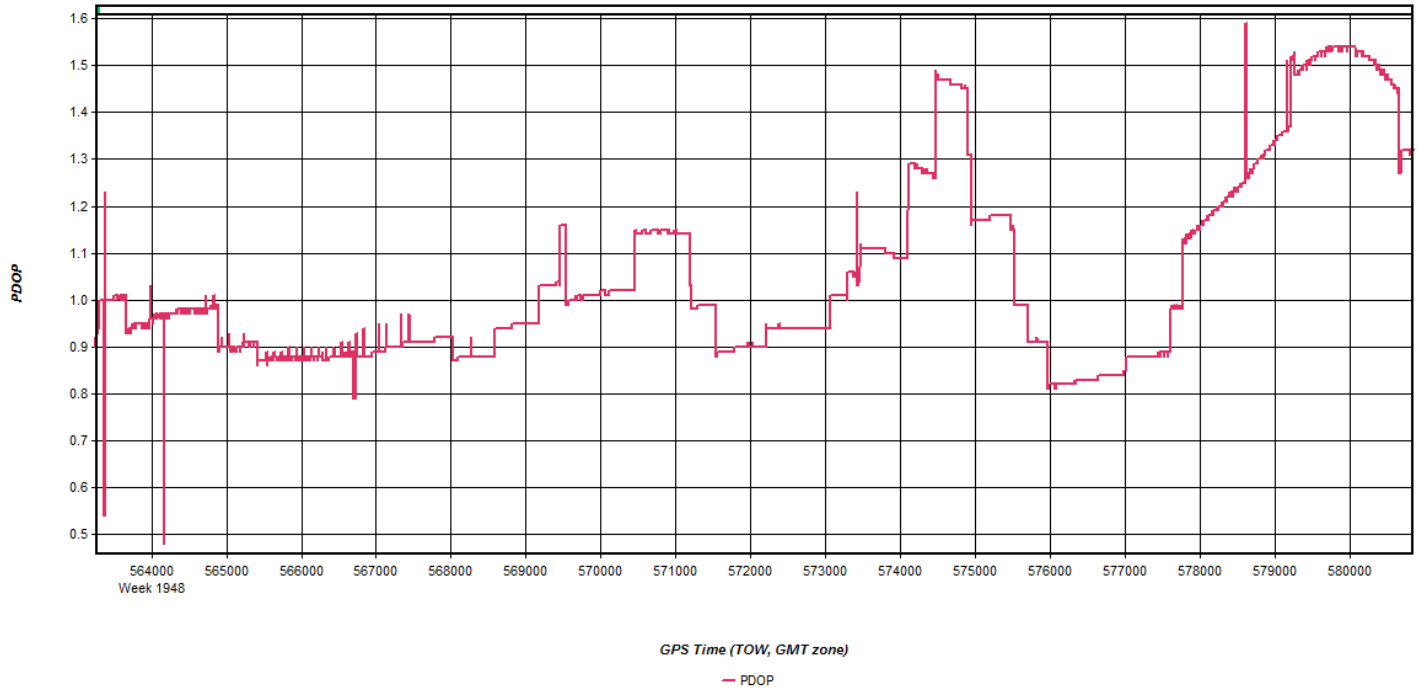
	Beg GB	End GB	Tot GB	Storage Name/#
	477	436	41	2

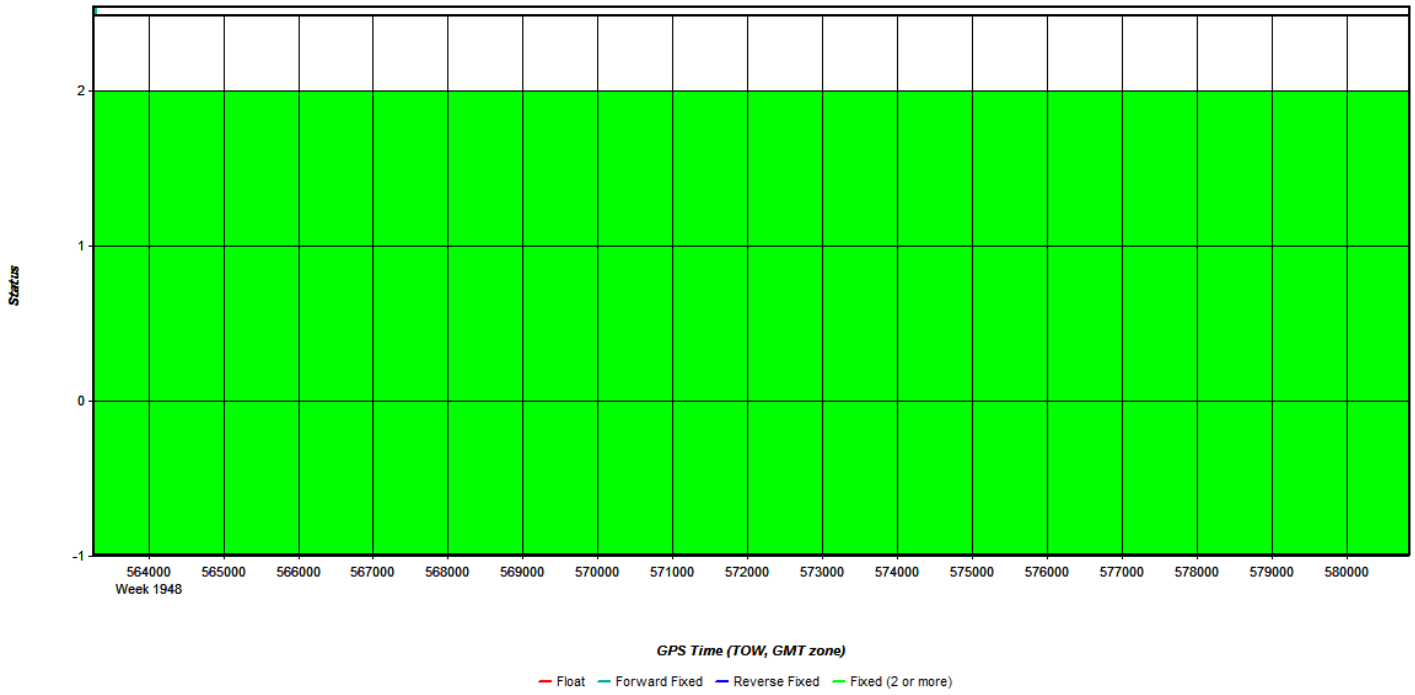
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
9003	359	1244	13:00	146	1.1/17	4855		0	Xtie 12.21 Door ☑ Static Start 13:01:30Z
1001	270	1308	1311	142	1.3/17	7408		0	Less Than 10% Drops Smooth/clear Fig8's 12:37
1002	090	1315	1318	137	1.2/18	7521		0	
1003	270	1321	1325	146	1.3/18	7376		0	
1004	090	1328	1332	140	1.3/18	7418		0	
1005	270	1335	1339	145	1.2/19	7333		0	
1006	090	1345	1351	133	1.2/18	7374		0	
1007	270	1355	1401	147	1.3/18	7323		0	
1008	090	1404	1411	141	1.2/19	7458		0	Old west end start
1009	270	1415	14.22	148	1.3/18	7340		0	Old 6.5 miles FWE
1010	090	1426	1434	141	1.4/17	7393		0	
1011	270	1438	1448	144	1.0/20	7416		0	
1012	090	1451	1502	147	1.1/19	7441		0	
1013	270	1506	1517	143	1.1/19	7442		0	
1014	090	1520	1531	150	1.1/18	7324		0	Whispy Old 10 FWE Door ☑ 15:33 Fig8's 15:33
									Static Stop 15:48 - 15:53

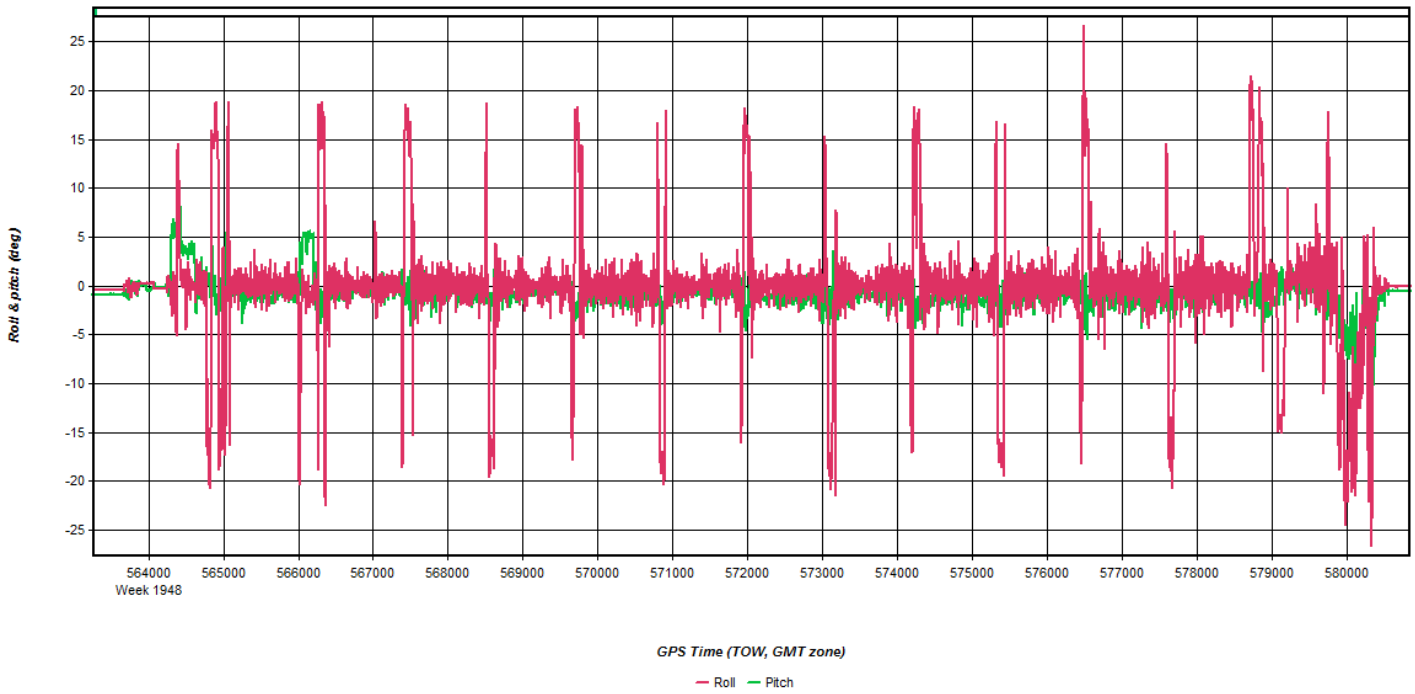
Total Proj Lines: Lines Flown: 15 Lines Remain: On line Time: 2:45 Mob Time: :45 Notes:

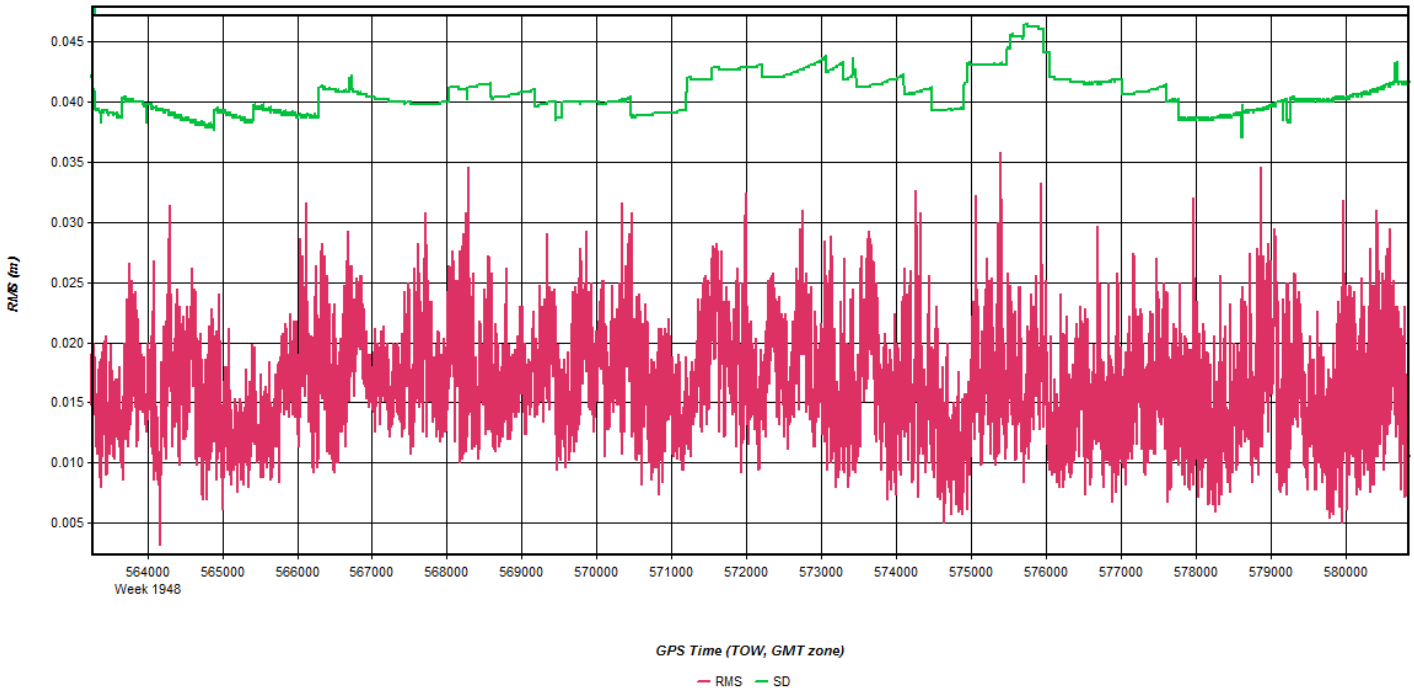
May 13, 2017-A (N262AS, SN7161)

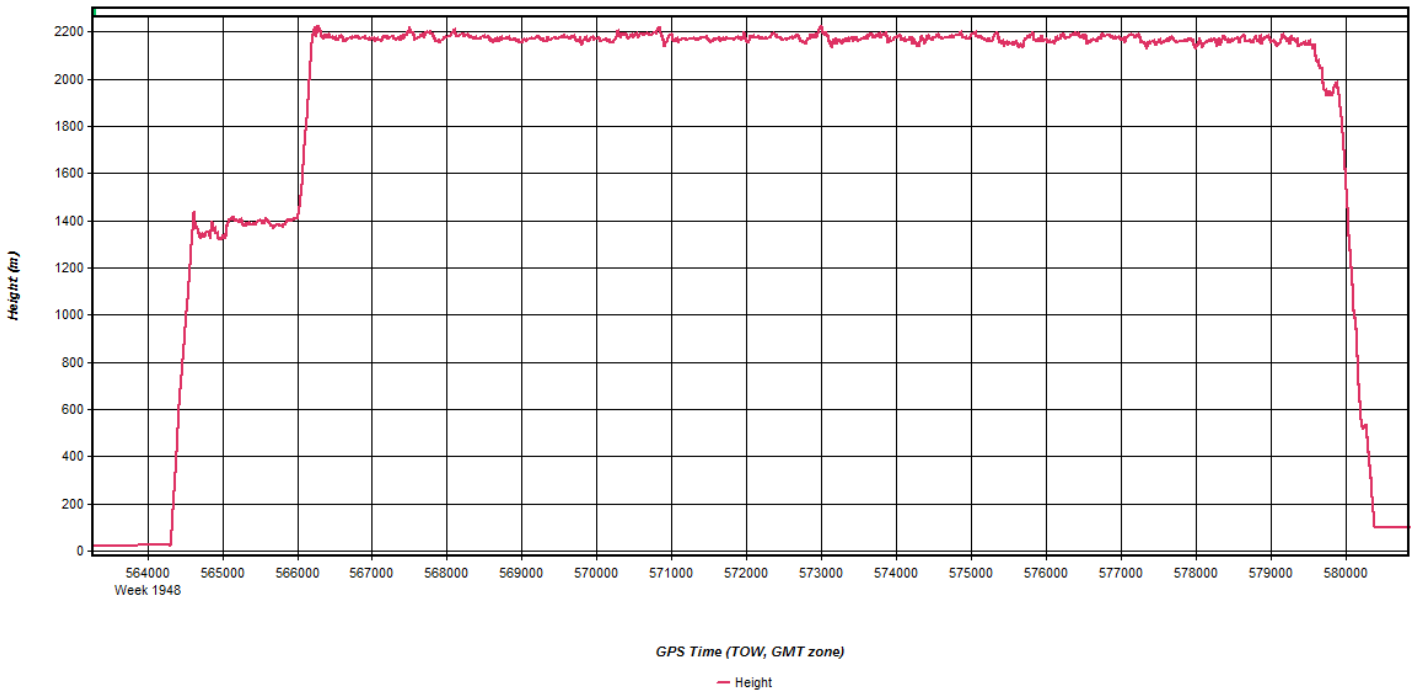

APTK_REV
MEU
APTK_FWD
10 km

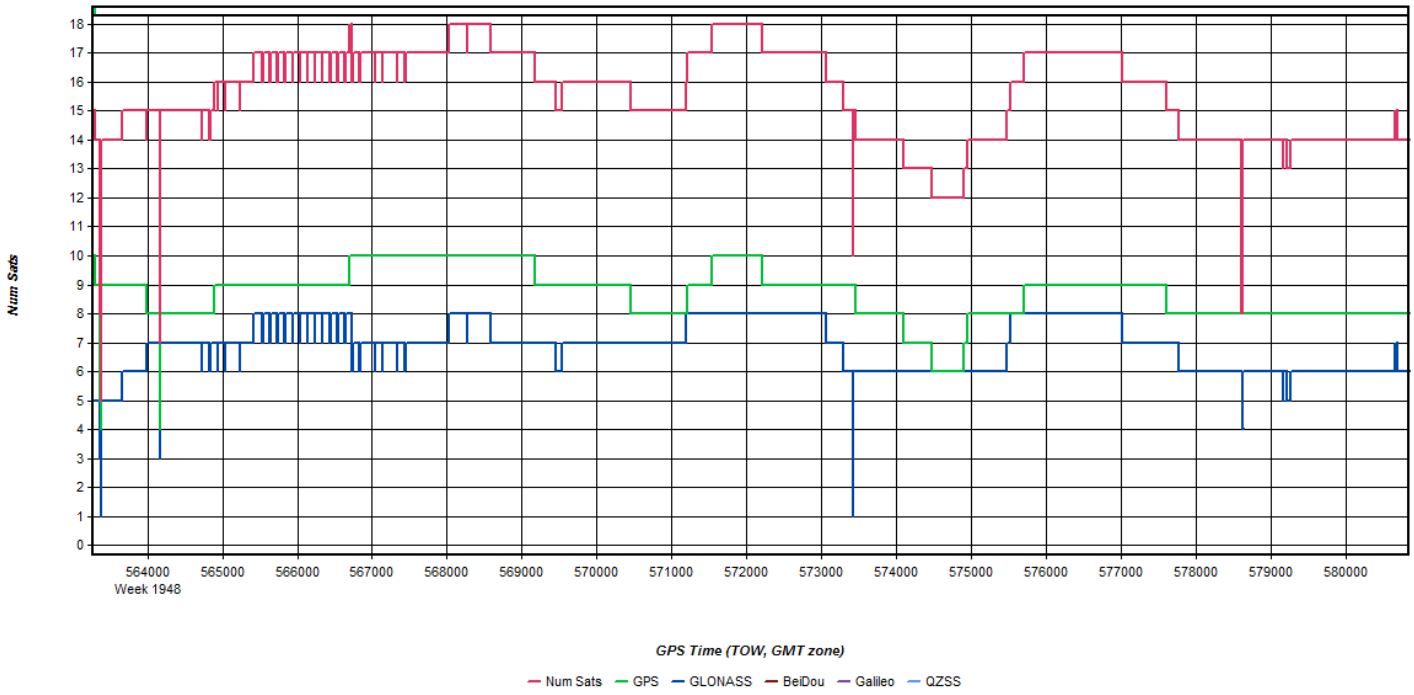

PDOP
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
PDOP

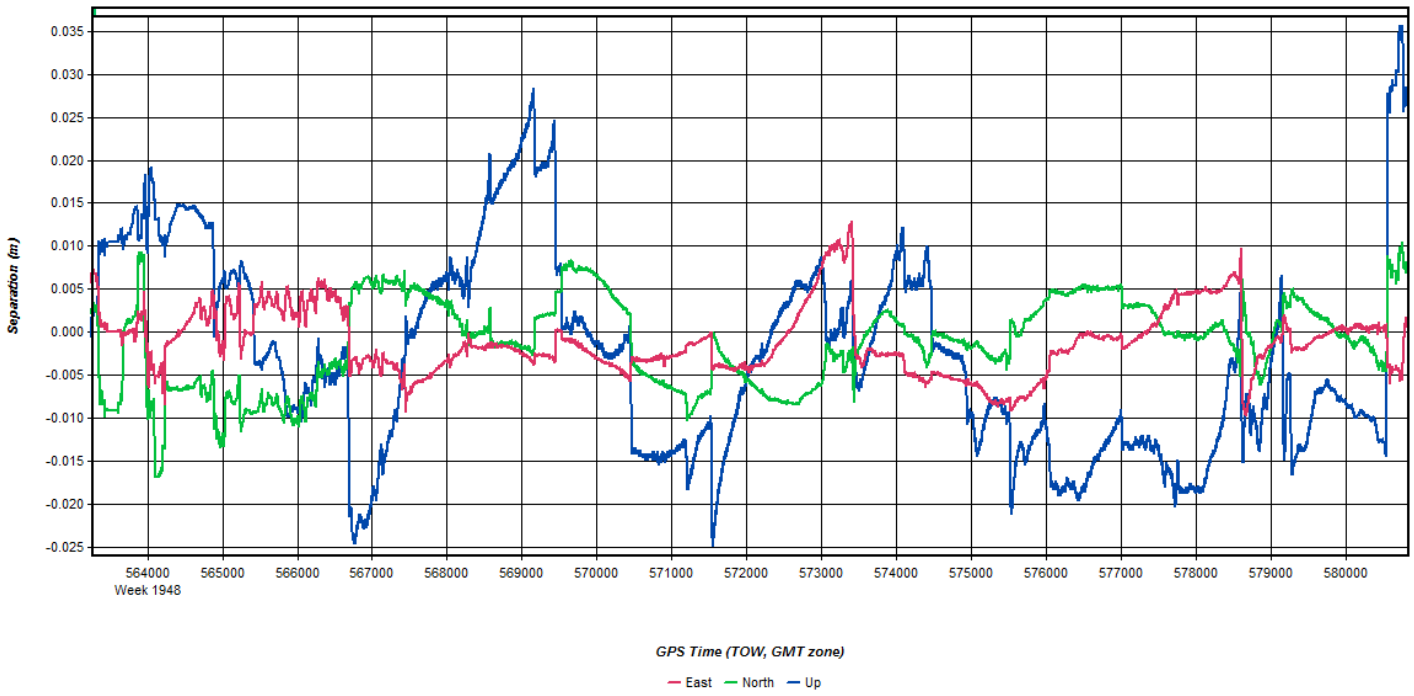

Status
2
1
0
-1
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

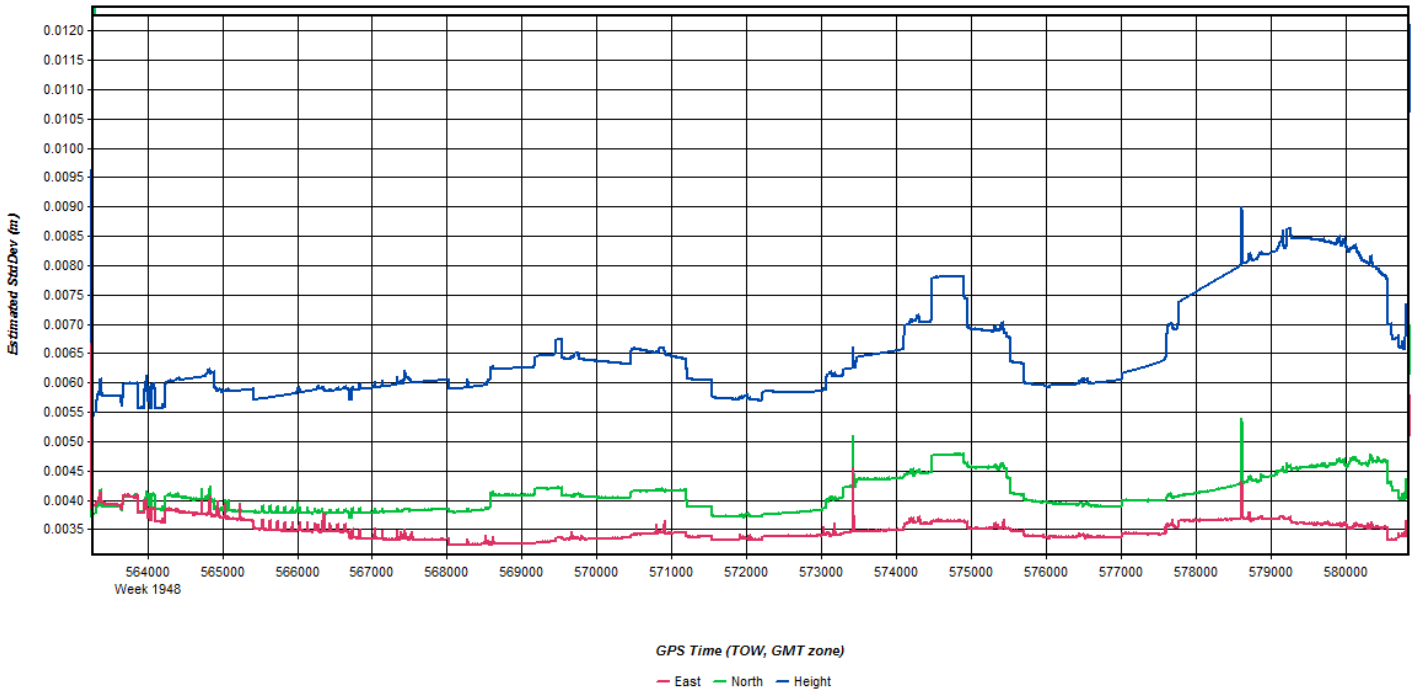

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Roll
Pitch

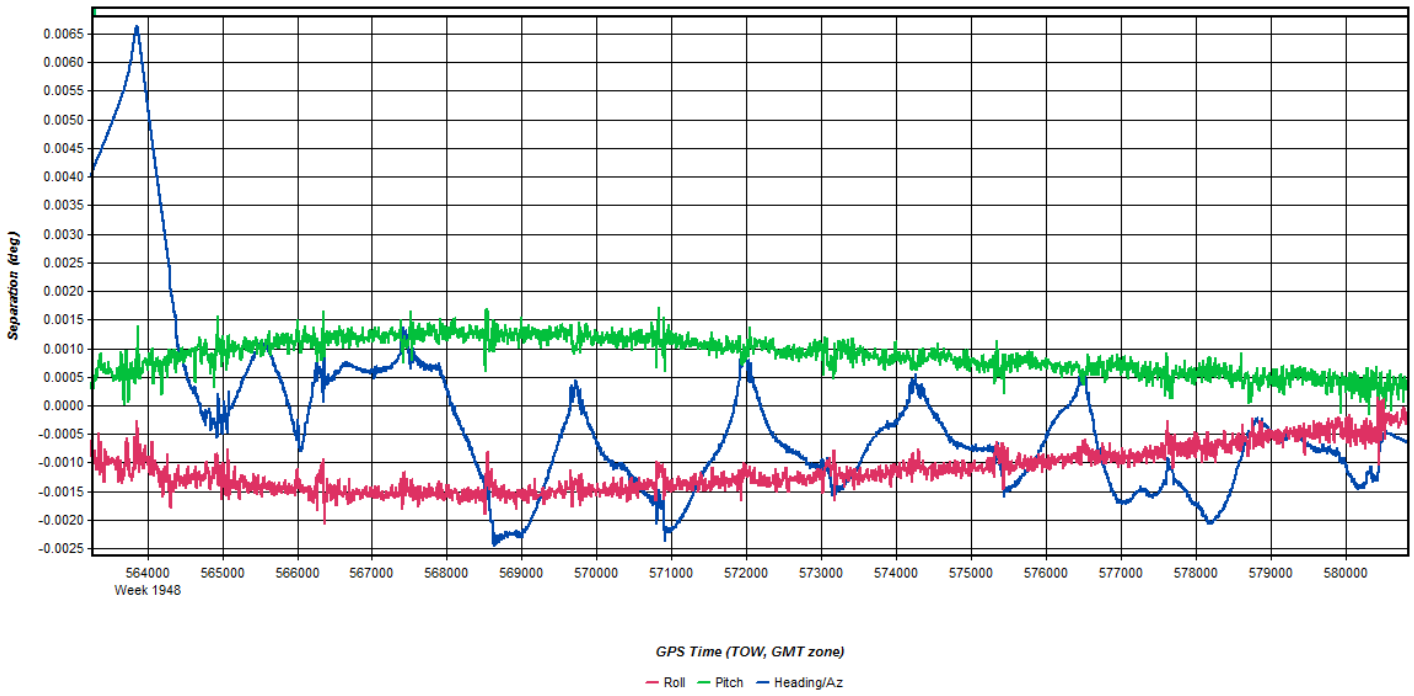

RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
RMS
SD

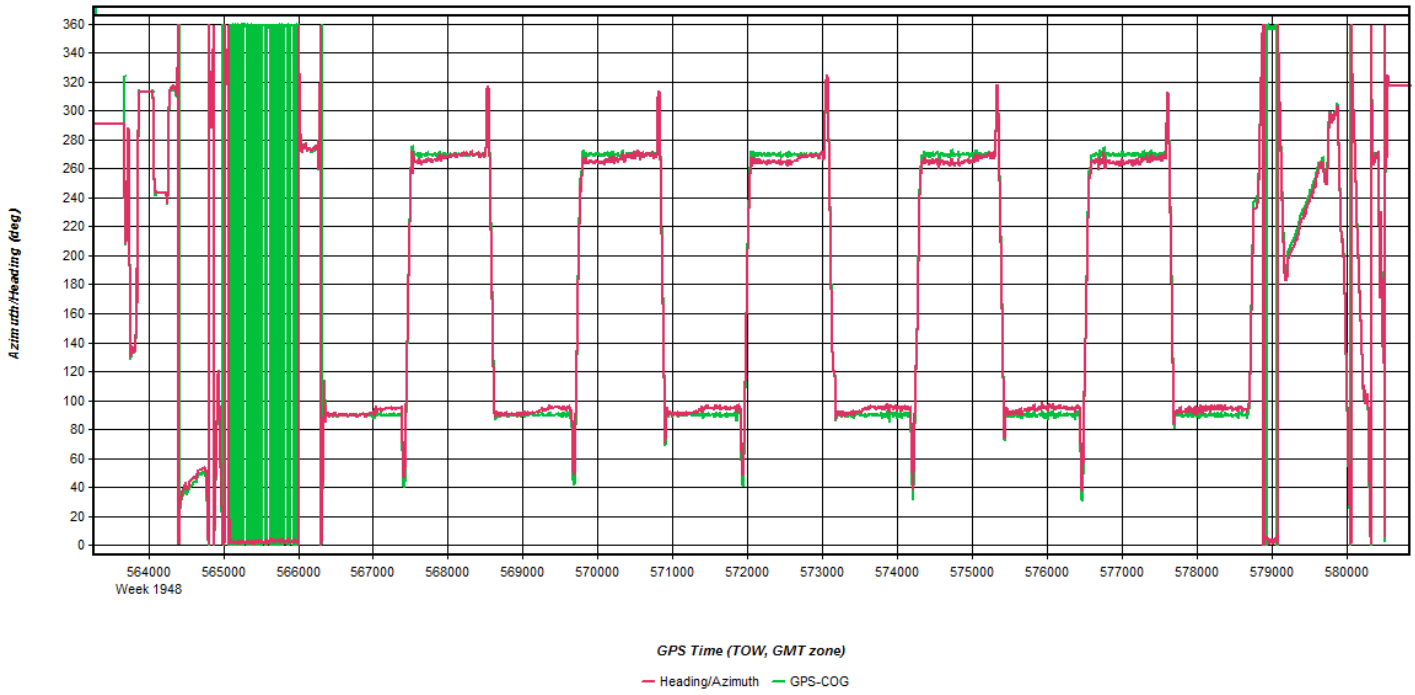

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Height

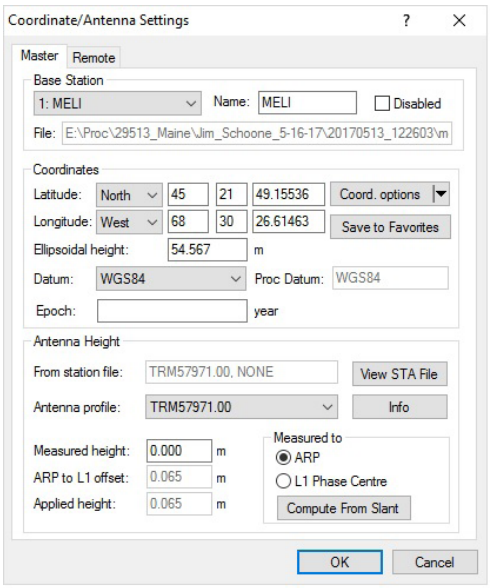

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
East
North
Height

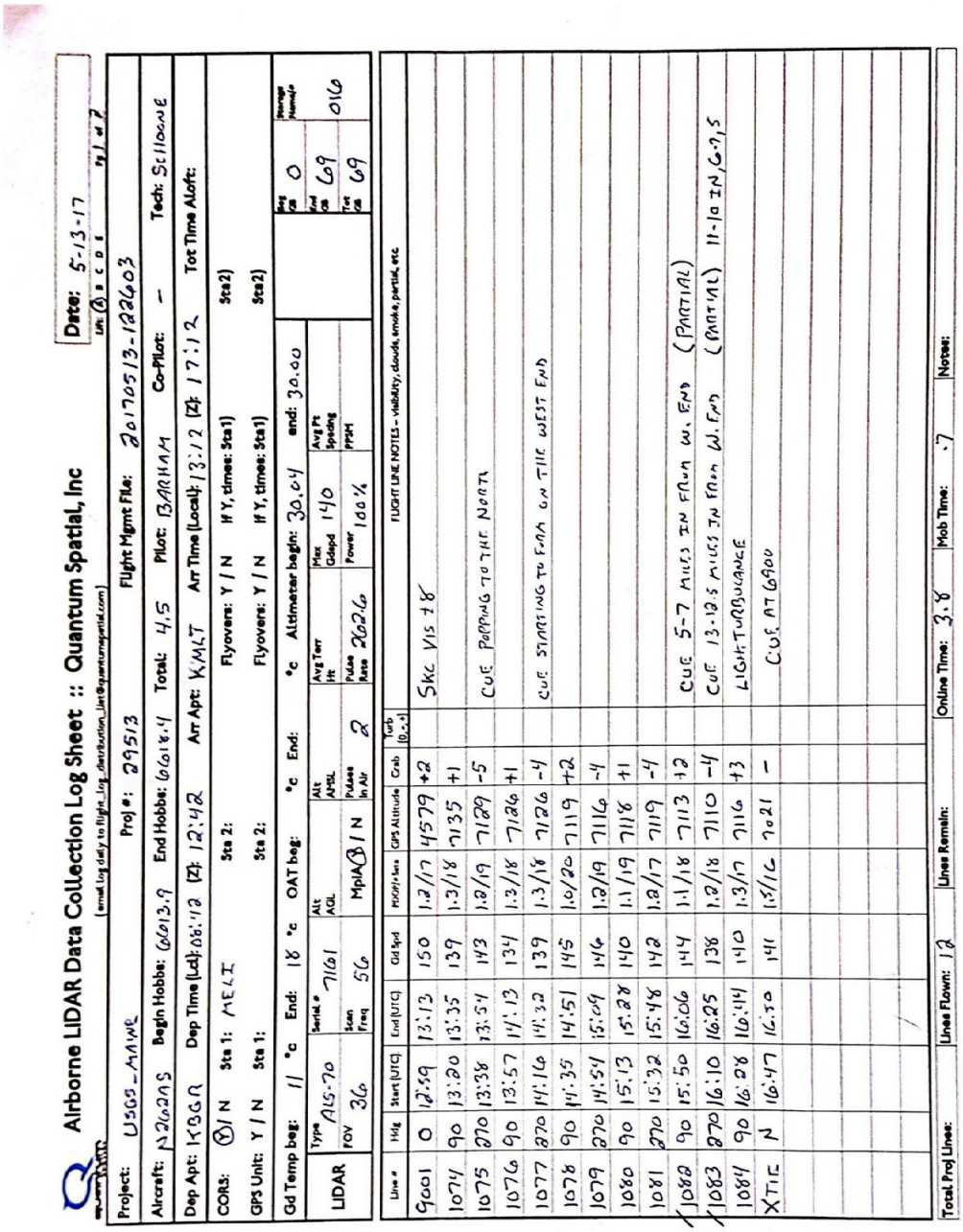

Separation (deg)
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
564000
Week 1948
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-16-17\20170513_122603\m
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-13-17

Proj #: 29513

Flight Mgmt File: 20170513-122603

Project: USGS_MAINE

Aircraft: N240QS Begin Hobbs: 6013.9 End Hobbs: 6018.4 Total: 4.5 Pilot: BARHAM Co-Pilot: — Tech: Stillouse

Dep Apt: KRGR Dep Time (Lcl): 08:12 (Z: 12:42 Arr Apt: KMLT Arr Time (Local): 13:12 (Z: 17:12 Tot Time Aloft:

CORS: (Y) N Sta 1: MELT Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Units: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

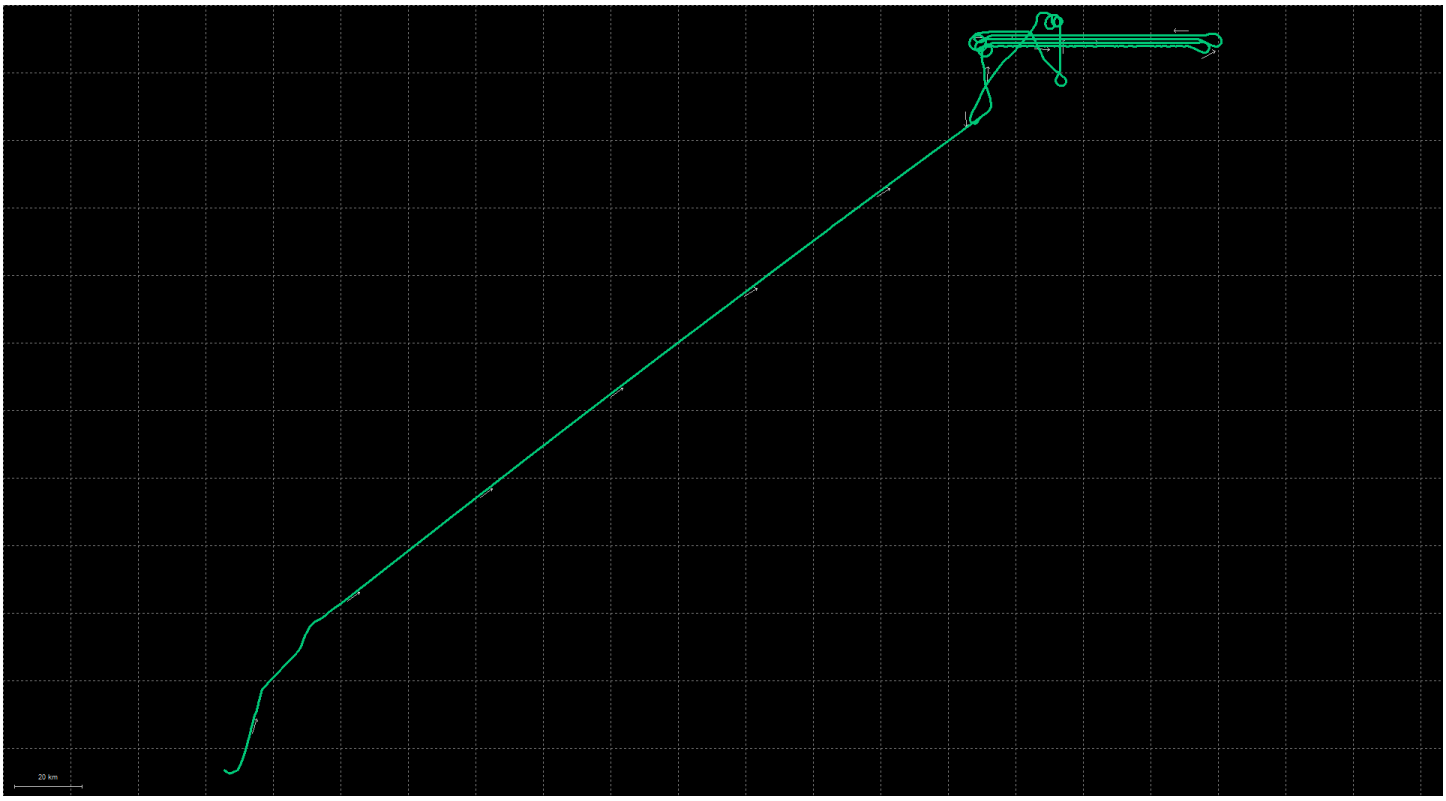
Gd Temp beg: 11 °c End: 18 °c OAT beg: °c End: °c Altimeter begin: 30.04 end: 30.00

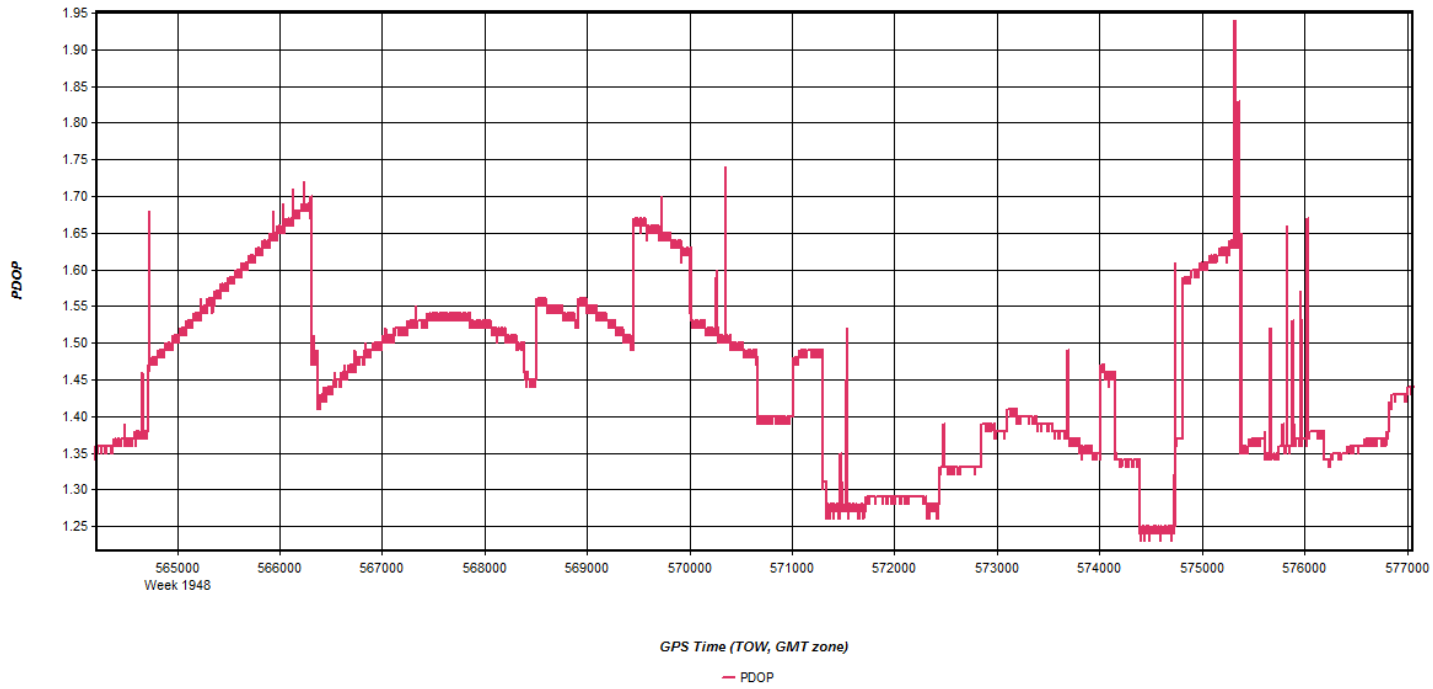
LIDAR	Type	AS-70	Serial #	7161	Alt AGL		Alt MSL		Avg Terr Ht		Max Gdspd	140	Avg Pt Spacing		Beg Cal	0	Manage Numbers
	FOV	36	Scan Freq	56	MpIA (1) / N		Pulses In Air	2	Pulse Rate	262.6	Power	100%	PPSM		End Cal	69	016
															Tot Cal	69	

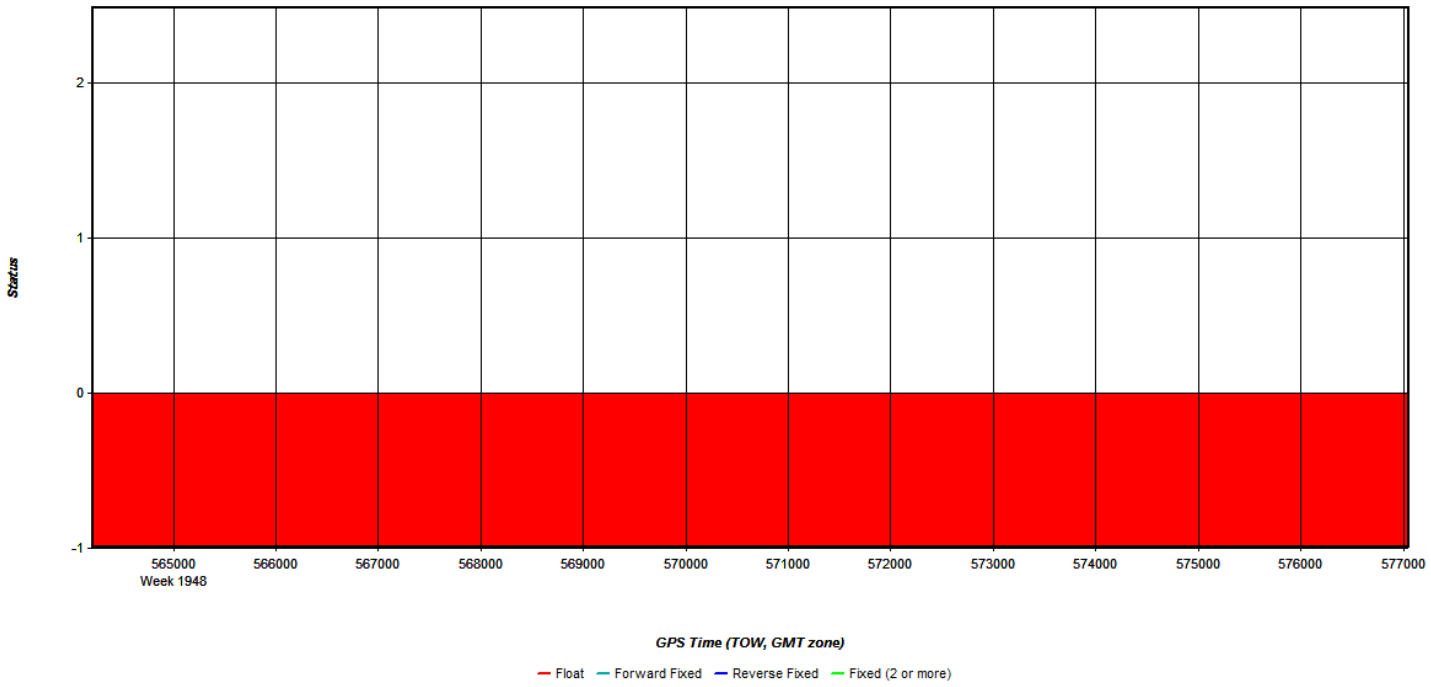
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/Sats	GPS Altitude	Crab	Turb (0..+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc
9001	0	12:59	13:13	150	1.2/17	4579	+2		SKC VIS 7 SM
1074	90	13:20	13:35	139	1.3/18	7135	+1		
1075	270	13:38	13:54	143	1.0/19	7129	-5		CUE PASSING TO THE NORTH
1076	90	13:57	14:13	134	1.3/18	7126	+1		
1077	270	14:16	14:32	139	1.3/18	7126	-4		CUE STARTING TO FAN ON THE WEST END
1078	90	14:35	14:51	145	1.0/20	7119	+2		
1079	270	14:54	15:09	146	1.2/19	7116	-4		
1080	90	15:13	15:28	140	1.1/19	7118	+1		
1081	270	15:32	15:48	142	1.2/17	7119	-4		
1082	90	15:50	16:06	144	1.1/18	7113	+2		CUE 5-7 MILES IN FROM W. END (PARTIAL)
1083	270	16:10	16:25	136	1.2/18	7110	-4		CUE 13-18.5 MILES IN FROM W. END (PARTIAL) 11-16 IN, 6-9.5
1084	90	16:28	16:44	140	1.3/17	7116	+3		LIGHT TURBULENCE
XTIE	N	16:47	16:50	141	1.5/16	7021	—		CUE AT 6900

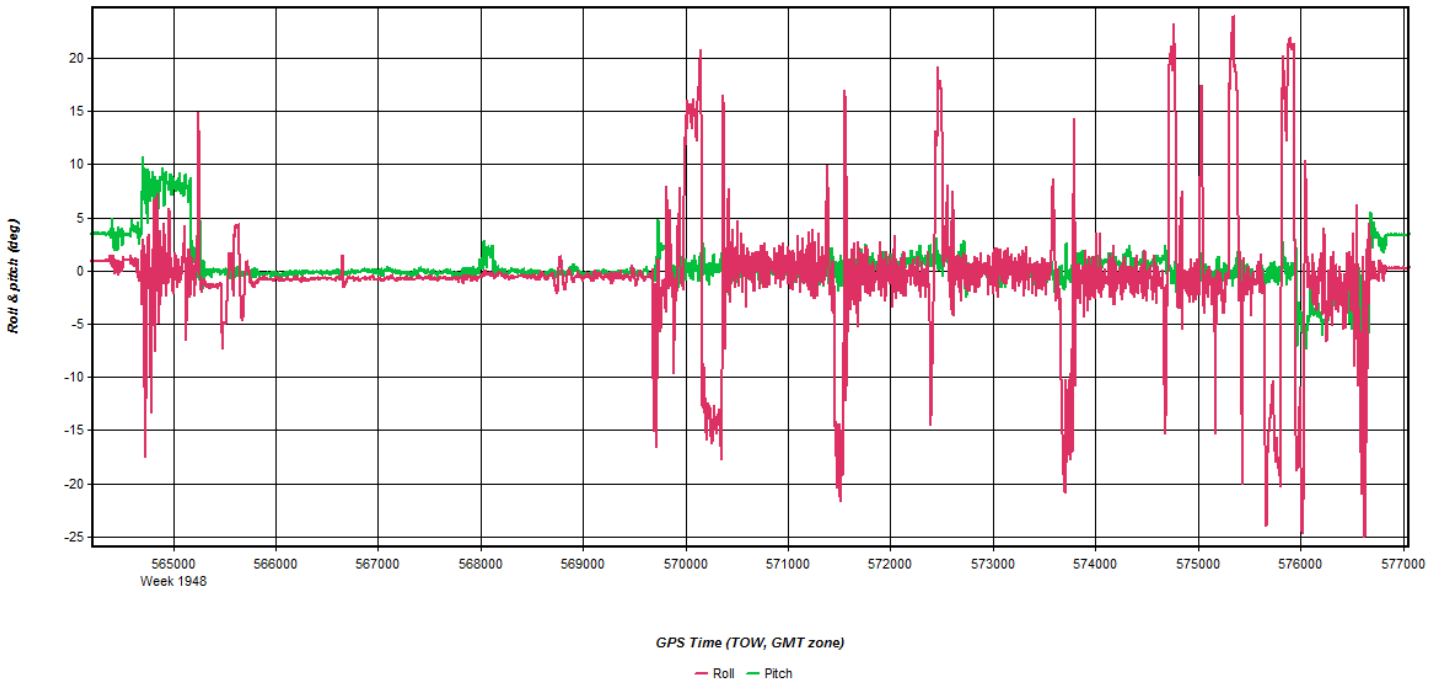
Total Proj Lines: Lines Flown: 12 Lines Remain: Online Time: 3.8 Mob Time: .7 Notes:

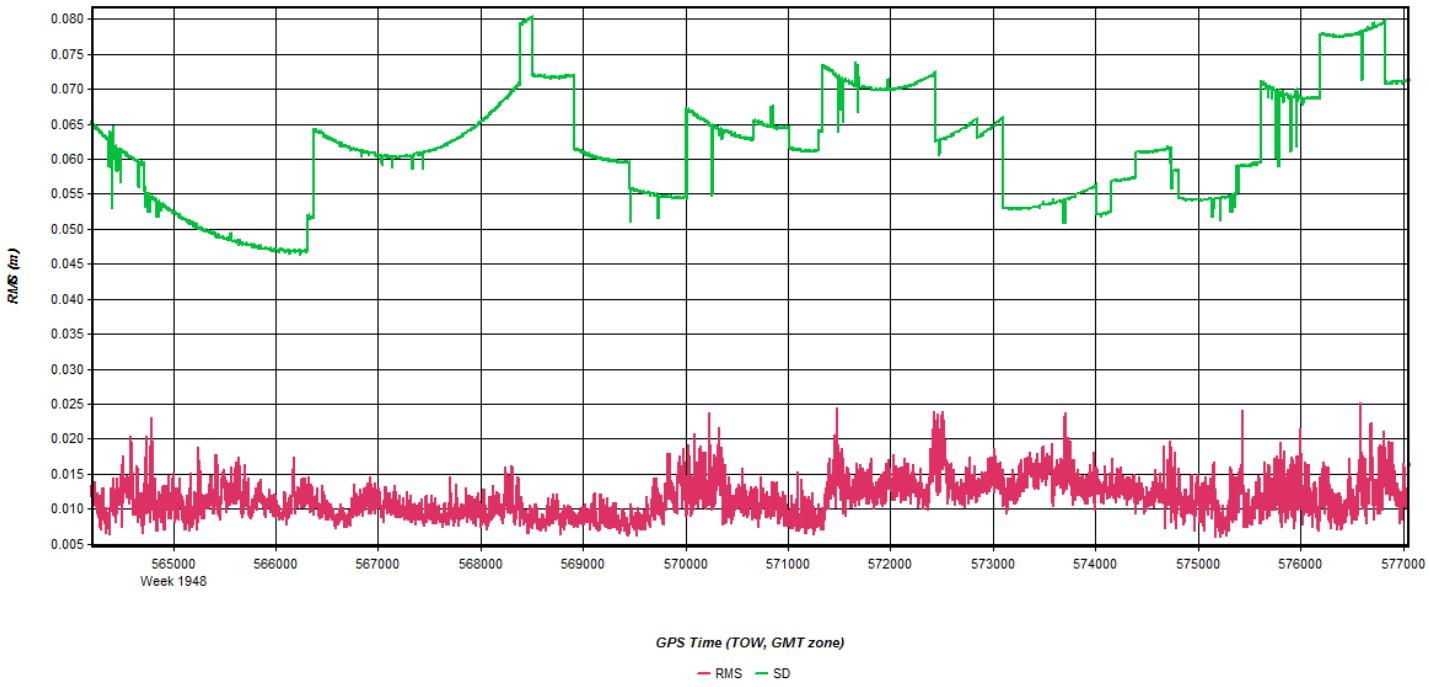
May 13, 2017-A (N916WC, SN8119)

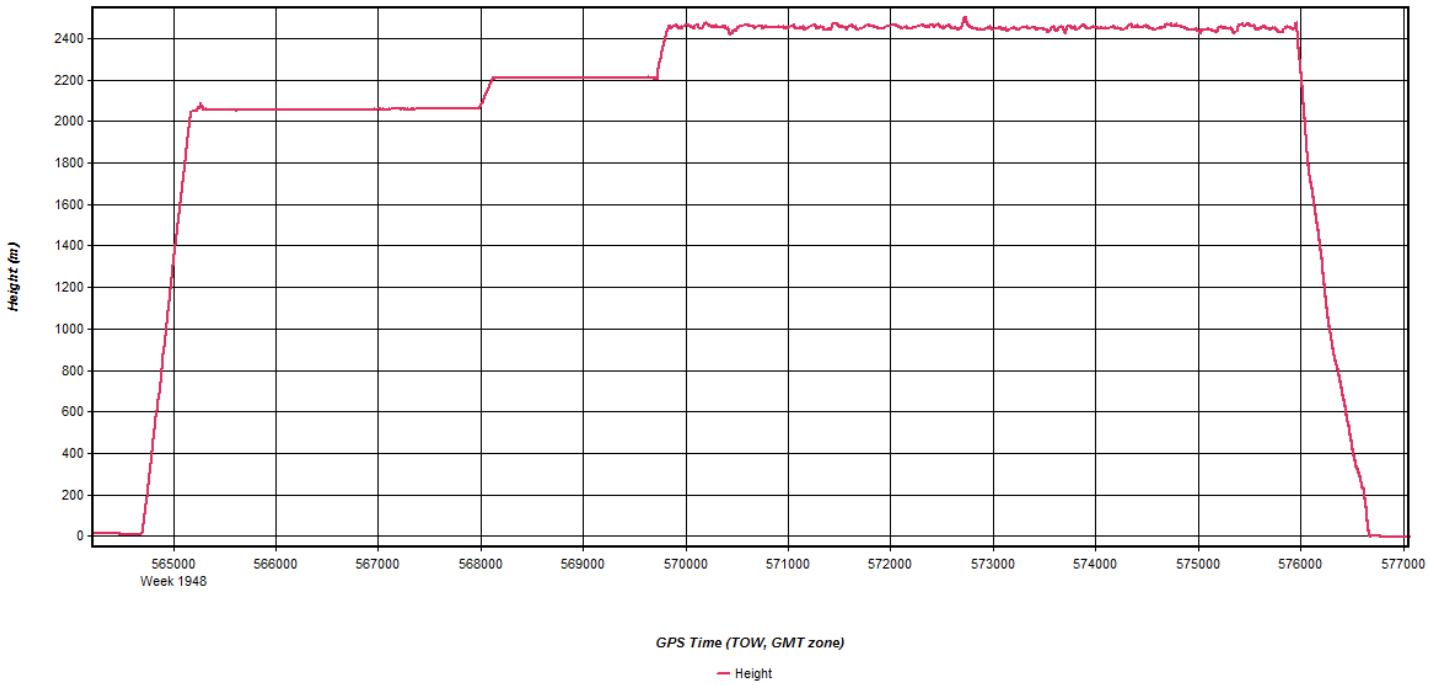

20 km

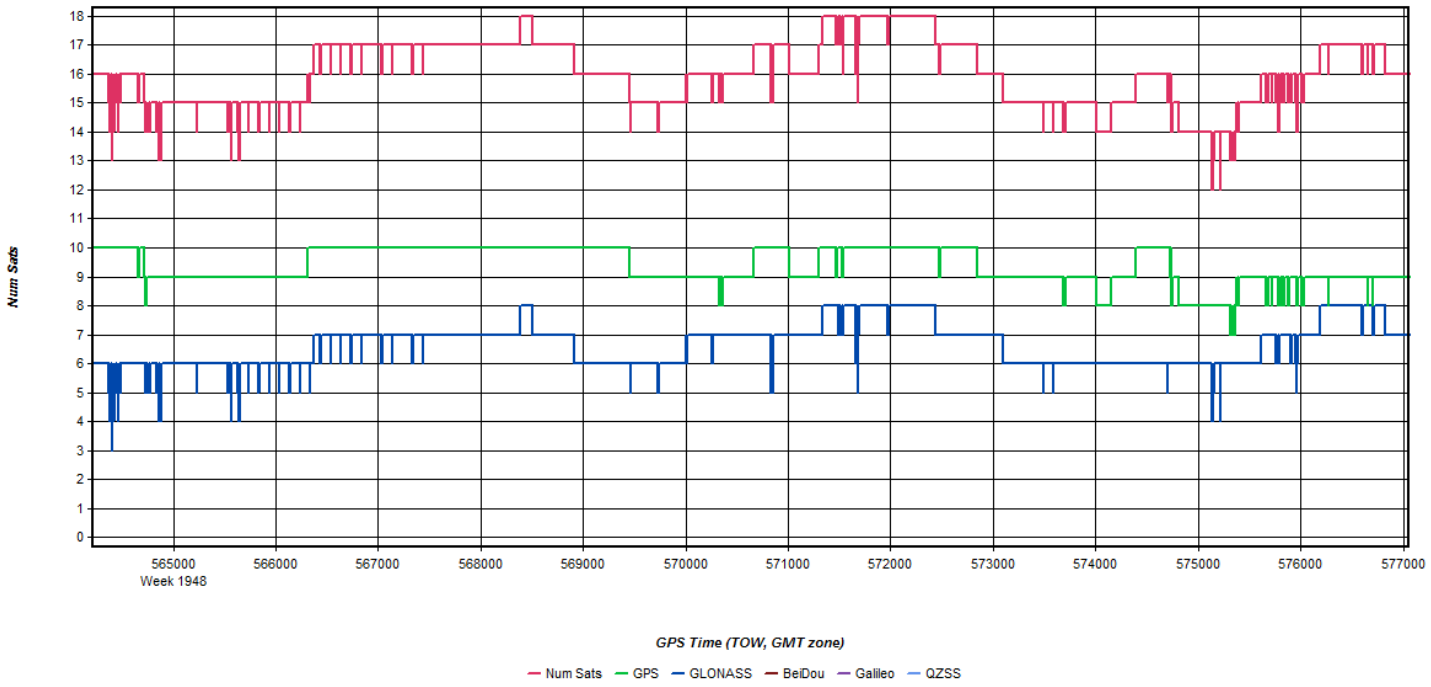

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
PDOP

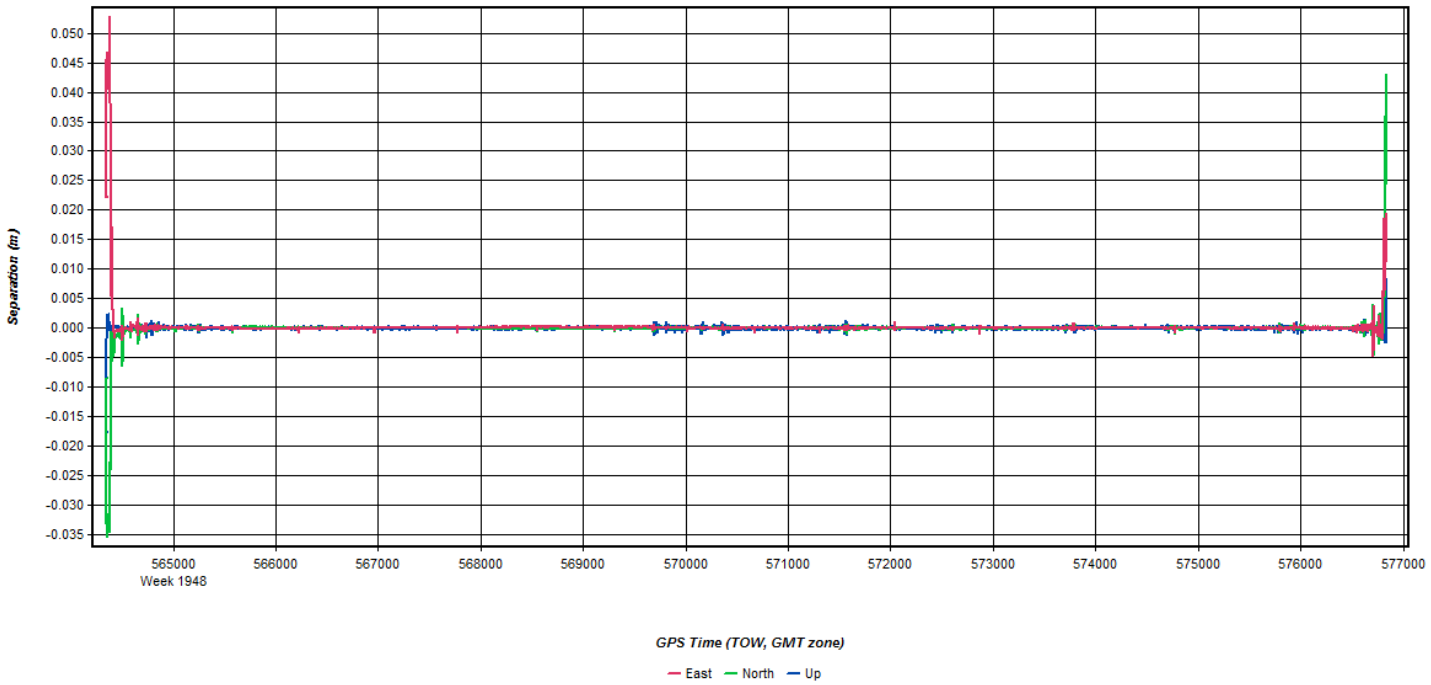

Status
2
1
0
-1
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

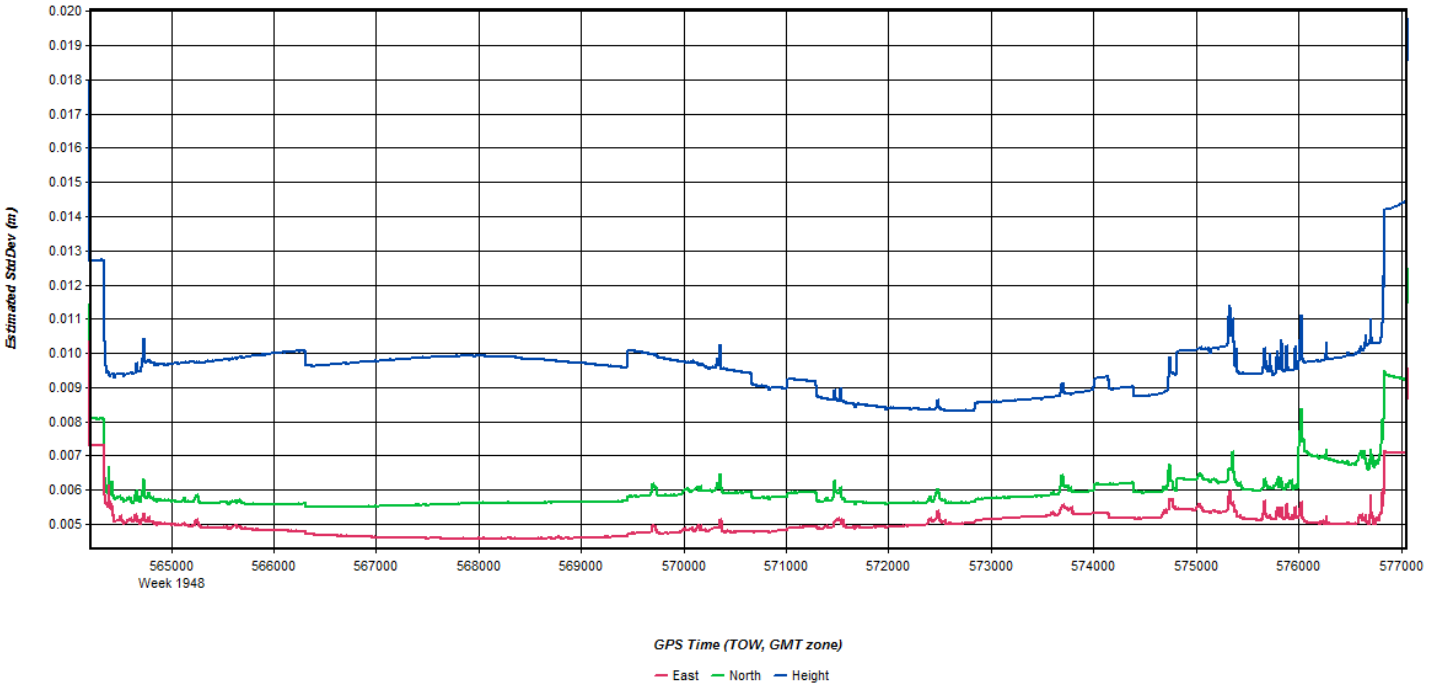

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
-25
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Roll
Pitch

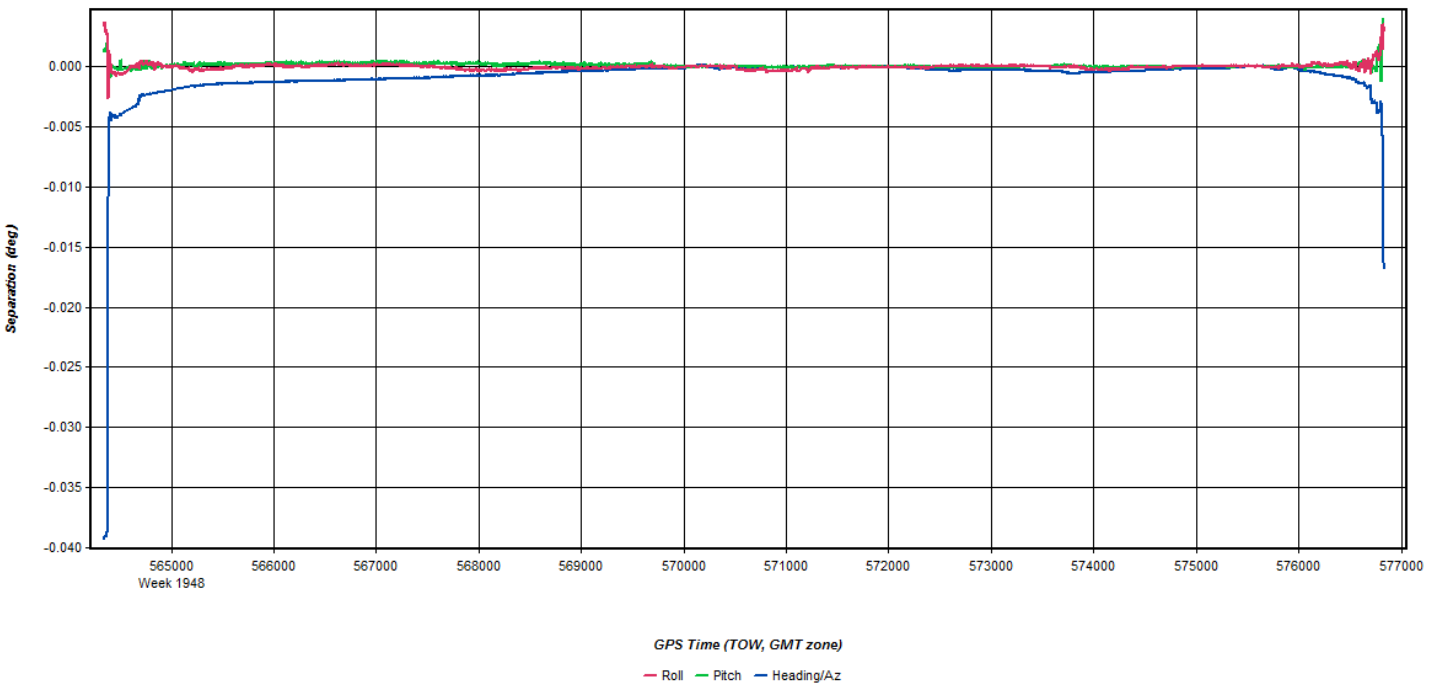

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
RMS
SD

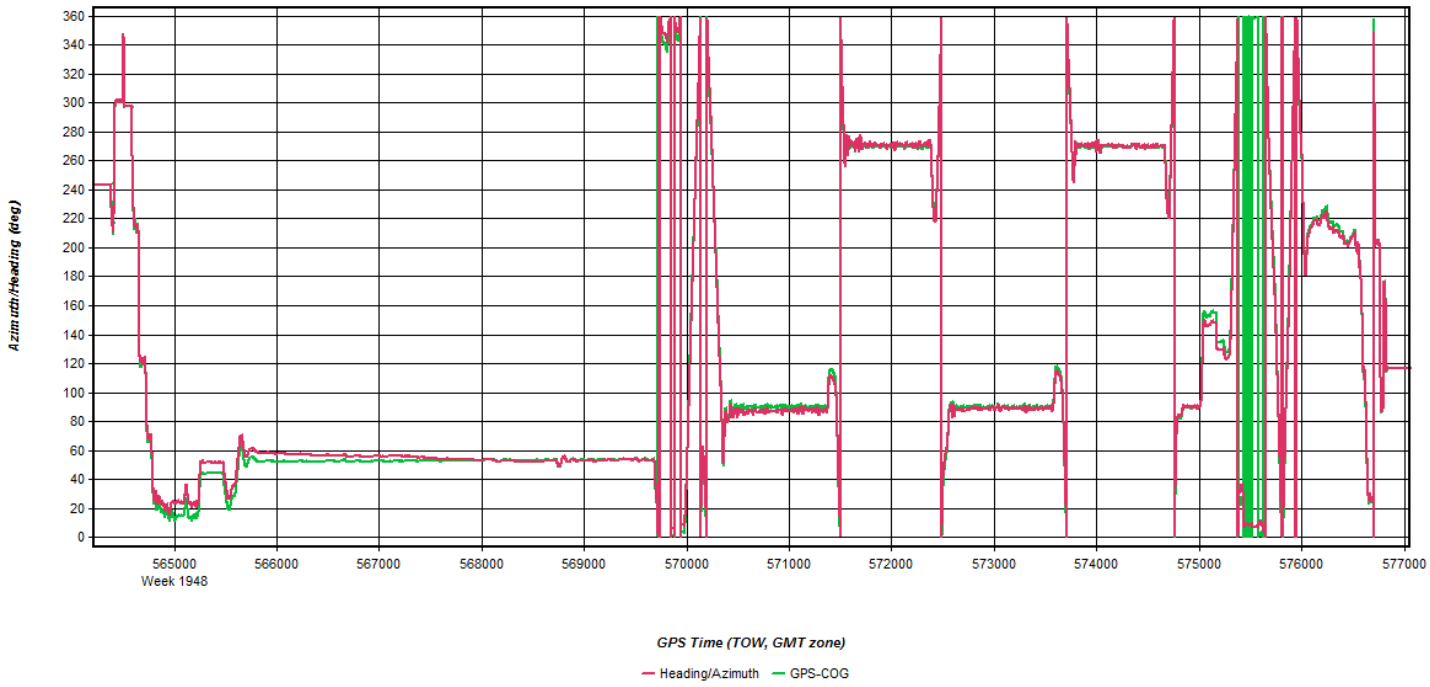

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

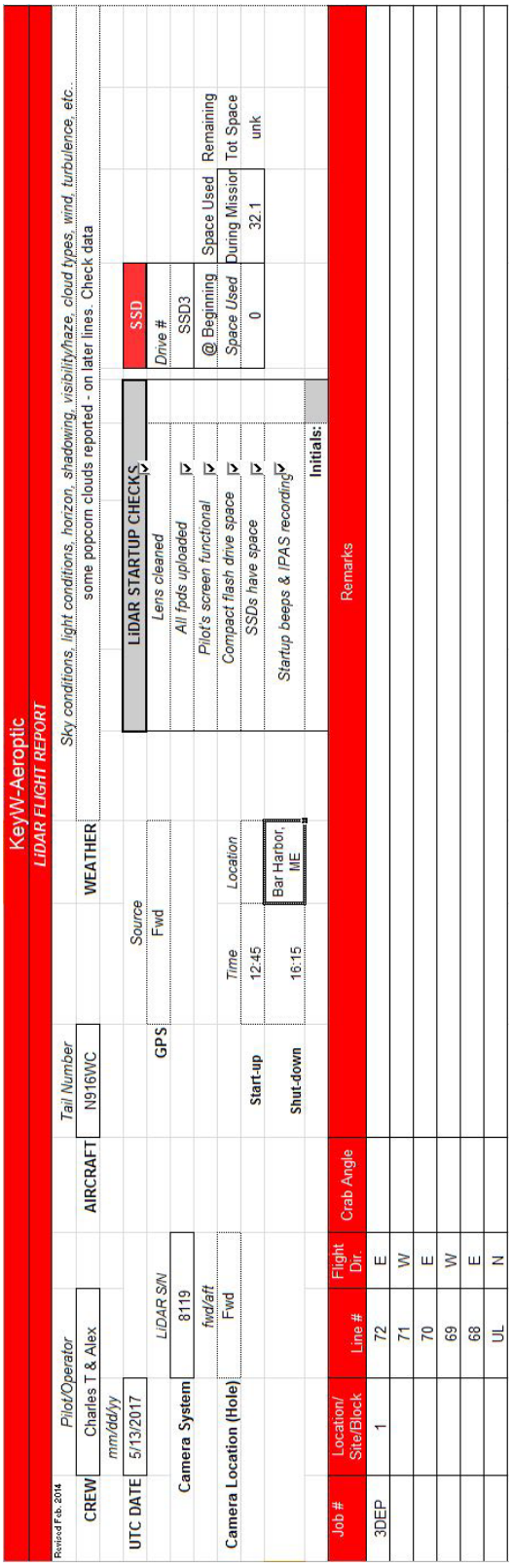

Separation (m)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
565000
Week 1948
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

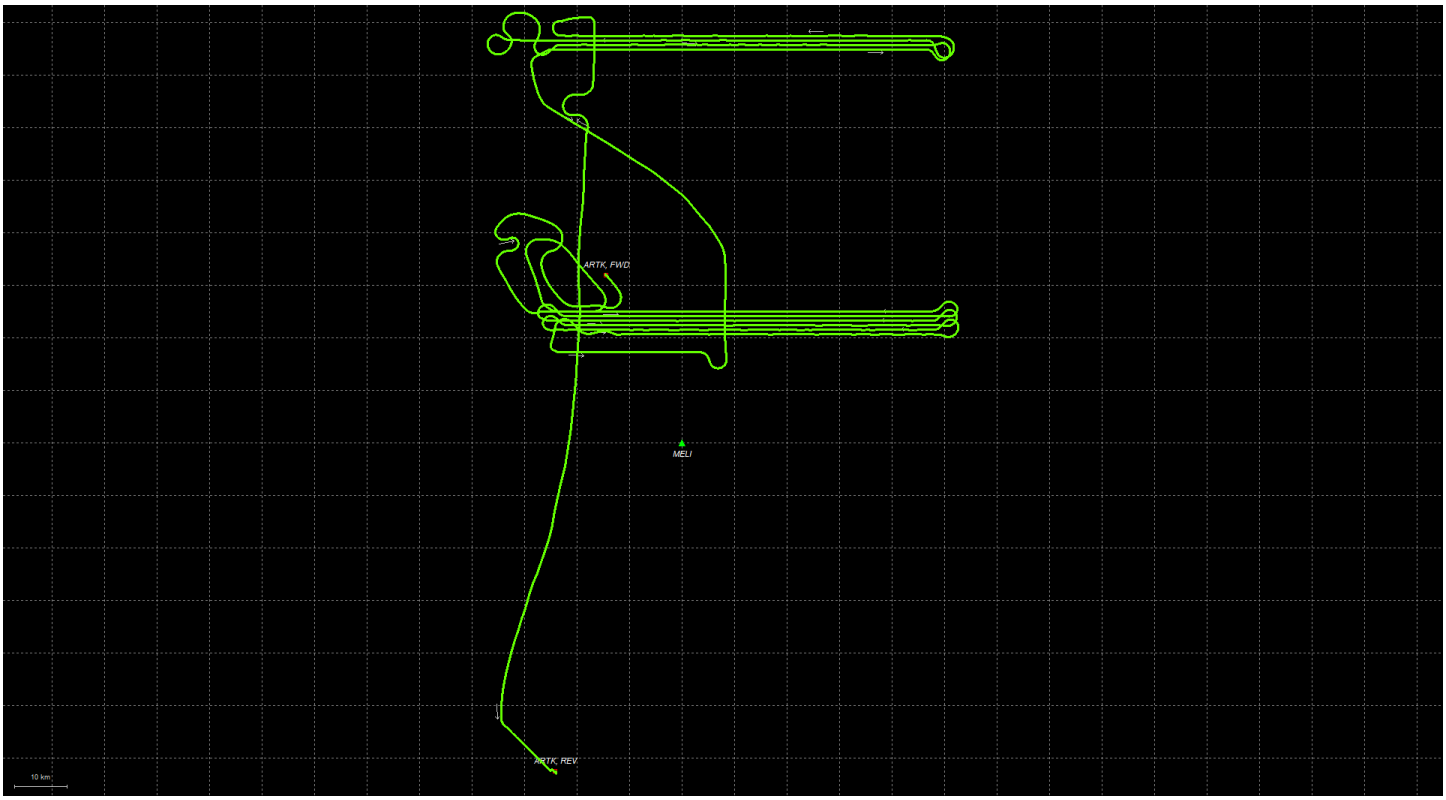


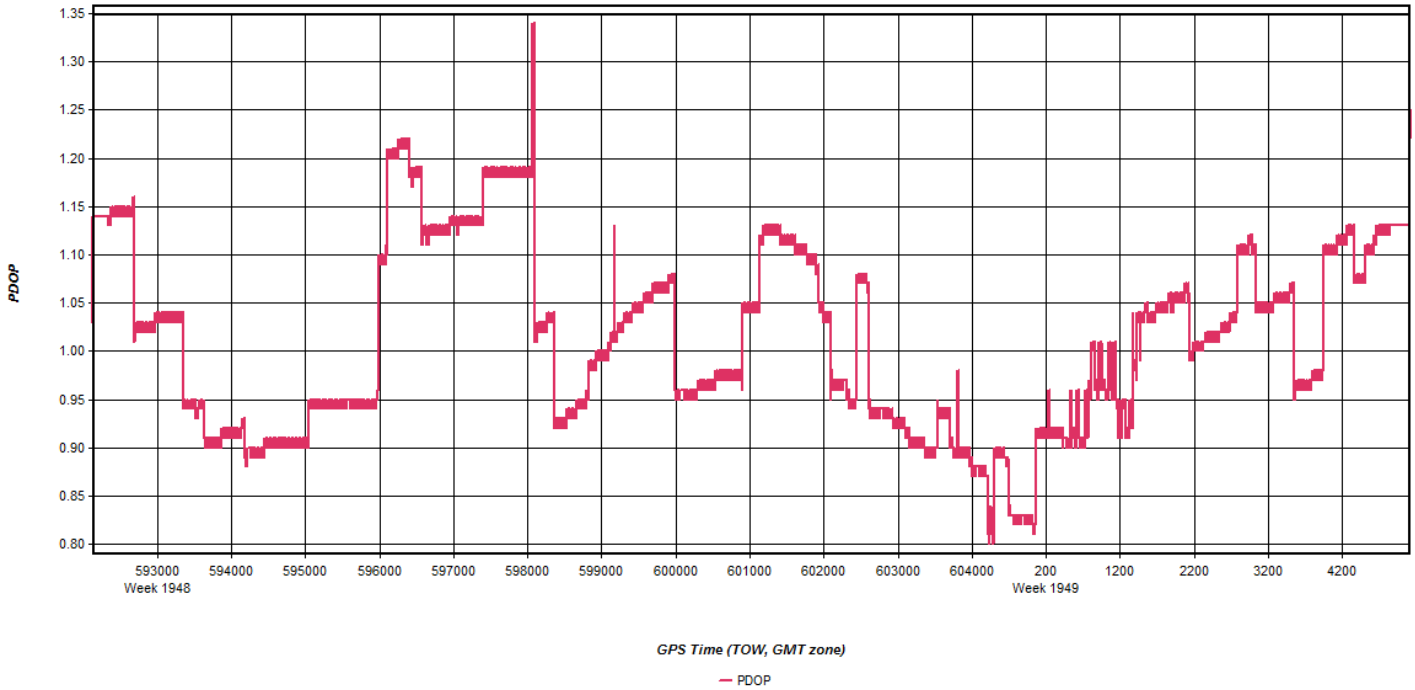
KeyW-Aeroptic
LIDAR FLIGHT REPORT

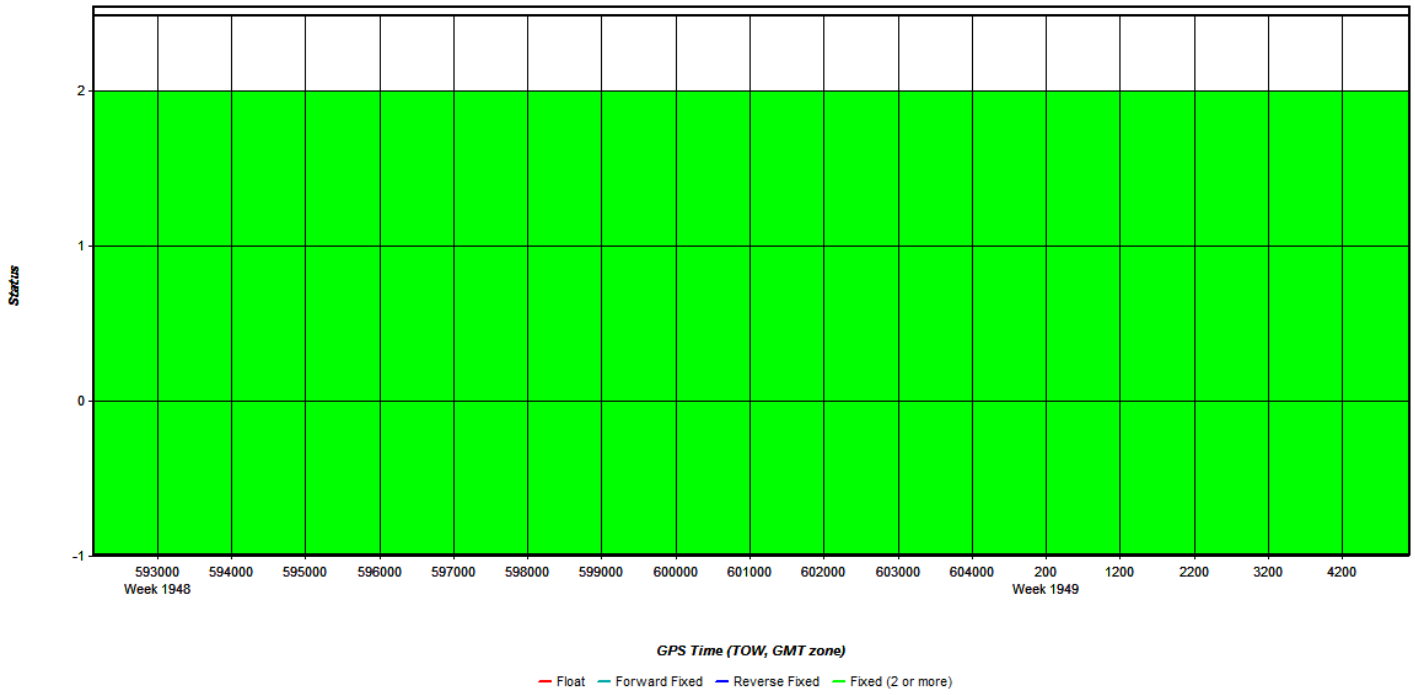
Revised Feb. 2014

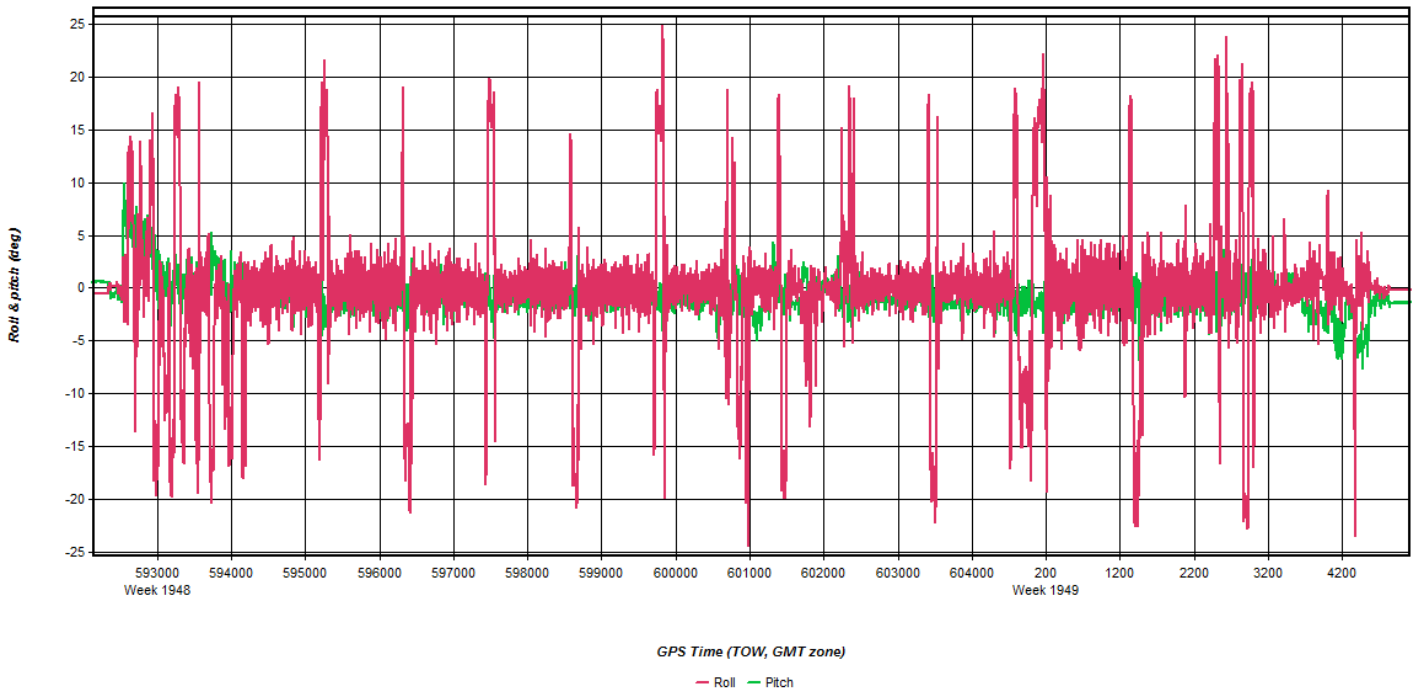
| | | |

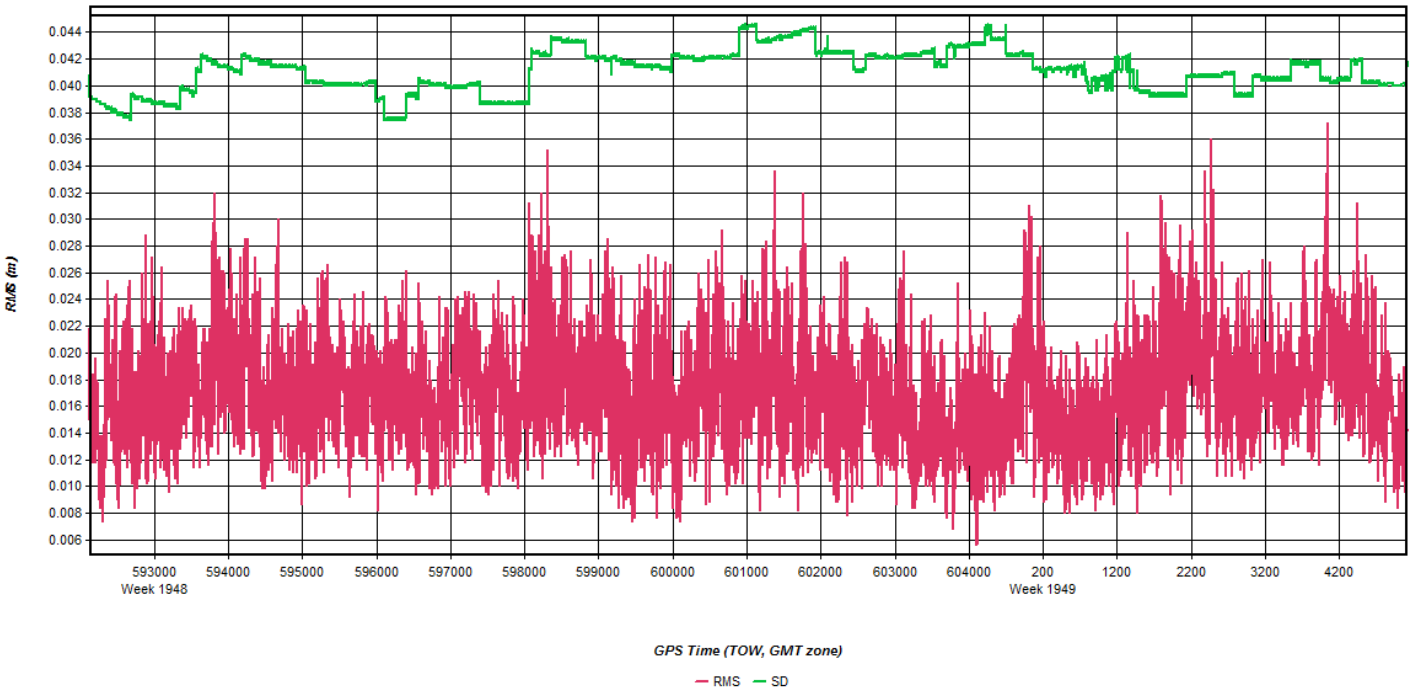
May 13, 2017-B (N262AS, SN7161)

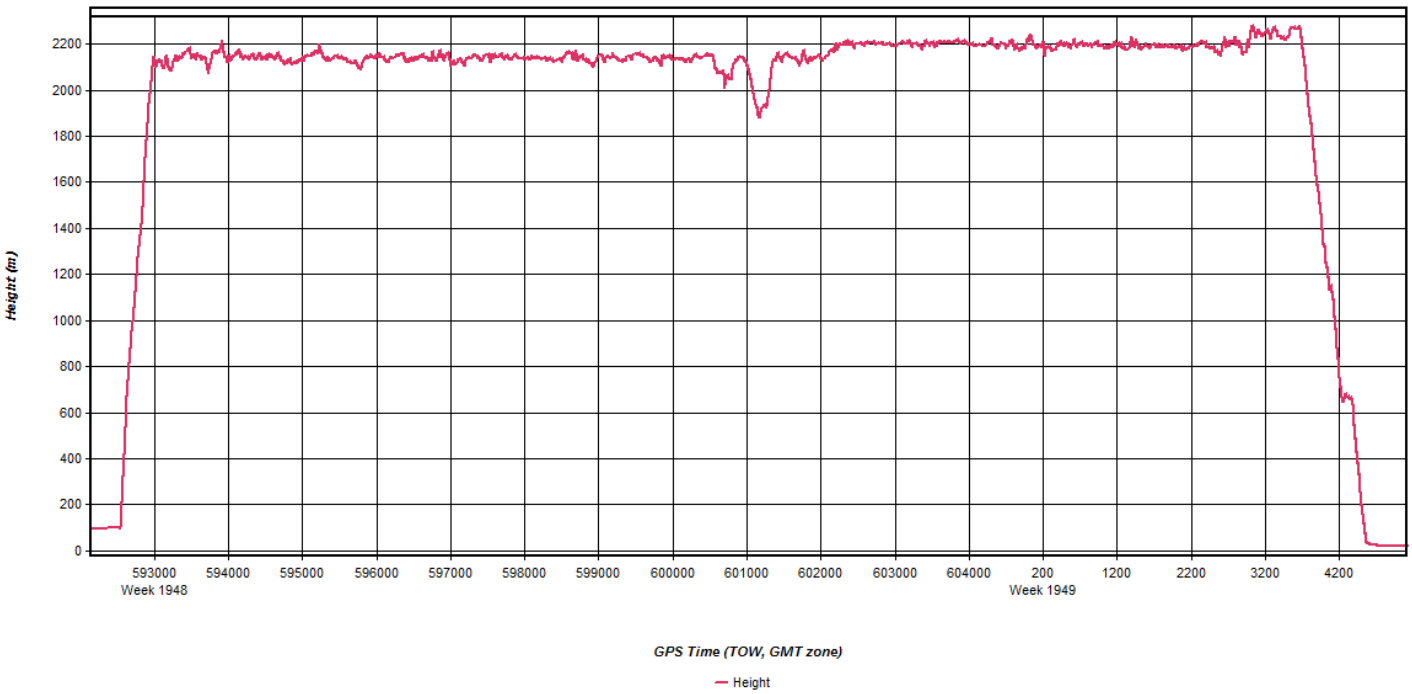

ARTK_FWD
MELI
ARTK_REV
10 km

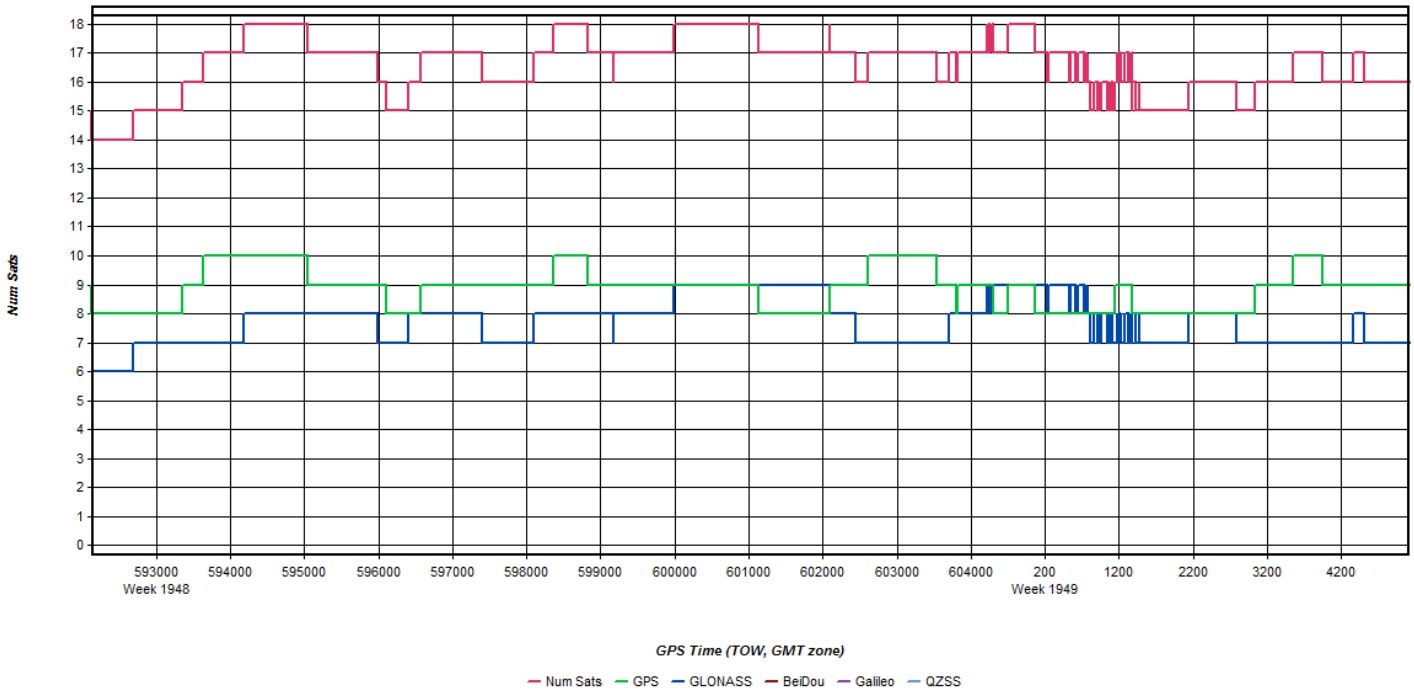

PDOP
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
PDOP

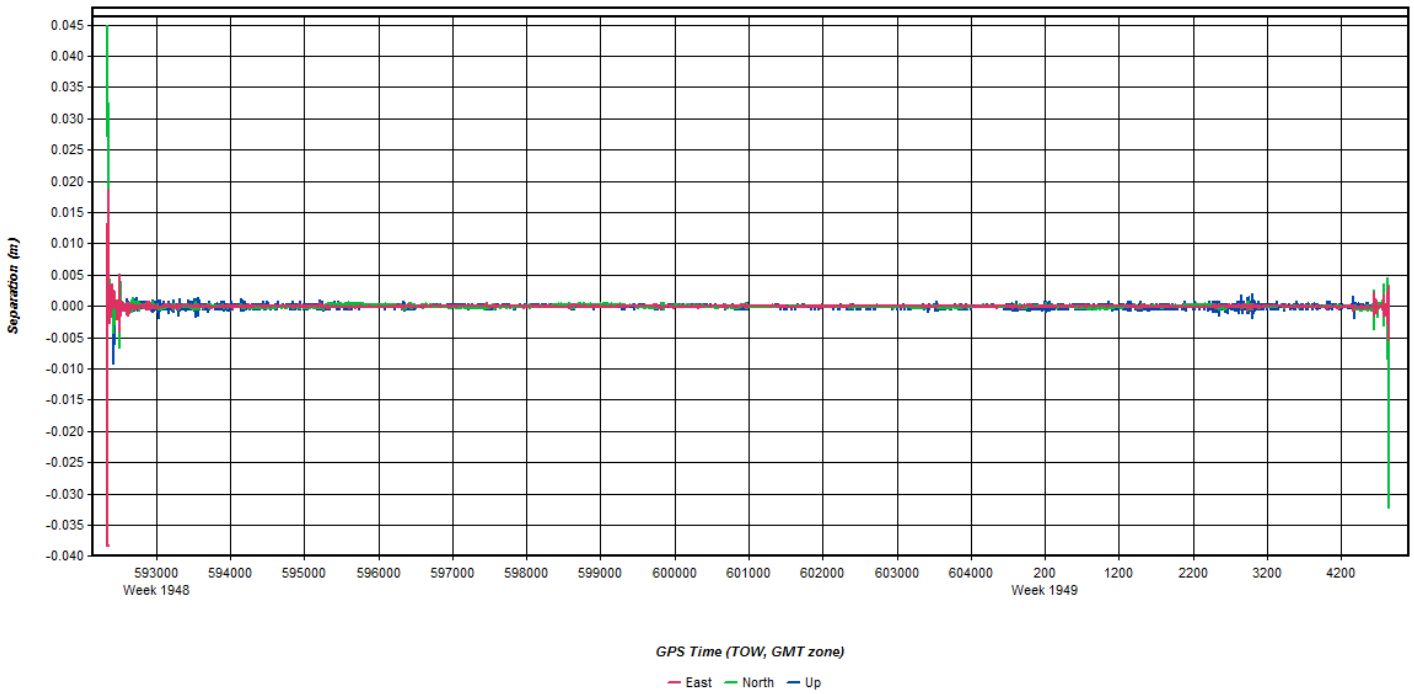

Status
2
1
0
-1
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

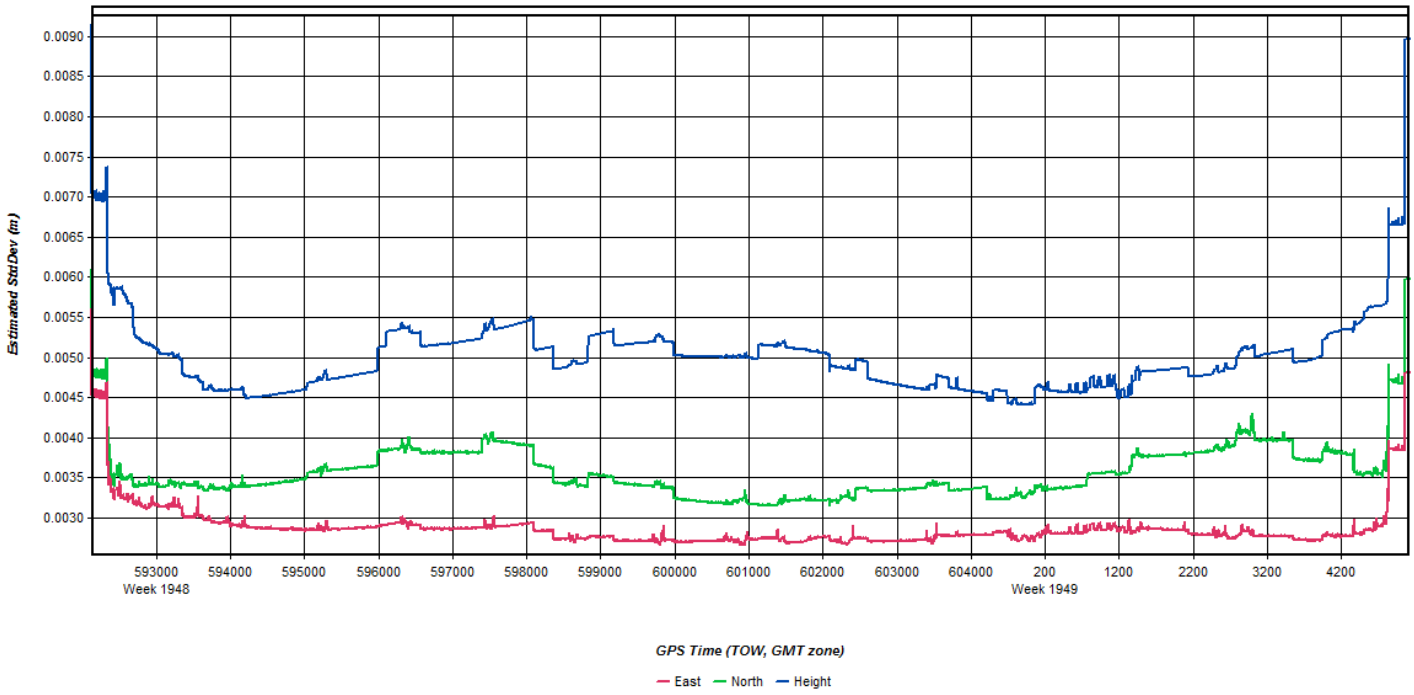

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Roll
Pitch

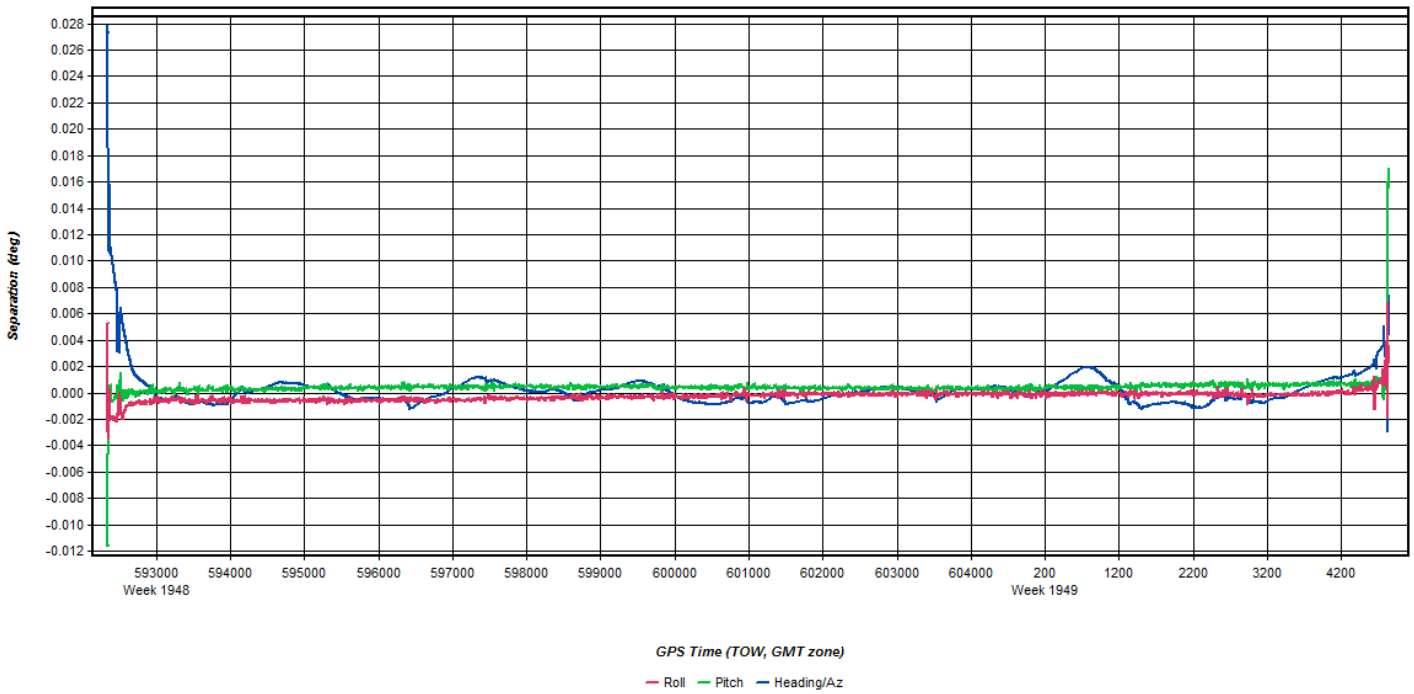

RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
RMS
SD

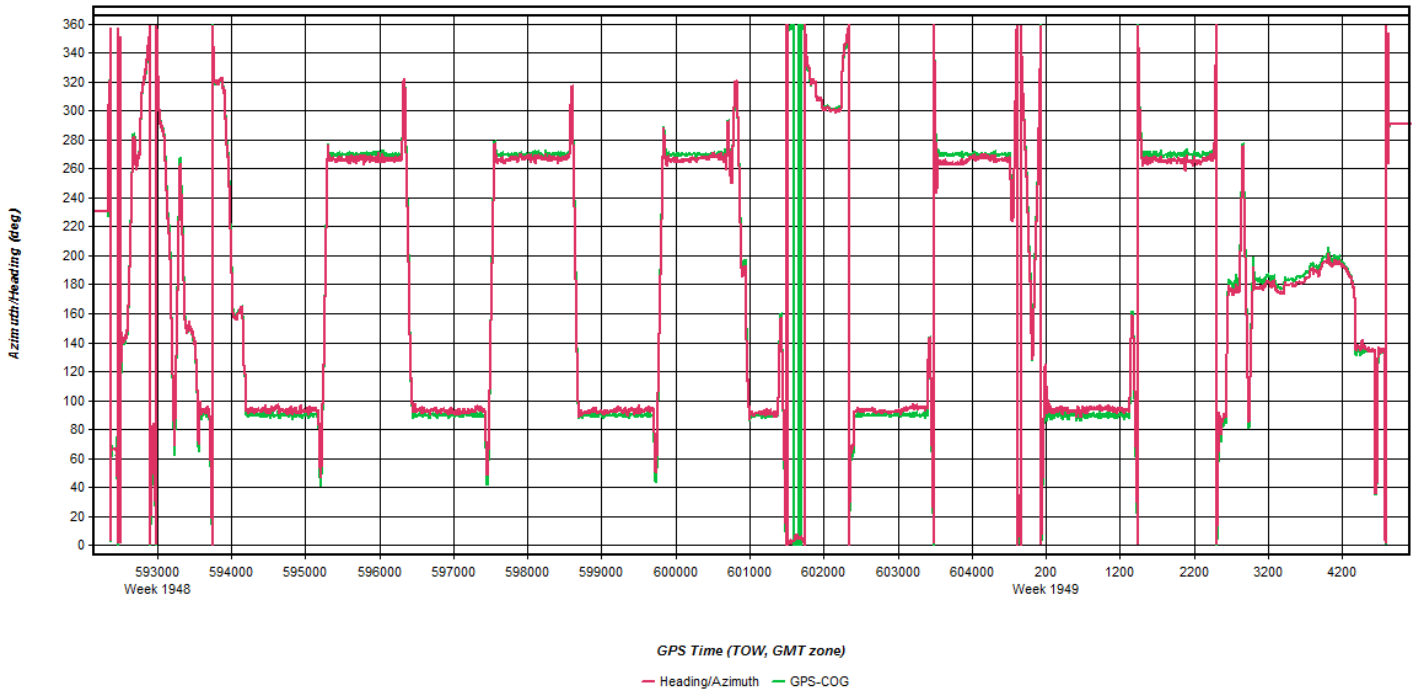

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Height

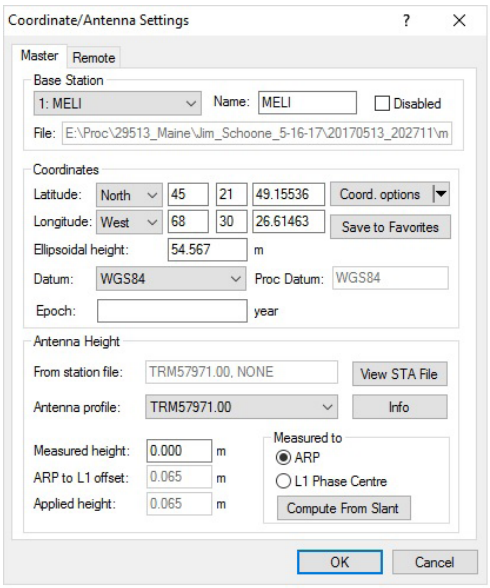

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
East
North
Height

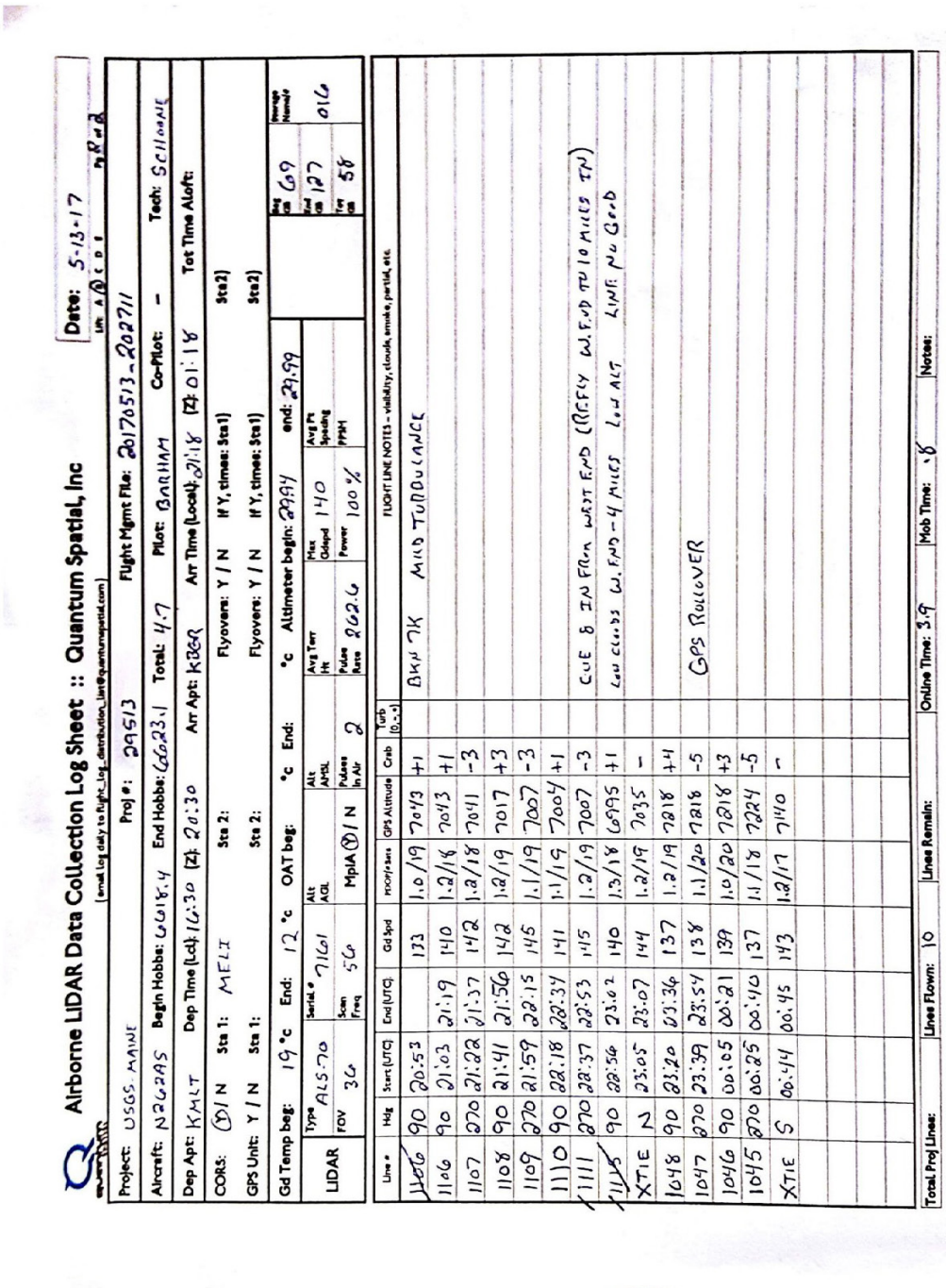

Separation (deg)
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
593000
Week 1948
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1949
1200
2200
3200
4200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-16-17\20170513_202711\m
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LIDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-13-17

Project: USGS MAINE Proj #: 29513 Flight Mgmt File: 20170513_202711

Aircraft: N2602AS Begin Hobbs: 6018.4 End Hobbs: 6023.1 Total: 4.7 Pilots: BARTRAM Co-Pilot: - Tech: SELLMAN

Dep Apt: KHLT Dep Time (Lcl): 16:30 (Z): 20:30 Arr Apt: KBGR Arr Time (Local): 21:18 (Z): 01:18 Tot Time Aloft:

CORS: (Y) N Sta 1: MELT Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Units: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

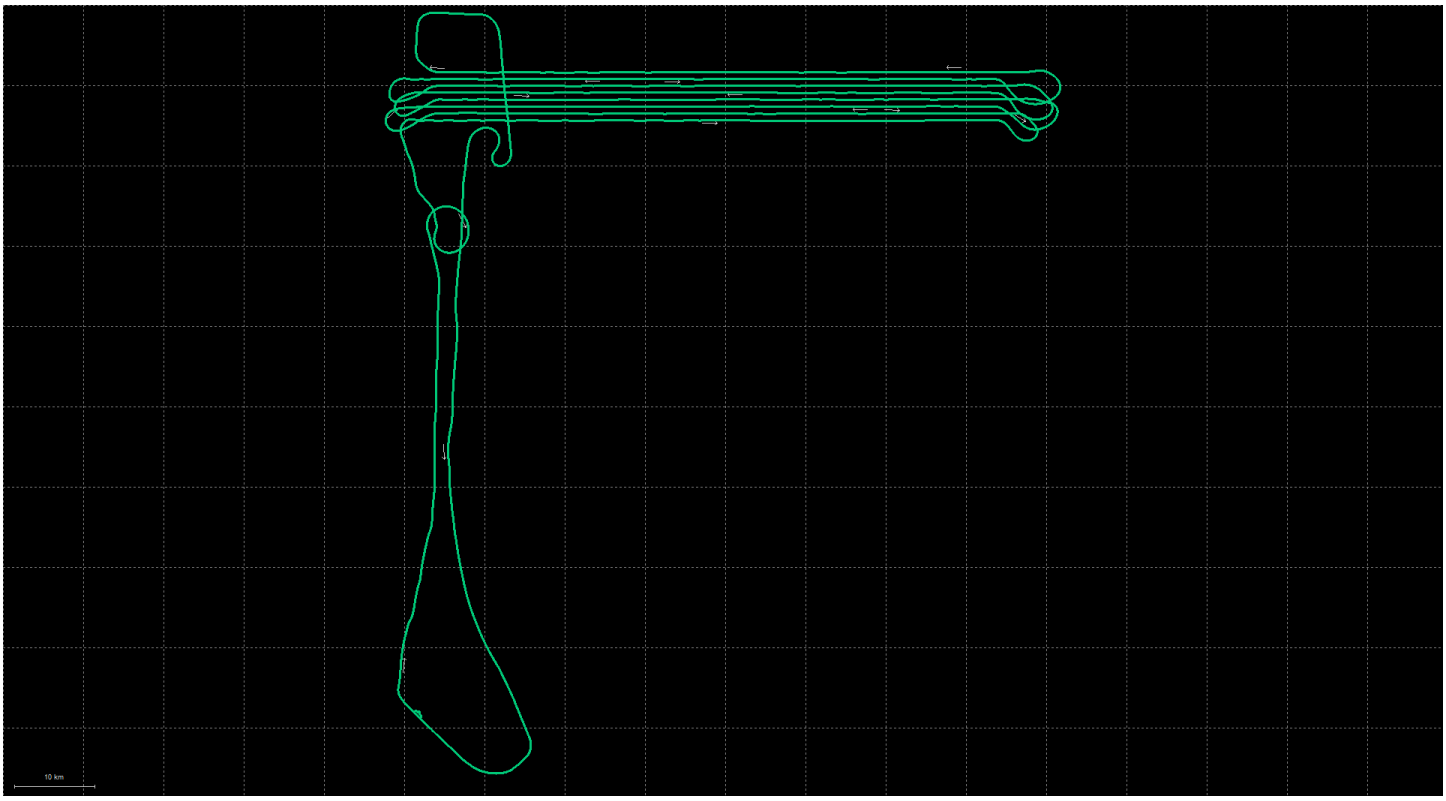
Gd Temp beg: 19 °c End: 12 °c OAT beg: °c End: °c Altimeter begin: 29.91 end: 29.99

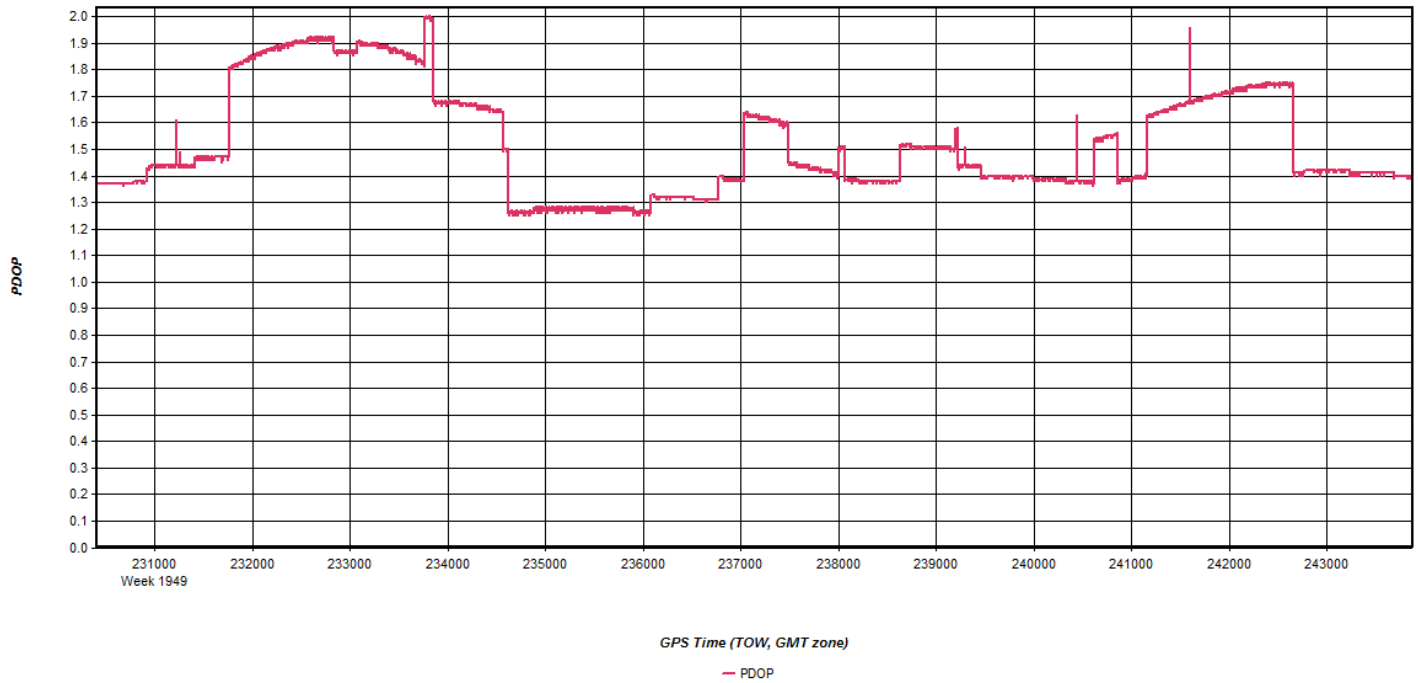
LIDAR	Type	ALS70	Serial #	7161	Alt AGL	Alt AMSL	Avg Terr Ht	Max Oper Power	140	Avg Pt Spacing	Img # Beg	69	Image Numbers
	FOV	36	Scan Freq	56	MpIA (Y) / N	Pulses In Air	Pulse Rate		100 %	PPM	End	127	016
							262.6				Tot	58	

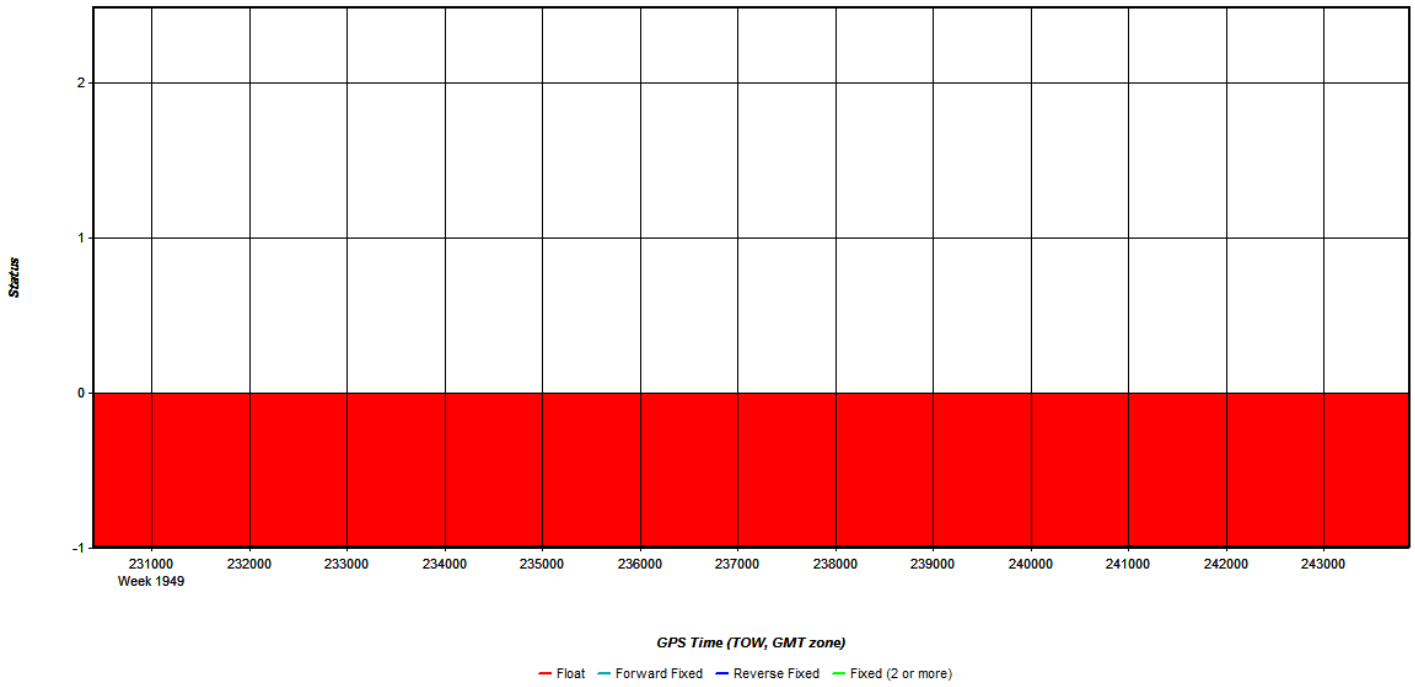
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	Alt AGL	GPS Altitude	Crab	Turb (0..5)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
1005	90	20:53		133	1.0/19	7043	+1		BKN 7K MILD TURBULANCE
1006	90	21:03	21:19	140	1.2/18	7043	+1		
1007	270	21:22	21:37	142	1.2/18	7041	-3		
1008	90	21:41	21:56	142	1.2/19	7017	+3		
1009	270	21:59	22:15	145	1.1/19	7007	-3		
1110	90	22:18	22:34	141	1.1/19	7004	+1		
1111	270	22:37	22:53	145	1.2/19	7007	-3		CUE & IN FROM WEST END (MCFLY W.END TO 10 MILES TP)
1105	90	22:56	23:02	140	1.3/18	6995	+1		LOW CLOUDS W.END - 4 MILES LOW ALT LIMIT: NO GPS
XTIE	N	23:05	23:07	144	1.2/19	7035	-		
1048	90	23:20	23:36	137	1.2/19	7018	+1		
1047	270	23:39	23:54	138	1.1/20	7016	-5		GPS ROLLOVER
1046	90	00:05	00:21	139	1.0/20	7018	+3		
1045	270	00:26	00:40	137	1.1/18	7024	-5		
XTIE	S	00:44	00:45	143	1.2/17	7040	-		

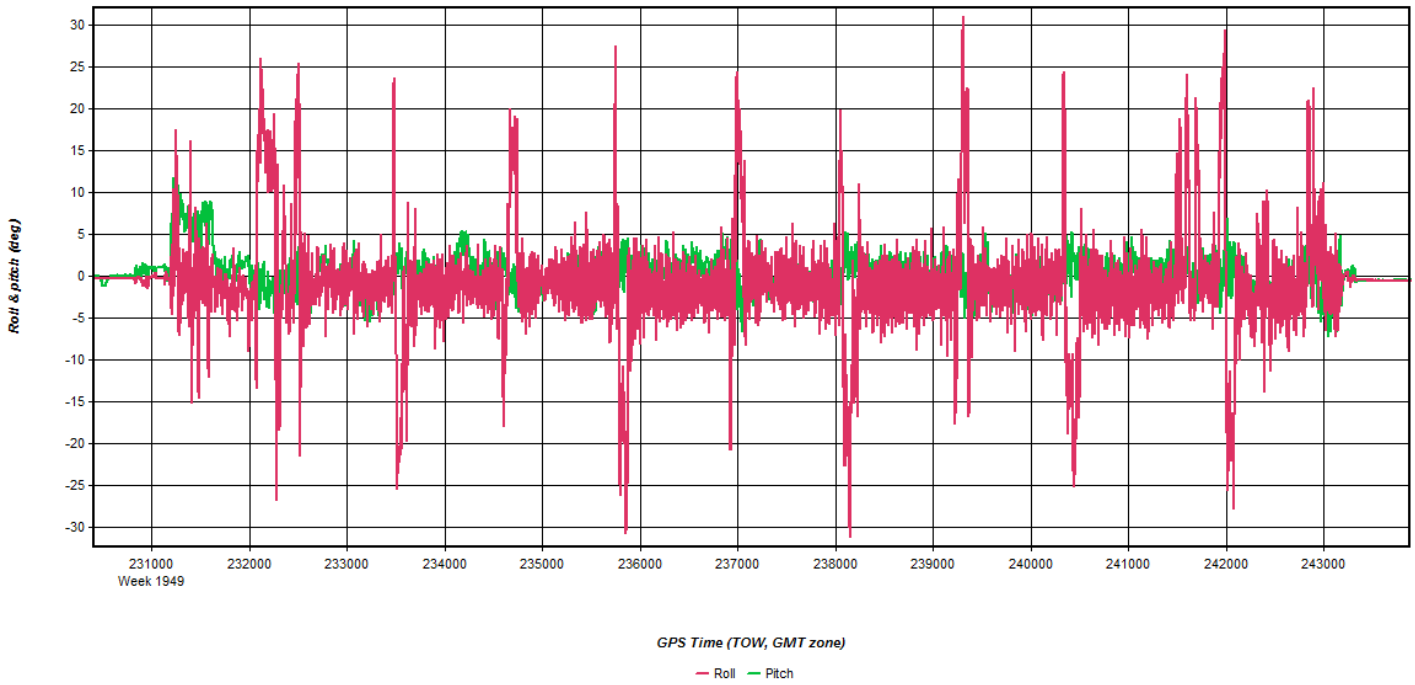
Total Proj Lines: Lines Flown: 10 Lines Remain: Online Time: 3.9 Mob Time: .8 Notes:

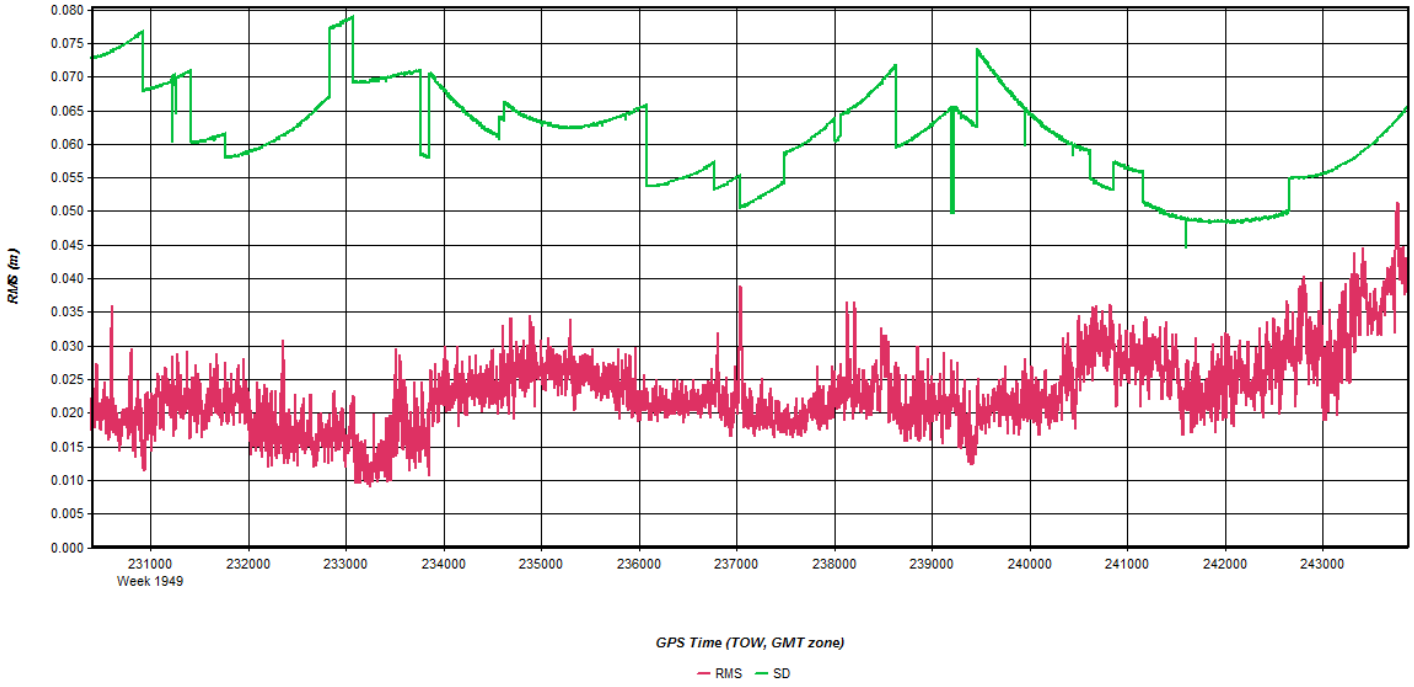
May 16, 2017-A (N73TM, SN7178)

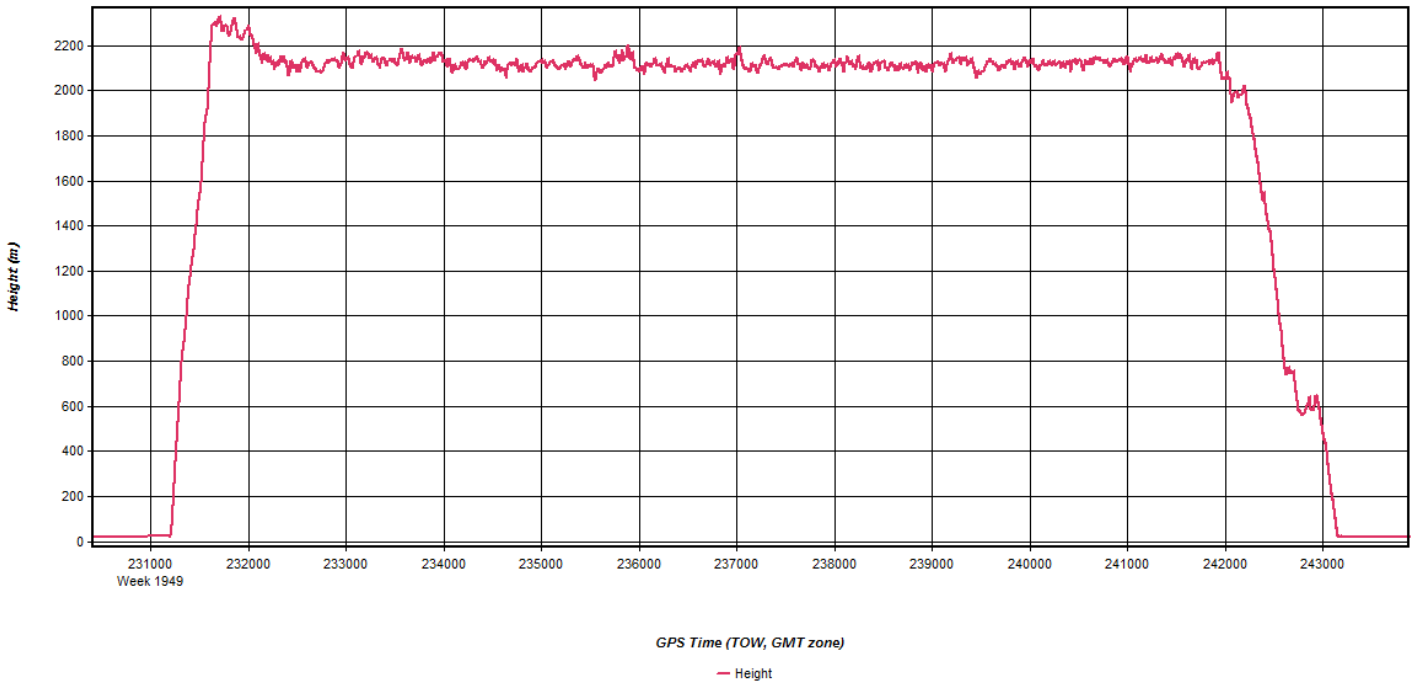

10 km

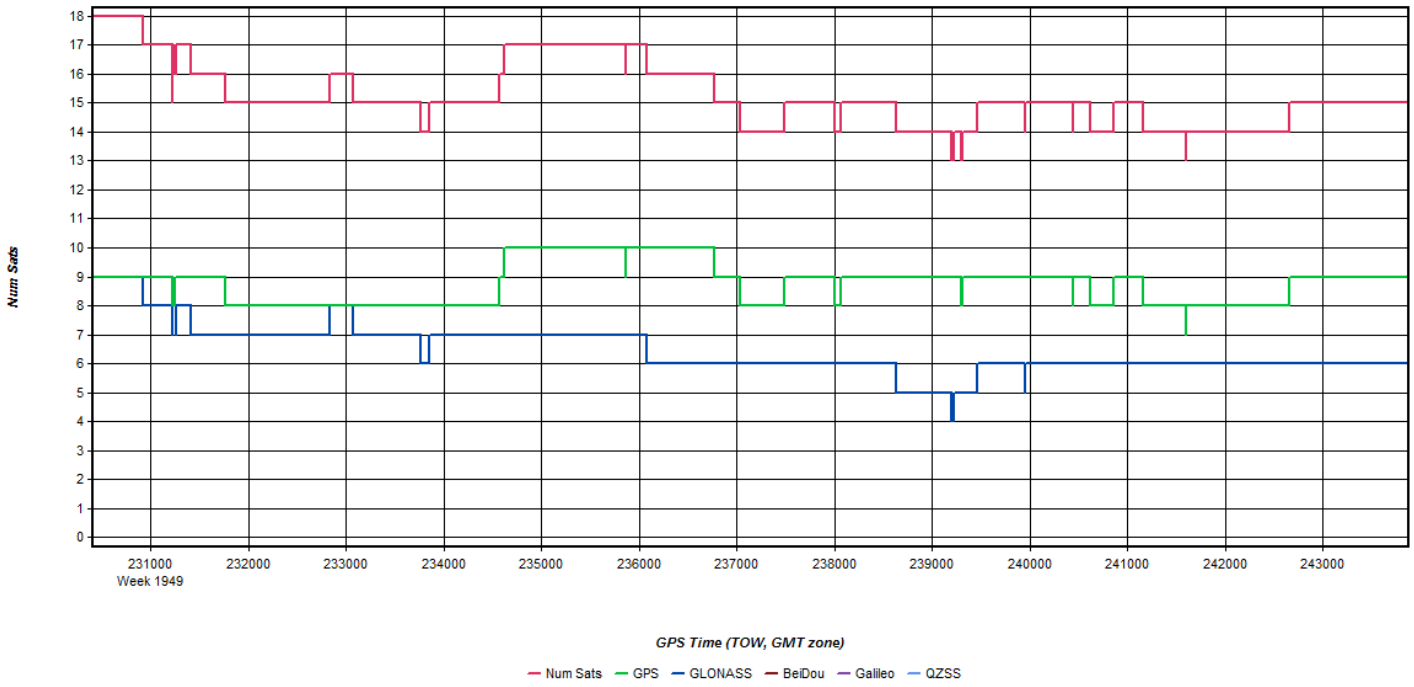

PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
PDOP

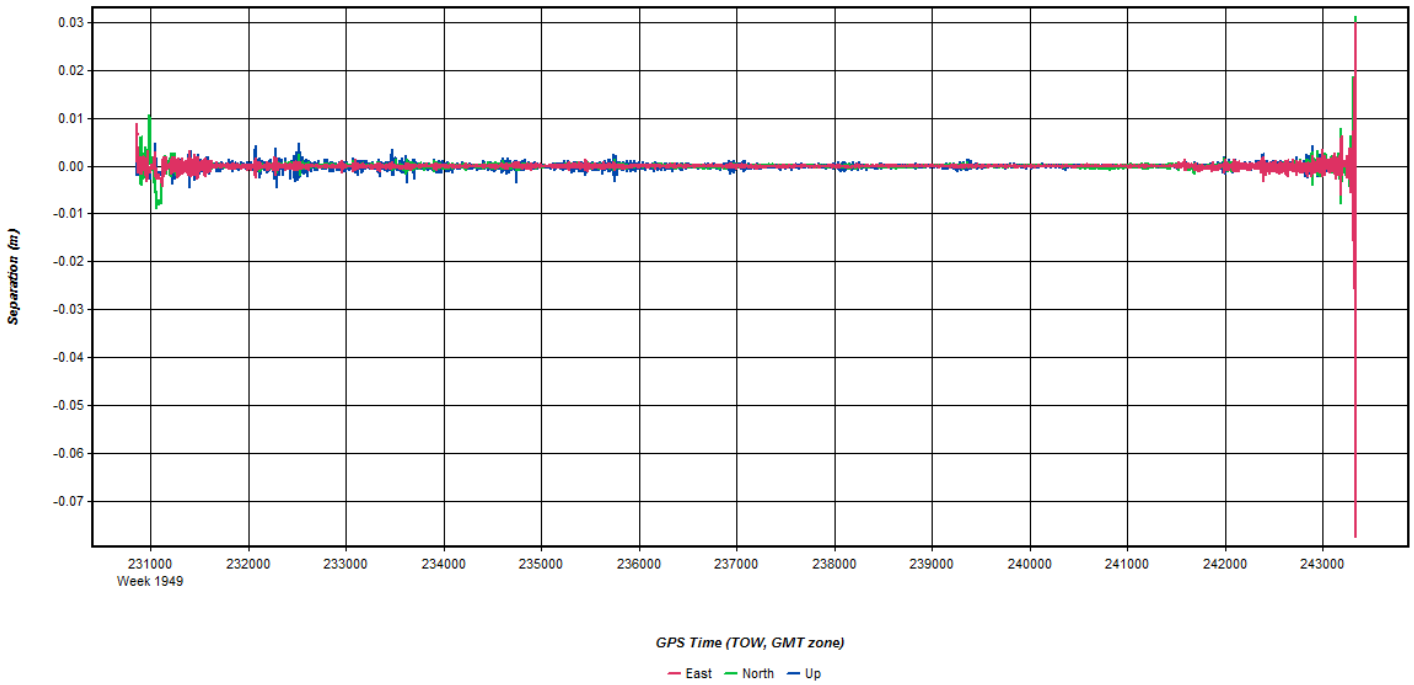

Status
2
1
0
-1
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

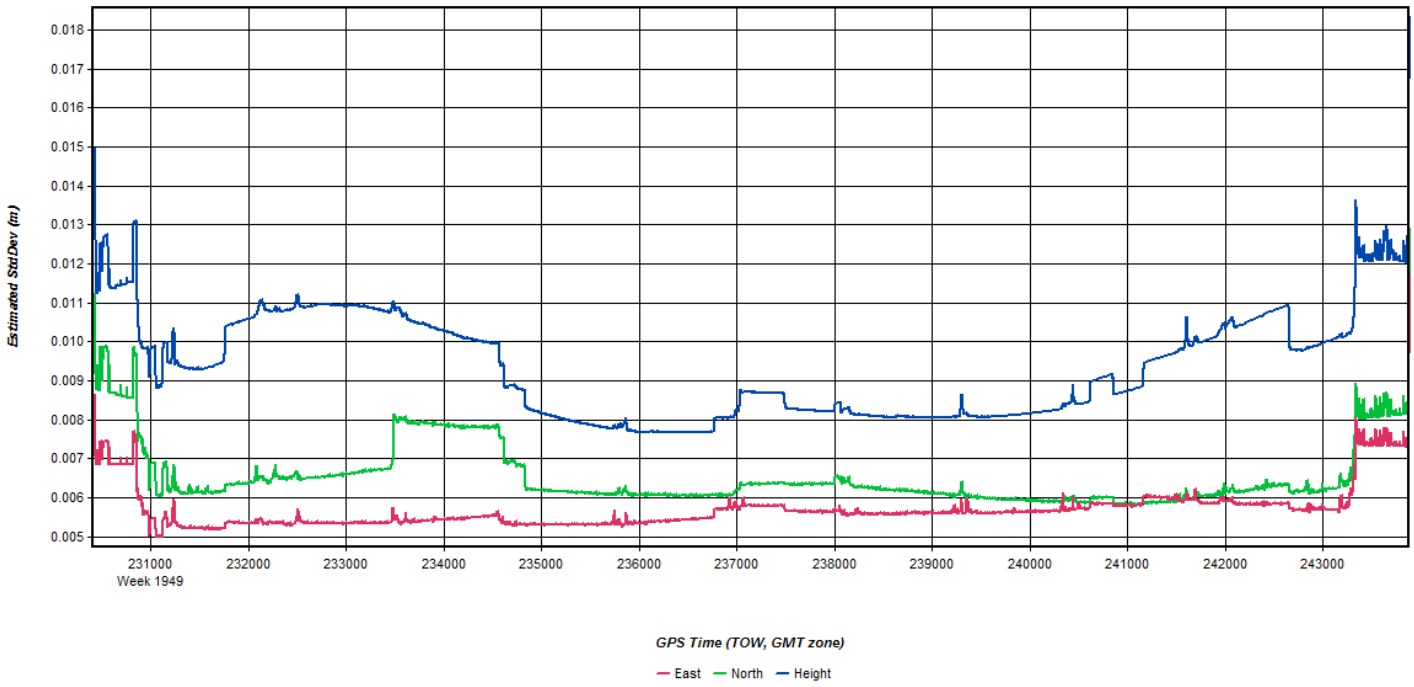

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Roll
Pitch

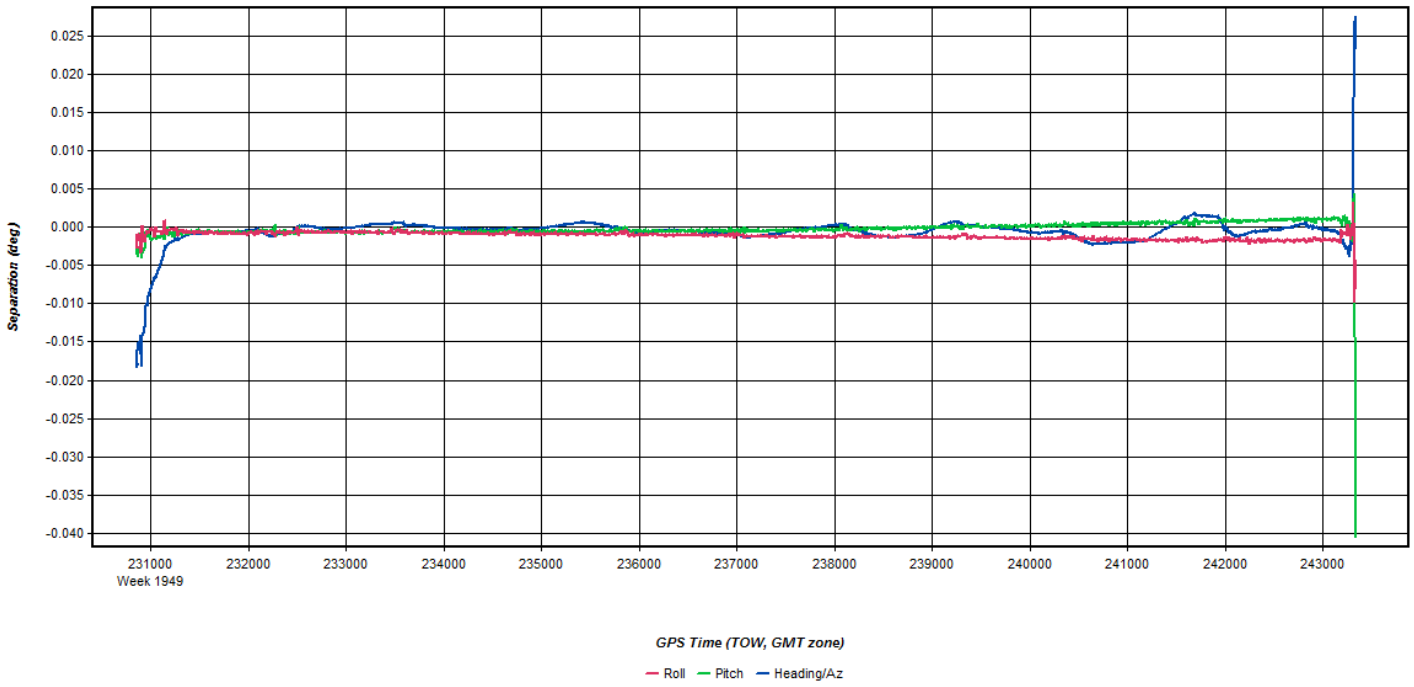

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
RMS
SD

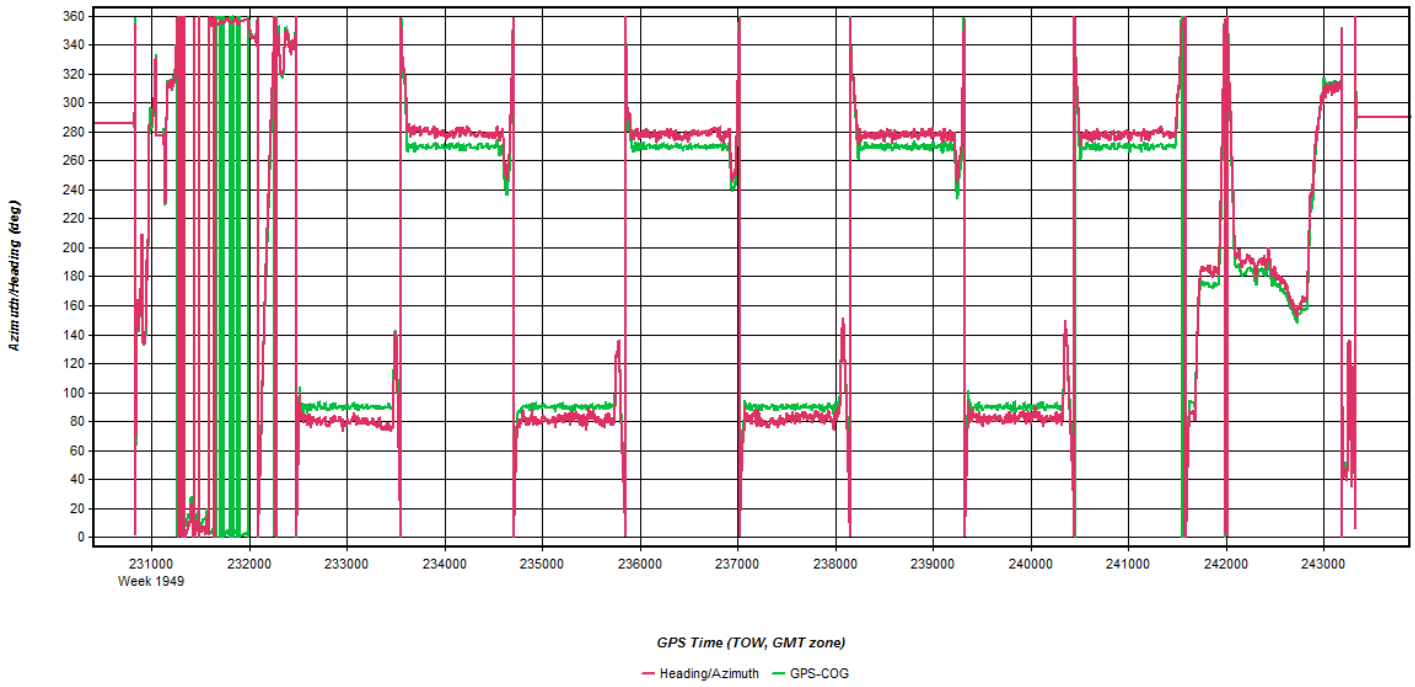

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

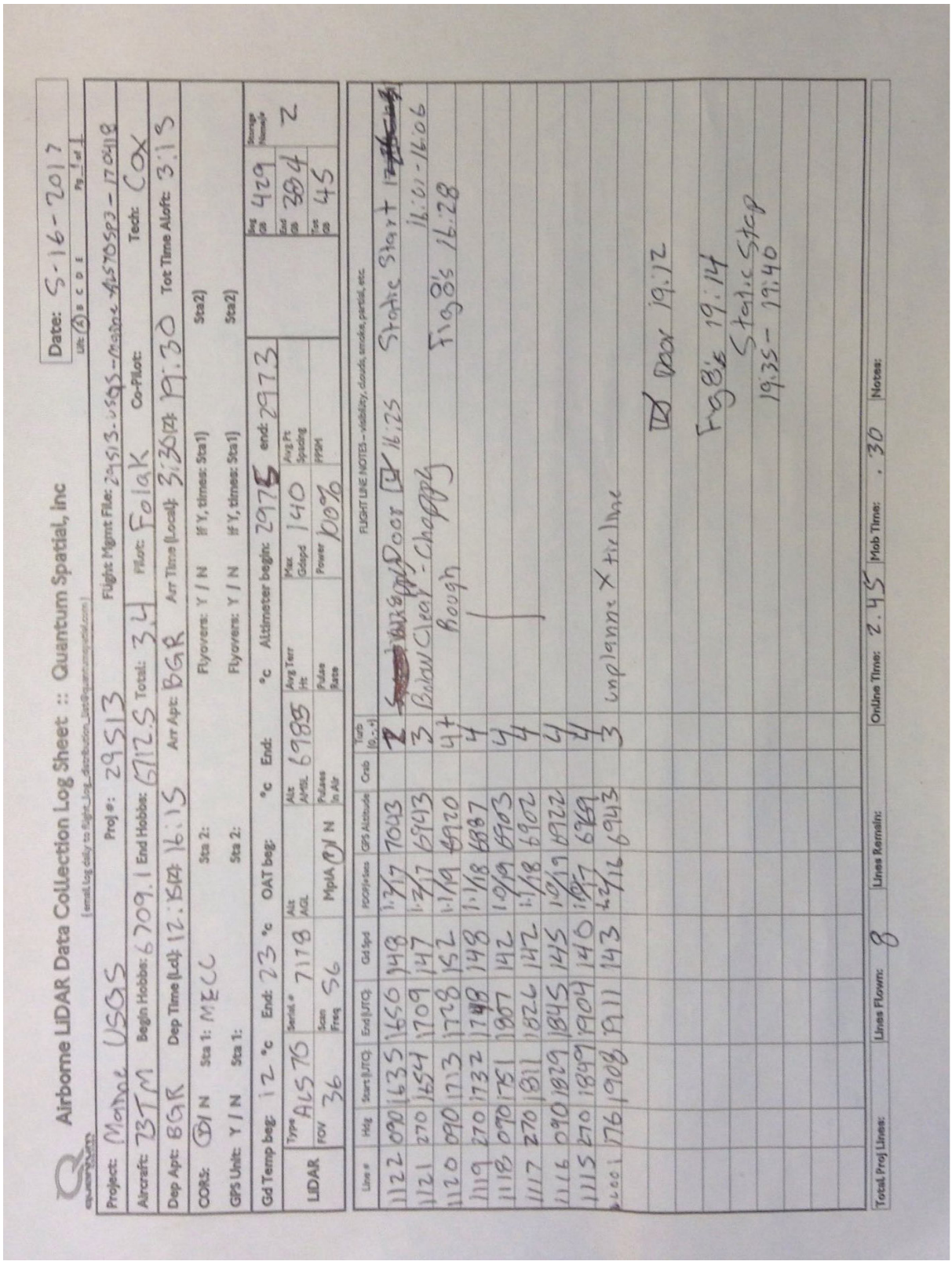

Separation (m)
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
231000
Week 1949
232000
233000
234000
235000
236000
237000
238000
239000
240000
241000
242000
243000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-16-2017

Project: Maine USGS Proj #: 29513 Flight Mgmt File: 29513-USGS-Maine-MS70523-170418

Aircraft: B3TM Begin Hobbs: 6709.1 End Hobbs: 6712.5 Total: 3.4 Pilot: Folak Co-Pilot: Tech: COX

Dep Apt: BGR Dep Time (Lat): 12:15 (EDT) 16:15 Arr Apt: BGR Arr Time (Local): 3:30PM 19:30 Tot Time Aloft: 3:15

CORS: Y / N Sta 1: MECC Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

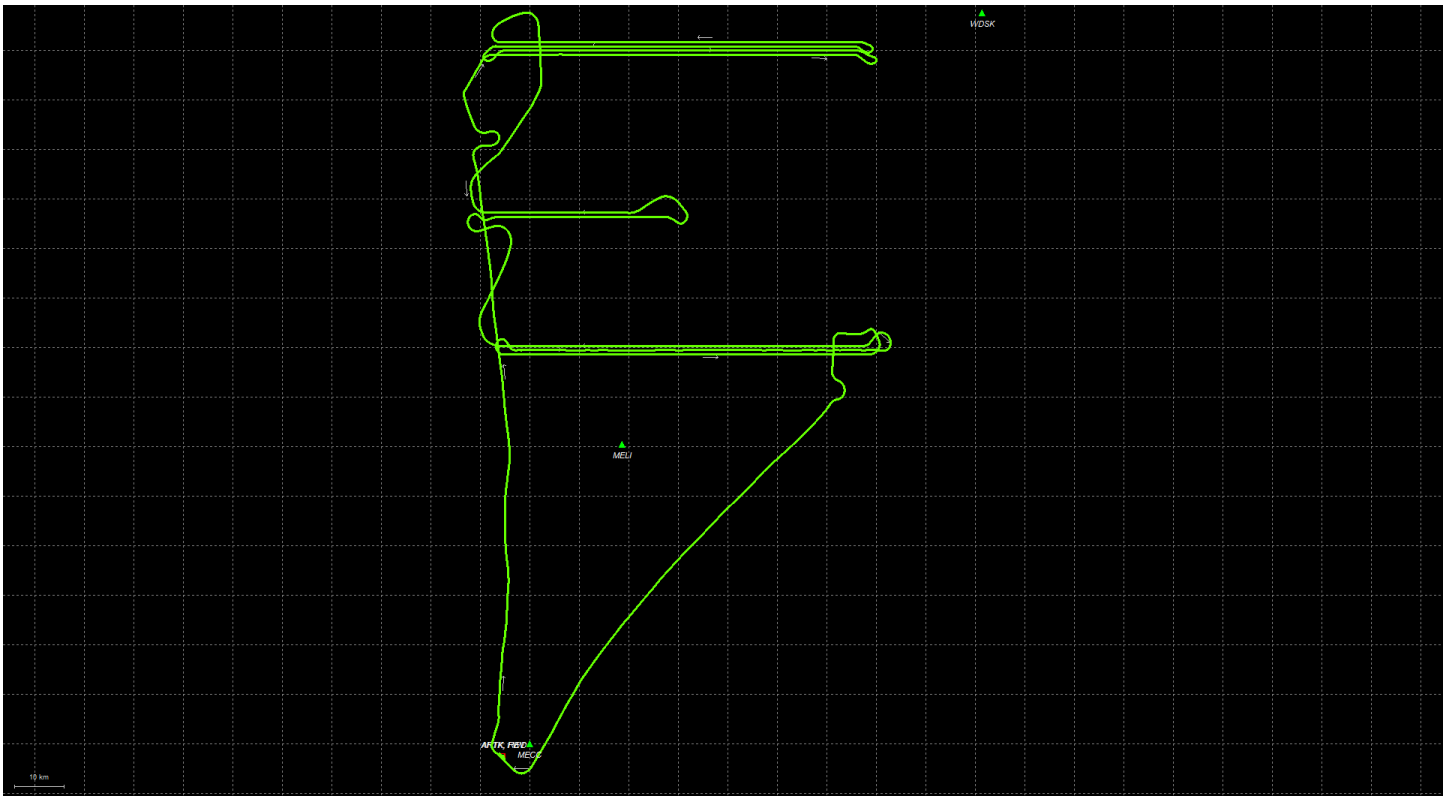
Gd Temp beg: 12 °c End: 23 °c OAT beg: °c End: °c Altimeter begin: 2975 end: 2973

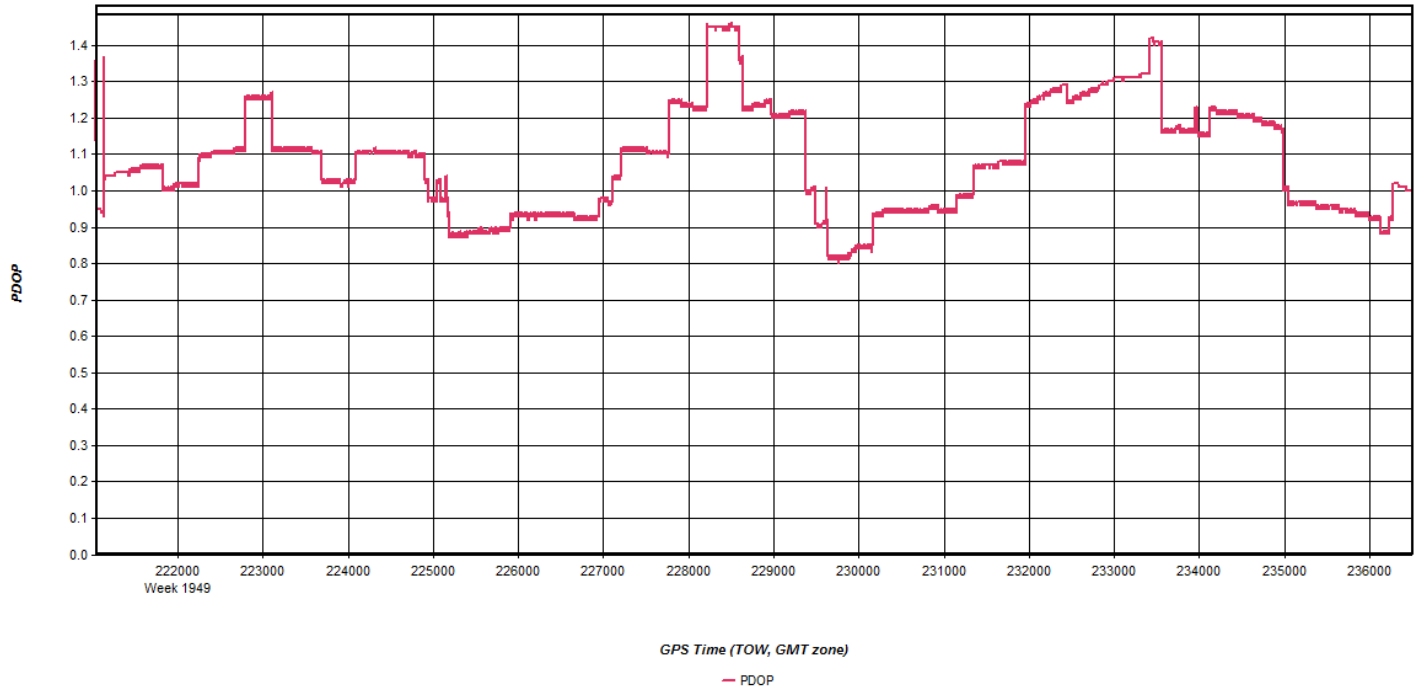
LIDAR	Type	ALS70	Serial #	7118	Alt AGL	Alt AMSL	6985	Avg Terr Ht	Max Glopd	140	Avg Pt Spacing	Beg Gb	429	Storage Number
	FOV	36	Scan Freq	56	MpiA (T) / N	Pulses In Air		Pulse Rate	Power	100%	PRR	End Gb	384	2
												Tot Gb	45	

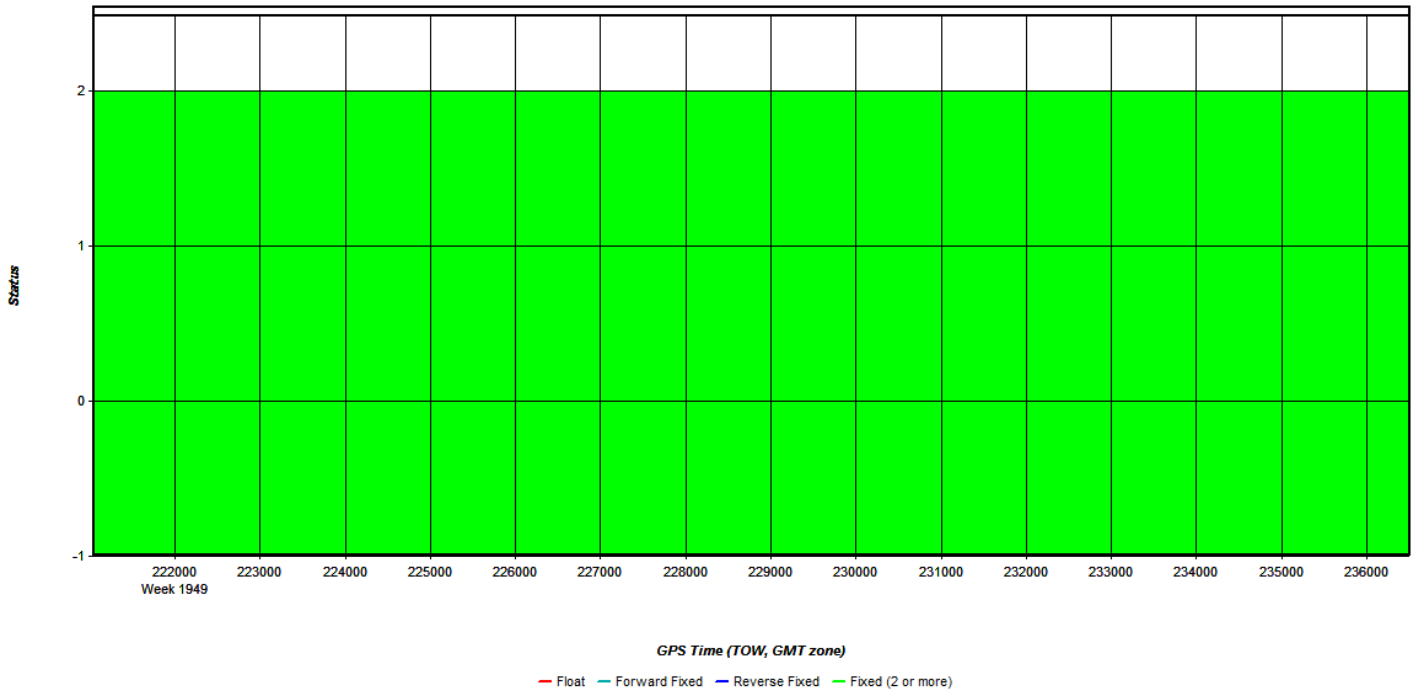
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POS Fix (sec)	GPS Altitude	Crab	Tarb (y/n)	FLIGHT LINE NOTES - visibility, clouds, smoke, partial, etc.
1122	090	1635	1650	148	1-7/17	7043		2	~~Static~~ Start + ~~Static~~ Door 16:25 Static Start + Door
1121	270	1654	1709	147	1-7/17	6943		3	Below Clear - Choppy 16:41-16:06
1120	090	1713	1728	152	1-1/19	6920		4+	Rough Fogs 16:28
1119	270	1732	1748	148	1-1/18	6887		4	
1118	090	1751	1807	142	1-1/19	6903		4	
1117	270	1811	1826	142	1-1/18	6902		4	
1116	090	1829	1845	145	1-1/19	6922		4	
1115	270	1849	1904	140	1-1/17	6949		4	
1114	176	1908	1911	143	2-2/16	6943		3	unplanned x tie line
									Door 19:12
									Fogs 19:14
									Static Stop 19:35 - 19:40

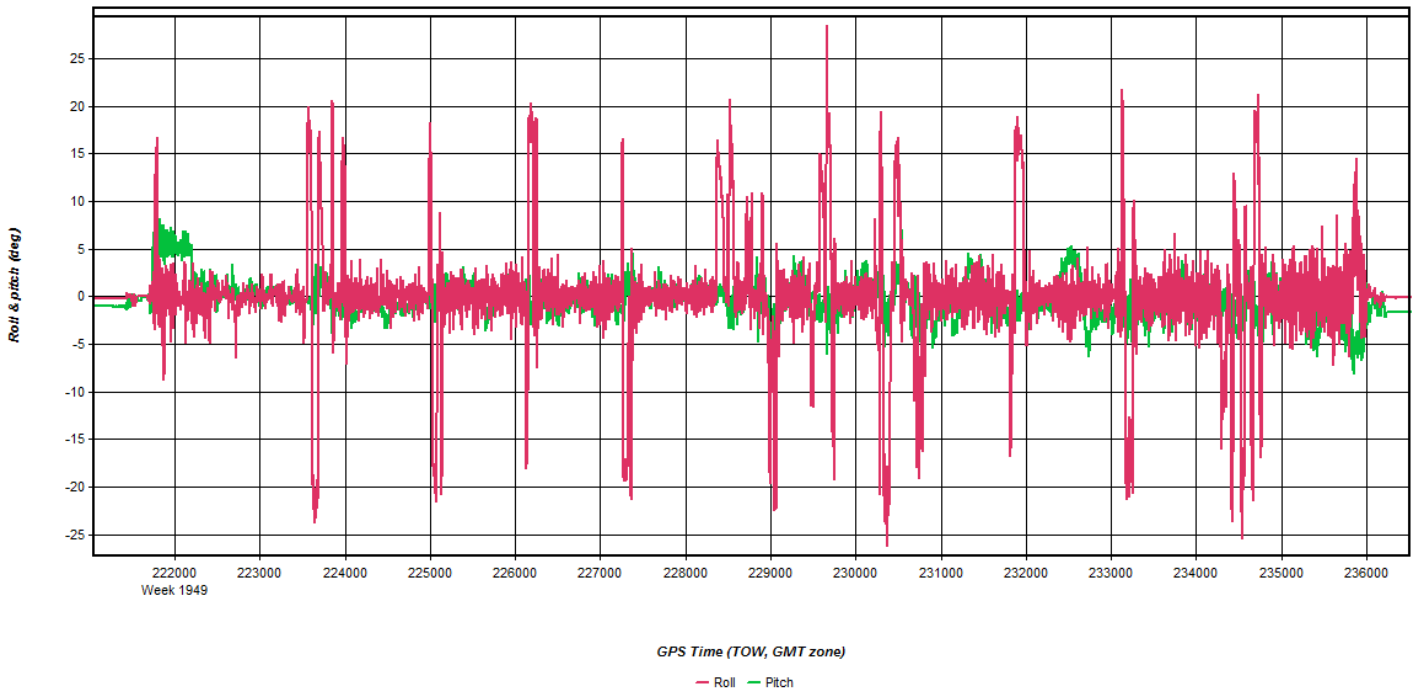
Total Proj Lines: Lines Flown: 8 Lines Remain: Online Time: 2.45 Mob Time: .30 Notes:

May 16, 2017-A (N262AS, SN7161)

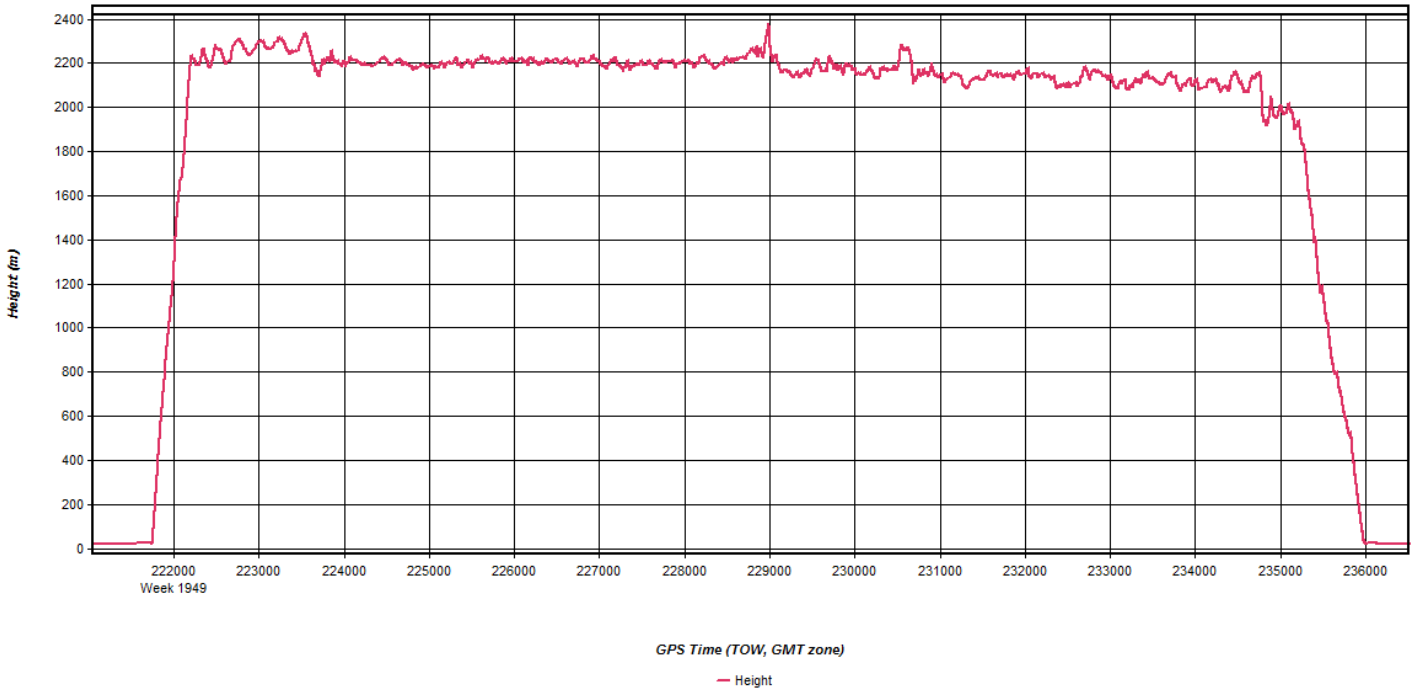

WDSK
MELI
ARTK_RBD
MECE
10 km

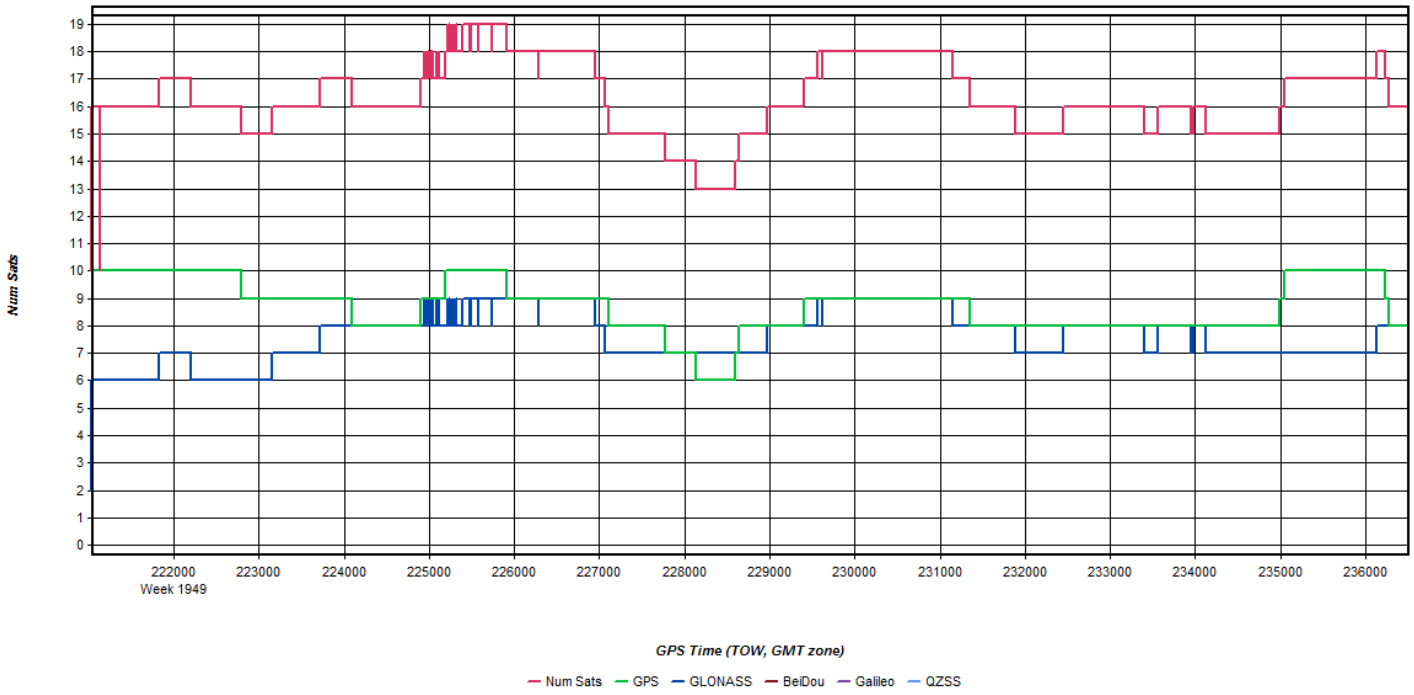

PDOP
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
PDOP

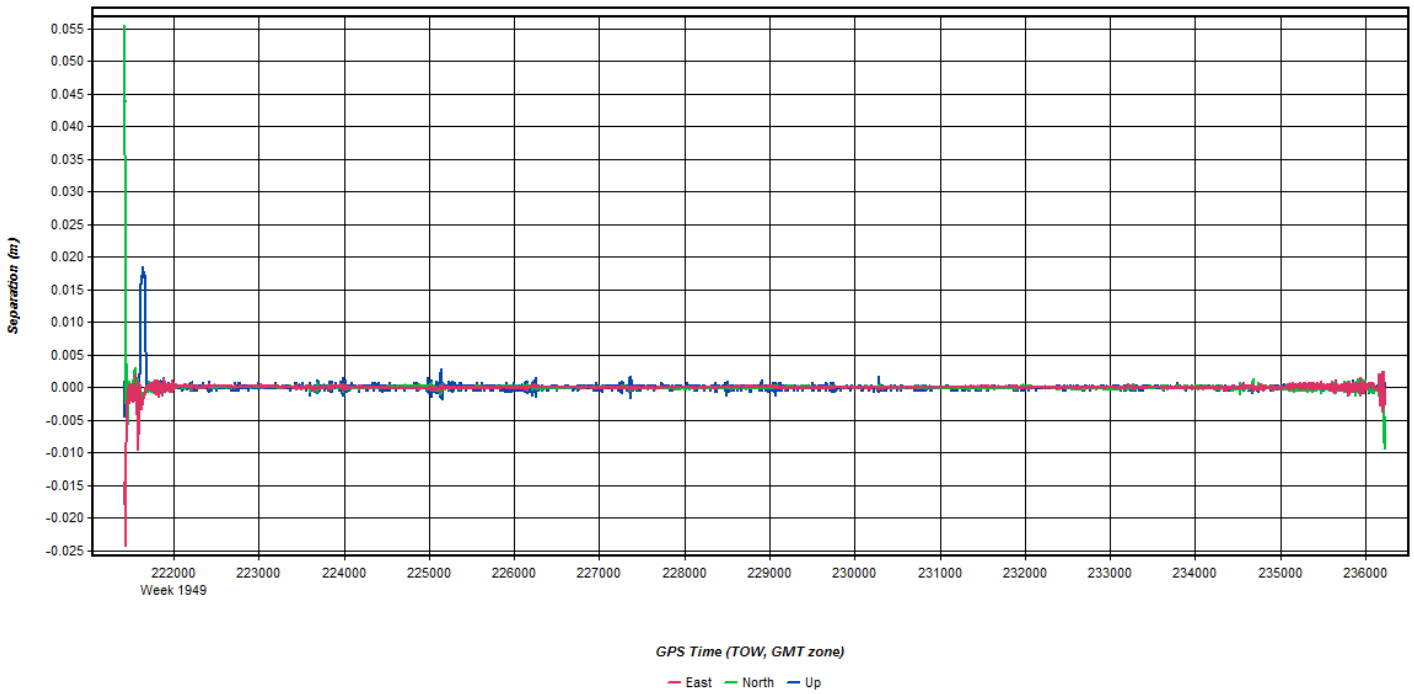

Status
2
1
0
-1
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

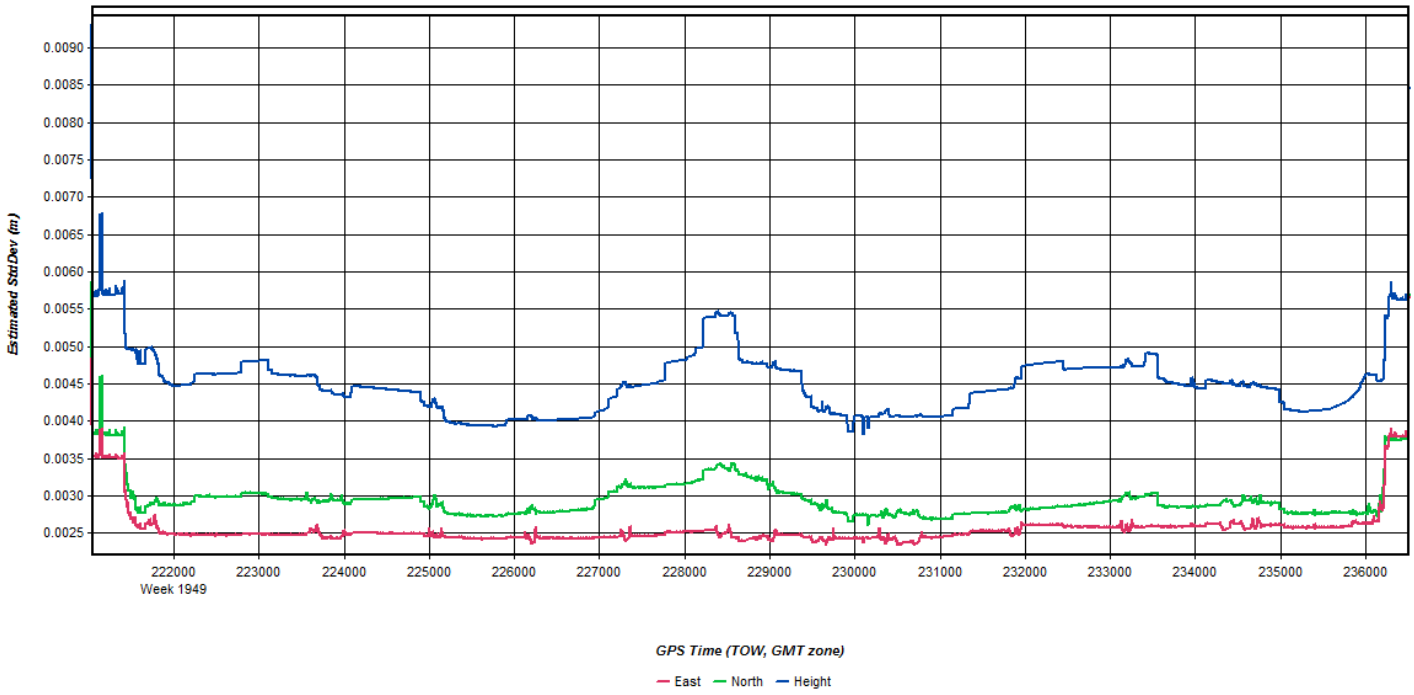

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Roll
Pitch

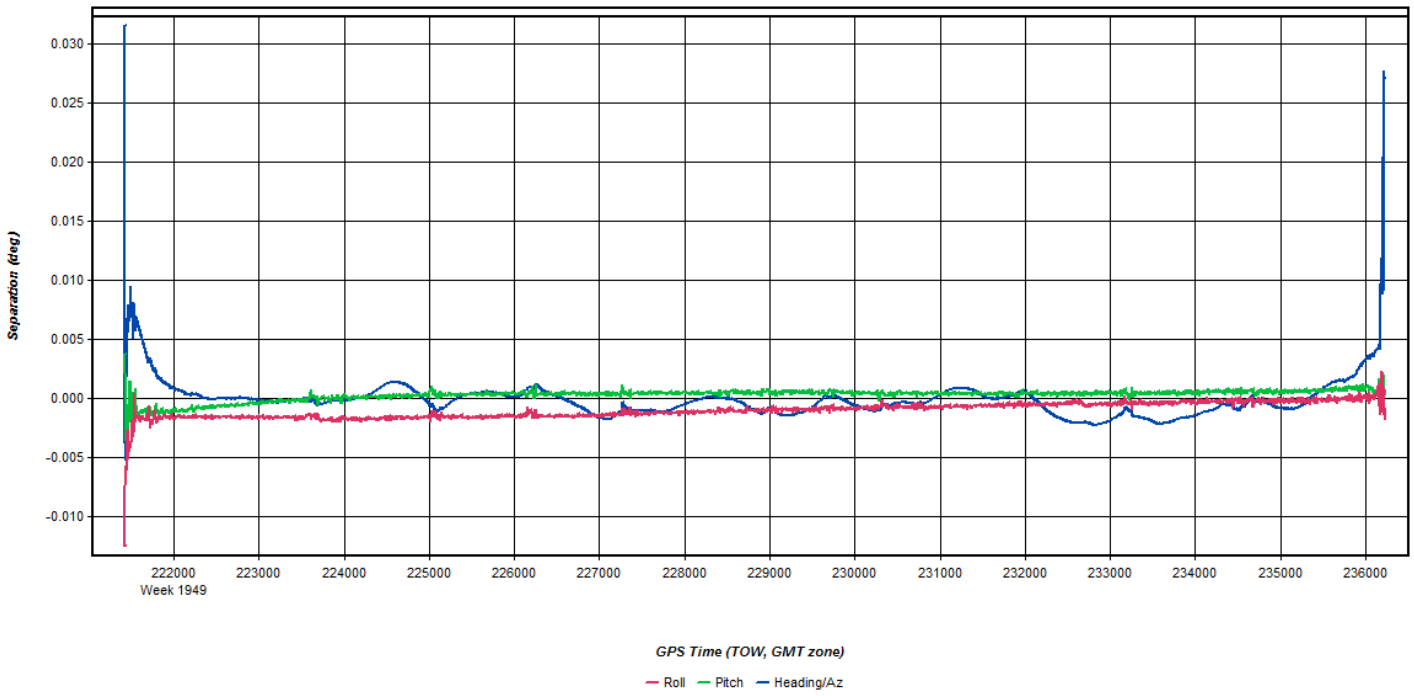
RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
RMS
SD

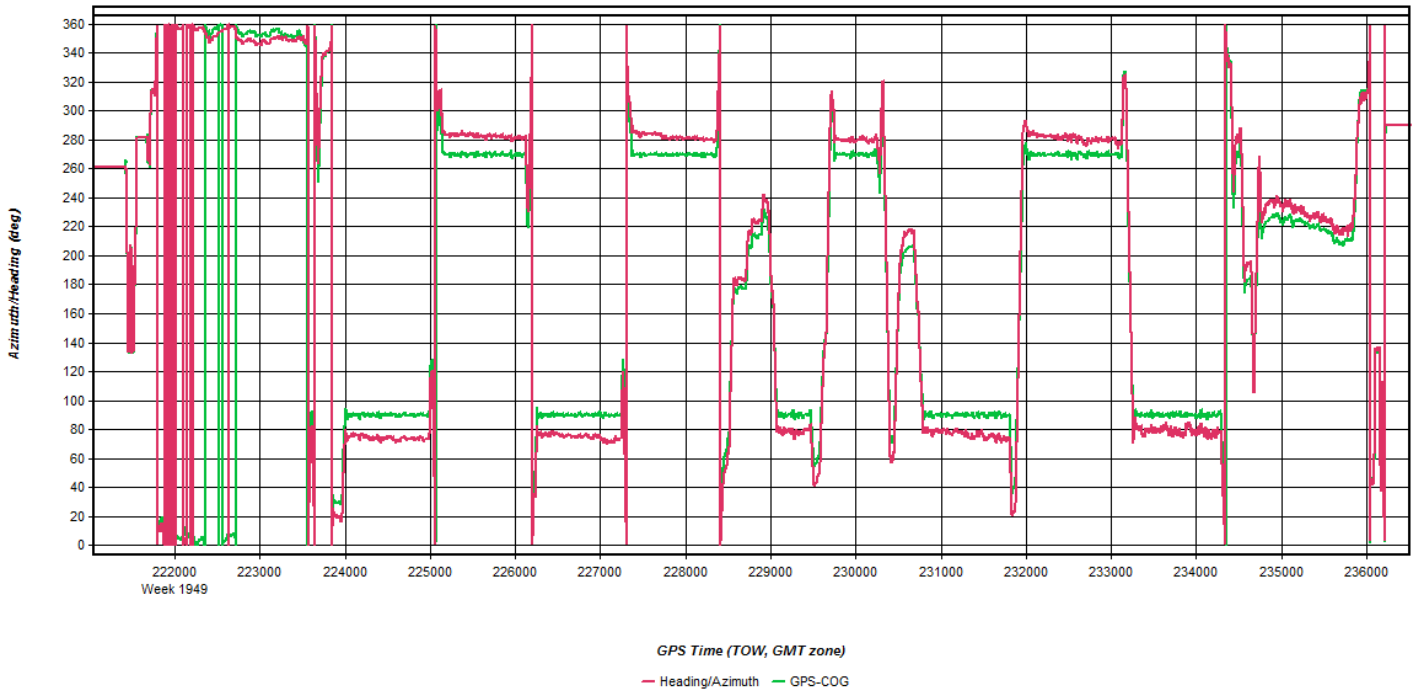

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Height

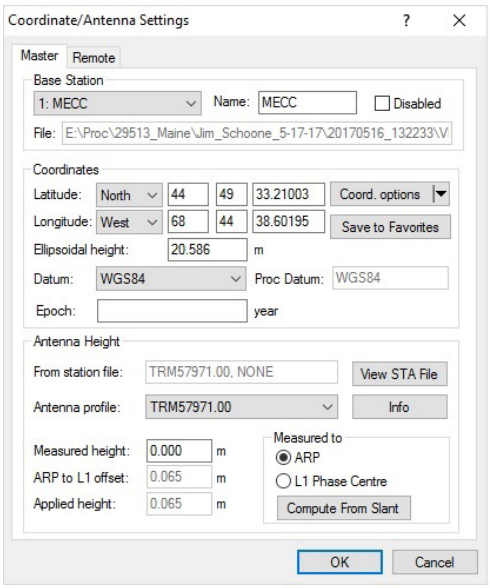

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

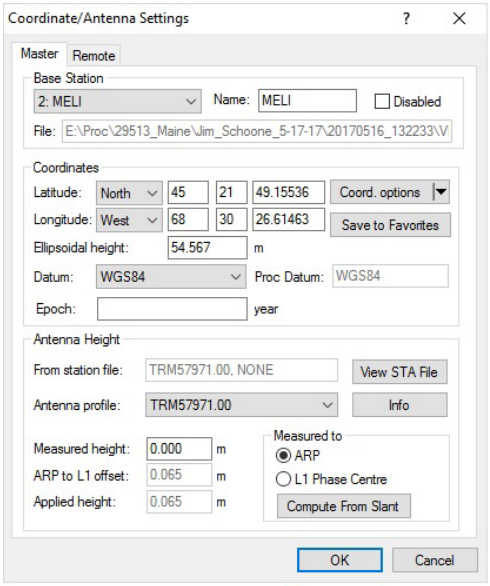

Separation (m)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
East
North
Up

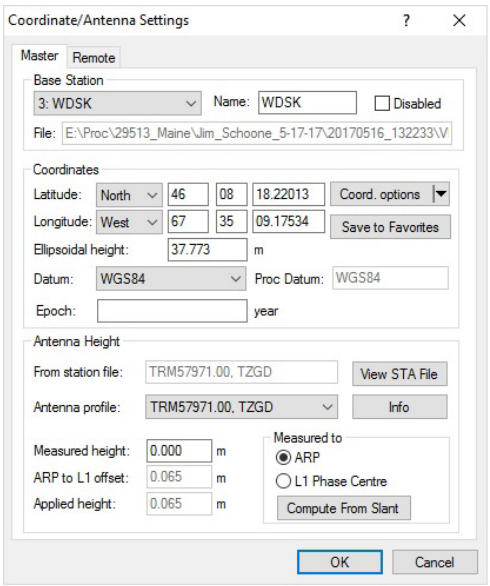

Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
222000
Week 1949
223000
224000
225000
226000
227000
228000
229000
230000
231000
232000
233000
234000
235000
236000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

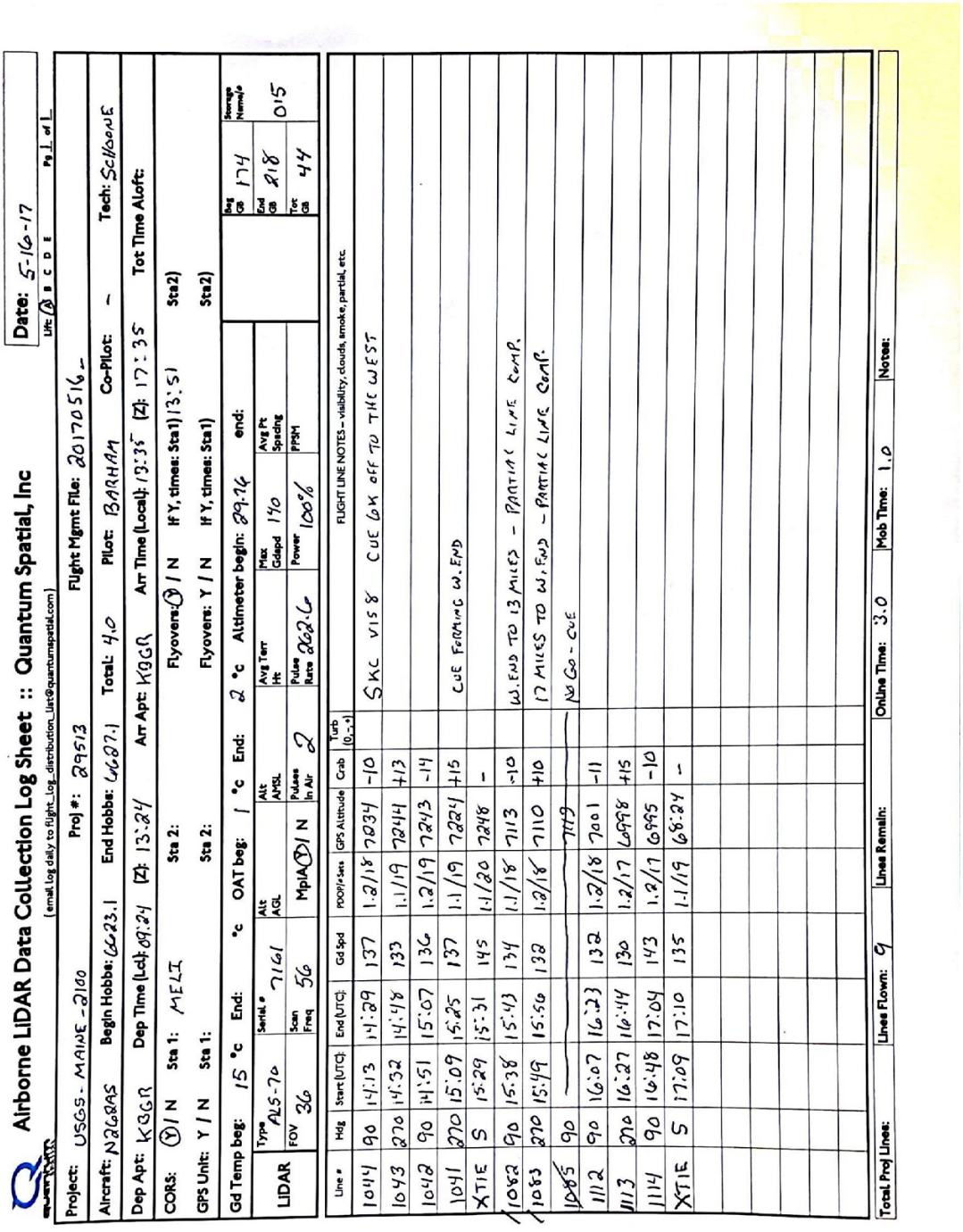

Coordinate/Antenna Settings
Master
Remote
Base Station
1: MECC
Name: MECC
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-17-17\20170516_132233\V
Coordinates
Latitude: North 44 49 33.21003
Coord. options
Longitude: West 68 44 38.60195
Save to Favorites
Ellipsoidal height: 20.586 m
Datum: WGS84
Proc Datum: WGS84
Epoch:
year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-17-17\20170516_132233\V
Coordinates
Latitude: North 45 21 49.15536 Coord. options
Longitude: West 68 30 26.61463 Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
3: WDSK
Name: WDSK
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-17-17\20170516_132233\V
Coordinates
Latitude: North 46 08 18.22013 Coord. options
Longitude: West 67 35 09.17534 Save to Favorites
Ellipsoidal height: 37.773 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, TZGD View STA File
Antenna profile: TRM57971.00, TZGD Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-16-17

Life: A B C D E Pg 1 of 1

Project: USGS - MAINE - 2100 Proj #: 29513 Flight Mgmt File: 20170516_

Aircraft: N268AS Begin Hobbs: 6623.1 End Hobbs: 6687.1 Total: 4.0 Pilot: BARHAM Co-Pilot: - Tech: Sellmans

Dep Apt: KBGR Dep Time (Lcl): 09:24 (Z): 13:24 Arr Apt: KBGR Arr Time (Local): 13:35 (Z): 17:35 Tot Time Aloft:

CORS: Y / N Sta 1: MELI Sta 2: Flyovers: Y / N If Y, times: Sta1) 13:51 Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

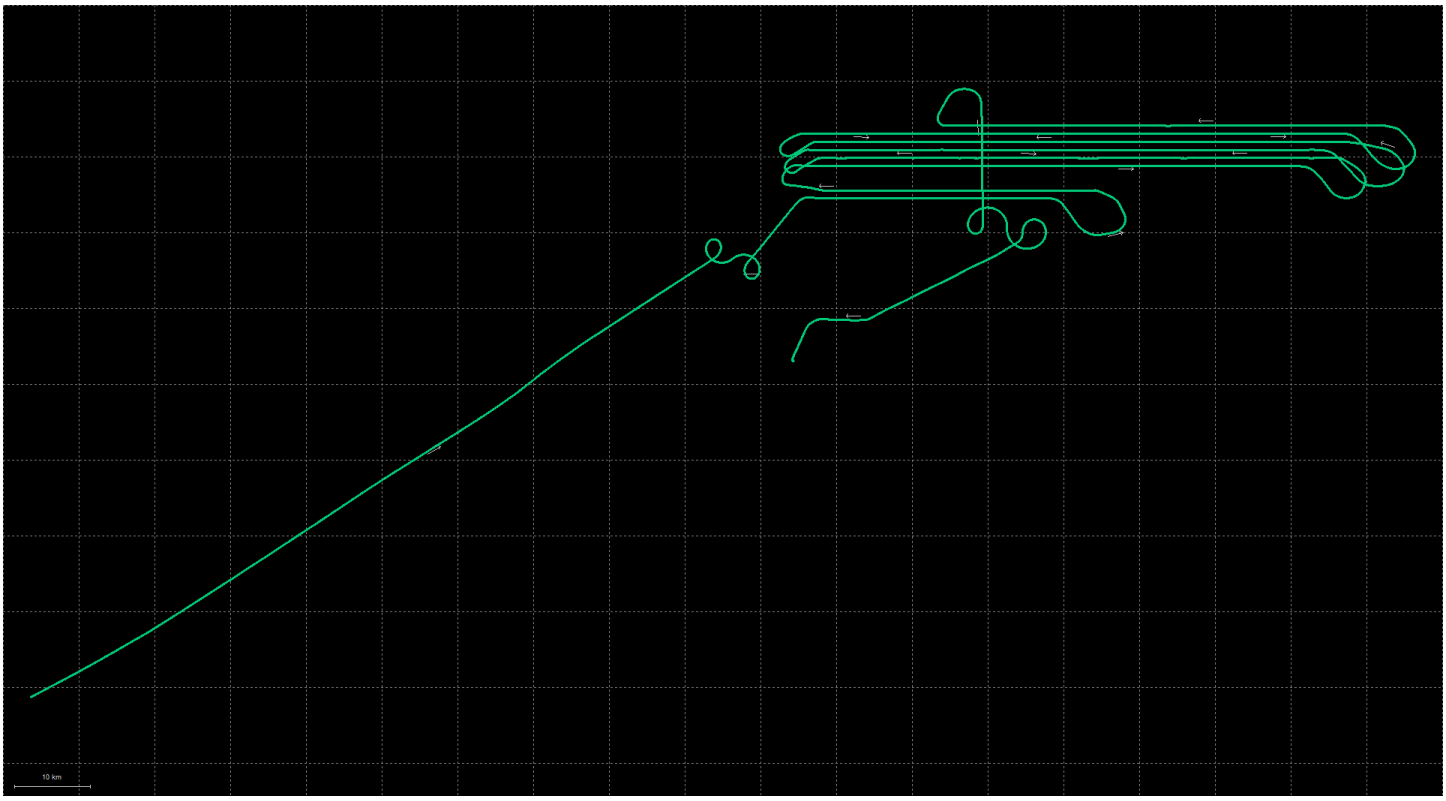
Gd Temp beg: 15 °c End: °c OAT beg: 1 °c End: 2 °c Altimeter begin: 29.96 end:

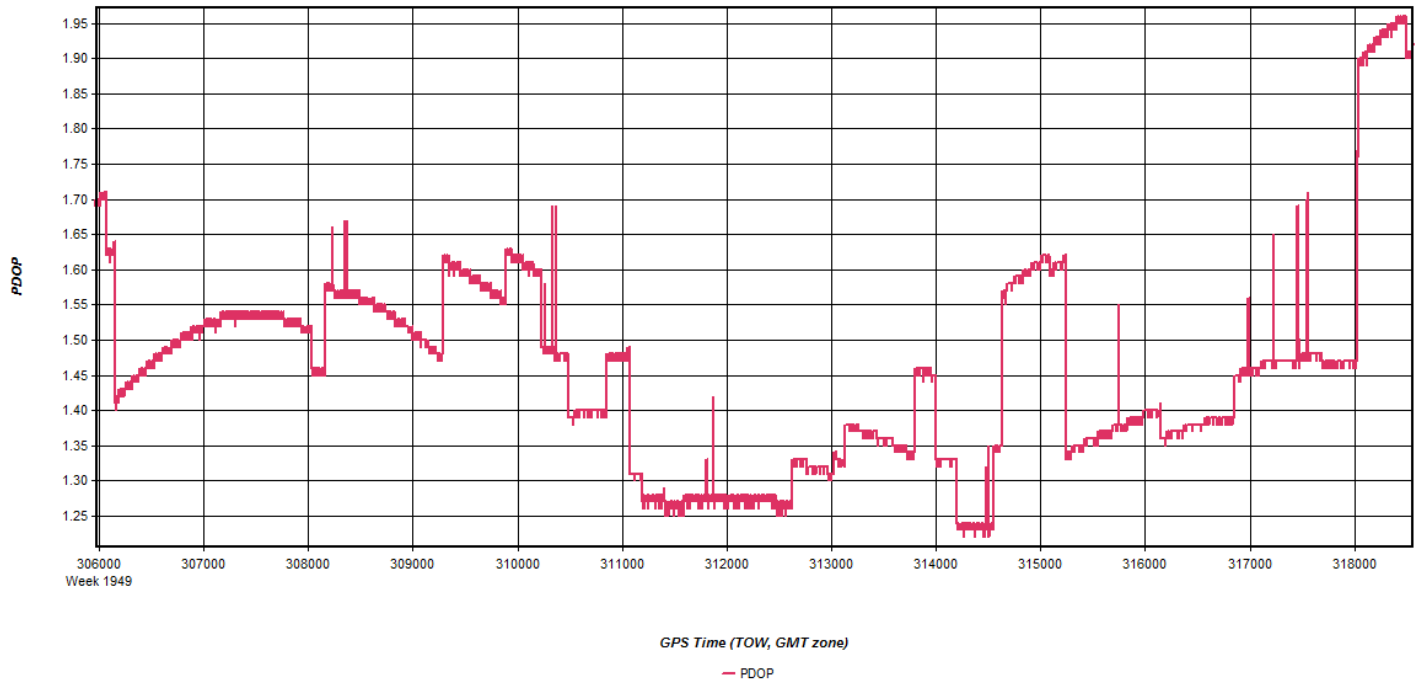
	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Cdepd	Avg Pt Spacing		Beg CR	174	Storage Name/s
LIDAR	ALS-70	7161				140		End CR	218	015	
	FOV 36	Scan Freq 56	MpiA(T) / N	Pulses In Air 2	Pulse Rate 262.6	Power 100%	PRR	Tot CR	44		

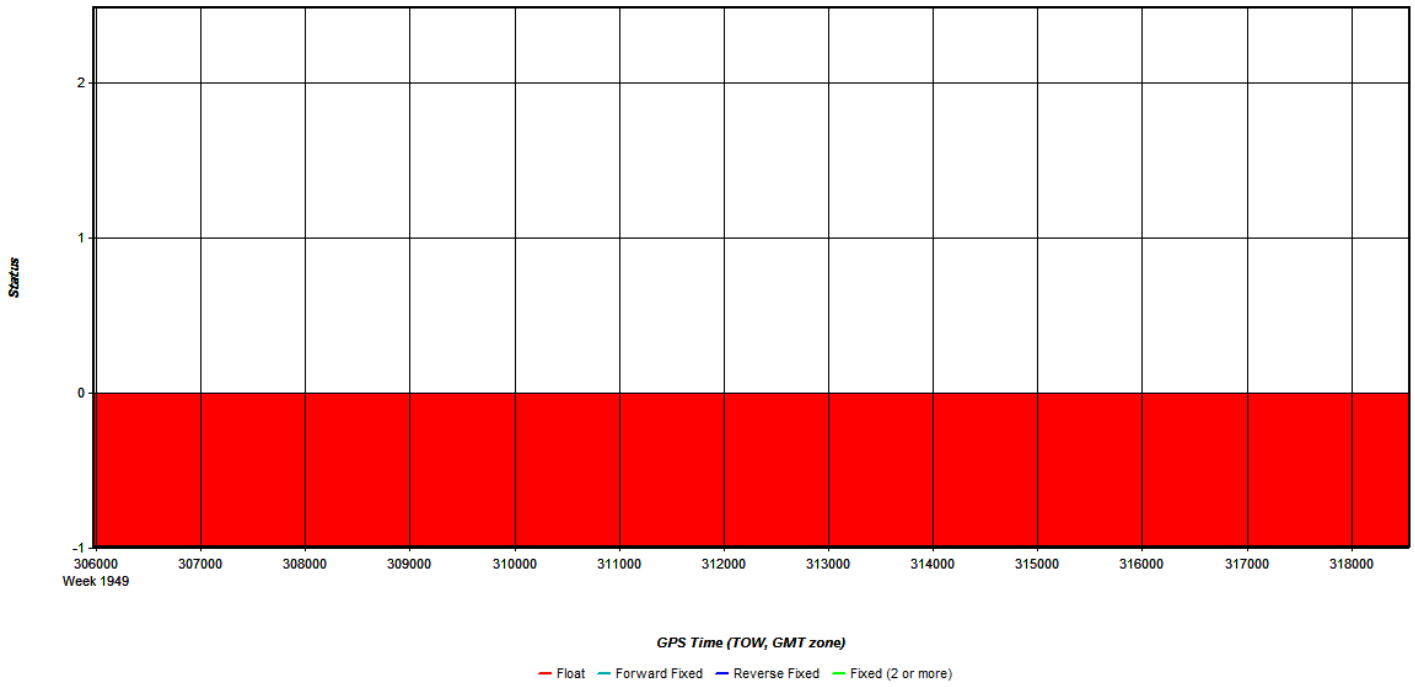
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POQ/Ses	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
1041	90	14:13	14:39	137	1.2/18	7034	-10		SKC VIS 8 CUE OK OFF TO THE WEST
1043	270	14:32	14:48	133	1.1/19	7044	+13		
1042	90	14:51	15:07	136	1.2/19	7043	-14		
1041	270	15:09	15:25	137	1.1/19	7024	+15		CUE FORMING W. END
XTIE	S	15:29	15:31	145	1.1/20	7048	-		
1052	90	15:38	15:43	134	1.1/18	7013	-10		W. END TO 13 MILES - PARTIAL LINE COMP.
1053	270	15:49	15:56	138	1.2/18	7010	+10		13 MILES TO W. END - PARTIAL LINE COMP.
~~1065~~	90	———	———	———	———	———	———		NO GO - CUE
1112	90	16:03	16:23	132	1.2/18	7001	-11		
1113	270	16:27	16:44	130	1.2/17	6998	+15		
1114	90	16:48	17:04	143	1.2/17	6995	-10		
XTIE	S	17:09	17:10	135	1.1/19	6824	-		

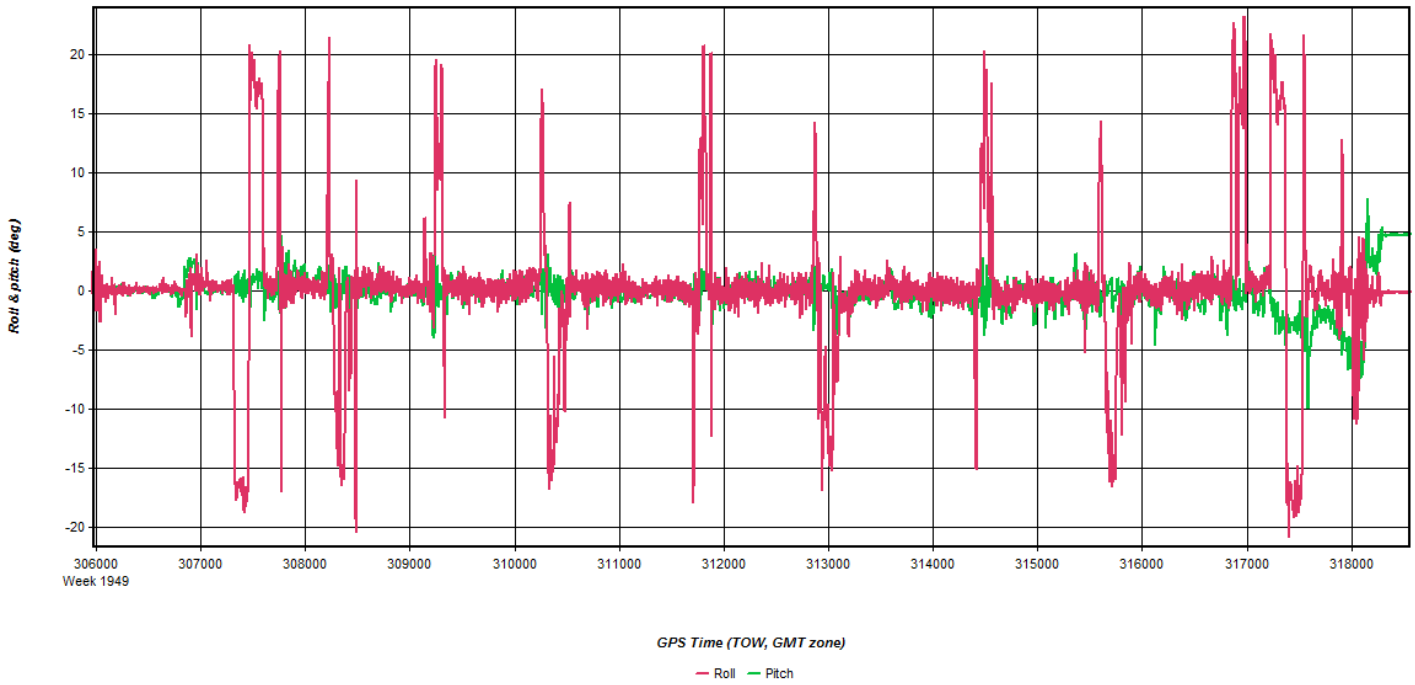
Total Proj Lines: Lines Flown: 9 Lines Remain: Online Time: 3.0 Mob Time: 1.0 Notes:

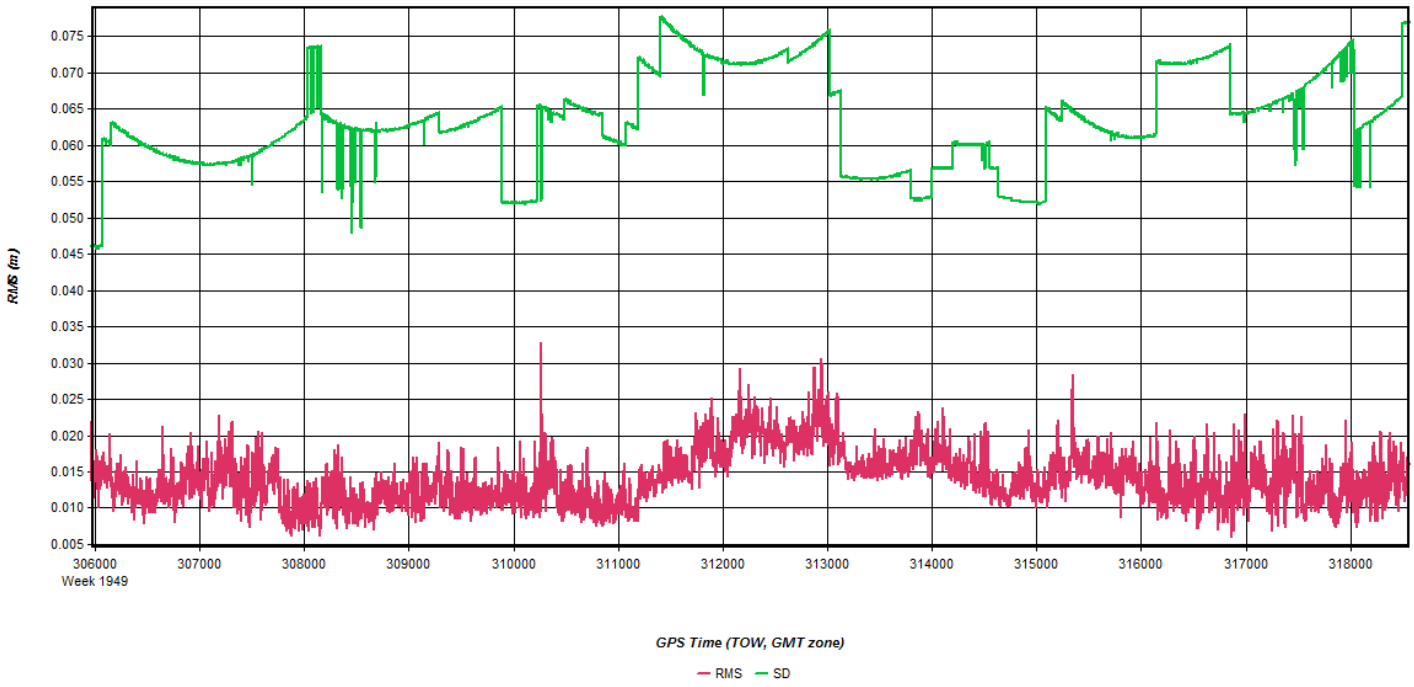
May 17, 2017-A (N916WC, SN8119)

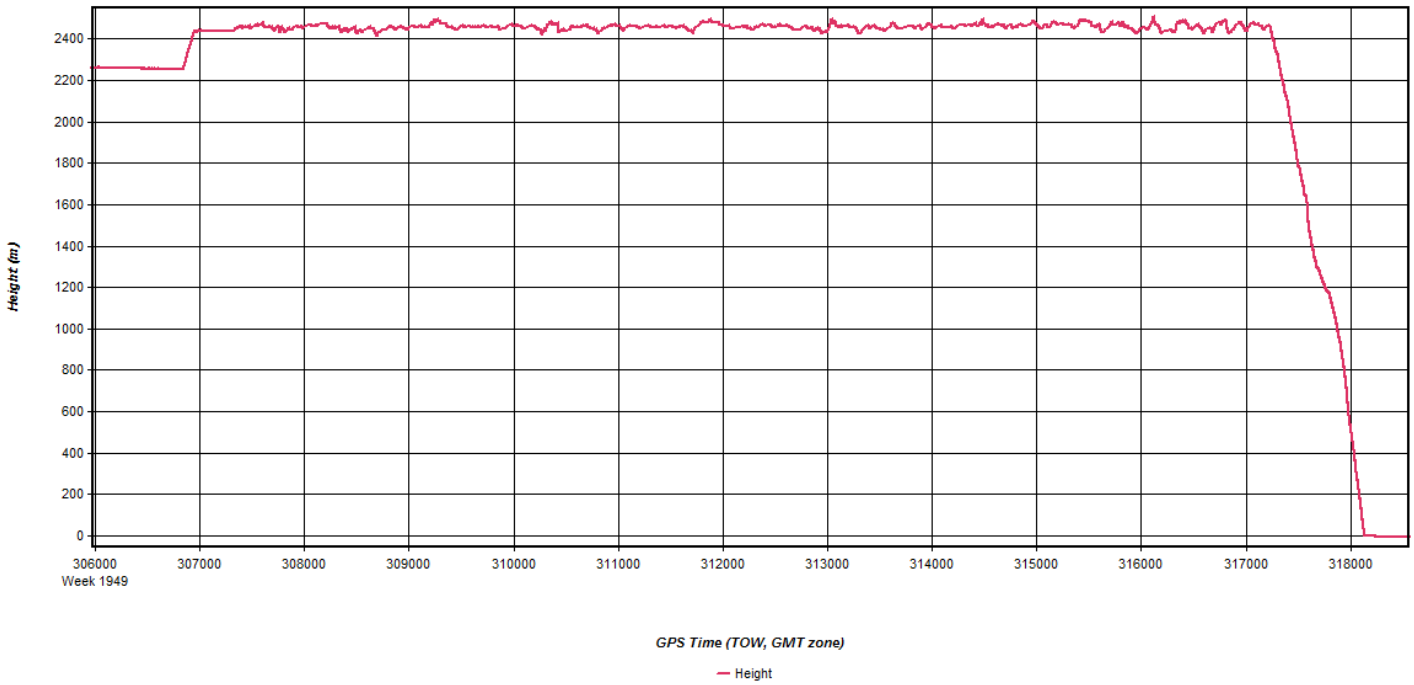

10 km

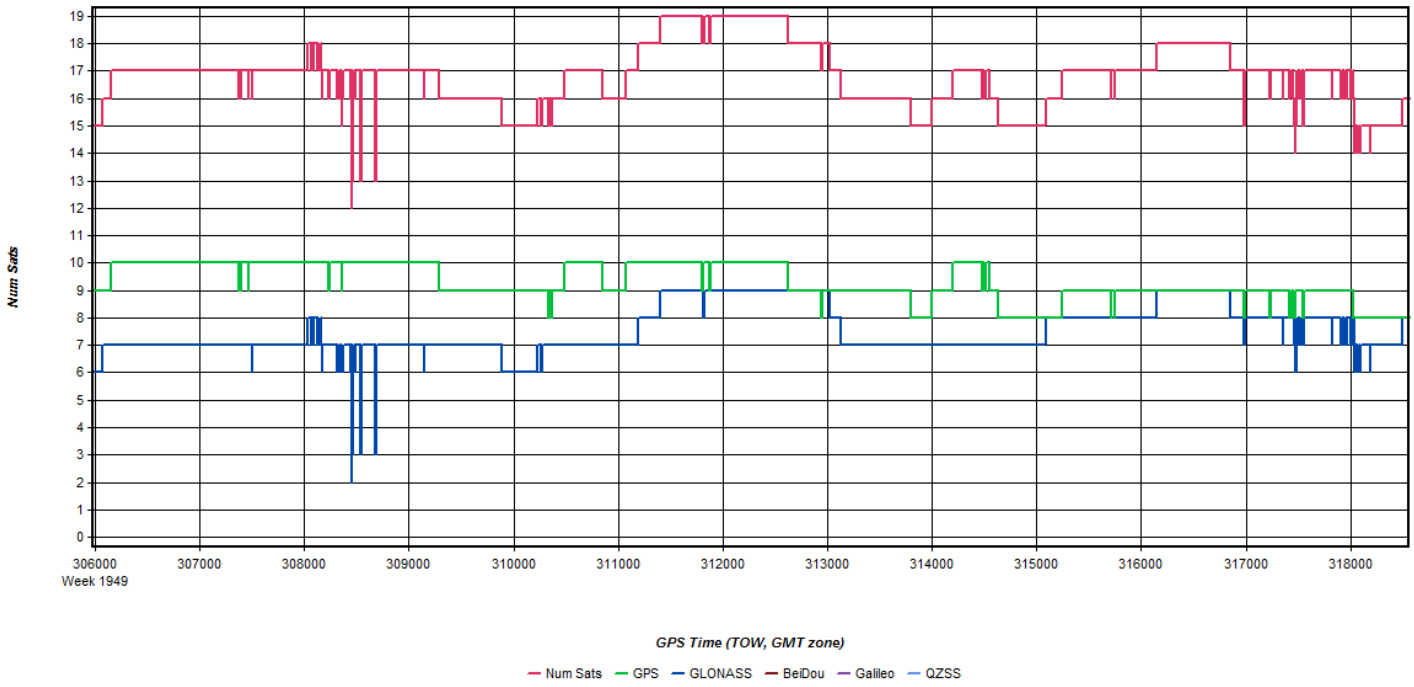

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
PDOP

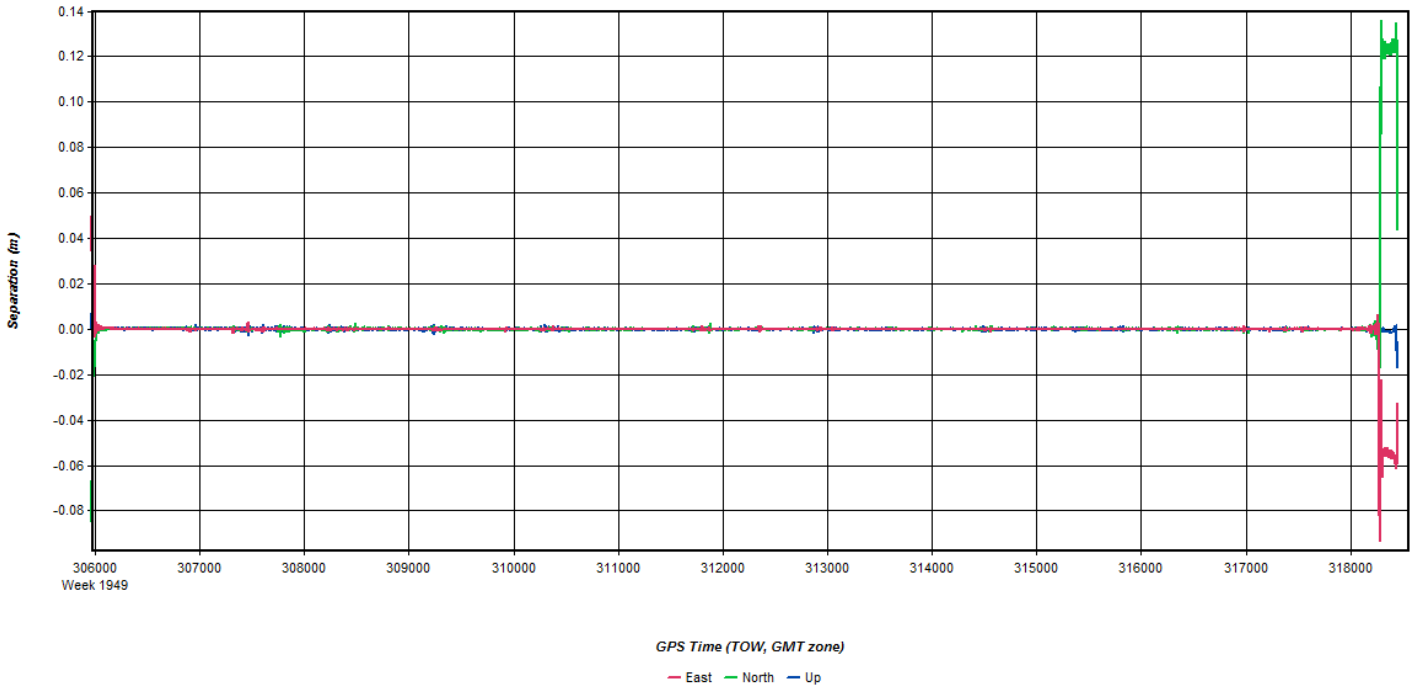

Status
2
1
0
-1
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

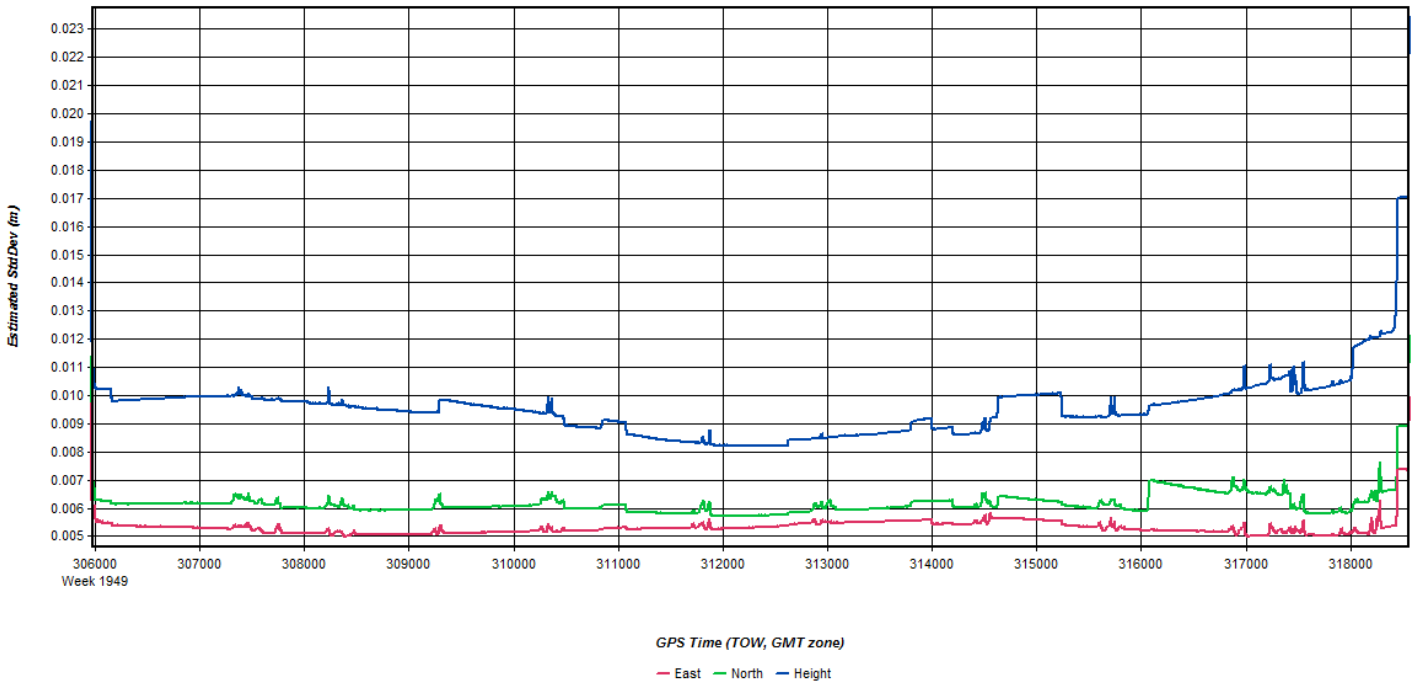

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Roll
Pitch

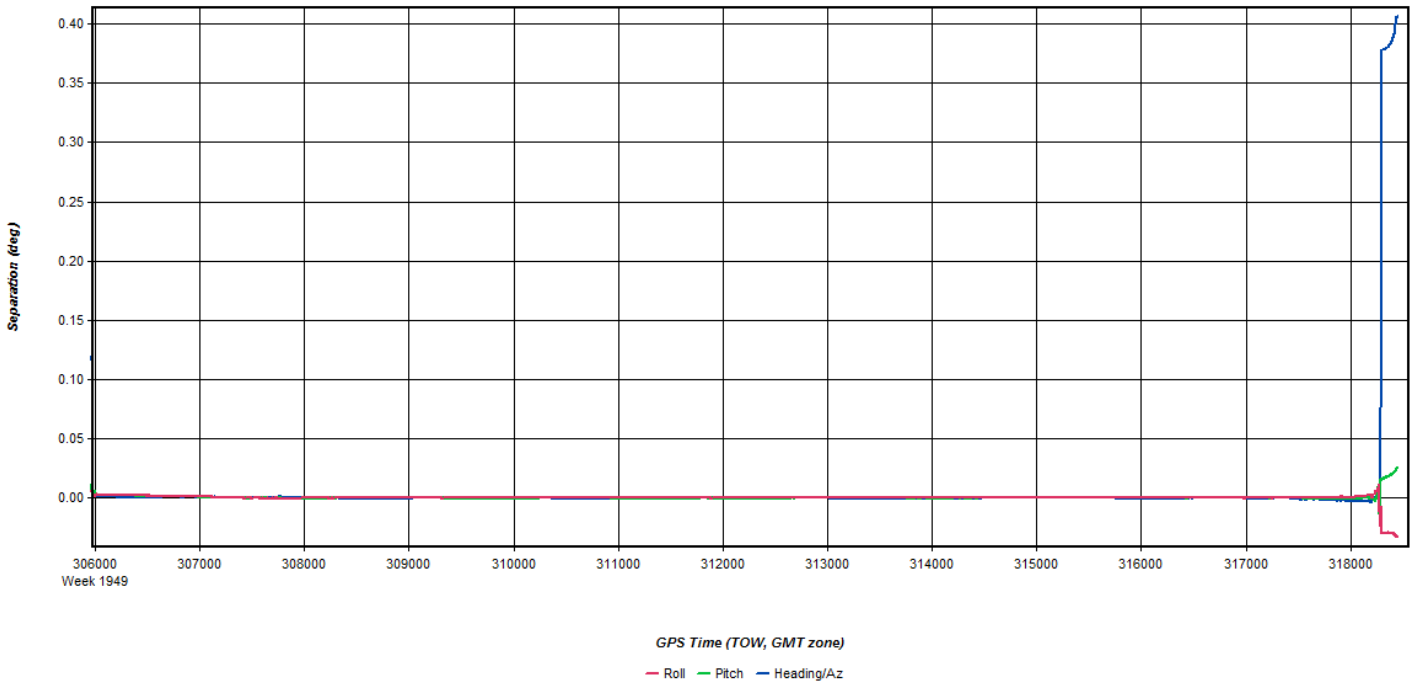

RMS (m)
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
RMS
SD

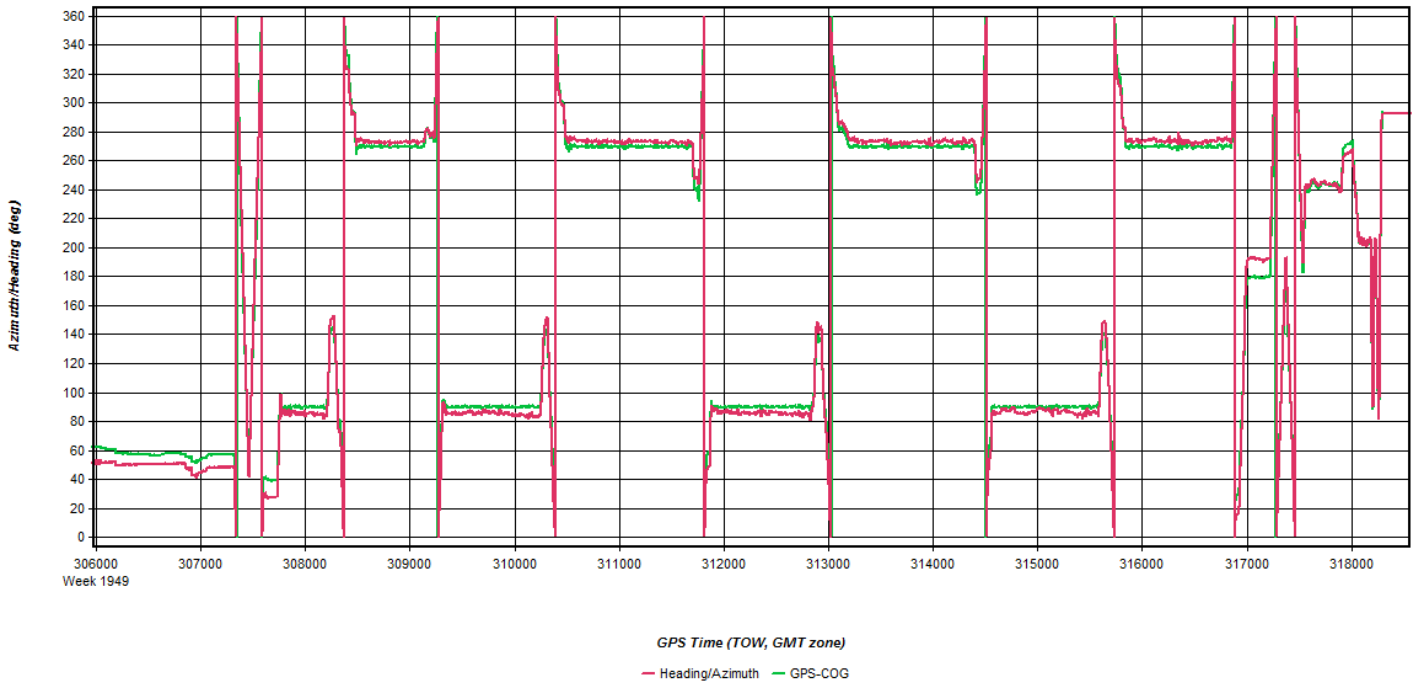

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

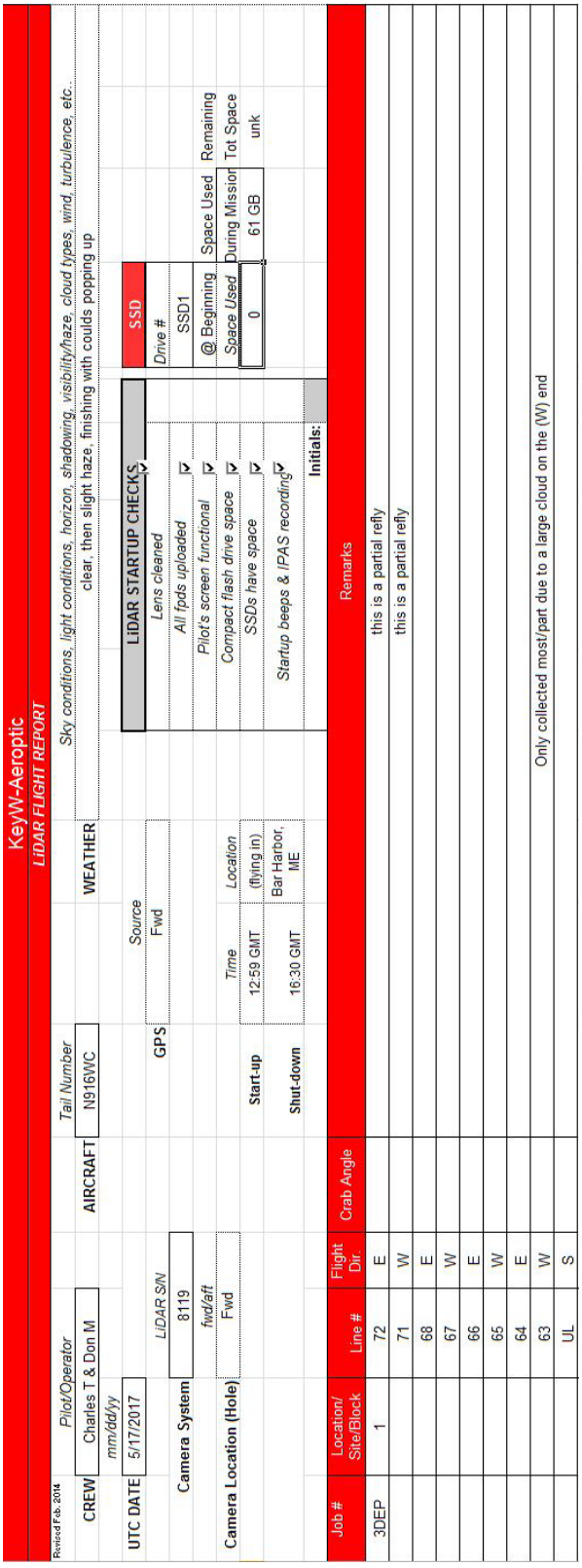

Separation (m)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.023
0.022
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.40
0.35
0.30
0.25
0.20
0.15
0.10
0.05
0.00
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
306000
Week 1949
307000
308000
309000
310000
311000
312000
313000
314000
315000
316000
317000
318000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW	*Pilot/Operator* Charles T & Don M	AIRCRAFT	*Tail Number* N916WC	WEATHER	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.* clear, then slight haze, finishing with coulds popping up		
UTC DATE	*mm/dd/yy* 5/17/2017						

	LiDAR S/N	*Source*		
Camera System	8119	GPS	Fwd	
	fwd/aft			
Camera Location (Hole)	Fwd			

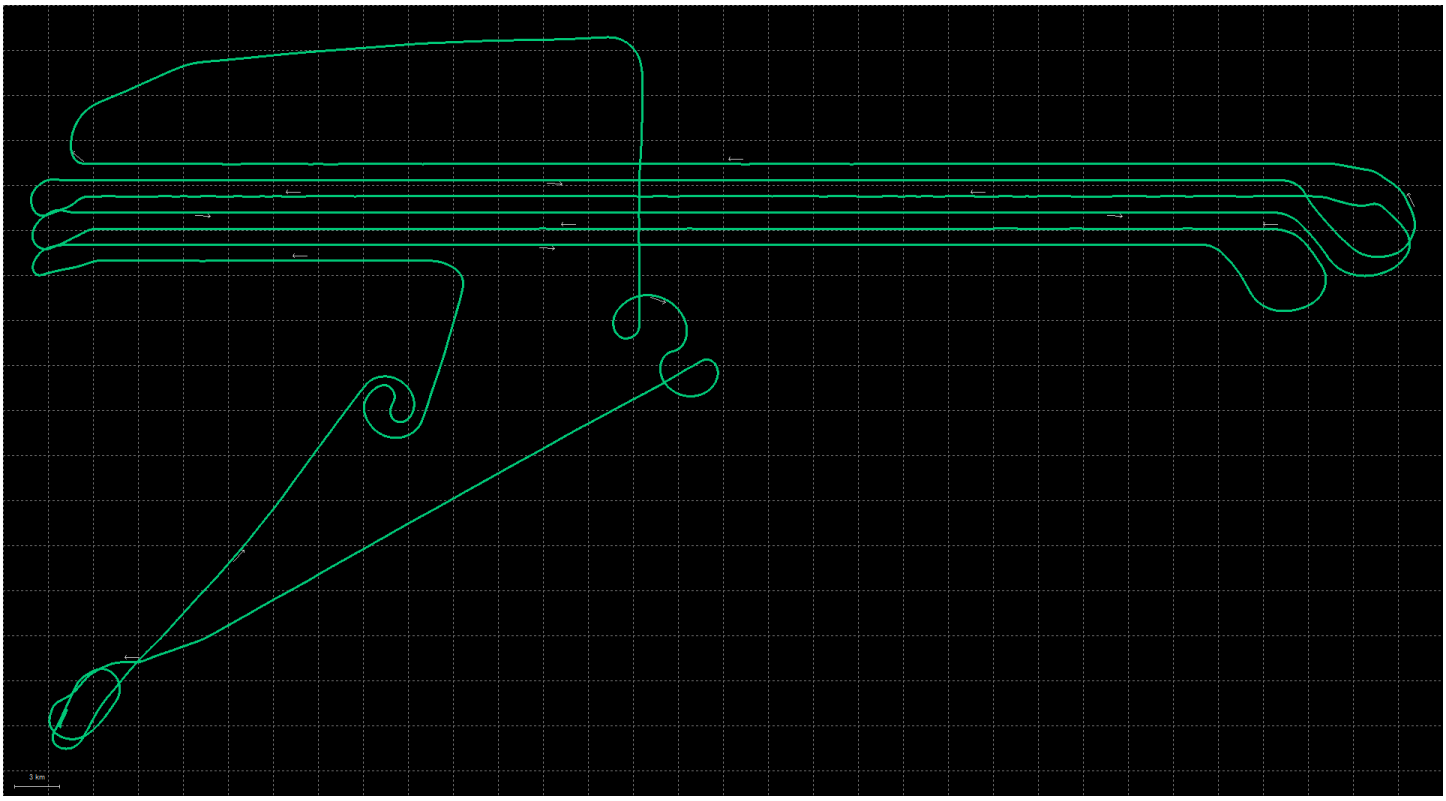
	Time	*Location*
Start-up	12:59 GMT	(flying in)
Shut-down	16:30 GMT	Bar Harbor, ME

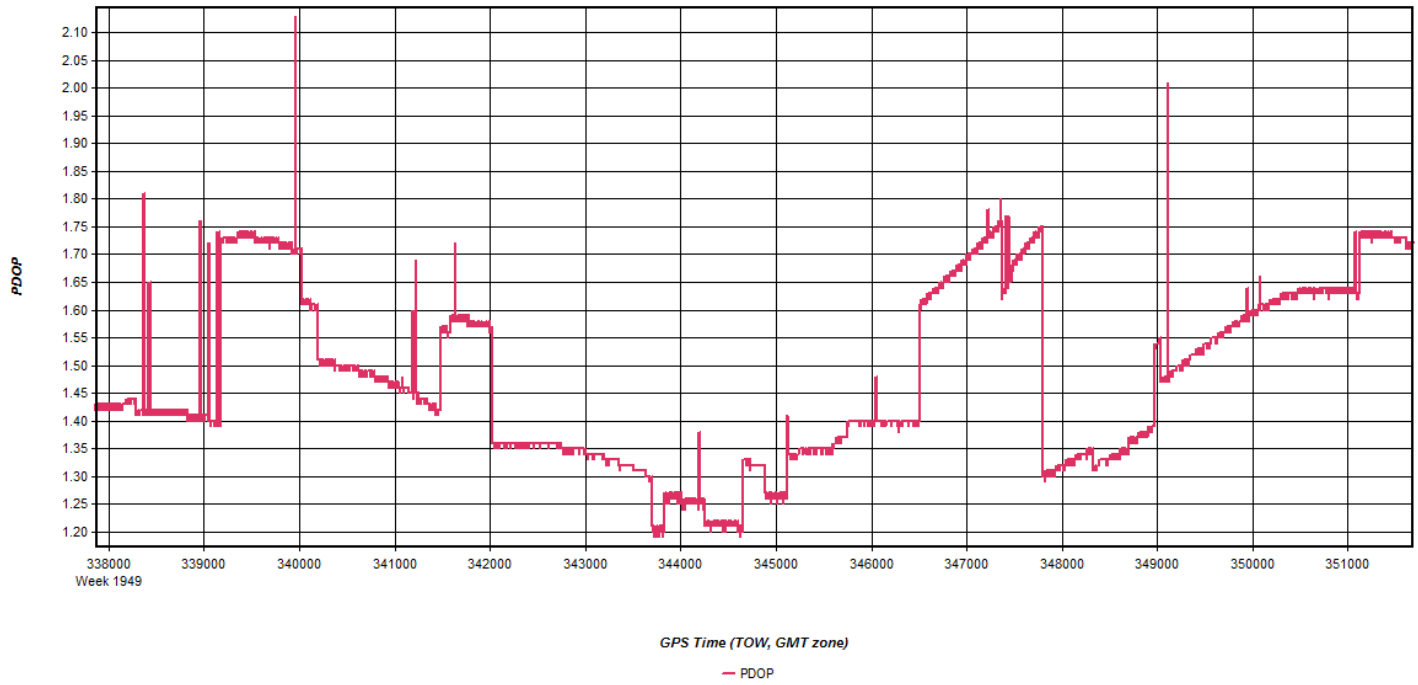
LiDAR STARTUP CHECKS	
Lens cleaned	
All ipds uploaded	
Pilot's screen functional	
Compact flash drive space	
SSDs have space	
Startup beeps & IPAS recording	
Initials:	

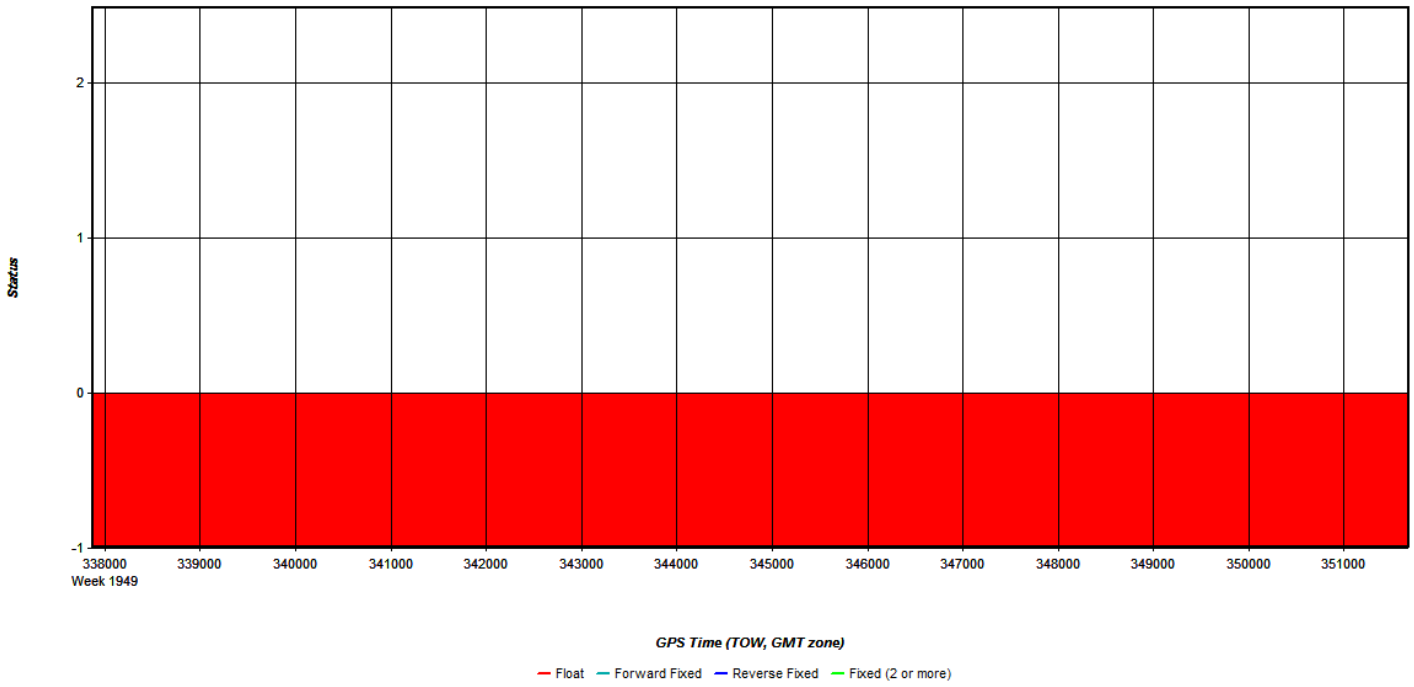
SSD			
Drive #			
SSD1			
@ Beginning	Space Used	Remaining	
Space Used	During Mission	Tot Space	
0	61 GB	unk	

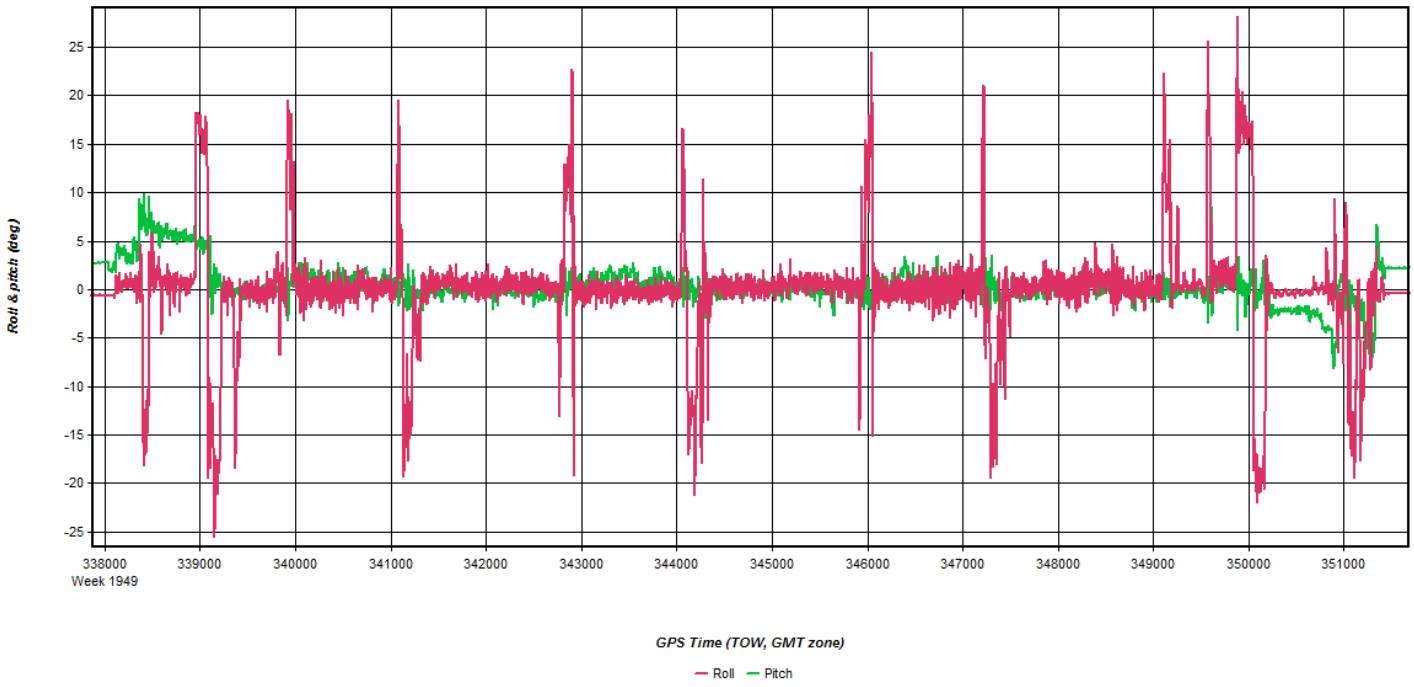
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	72	E		this is a partial refly
		71	W		this is a partial refly
		68	E		
		67	W		
		66	E		
		65	W		
		64	E		
		63	W		Only collected most/part due to a large cloud on the (W) end
		UL	S		

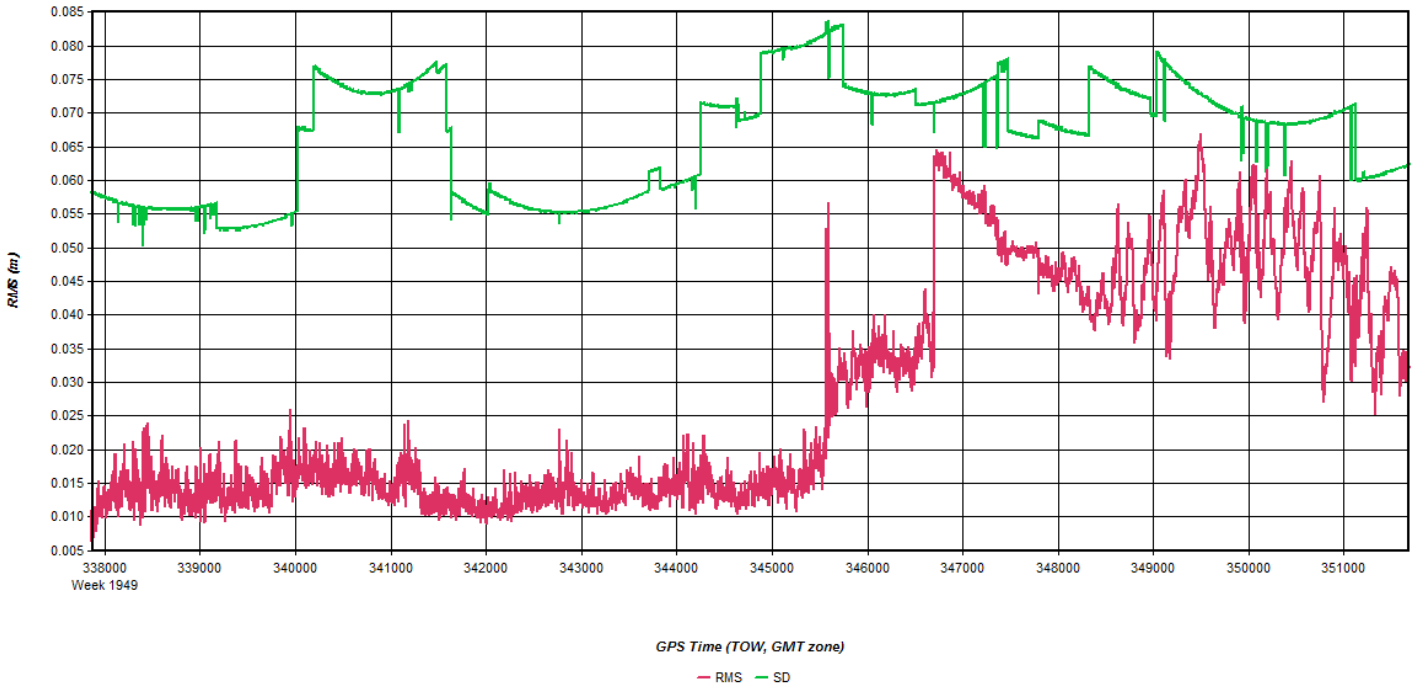
May 17, 2017-B (N916WC, SN8119)



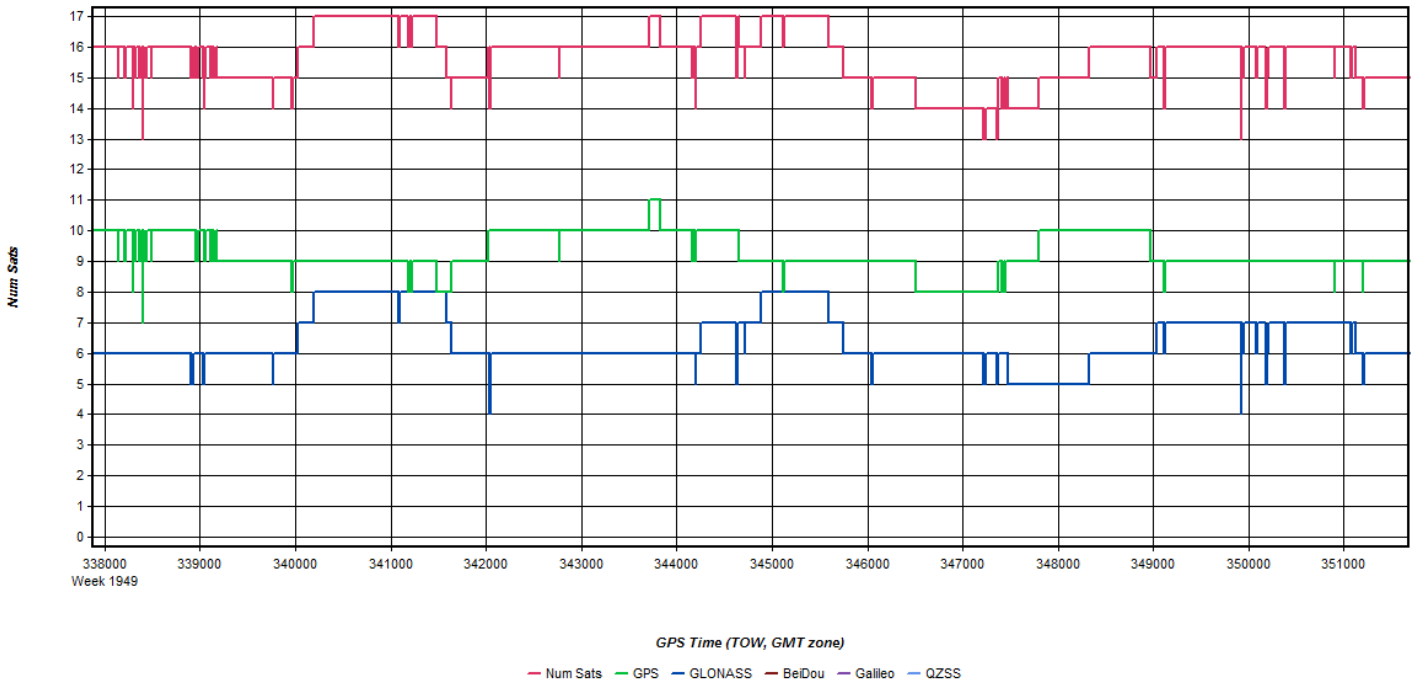

PDOP
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
PDOP

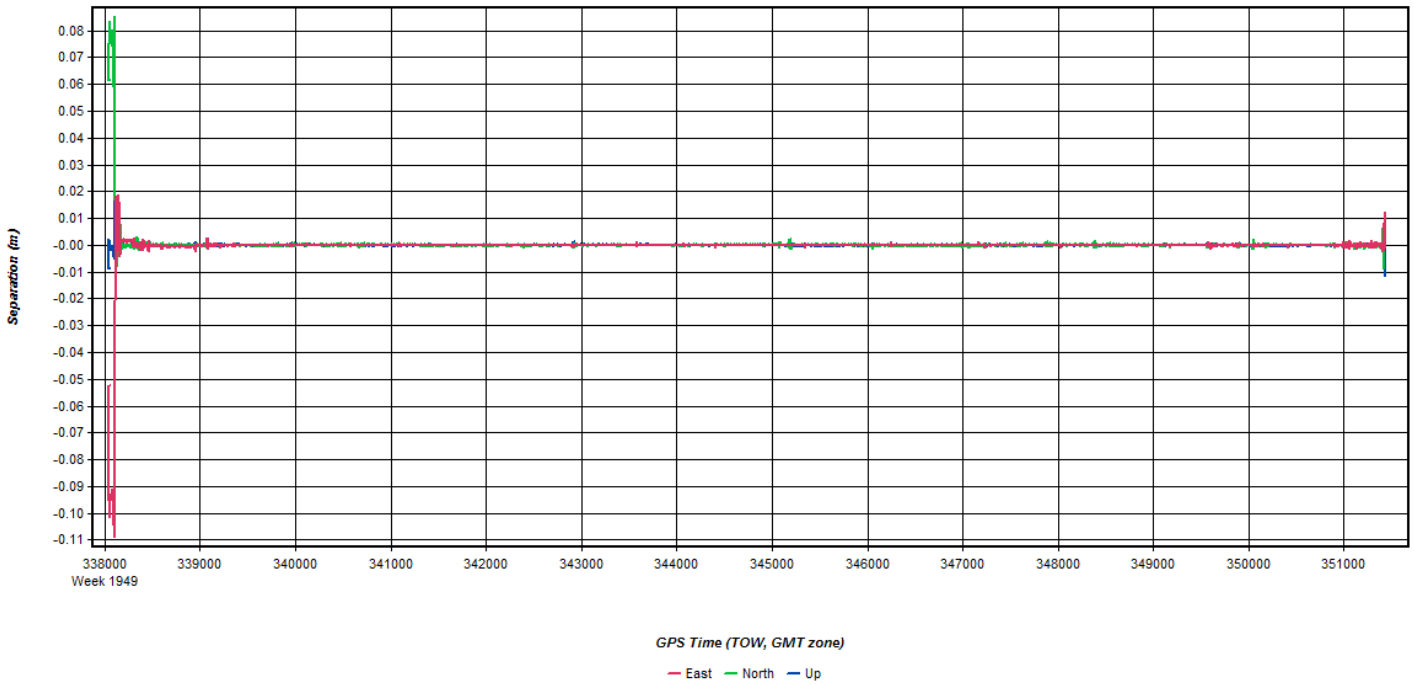

Status
2
1
0
-1
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

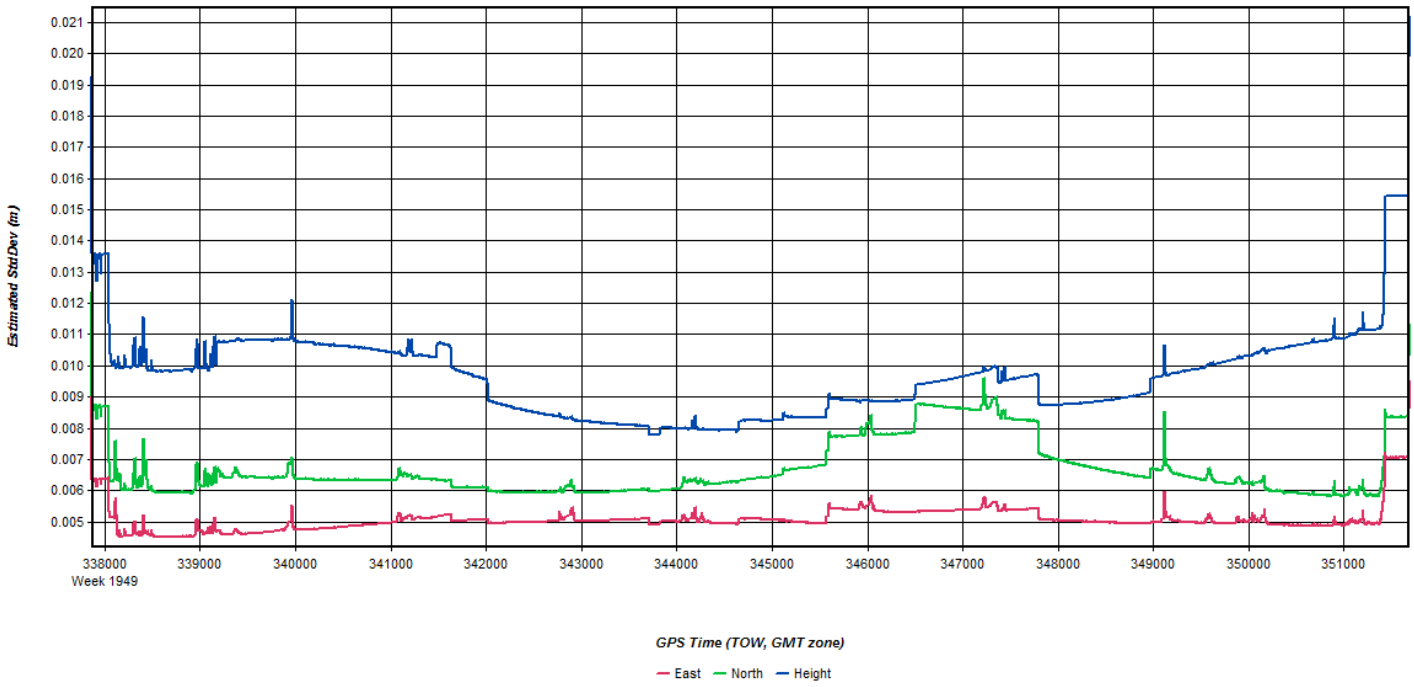

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Roll
Pitch

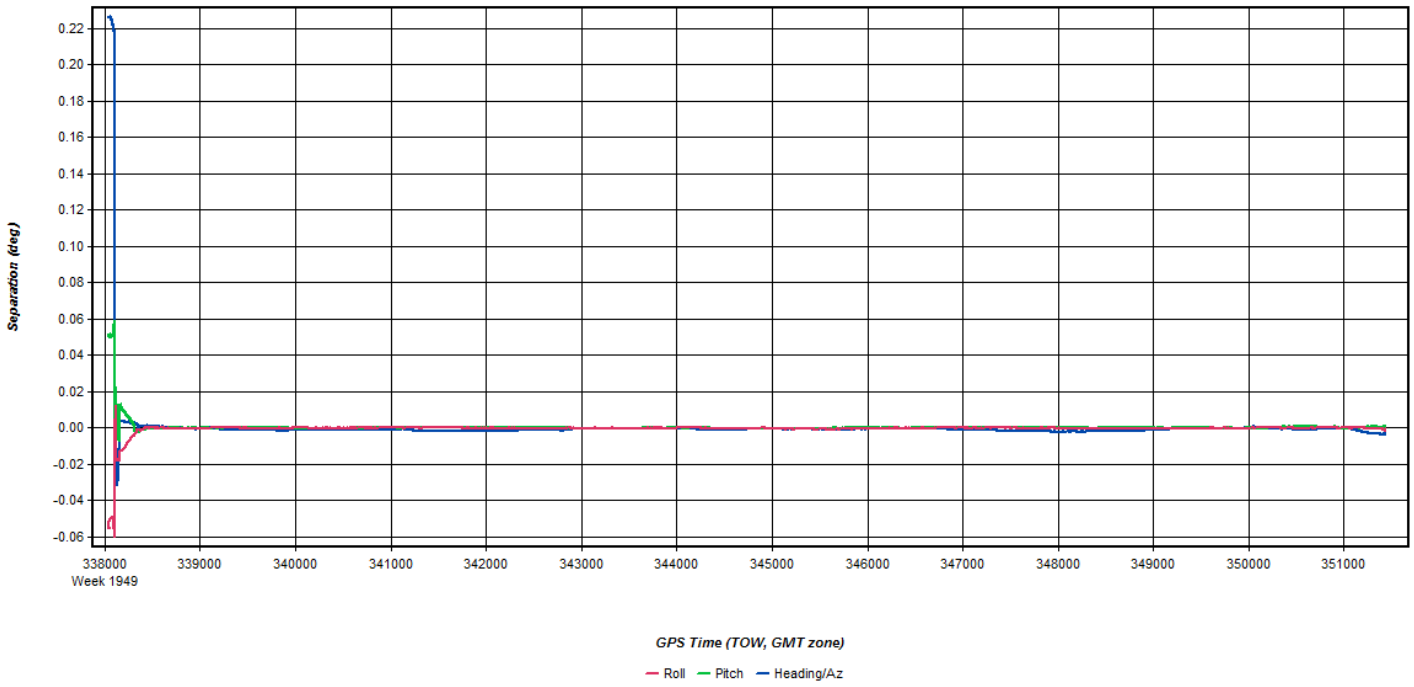

RMS (m)
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
RMS
SD

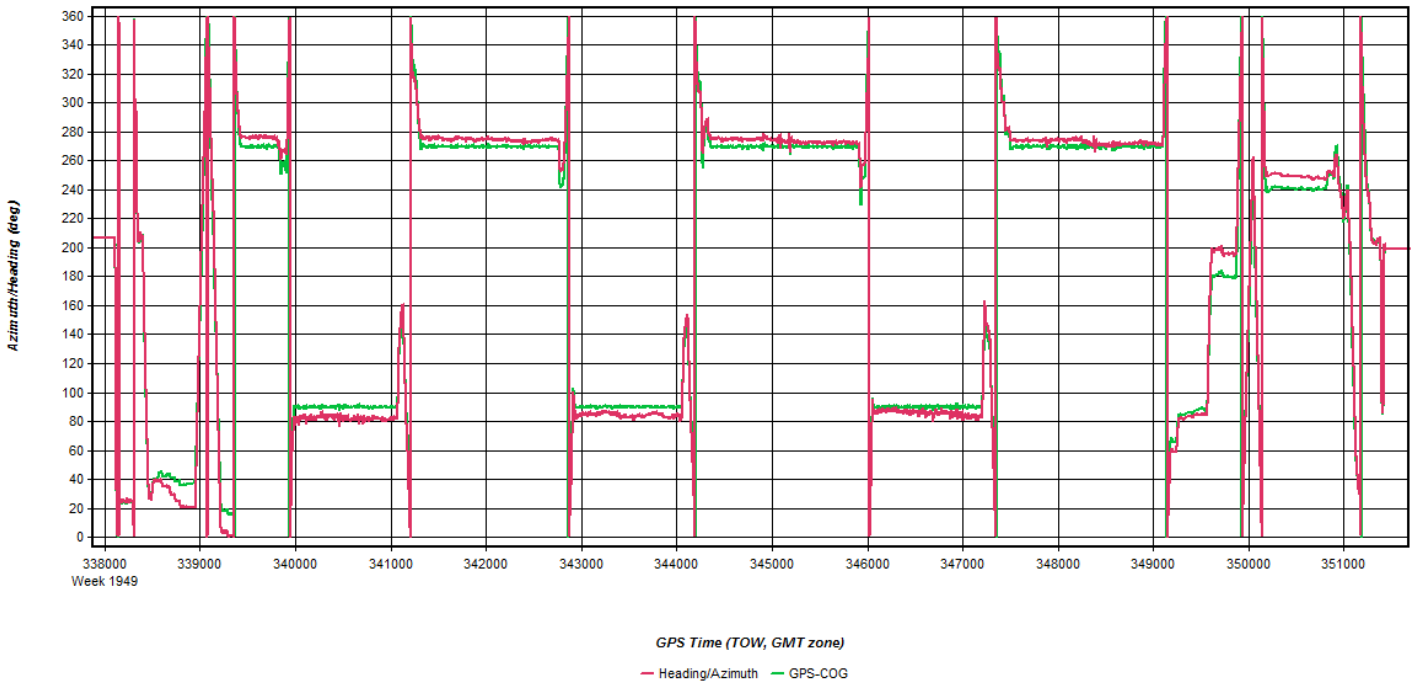
Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Height


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

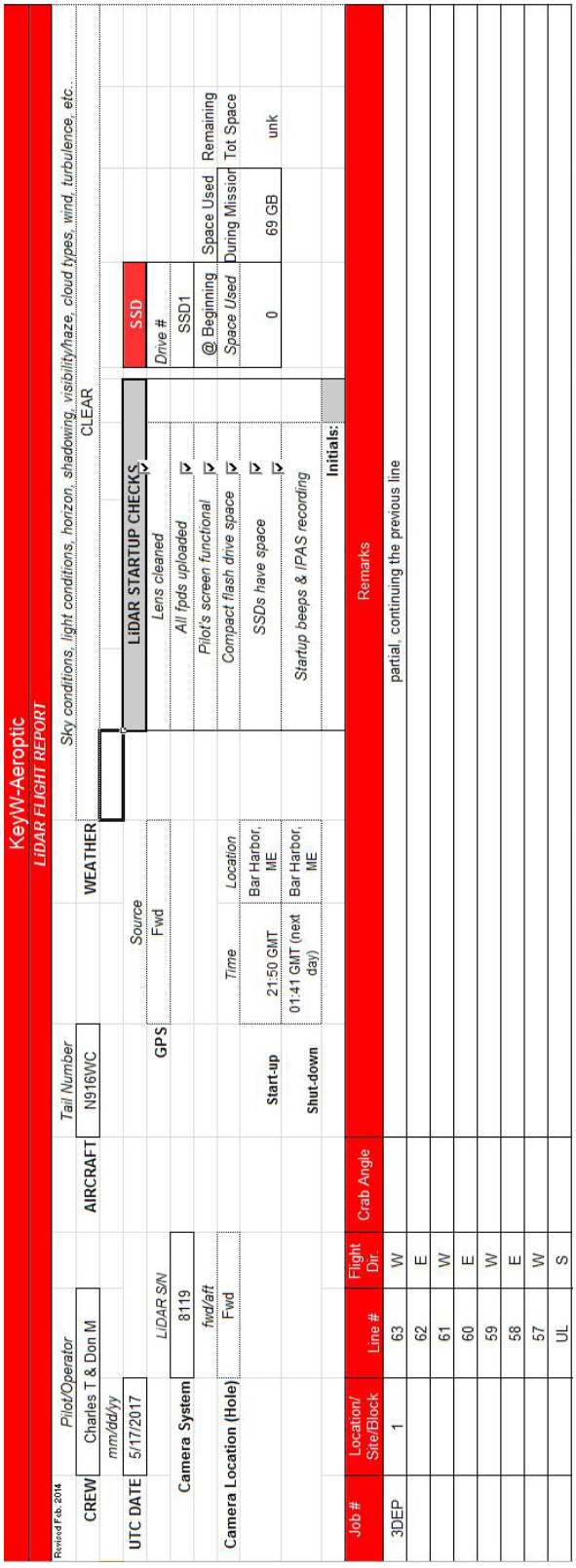

Separation (m)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
338000
Week 1949
339000
340000
341000
342000
343000
344000
345000
346000
347000
348000
349000
350000
351000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

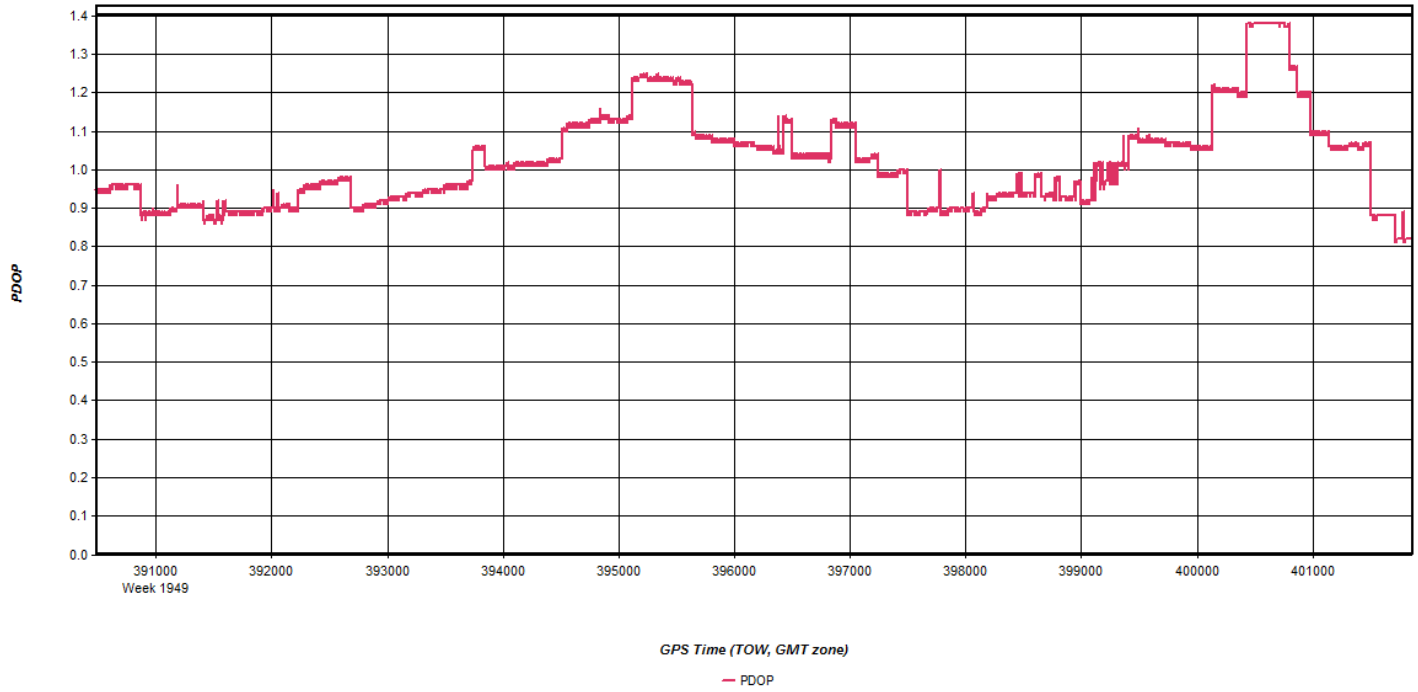
Revised Feb. 2014

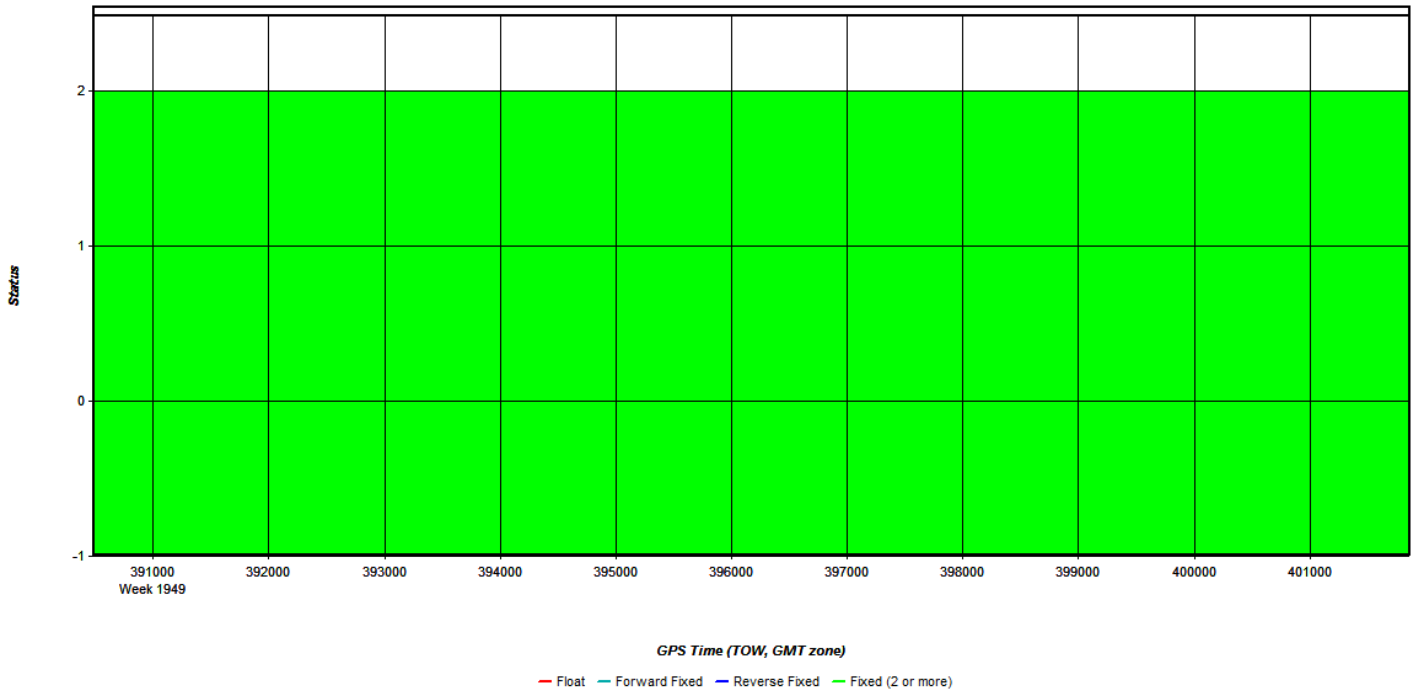
CREW	Pilot/Operator: Charles T & Don M		AIRCRAFT	Tail Number: N916WC		WEATHER	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.*: CLEAR				
UTC DATE	*mm/dd/yy*: 5/17/2017						LiDAR STARTUP CHECKS		SSD		
	LiDAR S/N		GPS	Source			*Lens cleaned*		Drive #		
Camera System	8119			Fwd			*All fpds uploaded*		SSD1		
	fwd/aft						*Pilot's screen functional*		@ Beginning	Space Used	Remaining
Camera Location (Hole)	Fwd						*Compact flash drive space*		Space Used	During Mission	Tot Space
				Time	*Location*		*SSDs have space*		0	69 GB	unk
		Start-up		21:50 GMT	Bar Harbor, ME						
		Shut-down		01:41 GMT (next day)	Bar Harbor, ME		*Startup beeps & IPAS recording*				
								Initials:			

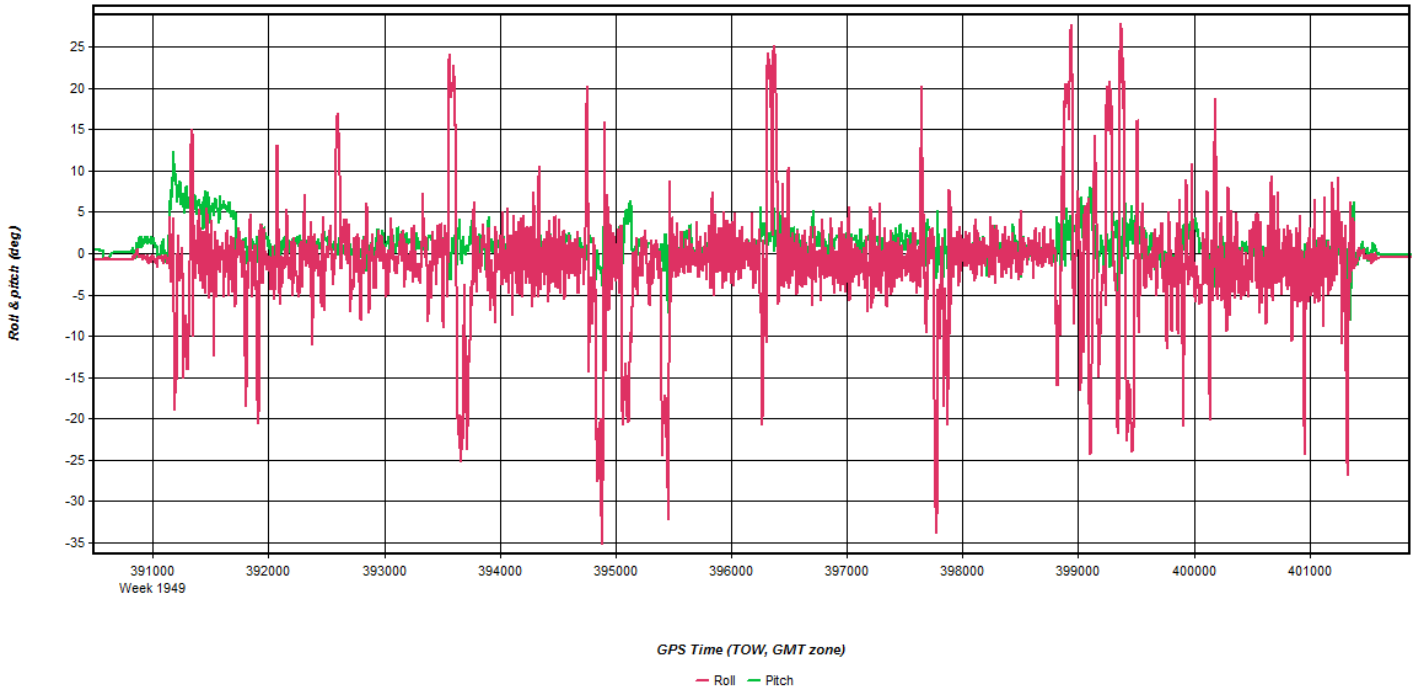
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	63	W		partial, continuing the previous line
		62	E		
		61	W		
		60	E		
		59	W		
		58	E		
		57	W		
		UL	S		

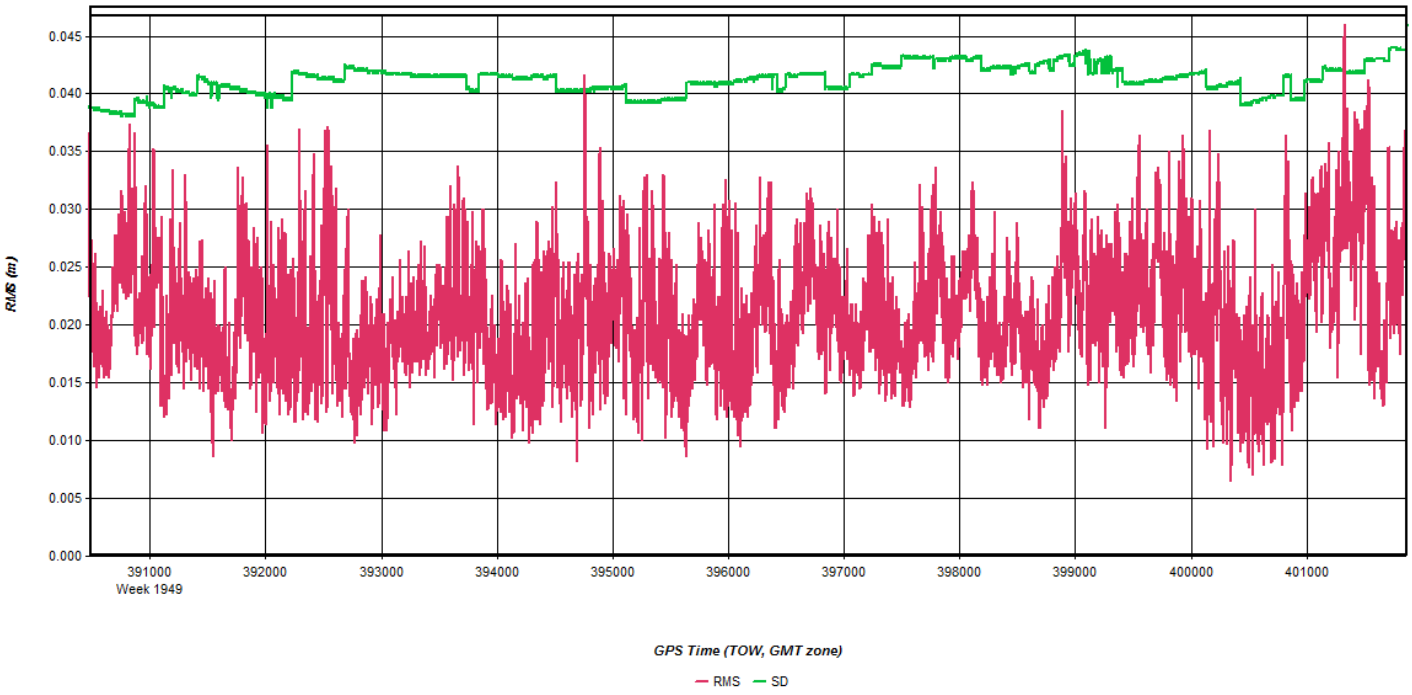
May 18, 2017-A (N73TM, SN7178)

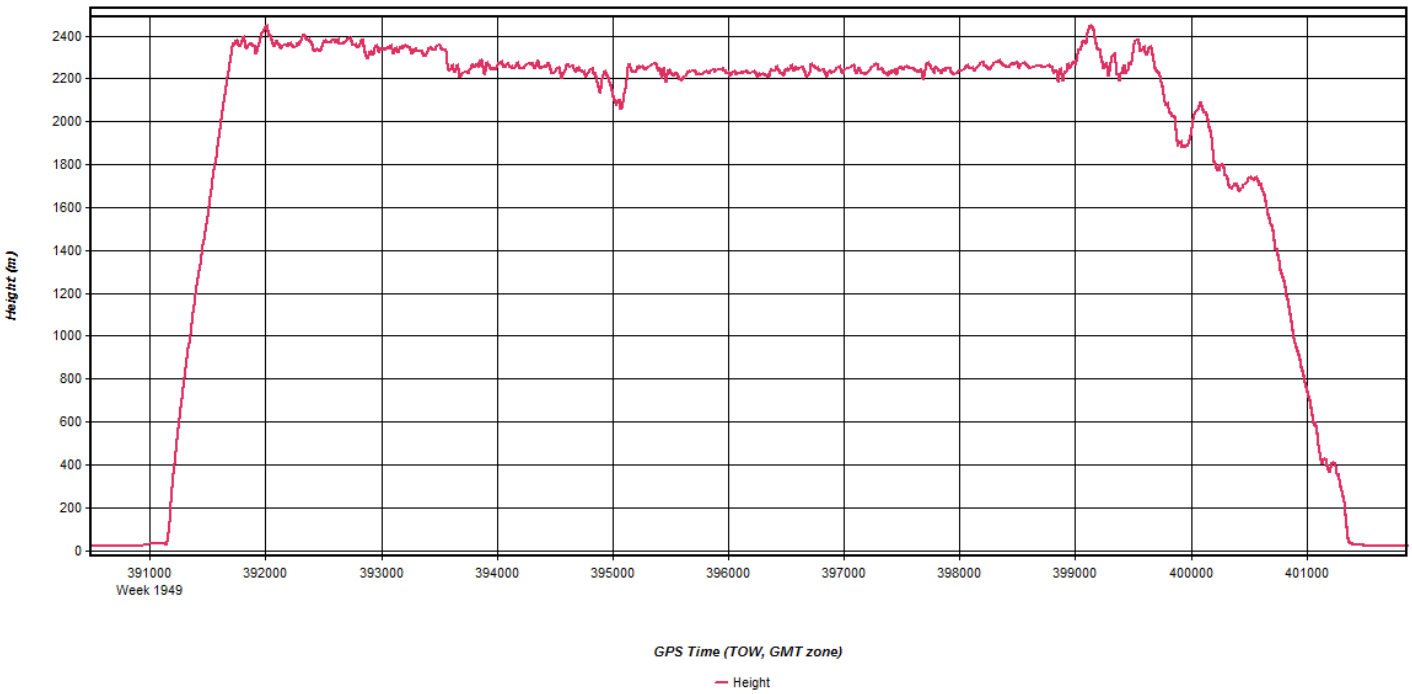
MELI
20 km

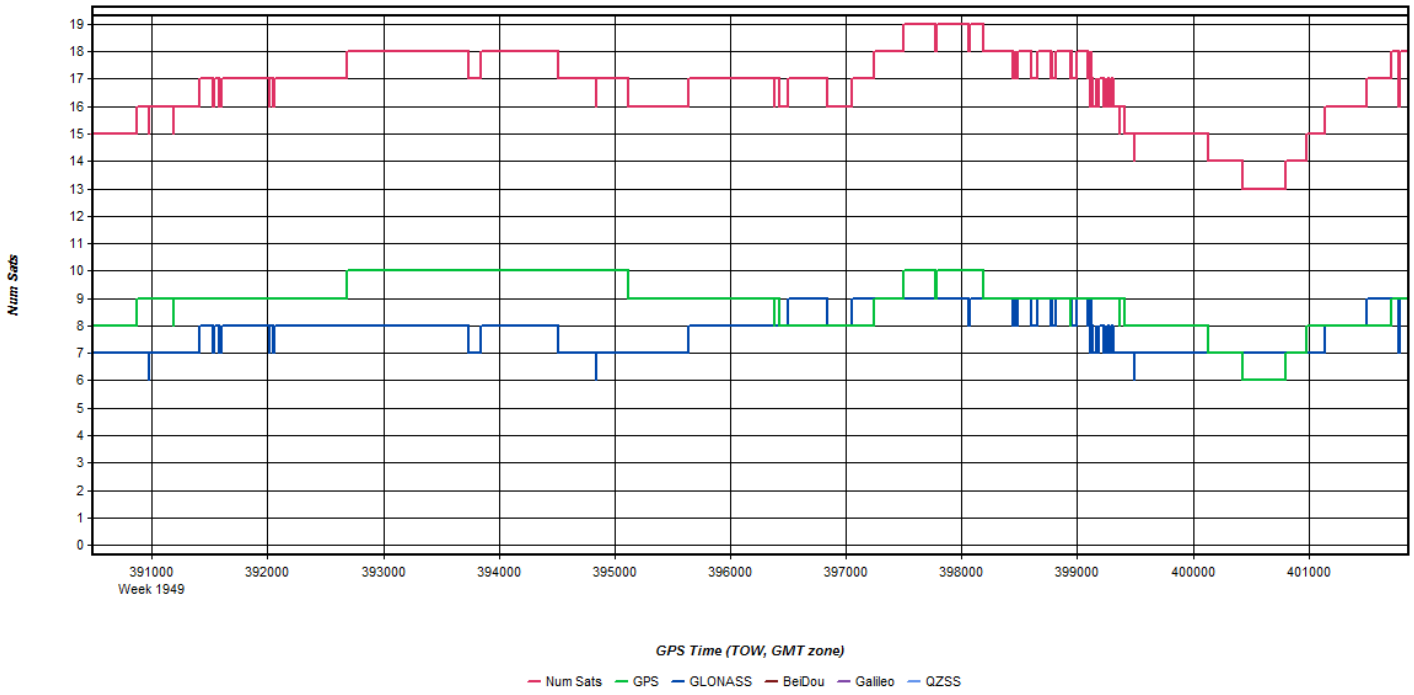

PDOP
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
PDOP

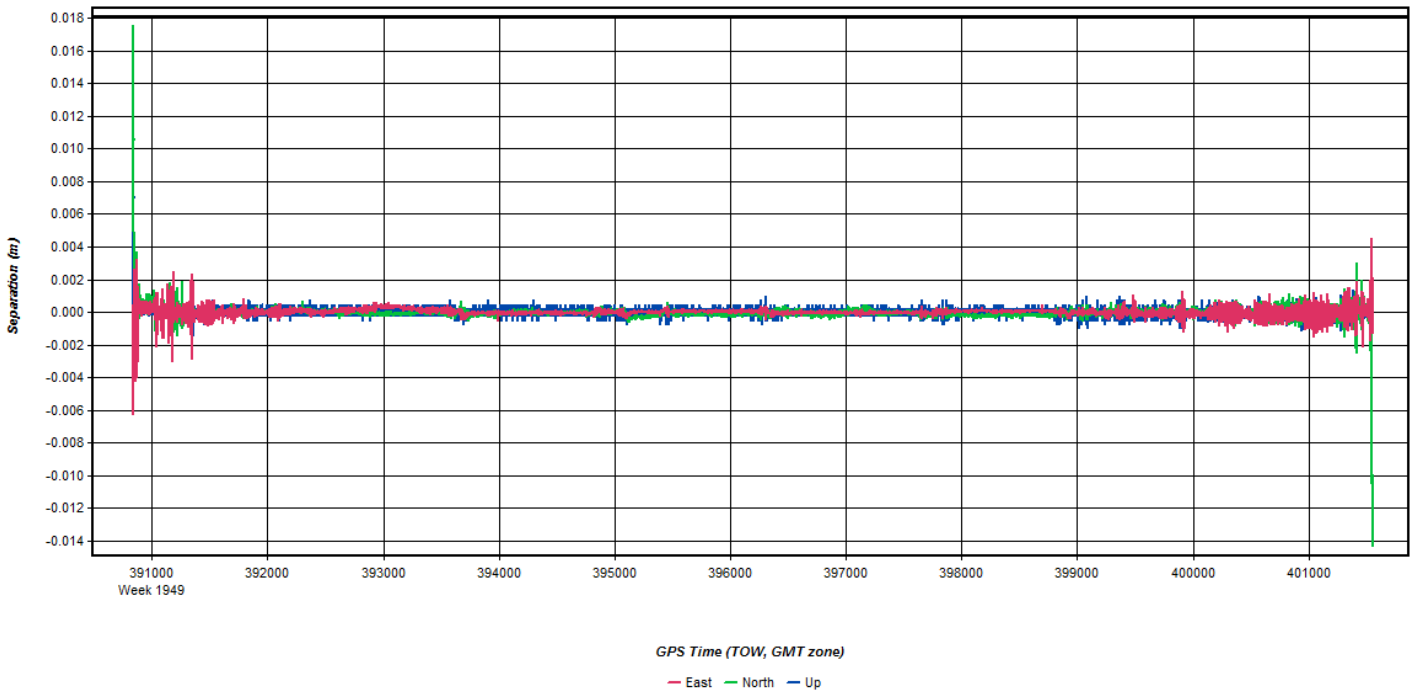

Status
2
1
0
-1
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

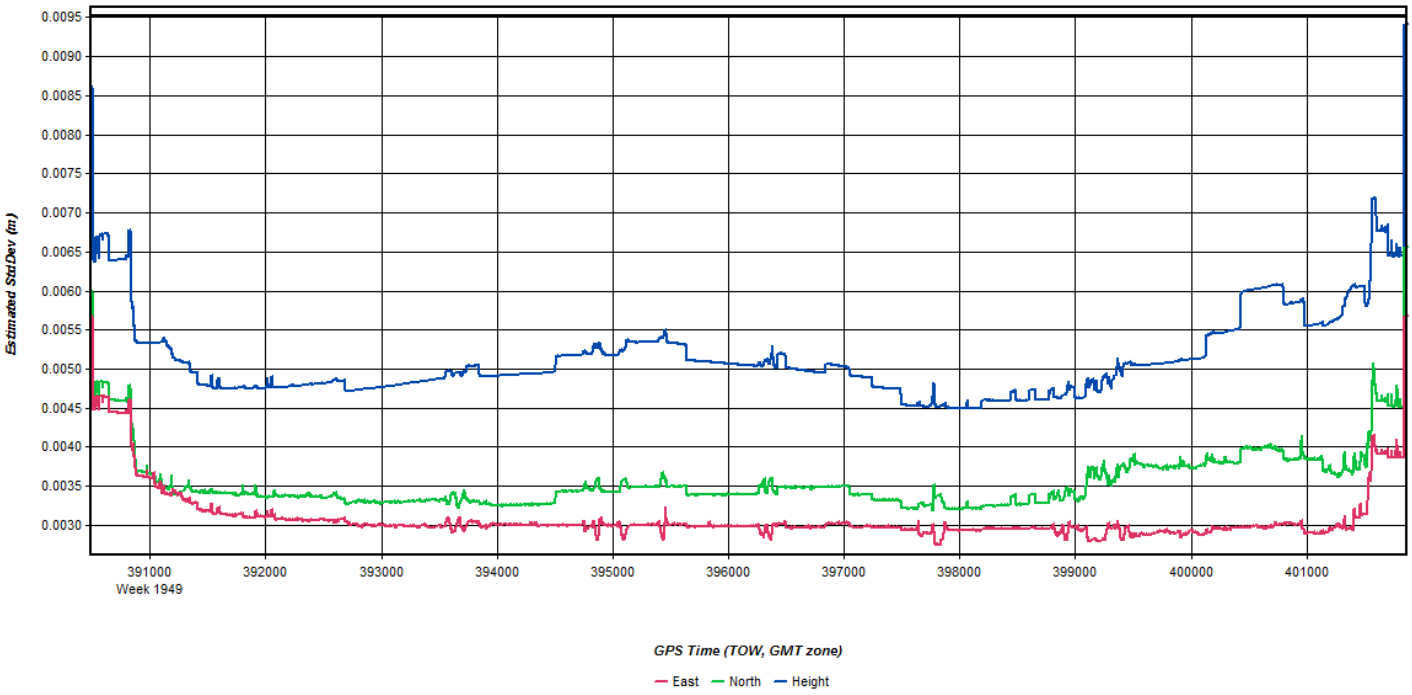

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Roll
Pitch

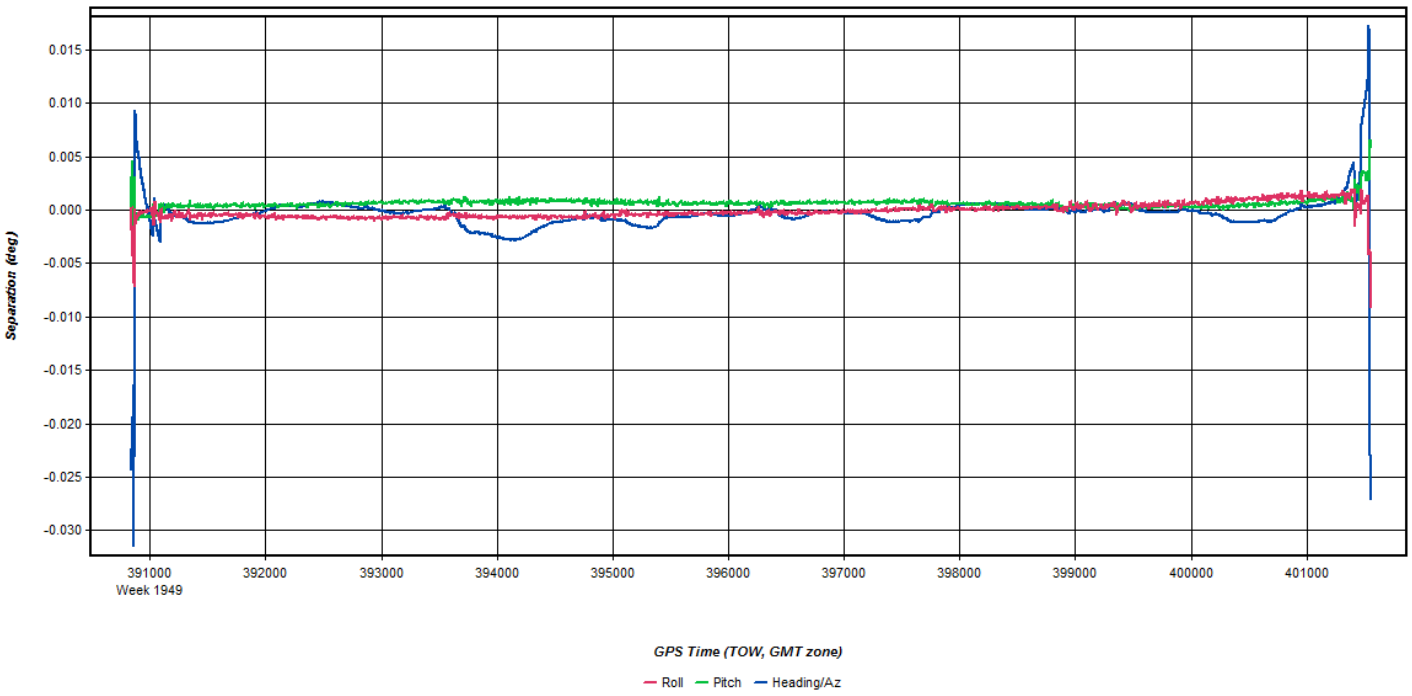

RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
RMS
SD

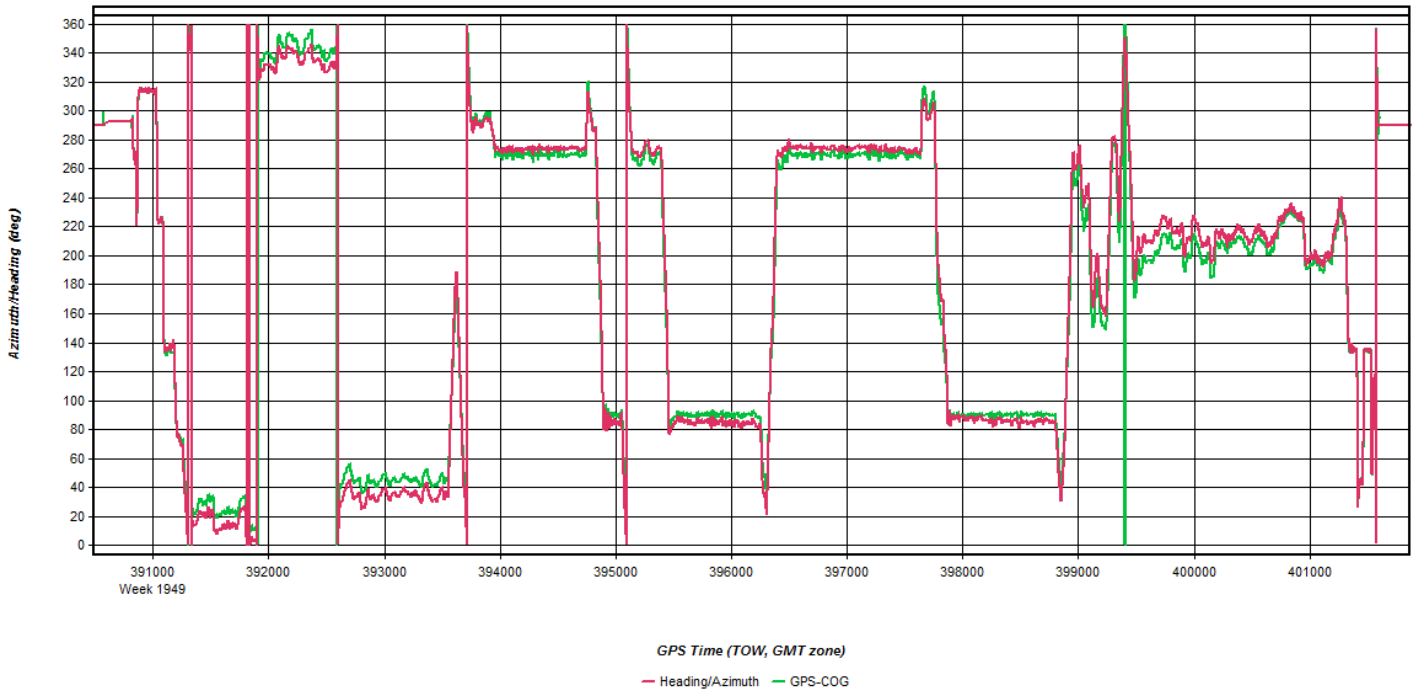

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Height

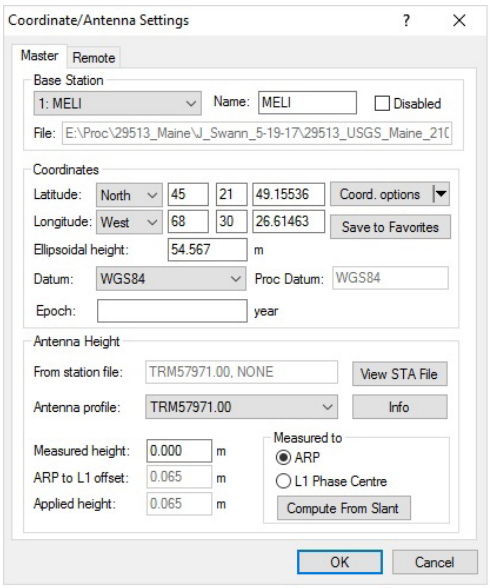

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
East
North
Up

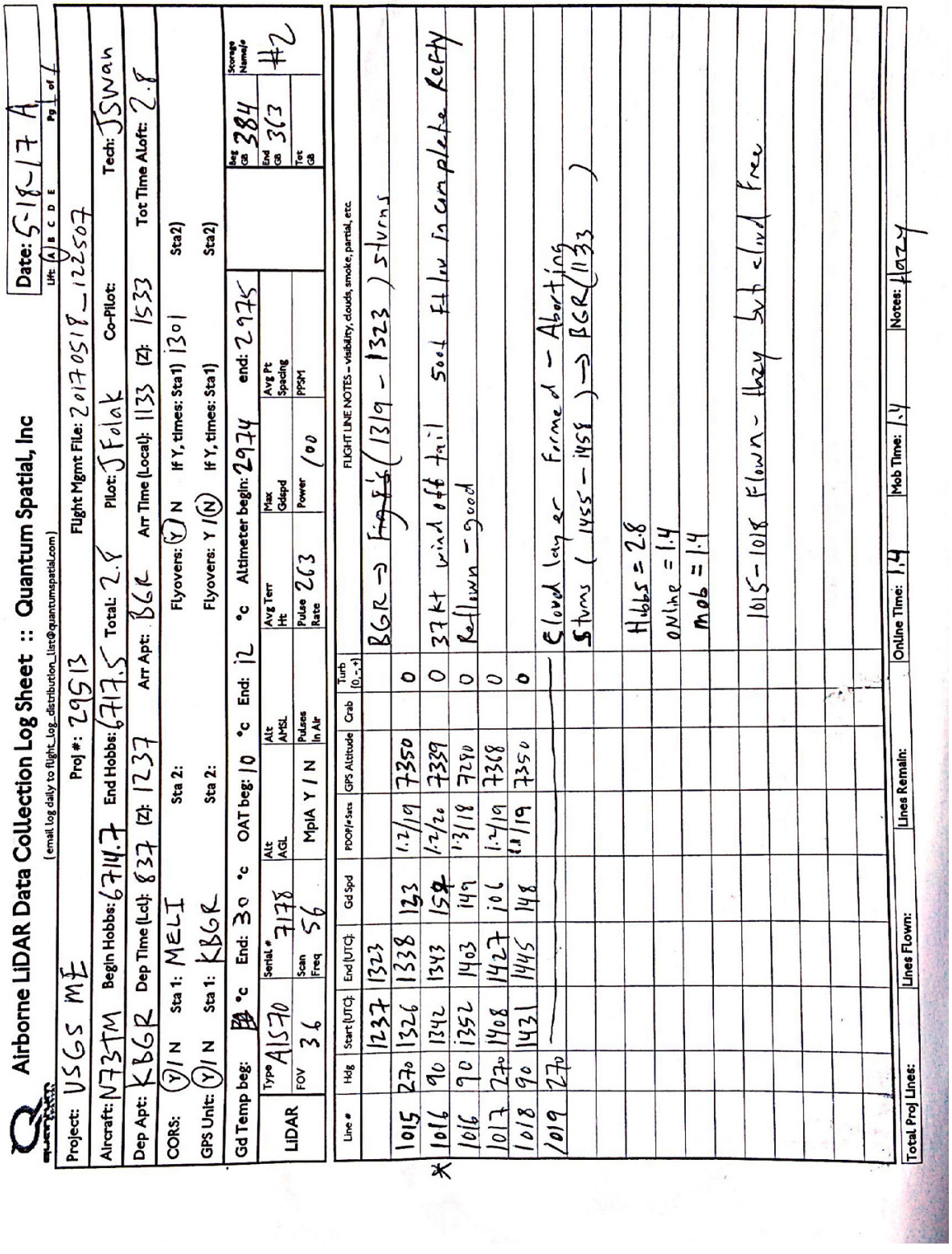

Estimated StdDev (m)
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\J_Swann_5-19-17\29513_USGS_Maine_21(
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_Log_distribution_list@quantumspatial.com)

Date: 5-18-17 A

Life: (A) B C D E Pg 1 of 1

Project: USGS ME | Proj #: 29513 | Flight Mgmt File: 20170518_122507

Aircraft: N737TM | Begin Hobbs: 6714.7 | End Hobbs: 6717.5 | Total: 2.8 | Pilot: J Folak | Co-Pilot: | Tech: JSwan

Dep Apt: KBGR | Dep Time (Lcl): 837 (Z: 1237 | Arr Apt: BGR | Arr Time (Local): 1133 (Z: 1533 | Tot Time Aloft: 2.8

CORS: (Y) / N | Sta 1: MELT | Sta 2: | Flyovers: (Y) / N | If Y, times: Sta1) 1301 | Sta2)

GPS Unit: (Y) / N | Sta 1: KBGR | Sta 2: | Flyovers: Y / (N) | If Y, times: Sta1) | Sta2)

Gd Temp beg: [illegible] °c | End: 30 °c | OAT beg: 10 °c | End: 12 °c | Altimeter begin: 2974 | end: 2975

LiDAR	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing
	AS70	7178					
	FOV	Scan Freq	MpiA Y / N	Pulses In Air	Pulse Rate	Power	PPSM
	36	56			263	100	

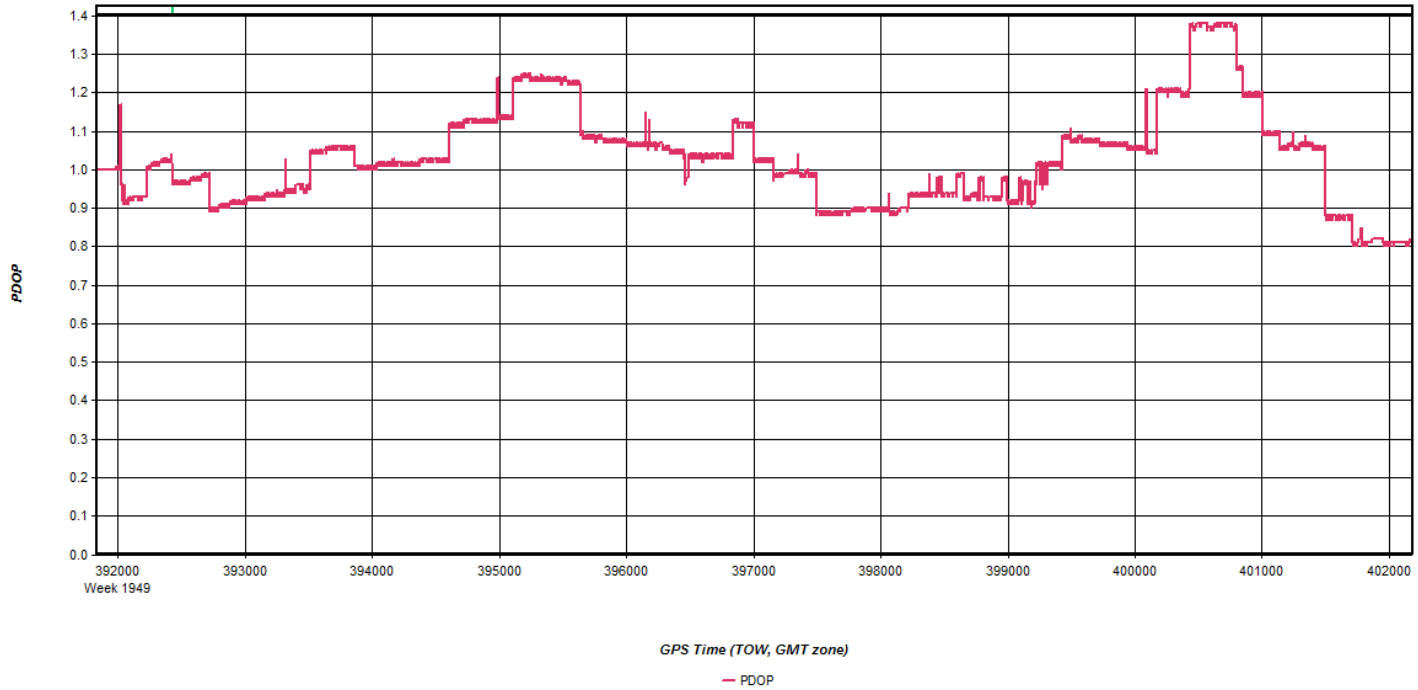
Beg Gb	384
End Gb	363
Tot Gb	
Storage Name/#	#2

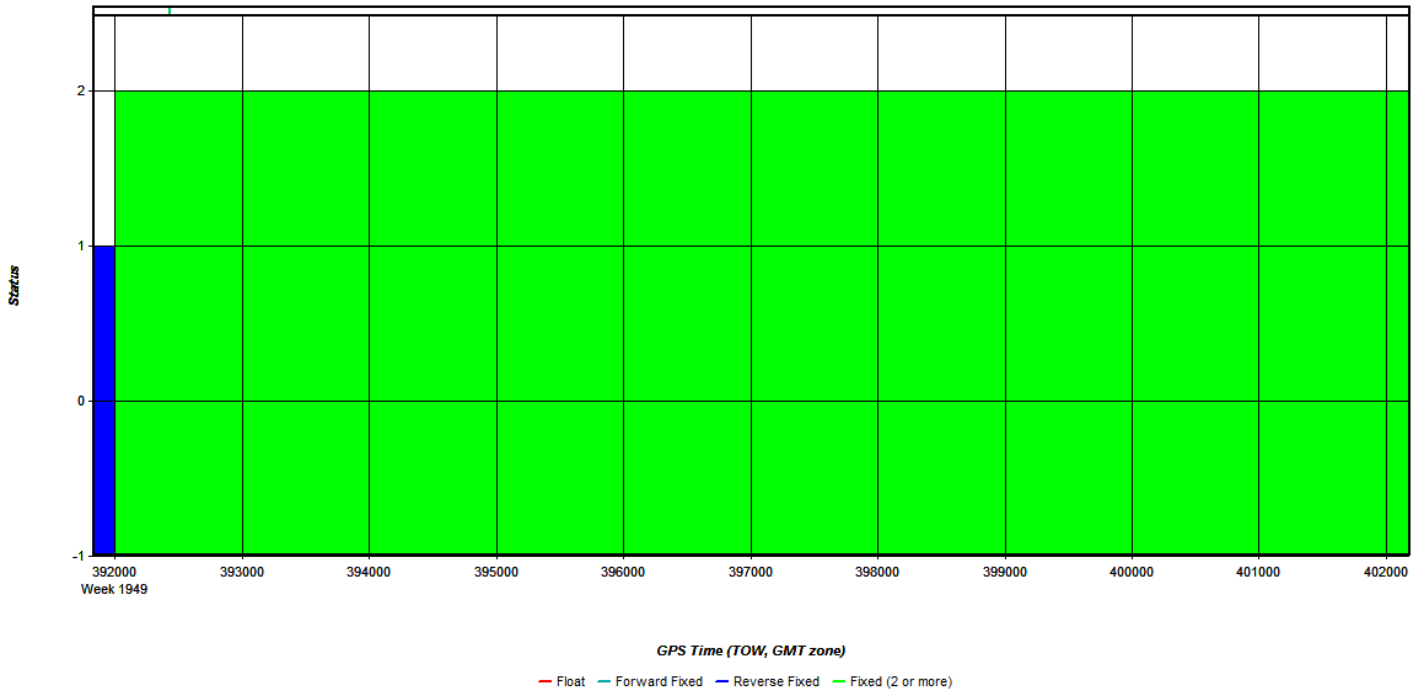
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/Sats	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc
		1237	1323						BGR → flight (1319 – 1323) 5 turns
1015	270	1326	1338	133	1.2/19	7350	0		
1016	90	1342	1343	152	1.2/20	7339	0	37 kt wind off tail 500ft FL low to complete Refly	
1016	90	1352	1403	149	1.3/18	7280	0	Reflown - good	
1017	270	1408	1427	106	1.2/19	7368	0		
1018	90	1431	1445	148	1.1/19	7350	0		
1019	270	—	—	—	—	—	—	—	Cloud layer formed - Aborting
									5 turns (1455 – 1458) → BGR (1533)
									Hobbs = 2.8
									online = 1.4
									mob = 1.4
									1015 – 1018 Flown - Hazy Syh cloud free

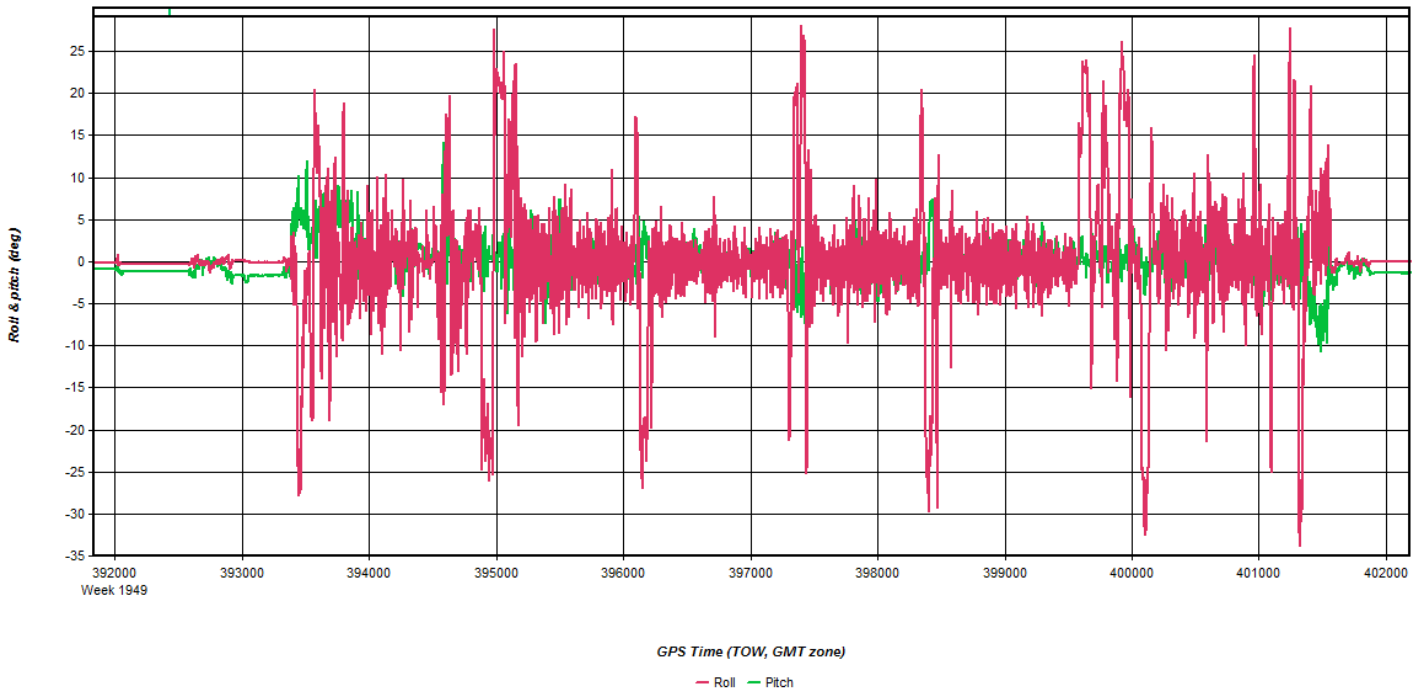
Total Proj Lines: | Lines Flown: | Lines Remain: | OnLine Time: 1.4 | Mob Time: 1.4 | Notes: Hazy

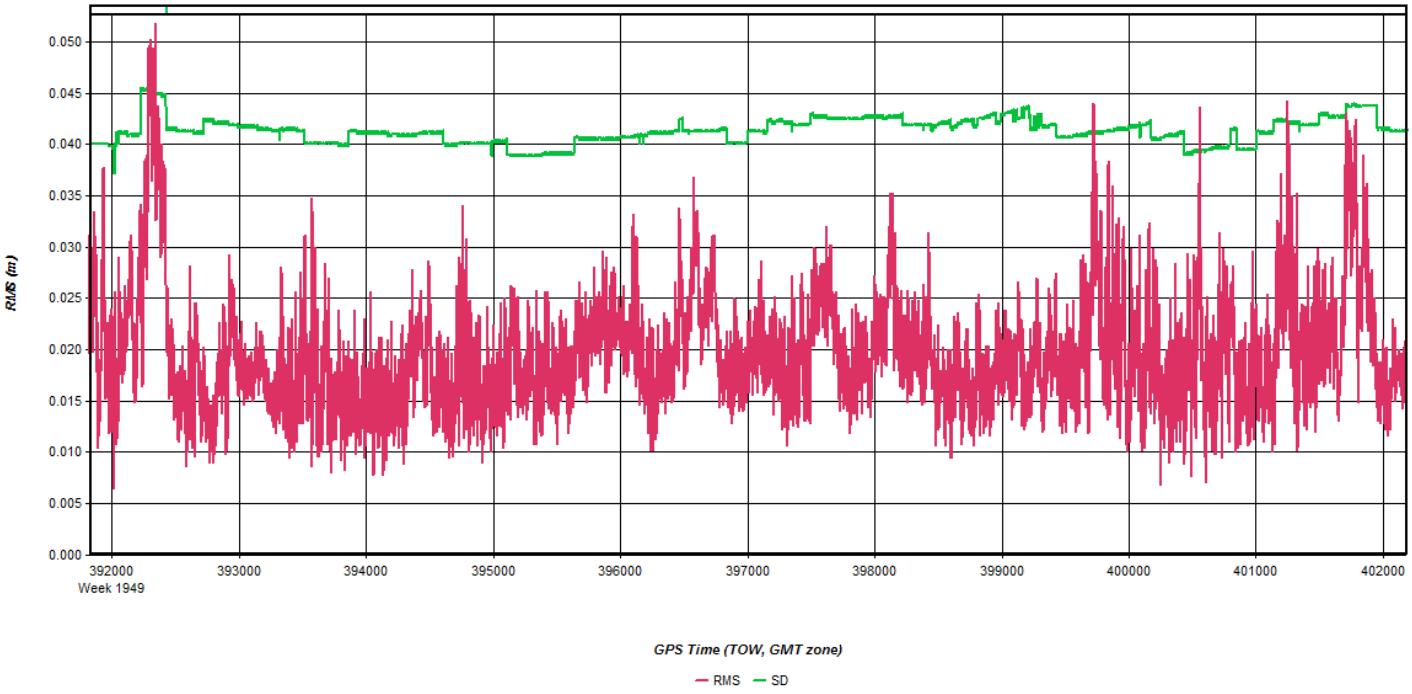
May 18, 2017-A (N262AS, SN7161)

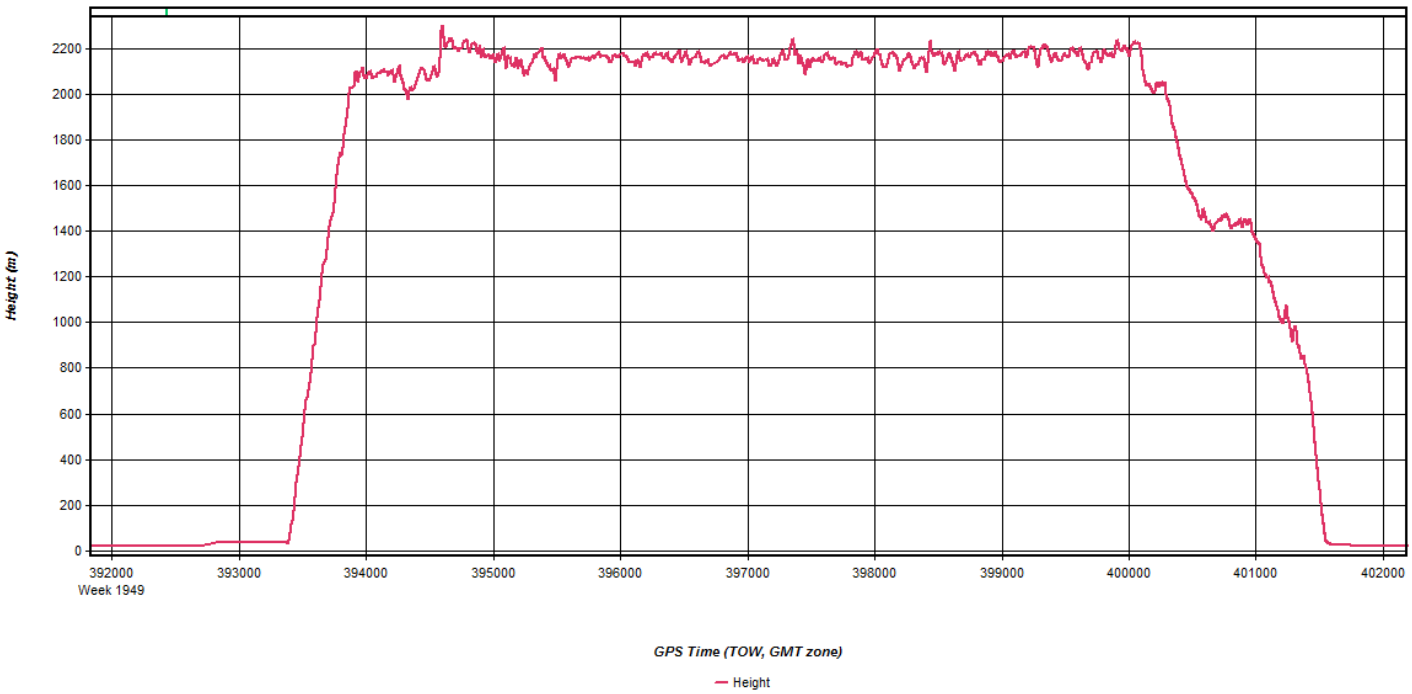
MELI
10 km

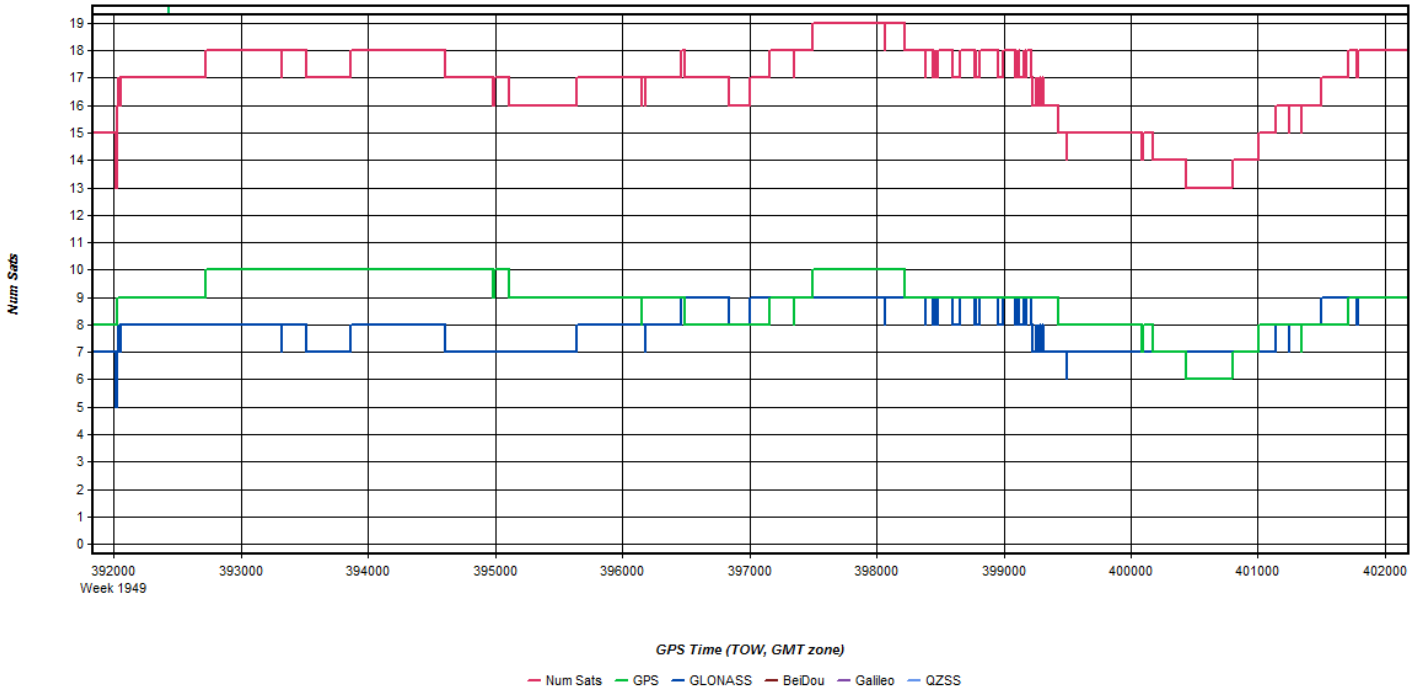

PDOP
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
PDOP

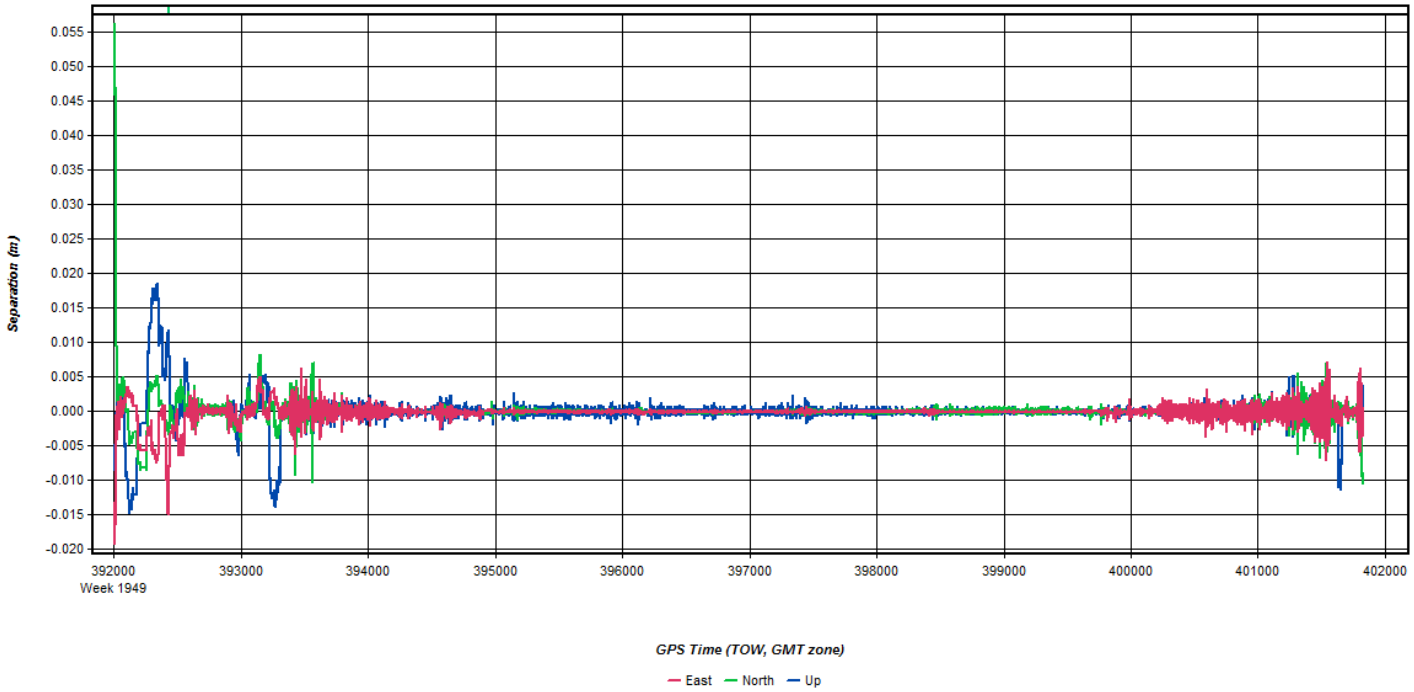

Status
2
1
0
-1
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

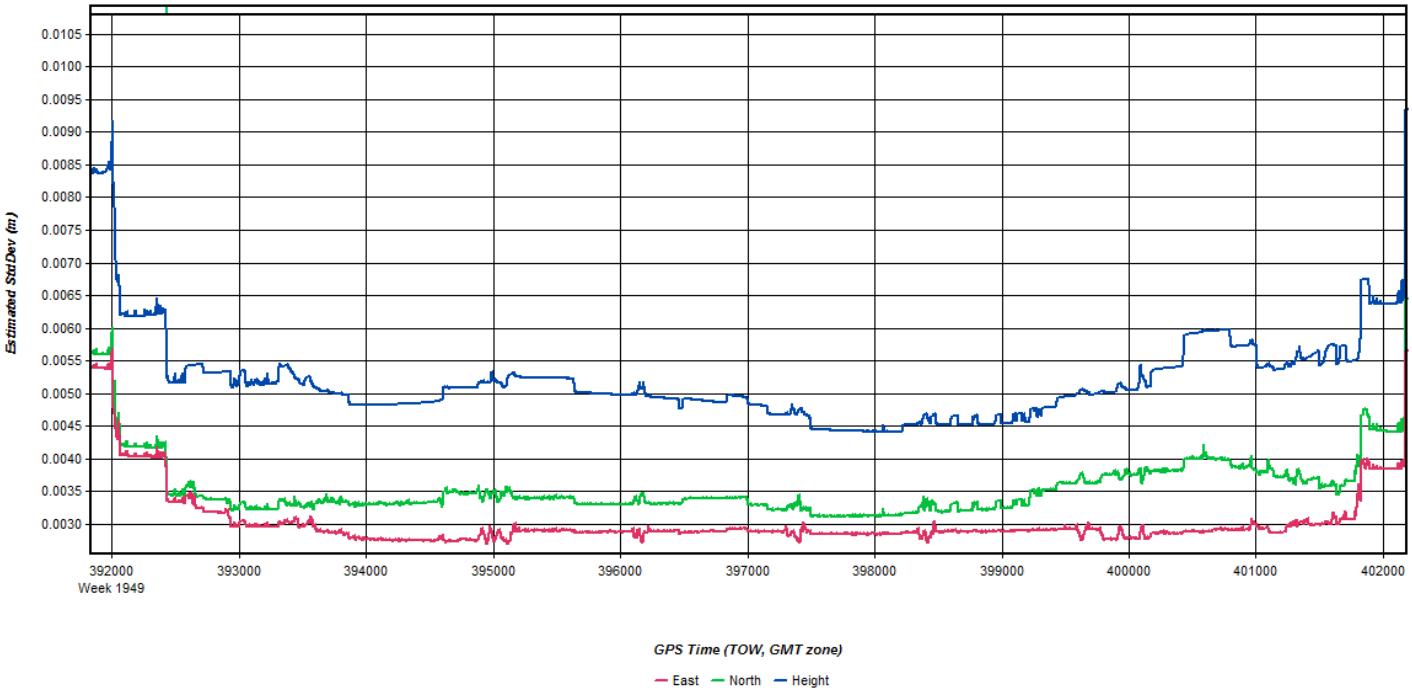

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Roll
Pitch

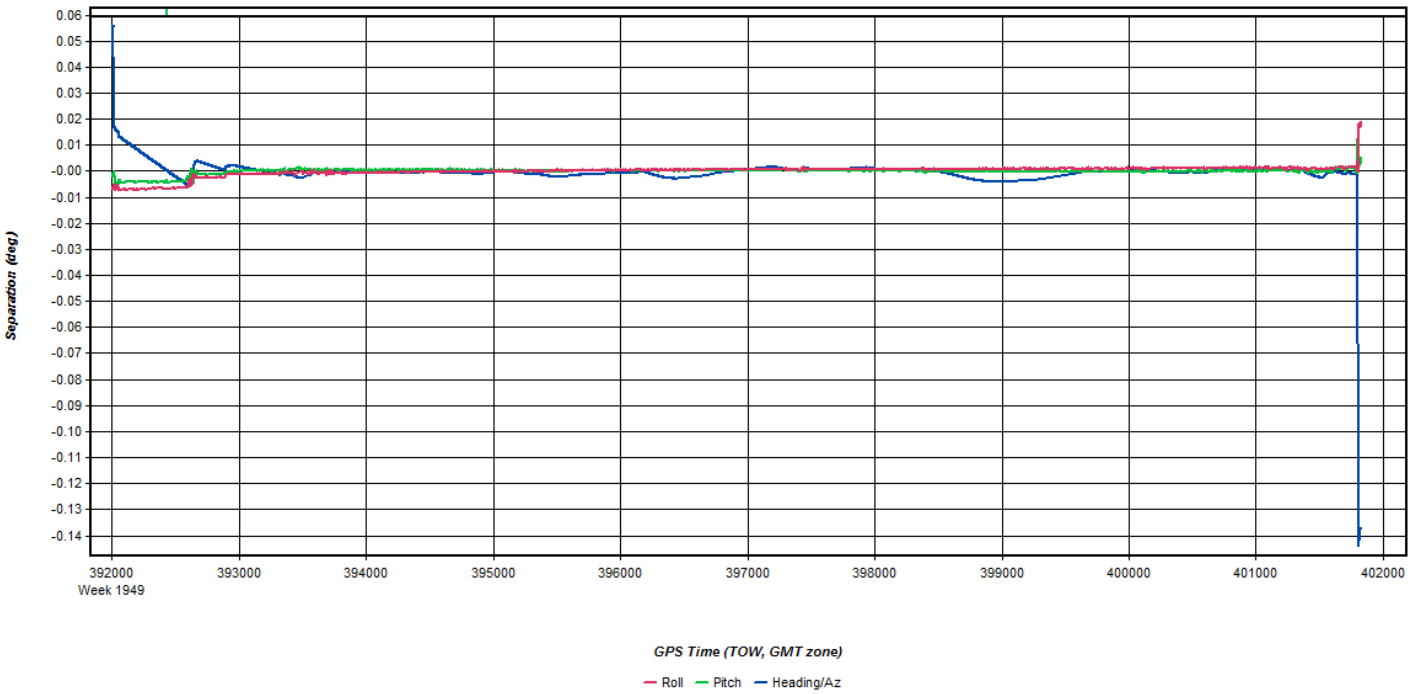

RMS (m)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
RMS
SD

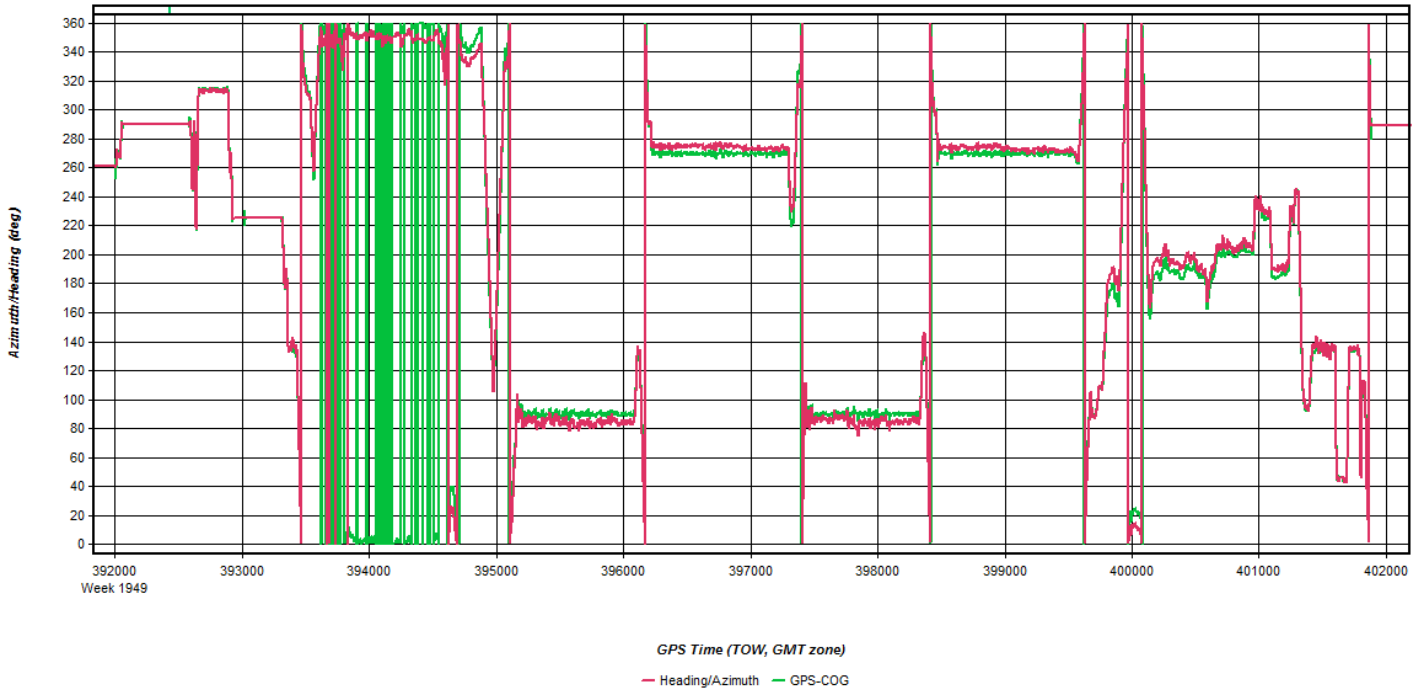

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Height

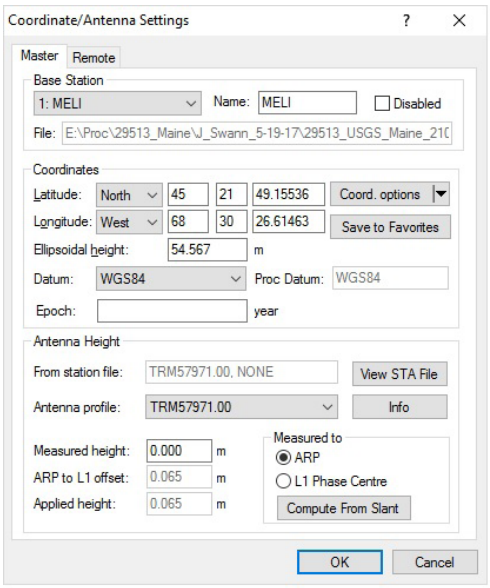

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
East
North
Height

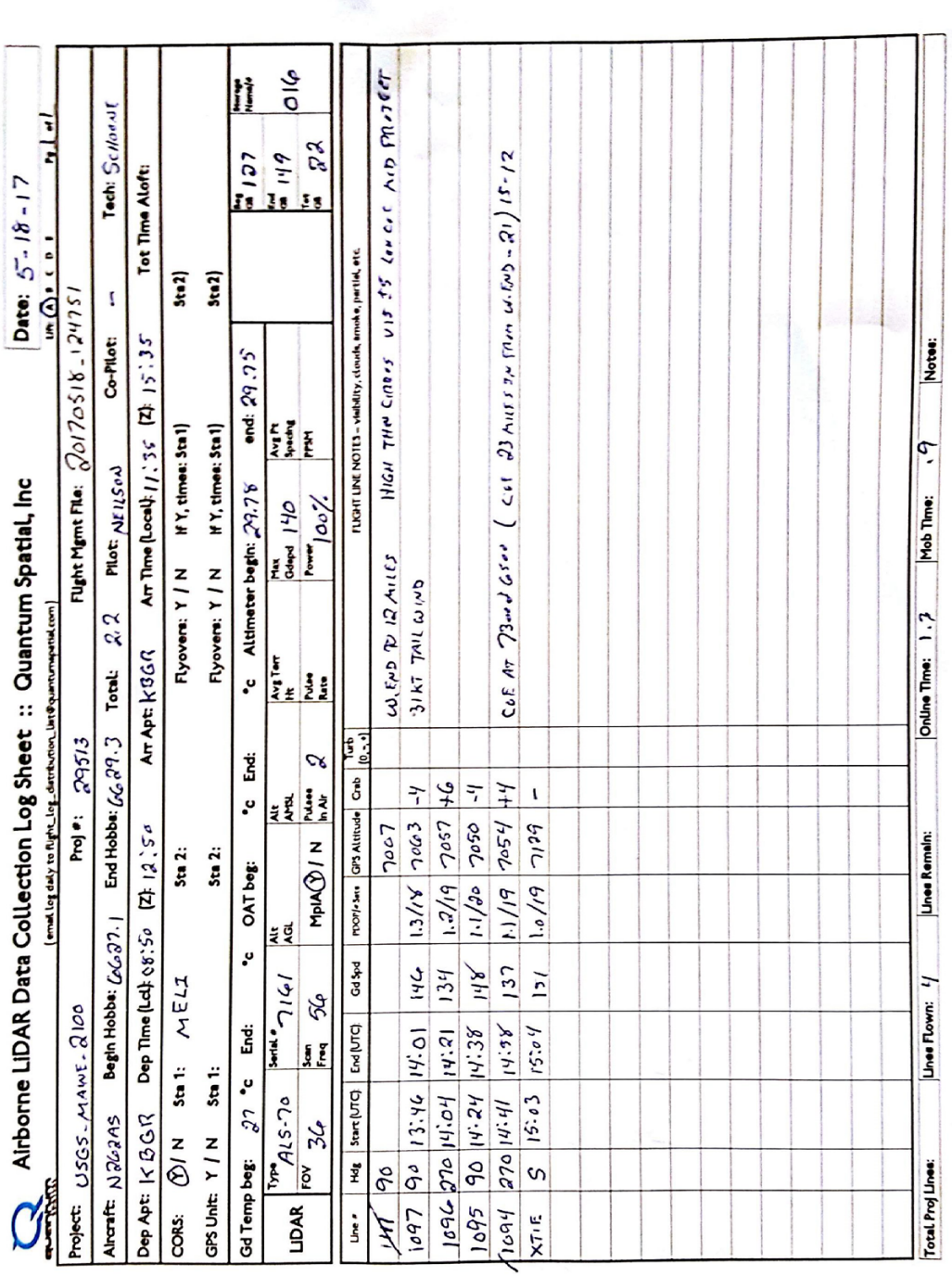

Separation (deg)
0.06
0.05
0.04
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
392000
Week 1949
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\J_Swann_5-19-17\29513_USGS_Maine_21(
Coordinates
Latitude: North 45 21 49.15536 Coord. options
Longitude: West 68 30 26.61463 Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_Log_distribution_list@quantumspatial.com)

Date: 5-18-17

Project: USGS_MAWE_2100 Proj #: 29513 Flight Mgmt File: 20170518_124751

Aircraft: N862AS Begin Hobbs: 6687.1 End Hobbs: 6689.3 Total: 2.2 Pilot: NELSON Co-Pilot: — Tech: Sullivan

Dep Apt: KBGR Dep Time (Lcl): 08:50 (Z): 12:50 Arr Apt: KBGR Arr Time (Local): 11:36 (Z): 15:35 Tot Time Aloft:

CORS: Y / N Sta 1: MELI Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

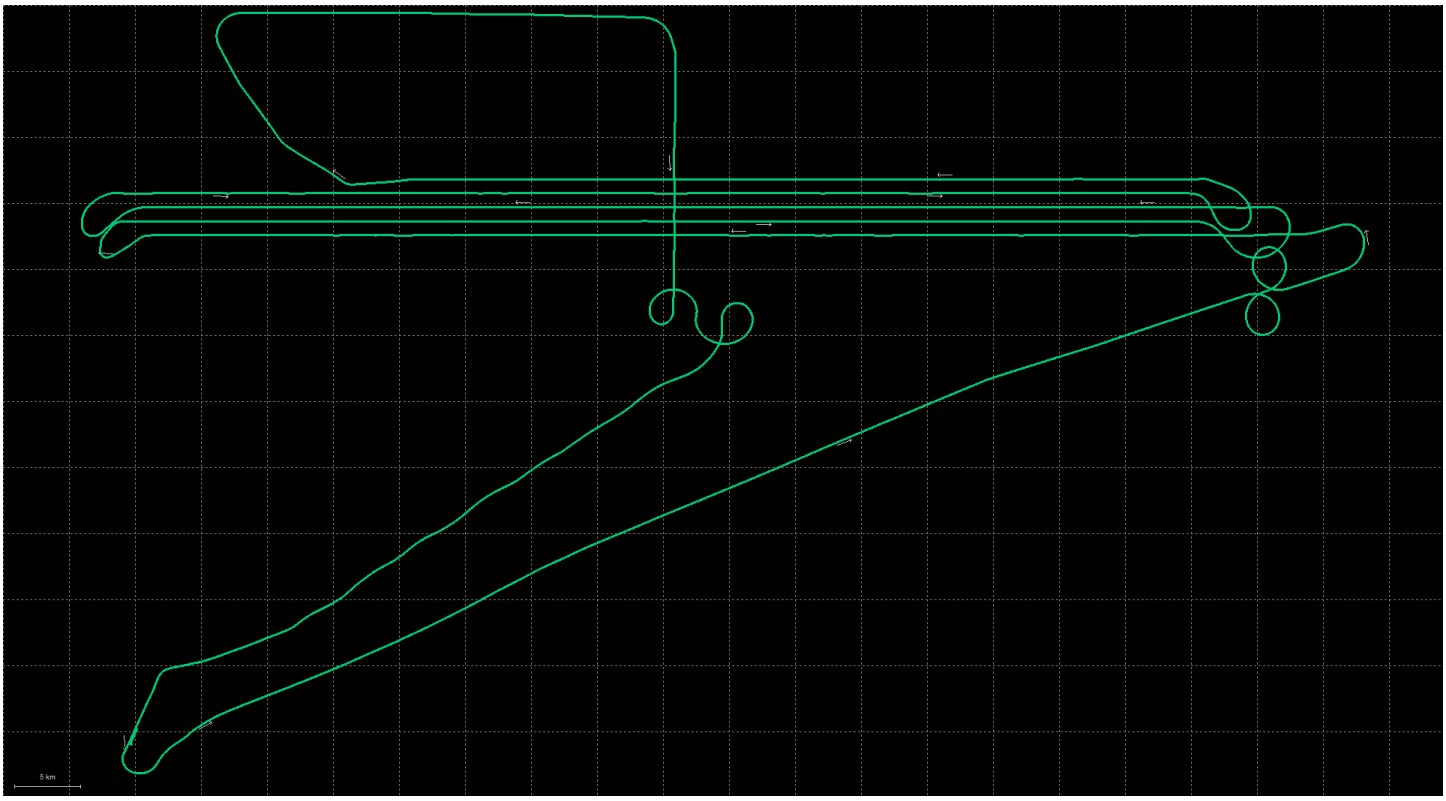
Gd Temp beg: 27 °c End: °c OAT beg: °c End: °c Altimeter begin: 29.78 end: 29.75

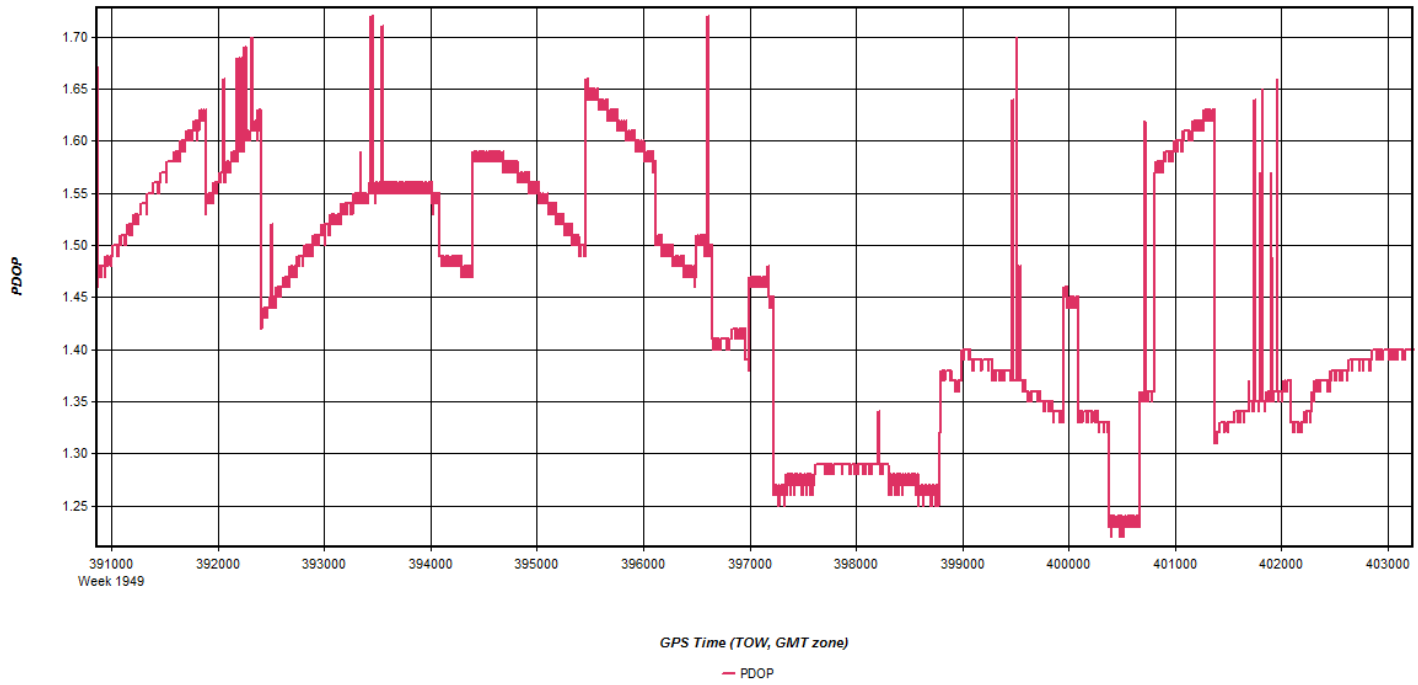
	Type	ALS-70	Serial #	7141	Alt AGL		Alt APSL		Crab	Turb (0,+,-)	Avg Terr Ht		Max Gdspd	140	Avg Pt Spacing		Beg alt	127	Average Humidity
LIDAR	FOV	36	Scan Freq	56	MpiA Y / N		Pulses In Air	2			Pulse Rate		Power	100%	PRR		End alt	149	016
																	Tot alt	22	

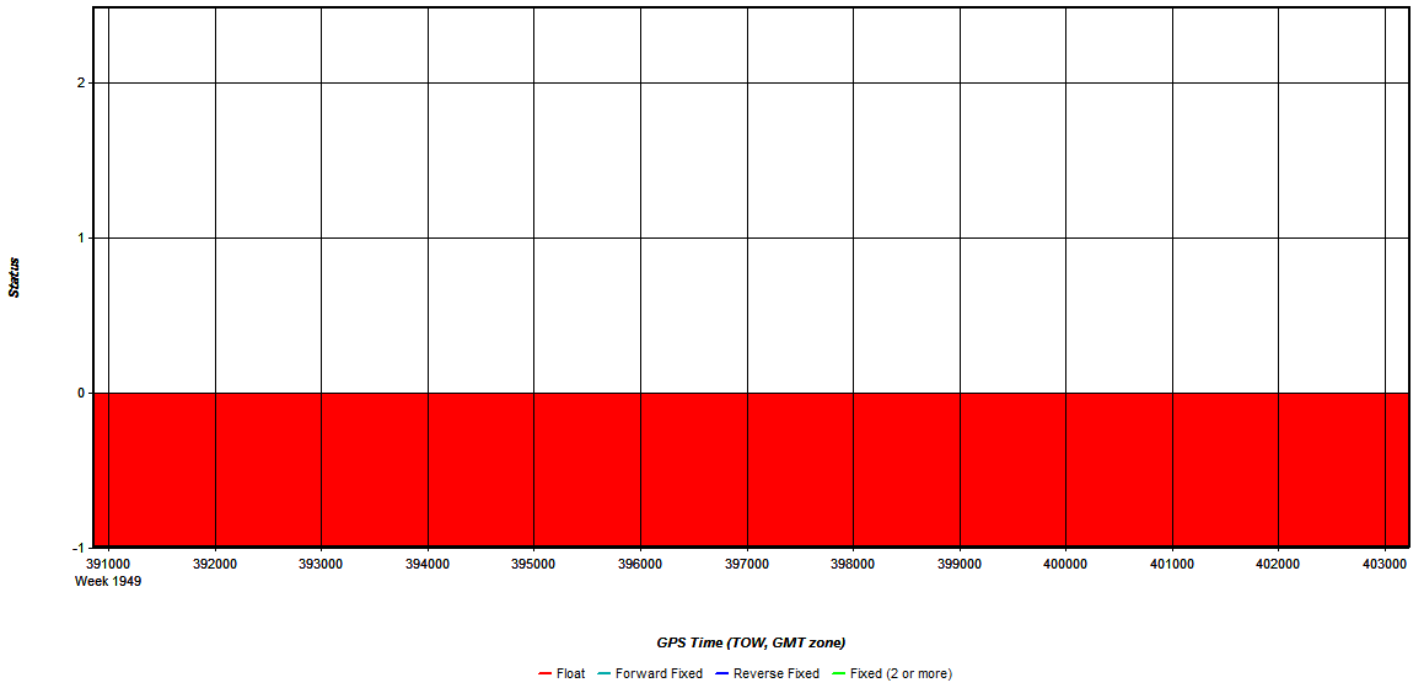
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	roll/+ sec	GPS Altitude	Crab	Turb (0,+,-)	FLIGHT LINE NOTES - visibility, clouds, smoke, particle, etc.
TEST	90					7007			
1097	90	13:46	14:01	146	1.3/18	7063	-4		WIND TO 12 KNOTS HIGH THIN CIRRUS VIS 25 LOWER AND PROJECT
1096	270	14:04	14:21	134	1.2/19	7057	+6		31 KT TAIL WIND
1095	90	14:24	14:38	148	1.1/20	7050	-4		
1094	270	14:41	14:58	132	1.1/19	7054	+4		COE AT 73 and 6500 (CUT 23 KNOTS FROM WIND - 21) 15-12
XTIE	S	15:03	15:04	131	1.0/19	7199	-		

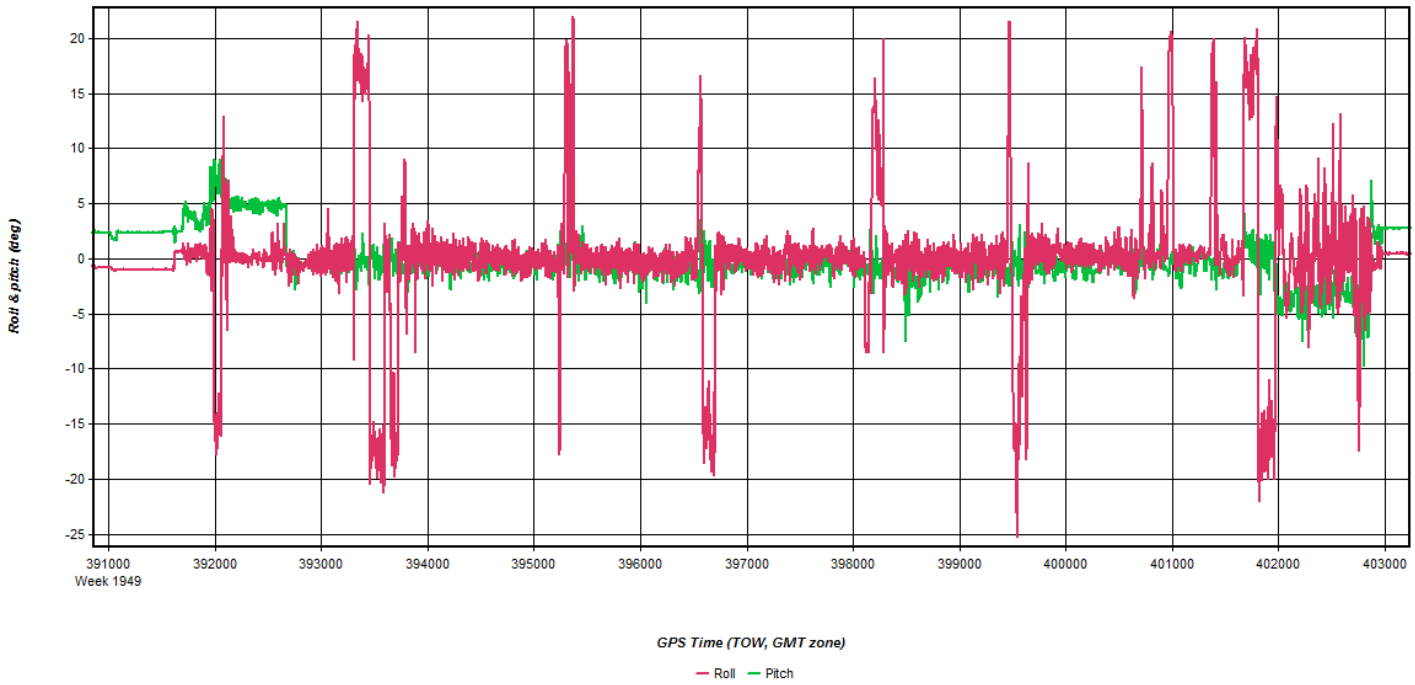
Total Proj Lines: Lines Flown: 4 Lines Remain: Online Time: 1.3 Mob Time: .9 Notes:

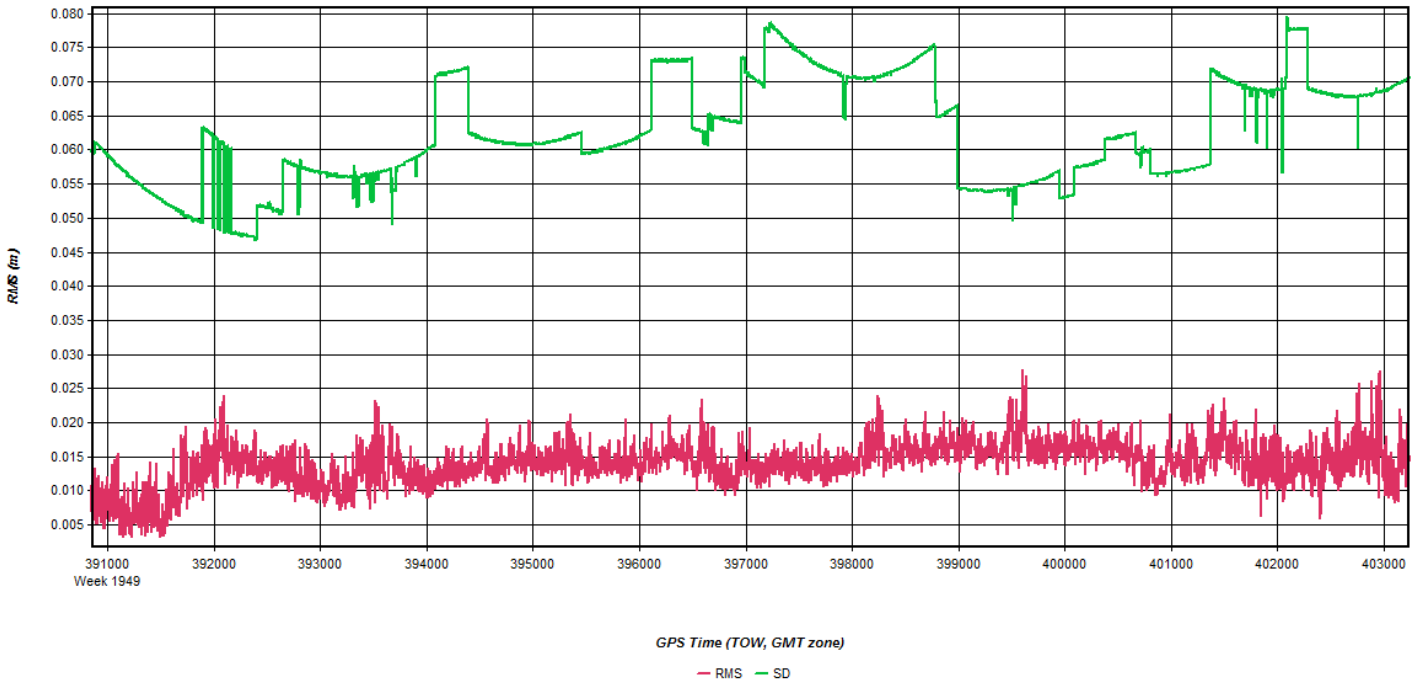
May 18, 2017-A (N916WC, SN8119)

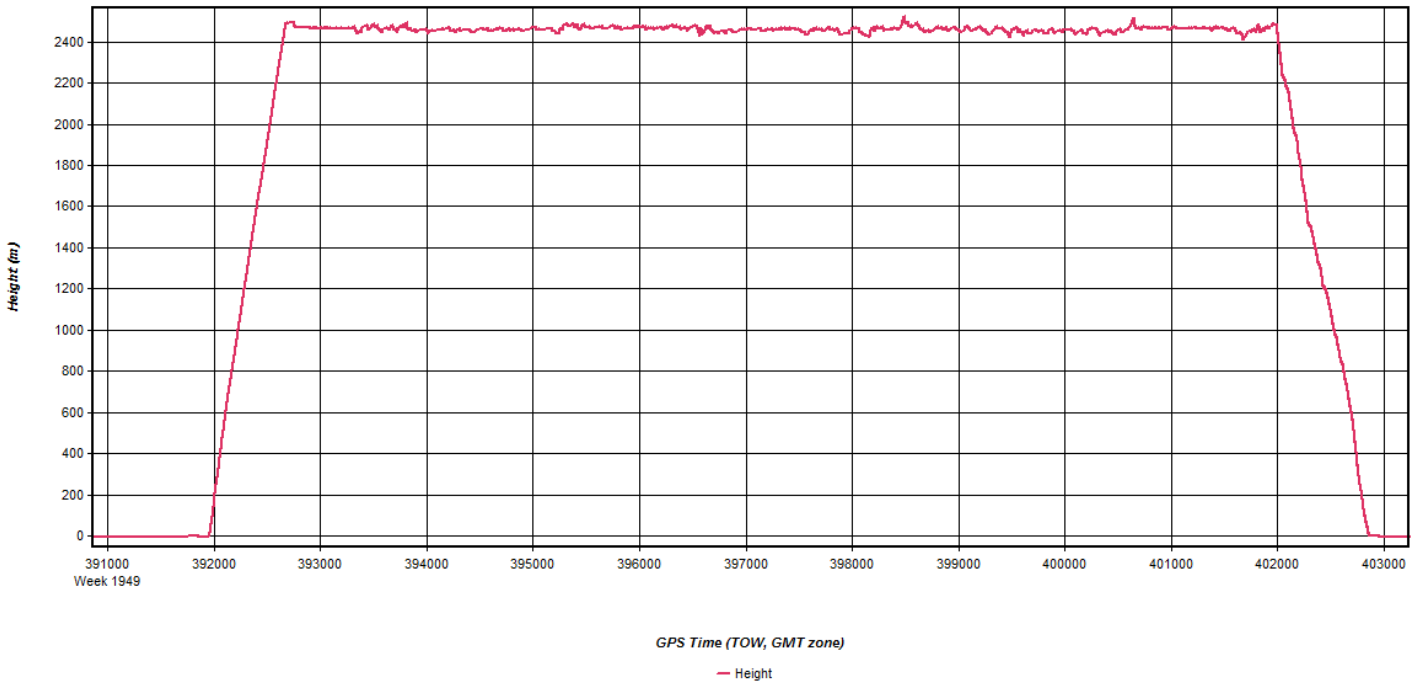

5 km

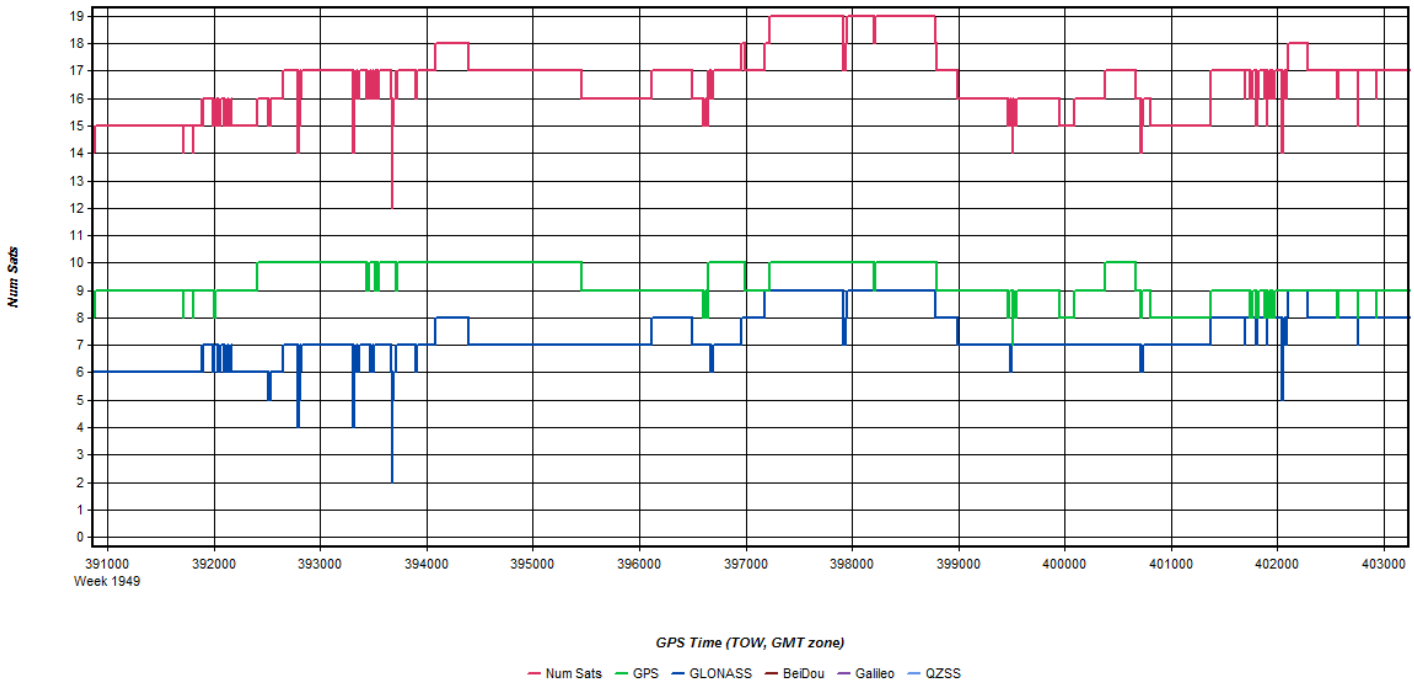

PDOP
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
PDOP

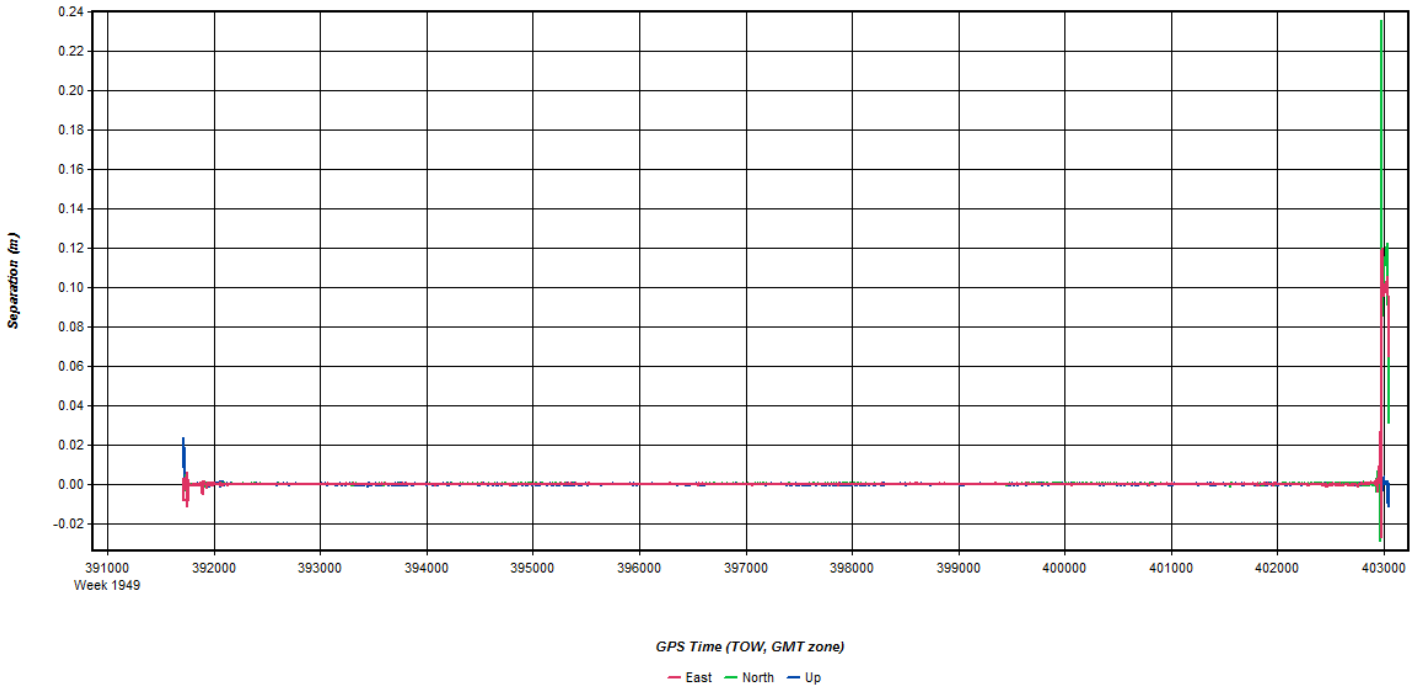

Status
2
1
0
-1
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

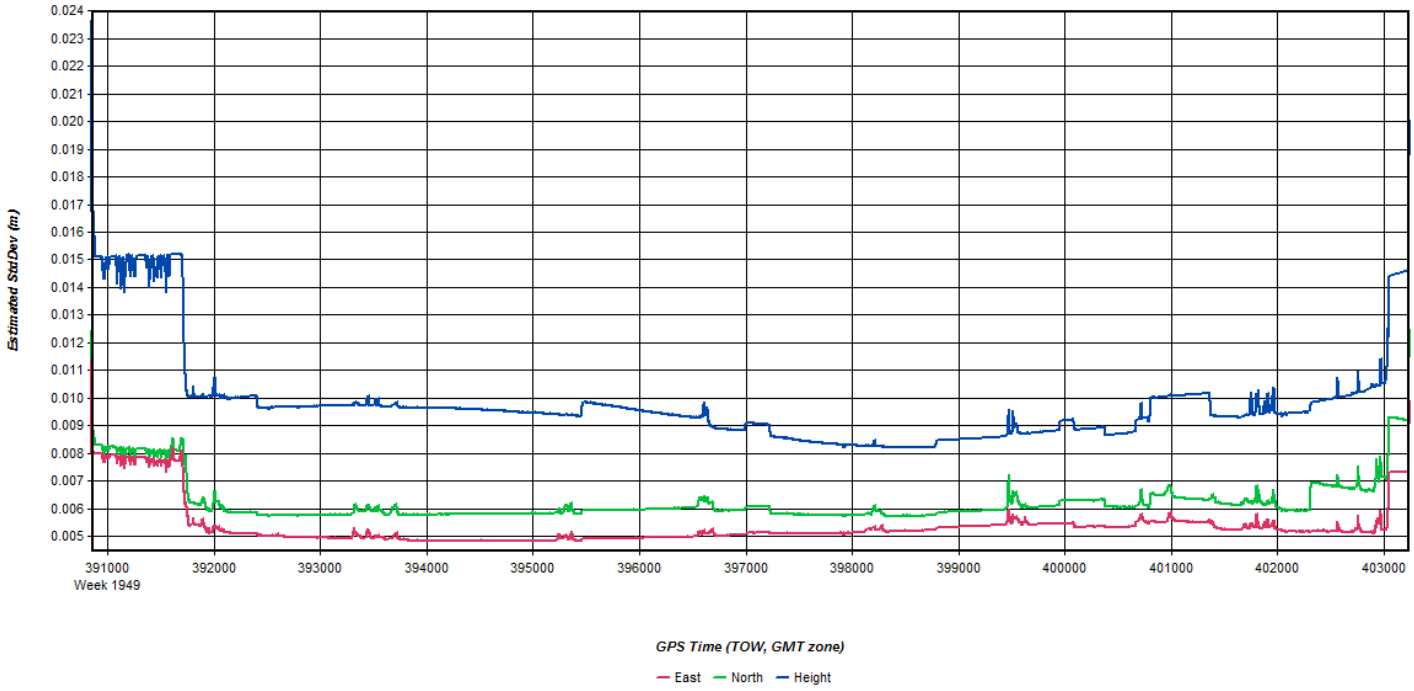

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
-25
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Roll
Pitch

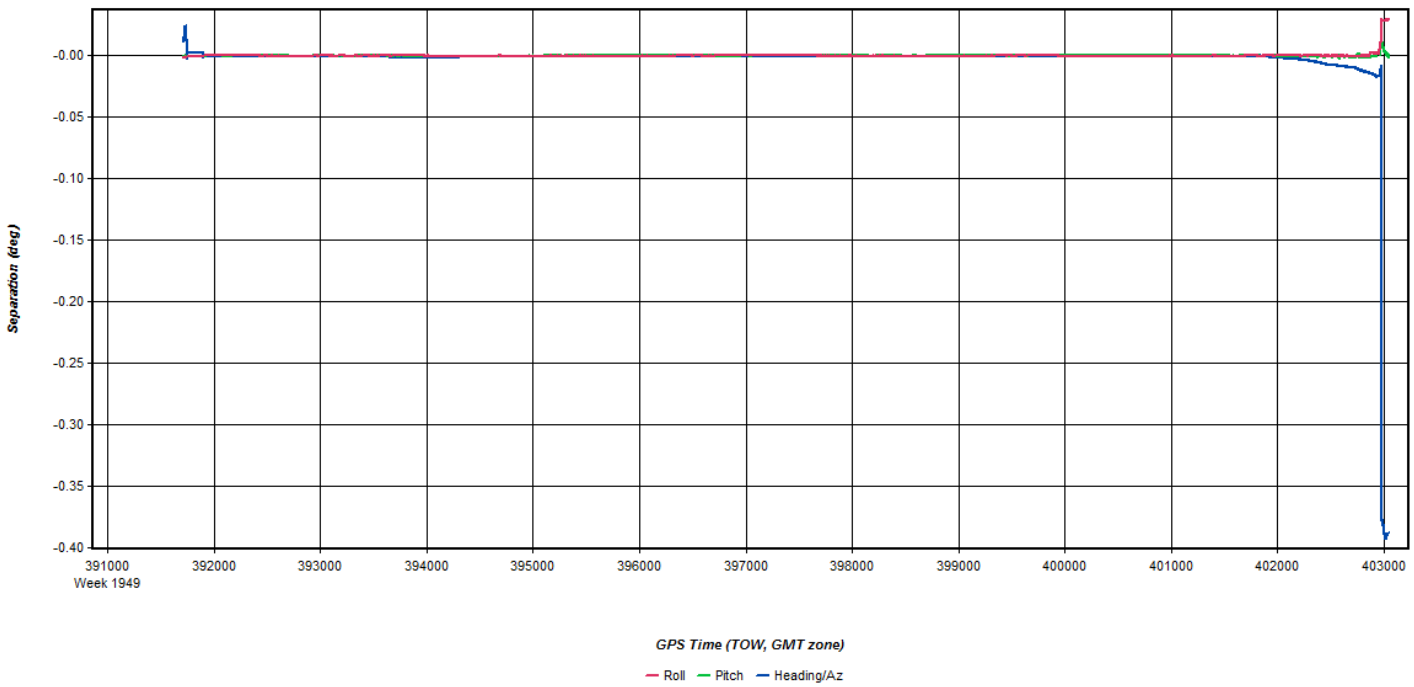

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
RMS
SD

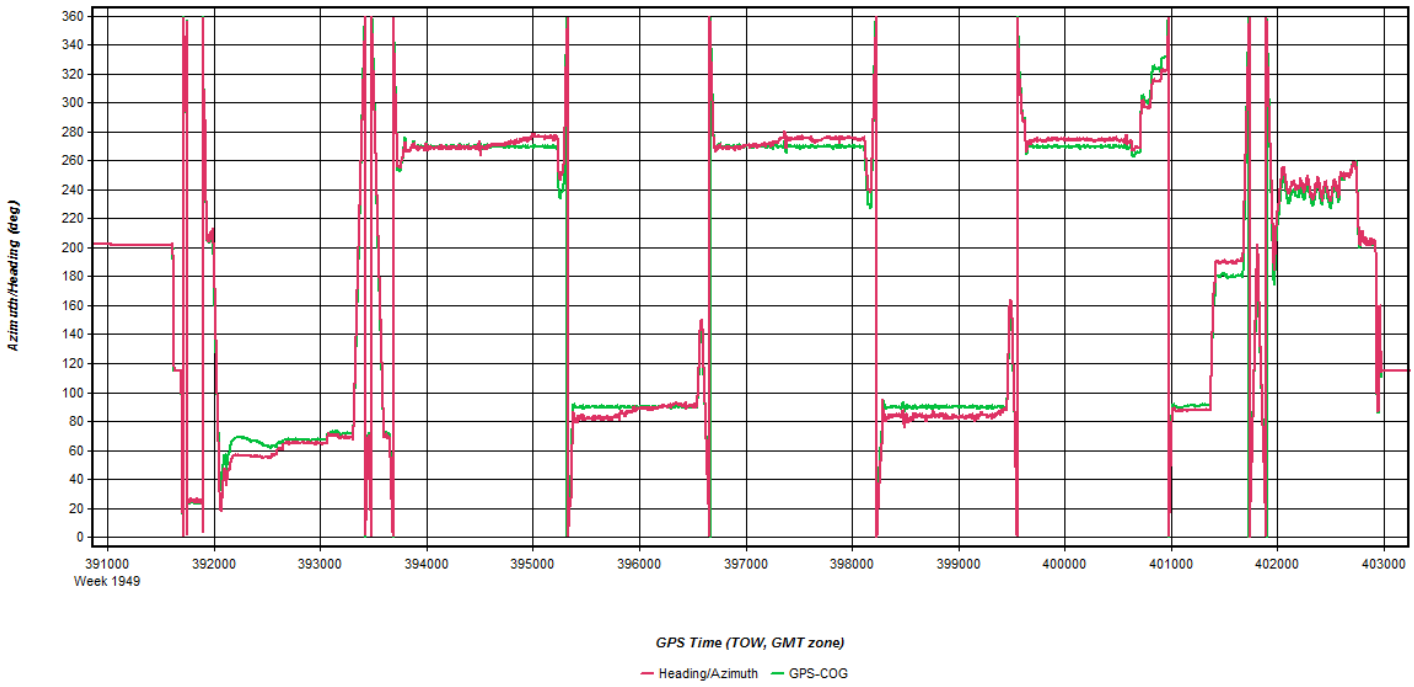

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Height


Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

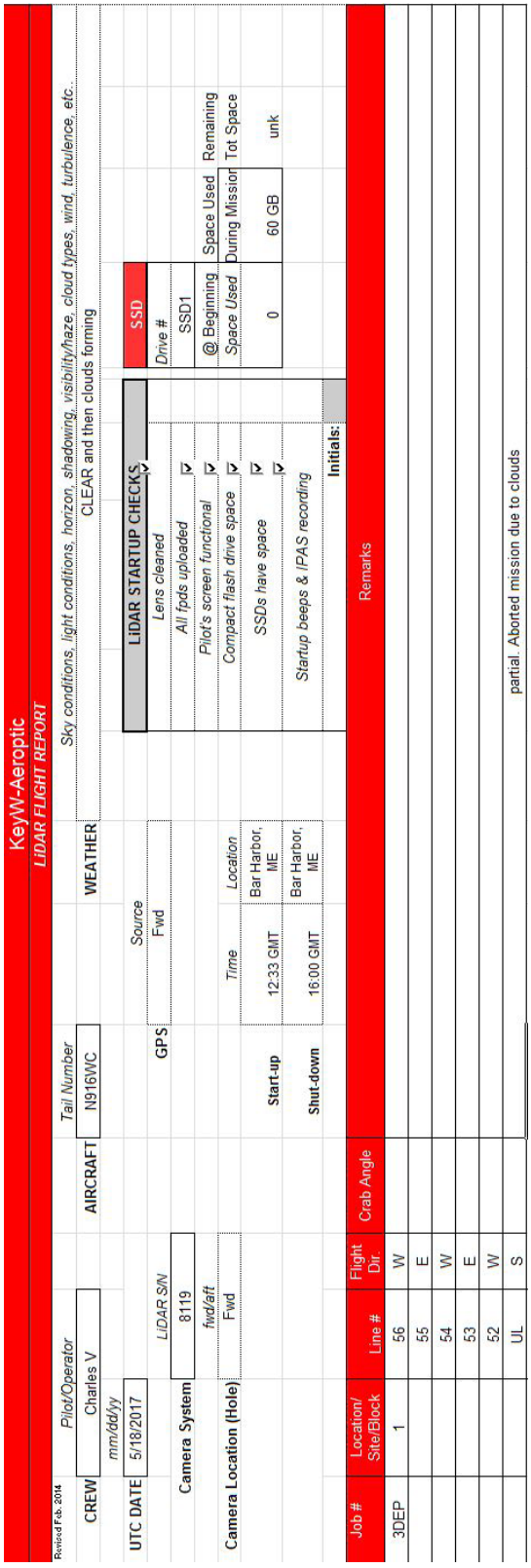

Separation (m)
0.24
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.024
0.023
0.022
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
-0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
391000
Week 1949
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW	*Pilot/Operator*	AIRCRAFT	*Tail Number*	WEATHER	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.*
	Charles V	N916WC		CLEAR and then clouds forming	

UTC DATE: 5/18/2017 (*mm/dd/yy*)

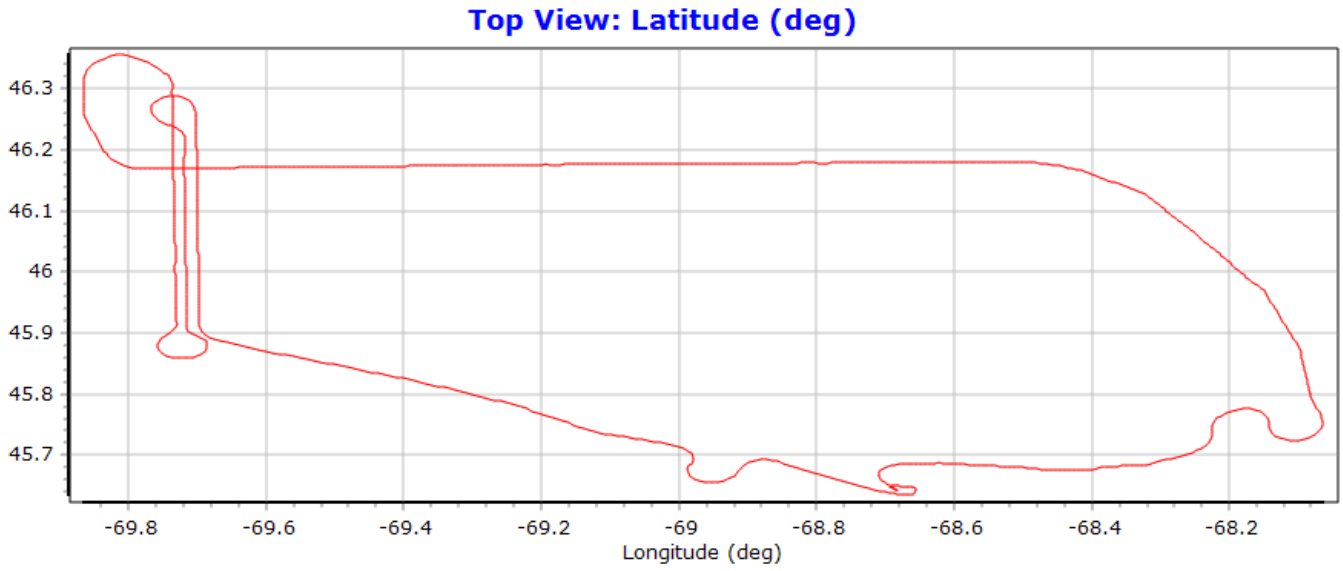
	LiDAR S/N	*Source*	*Time*	*Location*
Camera System	8119	GPS		
	fwd/aft	Fwd		
Camera Location (Hole)	Fwd			
		Start-up	12:33 GMT	Bar Harbor, ME
		Shut-down	16:00 GMT	Bar Harbor, ME

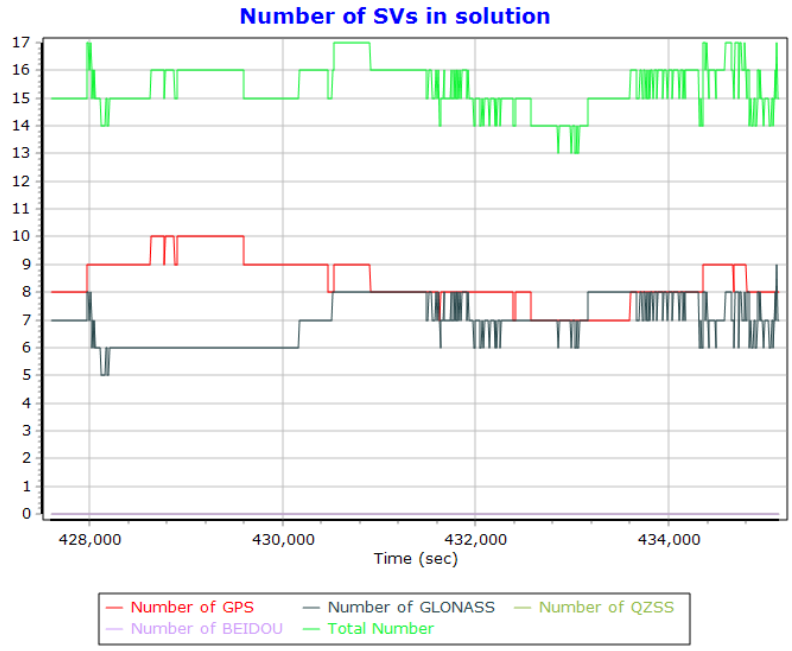
LiDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	

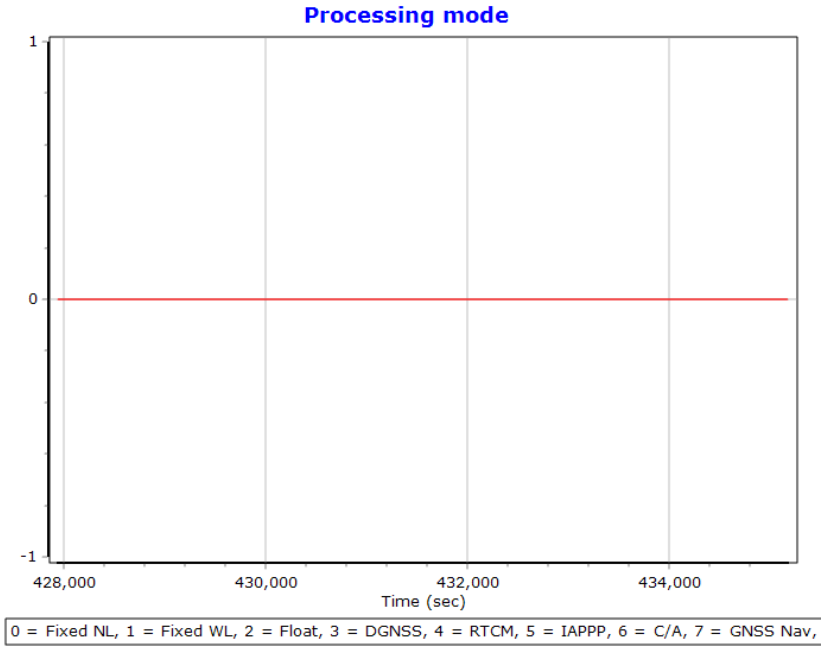
SSD			
Drive #	*@ Beginning Space Used*	*Space Used During Mission*	*Remaining Tot Space*
SSD1	0	60 GB	unk

Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	56	W		
		55	E		
		54	W		
		53	E		
		52	W		
		UL	S		partial. Aborted mission due to clouds

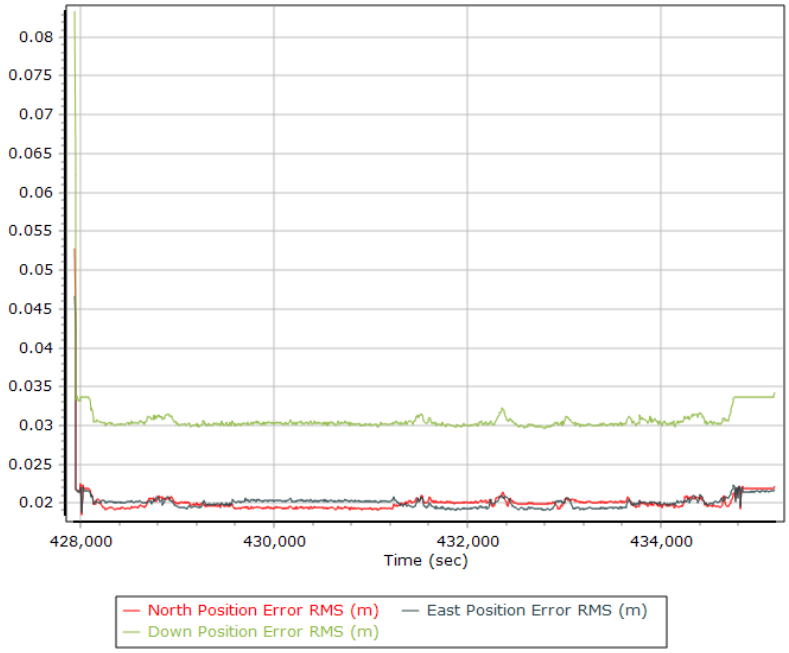
May 18, 2017-A (N1007Q,SN2221256)


Top View: Latitude (deg)
46.3
46.2
46.1
46
45.9
45.8
45.7
-69.8
-69.6
-69.4
-69.2
-69
-68.8
-68.6
-68.4
-68.2
Longitude (deg)


Number of SVs in solution
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
428,000
430,000
432,000
434,000
Time (sec)
Number of GPS
Number of GLONASS
Number of QZSS
Number of BEIDOU
Total Number


Processing mode
1
0
-1
428,000
430,000
432,000
434,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,

340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
428,000
430,000
432,000
434,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
428,000
430,000
432,000
434,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

Flight Log

Flight Log

Field Crew
Jonathan
Tim

Project #:

Project Description

GPS Information

Base 1	MILLPORT
Base 2	
Base 3	
Aero 2	

Meteorological Conditions

	Elevation	Temp	Pressure
Airport	400.5ft		
@ Altitude			
@ Altitude		#REF!	

IMU Information

	Start Time	Stop Time
Base 1		
Base 2		
Base 3		

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	log0518w.17o		1.8	GR3
Base 2				
Base 3				

Location: Millinocket,ME

Aircraft: N1107Q

Flight Date	Pilot	Operator
5/18/2017	Tim	Jonathan

Line/Dir		Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
122	270°	0:43:02	0:18:07	6,000					150 kts	52.12			
1	180°	1:10:40	0:07:31	6,000					150 kts	173 mph	21.63		
2	0°	1:22:10	0:07:17	6,000					150 kts	173 mph	20.95		
3	180°	1:34:25	0:07:22	6,000					150 kts	173 mph	21.19		

DMC FLIGHT SUMMARY

Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0
DMC Data Collection Time:	0:40:17	Miles Flown on Flights:	115.89
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

Data Collection

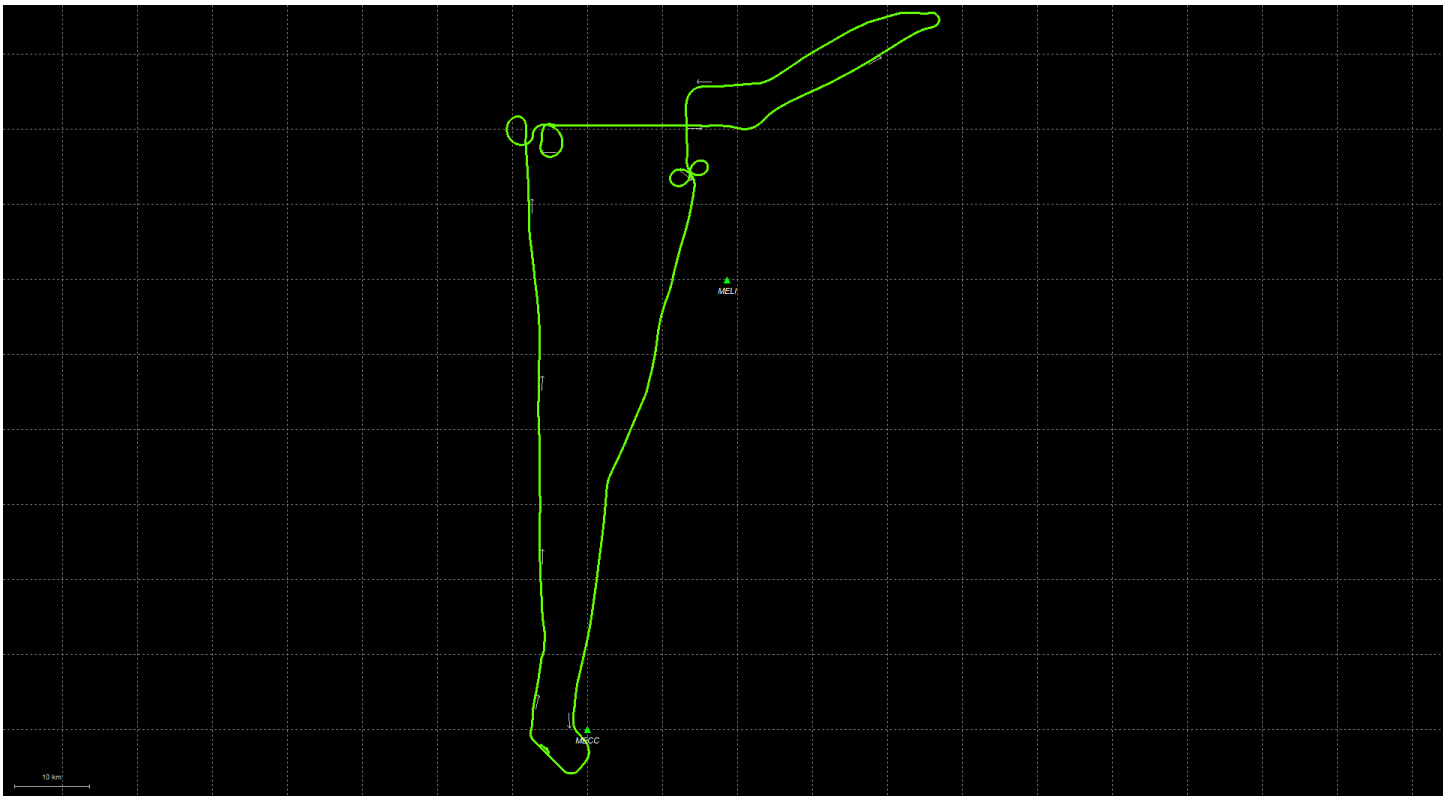
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

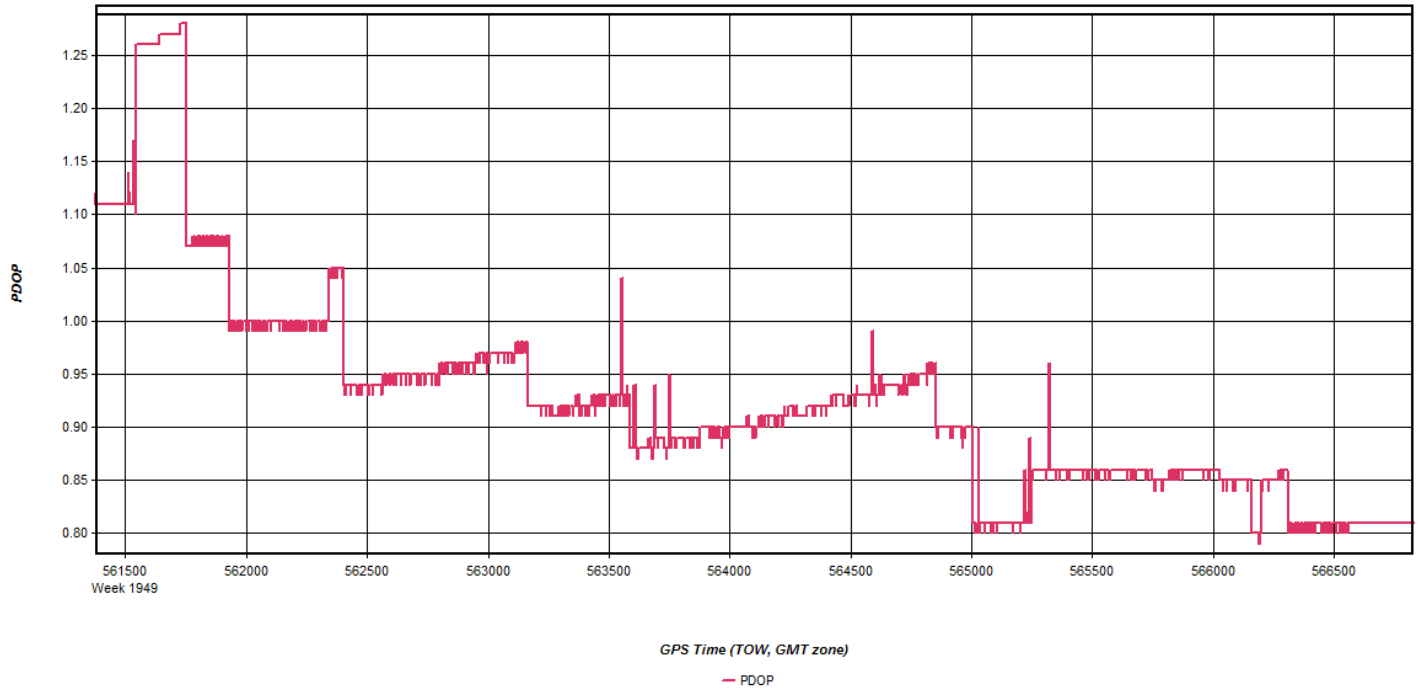
Comments

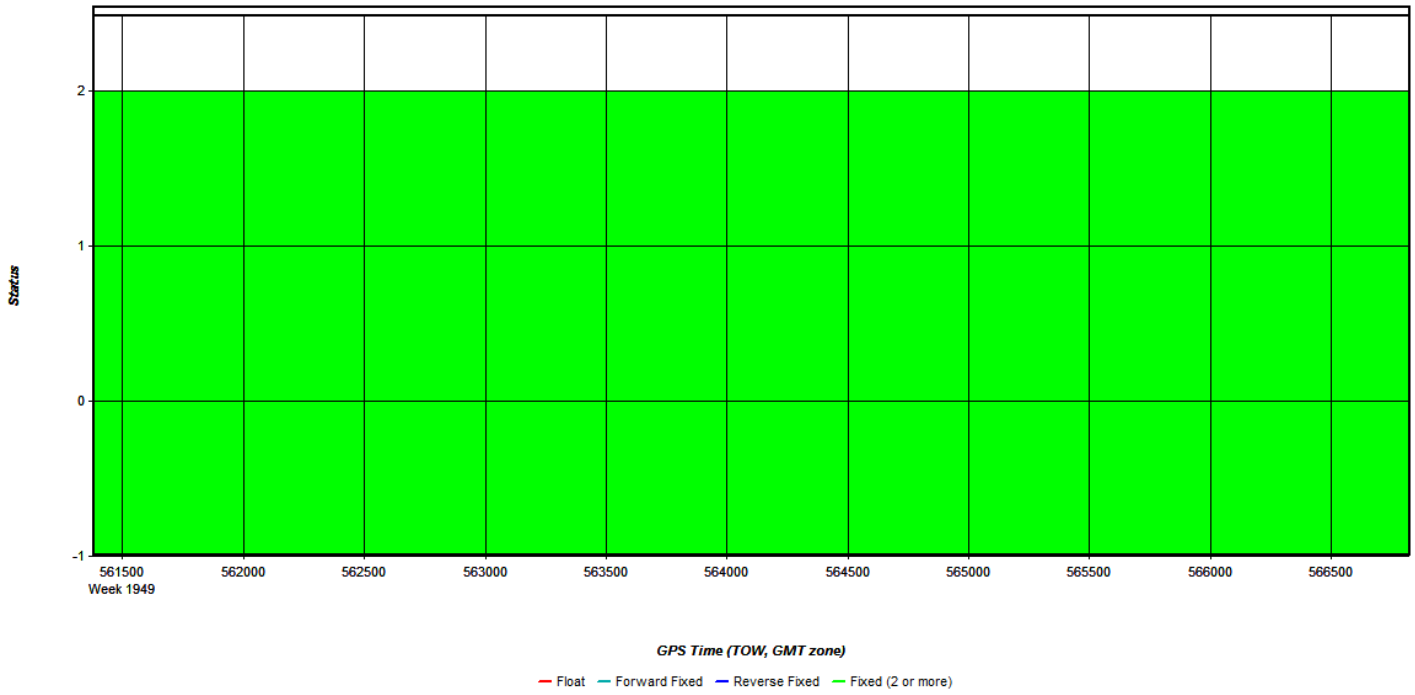
Weather

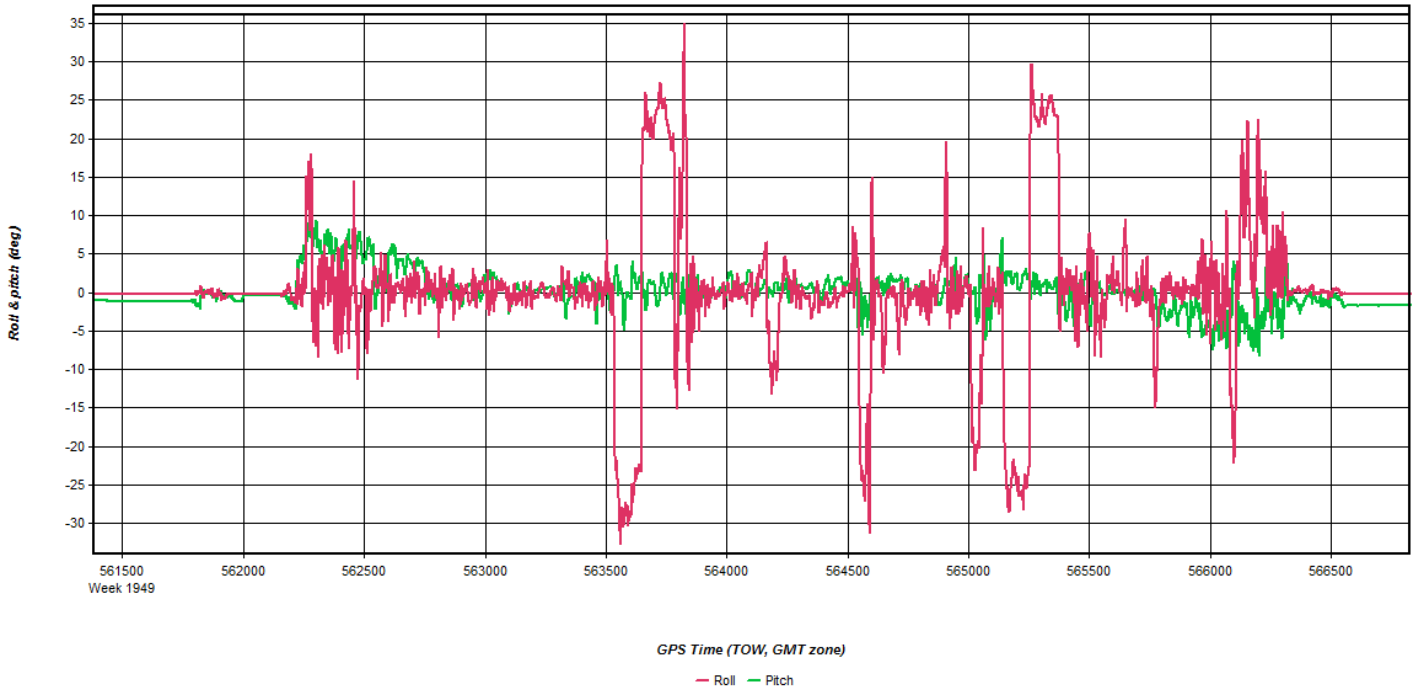
- ☑ Clear
- ☐ Fair
- ☐ Partly Cloudy
- ☐ Cloudy

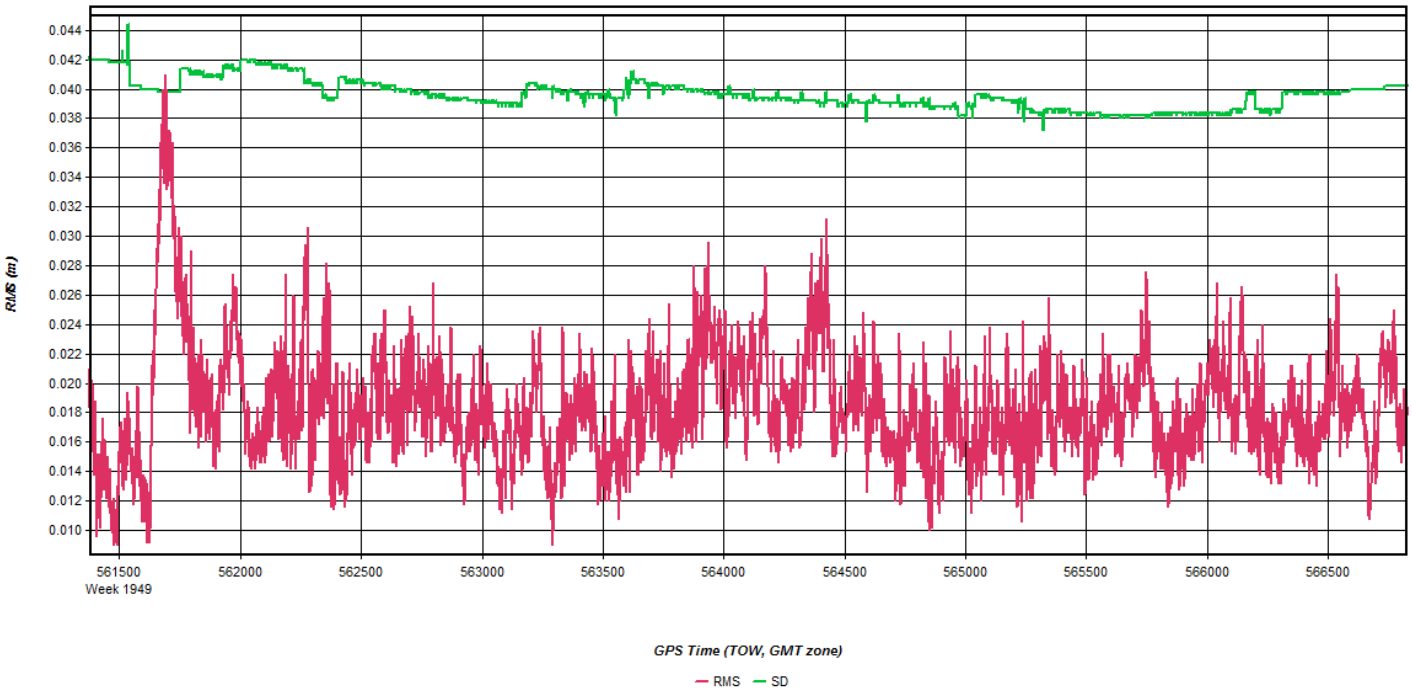
May 20, 2017-A (N262AS, SN7161)

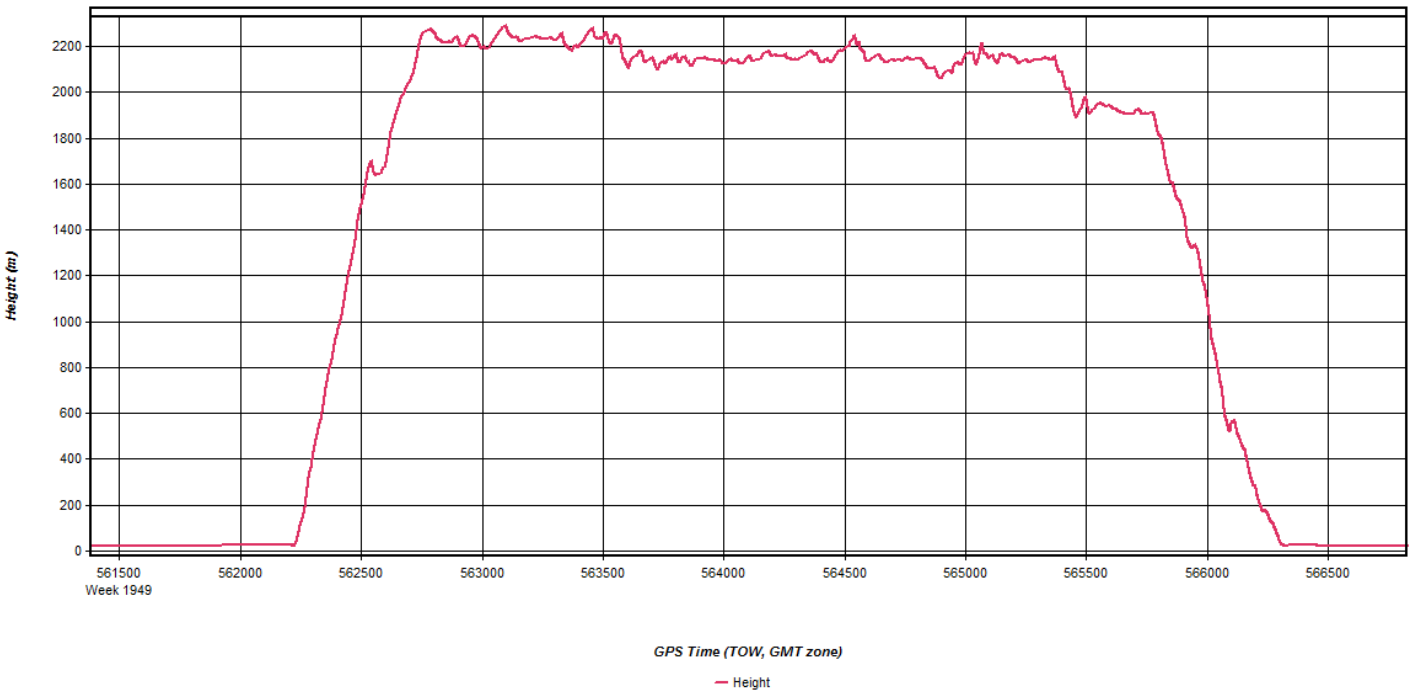

MELI
MECC
10 km

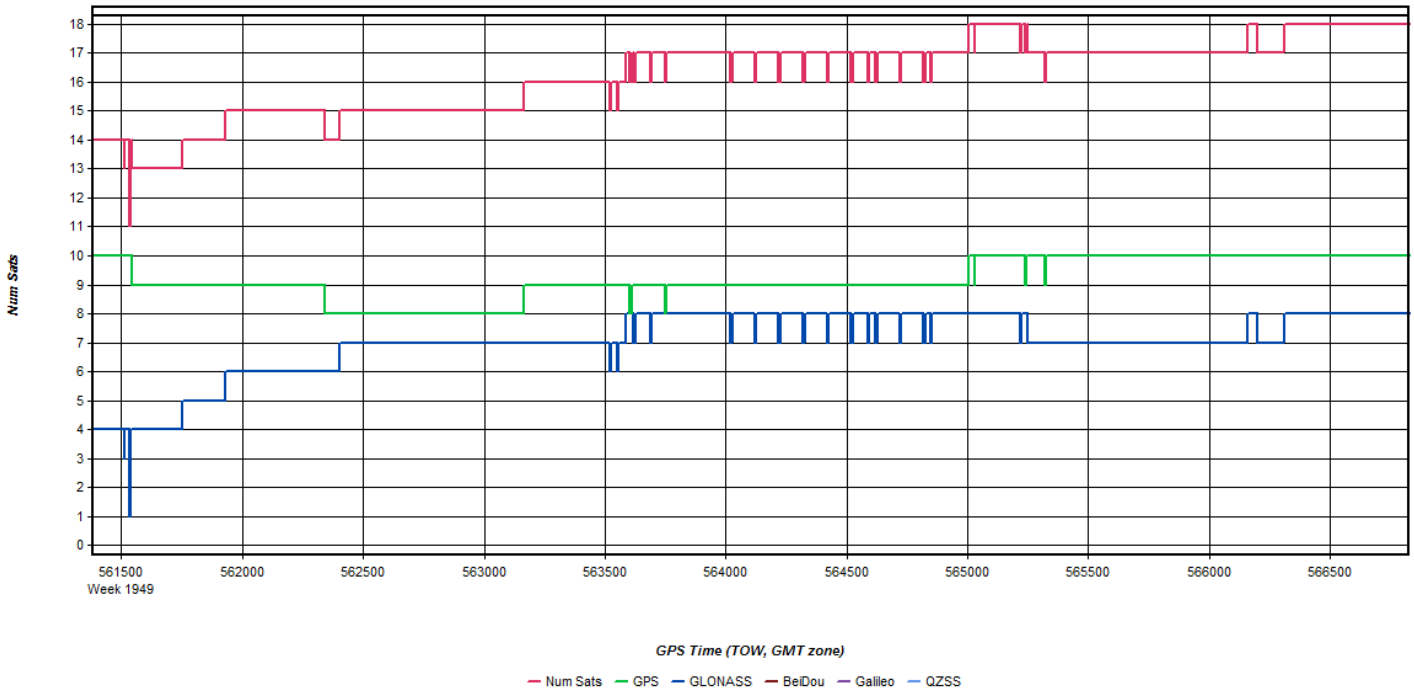

PDOP
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
PDOP

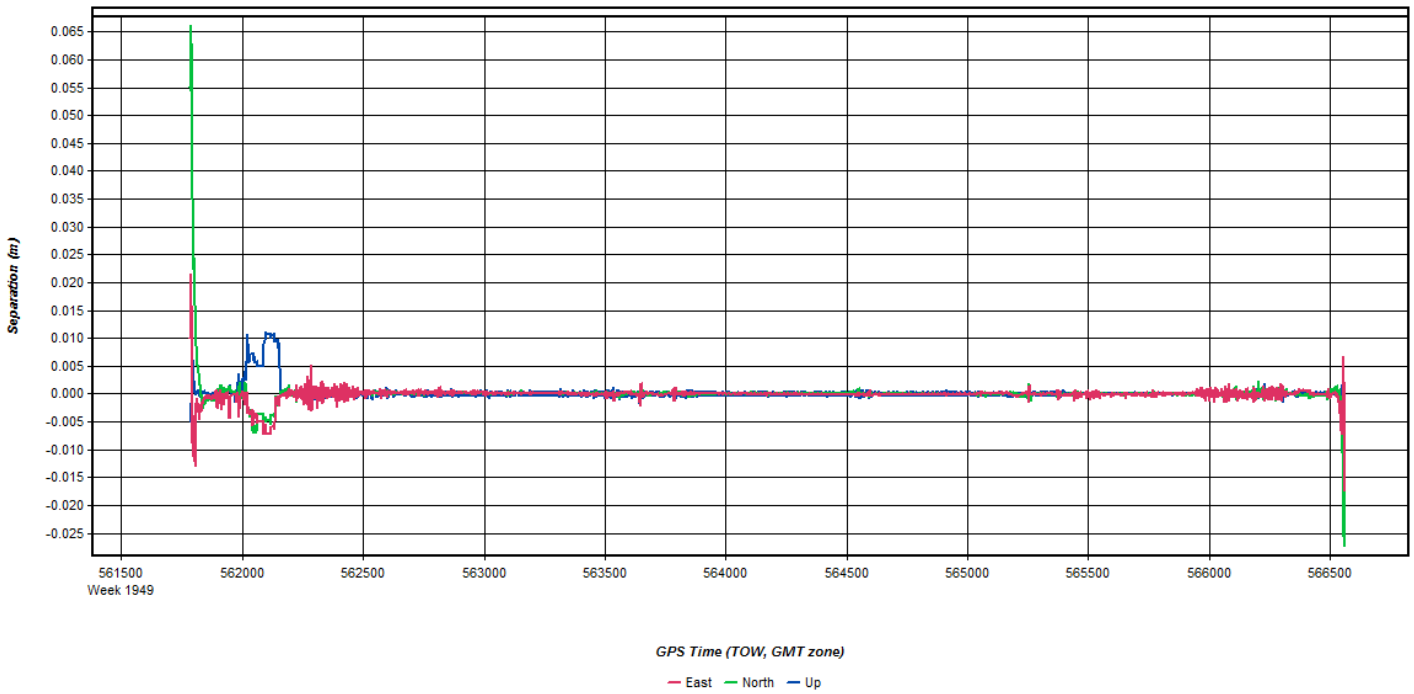

Status
2
1
0
-1
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

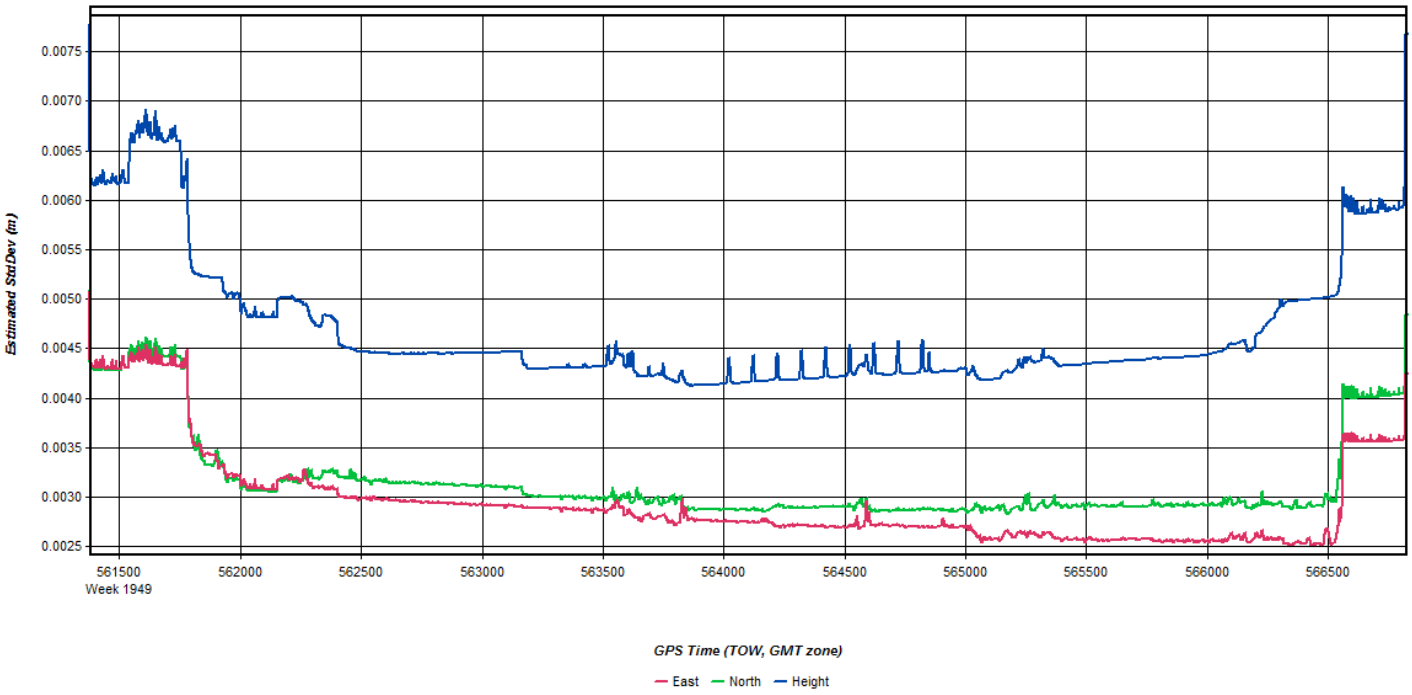

Roll & pitch (deg)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Roll
Pitch

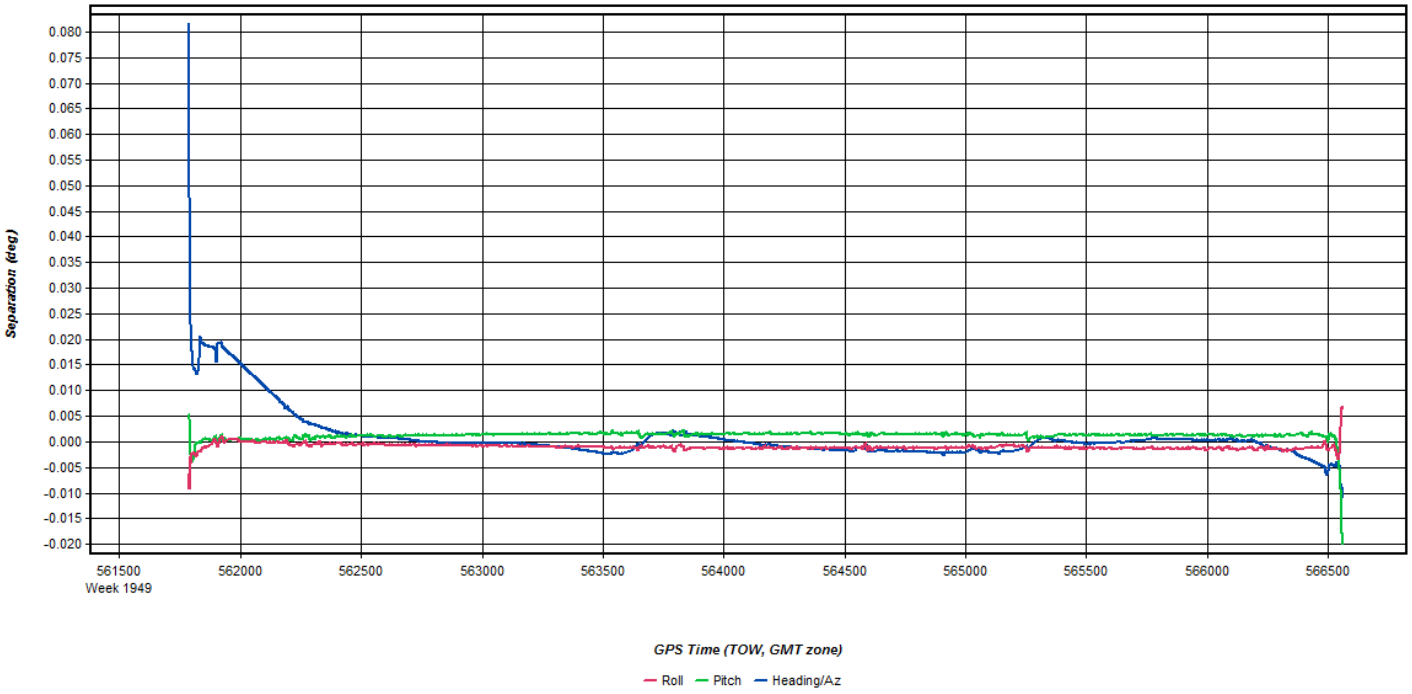

RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
RMS
SD

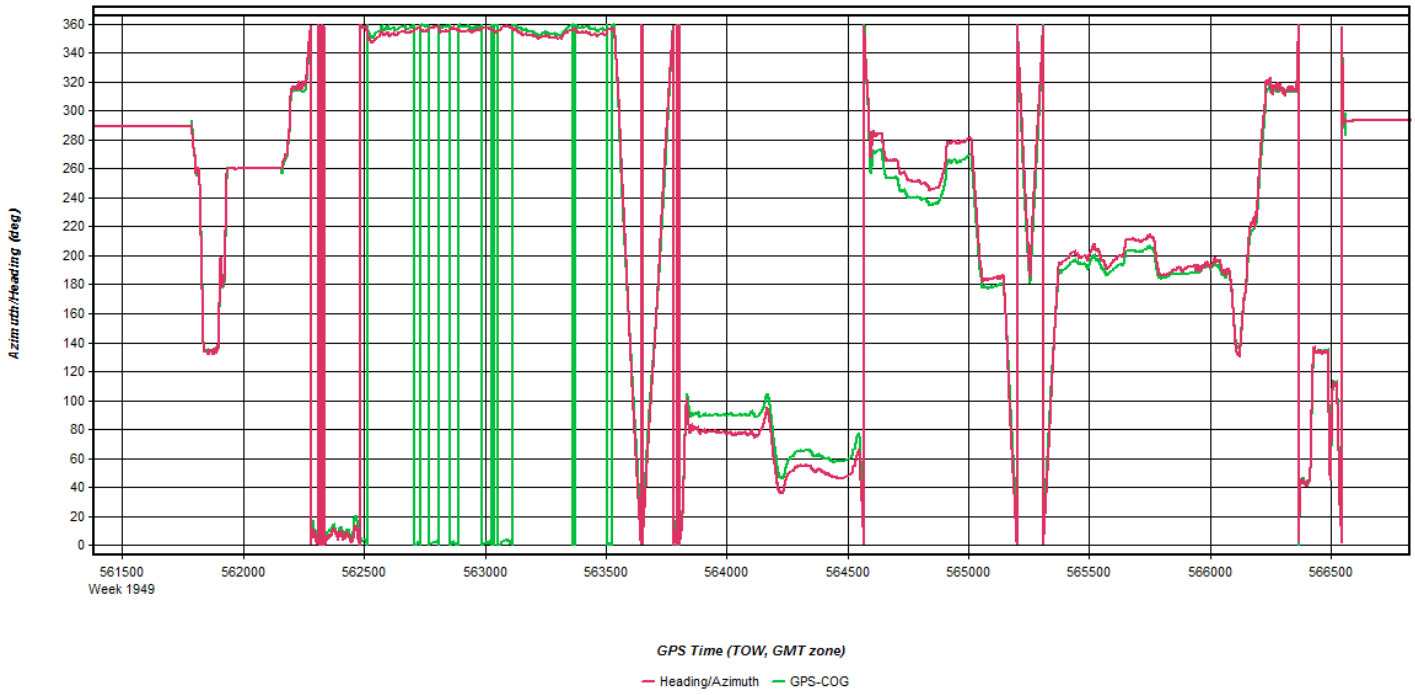

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Height

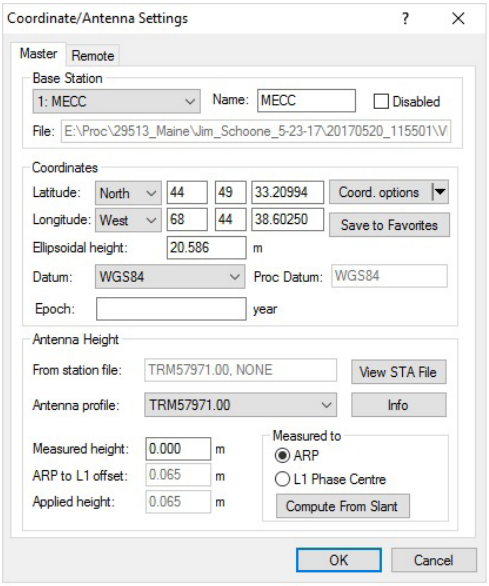

Num Sats
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

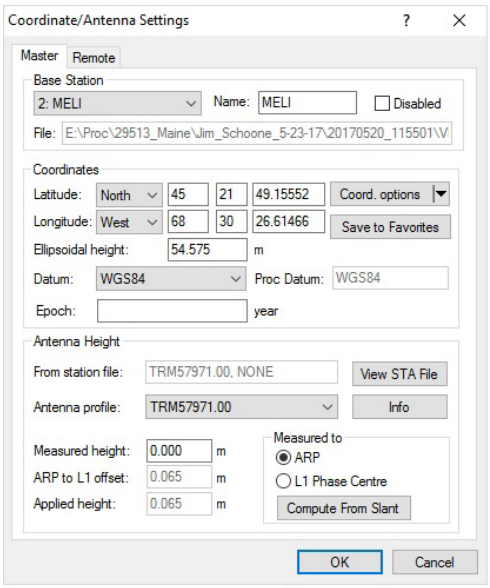

Separation (m)
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az

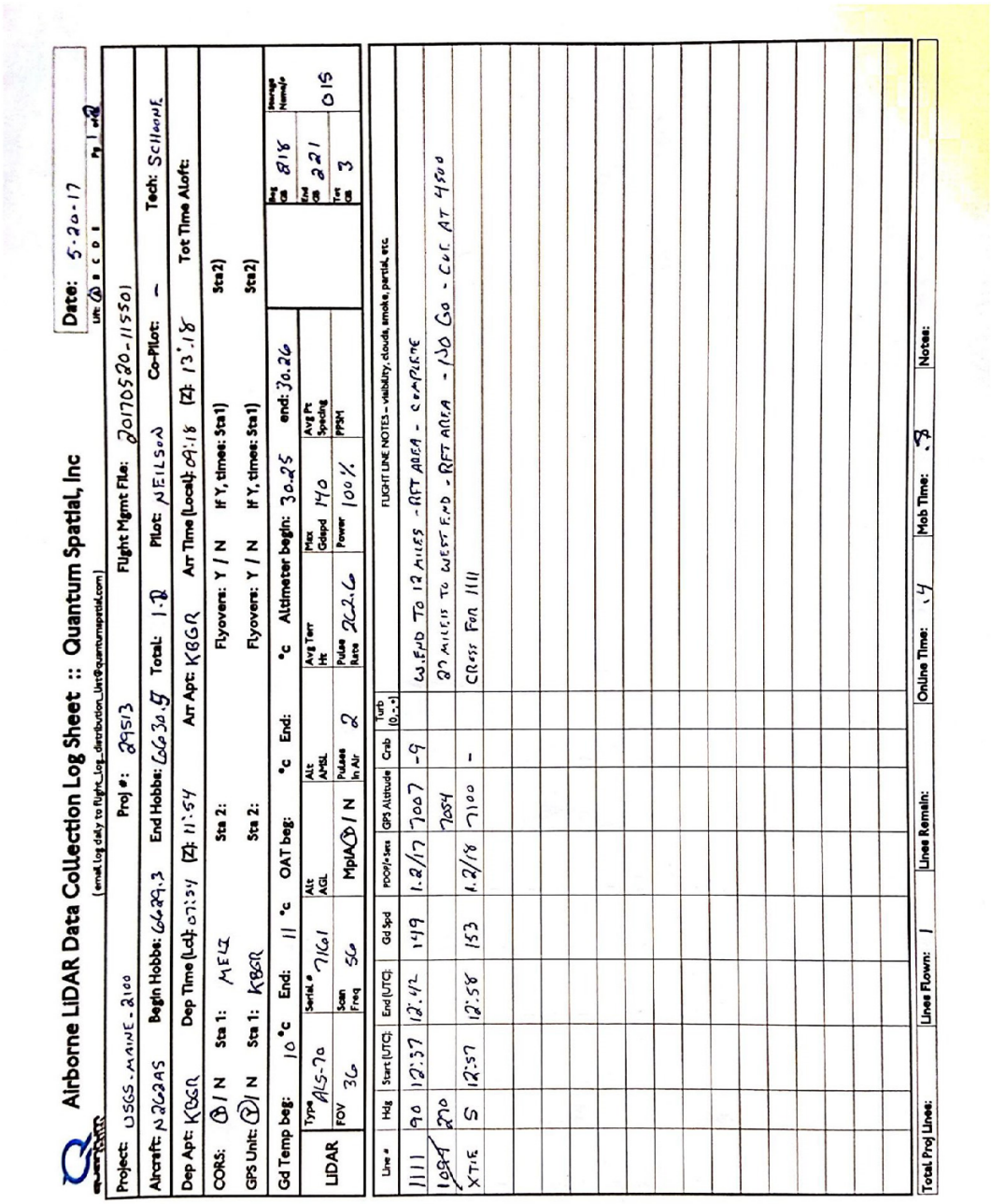

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
561500
Week 1949
562000
562500
563000
563500
564000
564500
565000
565500
566000
566500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MECC
Name: MECC
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-23-17\20170520_115501\V
Coordinates
Latitude: North 44 49 33.20994
Coord. options
Longitude: West 68 44 38.60250
Save to Favorites
Ellipsoidal height: 20.586 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\Jim_Schoone_5-23-17\20170520_115501\V
Coordinates
Latitude: North 45 21 49.15552 Coord. options
Longitude: West 68 30 26.61466 Save to Favorites
Ellipsoidal height: 54.575 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE View STA File
Antenna profile: TRM57971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-20-17

Project: USGS - MAINE - 2100 | Proj #: 29513 | Flight Mgmt File: 20170520_115501

Aircraft: N262AS | Begin Hobbs: 6629.3 | End Hobbs: 6630.7 | Total: 1.4 | Pilot: NEILSON | Co-Pilot: - | Tech: Schwenk

Dep Apt: KBGR | Dep Time (Lcl): 07:54 (Z): 11:54 | Arr Apt: KBGR | Arr Time (Local): 09:18 (Z): 13:18 | Tot Time Aloft:

CORS: Ⓐ / N Sta 1: MEHZ Sta 2: | Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Ⓐ / N Sta 1: KBGR Sta 2: | Flyovers: Y / N If Y, times: Sta1) Sta2)

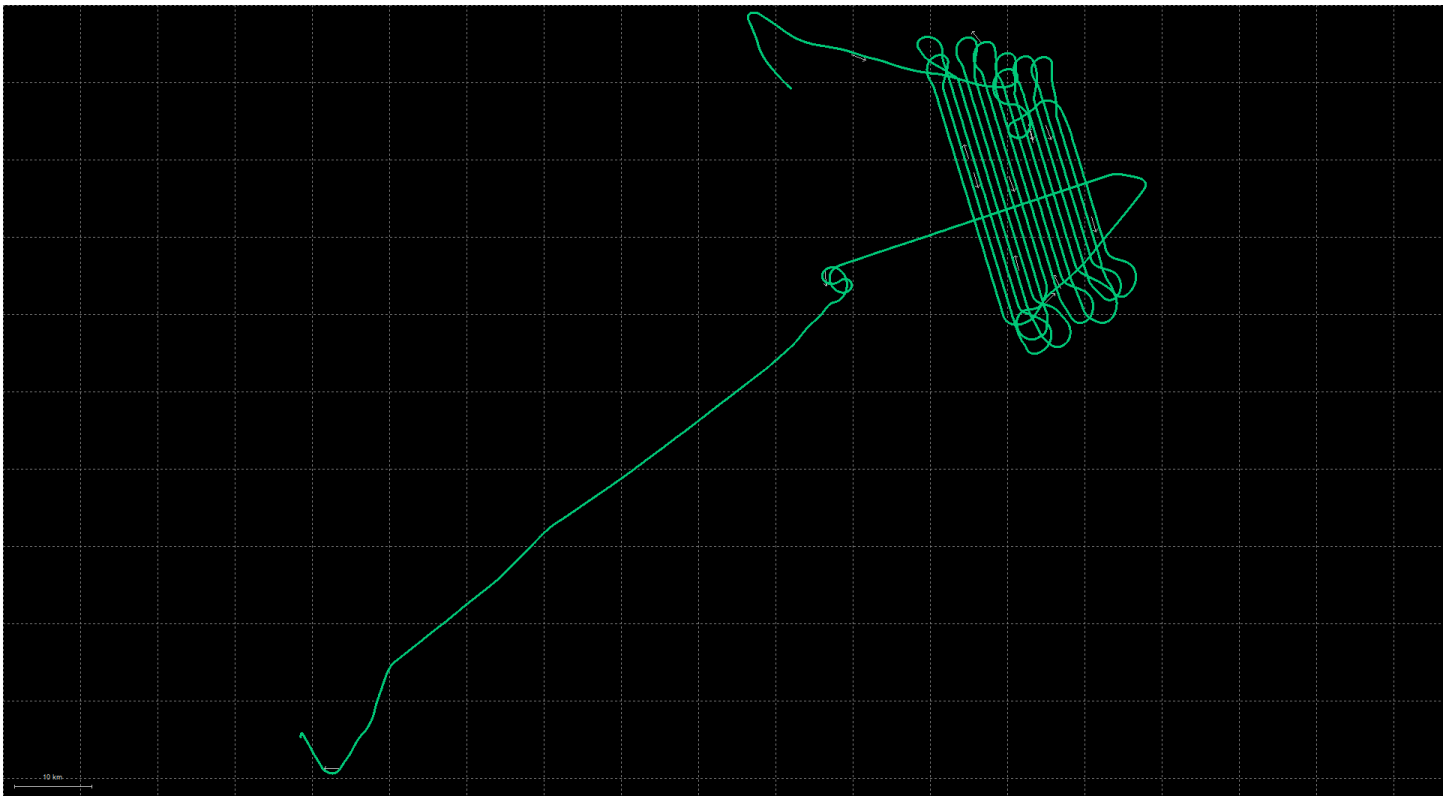
Gd Temp beg: 10 °c End: 11 °c OAT beg: °c End: °c Altimeter begin: 30.25 end: 30.26

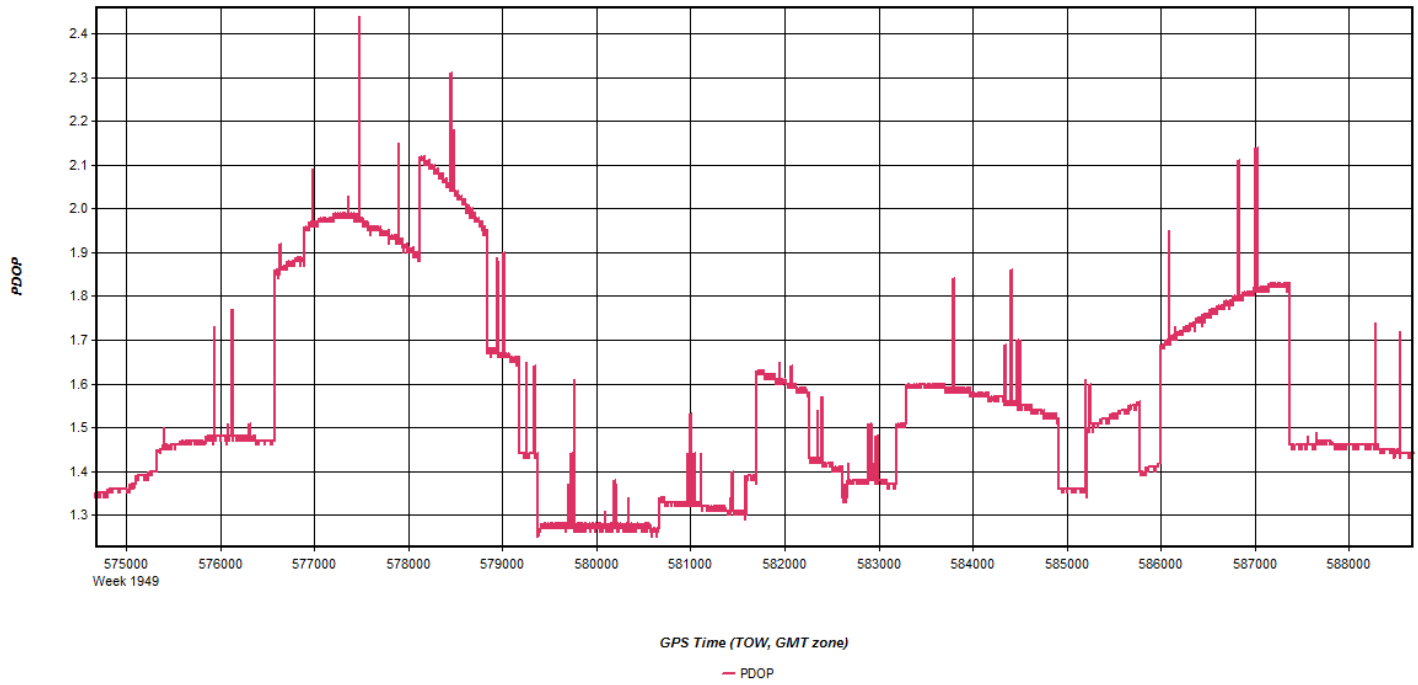
LiDAR	Type	ALS-70	Serial #	7161	Alt AGL		Alt ASL		Avg Terr Ht		Max Gspd	140	Avg Pt Spacing		Beg Cb	816	Image Numbers
	FOV	36	Scan Freq	56	MpiA Ⓐ / N		Pulses In Air	2	Pulse Rate	242.6	Power	100%	PRR		End Cb	221	015
															Tot Cb	3	

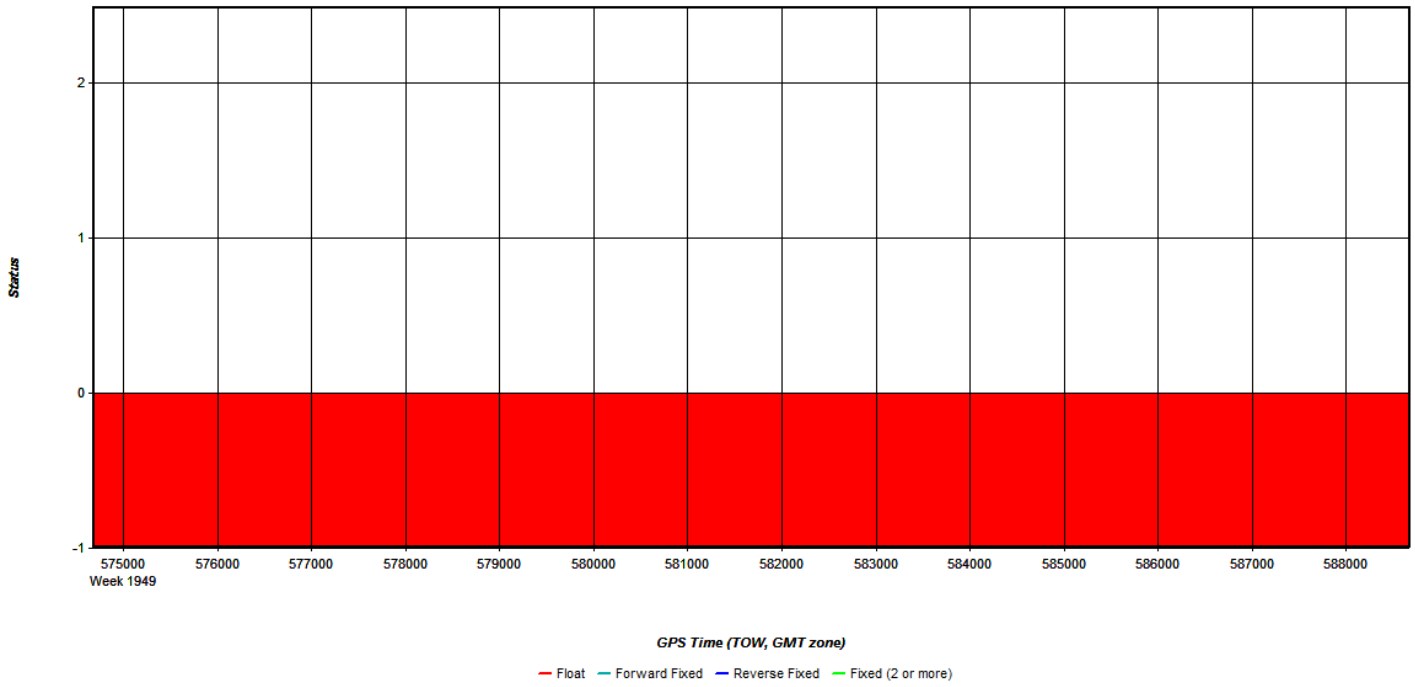
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	MSL/+Sea	GPS Altitude	Crab	Turb (0..+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
1111	90	12:37	12:42	149	1.2/17	7007	-9		W. END TO 12 MILES - ART AREA - COMPLETE
1084	270					7084			20 MILES TO WEST END - ART AREA - 150 Gs - CRC AT 4500
XTIE	S	12:57	12:58	153	1.2/18	7100	-		CROSS FOR 1111

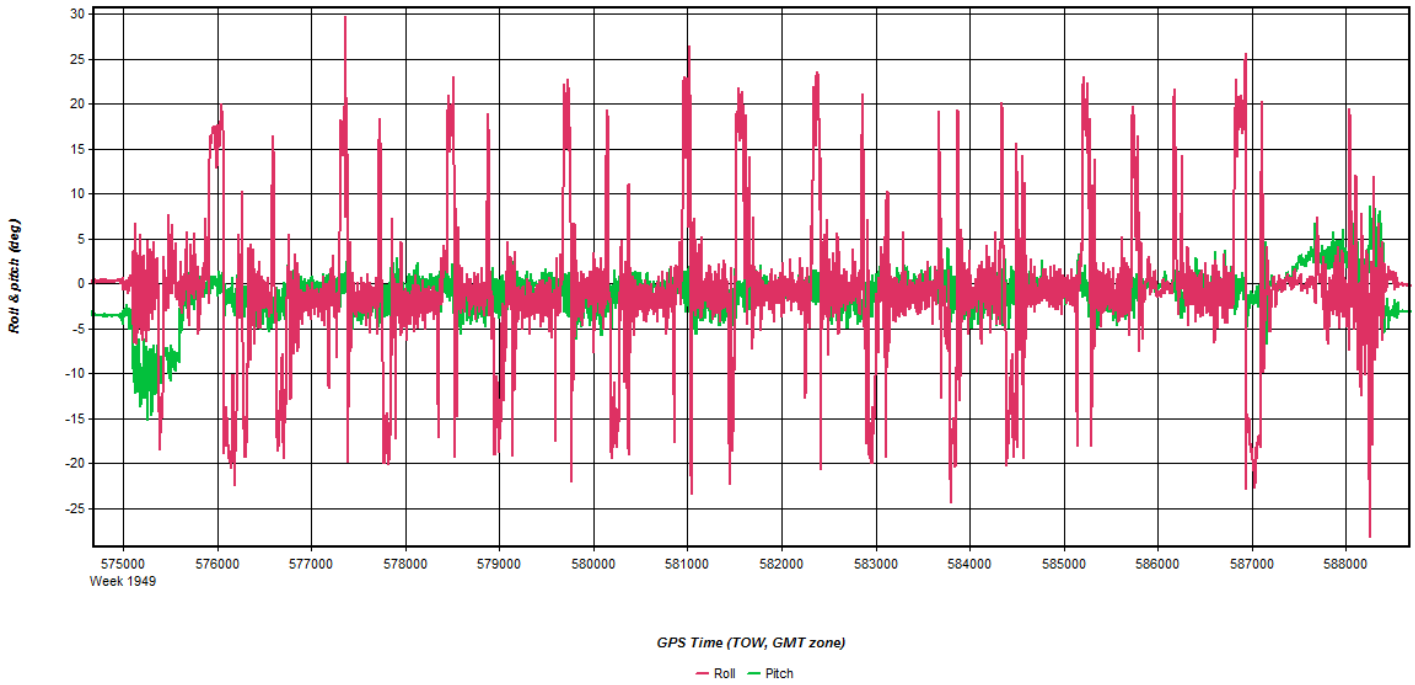
Total Proj Lines: | Lines Flown: 1 | Lines Remain: | Online Time: :4 | Mob Time: :3 | Notes:

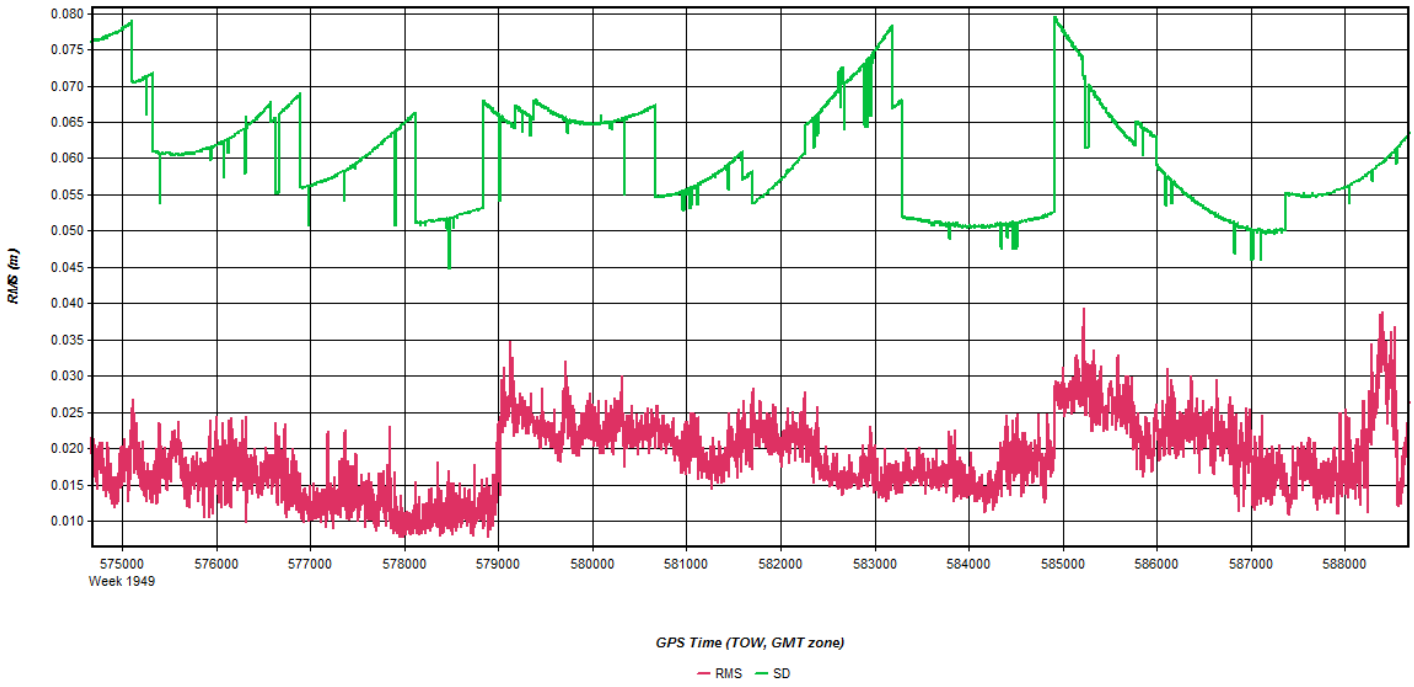
May 20, 2017-A (N915WC, SN8237)

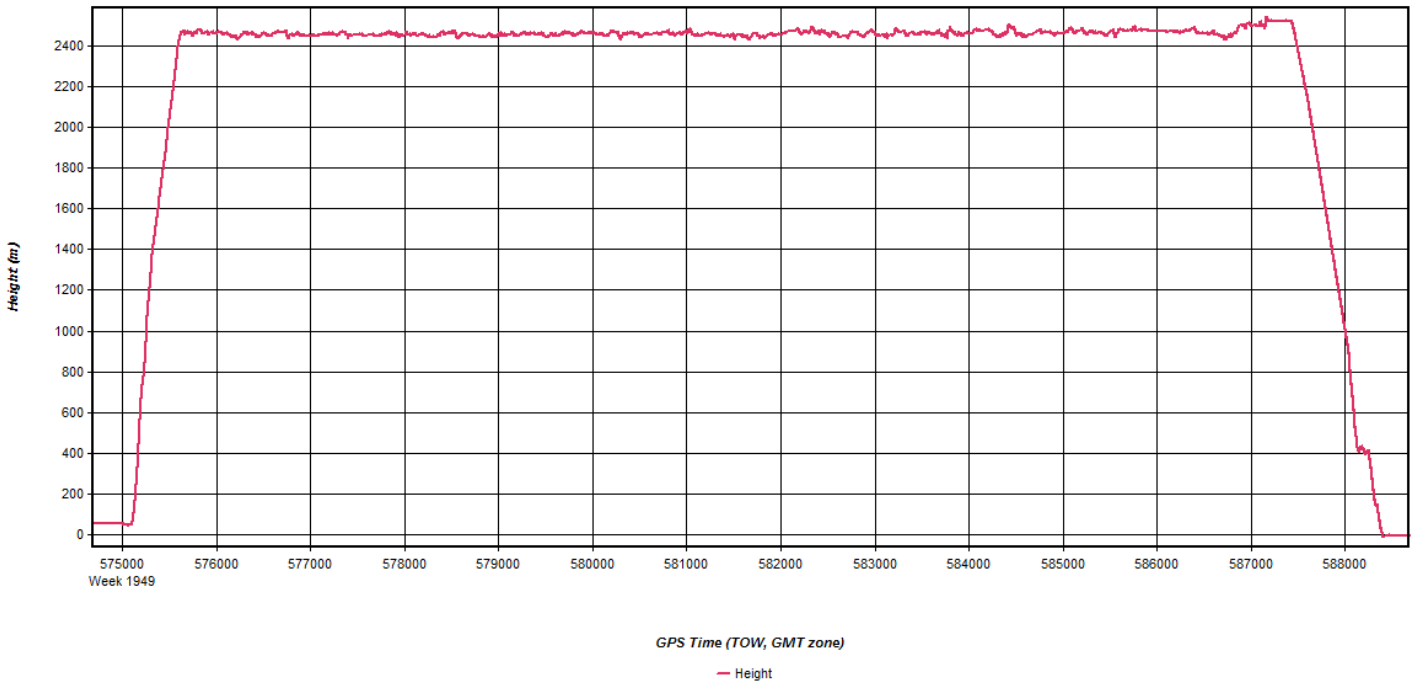


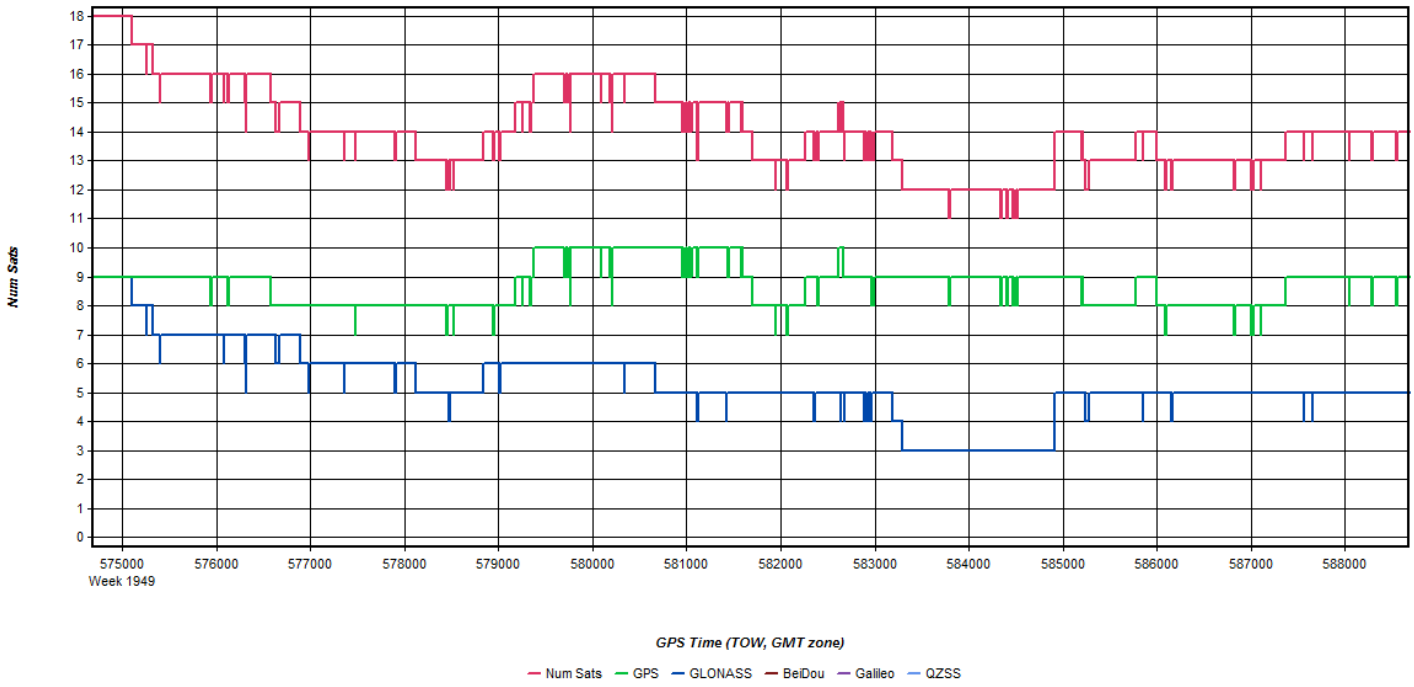

PDOP
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
PDOP

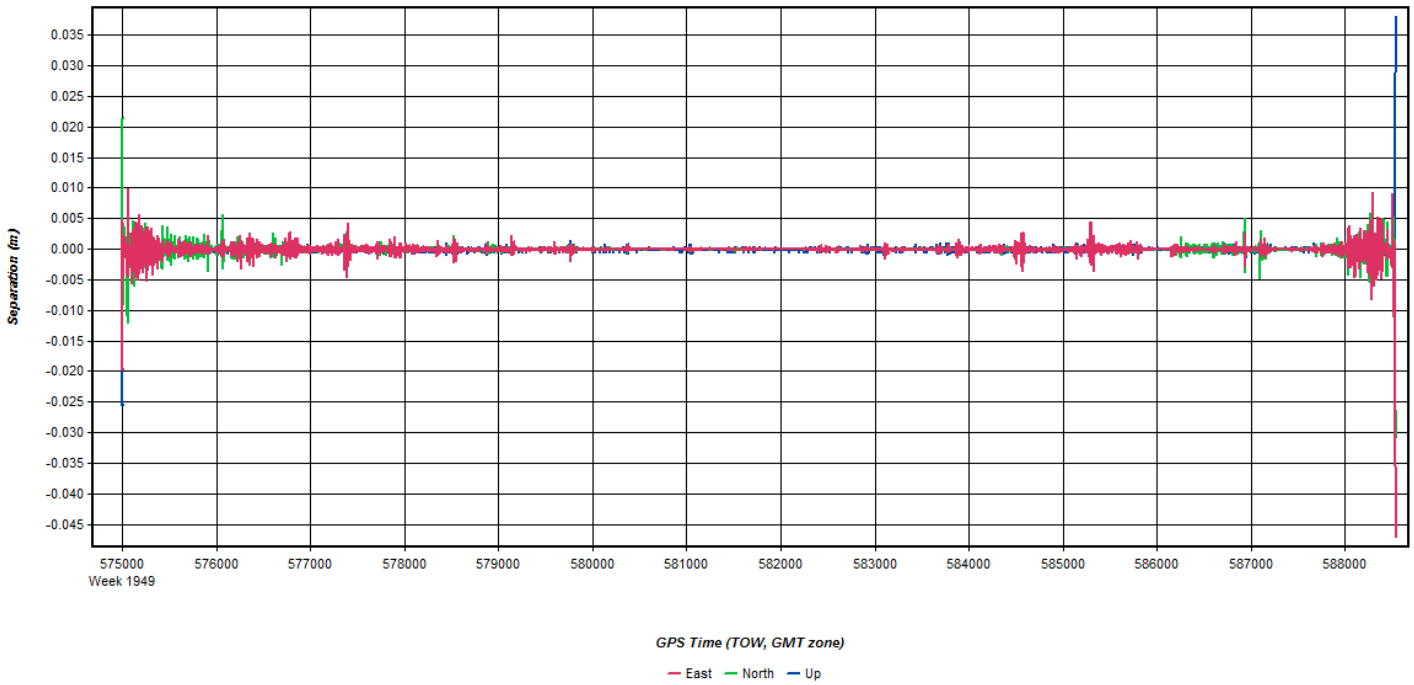

Status
2
1
0
-1
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

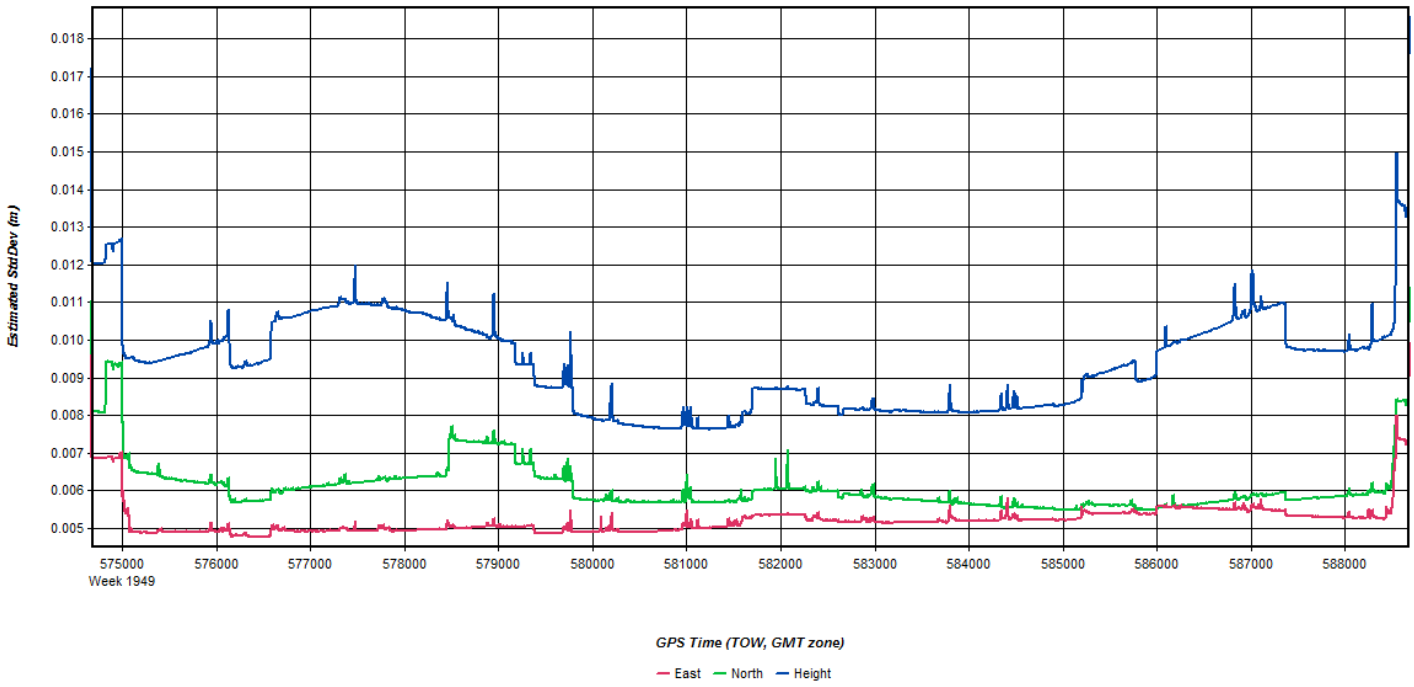

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Roll
Pitch

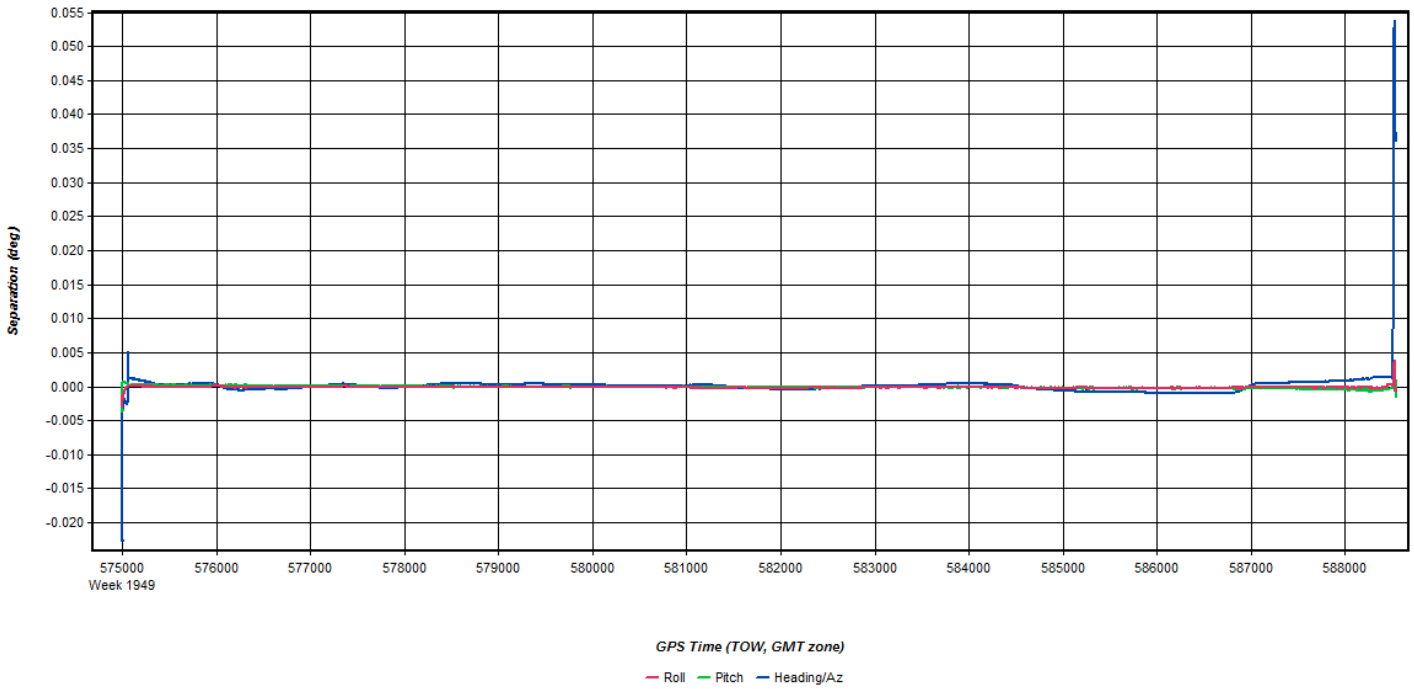

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
RMS
SD

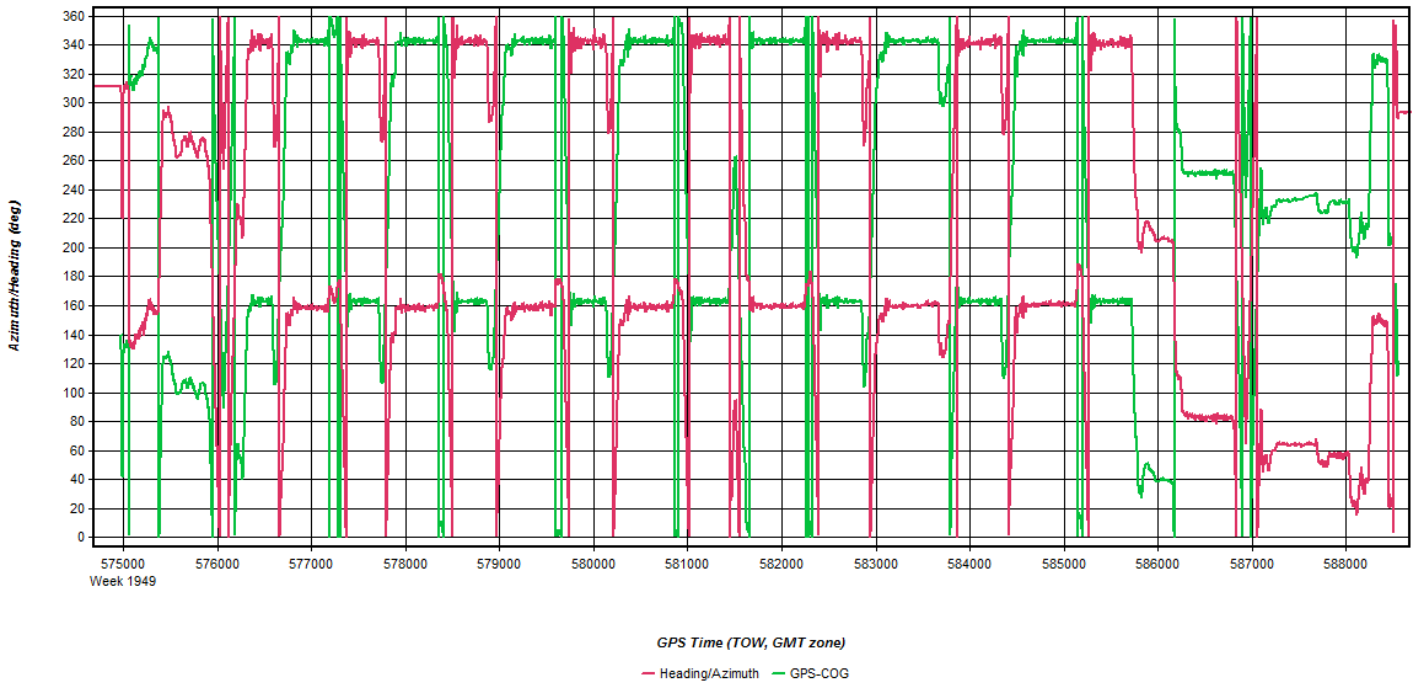

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

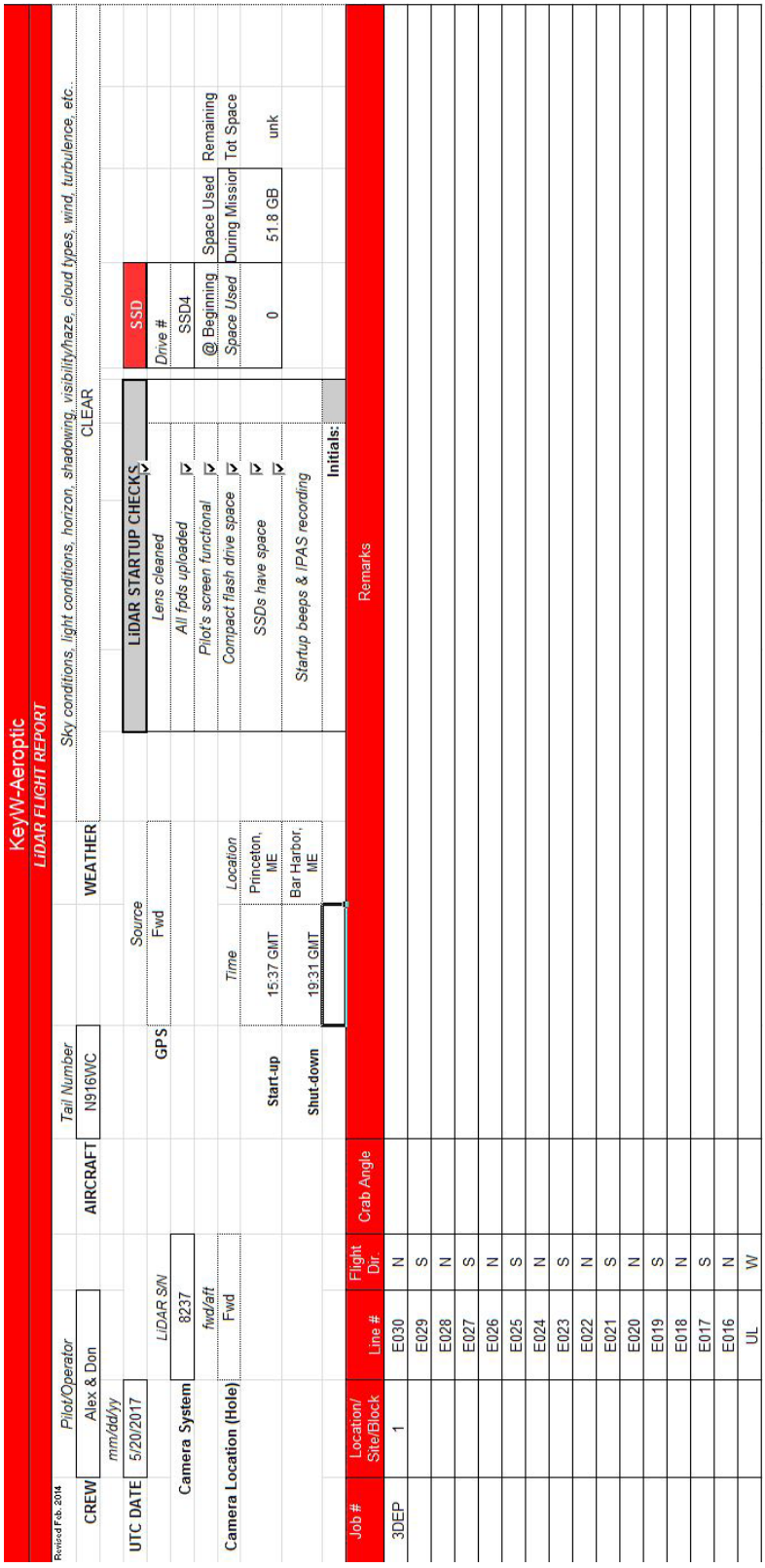

Separation (m)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
575000
Week 1949
576000
577000
578000
579000
580000
581000
582000
583000
584000
585000
586000
587000
588000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW	Pilot/Operator	AIRCRAFT	Tail Number	WEATHER
	Alex & Don	N916WC		CLEAR

Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.

UTC DATE	*mm/dd/yy*
	5/20/2017

Camera System	*LiDAR S/N*
	8237

Camera Location (Hole)	*fwd/aft*
	Fwd

	GPS	*Source*	*Time*	*Location*
Start-up		Fwd	15:37 GMT	Princeton, ME
Shut-down			19:31 GMT	Bar Harbor, ME

LiDAR STARTUP CHECKS

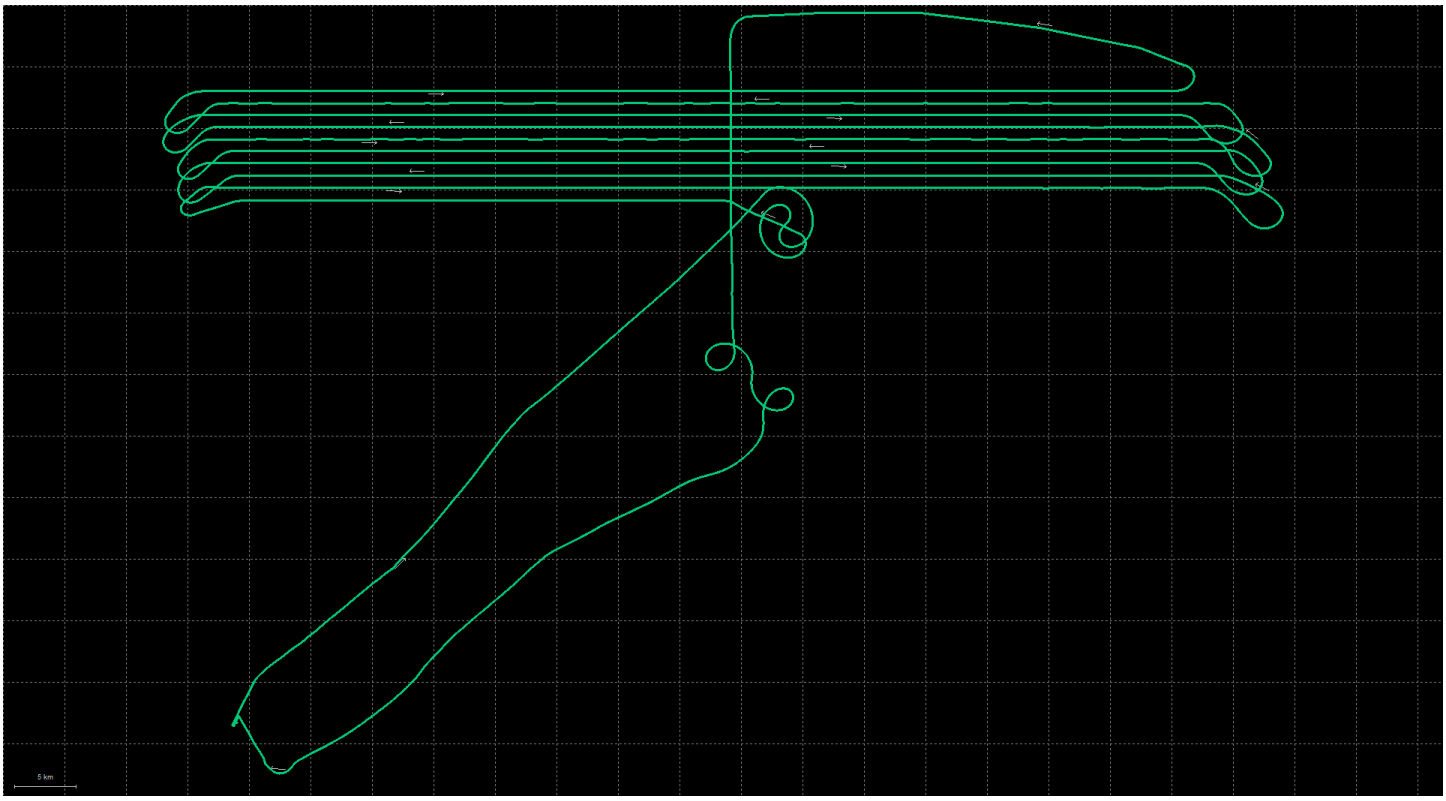
Lens cleaned	
All fpds uploaded	
Pilot's screen functional	
Compact flash drive space	
SSDs have space	
Startup beeps & IPAS recording	
Initials:	

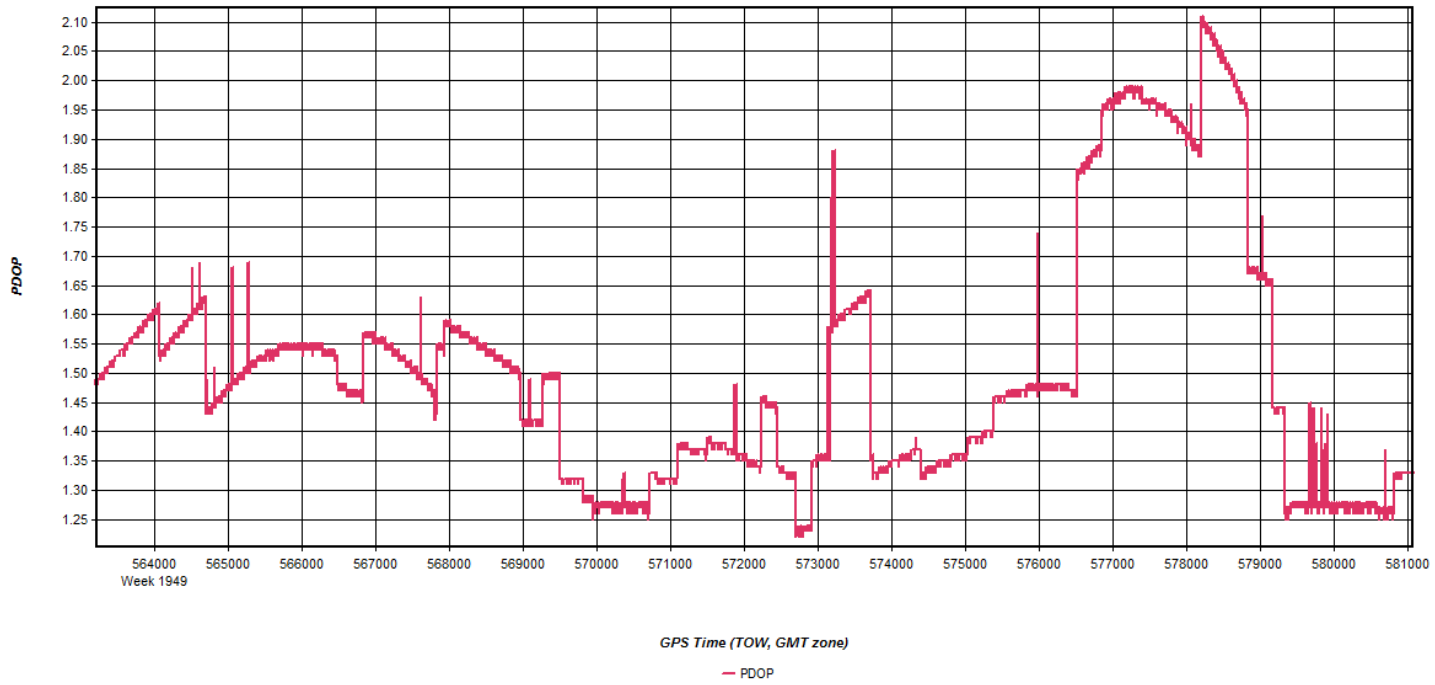
SSD

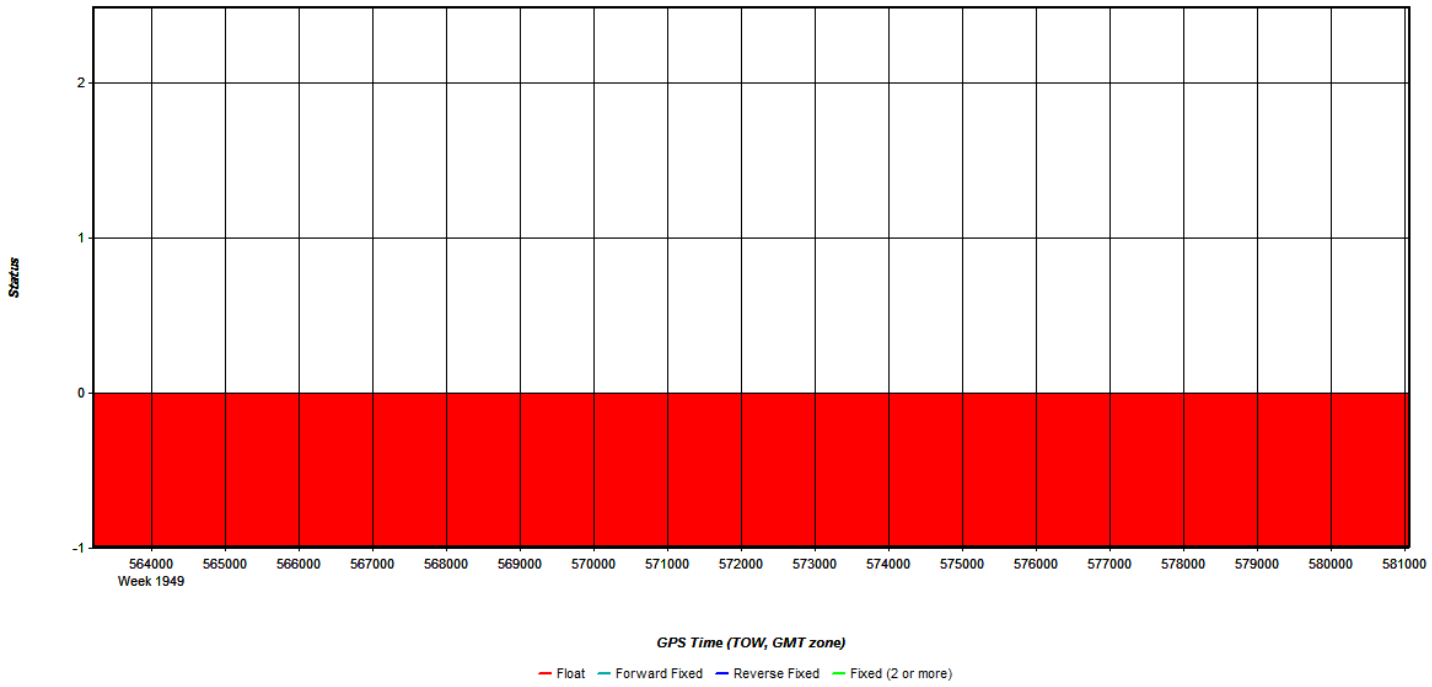
Drive #	*@ Beginning Space Used*	Space Used During Mission	Remaining Tot Space
SSD4	0	51.8 GB	unk

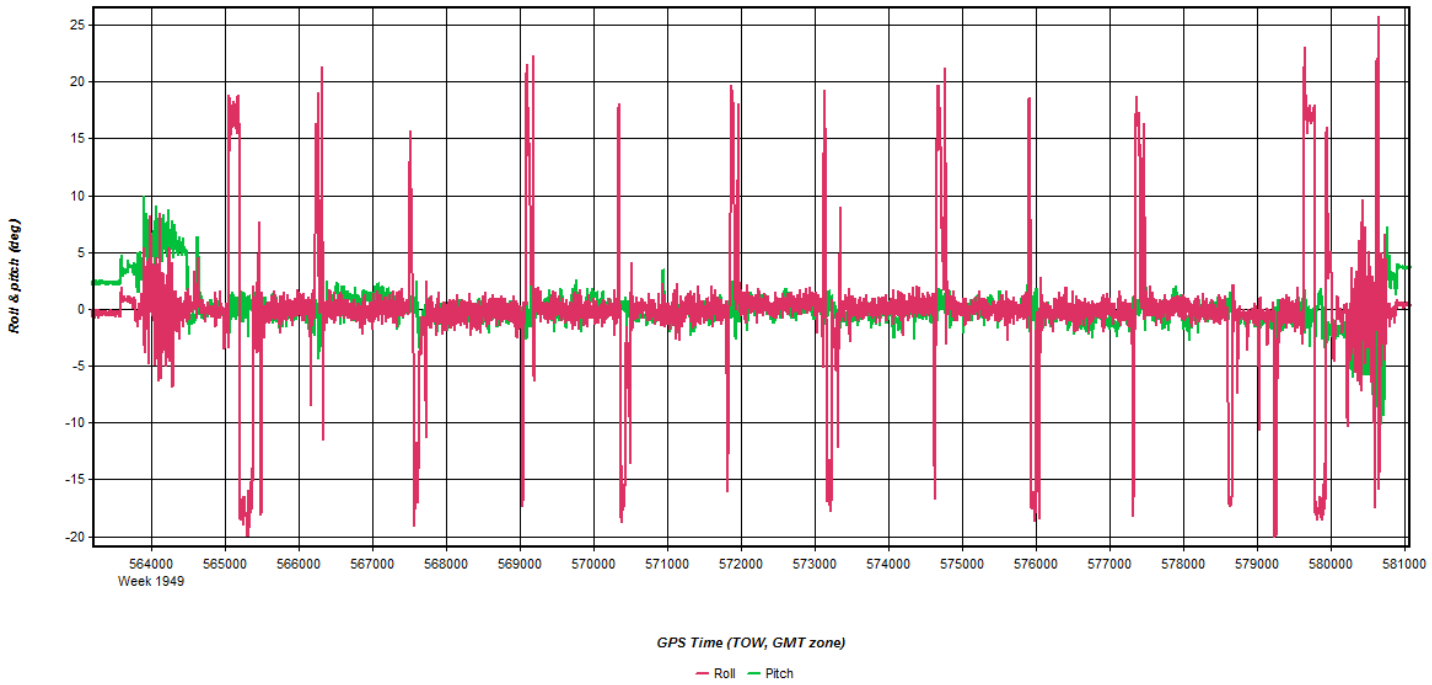
Job #	Location/ Site/Block	Line #	Flight Dir	Crab Angle	Remarks
3DEP	1	E030	N		
		E029	S		
		E028	N		
		E027	S		
		E026	N		
		E025	S		
		E024	N		
		E023	S		
		E022	N		
		E021	S		
		E020	N		
		E019	S		
		E018	N		
		E017	S		
		E016	N		
		UL	W		

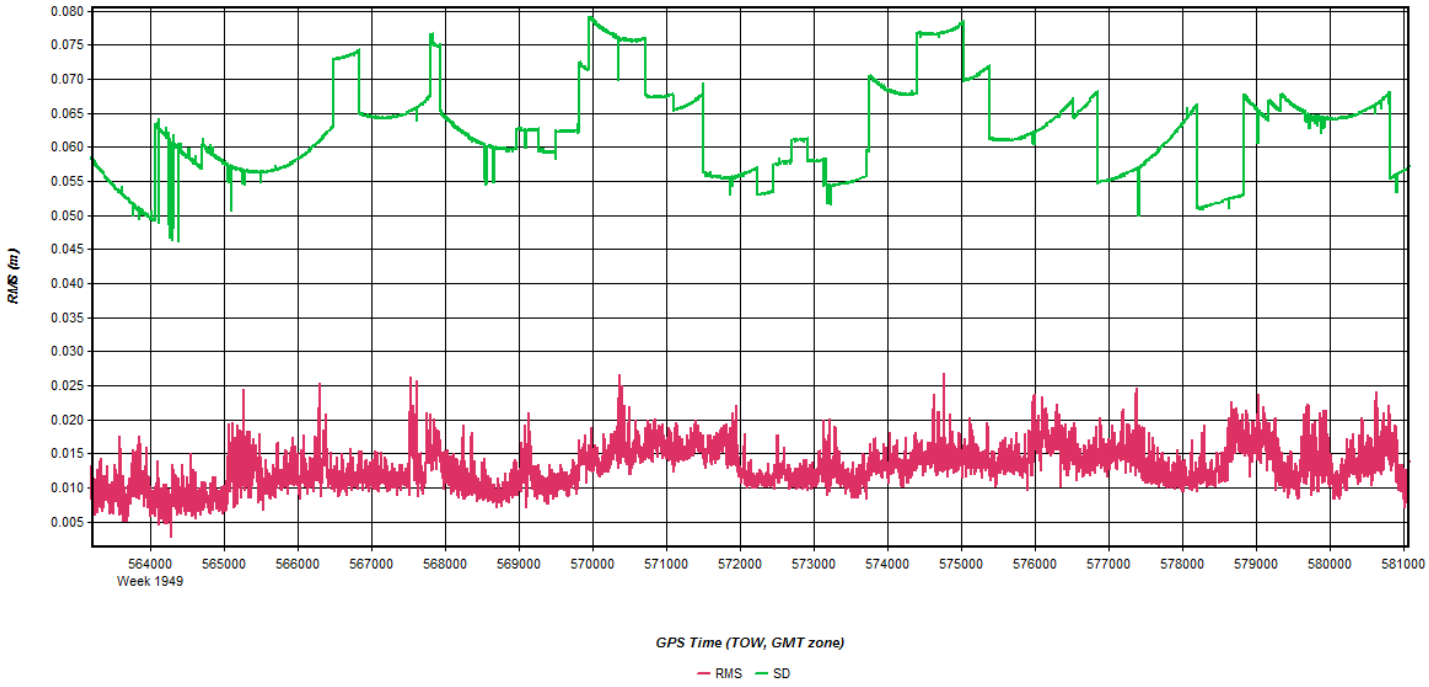
May 20, 2017-A (N916WC, SN8119)

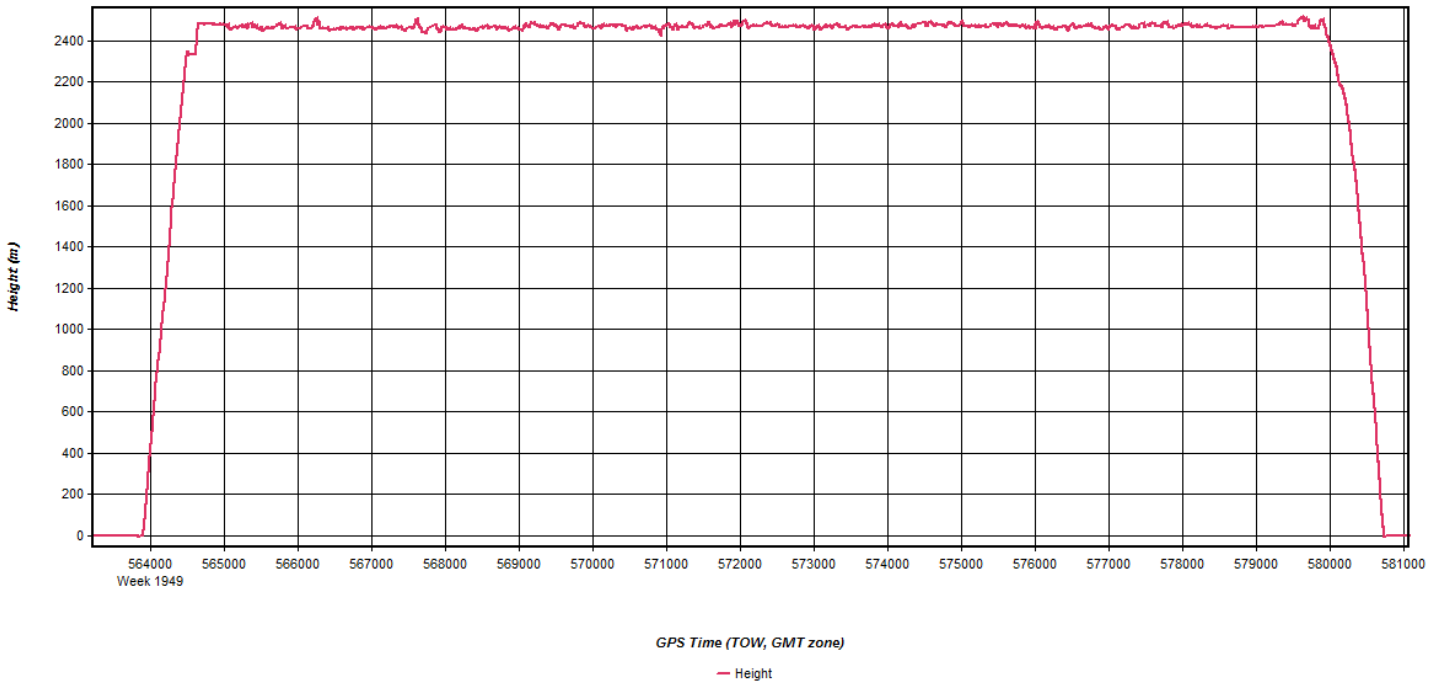

5 km

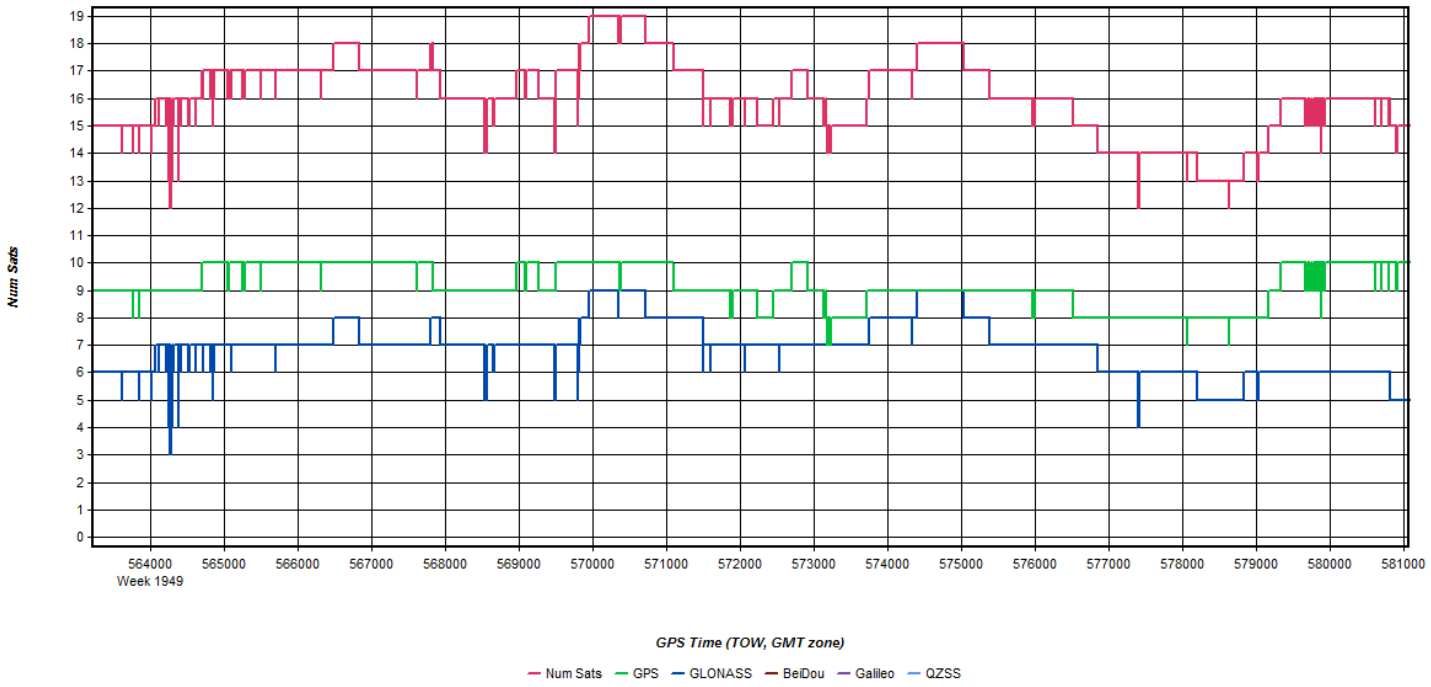

PDOP
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
PDOP

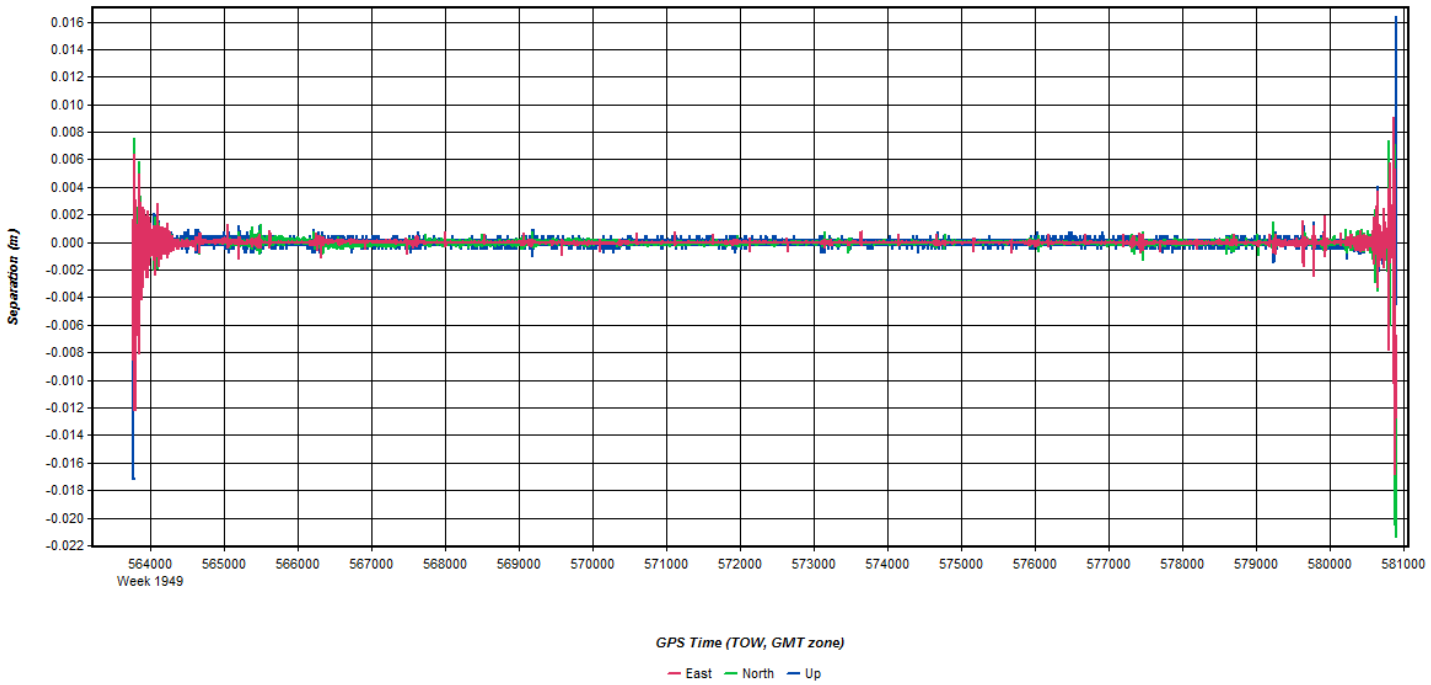

Status
2
1
0
-1
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

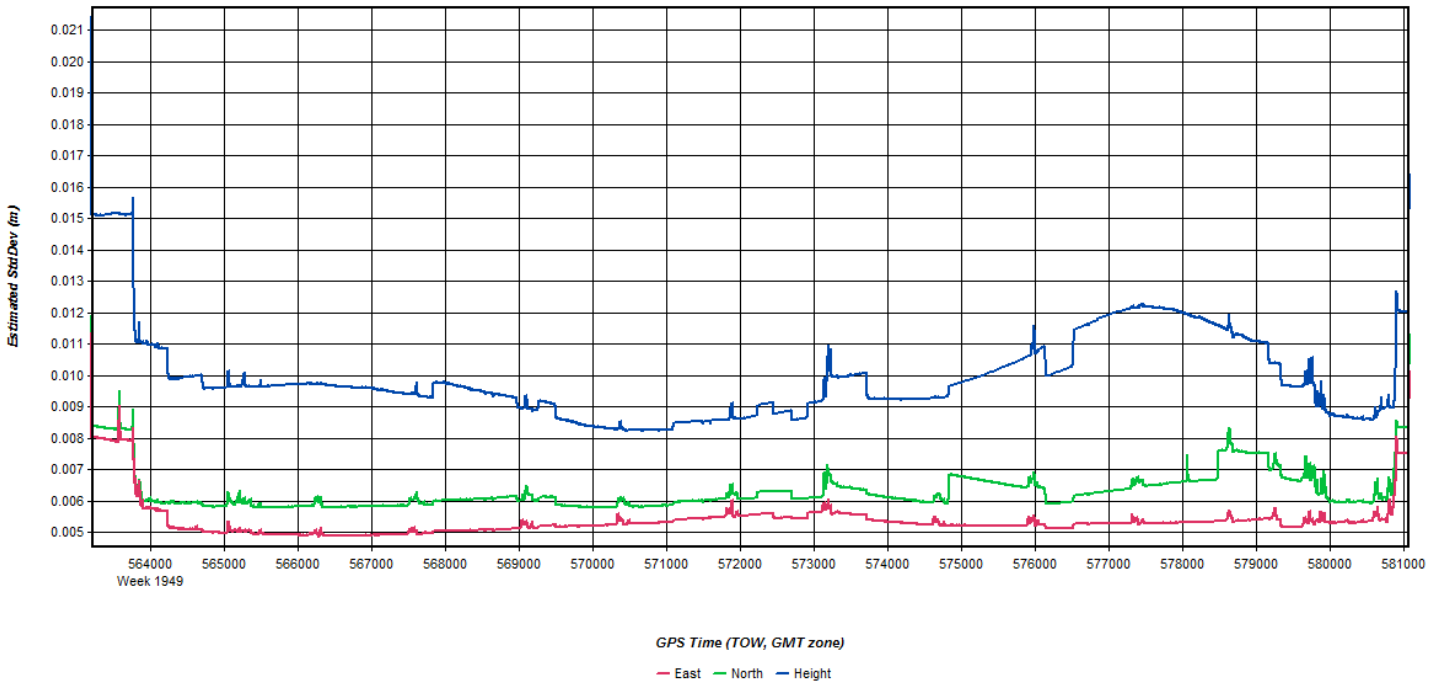

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Roll
Pitch

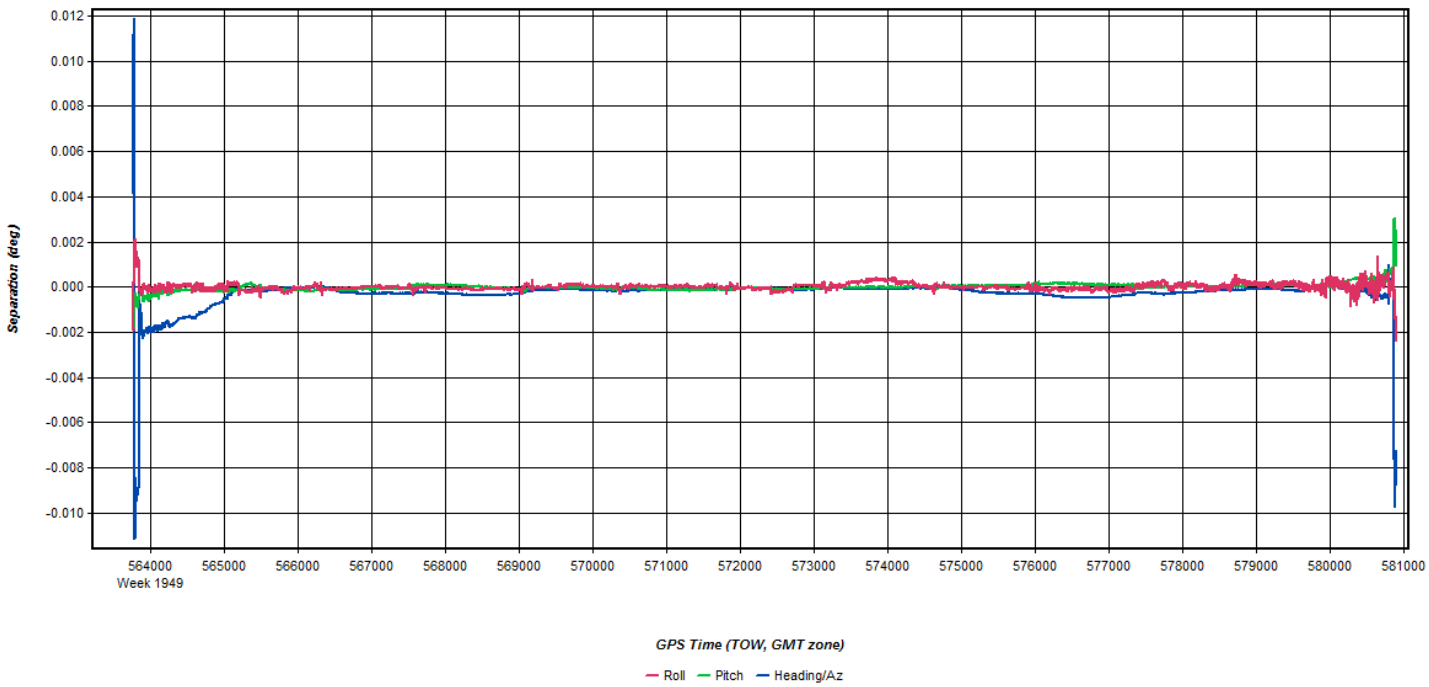

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
RMS
SD

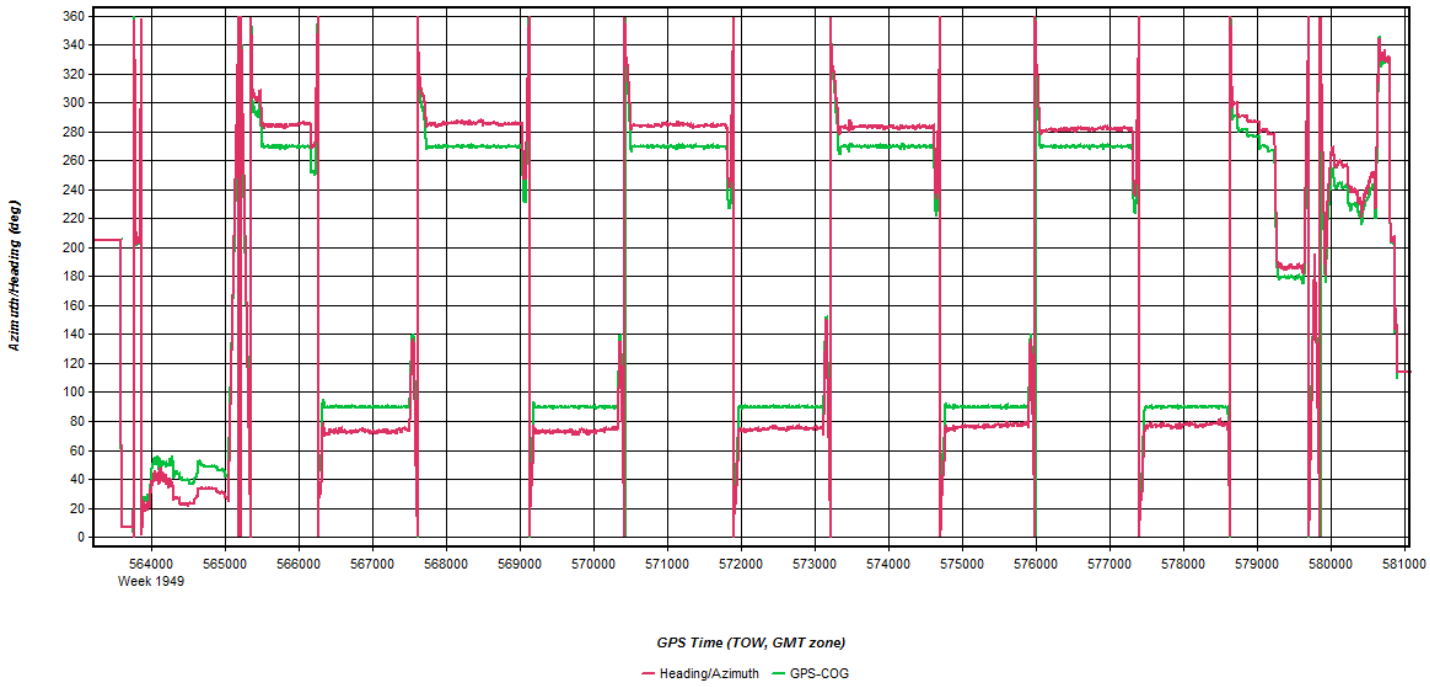

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

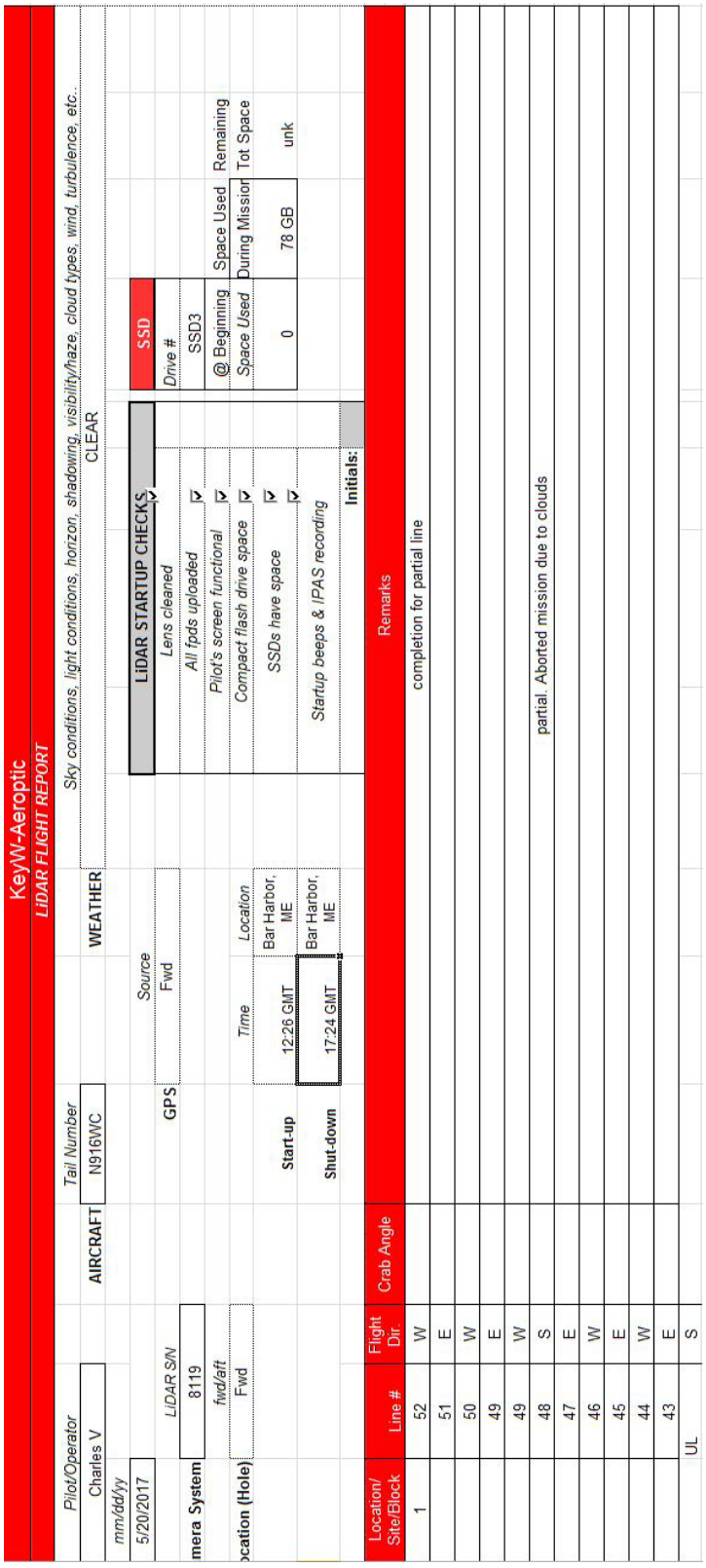

Separation (m)
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
-0.022
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
564000
Week 1949
565000
566000
567000
568000
569000
570000
571000
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Pilot/Operator		*Tail Number*		*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc..*
Charles V	**AIRCRAFT**	N916WC	**WEATHER**	CLEAR

mm/dd/yy: 5/20/2017

mera System	*LiDAR S/N*	8119
ocation (Hole)	*fwd/aft*	Fwd

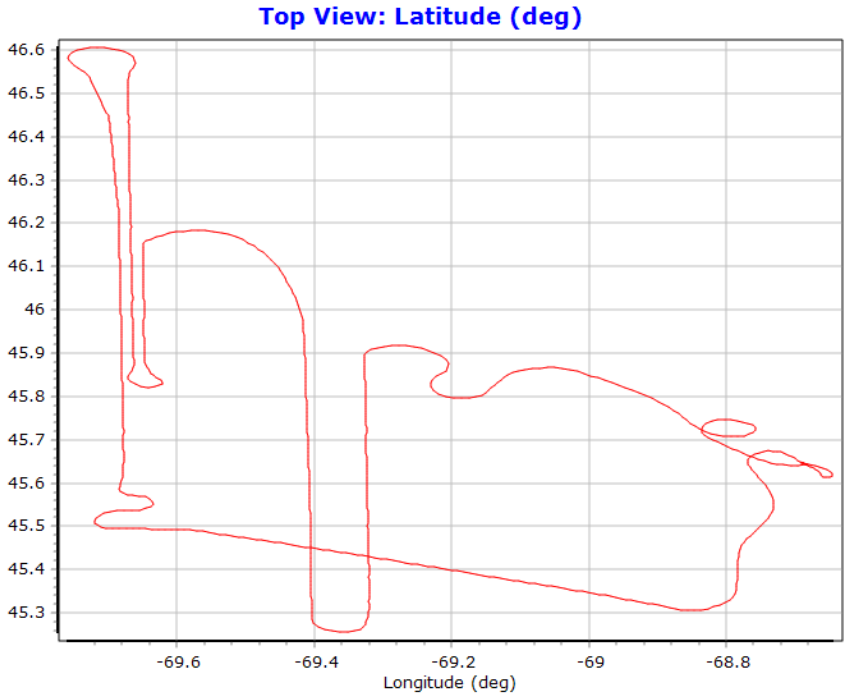
	Time	*Location*	*Source*	**GPS**
Start-up	12:26 GMT	Bar Harbor, ME	Fwd	
Shut-down	17:24 GMT	Bar Harbor, ME		

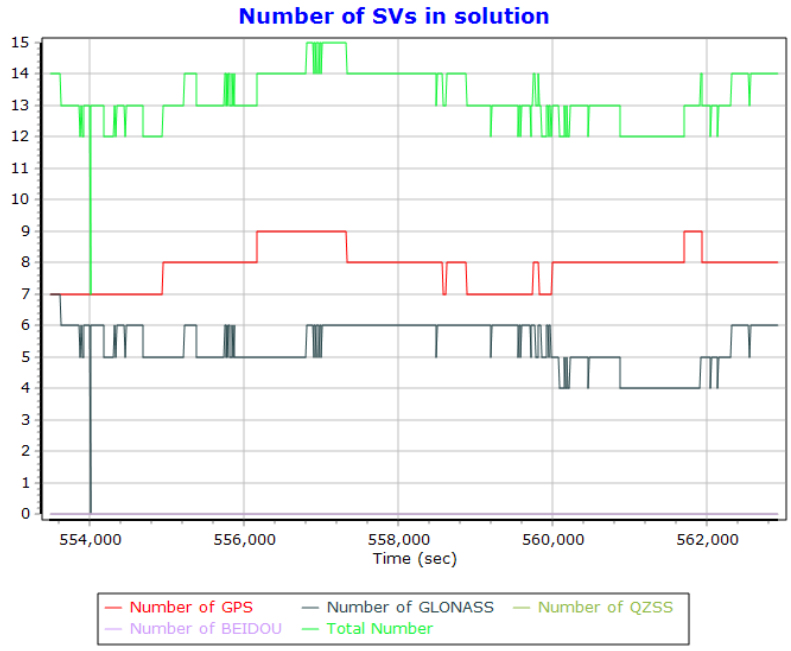
LiDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	
Pilot's screen functional	
Compact flash drive space	
SSDs have space	
Startup beeps & IPAS recording	
Initials:	

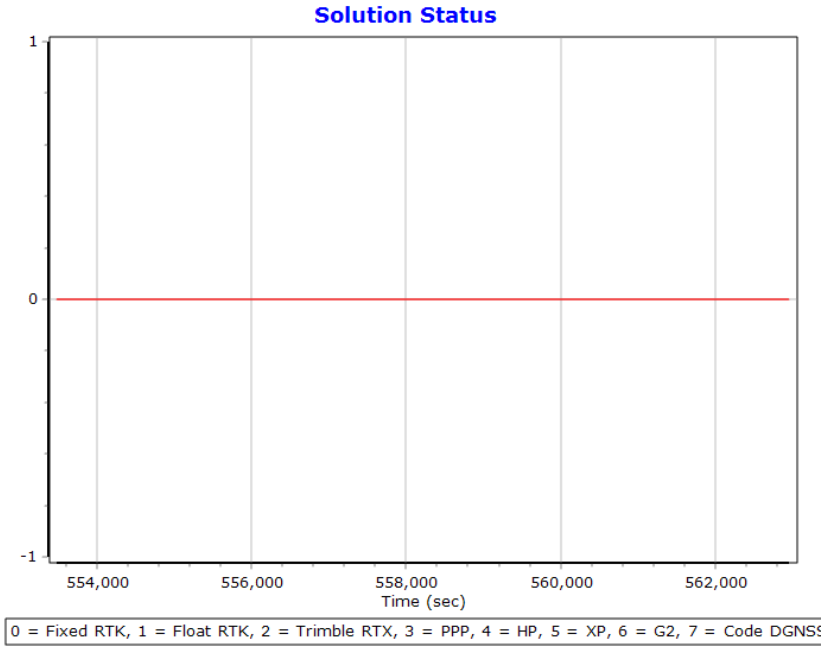
SSD			
Drive #			
SSD3			
@ Beginning	*Space Used*	*During Mission*	*Tot Space*
Space Used	*Remaining*		
0	78 GB		unk

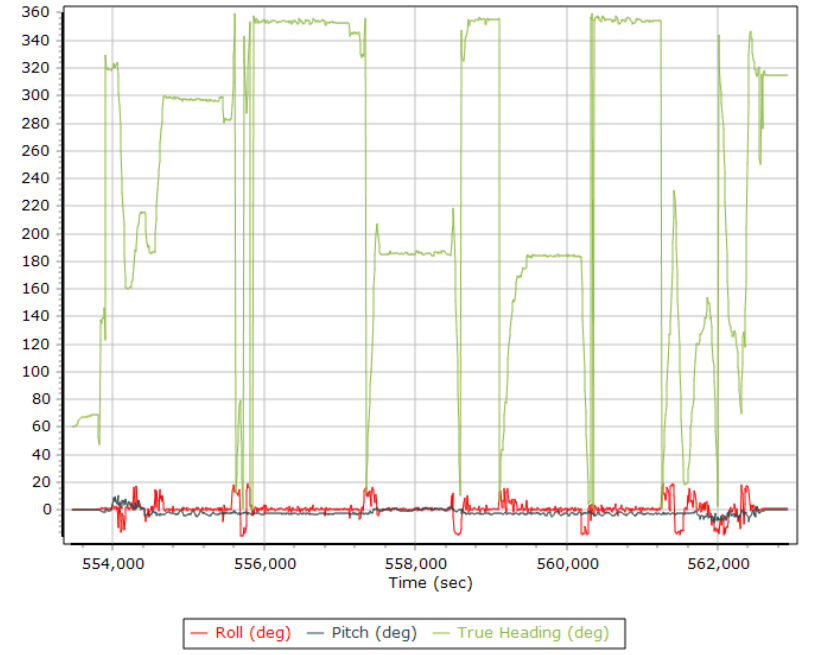
Location/ Site/Block	**Line #**	**Flight Dir.**	**Crab Angle**	**Remarks**
1	52	W		completion for partial line
	51	E		
	50	W		
	49	E		
	49	W		
	48	S		partial. Aborted mission due to clouds
	47	E		
	46	W		
	45	E		
	44	W		
	43	E		
	UL	S		

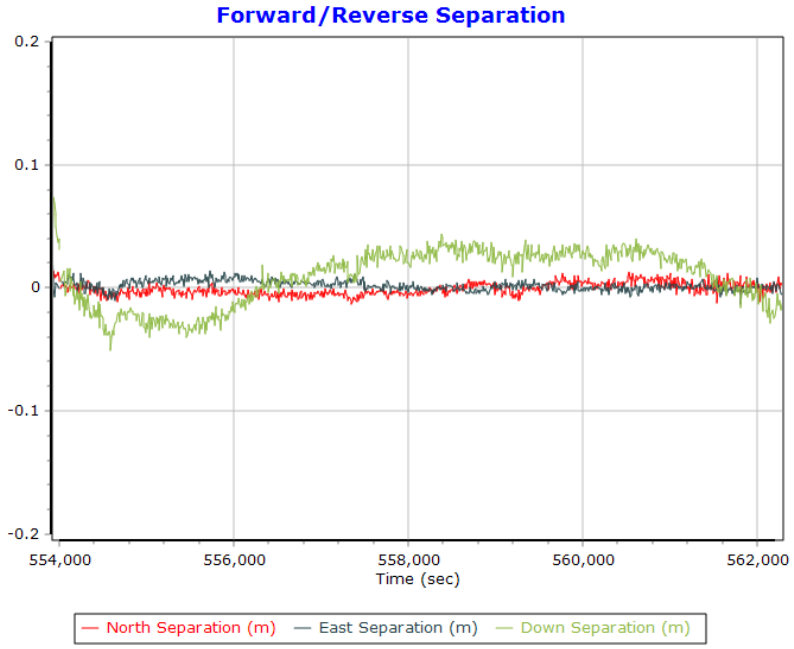
May 20, 2017-A (N1007Q,SN2221256)


Top View: Latitude (deg)
46.6
46.5
46.4
46.3
46.2
46.1
46
45.9
45.8
45.7
45.6
45.5
45.4
45.3
-69.6
-69.4
-69.2
-69
-68.8
Longitude (deg)

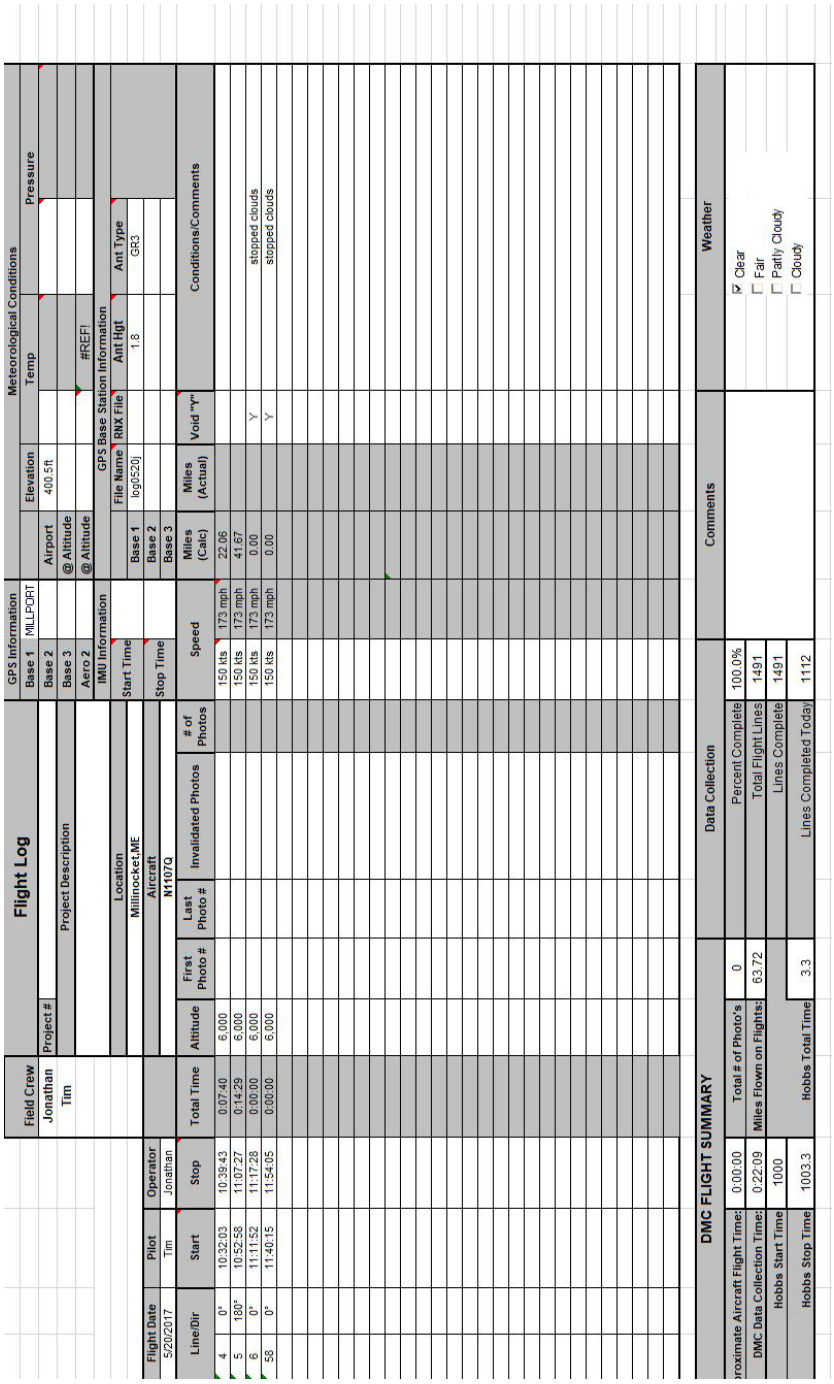

Number of SVs in solution
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
554,000
556,000
558,000
560,000
562,000
Time (sec)
Number of GPS
Number of GLONASS
Number of QZSS
Number of BEIDOU
Total Number


Solution Status
1
0
-1
554,000
556,000
558,000
560,000
562,000
Time (sec)
0 = Fixed RTK, 1 = Float RTK, 2 = Trimble RTX, 3 = PPP, 4 = HP, 5 = XP, 6 = G2, 7 = Code DGNSS


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
554,000
556,000
558,000
560,000
562,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


Forward/Reverse Separation
0.2
0.1
0
-0.1
-0.2
554,000
556,000
558,000
560,000
562,000
Time (sec)
North Separation (m)
East Separation (m)
Down Separation (m)

Flight Log



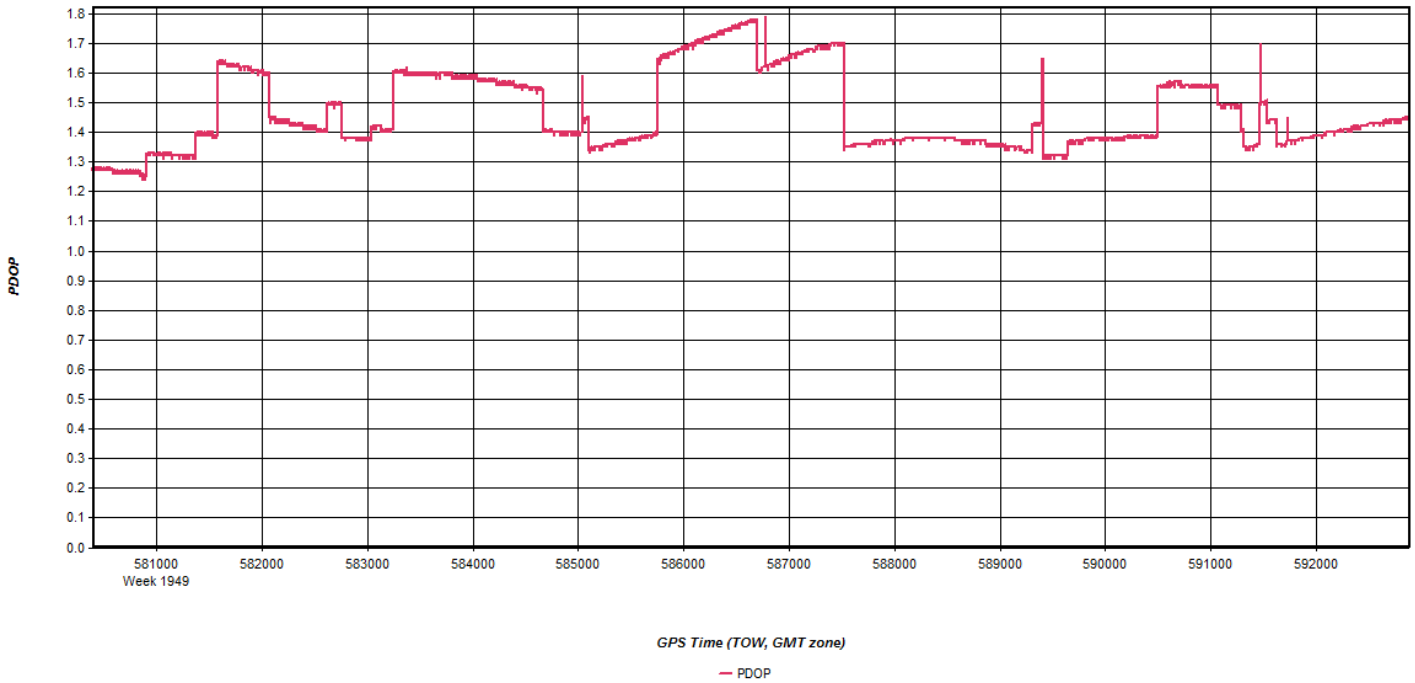
Flight Log

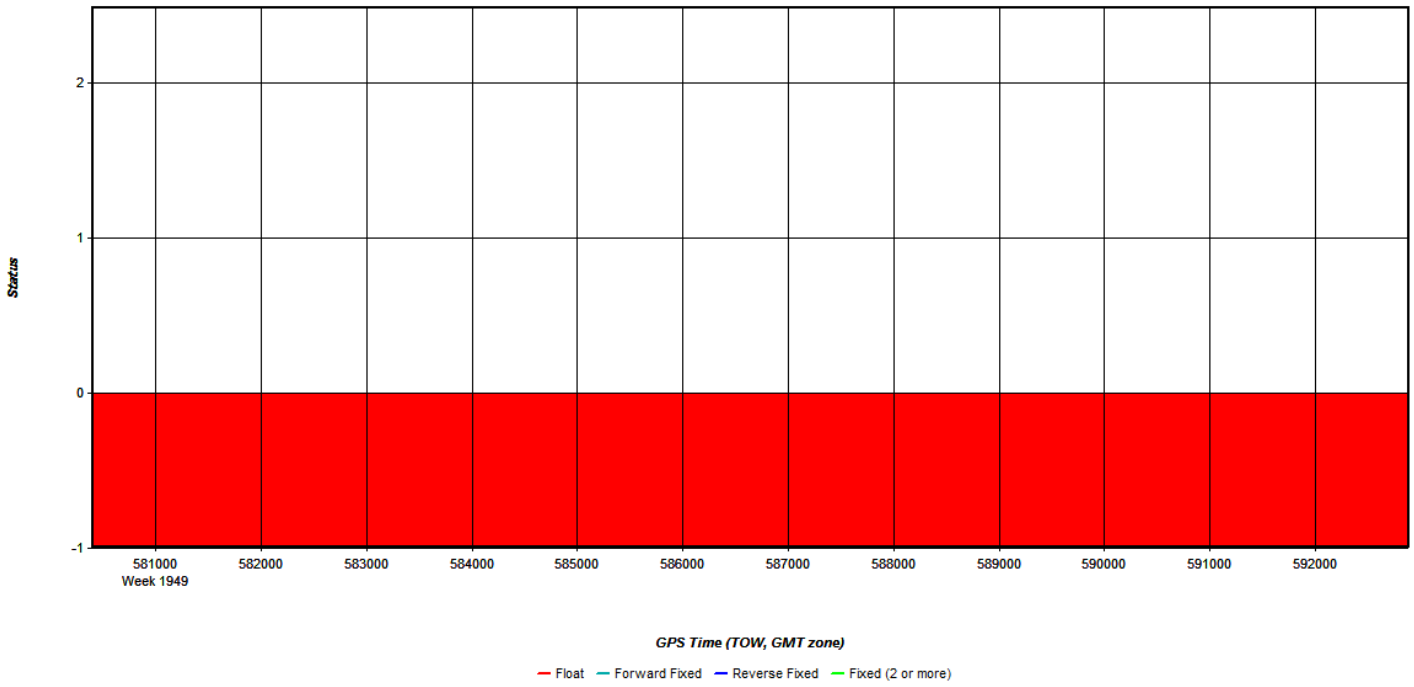
Field Crew		GPS Information		Meteorological Conditions			
Jonathan		Base 1	MILLPORT		Elevation	Temp	Pressure
Tim	Project #	Base 2		Airport	400.5ft		
	Project Description	Base 3		@ Altitude		#REF!	
		Aero 2		@ Altitude			
		IMU Information		GPS Base Station Information			
	Location	Start Time			File Name	RNX File	Ant Hgt	Ant Type
	Millinocket,ME			Base 1	log0520j		1.8	GR3
	Aircraft			Base 2				
	N1107Q	Stop Time		Base 3				

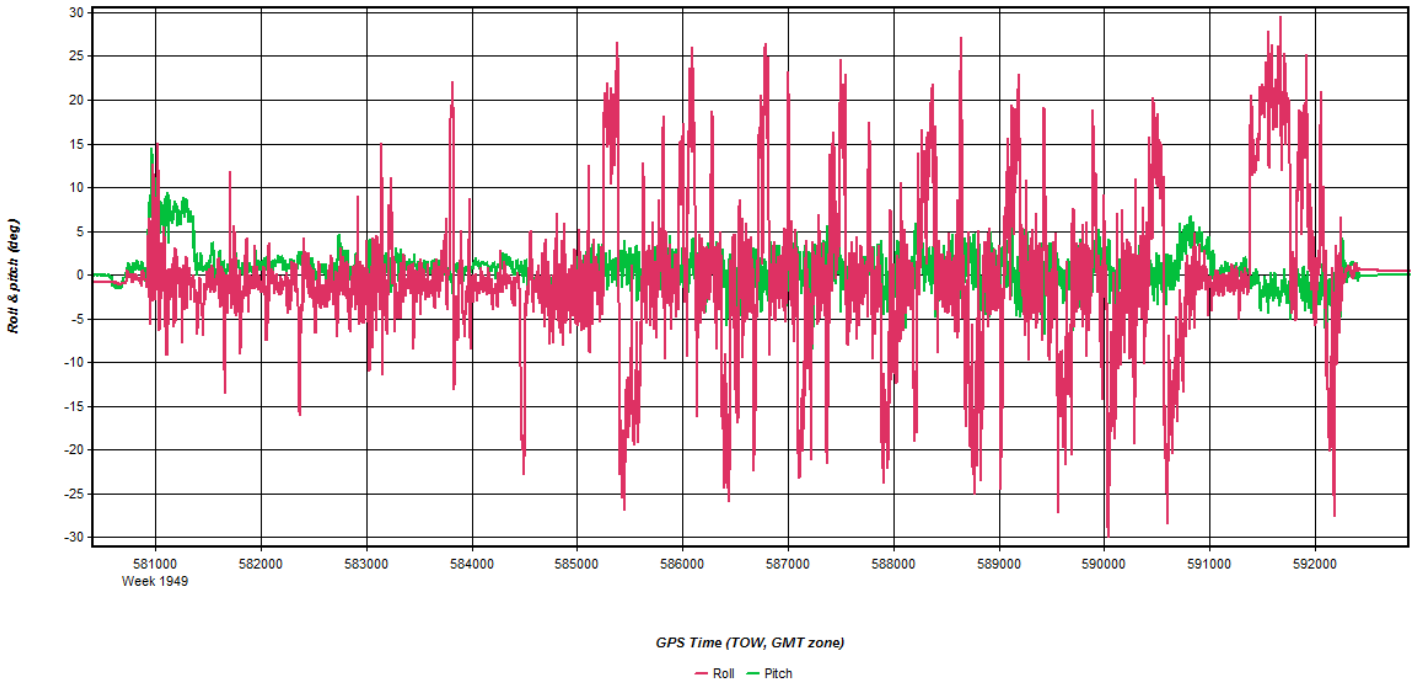
Flight Date	Pilot	Operator																		
5/20/2017	Tim	Jonathan																		
Line	Dir	Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed		Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments					
4	0°	10:32:03	10:39:43	0:07:40	6,000					150 kts	173 mph	22.06								
5	180°	10:52:58	11:07:27	0:14:29	6,000					150 kts	173 mph	41.67								
6	0°	11:11:52	11:17:28	0:00:00	6,000					150 kts	173 mph	0.00		Y	stopped clouds					
58	0°	11:40:15	11:54:05	0:00:00	6,000					150 kts	173 mph	0.00		Y	stopped clouds					

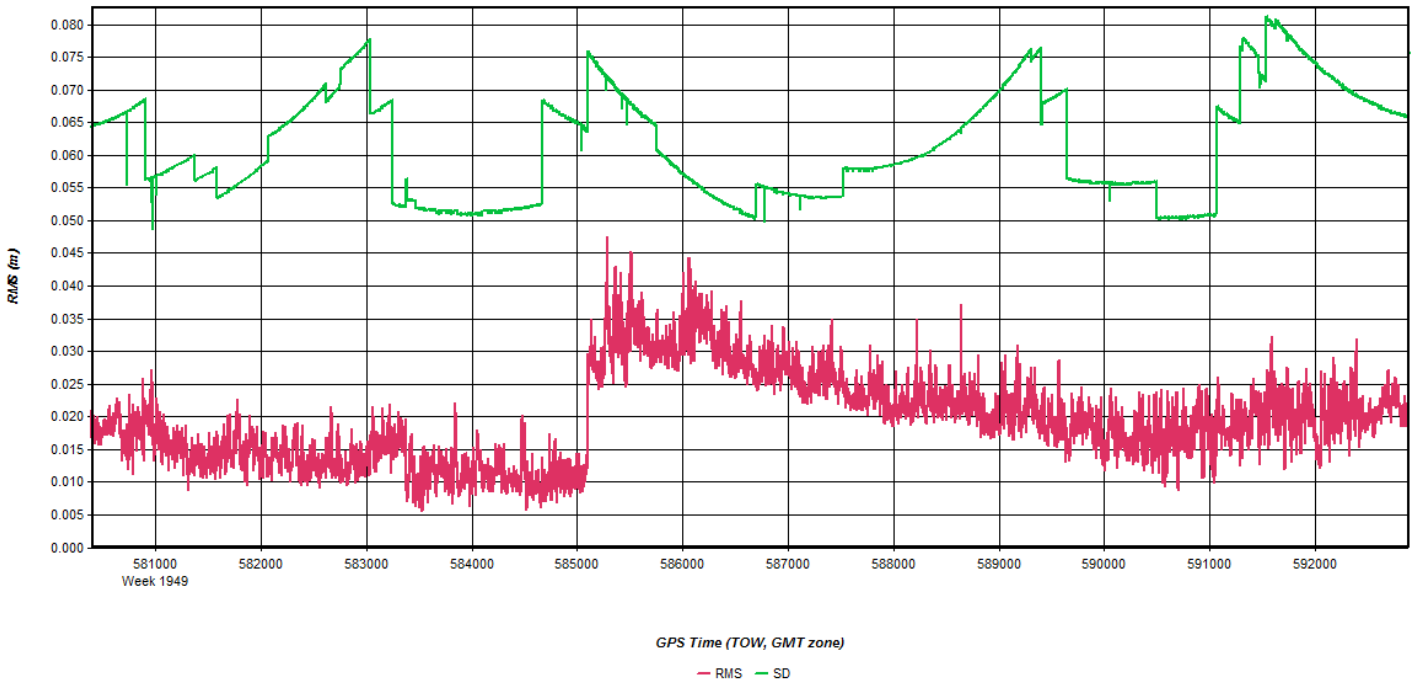
DMC FLIGHT SUMMARY				Data Collection			Comments	Weather
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0	Percent Complete	100.0%			☑ Clear
DMC Data Collection Time:	0:22:09	Miles Flown on Flights:	63.72	Total Flight Lines	1491			☐ Fair
Hobbs Start Time	1000			Lines Complete	1491			☐ Partly Cloudy
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3	Lines Completed Today	1112			☐ Cloudy

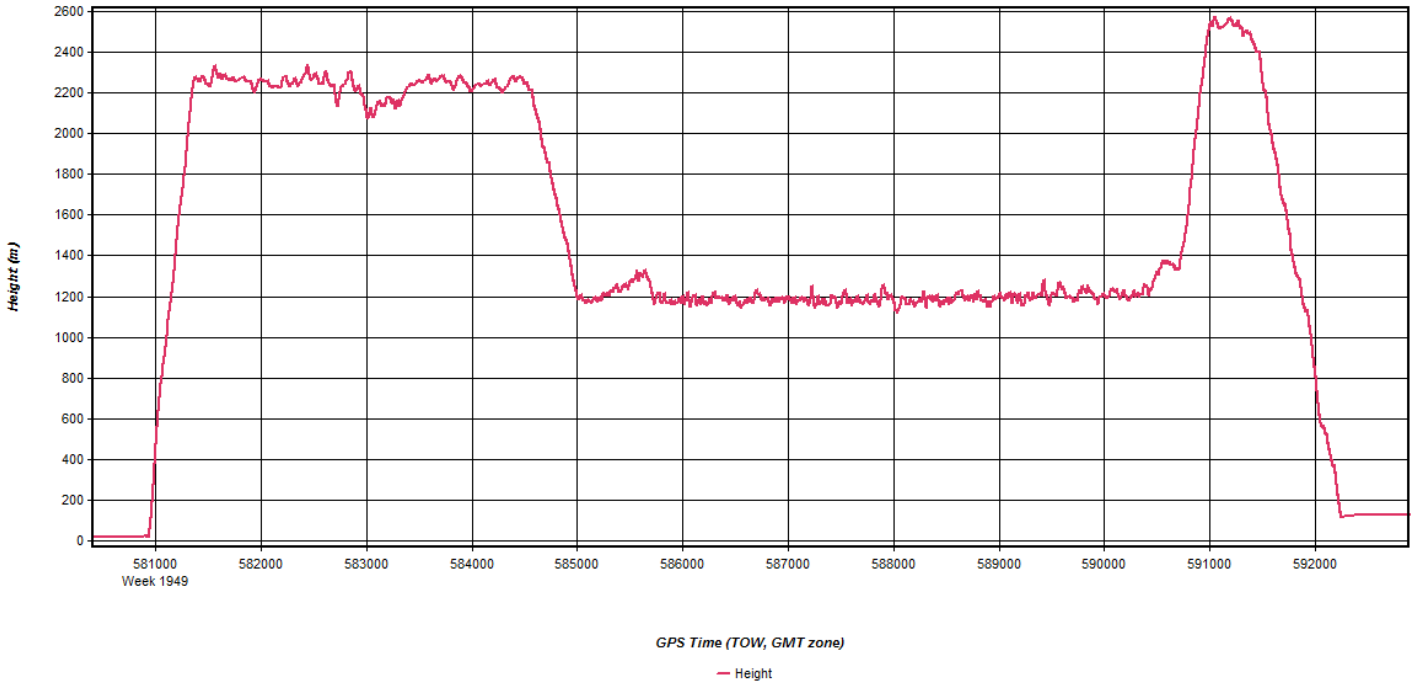
May 20, 2017-B (N73TM, SN7178)

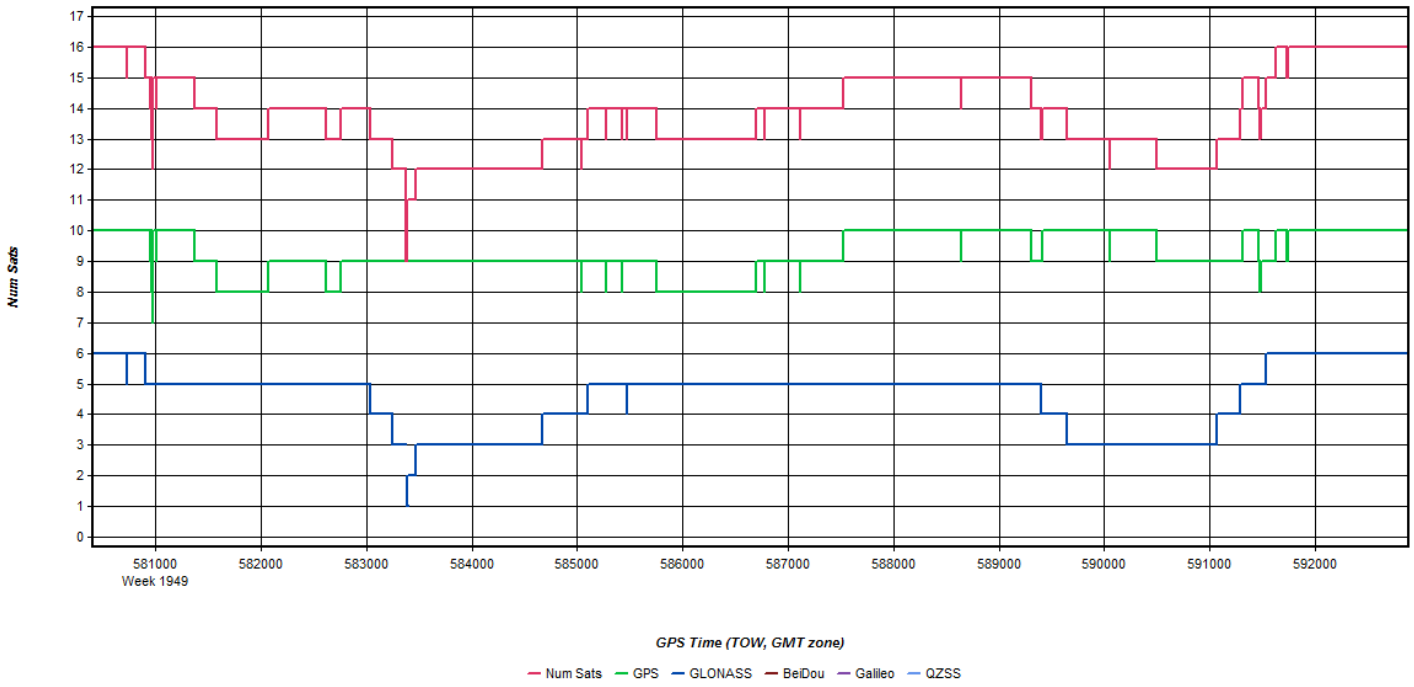

PDOP
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
PDOP

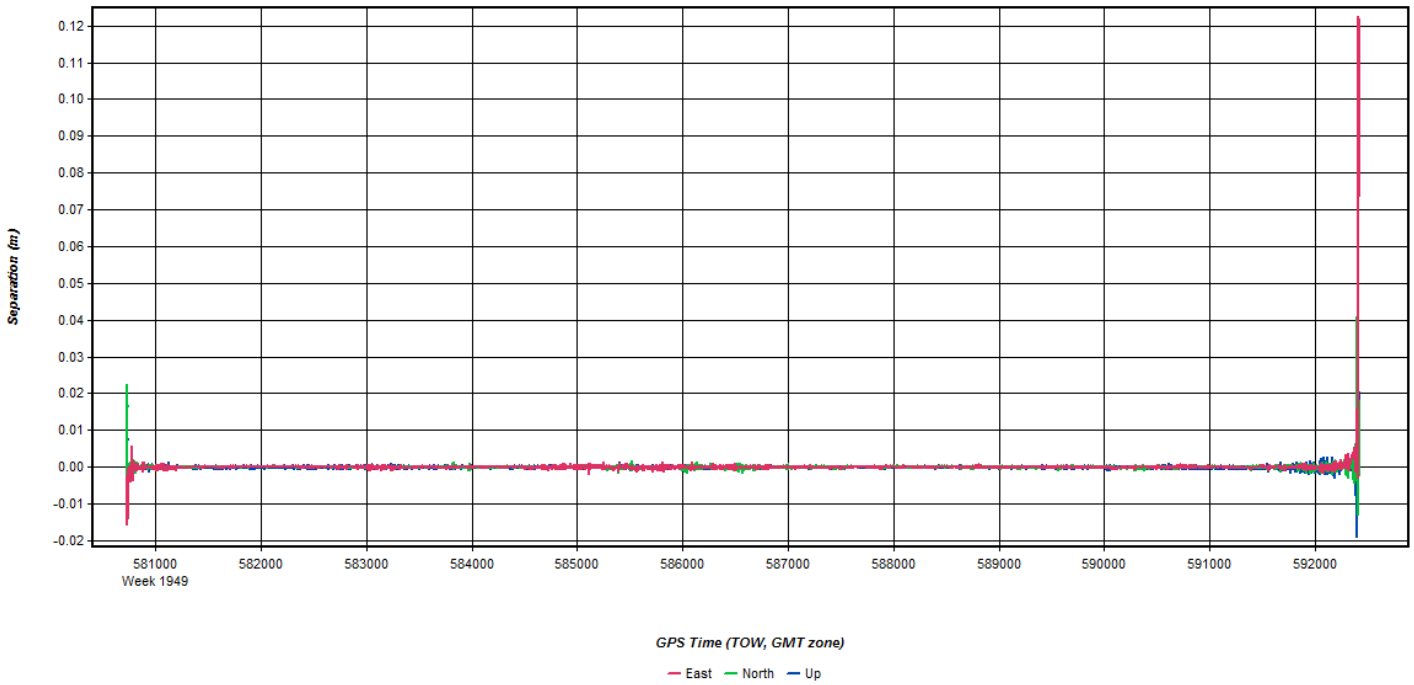

Status
2
1
0
-1
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

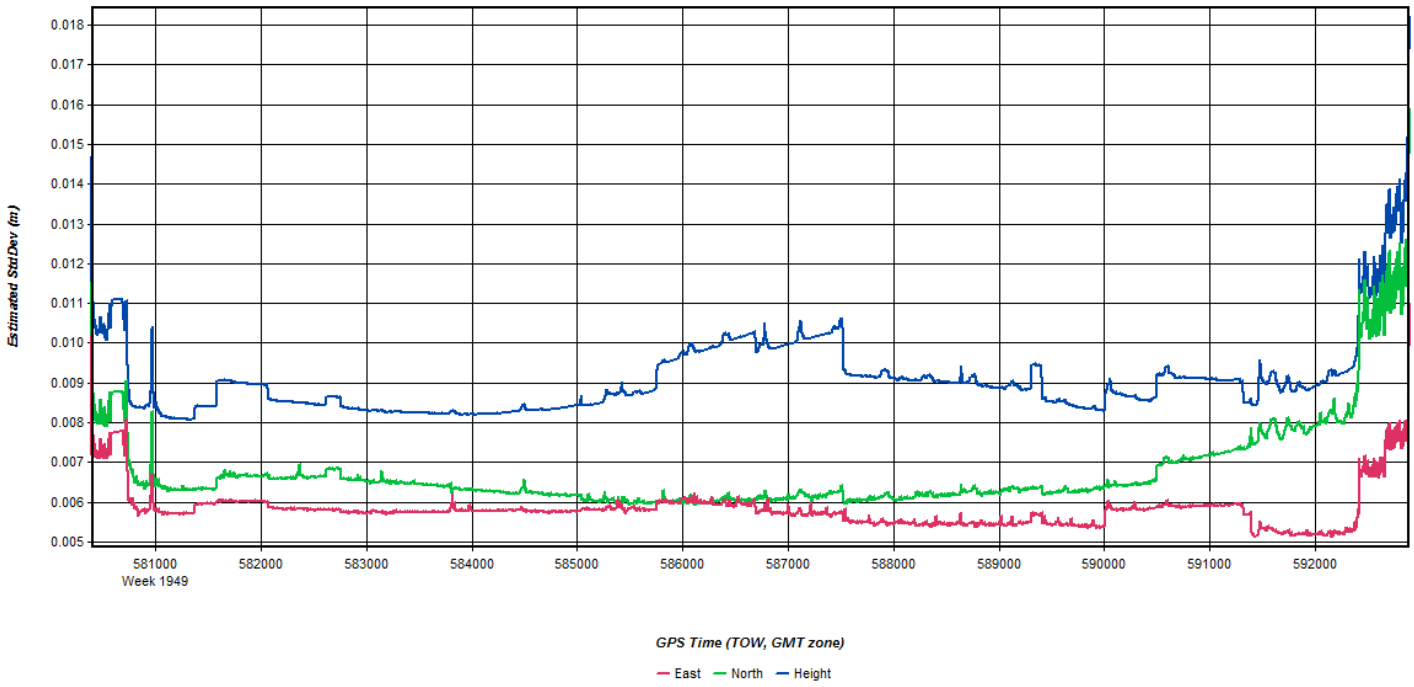

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Roll
Pitch

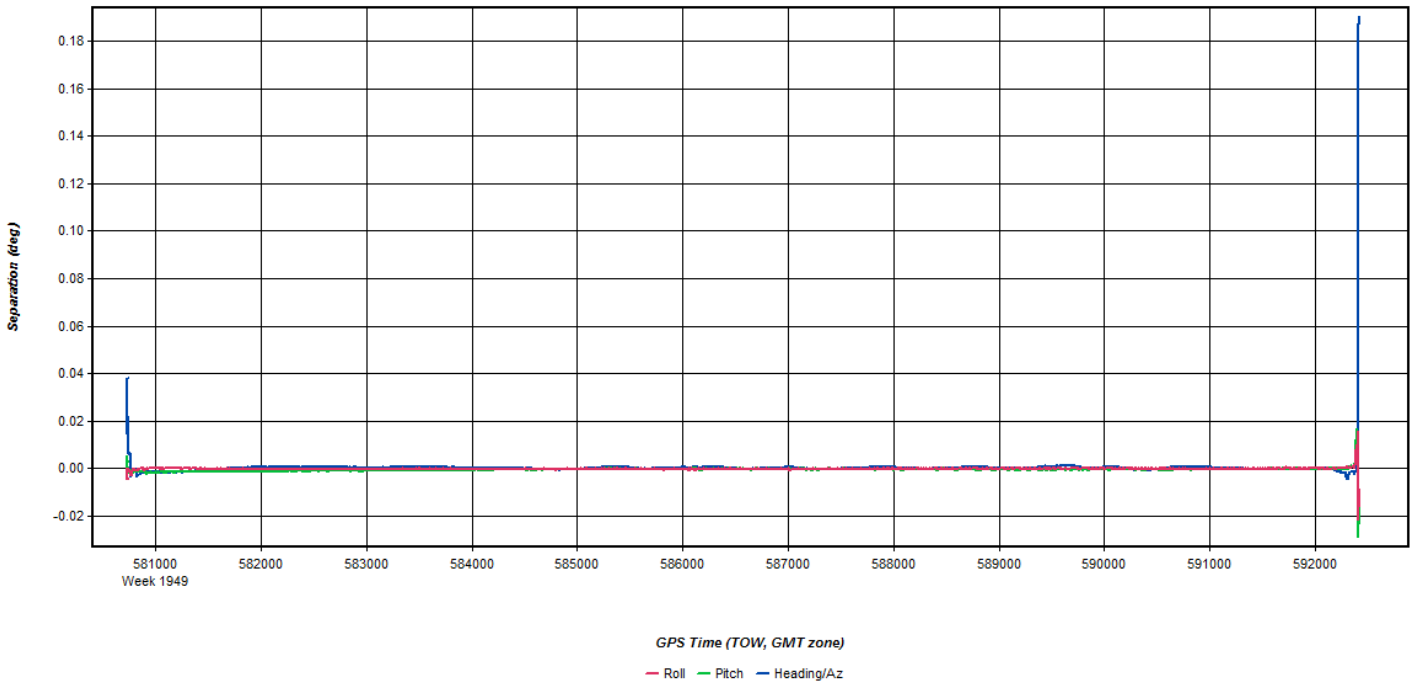

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
RMS
SD

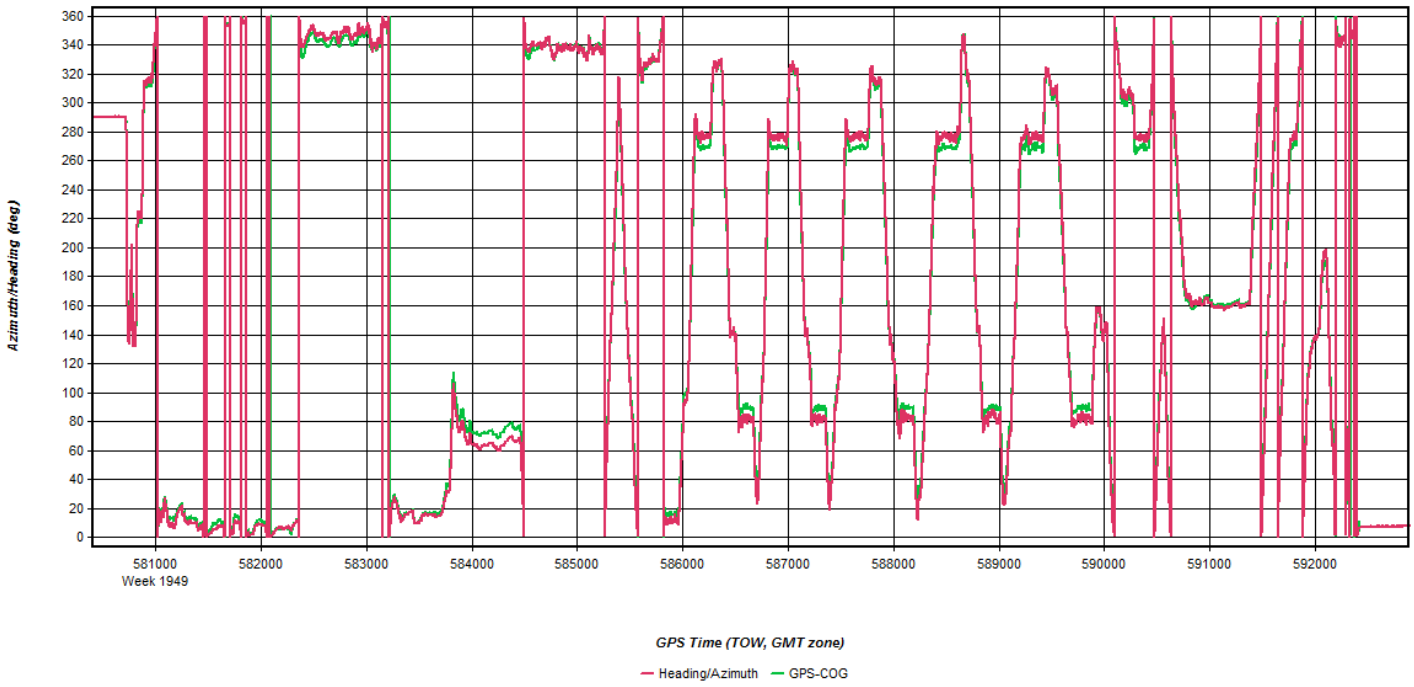

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Height


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

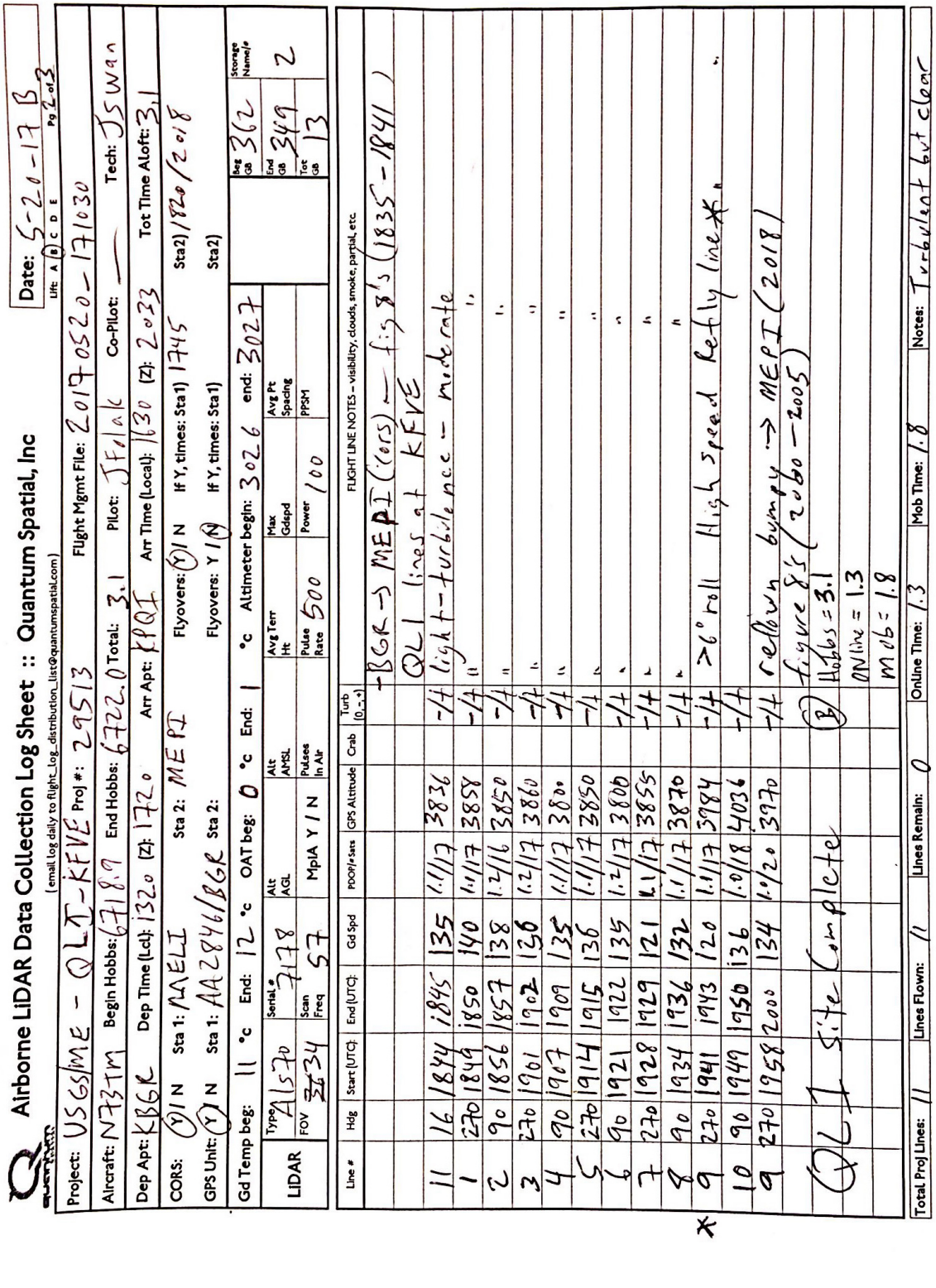

Separation (m)
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-20-17 B

Life: A (B) C D E Pg 2 of 3

Project: USGSME - QL1-KFVE Proj #: 29513 Flight Mgmt File: 20170520_171030

Aircraft: N737TM Begin Hobbs: 6718.9 End Hobbs: 6722.0 Total: 3.1 Pilot: JFolak Co-Pilot: — Tech: JSwan

Dep Apt: KBGR Dep Time (Lcl): 1320 (Z): 1720 Arr Apt: KPQI Arr Time (Local): 1630 (Z): 2023 Tot Time Aloft: 3.1

CORS: (Y) N Sta 1: NAEL Sta 2: MEPI Flyovers: (Y) N If Y, times: Sta1) 1745 Sta2) 1820/2018

GPS Unit: (Y) N Sta 1: AA2846/BGR Sta 2: Flyovers: Y (N) If Y, times: Sta1) Sta2)

Gd Temp beg: 11 °c End: 12 °c OAT beg: 0 °c End: 1 °c Altimeter begin: 3026 end: 3027

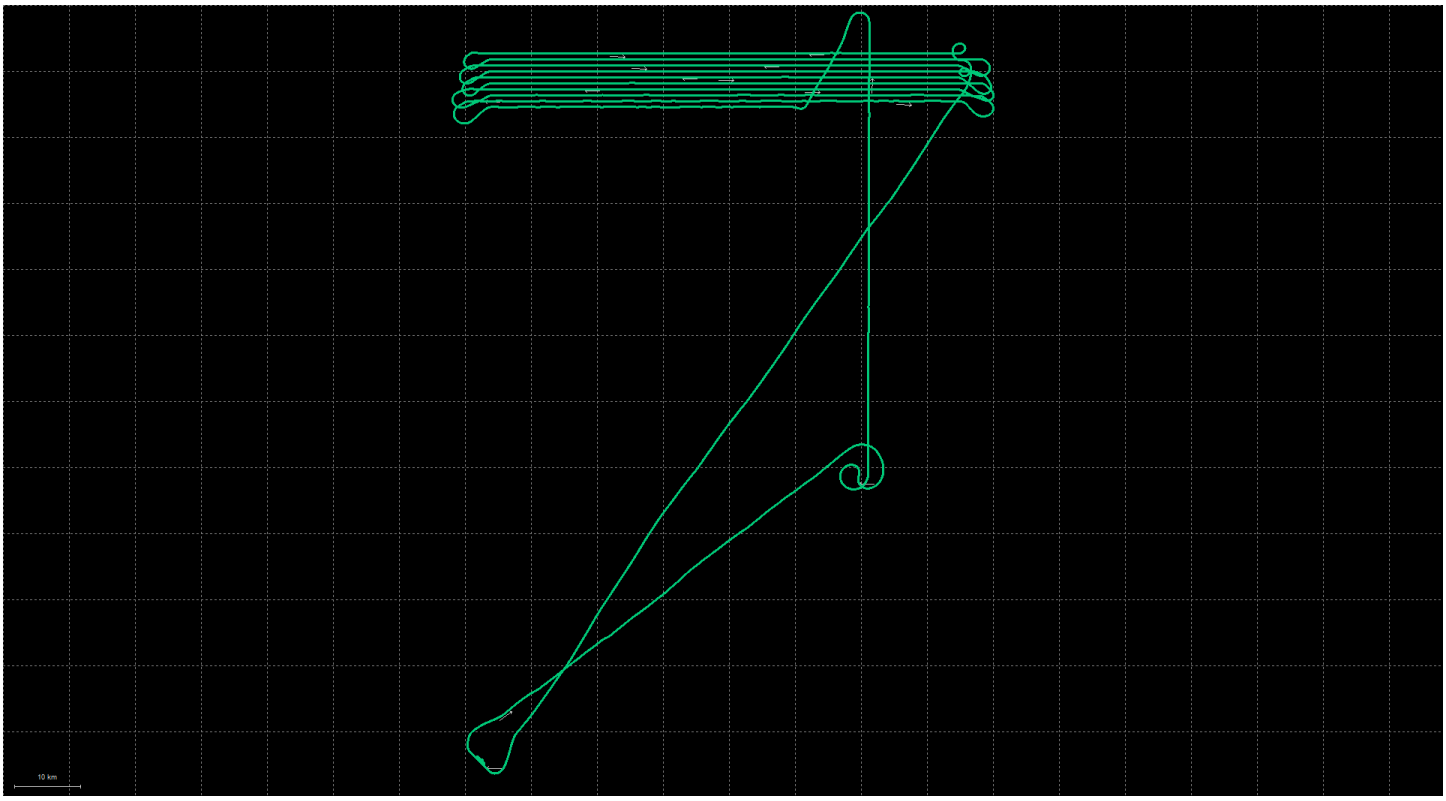
LiDAR: Type AL570, FOV 34, Serial# 7178, Scan Freq 57, Alt AGL, MpIA Y / N, Alt AMSL, Pulses In Air, Avg Terr Ht, Pulse Rate 500, Max Gdspd, Power 100, Avg Pt Spacing, PPSM

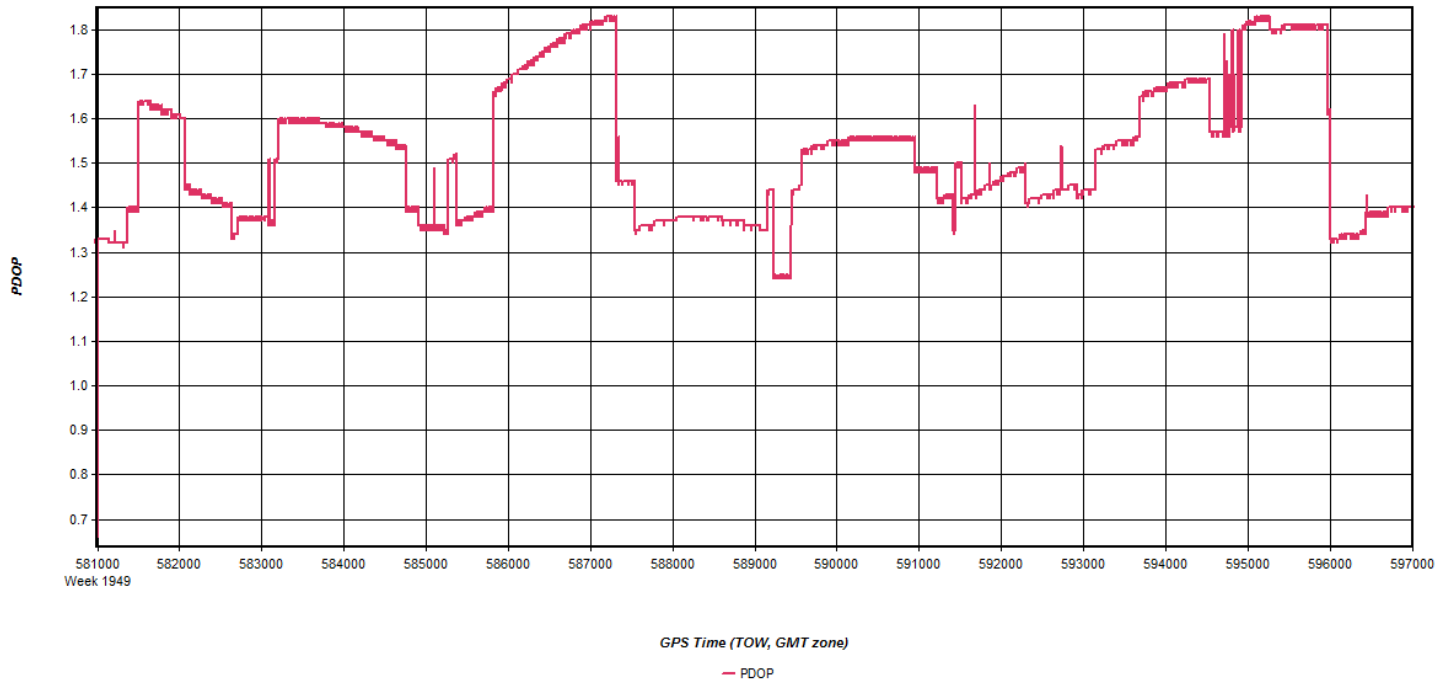
Beg GB 362, End GB 379, Tot GB 13, Storage Name/s 2

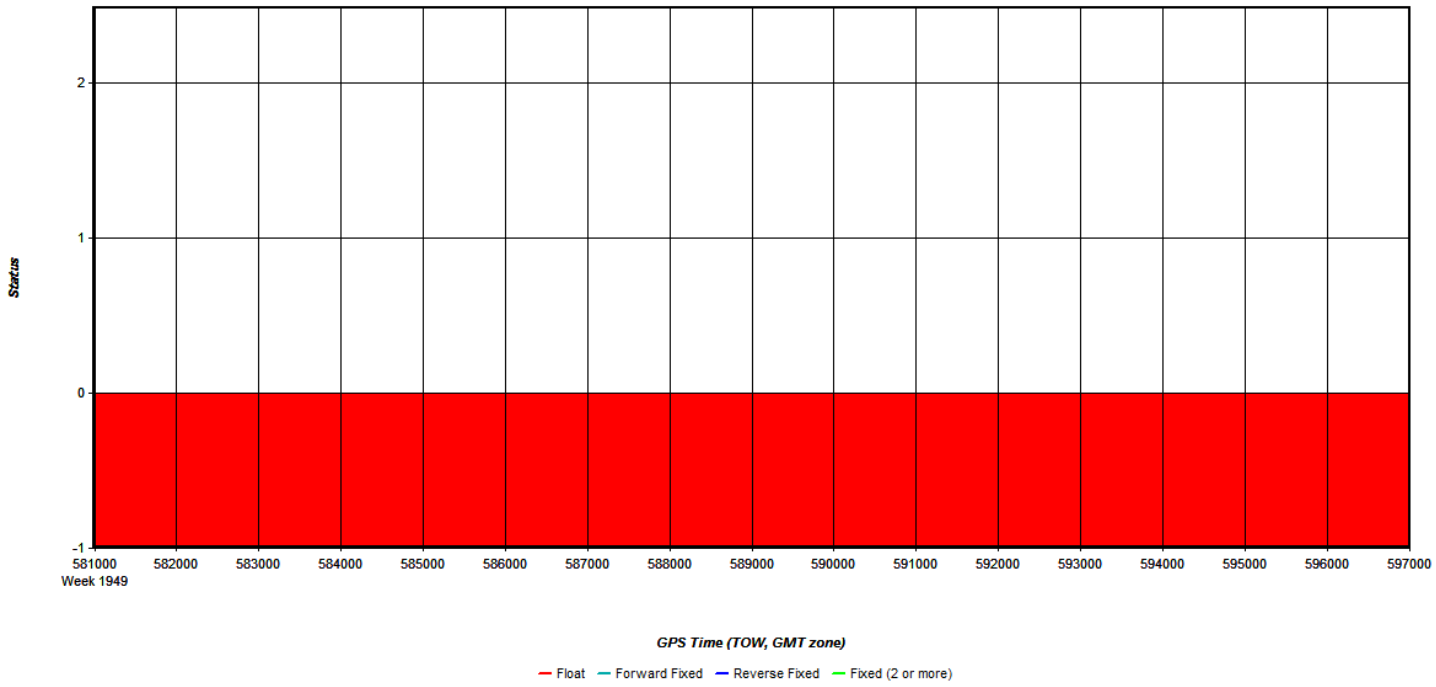
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/+sats	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
									+BGR → MEPI (1ors) — fig 8's (1835-1841)
									QL1 lines at KFVE
11	16	1844	1845	135	1.1/17	3836		-/+	light-turbulence - moderate
1	270	1849	1850	140	1.1/17	3858		-/+	"
2	90	1856	1857	138	1.2/16	3850		-/+	"
3	270	1901	1902	136	1.2/17	3860		-/+	"
4	90	1907	1909	135	1.1/17	3850		-/+	"
5	270	1914	1915	136	1.1/17	3850		-/+	"
6	90	1921	1922	135	1.2/17	3800		-/+	"
7	270	1928	1929	121	1.1/17	3855		-/+	"
8	90	1934	1936	132	1.1/17	3870		-/+	"
9	270	1941	1943	120	1.1/17	3984		-/+	>6° roll High speed Rolly line*
10	90	1949	1950	136	1.0/18	4036		-/+	"
9	270	1958	2000	134	1.1/20	3970		-/+	reburn bumpy → MEPI (2018)
									figure 8's (2080 - 2005)
QL1 Site Complete									(B) Hobbs = 3.1
									ONline = 1.3
									mob = 1.8

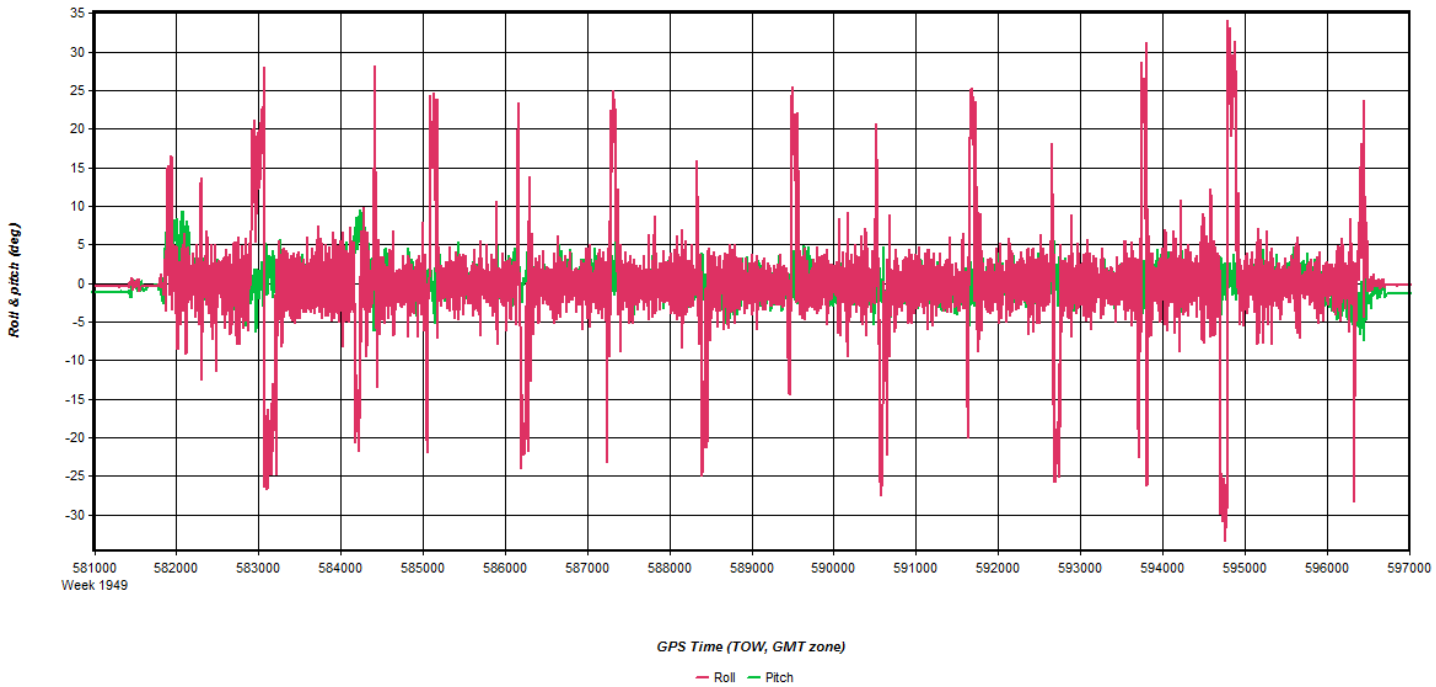
Total Proj Lines: 11 Lines Flown: 11 Lines Remain: 0 OnLine Time: 1.3 Mob Time: 1.8 Notes: Turbulent but clear

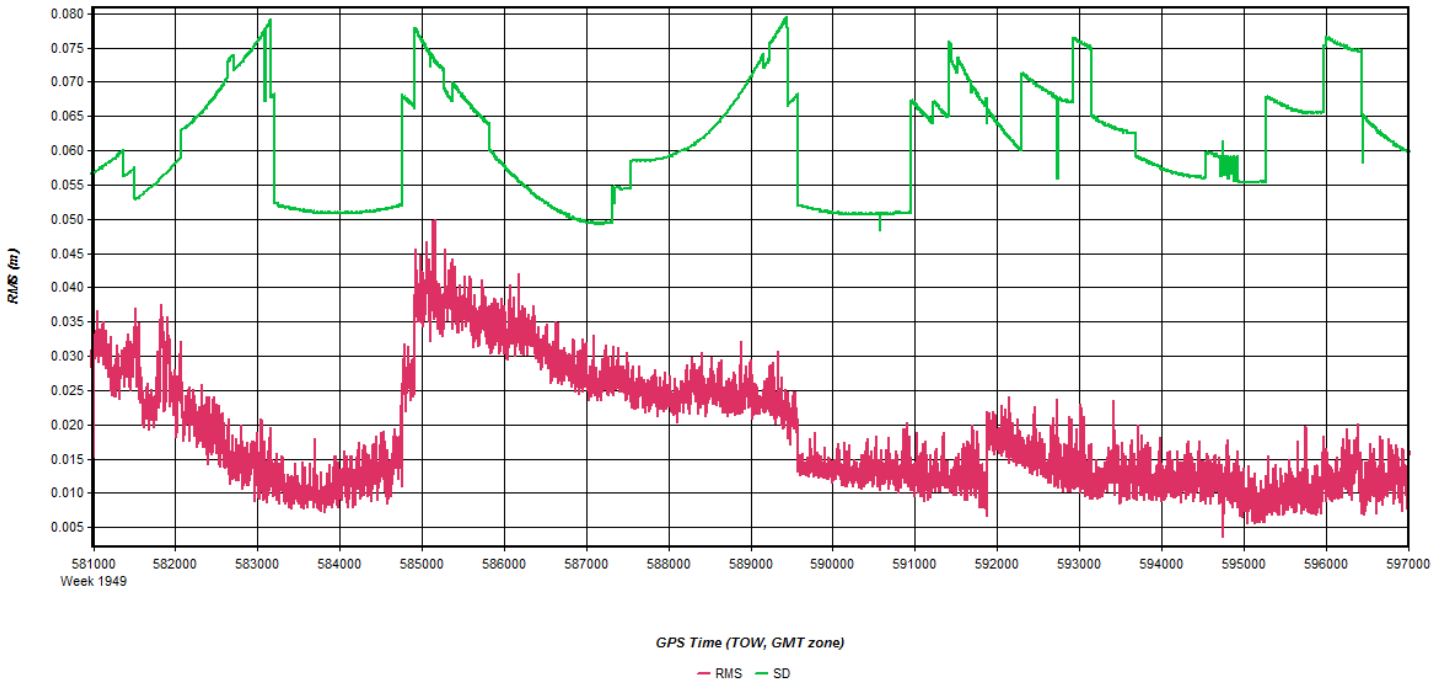
May 20, 2017-B (N262AS, SN7161)

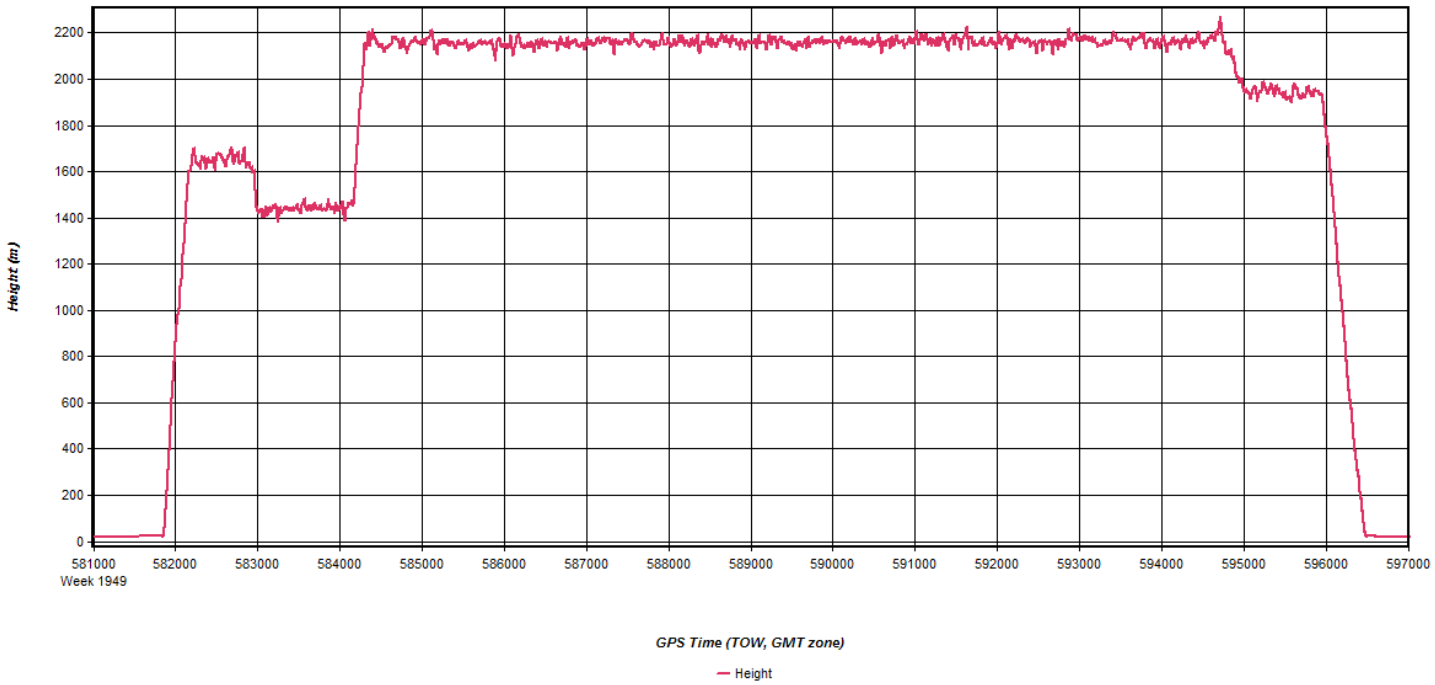

10 km

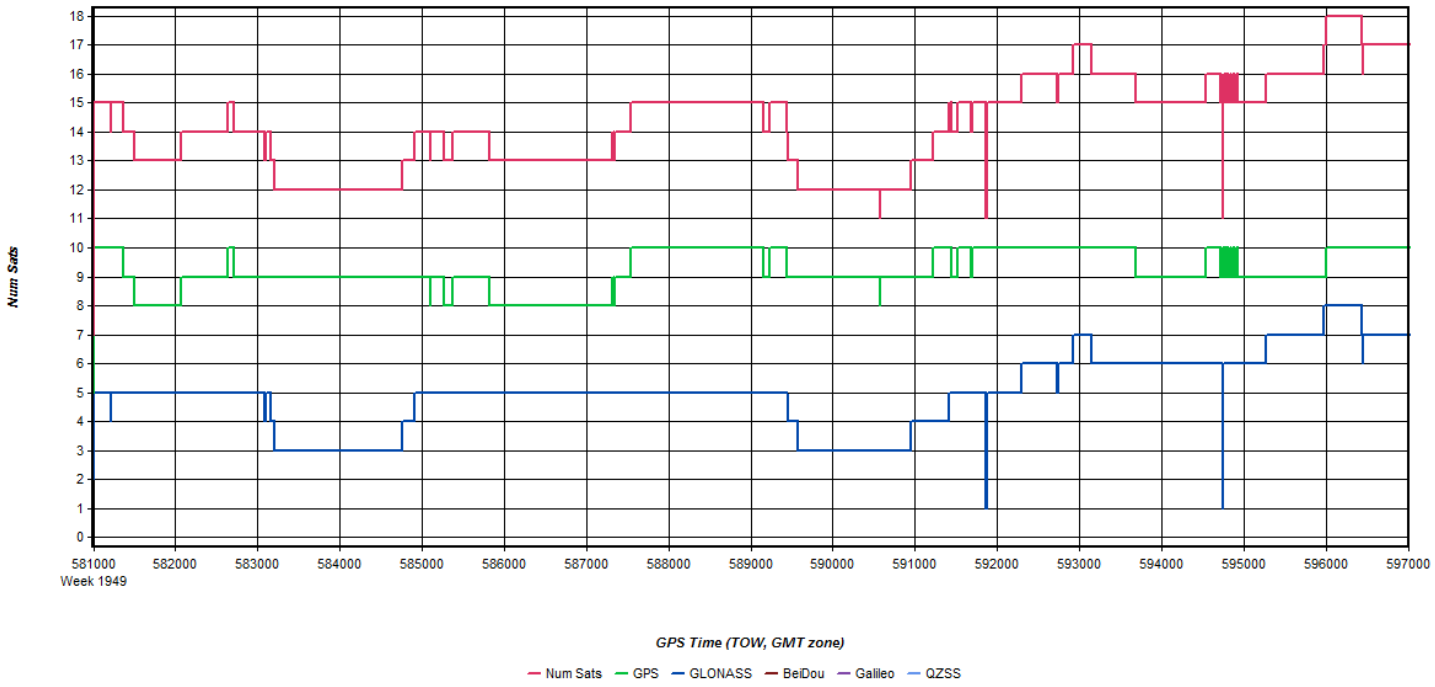

PDOP
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
PDOP

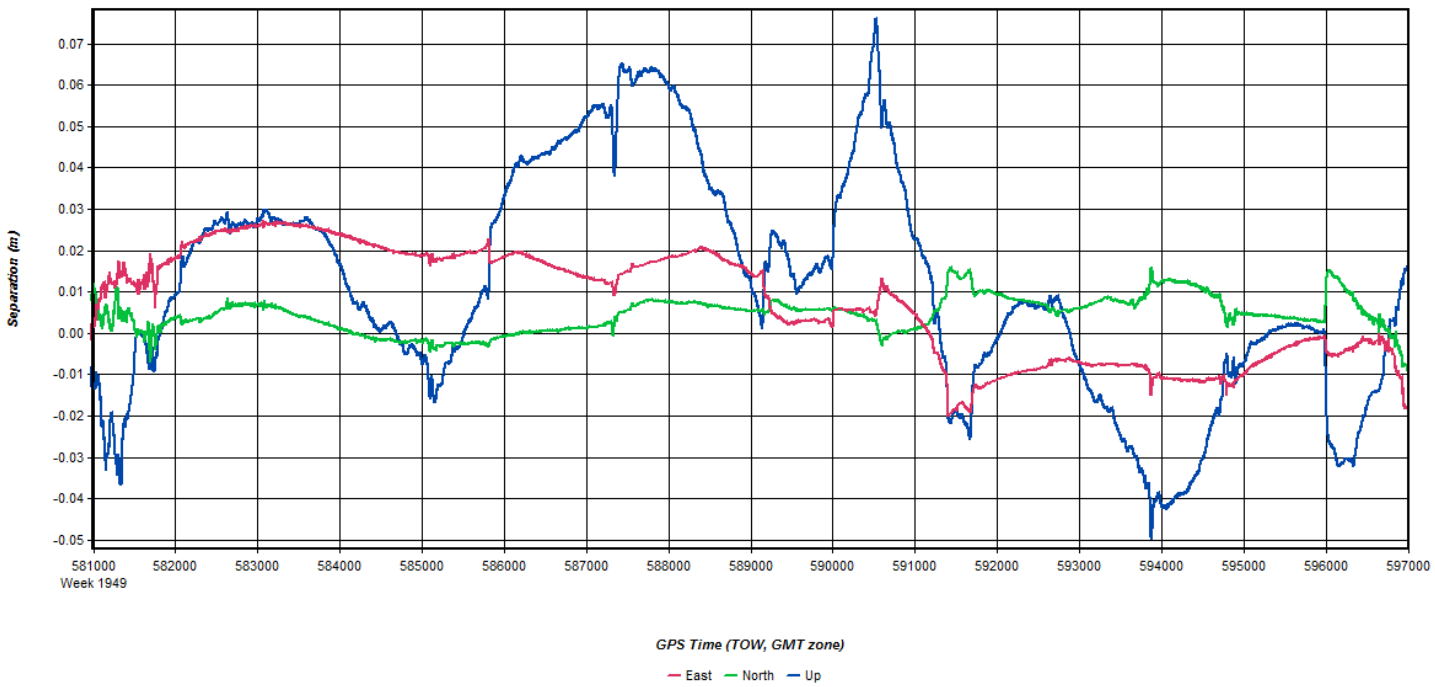

Status
2
1
0
-1
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)


Roll & pitch (deg)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Roll
Pitch

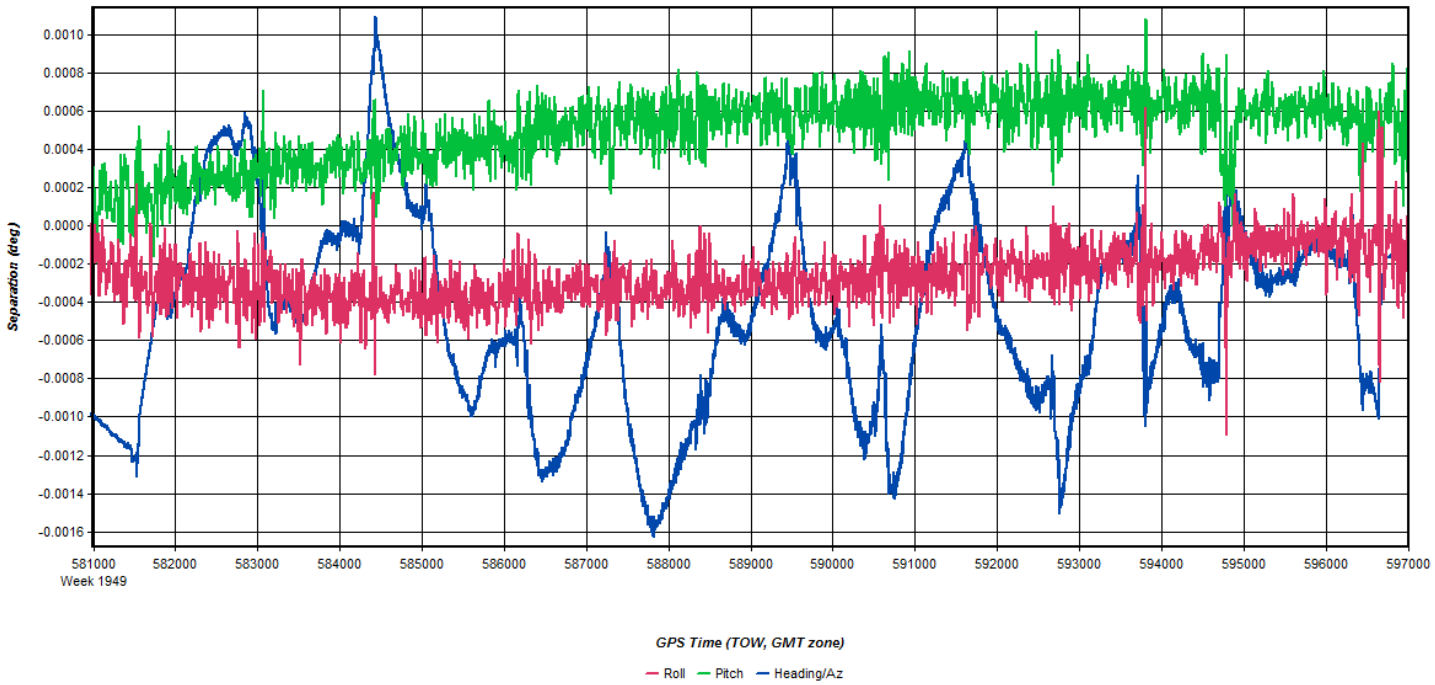

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
RMS
SD

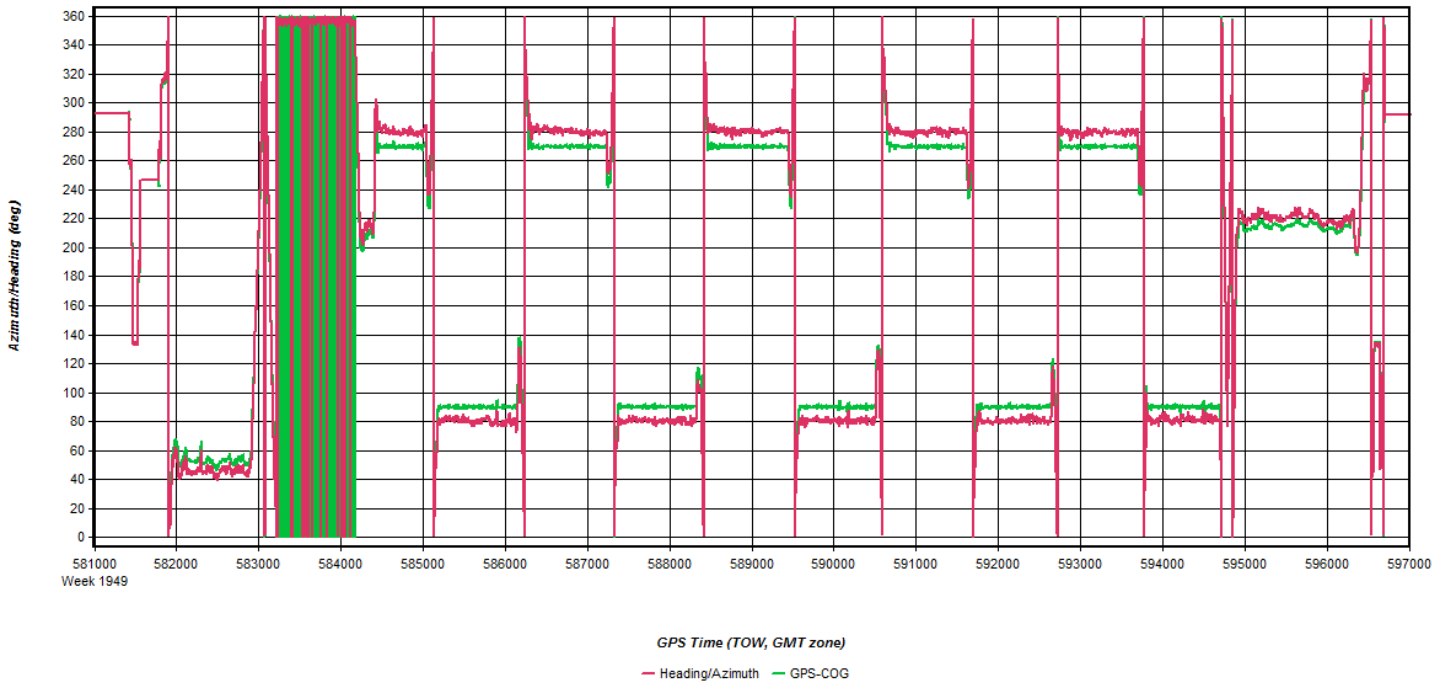

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
East
North
Up

Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
-0.0002
-0.0004
-0.0006
-0.0008
-0.0010
-0.0012
-0.0014
-0.0016
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
581000
Week 1949
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
592000
593000
594000
595000
596000
597000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Scanned by CamScanner

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-20-17

Project: USGS_MAINE_2160 Proj #: 29513 Flight Mgmt File: 20170520_172112

Aircraft: N260AS Begin Hobbs: 6630.5 End Hobbs: 6643.5 Total: 4.0 Pilot: NELSEN Co-Pilot: - Tech: Selleave

Dep Apt: KBGR Dep Time (Lcl): 13:36 (Z): 17:36 Arr Apt: KBGR Arr Time (Local): 17:42 (Z): 21:42 Tot Time Aloft:

CORS: Y / N Sta 1: MEIA Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

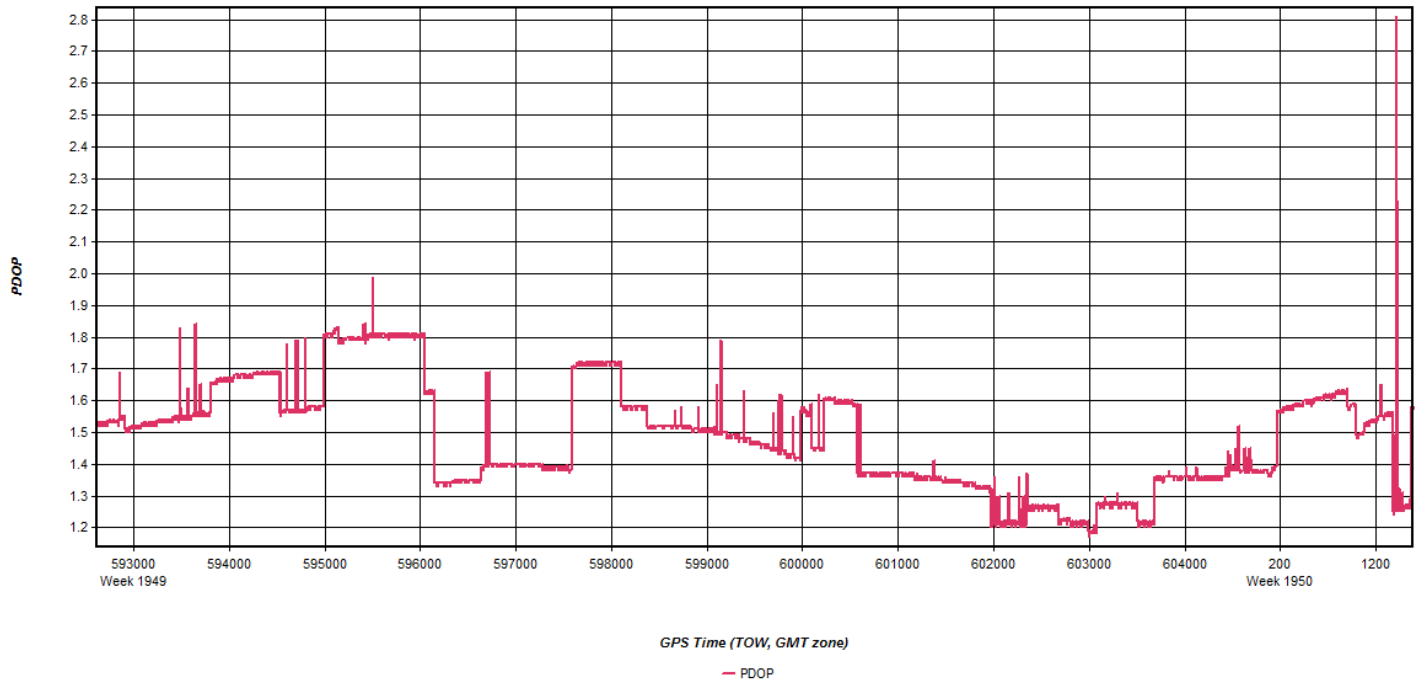
GPS Unit: Y / N Sta 1: KBGR Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

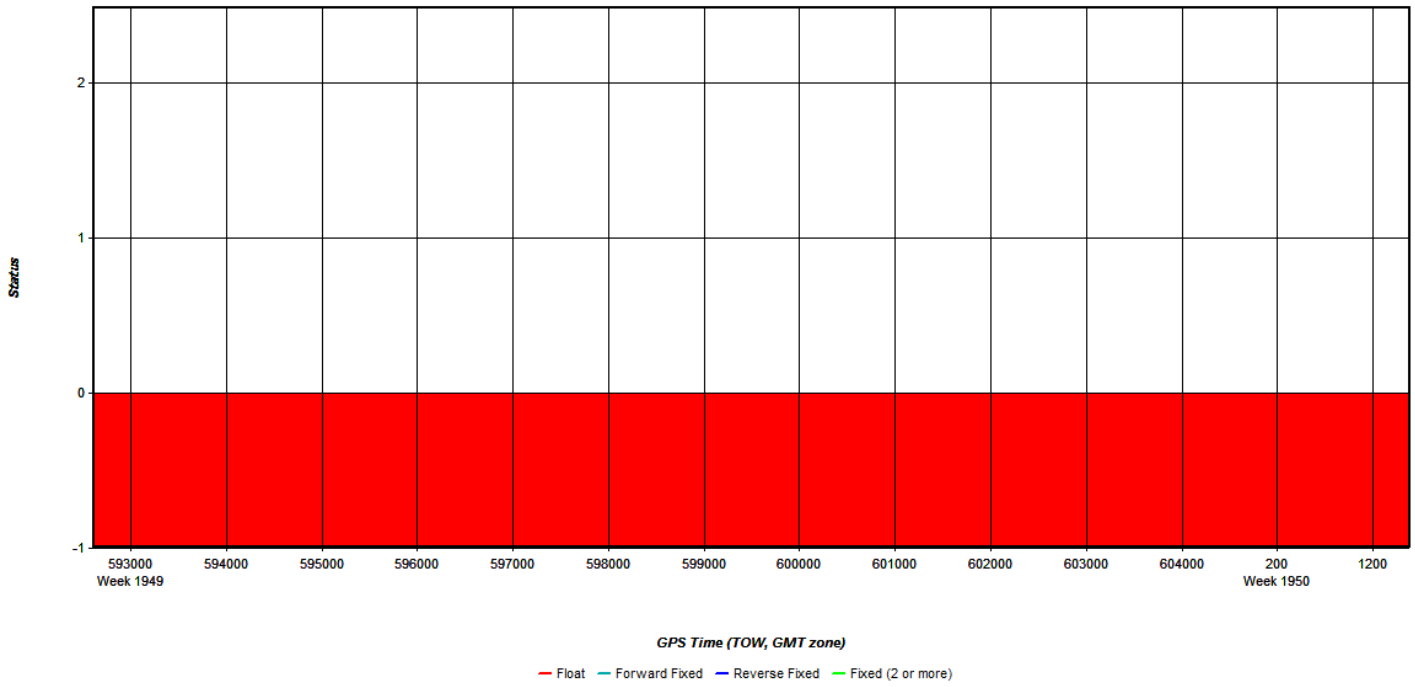
Gd Temp beg: 19 °c End: 18 °c OAT beg: °c End: °c Altimeter begin: 30.25 end: 30.24

| | | |

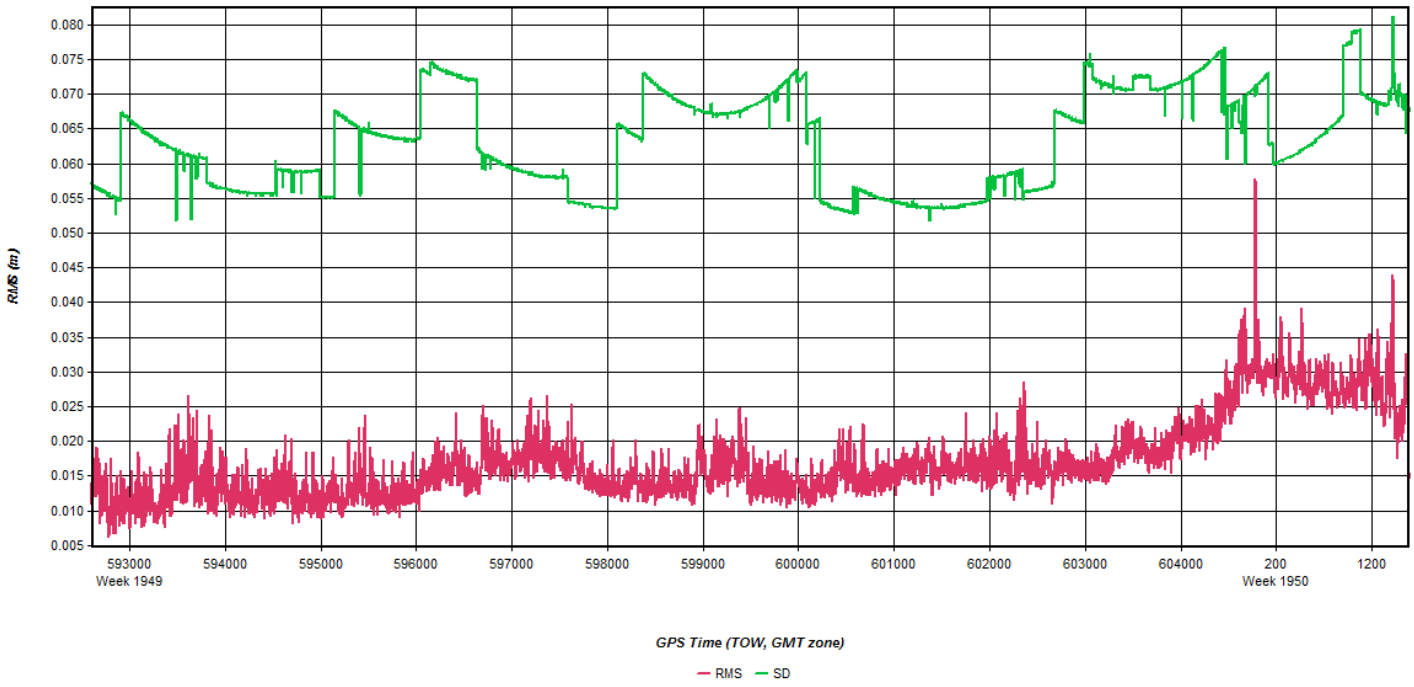
May 20, 2017-B (N915WC, SN8237)

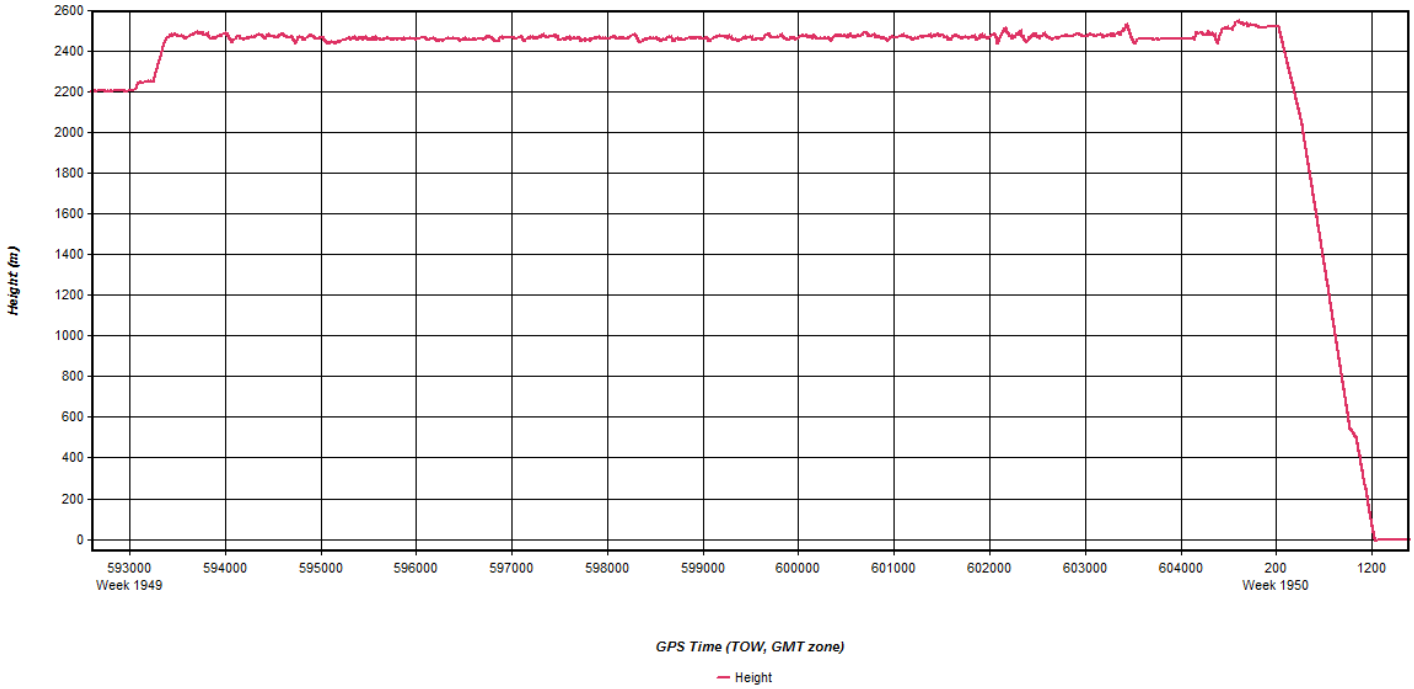
10 km

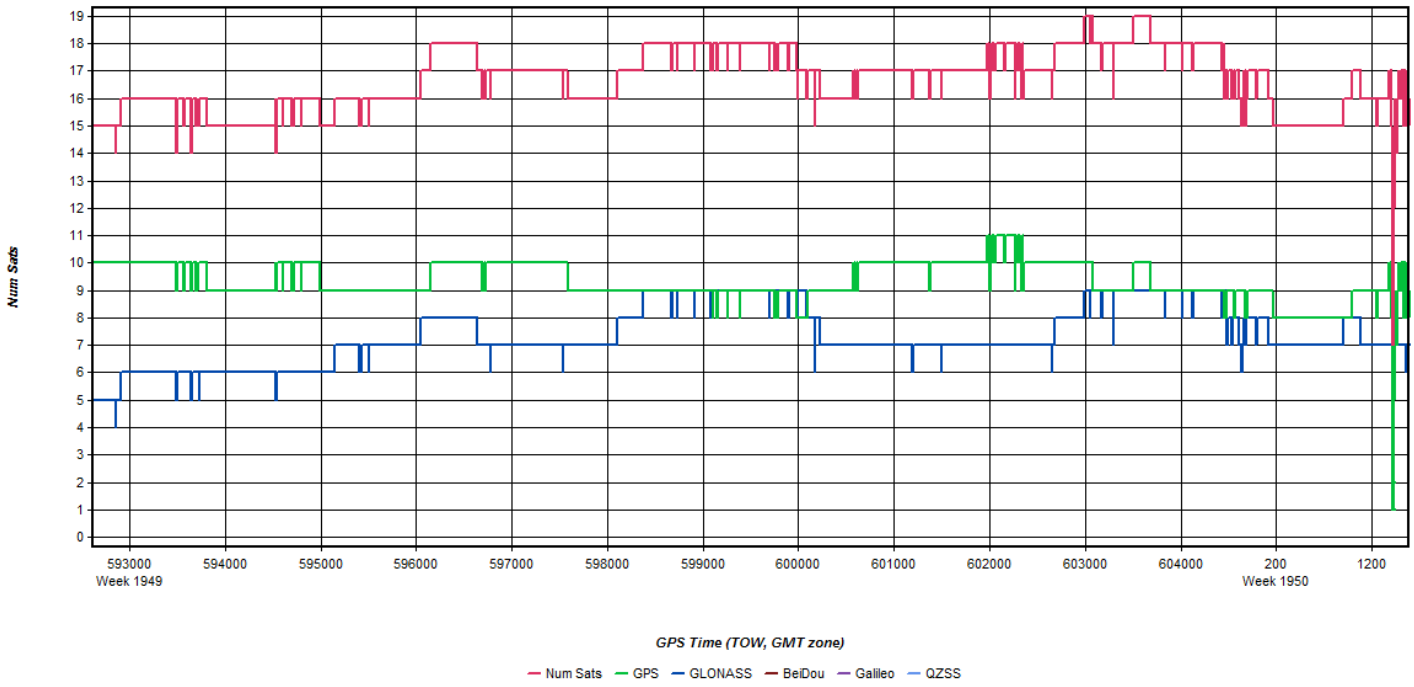

PDOP
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
PDOP

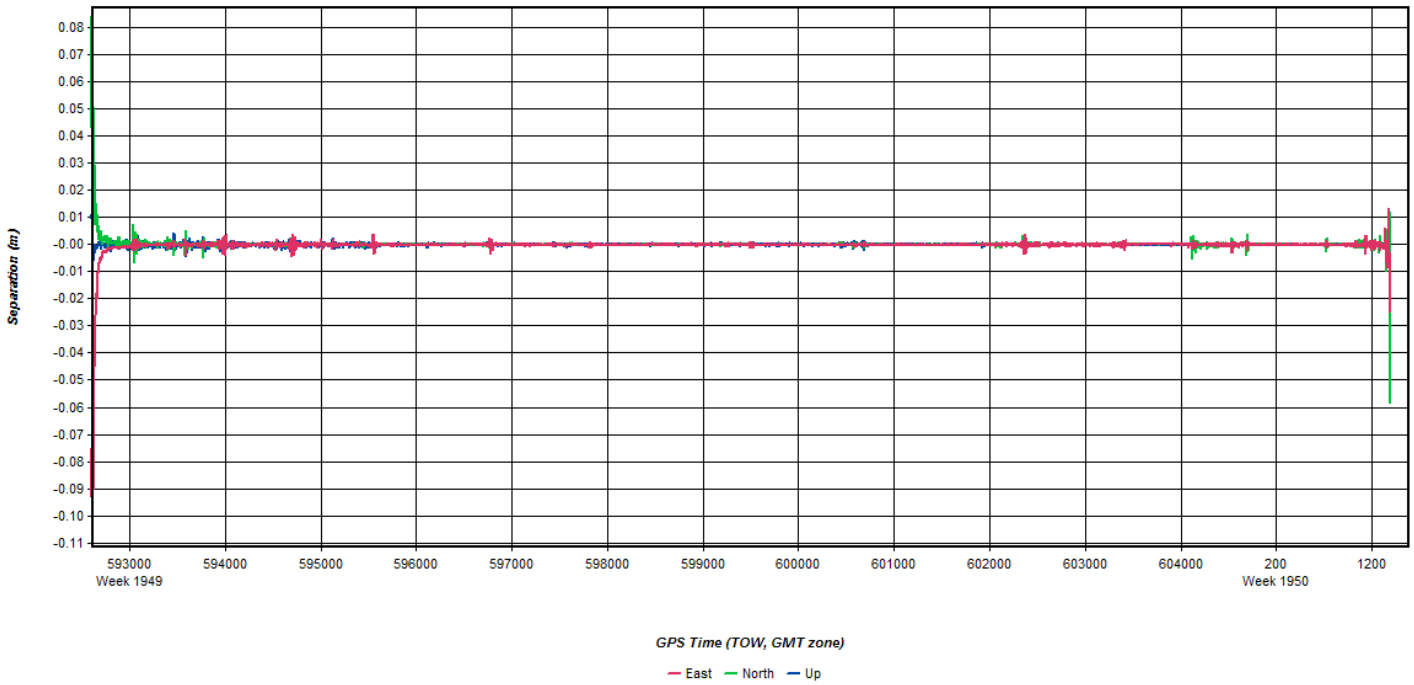

Status
2
1
0
-1
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

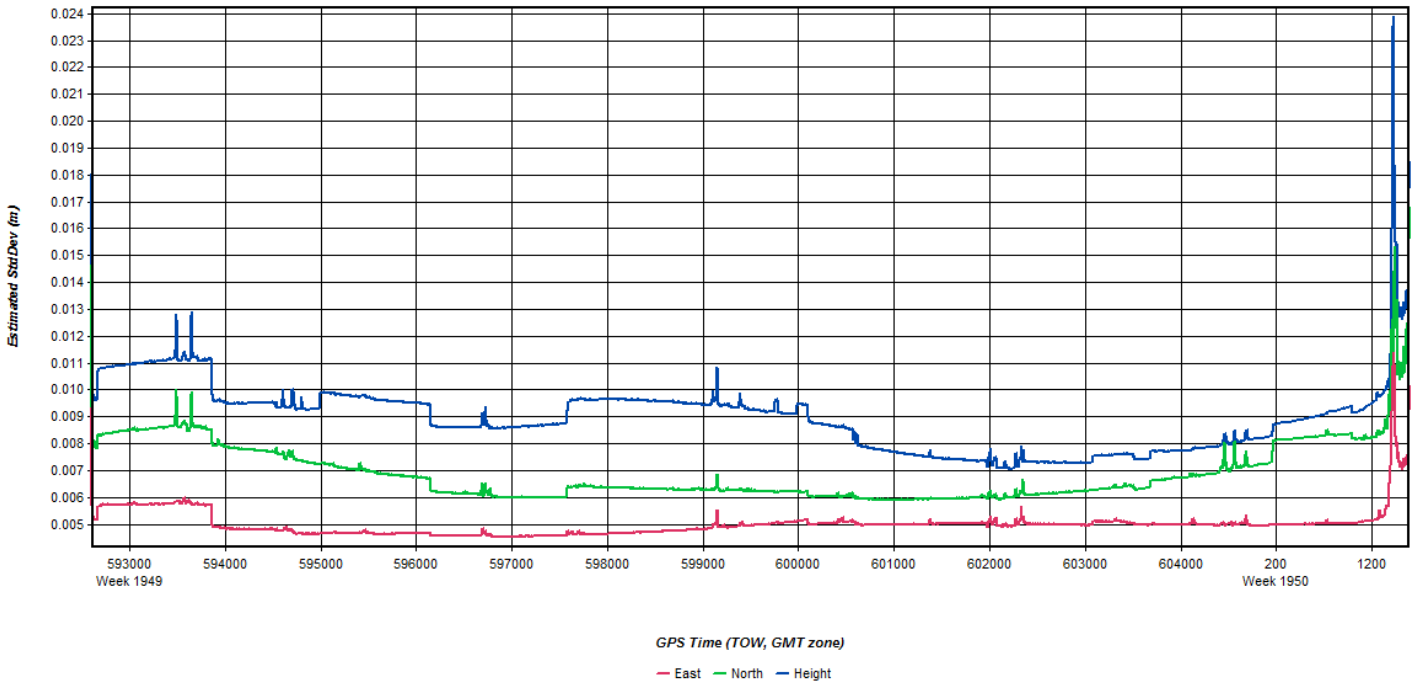
Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Roll
Pitch

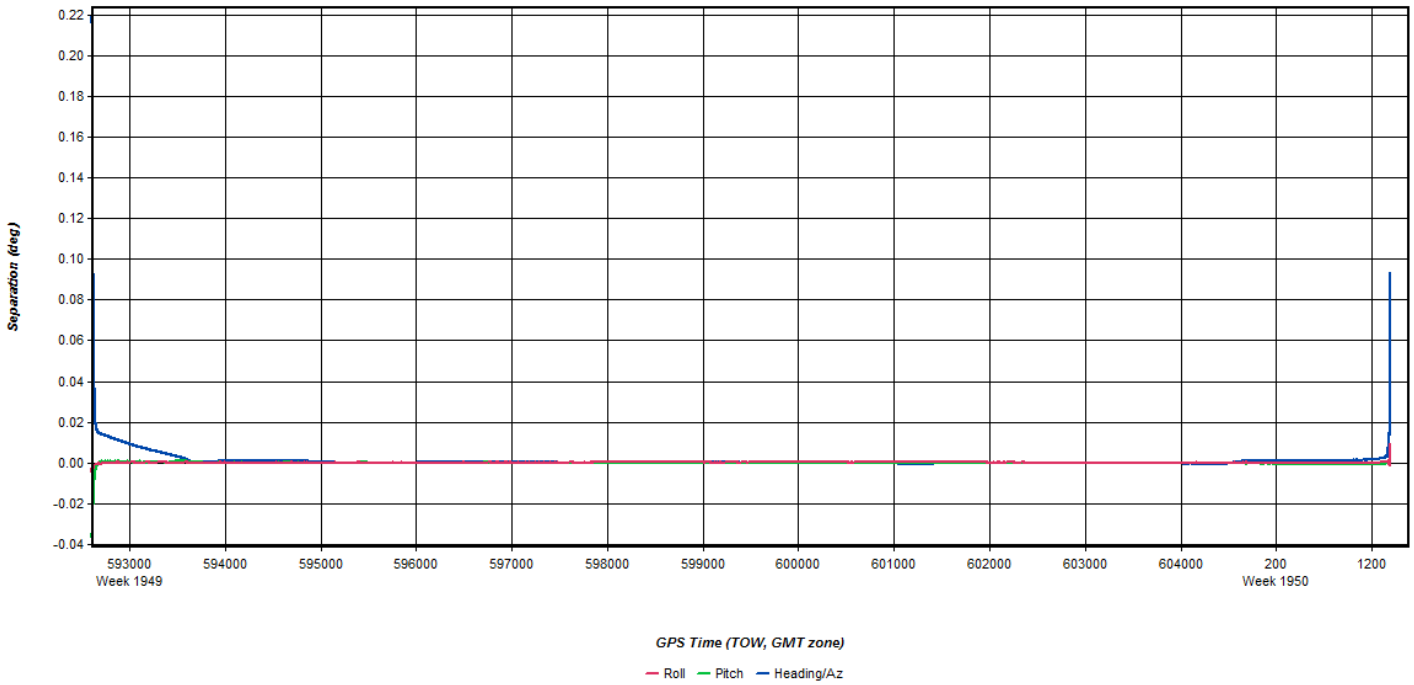

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
RMS
SD

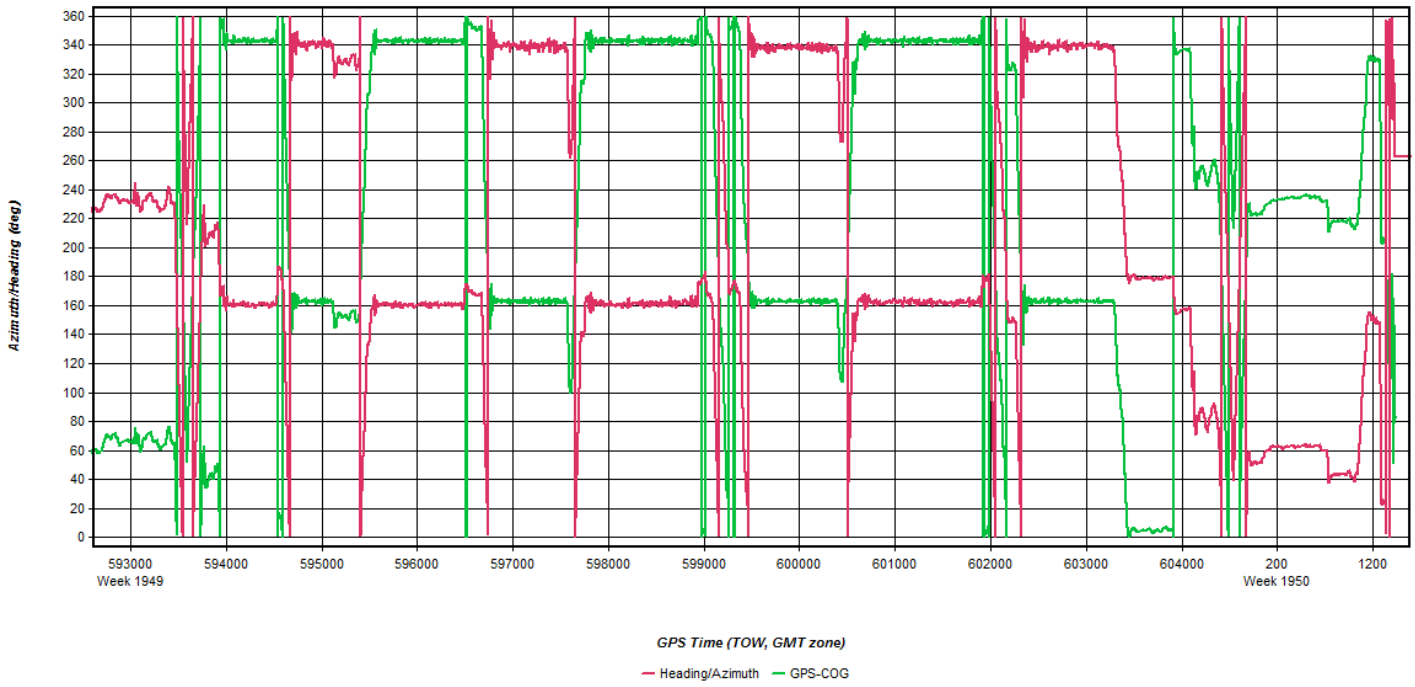

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

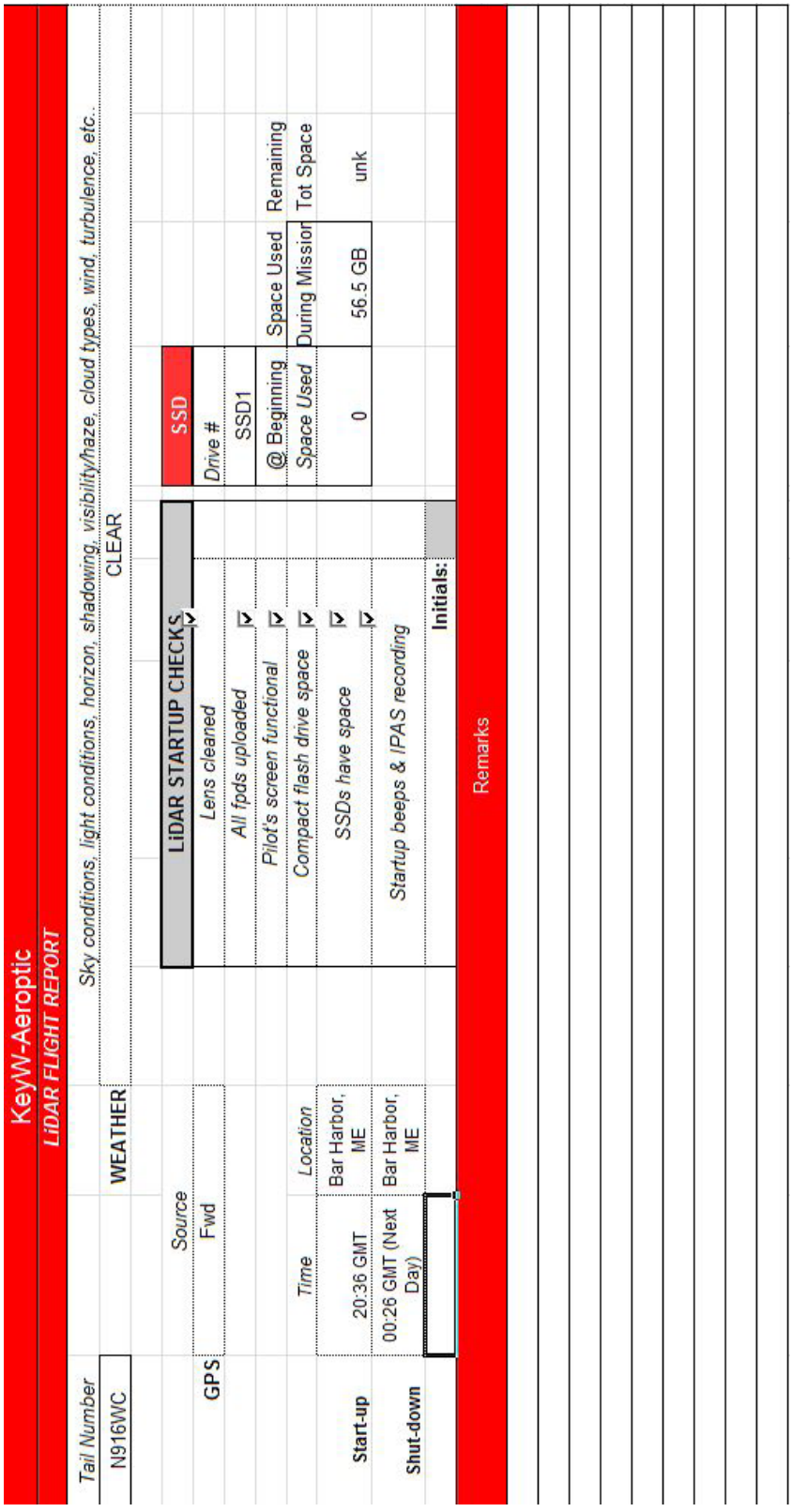

Separation (m)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.024
0.023
0.022
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
East
North
Height

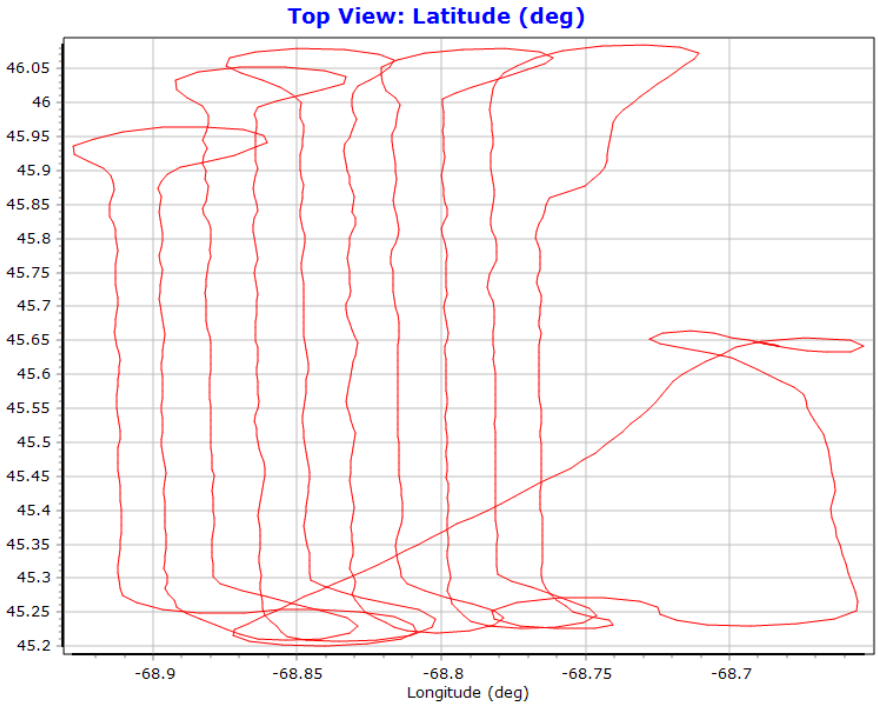

Separation (deg)
0.22
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az

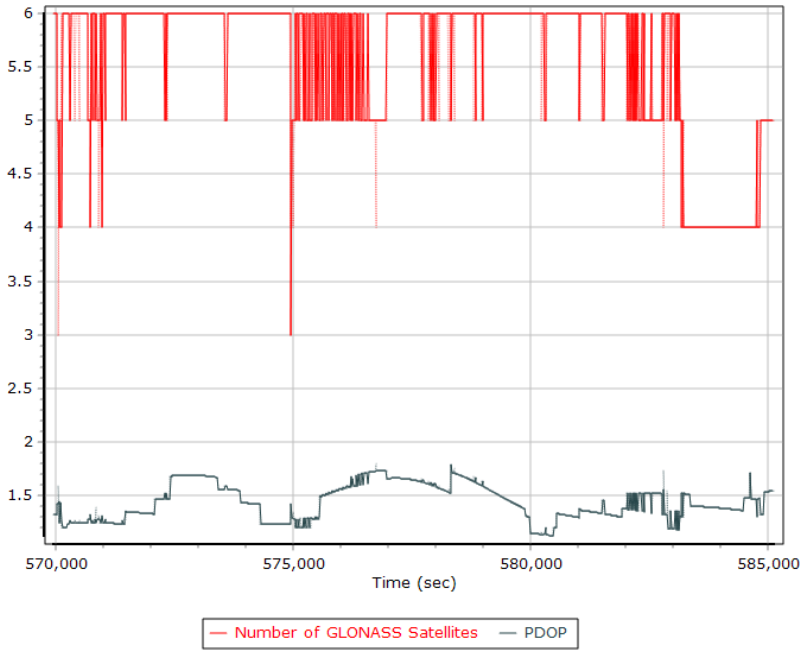

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
593000
Week 1949
594000
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
1200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

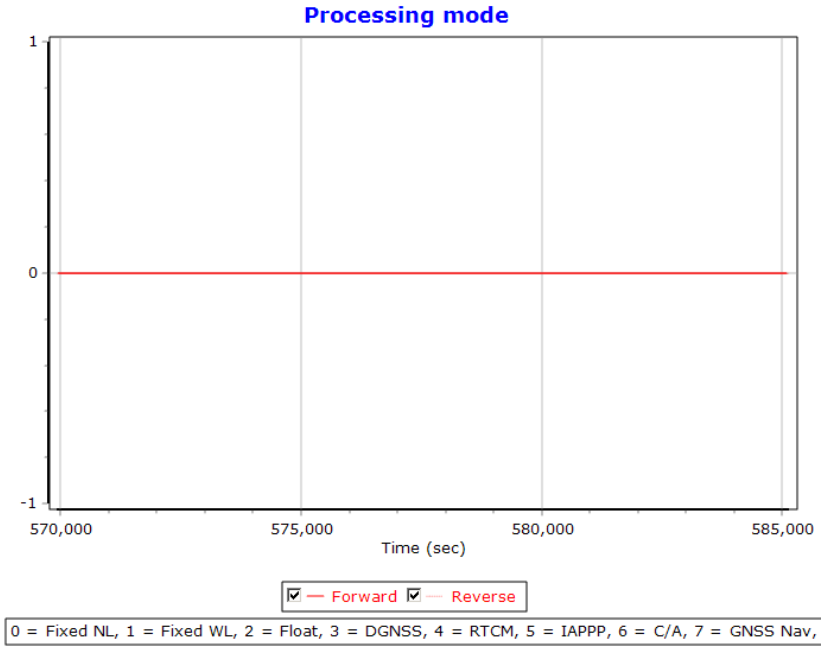
Flight Log

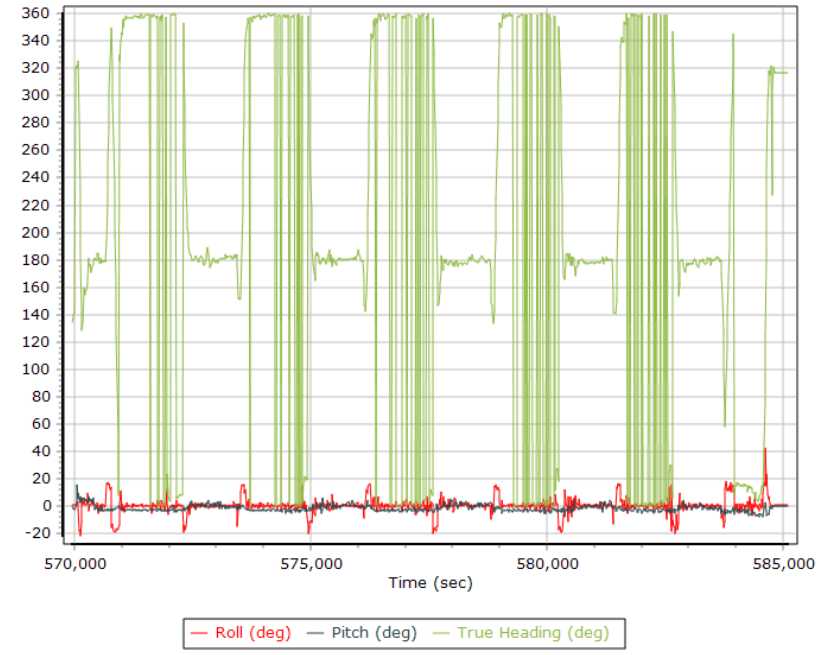

KeyW-Aeroptic
LiDAR FLIGHT REPORT
Tail Number
N916WC
WEATHER
Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.
CLEAR
GPS
Source
Fwd
Start-up
Shut-down
Time
Location
20:36 GMT
Bar Harbor, ME
00:26 GMT (Next Day)
Bar Harbor, ME
LiDAR STARTUP CHECKS
Lens cleaned
All fpds uploaded
Pilot's screen functional
Compact flash drive space
SSDs have space
Startup beeps & IPAS recording
Initials:
SSD
Drive #
SSD1
@ Beginning
Space Used
0
Space Used During Mission
56.5 GB
Remaining Tot Space
unk
Remarks

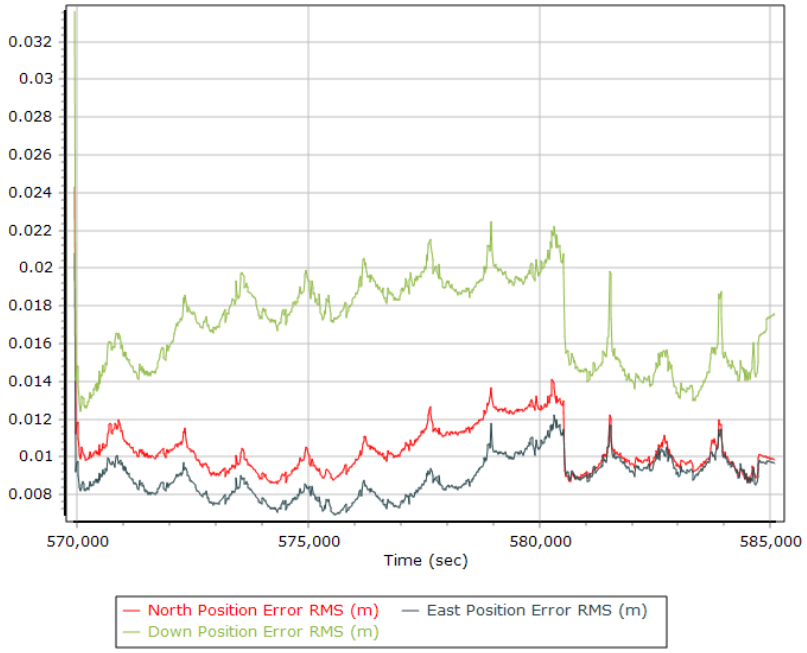
May 20, 2017-B (N1007Q,SN2221256)

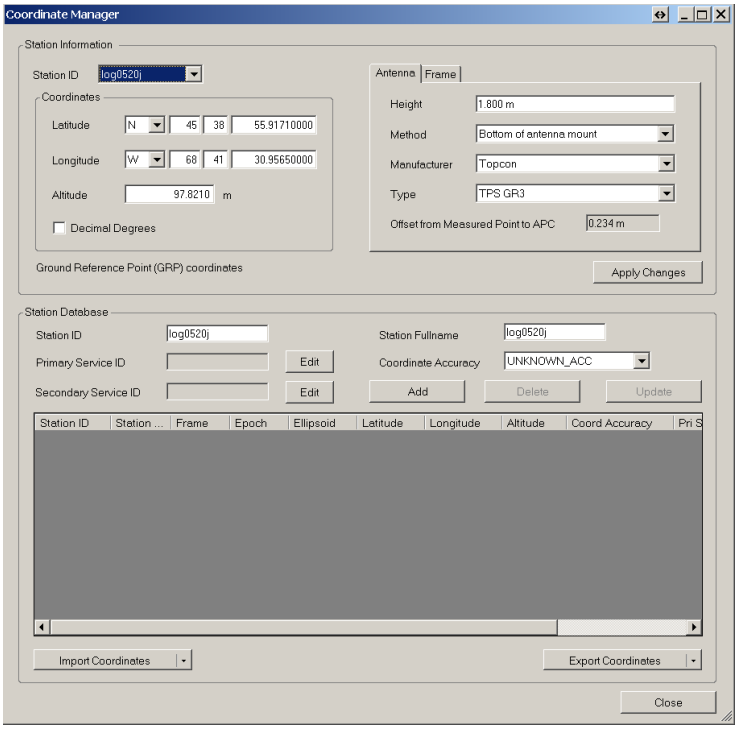

Top View: Latitude (deg)
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
45.25
45.2
-68.9
-68.85
-68.8
-68.75
-68.7
Longitude (deg)


6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
570,000
575,000
580,000
585,000
Time (sec)
Number of GLONASS Satellites
PDOP

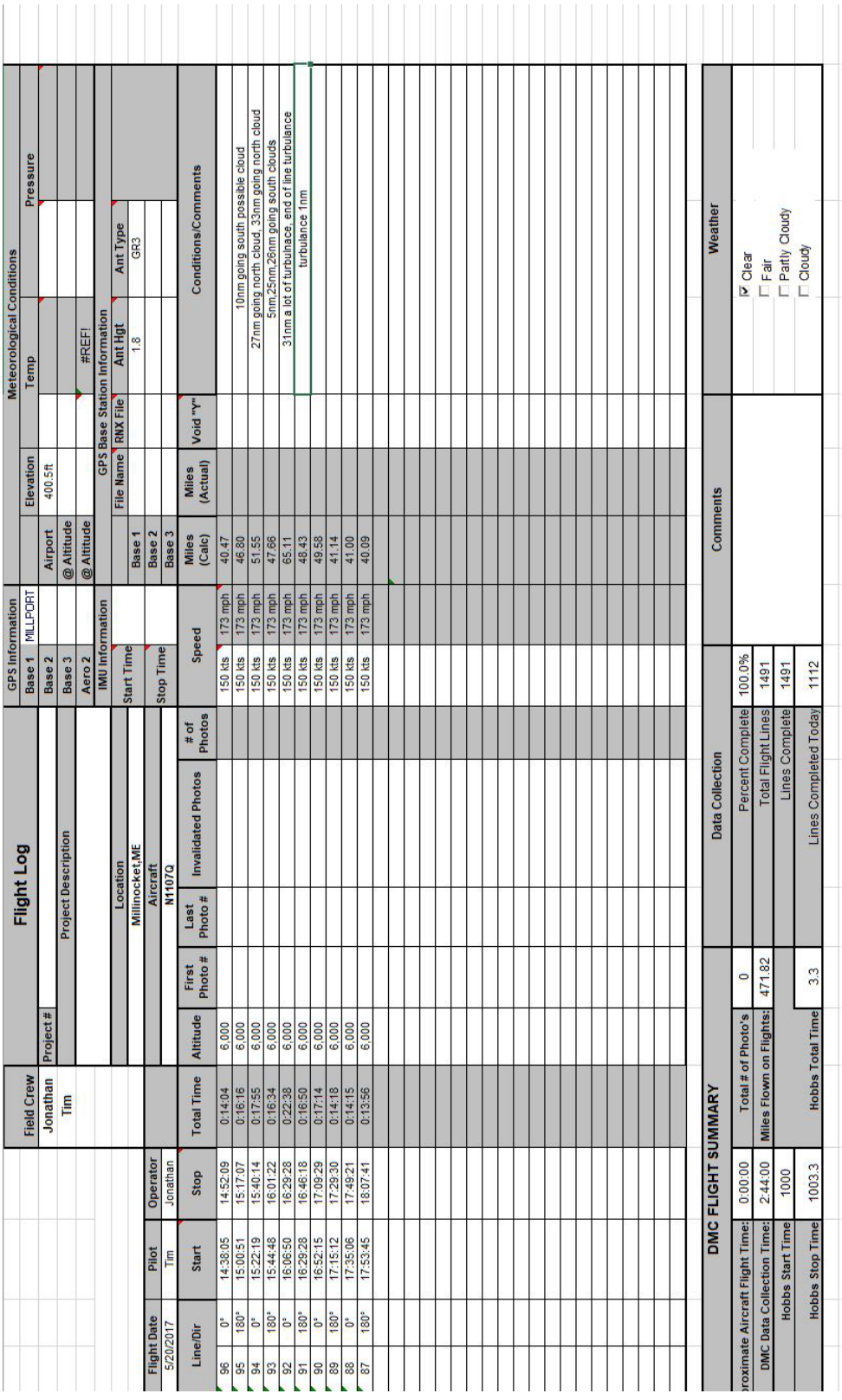

Processing mode
1
0
-1
570,000
575,000
580,000
585,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
570,000
575,000
580,000
585,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.032
0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
570,000
575,000
580,000
585,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log0520j
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log0520j
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname
log0520j
Coordinate Accuracy
UNKNOWN_ACC
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	Project #	GPS Information		Meteorological Conditions		
Jonathan		Base 1	MILLPORT		Elevation	Temp	Pressure
Tim	Project Description	Base 2		Airport	400.5ft		
		Base 3		@ Altitude			
		Aero 2		@ Altitude		#REF!	

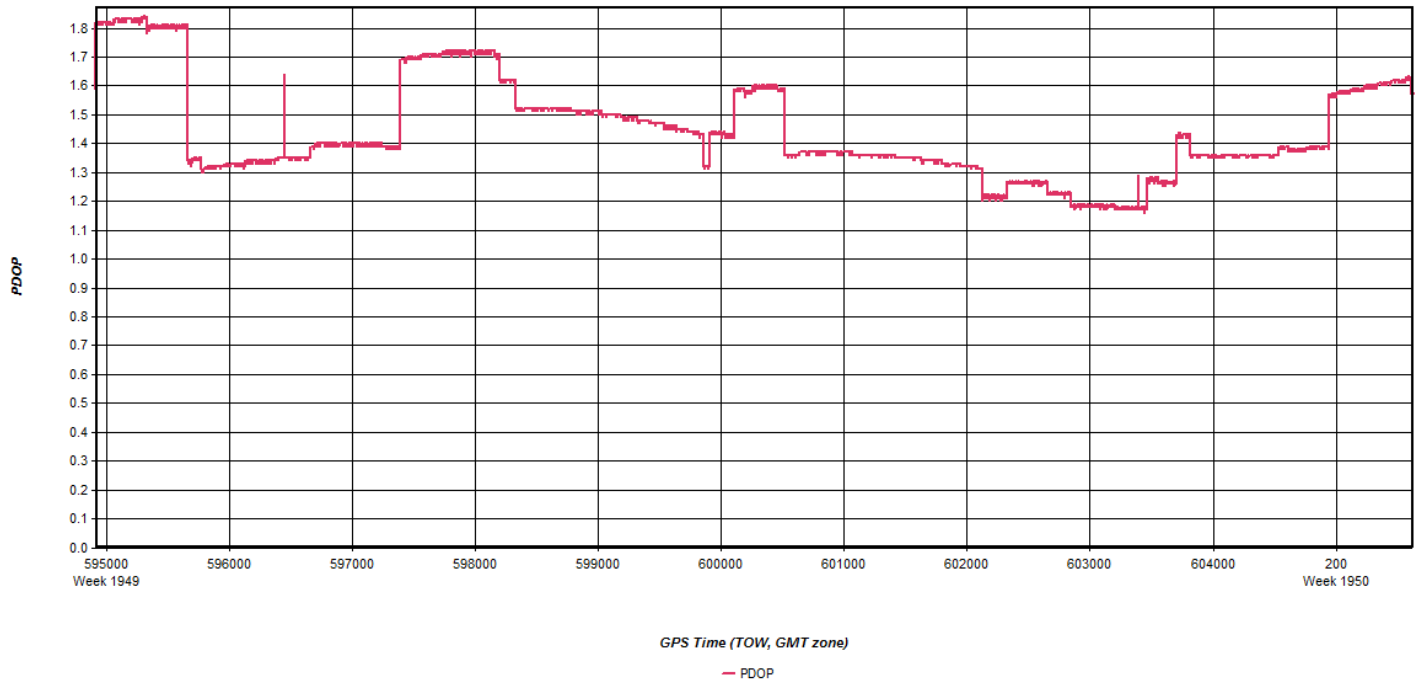
IMU Information	GPS Base Station Information			
		File Name	RNX File	Ant Hgt	Ant Type
Location	Base 1			1.8	GR3
Millinocket,ME	Base 2				
Aircraft	Base 3				
N1107Q					

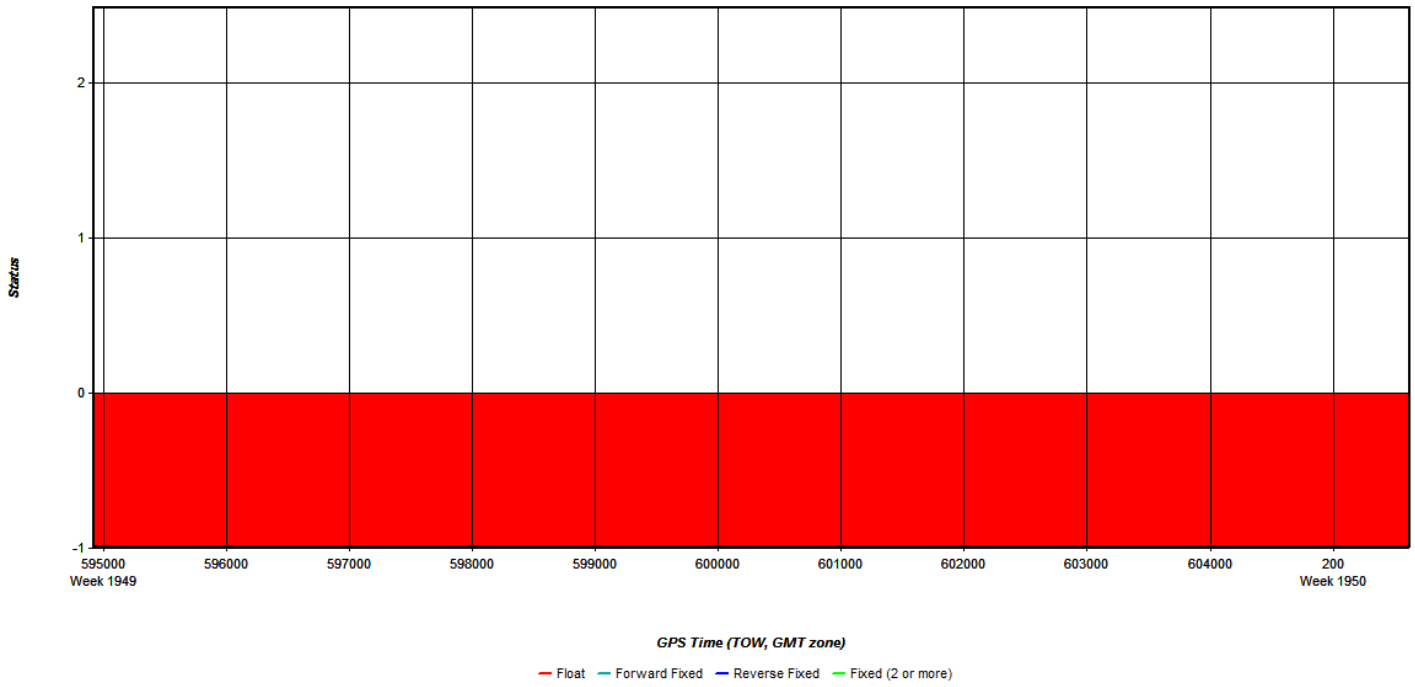
Flight Date	Pilot	Operator
5/20/2017	Tim	Jonathan

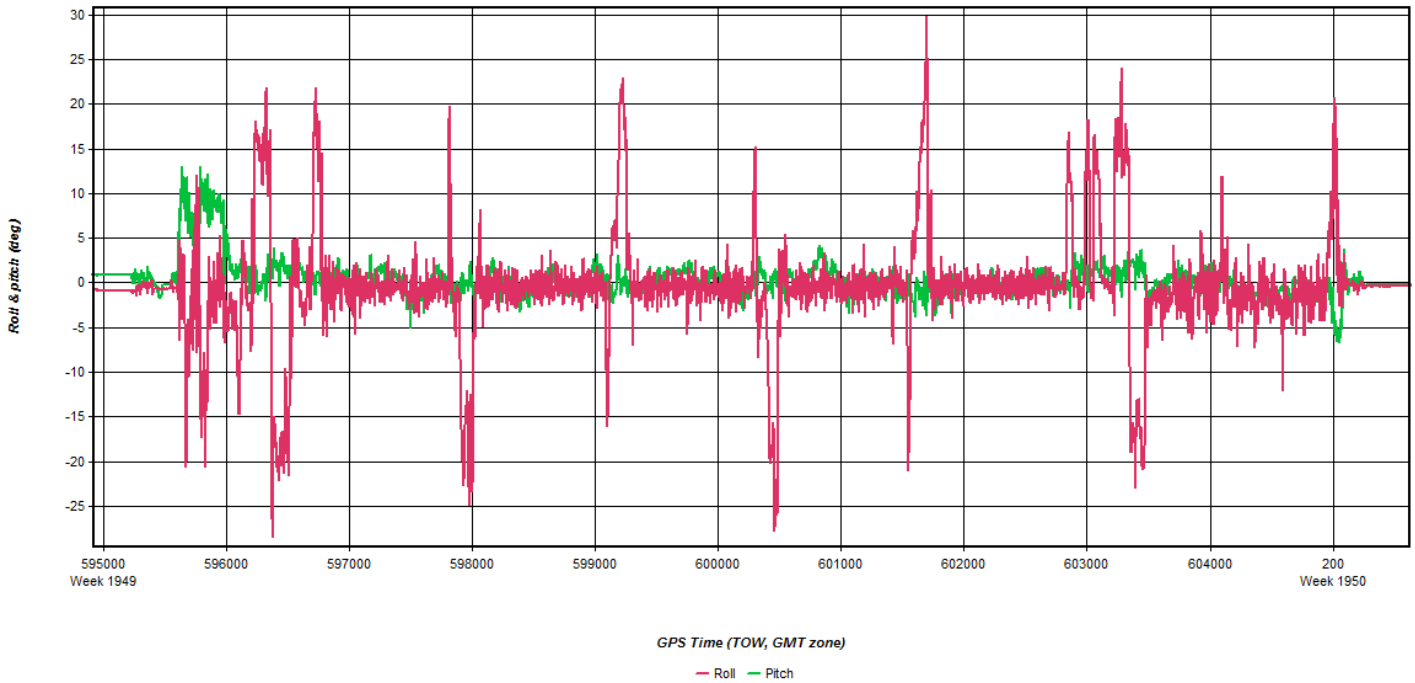
Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Start Time	Stop Time	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
96	0°	14:38:05	14:52:09	0:14:04	6,000							150 kts	173 mph	40.47		
95	180°	15:00:51	15:17:07	0:16:16	6,000							150 kts	173 mph	46.80		10nm going south possible cloud
94	0°	15:22:19	15:40:14	0:17:55	6,000							150 kts	173 mph	51.55		27nm going north cloud, 33nm going north cloud
93	180°	15:44:48	16:01:22	0:16:34	6,000							150 kts	173 mph	47.66		5nm,25nm,26nm going south clouds
92	0°	16:06:50	16:29:28	0:22:38	6,000							150 kts	173 mph	65.11		31nm a lot of turbulnace, end of line turbulance
91	180°	16:29:28	16:46:18	0:16:50	6,000							150 kts	173 mph	48.43		turbulance 1nm
90	0°	16:52:15	17:09:29	0:17:14	6,000							150 kts	173 mph	49.58		
89	180°	17:15:12	17:29:30	0:14:18	6,000							150 kts	173 mph	41.14		
88	0°	17:35:06	17:49:21	0:14:15	6,000							150 kts	173 mph	41.00		
87	180°	17:53:45	18:07:41	0:13:56	6,000							150 kts	173 mph	40.09		

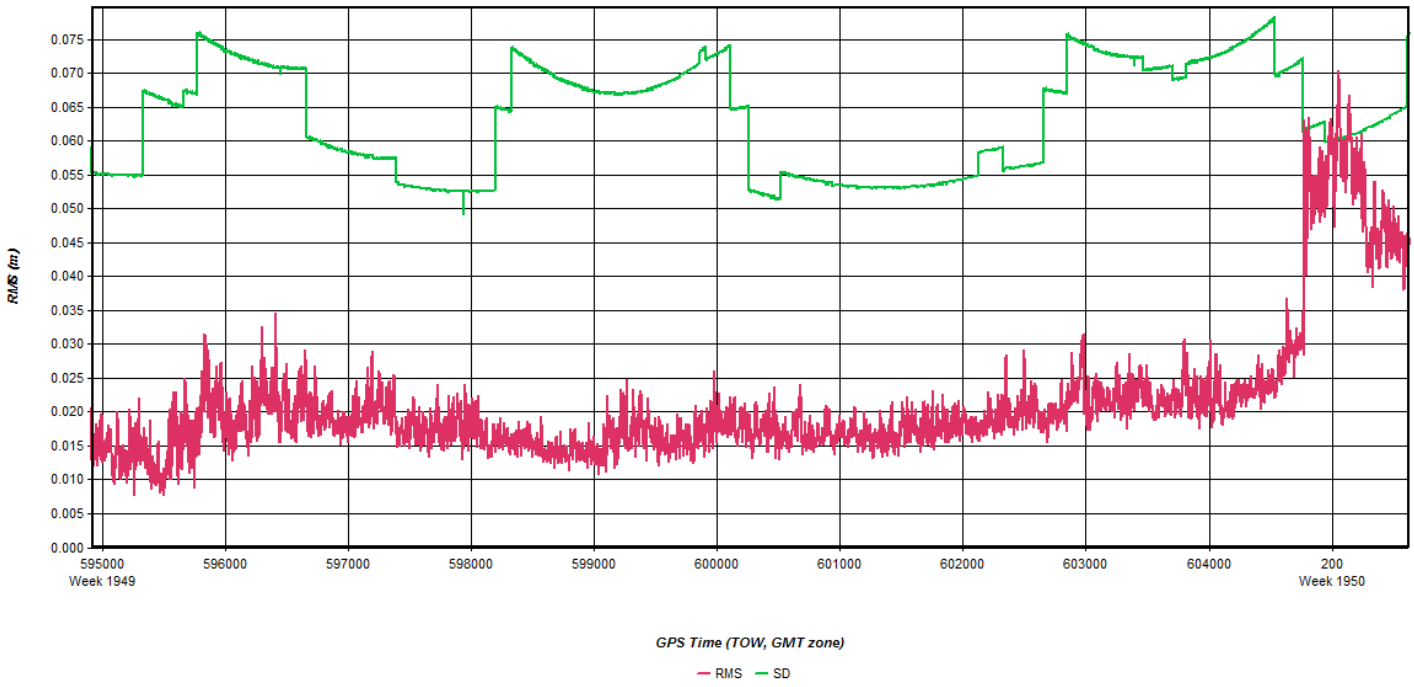
DMC FLIGHT SUMMARY				Data Collection		Comments	Weather
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0	Percent Complete	100.0%		☑ Clear
DMC Data Collection Time:	2:44:00	Miles Flown on Flights:	471.82	Total Flight Lines	1491		☐ Fair
Hobbs Start Time	1000			Lines Complete	1491		☐ Partly Cloudy
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3	Lines Completed Today	1112		☐ Cloudy

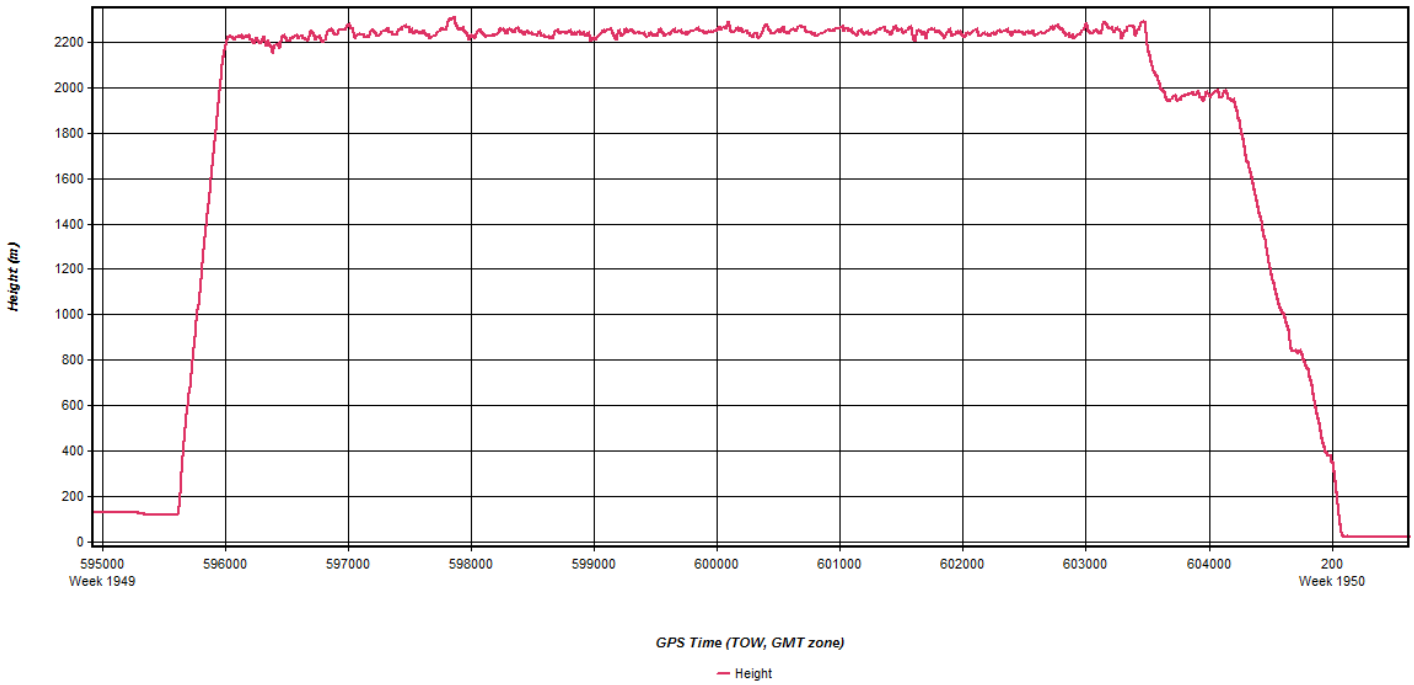
May 20, 2017-C (N73TM, SN7178)

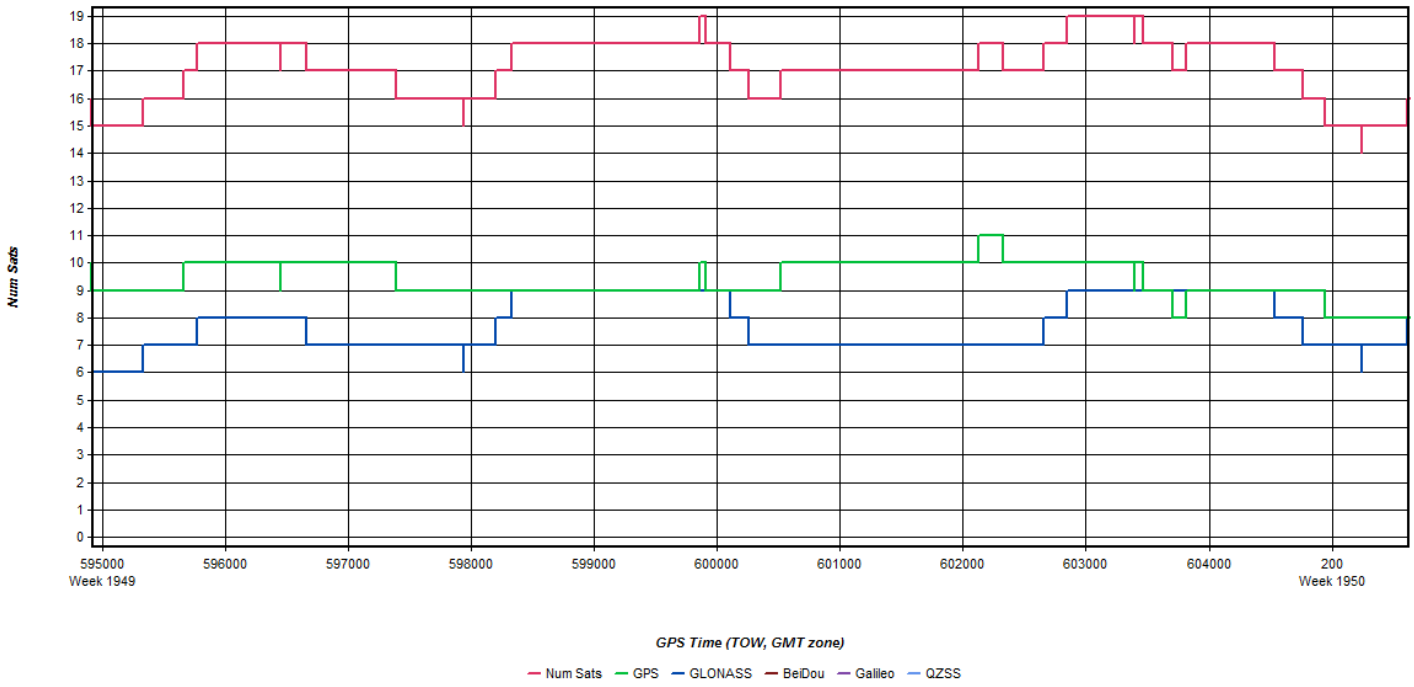

PDOP
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
PDOP

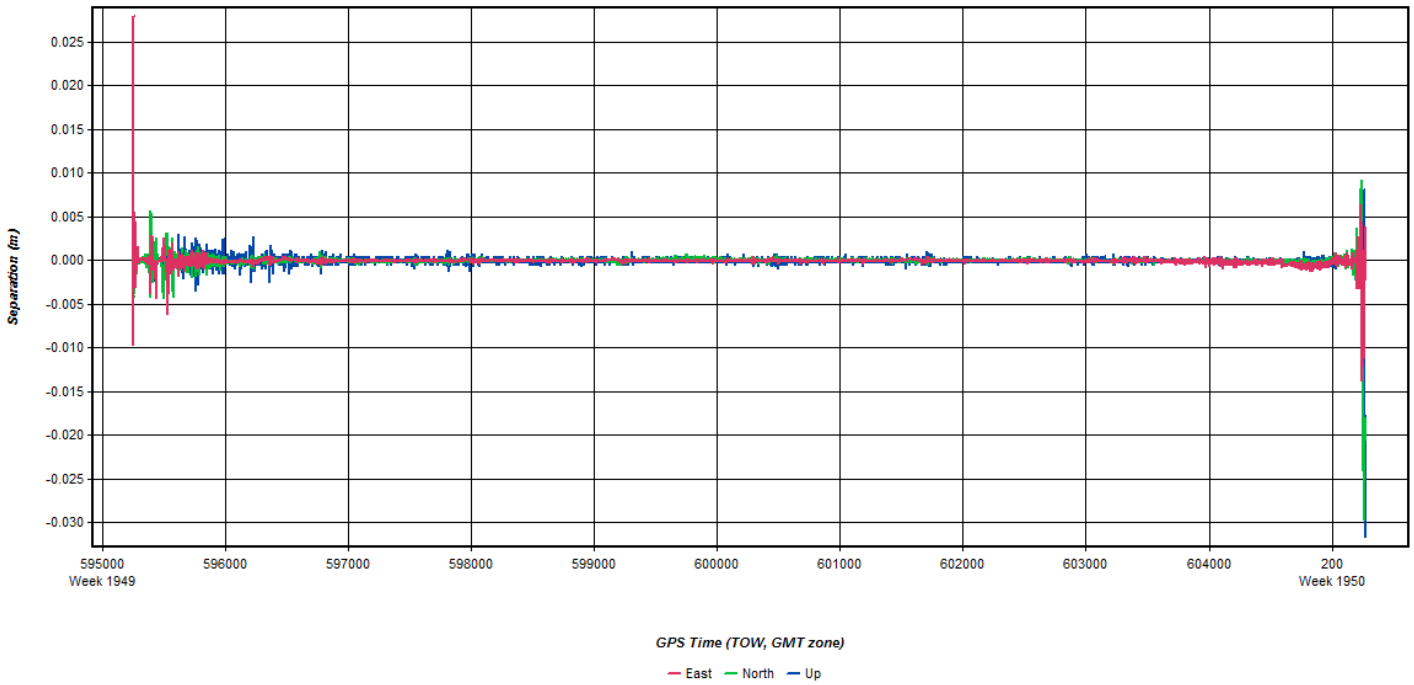

Status
2
1
0
-1
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

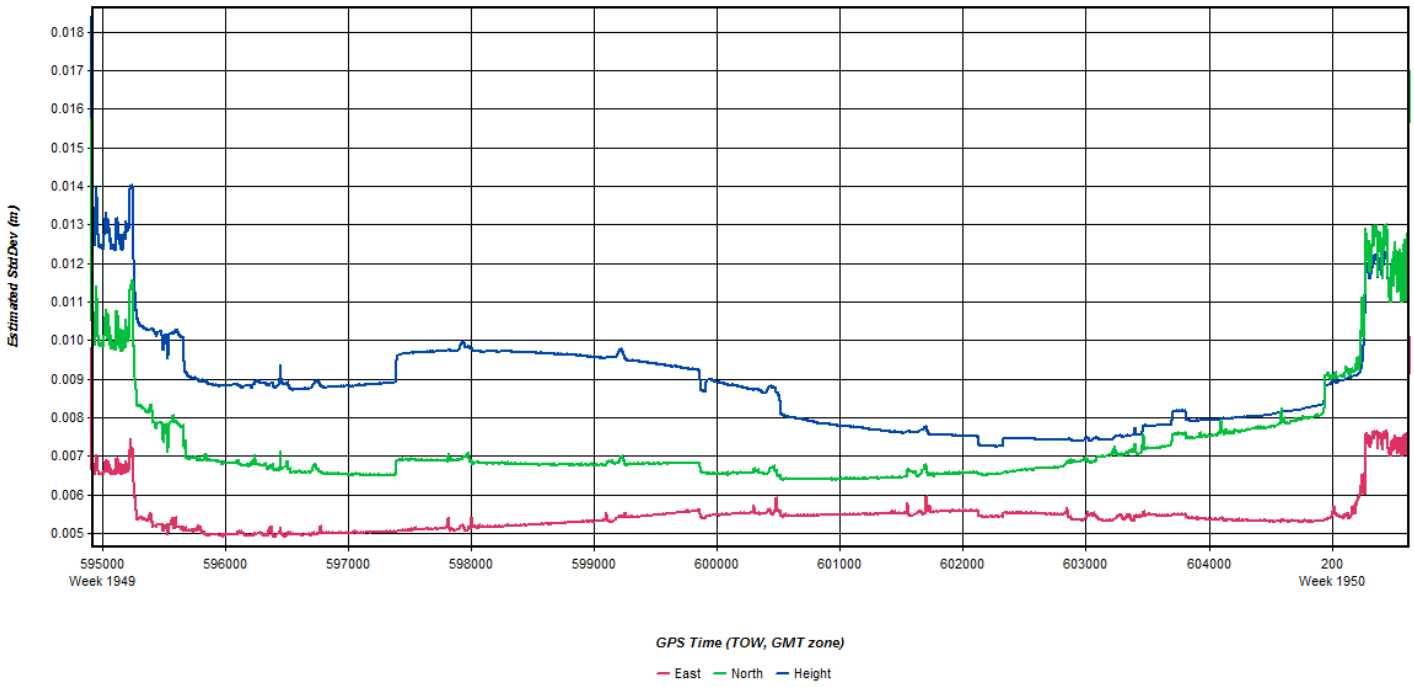

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Roll
Pitch

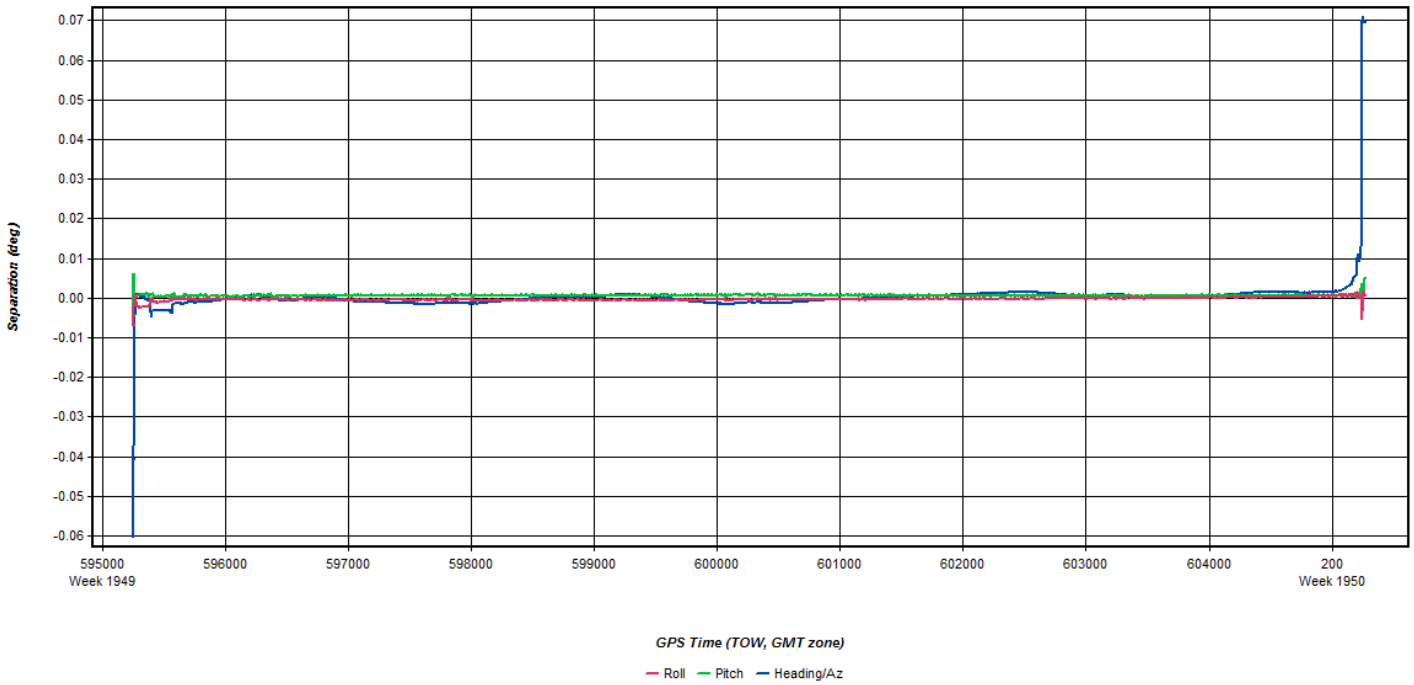

RMS (m)
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
RMS
SD

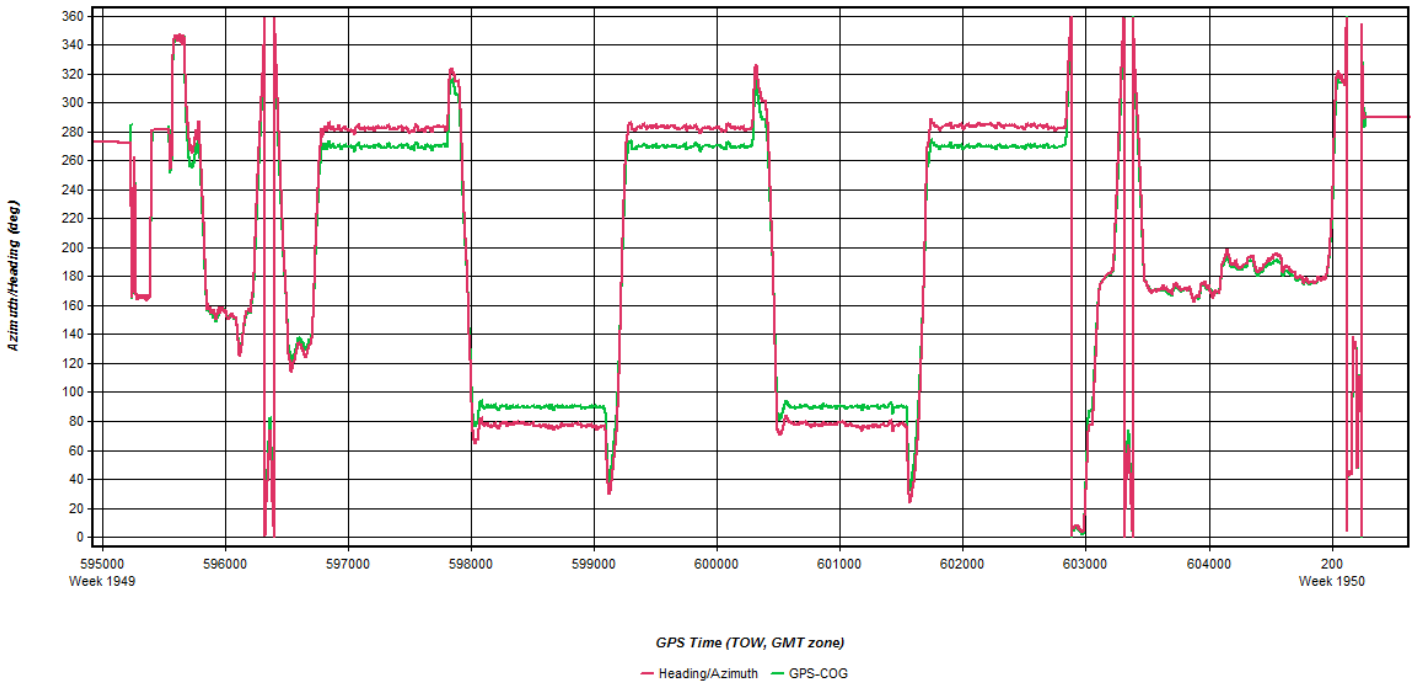

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
595000
Week 1949
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1950
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-20-17-C
Lift: A B (C) D E Pg 3 of 3

Project: USGS ME Proj #: 29513 Flight Mgmt File: 20170520-211232

Aircraft: N737M Begin Hobbs: 6722.0 End Hobbs: 6724.6 Total: 2.6 Pilot: JFolak Co-Pilot: — Tech: JSwan

Dep Apt: KPQI Dep Time (Lcl): 1720 (Z): 2120 Arr Apt: KBGR Arr Time (Local): 2005 (Z): 0005 Tot Time Aloft: 2.6

CORS: (Y) / N Sta 1: MEPI Sta 2: MELI Flyovers: (Y) / N If Y, times: Sta1) AT PQI Sta2) 2346

GPS Unit: (Y) / N Sta 1: AA2846 (BGR) Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

Gd Temp beg: 13 °c End: 16 °c OAT beg: 0 °c End: 0 °c Altimeter begin: 3027 end: 3026

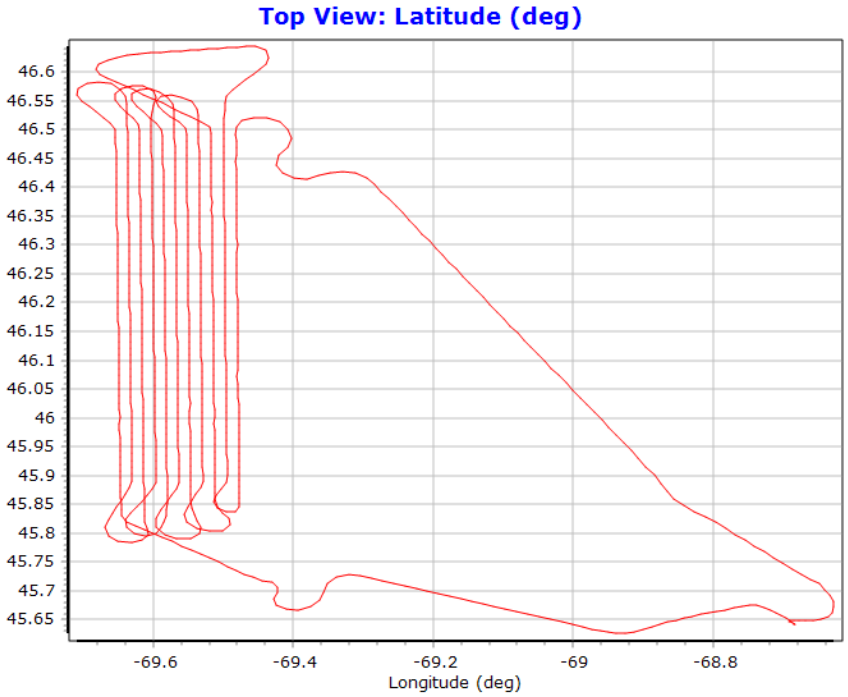
LiDAR	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing
	Alt 70	7178					
	FOV 36	Scan Freq 56	MpIA Y / N	Pulses In Air	Pulse Rate 263	Power 100	PPSM

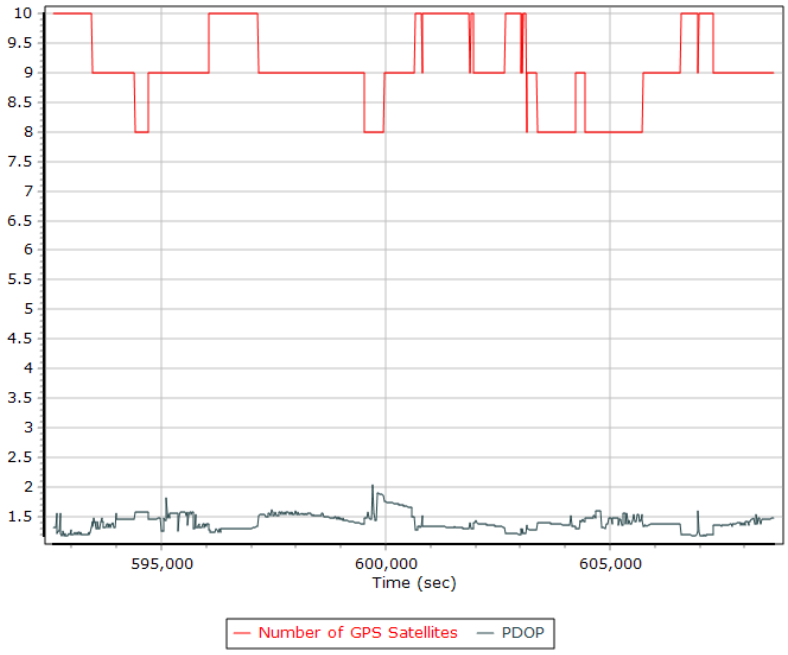
	Beg GB	Storage Name/#
	349	
	End GB 320	2
	Tot GB	

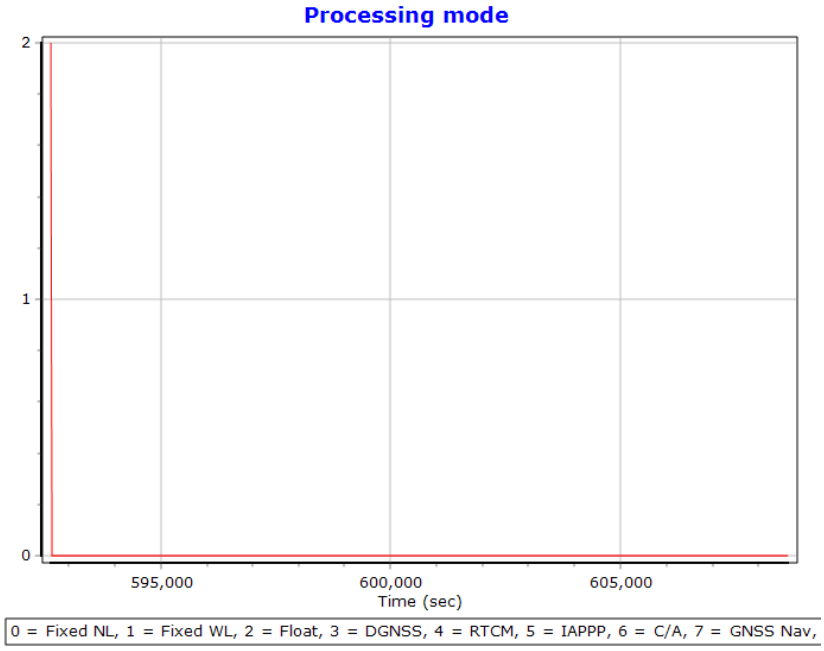
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
									PQI → Rig 8's (2139-2142)
1019	270	2147	2203	145	1.2/18	7263		0	
1020	90	2208	2224	125	1.2/18	7350		0	
1021	270	2228	2244	133	1.2/18	7400		0	
1022	90	2249	2305	137	1.1/19	7318		0	
1023	270	2309	2325	136	1.1/19	7402		0	
xtie	180	2331	2333	185	1.1/19	7517		0	unplanned xtie (Fig 8's 2333-2338) → MELI (2346)
									C Hobbs = 2.6 / onLine = 1.7 / mob = 0.9
									A+B+C Hobbs = 7.1 / mob = 4.1 / onLine = 3.0

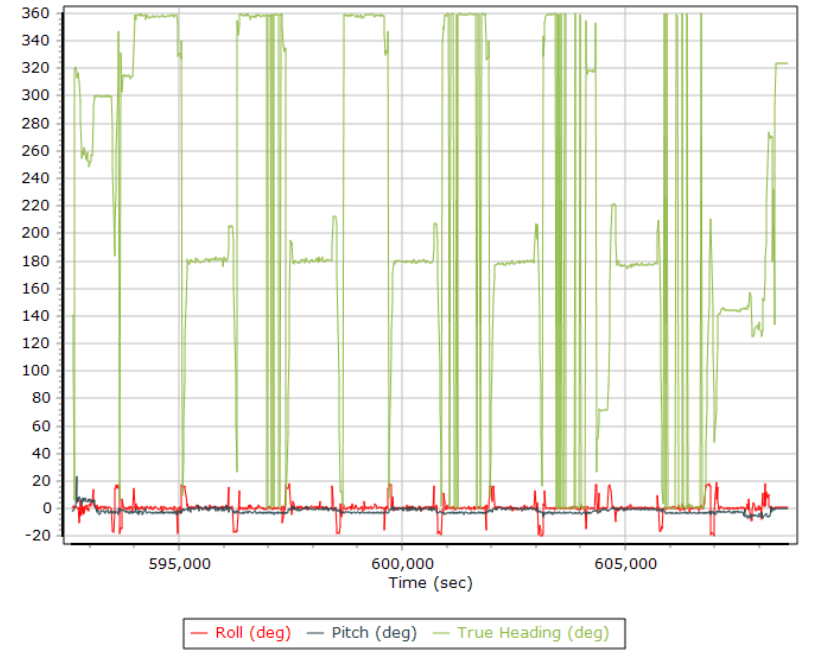
Total Proj Lines:	Lines Flown:	Lines Remain:	OnLine Time:	Mob Time:	Notes:

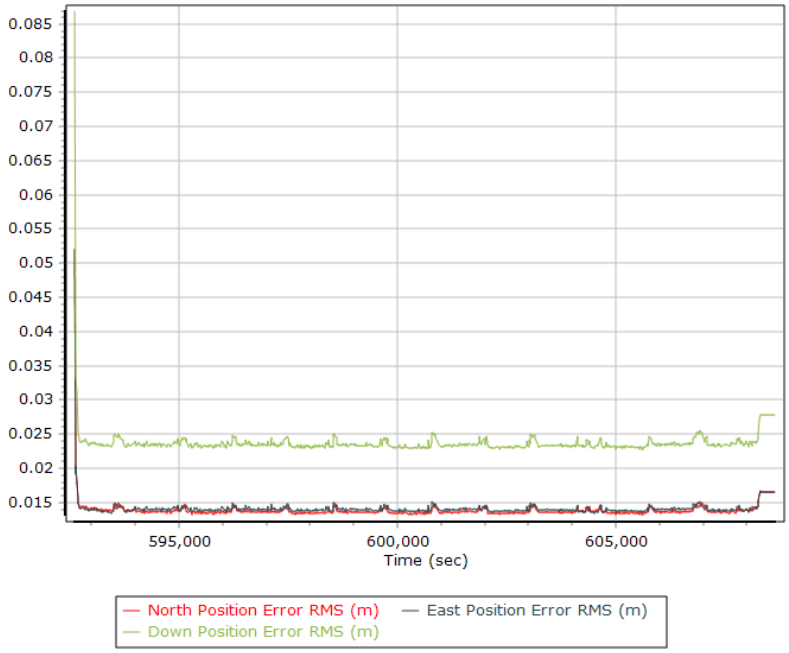
May 20, 2017-C (N1007Q,SN2221256)


Top View: Latitude (deg)
46.6
46.55
46.5
46.45
46.4
46.35
46.3
46.25
46.2
46.15
46.1
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
-69.6
-69.4
-69.2
-69
-68.8
Longitude (deg)

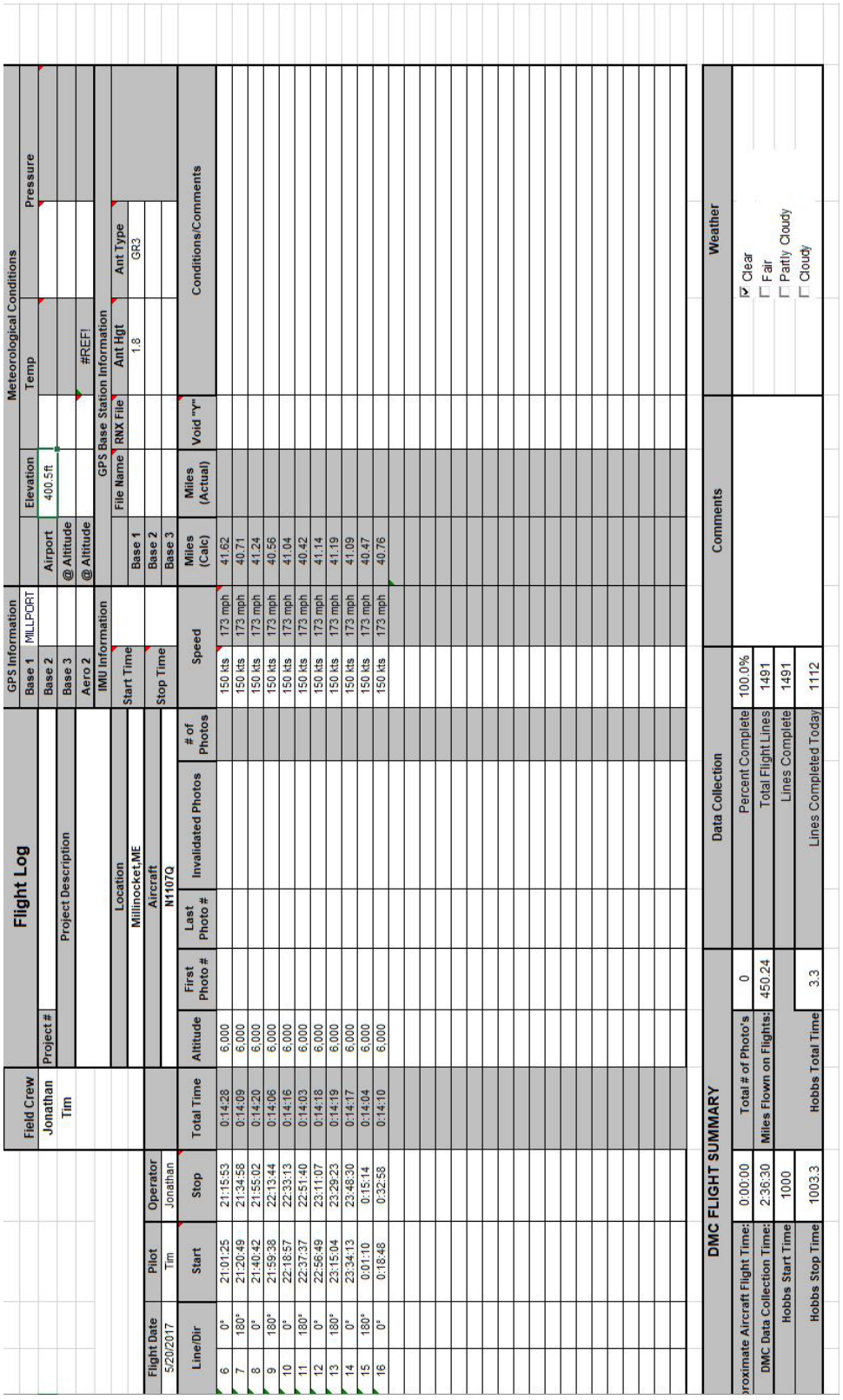

10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
595,000
600,000
605,000
Time (sec)
Number of GPS Satellites
PDOP


Processing mode
2
1
0
595,000
600,000
605,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
595,000
600,000
605,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
595,000
600,000
605,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

Flight Log



Flight Log

Field Crew: Jonathan, Tim

Project #:

Project Description:

GPS Information: Base 1 MILLPORT; Base 2; Base 3; Aero 2

Meteorological Conditions: Airport; @ Altitude; @ Altitude; Elevation 400.5ft; Temp #REF!; Pressure

GPS Base Station Information: IMU Information; Start Time; Stop Time; Location Millinocket,ME; Aircraft N1107Q; Base 1; Base 2; Base 3; File Name; RNX File; Ant Hgt 1.8; Ant Type GR3; Void "Y"

Flight Date: 5/20/2017; Pilot: Tim; Operator: Jonathan

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Conditions/Comments
6	0°	21:01:25	21:15:53	0:14:28	6,000					150 kts 173 mph	41.62		
7	180°	21:20:49	21:34:58	0:14:09	6,000					150 kts 173 mph	40.71		
8	0°	21:40:42	21:55:02	0:14:20	6,000					150 kts 173 mph	41.24		
9	180°	21:59:38	22:13:44	0:14:06	6,000					150 kts 173 mph	40.56		
10	0°	22:18:57	22:33:13	0:14:16	6,000					150 kts 173 mph	41.04		
11	180°	22:37:37	22:51:40	0:14:03	6,000					150 kts 173 mph	40.42		
12	0°	22:56:49	23:11:07	0:14:18	6,000					150 kts 173 mph	41.14		
13	180°	23:15:04	23:29:23	0:14:19	6,000					150 kts 173 mph	41.19		
14	0°	23:34:13	23:48:30	0:14:17	6,000					150 kts 173 mph	41.09		
15	180°	0:01:10	0:15:14	0:14:04	6,000					150 kts 173 mph	40.47		
16	0°	0:18:48	0:32:58	0:14:10	6,000					150 kts 173 mph	40.76		

DMC FLIGHT SUMMARY

Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0
DMC Data Collection Time:	2:36:30	Miles Flown on Flights:	450.24
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

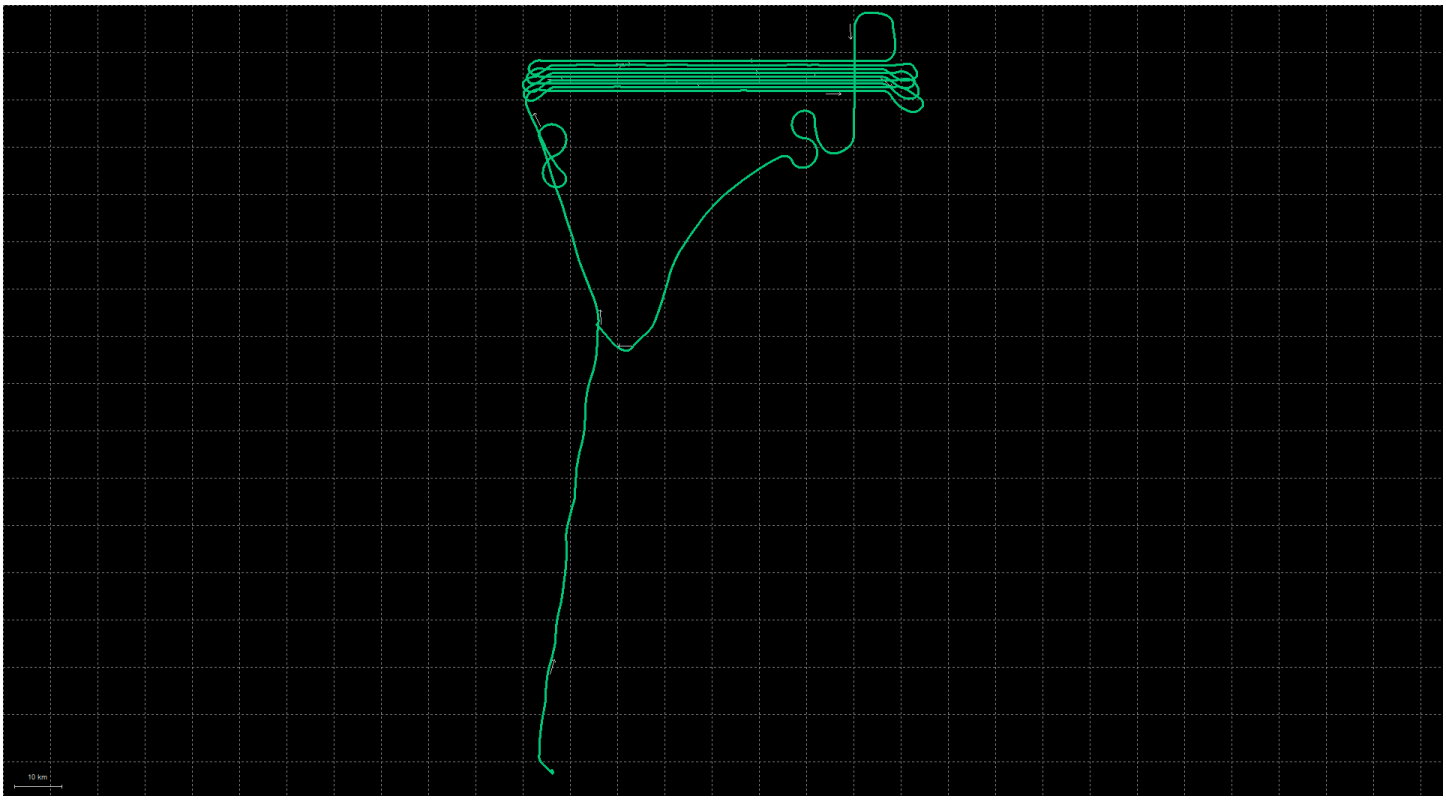
Data Collection

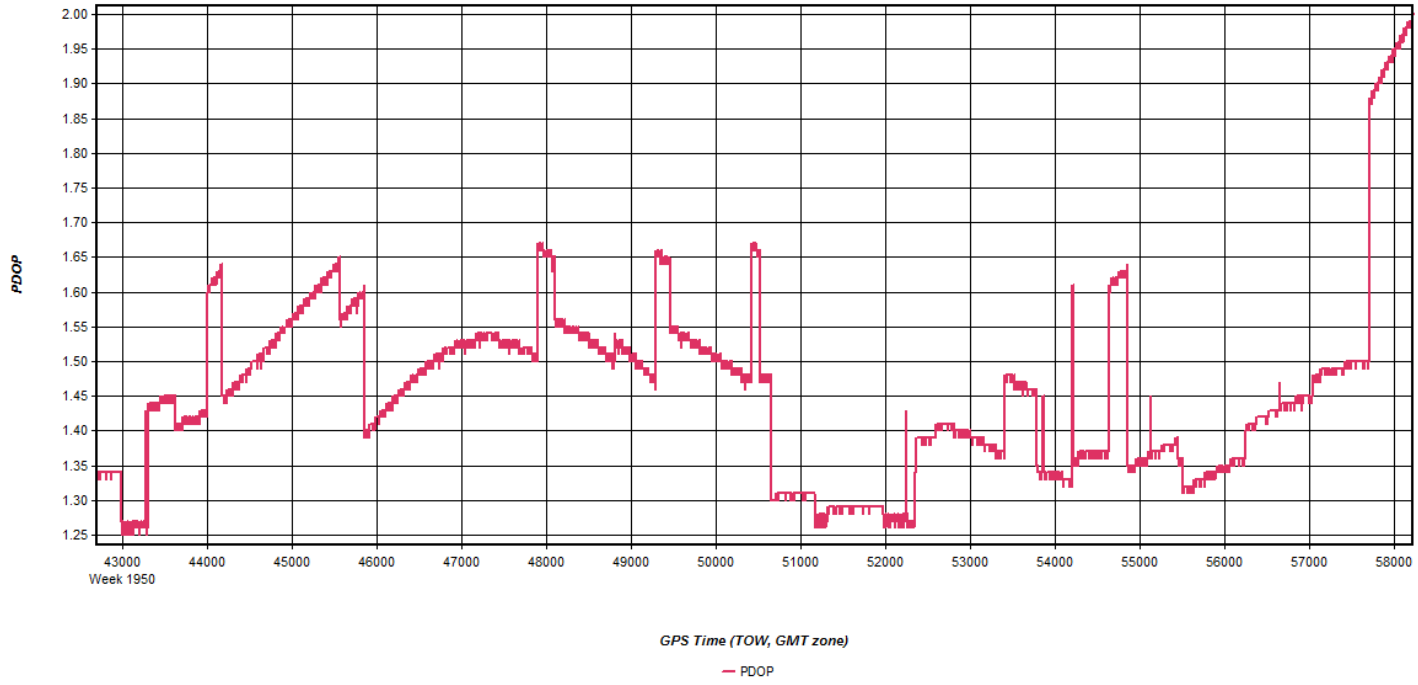
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

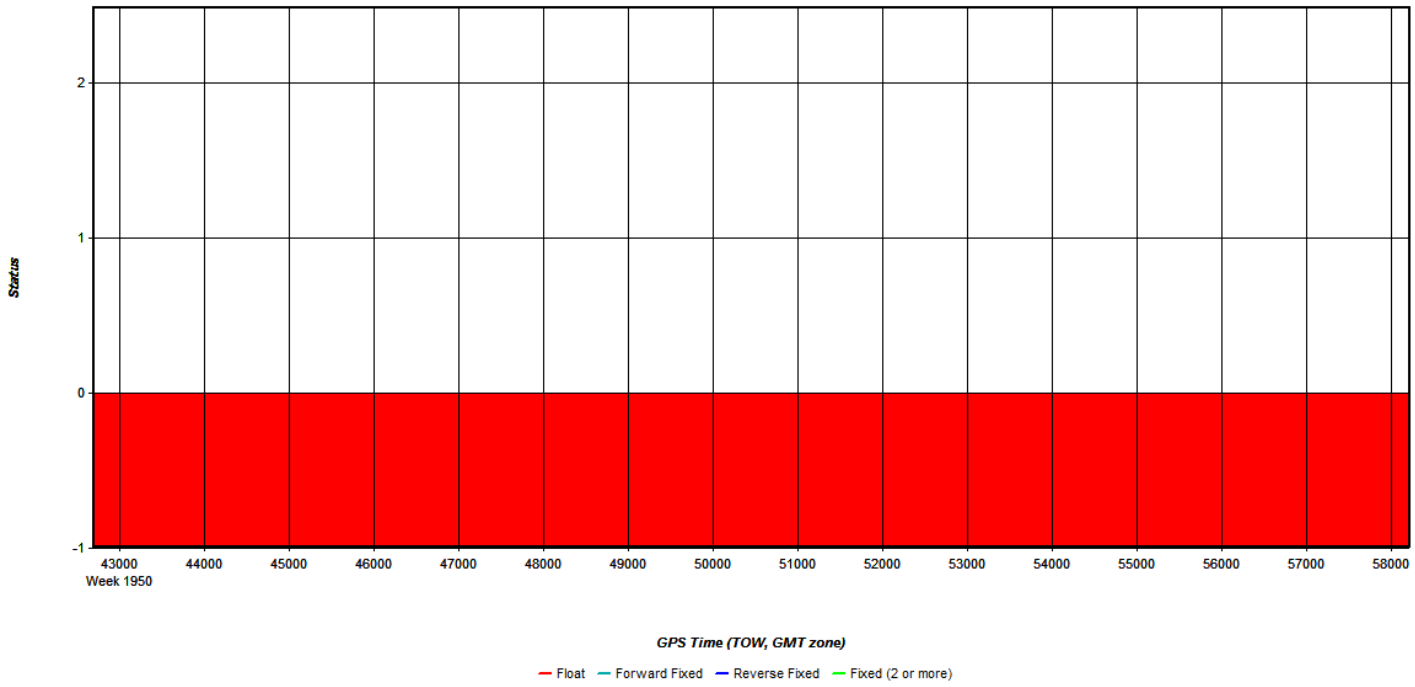
Comments

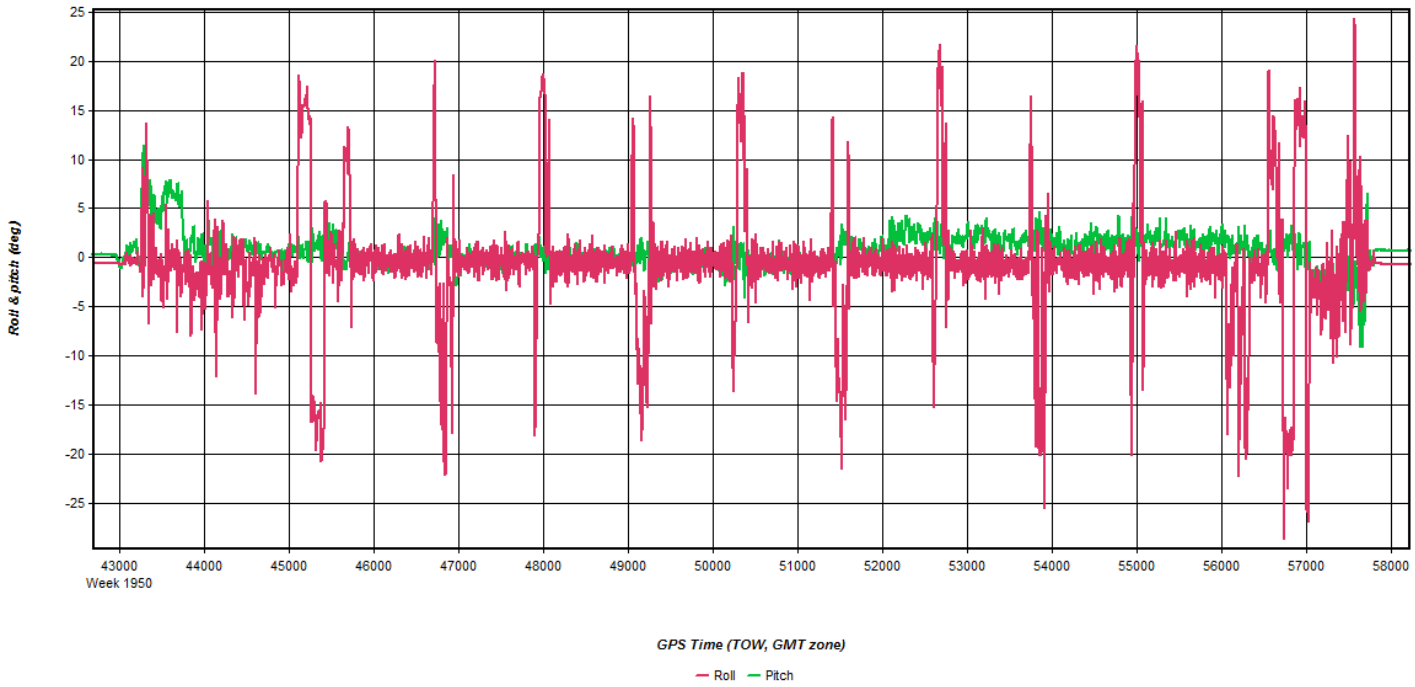
Weather: ☑ Clear ☐ Fair ☐ Partly Cloudy ☐ Cloudy

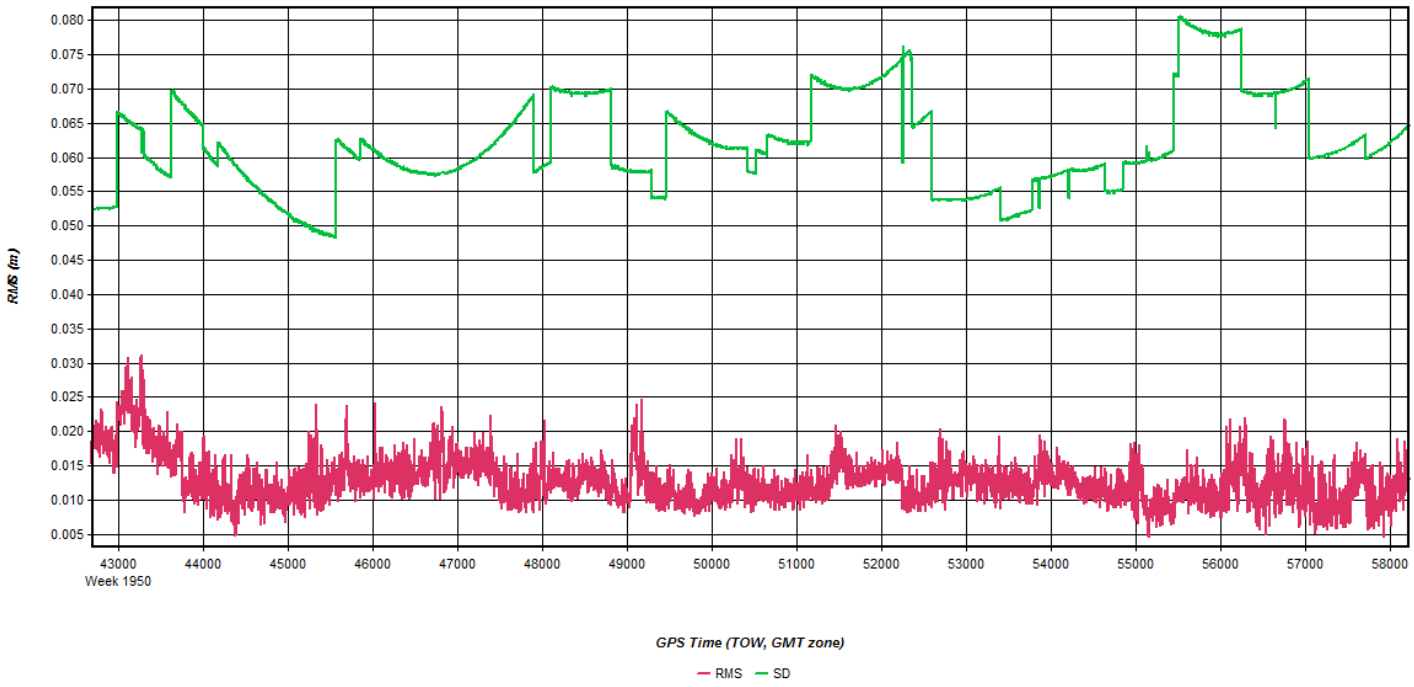
May 21, 2017-A (N73TM, SN7178)

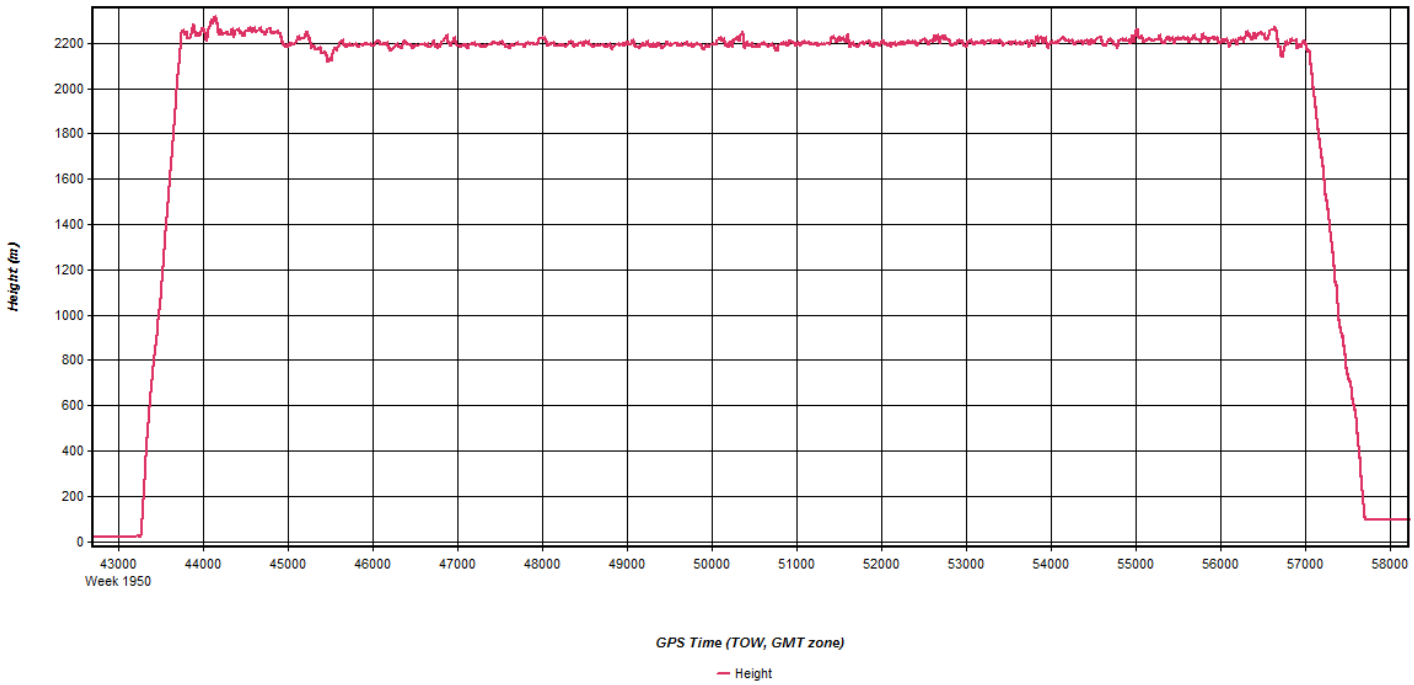

10 km

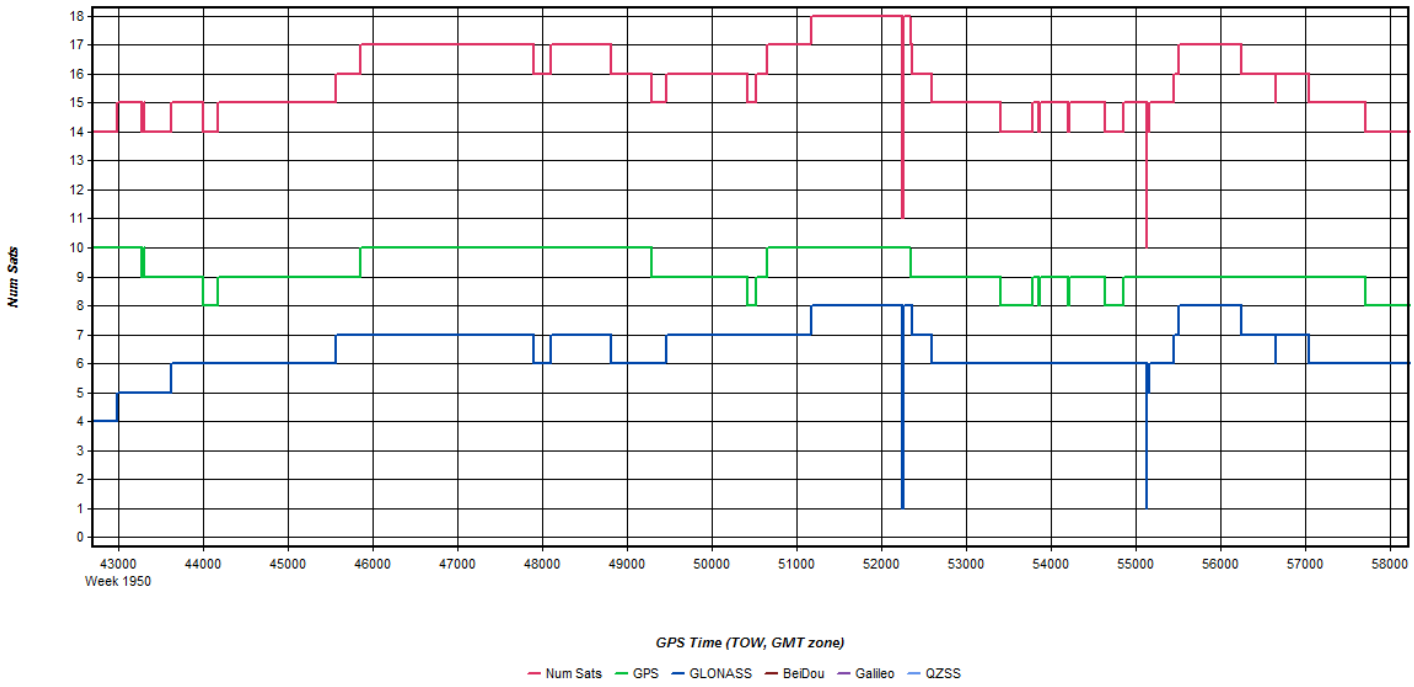

PDOP
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
PDOP

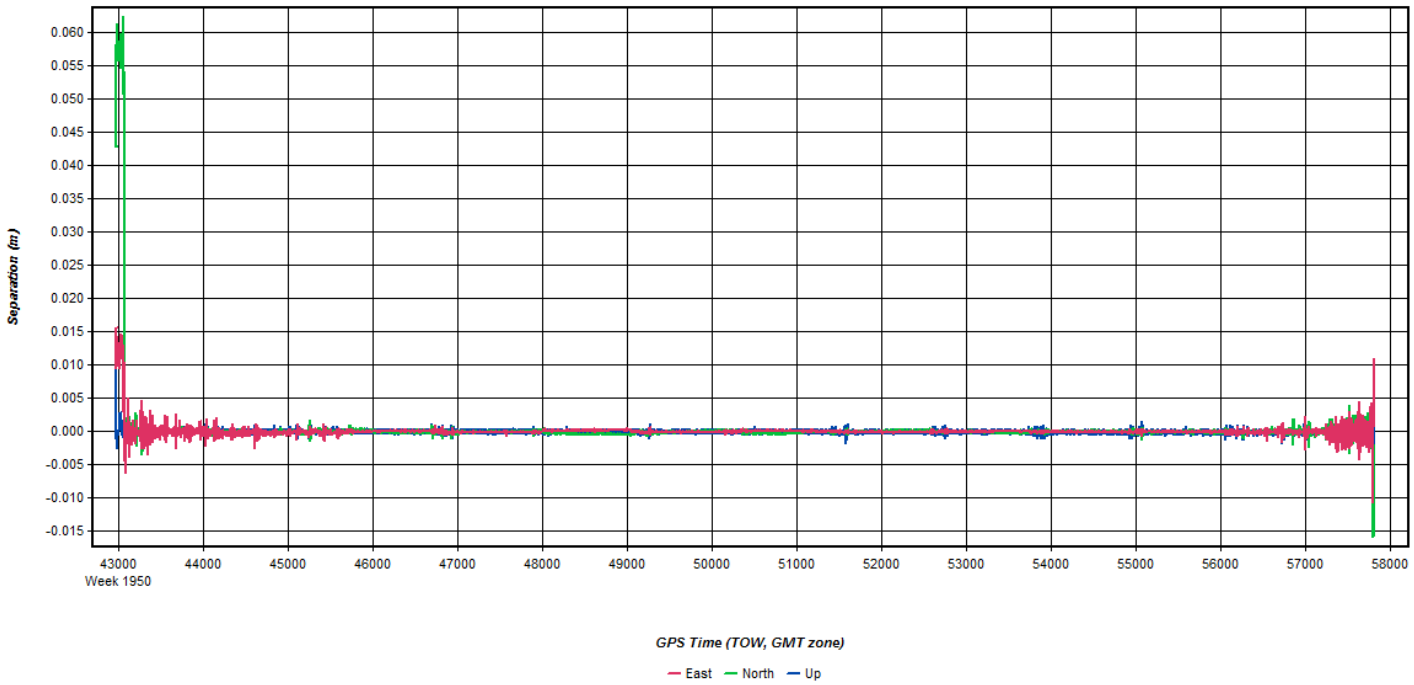

Status
2
1
0
-1
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

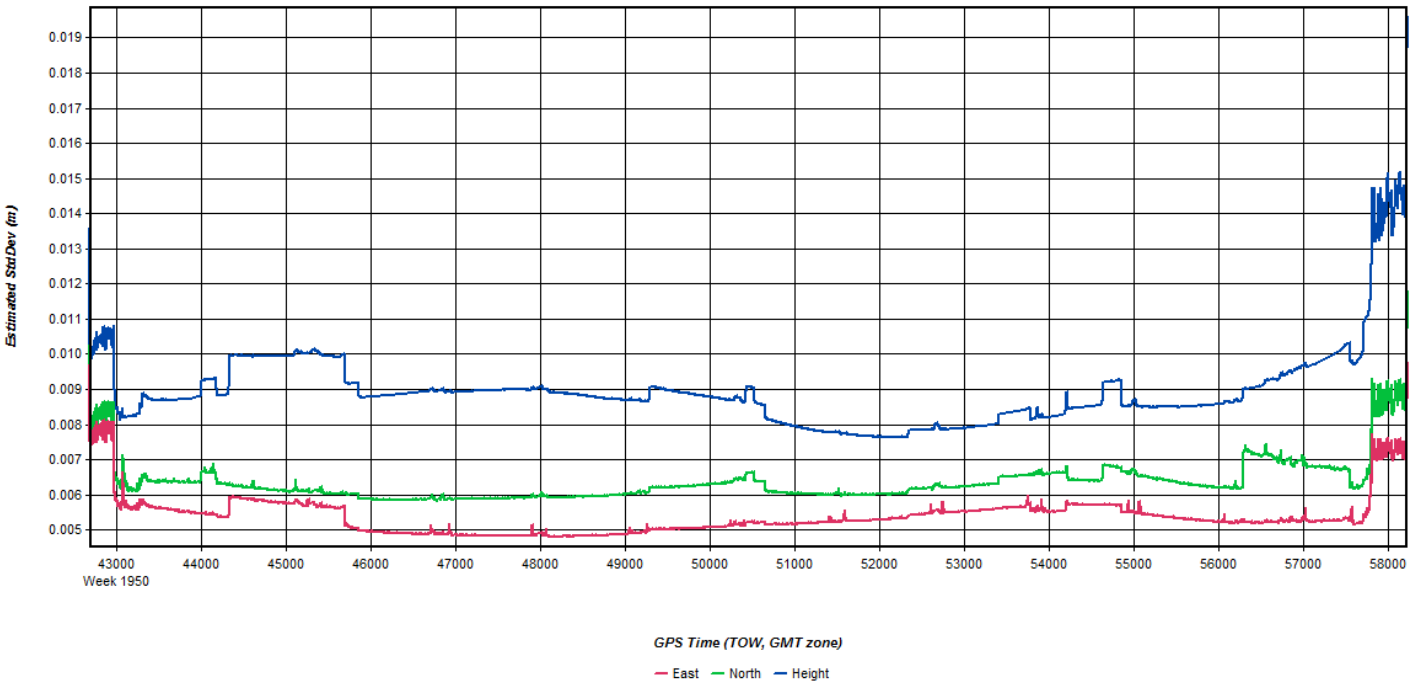

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch

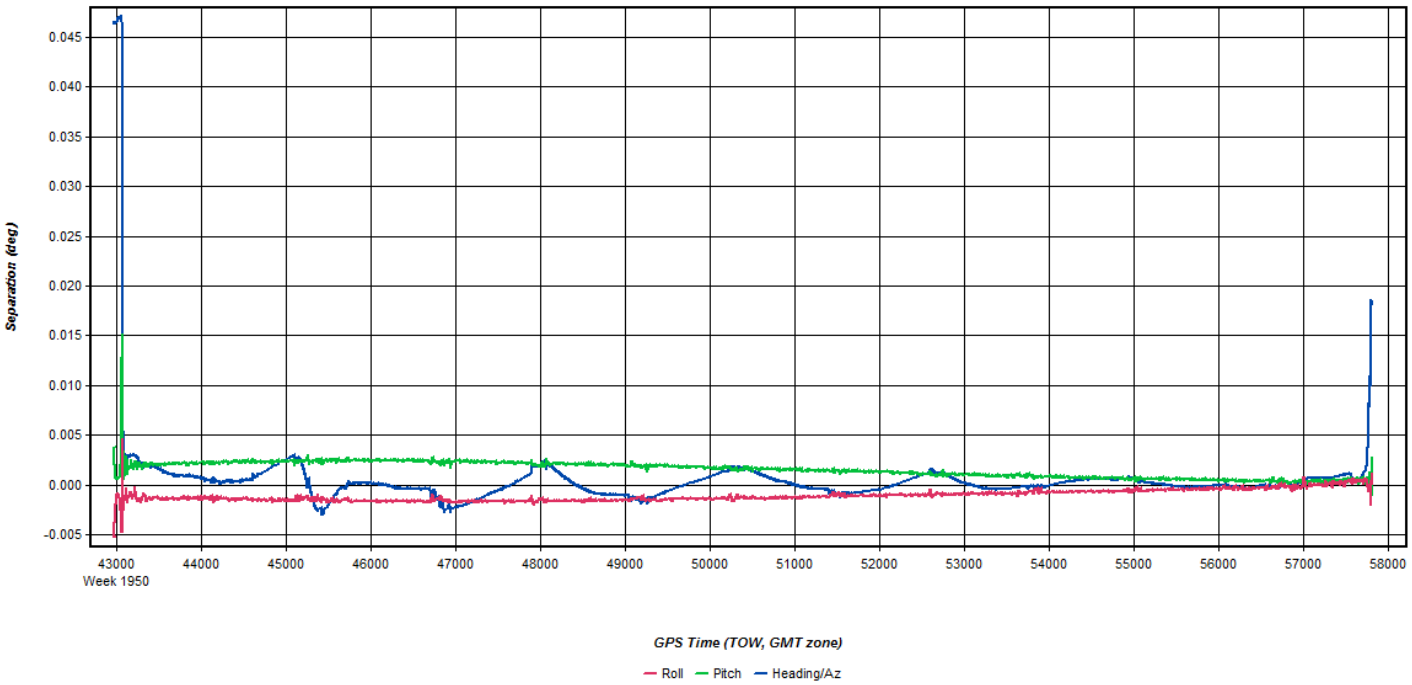

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
RMS
SD

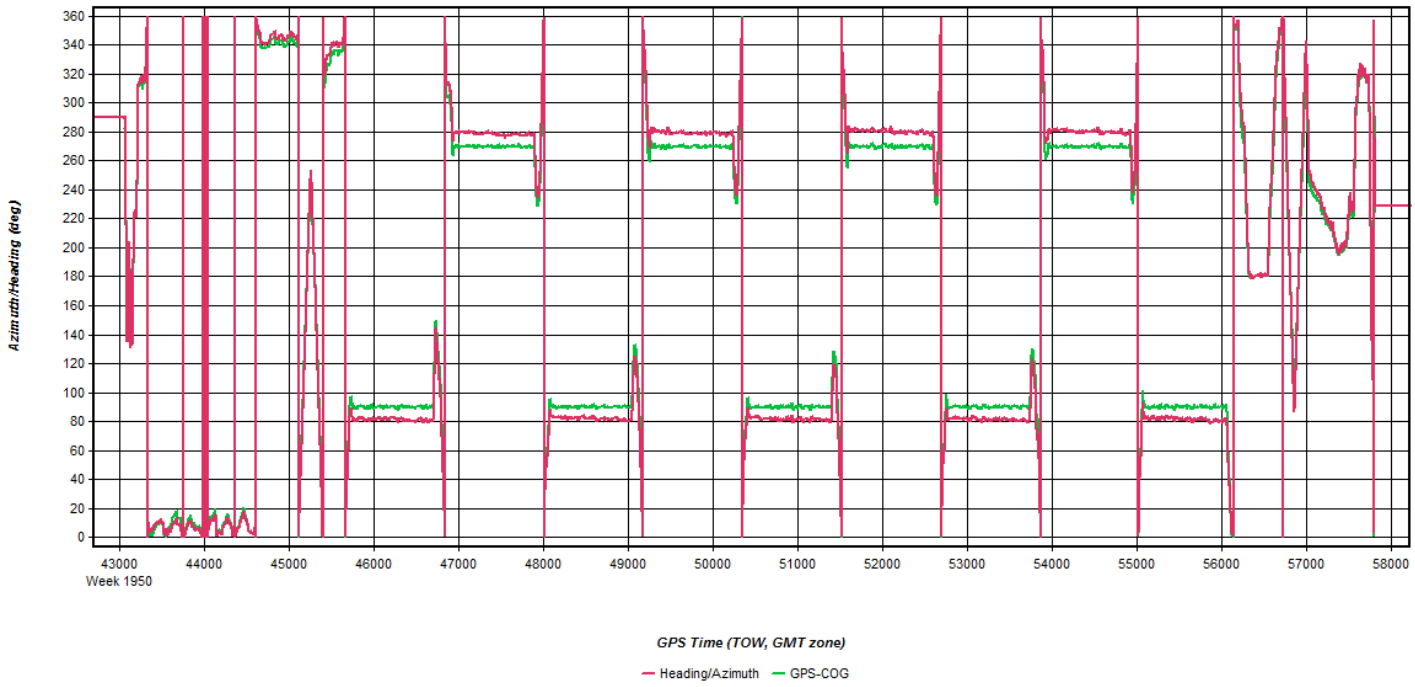

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

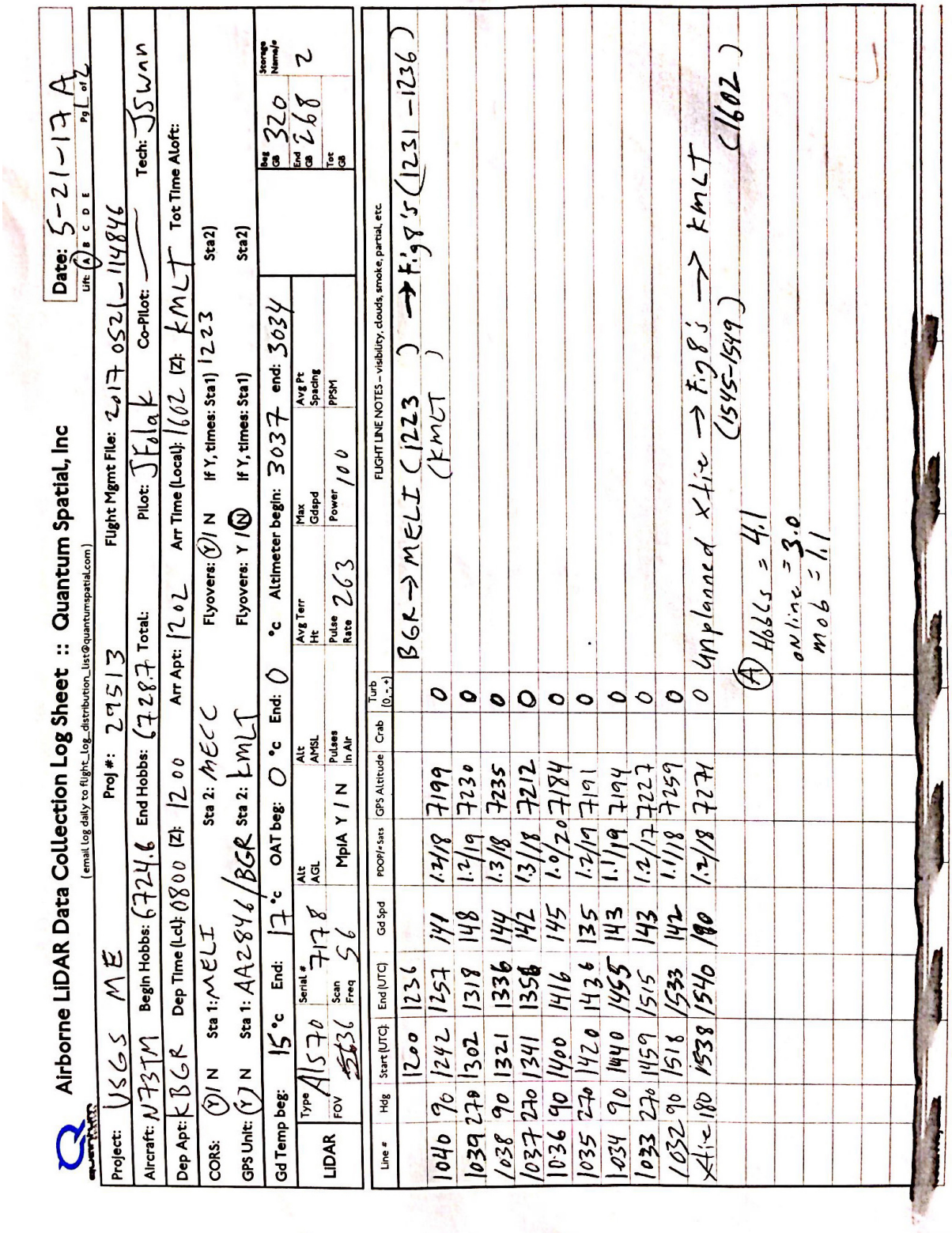

Separation (m)
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
43000
Week 1950
44000
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc
(email Log daily to flight_log_distribution_list@quantumspatial.com)

Date: 5-21-17 A
Lift: A B C D E Pg 1 of 2

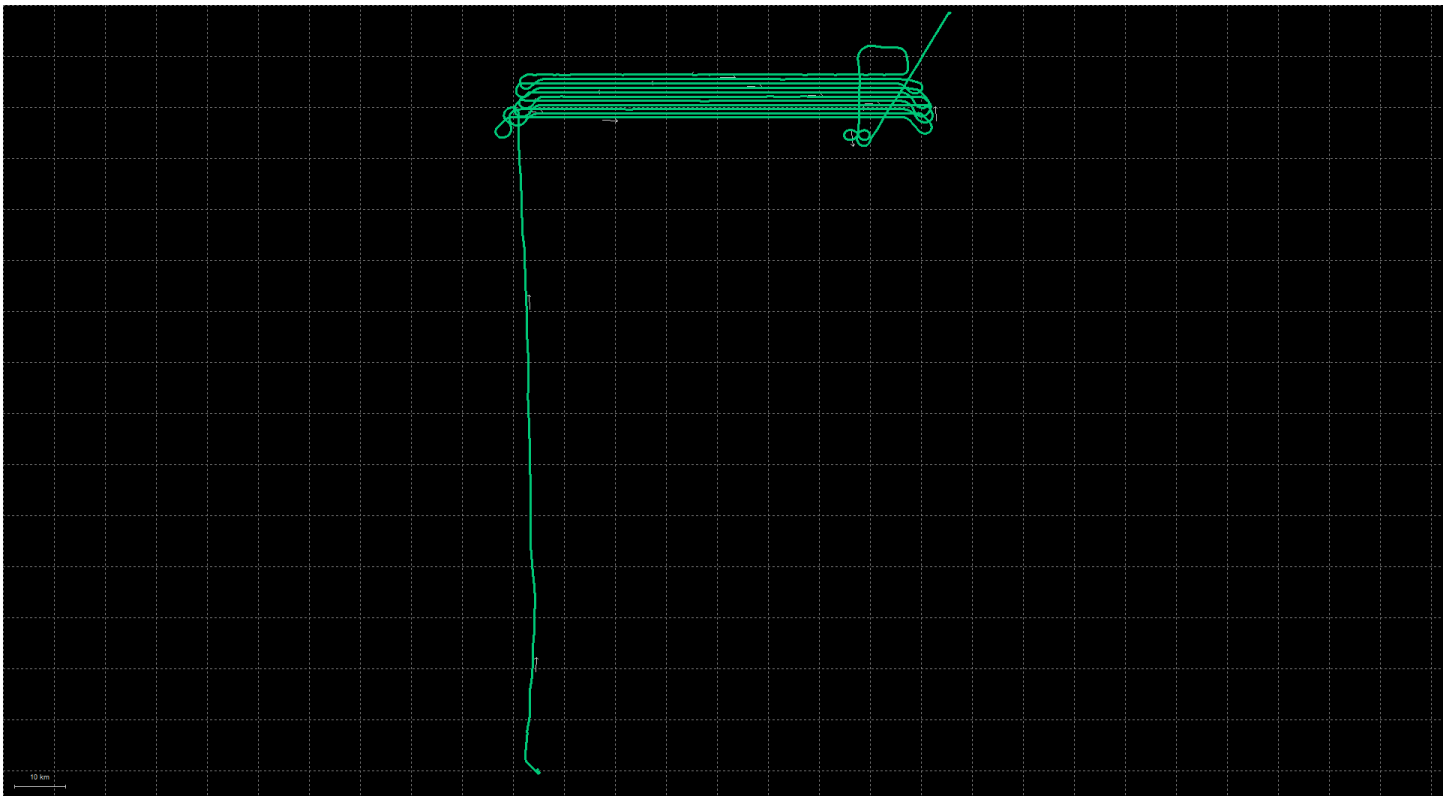
Project: USGS ME Proj #: 29513 Flight Mgmt File: 2017 0521_114846
Aircraft: N737TM Begin Hobbs: 6724.6 End Hobbs: 6728.7 Total: Pilot: JFlak Co-Pilot: — Tech: JSwan
Dep Apt: KBGR Dep Time (Lcl): 0800 (Z): 1200 Arr Apt: 1202 Arr Time (Local): 1602 (Z): KMLT Tot Time Aloft:
CORS: (Y) N Sta 1: MELI Sta 2: MECC Flyovers: (Y) N If Y, times: Sta1) 1223 Sta2)
GPS Unit: (Y) N Sta 1: AA2846/BGR Sta 2: KMLT Flyovers: Y (N) If Y, times: Sta1) Sta2)
Gd Temp beg: 15°c End: 17°c OAT beg: 0 °c End: 0 °c Altimeter begin: 3037 end: 3034

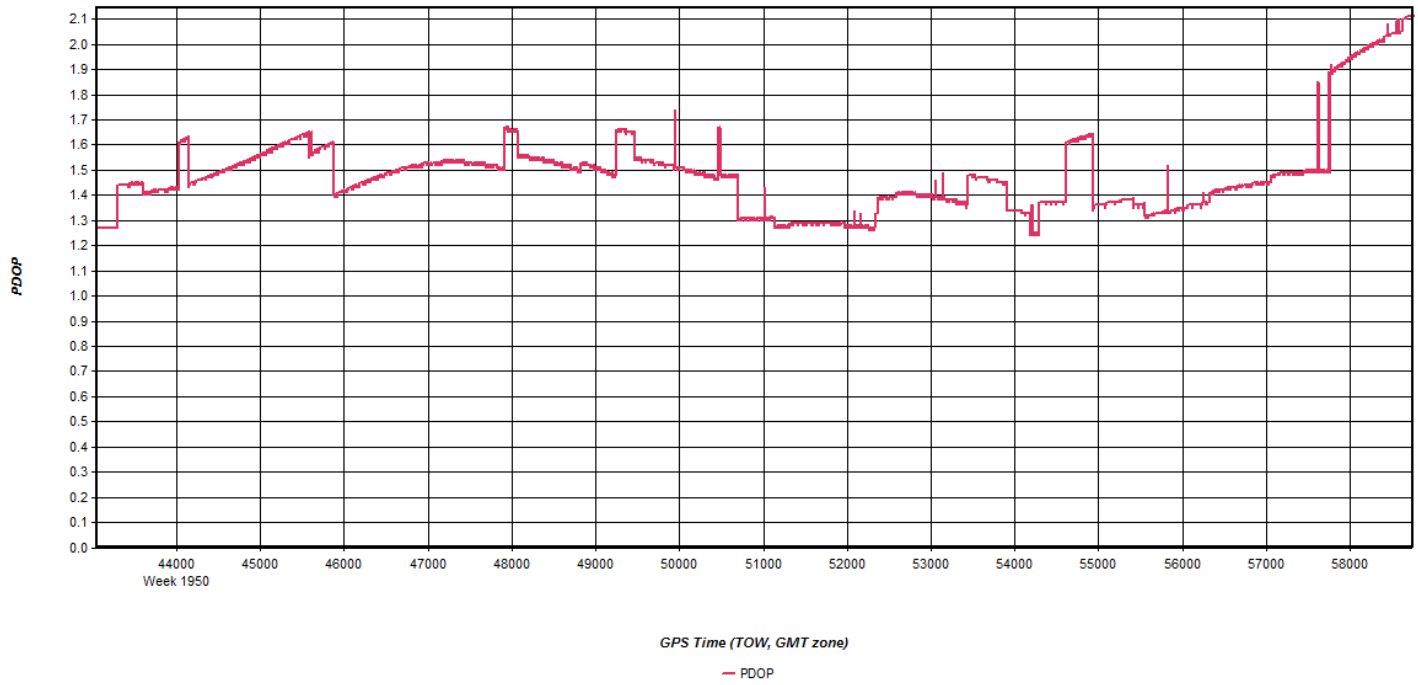
LiDAR	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing
	Alsa	7178					
	FOV 36	Scan Freq 56	MpiA Y / N	Pulses In Air	Pulse Rate 263	Power 100	PPSM

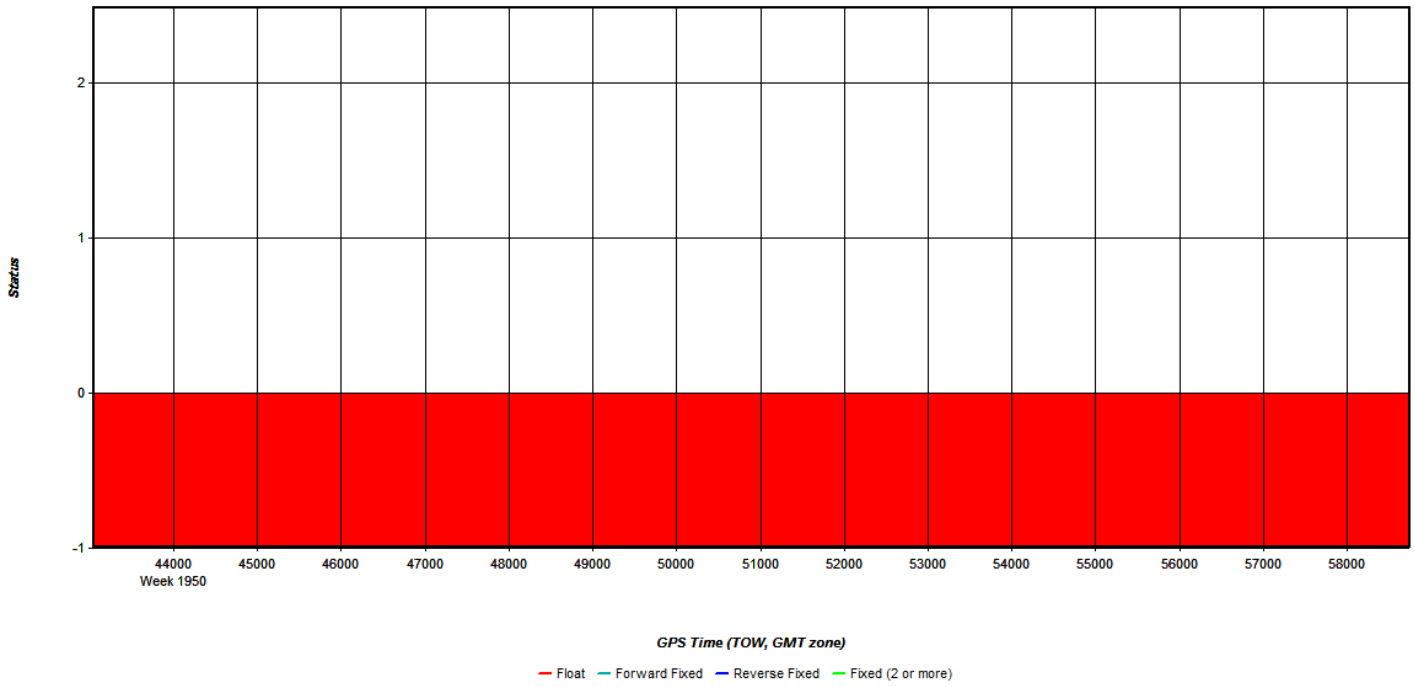
Beg Cal	320
End Cal	268
Tot Cal	
Storage Name/#	2

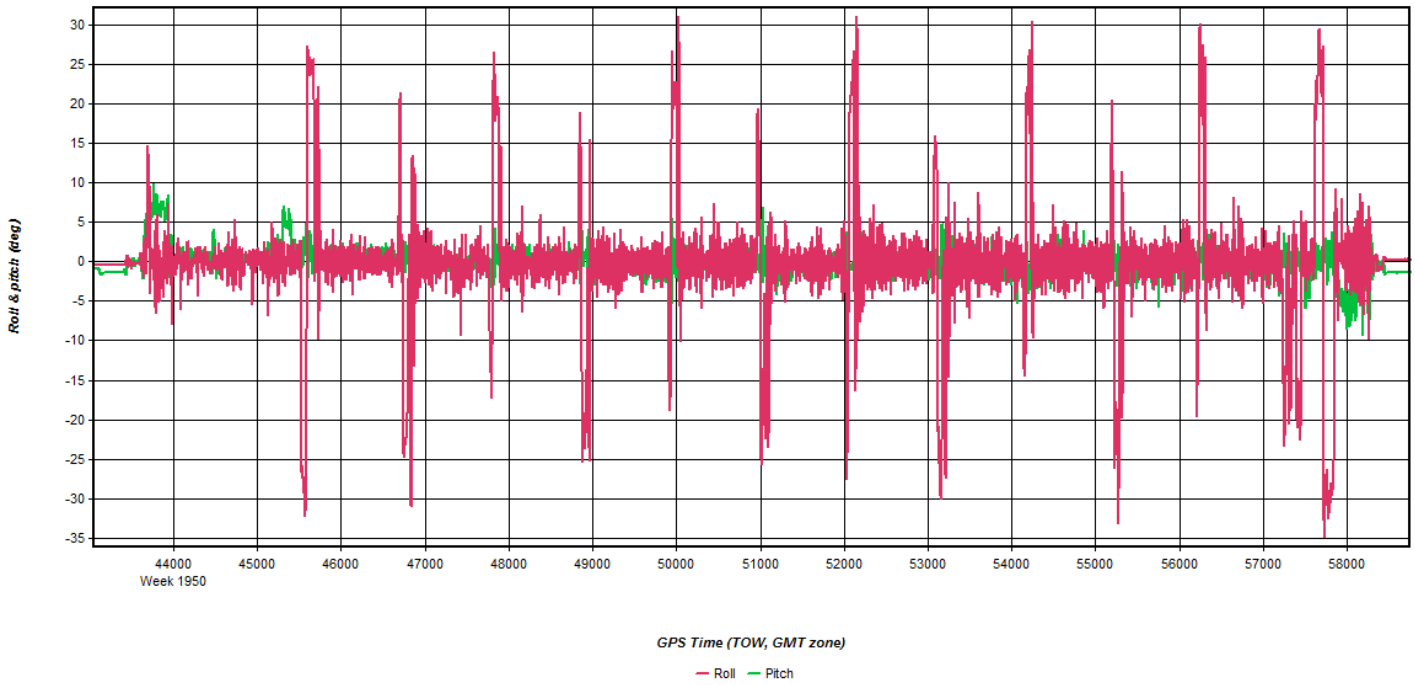
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0,+,-)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
		1200	1236						BGR→MELI (1223) →F.98's (1231-1236) (KMLT)
1040	90	1242	1257	141	1.7/18	7199		0	
1039	270	1302	1318	148	1.2/19	7230		0	
1038	90	1321	1336	144	1.3/18	7235		0	
1037	270	1341	1356	142	1.3/18	7212		0	
1036	90	1400	1416	145	1.0/20	7184		0	
1035	270	1420	1436	135	1.2/19	7191		0	
1034	90	1440	1455	143	1.1/19	7194		0	
1033	270	1459	1515	143	1.2/17	7227		0	
1032	90	1518	1533	142	1.1/18	7259		0	
Alt	180	1538	1540	180	1.2/18	7271		0	Unplanned Alt → F.98's → KMLT (1545-1549) (1602)
									(A) Hdgs = 41
									online = 3.0
									mob = 1.1

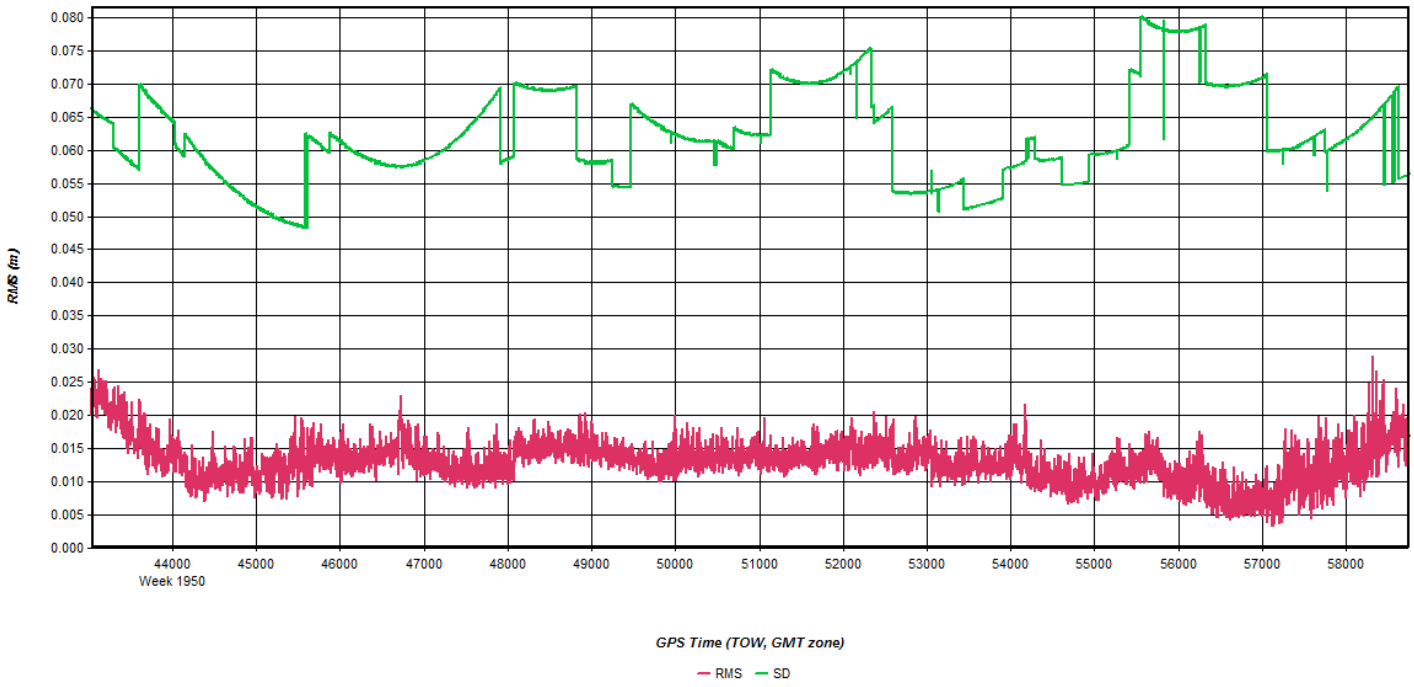
May 21, 2017-A (N262AS, SN7161)

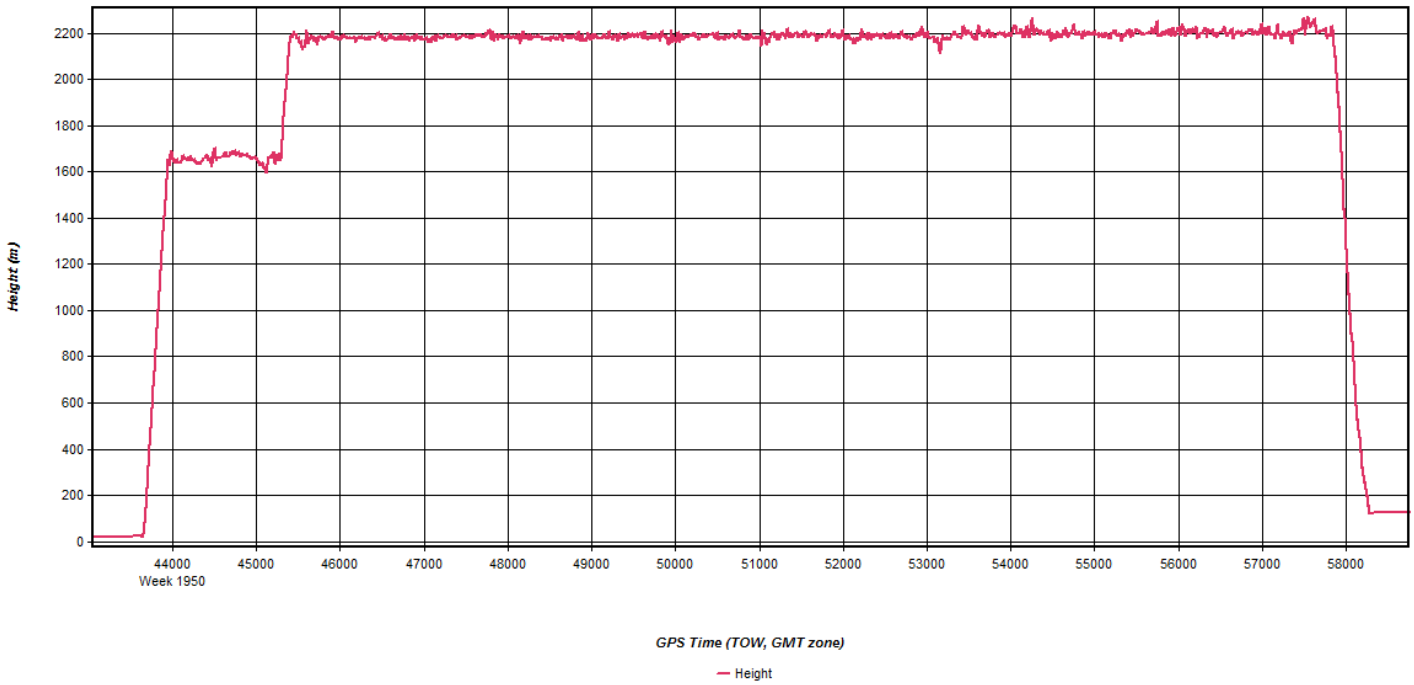

10 km

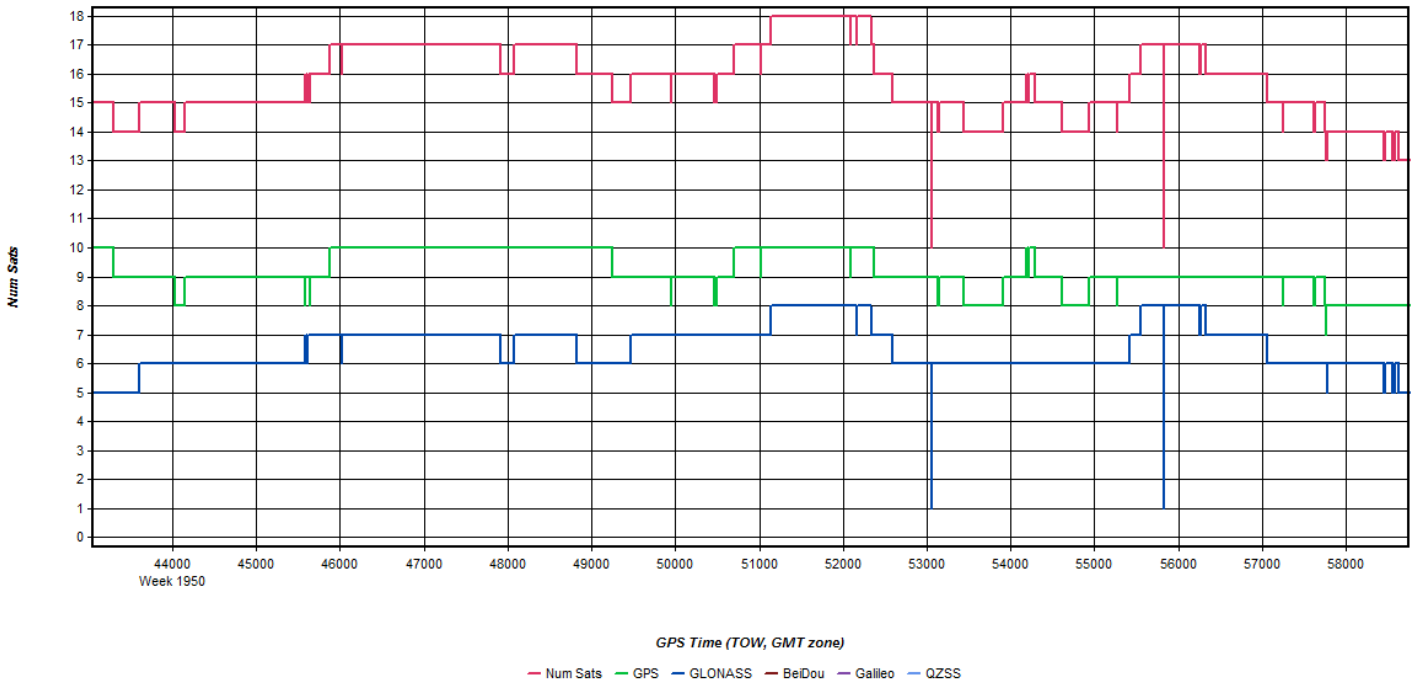

PDOP
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
PDOP


Status
2
1
0
-1
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

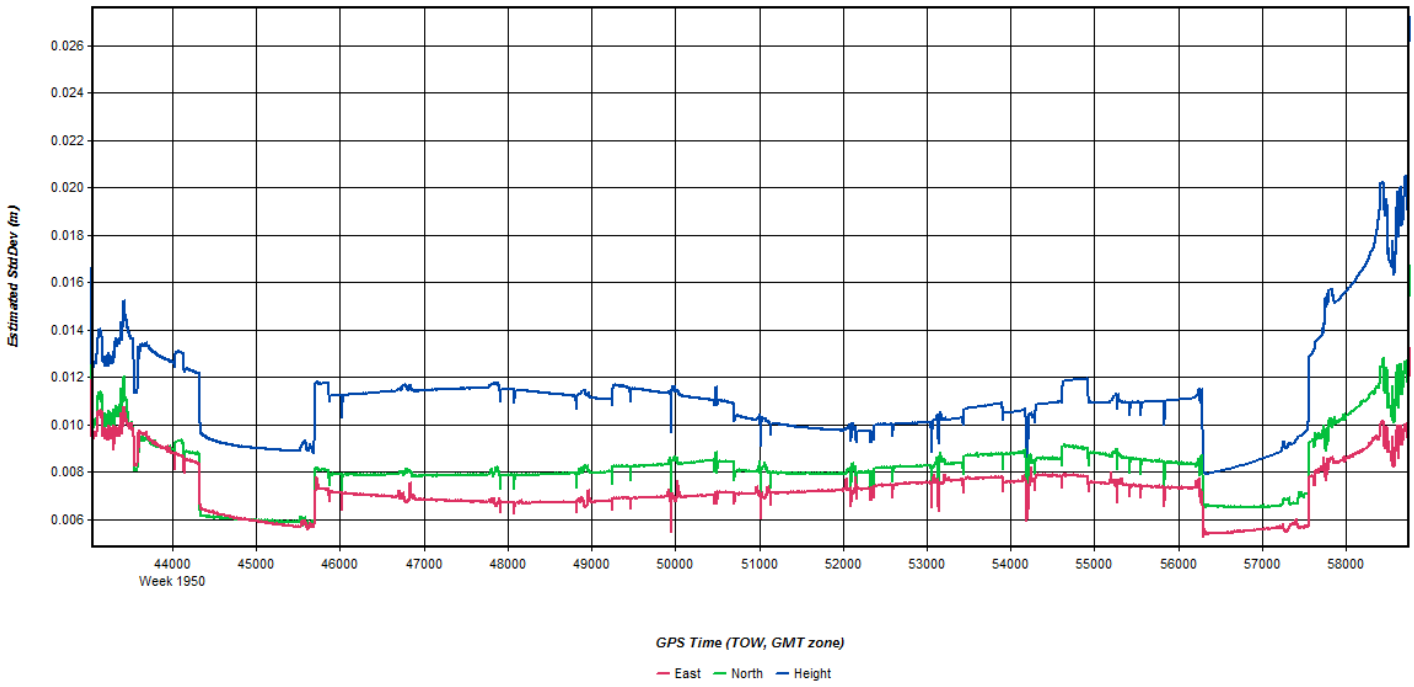

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch

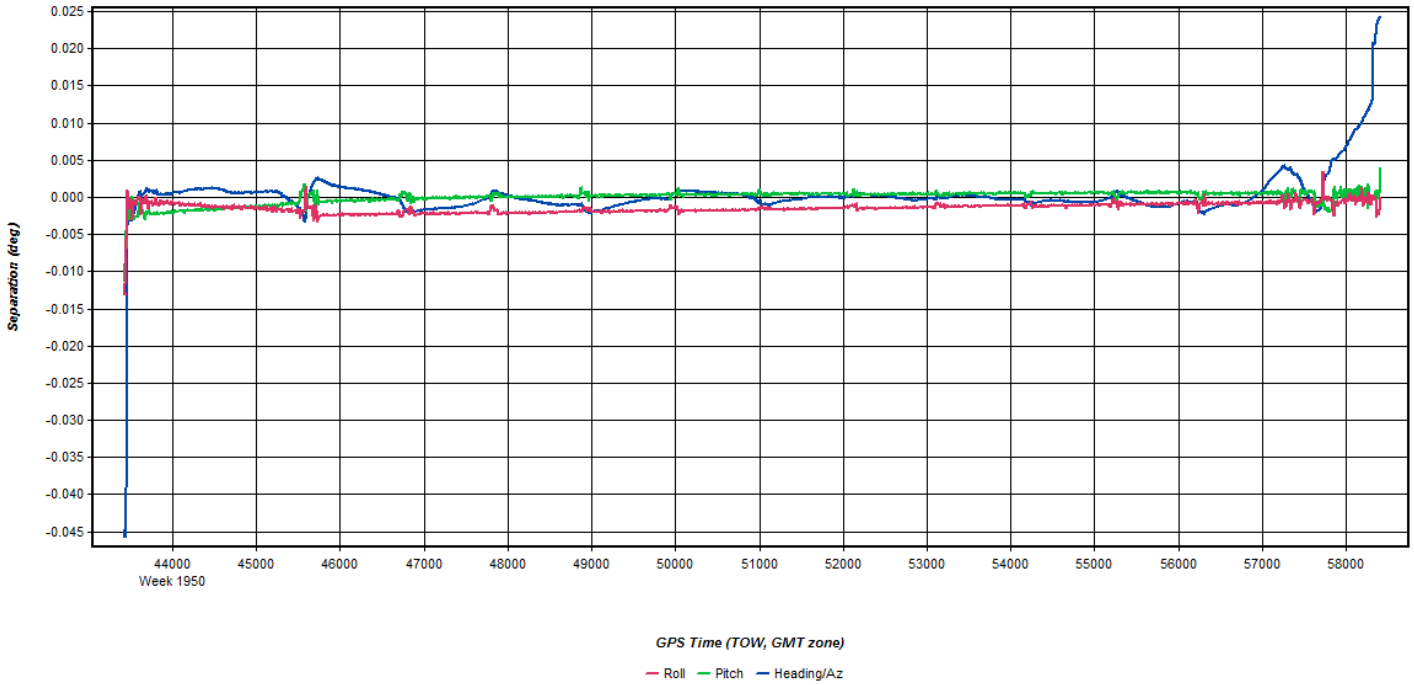

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
RMS
SD

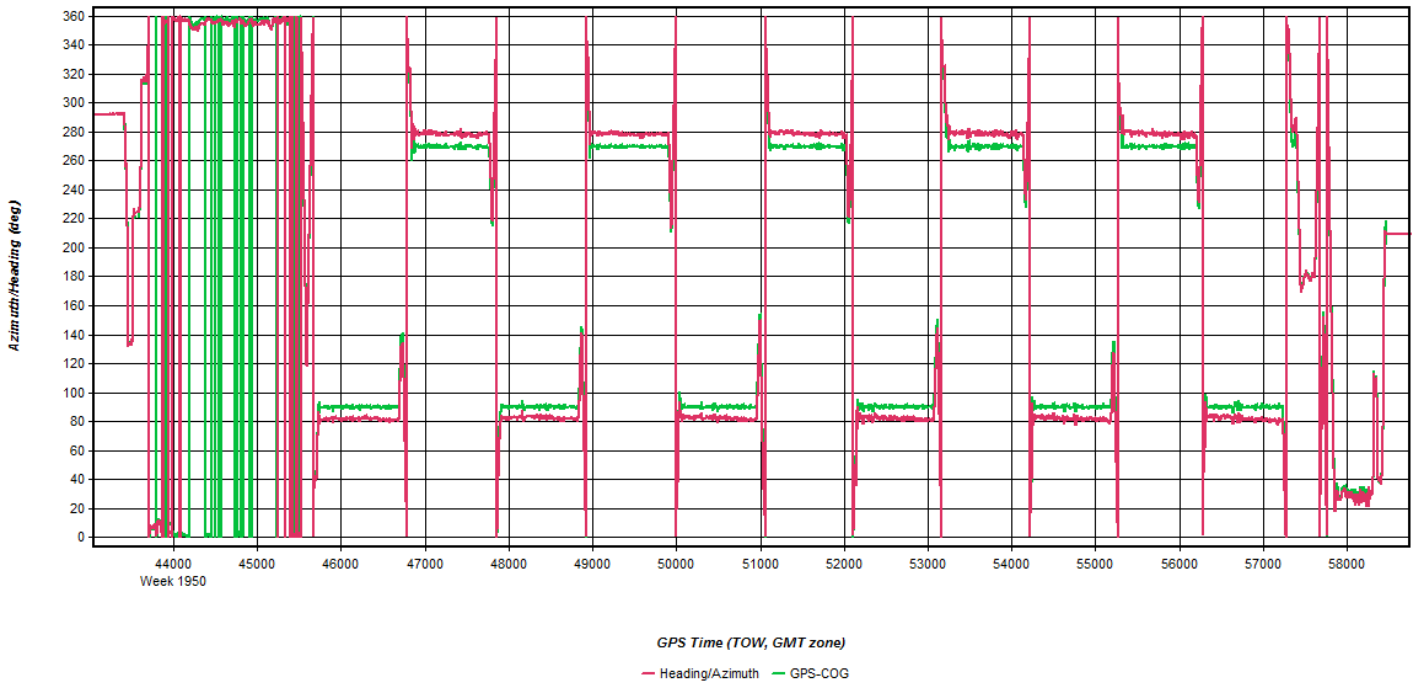

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

Separation (m)
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
-0.0
-0.1
-0.2
-0.3
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Up

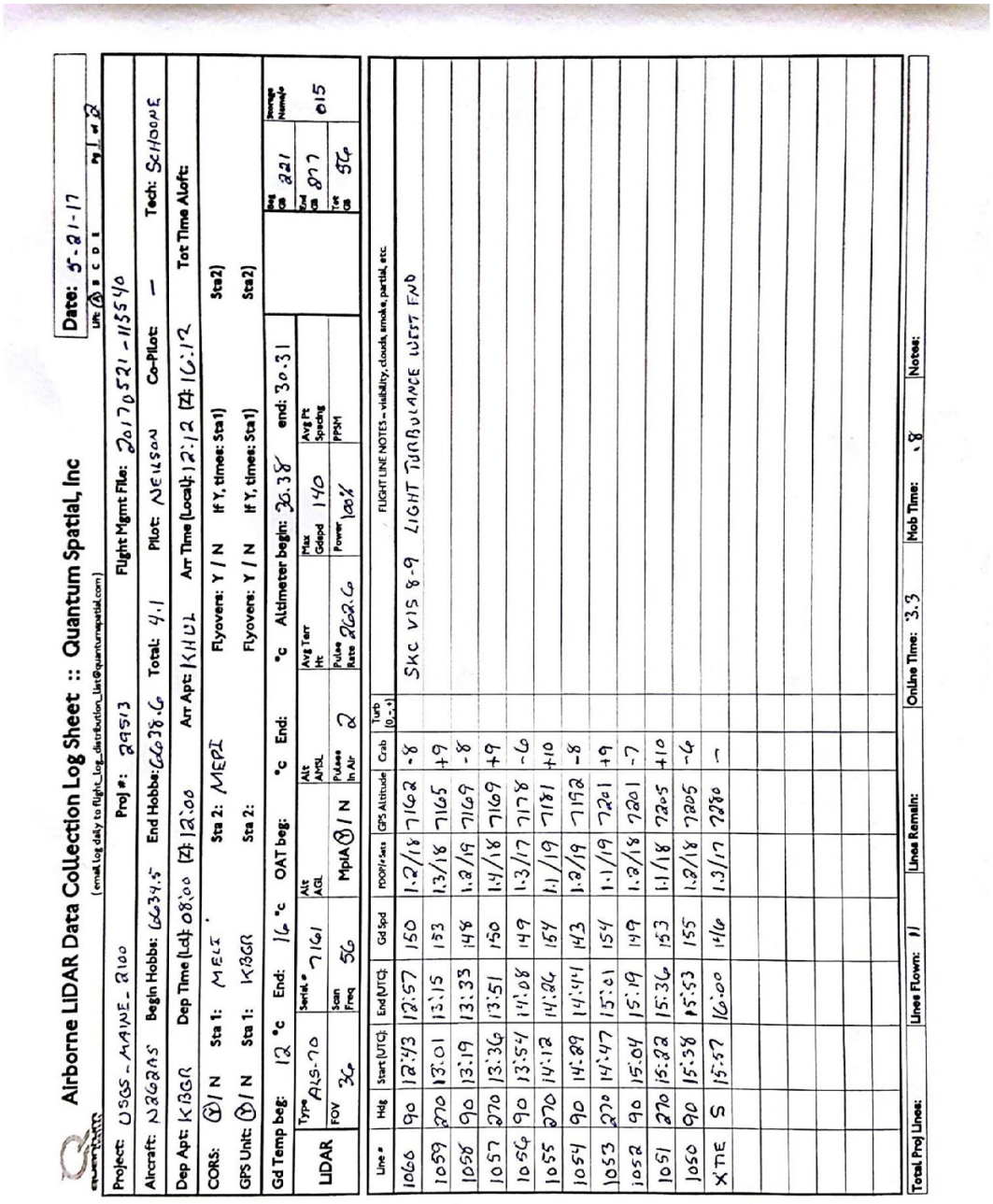

Estimated StdDev (m)
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
44000
Week 1950
45000
46000
47000
48000
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_List@quantumspatial.com)

Date: 5-21-17 UTC A B C D E Pg 1 of 2

Project: USGS_MAINE_2100 Proj #: 29513 Flight Mgmt File: 20170521-115540

Aircraft: N426QS Begin Hobbs: 6634.5 End Hobbs: 6638.6 Total: 4.1 Pilot: NELSON Co-Pilot: — Tech: SCHOONE

Dep Apt: KBGR Dep Time (Lcl): 08:00 (Z): 12:00 Arr Apt: KHUL Arr Time (Local): 12:12 (Z): 16:12 Tot Time Aloft:

CORS: Y / N Sta 1: MEL4 Sta 2: MEPI Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: KBGR Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

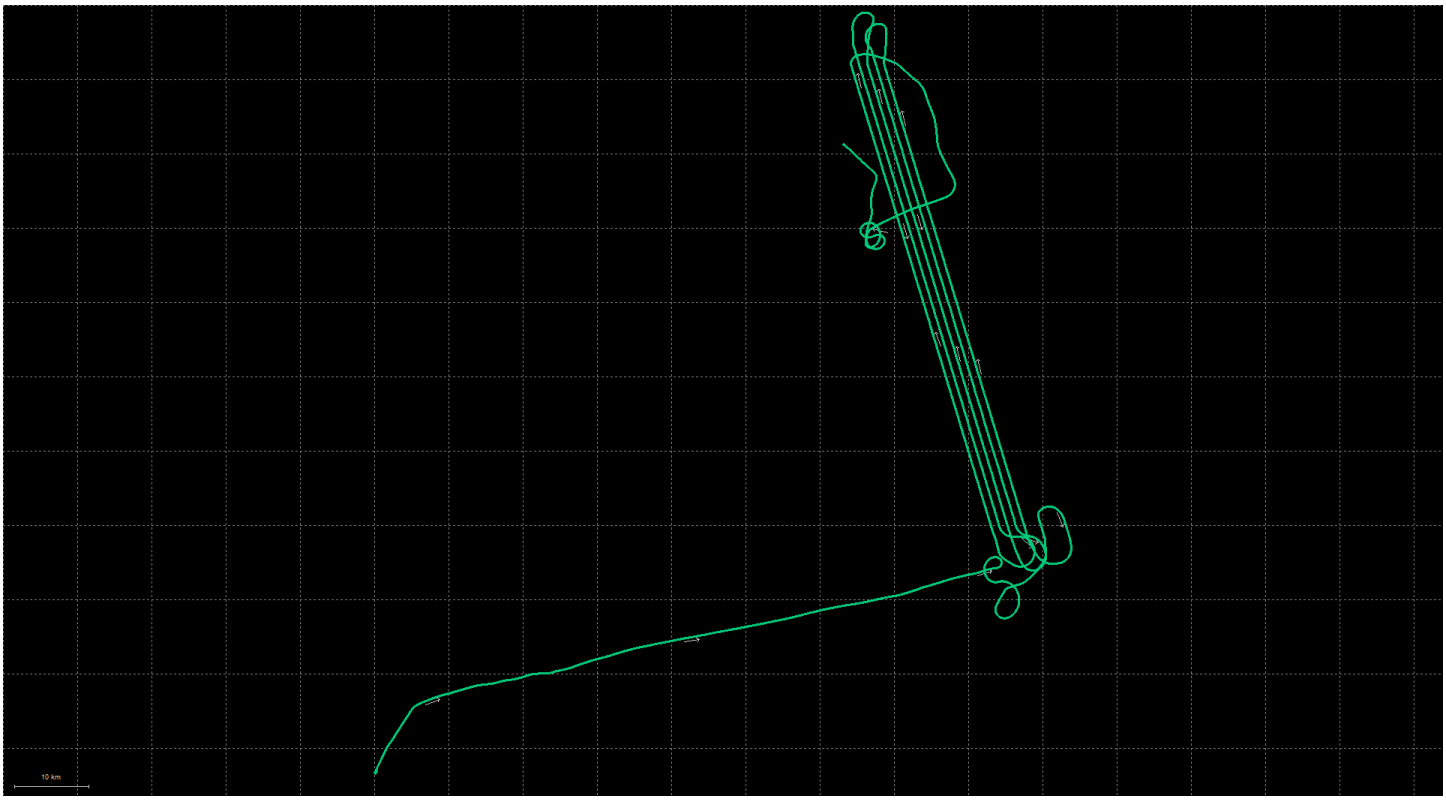
Gd Temp beg: 12 °c End: 16 °c OAT beg: °c End: °c Altimeter begin: 30.38 end: 30.31

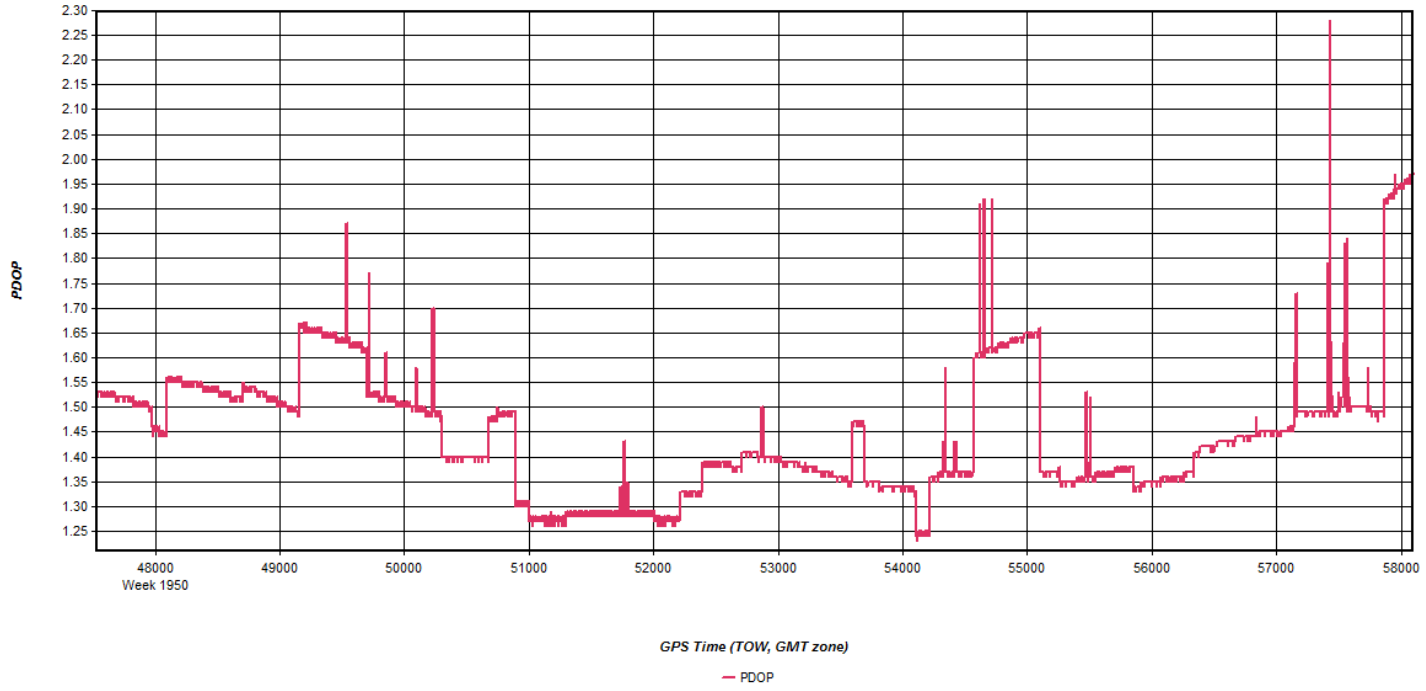
LiDAR	Type	ALS-70	Serial #	7161	Alt AGL		Alt AMSL		Avg Terr Ht:		Max Gdspd	140	Avg Pt Spacing		Beg GB	821	Passage Number
	FOV	36	Scan Freq	56	MpiA Y / N		Pulses In Air	2	Pulse Rate	266.6	Power	100%	PRR		End GB	897	015
															Tot GB	976	

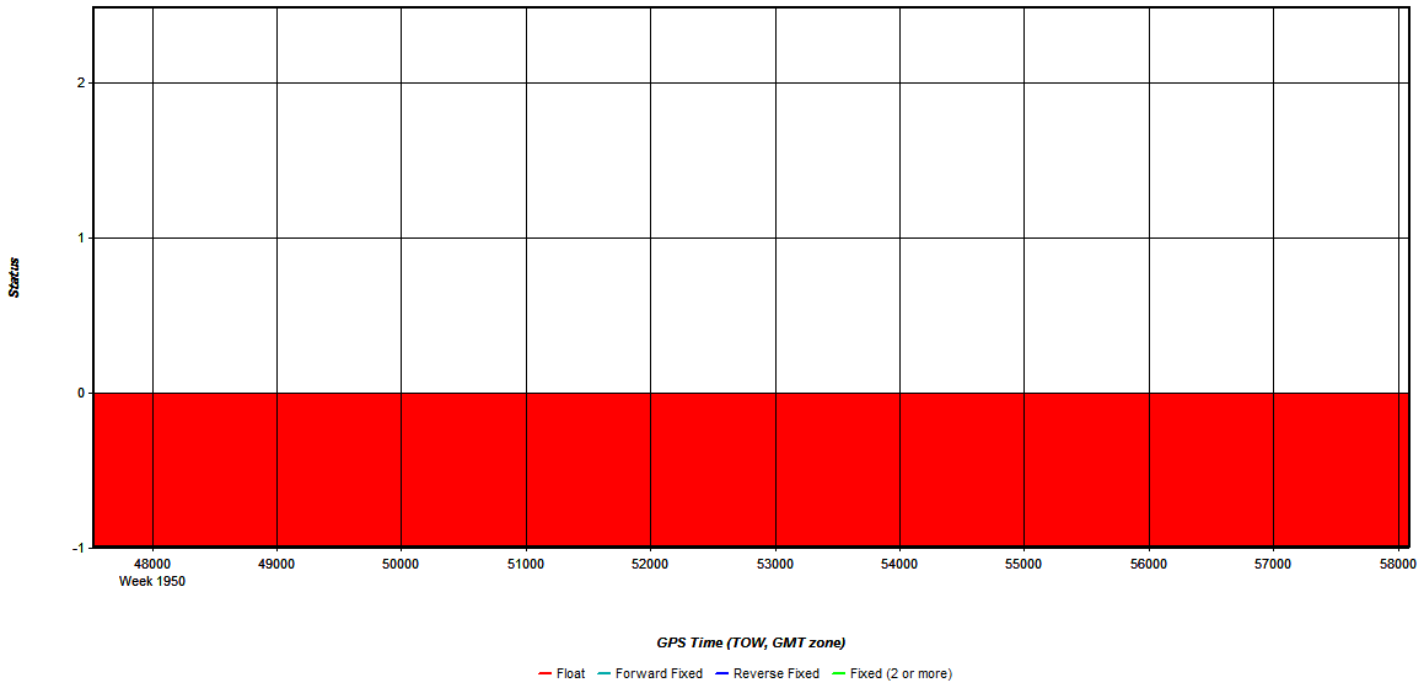
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/Sec	GPS Altitude	Crab	Turb (0,+,-)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc
1066	90	12:43	12:57	150	1.2/18	7162	-8		SKC VIS 8-9 LIGHT TURBULANCE WEST END
1059	270	13:01	13:15	153	1.3/18	7165	+9		
1058	90	13:19	13:33	148	1.2/19	7169	-8		
1057	270	13:36	13:51	150	1.4/18	7169	+9		
1056	90	13:54	14:08	149	1.3/17	7178	-6		
1055	270	14:12	14:26	154	1.1/19	7181	+10		
1054	90	14:29	14:44	143	1.2/19	7192	-8		
1053	270	14:47	15:01	154	1.1/19	7201	+9		
1052	90	15:04	15:19	149	1.2/18	7201	-7		
1051	270	15:22	15:36	153	1.1/18	7205	+10		
1050	90	15:38	15:53	155	1.2/18	7205	-6		
XTIE	S	15:57	16:00	146	1.3/17	7280	—		

Total Proj Lines: Lines Flown: 11 Lines Remain: Online Time: 3.3 Mob Time: .8 Notes:

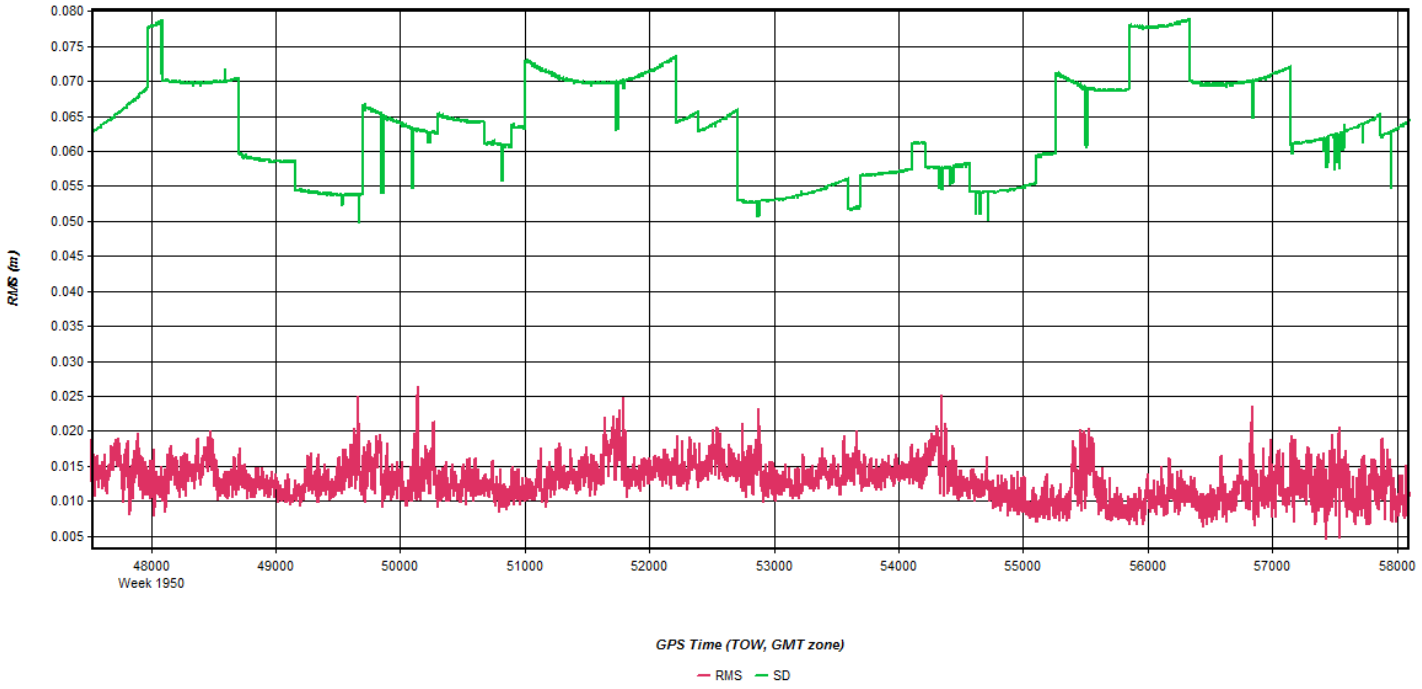
May 21, 2017-A (N915WC, SN8237)

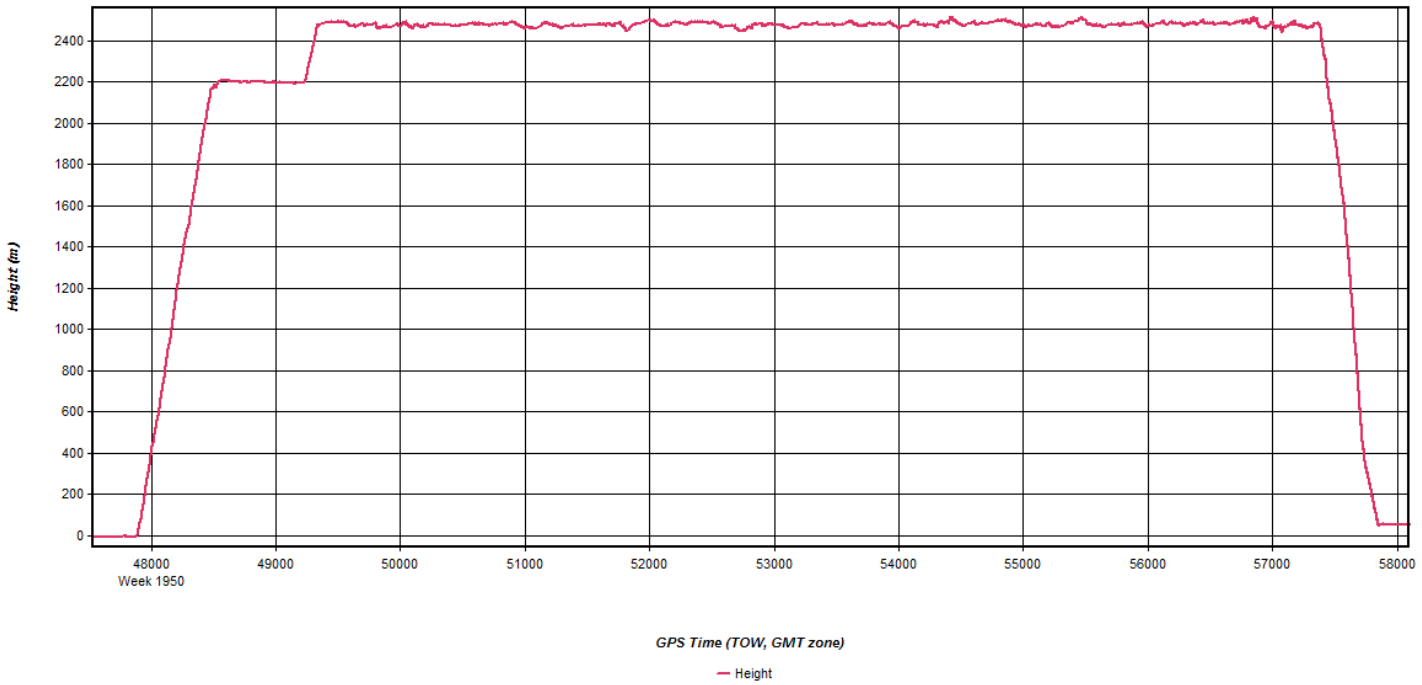

10 km

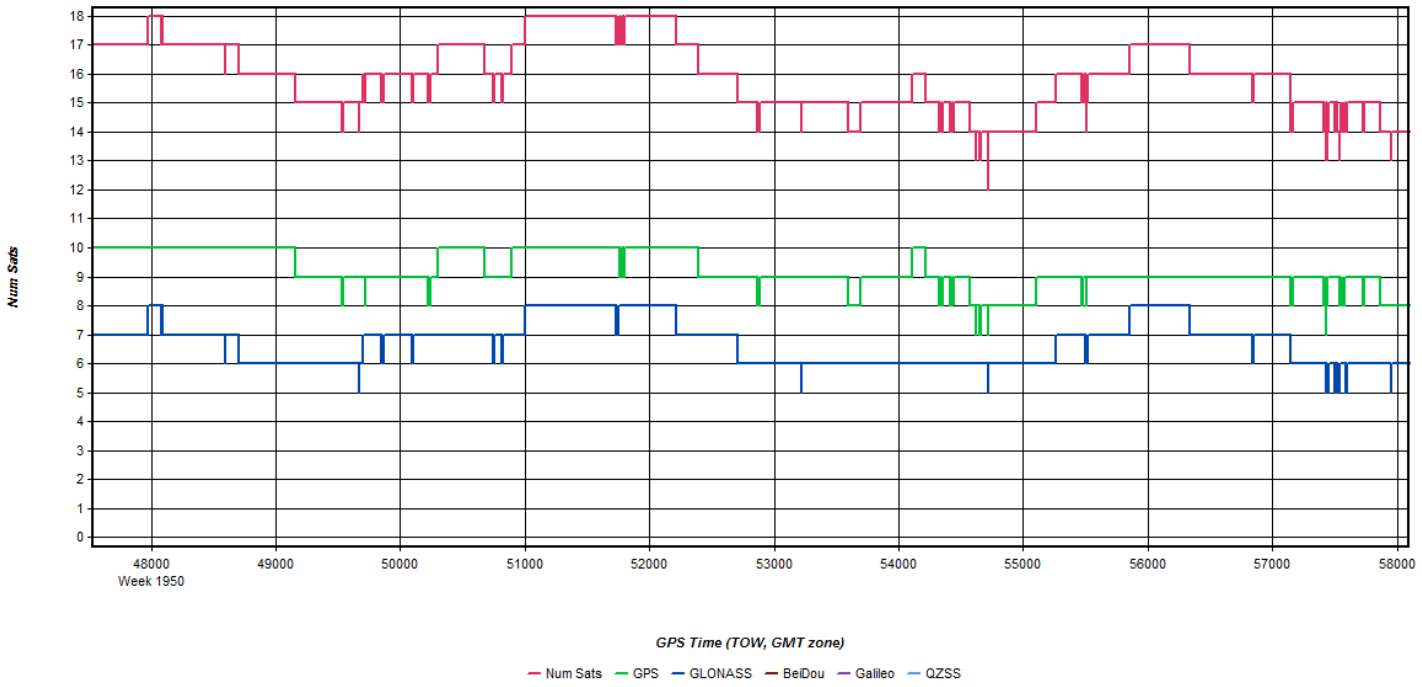

PDOP
2.30
2.25
2.20
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
PDOP

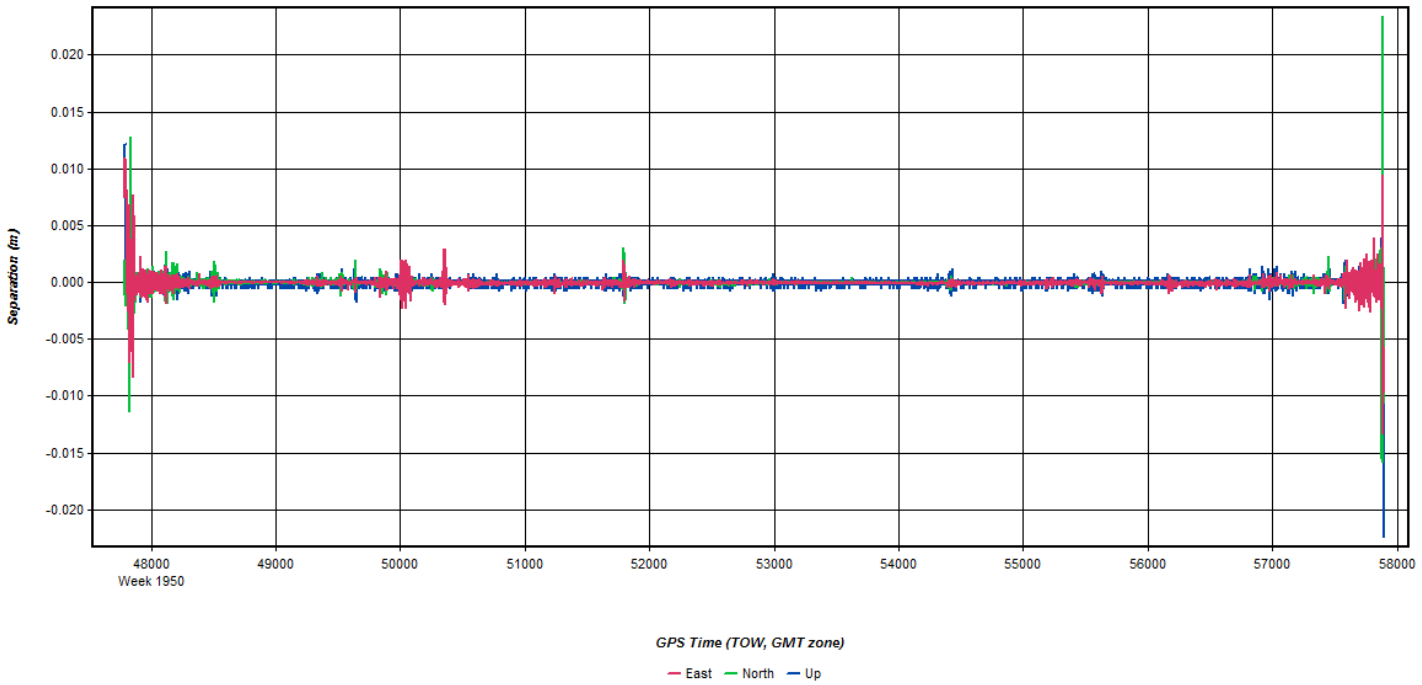

Status
2
1
0
-1
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

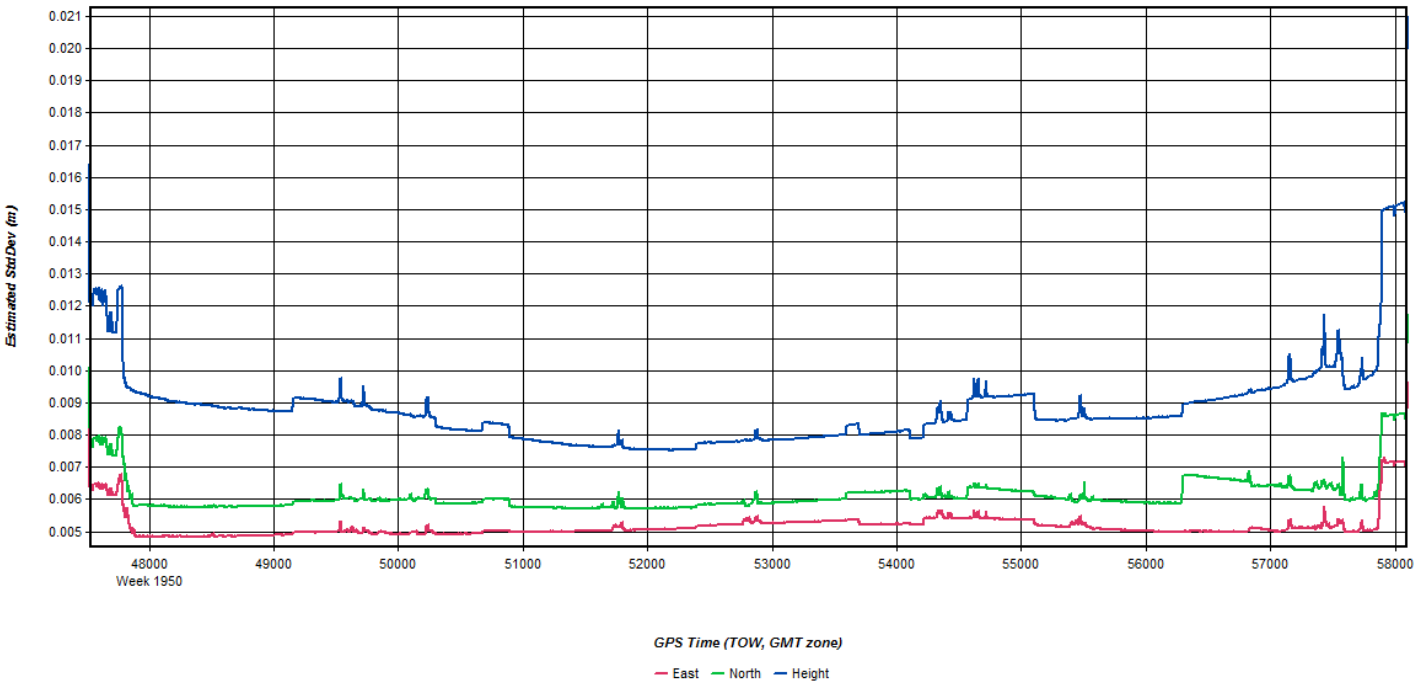
Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
-40
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch

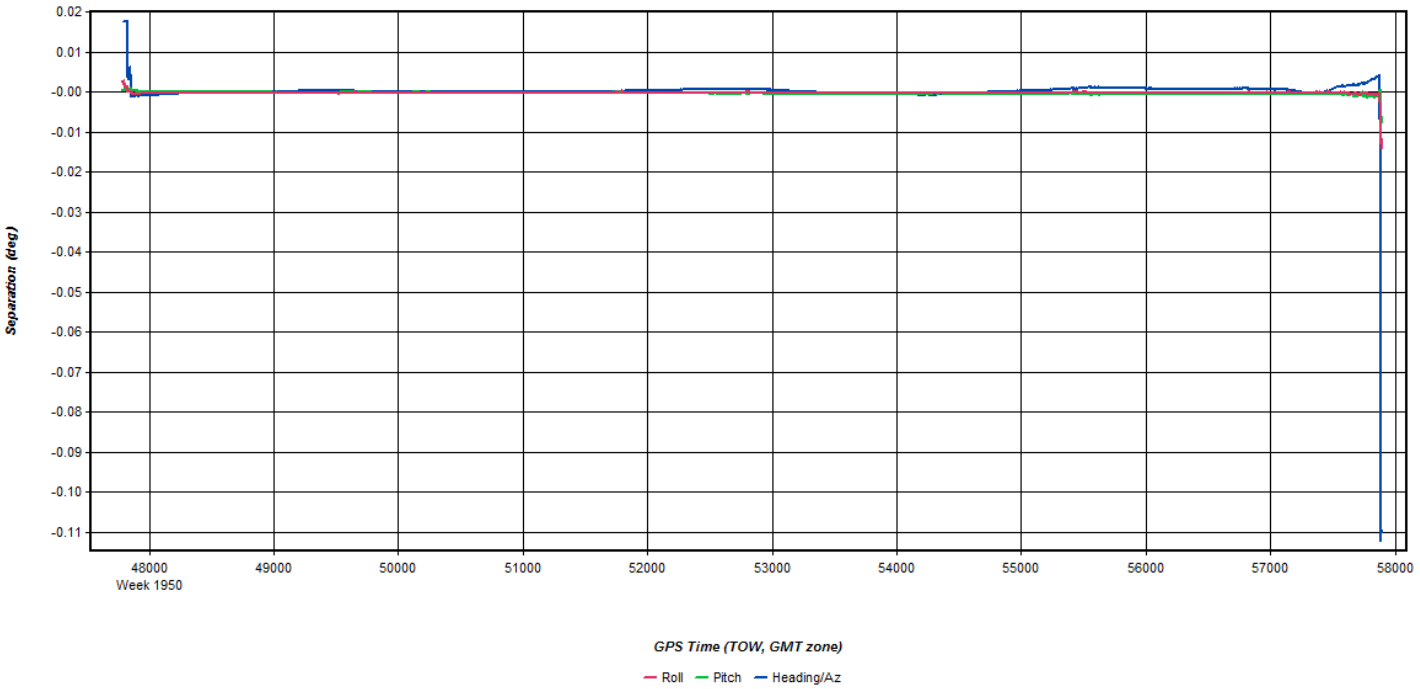

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
RMS
SD

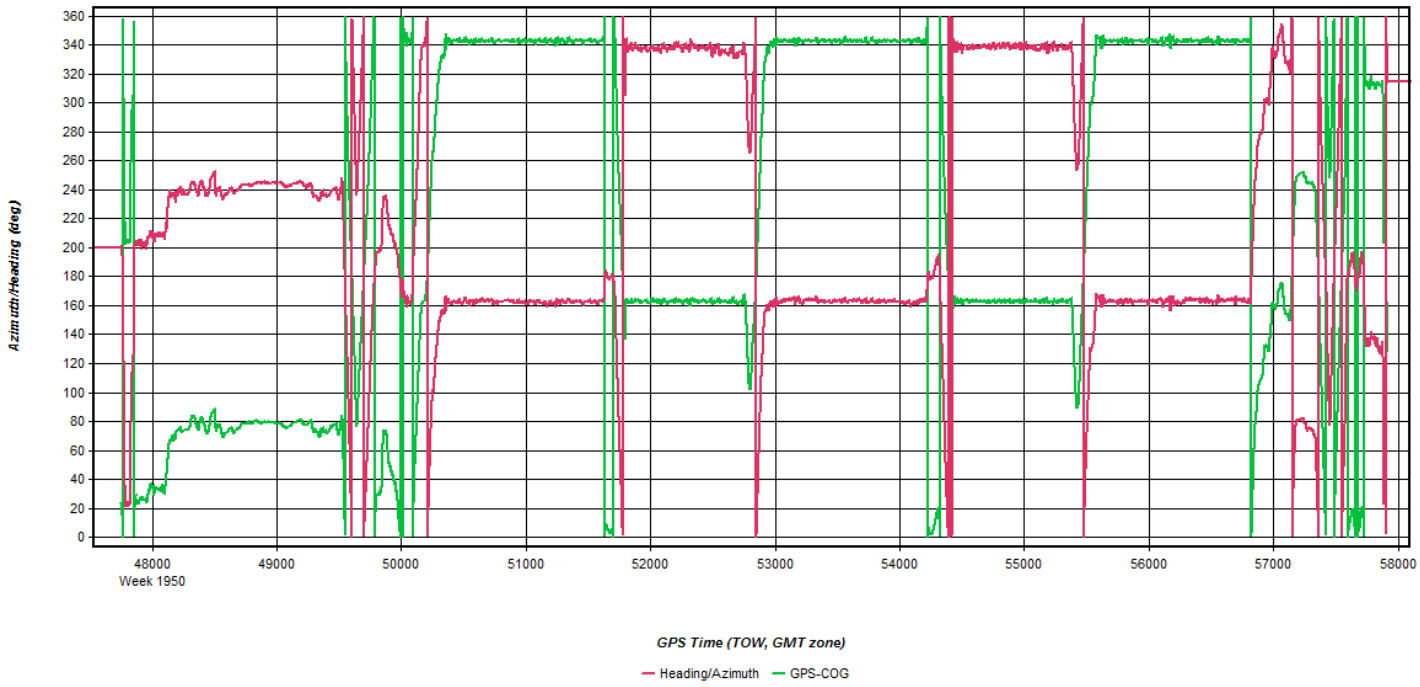

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

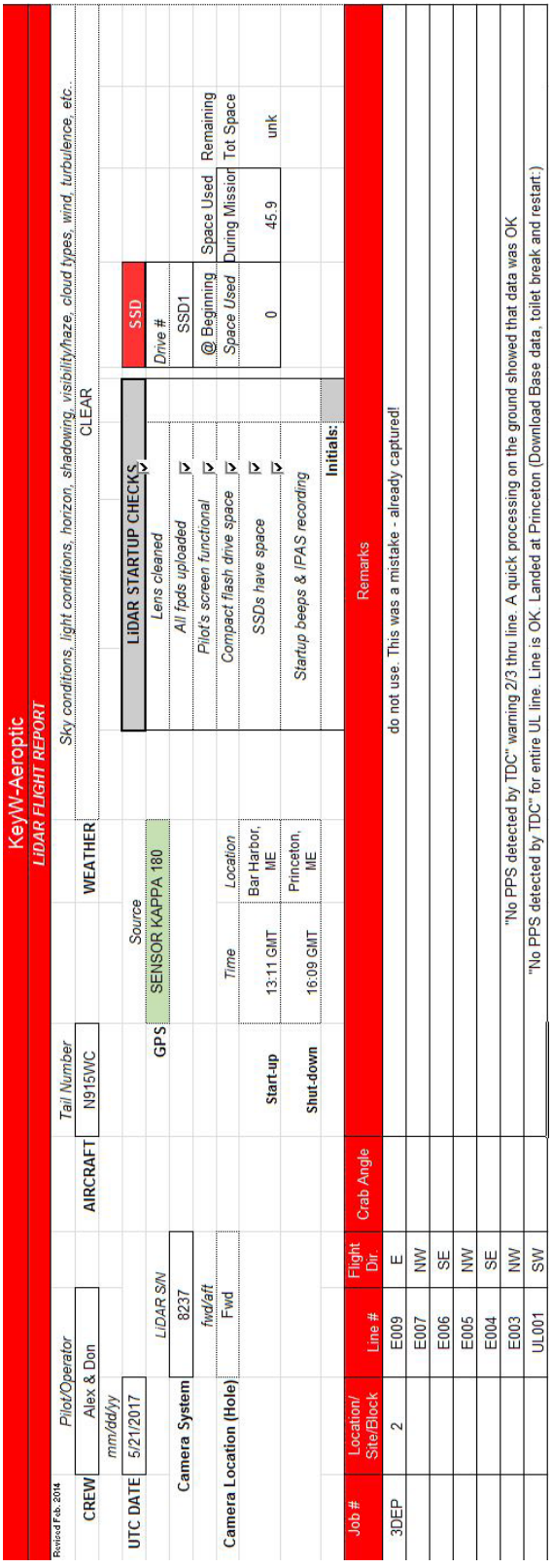

Separation (m)
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.02
0.01
-0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



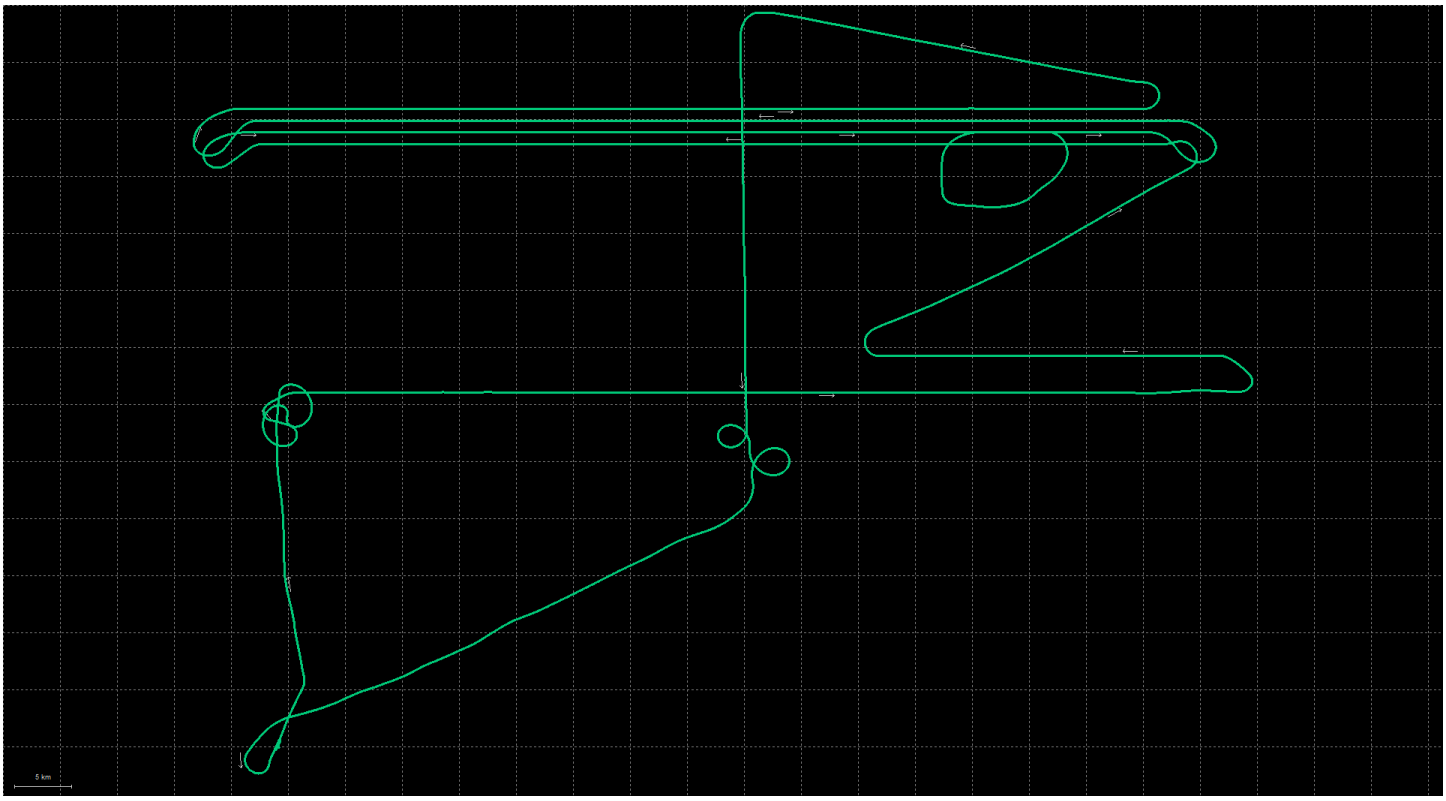
KeyW-Aeroptic

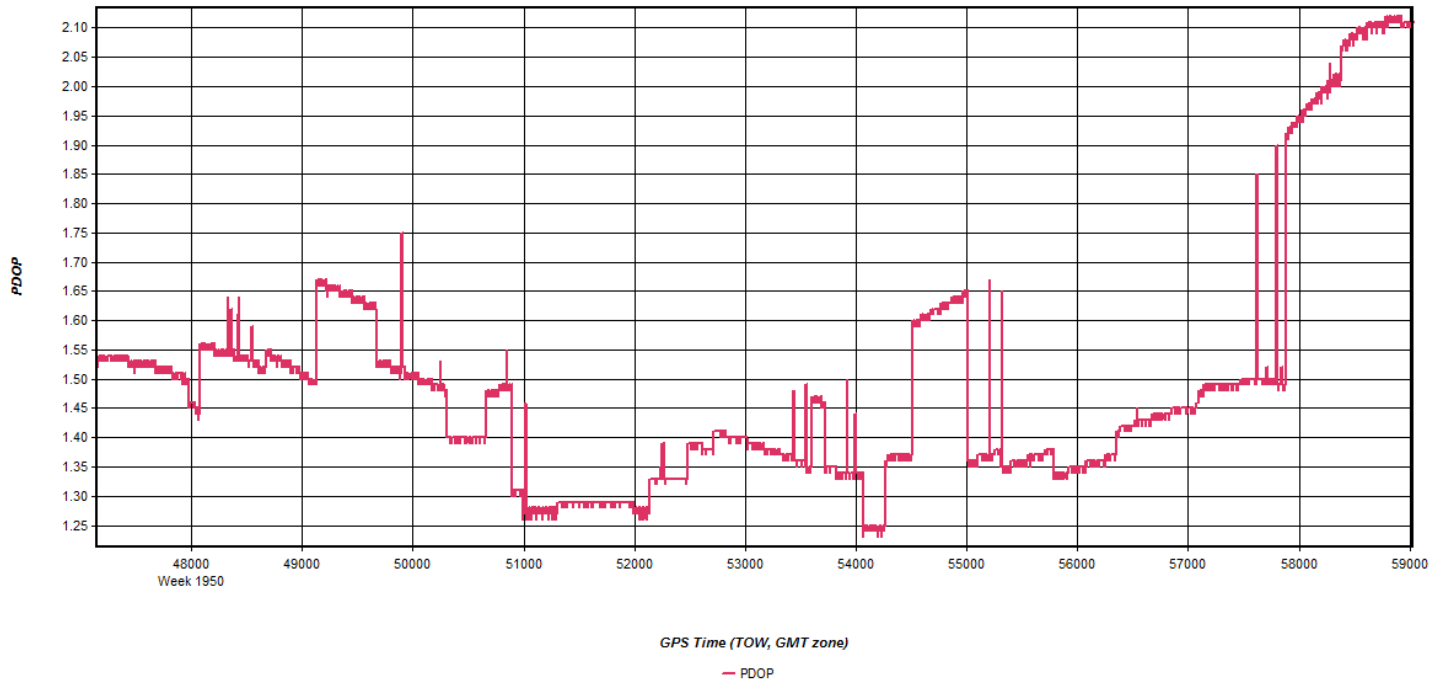
LiDAR FLIGHT REPORT

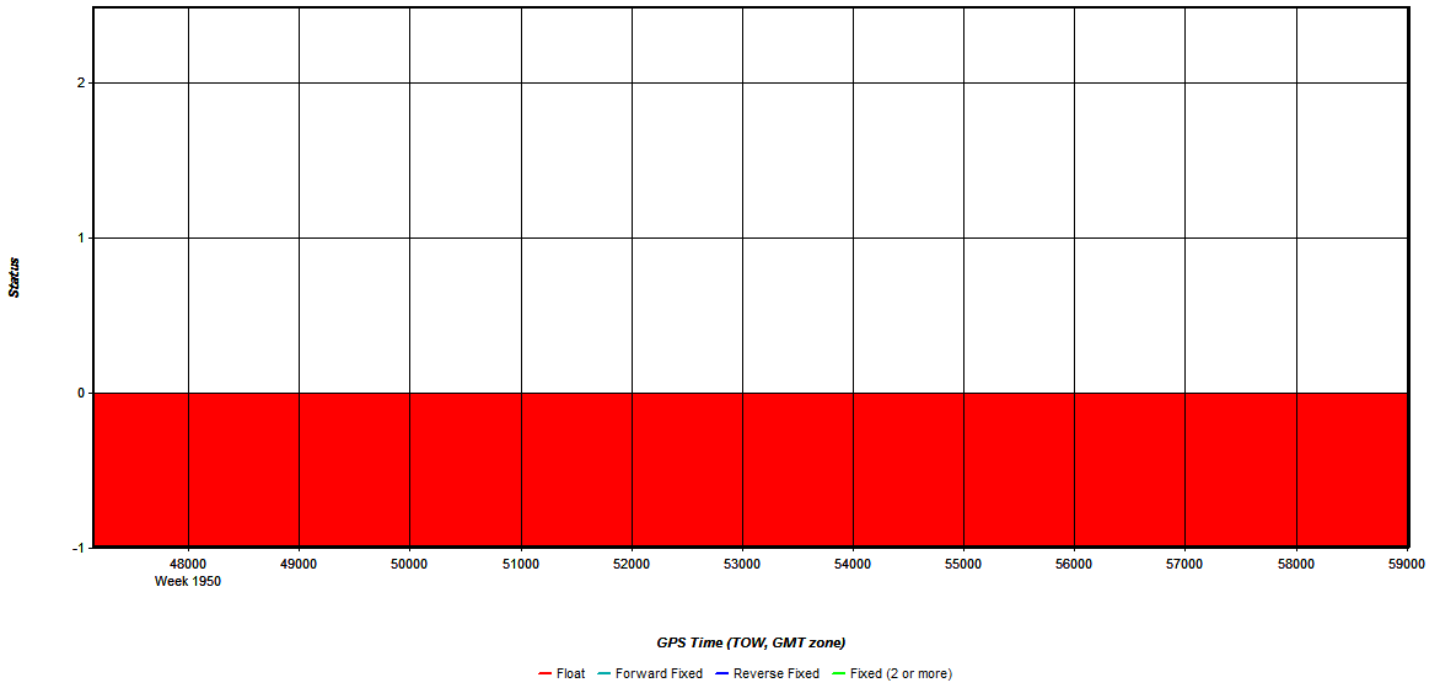
Revised Feb. 2014

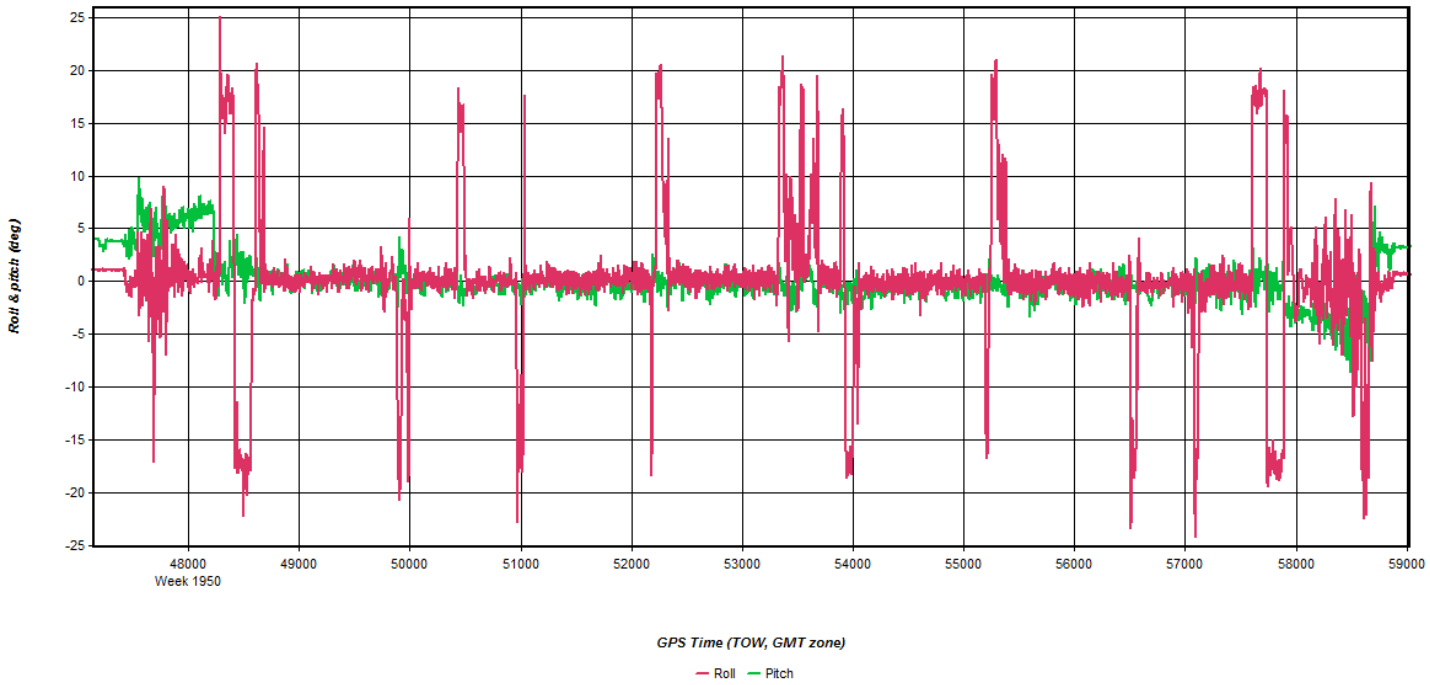
| | | |

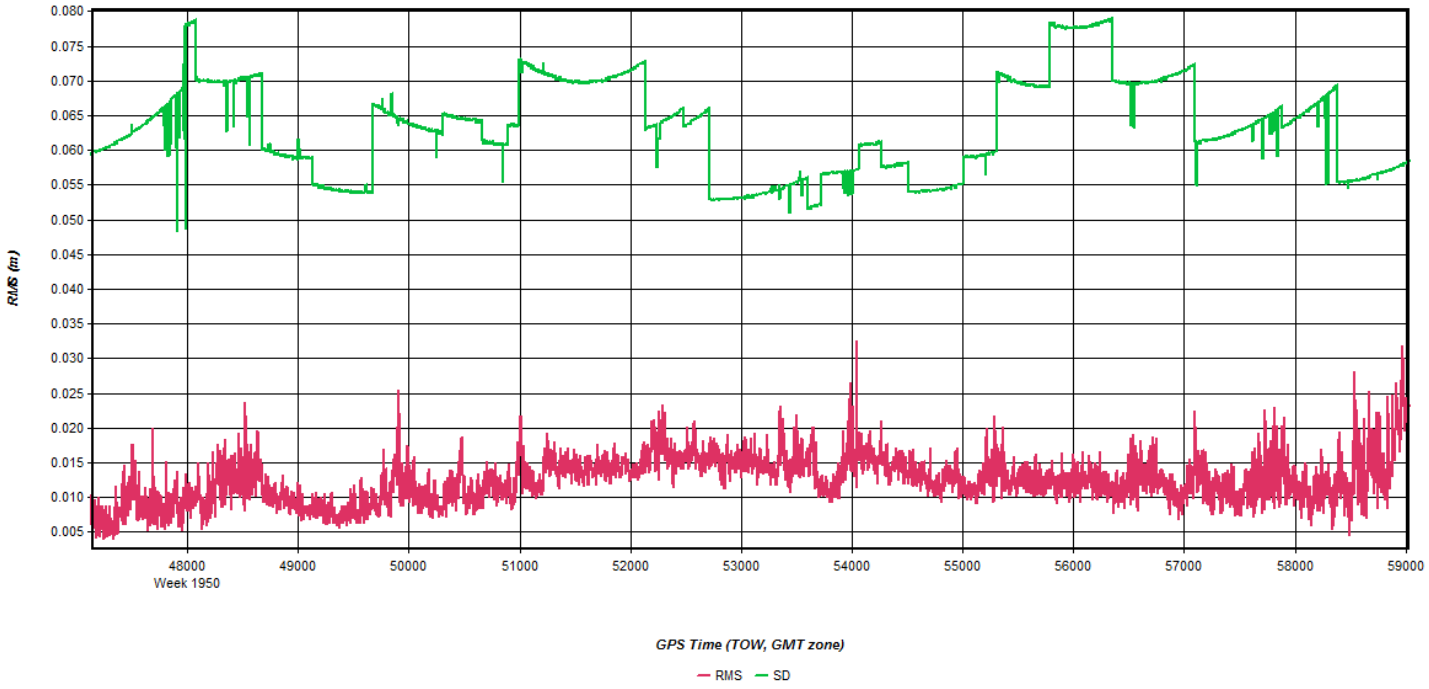
May 21, 2017-A (N916WC, SN8119)

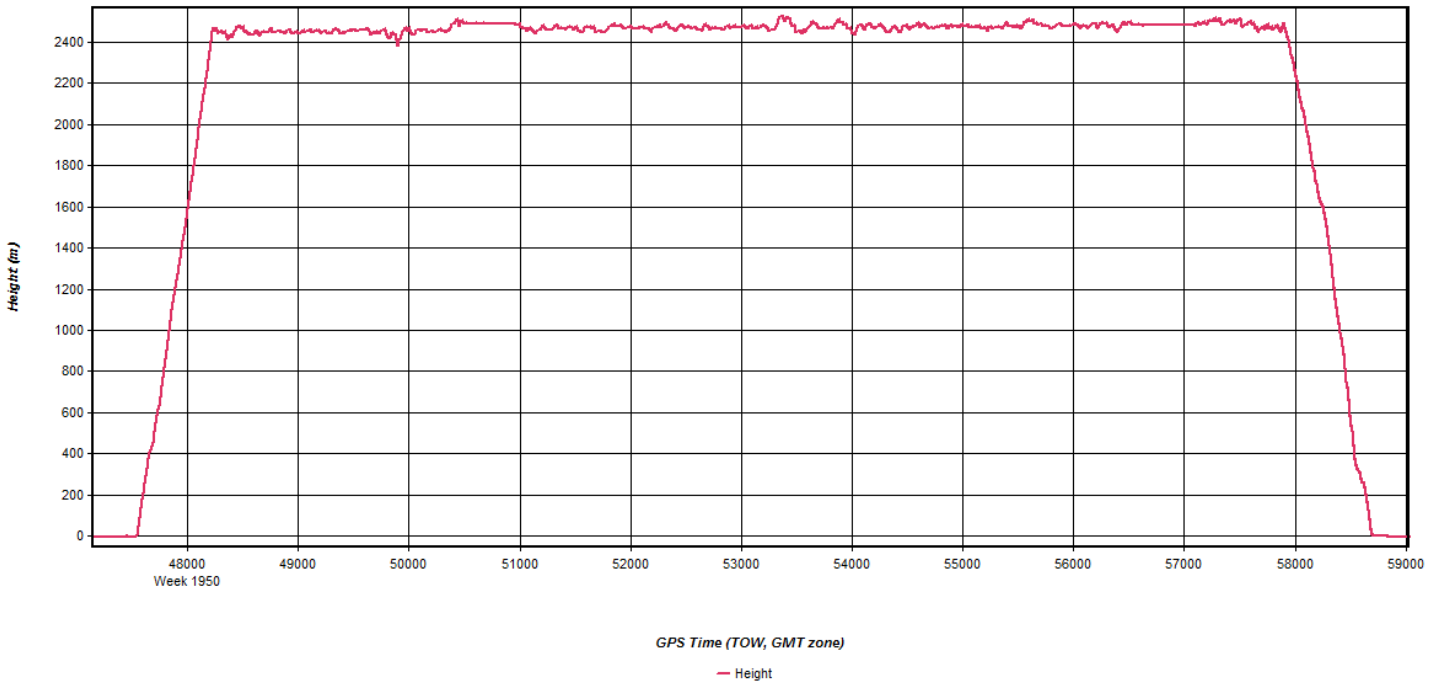

5 km

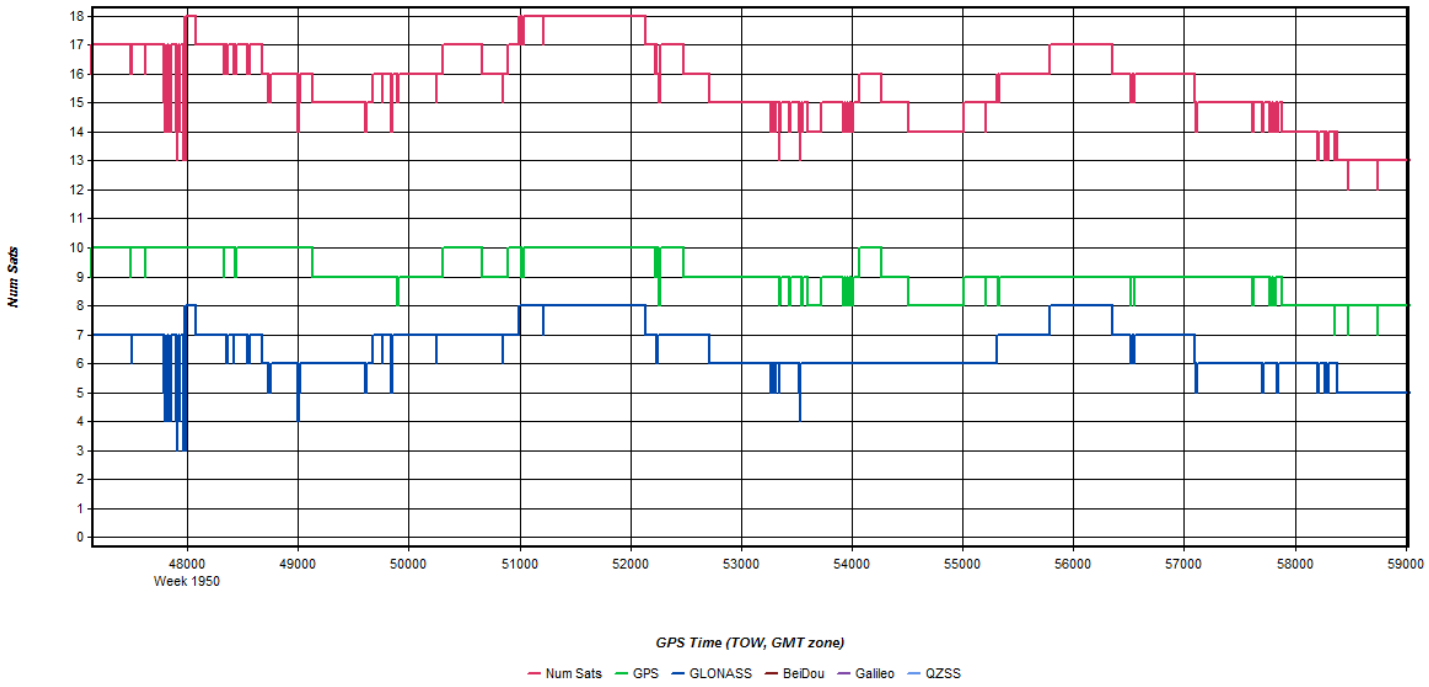

PDOP
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
PDOP

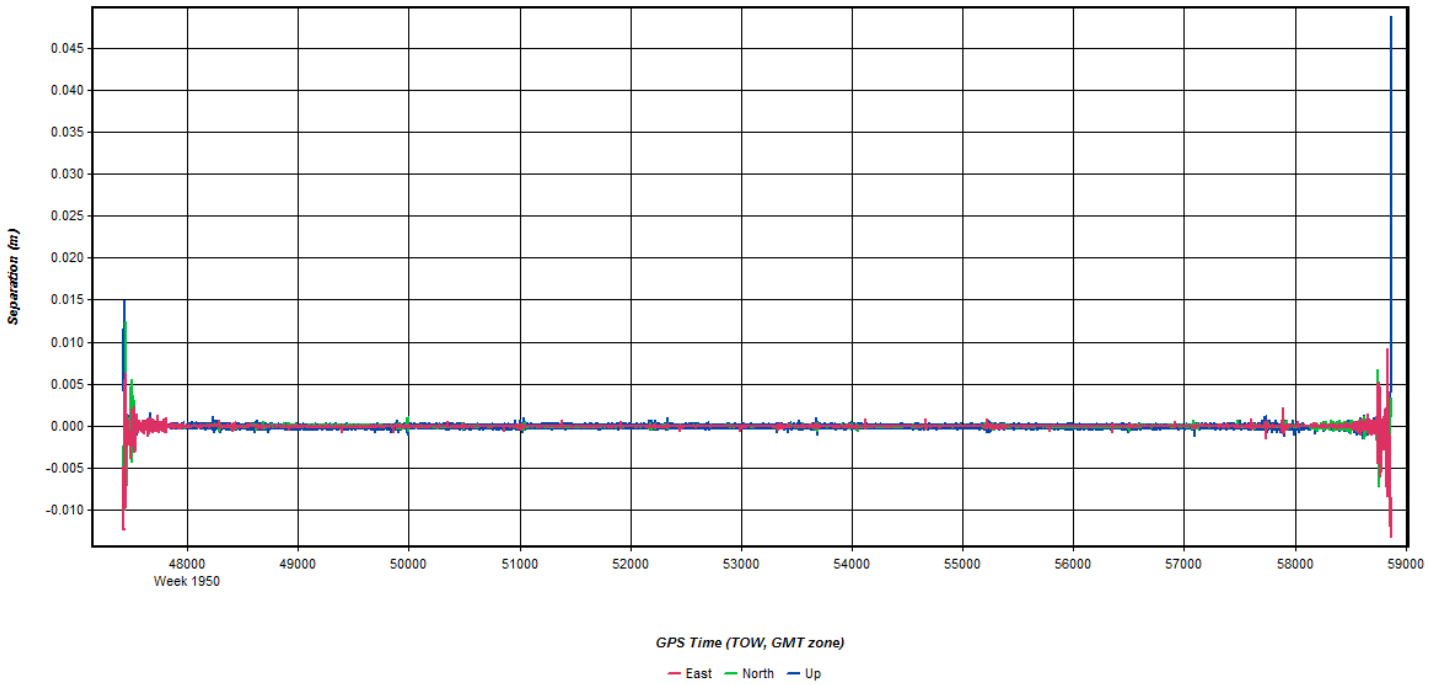

Status
2
1
0
-1
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

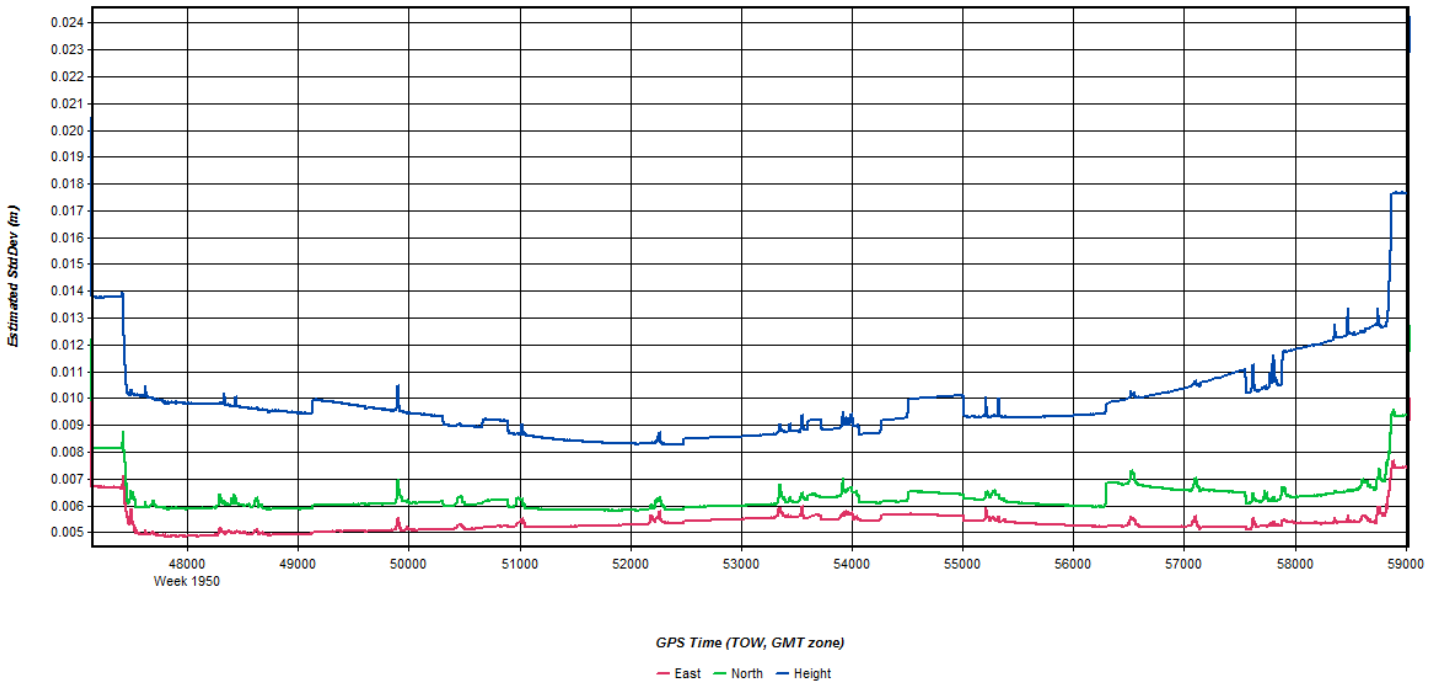

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Roll
Pitch

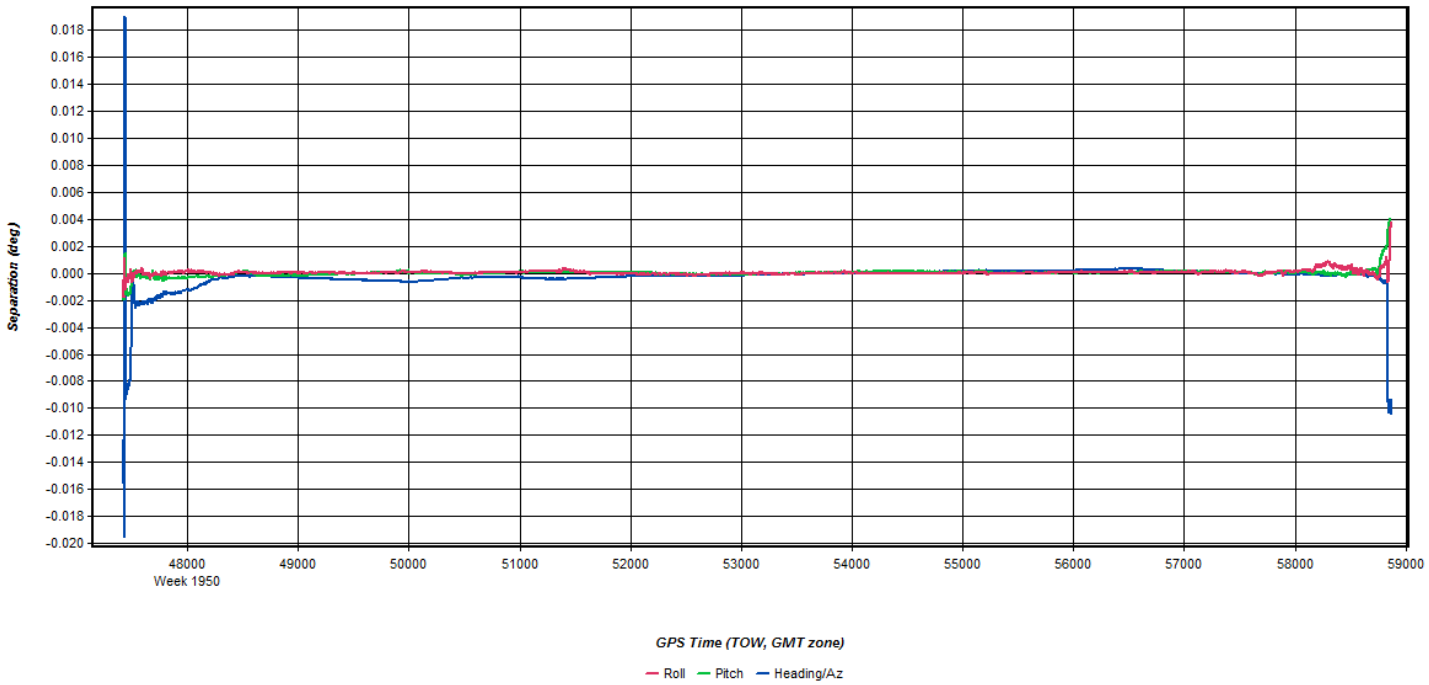

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
RMS
SD

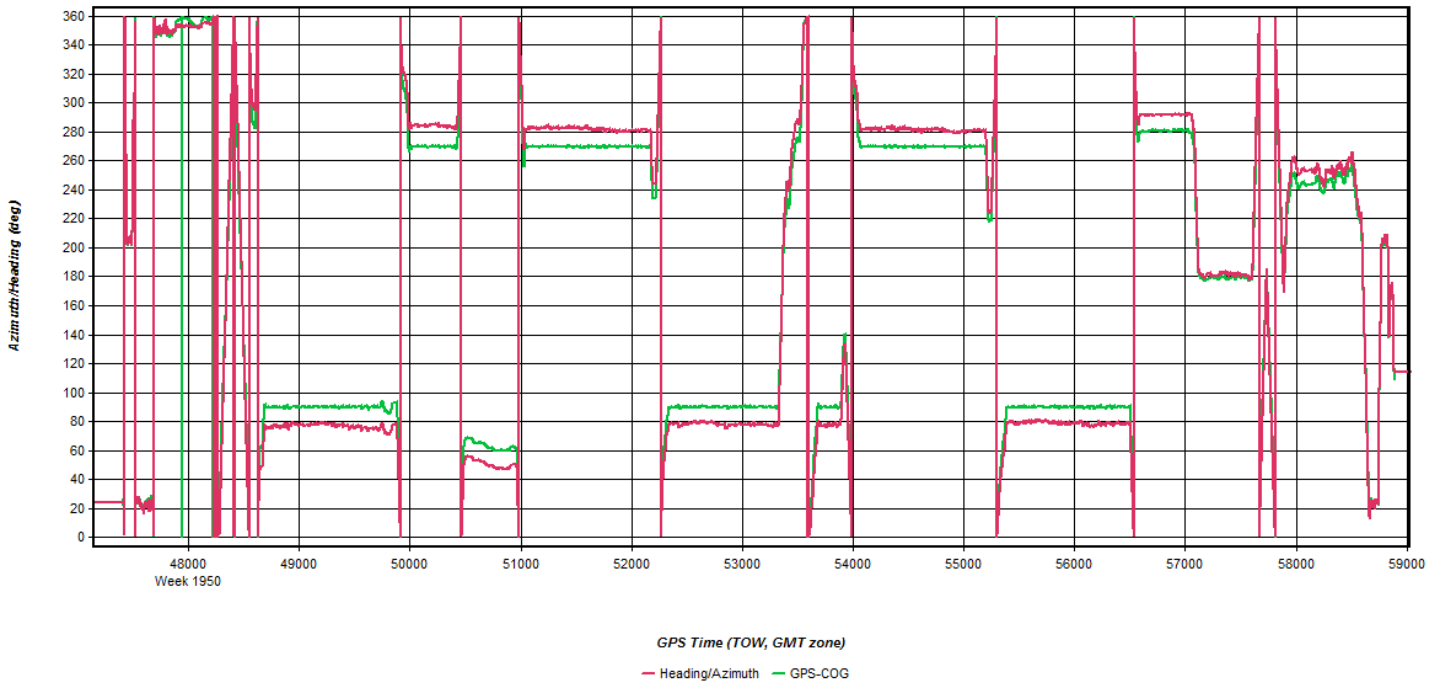

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

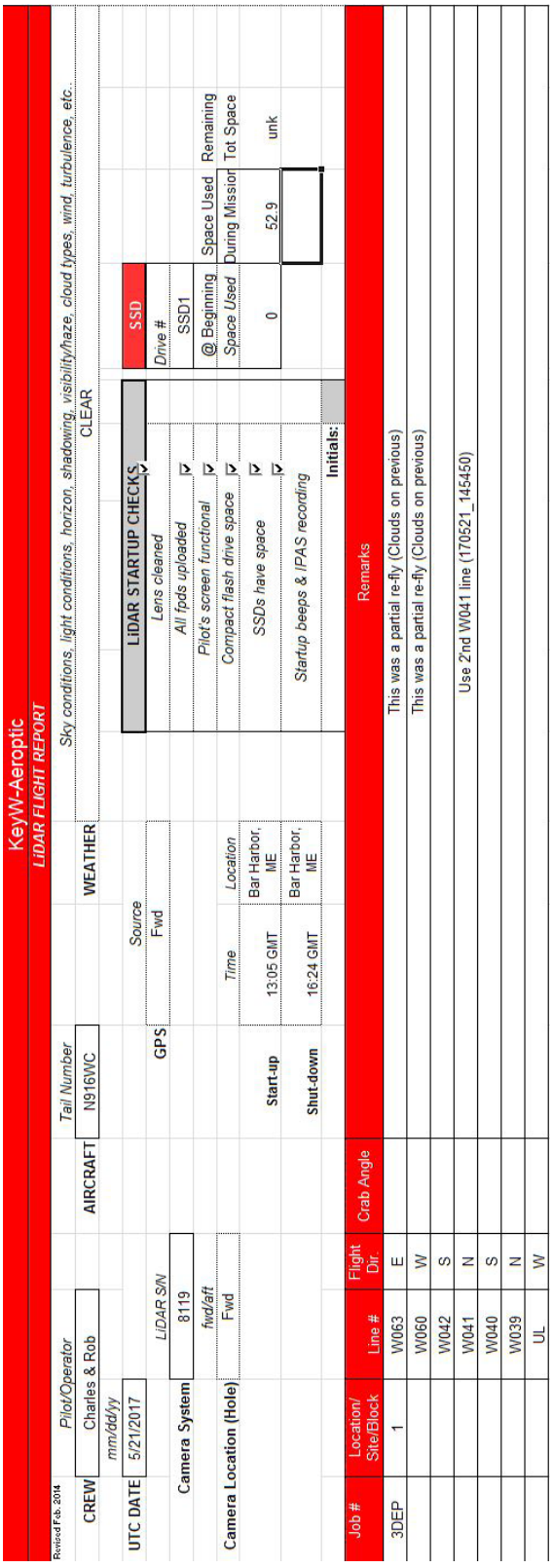

Separation (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.024
0.023
0.022
0.021
0.020
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
48000
Week 1950
49000
50000
51000
52000
53000
54000
55000
56000
57000
58000
59000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



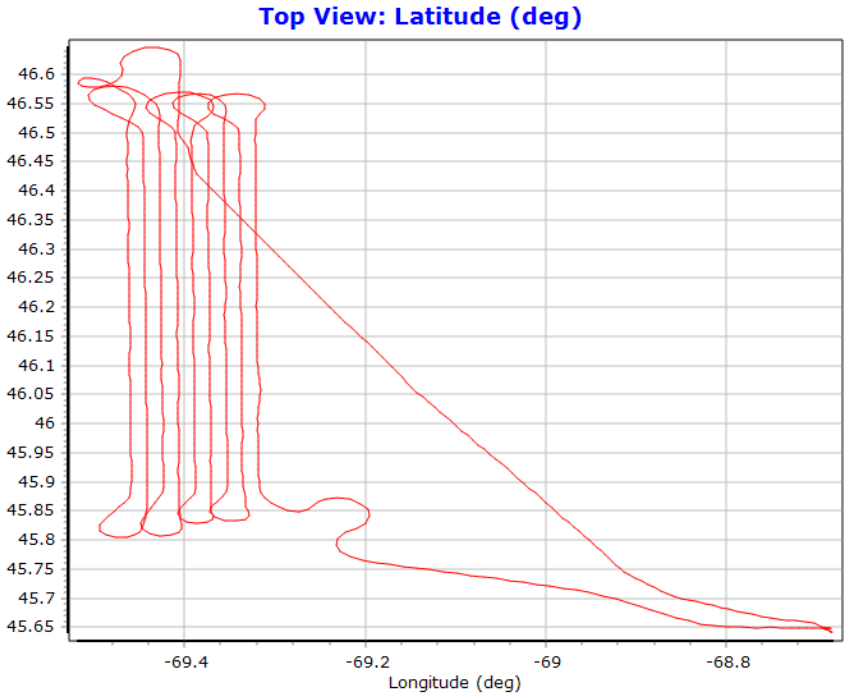
KeyW-Aeroptic

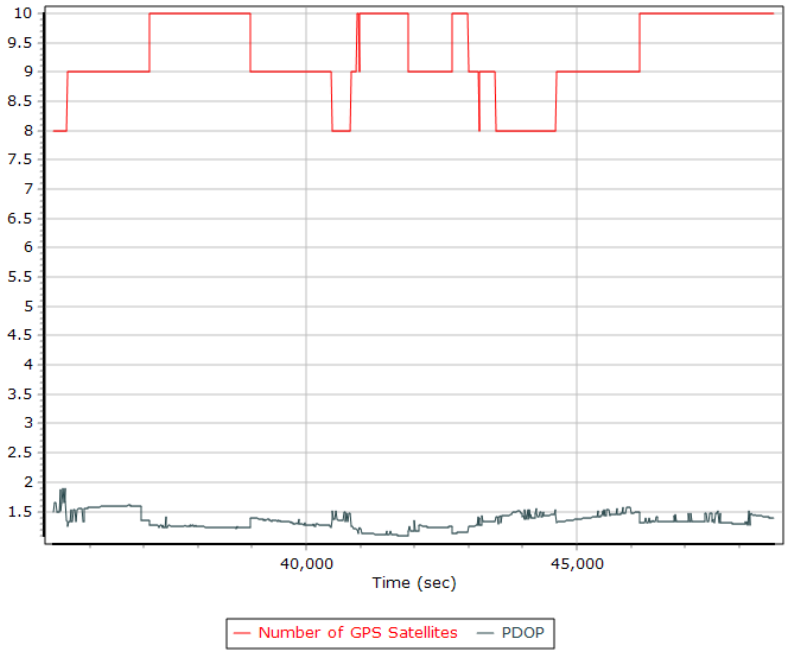
LiDAR FLIGHT REPORT

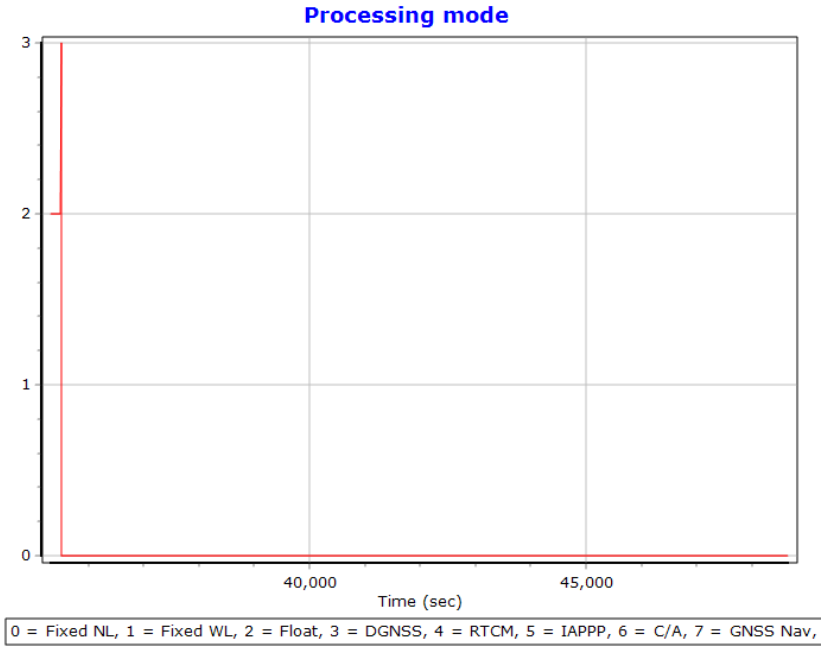
Revised Feb. 2014

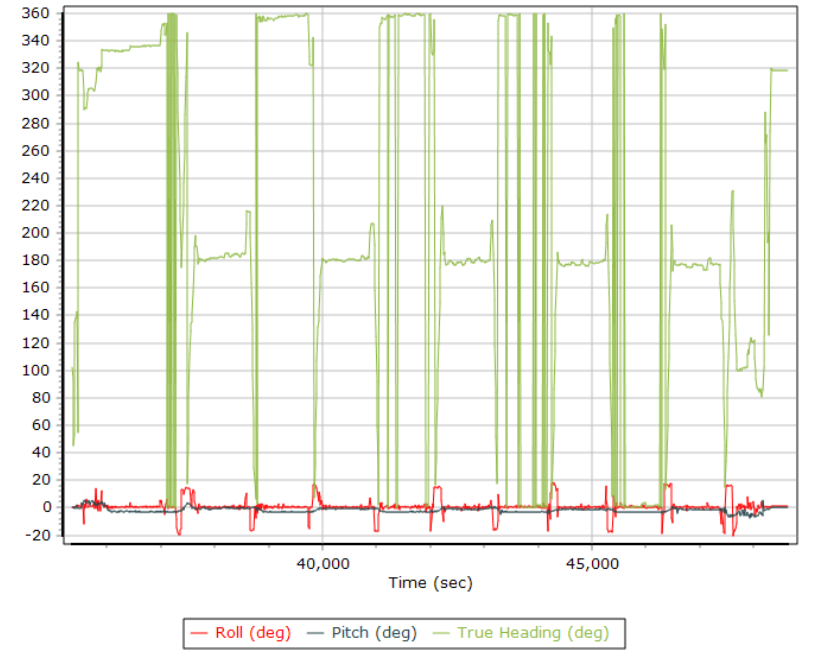
| | | |

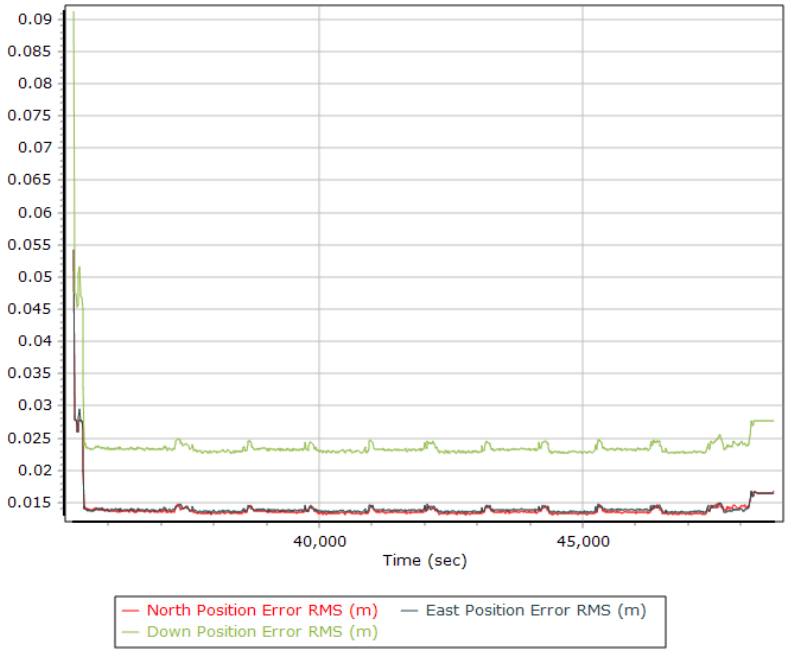
May 21, 2017-A (N1007Q,SN2221256)


Top View: Latitude (deg)
46.6
46.55
46.5
46.45
46.4
46.35
46.3
46.25
46.2
46.15
46.1
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
-69.4
-69.2
-69
-68.8
Longitude (deg)

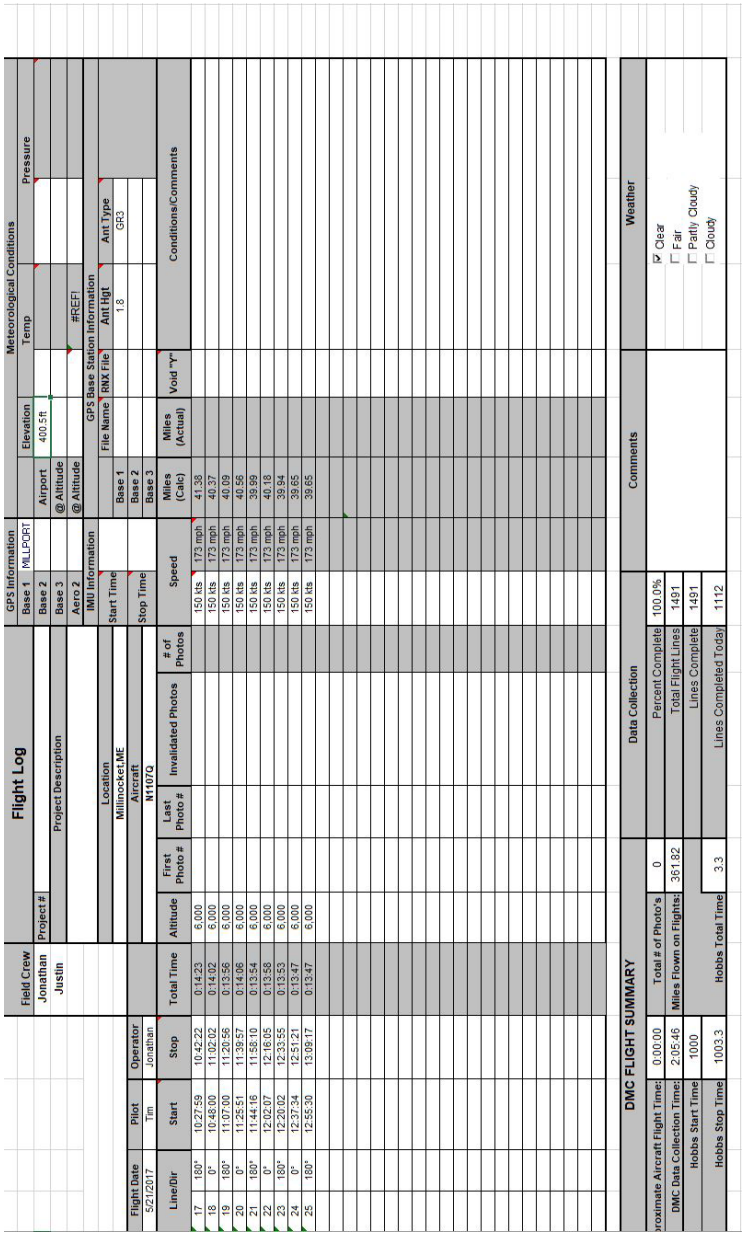

10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
40,000
45,000
Time (sec)
Number of GPS Satellites
PDOP


Processing mode
3
2
1
0
40,000
45,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
40,000
45,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.09
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
40,000
45,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

Flight Log

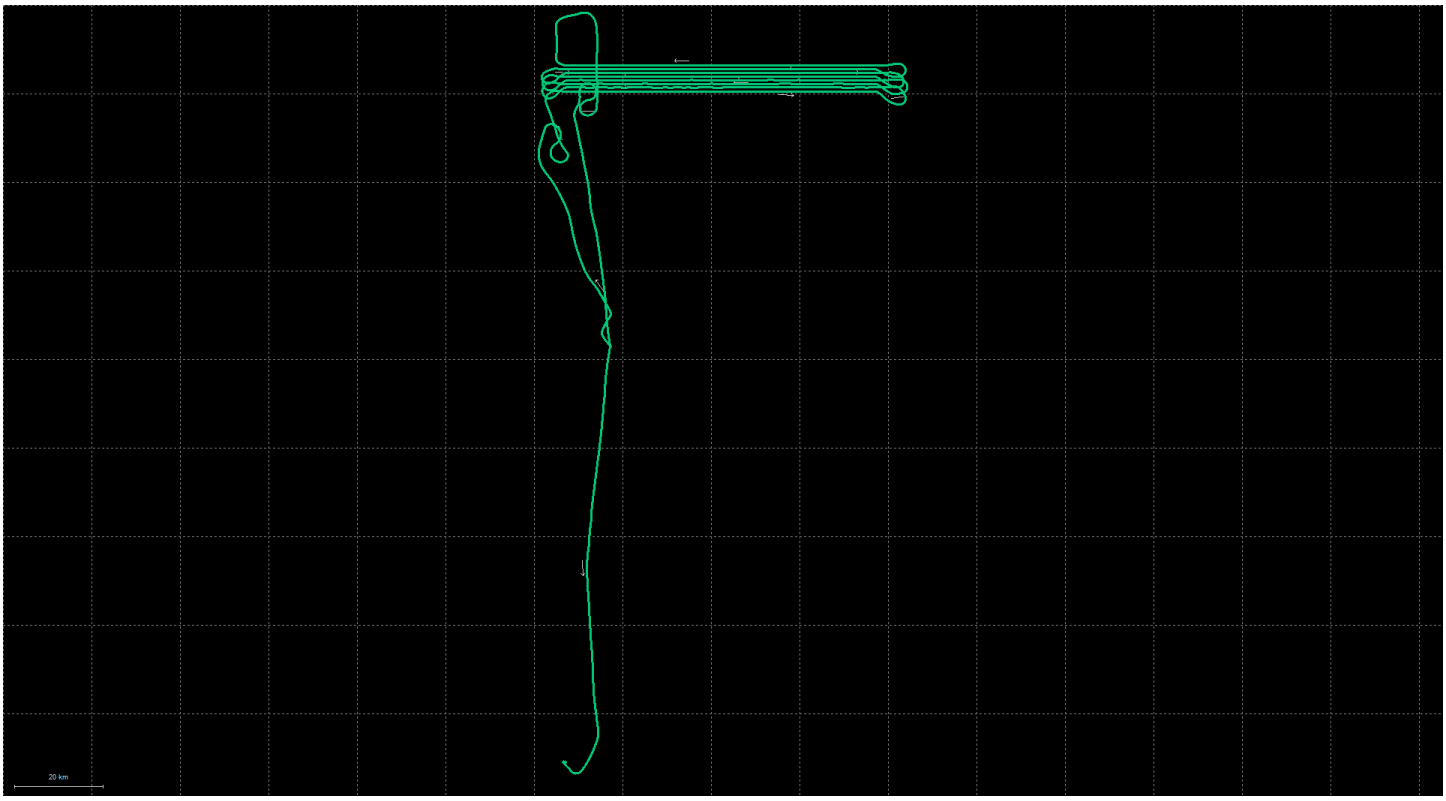


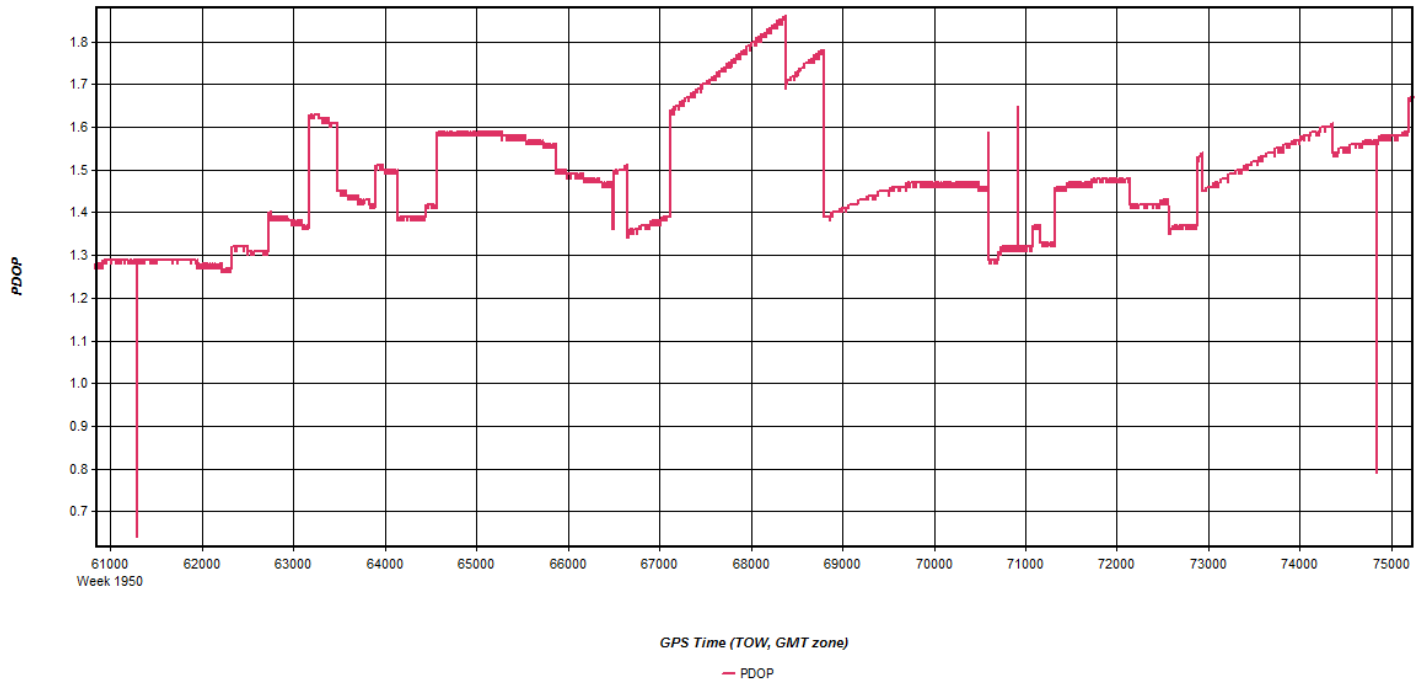
Flight Log

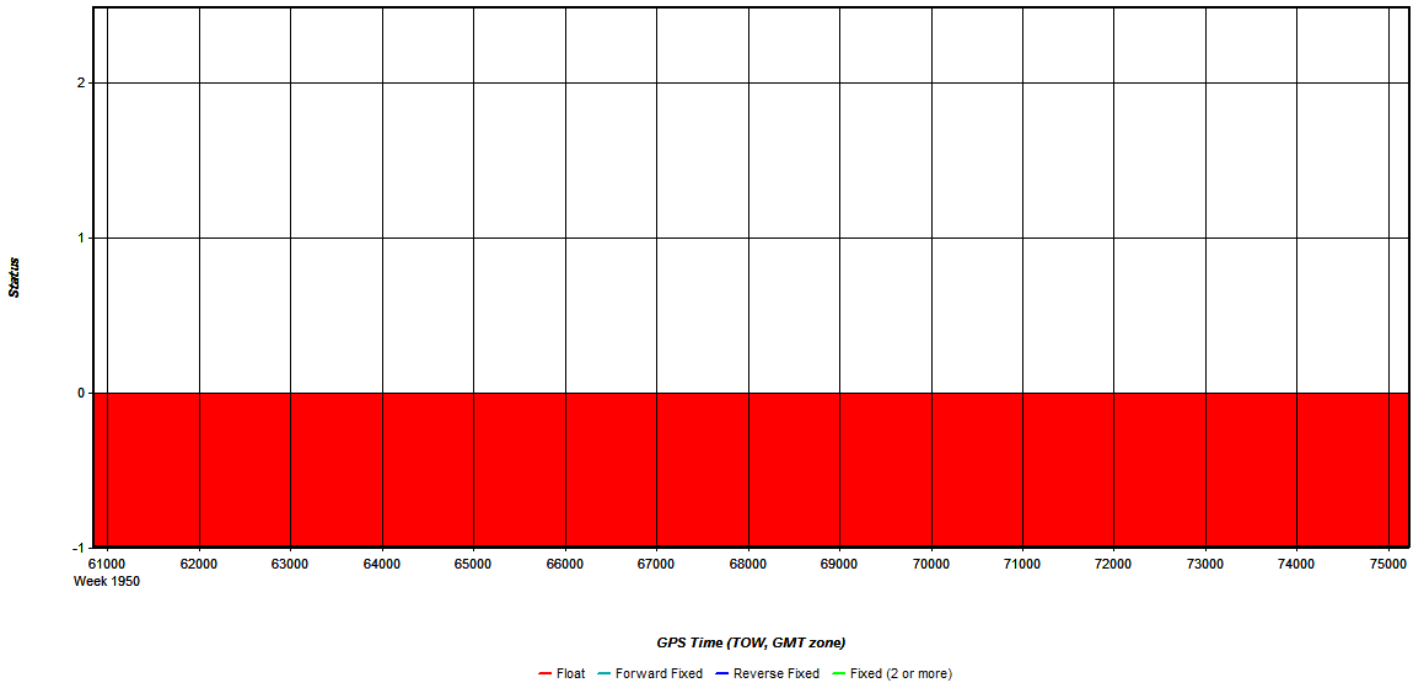
Field Crew			GPS Information		Meteorological Conditions			Pressure
Jonathan			Base 1	MLLPORT		Temp		
Justin	Project #		Base 2		Airport	Elevation		
	Project Description		Base 3		@ Altitude	400.5ft		
			Aero 2		@ Altitude		#REF!	
			IMU Information		GPS Base Station Information			
					File Name	RINX File	Ant Hgt	Ant Type
	Location		Start Time		Base 1		1.8	GR3
	Millinocket,ME				Base 2			
	Aircraft		Stop Time		Base 3			
	N1107Q							

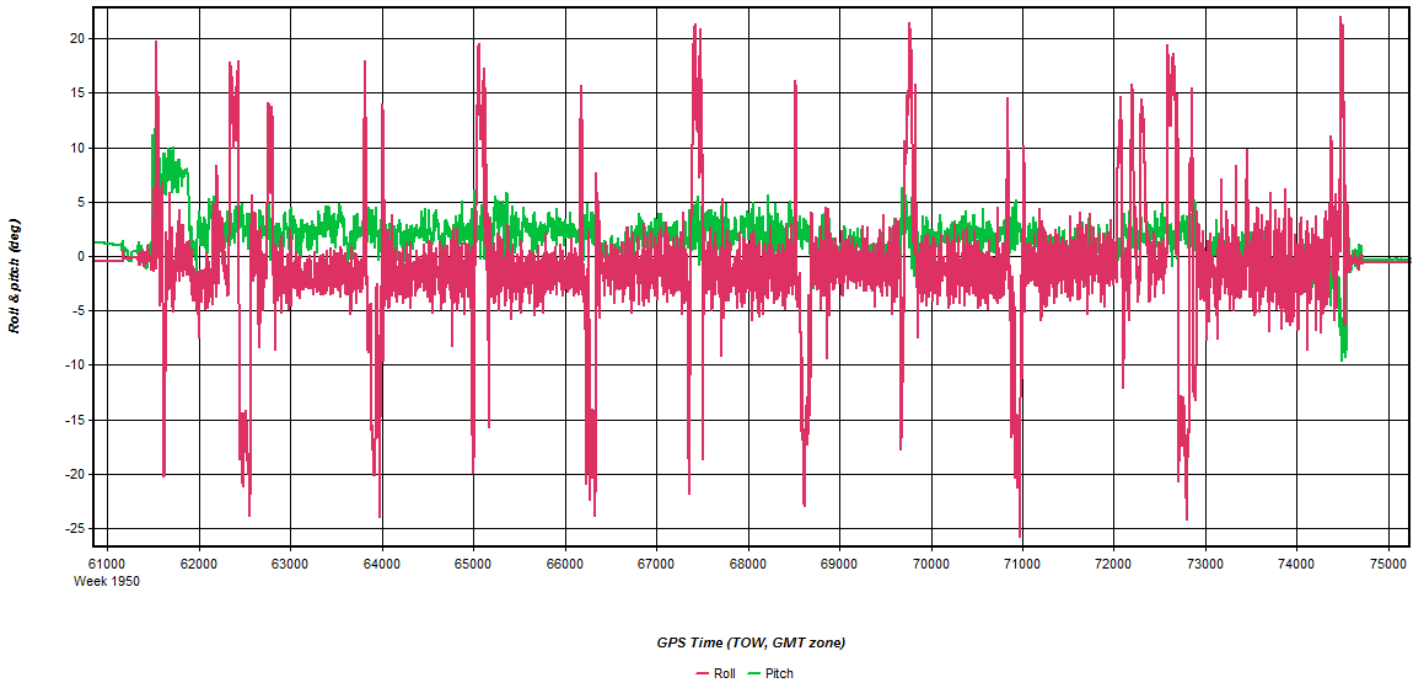
| Flight Date | Pilot | Operator | | | | | | |

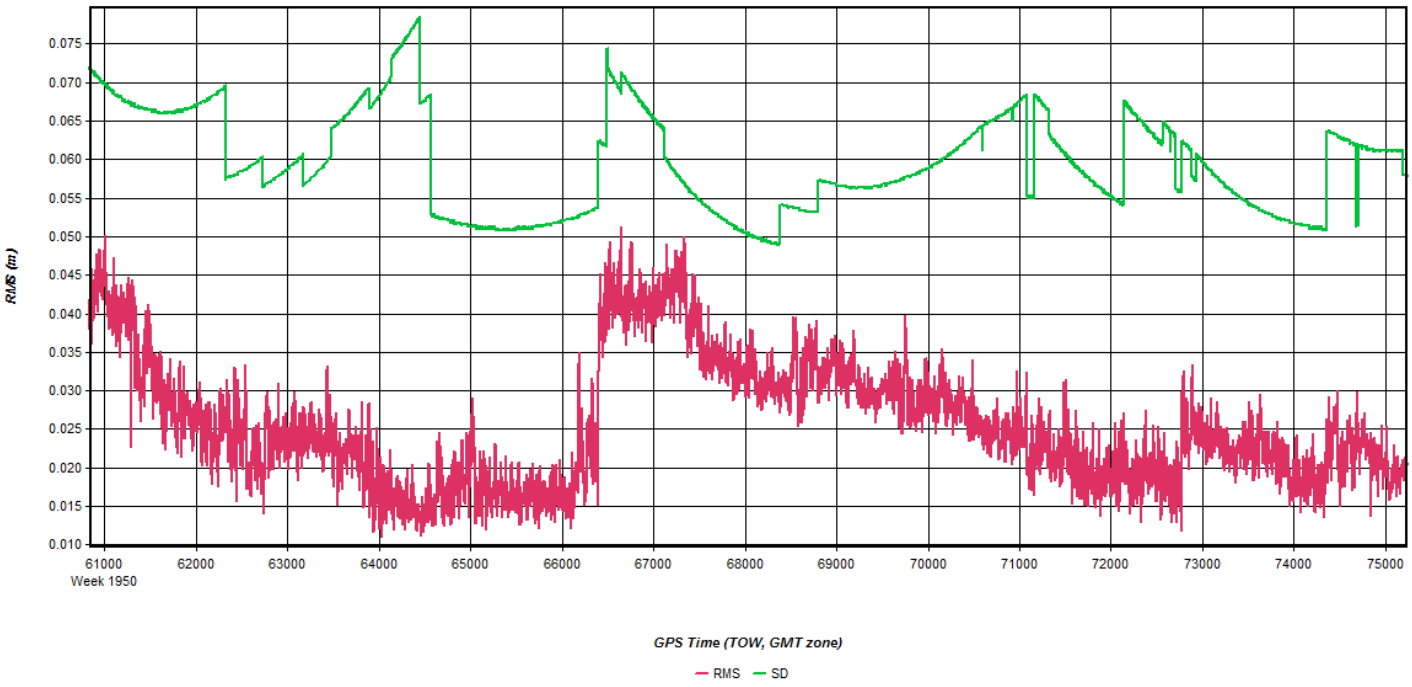
May 21, 2017-B (N73TM, SN7178)

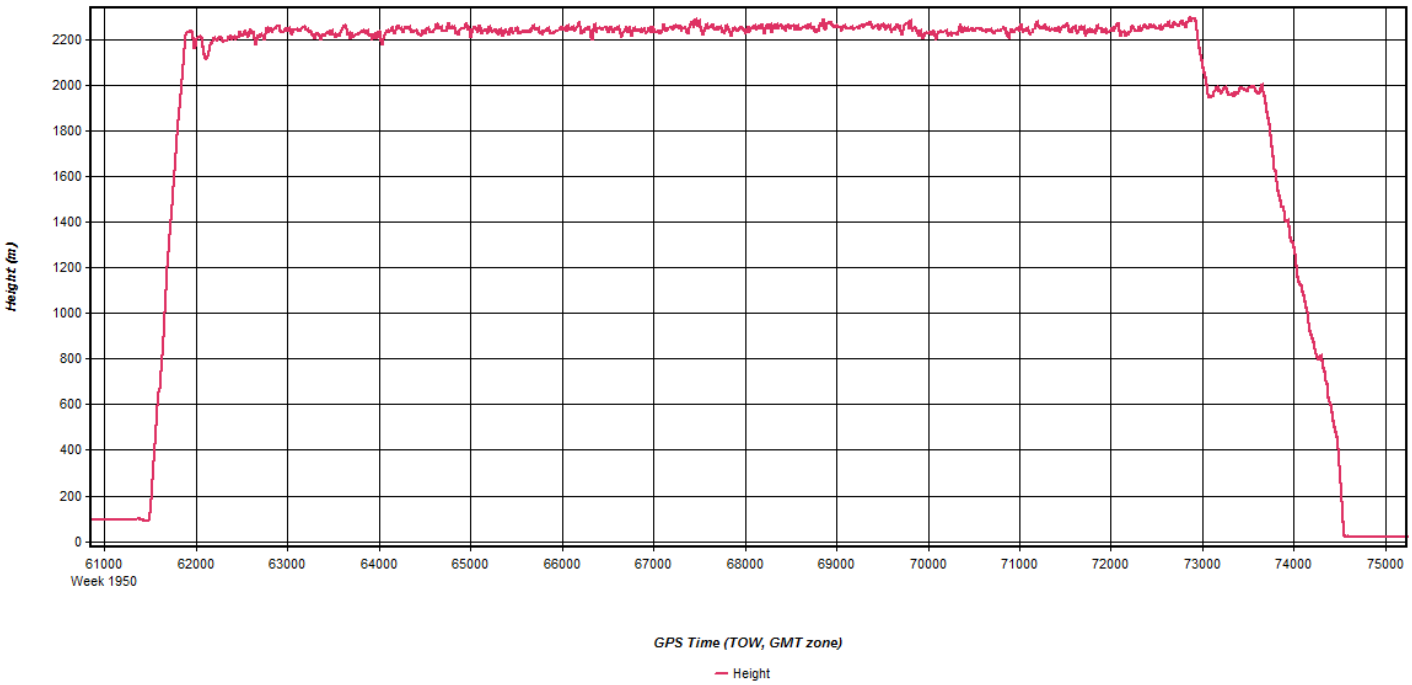

20 km

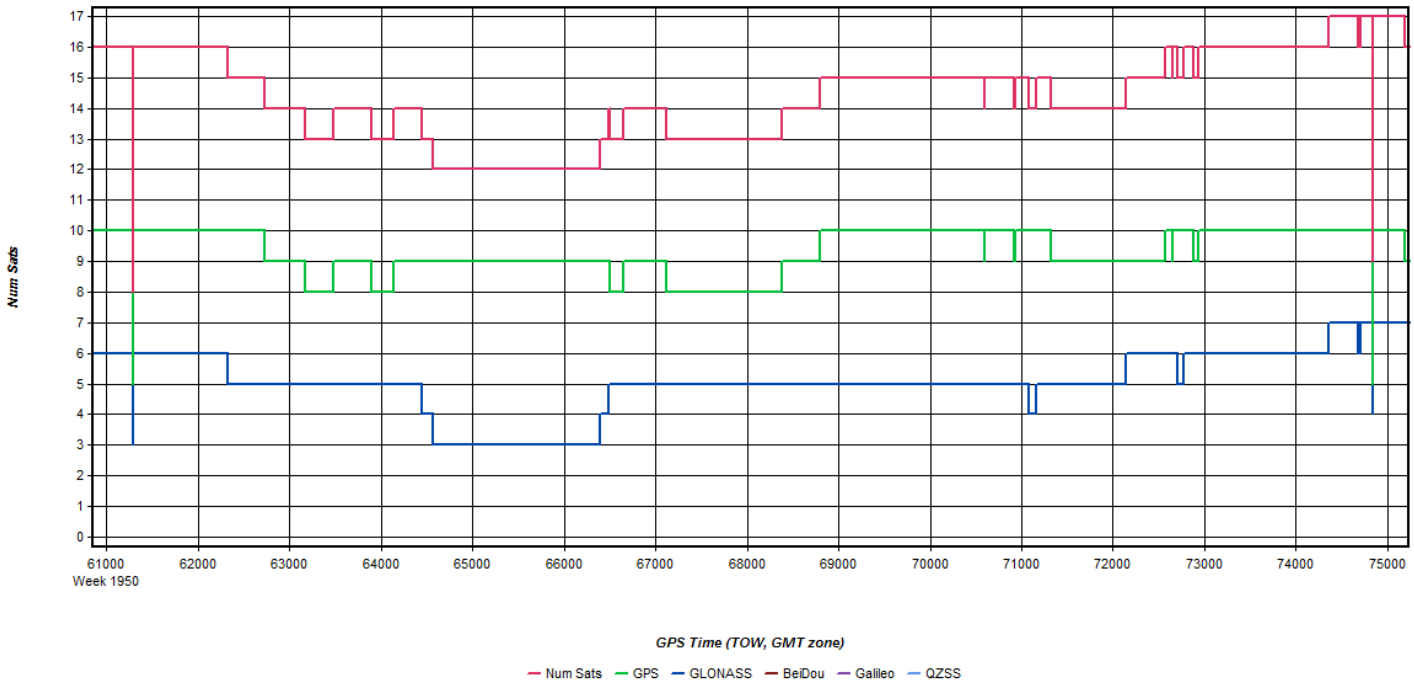

PDOP
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
PDOP

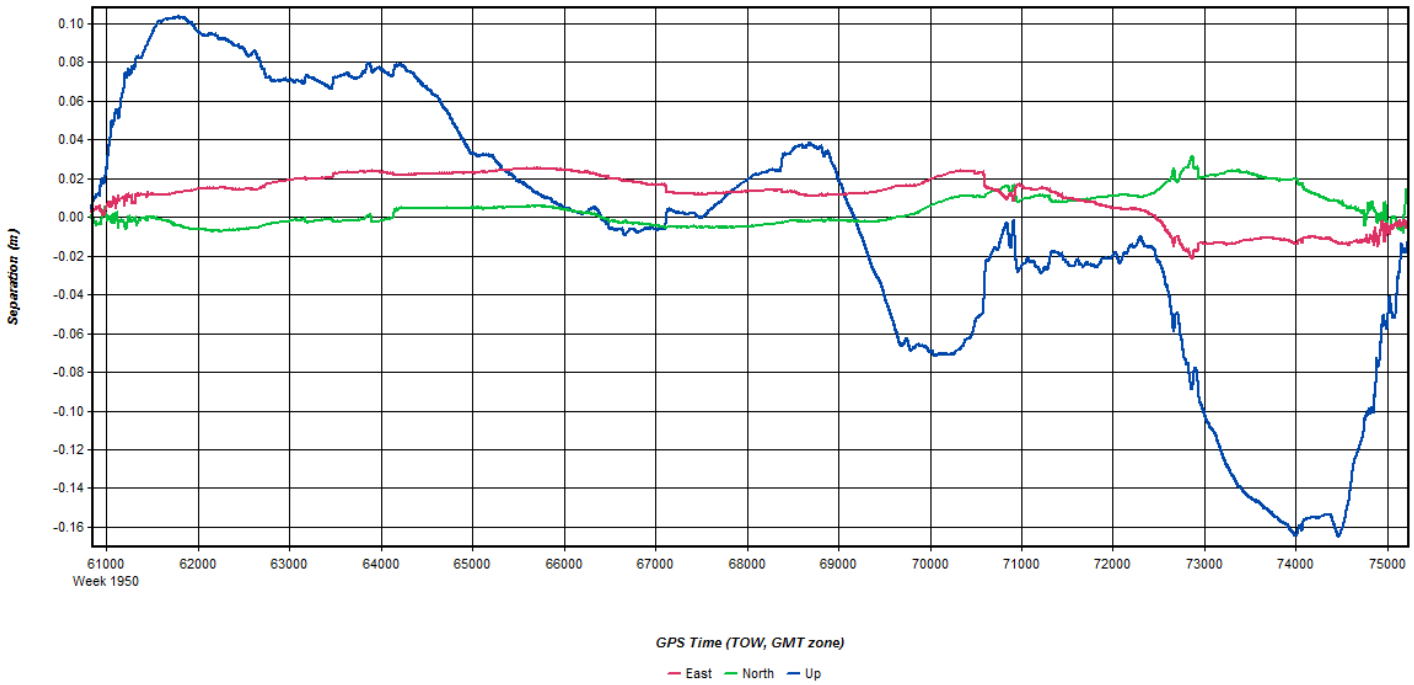

Status
2
1
0
-1
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

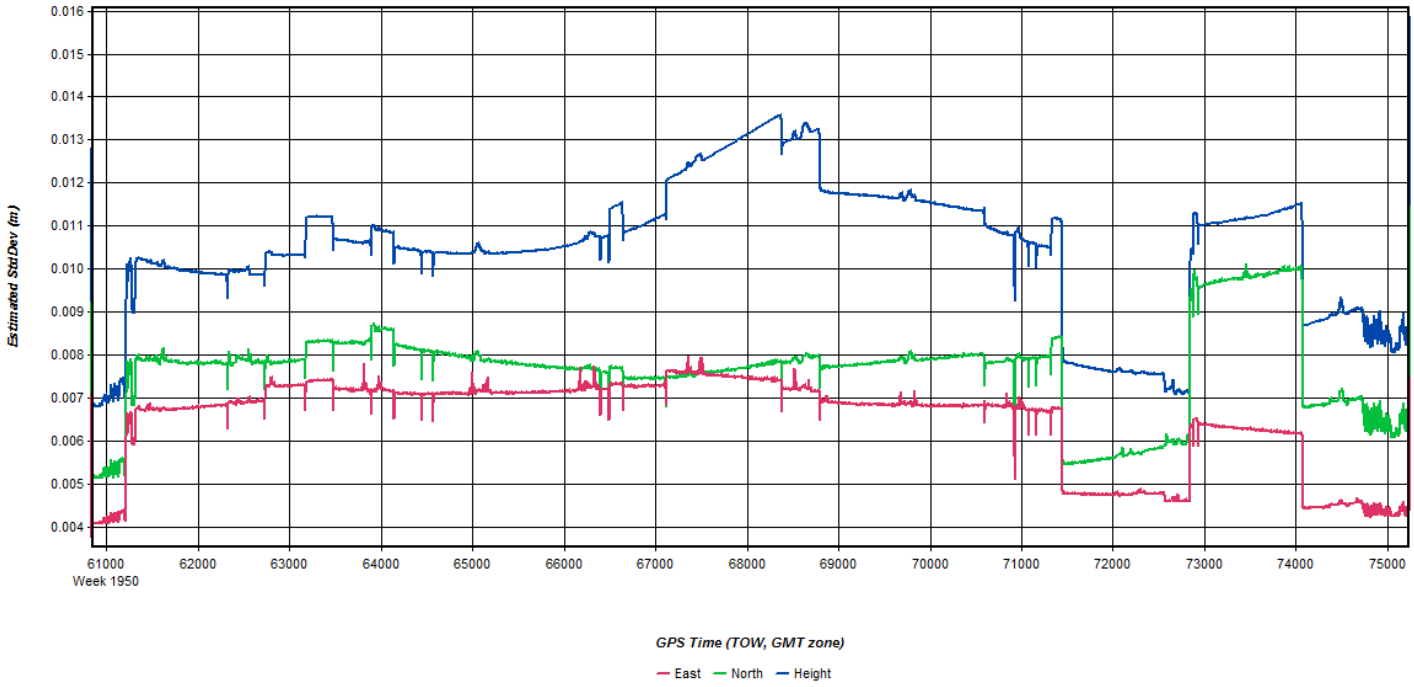

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
-25
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Roll
Pitch

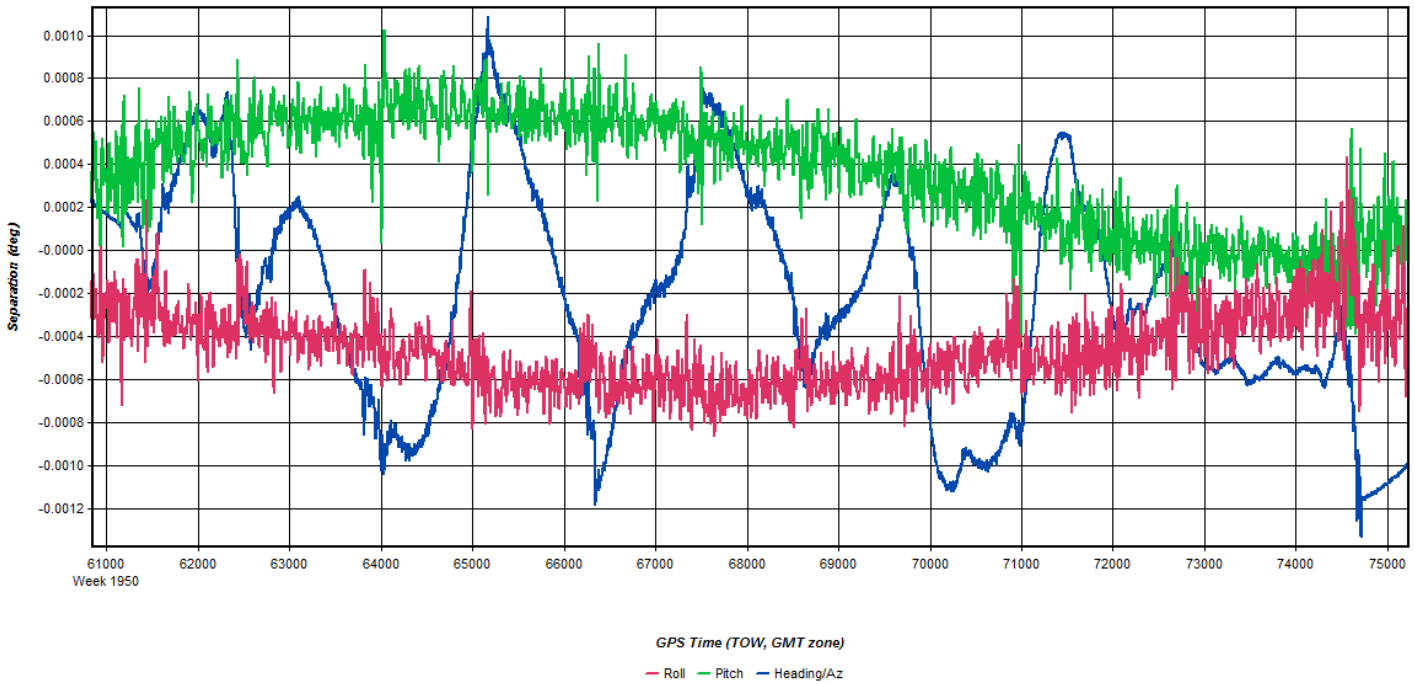

RMS (m)
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
RMS
SD

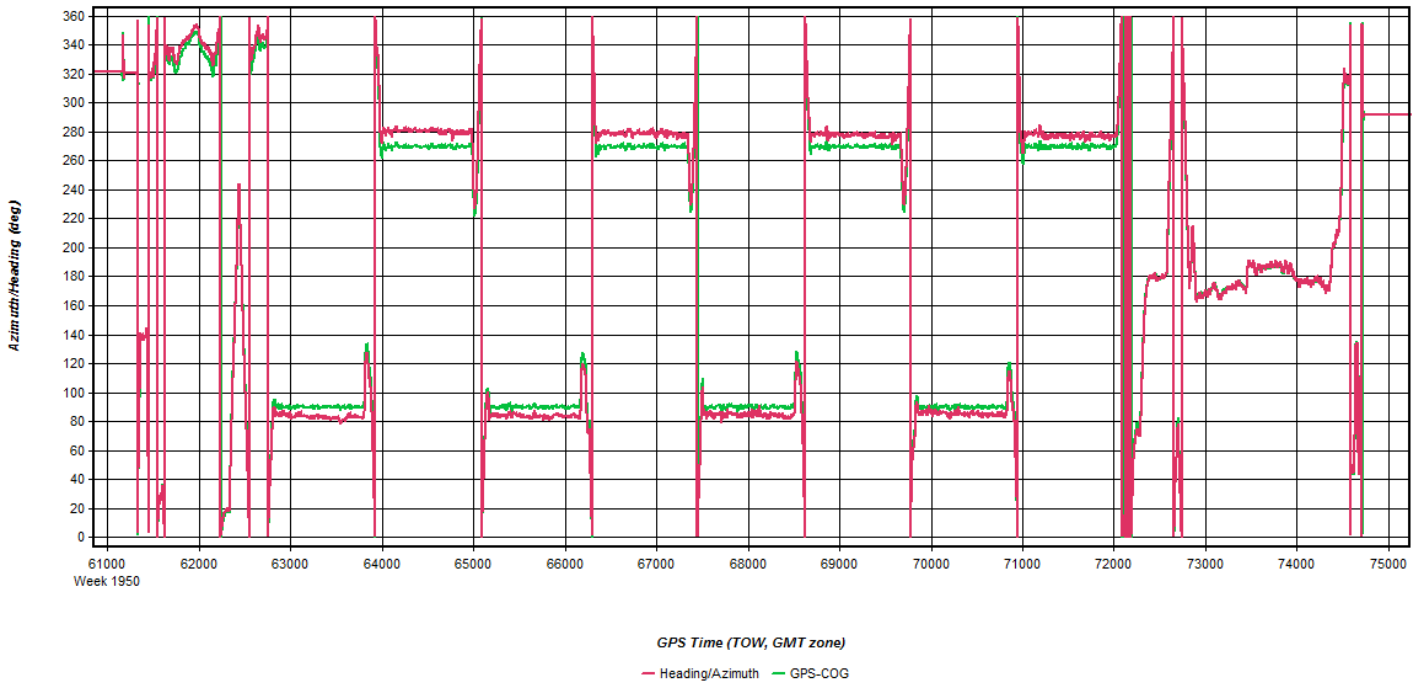

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Height


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

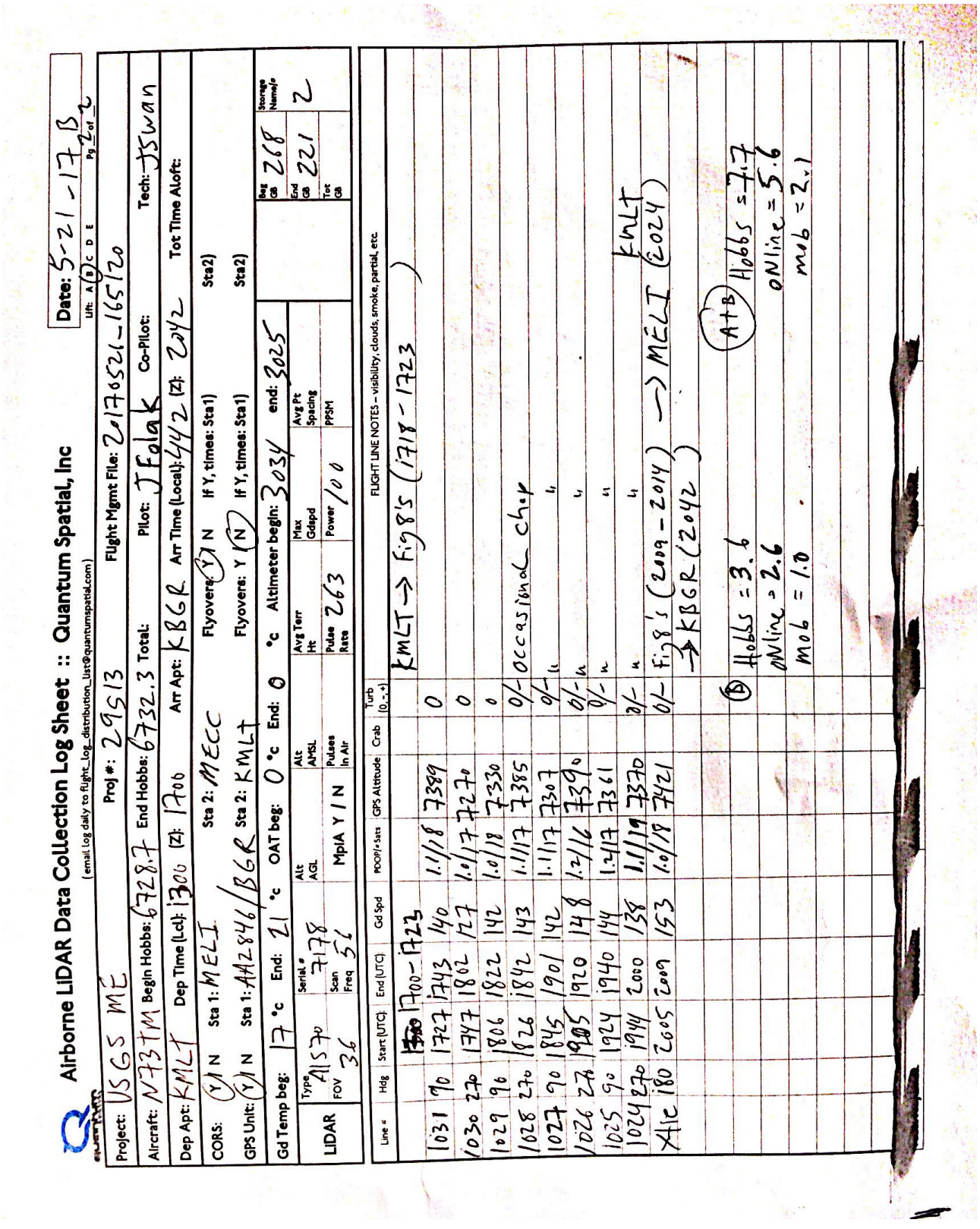

Separation (m)
0.10
0.08
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0010
0.0008
0.0006
0.0004
0.0002
-0.0000
-0.0002
-0.0004
-0.0006
-0.0008
-0.0010
-0.0012
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email Log daily to flight_Log_distribution_List@quantumspatial.com)

Date: 5-21-17 B

Lift: A (B) C D E Pg 2 of 2

Project: USGS ME Proj #: 29513 Flight Mgmt File: 20170521-165120

Aircraft: N737TM Begin Hobbs: 6728.7 End Hobbs: 6732.3 Total: Pilot: JFolak Co-Pilot: Tech: JSwan

Dep Apt: KMLT Dep Time (Lcl): 1300 (Z): 1700 Arr Apt: KBGR Arr Time (Local): 442 (Z): 2042 Tot Time Aloft:

CORS: (Y) N Sta 1: MELI Sta 2: MECC Flyover: (Y) N If Y, times: Sta1) Sta2)

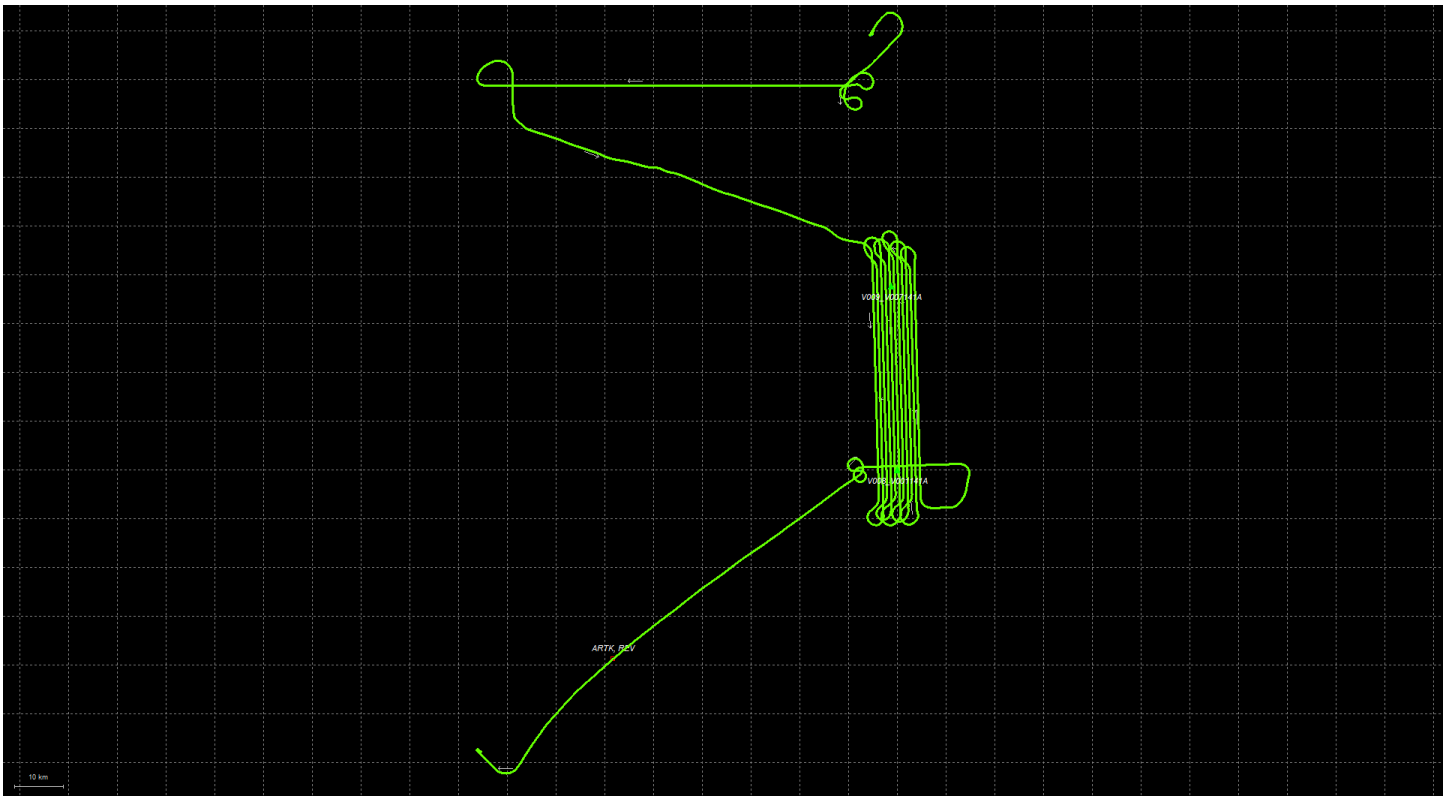
GPS Unit: (Y) N Sta 1: AA2846/BGR Sta 2: KMLT Flyover: Y (N) If Y, times: Sta1) Sta2)

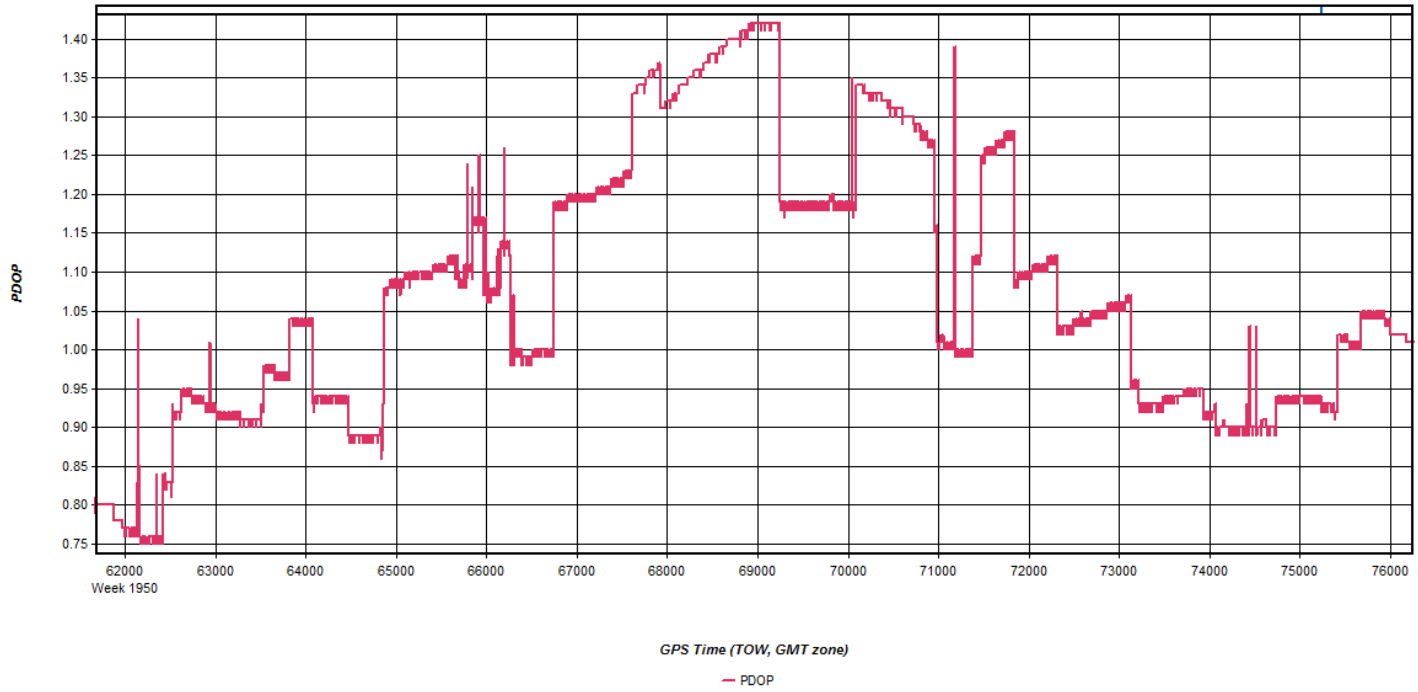
Gd Temp beg: 17 °c End: 21 °c OAT beg: 0 °c End: 0 °c Altimeter begin: 3034 end: 3025

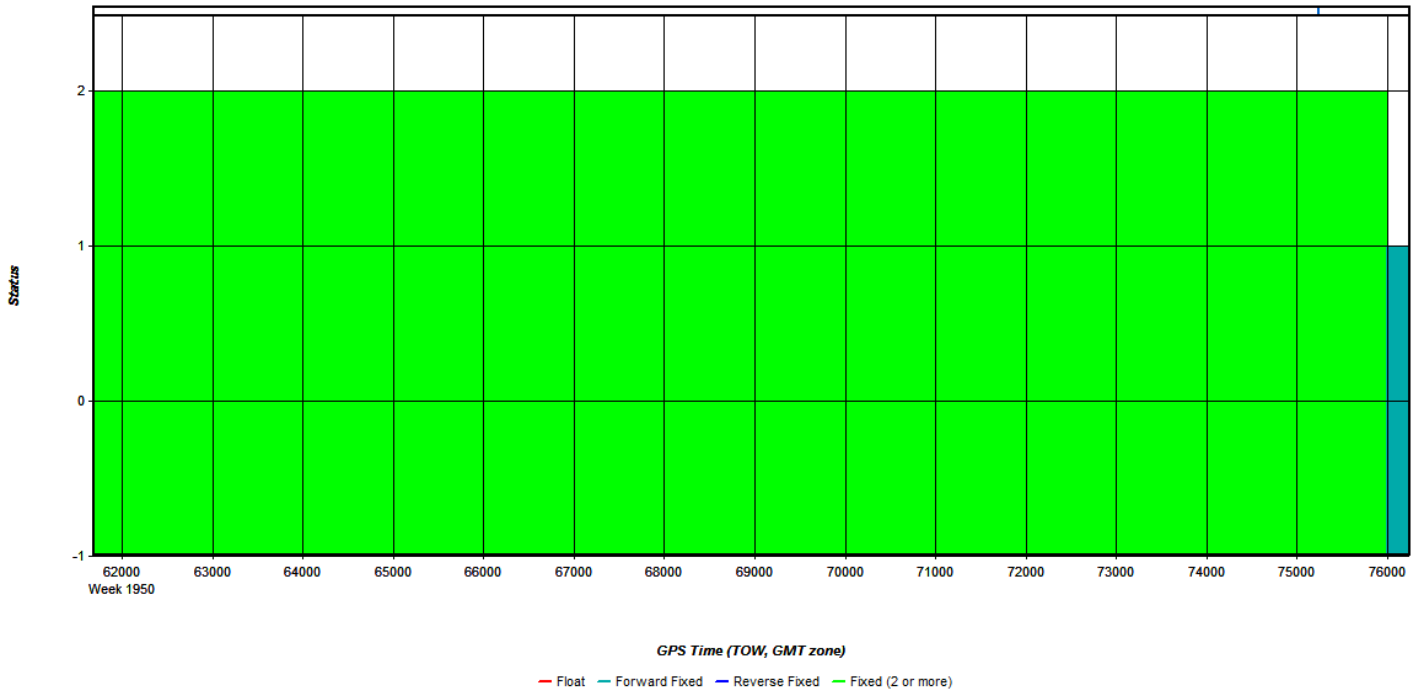
LiDAR	Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing	Beg GB	End GB	Storage Name/s
	AS370	7178						268	221	2
	FOV 36	Scan Freq 51	MpIA Y / N	Pulses In Air	Pulse Rate 263	Power 100	PPSM		Tot GB	

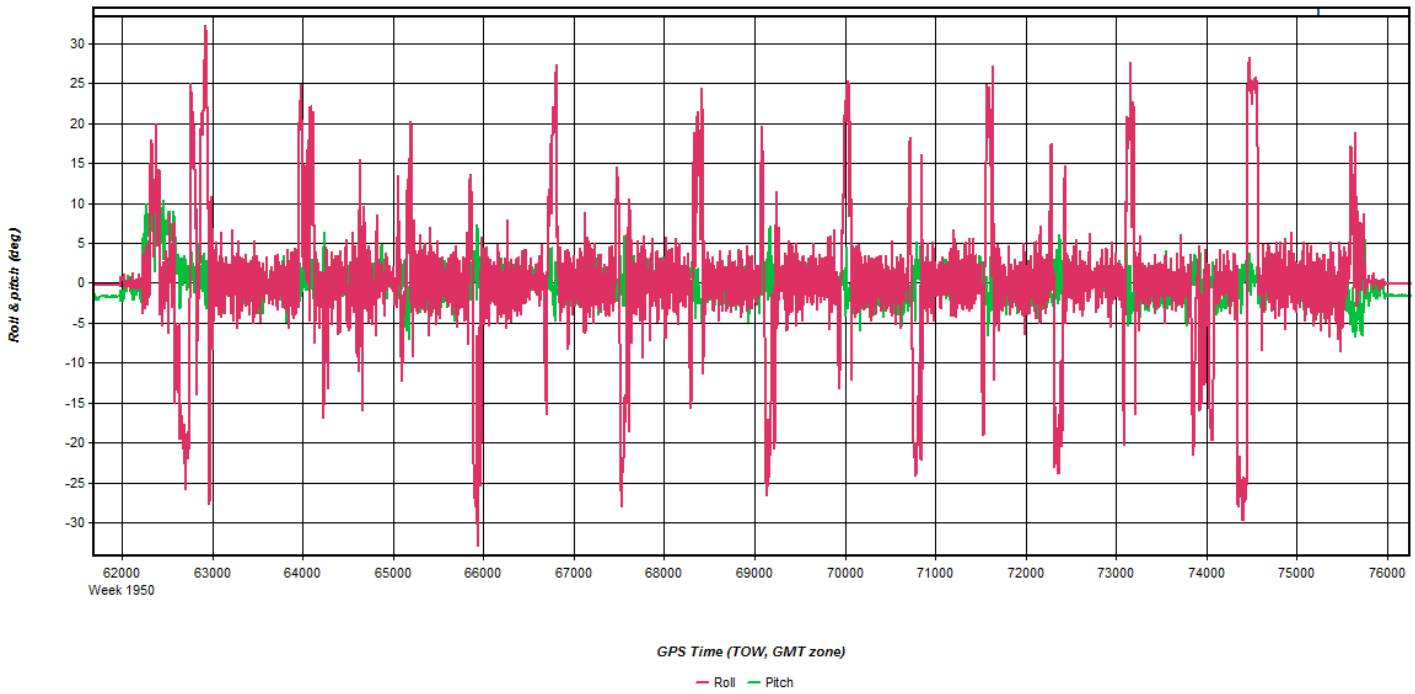
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	POOP/+Sats	GPS Altitude	Crab	Turb (0-5)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
		~~1350~~ 1700	1723						KMLT → Figs 1-8 (1718-1723)
1031	90	1727	1743	140	1.1/18	7389		0	
1030	270	1747	1802	127	1.0/17	7270		0	
1029	90	1806	1822	142	1.0/18	7330		0	
1028	270	1826	1842	143	1.1/17	7385		0/-	occasional chop
1027	90	1845	1901	142	1.1/17	7307		0/-	"
1026	270	~~1905~~ 1920	1938	148	1.2/16	7390		0/-	"
1025	90	1924	1940	144	1.2/17	7361		0/-	"
1024	270	1944	2000	138	1.1/19	7370		2/-	" KMLT
Alt	180	2005	2009	153	1.0/18	7421		0/-	Figs (2009-2014) → MELI (2024) → KBGR (2042)
									(A+B) Hobbs = 7.7
									(B) Hobbs = 3.6
									oNline = 2.6
									oNline = 5.6
									mob = 1.0
									mob = 2.1

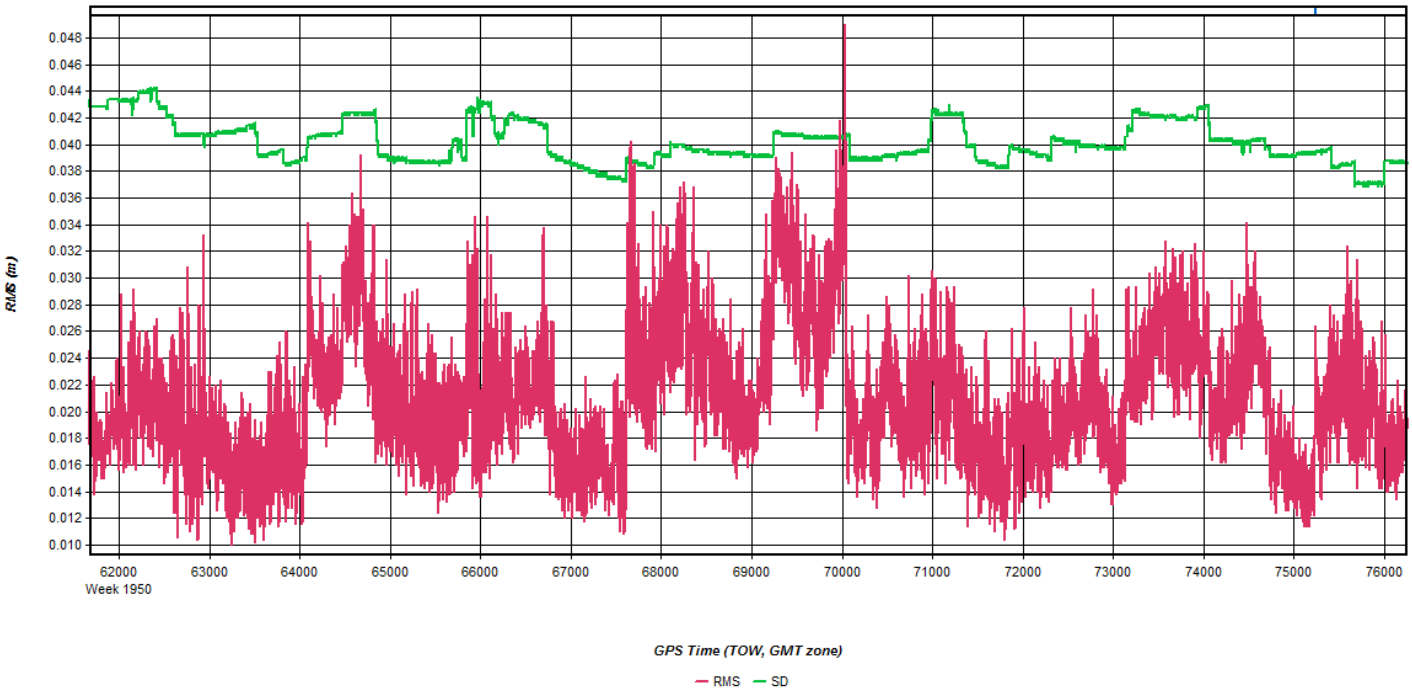
May 21, 2017-B (N262AS, SN7161)

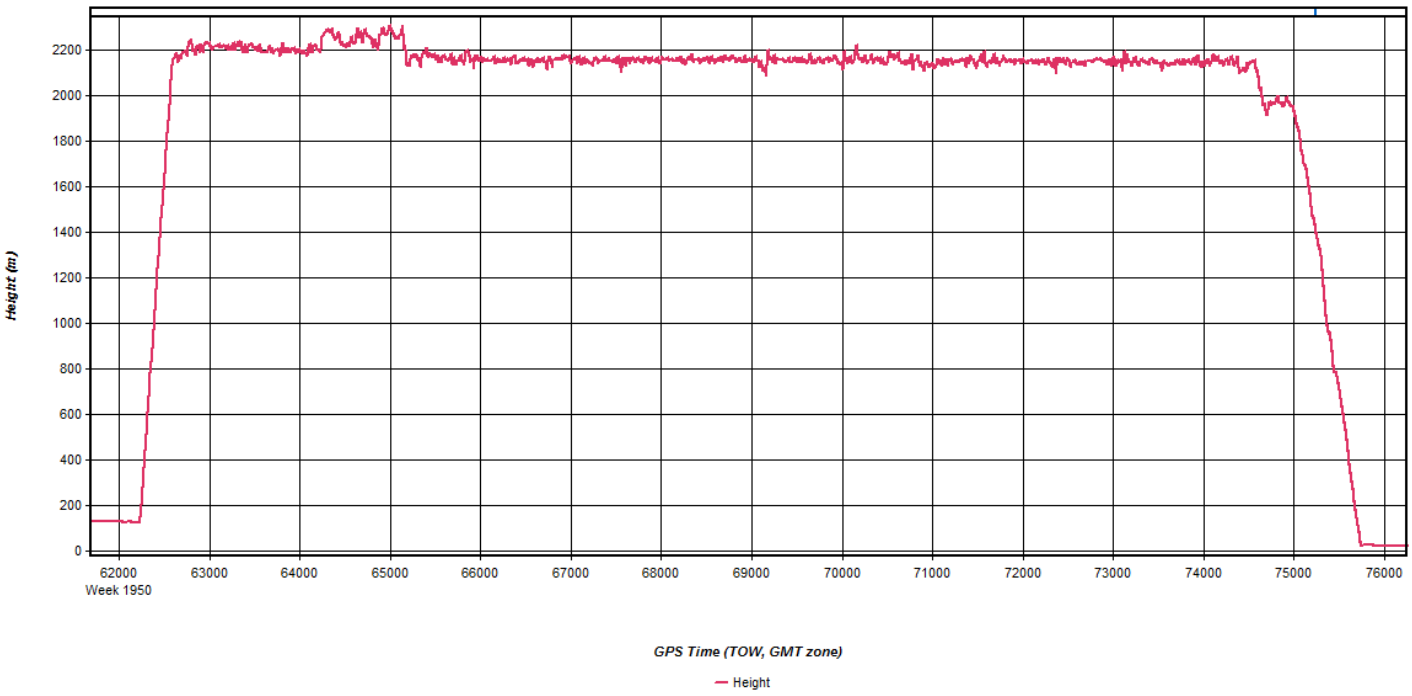

ARTK_REV
10 km

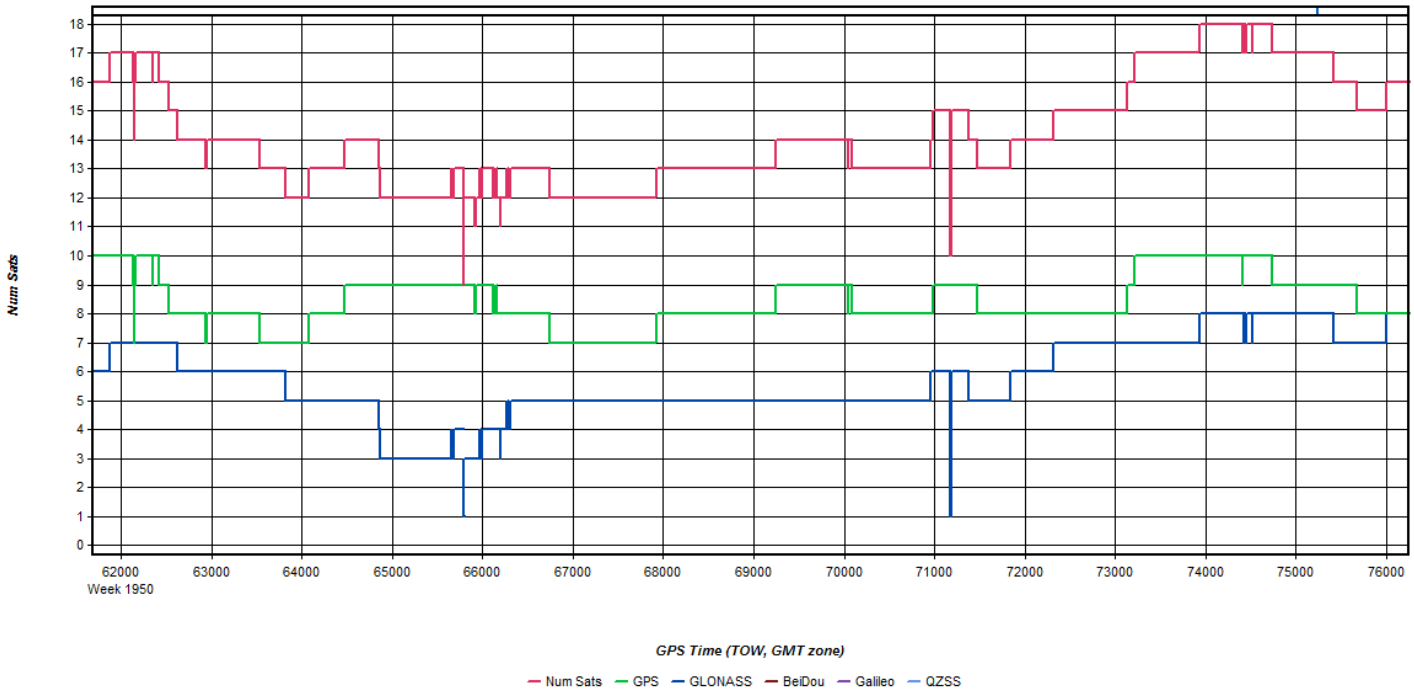

PDOP
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
0.75
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
PDOP

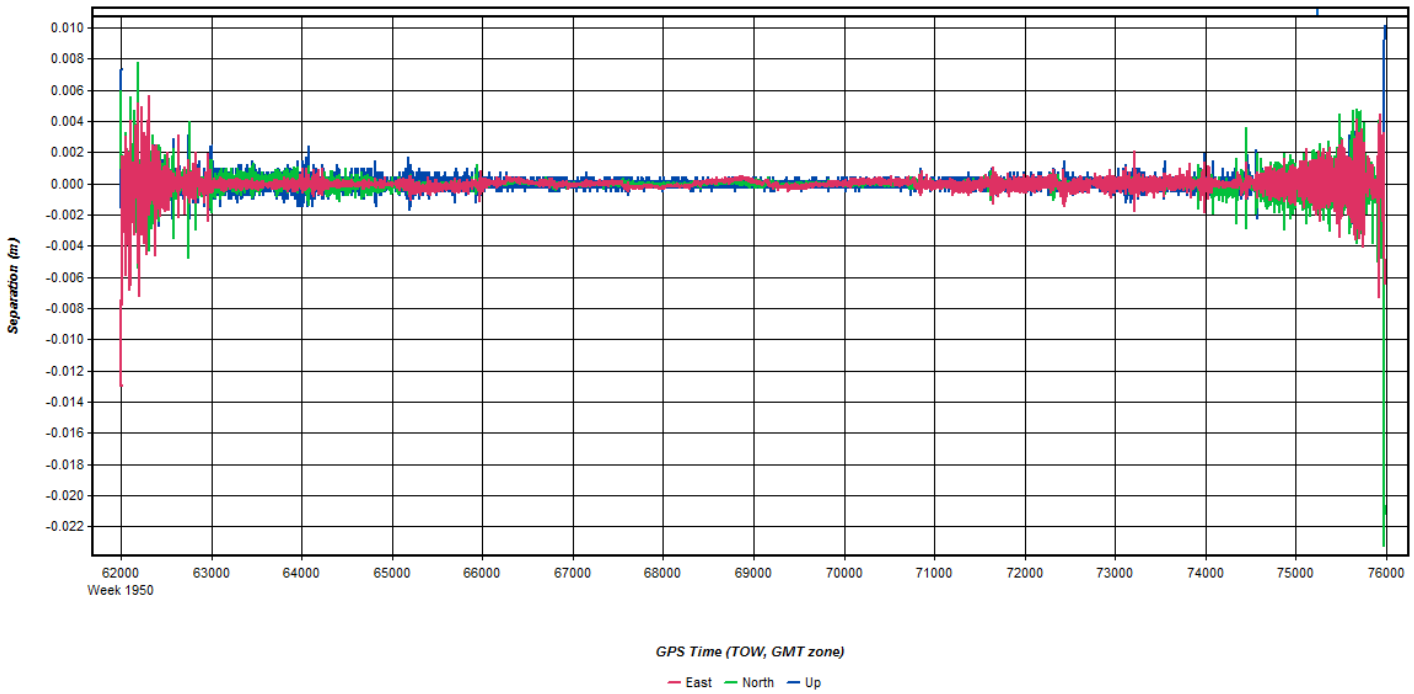

Status
2
1
0
-1
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

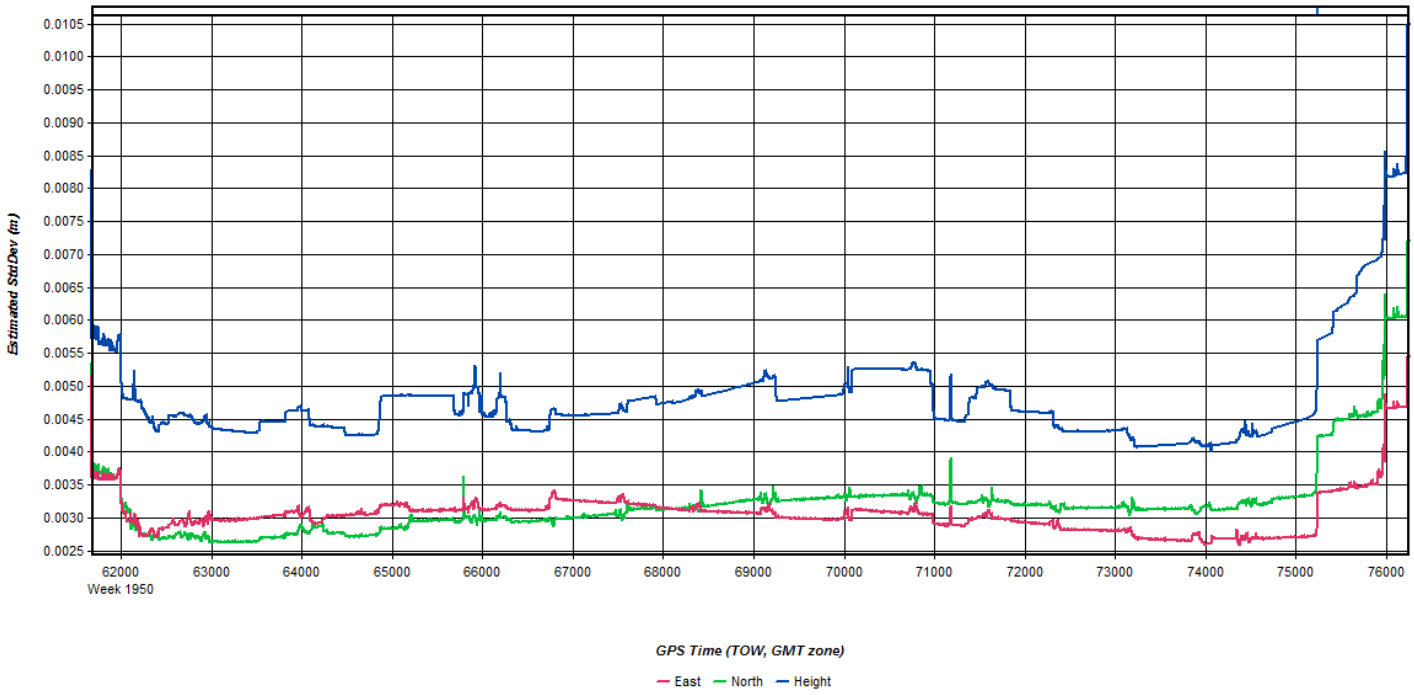

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Roll
Pitch

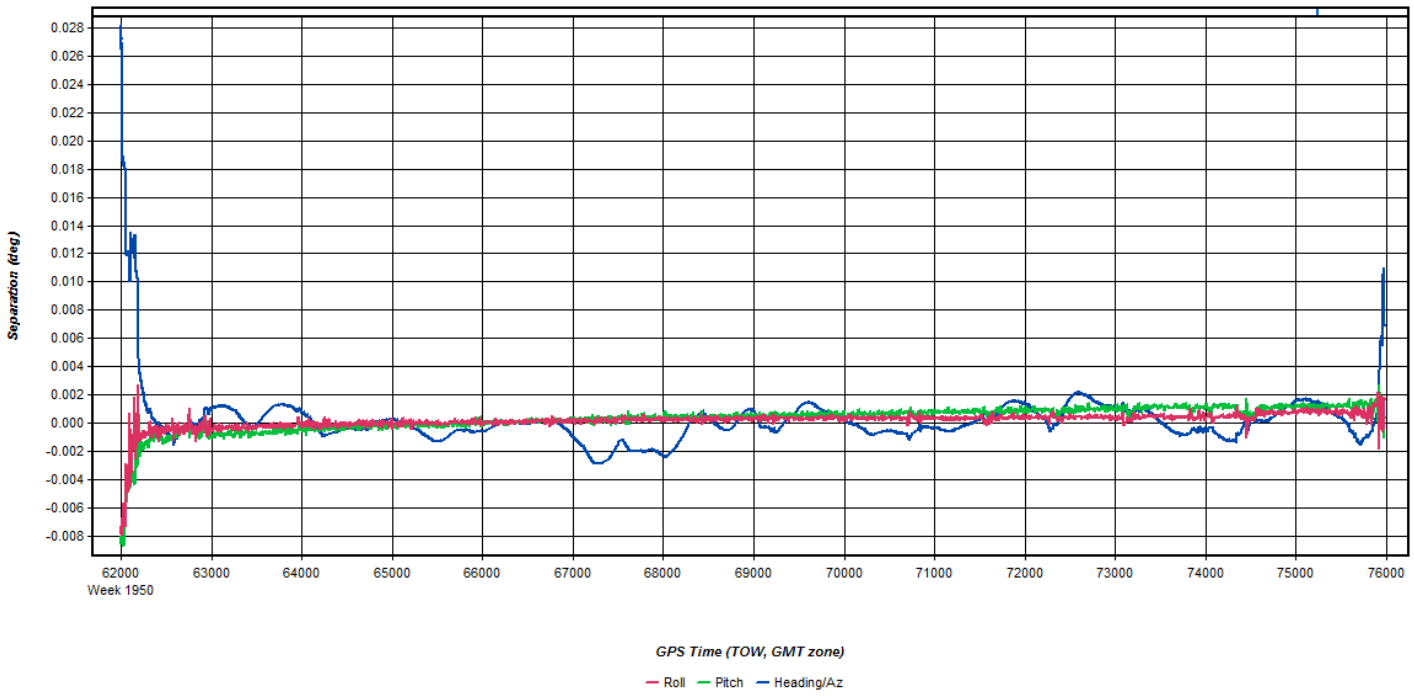

RMS (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
RMS
SD

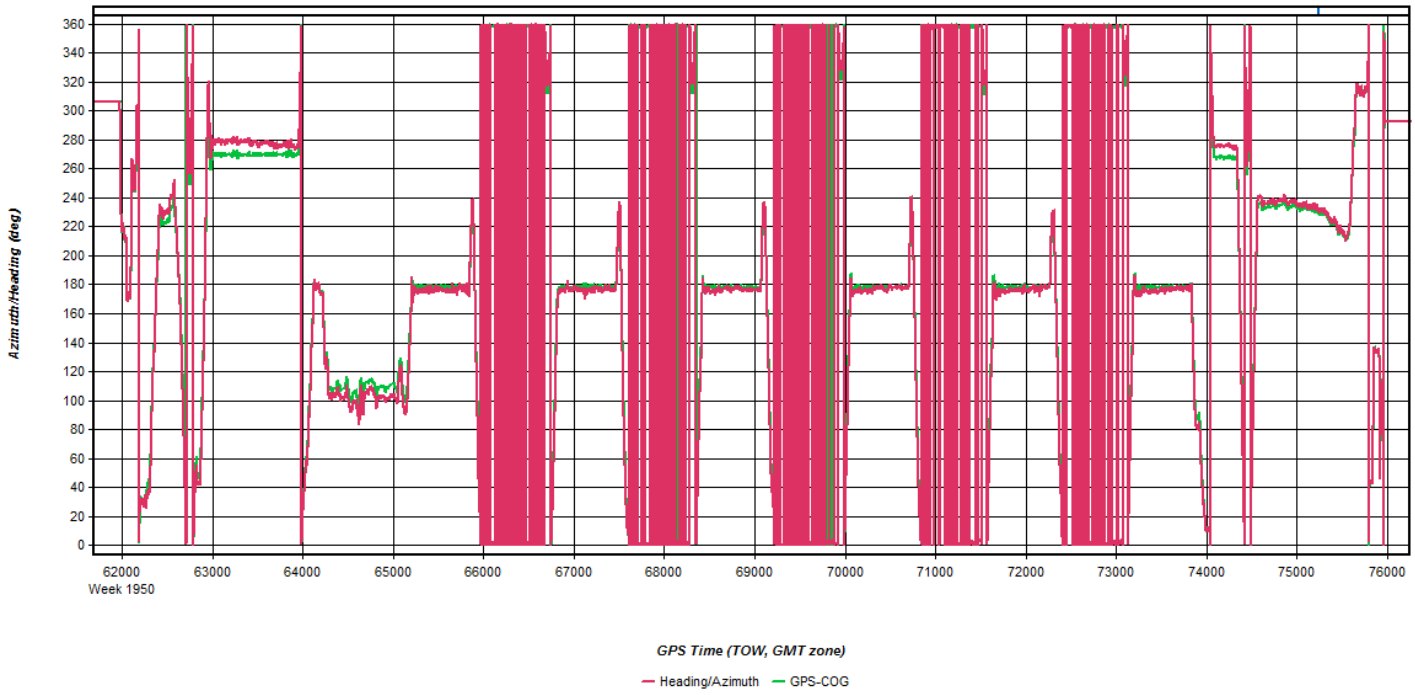

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Height

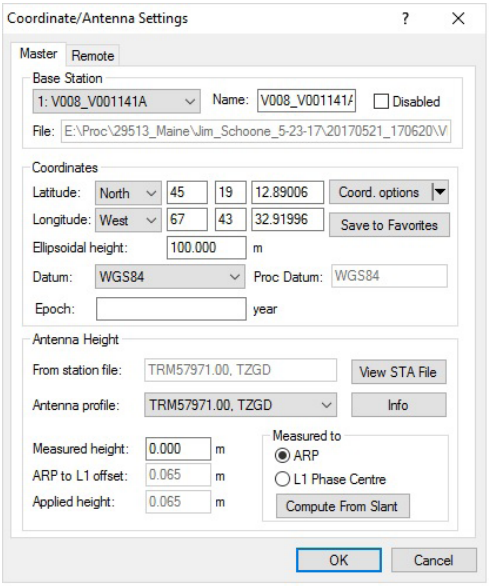

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

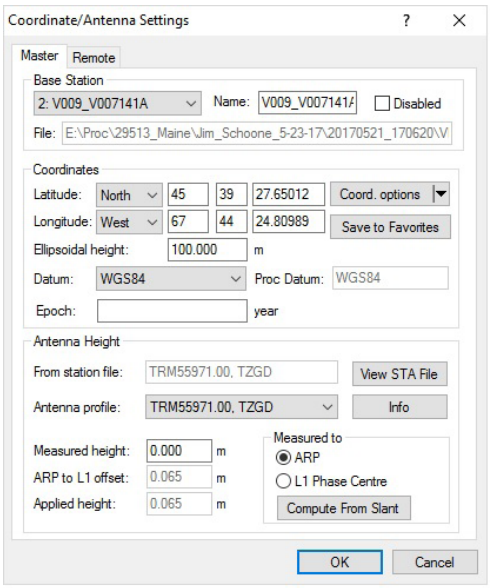

Separation (m)
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
-0.022
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az

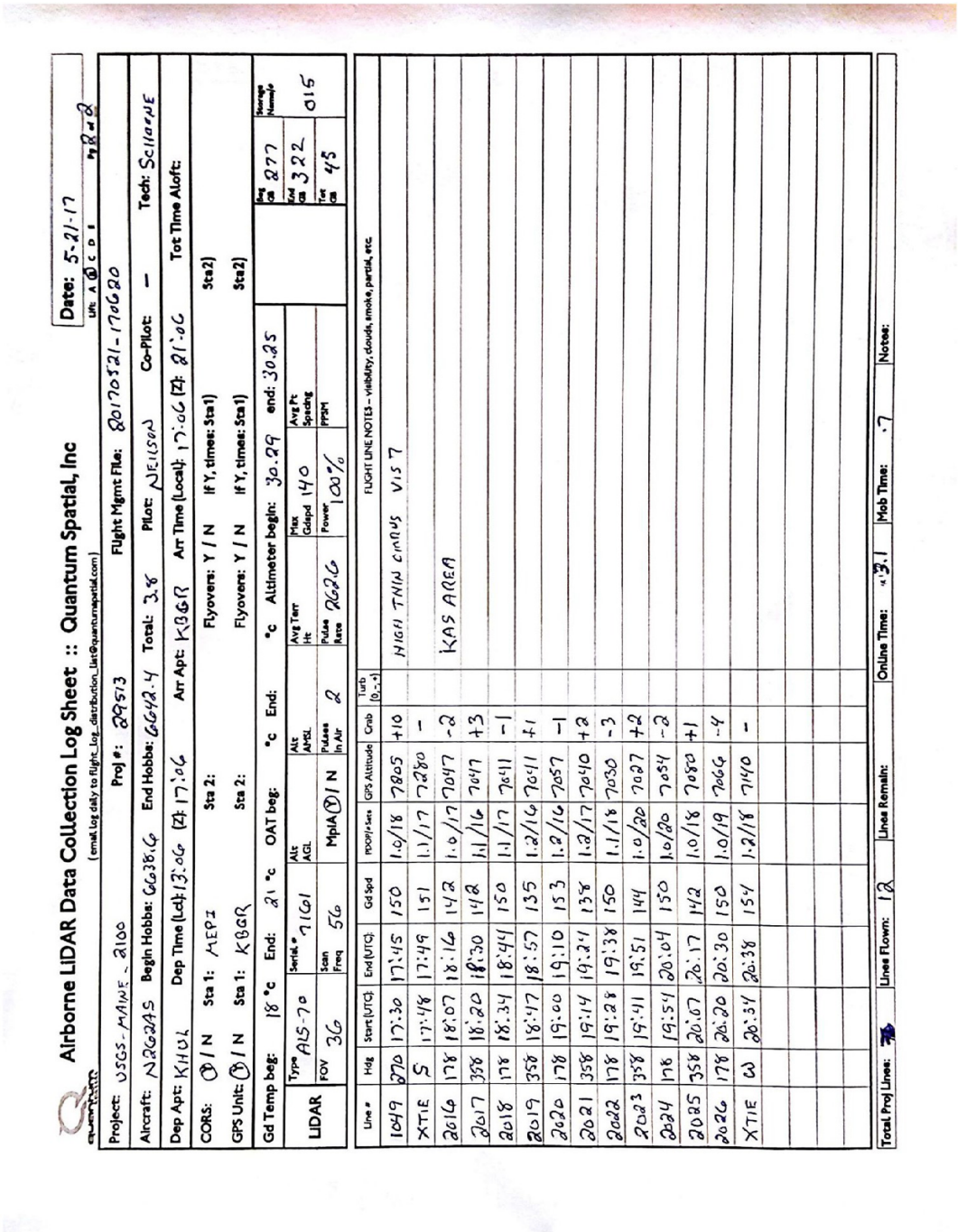

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
62000
Week 1950
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
75000
76000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V008_V001141A
Name:
V008_V001141A
Disabled
File:
E:\Proc\29513_Maine\Jim_Schoone_5-23-17\20170521_170620\V
Coordinates
Latitude:
North
45
19
12.89006
Coord. options
Longitude:
West
67
43
32.91996
Save to Favorites
Ellipsoidal height:
100.000
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, TZGD
View STA File
Antenna profile:
TRM57971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V009_V007141A
Name:
V009_V007141A
Disabled
File:
E:\Proc\29513_Maine\Jim_Schoone_5-23-17\20170521_170620\V
Coordinates
Latitude:
North
45
39
27.65012
Coord. options
Longitude:
West
67
44
24.80989
Save to Favorites
Ellipsoidal height:
100.000
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM55971.00, TZGD
View STA File
Antenna profile:
TRM55971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Scanned by CamScanner



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to Flight_Log_distribution_List@quantumspatial.com)

Date: 5-21-17

Project: USGS-MAINE_2100 Proj #: 89573 Flight Mgmt File: 20170521-170620

Aircraft: N262AS Begin Hobbs: 6636.6 End Hobbs: 6692.4 Total: 3.8 Pilot: NELSON Co-Pilot: — Tech: SCHARPE

Dep Apt: KHUL Dep Time (Lcl): 13:06 (Z): 17:06 Arr Apt: KBGR Arr Time (Local): 17:06 (Z): 21:06 Tot Time Aloft:

CORS: Y / N Sta 1: AEPI Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

GPS Unit: Y / N Sta 1: KBGR Sta 2: Flyovers: Y / N If Y, times: Sta1) Sta2)

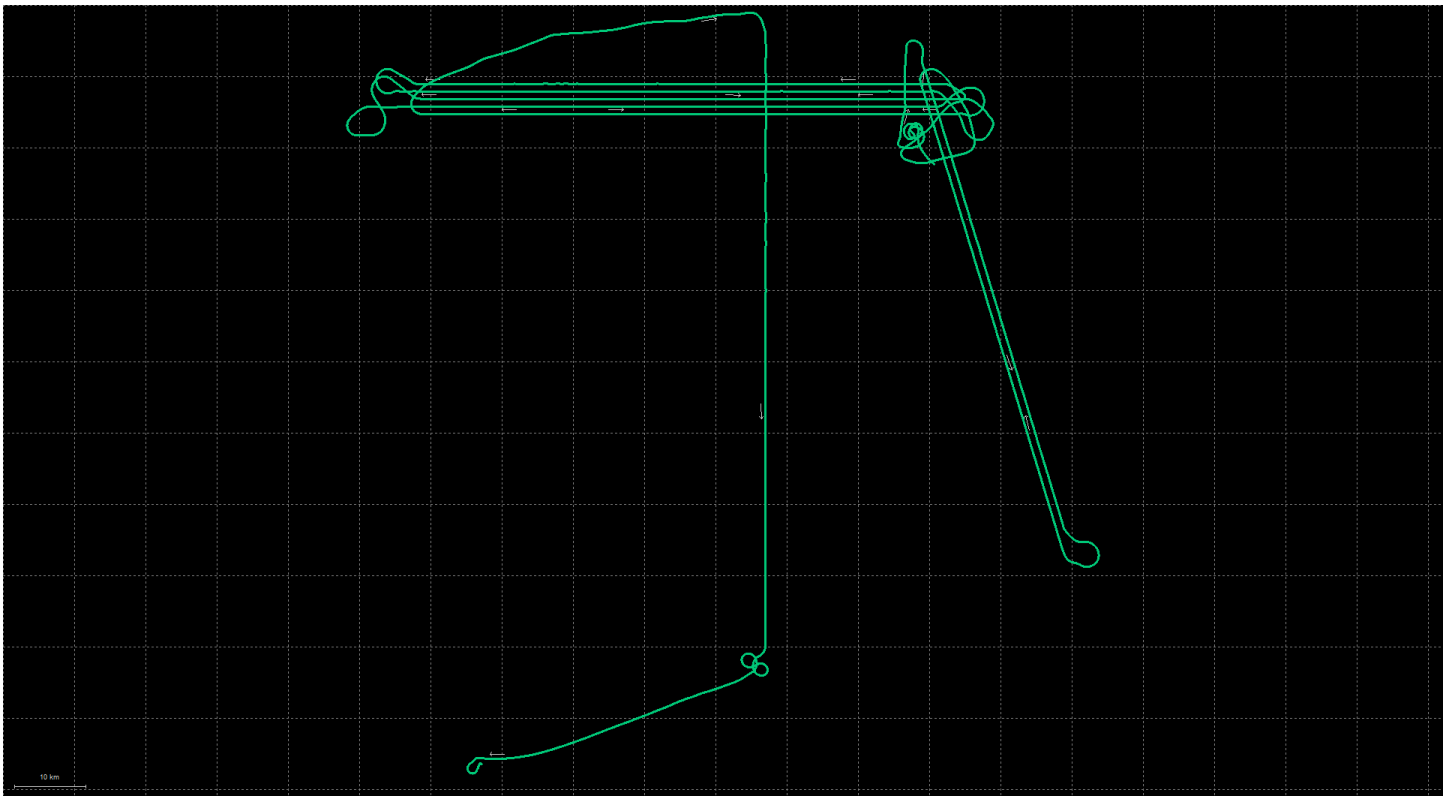
Gd Temp beg: 18 °c End: 21 °c OAT beg: °c End: °c Altimeter begin: 30.29 end: 30.25

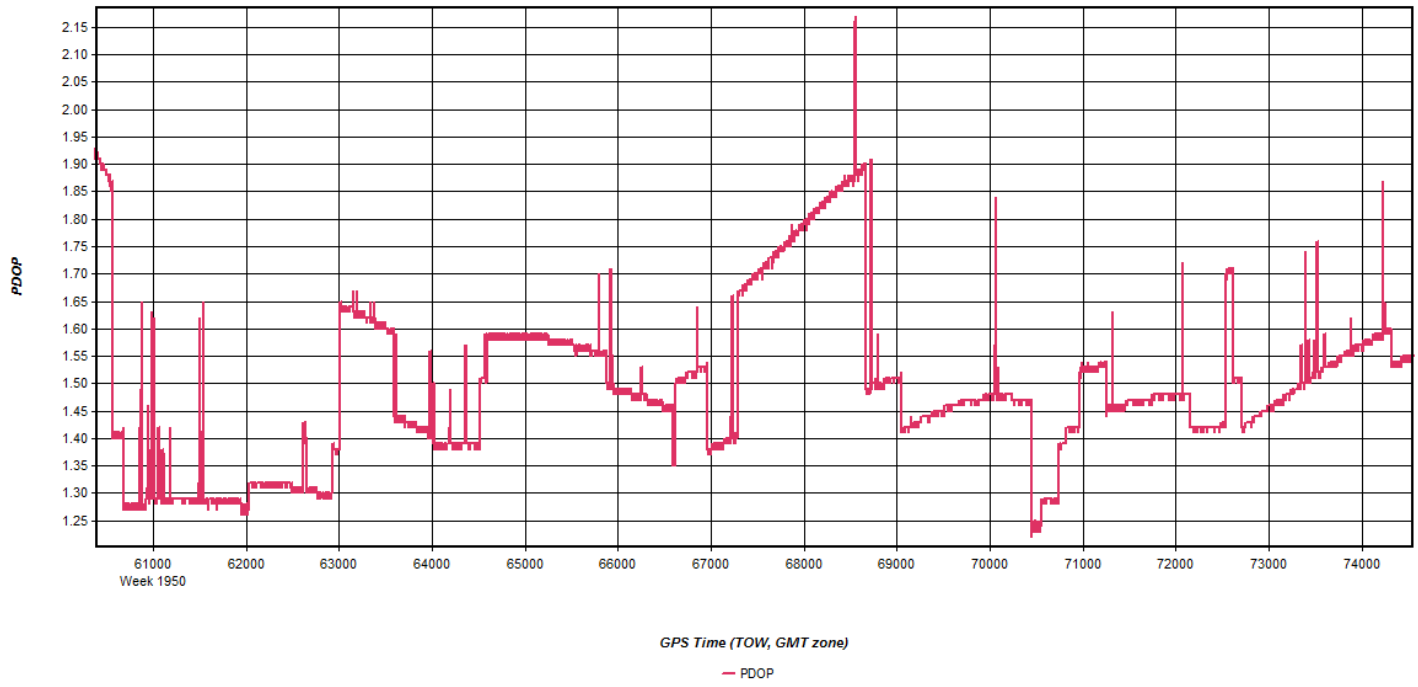
LiDAR	Type	ALS-70	Serial #	7160	Alt AGL	Alt ASL	Avg Terr Ht	Max Gdspd	140	Avg Pt Spacing		Beg CR	277	Storage Number
	FOV	36	Scan Freq	56	MpiA (Y / N)	Pulses In Air	2	Pulse Rate	266	Power	100%	PRF#	End CR	322	015
													Tot CR	45	

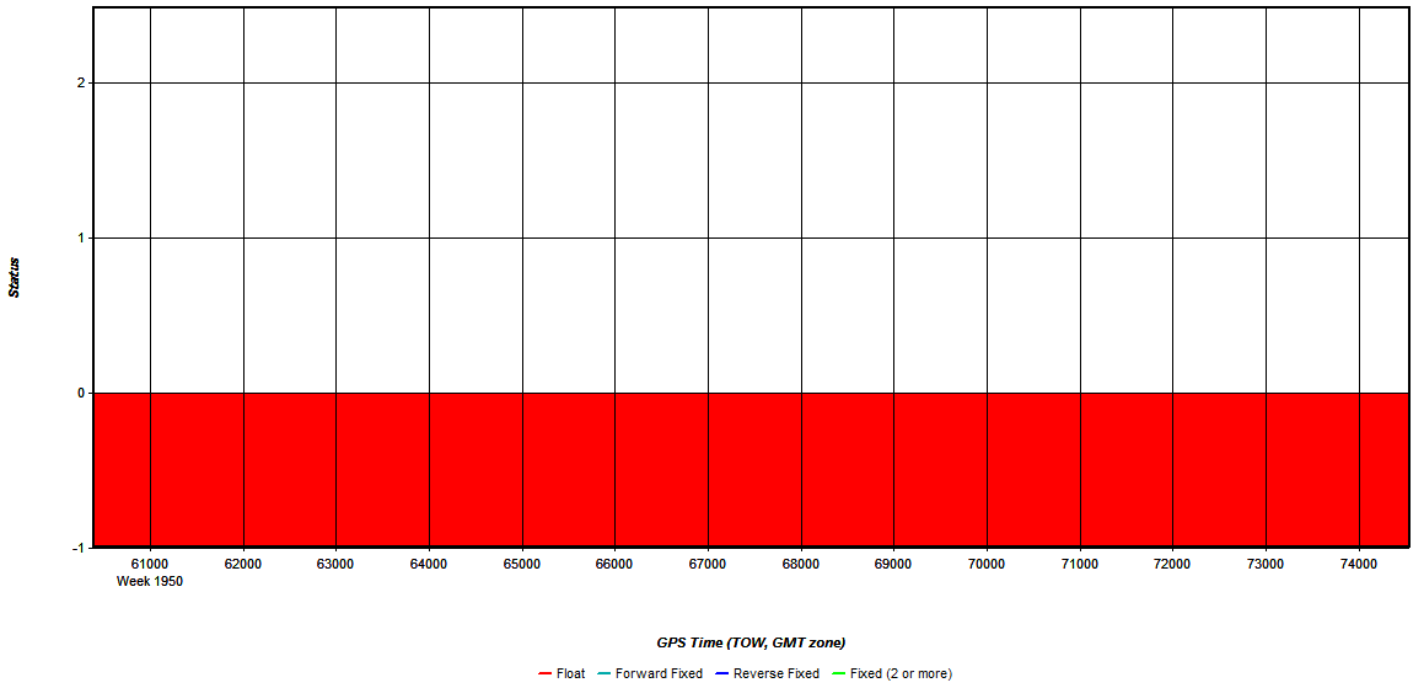
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	ROOP/sec	GPS Altitude	Crab	Turb (0,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
1049	270	17:30	17:45	150	1.0/18	7805	+10		HIGH THIN CLOUDS VIS 7
XTIE	5	17:48	17:49	151	1.1/17	7280	—		
2016	178	18:07	18:16	142	1.0/17	7047	-2		KAS AREA
2017	358	18:20	18:30	148	1.1/16	7047	+3		
2018	178	18:34	18:44	150	1.1/17	7011	-1		
2019	358	18:47	18:57	135	1.2/16	7011	+1		
2020	178	19:00	19:10	153	1.2/16	7057	-1		
2021	358	19:14	19:24	138	1.2/17	7010	+2		
2022	178	19:28	19:38	150	1.1/18	7030	-3		
2023	358	19:41	19:51	144	1.0/20	7027	+2		
2024	178	19:54	20:04	150	1.0/20	7054	-2		
2025	358	20:07	20:17	142	1.0/18	7050	+1		
2026	178	20:20	20:30	150	1.0/19	7064	-4		
XTIE	63	20:34	20:38	154	1.2/18	7040	—		

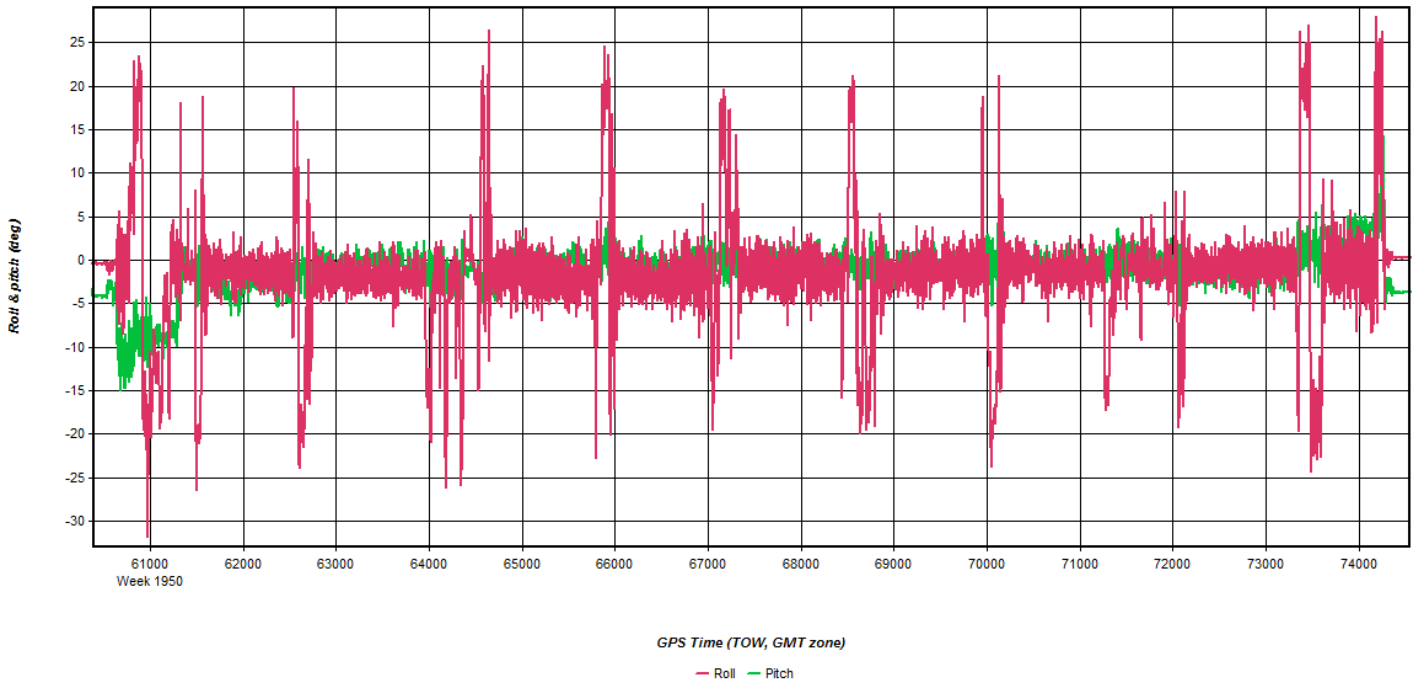
Total Proj Lines: Lines Flown: 18 Lines Remain: Online Time: 3.1 Mob Time: .7 Notes:

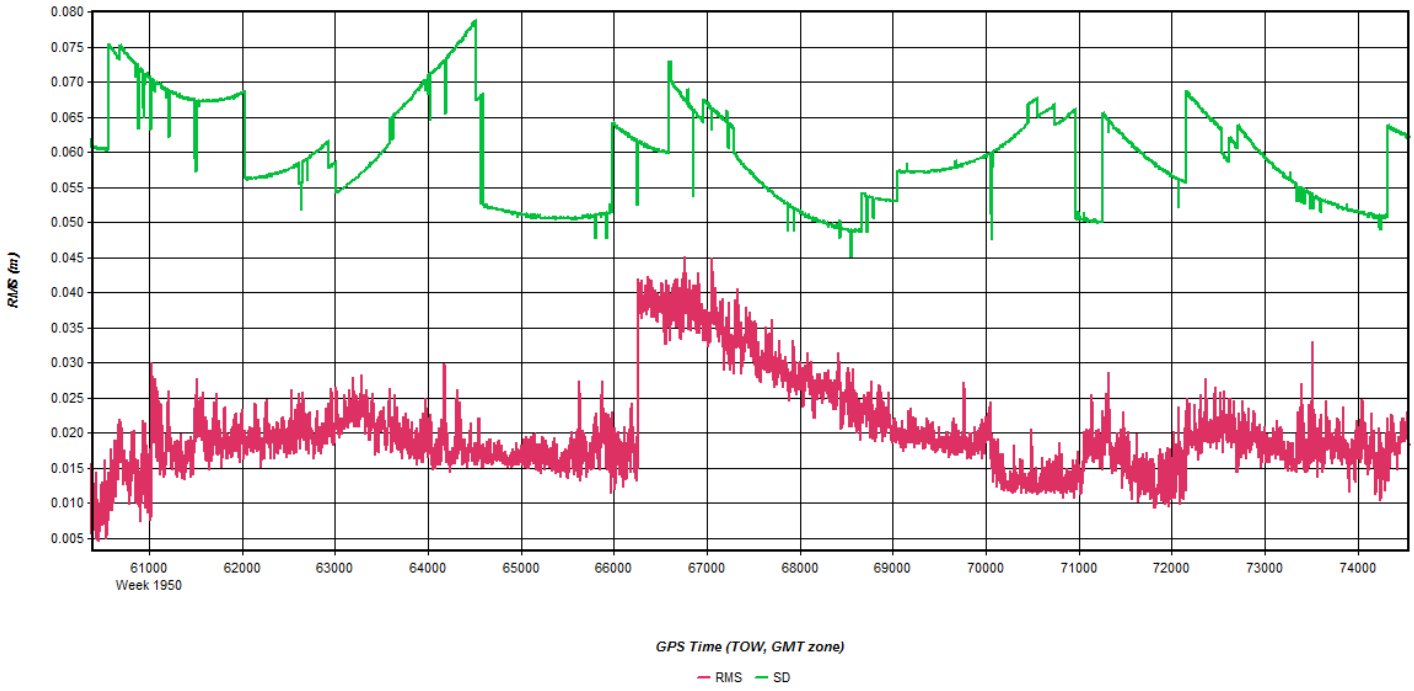
May 21, 2017-B (N915WC, SN8237)

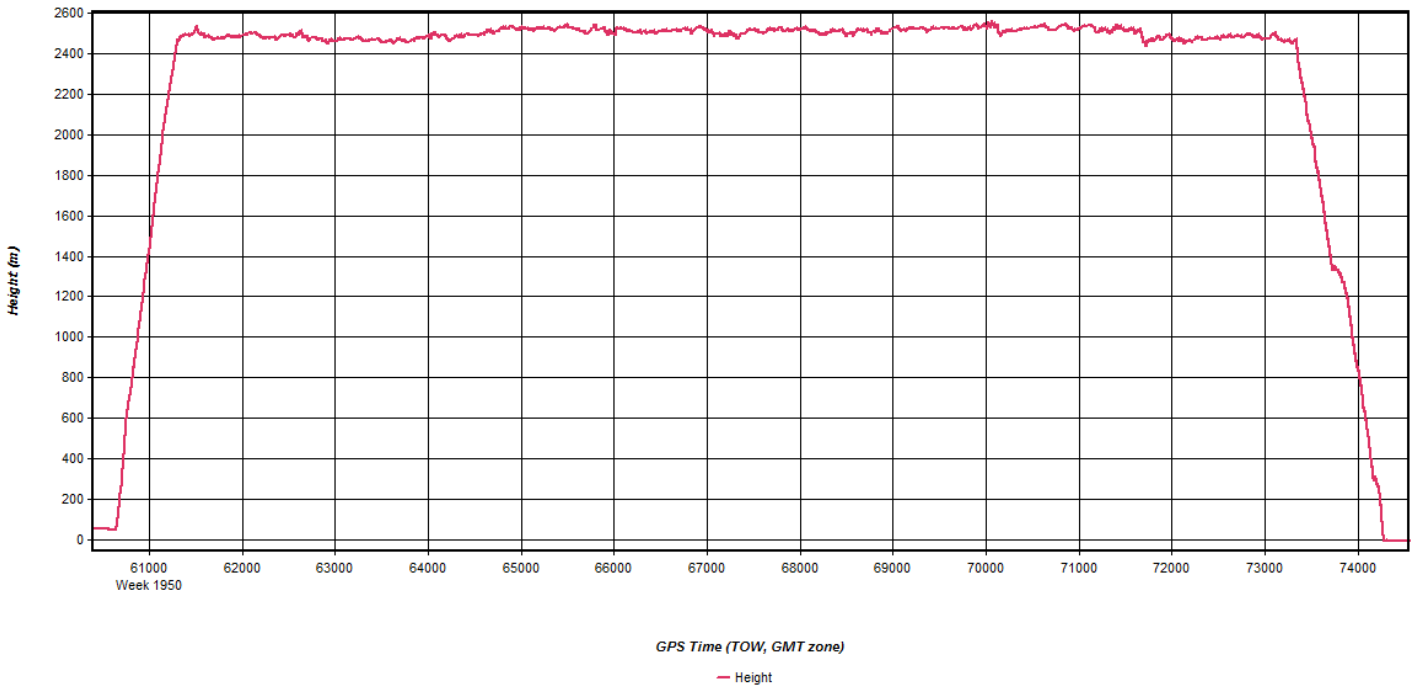

10 km


PDOP
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
PDOP

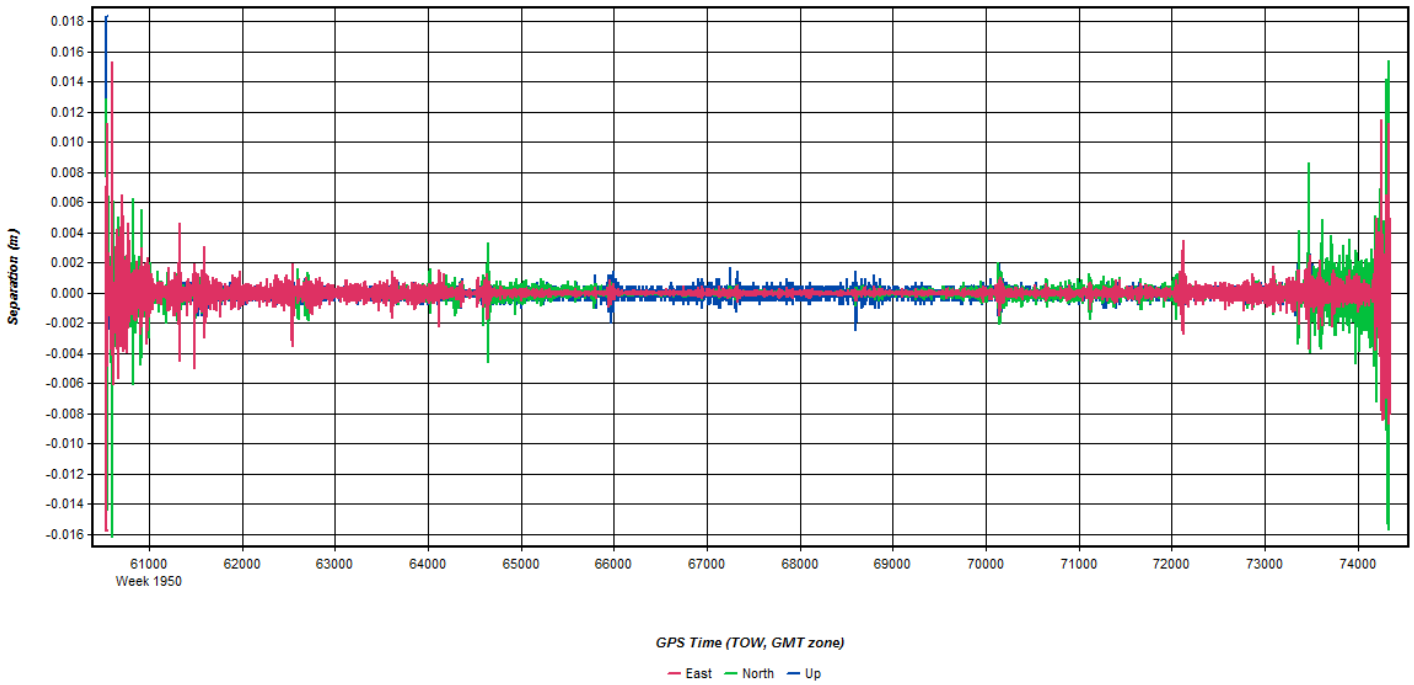

Status
2
1
0
-1
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

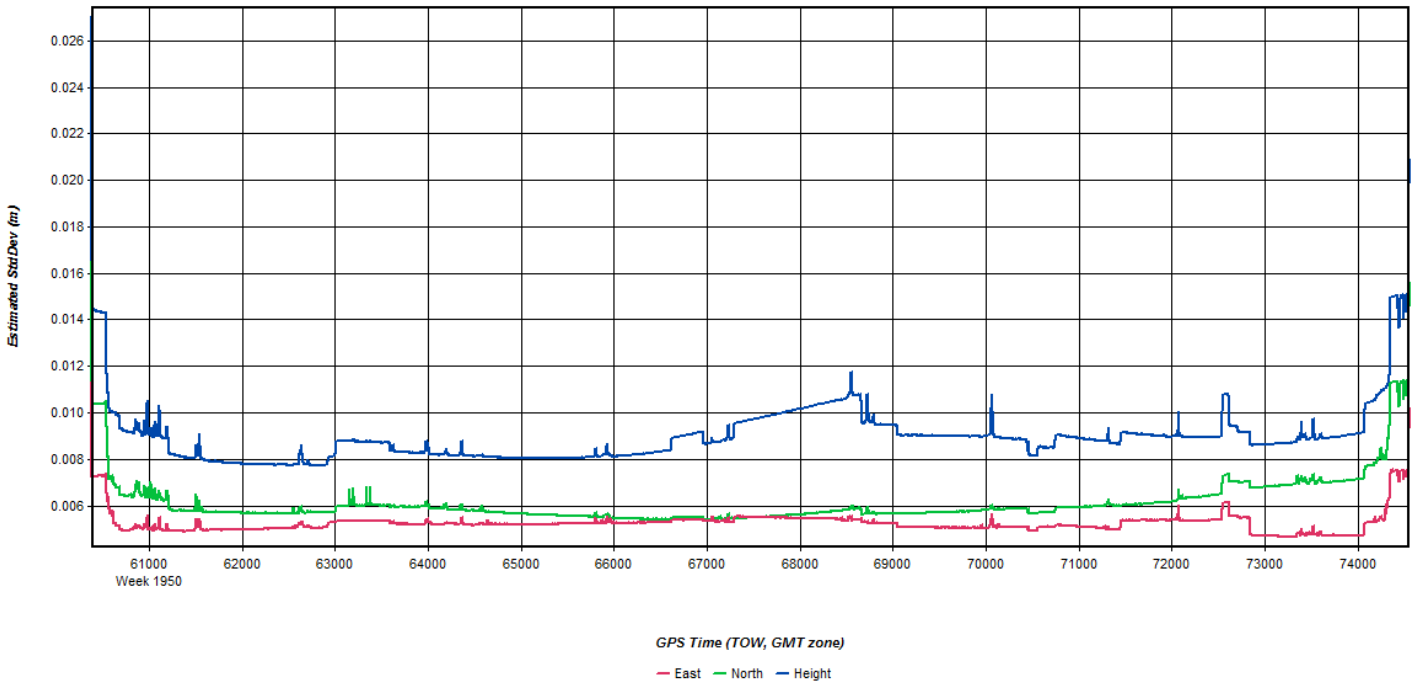

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Roll
Pitch

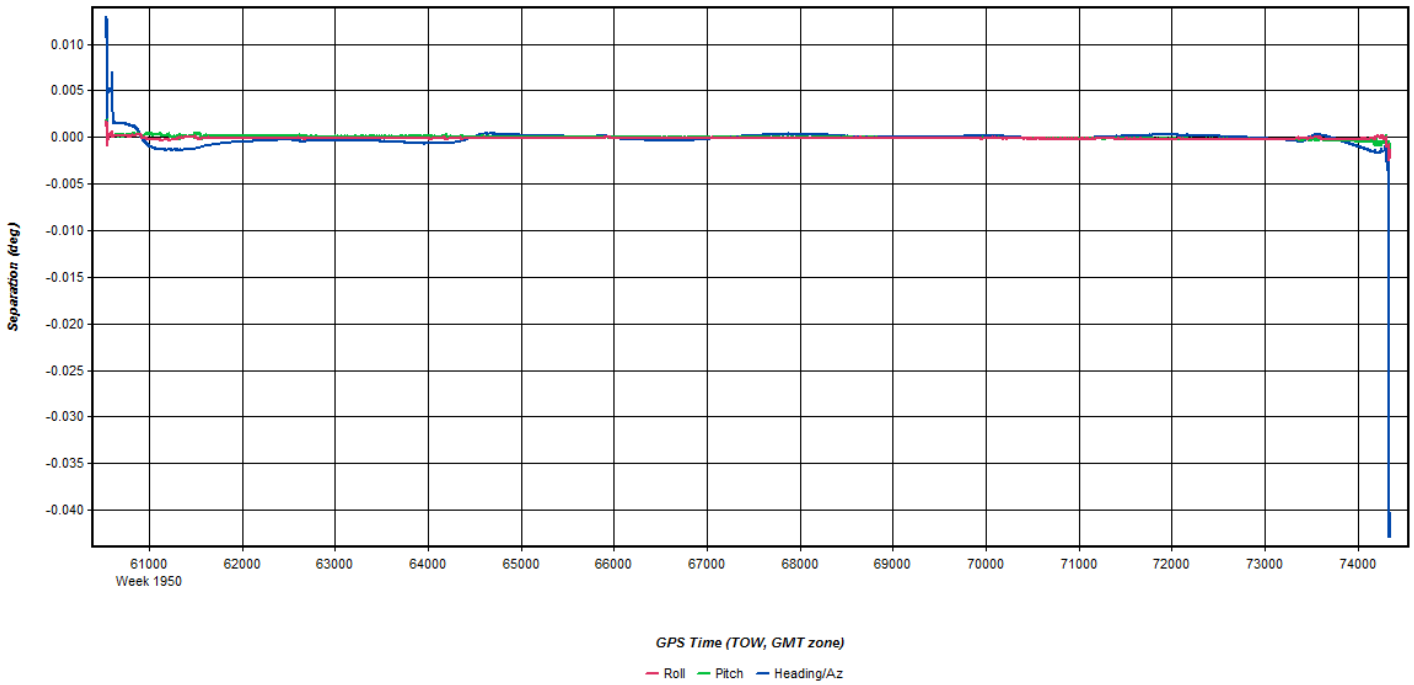

RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
RMS
SD

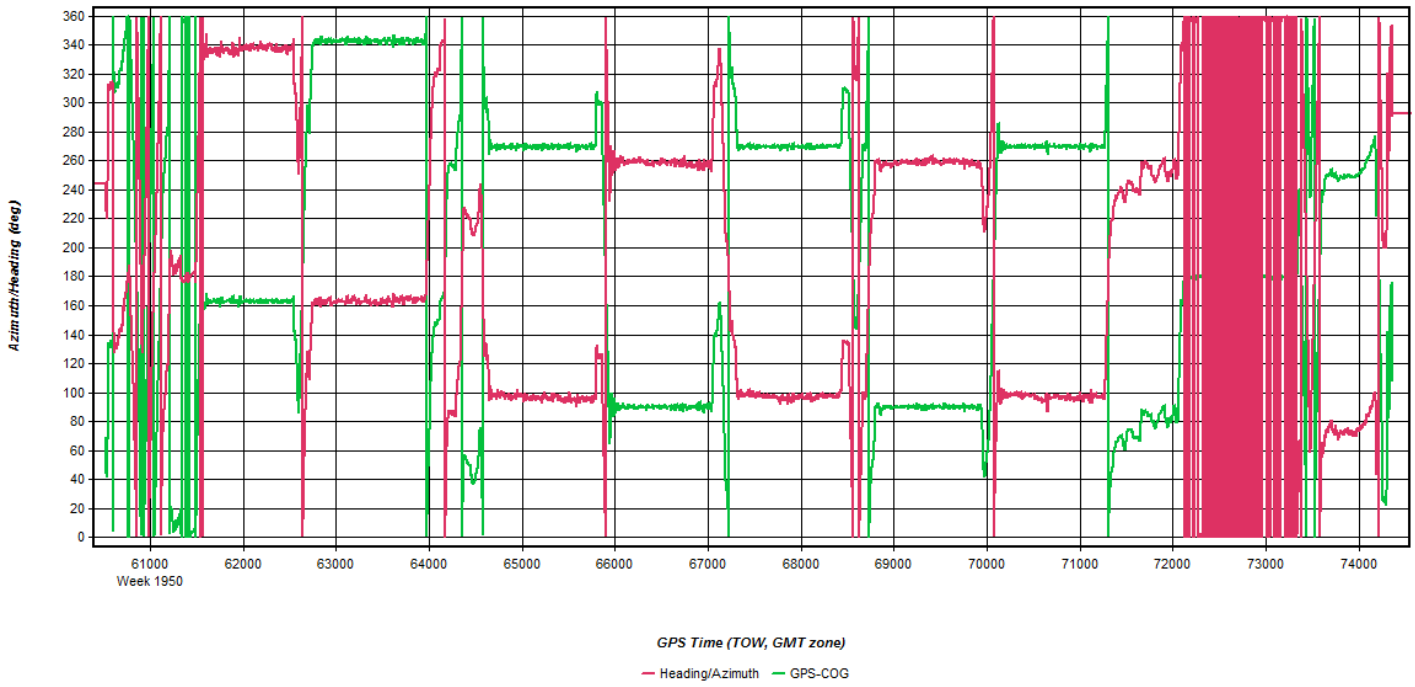

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Height

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

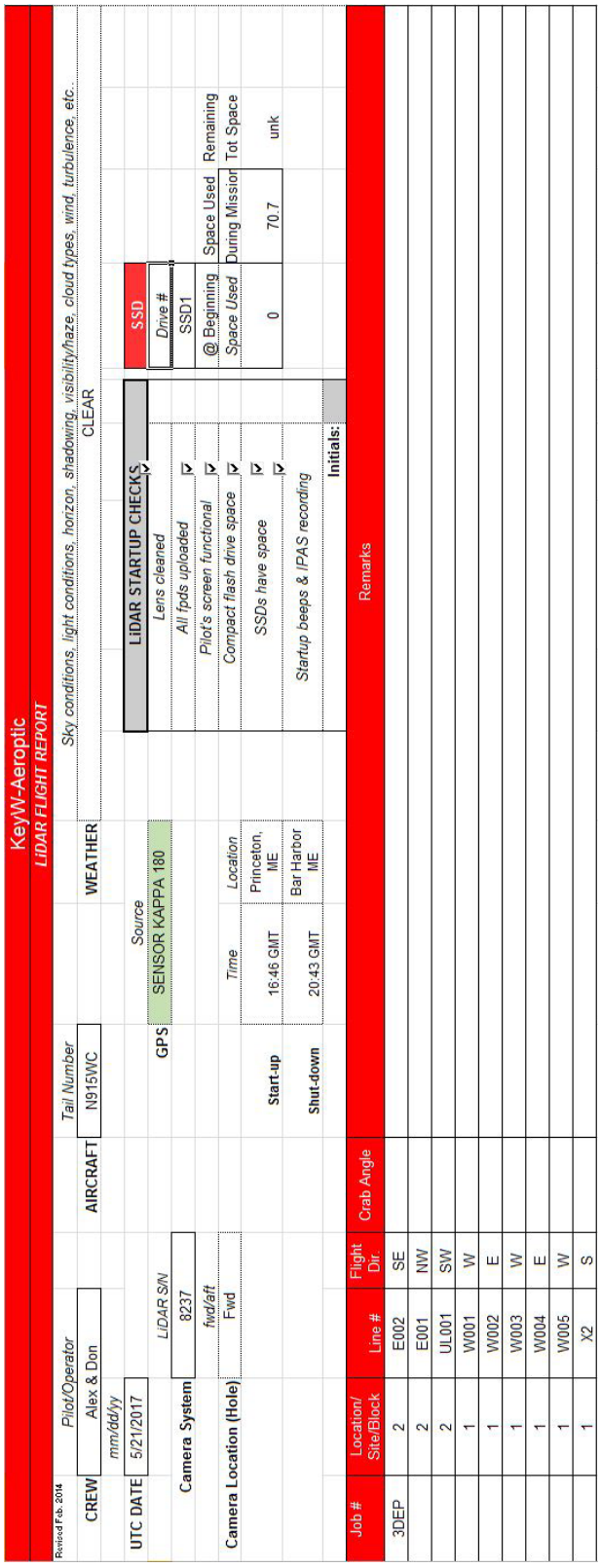

Separation (m)
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
61000
Week 1950
62000
63000
64000
65000
66000
67000
68000
69000
70000
71000
72000
73000
74000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic

LIDAR FLIGHT REPORT

Revised Feb. 2014

CREW	*Pilot/Operator* Alex & Don	AIRCRAFT	*Tail Number* N915WC	WEATHER	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.* CLEAR								
UTC DATE	*mm/dd/yy* 5/21/2017												
					Source								
	LiDAR S/N			GPS	SENSOR KAPPA 180								
Camera System	8237												
	fwd/aft												
Camera Location (Hole)	Fwd												
					Time	*Location*							
				Start-up	16:46 GMT	Princeton, ME							
				Shut-down	20:43 GMT	Bar Harbor ME							

Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	2	E002	SE		
	2	E001	NW		
	2	UL001	SW		
	1	W001	W		
	1	W002	E		
	1	W003	W		
	1	W004	E		
	1	W005	W		
	1	X2	S		

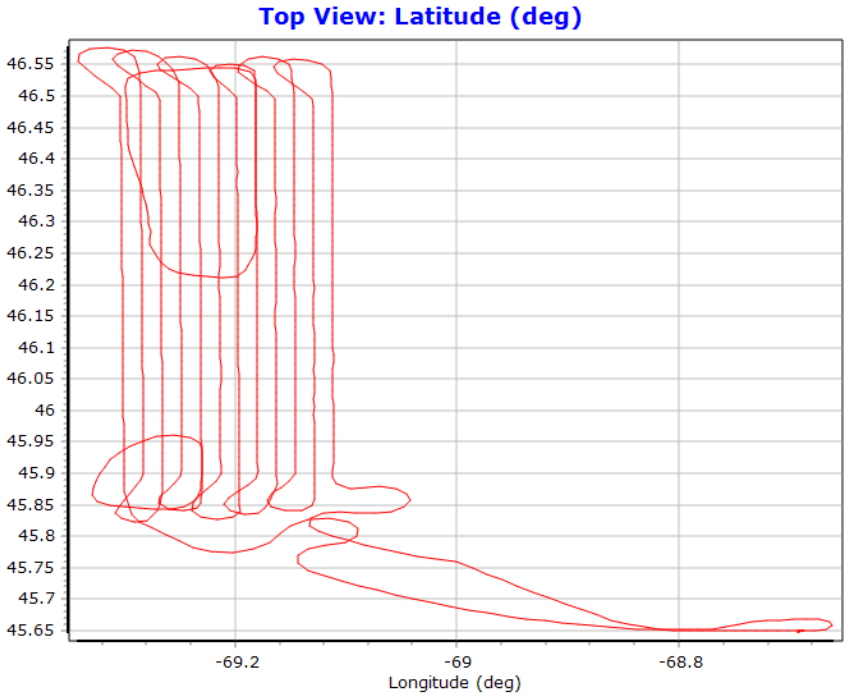
LIDAR STARTUP CHECKS

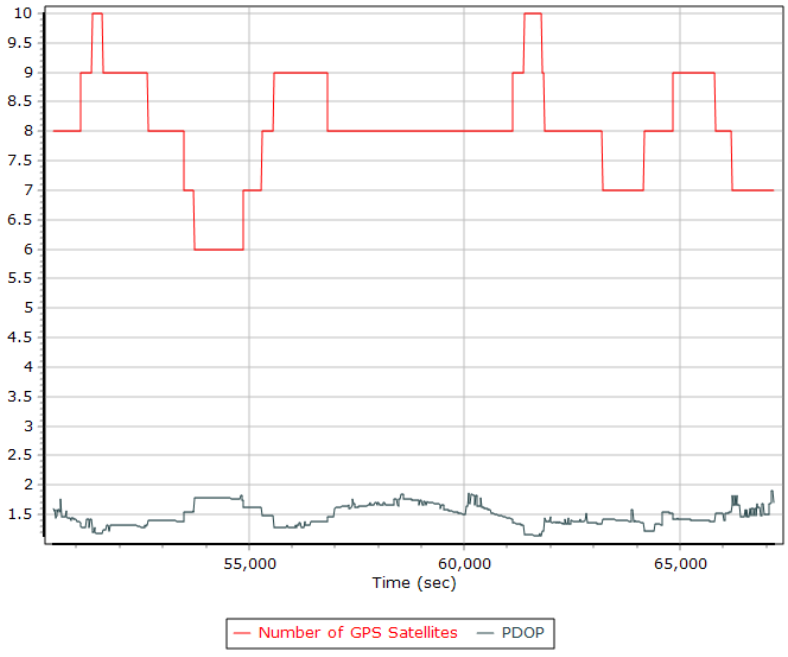
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	

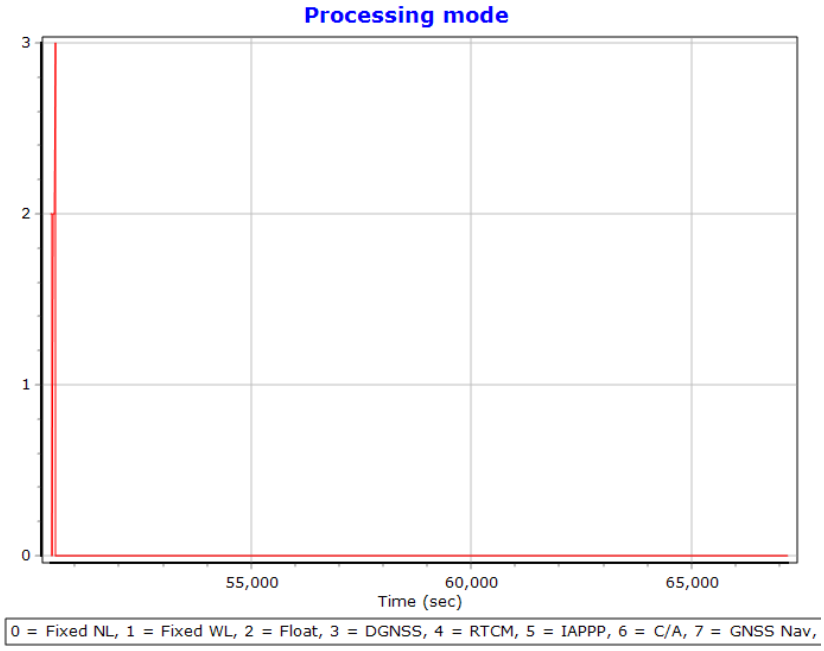
SSD

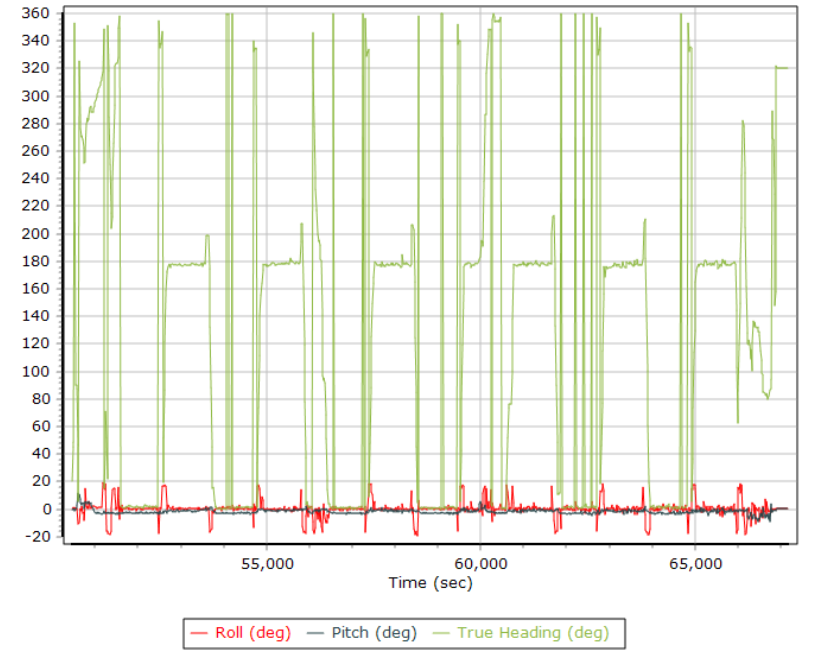
Drive #	*@ Beginning Space Used*	*Space Used During Mission*	*Remaining Tot Space*
SSD1	0	70.7	unk

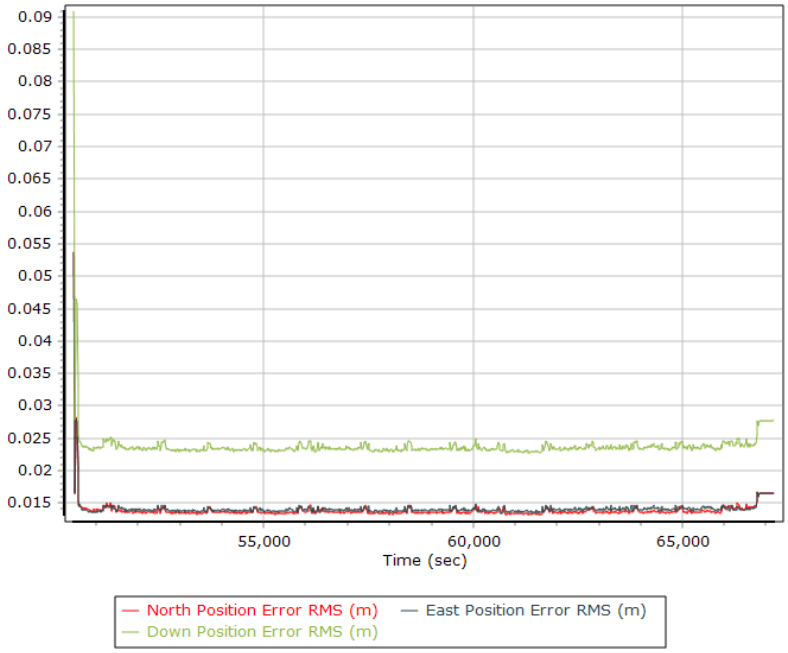
May 21, 2017-B (N1007Q,SN2221256)


Top View: Latitude (deg)
46.55
46.5
46.45
46.4
46.35
46.3
46.25
46.2
46.15
46.1
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
-69.2
-69
-68.8
Longitude (deg)

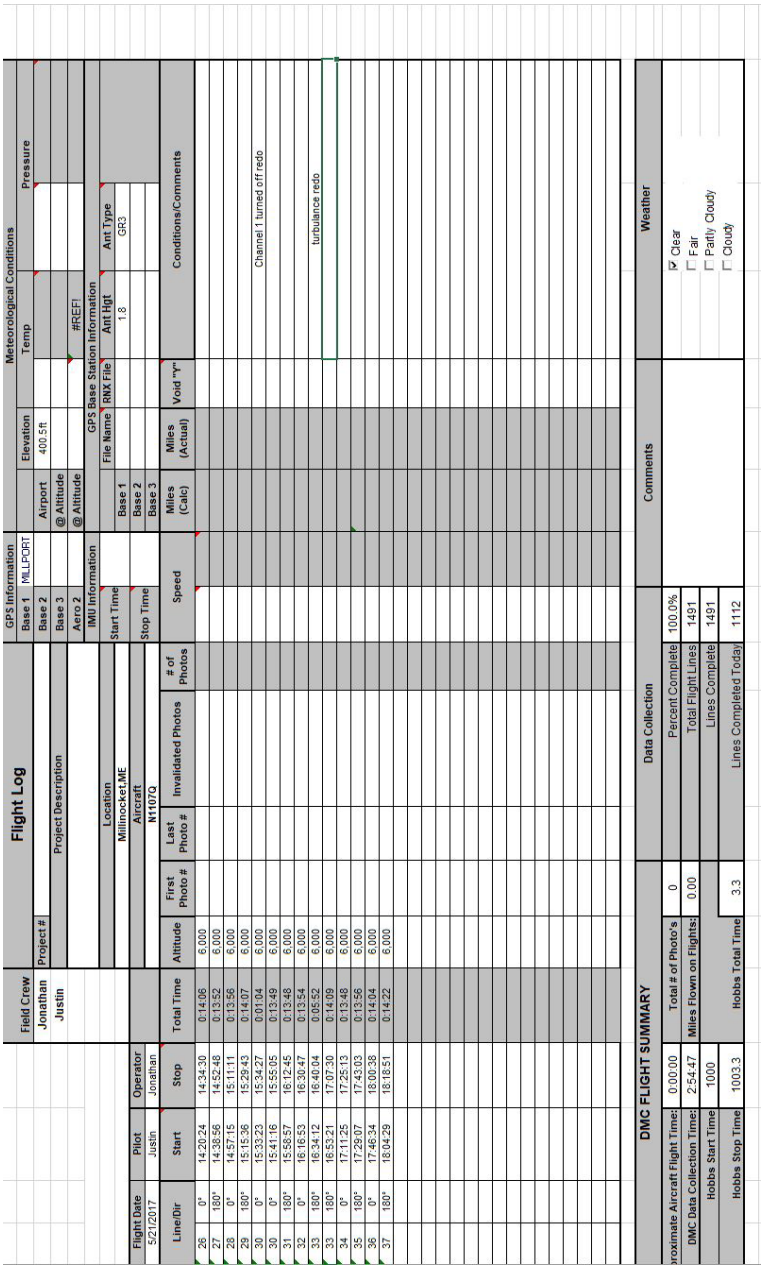

10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
55,000
60,000
65,000
Time (sec)
Number of GPS Satellites
PDOP


Processing mode
3
2
1
0
55,000
60,000
65,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
55,000
60,000
65,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.09
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
55,000
60,000
65,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

Flight Log



Flight Log

Field Crew
Jonathan
Justin

Project #:

Project Description:

GPS Information: Base 1 MILLPORT; Base 2; Base 3; Aero 2

IMU Information

Location: Millinocket,ME

Aircraft: N1107Q

Meteorological Conditions: Elevation — Airport 400.5ft; @ Altitude; @ Altitude

Temp: #REF!

Pressure

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1			1.8	GR3
Base 2				
Base 3				

Start Time; Stop Time

Flight Date	Pilot	Operator
5/21/2017	Justin	Jonathan

Line/Dir	Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
26 0°	14:20:24	14:34:30	0:14:06	6,000									
27 180°	14:36:56	14:52:48	0:13:52	6,000									
28 0°	14:57:15	15:11:11	0:13:56	6,000									
29 180°	15:15:36	15:29:43	0:14:07	6,000									
30 0°	15:33:23	15:34:27	0:01:04	6,000									Channel 1 turned off redo
30 0°	15:41:16	15:55:05	0:13:49	6,000									
31 180°	15:58:57	16:12:45	0:13:48	6,000									
32 0°	16:16:53	16:30:47	0:13:54	6,000									
33 180°	16:34:12	16:40:04	0:05:52	6,000									turbulance redo
33 180°	16:53:21	17:07:30	0:14:09	6,000									
34 0°	17:11:25	17:25:13	0:13:48	6,000									
35 180°	17:29:07	17:43:03	0:13:56	6,000									
36 0°	17:46:34	18:00:38	0:14:04	6,000									
37 180°	18:04:29	18:18:51	0:14:22	6,000									

DMC FLIGHT SUMMARY

Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0
DMC Data Collection Time:	2:54:47	Miles Flown on Flights:	0.00
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

Data Collection

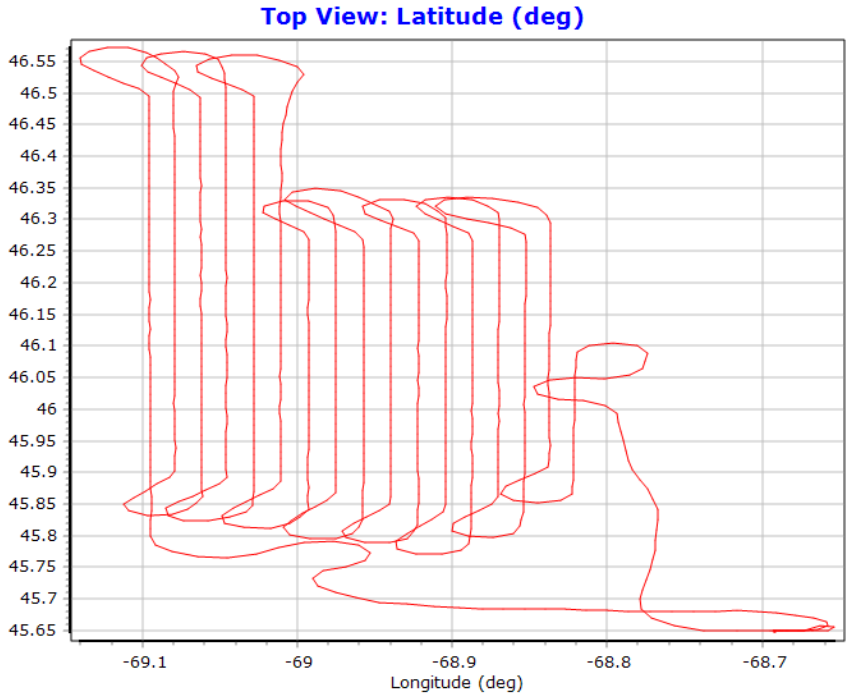
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

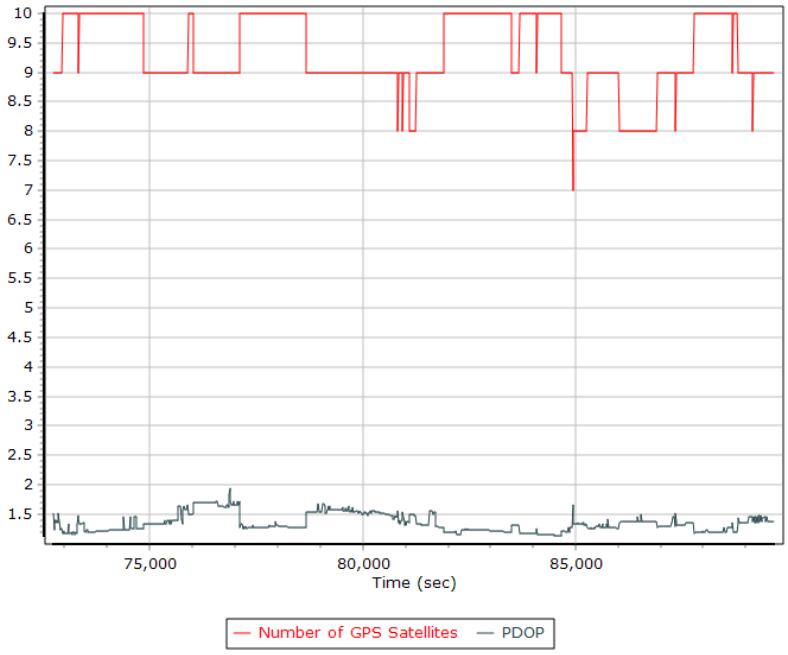
Comments

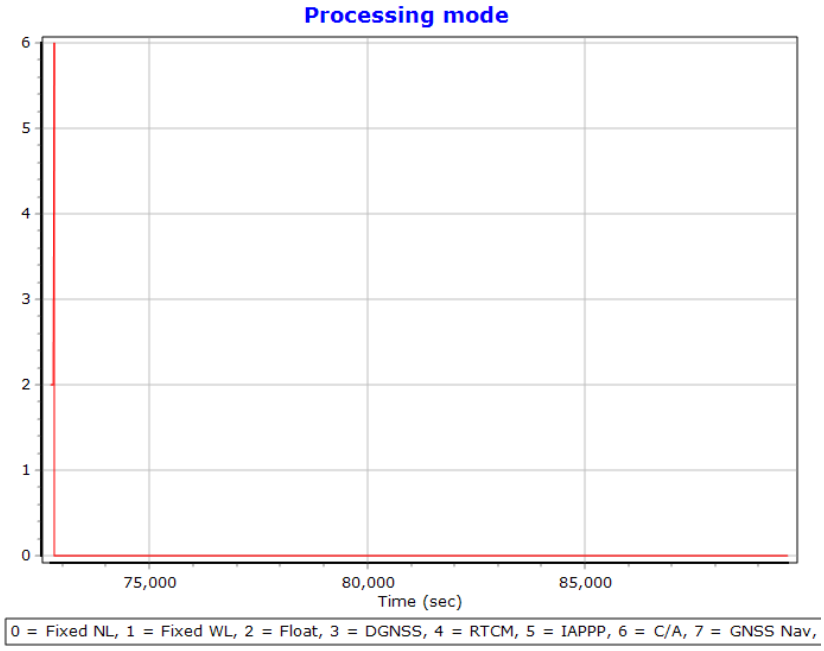
Weather

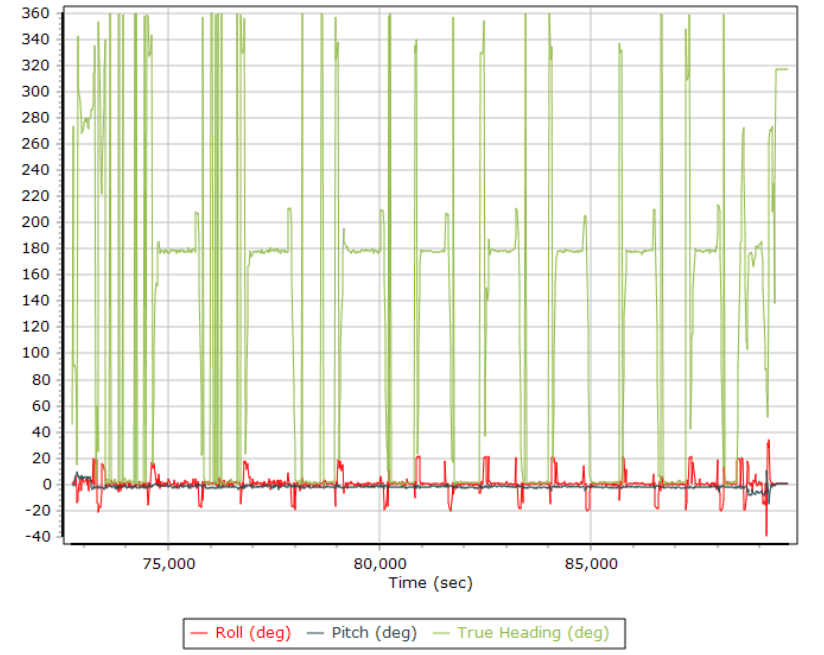
- ☑ Clear
- ☐ Fair
- ☐ Partly Cloudy
- ☐ Cloudy

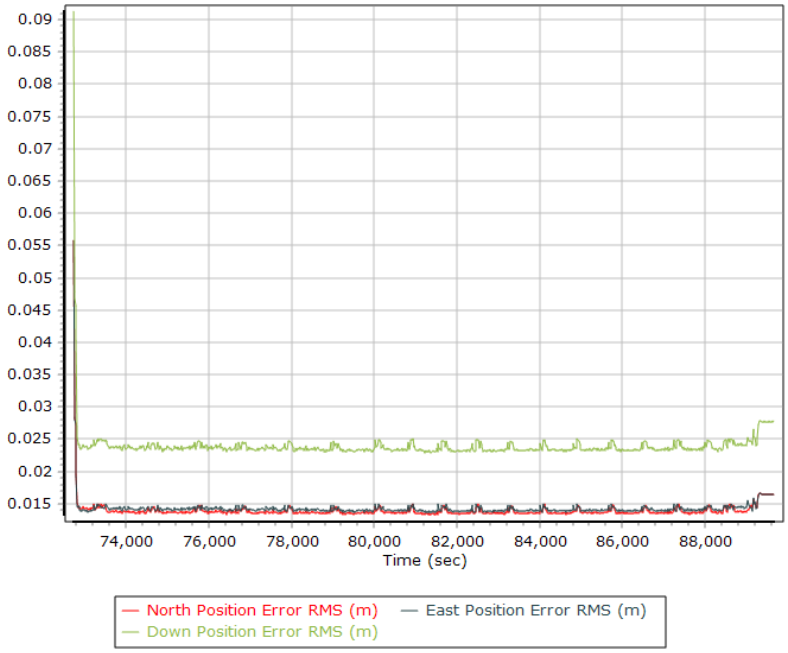
May 21, 2017-C (N1007Q,SN2221256)


Top View: Latitude (deg)
46.55
46.5
46.45
46.4
46.35
46.3
46.25
46.2
46.15
46.1
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
-69.1
-69
-68.9
-68.8
-68.7
Longitude (deg)

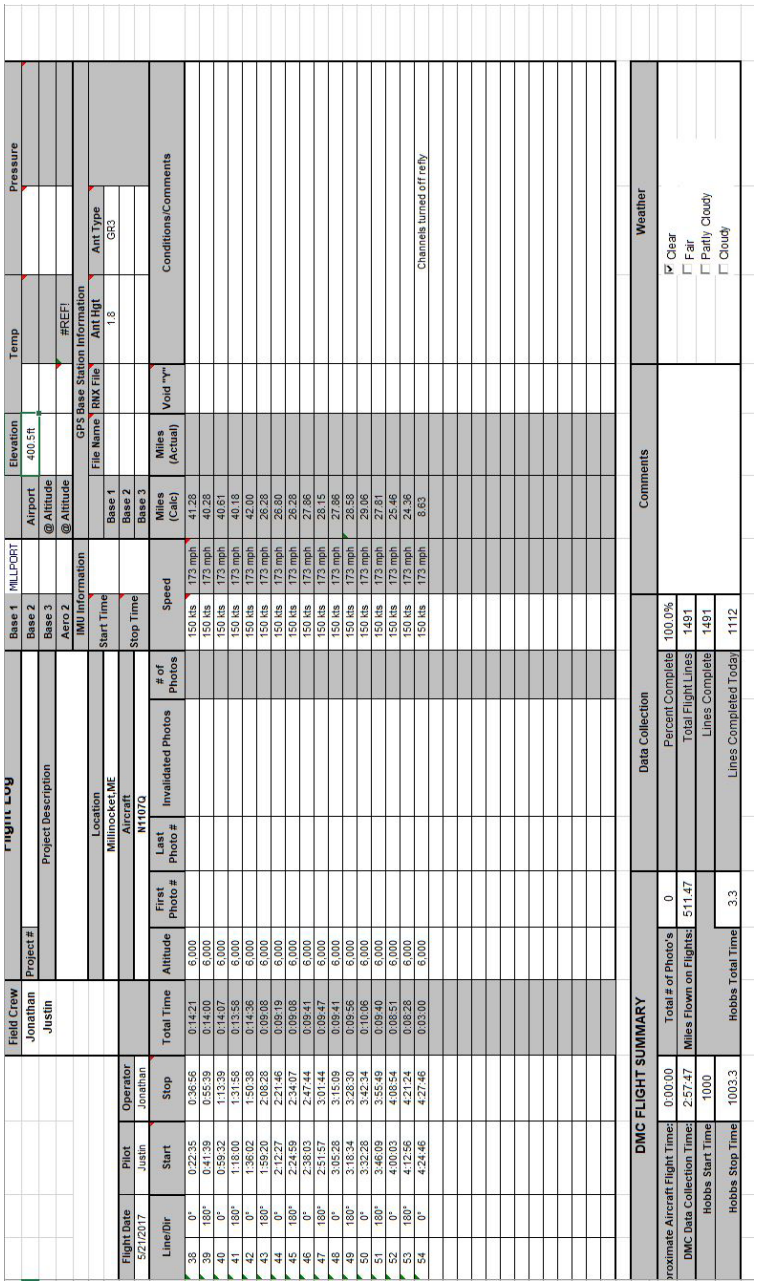

10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
75,000
80,000
85,000
Time (sec)
Number of GPS Satellites
PDOP


Processing mode
6
5
4
3
2
1
0
75,000
80,000
85,000
Time (sec)
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
75,000
80,000
85,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.09
0.085
0.08
0.075
0.07
0.065
0.06
0.055
0.05
0.045
0.04
0.035
0.03
0.025
0.02
0.015
74,000
76,000
78,000
80,000
82,000
84,000
86,000
88,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

Flight Log



Flight Log

Field Crew		Project #	Base 1	MILLPORT	Airport	Elevation 400.5ft	Temp		Pressure	
Jonathan			Base 2		@ Altitude					
Justin	Project Description		Base 3		@ Altitude		#REF!			
			Aero 2		@ Altitude					

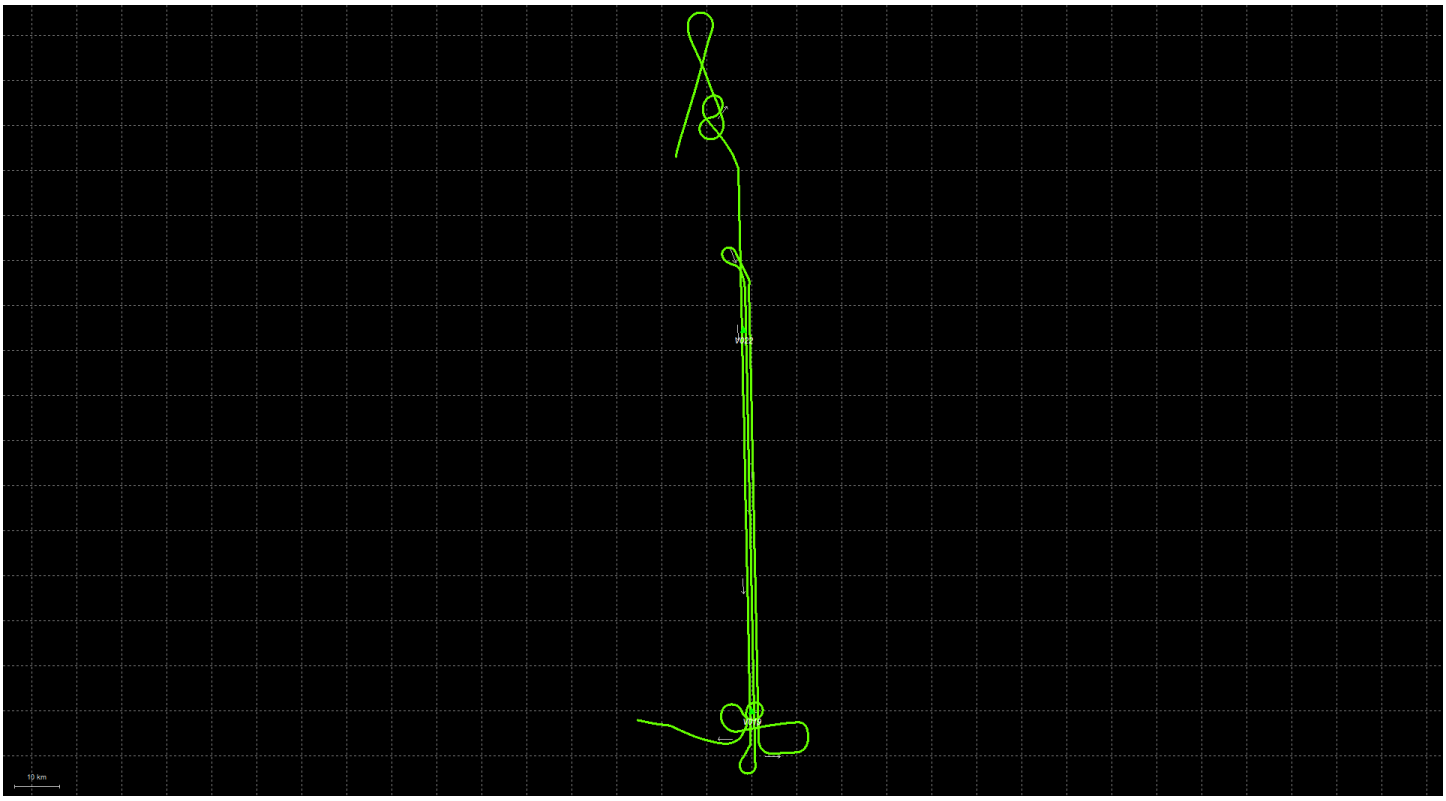
IMU Information			GPS Base Station Information				
Location	Start Time			File Name	RNX File	Ant Hgt	Ant Type
Millinocket,ME		Base 1				1.8	GR3
Aircraft		Base 2					
N1107Q	Stop Time	Base 3					

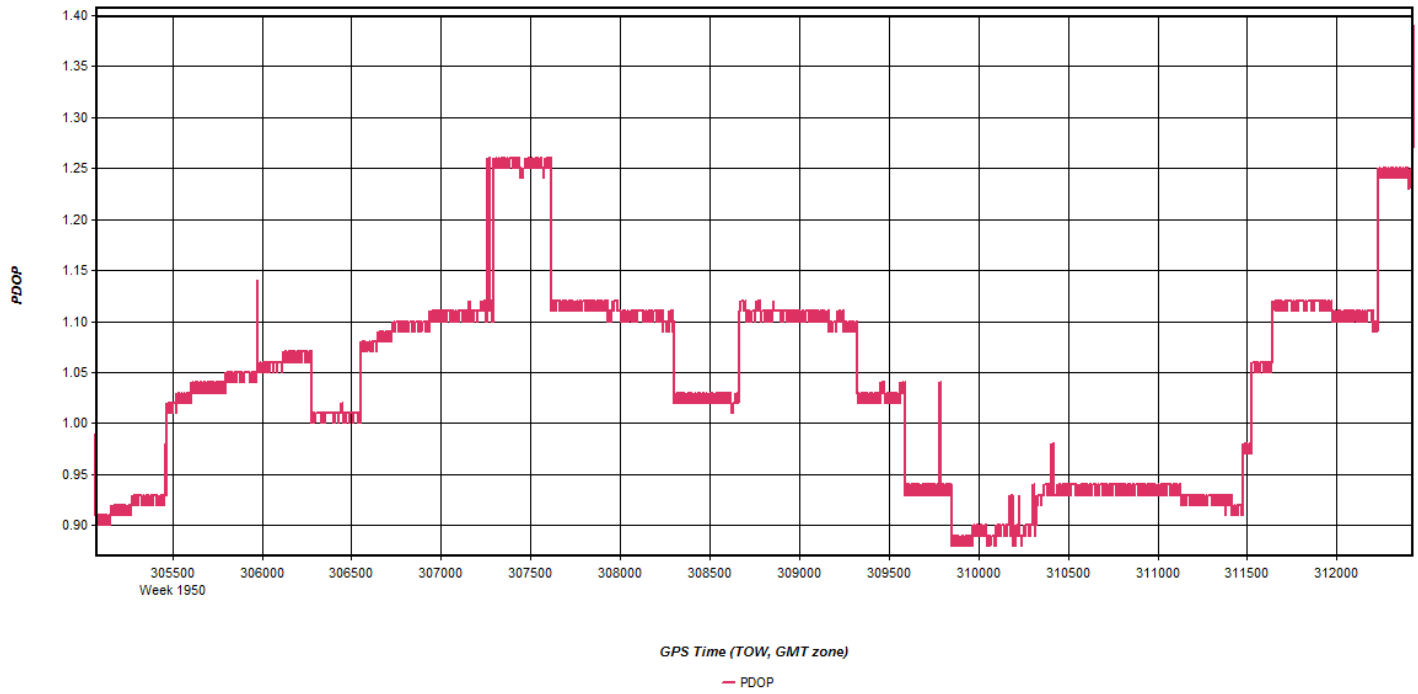
Flight Date	Pilot	Operator
5/21/2017	Justin	Jonathan

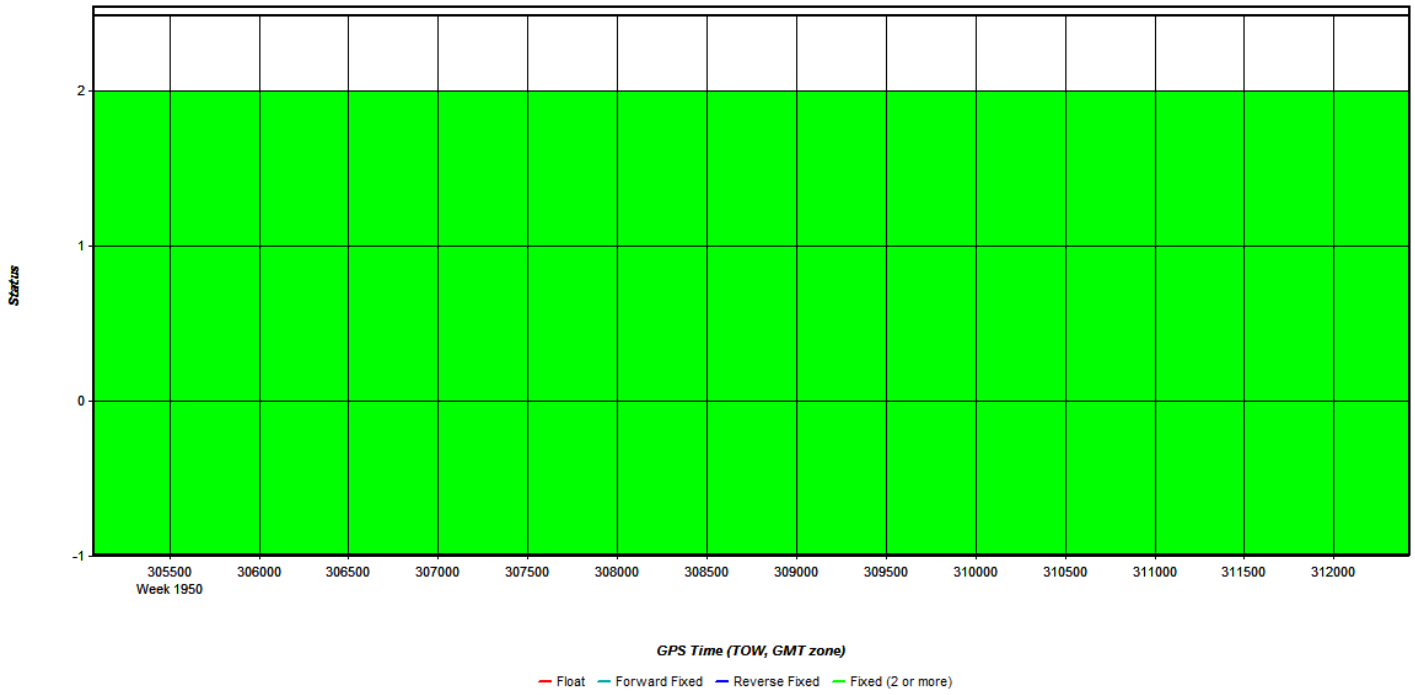
Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void *Y*	Conditions/Comments
38	0°	0:22:35	0:36:56	0:14:21	6,000					150 kts 173 mph	41.28			
39	180°	0:41:39	0:55:39	0:14:00	6,000					150 kts 173 mph	40.28			
40	0°	0:59:32	1:13:39	0:14:07	6,000					150 kts 173 mph	40.61			
41	180°	1:18:00	1:31:58	0:13:58	6,000					150 kts 173 mph	40.18			
42	0°	1:36:02	1:50:38	0:14:36	6,000					150 kts 173 mph	42.00			
43	180°	1:59:20	2:08:28	0:09:08	6,000					150 kts 173 mph	26.28			
44	0°	2:12:27	2:21:46	0:09:19	6,000					150 kts 173 mph	26.80			
45	180°	2:24:59	2:34:07	0:09:08	6,000					150 kts 173 mph	26.28			
46	0°	2:38:03	2:47:44	0:09:41	6,000					150 kts 173 mph	27.86			
47	180°	2:51:57	3:01:44	0:09:47	6,000					150 kts 173 mph	28.15			
48	0°	3:05:28	3:15:09	0:09:41	6,000					150 kts 173 mph	27.86			
49	180°	3:18:34	3:28:30	0:09:56	6,000					150 kts 173 mph	28.58			
50	0°	3:32:28	3:42:34	0:10:06	6,000					150 kts 173 mph	29.06			
51	180°	3:46:09	3:55:49	0:09:40	6,000					150 kts 173 mph	27.81			
52	0°	4:00:03	4:08:54	0:08:51	6,000					150 kts 173 mph	25.46			
53	180°	4:12:56	4:21:24	0:08:28	6,000					150 kts 173 mph	24.36			
54	0°	4:24:46	4:27:46	0:03:00	6,000					150 kts 173 mph	8.63			Channels turned off refly

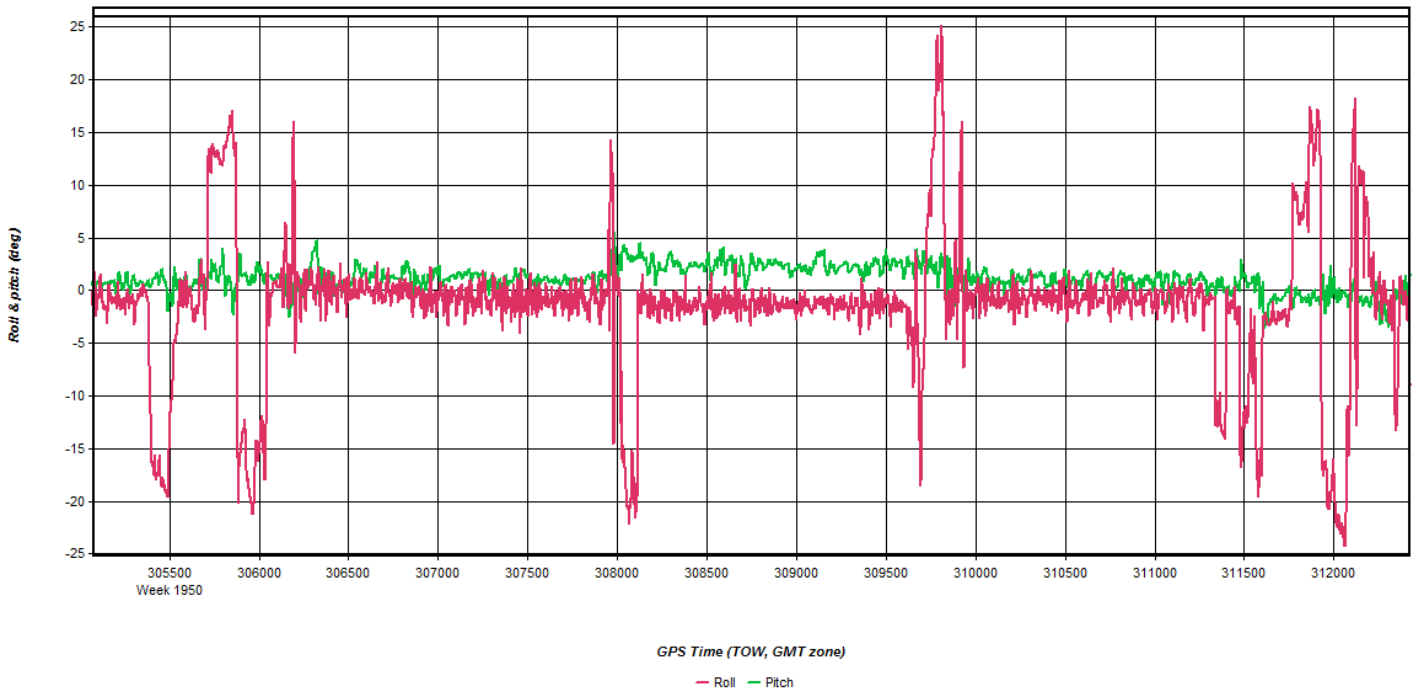
DMC FLIGHT SUMMARY					Data Collection		Comments	Weather
Approximate Aircraft Flight Times:	0:00:00	Total # of Photo's	0		Percent Complete	100.0%		☑ Clear
DMC Data Collection Times:	2:57:47	Miles Flown on Flights:	511.47		Total Flight Lines	1491		☐ Fair
Hobbs Start Time	1000				Lines Complete	1491		☐ Partly Cloudy
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3		Lines Completed Today	1112		☐ Cloudy

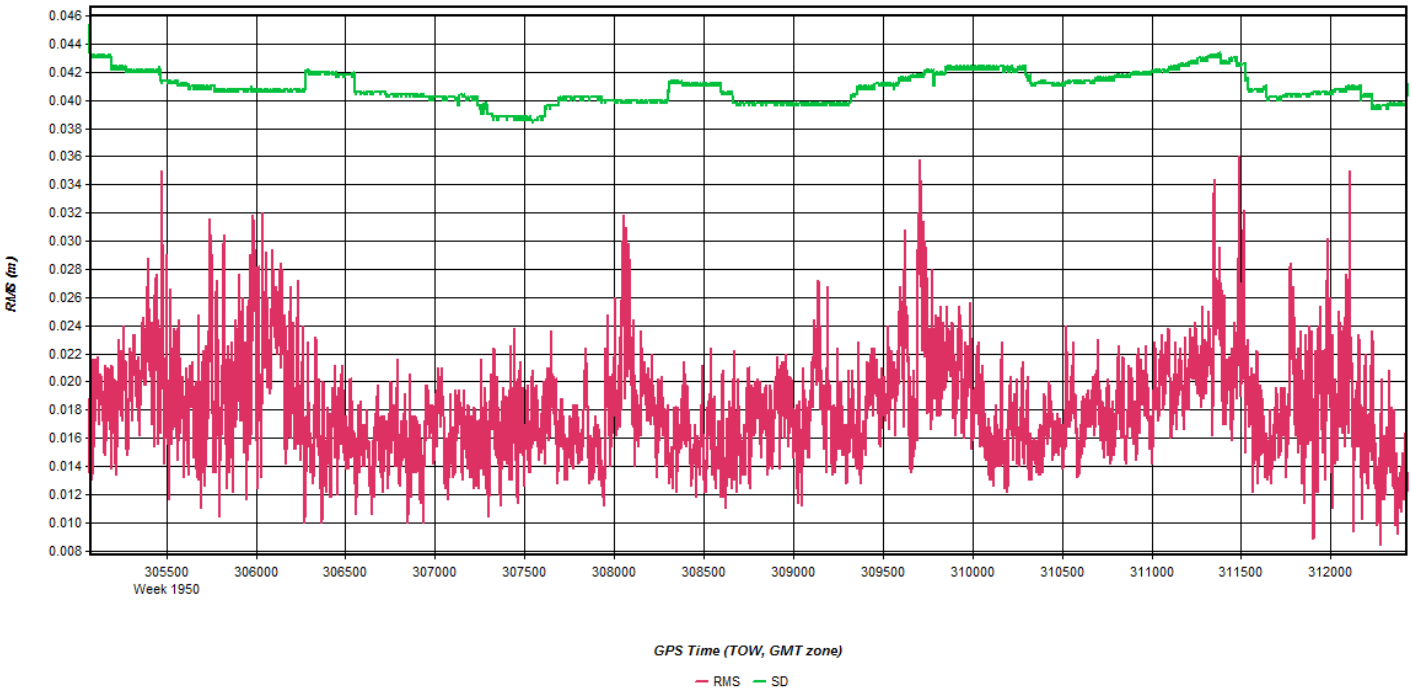
May 24, 2017-A (N73TM, SN7178)

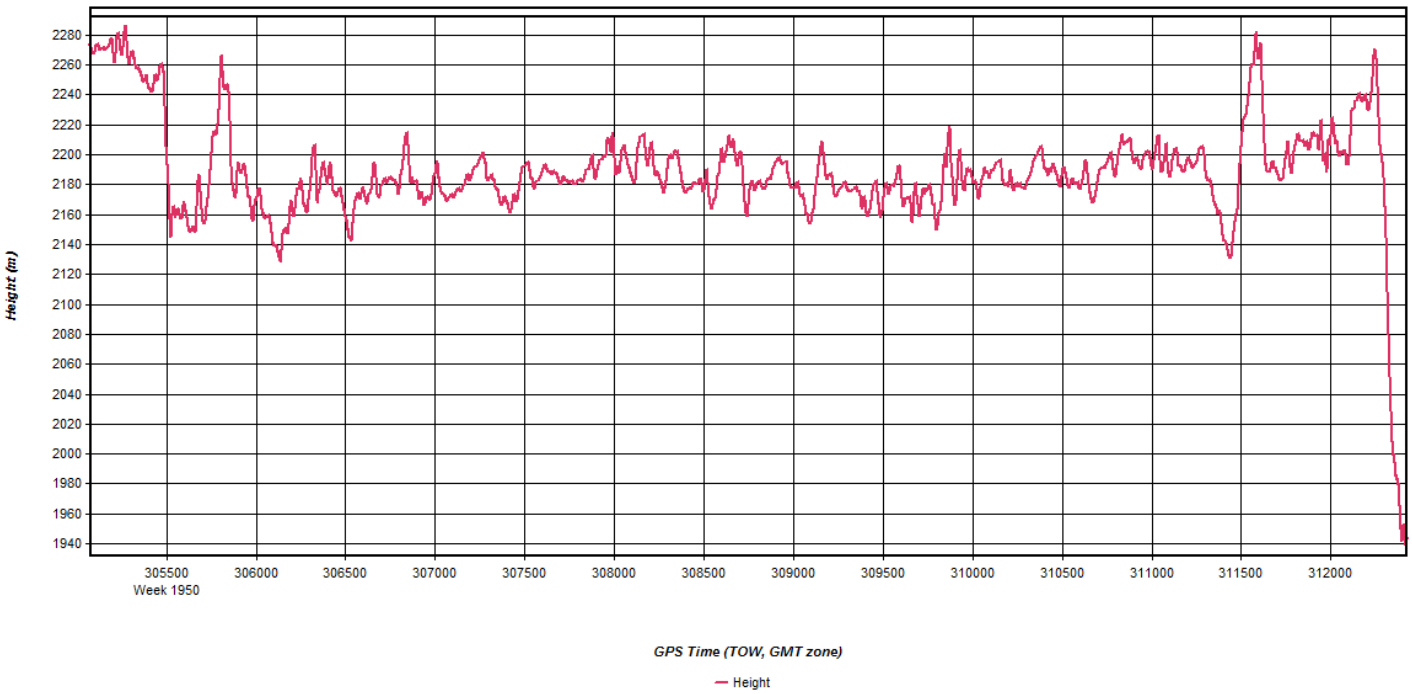


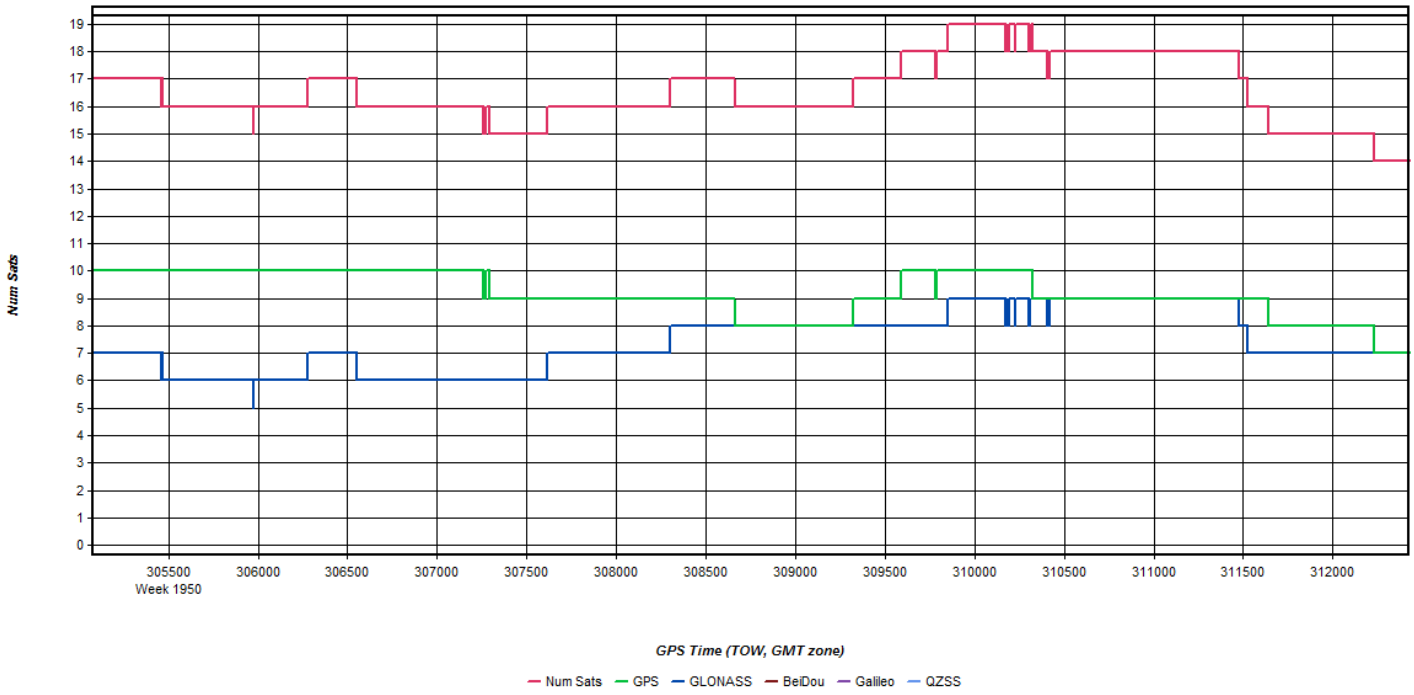

PDOP
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
PDOP

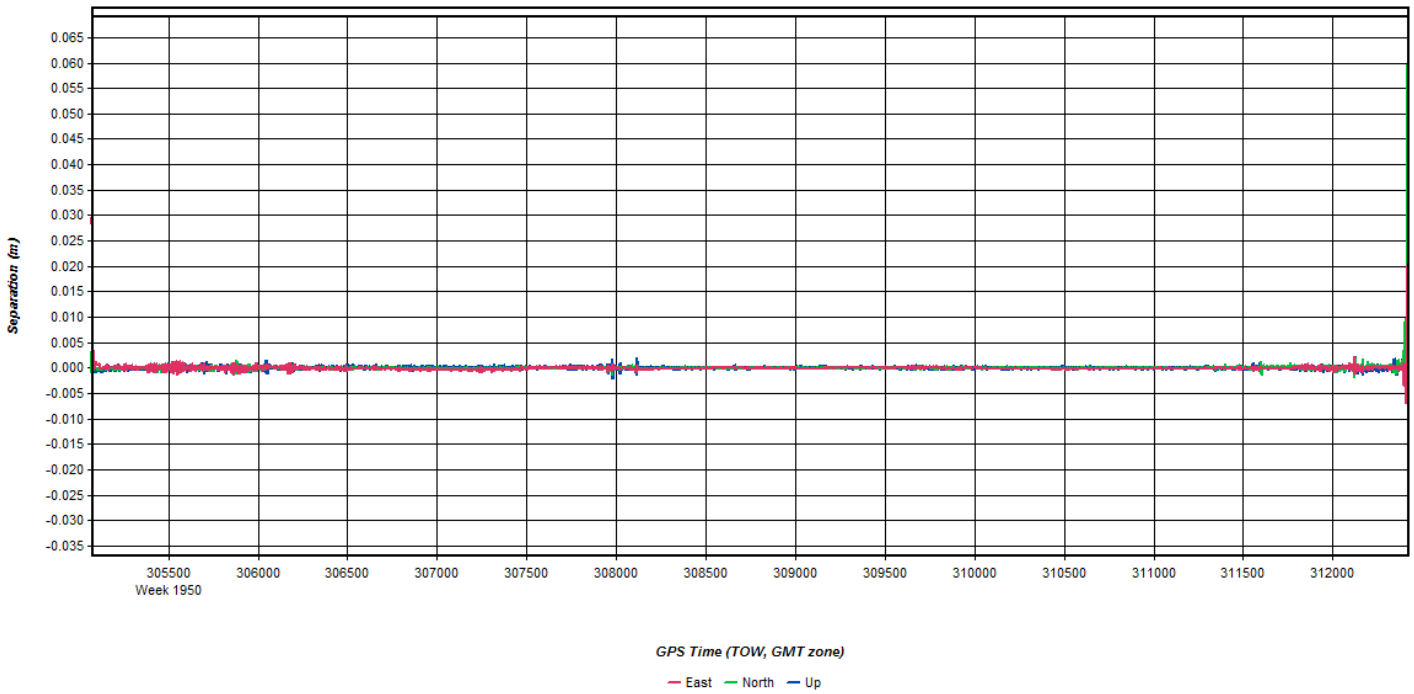

Status
2
1
0
-1
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

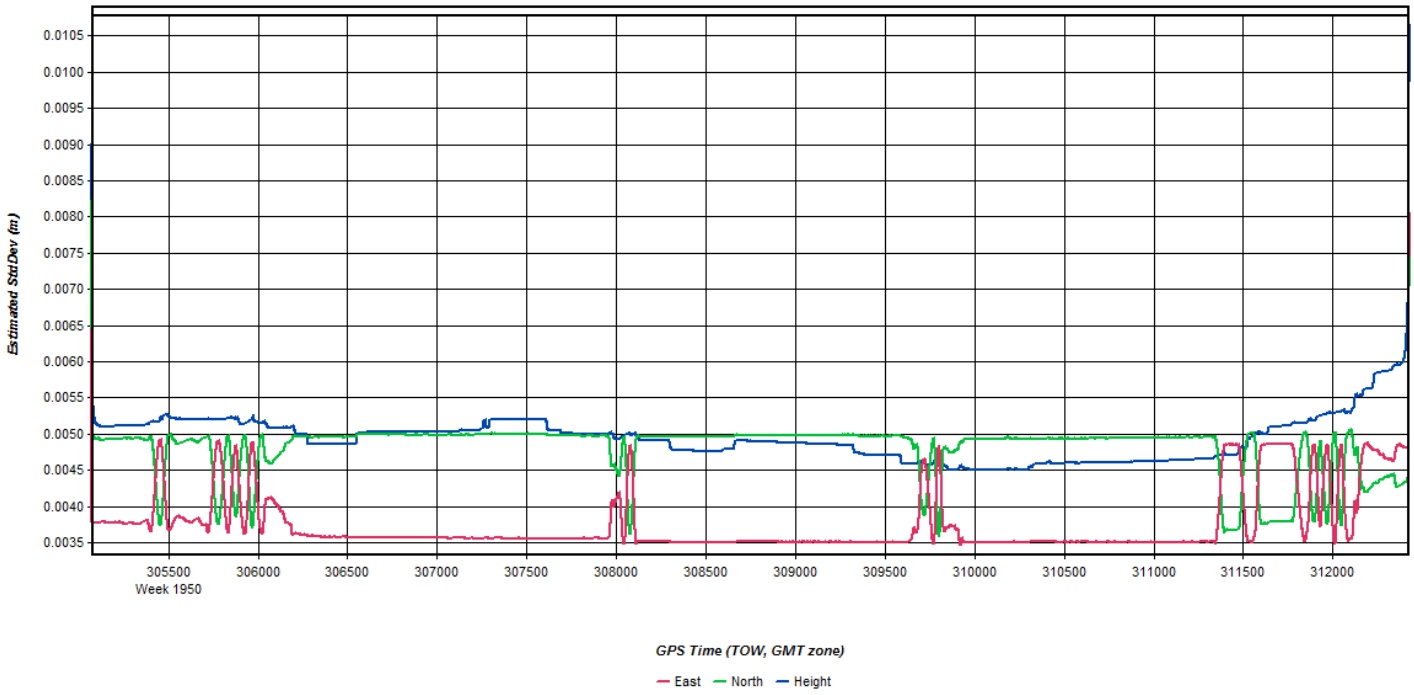

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Roll
Pitch

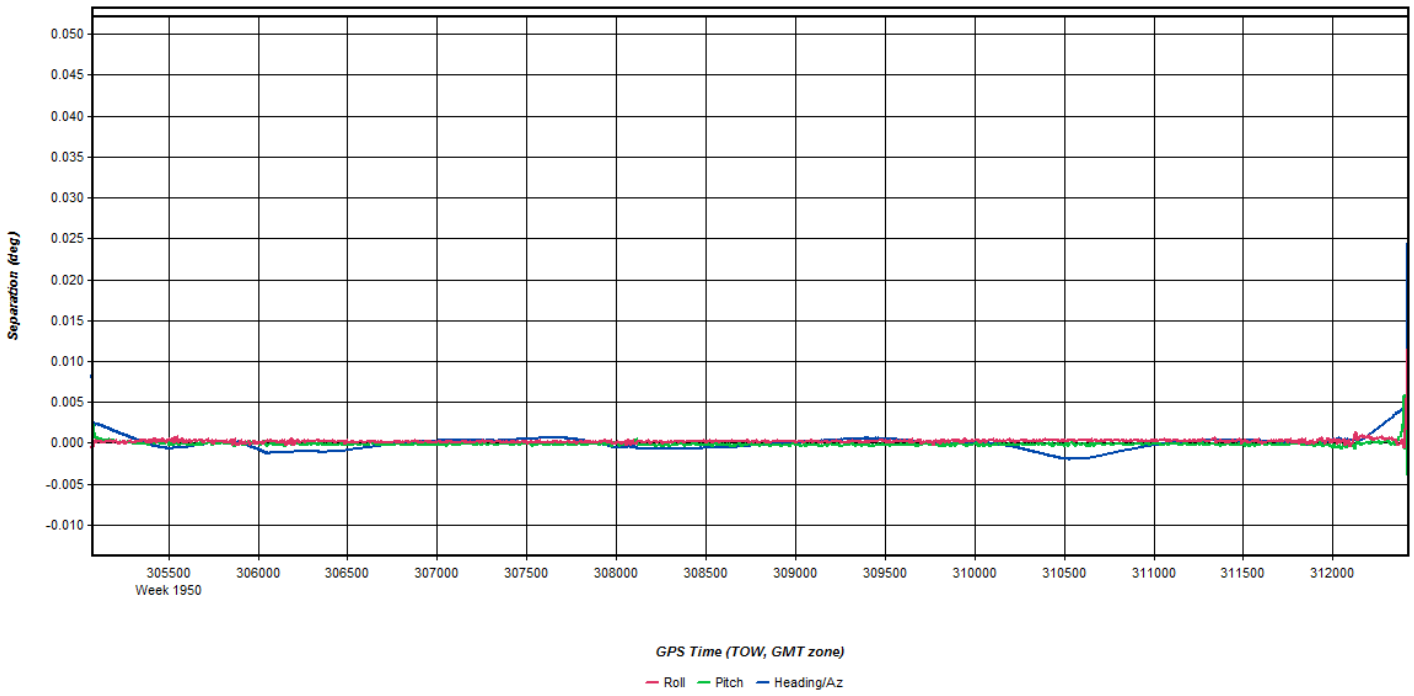

RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
RMS
SD

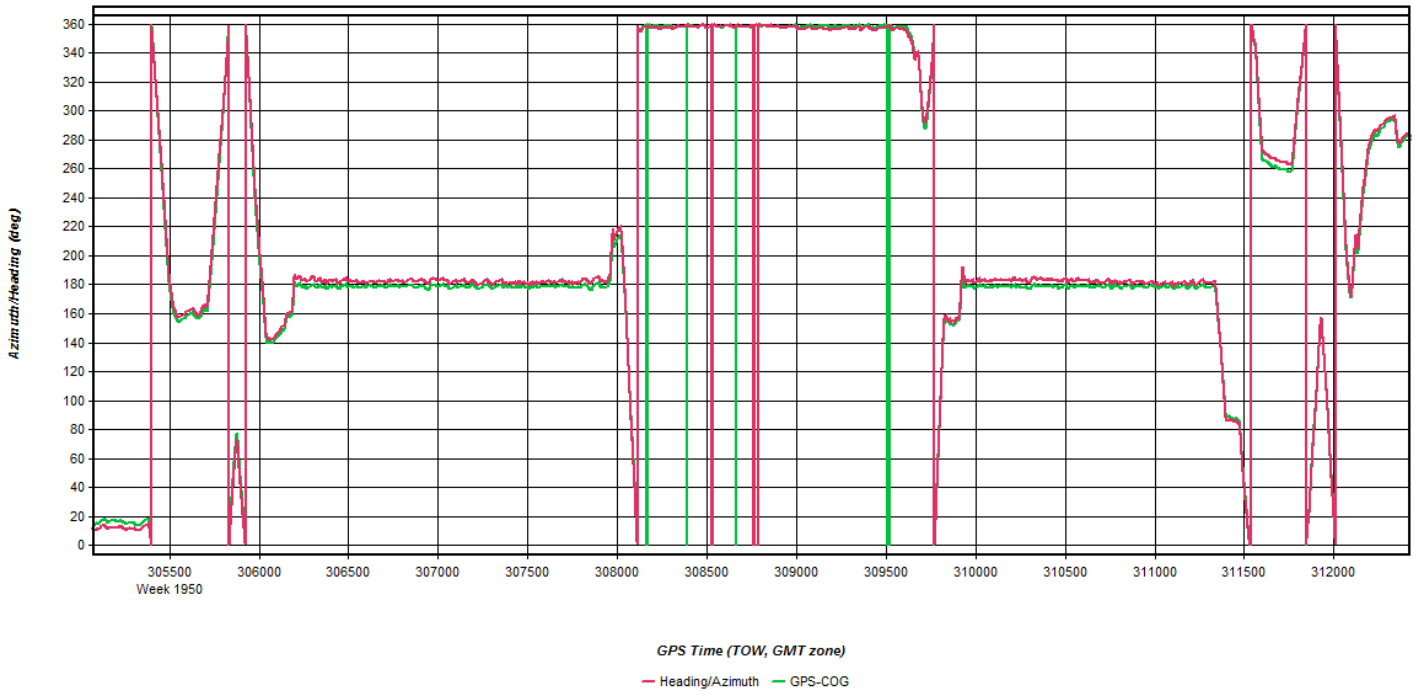

Height (m)
2280
2260
2240
2220
2200
2180
2160
2140
2120
2100
2080
2060
2040
2020
2000
1980
1960
1940
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Height

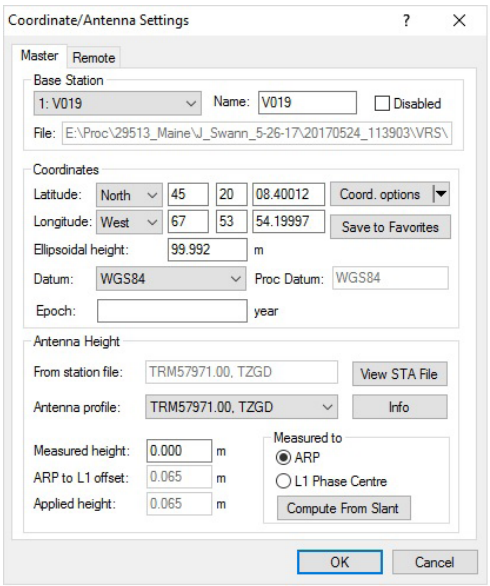

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

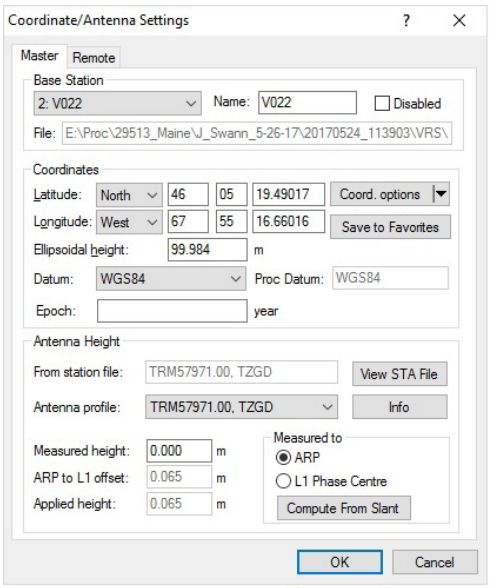

Separation (m)
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
East
North
Height

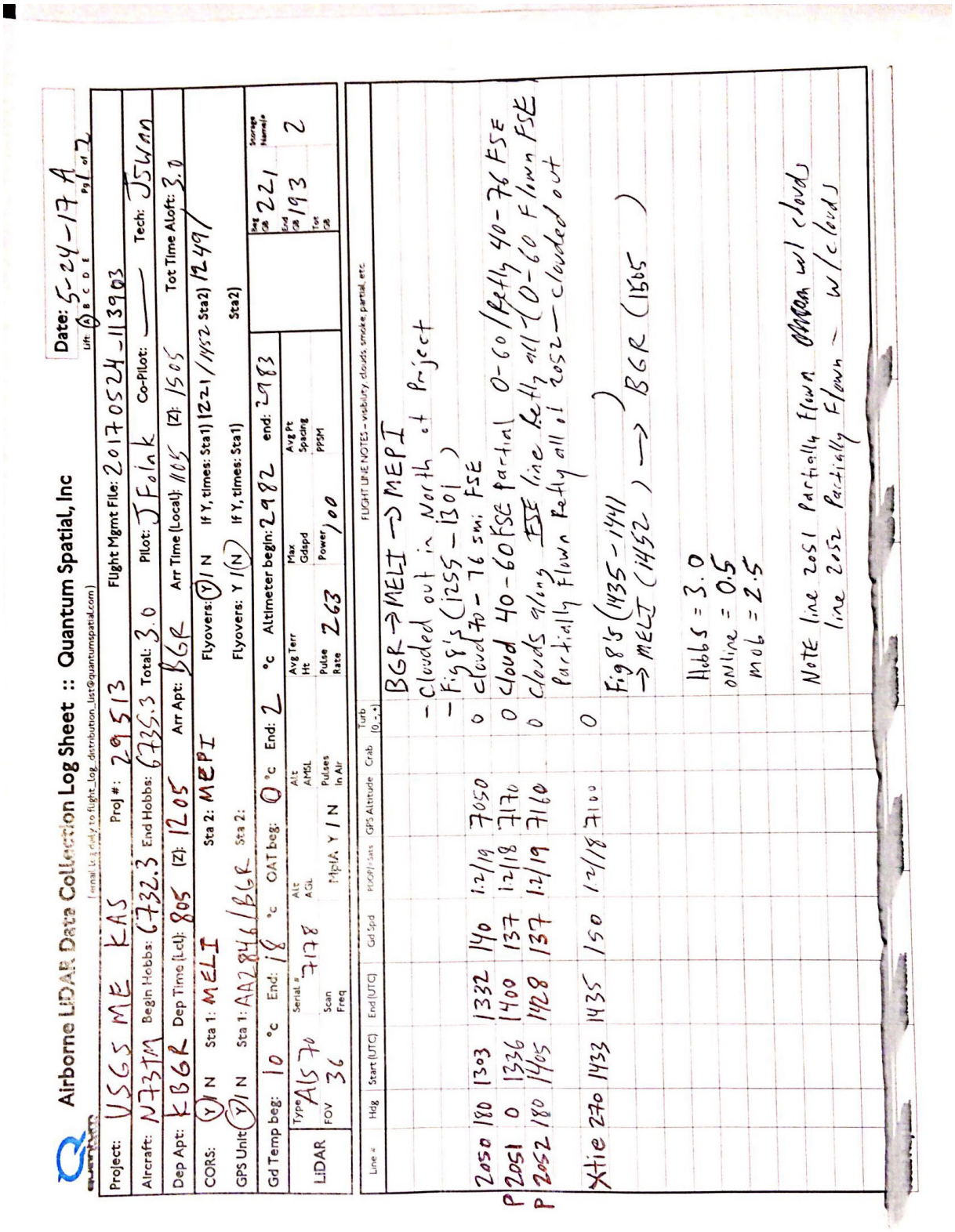

Separation (deg)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V019
Name: V019
Disabled
File: E:\Proc\29513_Maine\J_Swann_5-26-17\20170524_113903\VRS\
Coordinates
Latitude: North 45 20 08.40012
Coord. options
Longitude: West 67 53 54.19997
Save to Favorites
Ellipsoidal height: 99.992 m
Datum: WGS84
Proc Datum: WGS84
Epoch:
year
Antenna Height
From station file: TRM57971.00, TZGD
View STA File
Antenna profile: TRM57971.00, TZGD
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V022
Name:
V022
Disabled
File:
E:\Proc\29513_Maine\J_Swann_5-26-17\20170524_113903\VRS\
Coordinates
Latitude:
North
46
05
19.49017
Coord. options
Longitude:
West
67
55
16.66016
Save to Favorites
Ellipsoidal height:
99.984
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, TZGD
View STA File
Antenna profile:
TRM57971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: 5-24-17 A

Project: USGS ME KAS Proj #: 29513 Flight Mgmt File: 20170524_113903

Aircraft: N731M Begin Hobbs: 6732.3 End Hobbs: 6735.3 Total: 3.0 Pilot: JFolak Co-Pilot: — Tech: JSwan

Dep Apt: KBGR Dep Time (Lcl): 805 (Z): 1205 Arr Apt: BGR Arr Time (Local): 1105 (Z): 1505 Tot Time Aloft: 3.0

CORS: (Y) N Sta 1: MELI Sta 2: MEPI Flyovers: (Y) N If Y, times: Sta1) 1221/1452 Sta2) 1249

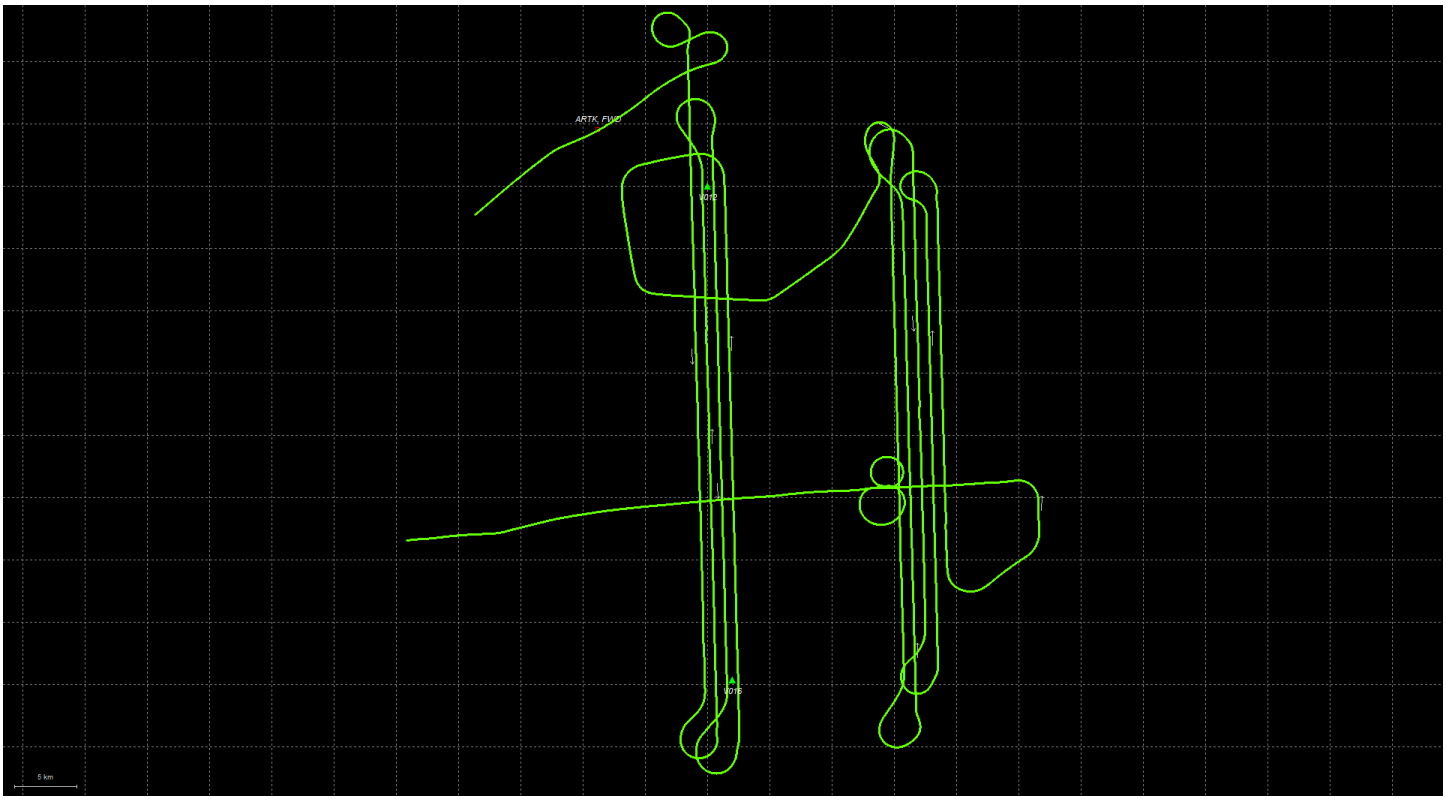
GPS Unit (Y) N Sta 1: AA2846/BGR Sta 2: Flyovers: Y / (N) If Y, times: Sta1) Sta2)

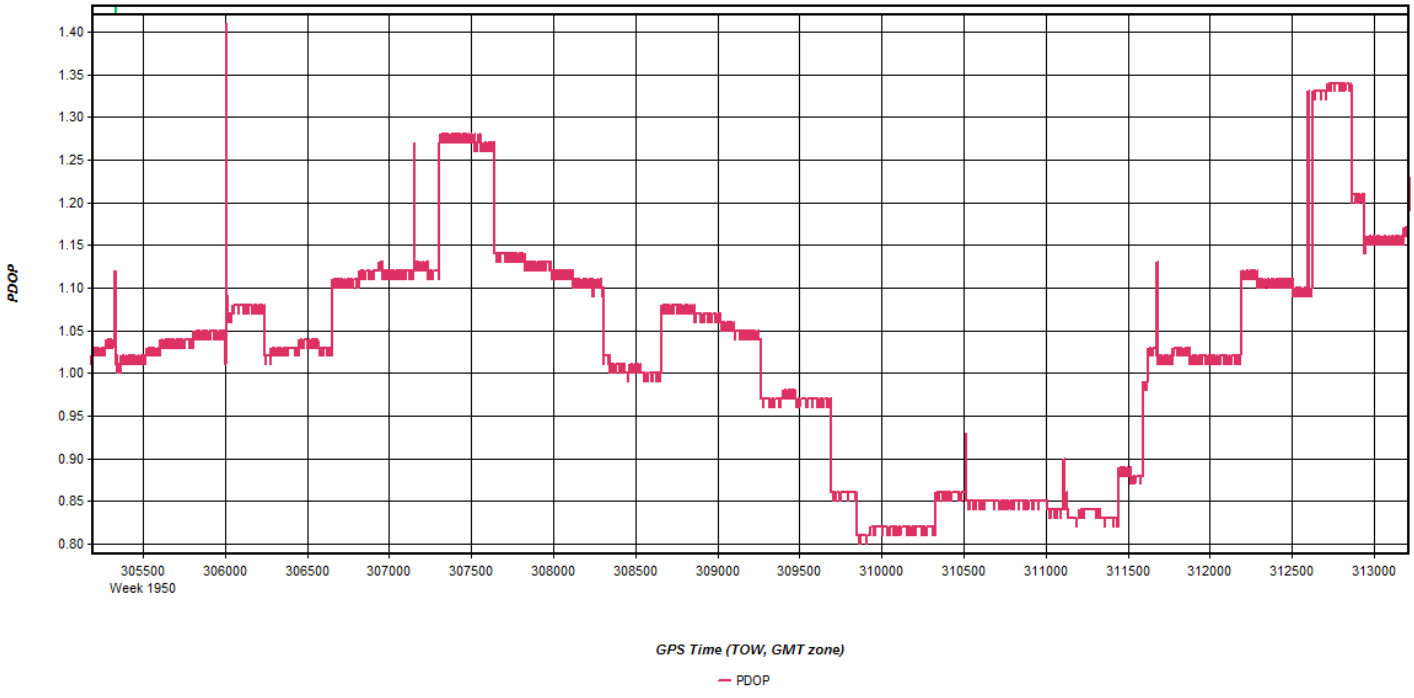
Gd Temp beg: 10 °c End: 18 °c OAT beg: 0 °c End: 2 °c Altimeter begin: 2982 end: 2983

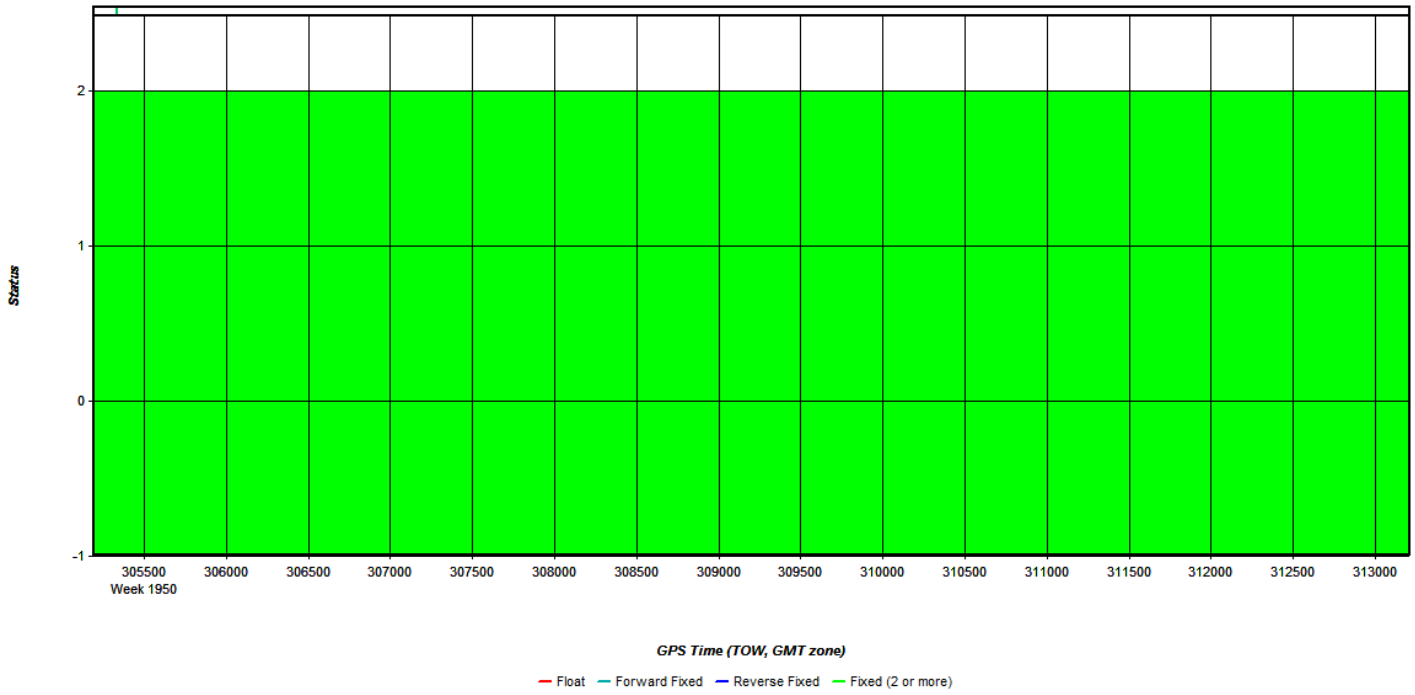
LiDAR	Type / FOV	Serial # / Scan Freq	Mpia Y / N	Alt AGL	GPS Sats	Gd Spd	Alt AMSL	Pulses In Air	Avg Terr Ht	Pulse Rate	Max Gdspd	Power	Avg Pt Spacing	PPSM	Seq Beg	221	Storage Numb
	AS70 / 36	7178	Y / N							263		100			End	193	2
															Tot		

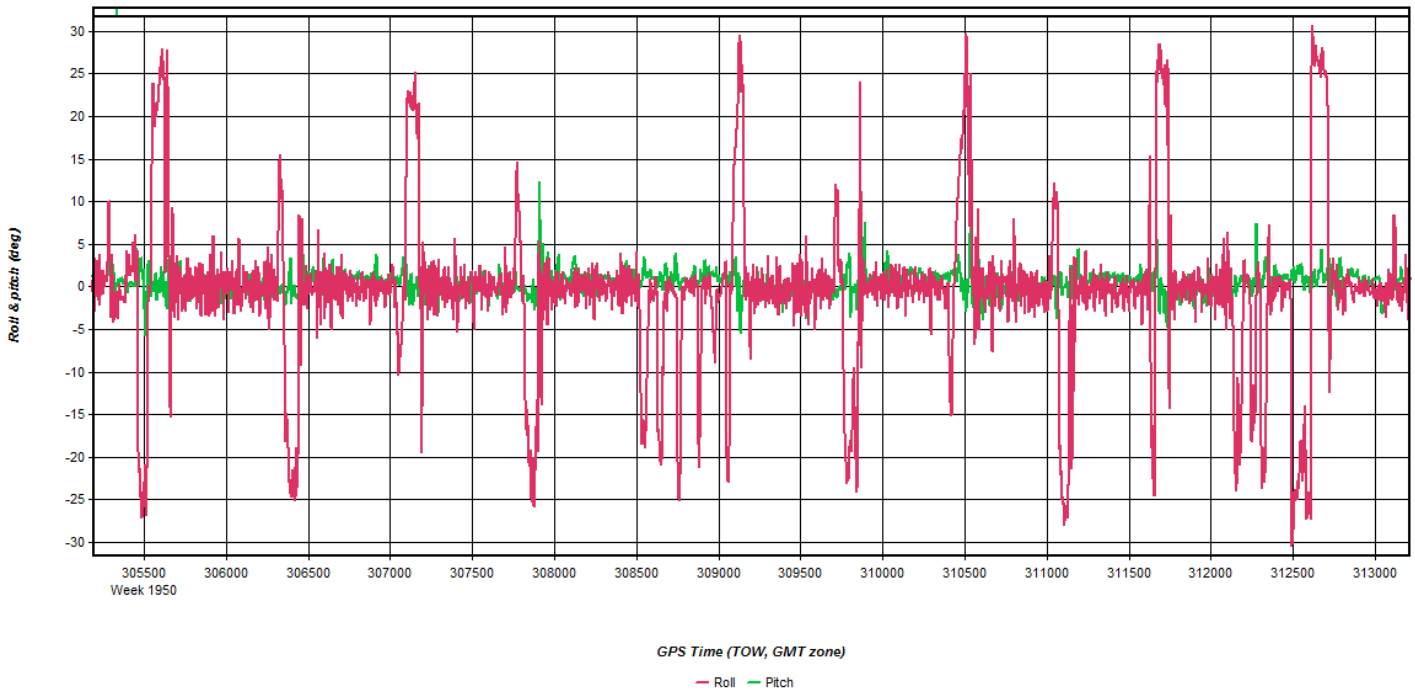
Line #	Hdg	Start (UTC)	End (UTC)	Gd Spd	PDOP / Sats	GPS Altitude	Grab	Turb (0,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc.
									BGR → MELI → MEPI
									- Clouded out in North at Project
									- Figs (1255 – 1301)
2050	180	1303	1332	140	12/19	7050		0	clouds 70 – 76 smi FSE
P 2051	0	1336	1400	137	12/18	7170		0	Cloud 40-60 FSE Partial 0-60 / Patty 40-76 FSE
P 2052	180	1405	1428	137	12/19	7160		0	clouds along ESE line Patty all at 2052 — clouded out
									Partially Flown Patty all at 2052 — clouded out
Xtie	270	1433	1435	150	12/18	7100		0	
									Figs (1435 – 1441)
									→ MELI (1452) → BGR (1505)
									Hobbs = 3.0
									online = 0.5
									mob = 2.5
									Note line 2051 Partially Flown Offset w/ clouds
									line 2052 Partially Flown – w/c clouds

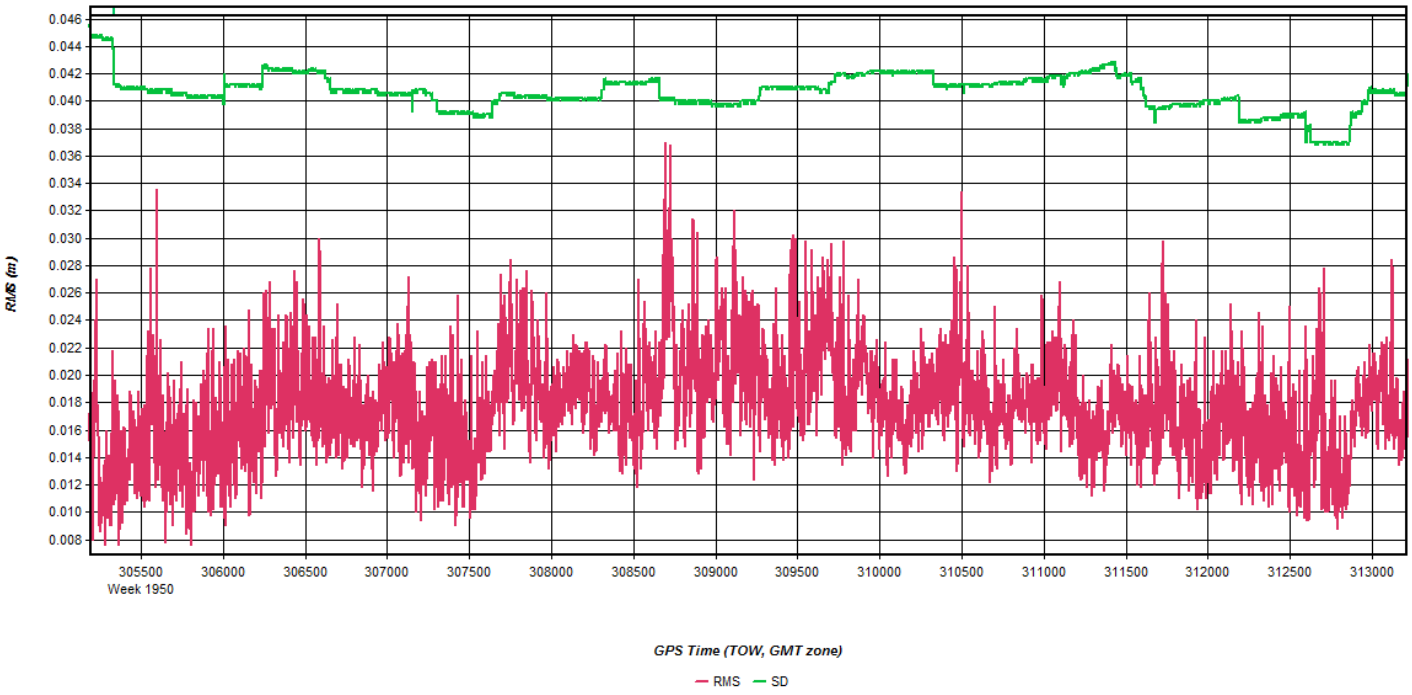
May 24, 2017-A (N262AS, SN7161)

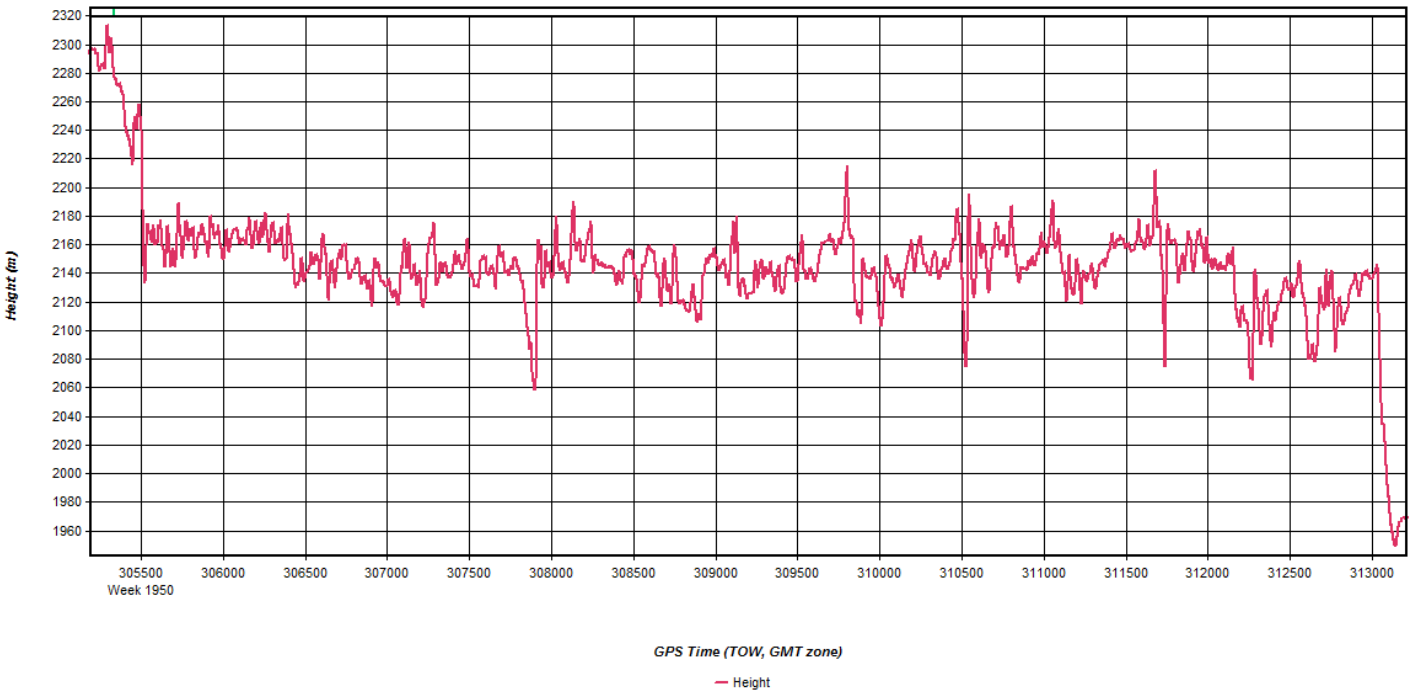

ARTK, FWD
5 km

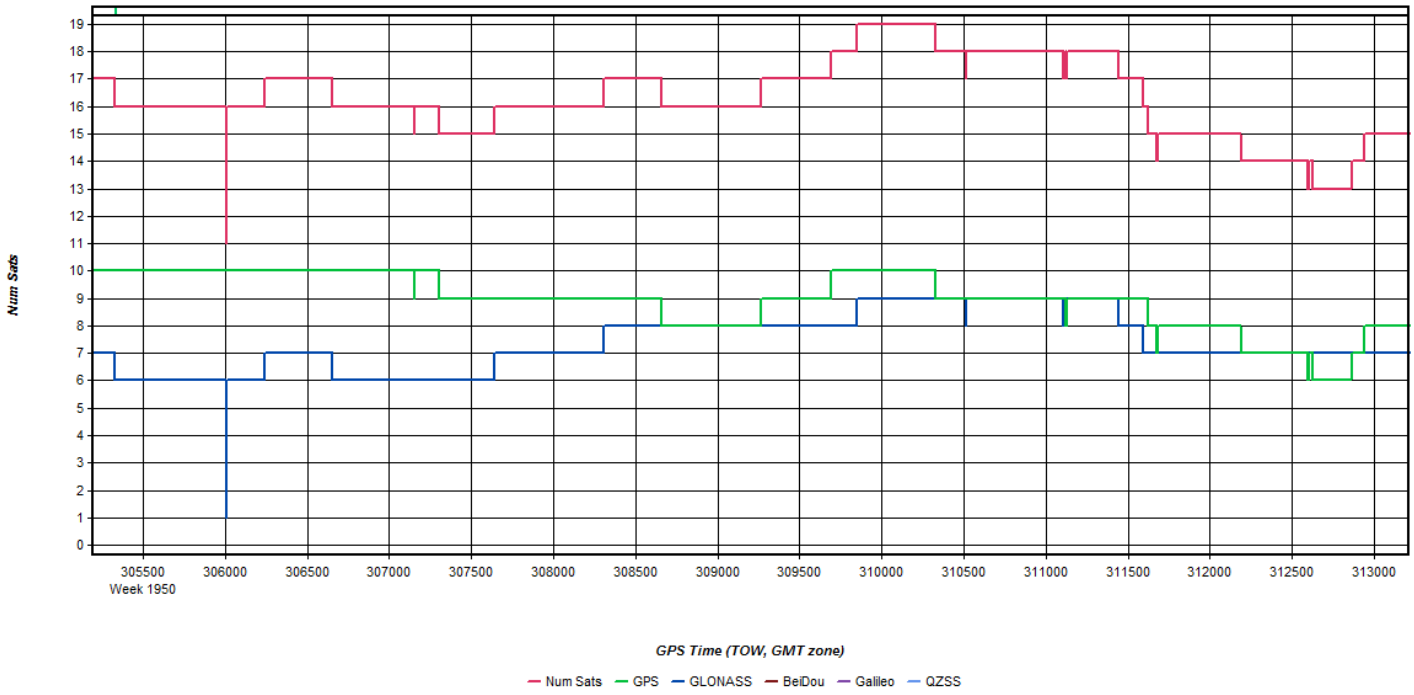

PDOP
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
PDOP

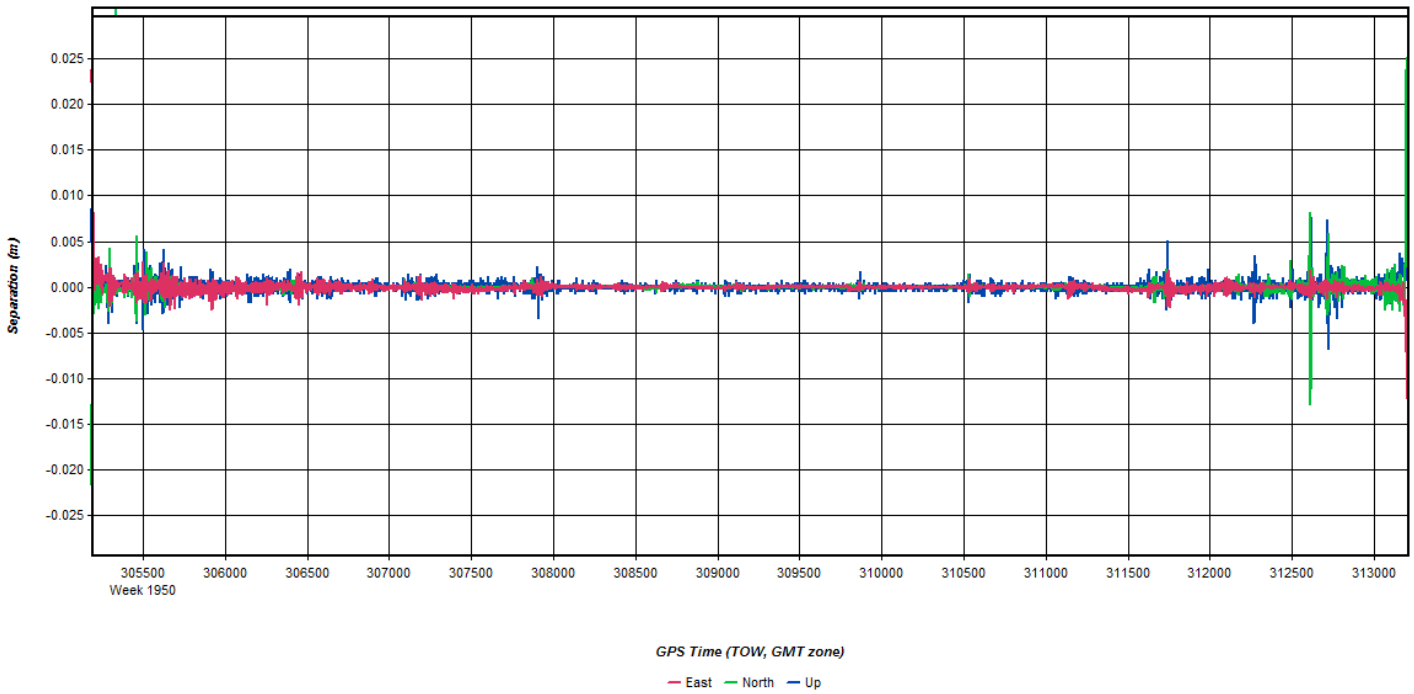

Status
2
1
0
-1
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

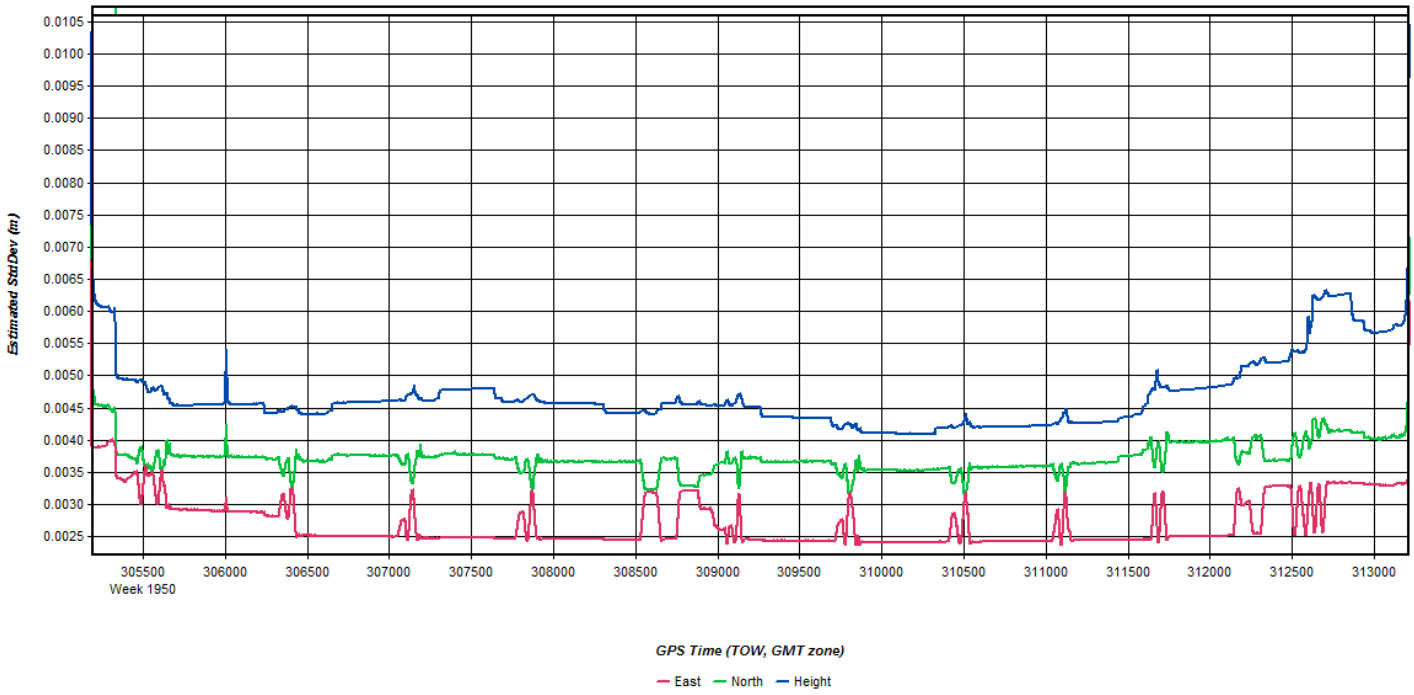

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Roll
Pitch

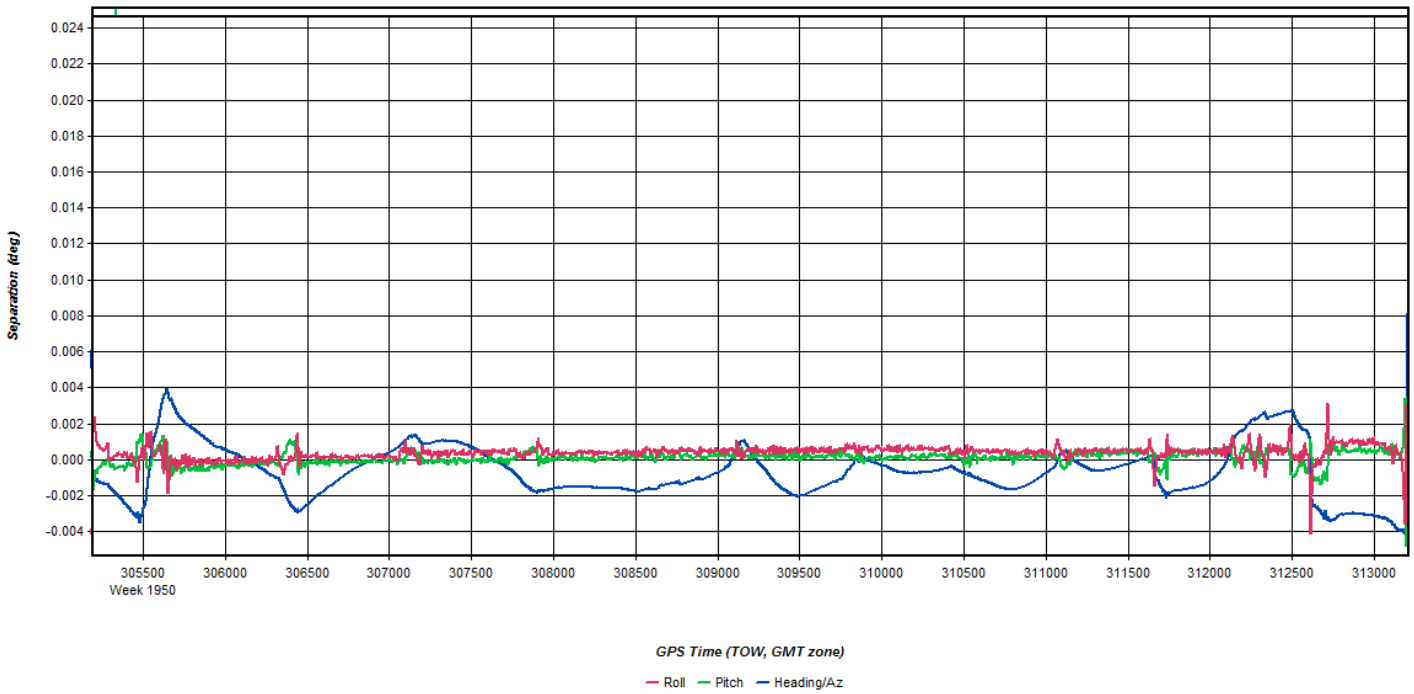

RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
RMS
SD

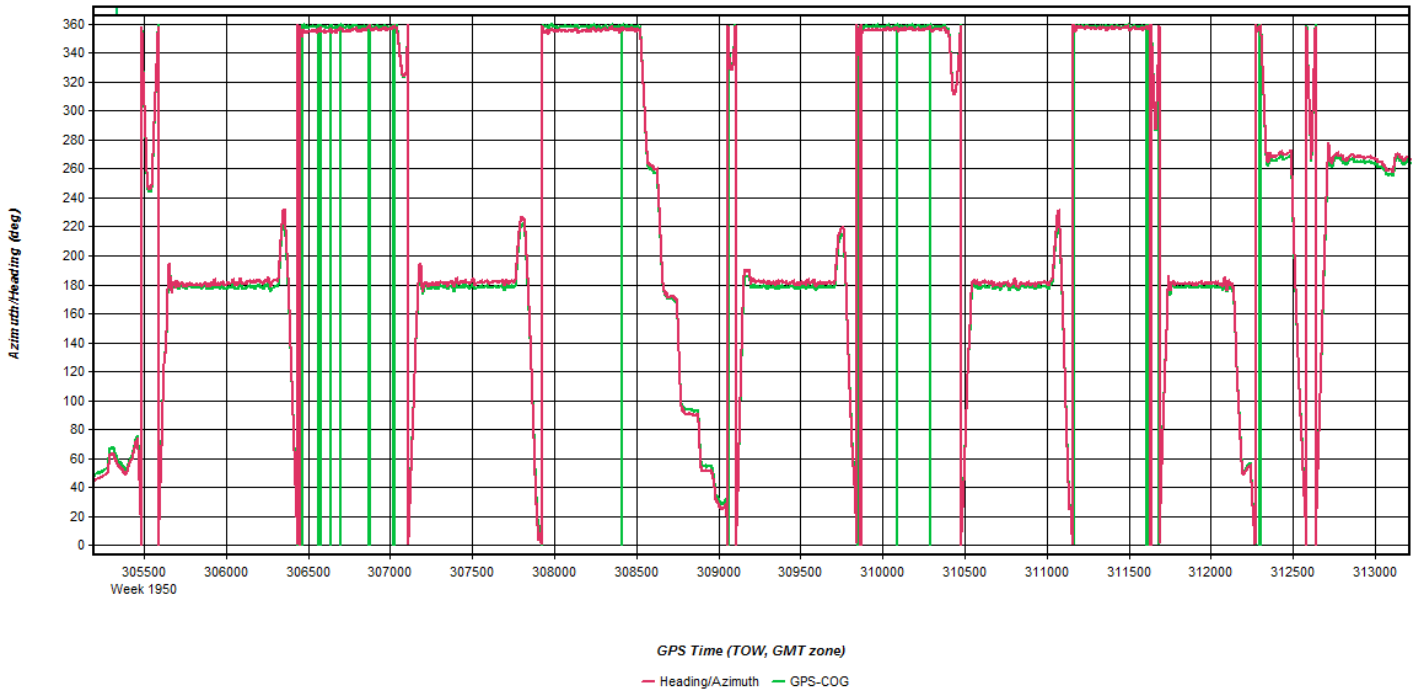

Height (m)
2320
2300
2280
2260
2240
2220
2200
2180
2160
2140
2120
2100
2080
2060
2040
2020
2000
1980
1960
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Height

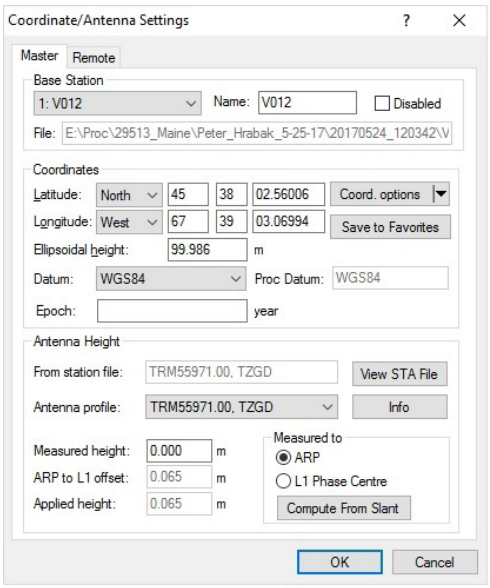

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

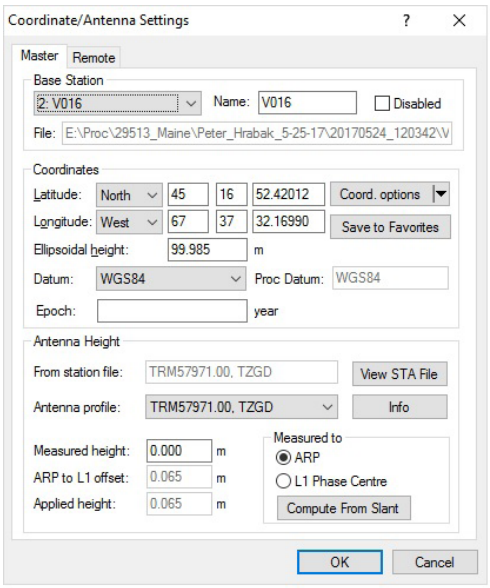

Separation (m)
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
305500
Week 1950
306000
306500
307000
307500
308000
308500
309000
309500
310000
310500
311000
311500
312000
312500
313000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V012
Name: V012
Disabled
File: E:\Proc\29513_Maine\Peter_Hrabak_5-25-17\20170524_120342\V
Coordinates
Latitude: North 45 38 02.56006
Coord. options
Longitude: West 67 39 03.06994
Save to Favorites
Ellipsoidal height: 99.986 m
Datum: WGS84
Proc Datum: WGS84
Epoch:
year
Antenna Height
From station file: TRM55971.00, TZGD
View STA File
Antenna profile: TRM55971.00, TZGD
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V016
Name:
V016
Disabled
File:
E:\Proc\29513_Maine\Peter_Hrabak_5-25-17\20170524_120342\V
Coordinates
Latitude:
North
45
16
52.42012
Coord. options
Longitude:
West
67
37
32.16990
Save to Favorites
Ellipsoidal height:
99.985
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, TZGD
View STA File
Antenna profile:
TRM57971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_list@quantumspatial.com) 20170524_120342

Date: MAY 24th, 2017

Lift: (A) B C D E Pg 1 of 1

Project: USGS MAINE 2017 **Proj #:** 29513 **Flight Mgmt File:** 29513_Maine_KAS_aoi_2100m

Aircraft: N262AS **Begin Hobbs:** 6642.3 **End Hobbs:** 6645.5 **Total:** 3.2 **Pilot:** J. NEILSON **Co-Pilot:** – **Tech:** P. HRABAK

Dep Apt: KBGR **Dep Time (Lcl):** 08:18 **(Z):** 12:18 z **Arr Apt:** KBGR **Arr Time (Local):** 11:27 **(Z):** 15:27 z **Tot Time Aloft:** 3:09

CORS: (Y) / N **Sta 1:** MELI CORS **Sta 2:** – **Flyovers:** (Y) / N **If Y, times: Sta1)** 12:34 & 15:09 z **Sta2)** –

GPS Unit: (Y) / N **Sta 1:** "BANG A" @ KBGR **Sta 2:** – **Flyovers:** Y / (N) **If Y, times: Sta1)** STATICS **Sta2)** –

Gd Temp beg: +17 °c **End:** +20 °c **OAT beg:** +03 °c **End:** +05 °c **Altimeter begin:** 29.83" **end:** 29.81"

LiDAR

Type	Serial #	Alt AGL	Alt AMSL	Avg Terr Ht	Max Gdspd	Avg Pt Spacing
LEICA ALS 70	7161	6890'	~7020'	~1500'	?	?

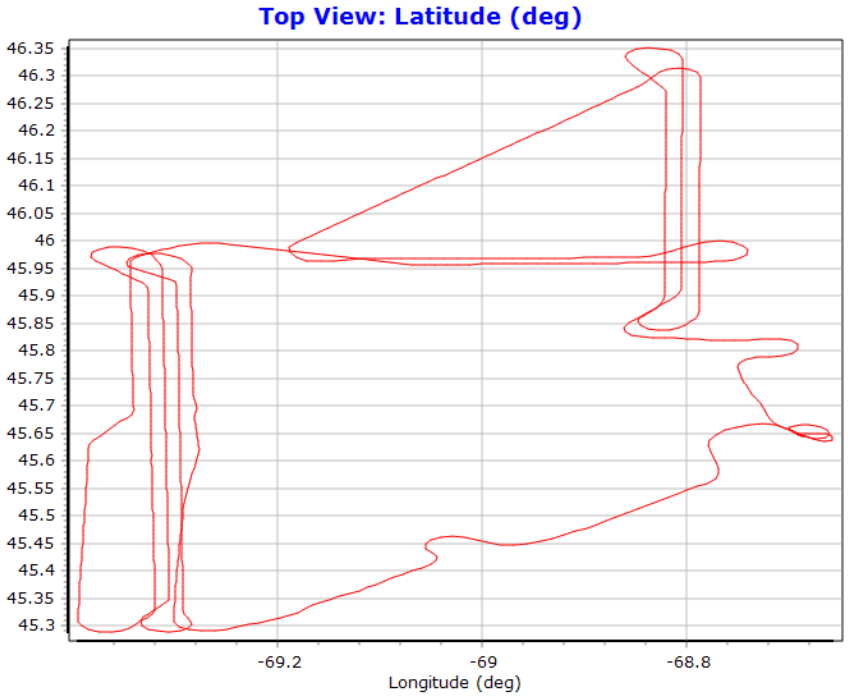
FOV	Scan Freq	MpiA (Y) / N	Pulses In Air	Pulse Rate	Power	PPSM
36°	56.0 Hz		2	262.6 kHz	100%	?

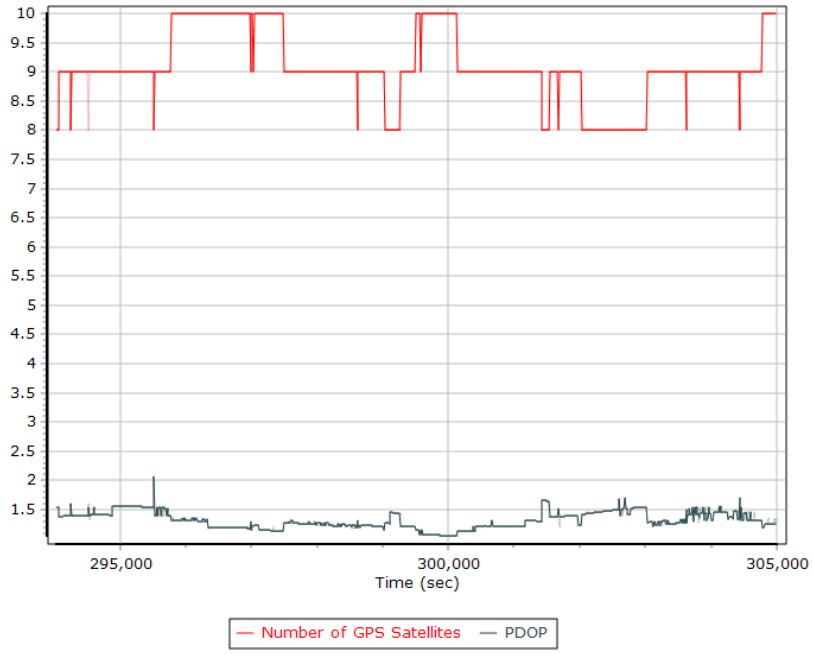
	Beg GB	End GB	Tot GB	Storage Name/#
	236	212	24	MM70 6000gb SSD S/N 015

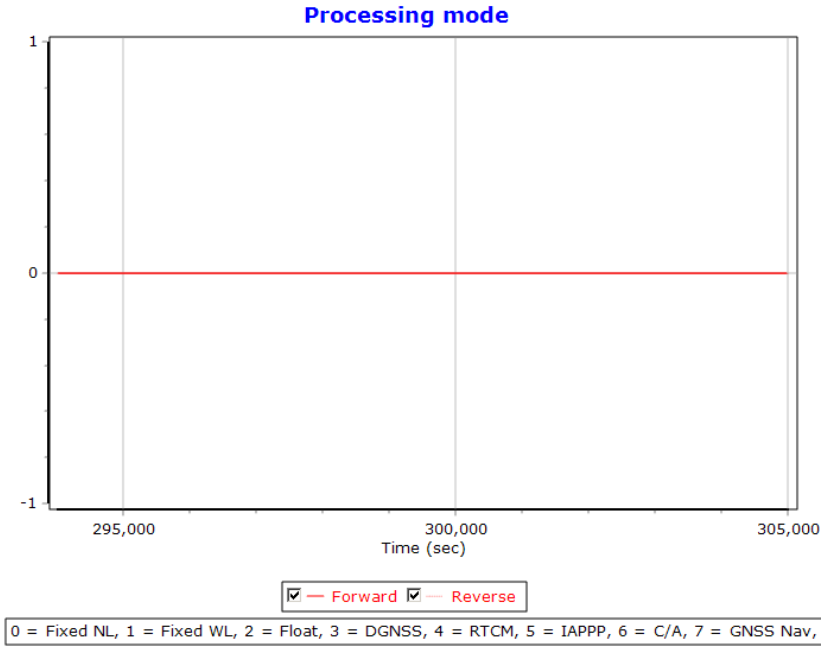
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc (FIG 8 @ 12:50 → 12:54 z)
2027	S	12:55	13:05	~150 kts	1.2/19	7050'	2°	0	-hz, ovc above, skc below, smooth
2028	N	13:08	13:17	~145 kts	1.1/19	7030'	3°	0	" " " " " "
2029	S	13:20	13:29	~150 kts	1.1/19	7020'	2°	0	" " " " " "
2030	N	13:32	13:41	~140 kts	1.1/19	7030'	3°	0	" " " , few below nearby, smooth (CLOUDS POPPING BELOW IN AREA, RELOCATING)
UL001	E	13:46	13:48	~160 kts	1.1/20	6940'	3°	0	" " " " " " " " (IMPROV CROSS LINE)
2045	S	13:53	14:01	~150 kts	1.1/20	7000'	4°	0	" " " " " " "
2046	N	14:05	14:13	~145 kts	1.2/19	7020'	3°	0	" " " " " " "
2047	S	14:16	14:23	~150 kts	1.2/19	7020'	3°	0	" " " " " " "
2048	N	14:26	14:33	~145 kts	1.1/19	7020'	2°	0	" " " " " " "
2049	S	14:36	14:41	~150 kts	1.1/19	7040'	2°	0	" " " " " " " (CLOUD ~7 mi FSE)
UL002	W	14:46	14:47	~145 kts	1.2/17	7000'	2°	0	" " " " " " " (IMPROV CROSS LINE)
									(FIG 8 @ 14:48 → 14:52)
									[LANDED DUE TO UNWORKABLE CLOUDS BELOW THROUGHOUT AOIs]

Total Proj Lines: 70 **Lines Flown:** 9 **Lines Remain:** **On line Time:** 1:52 **Mob Time:** 1:17 **Notes:** 20170524_120342

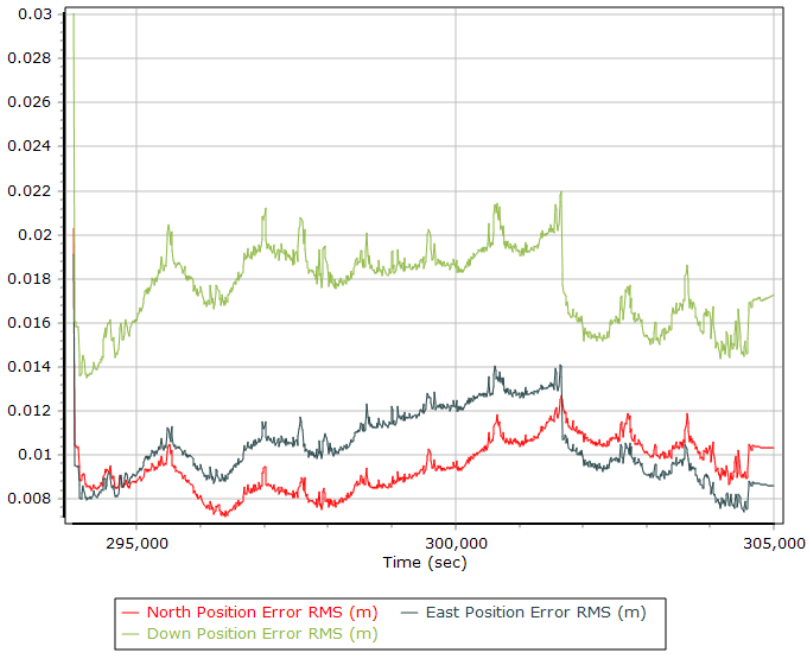
May 24, 2017-A (N1007Q,SN2221256)

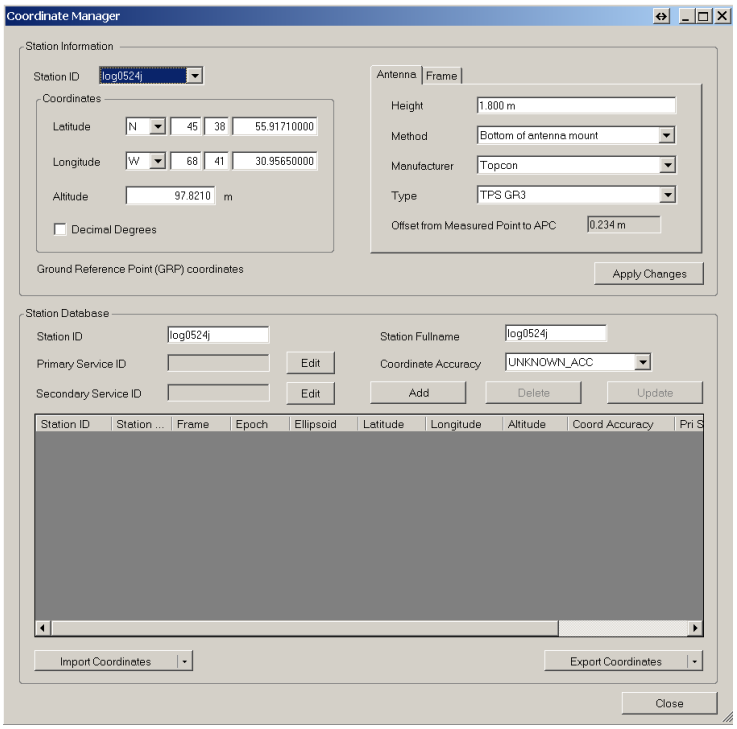

Top View: Latitude (deg)
46.35
46.3
46.25
46.2
46.15
46.1
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
-69.2
-69
-68.8
Longitude (deg)


10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
295,000
300,000
305,000
Time (sec)
Number of GPS Satellites
PDOP


Processing mode
1
0
-1
295,000
300,000
305,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,

340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
295,000
300,000
305,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
295,000
300,000
305,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log0524j
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log0524j
Primary Service ID
Edit
Secondary Service ID
Edit
Station Fullname
log0524j
Coordinate Accuracy
UNKNOWN_ACC
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log

Flight Log

Field Crew	Project #	Project Description
Jonathan	20170103:1	
Justin		

GPS Information			
Base 1	MILLPORT		
Base 2			
Base 3			
Aero 2			
IMU Information			
Start Time			
Stop Time			

Meteorological Conditions			
	Elevation	Temp	Pressure
Airport	400.5ft		
@ Altitude			
@ Altitude		#REF!	

GPS Base Station Information			
	File Name	RNX File	Ant Hgt
Base 1			1.8
Base 2			
Base 3			

Ant Type
GR3

Location
Millinocket,ME

Aircraft
N1107Q

Flight Date	Pilot	Operator
5/24/2017	Justin	Jonathan

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed		Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
54	0°	9:54:27	10:03:11	0:08:44	6,000					150 kts	173 mph	25.13			
55	180°	10:07:30	10:16:02	0:08:32	6,000					150 kts	173 mph	24.55			
56	0°	10:20:19	10:28:54	0:08:35	6,000					150 kts	173 mph	24.69			
111	90°	10:41:36	10:44:19	0:02:43	6,000					150 kts	173 mph	7.82			
112	270°	10:48:29	10:51:46	0:03:17	6,000					150 kts	173 mph	9.45			
57	180°	10:58:15	11:03:21	0:05:06	6,000					150 kts	173 mph	14.67			
58	0°	11:15:12	11:28:37	0:13:25	6,000					150 kts	173 mph	38.60			
59	180°	11:32:50	11:46:04	0:13:14	6,000					150 kts	173 mph	38.07			
60	0°	11:50:00	12:02:59	0:12:59	6,000					150 kts	173 mph	37.35			
61	180°	12:06:48	12:12:02	0:05:14	6,000					150 kts	173 mph	15.06			abort clouds refly

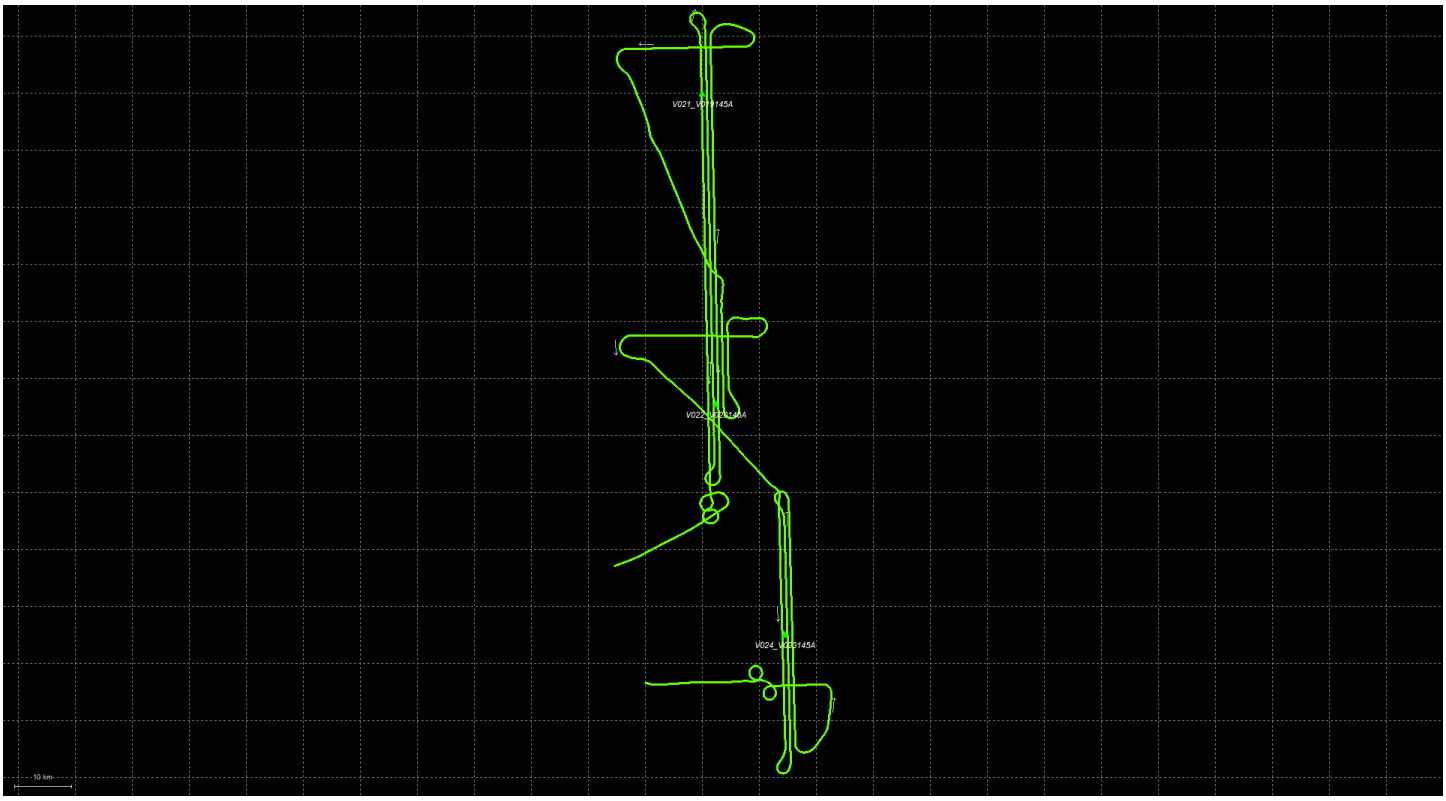
DMC FLIGHT SUMMARY			
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0
DMC Data Collection Time:	1:21:49	Miles Flown on Flights:	235.38
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

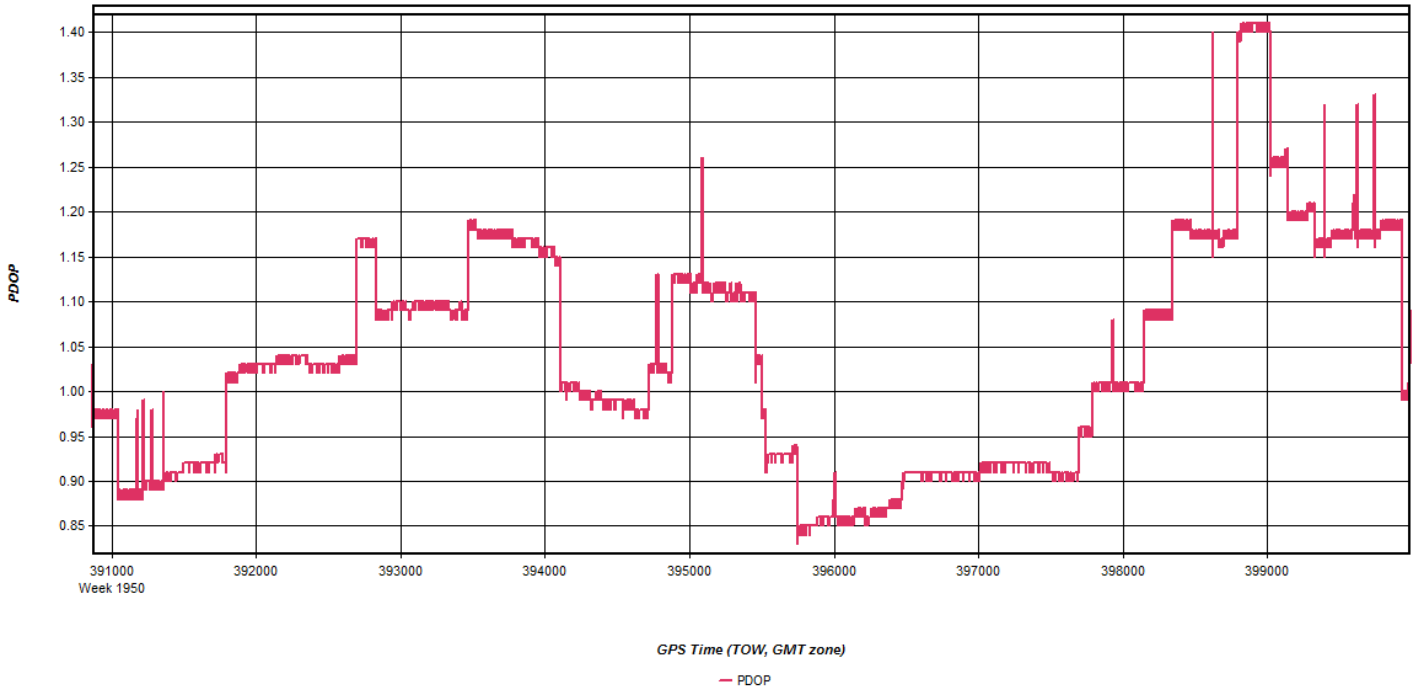
Data Collection	
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

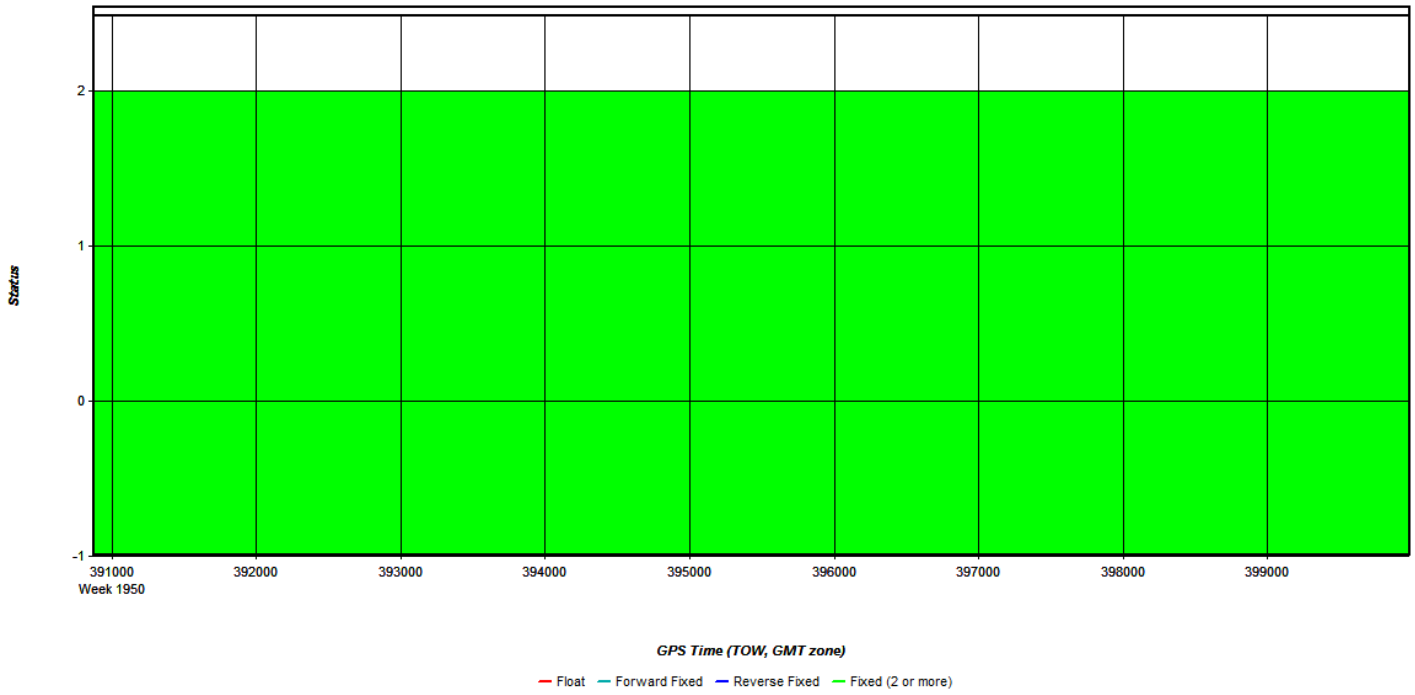
Comments

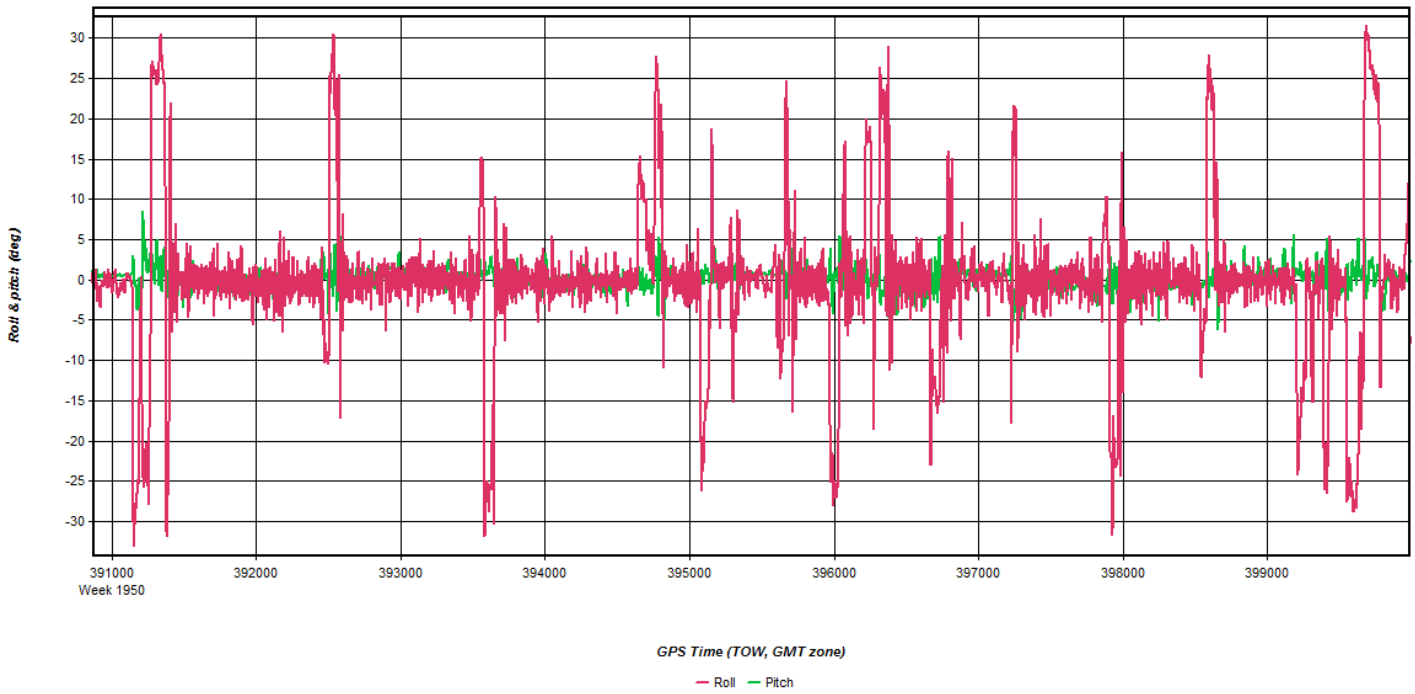
Weather
☑ Clear
☐ Fair
☐ Partly Cloudy
☐ Cloudy

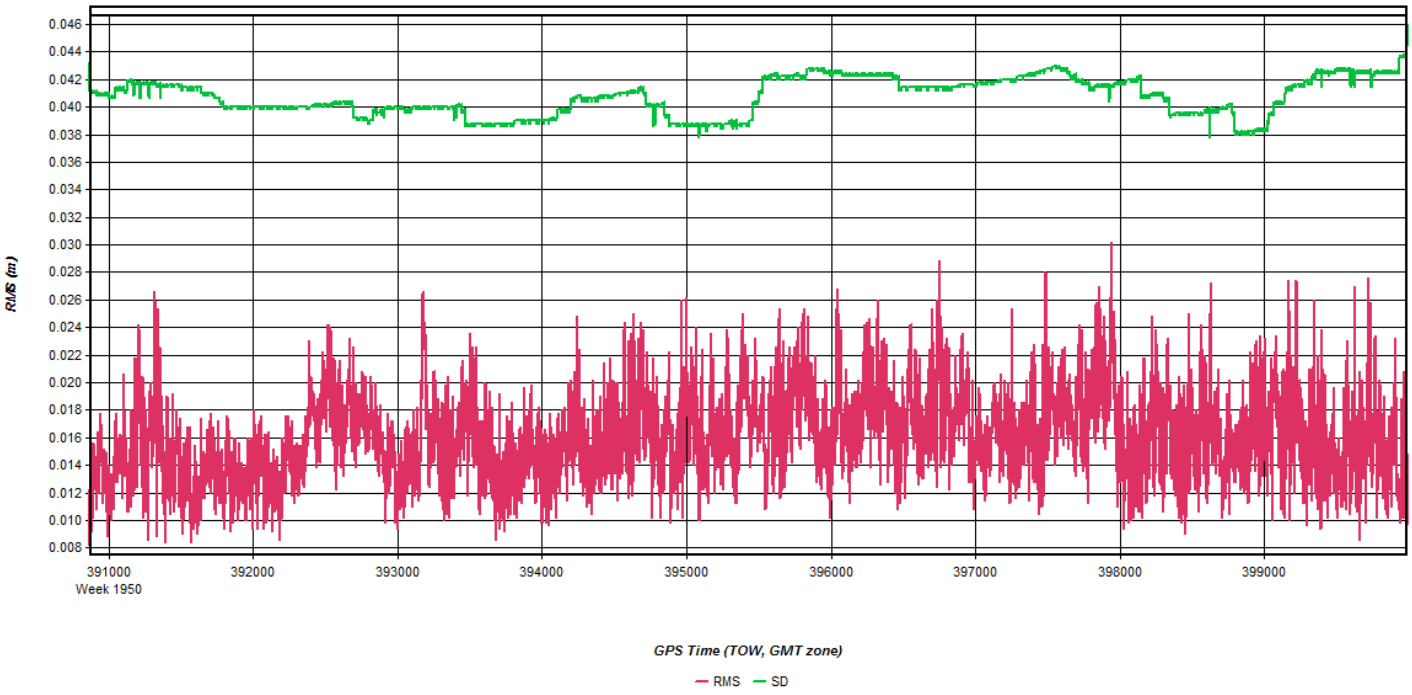
May 25, 2017-A (N262AS, SN7161)

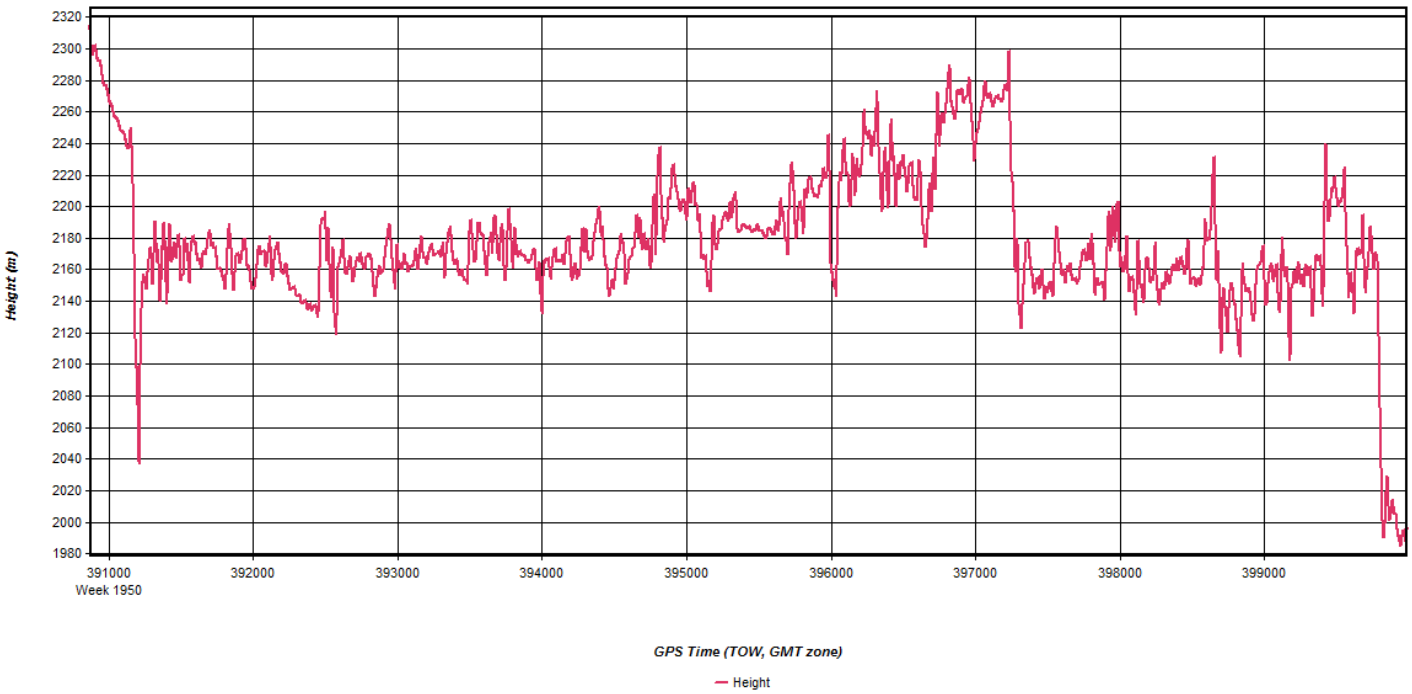


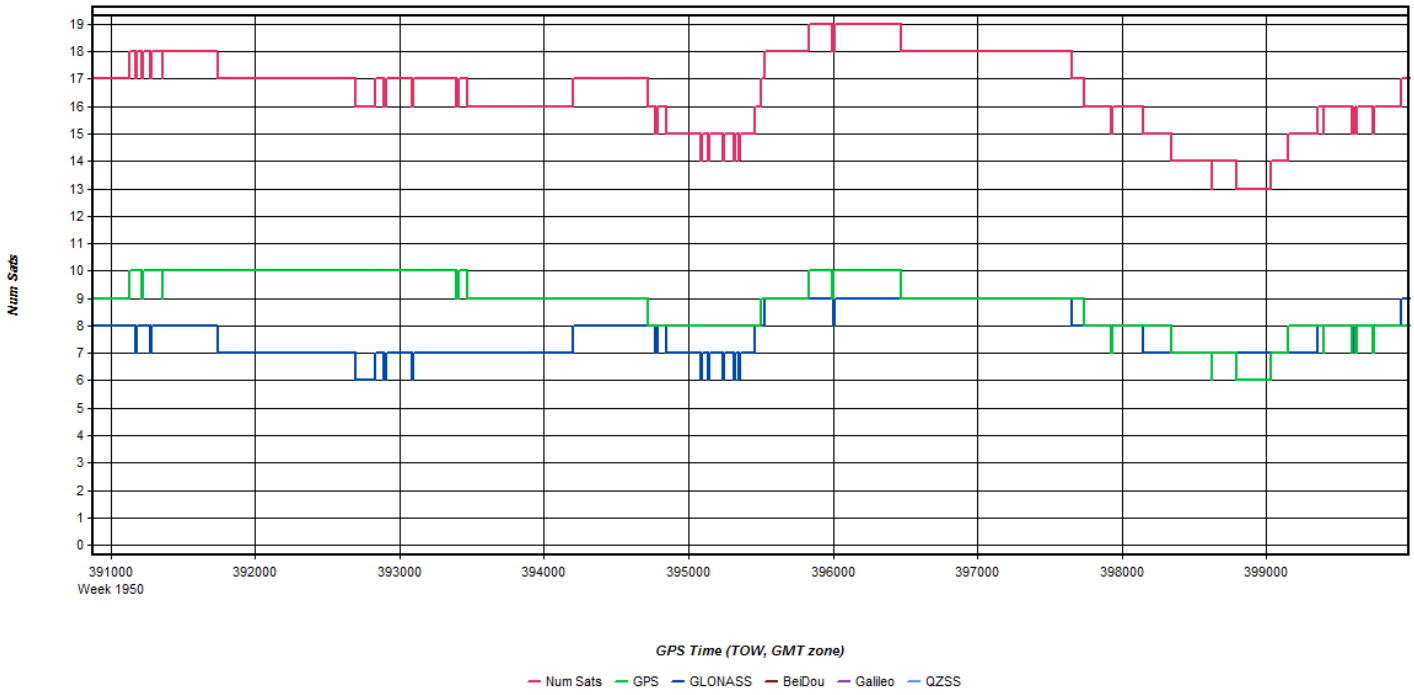

PDOP
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
PDOP

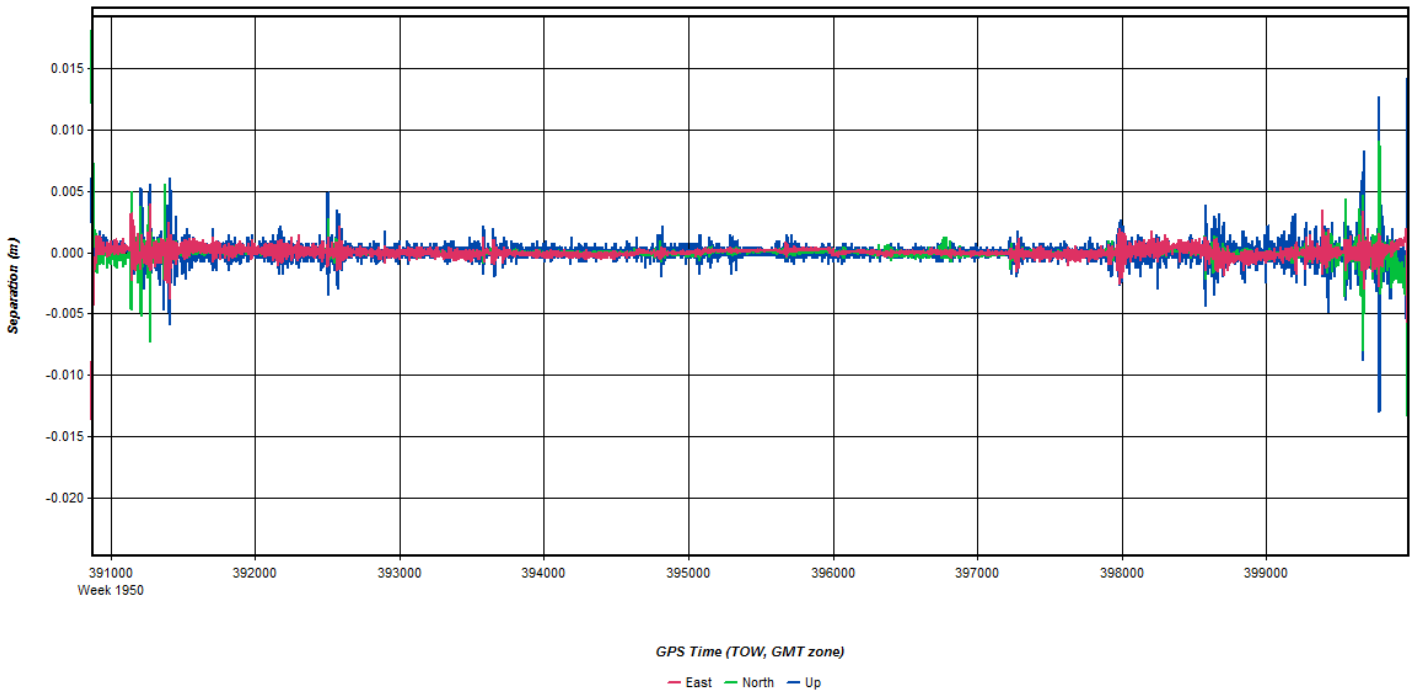

Status
2
1
0
-1
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

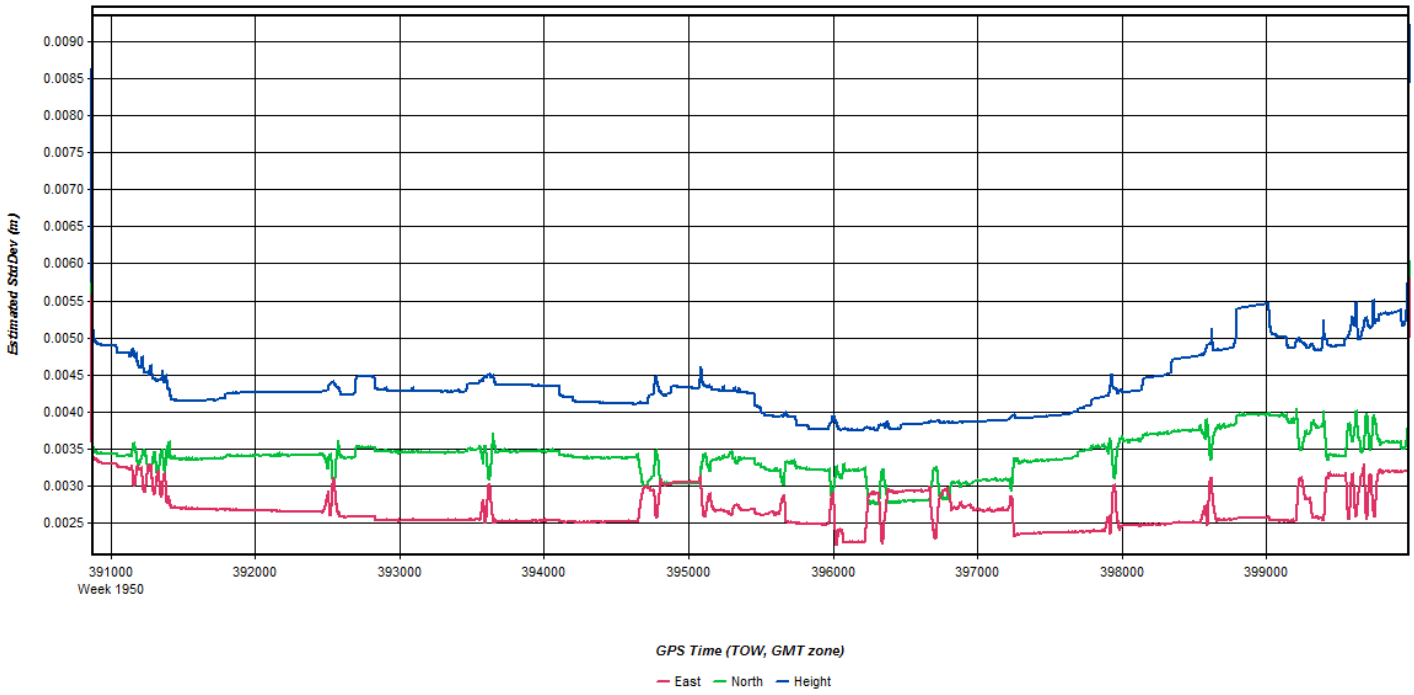

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Roll
Pitch

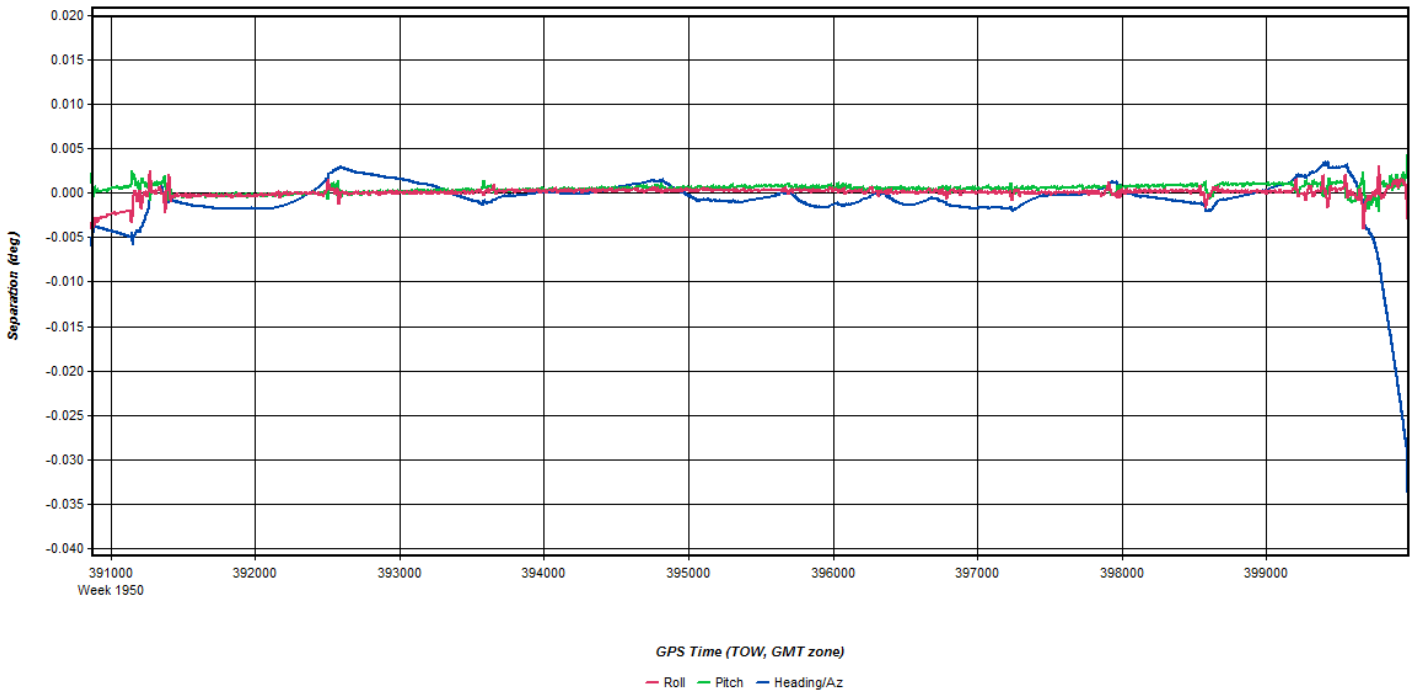

RMS (m)
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
RMS
SD

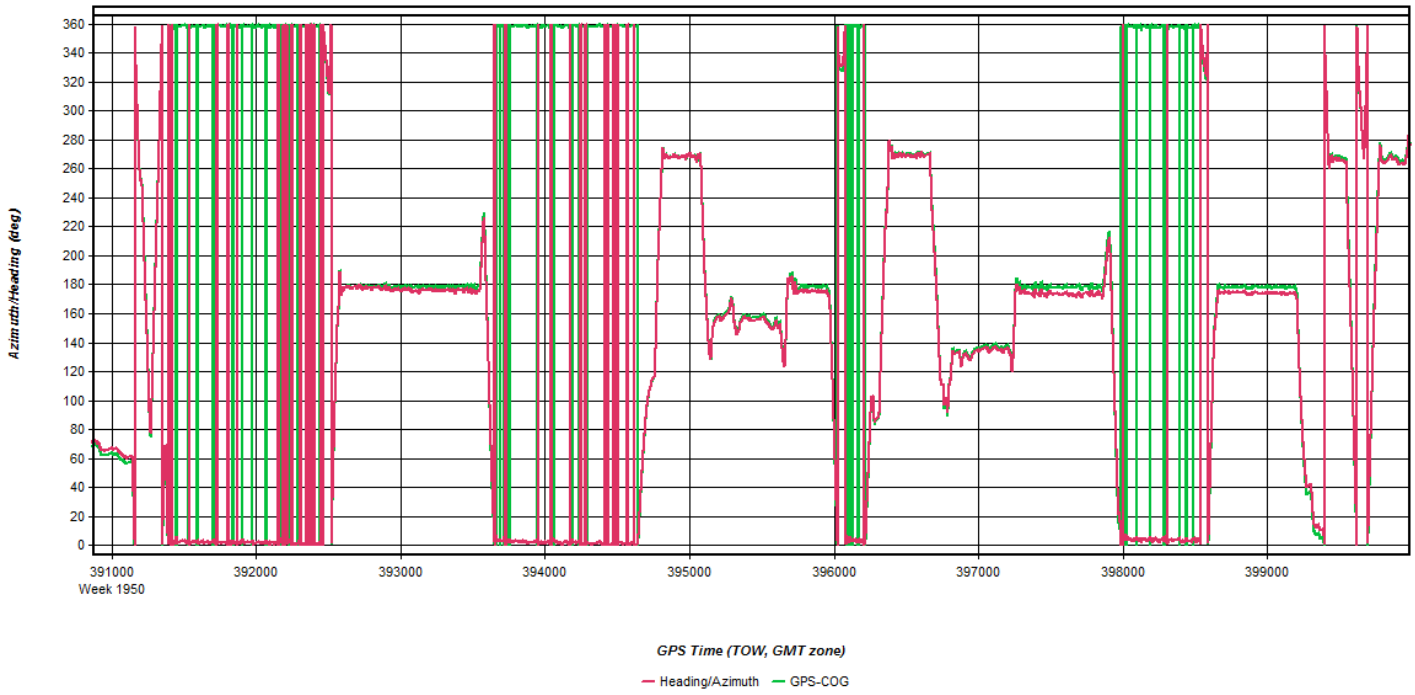

Height (m)
2320
2300
2280
2260
2240
2220
2200
2180
2160
2140
2120
2100
2080
2060
2040
2020
2000
1980
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Height

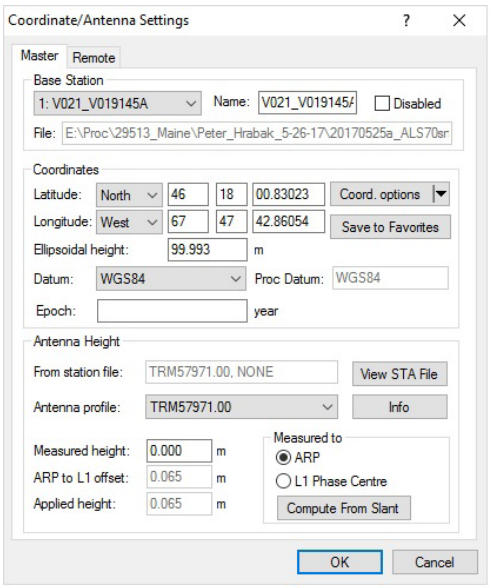

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

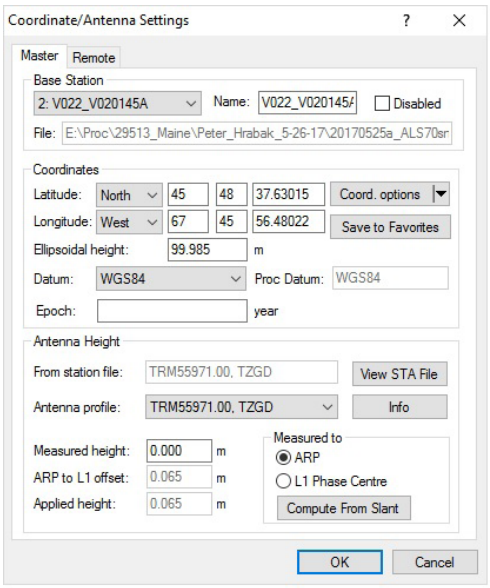

Separation (m)
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
East
North
Up

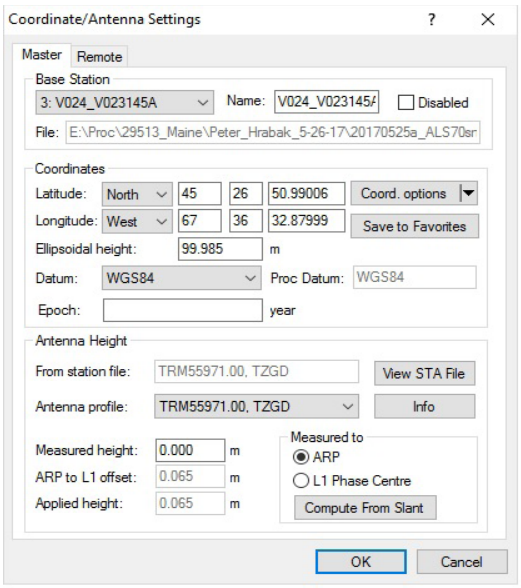

Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
391000
Week 1950
392000
393000
394000
395000
396000
397000
398000
399000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V021_V019145A
Name:
V021_V019145A
Disabled
File:
E:\Proc\29513_Maine\Peter_Hrabak_5-26-17\20170525a_ALS70sr
Coordinates
Latitude:
North
46
18
00.83023
Coord. options
Longitude:
West
67
47
42.86054
Save to Favorites
Ellipsoidal height:
99.993
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, NONE
View STA File
Antenna profile:
TRM57971.00
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V022_V020145A
Name:
V022_V020145A
Disabled
File:
E:\Proc\29513_Maine\Peter_Hrabak_5-26-17\20170525a_ALS70sr
Coordinates
Latitude:
North
45
48
37.63015
Coord. options
Longitude:
West
67
45
56.48022
Save to Favorites
Ellipsoidal height:
99.985
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM55971.00, TZGD
View STA File
Antenna profile:
TRM55971.00, TZGD
Info
Measured height:
0.000
m
Measured to
ARP
ARP to L1 offset:
0.065
m
L1 Phase Centre
Applied height:
0.065
m
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
3: V024_V023145A
Name:
V024_V023145A
Disabled
File:
E:\Proc\29513_Maine\Peter_Hrabak_5-26-17\20170525a_ALS70sr
Coordinates
Latitude:
North
45
26
50.99006
Coord. options
Longitude:
West
67
36
32.87999
Save to Favorites
Ellipsoidal height:
99.985
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM55971.00, TZGD
View STA File
Antenna profile:
TRM55971.00, TZGD
Info
Measured height:
0.000
m
Measured to
ARP
ARP to L1 offset:
0.065
m
L1 Phase Centre
Applied height:
0.065
m
Compute From Slant
OK
Cancel

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_list@quantumspatial.com) 20170525_115603

Date: MAY 25th, 2017

Lift: (A) B C D E Pg 1 of 1

Project: USGS MAINE 2017 **Proj #:** 29513 **Flight Mgmt File:** 29513_Maine_KAS2oi_2100m

Aircraft: N262AS **Begin Hobbs:** 6645.5 **End Hobbs:** 6648.9 **Total:** 3.4 **Pilot:** J. NEILSON **Co-Pilot:** – **Tech:** P. HRABAK

Dep Apt: KBGR **Dep Time (Lcl):** 08:08 **(Z):** 12:08 z **Arr Apt:** KBGR **Arr Time (Local):** 11:30 **(Z):** 15:30z **Tot Time Aloft:** 3:22

CORS: (Y)/ N **Sta 1:** MELI CORS **Sta 2:** – **Flyovers:** (Y)/ N **If Y, times: Sta1)** 12:24 & 15:15 z **Sta2)** –

GPS Unit: (Y)/ N **Sta 1:** "BANGA" @ KBGR **Sta 2:** – **Flyovers:** Y / (N) **If Y, times: Sta1)** STATICS **Sta2)** –

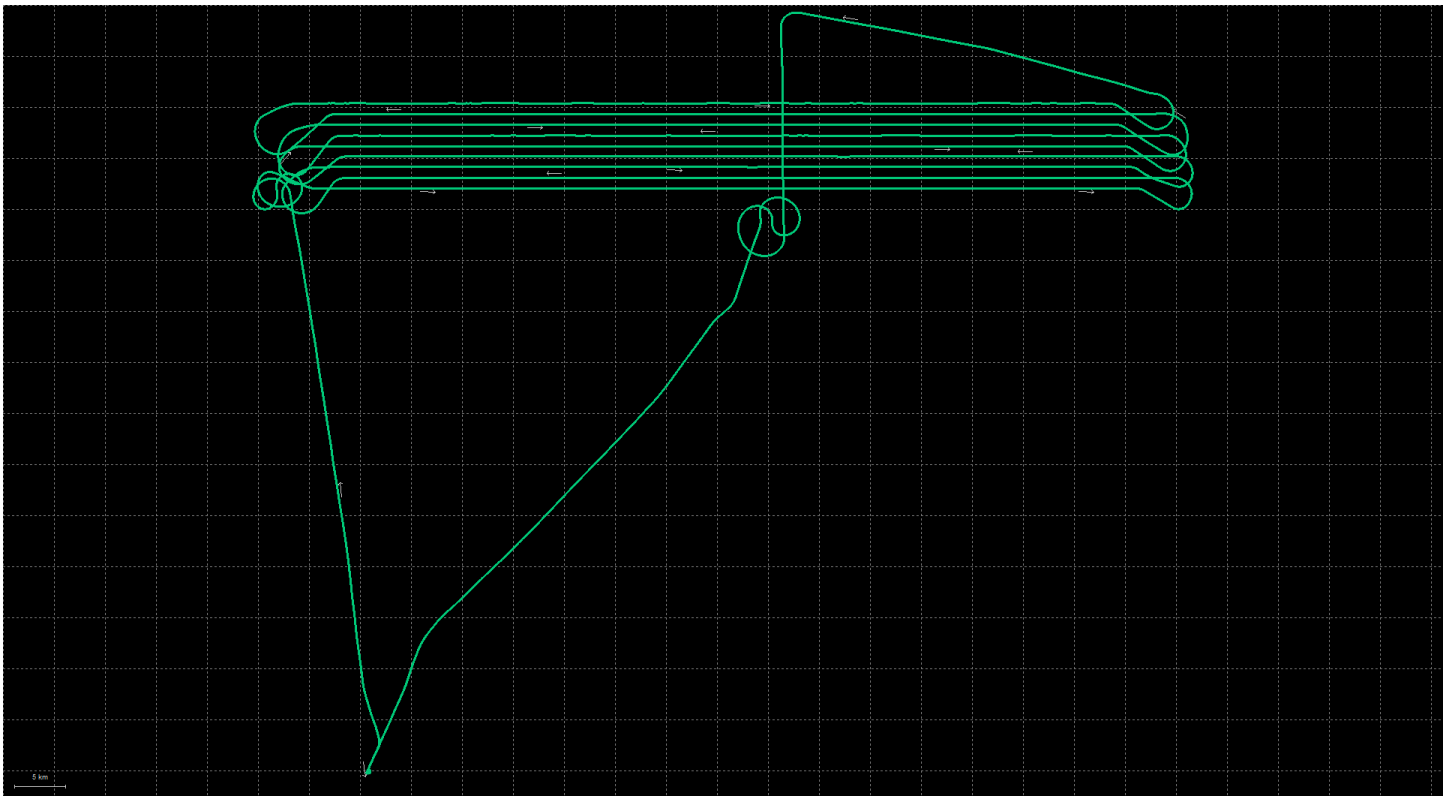
Gd Temp beg: + °c **End:** + °c **OAT beg:** +03 °c **End:** +05 °c **Altimeter begin:** 29. " **end:**

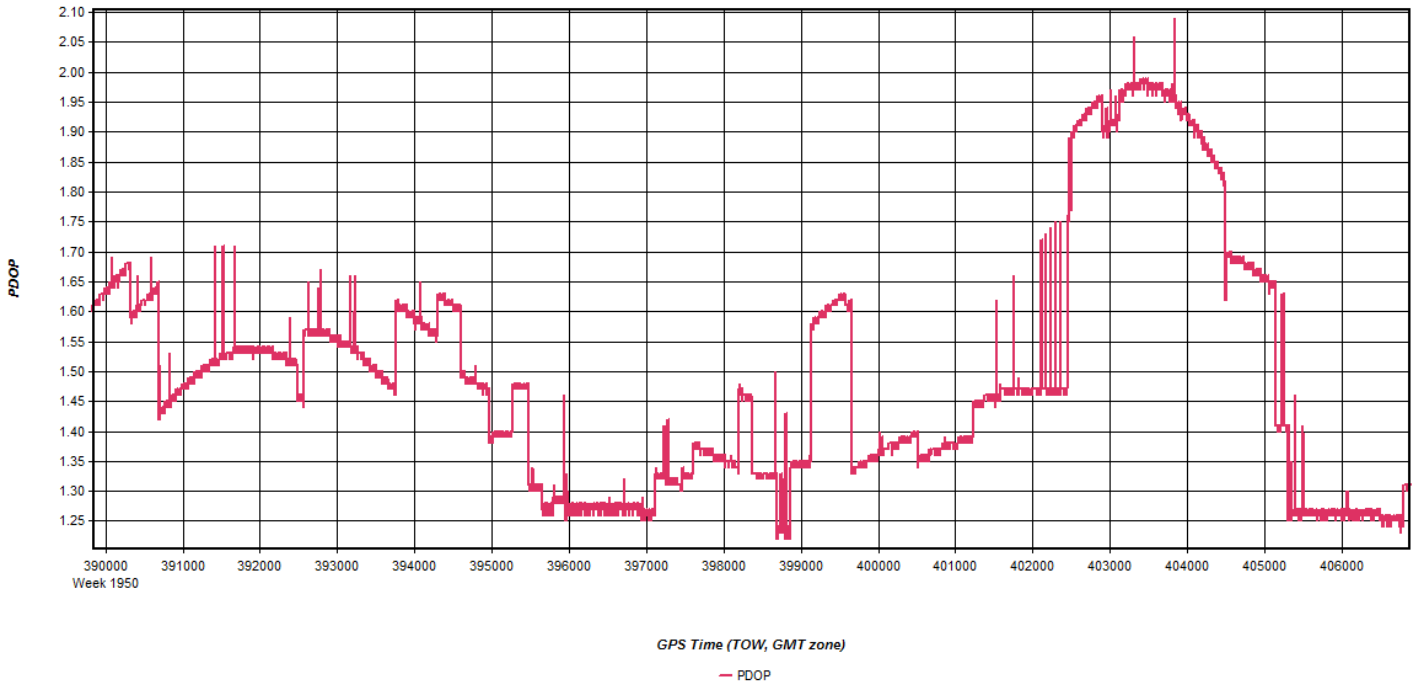
LiDAR										Beg GB 212	Storage Name/# MM700 600Gb SSD
	Type LEICA ALS 70	Serial # 7161	Alt AGL 6890'	Alt AMSL ~7060	Avg Terr Ht ~170'	Max Gdspd ?	Avg Pt Spacing ?			End GB 183	
	FOV 36°	Scan Freq 56.0 Hz	MpiA (Y)/ N	Pulses In Air 2	Pulse Rate 262.6 kHz	Power 100 %	PPSM ?			Tot GB 29	S/N 0015

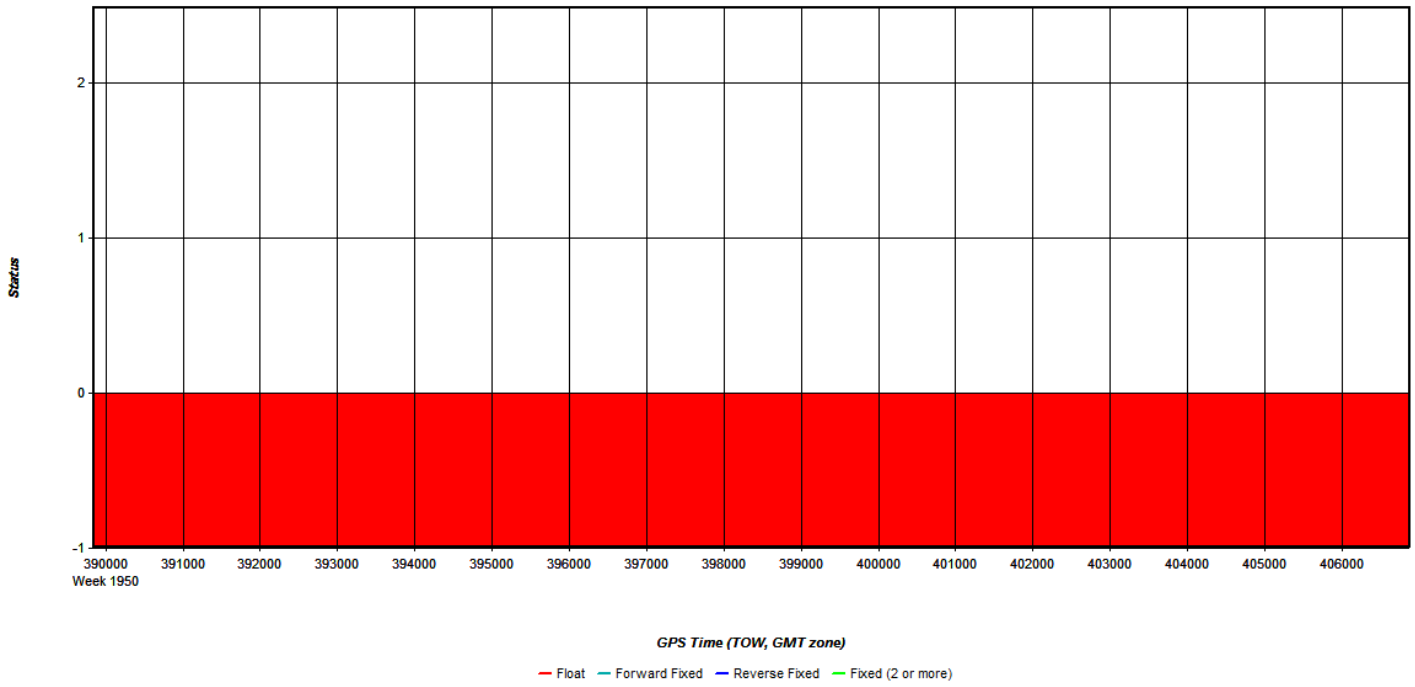
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc. (FIG8 @ 12:39 → 12:43 z)
2062	N	12:44	13:00	~145 kts	1.2/19	7080'	3°	0	hz, ovc above, skc below, smooth
2063	S	13:03	13:18	~155 kts	1.2/19	7080'	1°	0	" " " " " "
2064	N	13:23	13:37	~150 kts	1.3/18	7070'	4°	0	" " " " " "
2068	W	13:40	13:44	~150 kts	1.1/20	7200'	1°	0	" " " " " " (PLANNED CROSSTIE)
2065	S	13:55	13:58	~150 kts	1.1/19	7230'	3°	0	" " " " " "
2066	N	14:02	14:03	~150 kts	1.1/19	7250'	5°	0	" " " " " "
2069	W	14:06	14:10	~145 kts	1.1/19	7250'	1°	0	" " " " " " (PLANNED CROSSTIE)
2031	S	14:21	14:30	~145 kts	1.1/19	7020'	4°	0	" " ", few below nearby, smooth
2032	N	14:33	14:41	~145 kts	1.1/19	7020'	6°	0	" " " " " " "
2033	S	14:44	14:53	~150 kts	1.1/19	7010'	4°	0	" " ", clouds 6→0 FSE, smooth
ULØØ1	W	14:57	14:58	~145 kts	1.0/19	7020'	2°	0	" " ", few below nearby, " (IMPROV CROSS LINE)
									(FIG 8 @ 14:58 → 15:02)
									[LANDED FOR FUEL & TO EVALUATE OPTIONS WITH INCOMING WEATHER]

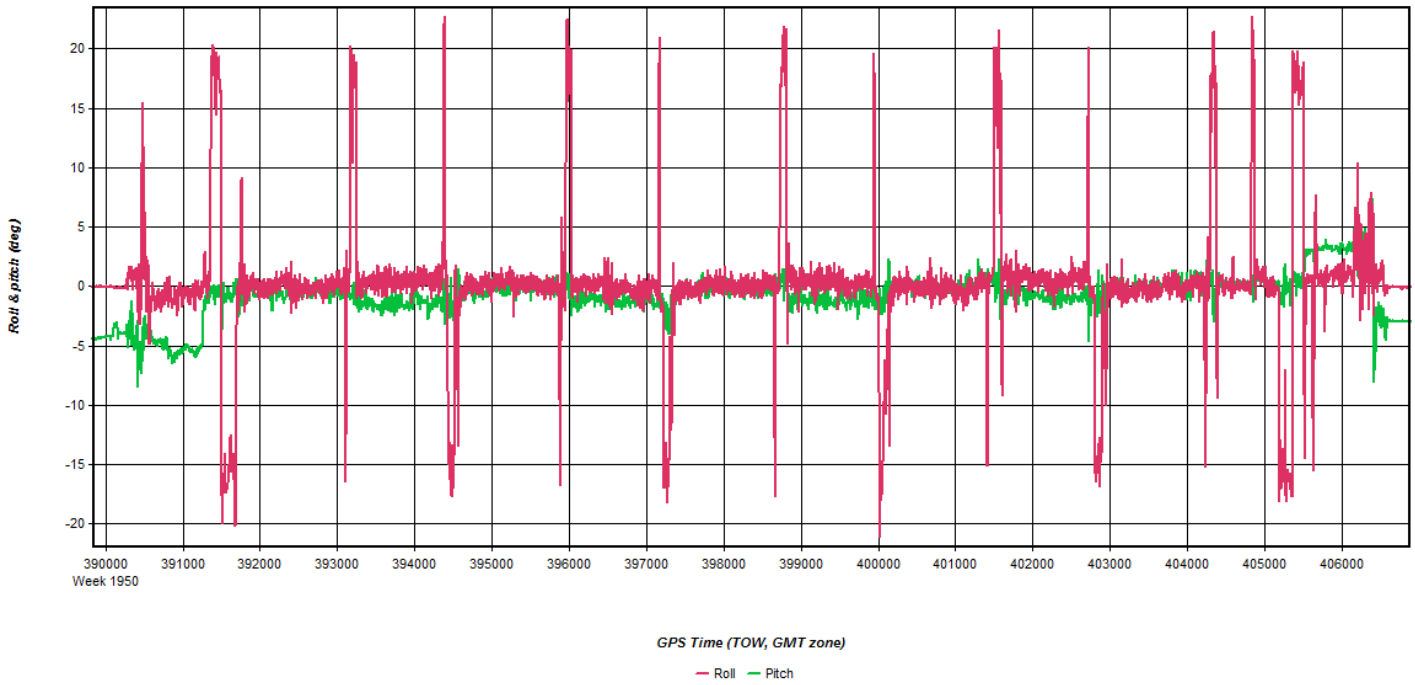
Total Proj Lines: 70 **Lines Flown:** 10 **Lines Remain:** **On line Time:** 2:14 **Mob Time:** 1:08 **Notes:** 20170525_115603

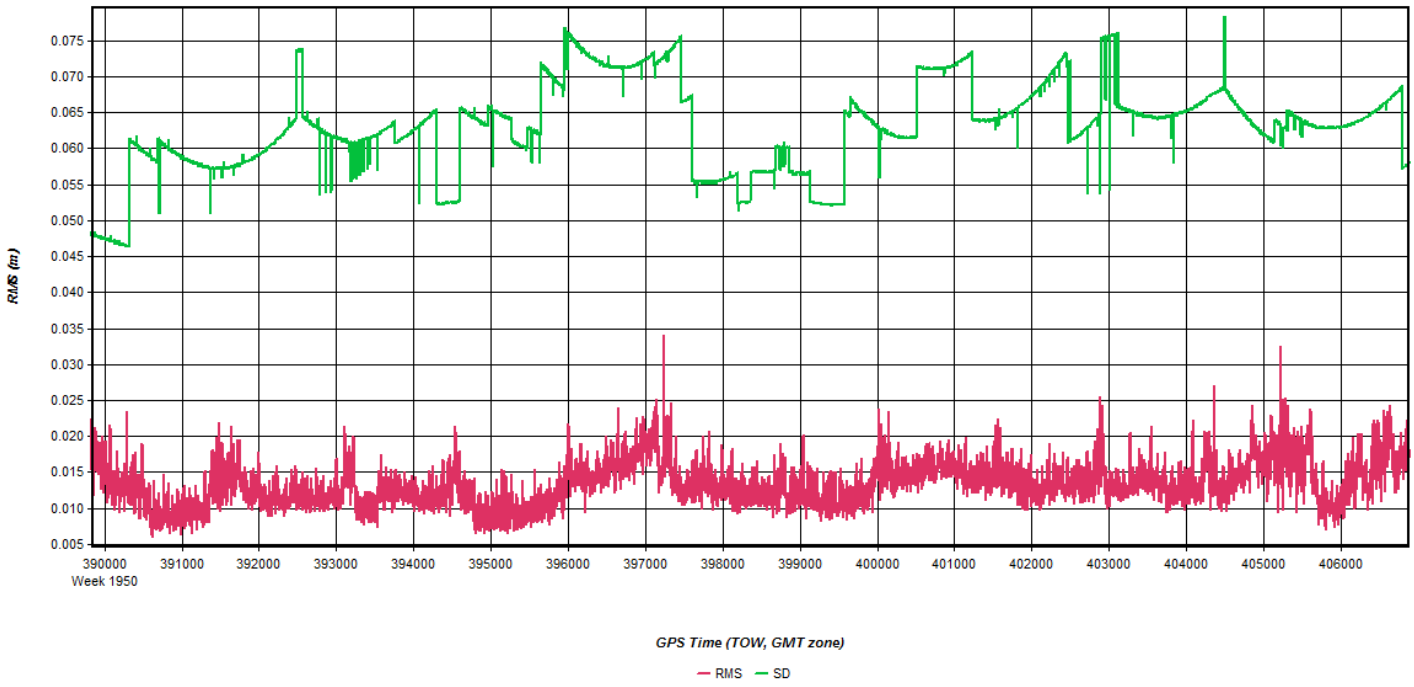
May 25, 2017-A (N915WC, SN8237)

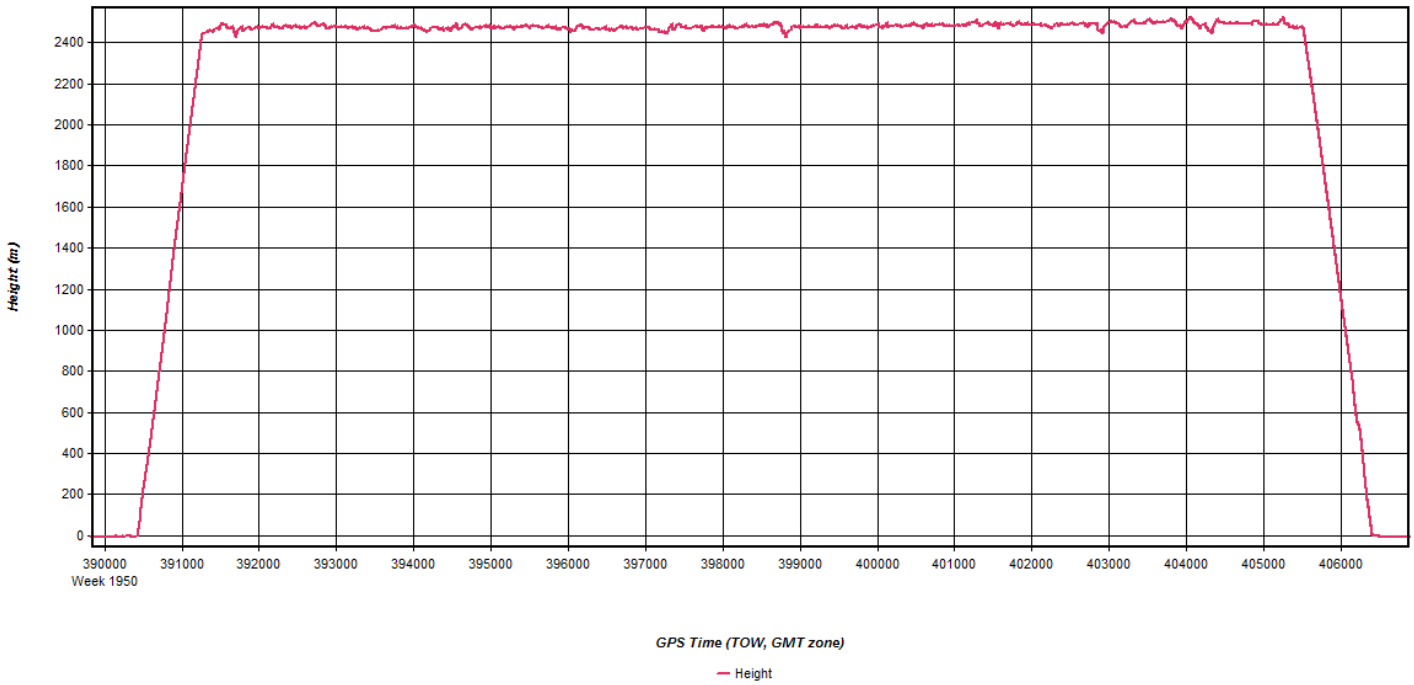


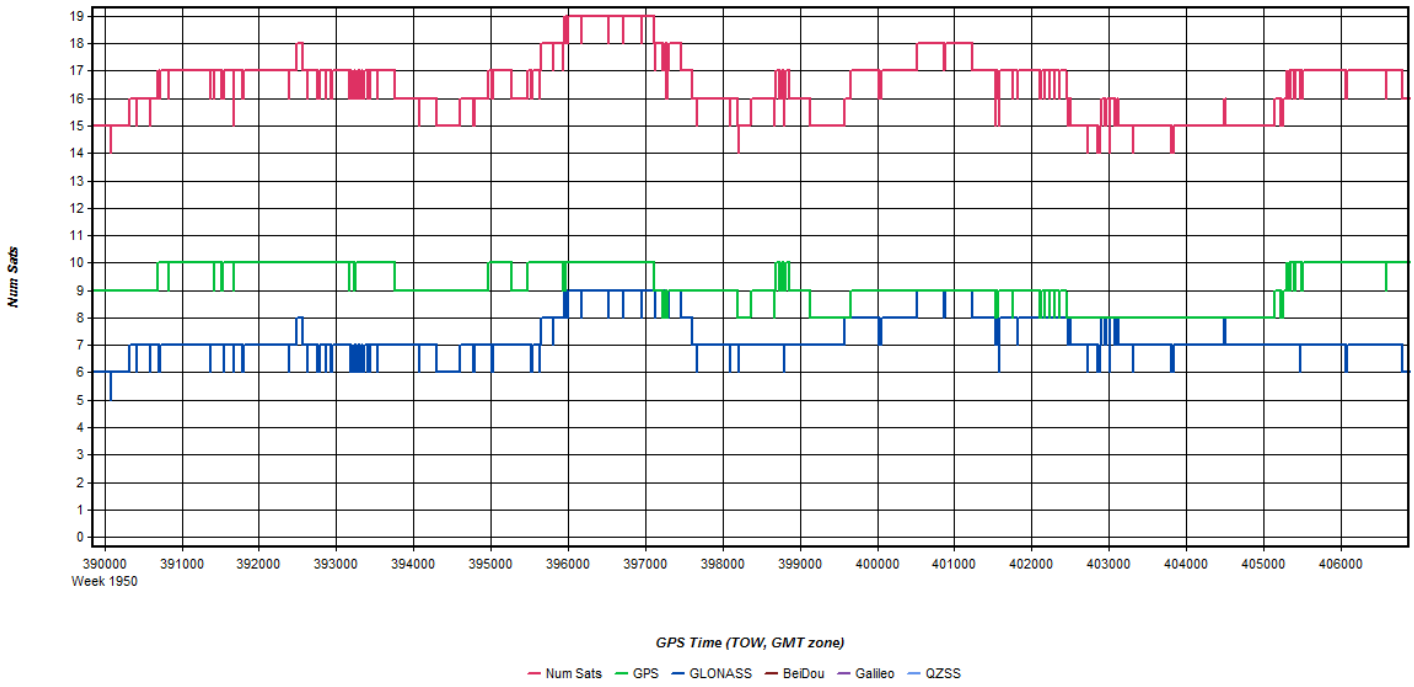

PDOP
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
PDOP

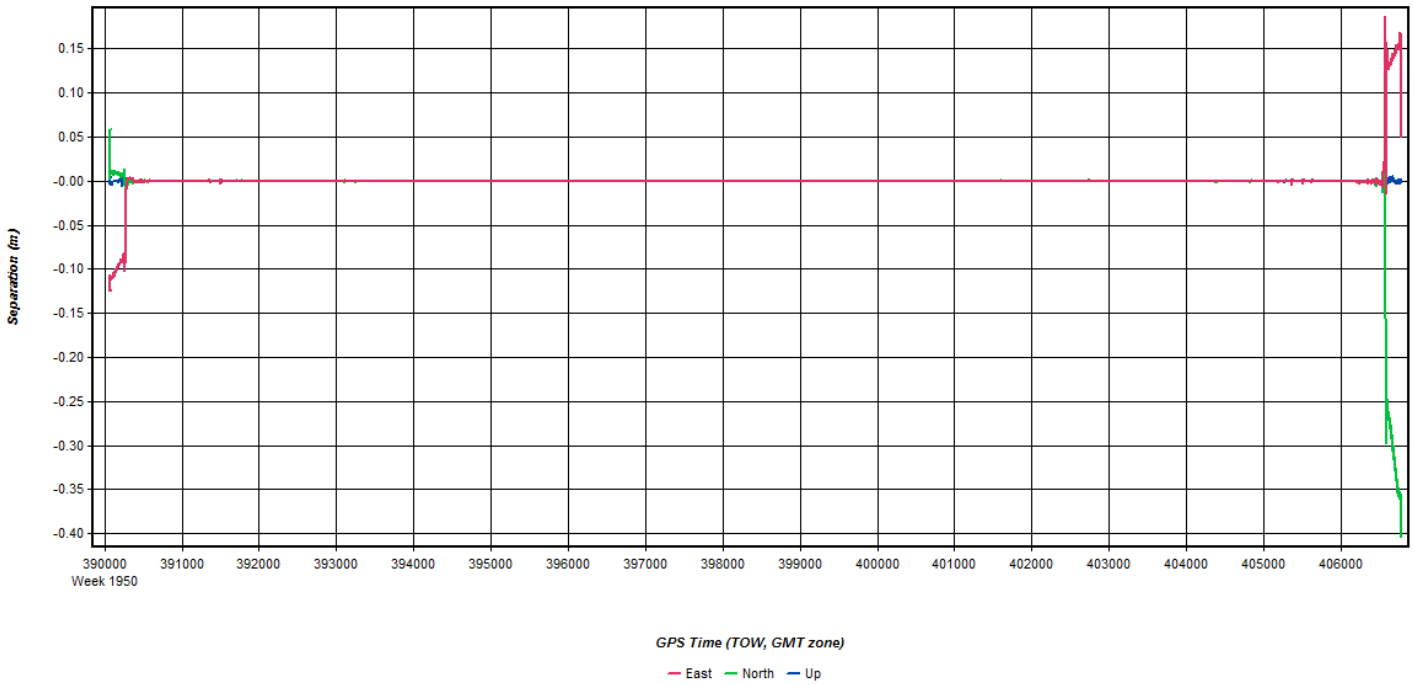

Status
2
1
0
-1
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

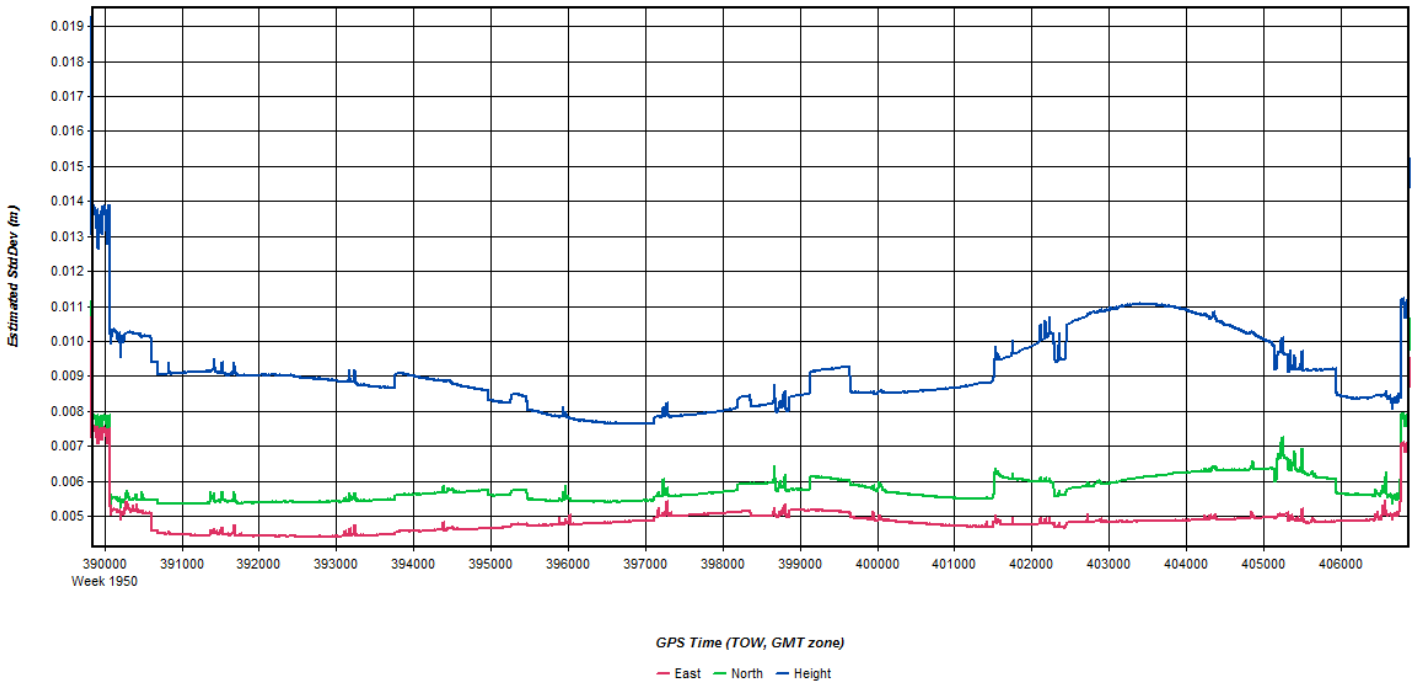

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
Roll
Pitch

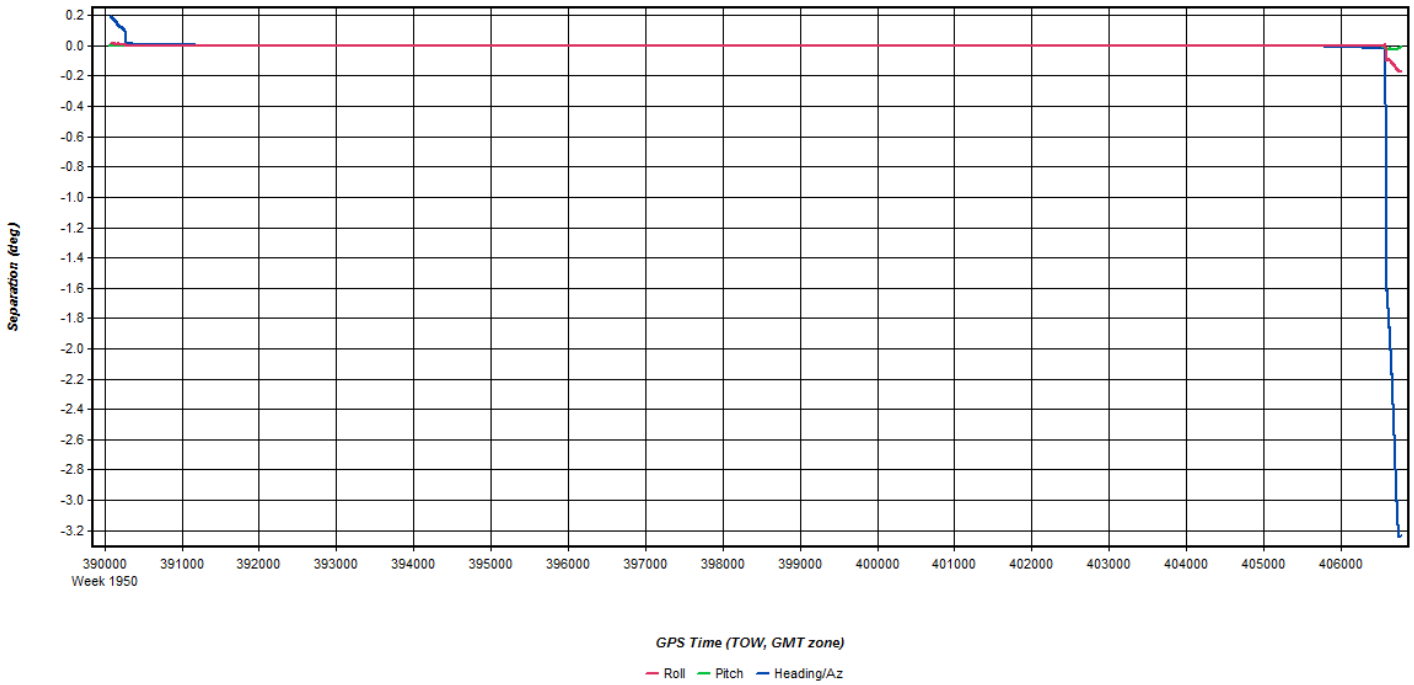

RMS (m)
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
RMS
SD

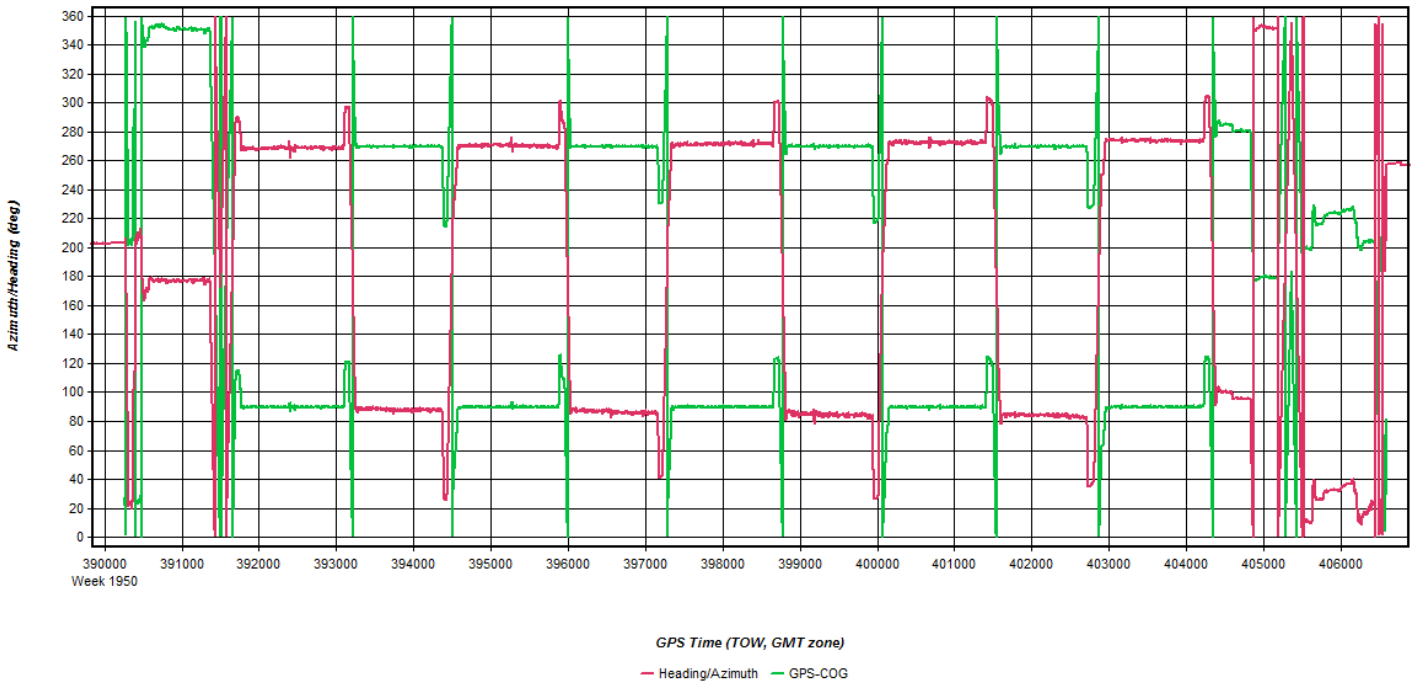

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
Height


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

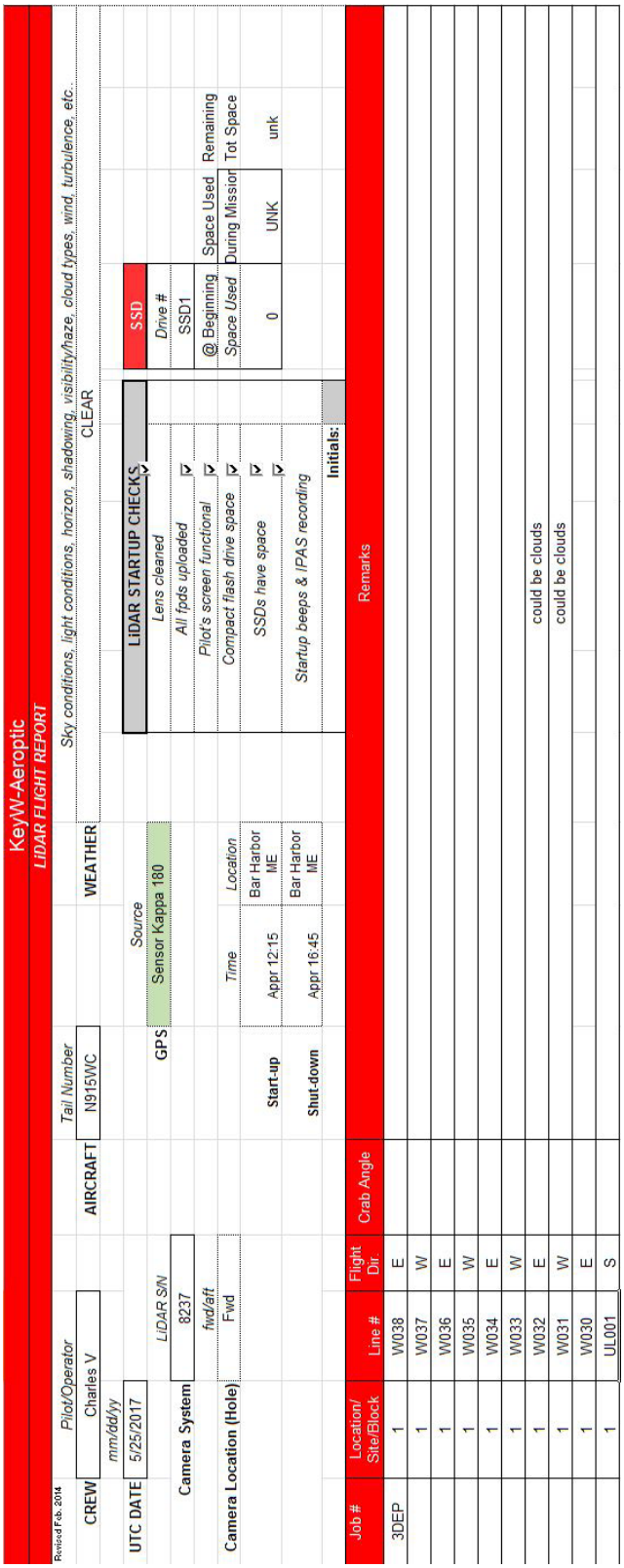

Separation (m)
0.15
0.10
0.05
-0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
-1.6
-1.8
-2.0
-2.2
-2.4
-2.6
-2.8
-3.0
-3.2
390000
Week 1950
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
390000
391000
392000
393000
394000
395000
396000
397000
398000
399000
400000
401000
402000
403000
404000
405000
406000
Week 1950
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic
LIDAR FLIGHT REPORT

Revised Feb. 2014

CREW	Pilot/Operator: Charles V	AIRCRAFT	Tail Number: N915WC	WEATHER	Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.: CLEAR		
UTC DATE	mm/dd/yy: 5/25/2017						

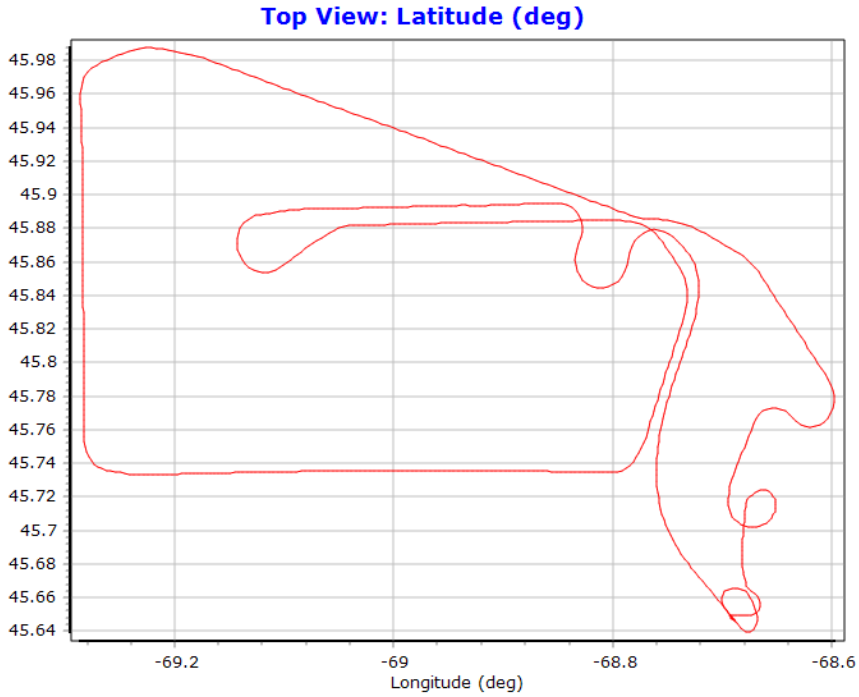
			Source	Time	Location
Camera System	LiDAR S/N: 8237	GPS	Sensor Kappa 180		
Camera Location (Hole)	fwd/aft: Fwd	Start-up		Appr 12:15	Bar Harbor ME
		Shut-down		Appr 16:45	Bar Harbor ME

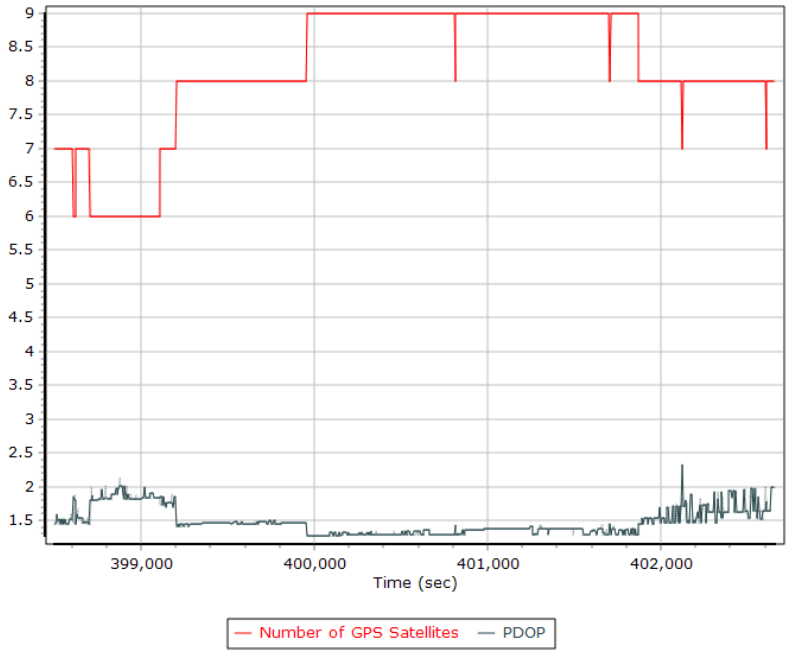
LIDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	
Initials:	

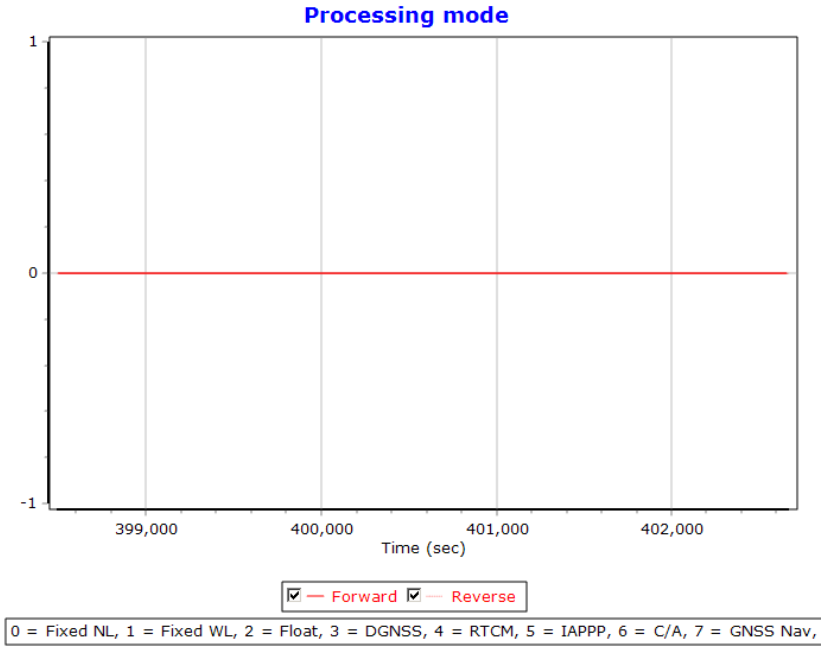
SSD			
Drive #			
SSD1			
@ Beginning Space Used	Space Used During Mission	Remaining Tot Space	
0	UNK	unk	

Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	W038	E		
	1	W037	W		
	1	W036	E		
	1	W035	W		
	1	W034	E		
	1	W033	W		
	1	W032	E		could be clouds
	1	W031	W		could be clouds
	1	W030	E		
	1	UL001	S		

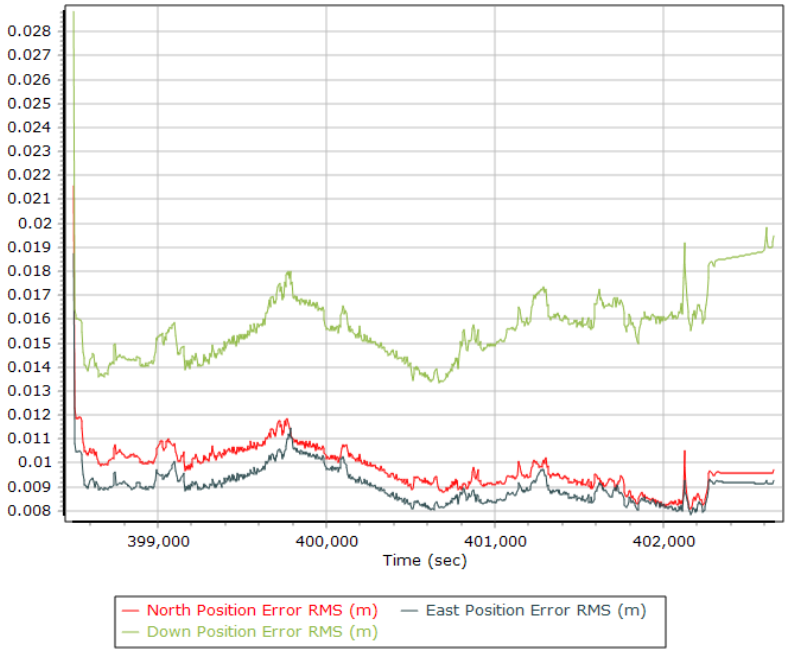
May 25, 2017-A (N1007Q,SN2221256)

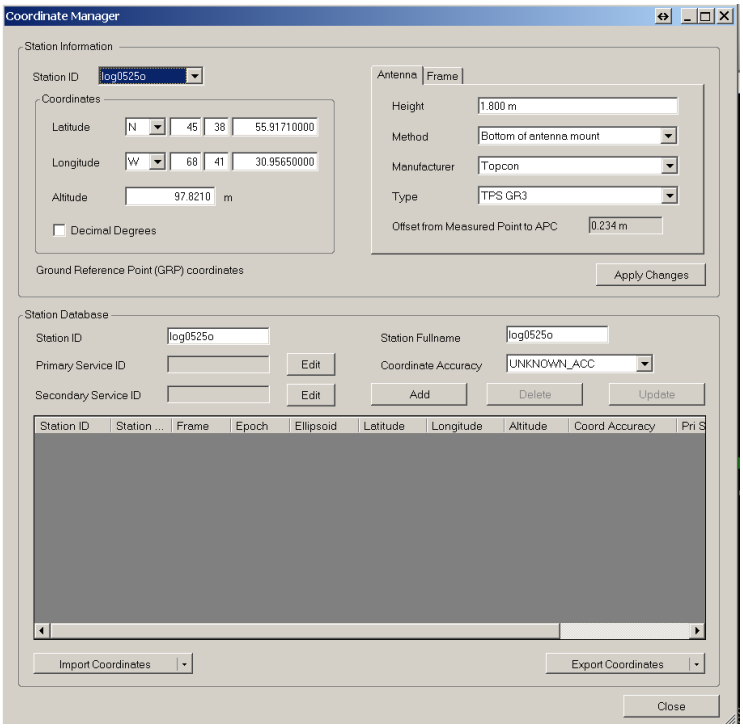

Top View: Latitude (deg)
45.98
45.96
45.94
45.92
45.9
45.88
45.86
45.84
45.82
45.8
45.78
45.76
45.74
45.72
45.7
45.68
45.66
45.64
-69.2
-69
-68.8
-68.6
Longitude (deg)


9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
399,000
400,000
401,000
402,000
Time (sec)
Number of GPS Satellites
PDOP

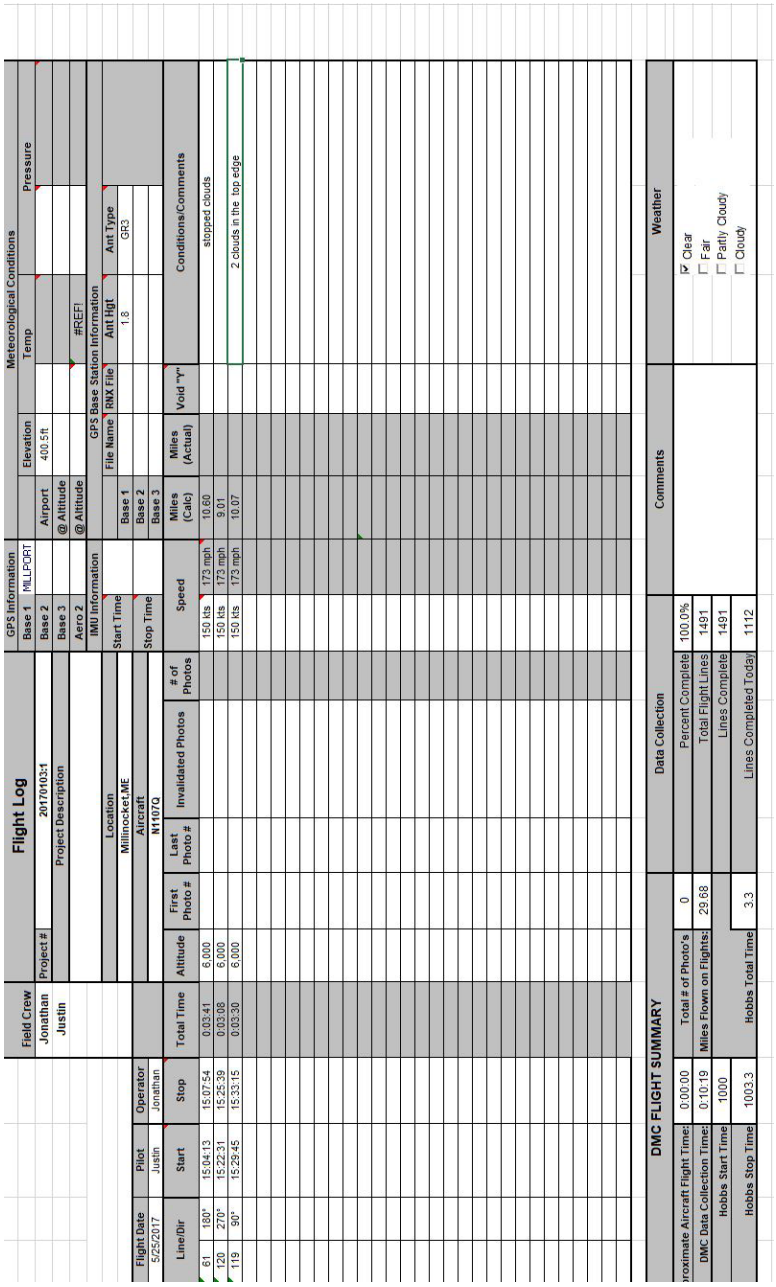

Processing mode
1
0
-1
399,000
400,000
401,000
402,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,

360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
-40
399,000
400,000
401,000
402,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.028
0.027
0.026
0.025
0.024
0.023
0.022
0.021
0.02
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.01
0.009
0.008
399,000
400,000
401,000
402,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log0525o
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log0525o
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname
log0525o
Coordinate Accuracy
UNKNOWN_ACC
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

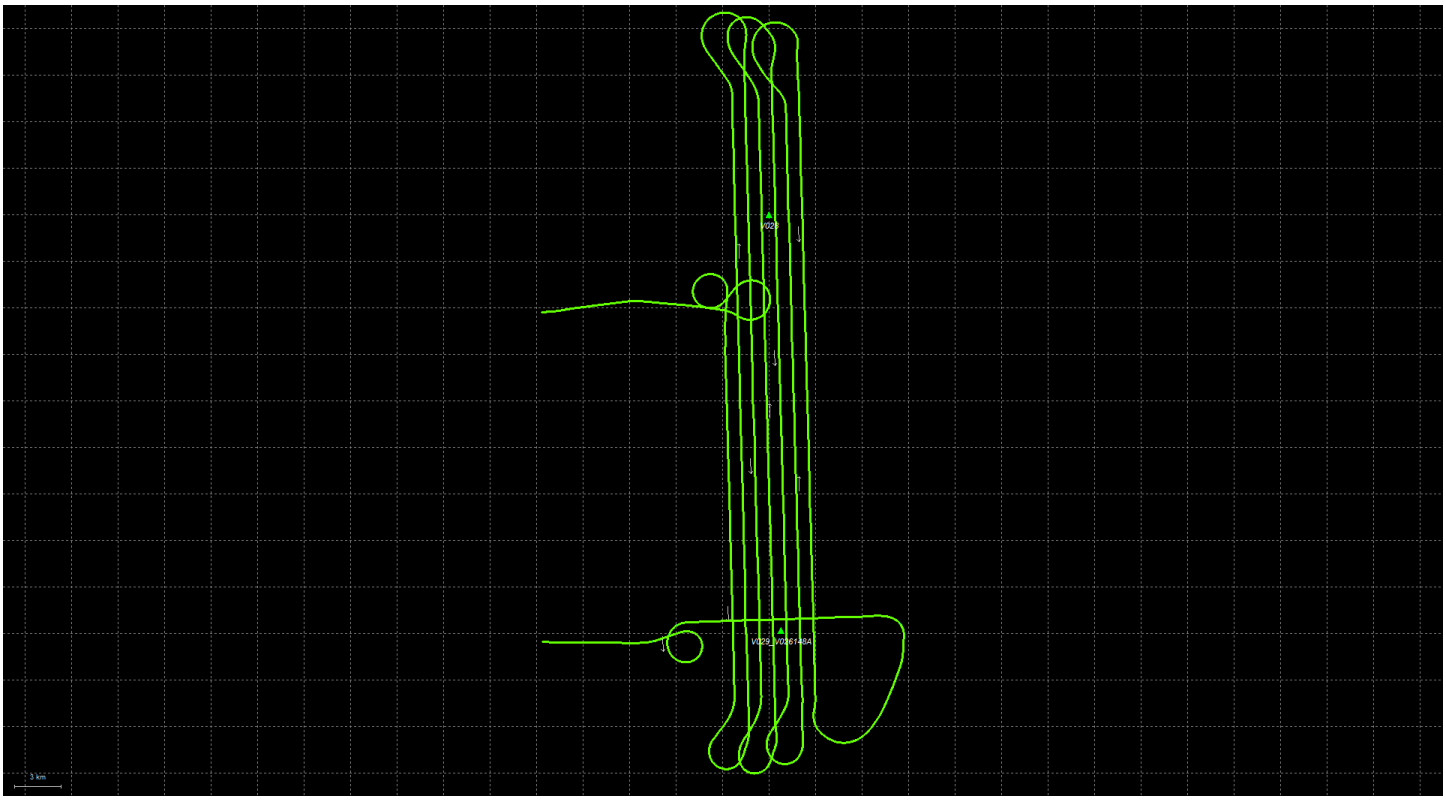
Flight Log

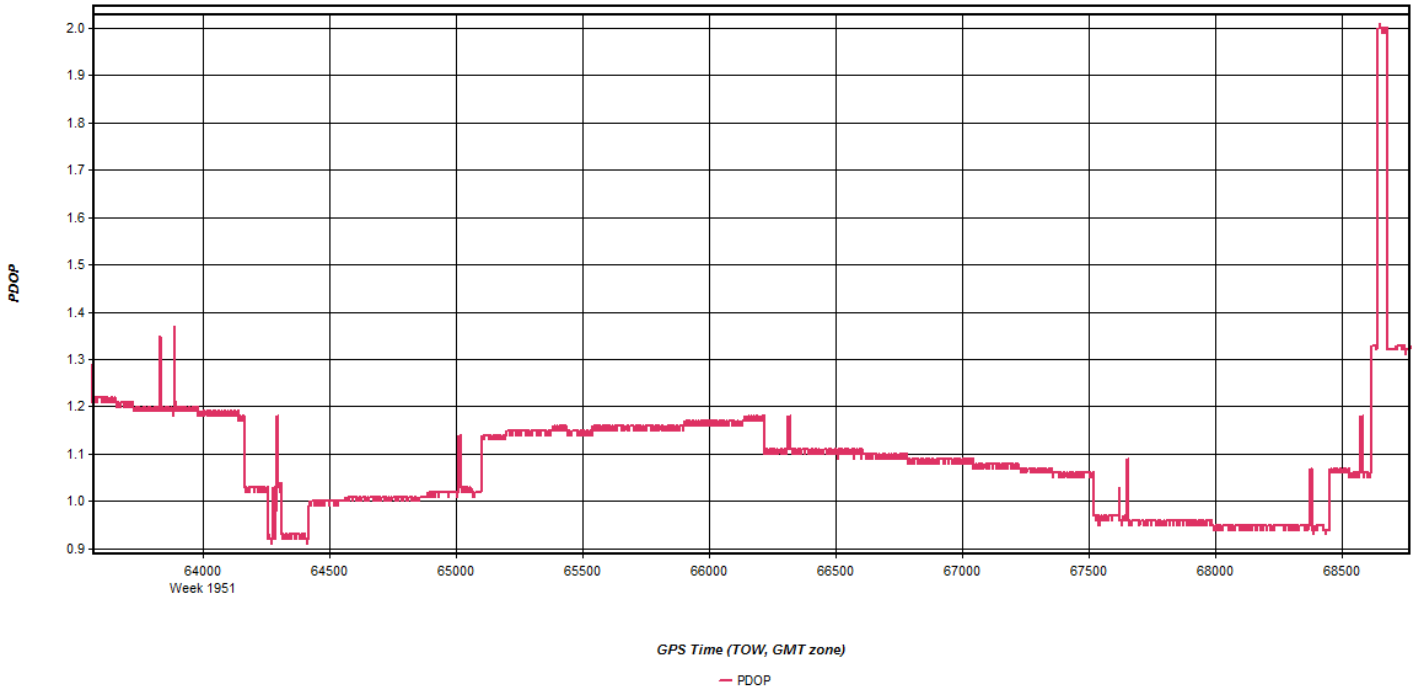


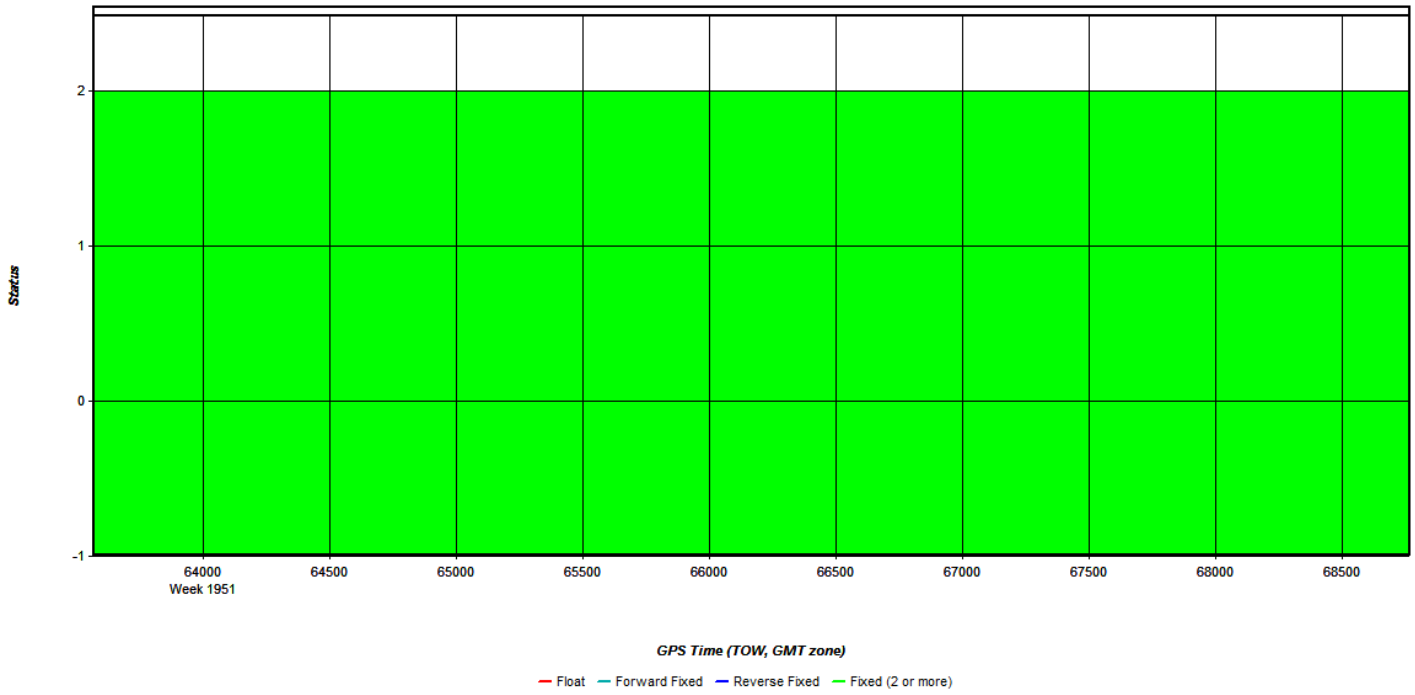
Flight Log

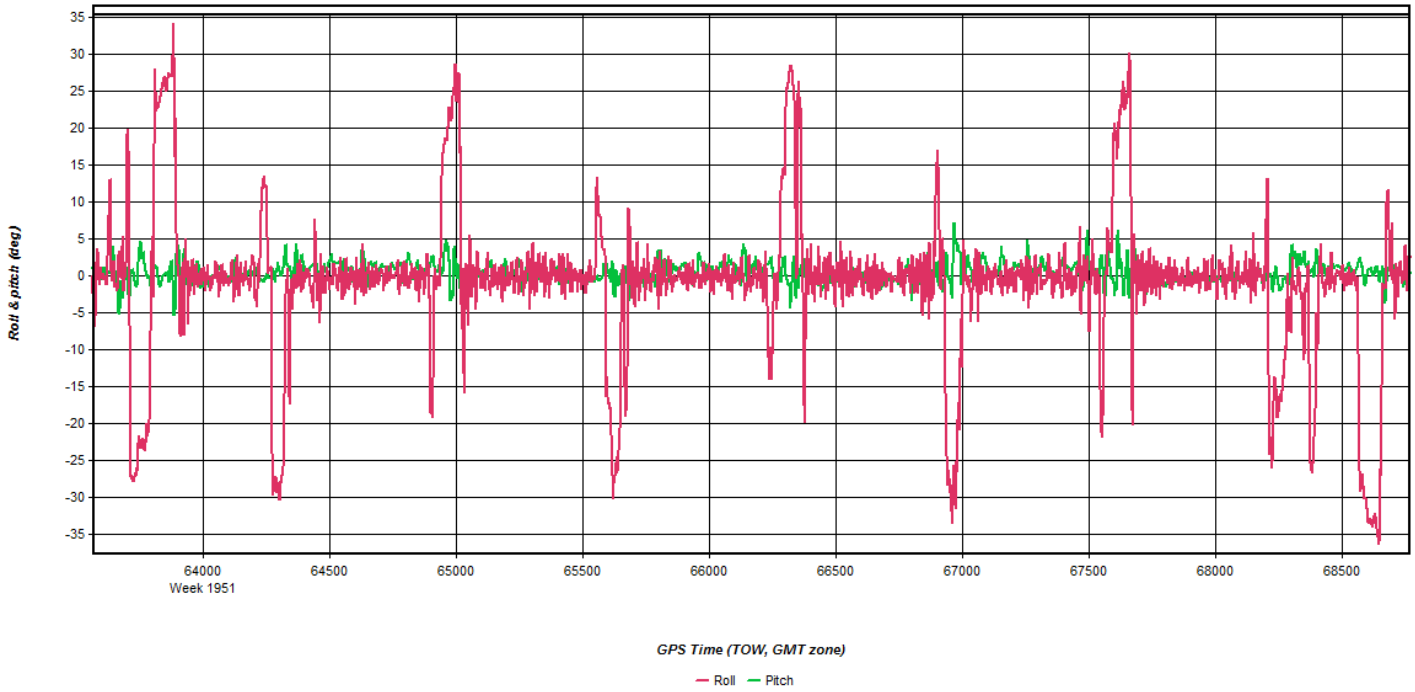
| Field Crew | | GPS Information | | Meteorological Conditions | | |

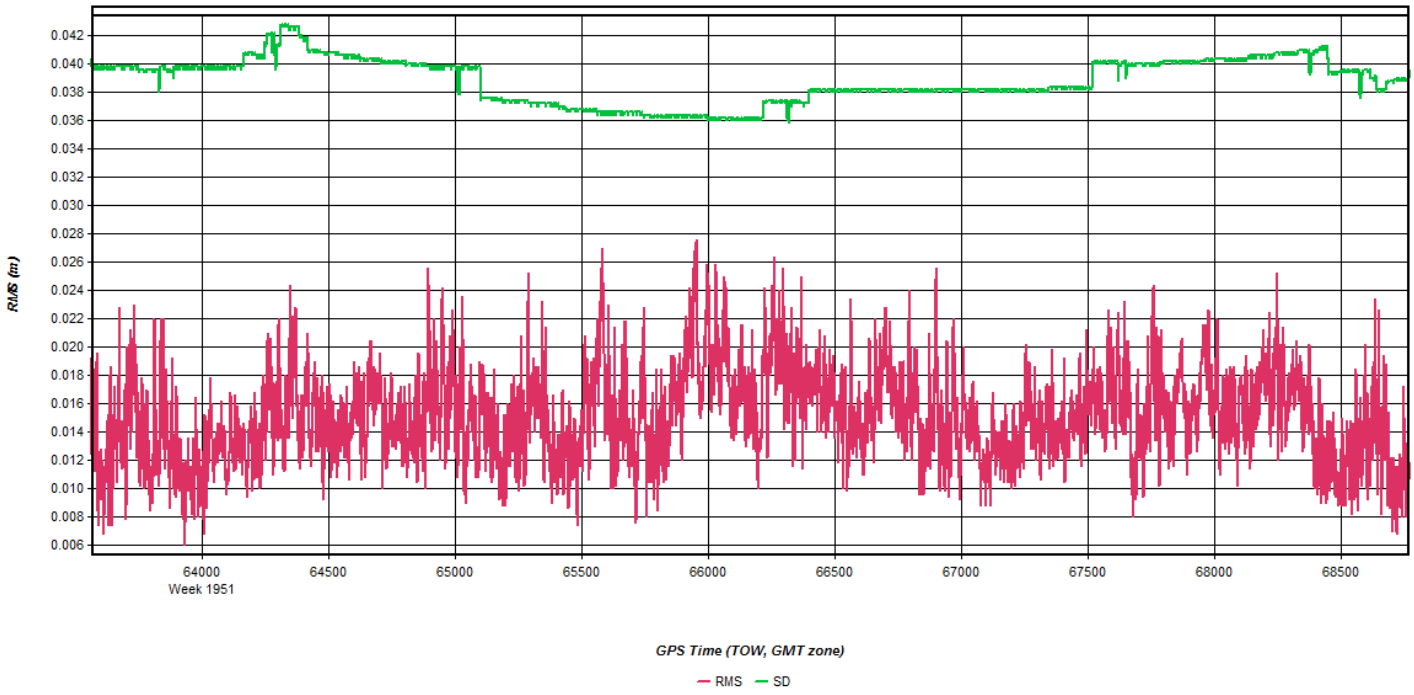
May 28, 2017-A (N262AS, SN7161)

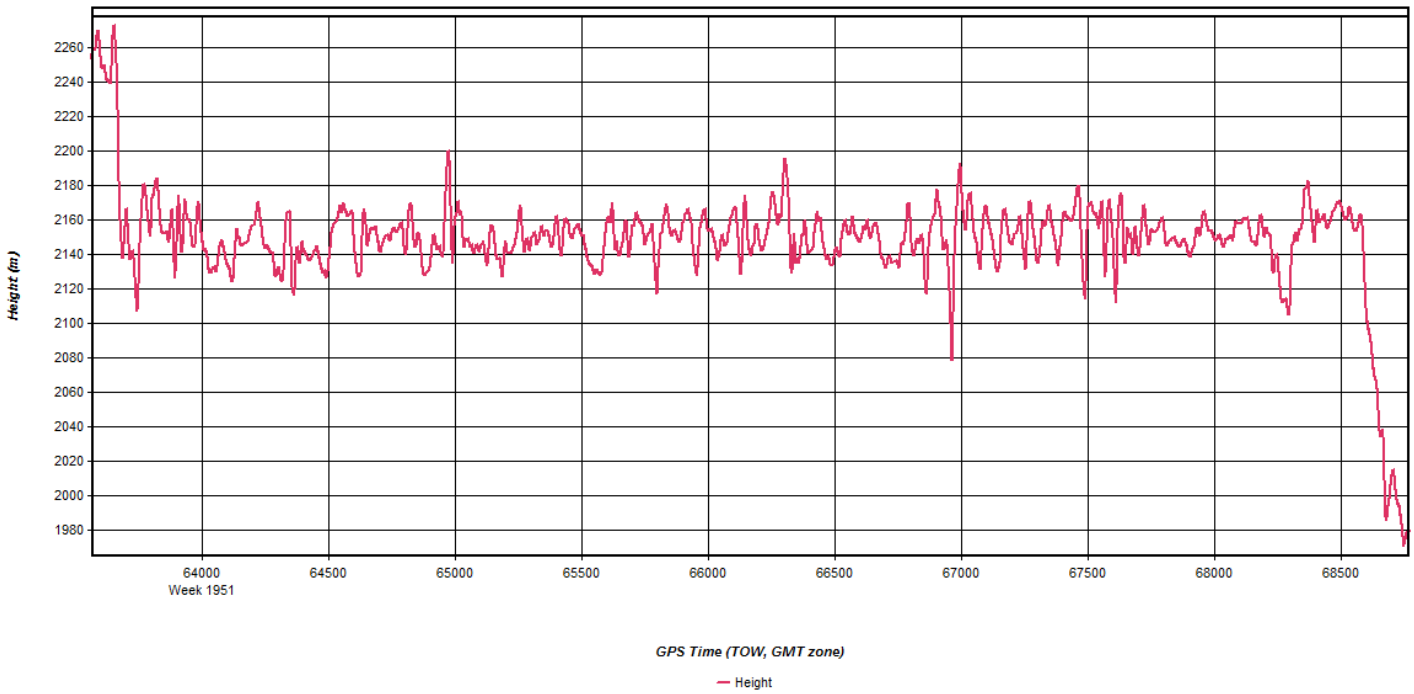


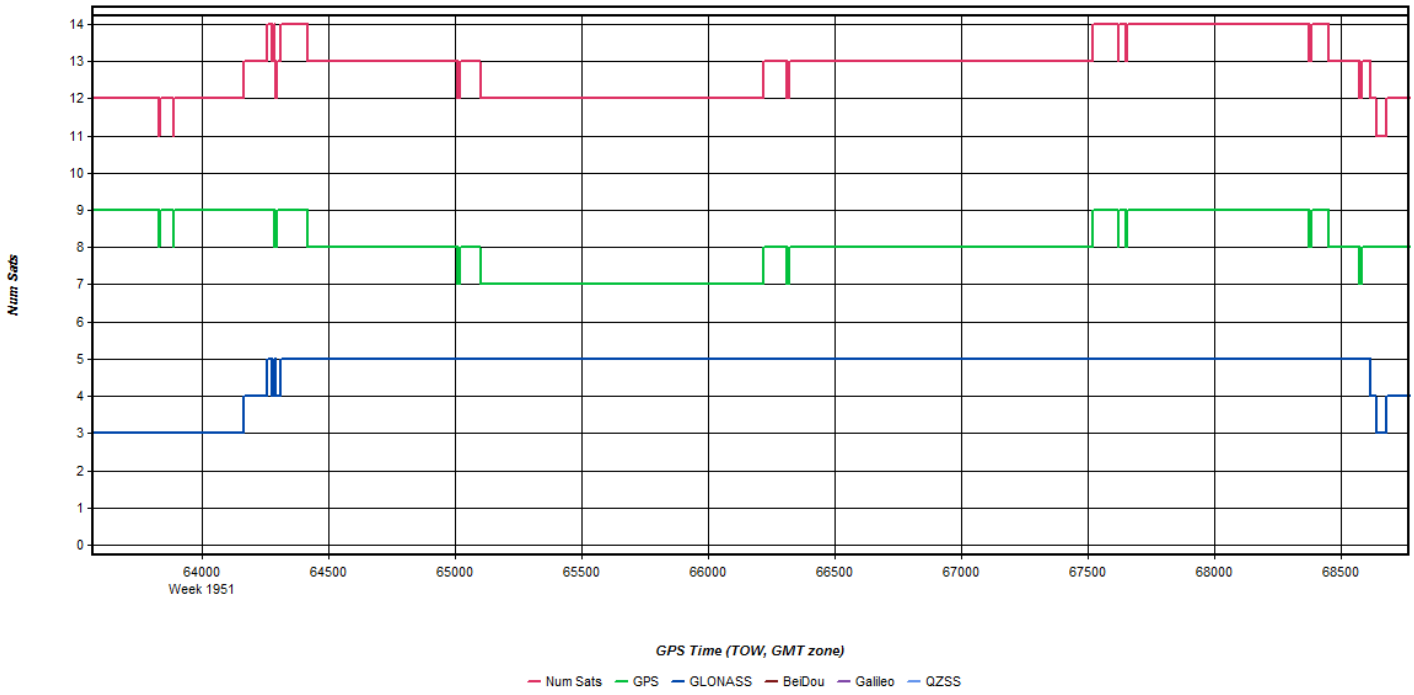

PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
PDOP

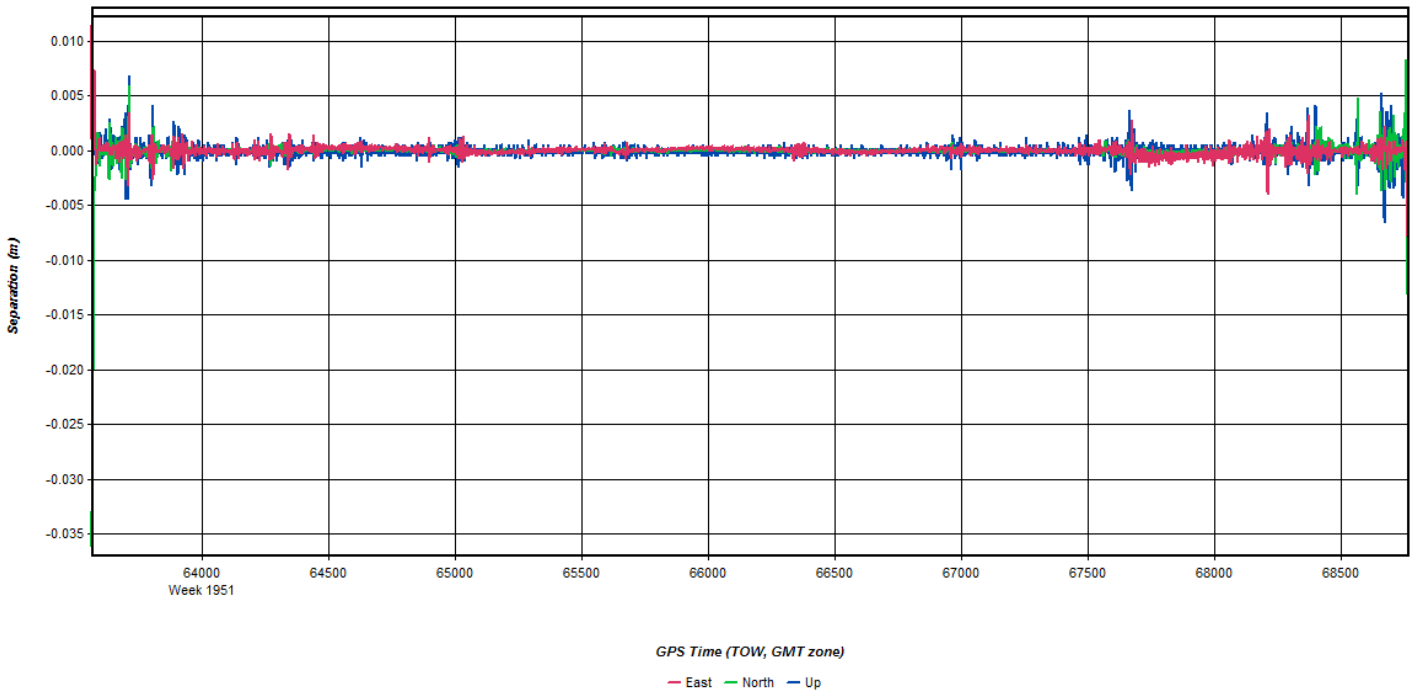

Status
2
1
0
-1
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

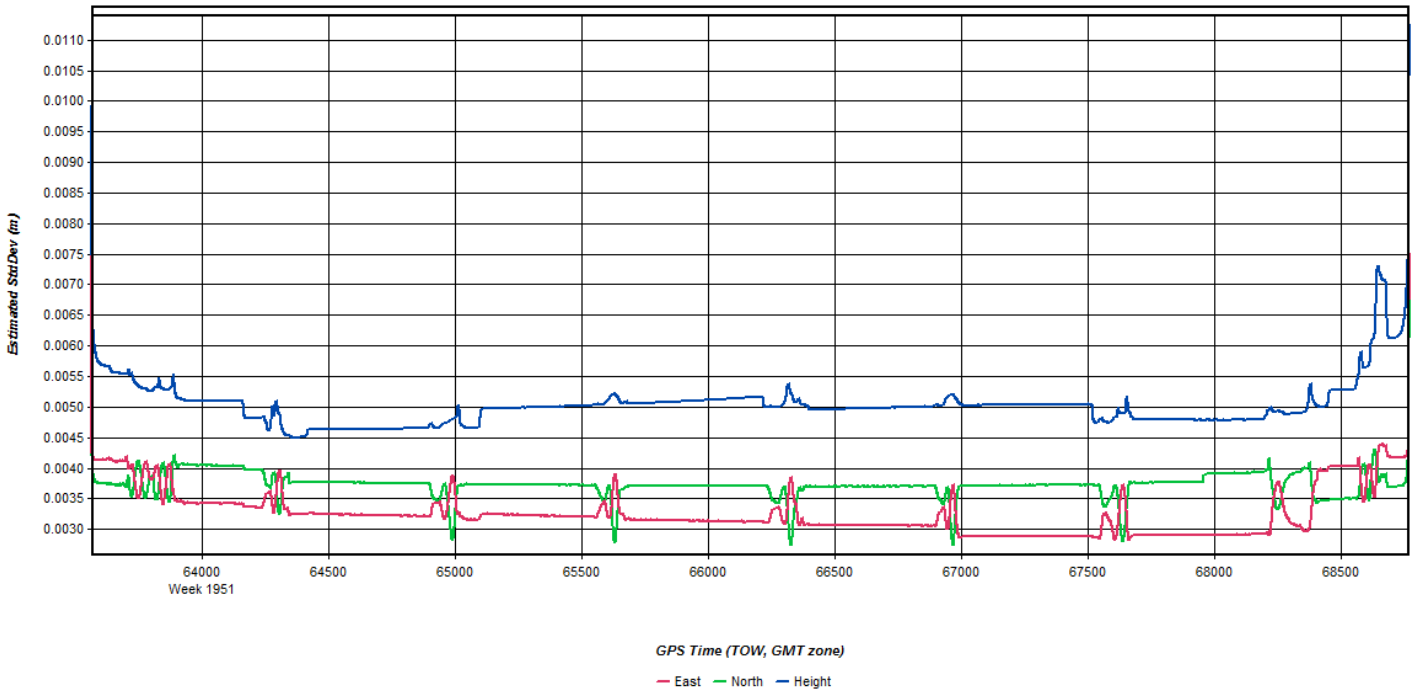

Roll & pitch (deg)
35
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
-35
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Roll
Pitch

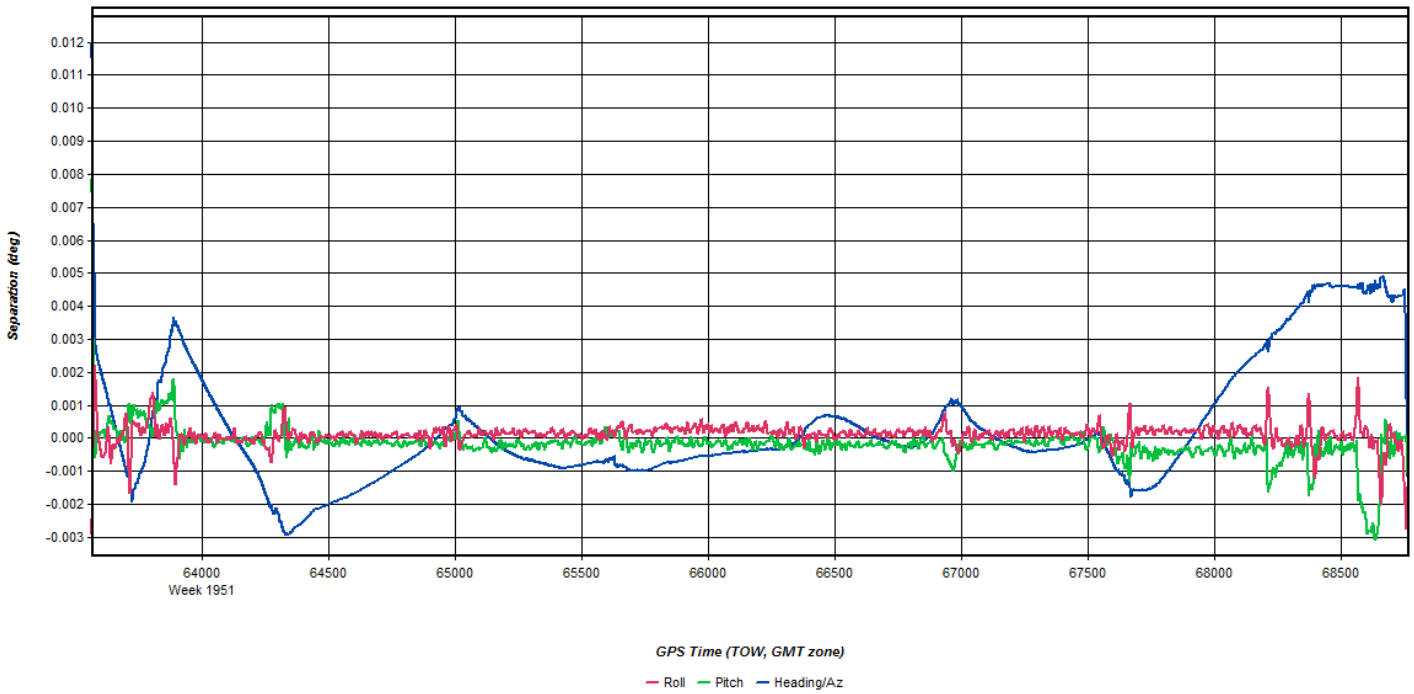

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
RMS
SD

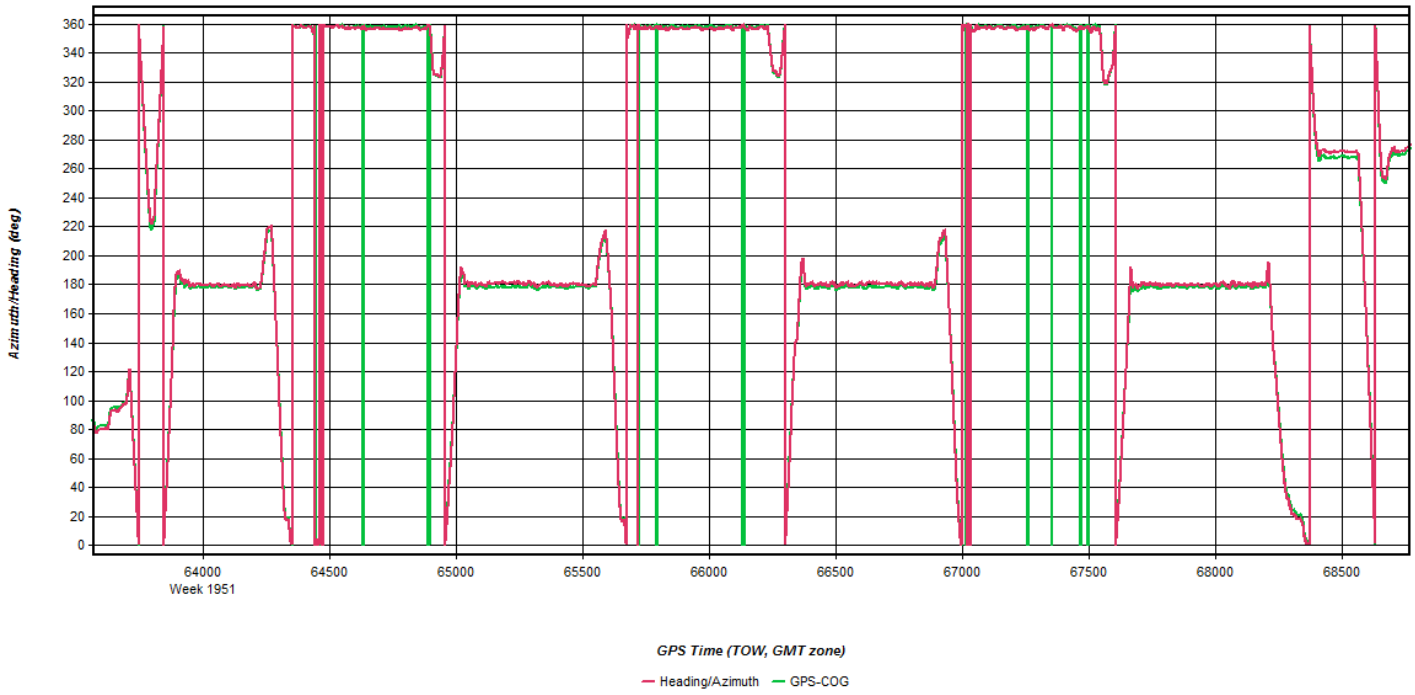

Height (m)
2260
2240
2220
2200
2180
2160
2140
2120
2100
2080
2060
2040
2020
2000
1980
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Height

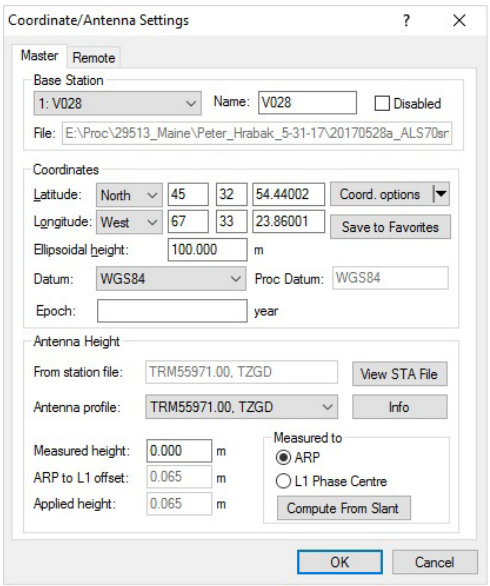

Num Sats
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

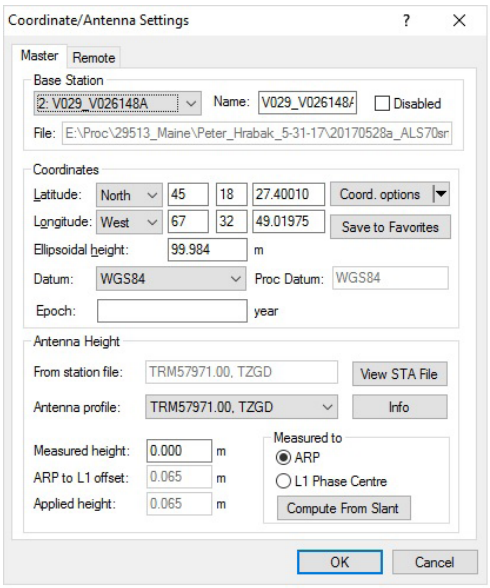

Separation (m)
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
64000
Week 1951
64500
65000
65500
66000
66500
67000
67500
68000
68500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: V028
Name: V028
Disabled
File: E:\Proc\29513_Maine\Peter_Hrabak_5-31-17\20170528a_ALS70sr
Coordinates
Latitude: North 45 32 54.44002
Coord. options
Longitude: West 67 33 23.86001
Save to Favorites
Ellipsoidal height: 100.000 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, TZGD
View STA File
Antenna profile: TRM55971.00, TZGD
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: V029_V026148A
Name:
V029_V026148A
Disabled
File:
E:\Proc\29513_Maine\Peter_Hrabak_5-31-17\20170528a_ALS70sr
Coordinates
Latitude:
North
45
18
27.40010
Coord. options
Longitude:
West
67
32
49.01975
Save to Favorites
Ellipsoidal height:
99.984
m
Datum:
WGS84
Proc Datum:
WGS84
Epoch:
year
Antenna Height
From station file:
TRM57971.00, TZGD
View STA File
Antenna profile:
TRM57971.00, TZGD
Info
Measured height:
0.000
m
ARP to L1 offset:
0.065
m
Applied height:
0.065
m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

Date: MAY 28th, 2017

(email log daily to flight_log_distribution_list@quantumspatial.com) 20170528_170022

Lift: (A) B C D E Pg 1 of 1

Project: USGS MAINE 2017 Proj #: 29513 Flight Mgmt File: 29513_Maine_KAS201_2100m

Aircraft: N262AS Begin Hobbs: 6649.8 End Hobbs: 6652.1 Total: 2.3 Pilot: J.NEILSON Co-Pilot: - Tech: P. HRABAK

Dep Apt: KBGR Dep Time (Lcl): 13:12 (Z): 17:12 z Arr Apt: KBGR Arr Time (Local): 15:31 (Z): 19:31 z Tot Time Aloft: 2:19

CORS: (Y)/ N Sta 1: MELI CORS Sta 2: - Flyovers: (Y)/ N If Y, times: Sta1) 17:26 & 19:18 z Sta2) -

GPS Unit: (Y)/ N Sta 1: "BANGA" @ KBGR Sta 2: - Flyovers: Y / (N) If Y, times: Sta1) STATICS Sta2) -

Gd Temp beg: +21 °c End: +22 °c OAT beg: +05 °c End: +05 °c Altimeter begin: 29.94" end: 29.94"

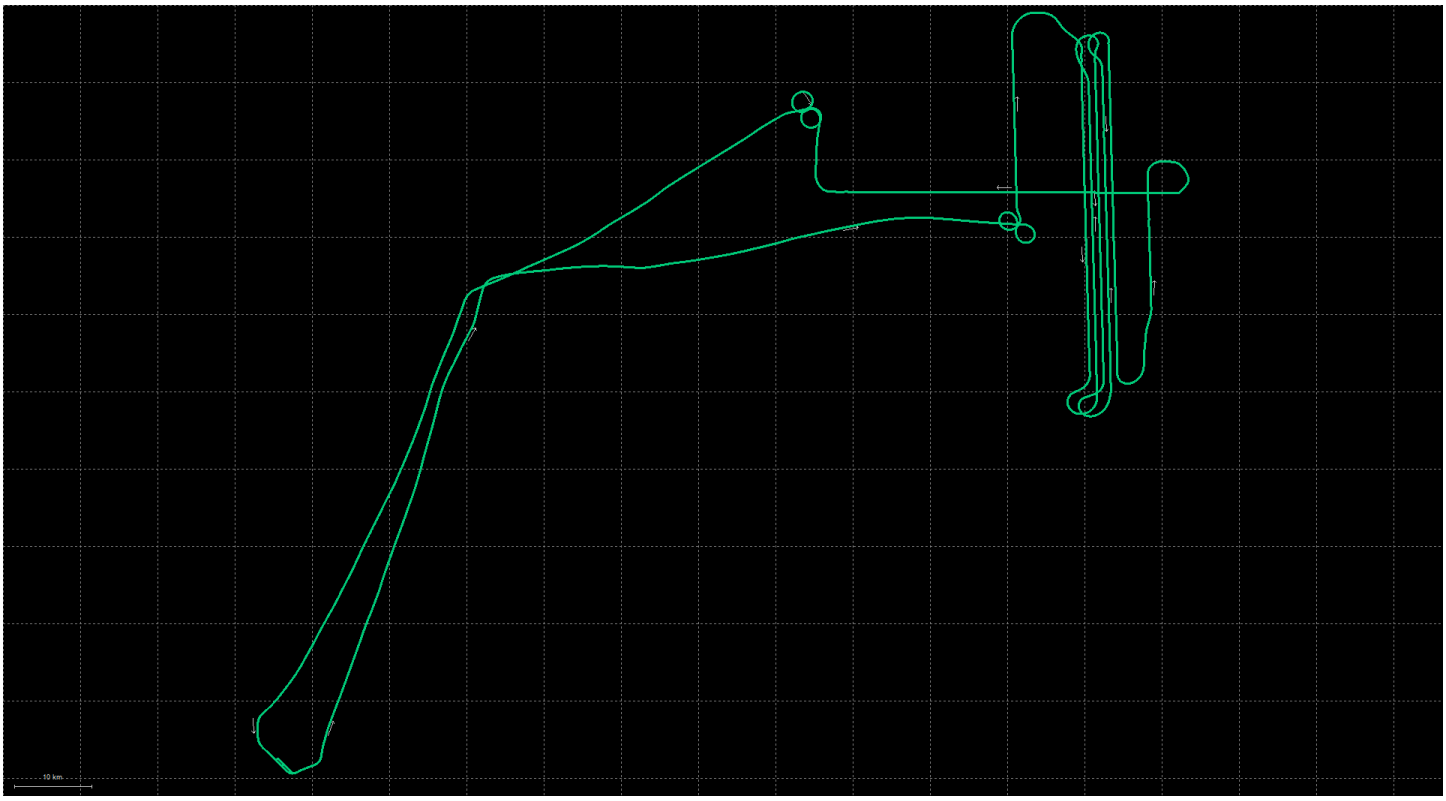
LiDAR									
Type LEICA ALS70	Serial # 7161	Alt AGL 6890'	Alt AMSL ~7020'	Avg Terr Ht ~130'	Max Gdspd ?	Avg Pt Spacing ?			
FOV 36°	Scan Freq 56.0 Hz	MpiA (Y)/ N	Pulses In Air 2	Pulse Rate 262.6 kHz	Power 100%	PPSM ?			

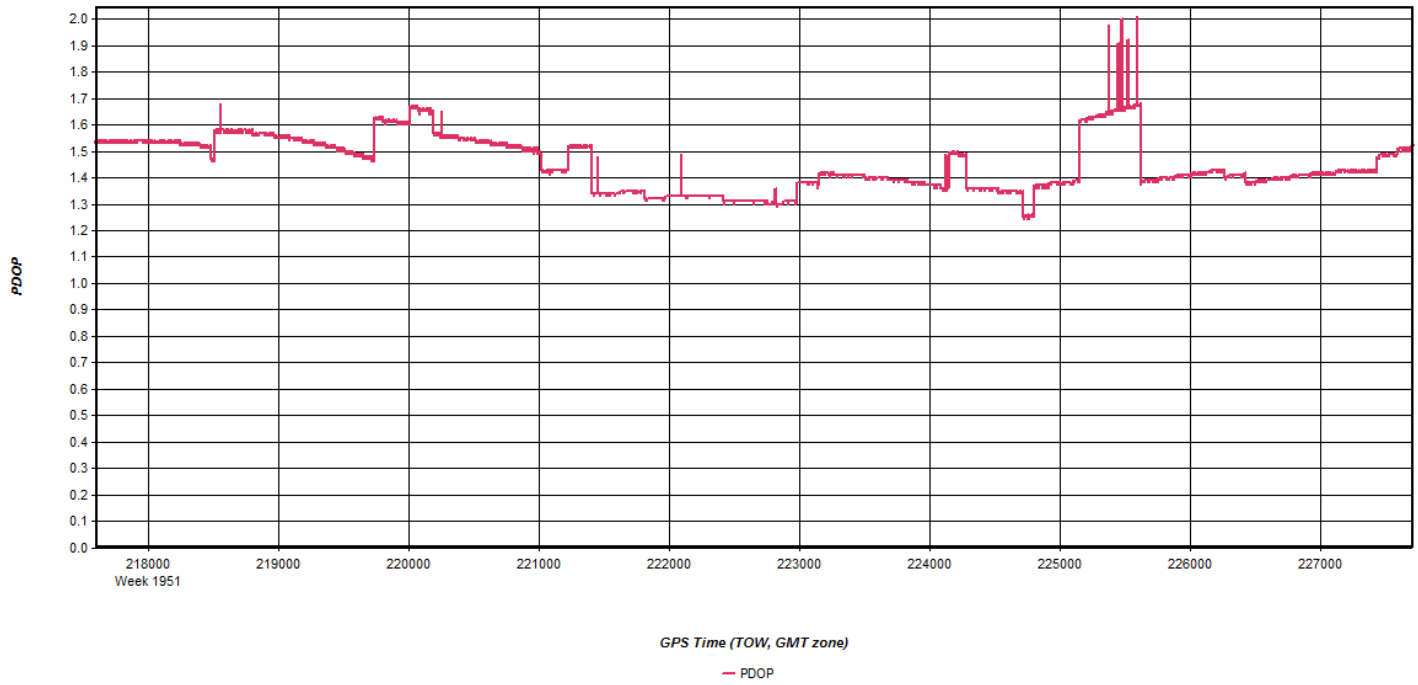
Beg GB	183	Storage Name/#
End GB	164	MM70 600gbSSD
Tot GB	19	5/10/15

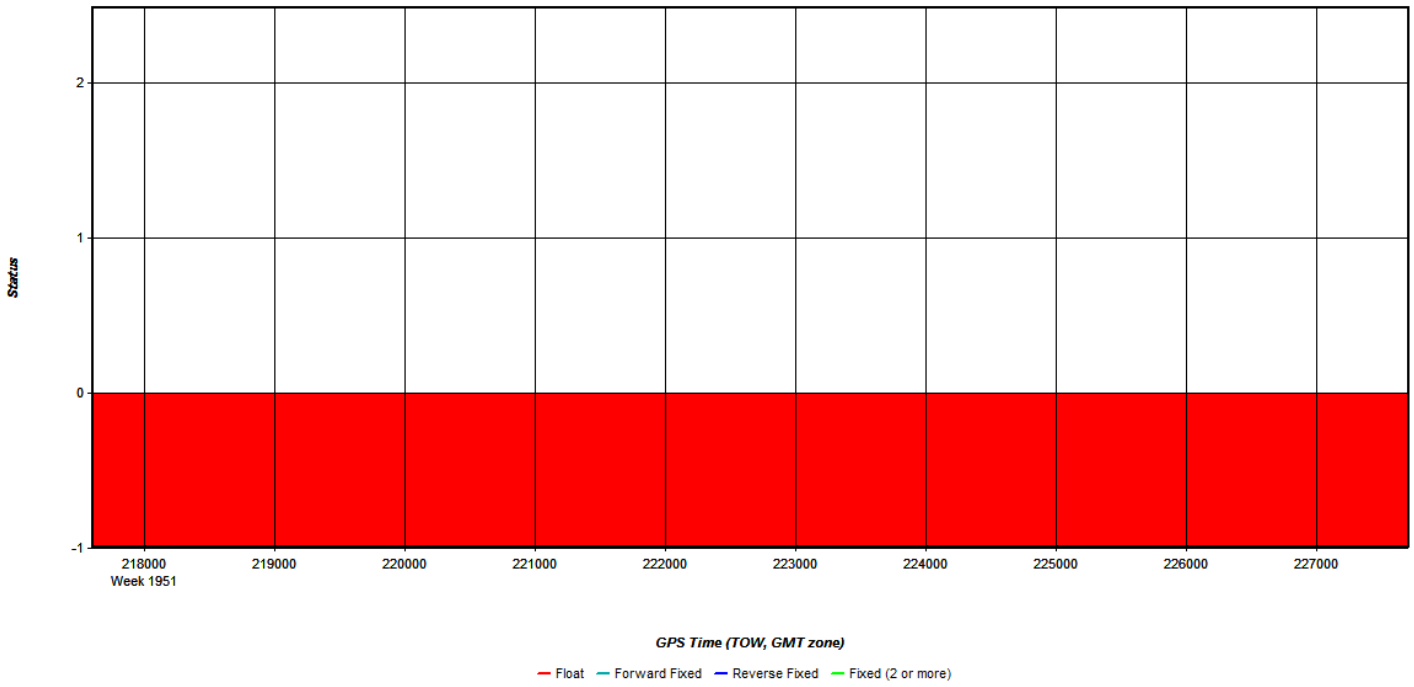
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0,-,+)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc. (FIG 8 @ 17:41 → 17:44 z)
2033	S	17:46	17:50	~150 kts.	1.1/17	7020'	2°	0	hz, scat high above, few below nearby, smooth (REFLIGHT OF PRIOR, 11-0 FSE)
2034	N	17:52	18:01	~145 kts.	1.1/16	7020'	1°	0	" " " " " " " "
2035	S	18:04	18:12	~155 kts.	1.1/17	7000'	2°	0	" " " " " " " "
2036	N	18:15	18:23	~145 kts.	1.1/17	7000'	2°	0	" " " " " " " "
2037	S	18:26	18:34	~155 kts.	1.3/15	7000'	2°	0	" " " " " " " "
2038	N	18:37	18:45	~145 kts.	1.2/16	7020'	1°	0	" " " " " " " "
2039	S	18:48	18:56	~155 kts.	1.1/17	7040'	1°	0	" " " " " " " "
									(REVERSED COURSE, SAW CLOUDS POPPED THROUGHOUT REMAINDER OF AOI)
UL0001	W	19:00	19:02	~145 kts.	1.0/18	7040'	4°	0	hz, scat high above, few below nearby, smooth (IMPROV CROSS LINE)
									("FIG 8" @ 19:02 → 19:05 z)
									[LANDED DUE TO UNWORKABLE CLOUDS BELOW THROUGHOUT AOI]

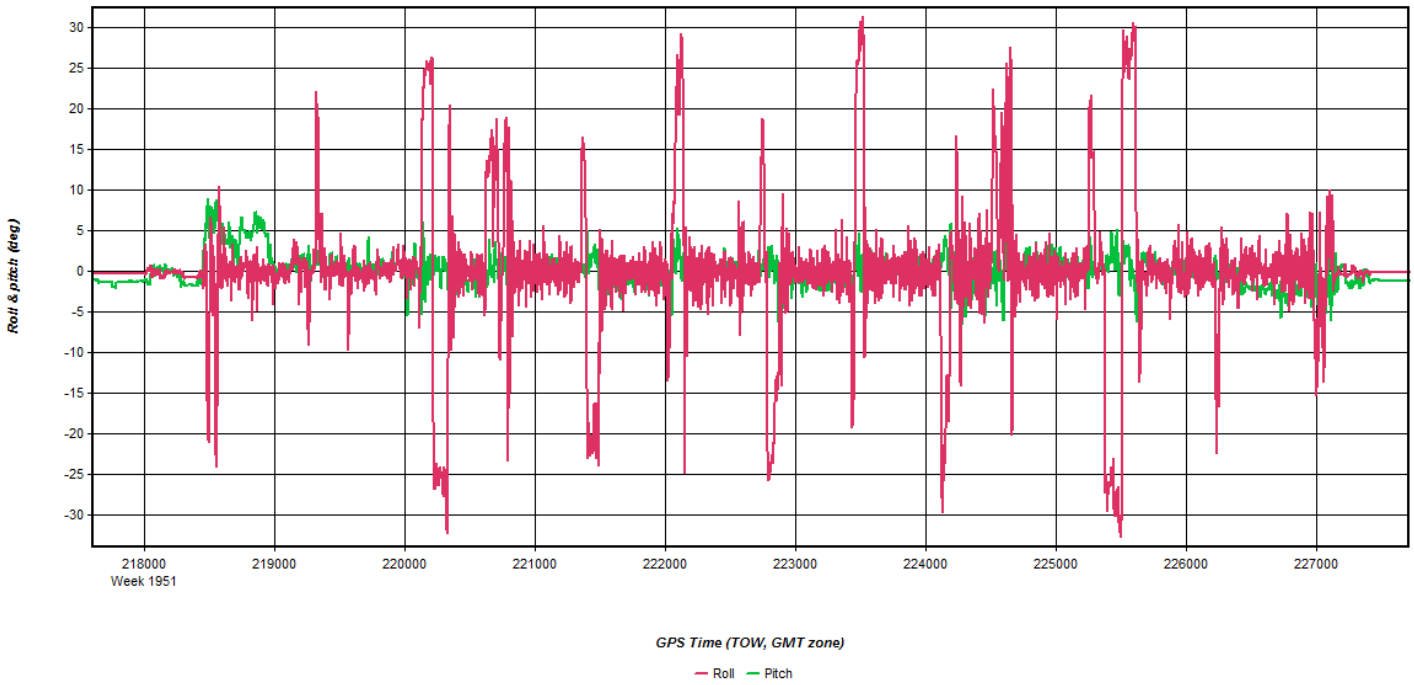
Total Proj Lines: 70 Lines Flown: 7 Lines Remain: Online Time: 1:16 Mob Time: 1:03 Notes: 20170528_170022

May 30, 2017-A (N262AS, SN7161)

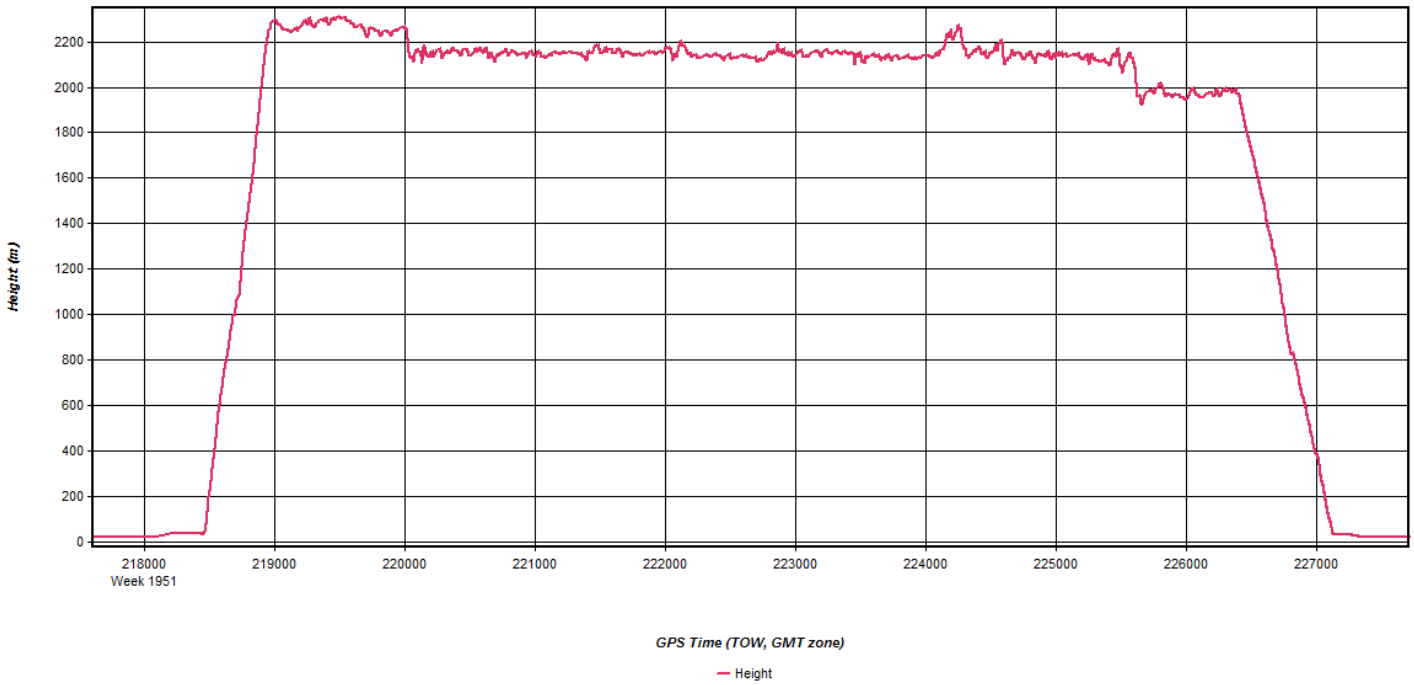



PDOP
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
PDOP

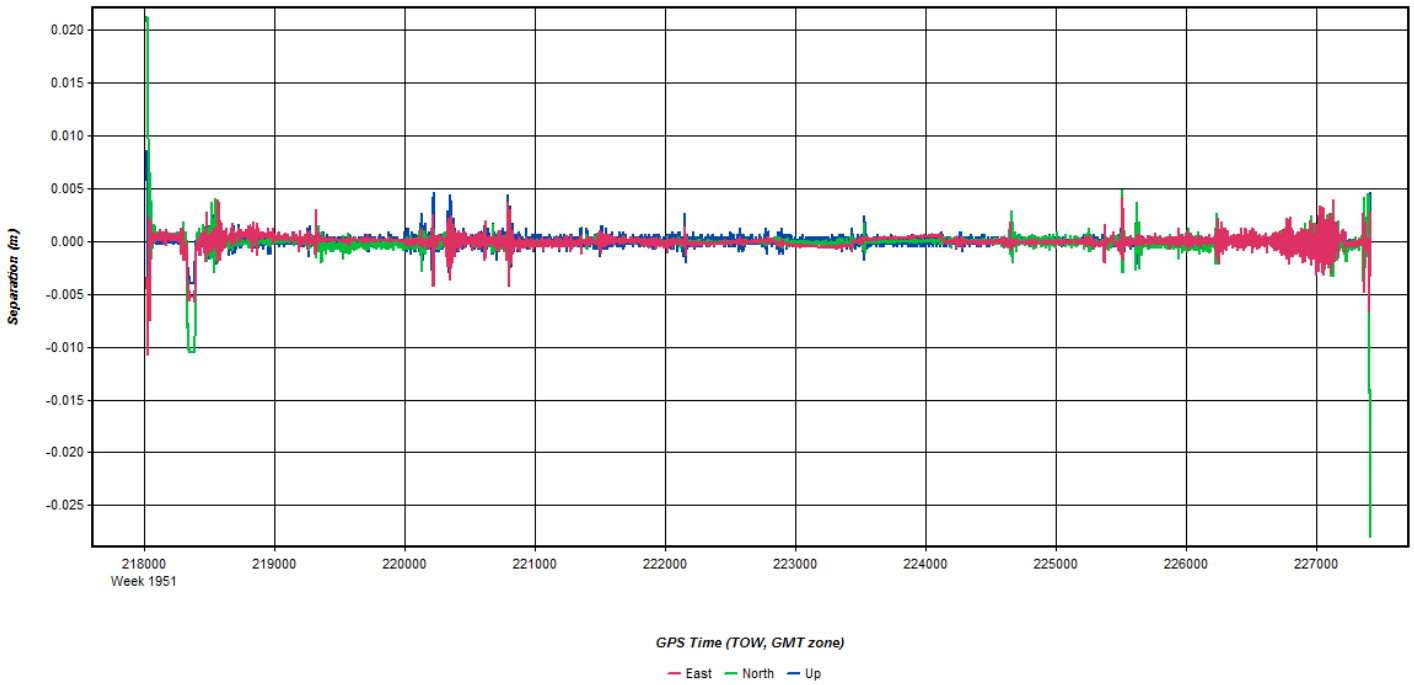

Status
2
1
0
-1
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

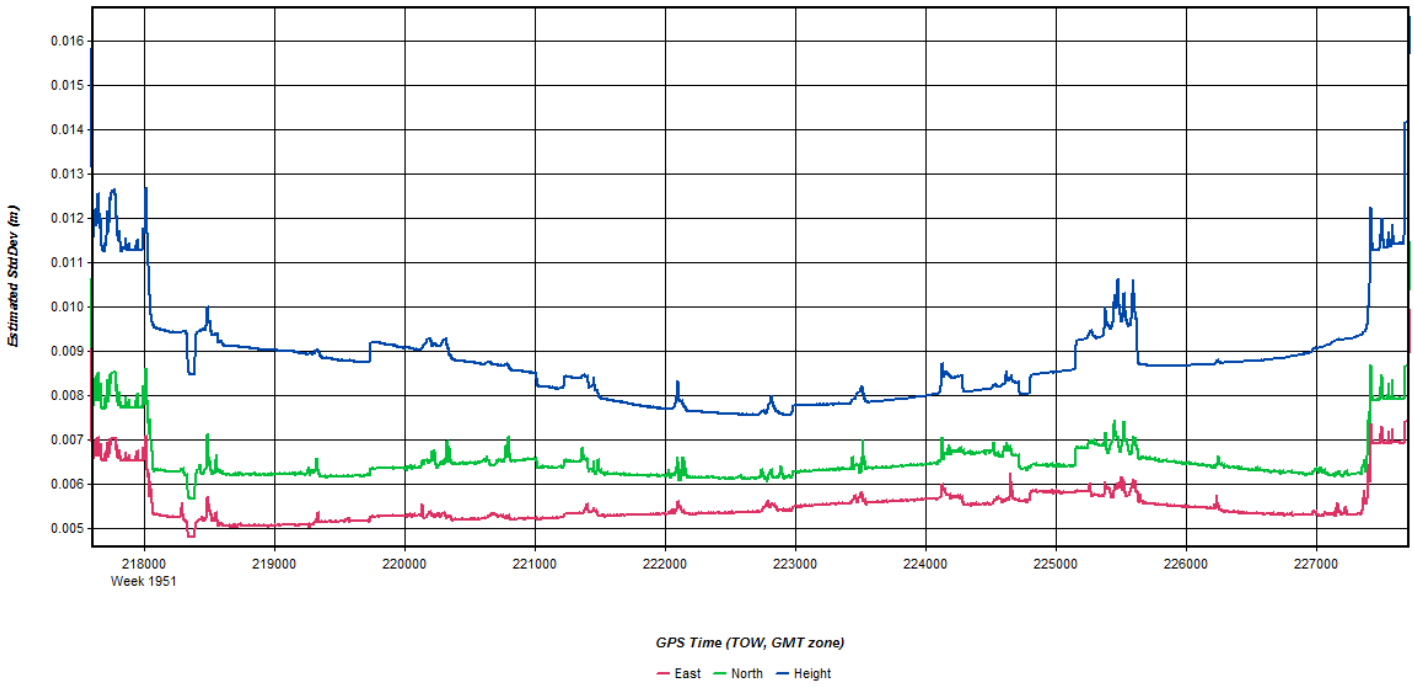

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Roll
Pitch

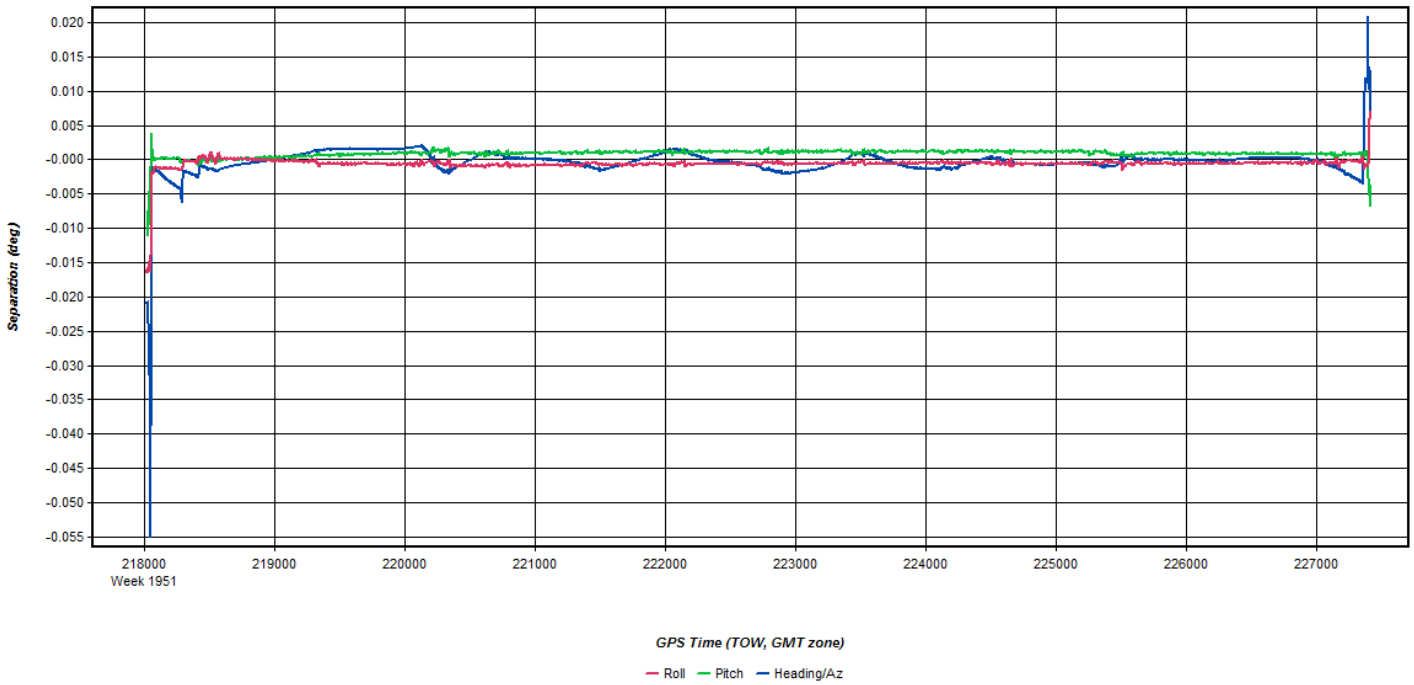
RMS (m)
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
RMS
SD

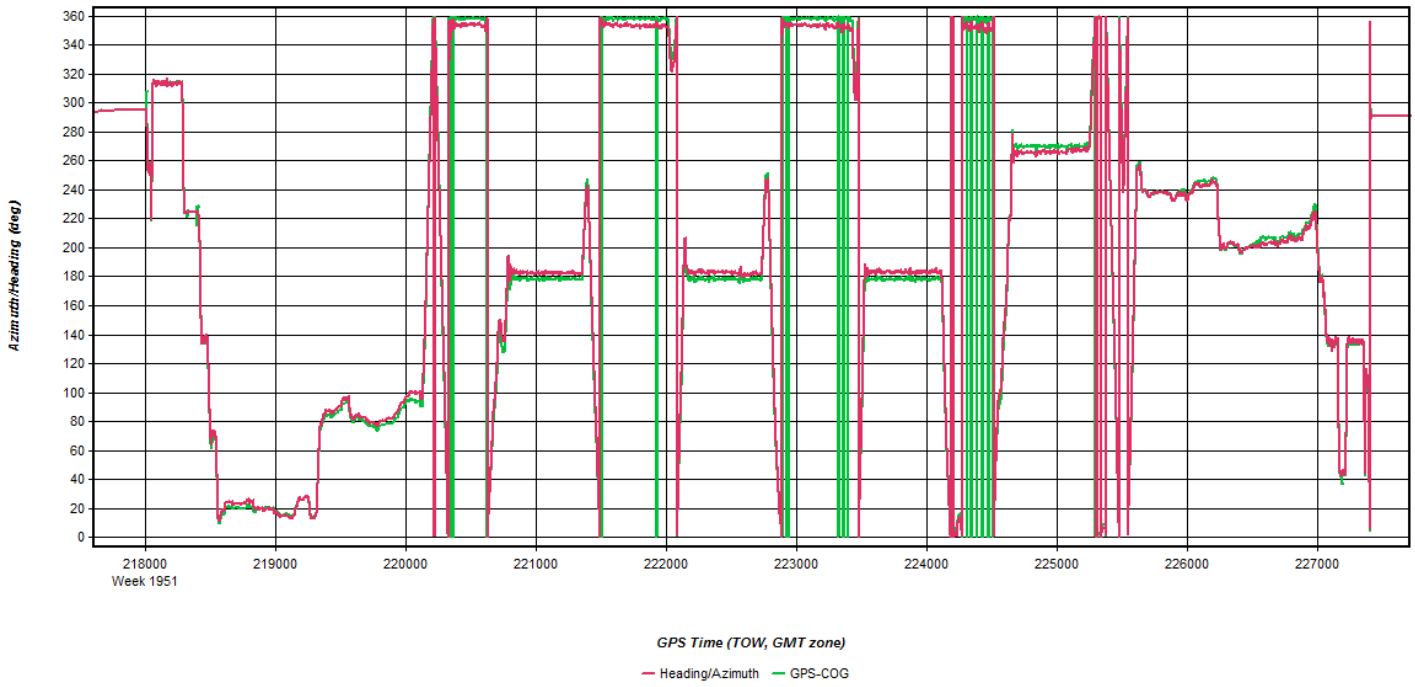

Height (m)
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Height

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
218000
Week 1951
219000
220000
221000
222000
223000
224000
225000
226000
227000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log

Airborne LiDAR Data Collection Log Sheet :: Quantum Spatial, Inc

(email log daily to flight_log_distribution_list@quantumspatial.com) 20170530_122507

Date: MAY 30th, 2017

Lift: (A) B C D E Pg 1 of 1

Project: USGS MAINE 2017 **Proj #:** 29513 **Flight Mgmt File:** 29513_Maine_KAB001_2100m

Aircraft: N262AS **Begin Hobbs:** 6652.1 **End Hobbs:** 6654.6 **Total:** 2.5 **Pilot:** J. NEILSON **Co-Pilot:** – **Tech:** P. HRABAK

Dep Apt: KBGR **Dep Time (Lcl):** 08:40 (Z): 12:40 Z **Arr Apt:** KBGR **Arr Time (Local):** 11:05 (Z): 15:05Z **Tot Time Aloft:** 2:25

CORS: (Y)/ N **Sta 1:** MELI CORS **Sta 2:** – **Flyovers:** (Y)/ N **If Y, times: Sta1)** 12:55 & 14:50Z **Sta2)** –

GPS Unit: (Y)/ N **Sta 1:** "BANGA" @KBGR **Sta 2:** – **Flyovers:** Y /(N) **If Y, times: Sta1)** STATICS **Sta2)** –

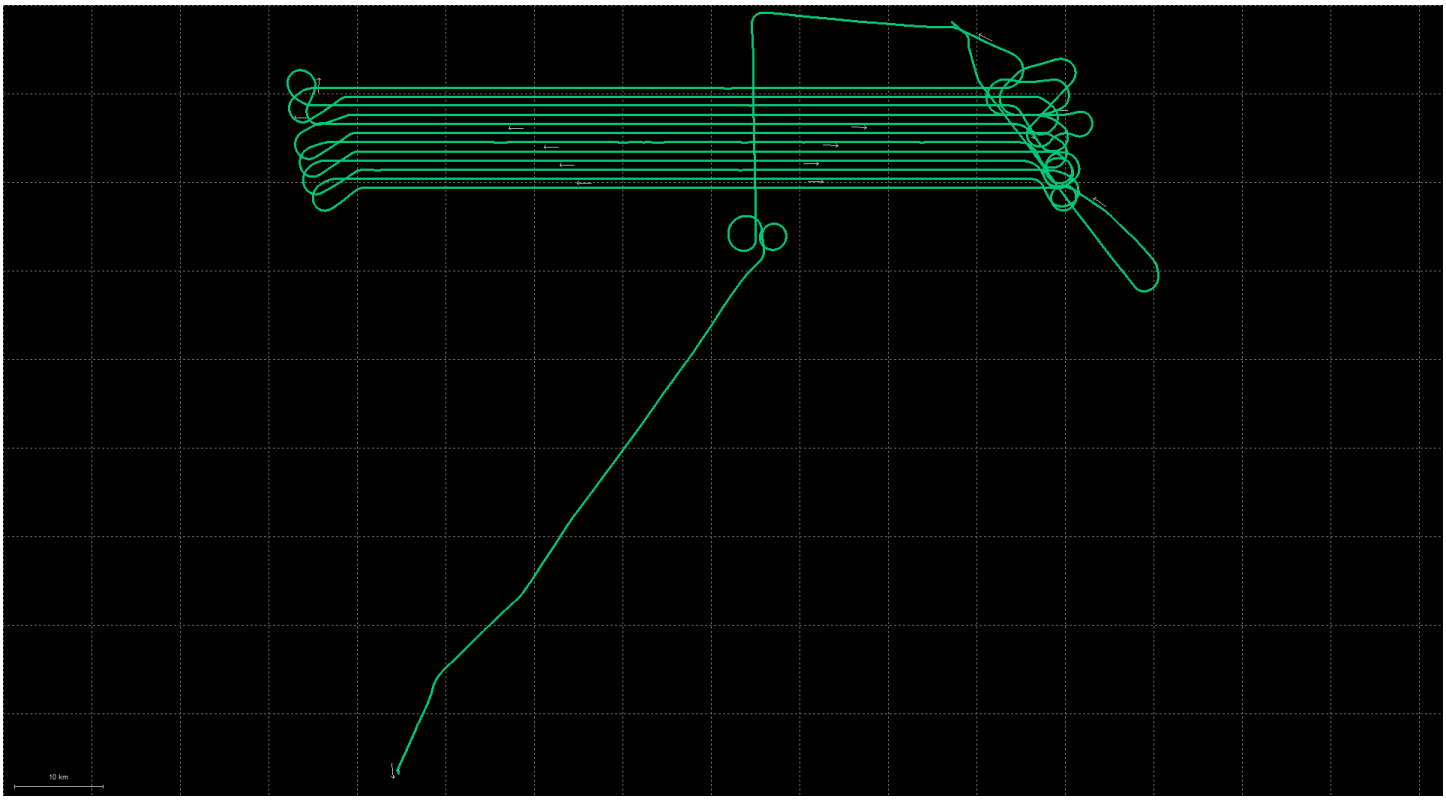
Gd Temp beg: +12 °c **End:** +15 °c **OAT beg:** +05 °c **End:** +05 °c **Altimeter begin:** 30.20" **end:** 30.17"

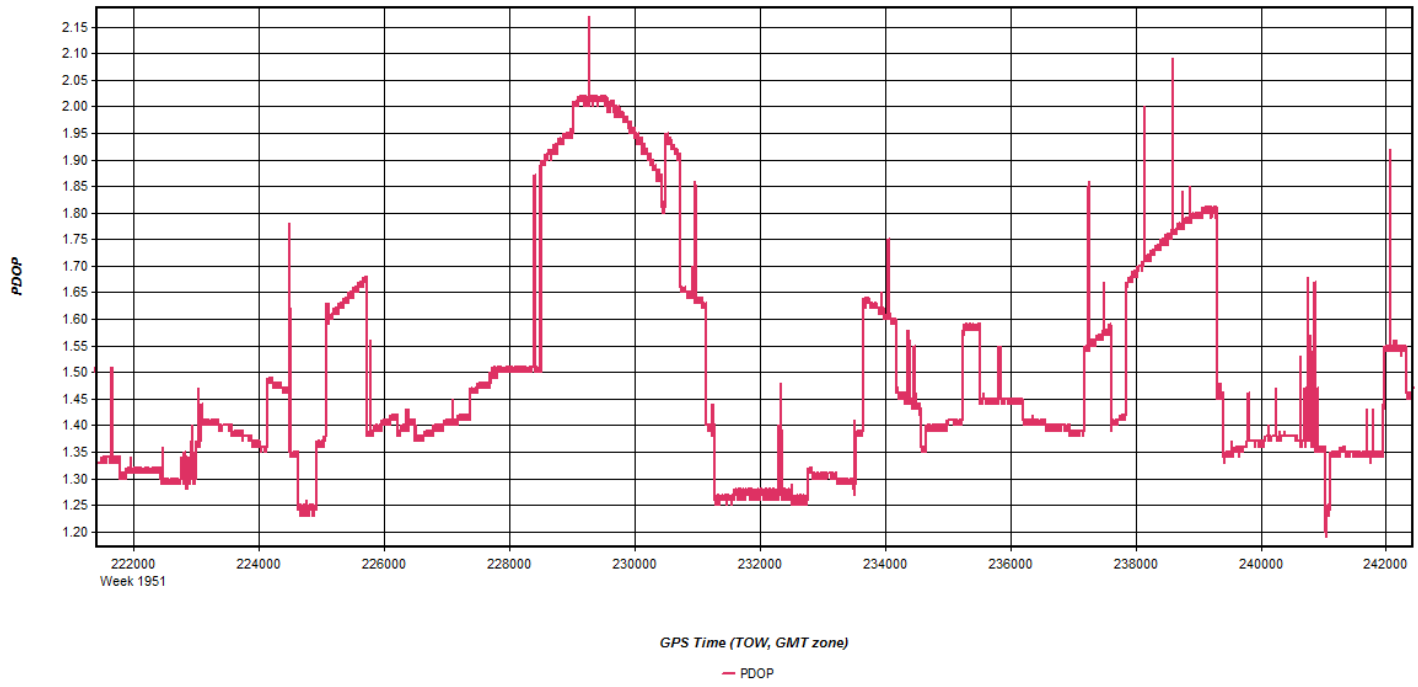
LiDAR										Beg GB	Storage Name/#
	Type LEICA ALS 70	Serial # 7161	Alt AGL 6890'	Alt AMSL ~7020'	Avg Terr Ht ~1300'	Max Gdspd ?	Avg Pt Spacing ?			164	MM70 600gbSD
	FOV 36°	Scan Freq 56.0 Hz	MpIA (Y)/ N	Pulses In Air 2	Pulse Rate 262.6 kHz	Power 100%	PPSM ?			End GB 144	
										Tot GB 20	S/N 015

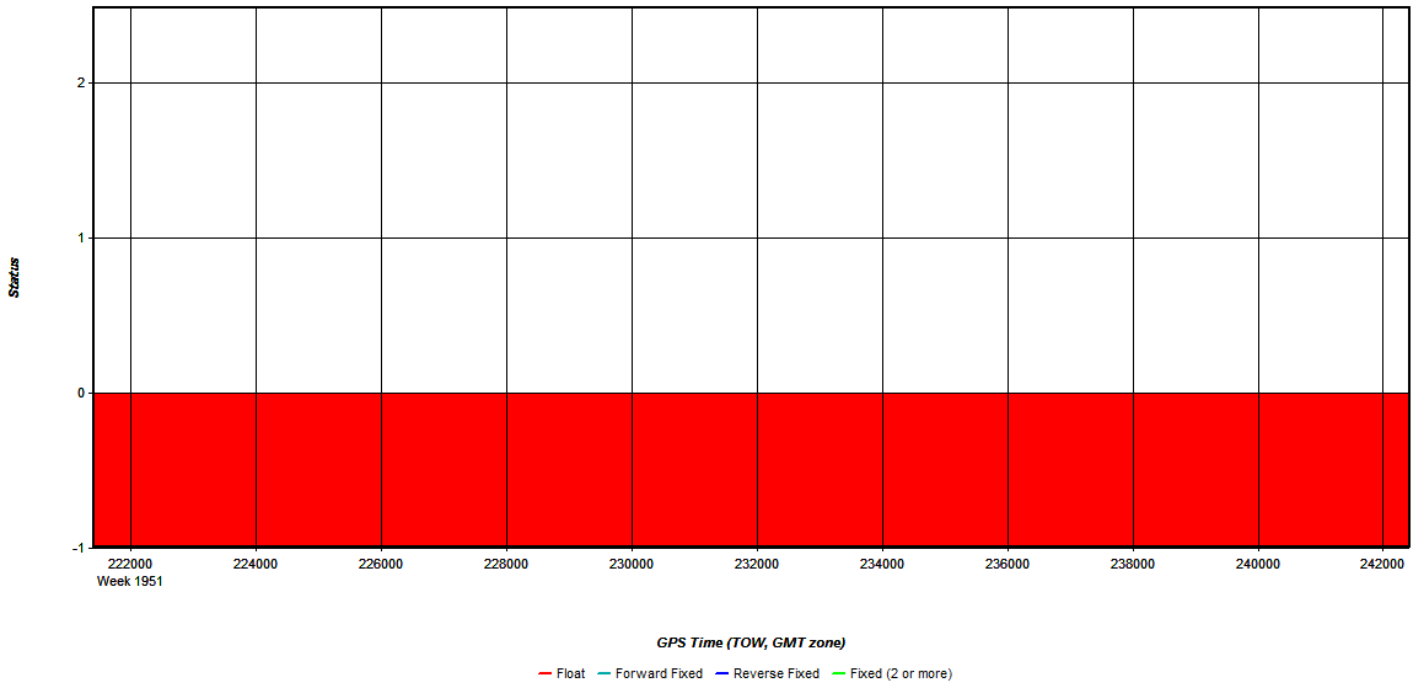
Line #	Hdg	Start (UTC):	End (UTC):	Gd Spd	PDOP/# Sats	GPS Altitude	Crab	Turb (0, -, +)	FLIGHT LINE NOTES – visibility, clouds, smoke, partial, etc. (FIG 8@ 13:08→13:12 Z)
2030	N	13:13	13:16	~150 kts	1.3/17	7030'	4°	0	hz, sky above & below, smooth (REFLIGHT OF PARTIAL, PREVIOUSLY REJECTED) (10-0 FNE)
2040	S	13:20	13:28	~140 kts	1.2/19	7020'	5°	0	" " " " "
2041	N	13:32	13:39	~150 kts	1.1/19	7020'	4°	0	", scat above, sky below, smooth
2042	S	13:42	13:51	~140 kts	1.1/19	7020'	5°	0	" " " " " "
2043	N	13:55	14:03	~150 kts	1.1/19	7020'	3°	0	" " " " " "
2044	S	14:06	14:14	~140 kts	1.1/18	7020'	6°	–	", sky above & below, occ-turb
2049	N	14:18	14:21	~145 kts	1.1/19	7040'	5°	–	" " " " " " (REFLIGHT OF PARTIAL, PREVIOUSLY REJECTED) (0-8 FSE)
2067	W	14:24	14:34	~140 kts	1.2/17	7040'	4°	–	" " ", few below @ W end, occ-turb (PLANNED CROSS TIE LINE)
									(BEGAN TARGETING OTHER LINES BUT FEW CLOUDS & INCREASING)
									(FIG 8@ 14:36→14:40 Z)
									[LANDED DUE TO CLOUDS IN REMAINDER OF AOI]

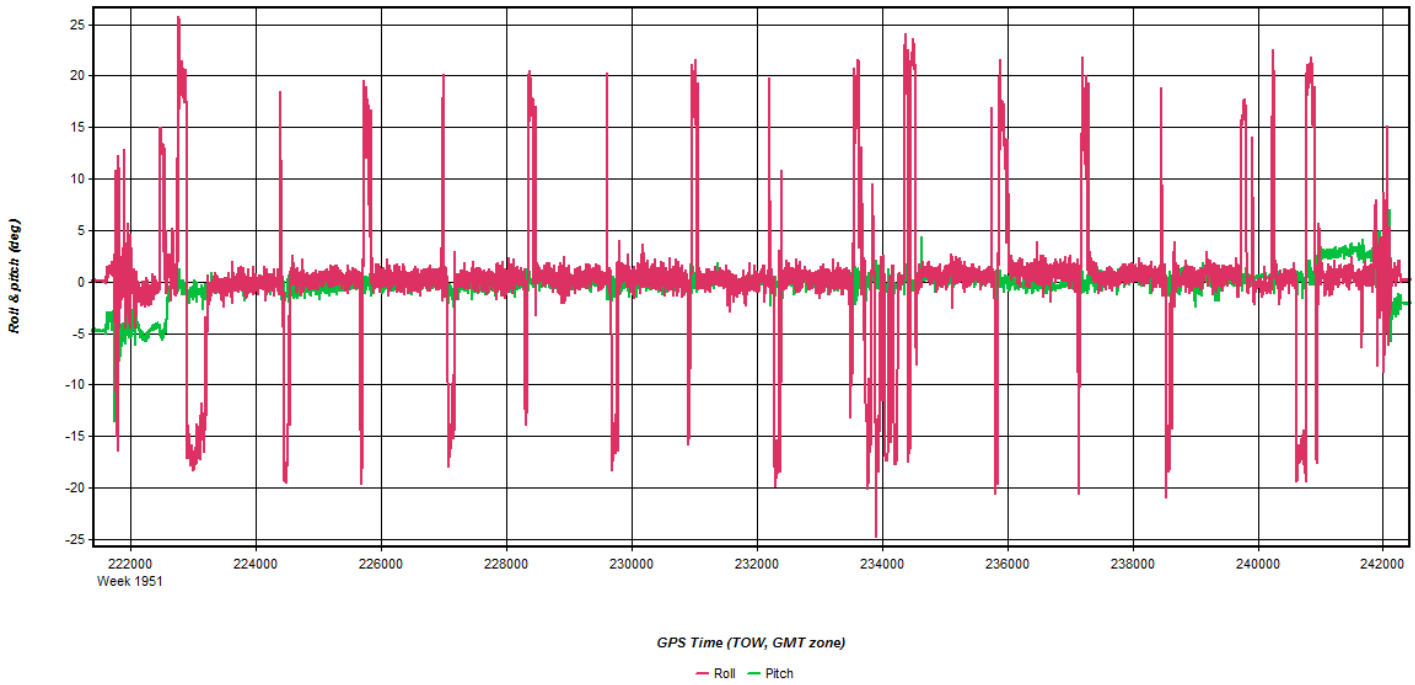
Total Proj Lines: 70	Lines Flown: 6	Lines Remain:	Online Time: 1:21	Mob Time: 1:04	Notes: 20170530_122507

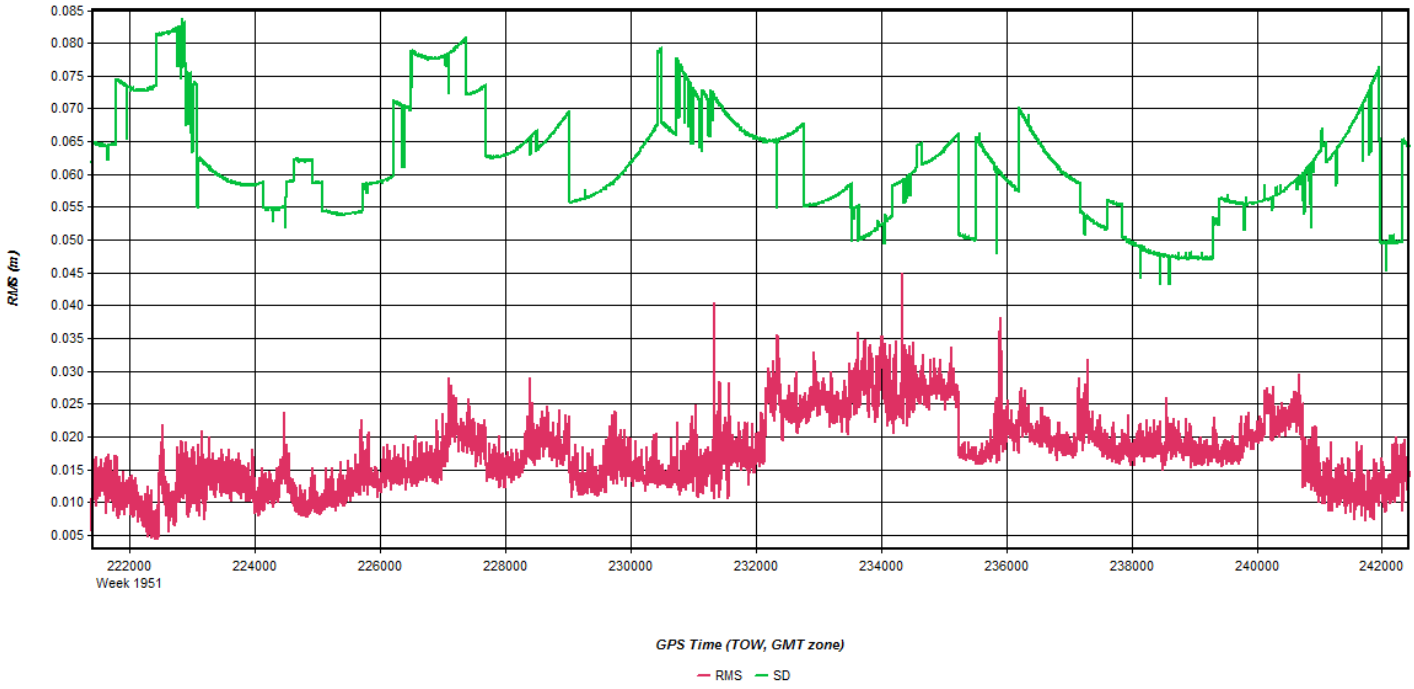
May 30, 2017-A (N915WC, SN8237)

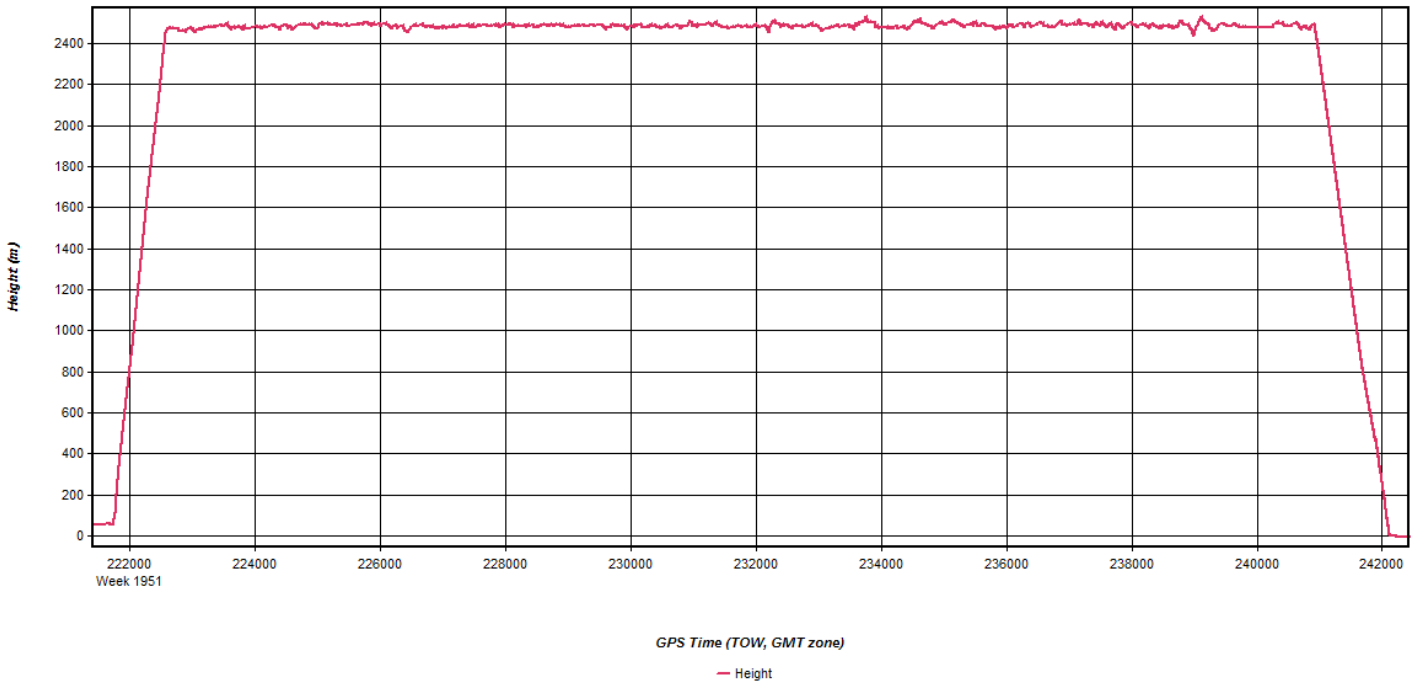

10 km

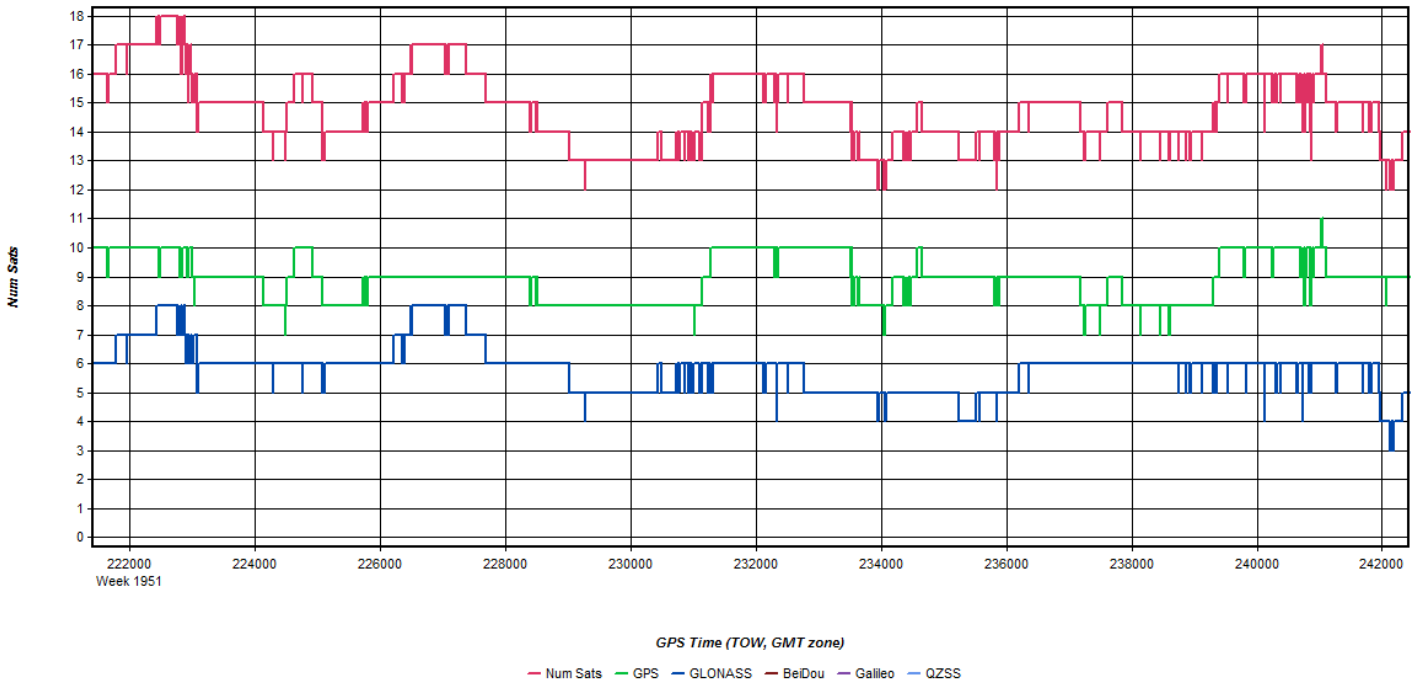

PDOP
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
PDOP

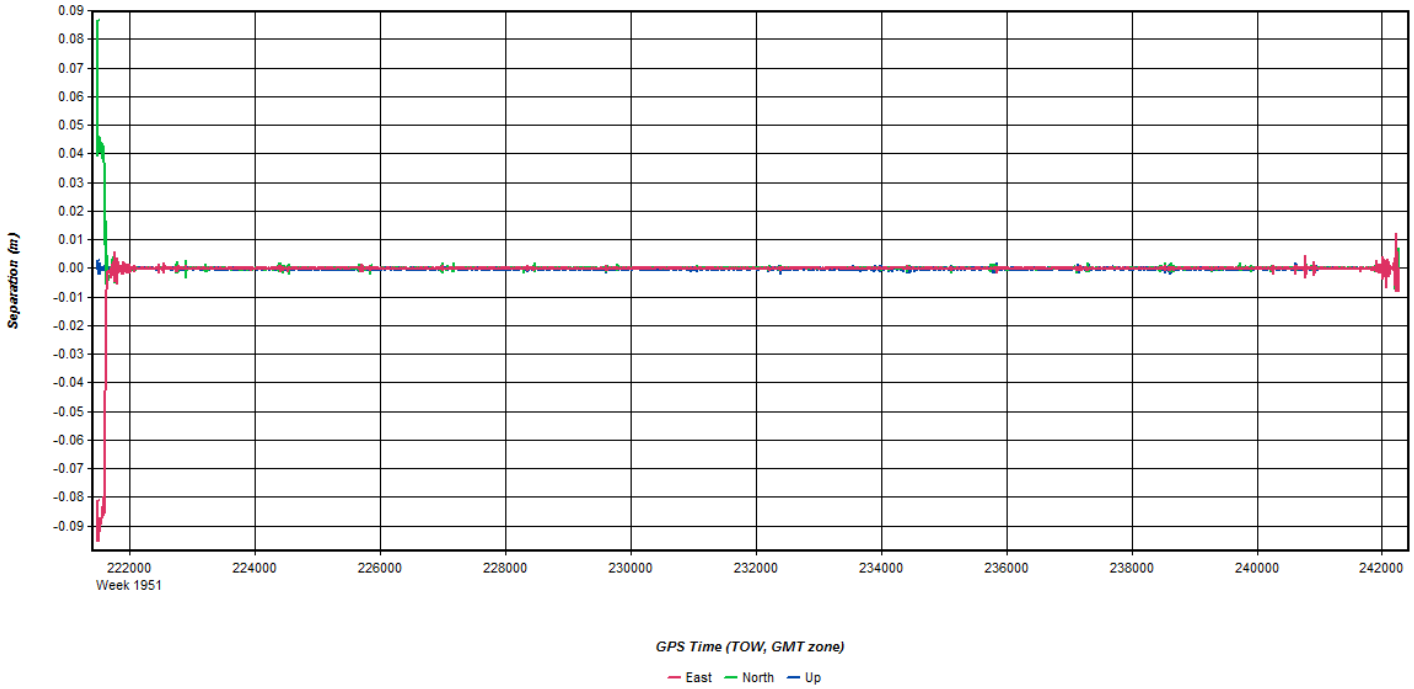

Status
2
1
0
-1
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

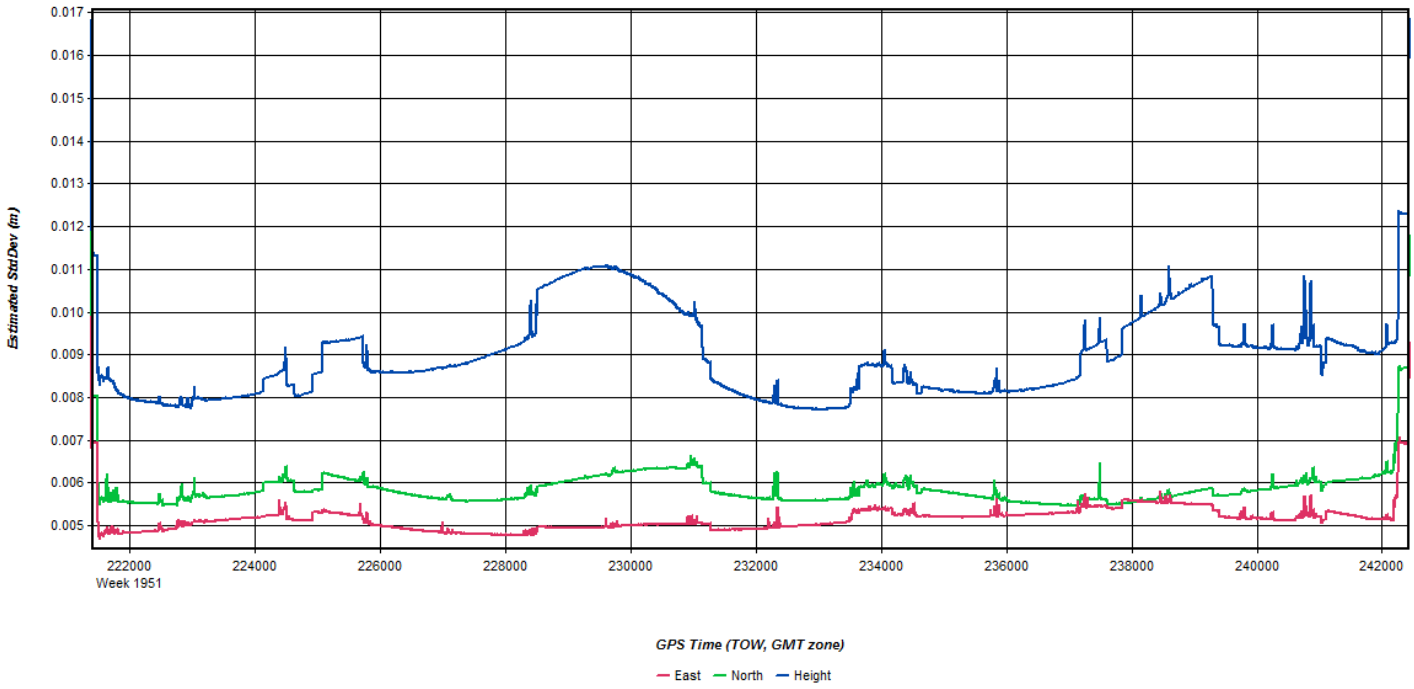

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Roll
Pitch

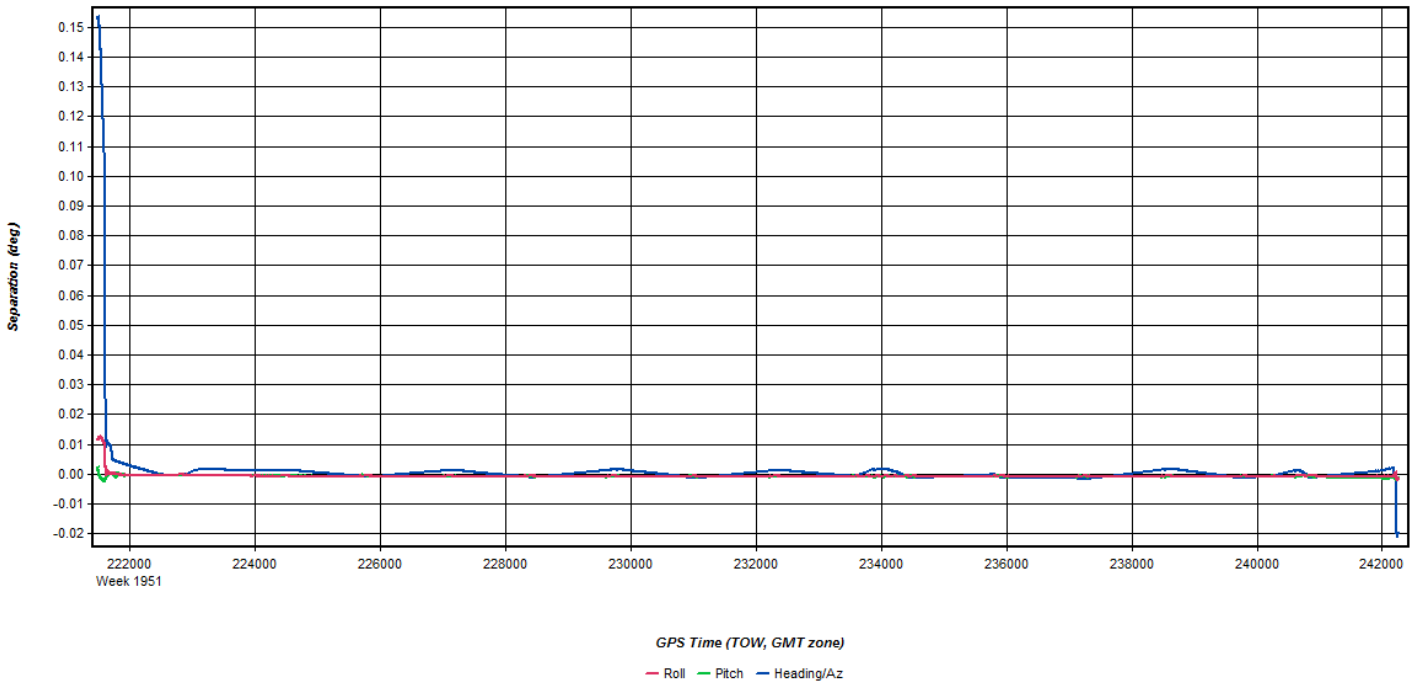

RMS (m)
0.085
0.080
0.075
0.070
0.065
0.060
0.055
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
RMS
SD

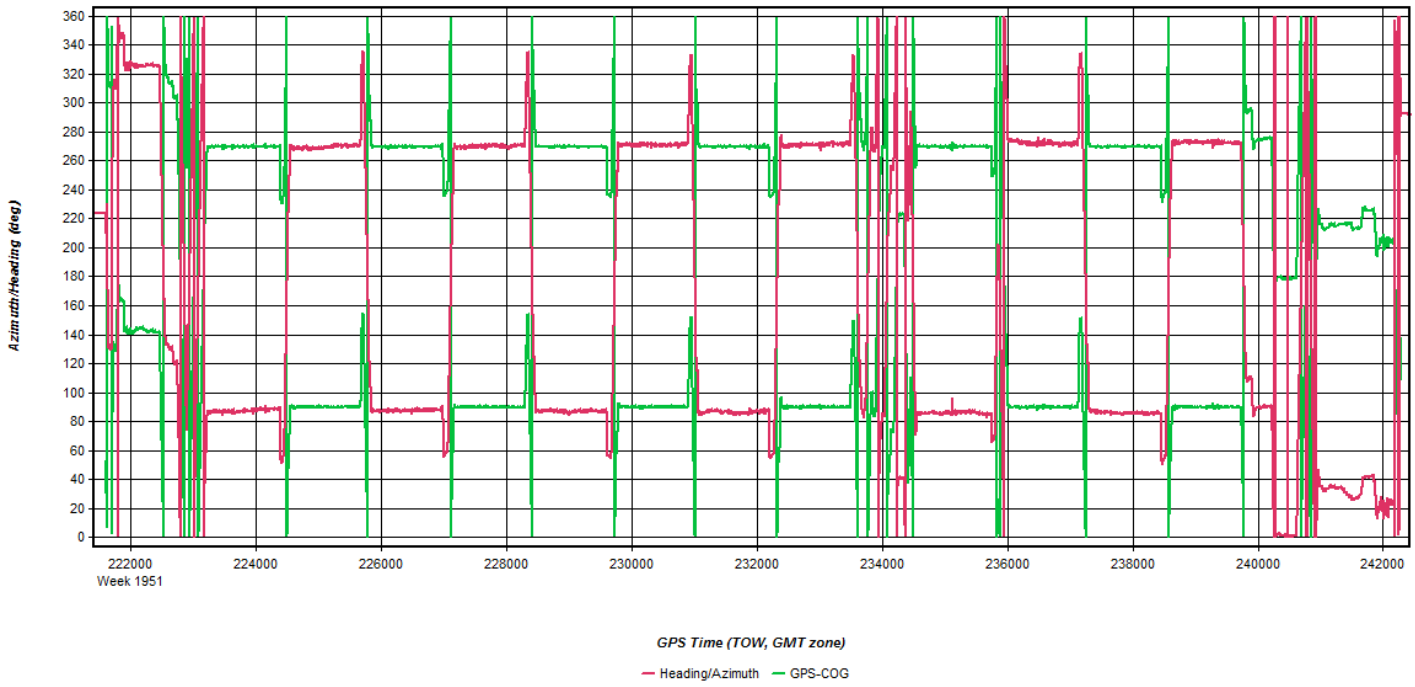

Height (m)
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Height


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

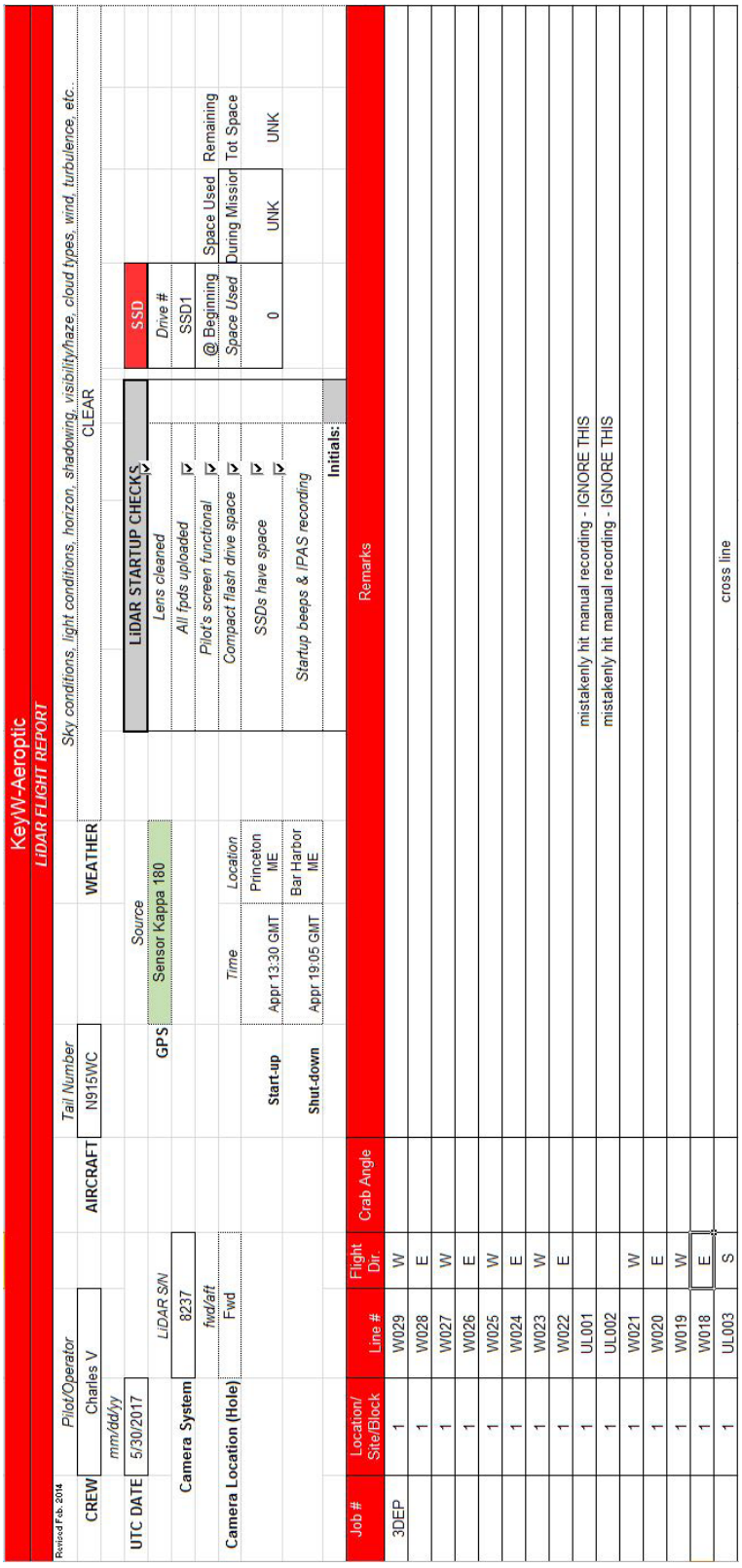

Separation (m)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.15
0.14
0.13
0.12
0.11
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
222000
Week 1951
224000
226000
228000
230000
232000
234000
236000
238000
240000
242000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

Revised Feb. 2014

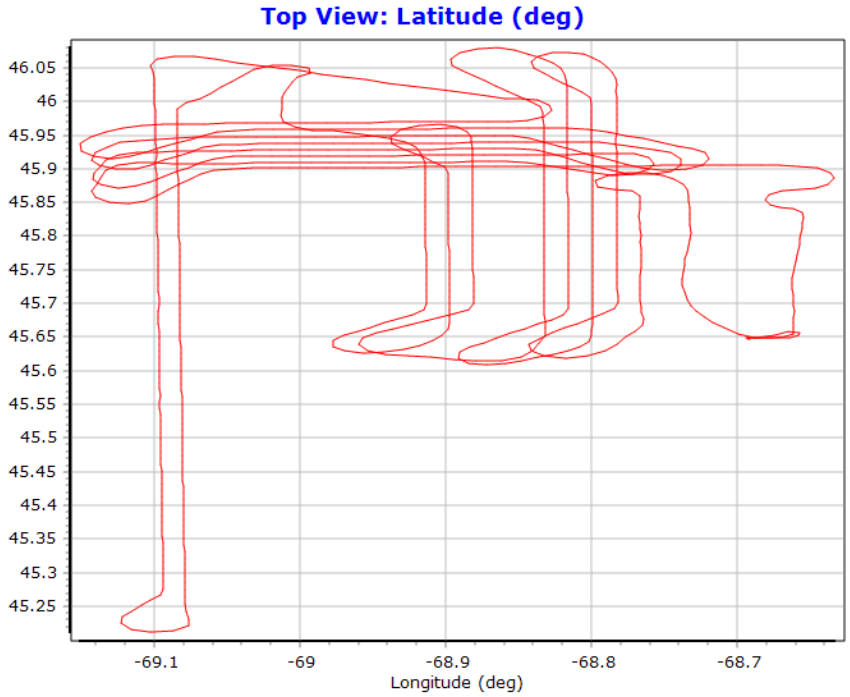
CREW	*Pilot/Operator* Charles V	AIRCRAFT	*Tail Number* N915WC	WEATHER	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.* CLEAR								
UTC DATE	*mm/dd/yy* 5/30/2017												
Camera System	*LiDAR S/N* 8237	GPS	*Source* Sensor Kappa 180										
Camera Location (Hole)	*fwd/aft* Fwd												
		Start-up	*Time* Appr 13:30 GMT	*Location* Princeton ME									
		Shut-down	Appr 19:05 GMT	Bar Harbor ME									

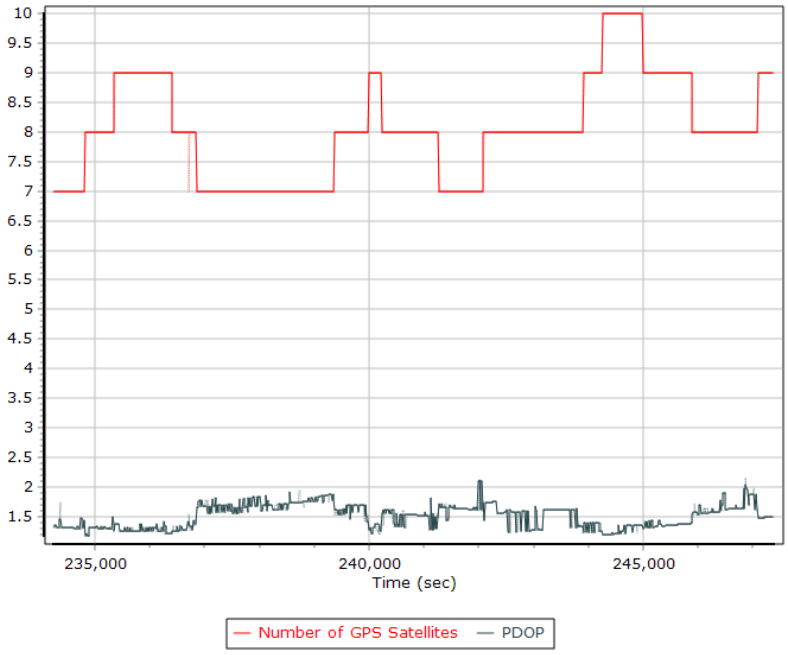
LiDAR STARTUP CHECKS	
Lens cleaned	
All tpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	

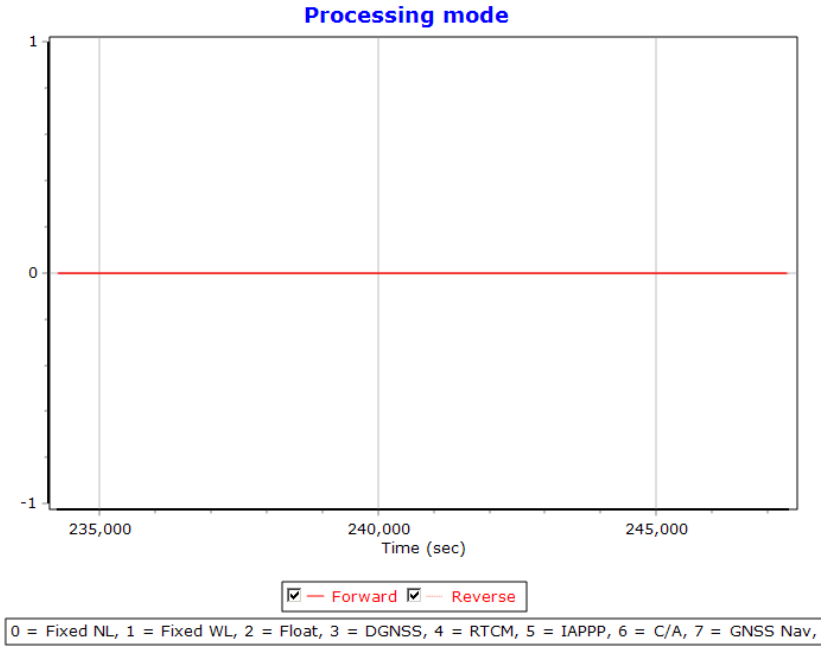
SSD				
Drive #	*@ Beginning*	*Space Used*	*Remaining During Mission*	*Tot Space*
SSD1	*Space Used*			
	0	UNK	UNK	UNK

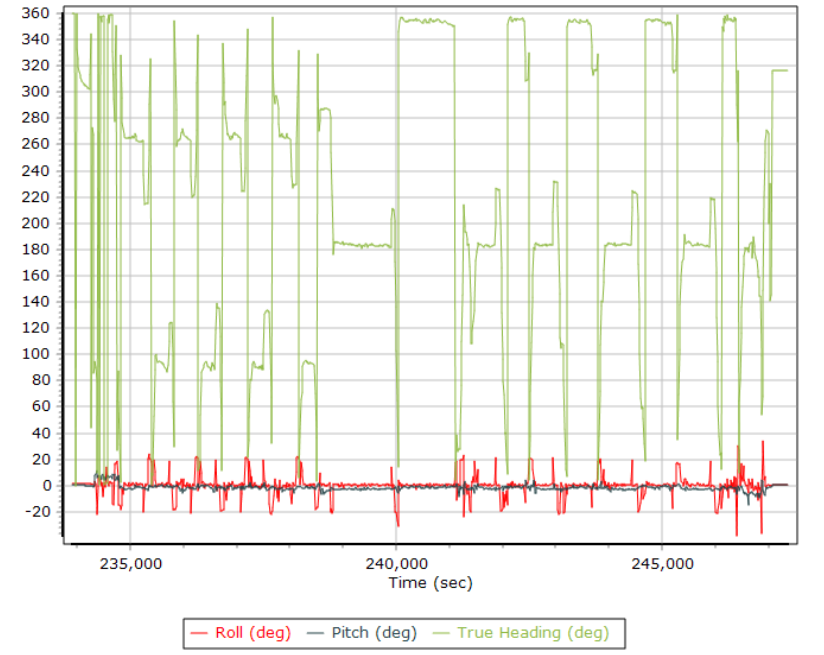
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	W029	W		
	1	W028	E		
	1	W027	W		
	1	W026	E		
	1	W025	W		
	1	W024	E		
	1	W023	W		
	1	W022	E		
	1	UL001			mistakenly hit manual recording - IGNORE THIS
	1	UL002			mistakenly hit manual recording - IGNORE THIS
	1	W021	W		
	1	W020	E		
	1	W019	W		
	1	W018	E		
	1	UL003	S		cross line

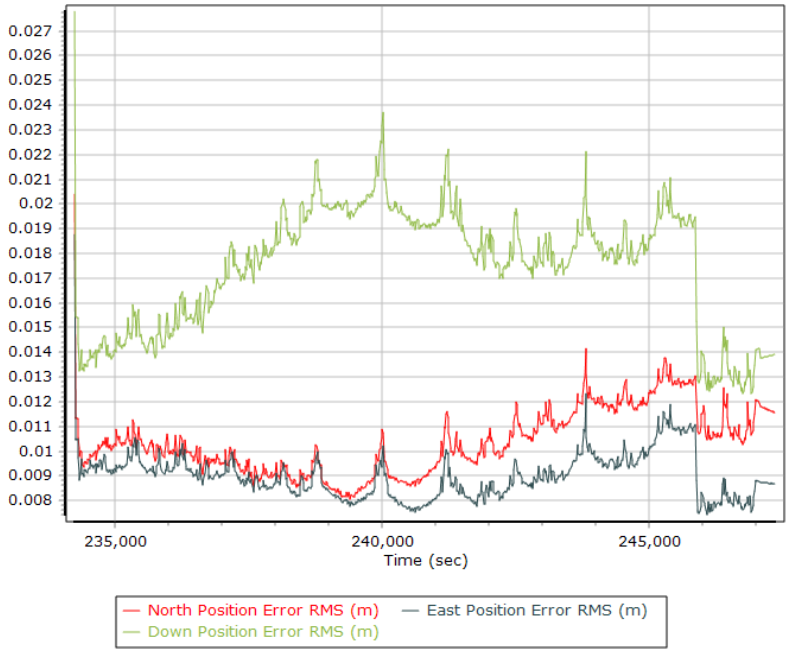
May 30, 2017-A (N1007Q,SN2221256)

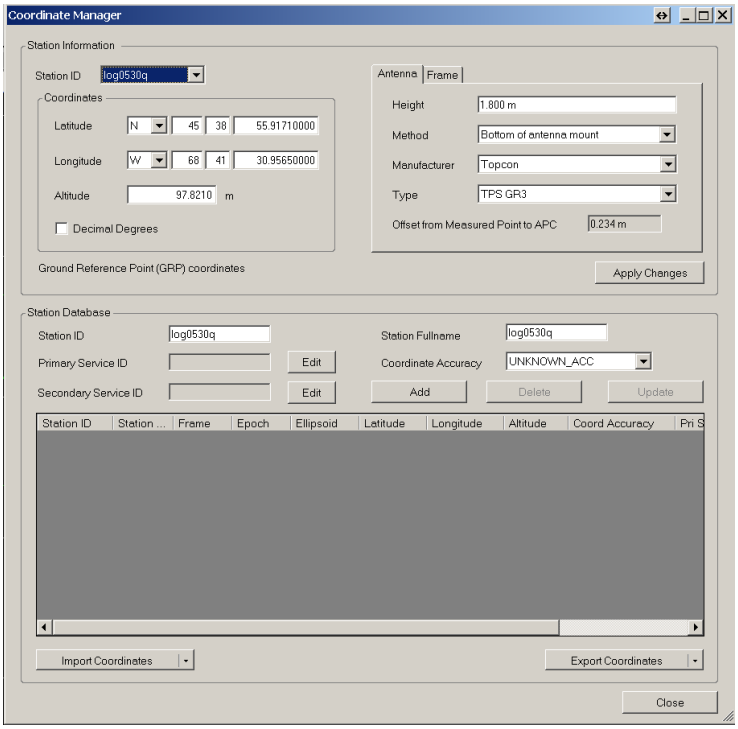

Top View: Latitude (deg)
46.05
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
45.25
-69.1
-69
-68.9
-68.8
-68.7
Longitude (deg)


10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
235,000
240,000
245,000
Time (sec)
Number of GPS Satellites
PDOP

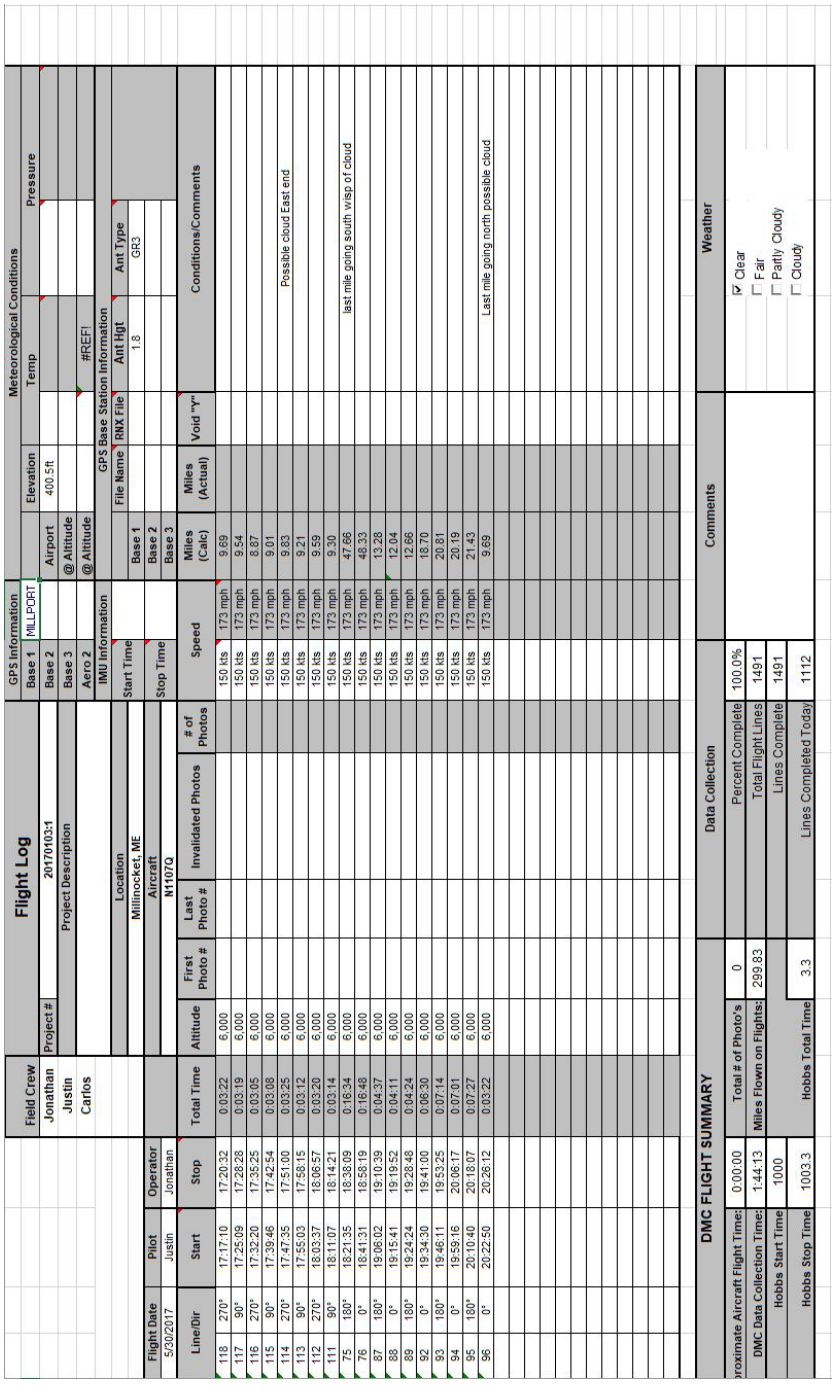

Processing mode
1
0
-1
235,000
240,000
245,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
235,000
240,000
245,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.027
0.026
0.025
0.024
0.023
0.022
0.021
0.02
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.01
0.009
0.008
235,000
240,000
245,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log0530q
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log0530q
Station Fullname
log0530q
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	
Jonathan	
Justin	
Carlos	

Project #	20170103-1
Project Description	

Location	
Millinocket, ME	
Aircraft	
N1107Q	

GPS Information: Base 1 MLLPORT; Base 2; Base 3; Aero 2; IMU Information; Start Time; Stop Time

Meteorological Conditions: Elevation — Airport 400.5ft; @ Altitude; @ Altitude. Temp — #REF!. Pressure.

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1			1.8	GR3
Base 2				
Base 3				

Flight Date	Pilot	Operator
5/30/2017	Justin	Jonathan

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
118	270°	17:17:10	17:20:32	0:03:22	6,000					150 kts 173 mph	9.69			
117	90°	17:25:09	17:28:28	0:03:19	6,000					150 kts 173 mph	9.54			
116	270°	17:32:20	17:35:25	0:03:05	6,000					150 kts 173 mph	8.87			
115	90°	17:39:46	17:42:54	0:03:08	6,000					150 kts 173 mph	9.01			
114	270°	17:47:35	17:51:00	0:03:25	6,000					150 kts 173 mph	9.83			Possible cloud East end
113	90°	17:55:03	17:58:15	0:03:12	6,000					150 kts 173 mph	9.21			
112	270°	18:03:37	18:06:57	0:03:20	6,000					150 kts 173 mph	9.59			
111	90°	18:11:07	18:14:21	0:03:14	6,000					150 kts 173 mph	9.30			
75	180°	18:21:35	18:38:09	0:16:34	6,000					150 kts 173 mph	47.66			last mile going south w/sp of cloud
76	0°	18:41:31	18:58:19	0:16:48	6,000					150 kts 173 mph	48.33			
87	180°	19:06:02	19:10:39	0:04:37	6,000					150 kts 173 mph	13.28			
88	0°	19:15:41	19:19:52	0:04:11	6,000					150 kts 173 mph	12.04			
89	180°	19:24:24	19:28:48	0:04:24	6,000					150 kts 173 mph	12.66			
92	0°	19:34:30	19:41:00	0:06:30	6,000					150 kts 173 mph	18.70			
93	180°	19:46:11	19:53:25	0:07:14	6,000					150 kts 173 mph	20.81			
94	0°	19:59:16	20:06:17	0:07:01	6,000					150 kts 173 mph	20.19			
95	180°	20:10:40	20:18:07	0:07:27	6,000					150 kts 173 mph	21.43			
96	0°	20:22:50	20:26:12	0:03:22	6,000					150 kts 173 mph	9.69			Last mile going north possible cloud

DMC FLIGHT SUMMARY

Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0	
DMC Data Collection Time:	1:44:13	Miles Flown on Flights:	299.83	
Hobbs Start Time	1000			
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3	

Data Collection

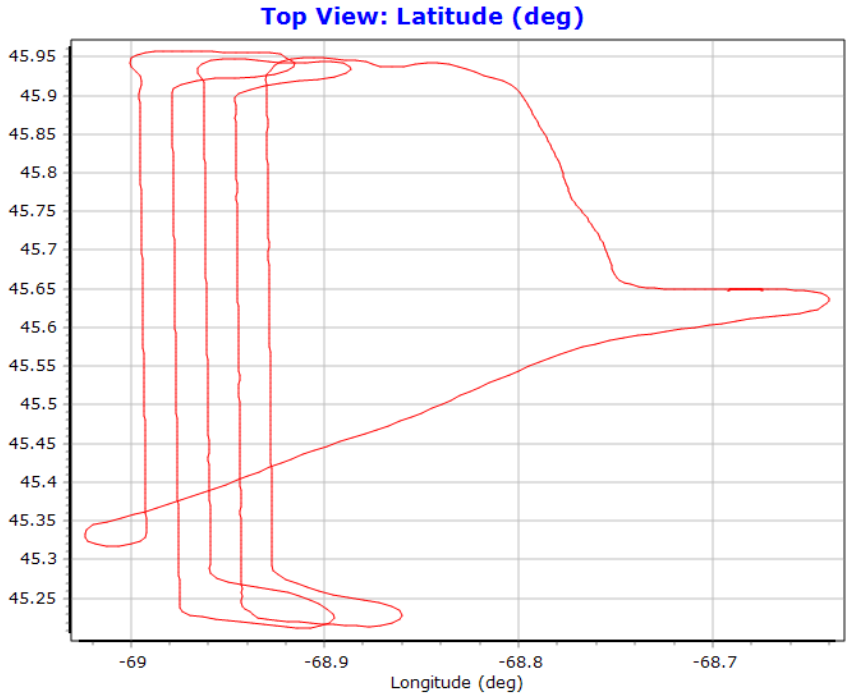
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

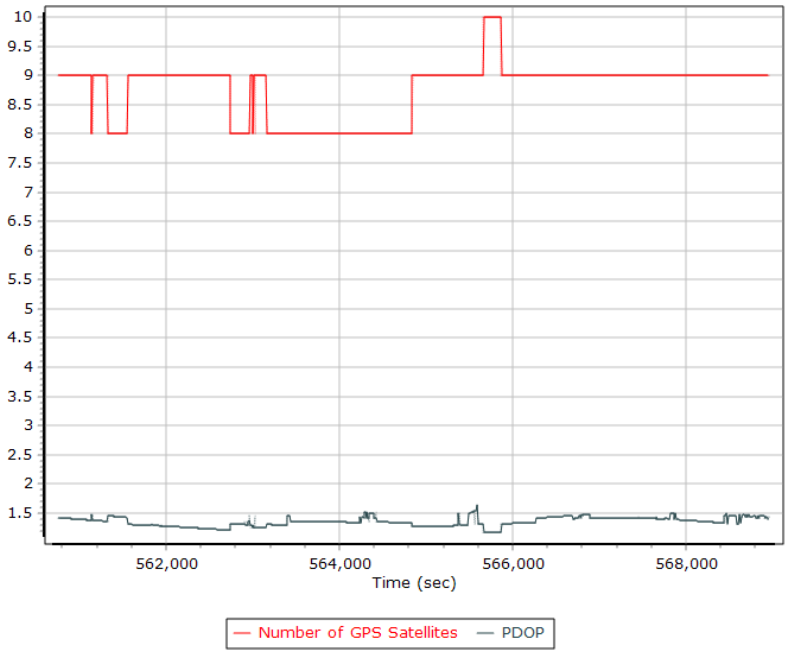
Comments

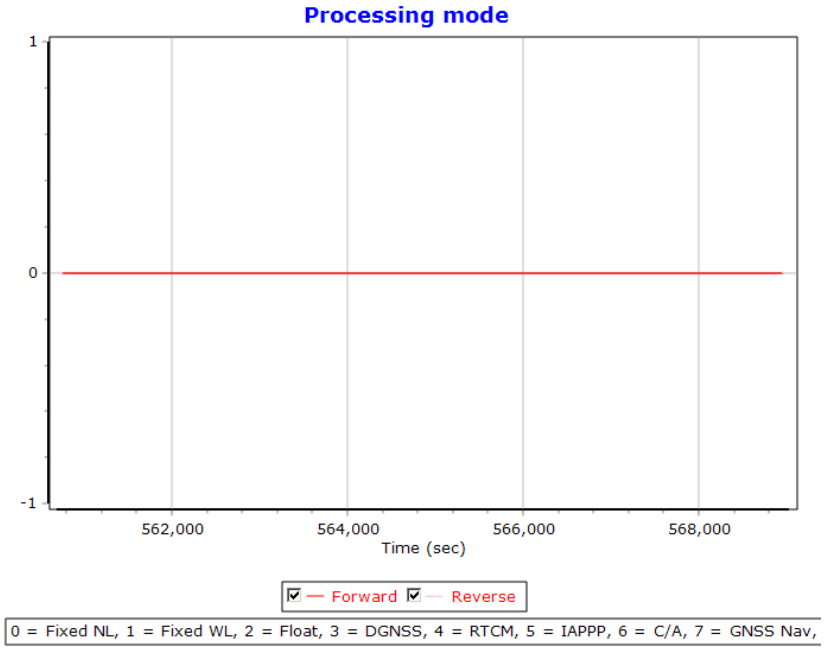
Weather

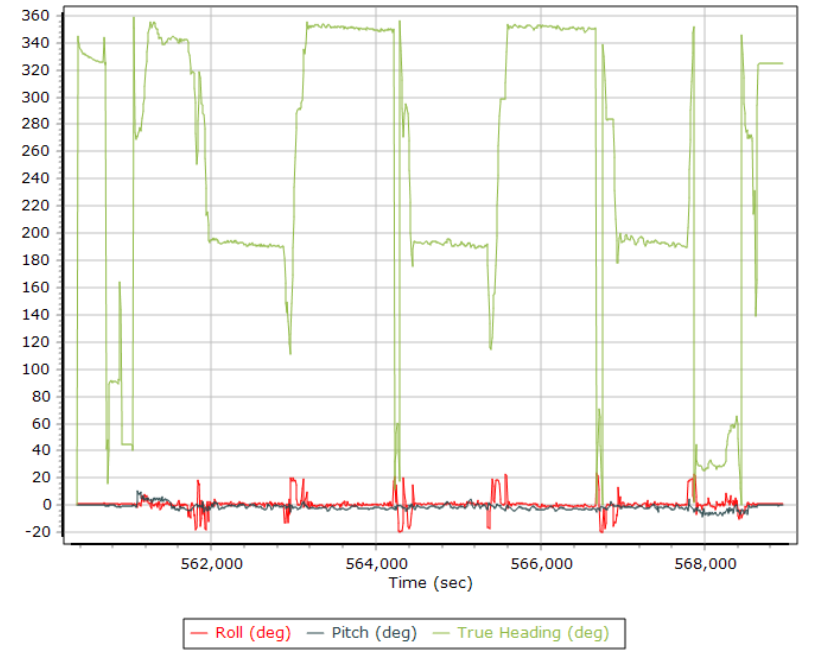
- ☑ Clear
- ☐ Fair
- ☐ Partly Cloudy
- ☐ Cloudy

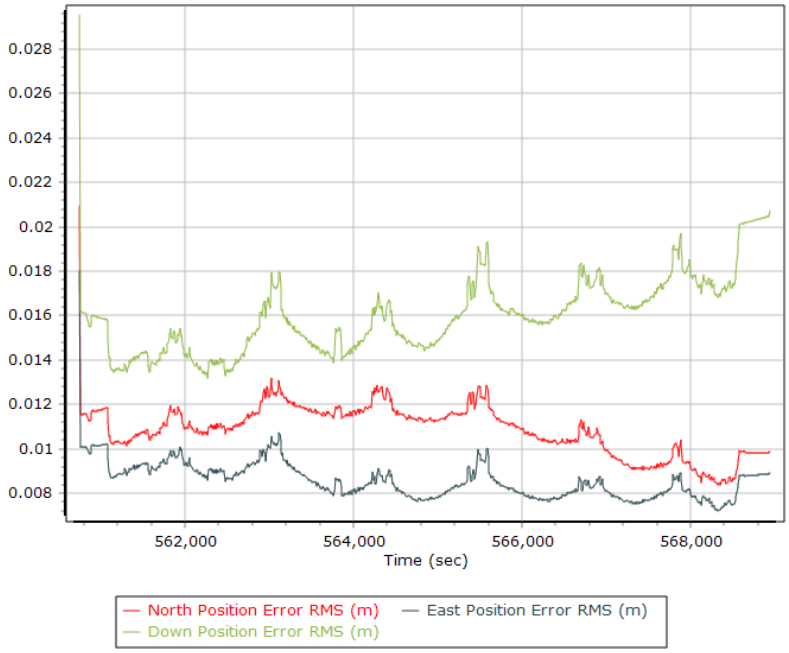
November 04, 2017-A (N1107Q, SN2221256)

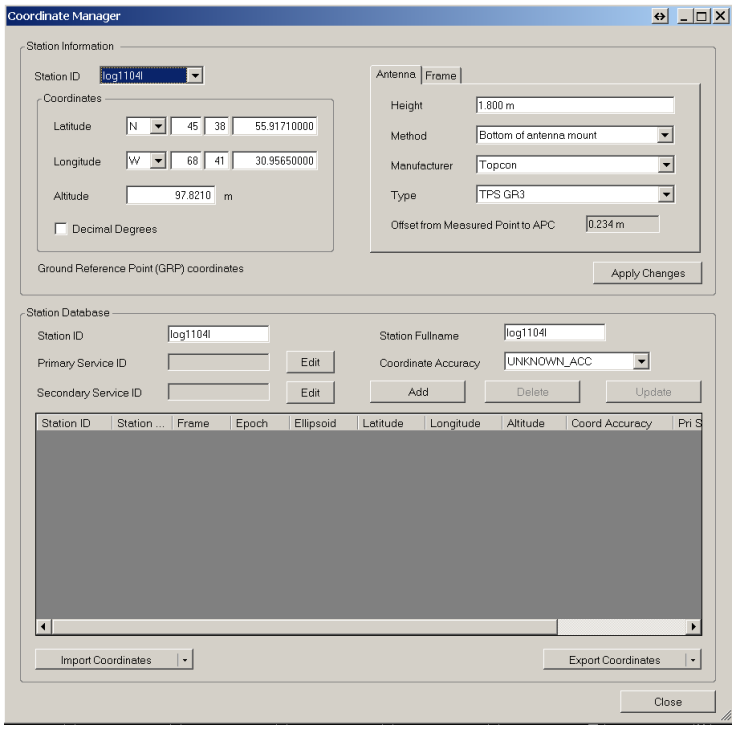

Top View: Latitude (deg)
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
45.25
-69
-68.9
-68.8
-68.7
Longitude (deg)


10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
562,000
564,000
566,000
568,000
Time (sec)
Number of GPS Satellites
PDOP

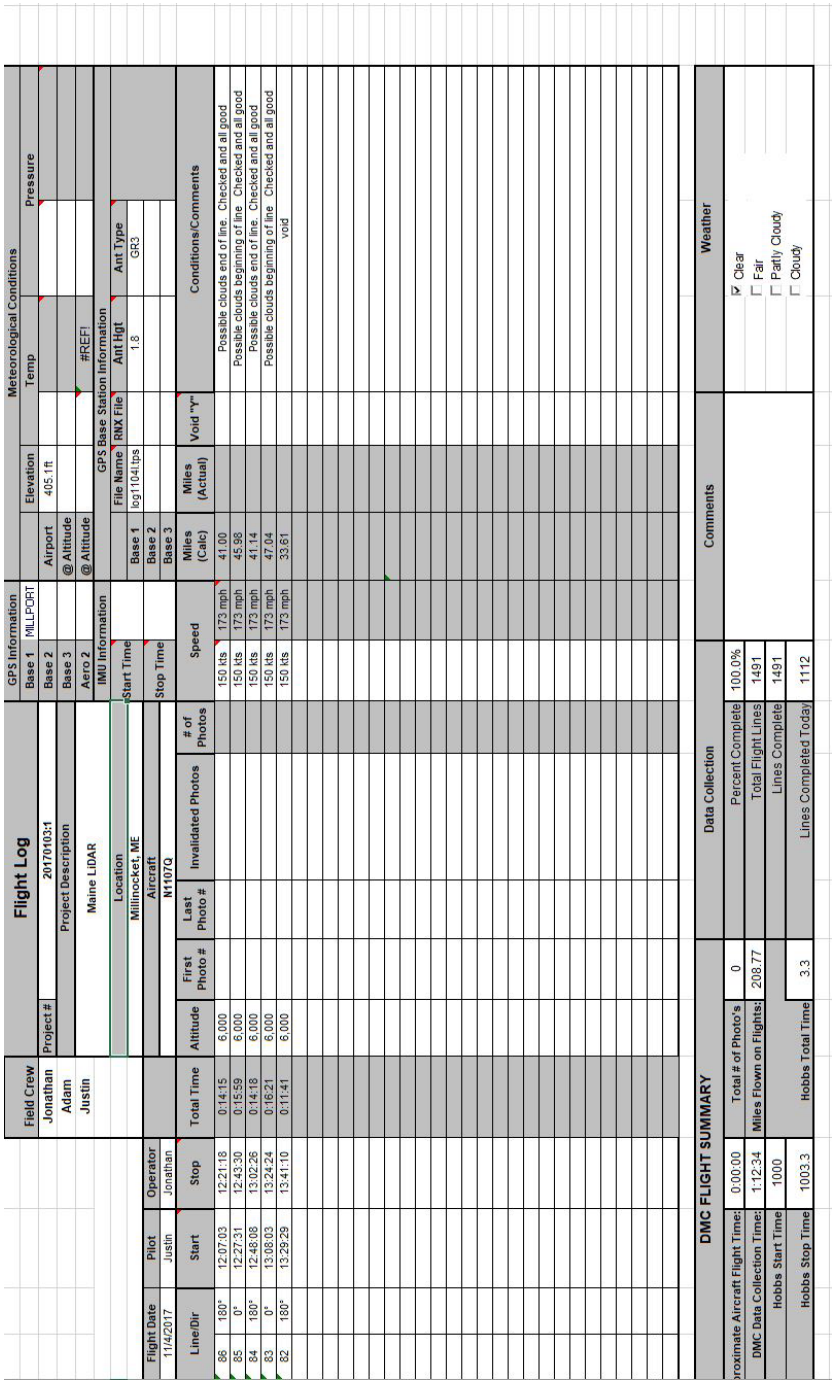

Processing mode
1
0
-1
562,000
564,000
566,000
568,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
562,000
564,000
566,000
568,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
562,000
564,000
566,000
568,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log1104l
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log1104l
Station Fullname
log1104l
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	
Jonathan	
Adam	
Justin	

Project #	20170103:1
Project Description	Maine LiDAR
Location	Millinocket, ME
Aircraft	N1107Q

GPS Information	
Base 1	MILLPORT
Base 2	
Base 3	
Aero 2	
IMU Information	
Start Time	
Stop Time	

Meteorological Conditions			
	Elevation	Temp	Pressure
Airport	405.1ft		
@ Altitude			
@ Altitude		#REF!	

GPS Base Station Information			
	File Name	RNX File	Ant Hgt
Base 1	log1104.tps		1.8
Base 2			
Base 3			

Ant Type
GR3

Flight Date	Pilot	Operator
11/4/2017	Justin	Jonathan

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
86	180°	12:07:03	12:21:18	0:14:15	6,000					150 kts 173 mph	41.00			Possible clouds end of line. Checked and all good
85	0°	12:27:31	12:43:30	0:15:59	6,000					150 kts 173 mph	45.98			Possible clouds beginning of line. Checked and all good
84	180°	12:48:08	13:02:26	0:14:18	6,000					150 kts 173 mph	41.14			Possible clouds end of line. Checked and all good
83	0°	13:08:03	13:24:24	0:16:21	6,000					150 kts 173 mph	47.04			Possible clouds beginning of line. Checked and all good
82	180°	13:29:29	13:41:10	0:11:41	6,000					150 kts 173 mph	33.61			void

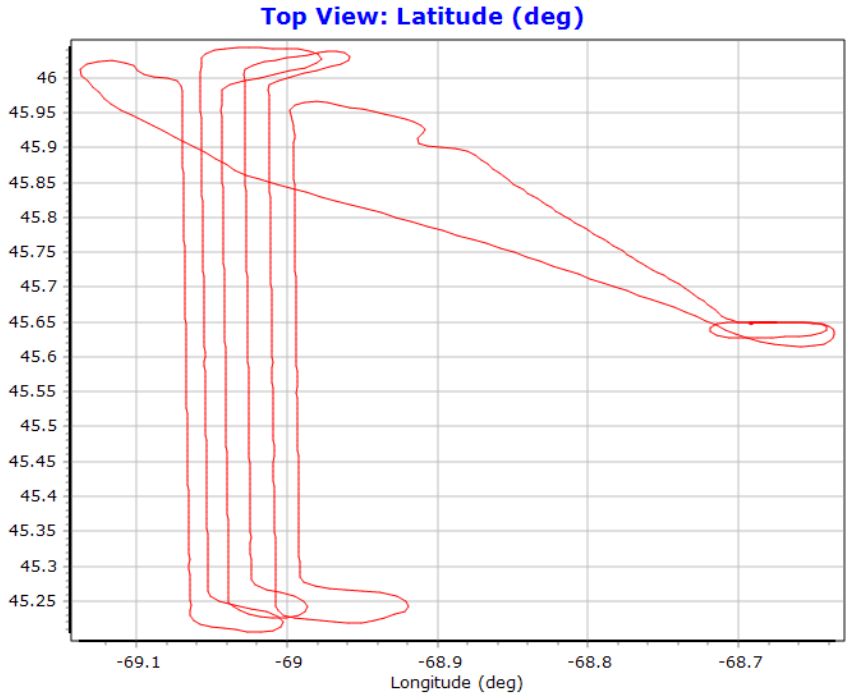
DMC FLIGHT SUMMARY			
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0
DMC Data Collection Time:	1:12:34	Miles Flown on Flights:	208.77
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

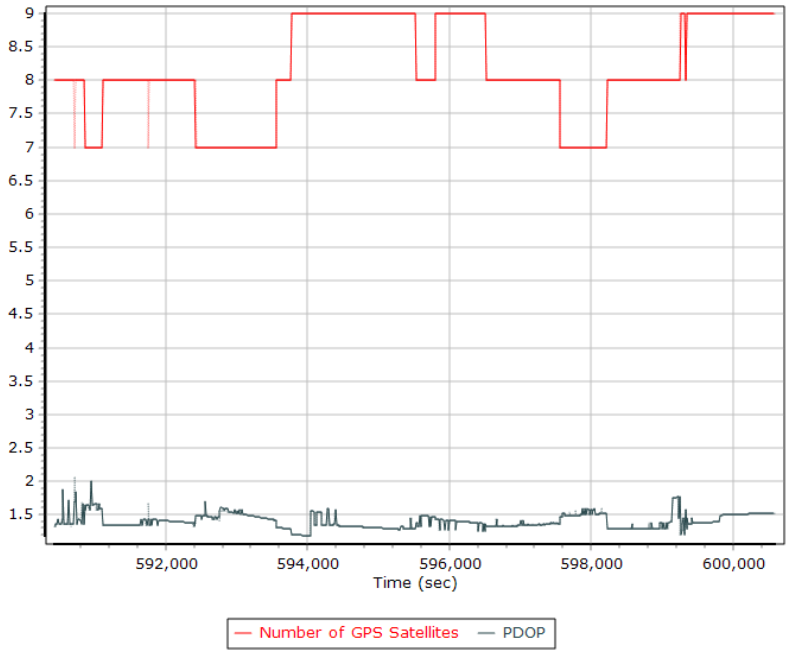
Data Collection	
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

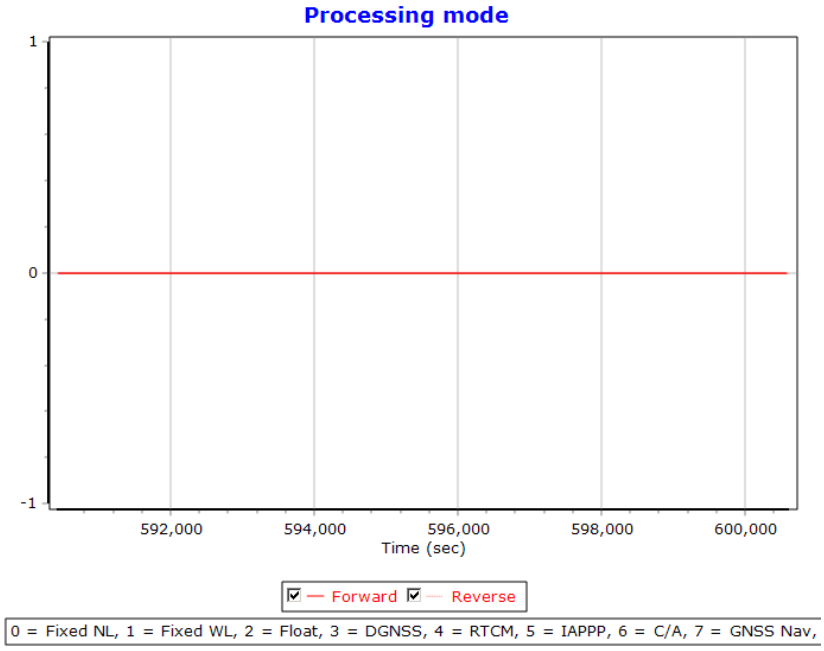
Comments

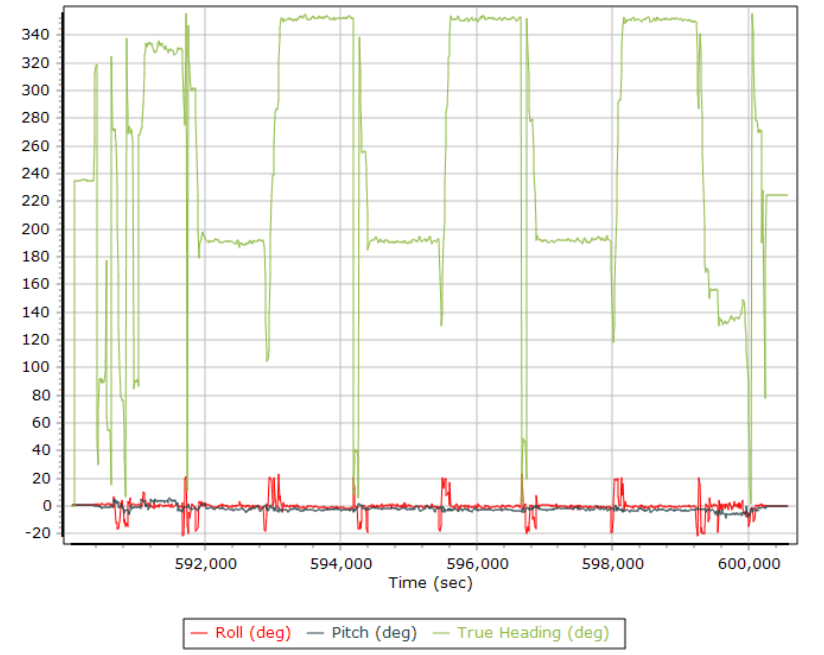
Weather
☑ Clear
☐ Fair
☐ Partly Cloudy
☐ Cloudy

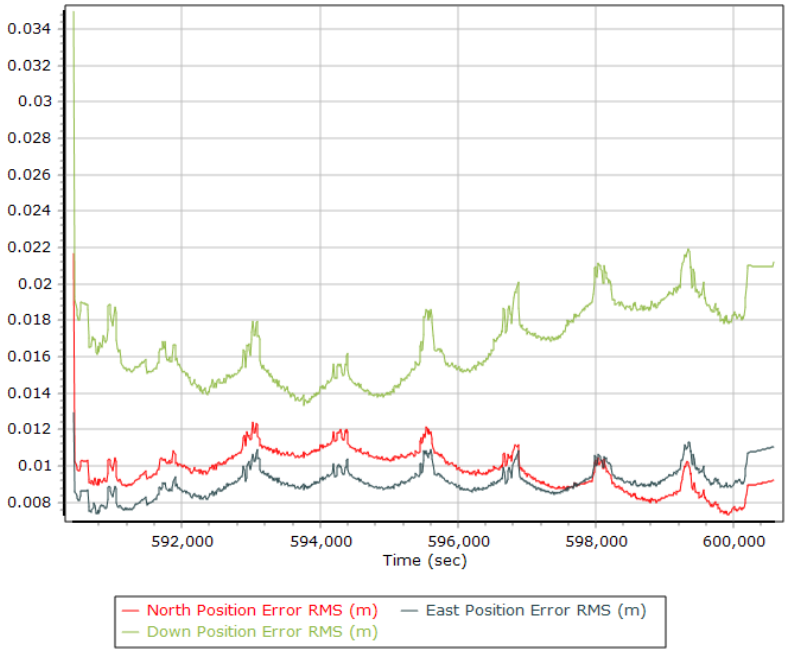
November 04, 2017-B (N1107Q, SN2221256)

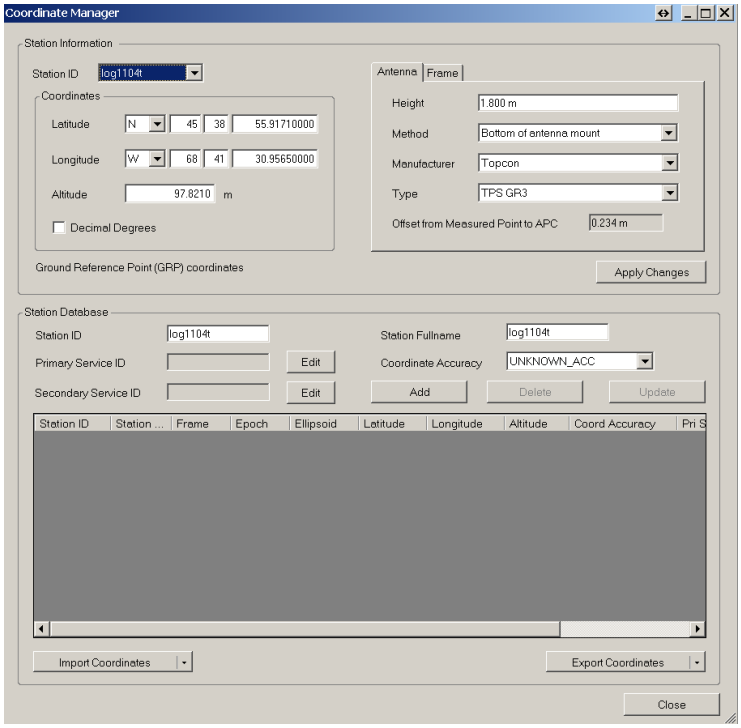

Top View: Latitude (deg)
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
45.25
-69.1
-69
-68.9
-68.8
-68.7
Longitude (deg)


9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
592,000
594,000
596,000
598,000
600,000
Time (sec)
Number of GPS Satellites
PDOP

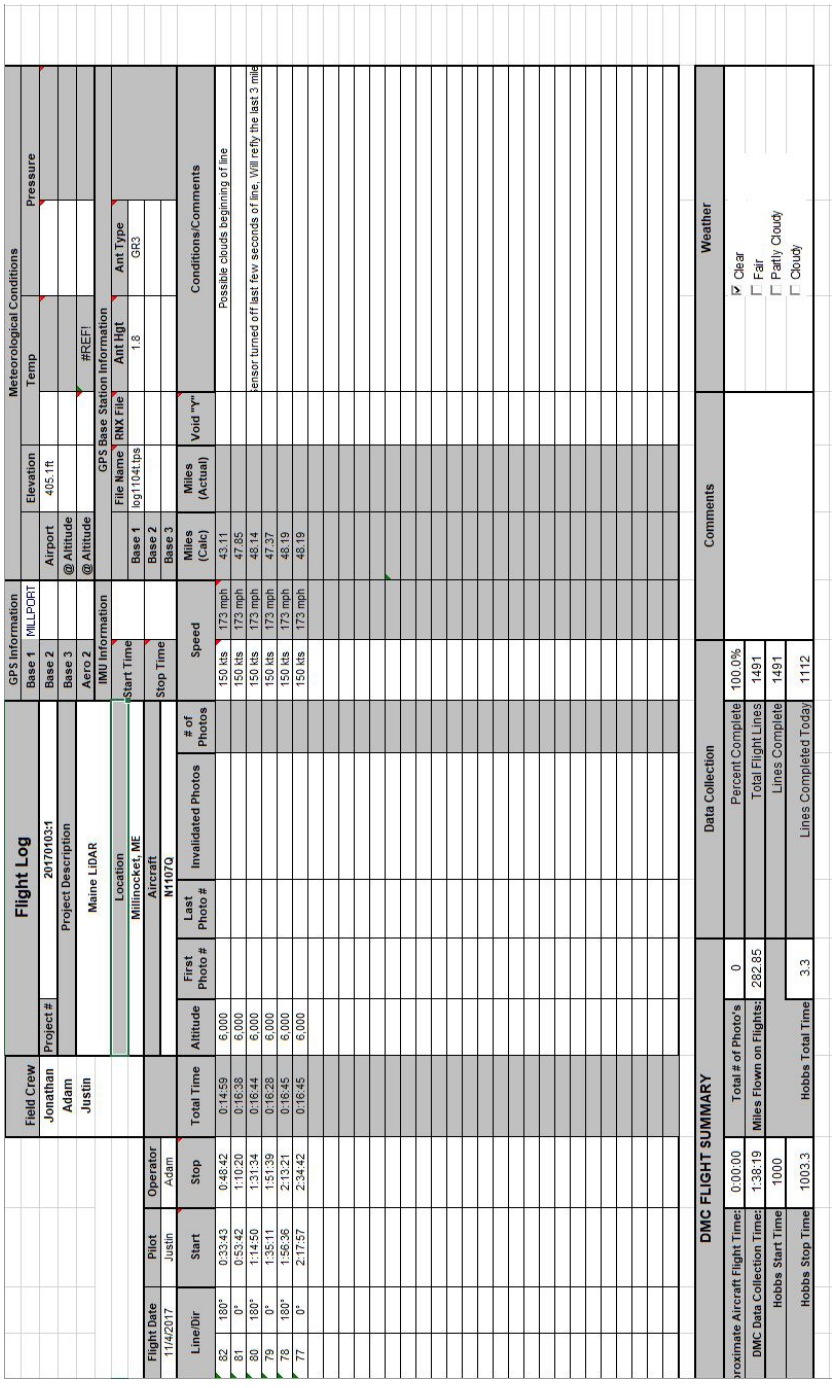

Processing mode
1
0
-1
592,000
594,000
596,000
598,000
600,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
592,000
594,000
596,000
598,000
600,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.034
0.032
0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
592,000
594,000
596,000
598,000
600,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log1104t
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log1104t
Primary Service ID
Secondary Service ID
Edit
Edit
Station Fullname
log1104t
Coordinate Accuracy
UNKNOWN_ACC
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	
Jonathan	
Adam	
Justin	

Project #	20170103-1
Project Description	Maine LiDAR
Location	Millinocket, ME
Aircraft	N1107Q

GPS Information

Base 1	MILLPORT
Base 2	
Base 3	
Aero 2	

IMU Information

Start Time	
Stop Time	

Meteorological Conditions

Elevation		Temp	Pressure
Airport	405.1ft		
@ Altitude			
@ Altitude		#REF!	

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	log1104.tps		1.8	GR3
Base 2				
Base 3				

Flight Date	Pilot	Operator
11/4/2017	Justin	Adam

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
82	180°	0:33:43	0:48:42	0:14:59	6,000					150 kts 173 mph	43.11			Possible clouds beginning of line
81	0°	0:53:42	1:10:20	0:16:38	6,000					150 kts 173 mph	47.85			
80	180°	1:14:50	1:31:34	0:16:44	6,000					150 kts 173 mph	48.14			ensor turned off last few seconds of line, Will refly the last 3 mile
79	0°	1:35:11	1:51:39	0:16:28	6,000					150 kts 173 mph	47.37			
78	180°	1:56:36	2:13:21	0:16:45	6,000					150 kts 173 mph	48.19			
77	0°	2:17:57	2:34:42	0:16:45	6,000					150 kts 173 mph	48.19			

DMC FLIGHT SUMMARY			
Approximate Aircraft Flight Times:	0:00:00	Total # of Photo's	0
DMC Data Collection Times:	1:38:19	Miles Flown on Flights:	282.85
Hobbs Start Time	1000		
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3

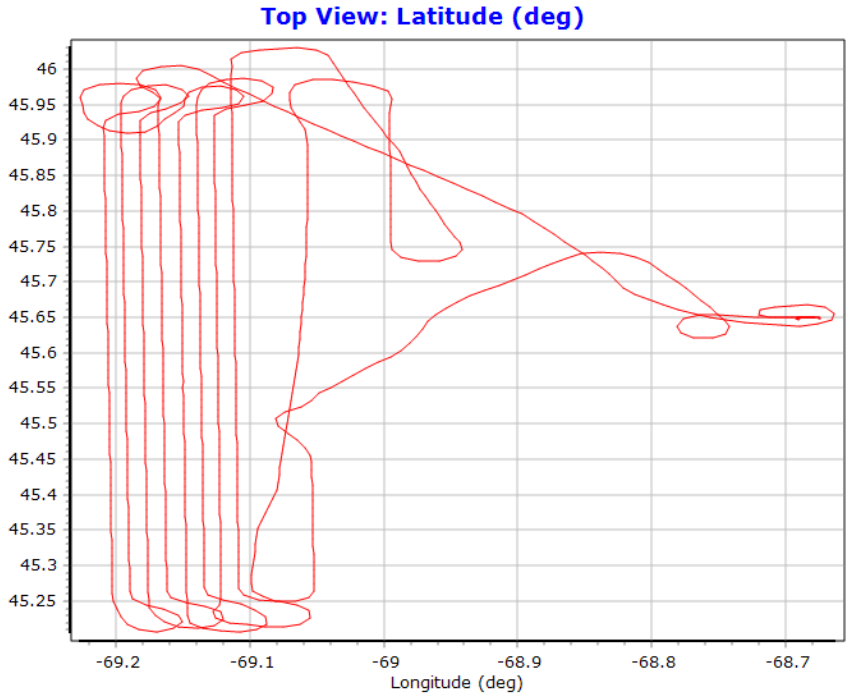
Data Collection	
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

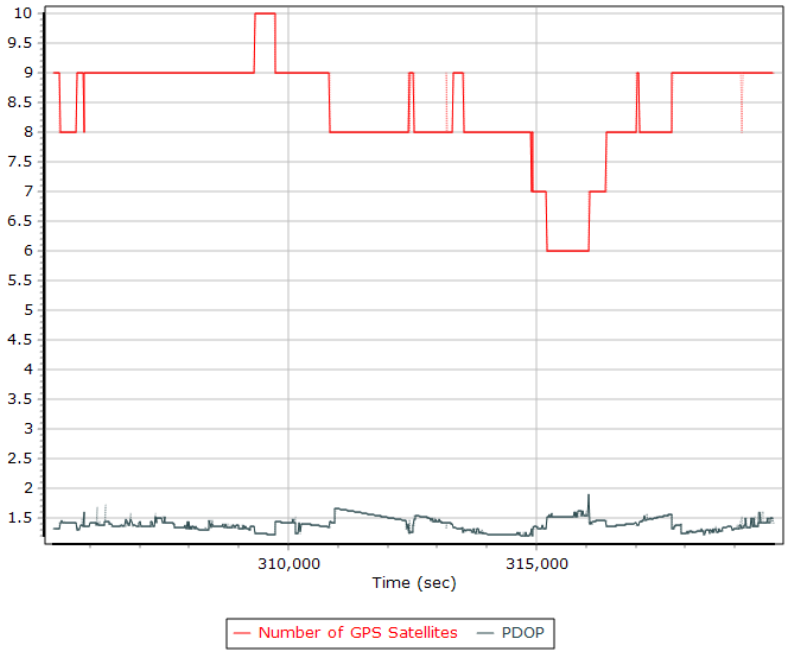
Comments

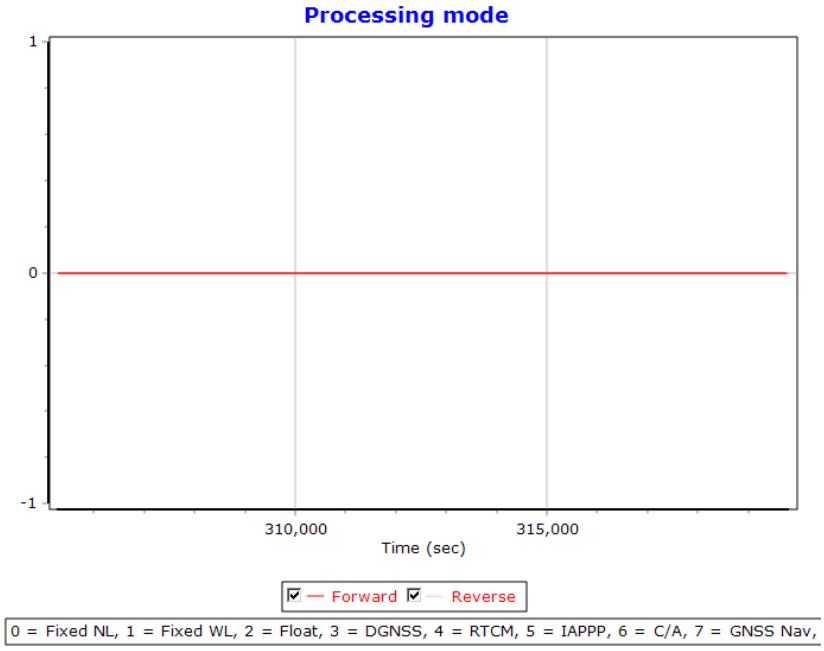
Weather

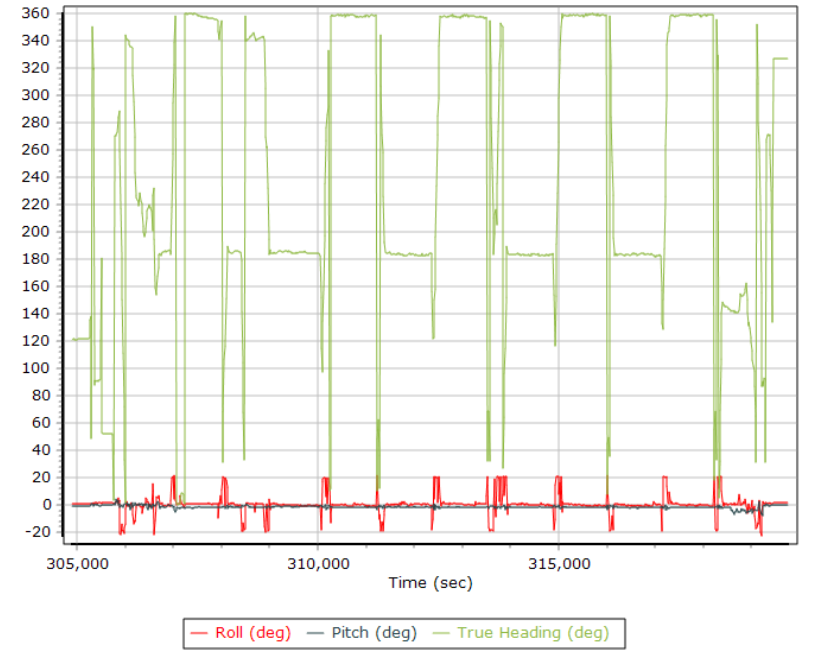
- ☑ Clear
- ☐ Fair
- ☐ Partly Cloudy
- ☐ Cloudy

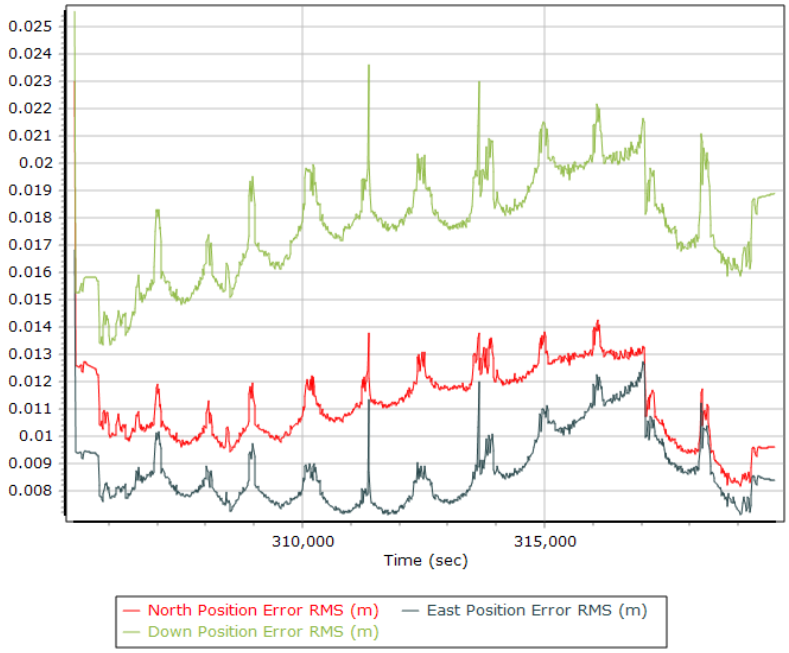
November 08, 2017-A (N1107Q, SN2221256)

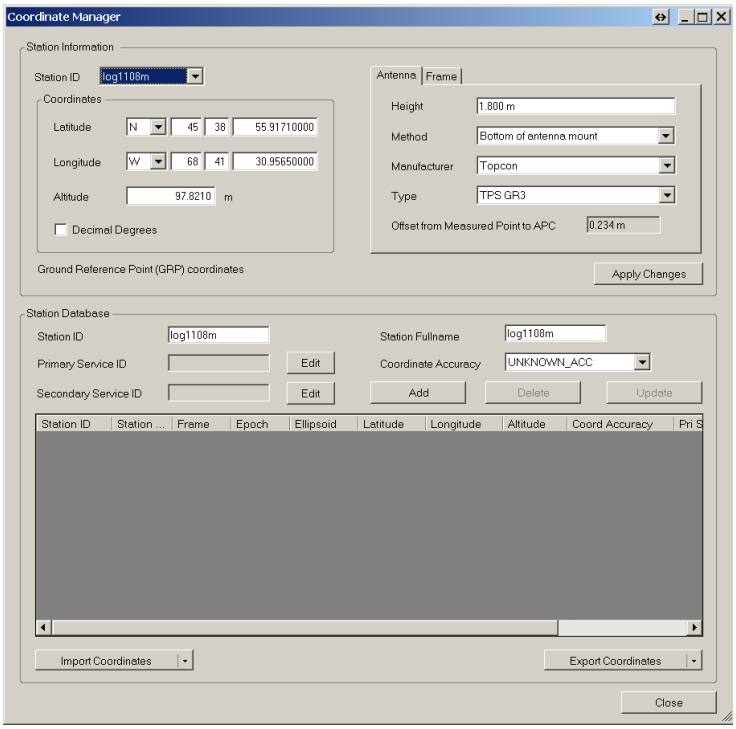

Top View: Latitude (deg)
46
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
45.25
-69.2
-69.1
-69
-68.9
-68.8
-68.7
Longitude (deg)


10
9.5
9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
310,000
315,000
Time (sec)
Number of GPS Satellites
PDOP

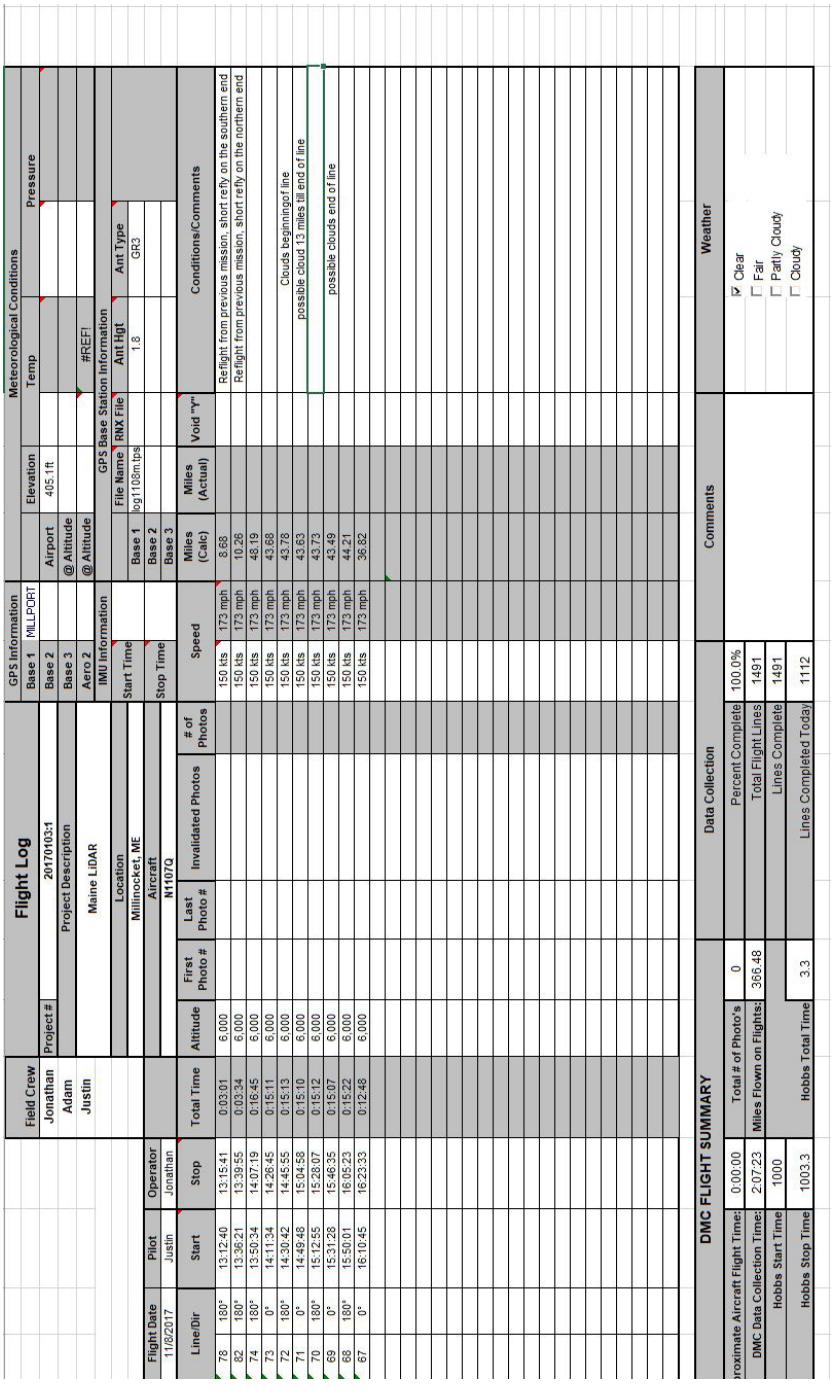

Processing mode
1
0
-1
310,000
315,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
305,000
310,000
315,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.025
0.024
0.023
0.022
0.021
0.02
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.01
0.009
0.008
310,000
315,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log1108m
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log1108m
Station Fullname
log1108m
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	
Jonathan	
Adam	
Justin	

Project #	20170103-1
Project Description	Maine LiDAR
Location	Millinocket, ME
Aircraft	N1107Q

GPS Information			
Base 1	MILLPORT		
Base 2			
Base 3			
Aero 2			
IMU Information			
Start Time			
Stop Time			

Meteorological Conditions			
Elevation		Temp	Pressure
Airport	405.1ft		
@ Altitude			
@ Altitude		#REF!	

GPS Base Station Information			
	File Name	RNX File	Ant Hgt
Base 1	bog1108m.tps		1.8
Base 2			
Base 3			

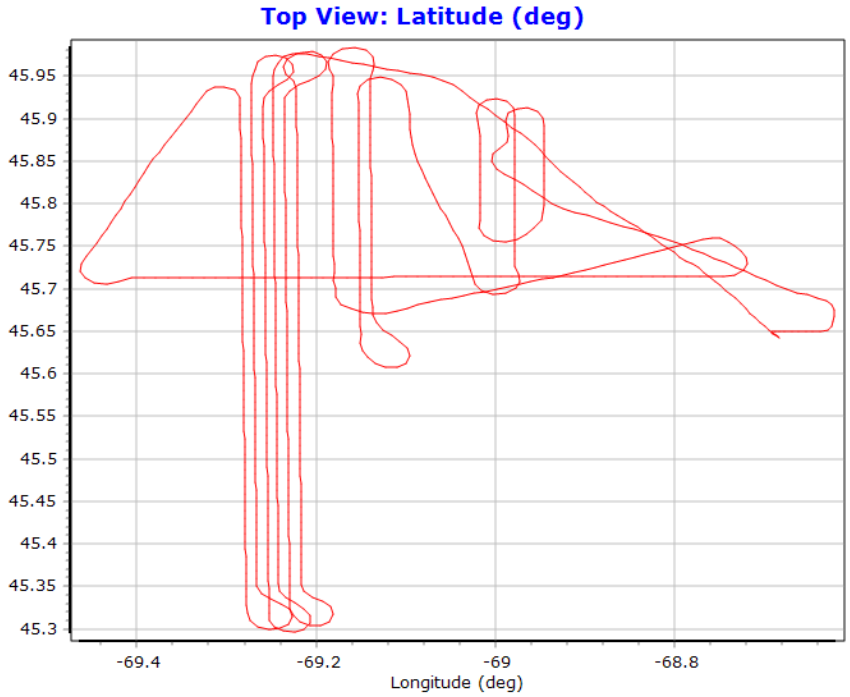
Ant Type
GR3

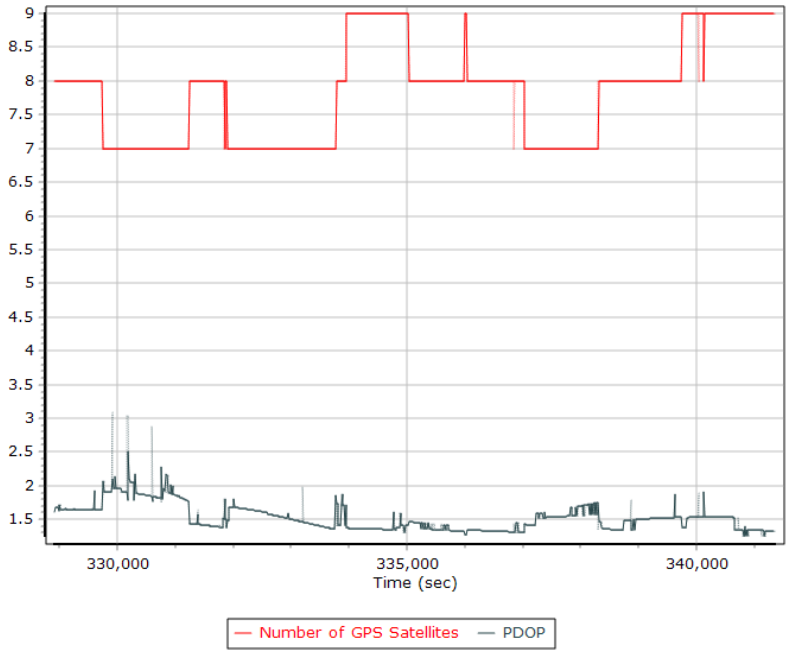
Flight Date	Pilot	Operator
11/8/2017	Justin	Jonathan

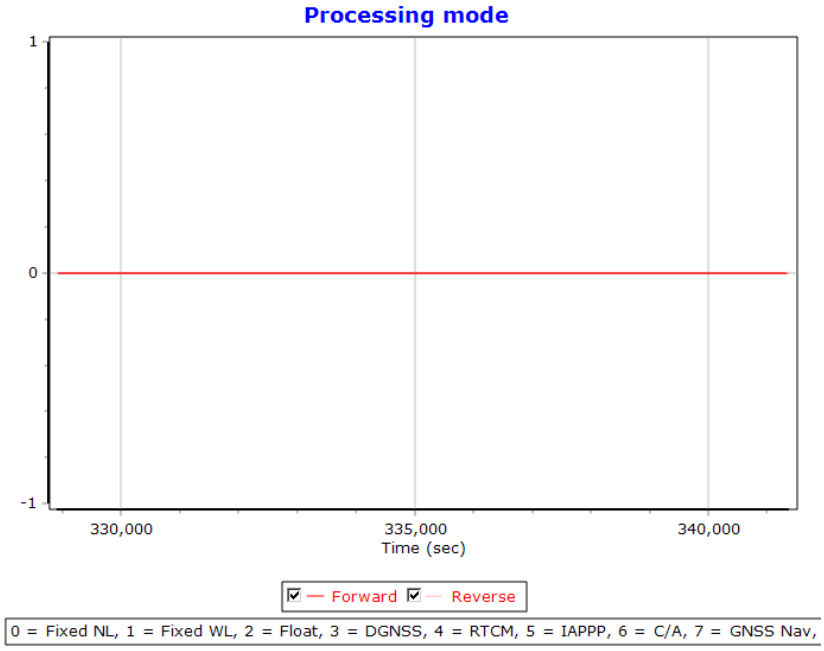
Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed		Miles (Calc)	Miles (Actual)	Void "Y"	Conditions/Comments
78	180°	13:12:40	13:15:41	0:03:01	6,000					150 kts	173 mph	8.68			Reflight from previous mission, short refly on the southern end
82	180°	13:36:21	13:39:55	0:03:34	6,000					150 kts	173 mph	10.26			Reflight from previous mission, short refly on the northern end
74	180°	13:50:34	14:07:19	0:16:45	6,000					150 kts	173 mph	48.19			
73	0°	14:11:34	14:26:45	0:15:11	6,000					150 kts	173 mph	43.68			
72	180°	14:30:42	14:45:55	0:15:13	6,000					150 kts	173 mph	43.78			Clouds beginningof line
71	0°	14:49:48	15:04:58	0:15:10	6,000					150 kts	173 mph	43.63			possible cloud 13 miles till end of line
70	180°	15:12:55	15:28:07	0:15:12	6,000					150 kts	173 mph	43.73			
69	0°	15:31:28	15:46:35	0:15:07	6,000					150 kts	173 mph	43.49			possible clouds end of line
68	180°	15:50:01	16:05:23	0:15:22	6,000					150 kts	173 mph	44.21			
67	0°	16:10:45	16:23:33	0:12:48	6,000					150 kts	173 mph	36.82			

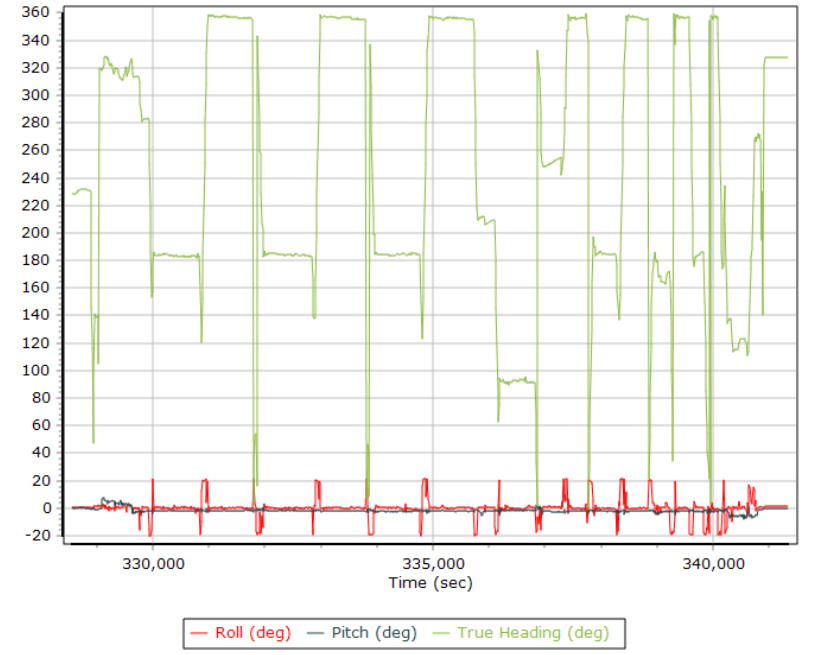
DMC FLIGHT SUMMARY				Data Collection			Comments	Weather	
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0	Percent Complete	100.0%			☑ Clear	
DMC Data Collection Time:	2:07:23	Miles Flown on Flights:	366.48	Total Flight Lines	1491			☐ Fair	
Hobbs Start Time	1000			Lines Complete	1491			☐ Partly Cloudy	
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3	Lines Completed Today	1112			☐ Cloudy	

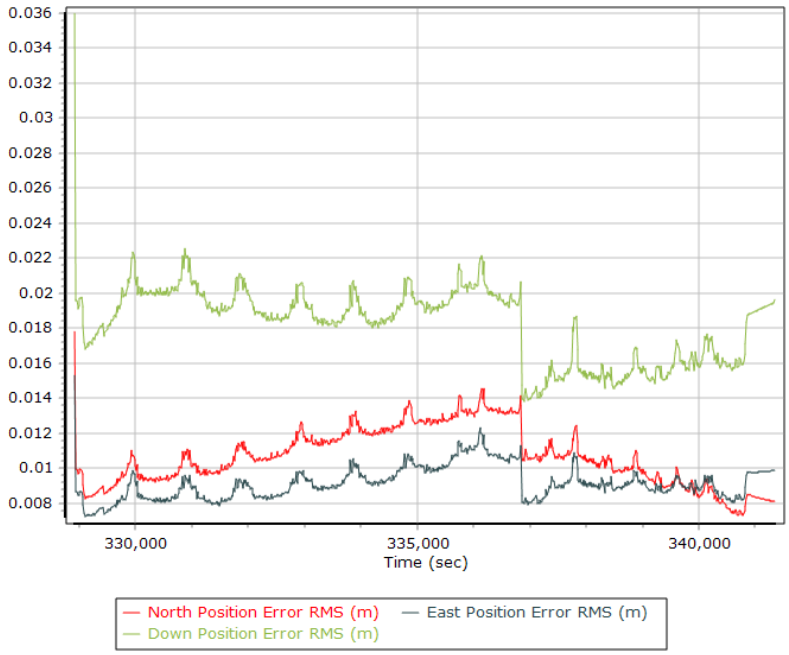
November 08, 2017-B (N1107Q, SN2221256)

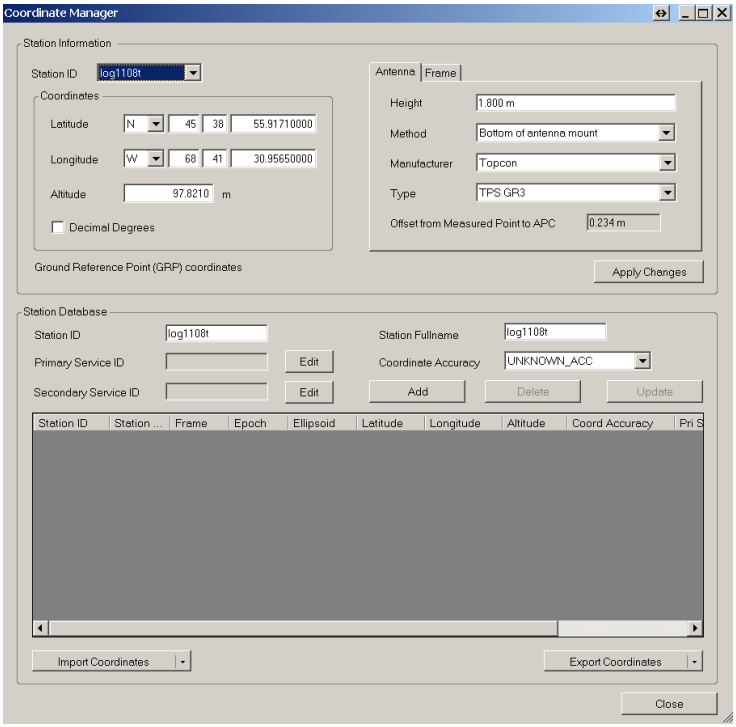

Top View: Latitude (deg)
45.95
45.9
45.85
45.8
45.75
45.7
45.65
45.6
45.55
45.5
45.45
45.4
45.35
45.3
-69.4
-69.2
-69
-68.8
Longitude (deg)


9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
330,000
335,000
340,000
Time (sec)
Number of GPS Satellites
PDOP

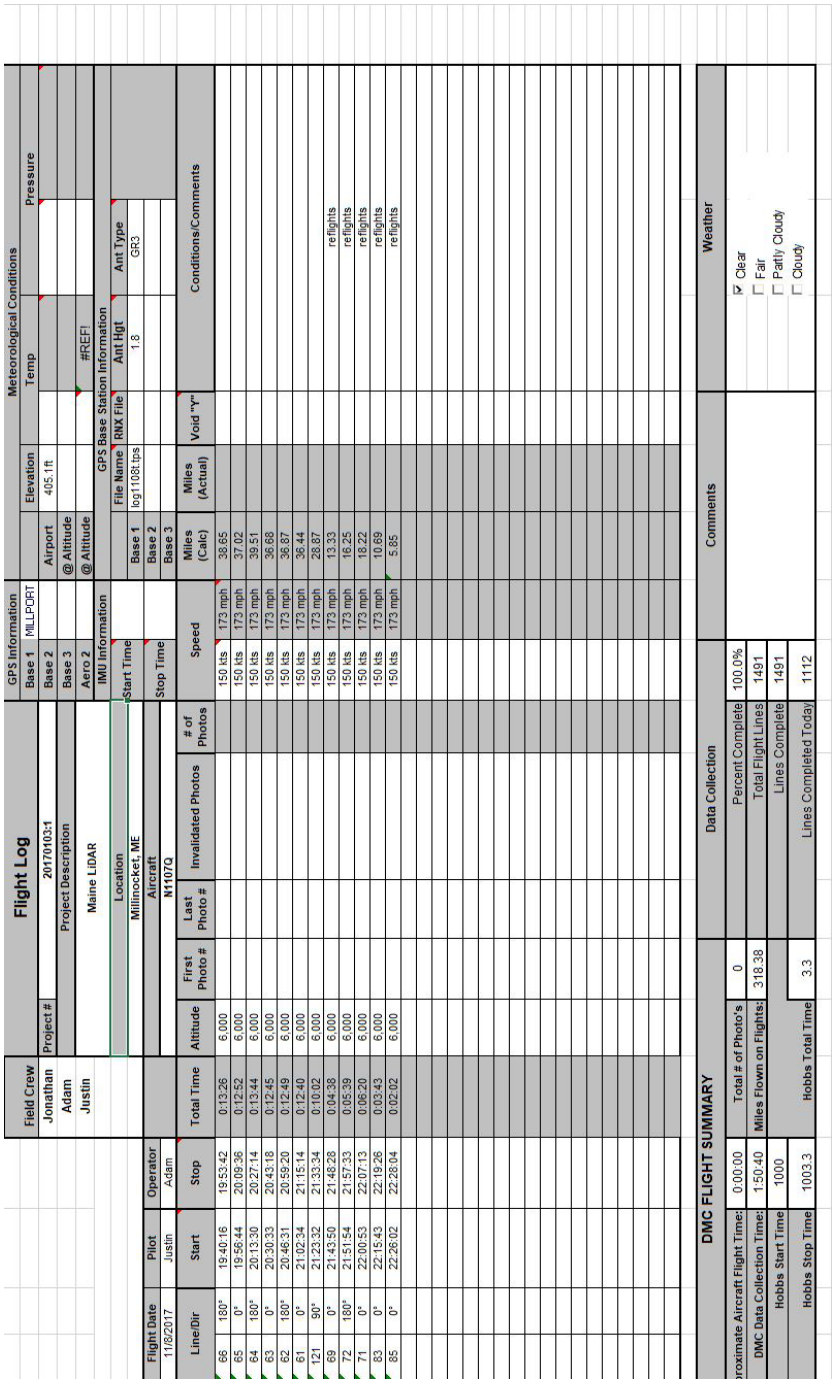

Processing mode
1
0
-1
330,000
335,000
340,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
330,000
335,000
340,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)


0.036
0.034
0.032
0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
330,000
335,000
340,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)


Coordinate Manager
Station Information
Station ID
log1108t
Coordinates
Latitude
N
45
38
55.91710000
Longitude
W
68
41
30.95650000
Altitude
97.8210
m
Decimal Degrees
Ground Reference Point (GRP) coordinates
Antenna
Frame
Height
1.800 m
Method
Bottom of antenna mount
Manufacturer
Topcon
Type
TPS GR3
Offset from Measured Point to APC
0.234 m
Apply Changes
Station Database
Station ID
log1108t
Primary Service ID
Edit
Secondary Service ID
Edit
Station Fullname
log1108t
Coordinate Accuracy
UNKNOWN_ACC
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

Flight Log



Flight Log

Field Crew	
Jonathan	
Adam	
Justin	

Project #	20170103-1
Project Description	
Maine LiDAR	

GPS Information	
Base 1	MLLPORT
Base 2	
Base 3	
Aero 2	
IMU Information	

Meteorological Conditions			
Elevation	Temp		Pressure
Airport	405.1ft		
@ Altitude			
@ Altitude	#REF!		

GPS Base Station Information			
	File Name	RNX File	Ant Hgt	Ant Type
Base 1	log1108t.tps		1.8	GR3
Base 2				
Base 3				

Location
Millinocket, ME

Aircraft
N1107Q

Start Time
Stop Time

Flight Date	Pilot	Operator
11/8/2017	Justin	Adam

Line/Dir		Start	Stop	Total Time	Altitude	First Photo #	Last Photo #	Invalidated Photos	# of Photos	Speed	Miles (Calc)	Miles (Actual)	Void "v"	Conditions/Comments
66	180°	19:40:16	19:53:42	0:13:26	6,000					150 kts 173 mph	38.65			
65	0°	19:56:44	20:09:36	0:12:52	6,000					150 kts 173 mph	37.02			
64	180°	20:13:30	20:27:14	0:13:44	6,000					150 kts 173 mph	39.51			
63	0°	20:30:33	20:43:18	0:12:45	6,000					150 kts 173 mph	36.68			
62	180°	20:46:31	20:59:20	0:12:49	6,000					150 kts 173 mph	36.87			
61	0°	21:02:34	21:15:14	0:12:40	6,000					150 kts 173 mph	36.44			
121	90°	21:23:32	21:33:34	0:10:02	6,000					150 kts 173 mph	28.87			
69	0°	21:43:50	21:48:28	0:04:38	6,000					150 kts 173 mph	13.33			reflights
72	180°	21:51:54	21:57:33	0:05:39	6,000					150 kts 173 mph	16.25			reflights
71	0°	22:00:53	22:07:13	0:06:20	6,000					150 kts 173 mph	18.22			reflights
83	0°	22:15:43	22:19:26	0:03:43	6,000					150 kts 173 mph	10.69			reflights
85	0°	22:26:02	22:28:04	0:02:02	6,000					150 kts 173 mph	5.85			reflights

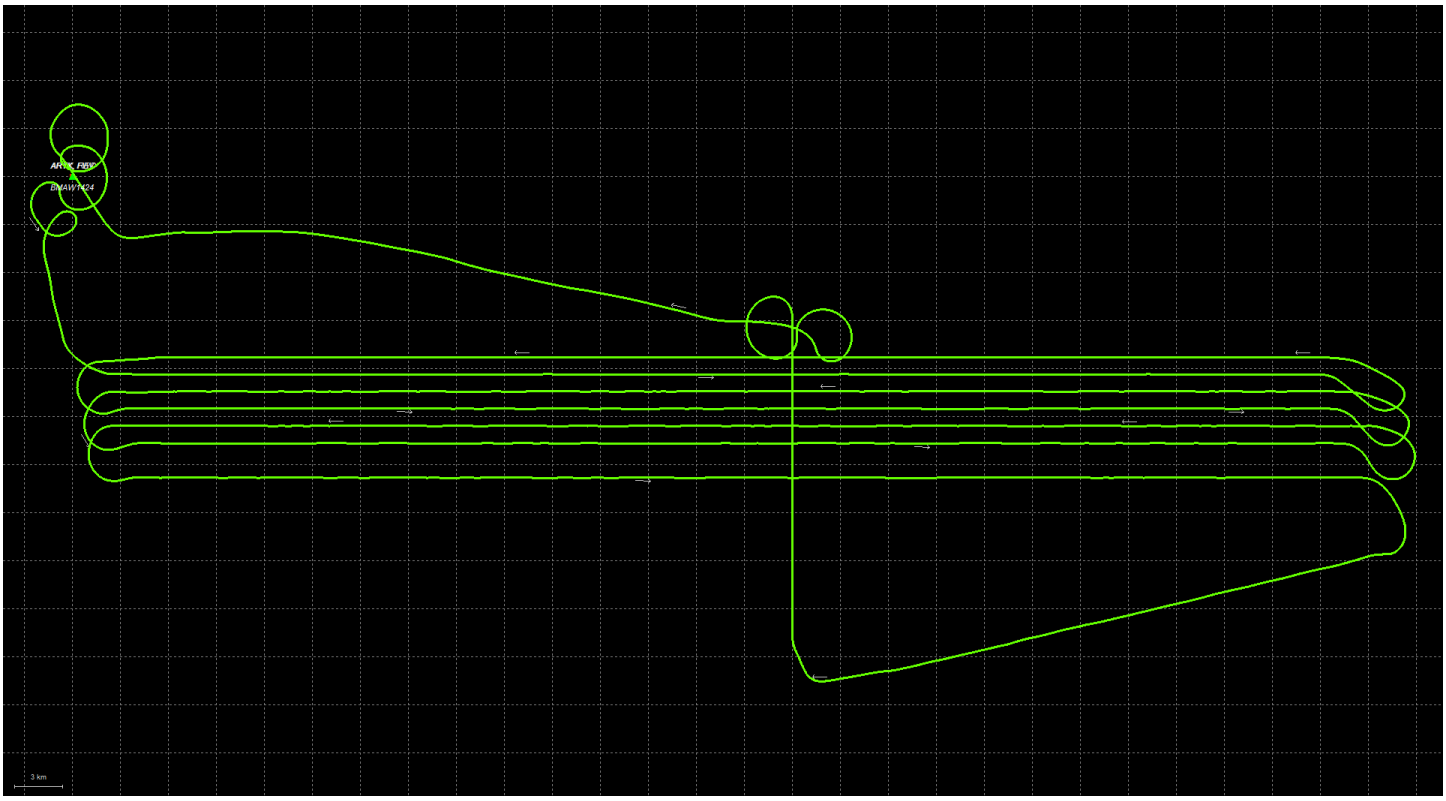
DMC FLIGHT SUMMARY					
Approximate Aircraft Flight Time:	0:00:00	Total # of Photo's	0		
DMC Data Collection Time:	1:50:40	Miles Flown on Flights:	318.38		
Hobbs Start Time	1000				
Hobbs Stop Time	1003.3	Hobbs Total Time	3.3		

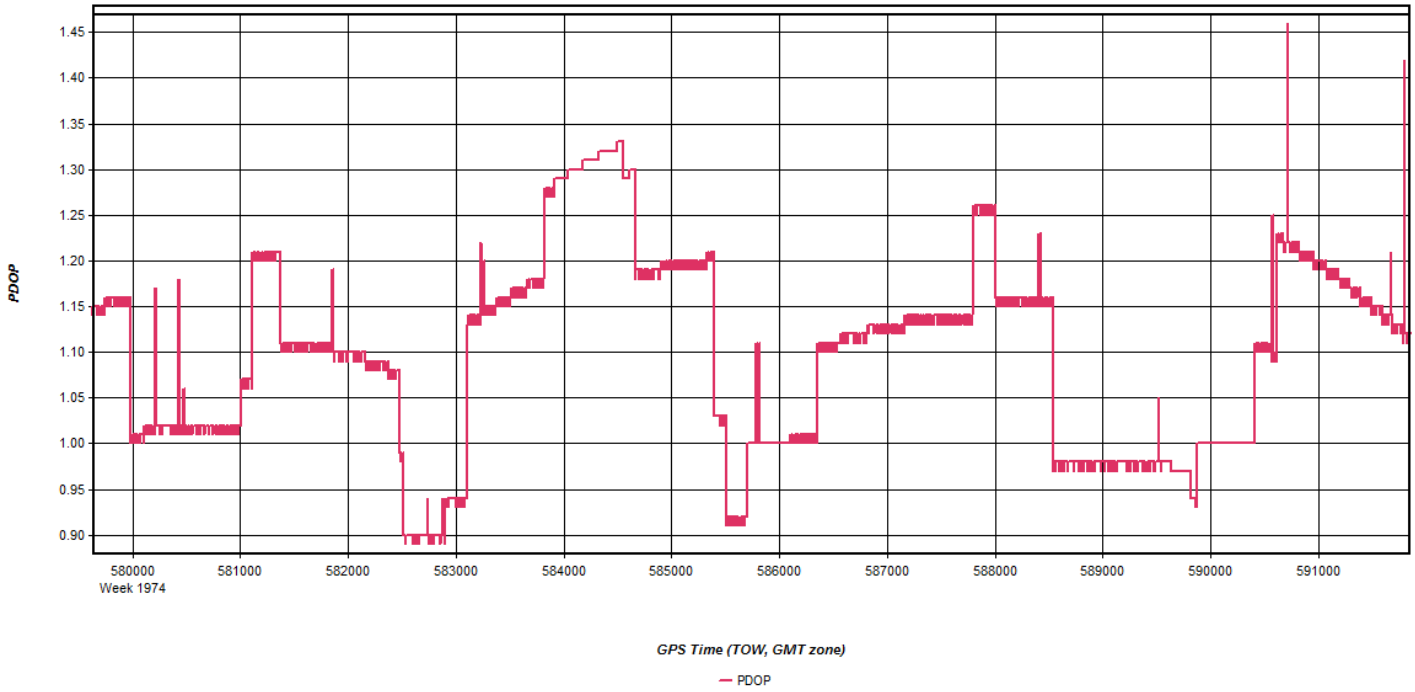
Data Collection	
Percent Complete	100.0%
Total Flight Lines	1491
Lines Complete	1491
Lines Completed Today	1112

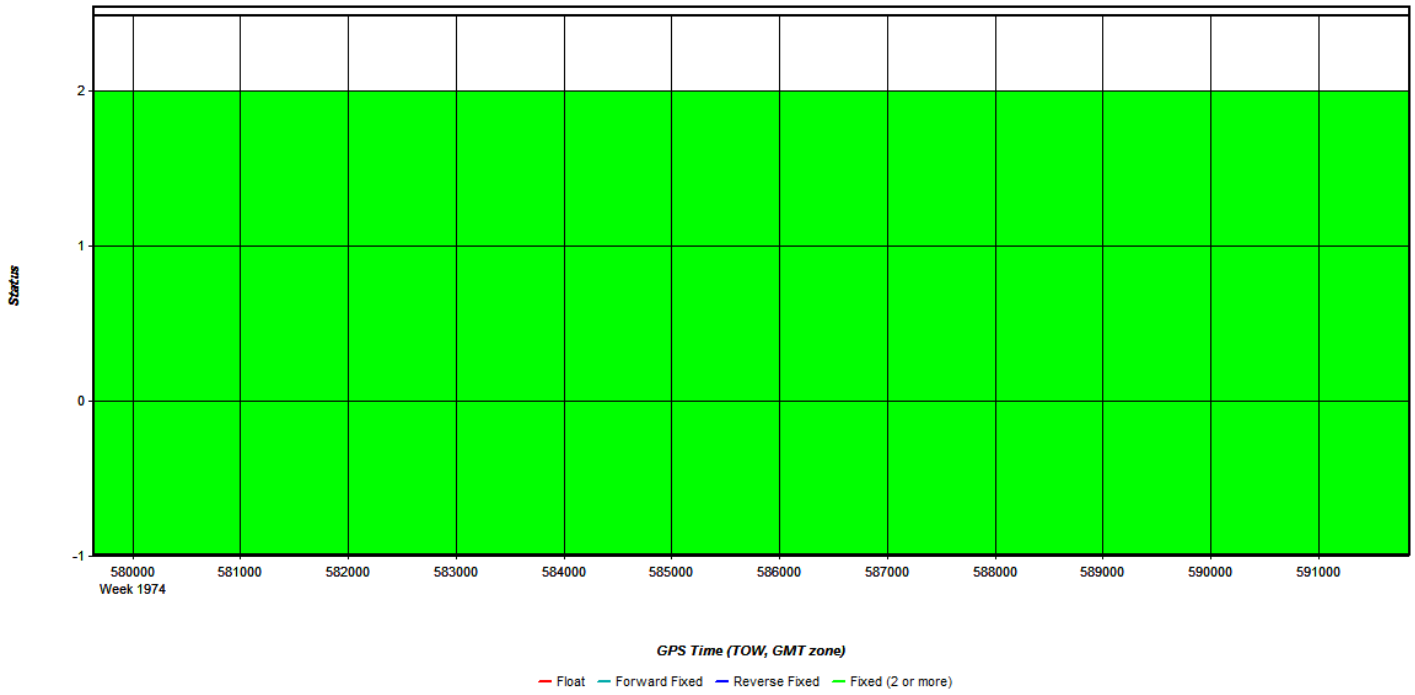
Comments

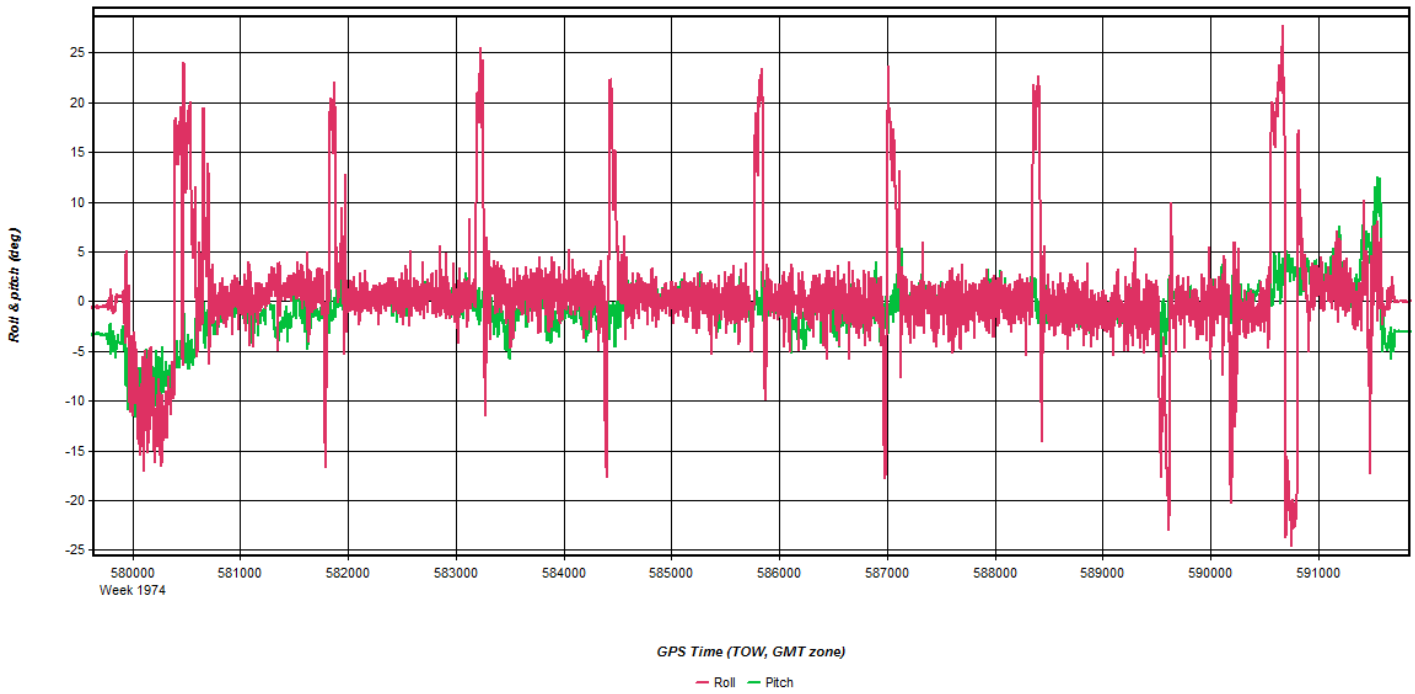
Weather
☑ Clear
☐ Fair
☐ Partly Cloudy
☐ Cloudy

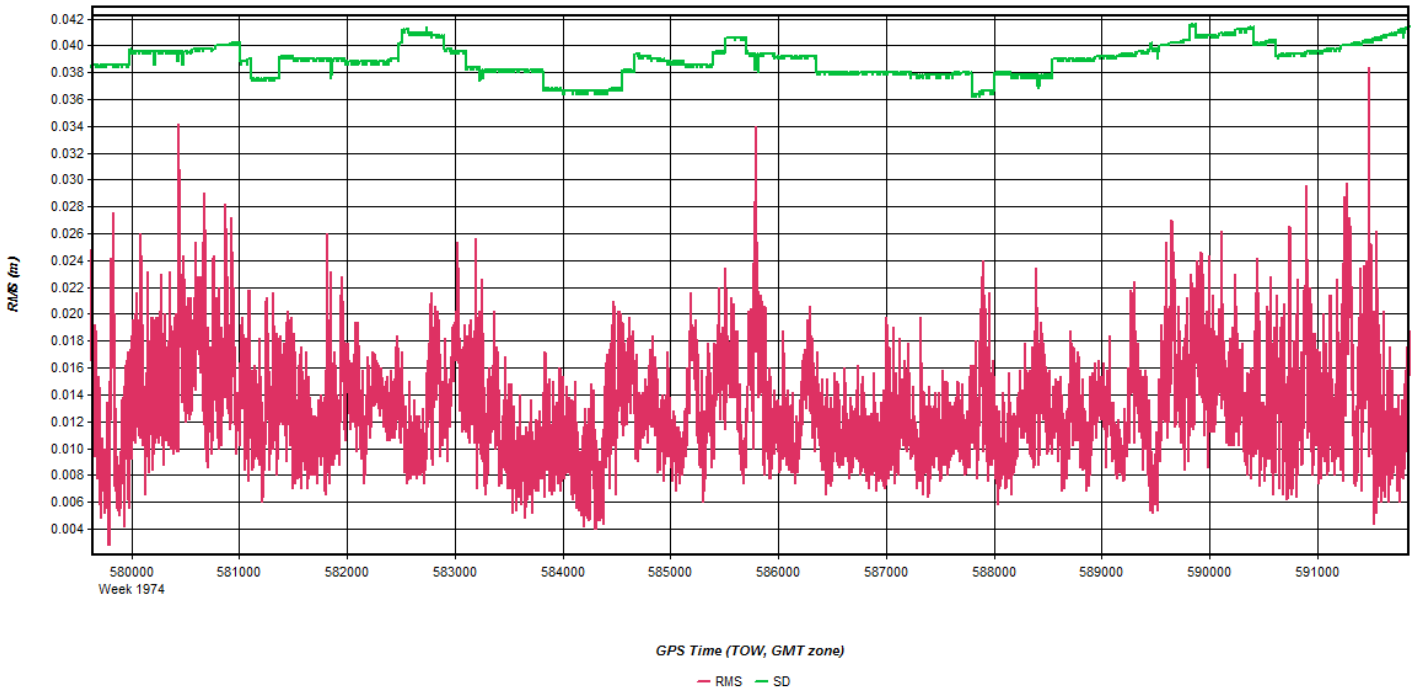
November 11, 2017-A (N915WC, SN8237)

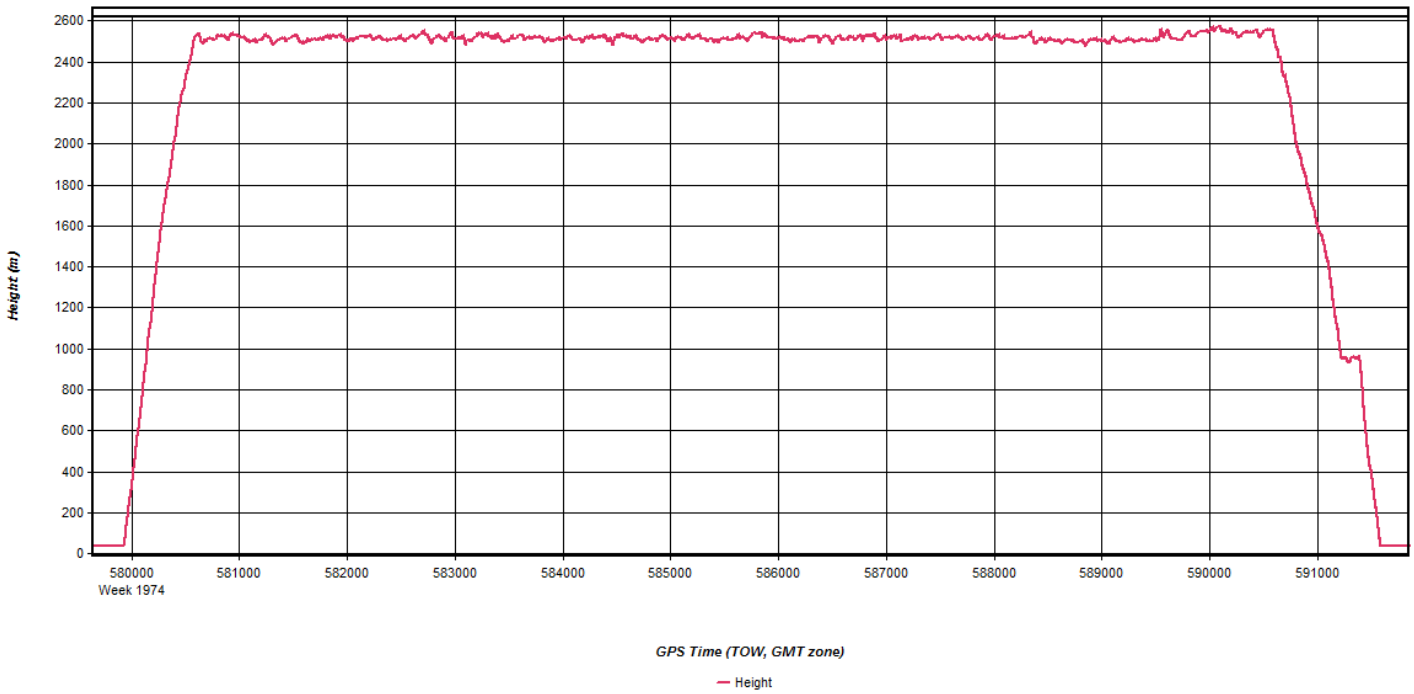


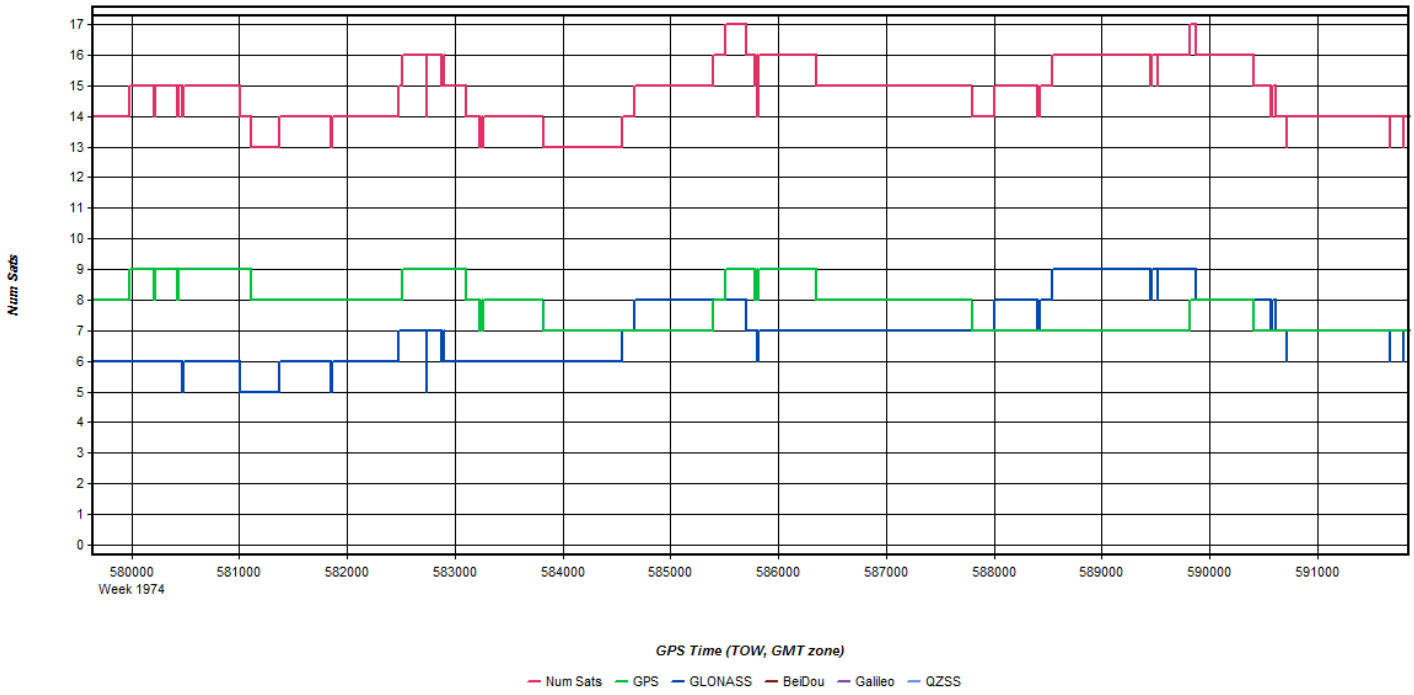

PDOP
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
PDOP


Status
2
1
0
-1
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

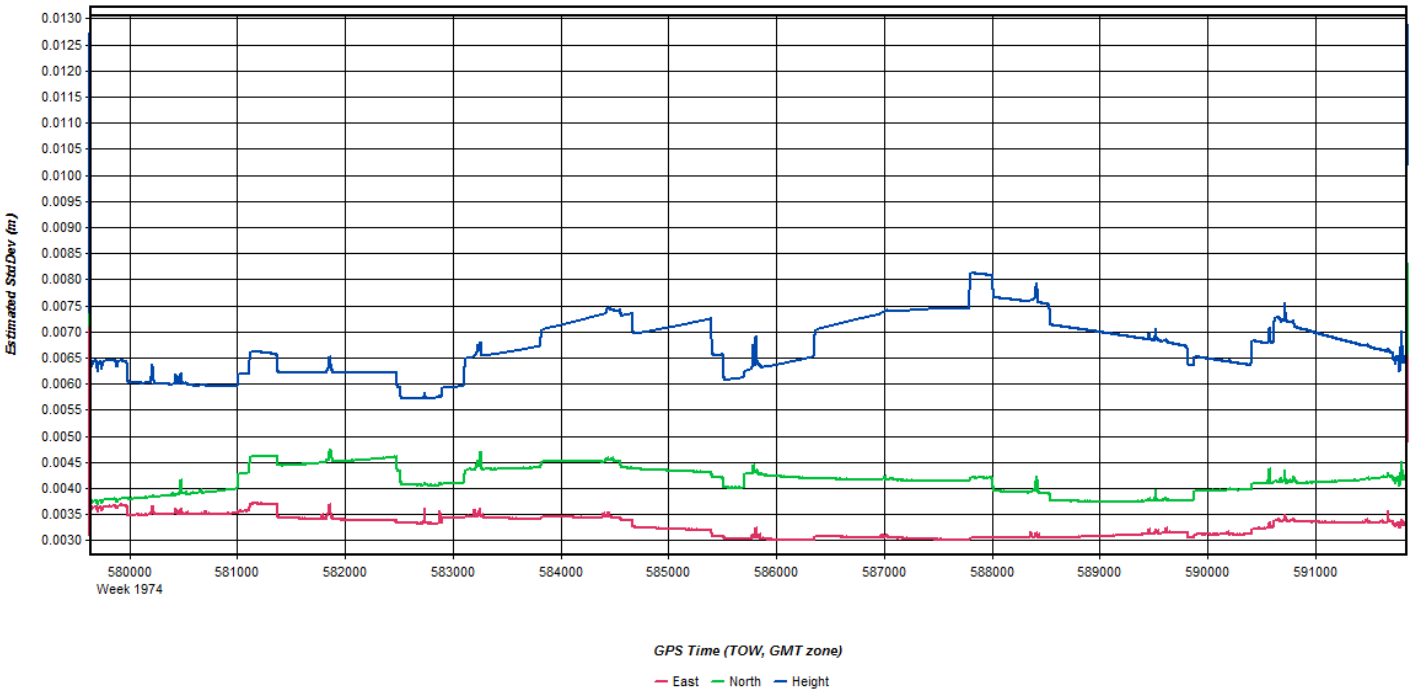

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Roll
Pitch

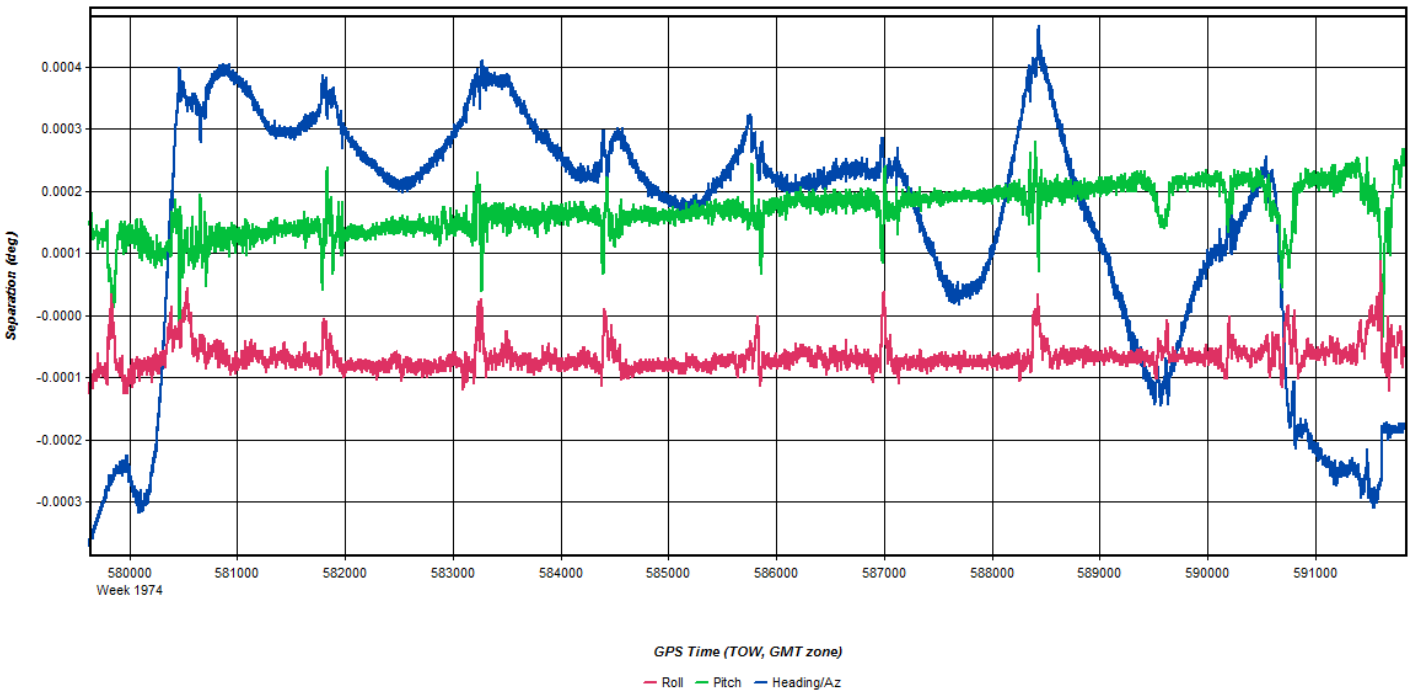

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
RMS
SD

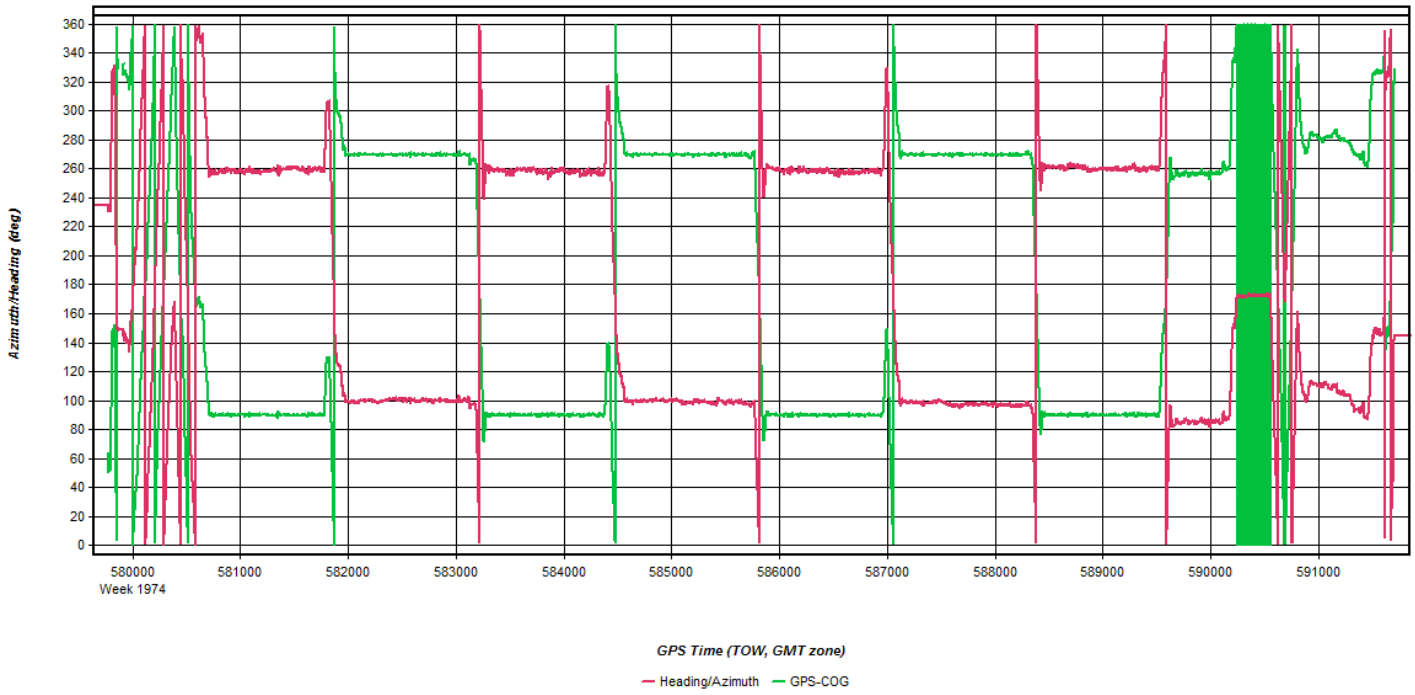

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Height

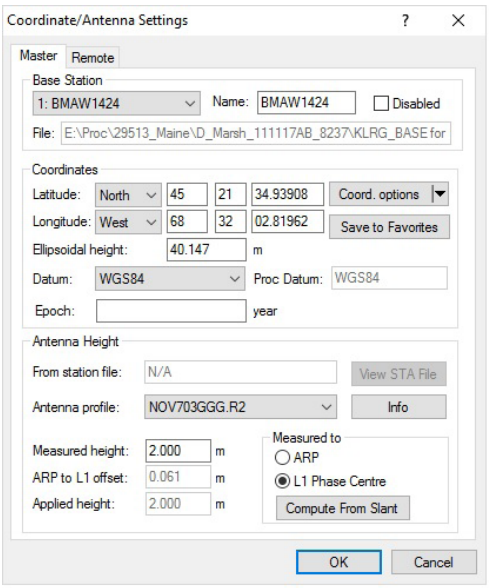

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

Separation (m)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
East
North
Up

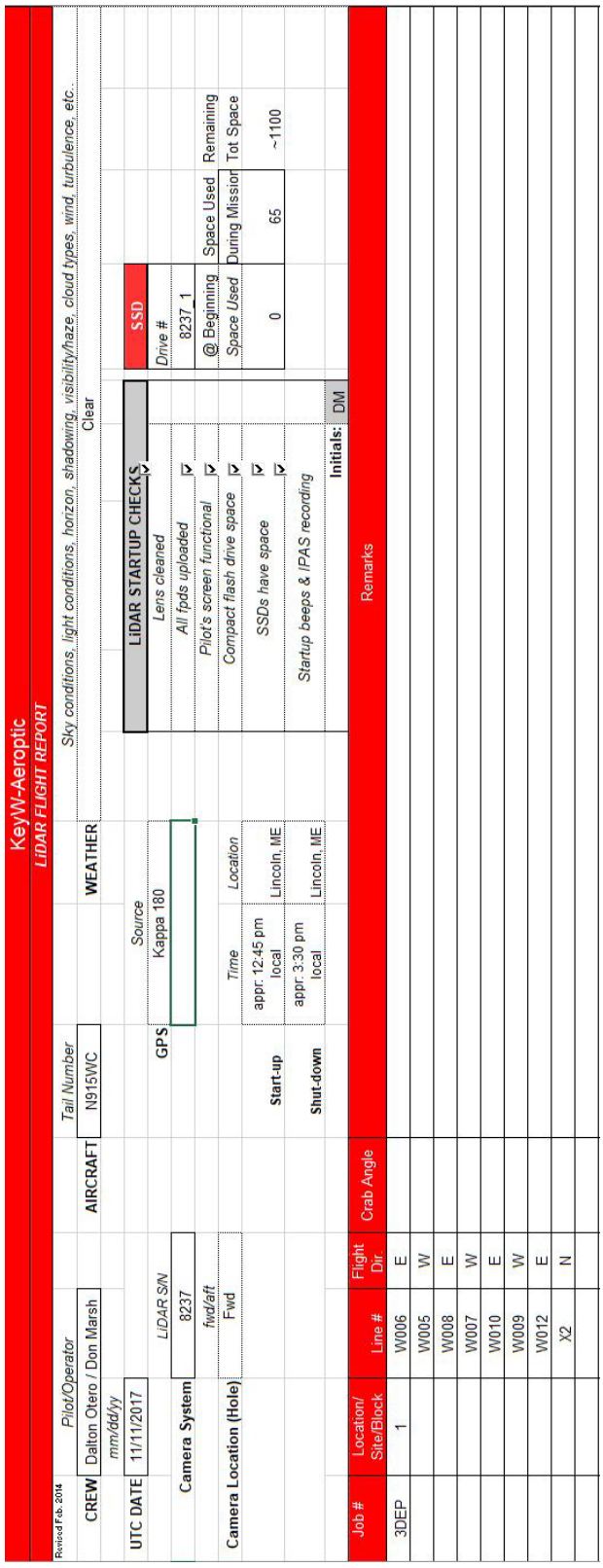

Estimated StdDev (m)
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0004
0.0003
0.0002
0.0001
-0.0000
-0.0001
-0.0002
-0.0003
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
580000
Week 1974
581000
582000
583000
584000
585000
586000
587000
588000
589000
590000
591000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: BMAW1424
Name: BMAW1424
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111117AB_8237\KLRG_BASE.for
Coordinates
Latitude: North 45 21 34.93908
Coord. options
Longitude: West 68 32 02.81962
Save to Favorites
Ellipsoidal height: 40.147 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: N/A
View STA File
Antenna profile: NOV703GGG.R2
Info
Measured height: 2.000 m
ARP to L1 offset: 0.061 m
Applied height: 2.000 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW: Pilot/Operator: Dalton Otero / Don Marsh
AIRCRAFT: Tail Number: N915WC
WEATHER: Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.: Clear

UTC DATE: mm/dd/yy: 11/11/2017

GPS: Source: Kappa 180

LiDAR STARTUP CHECKS
- Lens cleaned
- All fpds uploaded
- Pilot's screen functional
- Compact flash drive space
- SSDs have space
- Startup beeps & IPAS recording

SSD: Drive #: 8237_1

	@ Beginning	Space Used	Remaining
Space Used	During Mission		Tot Space
0	65		~1100

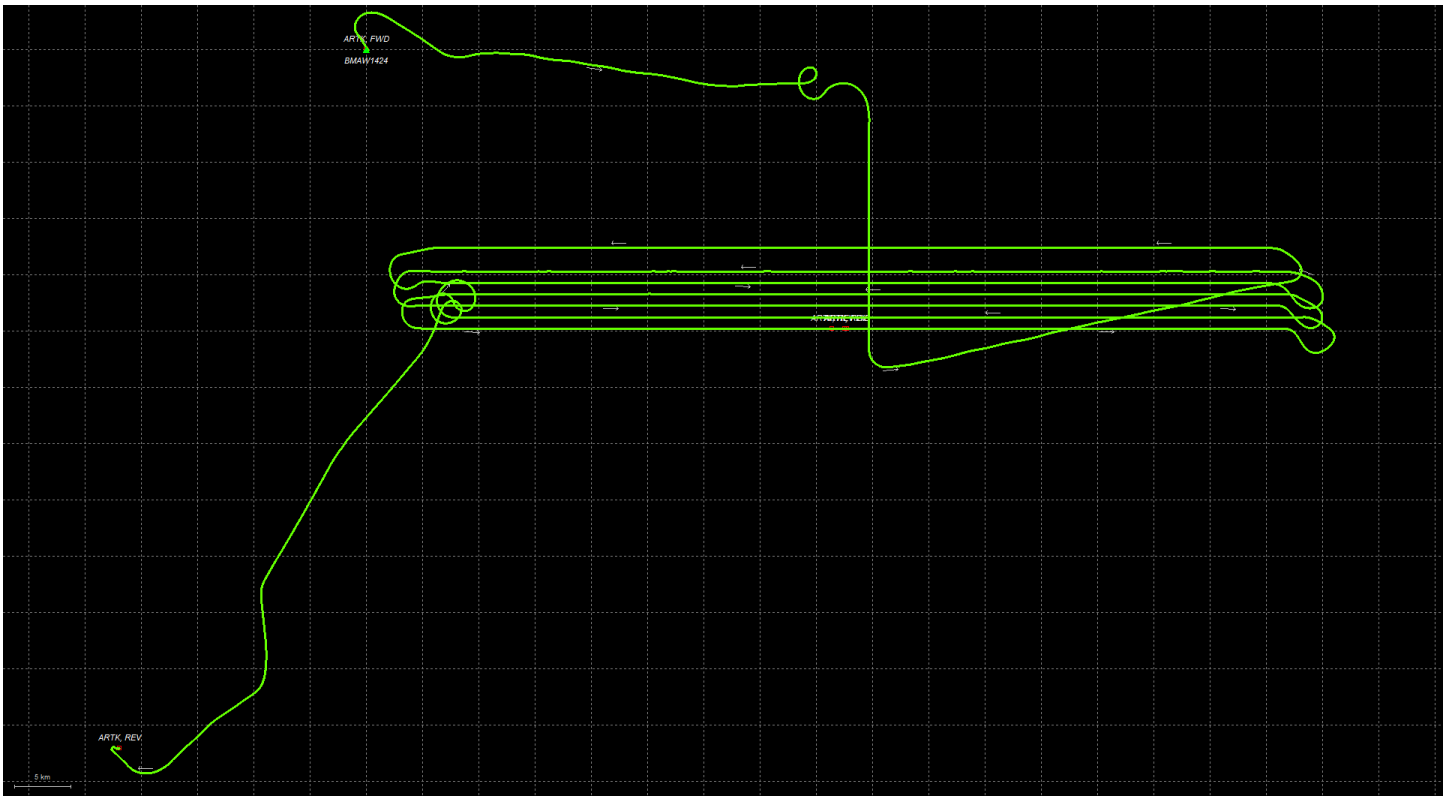
Initials: DM

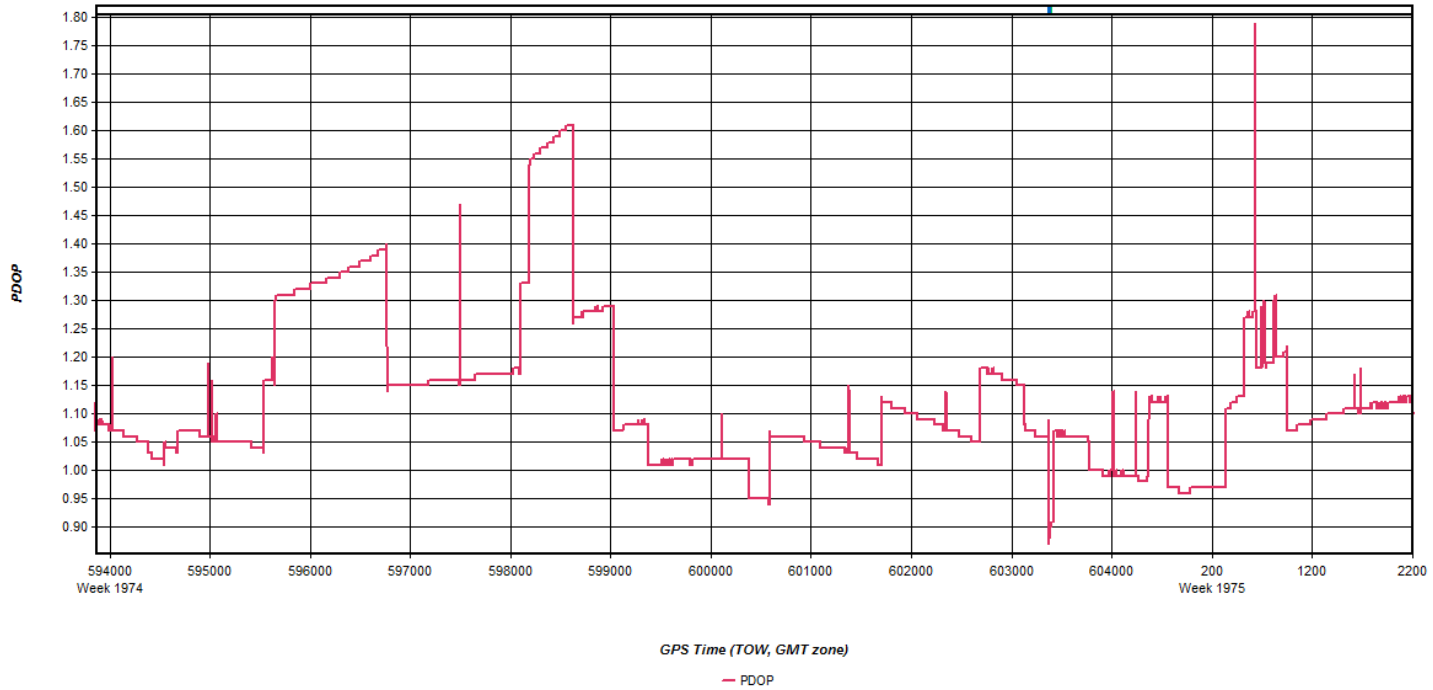
Camera System: LiDAR S/N: 8237
Camera Location (Hole): fwd/aft: Fwd

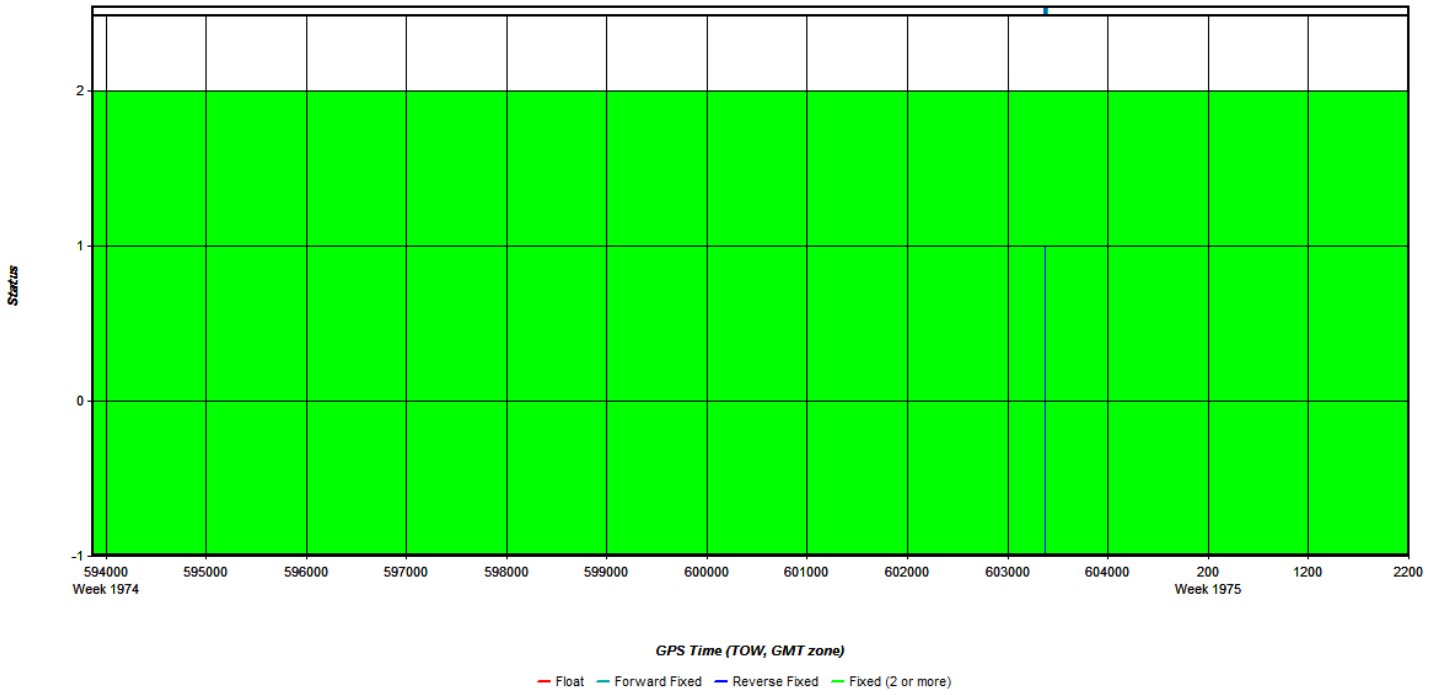
	Time	Location
Start-up	appr. 12:45 pm local	Lincoln, ME
Shut-down	appr. 3:30 pm local	Lincoln, ME

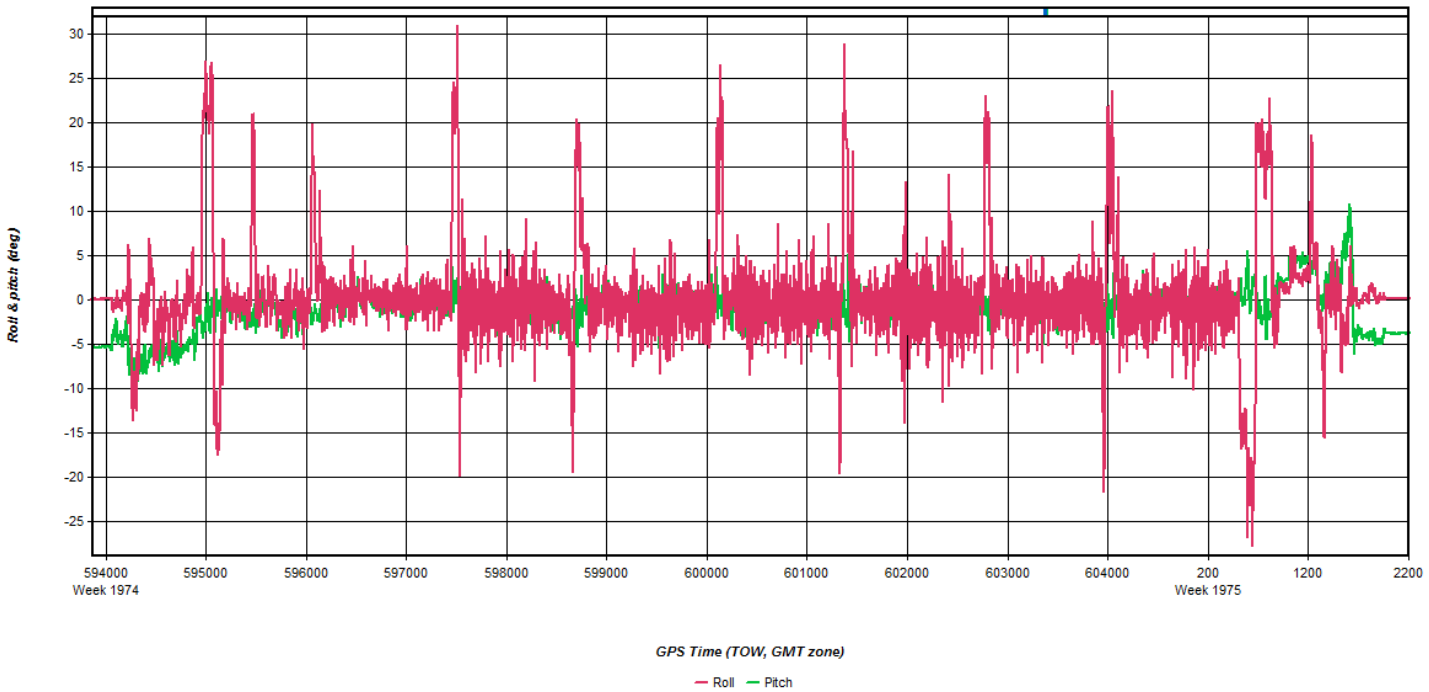
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	W006	E		
		W005	W		
		W008	E		
		W007	W		
		W010	E		
		W009	W		
		W012	E		
		X2	N		

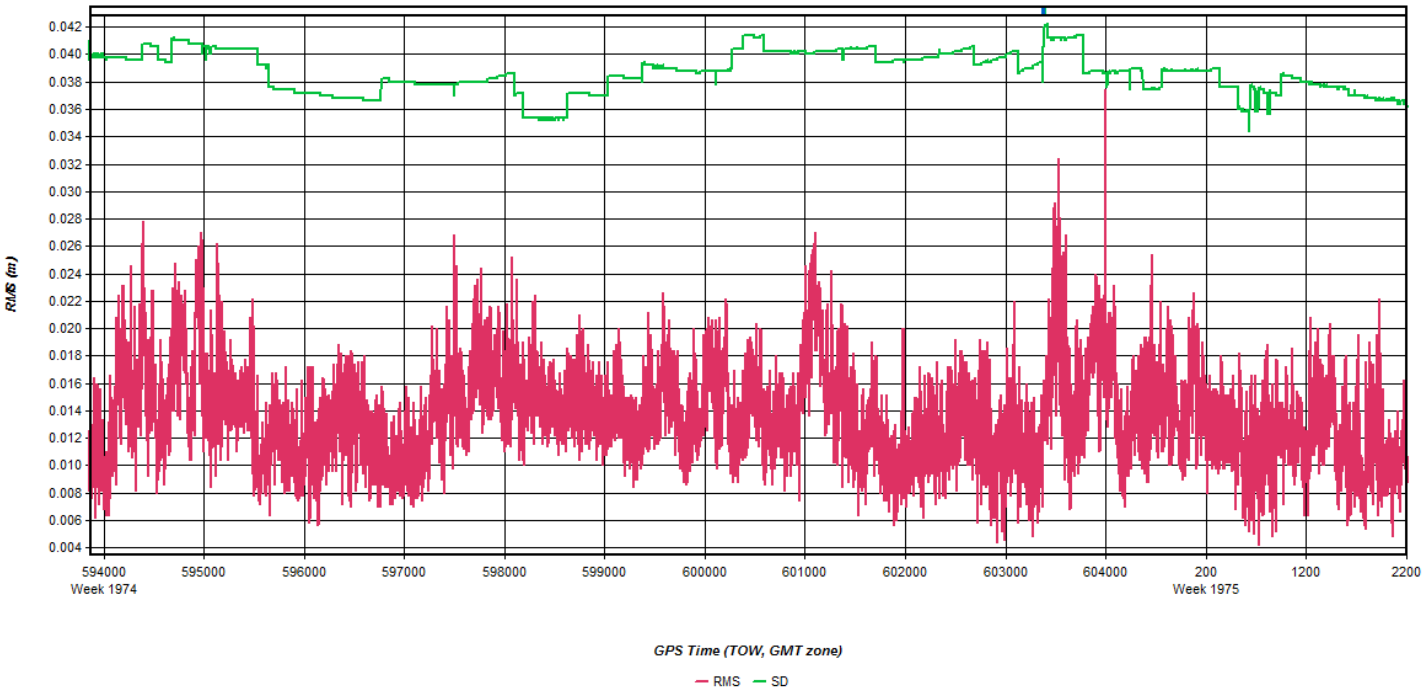
November 11, 2017-B (N915WC, SN8237)

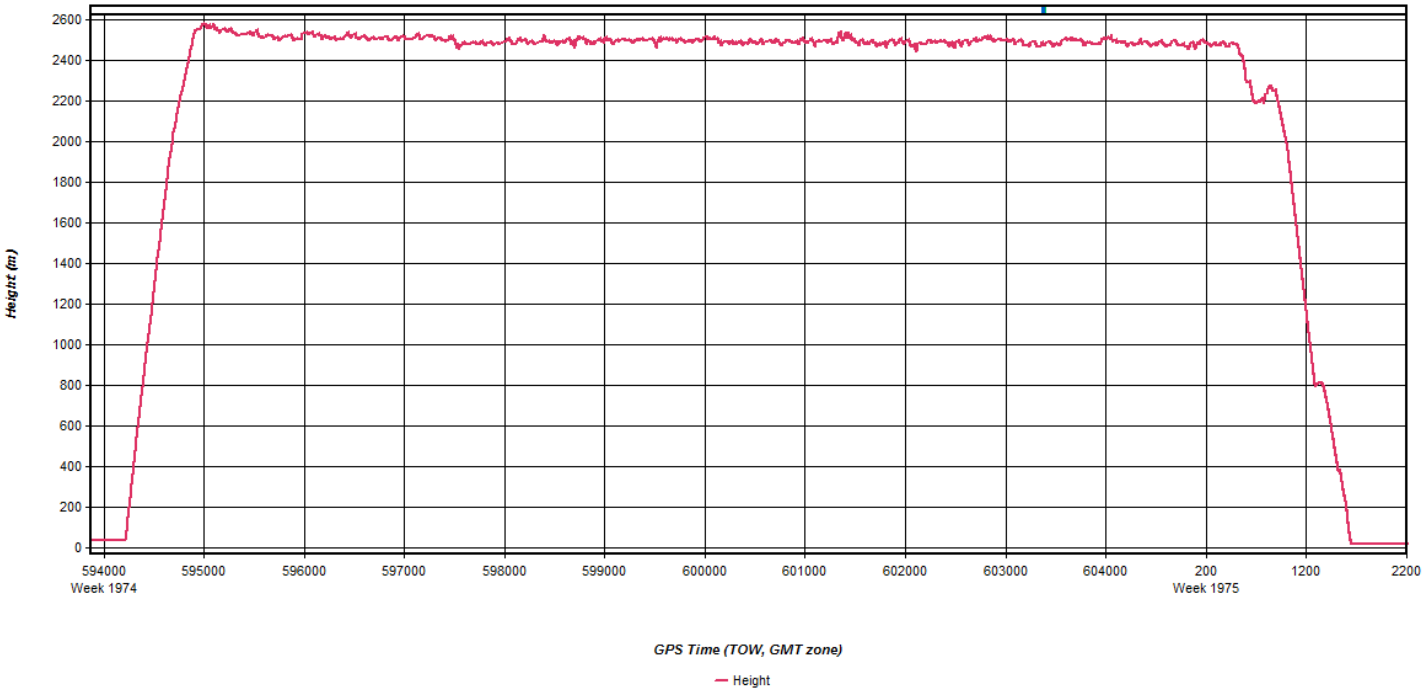

ARTK, FWD
BMAVT424
ARTK, REV

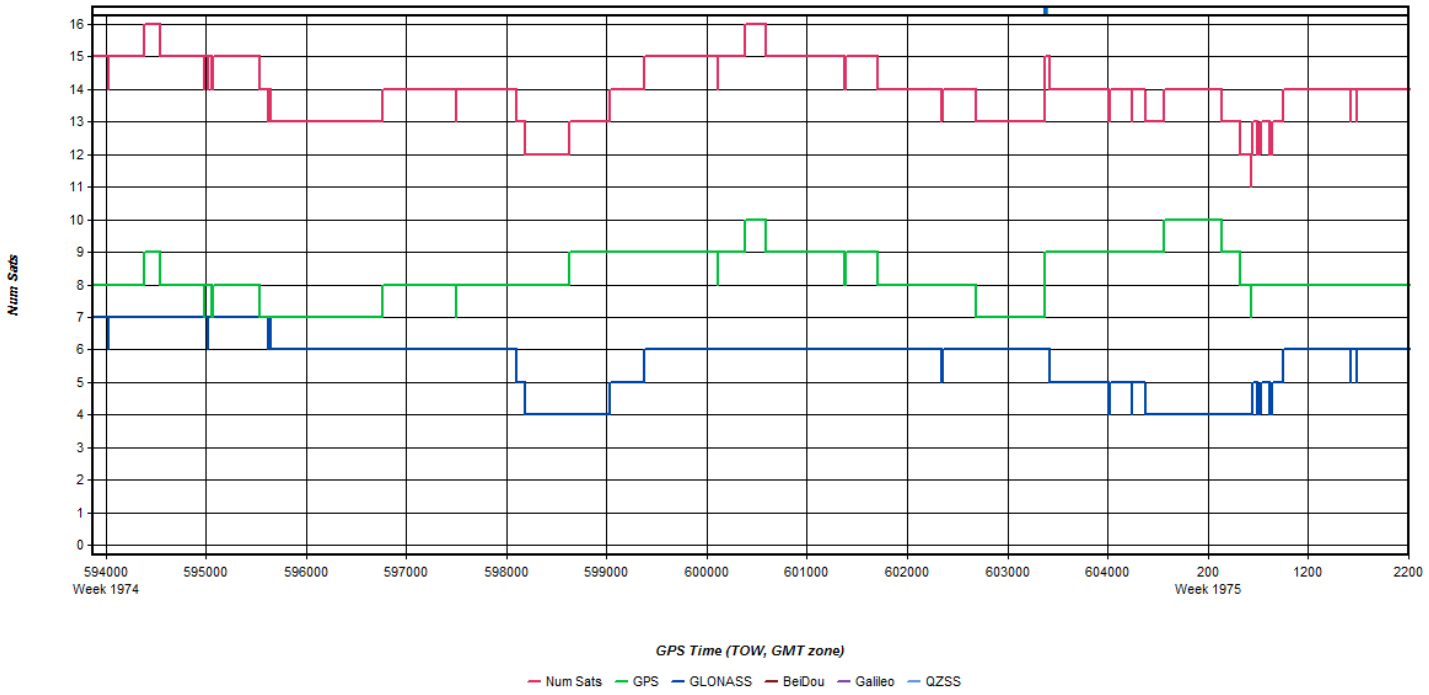

PDOP
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
PDOP

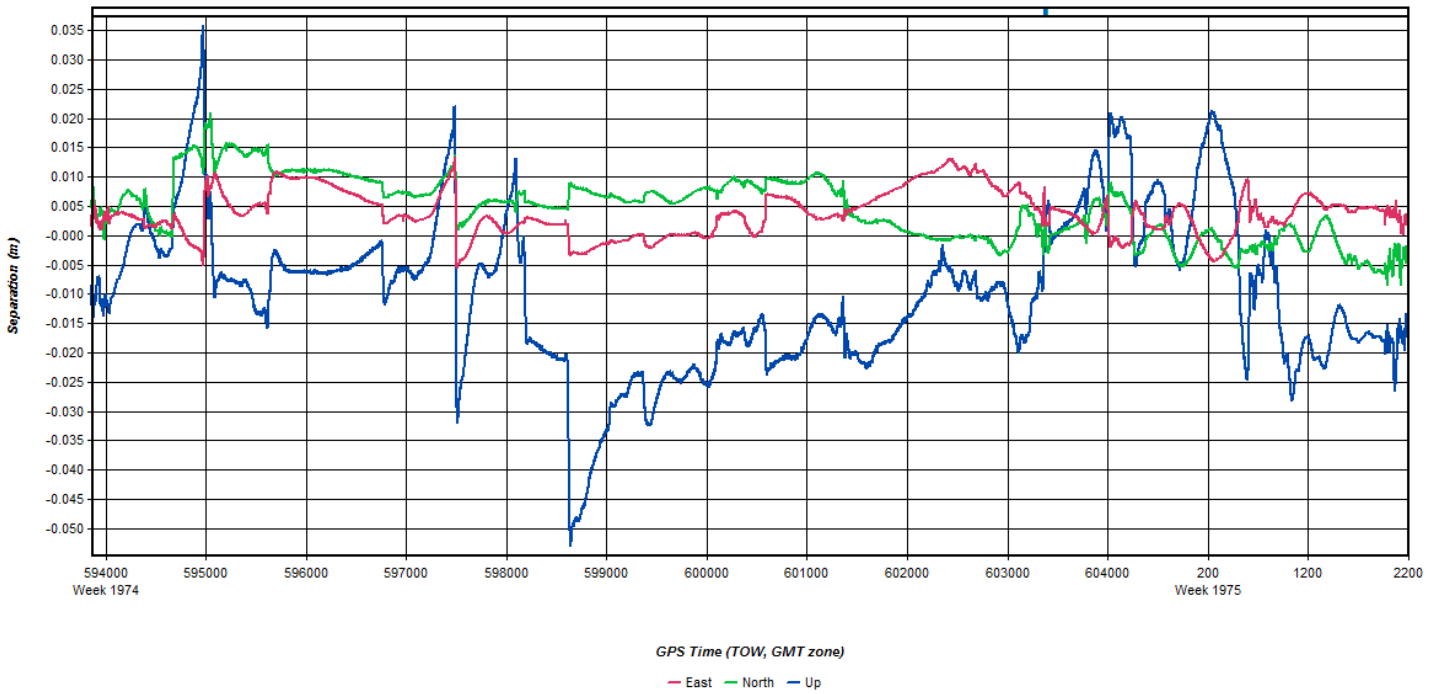

Status
2
1
0
-1
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

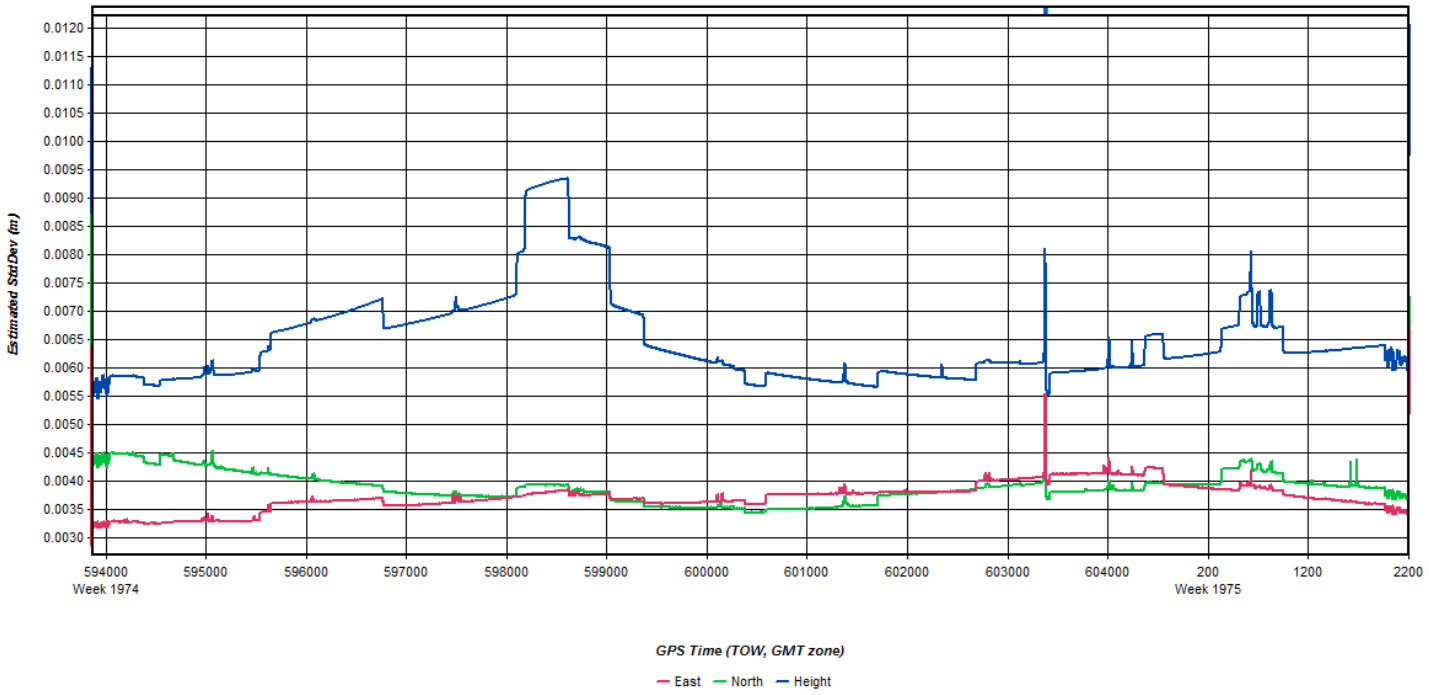

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Roll
Pitch

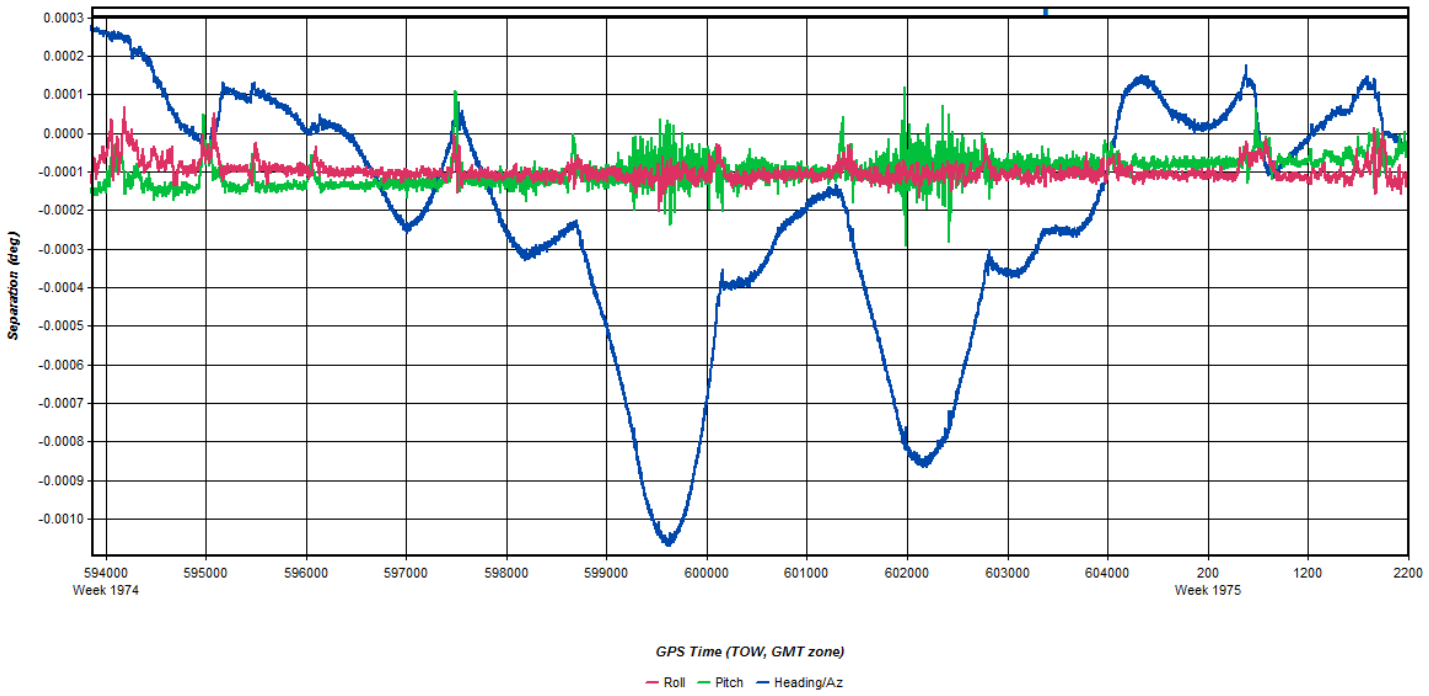

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
RMS
SD

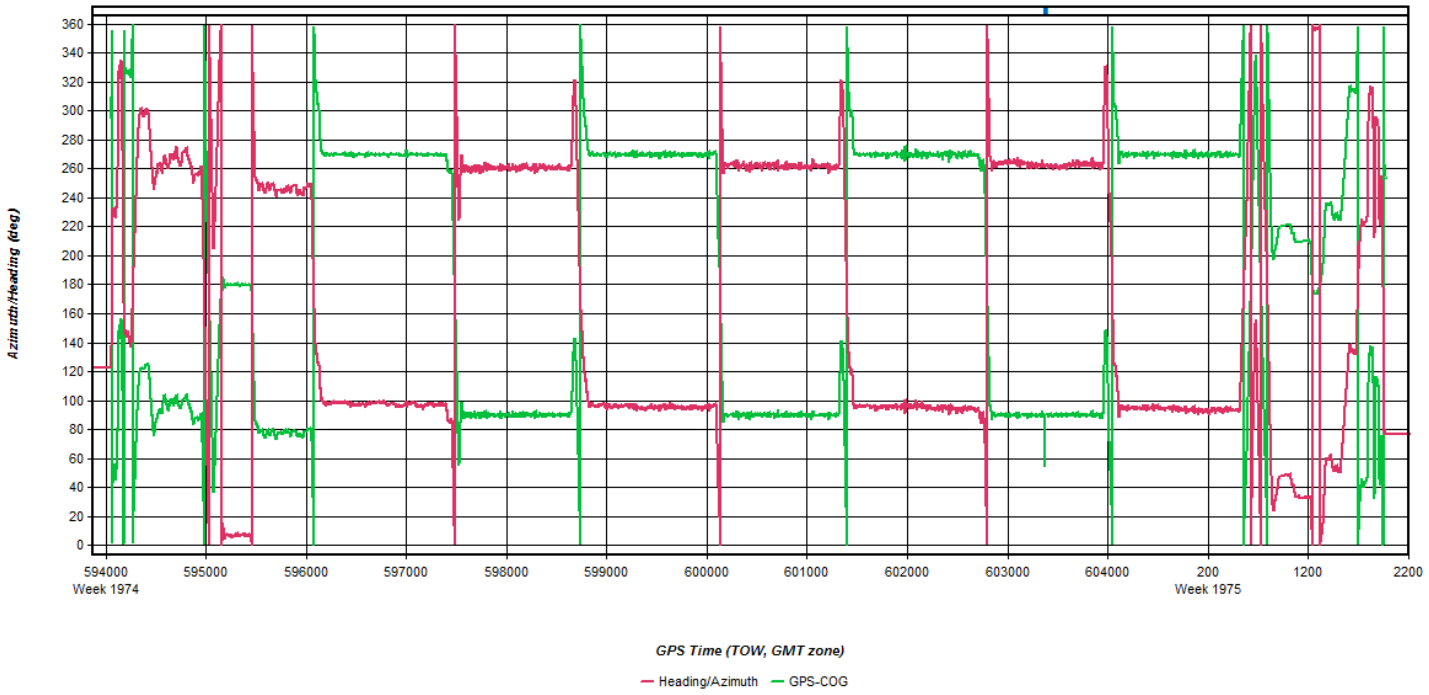

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
0
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Height

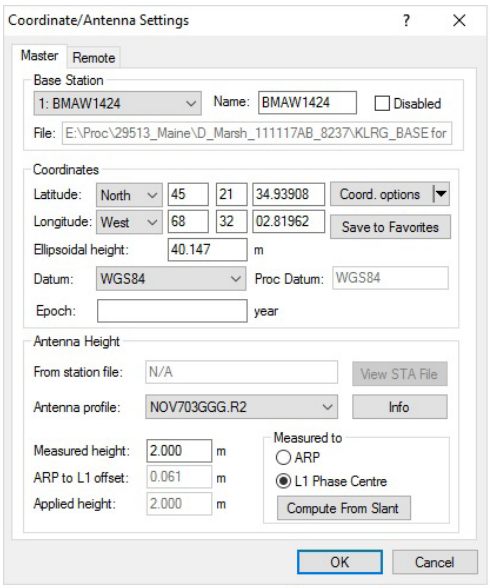

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
East
North
Up

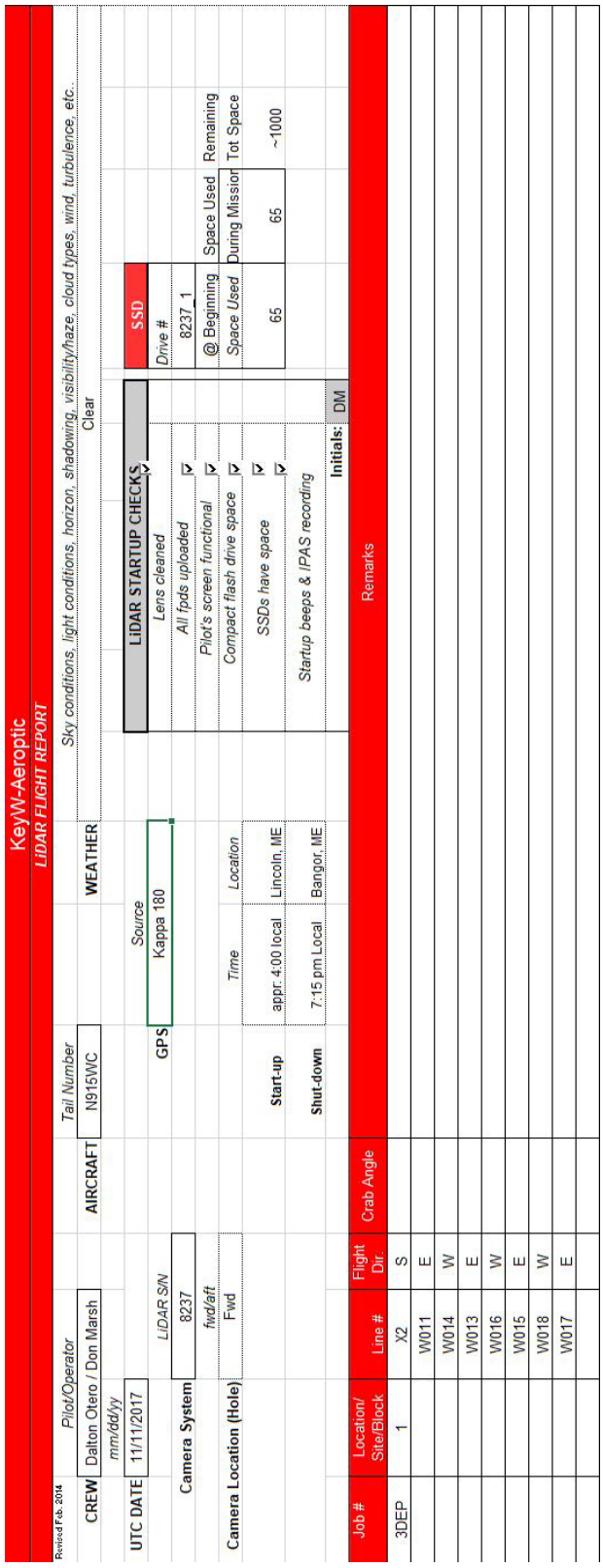

Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0003
0.0002
0.0001
0.0000
-0.0001
-0.0002
-0.0003
-0.0004
-0.0005
-0.0006
-0.0007
-0.0008
-0.0009
-0.0010
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
594000
Week 1974
595000
596000
597000
598000
599000
600000
601000
602000
603000
604000
200
Week 1975
1200
2200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: BMAW1424
Name: BMAW1424
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111117AB_8237\KLRG_BASE.for
Coordinates
Latitude: North 45 21 34.93908
Coord. options
Longitude: West 68 32 02.81962
Save to Favorites
Ellipsoidal height: 40.147 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: N/A
View STA File
Antenna profile: NOV703GGG.R2
Info
Measured height: 2.000 m
ARP to L1 offset: 0.061 m
Applied height: 2.000 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW	Pilot/Operator: Dalton Otero / Don Marsh	AIRCRAFT	Tail Number: N915WC	WEATHER	Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.: Clear								
UTC DATE	mm/dd/yy: 11/11/2017												
Camera System	LiDAR S/N: 8237	GPS	Source: Kappa 180										
Camera Location (Hole)	fwd/aft: Fwd												
				Time	Location								
		Start-up		appr. 4:00 local	Lincoln, ME								
		Shut-down		7:15 pm Local	Bangor, ME								

Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	1	X2	S		
		W011	E		
		W014	W		
		W013	E		
		W016	W		
		W015	E		
		W018	W		
		W017	E		

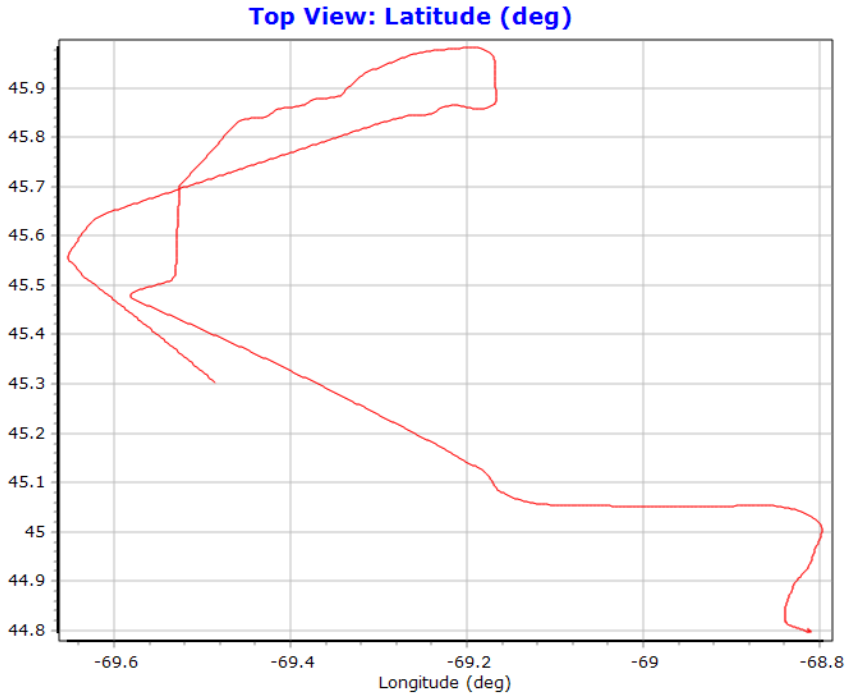
LiDAR STARTUP CHECKS

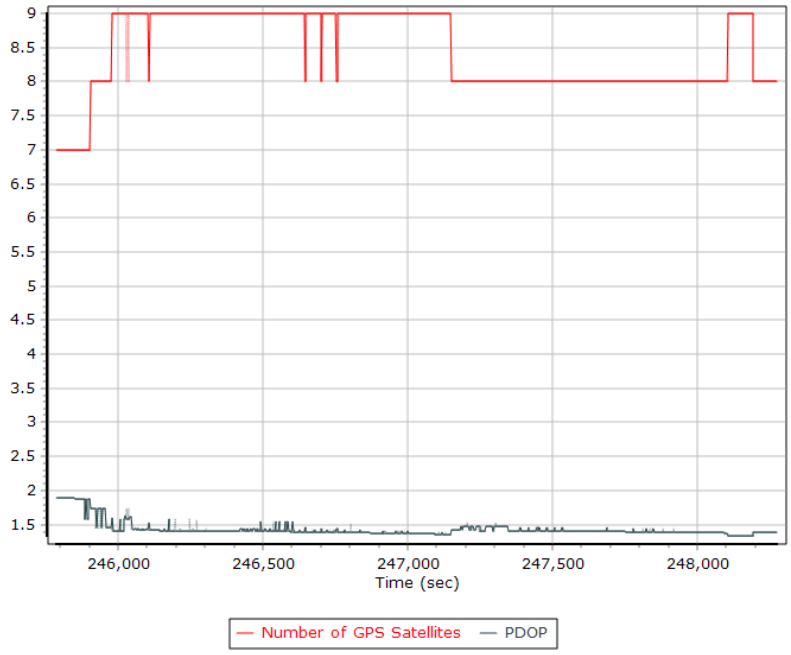
Lens cleaned	
All fpds uploaded	
Pilot's screen functional	
Compact flash drive space	
SSDs have space	
Startup beeps & IPAS recording	
Initials:	DM

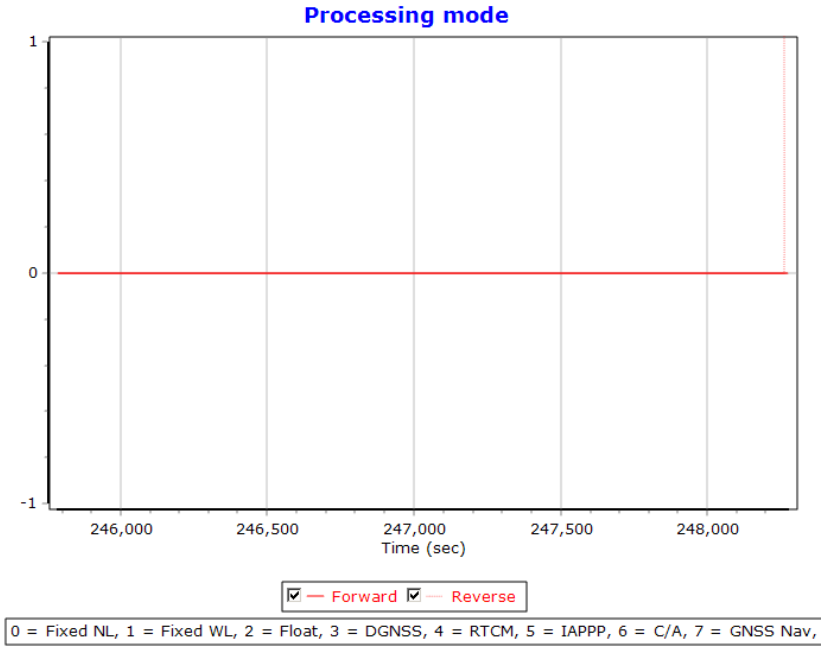
SSD

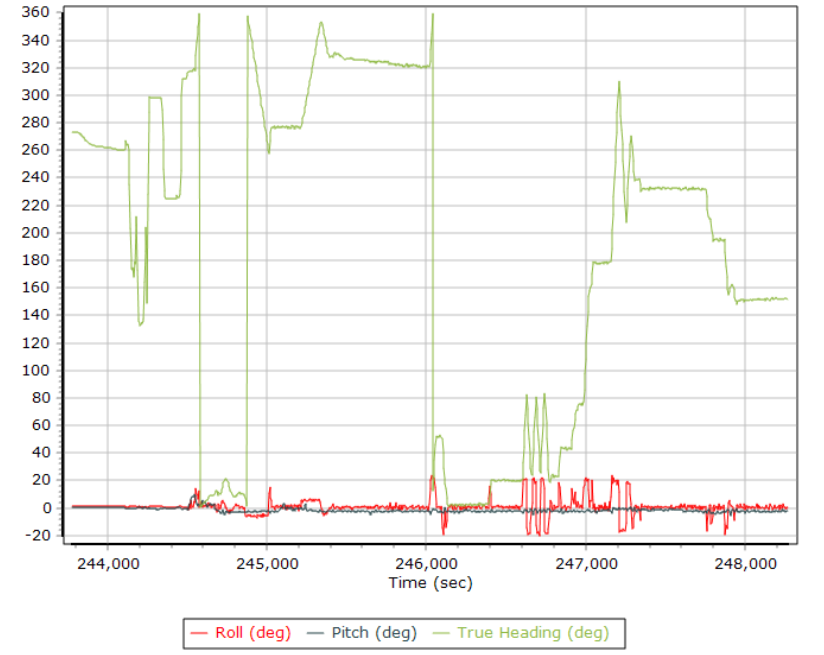
Drive #	8237_1	
	@ Beginning	Space Used
Space Used	During Mission	Tot Space Remaining
65	65	~1000

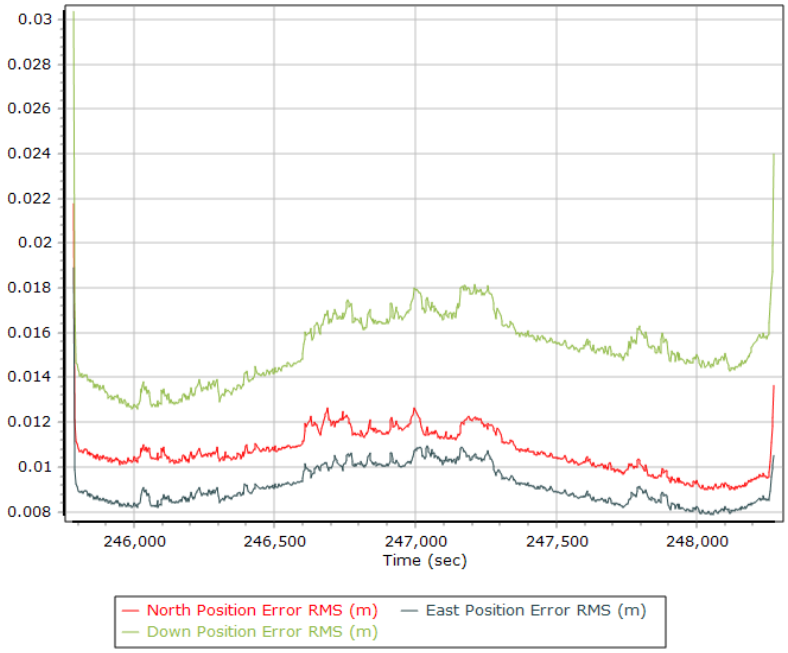
November 14, 2017-A (N1107Q, SN2221256)

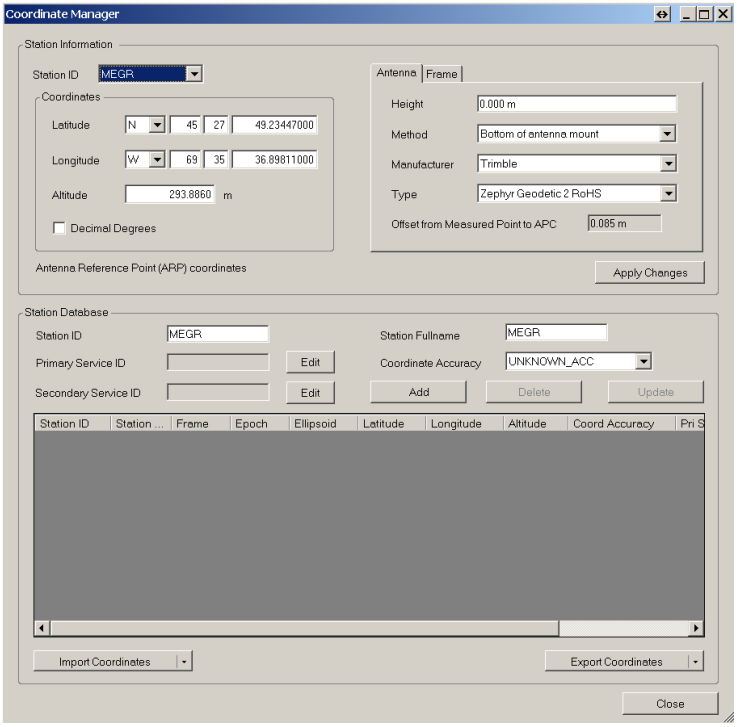

Top View: Latitude (deg)
45.9
45.8
45.7
45.6
45.5
45.4
45.3
45.2
45.1
45
44.9
44.8
-69.6
-69.4
-69.2
-69
-68.8
Longitude (deg)


9
8.5
8
7.5
7
6.5
6
5.5
5
4.5
4
3.5
3
2.5
2
1.5
246,000
246,500
247,000
247,500
248,000
Time (sec)
Number of GPS Satellites
PDOP

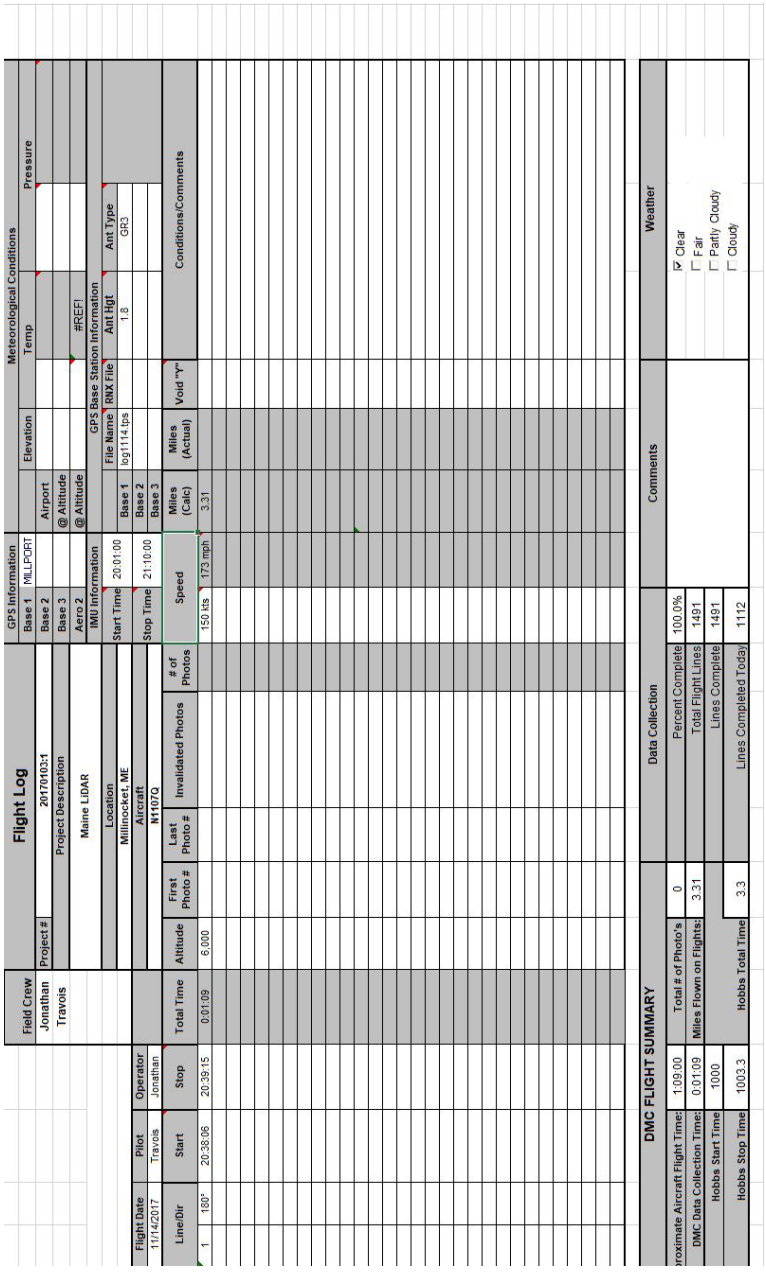

Processing mode
1
0
-1
246,000
246,500
247,000
247,500
248,000
Time (sec)
Forward
Reverse
0 = Fixed NL, 1 = Fixed WL, 2 = Float, 3 = DGNSS, 4 = RTCM, 5 = IAPPP, 6 = C/A, 7 = GNSS Nav,


360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
-20
244,000
245,000
246,000
247,000
248,000
Time (sec)
Roll (deg)
Pitch (deg)
True Heading (deg)

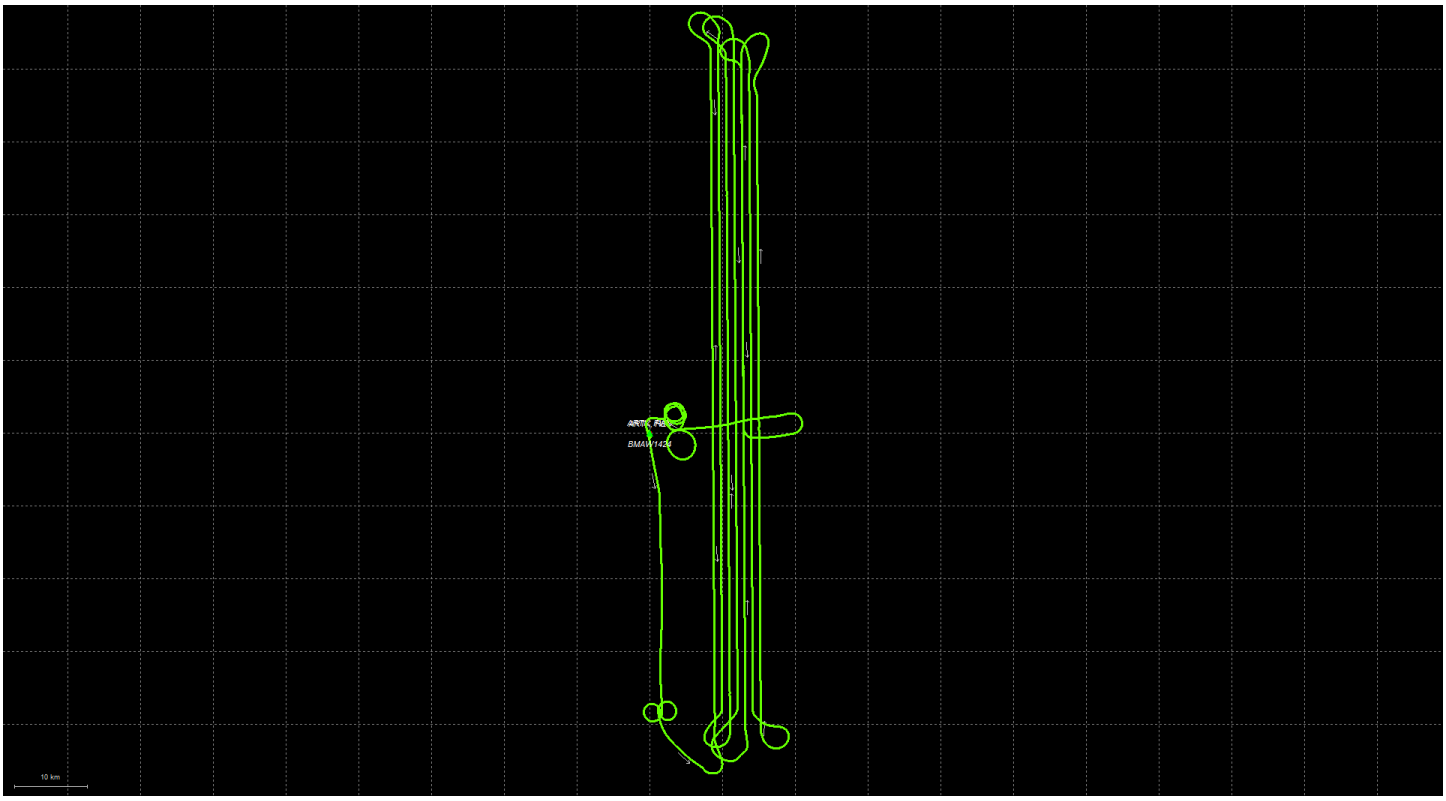

0.03
0.028
0.026
0.024
0.022
0.02
0.018
0.016
0.014
0.012
0.01
0.008
246,000
246,500
247,000
247,500
248,000
Time (sec)
North Position Error RMS (m)
East Position Error RMS (m)
Down Position Error RMS (m)

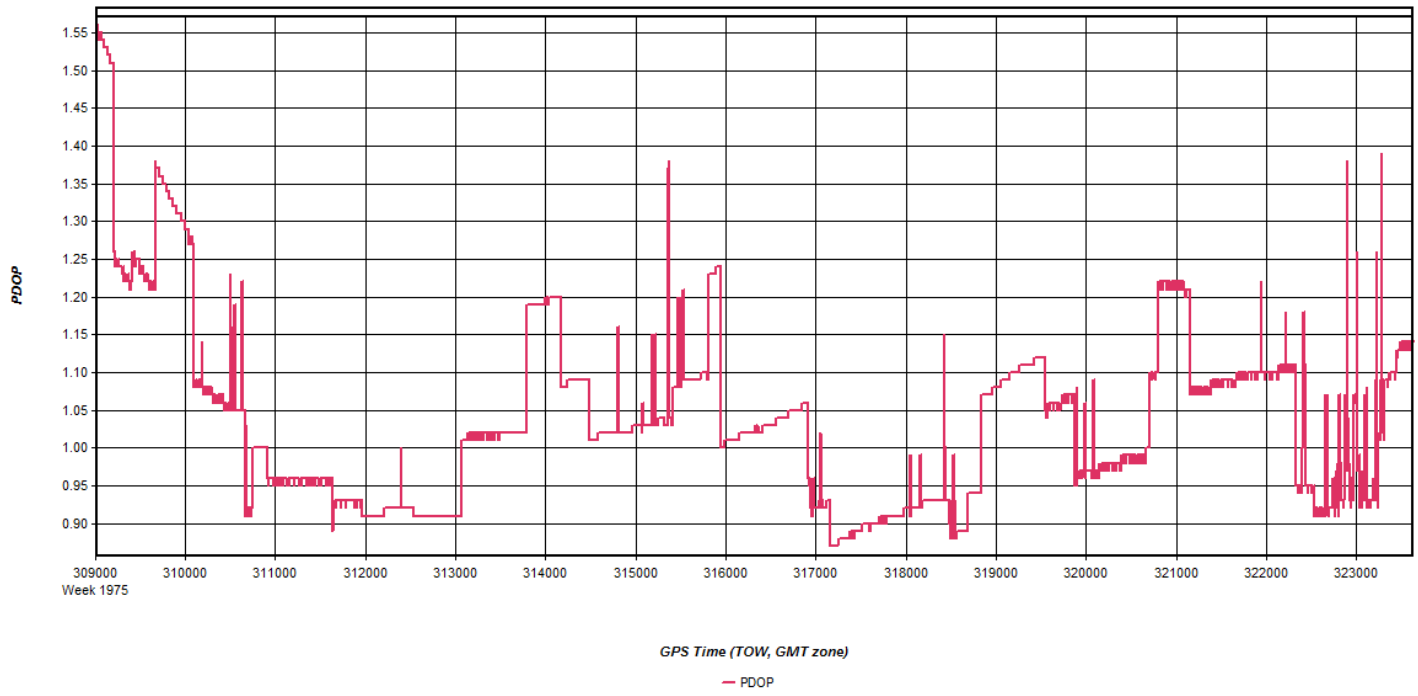

Coordinate Manager
Station Information
Station ID
MEGR
Coordinates
Latitude
N
45
27
49.23447000
Longitude
W
69
35
36.89811000
Altitude
293.8860
m
Decimal Degrees
Antenna Reference Point (ARP) coordinates
Antenna
Frame
Height
0.000 m
Method
Bottom of antenna mount
Manufacturer
Trimble
Type
Zephyr Geodetic 2 RoHS
Offset from Measured Point to APC
0.085 m
Apply Changes
Station Database
Station ID
MEGR
Station Fullname
MEGR
Primary Service ID
Edit
Coordinate Accuracy
UNKNOWN_ACC
Secondary Service ID
Edit
Add
Delete
Update
Station ID
Station ...
Frame
Epoch
Ellipsoid
Latitude
Longitude
Altitude
Coord Accuracy
Pri S
Import Coordinates
Export Coordinates
Close

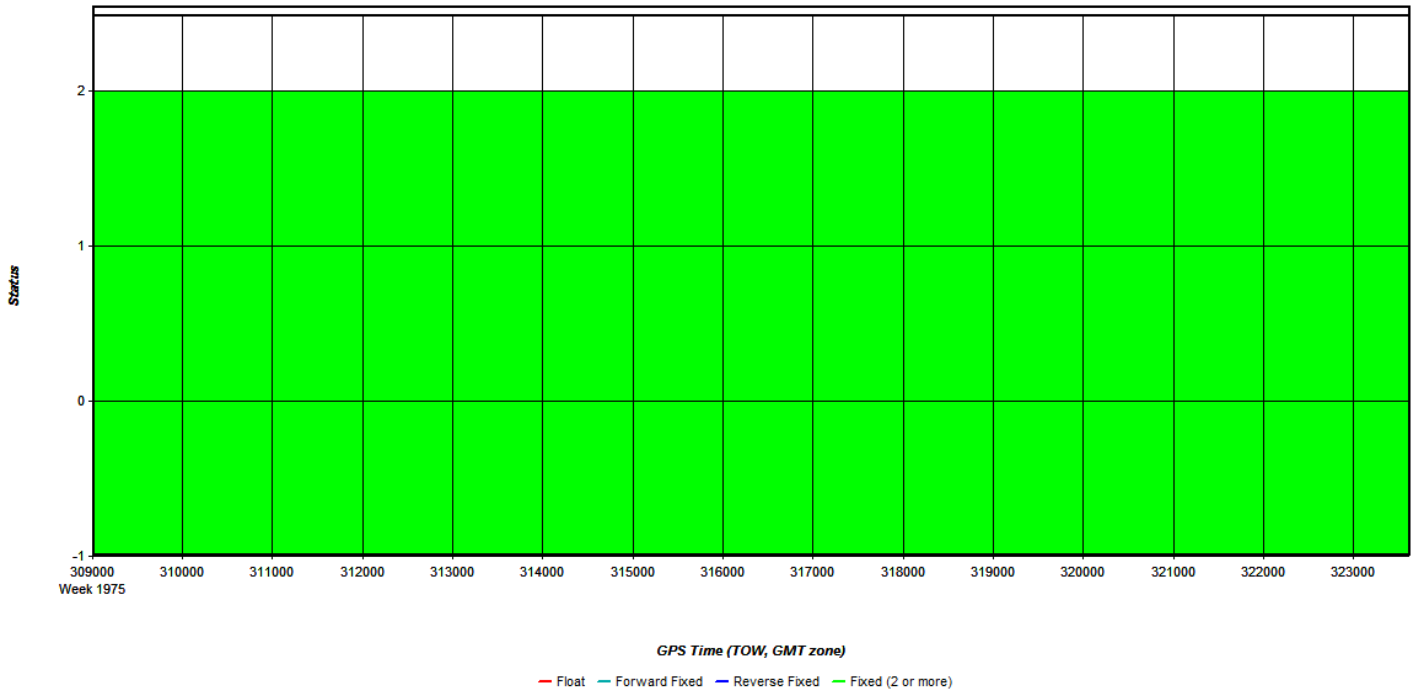
Flight Log

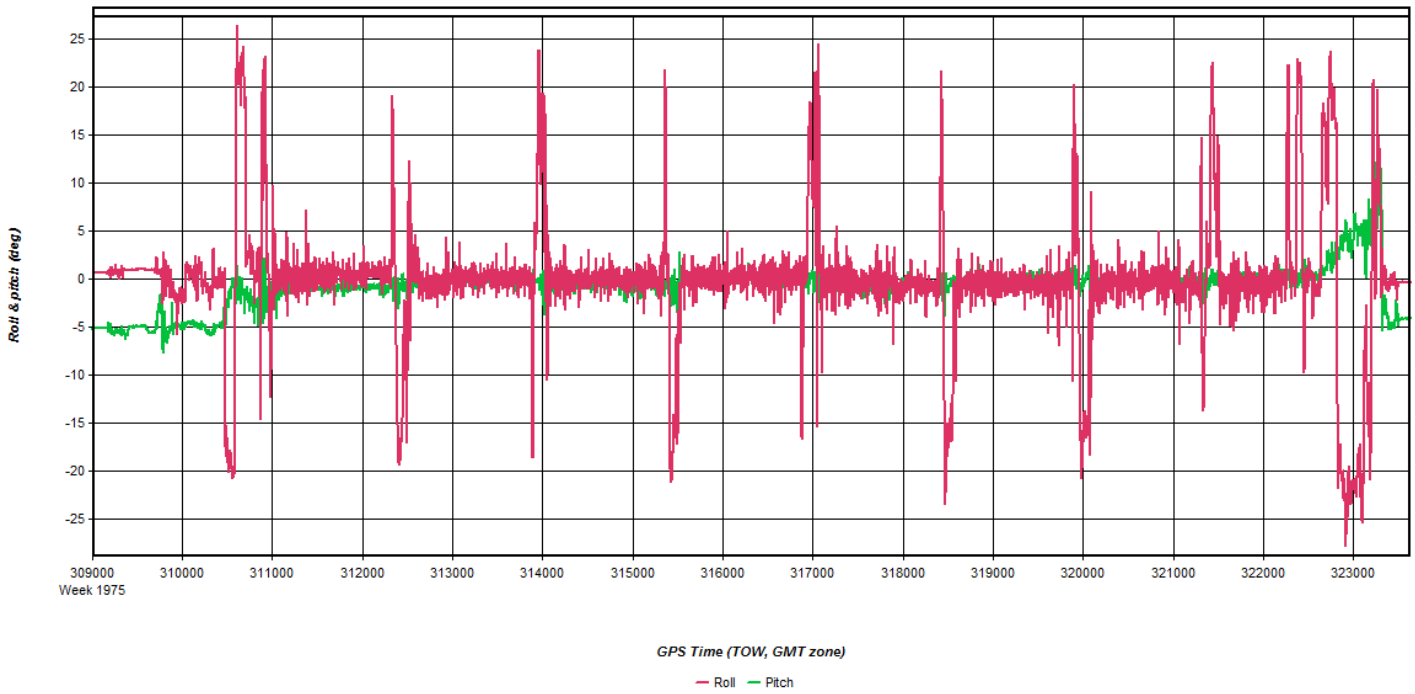

Flight Log
Field Crew
Jonathan
Travois
Project #
20170403:1
Project Description
Maine LiDAR
Location
Millinocket, ME
Aircraft
N1107Q
GPS Information
Base 1 KMLPORT
Base 2
Base 3
Aero 2
IMU Information
Start Time 20:01:00
Stop Time 21:10:00
Meteorological Conditions
Elevation
Airport
@ Altitude
@ Altitude
Temp
#REF!
Pressure
GPS Base Station Information
File Name
RINX File
Ant Hgt
Ant Type
Base 1
log1114.tps
1.8
GR3
Base 2
Base 3
Flight Date
11/14/2017
Pilot
Travis
Operator
Jonathan
Line/Dir
Start
Stop
Total Time
Altitude
First Photo #
Last Photo #
Invalidated Photos
# of Photos
Speed
Miles (Calc)
Miles (Actual)
Void "Y"
Conditions/Comments
1
180°
20:38:06
20:39:15
0:01:09
6,000
150 kts
173 mph
3.31
DMC FLIGHT SUMMARY
Approximate Aircraft Flight Time: 1:09:00
DMC Data Collection Time: 0:01:09
Hobbs Start Time 1000
Hobbs Stop Time 1003.3
Total # of Photo's 0
Miles Flown on Flights: 3.31
Hobbs Total Time 3.3
Data Collection
Percent Complete 100.0%
Total Flight Lines 1491
Lines Complete 1491
Lines Completed Today 1112
Comments
Weather
Clear
Fair
Partly Cloudy
Cloudy

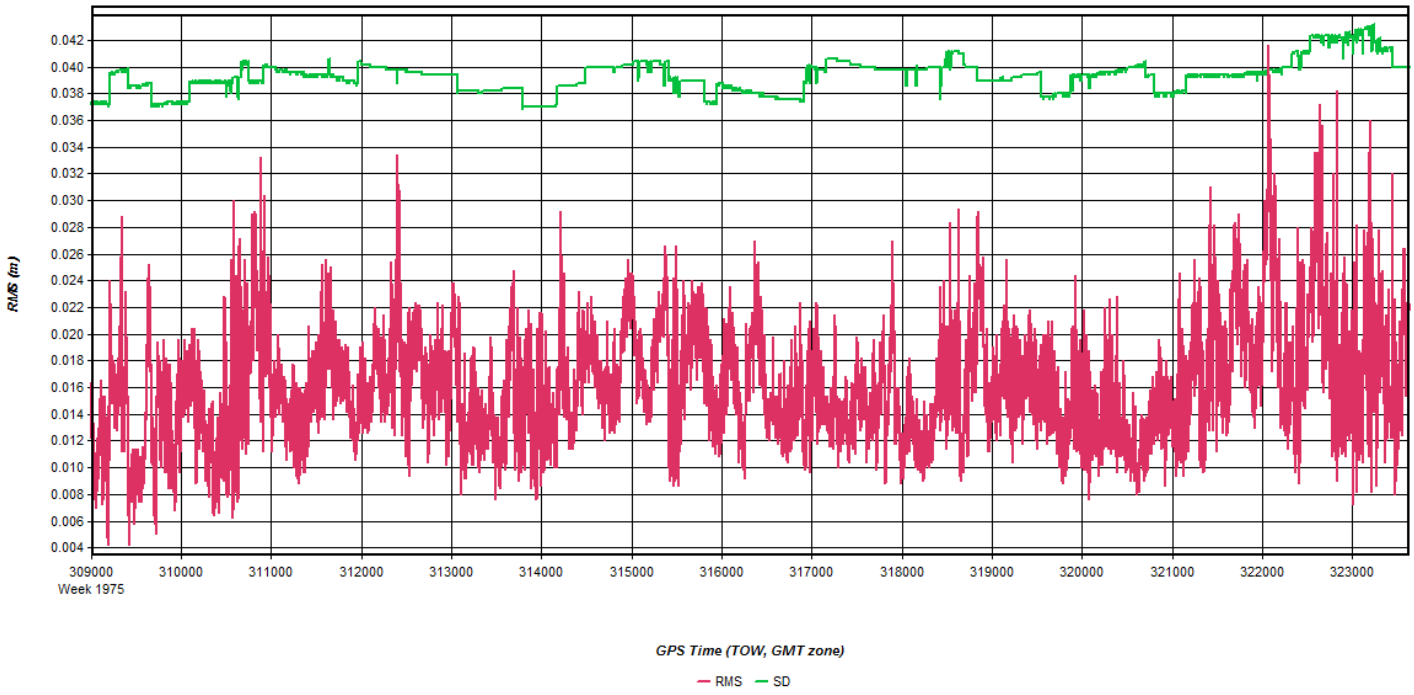
November 15, 2017-A (N915WC, SN8237)

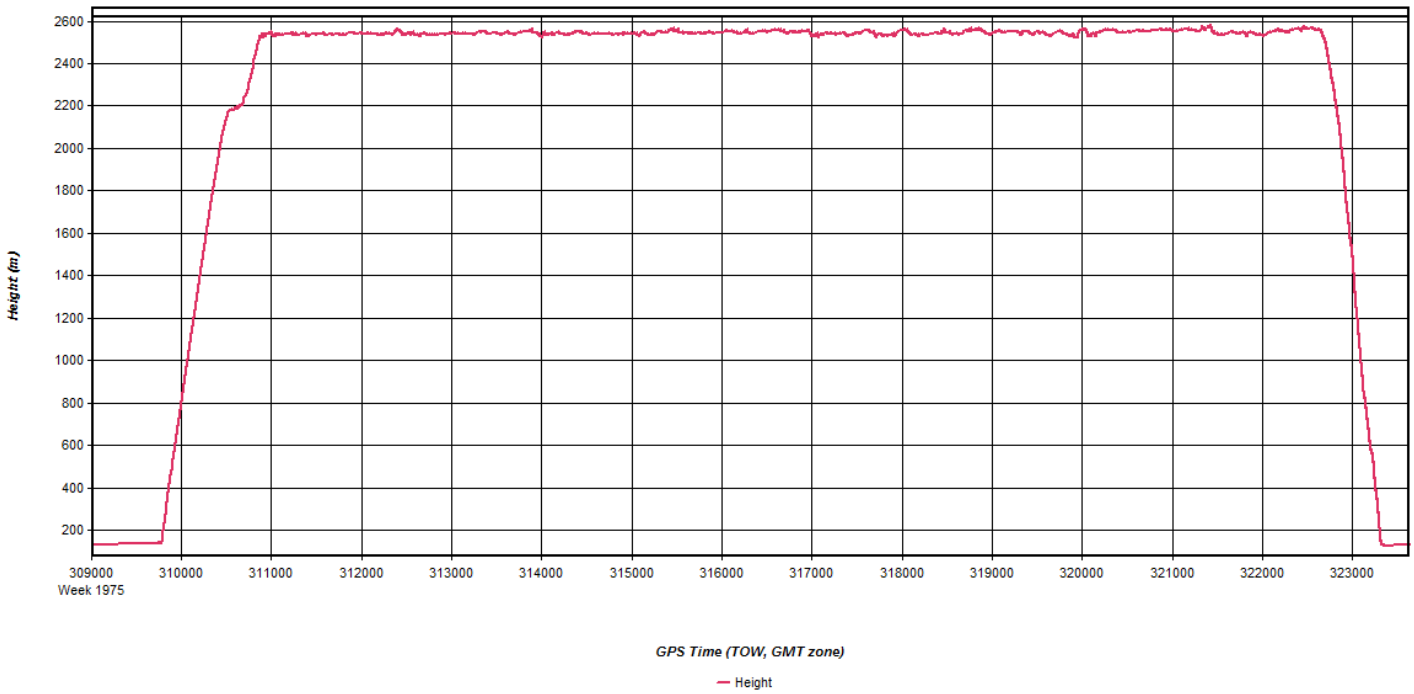


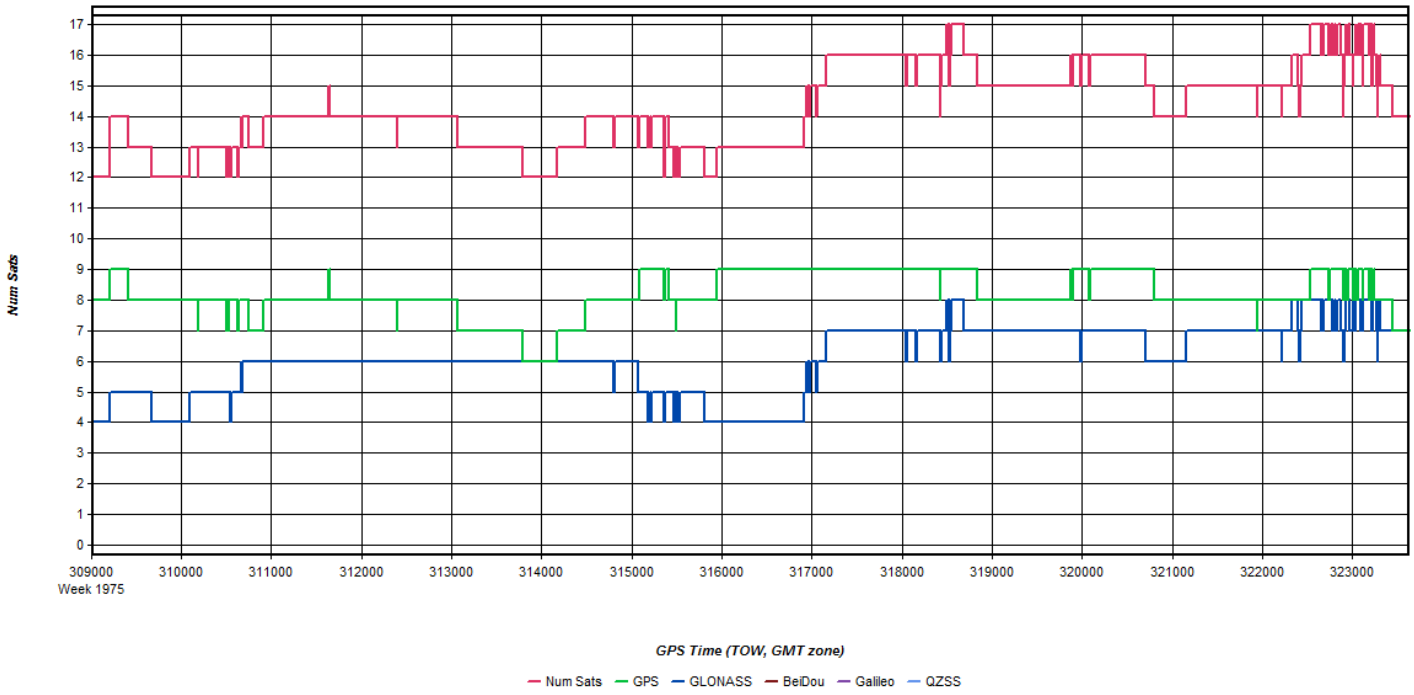

PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
PDOP

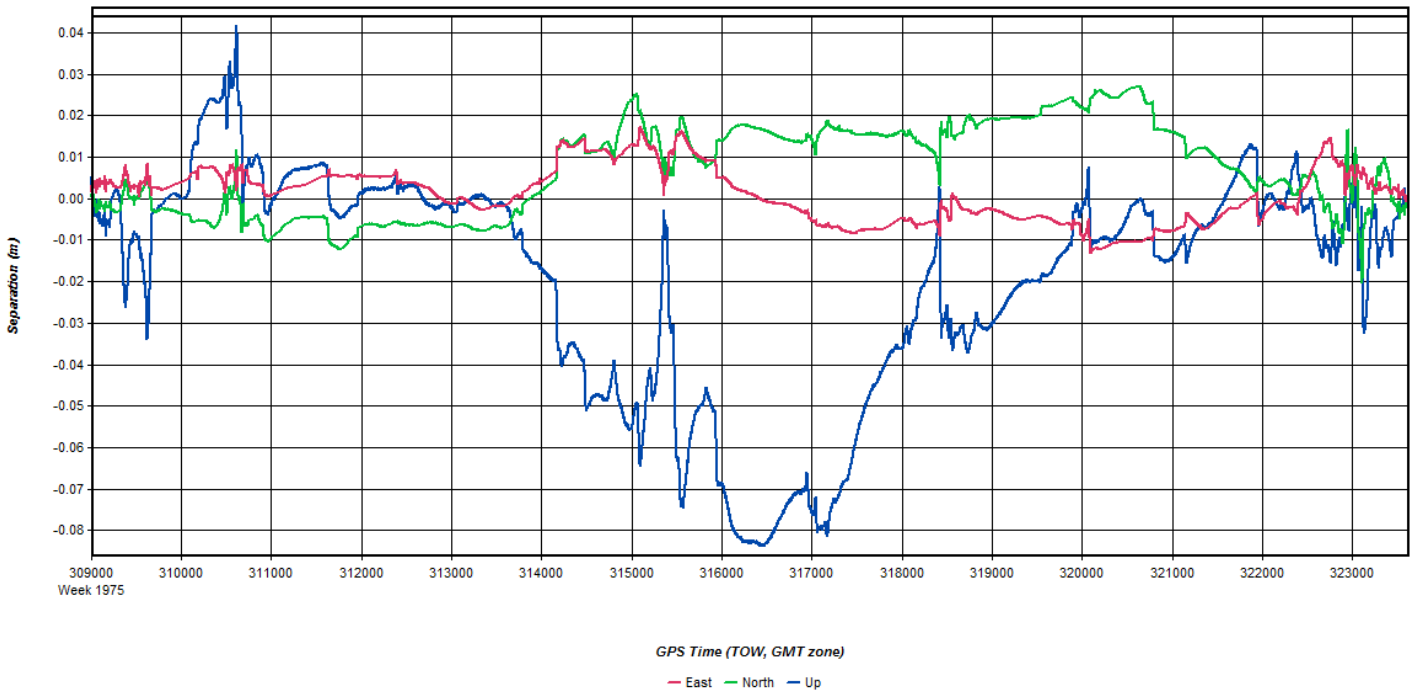

Status
2
1
0
-1
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

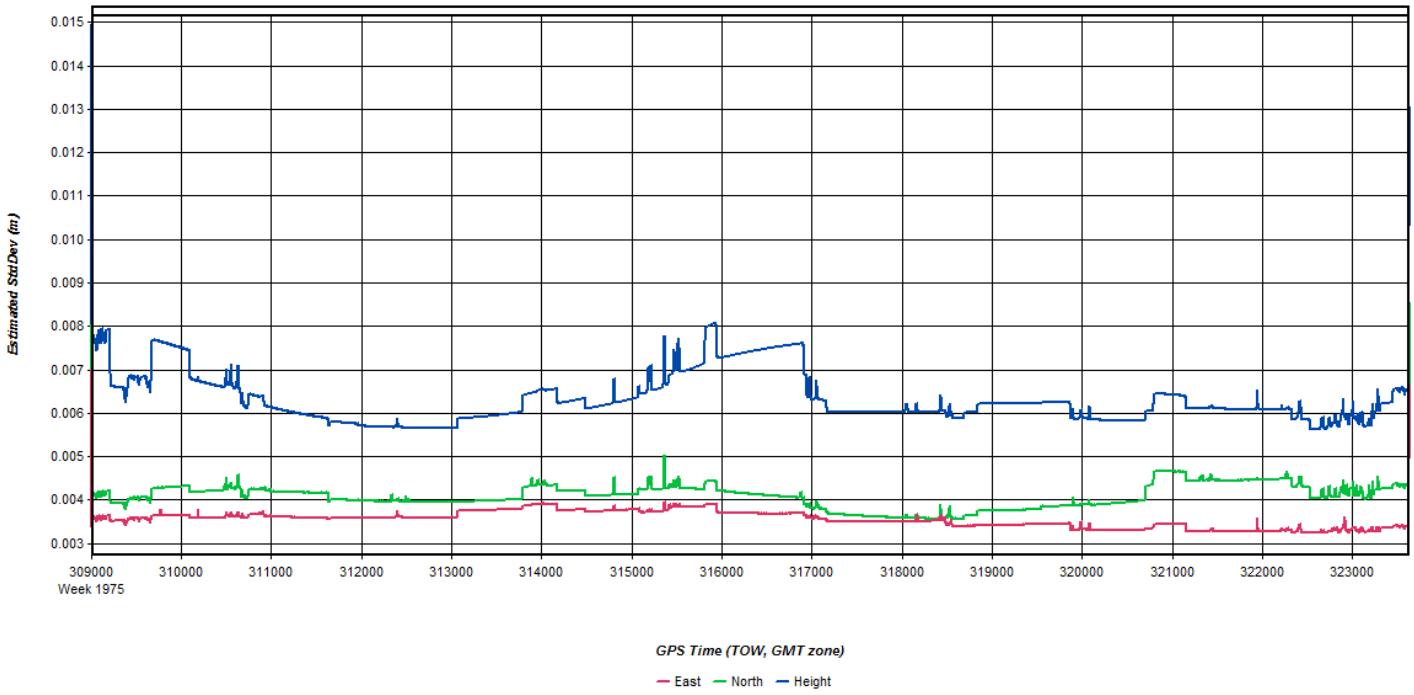

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Roll
Pitch

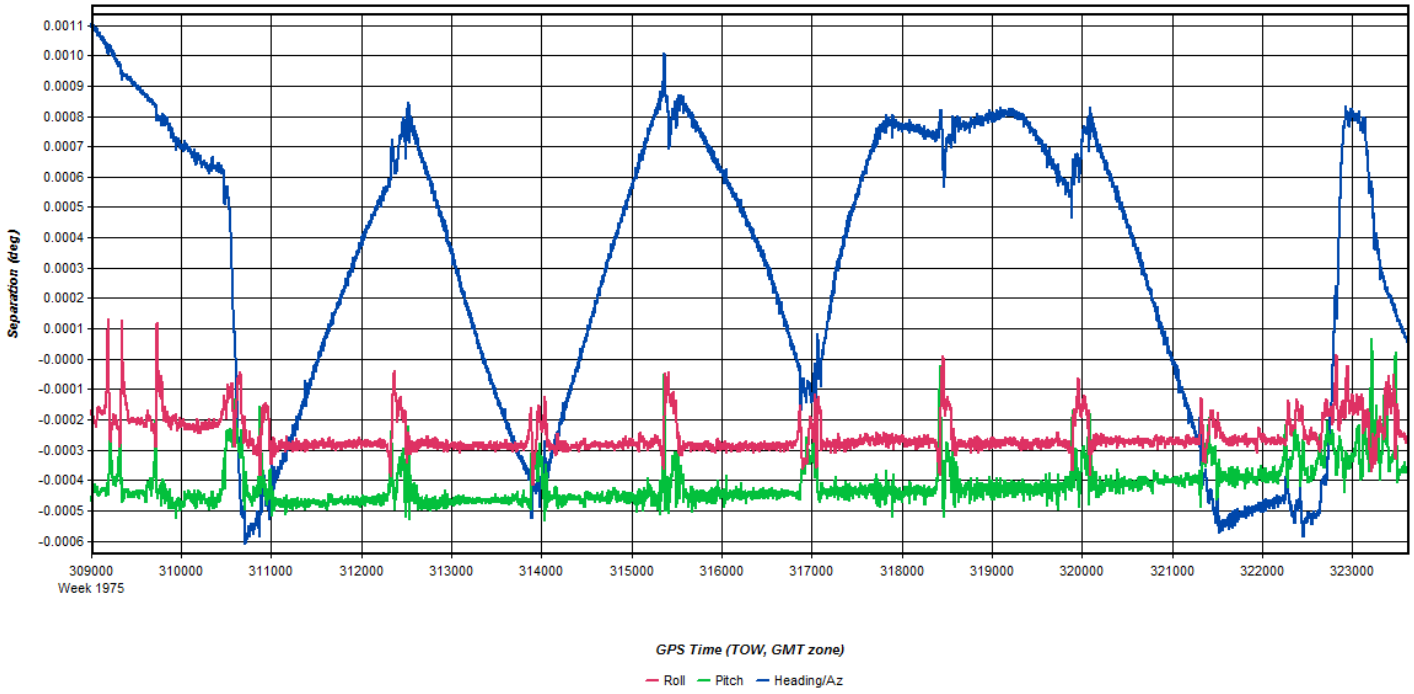

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
RMS
SD

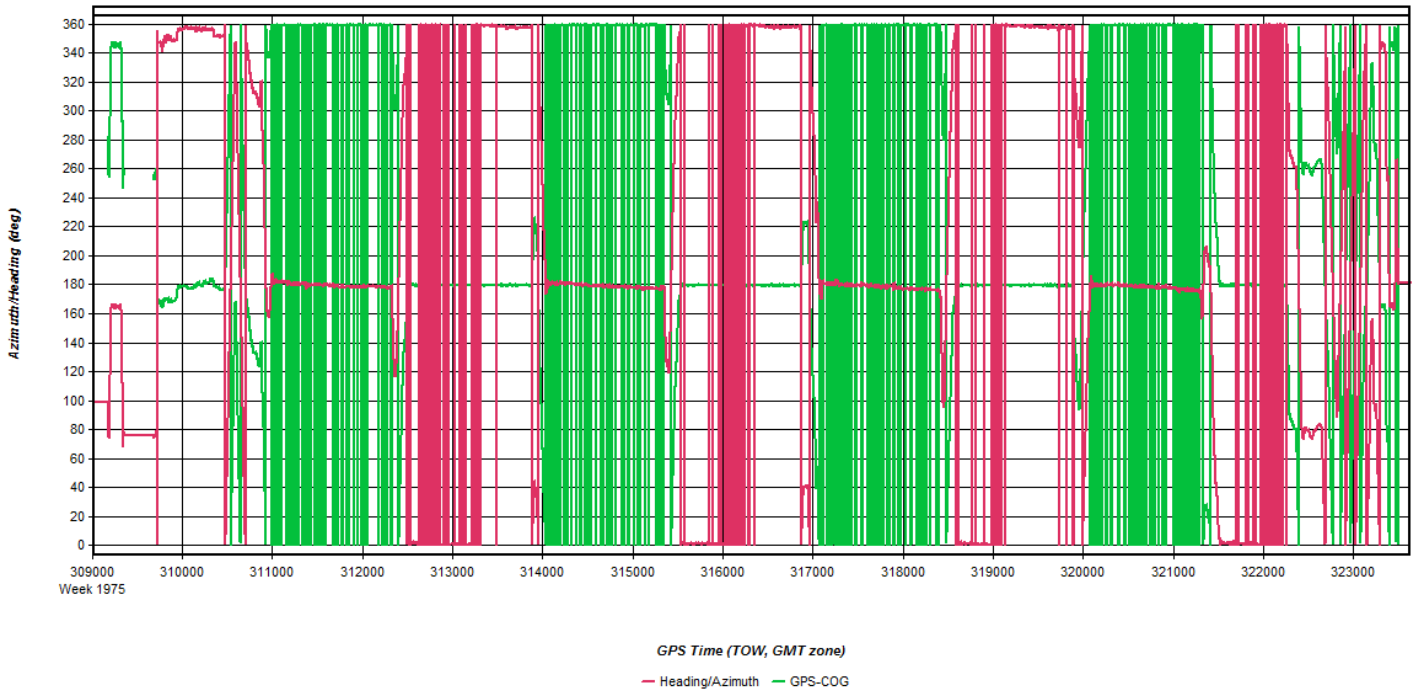

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Height

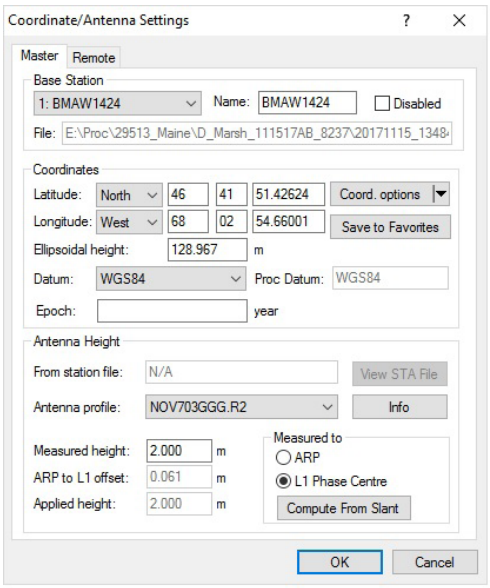

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
East
North
Up

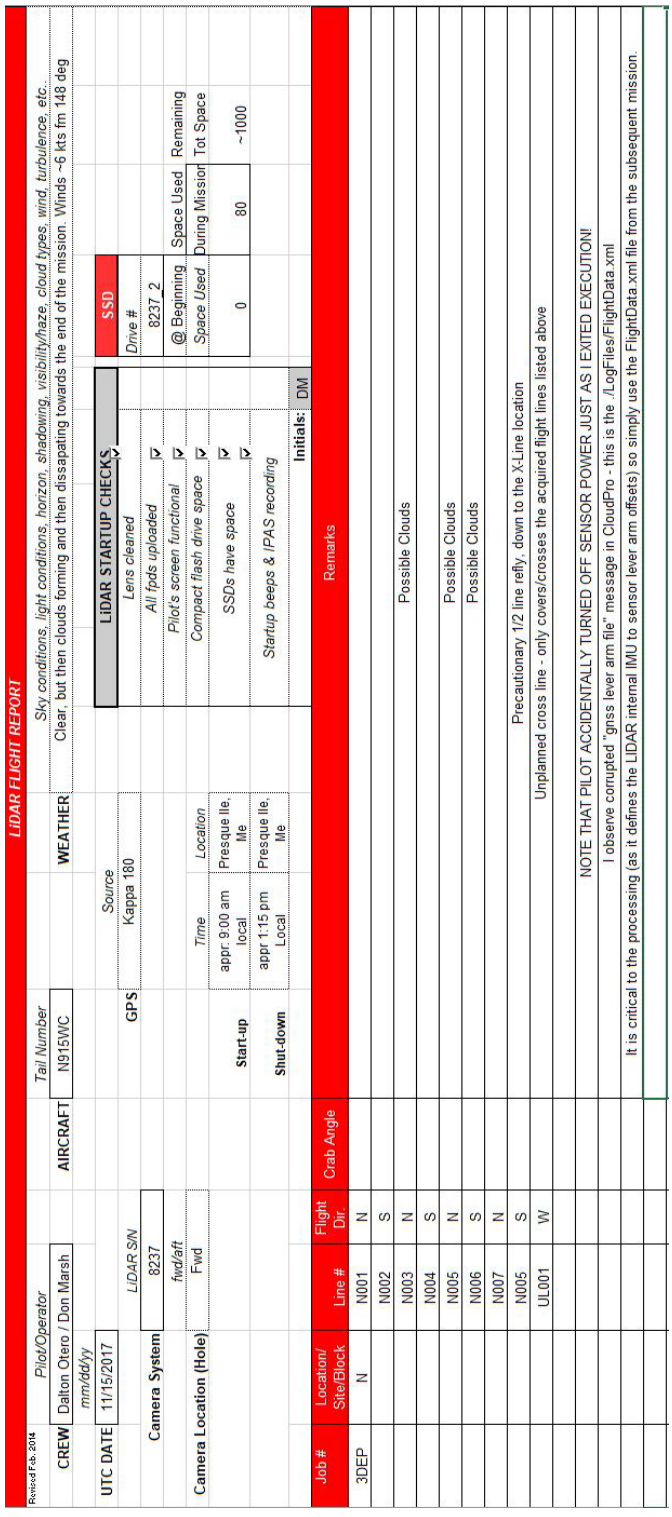

Estimated StdDev (m)
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
-0.0000
-0.0001
-0.0002
-0.0003
-0.0004
-0.0005
-0.0006
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
309000
Week 1975
310000
311000
312000
313000
314000
315000
316000
317000
318000
319000
320000
321000
322000
323000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: BMAW1424
Name: BMAW1424
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111517AB_8237\20171115_1348
Coordinates
Latitude: North 46 41 51.42624
Coord. options
Longitude: West 68 02 54.66001
Save to Favorites
Ellipsoidal height: 128.967 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: N/A
View STA File
Antenna profile: NOV703GGG.R2
Info
Measured height: 2.000 m
ARP to L1 offset: 0.061 m
Applied height: 2.000 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW	Pilot/Operator	AIRCRAFT	Tail Number
	Dalton Otero / Don Marsh	N915WC	

UTC DATE	mm/dd/yy
	11/15/2017

Camera System	LiDAR S/N
	8237

Camera Location (Hole)	fwd/aft
	Fwd

	GPS	Source
		Kappa 180

	Time	Location
Start-up	appr. 9:00 am local	Presque Ile, Me
Shut-down	appr 1:15 pm Local	Presque Ile, Me

WEATHER

Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.:
Clear, but then clouds forming and then dissapating towards the end of the mission. Winds ~6 kts fm 148 deg

LiDAR STARTUP CHECKS

Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑

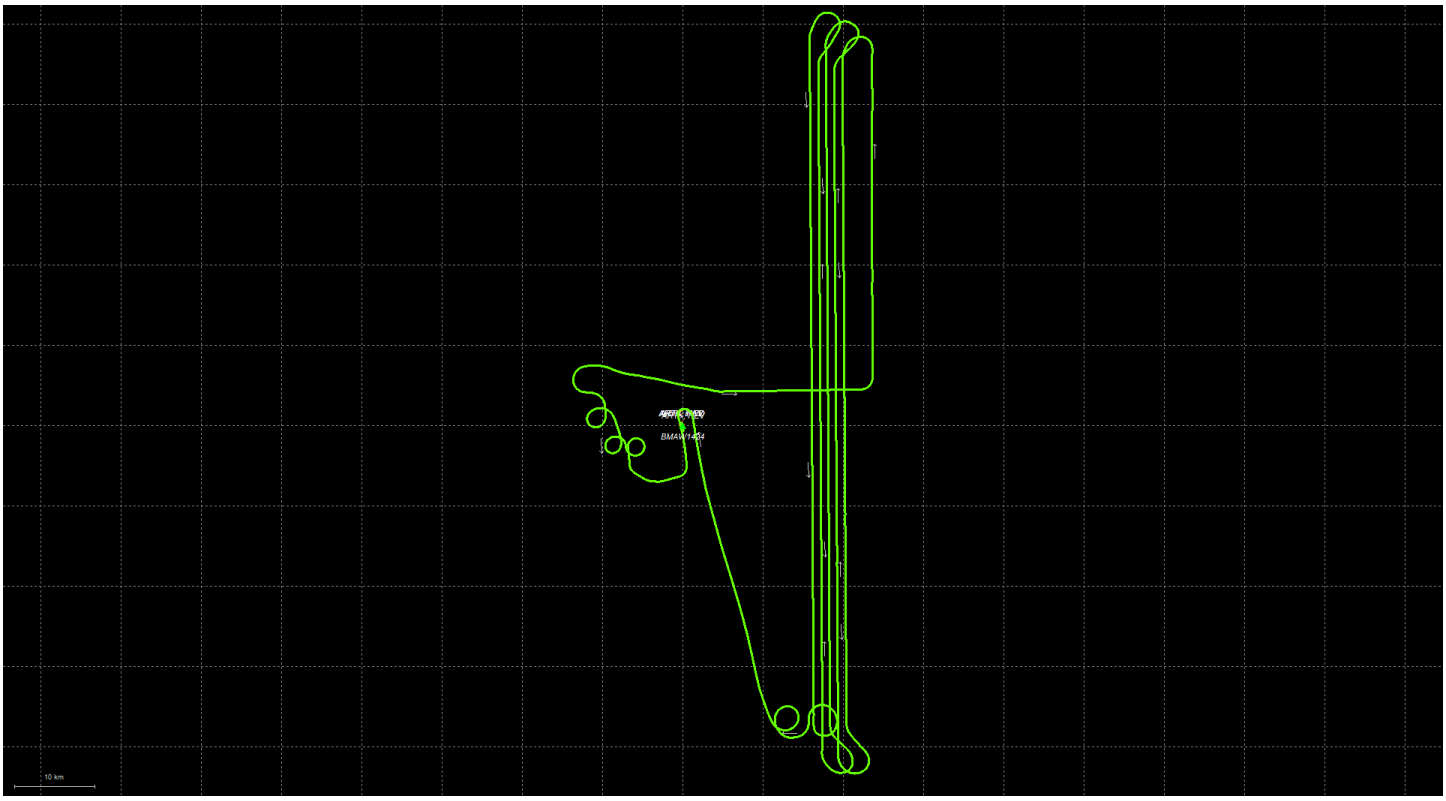
Initials: DM

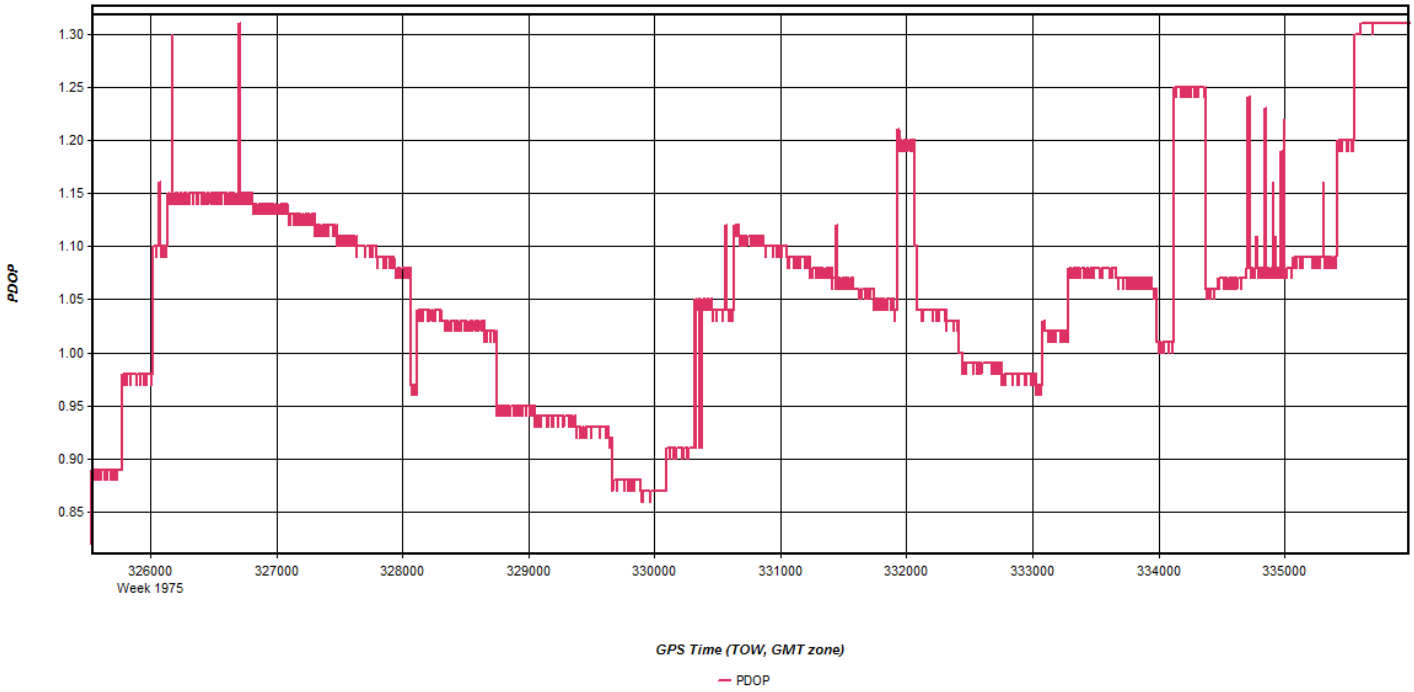
SSD

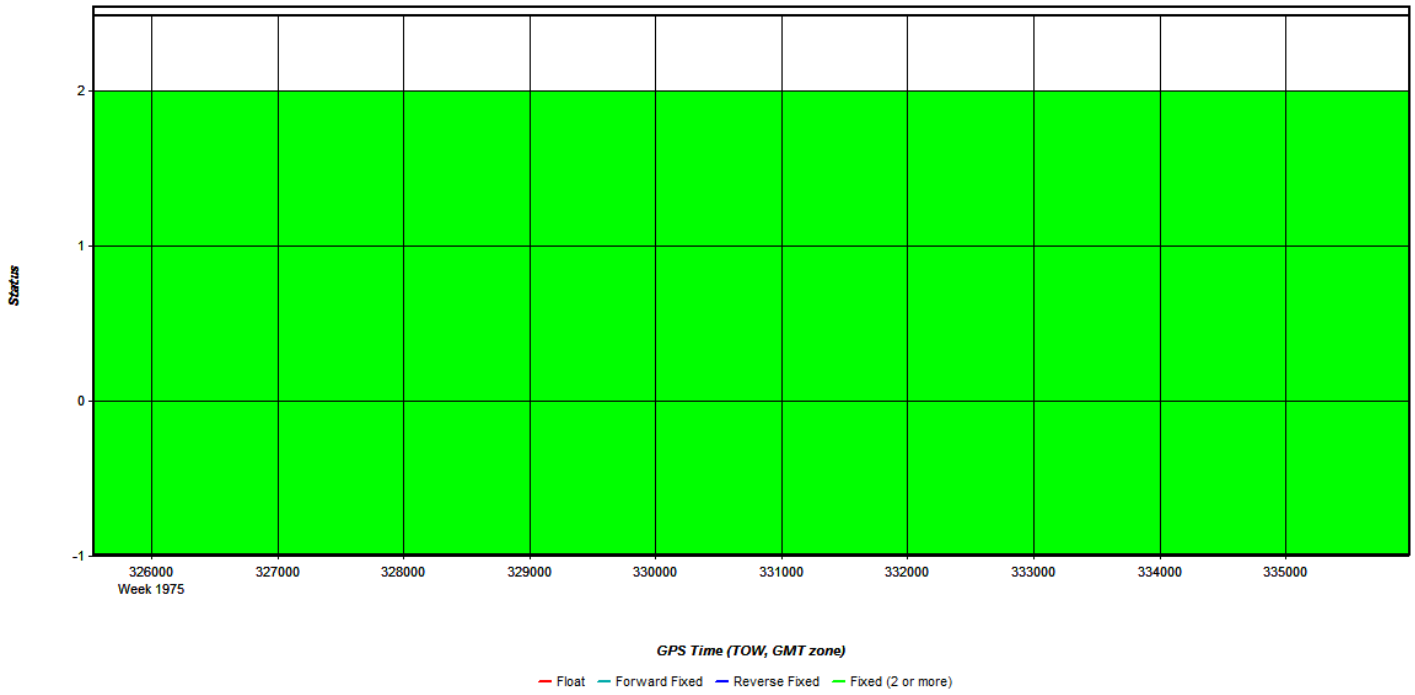
Drive #	Space Used @ Beginning	Space Used During Mission	Remaining Tot Space
8237_2	0	80	~1000

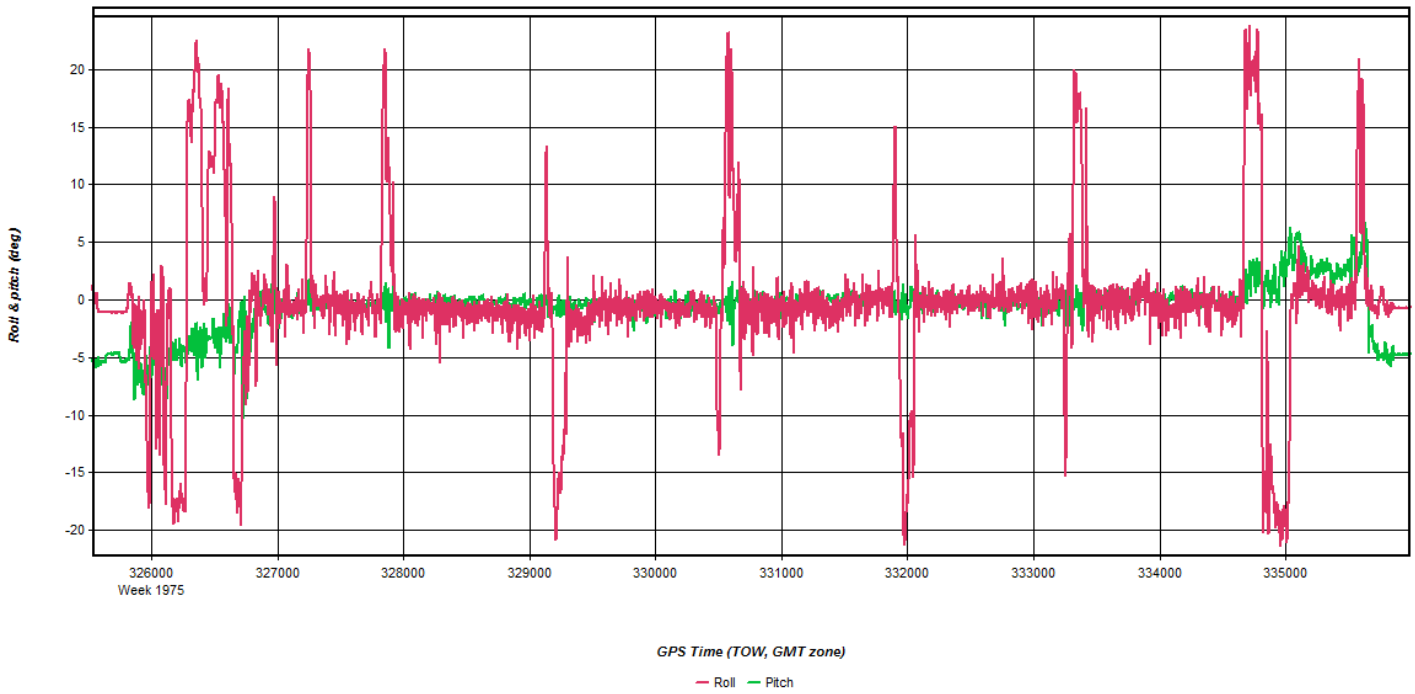
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	N	N001	N		
		N002	S		
		N003	N		Possible Clouds
		N004	S		
		N005	N		Possible Clouds
		N006	S		Possible Clouds
		N007	N		
		N005	S		Precautionary 1/2 line refly, down to the X-Line location
		UL001	W		Unplanned cross line - only covers/crosses the acquired flight lines listed above
					NOTE THAT PILOT ACCIDENTALLY TURNED OFF SENSOR POWER JUST AS I EXITED EXECUTION!!
					I observe corrupted "gnss lever arm file" message in CloudPro - this is the ./LogFiles/FlightData.xml
					It is critical to the processing (as it defines the LiDAR internal IMU to sensor lever arm offsets) so simply use the FlightData.xml file from the subsequent mission.

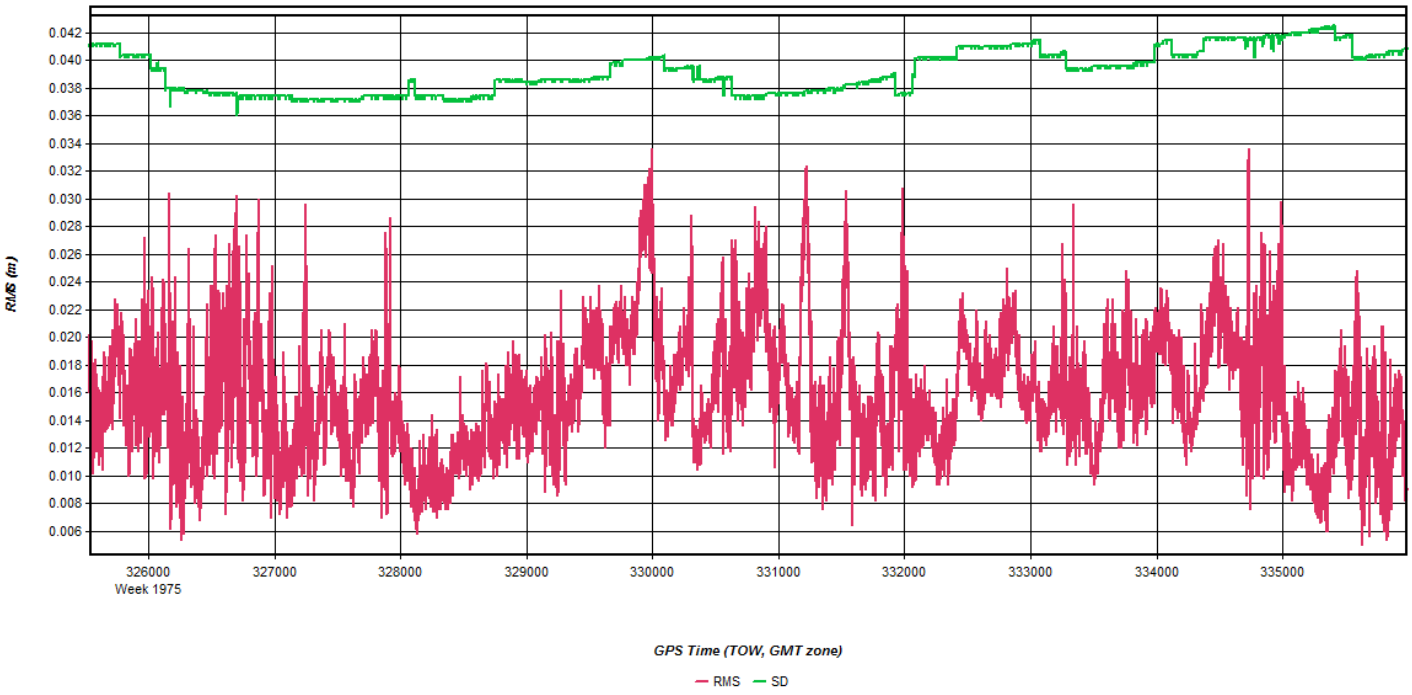
November 15, 2017-B (N915WC, SN8237)

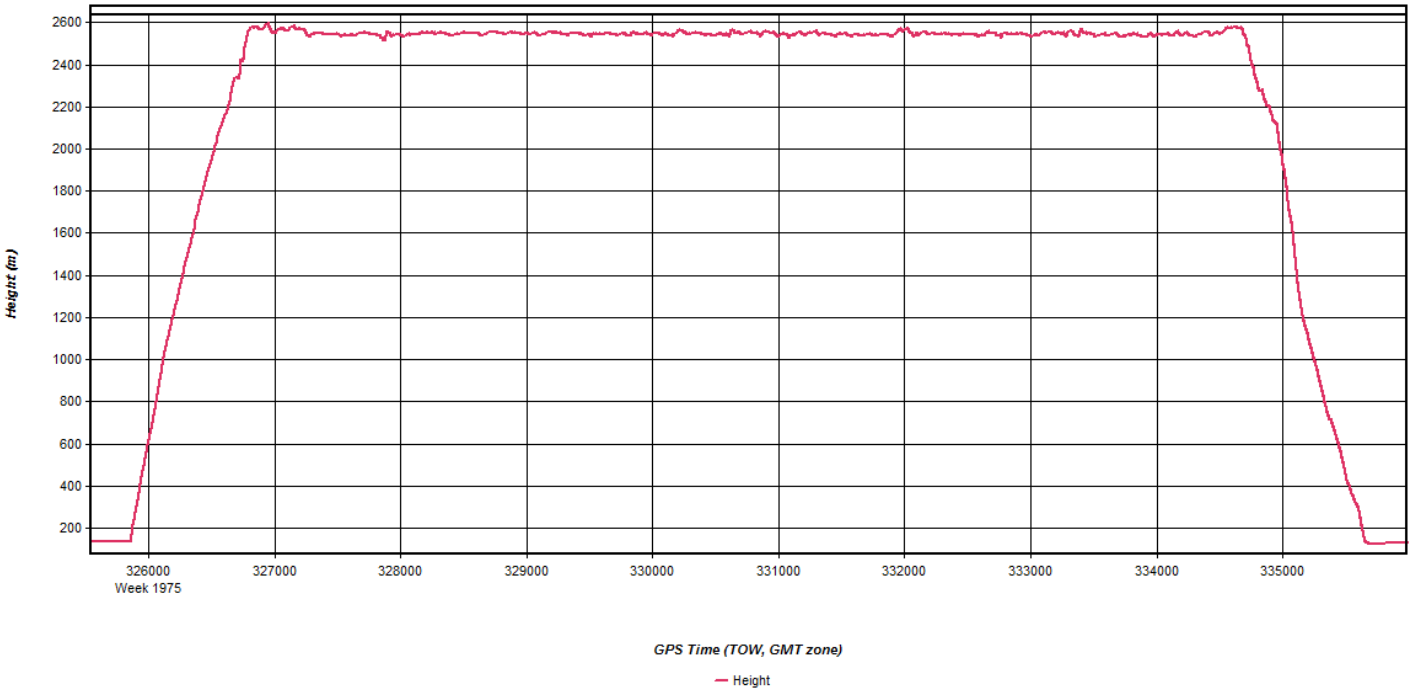


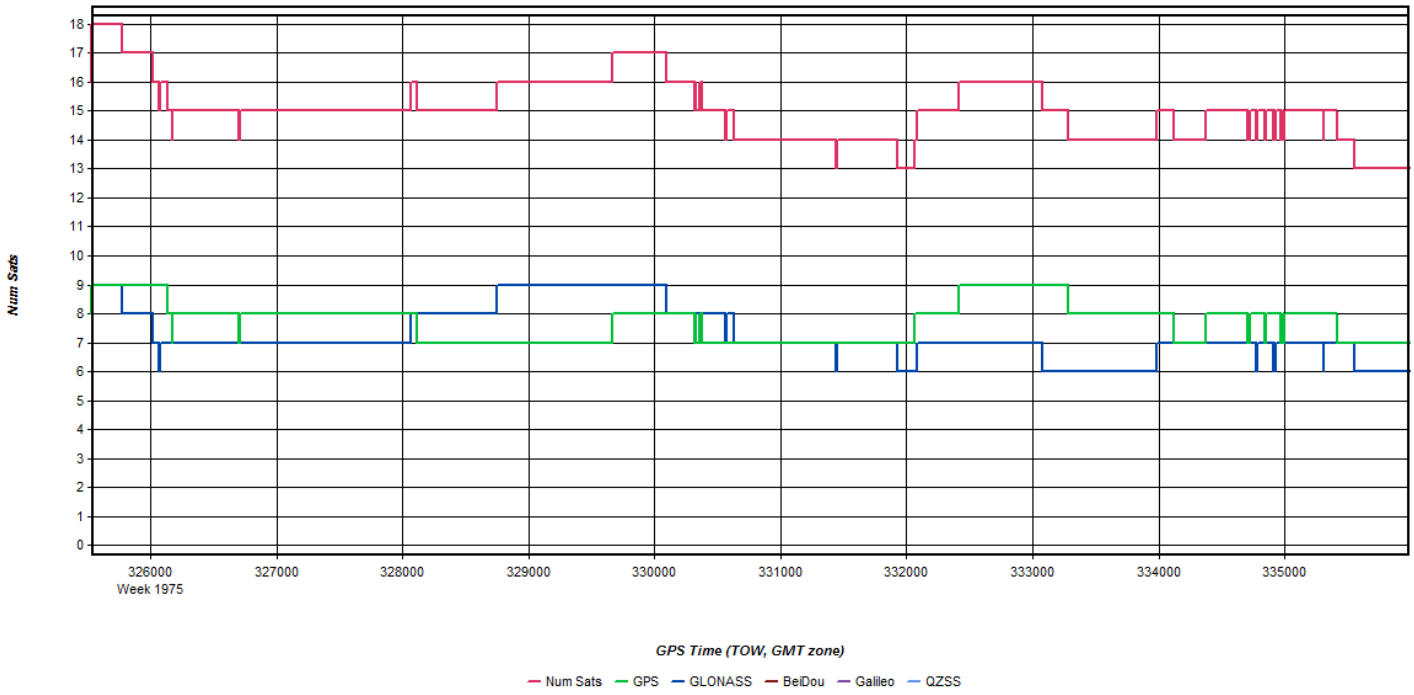

PDOP
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
PDOP

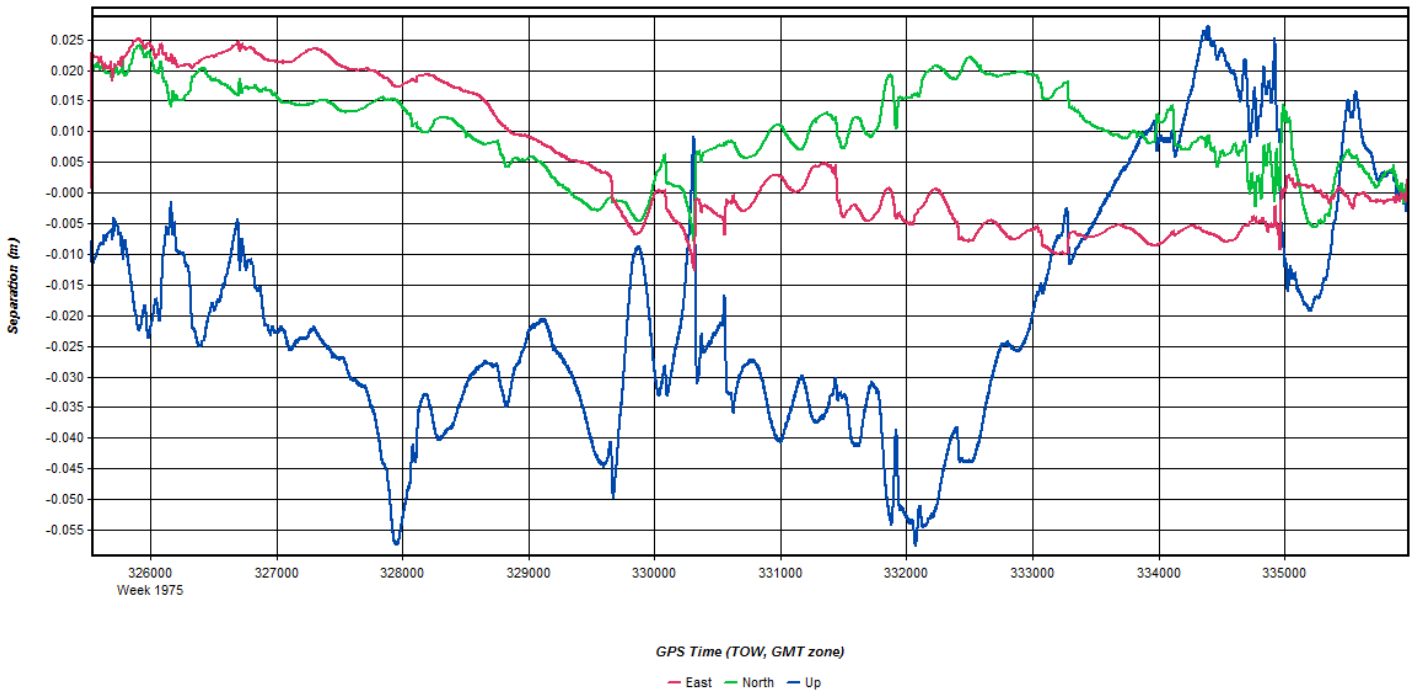

Status
2
1
0
-1
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

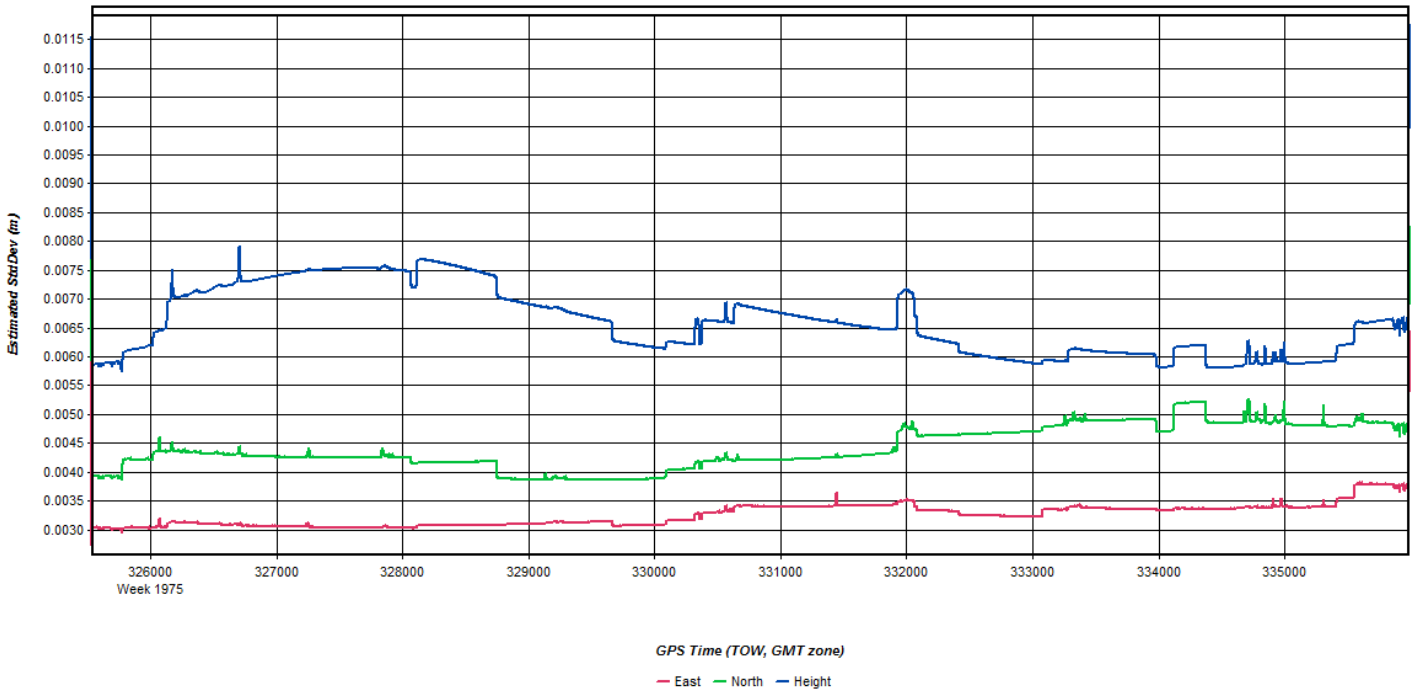

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Roll
Pitch

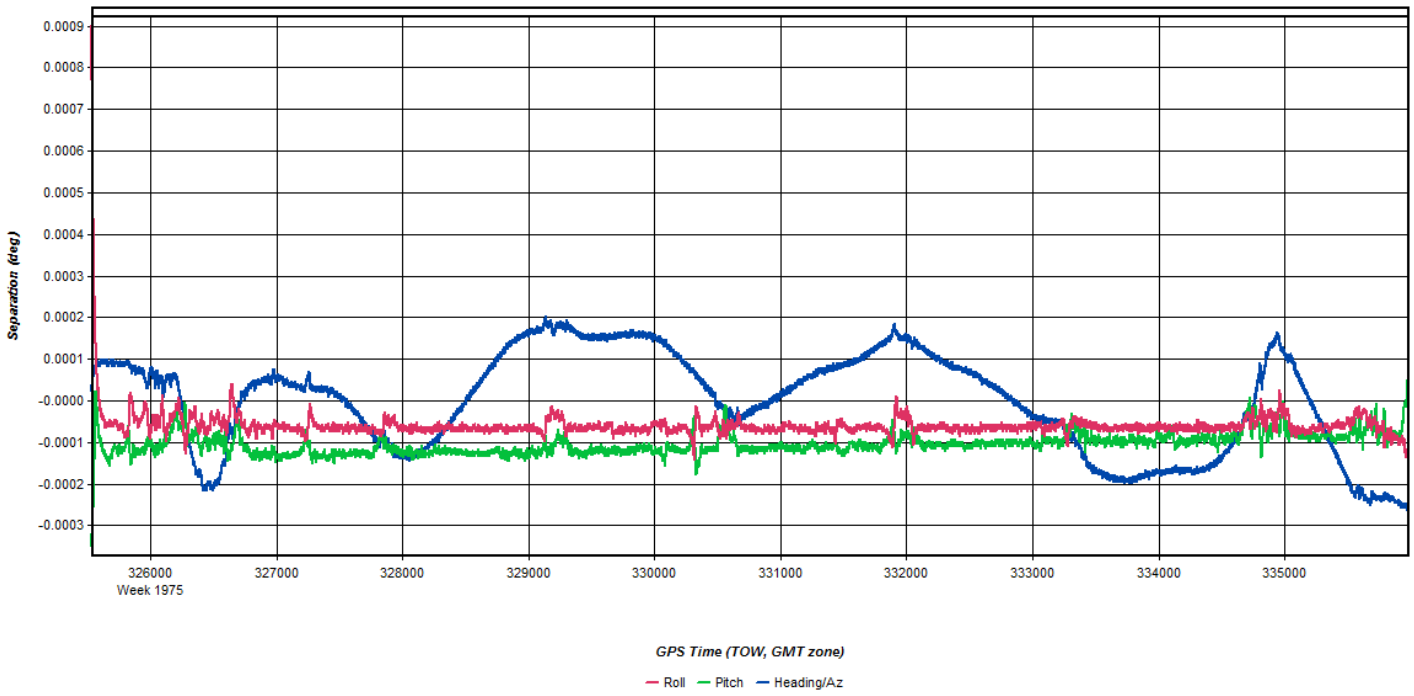

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
RMS
SD


Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Height

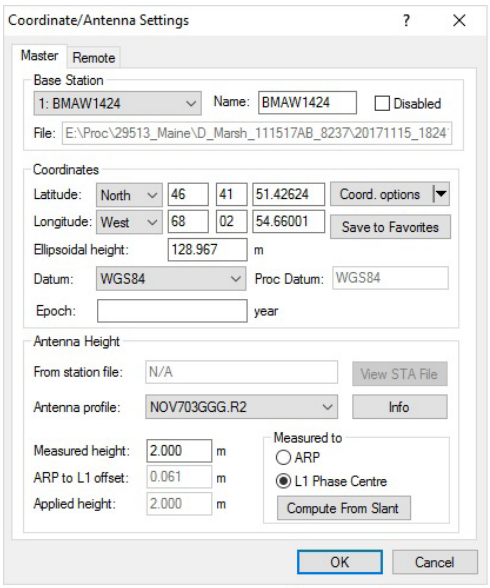

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
East
North
Up

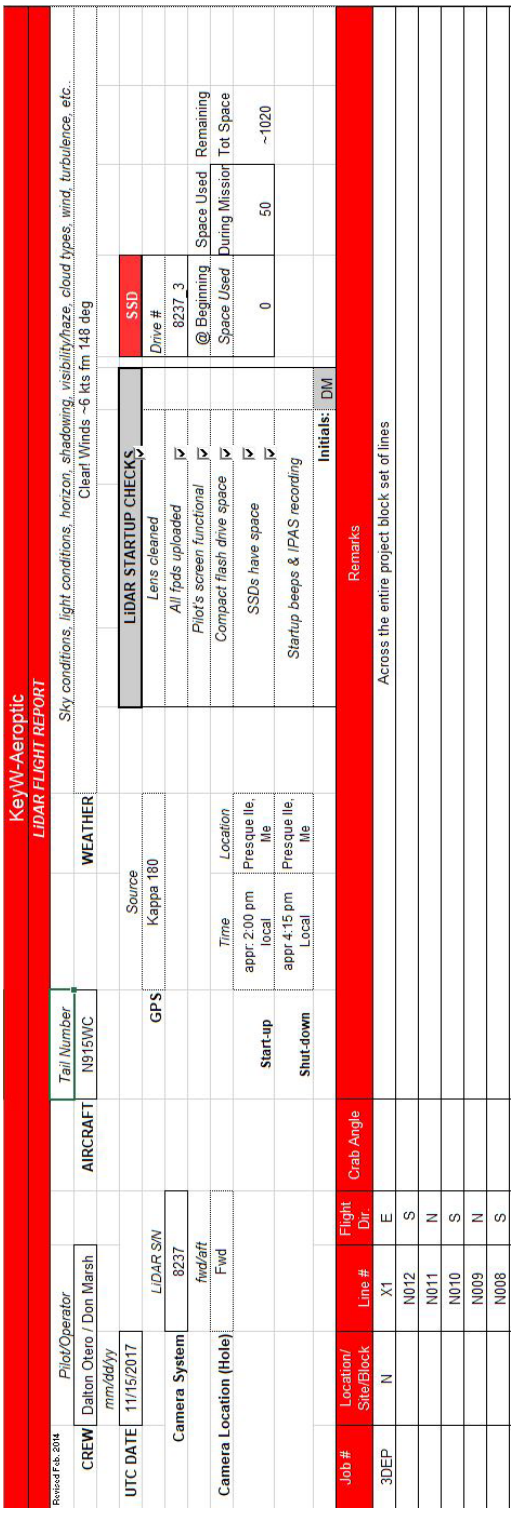

Estimated StdDev (m)
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
-0.0000
-0.0001
-0.0002
-0.0003
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az

Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
326000
Week 1975
327000
328000
329000
330000
331000
332000
333000
334000
335000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: BMAW1424
Name: BMAW1424
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111517AB_8237\20171115_1824
Coordinates
Latitude: North 46 41 51.42624
Coord. options
Longitude: West 68 02 54.66001
Save to Favorites
Ellipsoidal height: 128.967 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: N/A
View STA File
Antenna profile: NOV703GGG.R2
Info
Measured height: 2.000 m
ARP to L1 offset: 0.061 m
Applied height: 2.000 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic

LiDAR FLIGHT REPORT

Revised Feb. 2014

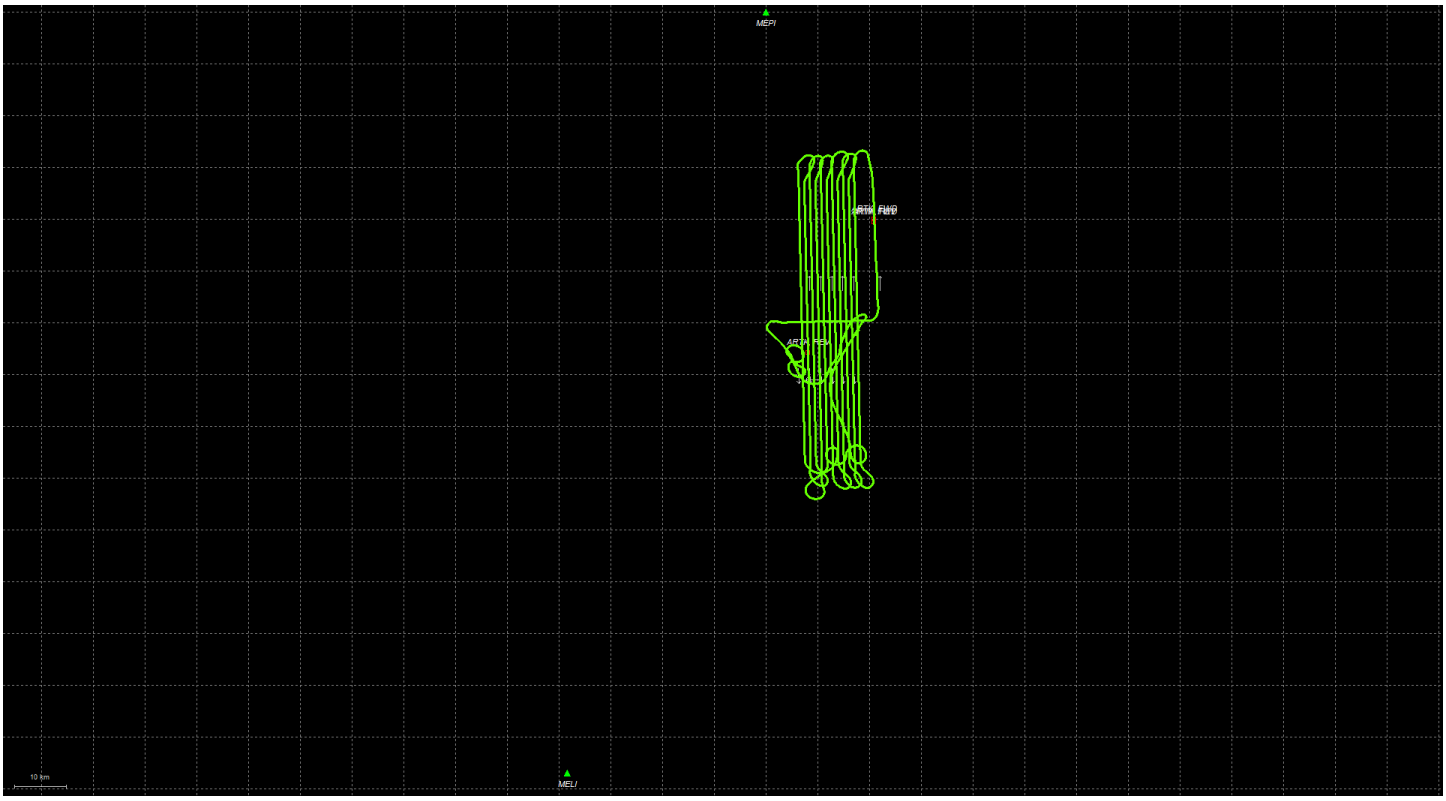
	Pilot/Operator		AIRCRAFT	Tail Number	WEATHER	Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.
CREW	Dalton Otero / Don Marsh		N915WC		Clear Winds ~6 kts fm 148 deg	
	mm/dd/yy					
UTC DATE	11/15/2017			Source		
			GPS	Kappa 180		
	LiDAR S/N					
Camera System	8237					
	fwd/aft					
Camera Location (Hole)	Fwd					
				Time	Location	
		Start-up		appr. 2:00 pm local	Presque Ile, Me	
		Shut-down		appr 4:15 pm Local	Presque Ile, Me	

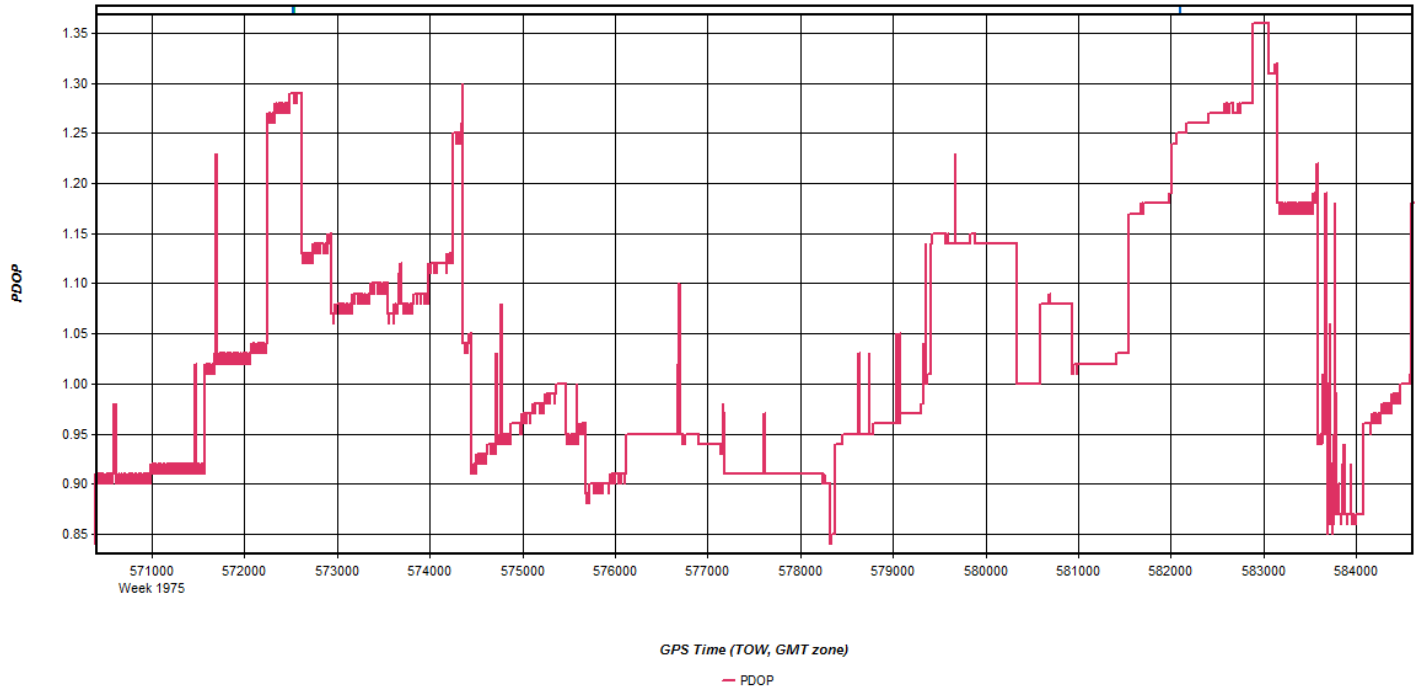
LIDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	DM

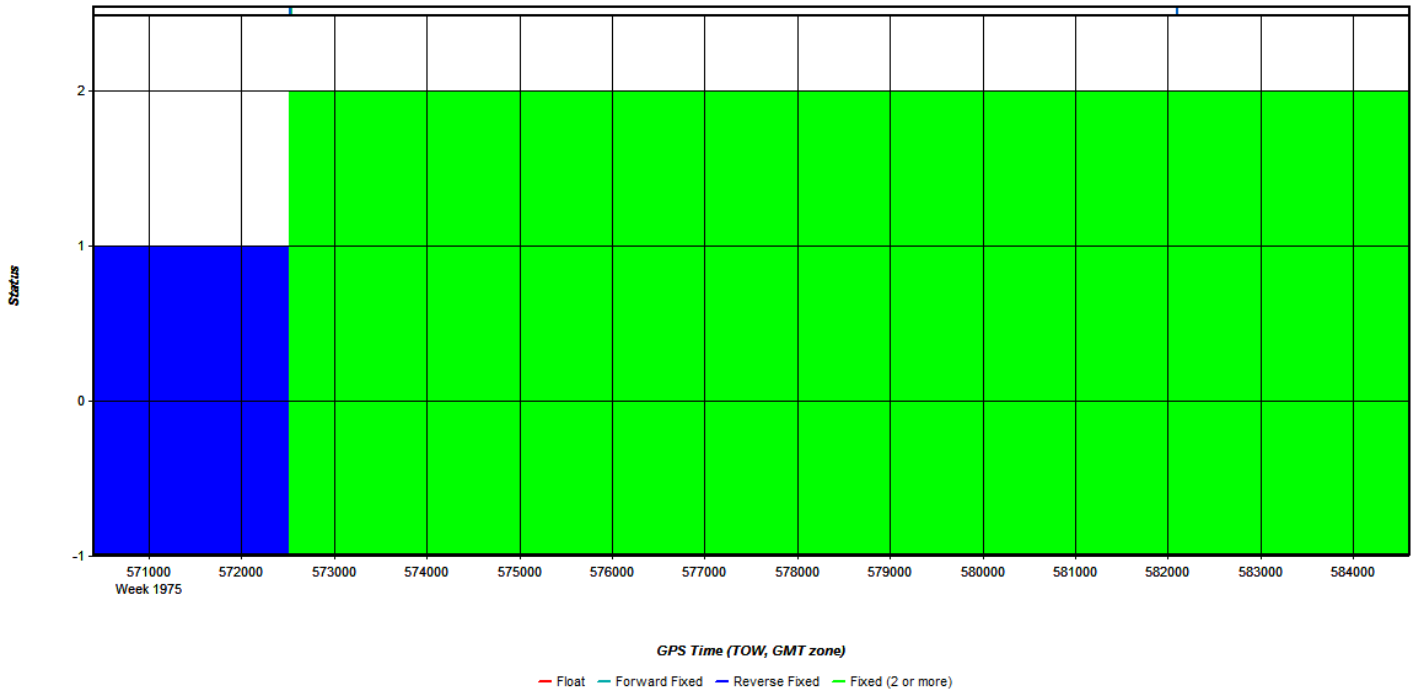
SSD			
Drive #			
8237_3			
@ Beginning	Space Used	Remaining	
Space Used	During Mission	Tot Space	
0	50	~1020	

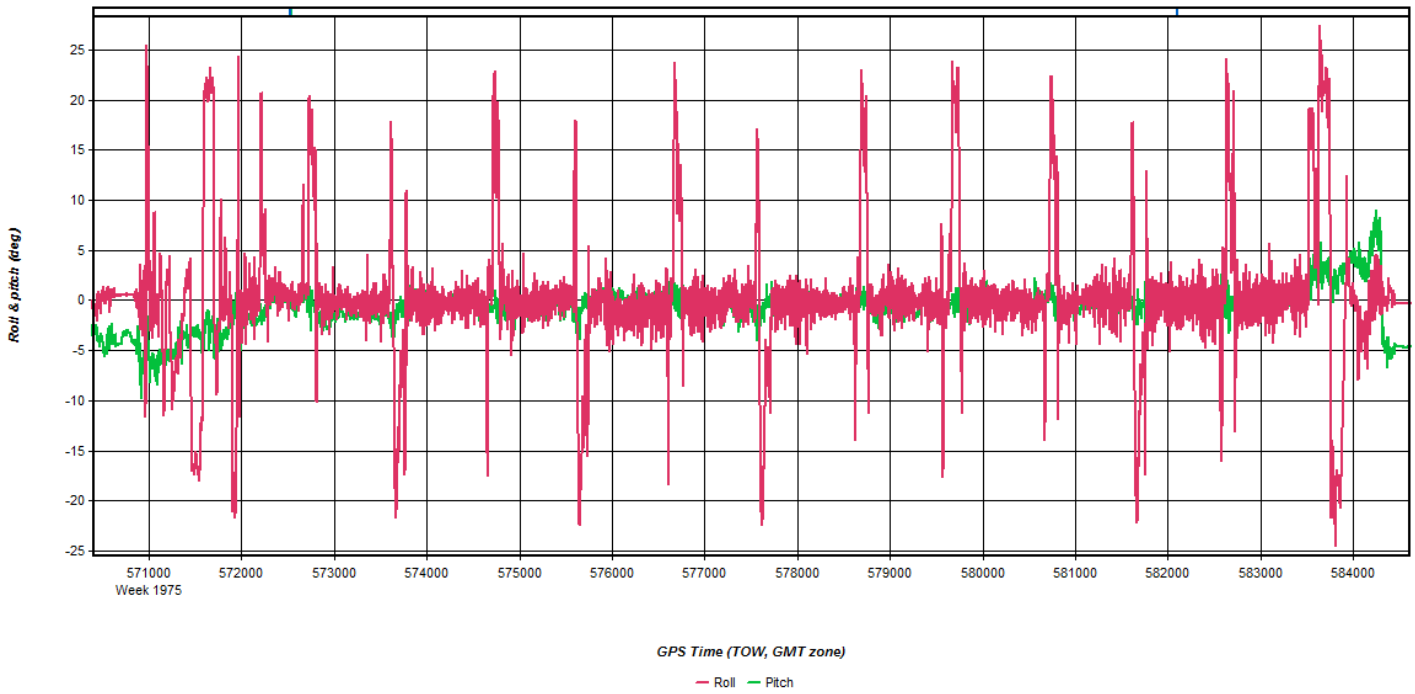
Job #	Location/ Site/Block	Line #	Flight Dir	Crab Angle	Remarks
3DEP	N	X1	E		Across the entire project block set of lines
		N012	S		
		N011	N		
		N010	S		
		N009	N		
		N008	S		

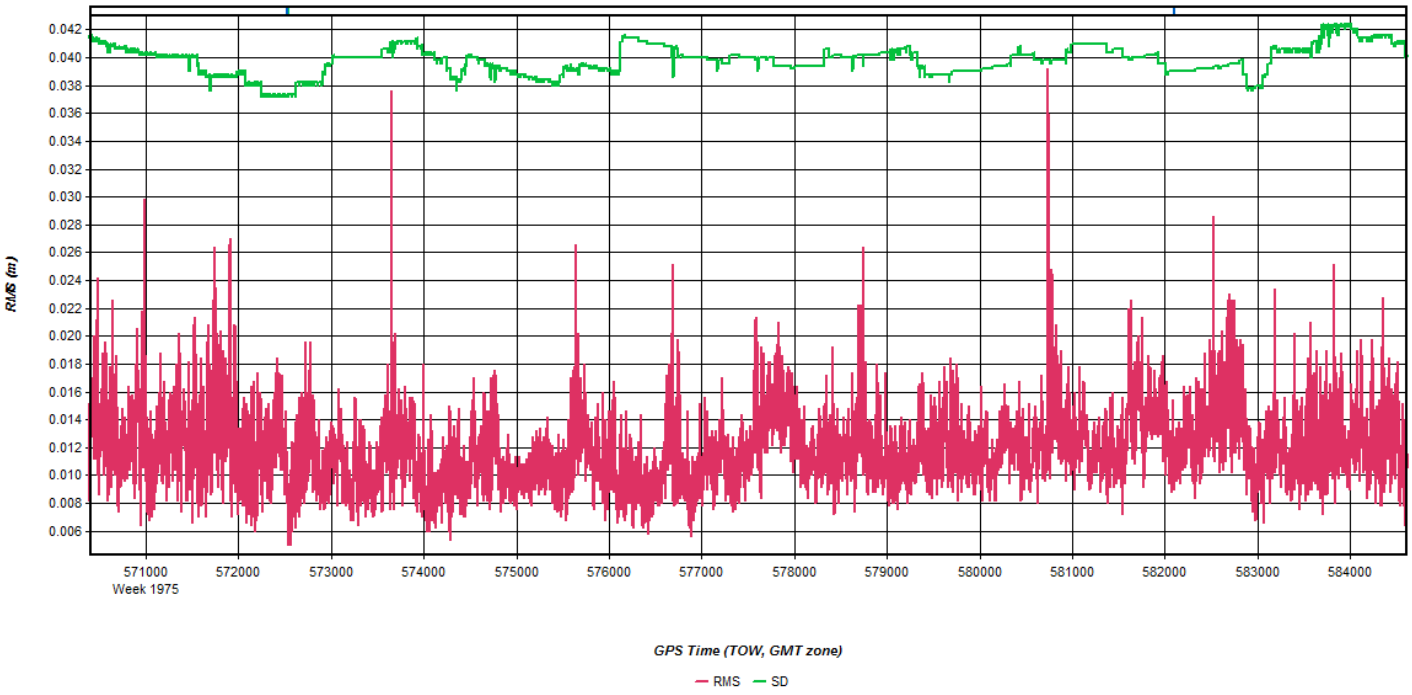
November 18, 2017-A (N915WC, SN8237)

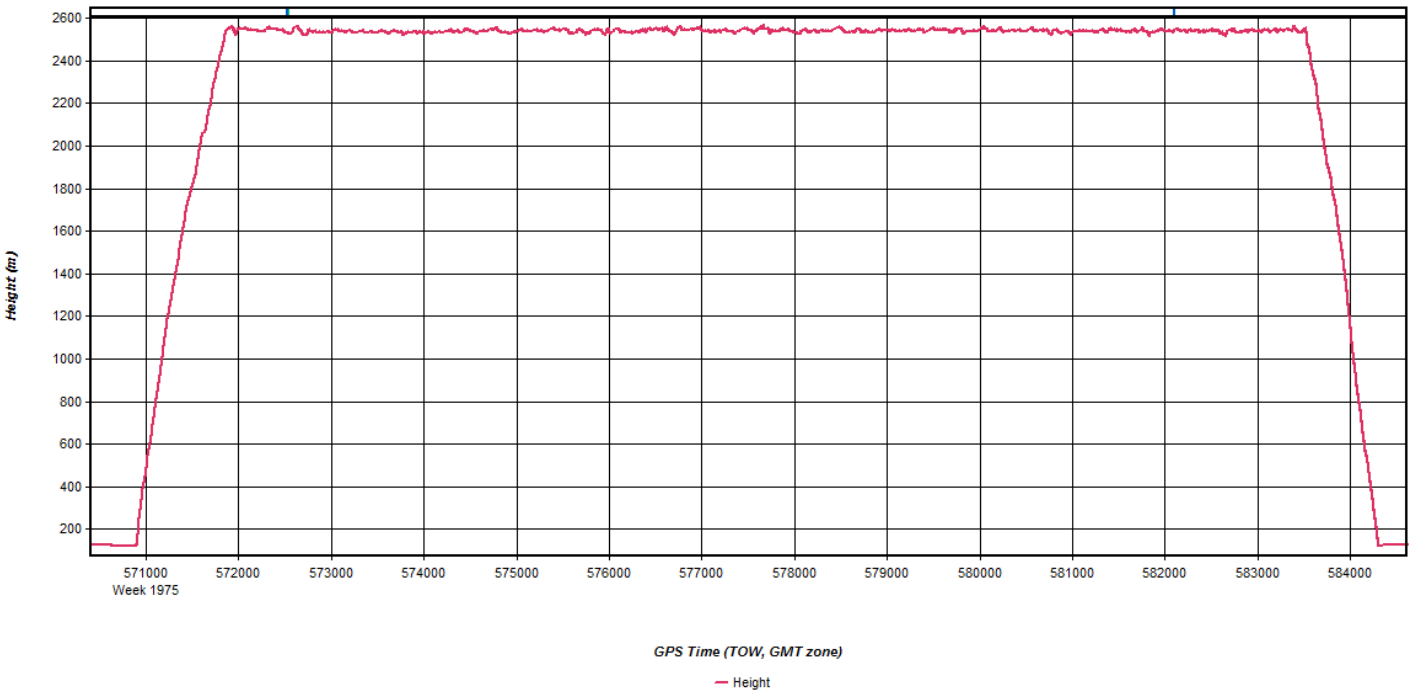

MEPI
MELI

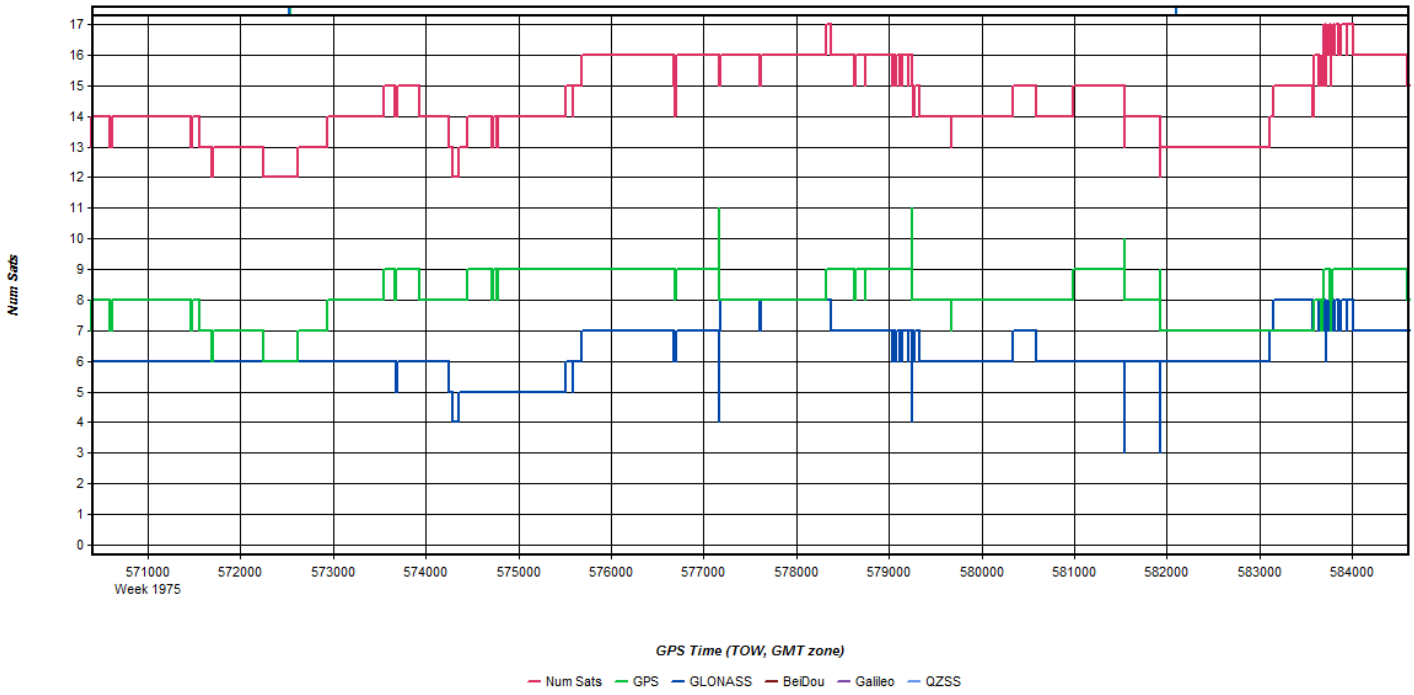

PDOP
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
PDOP

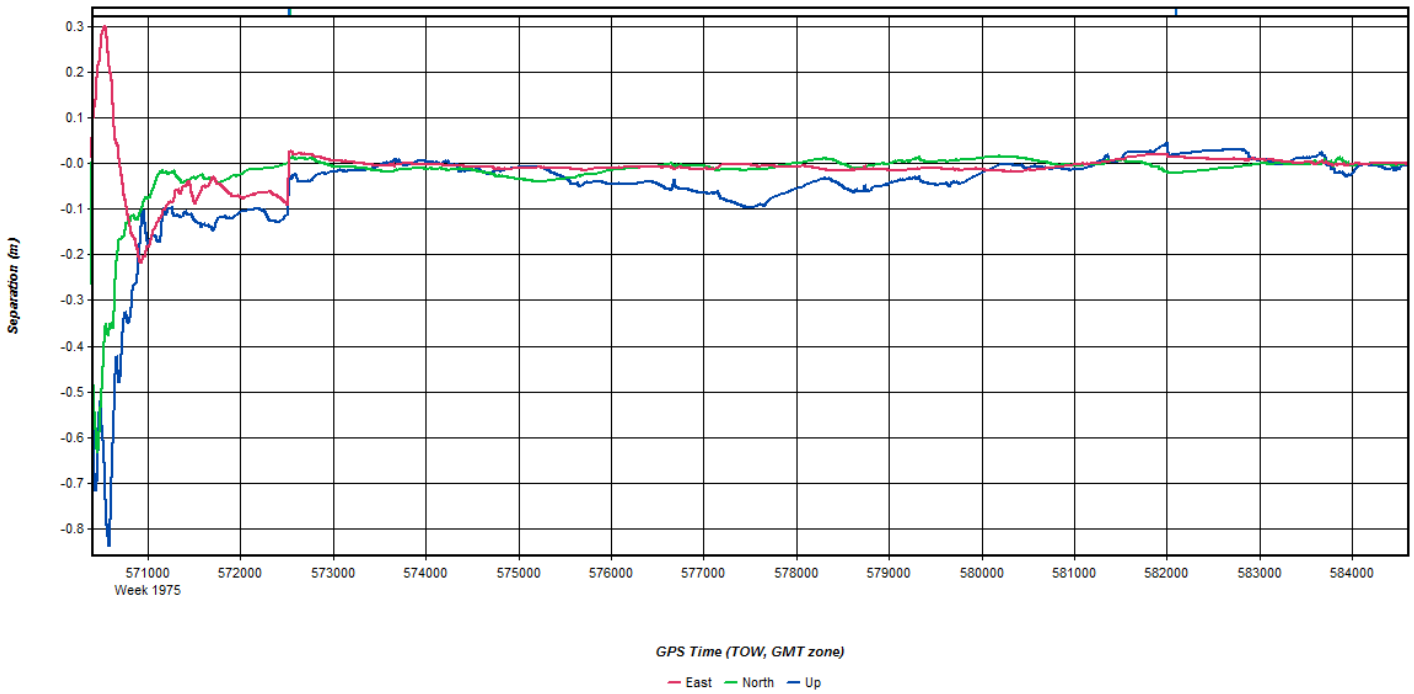

Status
2
1
0
-1
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

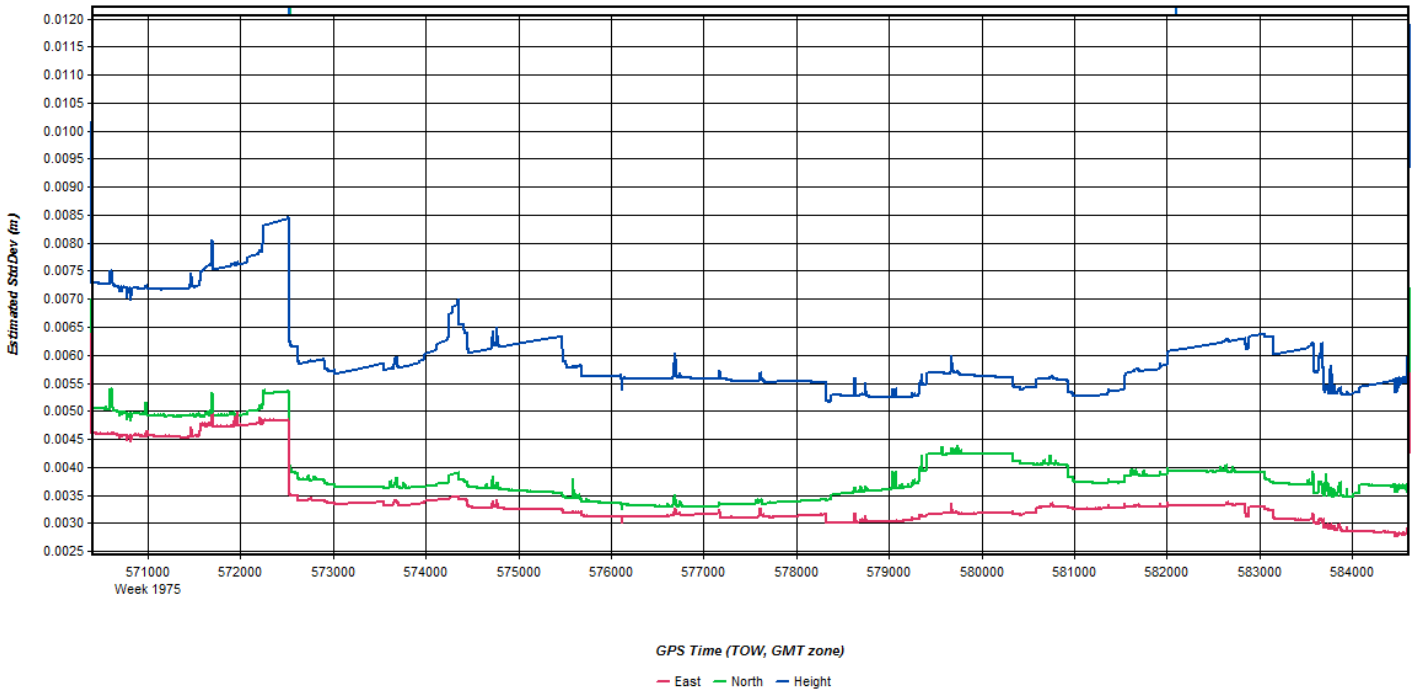

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Roll
Pitch

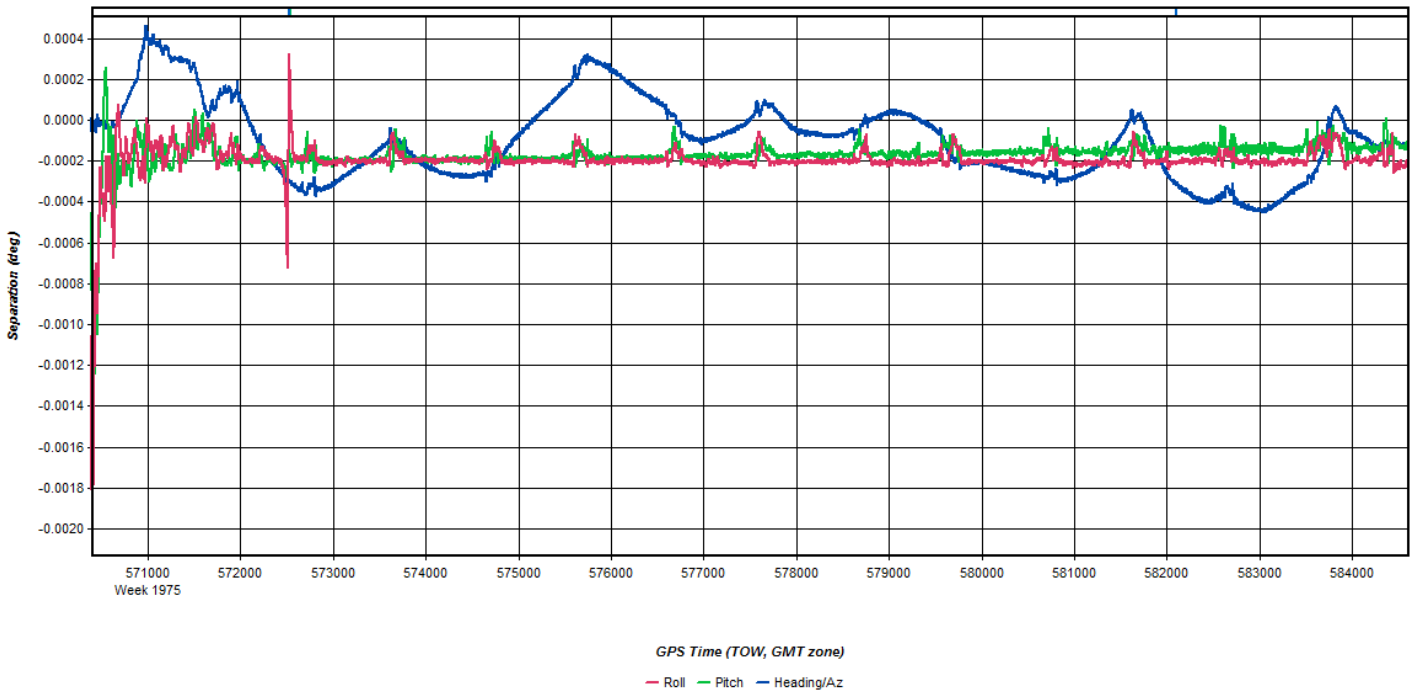

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
RMS
SD

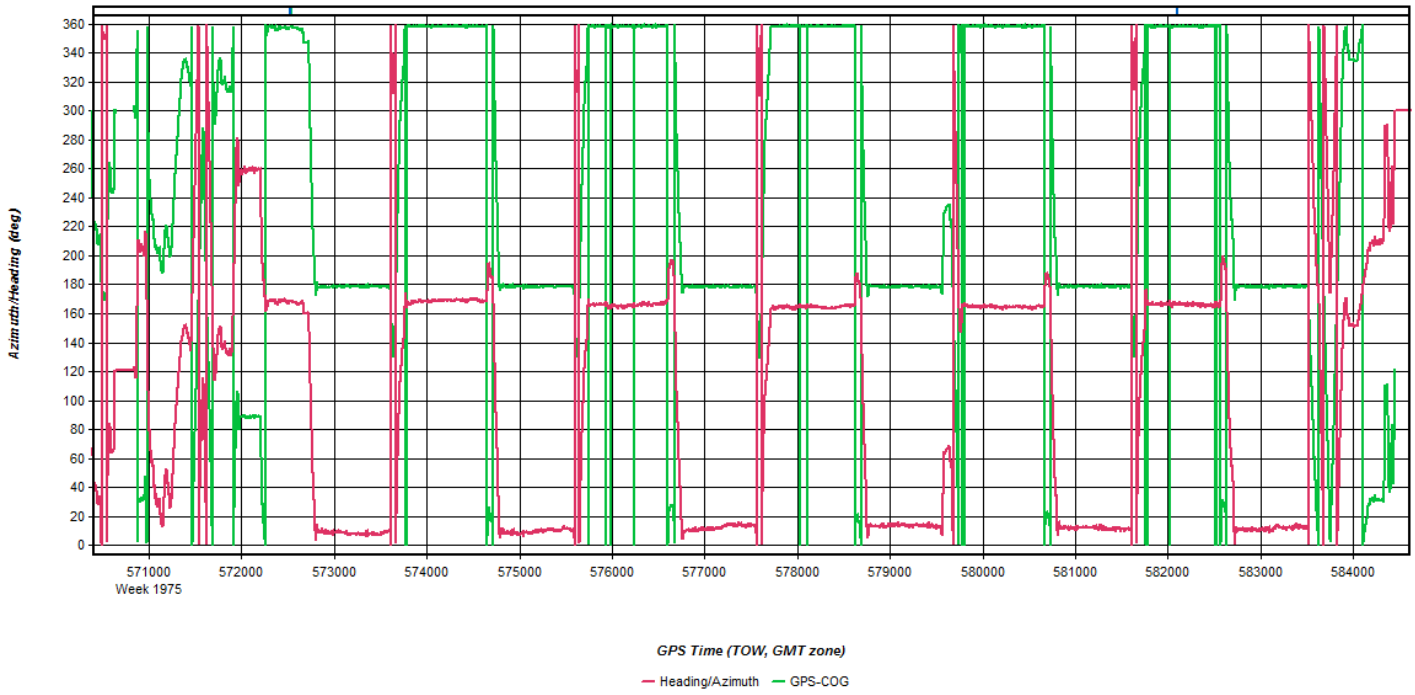

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Height

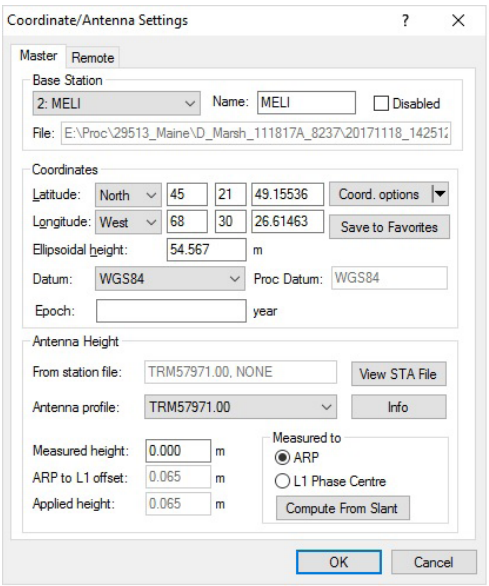

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

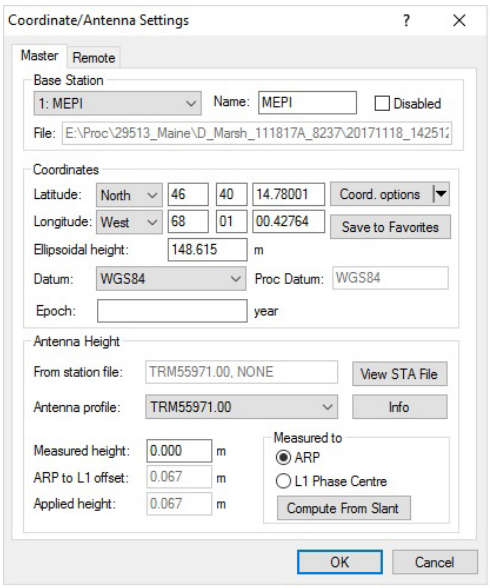

Separation (m)
0.3
0.2
0.1
-0.0
-0.1
-0.2
-0.3
-0.4
-0.5
-0.6
-0.7
-0.8
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
East
North
Height

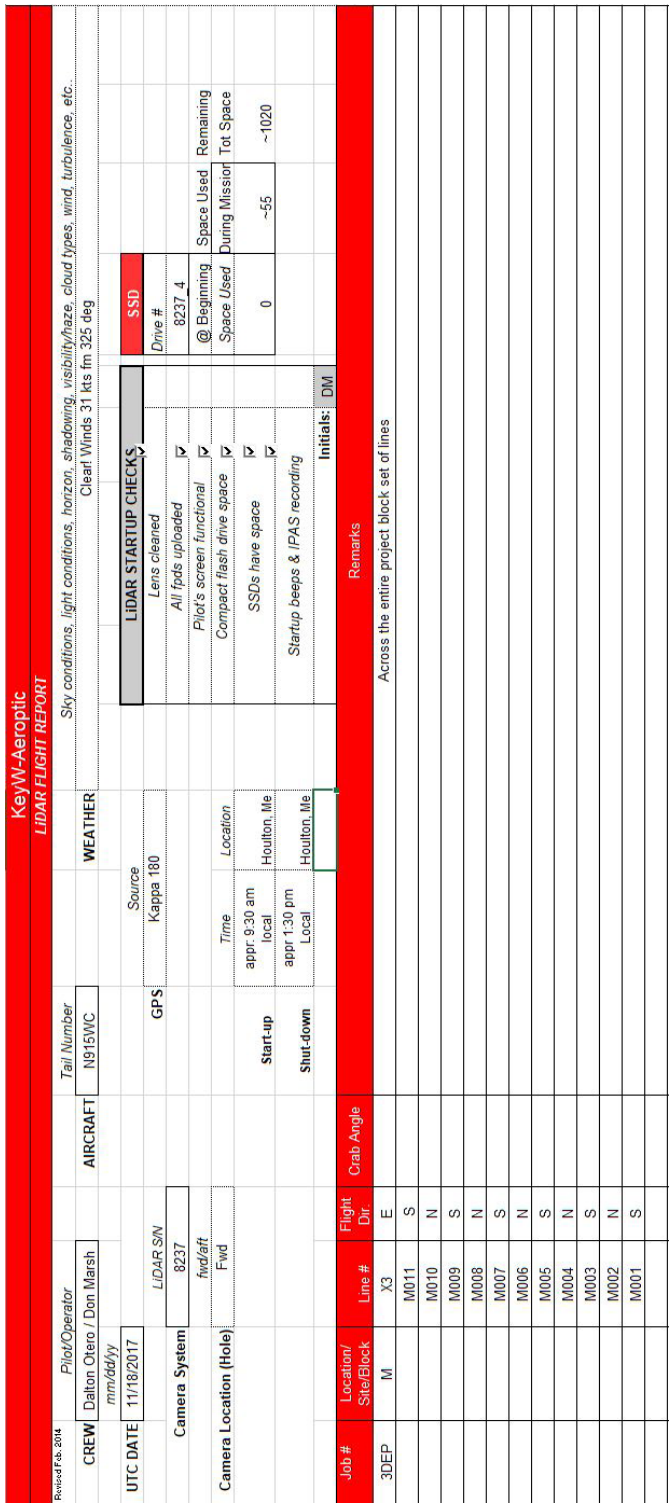

Separation (deg)
0.0004
0.0002
0.0000
-0.0002
-0.0004
-0.0006
-0.0008
-0.0010
-0.0012
-0.0014
-0.0016
-0.0018
-0.0020
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
571000
Week 1975
572000
573000
574000
575000
576000
577000
578000
579000
580000
581000
582000
583000
584000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111817A_8237\20171118_142512
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MEPI
Name: MEPI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_111817A_8237\20171118_142512
Coordinates
Latitude: North 46 40 14.78001 Coord. options
Longitude: West 68 01 00.42764 Save to Favorites
Ellipsoidal height: 148.615 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

CREW: Pilot/Operator — Dalton Otero / Don Marsh
AIRCRAFT: Tail Number — N915WC
WEATHER: Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc. — Clear! Winds 31 kts fm 325 deg

UTC DATE: mm/dd/yy — 11/18/2017

Camera System: LiDAR S/N — 8237
Camera Location (Hole): fwd/aft — Fwd

	GPS Source	Time	Location
Start-up	Kappa 180	appr. 9:30 am local	Houlton, Me
Shut-down		appr 1:30 pm Local	Houlton, Me

LiDAR STARTUP CHECKS
- Lens cleaned
- All fpds uploaded
- Pilot's screen functional
- Compact flash drive space
- SSDs have space
- Startup beeps & IPAS recording

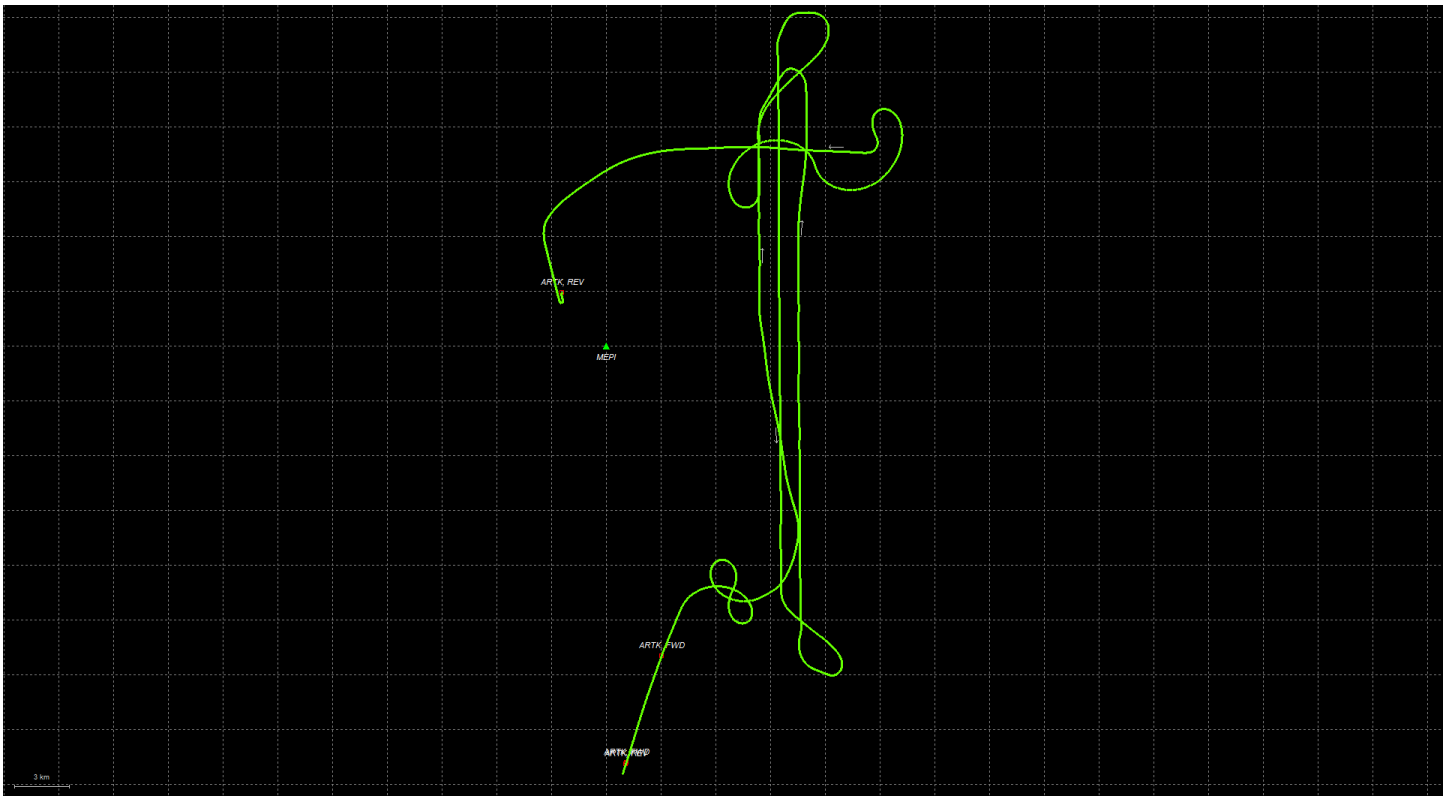
Initials: DM

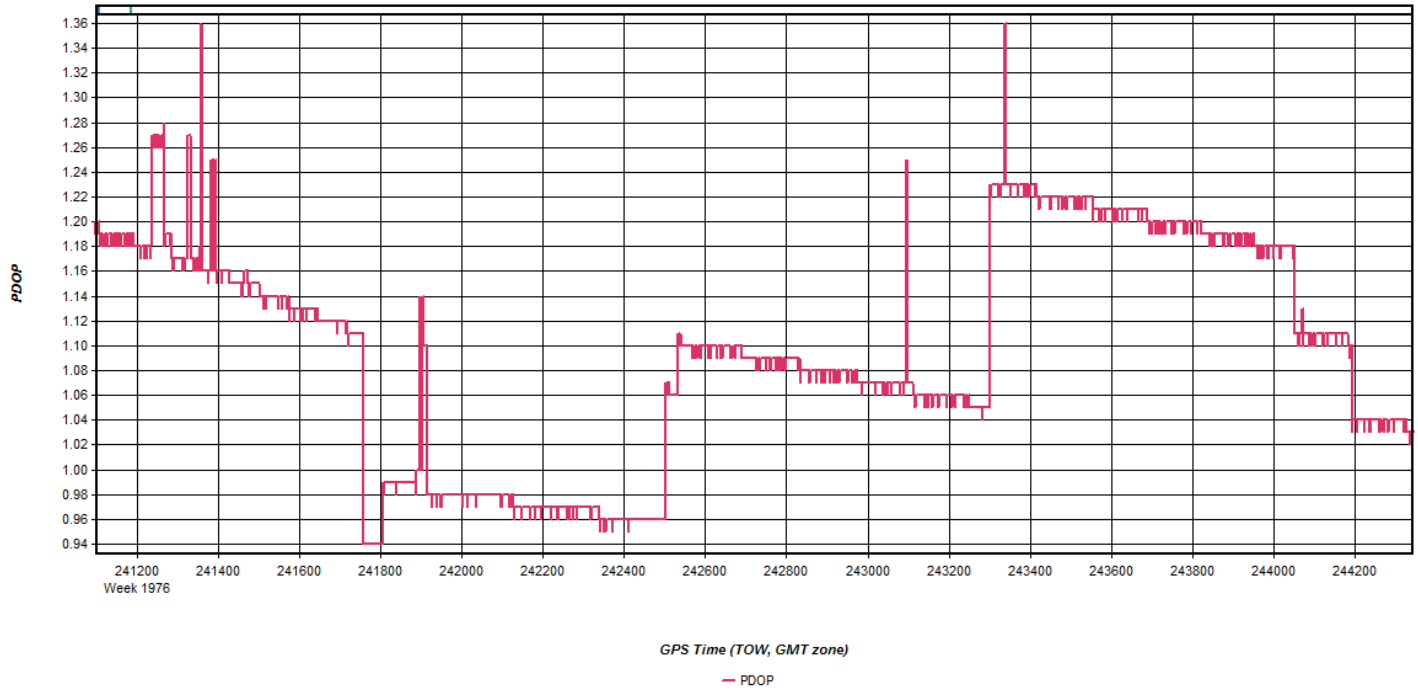
SSD
Drive #: 8237_4

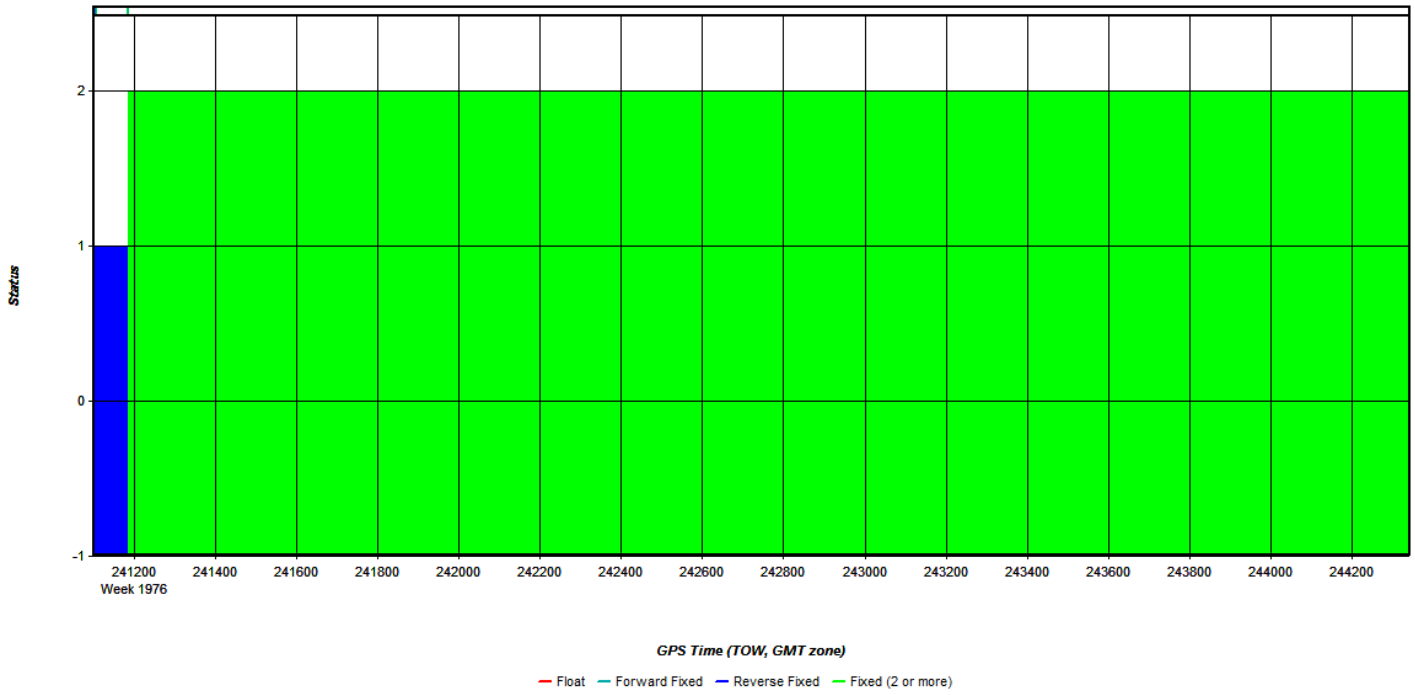
	@ Beginning	Space Used	Remaining
Space Used	During Mission	Tot Space	
0	~55	~1020	

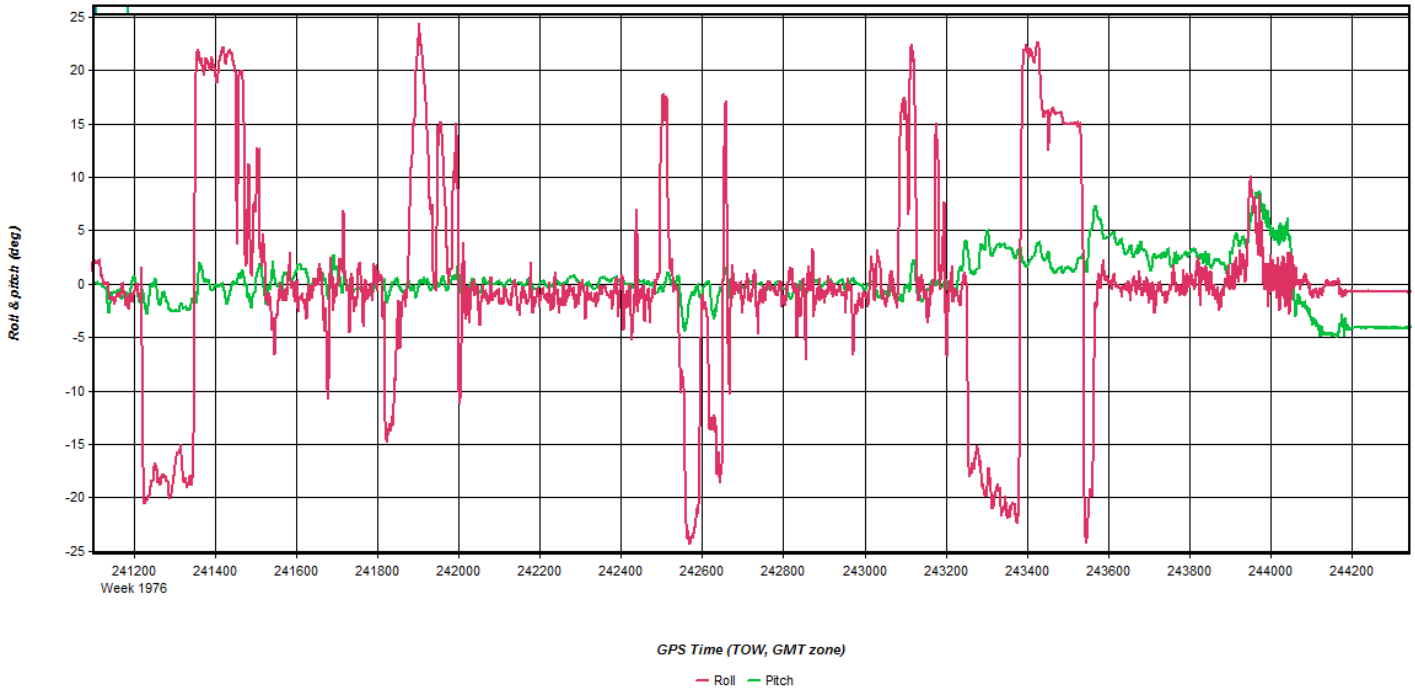
Job #	Location/ Site/Block	Line #	Flight Dir	Crab Angle	Remarks
3DEP	M	X3	E		Across the entire project block set of lines
		M011	S		
		M010	N		
		M009	S		
		M008	N		
		M007	S		
		M006	N		
		M005	S		
		M004	N		
		M003	S		
		M002	N		
		M001	S		

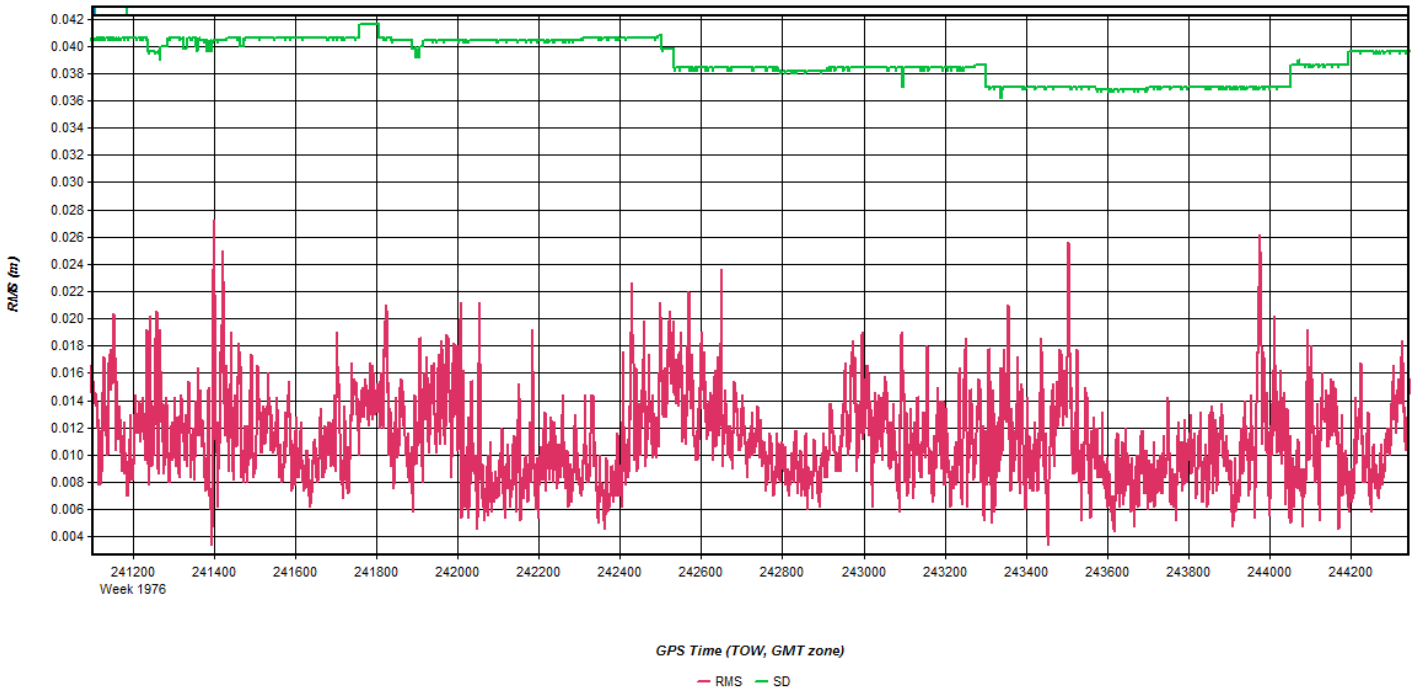
November 21, 2017-A (N915WC, SN8237)

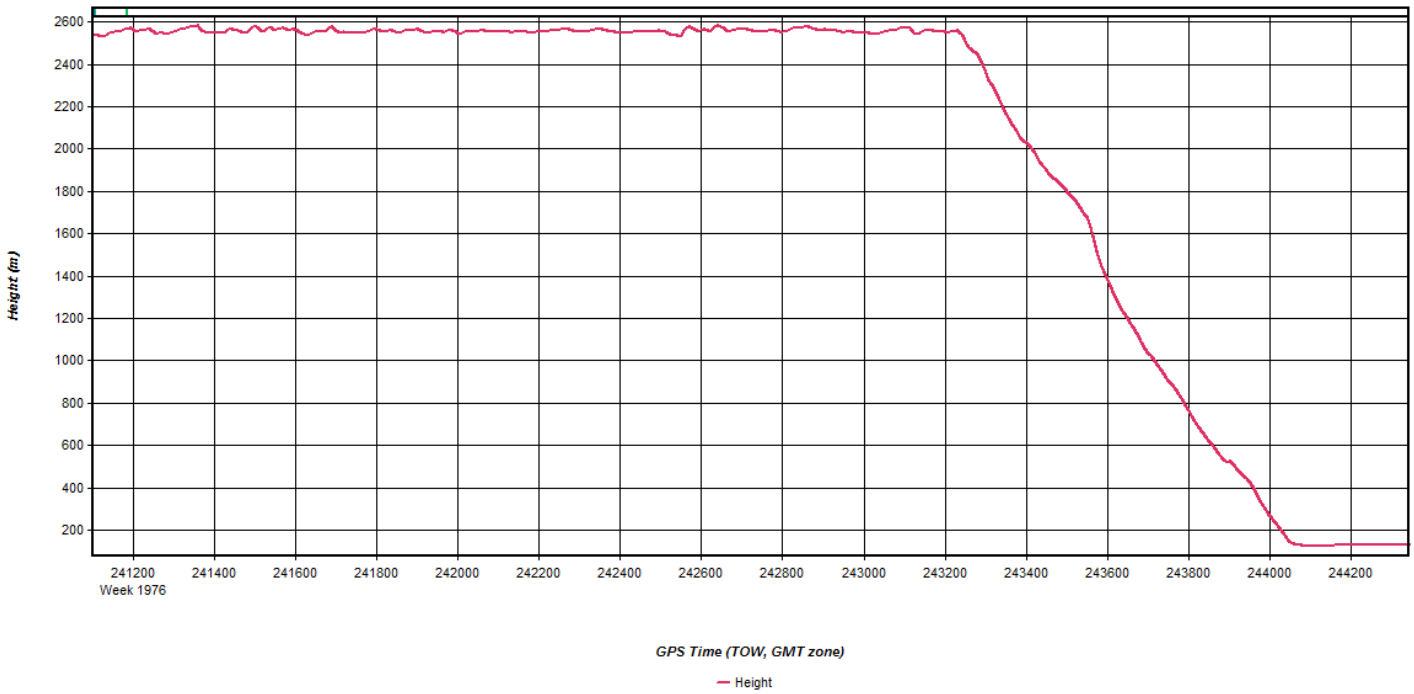

ARTK_REV
MEPI
ARTK_FWD
3 km

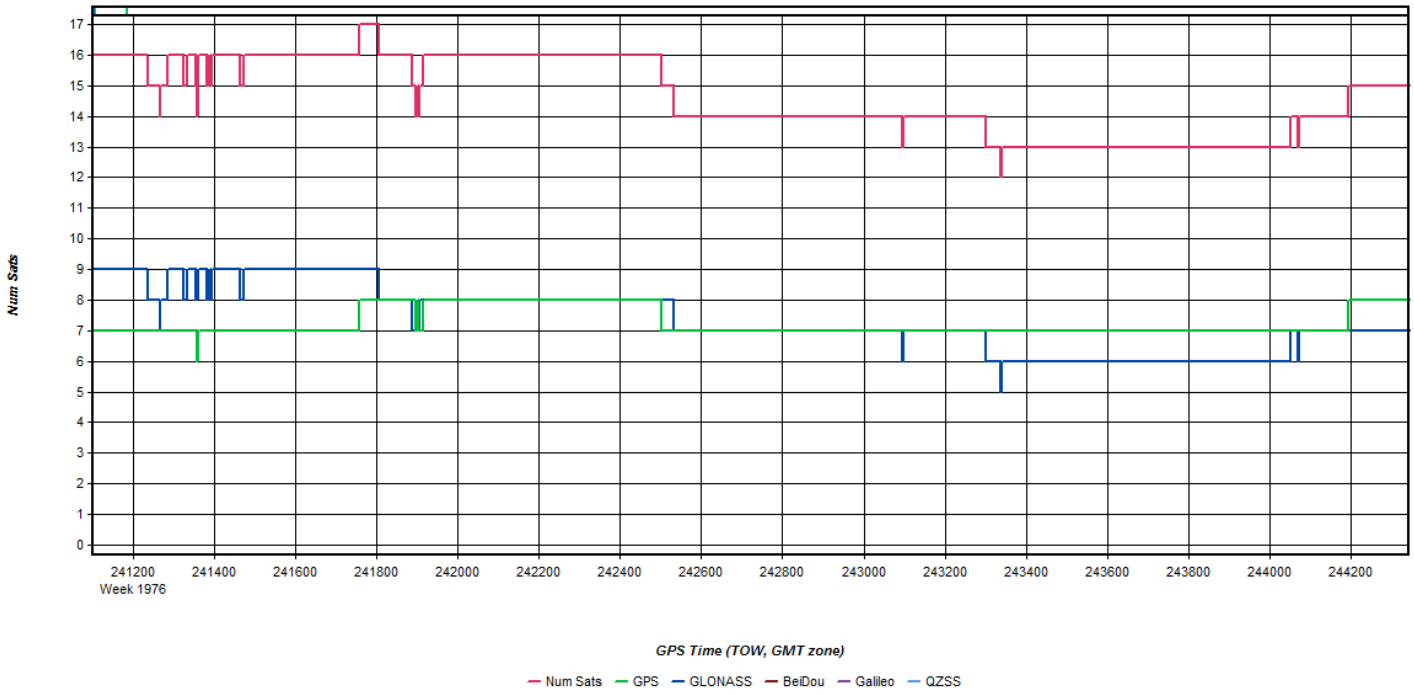

PDOP
1.36
1.34
1.32
1.30
1.28
1.26
1.24
1.22
1.20
1.18
1.16
1.14
1.12
1.10
1.08
1.06
1.04
1.02
1.00
0.98
0.96
0.94
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
PDOP

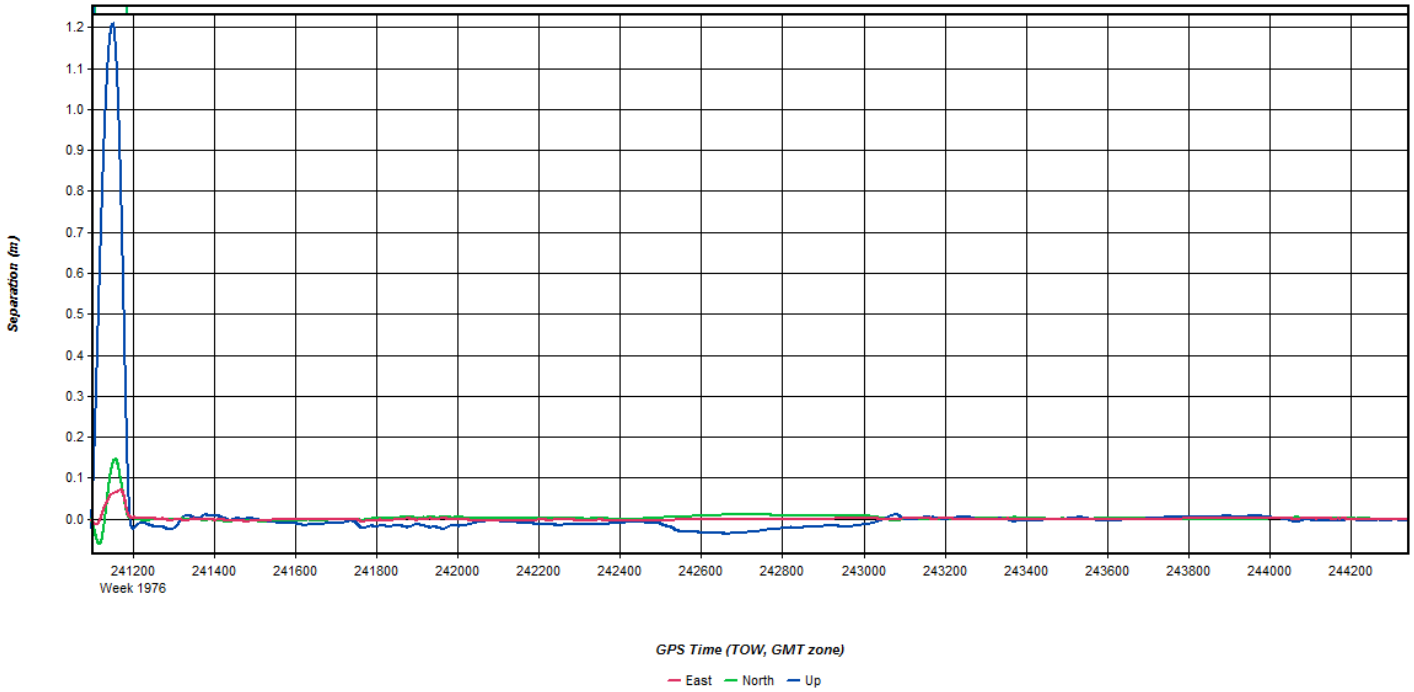

Status
2
1
0
-1
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

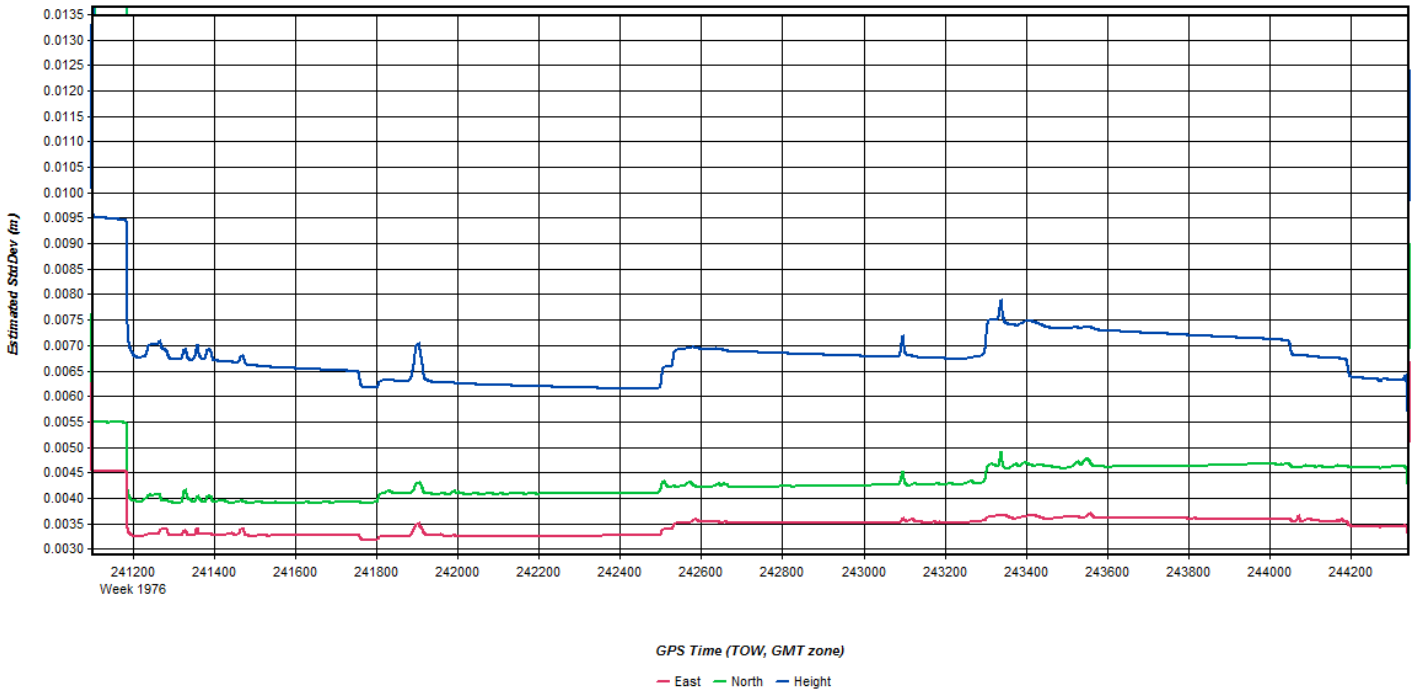

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Roll
Pitch

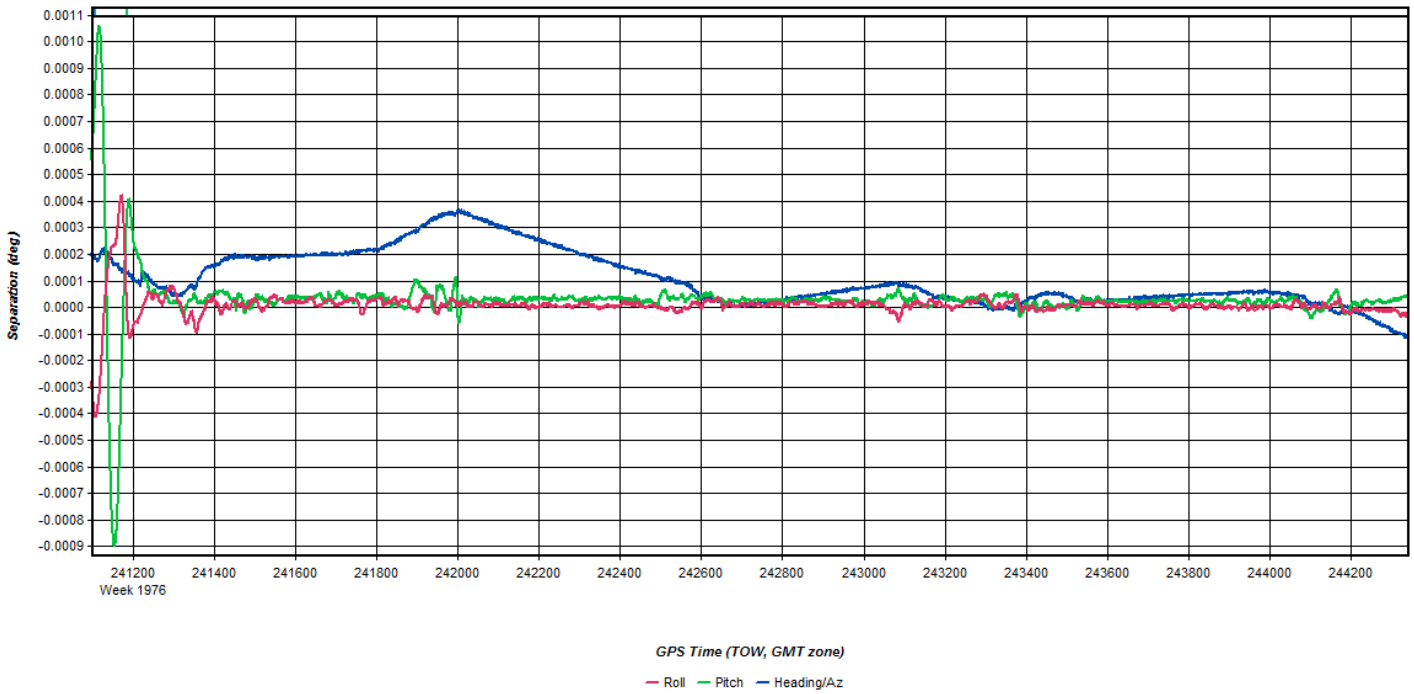

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
RMS
SD

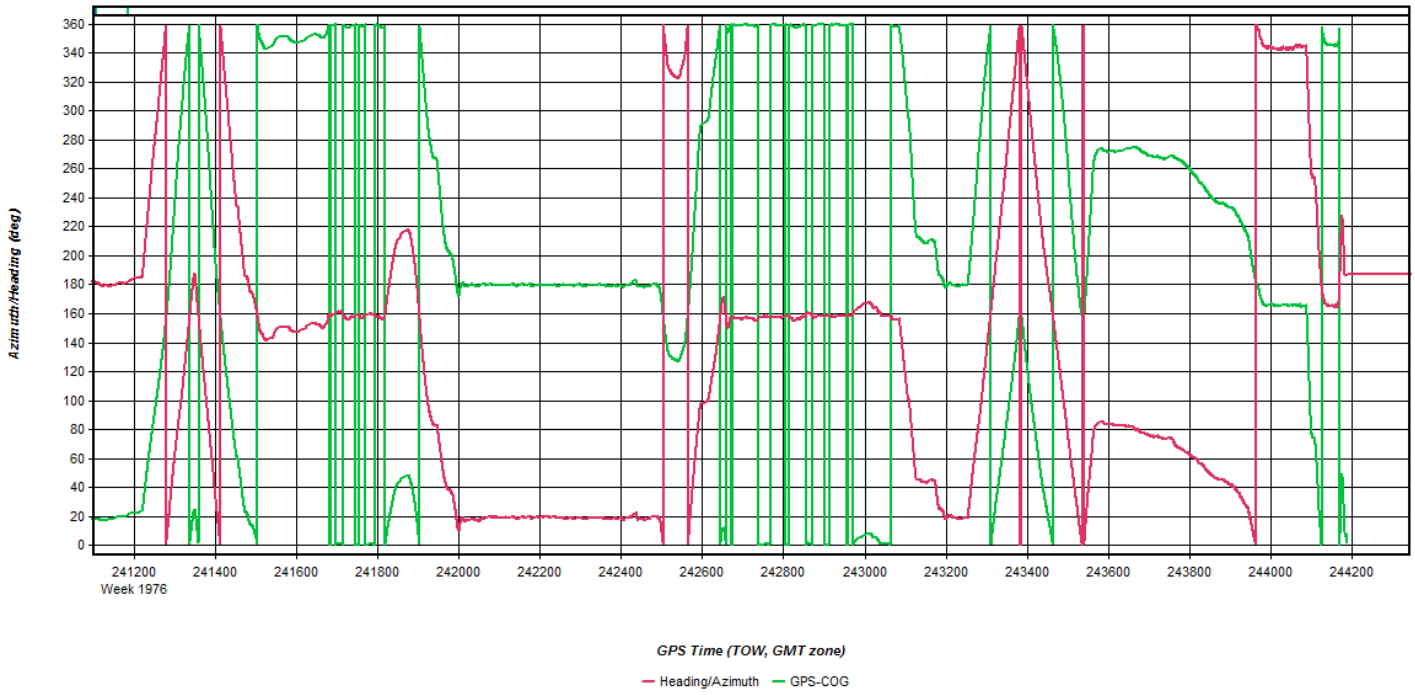

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Height

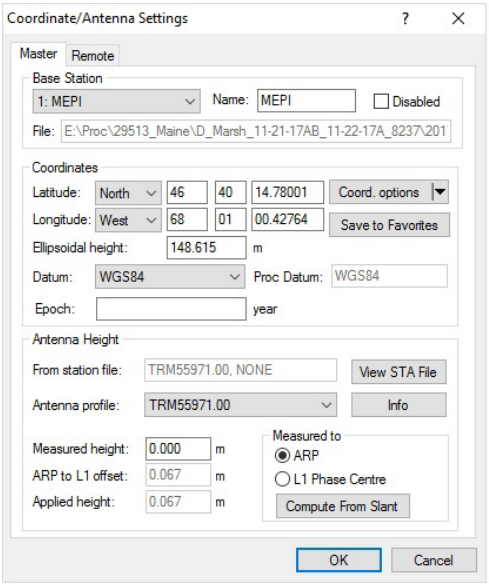

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
East
North
Up

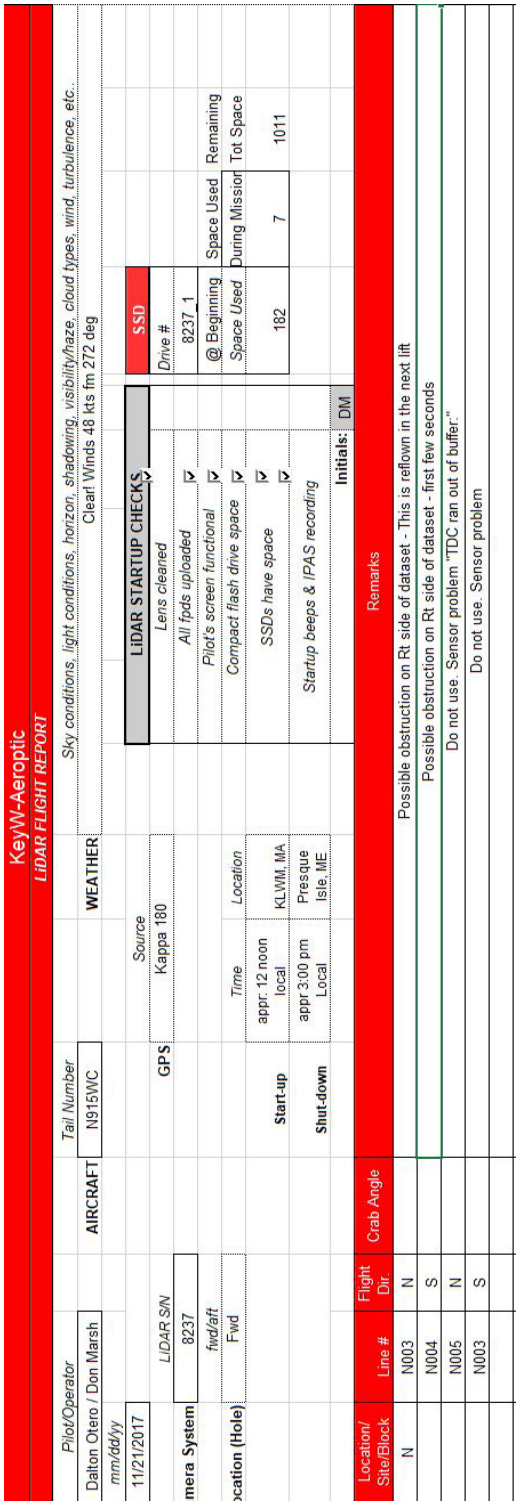

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0011
0.0010
0.0009
0.0008
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0.0000
-0.0001
-0.0002
-0.0003
-0.0004
-0.0005
-0.0006
-0.0007
-0.0008
-0.0009
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
241200
Week 1976
241400
241600
241800
242000
242200
242400
242600
242800
243000
243200
243400
243600
243800
244000
244200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MEPI
Name: MEPI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_11-21-17AB_11-22-17A_8237\201
Coordinates
Latitude: North 46 40 14.78001
Coord. options
Longitude: West 68 01 00.42764
Save to Favorites
Ellipsoidal height: 148.615 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Pilot/Operator		*Tail Number*		*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.*
Dalton Otero / Don Marsh	AIRCRAFT	N915WC	WEATHER	Clear Winds 48 kts fm 272 deg

mm/dd/yy: 11/21/2017

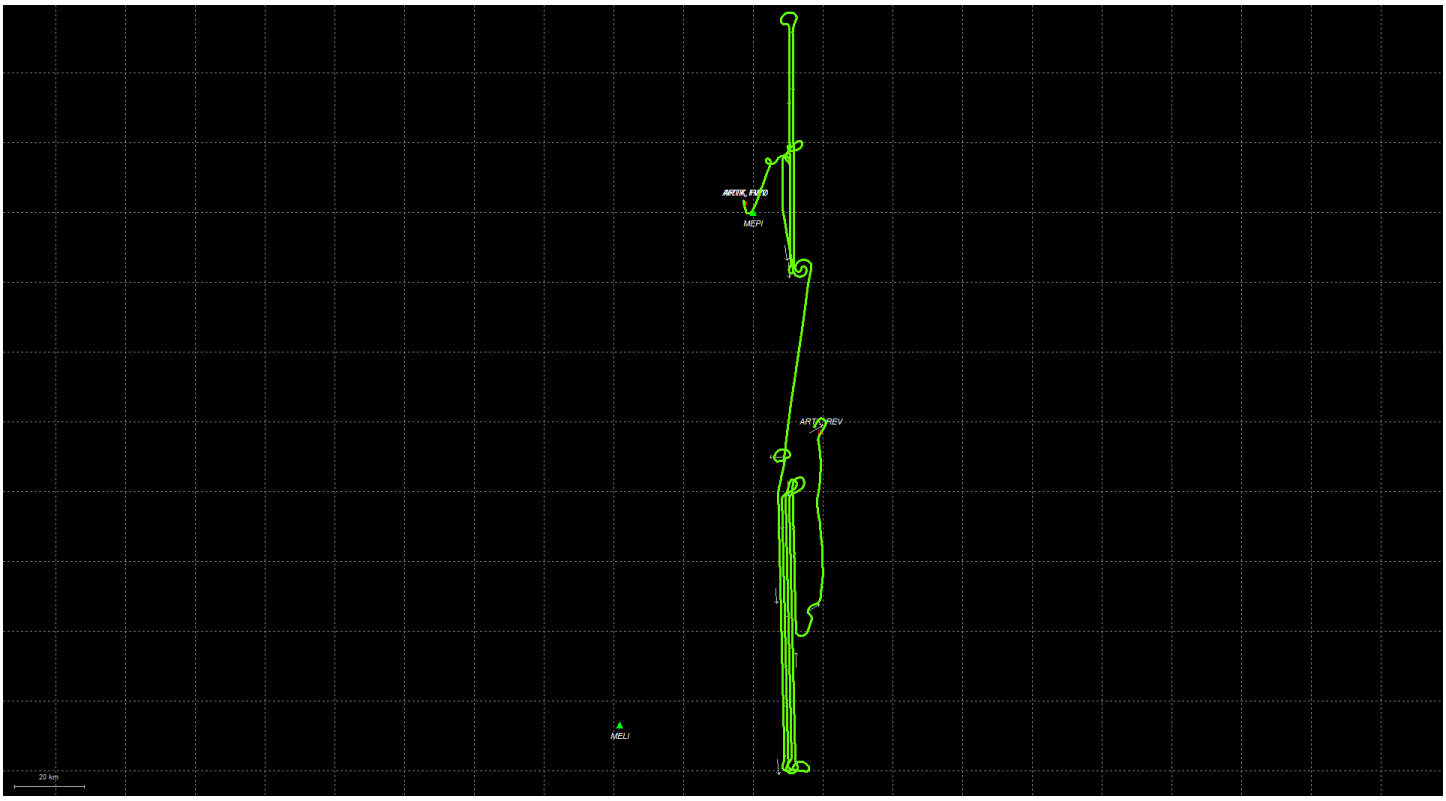
		Source		
	GPS	Kappa 180		
LiDAR S/N				
mera System: 8237				
fwd/aft				
cation (Hole): Fwd				
		Time	*Location*	
	Start-up	appr. 12 noon local	KLWM, MA	
	Shut-down	appr 3:00 pm Local	Presque Isle, ME	

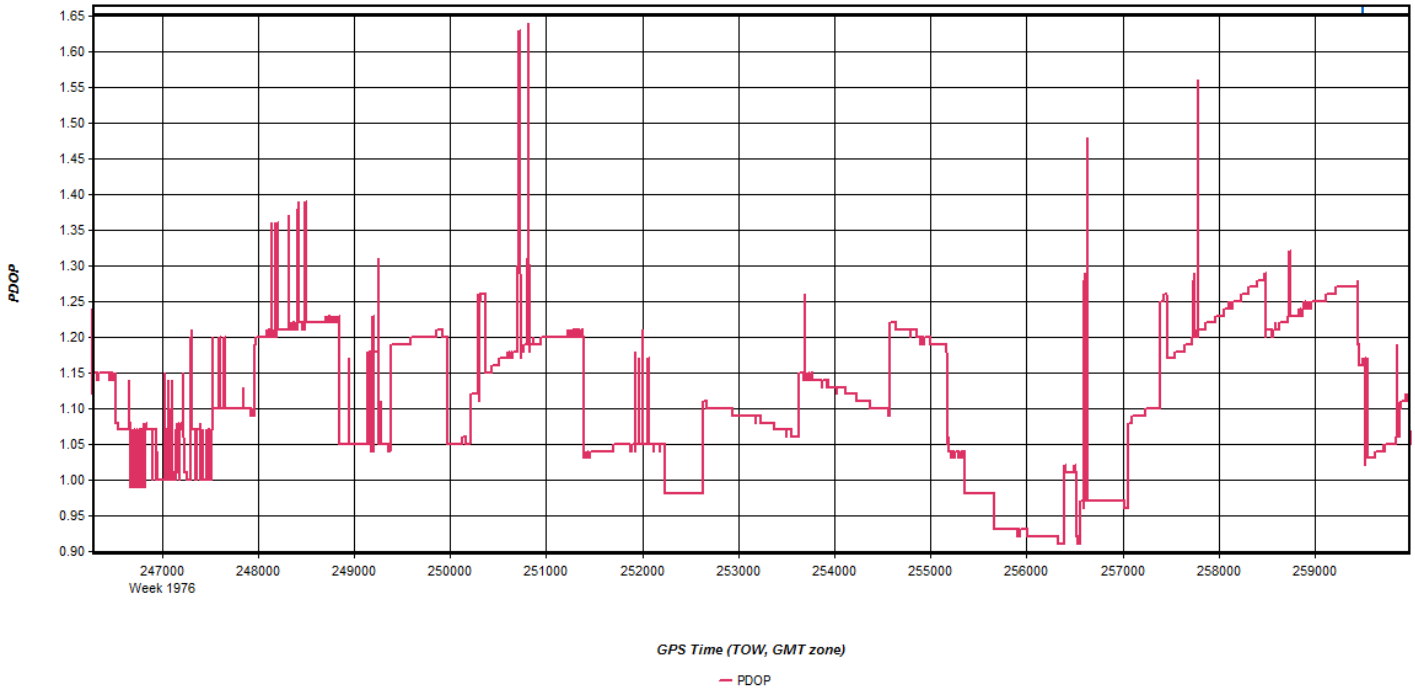
LiDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	DM

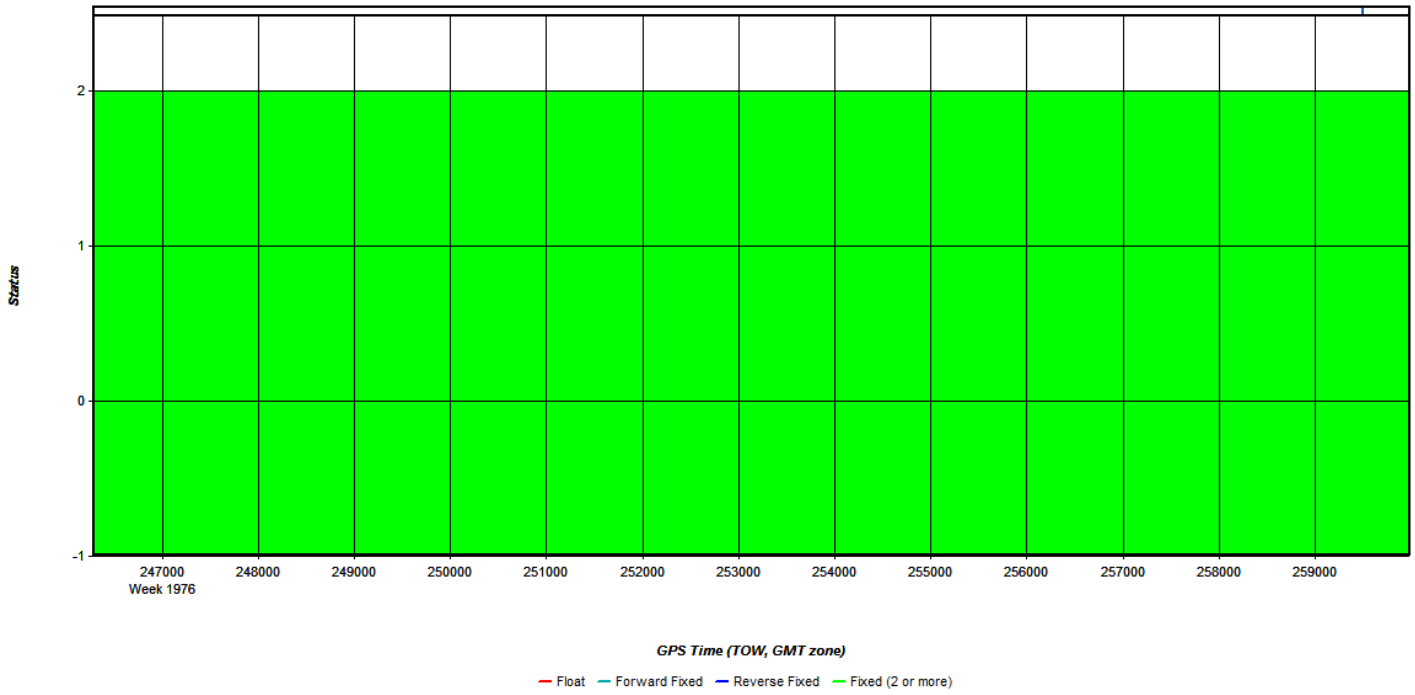
SSD			
Drive #			
8237_1			
@ Beginning	Space Used	Remaining	
Space Used	During Mission	Tot Space	
182	7	1011	

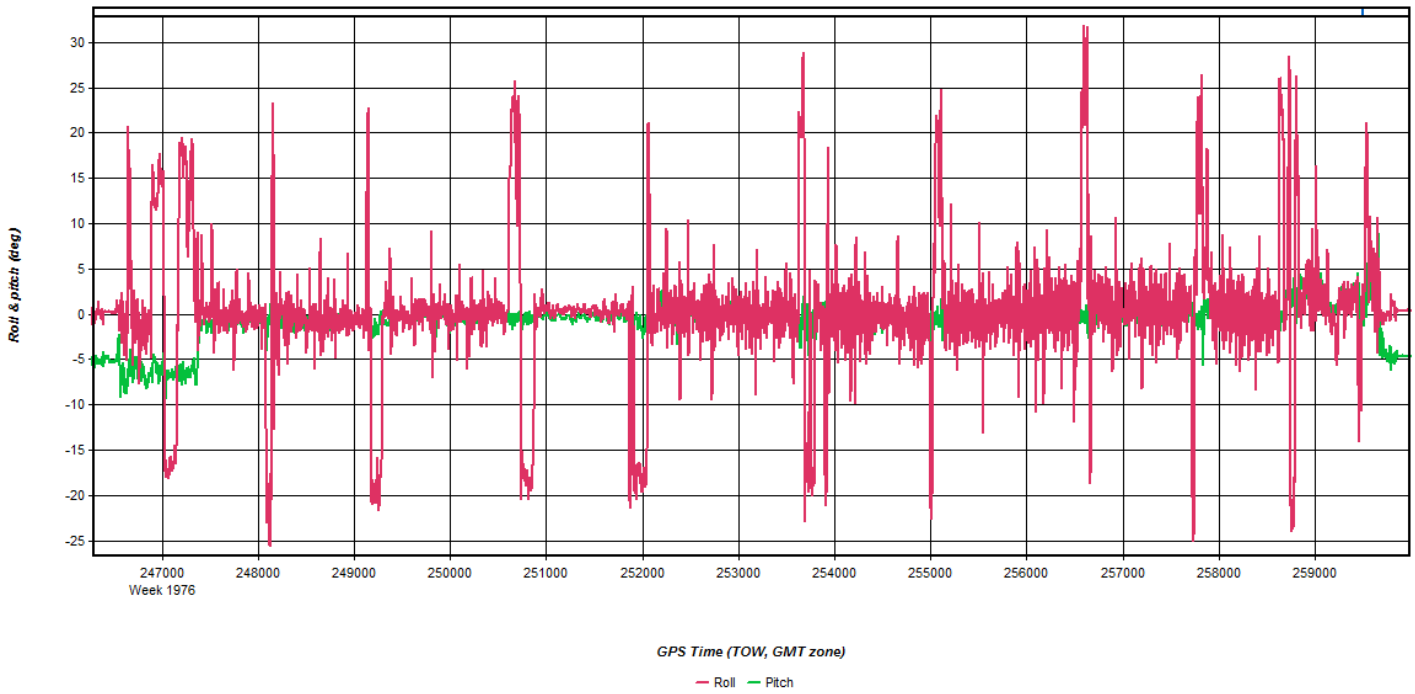
Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
N	N003	N		Possible obstruction on Rt side of dataset - This is reflown in the next lift
	N004	S		Possible obstruction on Rt side of dataset - first few seconds
	N005	N		Do not use. Sensor problem "TDC ran out of buffer."
	N003	S		Do not use. Sensor problem

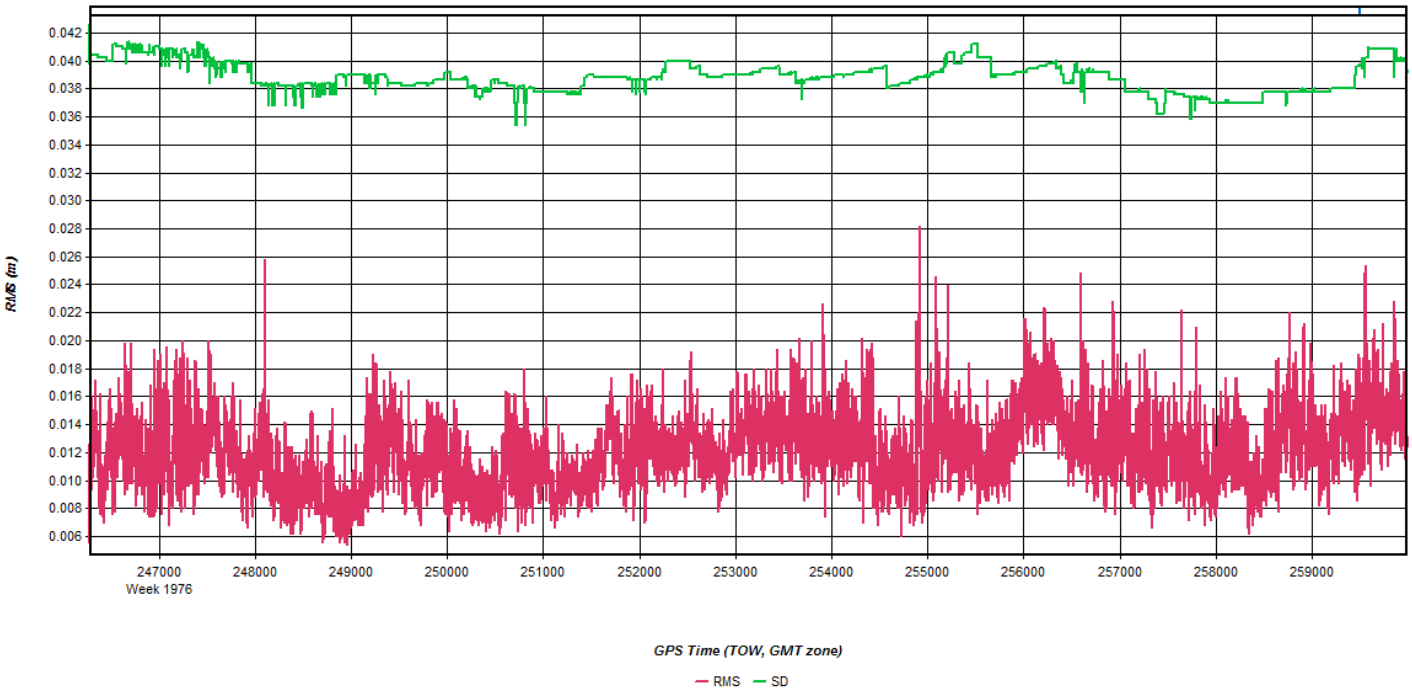
November 21, 2017-B (N915WC, SN8237)

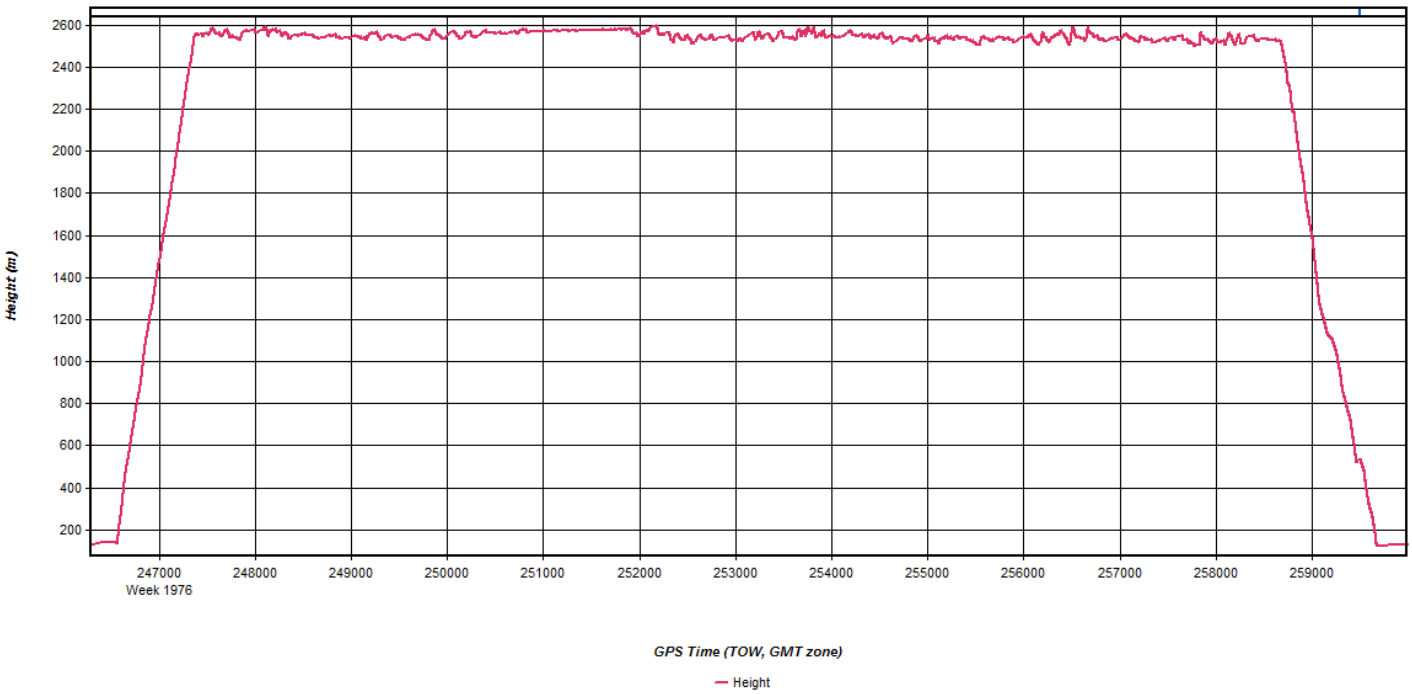

MEPI
MELI
20 km

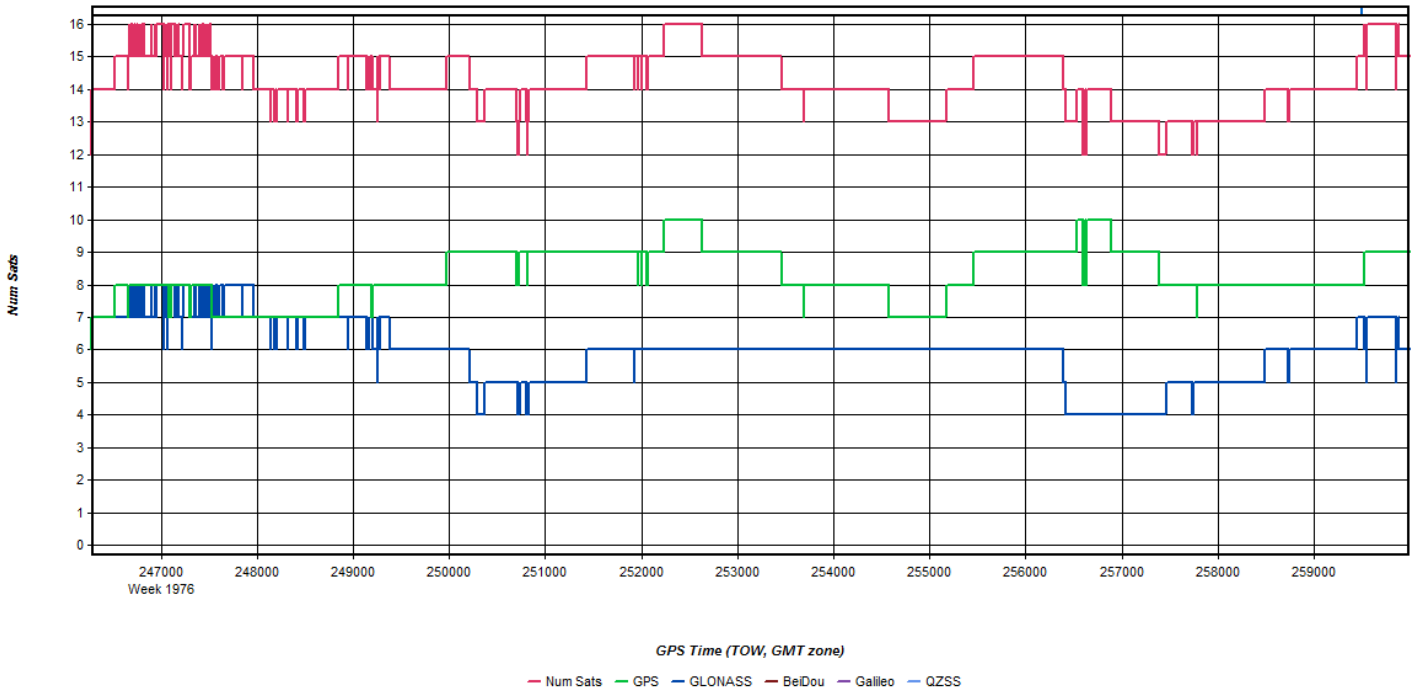

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
PDOP

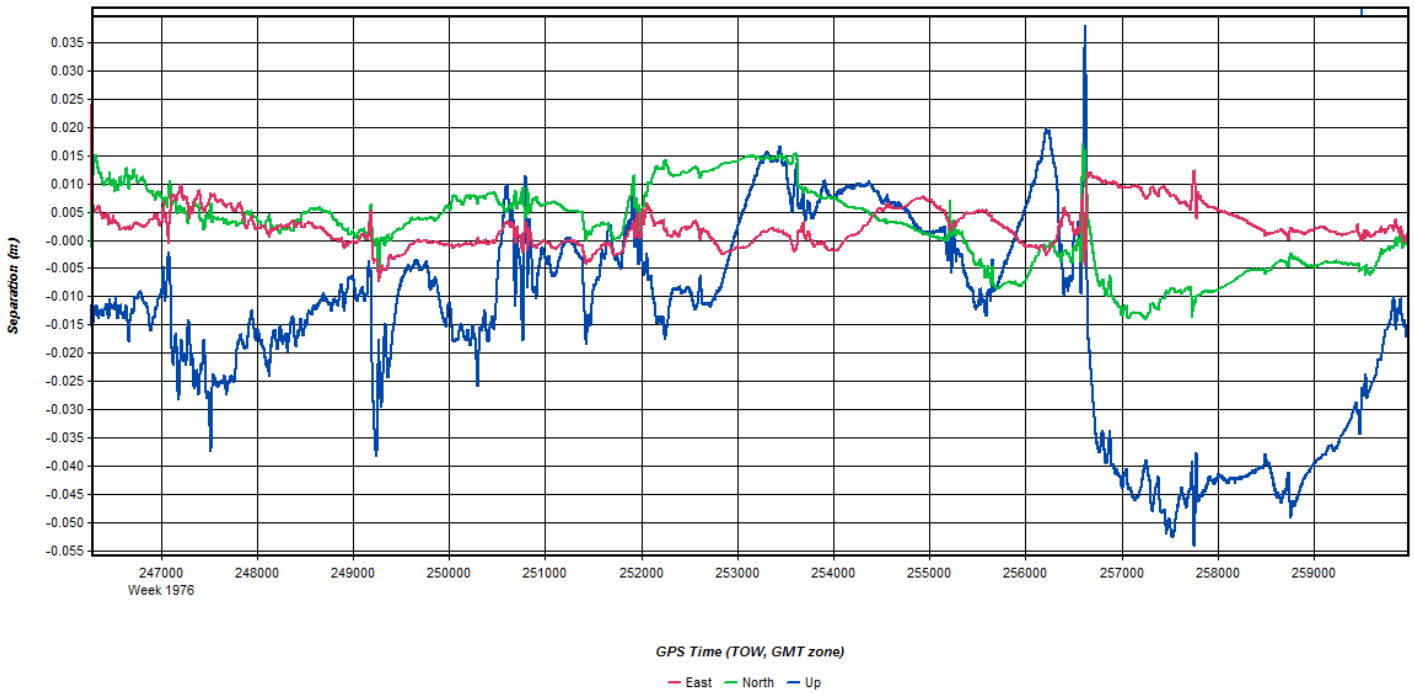

Status
2
1
0
-1
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

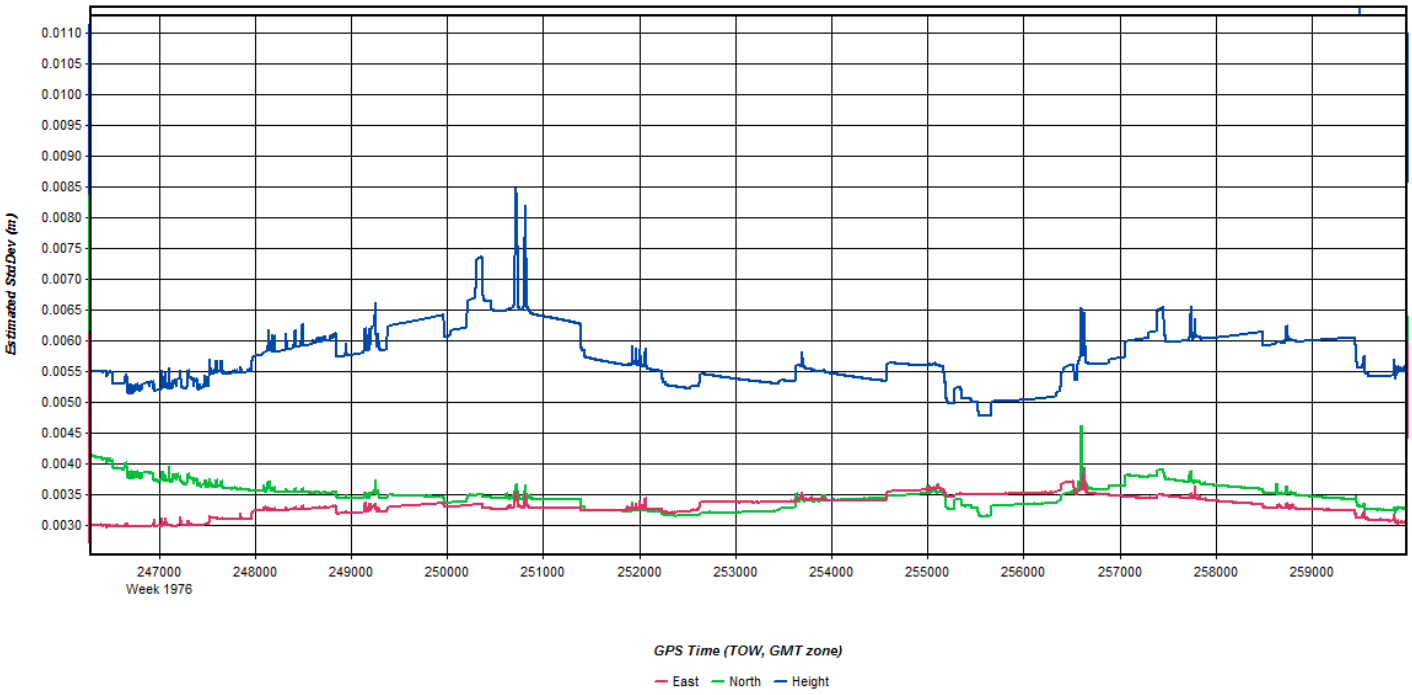

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
-25
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Roll
Pitch

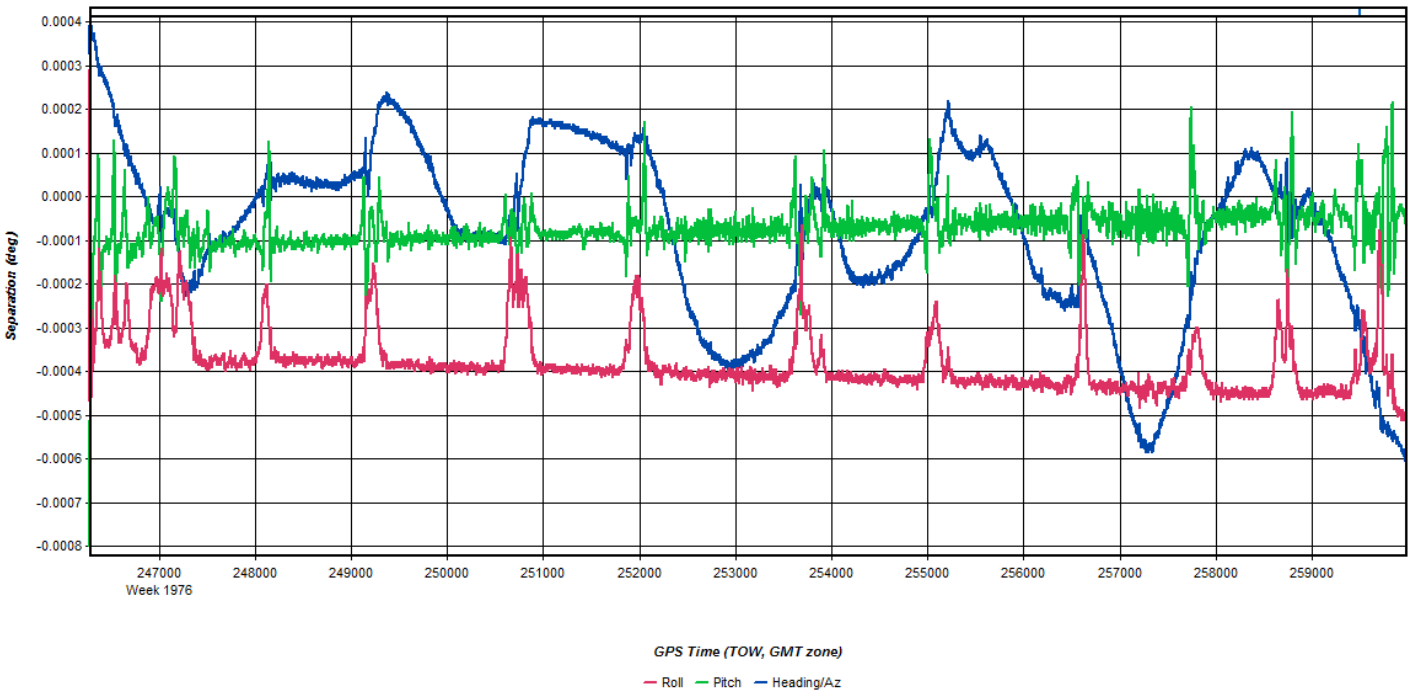

RMS (m)
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
RMS
SD

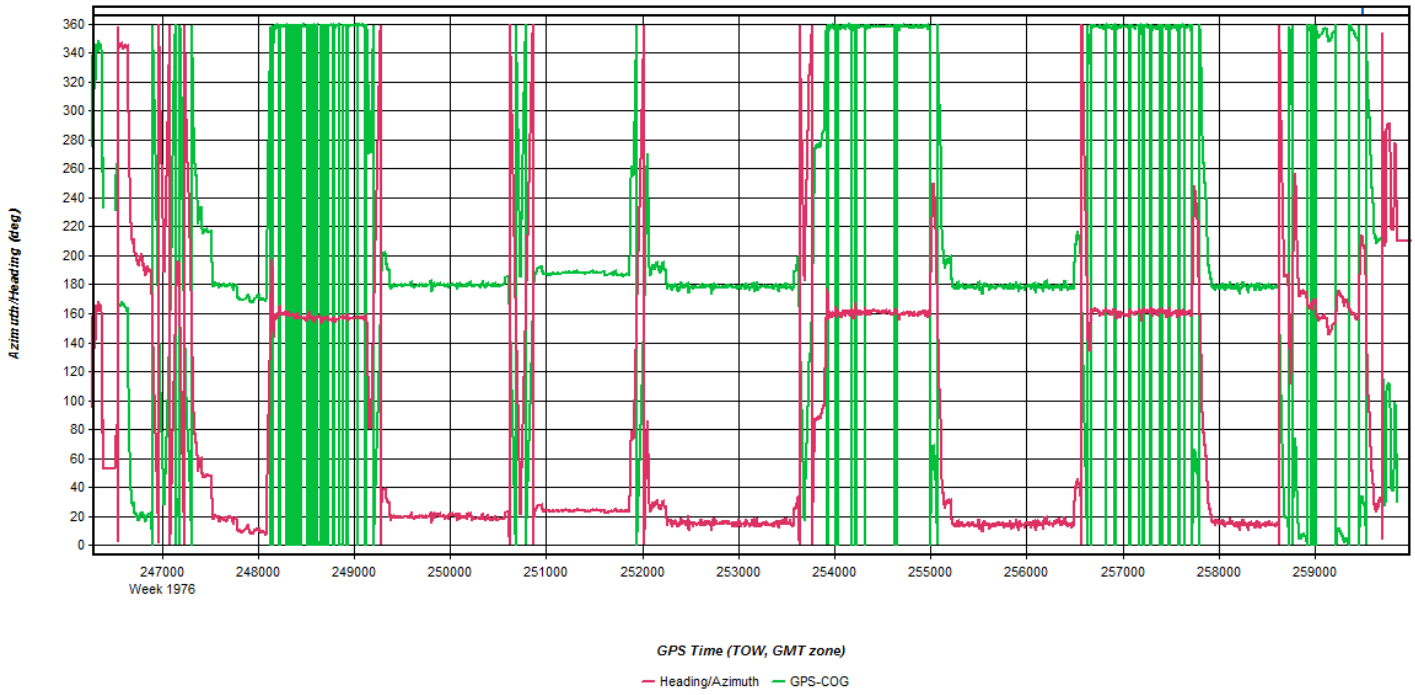

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Height

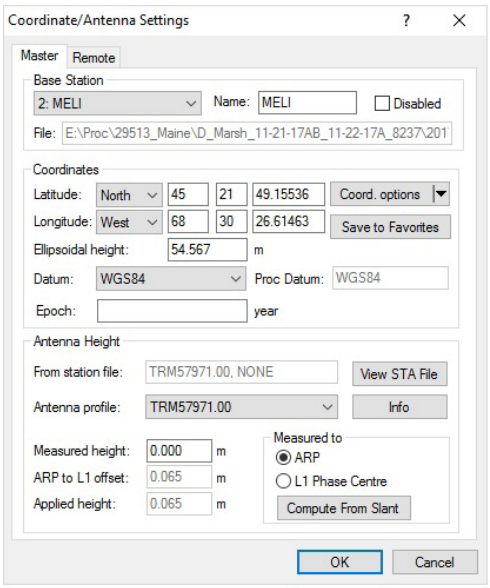

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

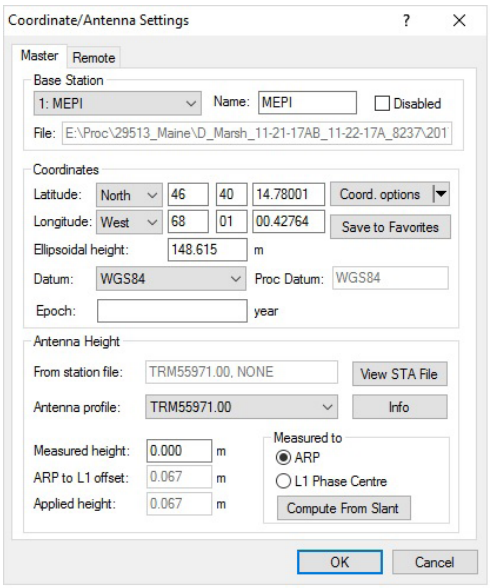

Separation (m)
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
East
North
Height

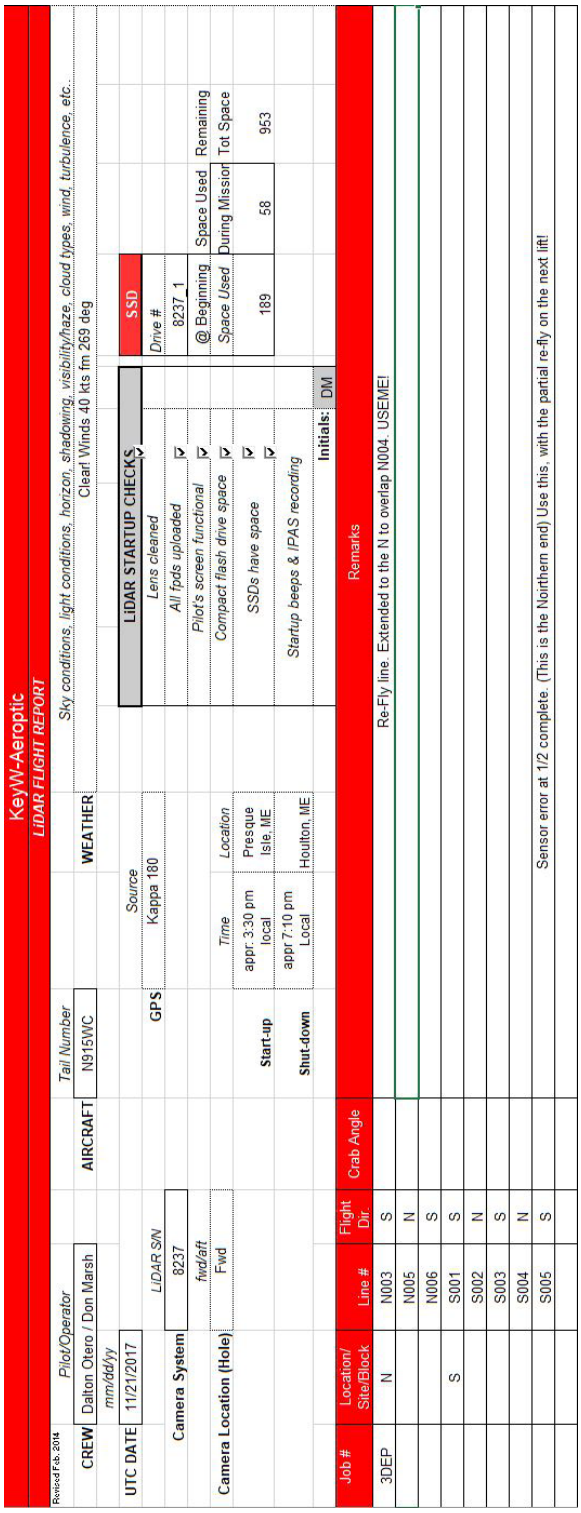

Separation (deg)
0.0004
0.0003
0.0002
0.0001
0.0000
-0.0001
-0.0002
-0.0003
-0.0004
-0.0005
-0.0006
-0.0007
-0.0008
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
247000
Week 1976
248000
249000
250000
251000
252000
253000
254000
255000
256000
257000
258000
259000
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
2: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_11-21-17AB_11-22-17A_8237\201
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MEPI
Name: MEPI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_11-21-17AB_11-22-17A_8237\201
Coordinates
Latitude: North 46 40 14.78001 Coord. options
Longitude: West 68 01 00.42764 Save to Favorites
Ellipsoidal height: 148.615 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE View STA File
Antenna profile: TRM55971.00 Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic

LIDAR FLIGHT REPORT

Revised Feb. 2014

	Pilot/Operator		*Tail Number*		**WEATHER**	*Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.*
CREW	Dalton Otero / Don Marsh	**AIRCRAFT**	N915WC		Clear Winds 40 kts fm 269 deg

mm/dd/yy

UTC DATE 11/21/2017

	LiDAR S/N		*Source*			
Camera System	8237	**GPS**	Kappa 180			
	fwd/aft					
Camera Location (Hole)	Fwd		*Time*	*Location*		
		Start-up	appr. 3:30 pm local	Presque Isle, ME		
		Shut-down	appr 7:10 pm Local	Houlton, ME		

LiDAR STARTUP CHECKS

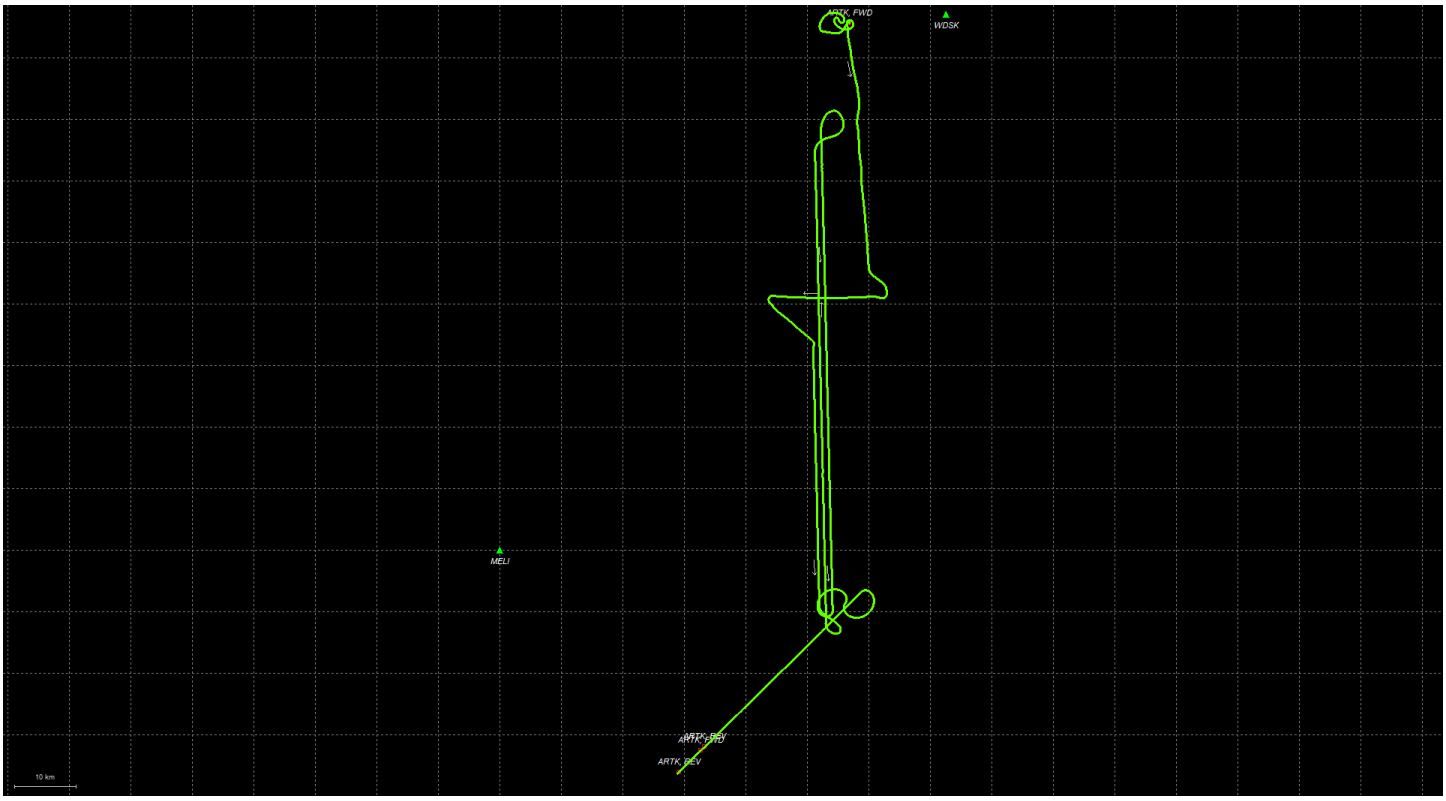
Lens cleaned	
All fpds uploaded	▽
Pilot's screen functional	▽
Compact flash drive space	▽
SSDs have space	▽
Startup beeps & IPAS recording	▽
Initials:	DM

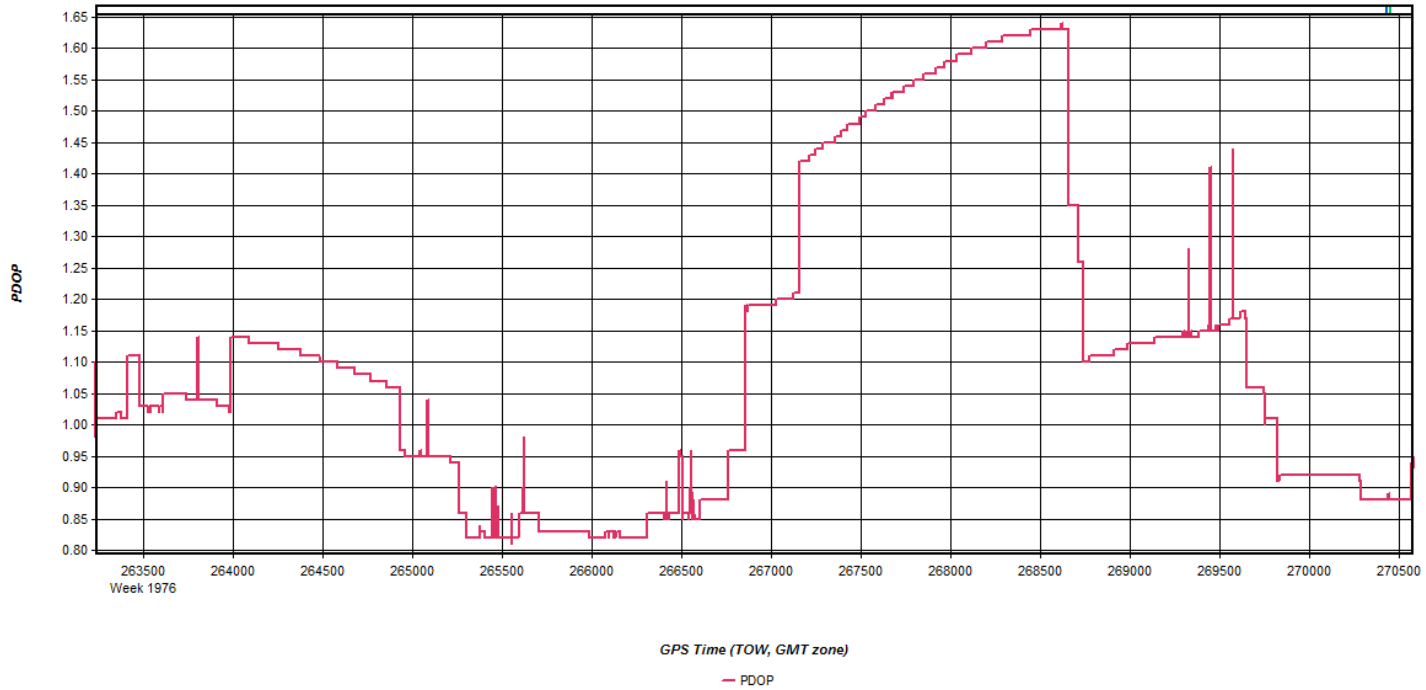
SSD

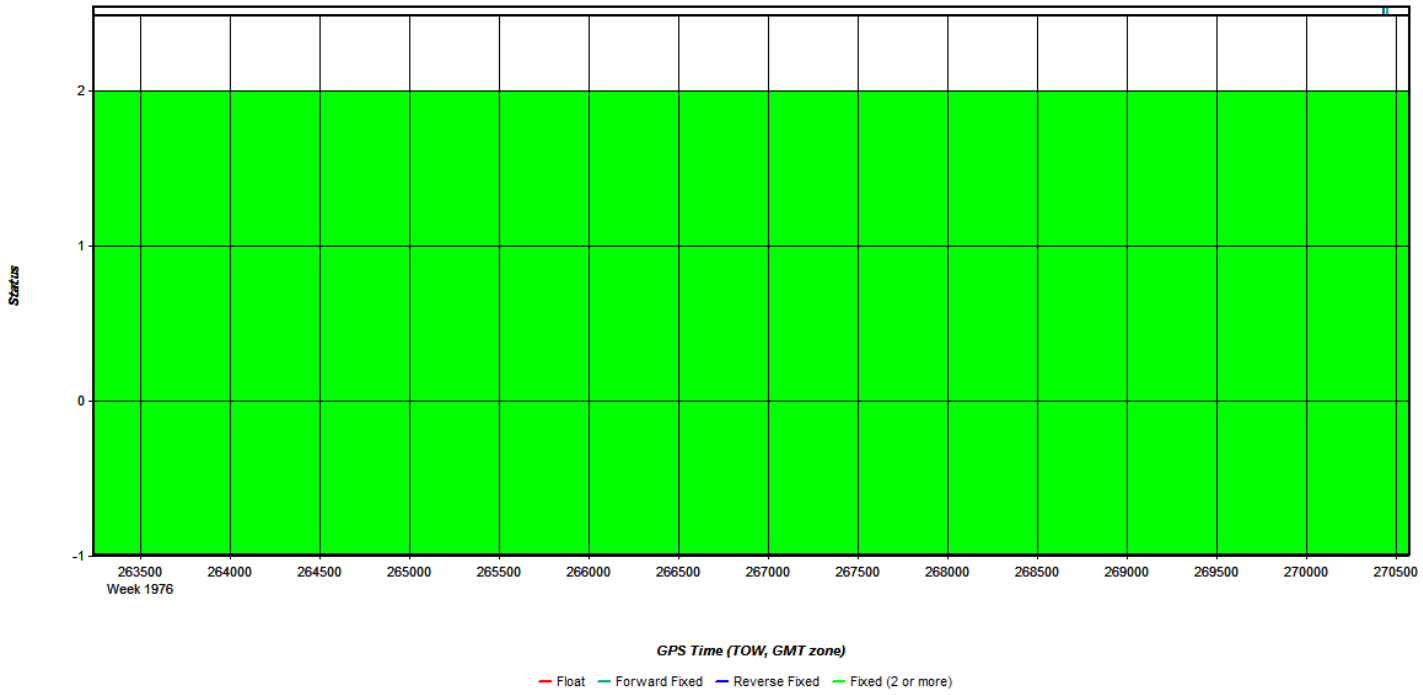
Drive #			
8237_1			
@ Beginning	Space Used	Remaining	
Space Used	During Mission	Tot Space	
189	58	953	

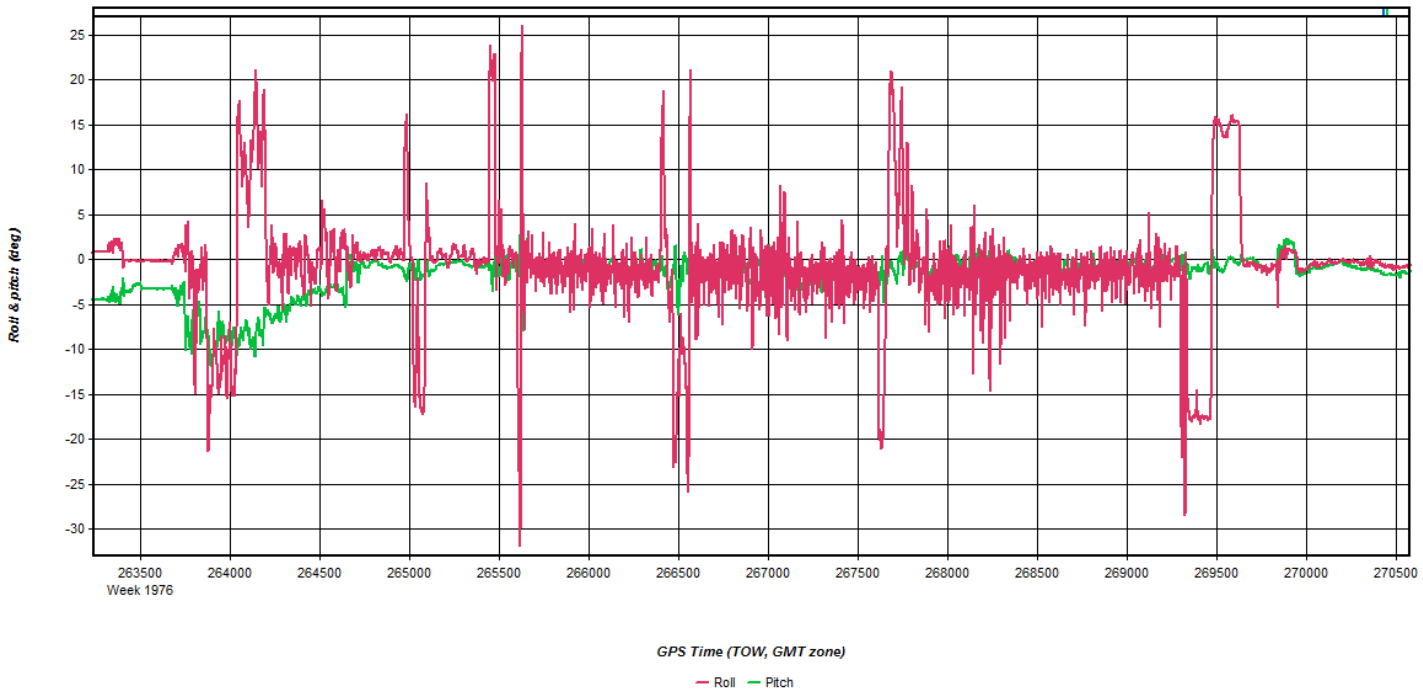
Job #	Location/ Site/Block	Line #	Flight Dir.	Crab Angle	Remarks
3DEP	N	N003	S		Re-Fly line. Extended to the N to overlap N004. USEME!
		N005	N		
		N006	S		
	S	S001	S		
		S002	N		
		S003	S		
		S004	N		
		S005	S		Sensor error at 1/2 complete. (This is the Northern end) Use this, with the partial re-fly on the next lift!

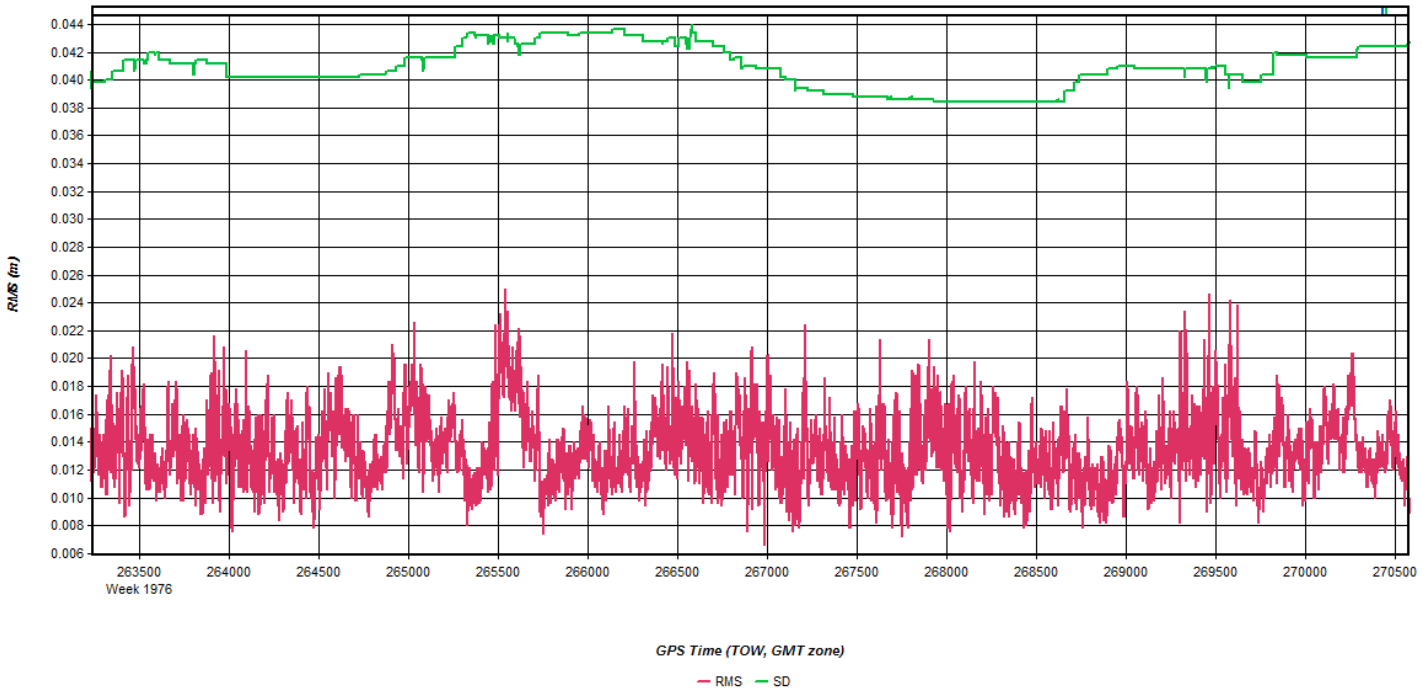
November 22, 2017-A (N915WC, SN8237)

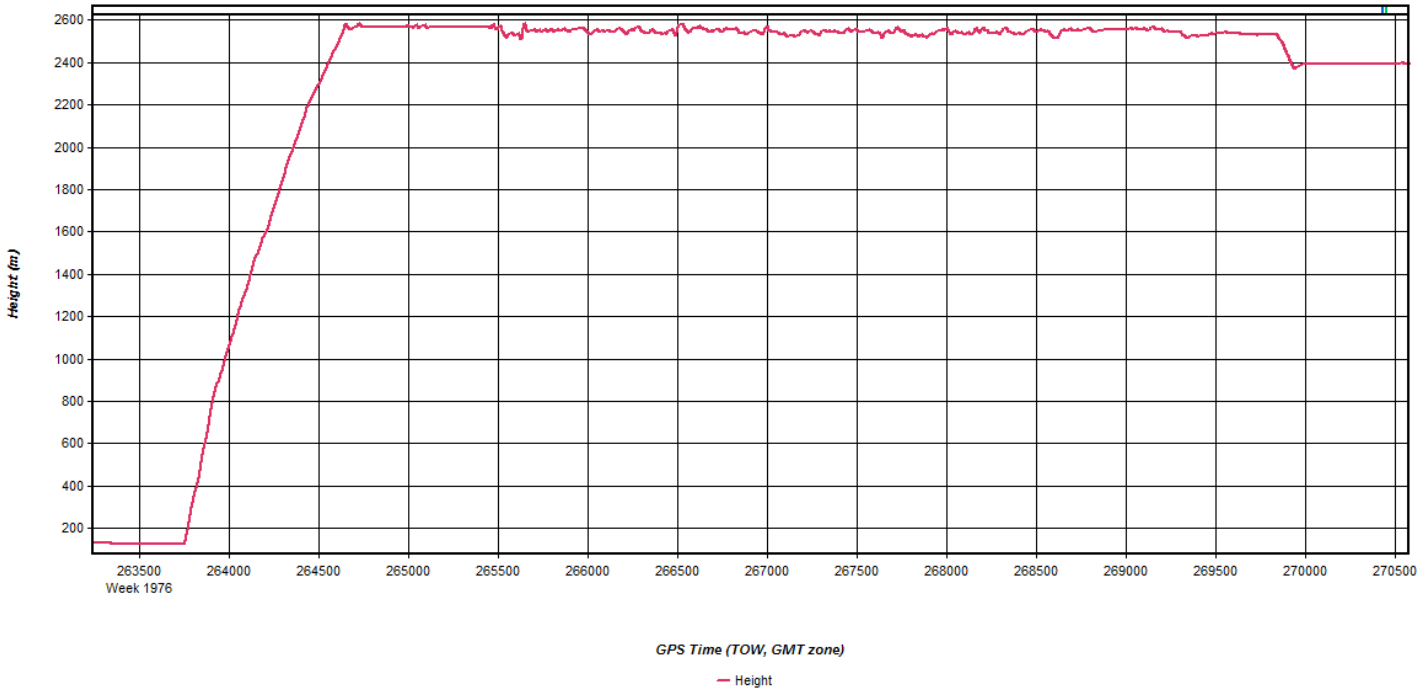

ARTK_FWD
WDSK
MELI
ARTK_REV
ARTK_REV
10 km

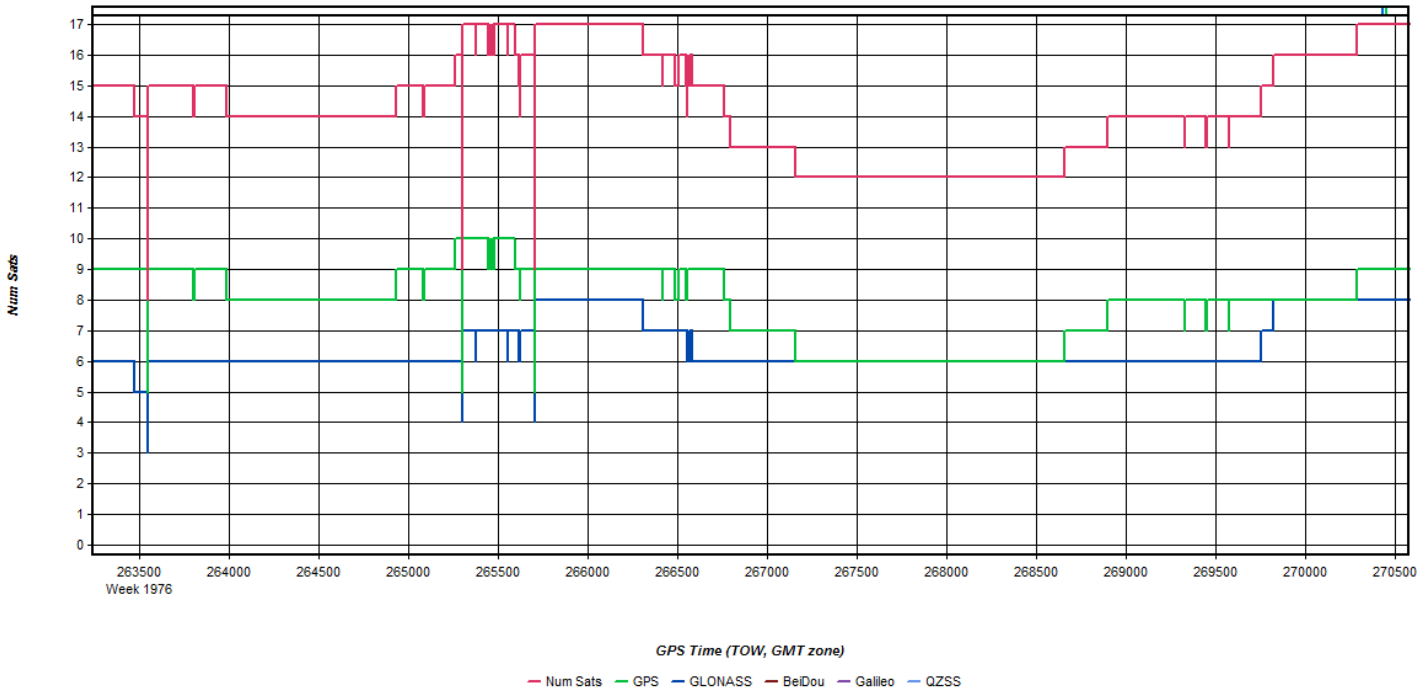

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
PDOP


Status
2
1
0
-1
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

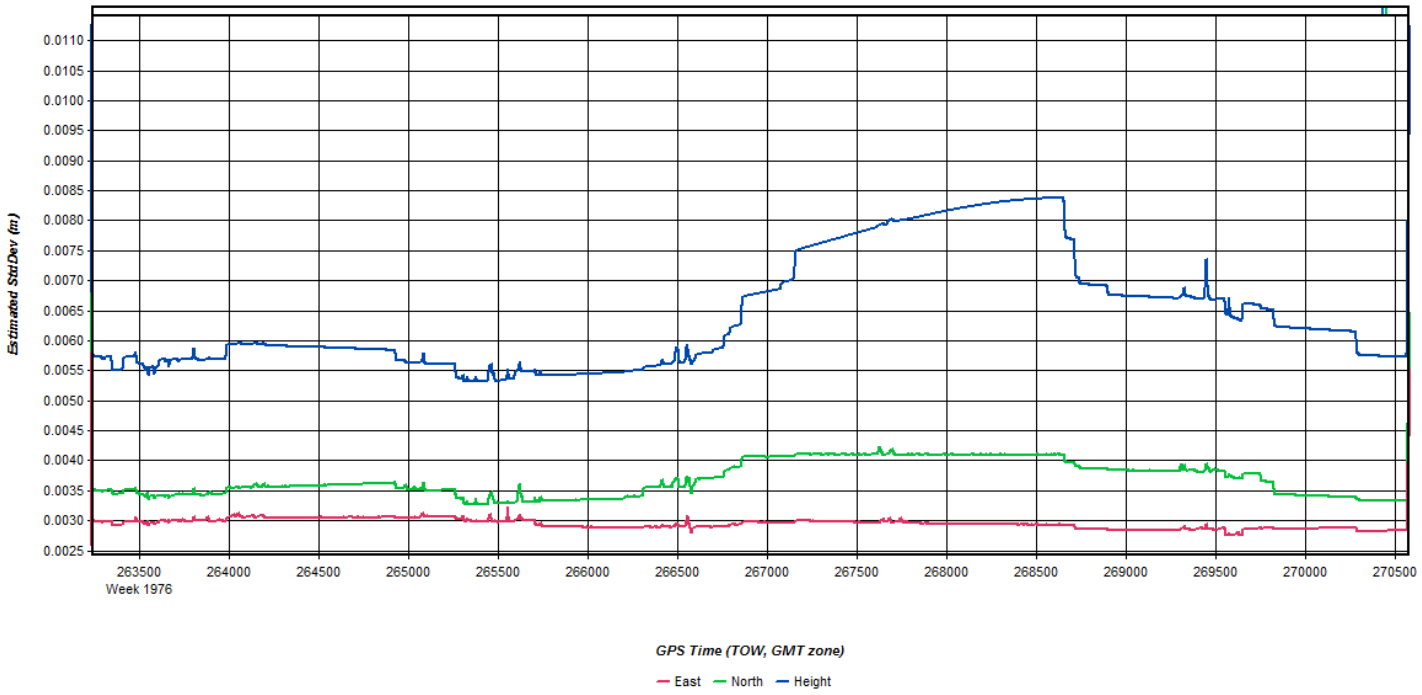

Roll & pitch (deg)
25
20
15
10
5
0
-5
-10
-15
-20
-25
-30
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Roll
Pitch

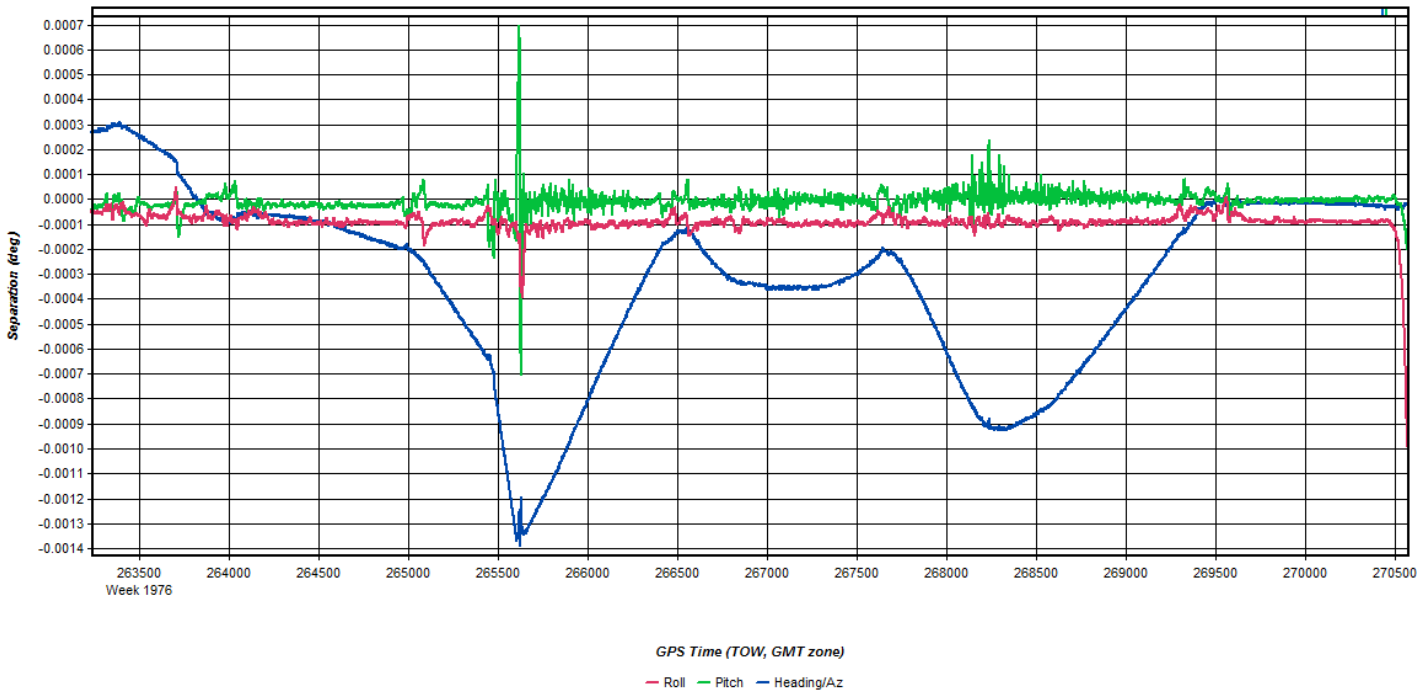

RMS (m)
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
RMS
SD

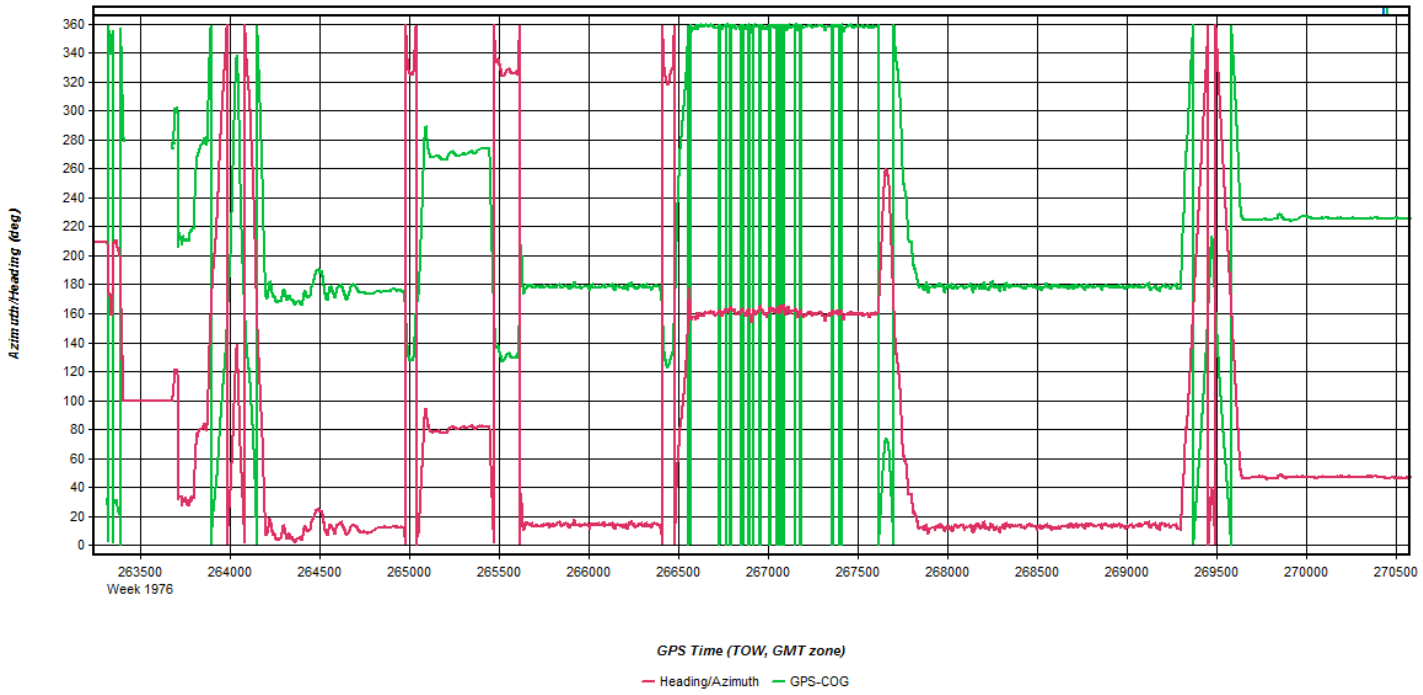

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Height

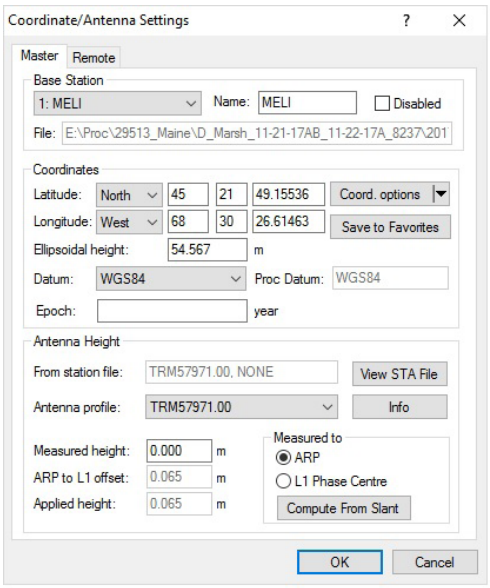

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS

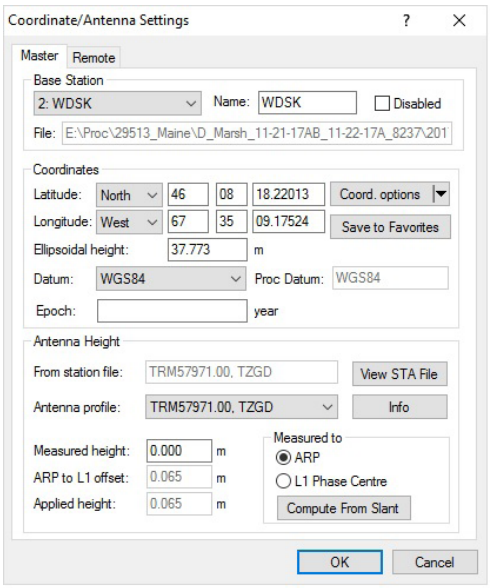
Separation (m)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
East
North
Up


Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
East
North
Height

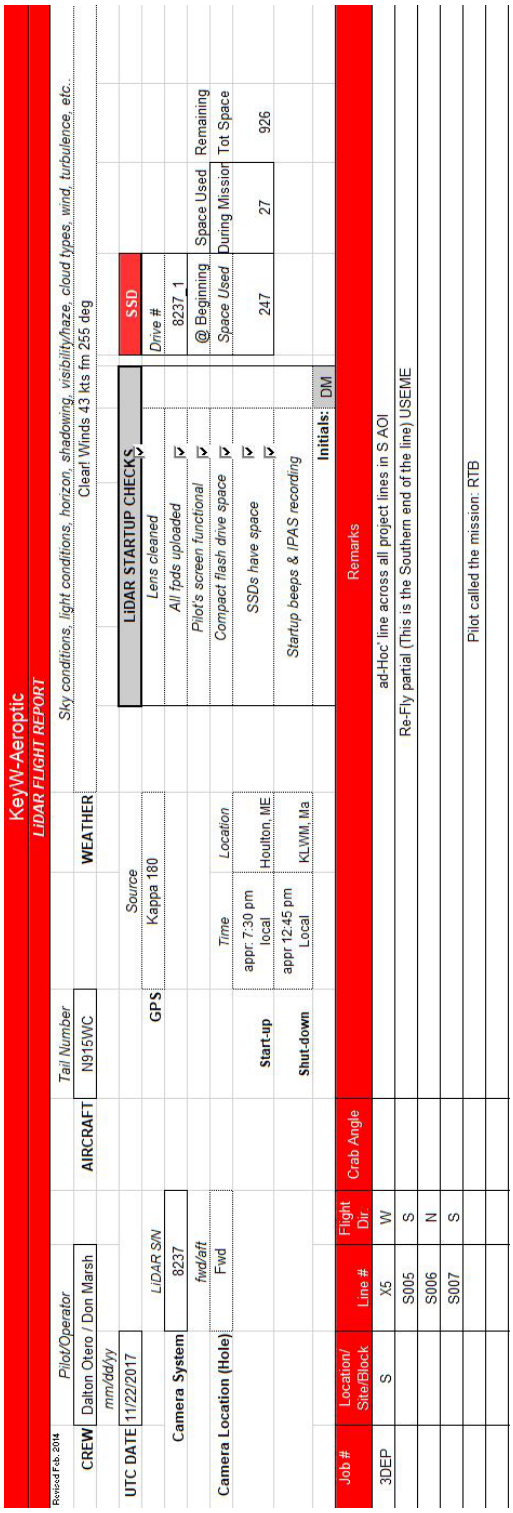

Separation (deg)
0.0007
0.0006
0.0005
0.0004
0.0003
0.0002
0.0001
0.0000
-0.0001
-0.0002
-0.0003
-0.0004
-0.0005
-0.0006
-0.0007
-0.0008
-0.0009
-0.0010
-0.0011
-0.0012
-0.0013
-0.0014
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
263500
Week 1976
264000
264500
265000
265500
266000
266500
267000
267500
268000
268500
269000
269500
270000
270500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MELI
Name: MELI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_11-21-17AB_11-22-17A_8237\201
Coordinates
Latitude: North 45 21 49.15536
Coord. options
Longitude: West 68 30 26.61463
Save to Favorites
Ellipsoidal height: 54.567 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, NONE
View STA File
Antenna profile: TRM57971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel


Coordinate/Antenna Settings
Master
Remote
Base Station
2: WDSK
Name: WDSK
Disabled
File: E:\Proc\29513_Maine\D_Marsh_11-21-17AB_11-22-17A_8237\201
Coordinates
Latitude: North 46 08 18.22013 Coord. options
Longitude: West 67 35 09.17524 Save to Favorites
Ellipsoidal height: 37.773 m
Datum: WGS84 Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM57971.00, TZGD View STA File
Antenna profile: TRM57971.00, TZGD Info
Measured height: 0.000 m
ARP to L1 offset: 0.065 m
Applied height: 0.065 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

	Pilot/Operator		Tail Number		Sky conditions, light conditions, horizon, shadowing, visibility/haze, cloud types, wind, turbulence, etc.
CREW	Dalton Otero / Don Marsh	AIRCRAFT	N915WC	WEATHER	Clear Winds 43 kts fm 255 deg

UTC DATE 11/22/2017 (mm/dd/yy)

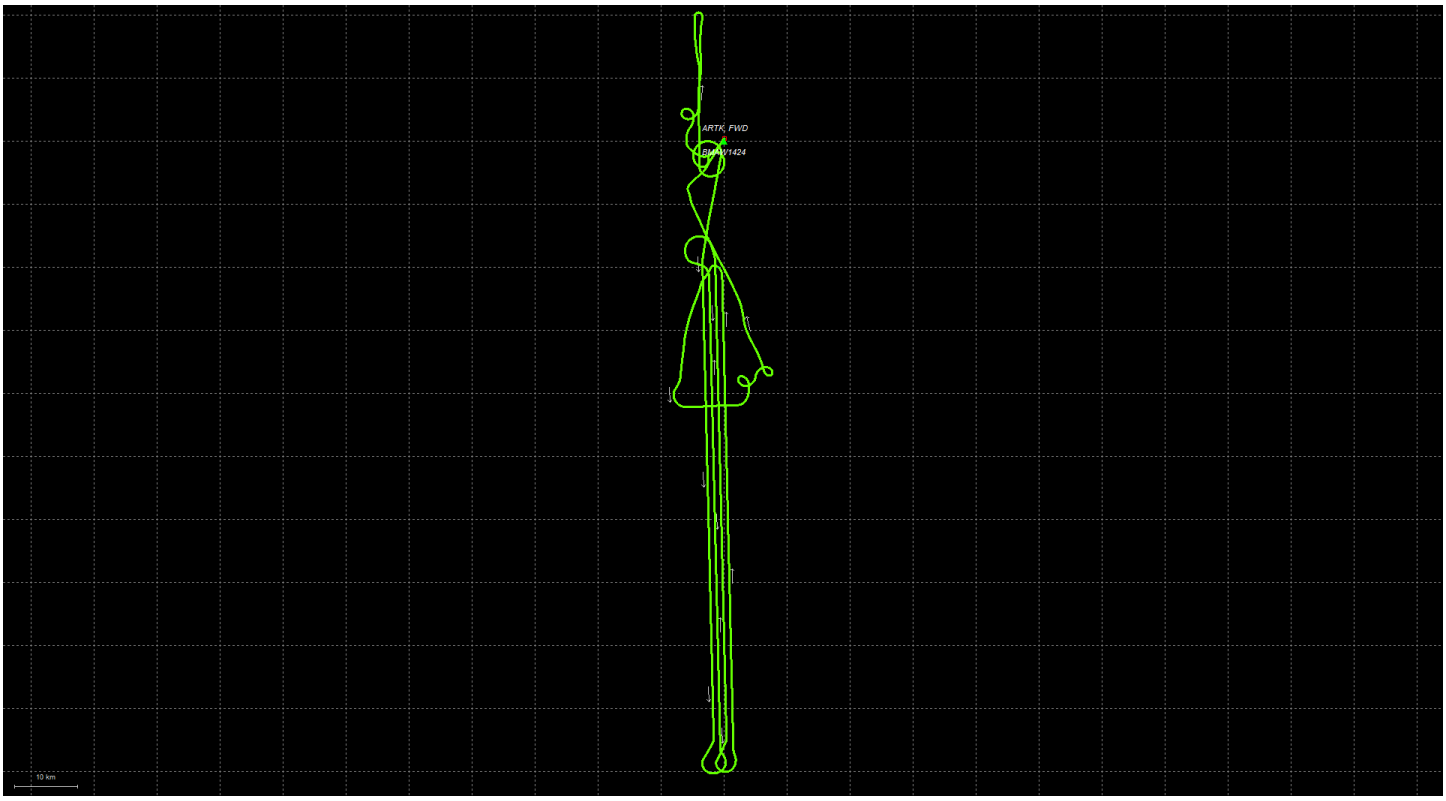
	LiDAR S/N		Source		Time	Location
Camera System	8237	GPS	Kappa 180	Start-up	appr. 7:30 pm local	Houlton, ME
	fwd/aft			Shut-down	appr 12:45 pm Local	KLWM, Ma
Camera Location (Hole)	Fwd					

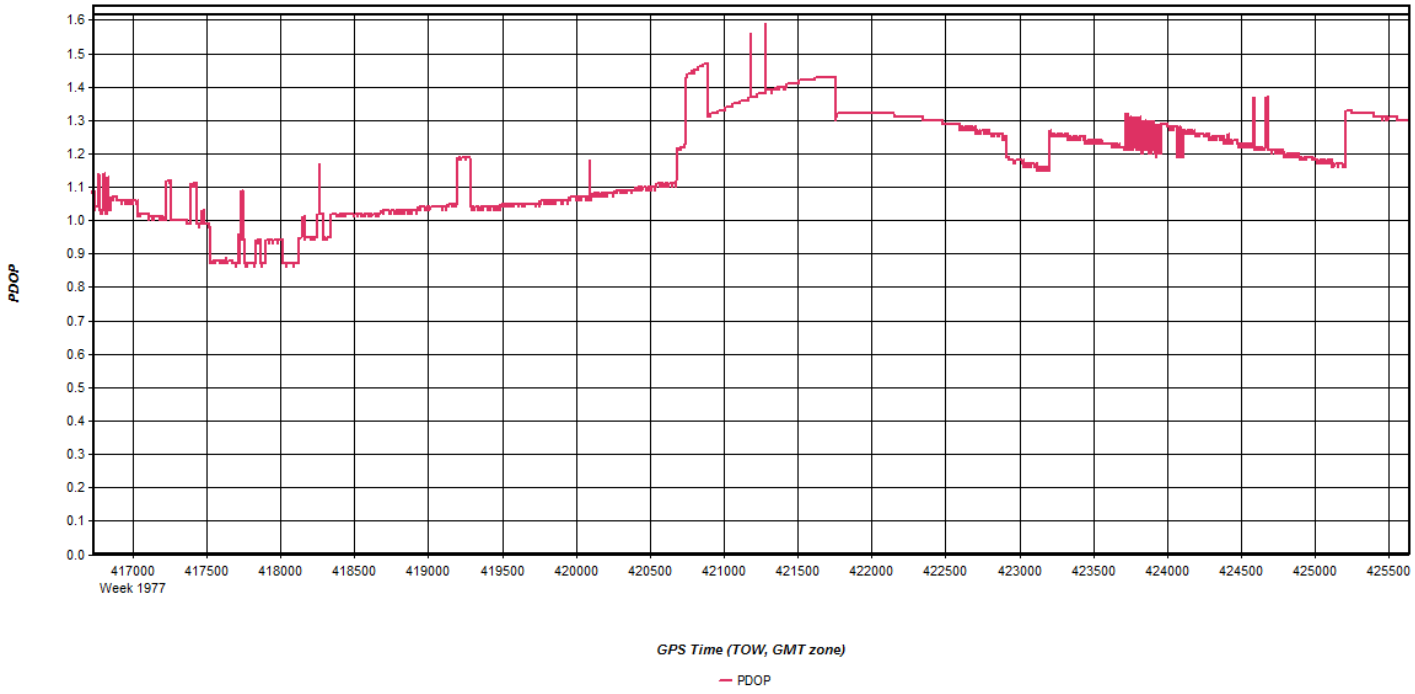
LIDAR STARTUP CHECKS	
Lens cleaned	
All fpds uploaded	☑
Pilot's screen functional	☑
Compact flash drive space	☑
SSDs have space	☑
Startup beeps & IPAS recording	☑
Initials:	DM

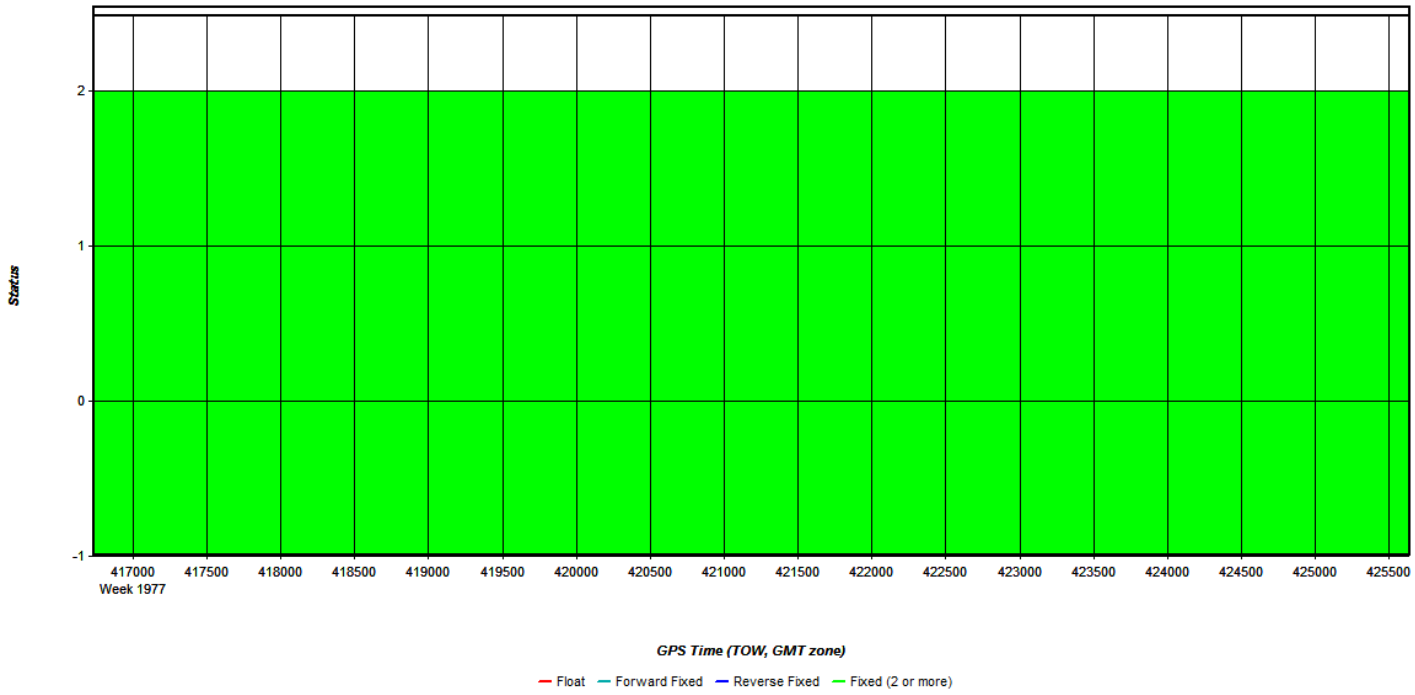
SSD			
Drive #			
8237_1			
@ Beginning Space Used	Space Used During Mission	Space Used	Remaining Tot Space
247	27		926

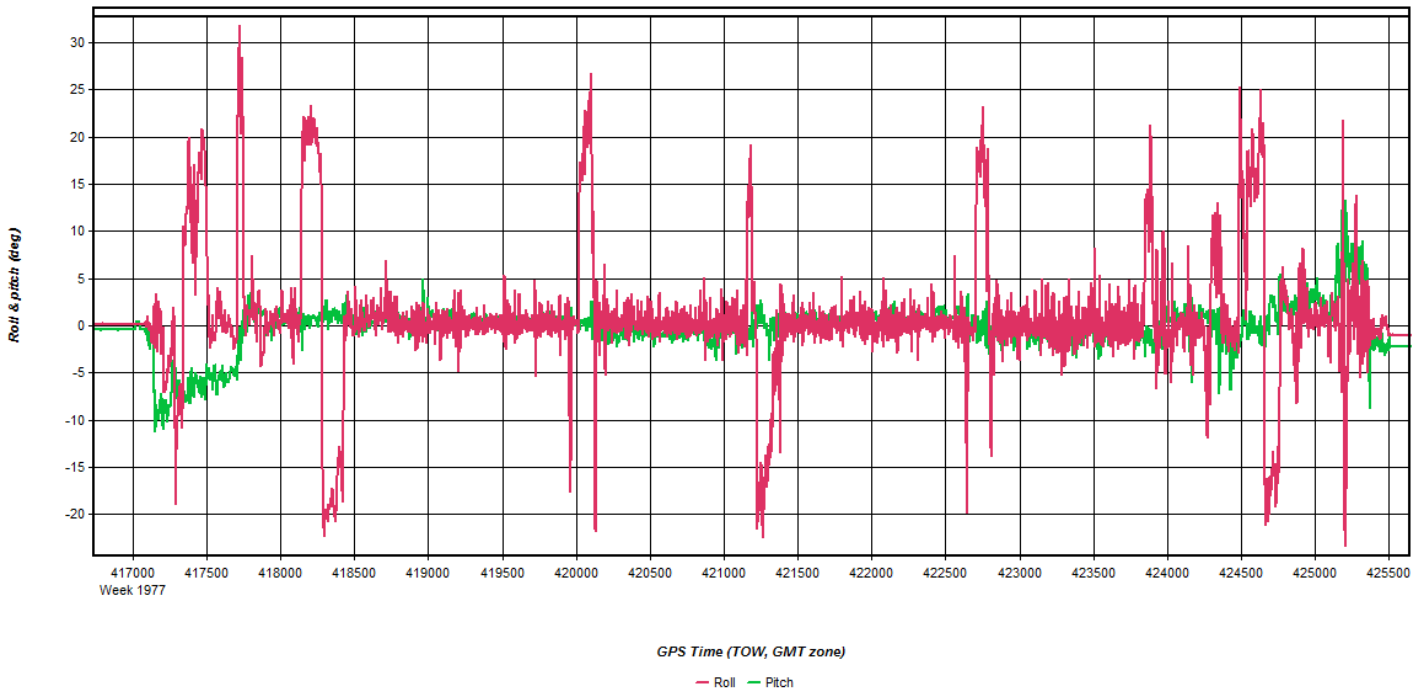
Job #	Location/ Site/Block	Line #	Flight Dir	Crab Angle	Remarks
3DEP	S	X5	W		ad-Hoc' line across all project lines in S AOI
		S005	S		Re-Fly partial (This is the Southern end of the line) USEME
		S006	N		
		S007	S		
					Pilot called the mission: RTB

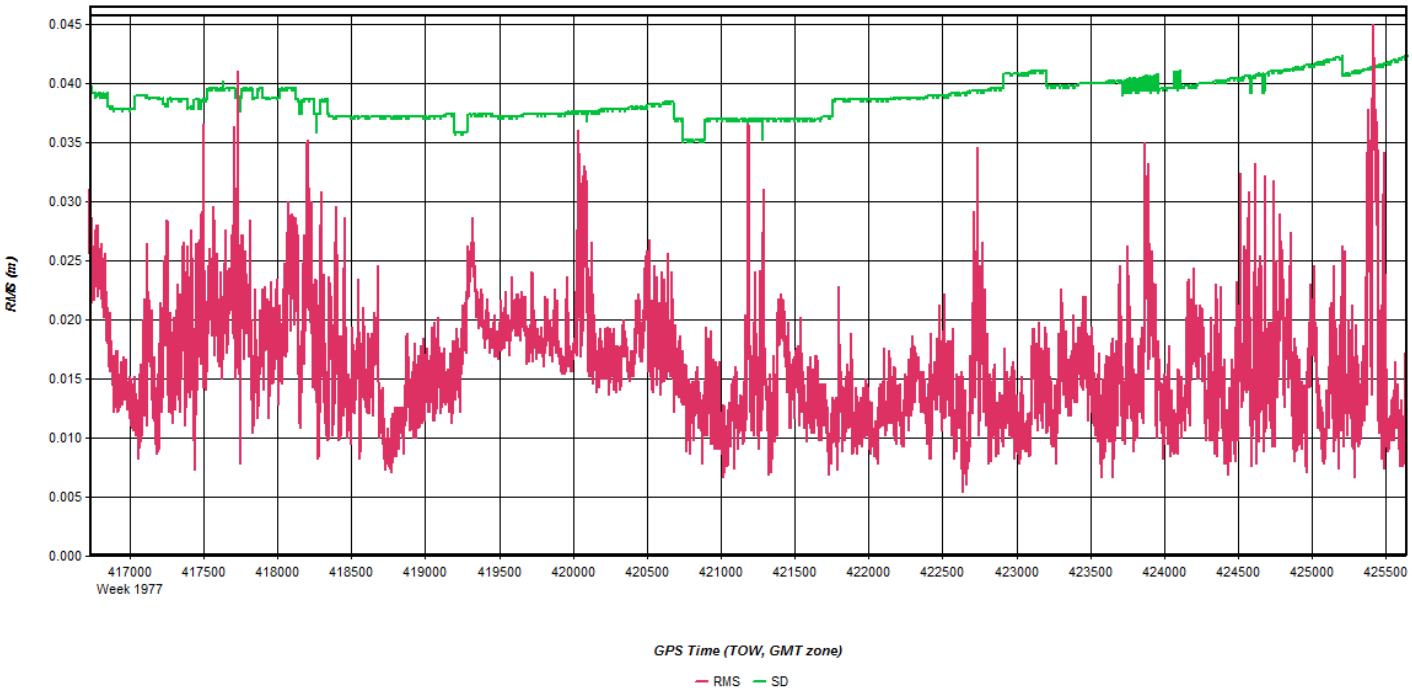
November 30, 2017-A (N915WC, SN8237)

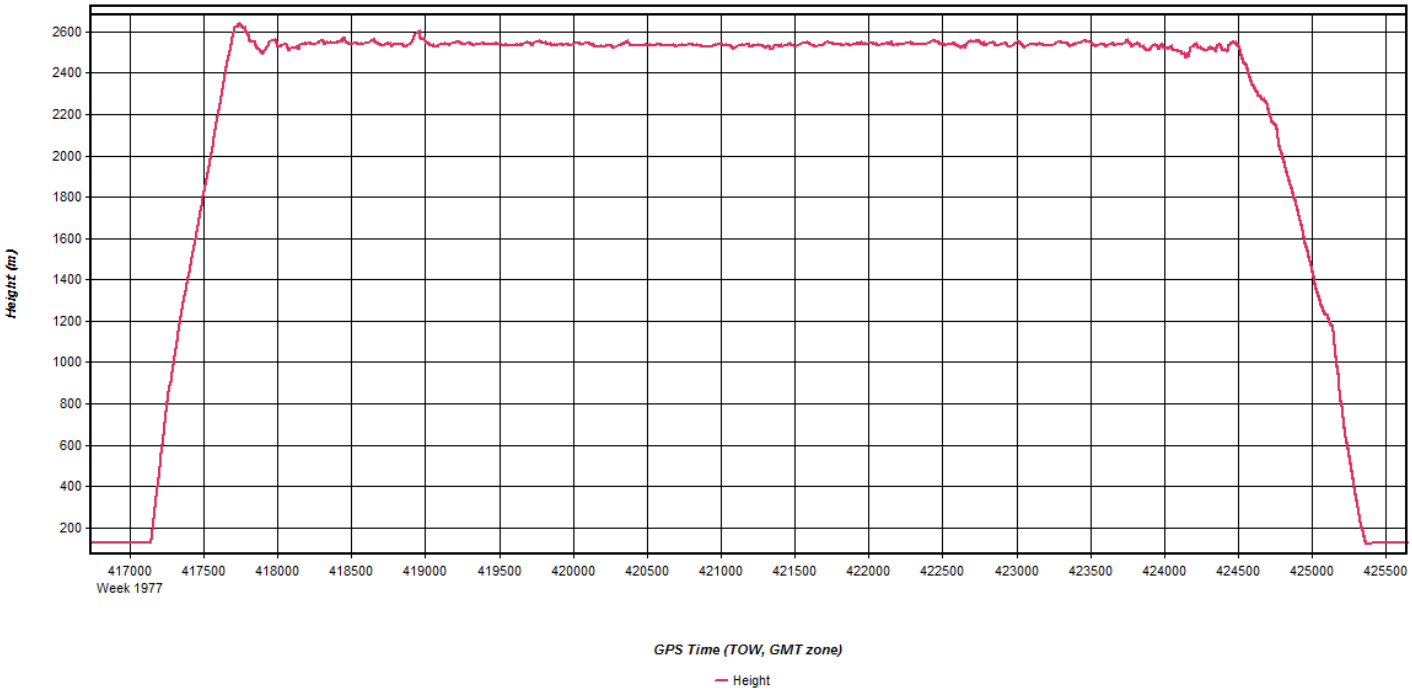

ARTK_FWD
10 km


PDOP
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
PDOP

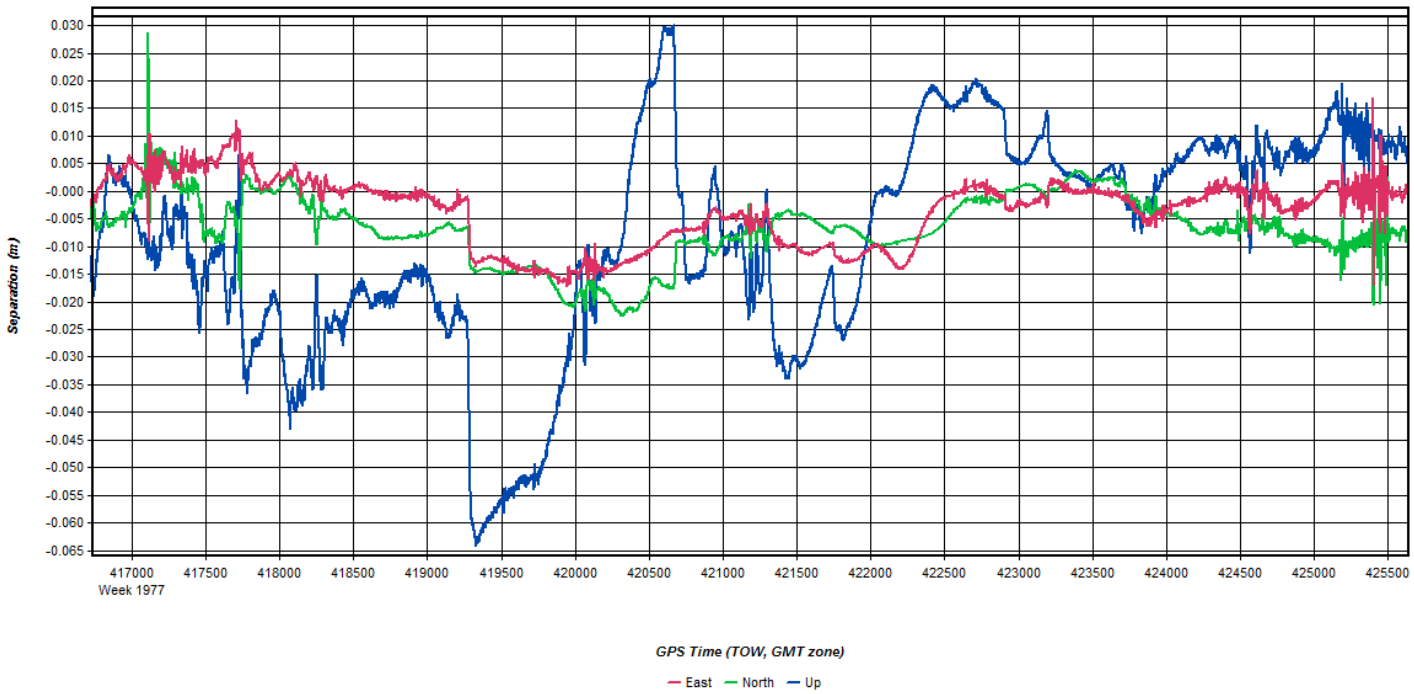

Status
2
1
0
-1
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

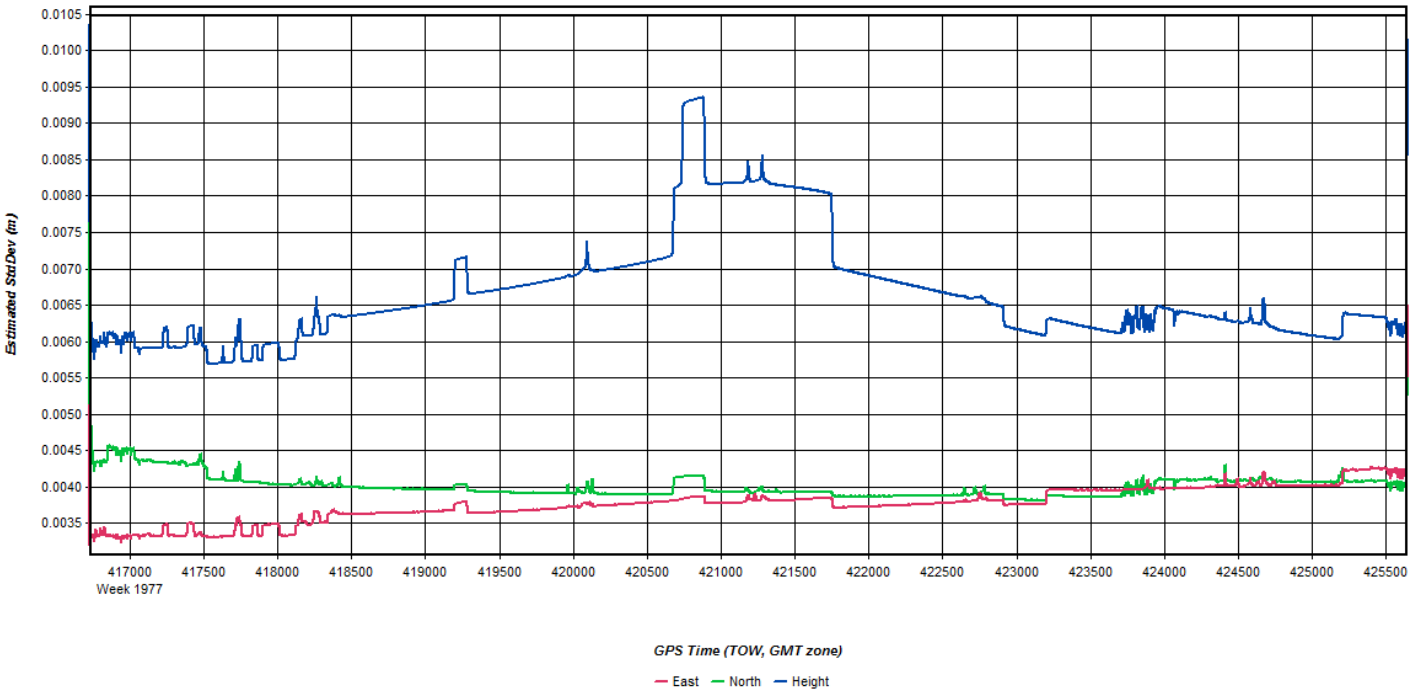

Roll & pitch (deg)
30
25
20
15
10
5
0
-5
-10
-15
-20
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
Roll
Pitch

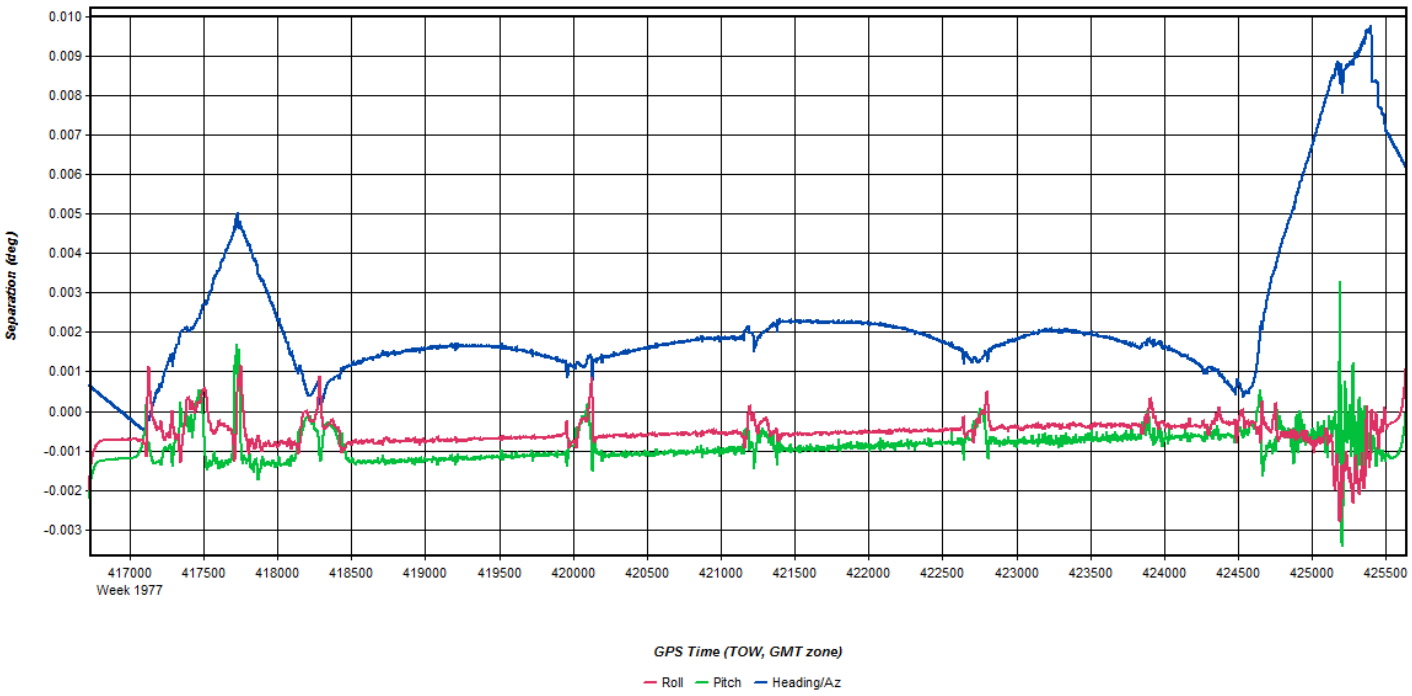

RMS (m)
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
RMS
SD

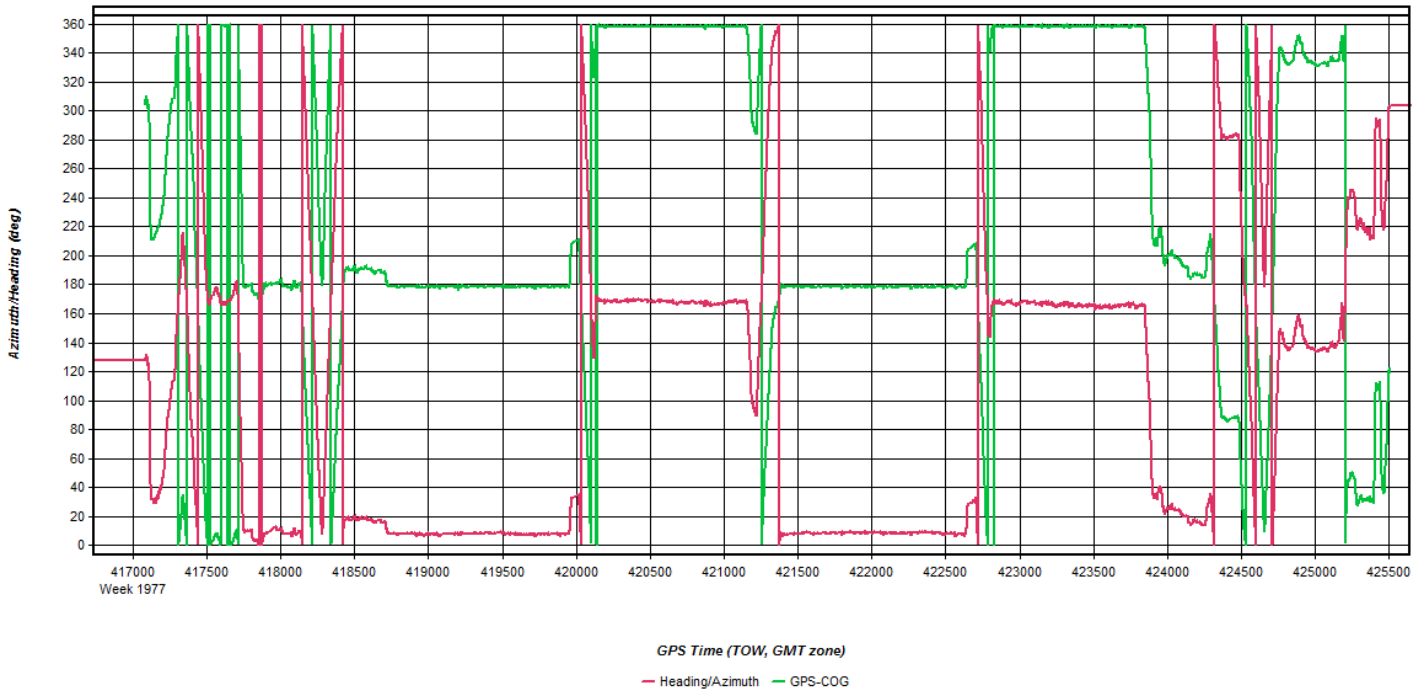

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
Height

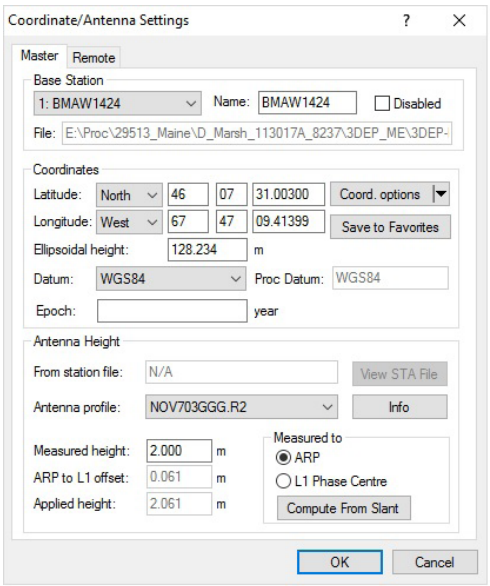
Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
417000
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
Week 1977
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
-0.060
-0.065
417000
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
Week 1977
GPS Time (TOW, GMT zone)
East
North
Up

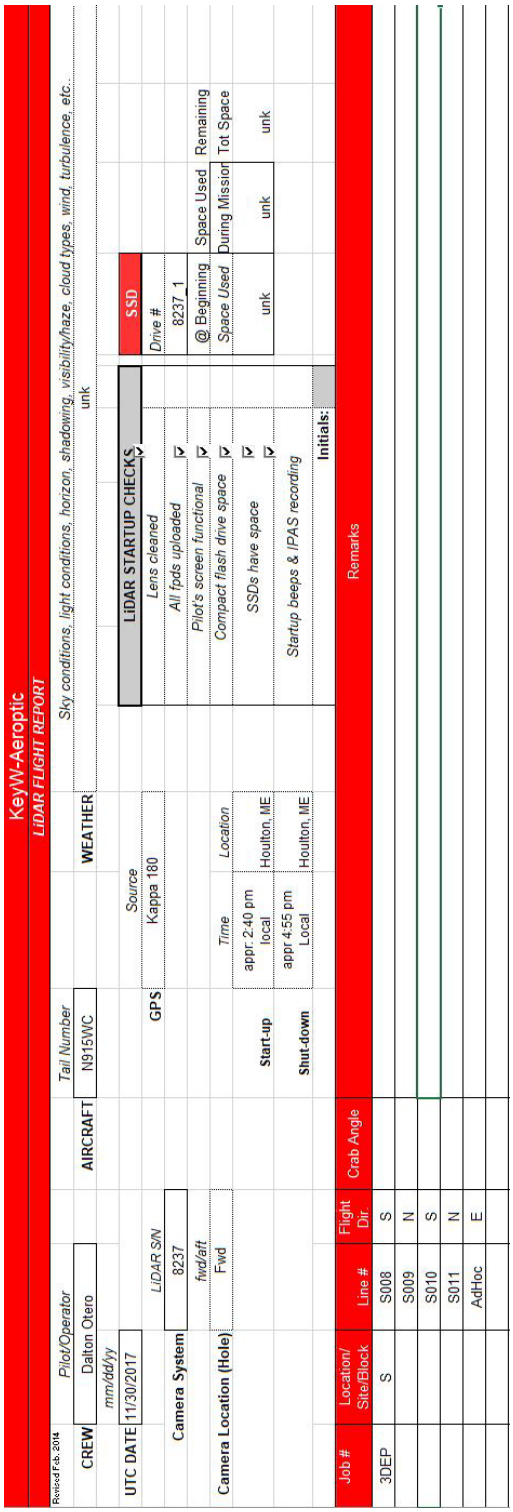

Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
417000
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
Week 1977
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
417000
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
Week 1977
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
417000
Week 1977
417500
418000
418500
419000
419500
420000
420500
421000
421500
422000
422500
423000
423500
424000
424500
425000
425500
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: BMAW1424
Name: BMAW1424
Disabled
File: E:\Proc\29513_Maine\D_Marsh_113017A_8237\3DEP_ME\3DEP-
Coordinates
Latitude: North 46 07 31.00300
Coord. options
Longitude: West 67 47 09.41399
Save to Favorites
Ellipsoidal height: 128.234 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: N/A
View STA File
Antenna profile: NOV703GGG.R2
Info
Measured height: 2.000 m
ARP to L1 offset: 0.061 m
Applied height: 2.061 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log

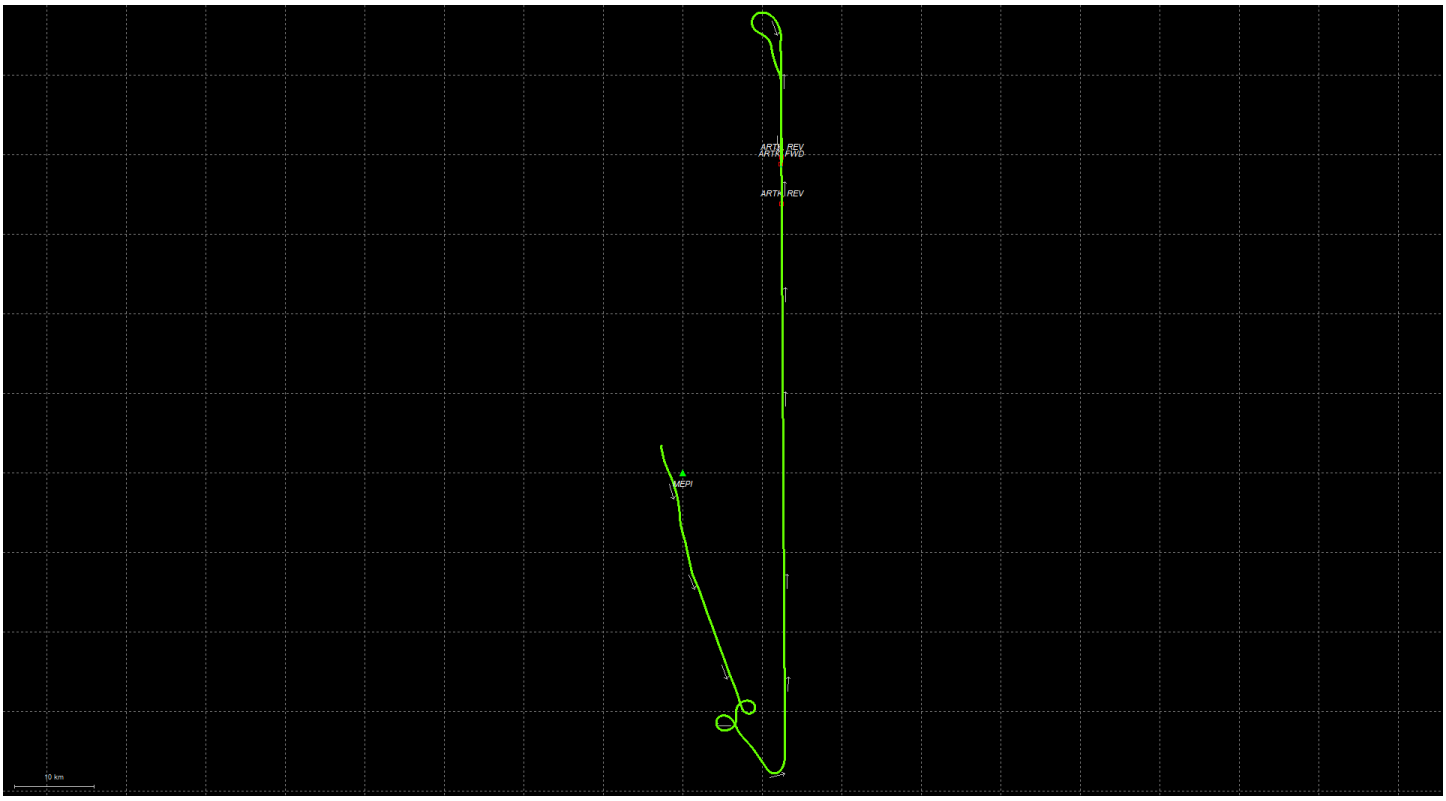


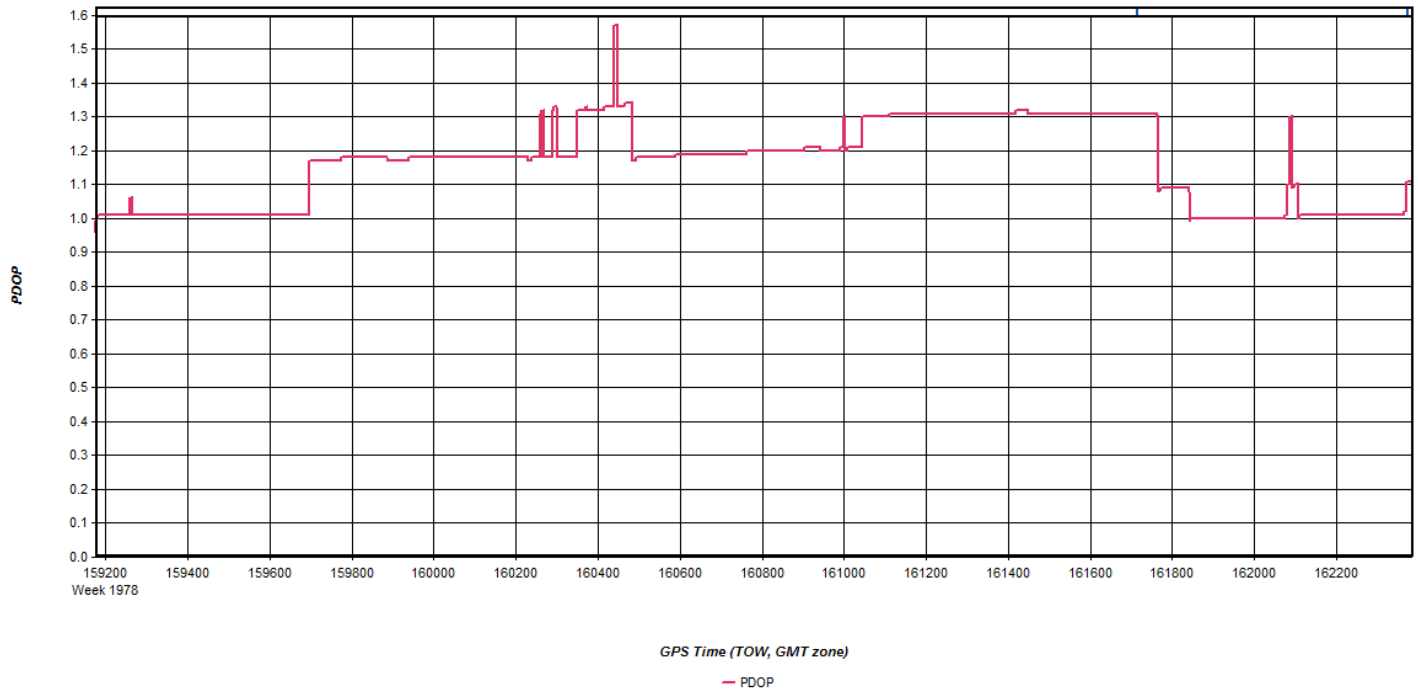
KeyW-Aeroptic
LiDAR FLIGHT REPORT

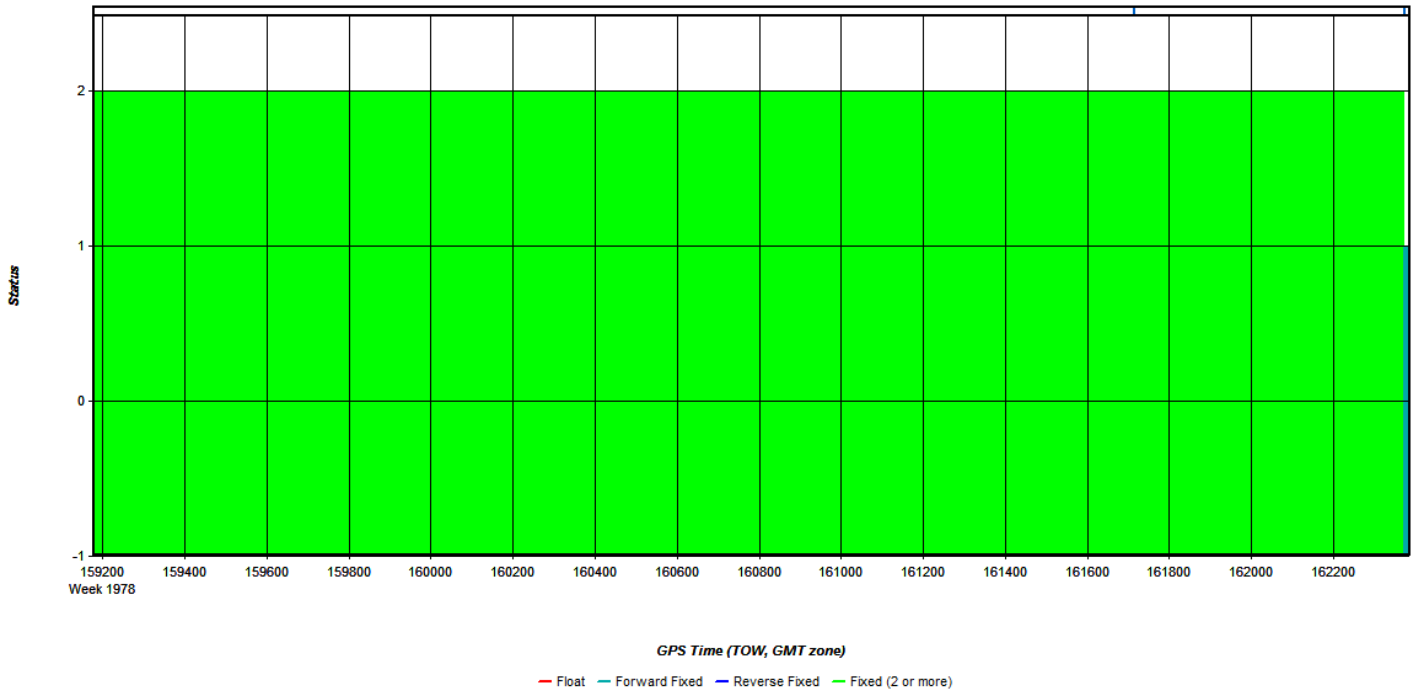
Revised Feb. 2014

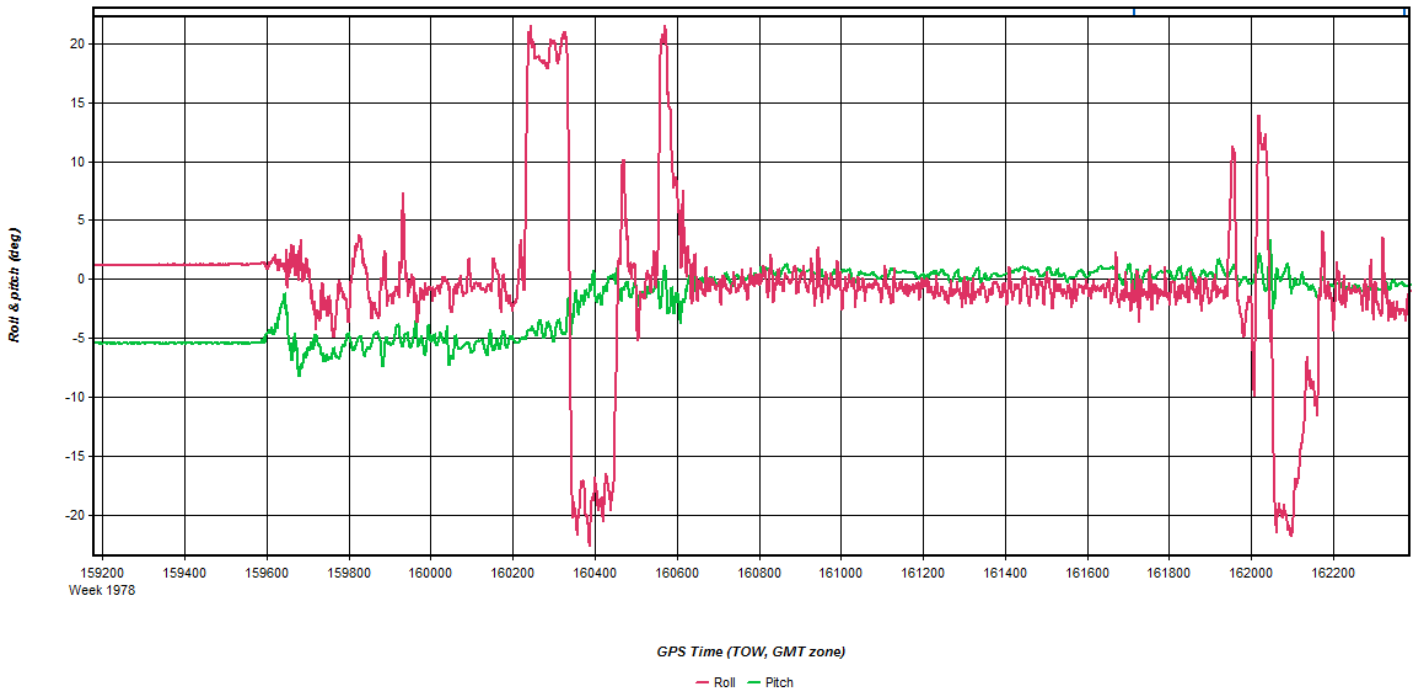
| | | |

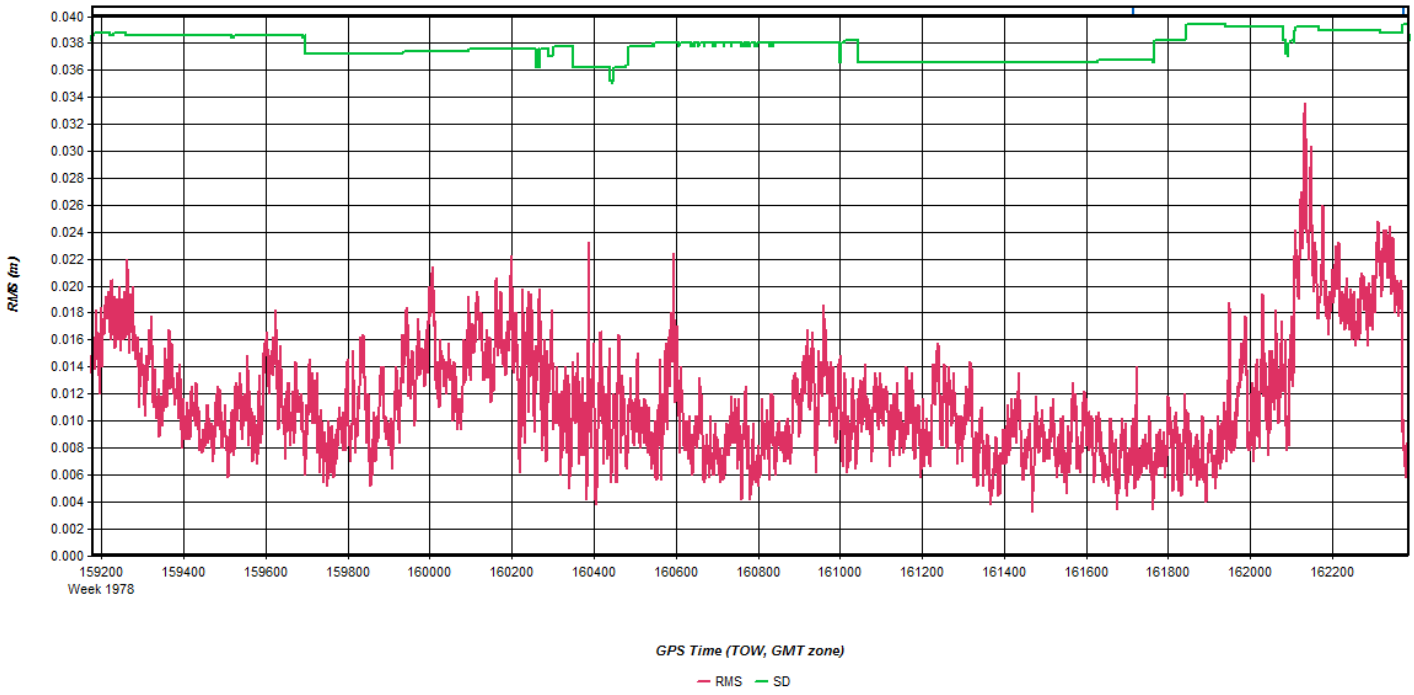
December 4, 2017-A (N915WC, SN8237)

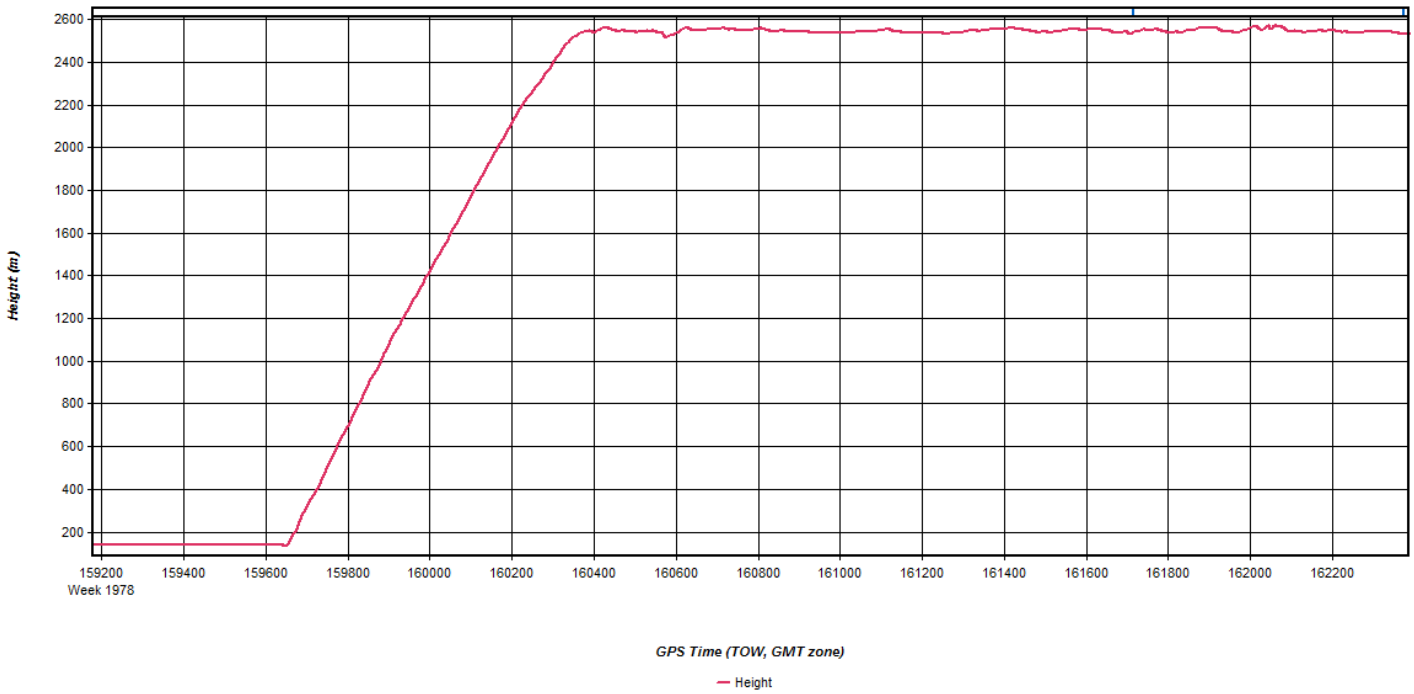

ARTA REV
ARTA FWD
ARTA REV
HEPI
10 km

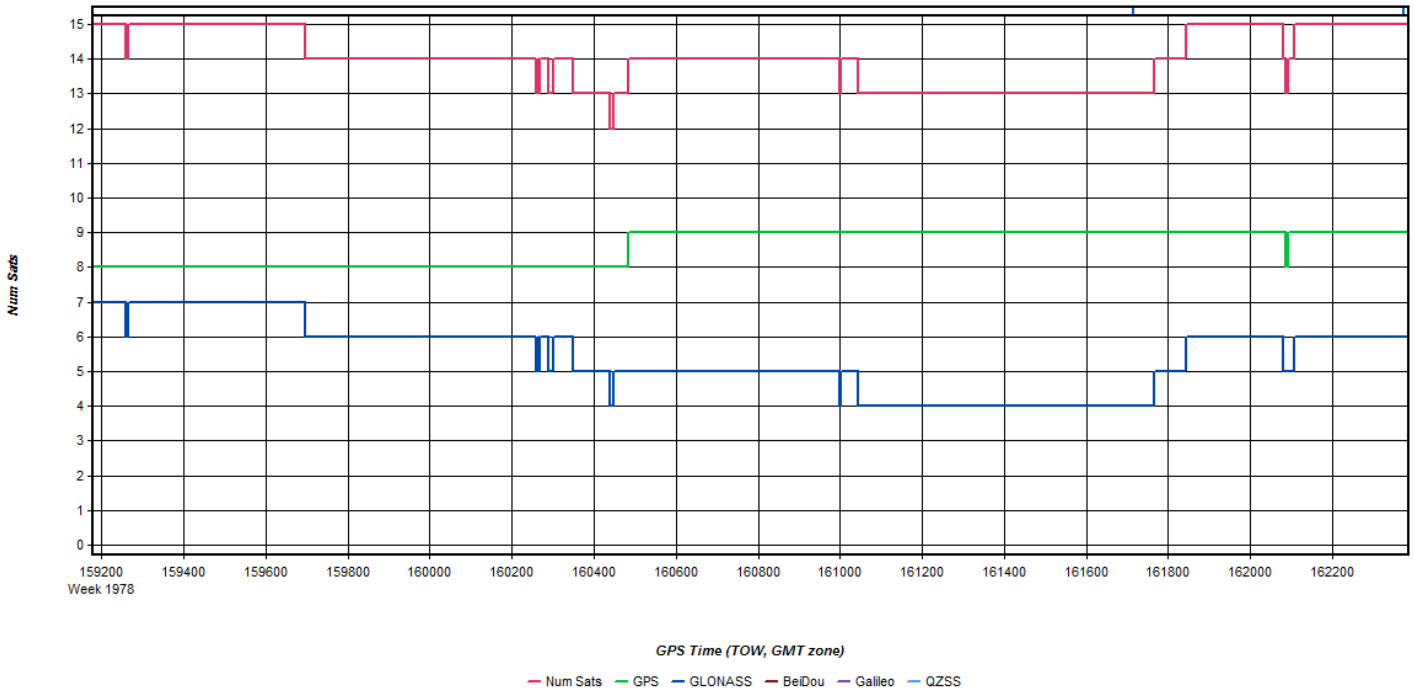

PDOP
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
159200
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
Week 1978
GPS Time (TOW, GMT zone)
PDOP

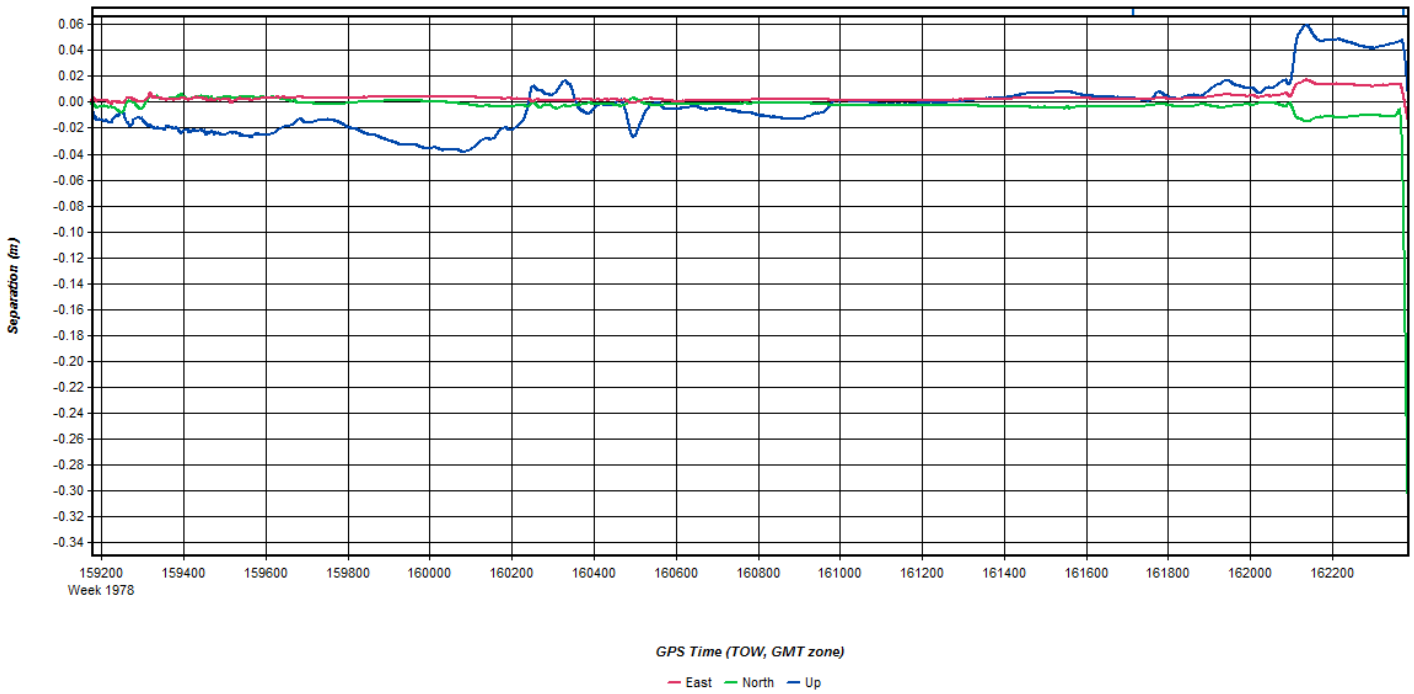

Status
2
1
0
-1
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Float
Forward Fixed
Reverse Fixed
Fixed (2 or more)

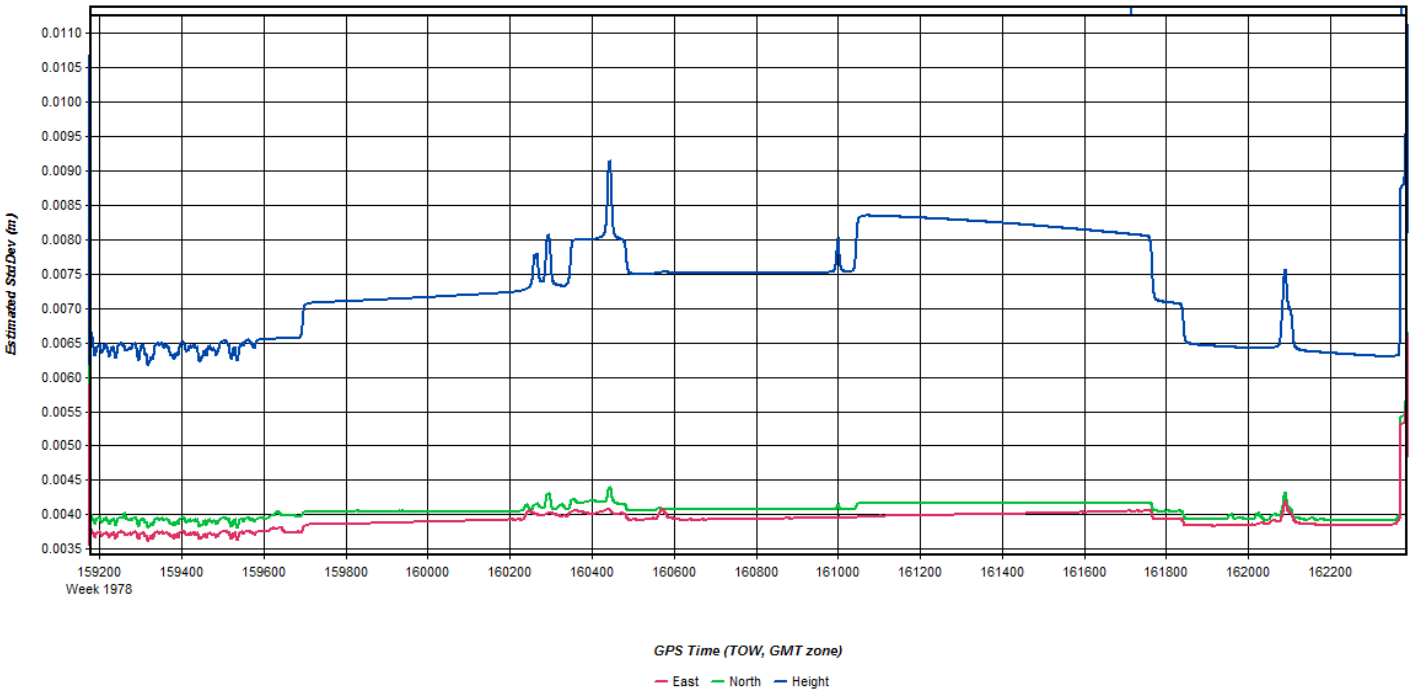

Roll & pitch (deg)
20
15
10
5
0
-5
-10
-15
-20
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Roll
Pitch

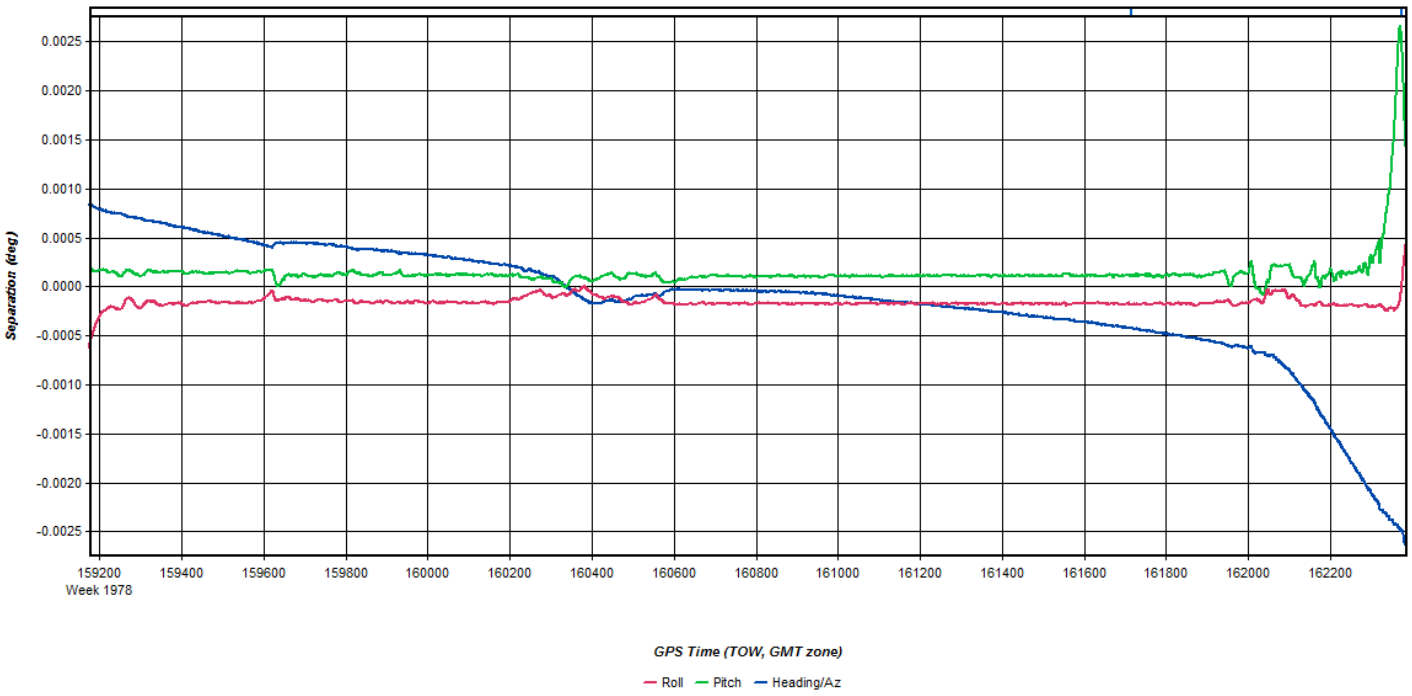

RMS (m)
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
RMS
SD

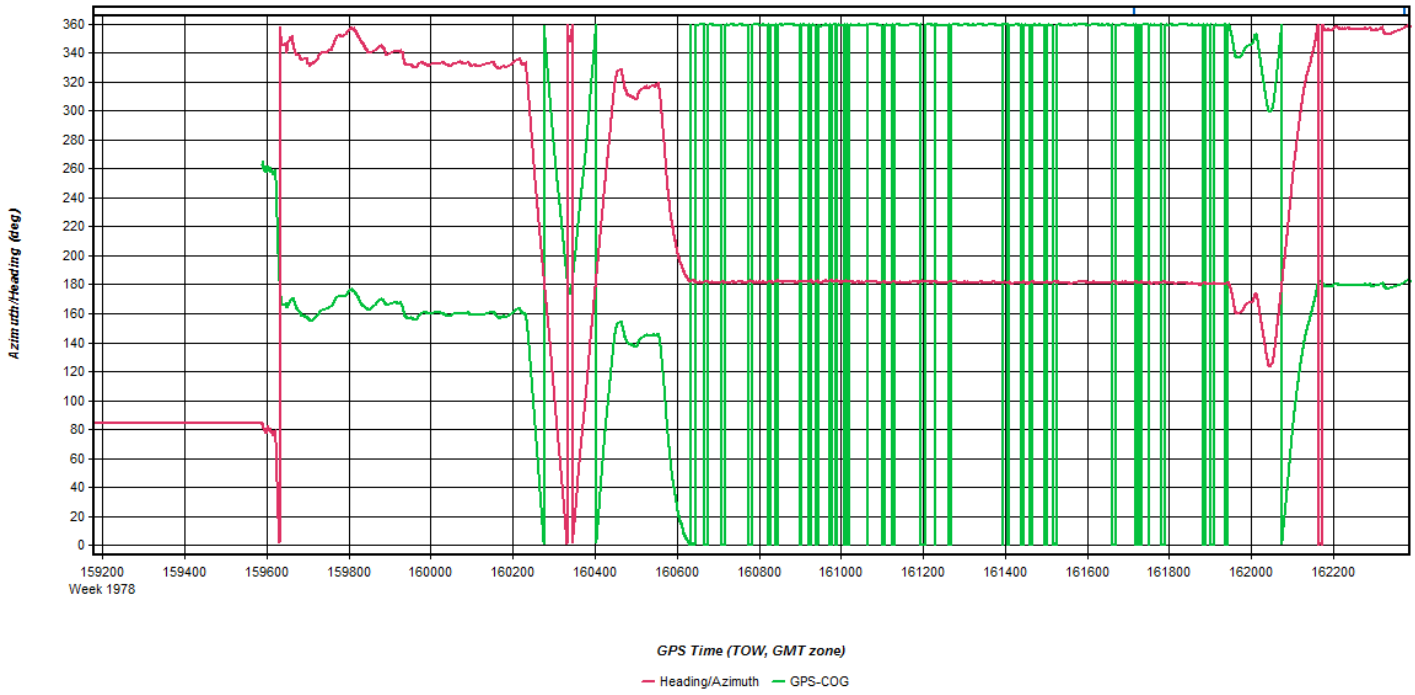

Height (m)
2600
2400
2200
2000
1800
1600
1400
1200
1000
800
600
400
200
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Height

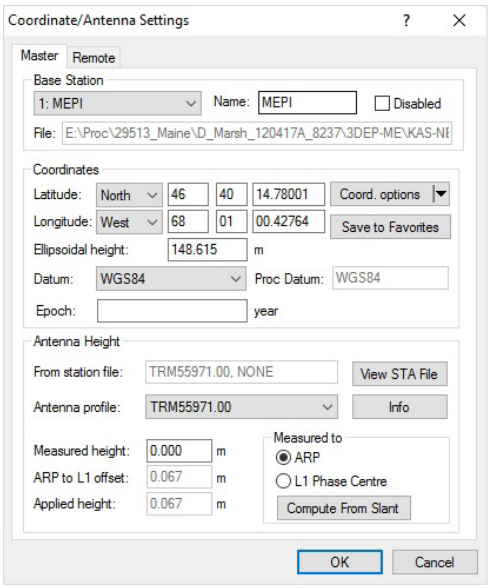

Num Sats
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou
Galileo
QZSS


Separation (m)
0.06
0.04
0.02
0.00
-0.02
-0.04
-0.06
-0.08
-0.10
-0.12
-0.14
-0.16
-0.18
-0.20
-0.22
-0.24
-0.26
-0.28
-0.30
-0.32
-0.34
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
East
North
Up

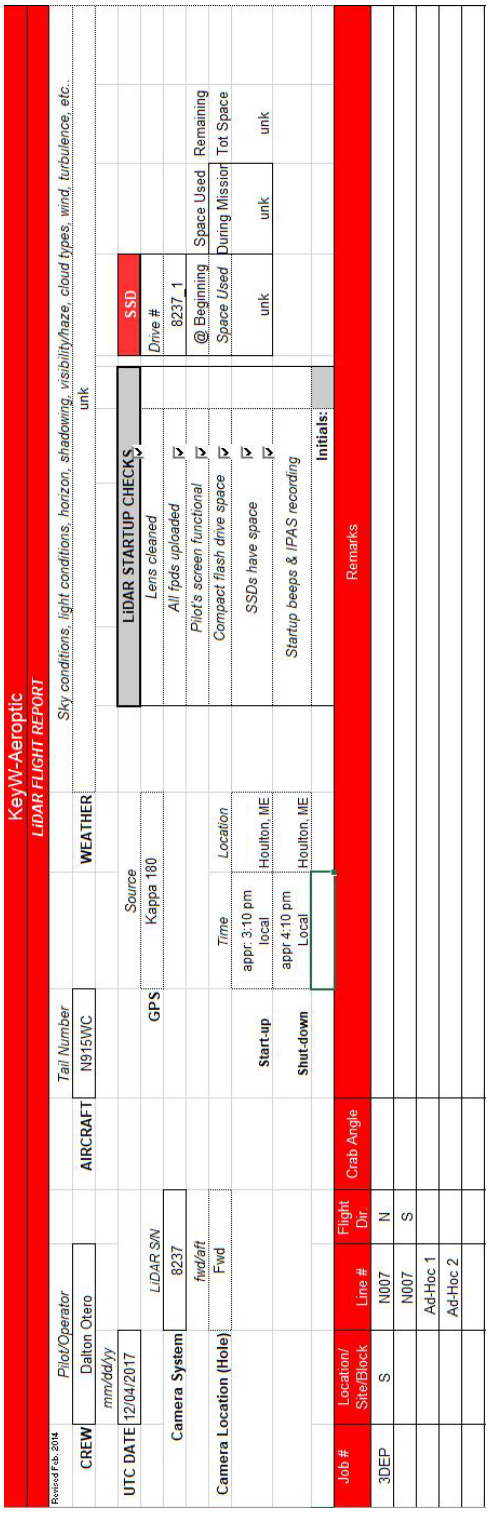

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
East
North
Height


Separation (deg)
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Roll
Pitch
Heading/Az


Azimuth/Heading (deg)
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
159200
Week 1978
159400
159600
159800
160000
160200
160400
160600
160800
161000
161200
161400
161600
161800
162000
162200
GPS Time (TOW, GMT zone)
Heading/Azimuth
GPS-COG


Coordinate/Antenna Settings
Master
Remote
Base Station
1: MEPI
Name: MEPI
Disabled
File: E:\Proc\29513_Maine\D_Marsh_120417A_8237\3DEP-ME\KAS-NE
Coordinates
Latitude: North 46 40 14.78001
Coord. options
Longitude: West 68 01 00.42764
Save to Favorites
Ellipsoidal height: 148.615 m
Datum: WGS84
Proc Datum: WGS84
Epoch: year
Antenna Height
From station file: TRM55971.00, NONE
View STA File
Antenna profile: TRM55971.00
Info
Measured height: 0.000 m
ARP to L1 offset: 0.067 m
Applied height: 0.067 m
Measured to
ARP
L1 Phase Centre
Compute From Slant
OK
Cancel

Flight Log



KeyW-Aeroptic
LiDAR FLIGHT REPORT

Revised Feb. 2014

| | | |

Appendix B

Survey Report

SEWALL

JAMES W. SEWALL COMPANY / *Since 1880*

An integrated team of geospatial, engineering, and natural resource consultants,
Sewall partners with clients to create practical, sustainable solutions.

March 28, 2018

Survey Report of

LiDAR Calibration and Quality Control Checks

State of Maine
LiDAR 2017 Work Program Data Acquisition.

REF: DO 18B 20170322000000008328
MA 18P 16041900000000000157

Offices nationwide
sewall.com
800 648 4202
info@sewall.com

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

State of Maine – Eastern Central Maine
LiDAR and Check Point Control Surveys for Project: Eastern Central Maine 2017

Sewall performed survey work to establish and collect vertical and horizontal quality control points throughout the project area. The project included collecting 182 LiDAR calibration points, 176 non-vegetated (NVA) check points, 125 vegetated check points (VVA) and 15 published control points. A total of 498 points were collected for this project.

A combination of RTK GPS, fast static GPS, and traditional surveying methods were used during this project. The RTK GPS survey procedure involved placing a GPS receiver on a check point and collecting three minute "fixed" observations. RTK GPS corrected observations were provided from a Virtual Reference Station Systems (VRS network – KeyNetGPS, Inc. or Maine Dept. of Transportation).

Virtual Reference Station System is a series of continuously operating, high precision GNSS reference stations working through a cellular modem. Two observations were taken at each check point and the two coordinates were compared and averaged. Published control check points were also located with RTK methods. A Hiper II centimeter accuracy survey grade GPS receiver was used to collect the data. A total of 110 points were collected using this method.

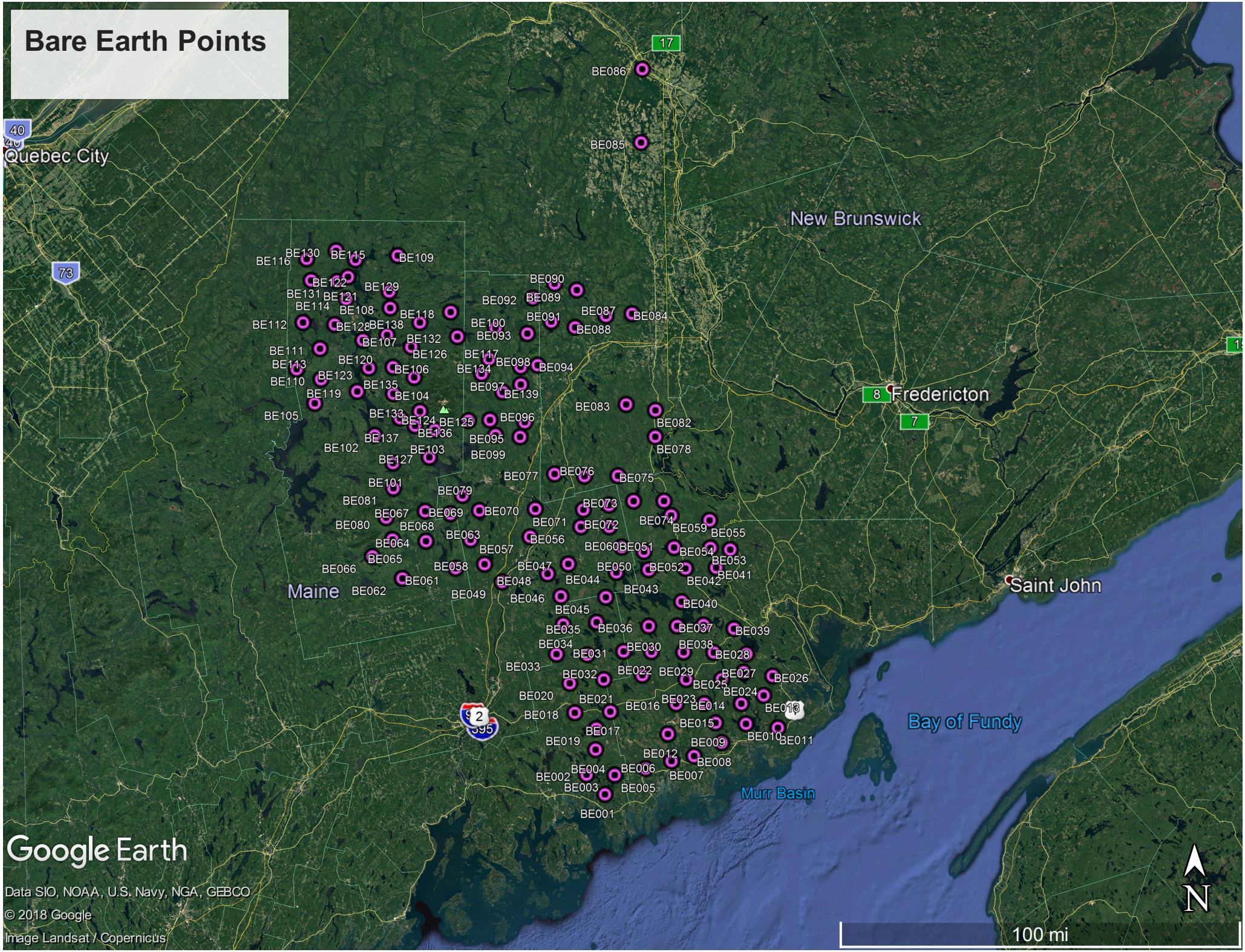
In areas with limited cellular coverage, fast static GPS methods were used to collect check points. The methods consisted of collecting data using two or three Hiper GD dual frequency GPS receivers. One unit was setup as a "base" which collected data during all of the "rover" sessions within a point cluster area. The point clusters consisted of 9 to 15 points each. The data was downloaded and processed using the closest CORS station. A total of 274 points were collected using this method.

In areas under the tree canopy, traditional surveying methods were used. Pairs of points were collected in open areas using GPS methods. The points were occupied using a Topcon GTS total station to survey the forested check points as well as locating a few other points near the forested points. Multiple observations were collected at each check point and the coordinates were compared and averaged. A total of 114 points were collected using this method.

All of the GPS information was downloaded, processed and analyzed using Topcon Tools processing software. Our final horizontal coordinates are shown in UTM – Zone 19N, NAD83 (2011) Epoch 2010, meters. The final elevations refer to NAVD 88 (GEOID12b), meters.

Offices nationwide
sewall.com
136 Center Street
P.O. Box 433
Old Town, Maine 04468
207 827 4456
fax: 207 827 3641
800 648 4202

Point Location Maps


Bare Earth Points
Quebec City
New Brunswick
Fredericton
Saint John
Maine
Bay of Fundy
Murr Basin
BE086
BE085
BE090
BE089
BE092
BE087
BE084
BE091
BE088
BE100
BE093
BE130
BE116
BE115
BE109
BE122
BE129
BE131
BE121
BE114
BE108
BE118
BE112
BE128
BE138
BE107
BE132
BE111
BE126
BE117
BE113
BE120
BE106
BE134
BE098
BE094
BE110
BE123
BE135
BE097
BE139
BE119
BE104
BE105
BE133
BE124
BE125
BE096
BE083
BE082
BE137
BE136
BE095
BE102
BE103
BE099
BE078
BE127
BE077
BE076
BE075
BE101
BE079
BE081
BE073
BE067
BE069
BE070
BE071
BE072
BE074
BE080
BE068
BE063
BE059
BE055
BE064
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BE051
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BE053
BE066
BE058
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BE052
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BE061
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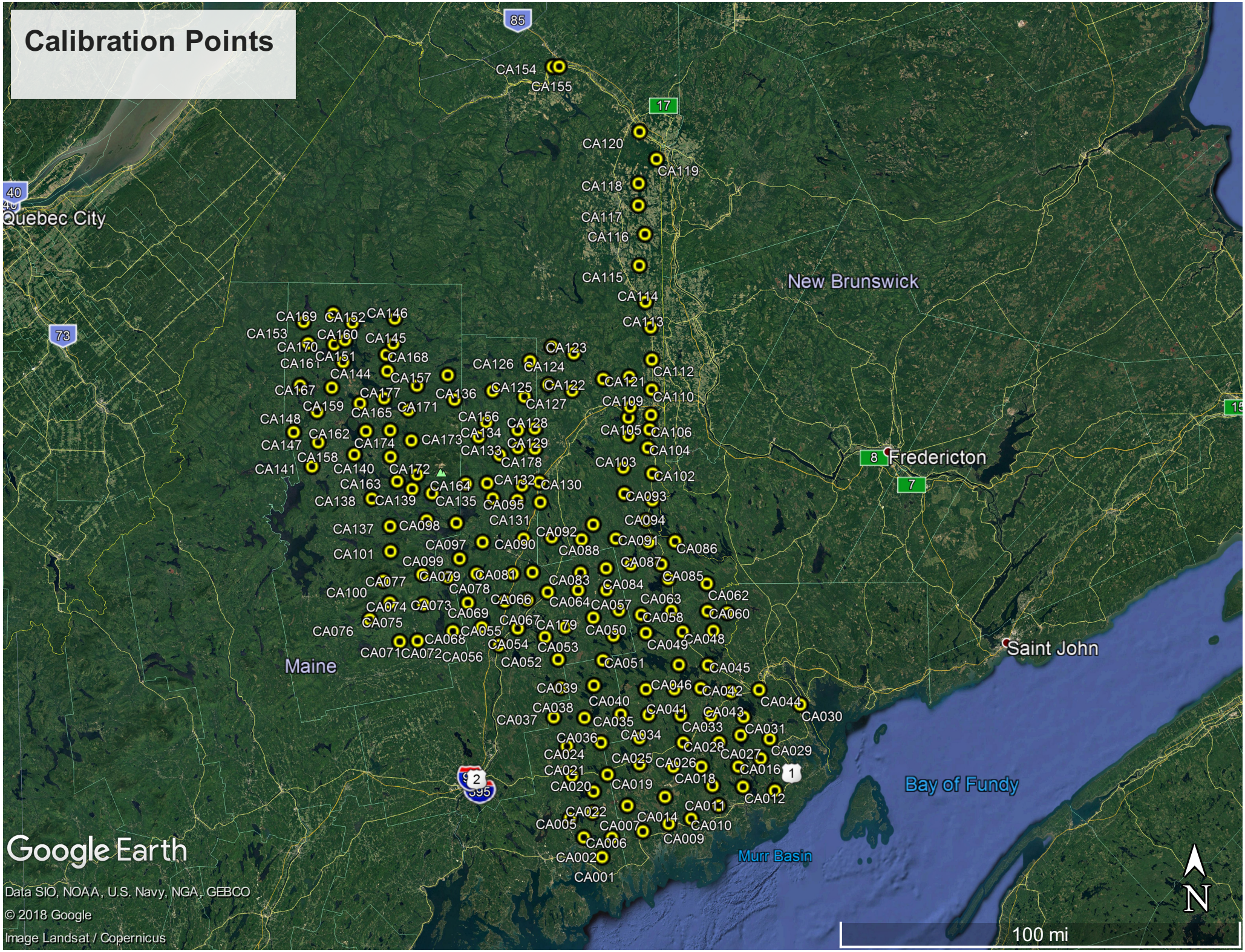
BE019
BE009
BE012
BE008
BE004
BE006
BE007
BE002
BE003
BE005
BE001
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2018 Google
Image Landsat / Copernicus
N
100 mi


Calibration Points
CA154
CA155
CA120
CA119
CA118
CA117
CA116
CA115
CA114
CA113
CA123
CA112
CA121
CA122
CA124
CA126
CA125
CA127
CA136
CA109
CA110
CA105
CA106
CA104
CA103
CA102
CA093
CA094
CA092
CA091
CA086
CA087
CA085
CA084
CA083
CA081
CA090
CA088
CA095
CA135
CA139
CA138
CA164
CA132
CA130
CA178
CA133
CA134
CA129
CA128
CA156
CA173
CA174
CA162
CA147
CA158
CA141
CA140
CA172
CA163
CA131
CA137
CA098
CA097
CA101
CA099
CA079
CA078
CA077
CA100
CA074
CA073
CA075
CA076
CA069
CA066
CA064
CA057
CA063
CA062
CA060
CA058
CA067
CA179
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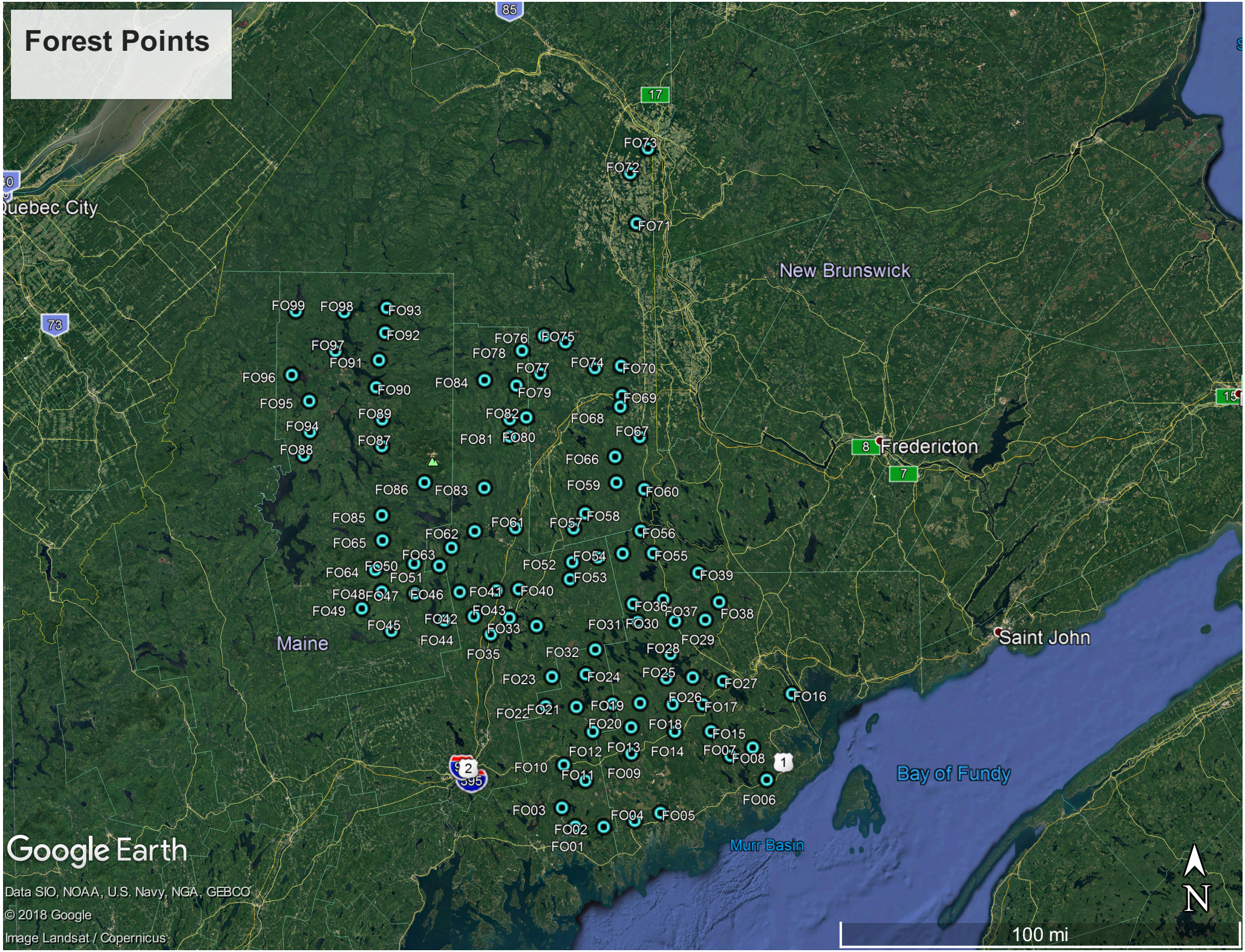
CA007
CA009
CA006
CA002
CA001
CA146
CA152
CA169
CA153
CA160
CA145
CA170
CA151
CA168
CA161
CA144
CA157
CA167
CA177
CA159
CA165
CA171
CA148
CA071
CA072
CA056
CA068
Quebec City
New Brunswick
Fredericton
Saint John
Maine
Bay of Fundy
Murr Basin
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2018 Google
Image Landsat / Copernicus
N
100 mi


Forest Points
Quebec City
New Brunswick
Fredericton
Saint John
Maine
Bay of Fundy
Murr Basin
FO99
FO98
FO93
FO92
FO97
FO91
FO96
FO90
FO95
FO89
FO94
FO87
FO88
FO86
FO83
FO85
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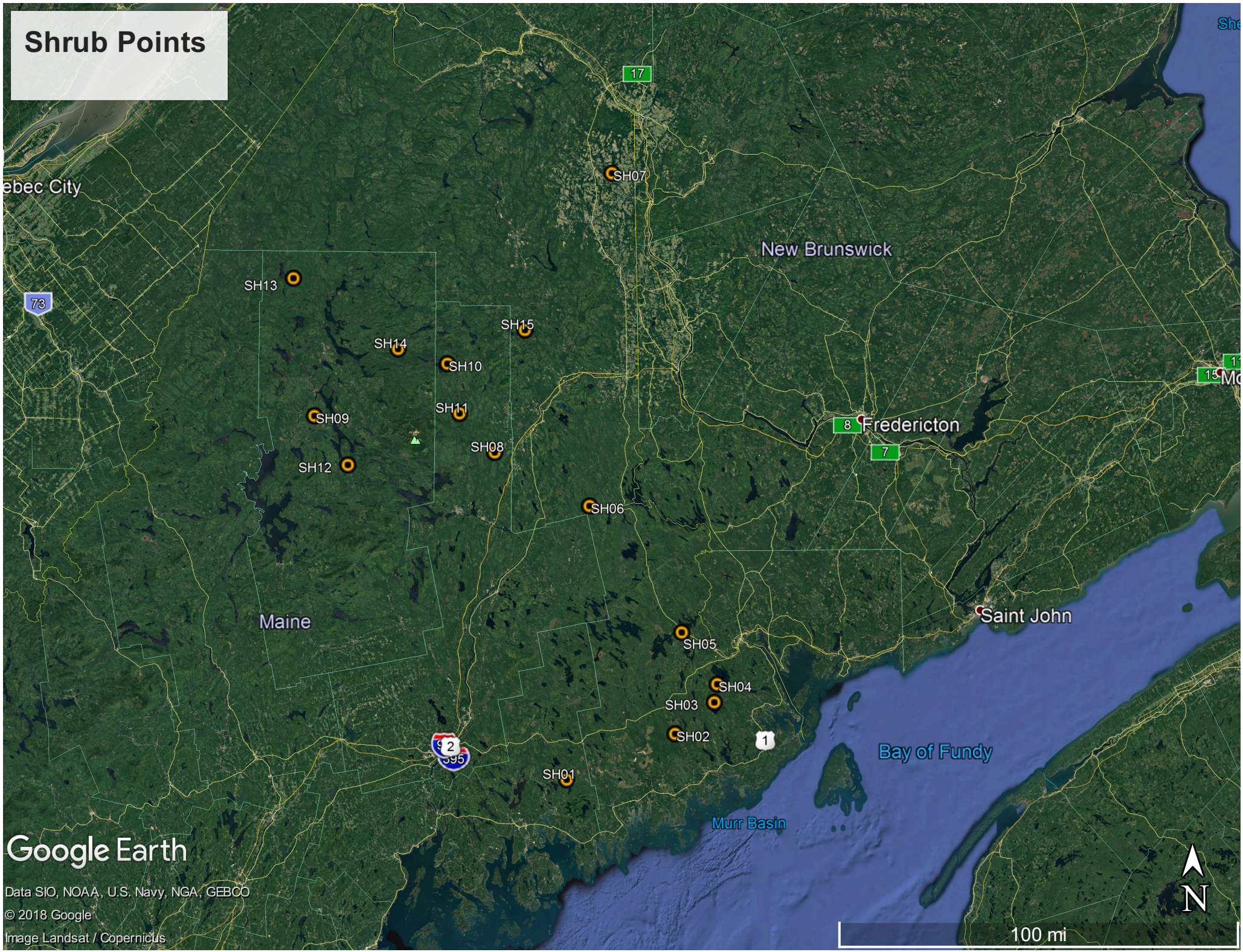
FO14
FO07
FO08
FO10
FO11
FO09
FO06
FO03
FO04
FO05
FO02
FO01
73
17
85
10
2
395
8
7
1
15
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2018 Google
Image Landsat / Copernicus
N
100 mi


Shrub Points
SH07
SH13
SH15
SH14
SH10
SH11
SH09
SH08
SH12
SH06
SH05
SH04
SH03
SH02
SH01
New Brunswick
Fredericton
Saint John
Maine
Bay of Fundy
Murr Basin
ebec City
17
73
8
7
15
2
395
1
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
© 2018 Google
Image Landsat / Copernicus
N
100 mi

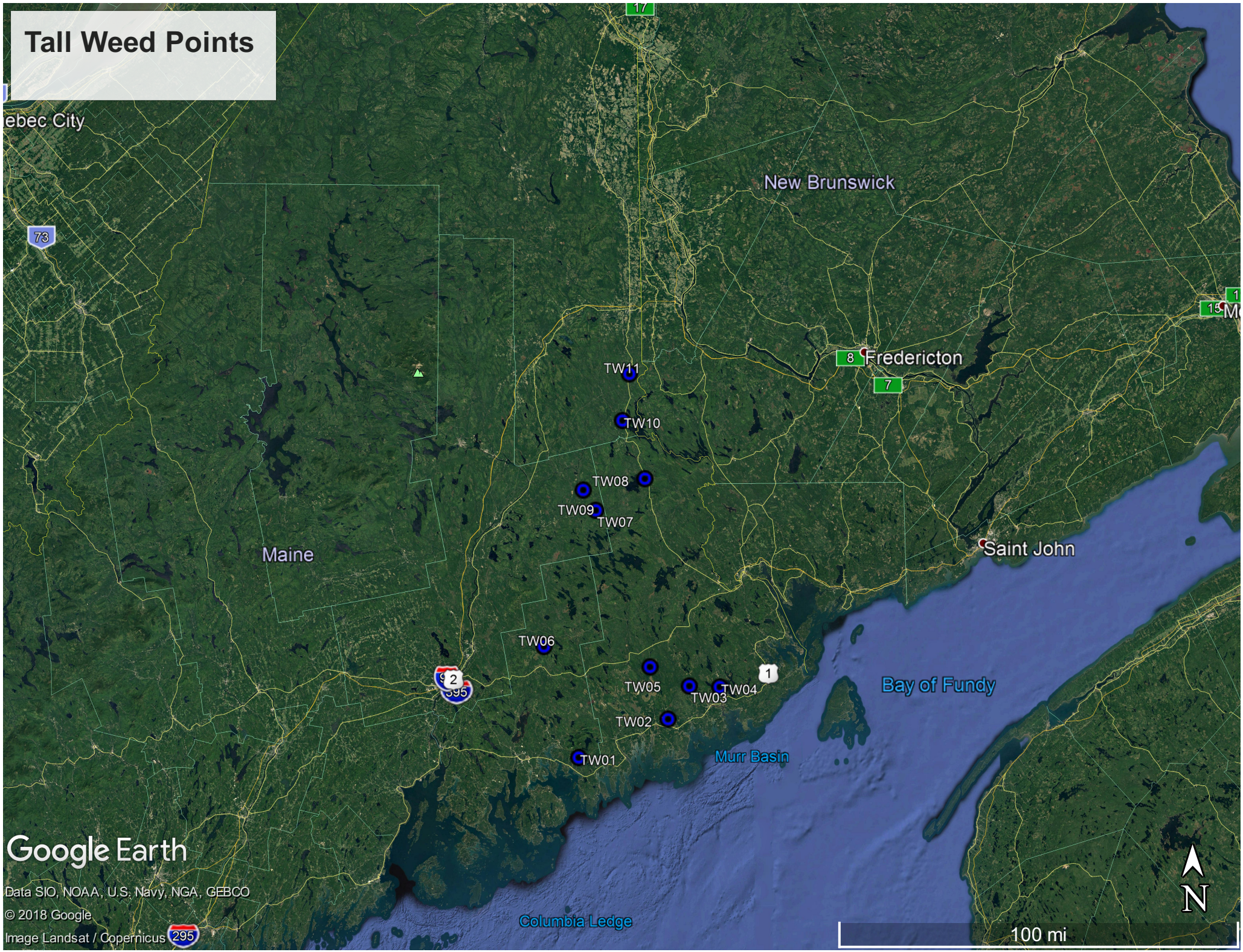

Tall Weed Points
ebec City
New Brunswick
73
17
15
8
Fredericton
7
TW11
TW10
TW08
TW09
TW07
Saint John
Maine
TW06
2
395
TW05
TW03
TW04
1
TW02
TW01
Bay of Fundy
Murr Basin
Columbia Ledge
Google Earth
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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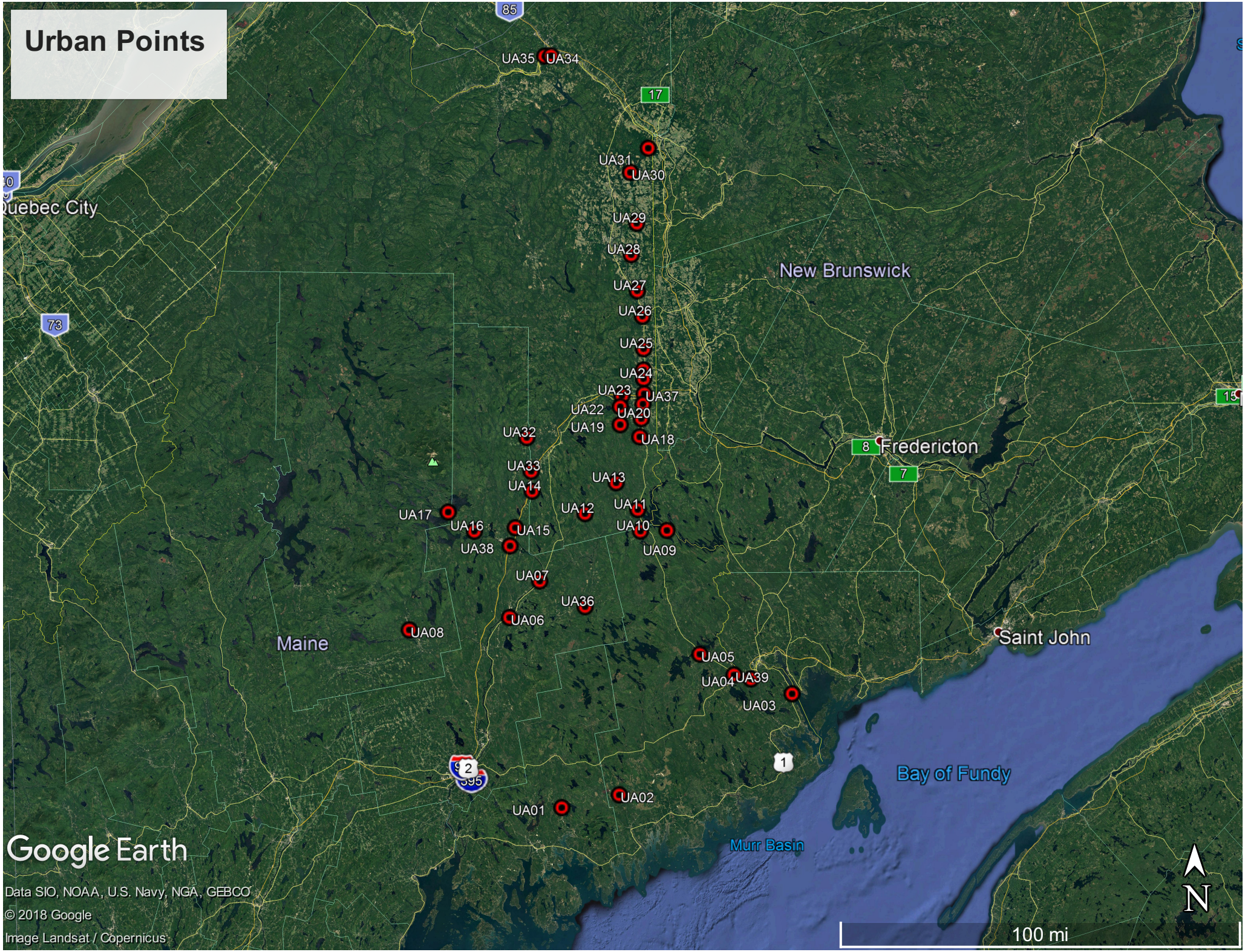
Image Landsat / Copernicus
295
N
100 mi


Urban Points
UA35
UA34
UA31
UA30
UA29
UA28
UA27
UA26
UA25
UA24
UA23
UA37
UA22
UA20
UA19
UA18
UA32
UA33
UA14
UA13
UA12
UA11
UA17
UA16
UA15
UA10
UA38
UA09
UA07
UA36
UA06
UA08
UA05
UA04
UA39
UA03
UA02
UA01
New Brunswick
Fredericton
Saint John
Maine
Bay of Fundy
Murr Basin
Quebec City
Google Earth
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N
100 mi

Final Point Coordinates

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number: 84938S
Project Name: Eastern Maine

Horizontal Datum: UTM Zone 19N NAD83 (2011)
Vertical Datum: NAVD88 - GEOID12B
Units: Meters
Date: 6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
BE01	4932367.87	570918.72	76.32	GRAVEL
BE02	4940127.01	563608.13	48.81	GRAVEL
BE03	4940050.94	574743.03	63.42	GRAVEL
BE04	4950041.06	567115.75	138.16	GRAVEL
BE05	4942655.17	586957.93	54.14	GRAVEL
BE06	4945723.02	597205.20	20.41	GRAVEL
BE07	4947762.37	606097.87	65.94	GRAVEL
BE08	4953120.87	616940.98	23.13	GRAVEL
BE09	4960915.92	614492.83	29.89	GRAVEL
BE10	4960590.75	626505.17	53.76	GRAVEL
BE11	4959054.2	639168.89	33.78	GRAVEL
BE12	4956395.91	595672.57	76.9	GRAVEL
BE13	4971842.68	633455.63	48.56	GRAVEL
BE14	4968595.33	624633.53	42.19	GRAVEL
BE15	4968501.21	609993.27	63.76	GRAVEL
BE16	4968335.29	598886.16	70.4	GRAVEL
BE17	4965101.29	572871.48	83.66	GRAVEL
BE18	4964574.39	558844.55	89.09	GRAVEL
BE19	4958360.00	567396.60	119.11	GRAVEL
BE20	4976212.29	556777.11	144.87	GRAVEL
BE21	4977739.82	570201.10	110.17	GRAVEL
BE22	4979596.41	585416.54	108.20	GRAVEL
BE23	4977975.77	602747.06	104.39	GRAVEL
BE24	4978142.69	616883.24	49.17	GRAVEL
BE25	4982126.34	627048.19	103.37	GRAVEL
BE26	4979599.22	636959.21	38.83	GRAVEL
BE27	4988161.76	627234.57	58.73	GRAVEL
BE28	4988680.91	613689.33	70.47	GRAVEL
BE29	4988778.23	601696.48	78.64	GRAVEL
BE30	4988985.70	588933.58	74.13	GRAVEL

BE31	4988905.16	577990.32	117.40	GRAVEL
BE32	4987527.81	563610.88	113.35	GRAVEL
BE33	4987677.91	551465.53	133.63	GRAVEL
BE34	5001199.15	553627.17	87.87	GRAVEL
BE35	5000346.16	567245.98	218.08	GRAVEL
BE36	4998950.10	587829.98	97.55	GRAVEL
BE37	4999076.53	599096.20	73.22	GRAVEL
BE38	4999501.38	609473.22	68.60	GRAVEL
BE39	4995639.93	622088.77	61.33	GRAVEL
BE40	5008674.15	600788.37	69.58	GRAVEL
BE41	5022143.75	614324.48	103.26	GRAVEL
BE42	5021716.23	602191.07	107.4	GRAVEL
BE43	5021194.85	587675.47	152.14	GRAVEL
BE44	5020052.64	574904.02	99.74	GRAVEL
BE45	5010259.12	570824.03	121.48	GRAVEL
BE46	5010487.90	553085.71	165.24	GRAVEL
BE47	5023240.03	555928.1	124.14	GRAVEL
BE48	5019322.54	547753.81	188.08	GRAVEL
BE49	5016005.83	529796.69	56.01	GRAVEL
BE50	5030074.52	576946.74	213.07	GRAVEL
BE51	5028350.87	585812.92	157.50	GRAVEL
BE52	5029976.75	597654.93	137.44	GRAVEL
BE53	5029922.72	611995.98	109.03	GRAVEL
BE54	5029286.55	619827.93	94.35	GRAVEL
BE55	5040788.67	611595.43	142.65	GRAVEL
BE56	5037897.34	560812.21	120.24	GRAVEL
BE57	5033840.98	540778.48	68.79	GRAVEL
BE58	5022938.74	522850.36	67.85	GRAVEL
BE59	5042580.16	596397.63	136.96	GRAVEL
BE60	5037974.27	572005.36	189.37	GRAVEL
BE61	5021245.09	511434.31	109.60	GRAVEL
BE62	5017097.50	490394.15	201.38	GRAVEL
BE63	5032582.99	517281.80	170.79	GRAVEL
BE64	5031715.29	499094.26	134.00	GRAVEL
BE65	5032388.39	486378.67	178.24	GRAVEL
BE66	5025694.44	478487.21	276.15	GRAVEL
BE67	5043625.40	499276.41	300.43	GRAVEL
BE68	5042690.15	509254.96	166.20	GRAVEL
BE69	5044062.50	520692.17	196.54	GRAVEL
BE70	5044827.39	542744.36	154.77	GRAVEL
BE71	5044674.64	561741.83	110.90	GRAVEL
BE72	5046542.28	571855.19	119.57	GRAVEL
BE73	5048158.92	581561.58	169.17	GRAVEL
BE74	5048243.85	593547.32	154.16	GRAVEL
BE75	5058259.54	575596.59	113.98	GRAVEL

BE76	5057862.72	562113.23	165.76	GRAVEL
BE77	5058640.28	550306.11	178.87	GRAVEL
BE78	5073529.94	589943.60	141.52	GRAVEL
BE79	5049960.56	513946.83	150.46	GRAVEL
BE80	5040567.00	483632.51	488.21	GRAVEL
BE81	5053030.45	486970.75	393.42	GRAVEL
BE82	5083954.39	589948.13	208.29	GRAVEL
BE83	5086212.31	578377.91	176.27	GRAVEL
BE84	5121951.81	580483.60	179.73	GRAVEL
BE85	5189697.59	583638.29	196.80	GRAVEL
BE86	5218869.97	583941.43	136.01	GRAVEL
BE87	5121119.62	570195.05	258.98	GRAVEL
BE88	5116402.37	557995.29	307.69	GRAVEL
BE89	5131152.71	558602.68	212.41	GRAVEL
BE90	5133670.06	549810.17	269.19	GRAVEL
BE91	5118691.58	548600.15	260.85	GRAVEL
BE92	5127935.83	541408.02	293.43	GRAVEL
BE93	5113896.20	539182.15	333.17	GRAVEL
BE94	5101442.87	543365.98	262.07	GRAVEL
BE95	5073165.57	536586.82	140.96	GRAVEL
BE96	5078985.10	538412.95	172.02	GRAVEL
BE97	5093781.71	536741.27	257.90	GRAVEL
BE98	5100745.71	536595.47	291.71	GRAVEL
BE99	5073752.92	526906.41	163.78	GRAVEL
BE100	5116093.99	526604.22	242.19	GRAVEL
BE101	5062507.11	486394.04	295.08	GRAVEL
BE102	5073426.92	479088.15	288.58	GRAVEL
BE103	5075669.77	502893.91	179.46	GRAVEL
BE104	5089881.01	486373.28	343.33	GRAVEL
BE105	5085930.62	455200.60	337.73	GRAVEL
BE106	5100331.11	486168.22	371.38	GRAVEL
BE107	5113025.51	483670.35	291.01	GRAVEL
BE108	5123696.51	484846.34	302.59	GRAVEL
BE109	5144432.52	487682.24	313.77	GRAVEL
BE110	5095479.61	457676.80	319.84	GRAVEL
BE111	5107530.02	457102.09	362.42	GRAVEL
BE112	5117826.10	450288.49	310.89	GRAVEL
BE113	5099381.48	447887.58	438.88	GRAVEL
BE114	5127241.17	467319.74	315.18	GRAVEL
BE115	5142709.41	470904.48	316.22	GRAVEL
BE116	5142996.97	451494.84	443.24	GRAVEL
BE117	5104127.78	523201.31	239.50	GRAVEL
BE118	5122217.18	508794.17	236.75	GRAVEL
BE119	5090700.91	472018.93	322.27	GRAVEL
BE120	5110906.84	474141.42	311.78	GRAVEL

BE121	5135896.46	467982.6	301.31	GRAVEL
BE122	5134470.53	453313.05	352.44	GRAVEL
BE123	5099953.79	476529.31	349.51	GRAVEL
BE124	5080249.95	489120.17	222.37	GRAVEL
BE125	5079747.91	524630.84	219.18	GRAVEL
BE126	5108384.25	493312.49	308.62	GRAVEL
BE127	5064925.80	500776.71	204.92	GRAVEL
BE128	5116922.82	459178.02	310.40	GRAVEL
BE129	5130236.44	484384.83	314.91	GRAVEL
BE130	5146215.06	463154.74	375.9	GRAVEL
BE131	5134139.33	463705.49	340.17	GRAVEL
BE132	5112275.59	511401.05	208.93	GRAVEL
BE133	5082999.34	496947.56	324.96	GRAVEL
BE134	5097962.62	521203.83	141.17	GRAVEL
BE135	5096361.1	494561.93	419.5	GRAVEL
BE136	5081969.71	512087.78	363.89	GRAVEL
BE137	5077293.76	495040.90	182.19	GRAVEL
BE138	5118432.45	497255.5	259.23	GRAVEL
BE139	5090813.32	529576.30	117.02	GRAVEL

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number:	84938S
Project Name:	Eastern Maine
Horizontal Datum:	UTM Zone 19N NAD83 (2011)
Vertical Datum:	NAVD88 - GEOID12B
Units:	Meters
Date:	6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
CA01	4932361.24	570901.33	76.14	GRAVEL
CA02	4940132.25	563630.37	49.29	PAVEMENT
CA03	4940060.48	574763.55	62.96	GRAVEL
CA04	4947624.68	558115.74	49.86	PAVEMENT
CA05	4950097.46	567061.26	139.65	GRAVEL
CA06	4942679.32	587002.82	53.58	GRAVEL
CA07	4952829.77	580806.54	62.43	GRAVEL
CA08	4945726.81	597223.70	20.13	PAVEMENT
CA09	4947778.11	606110.45	66.42	GRAVEL
CA10	4953153.52	616970.48	21.33	PAVEMENT
CA11	4960907.31	614510.50	29.49	GRAVEL
CA12	4960565.48	626502.66	54.27	GRAVEL
CA13	4959034.98	639175.37	34.29	GRAVEL
CA14	4956411.43	595676.87	76.75	GRAVEL
CA15	4971864.80	633440.97	49.08	GRAVEL
CA16	4968554.07	624654.16	39.35	GRAVEL
CA17	4968470.62	609988.63	65.02	GRAVEL
CA18	4968362.26	598927.39	70.57	GRAVEL
CA19	4969317.26	585568.65	137.57	PAVEMENT
CA20	4965124.41	572874.45	83.83	GRAVEL
CA21	4964551.04	558839.68	89.74	GRAVEL
CA22	4958329.62	567399.86	119.23	GRAVEL
CA23	4976207.33	556764.79	144.89	GRAVEL
CA24	4977761.29	570212.36	110.17	GRAVEL
CA25	4979596.13	585432.94	107.98	GRAVEL
CA26	4977967.77	602725.65	103.83	GRAVEL
CA27	4978151.18	616917.71	48.93	GRAVEL
CA28	4982119.84	627046.02	103.27	PAVEMENT
CA29	4979590.15	636962.57	38.84	PAVEMENT
CA31	4988159.73			

CA32	4988696.60	613627.42	73.48	GRAVEL
CA33	4988757.01	601704.24	76.57	GRAVEL
CA34	4988936.60	588941.31	73.90	GRAVEL
CA35	4988928.67	577977.25	117.59	GRAVEL
CA36	4987525.91	563637.20	113.41	GRAVEL
CA37	4987668.94	551481.89	133.27	GRAVEL
CA38	5001202.63	553647.48	88.57	GRAVEL
CA39	5000348.07	567281.81	218.37	GRAVEL
CA40	4998948.21	587849.01	96.62	GRAVEL
CA41	4999048.90	599083.57	74.23	GRAVEL
CA42	4999436.13	609485.07	67.19	GRAVEL
CA43	4995662.06	622088.69	61.49	GRAVEL
CA44	4998954.79	632583.84	33.20	PAVEMENT
CA45	5008608.85	612349.48	69.98	PAVEMENT
CA46	5008664.22	600799.93	68.93	GRAVEL
CA47	5022150.41	614342.65	103.21	GRAVEL
CA48	5021678.94	602215.67	107.39	GRAVEL
CA49	5021182.57	587674.52	151.73	GRAVEL
CA50	5020045.15	574918.27	99.72	GRAVEL
CA51	5010235.30	570808.93	123.53	GRAVEL
CA52	5010489.49	553096.18	165.49	GRAVEL
CA53	5023256.12	555931.55	124.23	GRAVEL
CA54	5019312.29	547840.08	185.24	GRAVEL
CA55	5022614.25	537060.26	66.68	PAVEMENT
CA56	5016028.50	529800.97	56.05	GRAVEL
CA57	5030030.42	576962.94	209.93	PAVEMENT
CA58	5028319.74	585806.88	158.57	GRAVEL
CA59	5029948.54	597666.36	136.75	GRAVEL
CA60	5029889.91	612004.70	109.15	GRAVEL
CA61	5029293.49	619839.15	94.30	GRAVEL
CA62	5040758.08	611605.70	141.12	GRAVEL
CA63	5042546.98	596406.36	136.79	GRAVEL
CA64	5037967.12	572030.30	189.77	PAVEMENT
CA65	5037862.62	560816.80	119.48	GRAVEL
CA66	5036990.46	548809.80	72.54	GRAVEL
CA67	5033799.11	540795.31	68.46	GRAVEL
CA68	5022958.55	522860.02	68.75	GRAVEL
CA69	5033265.84	531911.66	99.68	PAVEMENT
CA70	5021289.07	511447.02	110.79	GRAVEL
CA71	5017398.53	497432.38	119.70	PAVEMENT
CA72	5017077.53	490404.84	201.23	GRAVEL
CA73	5032601.59	517280.09	171.80	GRAVEL
CA74	5031730.95	499093.08	133.89	GRAVEL
CA75	5032408.95	486398.44	178.27	GRAVEL
CA76	5025701.29	478469.06	277.03	GRAVEL

CA77	5043634.89	499291.52	301.06	GRAVEL
CA78	5042736.14	509256.74	165.26	PAVEMENT
CA79	5044061.75	520709.42	196.85	GRAVEL
CA80	5044098.74	534942.27	109.02	PAVEMENT
CA81	5044800.46	542761.93	156.28	GRAVEL
CA82	5044683.33	561719.77	111.05	PAVEMENT
CA83	5046533.91	571837.79	118.95	GRAVEL
CA84	5048137.13	581559.51	170.20	GRAVEL
CA85	5048268.78	593570.15	154.49	GRAVEL
CA86	5057314.17	599010.66	134.71	PAVEMENT
CA87	5056875.21	588847.46	147.49	PAVEMENT
CA88	5058235.23	575608.04	112.64	PAVEMENT
CA89	5057879.52	562093.46	165.90	GRAVEL
CA90	5058647.43	550293.13	179.12	GRAVEL
CA91	5065501.11	587460.54	226.86	PAVEMENT
CA92	5063762.98	566639.60	165.01	PAVEMENT
CA93	5075995.11	578851.00	116.90	GRAVEL
CA94	5073524.25	589931.53	141.10	GRAVEL
CA95	5072418.01	545728.17	190.33	PAVEMENT
CA96	5057994.36	539182.19	130.28	PAVEMENT
CA97	5056528.84	523018.46	109.34	PAVEMENT
CA98	5064005.23	512559.08	148.74	GRAVEL
CA99	5049946.55	513942.67	150.41	GRAVEL
CA100	5040572.50	483644.77	489.49	GRAVEL
CA101	5053045.83	486987.92	394.07	GRAVEL
CA102	5083976.84	589958.21	208.85	GRAVEL
CA103	5086223.92	578347.45	175.46	GRAVEL
CA104	5094120.00	588043.99	133.38	PAVEMENT
CA105	5098861.80	580335.90	197.52	PAVEMENT
CA106	5101287.59	588645.98	151.43	PAVEMENT
CA107	5107011.88	589125.52	123.55	PAVEMENT
CA108	5105908.47	580264.28	128.04	PAVEMENT
CA109	5110280.94	580922.46	167.88	PAVEMENT
CA110	5117003.01	589424.45	125.32	GRAVEL
CA111	5121949.15	580466.91	181.11	GRAVEL
CA112	5128802.64	589365.65	130.31	PAVEMENT
CA113	5141592.49	588819.47	124.91	PAVEMENT
CA114	5151604.01	586699.27	147.90	PAVEMENT
CA115	5165903.31	584179.82	200.43	GRAVEL
CA116	5178300.73	586326.17	183.62	PAVEMENT
CA117	5189698.68	583657.23	196.44	GRAVEL
CA118	5198305.18	583651.55	206.85	PAVEMENT
CA119	5208043.06	590707.62	232.95	PAVEMENT
CA120	5218873.51	583978.68	136.37	GRAVEL
CA121	5121064.84	570201.56	256.85	GRAVEL

CA122	5116430.67	558031.02	306.02	GRAVEL
CA123	5131144.32	558544.45	210.08	GRAVEL
CA124	5133656.06	549839.43	267.94	GRAVEL
CA125	5118703.75	548616.85	260.53	GRAVEL
CA126	5127942.70	541433.51	293.58	GRAVEL
CA127	5113909.29	539191.08	333.42	GRAVEL
CA128	5101448.95	543250.95	263.66	PAVEMENT
CA129	5093519.39	543467.35	165.83	PAVEMENT
CA130	5080330.46	545297.78	160.59	GRAVEL
CA131	5073163.12	536593.53	141.22	GRAVEL
CA132	5078987.83	538424.72	171.93	PAVEMENT
CA133	5093780.62	536721.65	259.78	GRAVEL
CA134	5100756.26	536618.97	289.50	GRAVEL
CA135	5073744.89	526891.84	164.29	GRAVEL
CA136	5116108.85	526622.68	242.45	GRAVEL
CA137	5062538.76	486371.32	294.94	GRAVEL
CA138	5073401.10	479063.25	288.34	GRAVEL
CA139	5075651.39	502921.54	180.21	GRAVEL
CA140	5089869.82	486391.88	343.42	GRAVEL
CA141	5085918.49	455227.55	337.46	GRAVEL
CA142	5100298.24	486167.87	373.27	GRAVEL
CA143	5113000.09	483672.87	291.21	GRAVEL
CA144	5123712.4	484838.5	302.88	GRAVEL
CA145	5134544.22	487124.17	353.29	GRAVEL
CA146	5144433.15	487645.01	314.36	GRAVEL
CA147	5095423.11	457644.33	320.28	GRAVEL
CA148	5107527.91	457119.41	362.37	GRAVEL
CA149	5117850.22	450298.11	309.99	GRAVEL
CA150	5099404.59	447866.35	438.39	GRAVEL
CA151	5127256.59	467300.49	315.35	GRAVEL
CA152	5142724.61	470891.77	316.88	GRAVEL
CA153	5143008.04	451479.47	443.51	GRAVEL
CA154	5244519.84	549471.84	195.00	PAVEMENT
CA155	5244623.00	551937.13	172.33	PAVEMENT
CA156	5104136.97	523215.45	239.55	GRAVEL
CA157	5122232.96	508773.81	236.6	GRAVEL
CA158	5090680.06	472029.06	321.80	GRAVEL
CA159	5110907.54	474097.37	311.57	GRAVEL
CA160	5135892.49	468004.37	302.31	GRAVEL
CA161	5134467.38	453336.73	352.51	GRAVEL
CA162	5099967.12	476524.59	349.05	GRAVEL
CA163	5080252.41	489086.88	222.31	GRAVEL
CA164	5079736.83	524648.24	221.11	GRAVEL
CA165	5108390.35	493314.57	308.18	GRAVEL
CA166	5064921.78	500796.63	204.97	GRAVEL

CA167	5116934.88	459157.74	309.48	GRAVEL
CA168	5130207.52	484401.52	314.83	GRAVEL
CA169	5146224.43	463204.25	375.07	GRAVEL
CA170	5134152.67	463685.29	340.37	GRAVEL
CA171	5112288.06	511399.93	208.37	GRAVEL
CA172	5082983.47	496927.50	325.14	GRAVEL
CA173	5097953.73	521209.98	141.62	GRAVEL
CA174	5096383.14	494562.10	419.34	GRAVEL
CA175	5081983.01	512094.76	364.48	GRAVEL
CA176	5077281.31	495020.08	181.98	GRAVEL
CA177	5118412.29	497191.41	260.89	GRAVEL
CA178	5090854.03	529580.02	114.84	GRAVEL
CA179	5027087.74	566899.18	165.16	PAVEMENT
CA180	4871255.88	428763.71	20.18	GRAVEL
CA181	4870342.16	428506.30	33.82	GRAVEL
CA182	4868131.46	428248.48	2.60	GRAVEL

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number:	84938S
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Vertical Datum:	NAVD88 - GEOID12B
Units:	Meters
Date:	6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
FO01	4940133.01	563576.76	46.32	FOREST
FO02	4940089.55	574750.78	61.39	FOREST
FO03	4947583.38	558142.80	48.82	FOREST
FO04	4942622.89	587007.36	52.17	FOREST
FO05	4945757.38	597184.41	20.22	FOREST
FO06	4959078.36	639136.01	35.66	FOREST
FO07	4971857.65	633482.18	46.68	FOREST
FO08	4968522.39	624687.69	33.79	FOREST
FO09	4969267.58	585577.63	135.70	FOREST
FO10	4964550.25	558808.16	92.31	FOREST
FO11	4958381.38	567414.38	119.80	FOREST
FO12	4977782.11	570250.83	113.34	FOREST
FO13	4979614.88	585457.87	106.38	FOREST
FO14	4978014.58	602697.24	101.81	FOREST
FO15	4978183.46	616950.27	51.21	FOREST
FO17	4988802.28	613659.12	60.58	FOREST
FO18	4988755.30	601750.54	75.81	FOREST
FO19	4988991.96	588914.57	75.27	FOREST
FO20	4988853.87	577992.38	120.80	FOREST
FO21	4987518.48	563681.32	111.54	FOREST
FO22	4987633.93	551535.46	131.58	FOREST
FO23	5001205.22	553679.85	85.53	FOREST
FO24	5000358.14	567309.39	219.19	FOREST
FO25	4999061.72	599111.87	70.64	FOREST
FO26	4999435.57	609519.62	66.05	FOREST
FO27	4995661.13	622060.35	59.83	FOREST
FO28	5008643.19	600776.03	68.82	FOREST
FO29	5022184.19	614354.63	103.46	FOREST
FO31	5021178.80	587697.57	151.45	FOREST
FO30	5021625.82	602261.74	106.74	FOREST
FO32	5010270.39	570858.50	122.23	FOREST

FO33	5019342.81	547830.23	185.41	FOREST
FO34	5022524.19	537051.55	65.21	FOREST
FO35	5015969.64	529750.49	57.81	FOREST
FO36	5028342.48	585841.06	154.98	FOREST
FO37	5029972.00	597686.62	137.67	FOREST
FO38	5029267.41	619831.95	94.52	FOREST
FO39	5040753.3	611578.88	139.86	FOREST
FO40	5037865.10	560848.80	119.74	FOREST
FO41	5033830.59	540755.44	57.90	FOREST
FO42	5023008.37	522793.49	72.19	FOREST
FO43	5033217.37	531864.07	102.09	FOREST
FO44	5021362.43	511406.45	115.50	FOREST
FO45	5017046.89	490384.78	201.24	FOREST
FO46	5032550.22	517318.10	171.91	FOREST
FO47	5031717.31	499068.13	134.56	FOREST
FO48	5032382.38	486461.22	177.09	FOREST
FO49	5025730.00	478502.33	281.91	FOREST
FO50	5043653.52	499269.26	299.01	FOREST
FO51	5042715.78	509223.97	164.55	FOREST
FO52	5044649.90	561716.26	109.36	FOREST
FO53	5046512.78	571809.83	117.22	FOREST
FO54	5048148.90	581599.87	166.77	FOREST
FO55	5048290.34	593608.30	154.08	FOREST
FO56	5056906.74	588880.14	143.60	FOREST
FO57	5057882.01	562137.50	165.81	FOREST
FO58	5063797.22	566687.29	162.98	FOREST
FO59	5076051.76	578901.25	117.70	FOREST
FO60	5073525.77	590001.36	145.30	FOREST
FO61	5058046.66	539201.00	131.28	FOREST
FO62	5056523.92	523072.84	110.84	FOREST
FO63	5049988.39	513983.87	154.31	FOREST
FO64	5040589.28	483636.92	493.48	FOREST
FO65	5053063.38	487004.41	395.80	FOREST
FO66	5086237.32	578385.76	177.44	FOREST
FO67	5094103.18	588028.97	132.09	FOREST
FO68	5105949.00	580307.69	125.75	FOREST
FO69	5110260.41	580948.34	164.53	FOREST
FO70	5121962.58	580568.45	175.61	FOREST
FO71	5178260.72	586287.95	179.78	FOREST
FO72	5198280.68	583644.84	203.22	FOREST
FO73	5208032.39	590598.38	233.88	FOREST
FO74	5121062.66	570175.72	256.63	FOREST
FO75	5131107.64	558406.49	206.44	FOREST
FO76	5133685.34	549828.36	270.05	FOREST
FO77	5118656.27	548560.26	262.54	FOREST

FO78	5127858.62	541469.85	300.61	FOREST
FO79	5113920.43	539211.75	334.27	FOREST
FO80	5101469.82	543228.05	264.32	FOREST
FO81	5093875.05	536700.05	261.84	FOREST
FO82	5100761.17	536663.97	285.23	FOREST
FO83	5073759.29	526848.54	170.32	FOREST
FO84	5116064.44	526621.55	242.49	FOREST
FO85	5062583.13	486357.12	295.87	FOREST
FO86	5075760.39	502864.51	181.03	FOREST
FO87	5089781.16	486231.14	346.66	FOREST
FO88	5085982.72	455237.73	335.60	FOREST
FO89	5100208.15	486205.16	379.21	FOREST
FO90	5113010.16	483730.06	291.72	FOREST
FO91	5123746.72	484850.90	304.49	FOREST
FO92	5134556.56	487149.69	356.78	FOREST
FO93	5144469.57	487667.68	315.33	FOREST
FO94	5095507.63	457639.47	319.83	FOREST
FO95	5107488.86	457225.51	363.65	FOREST
FO96	5117863.41	450267.15	311.70	FOREST
FO97	5127183.95	467278.71	315.30	FOREST
FO98	5142756.51	470903.37	317.80	FOREST
FO99	5142964.27	451497.07	443.41	FOREST

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number: 84938S
Project Name: Eastern Maine
Horizontal Datum: UTM Zone 19N NAD83 (2011)
Vertical Datum: NAVD88 - GEOID12B
Units: Meters
Date: 6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
SH01	4950028.45	567141.99	137.36	SMALL TREES
SH02	4968564.00	609931.83	61.32	SMALL TREES
SH03	4982143.22	627039.30	104.51	SHRUBS
SH04	4988377.83	628804.35	52.95	SHRUBS
SH05	5008556.00	612370.90	69.19	SHRUBS
SH06	5058243.28	575583.89	113.90	SHRUBS
SH07	5189491.20	583669.21	193.82	SHRUBS
SH08	5078983.25	538466.38	170.93	SHRUBS
SH09	5090718.08	472048.51	323.96	SHRUBS
SH10	5116092.39	526668.43	242.27	SHRUBS
SH11	5104119.74	523225.42	239.28	SHRUBS
SH12	5073395.25	479006.47	286.31	MEADOW GRASS
SH13	5146291.22	463111.63	368.82	SHRUBS
SH14	5122239.13	508751.73	237.07	SHRUBS
SH15	5133640.88	549815.22	268.71	SMALL TREES

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number:	84938S
Project Name:	Eastern Maine
Horizontal Datum:	UTM Zone 19N NAD83 (2011)
Vertical Datum:	NAVD88 - GEOID12B
Units:	Meters
Date:	6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
TW01	4932360.94	570882.14	75.54	BLUEBERRY PLANTS
TW02	4947773.71	606121.93	65.99	BLUEBERRY PLANTS
TW03	4960895.66	614491.56	29.54	FIELD GRASS
TW04	4960594.15	626510.27	52.78	WEEDS
TW05	4968293.97	598842.18	70.66	WEEDS
TW06	4976203.39	556780.21	144.09	FIELD GRASS
TW07	5030039.77	577005.67	203.72	HAY FIELD
TW08	5042618.37	596389.24	136.53	WEEDS
TW09	5037998.92	572013.46	189.62	FIELD GRASS
TW10	5065466.5	587402.51	232.58	FIELD GRASS
TW11	5083975.25	589997.18	207.38	FIELD GRASS

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number:	84938S
Project Name:	Eastern Maine
Horizontal Datum:	UTM Zone 19N NAD83 (2011)
Vertical Datum:	NAVD88 - GEOID12B
Units:	Meters
Date:	6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
UA01	4947604.86	558090.19	50.18	PAVEMENT
UA02	4952798.72	580831.06	62.38	PAVEMENT
UA04	4998961.80	632593.33	33.26	PAVEMENT
UA05	5008626.67	612341.73	70.05	PAVEMENT
UA06	5022583.28	537023.37	65.70	PAVEMENT
UA07	5037066.18	548923.85	71.66	PAVEMENT
UA08	5017431.81	497436.83	119.74	PAVEMENT
UA09	5057325.92	599019.31	134.11	PAVEMENT
UA10	5056851.65	588845.42	147.73	PAVEMENT
UA11	5065469.67	587462.68	226.24	PAVEMENT
UA12	5063744.82	566628.68	165.13	PAVEMENT
UA13	5075941.07	578865.53	116.62	PAVEMENT
UA14	5072440.64	545723.92	190.40	PAVEMENT
UA15	5058005.62	539146.59	128.40	PAVEMENT
UA16	5056543.32	522962.89	109.61	PAVEMENT
UA17	5064008.00	512597.23	149.08	PAVEMENT
UA18	5094110.24	588056.66	133.77	PAVEMENT
UA19	5098858.34	580327.25	197.94	PAVEMENT
UA20	5101281.70	588636.18	151.25	PAVEMENT
UA21	5107019.67	589126.52	123.61	PAVEMENT
UA22	5105907.78	580289.81	127.48	PAVEMENT
UA23	5110259.58	580923.34	167.05	PAVEMENT
UA24	5117013.76	589428.56	125.30	PAVEMENT
UA25	5128811.31	589374.86	130.41	PAVEMENT
UA26	5141624.15	588816.84	124.69	PAVEMENT
UA27	5151587.56	586700.90	147.89	PAVEMENT
UA28	5165874.95	584207.45	200.30	PAVEMENT
UA29	5178299.97	586299.86	183.12	PAVEMENT
UA30	5198311.88	583624.66	207.08	PAVEMENT
UA31	5208112.68	590714.26	233.85	PAVEMENT

UA32	5093525.85	543479.64	165.83	PAVEMENT
UA33	5080310.28	545249.16	161.38	PAVEMENT
UA34	5244482.44	549465.73	195.92	PAVEMENT
UA35	5244614.88	551947.30	172.40	PAVEMENT
UA36	5027096.05	566930.39	164.90	PAVEMENT
UA37	5110979.99	589667.98	122.92	PAVEMENT
UA38	5050853.36	537109.29	102.19	PAVEMENT
UA39	5000565.77	625899.11	58.27	PAVEMENT

SEWALL
JAMES W. SEWALL COMPANY / Since 1880

GPS Control Summary

Project Number:	84938S
Project Name:	Eastern Maine
Horizontal Datum:	UTM Zone 19N NAD83 (2011)
Vertical Datum:	NAVD88 - GEOID12B
Units:	Meters
Date:	6/28/2017

Station	Northing (Y)	Easting (X)	Elevation	Description
B82	5080716.23	486369.79	287.16	DISK
BBCD49 (ME06)	5180508.97	589295.730	115.130	DISK
BBDQ47	4932911.25	589132.386	3.286	DISK
BM F191	5055807.28	592466.97	182.02	DISK
BM1599-10	5027061.99	566451.95	141.96	DISK
K167	4965574.54	624788.69	32.97	DISK
MDOT 22657-71	5244712.06	549099.490	176.940	REBAR
MDOT 2652-10	5022351.02	536646.17	67.03	DISK
MDOT CONTROL	4979612.87	636964.32	38.39	REBAR
MILLPORT	5055081.43	524004.84	122.14	DISK
NAE106	5180510.11	589293.390	115.150	DISK
Q40 RESET	4983842.57	611092.96	52.55	DISK
RE0040	5103158.042	588961.644	176.996	DISK
S42	5234174.45	568971.900	167.290	DISK

Final Data Sheets

BE Data Sheets

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE01
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

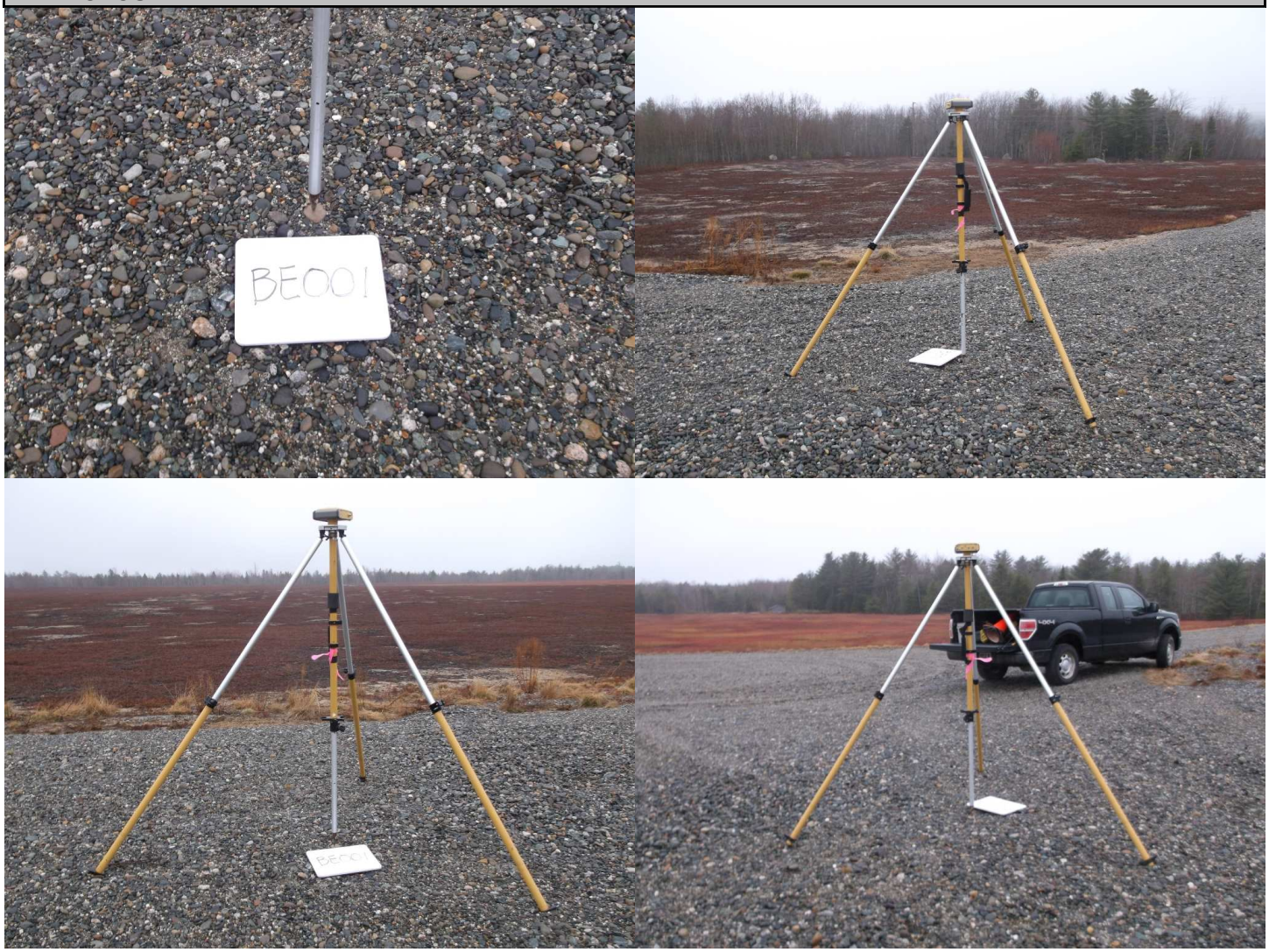
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4932367.87	570918.72	76.32

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.009
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE02
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940127.01	563608.13	48.81

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.008
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

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Point ID	BE03
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

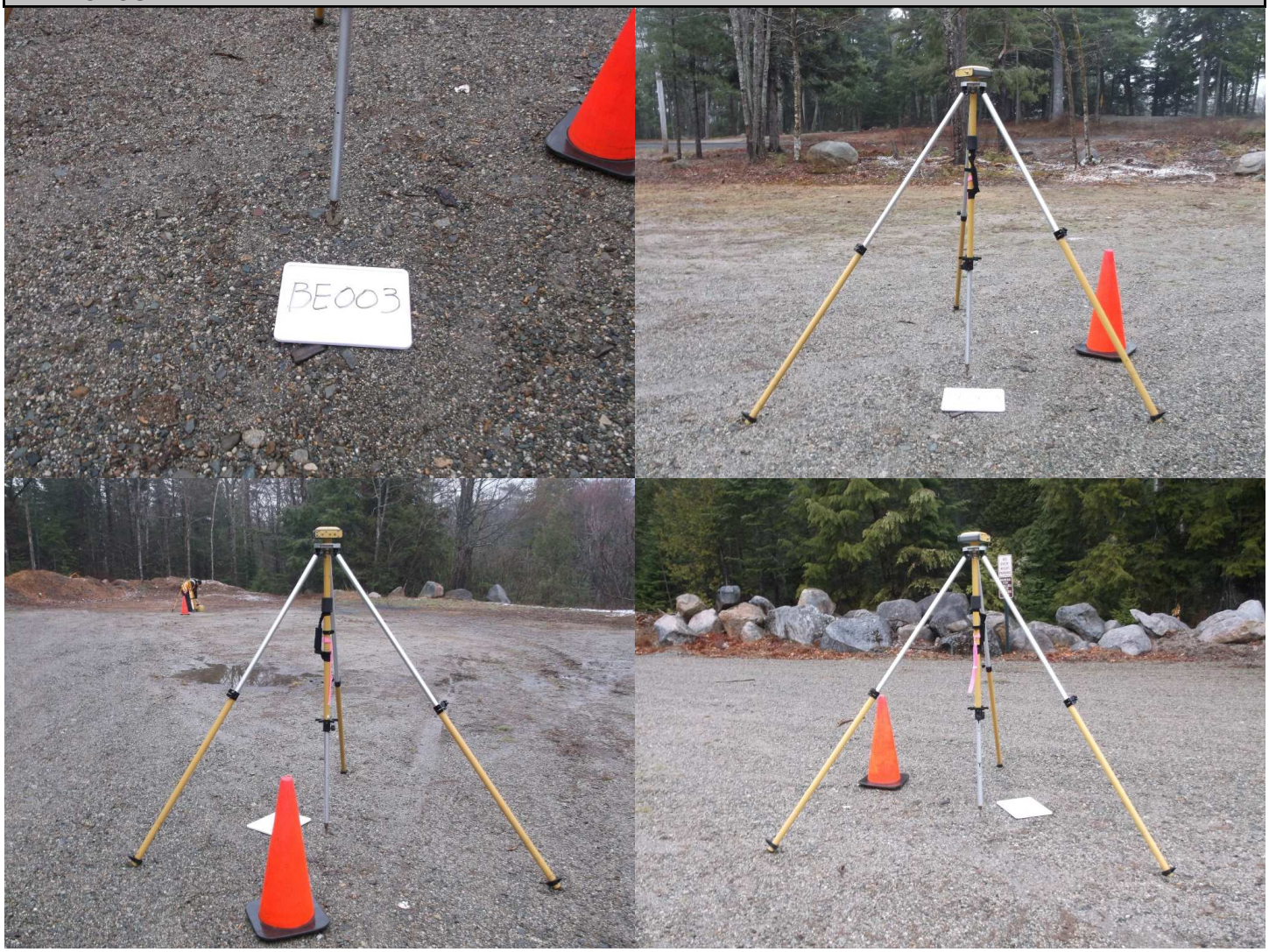
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940050.94	574743.03	63.42

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.010
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE04
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

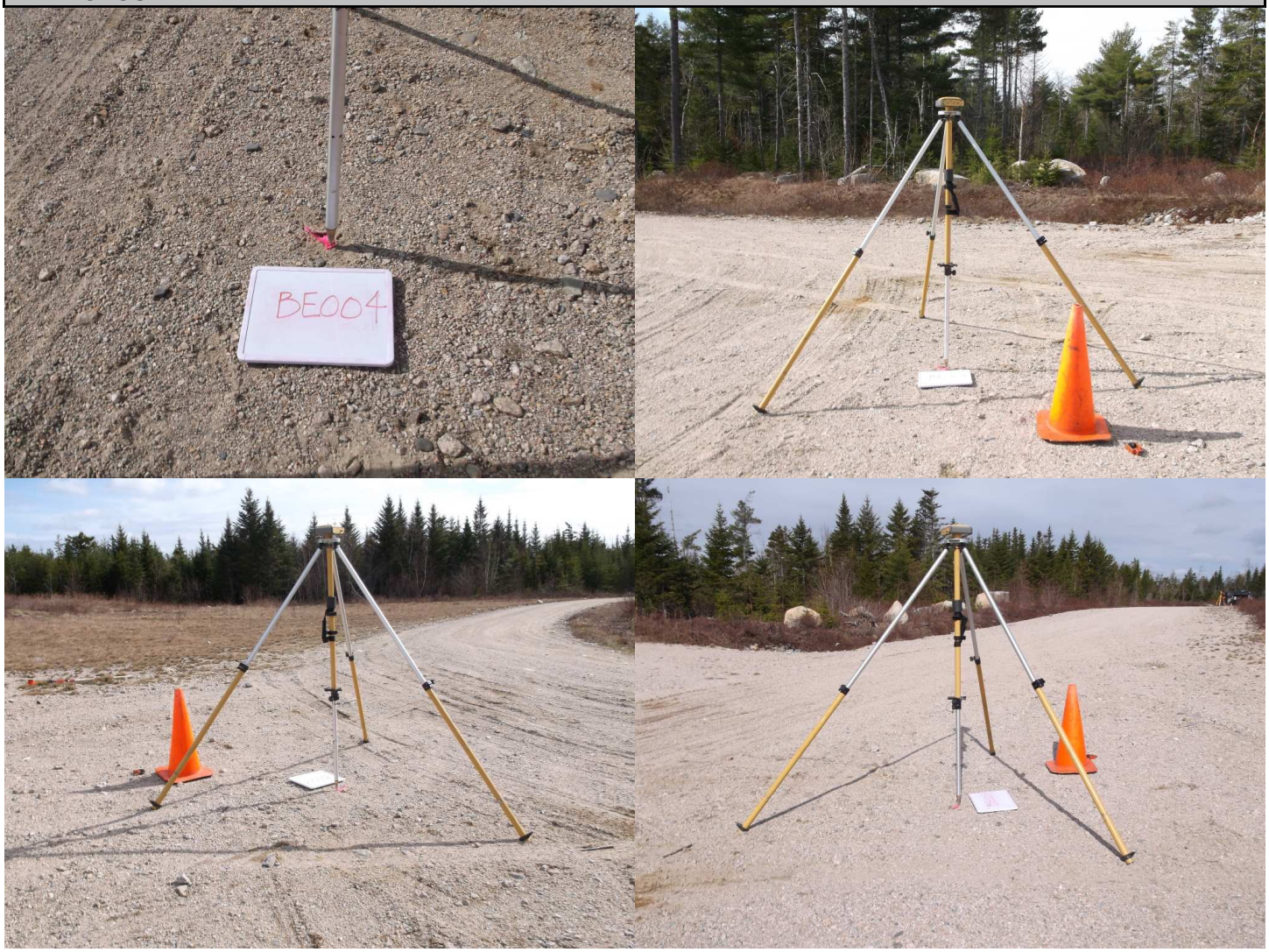
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4950041.06	567115.75	138.16

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.005
RMSE Z	0.008
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

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Point ID	BE05
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4942655.17	586957.93	54.14

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.008
RMSE Z	0.013
Method	STATIC GPS

PHOTOS:

SEWALL
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Point ID	BE06
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4945723.02	597205.20	20.41

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE08
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4953120.87	616940.98	23.13

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE09
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

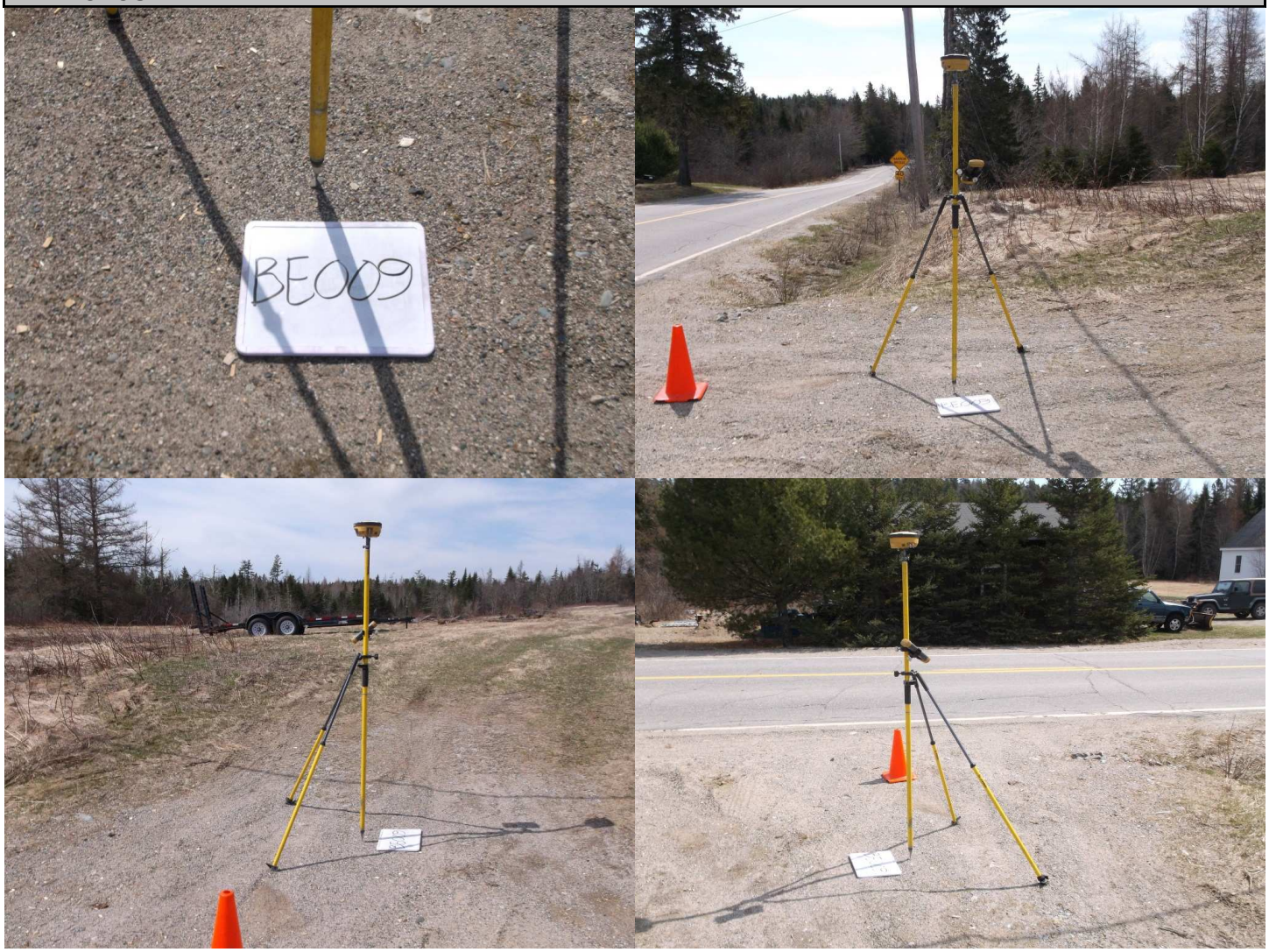
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960915.92	614492.83	29.89

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE10
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960590.75	626505.17	53.76

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE11
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4959054.20	639168.89	33.78

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE12
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4956395.91	595672.57	76.90

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
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Point ID	BE13
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4971842.68	633455.63	48.56

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

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Point ID	BE14
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968595.33	624633.53	42.19

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE15
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

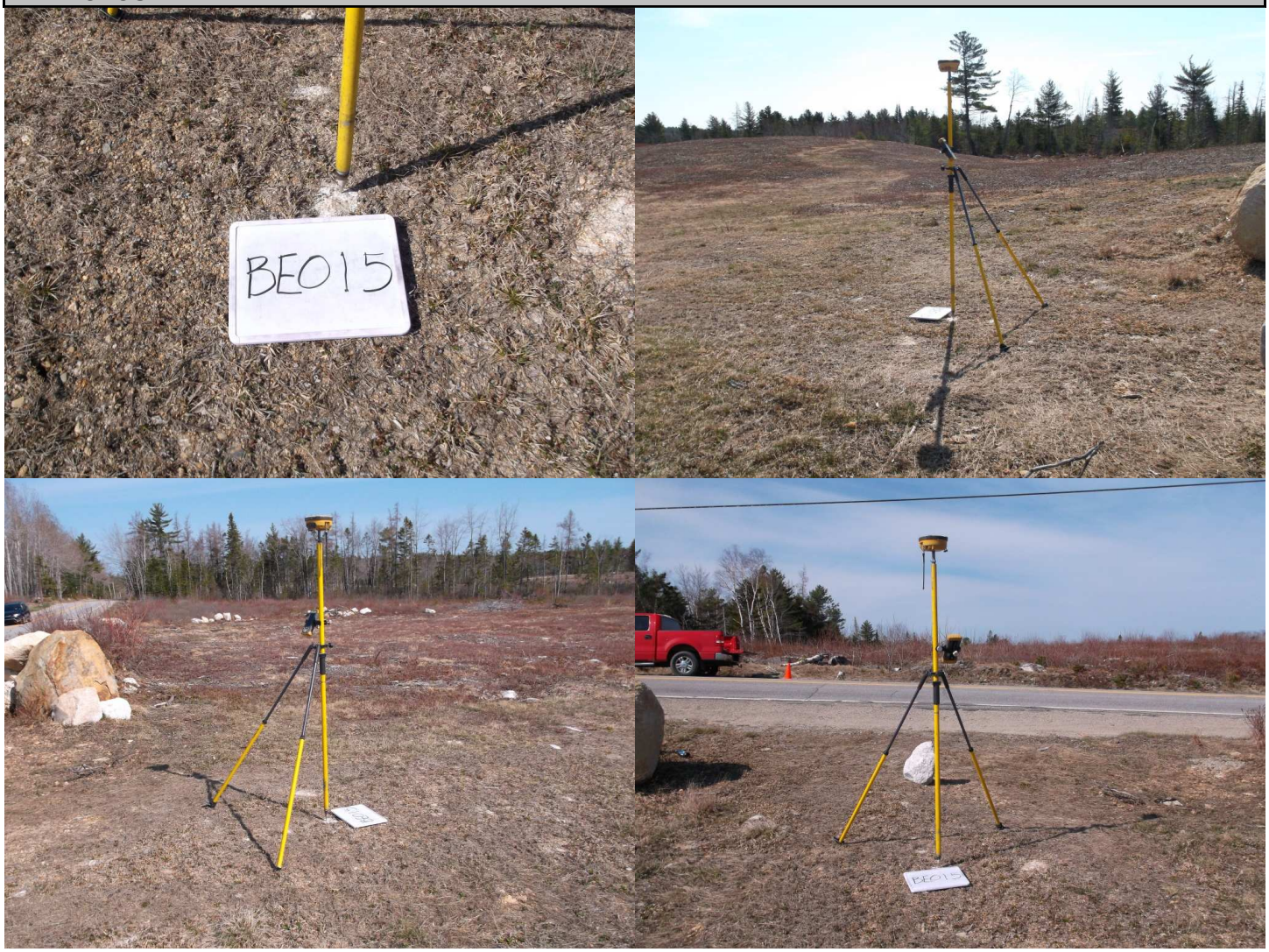
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968501.21	609993.27	63.76

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

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Point ID	BE16
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968335.29	598886.16	70.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

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Point ID	BE17
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

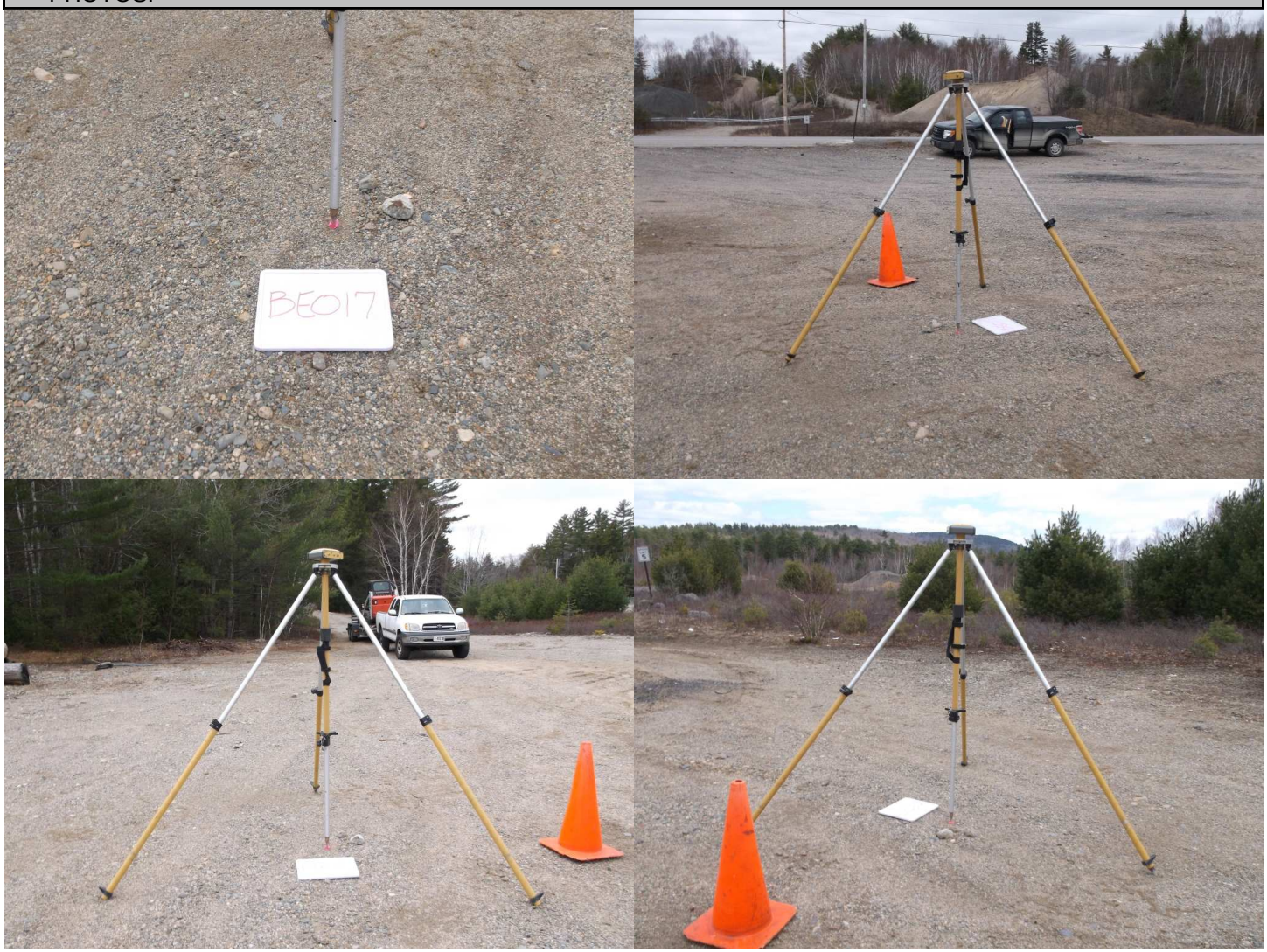
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4965101.29	572871.48	83.66

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.010
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:



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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE18
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4964574.39	558844.55	89.09

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.008
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE19
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

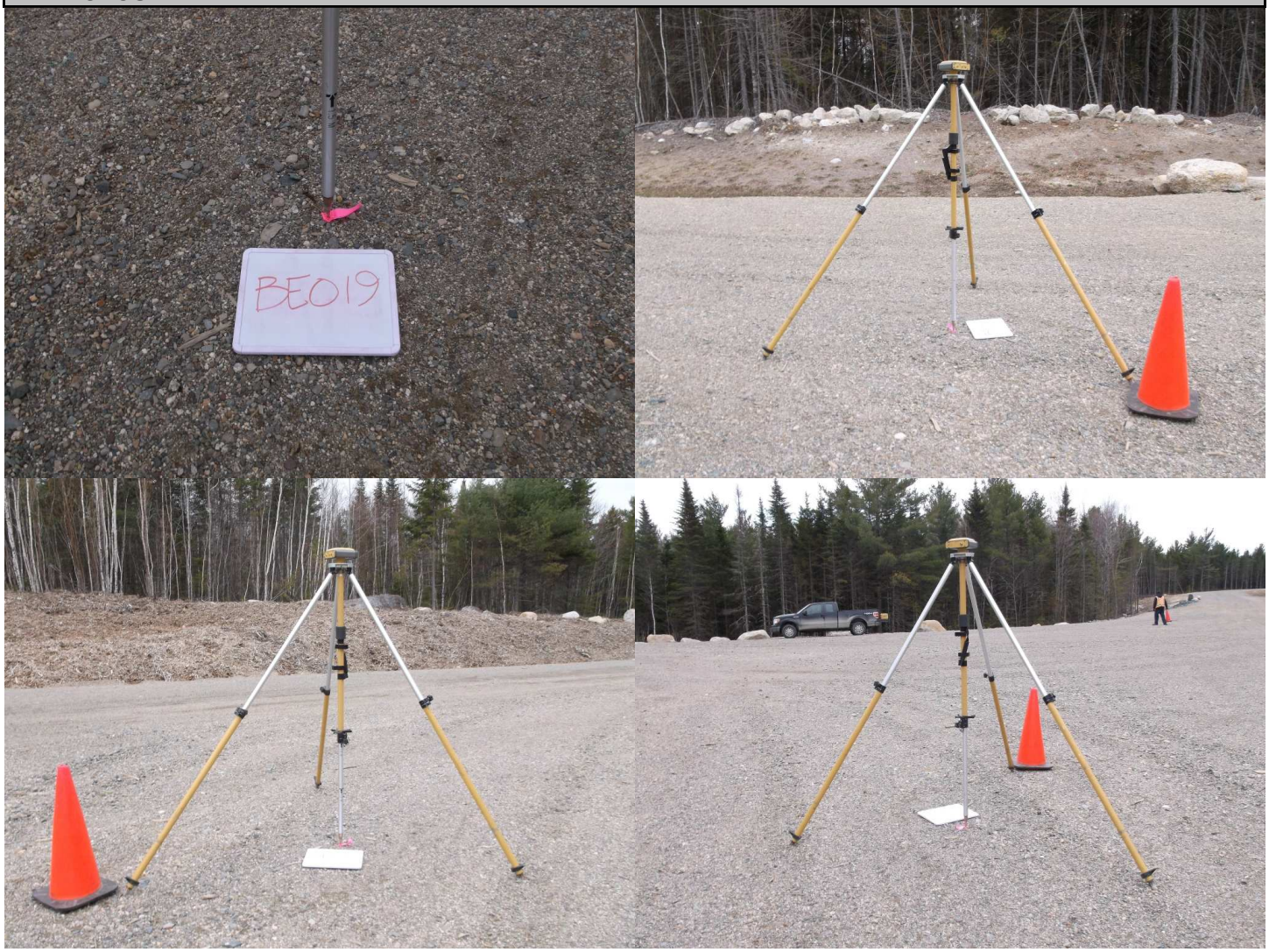
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4958360.00	567396.60	119.11

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.007
RMSE Z	0.013
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE20
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4976212.29	556777.11	144.87

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE21
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4977739.82	570201.10	110.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.007
RMSE Z	0.011
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE22
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

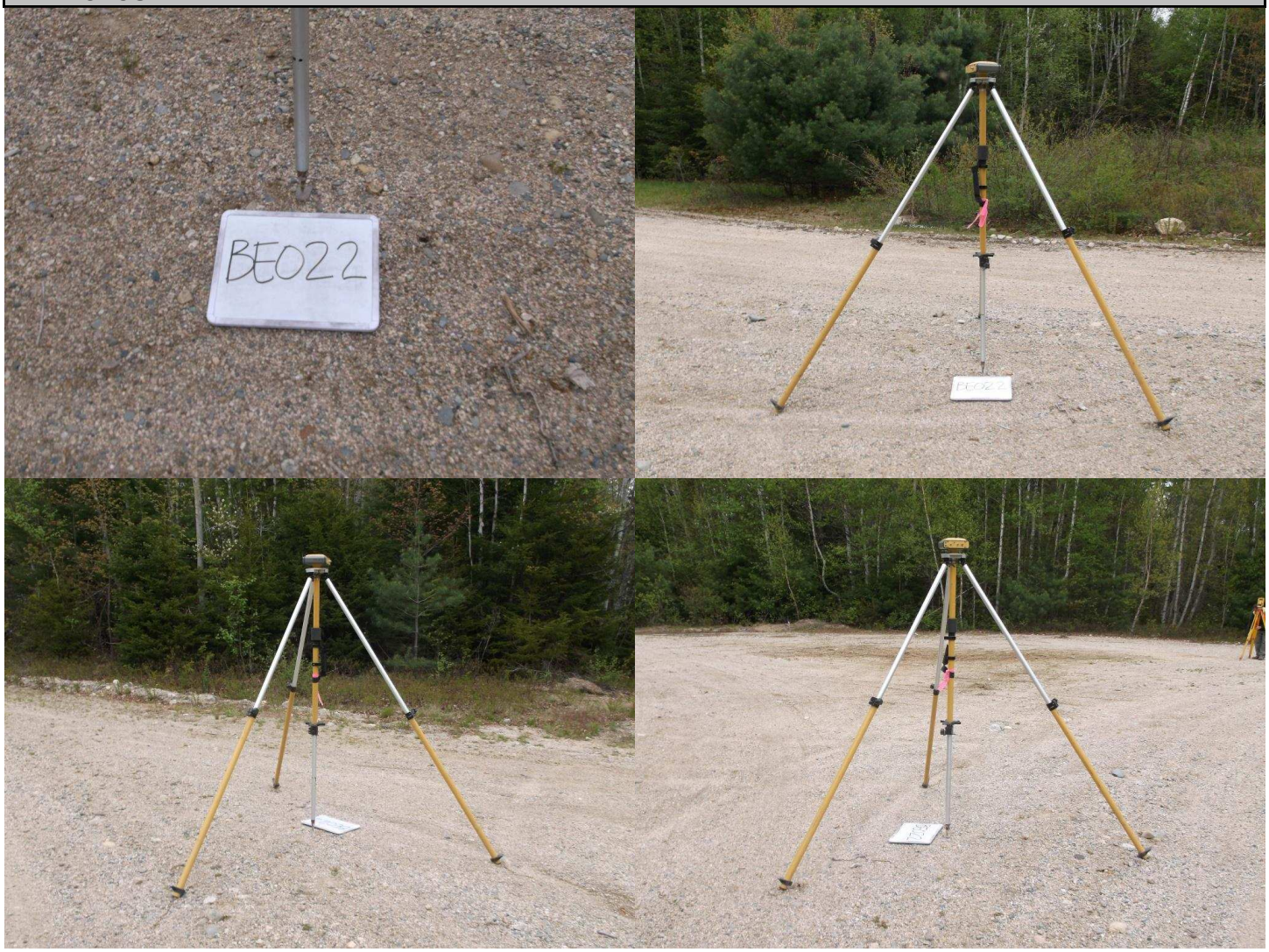
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979596.41	585416.54	108.20

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE23
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4977975.77	602747.06	104.39

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

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Point ID	BE24
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4978142.69	616883.24	49.17

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE25
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4982126.34	627048.19	103.37

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE26
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979599.22	636959.21	38.83

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE27
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988161.76	627234.57	58.73

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

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Point ID	BE28
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988680.91	613689.33	70.47

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

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Point ID	BE29
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988778.23	601696.48	78.64

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

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Point ID	BE30
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988985.70	588933.58	74.13

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE31
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

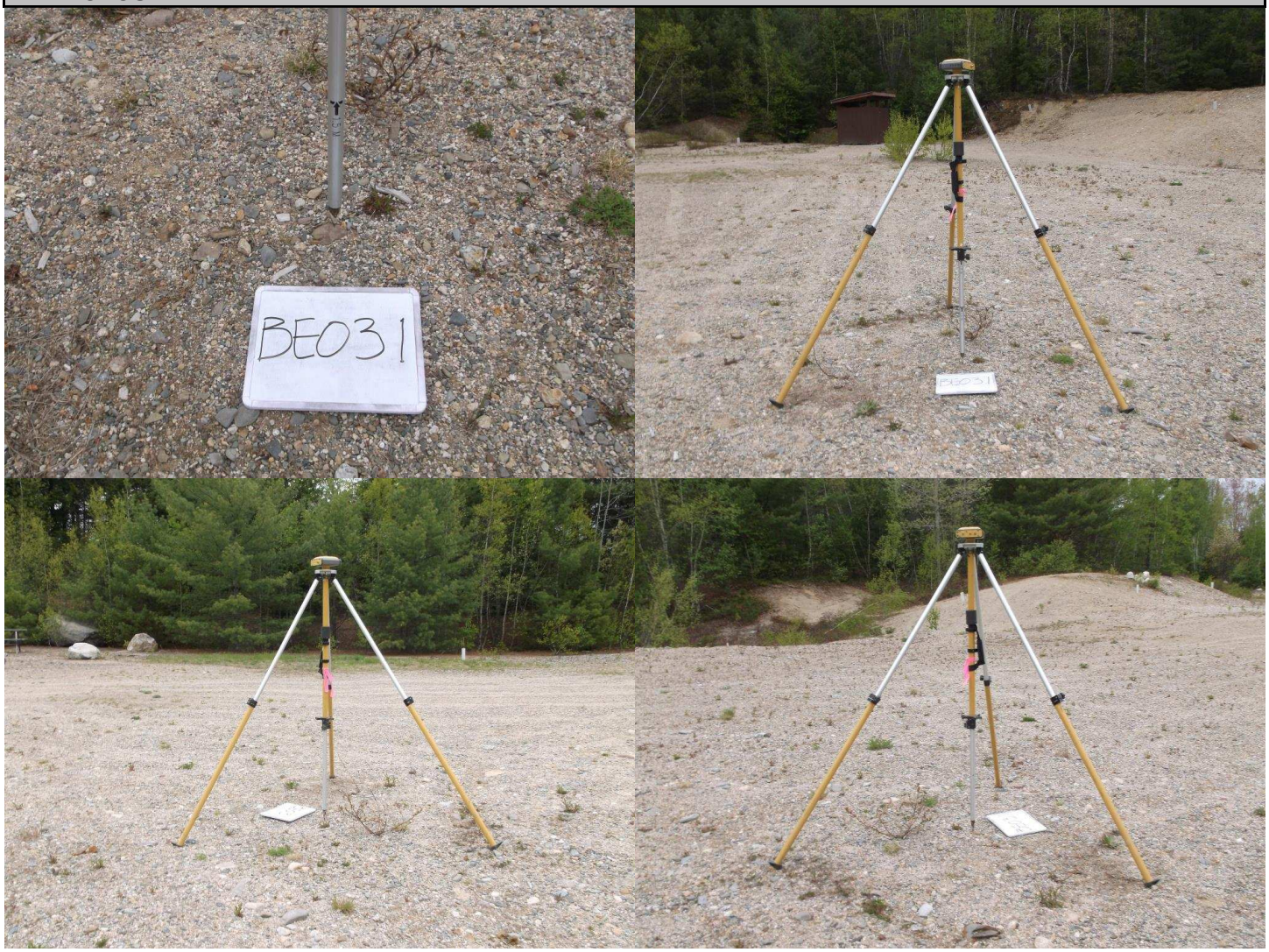
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988905.16	577990.32	117.40

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE32
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987527.81	563610.88	113.35

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.013
RMSE Z	0.046
Method	STATIC GPS

PHOTOS:

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JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE33
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987677.91	551465.53	133.63

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.014
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE34
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5001199.15	553627.17	87.87

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.009
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE35
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

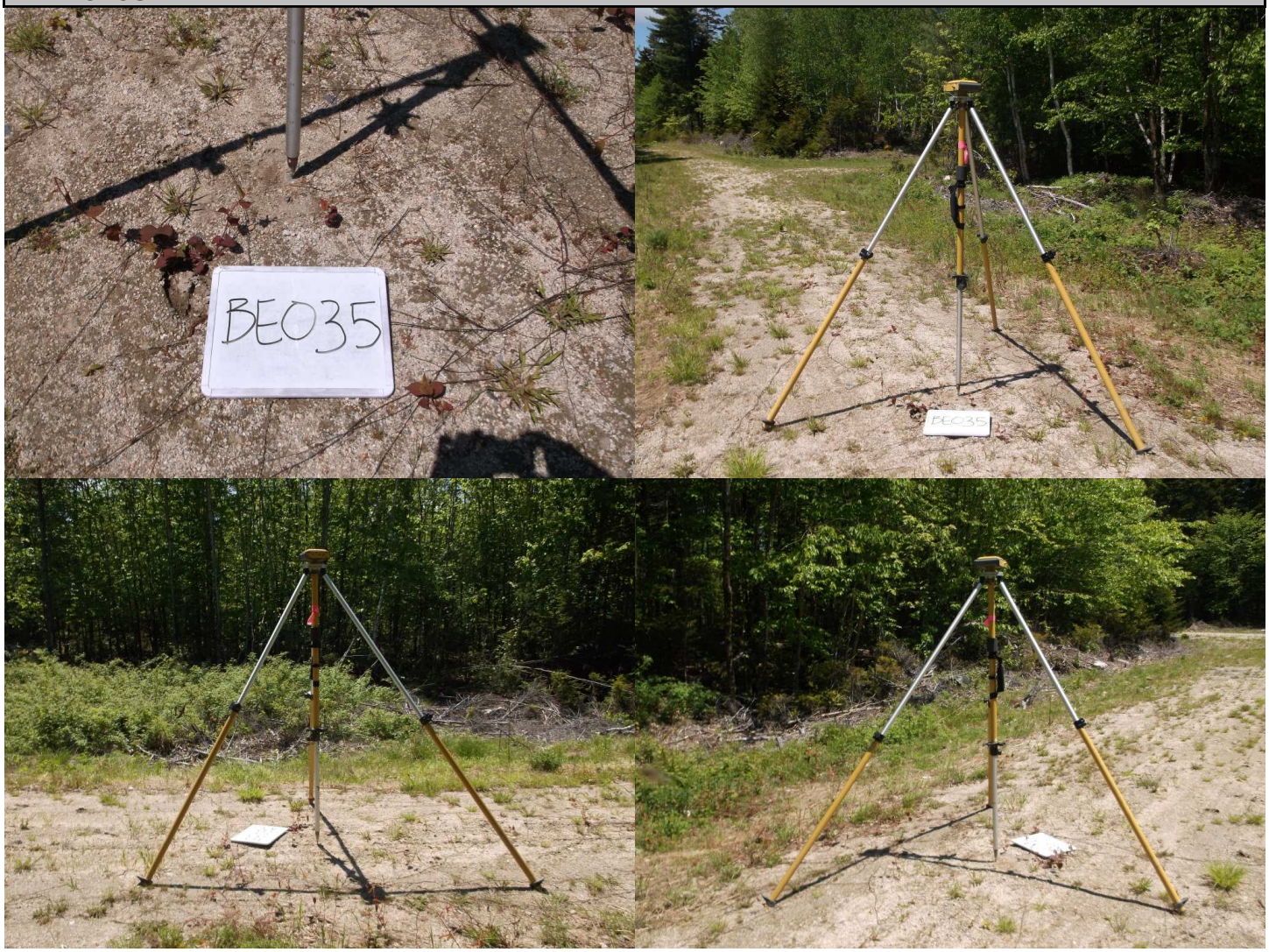
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5000346.16	567245.98	218.08

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.010
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE36
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

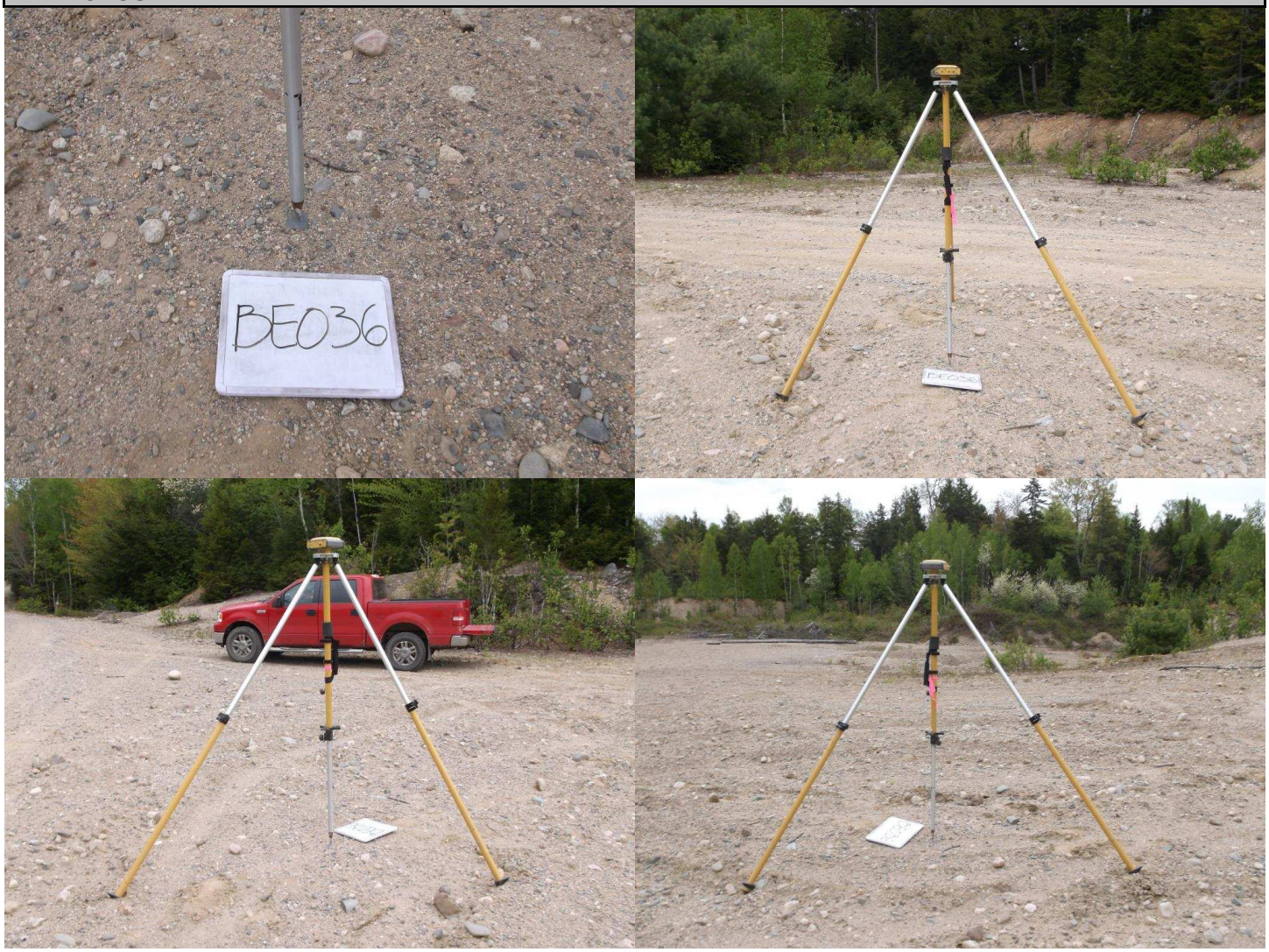
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4998950.10	587829.98	97.55

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE37
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

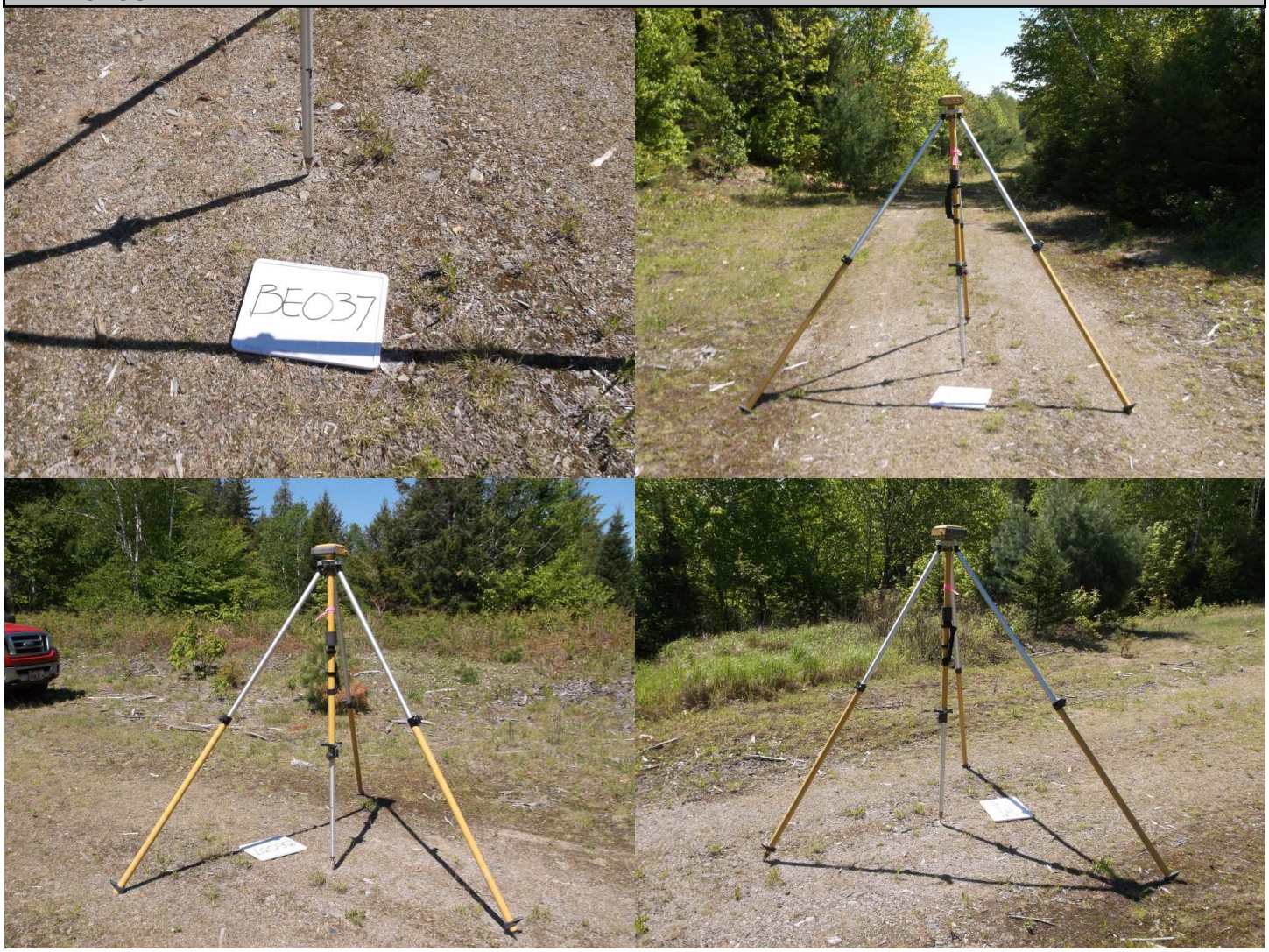
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999076.53	599096.20	73.22

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE38
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

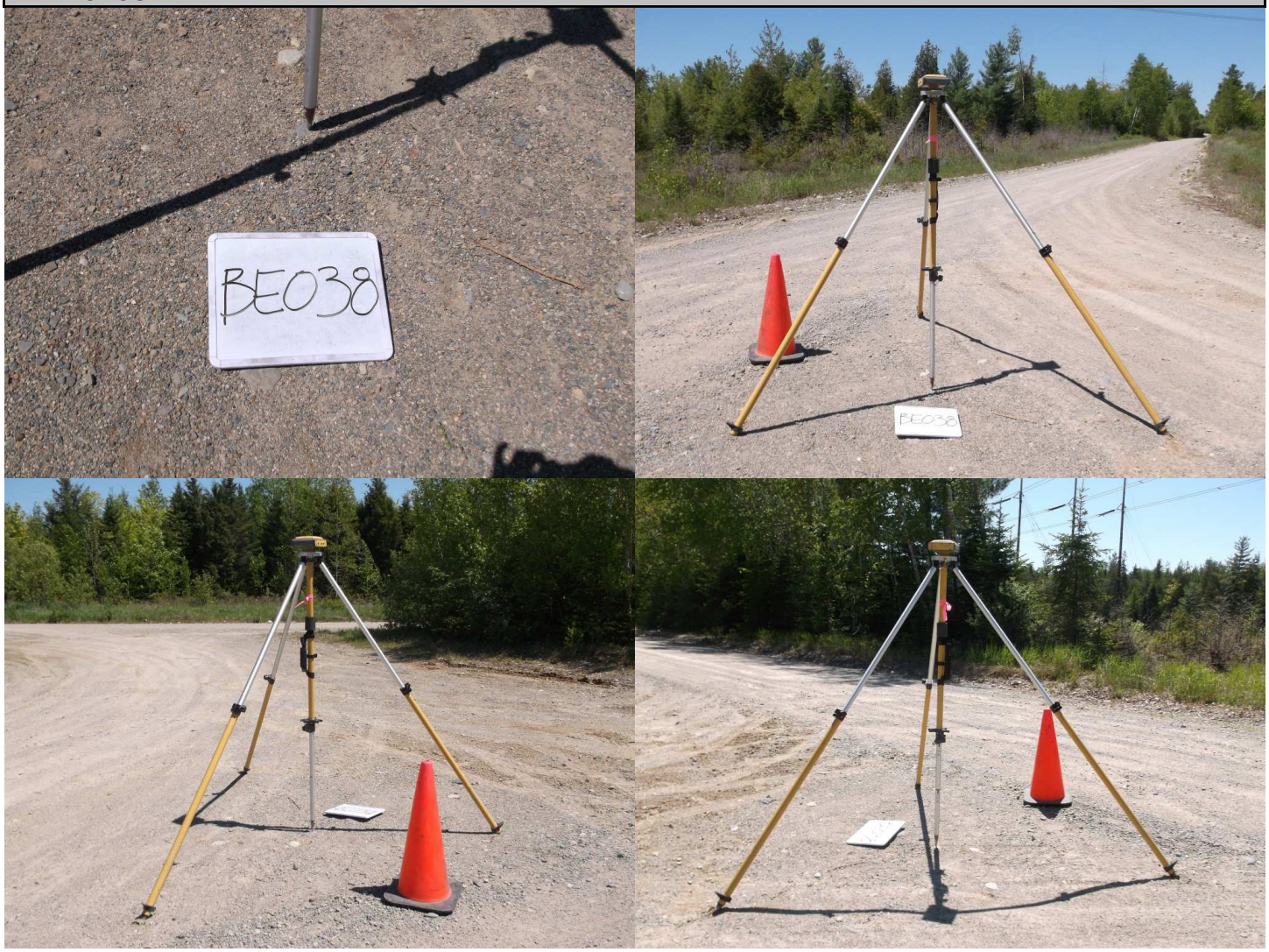
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999501.38	609473.22	68.60

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE39
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4995639.93	622088.77	61.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE40
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008674.15	600788.37	69.58

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE41
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

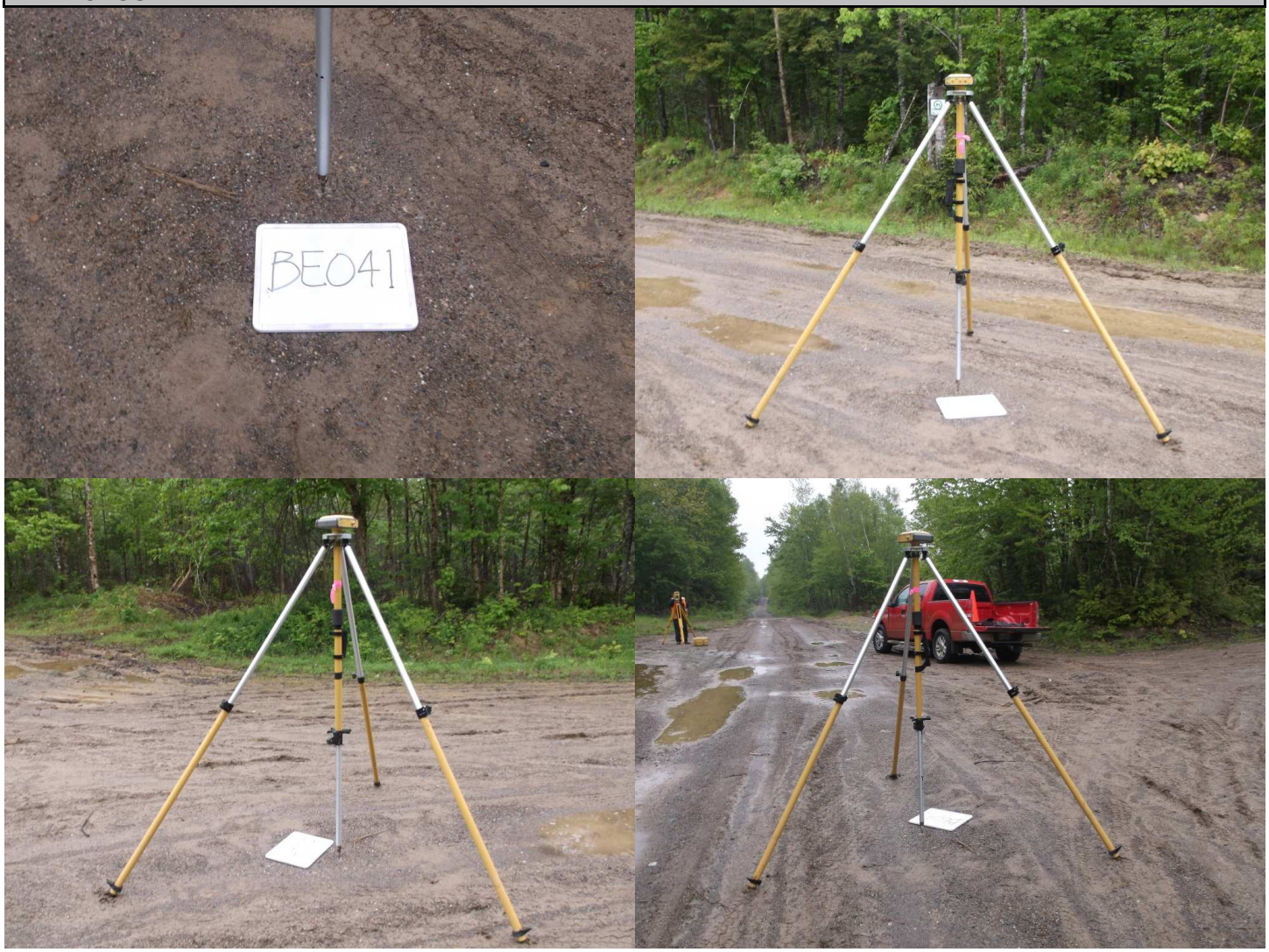
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022143.75	614324.48	103.26

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE42
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021716.23	602191.07	107.40

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE43
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

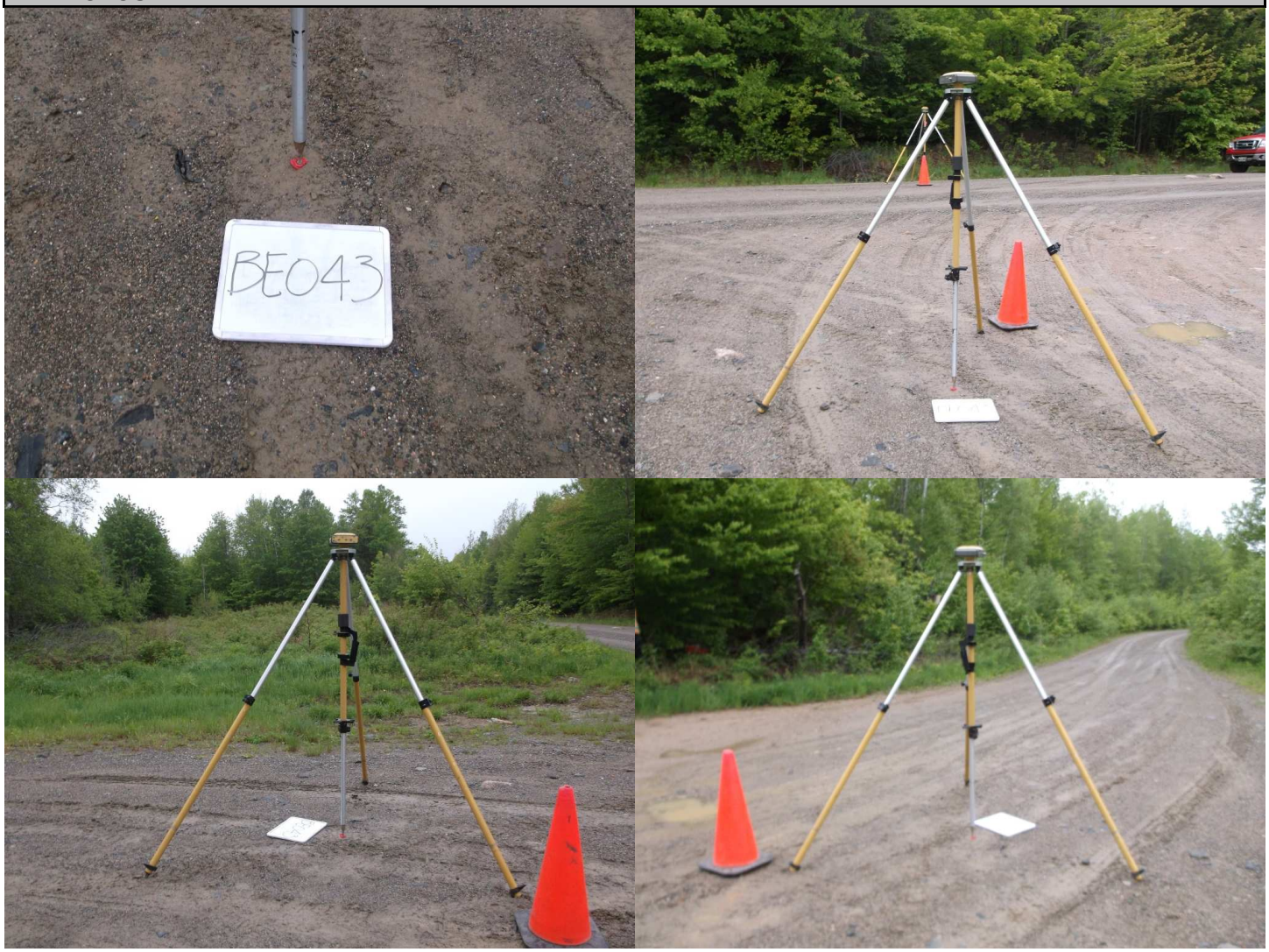
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021194.85	587675.47	152.14

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.008
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE44
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5020052.64	574904.02	99.74

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.008
RMSE Z	0.011
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE45
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

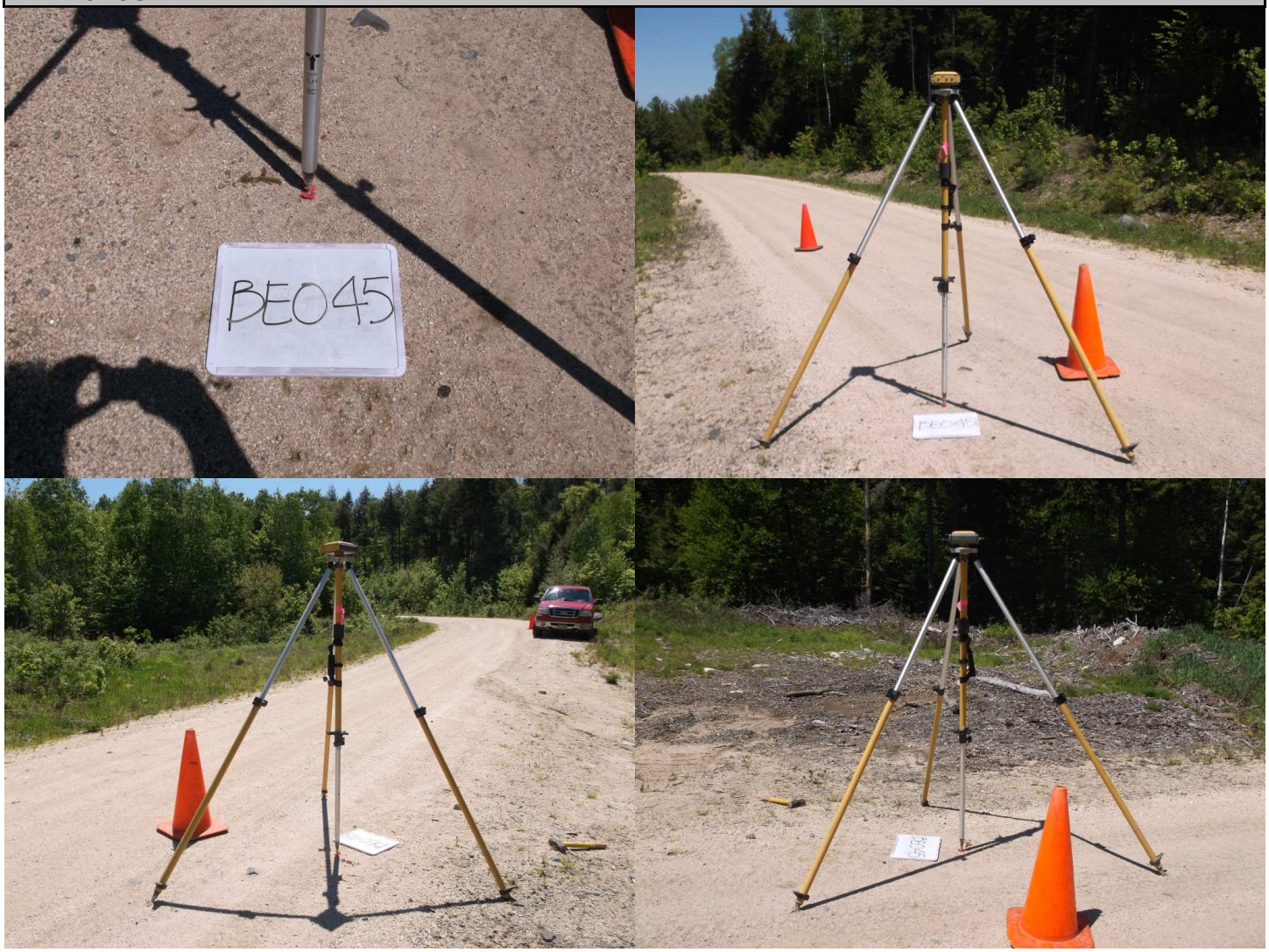
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5010259.12	570824.03	121.48

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.009
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE46
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

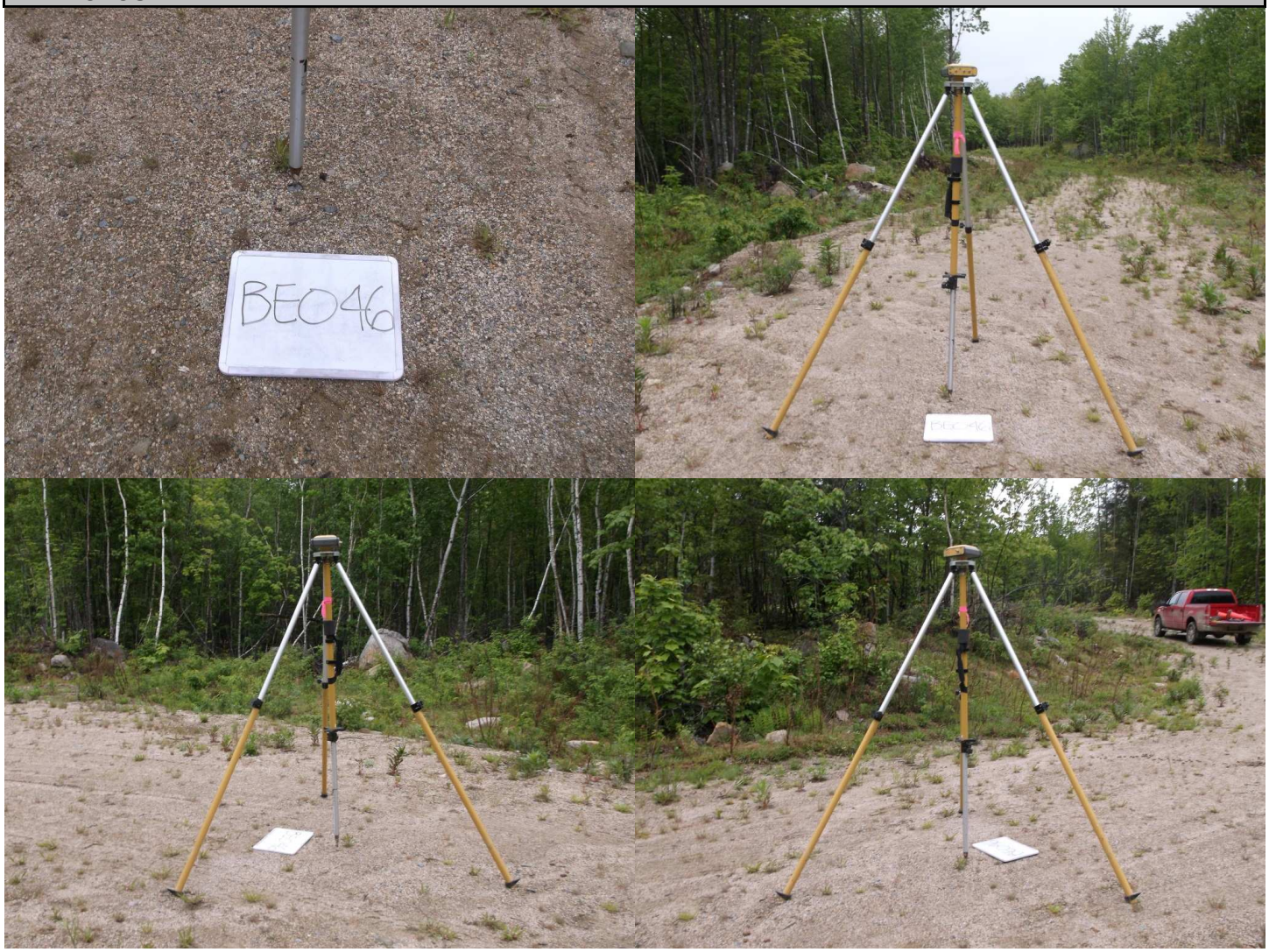
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5010487.90	553085.71	165.24

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.007
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:



SEWALL
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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE47
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5023240.03	555928.10	124.14

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.008
RMSE Z	0.010
Method	STATIC GPS

PHOTOS:

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE48
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

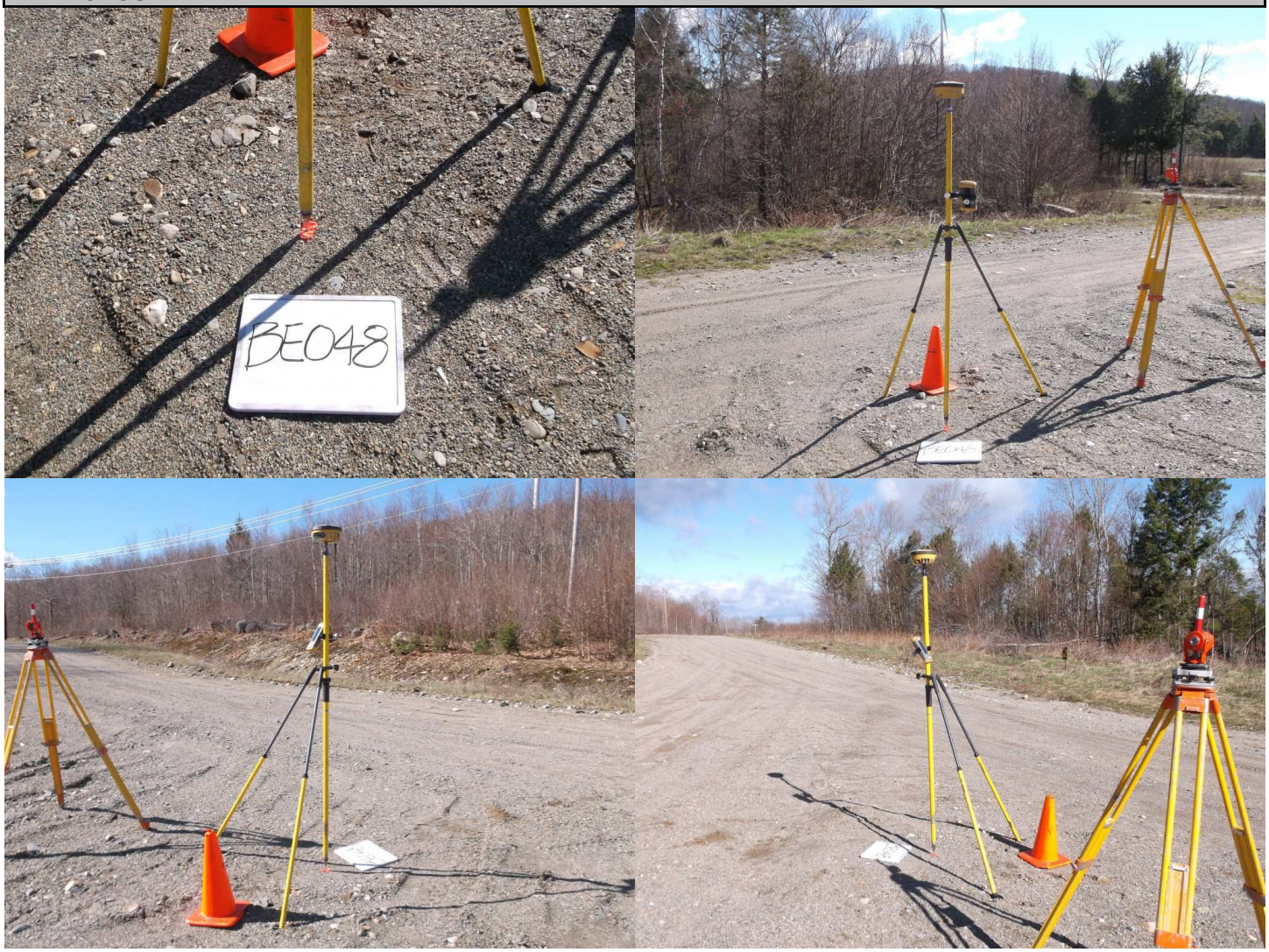
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5019322.54	547753.81	188.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE49
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5016005.83	529796.69	56.01

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE50
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5030074.52	576946.74	213.07

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.012
RMSE Z	0.020
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE51
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5028350.87	585812.92	157.50

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE52
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029976.75	597654.93	137.44

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE53
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029922.72	611995.98	109.03

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE54
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

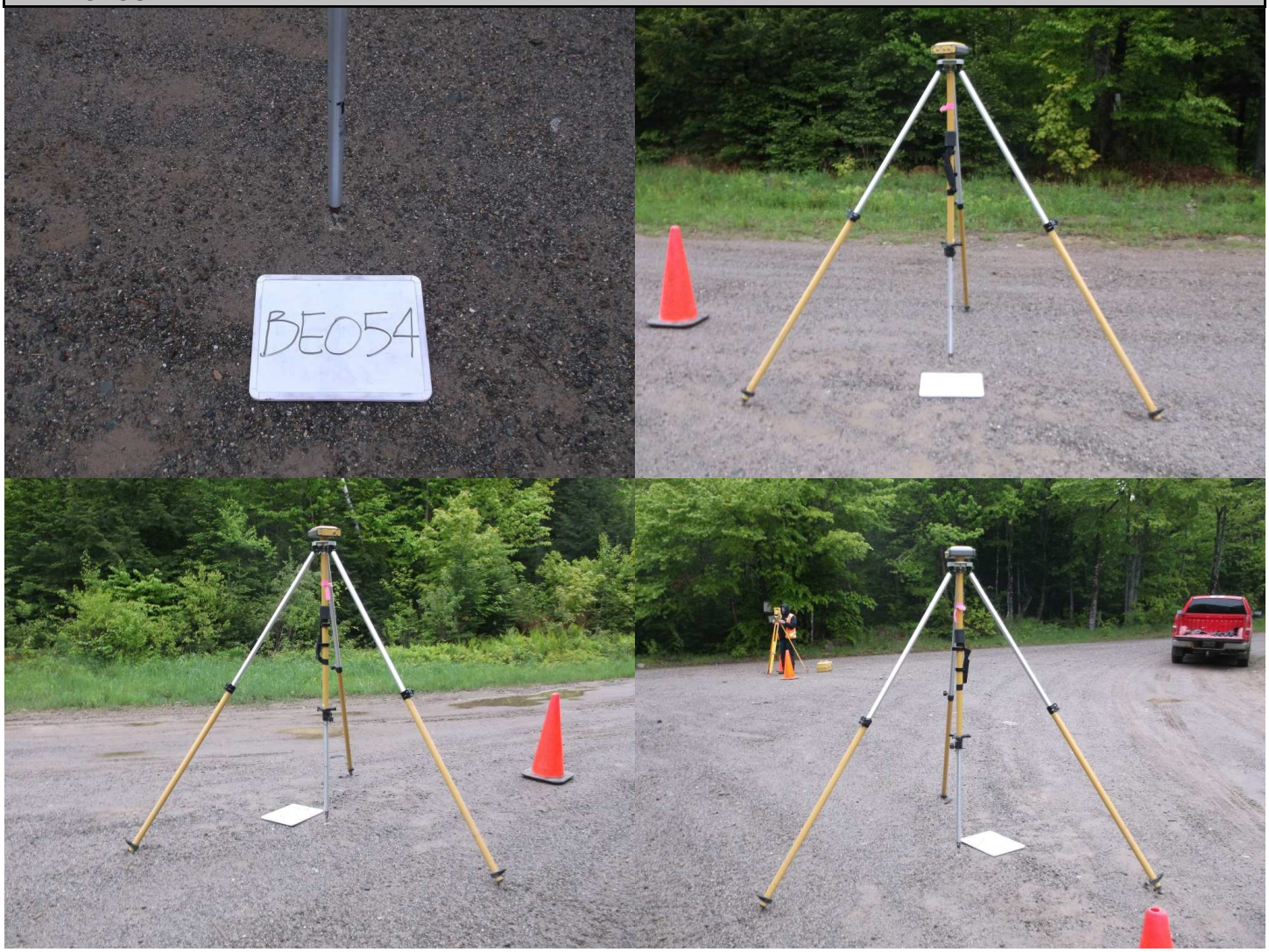
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029286.55	619827.93	94.35

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE55
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040788.67	611595.43	142.65

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.014
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE56
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037897.34	560812.21	120.24

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-25-2017
RMSE Hz	0.010
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE57
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5033840.98	540778.48	68.79

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE58
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022938.74	522850.36	67.85

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE59
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042580.16	596397.63	136.96

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE60
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037974.27	572005.36	189.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.011
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE61
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021245.09	511434.31	109.60

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.009
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE62
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5017097.50	490394.15	201.38

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE63
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032582.99	517281.80	170.79

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.009
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE64
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5031715.29	499094.26	134.00

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE65
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032388.39	486378.67	178.24

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE66
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

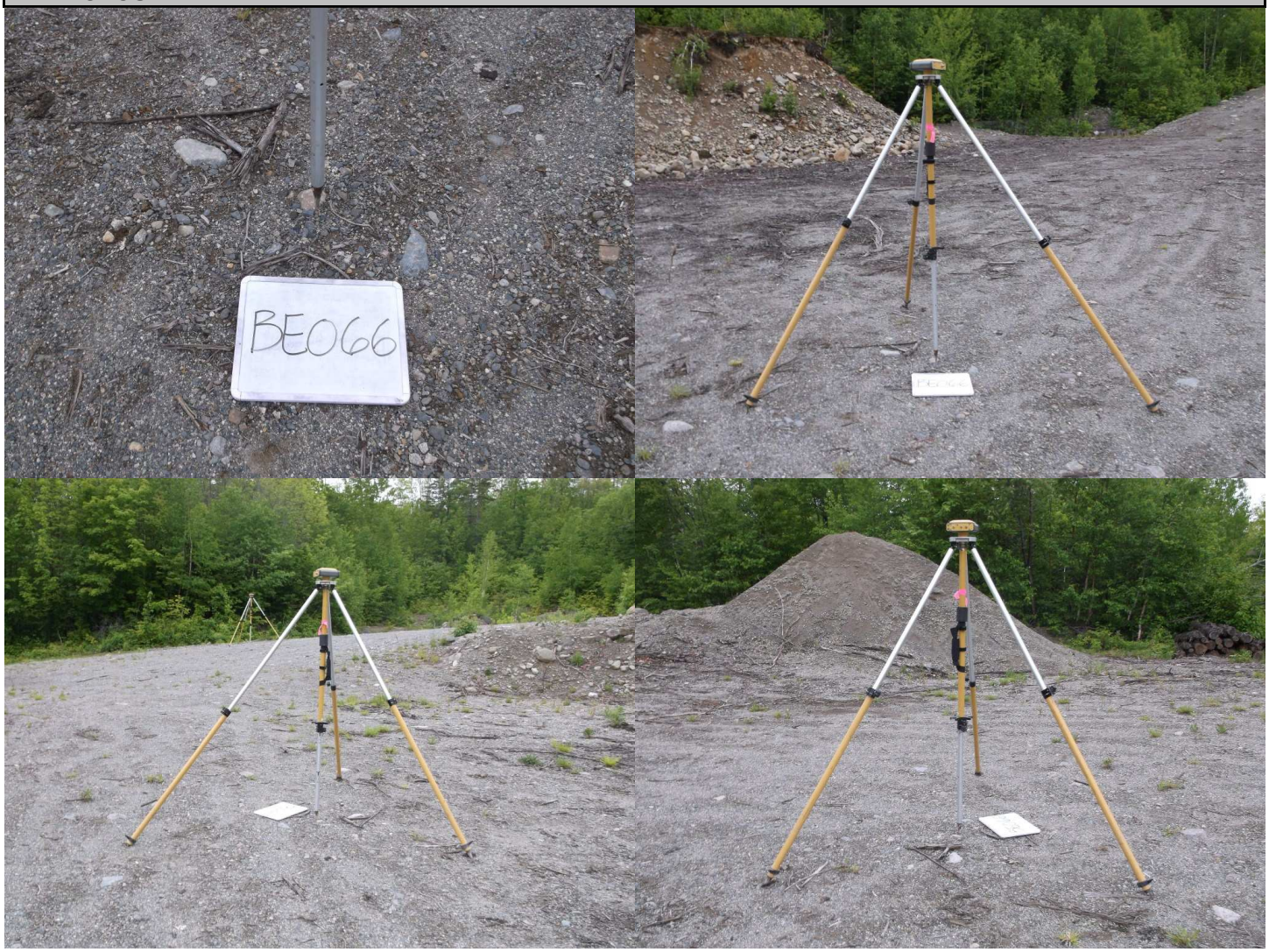
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5025694.44	478487.21	276.15

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.010
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE67
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5043625.40	499276.41	300.43

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE68
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042690.15	509254.96	166.20

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE69
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044062.50	520692.17	196.54

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE70
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044827.39	542744.36	154.77

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE71
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

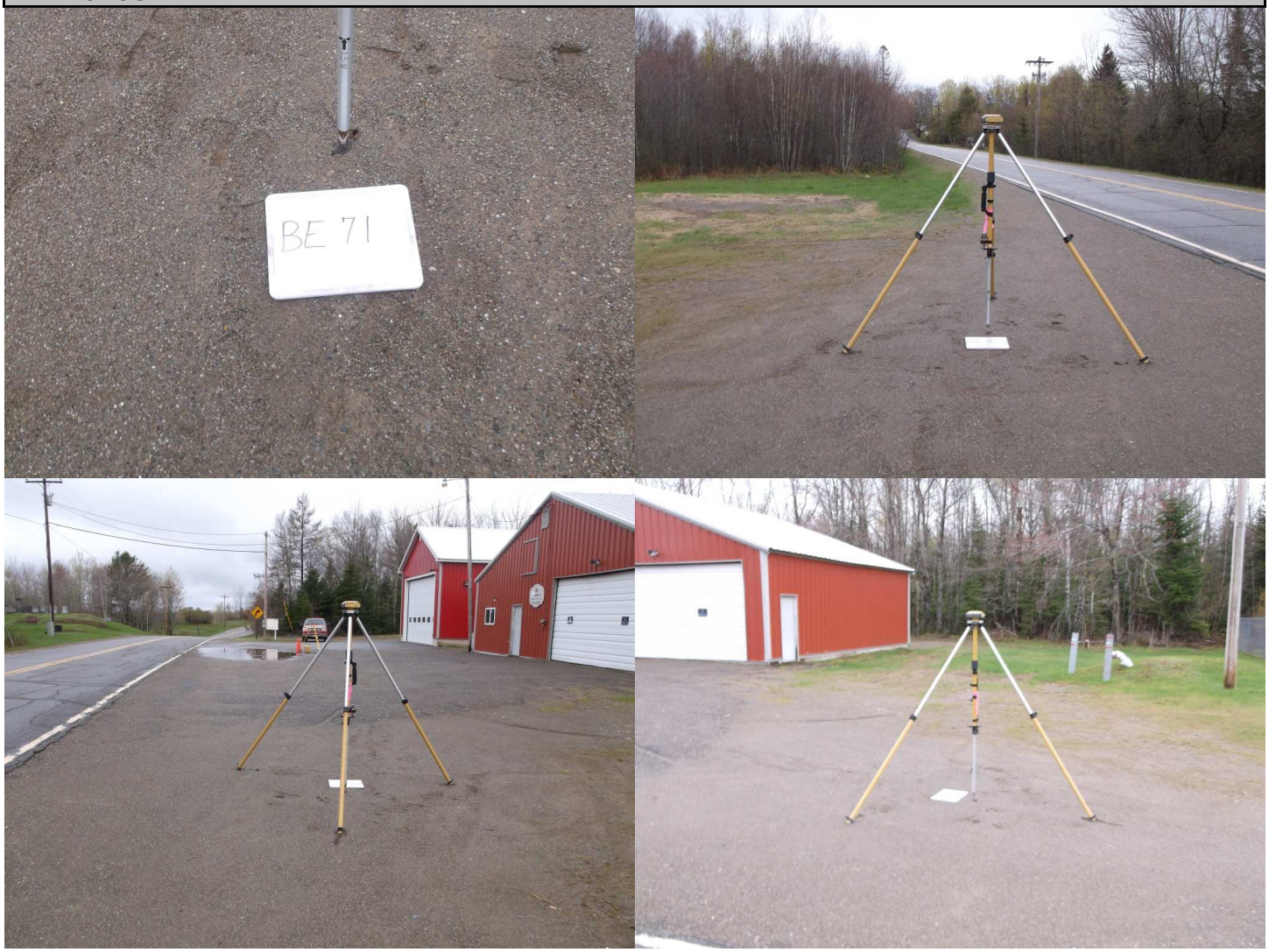
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044674.64	561741.83	110.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.013
RMSE Z	0.022
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE72
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

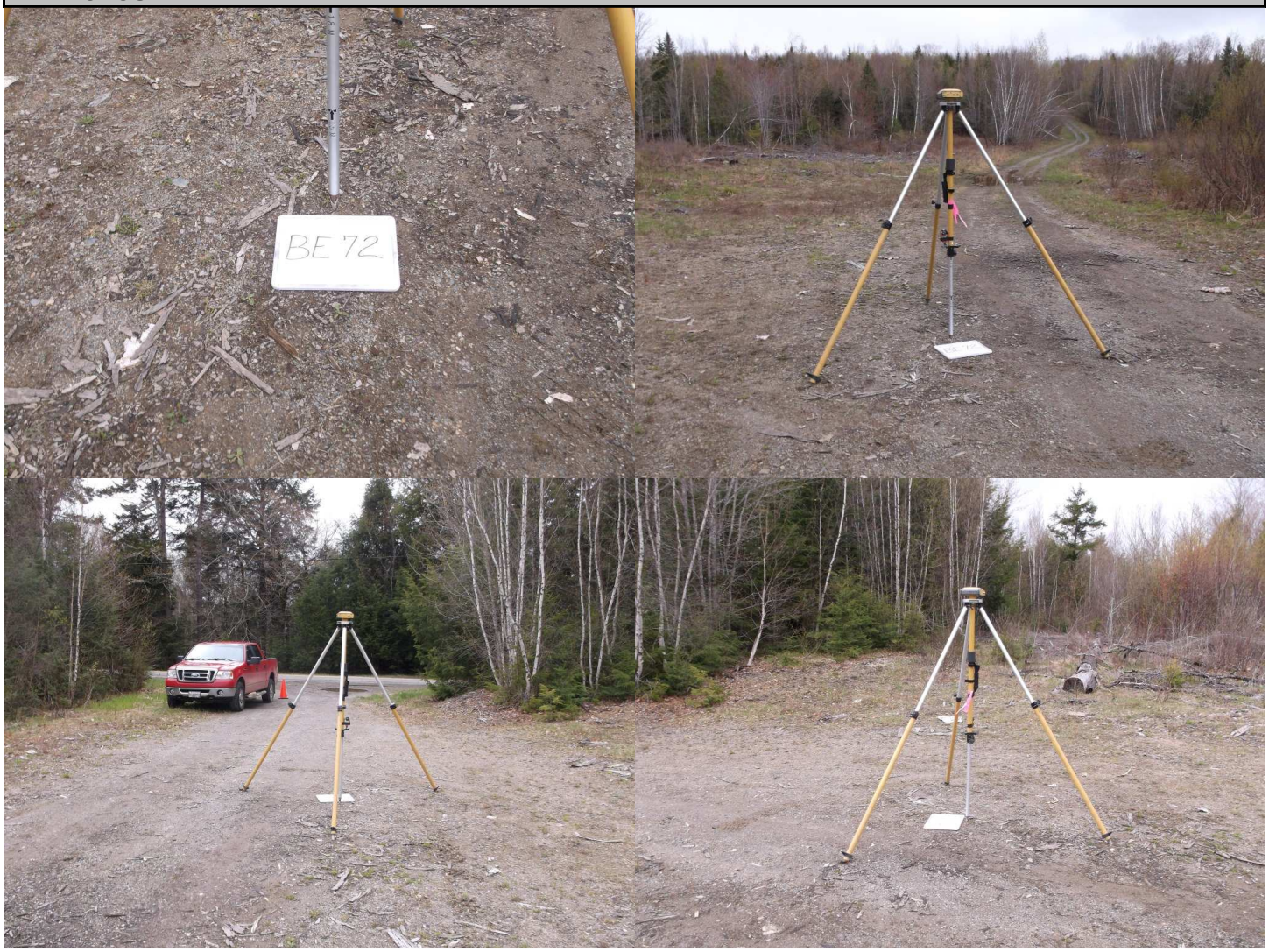
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5046542.28	571855.19	119.57

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.011
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE73
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048158.92	581561.58	169.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.018
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE74
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048243.85	593547.32	154.16

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE75
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058259.54	575596.59	113.98

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.011
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE75
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058259.54	575596.59	113.98

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.011
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE77
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058640.28	550306.11	178.87

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE78
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073529.94	589943.60	141.52

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE79
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

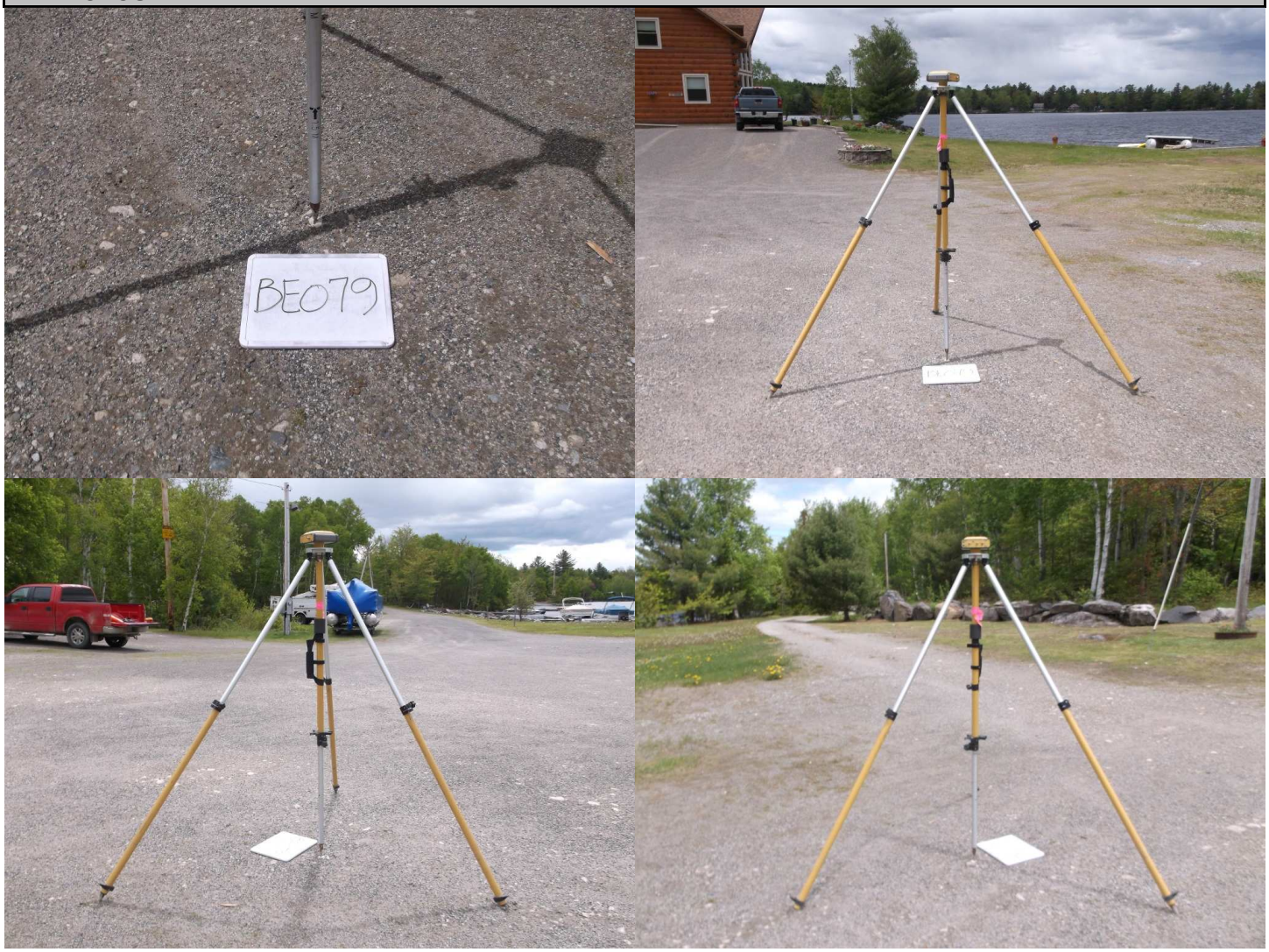
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5049960.56	513946.83	150.46

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE80
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040567.00	483632.51	488.21

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.011
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE81
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5053030.45	486970.75	393.42

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE82
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5083954.39	589948.13	208.29

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE83
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5086212.31	578377.91	176.27

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE84
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121951.81	580483.60	179.73

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.017
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE85
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5189697.59	583638.29	196.80

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-17-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE86
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5218869.97	583941.43	136.01

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE87
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121119.62	570195.05	258.98

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.017
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE88
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116402.37	557995.29	307.69

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.017
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE89
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5131152.71	558602.68	212.41

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE90
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5133670.06	549810.17	269.19

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE91
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5118691.58	548600.15	260.85

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE92
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

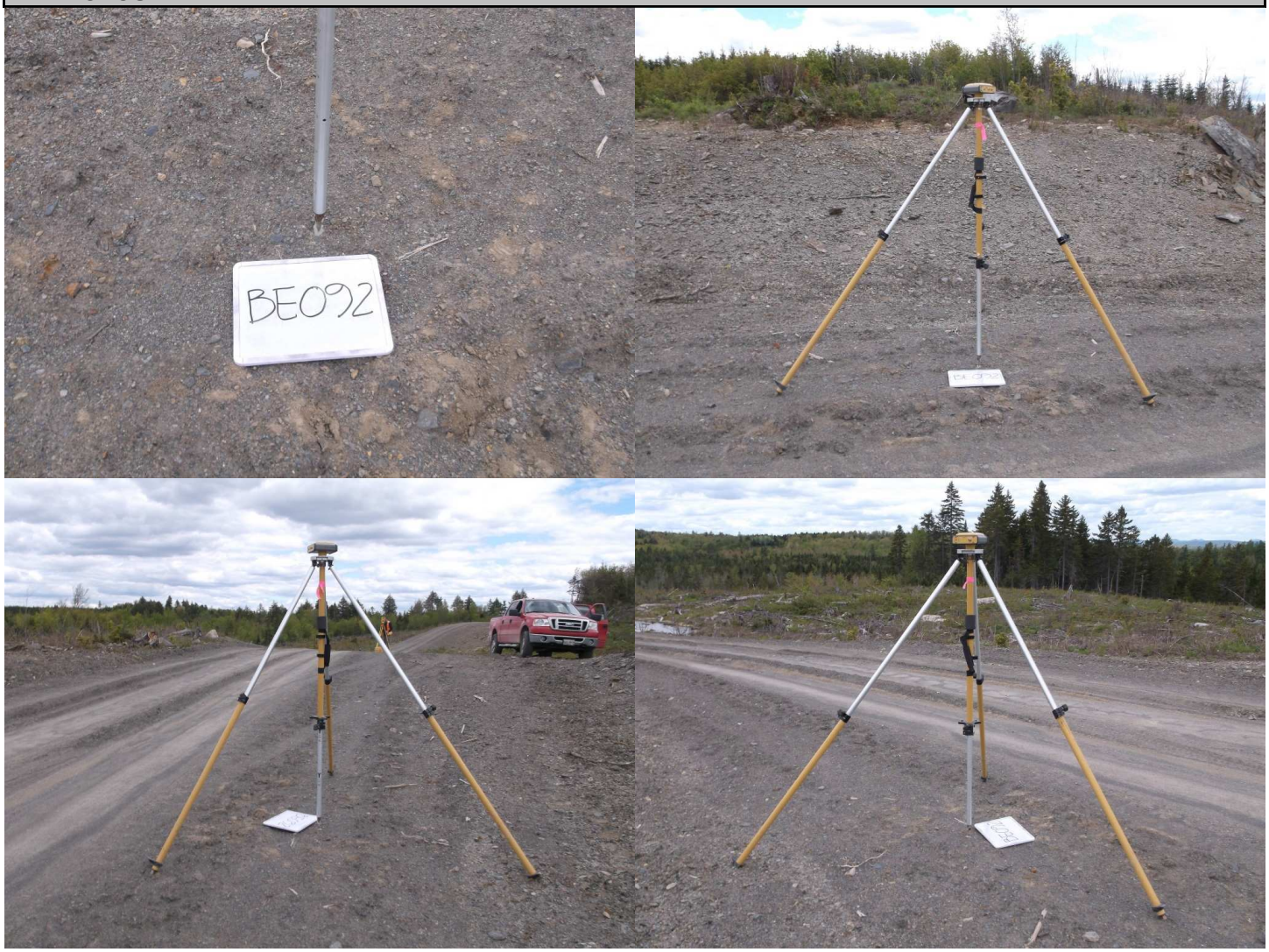
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127935.83	541408.02	293.43

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE93
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113896.2	539182.15	333.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

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Point ID	BE94
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

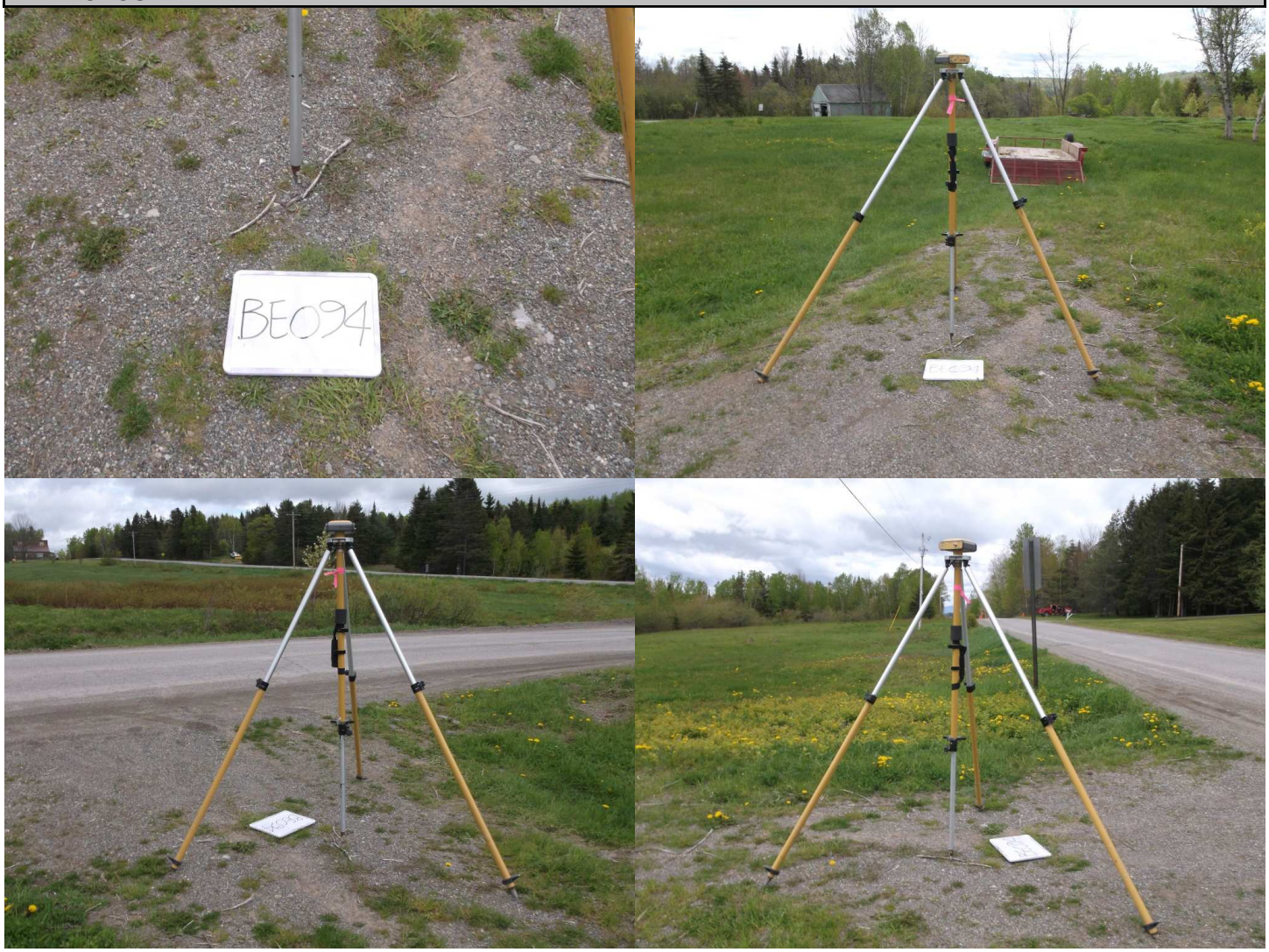
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5101442.87	543365.98	262.07

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
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Point ID	BE95
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073165.57	536586.82	140.96

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE96
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5078985.10	538412.95	172.02

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
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Point ID	BE97
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5093781.71	536741.27	257.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
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Point ID	BE98
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

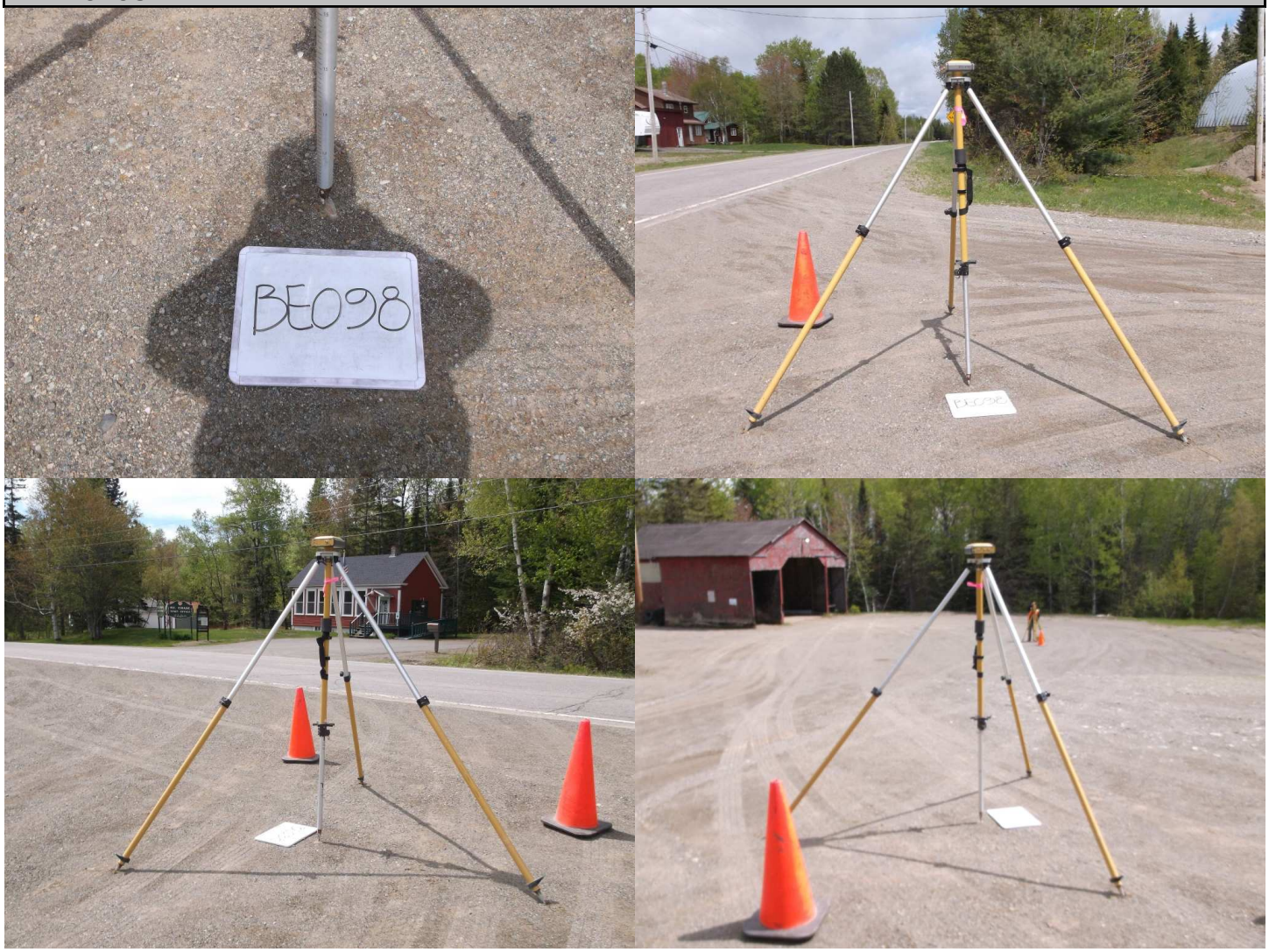
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100745.71	536595.47	291.71

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE99
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

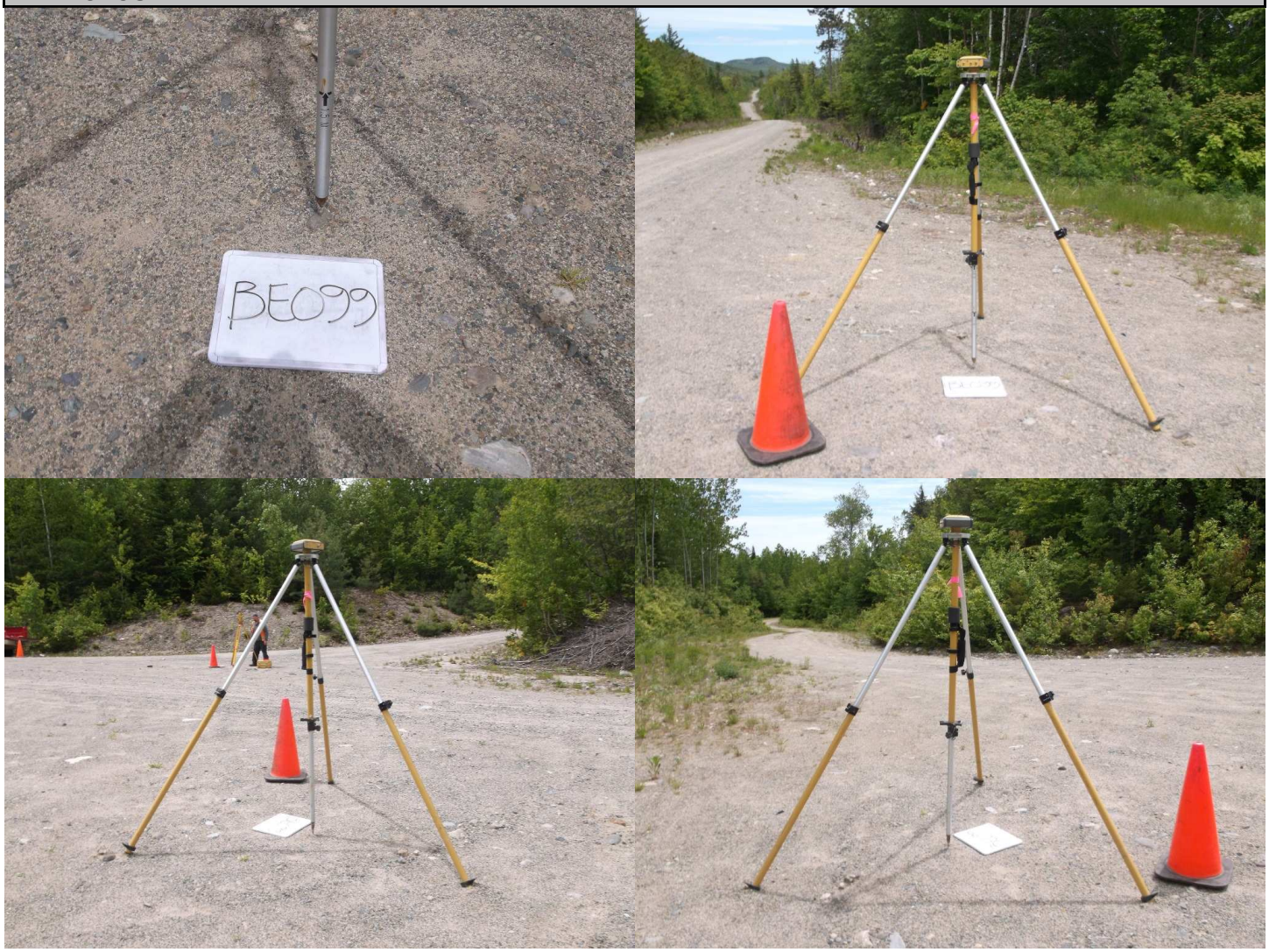
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073752.92	526906.41	163.78

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE100
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116093.99	526604.22	242.19

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.016
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE101
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5062507.11	486394.04	295.08

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

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Point ID	BE102
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073426.92	479088.15	288.58

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.005
RMSE Z	0.010
Method	STATIC GPS

PHOTOS:

SEWALL
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Point ID	BE103
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

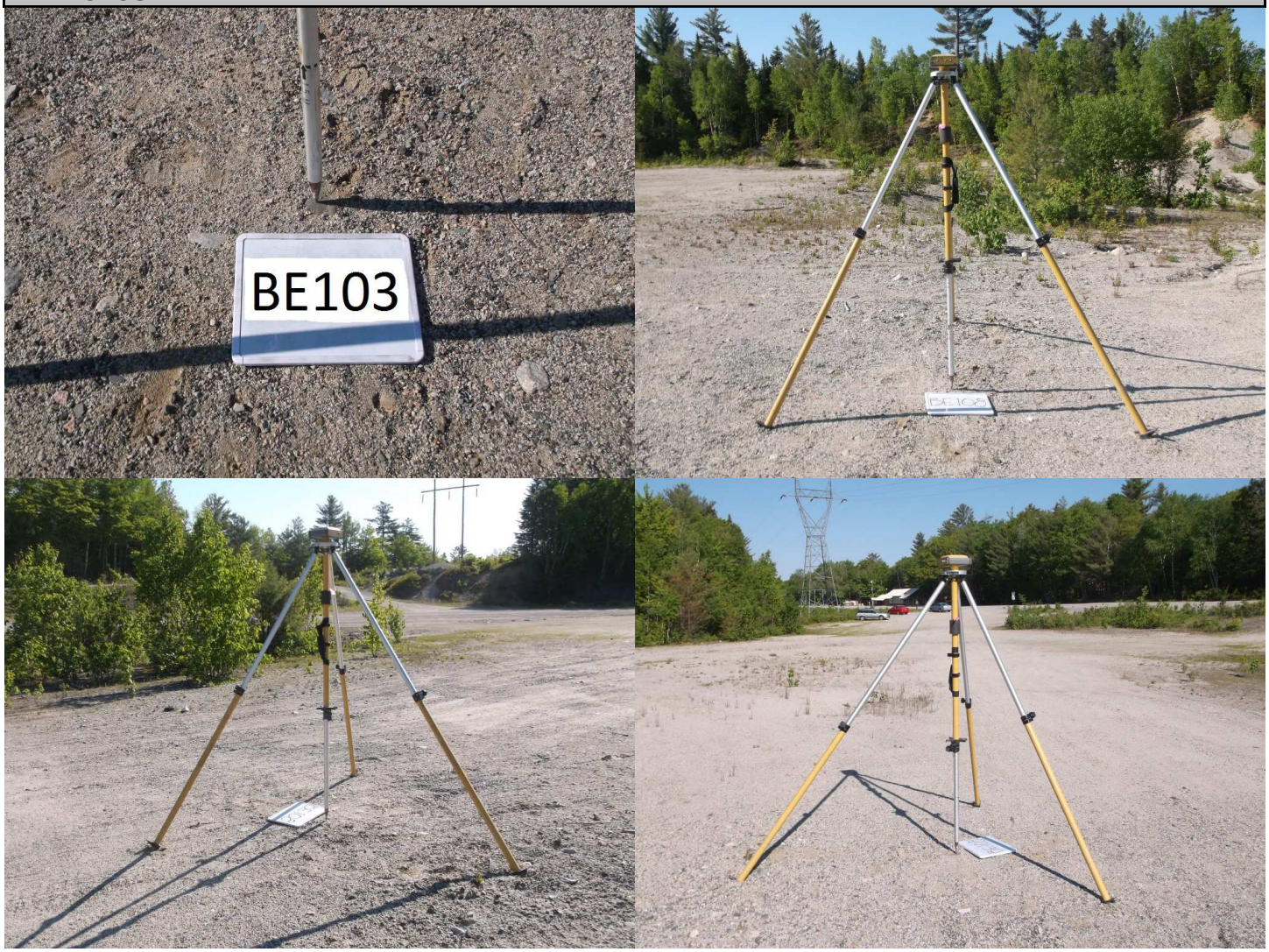
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5075669.77	502893.91	179.46

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE104
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

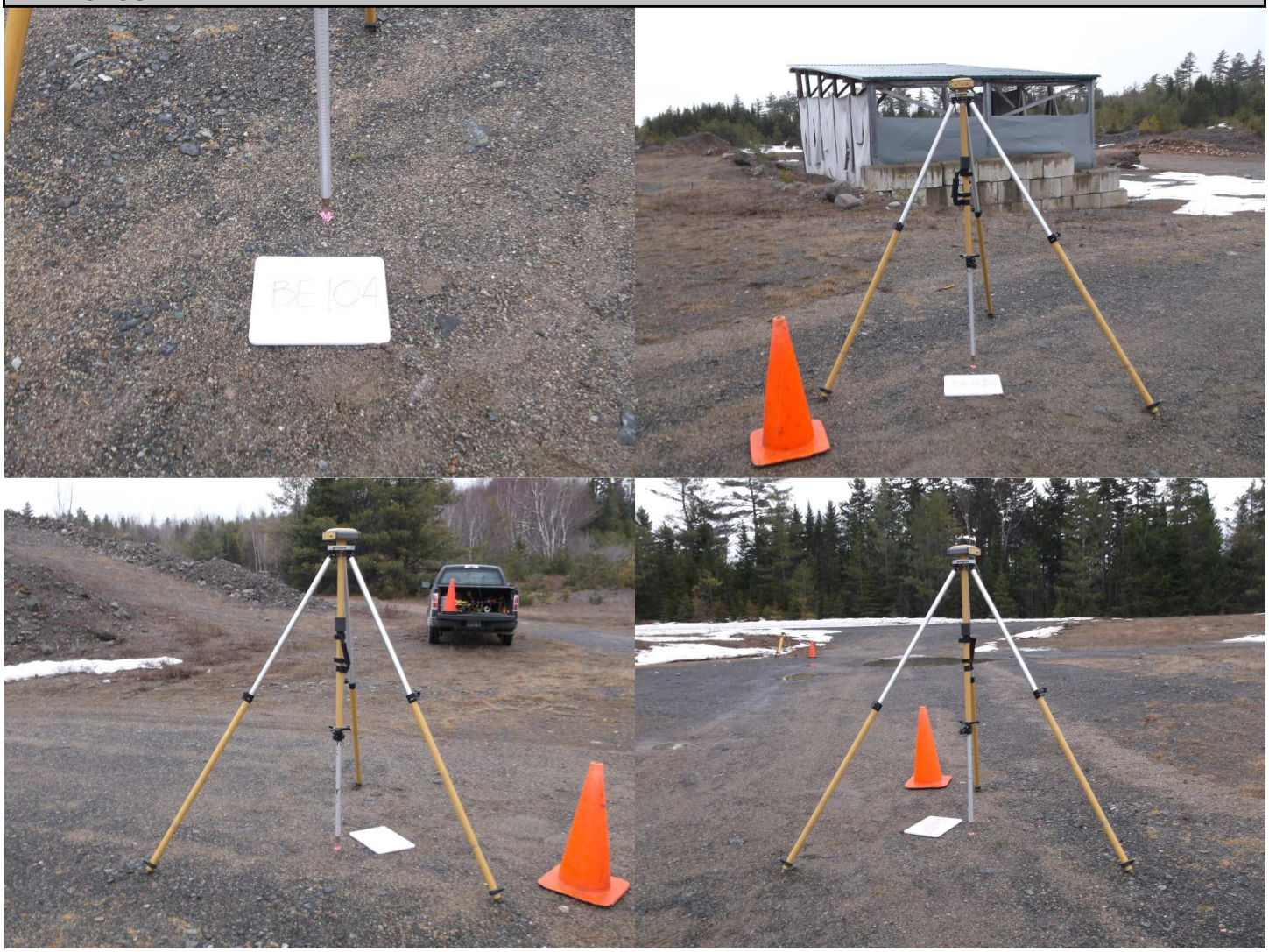
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5089881.01	486373.28	343.33

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.004
RMSE Z	0.006
Method	STATIC GPS

PHOTOS:



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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE105
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5085930.62	455200.60	337.73

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE106
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100331.11	486168.22	371.38

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

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Point ID	BE107
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

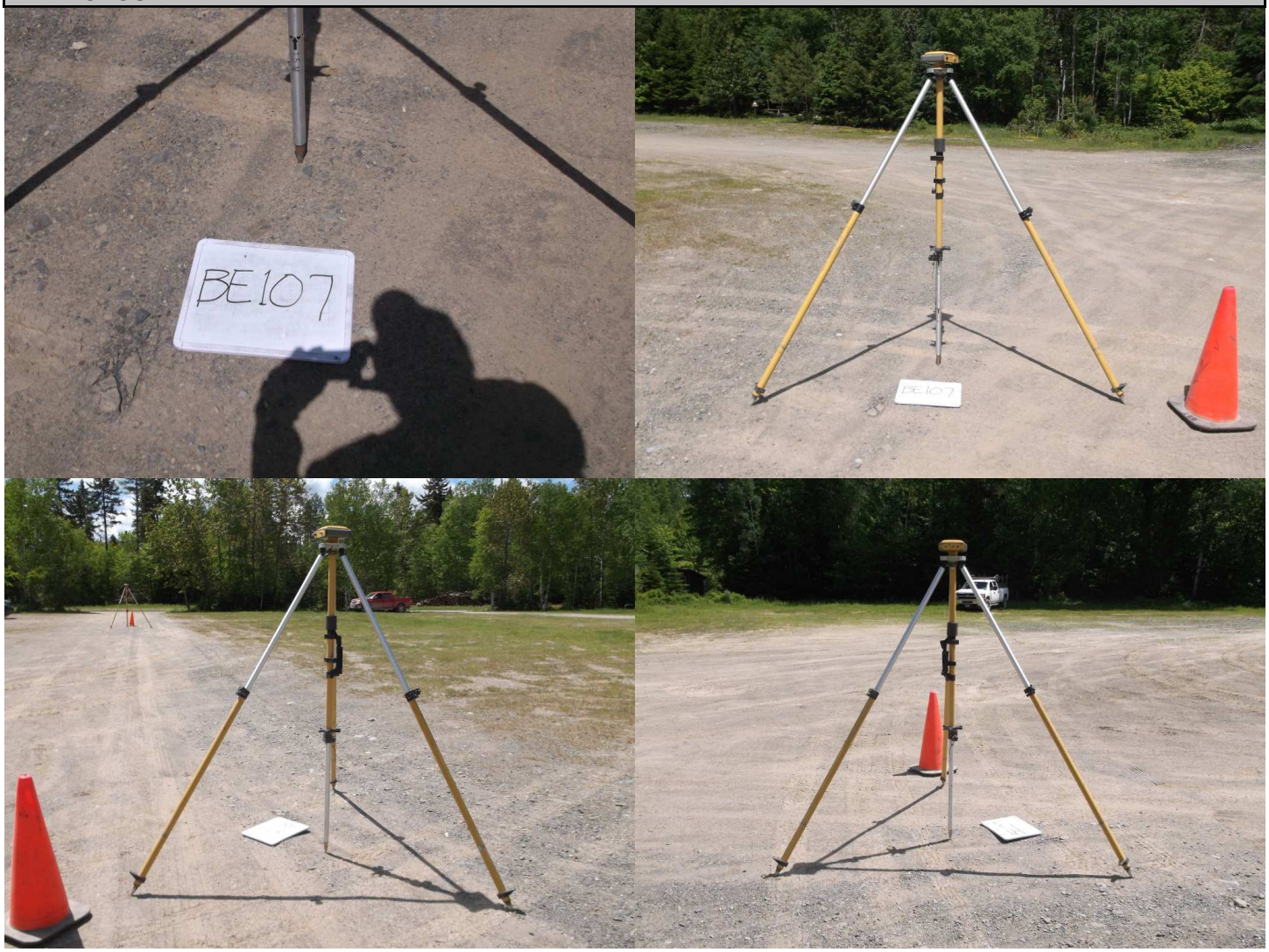
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113025.51	483670.35	291.01

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
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Point ID	BE108
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

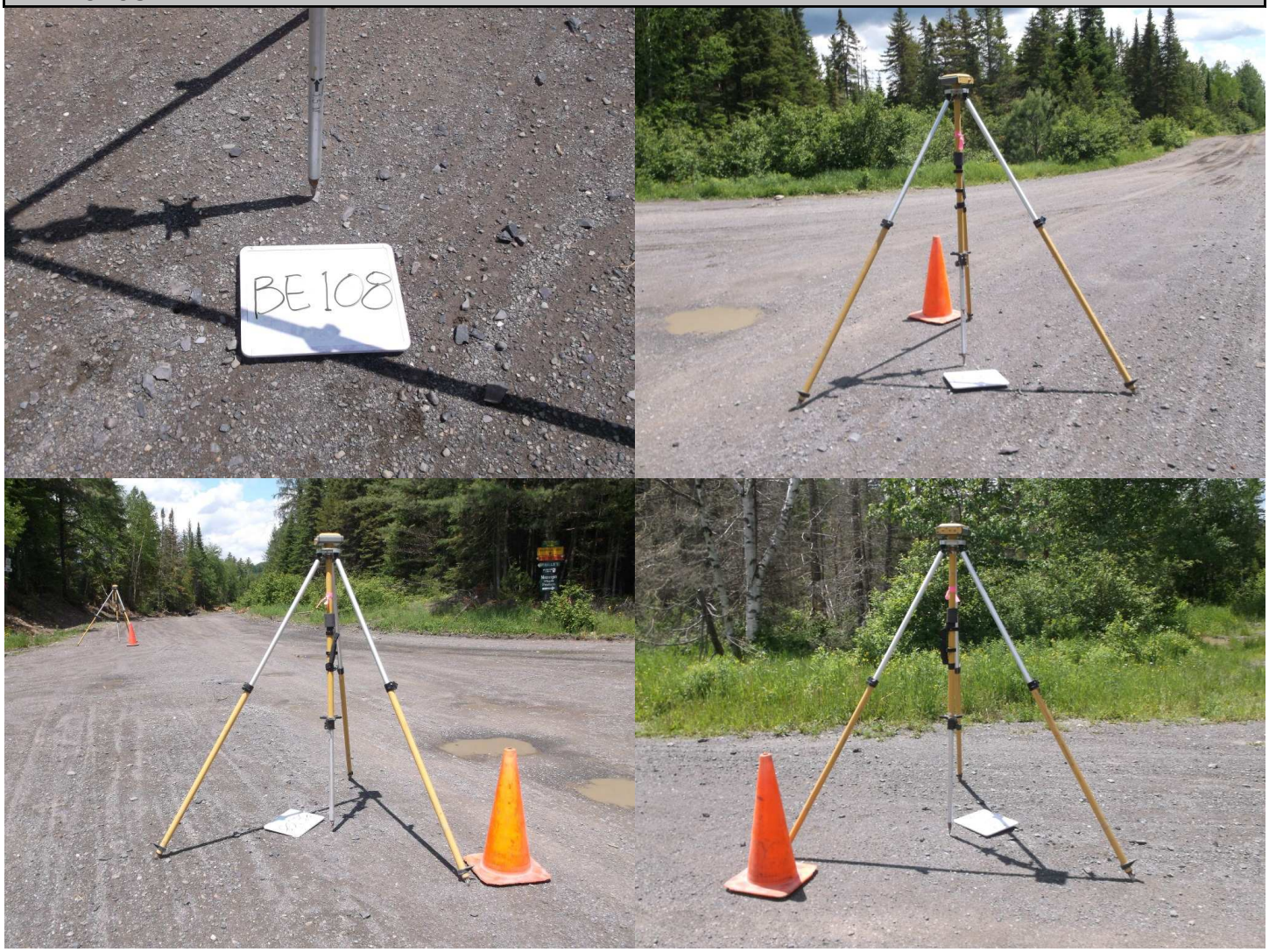
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5123696.51	484846.34	302.59

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-20-2017
RMSE Hz	0.008
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:



SEWALL
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Point ID	BE109
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5144432.52	487682.24	313.77

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-20-2017
RMSE Hz	0.008
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE110
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

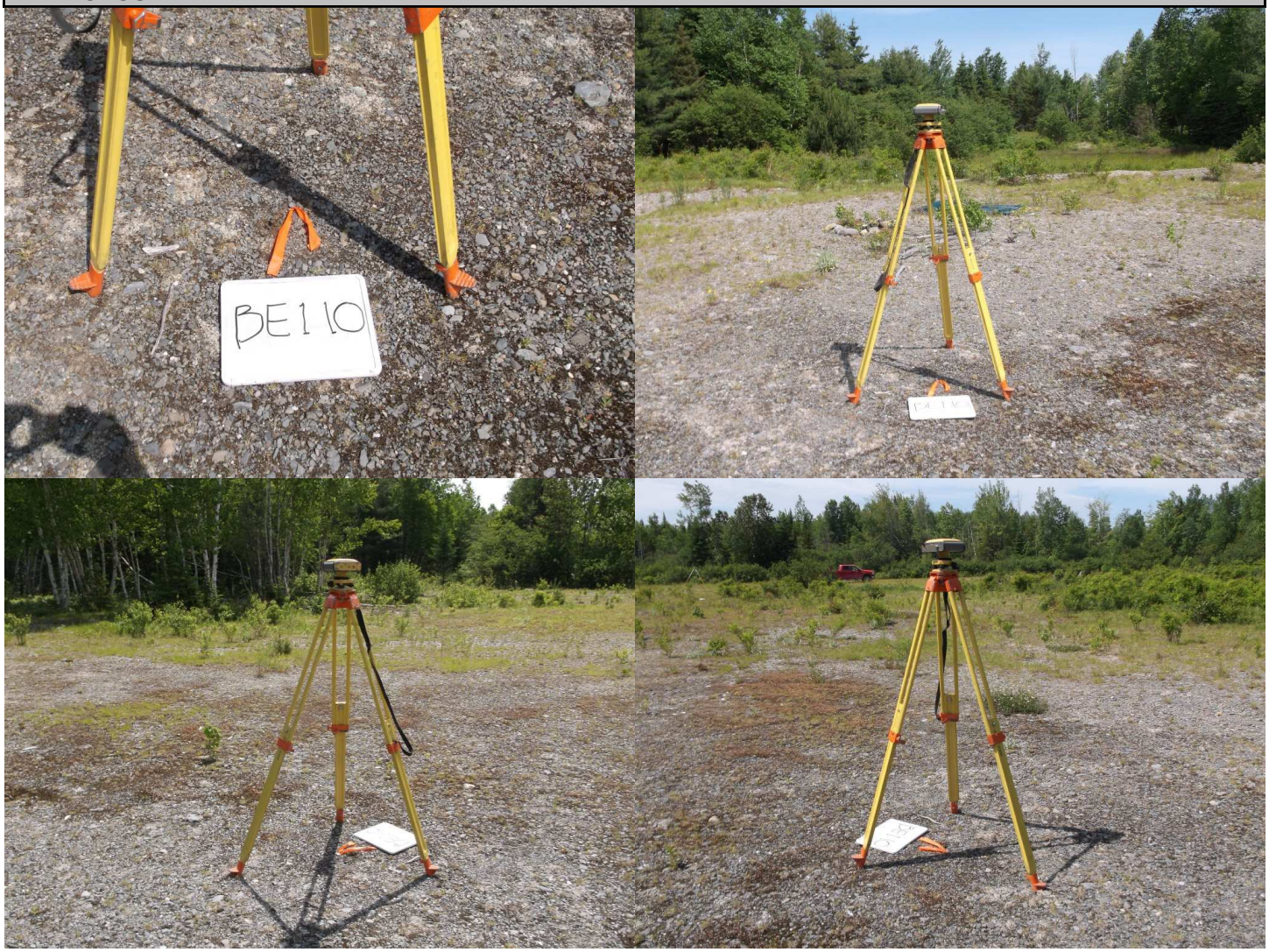
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5095479.61	457676.80	319.84

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.577 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE111
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

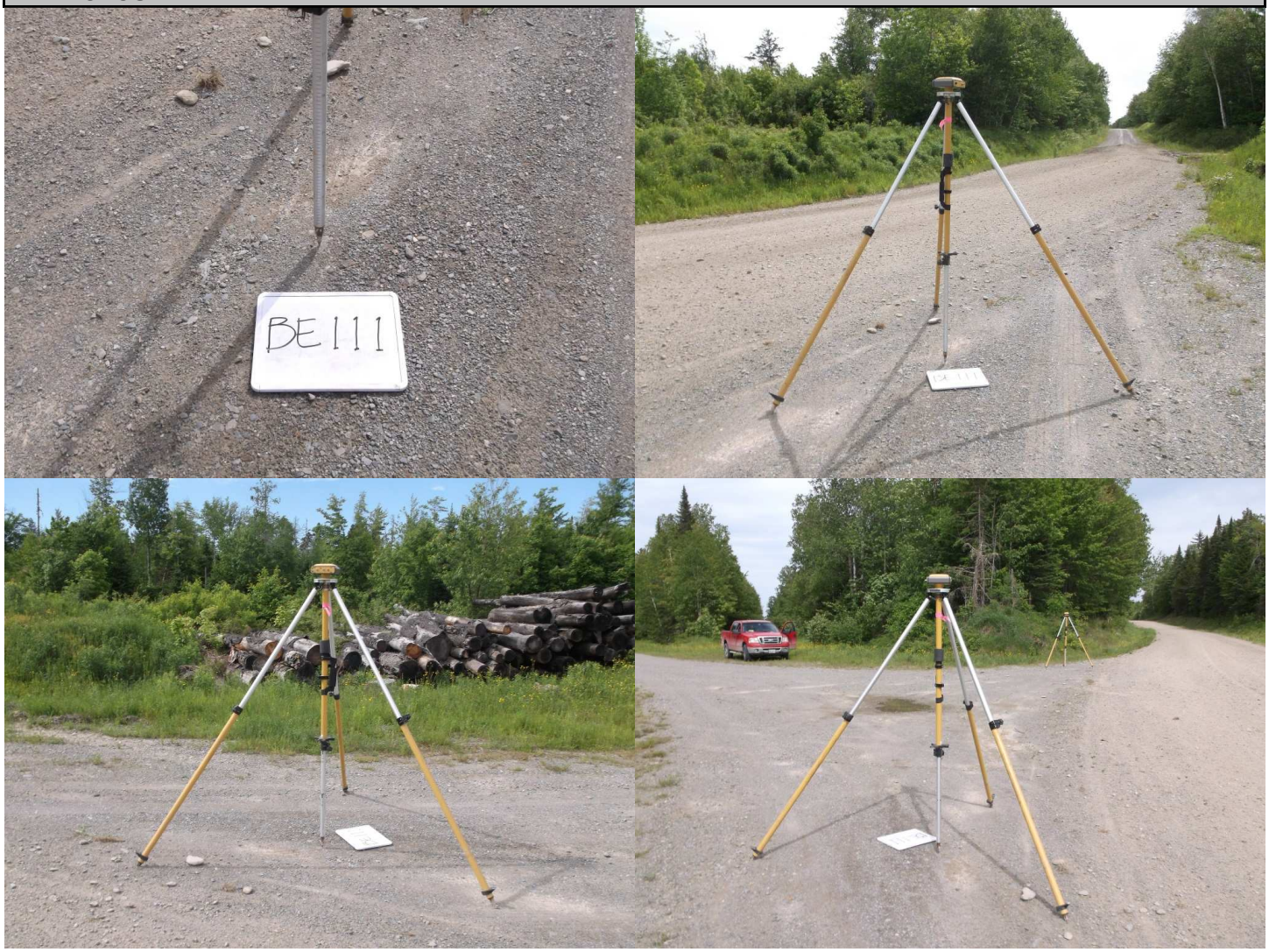
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5107530.02	457102.09	362.42

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE112
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

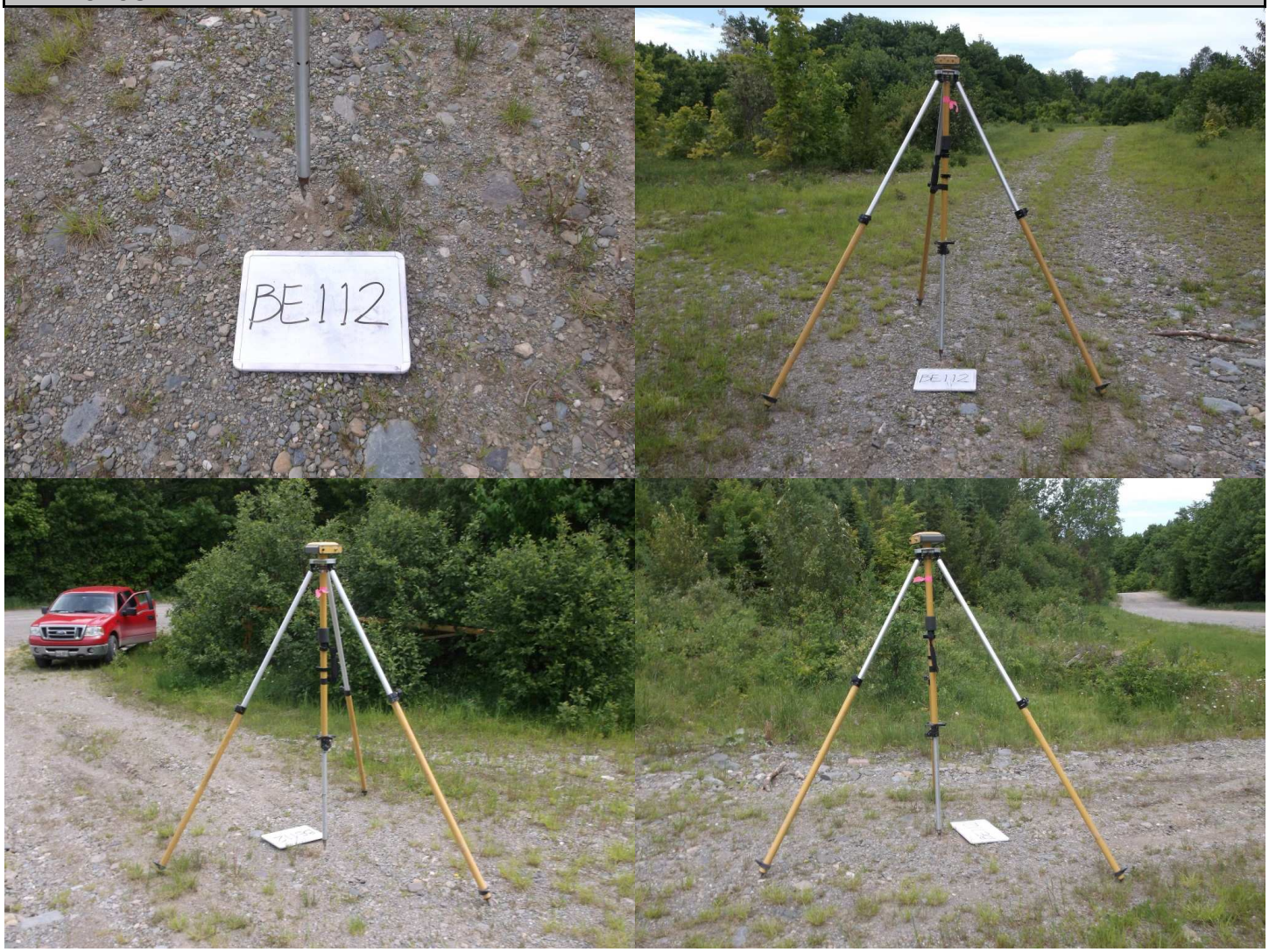
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5117826.10	450288.49	310.89

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE113
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5099381.48	447887.58	438.88

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE114
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

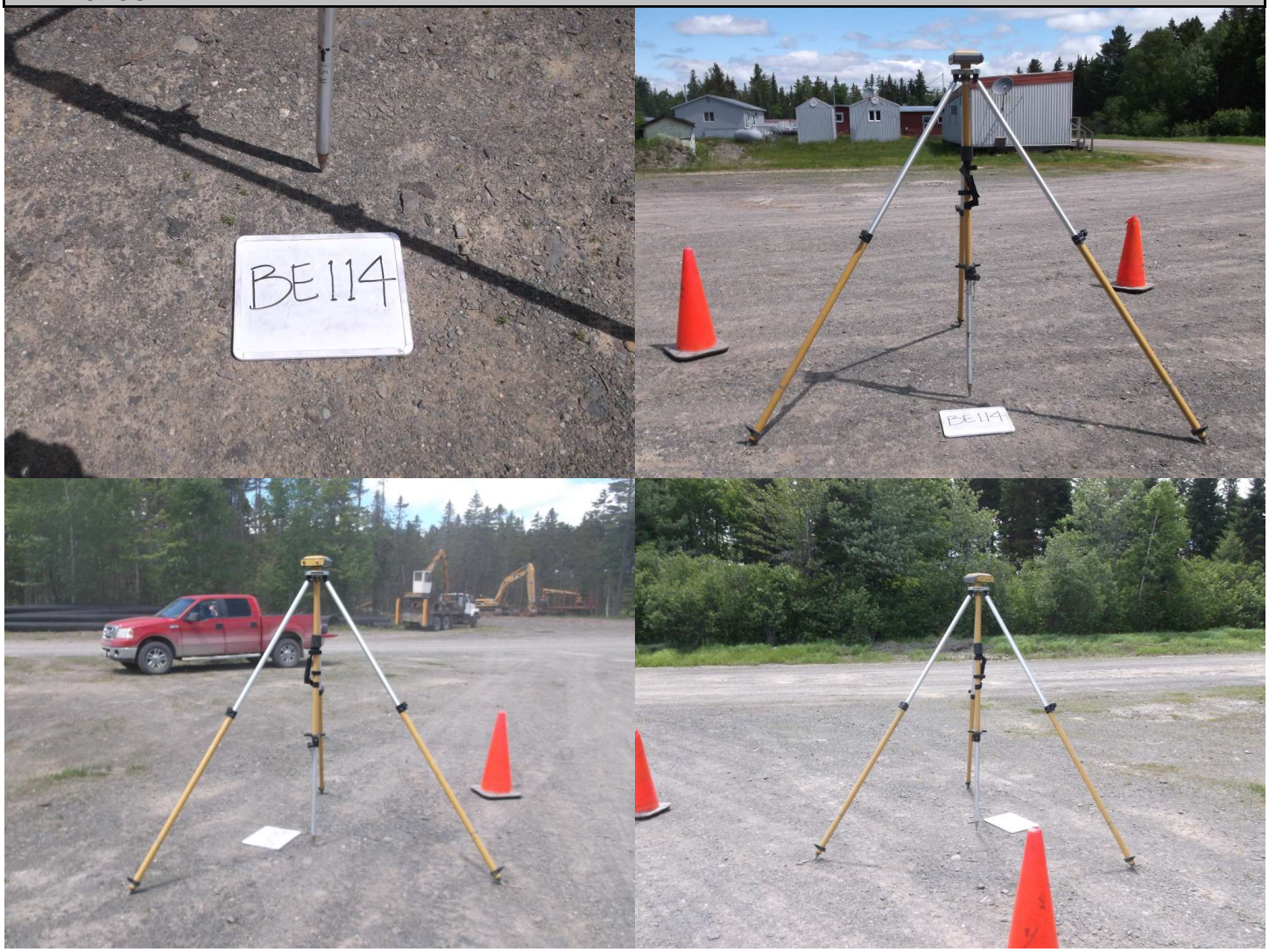
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127241.17	467319.74	315.18

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

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Point ID	BE115
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5142709.41	470904.48	316.22

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE116
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

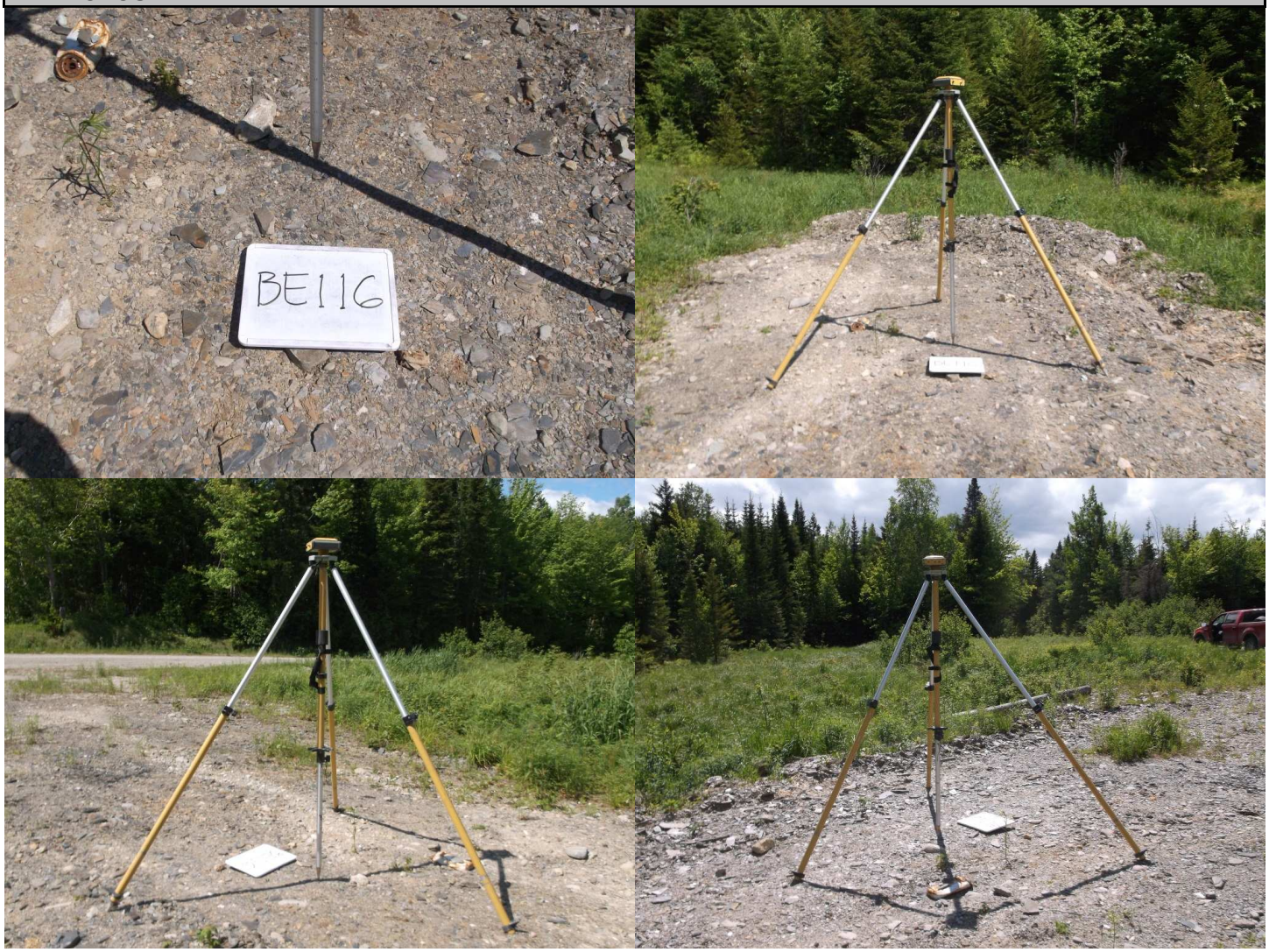
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5142996.97	451494.84	443.24

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE117
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

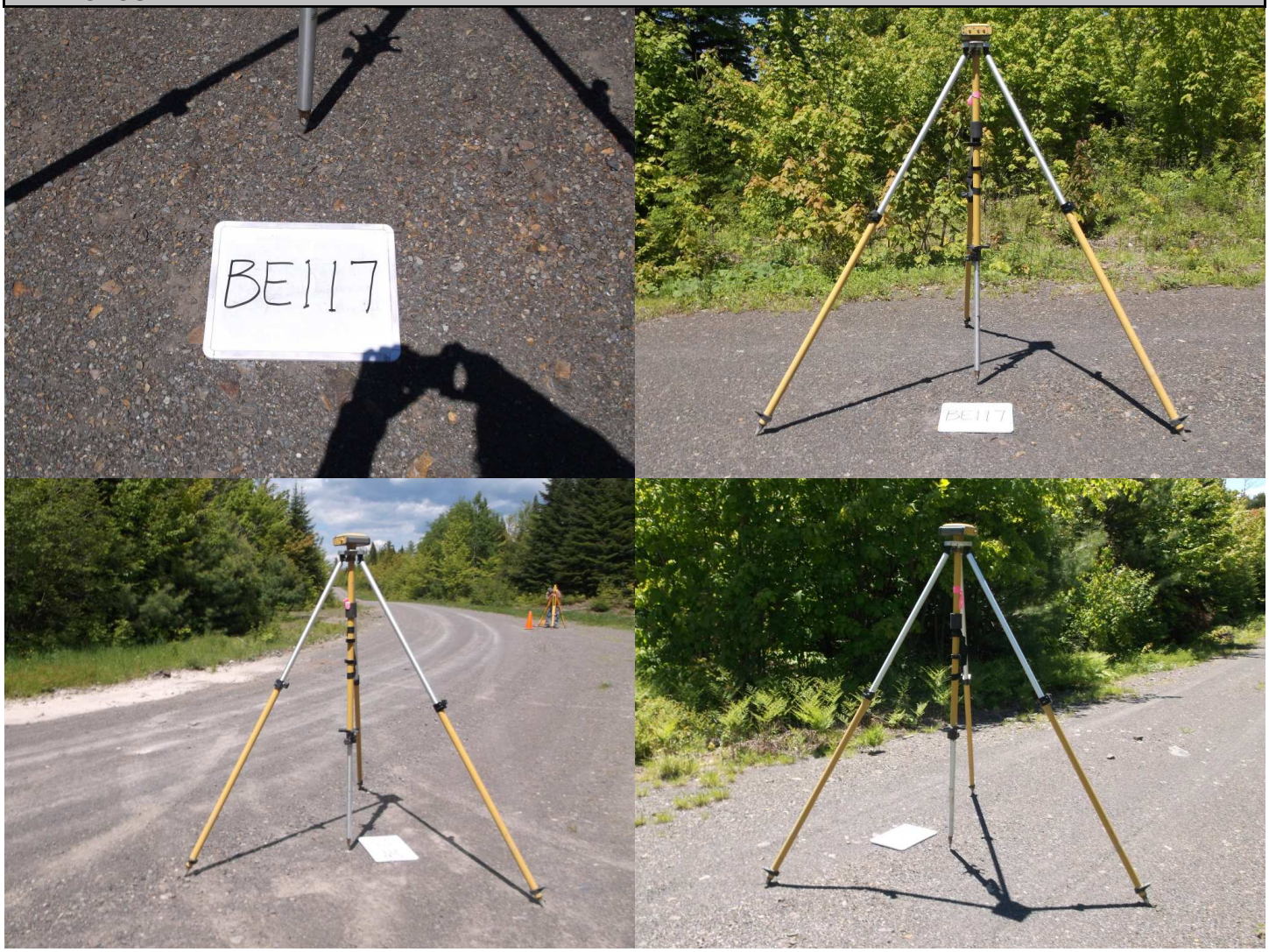
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5104127.78	523201.31	239.50

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



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Point ID	BE118
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

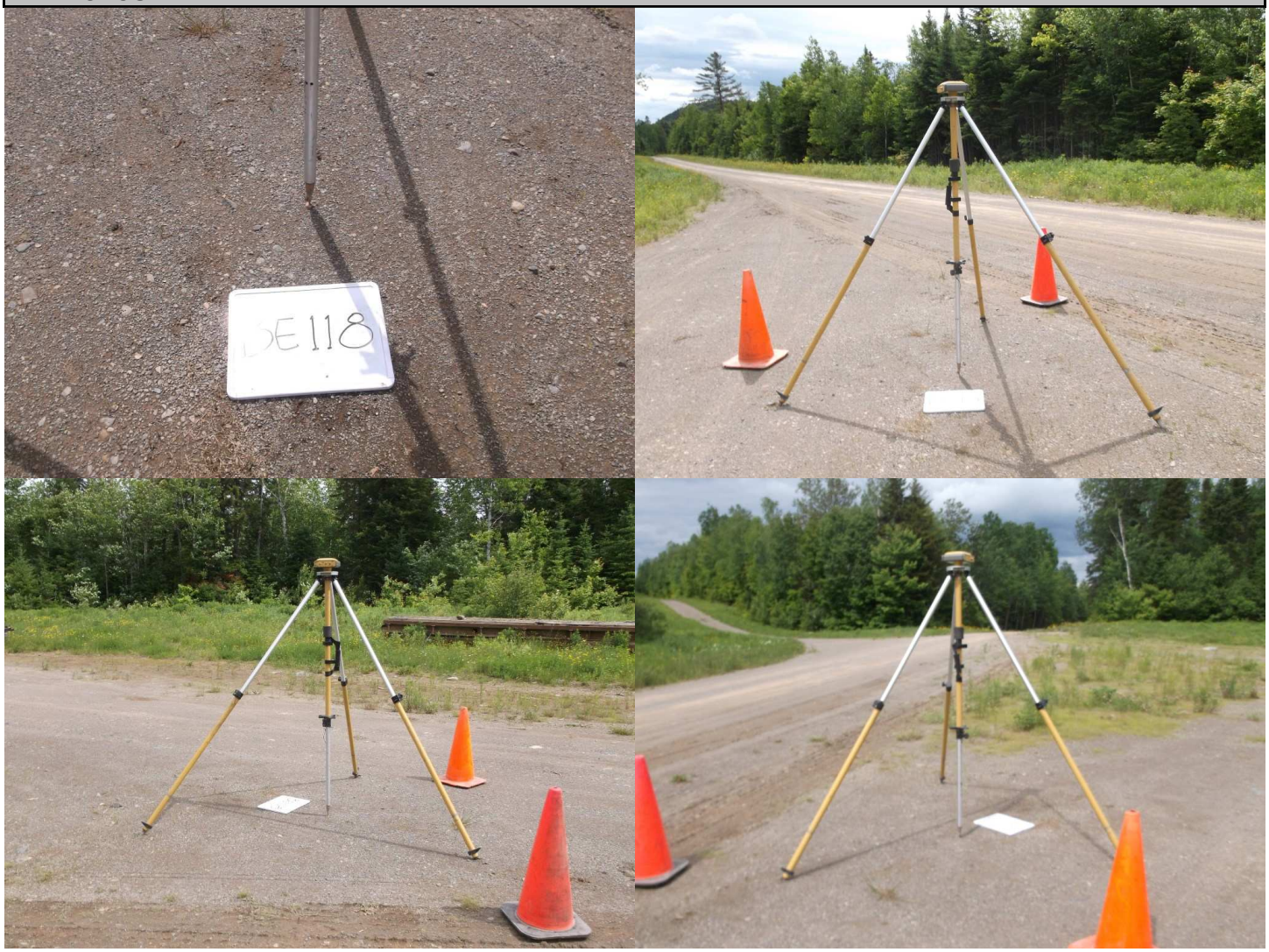
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5122217.18	508794.17	236.75

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-21-2017
RMSE Hz	0.009
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE119
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5090700.91	472018.93	322.27

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE120
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110906.84	474141.42	311.78

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE121
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5135896.46	467982.60	301.31

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE122
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5134470.53	453313.05	352.44

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE123
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5099953.79	476529.31	349.51

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE124
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5080249.95	489120.17	222.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.004
RMSE Z	0.006
Method	STATIC GPS

PHOTOS:

SEWALL
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Point ID	BE125
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5079747.91	524630.84	219.18

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
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Point ID	BE126
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5108384.25	493312.49	308.62

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
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Point ID	BE127
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5064925.80	500776.71	204.92

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

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Point ID	BE128
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116922.82	459178.02	310.40

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

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Point ID	BE129
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5130236.44	484384.83	314.91

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-20-2017
RMSE Hz	0.008
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE130
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

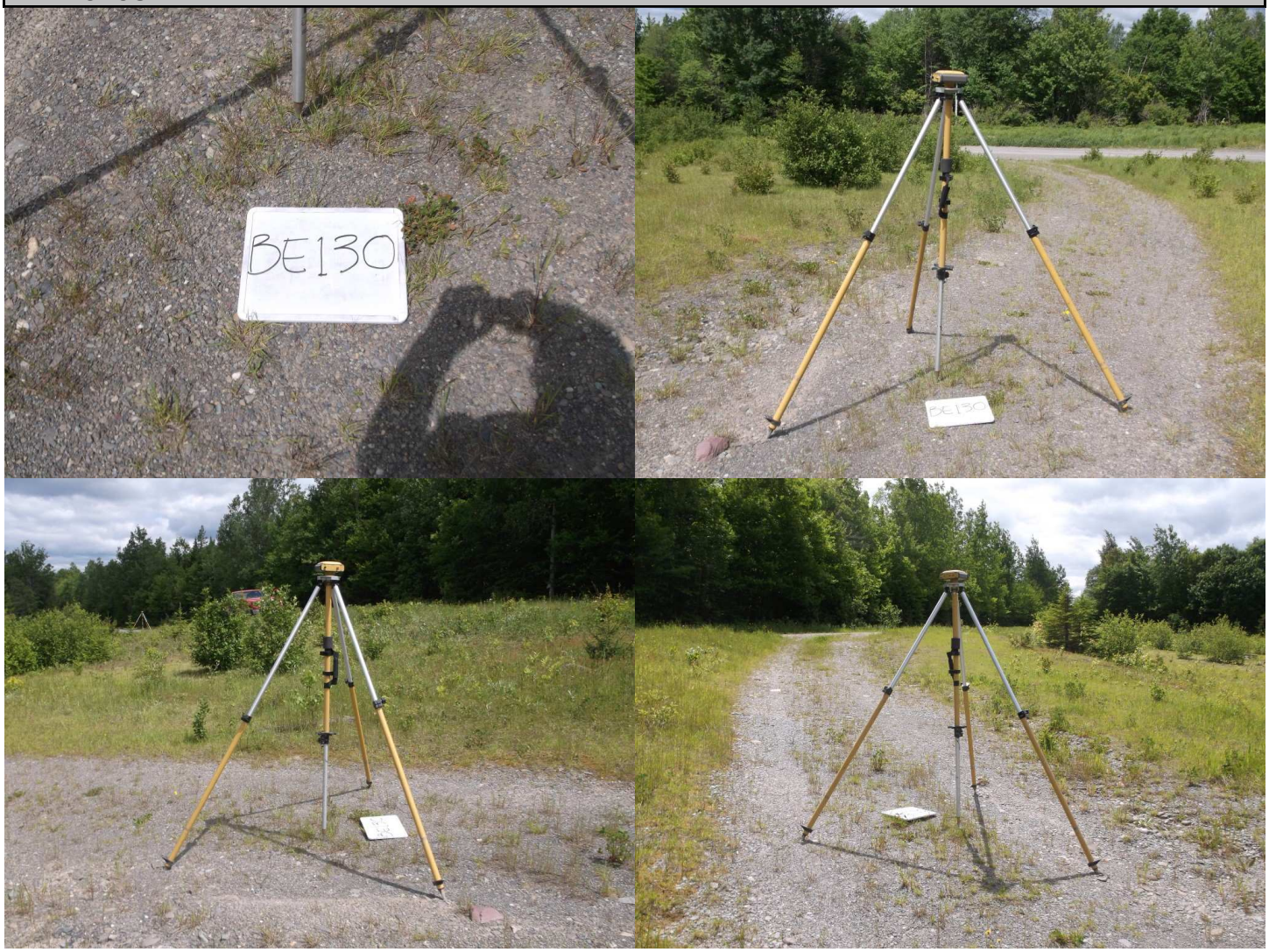
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5146215.06	463154.74	375.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE131
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5134139.33	463705.49	340.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE132
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

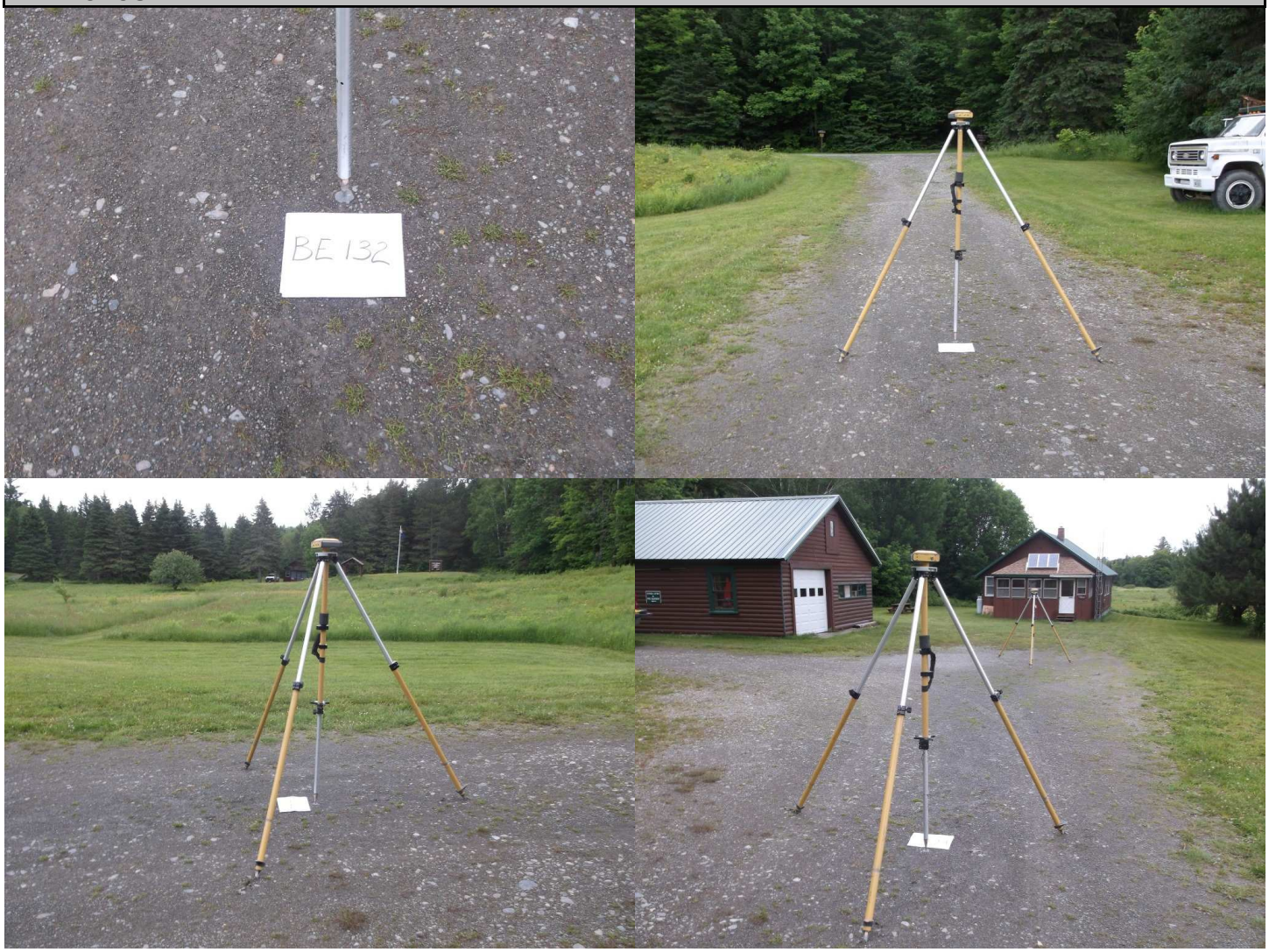
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5112275.59	511401.05	208.93

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-28-2017
RMSE Hz	0.021
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE133
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

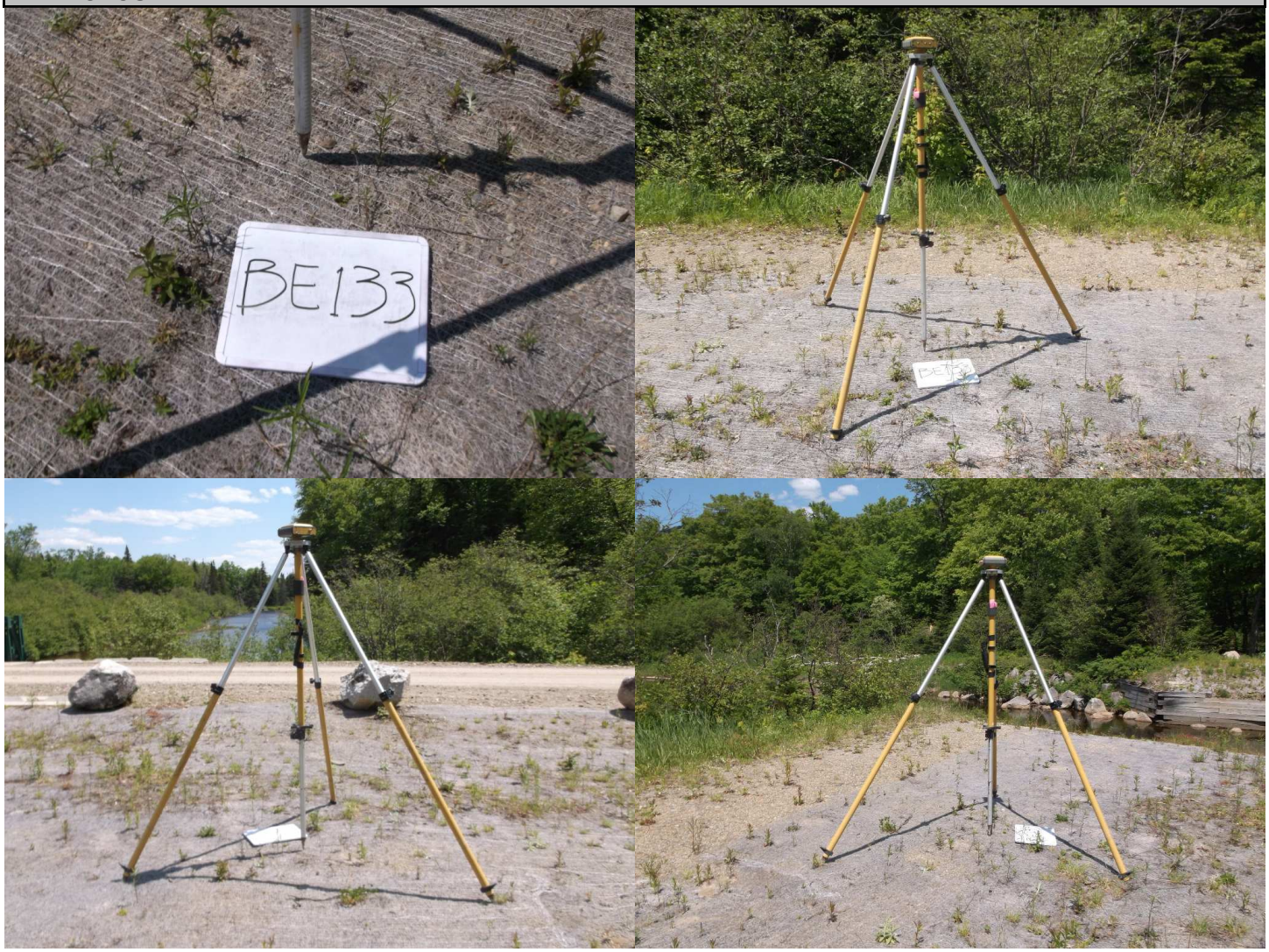
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5082999.34	496947.56	324.96

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
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Point ID	BE134
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5097962.62	521203.83	141.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
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Point ID	BE135
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5096361.10	494561.93	419.50

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0515
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE136
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

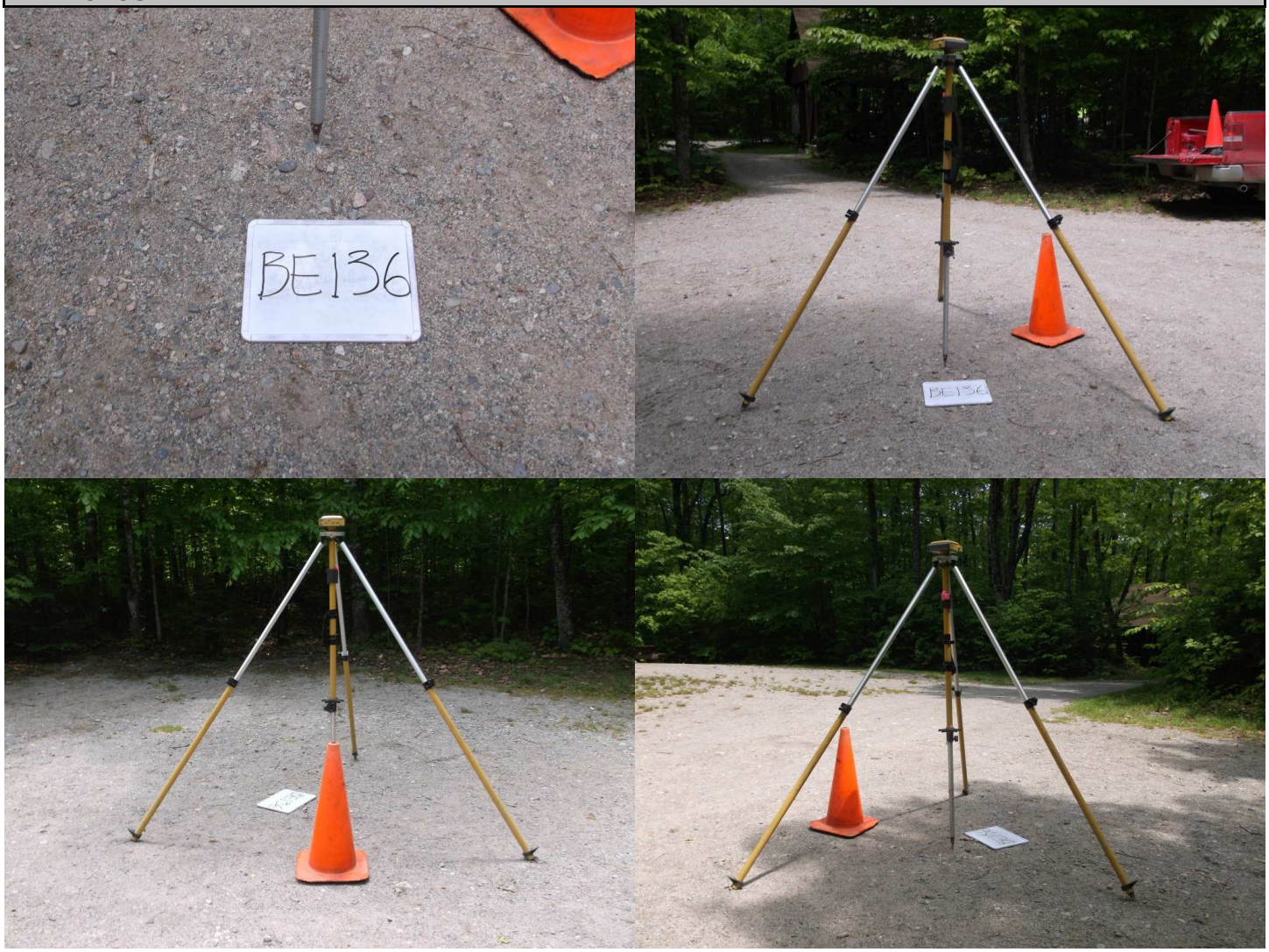
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5081969.71	512087.78	363.89

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE137
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

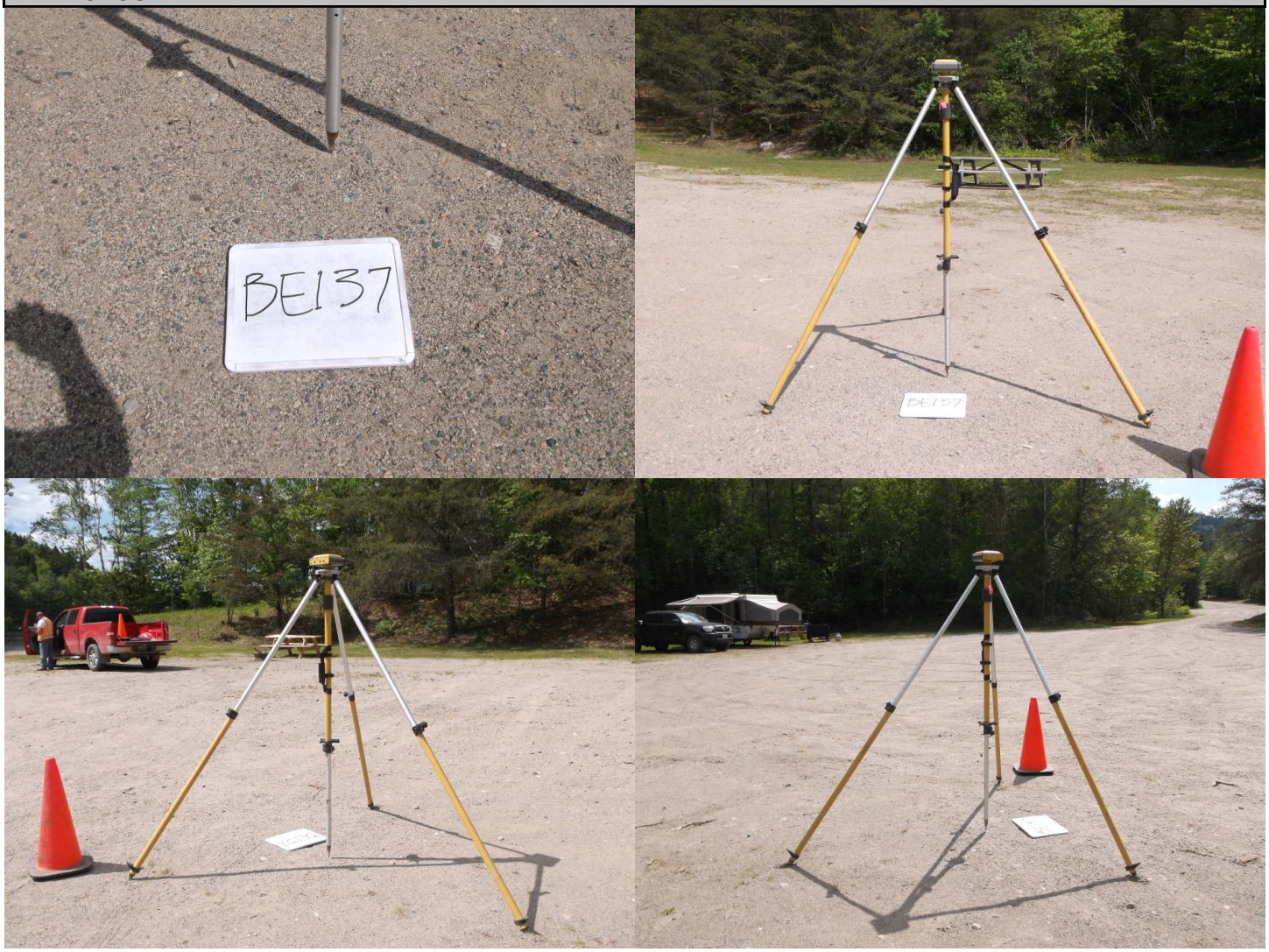
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5077293.76	495040.90	182.19

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE138
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5118432.45	497255.50	259.23

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0509
Antenna Height	1.80 Meters

Date (MM-DD-YYYY)	06-21-2017
RMSE Hz	0.009
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BE139
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

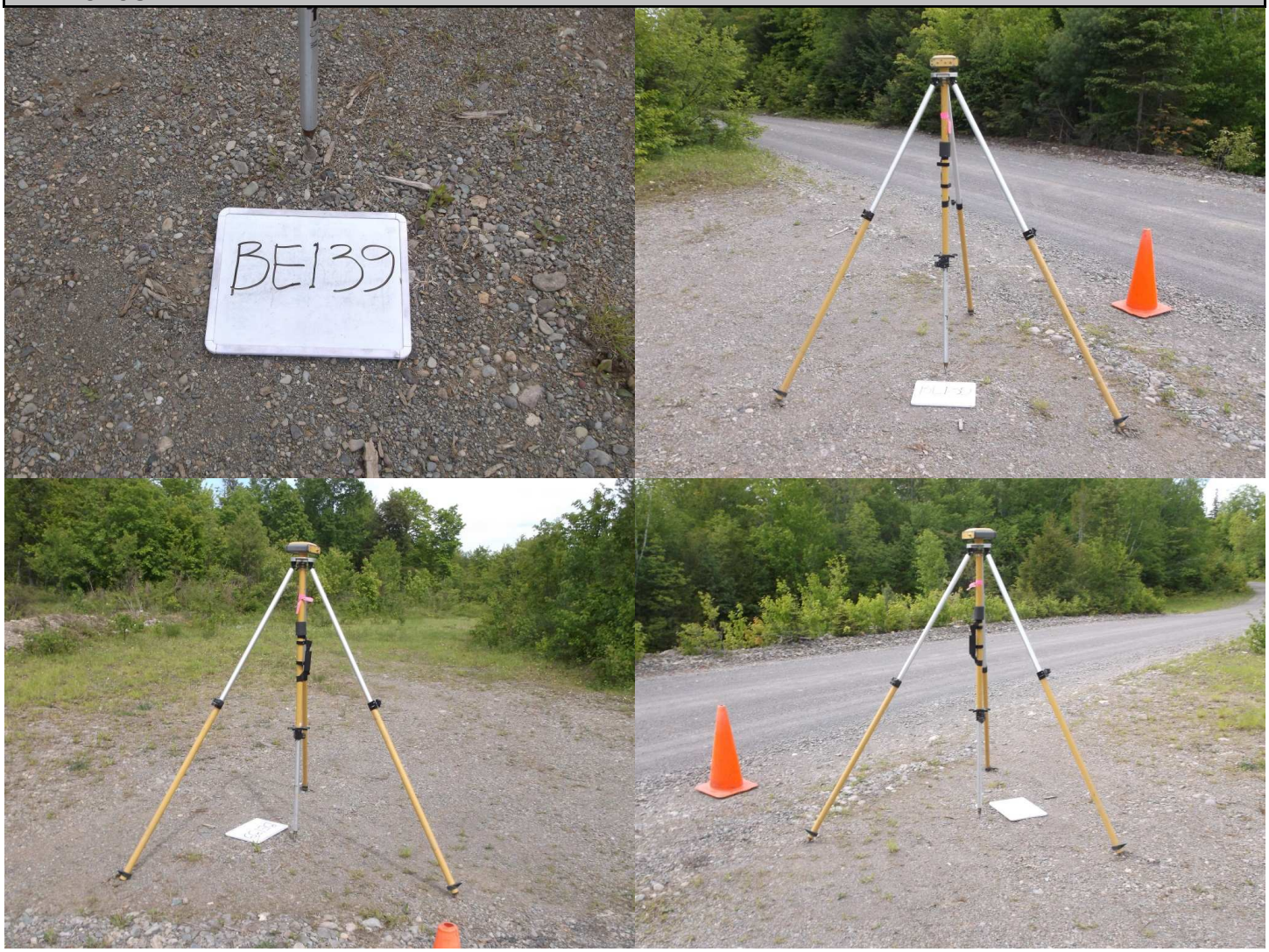
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5090813.32	529576.30	117.02

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



CA Data Sheets

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA01
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

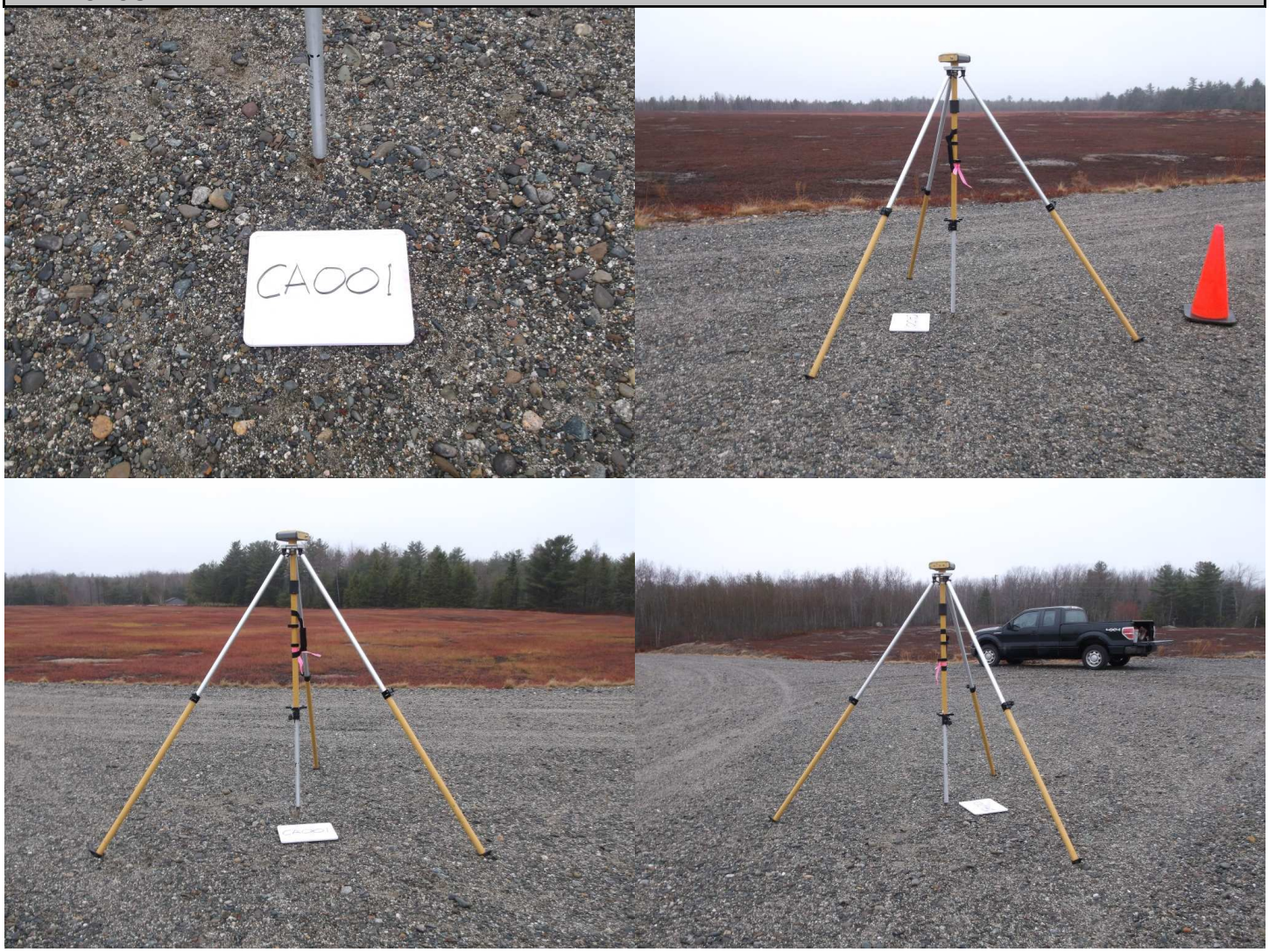
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4932361.24	570901.33	76.14

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.010
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA02
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940132.25	563630.37	49.29

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.010
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA03
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940060.48	574763.55	62.96

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.008
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA04
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

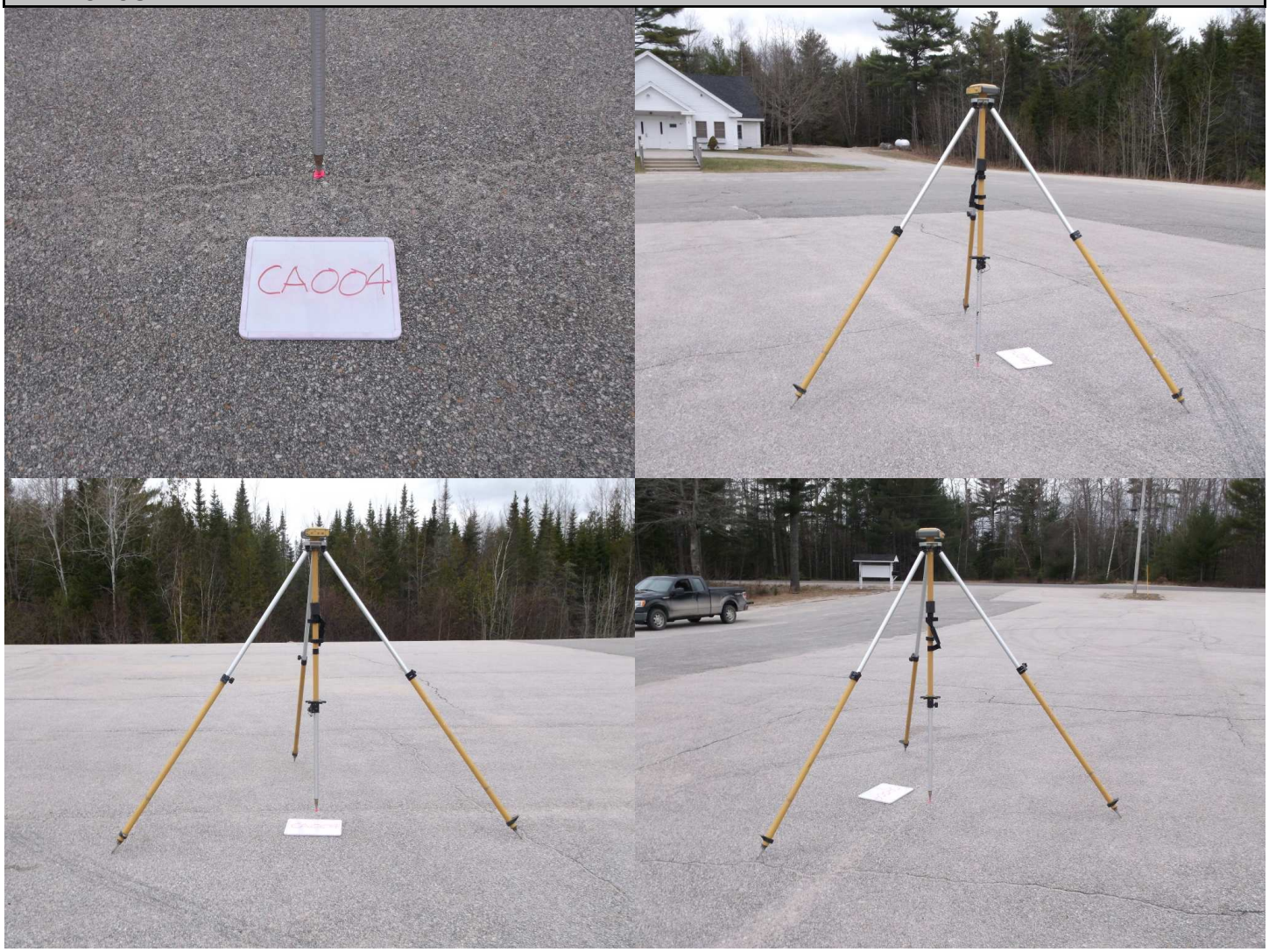
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4947624.68	558115.74	49.86

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.010
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA05
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4950097.461	567061.264	139.652

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.002
RMSE Z	0.003
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA06
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4942679.32	587002.82	53.58

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.007
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA07
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4952829.77	580806.54	62.43

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.009
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA08
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4945726.81	597223.70	20.13

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.002
RMSE Z	0.003
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA09
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4947778.11	606110.45	66.42

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA10
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4953153.52	616970.48	21.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA11
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

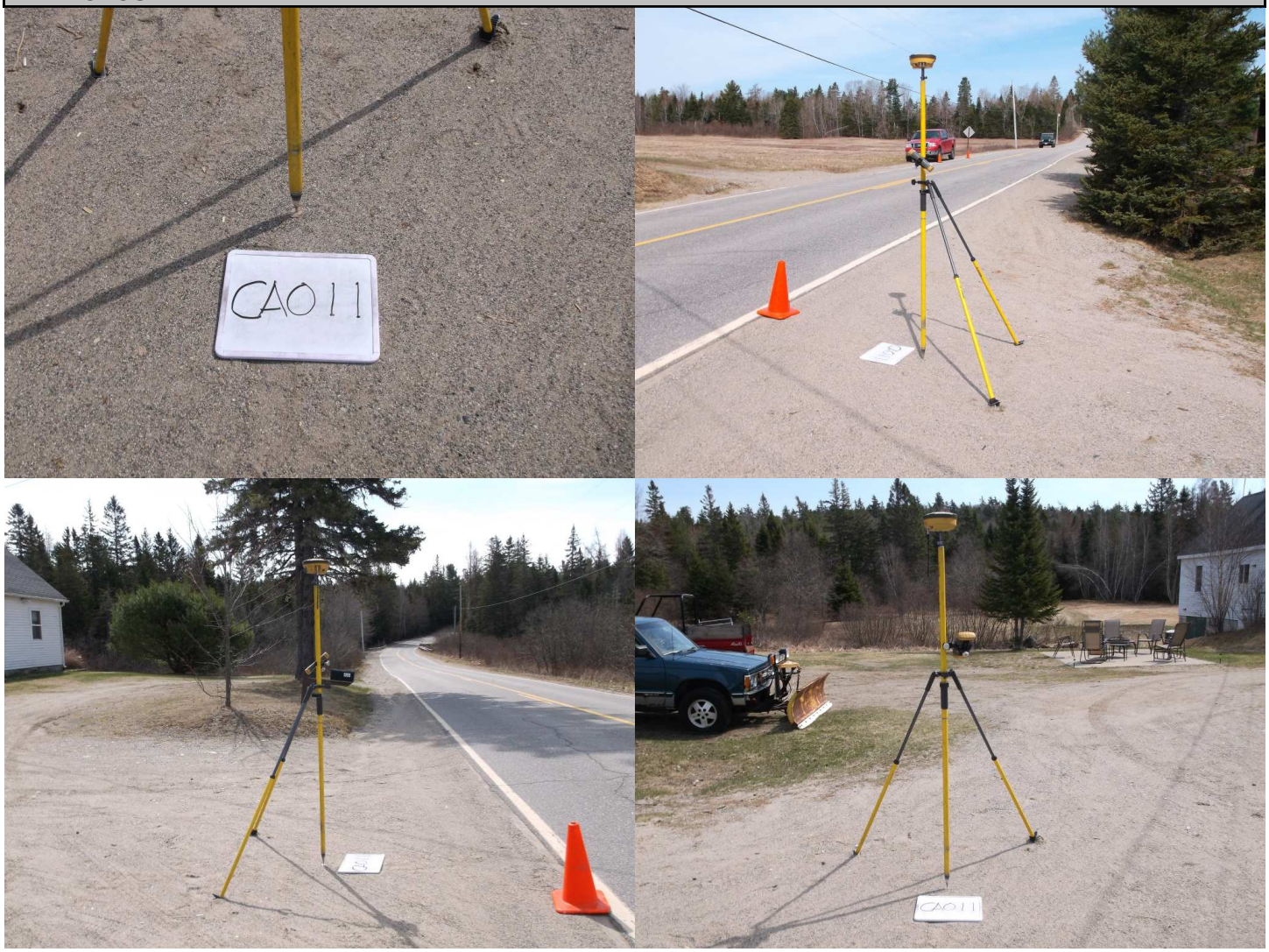
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960907.31	614510.50	29.49

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA12
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960565.48	626502.66	54.27

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA13
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4959034.98	639175.37	34.29

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA14
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

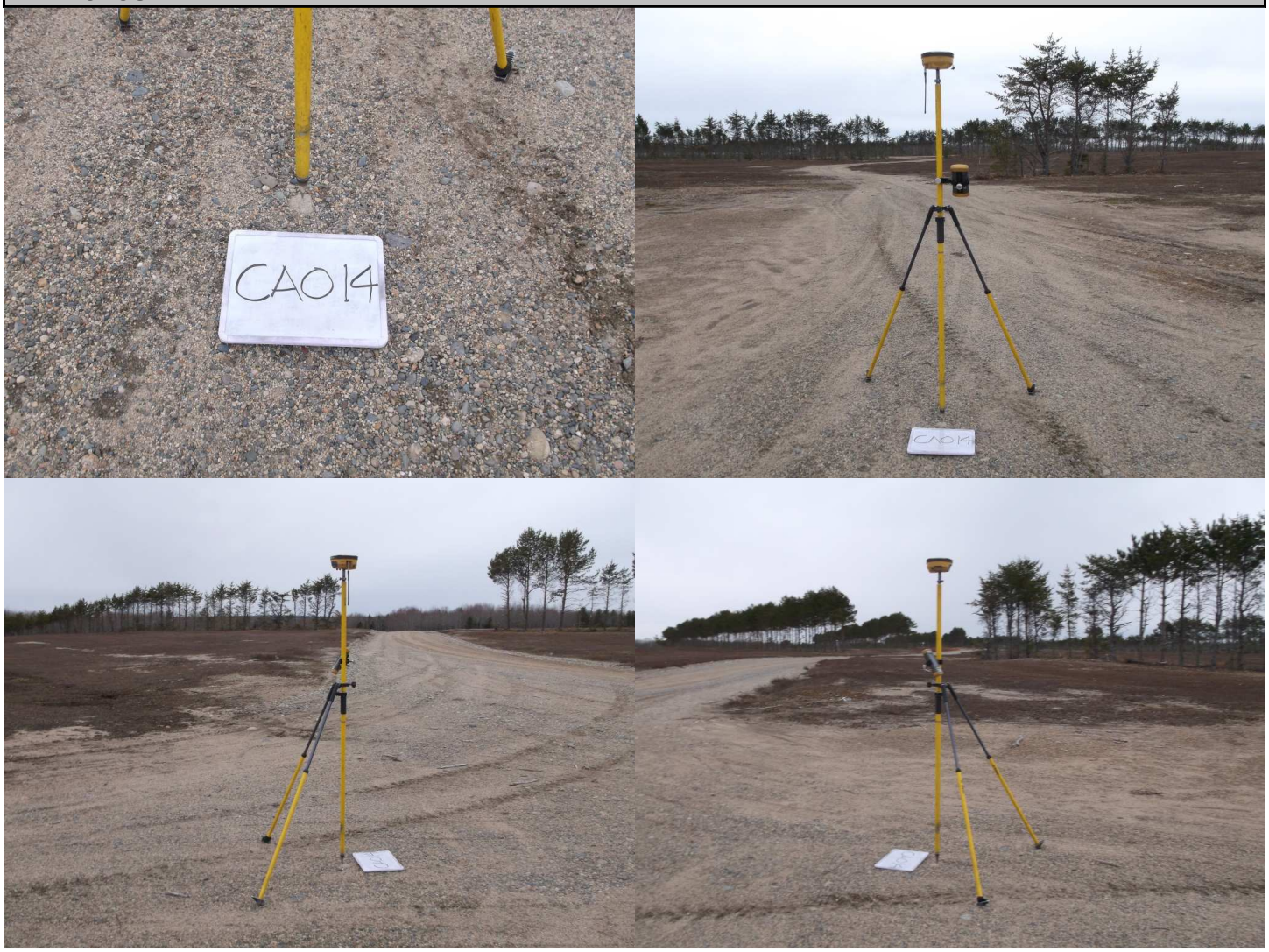
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4956411.43	595676.87	76.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA15
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4971864.80	633440.97	49.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA16
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968554.07	624654.16	39.35

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA17
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968470.62	609988.63	65.02

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA18
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968362.26	598927.39	70.57

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA19
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4969317.26	585568.65	137.57

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA20
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

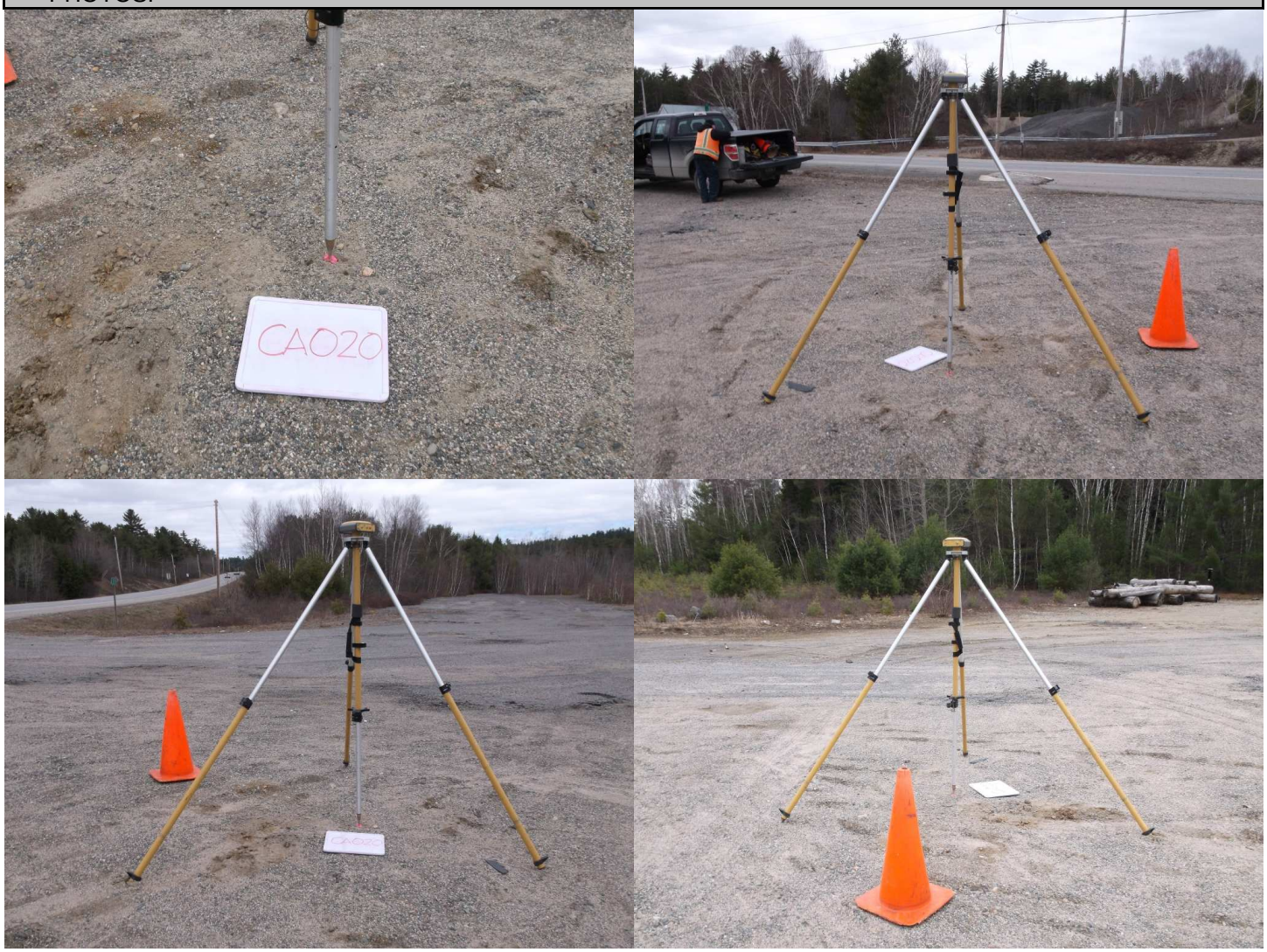
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4965124.41	572874.45	83.83

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.010
RMSE Z	0.015
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA21
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4964551.04	558839.68	89.74

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.009
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA22
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

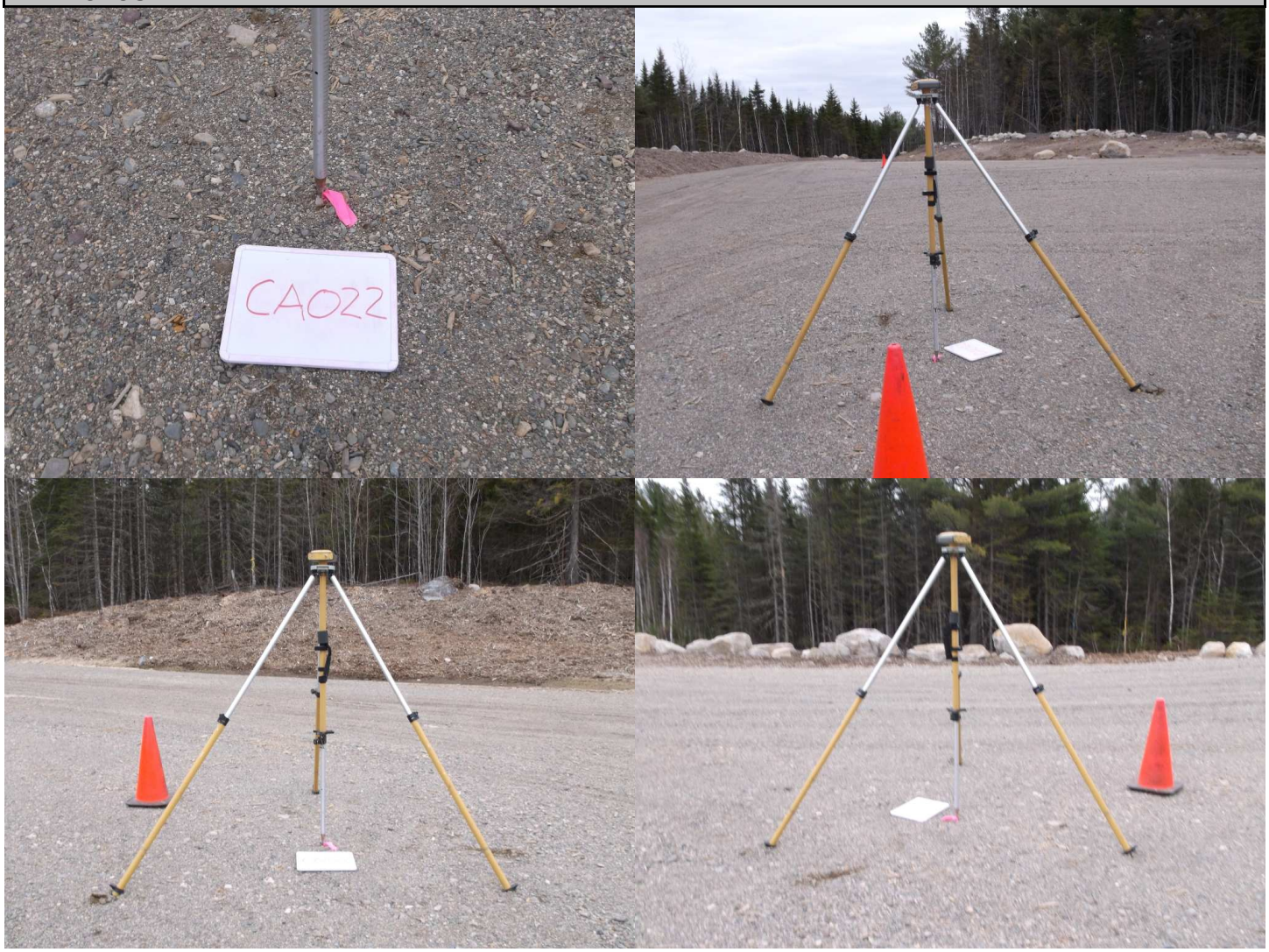
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4958329.62	567399.86	119.23

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.007
RMSE Z	0.012
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA23
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4976207.33	556764.79	144.89

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA24
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4977761.29	570212.36	110.17

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.007
RMSE Z	0.012
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA25
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

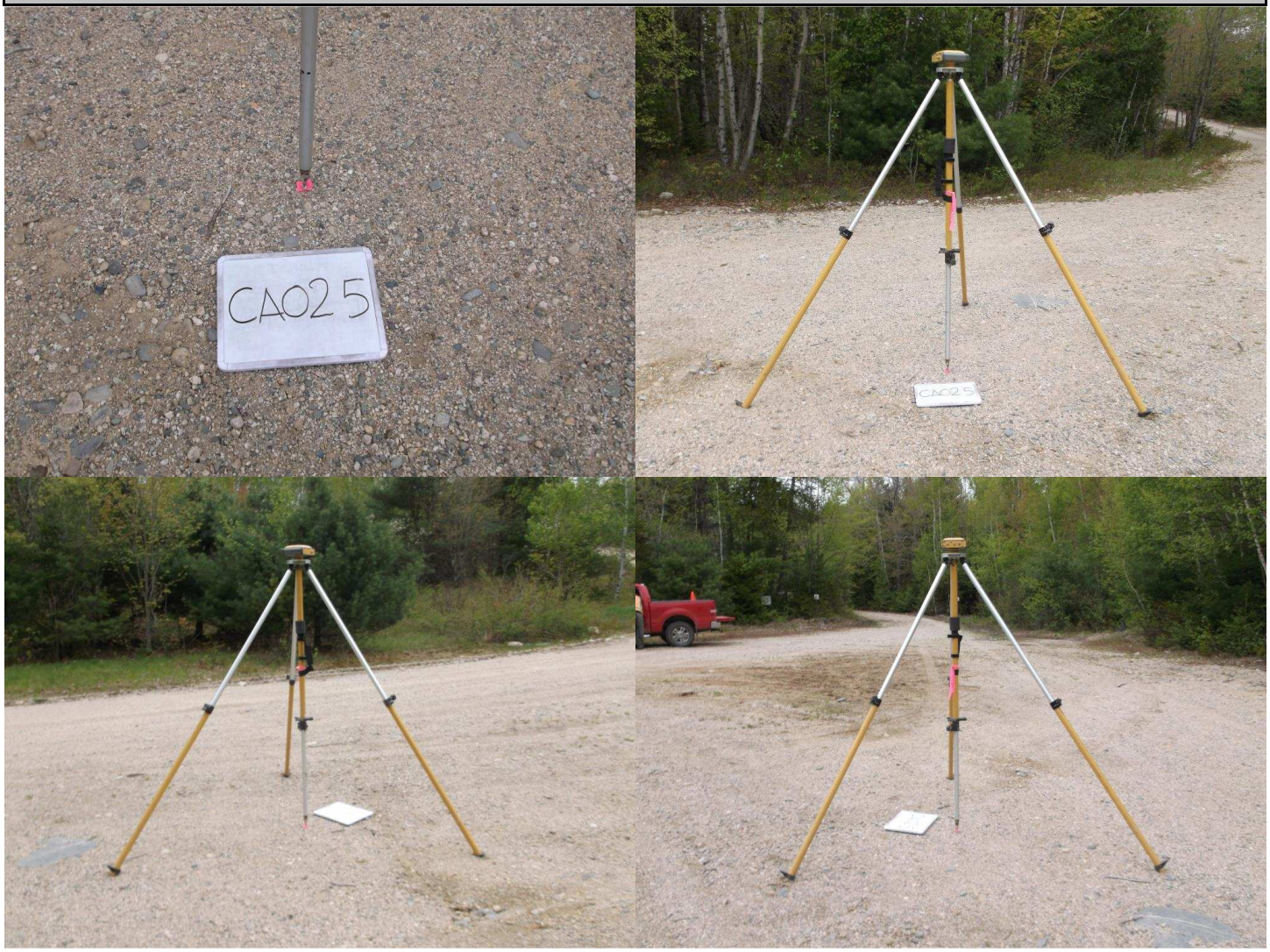
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979596.13	585432.94	107.98

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA26
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4977967.77	602725.65	103.83

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA27
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4978151.18	616917.71	48.93

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA28
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4982119.84	627046.02	103.27

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA29
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979590.15	636962.58	38.84

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA31
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988159.73	627242.65	59.07

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA32
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988696.60	613627.42	73.49

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA33
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

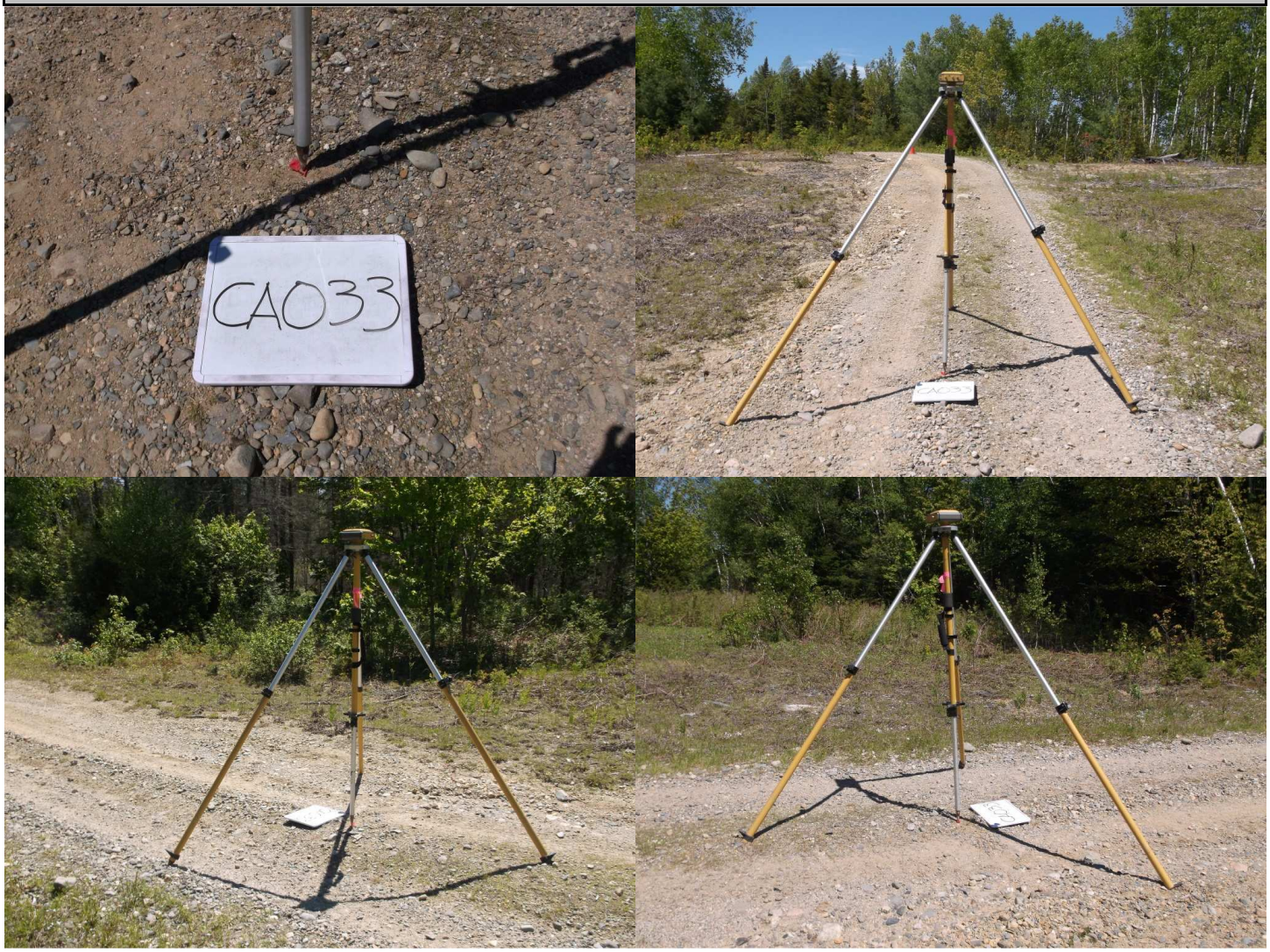
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988757.01	601704.24	76.57

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA34
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988936.60	588941.31	73.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA35
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

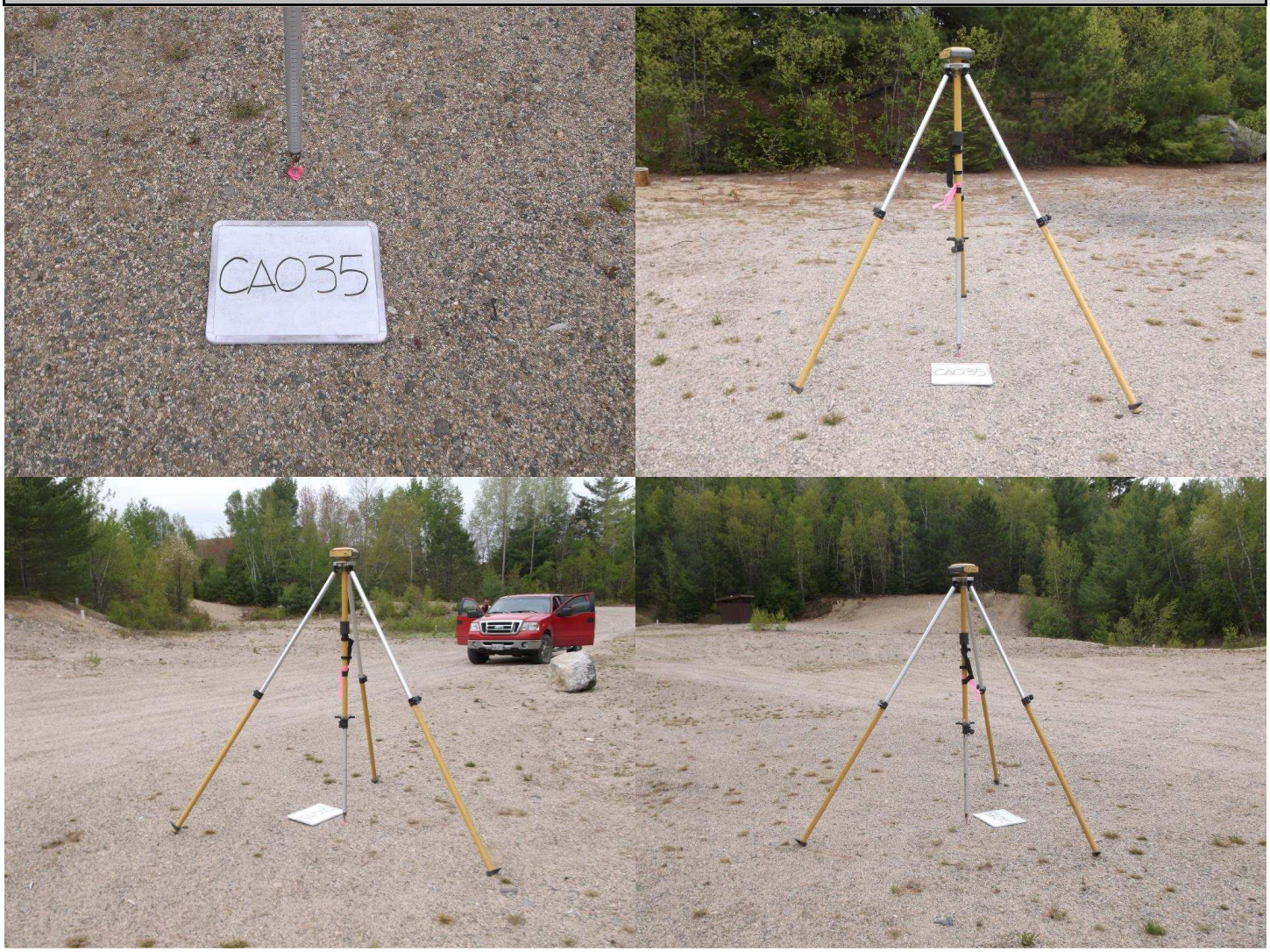
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988928.67	577977.25	117.59

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA36
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

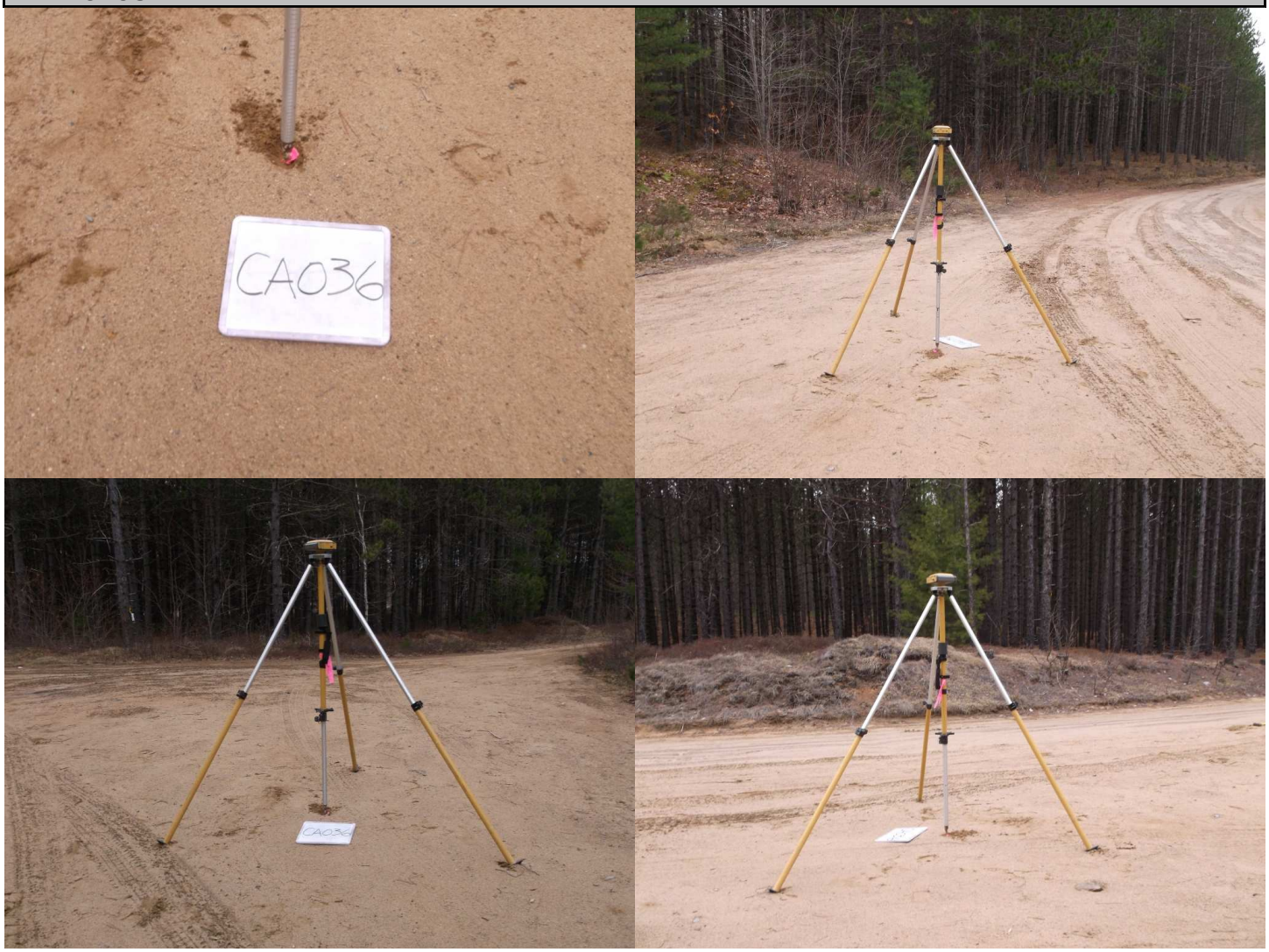
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987525.91	563637.20	113.41

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.006
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA37
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987668.94	551481.89	133.27

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-28-2017
RMSE Hz	0.015
RMSE Z	0.024
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA38
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

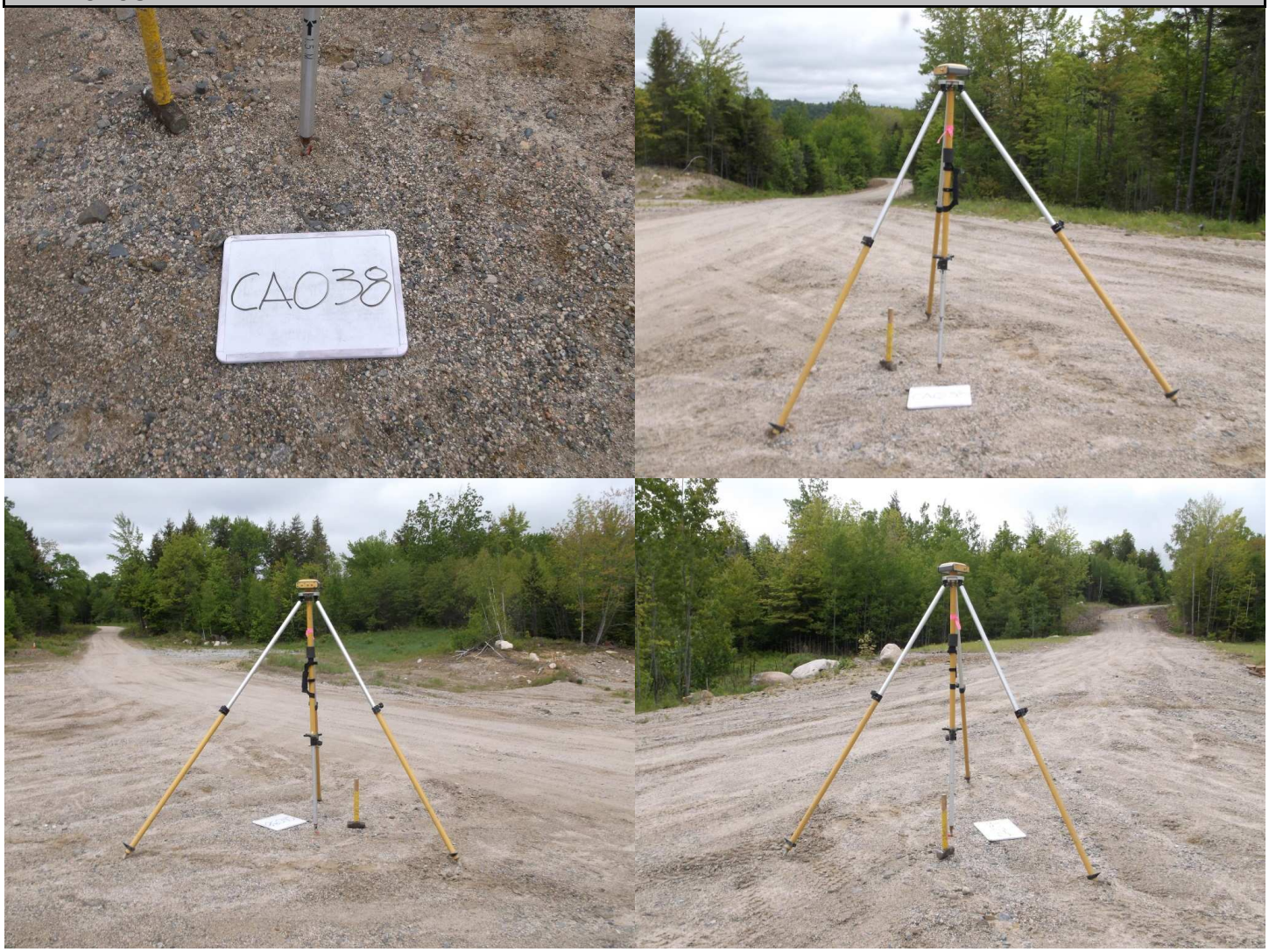
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5001202.63	553647.48	88.57

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.012
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA39
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

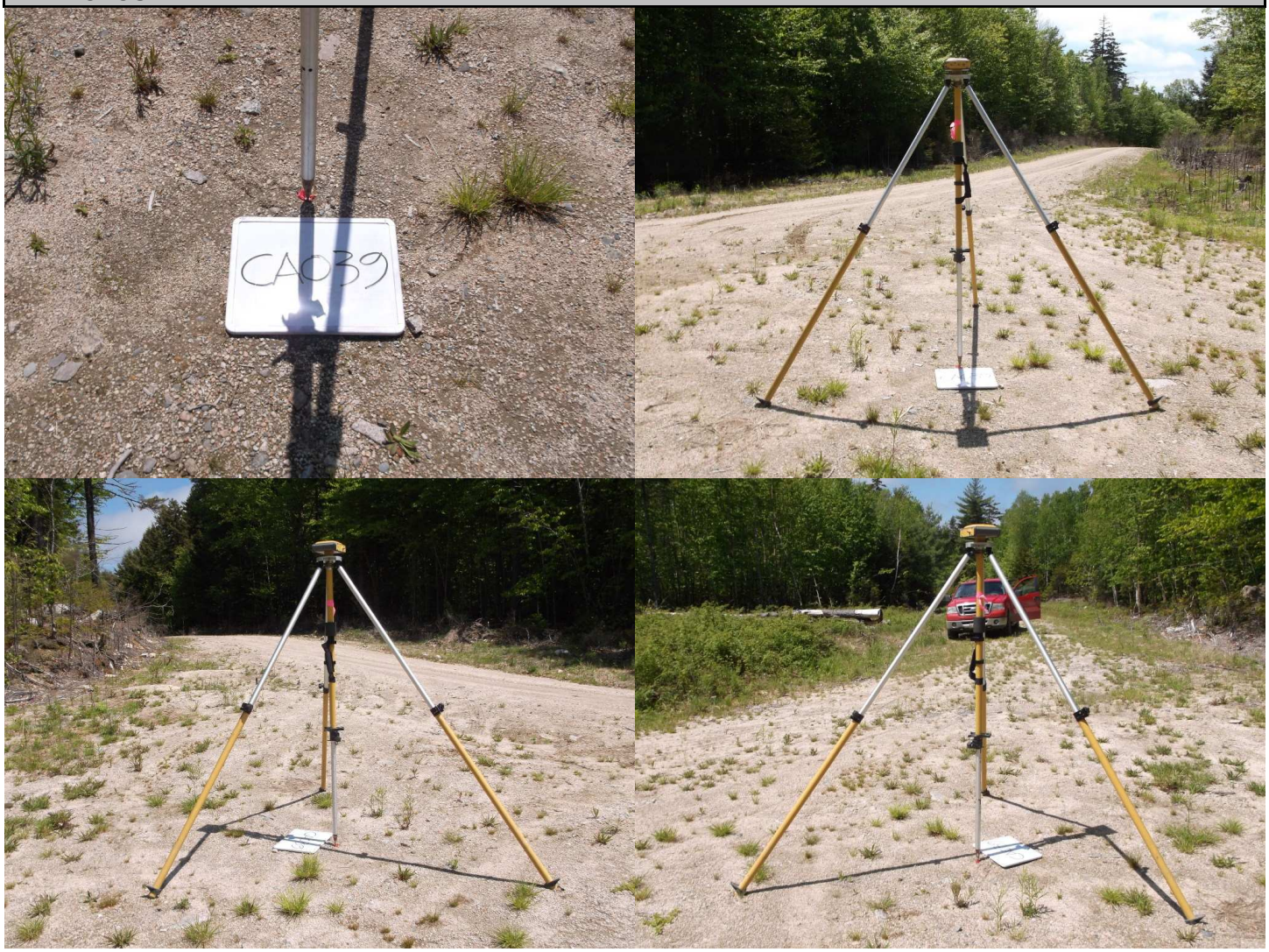
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5000348.07	567281.81	218.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.010
RMSE Z	0.026
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA40
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

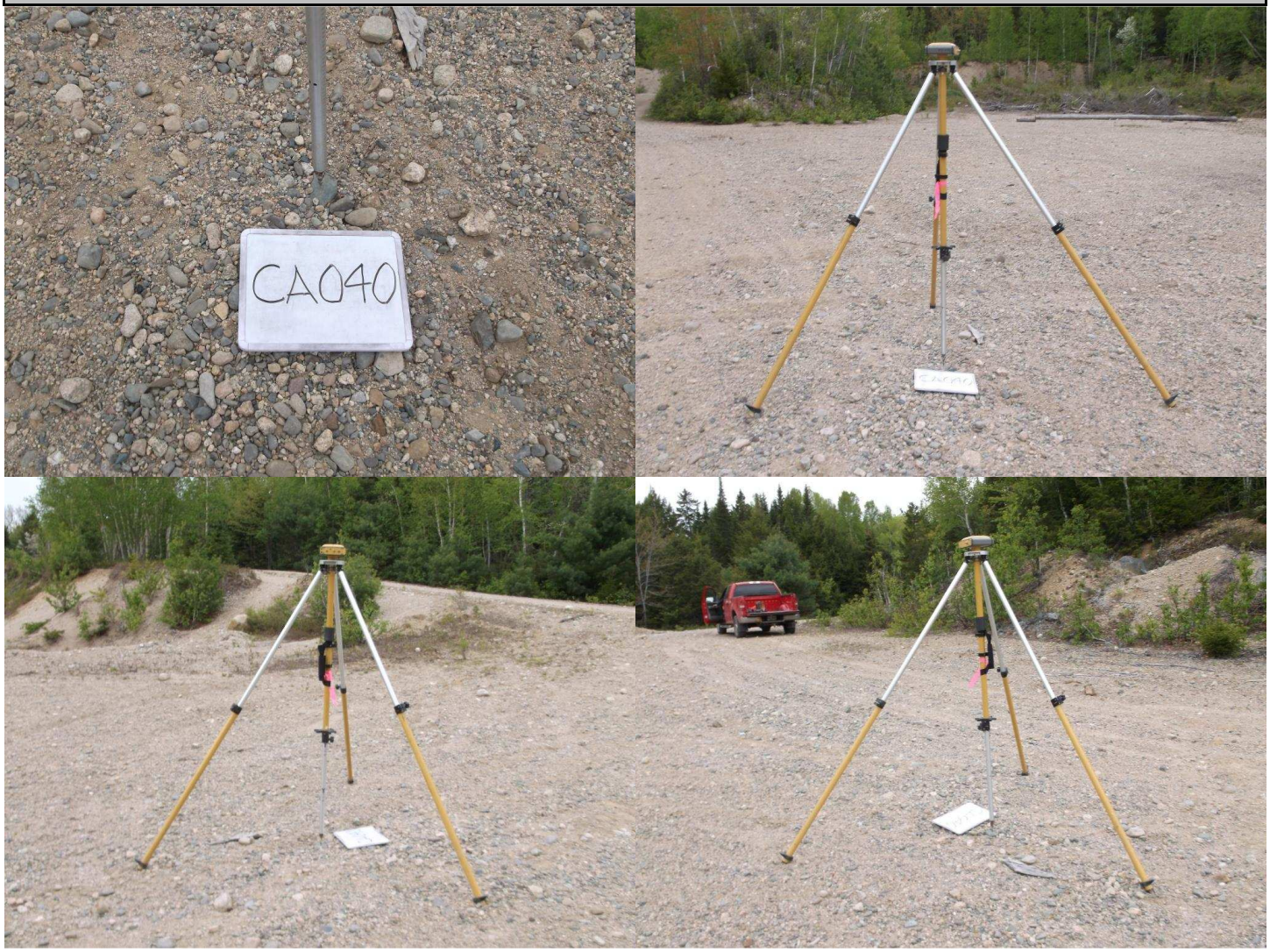
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4998948.21	587849.01	96.62

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA41
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999048.90	599083.57	74.23

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA42
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999436.13	609485.07	67.19

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA43
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4995662.06	622088.69	61.49

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA44
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4998954.79	632583.84	33.20

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA45
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008608.85	612349.48	69.98

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA46
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

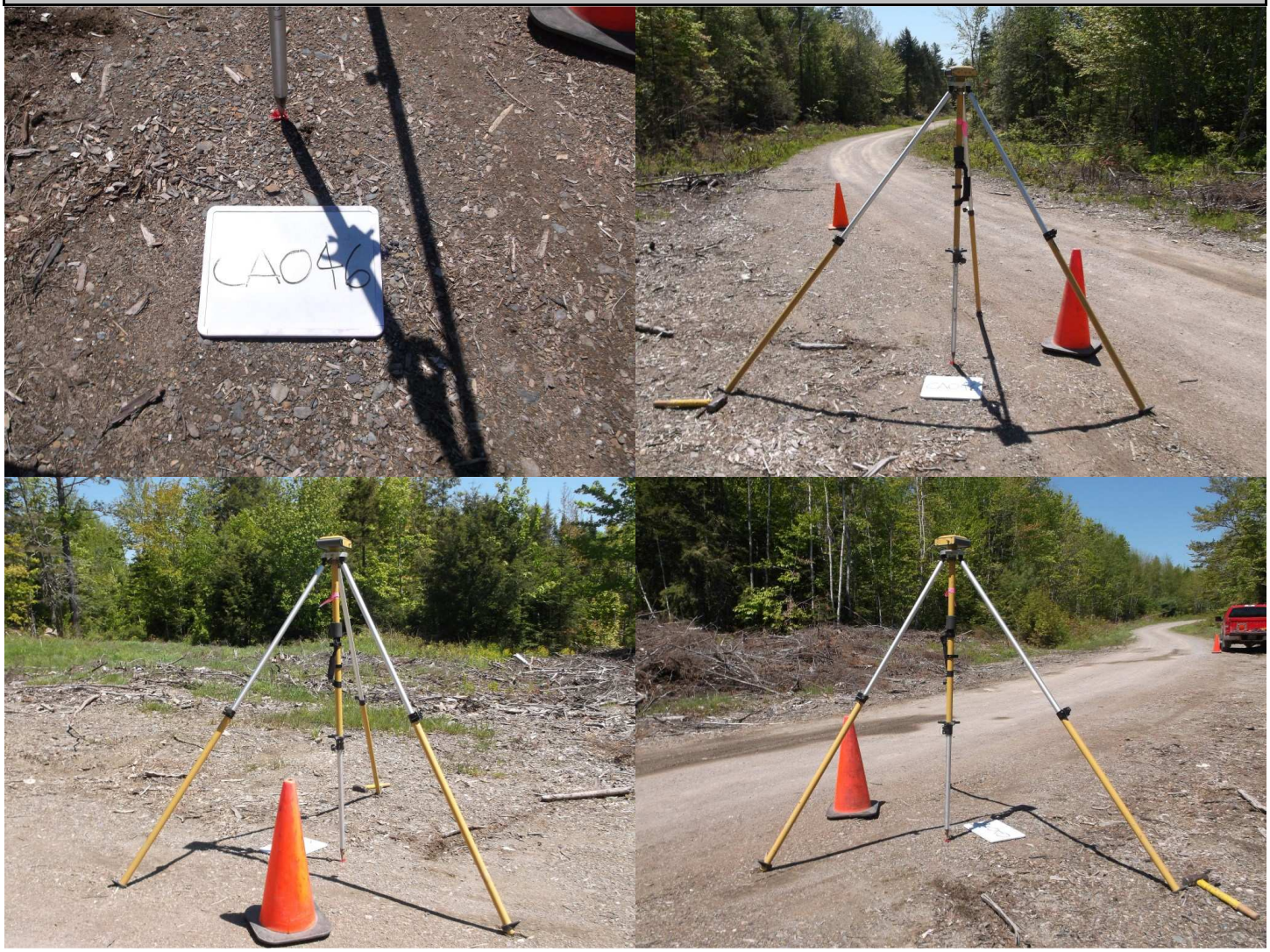
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008664.22	600799.93	68.93

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-30-2017
RMSE Hz	0.016
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA47
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

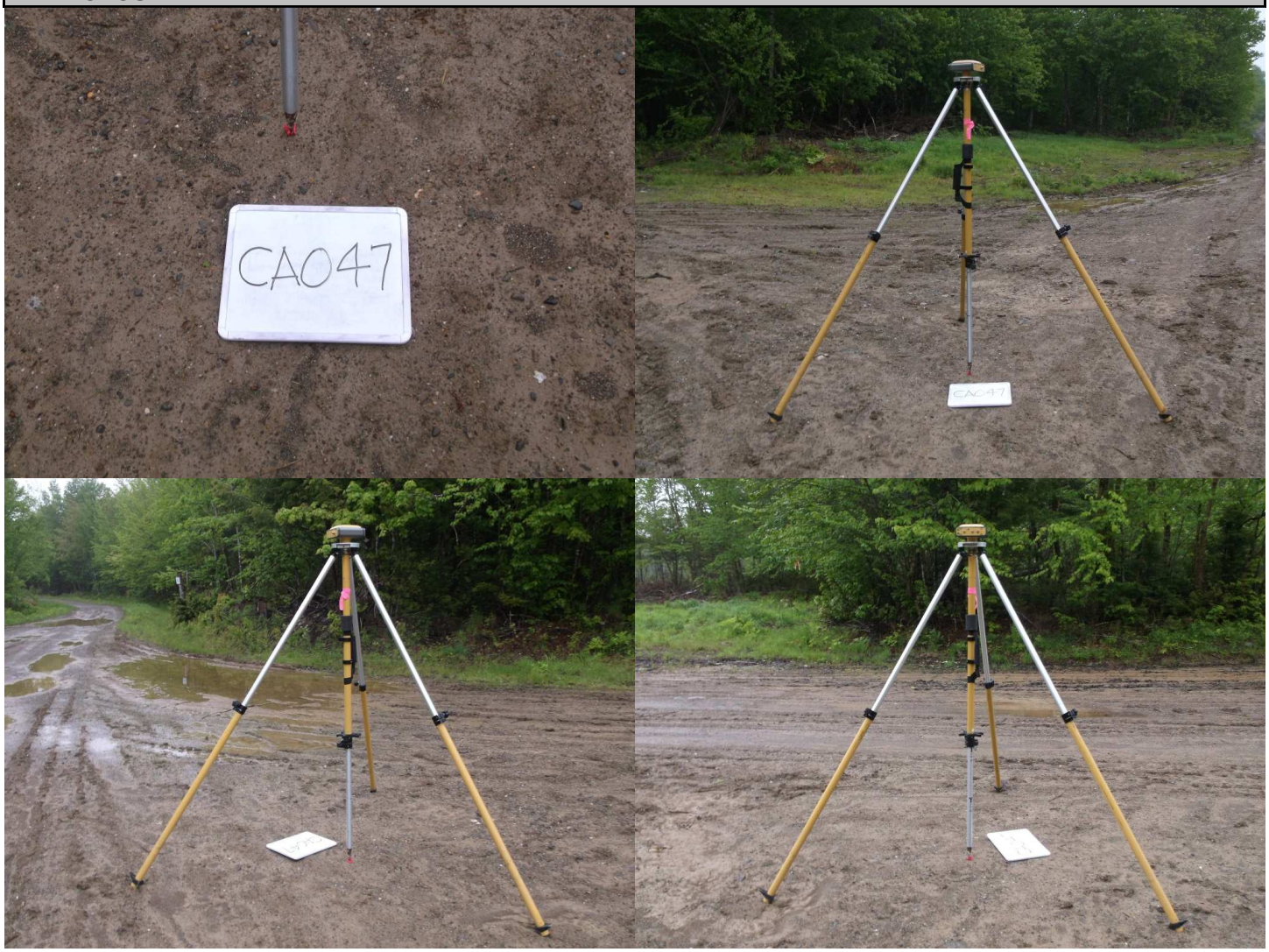
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022150.41	614342.65	103.21

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA48
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

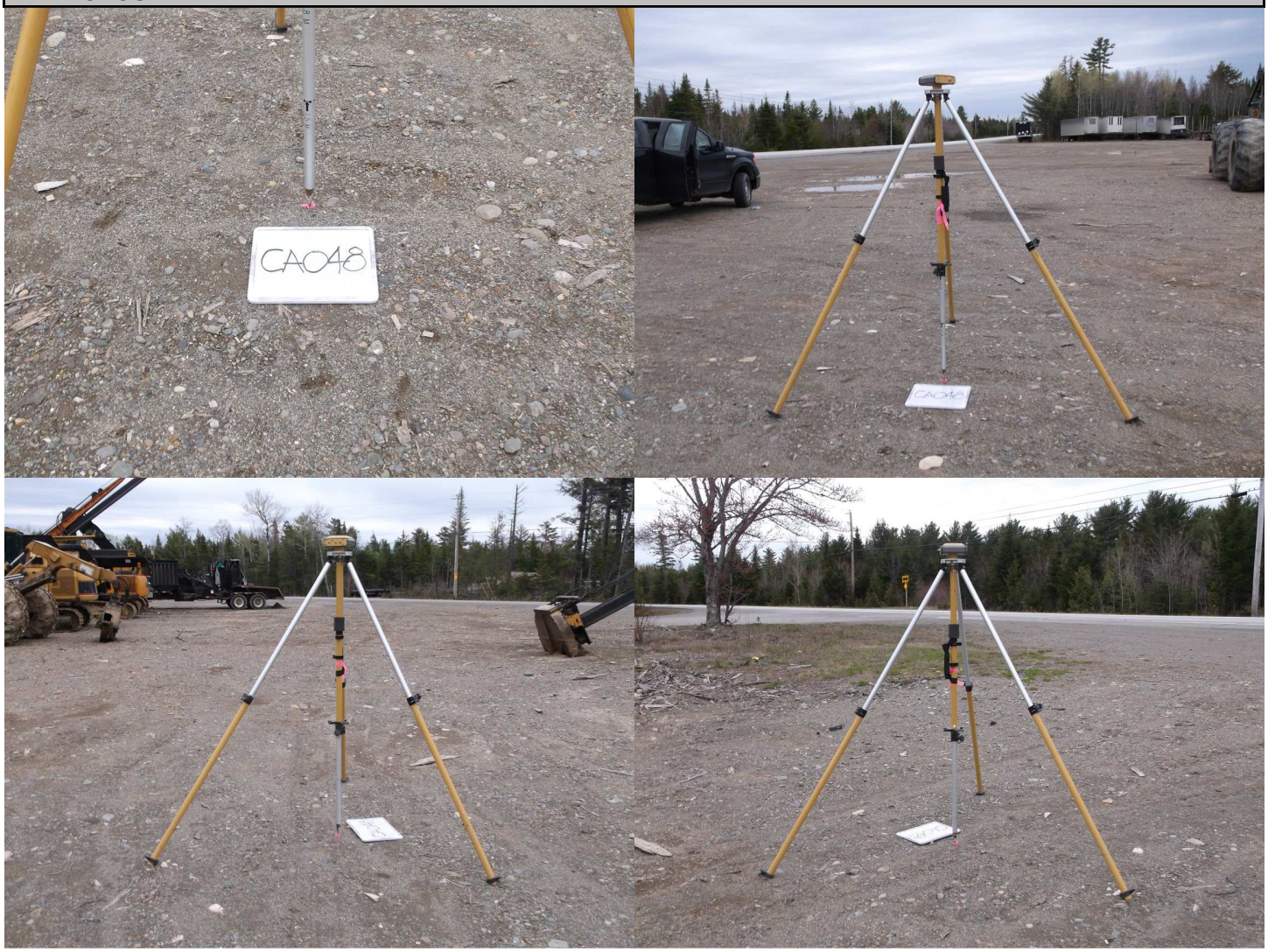
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021678.94	602215.67	107.39

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA49
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

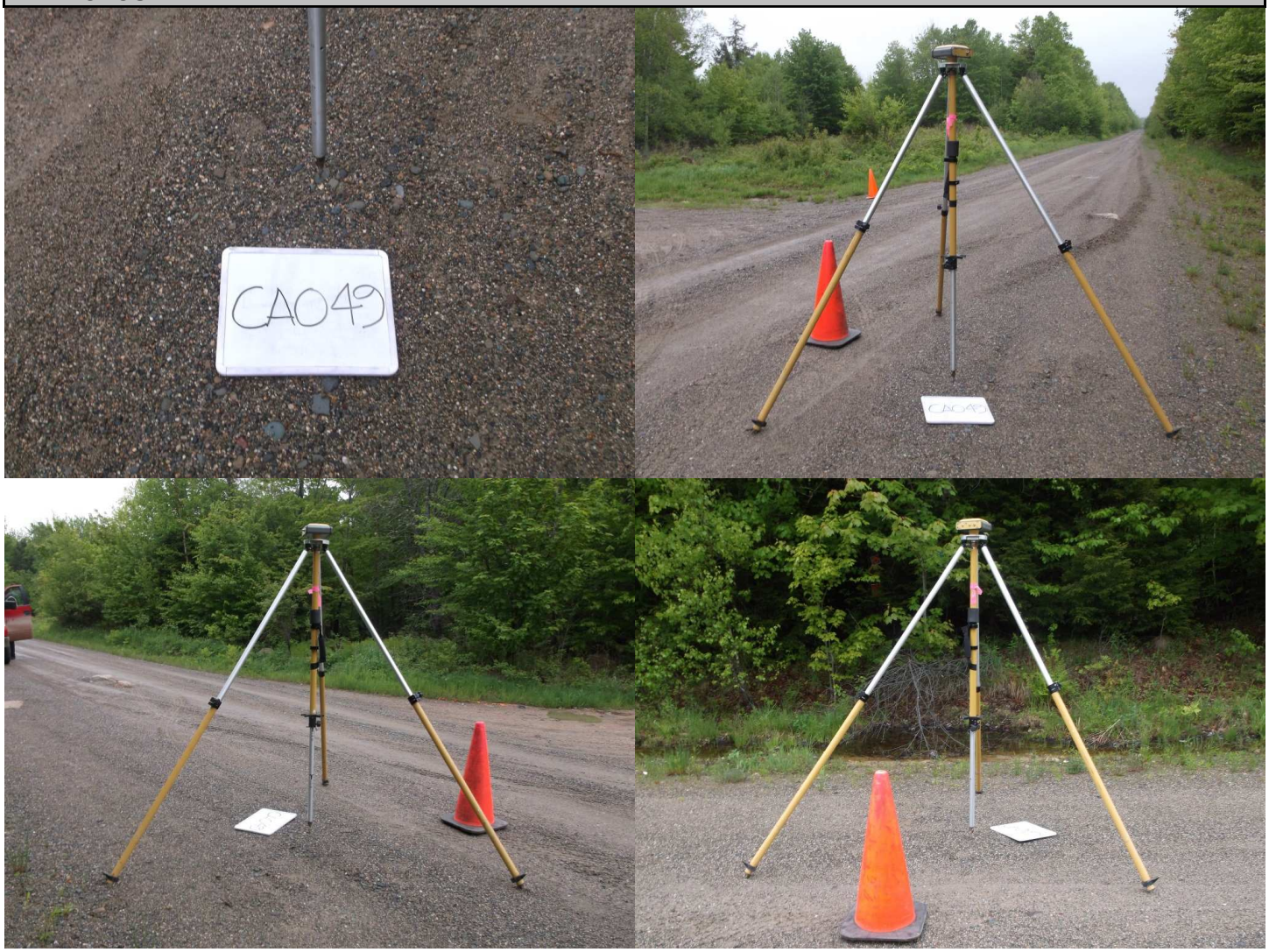
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021182.57	587674.52	151.73

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.008
RMSE Z	0.023
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA50
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5020045.15	574918.27	99.72

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.008
RMSE Z	0.013
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA51
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5010235.30	570808.93	123.53

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.008
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA52
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

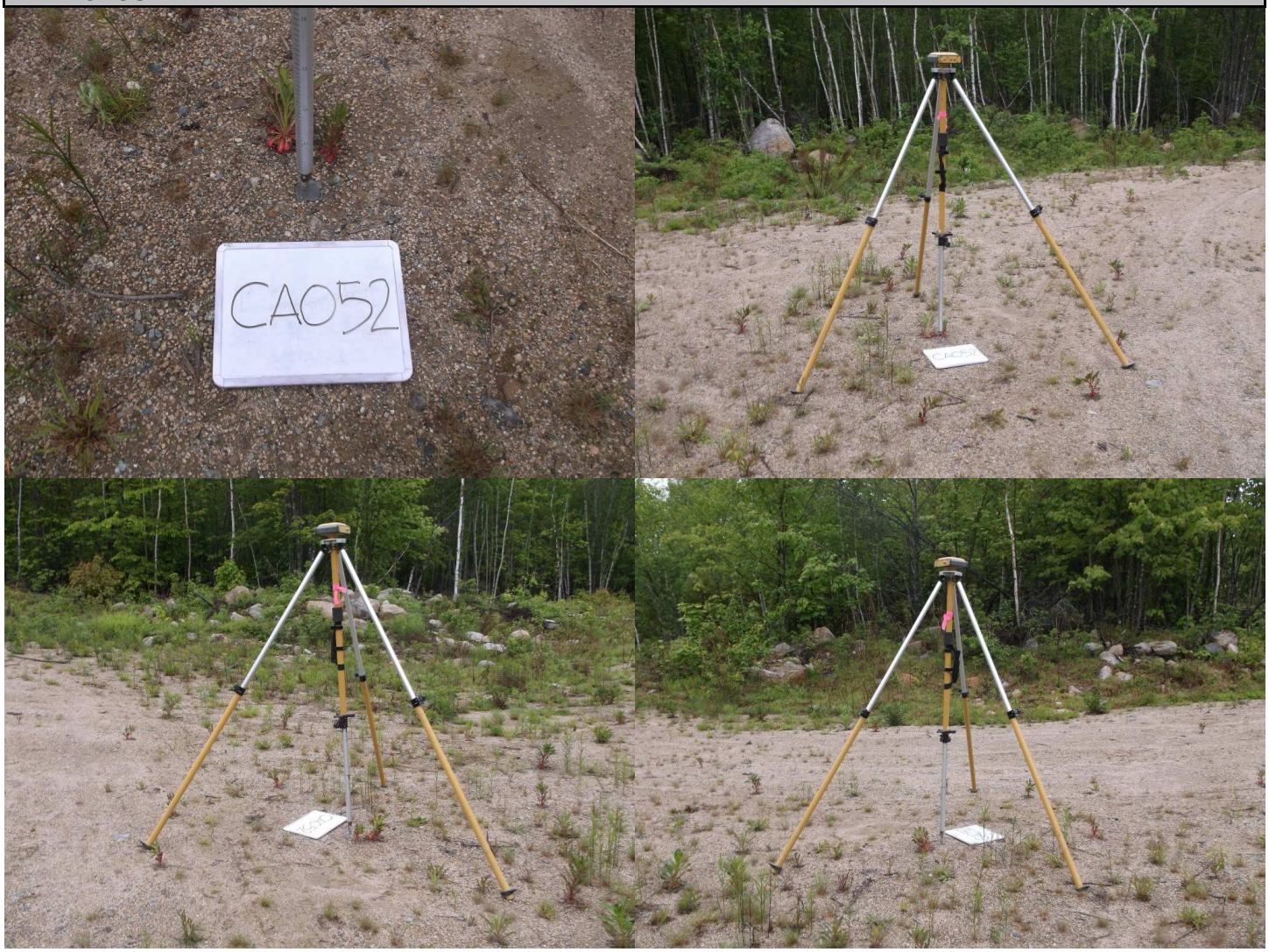
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5010489.49	553096.18	165.49

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-01-2017
RMSE Hz	0.008
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA53
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5023256.12	555931.55	124.23

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.008
RMSE Z	0.011
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA54
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

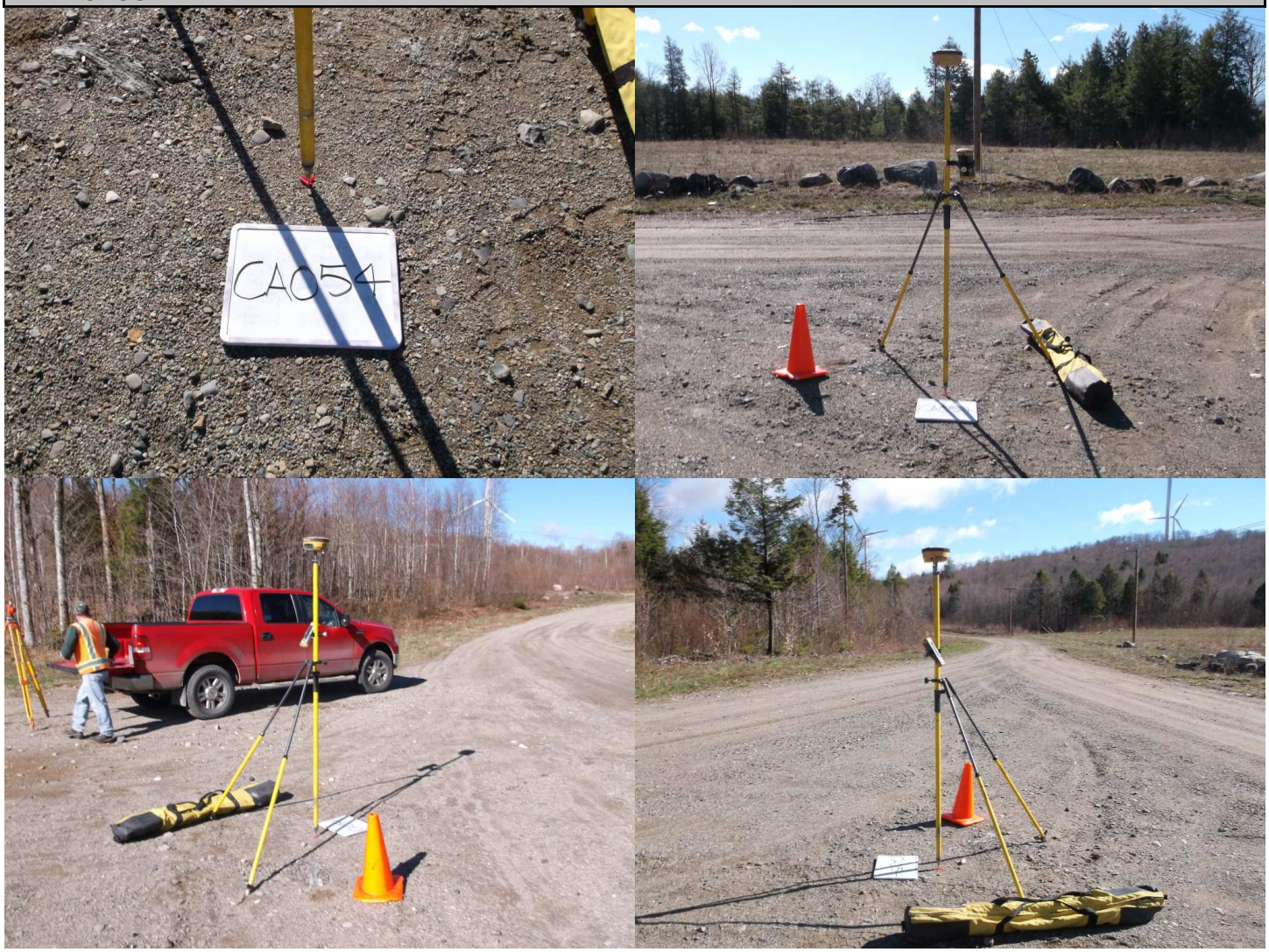
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5019312.29	547840.08	185.24

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA55
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022614.25	537060.26	66.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA56
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5016028.50	529800.97	56.05

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA57
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5030030.42	576962.94	209.93

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.007
RMSE Z	0.013
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA58
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

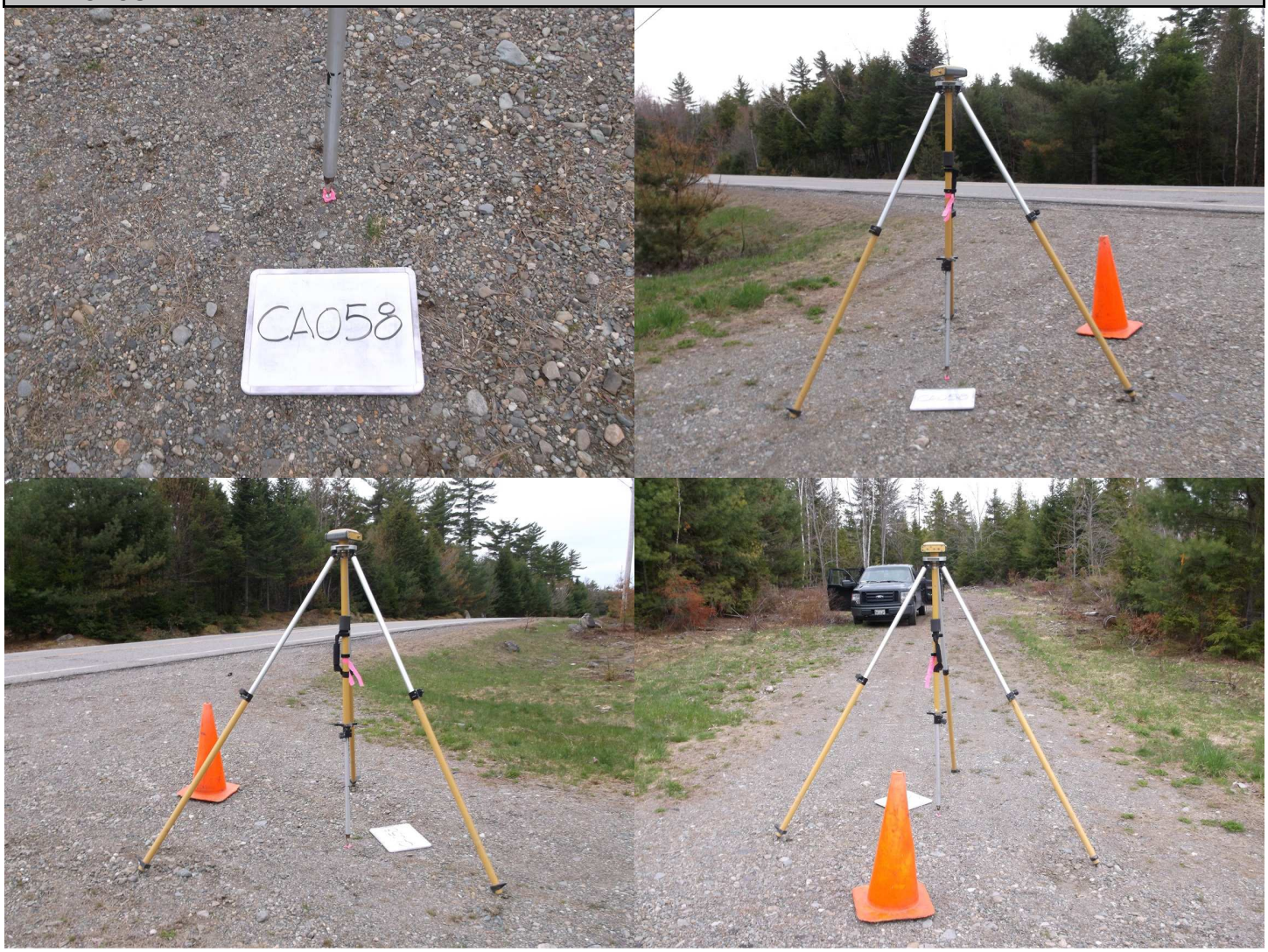
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5028319.74	585806.88	158.57

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA59
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029948.54	597666.36	136.75

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA60
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

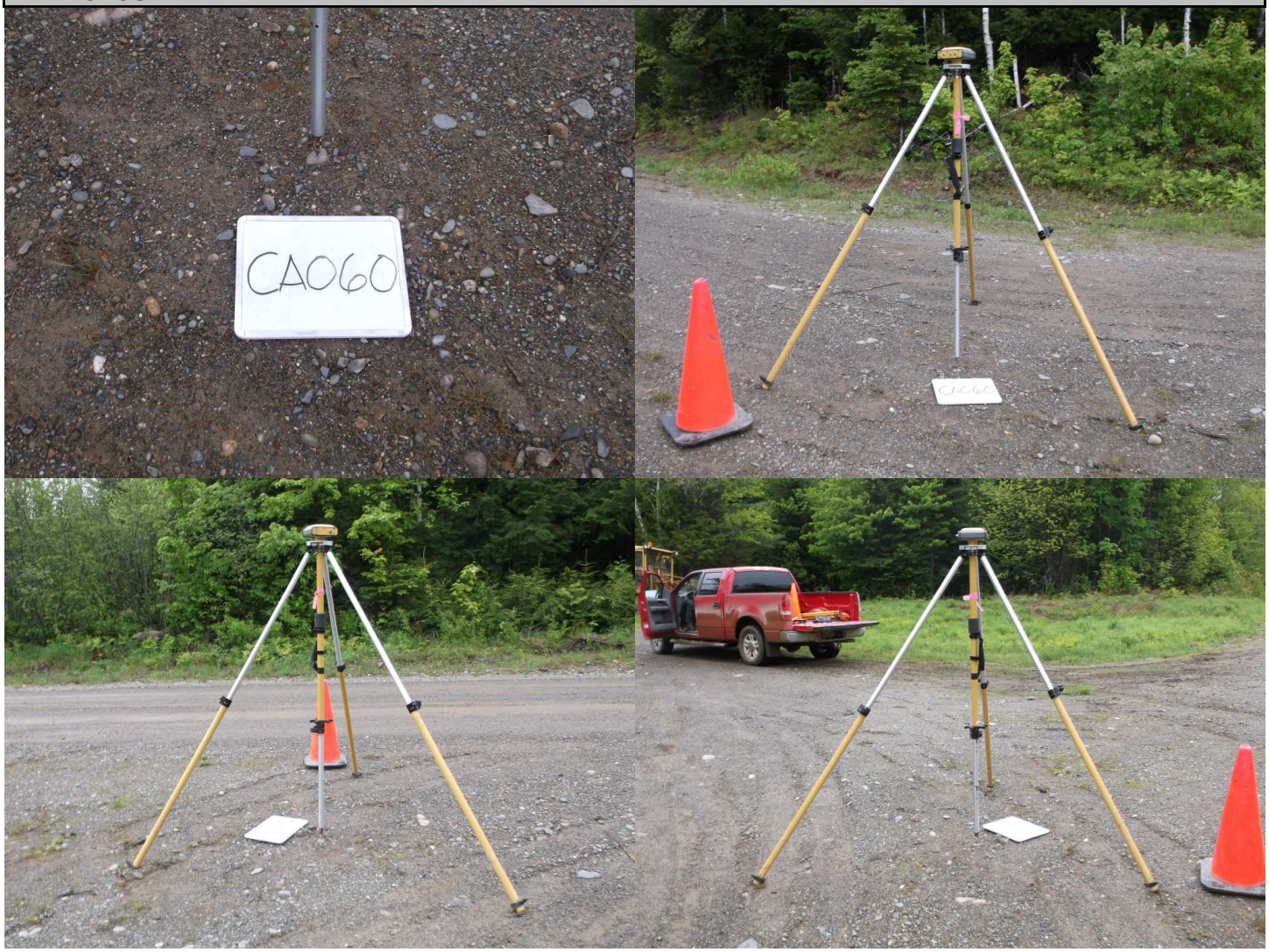
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029889.91	612004.70	109.15

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA61
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

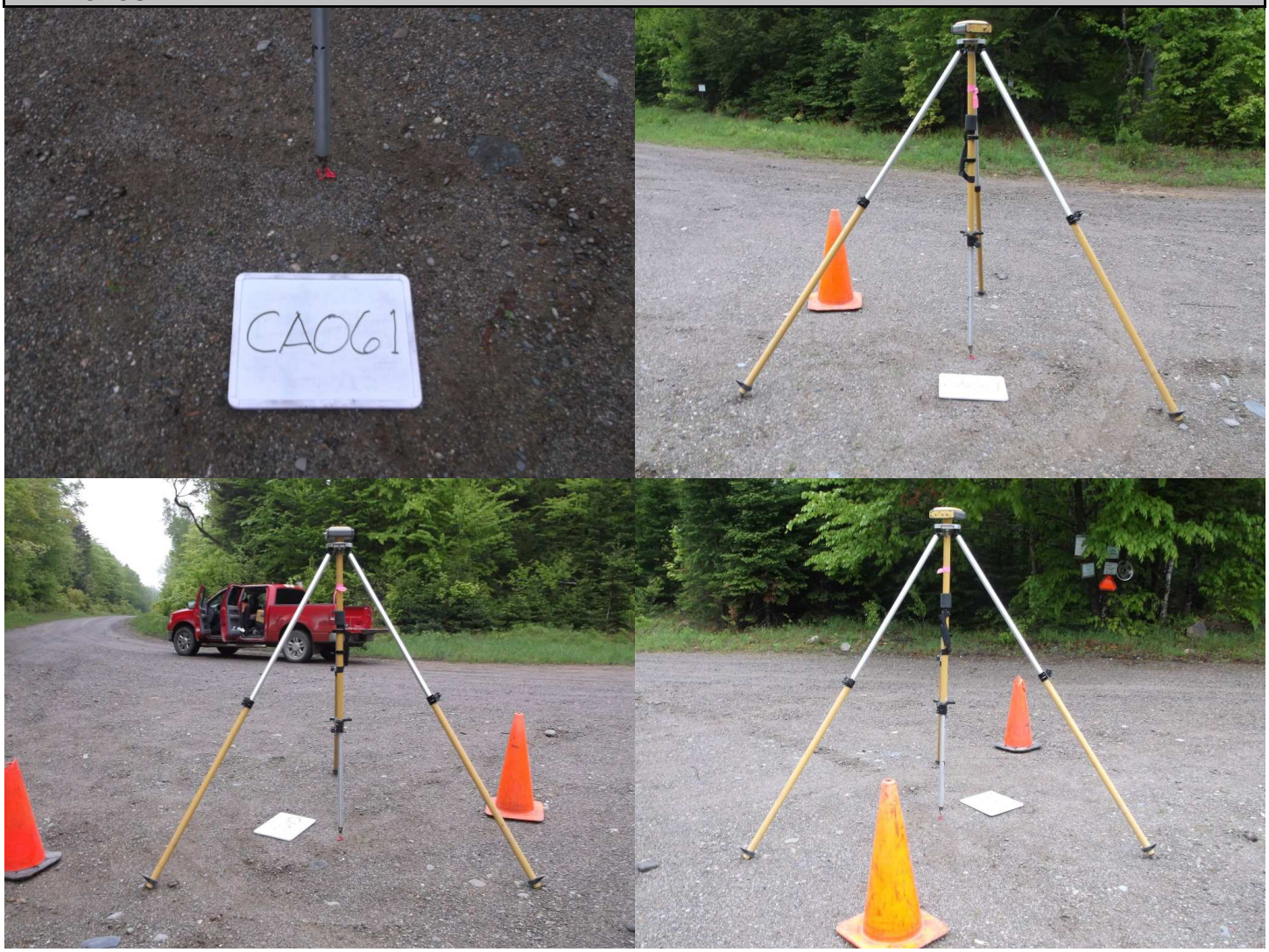
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029293.49	619839.15	94.30

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-31-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA62
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040758.08	611605.70	141.12

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA63
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042546.98	596406.36	136.79

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-05-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA64
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037967.12	572030.30	189.77

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.006
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA65
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

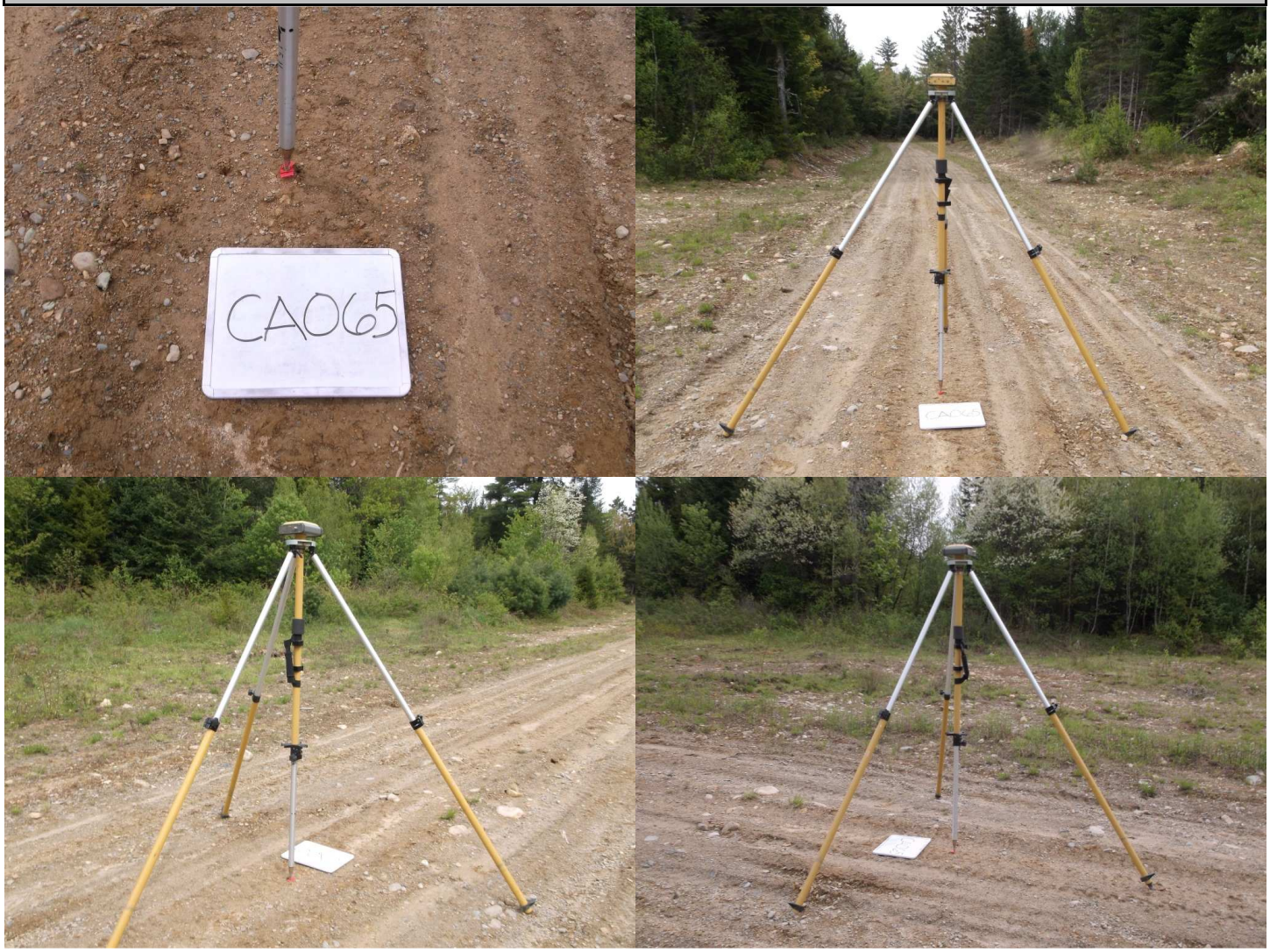
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037862.62	560816.80	119.48

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-25-2017
RMSE Hz	0.010
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA66
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5036990.46	548809.80	72.54

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA67
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5033799.11	540795.31	68.46

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA68
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022958.55	522860.02	68.75

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA69
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5033265.84	531911.66	99.68

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA70
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

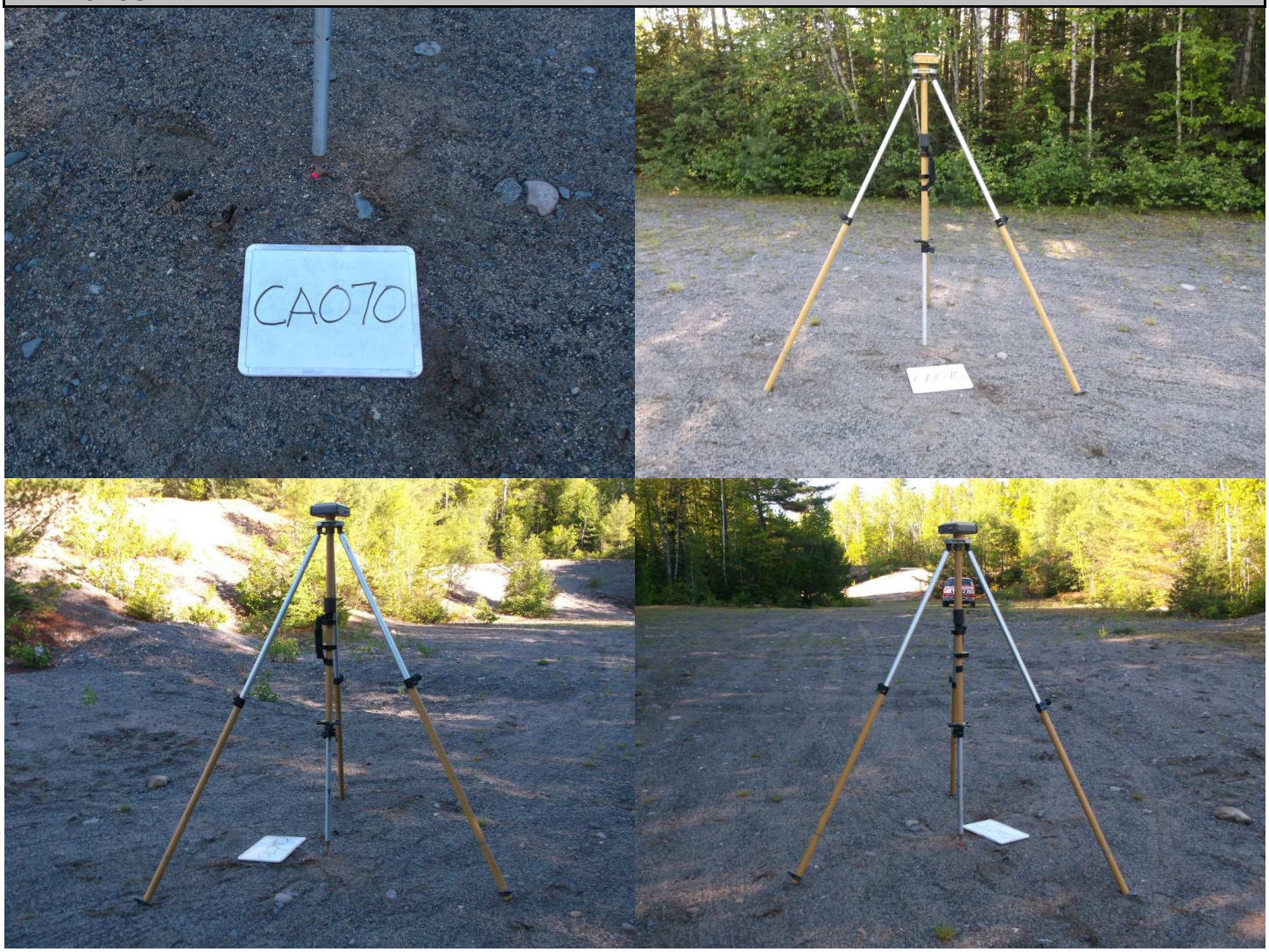
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021289.07	511447.02	110.79

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.009
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA71
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5017398.53	497432.38	119.70

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA72
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5017077.53	490404.84	201.23

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA73
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032601.59	517280.09	171.80

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.008
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA74
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5031730.95	499093.08	133.89

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA75
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032408.95	486398.44	178.27

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA76
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5025701.29	478469.06	277.03

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.009
RMSE Z	0.016
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA77
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5043634.89	499291.52	301.06

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA78
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042736.14	509256.74	165.26

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA79
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044061.75	520709.42	196.85

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA80
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044098.74	534942.27	109.02

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA81
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044800.46	542761.93	156.28

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA82
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044683.33	561719.77	111.05

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.013
RMSE Z	0.021
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA83
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5046533.91	571837.79	118.95

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA84
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048137.13	581559.51	170.20

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.018
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA85
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048268.78	593570.15	154.49

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA86
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5057314.17	599010.66	134.71

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.009
RMSE Z	0.021
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA87
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056875.21	588847.46	147.49

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.017
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA88
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058235.23	575608.04	112.64

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA89
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5057879.52	562093.46	165.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA90
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

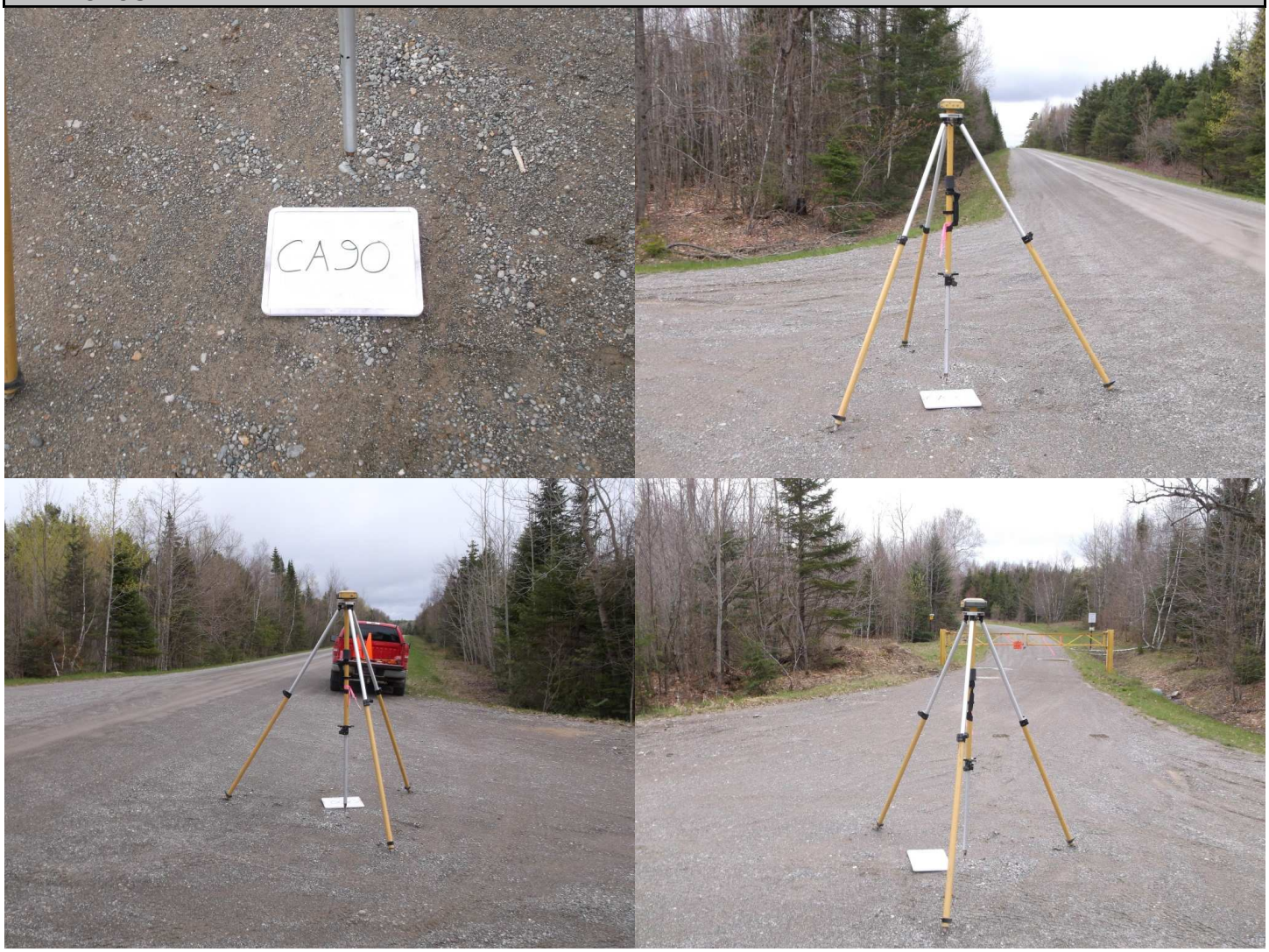
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058647.43	550293.13	179.12

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.017
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA91
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5065501.11	587460.54	226.86

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.014
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA92
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

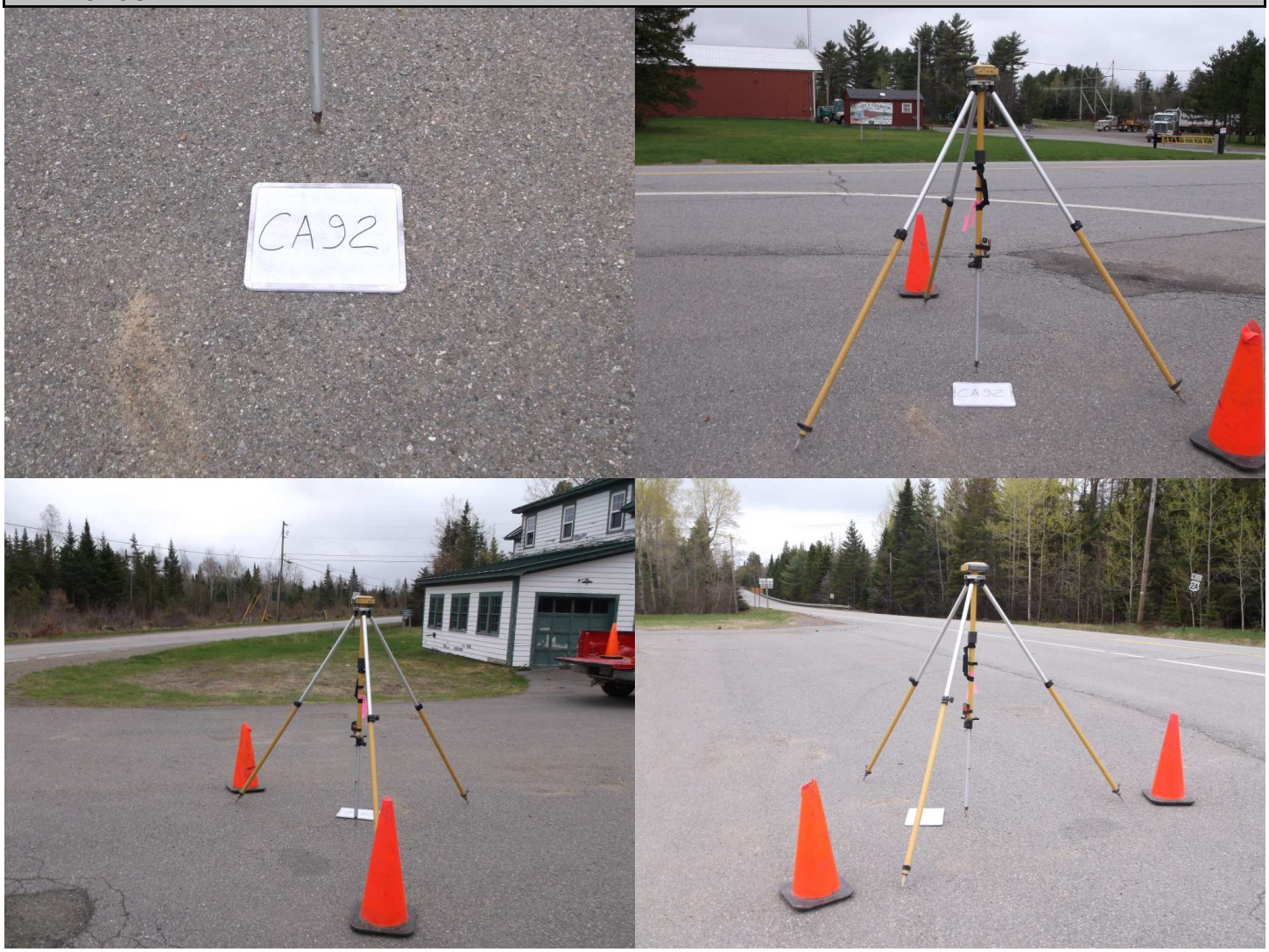
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5063762.98	566639.60	165.01

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.023
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA93
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

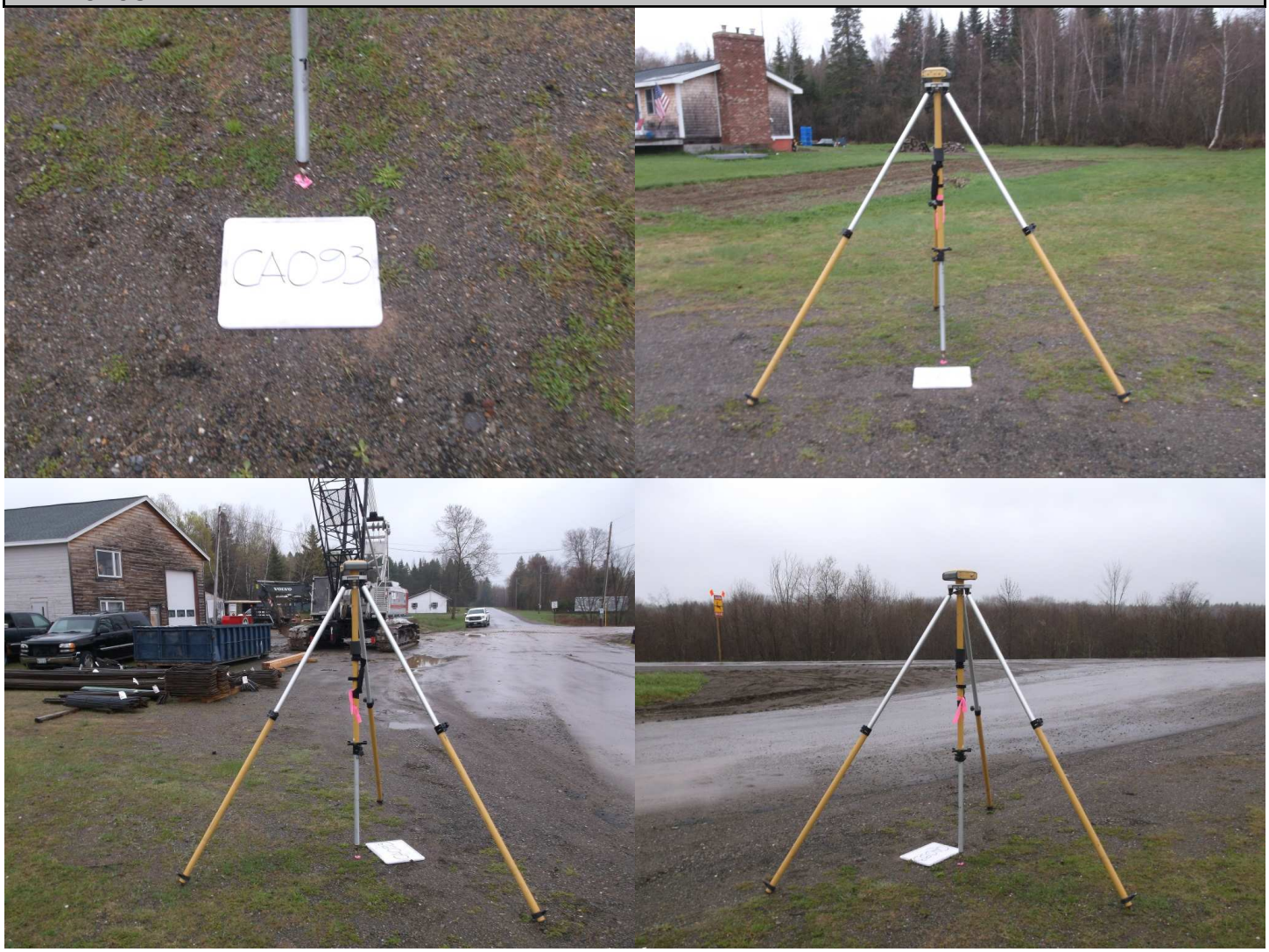
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5075995.11	578851.00	116.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA94
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

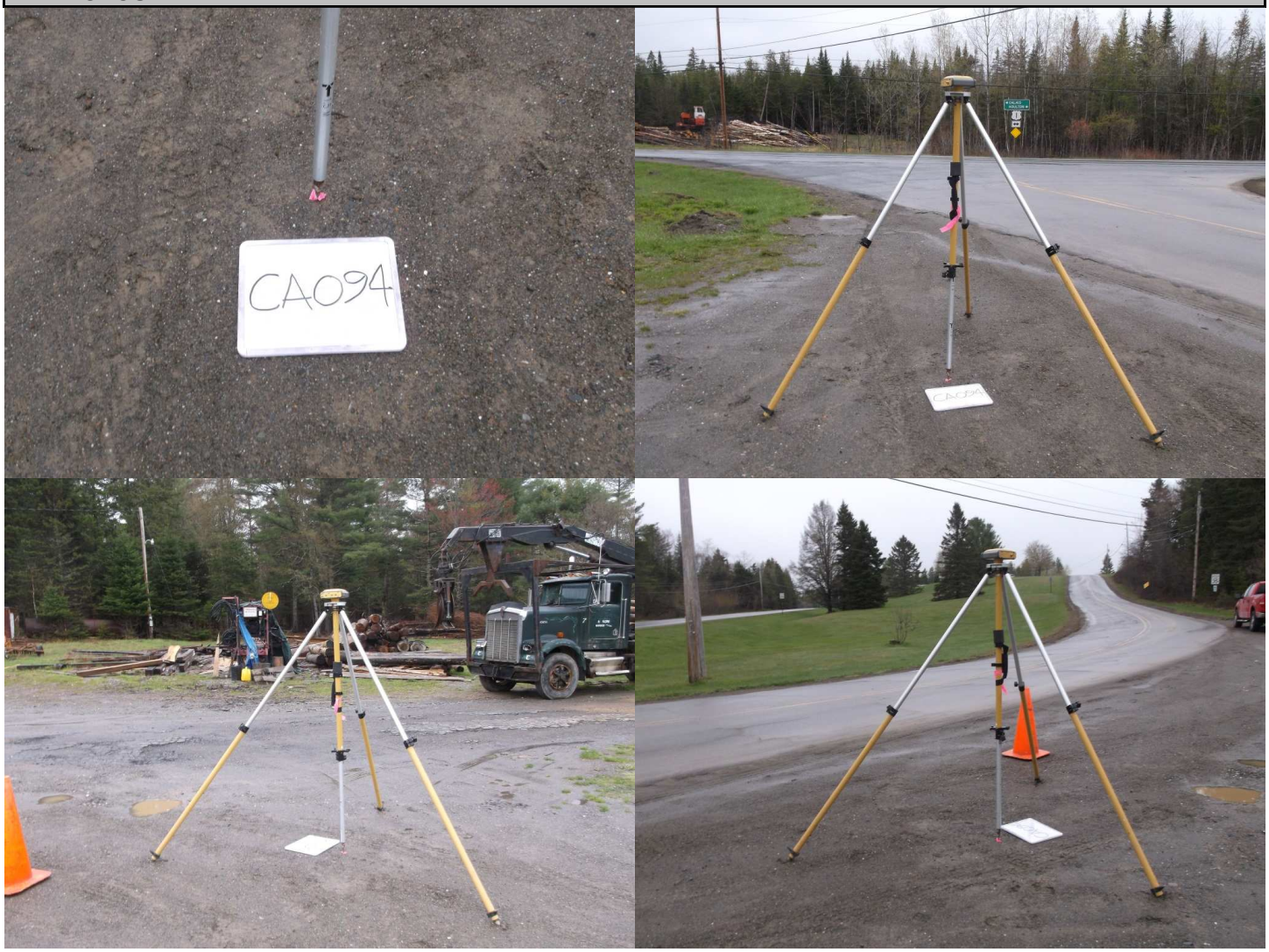
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073524.25	589931.53	141.10

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA95
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5072418.01	545728.17	190.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA96
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5057994.36	539182.19	130.28

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA97
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056528.84	523018.46	109.34

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA98
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5064005.23	512559.08	148.74

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.015
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA99
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5049946.55	513942.67	150.41

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-02-2017
RMSE Hz	0.011
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA100
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040572.50	483644.77	489.49

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.010
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA101
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5053045.83	486987.92	394.07

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-05-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA102
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5083976.84	589958.21	208.85

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA103
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5086223.92	578347.45	175.46

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA104
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5094120.00	588043.99	133.38

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA105
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5098861.80	580335.90	197.52

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA106
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5101287.59	588645.98	151.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA107
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5107011.88	589125.52	123.55

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA108
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5105908.47	580264.28	128.04

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA109
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

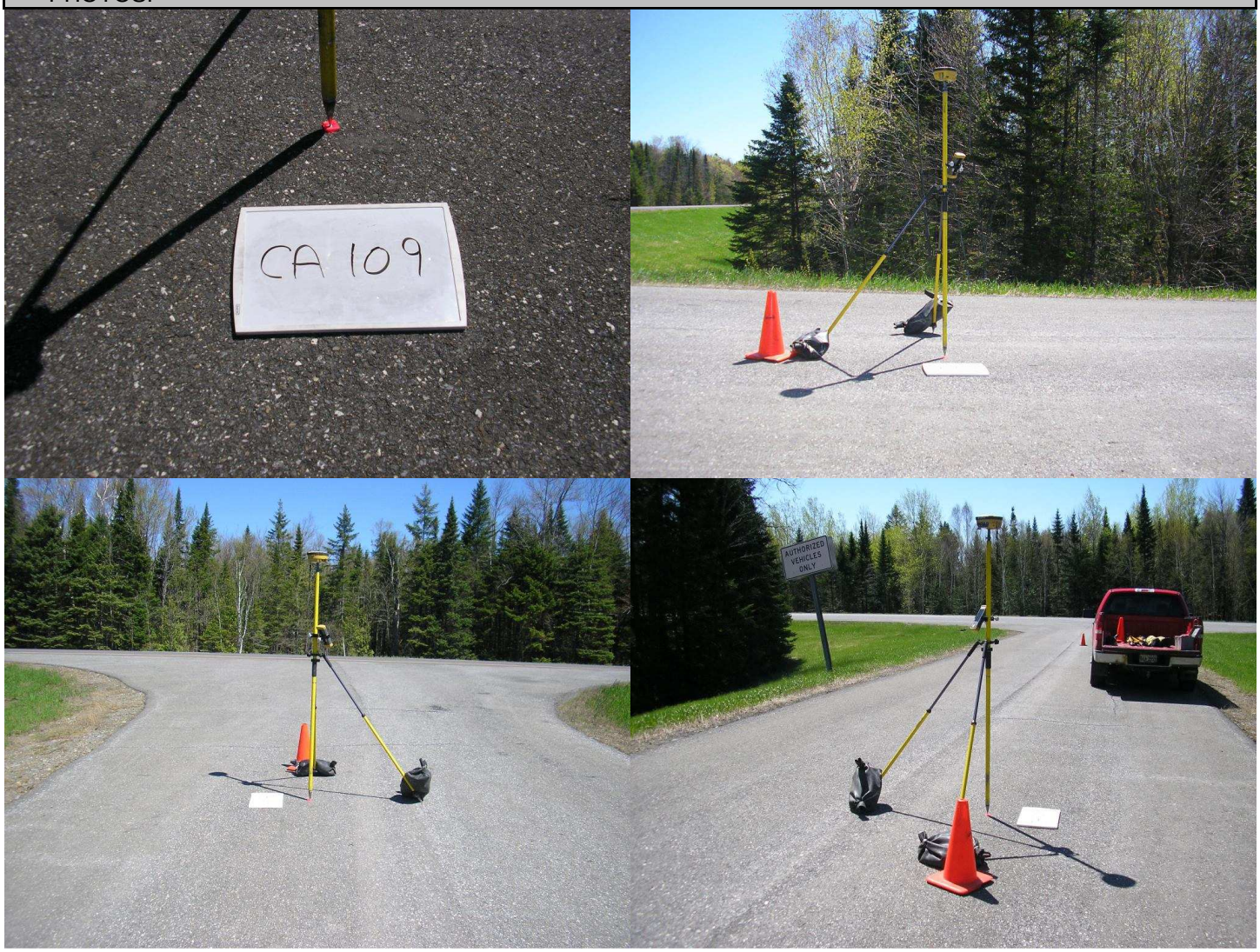
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110280.94	580922.46	167.88

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA110
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5117003.01	589424.45	125.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA111
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121949.15	580466.91	181.11

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.017
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA112
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5128802.64	589365.65	130.31

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA113
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5141592.49	588819.47	124.91

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA114
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5151604.01	586699.27	147.90

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA115
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5165903.31	584179.82	200.43

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA116
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5178300.73	586326.17	183.62

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA117
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5189698.68	583657.23	196.44

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-17-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA118
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5198305.18	583651.55	206.85

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA119
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5208043.06	590707.62	232.95

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA120
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5218873.51	583978.68	136.37

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA121
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121064.84	570201.56	256.85

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.017
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA122
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116430.67	558031.02	306.02

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA123
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5131144.32	558544.45	210.08

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA124
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

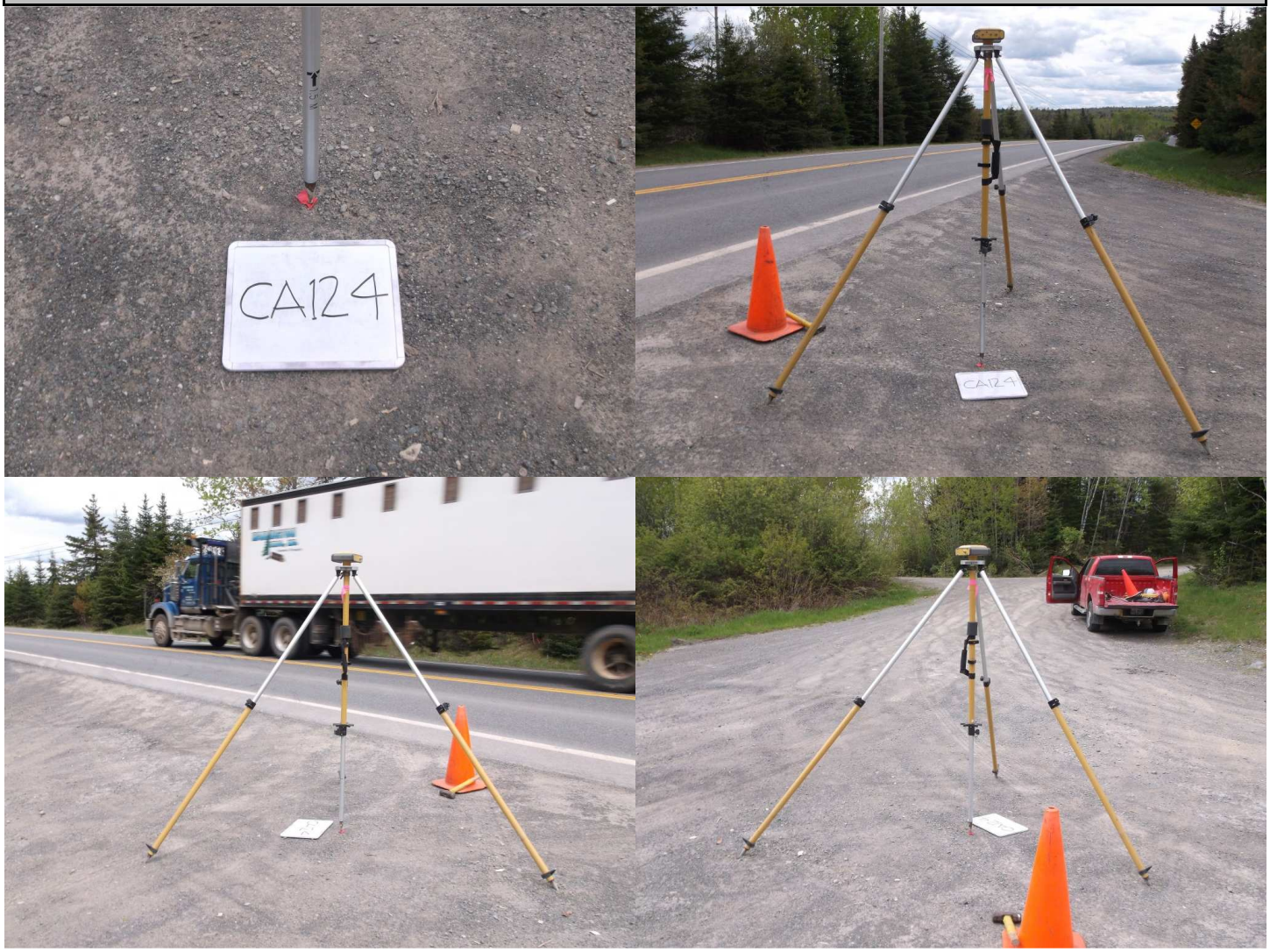
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5133656.06	549839.43	267.94

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA125
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5118703.75	548616.85	260.53

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.016
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA126
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127942.70	541433.51	293.58

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.018
RMSE Z	0.029
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA127
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

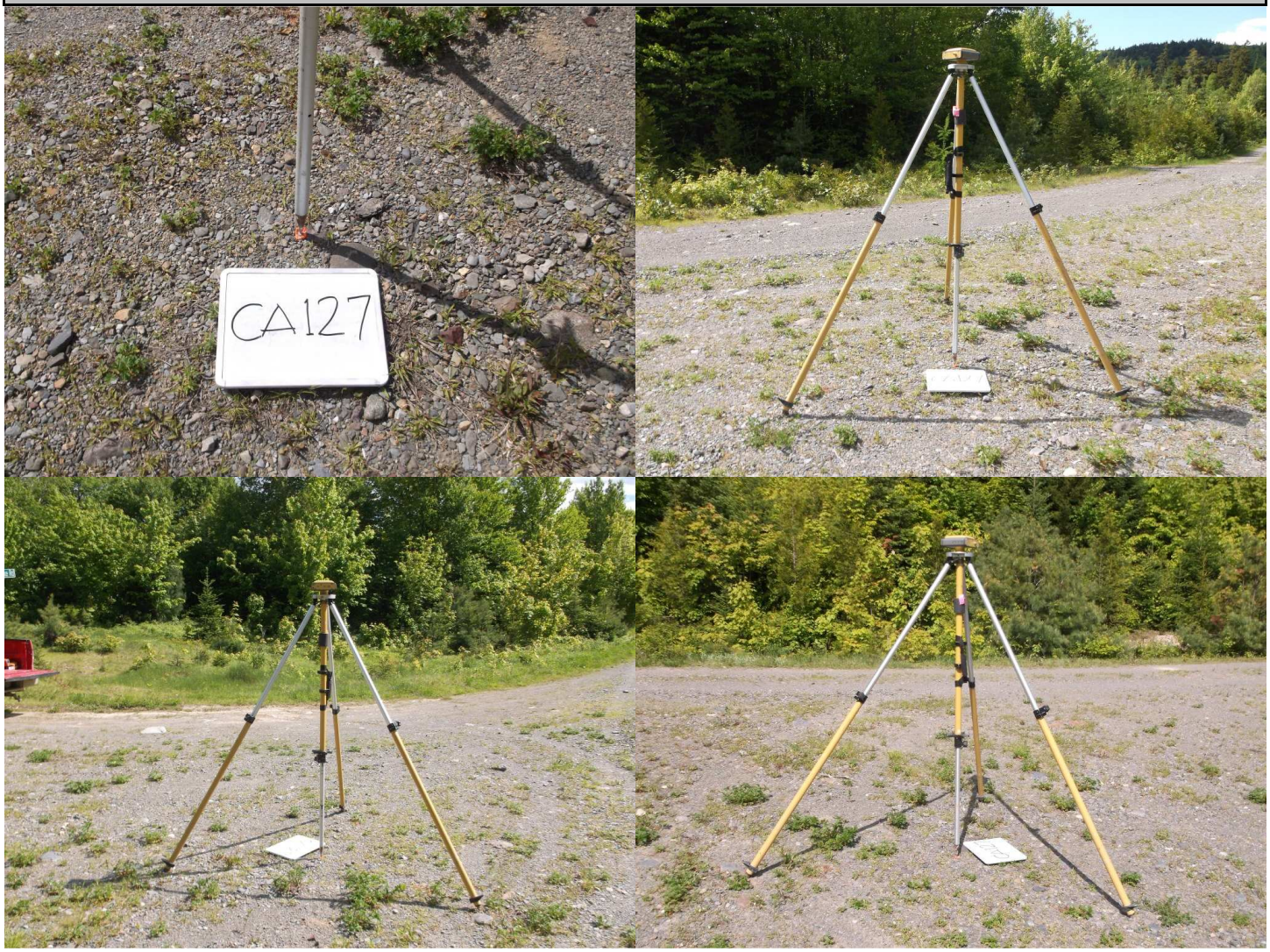
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113909.29	539191.08	333.42

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA128
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5101448.95	543250.95	263.66

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA129
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5093519.39	543467.35	165.83

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA130
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5080330.46	545297.78	160.59

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA131
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073163.12	536593.53	141.22

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA132
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5078987.83	538424.72	171.93

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA133
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

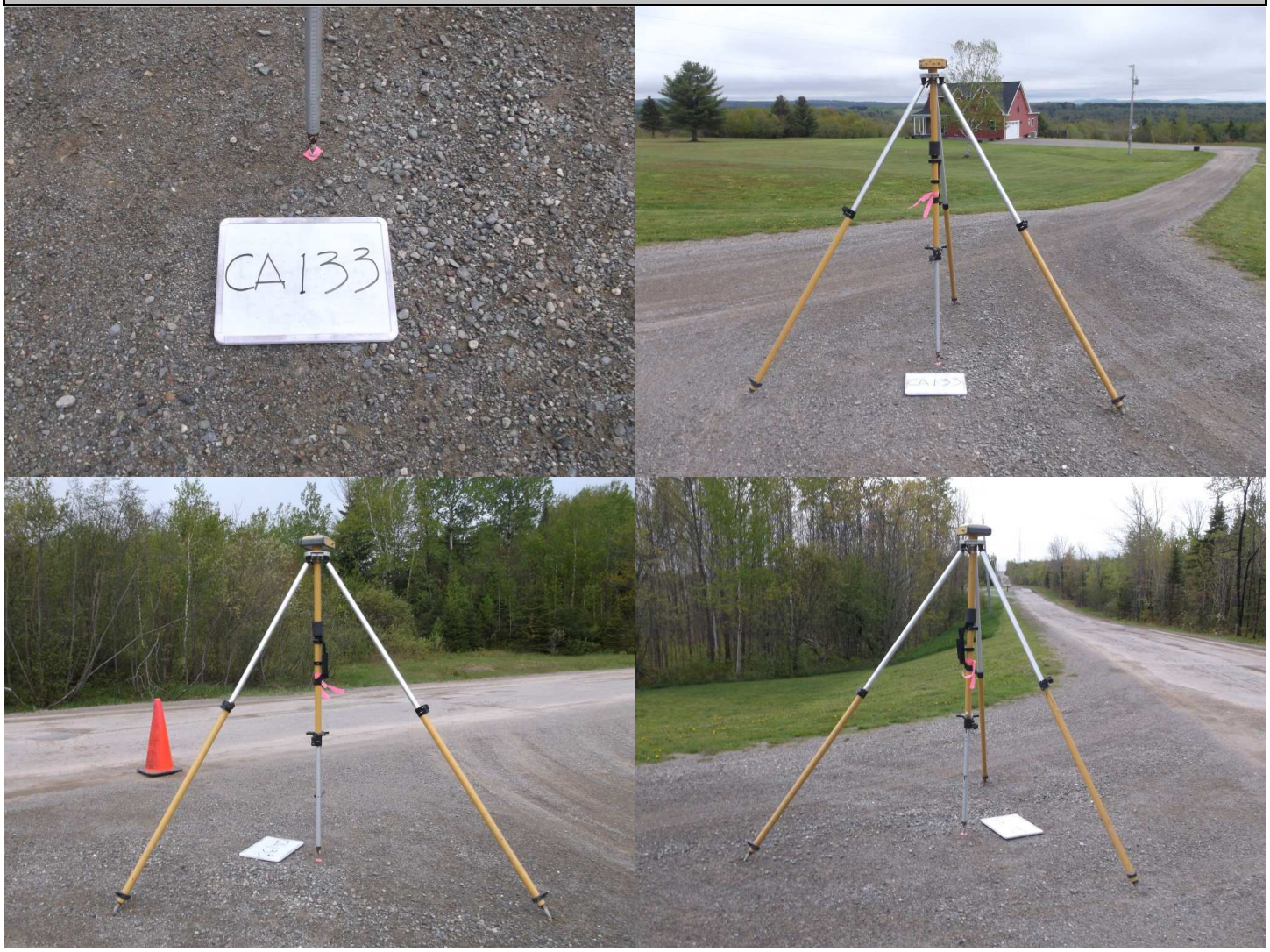
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5093780.62	536721.65	259.78

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA134
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100756.26	536618.97	289.50

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-23-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA135
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073744.89	526891.84	164.29

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA136
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116108.85	526622.68	242.45

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA137
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

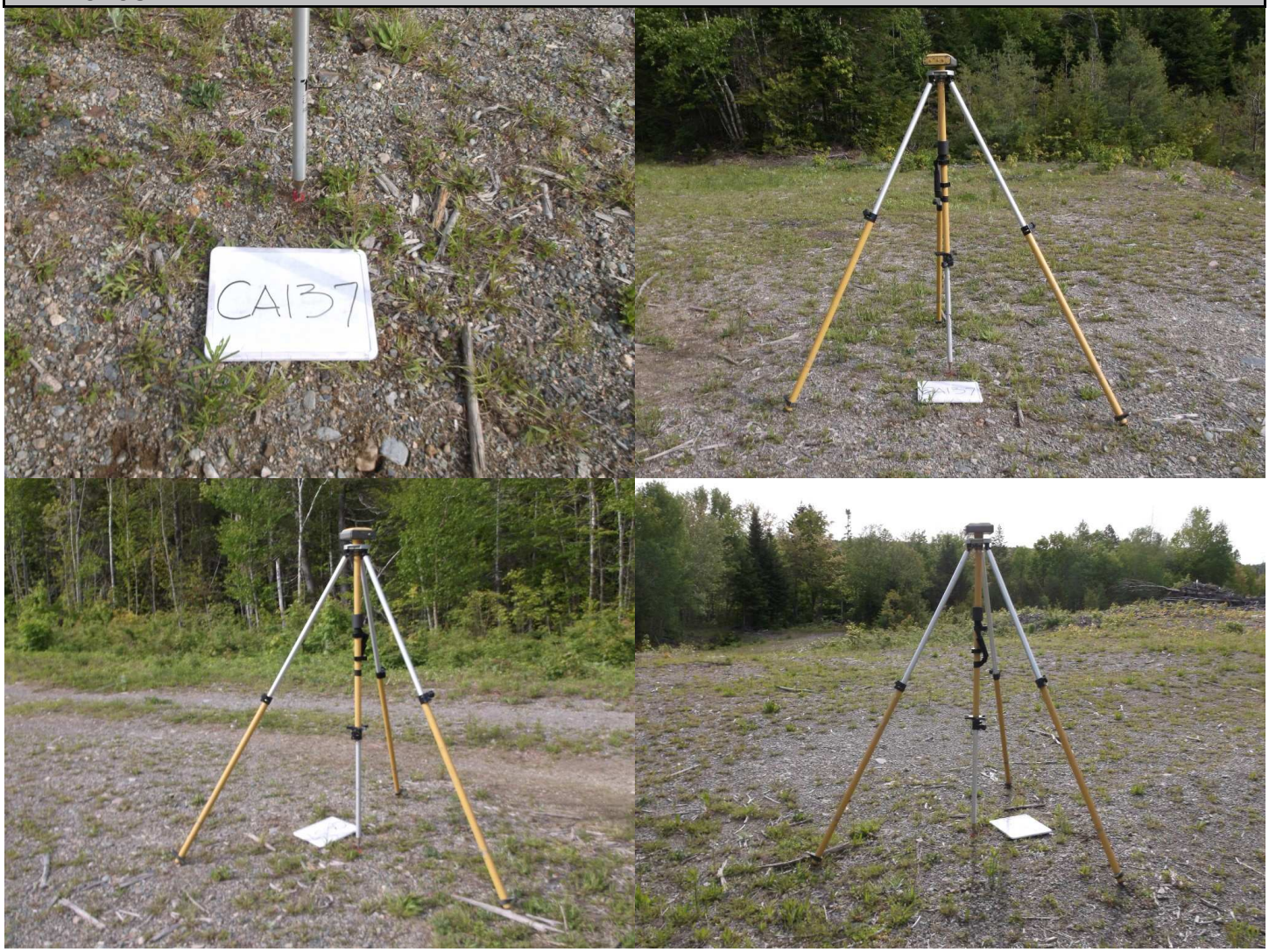
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5062538.76	486371.32	294.94

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA138
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073401.10	479063.25	288.34

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.005
RMSE Z	0.011
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA139
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

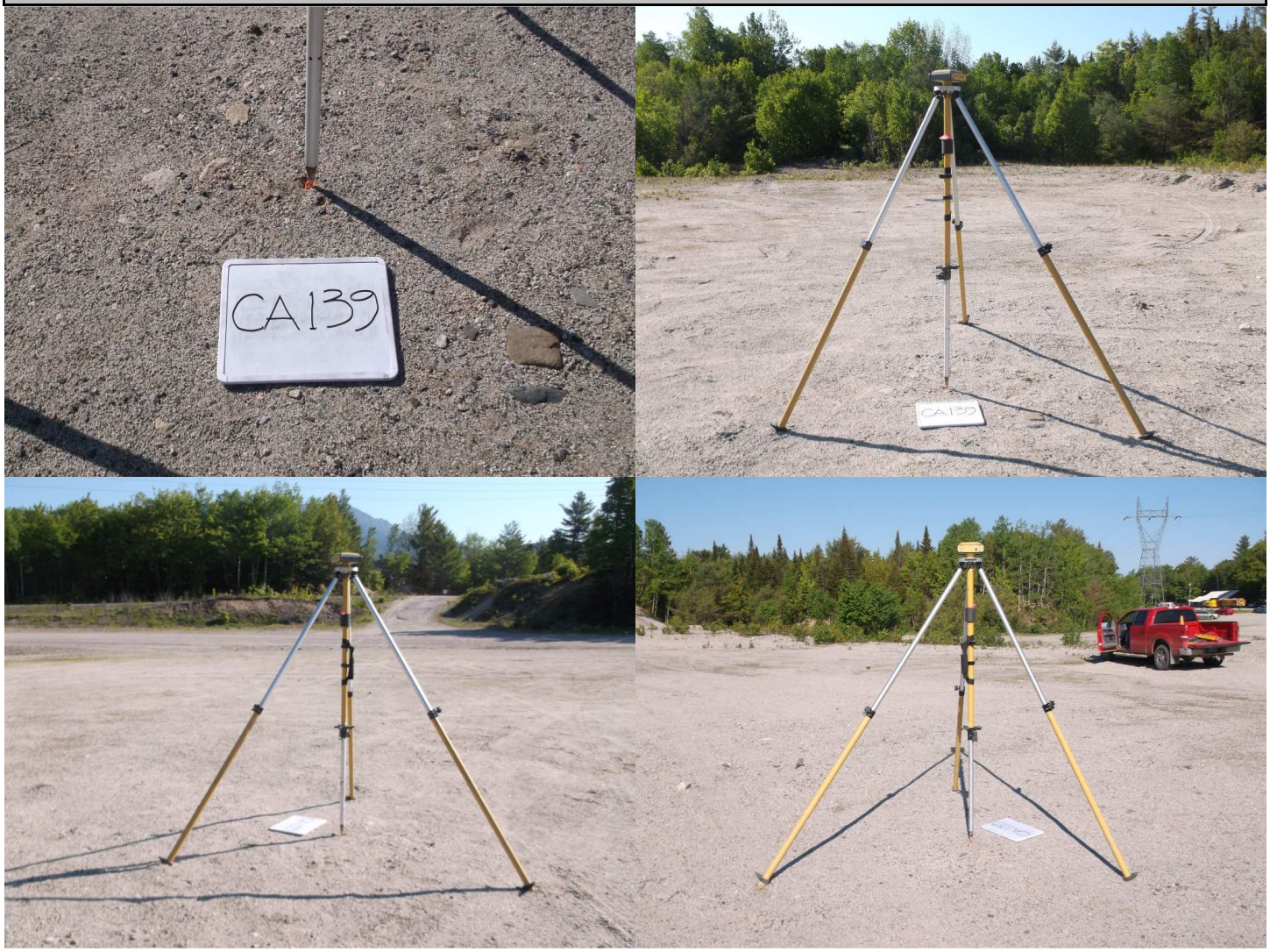
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5075651.39	502921.54	180.21

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.017
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA140
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

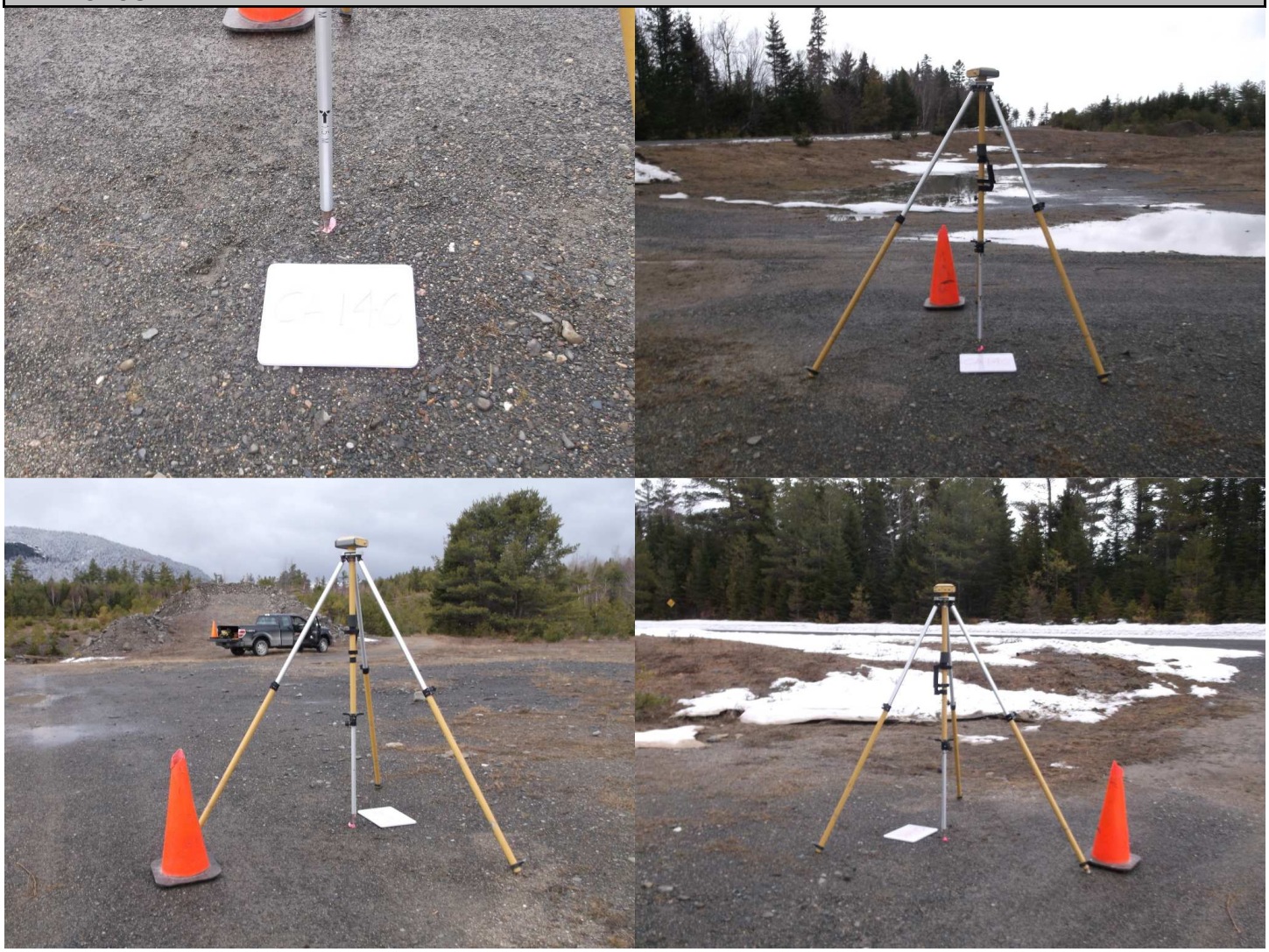
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5089869.82	486391.88	343.42

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.005
RMSE Z	0.006
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA141
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

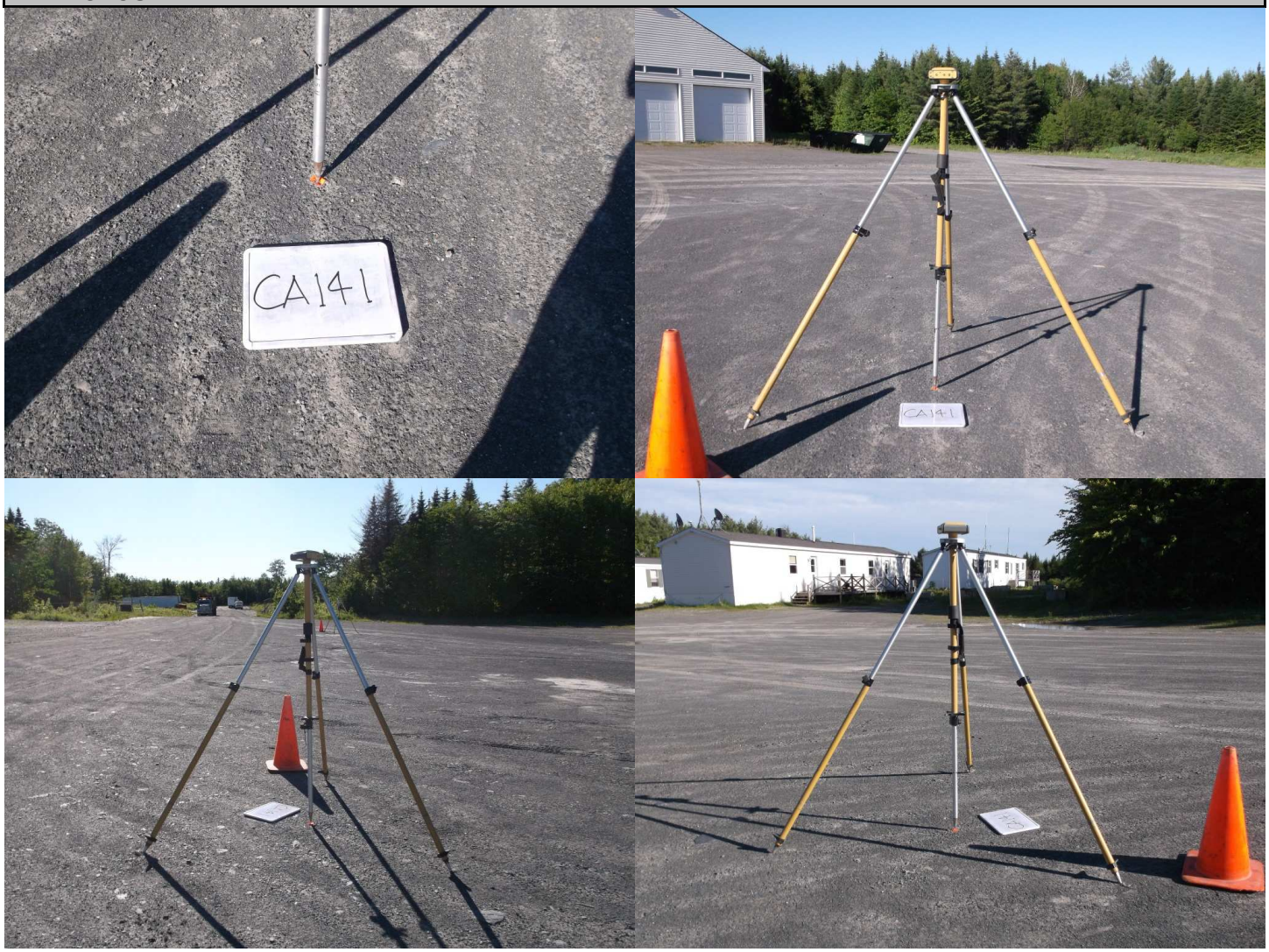
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5085918.49	455227.55	337.46

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA142
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100298.24	486167.87	373.27

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA143
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

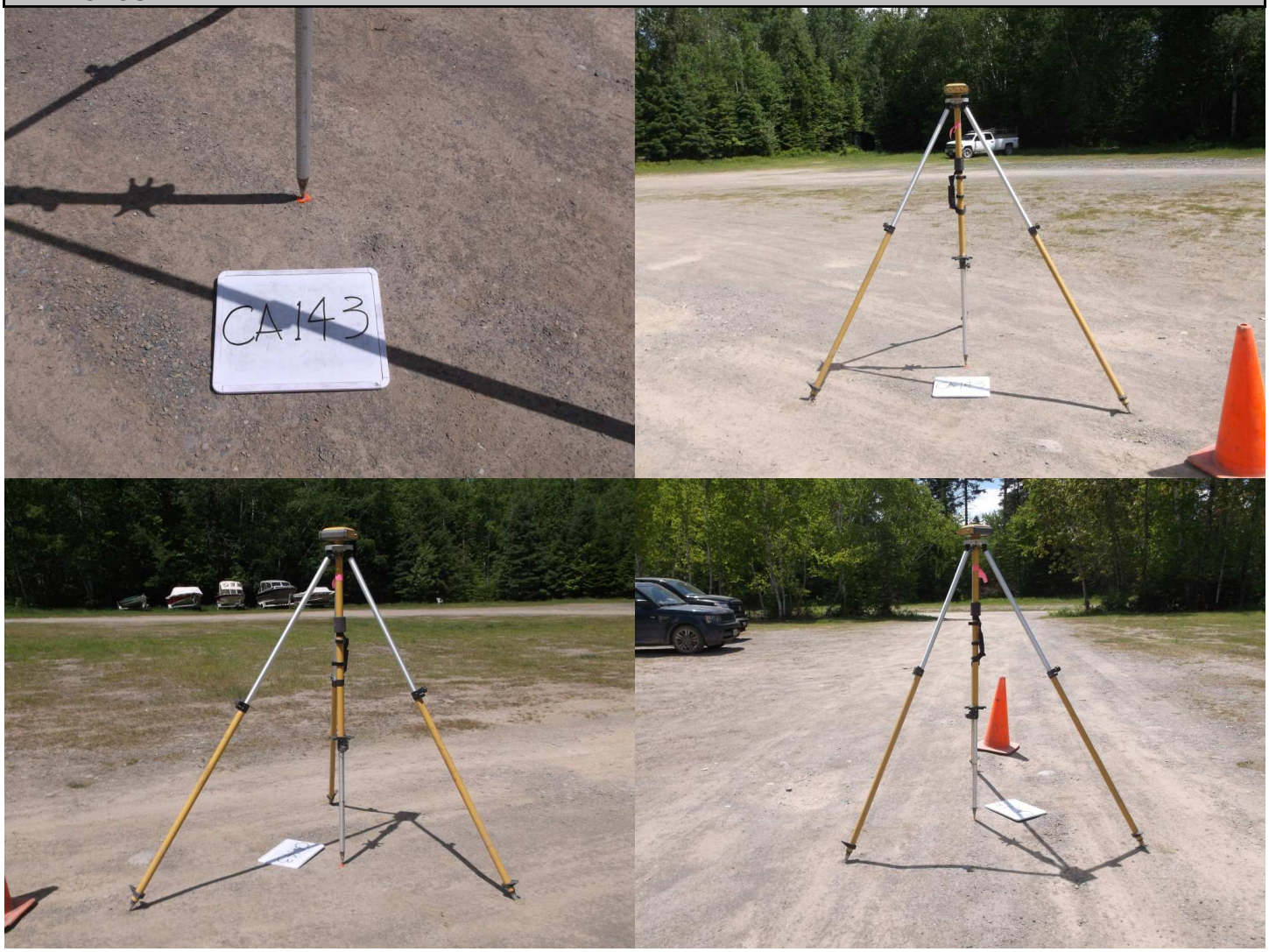
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113000.09	483672.87	291.21

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA147
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

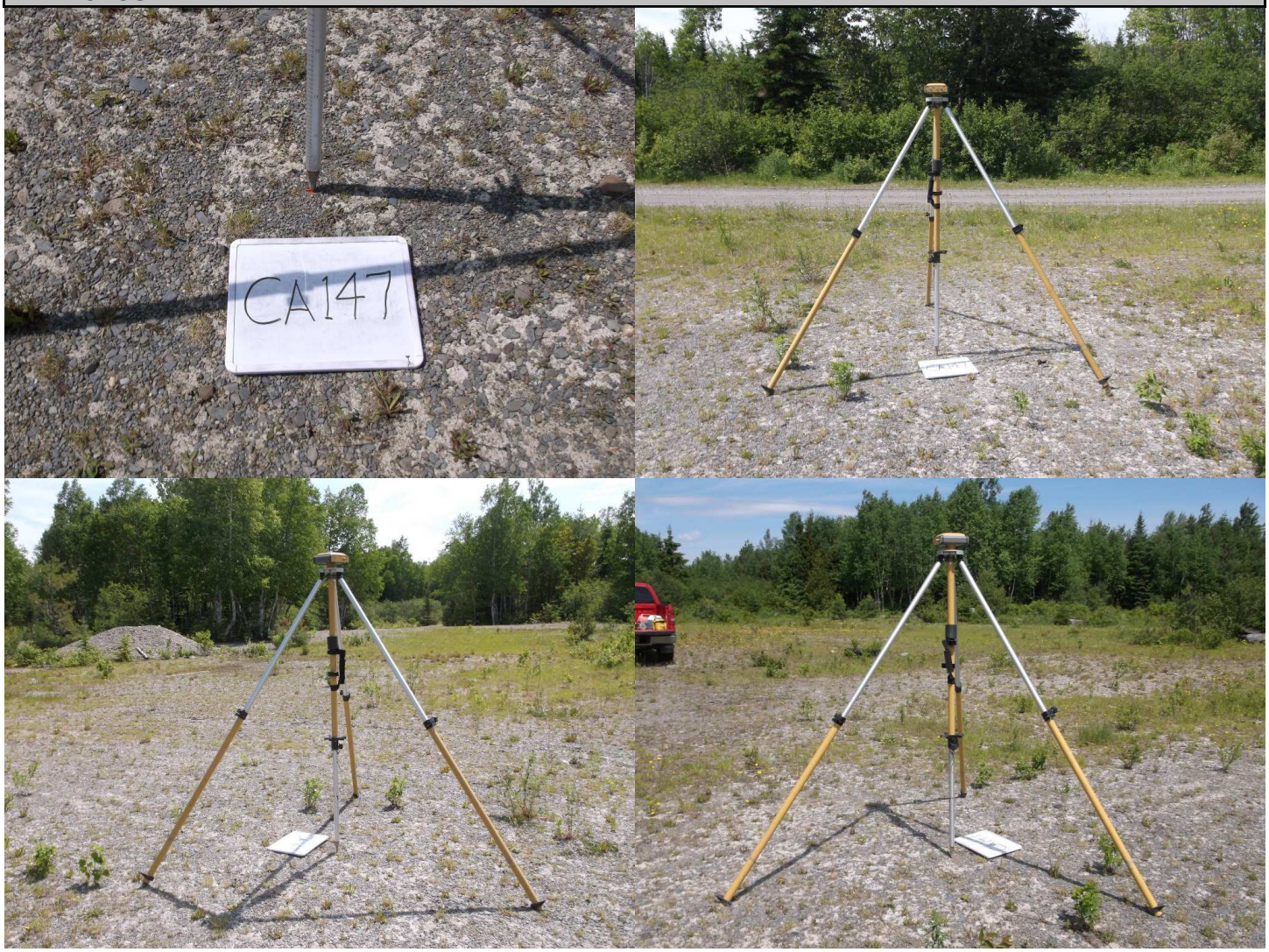
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5095423.11	457644.33	320.28

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA148
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5107527.91	457119.41	362.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA149
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5117850.22	450298.11	309.99

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA150
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5099404.59	447866.35	438.39

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA151
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

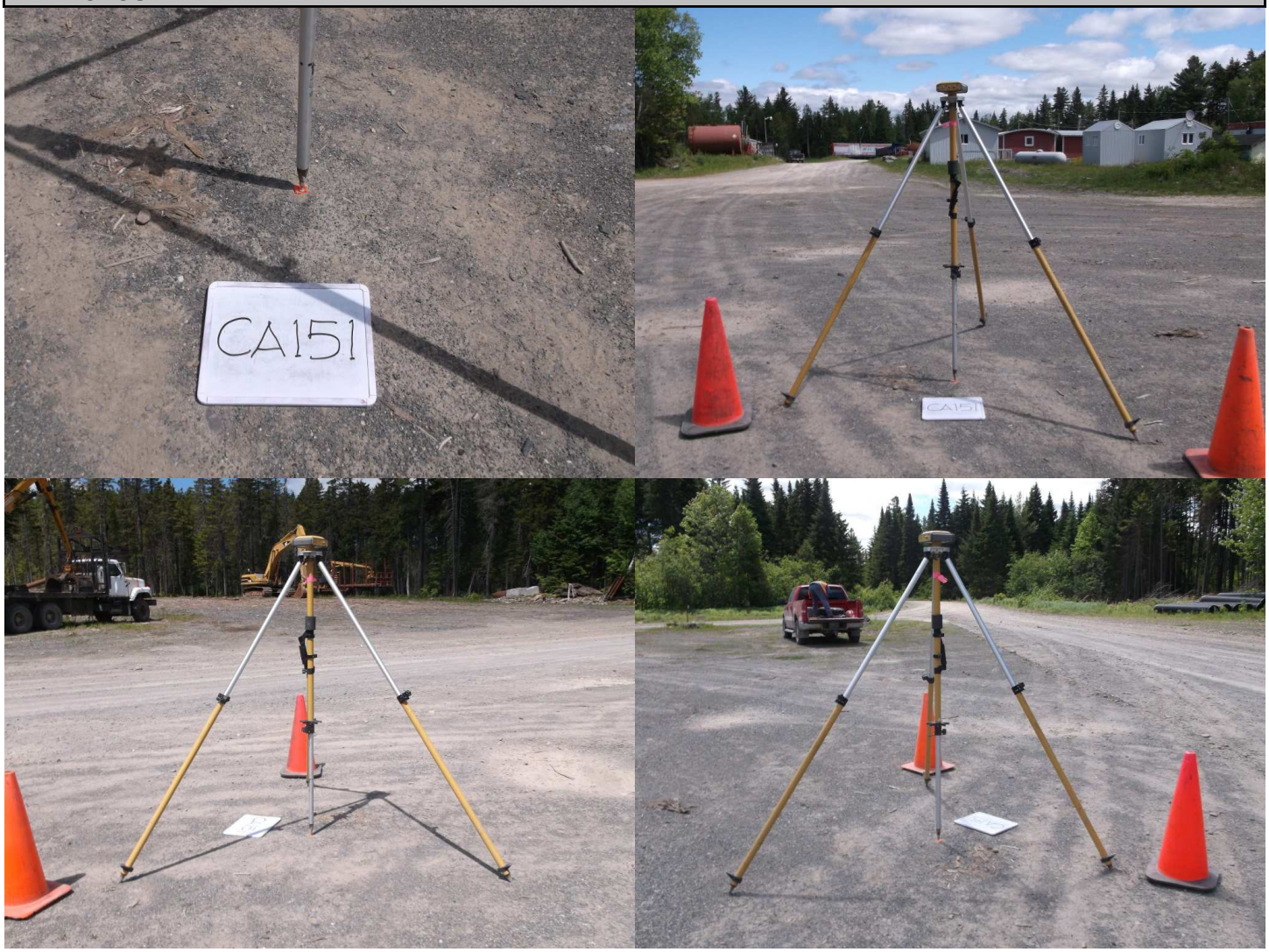
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127256.59	467300.49	315.35

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA152
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

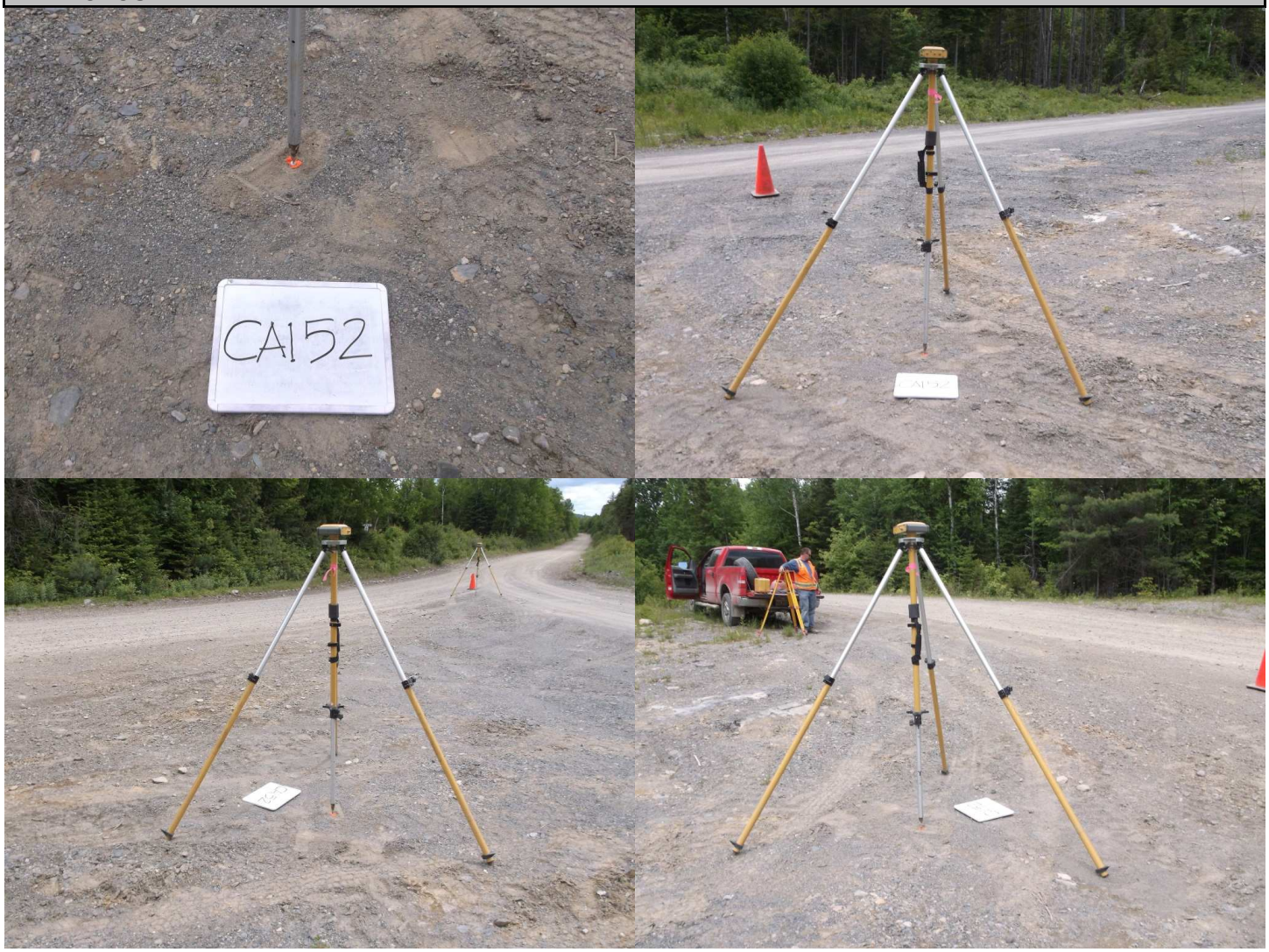
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5142724.61	470891.77	316.88

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA153
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5143008.04	451479.47	443.51

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA154
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5244519.84	549471.84	195.00

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA155
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5244623.00	551937.13	172.33

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA156
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5104136.97	523215.45	239.55

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA158
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5090680.06	472029.06	321.80

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA159
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110907.54	474097.37	311.57

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA160
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5135892.49	468004.37	302.31

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA161
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5134467.38	453336.73	352.51

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA162
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5099967.12	476524.59	349.05

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA163
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5080252.41	489086.88	222.31

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.002
RMSE Z	0.004
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA164
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5079736.83	524648.24	221.11

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.017
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA165
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

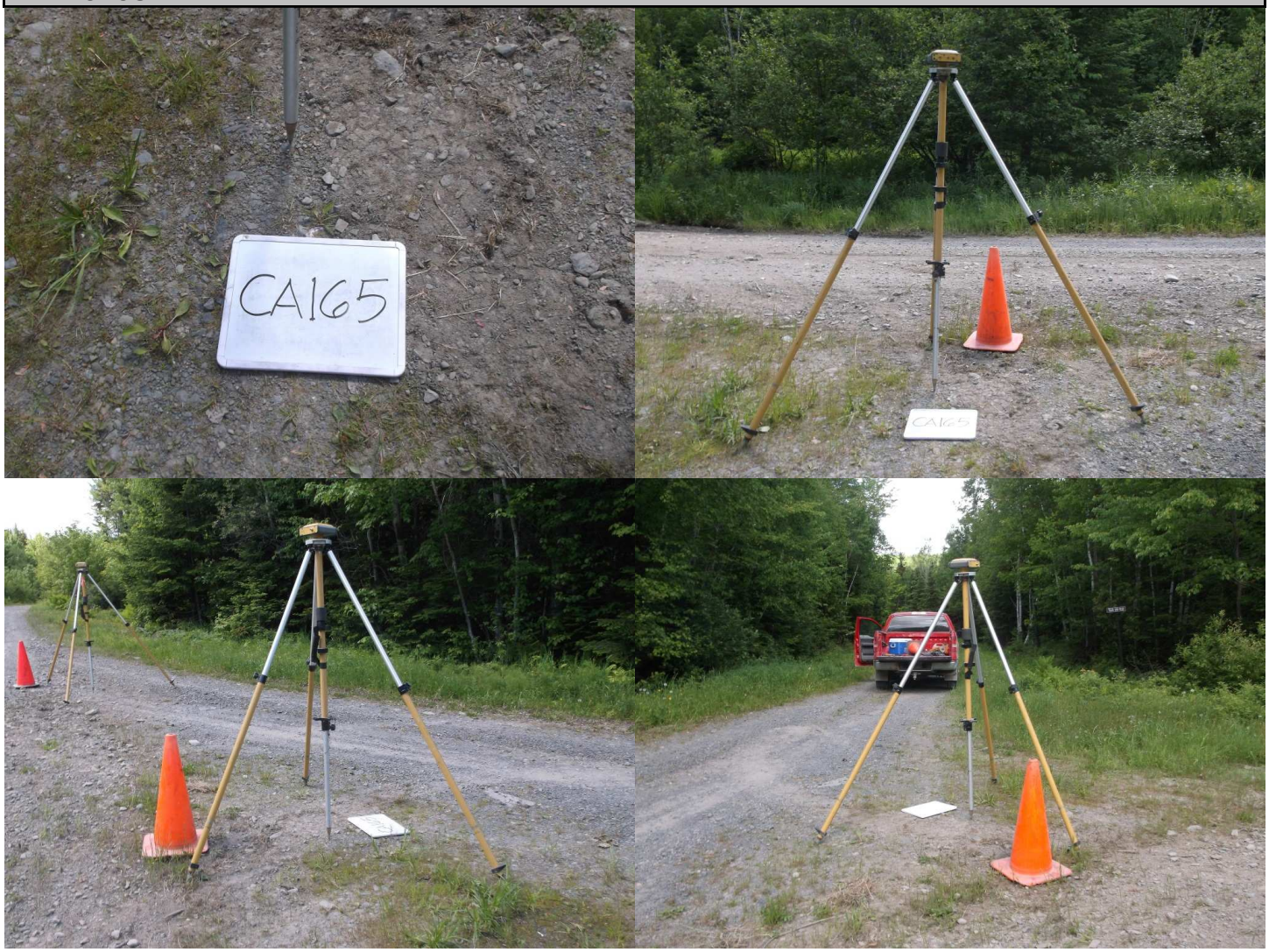
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5108390.35	493314.57	308.18

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA166
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5064921.78	500796.63	204.97

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA167
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116934.88	459157.74	309.48

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-13-2017
RMSE Hz	0.018
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA169
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5146224.43	463204.25	375.07

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA170
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

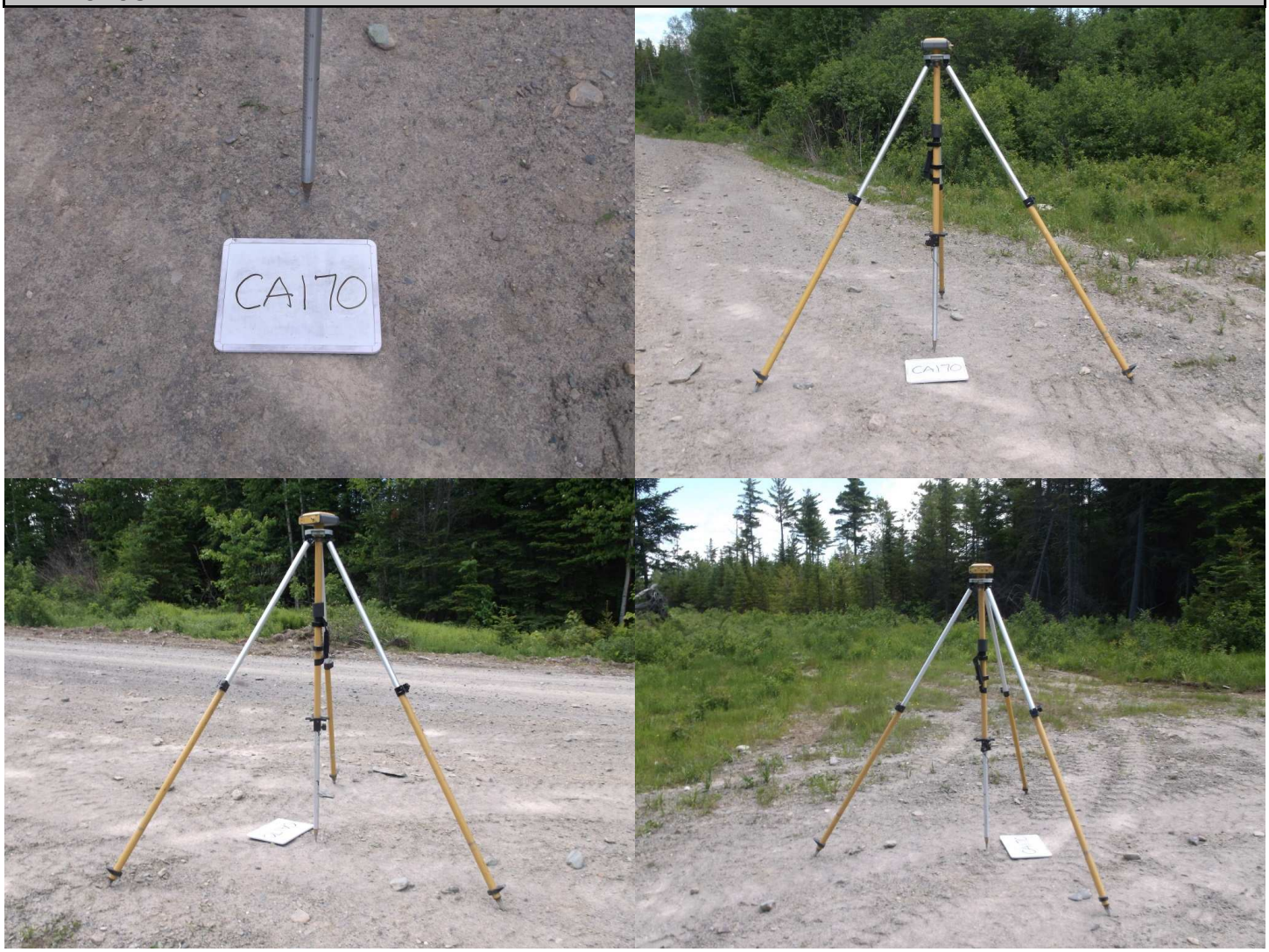
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5134152.67	463685.29	340.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-14-2017
RMSE Hz	0.024
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA171
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5112288.06	511399.93	208.37

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-28-2017
RMSE Hz	0.018
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:

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Point ID	CA172
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5082983.47	496927.50	325.14

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA173
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5097953.73	521209.98	141.62

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-07-2017
RMSE Hz	0.020
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA174
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5096383.14	494562.10	419.34

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-15-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA175
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

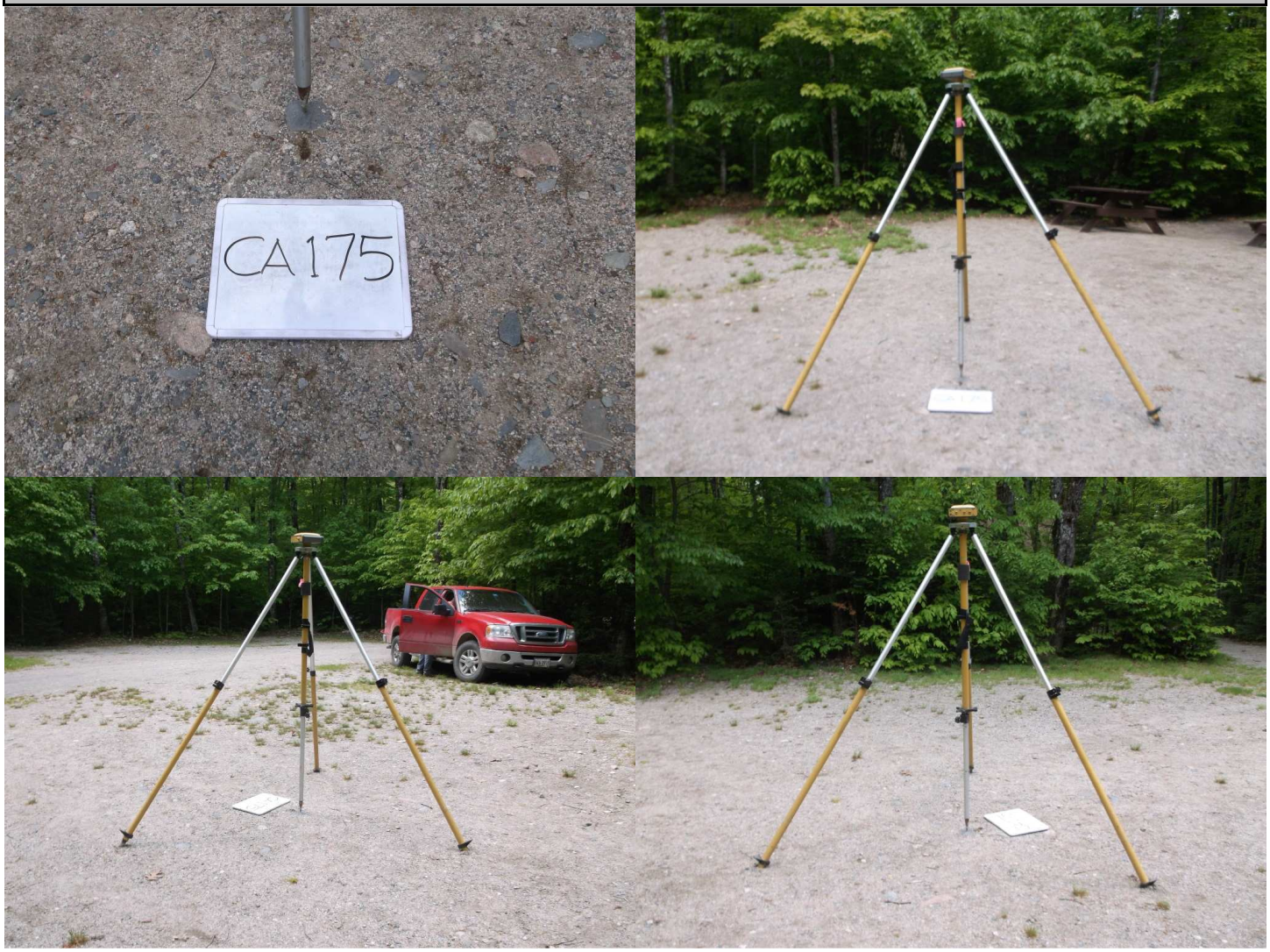
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5081983.01	512094.76	364.48

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA176
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

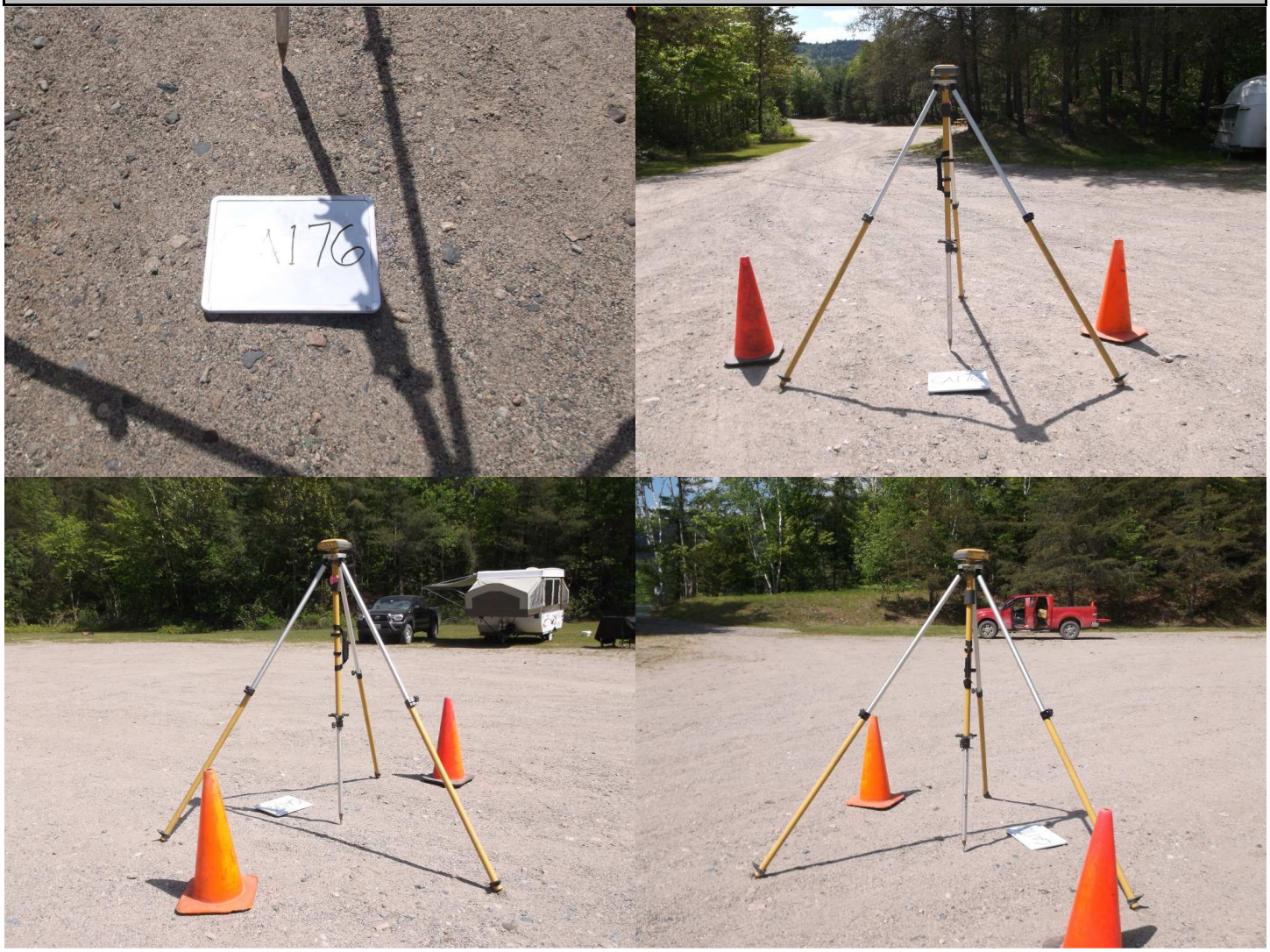
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5077281.31	495020.08	181.98

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA178
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

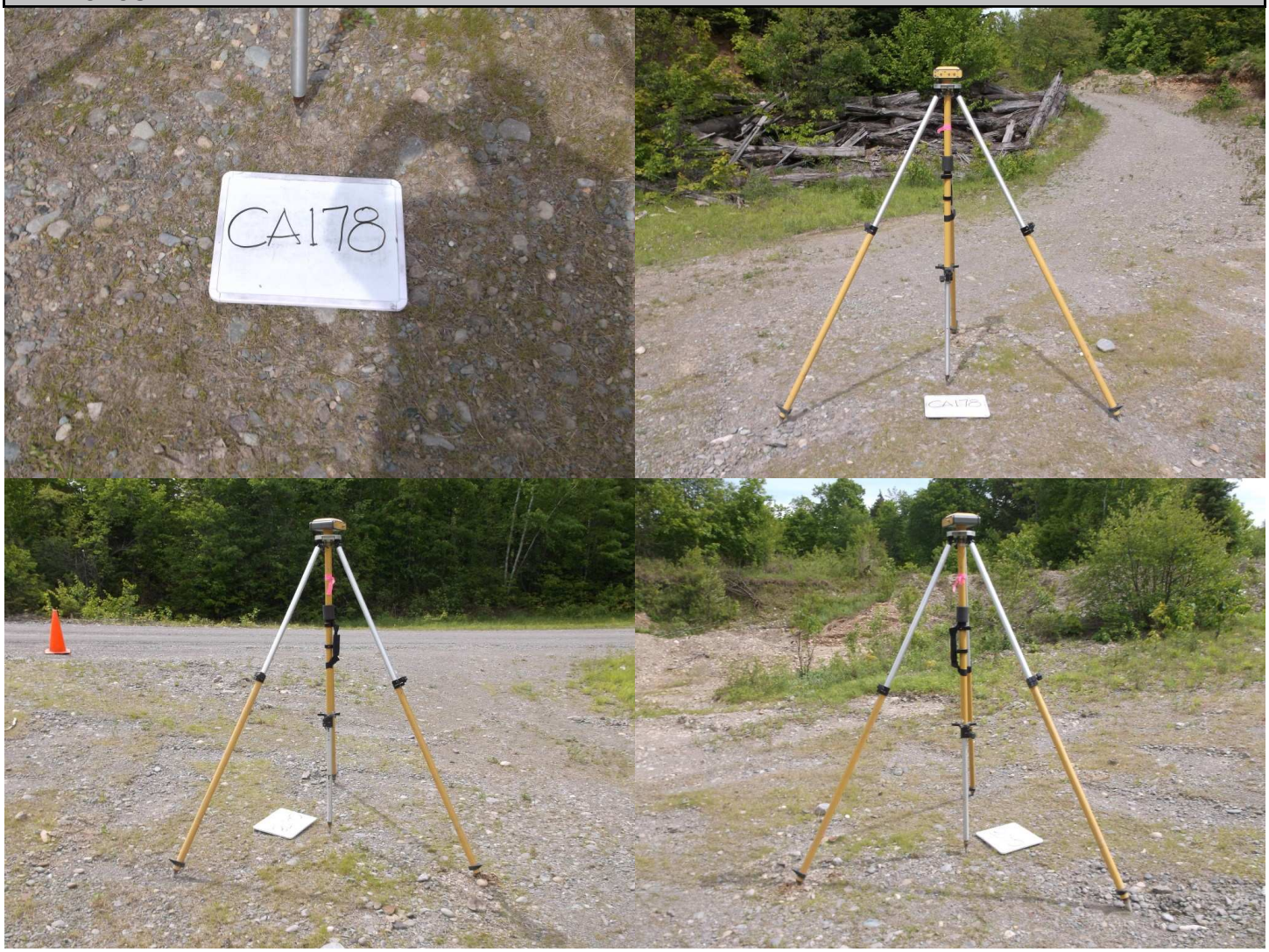
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5090854.03	529580.02	114.84

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-06-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA179
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5027087.74	566899.18	165.16

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.010
RMSE Z	0.021
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA180
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Sagadahoc
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4871255.88	428763.71	20.18

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA181
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Sagadahoc
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4870342.16	428506.30	33.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	CA182
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Sagadahoc
Quad	

	Aerial Target
X	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4868131.46	428248.48	2.60

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

FO Data Sheets

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO01
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940133.01	563576.76	46.32

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-20-2017
Occupy PT	BE02
Back Sight PT	CA02
RMSE Hz	0.008
RMSE Z	0.018

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO02
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4940089.55	574750.78	61.39

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-20-2017
Occupy PT	CA03
Back Sight PT	BE03
RMSE Hz	0.008
RMSE Z	0.015

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO03
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4947583.38	558142.80	48.82

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-19-2017
Occupy PT	CA04
Back Sight PT	UA01
RMSE Hz	0.010
RMSE Z	0.014

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO04
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4942622.89	587007.36	52.17

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-20-2017
Occupy PT	CA06
Back Sight PT	BE05
RMSE Hz	0.007
RMSE Z	0.014

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO05
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4945757.38	597184.41	20.22

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-20-2017
Occupy PT	BE06
Back Sight PT	CA08
RMSE Hz	0.001
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO06
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4959078.36	639136.01	35.66

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-25-2017
Occupy PT	BE11
Back Sight PT	CA13
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO07
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4971857.65	633482.18	46.68

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-27-2017
Occupy PT	BE13
Back Sight PT	CA15
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO08
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968522.39	624687.69	33.79

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-25-2017
Occupy PT	CA16
Back Sight PT	BE14
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO09
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4969267.58	585577.63	135.70

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	4-25-2017
Occupy PT	CA19
Back Sight PT	904
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO10
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4964550.25	558808.16	92.31

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-19-2017
Occupy PT	CA21
Back Sight PT	BE18
RMSE Hz	0.009
RMSE Z	0.017

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO11
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4958381.38	567414.38	119.80

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-19-2017
Occupy PT	CA22
Back Sight PT	BE19
RMSE Hz	0.007
RMSE Z	0.012

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO12
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4977782.11	570250.83	113.34

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-28-2017
Occupy PT	CA24
Back Sight PT	BE21
RMSE Hz	0.007
RMSE Z	0.014

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO13
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979614.88	585457.87	106.38

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-22-2017
Occupy PT	CA25
Back Sight PT	BE22
RMSE Hz	0.017
RMSE Z	0.029

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO14
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4978014.58	602697.24	101.81

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-25-2017
Occupy PT	CA26
Back Sight PT	BE23
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

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Point ID	FO15
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4978183.46	616950.27	51.21

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-27-2017
Occupy PT	CA27
Back Sight PT	BE24
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

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Point ID	FO17
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988802.28	613659.12	60.58

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-27-2017
Occupy PT	BE28
Back Sight PT	CA32
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

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Point ID	FO18
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988755.30	601750.54	75.81

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-30-2017
Occupy PT	CA33
Back Sight PT	BE29
RMSE Hz	0.016
RMSE Z	0.027

PHOTOS:

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Point ID	FO19
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988991.96	588914.57	75.27

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-22-2017
Occupy PT	BE30
Back Sight PT	CA34
RMSE Hz	0.017
RMSE Z	0.029

PHOTOS:

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Point ID	FO20
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988853.87	577992.38	120.80

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-22-2017
Occupy PT	CA35
Back Sight PT	BE31
RMSE Hz	0.017
RMSE Z	0.029

PHOTOS:

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Point ID	FO21
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987518.48	563681.32	111.54

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-28-2017
Occupy PT	CA36
Back Sight PT	BE32
RMSE Hz	0.006
RMSE Z	0.014

PHOTOS:

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Point ID	FO22
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4987633.93	551535.46	131.58

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-28-2017
Occupy PT	CA37
Back Sight PT	BE33
RMSE Hz	0.015
RMSE Z	0.024

PHOTOS:

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Point ID	FO23
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5001205.22	553679.85	85.53

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-01-2017
Occupy PT	CA38
Back Sight PT	BE34
RMSE Hz	0.012
RMSE Z	0.017

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO24
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5000358.14	567309.39	219.19

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-01-2017
Occupy PT	CA39
Back Sight PT	BE35
RMSE Hz	0.010
RMSE Z	0.026

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO25
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999061.72	599111.87	70.64

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-30-2017
Occupy PT	CA41
Back Sight PT	BE37
RMSE Hz	0.016
RMSE Z	0.027

PHOTOS:

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Point ID	FO26
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4999435.57	609519.62	66.05

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-30-2017
Occupy PT	CA42
Back Sight PT	BE38
RMSE Hz	0.016
RMSE Z	0.027

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Point ID	FO27
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4995661.13	622060.35	59.83

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-27-2017
Occupy PT	CA43
Back Sight PT	BE39
RMSE Hz	0.002
RMSE Z	0.002

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Point ID	FO28
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008643.19	600776.03	68.82

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-30-2017
Occupy PT	CA46
Back Sight PT	BE40
RMSE Hz	0.016
RMSE Z	0.027

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO29
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022184.19	614354.63	103.46

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-25-2017
Occupy PT	CA47
Back Sight PT	BE41
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

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Point ID	FO30
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021625.82	602261.74	106.74

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	CA48
Back Sight PT	BE42
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO31
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021178.80	587697.57	151.45

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-25-2017
Occupy PT	CA49
Back Sight PT	BE43
RMSE Hz	0.008
RMSE Z	0.023

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO32
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5010270.39	570858.50	122.23

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-01-2017
Occupy PT	BE45
Back Sight PT	CA51
RMSE Hz	0.007
RMSE Z	0.012

PHOTOS:

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Point ID	FO33
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5019342.81	547830.23	185.41

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-03-2017
Occupy PT	CA54
Back Sight PT	BE48
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO34
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022524.19	537051.55	65.21

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	UA06
Back Sight PT	CA55
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO35
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5015969.64	529750.49	57.81

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	BE49
Back Sight PT	CA56
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO36
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5028342.48	585841.06	154.98

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	CA58
Back Sight PT	BE51
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO37
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029972.00	597686.62	137.67

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	CA59
Back Sight PT	BE52
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO38
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5029267.41	619831.95	94.52

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-25-2017
Occupy PT	CA61
Back Sight PT	BE54
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO39
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040753.30	611578.88	139.86

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	CA62
Back Sight PT	BE55
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

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Point ID	FO40
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037865.10	560848.80	119.74

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-25-2017
Occupy PT	CA65
Back Sight PT	BE56
RMSE Hz	0.010
RMSE Z	0.016

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO41
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5033830.59	540755.44	57.90

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	BE57
Back Sight PT	CA67
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO42
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5023008.37	522793.49	72.19

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	CA68
Back Sight PT	BE58
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO43
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5033217.37	531864.07	102.09

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	903
Back Sight PT	CA69
RMSE Hz	0.002
RMSE Z	0.002

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO44
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5021362.43	511406.45	115.50

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-02-2017
Occupy PT	CA70
Back Sight PT	BE61
RMSE Hz	0.009
RMSE Z	0.017

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO45
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5017046.89	490384.78	201.24

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-09-2017
Occupy PT	CA72
Back Sight PT	BE62
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO46
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032550.22	517318.10	171.91

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-02-2017
Occupy PT	CA73
Back Sight PT	BE63
RMSE Hz	0.008
RMSE Z	0.014

PHOTOS:

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JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO47
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5031717.31	499068.13	134.56

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-09-2017
Occupy PT	CA74
Back Sight PT	BE64
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

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Point ID	FO48
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5032382.38	486461.22	177.09

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-09-2017
Occupy PT	CA75
Back Sight PT	BE65
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

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Point ID	FO49
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5025730.00	478502.33	281.91

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	06-05-2017
Occupy PT	CA76
Back Sight PT	BE66
RMSE Hz	0.009
RMSE Z	0.016

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO50
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5043653.52	499269.26	299.01

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	06-05-2017
Occupy PT	CA77
Back Sight PT	BE67
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO51
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042715.78	509223.97	164.55

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-02-2017
Occupy PT	CA78
Back Sight PT	BE68
RMSE Hz	0.011
RMSE Z	0.018

PHOTOS:

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Point ID	FO52
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5044649.90	561716.26	109.36

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-10-2017
Occupy PT	CA82
Back Sight PT	BE71
RMSE Hz	0.013
RMSE Z	0.021

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO53
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5046512.78	571809.83	117.22

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-10-2017
Occupy PT	CA83
Back Sight PT	BE72
RMSE Hz	0.021
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO54
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048148.90	581599.87	166.77

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-08-2017
Occupy PT	CA84
Back Sight PT	BE73
RMSE Hz	0.018
RMSE Z	0.028

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO55
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5048290.34	593608.30	154.08

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	CA85
Back Sight PT	BE74
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO56
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056906.74	588880.14	143.60

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-08-2017
Occupy PT	CA87
Back Sight PT	UA10
RMSE Hz	0.017
RMSE Z	0.029

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO57
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5057882.01	562137.50	165.81

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-10-2017
Occupy PT	CA89
Back Sight PT	BE76
RMSE Hz	0.021
RMSE Z	0.030

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO58
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5063797.22	566687.29	162.98

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-10-2017
Occupy PT	CA92
Back Sight PT	UA12
RMSE Hz	0.023
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO59
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5076051.76	578901.25	117.70

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-11-2017
Occupy PT	CA93
Back Sight PT	UA13
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO60
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073525.77	590001.36	145.30

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-11-2017
Occupy PT	CA94
Back Sight PT	BE78
RMSE Hz	0.019
RMSE Z	0.030

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO61
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058046.66	539201.00	131.28

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	CA96
Back Sight PT	UA15
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO62
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056523.92	523072.84	110.84

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	04-24-2017
Occupy PT	CA97
Back Sight PT	UA16
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO63
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5049988.39	513983.87	154.31

Operator	Rob Prescott
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	06-02-2017
Occupy PT	CA99
Back Sight PT	BE79
RMSE Hz	0.011
RMSE Z	0.018

PHOTOS:

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Point ID	FO64
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5040589.28	483636.92	493.48

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	06-05-2017
Occupy PT	CA100
Back Sight PT	BE80
RMSE Hz	0.010
RMSE Z	0.019

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Point ID	FO65
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5053063.38	487004.41	395.80

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	06-05-2017
Occupy PT	CA101
Back Sight PT	BE81
RMSE Hz	0.015
RMSE Z	0.025

PHOTOS:

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Point ID	FO66
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5086237.32	578385.76	177.44

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-11-2017
Occupy PT	CA103
Back Sight PT	BE83
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

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Point ID	FO67
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5094103.18	588028.97	132.09

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-11-2017
Occupy PT	CA104
Back Sight PT	UA18
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

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Point ID	FO68
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5105949.00	580307.69	125.75

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-16-2017
Occupy PT	UA22
Back Sight PT	CA108
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

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Point ID	FO69
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110260.41	580948.34	164.53

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-16-2017
Occupy PT	UA23
Back Sight PT	CA109
RMSE Hz	0.005
RMSE Z	0.005

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO70
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121962.58	580568.45	175.61

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA111
Back Sight PT	BE84
RMSE Hz	0.017
RMSE Z	0.028

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO71
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

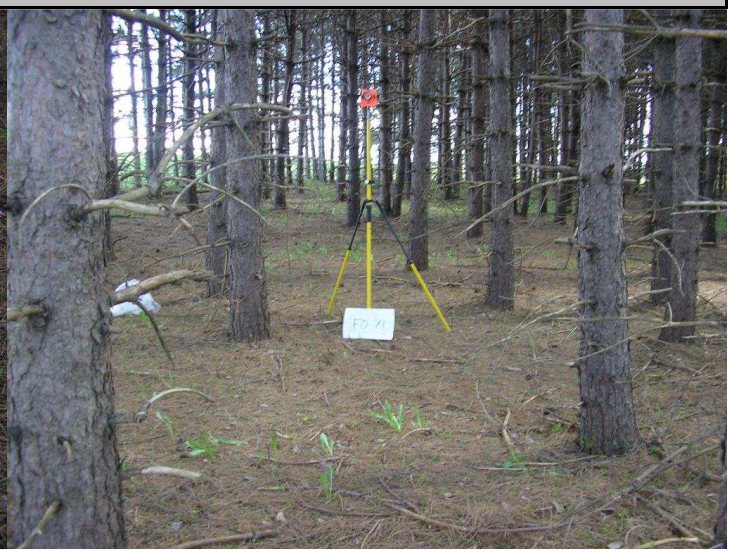
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5178260.72	586287.95	179.78

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	UA29
Back Sight PT	CA116
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO72
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5198280.68	583644.84	203.22

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA118
Back Sight PT	UA30
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO73
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5208032.39	590598.38	233.88

Operator	John Allen
Instrument Model	Topcon GTS313
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA119
Back Sight PT	UA31
RMSE Hz	0.005
RMSE Z	0.005

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO74
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5121062.66	570175.72	256.63

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA121
Back Sight PT	BE87
RMSE Hz	0.017
RMSE Z	0.028

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO75
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5131107.64	558406.49	206.44

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA123
Back Sight PT	BE89
RMSE Hz	0.018
RMSE Z	0.029

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO76
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5133685.34	549828.36	270.05

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA124
Back Sight PT	BE90
RMSE Hz	0.018
RMSE Z	0.029

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO77
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5118656.27	548560.26	262.54

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-07-2017
Occupy PT	CA125
Back Sight PT	BE91
RMSE Hz	0.016
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO78
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127858.62	541469.85	300.61

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA126
Back Sight PT	BE92
RMSE Hz	0.018
RMSE Z	0.029

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO79
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113920.43	539211.75	334.27

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-07-2017
Occupy PT	CA127
Back Sight PT	BE93
RMSE Hz	0.020
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO80
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5101469.82	543228.05	264.32

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-23-2017
Occupy PT	CA128
Back Sight PT	BE94
RMSE Hz	0.021
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO81
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5093875.05	536700.05	261.84

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-23-2017
Occupy PT	CA133
Back Sight PT	BE97
RMSE Hz	0.021
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO82
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100761.17	536663.97	285.23

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-23-2017
Occupy PT	CA134
Back Sight PT	BE98
RMSE Hz	0.021
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO83
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073759.29	526848.54	170.32

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-06-2017
Occupy PT	CA135
Back Sight PT	BE99
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO84
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116064.44	526621.55	242.49

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-07-2017
Occupy PT	CA136
Back Sight PT	BE100
RMSE Hz	0.020
RMSE Z	0.030

PHOTOS:

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Point ID	FO85
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5062583.13	486357.12	295.87

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-06-2017
Occupy PT	CA137
Back Sight PT	BE101
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO86
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5075760.39	502864.51	181.03

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-08-2017
Occupy PT	CA139
Back Sight PT	BE103
RMSE Hz	0.017
RMSE Z	0.030

PHOTOS:

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Point ID	FO87
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5089781.16	486231.14	346.66

Operator	Rob Prescott
Instrument Model	Topcon DS203AC
Date (MM-DD-YYYY)	04-18-2017
Occupy PT	CA140
Back Sight PT	BE104
RMSE Hz	0.005
RMSE Z	0.006

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO88
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5085982.72	455237.73	335.60

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-13-2017
Occupy PT	CA141
Back Sight PT	BE105
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO89
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5100208.15	486205.16	379.21

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-15-2017
Occupy PT	CA142
Back Sight PT	BE106
RMSE Hz	0.022
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO90
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5113010.16	483730.06	291.72

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-15-2017
Occupy PT	CA143
Back Sight PT	BE107
RMSE Hz	0.022
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO91
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5123746.72	484850.90	304.49

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-20-2017
Occupy PT	CA144
Back Sight PT	BE108
RMSE Hz	0.008
RMSE Z	0.023

PHOTOS:

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Point ID	FO92
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5134556.56	487149.69	356.78

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-20-2017
Occupy PT	CA145
Back Sight PT	929
RMSE Hz	0.008
RMSE Z	0.023

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO93
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5144469.57	487667.68	315.33

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-20-2017
Occupy PT	CA146
Back Sight PT	BE109
RMSE Hz	0.008
RMSE Z	0.023

PHOTOS:

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Point ID	FO94
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5095507.63	457639.47	319.83

Operator	Rob Prescott
Instrument Model	Topcon DS203AC
Date (MM-DD-YYYY)	06-13-2017
Occupy PT	CA147
Back Sight PT	BE110
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

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Point ID	FO95
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5107488.86	457225.51	363.65

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-13-2017
Occupy PT	CA148
Back Sight PT	BE111
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

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Point ID	FO96
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5117863.41	450267.15	311.70

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-13-2017
Occupy PT	CA149
Back Sight PT	BE112
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

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Point ID	FO97
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5127183.95	467278.71	315.30

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-14-2017
Occupy PT	CA151
Back Sight PT	BE114
RMSE Hz	0.024
RMSE Z	0.030

PHOTOS:

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Point ID	FO98
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5142756.51	470903.37	317.80

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-14-2017
Occupy PT	CA152
Back Sight PT	BE115
RMSE Hz	0.024
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	FO99
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5142964.27	451497.07	443.41

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-14-2017
Occupy PT	CA153
Back Sight PT	BE116
RMSE Hz	0.024
RMSE Z	0.030

PHOTOS:

SH Data Sheets

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH01
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4950028.45	567141.99	137.36

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-19-2017
Occupy PT	CA05
Back Sight PT	BE04
RMSE Hz	0.012
RMSE Z	0.020

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SHO2
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968564.00	609931.83	61.32

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH03
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

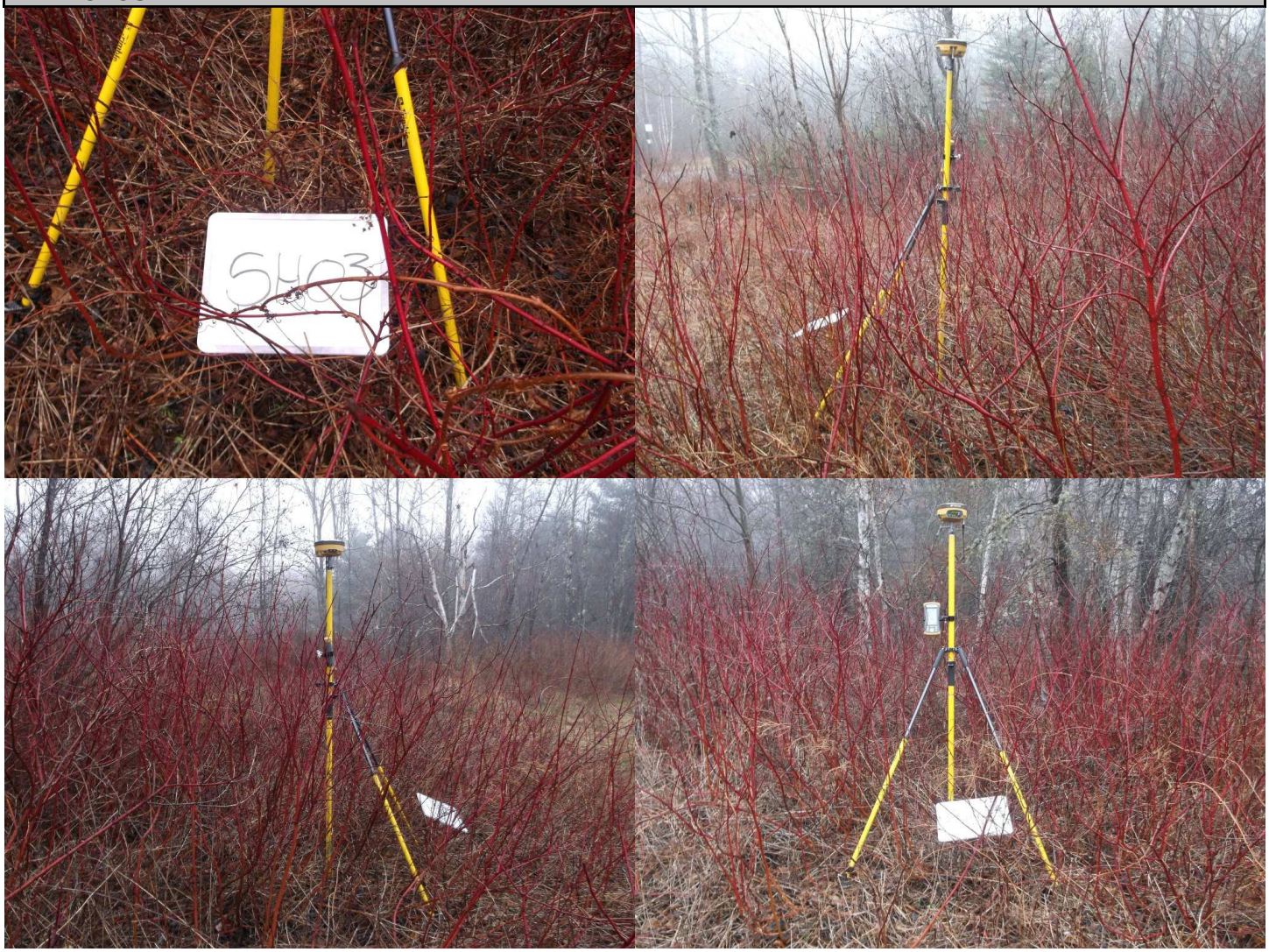
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4982143.22	627039.30	104.51

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH04
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4988377.83	628804.35	52.95

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH05
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008556.00	612370.90	69.19

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH06
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058243.28	575583.89	113.90

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-10-2017
Occupy PT	CA88
Back Sight PT	BE75
RMSE Hz	0.021
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH07
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5189491.20	583669.21	193.82

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-17-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH08
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5078983.25	538466.38	170.93

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.010
RMSE Z	0.012
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH09
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5090718.08	472048.51	323.96

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-13-2017
Occupy PT	CA158
Back Sight PT	BE119
RMSE Hz	0.018
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH10
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5116092.39	526668.43	242.27

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-07-2017
Occupy PT	CA136
Back Sight PT	BE100
RMSE Hz	0.020
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH11
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5104119.74	523225.42	239.28

Operator	Rob Prescott
Instrument Model	Topcon GTS 311
Date (MM-DD-YYYY)	06-07-2017
Occupy PT	CA156
Back Sight PT	BE117
RMSE Hz	0.020
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH12
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5073395.25	479006.47	286.31

Operator	Rob Prescott
Instrument Model	Topcon DS203AC
Date (MM-DD-YYYY)	04-18-2017
Occupy PT	CA138
Back Sight PT	BE102
RMSE Hz	0.005
RMSE Z	0.011

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH13
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5146291.22	463111.63	368.82

Operator	Rob Prescott
Instrument Model	Topcon DS203AC
Date (MM-DD-YYYY)	06-14-2017
Occupy PT	CA169
Back Sight PT	BE130
RMSE Hz	0.024
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH14
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5122239.13	508751.73	237.07

Operator	Rob Prescott
Instrument Model	Topcon DS203AC
Date (MM-DD-YYYY)	06-21-2017
Occupy PT	CA157
Back Sight PT	BE118
RMSE Hz	0.009
RMSE Z	0.023

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	SH15
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5133640.88	549815.22	268.71

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-24-2017
Occupy PT	CA124
Back Sight PT	BE90
RMSE Hz	0.018
RMSE Z	0.029

PHOTOS:

TW Data Sheets

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW01
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

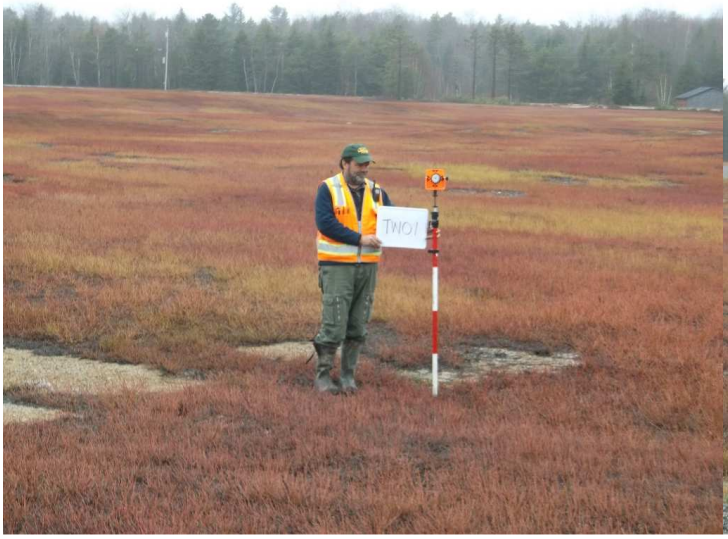
	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4932360.94	570882.14	75.54

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	04-20-2017
Occupy PT	CA01
Back Sight PT	BE01
RMSE Hz	0.010
RMSE Z	0.017

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW02
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4947773.71	606121.93	65.99

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW03
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

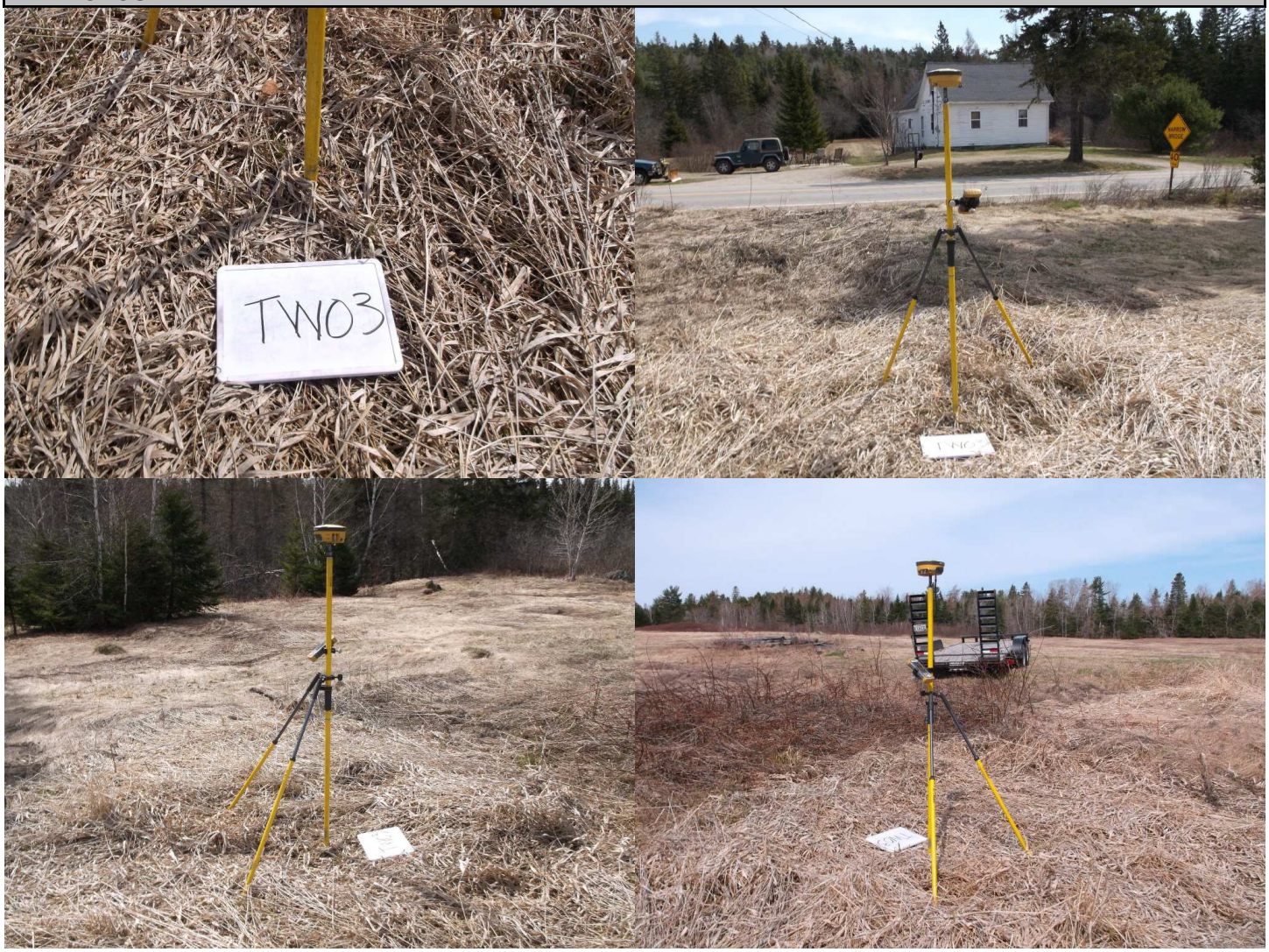
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960895.66	614491.56	29.54

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW04
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4960594.15	626510.27	52.78

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW05
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4968293.97	598842.18	70.66

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-25-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW06
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4976203.39	556780.21	144.09

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW07
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5030039.77	577005.67	203.72

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-04-2017
Occupy PT	CA57
Back Sight PT	BE50
RMSE Hz	0.007
RMSE Z	0.013

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW08
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5042618.37	596389.24	136.53

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-05-2017
Occupy PT	BE59
Back Sight PT	CA63
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW09
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037998.92	572013.46	189.62

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-04-2017
Occupy PT	BE60
Back Sight PT	CA64
RMSE Hz	0.011
RMSE Z	0.023

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW10
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5065466.50	587402.51	232.58

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-08-2017
Occupy PT	CA91
Back Sight PT	UA11
RMSE Hz	0.014
RMSE Z	0.028

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	TW11
Project No.	28794
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5083975.25	589997.18	207.38

Operator	Rob Prescott
Instrument Model	Topcon GTS311
Date (MM-DD-YYYY)	05-11-2017
Occupy PT	CA102
Back Sight PT	BE82
RMSE Hz	0.019
RMSE Z	0.030

PHOTOS:

UA Data Sheets

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA01
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Hancock
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

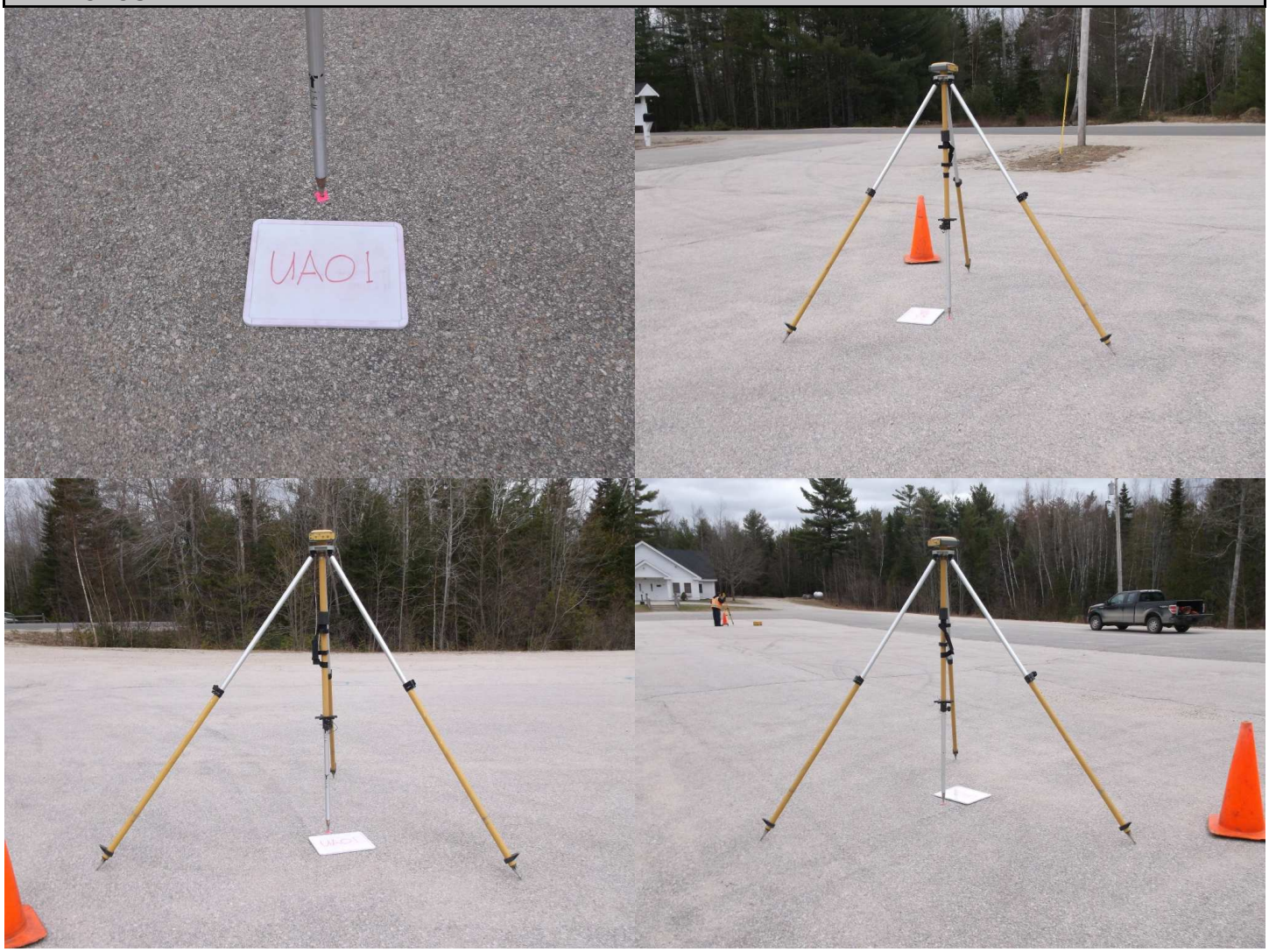
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4947604.86	558090.19	50.18

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.009
RMSE Z	0.014
Method	STATIC GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA02
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

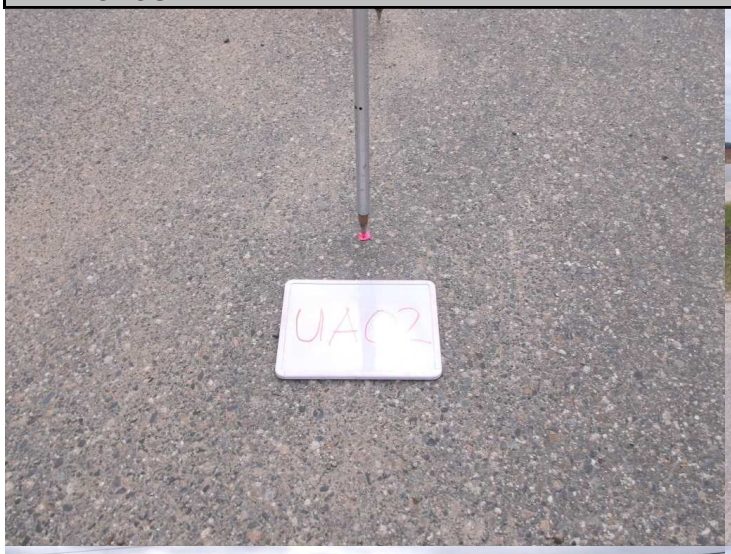
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4952798.72	580831.06	62.38

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-19-2017
RMSE Hz	0.010
RMSE Z	0.017
Method	STATIC GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA04
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4998961.80	632593.33	33.26

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA05
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5008626.67	612341.73	70.05

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA06
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022583.28	537023.37	65.70

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA07
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5037066.18	548923.85	71.66

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA08
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

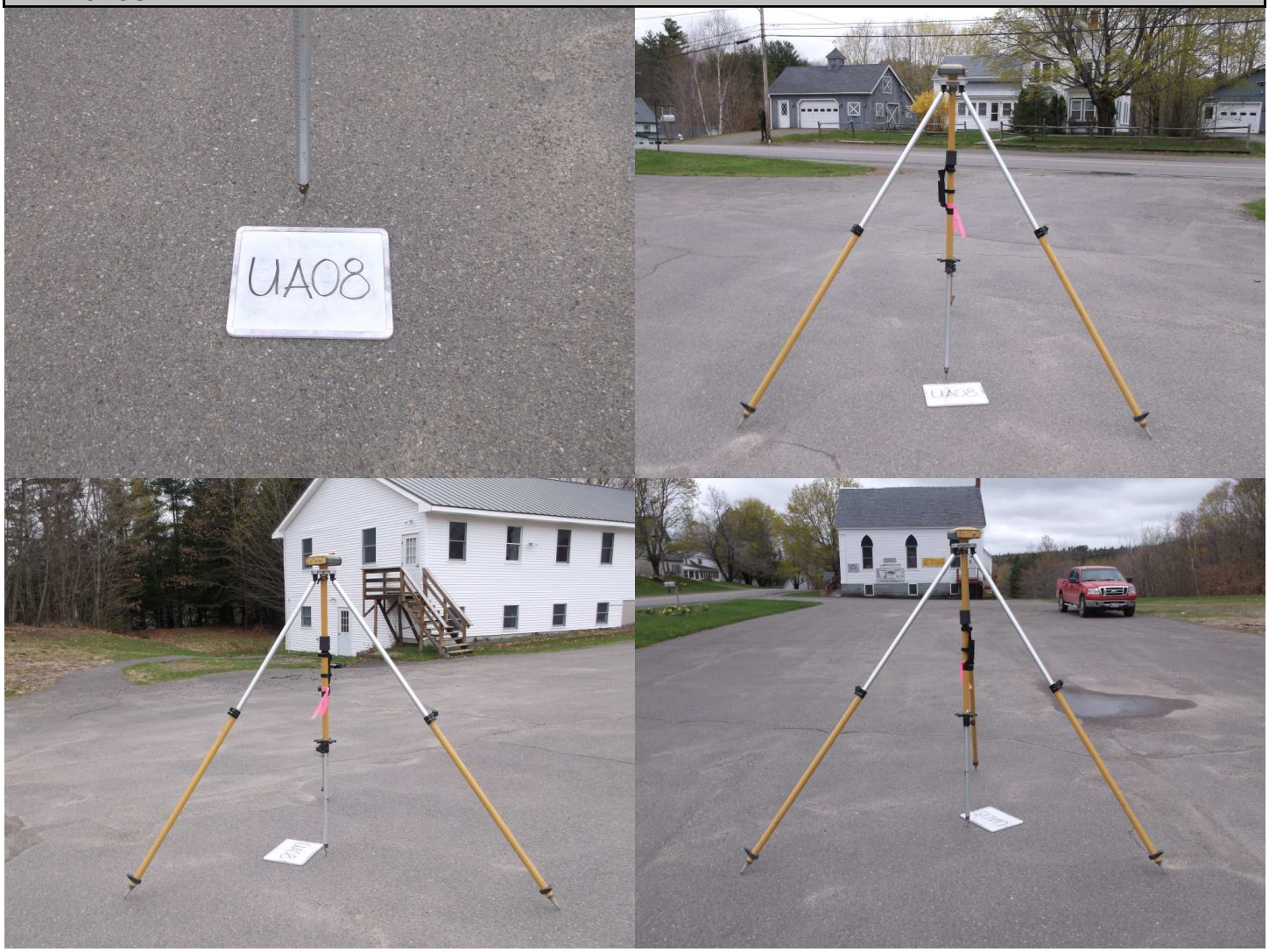
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5017431.81	497436.83	119.74

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-09-2017
RMSE Hz	0.015
RMSE Z	0.025
Method	STATIC GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA09
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5057325.92	599019.31	134.11

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.012
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA10
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056851.65	588845.42	147.73

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.016
RMSE Z	0.028
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA11
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5065469.67	587462.68	226.24

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.012
RMSE Z	0.027
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA12
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5063744.82	566628.68	165.13

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-10-2017
RMSE Hz	0.022
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA13
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5075941.07	578865.53	116.62

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA14
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5072440.64	545723.92	190.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA15
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

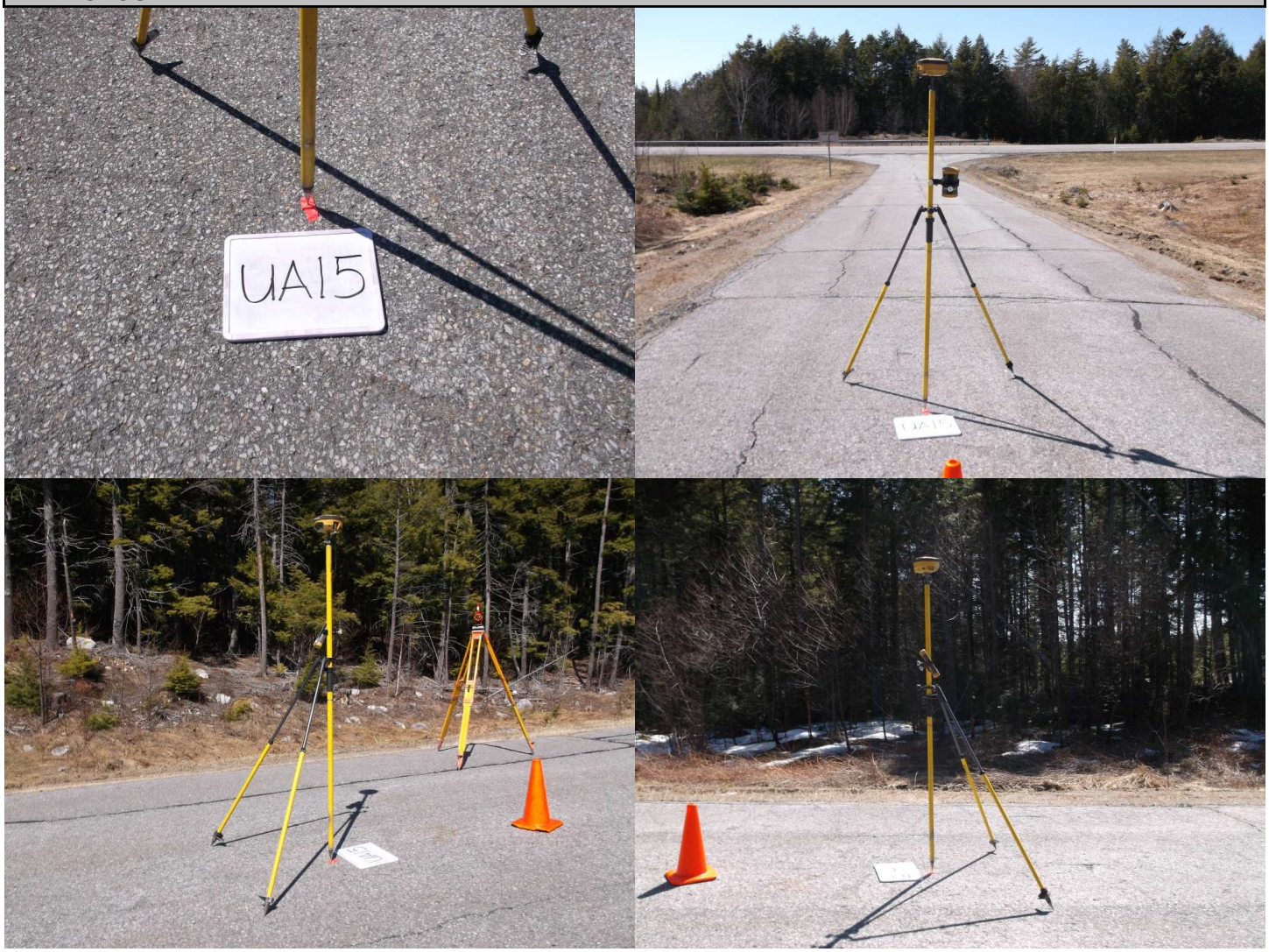
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5058005.62	539146.59	128.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA16
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5056543.32	522962.89	109.61

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA17
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5064008.00	512597.23	149.08

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	06-08-2017
RMSE Hz	0.014
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

SEWALL
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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA18
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5094110.24	588056.66	133.77

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-11-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA19
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5098858.34	580327.25	197.94

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA20
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5101281.70	588636.18	151.25

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

SEWALL
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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA21
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5107019.67	589126.52	123.61

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA22
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5105907.78	580289.81	127.48

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA23
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

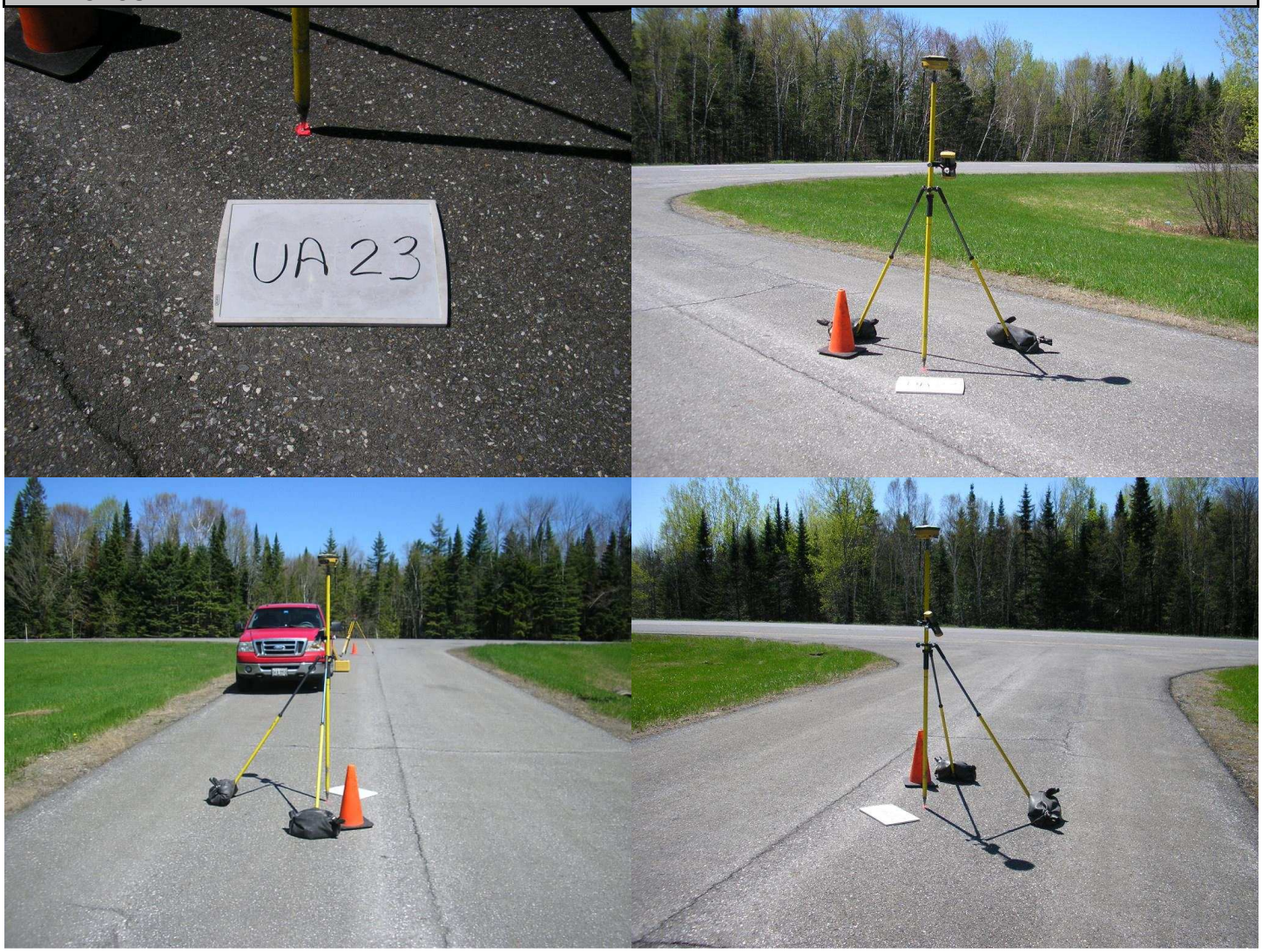
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110259.58	580923.34	167.05

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA24
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5117013.76	589428.56	125.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA25
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5128811.31	589374.86	130.41

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA26
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5141624.15	588816.84	124.69

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA27
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5151587.56	586700.90	147.89

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA28
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5165874.95	584207.45	200.30

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA29
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5178299.97	586299.86	183.12

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA30
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5198311.88	583624.66	207.08

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA31
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5208112.68	590714.26	233.85

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.002
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA32
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5093525.85	543479.64	165.83

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-22-2017
RMSE Hz	0.021
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA33
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5080310.28	545249.16	161.38

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA34
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

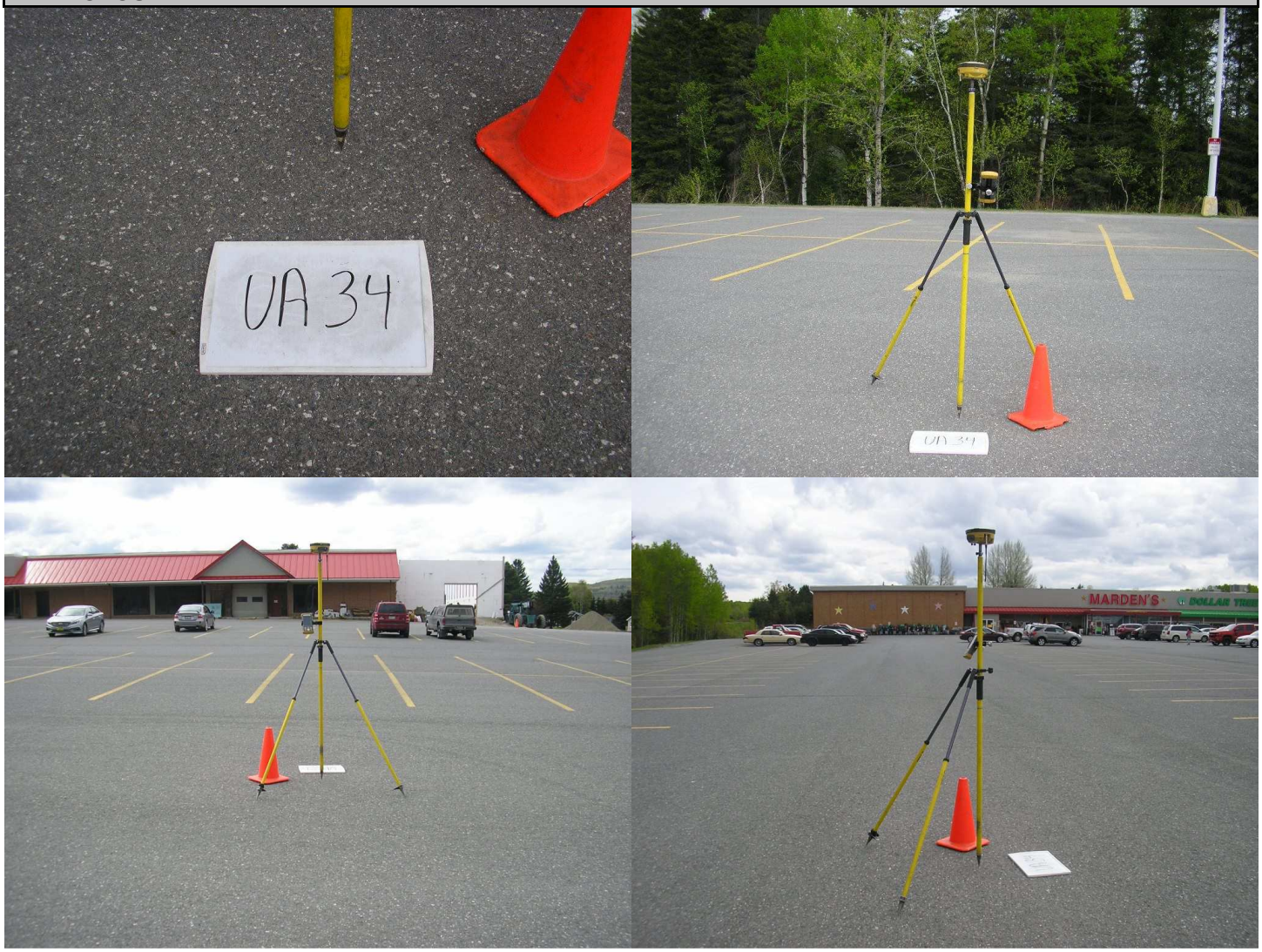
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5244482.44	549465.73	195.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



SEWALL
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James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA35
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5244614.88	551947.30	172.40

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA36
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5027096.05	566930.39	164.90

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-04-2017
RMSE Hz	0.009
RMSE Z	0.018
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA37
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5110979.99	589667.98	122.92

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA38
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

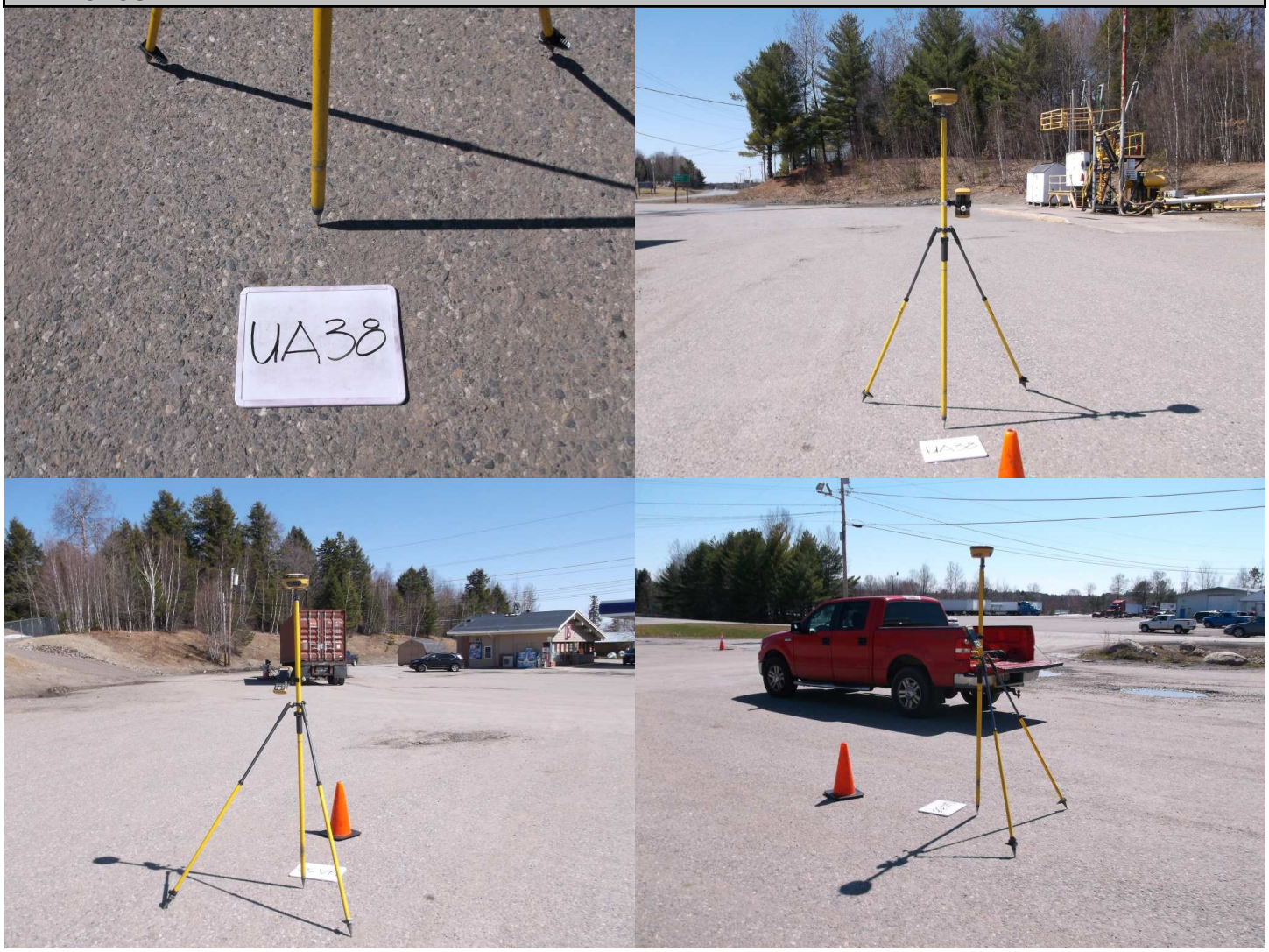
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5050853.36	537109.29	102.19

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA39
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

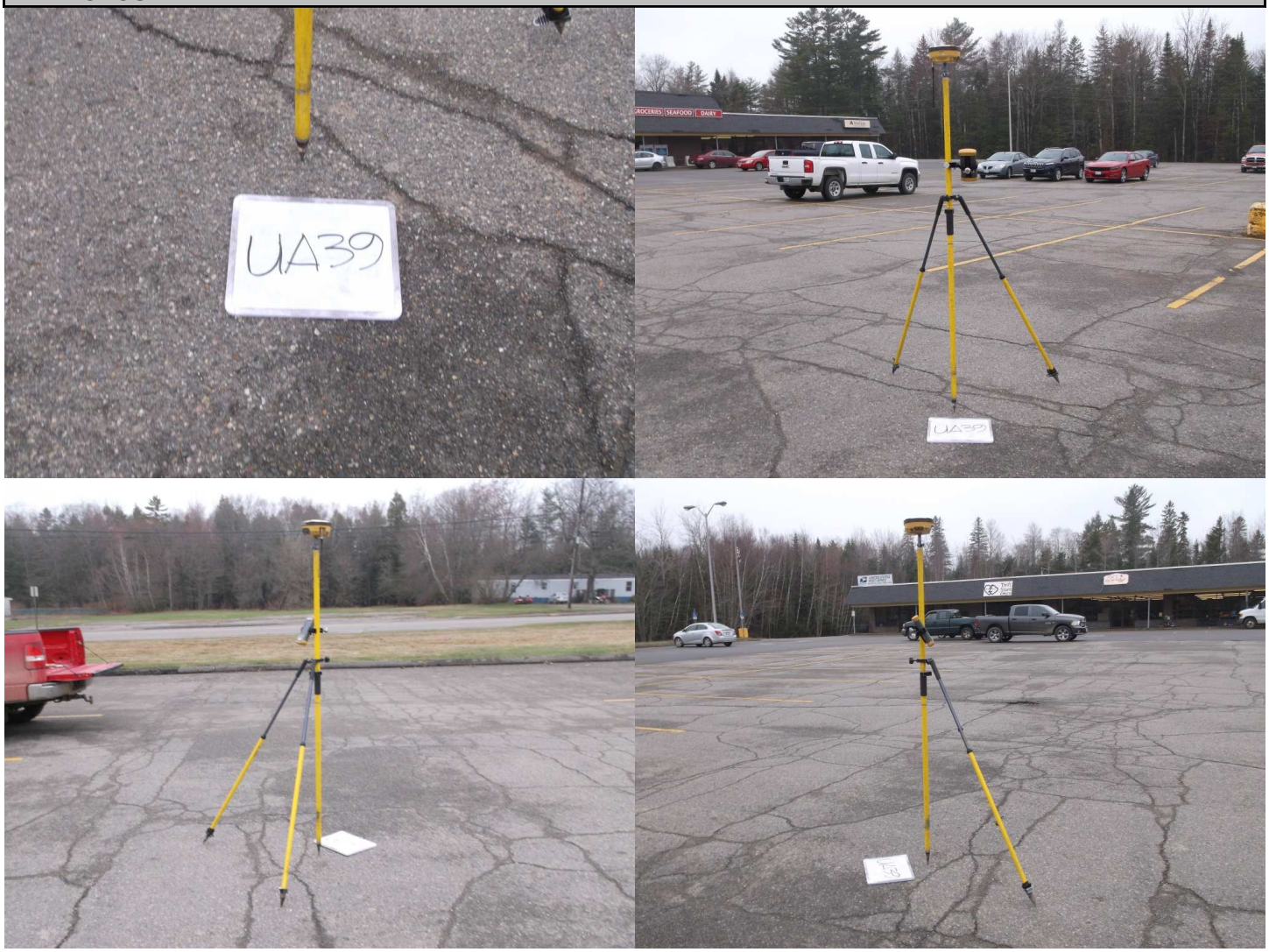
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5000565.77	625899.11	58.27

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:



SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	UA40
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
X	LiDAR QC Point
	New Control
	Photo ID
	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5120398.75	589357.65	141.71

Operator	John Allen
Receiver Model	Topcon Hiper II
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

Published Control

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	B82
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Piscataquis
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5080716.23	486369.79	287.16

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-18-2017
RMSE Hz	-
RMSE Z	-
Method	STATIC GPS BASE

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BBCD49 (ME06)
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5180508.97	589295.73	115.13

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BBDQ47
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4932911.25	589132.386	3.286

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.011
RMSE Z	0.022
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BM F191
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5055807.28	592466.97	182.02

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	05-08-2017
RMSE Hz	0.019
RMSE Z	0.030
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BM1559-10
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5027061.99	566451.95	141.96

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0793
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.011
RMSE Z	0.019
Method	STATIC GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	K167
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4965574.54	624788.69	32.97

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	MDOT 2652-10
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5022351.02	536646.17	67.03

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-03-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	MDOT Control Mark Rebar
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4979612.87	636964.32	38.39

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-27-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	MDOT 22657-71 REBAR
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5244712.06	549099.49	176.94

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

SEWALL
JAMES W. SEWALL COMPANY / Since 1880
James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	MILLPORT
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Penobscot
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5055081.43	524004.84	122.14

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	NAE106 DISK
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

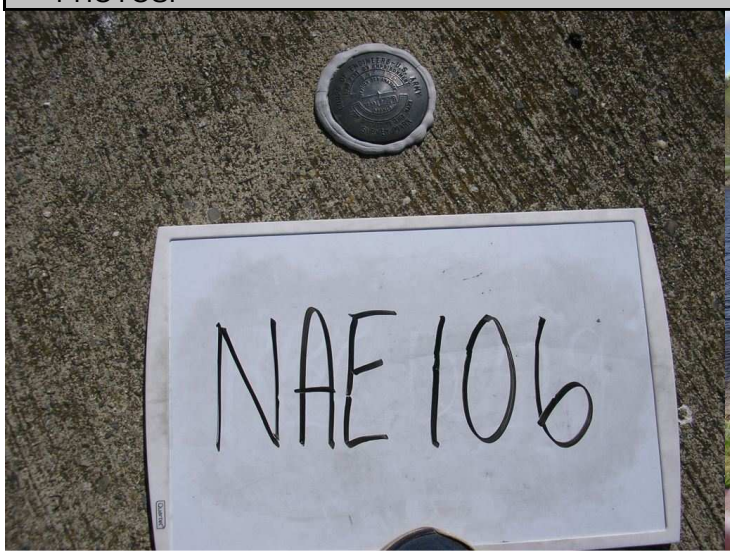
Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5180510.11	589293.39	115.15

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:



JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	Q40 RESET
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4983842.57	611092.96	52.55

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	04/27/2017
RMSE Hz	0.003
RMSE Z	0.005
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	RE0040
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5103158.04	588961.64	177.00

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-16-2017
RMSE Hz	0.001
RMSE Z	0.002
Method	RTK GPS

PHOTOS:

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	S42 DISK
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Aroostook
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
5234174.45	568971.90	167.29

Operator	John Allen
Receiver Model	Topcon Hiper GD
Receiver S/N	763-0106
Antenna Height	2.0 Meters

Date (MM-DD-YYYY)	05-24-2017
RMSE Hz	0.001
RMSE Z	0.001
Method	RTK GPS

PHOTOS:

JAMES W. SEWALL COMPANY / Since 1880

James W. Sewall Company – 136 Center Street, Old Town, ME 04468 - Ph. 207-827-4456 - www.sewall.com

Point ID	BBDQ47
Project No.	29513
Project Name	Eastern Central Maine 2017
State	Maine
County	Washington
Quad	

	Aerial Target
	LiDAR Ground Control
	LiDAR QC Point
	New Control
	Photo ID
X	Published Control

Coordinate System
NAD83(2011)
UTM – Zone 19N
NAVD88
GEOID12B
Meters

Northing	Easting	Elevation
4932911.25	589132.39	3.29

Operator	Rob Prescott
Receiver Model	Topcon Hiper GD
Receiver S/N	272-0788
Antenna Height	1.8 Meters

Date (MM-DD-YYYY)	04-20-2017
RMSE Hz	0.011
RMSE Z	0.022
Method	STATIC GPS

PHOTOS: