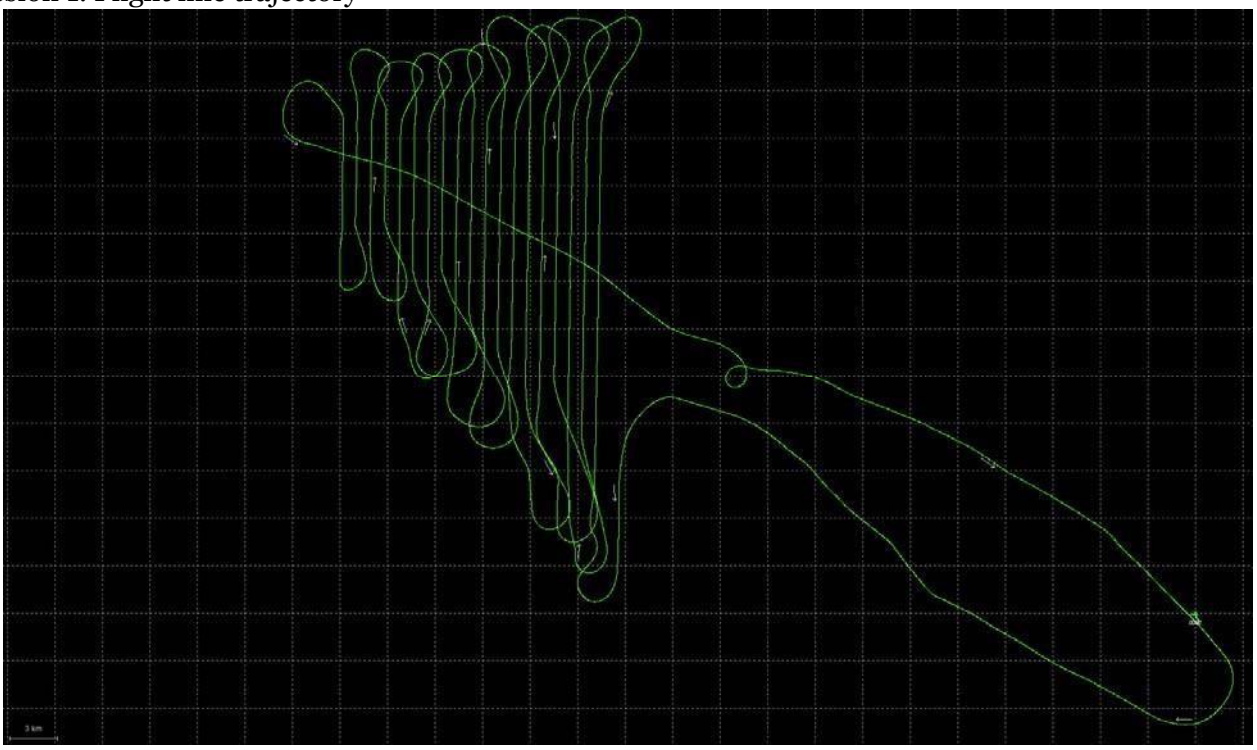
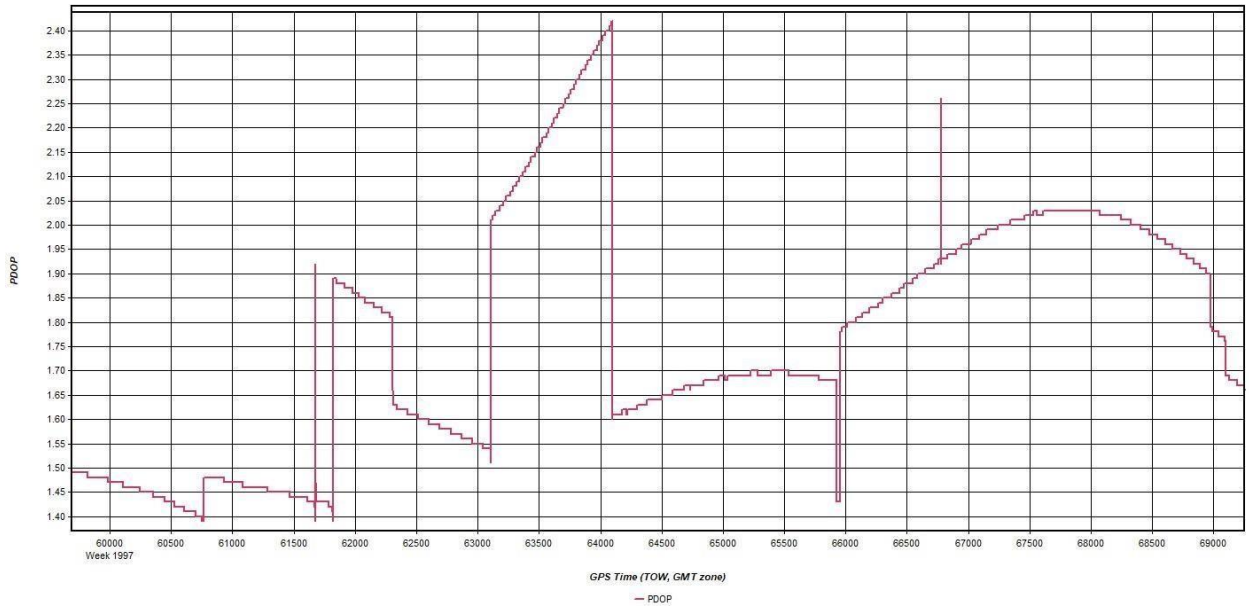
Appendix B: GPS Processing Block 01

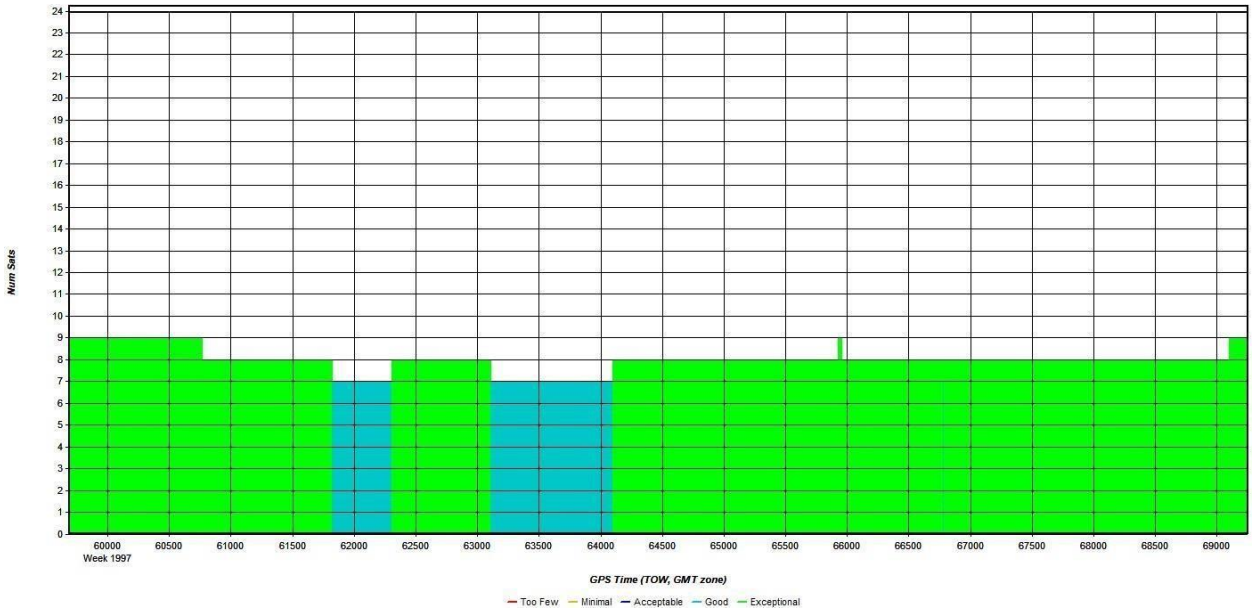
Mission 1. Flight line trajectory



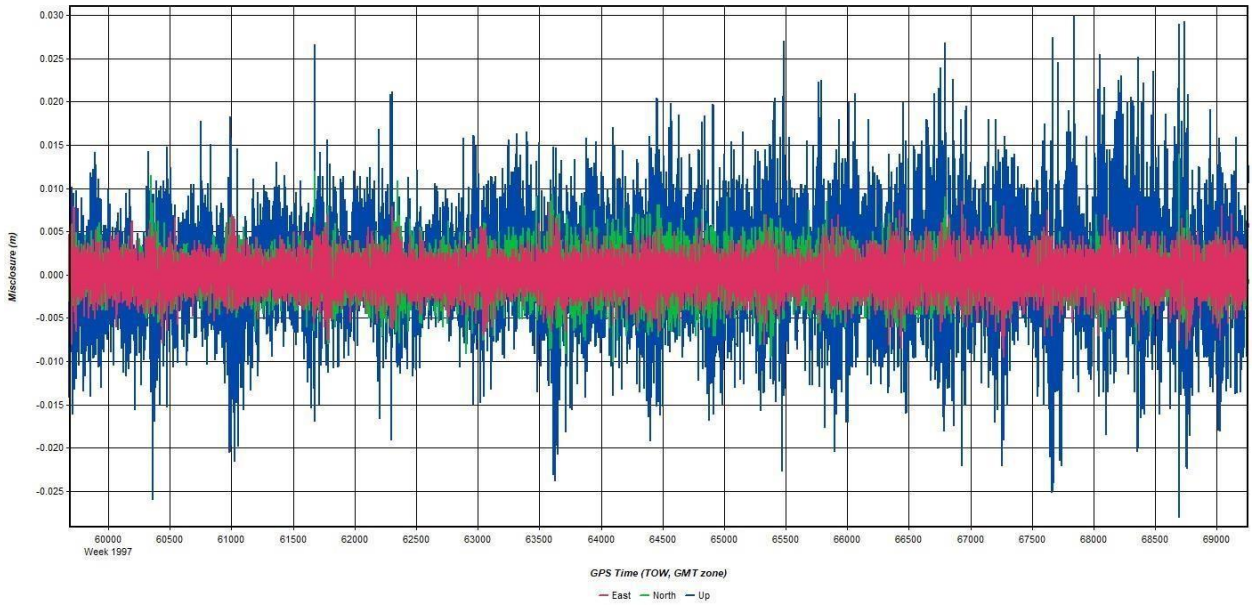
Mission 1. PDOP



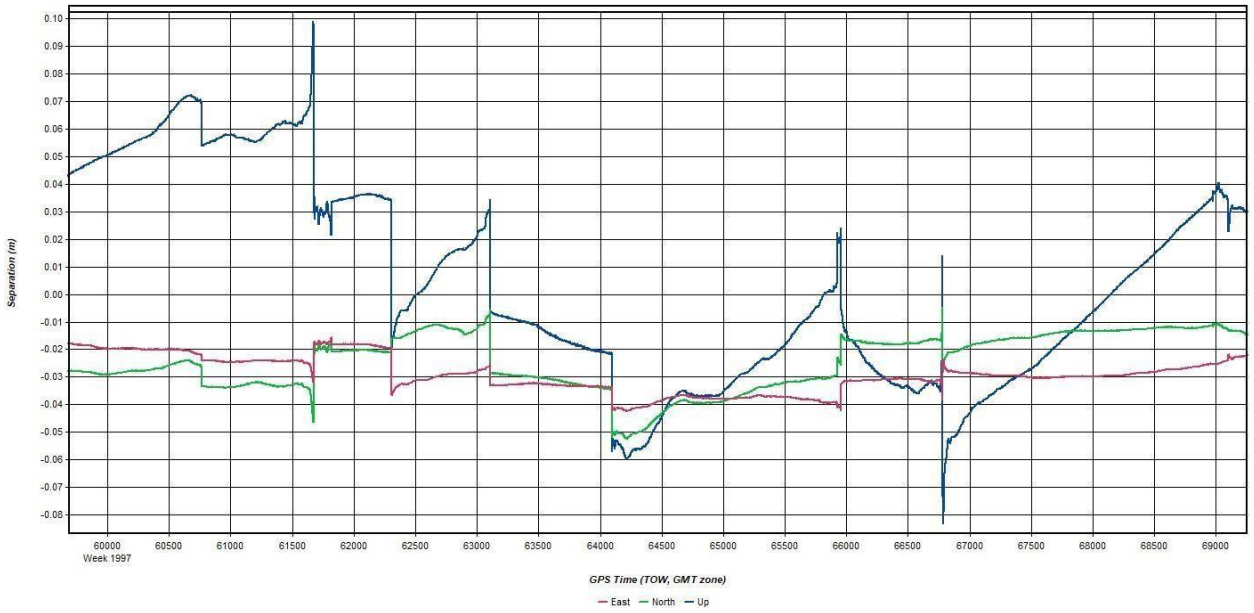
Mission 1. Number of satellites



Mission 1. GPS misclosure



Mission 1. GPS separation



Mission 1. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717

Solution Type: Combined

Number of Epochs:
Total in GPB file: 26542
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: 0.0165 (m)
C/A Code: 0.33 (m)
L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:
East: 0.027 (m)
North: 0.029 (m)
Height: 0.059 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26470 occurances):
East: 0.027 (m)
North: 0.025 (m)
Height: 0.036 (m)

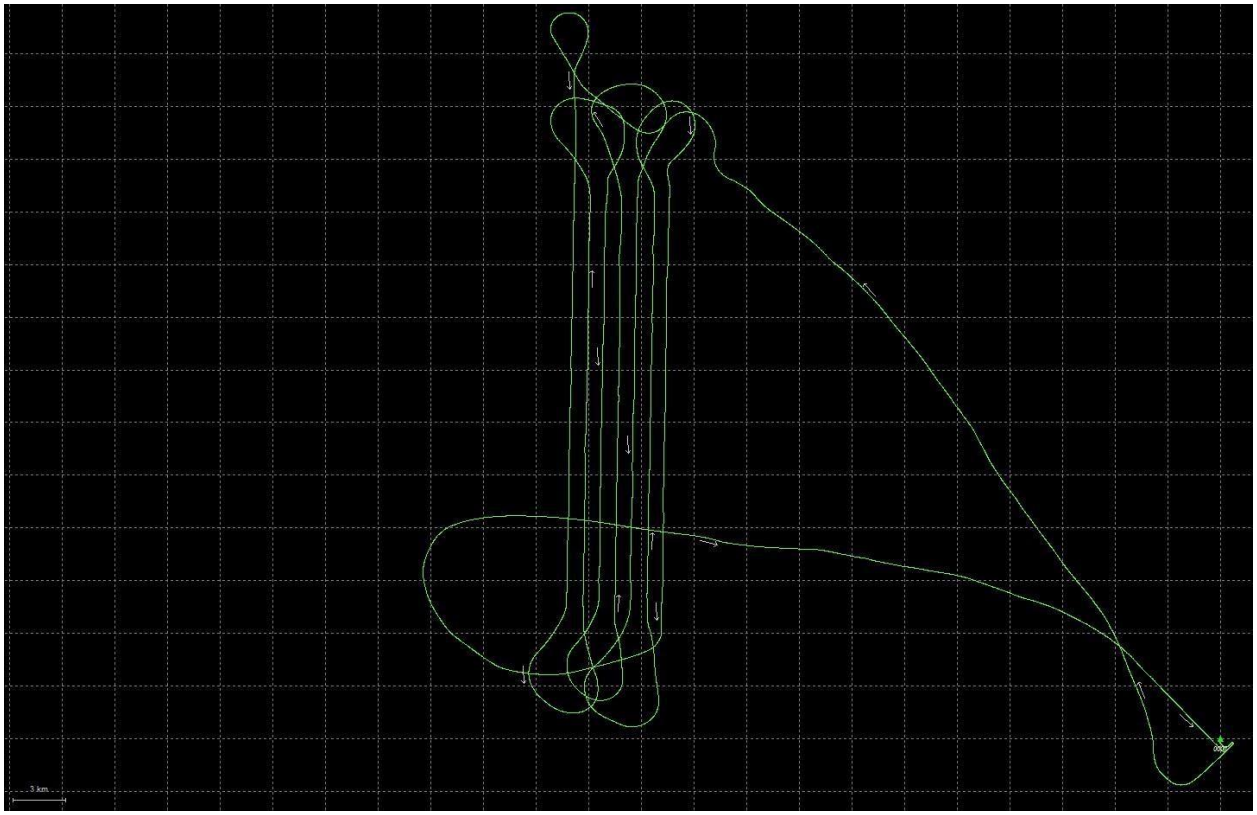
Quality Number Percentages:
Q 1: 99.9 %
Q 2: 0.1 %
Q 3: 0.0 %
Q 4: 0.0 %
Q 5: 0.0 %
Q 6: 0.0 %

Position Standard Deviation Percentages:
0.00 - 0.10 m: 99.9 %
0.10 - 0.30 m: 0.1 %
0.30 - 1.00 m: 0.0 %
1.00 - 5.00 m: 0.0 %
5.00 m + over: 0.0 %

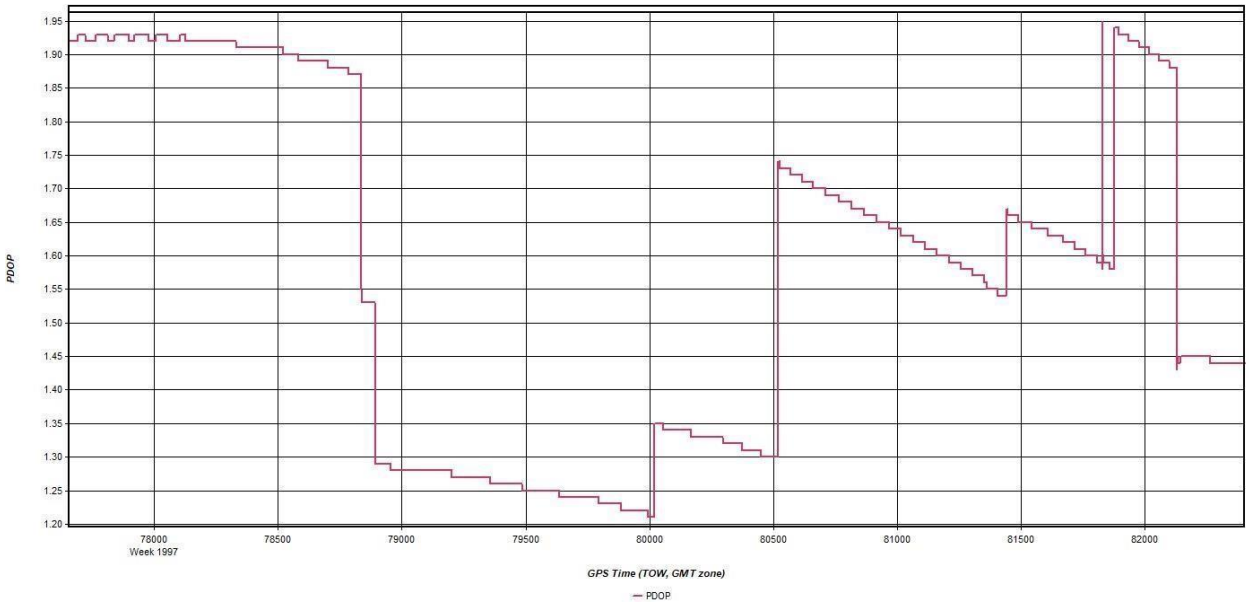
Percentages of epochs with DD_DOP over 10.00:
DOP over Tol: 0.0 %

Baseline Distances:
Maximum: 65.741 (km)
Minimum: 0.077 (km)
Average: 41.958 (km)
First Epoch: 0.103 (km)
Last Epoch: 0.086 (km)

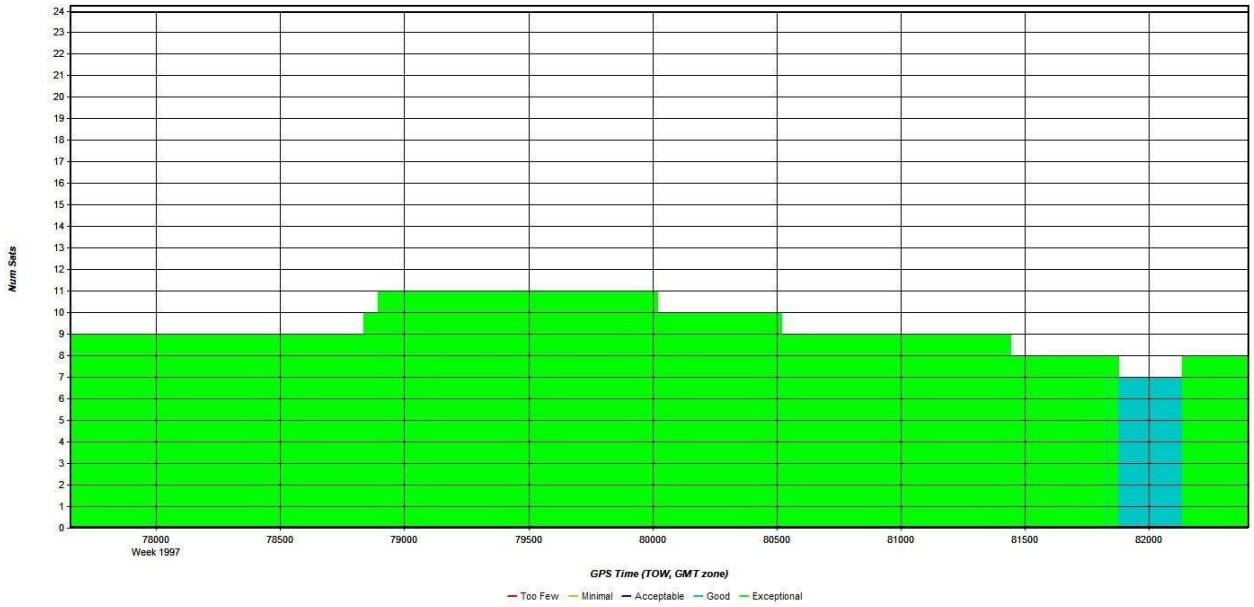
Mission 2. Flight line trajectory



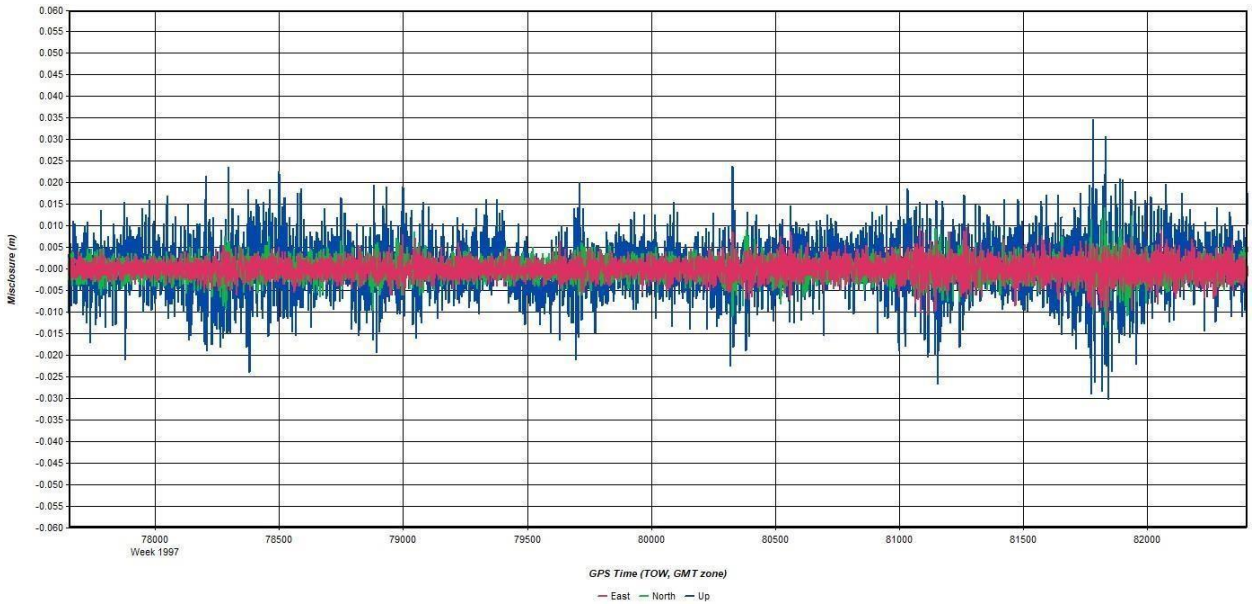
Mission 2. PDOP



Mission 2. Number of satellites

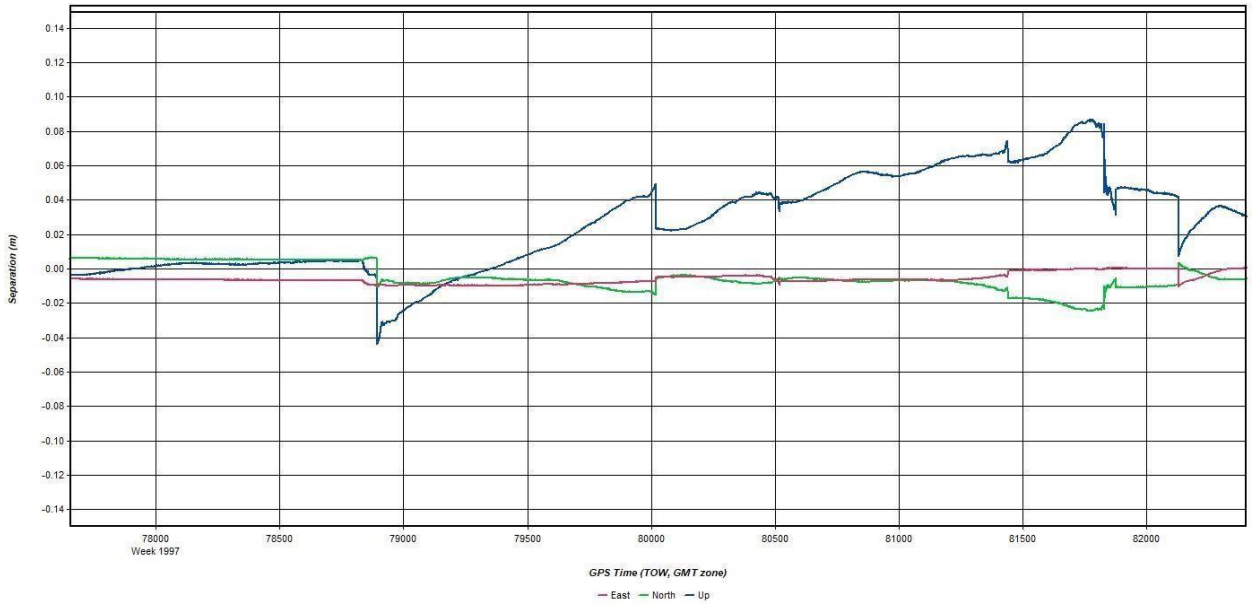


Mission 2. GPS misclosure



Mission 2. GPS separation

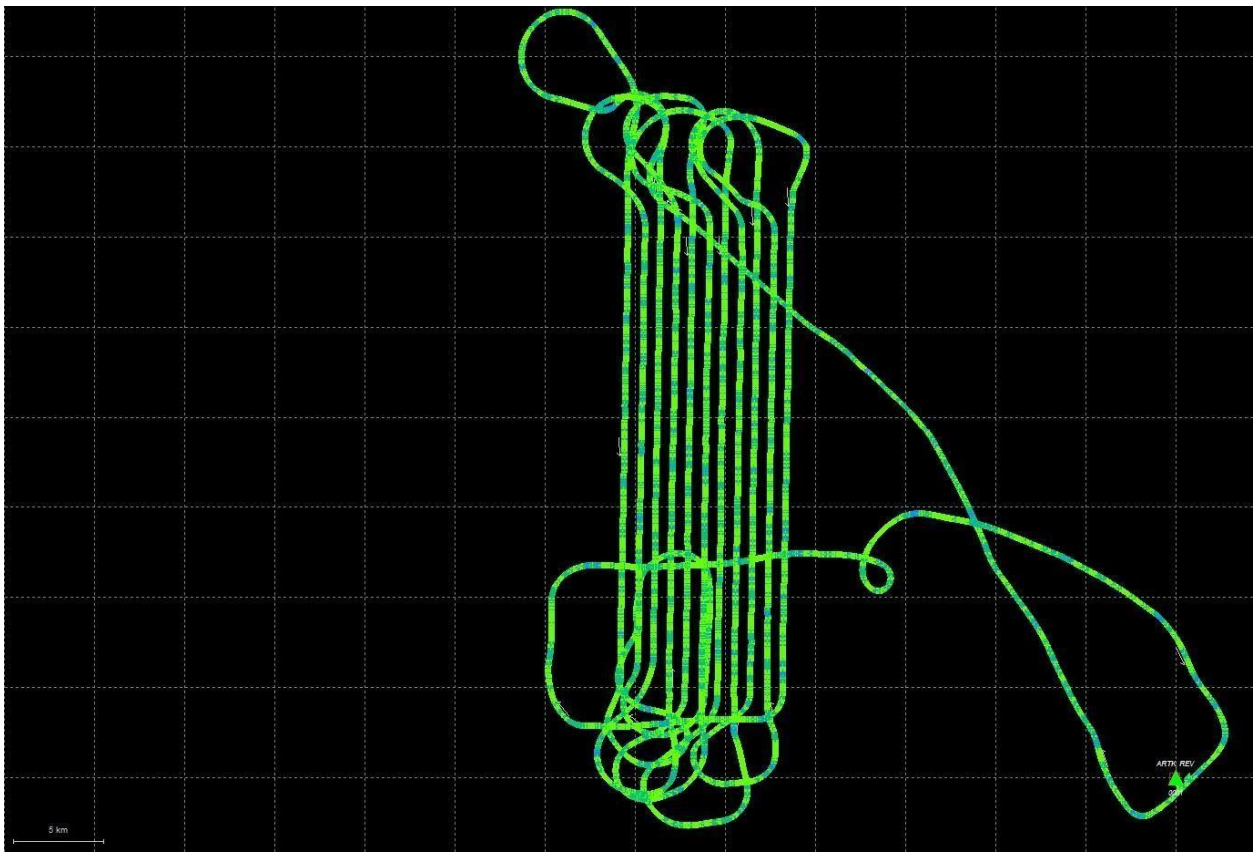
Texas West Central PAR#
00105-10



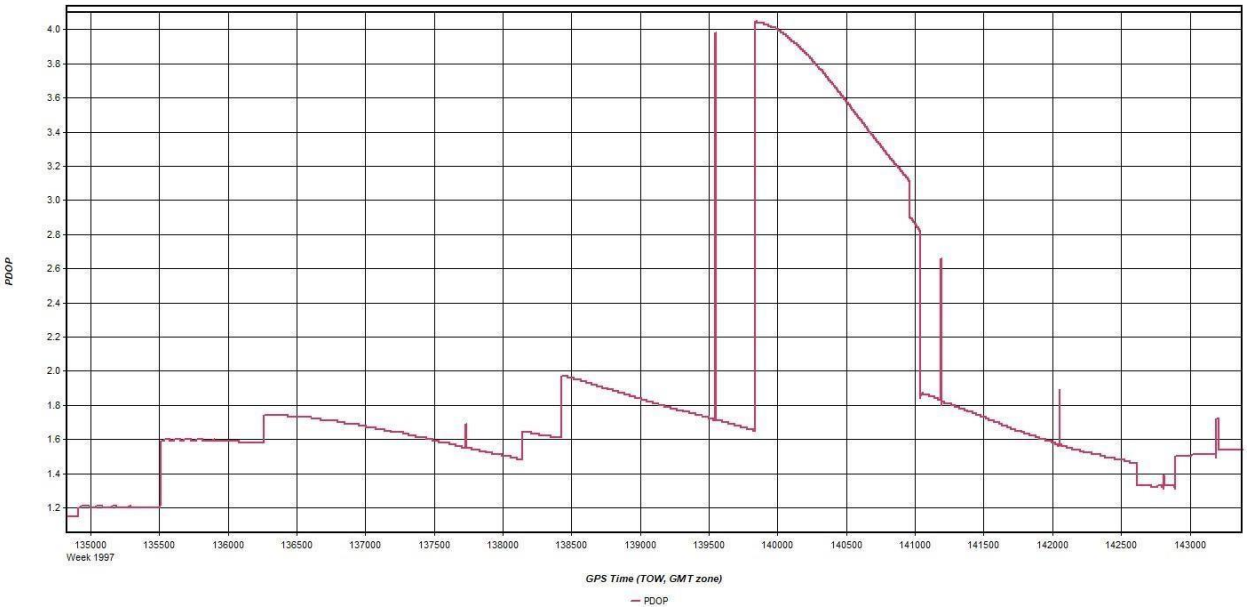
Mission 2. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      16568
        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:       0.0148 (m)
        C/A Code:       0.34 (m)
        L1 Doppler:     0.025 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.006 (m)
        North:  0.010 (m)
        Height: 0.039 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (16563 occurances):
        East:   0.006 (m)
        North:  0.009 (m)
        Height: 0.038 (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:        55.259 (km)
        Minimum:        0.076 (km)
        Average:        31.356 (km)
        First Epoch:    0.086 (km)
        Last Epoch:     0.088 (km)
```

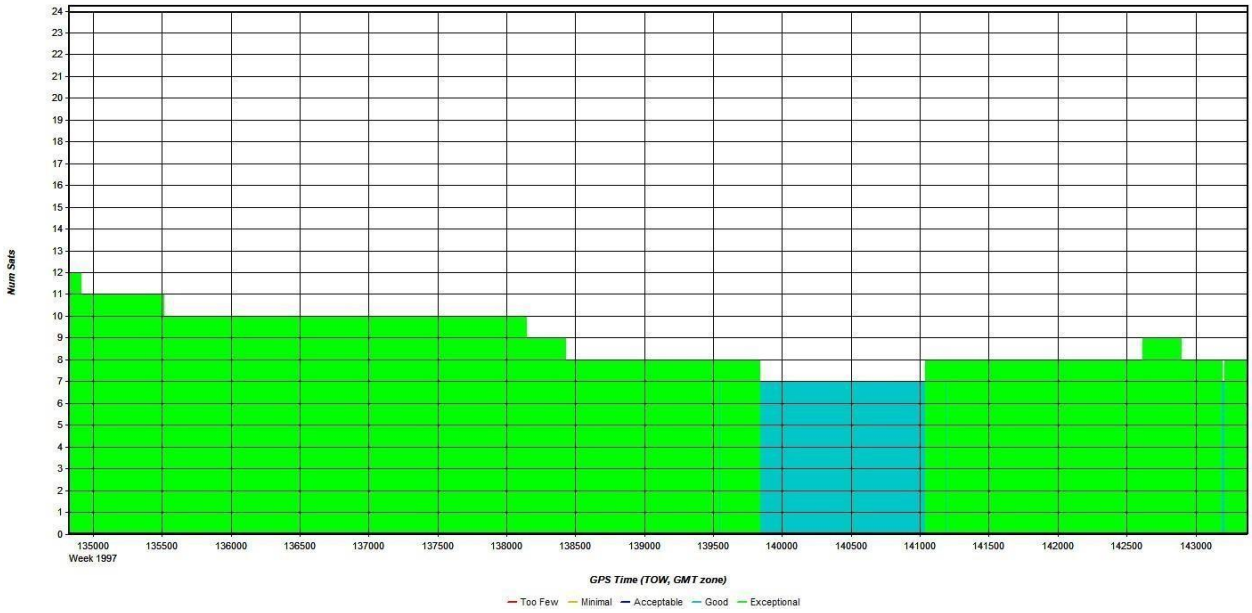
Mission 3. Flight line trajectory



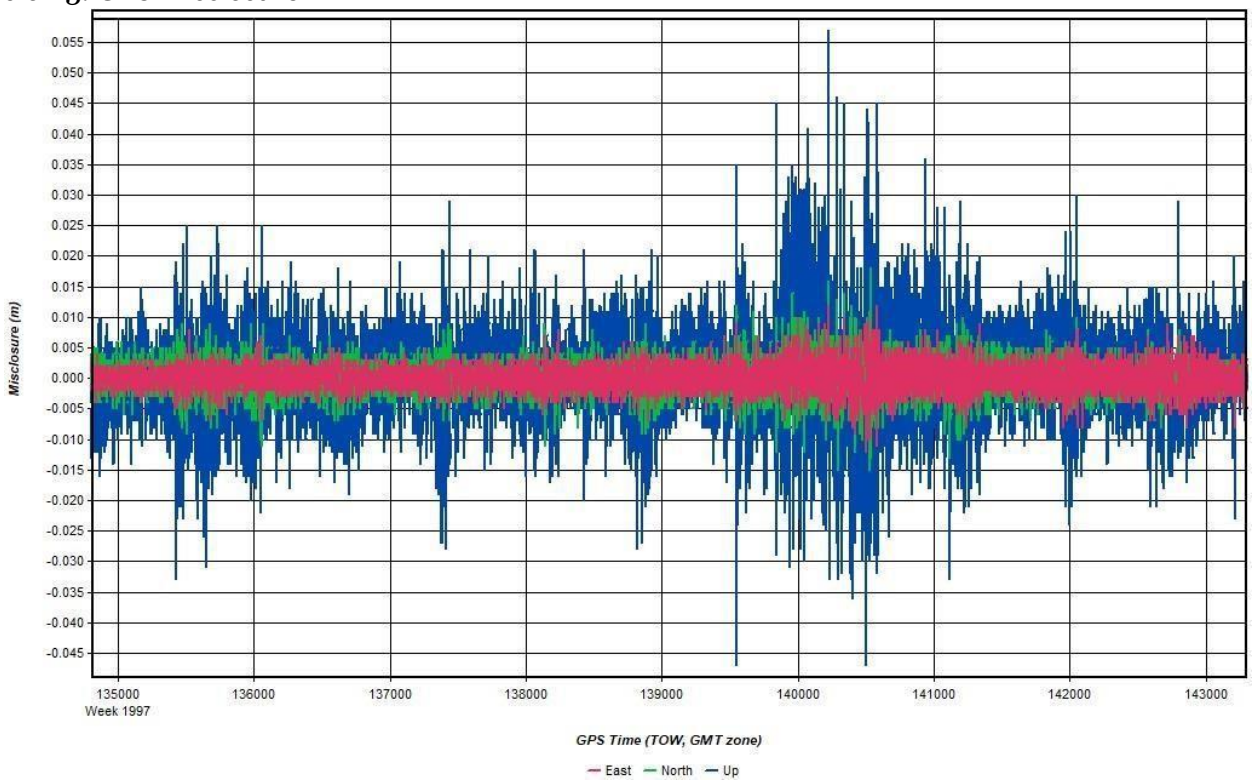
Mission 3. PDOP



Mission 3. Number of satellites

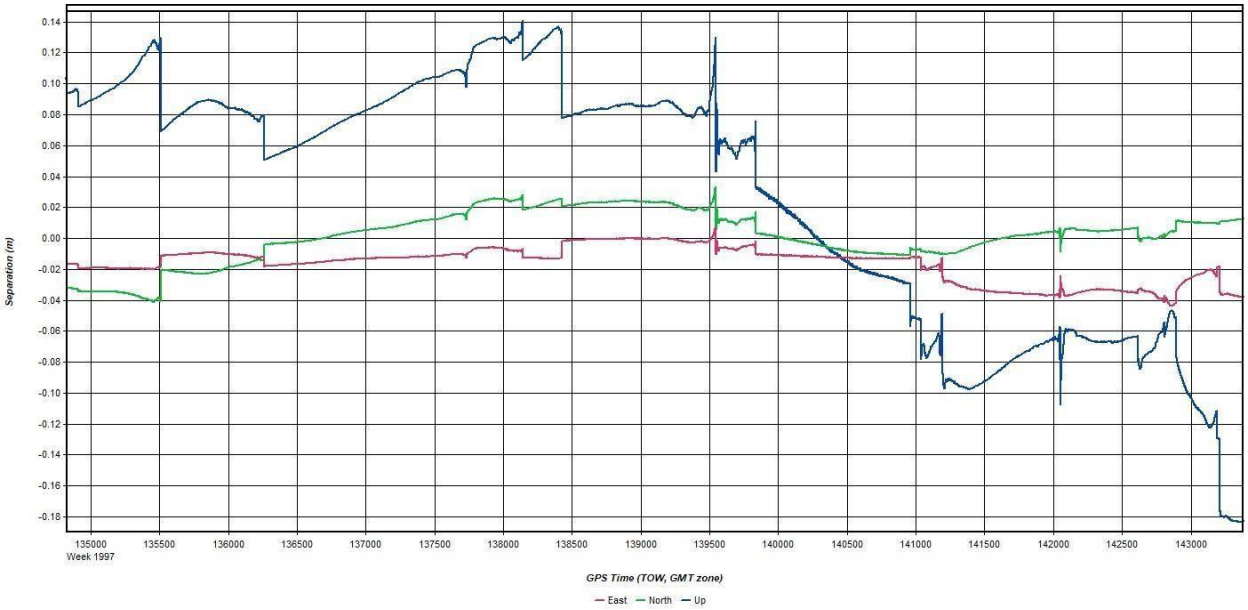


Mission 3. GPS misclosure



Mission 3. GPS separation

July 12, 2018

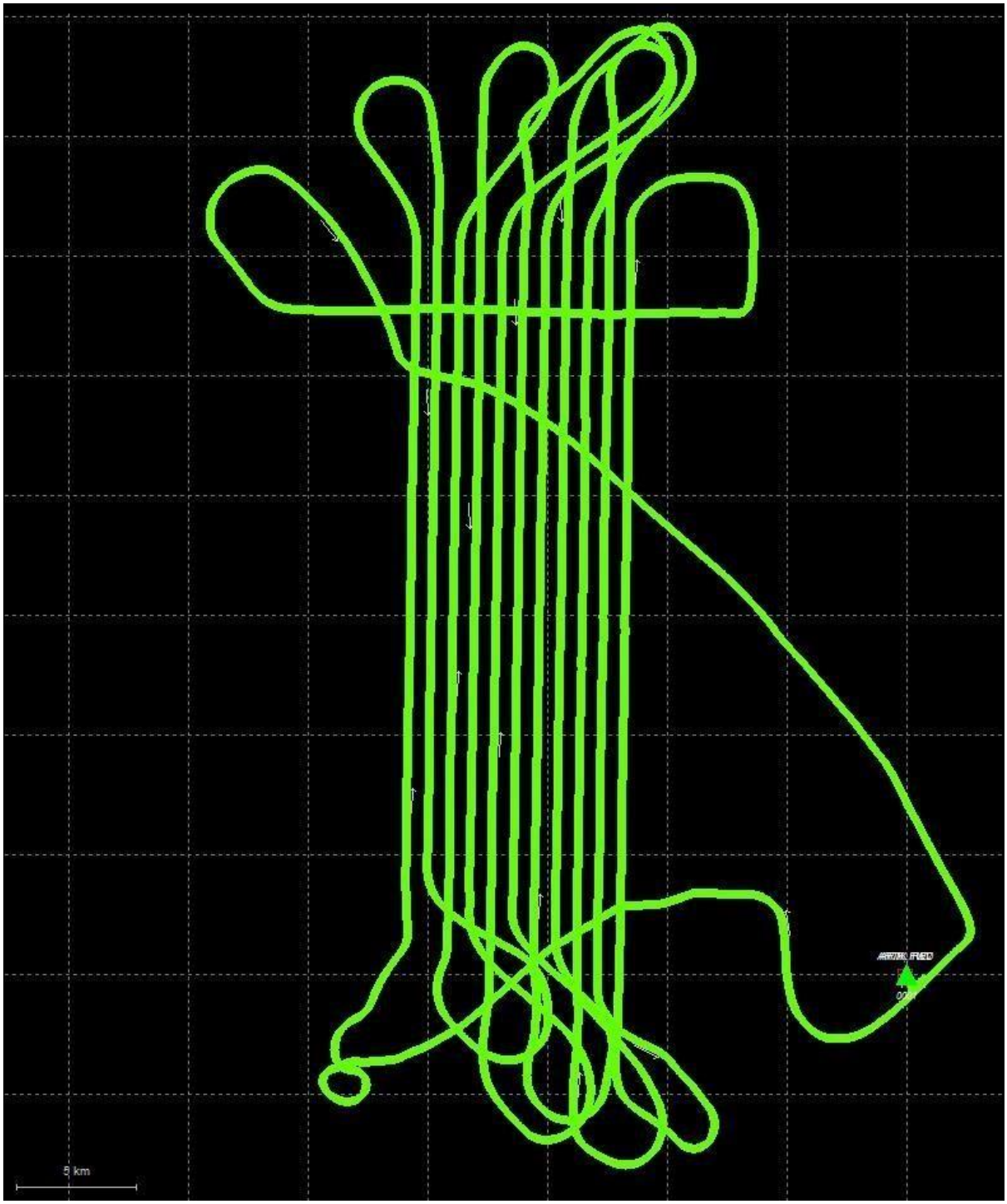


Mission 3. Processing summary

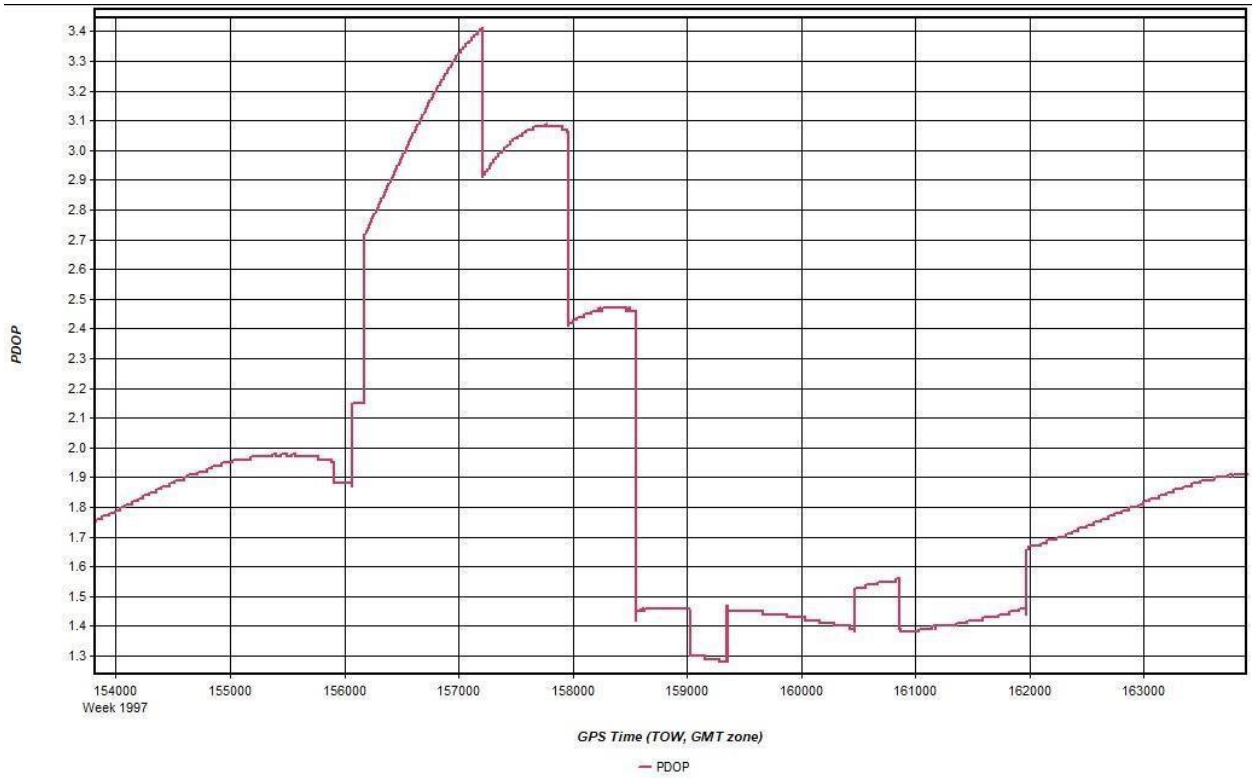
Texas West Central PAR#
00105-10

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      24205
        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:       0.0213 (m)
        C/A Code:       0.30 (m)
        L1 Doppler:     0.024 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.023 (m)
        North:  0.016 (m)
        Height: 0.092 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (24201 occurances):
        East:   0.023 (m)
        North:  0.016 (m)
        Height: 0.092 (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:        54.487 (km)
        Minimum:        0.080 (km)
        Average:        28.904 (km)
        First Epoch:    0.797 (km)
        Last Epoch:     0.096 (km)
```

Mission 4. Flight line trajectory

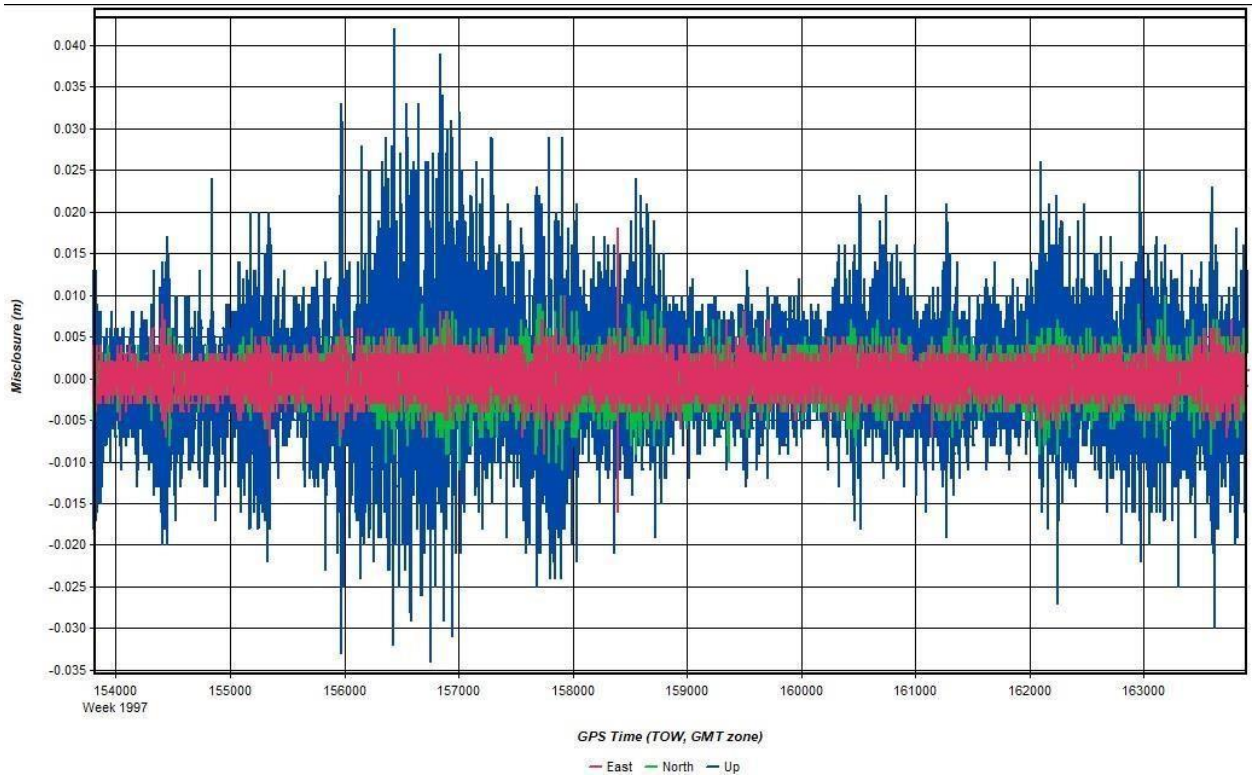


Mission 4. PDOP

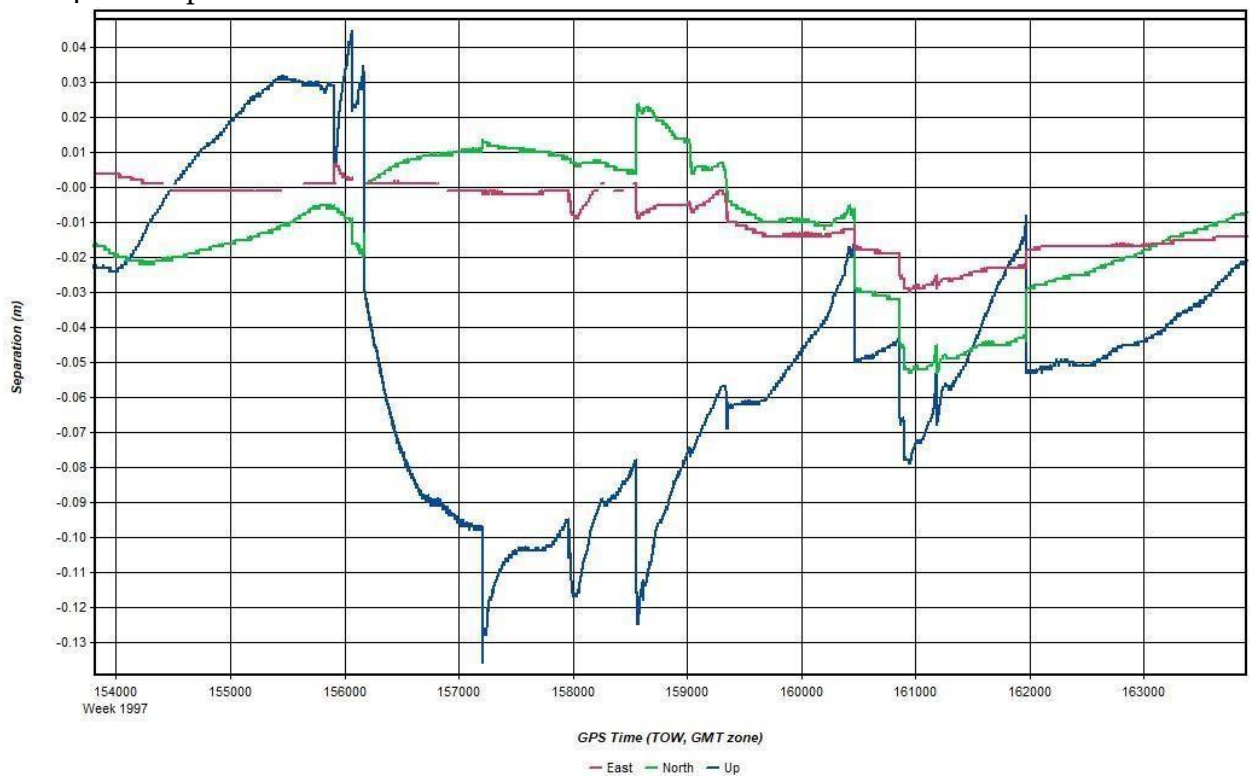


Mission 4. Number of satellites

Mission 4. GPS misclosure



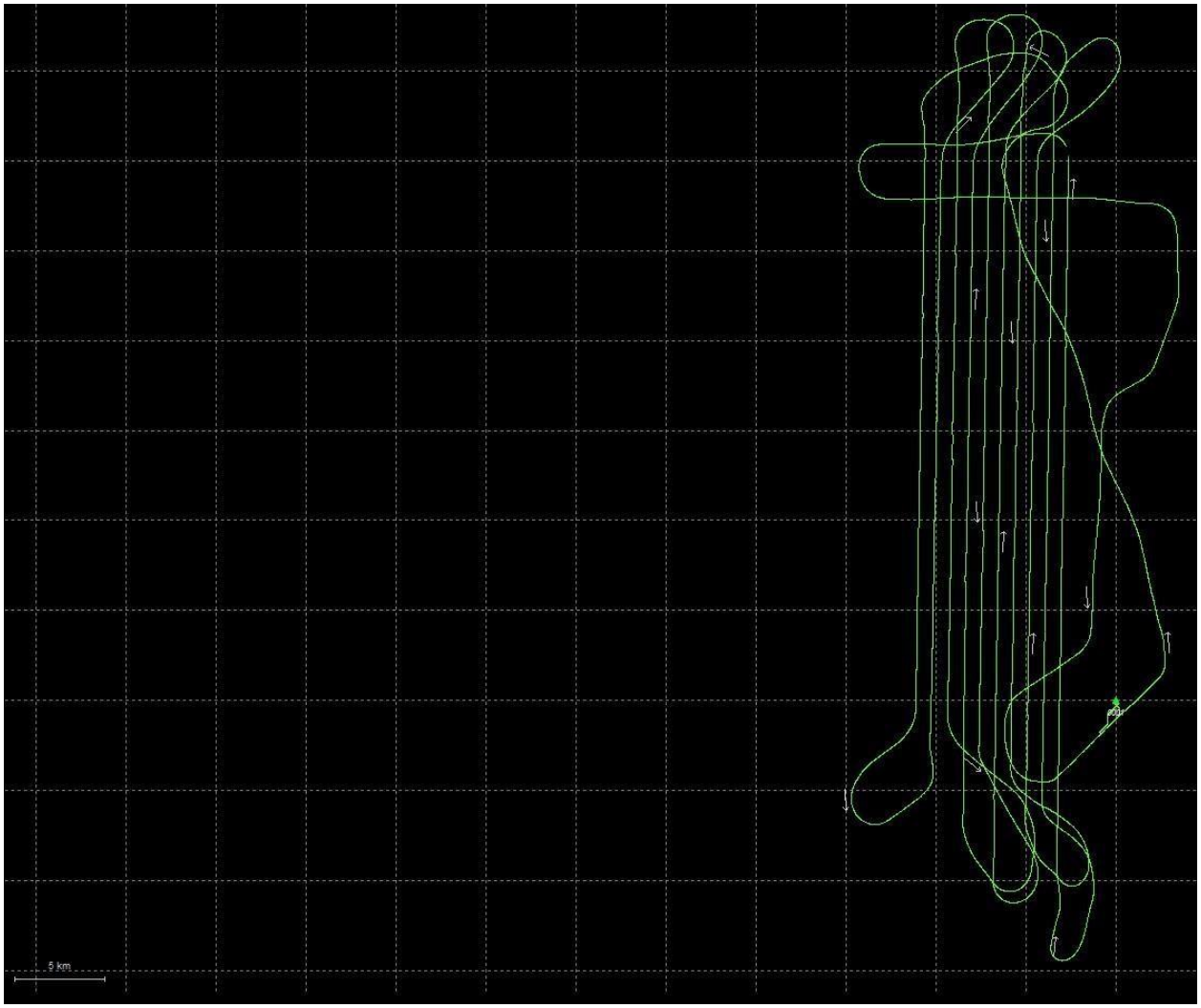
Mission 4. GPS separation



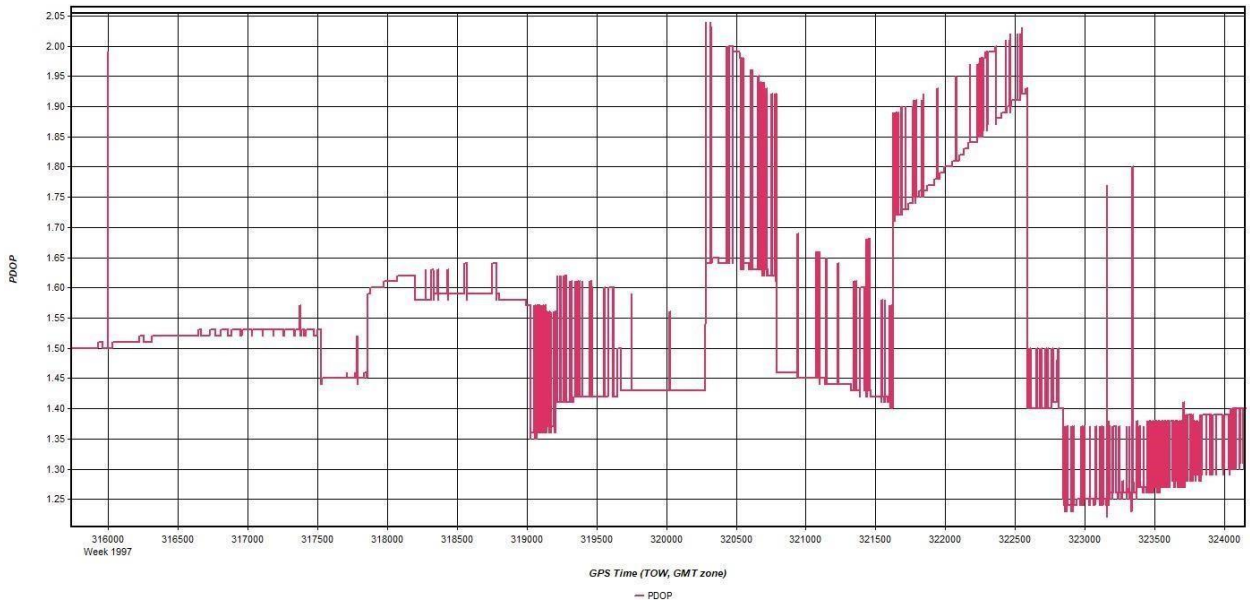
Mission 4. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      25153
        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:       0.0166 (m)
        C/A Code:       0.40 (m)
        L1 Doppler:     0.020 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.012 (m)
        North:  0.020 (m)
        Height: 0.056 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (25148 occurances):
        East:   0.012 (m)
        North:  0.020 (m)
        Height: 0.055 (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:        43.283 (km)
        Minimum:        0.072 (km)
        Average:        22.200 (km)
        First Epoch:    0.096 (km)
        Last Epoch:     0.103 (km)
```

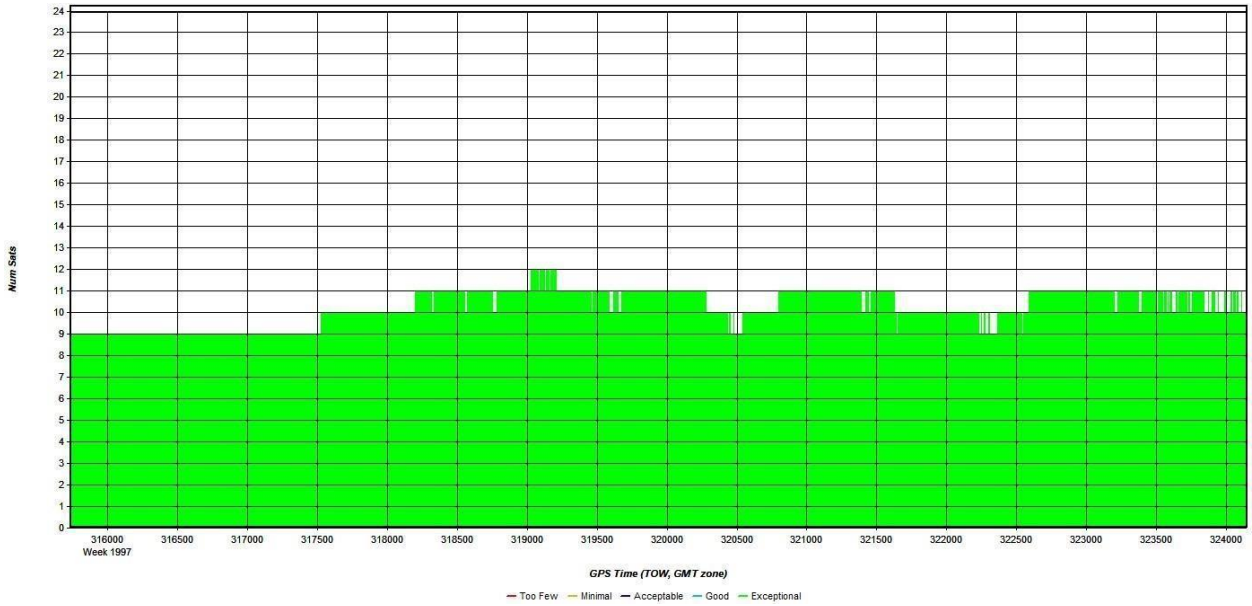
Mission 5. Flight line trajectory



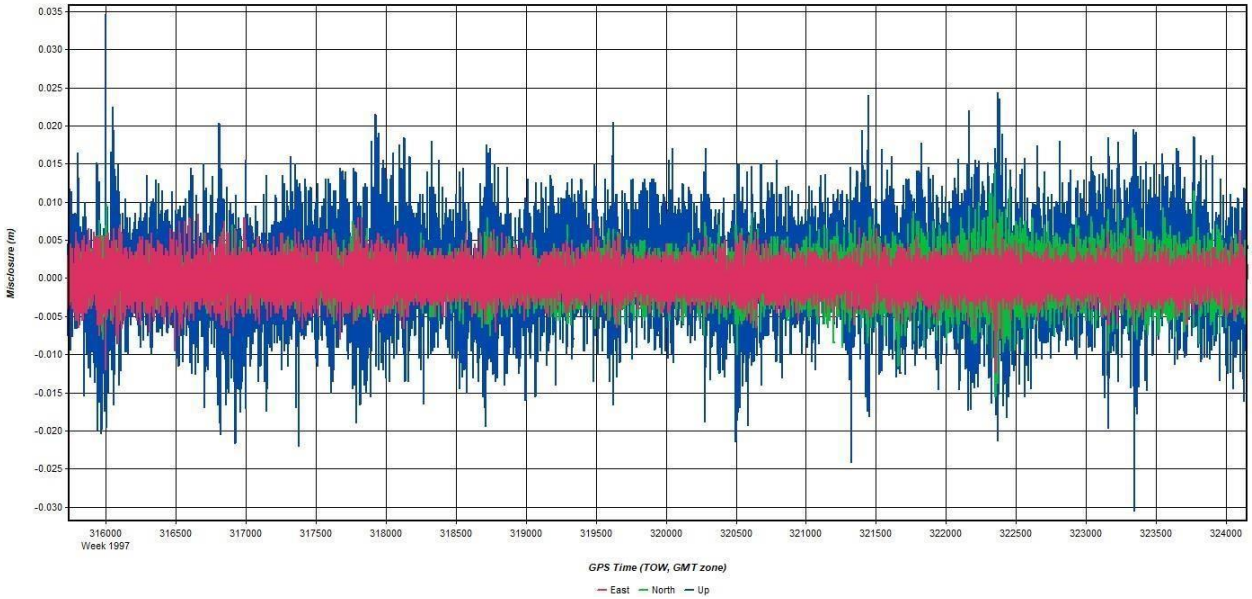
Mission 5. PDOP



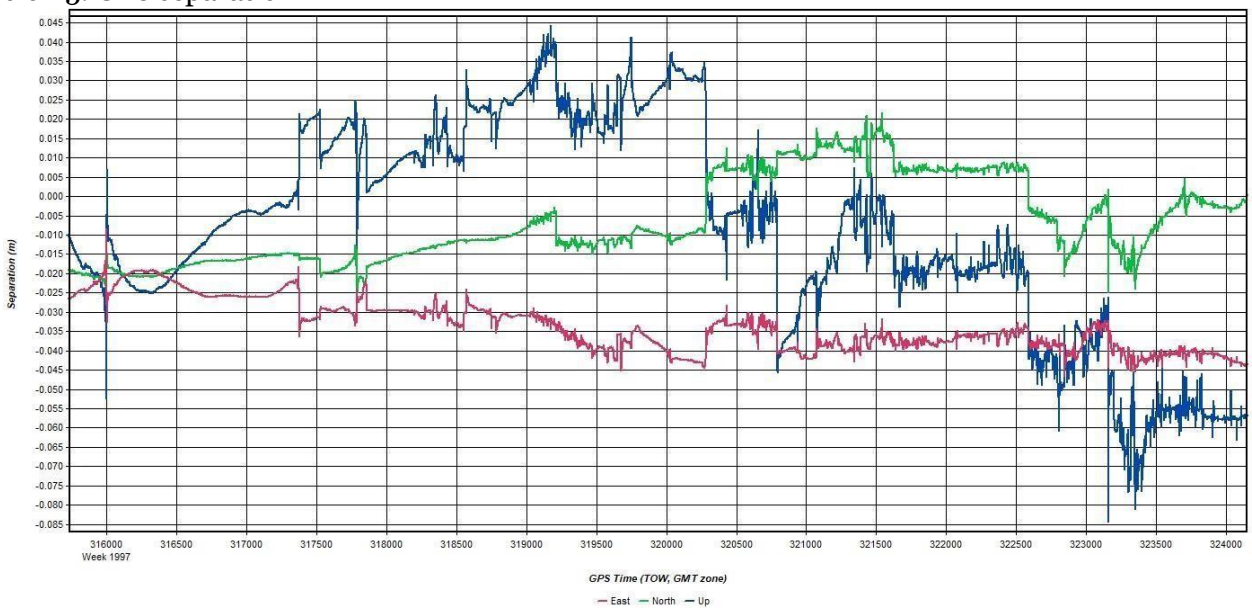
Mission 5. Number of satellites



Mission 5. GPS misclosure



Mission 5. GPS separation



Mission 5. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 24835
- No processed position: 21
- 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: 0.65 (m)
- L1 Doppler: 0.044 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.051 (m)
- North: 0.030 (m)
- Height: 0.085 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (24793 occurances):
- East: 0.032 (m)
- North: 0.014 (m)
- Height: 0.029 (m)

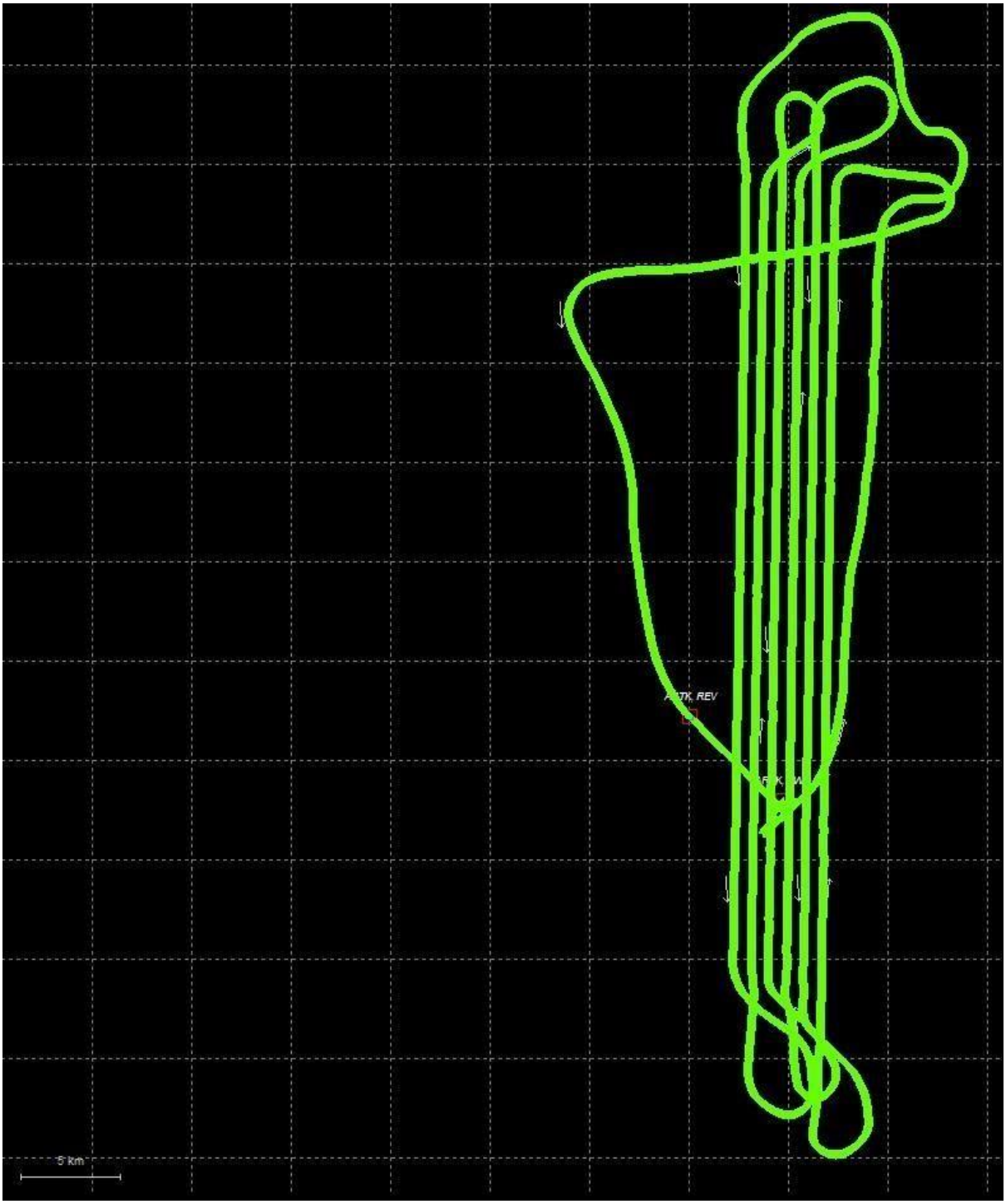
Quality Number Percentages:
- Q 1: 99.8 %
- Q 2: 0.2 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

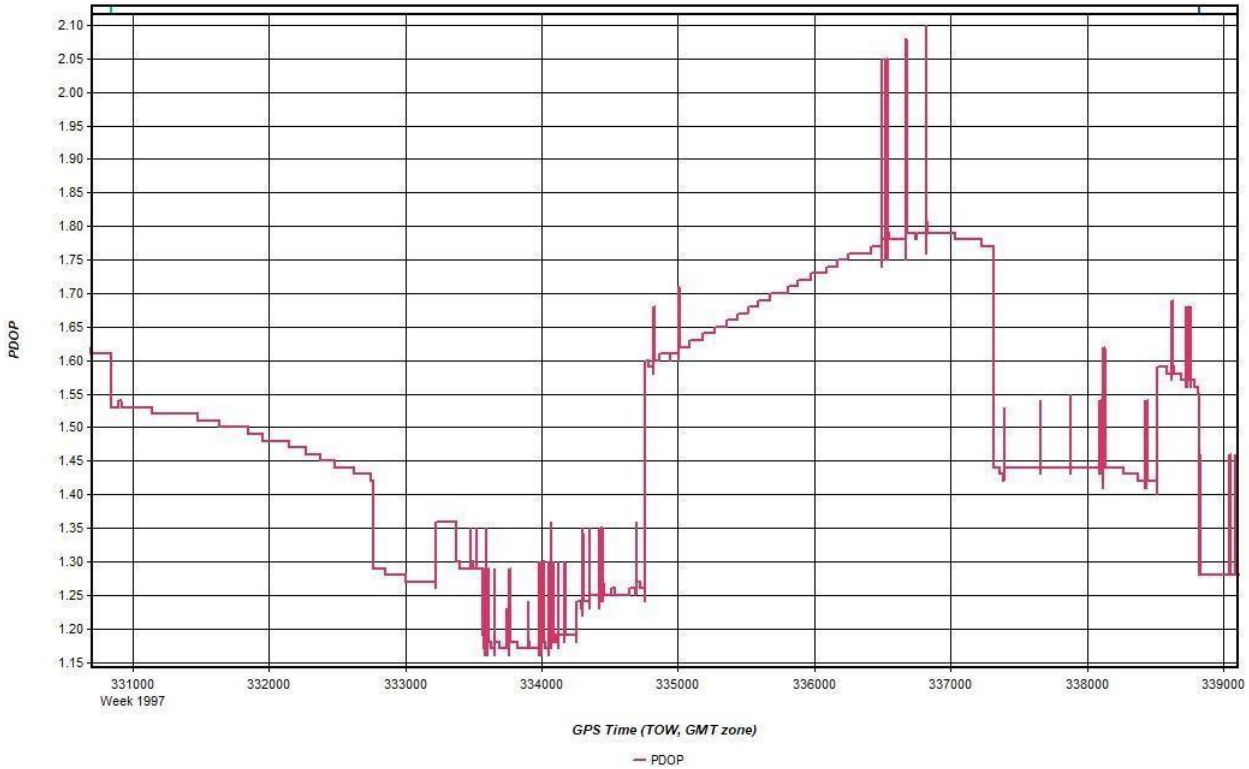
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 38.495 (km)
- Minimum: 0.105 (km)
- Average: 16.435 (km)
- First Epoch: 0.112 (km)
- Last Epoch: 0.252 (km)

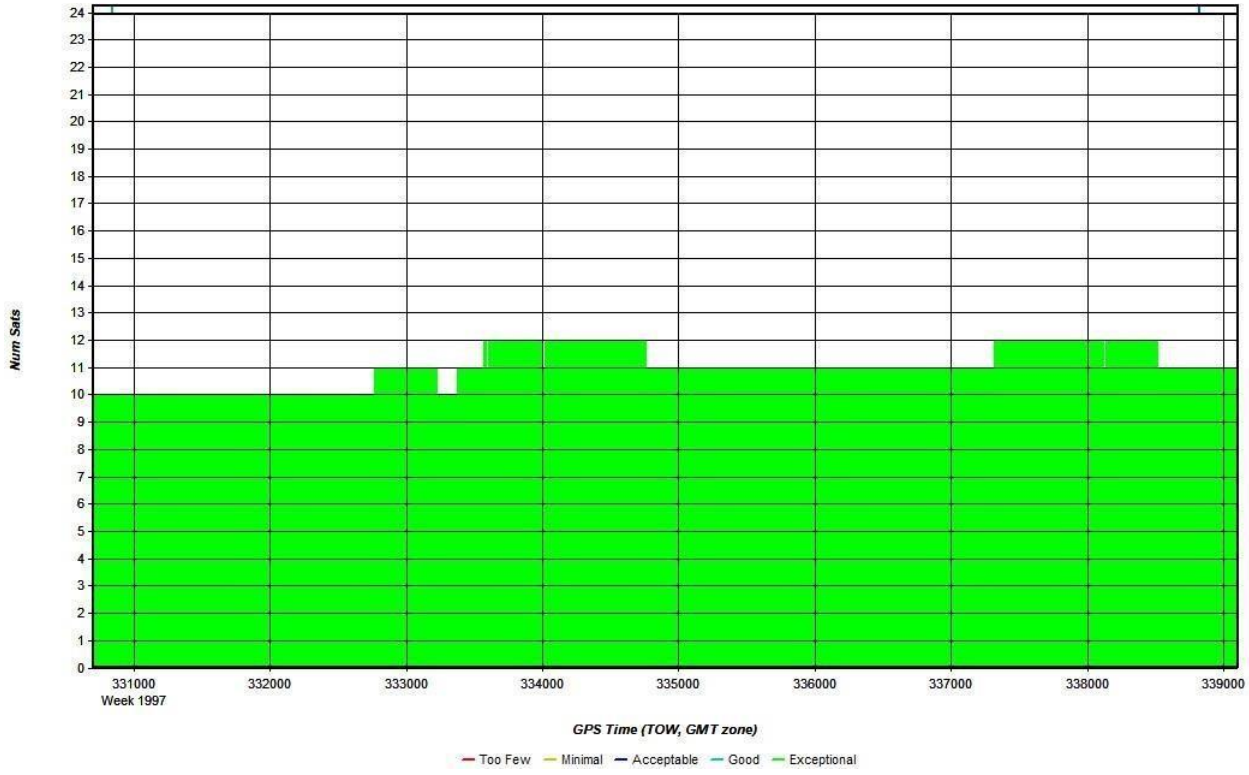
Mission 6. Flight line trajectory



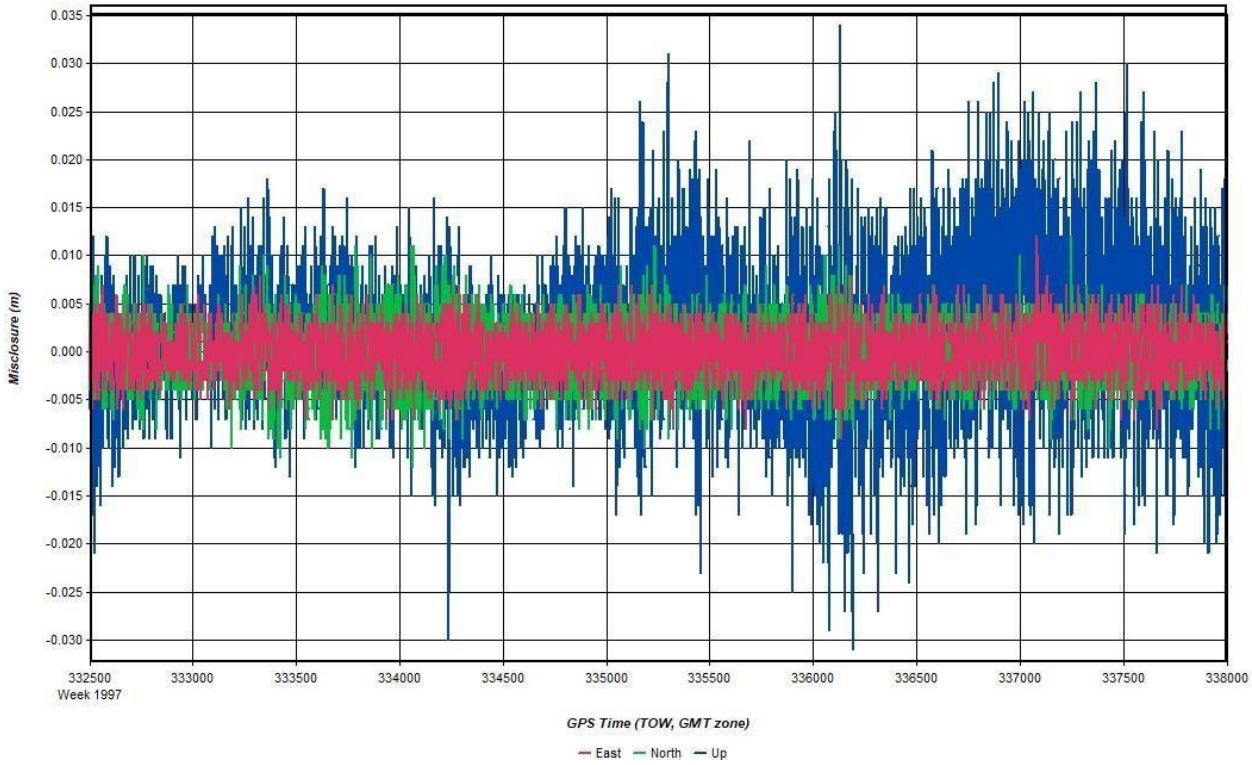
Mission 6. PDOP



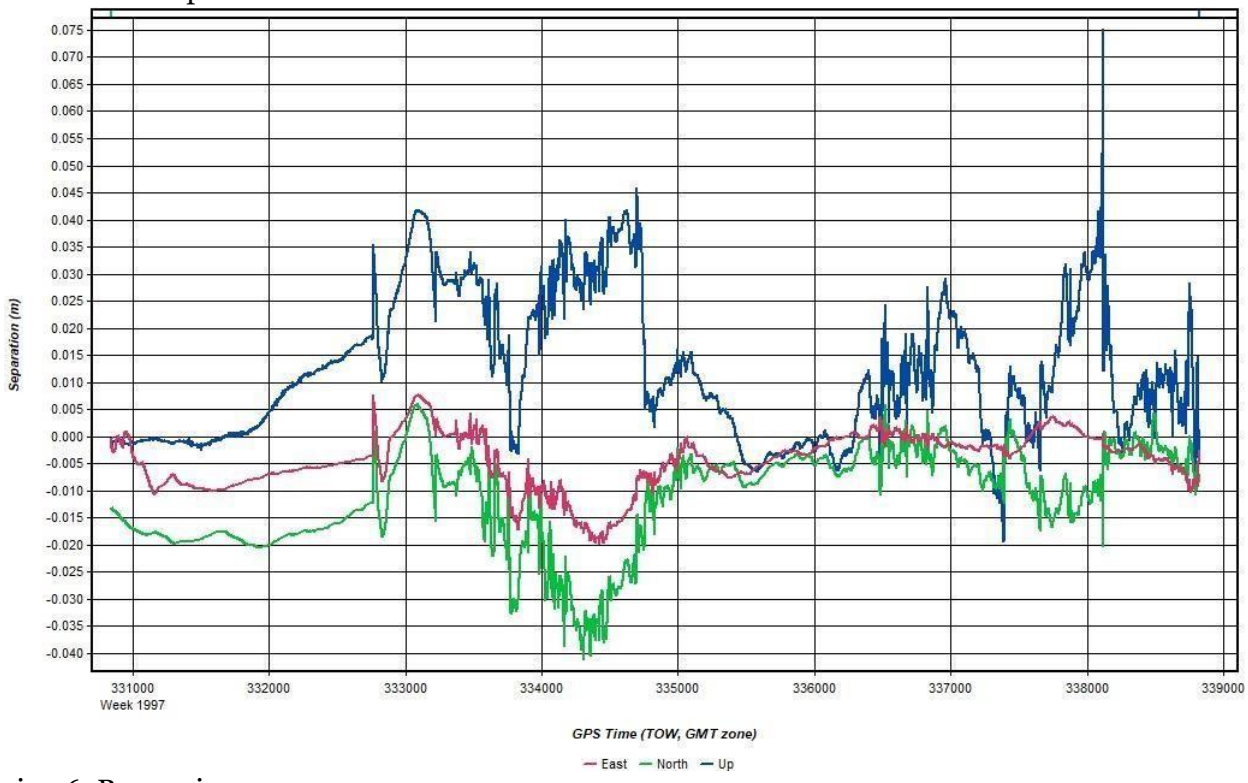
Mission 6. Number of satellites



Mission 6. GPS misclosure



Mission 6. GPS separation



Mission 6. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:

Total in GPB file:	16831
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:	0.0181 (m)
C/A Code:	0.90 (m)
L1 Doppler:	0.040 (m/s)

Fwd/Rev Separation RMS Values:

East:	0.073 (m)
North:	0.050 (m)
Height:	0.218 (m)

Quality Number Percentages:

Q 1:	98.0 %
Q 2:	2.0 %
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 %

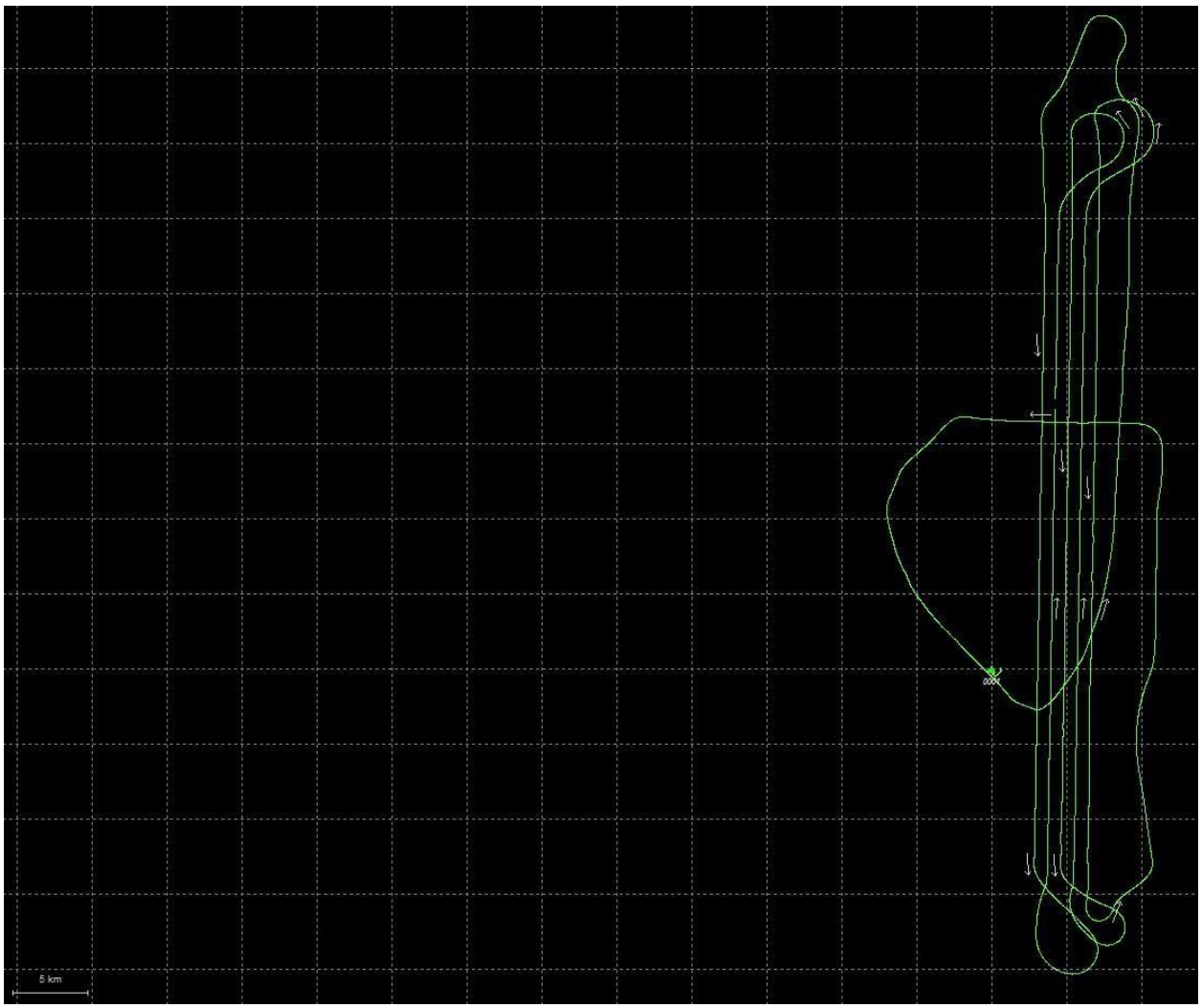
Percentages of epochs with DD_DOP over 10.00:

DOP over Tol:	0.0 %

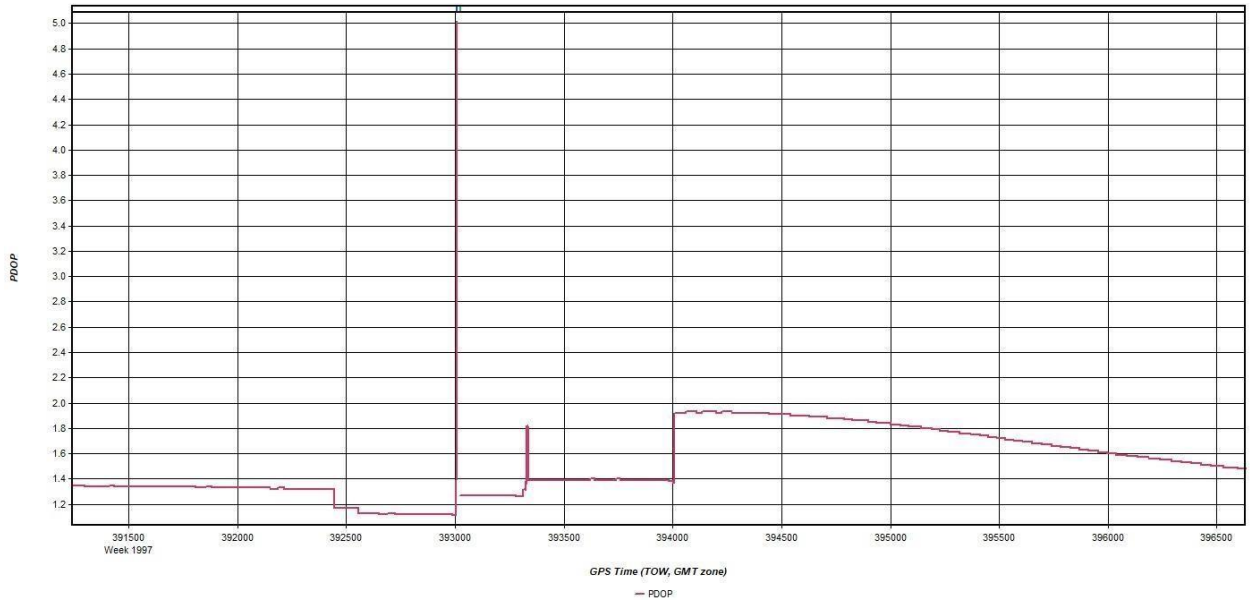
Baseline Distances:

Maximum:	69.362 (km)
Minimum:	52.060 (km)
Average:	57.236 (km)
First Epoch:	54.970 (km)
Last Epoch:	54.991 (km)

Mission 7. Flight line trajectory

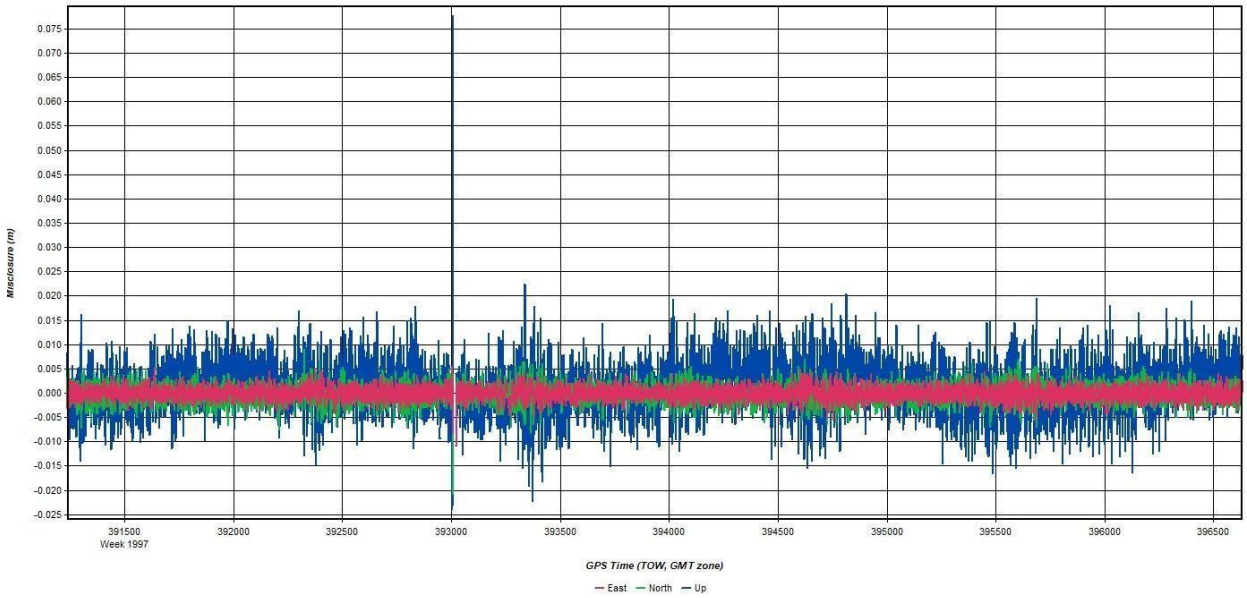


Mission 7. PDOP

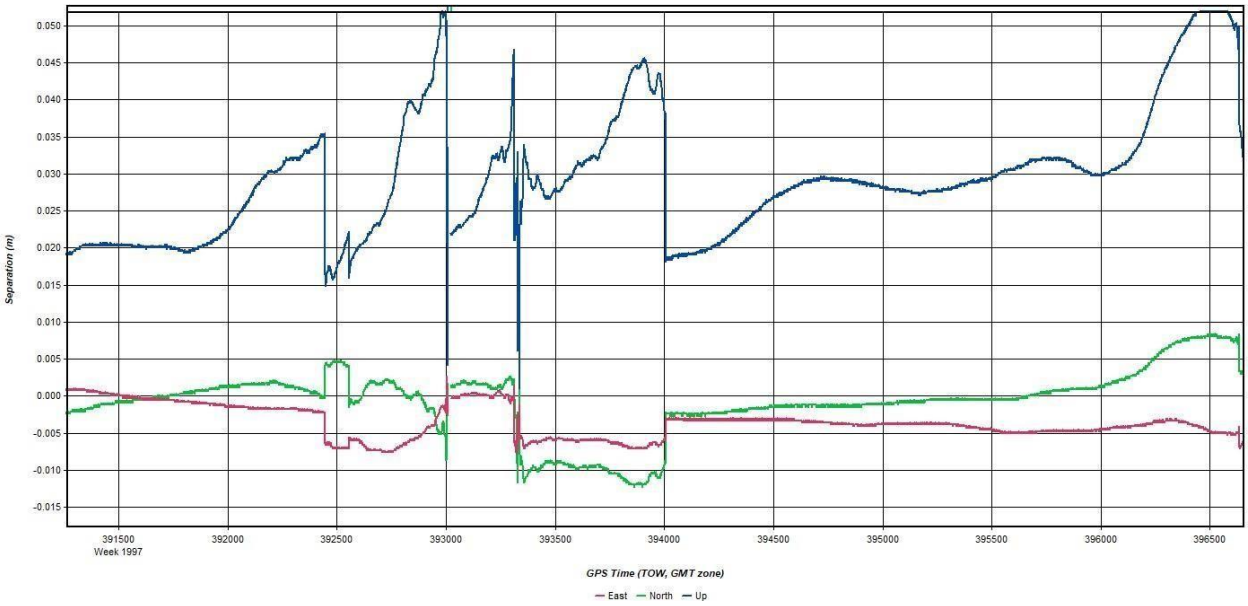


Mission 7. Number of satellites

Mission 7. GPS misclosure



Mission 7. GPS separation

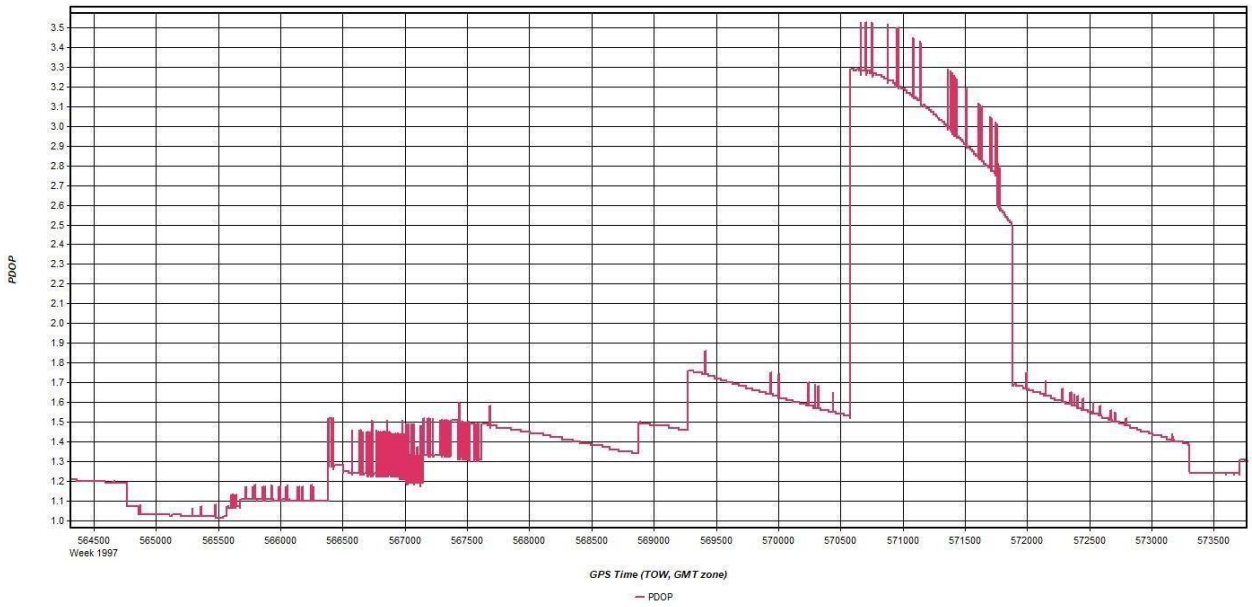


Mission 7. Processing summary

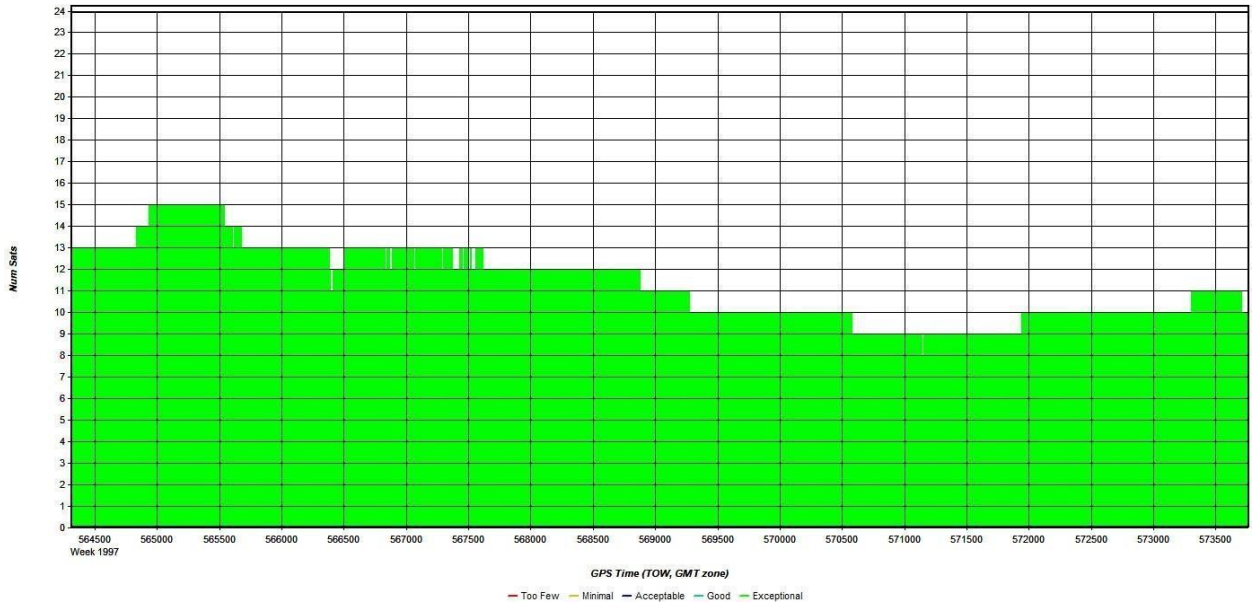
```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      17658
        No processed position:  25
        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:       0.36 (m)
        L1 Doppler:     0.024 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.004 (m)
        North:  0.007 (m)
        Height: 0.027 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (17623 occurances):
        East:   0.003 (m)
        North:  0.004 (m)
        Height: 0.025 (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:        43.992 (km)
        Minimum:        0.175 (km)
        Average:        15.350 (km)
        First Epoch:    0.571 (km)
        Last Epoch:     0.299 (km)
```

Mission 8. Flight line trajectory

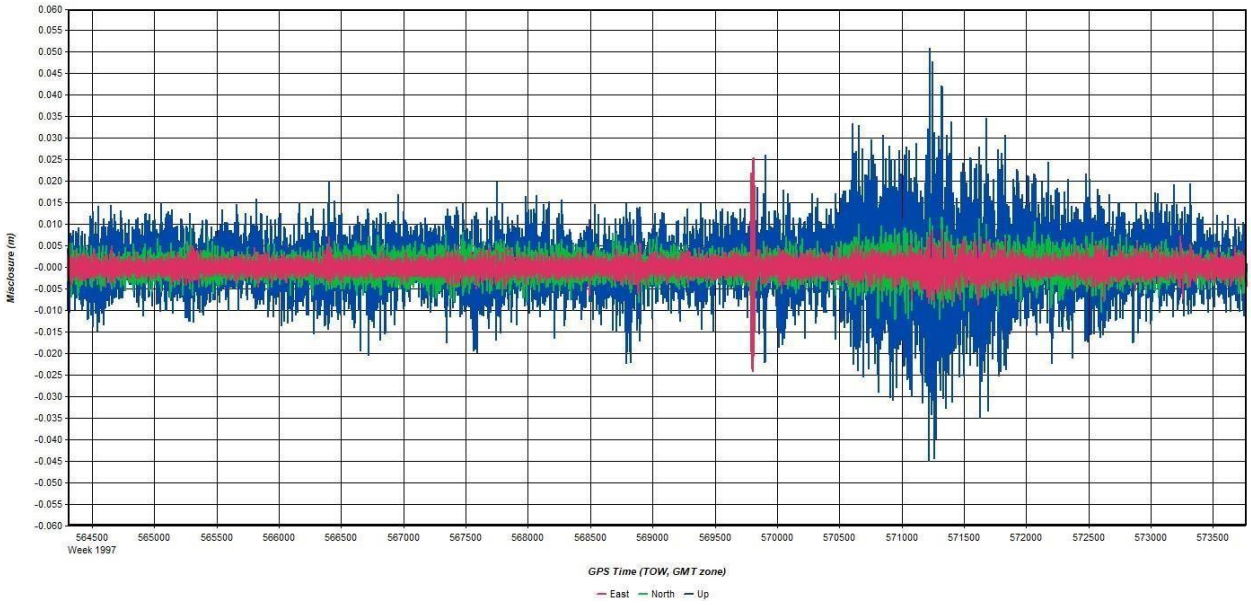
Mission 8. PDOP



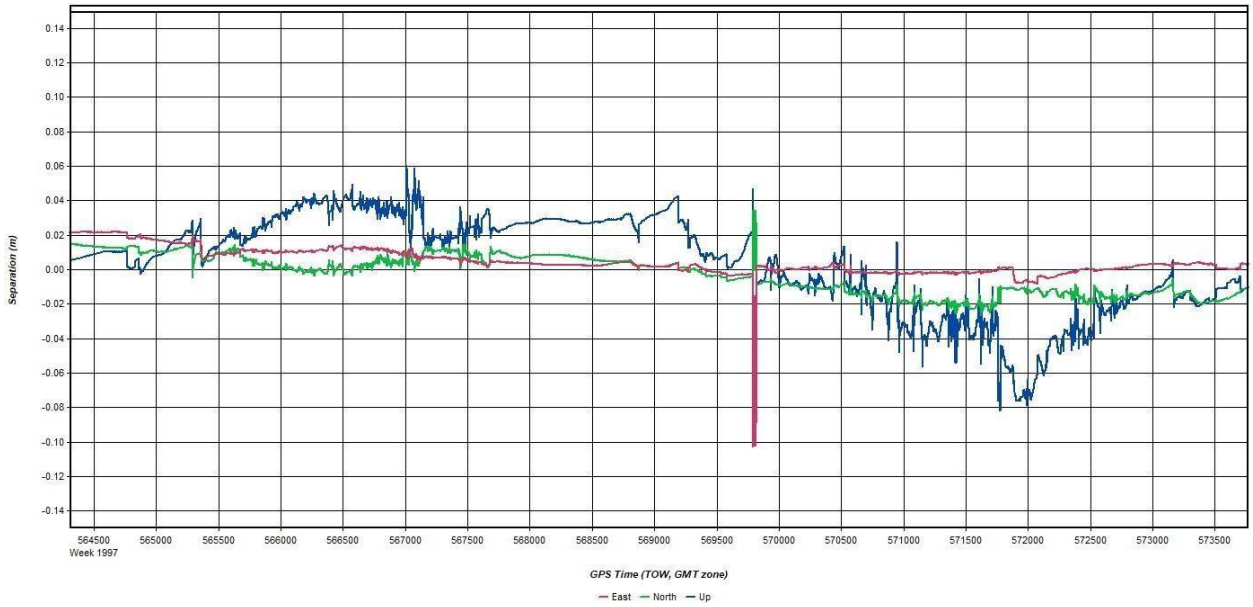
Mission 8. Number of satellites



Mission 8. GPS misclosure



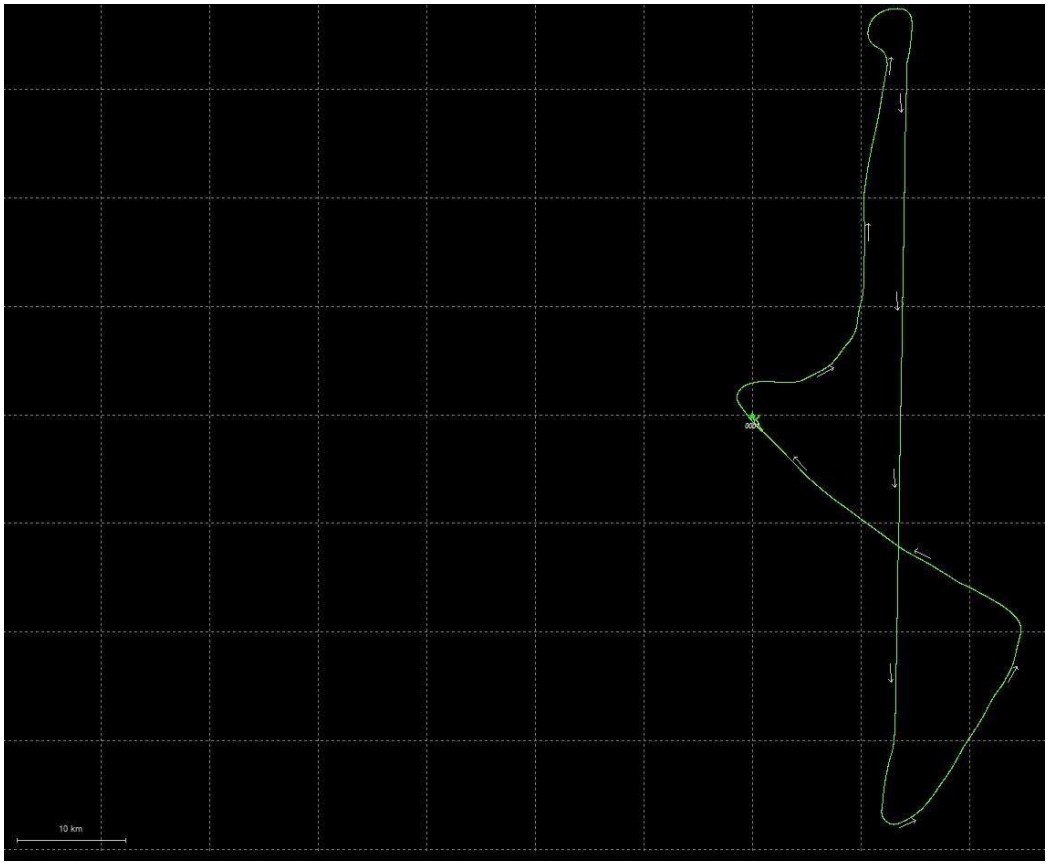
Mission 8. GPS separation



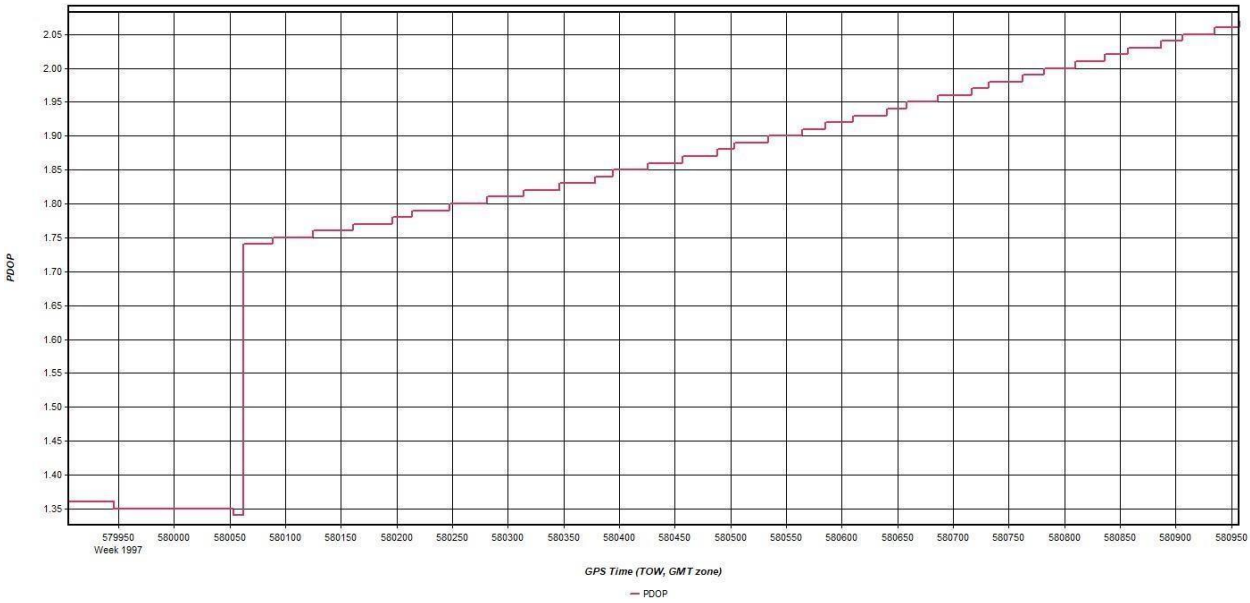
Mission 8. Processing summary

```
            Processing Summary Information

   Program: Inertial Explorer
   Version: 8.60.6717
   Solution Type:  Combined

   Number of Epochs:
           Total in GPB file:      25227
           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:       0.0194 (m)
           C/A Code:       0.84 (m)
           L1 Doppler:     0.038 (m/s)

   Fwd/Rev Separation RMS Values:
           East:   0.013 (m)
           North:  0.011 (m)
           Height: 0.027 (m)

   Fwd/Rev Sep. RMS for dual FWD/REV fixes (25221 occurances):
           East:   0.012 (m)
           North:  0.011 (m)
           Height: 0.026 (m)

   Quality Number Percentages:
           Q 1:    99.2 %
           Q 2:     0.6 %
           Q 3:     0.2 %
           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:        61.469 (km)
           Minimum:        40.649 (km)
           Average:        49.889 (km)
           First Epoch:    54.502 (km)
           Last Epoch:     54.992 (km)
```

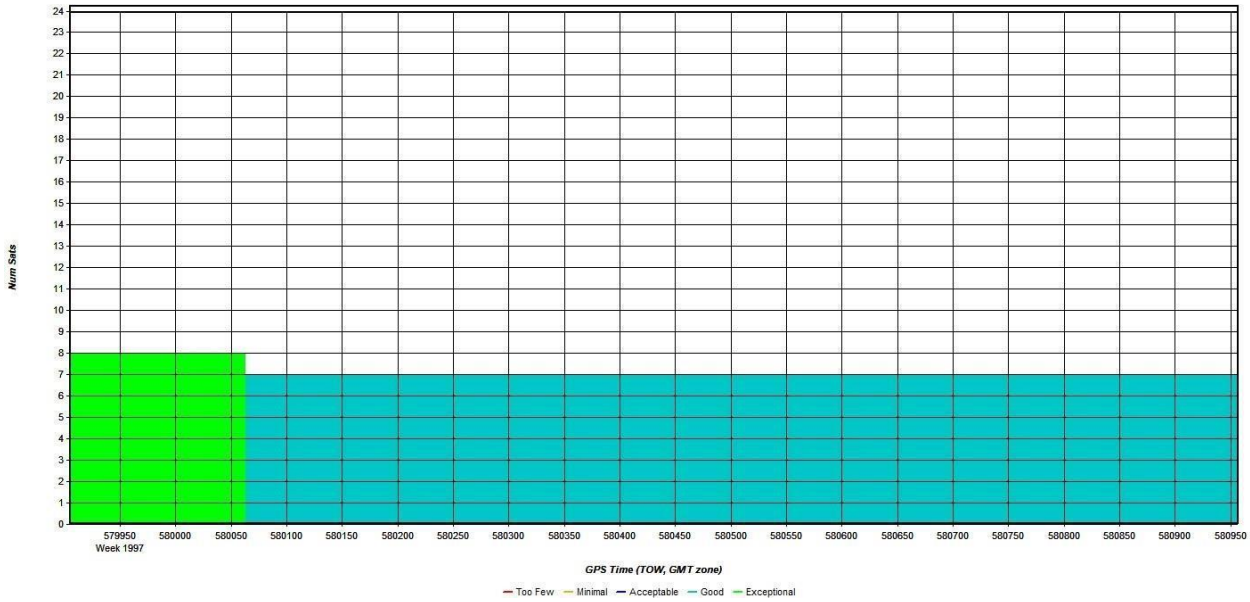
Mission 9. Flight line trajectory



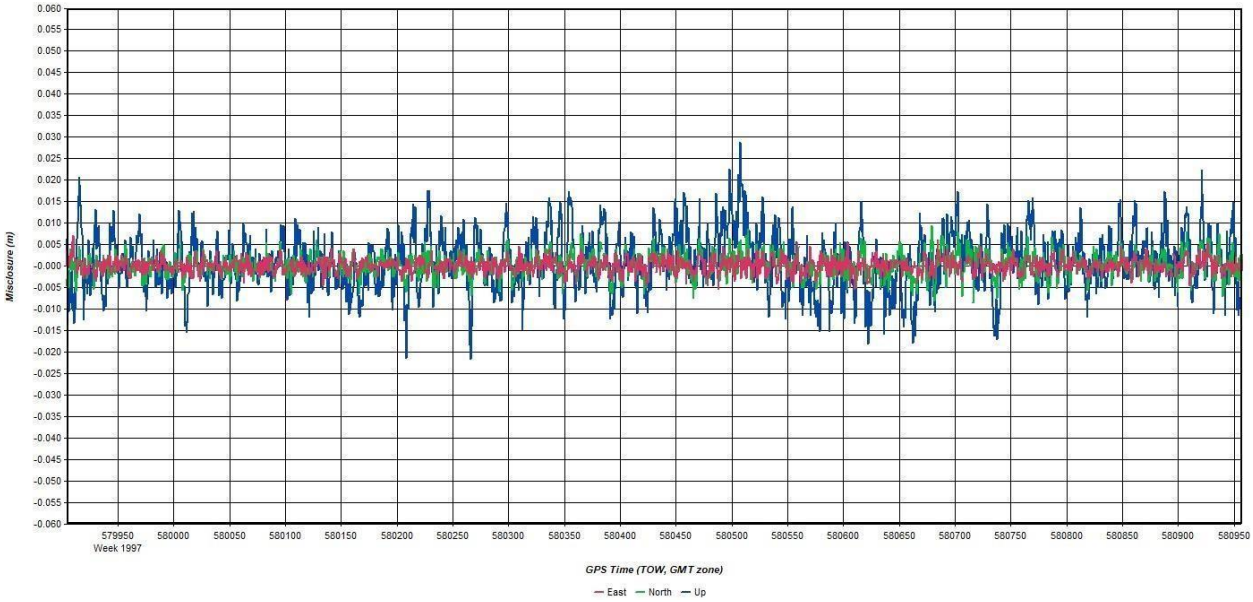
Mission 9. PDOP



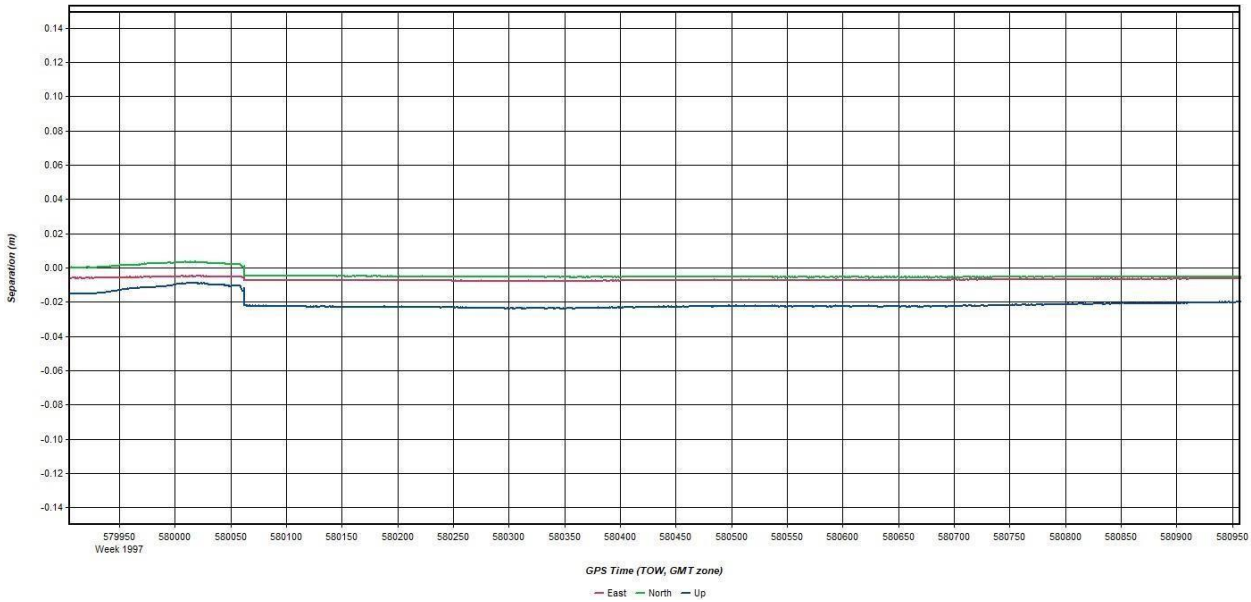
Mission 9. Number of satellites



Mission 9. GPS misclosure



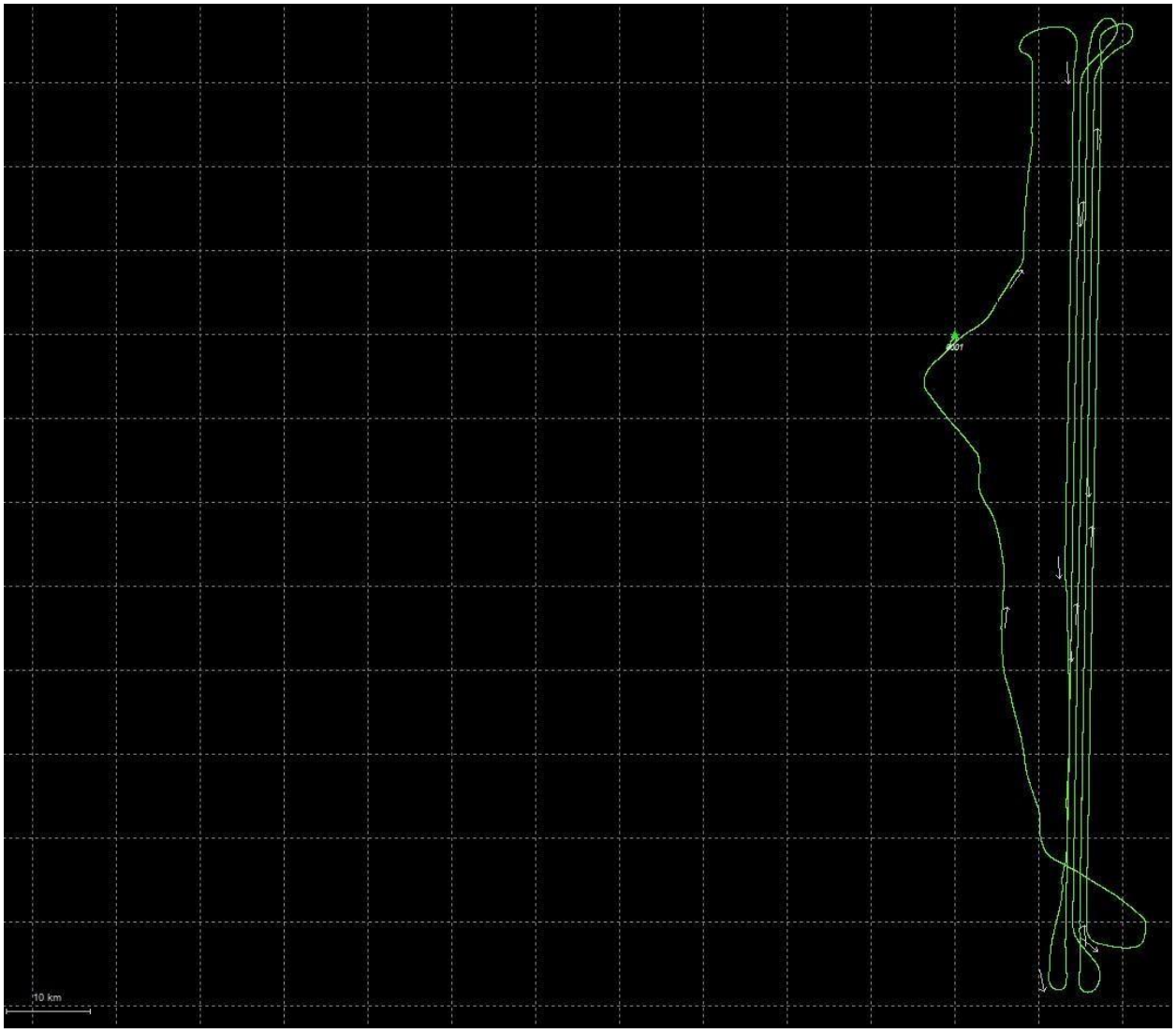
Mission 9. GPS separation


0.14
0.12
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
Separation (m)
579950
Week 1997
580000
580050
580100
580150
580200
580250
580300
580350
580400
580450
580500
580550
580600
580650
580700
580750
580800
580850
580900
580950
GPS Time (TOW, GMT zone)
East
North
Up

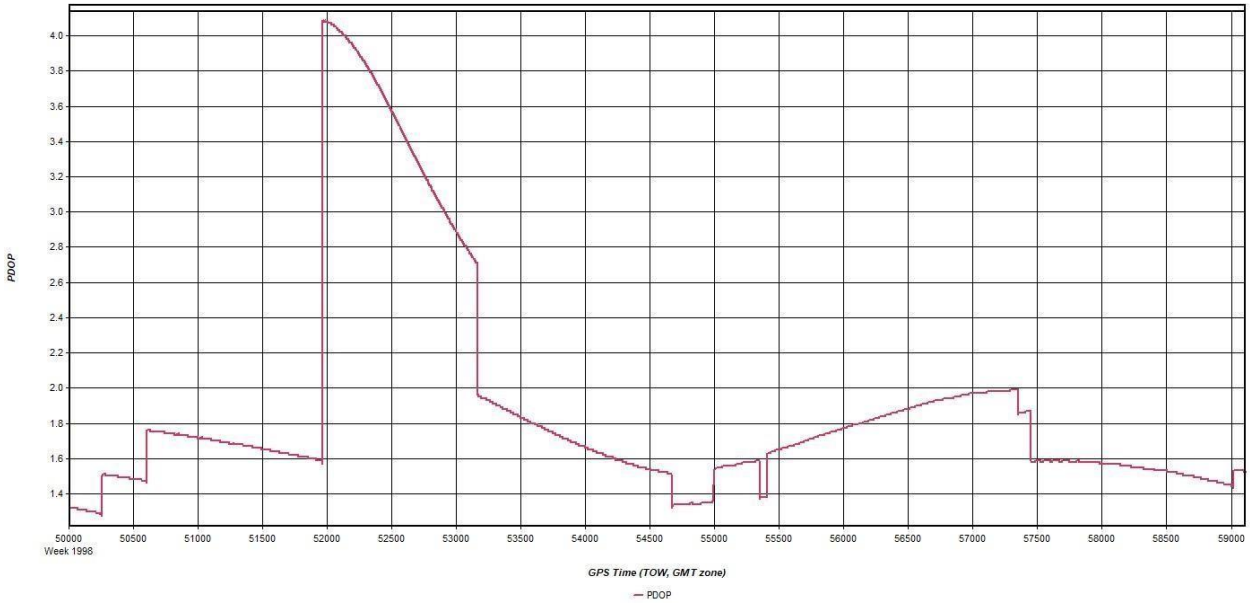
Mission 9. Processing summary

```
            Processing Summary Information

    Program: Inertial Explorer
    Version: 8.60.6717
    Solution Type:  Combined

    Number of Epochs:
            Total in GPB file:      24965
            No processed position:  14
            Missing Fwd or Rev:     3
            With bad C/A code:      0
            With bad L1 Phase:      0

    Measurement RMS Values:
            L1 Phase:       0.0127 (m)
            C/A Code:       0.34 (m)
            L1 Doppler:     0.022 (m/s)

    Fwd/Rev Separation RMS Values:
            East:   0.007 (m)
            North:  0.005 (m)
            Height: 0.018 (m)

    Fwd/Rev Sep. RMS for dual FWD/REV fixes (24944 occurances):
            East:   0.006 (m)
            North:  0.004 (m)
            Height: 0.014 (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:        79.550 (km)
            Minimum:        0.243 (km)
            Average:        33.382 (km)
            First Epoch:    0.298 (km)
            Last Epoch:     0.265 (km)
```

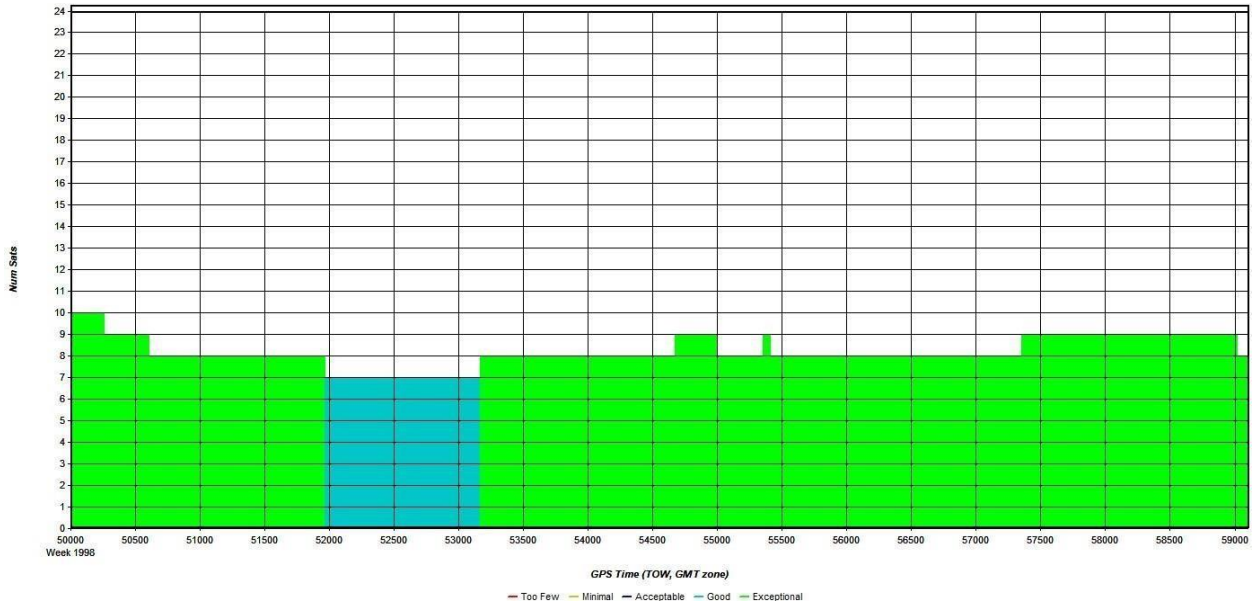
Mission 10. Flight line trajectory



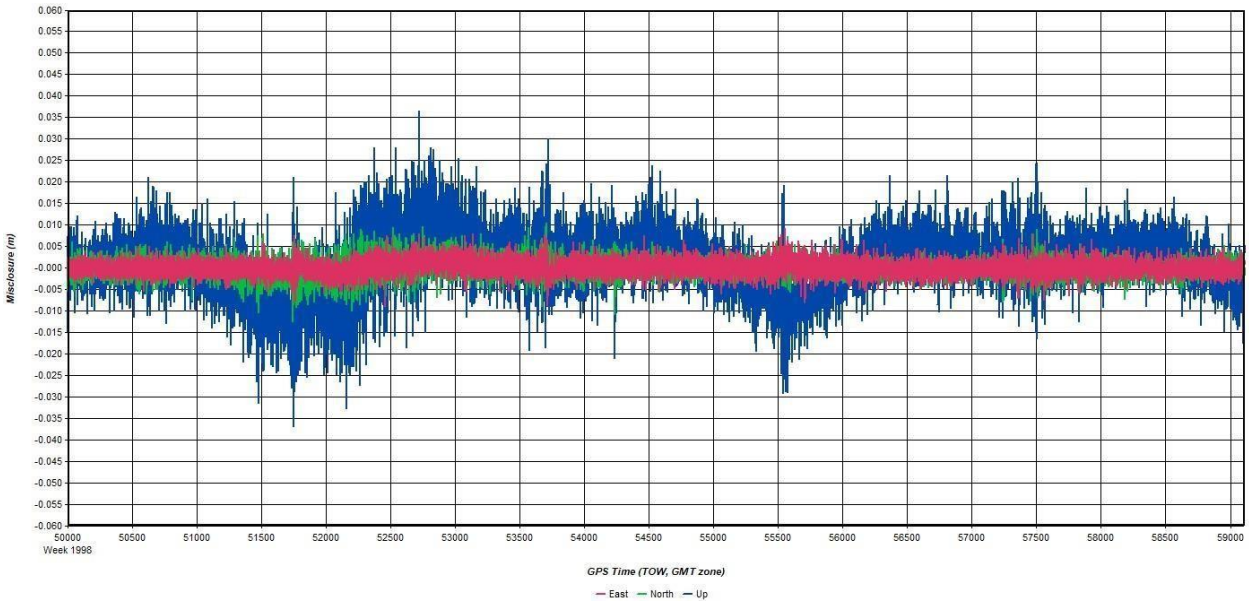
Mission 10. PDOP



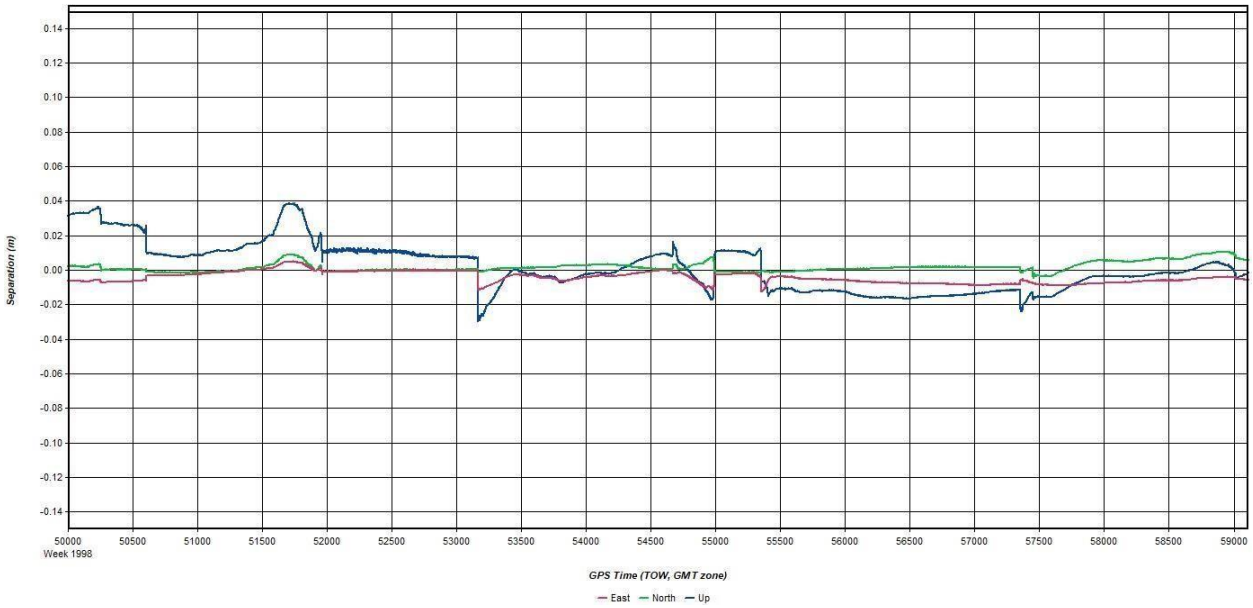
Mission 10. Number of satellites



Mission 10. GPS misclosure



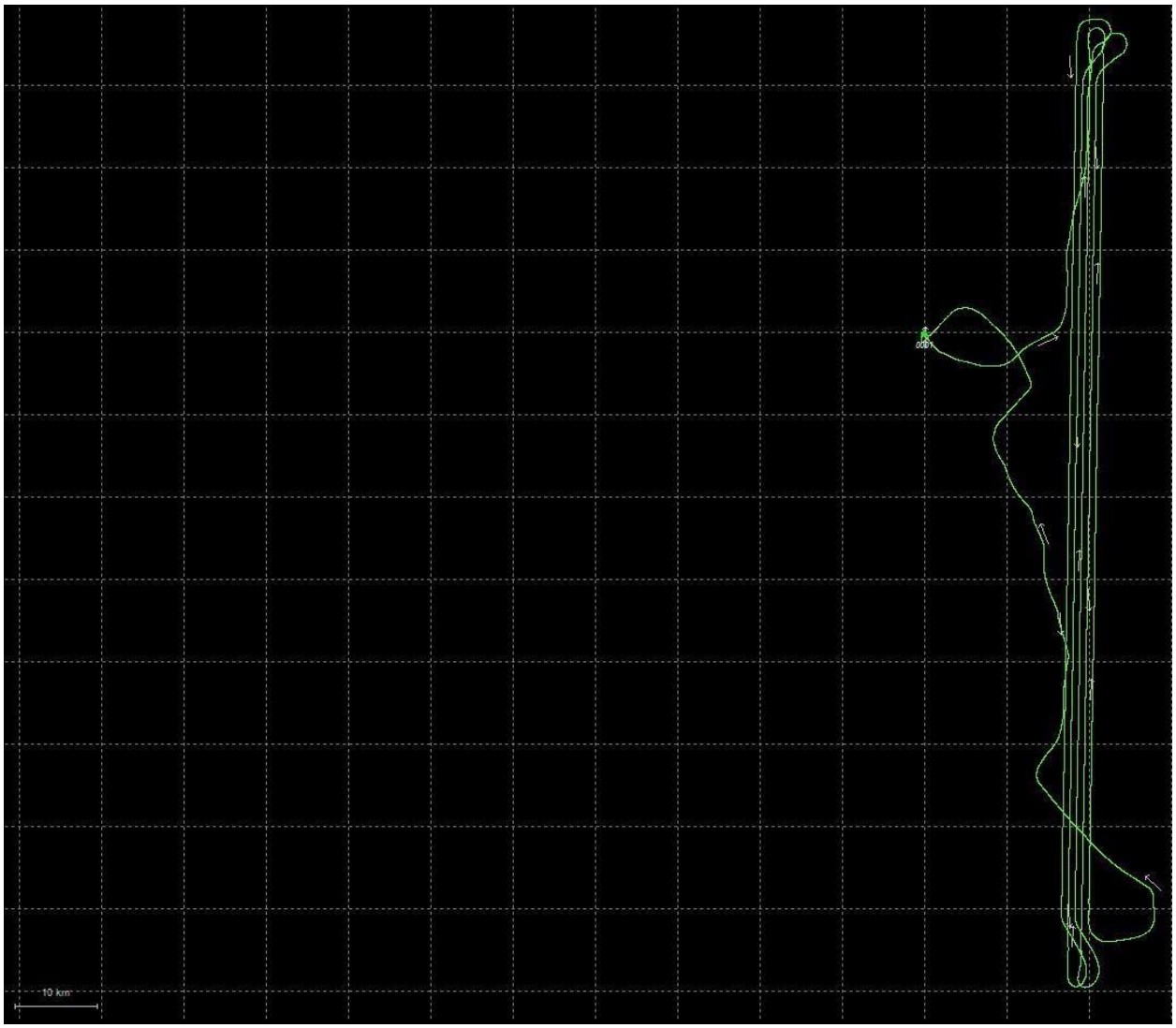
Mission 10. GPS separation



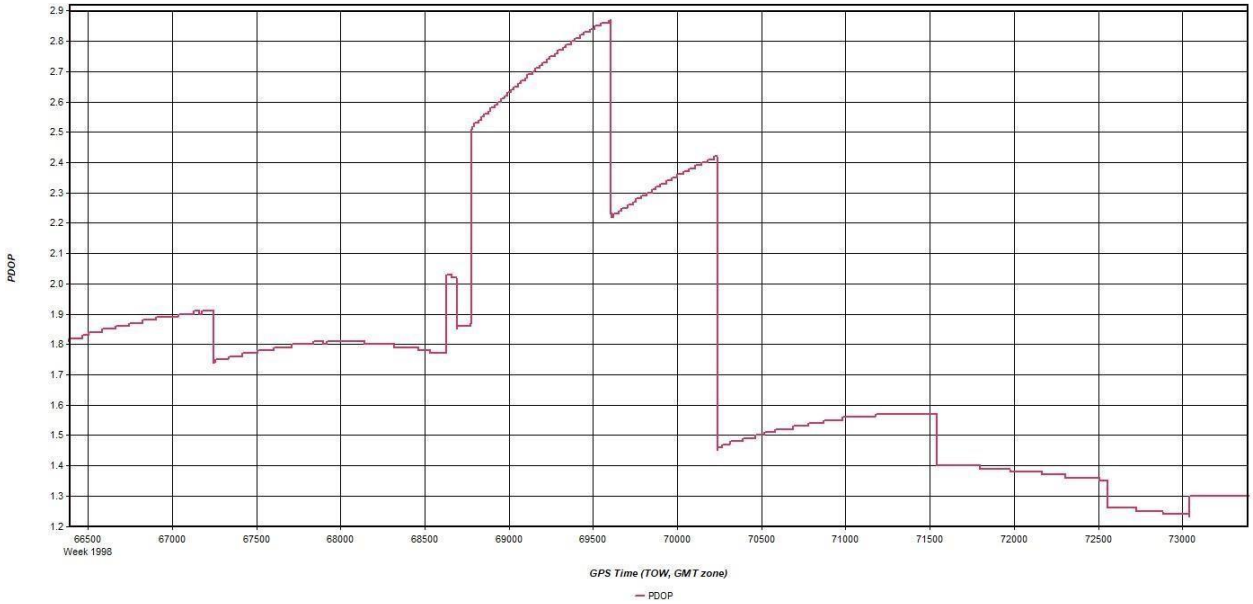
Mission 10. Processing summary

```
            Processing Summary Information

   Program: Inertial Explorer
   Version: 8.60.6717
   Solution Type:  Combined

   Number of Epochs:
           Total in GPB file:      24909
           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:       0.0128 (m)
           C/A Code:       0.31 (m)
           L1 Doppler:     0.023 (m/s)

   Fwd/Rev Separation RMS Values:
           East:   0.005 (m)
           North:  0.014 (m)
           Height: 0.016 (m)

   Fwd/Rev Sep. RMS for dual FWD/REV fixes (24905 occurances):
           East:   0.005 (m)
           North:  0.014 (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:        81.141 (km)
           Minimum:        0.151 (km)
           Average:        35.929 (km)
           First Epoch:    0.151 (km)
           Last Epoch:     0.277 (km)
```

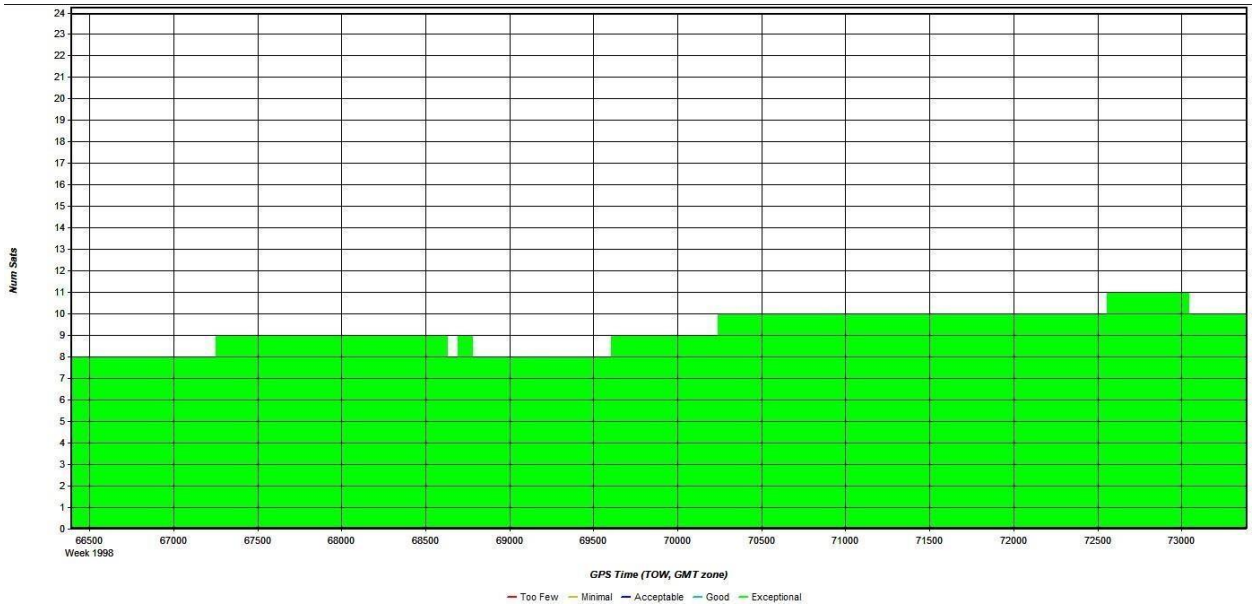
Mission 11. Flight line trajectory



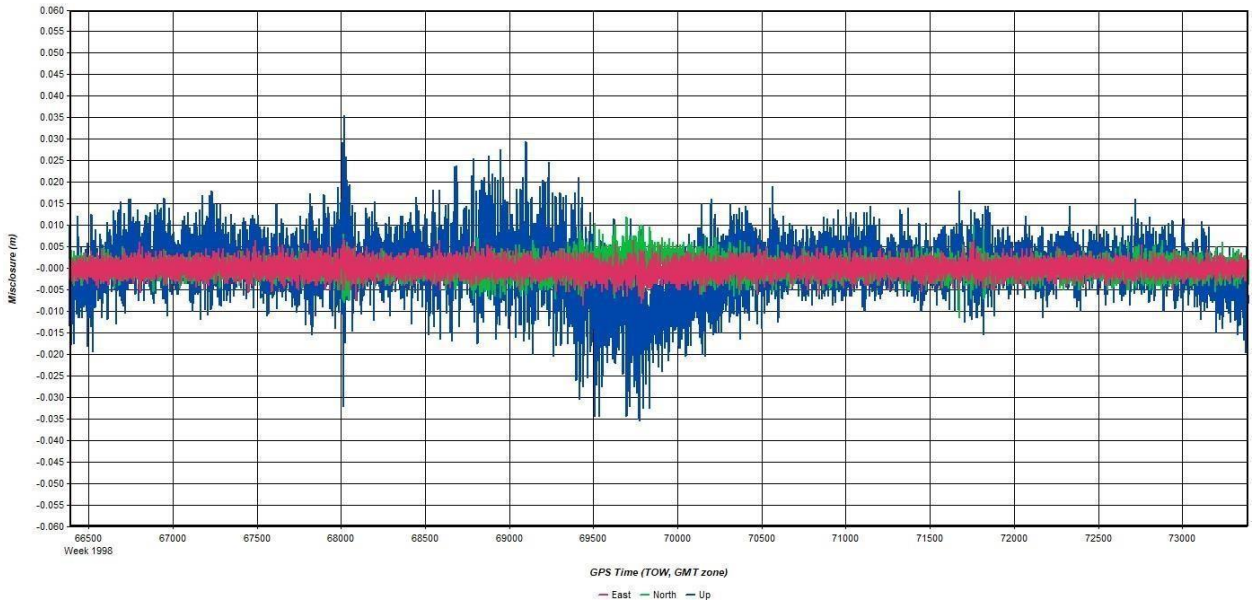
Mission 11. PDOP



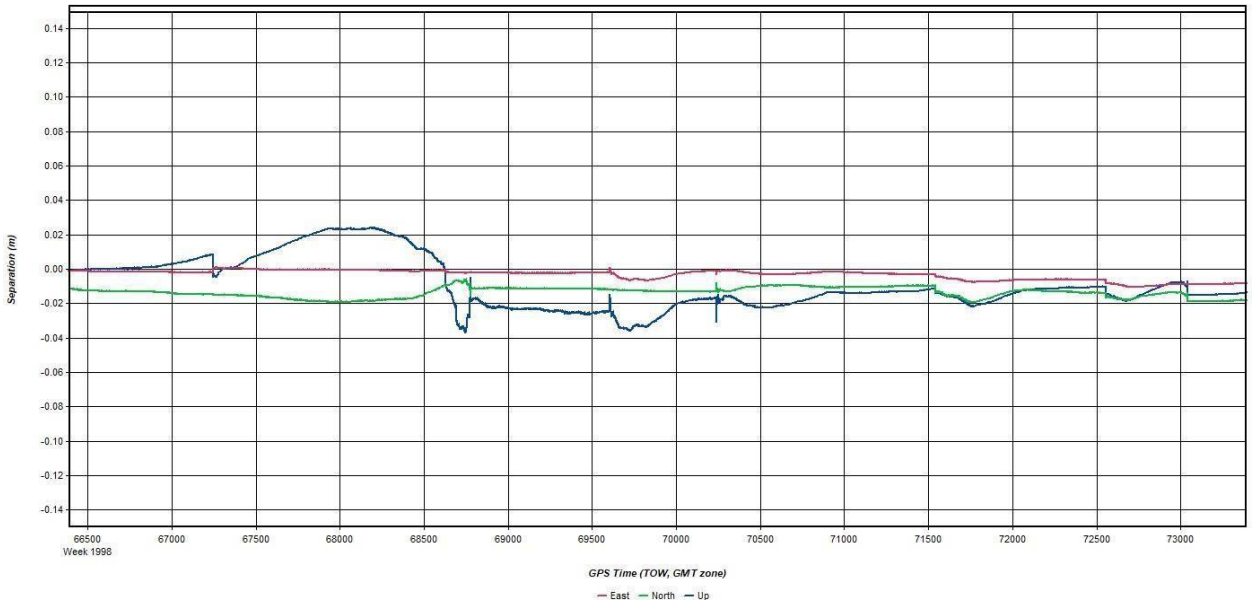
Mission 11. Number of satellites



Mission 11. GPS misclosure



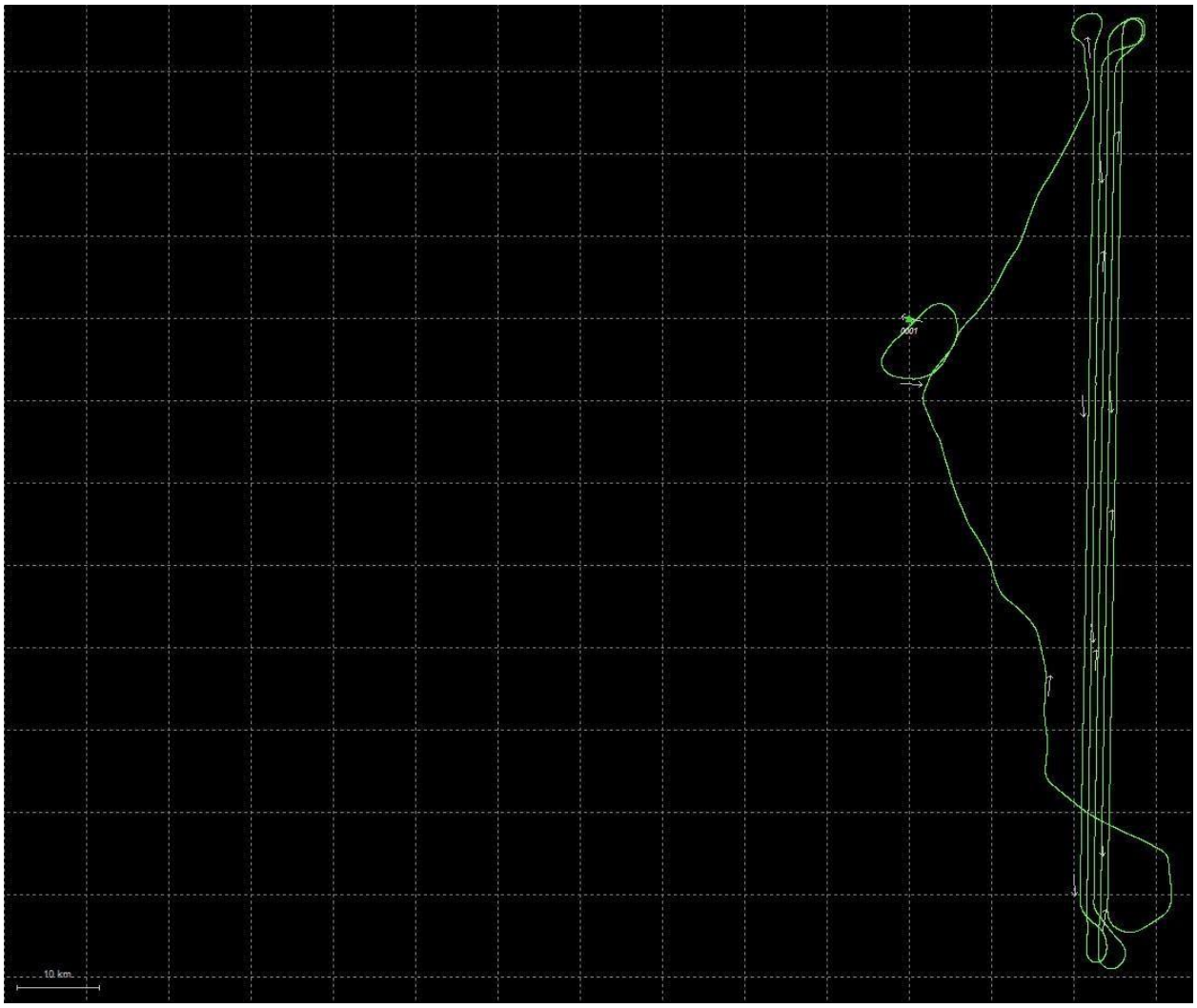
Mission 11. GPS separation



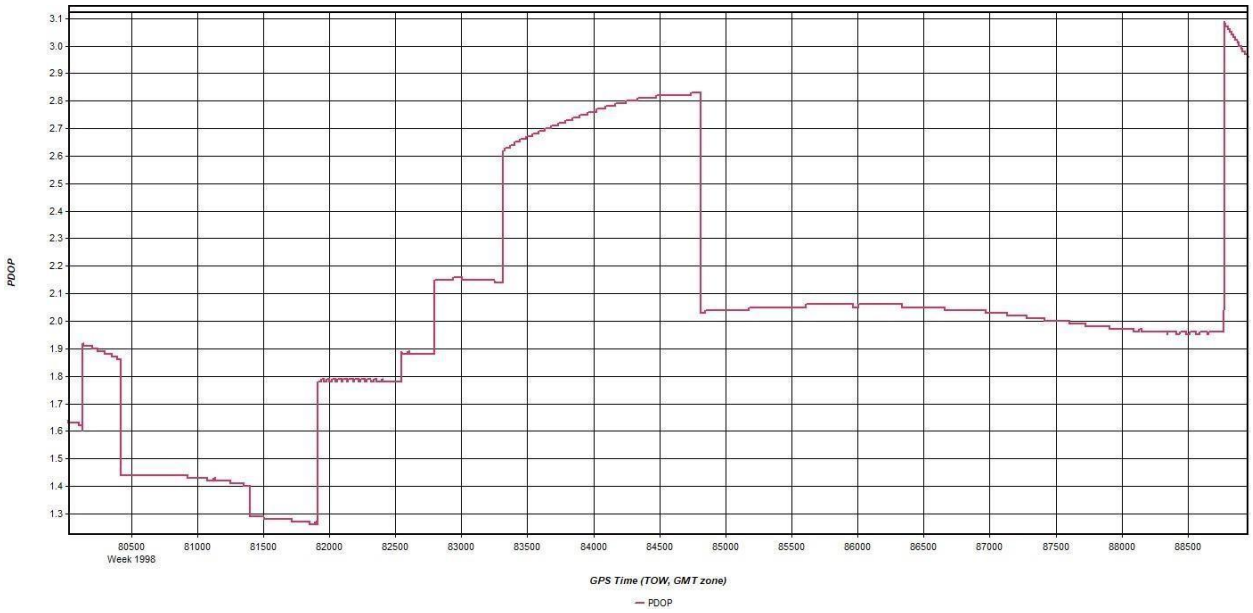
Mission 11. Processing summary

```
            Processing Summary Information

   Program: Inertial Explorer
   Version: 8.60.6717
   Solution Type:  Combined

   Number of Epochs:
           Total in GPB file:      24850
           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:       0.0132 (m)
           C/A Code:       0.33 (m)
           L1 Doppler:     0.022 (m/s)

   Fwd/Rev Separation RMS Values:
           East:   0.006 (m)
           North:  0.013 (m)
           Height: 0.027 (m)

   Fwd/Rev Sep. RMS for dual FWD/REV fixes (24844 occurances):
           East:   0.006 (m)
           North:  0.013 (m)
           Height: 0.027 (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:        82.058 (km)
           Minimum:        0.243 (km)
           Average:        37.143 (km)
           First Epoch:    0.277 (km)
           Last Epoch:     0.252 (km)
```

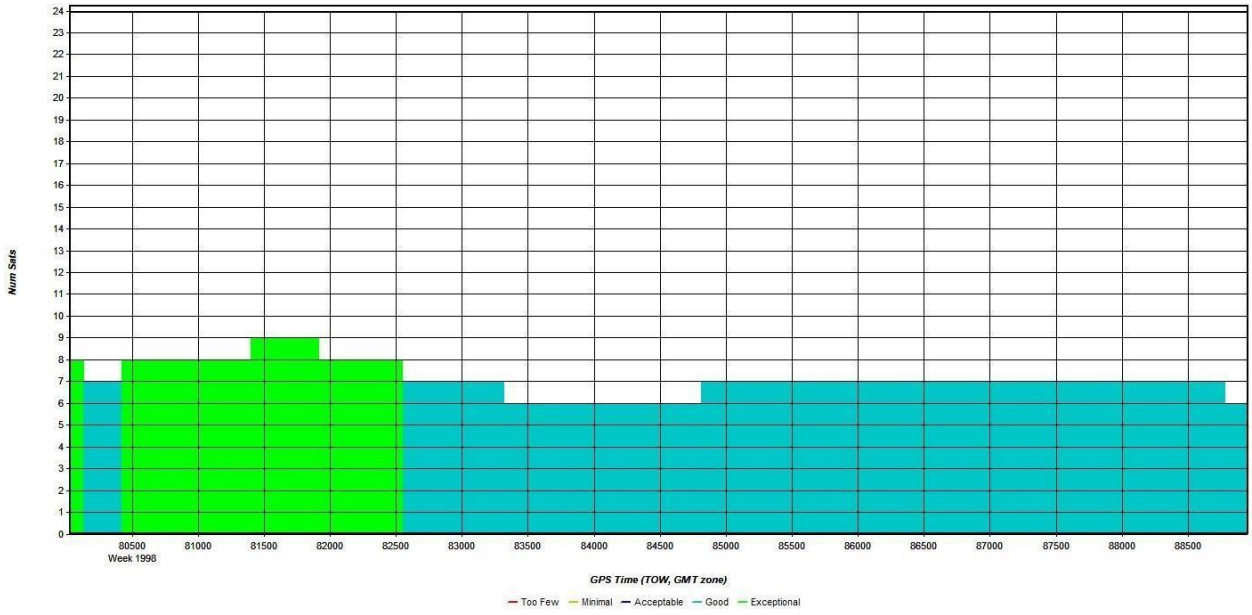
Mission 12. Flight line trajectory



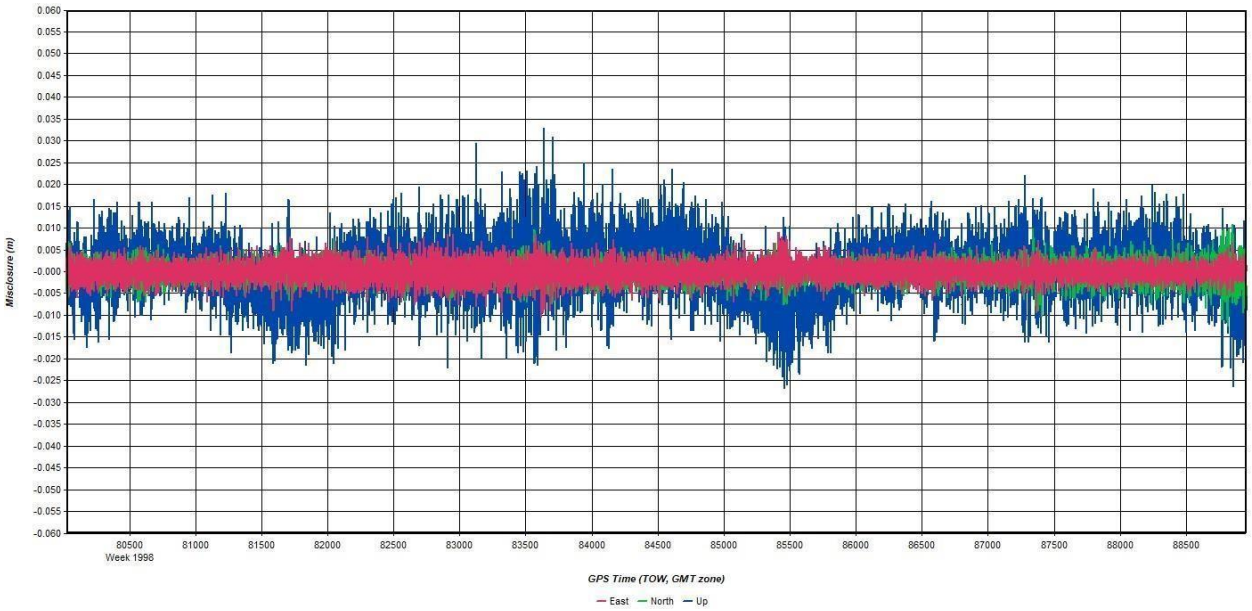
Mission 12. PDOP



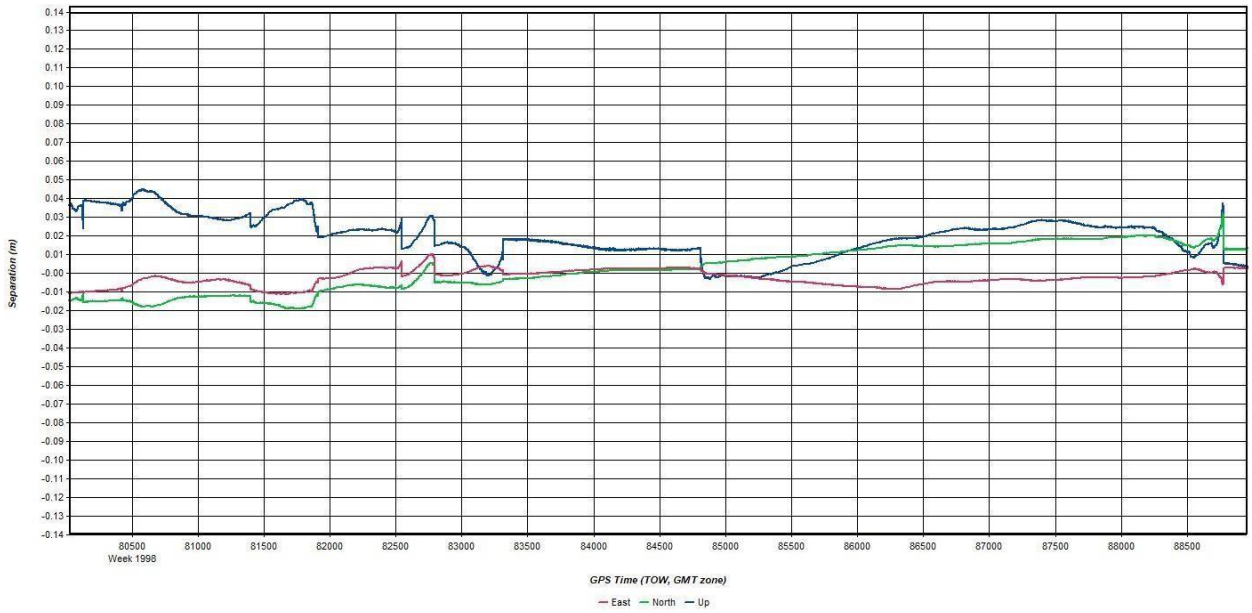
Mission 12. Number of satellites



Mission 12. GPS misclosure



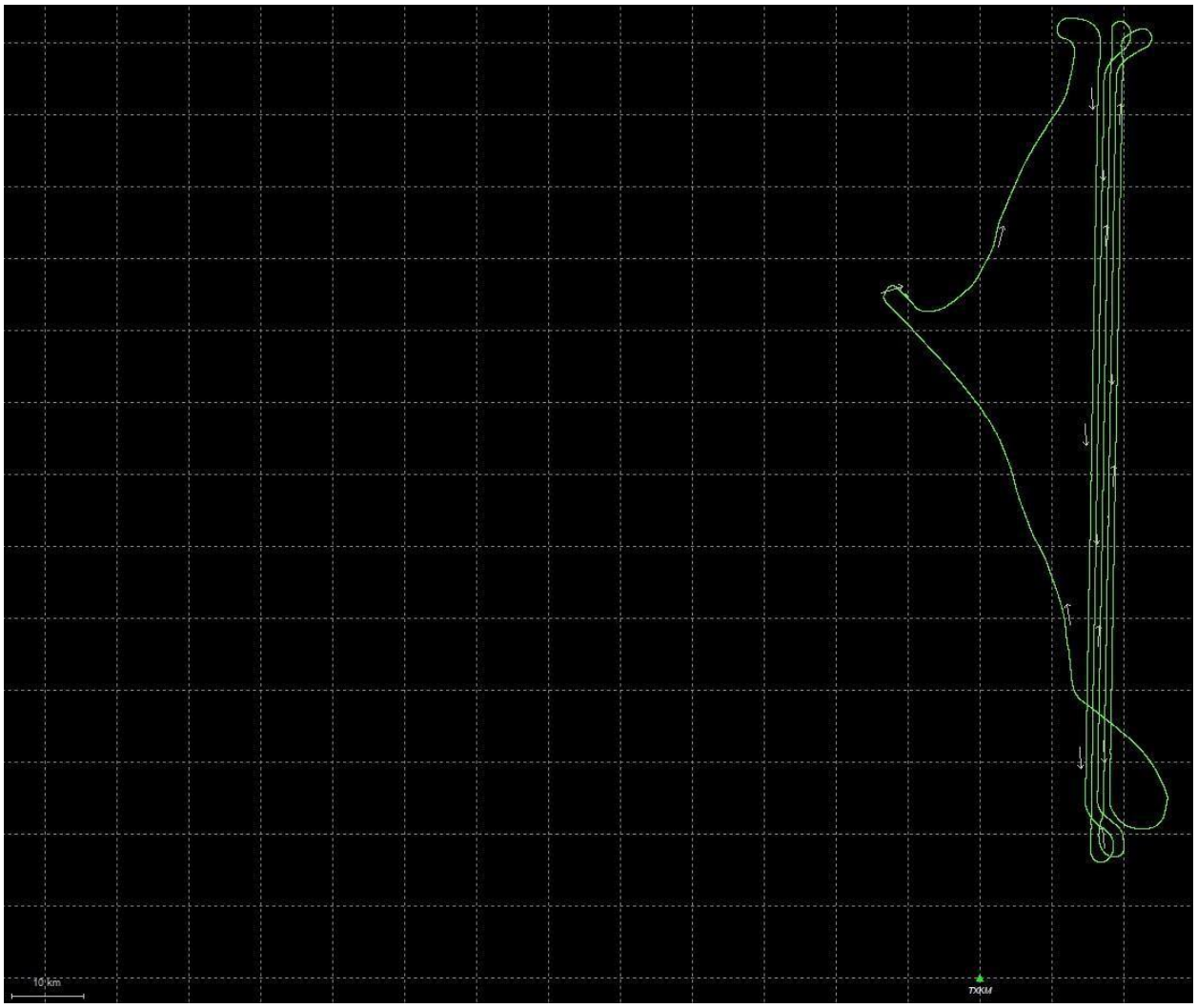
Mission 12. GPS separation



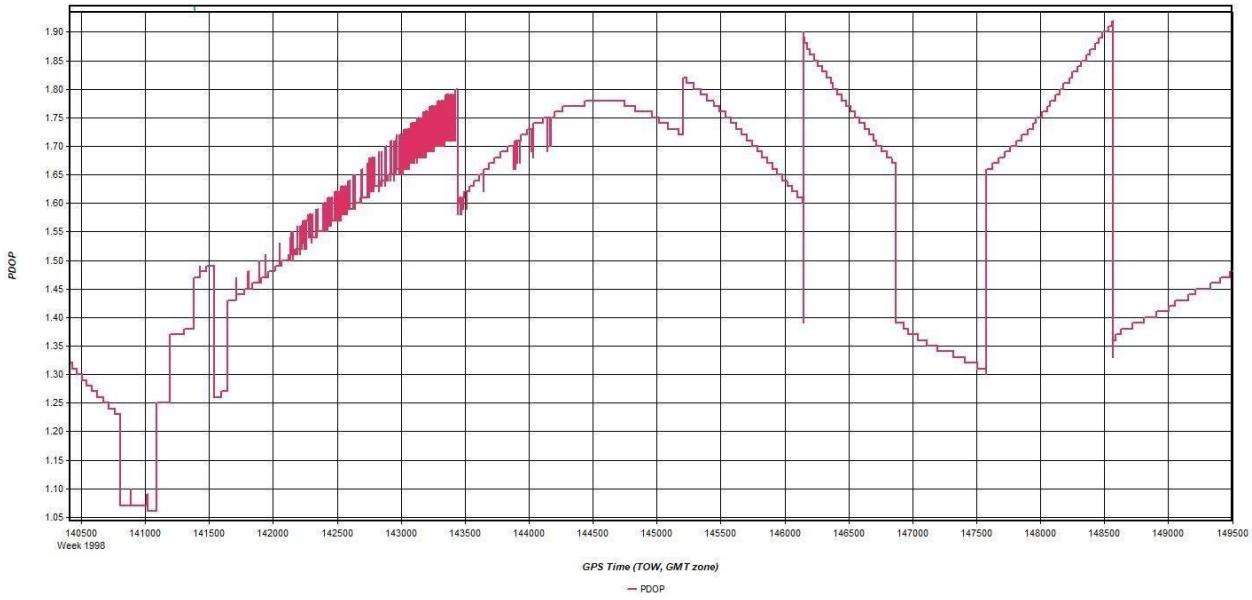
Mission 12. Processing summary

```
            Processing Summary Information

    Program: Inertial Explorer
    Version: 8.60.6717
    Solution Type:  Combined

    Number of Epochs:
            Total in GPB file:      24850
            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:       0.0132 (m)
            C/A Code:       0.33 (m)
            L1 Doppler:     0.022 (m/s)

    Fwd/Rev Separation RMS Values:
            East:   0.006 (m)
            North:  0.013 (m)
            Height: 0.027 (m)

    Fwd/Rev Sep. RMS for dual FWD/REV fixes (24844 occurances):
            East:   0.006 (m)
            North:  0.013 (m)
            Height: 0.027 (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:        82.058 (km)
            Minimum:        0.243 (km)
            Average:        37.143 (km)
            First Epoch:    0.277 (km)
            Last Epoch:     0.252 (km)
```

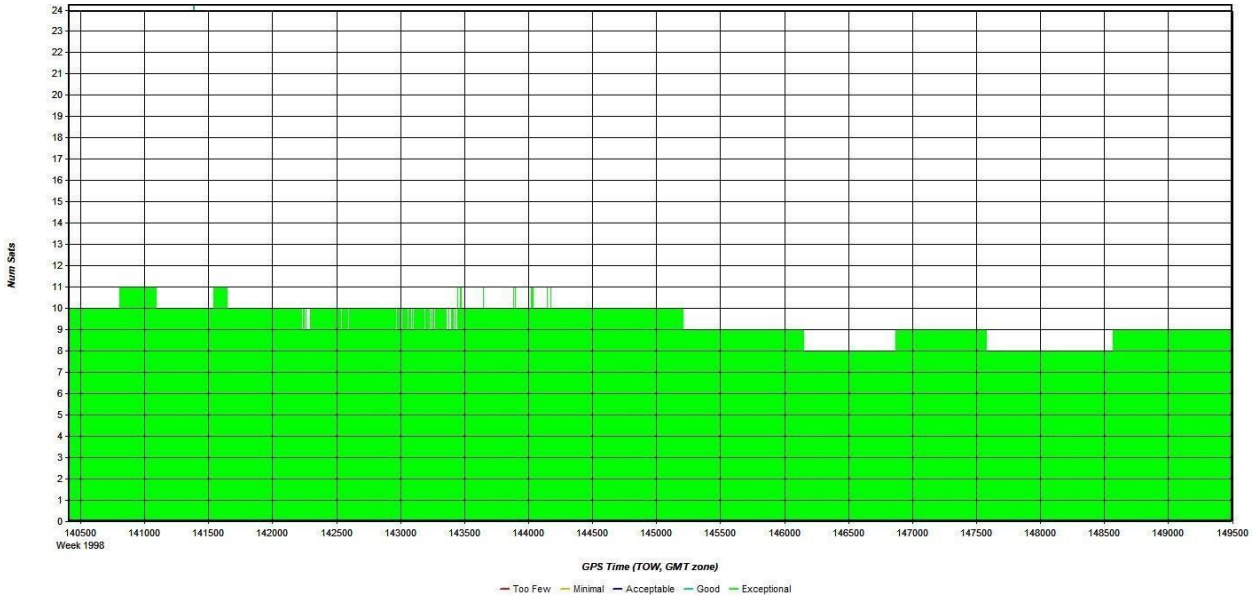
Mission 13a. Flight line trajectory



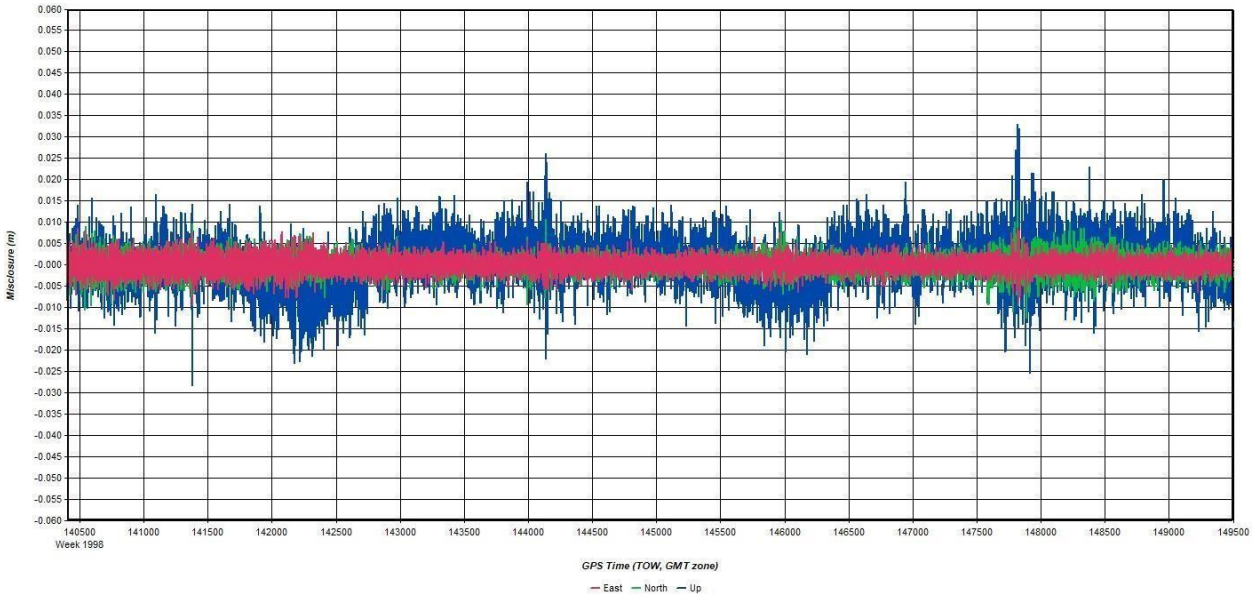
Mission 13a. PDOP



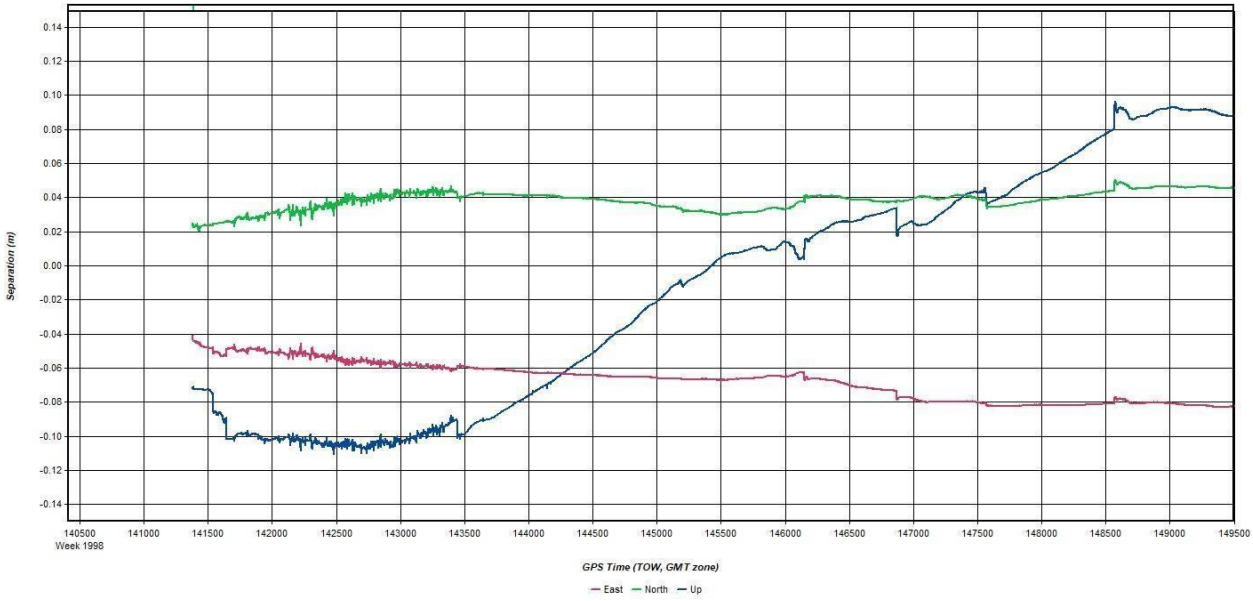
Mission 13a. Number of satellites



Mission 13a. GPS misclosure



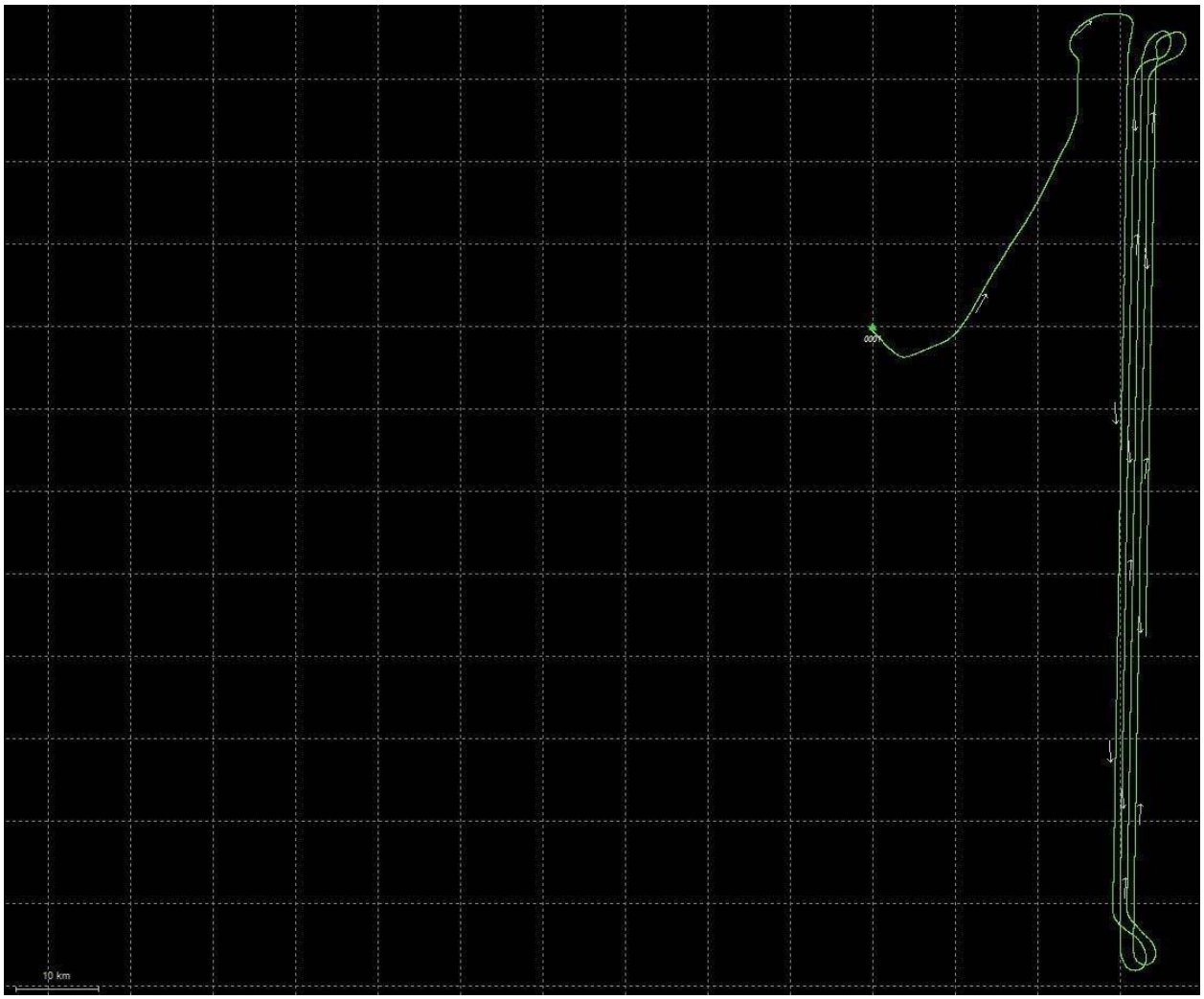
Mission 13a. GPS separation



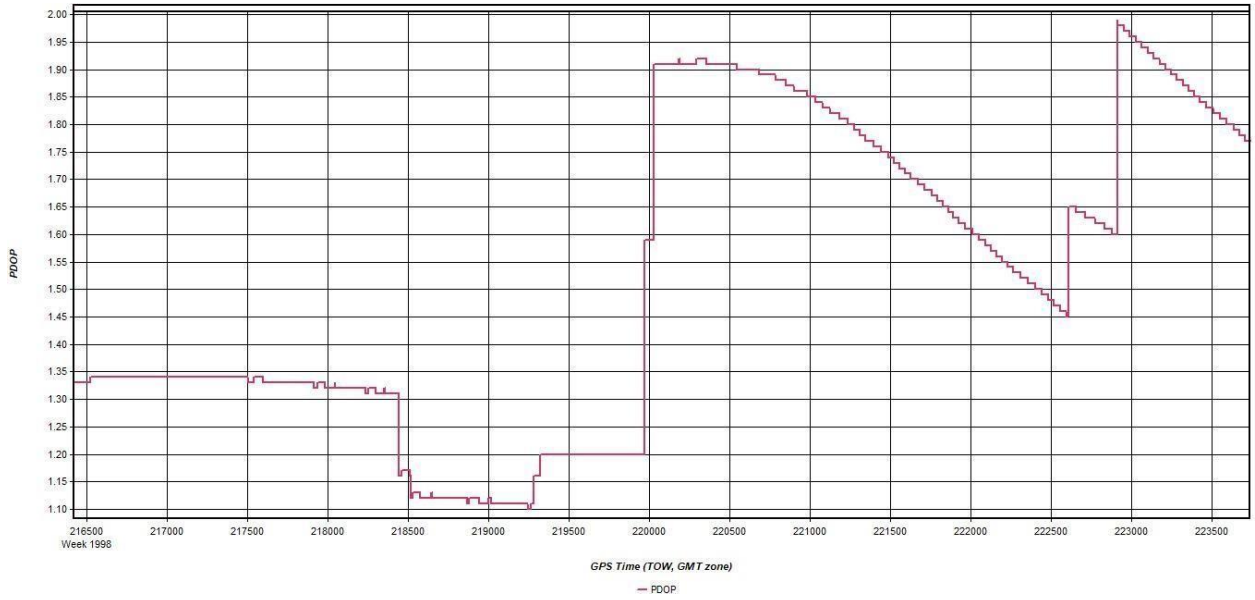
Mission 13a. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      24859
        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:       0.0184 (m)
        C/A Code:       0.61 (m)
        L1 Doppler:     0.036 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.077 (m)
        North:  0.071 (m)
        Height: 0.206 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (18189 occurances):
        East:   0.071 (m)
        North:  0.039 (m)
        Height: 0.072 (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:        133.528 (km)
        Minimum:        22.810 (km)
        Average:        78.745 (km)
        First Epoch:    94.841 (km)
        Last Epoch:     94.822 (km)
```

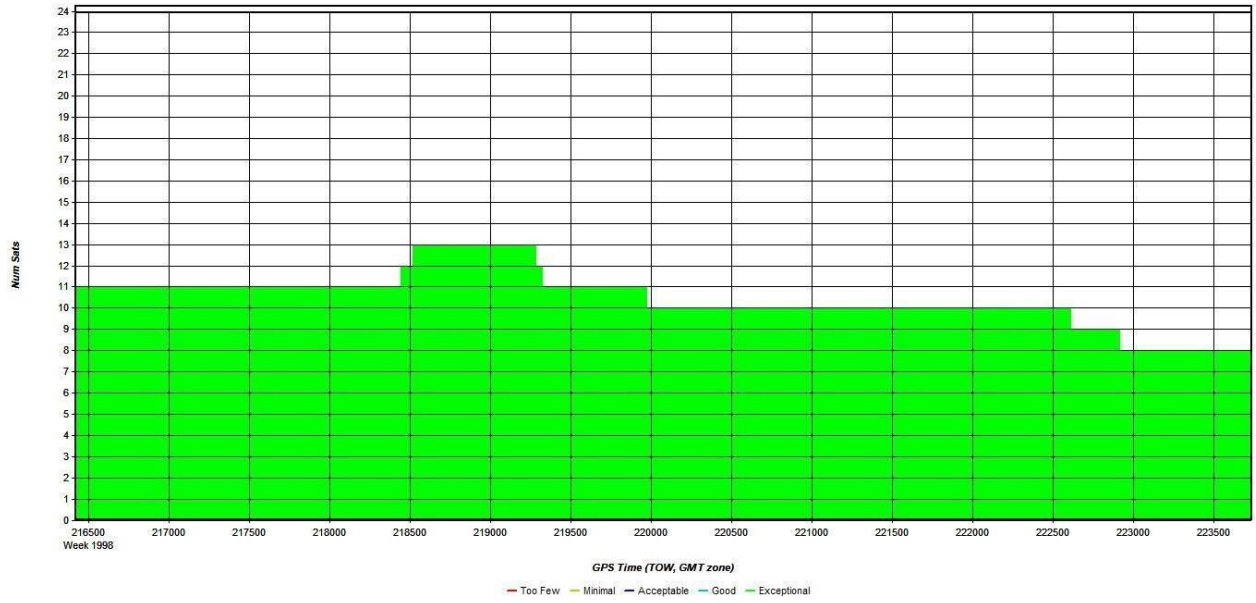
Mission 13b. Flight line trajectory



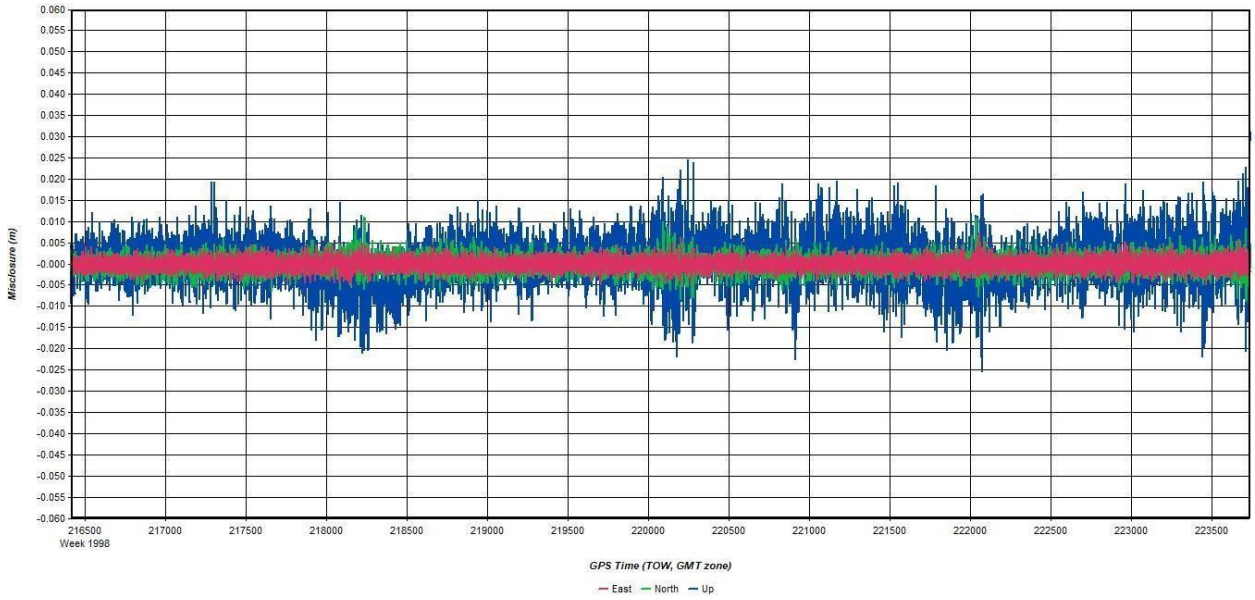
Mission 13b. PDOP



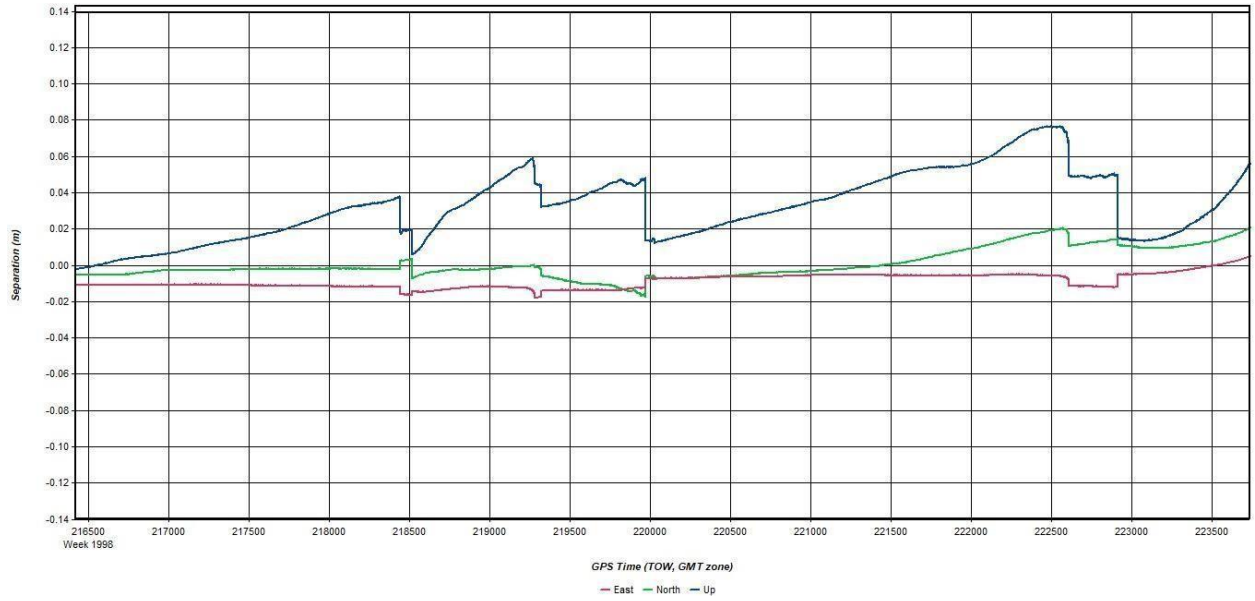
Mission 13b. Number of satellites



Mission 13b. GPS misclosure



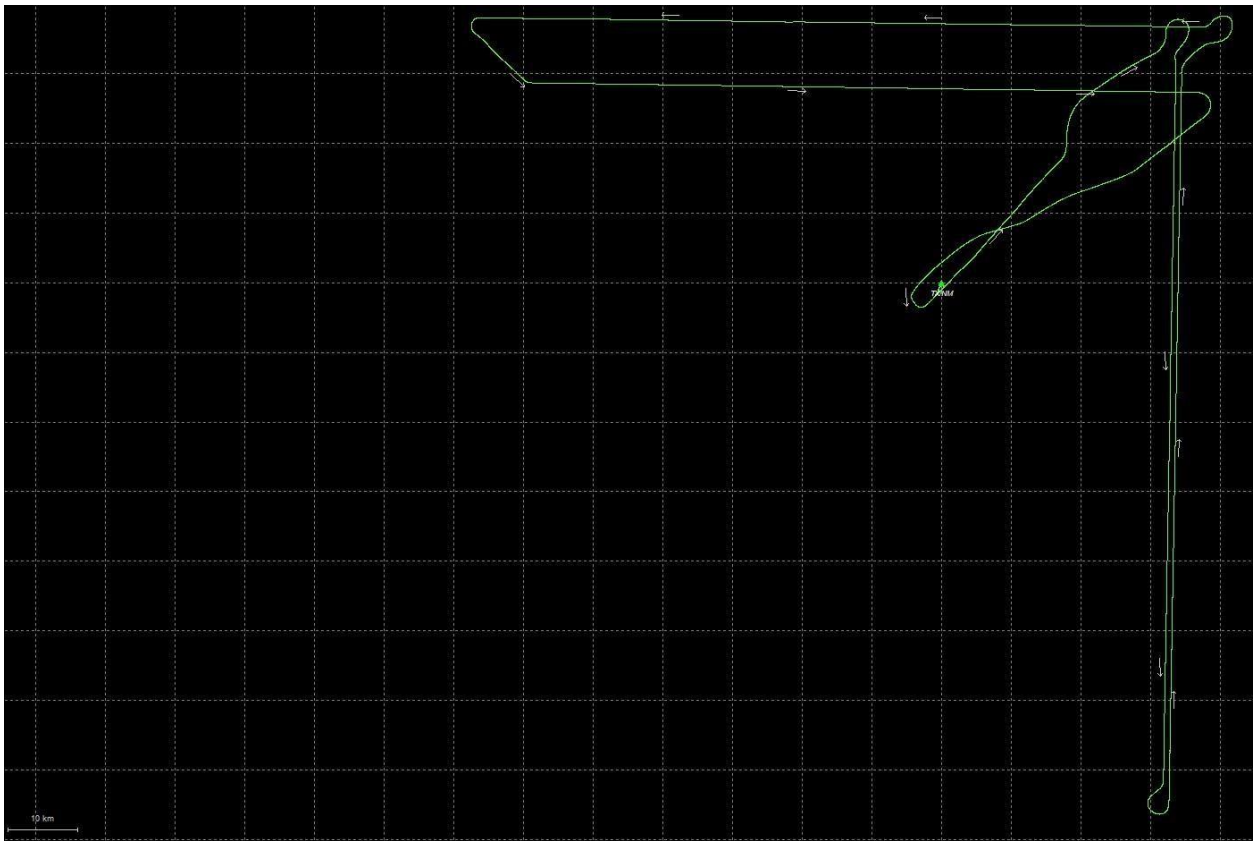
Mission 13b. GPS separation



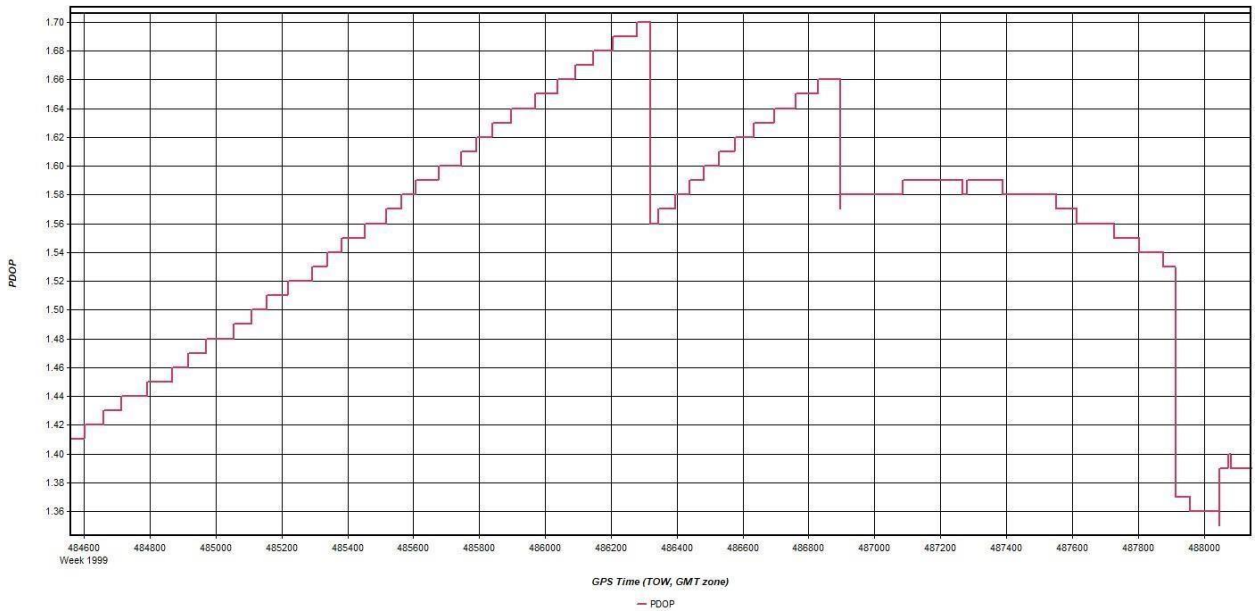
Mission 13b. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      20679
        No processed position:  1
        Missing Fwd or Rev:     5
        With bad C/A code:      0
        With bad L1 Phase:      0

Measurement RMS Values:
        L1 Phase:       0.0168 (m)
        C/A Code:       0.44 (m)
        L1 Doppler:     0.024 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.050 (m)
        North:  0.021 (m)
        Height: 0.062 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (20621 occurances):
        East:   0.020 (m)
        North:  0.020 (m)
        Height: 0.055 (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 %

Baseline Distances:
        Maximum:        83.873 (km)
        Minimum:        0.096 (km)
        Average:        41.876 (km)
        First Epoch:    0.096 (km)
        Last Epoch:     49.770 (km)
```

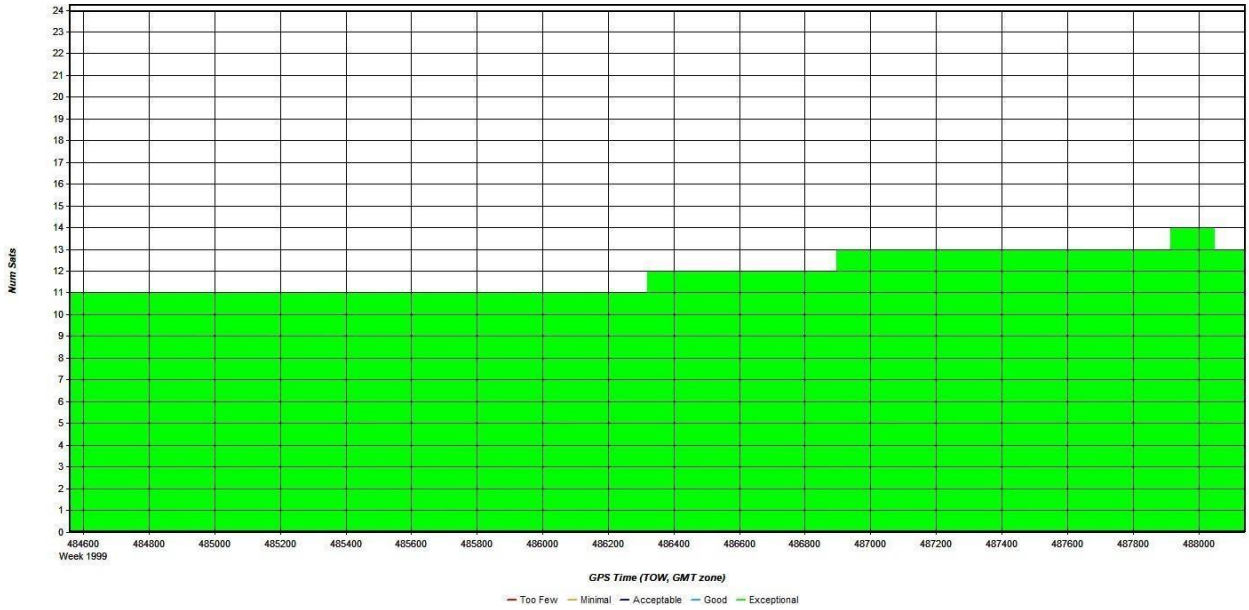
Mission 14. Flight line trajectory



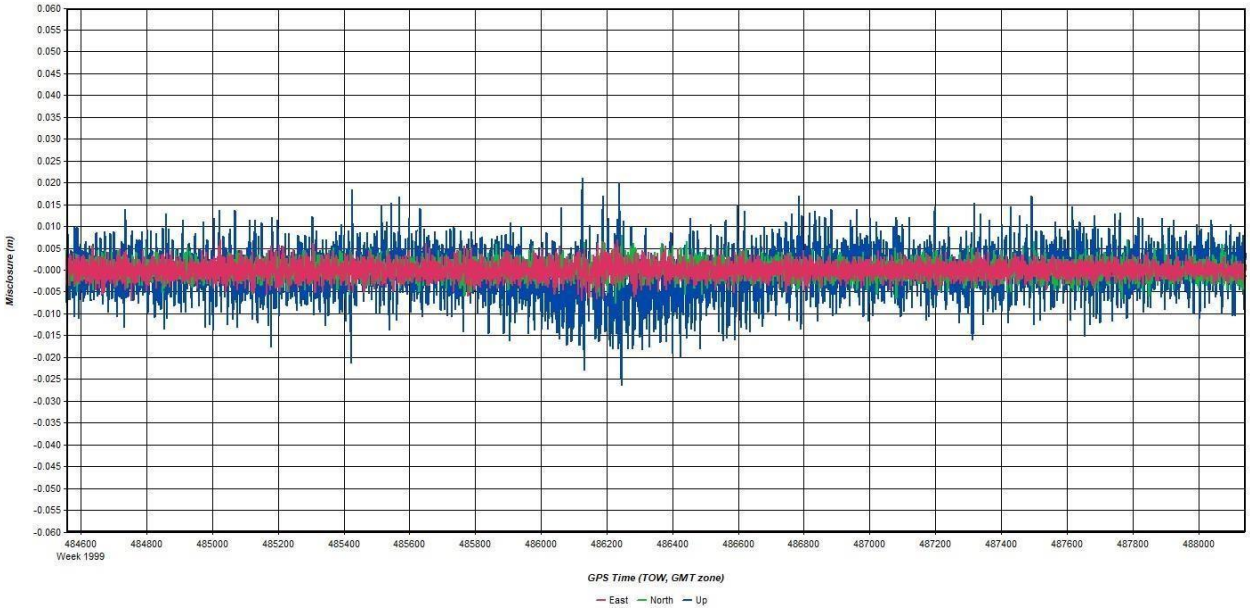
Mission 14. PDOP



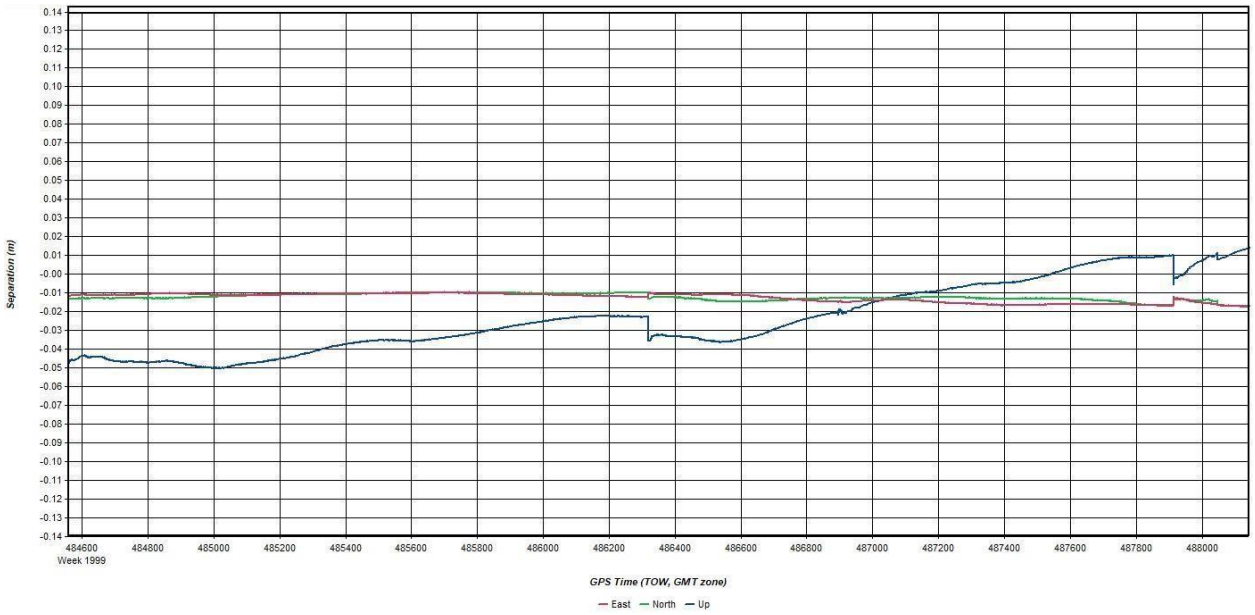
Mission 14. Number of satellites



Mission 14. GPS misclosure



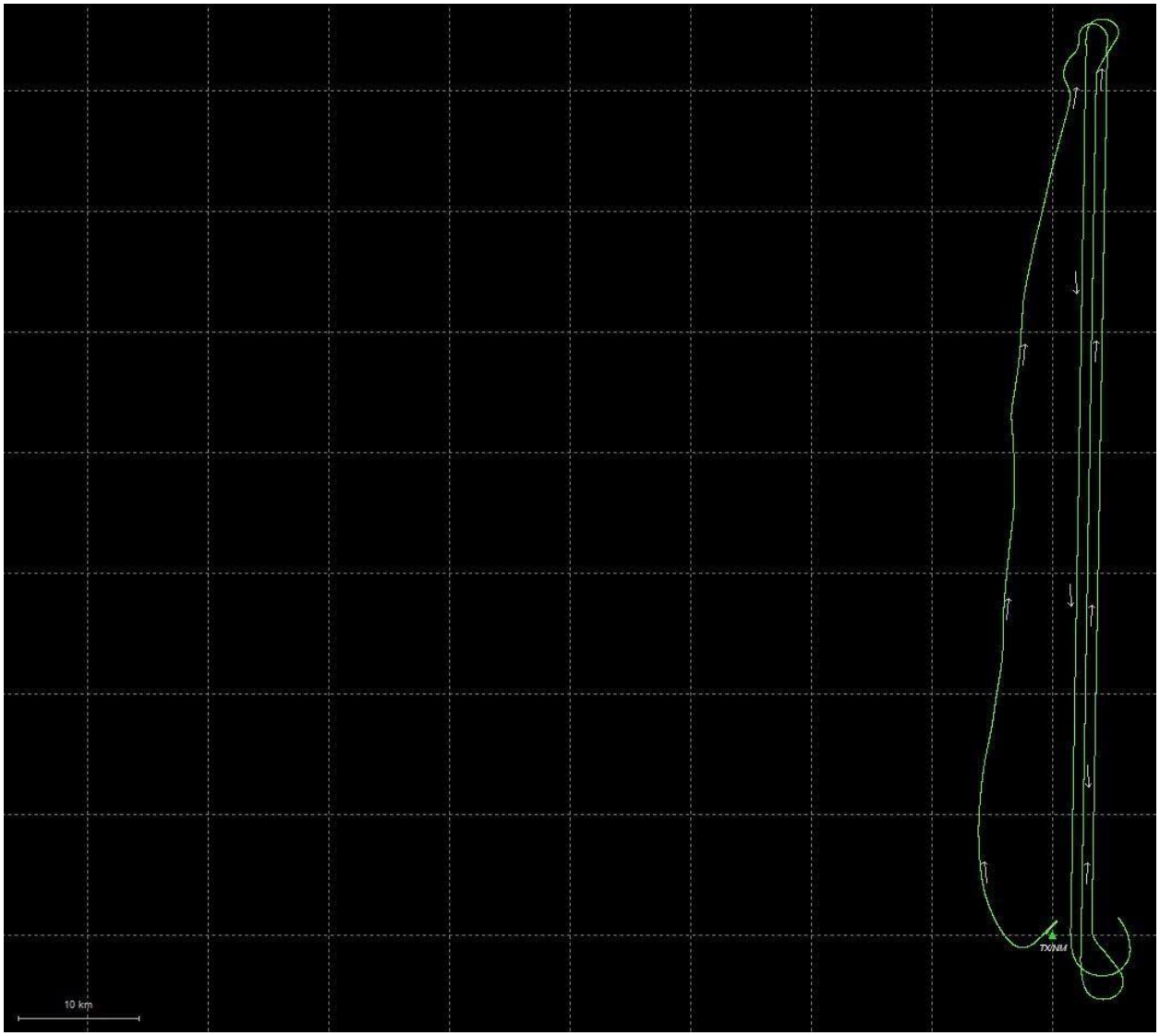
Mission 14. GPS separation


Separation (m)
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
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
-0.09
-0.10
-0.11
-0.12
-0.13
-0.14
484600
Week 1999
484800
485000
485200
485400
485600
485800
486000
486200
486400
486600
486800
487000
487200
487400
487600
487800
488000
GPS Time (TOW, GMT zone)
East
North
Up

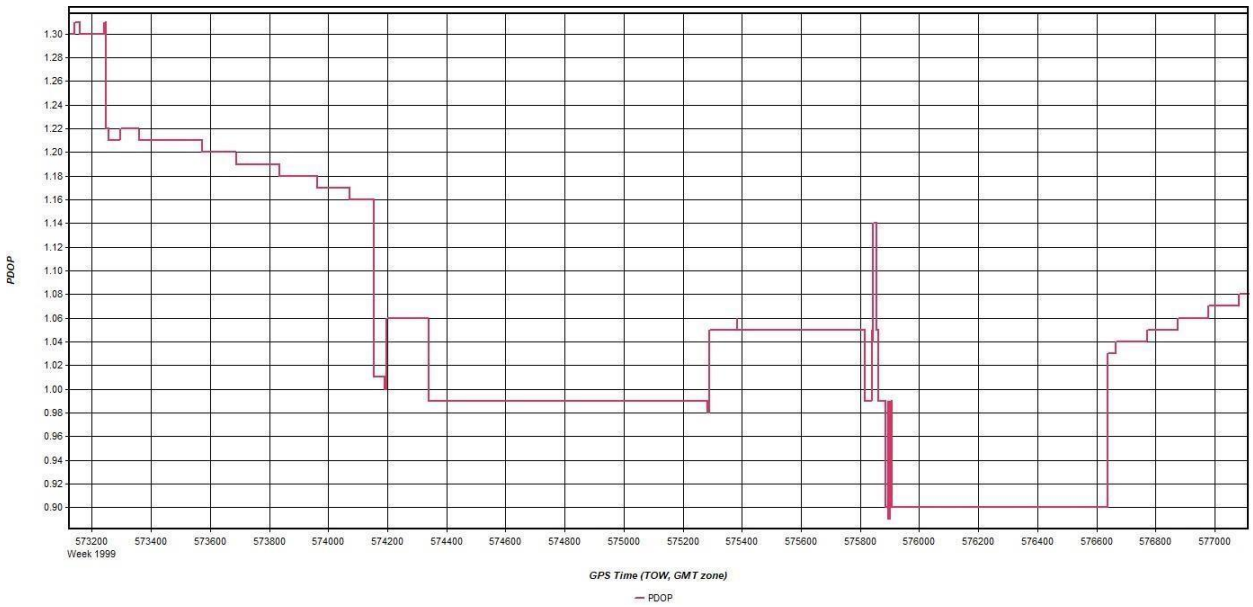
Mission 14. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      20856
        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:       0.0184 (m)
        C/A Code:       0.99 (m)
        L1 Doppler:     0.030 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.027 (m)
        North:  0.023 (m)
        Height: 0.040 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (20851 occurances):
        East:   0.018 (m)
        North:  0.015 (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:        81.618 (km)
        Minimum:        0.069 (km)
        Average:        38.445 (km)
        First Epoch:    0.093 (km)
        Last Epoch:     0.094 (km)
```

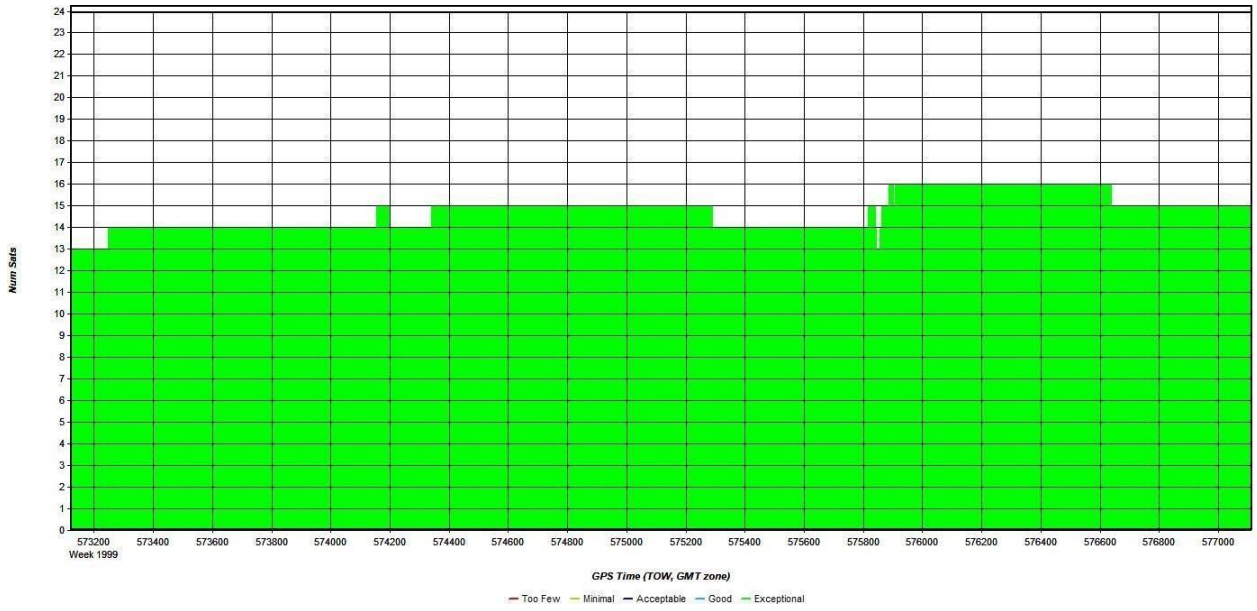
Mission 15. Flight line trajectory



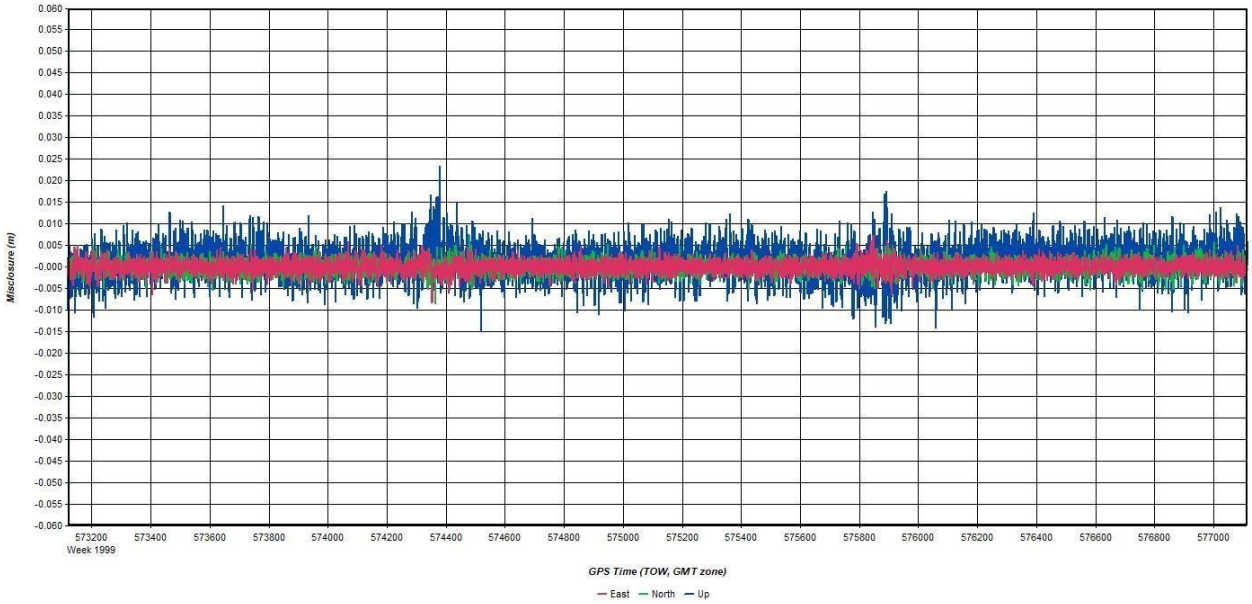
Mission 15. PDOP



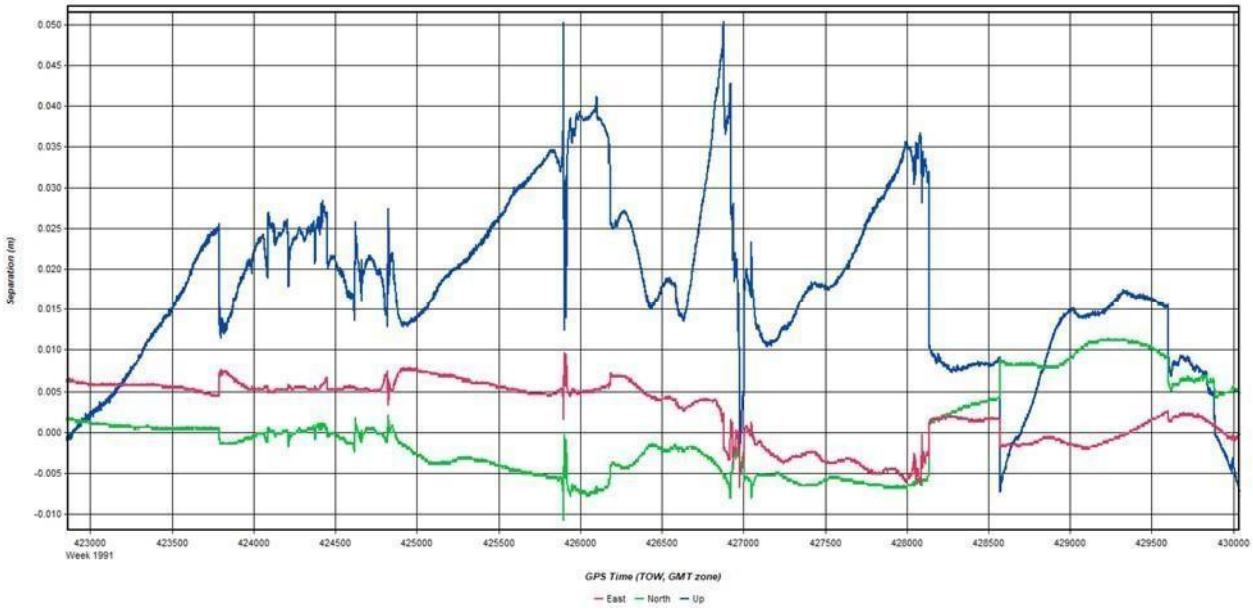
Mission 15. Number of satellites



Mission 15. GPS misclosure



Mission 15. GPS separation

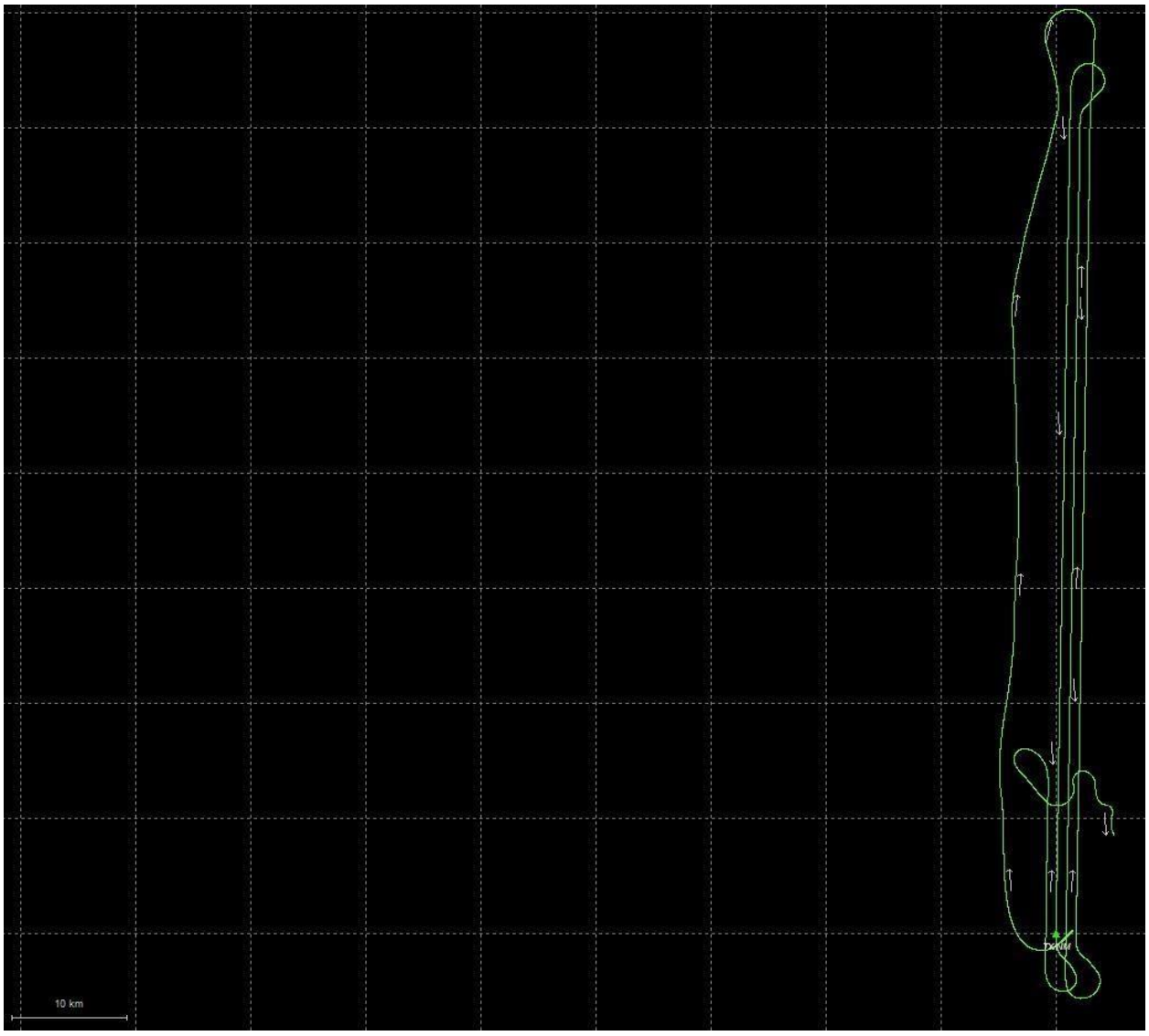


Mission 15. Processing summary

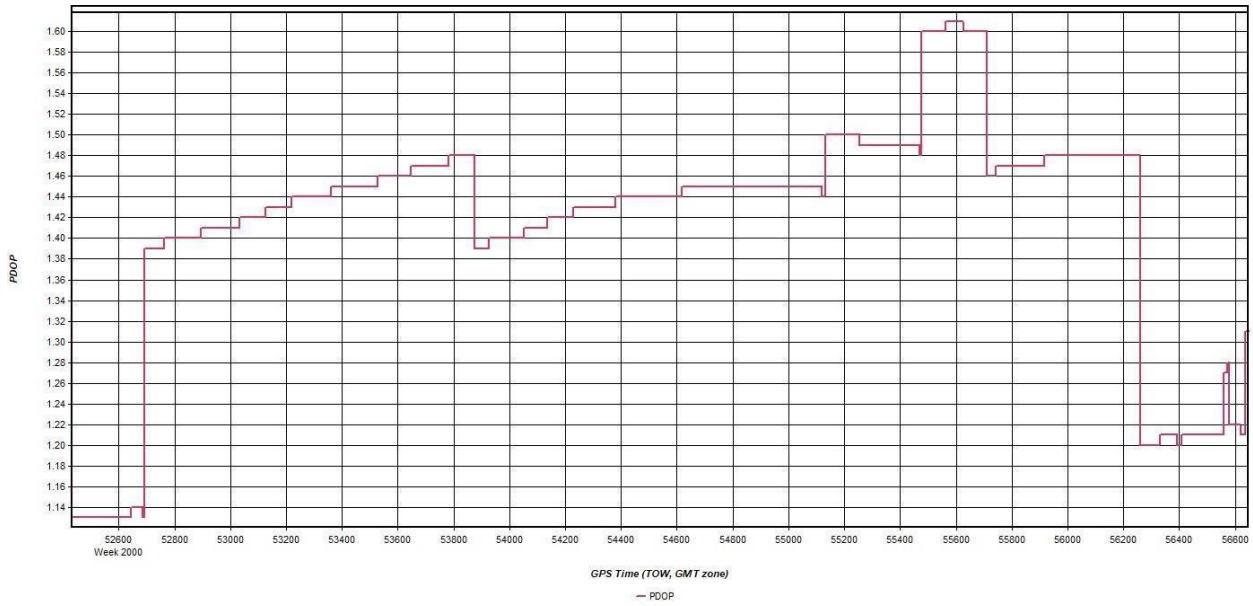
```
          Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      12464
        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:       0.95 (m)
        L1 Doppler:     0.027 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.009 (m)
        North:  0.016 (m)
        Height: 0.024 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (12459 occurances):
        East:   0.008 (m)
        North:  0.010 (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:        75.800 (km)
        Minimum:        0.486 (km)
        Average:        32.721 (km)
        First Epoch:    0.568 (km)
        Last Epoch:     5.637 (km)
```

Mission 16. Flight line trajectory

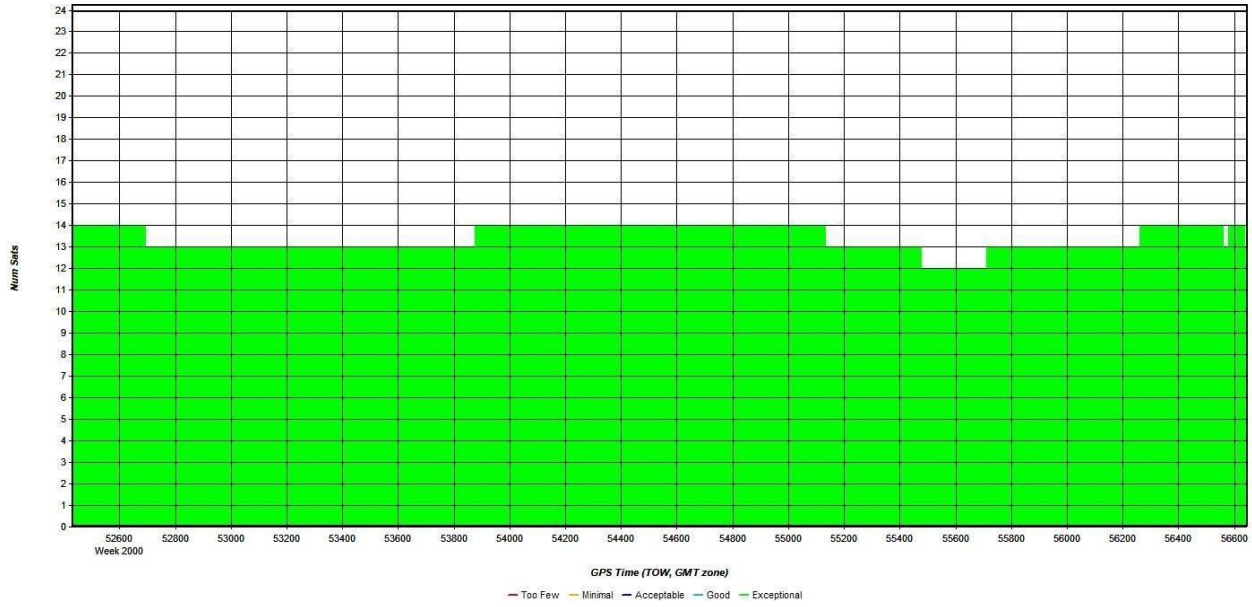
+



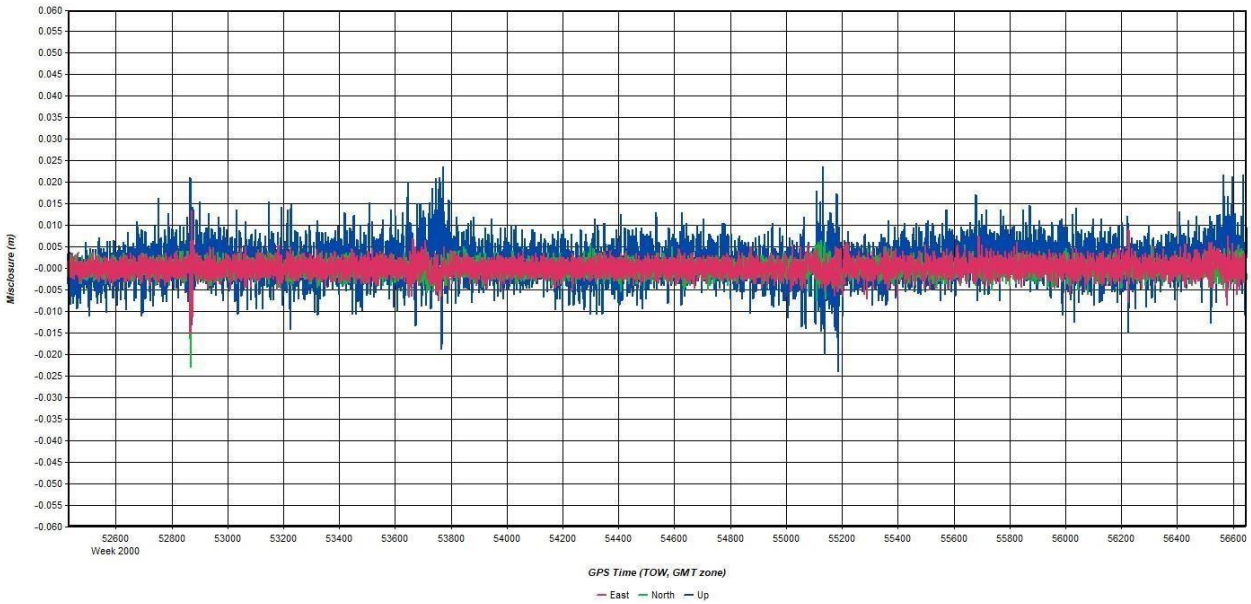
Mission 16. PDOP



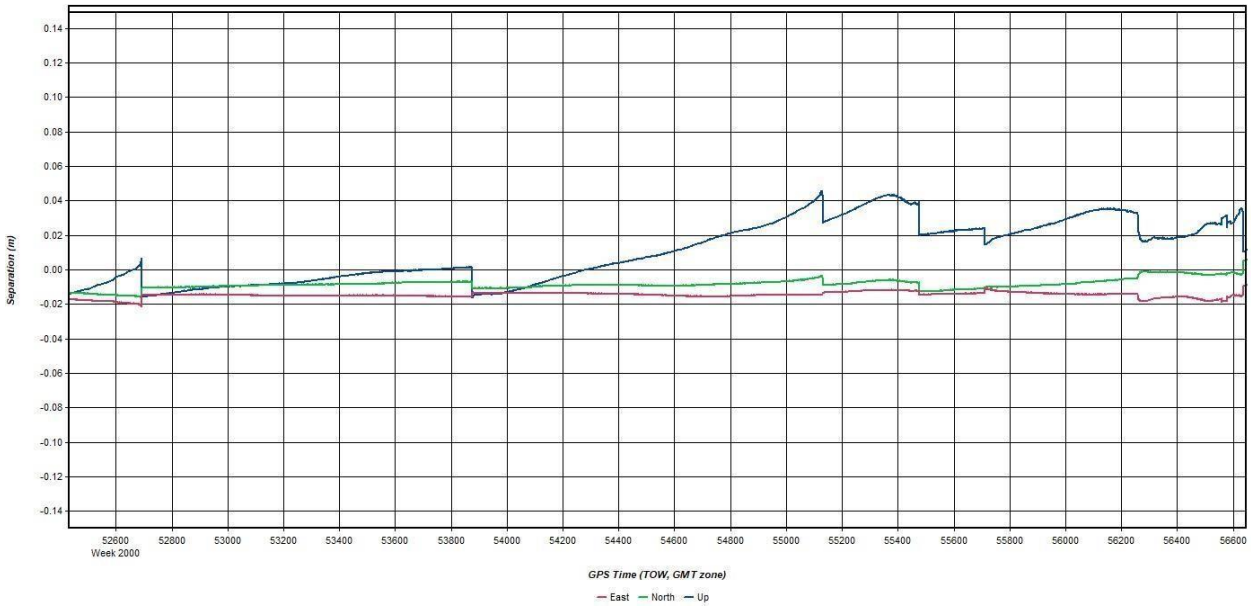
Mission 16. Number of satellites



Mission 16. GPS misclosure



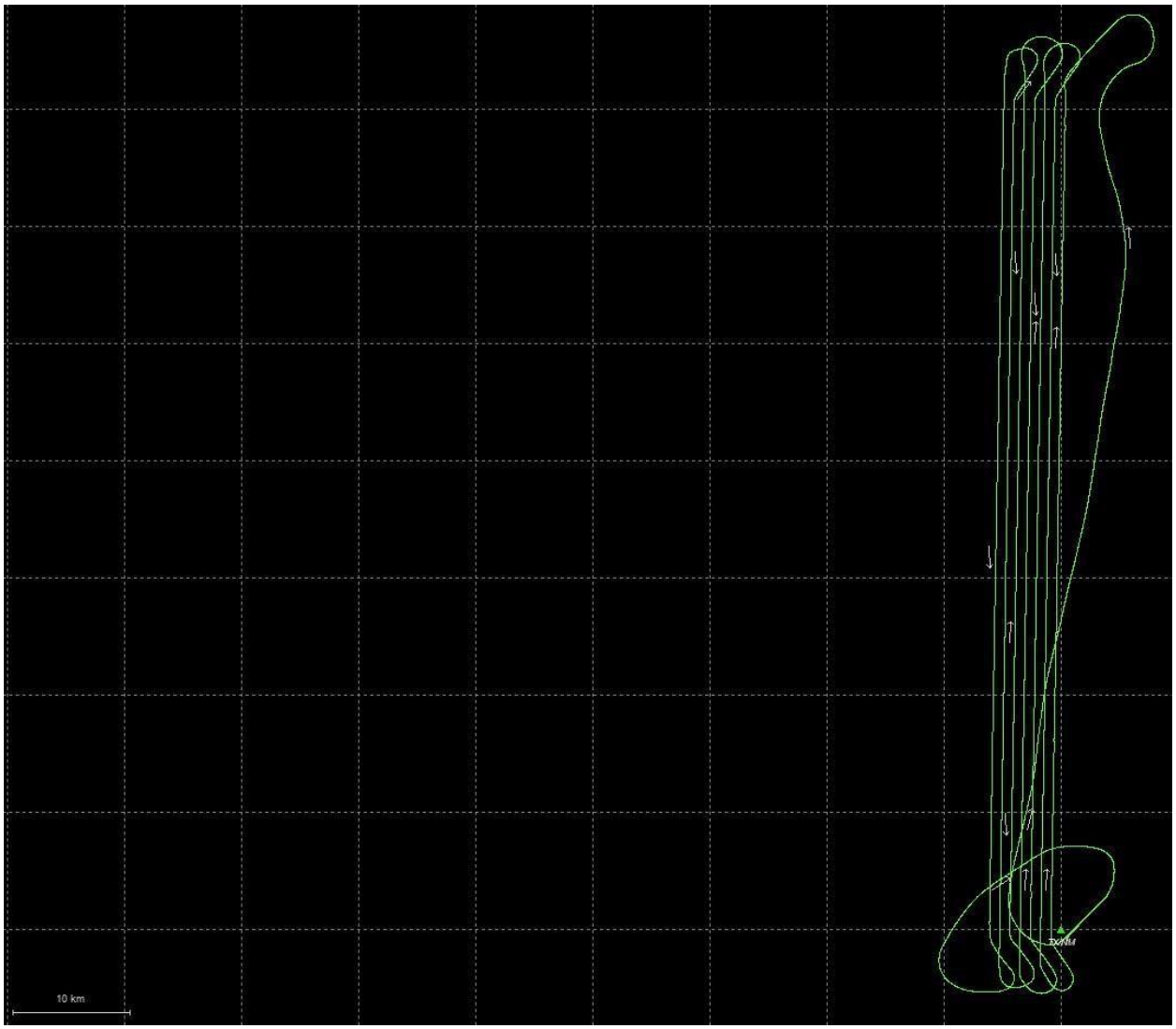
Mission 16. GPS separation



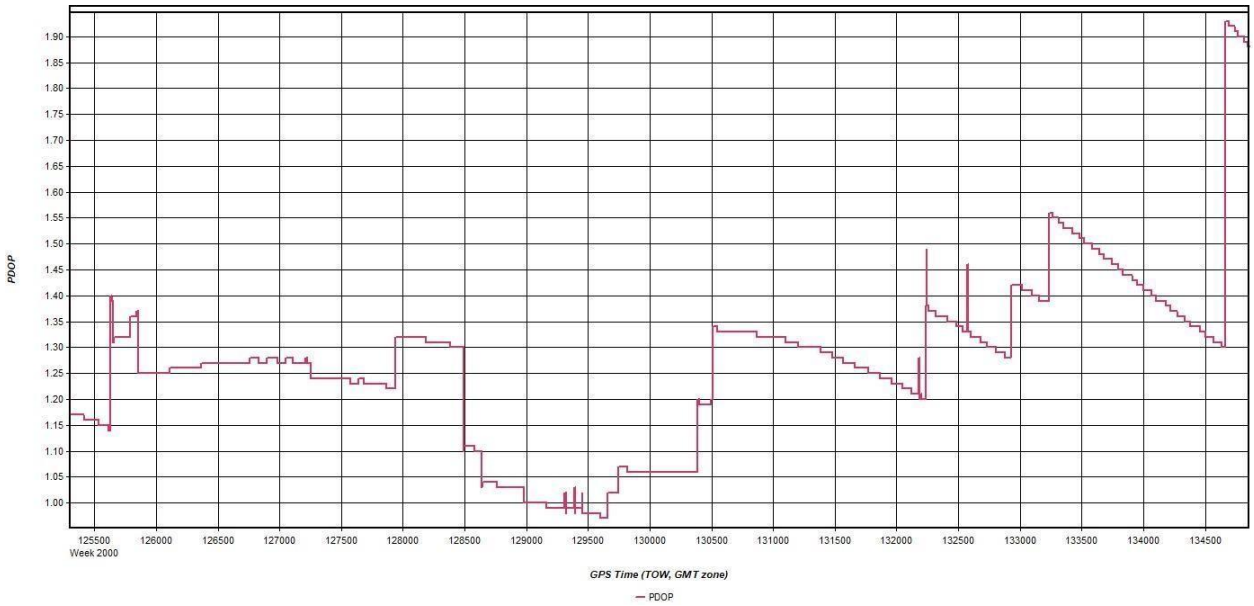
Mission 16. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      14052
        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:       0.0180 (m)
        C/A Code:       0.84 (m)
        L1 Doppler:     0.029 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.014 (m)
        North:  0.013 (m)
        Height: 0.019 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (14046 occurances):
        East:   0.014 (m)
        North:  0.012 (m)
        Height: 0.019 (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:        79.860 (km)
        Minimum:        0.027 (km)
        Average:        31.906 (km)
        First Epoch:    0.918 (km)
        Last Epoch:     9.883 (km)
```

Mission 17. Flight line trajectory

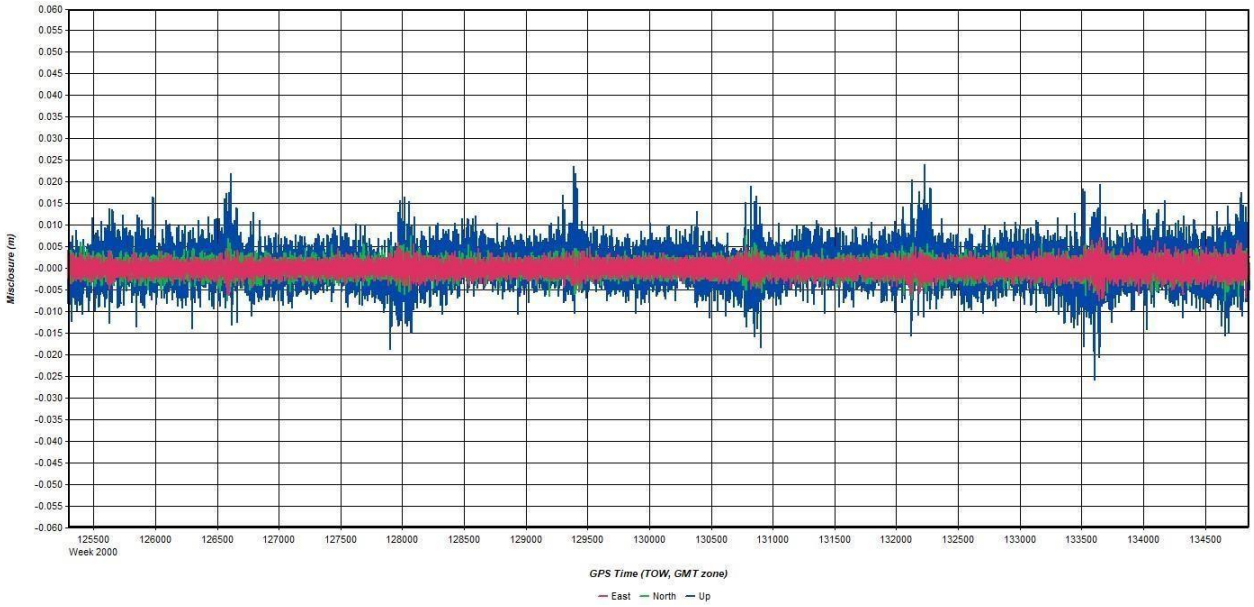


Mission 17. PDOP

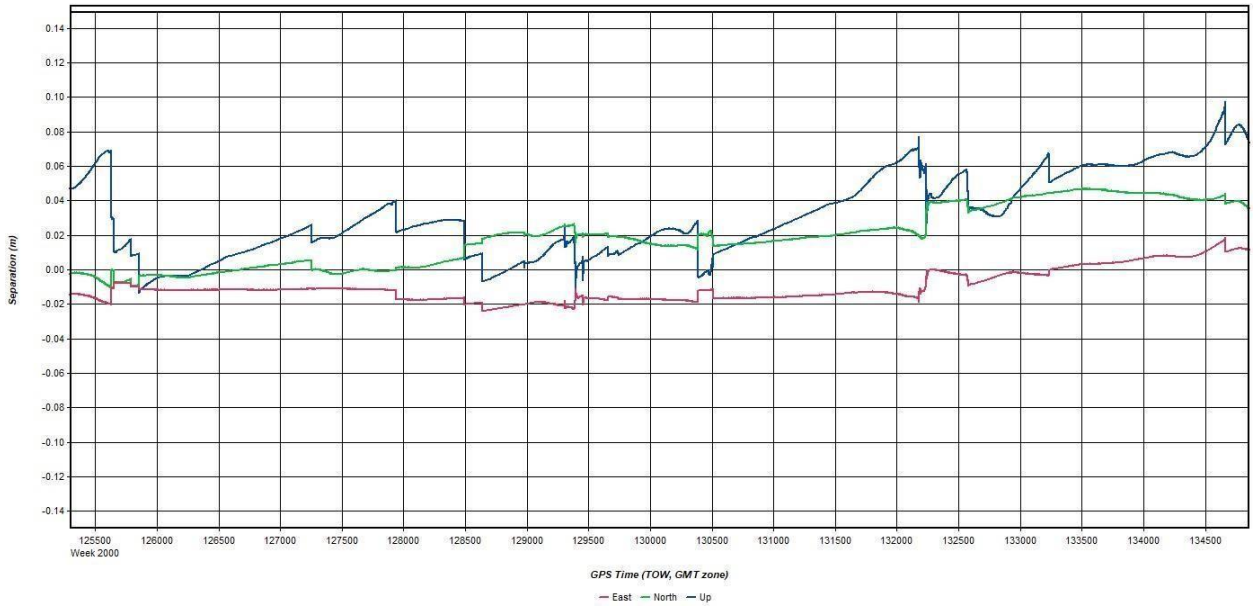


Mission 17. Number of satellites

Mission 17. GPS misclosure



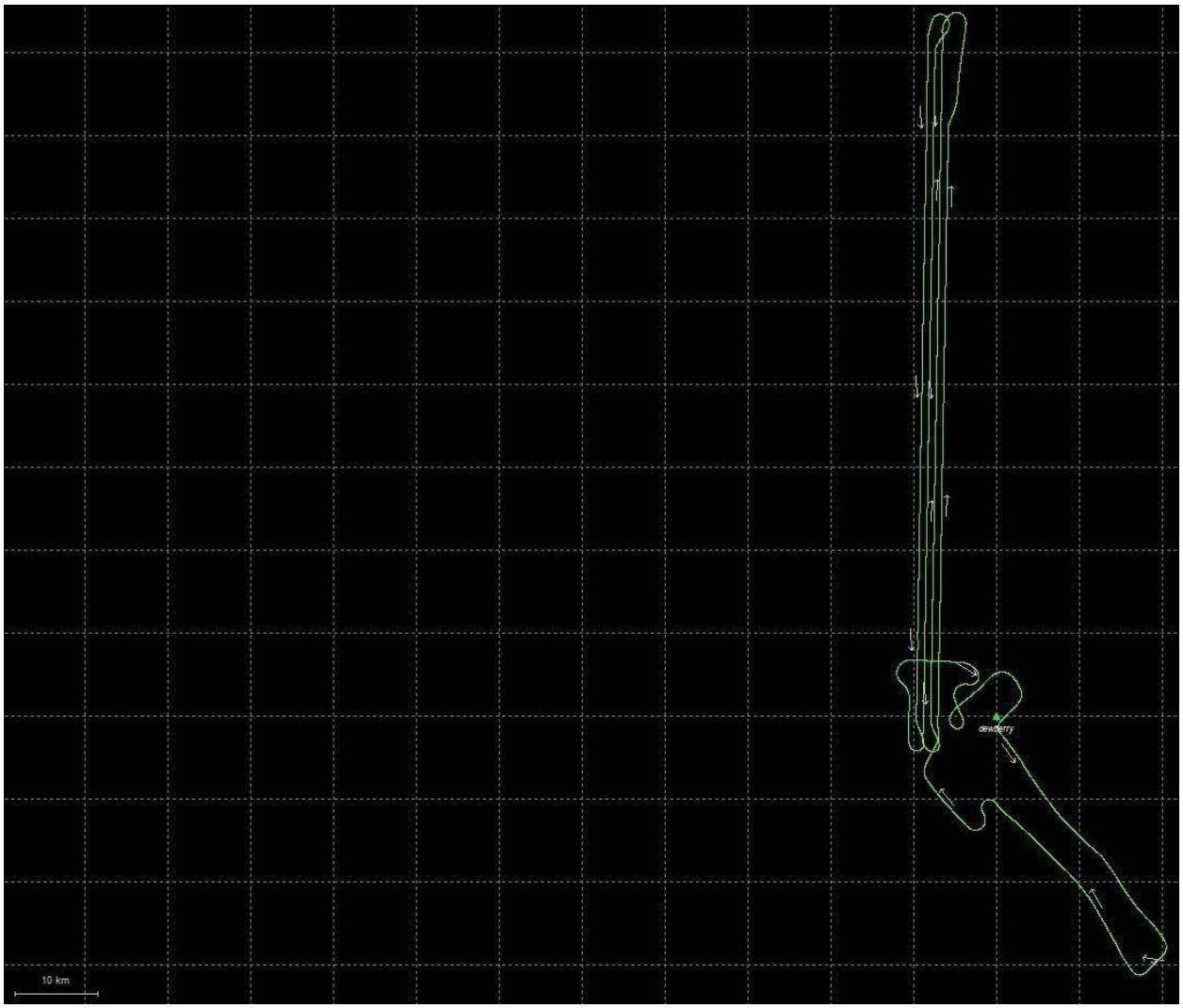
Mission 17. GPS separation



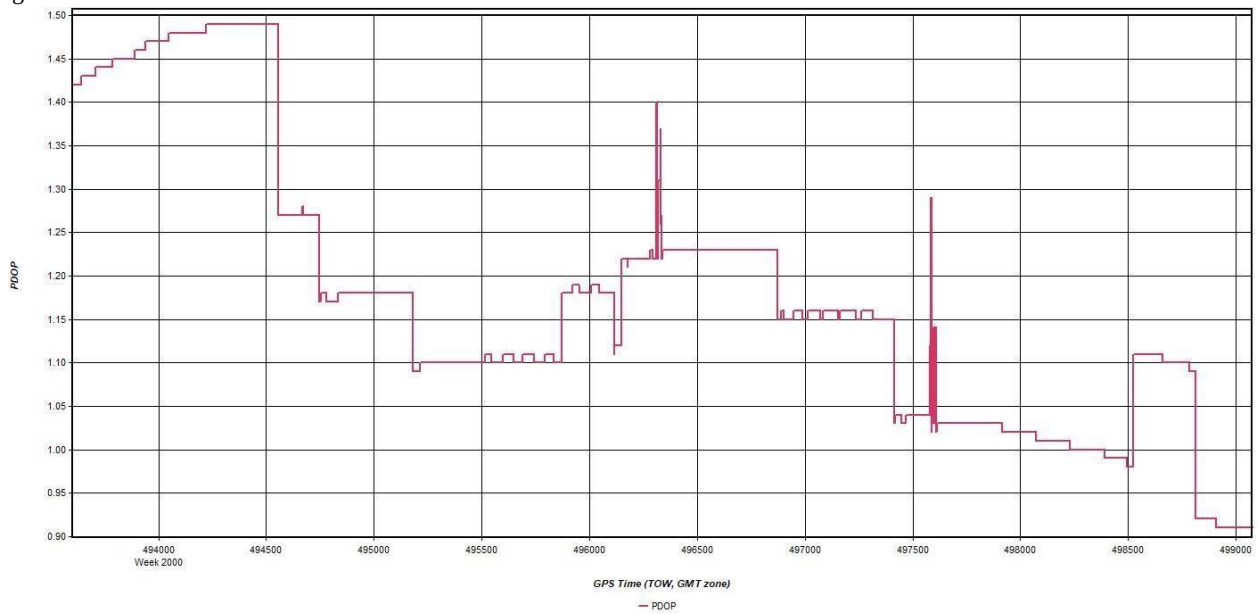
Mission 17. Processing summary

```
          Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      25104
        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:       0.0207 (m)
        C/A Code:       0.83 (m)
        L1 Doppler:     0.029 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.013 (m)
        North:  0.023 (m)
        Height: 0.039 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (25099 occurances):
        East:   0.013 (m)
        North:  0.023 (m)
        Height: 0.038 (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:        77.875 (km)
        Minimum:        0.771 (km)
        Average:        33.384 (km)
        First Epoch:    1.047 (km)
        Last Epoch:     1.058 (km)
```

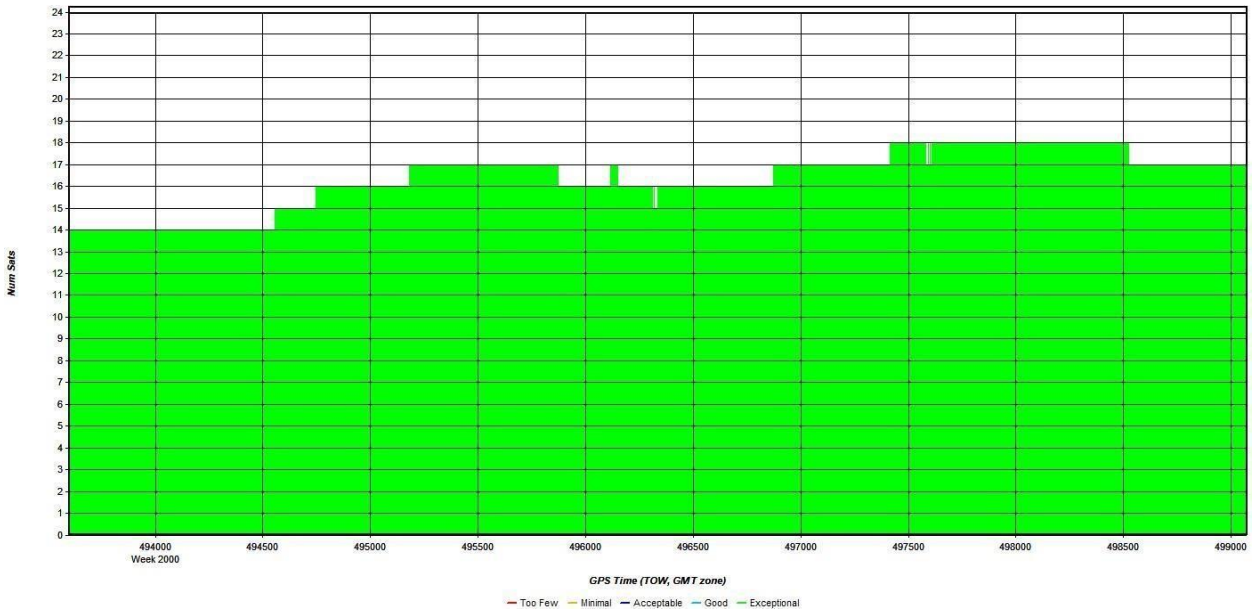
Mission 18. Flight line trajectory



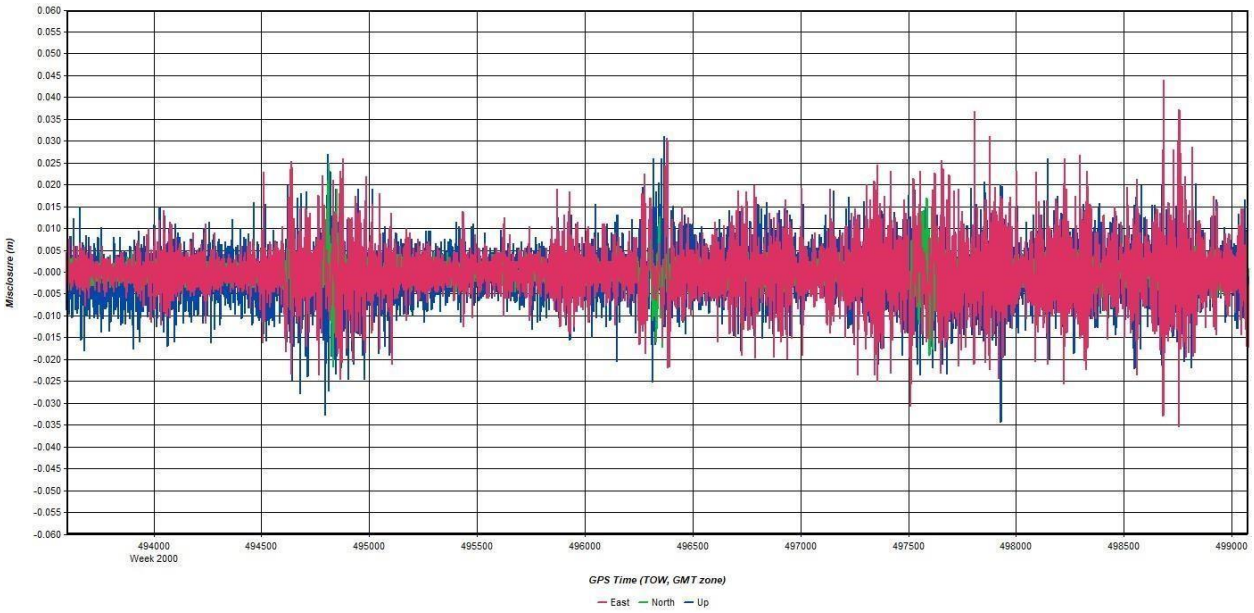
Mission 18. PDOP



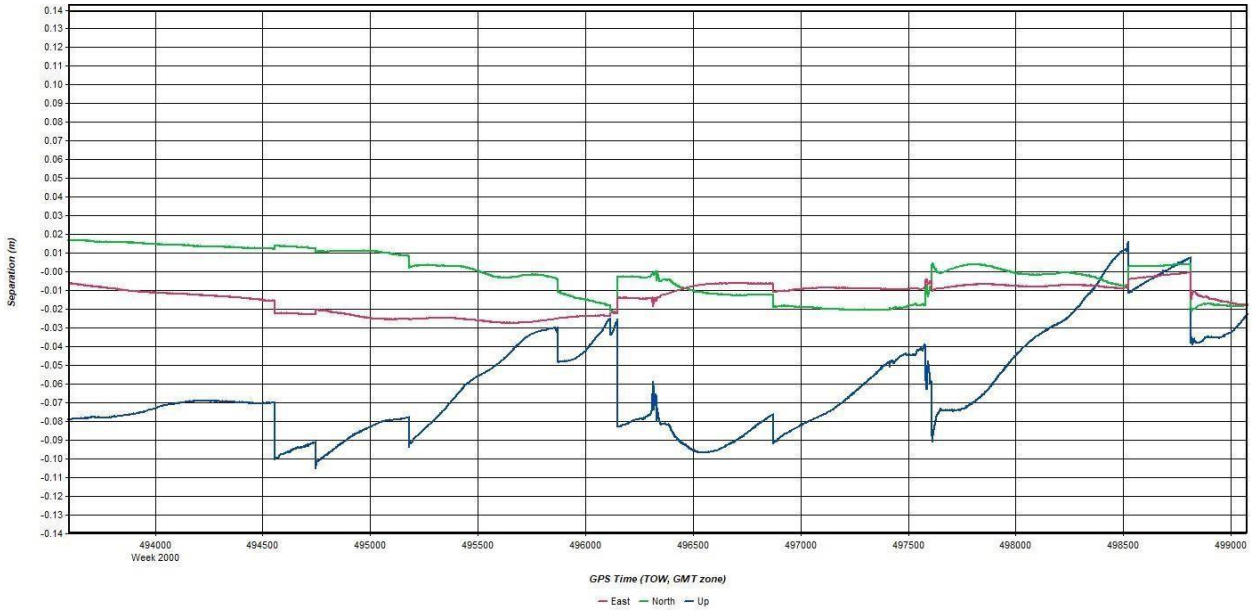
Mission 18. Number of satellites



Mission 18. GPS misclosure



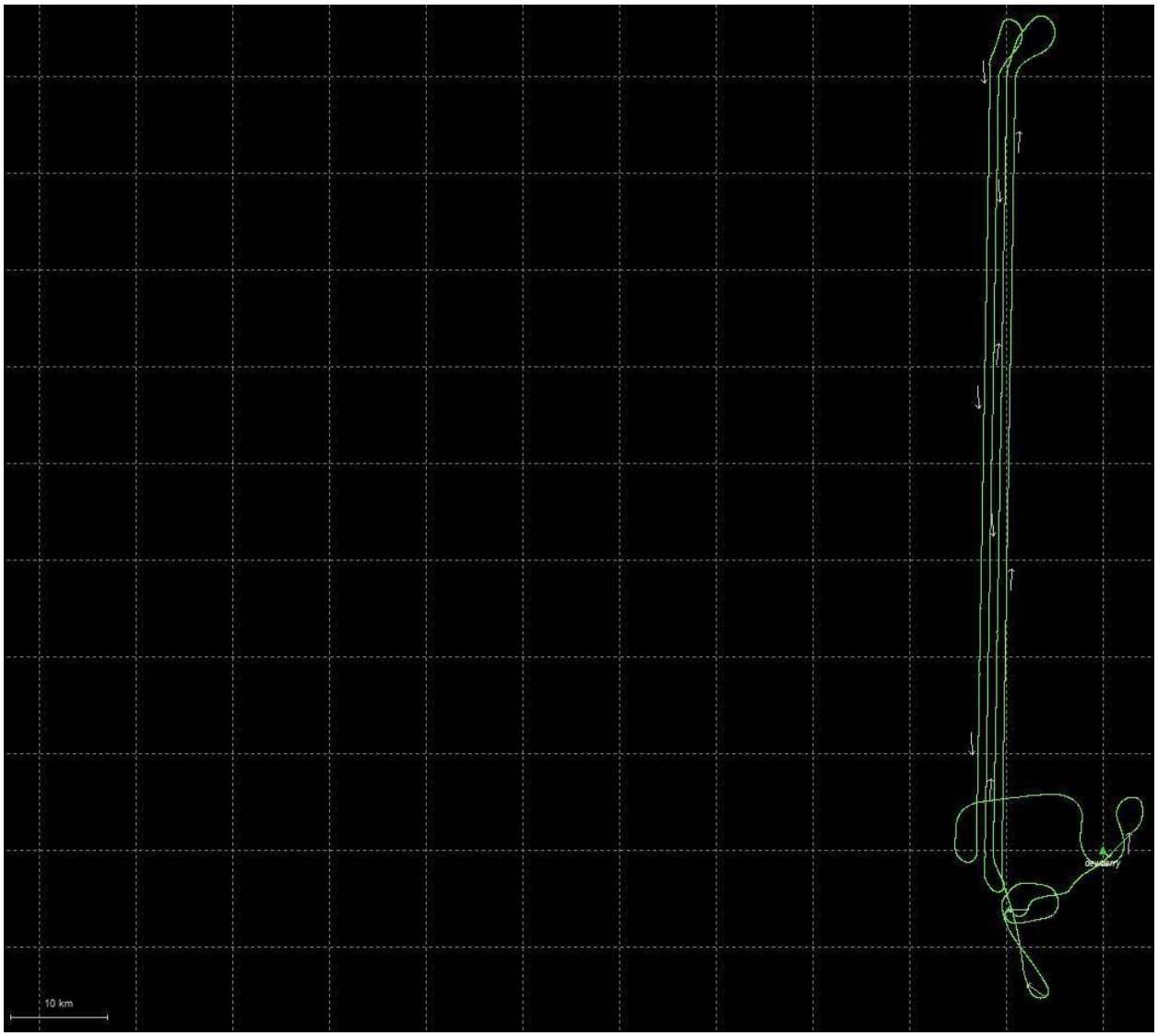
Mission 18. GPS separation



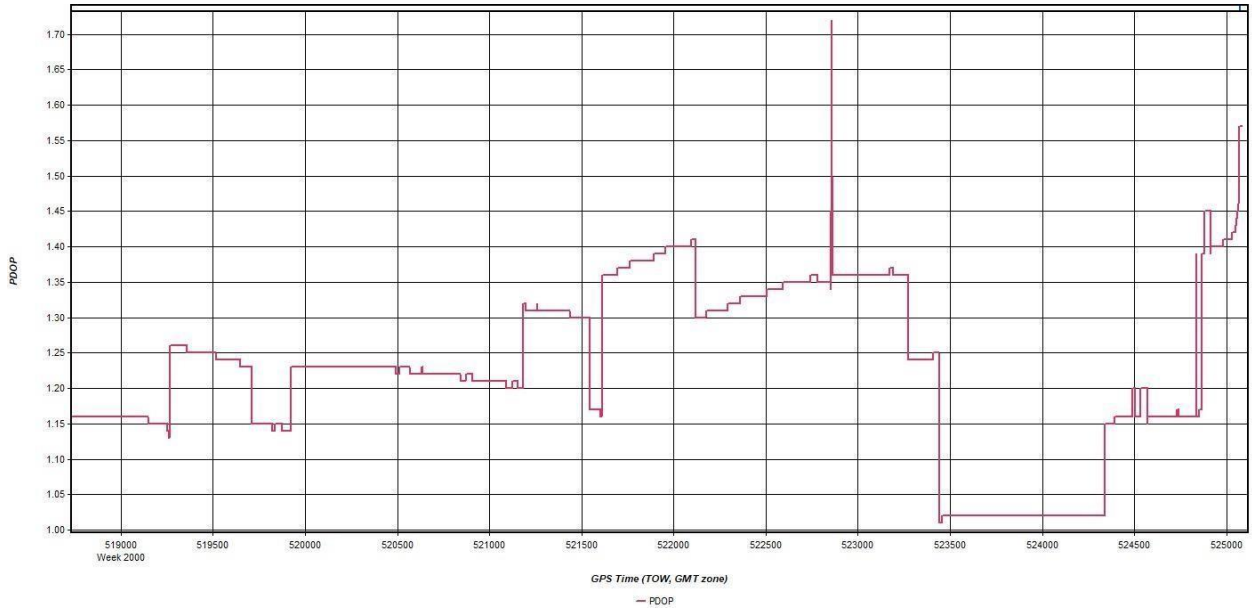
Mission 18. Processing summary

```
          Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      17122
        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:       0.0270 (m)
        C/A Code:       0.90 (m)
        L1 Doppler:     0.031 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.015 (m)
        North:  0.020 (m)
        Height: 0.060 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (17116 occurances):
        East:   0.015 (m)
        North:  0.019 (m)
        Height: 0.060 (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:        84.305 (km)
        Minimum:        0.791 (km)
        Average:        34.172 (km)
        First Epoch:    34.812 (km)
        Last Epoch:     35.191 (km)
```

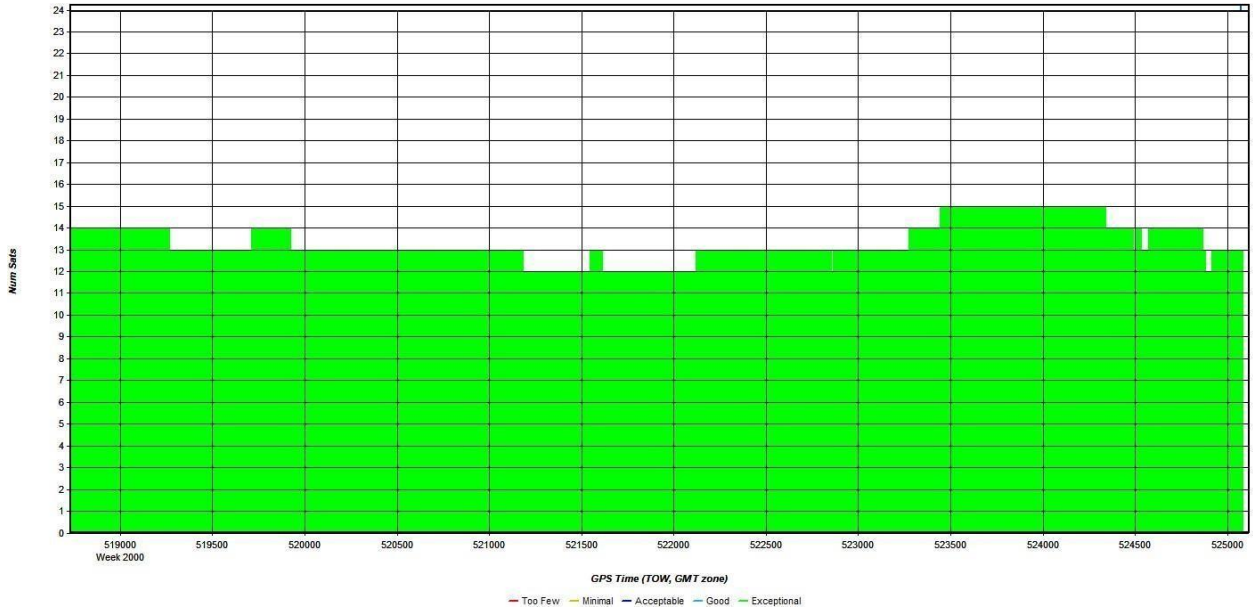
Mission 19. Flight line trajectory



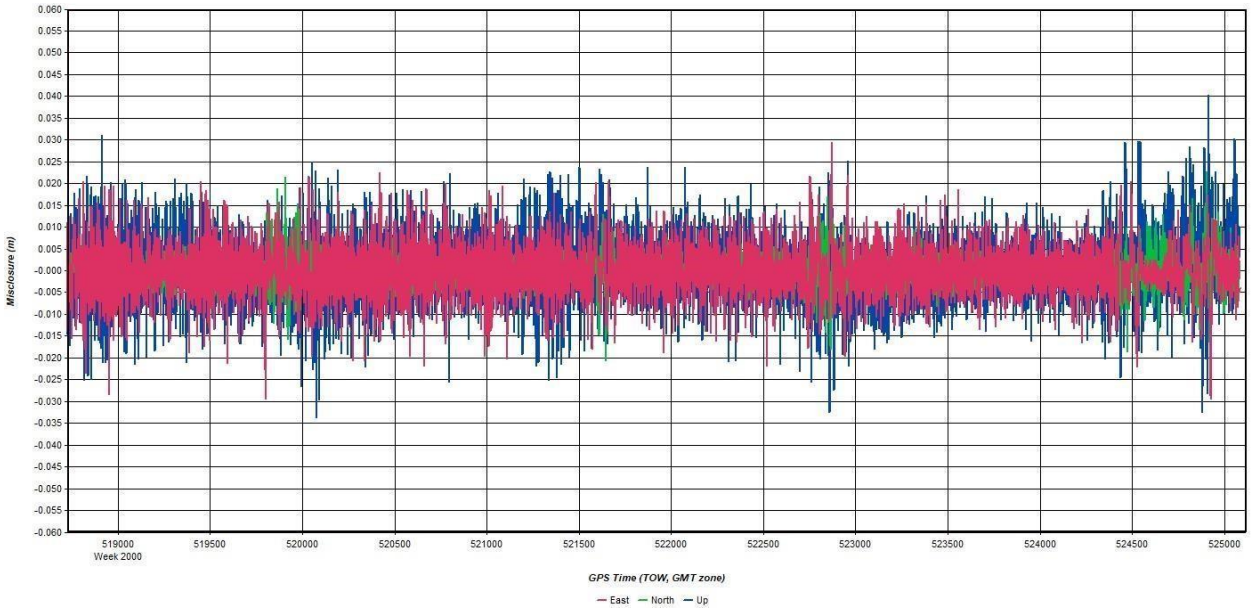
Mission 19. PDOP



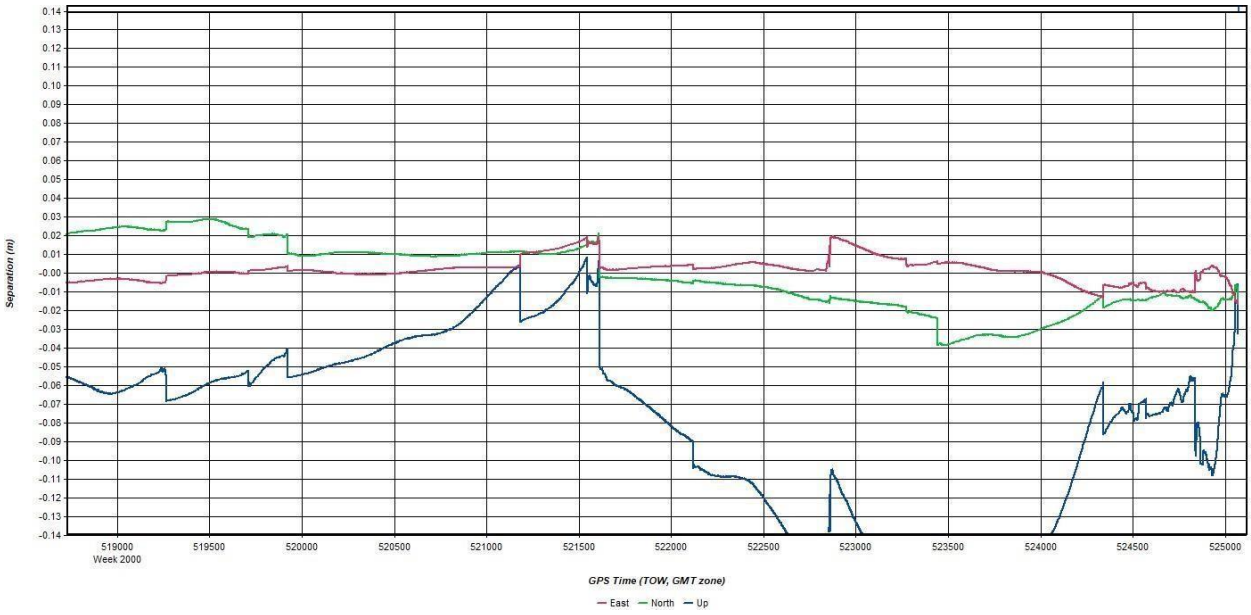
Mission 19. Number of satellites



Mission 19. GPS misclosure



Mission 19. GPS separation

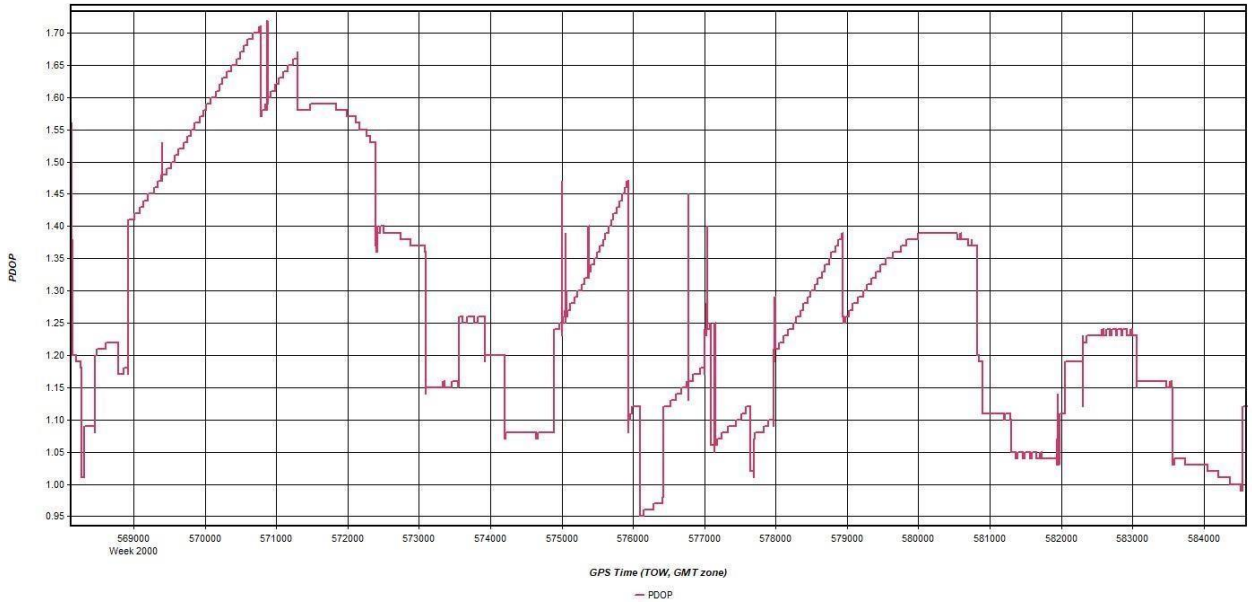


Mission 19. Processing summary

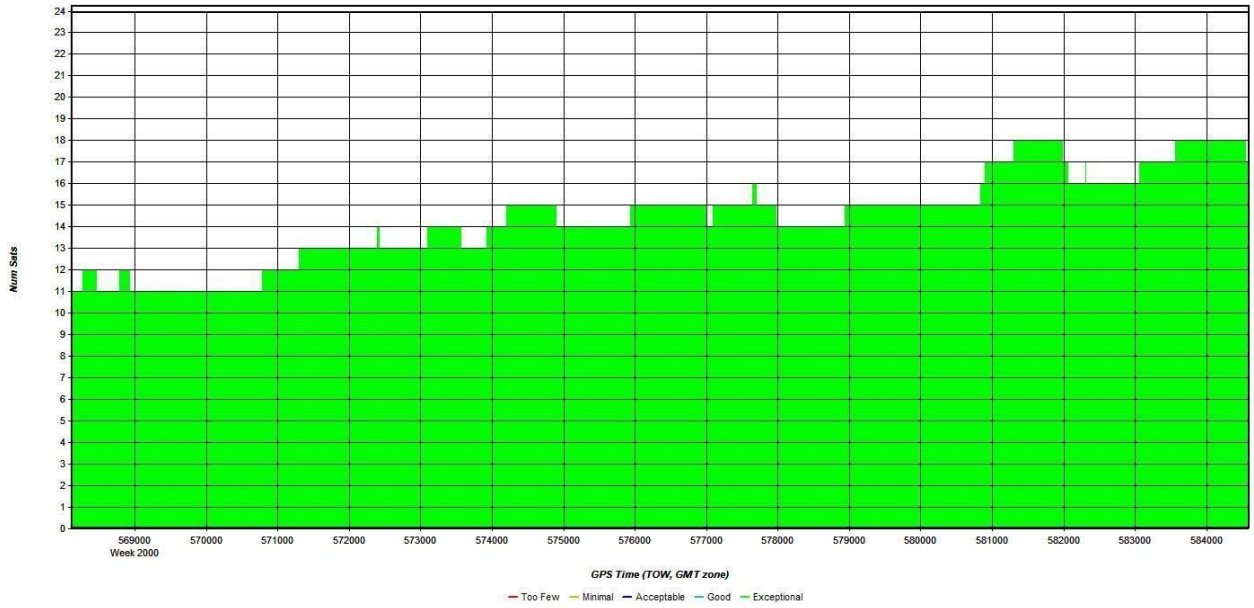
```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      18998
        No processed position:  3238
        Missing Fwd or Rev:     3
        With bad C/A code:      0
        With bad L1 Phase:      0

Measurement RMS Values:
        L1 Phase:       0.0245 (m)
        C/A Code:       0.97 (m)
        L1 Doppler:     0.029 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.010 (m)
        North:  0.024 (m)
        Height: 0.130 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (15735 occurances):
        East:   0.008 (m)
        North:  0.018 (m)
        Height: 0.089 (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:        86.323 (km)
        Minimum:        0.017 (km)
        Average:        34.859 (km)
        First Epoch:    0.032 (km)
        Last Epoch:     0.776 (km)
```

Mission 20. Flight line trajectory

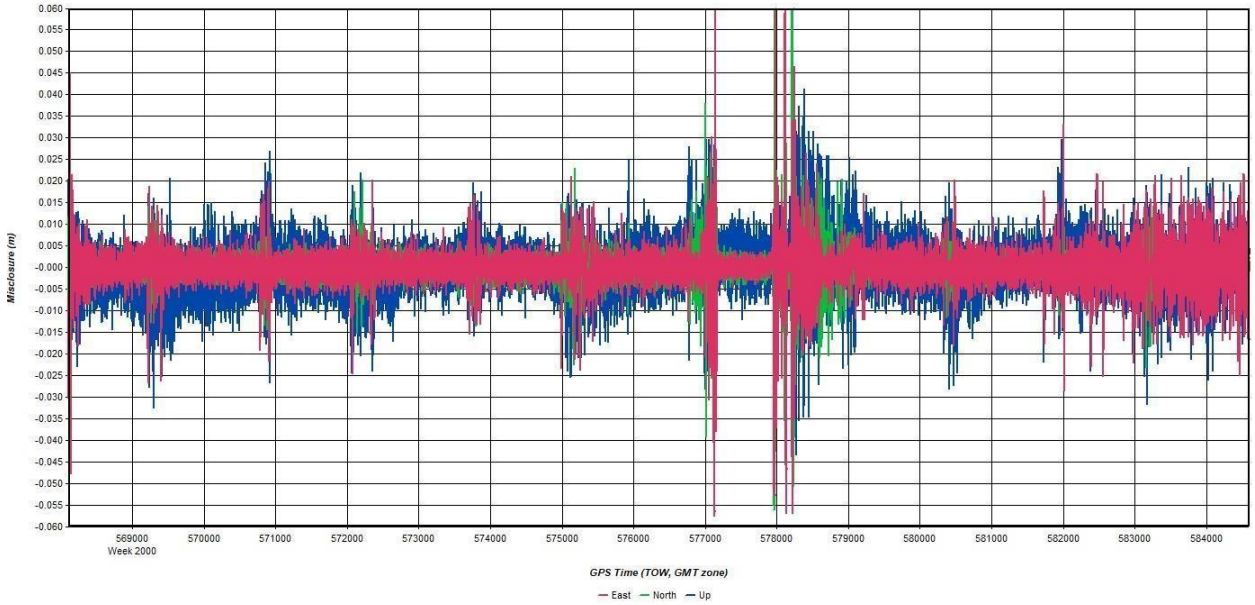
Mission 20. PDOP



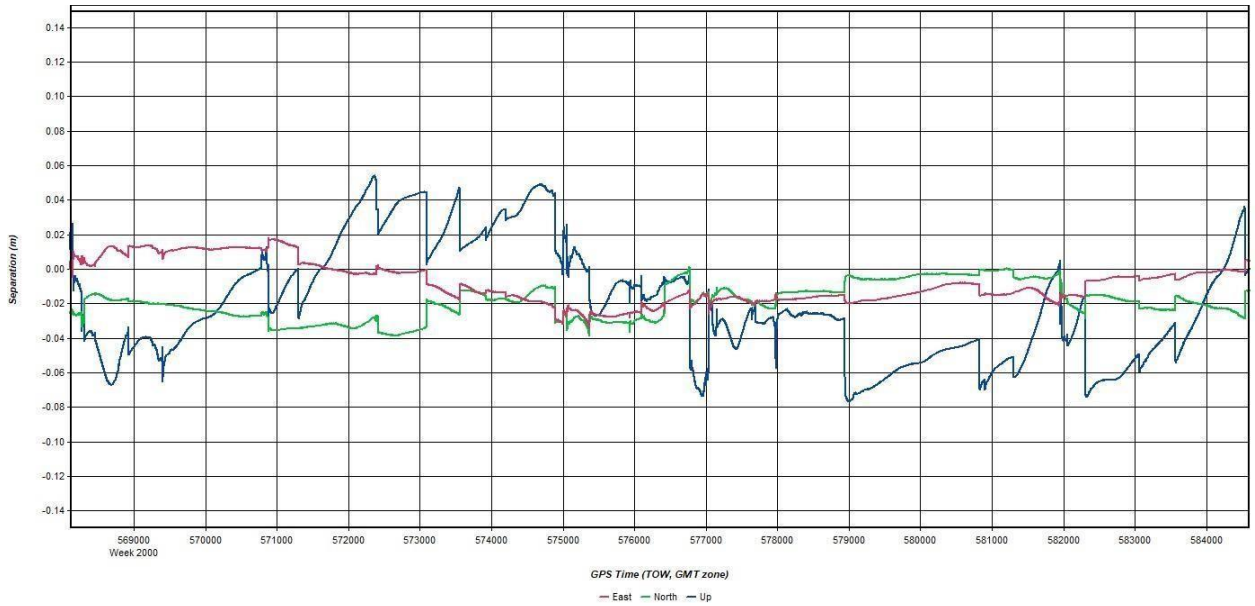
Mission 20. Number of satellites



Mission 20. GPS misclosure



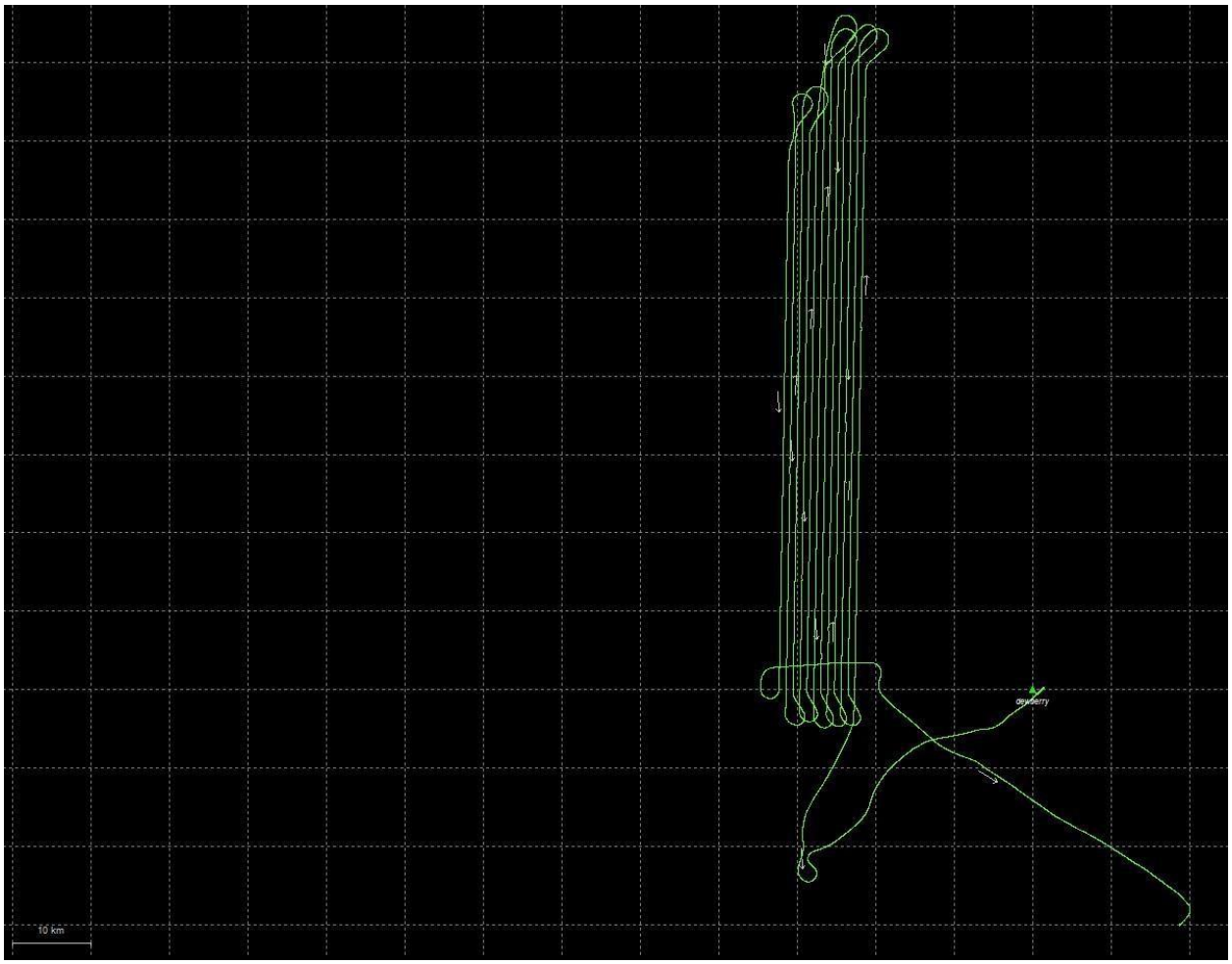
Mission 20. GPS separation



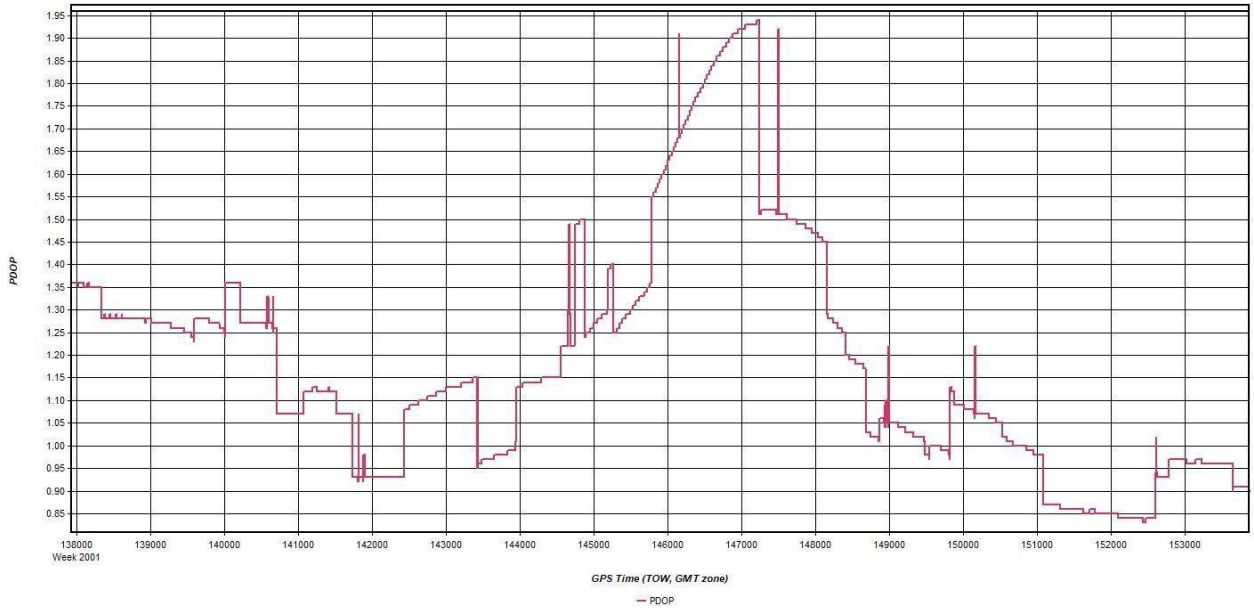
Mission 20. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      37813
        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:       0.0242 (m)
        C/A Code:       0.92 (m)
        L1 Doppler:     0.030 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.014 (m)
        North:  0.023 (m)
        Height: 0.043 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (37807 occurances):
        East:   0.013 (m)
        North:  0.023 (m)
        Height: 0.043 (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:        89.755 (km)
        Minimum:        0.418 (km)
        Average:        39.285 (km)
        First Epoch:    34.813 (km)
        Last Epoch:     0.591 (km)
```

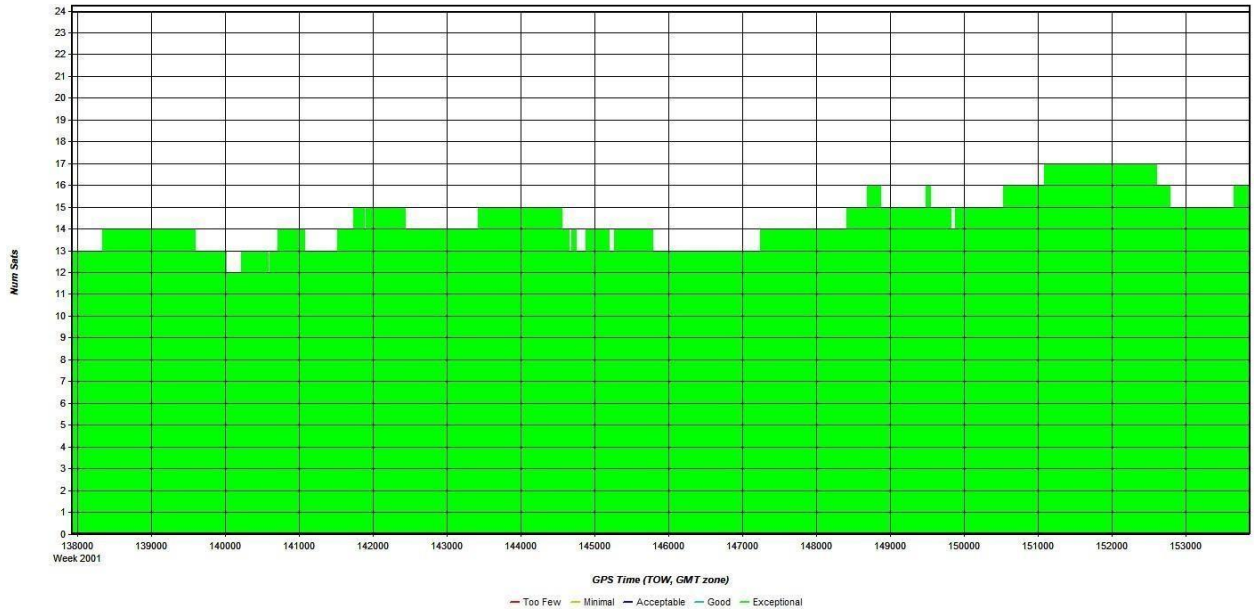
Mission 21. Flight line trajectory



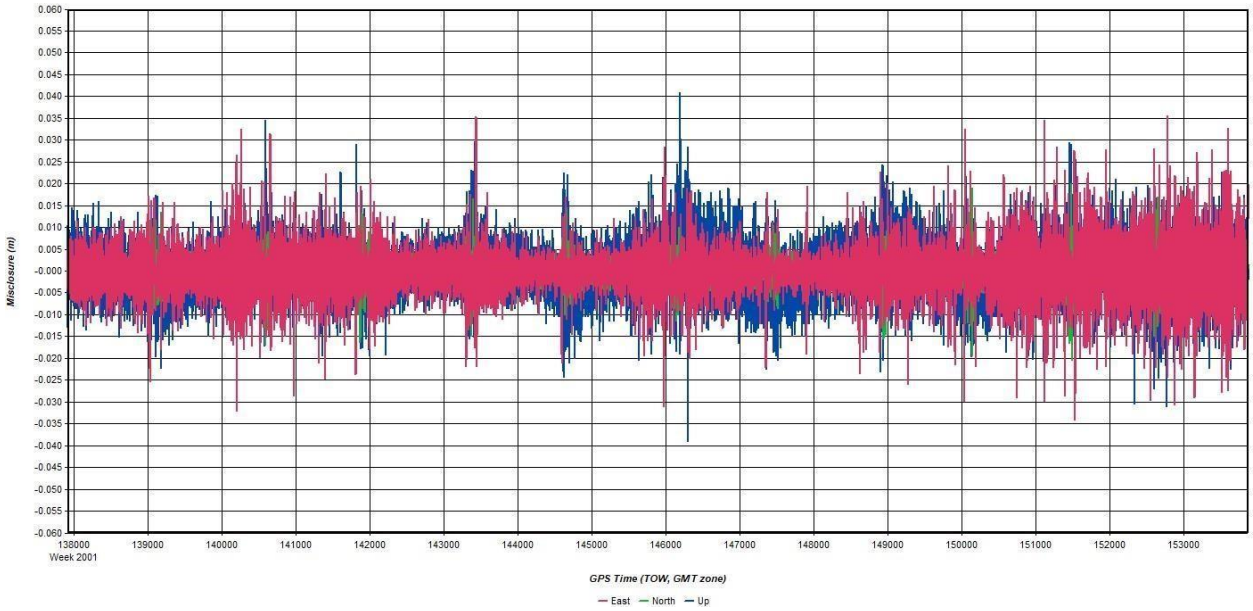
Mission 21. PDOP



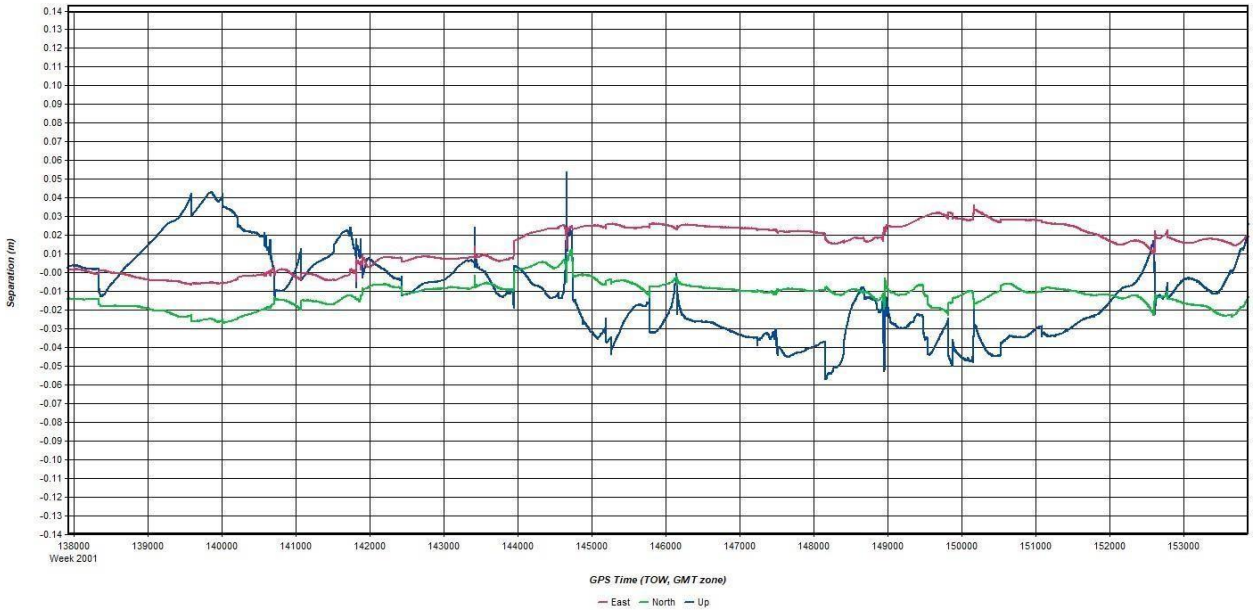
Mission 21. Number of satellites



Mission 21. GPS misclosure



Mission 21. GPS separation



Mission 21. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 37923
- 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: 0.0210 (m)
- C/A Code: 0.97 (m)
- L1 Doppler: 0.029 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.018 (m)
- North: 0.013 (m)
- Height: 0.025 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (37917 occurances):
- East: 0.018 (m)
- North: 0.013 (m)
- Height: 0.024 (m)

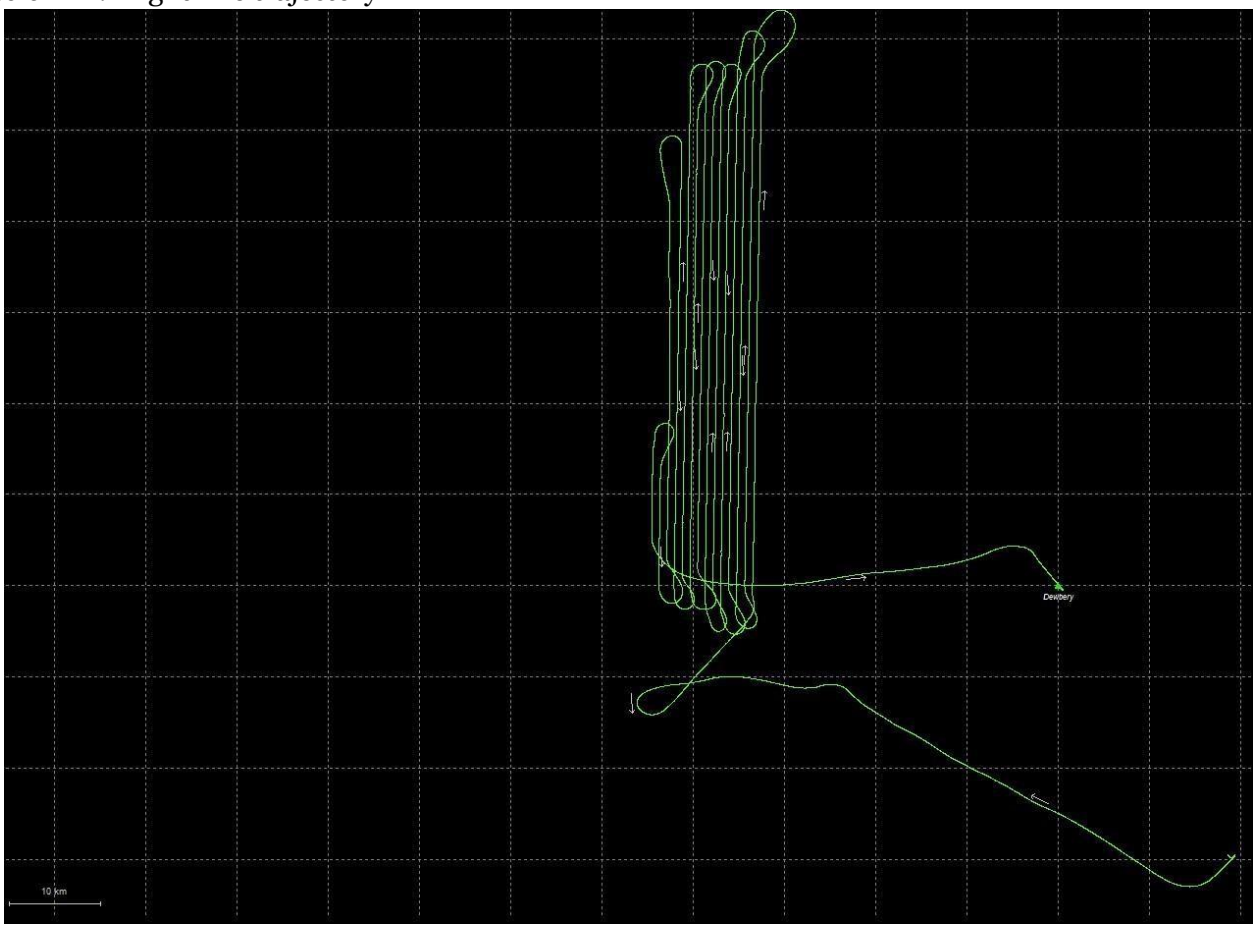
Quality Number Percentages:
- Q 1: 100.0 %
- Q 2: 0.0 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

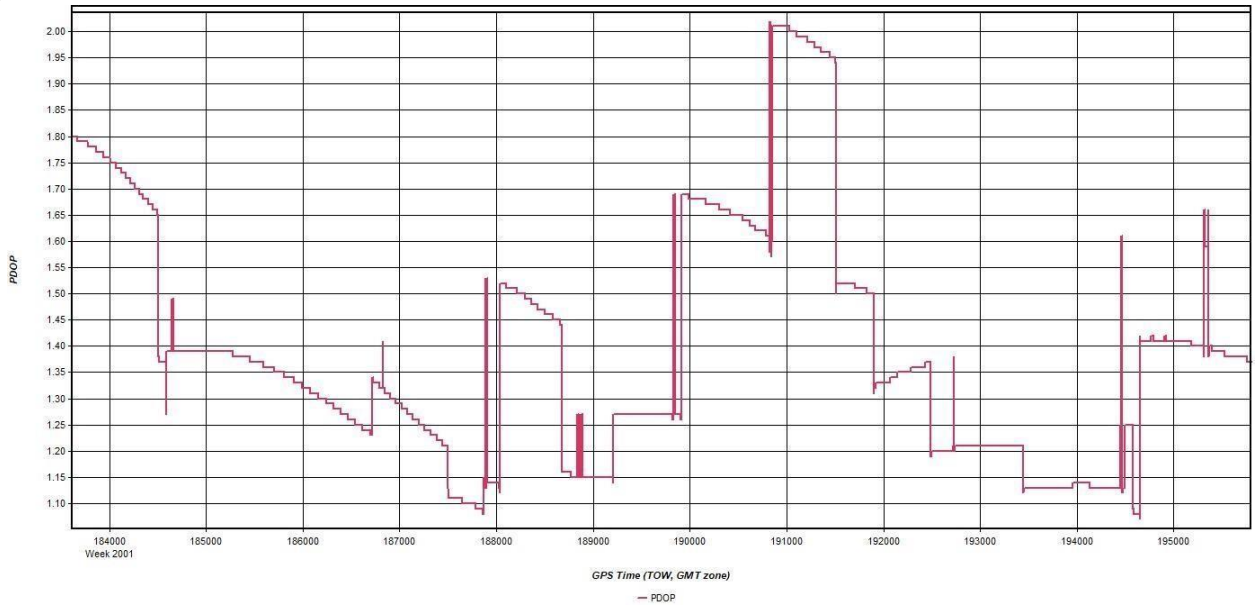
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 89.095 (km)
- Minimum: 0.020 (km)
- Average: 45.653 (km)
- First Epoch: 0.020 (km)
- Last Epoch: 35.186 (km)

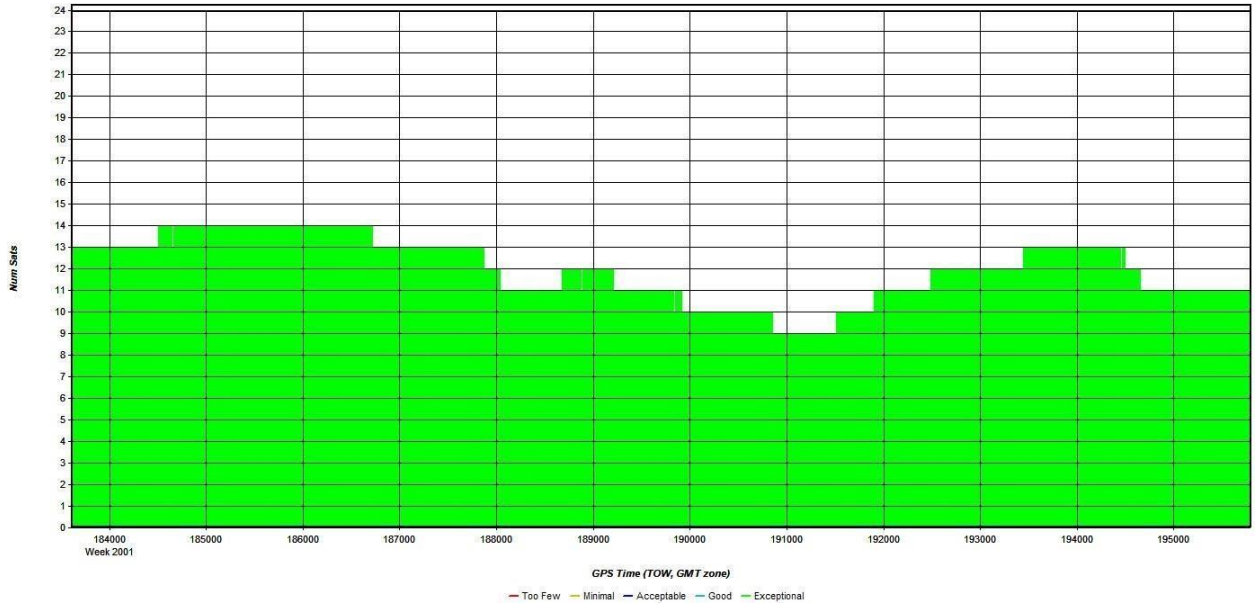
Mission 22. Flight line trajectory



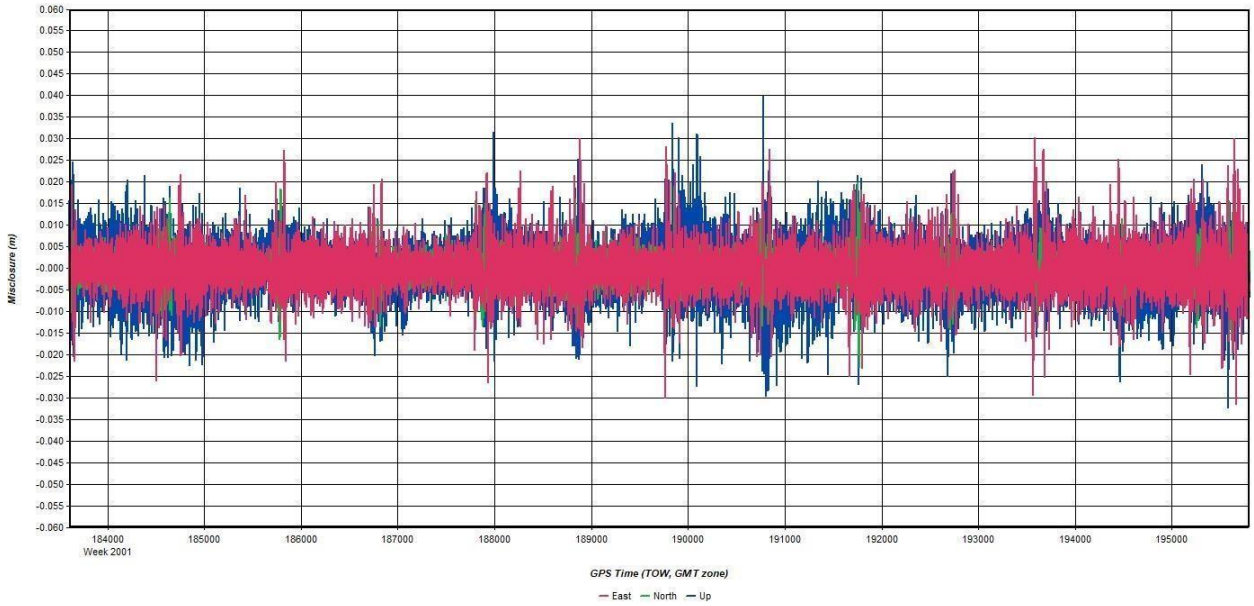
Mission 22. PDOP



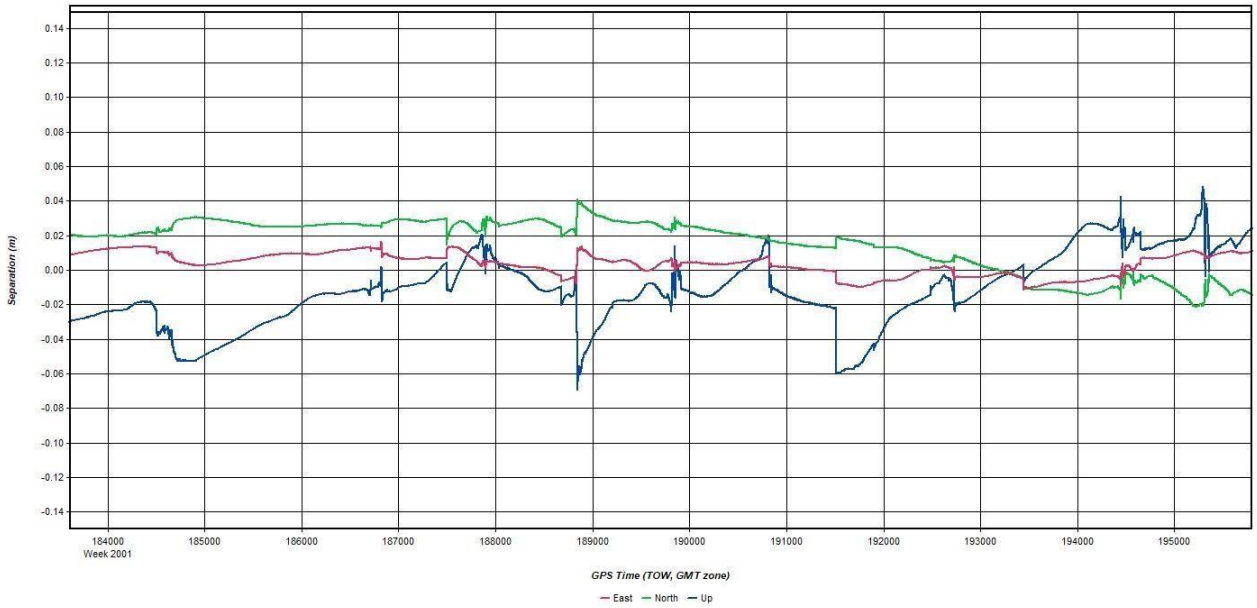
Mission 22. Number of satellites



Mission 22. GPS misclosure



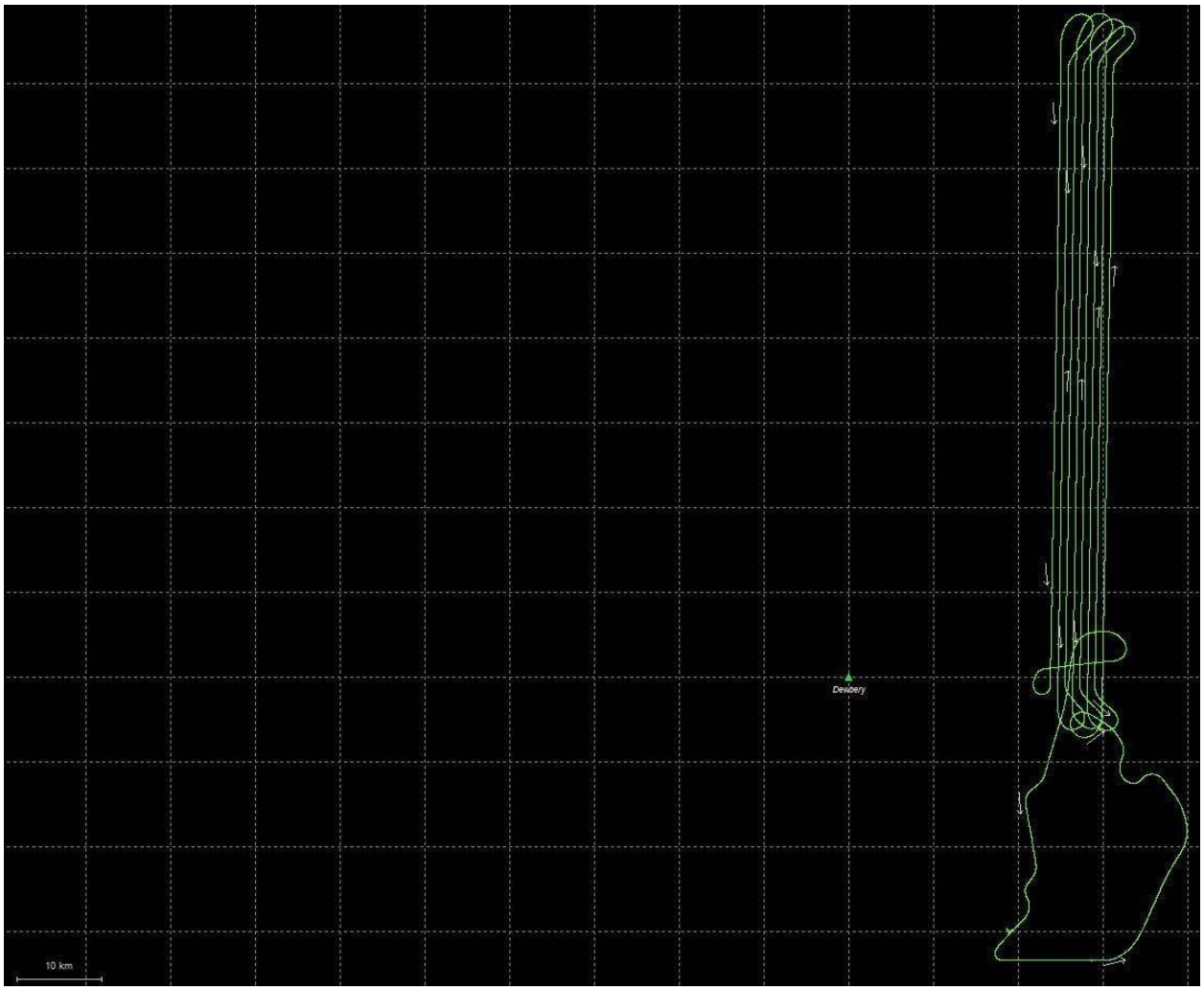
Mission 22. GPS separation



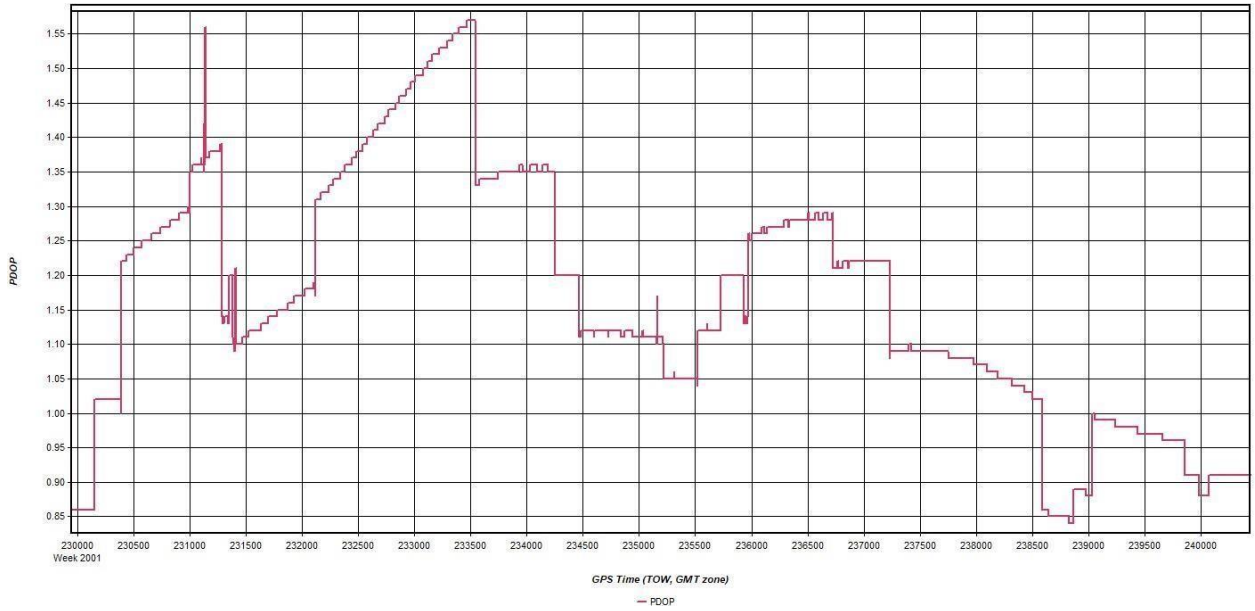
Mission 22. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      30364
        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:       0.0192 (m)
        C/A Code:       0.76 (m)
        L1 Doppler:     0.031 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.008 (m)
        North:  0.022 (m)
        Height: 0.033 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (30358 occurances):
        East:   0.008 (m)
        North:  0.021 (m)
        Height: 0.030 (m)

Quality Number Percentages:
        Q 1:    99.7 %
        Q 2:     0.3 %
        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:        69.603 (km)
        Minimum:        0.028 (km)
        Average:        44.413 (km)
        First Epoch:    34.578 (km)
        Last Epoch:     0.028 (km)
```

Mission 23. Flight line trajectory

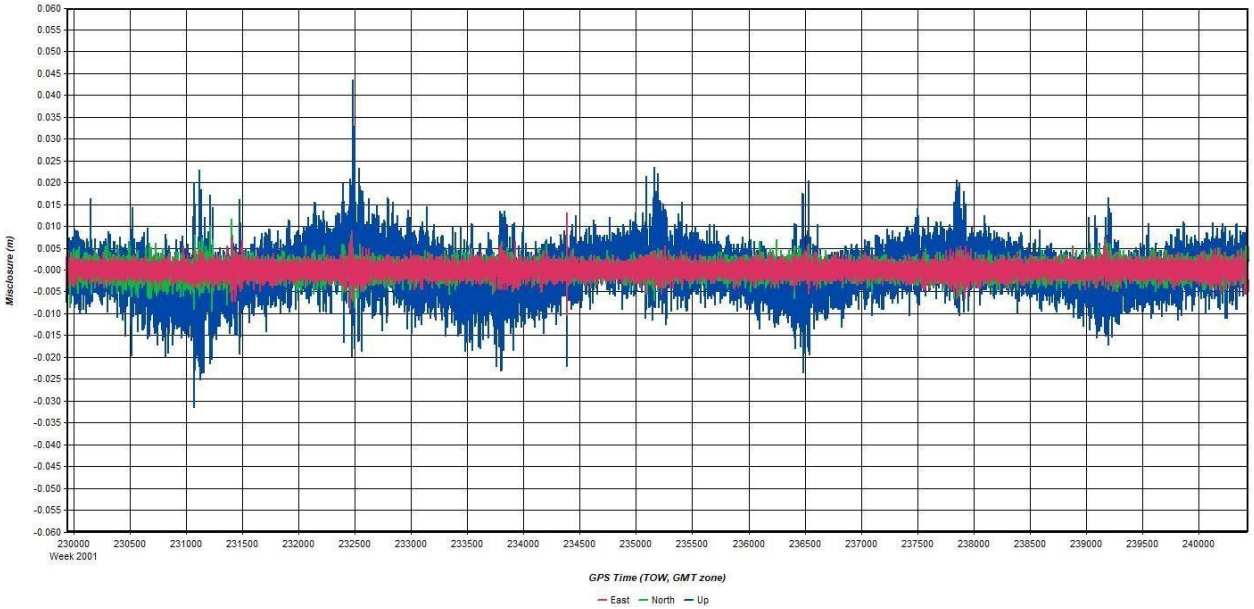


Mission 23. PDOP

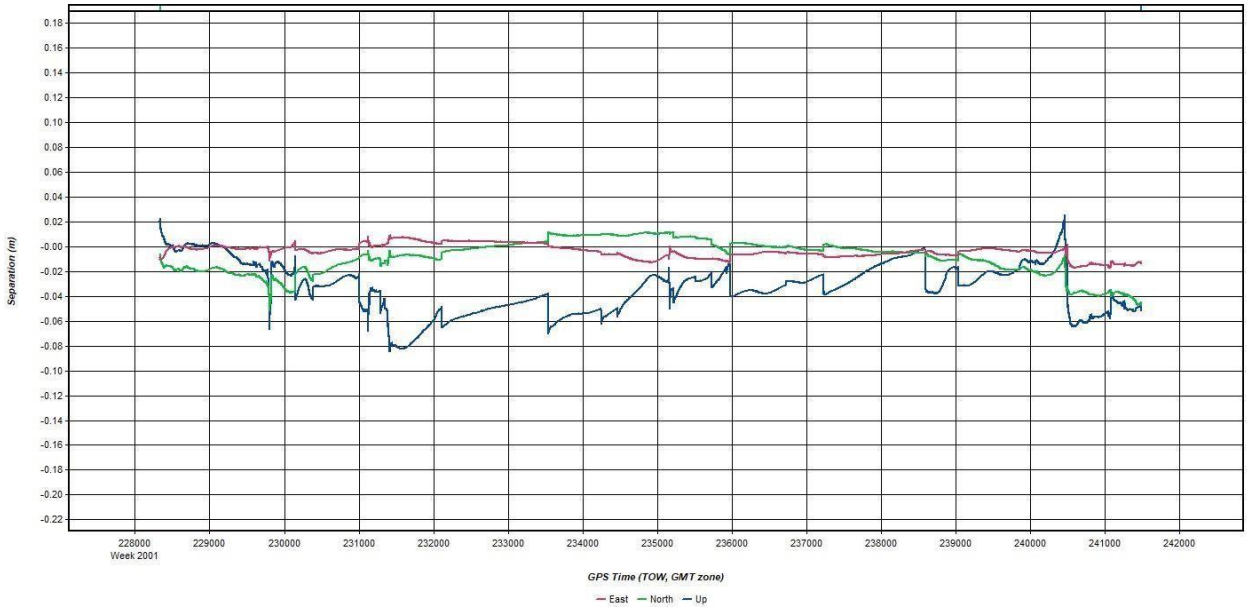


Mission 23. Number of satellites

Mission 23. GPS misclosure



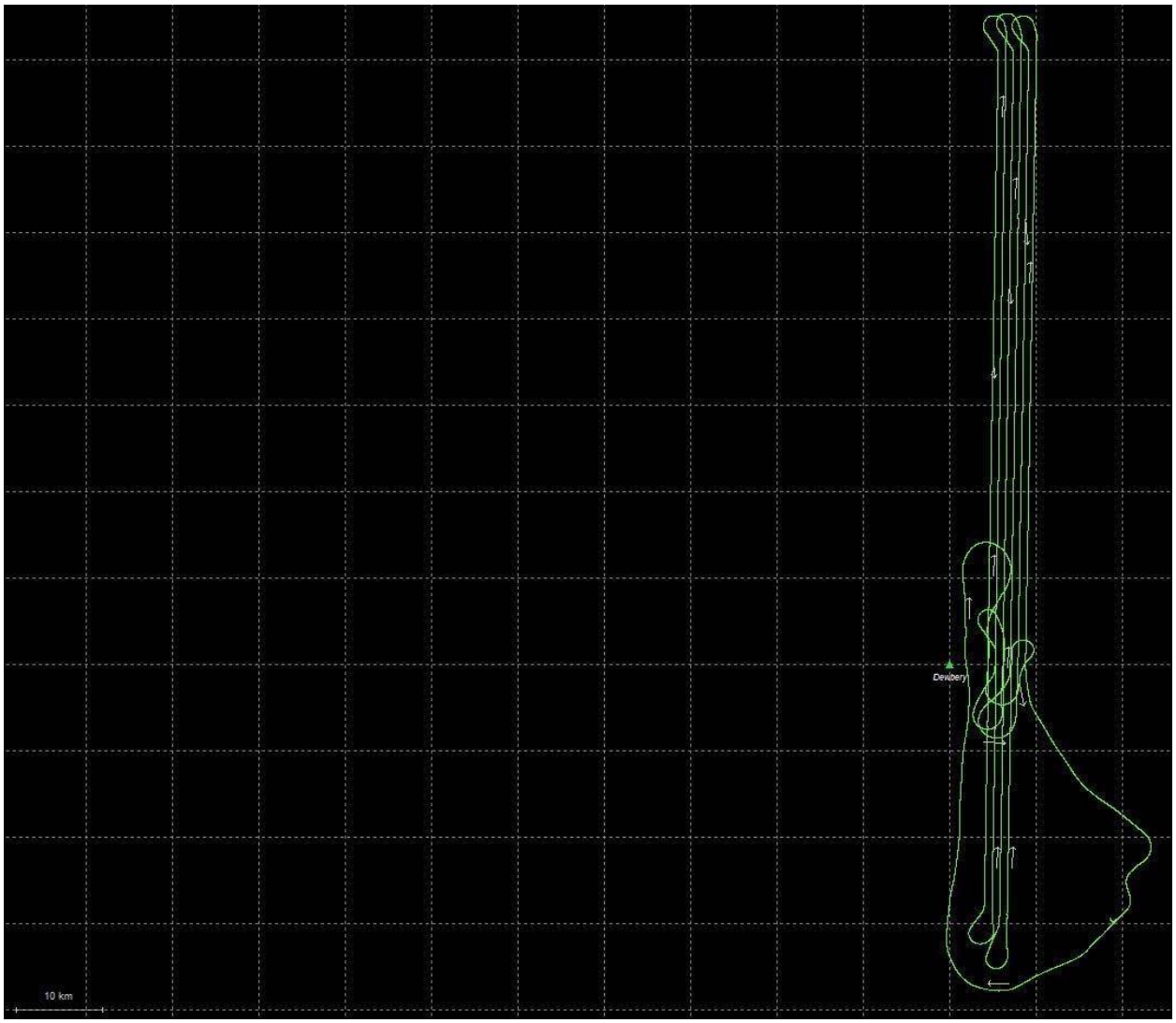
Mission 23. GPS separation



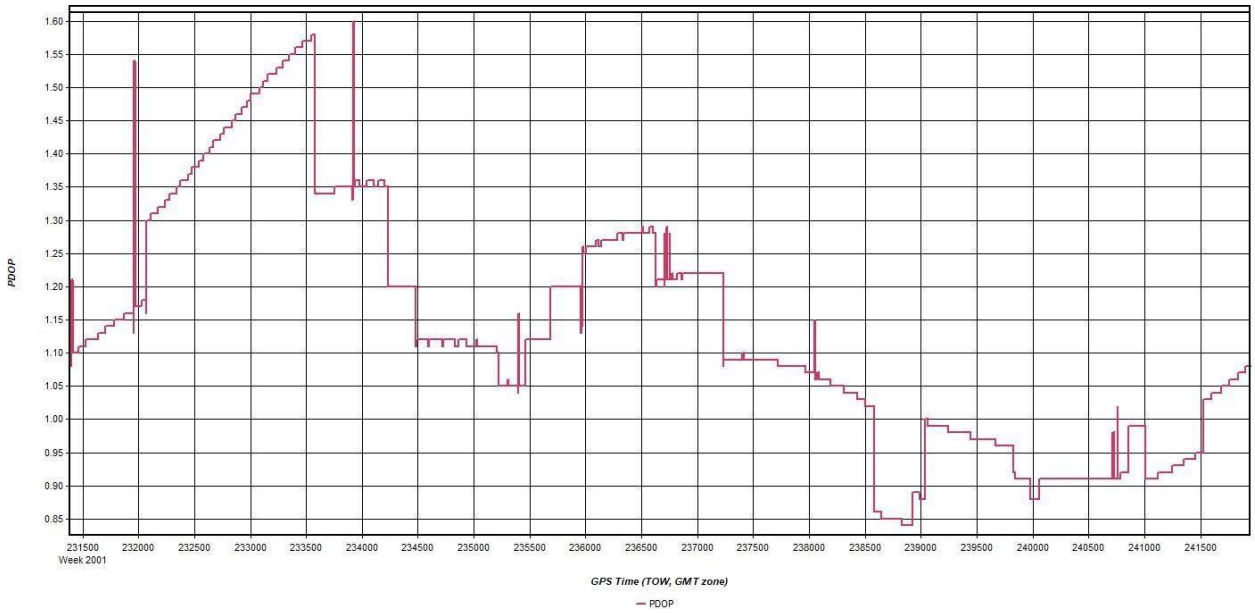
Mission 23. Processing summary

```
          Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      26613
        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:       0.0197 (m)
        C/A Code:       0.94 (m)
        L1 Doppler:     0.031 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.019 (m)
        North:  0.054 (m)
        Height: 0.074 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26304 occurances):
        East:   0.007 (m)
        North:  0.016 (m)
        Height: 0.038 (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:        82.708 (km)
        Minimum:        21.636 (km)
        Average:        45.237 (km)
        First Epoch:    34.567 (km)
        Last Epoch:     35.053 (km)
```

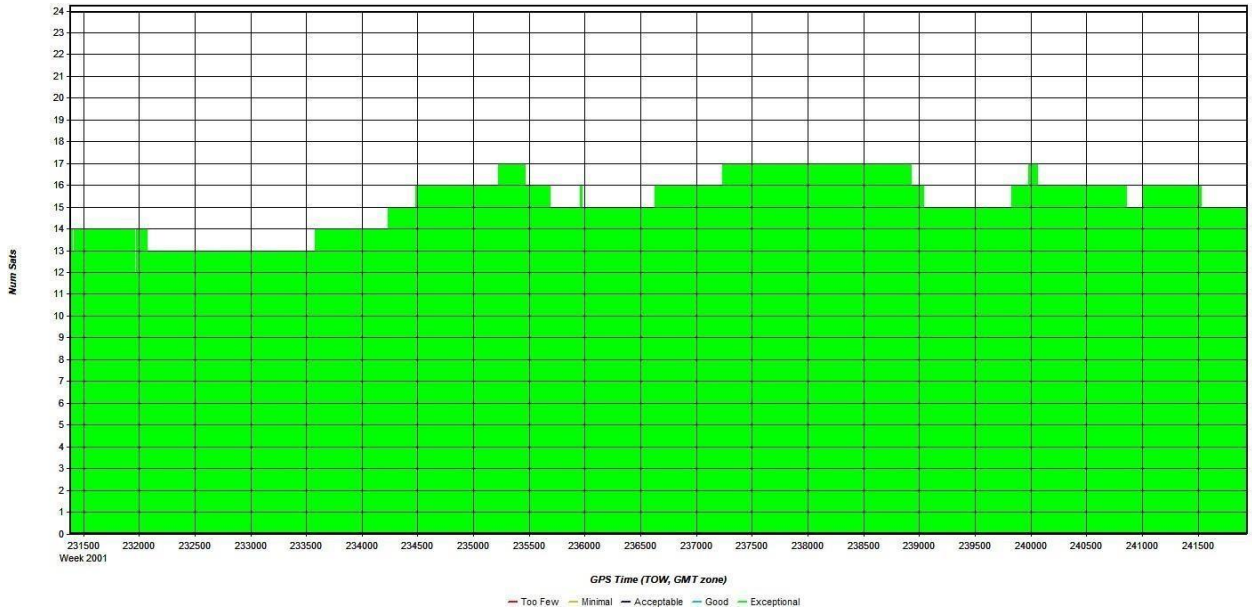
Mission 24. Flight line trajectory



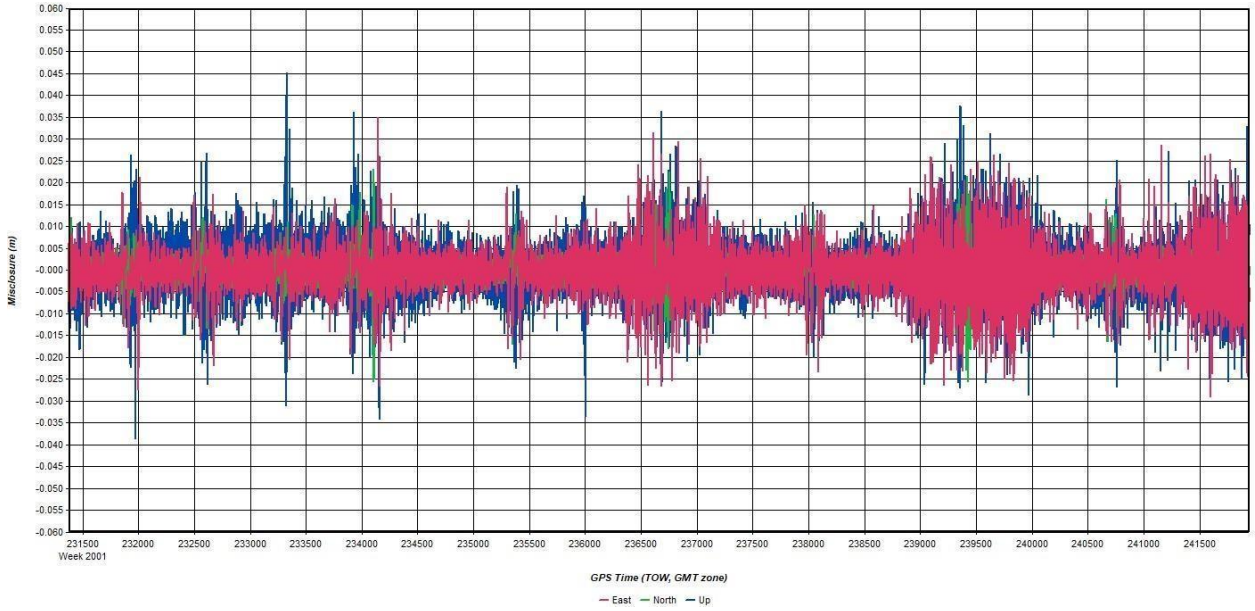
Mission 24. PDOP



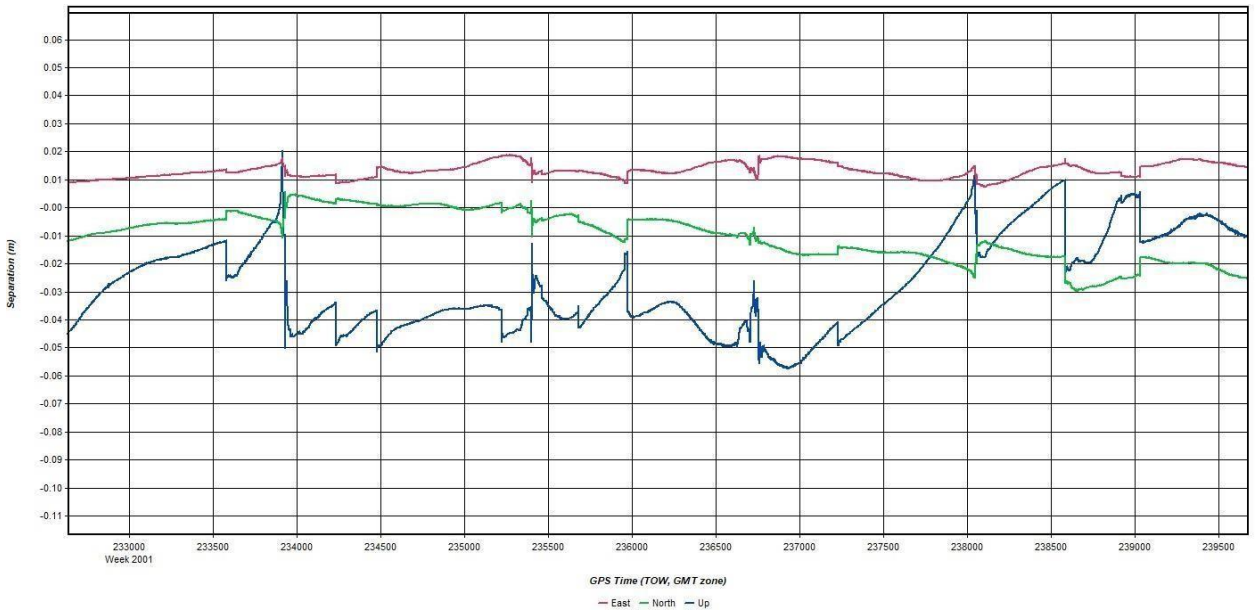
Mission 24. Number of satellites



Mission 24. GPS misclosure



Mission 24. GPS separation



Mission 24. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 26834
- 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: 0.0211 (m)
- C/A Code: 1.03 (m)
- L1 Doppler: 0.030 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.016 (m)
- North: 0.026 (m)
- Height: 0.038 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26828 occurances):
- East: 0.011 (m)
- North: 0.021 (m)
- Height: 0.034 (m)

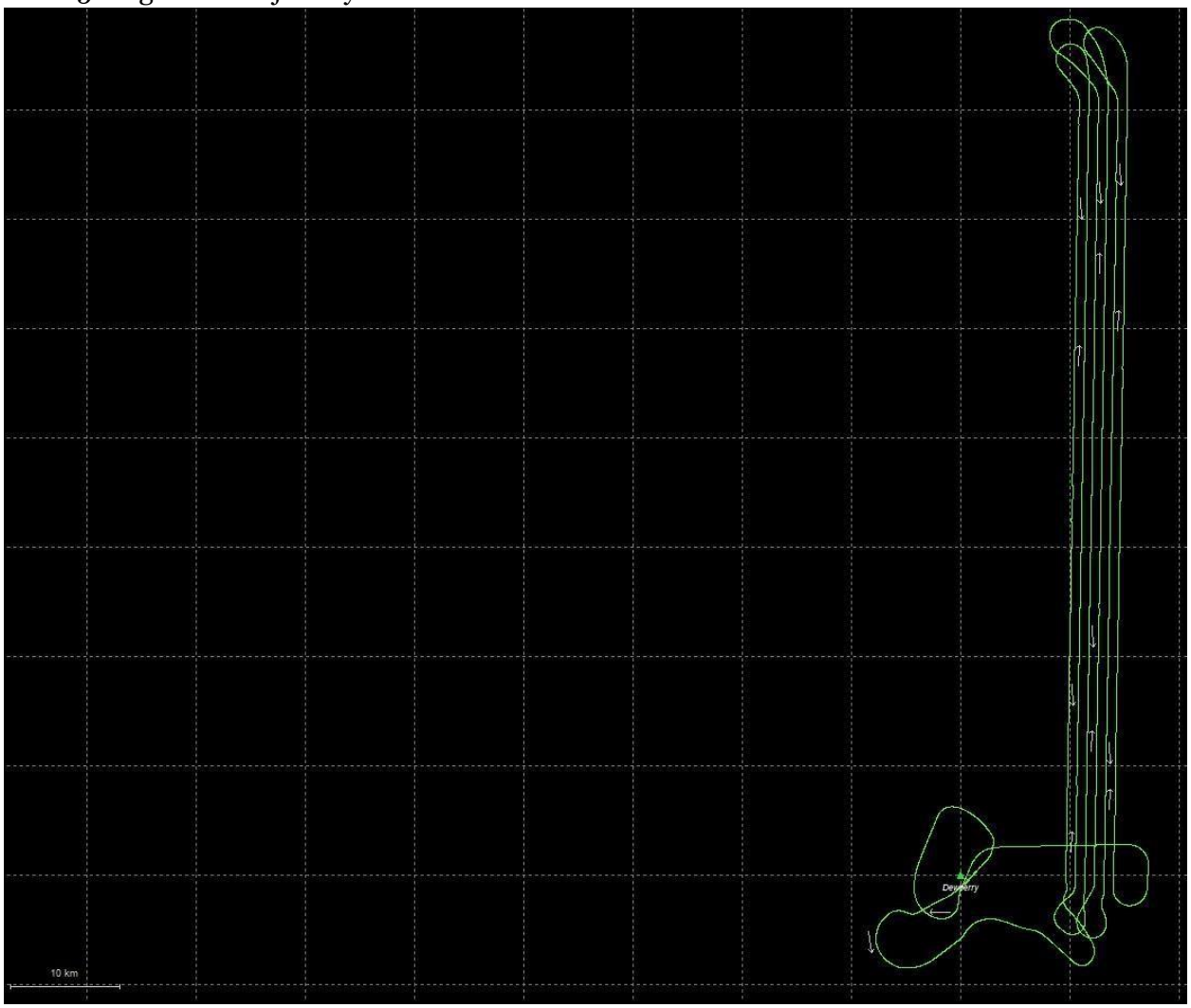
Quality Number Percentages:
- Q 1: 99.9 %
- Q 2: 0.1 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

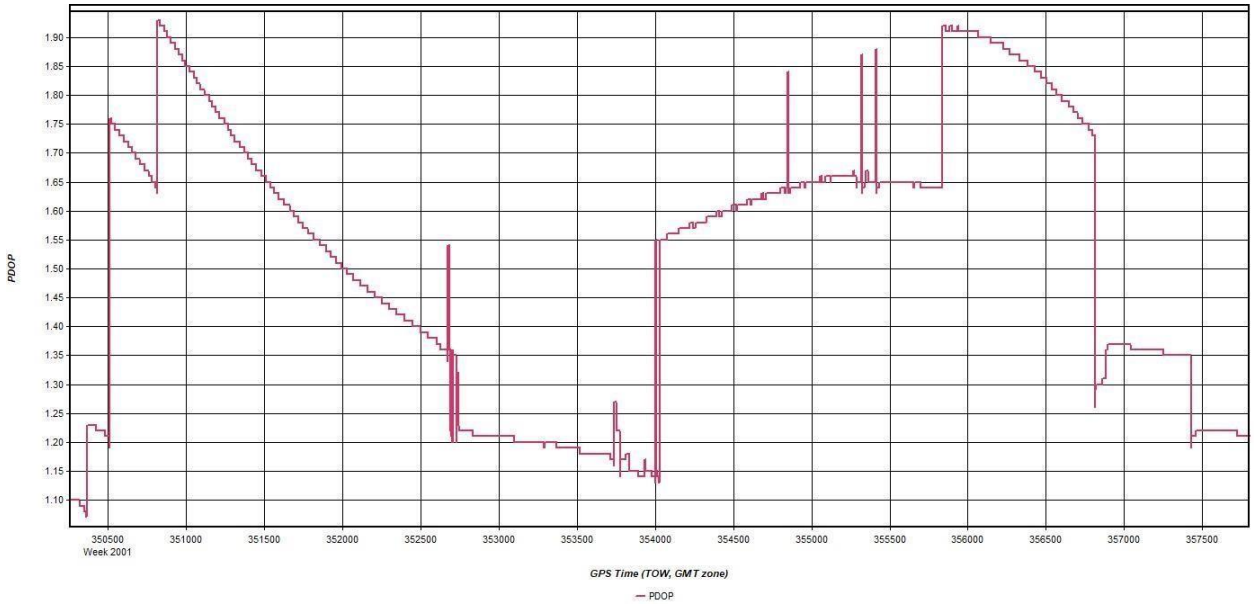
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 75.105 (km)
- Minimum: 1.860 (km)
- Average: 29.788 (km)
- First Epoch: 34.581 (km)
- Last Epoch: 34.613 (km)

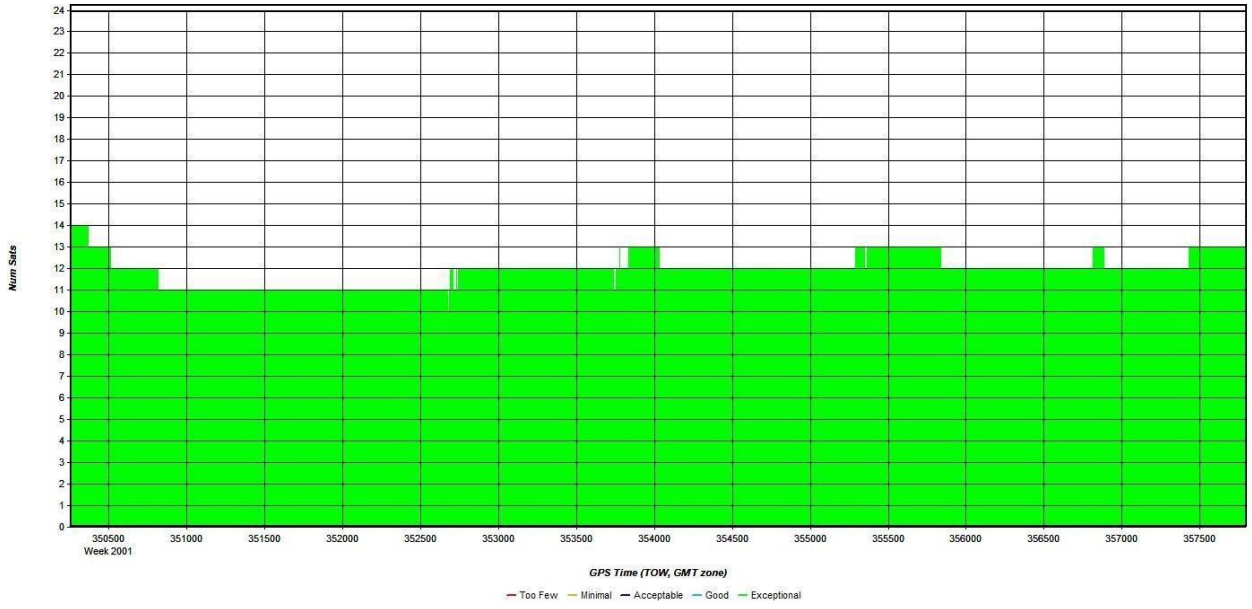
Mission 25. Flight line trajectory



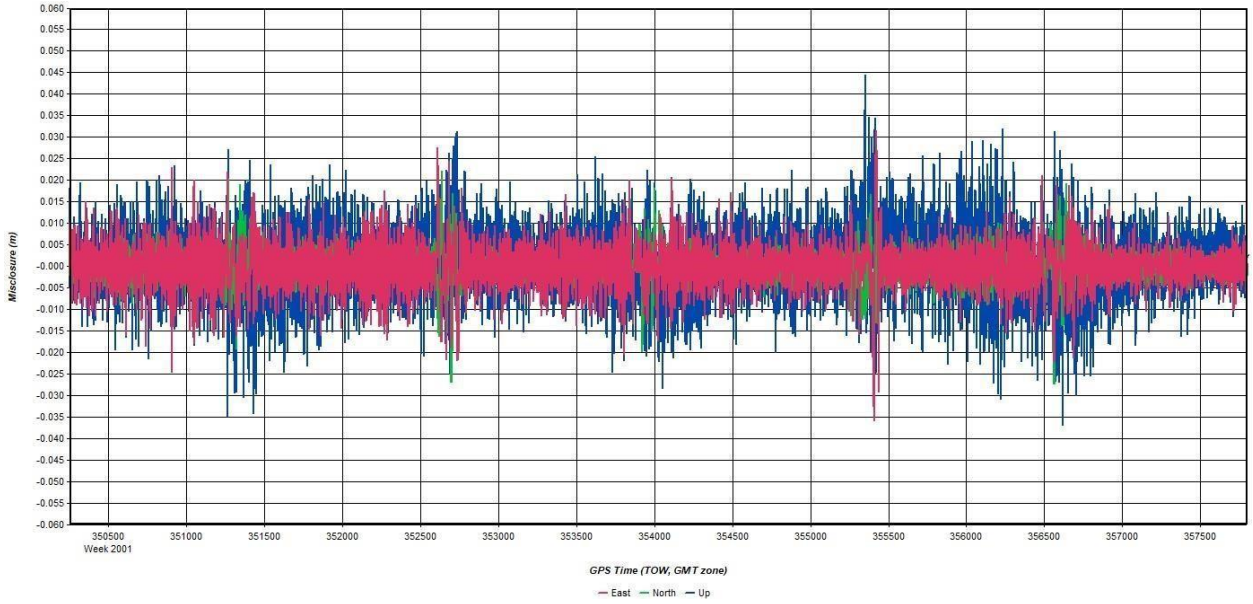
Mission 25. PDOP



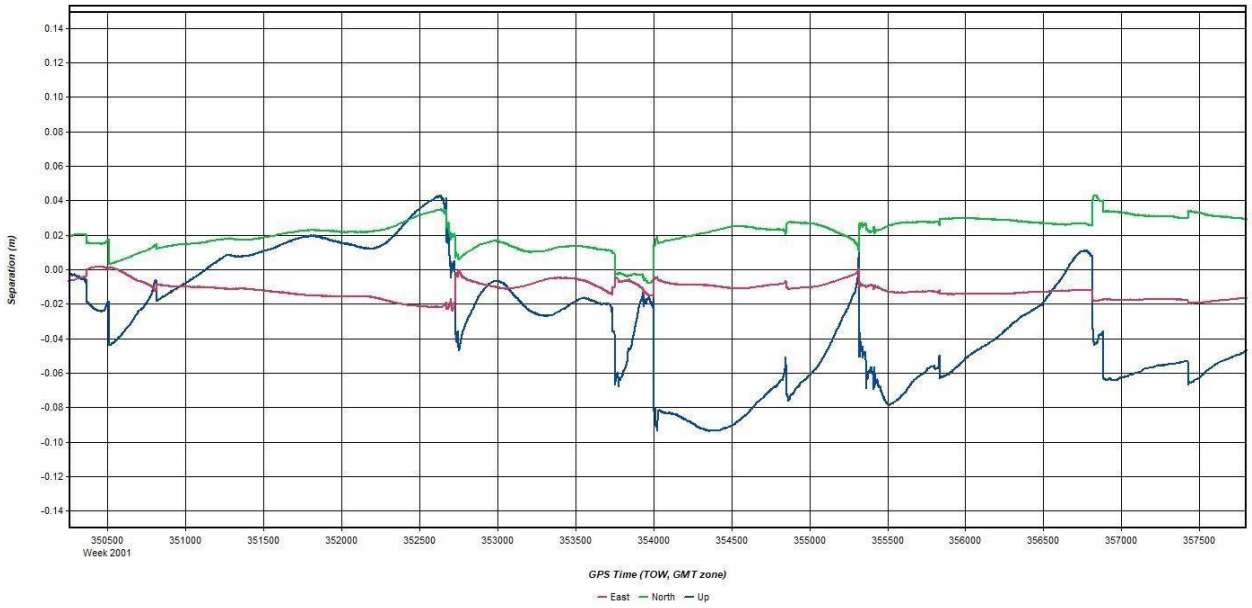
Mission 25. Number of satellites



Mission 25. GPS misclosure



Mission 25. GPS separation



Mission 25. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 20497
- 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: 0.0247 (m)
- C/A Code: 0.85 (m)
- L1 Doppler: 0.029 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.013 (m)
- North: 0.023 (m)
- Height: 0.041 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (20492 occurances):
- East: 0.012 (m)
- North: 0.023 (m)
- Height: 0.041 (m)

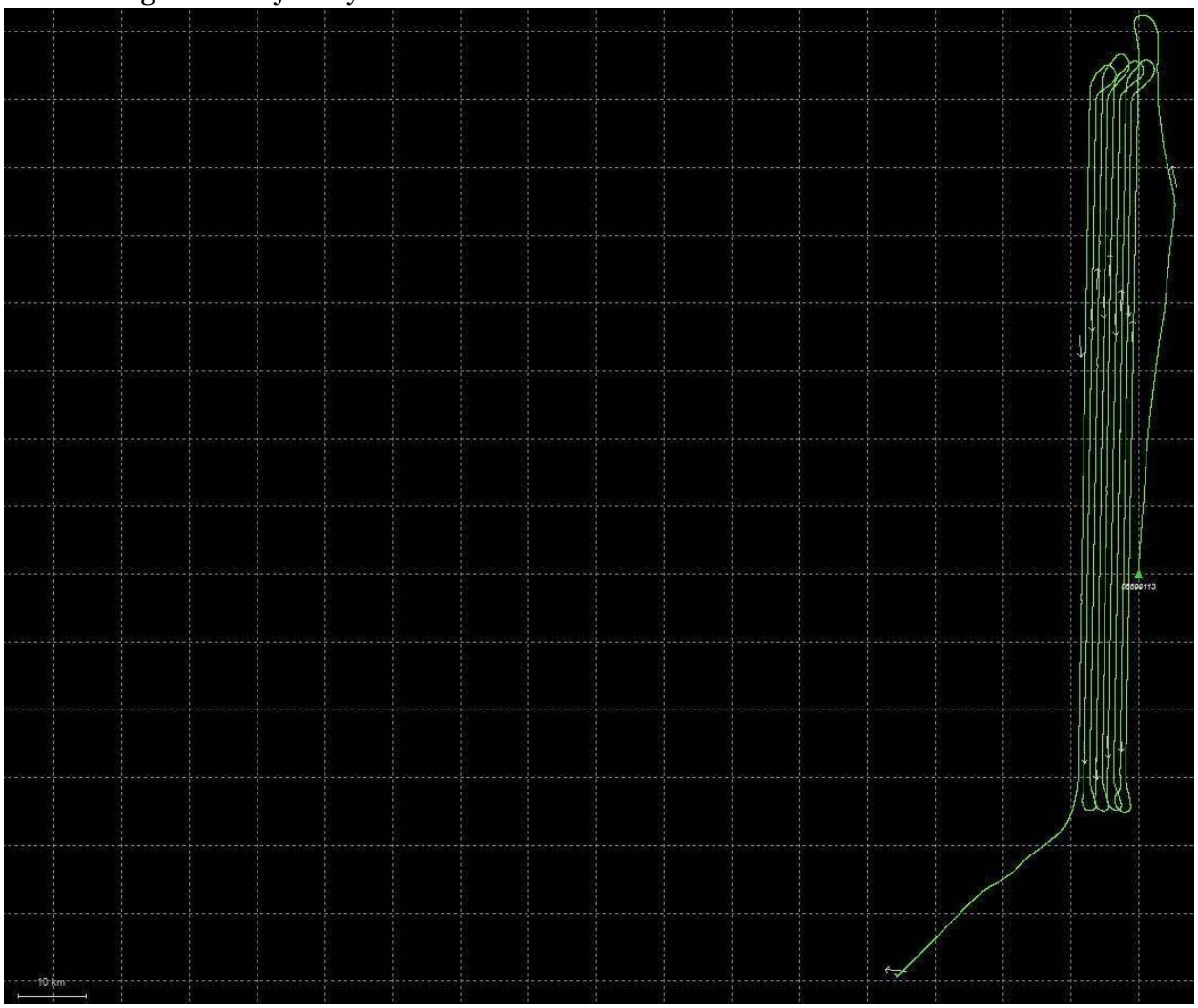
Quality Number Percentages:
- Q 1: 99.9 %
- Q 2: 0.1 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

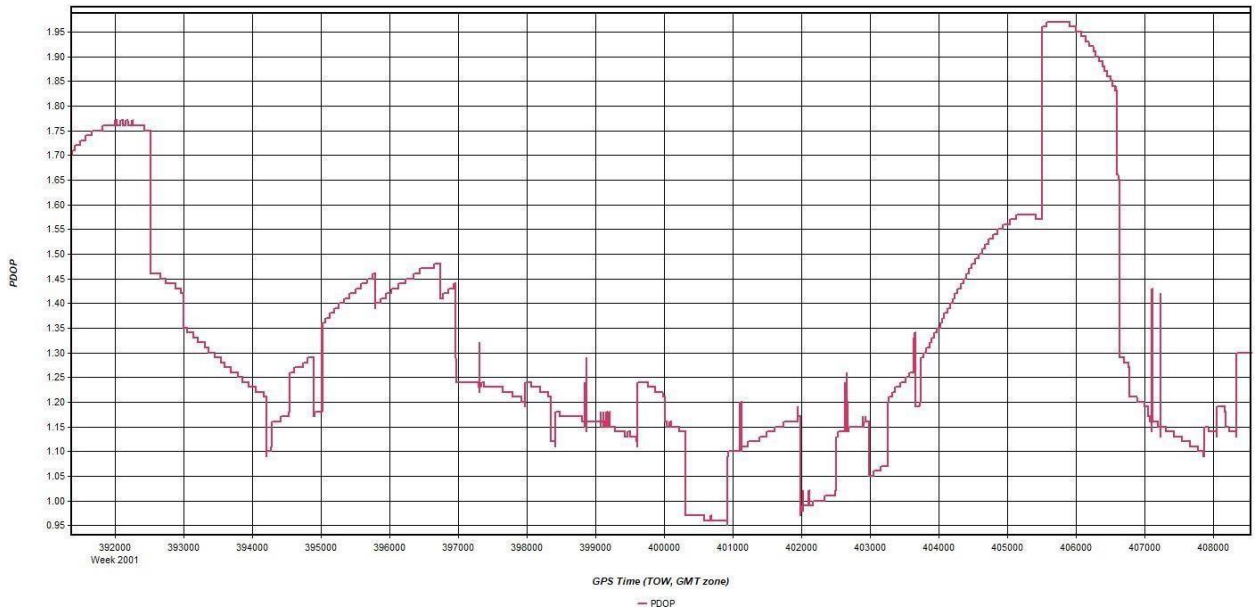
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 78.177 (km)
- Minimum: 0.539 (km)
- Average: 31.329 (km)
- First Epoch: 0.905 (km)
- Last Epoch: 0.773 (km)

Mission 26. Flight line trajectory

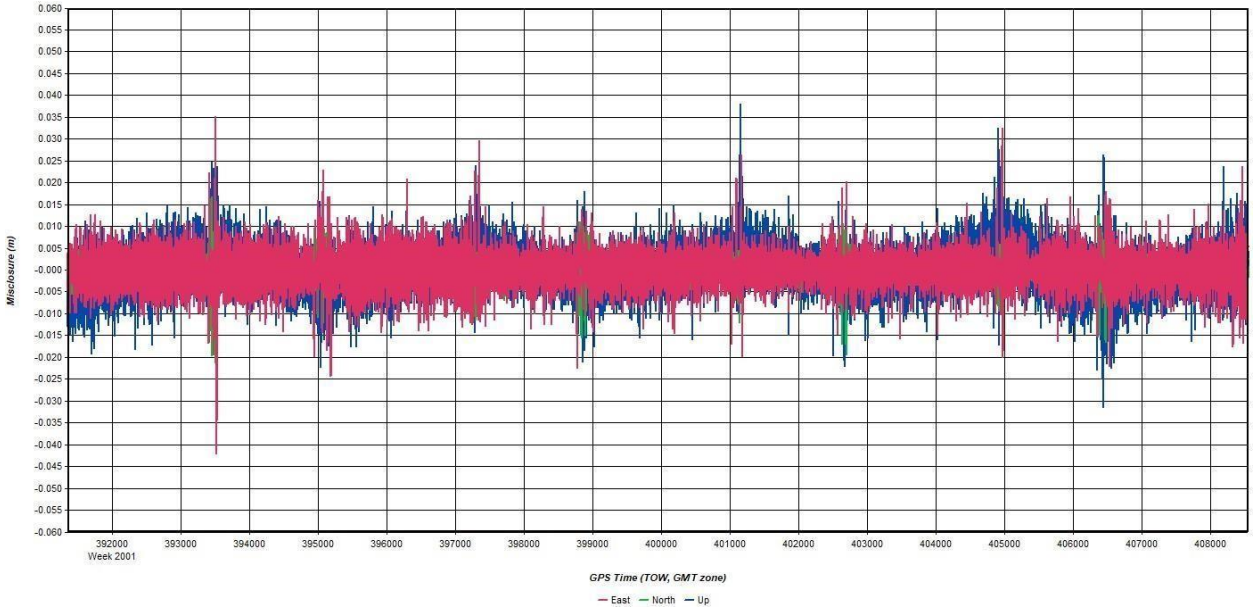


Mission 26. PDOP

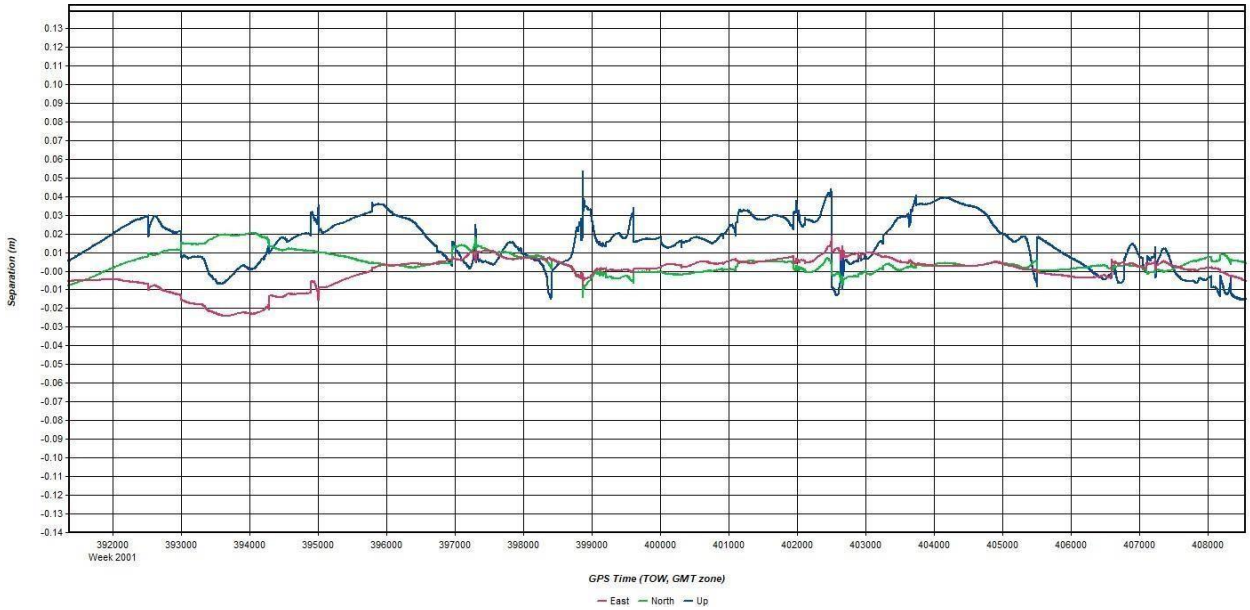


Mission 26. Number of satellites

Mission 26. GPS misclosure



Mission 26. GPS separation



Mission 26. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 39845
- 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: 0.0182 (m)
- C/A Code: 0.35 (m)
- L1 Doppler: 0.030 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.009 (m)
- North: 0.007 (m)
- Height: 0.019 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (39840 occurances):
- East: 0.008 (m)
- North: 0.007 (m)
- Height: 0.019 (m)

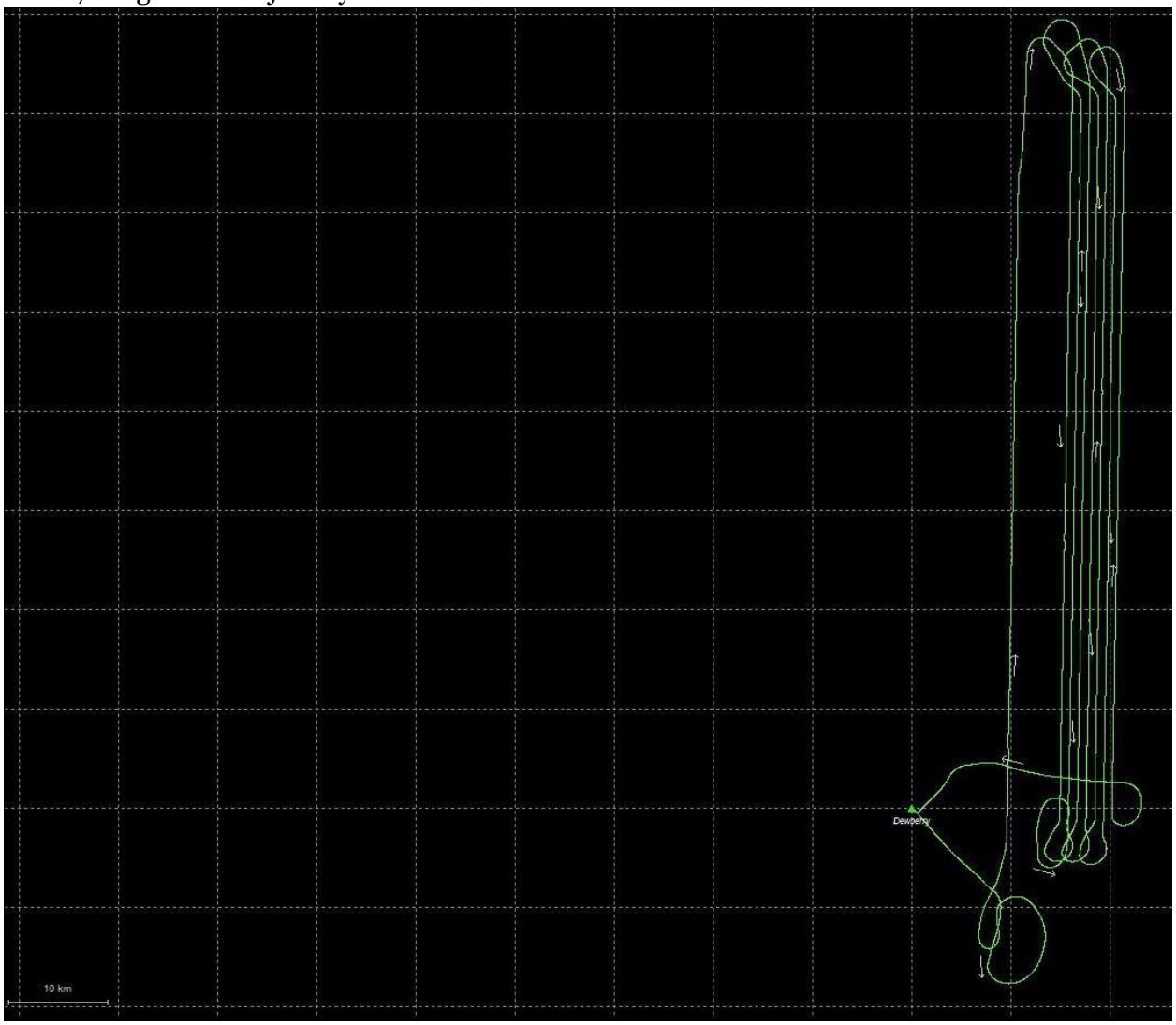
Quality Number Percentages:
- Q 1: 100.0 %
- Q 2: 0.0 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

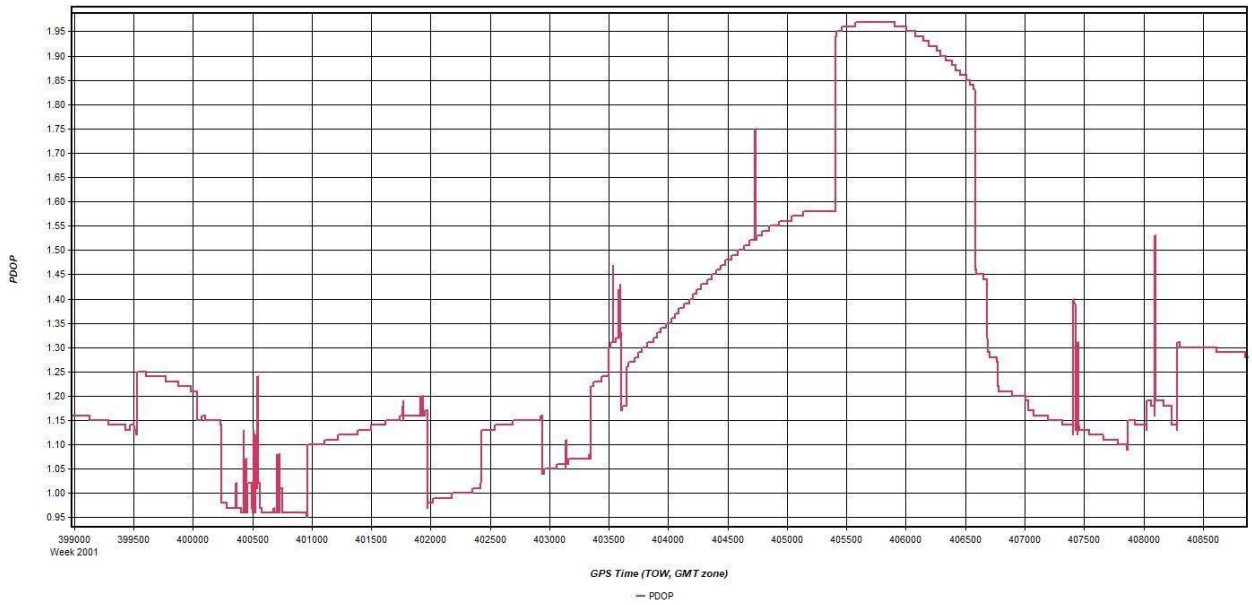
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 81.179 (km)
- Minimum: 0.036 (km)
- Average: 33.480 (km)
- First Epoch: 0.042 (km)
- Last Epoch: 68.198 (km)

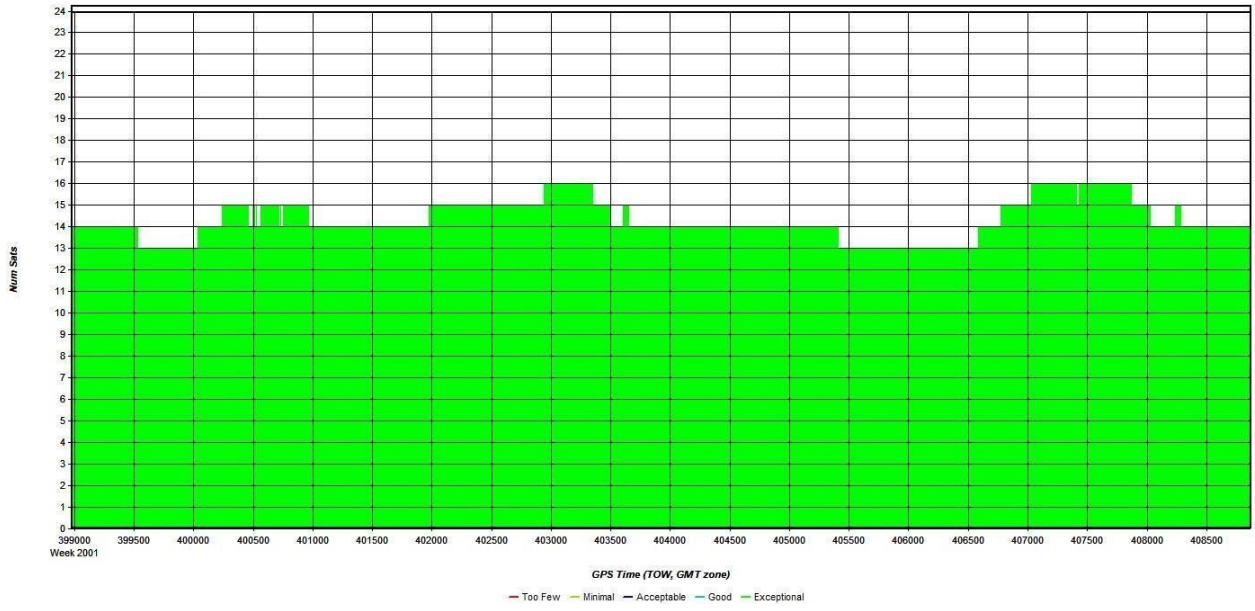
Mission 27. Flight line trajectory



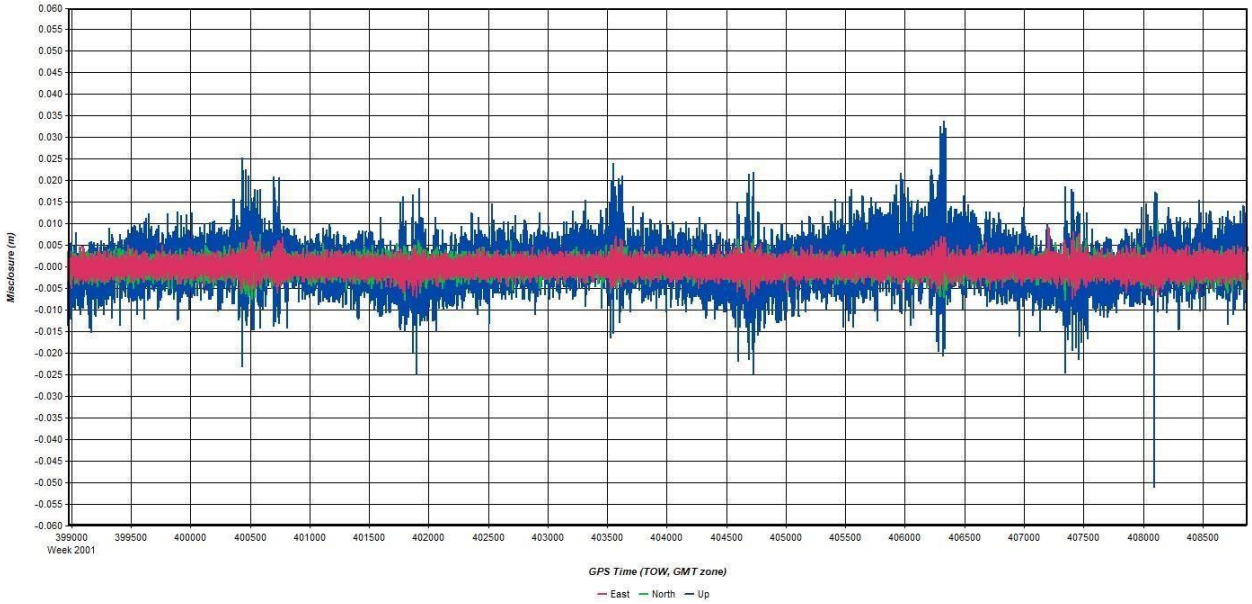
Mission 27. PDOP



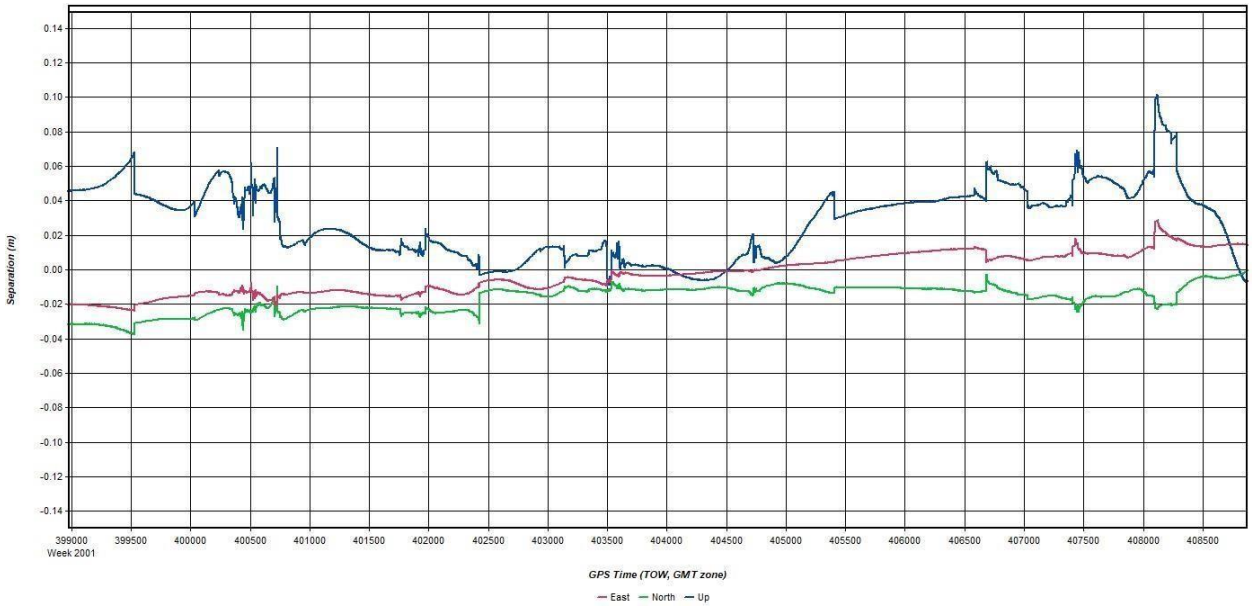
Mission 27. Number of satellites



Mission 27. GPS misclosure



Mission 27. GPS separation



Mission 27. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 26355
- 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: 0.0177 (m)
- C/A Code: 0.90 (m)
- L1 Doppler: 0.032 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.013 (m)
- North: 0.018 (m)
- Height: 0.032 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26351 occurances):
- East: 0.013 (m)
- North: 0.018 (m)
- Height: 0.032 (m)

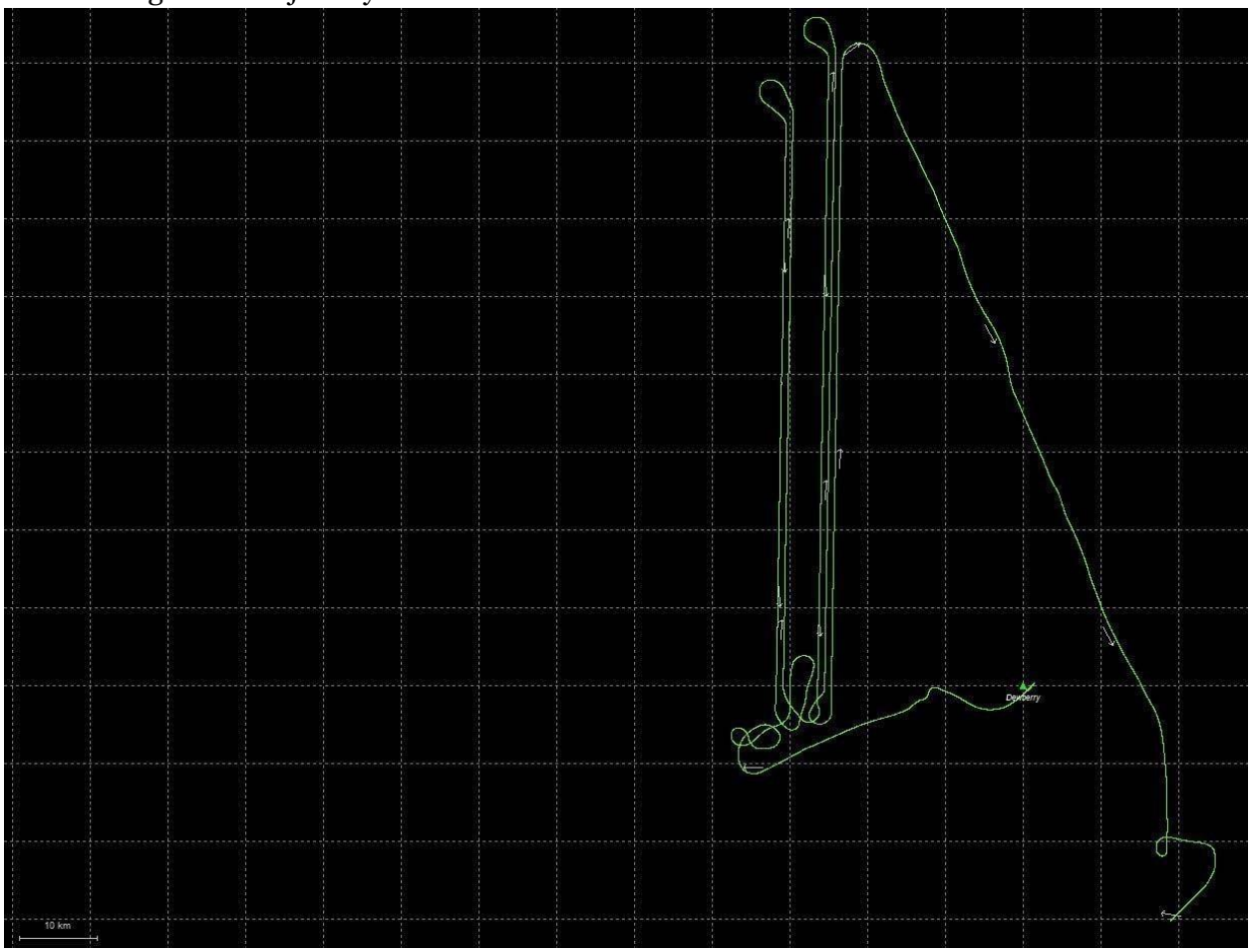
Quality Number Percentages:
- Q 1: 99.9 %
- Q 2: 0.1 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

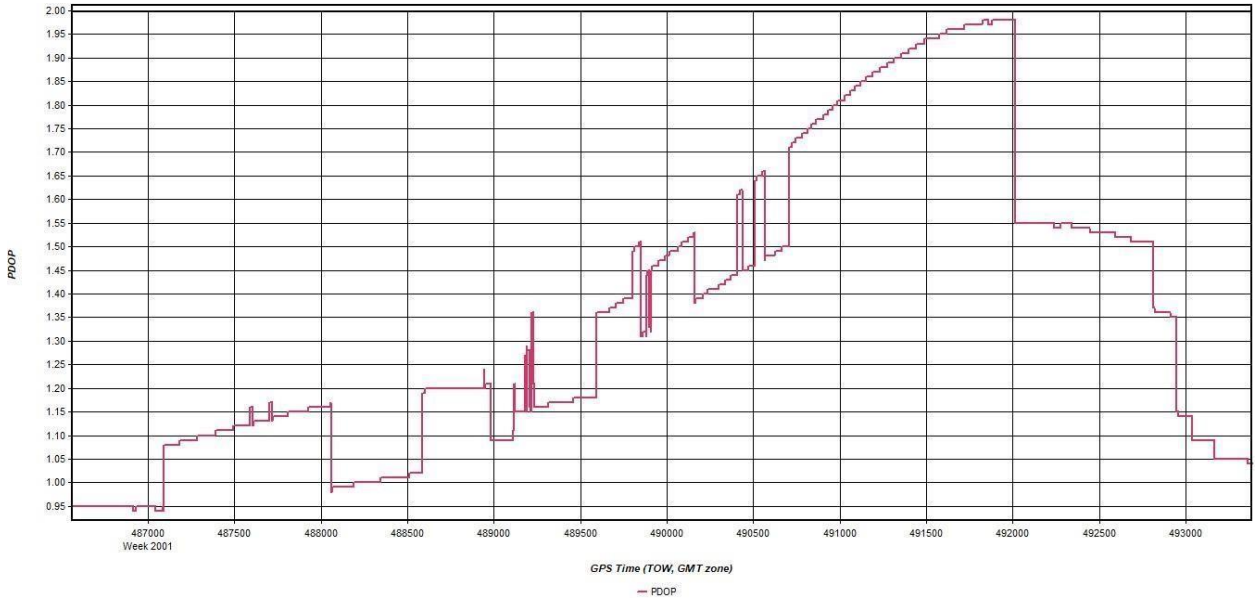
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 79.987 (km)
- Minimum: 0.018 (km)
- Average: 36.915 (km)
- First Epoch: 0.018 (km)
- Last Epoch: 0.778 (km)

Mission 28. Flight line trajectory

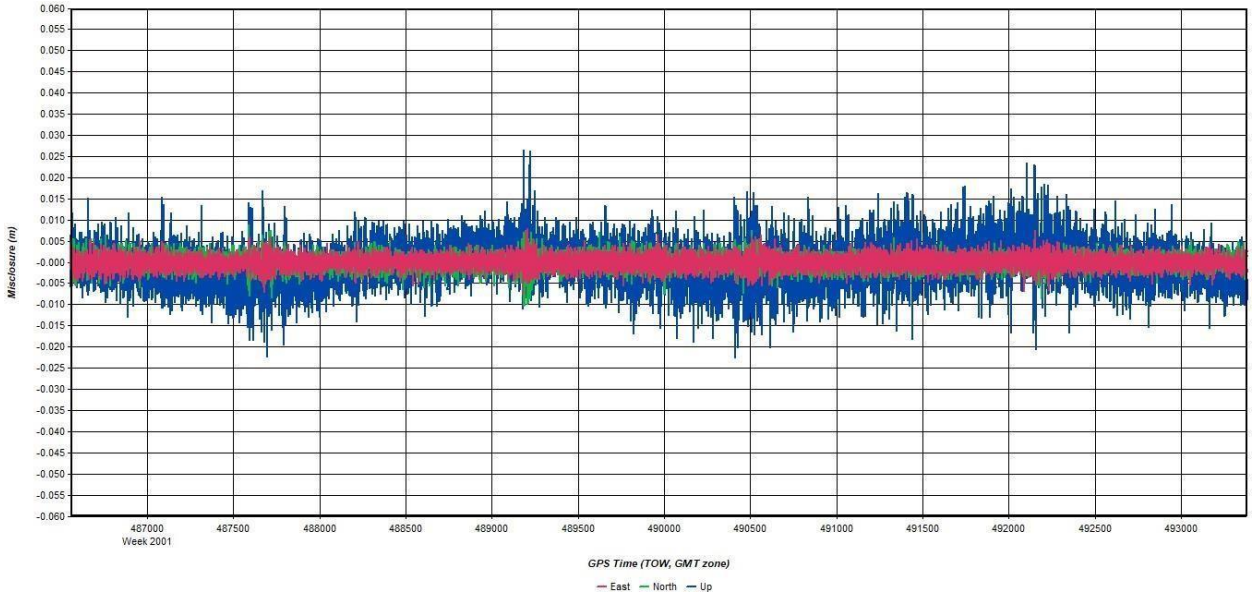


Mission 28. PDOP

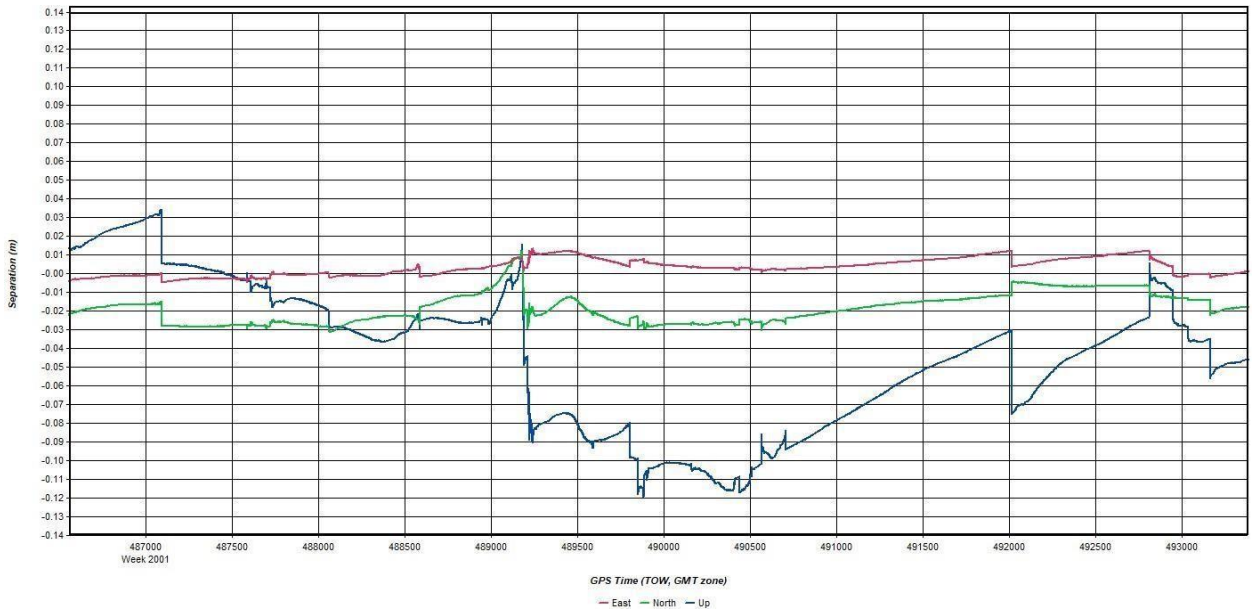


Mission 28. Number of satellites

Mission 28. GPS misclosure



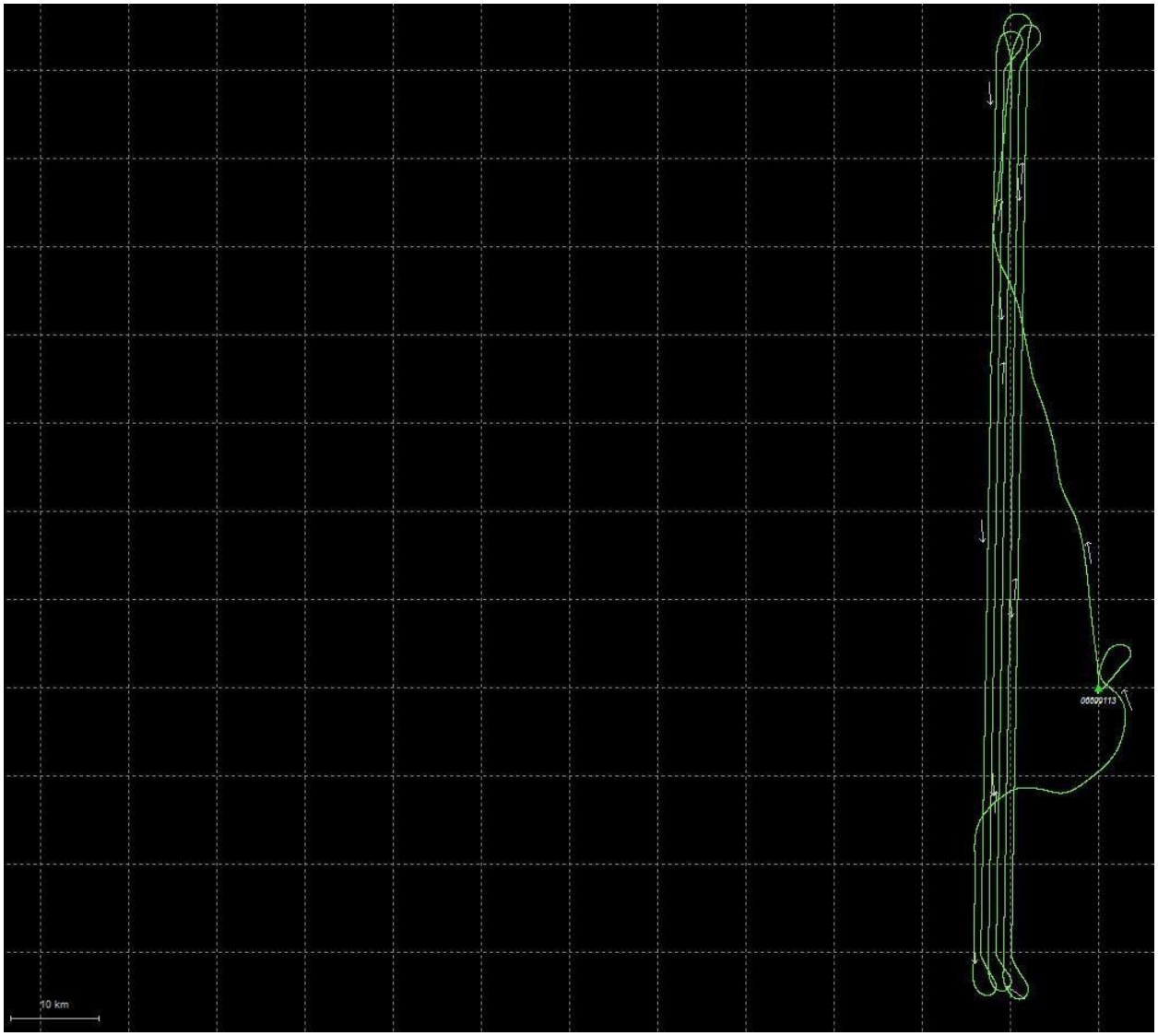
Mission 28. GPS separation



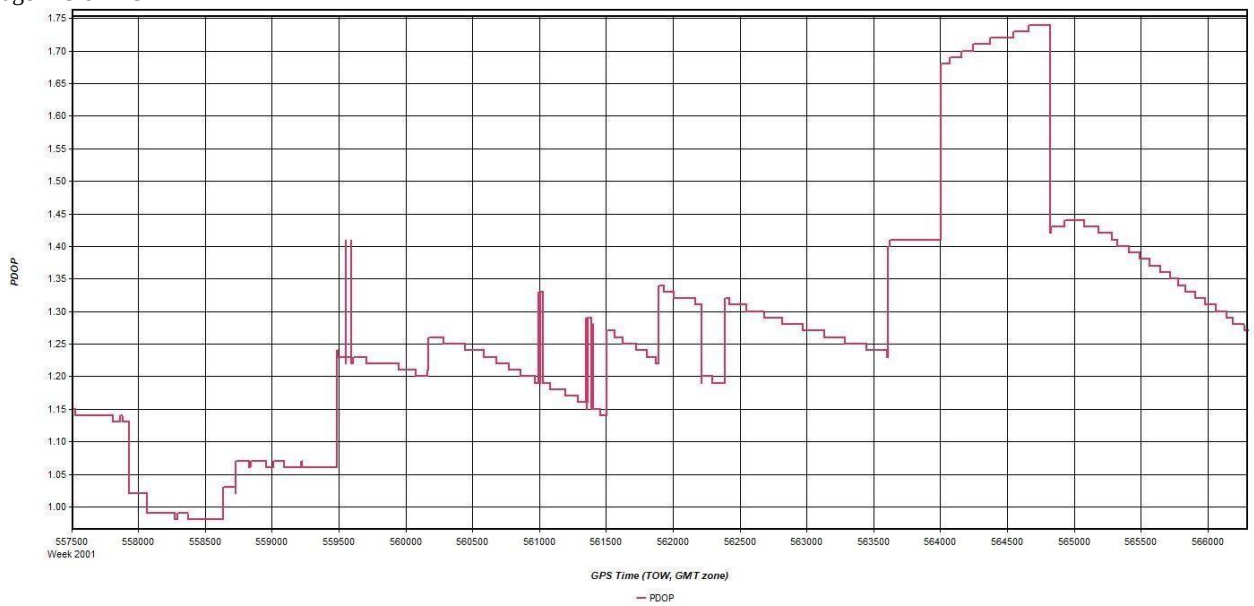
Mission 28. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      23601
        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:       0.0213 (m)
        C/A Code:       0.85 (m)
        L1 Doppler:     0.032 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.007 (m)
        North:  0.023 (m)
        Height: 0.056 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (23595 occurances):
        East:   0.007 (m)
        North:  0.023 (m)
        Height: 0.055 (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:        88.814 (km)
        Minimum:        0.018 (km)
        Average:        40.709 (km)
        First Epoch:    0.018 (km)
        Last Epoch:     35.120 (km)
```

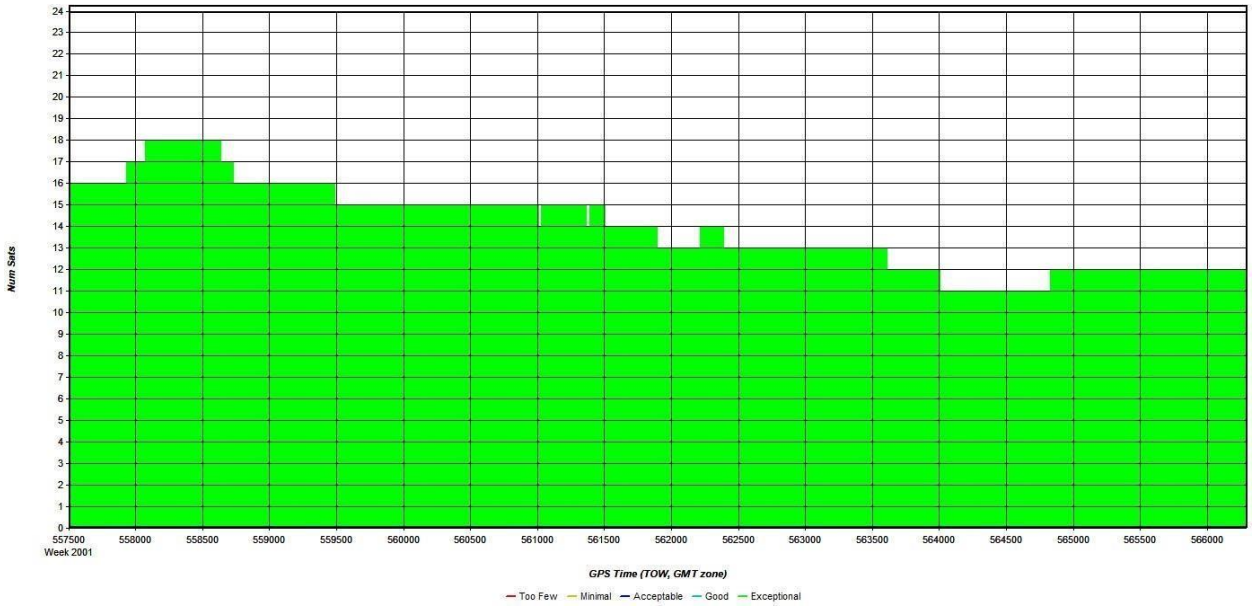
Mission 29. Flight line trajectory



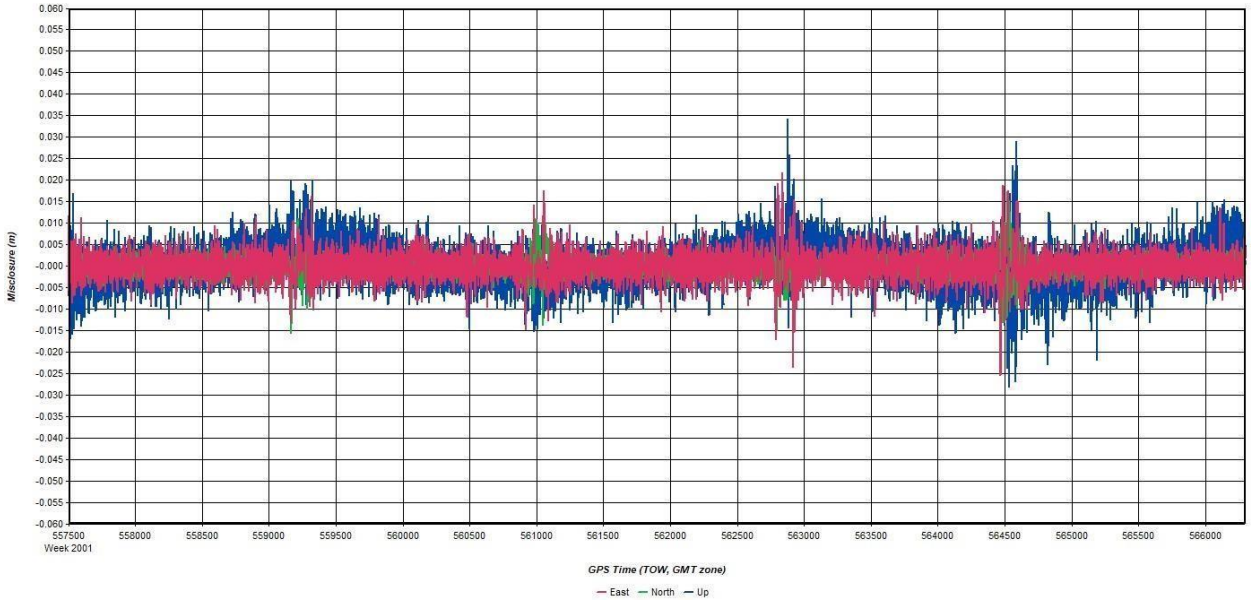
Mission 29. PDOP



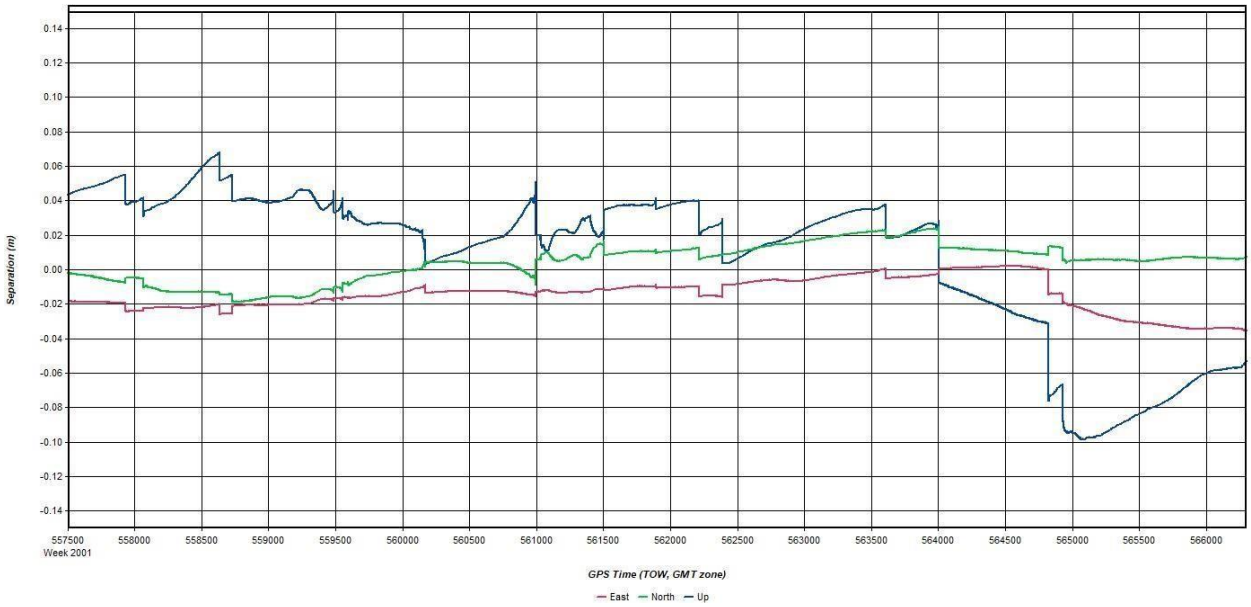
Mission 29. Number of satellites



Mission 29. GPS misclosure



Mission 29. GPS separation



Mission 29. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 23725
- 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: 0.0206 (m)
- C/A Code: 0.34 (m)
- L1 Doppler: 0.028 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.019 (m)
- North: 0.010 (m)
- Height: 0.046 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (23721 occurances):
- East: 0.019 (m)
- North: 0.010 (m)
- Height: 0.046 (m)

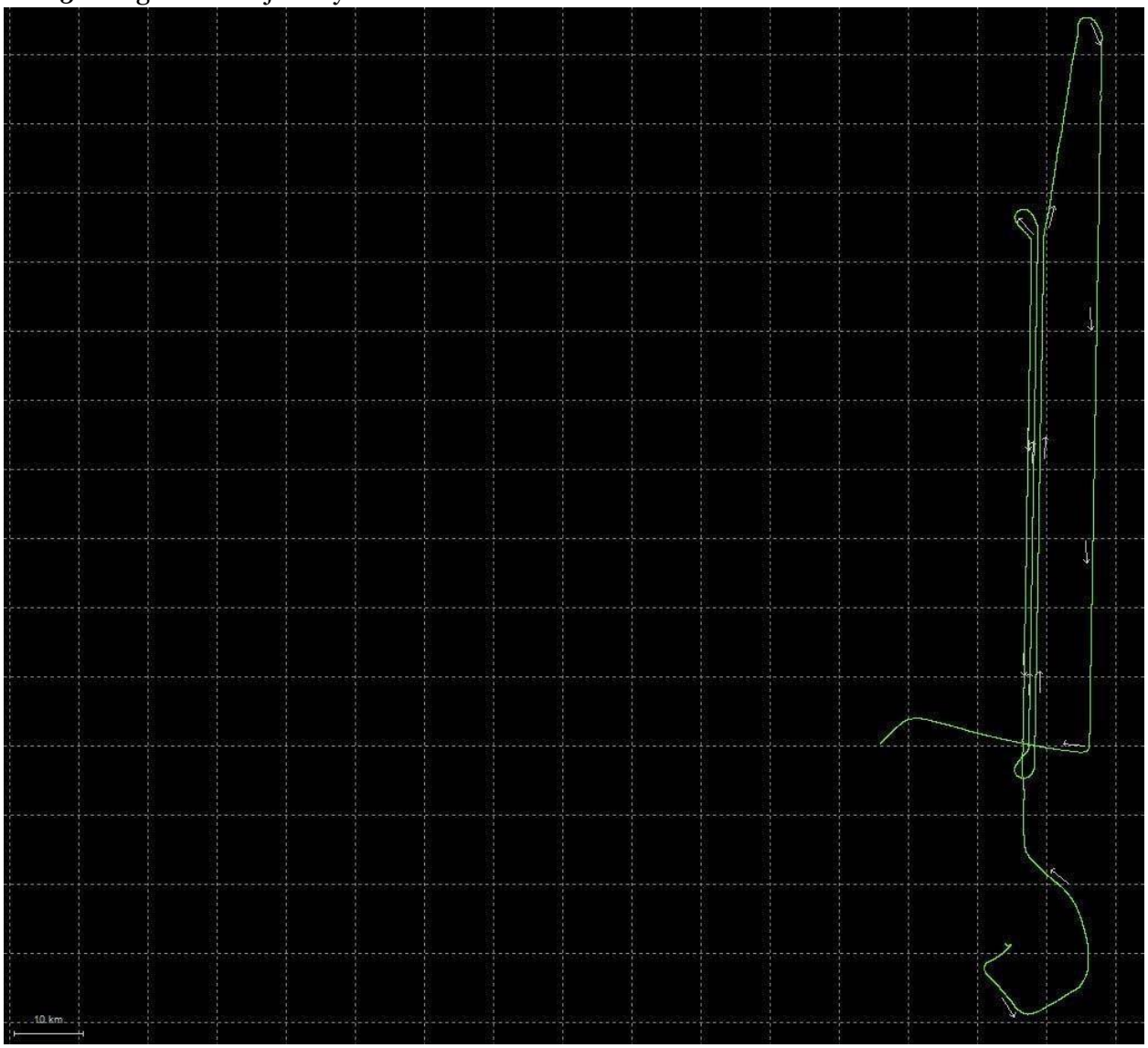
Quality Number Percentages:
- Q 1: 100.0 %
- Q 2: 0.0 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

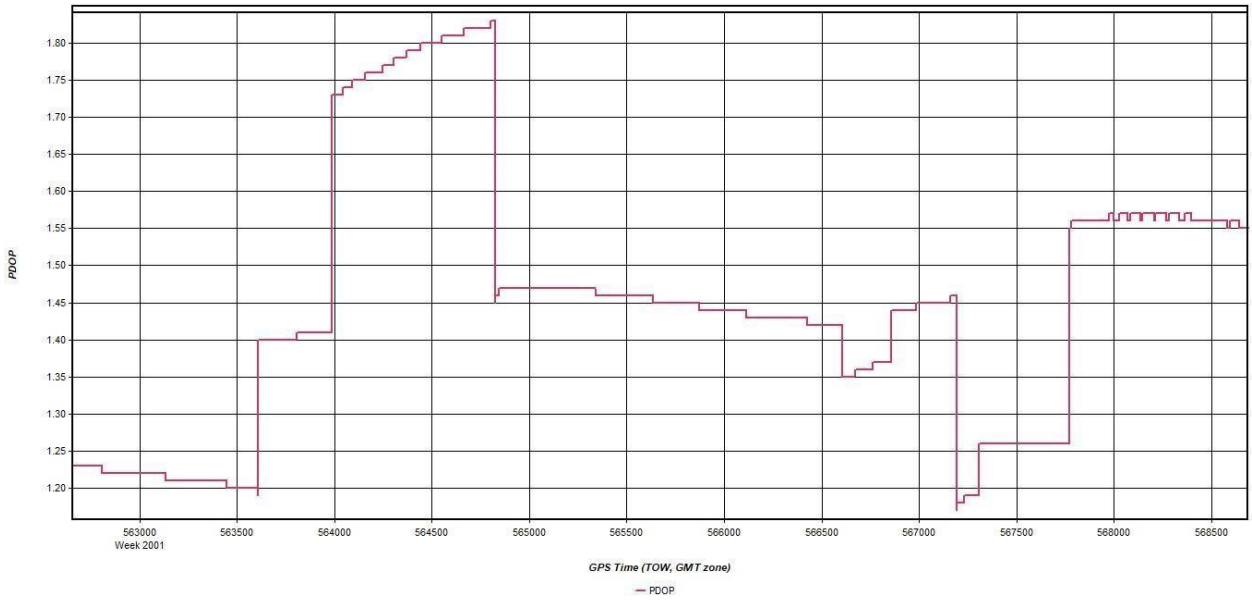
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 76.126 (km)
- Minimum: 0.037 (km)
- Average: 31.675 (km)
- First Epoch: 0.037 (km)
- Last Epoch: 0.209 (km)

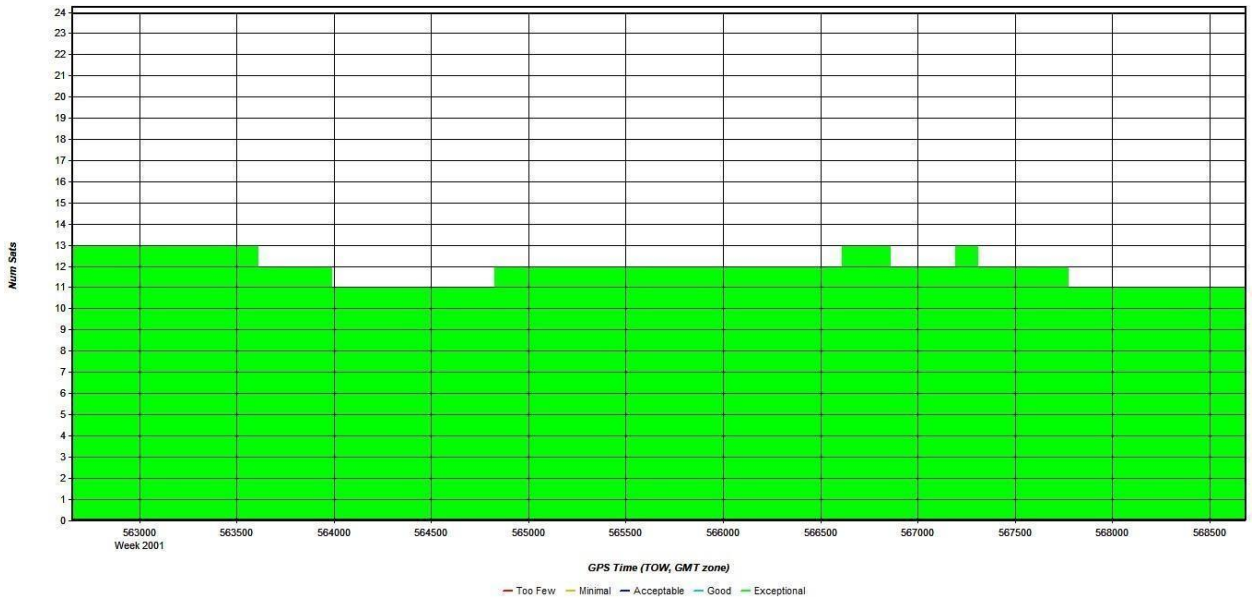
Mission 30. Flight line trajectory



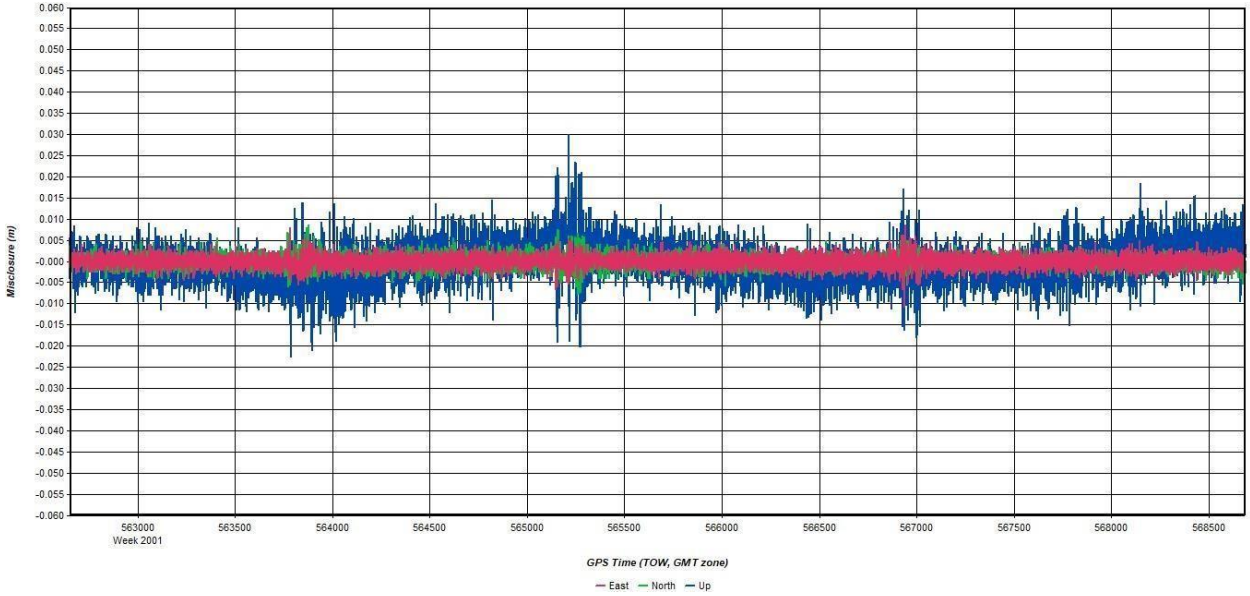
Mission 30. PDOP



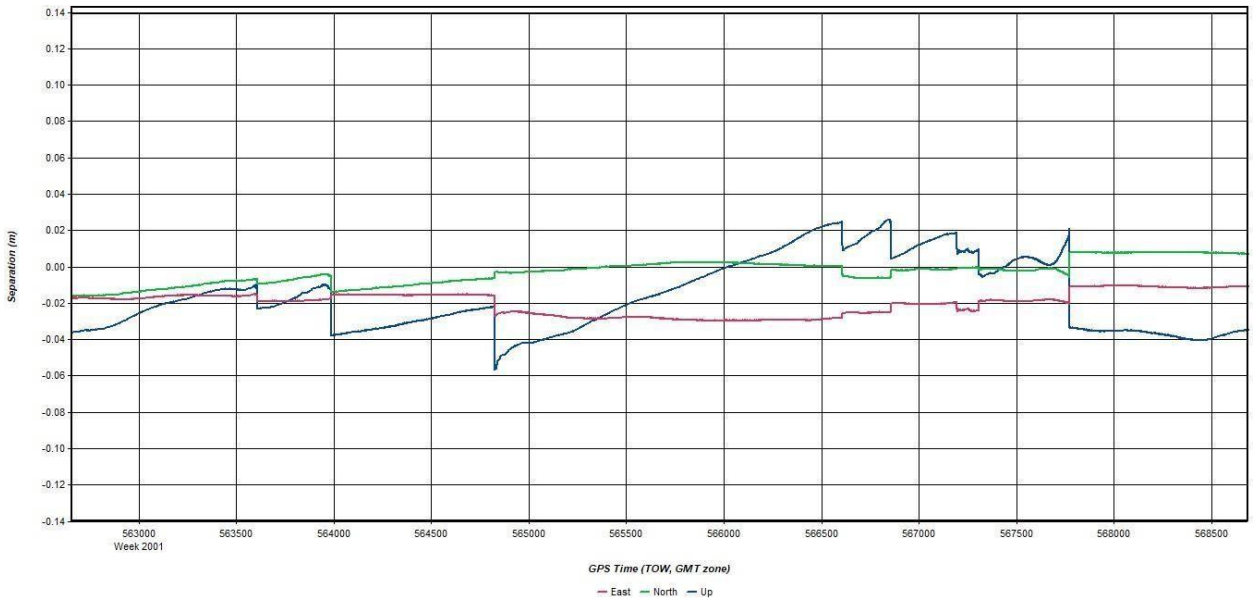
Mission 30. Number of satellites



Mission 30. GPS misclosure



Mission 30. GPS separation



Mission 30. Processing summary

Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type: Combined

Number of Epochs:
- Total in GPB file: 16274
- 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: 0.0178 (m)
- C/A Code: 0.40 (m)
- L1 Doppler: 0.030 (m/s)

Fwd/Rev Separation RMS Values:
- East: 0.040 (m)
- North: 0.059 (m)
- Height: 0.117 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (14545 occurances):
- East: 0.020 (m)
- North: 0.008 (m)
- Height: 0.028 (m)

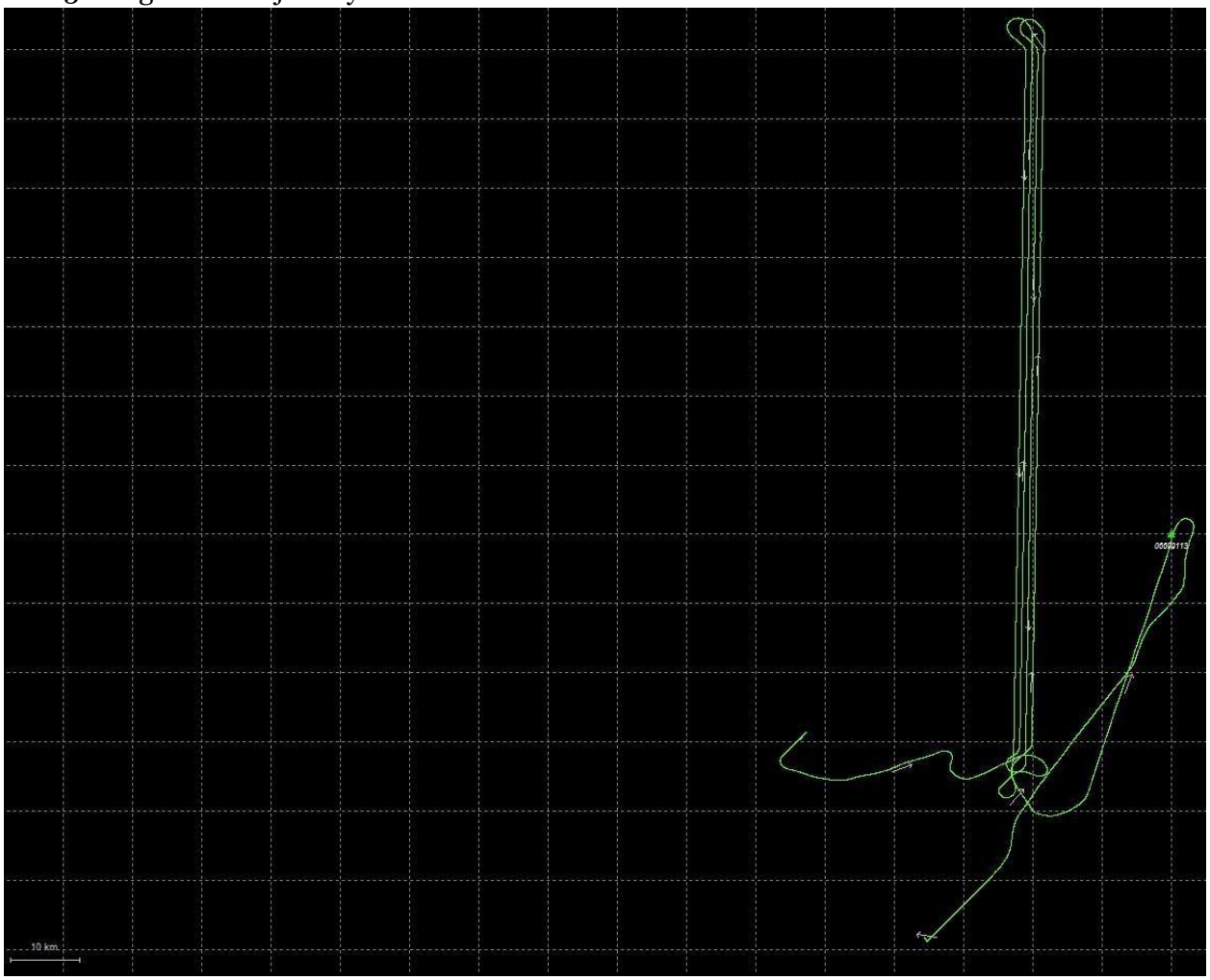
Quality Number Percentages:
- Q 1: 99.9 %
- Q 2: 0.1 %
- Q 3: 0.0 %
- Q 4: 0.0 %
- Q 5: 0.0 %
- Q 6: 0.0 %

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 %

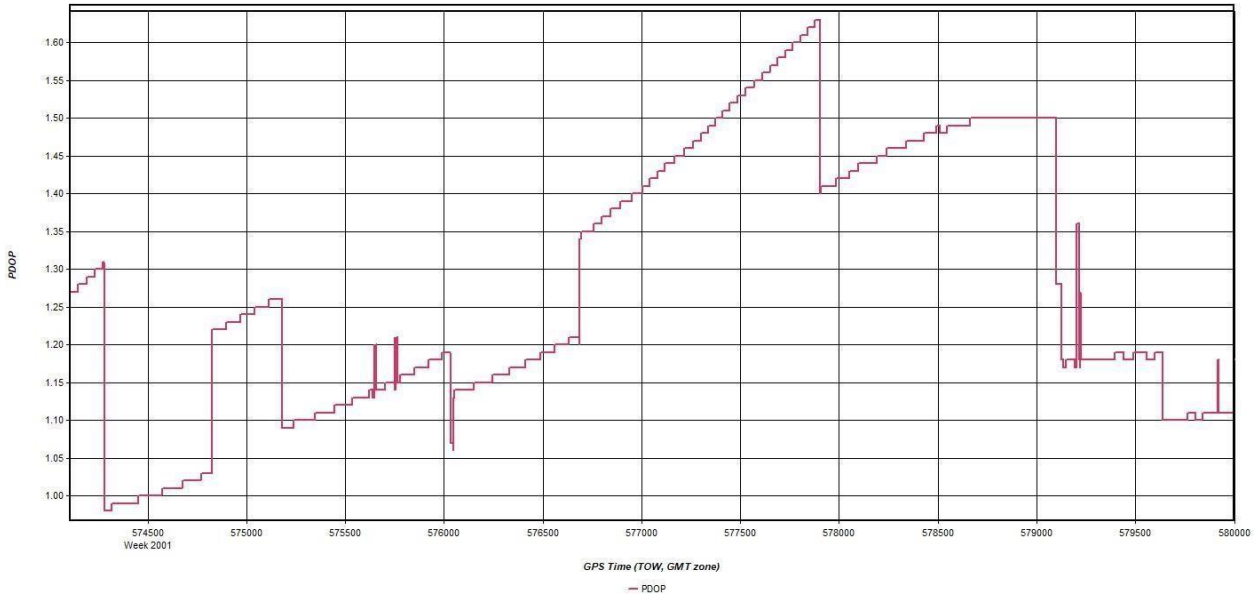
Percentages of epochs with DD_DOP over 10.00:
- DOP over Tol: 0.0 %

Baseline Distances:
- Maximum: 78.342 (km)
- Minimum: 23.142 (km)
- Average: 46.813 (km)
- First Epoch: 68.088 (km)
- Last Epoch: 61.254 (km)

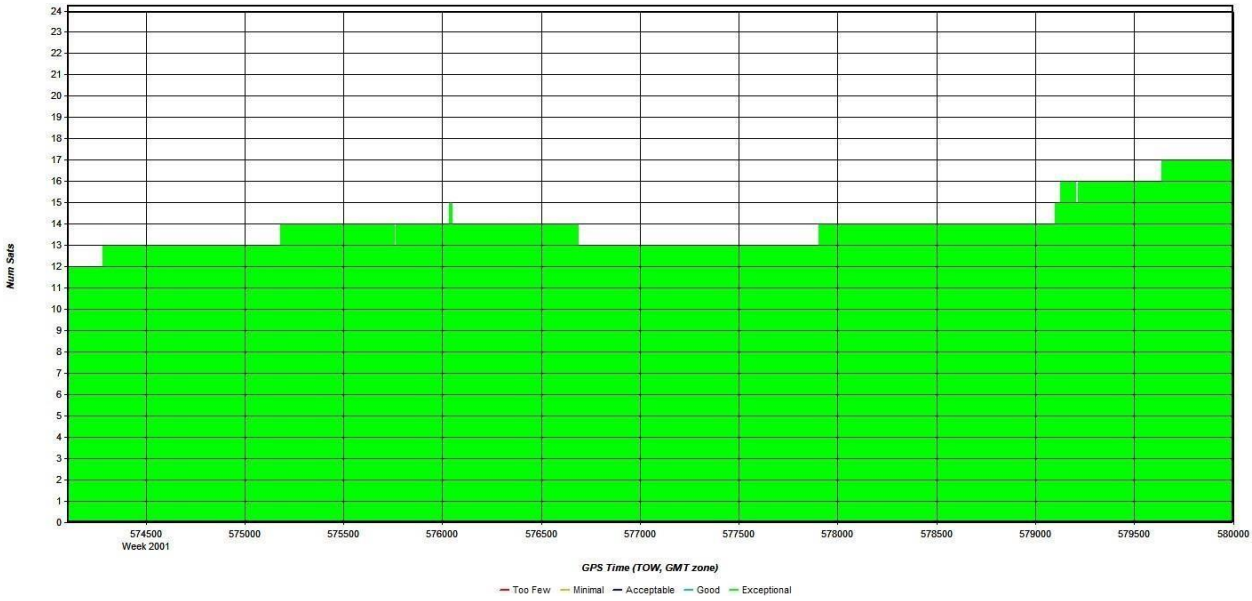
Mission 31. Flight line trajectory



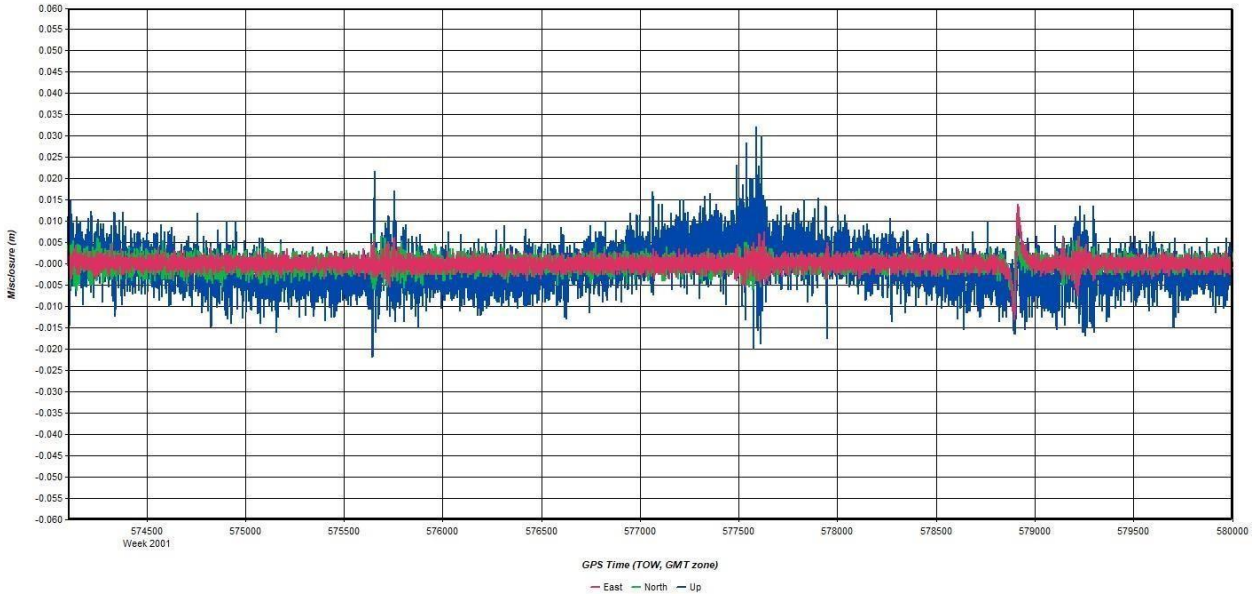
Mission 31. PDOP



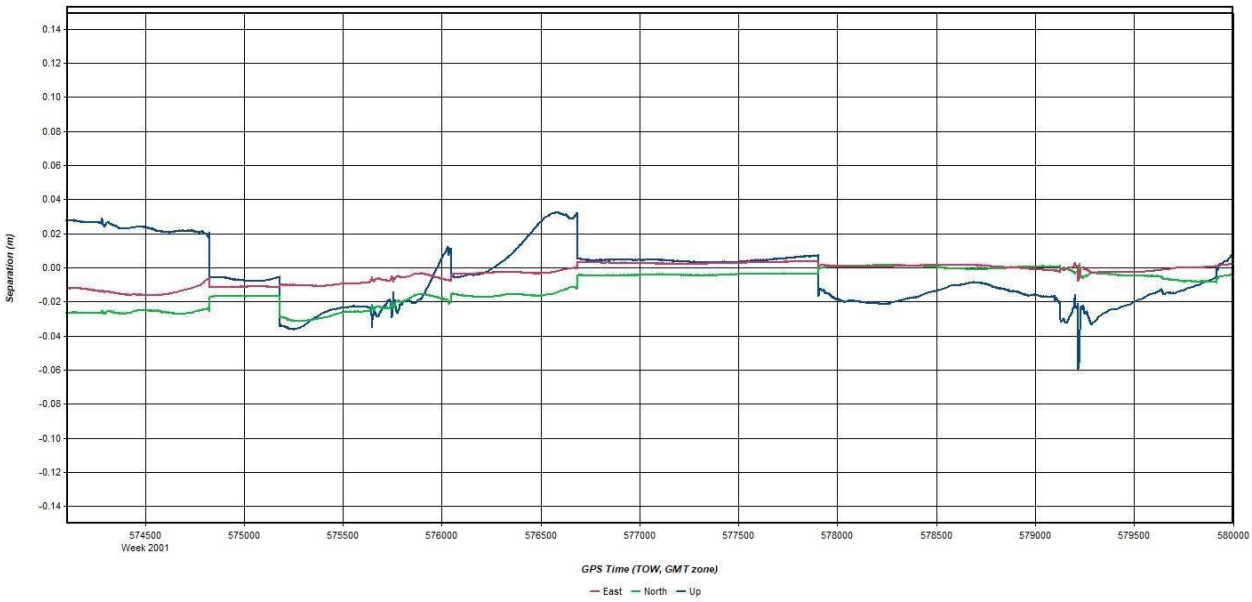
Mission 31. Number of satellites



Mission 31. GPS misclosure



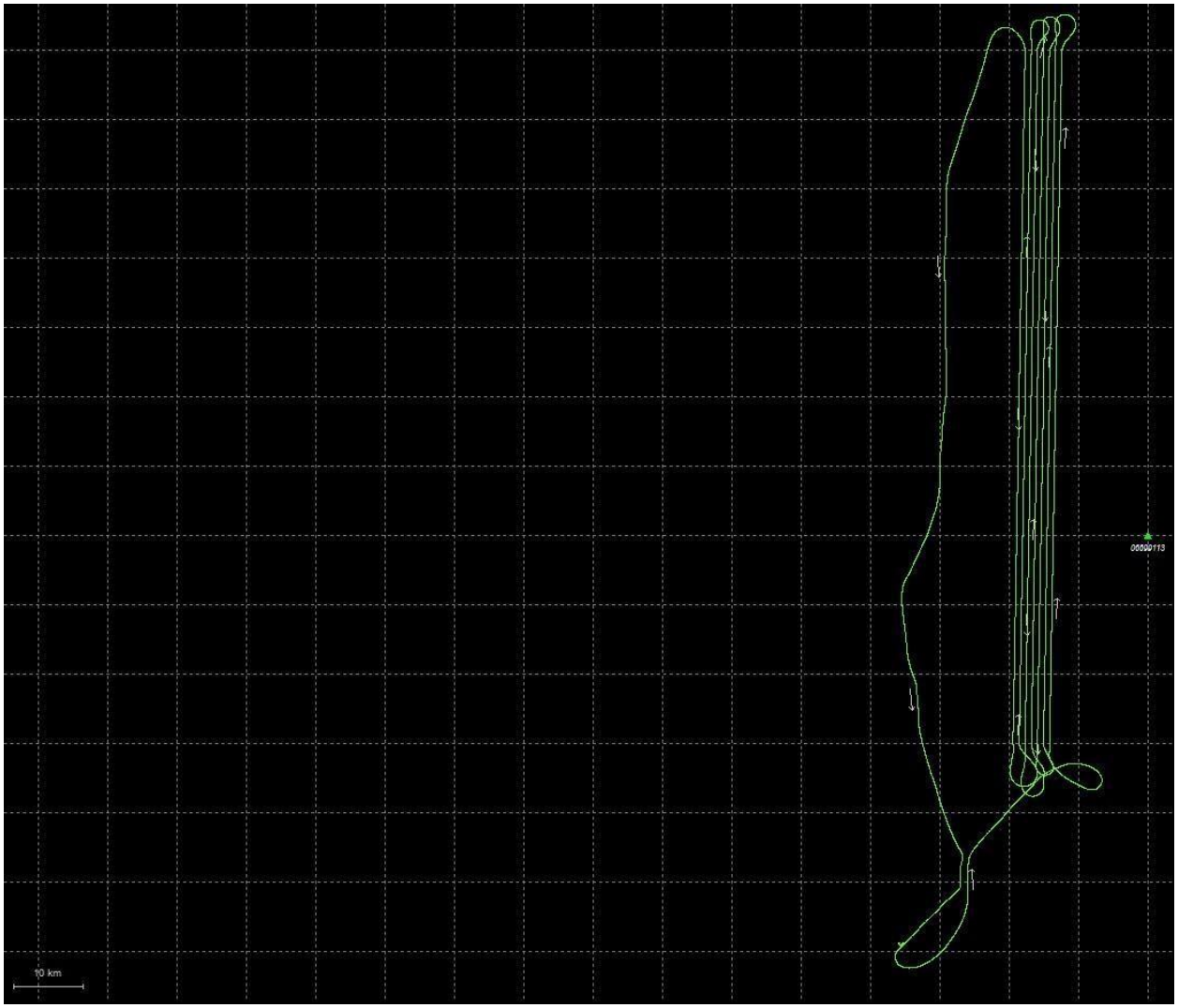
Mission 31. GPS separation



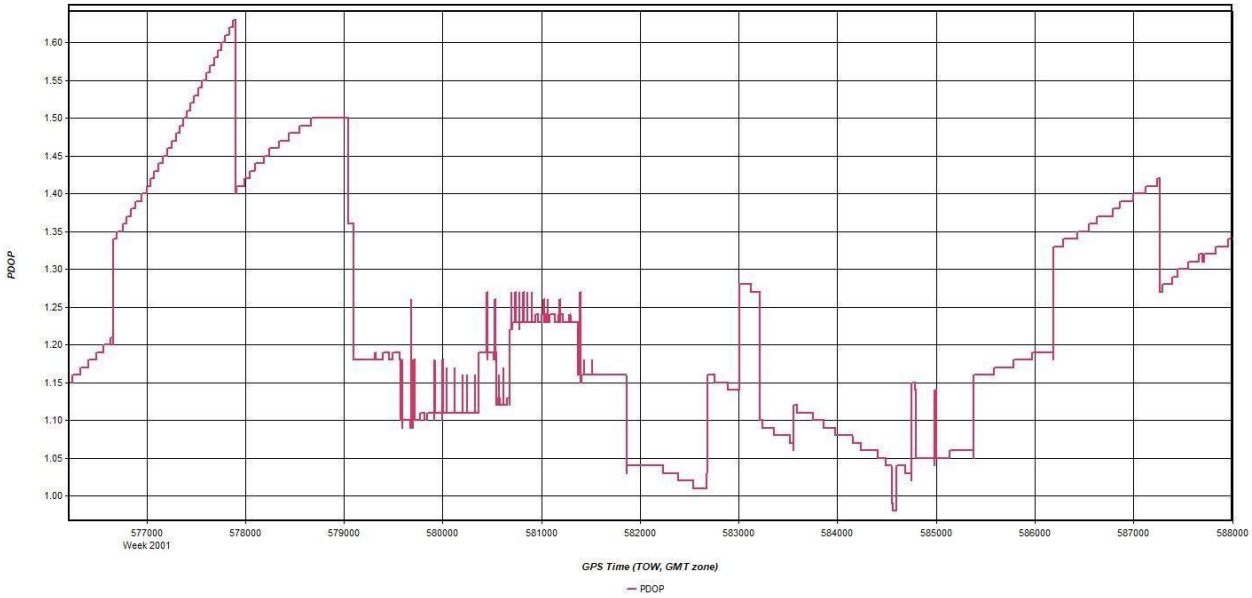
Mission 31. Processing summary

```
          Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      21942
        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:       0.0186 (m)
        C/A Code:       0.36 (m)
        L1 Doppler:     0.031 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.009 (m)
        North:  0.016 (m)
        Height: 0.029 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (21935 occurances):
        East:   0.009 (m)
        North:  0.016 (m)
        Height: 0.029 (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:        77.469 (km)
        Minimum:        0.171 (km)
        Average:        40.519 (km)
        First Epoch:    61.315 (km)
        Last Epoch:     68.068 (km)
```

Mission 32. Flight line trajectory

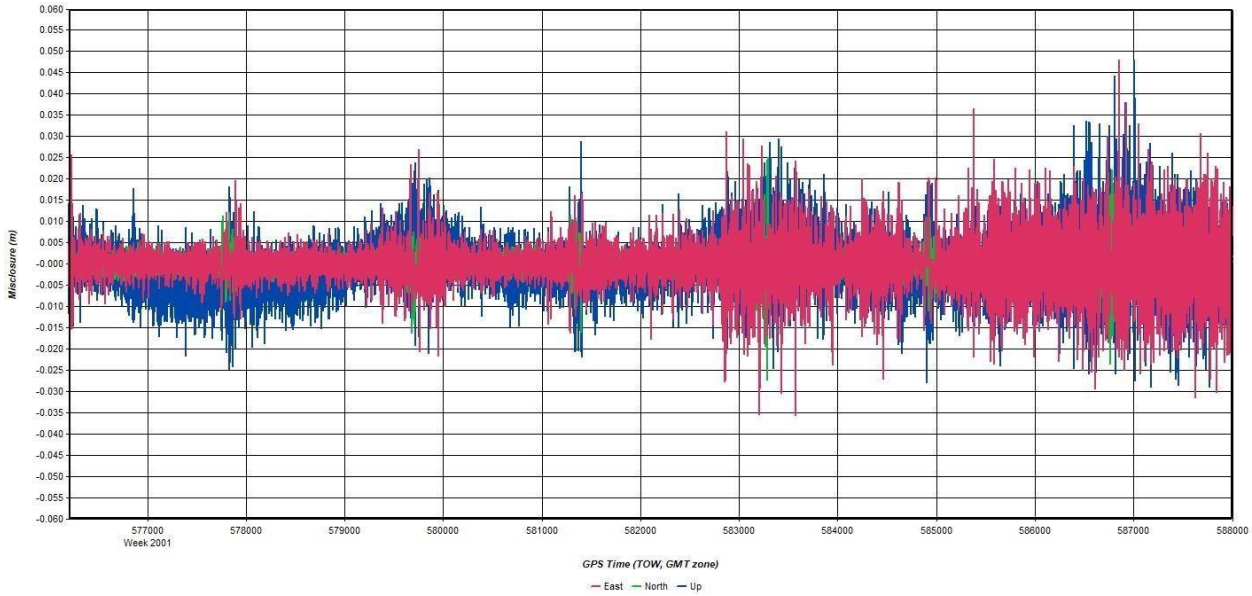

10 km

Mission 32. PDOP

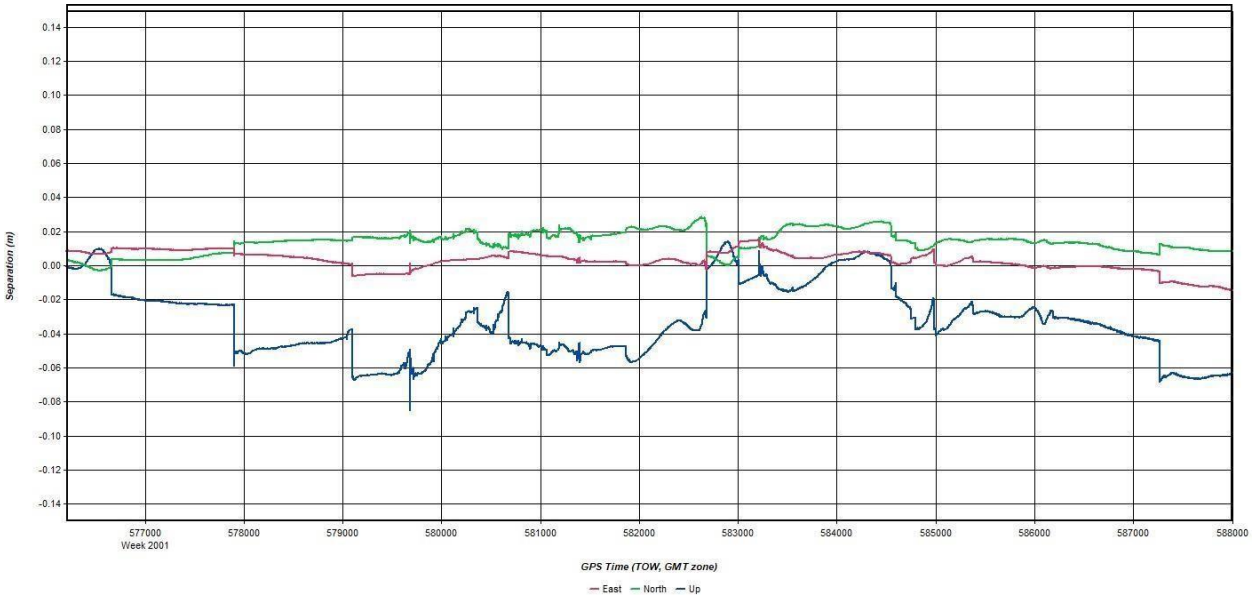


Mission 32. Number of satellites

Mission 32. GPS misclosure



Mission 32. GPS separation



Mission 32. Processing summary

```
         Processing Summary Information

Program: Inertial Explorer
Version: 8.60.6717
Solution Type:  Combined

Number of Epochs:
        Total in GPB file:      32528
        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:       0.0205 (m)
        C/A Code:       0.45 (m)
        L1 Doppler:     0.031 (m/s)

Fwd/Rev Separation RMS Values:
        East:   0.074 (m)
        North:  0.128 (m)
        Height: 0.233 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (31028 occurances):
        East:   0.009 (m)
        North:  0.014 (m)
        Height: 0.039 (m)

Quality Number Percentages:
        Q 1:    98.3 %
        Q 2:     1.7 %
        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:        75.153 (km)
        Minimum:        13.585 (km)
        Average:        40.403 (km)
        First Epoch:    68.068 (km)
        Last Epoch:     68.159 (km)
```

APPENDIX B: FLIGHT LOGS BY MISSION

Mission 1

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew	
RCD CRU	
DRIVE Tact	
MISSION 1	

Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059

GPS Information: Base 1 _7924_0415_153; Base 2; Base3; Aero 1
IMU Information: Start Time 19:59:12; Stop Time 19:40:00
AGC: A/b

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@Altitude			
@Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	_7924_0415_153541.m00		1.61	,EIAI12020G
Base 2				
Base 3				

Flight Date (UTC): 4/5/2018 | Pilot: ? | Operator: Shealy | Sensor: ALS70 | Aircraft: TAC | SENSOR NAVIGATION FILE NAME: 20180415_155613

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	131	180415_163523	16:35:42	16:42:58	0:07:16	40	53.4	151700	YES	Y	2986.21	9797					Shealy	0000
	130	180415_164812	16:48:31	16:53:58	0:05:27	40	53.4	151700	YES	Y	3004.555	9857					Shealy	0000
	129	180415_170003	17:00:22	17:06:00	0:05:38	40	53.4	151700	YES	Y	3013.021	9885					Shealy	0000
	128	180415_171107	17:11:27	17:16:07	0:04:40	40	53.4	151700	YES	Y	3051.248	10011					Shealy	0000
	127	180415_172241	17:23:00	17:27:55	0:04:55	40	53.4	151700	YES	Y	3018.357	9903					Shealy	0000
	126	180415_173230	17:32:49	17:37:25	0:04:35	40	53.4	151700	YES	Y	3034.539	9956					Shealy	0000
	125	180415_174435	17:44:55	17:49:29	0:04:34	40	53.4	151700	YES	Y	3030.958	9943					Shealy	0000
	124	180415_175454	17:55:13	17:59:11	0:03:58	40	53.4	151700	YES	Y	3000.961	9846					Shealy	0000
	123	180415_180400	18:04:20	18:07:38	0:03:18	40	53.4	151700	YES	Y	3046.997	9997					Shealy	0000
	122	180415_181106	18:11:25	18:14:49	0:03:24	40	53.4	151700	YES	Y	3088.475	10133					Shealy	0000
	121	180415_182011	18:20:30	18:24:11	0:03:40	40	53.4	151700	YES	Y	3037.249	9965					Shealy	0000
	120	180415_182814	18:28:33	18:31:01	0:02:28	40	53.4	151700	YES	Y	3065.334	10057					Shealy	0000
	119	180415_183554	18:36:13	18:38:56	0:02:43	40	53.4	151700	YES	Y	3085.399	10123					Shealy	0000
	118	180415_184216	18:42:37	18:45:09	0:02:32	40	53.4	151700	YES	Y	3054.315	10021					Shealy	0000
	117	180415_185038	18:50:47	18:52:36	0:01:49	40	53.4	151700	YES	Y	3067.542	10064					Shealy	0000
	116	180415_185552	18:56:12	18:57:44	0:01:32	40	53.4	151700	YES	Y	3065.902	10059					Shealy	0000
	115	180415_190139	19:01:58	19:03:34	0:01:36	40	53.4	151700	YES	Y	3059.784	10039					Shealy	0000
	114	180415_190656	19:07:16	19:08:51	0:01:35	40	53.4	151700	YES	Y	3091.057	10141					Shealy	0000
	113	180415_191243	19:13:03	19:13:58	0:00:55	40	53.4	151700	YES	Y	3084.221	10119					Shealy	0000
	UL001	180415_191641	19:17:00	19:22:18	0:05:18	40	53.4	143900	YES	Y	2877.95	9442					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3181.7
Aircraft IMU Time		Hobbs Stop	3185.5
Sensor Collection Time		Hobbs Total	3.8
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 2

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew	
RCD CRU	
DRIVE Tact	
MISSION 2	

Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059

GPS Information: Base 1 M2_7924_0415_1; Base 2; Base3; Aero 1
IMU Information: Start Time 20:57:06; Stop Time 23:16:09
AGC: A/b

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@Altitude			
@Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M2_7924_0415_153541		1.61	,EIAI12020G
Base 2				
Base 3				

Flight Date (UTC): 4/5/2018 | Pilot: ? | Operator: Shealy | Sensor: ALS70 | Aircraft: TAC | SENSOR NAVIGATION FILE NAME: 20180415_205533

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	132	180415_213429	21:34:48	21:41:55	0:07:07	40	53.4	151700	YES	Y	3045.181	9991					Shealy	0000
	133	180415_214630	21:46:50	21:53:28	0:06:39	40	53.4	151700	YES	Y	2985.826	9796					Shealy	0000
	134	180415_215755	21:58:15	22:05:56	0:31:07	40	53.4	151700	YES	Y	3041.753	9980					Shealy	0000
	135	180415_220936	22:09:56	22:15:56	0:30:07	40	53.4	151700	YES	Y	2962.56	9720					Shealy	0000
	136	180415_222209	22:22:28	22:29:40	0:31:25	40	53.4	151700	YES	Y	2973.504	9756					Shealy	0000
	137	180415_223430	22:34:49	22:41:30	0:31:34	40	53.4	151700	YES	Y	2976.771	9766					Shealy	0000
	138	180415_224547	22:46:06	22:53:06	0:30:38	40	53.4	151700	YES	Y	2936.24	9633					Shealy	0000
	UL001	180415_225856	22:59:15	23:01:17	0:26:28	40	53.4	151700	YES	Y	3058.604	10035					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3185.5
Aircraft IMU Time		Hobbs Stop	3187.9
Sensor Collection Time		Hobbs Total	2.4
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

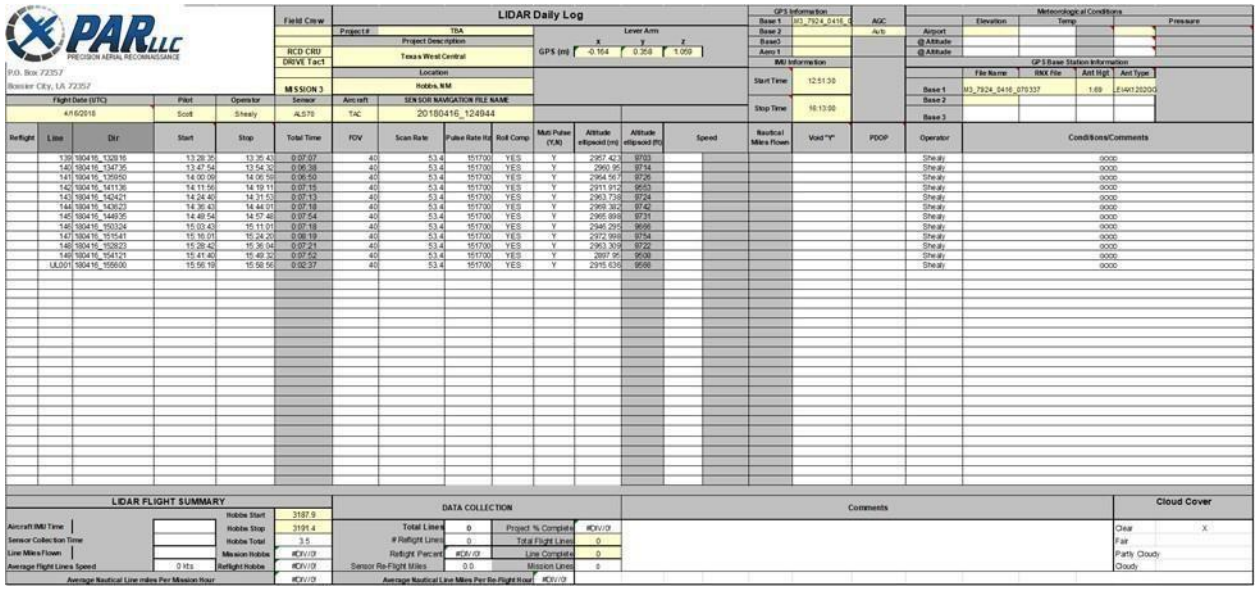
DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 3



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
Project #	TBA		
Project Description			
RCD CRD	Texas West Central		
DRIVE Tact			
Location			
MISSION 3	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/16/2018	Scott	Sheely	AL570
Aircraft	SENSOR NAVIGATION FILE NAME		
TAC	20180416_124944		

Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059

GPS Information: Base 1 M3_7924_0416_0; Base 2; Base3; Aero 1
IMU Information: Start Time 12:51:30; Stop Time 16:13:00
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M3_7924_0416_070337		1.69	JEAW1202GG
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	139	180416_132816	13:28:35	13:35:43	0:07:07	40	53.4	151700	YES	Y	2957.423	9703					Sheely	0000
	140	180416_134736	13:47:54	13:54:32	0:06:38	40	53.4	151700	YES	Y	2960.95	9714					Sheely	0000
	141	180416_135950	14:00:09	14:06:59	0:06:50	40	53.4	151700	YES	Y	2964.567	9726					Sheely	0000
	142	180416_141136	14:11:56	14:19:11	0:07:15	40	53.4	151700	YES	Y	2911.912	9553					Sheely	0000
	143	180416_142421	14:24:40	14:31:53	0:07:13	40	53.4	151700	YES	Y	2963.736	9724					Sheely	0000
	144	180416_143623	14:36:43	14:44:01	0:07:18	40	53.4	151700	YES	Y	2968.382	9742					Sheely	0000
	145	180416_144935	14:49:54	14:57:48	0:07:54	40	53.4	151700	YES	Y	2965.898	9731					Sheely	0000
	146	180416_150324	15:03:43	15:11:01	0:07:18	40	53.4	151700	YES	Y	2946.295	9666					Sheely	0000
	147	180416_151541	15:16:01	15:24:20	0:08:19	40	53.4	151700	YES	Y	2972.998	9754					Sheely	0000
	148	180416_152823	15:28:42	15:35:04	0:07:21	40	53.4	151700	YES	Y	2963.309	9722					Sheely	0000
	149	180416_154121	15:41:40	15:49:32	0:07:52	40	53.4	151700	YES	Y	2897.95	9506					Sheely	0000
	UL001	180416_155600	15:56:19	15:58:56	0:02:37	40	53.4	151700	YES	Y	2915.636	9566					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3187.9
Aircraft IMU Time		Hobbs Stop	3191.4
Sensor Collection Time		Hobbs Total	3.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

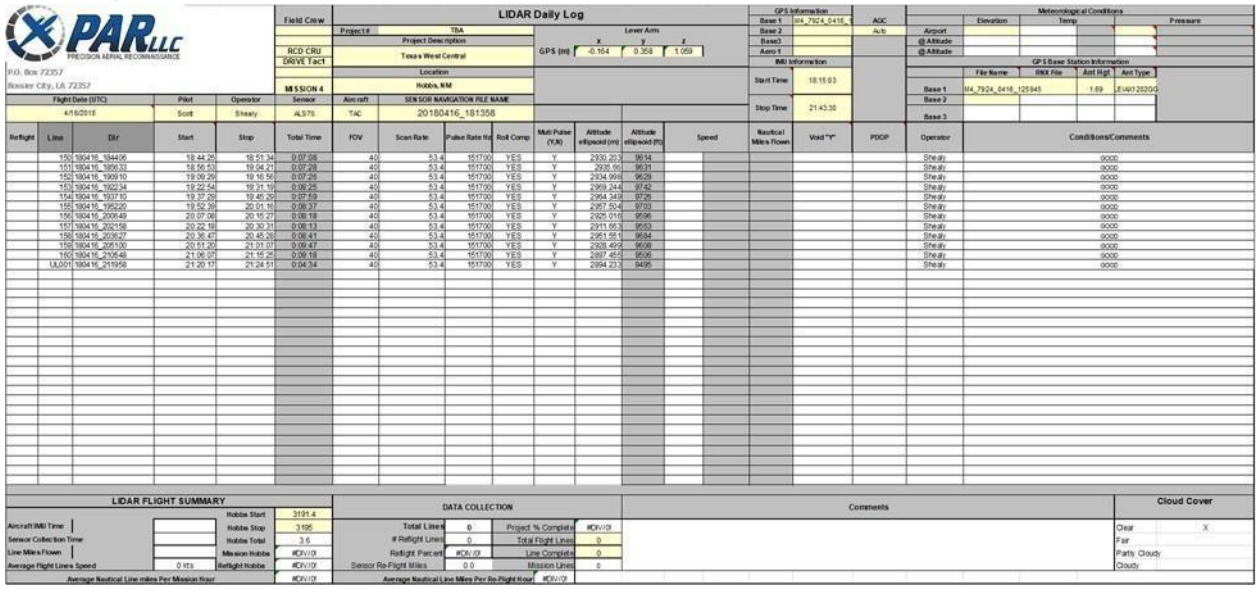
Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 4



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
Project #	TBA		
Project Description			
RCD CRD	Texas West Central		
DRIVE Tact			
Location			
MISSION 4	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/16/2018	Scott	Sheely	AL570
Aircraft	SENSOR NAVIGATION FILE NAME		
TAC	20180416_181358		

Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059

GPS Information: Base 1 M4_7924_0416_; Base 2; Base3; Aero 1
IMU Information: Start Time 18:15:03; Stop Time 21:43:30
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M4_7924_0416_125945		1.69	JEAW1202GG
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	150	180416_184406	18:44:25	18:51:34	0:07:08	40	53.4	151700	YES	Y	2930.203	9614					Sheely	0000
	151	180416_185633	18:56:53	19:04:21	0:07:28	40	53.4	151700	YES	Y	2935.99	9631					Sheely	0000
	152	180416_190910	19:09:29	19:16:56	0:07:26	40	53.4	151700	YES	Y	2934.998	9629					Sheely	0000
	153	180416_192234	19:22:54	19:31:19	0:08:25	40	53.4	151700	YES	Y	2959.244	9742					Sheely	0000
	154	180416_193710	19:37:29	19:45:29	0:07:59	40	53.4	151700	YES	Y	2964.349	9726					Sheely	0000
	155	180416_195220	19:52:39	20:01:16	0:08:37	40	53.4	151700	YES	Y	2957.504	9703					Sheely	0000
	156	180416_200649	20:07:06	20:16:27	0:09:18	40	53.4	151700	YES	Y	2925.016	9596					Sheely	0000
	157	180416_202158	20:22:16	20:30:31	0:08:13	40	53.4	151700	YES	Y	2911.663	9553					Sheely	0000
	158	180416_203627	20:36:47	20:45:28	0:08:41	40	53.4	151700	YES	Y	2951.551	9684					Sheely	0000
	159	180416_205100	20:51:20	21:01:07	0:09:47	40	53.4	151700	YES	Y	2928.499	9608					Sheely	0000
	160	180416_210548	21:06:07	21:15:25	0:09:18	40	53.4	151700	YES	Y	2897.454	9506					Sheely	0000
	UL001	180416_211958	21:20:17	21:24:51	0:04:34	40	53.4	151700	YES	Y	2894.233	9495					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3191.4
Aircraft IMU Time		Hobbs Stop	3195
Sensor Collection Time		Hobbs Total	3.6
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

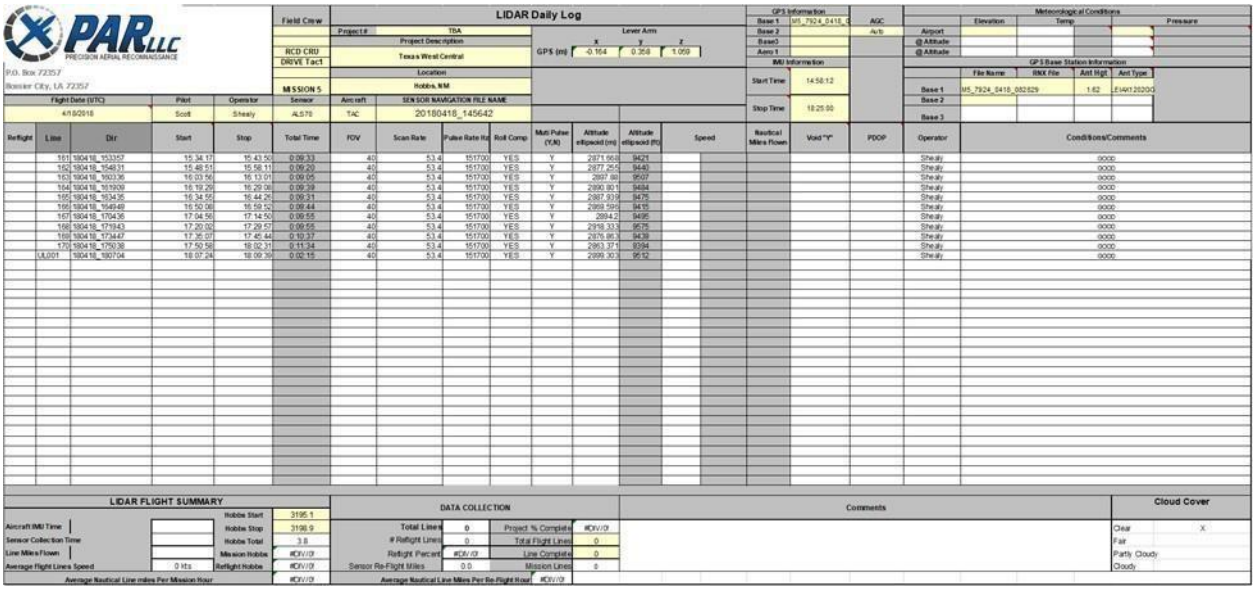
Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 5



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
Project #	TBA		
Project Description			
RCD CRD	Texas West Central		
DRIVE Tact			
Location			
MISSION 5	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/18/2018	Scott	Sheely	AL570

Lever Arm	x	y	z
GPS (m)	-0.164	0.358	1.059

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180418_145642

GPS Information	
Base 1	M5_7924_0418_0
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	14:58:12
Stop Time	18:25:00

AGC: Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information	File Name	RINX File	Ant Hgt	Ant Type
Base 1	M5_7924_0418_082629		1.62	.EAR12020G
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	161	180418_153357	15:34:17	15:43:50	0:09:33	40	53.4	151700	YES	Y	2871.968	9421					Sheely	0000
	162	180418_154831	15:48:51	15:58:11	0:09:20	40	53.4	151700	YES	Y	2877.254	9440					Sheely	0000
	163	180418_160336	16:03:56	16:13:01	0:09:05	40	53.4	151700	YES	Y	2897.88	9507					Sheely	0000
	164	180418_161939	16:19:29	16:29:08	0:09:39	40	53.4	151700	YES	Y	2890.801	9484					Sheely	0000
	165	180418_163435	16:34:56	16:44:26	0:09:31	40	53.4	151700	YES	Y	2887.939	9475					Sheely	0000
	166	180418_164949	16:50:08	16:59:52	0:09:44	40	53.4	151700	YES	Y	2893.595	9493					Sheely	0000
	167	180418_170436	17:04:56	17:14:50	0:09:55	40	53.4	151700	YES	Y	2894.2	9495					Sheely	0000
	168	180418_171943	17:20:02	17:29:57	0:09:55	40	53.4	151700	YES	Y	2918.33	9575					Sheely	0000
	169	180418_173447	17:35:07	17:45:44	0:10:37	40	53.4	151700	YES	Y	2876.863	9439					Sheely	0000
	170	180418_175038	17:50:58	18:02:31	0:11:34	40	53.4	151700	YES	Y	2863.371	9394					Sheely	0000
	UL001	180418_180704	18:07:24	18:09:39	0:02:15	40	53.4	151700	YES	Y	2899.303	9512					Sheely	0000

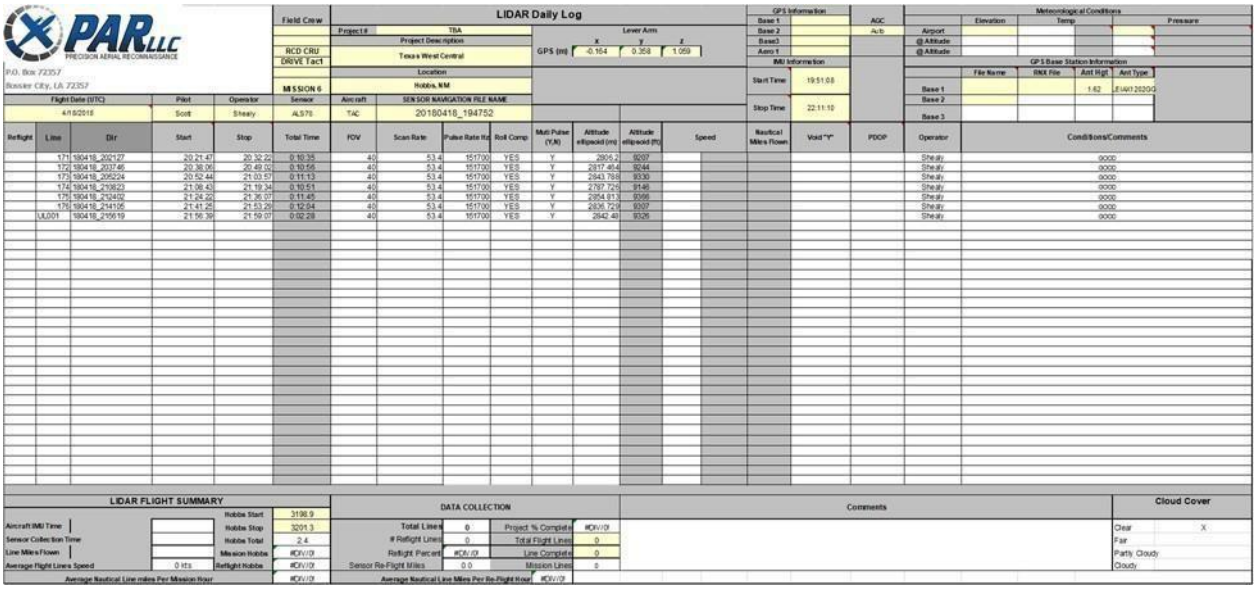
LIDAR FLIGHT SUMMARY			
		Hobbs Start	3195.1
Aircraft IMU Time		Hobbs Stop	3198.9
Sensor Collection Time		Hobbs Total	3.8
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION			
Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover	
Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 6



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
Project #	TBA		
Project Description			
RCD CRD	Texas West Central		
DRIVE Tact			
Location			
MISSION 6	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/19/2018	Scott	Sheely	AL570

Lever Arm	x	y	z
GPS (m)	-0.164	0.358	1.059

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180418_194752

GPS Information	
Base 1	
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	19:51:08
Stop Time	22:11:10

AGC: Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information	File Name	RINX File	Ant Hgt	Ant Type
Base 1			1.62	.EAR12020G
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	171	180418_202127	20:21:47	20:32:22	0:10:35	40	53.4	151700	YES	Y	2806.2	9207					Sheely	0000
	172	180418_203746	20:38:06	20:48:02	0:10:56	40	53.4	151700	YES	Y	2817.464	9244					Sheely	0000
	173	180418_205224	20:52:44	21:03:57	0:11:13	40	53.4	151700	YES	Y	2843.788	9330					Sheely	0000
	174	180418_210823	21:08:43	21:19:34	0:10:51	40	53.4	151700	YES	Y	2797.724	9148					Sheely	0000
	175	180418_212402	21:24:22	21:36:07	0:11:45	40	53.4	151700	YES	Y	2854.913	9356					Sheely	0000
	176	180418_214105	21:41:25	21:53:29	0:12:04	40	53.4	151700	YES	Y	2836.729	9307					Sheely	0000
	UL001	180418_215619	21:56:39	21:59:07	0:02:28	40	53.4	151700	YES	Y	2842.48	9326					Sheely	0000

LIDAR FLIGHT SUMMARY			
		Hobbs Start	3198.9
Aircraft IMU Time		Hobbs Stop	3201.3
Sensor Collection Time		Hobbs Total	2.4
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION			
Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover	
Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 7

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRU	Texas West Central		
DRIVE Tact			
	Location		
MISSION 7	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/19/2018	Scott	Sheely	AL570

Lever Arm: x -0.164, y 0.358, z 1.059 (GPS (m))

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180419_120338

GPS Information: Base 1 M7_7924_0419_0; Base 2; Base3; Aero 1
IMU Information: Start Time 12:06:50; Stop Time 14:34:00
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M7_7924_0419_064124		1.652	EIAW12020G
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	177	180419_124154	12:42:13	12:56:25	0:14:12	40	53.4	151700	YES	Y	2821.56	9257					Sheely	0000
	178	180419_130140	13:01:58	13:13:29	0:11:30	40	53.4	151700	YES	Y	2824.89	9268					Sheely	0000
	179	180419_131843	13:19:02	13:34:12	0:15:10	40	53.4	151700	YES	Y	2842.629	9326					Sheely	0000
	180	180419_133641	13:39:01	13:50:51	0:11:50	40	53.4	151700	YES	Y	2830.222	9285					Sheely	0000
	181	180419_135648	13:57:07	14:10:56	0:13:49	40	53.4	151700	YES	Y	2871.876	9422					Sheely	0000
	UL001	180419_141906	14:19:25	14:21:22	0:01:57	40	53.4	151700	YES	Y	2828.718	9281					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3201.5
Aircraft IMU Time		Hobbs Stop	3204
Sensor Collection Time		Hobbs Total	2.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 8

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRU	Texas West Central		
DRIVE Tact			
	Location		
MISSION 8	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/21/2018	Scott	Sheely	AL570

Lever Arm: x -0.164, y 0.358, z 1.059 (GPS (m))

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180421_121307

GPS Information: Base 1 M8_7924_0421_0; Base 2; Base3; Aero 1
IMU Information: Start Time 12:13:38; Stop Time 15:44:00
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M8_7924_0421_081113		1.615	EIAW12020G
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	181	180421_124527	12:45:47	12:58:52	0:13:05	40	53.4	151700	YES	Y	2813.459	9230					Sheely	0000
	182	180421_130405	13:04:26	13:17:47	0:13:22	40	53.4	151700	YES	Y	2843.753	9330					Sheely	0000
	183	180421_132203	13:22:23	13:35:32	0:13:08	40	53.4	151700	YES	Y	2837.439	9309					Sheely	0000
	184	180421_134206	13:42:26	13:58:03	0:15:37	40	53.4	151700	YES	Y	2835.569	9303					Sheely	0000
	185	180421_140245	14:03:05	14:17:59	0:14:54	40	53.4	151700	YES	Y	2824.667	9267					Sheely	0000
	186	180421_142313	14:22:33	14:39:42	0:16:10	40	53.4	151700	YES	Y	2827.349	9276					Sheely	0000
	187	180421_144347	14:44:07	15:01:09	0:17:02	40	53.4	151700	YES	Y	2829.901	9284					Sheely	0000
	188	180421_150542	15:06:01	15:22:38	0:16:37	40	53.4	151700	YES	Y	2810.349	9220					Sheely	0000
	UL001	180421_152741	15:28:01	15:31:07	0:03:06	40	53.4	151700	YES	Y	2878.214	9443					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3204.1
Aircraft IMU Time		Hobbs Stop	3207.7
Sensor Collection Time		Hobbs Total	3.6
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

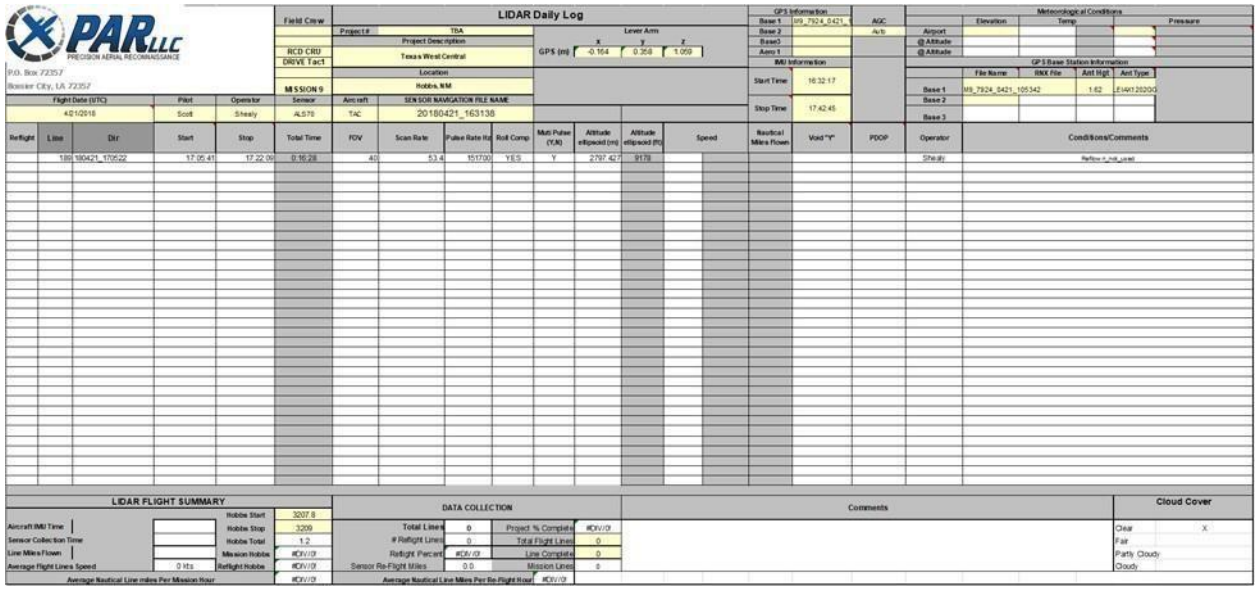
DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 9



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRU	Texas West Central		
DRIVE Tact			
	Location		
MISSION 9	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/21/2018	Scott	Sheely	AL570

Lever Arm	x	y	z
GPS (m)	-0.164	0.358	1.059

GPS Information	
Base 1	89_7924_0421_1
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	16:32:17
Stop Time	17:42:45

AGC
Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M9_7924_0421_105342		1.62	EIAR12020G
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	189	180421_170522	17:05:41	17:22:09	0:16:28	40	53.4	151700	YES	Y	2797.427	9178					Sheely	

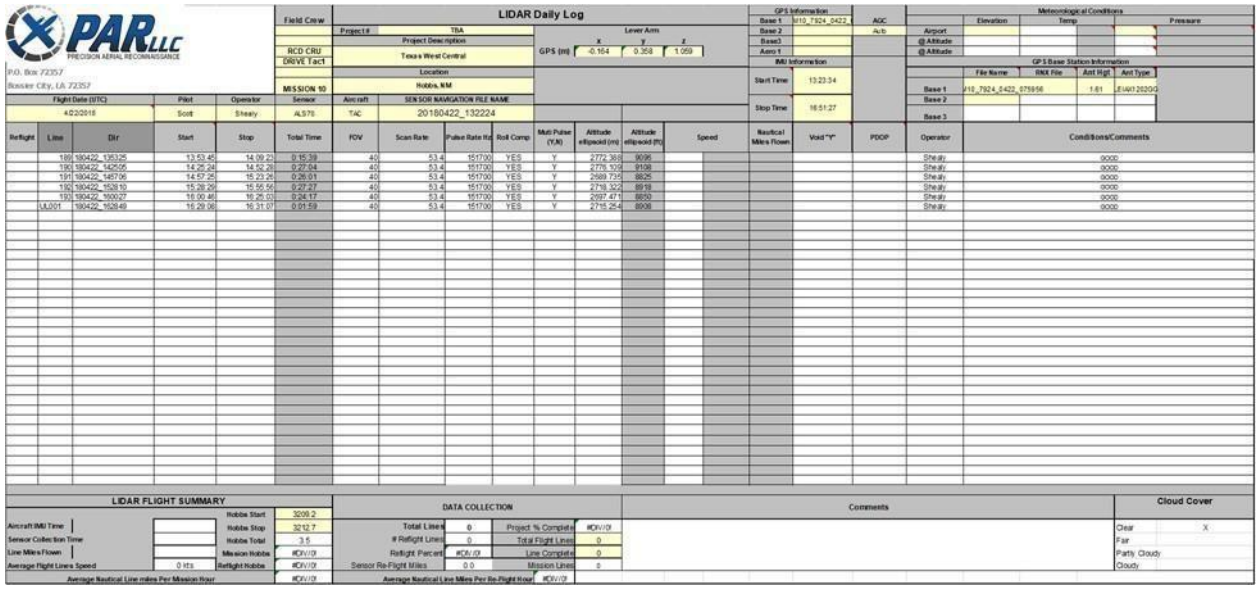
LIDAR FLIGHT SUMMARY			
		Hobbs Start	3207.8
Aircraft IMU Time		Hobbs Stop	3209
Sensor Collection Time		Hobbs Total	1.2
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION			
Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover	
Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 10



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRU	Texas West Central		
DRIVE Tact			
	Location		
MISSION 10	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/22/2018	Scott	Sheely	AL570

Lever Arm	x	y	z
GPS (m)	-0.164	0.358	1.059

GPS Information	
Base 1	910_7924_0422_
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	13:23:34
Stop Time	16:51:27

AGC
Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information	File Name	RNX File	Ant Hgt	Ant Type
Base 1	910_7924_0422_075956		1.61	EIAR12020G
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	189	180422_135335	13:53:45	14:09:23	0:15:39	40	53.4	151700	YES	Y	2772.388	9095					Sheely	good
	190	180422_142505	14:25:24	14:52:28	0:27:04	40	53.4	151700	YES	Y	2776.109	9108					Sheely	good
	191	180422_145706	14:57:25	15:23:26	0:26:01	40	53.4	151700	YES	Y	2569.735	8825					Sheely	good
	192	180422_153610	15:28:29	15:56:56	0:27:27	40	53.4	151700	YES	Y	2719.322	8918					Sheely	good
	193	180422_160027	16:00:46	16:25:03	0:24:17	40	53.4	151700	YES	Y	2697.471	8850					Sheely	good
	UL001	180422_162849	16:29:06	16:31:07	0:01:59	40	53.4	151700	YES	Y	2715.254	8908					Sheely	good

LIDAR FLIGHT SUMMARY			
		Hobbs Start	3208.2
Aircraft IMU Time		Hobbs Stop	3212.7
Sensor Collection Time		Hobbs Total	3.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION			
Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover	
Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 11

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRD	Texas West Central		
DRIVE Tact			
	Location		
MISSION 11	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/2/2018	Scott	Sheely	AL570

Lever Arm: x -0.164, y 0.358, z 1.059 (GPS (m))

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180422_172416

GPS Information: Base 1 M11_7924_0422_; Base 2; Base3; Aero 1
IMU Information: Start Time 17:27:03; Stop Time 20:54:36
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M11_7924_0422_120350		1.61	JEAN1202GG
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	194	180422_175334	17:53:54	18:17:55	0:24:01	40	53.4	151700	YES	Y	2705.836	8877					Sheely	0000
	195	180422_182246	18:23:06	18:51:36	0:28:30	40	53.4	151700	YES	Y	2724.328	8938					Sheely	0000
	196	180422_185519	18:55:39	19:20:14	0:24:35	40	53.4	151700	YES	Y	2695.189	8843					Sheely	0000
	197	180422_192517	19:25:36	19:54:13	0:28:37	40	53.4	151700	YES	Y	2716.498	8912					Sheely	0000
	198	180422_195818	19:58:37	20:22:53	0:24:15	40	53.4	151700	YES	Y	2676.269	8780					Sheely	0000
	UL001	180422_202813	20:28:33	20:31:49	0:03:16	40	53.4	151700	YES	Y	2758.279	9049					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3212.7
Aircraft IMU Time		Hobbs Stop	3216.3
Sensor Collection Time		Hobbs Total	3.6
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 12

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD CRD	Texas West Central		
DRIVE Tact			
	Location		
MISSION 12	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
4/2/2018	Scott	Sheely	AL570

Lever Arm: x -0.164, y 0.358, z 1.059 (GPS (m))

Aircraft	SENSOR NAVIGATION FILE NAME
TAC	20180422_214218

GPS Information: Base 1 M12_7924_0422_; Base 2; Base3; Aero 1
IMU Information: Start Time 21:42:59; Stop Time 1:10:12
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	M12_7924_0422_162623		1.62	JEAN1202GG
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	199	180422_221336	22:13:54	22:39:34	0:25:40	40	53.4	151700	YES	Y	2871.668	9421					Sheely	0000
	200	180422_224400	22:44:19	23:11:10	0:26:50	40	53.4	151700	YES	Y	2877.255	9440					Sheely	0000
	201	180422_231544	23:16:03	23:41:43	0:25:40	40	53.4	151700	YES	Y	2897.88	9507					Sheely	0000
	202	180422_234630	23:46:48	0:14:14	0:27:24	40	53.4	151700	YES	Y	2890.815	9484					Sheely	0000
	203	180423_001804	0:18:23	0:42:32	0:24:09	40	53.4	151700	YES	Y	2887.929	9475					Sheely	0000
	UL001	180423_004742	0:48:00	0:50:54	0:02:53	40	53.4	151700	YES	Y	2869.586	9415					Sheely	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3216.3
Aircraft IMU Time		Hobbs Stop	3219.8
Sensor Collection Time		Hobbs Total	3.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 13a

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew: RCD CRU; DRIVE Tac1
Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
MISSION 13a
Flight Date (UTC): 4/23/2018
Pilot: Scott
Operator: Shealy
Sensor: ALS70
Aircraft: TAC
SENSOR NAVIGATION FILE NAME: 20180423_143041
Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059
GPS Information: Base 1; Base 2; Base3; Aero 1
IMU Information: Start Time 14:31:03; Stop Time 17:59:00
AGC: Auto
Meteorological Conditions: Elevation; Temp; Pressure; Airport; @Altitude; @Altitude
GPS Base Station Information: File Name; RINX File; Ant Hgt; Ant Type; Base 1; Base 2; Base 3

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	204	180423_150007	15:00:25	15:28:44	0:28:18	40	53.4	151700	YES	Y	2690.773	8828					Shealy	0000
	205	180423_153352	15:34:11	15:59:48	0:25:37	40	53.4	151700	YES	Y	2752.983	9032					Shealy	0000
	206	180423_160420	16:04:39	16:30:34	0:25:55	40	53.4	151700	YES	Y	2675.956	8779					Shealy	0000
	207	180423_163509	16:35:09	17:01:13	0:26:45	40	53.4	151700	YES	Y	2721.532	8929					Shealy	0000
	208	180423_170547	17:06:06	17:31:43	0:25:37	40	53.4	151700	YES	Y	2719.886	8923					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	3220
Aircraft IMU Time		Hobbs Stop	3223.6
Sensor Collection Time		Hobbs Total	3.6
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 Hrs	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 13b

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew: RCD CRU; DRIVE Tac1
Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
MISSION 13b
Flight Date (UTC): 4/24/2018
Pilot: Scott
Operator: Shealy
Sensor: ALS70
Aircraft: TAC
SENSOR NAVIGATION FILE NAME: 20180424_113620
Lever Arm: GPS (m) x -0.164, y 0.358, z 1.059
GPS Information: Base 1 M14_7924_0424_; Base 2; Base3; Aero 1
IMU Information: Start Time 11:37:15; Stop Time
AGC: Auto
Meteorological Conditions: Elevation; Temp; Pressure; Airport; @Altitude; @Altitude
GPS Base Station Information: File Name; RINX File; Ant Hgt; Ant Type; Base 1 M14_7924_0424_061650; Base 2; Base 3

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	209	180424_120636	12:06:56	12:34:36	0:27:40	40	53.4	151700	YES	Y	2722.751	8933					Shealy	0000
	210	180424_123919	12:39:39	13:07:28	0:27:49	40	53.4	151700	YES	Y	2749.461	9021					Shealy	0000
	211	180424_131139	13:11:58	13:38:55	0:26:57	40	53.4	151700	YES	Y	2731.208	8961					Shealy	0000
	212	180424_134254	13:43:14	14:08:53	0:25:39	40	53.4	151700	YES	Y	2753.837	9035					Shealy	0000
	213	180424_141246	14:13:06			40	53.4	151700	YES	Y	2958.771	8723					Shealy	842

LIDAR FLIGHT SUMMARY

		Hobbs Start	3223.7
Aircraft IMU Time		Hobbs Stop	3226.9
Sensor Collection Time		Hobbs Total	3.2
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 Hrs	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 14

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD B	Texas West Central		
DRIVE 11	Location		
MISSION 14	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/4/2018	Scott	Shealy	ALS70

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

GPS Information		AGC
Base 1	19821240.T02	
Base 2		Auto
Base3		
Aero 1		

IMU Information: Start Time 15:03:56; Stop Time 15:57:00

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821240.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	212	180504_143547	14:36:06	15:01:44	0:25:38	40	53.4	151700	YES	Y	2712.625	8900					Shealy	0000
	213	180504_150501	15:05:20	15:35:24	0:30:04	40	53.4	151700	YES	Y	2699.104	8855					Shealy	0000
	214	180504_154049	15:40:59	16:10:05	0:29:07	40	53.4	143900	YES	Y	2928.956	9609					Shealy	0000
	215	180504_161434	16:14:53	16:39:07	0:24:15	40	53.4	143900	YES	Y	2938.012	9639					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4905.3
Aircraft IMU Time		Hobbs Stop	4909.3
Sensor Collection Time		Hobbs Total	3.0
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 15

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD B	Texas West Central		
DRIVE 11	Location		
MISSION 15	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/5/2018	Scott	Shealy	ALS70

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

GPS Information		AGC
Base 1	19821250.T02	
Base 2		Auto
Base3		
Aero 1		

IMU Information: Start Time 16:37:18; Stop Time 16:20:10

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821250.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	57	180505_151154	15:12:14	15:31:09	0:18:56	40	53.4	151700	YES	Y	2938.56	9641					Shealy	0000
	56	180505_153457	15:35:17	15:56:11	0:20:54	40	53.4	151700	YES	Y	2956.826	9701					Shealy	0000
	55	180505_155912	15:59:32	16:18:30	0:18:58	40	53.4	151700	YES	Y	2975.092	9761					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4910.6
Aircraft IMU Time		Hobbs Stop	4912.7
Sensor Collection Time		Hobbs Total	2.1
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

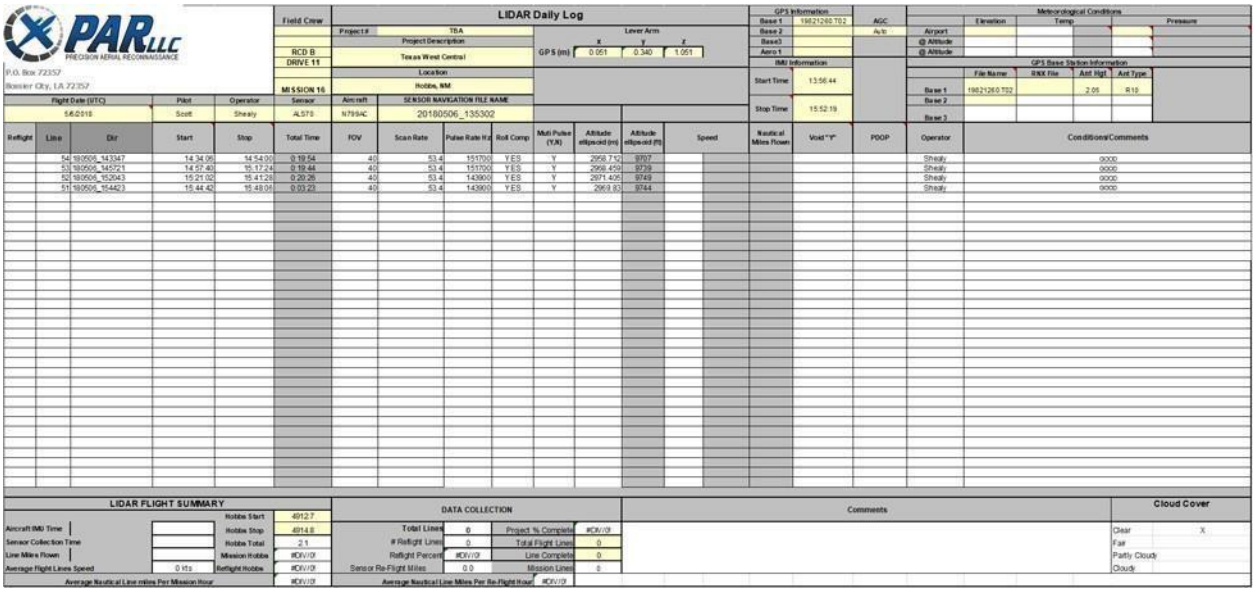
DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 16



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew		
	Project #	TBA
	Project Description	
RCD B		Texas West Central
DRIVE 11	Location	
		Hobbs, NM
MISSION 16	Aircraft	SENSOR NAVIGATION FILE NAME
	N799AC	20180506_135302

Lever Arm: x 0.051, y 0.340, z 1.051 (GPS (m))

GPS Information: Base 1 1982126D.T02; Base 2; Base3; Aero1; AGC: Auto

IMU Information: Start Time 13:56:44; Stop Time 15:52:19

Meteorological Conditions: Airport; @ Altitude; @ Altitude — Elevation, Temp, Pressure

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	1982126D.T02		2.05	R10
Base 2				
Base 3				

Flight Date (UTC): 5/6/2018; Pilot: Scott; Operator: Shealy; Sensor: ALS70

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	POOP	Operator	Conditions/Comments
	54	180506_143347	14:34:06	14:54:00	0:19:54	40	53.4	151700	YES	Y	2958.712	9707					Shealy	0000
	53	180506_145721	14:57:40	15:17:24	0:19:44	40	53.4	151700	YES	Y	2958.459	9739					Shealy	0000
	52	180506_152043	15:21:02	15:41:28	0:20:26	40	53.4	143900	YES	Y	2871.405	9749					Shealy	0000
	51	180506_154423	15:44:42	15:48:06	0:03:23	40	53.4	143900	YES	Y	2869.83	9744					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4912.7
Aircraft IMU Time		Hobbs Stop	4914.8
Sensor Collection Time		Hobbs Total	2.1
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

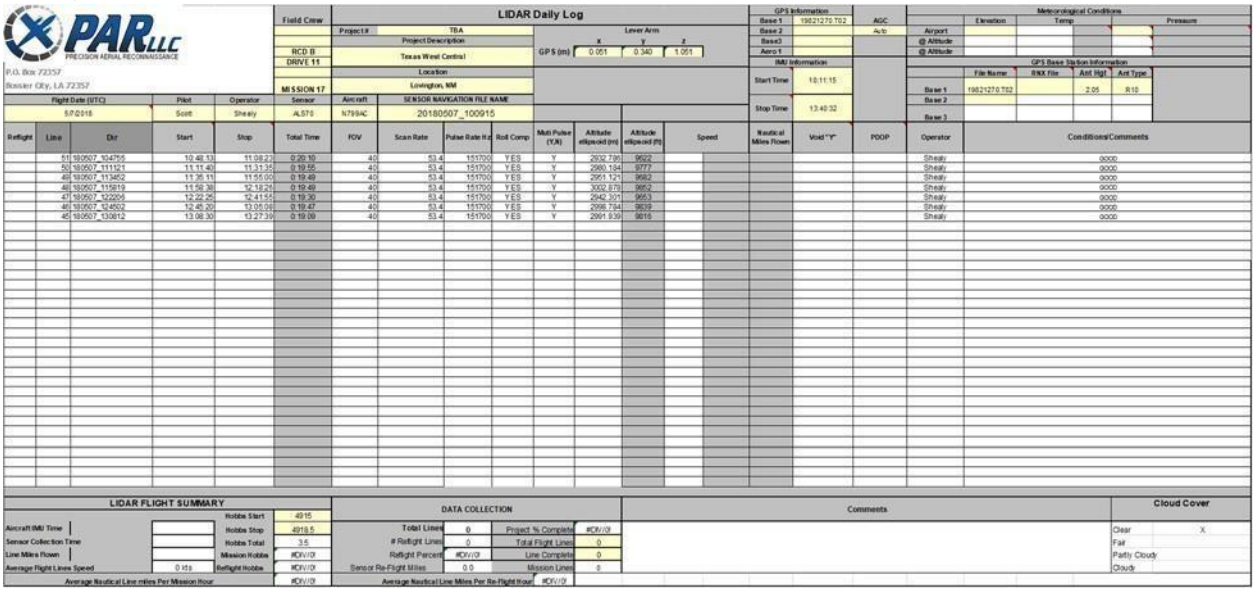
DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 17



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew		
	Project #	TBA
	Project Description	
RCD B		Texas West Central
DRIVE 11	Location	
		Lovington, NM
MISSION 17	Aircraft	SENSOR NAVIGATION FILE NAME
	N799AC	20180507_100915

Lever Arm: x 0.051, y 0.340, z 1.051 (GPS (m))

GPS Information: Base 1 1982127D.T02; Base 2; Base3; Aero1; AGC: Auto

IMU Information: Start Time 10:11:15; Stop Time 13:40:32

Meteorological Conditions: Airport; @ Altitude; @ Altitude — Elevation, Temp, Pressure

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	1982127D.T02		2.05	R10
Base 2				
Base 3				

Flight Date (UTC): 5/7/2018; Pilot: Scott; Operator: Shealy; Sensor: ALS70

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	POOP	Operator	Conditions/Comments
	51	180507_104755	10:48:13	11:08:23	0:20:10	40	53.4	151700	YES	Y	2932.795	9622					Shealy	0000
	50	180507_111121	11:11:40	11:31:35	0:19:55	40	53.4	151700	YES	Y	2980.184	9777					Shealy	0000
	49	180507_113452	11:35:11	11:55:00	0:19:49	40	53.4	151700	YES	Y	2951.121	9682					Shealy	0000
	48	180507_115819	11:58:38	12:18:26	0:19:48	40	53.4	151700	YES	Y	3002.879	9852					Shealy	0000
	47	180507_122205	12:22:25	12:41:55	0:19:30	40	53.4	151700	YES	Y	2942.301	9653					Shealy	0000
	46	180507_124502	12:45:20	13:05:08	0:19:47	40	53.4	151700	YES	Y	2998.784	9839					Shealy	0000
	45	180507_130812	13:08:30	13:27:39	0:19:09	40	53.4	151700	YES	Y	2991.939	9816					Shealy	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4915
Aircraft IMU Time		Hobbs Stop	4918.5
Sensor Collection Time		Hobbs Total	3.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 18

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew	Project #	Project Description	Lever Arm (GPS) x	y	z
DRIVE Red	TBA	Texas West Central	-0.175	0.317	1.177

Location	Mission	Aircraft	Sensor	Pilot	Operator
Hobbs, NM	MISSION 18	N6461Z	AL570	Scott	Lee

SENSOR NAVIGATION FILE NAME: 20180511_163720
Flight Date (UTC): 5/11/2018

GPS Information: Base 1: 19821310.T02; Base 2; Base3; Aero 1
IMU Information: Start Time: 16:36:34; Stop Time: 19:04:52
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821310.T02		2.05	R10
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	44	180511_170617	17:06:35	17:23:30	0:16:55	40	53.4	151700	YES	Y	2981.421	9782					Lee	0000
	43	180511_172824	17:28:42	17:50:51	0:22:09	40	53.4	151700	YES	Y	2973.643	9756					Lee	0000
	42	180511_175307	17:53:25	18:11:48	0:18:23	40	53.4	151700	YES	Y	2982.119	9784					Lee	0000
	41	180511_181429	18:14:48	18:37:48	0:23:00	40	53.4	151700	YES	Y	2960.734	9714					Lee	0000
	40	180511_184005	18:40:24	18:40:46	0:00:22	40	53.4	151700	YES	Y	2976.759	9766					Lee	0000
	UL001	180511_184214	18:42:33	18:43:26	0:00:53	40	53.4	151700	YES	Y	2958.74	9707					Lee	0000

LIDAR FLIGHT SUMMARY

Hobbs Start	6145.9		
Aircraft IMU Time		Hobbs Stop	6148.1
Sensor Collection Time		Hobbs Total	2.2
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 19

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew	Project #	Project Description	Lever Arm (GPS) x	y	z
DRIVE Red	TBA	Texas West Central	-0.175	0.317	1.177

Location	Mission	Aircraft	Sensor	Pilot	Operator
Hobbs, NM	MISSION 19	N6461Z	AL570	Scott	Lee

SENSOR NAVIGATION FILE NAME: 20180511_230921
Flight Date (UTC): 5/11/2018

GPS Information: Base 1: 19821311.T02; Base 2; Base3; Aero 1
IMU Information: Start Time: 23:08:35; Stop Time: 1:53:14
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821311.T02		2.05	R10
Base 2				
Base 3				

Relight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	40	180512_000623	0:05:42	0:23:09	0:17:27	40	53.4	151700	YES	Y	2966.086	9731					Lee	0000
	39	180512_002743	0:28:01	0:52:14	0:24:12	40	53.4	151700	YES	Y	3024.929	9924					Lee	0000
	38	180512_005433	0:54:51	1:12:18	0:17:27	40	53.4	151700	YES	Y	3015.706	9894					Lee	0000
	37	180512_011936	1:19:24	1:40:29	0:24:06	40	53.4	151700	YES	Y	2992.115	9817					Lee	0000
	UL001	180512_014234	1:42:53	1:43:34	0:00:42	40	53.4	151700	YES	Y	3014.799	9891					Lee	0000

LIDAR FLIGHT SUMMARY

Hobbs Start	6148.1		
Aircraft IMU Time		Hobbs Stop	6150.6
Sensor Collection Time		Hobbs Total	2.5
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Relight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Relight Lines	0	Total Flight Lines	0
Relight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 20

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE Red	Texas West Central		
	Location		
MISSION 20	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/12/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

Aircraft	SENSOR NAVIGATION FILE NAME
N6461Z	20180512_131720

GPS Information: Base 1 19821320.T02; Base 2; Base3; Aero 1; IMU Information: Start Time 13:16:34; Stop Time 18:38:16

AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure; Airport; @Altitude; @Altitude

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821320.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	36	180512_134846	13:49:06	14:06:56	0:17:50	40	53.4	151700	YES	Y	2975.025	9764					Lee	0000
	35	180512_141017	14:10:37	14:33:02	0:22:25	40	53.4	151700	YES	Y	3021.73	9914					Lee	0000
	34	180512_143532	14:35:52	14:53:55	0:18:03	40	53.4	151700	YES	Y	3044.126	9987					Lee	0000
	33	180512_145952	15:00:12	15:21:49	0:21:37	40	53.4	151700	YES	Y	3032.615	9950					Lee	0000
	32	180512_152422	15:24:42	15:43:09	0:18:27	40	53.4	151700	YES	Y	3033.748	9953					Lee	0000
	31	180512_155047	15:51:07	16:12:27	0:21:20	40	53.4	151700	YES	Y	3026.394	9929					Lee	0000
	30	180512_165359	16:54:10	17:12:04	0:17:55	40	53.4	151700	YES	Y	3031.162	9945					Lee	0000
	29	180512_171534	17:16:53	17:37:54	0:22:01	40	53.4	151700	YES	Y	3015.626	9894					Lee	0000
	28	180512_174018	17:40:38	17:58:34	0:17:57	40	53.4	151700	YES	Y	3037.87	9967					Lee	0000
	27	180512_180206	18:02:26	18:23:58	0:21:32	40	53.4	151700	YES	Y	3055.33	10024					Lee	0000
	UL001	180512_182530	18:25:50	18:28:05	0:02:15	40	53.4	151700	YES	Y	3148.987	10331					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6150.6
Aircraft IMU Time		Hobbs Stop	6156.5
Sensor Collection Time		Hobbs Total	4.9
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 21

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE Red	Texas West Central		
	Location		
MISSION 21	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/14/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

Aircraft	SENSOR NAVIGATION FILE NAME
N6461Z	20180514_134637

GPS Information: Base 1 19821340.T02; Base 2; Base3; Aero 1; IMU Information: Start Time 13:45:47; Stop Time 19:07:08

AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure; Airport; @Altitude; @Altitude

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821340.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	25	180514_141803	14:18:22	14:37:02	0:18:40	40	53.4	151700	YES	Y	3060.494	10041					Lee	0000
	25	180514_144023	14:40:42	15:01:55	0:21:13	40	53.4	151700	YES	Y	3056.142	10027					Lee	0000
	24	180514_150424	15:04:43	15:23:22	0:18:39	40	53.4	151700	YES	Y	3064.037	10053					Lee	0000
	23	180514_152706	15:27:25	15:48:16	0:20:51	40	53.4	151700	YES	Y	3060.623	10039					Lee	0000
	22	180514_155047	15:51:06	16:09:42	0:18:35	40	53.4	151700	YES	Y	3066.823	10062					Lee	0000
	21	180514_161256	16:13:16	16:34:24	0:21:08	40	53.4	151700	YES	Y	3061.156	10043					Lee	0000
	20	180514_163658	16:37:18	16:55:47	0:18:29	40	53.4	151700	YES	Y	3076.42	10094					Lee	0000
	19	180514_170221	17:02:40	17:21:19	0:18:39	40	53.4	151700	YES	Y	3081.853	10111					Lee	0000
	18	180514_172235	17:23:55	17:40:30	0:16:35	40	53.4	151700	YES	Y	3089.425	10169					Lee	0000
	17	180514_174356	17:44:14	18:03:01	0:18:47	40	53.4	151700	YES	Y	3066.443	10060					Lee	0000
	16	180514_180530	18:05:50	18:22:46	0:16:34	40	53.4	151700	YES	Y	3052.455	10047					Lee	0000
	15	180514_182940	18:29:58	18:44:25	0:14:26	40	53.4	151700	YES	Y	3092.497	10146					Lee	0000
	UL001	180514_184605	18:46:24	18:49:02	0:02:38	40	53.4	151700	YES	Y	2981.985	9783					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6156.5
Aircraft IMU Time		Hobbs Stop	6161.6
Sensor Collection Time		Hobbs Total	5.1
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 22

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE Blue	Texas West Central		
RCD B	Location		
MISSION 22	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/15/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

Aircraft	SENSOR NAVIGATION FILE NAME
N6461Z	20180515_022221

GPS Information: Base 1 19621341.T02; Base 2; Base3; Aero 1
IMU Information: Start Time 2:24:13; Stop Time 6:36:55
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	19621341.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	14	180515_030103	3:01:23	3:14:57	0:13:34	40	53.4	151700	YES	Y	3072.348	10080					Lee	0000
	13	180515_031939	3:19:58	3:34:41	0:14:44	40	53.4	151700	YES	Y	3079.093	10102					Lee	0000
	12	180515_033720	3:37:39	3:51:33	0:13:54	40	53.4	151700	YES	Y	3063.706	10052					Lee	0000
	11	180515_035535	3:55:55	4:09:50	0:13:55	40	53.4	151700	YES	Y	3054.56	10022					Lee	0000
	10	180515_041238	4:12:58	4:26:03	0:13:05	40	53.4	151700	YES	Y	3010.425	9877					Lee	0000
	9	180515_042848	4:29:07	4:42:33	0:13:26	40	53.4	151700	YES	Y	3028.239	9935					Lee	0000
	8	180515_044519	4:45:39	4:58:32	0:12:54	40	53.4	151700	YES	Y	3027.676	9933					Lee	0000
	7	180515_050127	5:01:46	5:14:23	0:12:37	40	53.4	151700	YES	Y	3007.345	9867					Lee	0000
	6	180515_051728	5:17:47	5:30:13	0:12:26	40	53.4	151700	YES	Y	2981.393	9781					Lee	0000
	5	180515_053305	5:33:24	5:45:33	0:12:10	40	53.4	151700	YES	Y	3007.279	9866					Lee	0000
	4	180515_054842	5:48:01	6:00:41	0:11:41	40	53.4	151700	YES	Y	2989.164	9807					Lee	0000
	3	180515_060017	6:10:36	6:13:01	0:02:24	40	53.4	151700	YES	Y	2990.612	9812					Lee	0000
	2	180515_061554	6:16:13	6:18:41	0:02:28	40	53.4	151700	YES	Y	2999.329	9840					Lee	0000
	1	180515_062127	6:21:46	6:23:38	0:01:52	40	53.4	151700	YES	Y	2995.395	9827					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6162.3
Aircraft IMU Time		Hobbs Stop	6166.5
Sensor Collection Time		Hobbs Total	4.2
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 23

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE 11	Texas West Central		
	Location		
MISSION 23	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/15/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

Aircraft	SENSOR NAVIGATION FILE NAME
N799AC	20180515_151914

GPS Information: Base 1 19621350.T02; Base 2; Base3; Aero 1
IMU Information: Start Time 15:19:35; Stop Time 19:07:44
AGC: Auto

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	19621350.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	0.674240421	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	86	180515_155159	15:52:19	15:10:54	0:18:36	40	53.4	151700	YES	Y	2918.253	9574					Lee	0000
	85	180515_161404	16:14:24	16:33:01	0:18:37	40	53.4	151700	YES	Y	2900.761	9517					Lee	0000
	84	180515_163624	16:36:44	16:55:11	0:18:26	40	53.4	143900	YES	Y	2897.207	9472					Lee	0000
	83	180515_165852	16:59:12	17:17:55	0:18:43	40	53.4	143900	YES	Y	2895.35	9469					Lee	0000
	82	180515_172119	17:21:39	17:39:50	0:18:11	40	53.4	143900	YES	Y	2916.347	9568					Lee	0000
	81	180515_174349	17:44:09	18:02:50	0:18:41	40	53.4	143900	YES	Y	2890.836	9484					Lee	0000
	80	180515_180611	18:06:30	18:24:33	0:18:03	40	53.4	143900	YES	Y	2915.223	9564					Lee	0000
	79	180515_182821	18:28:40	18:47:13	0:18:32	40	53.4	143900	YES	Y	2901.587	9520					Lee	0000
	UL001	180515_184844	18:49:04	19:50:56	0:01:52	40	53.4	143900	YES	Y	2918.941	9577					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4940.1
Aircraft IMU Time		Hobbs Stop	4944.1
Sensor Collection Time		Hobbs Total	4.0
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

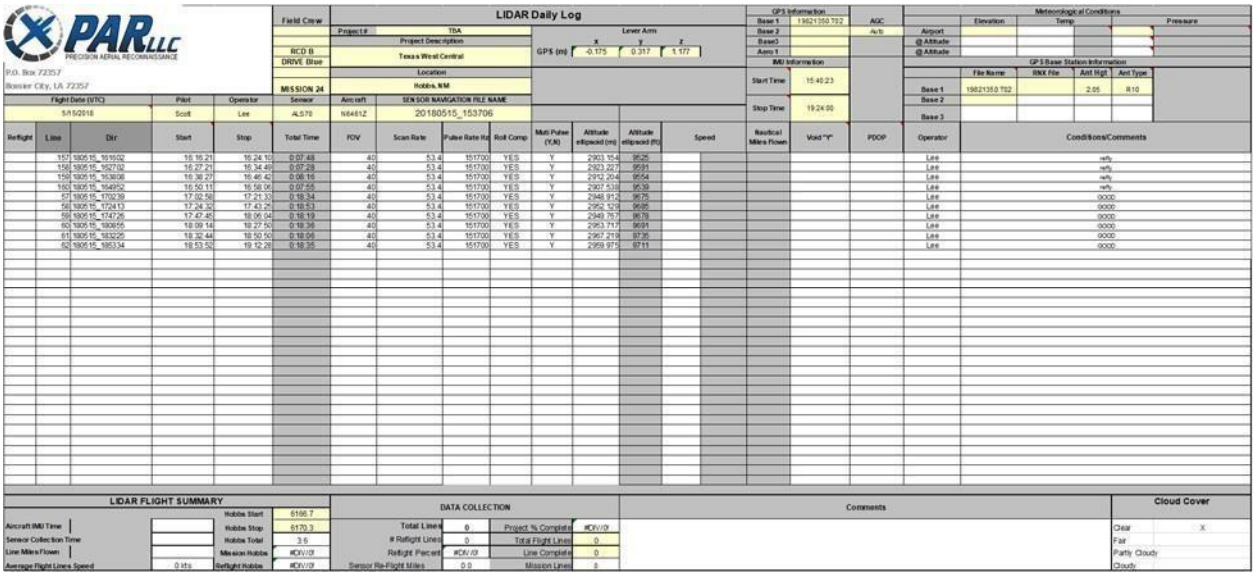
DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 24



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew		
RCD B		
DRIVE Blue		
MISSION 24		
Flight Date (UTC)	Pilot	Operator
5/16/2018	Scott	Lee

Project #	TBA
Project Description	Texas West Central
Location	Hobbs, NM
Aircraft	SENSOR NAVIGATION FILE NAME
N6461Z	20180515_153706

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

GPS Information	
Base 1	19821350.T02
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	15:40:23
Stop Time	19:24:00

AGC: Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@Altitude			
@Altitude			

GPS Base Station Information	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821350.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	157	1805 15_161602	16:16:21	16:24:10	0:07:48	40	53.4	151700	YES	Y	2903.154	9525					Lee	refly
	158	1805 15_162702	16:27:21	16:34:49	0:07:28	40	53.4	151700	YES	Y	2923.227	9591					Lee	refly
	159	1805 15_163808	16:38:27	16:46:42	0:08:16	40	53.4	151700	YES	Y	2912.204	9554					Lee	refly
	160	1805 15_164952	16:50:11	16:58:06	0:07:55	40	53.4	151700	YES	Y	2907.538	9539					Lee	refly
	57	1805 15_170239	17:02:58	17:21:33	0:18:34	40	53.4	151700	YES	Y	2948.912	9675					Lee	0000
	58	1805 15_172413	17:24:32	17:43:25	0:18:53	40	53.4	151700	YES	Y	2952.129	9685					Lee	0000
	59	1805 15_174726	17:47:45	18:06:04	0:18:19	40	53.4	151700	YES	Y	2949.757	9678					Lee	0000
	60	1805 15_180655	18:09:14	18:27:50	0:18:36	40	53.4	151700	YES	Y	2953.717	9691					Lee	0000
	61	1805 15_183225	18:32:44	18:50:50	0:18:06	40	53.4	151700	YES	Y	2967.219	9735					Lee	0000
	62	1805 15_185334	18:53:52	19:12:26	0:18:35	40	53.4	151700	YES	Y	2959.975	9711					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6166.7
Aircraft IMU Time		Hobbs Stop	6170.3
Sensor Collection Time		Hobbs Total	3.6
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!

DATA COLLECTION

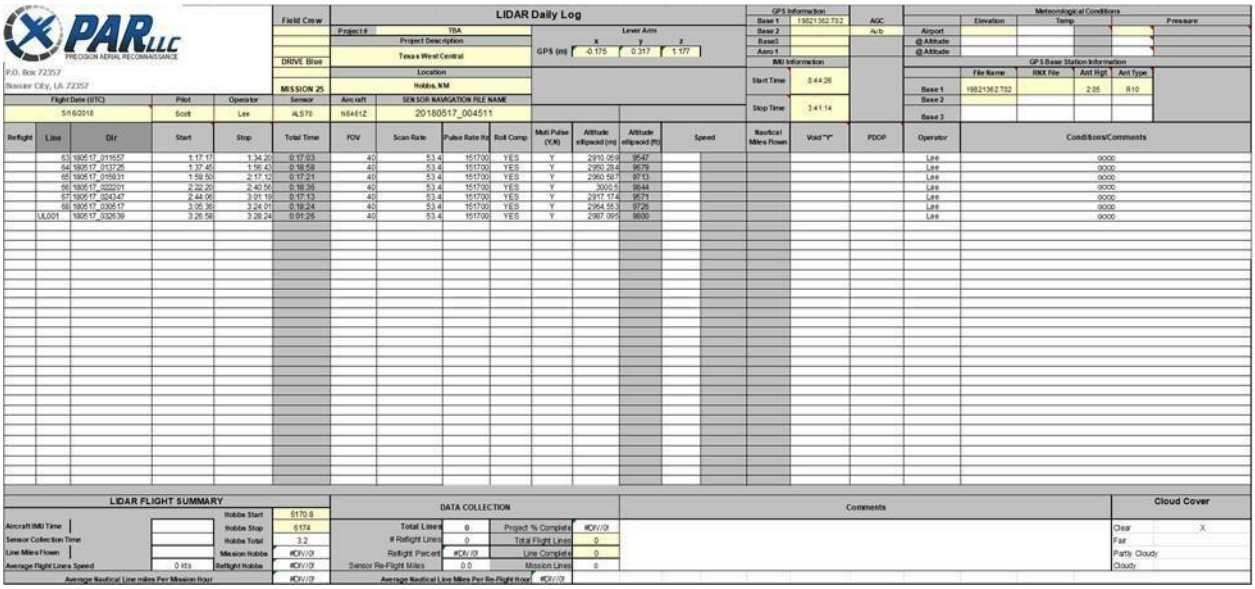
Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 25



PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew		
DRIVE Blue		
MISSION 25		
Flight Date (UTC)	Pilot	Operator
5/16/2018	Scott	Lee

Project #	TBA
Project Description	Texas West Central
Location	Hobbs, NM
Aircraft	SENSOR NAVIGATION FILE NAME
N6461Z	20180517_004511

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

GPS Information	
Base 1	19821362.T02
Base 2	
Base3	
Aero 1	
IMU Information	
Start Time	0:44:26
Stop Time	3:41:14

AGC: Auto

Meteorological Conditions	Elevation	Temp	Pressure
Airport			
@Altitude			
@Altitude			

GPS Base Station Information	File Name	RINX File	Ant Hgt	Ant Type
Base 1	19821362.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	63	1805 17_011657	1:17:17	1:34:20	0:17:03	40	53.4	151700	YES	Y	2910.059	9547					Lee	0000
	64	1805 17_013725	1:37:45	1:56:43	0:18:58	40	53.4	151700	YES	Y	2950.284	9679					Lee	0000
	65	1805 17_015931	1:59:50	2:17:12	0:17:21	40	53.4	151700	YES	Y	2960.587	9713					Lee	0000
	66	1805 17_022201	2:22:20	2:40:56	0:18:36	40	53.4	151700	YES	Y	3000.51	9844					Lee	0000
	67	1805 17_024347	2:44:06	3:01:19	0:17:13	40	53.4	151700	YES	Y	2917.174	9571					Lee	0000
	68	1805 17_030517	3:05:36	3:24:01	0:18:24	40	53.4	151700	YES	Y	2964.563	9726					Lee	0000
	UL001	1805 17_032639	3:26:58	3:28:24	0:01:26	40	53.4	151700	YES	Y	2987.095	9800					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6170.8
Aircraft IMU Time		Hobbs Stop	6174
Sensor Collection Time		Hobbs Total	3.2
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 26

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
RCD B	Texas West Central		
DRIVE Blue	Location		
	Hobbs, NM		
MISSION 25	Aircraft	SENSOR NAVIGATION FILE NAME	
	N6461Z	20180517_120619	

Lever Arm: GPS (m) x -0.175, y 0.317, z 1.177

GPS Information: Base 1 0669911374O; Base 2; Base3; Aero 1; IMU Information: Start Time 12:10:54; Stop Time 17:42:34

AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure; Airport; @ Altitude; @ Altitude

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	0669911374O		2	CHCI9005
Base 2				
Base 3				

Flight Date (UTC)	Pilot	Operator
5/17/2018	Scott	Lee

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	112	180517_124219	12:42:37	13:15:36	0:32:58	40	53.4	151700	YES	Y	2815.083	9239					Lee	0000
	111	180517_131836	13:18:56	13:42:20	0:23:25	40	53.4	151700	YES	Y	2798.829	9182					Lee	0000
	110	180517_134640	13:46:56	14:20:05	0:33:07	40	53.4	151700	YES	Y	2867.779	9409					Lee	0000
	109	180517_142251	14:23:09	14:46:10	0:23:01	40	53.4	151700	YES	Y	2840.249	9318					Lee	0000
	108	180517_145024	14:50:42	15:23:43	0:33:01	40	53.4	151700	YES	Y	2851.693	9356					Lee	0000
	107	180517_152630	15:26:49	15:49:27	0:22:38	40	53.4	151700	YES	Y	2863.387	9393					Lee	0000
	106	180517_155358	15:54:16	16:26:58	0:32:43	40	53.4	151700	YES	Y	2852.513	9359					Lee	0000
	105	180517_162944	16:30:02	16:52:32	0:22:30	40	53.4	151700	YES	Y	2848.367	9345					Lee	0000
	104	180517_165614	16:56:32	17:29:06	0:32:33	40	53.4	151700	YES	Y	2872.284	9423					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6174.3
Aircraft IMU Time		Hobbs Stop	6179.7
Sensor Collection Time		Hobbs Total	5.4
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 Hrs	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 27

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE 11	Texas West Central		
	Location		
	Hobbs, NM		
MISSION 27	Aircraft	SENSOR NAVIGATION FILE NAME	
	N7994C	20180517_140042	

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

GPS Information: Base 1 19821370.T02; Base2; Base3; Aero1; IMU Information: Start Time 13:59:49; Stop Time 17:46:28

AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure; Airport; @ Altitude; @ Altitude

GPS Base Station Information

	File Name	RNX File	Ant Hgt	Ant Type
Base 1	19821370.T02		2.05	R10
Base 2				
Base 3				

Flight Date (UTC)	Pilot	Operator
5/17/2018	Scott	Lee

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	63	180517_142912	14:29:32	14:43:49	0:14:17	40	53.4	151700	YES	Y	2952.478	9687					Lee	0000
	69	180517_144930	14:49:49	15:12:21	0:22:32	40	53.4	151700	YES	Y	2948.942	9675					Lee	Retry
	70	180517_151511	15:15:30	15:15:49	0:00:18	40	53.4	143900	YES	Y	2920.213	9581					Lee	0000
	70	180517_151950	15:20:09	15:35:52	0:15:42	40	53.4	143900	YES	Y	2954.779	9727					Lee	0000
	71	180517_154111	15:41:30	16:04:02	0:22:32	40	53.4	143900	YES	Y	2948.593	9674					Lee	0000
	72	180517_160652	16:07:11	16:23:01	0:15:50	40	53.4	143900	YES	Y	2969.432	9742					Lee	0000
	73	180517_162716	16:27:36	16:49:35	0:22:00	40	53.4	143900	YES	Y	2969.7	9743					Lee	0000
	74	180517_165203	16:52:50	17:08:47	0:15:56	40	53.4	143900	YES	Y	2927.27	9604					Lee	0000
	75	180517_171022	17:12:42	17:34:28	0:21:46	40	53.4	143900	YES	Y	2952.247	9686					Lee	0000
	UL001	180517_173626	17:36:45	17:38:47	0:02:02	40	53.4	143900	YES	Y	2761.34	9125					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4945.9
Aircraft IMU Time		Hobbs Stop	4949.7
Sensor Collection Time		Hobbs Total	3.8
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 Hrs	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover: Clear X; Fair; Partly Cloudy; Cloudy

Mission 28

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
DRIVE 11			
MISSION 28			
Flight Date (UTC)	Pilot	Operator	Sensor
5/17/2018	Scott	Lee	ALS70

Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
Aircraft: N799AC
SENSOR NAVIGATION FILE NAME: 20180518_142303
Lever Arm (x, y, z): GPS (m) 0.051, 0.340, 1.051

GPS Information: Base 1 1982138O T02; Base 2; Base3; Aero 1
IMU Information: Start Time 14:22:19; Stop Time 17:48:34
AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure
Airport; @ Altitude; @ Altitude

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	1982138O.T02		2.05	R10
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	16	180518_150244	15:03:03	15:03:16	0:00:13	40	53.4	151700	YES	Y	3044.953	9990					Lee	0000
	16	180518_150858	15:09:17	15:26:15	0:16:58	40	53.4	151700	YES	Y	3059.141	10037					Lee	0000
	17	180518_153018	15:30:37	15:51:26	0:20:49	40	53.4	151700	YES	Y	3066.141	10059					Lee	0000
	22	180518_155409	15:54:26	16:13:12	0:18:43	40	53.4	151700	YES	Y	3064.54	10054					Lee	0000
	23	180518_161715	16:17:35	16:41:10	0:23:35	40	53.4	151700	YES	Y	3073.826	10085					Lee	0000
	24	180518_164406	16:44:26	17:02:53	0:18:27	40	53.4	151700	YES	Y	3061.53	10044					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4950.9
Aircraft IMU Time		Hobbs Stop	4954.3
Sensor Collection Time		Hobbs Total	3.4
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 29

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
RCD B			
DRIVE Red			
MISSION 29			
Flight Date (UTC)	Pilot	Operator	Sensor
5/19/2018	Scott	Lee	ALS70

Project # TBA
Project Description: Texas West Central
Location: Hobbs, NM
Aircraft: N6481Z
SENSOR NAVIGATION FILE NAME: 20180519_101637
Lever Arm (x, y, z): GPS (m) -0.175, 0.317, 1.177

GPS Information: Base 1 0669911339.40; Base 2; Base3; Aero 1
IMU Information: Start Time 10:18:45; Stop Time 13:38:27
AGC: Auto

Meteorological Conditions: Elevation; Temp; Pressure
Airport; @ Altitude; @ Altitude

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	0669911339.40		2	CHC19005
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	103	1905 19_105217	10:52:36	11:19:14	0:26:37	40	53.4	151700	YES	Y	2959.647	9382					Lee	0000
	102	1905 19_112221	11:22:40	11:48:36	0:25:56	40	53.4	151700	YES	Y	2966.911	9405					Lee	0000
	101	1905 19_115208	11:52:27	12:19:44	0:27:17	40	53.4	151700	YES	Y	2964.281	9397					Lee	0000
	100	1905 19_122219	12:22:36	12:47:41	0:25:05	40	53.4	151700	YES	Y	2964.841	9399					Lee	0000
	99	1905 19_125044	12:51:03	13:18:43	0:27:40	40	53.4	151700	YES	Y	2980.875	9452					Lee	0000
																		0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	6180.8
Aircraft IMU Time		Hobbs Stop	6183.9
Sensor Collection Time		Hobbs Total	3.1
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour	#DIV/0!		

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 30

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE 11	Texas West Central		
	Location		
MISSION 30	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/19/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

GPS Information		AGC
Base 1	0669911394	Auto
Base 2		
Base3		
Aero 1		

IMU Information: Start Time 11:45:22; Stop Time 14:10:15

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	0669911394		2	CHCX900S
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	76	180519_121718	12:17:39	12:36:05	0:18:26	40	53.4	151700	YES	Y	2913.719	9559					Lee	0000
	77	180519_123912	12:39:32	12:58:59	0:19:27	40	53.4	151700	YES	Y	2902.98	9524					Lee	0000
	78	180519_130153	13:02:14	13:20:16	0:18:02	40	53.4	151700	YES	Y	2902.904	9524					Lee	0000
	87	180519_133027	13:30:40	13:58:02	0:27:14	40	53.4	151700	YES	Y	2925.021	9597					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4954.5
Aircraft IMU Time		Hobbs Stop	4956.9
Sensor Collection Time		Hobbs Total	2.4
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	

Mission 31

PAR LLC
PRECISION AERIAL RECONNAISSANCE
P.O. Box 72357
Bossier City, LA 72357

LIDAR Daily Log

Field Crew			
	Project #	TBA	
	Project Description		
DRIVE 11	Texas West Central		
	Location		
MISSION 31	Hobbs, NM		
Flight Date (UTC)	Pilot	Operator	Sensor
5/19/2018	Scott	Lee	ALS70

Lever Arm: GPS (m) x 0.051, y 0.340, z 1.051

GPS Information		AGC
Base 1	0669911394	Auto
Base 2		
Base3		
Aero 1		

IMU Information: Start Time 14:55:19; Stop Time 18:03:13

Meteorological Conditions

	Elevation	Temp	Pressure
Airport			
@ Altitude			
@ Altitude			

GPS Base Station Information

	File Name	RINX File	Ant Hgt	Ant Type
Base 1	0669911394		2	CHCX900S
Base 2				
Base 3				

Reflight	Line	Dir	Start	Stop	Total Time	FOV	Scan Rate	Pulse Rate Hz	Roll Comp	Multi Pulse (Y,N)	Altitude ellipsoid (m)	Altitude ellipsoid (ft)	Speed	Nautical Miles Flown	Void "Y"	PDOP	Operator	Conditions/Comments
	86	180519_152921	15:29:40	15:53:51	0:24:11	40	53.4	151700	YES	Y	2895.09	9502					Lee	0000
	89	180519_155716	15:57:35	16:24:30	0:26:55	40	53.4	151700	YES	Y	2913.07	9557					Lee	0000
	90	180519_162714	16:27:34	16:52:05	0:24:31	40	53.4	151700	YES	Y	2904.853	9530					Lee	0000
	91	180519_165825	16:58:44	17:22:34	0:23:50	40	53.4	151700	YES	Y	2907.059	9538					Lee	0000

LIDAR FLIGHT SUMMARY

		Hobbs Start	4955.9
Aircraft IMU Time		Hobbs Stop	4960
Sensor Collection Time		Hobbs Total	3.1
Line Miles Flown		Mission Hobbs	#DIV/0!
Average Flight Lines Speed	0 kts	Reflight Hobbs	#DIV/0!
Average Nautical Line miles Per Mission Hour			#DIV/0!

DATA COLLECTION

Total Lines	0	Project % Complete	#DIV/0!
# Reflight Lines	0	Total Flight Lines	0
Reflight Percent	#DIV/0!	Line Complete	0
Sensor Re-Flight Miles	0.0	Mission Lines	0
Average Nautical Line Miles Per Re-Flight Hour			#DIV/0!

Comments

Cloud Cover

Clear	X
Fair	
Partly Cloudy	
Cloudy	