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# Collection Report

CPRA LADOTD Lidar 2019 | Louisiana

## **Full Project AOI**

Contract: 4400010335 1 | January 28, 2020

Version 01

**Prepared for: CPRA/LADOTD**

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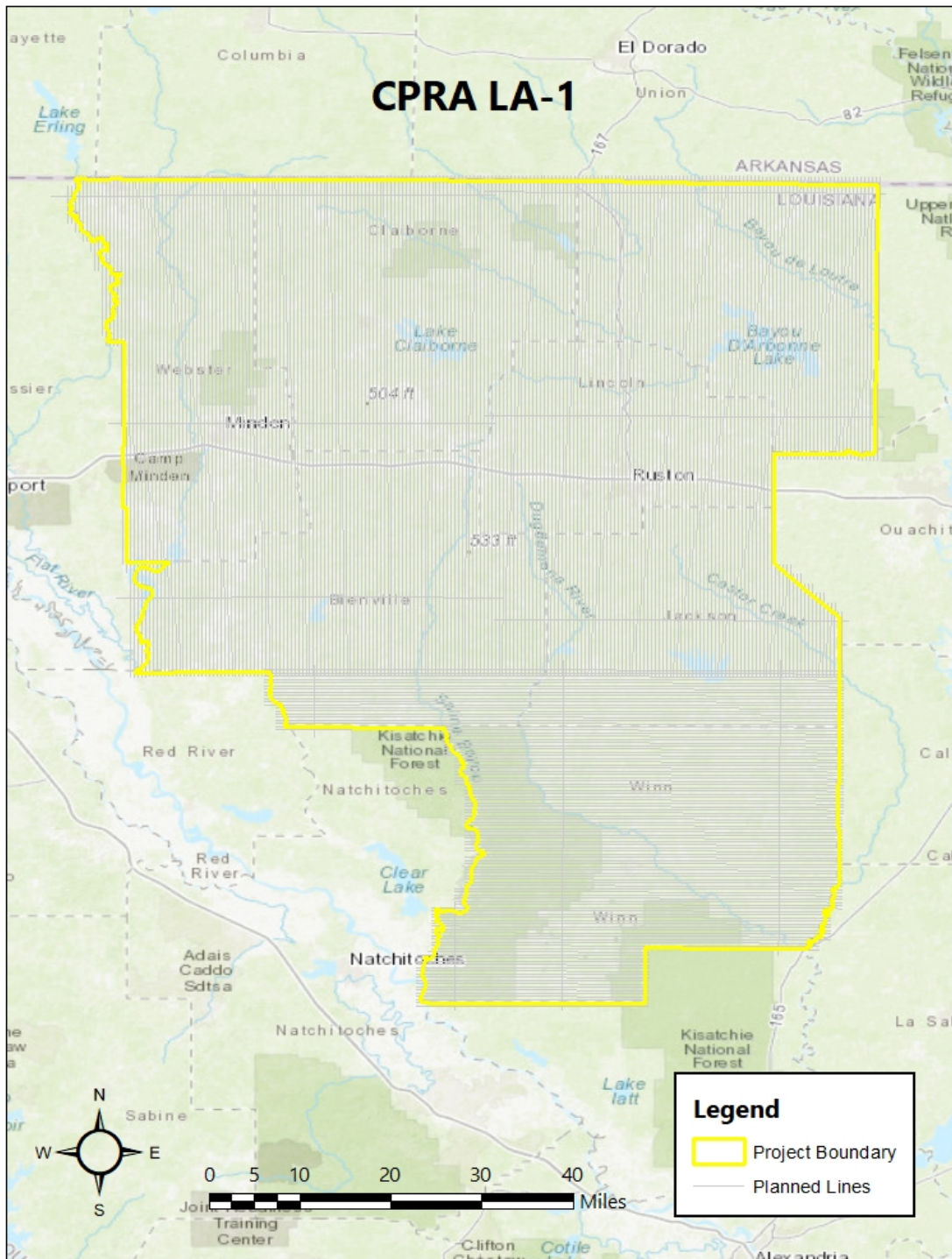
## Abbreviations

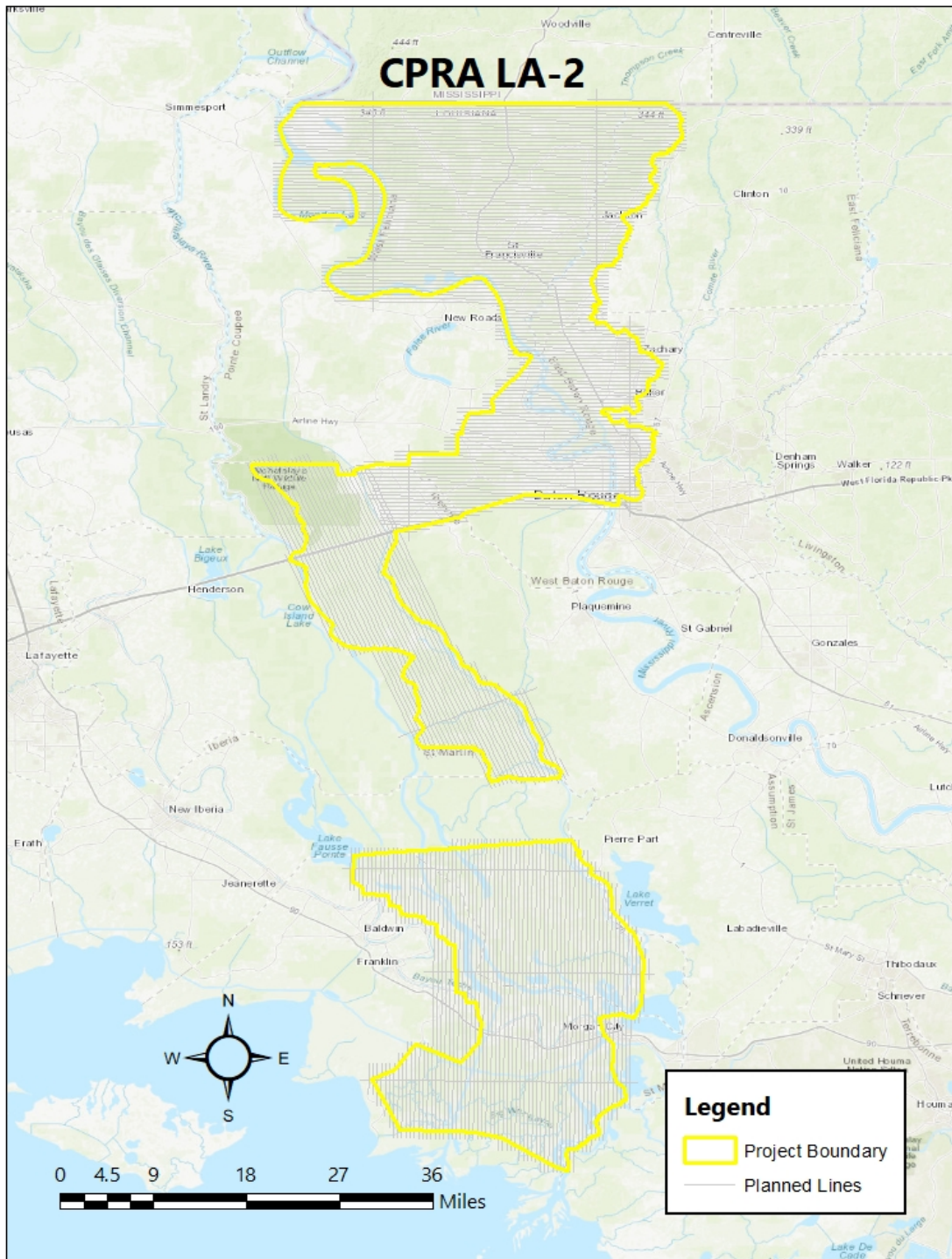
<b>GSD</b>	Ground Sample Distance
<b>PPSM</b>	Points per square meter
<b>AMT</b>	Above Mean Terrain
<b>ASL</b>	Above Sea Level
<b>GNSS</b>	Global Navigation Satellite System
<b>IMU</b>	Inertial Measurement Unit

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# 1. General Project Information

Project Name	CPRA LADOTD Lidar 2019
Project Tracks	LA-1: 342; LA-2: 257
Lidar Point Density	8 ppsm
Collection AMT(s)	9100 ft
Sensor Type	Leica ALS 80
Sensor Serial #s	118, 130
# of Collections	73
Collection Date(s)	03/27/2019 - 11/04/2019





## 2. Collection Details

Listed below are the Acquisition Logs and GNSS processing plots for each Collection.

### Collection ID: 190327\_130\_33780163\_01

#### GNSS-IMU Summary Log:

##### Number of Epochs:

Total in GPB file:	34154
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

##### Measurement RMS Values:

L1 Phase:	0.0212 (m)
C/A Code:	0.94 (m)
L1 Doppler:	0.023 (m/s)

##### Fwd/Rev Separation RMS Values:

East:	0.017 (m)
North:	0.013 (m)
Height:	0.038 (m)

##### Fwd/Rev Sep. RMS for dual FWD/REV fixes (34150 occurrences):

East:	0.017 (m)
North:	0.013 (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 %
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##### Baseline Distances:

Maximum:	111.203 (km)
Minimum:	0.087 (km)
Average:	74.669 (km)



First Epoch: 0.108 (km)  
 Last Epoch: 0.090 (km)

## Collection ID: 190327\_130\_33780163\_02

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 32891  
 No processed position: 2  
 Missing Fwd or Rev: 65  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0221 (m)  
 C/A Code: 0.64 (m)  
 L1 Doppler: 0.022 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.024 (m)  
 North: 0.015 (m)  
 Height: 0.037 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (32824 occurrences):

East: 0.024 (m)  
 North: 0.015 (m)  
 Height: 0.037 (m)

#### Quality Number Percentages:

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

#### Position Standard Deviation Percentages:

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

#### Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

#### Baseline Distances:

Maximum: 116.304 (km)  
 Minimum: 5.893 (km)  
 Average: 78.536 (km)  
 First Epoch: 6.058 (km)

Last Epoch: 6.066 (km)

## Collection ID: 190328\_130\_33780163\_03

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 16315  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0223 (m)  
 C/A Code: 1.81 (m)  
 L1 Doppler: 0.023 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.042 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (16311 occurrences):

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.042 (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: 111.424 (km)  
 Minimum: 0.064 (km)  
 Average: 50.930 (km)  
 First Epoch: 0.074 (km)  
 Last Epoch: 0.081 (km)

## Collection ID: 190401\_130\_33780163\_04

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 32685  
 No processed position: 3

Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0228 (m)  
 C/A Code: 0.93 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.017 (m)  
 North: 0.011 (m)  
 Height: 0.058 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (32680 occurrences):

East: 0.017 (m)  
 North: 0.011 (m)  
 Height: 0.058 (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: 113.451 (km)  
 Minimum: 5.884 (km)  
 Average: 73.390 (km)  
 First Epoch: 6.064 (km)  
 Last Epoch: 6.063 (km)

**Collection ID: 190401\_130\_33780163\_05****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 15985  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0191 (m)  
 C/A Code: 0.76 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.011 (m)

Height: 0.026 (m)  
 Fwd/Rev Sep. RMS for dual FWD/REV fixes (15981 occurrences):  
 East: 0.011 (m)  
 North: 0.011 (m)  
 Height: 0.026 (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: 105.208 (km)  
 Minimum: 5.981 (km)  
 Average: 64.035 (km)  
 First Epoch: 6.063 (km)  
 Last Epoch: 15.586 (km)

## Collection ID: 190409\_118\_33780163\_01

### GNSS-IMU Summary Log:

Number of Epochs:  
 Total in GPB file: 32089  
 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: 0.0198 (m)  
 C/A Code: 1.08 (m)  
 L1 Doppler: 0.022 (m/s)  
 Fwd/Rev Separation RMS Values:  
 East: 0.013 (m)  
 North: 0.008 (m)  
 Height: 0.021 (m)  
 Fwd/Rev Sep. RMS for dual FWD/REV fixes (32084 occurrences):  
 East: 0.013 (m)  
 North: 0.008 (m)  
 Height: 0.021 (m)  
 Quality Number Percentages:  
 Q 1: 100.0 %  
 Q 2: 0.0 %  
 Q 3: 0.0 %  
 Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

## Position Standard Deviation Percentages:

0.00 - 0.10 m: 100.0 %

0.10 - 0.30 m: 0.0 %

0.30 - 1.00 m: 0.0 %

1.00 - 5.00 m: 0.0 %

5.00 m + over: 0.0 %

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

## Baseline Distances:

Maximum: 94.938 (km)

Minimum: 0.061 (km)

Average: 60.768 (km)

First Epoch: 0.080 (km)

Last Epoch: 0.061 (km)

**Collection ID: 190410\_118\_33780163\_02****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 33840

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0222 (m)

C/A Code: 1.30 (m)

L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.024 (m)

North: 0.017 (m)

Height: 0.048 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (33836 occurrences):

East: 0.024 (m)

North: 0.017 (m)

Height: 0.048 (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:	92.967 (km)
Minimum:	0.094 (km)
Average:	58.650 (km)
First Epoch:	0.103 (km)
Last Epoch:	0.102 (km)

**Collection ID: 190415\_118\_33780163\_03****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	34854
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0300 (m)
C/A Code:	1.22 (m)
L1 Doppler:	0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.050 (m)
North:	0.028 (m)
Height:	0.097 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (34850 occurrences):

East:	0.050 (m)
North:	0.028 (m)
Height:	0.097 (m)

## Quality Number Percentages:

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

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol:	0.0 %
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## Baseline Distances:

Maximum:	72.942 (km)
Minimum:	0.059 (km)
Average:	48.071 (km)
First Epoch:	0.088 (km)
Last Epoch:	0.104 (km)

**Collection ID: 190415\_118\_33780163\_04****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	21651
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0225 (m)
C/A Code:	1.46 (m)
L1 Doppler:	0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.017 (m)
North:	0.015 (m)
Height:	0.050 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (21647 occurrences):

East:	0.017 (m)
North:	0.015 (m)
Height:	0.050 (m)

## Quality Number Percentages:

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

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol:	0.0 %
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## Baseline Distances:

Maximum:	60.203 (km)
Minimum:	0.097 (km)
Average:	38.075 (km)
First Epoch:	0.126 (km)
Last Epoch:	0.097 (km)

**Collection ID: 190416\_118\_33780163\_05****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	20744
No processed position:	3
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase: 0.0263 (m)  
 C/A Code: 1.20 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.018 (m)  
 North: 0.016 (m)  
 Height: 0.088 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (20739 occurrences):

East: 0.018 (m)  
 North: 0.016 (m)  
 Height: 0.088 (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: 53.138 (km)  
 Minimum: 0.080 (km)  
 Average: 32.736 (km)  
 First Epoch: 0.091 (km)  
 Last Epoch: 0.129 (km)

**Collection ID: 190416\_118\_33780163\_06****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 30579  
 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: 0.0222 (m)  
 C/A Code: 1.00 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.023 (m)  
 North: 0.014 (m)  
 Height: 0.072 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (30574 occurrences):

East: 0.023 (m)



North: 0.014 (m)

Height: 0.072 (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: 60.190 (km)

Minimum: 0.138 (km)

Average: 22.211 (km)

First Epoch: 0.141 (km)

Last Epoch: 0.145 (km)

## Collection ID: 190420\_118\_33780163\_07

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 34460

No processed position: 2

Missing Fwd or Rev: 33

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0340 (m)

C/A Code: 0.85 (m)

L1 Doppler: 0.020 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.044 (m)

North: 0.034 (m)

Height: 0.113 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (34425 occurrences):

East: 0.044 (m)

North: 0.034 (m)

Height: 0.113 (m)

Quality Number Percentages:

Q 1: 98.7 %

Q 2: 1.3 %

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: 44.621 (km)  
 Minimum: 0.031 (km)  
 Average: 15.165 (km)  
 First Epoch: 0.114 (km)  
 Last Epoch: 0.133 (km)

## Collection ID: 190420\_118\_33780163\_08

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 21318  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0324 (m)  
 C/A Code: 0.82 (m)  
 L1 Doppler: 0.022 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.018 (m)  
 North: 0.029 (m)  
 Height: 0.040 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (21314 occurrences):

East: 0.018 (m)  
 North: 0.029 (m)  
 Height: 0.040 (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: 45.977 (km)  
 Minimum: 0.124 (km)

Average: 22.336 (km)  
 First Epoch: 0.133 (km)  
 Last Epoch: 0.130 (km)

## Collection ID: 190421\_118\_33780163\_09

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 34322  
 No processed position: 39  
 Missing Fwd or Rev: 4  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0223 (m)  
 C/A Code: 0.68 (m)  
 L1 Doppler: 0.021 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.027 (m)  
 North: 0.013 (m)  
 Height: 0.074 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (34279 occurrences):

East: 0.027 (m)  
 North: 0.013 (m)  
 Height: 0.074 (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: 88.687 (km)  
 Minimum: 5.875 (km)  
 Average: 51.196 (km)  
 First Epoch: 14.945 (km)  
 Last Epoch: 15.058 (km)

## Collection ID: 190421\_118\_33780163\_10

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 21849  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0314 (m)  
 C/A Code: 0.80 (m)  
 L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.017 (m)  
 North: 0.031 (m)  
 Height: 0.072 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (21845 occurrences):

East: 0.017 (m)  
 North: 0.031 (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: 79.100 (km)  
 Minimum: 0.138 (km)  
 Average: 43.494 (km)  
 First Epoch: 0.211 (km)  
 Last Epoch: 0.138 (km)

## Collection ID: 190422\_118\_33780163\_11

### GNSS-IMU Summary Log:

Number of Epochs:  
 Total in GPB file: 35157  
 No processed position: 2  
 Missing Fwd or Rev: 4  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0321 (m)  
 C/A Code: 0.86 (m)  
 L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.110 (m)  
 North: 0.035 (m)  
 Height: 0.089 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (35151 occurrences):

East: 0.110 (m)  
 North: 0.035 (m)  
 Height: 0.089 (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: 70.111 (km)  
 Minimum: 0.120 (km)  
 Average: 42.837 (km)  
 First Epoch: 0.152 (km)  
 Last Epoch: 0.120 (km)

**Collection ID: 190422\_118\_33780163\_12****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 19340  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0244 (m)  
 C/A Code: 0.79 (m)  
 L1 Doppler: 0.025 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.057 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (19336 occurrences):

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.057 (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: 69.141 (km)  
 Minimum: 0.116 (km)  
 Average: 35.334 (km)  
 First Epoch: 0.120 (km)  
 Last Epoch: 0.151 (km)

**Collection ID: 190423\_118\_33780163\_13****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 27968  
 No processed position: 3  
 Missing Fwd or Rev: 3  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0220 (m)  
 C/A Code: 0.85 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.036 (m)  
 North: 0.012 (m)  
 Height: 0.048 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (27962 occurrences):

East: 0.036 (m)  
 North: 0.012 (m)  
 Height: 0.048 (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: 55.836 (km)

Minimum: 0.099 (km)

Average: 30.900 (km)

First Epoch: 0.150 (km)

Last Epoch: 0.099 (km)

## Collection ID: 190426\_118\_33780163\_14

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 25798

No processed position: 2

Missing Fwd or Rev: 532

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0248 (m)

C/A Code: 0.63 (m)

L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.090 (m)

North: 0.043 (m)

Height: 0.093 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (20198 occurrences):

East: 0.026 (m)

North: 0.016 (m)

Height: 0.045 (m)

Quality Number Percentages:

Q 1: 98.2 %

Q 2: 1.8 %

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: 207.659 (km)

Minimum: 1.192 (km)

Average: 44.561 (km)

First Epoch: 36.883 (km)

Last Epoch: 207.659 (km)

**Collection ID: 190426\_118\_33780163\_15****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	29143
No processed position:	48
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0276 (m)
C/A Code:	0.84 (m)
L1 Doppler:	0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.044 (m)
North:	0.010 (m)
Height:	0.045 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (29093 occurrences):

East:	0.044 (m)
North:	0.010 (m)
Height:	0.045 (m)

## Quality Number Percentages:

Q 1:	99.6 %
Q 2:	0.4 %
Q 3:	0.0 %
Q 4:	0.0 %
Q 5:	0.0 %
Q 6:	0.0 %

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol:	0.0 %
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## Baseline Distances:

Maximum:	70.457 (km)
Minimum:	0.172 (km)
Average:	36.068 (km)
First Epoch:	0.199 (km)
Last Epoch:	0.254 (km)

**Collection ID: 190427\_118\_33780163\_16****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	27572
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0



## Measurement RMS Values:

L1 Phase: 0.0317 (m)  
 C/A Code: 0.63 (m)  
 L1 Doppler: 0.020 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.020 (m)  
 North: 0.022 (m)  
 Height: 0.093 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (27568 occurrences):

East: 0.020 (m)  
 North: 0.022 (m)  
 Height: 0.093 (m)

## Quality Number Percentages:

Q 1: 99.5 %  
 Q 2: 0.5 %  
 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: 70.068 (km)  
 Minimum: 0.211 (km)  
 Average: 37.356 (km)  
 First Epoch: 0.223 (km)  
 Last Epoch: 0.211 (km)

**Collection ID: 190506\_130\_33780163\_06****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 32785  
 No processed position: 2  
 Missing Fwd or Rev: 540  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0229 (m)  
 C/A Code: 1.15 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.049 (m)  
 North: 0.015 (m)  
 Height: 0.058 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (29741 occurrences):

East: 0.010 (m)

North: 0.010 (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: 131.878 (km)

Minimum: 0.077 (km)

Average: 50.213 (km)

First Epoch: 131.482 (km)

Last Epoch: 0.087 (km)

## Collection ID: 190514\_130\_33780163\_07

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 39190

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0179 (m)

C/A Code: 0.69 (m)

L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.014 (m)

North: 0.011 (m)

Height: 0.049 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (39186 occurrences):

East: 0.014 (m)

North: 0.011 (m)

Height: 0.049 (m)

Quality Number Percentages:

Q 1: 96.4 %

Q 2: 3.6 %

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: 150.342 (km)  
 Minimum: 0.653 (km)  
 Average: 89.031 (km)  
 First Epoch: 1.820 (km)  
 Last Epoch: 130.576 (km)

## Collection ID: 190515\_130\_33780163\_08

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 37087  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0184 (m)  
 C/A Code: 1.42 (m)  
 L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.009 (m)  
 North: 0.007 (m)  
 Height: 0.017 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (37083 occurrences):

East: 0.009 (m)  
 North: 0.007 (m)  
 Height: 0.017 (m)

Quality Number Percentages:

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

Position Standard Deviation Percentages:

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

Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 113.577 (km)  
 Minimum: 0.124 (km)

Average: 78.601 (km)  
 First Epoch: 0.187 (km)  
 Last Epoch: 0.176 (km)

## Collection ID: 190516\_130\_33780163\_09

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 35141  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0177 (m)  
 C/A Code: 1.67 (m)  
 L1 Doppler: 0.022 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.013 (m)  
 North: 0.007 (m)  
 Height: 0.028 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (35137 occurrences):

East: 0.013 (m)  
 North: 0.007 (m)  
 Height: 0.028 (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: 88.244 (km)  
 Minimum: 0.072 (km)  
 Average: 56.627 (km)  
 First Epoch: 0.194 (km)  
 Last Epoch: 0.198 (km)

## Collection ID: 190517\_130\_33780163\_10

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 22956  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0203 (m)  
 C/A Code: 1.74 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.011 (m)  
 Height: 0.038 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (22952 occurrences):

East: 0.011 (m)  
 North: 0.011 (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: 87.184 (km)  
 Minimum: 0.113 (km)  
 Average: 51.922 (km)  
 First Epoch: 0.197 (km)  
 Last Epoch: 0.203 (km)

**Collection ID: 190517\_130\_33780163\_11****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 28339  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0208 (m)  
 C/A Code: 1.31 (m)  
 L1 Doppler: 0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.029 (m)

North: 0.011 (m)

Height: 0.048 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (28335 occurrences):

East: 0.029 (m)

North: 0.011 (m)

Height: 0.048 (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: 90.122 (km)

Minimum: 0.190 (km)

Average: 59.383 (km)

First Epoch: 0.202 (km)

Last Epoch: 0.190 (km)

## Collection ID: 190527\_130\_33780163\_12

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 31122

No processed position: 1

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0184 (m)

C/A Code: 1.54 (m)

L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.005 (m)

North: 0.010 (m)

Height: 0.021 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (31119 occurrences):

East: 0.005 (m)

North: 0.010 (m)

Height: 0.021 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %  
 Q 4: 0.0 %  
 Q 5: 0.0 %  
 Q 6: 0.0 %

Position Standard Deviation Percentages:

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

Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 124.241 (km)  
 Minimum: 0.030 (km)  
 Average: 74.072 (km)  
 First Epoch: 0.224 (km)  
 Last Epoch: 0.032 (km)

## Collection ID: 190528\_130\_33780163\_13

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 19509  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0182 (m)  
 C/A Code: 1.61 (m)  
 L1 Doppler: 0.024 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.009 (m)  
 North: 0.012 (m)  
 Height: 0.035 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (19505 occurrences):

East: 0.009 (m)  
 North: 0.012 (m)  
 Height: 0.035 (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: 108.497 (km)

Minimum: 0.030 (km)

Average: 62.842 (km)

First Epoch: 0.212 (km)

Last Epoch: 0.032 (km)

## Collection ID: 190531\_130\_33780163\_14

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 33726

No processed position: 2

Missing Fwd or Rev: 4

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0227 (m)

C/A Code: 1.72 (m)

L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.016 (m)

North: 0.012 (m)

Height: 0.052 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (33720 occurrences):

East: 0.016 (m)

North: 0.012 (m)

Height: 0.052 (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: 109.564 (km)

Minimum: 0.030 (km)

Average: 70.967 (km)

First Epoch: 0.058 (km)

Last Epoch: 0.031 (km)



**Collection ID: 190601\_130\_33780163\_15****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	32964
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0192 (m)
C/A Code:	1.45 (m)
L1 Doppler:	0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.006 (m)
North:	0.007 (m)
Height:	0.025 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (32960 occurrences):

East:	0.006 (m)
North:	0.007 (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 %
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## Baseline Distances:

Maximum:	92.782 (km)
Minimum:	0.029 (km)
Average:	61.773 (km)
First Epoch:	0.211 (km)
Last Epoch:	0.031 (km)

**Collection ID: 190602\_130\_33780163\_16****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	33335
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase: 0.0216 (m)  
 C/A Code: 1.12 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.008 (m)  
 North: 0.014 (m)  
 Height: 0.024 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (33331 occurrences):

East: 0.008 (m)  
 North: 0.014 (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: 100.186 (km)  
 Minimum: 0.154 (km)  
 Average: 65.168 (km)  
 First Epoch: 0.228 (km)  
 Last Epoch: 0.154 (km)

**Collection ID: 190610\_130\_33780163\_17****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 31854  
 No processed position: 1  
 Missing Fwd or Rev: 4  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0224 (m)  
 C/A Code: 1.23 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.021 (m)  
 North: 0.019 (m)  
 Height: 0.044 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (31849 occurrences):

East: 0.021 (m)

North: 0.019 (m)

Height: 0.044 (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: 124.824 (km)

Minimum: 0.035 (km)

Average: 81.614 (km)

First Epoch: 0.064 (km)

Last Epoch: 0.039 (km)

## Collection ID: 190611\_130\_33780163\_18

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 31359

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0302 (m)

C/A Code: 1.43 (m)

L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.023 (m)

North: 0.022 (m)

Height: 0.083 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (31355 occurrences):

East: 0.023 (m)

North: 0.022 (m)

Height: 0.083 (m)

Quality Number Percentages:

Q 1: 99.5 %

Q 2: 0.4 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

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

Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 78.883 (km)  
 Minimum: 0.054 (km)  
 Average: 48.100 (km)  
 First Epoch: 0.119 (km)  
 Last Epoch: 0.062 (km)

## Collection ID: 190618\_130\_33780163\_19

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 33355  
 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: 0.0171 (m)  
 C/A Code: 1.71 (m)  
 L1 Doppler: 0.022 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.009 (m)  
 North: 0.015 (m)  
 Height: 0.022 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (33350 occurrences):

East: 0.009 (m)  
 North: 0.015 (m)  
 Height: 0.022 (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: 107.517 (km)  
 Minimum: 0.038 (km)

Average: 64.009 (km)  
 First Epoch: 0.038 (km)  
 Last Epoch: 0.045 (km)

## Collection ID: 190703\_130\_33780163\_20

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 37898  
 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: 0.0222 (m)  
 C/A Code: 1.28 (m)  
 L1 Doppler: 0.024 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.029 (m)  
 North: 0.014 (m)  
 Height: 0.065 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (37893 occurrences):

East: 0.029 (m)  
 North: 0.014 (m)  
 Height: 0.065 (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: 112.801 (km)  
 Minimum: 0.832 (km)  
 Average: 63.982 (km)  
 First Epoch: 0.832 (km)  
 Last Epoch: 0.889 (km)

## Collection ID: 191005\_118\_33780163\_17

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 29301  
 No processed position: 11  
 Missing Fwd or Rev: 11  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0238 (m)  
 C/A Code: 1.79 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.033 (m)  
 North: 0.019 (m)  
 Height: 0.065 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (29218 occurrences):

East: 0.033 (m)  
 North: 0.019 (m)  
 Height: 0.065 (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: 102.280 (km)  
 Minimum: 0.216 (km)  
 Average: 54.458 (km)  
 First Epoch: 0.257 (km)  
 Last Epoch: 0.220 (km)

**Collection ID: 191008\_118\_33780163\_18****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 19462  
 No processed position: 9  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0169 (m)  
 C/A Code: 0.93 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.010 (m)  
 North: 0.011 (m)  
 Height: 0.031 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (19444 occurrences):

East: 0.008 (m)  
 North: 0.011 (m)  
 Height: 0.028 (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: 54.357 (km)  
 Minimum: 0.196 (km)  
 Average: 31.566 (km)  
 First Epoch: 0.223 (km)  
 Last Epoch: 0.223 (km)

**Collection ID: 191012\_118\_33780163\_19****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 13770  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0223 (m)  
 C/A Code: 1.61 (m)  
 L1 Doppler: 0.026 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.009 (m)  
 Height: 0.029 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (13766 occurrences):

East: 0.011 (m)  
 North: 0.009 (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: 50.554 (km)  
 Minimum: 0.257 (km)  
 Average: 25.178 (km)  
 First Epoch: 0.260 (km)  
 Last Epoch: 0.259 (km)

**Collection ID: 191012\_118\_33780163\_20****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 10342  
 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: 0.0249 (m)  
 C/A Code: 1.41 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.020 (m)  
 North: 0.026 (m)  
 Height: 0.107 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (10337 occurrences):

East: 0.020 (m)  
 North: 0.026 (m)  
 Height: 0.107 (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: 47.863 (km)

Minimum: 0.188 (km)

Average: 21.821 (km)

First Epoch: 0.259 (km)

Last Epoch: 0.274 (km)

## Collection ID: 191012\_130\_33780163\_21

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 33722

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: 0.0219 (m)

C/A Code: 2.39 (m)

L1 Doppler: 0.020 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.030 (m)

North: 0.019 (m)

Height: 0.058 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (33717 occurrences):

East: 0.030 (m)

North: 0.019 (m)

Height: 0.058 (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: 86.838 (km)

Minimum: 0.873 (km)

Average: 44.875 (km)

First Epoch: 0.886 (km)

Last Epoch: 0.896 (km)

**Collection ID: 191012\_130\_33780163\_22****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	21563
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0345 (m)
C/A Code:	2.56 (m)
L1 Doppler:	0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.022 (m)
North:	0.015 (m)
Height:	0.038 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (21559 occurrences):

East:	0.022 (m)
North:	0.015 (m)
Height:	0.038 (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 %
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## Baseline Distances:

Maximum:	86.285 (km)
Minimum:	0.883 (km)
Average:	43.962 (km)
First Epoch:	0.896 (km)
Last Epoch:	0.889 (km)

**Collection ID: 191016\_118\_33780163\_21****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	28110
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase: 0.0273 (m)  
 C/A Code: 1.50 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.020 (m)  
 North: 0.021 (m)  
 Height: 0.075 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (28106 occurrences):

East: 0.020 (m)  
 North: 0.021 (m)  
 Height: 0.075 (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: 73.299 (km)  
 Minimum: 0.185 (km)  
 Average: 38.054 (km)  
 First Epoch: 0.226 (km)  
 Last Epoch: 0.246 (km)

**Collection ID: 191016\_130\_33780163\_23****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 33406  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0257 (m)  
 C/A Code: 2.51 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.022 (m)  
 North: 0.022 (m)  
 Height: 0.049 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (33402 occurrences):

East: 0.022 (m)

North: 0.022 (m)

Height: 0.049 (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: 96.812 (km)

Minimum: 0.840 (km)

Average: 48.393 (km)

First Epoch: 0.851 (km)

Last Epoch: 0.896 (km)

## Collection ID: 191017\_118\_33780163\_22

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 25739

No processed position: 3

Missing Fwd or Rev: 549

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0250 (m)

C/A Code: 1.67 (m)

L1 Doppler: 0.020 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.039 (m)

North: 0.030 (m)

Height: 0.055 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (25127 occurrences):

East: 0.036 (m)

North: 0.021 (m)

Height: 0.051 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %

Q 3: 0.0 %

Q 4: 0.0 %

Q 5: 0.0 %

Q 6: 0.0 %

Position Standard Deviation Percentages:

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

Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

Baseline Distances:

Maximum: 85.659 (km)  
 Minimum: 0.219 (km)  
 Average: 49.333 (km)  
 First Epoch: 54.730 (km)  
 Last Epoch: 0.219 (km)

## Collection ID: 191017\_130\_33780163\_24

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 30680  
 No processed position: 6295  
 Missing Fwd or Rev: 845  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0219 (m)  
 C/A Code: 1.65 (m)  
 L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.028 (m)  
 North: 0.059 (m)  
 Height: 0.089 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (22933 occurrences):

East: 0.012 (m)  
 North: 0.017 (m)  
 Height: 0.068 (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: 99.476 (km)  
 Minimum: 2.008 (km)

Average: 31.467 (km)  
 First Epoch: 88.720 (km)  
 Last Epoch: 95.703 (km)

## Collection ID: 191017\_130\_33780163\_25

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 29511  
 No processed position: 2  
 Missing Fwd or Rev: 524  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0225 (m)  
 C/A Code: 2.25 (m)  
 L1 Doppler: 0.019 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.107 (m)  
 North: 0.181 (m)  
 Height: 0.131 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (14395 occurrences):

East: 0.007 (m)  
 North: 0.027 (m)  
 Height: 0.087 (m)

#### Quality Number Percentages:

Q 1: 99.2 %  
 Q 2: 0.8 %  
 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: 203.572 (km)  
 Minimum: 0.849 (km)  
 Average: 84.508 (km)  
 First Epoch: 174.669 (km)  
 Last Epoch: 0.849 (km)

## Collection ID: 191018\_118\_33780163\_23

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 31785  
 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: 0.0290 (m)  
 C/A Code: 1.25 (m)  
 L1 Doppler: 0.019 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.021 (m)  
 North: 0.024 (m)  
 Height: 0.075 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (31780 occurrences):

East: 0.021 (m)  
 North: 0.024 (m)  
 Height: 0.075 (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: 82.105 (km)  
 Minimum: 0.210 (km)  
 Average: 46.703 (km)  
 First Epoch: 0.240 (km)  
 Last Epoch: 0.237 (km)

**Collection ID: 191018\_118\_33780163\_24****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 29279  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0241 (m)  
 C/A Code: 0.78 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.020 (m)

North: 0.030 (m)

Height: 0.052 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (29275 occurrences):

East: 0.020 (m)

North: 0.030 (m)

Height: 0.052 (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: 78.604 (km)

Minimum: 0.954 (km)

Average: 46.356 (km)

First Epoch: 1.900 (km)

Last Epoch: 1.896 (km)

## Collection ID: 191018\_130\_33780163\_26

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 32185

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: 0.0281 (m)

C/A Code: 2.26 (m)

L1 Doppler: 0.019 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.039 (m)

North: 0.022 (m)

Height: 0.037 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (32180 occurrences):

East: 0.039 (m)

North: 0.022 (m)

Height: 0.037 (m)

Quality Number Percentages:

Q 1: 100.0 %

Q 2: 0.0 %



Q 3: 0.0 %  
 Q 4: 0.0 %  
 Q 5: 0.0 %  
 Q 6: 0.0 %

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

## Baseline Distances:

Maximum: 101.442 (km)  
 Minimum: 0.867 (km)  
 Average: 57.528 (km)  
 First Epoch: 0.884 (km)  
 Last Epoch: 0.888 (km)

**Collection ID: 191019\_118\_33780163\_25****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 20652  
 No processed position: 2  
 Missing Fwd or Rev: 4  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0173 (m)  
 C/A Code: 0.69 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.008 (m)  
 North: 0.006 (m)  
 Height: 0.019 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (20646 occurrences):

East: 0.008 (m)  
 North: 0.006 (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: 73.030 (km)

Minimum: 1.216 (km)

Average: 40.814 (km)

First Epoch: 1.886 (km)

Last Epoch: 2.011 (km)

## Collection ID: 191019\_130\_33780163\_28

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 30466

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0215 (m)

C/A Code: 2.25 (m)

L1 Doppler: 0.020 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.014 (m)

North: 0.019 (m)

Height: 0.044 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (30462 occurrences):

East: 0.014 (m)

North: 0.019 (m)

Height: 0.044 (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: 92.045 (km)

Minimum: 0.725 (km)

Average: 48.022 (km)

First Epoch: 0.854 (km)

Last Epoch: 0.887 (km)

**Collection ID: 191022\_118\_33780163\_26****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	24363
No processed position:	3
Missing Fwd or Rev:	4
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0199 (m)
C/A Code:	1.59 (m)
L1 Doppler:	0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.014 (m)
North:	0.014 (m)
Height:	0.048 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (24356 occurrences):

East:	0.014 (m)
North:	0.014 (m)
Height:	0.048 (m)

## Quality Number Percentages:

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

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol:	0.0 %
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## Baseline Distances:

Maximum:	74.707 (km)
Minimum:	0.196 (km)
Average:	39.321 (km)
First Epoch:	0.238 (km)
Last Epoch:	0.196 (km)

**Collection ID: 191023\_118\_33780163\_27****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	28777
No processed position:	2
Missing Fwd or Rev:	2
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase: 0.0215 (m)  
 C/A Code: 1.30 (m)  
 L1 Doppler: 0.025 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.020 (m)  
 North: 0.018 (m)  
 Height: 0.061 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (28773 occurrences):

East: 0.020 (m)  
 North: 0.018 (m)  
 Height: 0.061 (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: 122.287 (km)  
 Minimum: 0.139 (km)  
 Average: 55.197 (km)  
 First Epoch: 0.237 (km)  
 Last Epoch: 0.175 (km)

**Collection ID: 191023\_118\_33780163\_28****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 27722  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0198 (m)  
 C/A Code: 1.47 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.008 (m)  
 North: 0.008 (m)  
 Height: 0.030 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (27718 occurrences):

East: 0.008 (m)

North: 0.008 (m)

Height: 0.030 (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: 124.874 (km)

Minimum: 0.133 (km)

Average: 58.790 (km)

First Epoch: 0.175 (km)

Last Epoch: 0.221 (km)

## Collection ID: 191023\_130\_33780163\_29

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 26723

No processed position: 3

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0206 (m)

C/A Code: 2.30 (m)

L1 Doppler: 0.021 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.011 (m)

North: 0.013 (m)

Height: 0.033 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (26718 occurrences):

East: 0.011 (m)

North: 0.013 (m)

Height: 0.033 (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: 92.589 (km)  
 Minimum: 0.904 (km)  
 Average: 50.001 (km)  
 First Epoch: 0.957 (km)  
 Last Epoch: 0.910 (km)

## Collection ID: 191024\_118\_33780163\_29

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 27610  
 No processed position: 3  
 Missing Fwd or Rev: 3  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0235 (m)  
 C/A Code: 0.94 (m)  
 L1 Doppler: 0.025 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.072 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (27604 occurrences):

East: 0.011 (m)  
 North: 0.015 (m)  
 Height: 0.072 (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: 123.036 (km)  
 Minimum: 0.170 (km)  
 Average: 57.506 (km)

First Epoch: 0.237 (km)  
 Last Epoch: 0.213 (km)

## Collection ID: 191024\_118\_33780163\_30

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 19767  
 No processed position: 10  
 Missing Fwd or Rev: 584  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0181 (m)  
 C/A Code: 1.33 (m)  
 L1 Doppler: 0.020 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.018 (m)  
 North: 0.048 (m)  
 Height: 0.044 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (17316 occurrences):

East: 0.013 (m)  
 North: 0.016 (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: 123.195 (km)  
 Minimum: 0.132 (km)  
 Average: 50.615 (km)  
 First Epoch: 0.213 (km)  
 Last Epoch: 0.260 (km)

## Collection ID: 191024\_130\_33780163\_30

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 24696

No processed position: 3  
 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: 1.31 (m)  
 L1 Doppler: 0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.021 (m)  
 North: 0.018 (m)  
 Height: 0.049 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (24690 occurrences):

East: 0.021 (m)  
 North: 0.018 (m)  
 Height: 0.049 (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: 93.138 (km)  
 Minimum: 0.819 (km)  
 Average: 52.828 (km)  
 First Epoch: 0.832 (km)  
 Last Epoch: 0.831 (km)

**Collection ID: 191029\_118\_33780163\_31****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 17003  
 No processed position: 1  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0172 (m)  
 C/A Code: 1.96 (m)  
 L1 Doppler: 0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.009 (m)



North: 0.008 (m)  
 Height: 0.042 (m)  
 Fwd/Rev Sep. RMS for dual FWD/REV fixes (17000 occurrences):  
 East: 0.009 (m)  
 North: 0.008 (m)  
 Height: 0.042 (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: 101.268 (km)  
 Minimum: 0.133 (km)  
 Average: 50.554 (km)  
 First Epoch: 0.170 (km)  
 Last Epoch: 0.258 (km)

## Collection ID: 191029\_130\_33780163\_31

### GNSS-IMU Summary Log:

Number of Epochs:  
 Total in GPB file: 18375  
 No processed position: 3  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0  
 Measurement RMS Values:  
 L1 Phase: 0.0211 (m)  
 C/A Code: 2.63 (m)  
 L1 Doppler: 0.028 (m/s)  
 Fwd/Rev Separation RMS Values:  
 East: 0.009 (m)  
 North: 0.012 (m)  
 Height: 0.025 (m)  
 Fwd/Rev Sep. RMS for dual FWD/REV fixes (18370 occurrences):  
 East: 0.009 (m)  
 North: 0.012 (m)  
 Height: 0.025 (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: 58.345 (km)  
 Minimum: 0.090 (km)  
 Average: 24.328 (km)  
 First Epoch: 0.090 (km)  
 Last Epoch: 0.099 (km)

**Collection ID: 191029\_130\_33780163\_32****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 14096  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0177 (m)  
 C/A Code: 2.35 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.007 (m)  
 North: 0.010 (m)  
 Height: 0.035 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (14092 occurrences):

East: 0.007 (m)  
 North: 0.010 (m)  
 Height: 0.035 (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: 58.463 (km)

Minimum: 0.076 (km)

Average: 22.982 (km)

First Epoch: 0.090 (km)

Last Epoch: 0.091 (km)

## Collection ID: 191101\_118\_33780163\_32

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 23311

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0218 (m)

C/A Code: 0.85 (m)

L1 Doppler: 0.023 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.015 (m)

North: 0.013 (m)

Height: 0.084 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (23307 occurrences):

East: 0.015 (m)

North: 0.013 (m)

Height: 0.084 (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: 102.537 (km)

Minimum: 0.166 (km)

Average: 50.949 (km)

First Epoch: 0.252 (km)

Last Epoch: 0.178 (km)

**Collection ID: 191101\_118\_33780163\_33a****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	11625
No processed position:	2
Missing Fwd or Rev:	4
With bad C/A code:	0
With bad L1 Phase:	0

## Measurement RMS Values:

L1 Phase:	0.0163 (m)
C/A Code:	1.10 (m)
L1 Doppler:	0.019 (m/s)

## Fwd/Rev Separation RMS Values:

East:	0.005 (m)
North:	0.019 (m)
Height:	0.023 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (11619 occurrences):

East:	0.005 (m)
North:	0.019 (m)
Height:	0.023 (m)

## Quality Number Percentages:

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

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol:	0.0 %
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## Baseline Distances:

Maximum:	100.050 (km)
Minimum:	0.135 (km)
Average:	47.624 (km)
First Epoch:	0.178 (km)
Last Epoch:	44.415 (km)

**Collection ID: 191101\_118\_33780163\_33b****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file:	12673
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: 1.41 (m)  
 L1 Doppler: 0.020 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.007 (m)  
 North: 0.030 (m)  
 Height: 0.088 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (12668 occurrences):

East: 0.007 (m)  
 North: 0.030 (m)  
 Height: 0.088 (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: 101.439 (km)  
 Minimum: 0.258 (km)  
 Average: 50.882 (km)  
 First Epoch: 46.127 (km)  
 Last Epoch: 0.258 (km)

**Collection ID: 191101\_130\_33780163\_33****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 30843  
 No processed position: 3  
 Missing Fwd or Rev: 19  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0245 (m)  
 C/A Code: 1.58 (m)  
 L1 Doppler: 0.025 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.035 (m)  
 North: 0.031 (m)  
 Height: 0.087 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (30821 occurrences):

East: 0.035 (m)

North: 0.031 (m)

Height: 0.087 (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: 89.444 (km)

Minimum: 0.069 (km)

Average: 46.313 (km)

First Epoch: 0.104 (km)

Last Epoch: 24.793 (km)

## Collection ID: 191101\_130\_33780163\_34

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 21077

No processed position: 2

Missing Fwd or Rev: 2

With bad C/A code: 0

With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0248 (m)

C/A Code: 2.41 (m)

L1 Doppler: 0.022 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.021 (m)

North: 0.014 (m)

Height: 0.035 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (21073 occurrences):

East: 0.021 (m)

North: 0.014 (m)

Height: 0.035 (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: 87.742 (km)  
 Minimum: 0.066 (km)  
 Average: 41.471 (km)  
 First Epoch: 0.126 (km)  
 Last Epoch: 0.093 (km)

## Collection ID: 191102\_118\_33780163\_34

### GNSS-IMU Summary Log:

Number of Epochs:

Total in GPB file: 24187  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

Measurement RMS Values:

L1 Phase: 0.0219 (m)  
 C/A Code: 1.18 (m)  
 L1 Doppler: 0.024 (m/s)

Fwd/Rev Separation RMS Values:

East: 0.020 (m)  
 North: 0.008 (m)  
 Height: 0.053 (m)

Fwd/Rev Sep. RMS for dual FWD/REV fixes (24183 occurrences):

East: 0.020 (m)  
 North: 0.008 (m)  
 Height: 0.053 (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: 104.246 (km)  
 Minimum: 0.223 (km)

Average: 55.659 (km)  
 First Epoch: 0.244 (km)  
 Last Epoch: 0.314 (km)

## Collection ID: 191102\_130\_33780163\_35

### GNSS-IMU Summary Log:

#### Number of Epochs:

Total in GPB file: 27774  
 No processed position: 23  
 Missing Fwd or Rev: 39  
 With bad C/A code: 0  
 With bad L1 Phase: 0

#### Measurement RMS Values:

L1 Phase: 0.0217 (m)  
 C/A Code: 1.76 (m)  
 L1 Doppler: 0.023 (m/s)

#### Fwd/Rev Separation RMS Values:

East: 0.016 (m)  
 North: 0.014 (m)  
 Height: 0.062 (m)

#### Fwd/Rev Sep. RMS for dual FWD/REV fixes (27708 occurrences):

East: 0.016 (m)  
 North: 0.014 (m)  
 Height: 0.062 (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: 86.981 (km)  
 Minimum: 0.065 (km)  
 Average: 39.328 (km)  
 First Epoch: 0.113 (km)  
 Last Epoch: 0.092 (km)

## Collection ID: 191102\_130\_33780163\_36

### GNSS-IMU Summary Log:

#### Number of Epochs:



Total in GPB file: 26685  
 No processed position: 3  
 Missing Fwd or Rev: 65  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0190 (m)  
 C/A Code: 2.04 (m)  
 L1 Doppler: 0.021 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.014 (m)  
 North: 0.010 (m)  
 Height: 0.060 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (26617 occurrences):

East: 0.014 (m)  
 North: 0.010 (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: 86.333 (km)  
 Minimum: 0.092 (km)  
 Average: 41.863 (km)  
 First Epoch: 0.092 (km)  
 Last Epoch: 72.109 (km)

**Collection ID: 191103\_130\_33780163\_37****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 29916  
 No processed position: 30  
 Missing Fwd or Rev: 300  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0220 (m)  
 C/A Code: 2.69 (m)  
 L1 Doppler: 0.023 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.015 (m)  
 North: 0.027 (m)  
 Height: 0.058 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (29558 occurrences):

East: 0.014 (m)  
 North: 0.022 (m)  
 Height: 0.053 (m)

## Quality Number Percentages:

Q 1: 99.8 %  
 Q 2: 0.0 %  
 Q 3: 0.0 %  
 Q 4: 0.0 %  
 Q 5: 0.1 %  
 Q 6: 0.0 %

## Position Standard Deviation Percentages:

0.00 - 0.10 m: 99.9 %  
 0.10 - 0.30 m: 0.0 %  
 0.30 - 1.00 m: 0.1 %  
 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: 88.813 (km)  
 Minimum: 0.070 (km)  
 Average: 34.952 (km)  
 First Epoch: 0.090 (km)  
 Last Epoch: 0.090 (km)

**Collection ID: 191103\_130\_33780163\_38****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 26078  
 No processed position: 2  
 Missing Fwd or Rev: 2  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0245 (m)  
 C/A Code: 2.25 (m)  
 L1 Doppler: 0.022 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.018 (m)  
 North: 0.018 (m)  
 Height: 0.029 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (26074 occurrences):

East: 0.018 (m)  
 North: 0.018 (m)  
 Height: 0.029 (m)

## Quality Number Percentages:

Q 1: 100.0 %  
 Q 2: 0.0 %

Q 3: 0.0 %  
 Q 4: 0.0 %  
 Q 5: 0.0 %  
 Q 6: 0.0 %

## Position Standard Deviation Percentages:

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

## Percentages of epochs with DD\_DOP over 10.00:

DOP over Tol: 0.0 %

## Baseline Distances:

Maximum: 94.040 (km)  
 Minimum: 0.067 (km)  
 Average: 52.666 (km)  
 First Epoch: 0.126 (km)  
 Last Epoch: 0.085 (km)

**Collection ID: 191104\_130\_33780163\_39****GNSS-IMU Summary Log:**

## Number of Epochs:

Total in GPB file: 25876  
 No processed position: 9  
 Missing Fwd or Rev: 4  
 With bad C/A code: 0  
 With bad L1 Phase: 0

## Measurement RMS Values:

L1 Phase: 0.0158 (m)  
 C/A Code: 1.89 (m)  
 L1 Doppler: 0.024 (m/s)

## Fwd/Rev Separation RMS Values:

East: 0.016 (m)  
 North: 0.010 (m)  
 Height: 0.019 (m)

## Fwd/Rev Sep. RMS for dual FWD/REV fixes (25861 occurrences):

East: 0.016 (m)  
 North: 0.010 (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: 89.134 (km)

Minimum: 0.073 (km)

Average: 45.226 (km)

First Epoch: 0.126 (km)

Last Epoch: 0.090 (km)