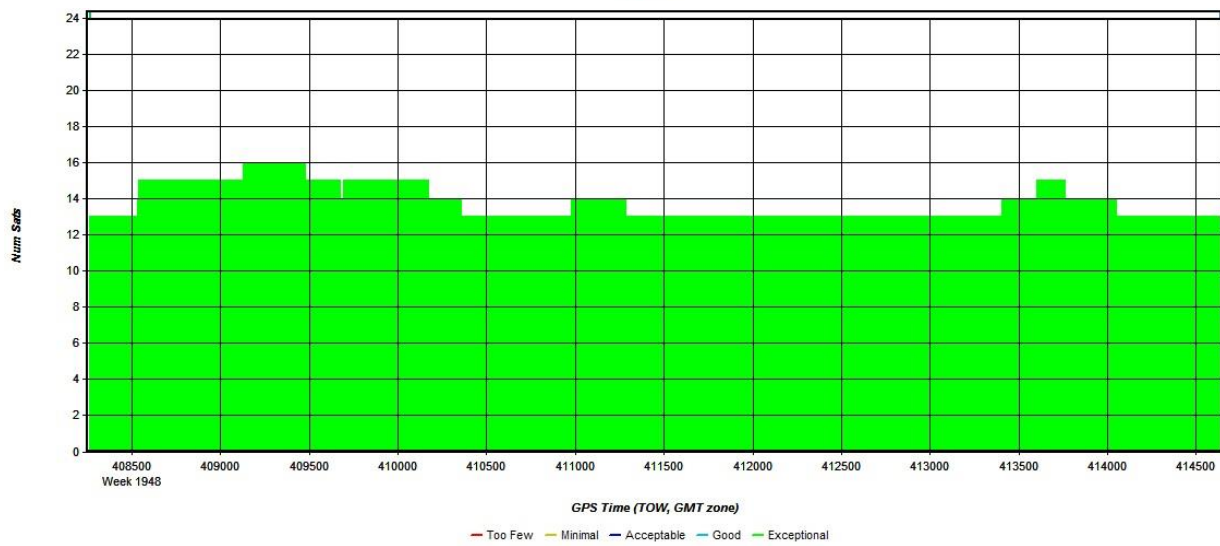
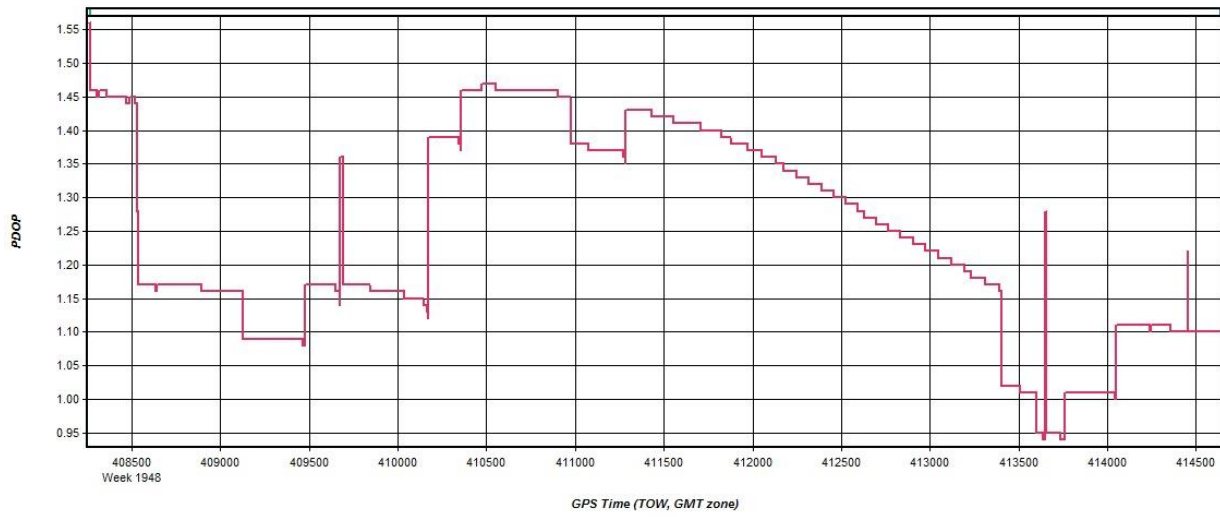
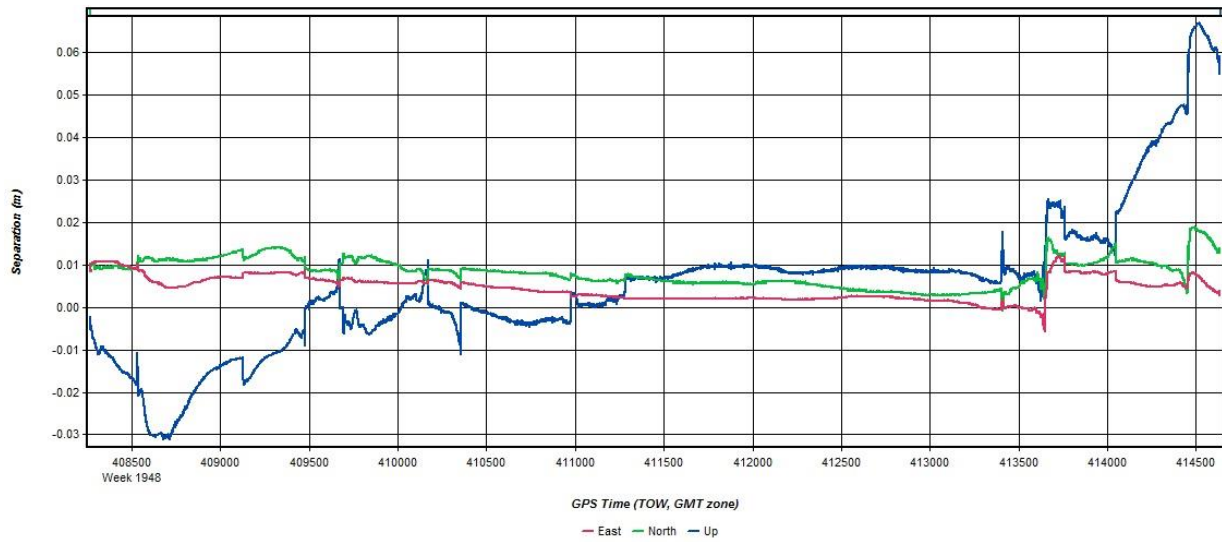


Appendix A: GPS and IMU Processing Reports for Each Mission

M1





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M1\IE_files\SD_M1.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 12743

No processed position: 6

Missing Fwd or Rev: 244
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0126 (m)
C/A Code: 0.27 (m)
L1 Doppler: 0.029 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.013 (m)
North: 0.020 (m)
Height: 0.006 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (12493 occurrences):

East: 0.013 (m)
North: 0.020 (m)
Height: 0.006 (m)

Quality Number Percentages:

Q 1: 54.5 %
Q 2: 39.6 %
Q 3: 5.8 %
Q 4: 0.1 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

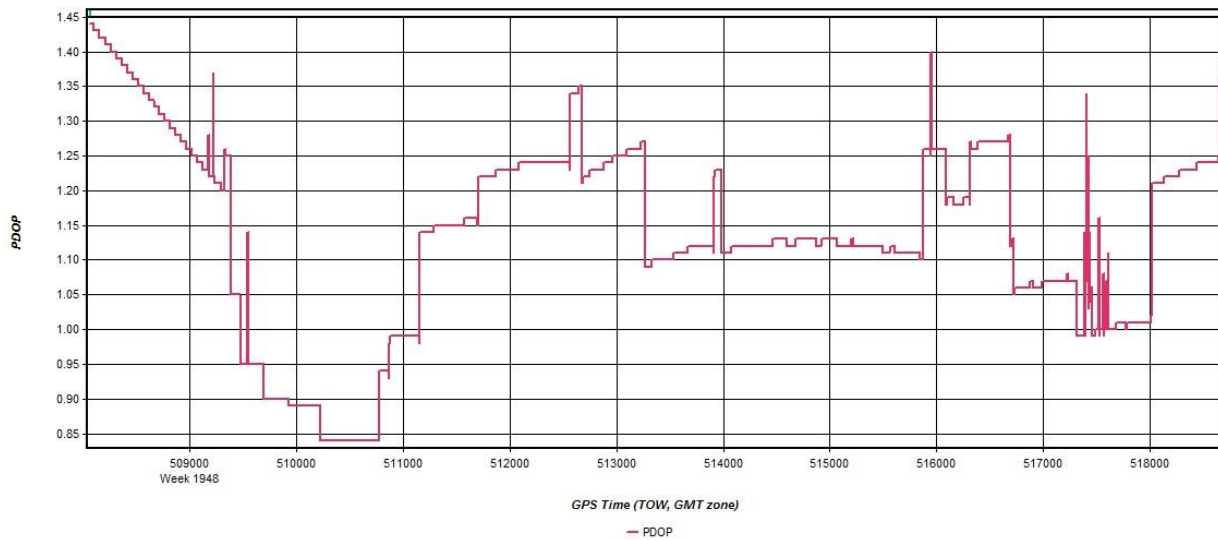
Percentages of epochs with DD_DOP over 10.00:

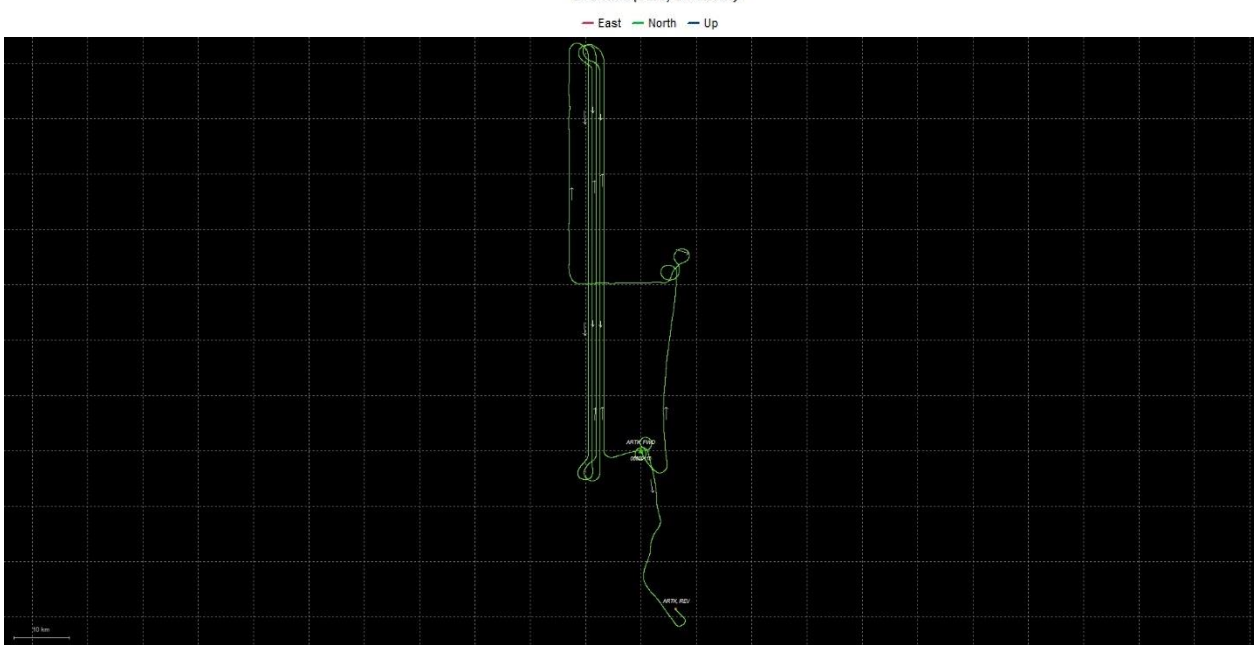
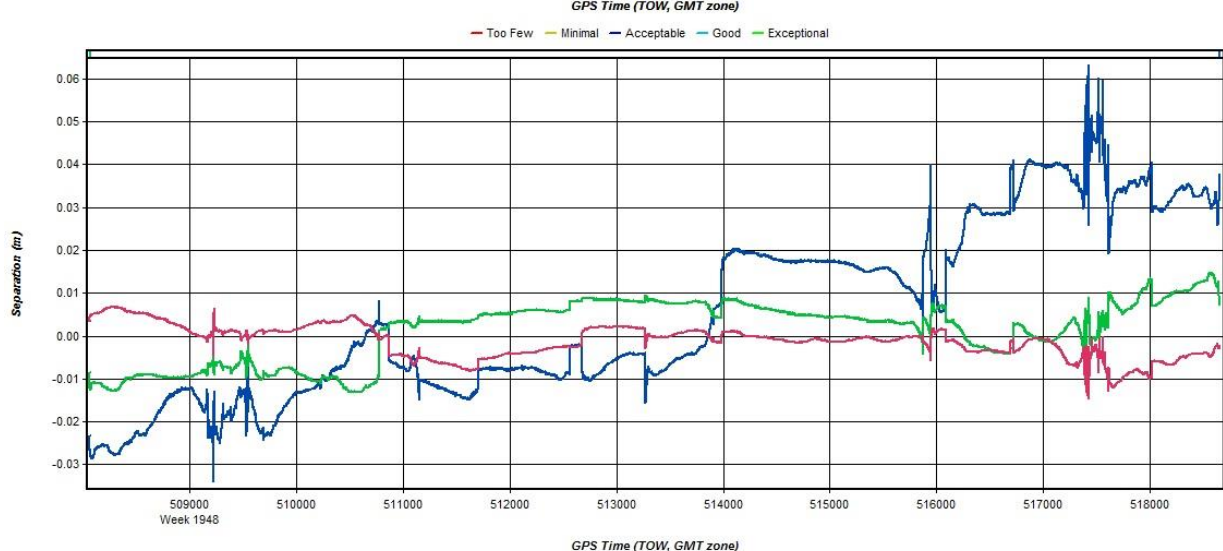
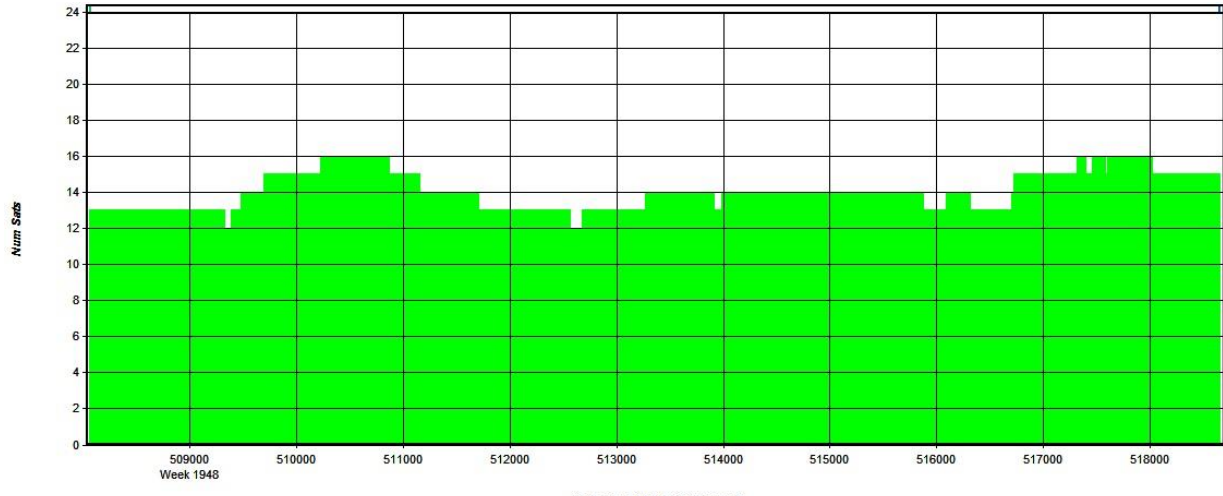
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	75.012 (km)
Minimum:	0.059 (km)
Average:	27.061 (km)
First Epoch:	0.090 (km)
Last Epoch:	29.104 (km)

M2





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M2\IE_files\SD_M2.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 21194
No processed position: 5
Missing Fwd or Rev: 245
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0141 (m)
C/A Code: 0.30 (m)
L1 Doppler: 0.035 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.008 (m)
North: 0.005 (m)
Height: 0.004 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (20944 occurrences):

East: 0.008 (m)
North: 0.005 (m)
Height: 0.004 (m)

Quality Number Percentages:

Q 1: 57.3 %
Q 2: 37.4 %
Q 3: 5.3 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

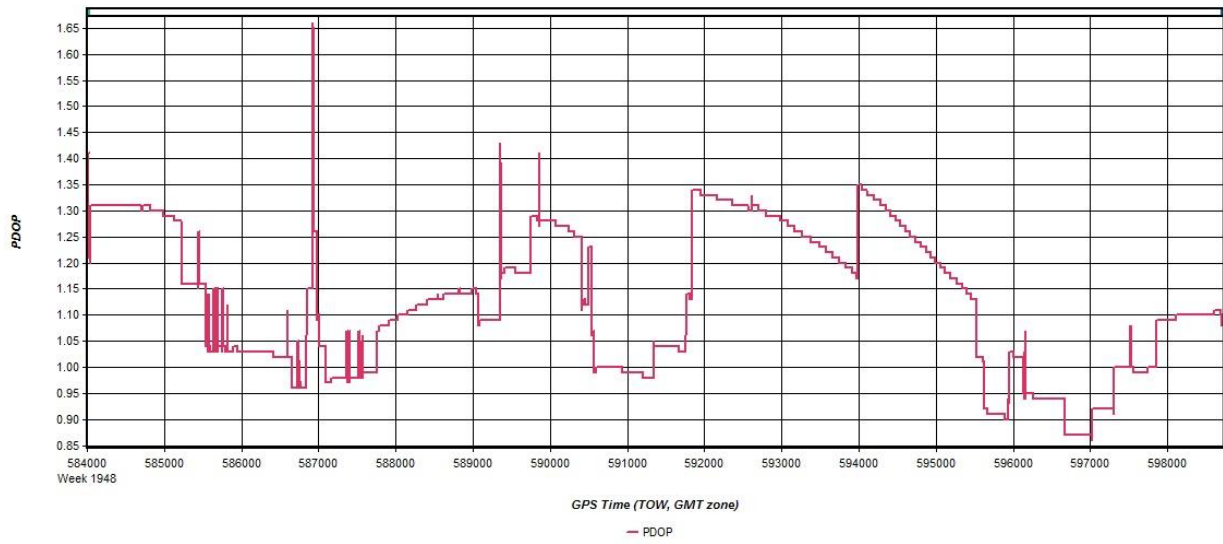
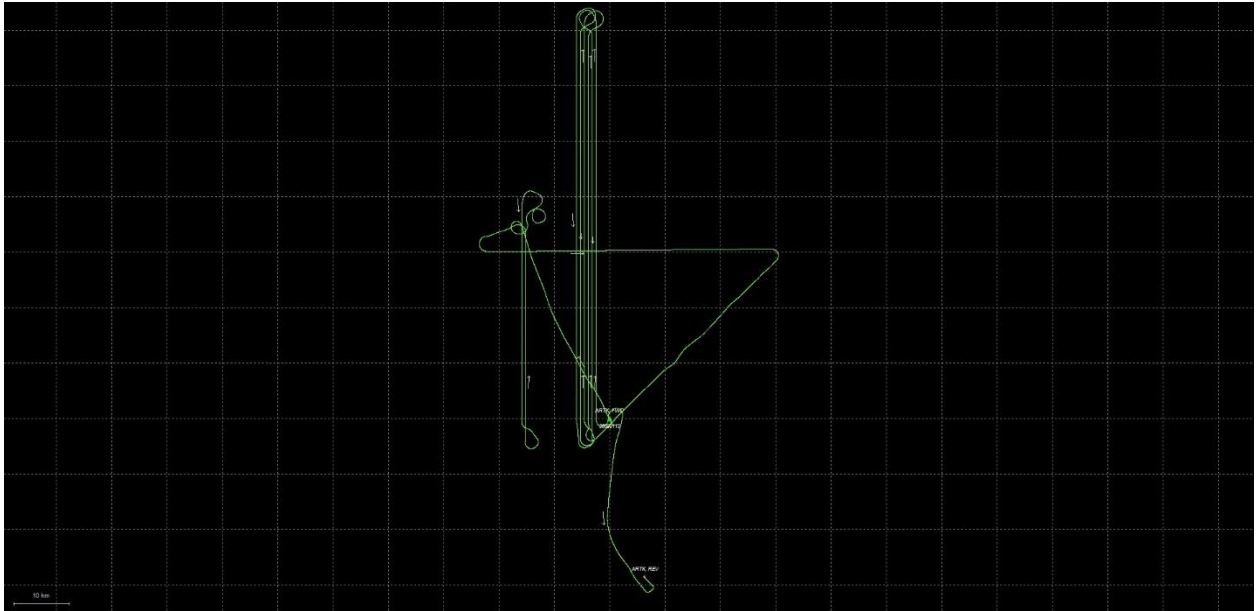
Percentages of epochs with DD_DOP over 10.00:

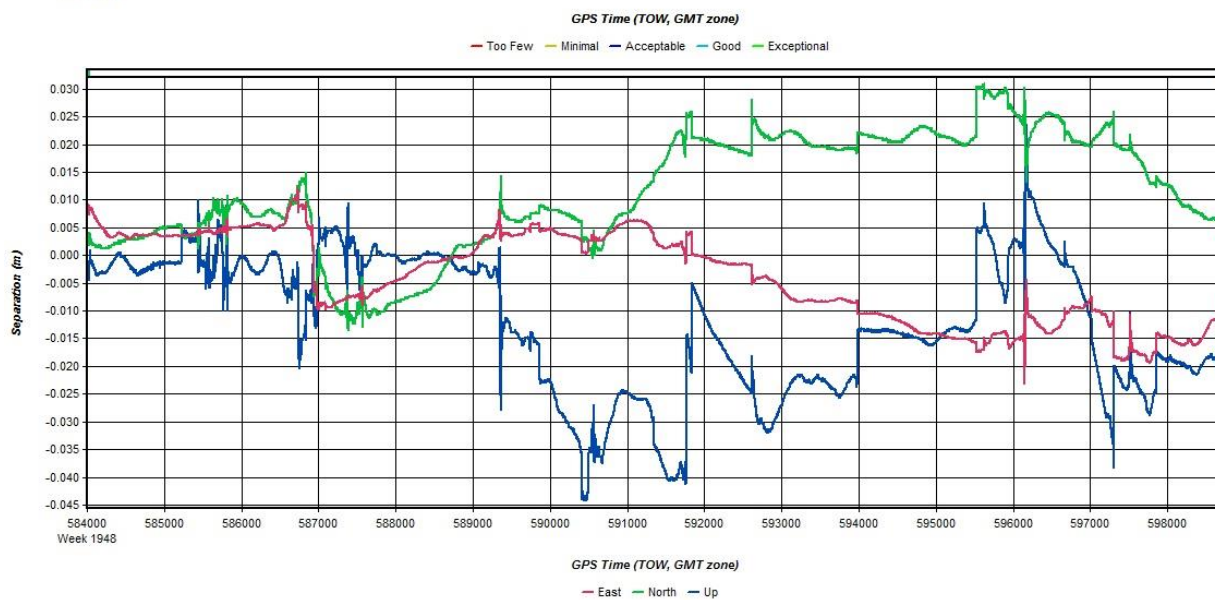
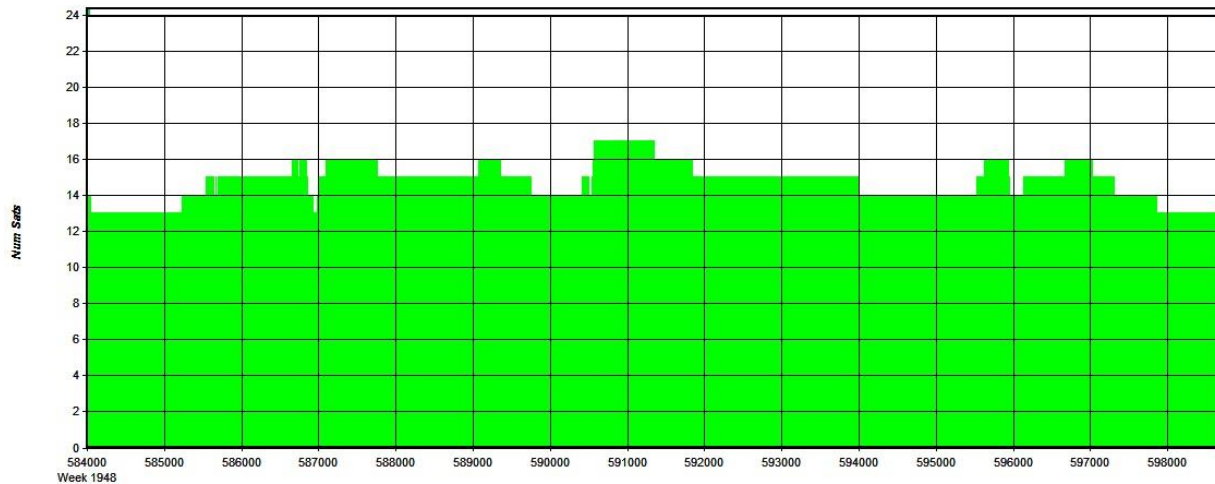
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 74.119 (km)
Minimum: 0.058 (km)
Average: 32.174 (km)
First Epoch: 0.073 (km)
Last Epoch: 29.082 (km)

M3





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M3\IE_files\SD_M3.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 29372

No processed position: 5

Missing Fwd or Rev: 832

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0153 (m)

C/A Code: 0.30 (m)

L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.002 (m)

North: 0.003 (m)

Height: 0.002 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (28535 occurrences):

East: 0.002 (m)

North: 0.003 (m)

Height: 0.002 (m)

Quality Number Percentages:

Q 1: 57.2 %

Q 2: 37.5 %

Q 3: 5.3 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

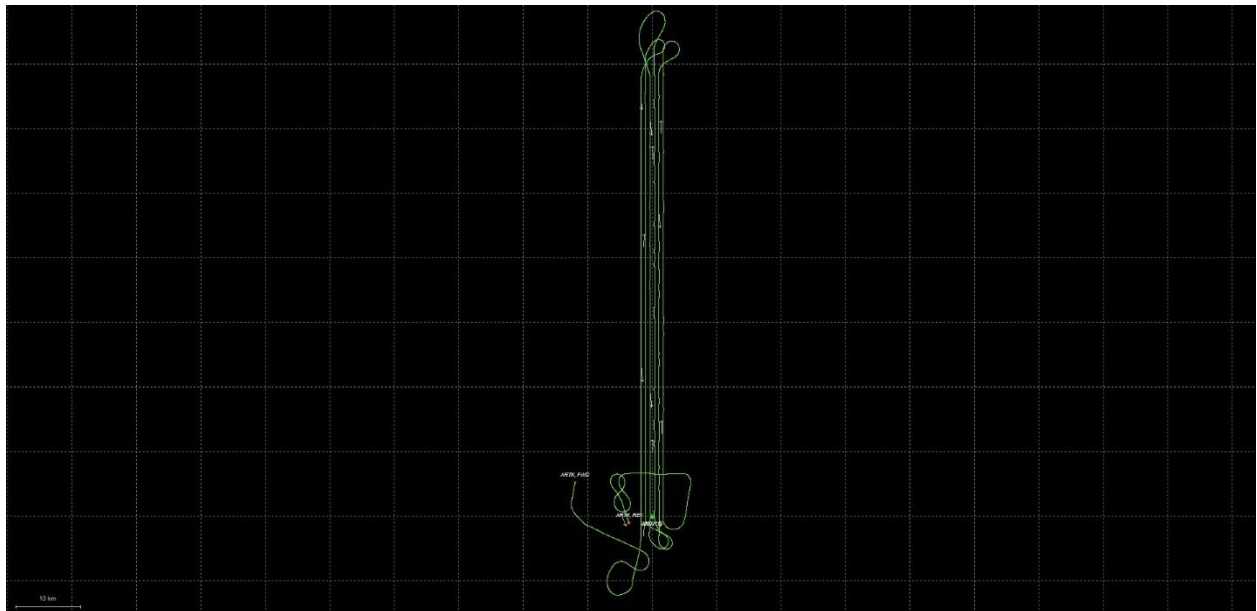
Percentages of epochs with DD_DOP over 10.00:

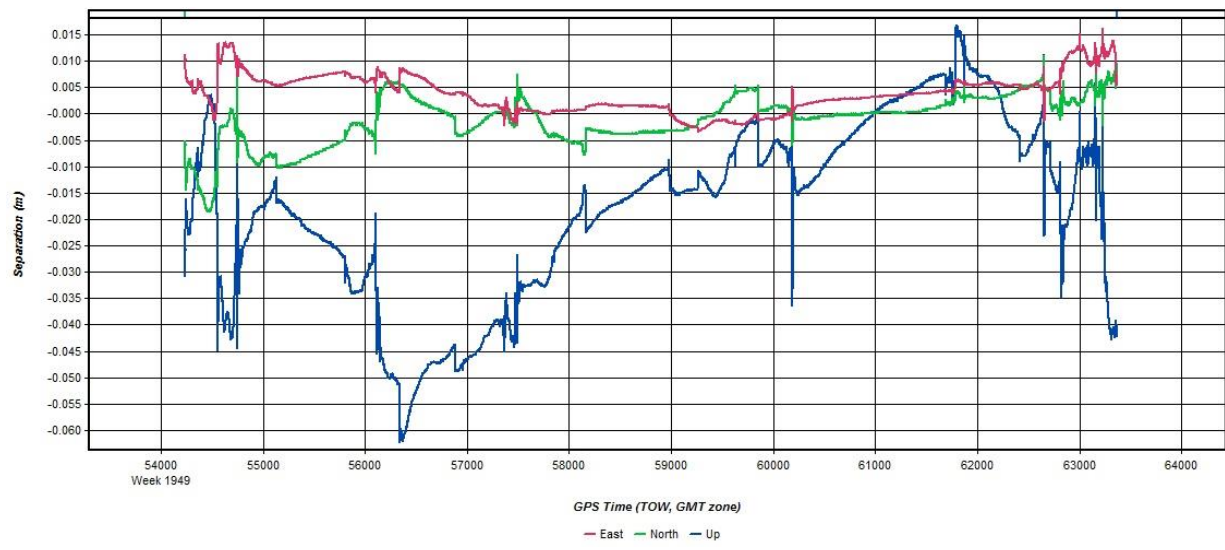
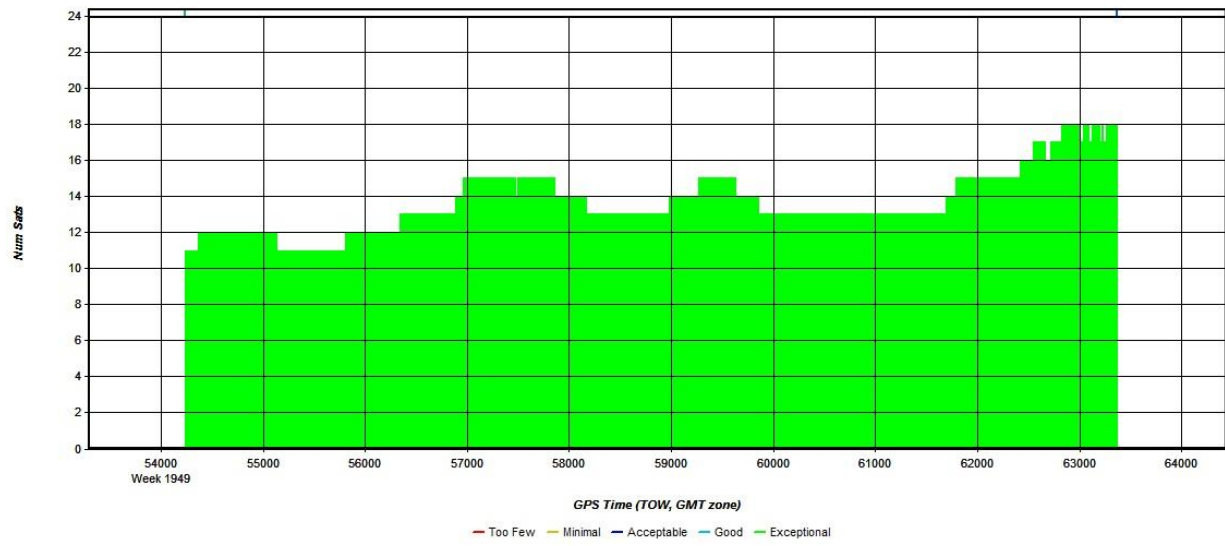
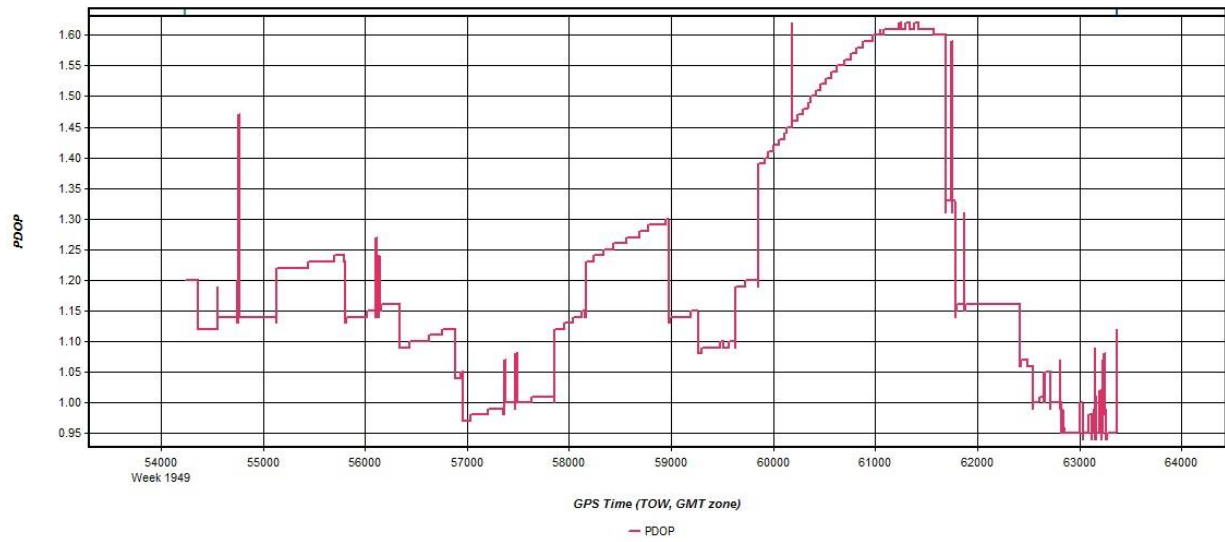
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	73.746 (km)
Minimum:	0.057 (km)
Average:	30.126 (km)
First Epoch:	0.073 (km)
Last Epoch:	29.103 (km)

M4





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M4\IE_files\SD_M4.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 22163
No processed position: 3898
Missing Fwd or Rev: 2
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0141 (m)
C/A Code: 0.31 (m)
L1 Doppler: 0.031 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.005 (m)
North: 0.005 (m)
Height: 0.024 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (18262 occurrences):

East: 0.005 (m)
North: 0.005 (m)
Height: 0.024 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

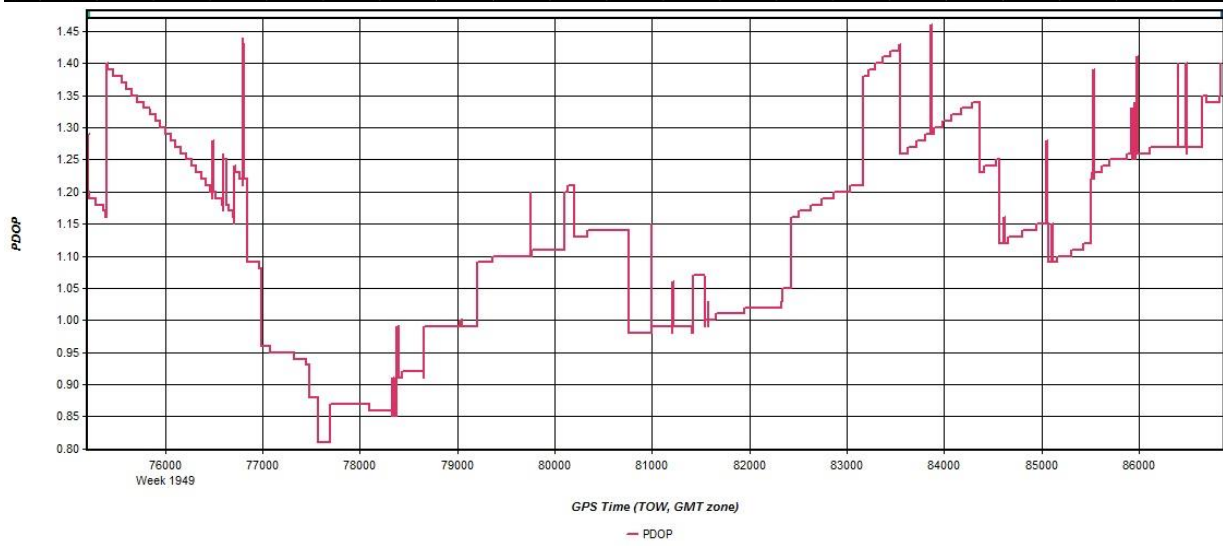
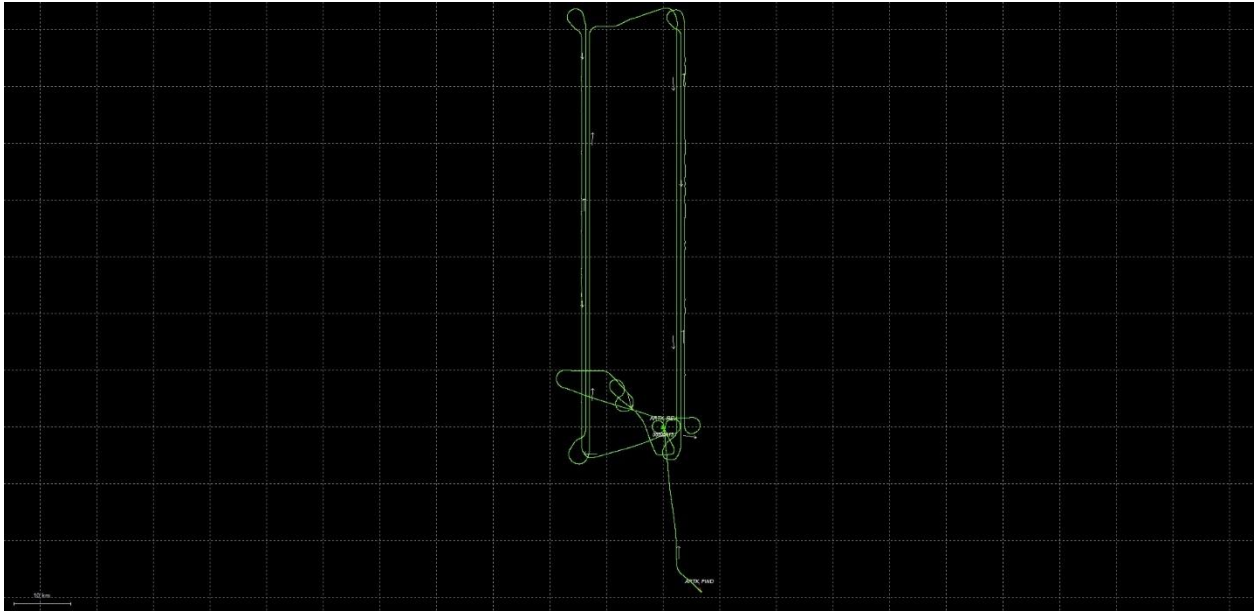
Percentages of epochs with DD_DOP over 10.00:

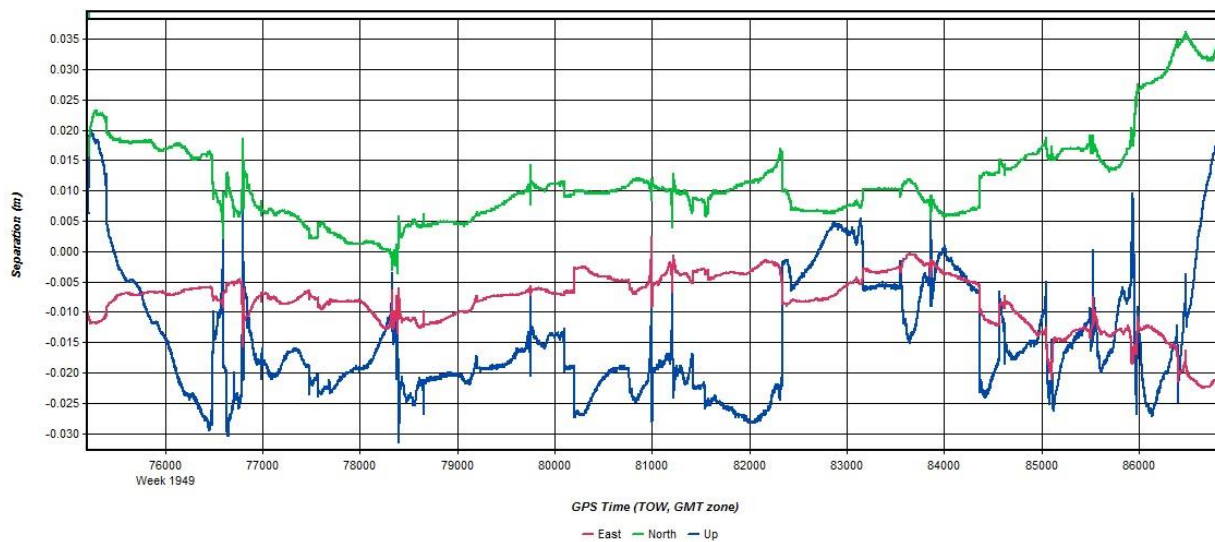
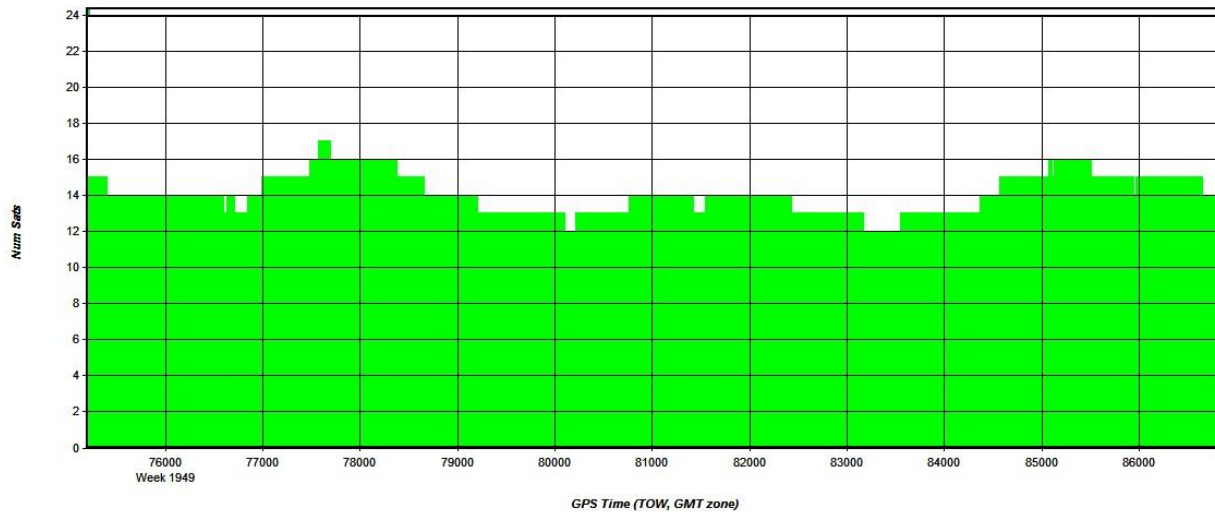
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 78.091 (km)
Minimum: 0.316 (km)
Average: 31.954 (km)
First Epoch: 13.106 (km)
Last Epoch: 3.759 (km)

M5





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M5\IE_files\SD_M5.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 23266

No processed position: 5

Missing Fwd or Rev: 244

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0137 (m)

C/A Code: 0.27 (m)

L1 Doppler: 0.032 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.014 (m)

North: 0.008 (m)

Height: 0.004 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (23017 occurrences):

East: 0.014 (m)

North: 0.008 (m)

Height: 0.004 (m)

Quality Number Percentages:

Q 1: 55.6 %

Q 2: 38.7 %

Q 3: 5.7 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

Percentages of epochs with DD_DOP over 10.00:

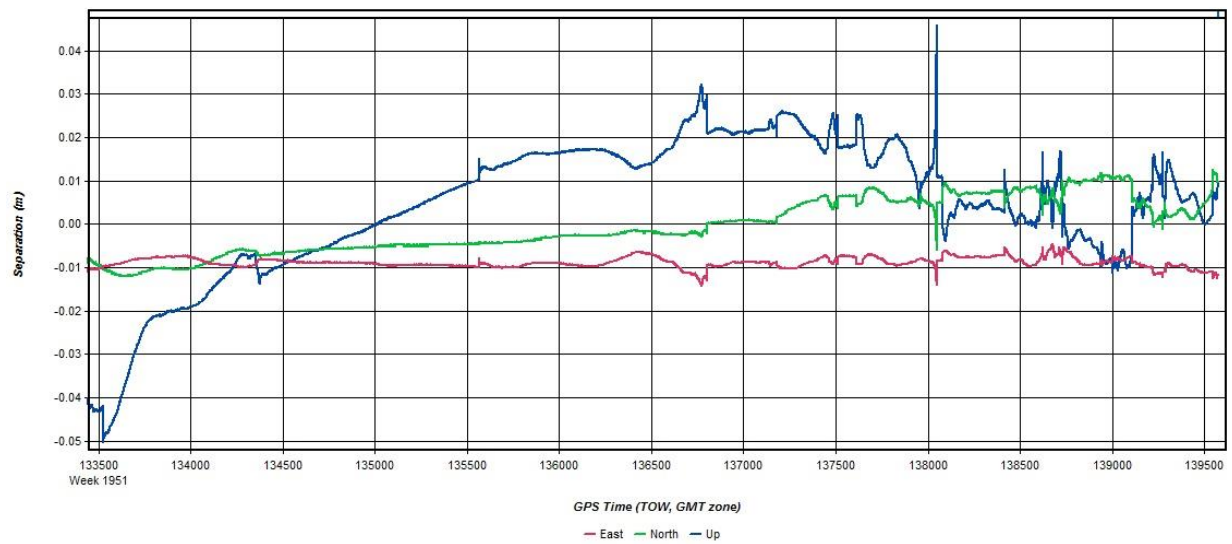
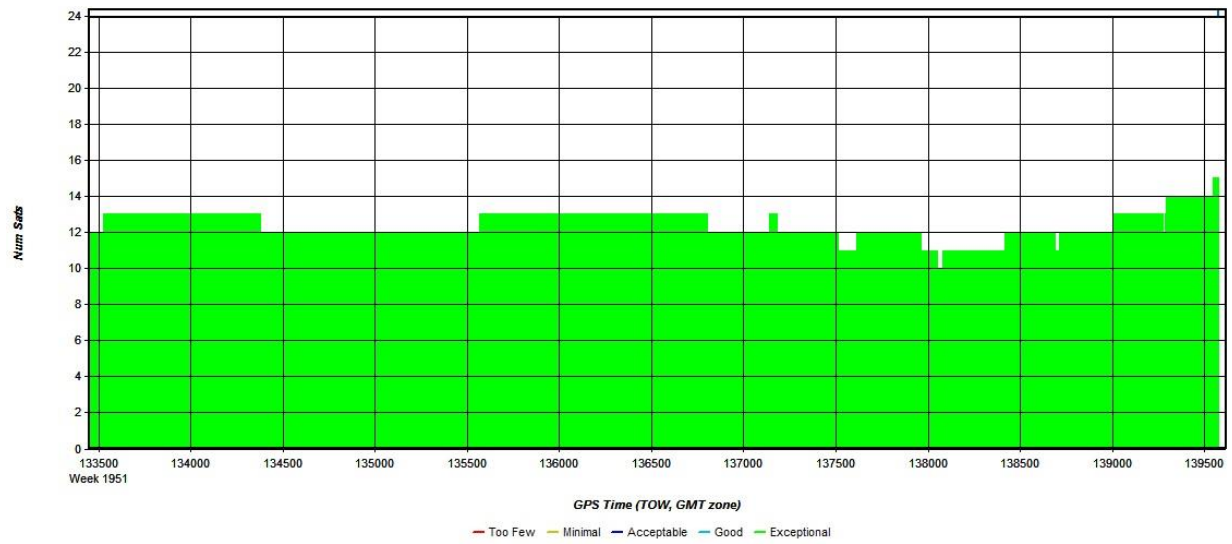
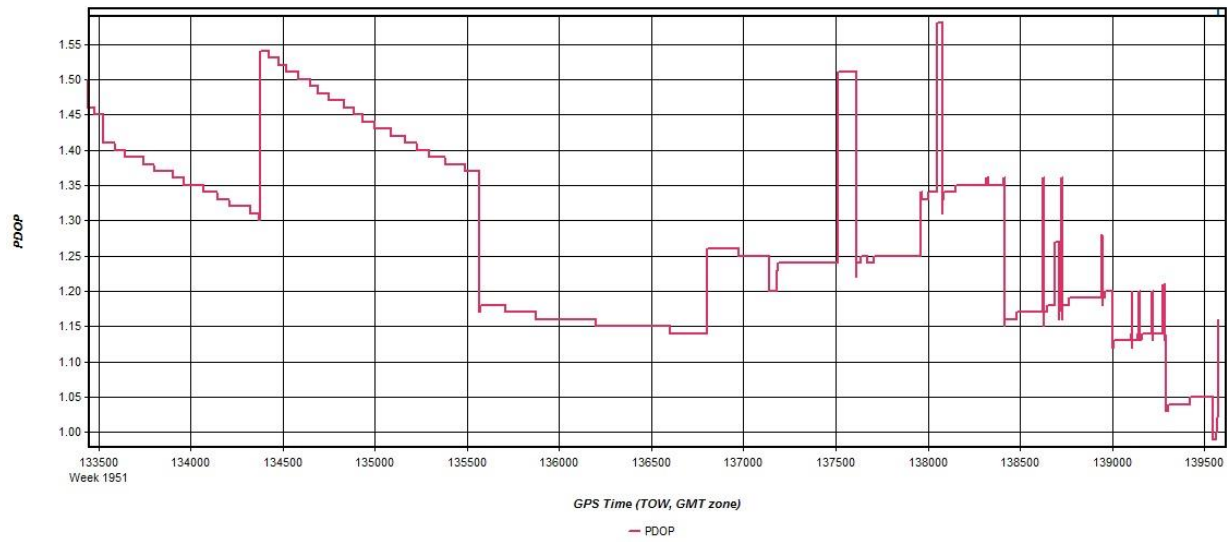
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	74.891 (km)
Minimum:	0.058 (km)
Average:	29.753 (km)
First Epoch:	29.250 (km)
Last Epoch:	0.075 (km)

M6





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M6\IE_Files\SD_M6.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 12267
No processed position: 6
Missing Fwd or Rev: 814
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0132 (m)
C/A Code: 0.32 (m)
L1 Doppler: 0.030 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.002 (m)
North: 0.020 (m)
Height: 0.005 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (11447 occurrences):

East: 0.002 (m)
North: 0.020 (m)
Height: 0.005 (m)

Quality Number Percentages:

Q 1: 53.9 %
Q 2: 40.1 %
Q 3: 6.0 %
Q 4: 0.1 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

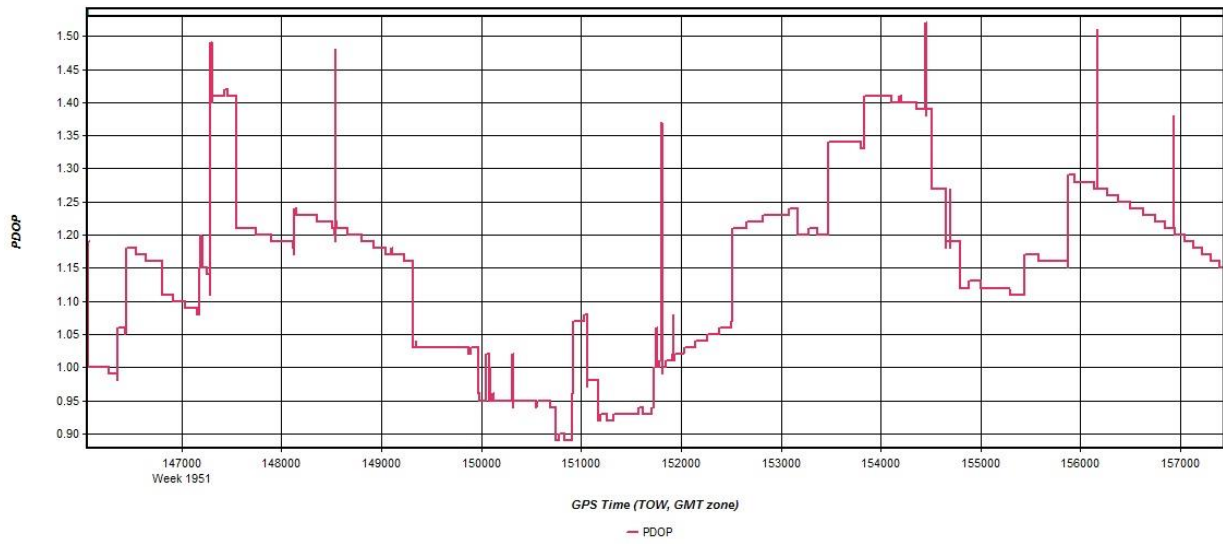
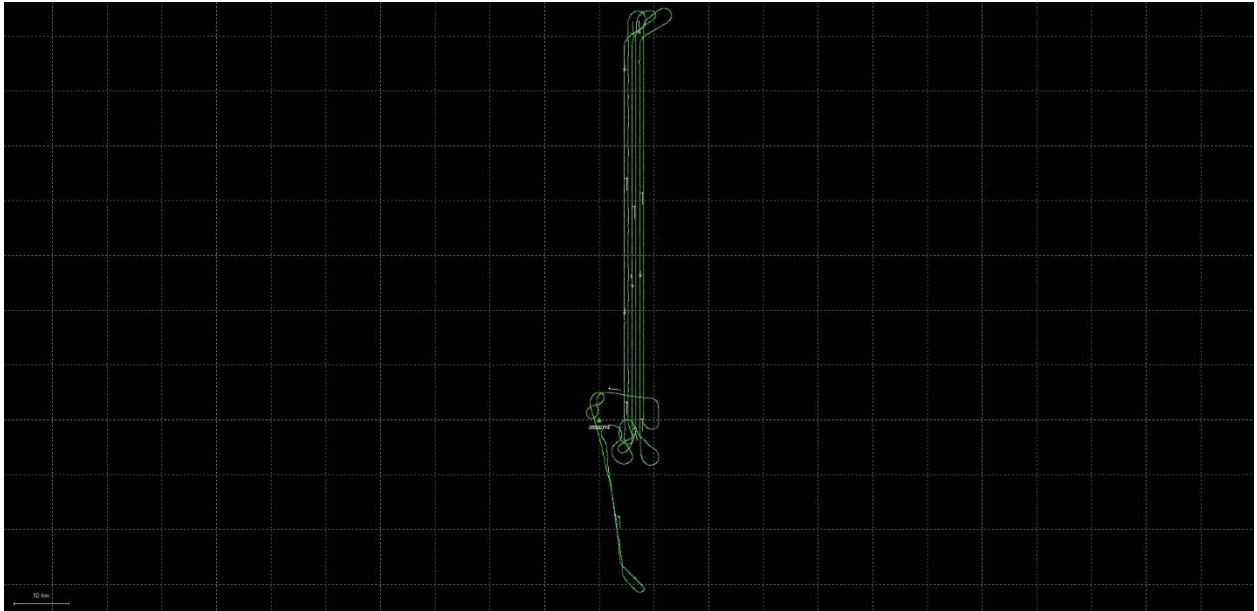
Percentages of epochs with DD_DOP over 10.00:

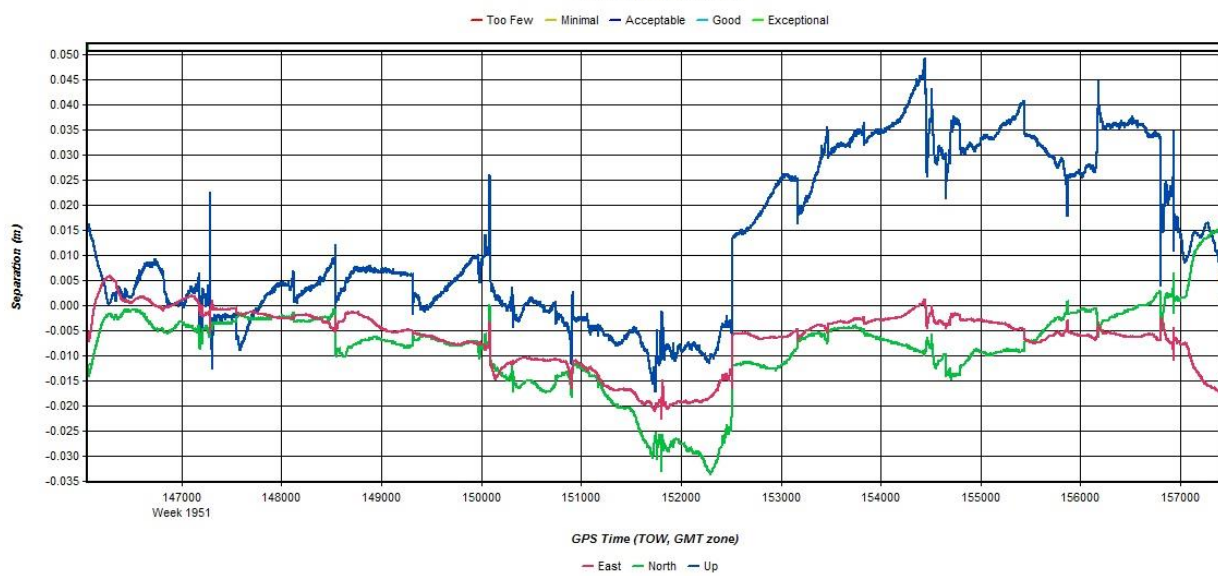
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 77.466 (km)
Minimum: 0.059 (km)
Average: 25.994 (km)
First Epoch: 1.269 (km)
Last Epoch: 29.264 (km)

M7





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M7\IE_Files\SD_M7.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 22736

No processed position: 7

Missing Fwd or Rev: 1174

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0139 (m)

C/A Code: 0.30 (m)

L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.001 (m)

North: 0.001 (m)

Height: 0.000 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (2155 occurrences):

East: 0.001 (m)

North: 0.001 (m)

Height: 0.000 (m)

Quality Number Percentages:

Q 1: 56.0 %

Q 2: 37.9 %

Q 3: 6.0 %

Q 4: 0.1 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

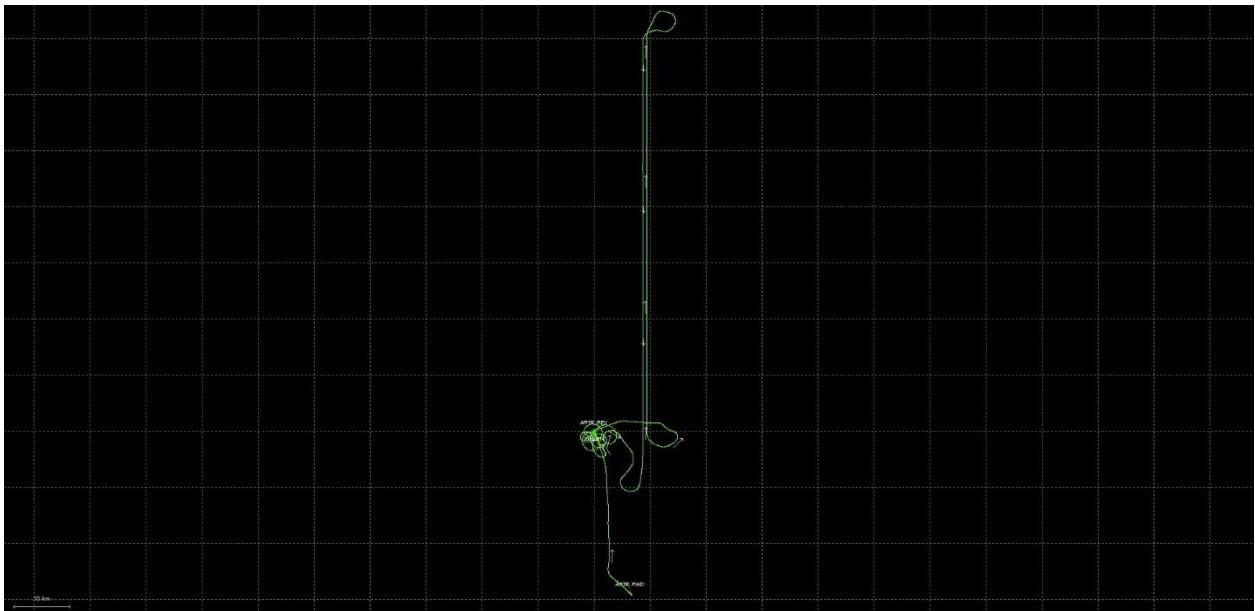
Percentages of epochs with DD_DOP over 10.00:

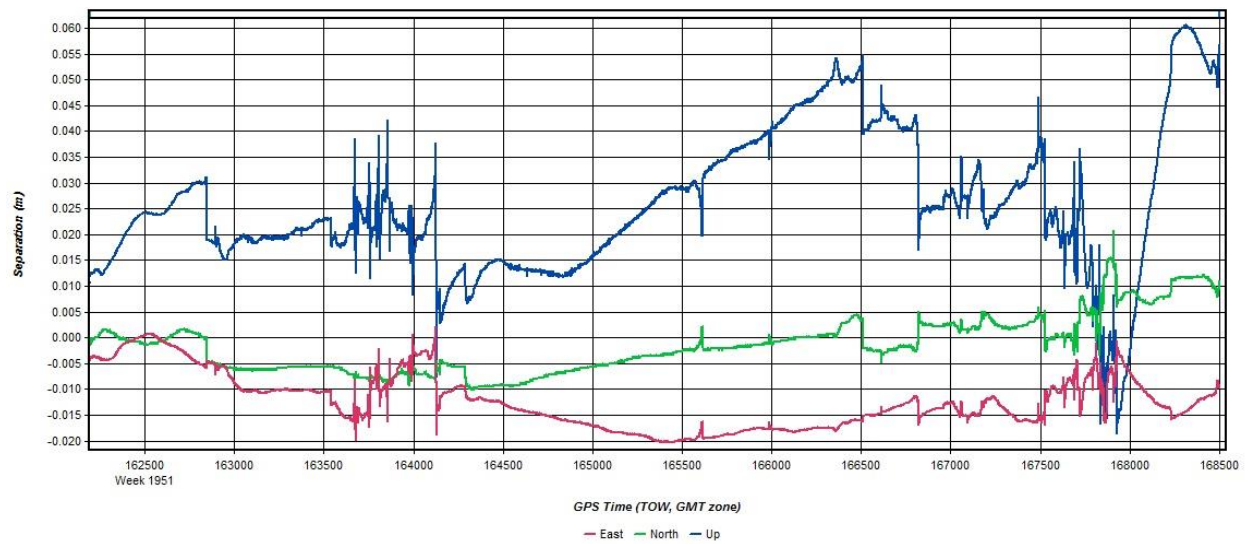
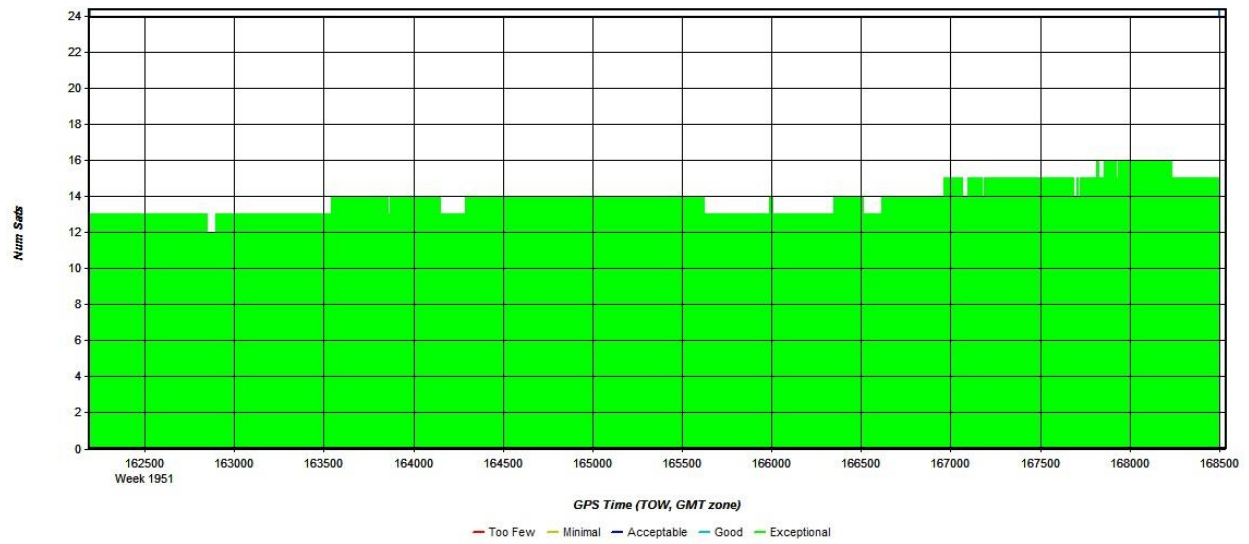
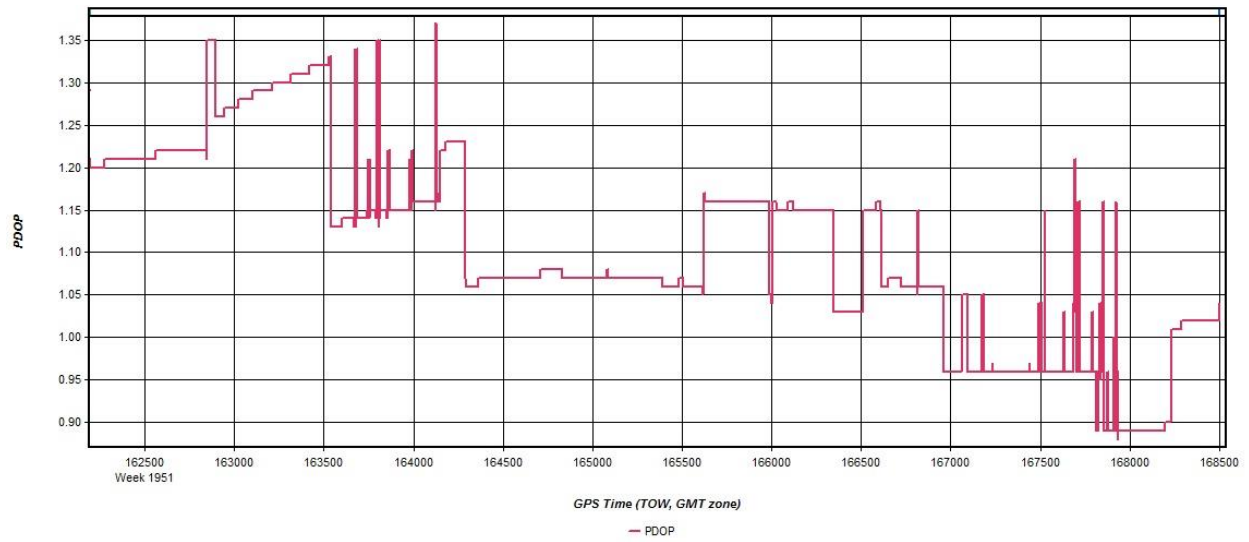
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	75.468 (km)
Minimum:	0.835 (km)
Average:	31.236 (km)
First Epoch:	29.264 (km)
Last Epoch:	29.265 (km)

M8





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M8\IE_Files\SD_M8.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 12624
No processed position: 5
Missing Fwd or Rev: 1740
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0142 (m)
C/A Code: 0.30 (m)
L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.001 (m)
North: 0.001 (m)
Height: 0.000 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (10879 occurrences):

East: 0.001 (m)
North: 0.001 (m)
Height: 0.000 (m)

Quality Number Percentages:

Q 1: 54.9 %
Q 2: 36.4 %
Q 3: 8.7 %
Q 4: 0.1 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

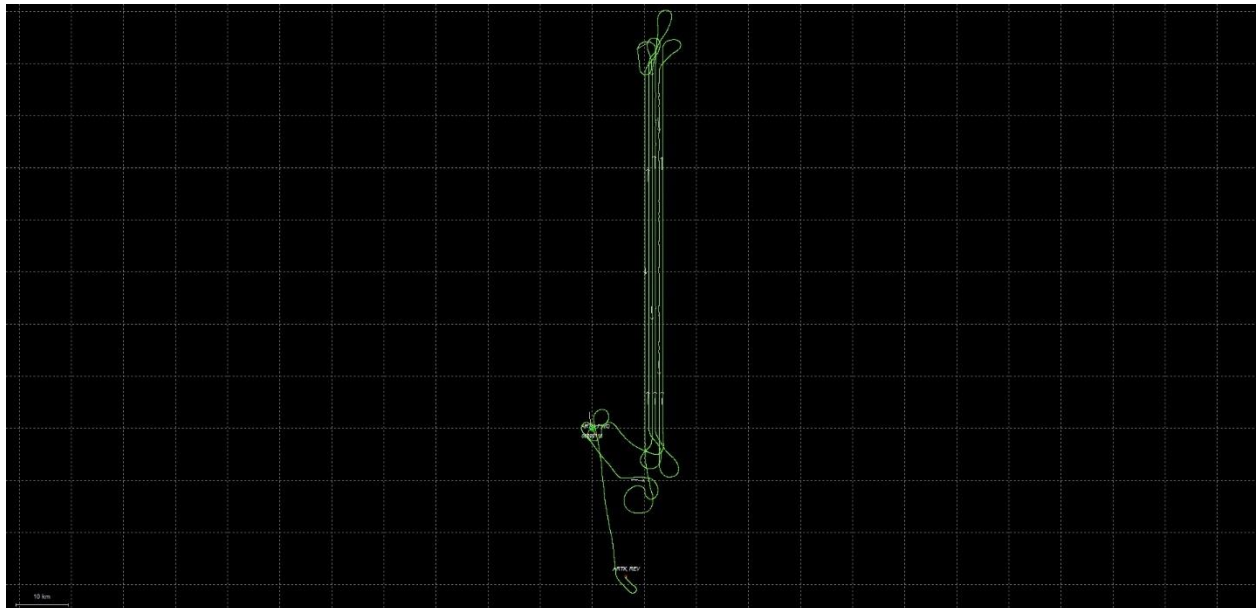
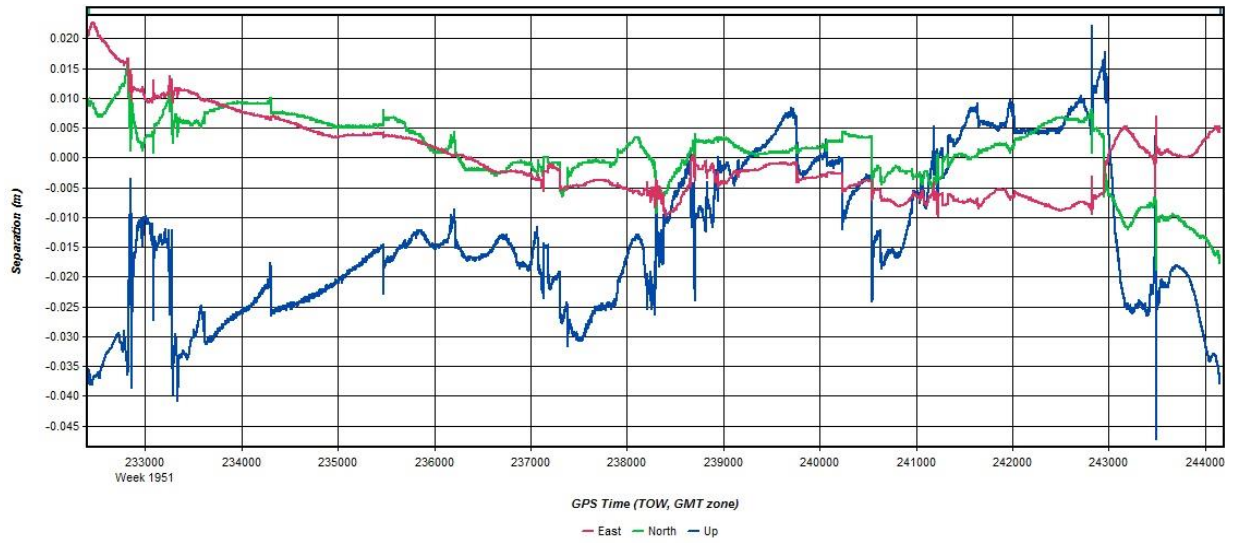
Percentages of epochs with DD_DOP over 10.00:

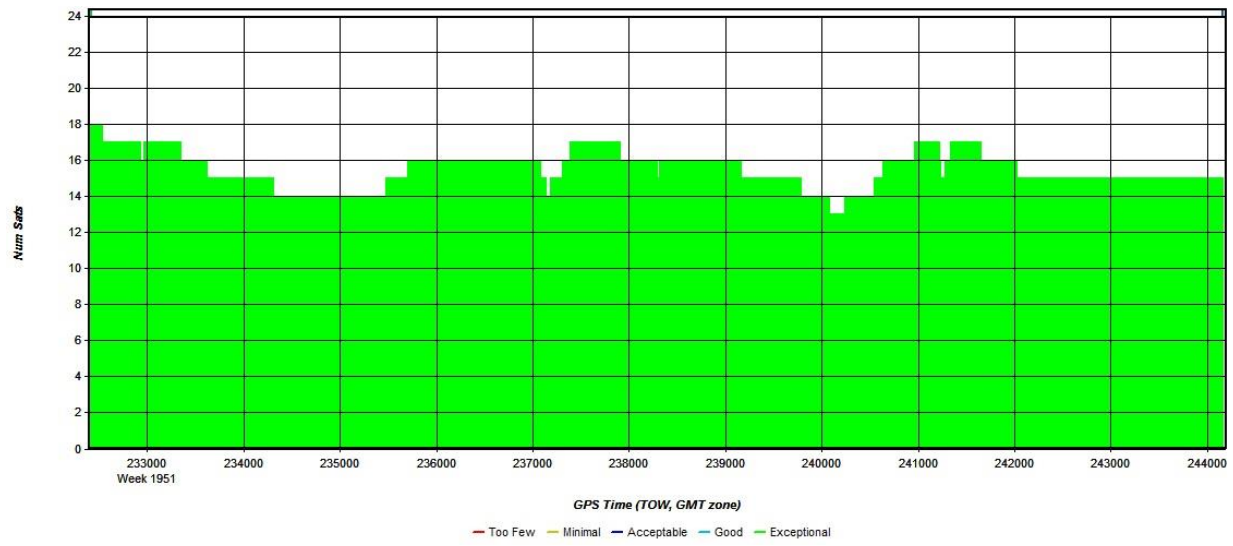
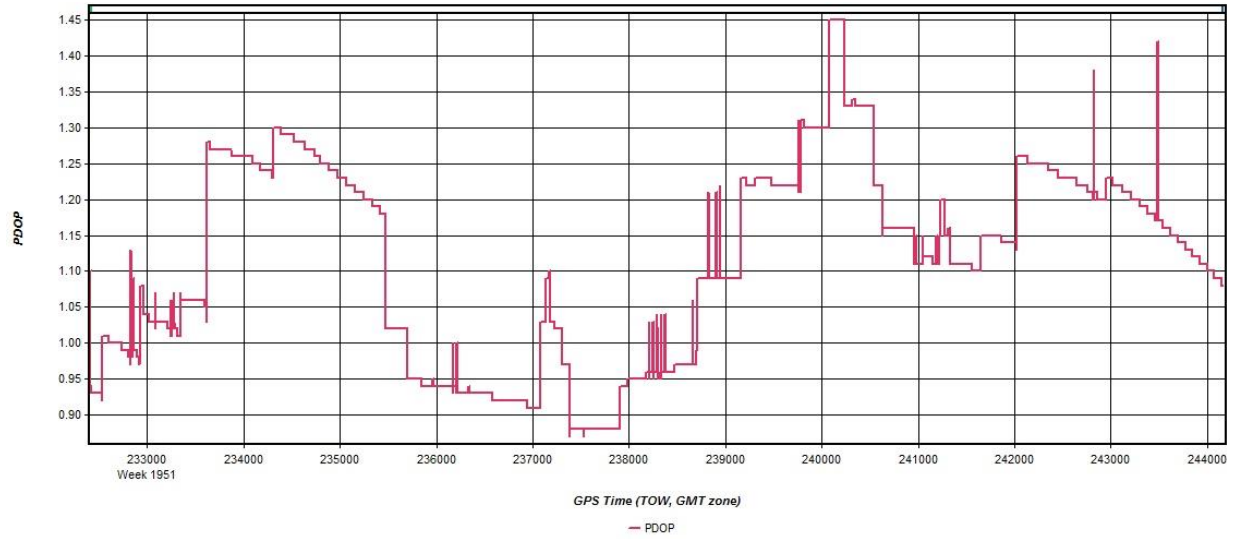
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 75.358 (km)
Minimum: 0.058 (km)
Average: 23.951 (km)
First Epoch: 29.265 (km)
Last Epoch: 0.073 (km)

M9





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M9\IE_files\SD_M9.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 23494

No processed position: 5

Missing Fwd or Rev: 808

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0135 (m)

C/A Code: 0.29 (m)

L1 Doppler: 0.035 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.001 (m)

North: 0.002 (m)

Height: 0.002 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (22681 occurrences):

East: 0.001 (m)

North: 0.002 (m)

Height: 0.002 (m)

Quality Number Percentages:

Q 1: 55.1 %

Q 2: 39.3 %

Q 3: 5.6 %

Q 4: 0.1 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

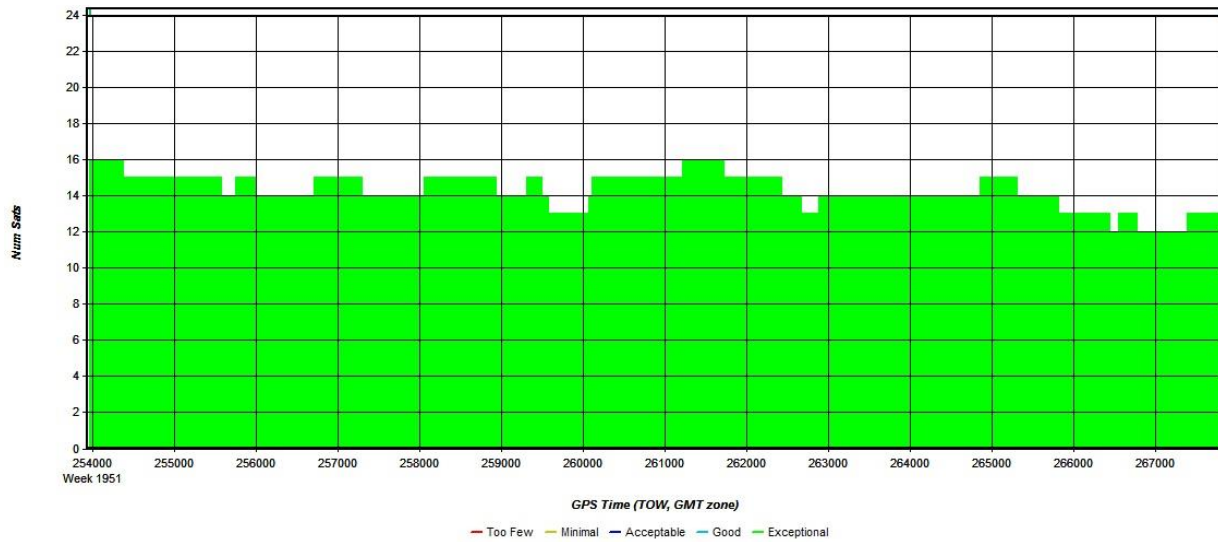
Percentages of epochs with DD_DOP over 10.00:

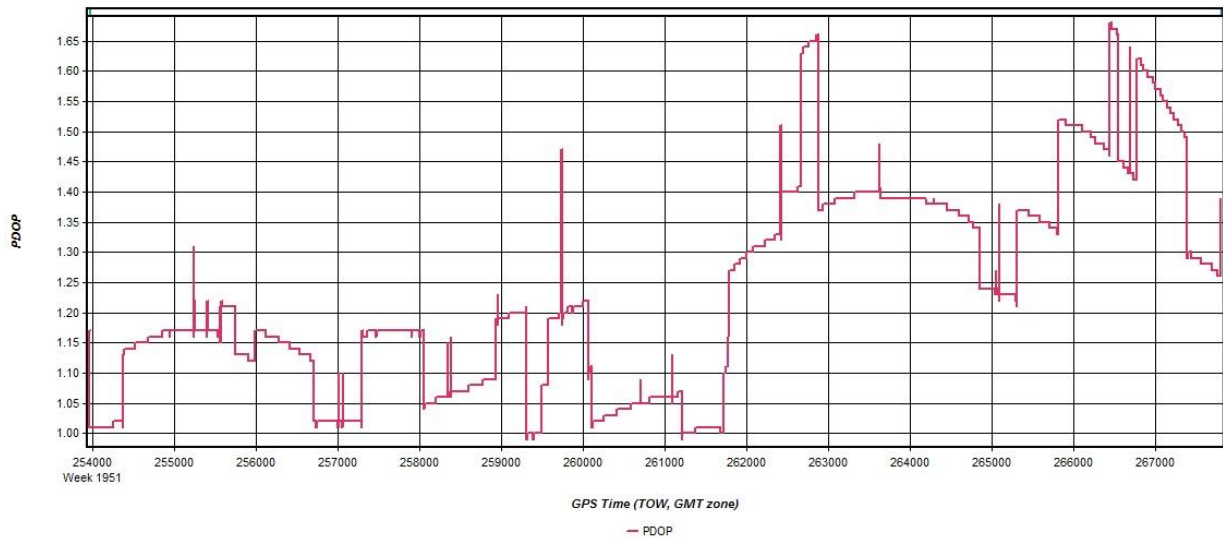
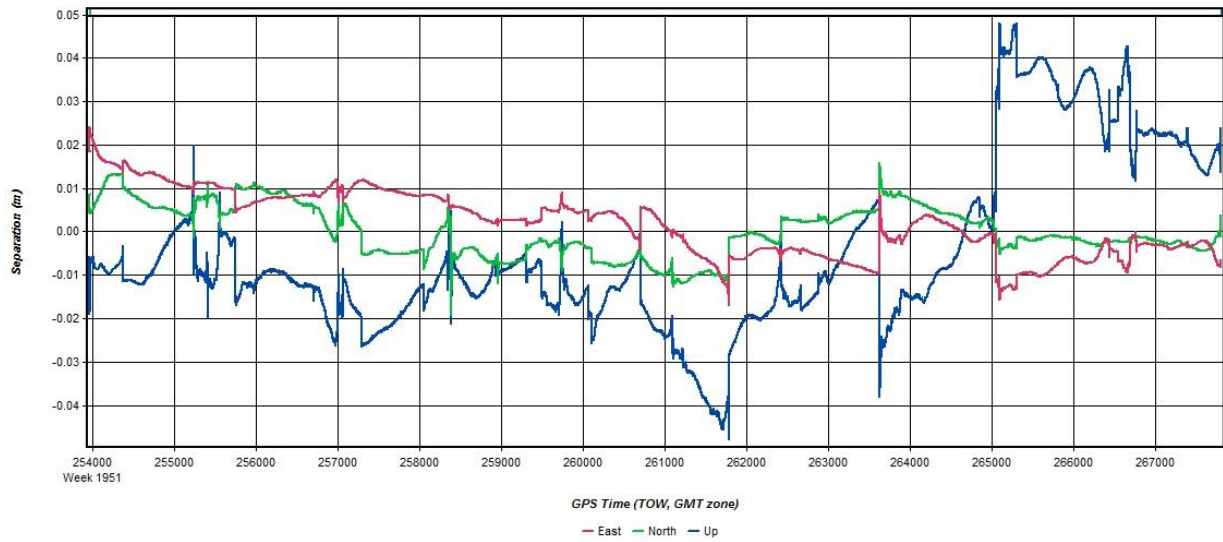
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	81.191 (km)
Minimum:	0.057 (km)
Average:	33.509 (km)
First Epoch:	1.265 (km)
Last Epoch:	29.213 (km)

M10





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M10\IE_files\SD_M10.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 27664
No processed position: 7
Missing Fwd or Rev: 245
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0134 (m)
C/A Code: 0.31 (m)
L1 Doppler: 0.032 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.003 (m)
North: 0.008 (m)
Height: 0.003 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (27412 occurrences):

East: 0.003 (m)
North: 0.008 (m)
Height: 0.003 (m)

Quality Number Percentages:

Q 1: 57.5 %
Q 2: 37.0 %
Q 3: 5.5 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

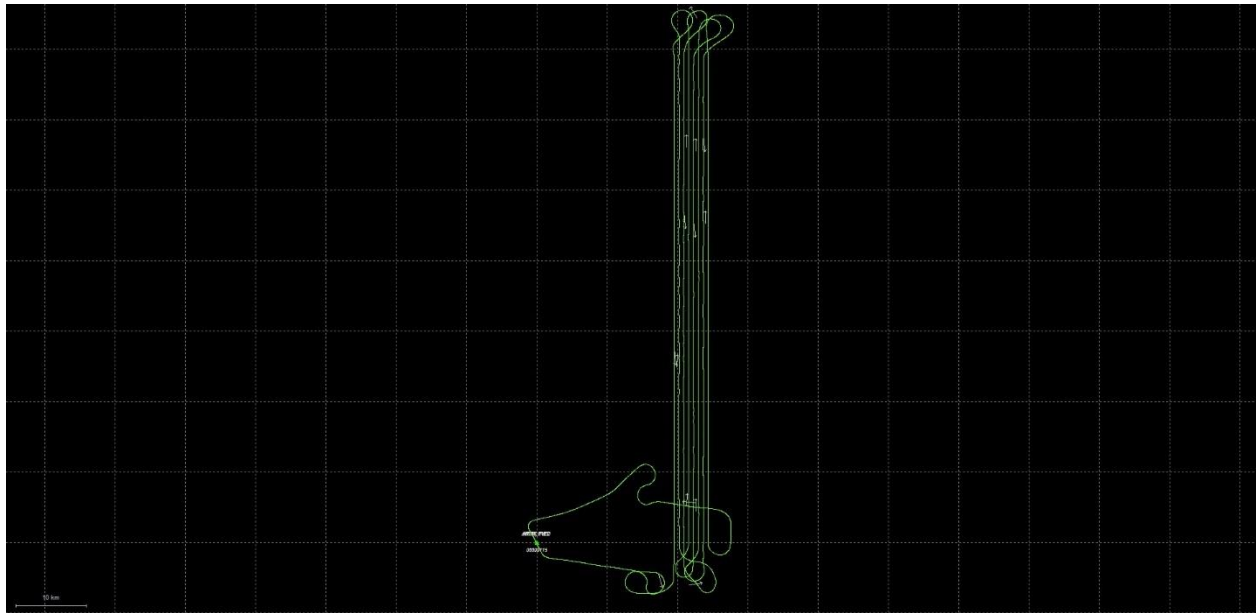
Percentages of epochs with DD_DOP over 10.00:

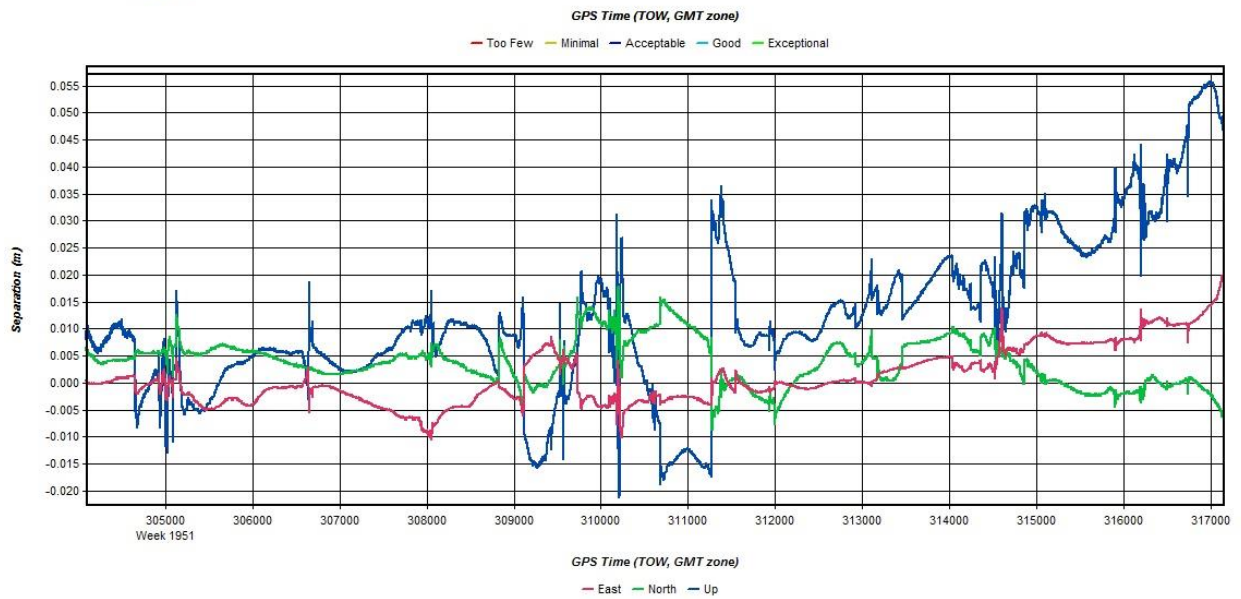
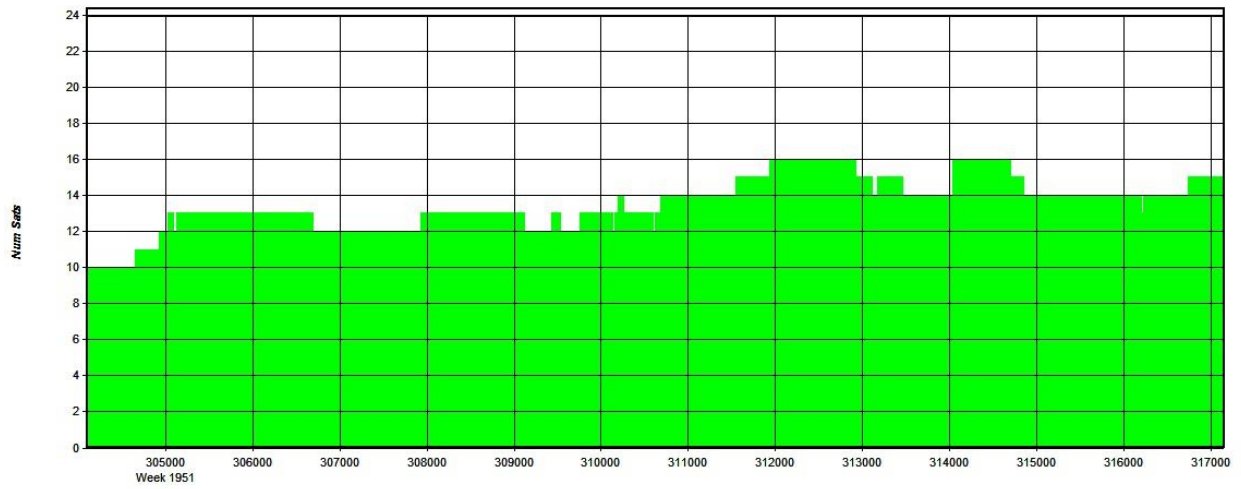
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 76.309 (km)
Minimum: 0.042 (km)
Average: 33.954 (km)
First Epoch: 29.213 (km)
Last Epoch: 0.073 (km)

M11





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M11\IE_files\SD_M11.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 26133

No processed position: 6

Missing Fwd or Rev: 962

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0131 (m)

C/A Code: 0.30 (m)

L1 Doppler: 0.034 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.005 (m)

North: 0.016 (m)

Height: 0.005 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (25165 occurrences):

East: 0.005 (m)

North: 0.016 (m)

Height: 0.005 (m)

Quality Number Percentages:

Q 1: 56.1 %

Q 2: 38.4 %

Q 3: 5.5 %

Q 4: 0.1 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

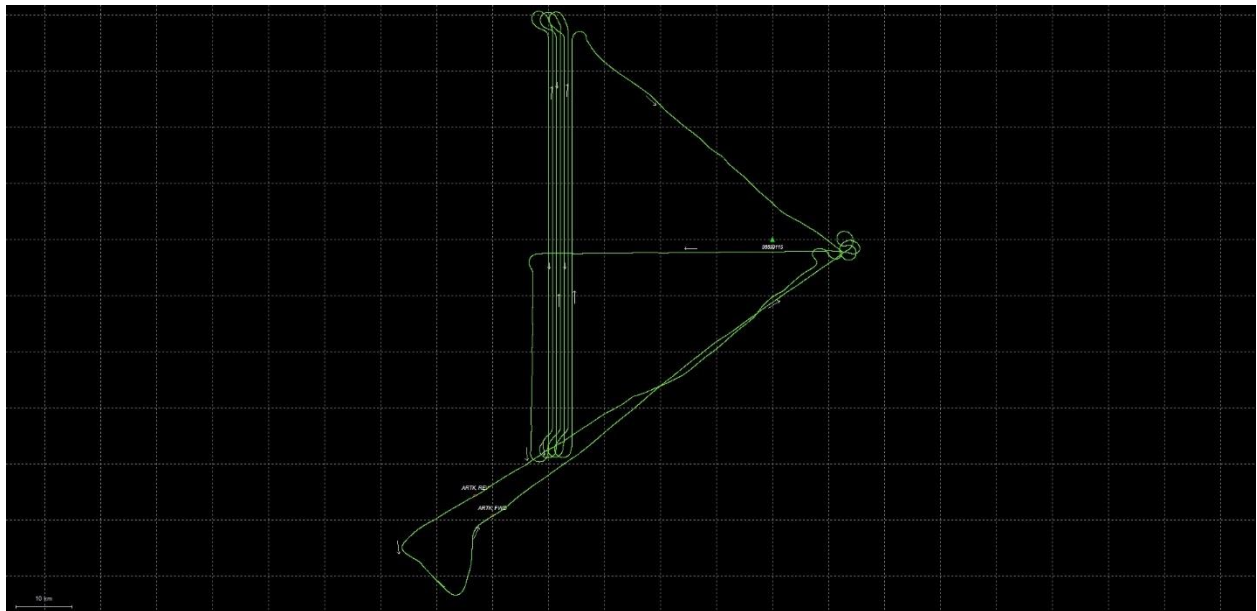
Percentages of epochs with DD_DOP over 10.00:

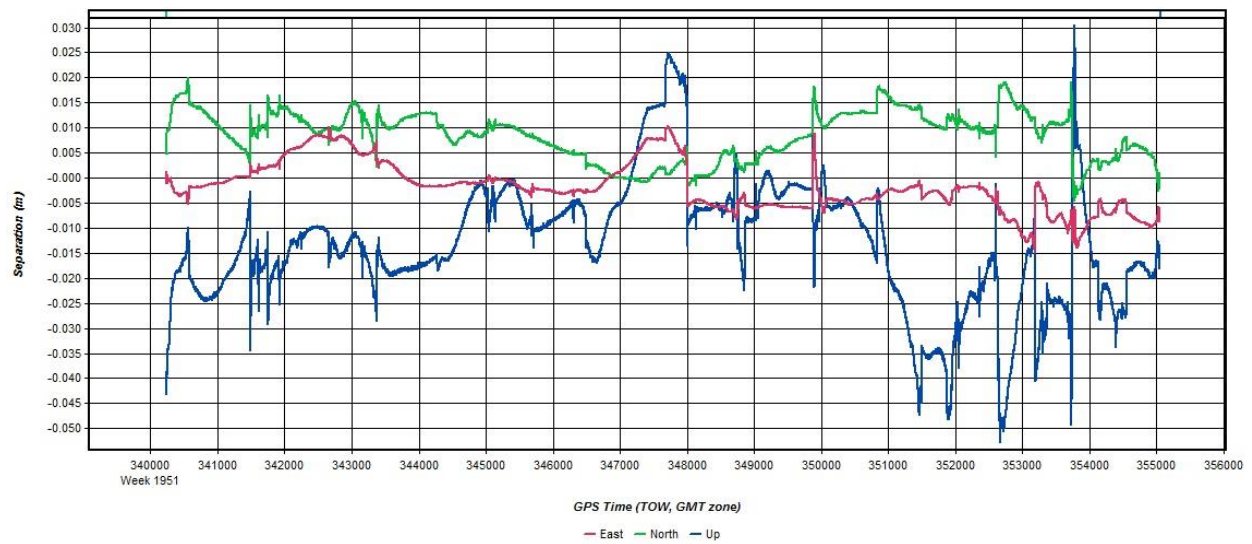
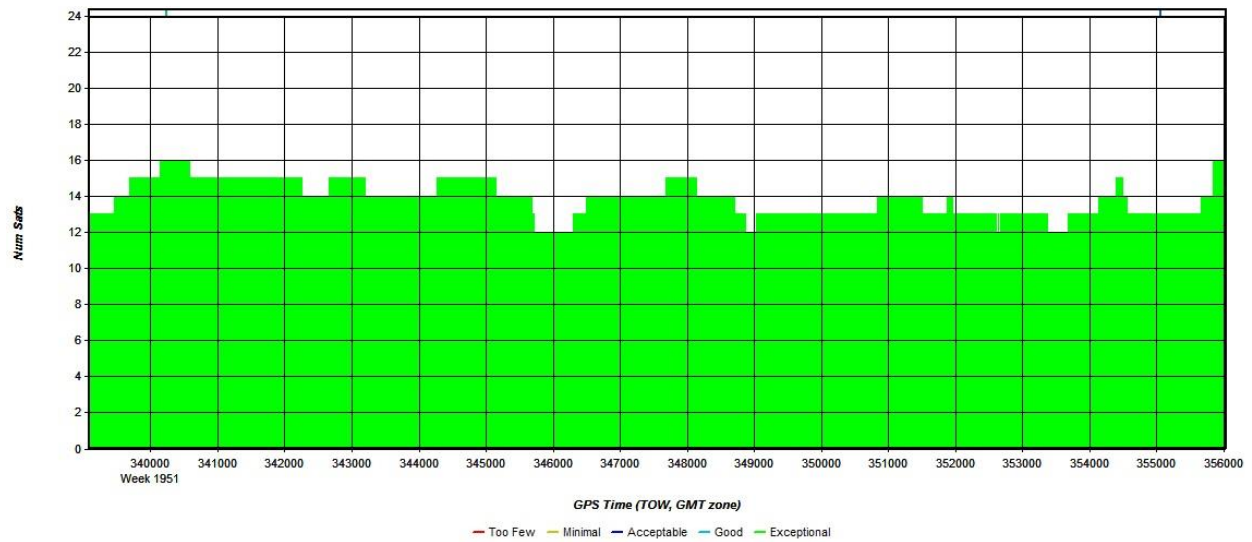
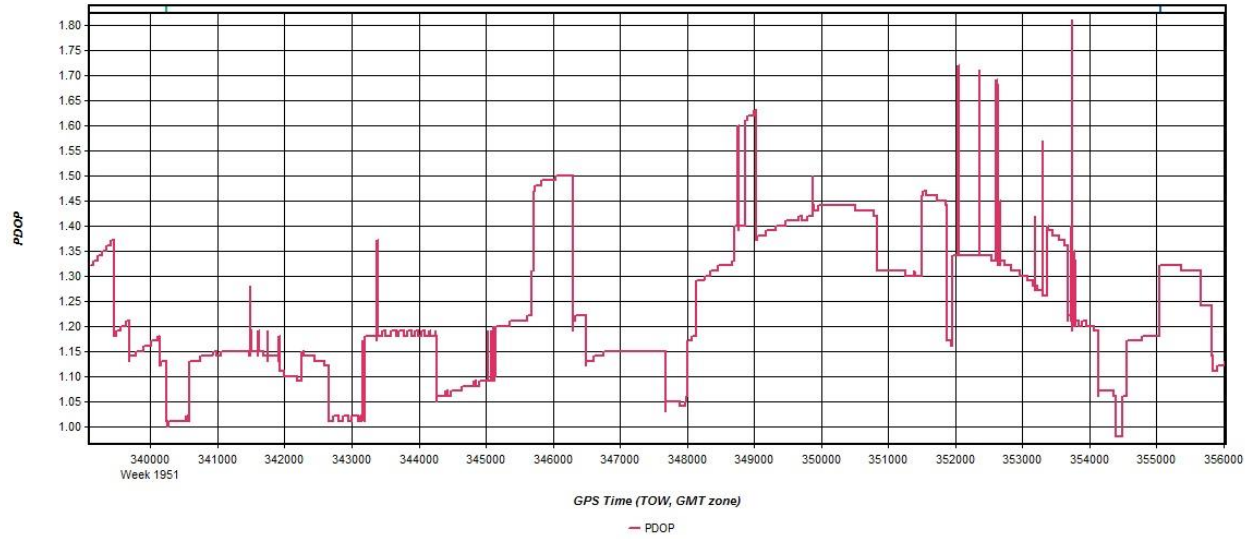
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	78.839 (km)
Minimum:	0.058 (km)
Average:	37.302 (km)
First Epoch:	0.093 (km)
Last Epoch:	0.092 (km)

M12





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M12\IE_files\SD_M12.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 33873
No processed position: 6
Missing Fwd or Rev: 245
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0147 (m)
C/A Code: 0.32 (m)
L1 Doppler: 0.037 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.003 (m)
North: 0.011 (m)
Height: 0.004 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (33622 occurrences):

East: 0.003 (m)
North: 0.011 (m)
Height: 0.004 (m)

Quality Number Percentages:

Q 1: 56.6 %
Q 2: 38.7 %
Q 3: 4.7 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

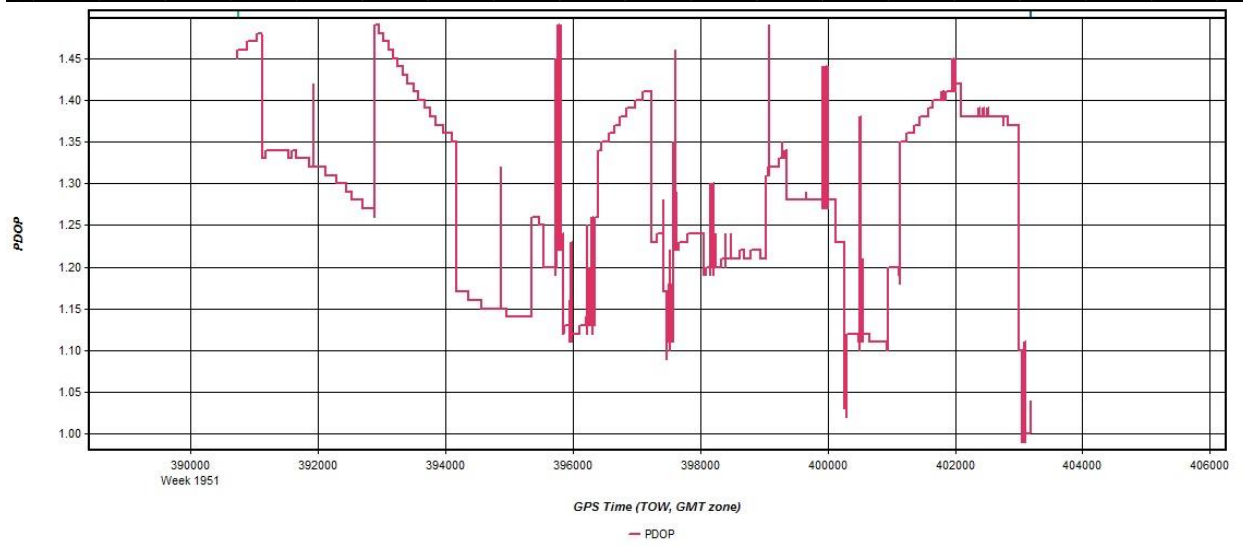
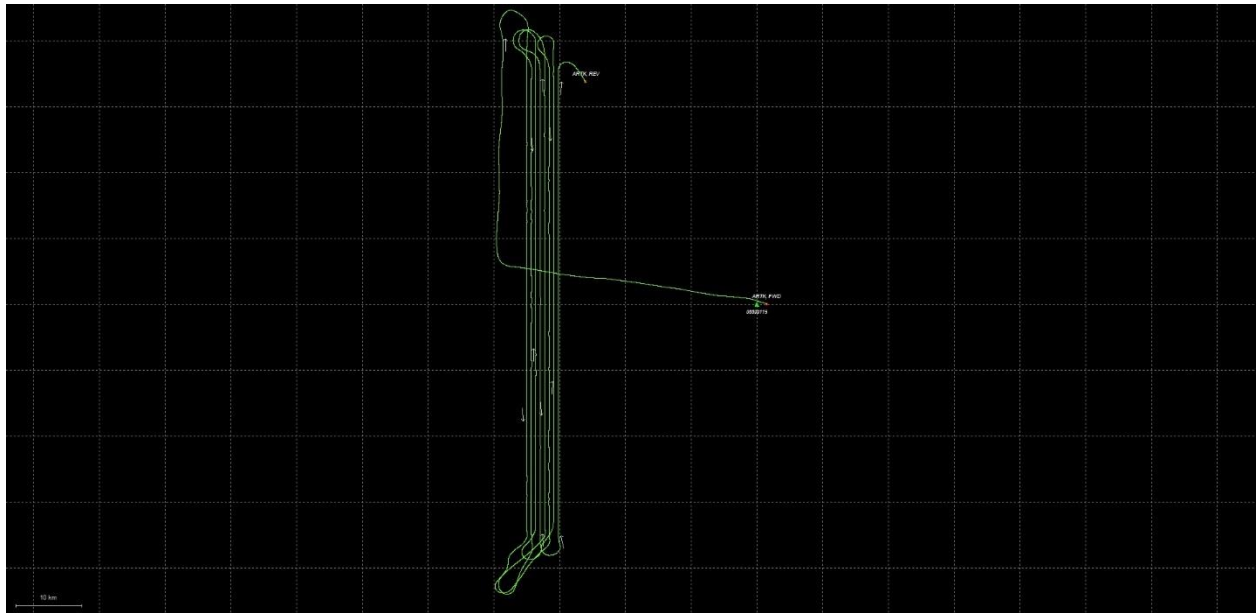
Percentages of epochs with DD_DOP over 10.00:

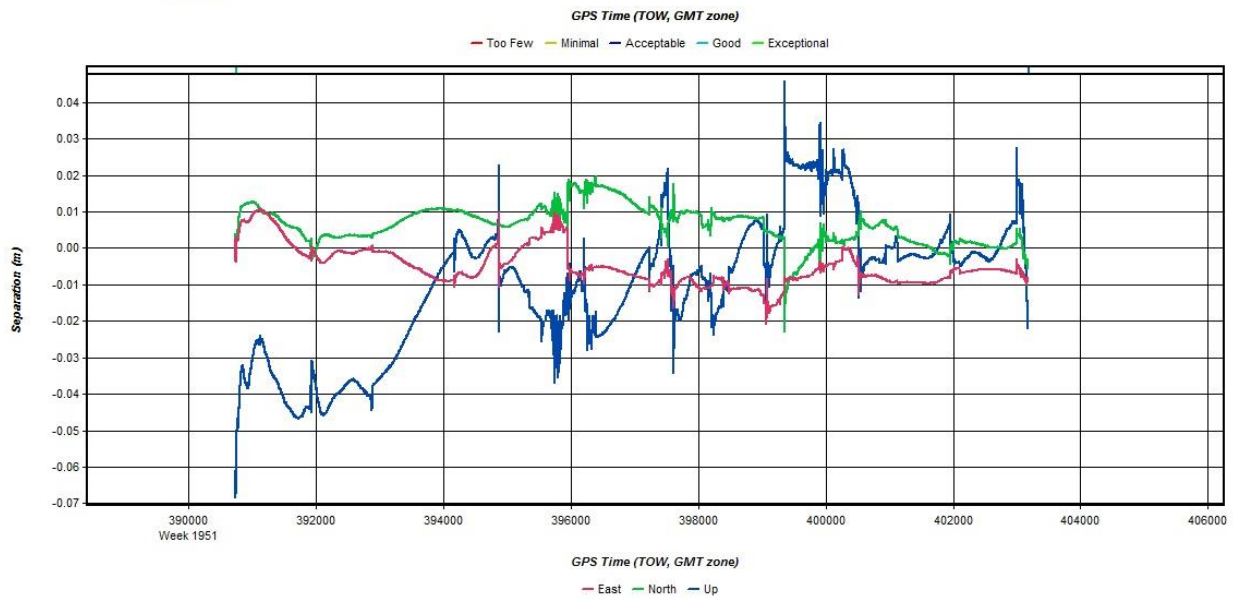
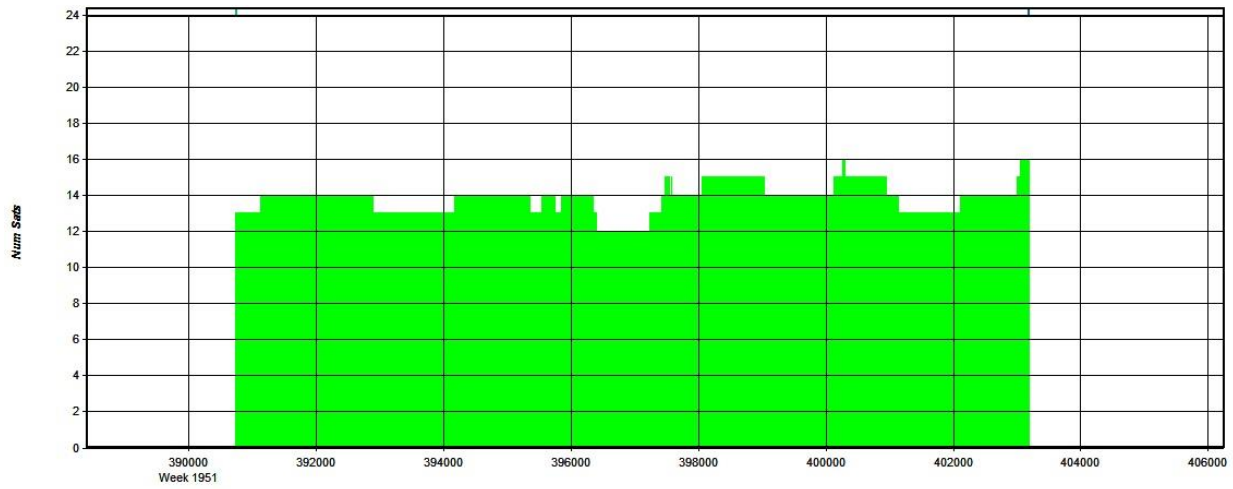
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 85.967 (km)
Minimum: 2.197 (km)
Average: 44.181 (km)
First Epoch: 84.985 (km)
Last Epoch: 84.992 (km)

M13





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M13\IE_files\SD_M13.cfg
 Solution Type: Combined

Number of Epochs:

Total in GPB file: 35714
 No processed position: 10819
 Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0139 (m)

C/A Code: 0.32 (m)

L1 Doppler: 0.036 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.007 (m)

North: 0.008 (m)

Height: 0.022 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (24891 occurrences):

East: 0.007 (m)

North: 0.008 (m)

Height: 0.021 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

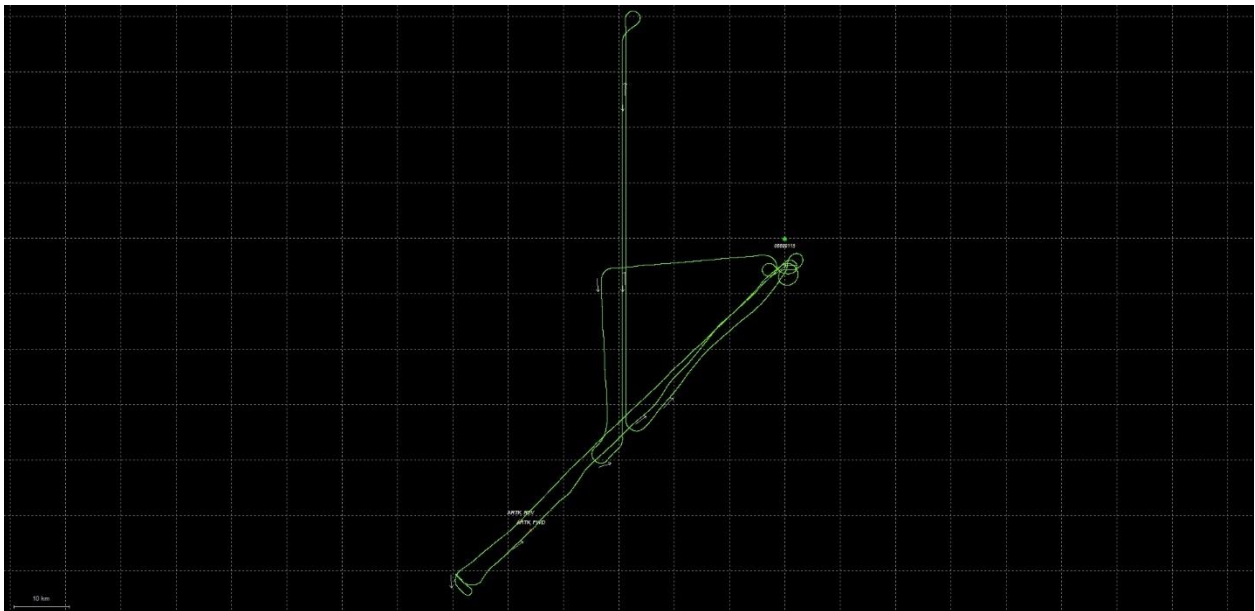
Percentages of epochs with DD_DOP over 10.00:

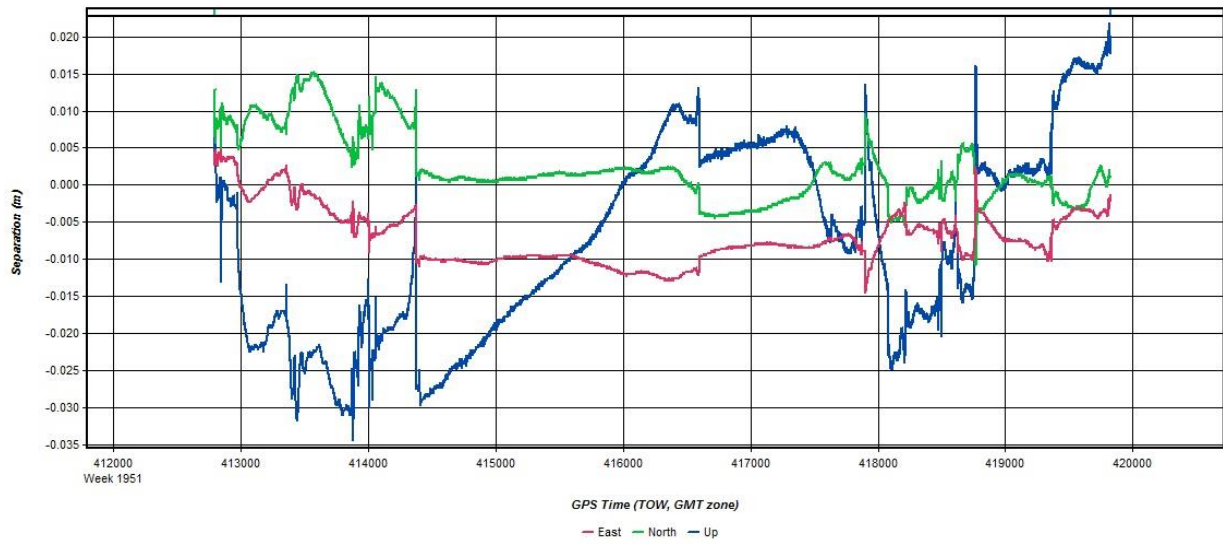
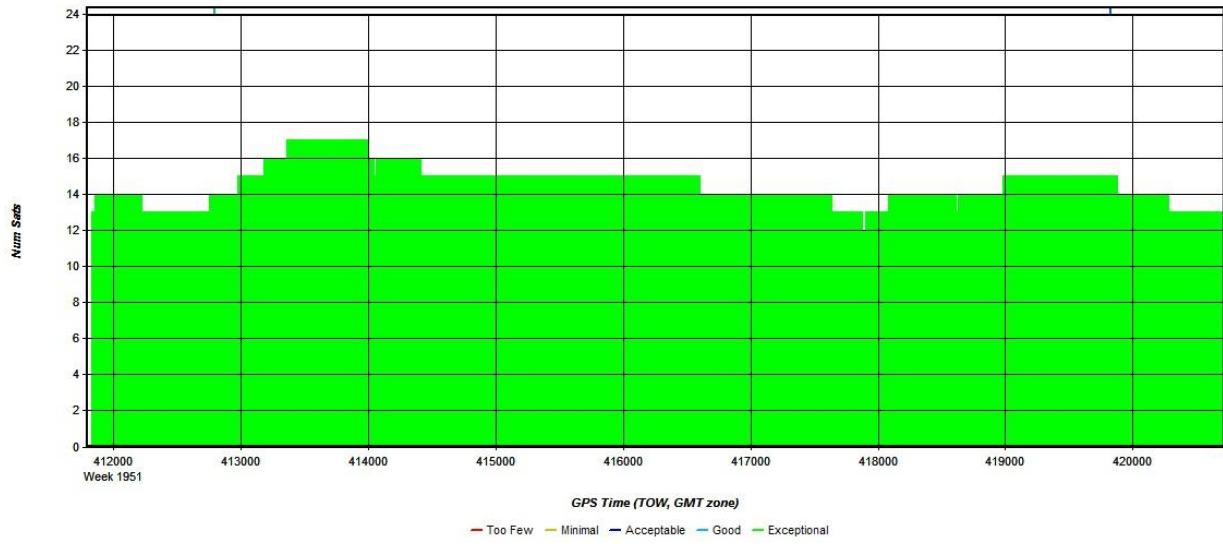
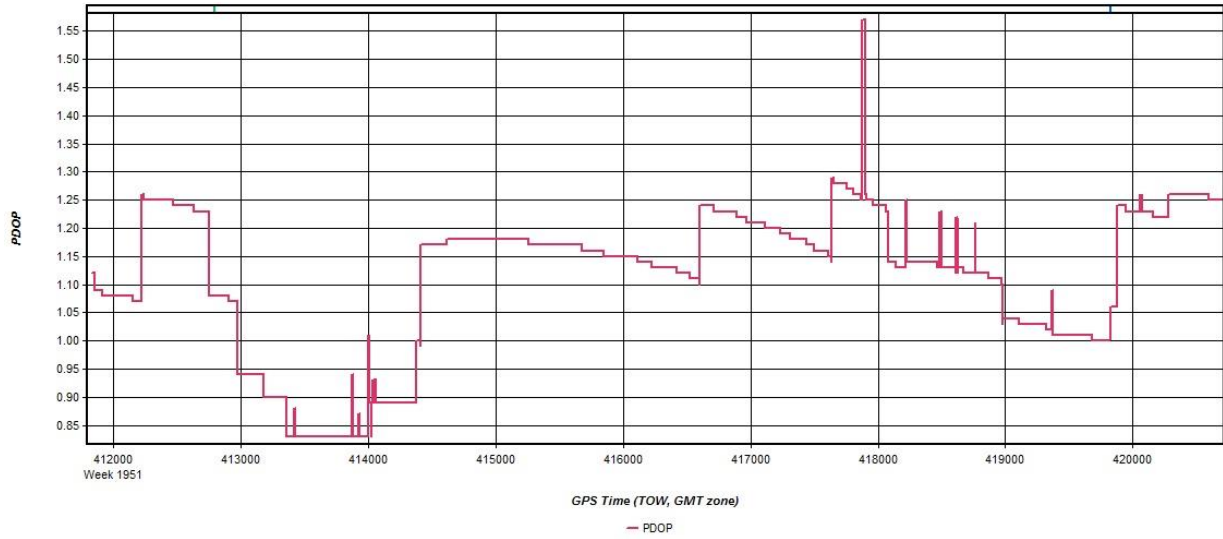
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	58.614 (km)
Minimum:	0.490 (km)
Average:	39.774 (km)
First Epoch:	1.533 (km)
Last Epoch:	42.342 (km)

M14





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M14\IE_Files\SD_M14.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 17753
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0154 (m)
C/A Code: 0.33 (m)
L1 Doppler: 0.036 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.070 (m)
North: 0.032 (m)
Height: 0.113 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (14061 occurrences):

East: 0.008 (m)
North: 0.005 (m)
Height: 0.015 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

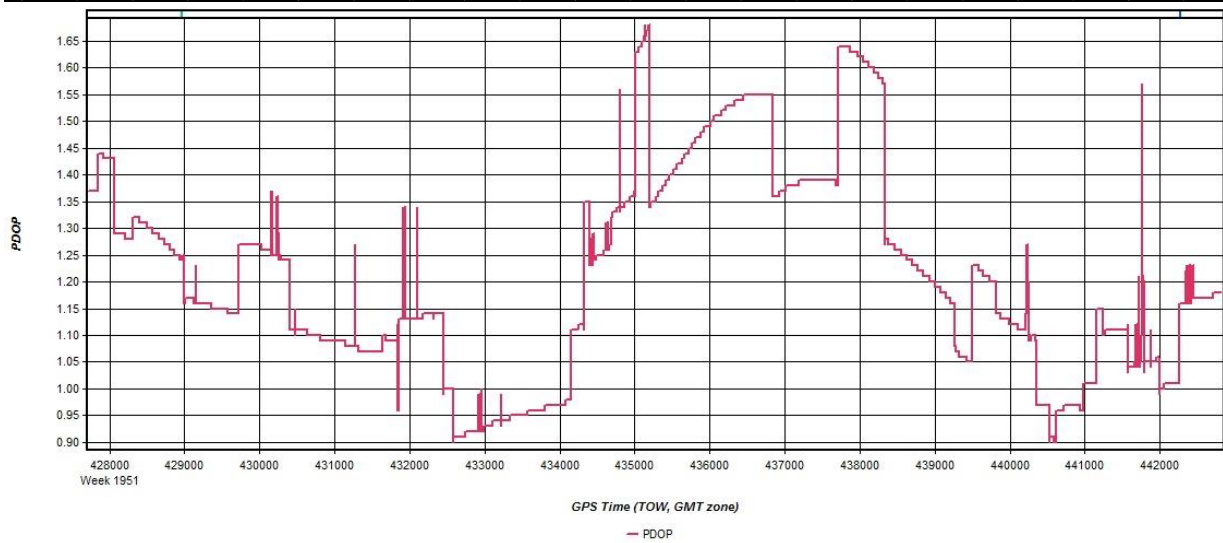
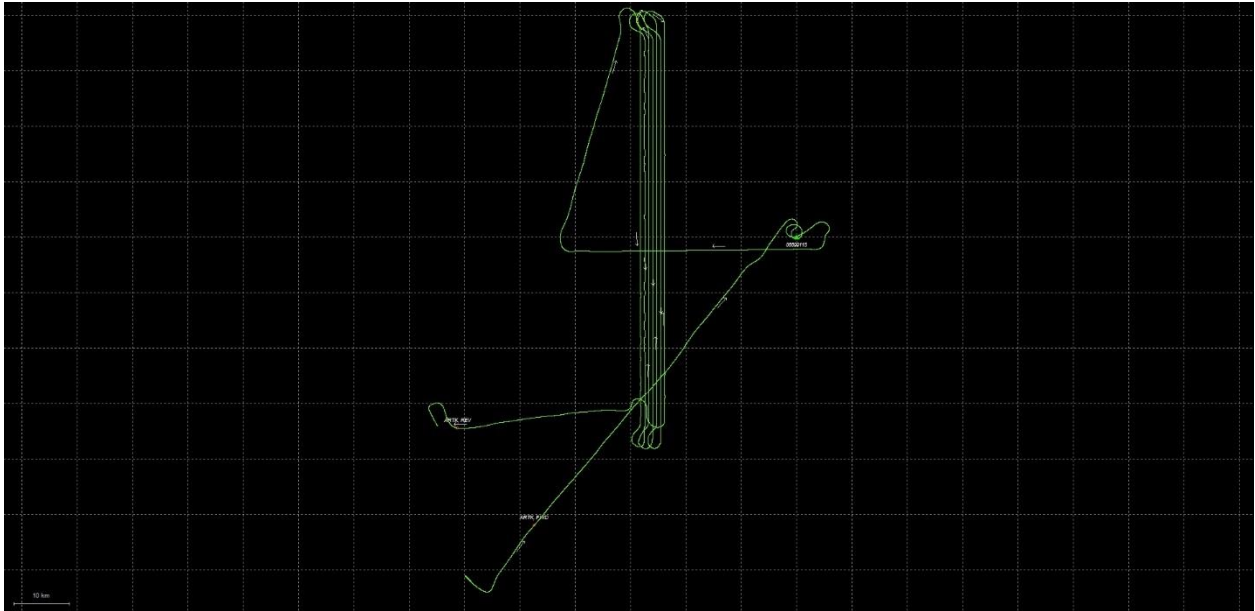
Percentages of epochs with DD_DOP over 10.00:

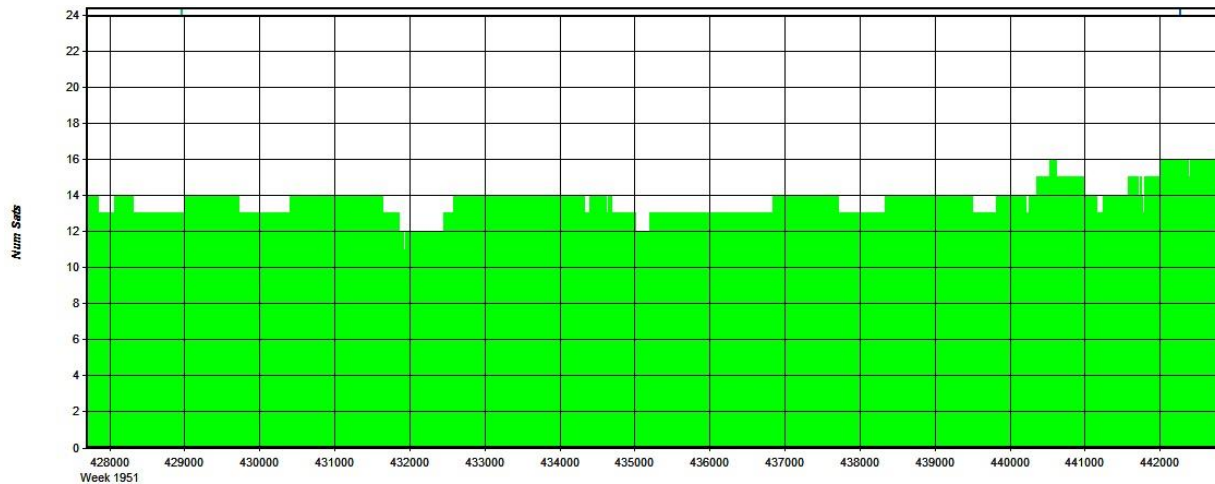
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 86.535 (km)
Minimum: 3.288 (km)
Average: 43.014 (km)
First Epoch: 84.986 (km)
Last Epoch: 84.985 (km)

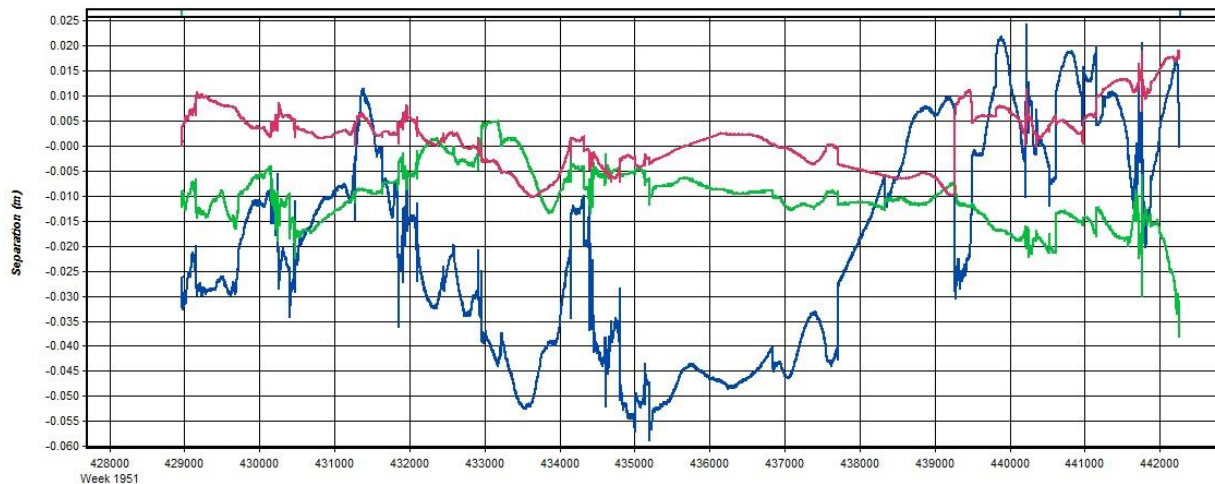
M15





GPS Time (TOW, GMT zone)

— Too Few — Minimal — Acceptable — Good — Exceptional



GPS Time (TOW, GMT zone)

— East — North — Up

Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M15\IE_files\SD_M15.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 30194

No processed position: 2

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0163 (m)

C/A Code: 0.30 (m)

L1 Doppler: 0.036 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.031 (m)

North: 0.017 (m)

Height: 0.085 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26599 occurrences):

East: 0.006 (m)

North: 0.012 (m)

Height: 0.029 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

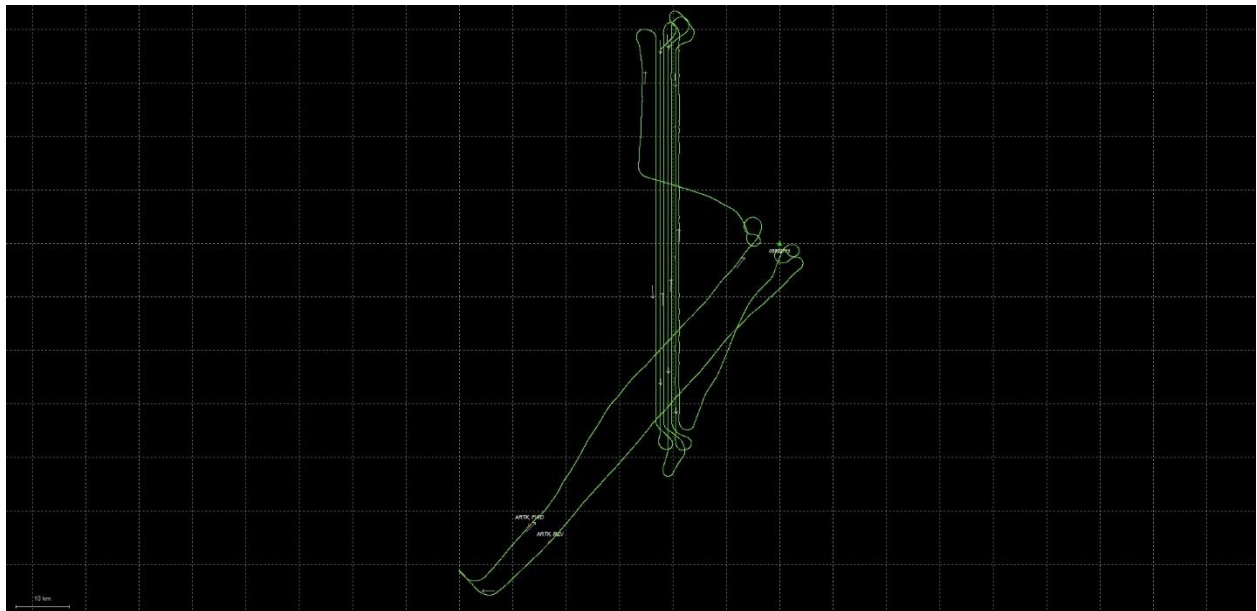
Percentages of epochs with DD_DOP over 10.00:

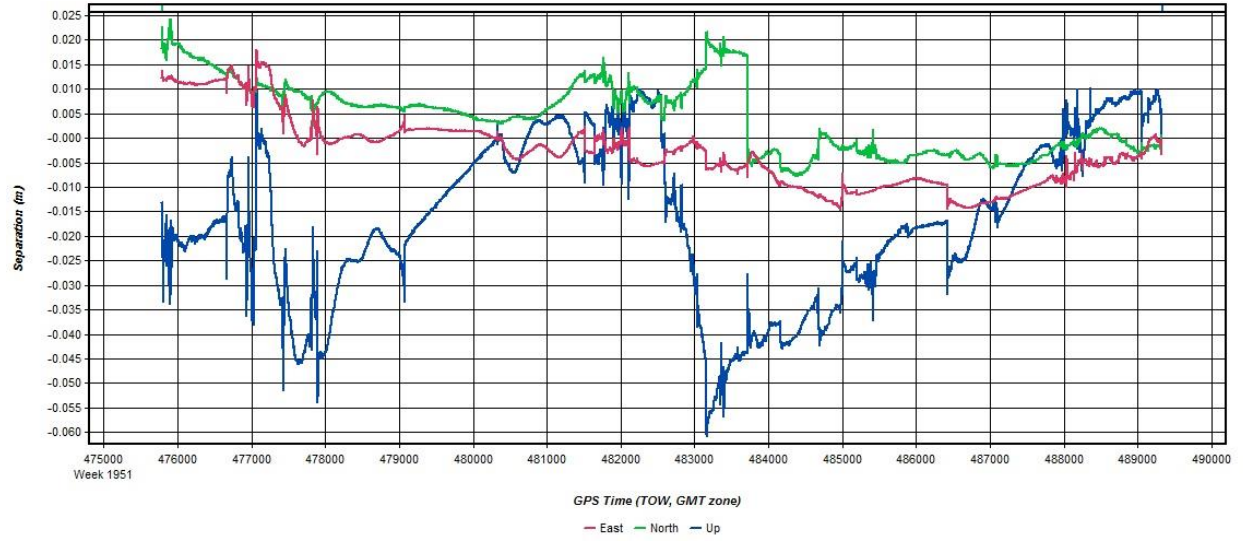
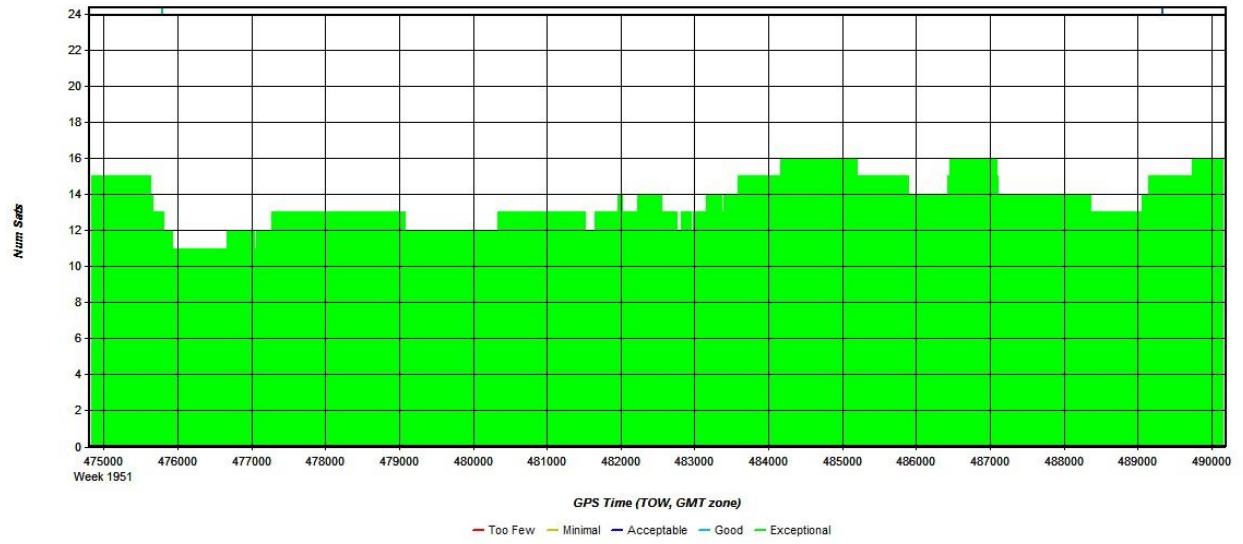
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.142 (km)
Minimum:	0.165 (km)
Average:	39.209 (km)
First Epoch:	84.985 (km)
Last Epoch:	72.812 (km)

M16





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M16\IE_files\SD_M16.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 30645
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0151 (m)
C/A Code: 0.32 (m)
L1 Doppler: 0.039 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.041 (m)
North: 0.046 (m)
Height: 0.066 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (27079 occurrences):

East: 0.008 (m)
North: 0.008 (m)
Height: 0.023 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

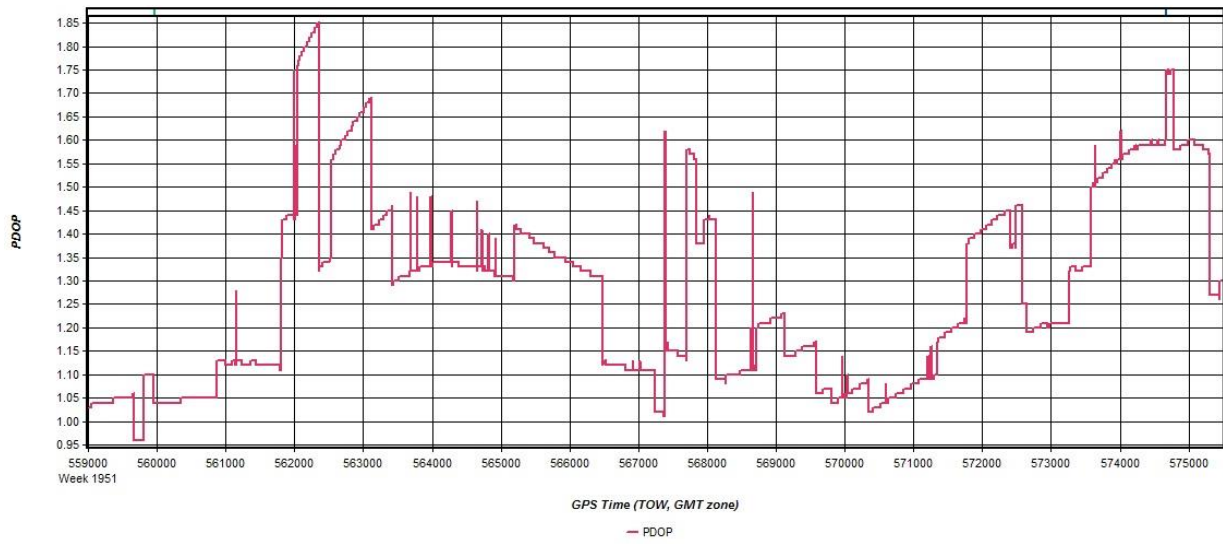
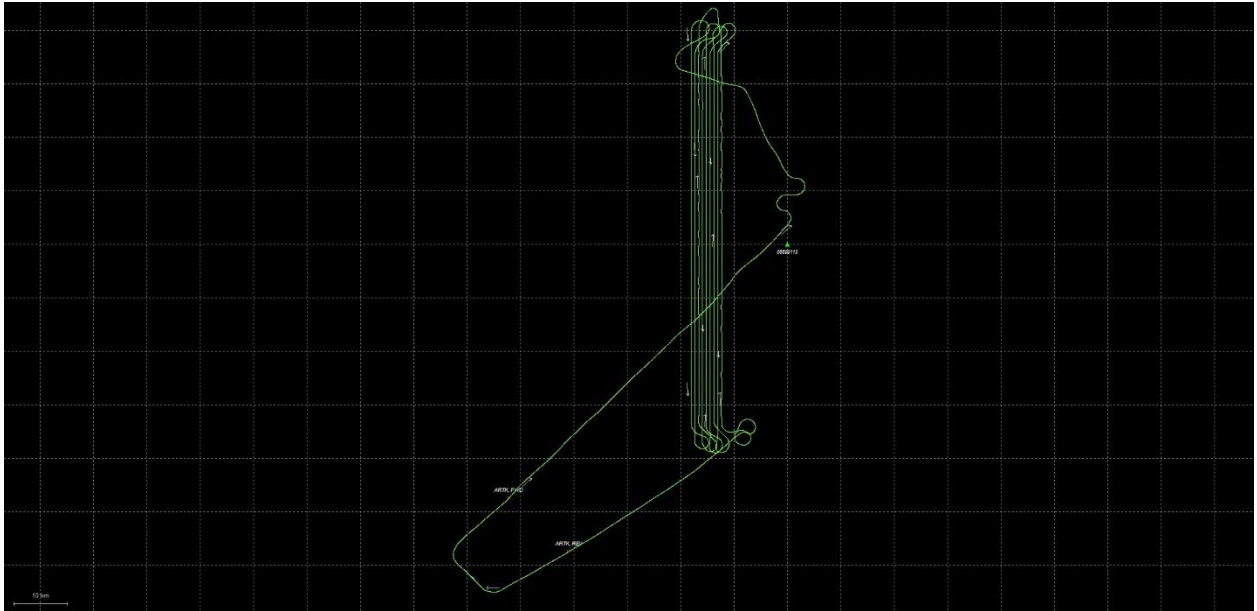
Percentages of epochs with DD_DOP over 10.00:

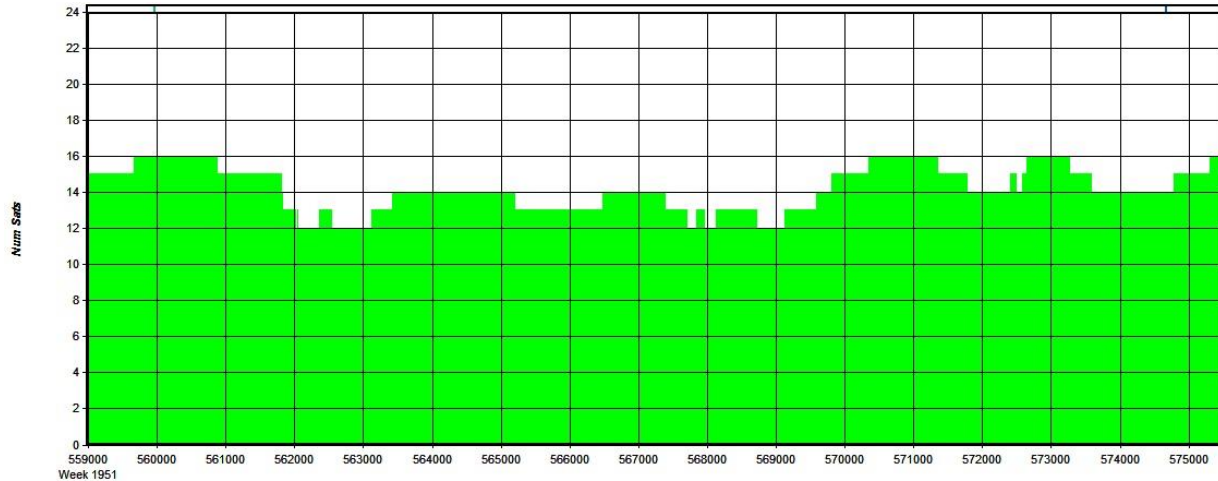
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 85.333 (km)
Minimum: 1.061 (km)
Average: 36.240 (km)
First Epoch: 84.991 (km)
Last Epoch: 84.992 (km)

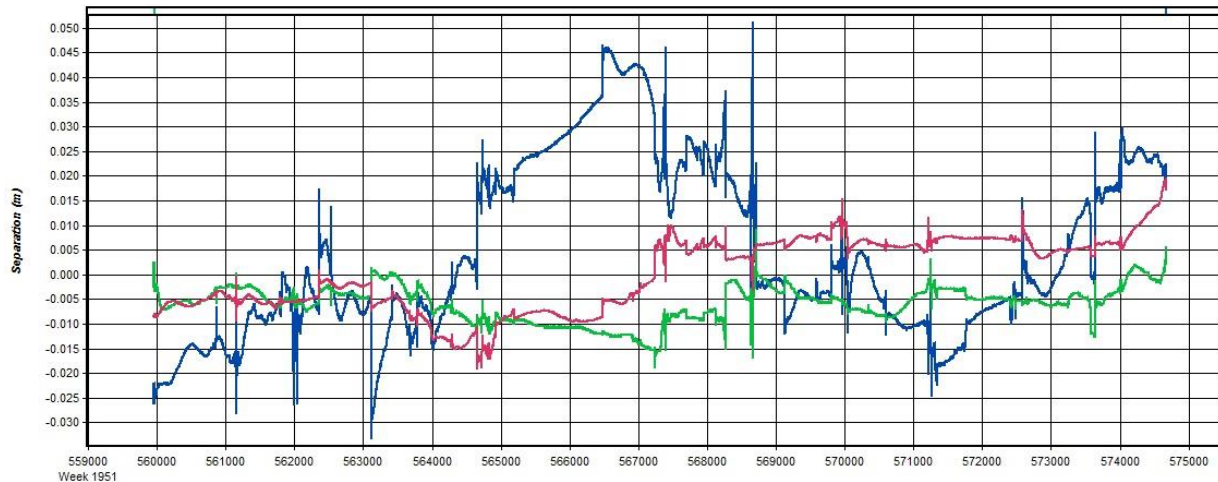
M17





GPS Time (TOW, GMT zone)

— Too Few — Minimal — Acceptable — Good — Exceptional



GPS Time (TOW, GMT zone)

— East — North — Up

Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M17\IE_files\SD_M17.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 33036

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0141 (m)

C/A Code: 0.35 (m)

L1 Doppler: 0.034 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.043 (m)

North: 0.015 (m)

Height: 0.045 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29421 occurrences):

East: 0.007 (m)

North: 0.007 (m)

Height: 0.018 (m)

Quality Number Percentages:

Q 1: 99.9 %

Q 2: 0.1 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

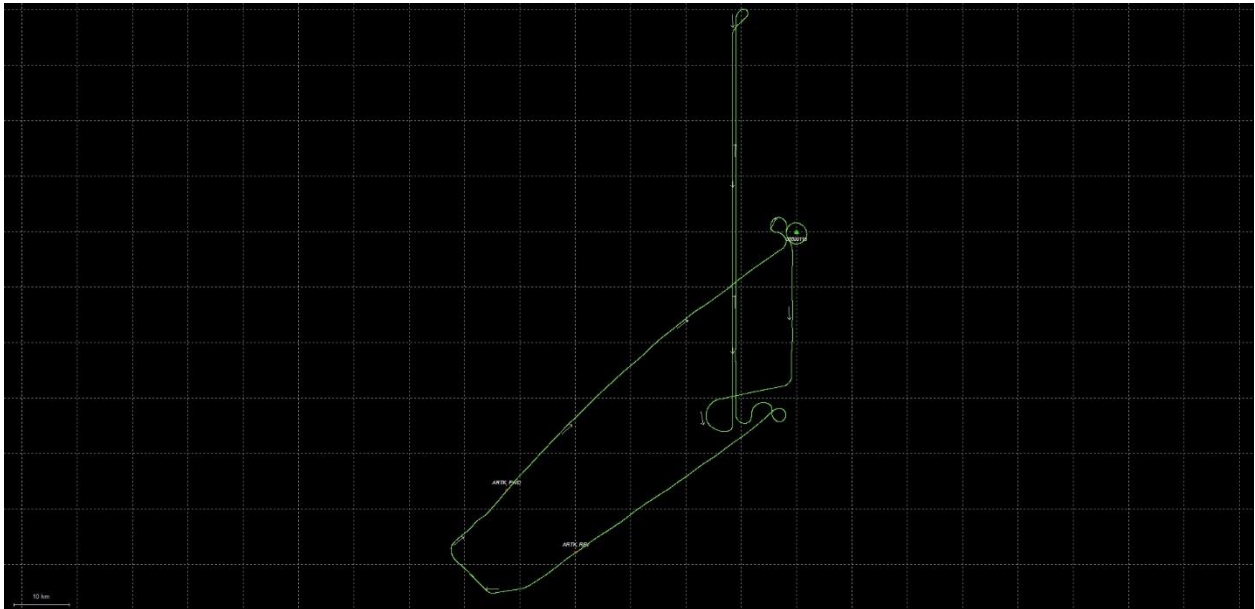
Percentages of epochs with DD_DOP over 10.00:

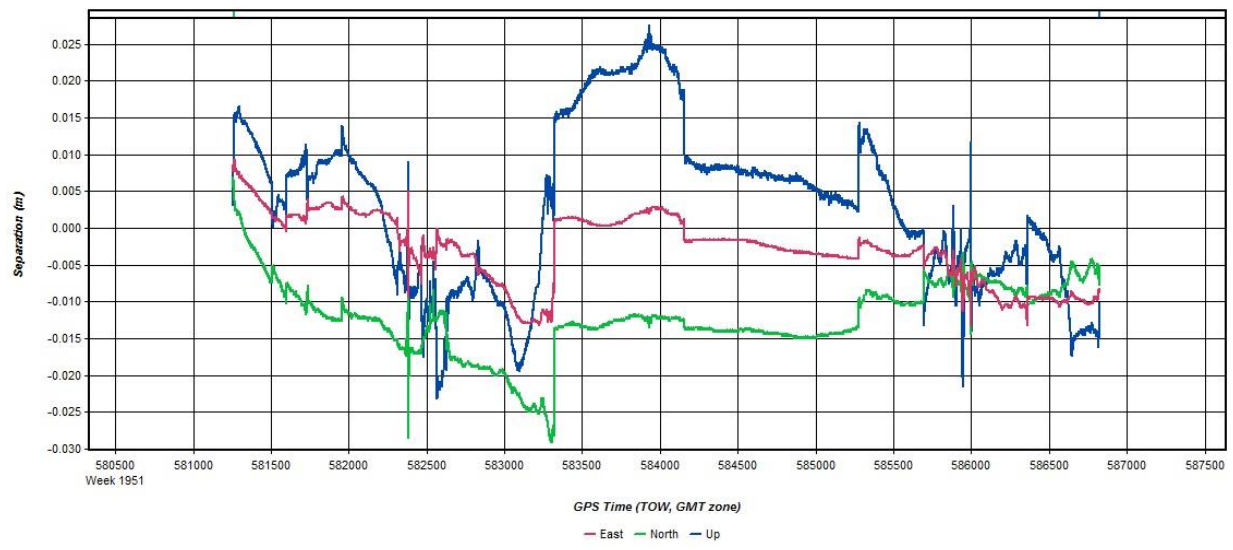
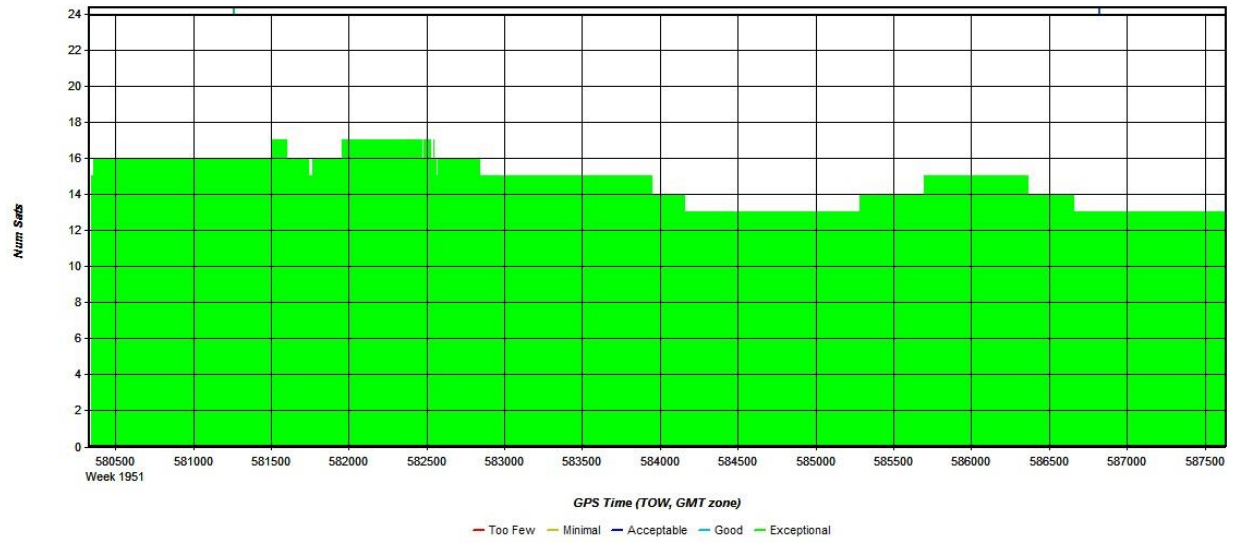
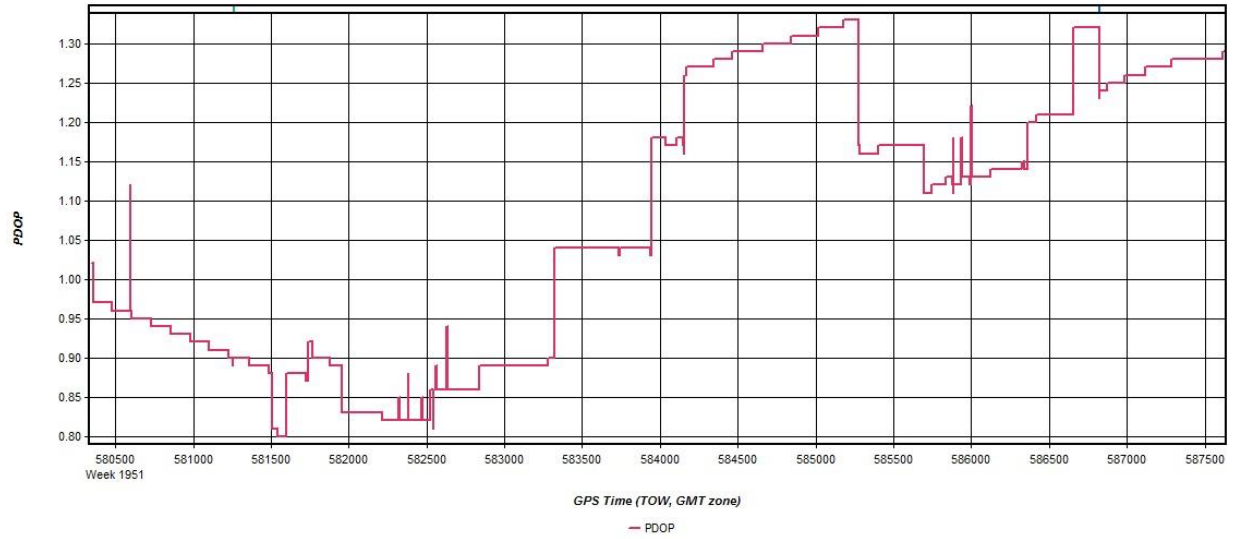
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.276 (km)
Minimum:	2.451 (km)
Average:	34.373 (km)
First Epoch:	84.992 (km)
Last Epoch:	84.986 (km)

M18





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M18\IE_files\SD_M18.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 14575
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0155 (m)
C/A Code: 0.35 (m)
L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.032 (m)
North: 0.050 (m)
Height: 0.157 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (11133 occurrences):

East: 0.005 (m)
North: 0.013 (m)
Height: 0.011 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

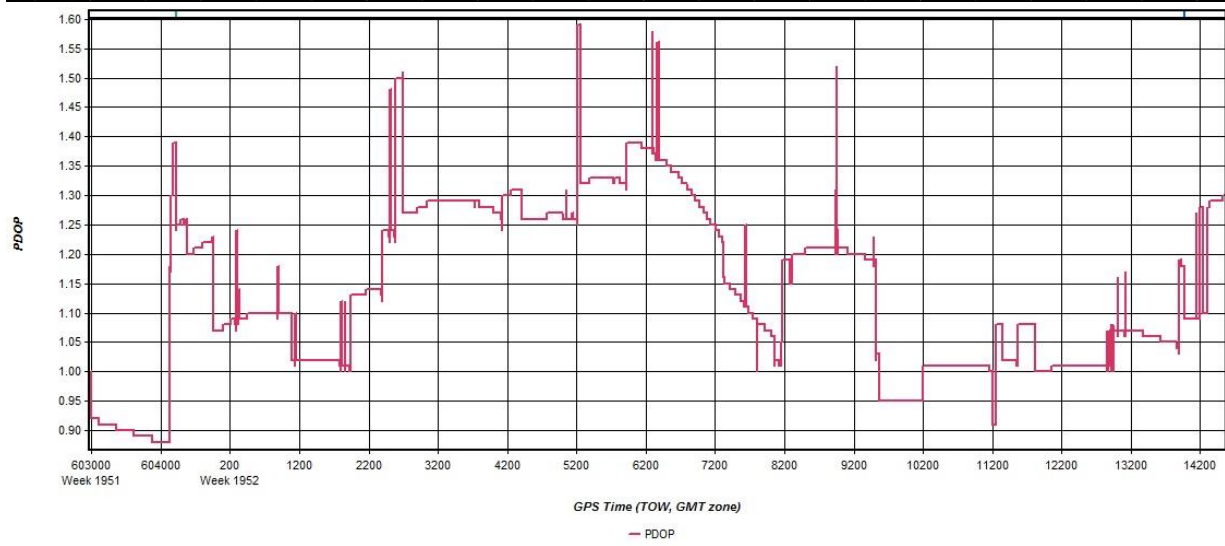
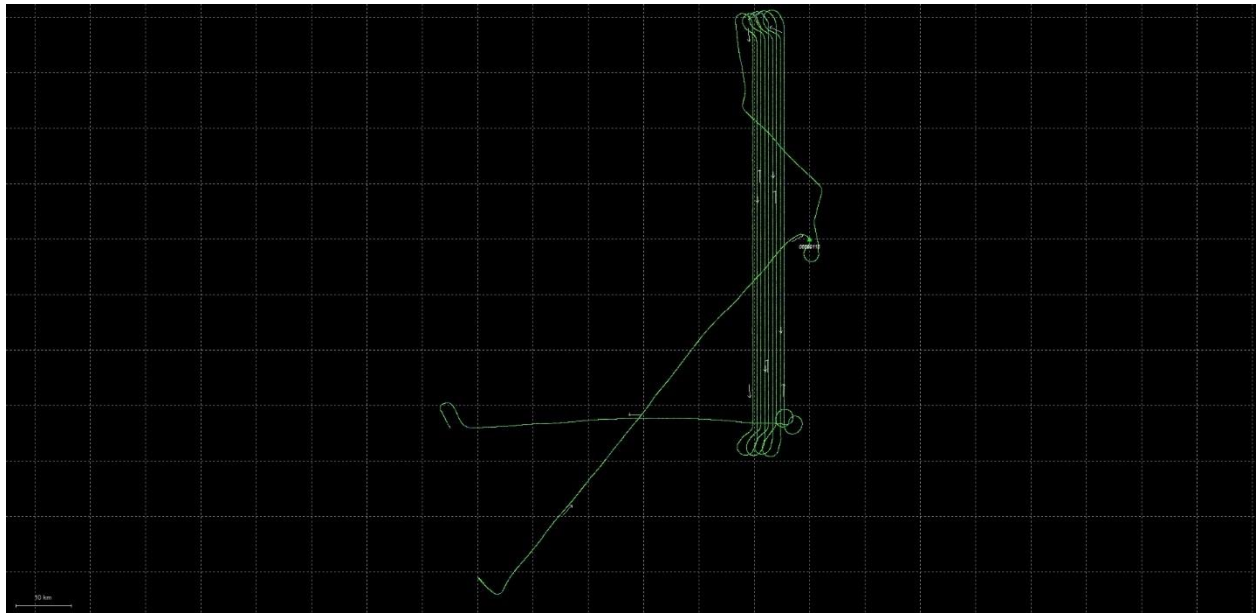
Percentages of epochs with DD_DOP over 10.00:

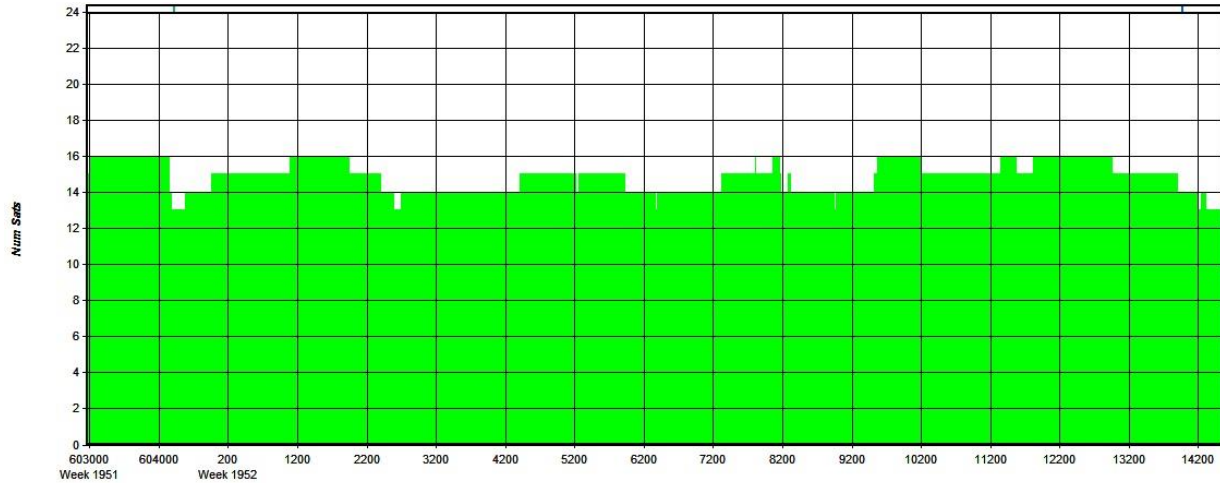
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 85.352 (km)
Minimum: 1.532 (km)
Average: 41.175 (km)
First Epoch: 84.986 (km)
Last Epoch: 84.986 (km)

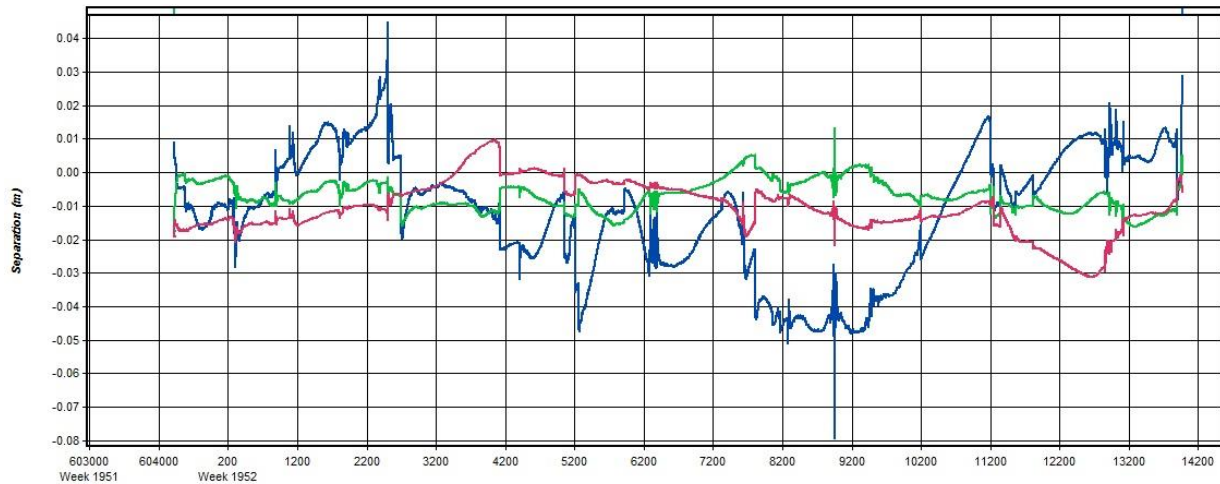
M19





GPS Time (TOW, GMT zone)

— Too Few — Minimal — Acceptable — Good — Exceptional



GPS Time (TOW, GMT zone)

— East — North — Up

Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M19\IE_Files\SD_M19.cfg
 Solution Type: Combined

Number of Epochs:

Total in GPB file: 32755
 No processed position: 1
 Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0167 (m)

C/A Code: 0.35 (m)

L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.067 (m)

North: 0.036 (m)

Height: 0.131 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29115 occurrences):

East: 0.013 (m)

North: 0.008 (m)

Height: 0.021 (m)

Quality Number Percentages:

Q 1: 99.8 %

Q 2: 0.2 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

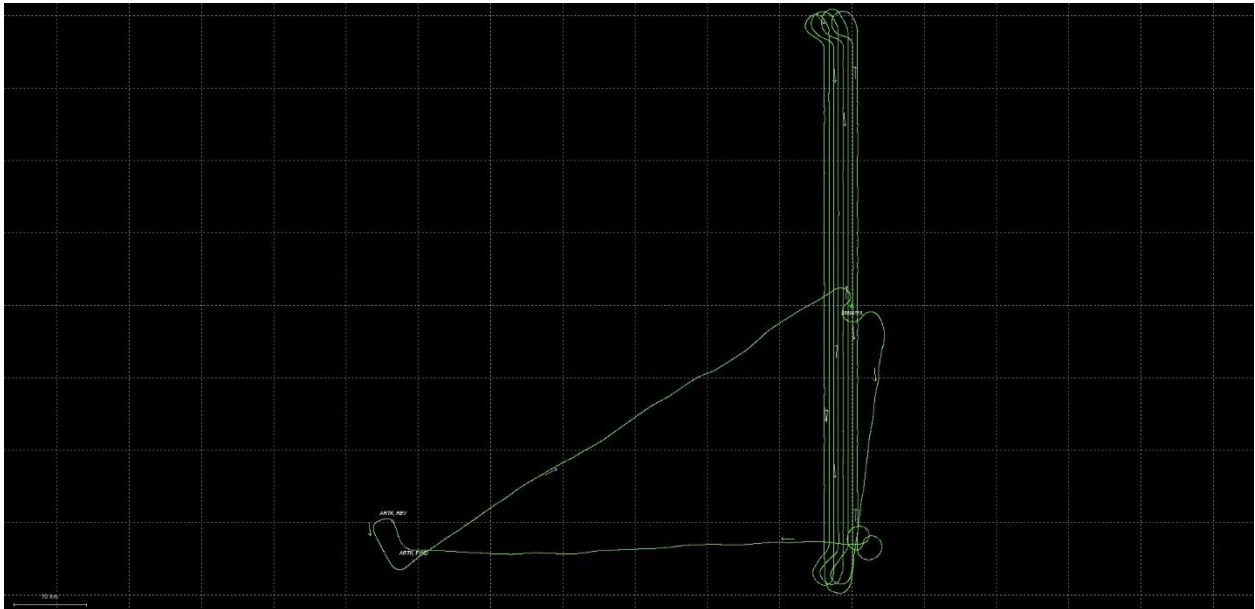
Percentages of epochs with DD_DOP over 10.00:

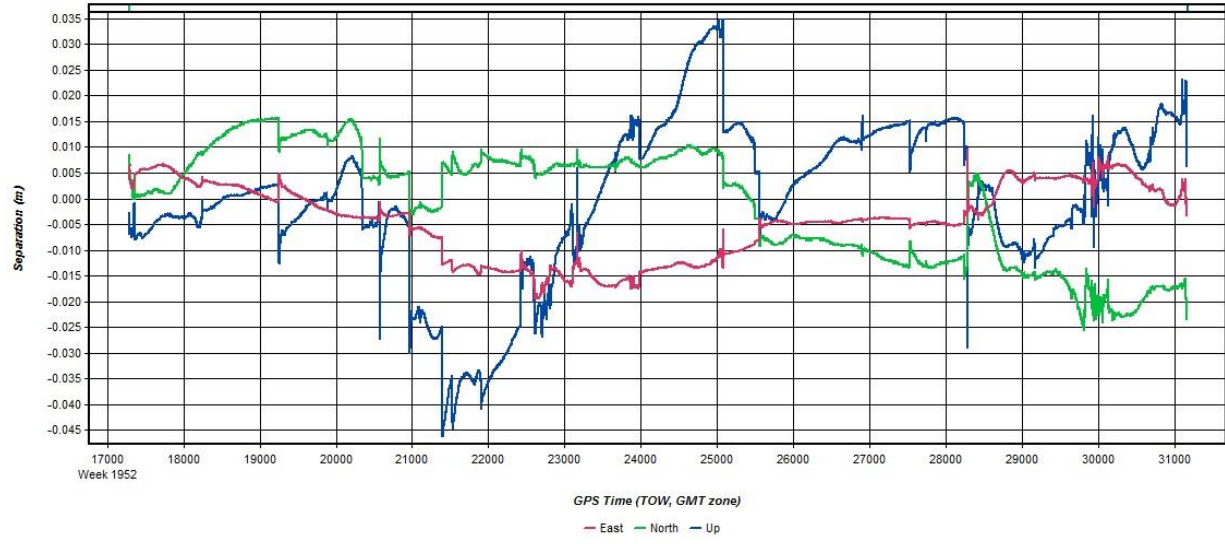
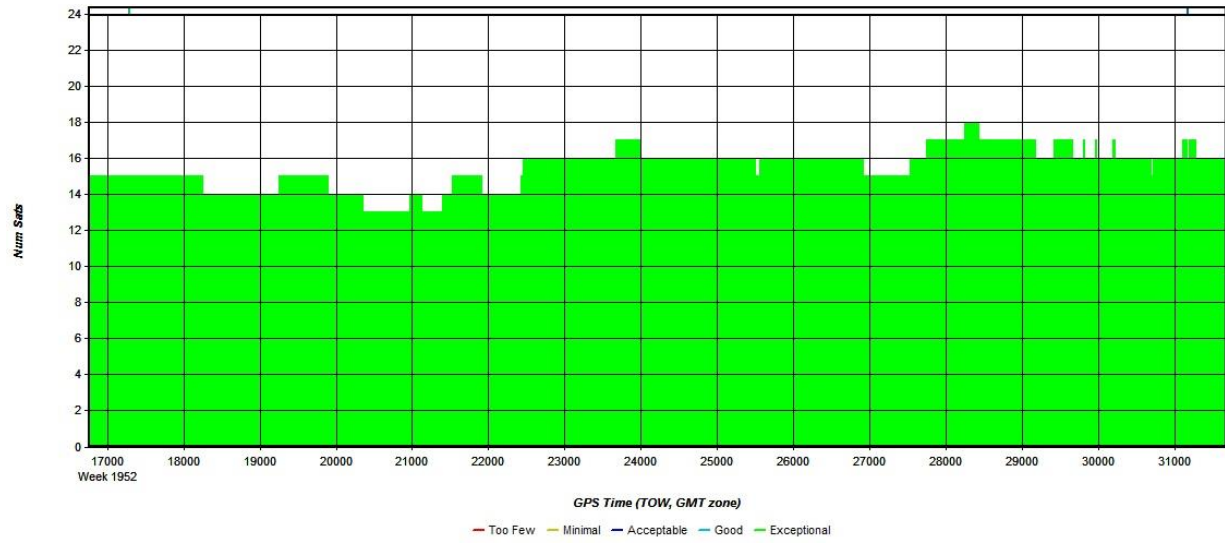
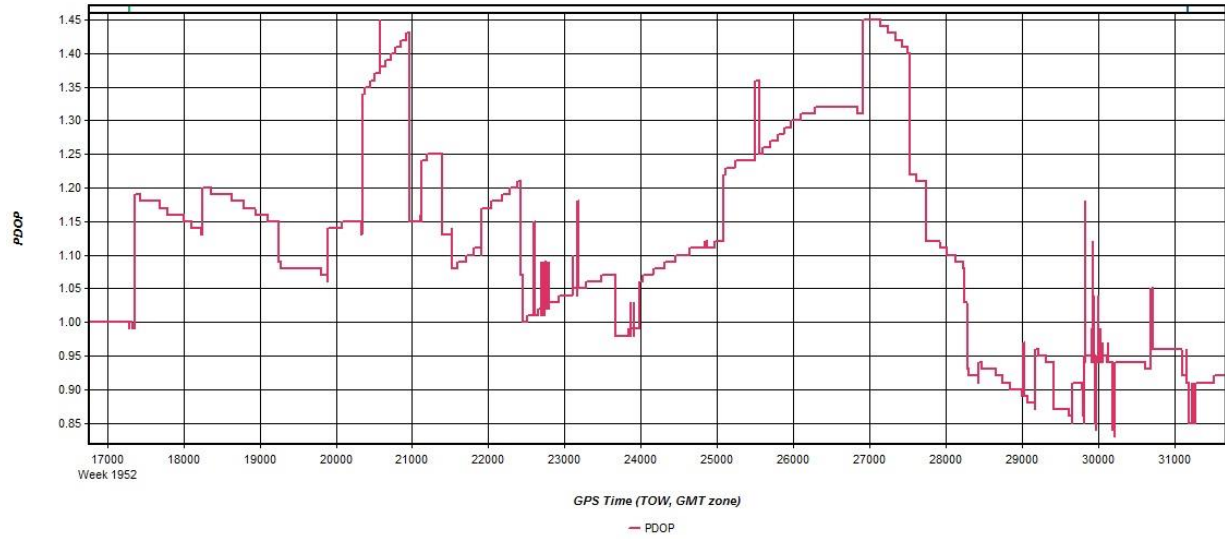
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.172 (km)
Minimum:	0.112 (km)
Average:	29.734 (km)
First Epoch:	84.986 (km)
Last Epoch:	72.858 (km)

M20





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M20\IE_files\SD_M20.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 29824
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0170 (m)
C/A Code: 0.32 (m)
L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.027 (m)
North: 0.028 (m)
Height: 0.031 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (27747 occurrences):

East: 0.008 (m)
North: 0.011 (m)
Height: 0.015 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

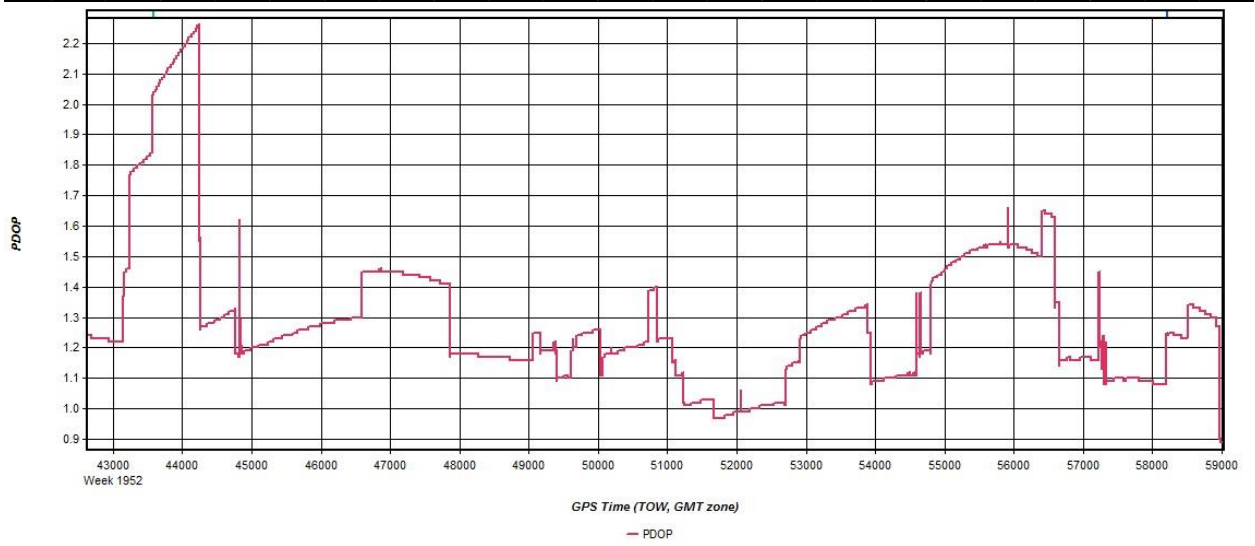
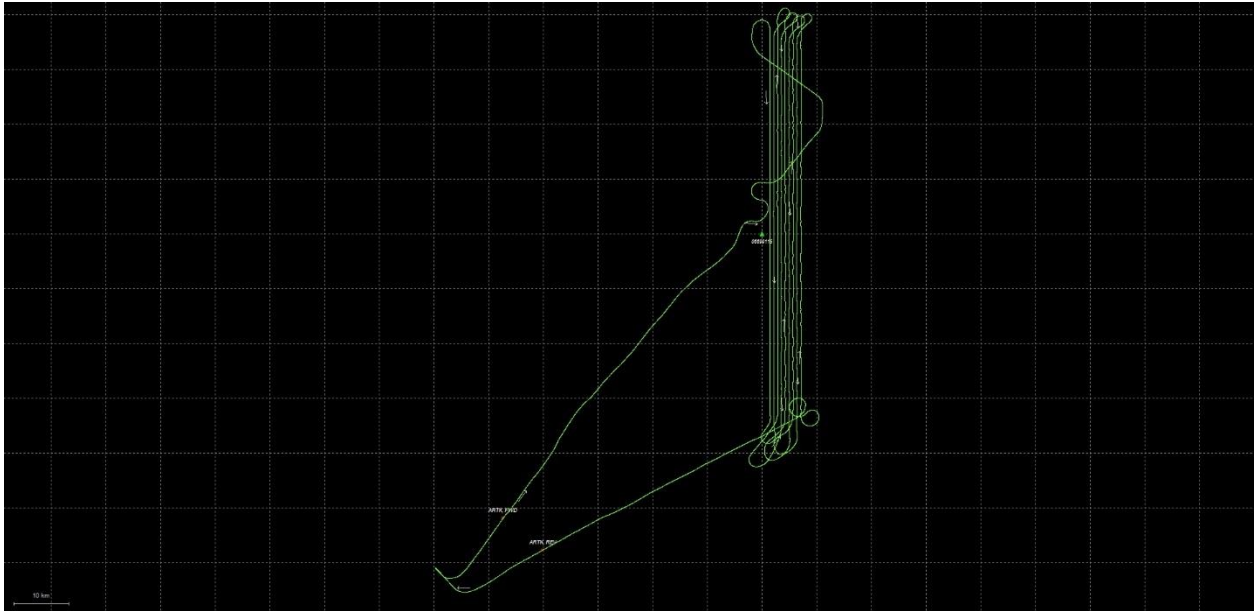
Percentages of epochs with DD_DOP over 10.00:

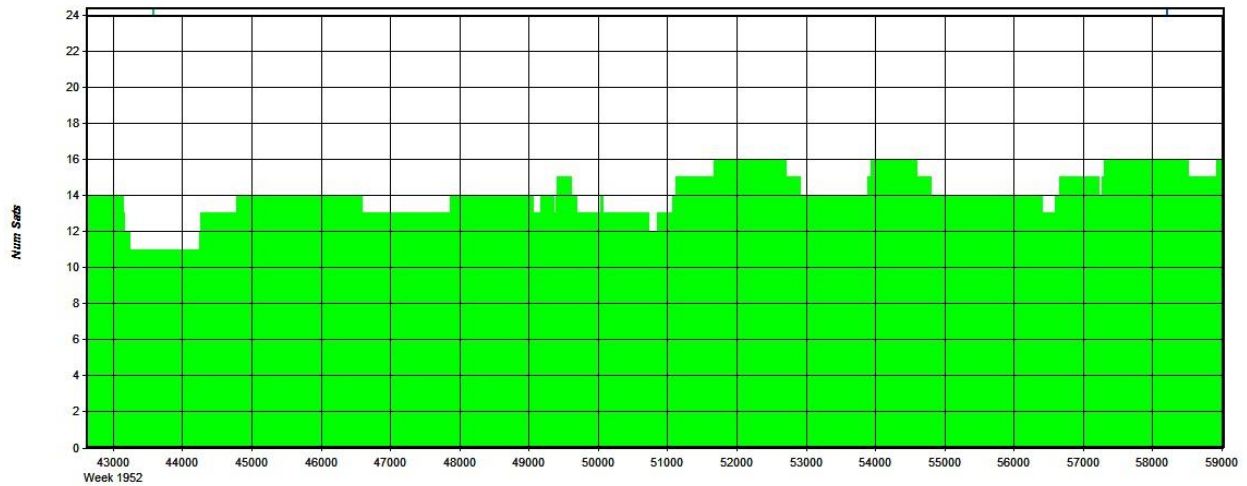
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 72.979 (km)
Minimum: 0.087 (km)
Average: 27.339 (km)
First Epoch: 72.857 (km)
Last Epoch: 72.856 (km)

M21





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M21\IE_files\SD_M21.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 32773

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0154 (m)

C/A Code: 0.34 (m)

L1 Doppler: 0.034 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.022 (m)

North: 0.039 (m)

Height: 0.078 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29263 occurrences):

East: 0.009 (m)

North: 0.006 (m)

Height: 0.017 (m)

Quality Number Percentages:

Q 1: 99.9 %

Q 2: 0.1 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

Percentages of epochs with DD_DOP over 10.00:

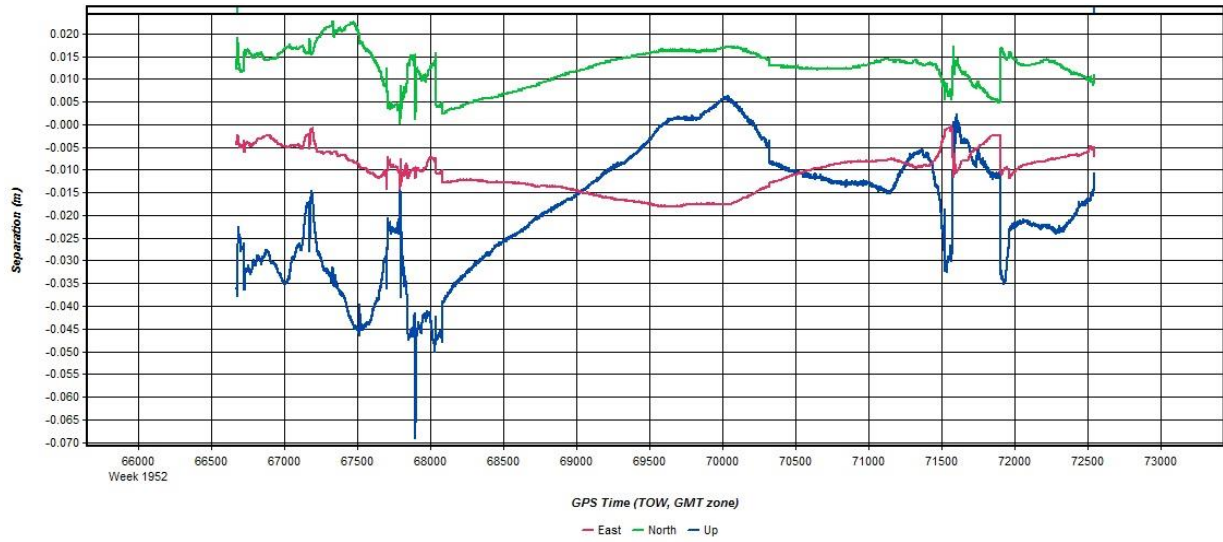
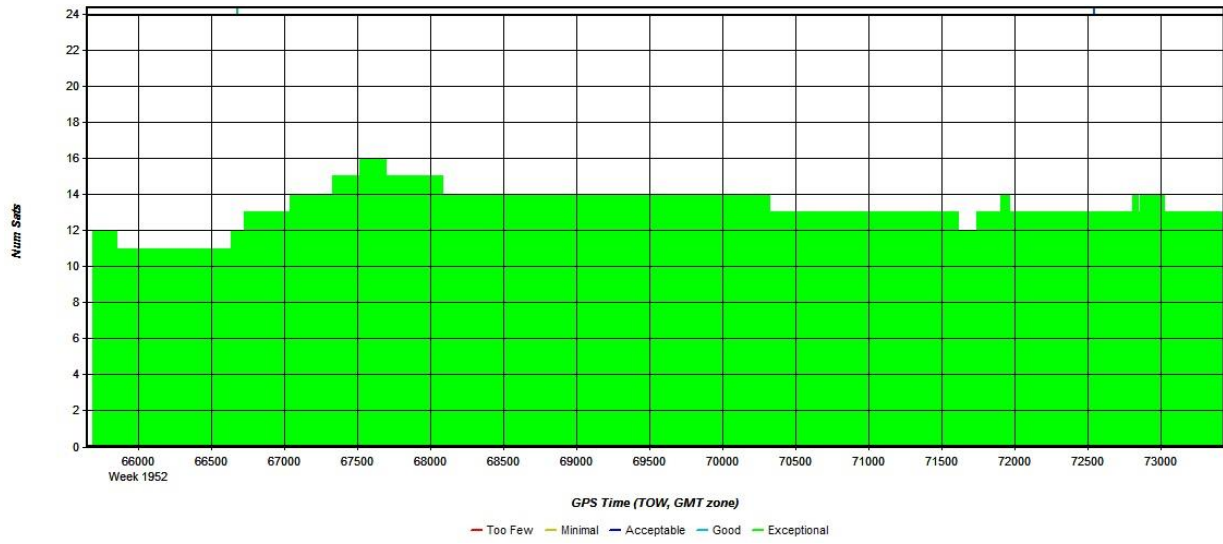
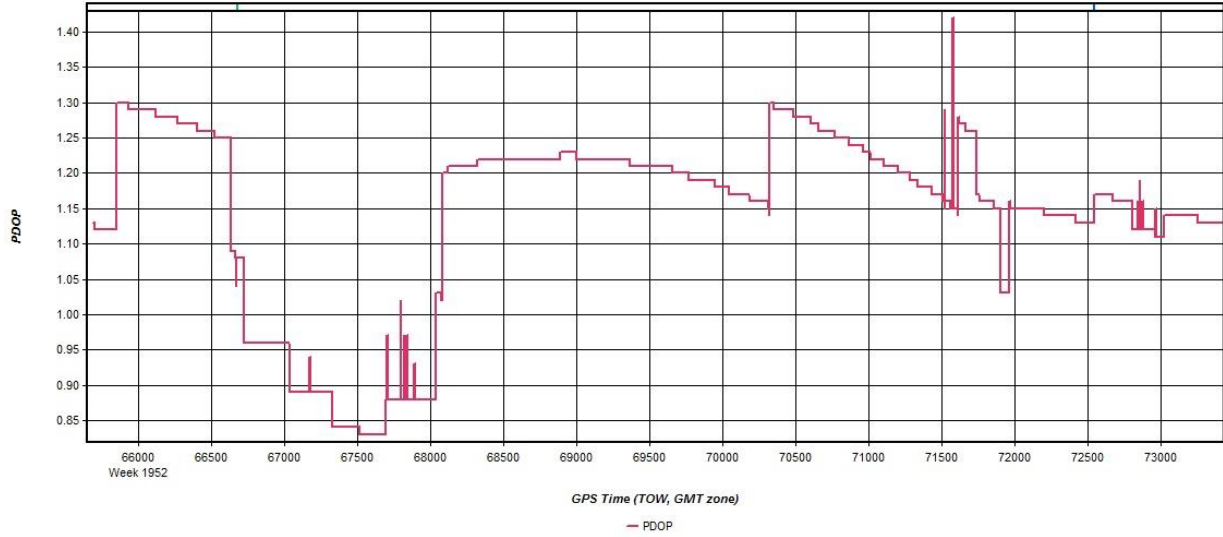
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.386 (km)
Minimum:	1.423 (km)
Average:	30.451 (km)
First Epoch:	84.992 (km)
Last Epoch:	84.986 (km)

M22





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M22\IE_Files\SD_M22.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 15503
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0183 (m)
C/A Code: 0.37 (m)
L1 Doppler: 0.031 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.087 (m)
North: 0.036 (m)
Height: 0.073 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (11741 occurrences):

East: 0.011 (m)
North: 0.013 (m)
Height: 0.023 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

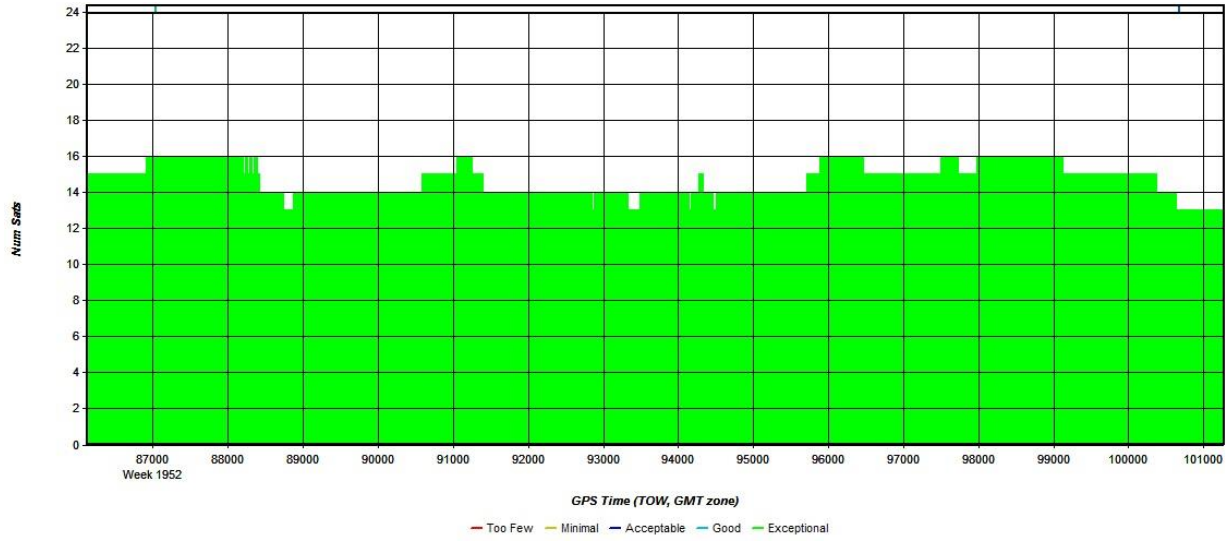
Percentages of epochs with DD_DOP over 10.00:

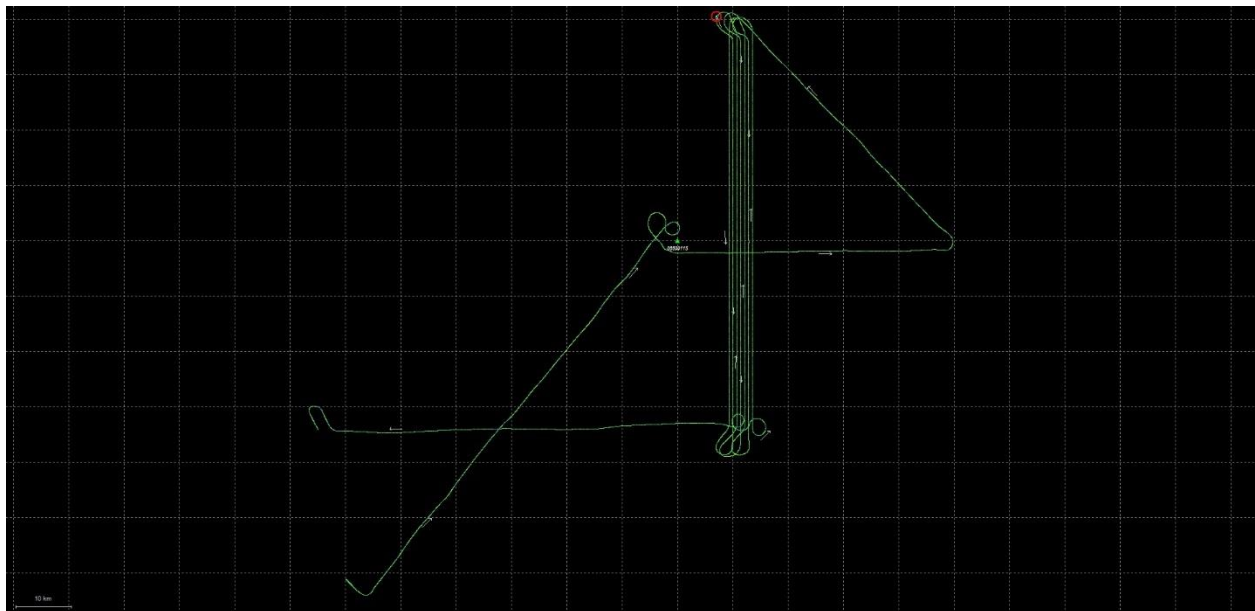
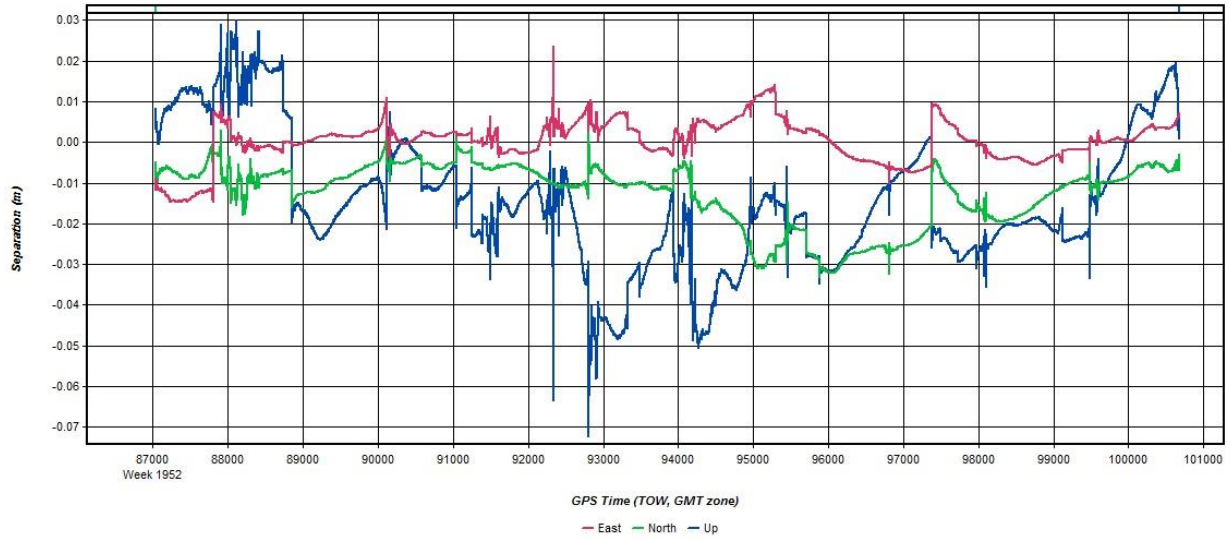
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 86.850 (km)
Minimum: 1.547 (km)
Average: 41.085 (km)
First Epoch: 84.986 (km)
Last Epoch: 84.986 (km)

M23





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M23\IE_Files\SD_M23.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 30306

No processed position: 1

Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0160 (m)
C/A Code: 0.38 (m)
L1 Doppler: 0.032 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.026 (m)
North: 0.029 (m)
Height: 0.082 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (27277 occurrences):

East: 0.005 (m)
North: 0.015 (m)
Height: 0.022 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

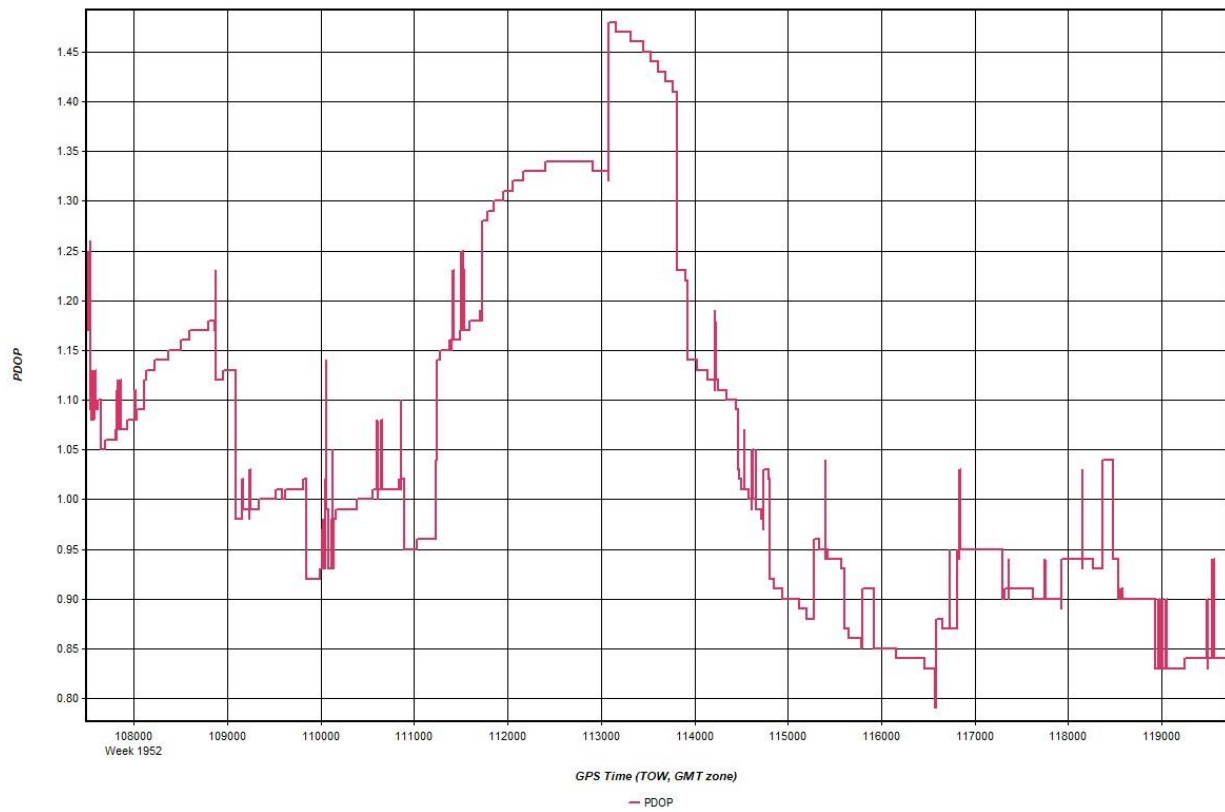
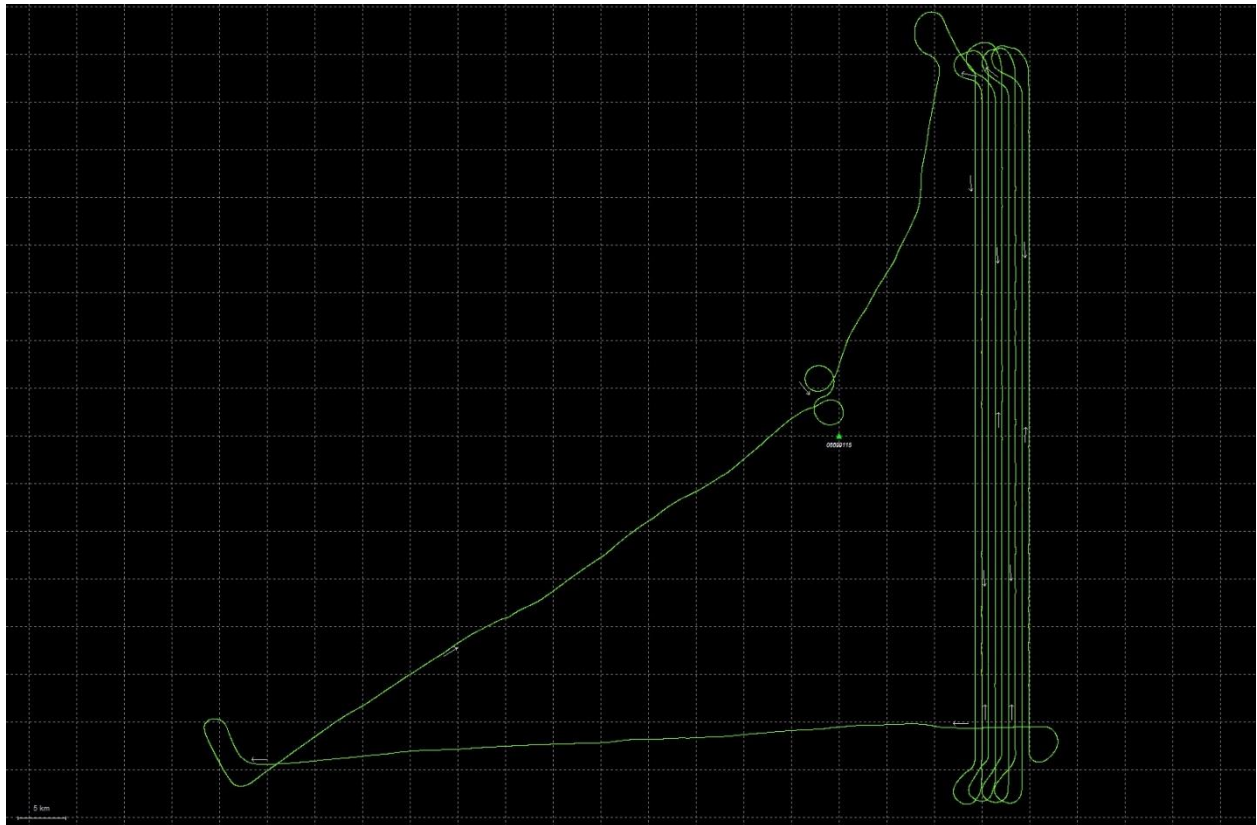
Percentages of epochs with DD_DOP over 10.00:

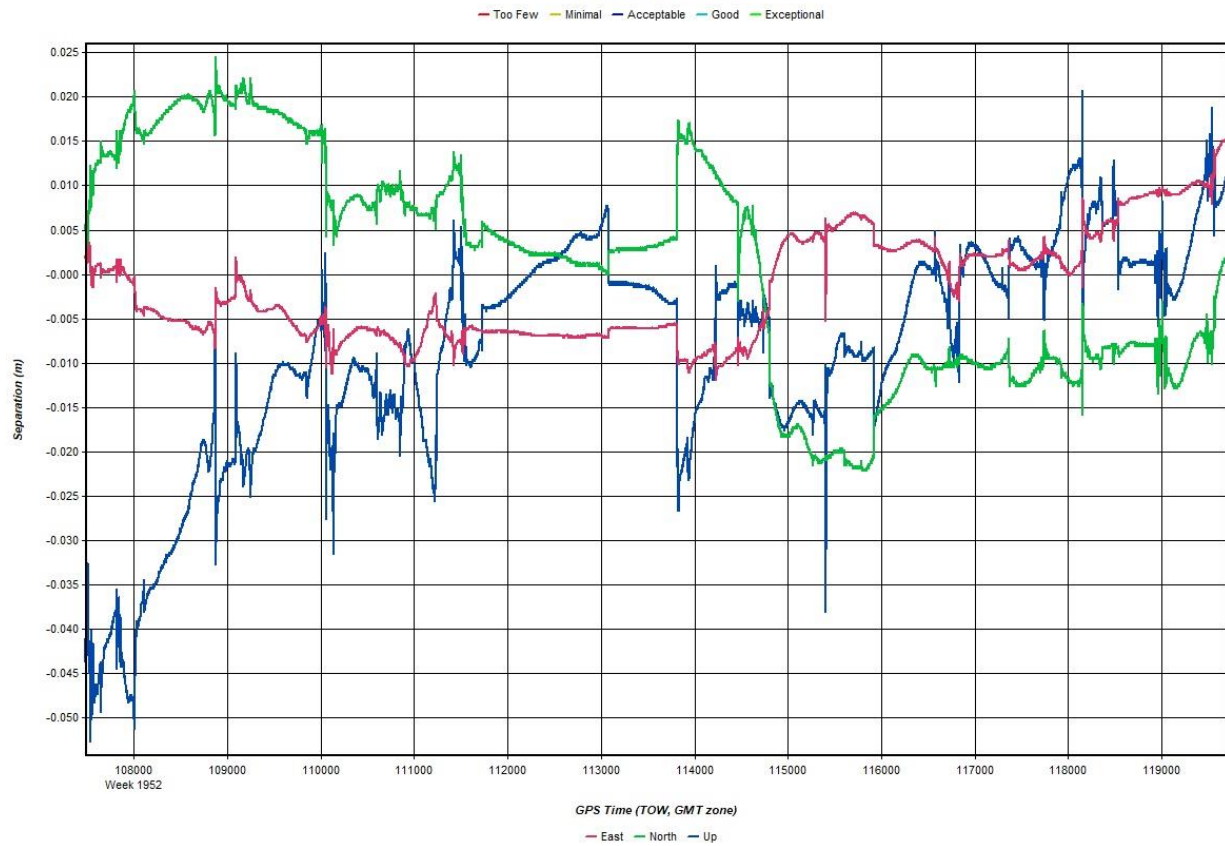
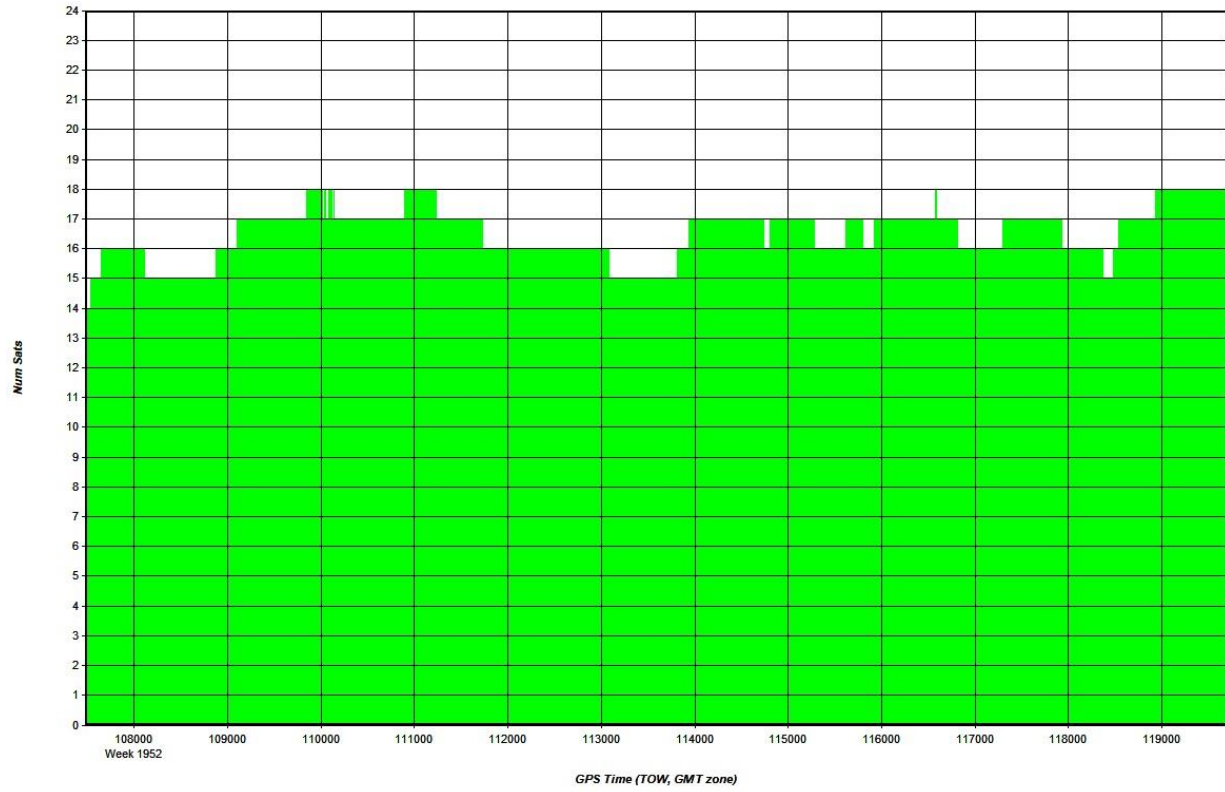
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.161 (km)
Minimum:	1.277 (km)
Average:	32.485 (km)
First Epoch:	84.986 (km)
Last Epoch:	72.857 (km)

M24





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M24\IE_Files\SD_M24.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 33435
No processed position: 2
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0146 (m)
C/A Code: 0.32 (m)
L1 Doppler: 0.036 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.025 (m)
North: 0.030 (m)
Height: 0.034 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29931 occurrences):

East: 0.007 (m)
North: 0.013 (m)
Height: 0.016 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

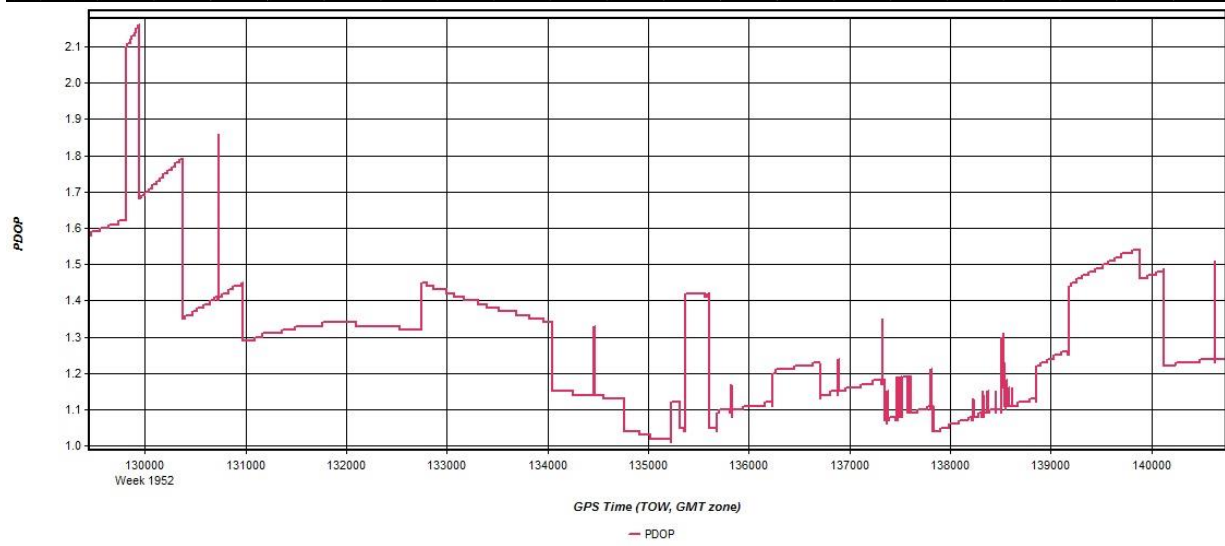
Percentages of epochs with DD_DOP over 10.00:

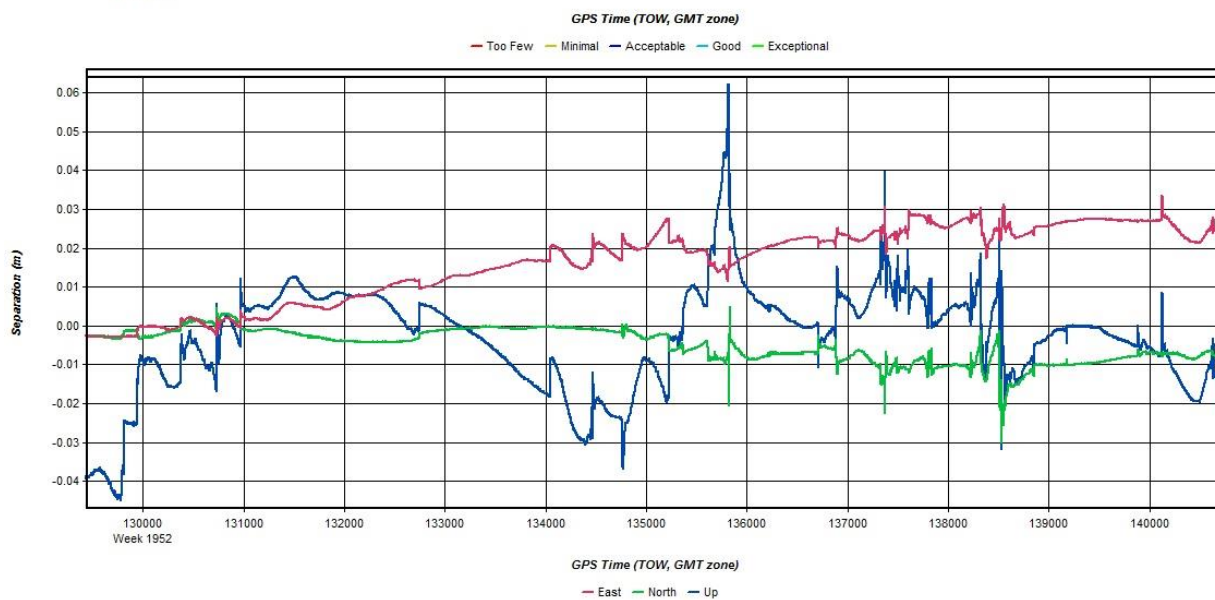
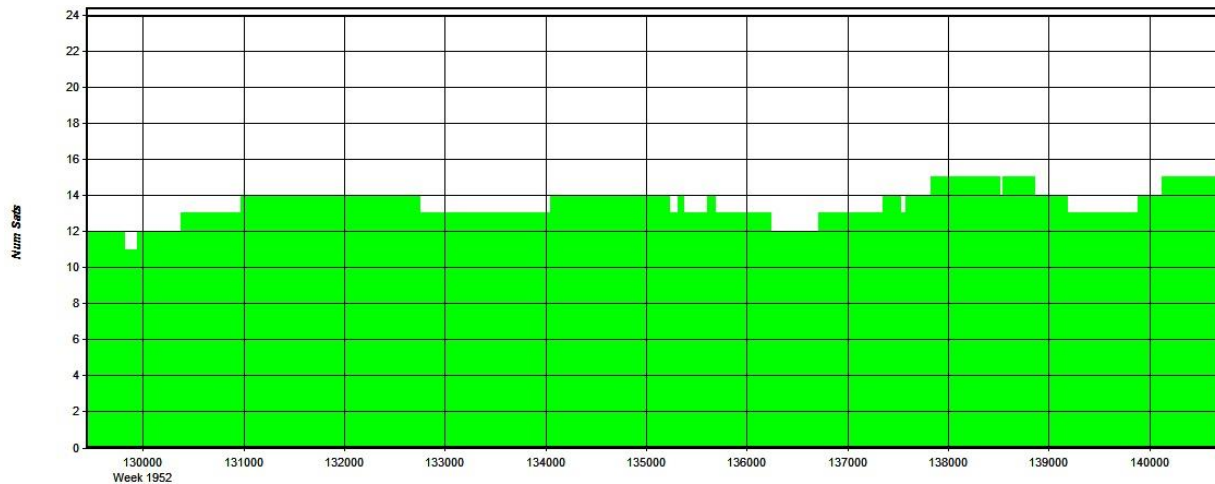
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 72.967 (km)
Minimum: 1.336 (km)
Average: 31.931 (km)
First Epoch: 72.851 (km)
Last Epoch: 72.860 (km)

M25





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M25\IE_Files\SD_M25.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 32742

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0159 (m)

C/A Code: 0.36 (m)

L1 Doppler: 0.031 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.073 (m)

North: 0.023 (m)

Height: 0.080 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29373 occurrences):

East: 0.019 (m)

North: 0.007 (m)

Height: 0.018 (m)

Quality Number Percentages:

Q 1: 99.6 %

Q 2: 0.4 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

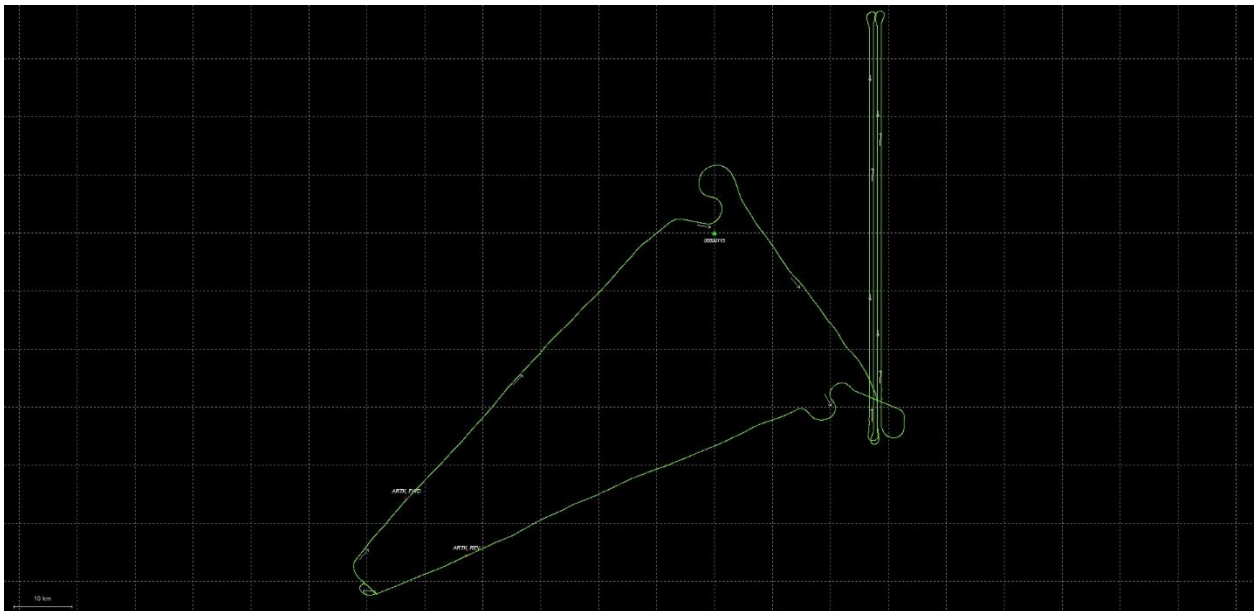
Percentages of epochs with DD_DOP over 10.00:

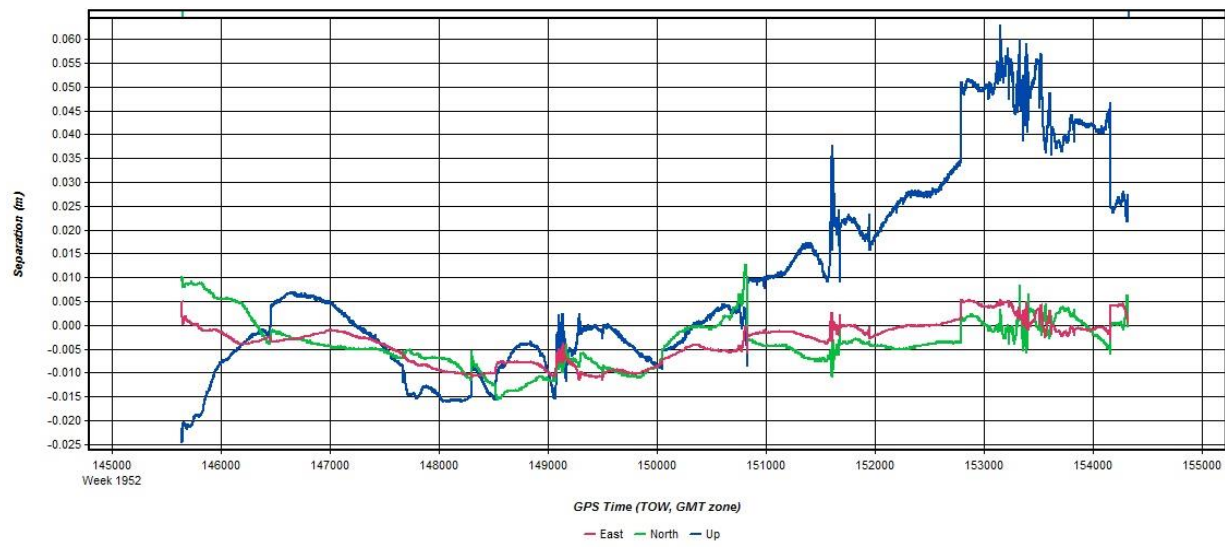
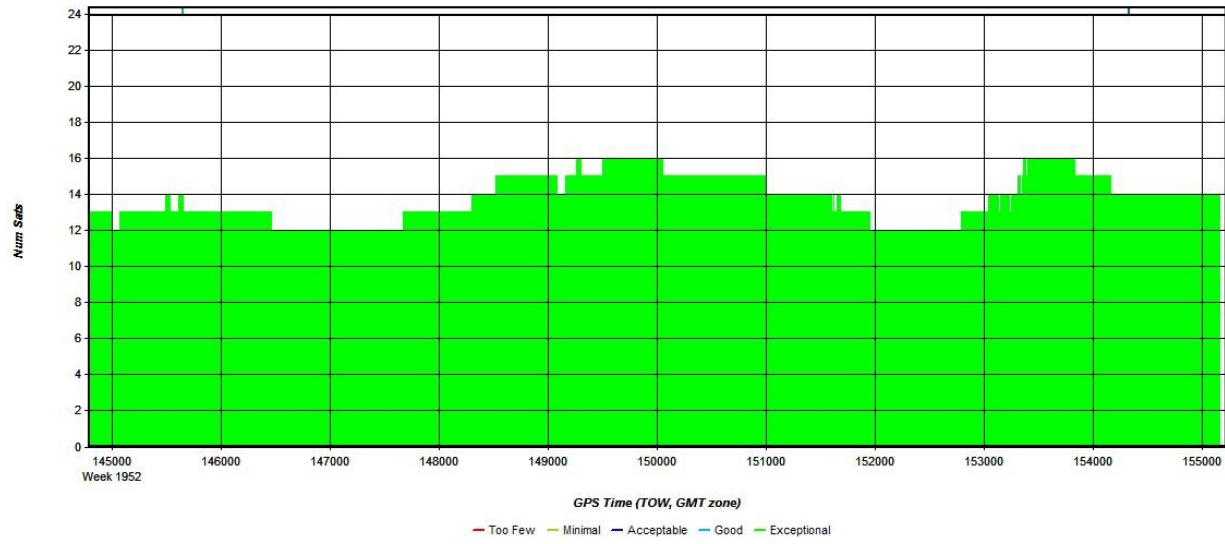
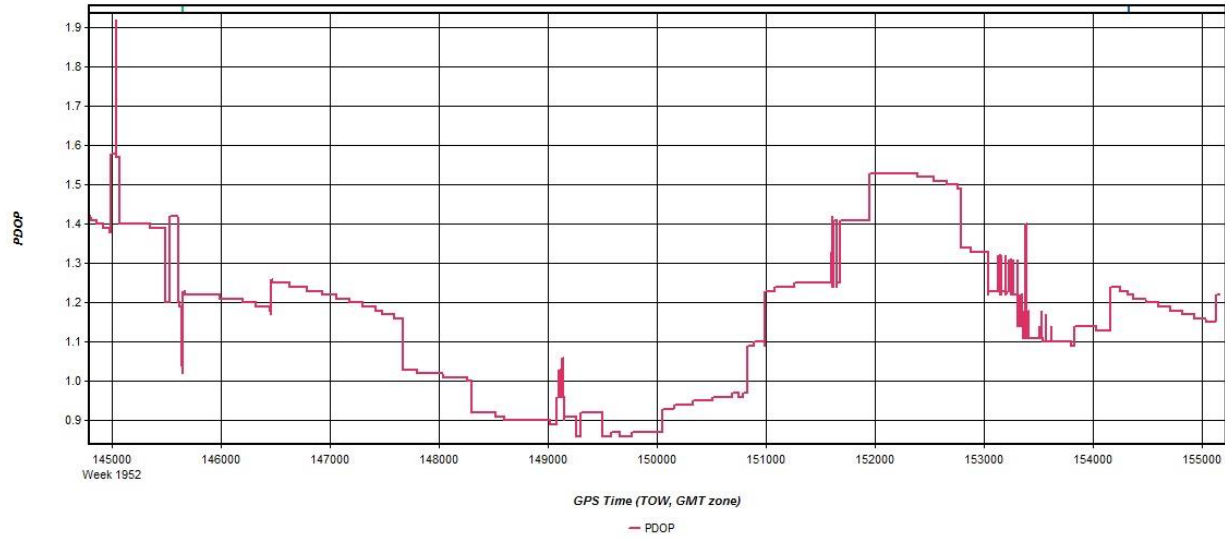
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	86.774 (km)
Minimum:	0.250 (km)
Average:	37.126 (km)
First Epoch:	85.014 (km)
Last Epoch:	84.986 (km)

M26





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M26\IE_files\SD_M26.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 20731
No processed position: 2
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0170 (m)
C/A Code: 0.36 (m)
L1 Doppler: 0.034 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.049 (m)
North: 0.050 (m)
Height: 0.099 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (17343 occurrences):

East: 0.005 (m)
North: 0.006 (m)
Height: 0.022 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

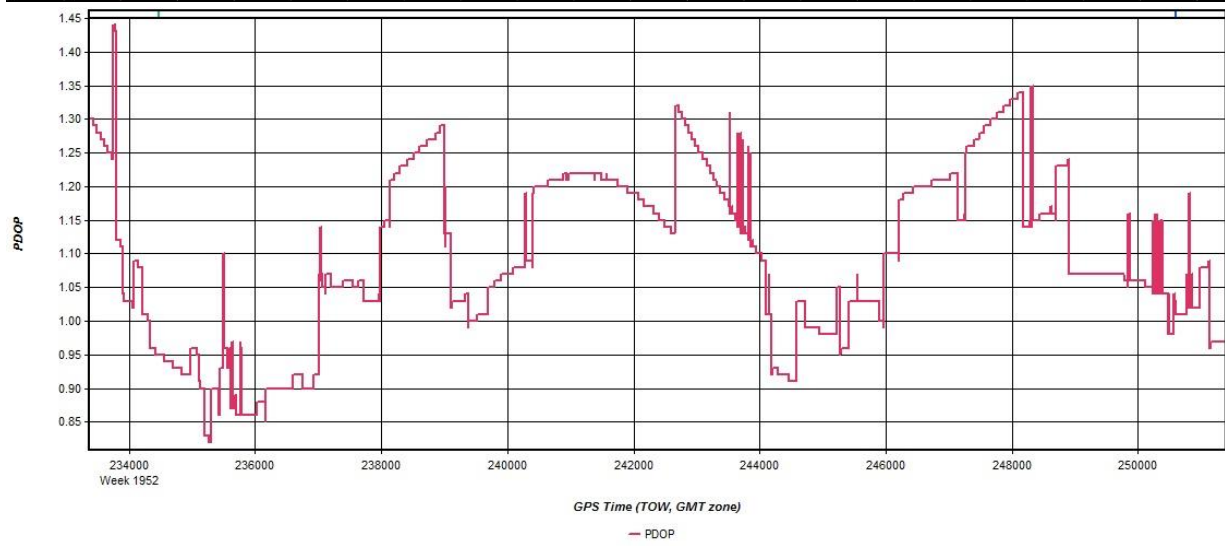
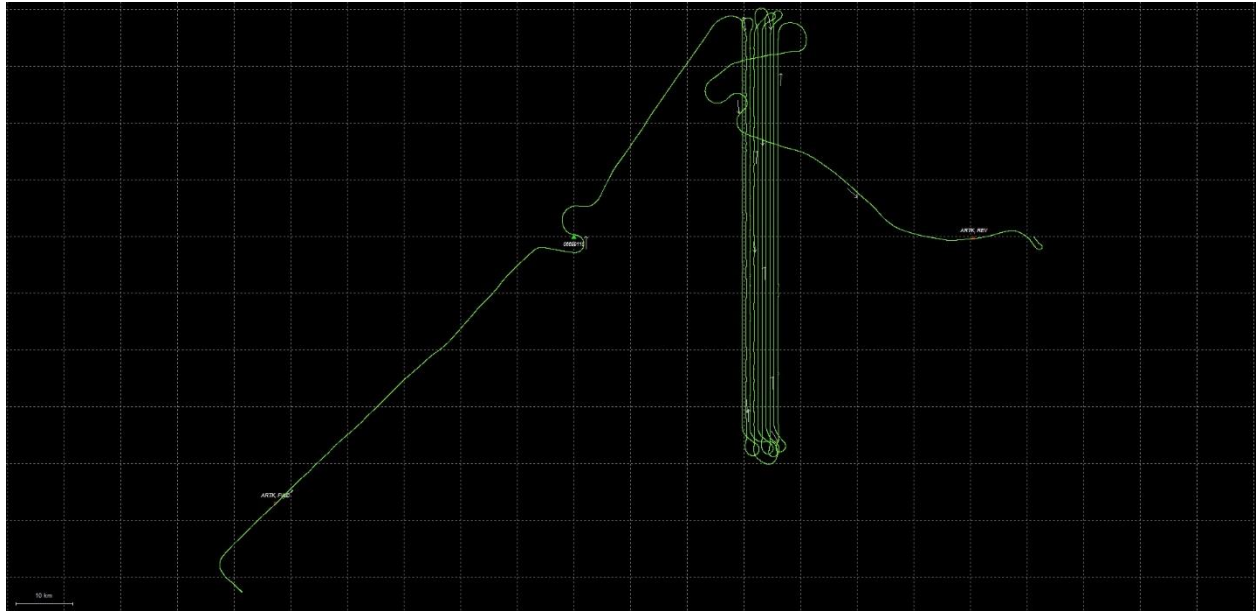
Percentages of epochs with DD_DOP over 10.00:

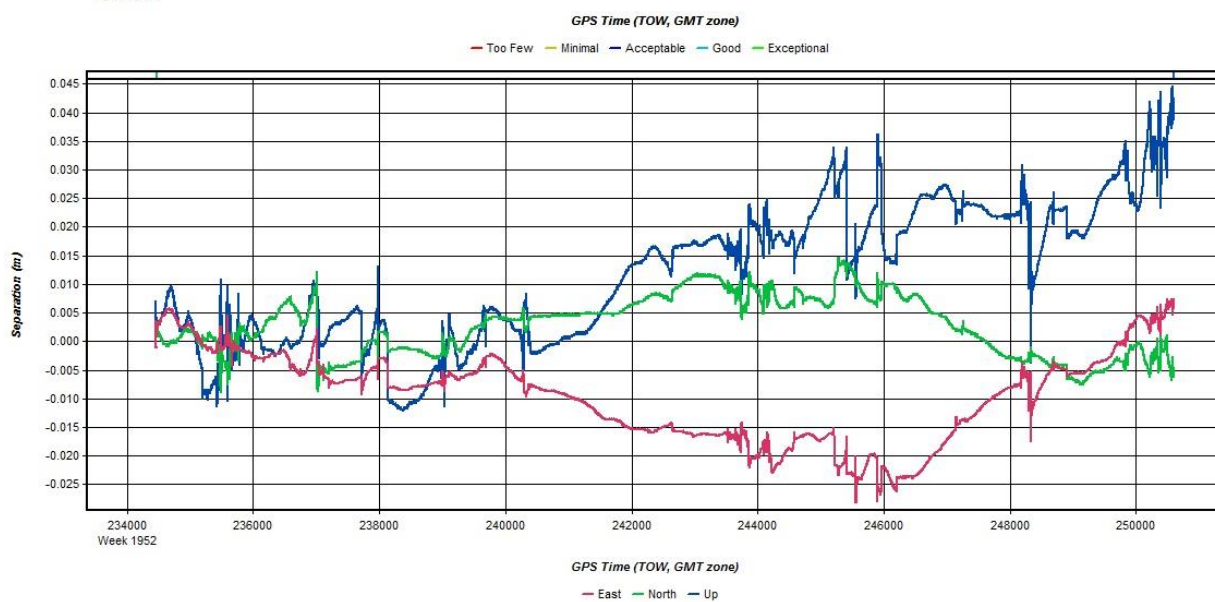
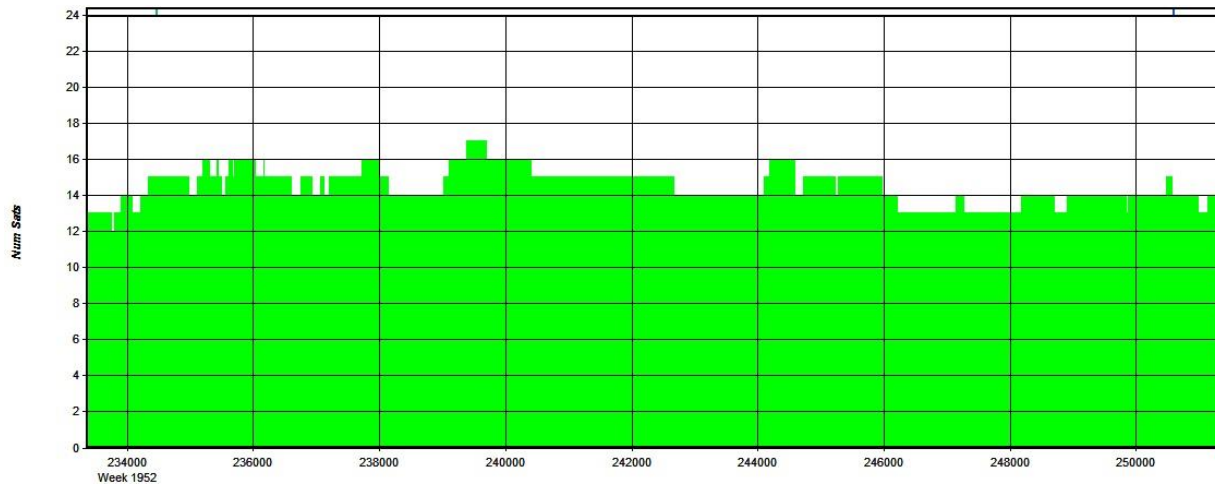
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 86.596 (km)
Minimum: 1.703 (km)
Average: 42.203 (km)
First Epoch: 84.986 (km)
Last Epoch: 84.986 (km)

M27





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M27\IE_files\SD_M27.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 35994

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0143 (m)

C/A Code: 0.33 (m)

L1 Doppler: 0.037 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.015 (m)

North: 0.029 (m)

Height: 0.055 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (32269 occurrences):

East: 0.012 (m)

North: 0.006 (m)

Height: 0.017 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

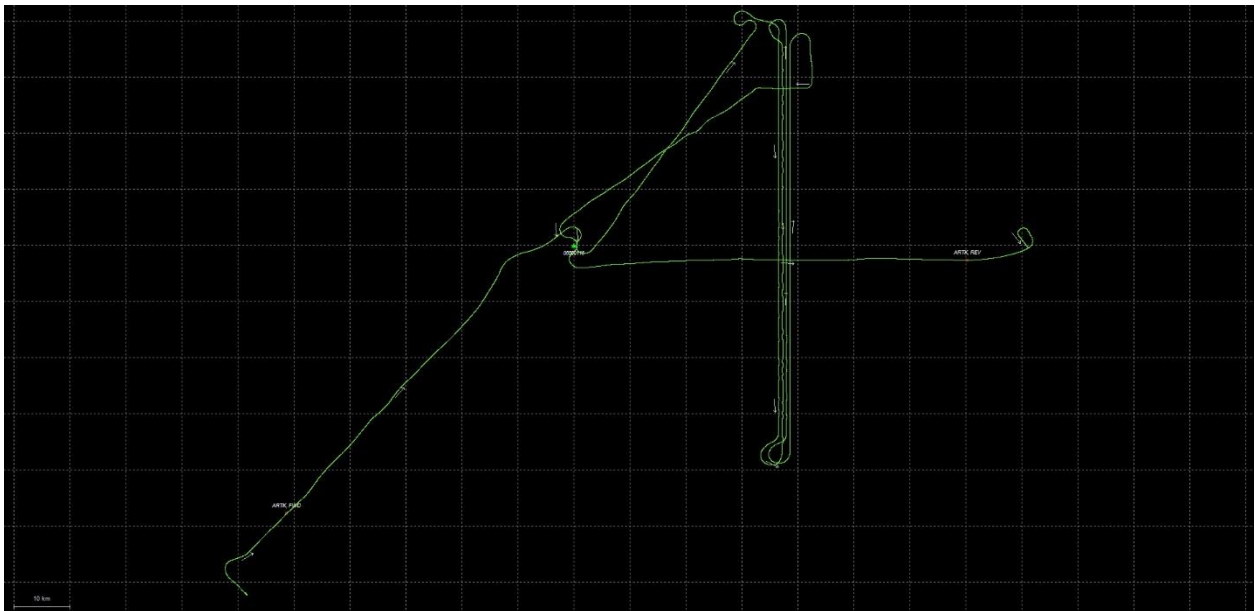
Percentages of epochs with DD_DOP over 10.00:

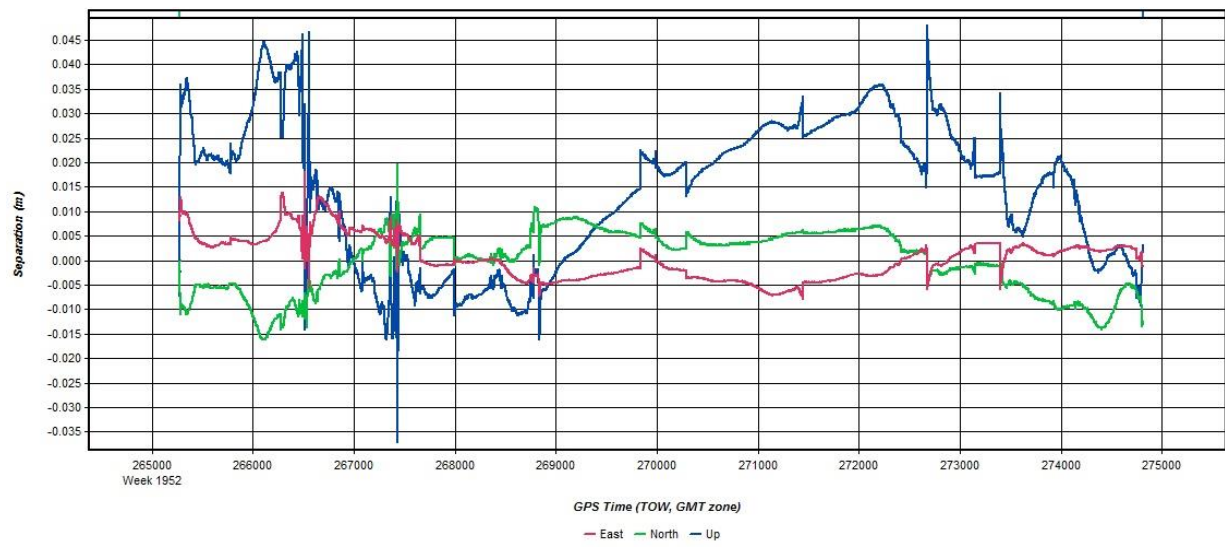
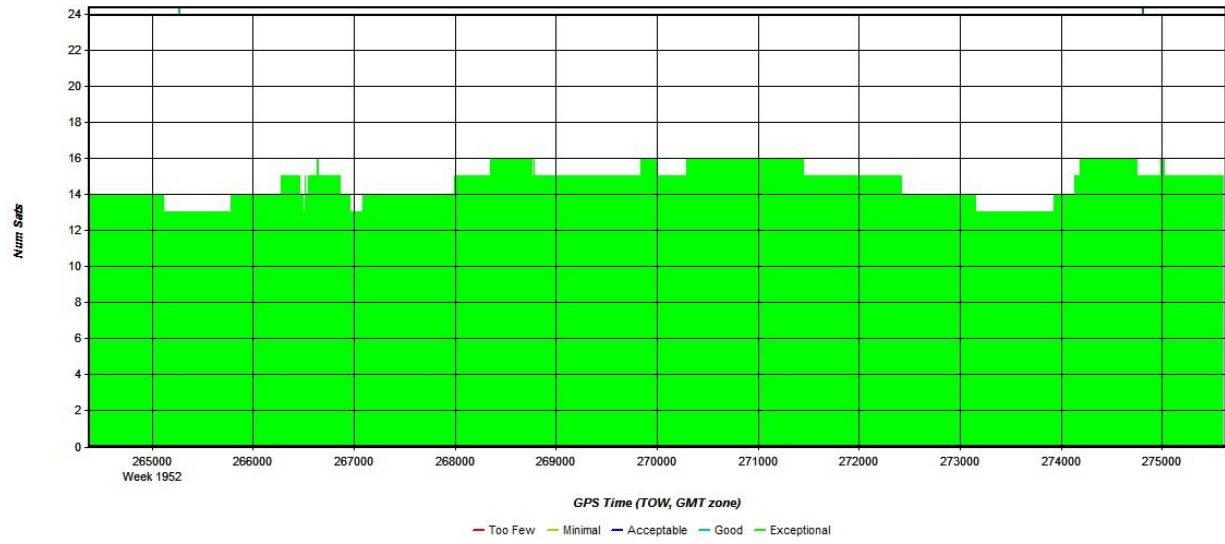
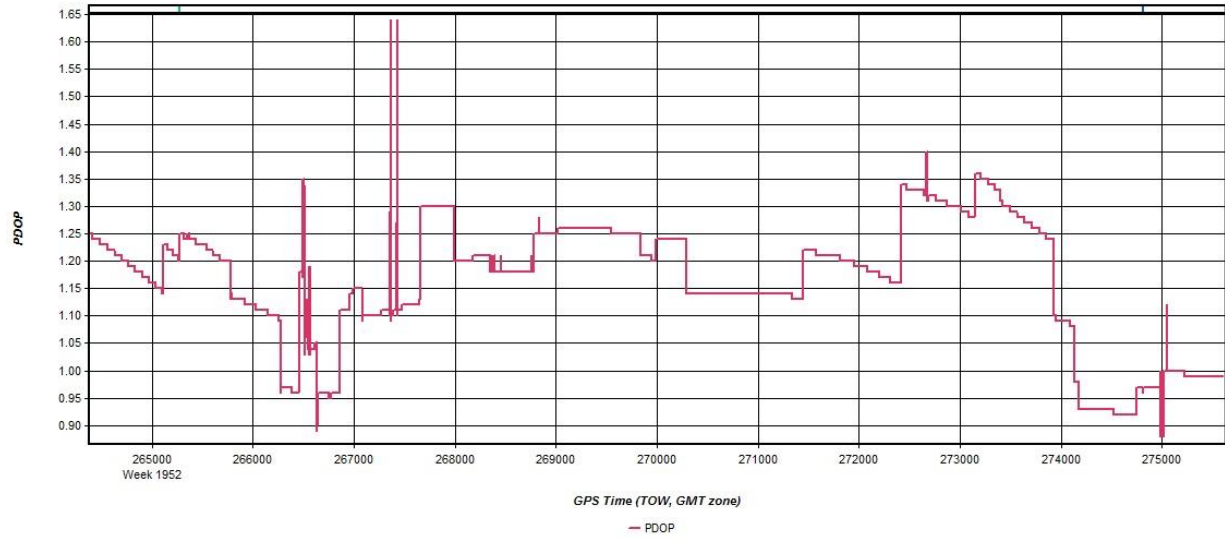
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	85.261 (km)
Minimum:	0.357 (km)
Average:	43.159 (km)
First Epoch:	84.986 (km)
Last Epoch:	80.724 (km)

M28





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M28\IE_files\SD_M28.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file:	22456
No processed position:	1
Missing Fwd or Rev:	3
With bad C/A code:	0
With bad L1 Phase:	0

Measurement RMS Values:

L1 Phase:	0.0149 (m)
C/A Code:	0.36 (m)
L1 Doppler:	0.038 (m/s)

Fwd/Rev Separation RMS Values:

East:	0.041 (m)
North:	0.033 (m)
Height:	0.067 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (19075 occurrences):

East:	0.004 (m)
North:	0.006 (m)
Height:	0.020 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

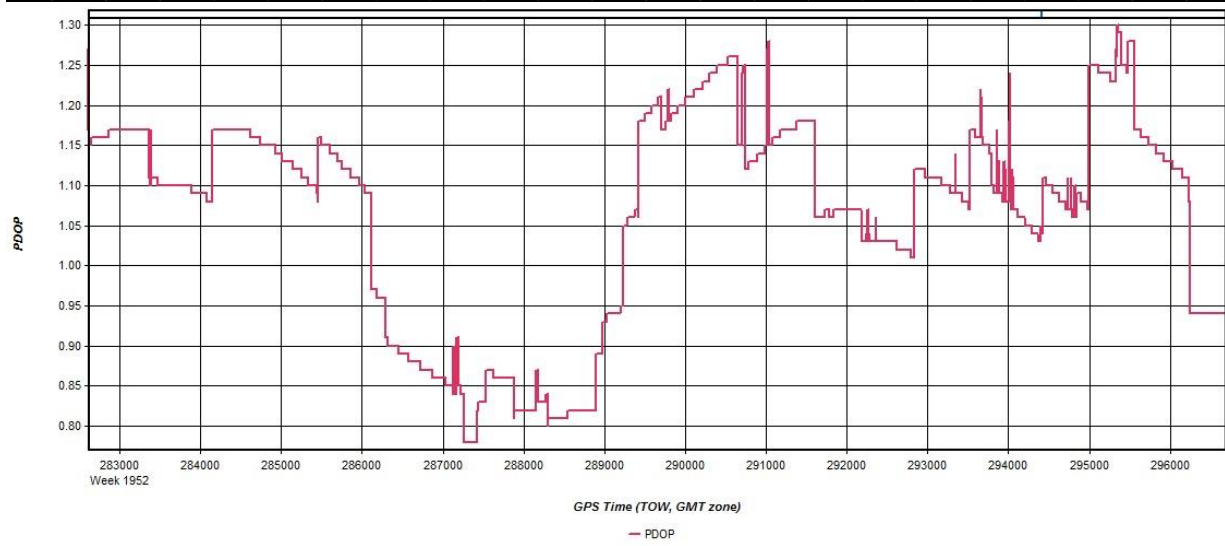
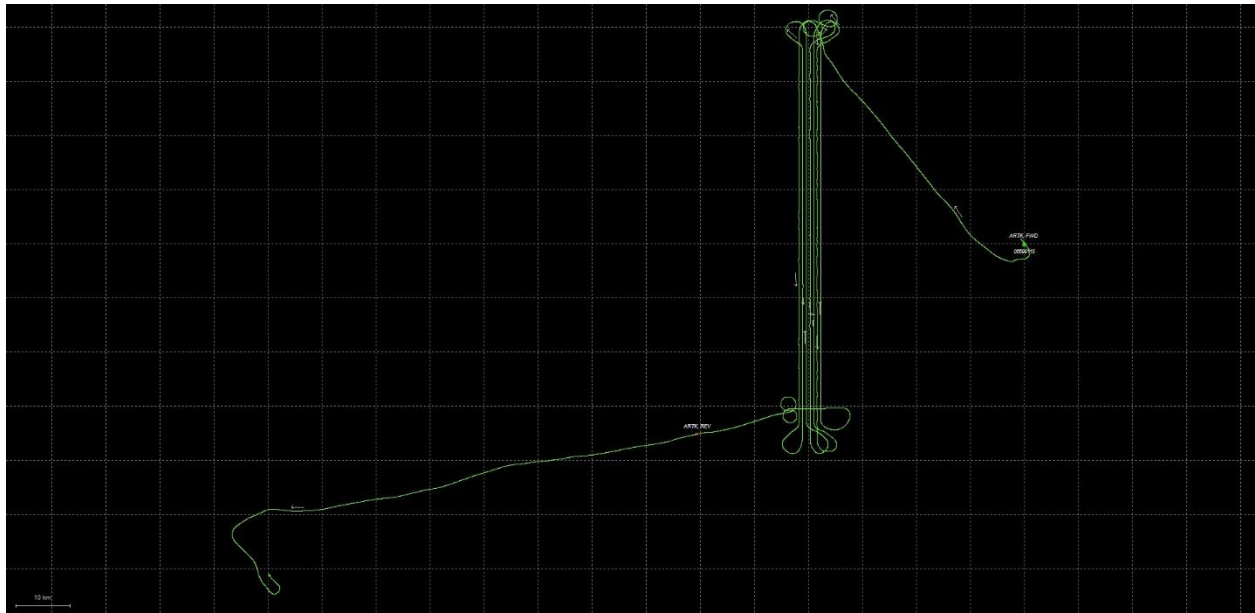
Percentages of epochs with DD_DOP over 10.00:

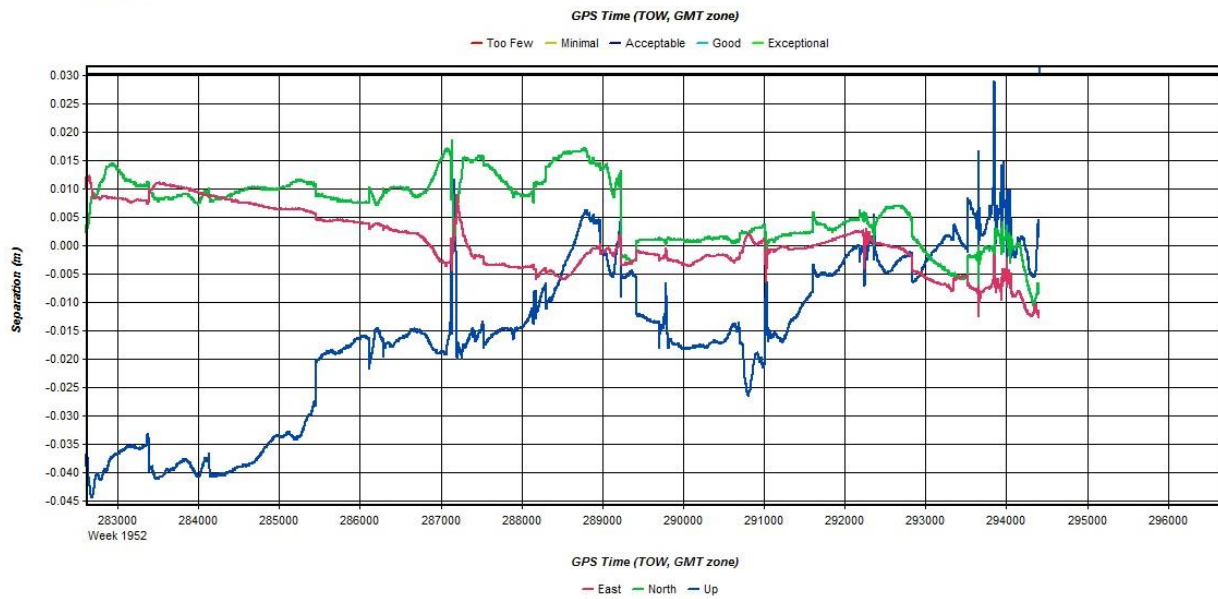
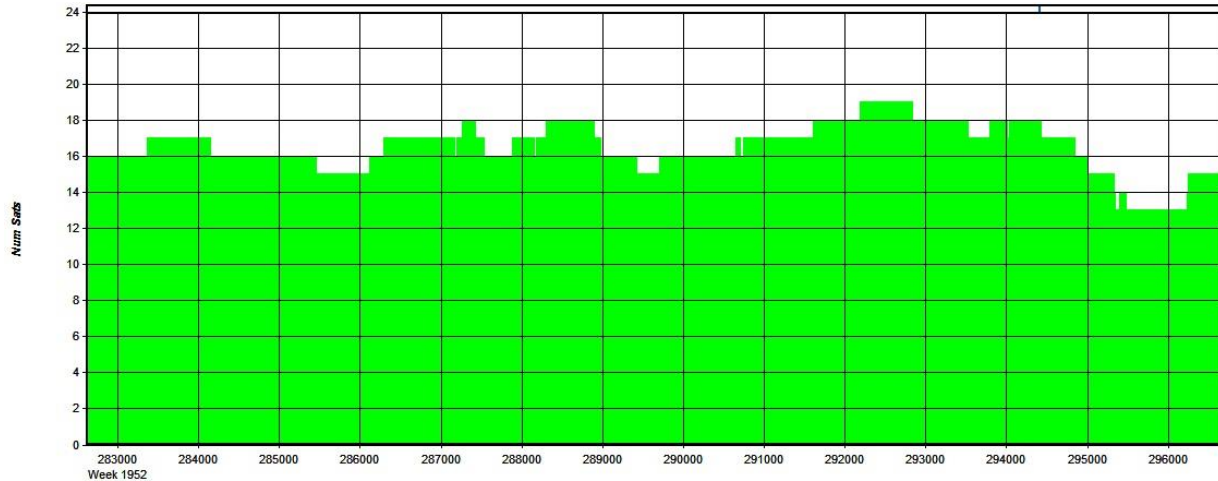
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 85.228 (km)
Minimum: 0.361 (km)
Average: 44.428 (km)
First Epoch: 84.986 (km)
Last Epoch: 80.676 (km)

M29





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M29\IE_files\SD_M29.cfg
 Solution Type: Combined

Number of Epochs:

Total in GPB file: 28116
 No processed position: 1
 Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0146 (m)

C/A Code: 0.37 (m)

L1 Doppler: 0.033 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.020 (m)

North: 0.030 (m)

Height: 0.051 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (23587 occurrences):

East: 0.005 (m)

North: 0.009 (m)

Height: 0.021 (m)

Quality Number Percentages:

Q 1: 99.9 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

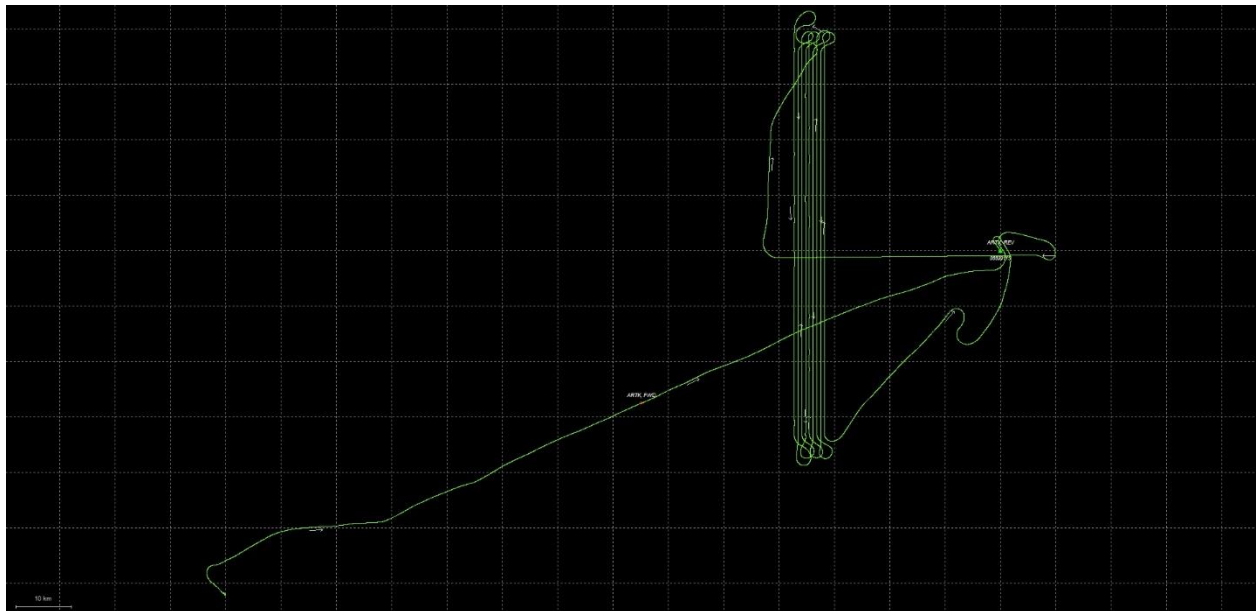
Percentages of epochs with DD_DOP over 10.00:

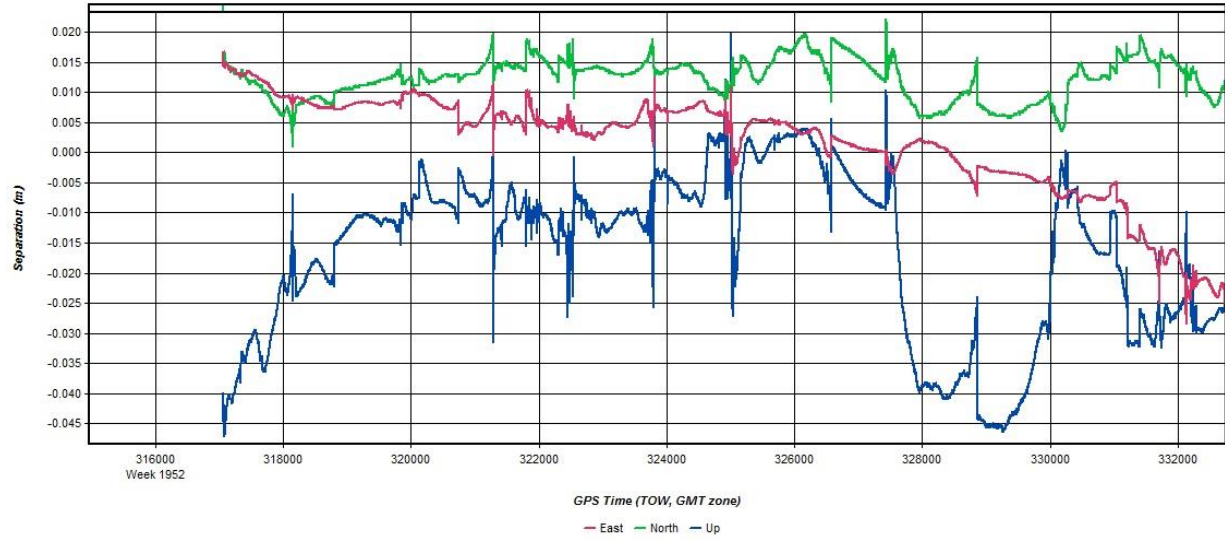
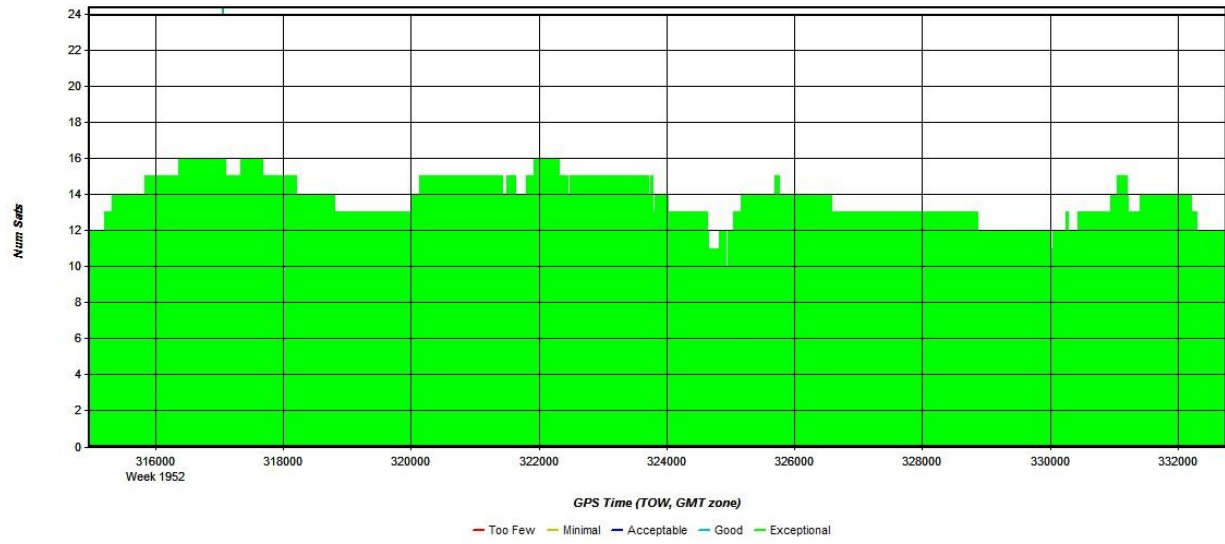
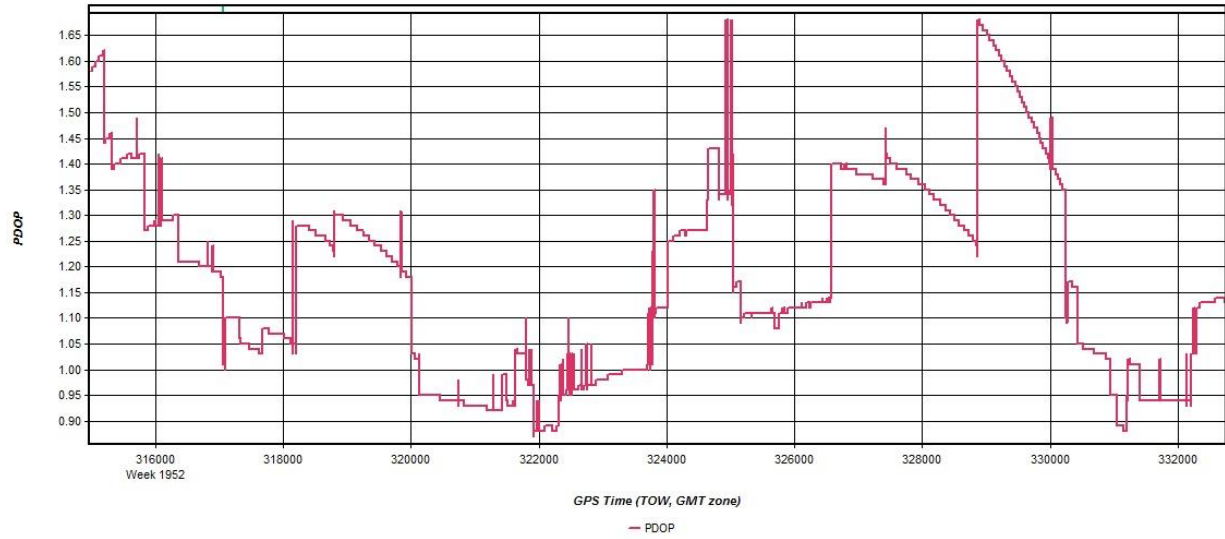
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	156.324 (km)
Minimum:	0.050 (km)
Average:	56.358 (km)
First Epoch:	0.078 (km)
Last Epoch:	152.515 (km)

M30





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M30\IE_files\SD_M30.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file:	35536
No processed position:	1
Missing Fwd or Rev:	3
With bad C/A code:	0
With bad L1 Phase:	0

Measurement RMS Values:

L1 Phase:	0.0153 (m)
C/A Code:	0.33 (m)
L1 Doppler:	0.036 (m/s)

Fwd/Rev Separation RMS Values:

East:	0.021 (m)
North:	0.030 (m)
Height:	0.048 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (31378 occurrences):

East:	0.009 (m)
North:	0.013 (m)
Height:	0.021 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

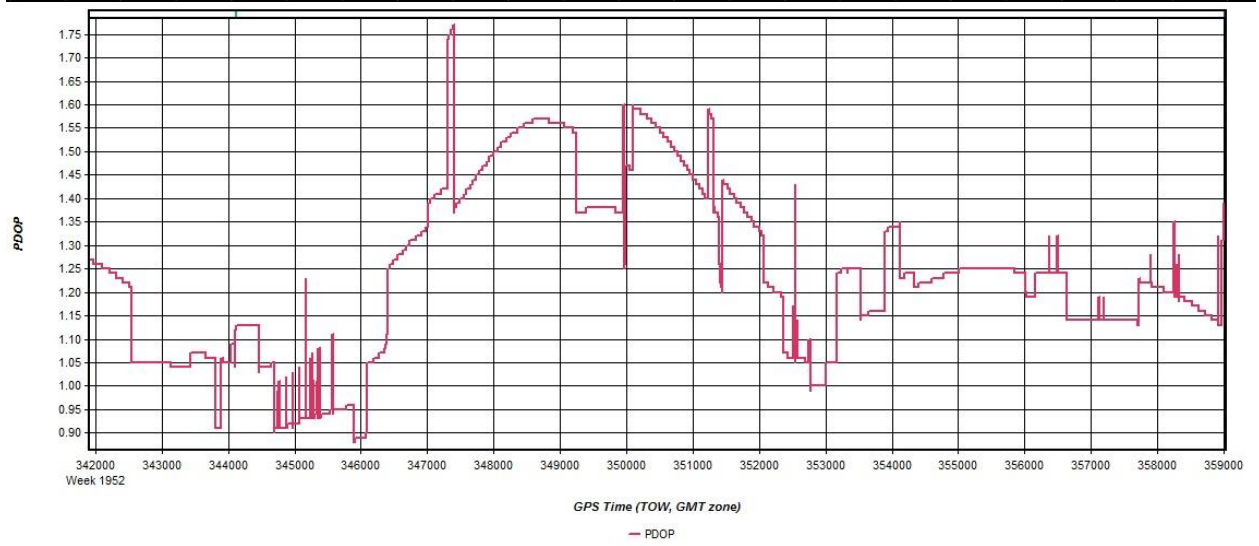
Percentages of epochs with DD_DOP over 10.00:

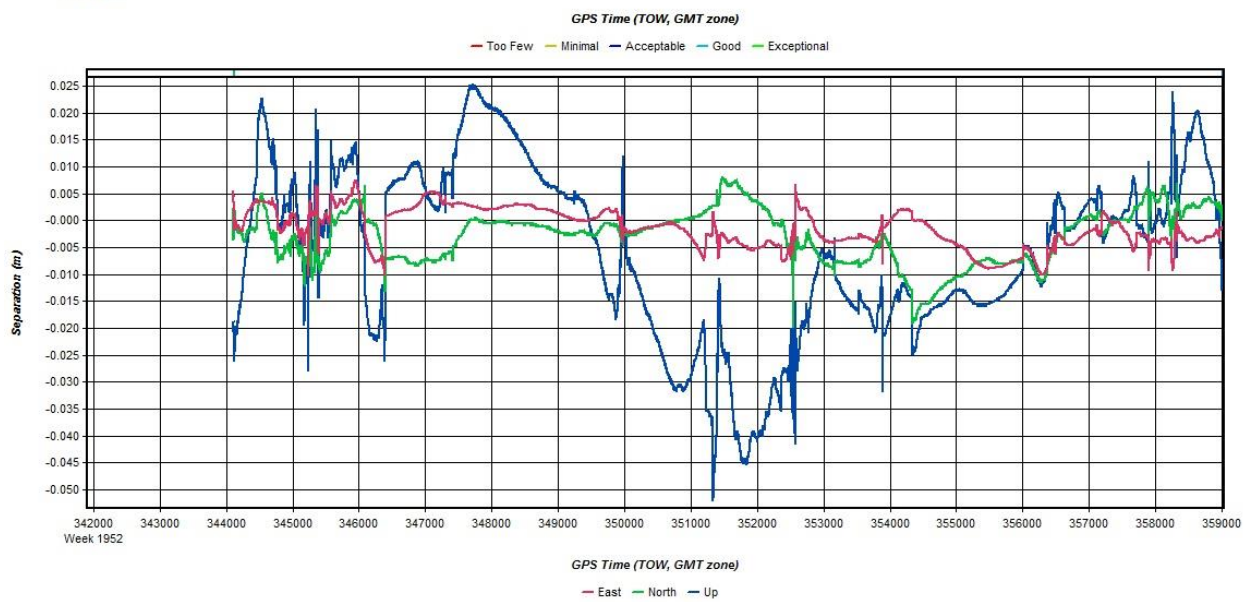
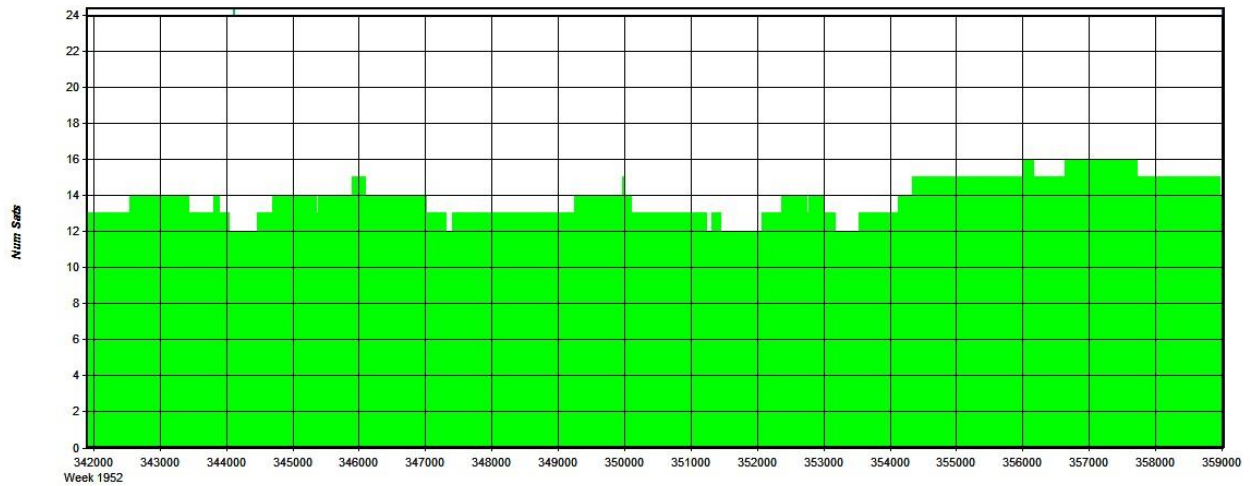
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 154.066 (km)
Minimum: 0.029 (km)
Average: 46.826 (km)
First Epoch: 152.515 (km)
Last Epoch: 0.057 (km)

M31





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M31\IE_files\SD_M31.cfg
 Solution Type: Combined

Number of Epochs:

Total in GPB file: 34244
 No processed position: 2
 Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0152 (m)

C/A Code: 0.33 (m)

L1 Doppler: 0.037 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.037 (m)

North: 0.017 (m)

Height: 0.051 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29790 occurrences):

East: 0.004 (m)

North: 0.006 (m)

Height: 0.017 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

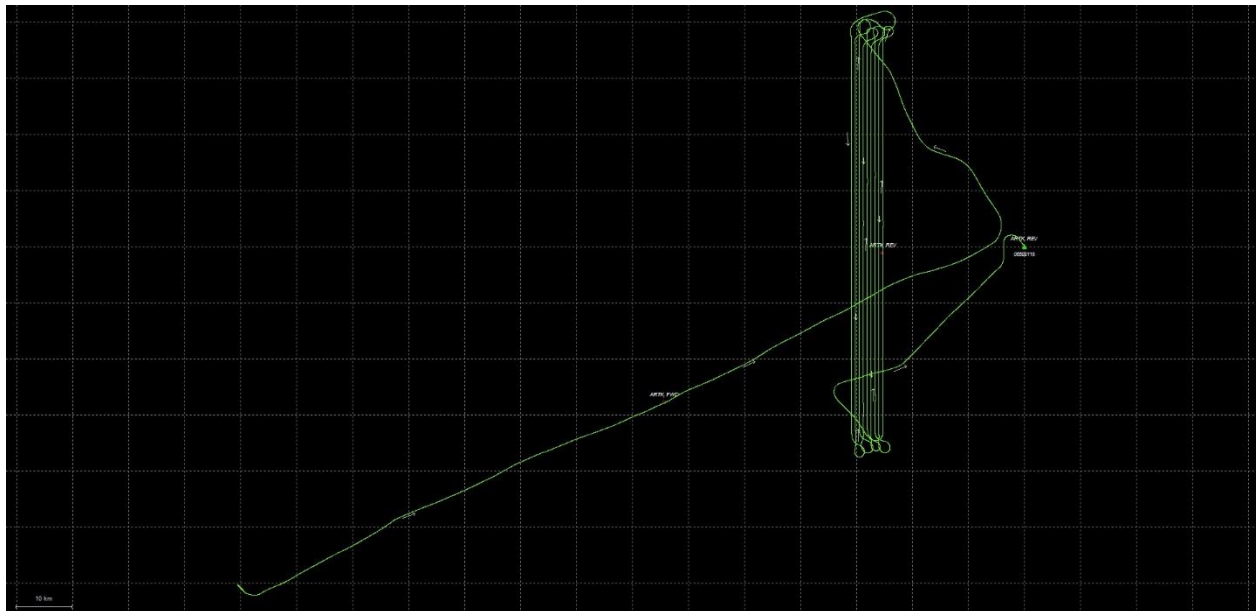
Percentages of epochs with DD_DOP over 10.00:

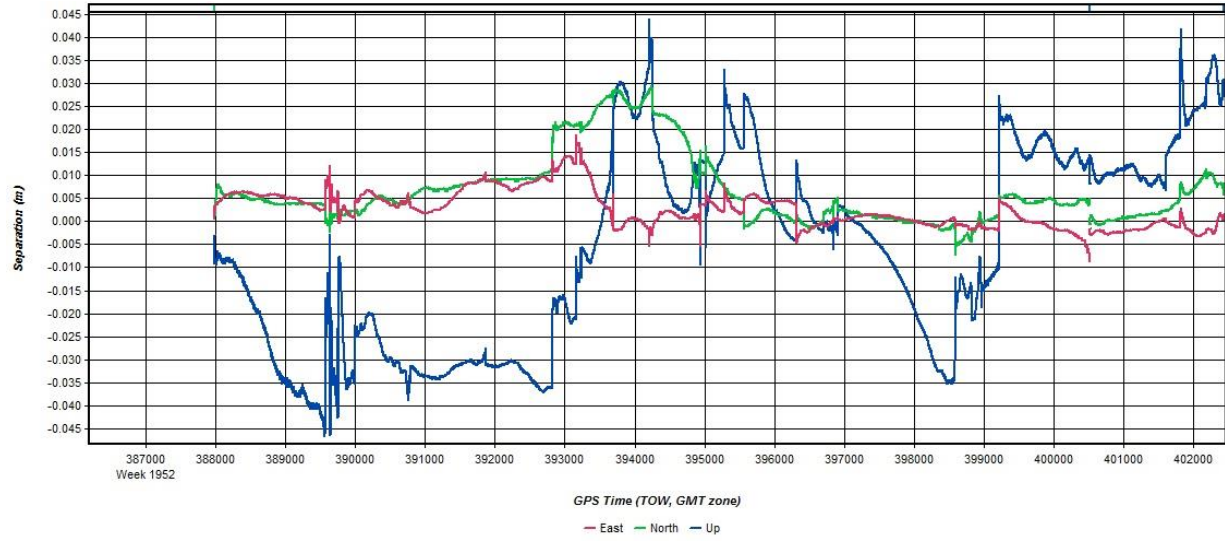
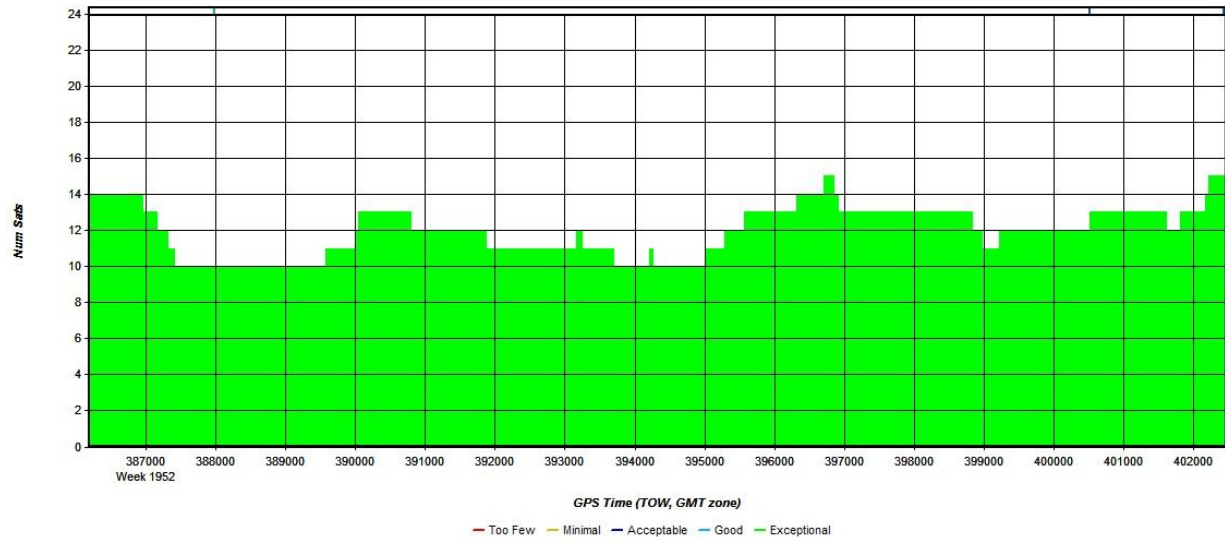
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	153.168 (km)
Minimum:	0.035 (km)
Average:	34.317 (km)
First Epoch:	152.515 (km)
Last Epoch:	0.069 (km)

M32





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M32\IE_files\SD_M32.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 32513
No processed position: 1
Missing Fwd or Rev: 3
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0146 (m)
C/A Code: 0.33 (m)
L1 Doppler: 0.035 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.033 (m)
North: 0.041 (m)
Height: 0.036 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (28918 occurrences):

East: 0.005 (m)
North: 0.010 (m)
Height: 0.022 (m)

Quality Number Percentages:

Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

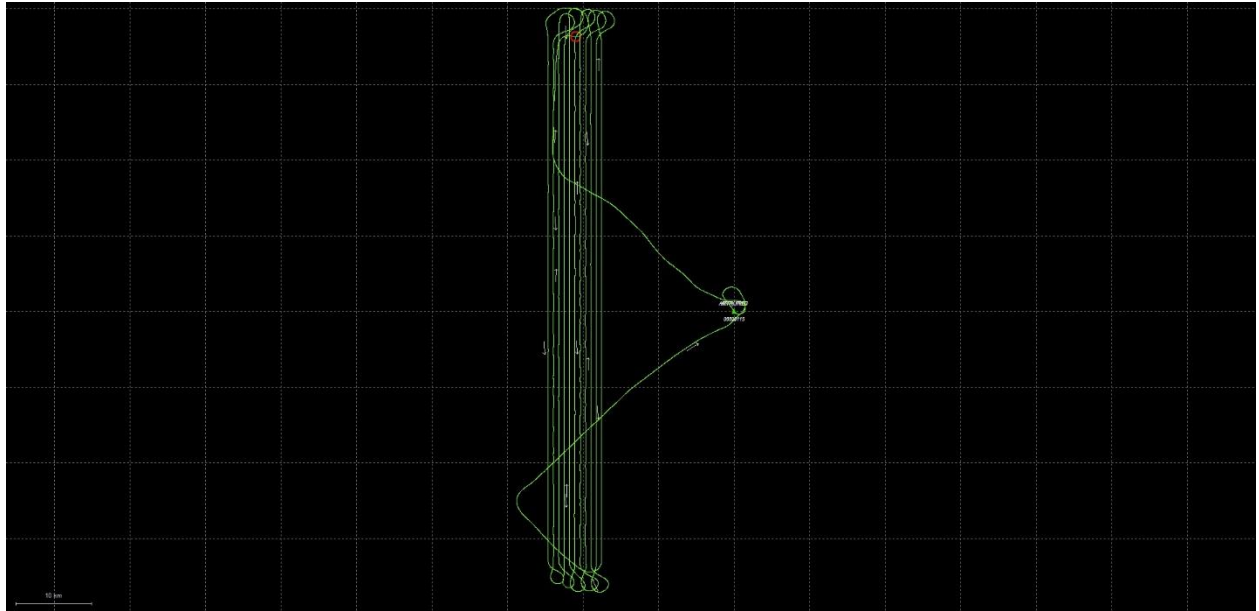
Percentages of epochs with DD_DOP over 10.00:

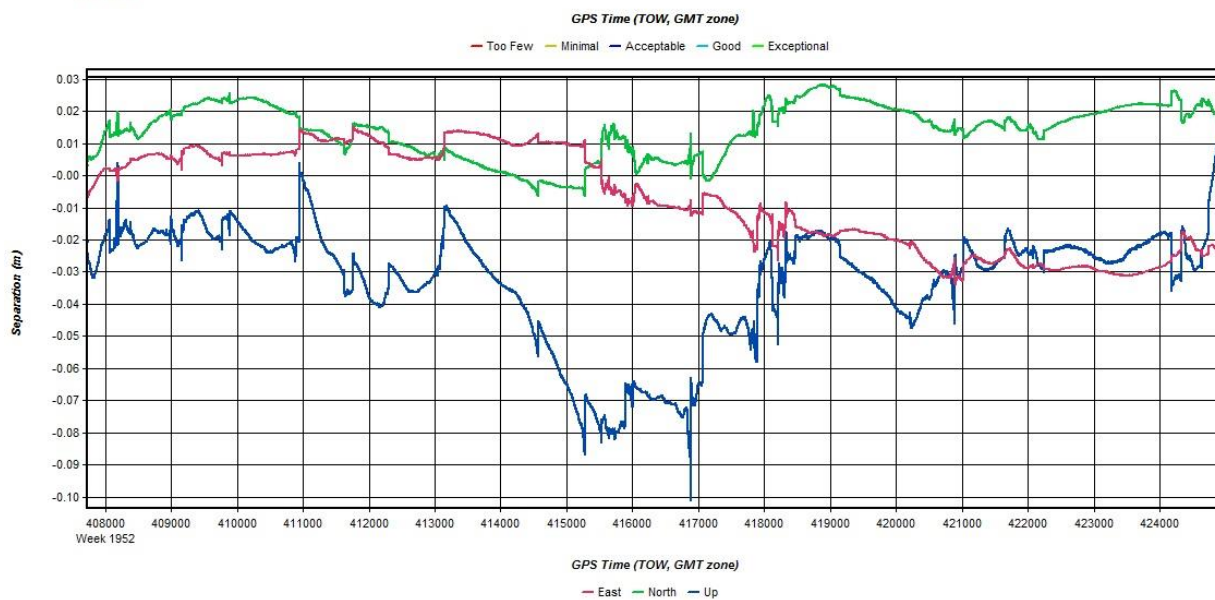
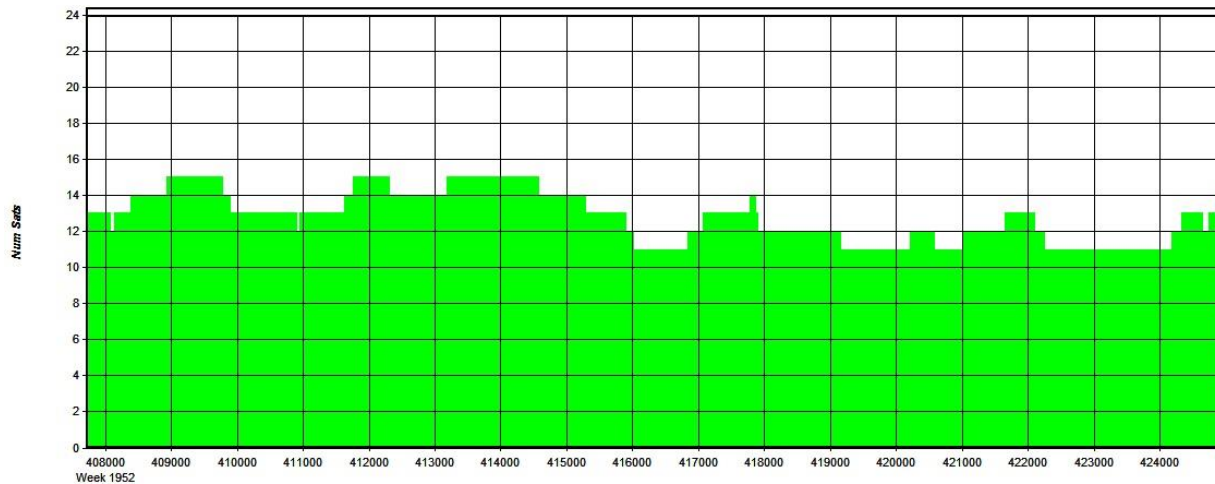
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 153.156 (km)
Minimum: 0.026 (km)
Average: 43.366 (km)
First Epoch: 152.515 (km)
Last Epoch: 0.057 (km)

M33





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M33\IE_files\SD_M33.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 34496

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0150 (m)

C/A Code: 0.32 (m)

L1 Doppler: 0.032 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.017 (m)

North: 0.016 (m)

Height: 0.037 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (34490 occurrences):

East: 0.017 (m)

North: 0.016 (m)

Height: 0.037 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

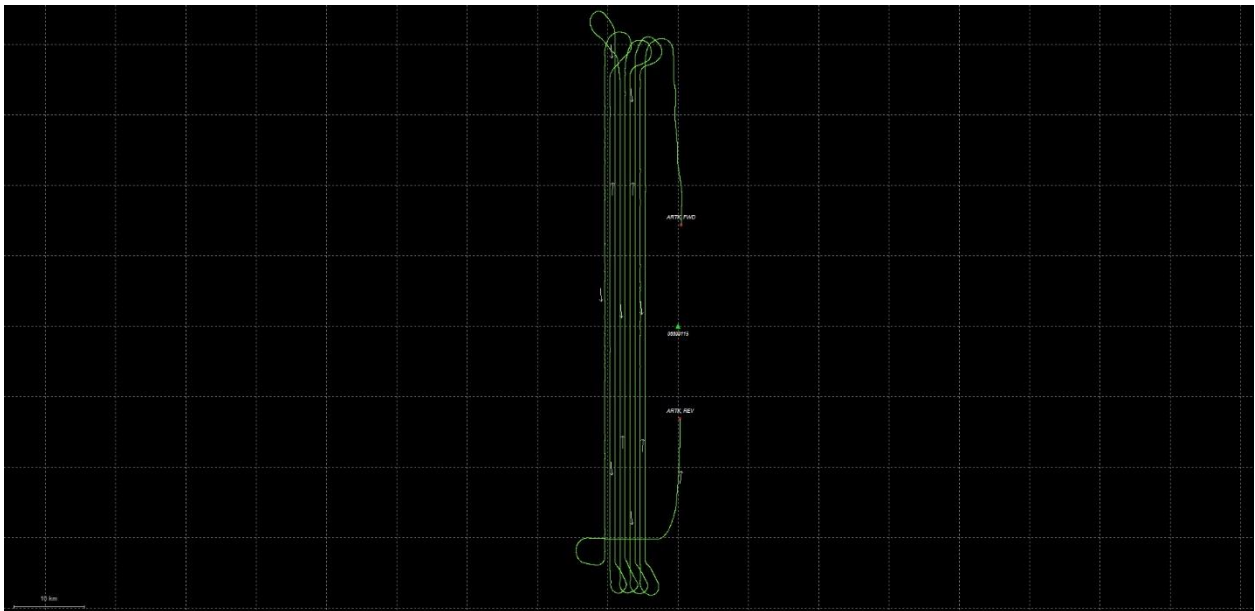
Percentages of epochs with DD_DOP over 10.00:

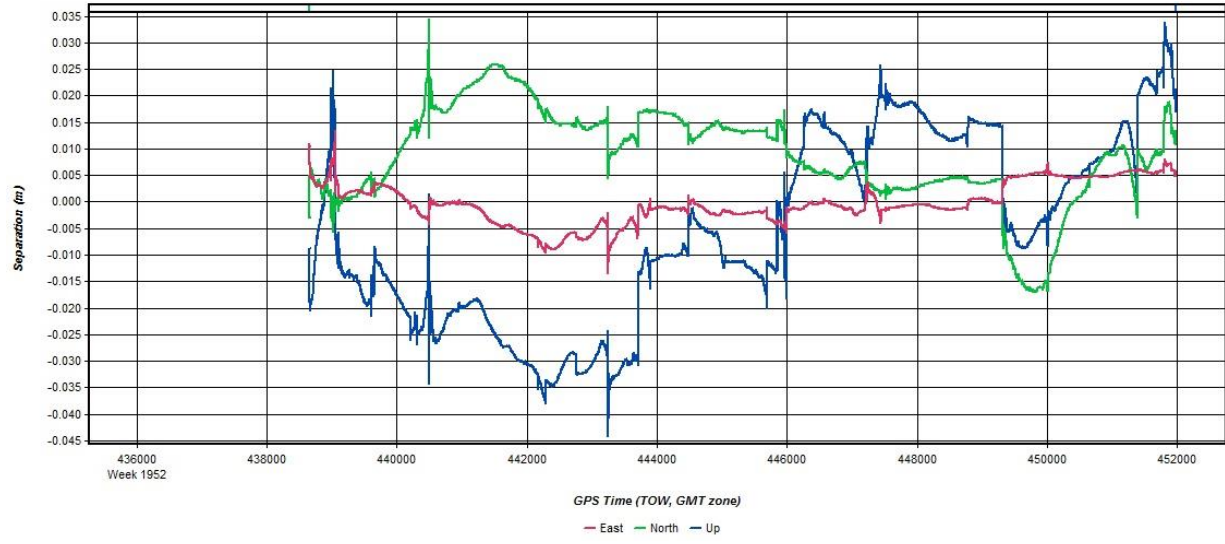
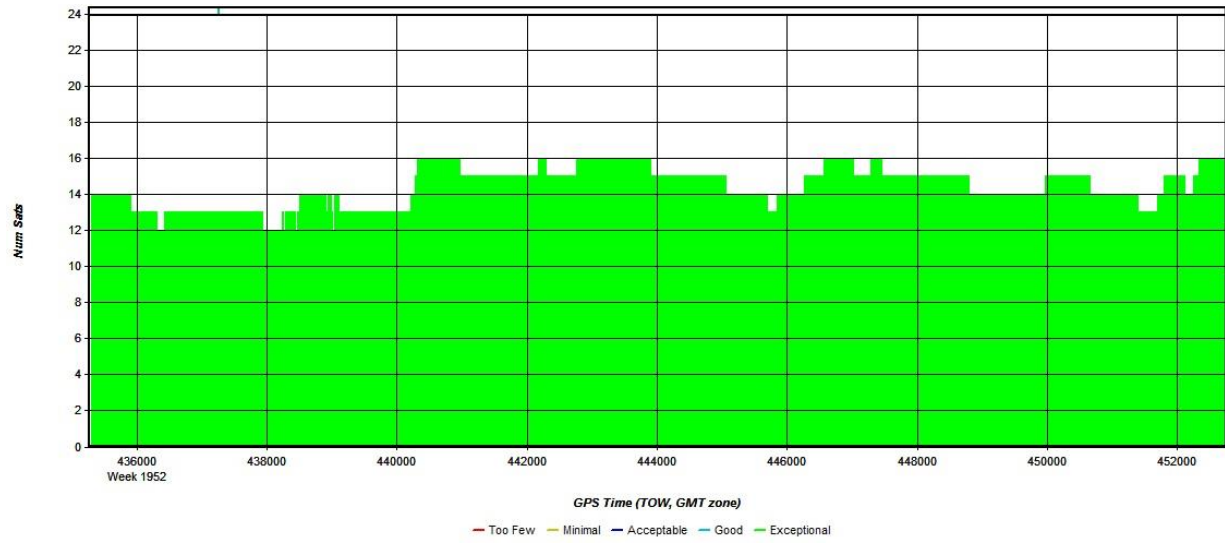
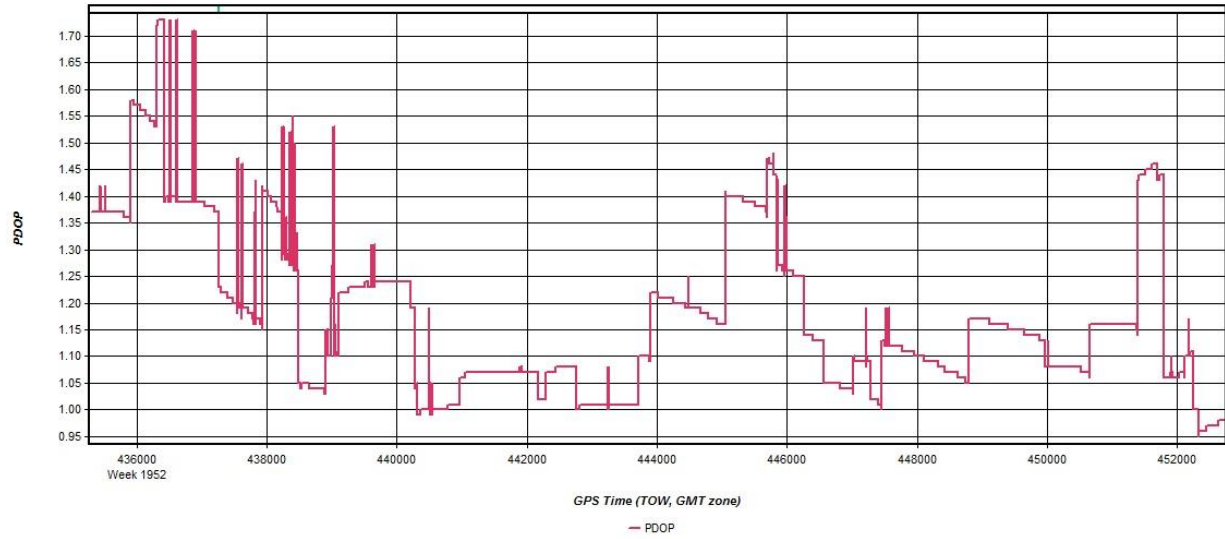
DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	45.890 (km)
Minimum:	0.034 (km)
Average:	27.453 (km)
First Epoch:	0.056 (km)
Last Epoch:	0.034 (km)

M34





Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Project: H:\South_Dakota_LiDAR\M34\IE_files\SD_M34.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 34904
No processed position: 8241
Missing Fwd or Rev: 2
With bad C/A code: 0
With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0140 (m)
C/A Code: 0.31 (m)
L1 Doppler: 0.035 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.004 (m)
North: 0.013 (m)
Height: 0.018 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26660 occurrences):

East: 0.004 (m)
North: 0.012 (m)
Height: 0.018 (m)

Quality Number Percentages:

Q 1: 100.0 %
Q 2: 0.0 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %
0.10 - 0.30 m: 0.0 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

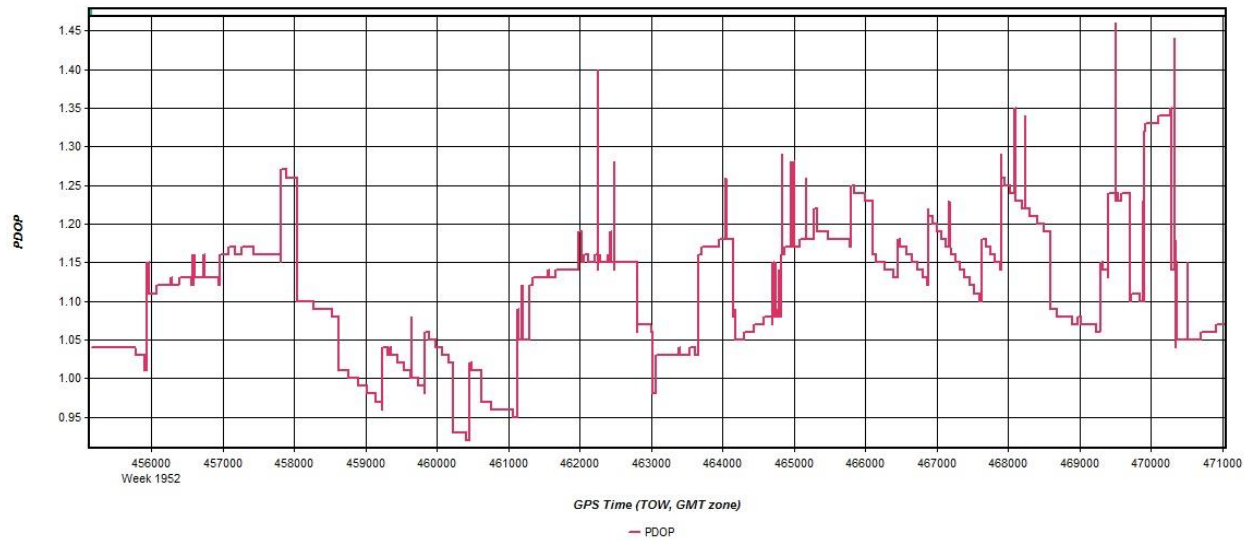
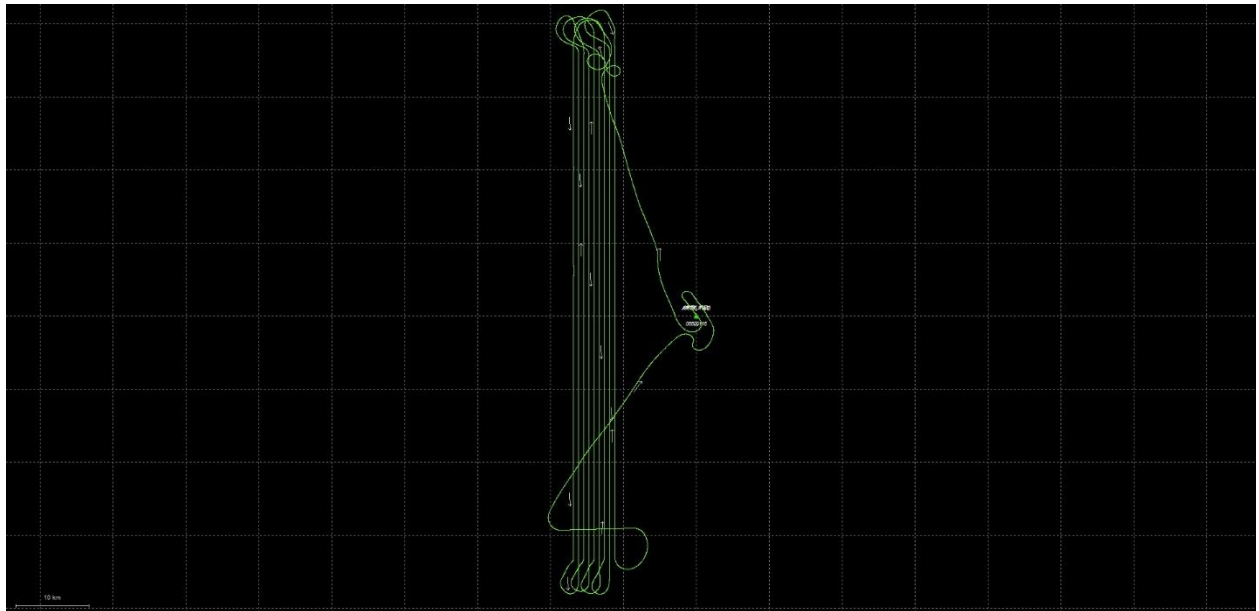
Percentages of epochs with DD_DOP over 10.00:

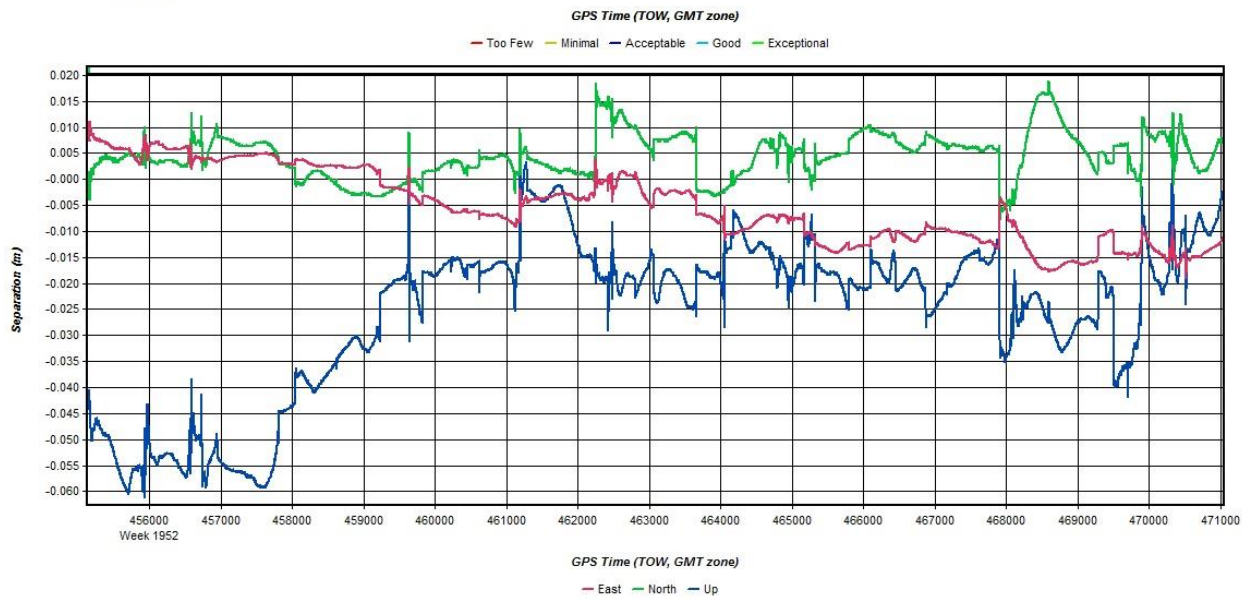
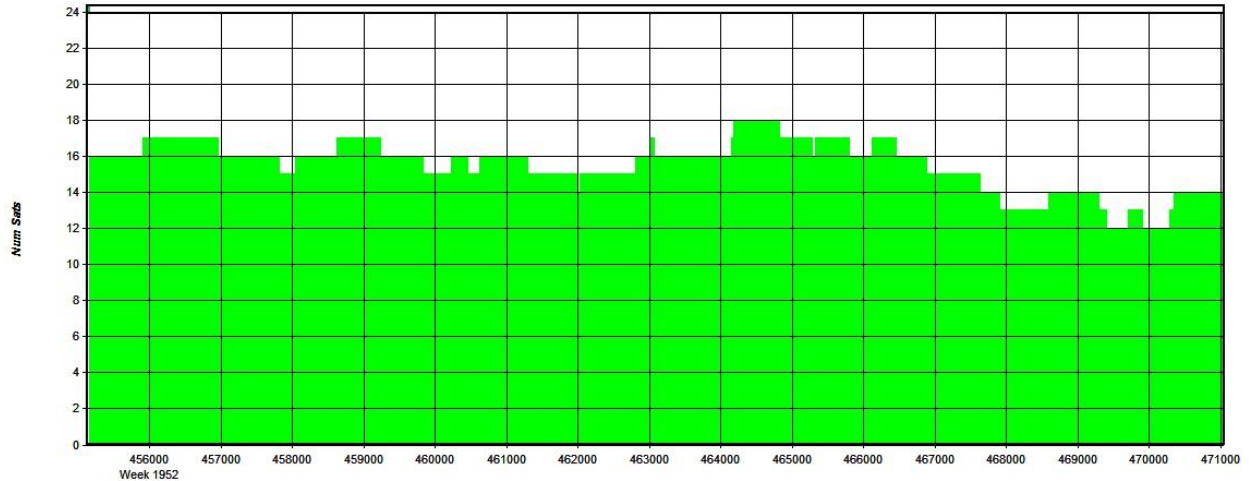
DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 45.807 (km)
Minimum: 4.748 (km)
Average: 22.772 (km)
First Epoch: 14.218 (km)
Last Epoch: 13.048 (km)

M35





Processing Summary Information

Program: Inertial Explorer
 Version: 8.60.6717
 Project: H:\South_Dakota_LiDAR\M35\IE_files\SD_M35.cfg

Solution Type: Combined

Number of Epochs:

Total in GPB file: 31815

No processed position: 1

Missing Fwd or Rev: 3

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0144 (m)

C/A Code: 0.33 (m)

L1 Doppler: 0.035 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.009 (m)

North: 0.006 (m)

Height: 0.030 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (31811 occurrences):

East: 0.009 (m)

North: 0.006 (m)

Height: 0.030 (m)

Quality Number Percentages:

Q 1: 99.9 %

Q 2: 0.1 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

0.00 - 0.10 m:	100.0 %
0.10 - 0.30 m:	0.0 %
0.30 - 1.00 m:	0.0 %
1.00 - 5.00 m:	0.0 %
5.00 m + over:	0.0 %

Percentages of epochs with DD_DOP over 10.00:

DOP over Tol:	0.0 %
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Baseline Distances:

Maximum:	44.489 (km)
Minimum:	0.042 (km)
Average:	23.172 (km)
First Epoch:	0.050 (km)
Last Epoch:	0.086 (km)