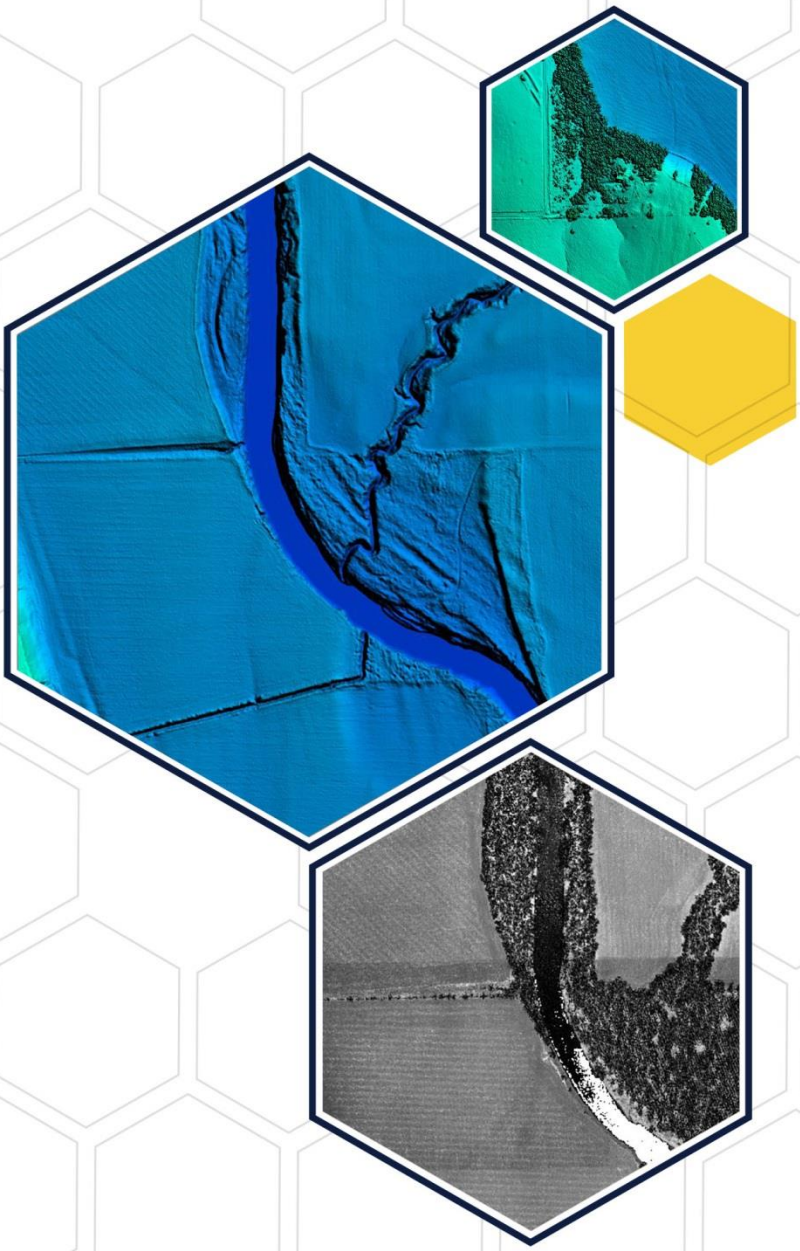

atlantic

Aerial Lidar Report

16061
USDA Forest Service, Fremont-Winema, Willamette, Deschutes, and Umpqua National Forests
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Section 1: Lidar Acquisition

1.1 Acquisition

The Atlantic Group, LLC (Atlantic) has successfully completed lidar acquisition for the Fremont-Winema, Willamette, Deschutes, and Umpqua National Forests areas of interest (AOI). Lidar for this AOI was acquired in fifty (50) flight missions completed on October 25th, 2016. The project area encompasses 1,275,059 acres, 5,160 square kilometers or 1,992 square miles.

1.2 Acquisition Status Report

Upon notification to proceed, the flight crew loaded the flight plans and validated the flight parameters. The Acquisition Manager contacted air traffic control and coordinated flight pattern requirements. Lidar acquisition began immediately upon notification that control base stations were in place. During flight operations, the flight crew monitored weather and atmospheric conditions. Lidar missions were flown only when no condition existed below the sensor that would affect the collection of data. The pilot constantly monitored the aircraft course, position, pitch, roll, and yaw of the aircraft. The sensor operator monitored the sensor, the status of PDOPs, and performed the first Q/C review during acquisition. The flight crew constantly reviewed weather and cloud locations. Any flight lines impacted by unfavorable conditions were marked as invalid and re-flown immediately or at an optimal time.

1.3 Acquisition Details

Atlantic acquired one thousand six hundred and thirty-five (1,635) passes of the AOI as a series of perpendicular and/or adjacent flight lines. The flight plan included zigzag flight line collection as a result of the inherent IMU drift associated with all IMU systems. Differential GPS unit in aircraft recorded sample positions at 2 Hz or more frequency. Lidar data was only acquired when GPS PDOP was ≤ 4 and at least 6 satellites were in view.

Atlantic lidar sensors are calibrated at a designated site located at the Fayetteville Municipal Airport (FYM) in Fayetteville, TN and are periodically checked and adjusted to minimize corrections at project sites.

1.4 Project Purpose

The primary purpose of the lidar survey was to establish measurements of the bare earth surface, as well as top surface feature data for providing geometric inputs for modeling, other numerical modeling and economic related assessments.

1.5 Lidar Flight Line Orientation

The following graphic represents the alignment of the project area of interest (AOI) and the flight-lines executed to provide AOI coverage.

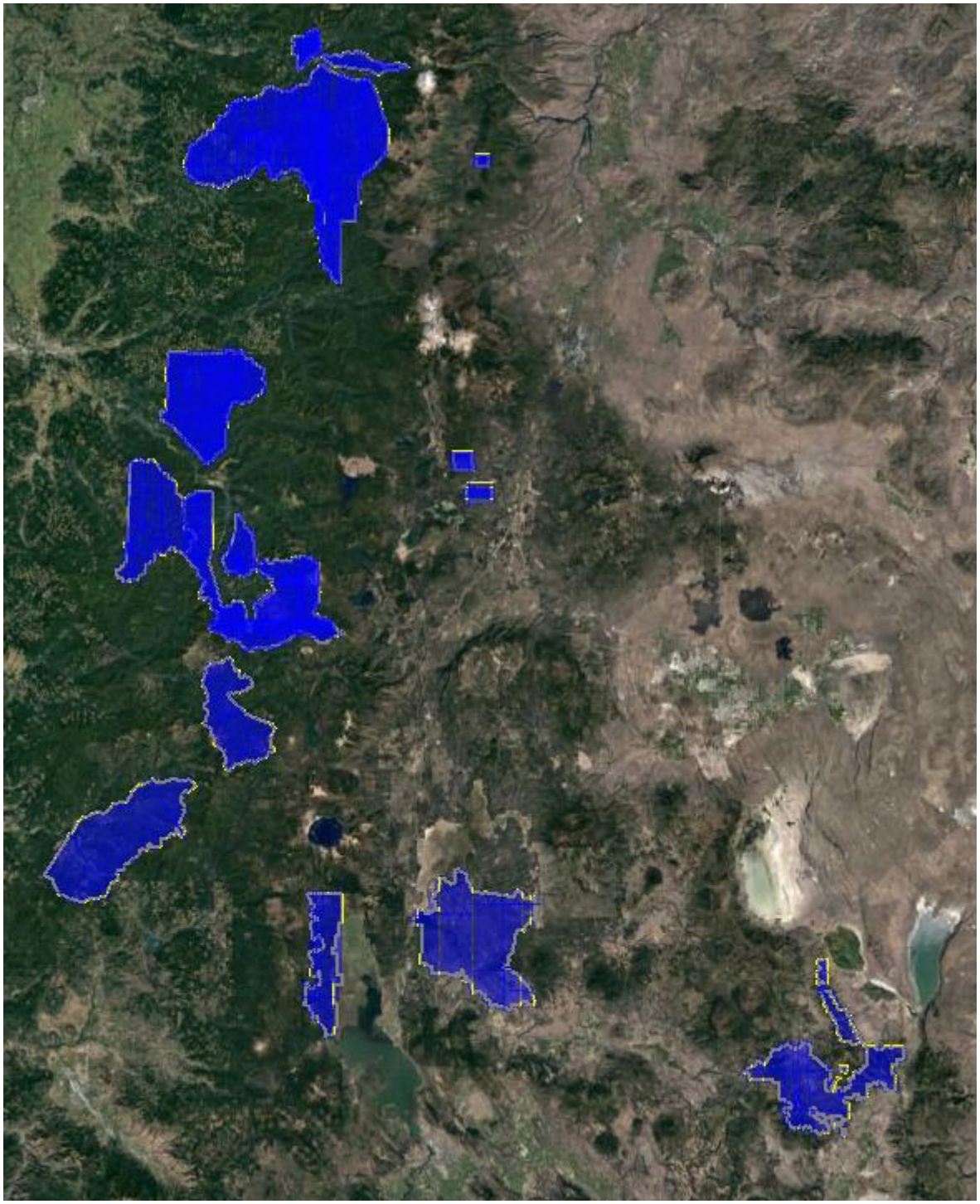


Figure 1: Trajectories as flown by Atlantic

1.6 Acquisition Equipment

Atlantic operated a Cessna T210L (N732JE) and a Partenavia S.P.A. P 68 C/TC (N775MW) outfitted with Leica ALS70-HP lidar systems during the collection of the project area. Table 1 represents a list of the features and characteristics for the Leica ALS70-HP lidar system:

Atlantic's Sensor Characteristics		
Leica ALS70-HP		
Manufacturer	Leica	
Model	ALS70 - HP	
Platform	Fixed-Wing	
Scan Pattern	Sine, Triangle, Raster	
Maximum Scan Rate (Hz)	Sine	200
	Triangle	158
	Raster	120
Field of View (°)	0 - 75 (Full Angle, User Adjustable)	
Maximum Pulse rate (kHz)	500	
Maximum Flying height (m AGL)	3500	
Number of returns	Unlimited	
Number of Intensity Measurements	3 (First, Second, Third)	
Roll Stabilization (Automatic Adaptive, °)	75 - Active FOV	
Storage Media	Removable 500 GB SSD	
Storage Capacity (Hours @ Max Pulse Rate)	6	
Size (cm)	Scanner	37 W x 68 L x 26 H
	Control Electronics	45 W x 47 D x 36 H
Weight (kg)	Scanner	43
	Control Electronics	45
Operating Temperature	0 - 40 °C	
Flight Management	FCMS	
Power Consumption	927 @ 22.0 - 30.3 VDC	

Table 1: Atlantic Sensor Characteristics

1.7 Lidar System Acquisition Parameters

Table 2 illustrates Atlantic's system parameters for lidar acquisition on this project.

Lidar System Acquisition Parameters	
Item	**Parameter**
System	Leica ALS-70 HP
Nominal Pulse Spacing (m)	0.5
Nominal Pulse Density (pls/m²)	4.2
Nominal Flight Height (AGL meters)	1965
Nominal Flight Speed (kts)	110
Pass Heading (degree)	0
Sensor Scan Angle (degree)	30
Scan Frequency (Hz)	41.0
Pulse Rate of Scanner (kHz)	278.0
Line Spacing (m)	465
Pulse Duration of Scanner (ns)	4
Pulse Width of Scanner (m)	0.43
Central Wavelength of Sensor Laser (nm)	1064
Sensor Operated with Multiple Pulses	Varies
Beam Divergence (mrad)	0.22
Nominal Swath Width (m)	1098
Nominal Swath Overlap (%)	50
Scan Pattern	Triangle

Table 2: Atlantic Lidar System Acquisition Parameters

1.8 Airborne GPS Kinematic

Differential GPS unit in aircraft collected positions at 2 Hz. Airborne GPS data was processed using the Inertial Explorer (version 8.60.5025) software. Flights were flown with a minimum of 6 satellites in view (10° above the horizon) and with a PDOP of ≤4 when the laser was online.

For all flights, the GPS data can be classified as good, with GPS residuals of 3cm average or better but none larger than 10cm being recorded.

Data collected by the lidar unit is reviewed for completeness, acceptable density and to make sure all data is captured without errors or corrupted values. In addition, all GPS, aircraft trajectory, mission information, and ground control files are reviewed and logged into a database.

GPS processing results for each lift are included in **Section 5: GPS Processing**.

Section 2: Lidar Processing

2.1 Generation of Laser Points

Atlantic used a combination of Waypoint and Leica software products to extract the lidar swath data from the raw flight records. Waypoint Inertial Explorer is used to extract the raw IPAS ABGPS/IMU data, which is further processed in combination with controlled base stations to provide the final Smoothed Best Estimate Trajectory (SBET) for each mission. The SBET's are combined with the raw laser scan files to export the (*.las) formatted swath point clouds.

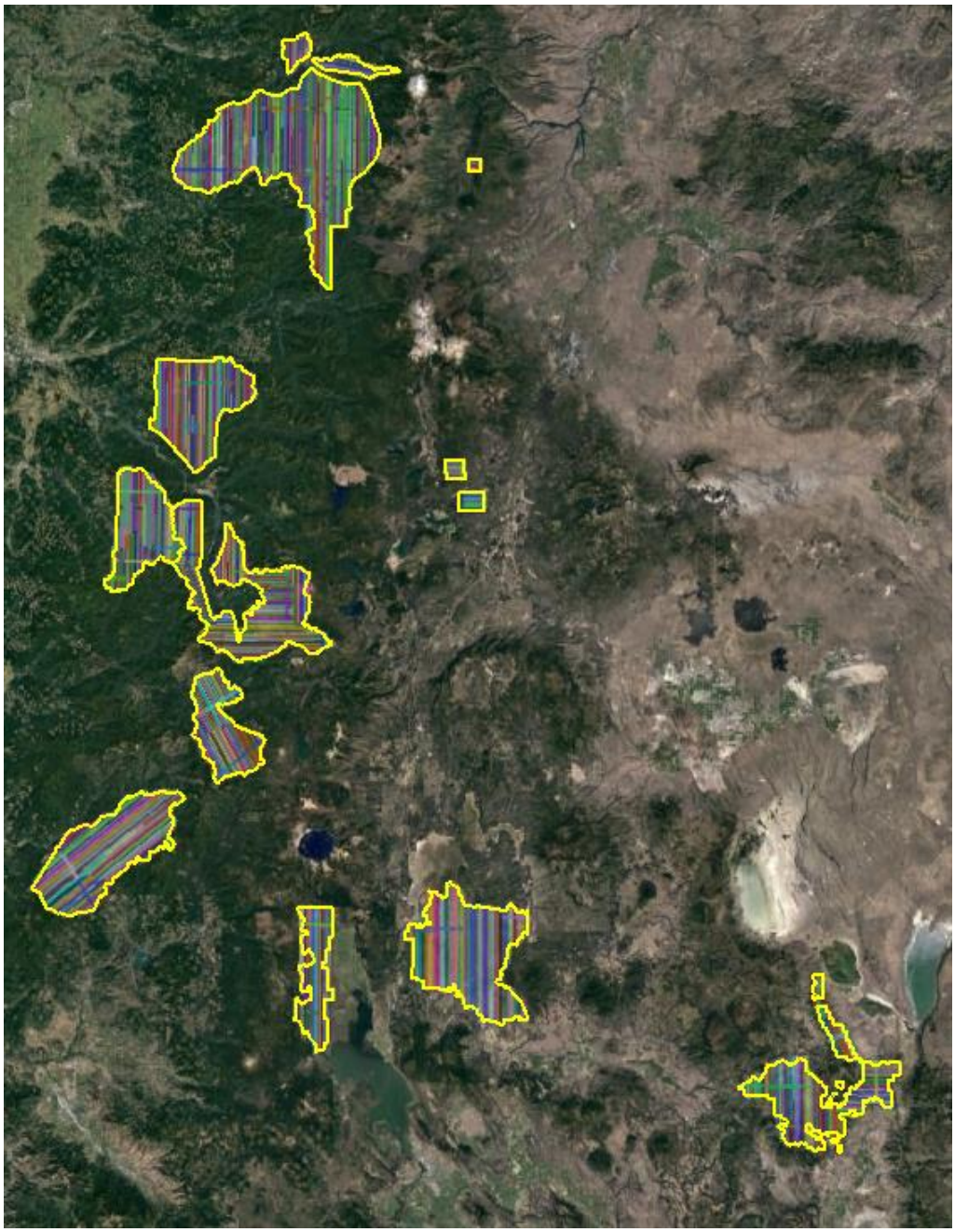


Figure 2: Lidar swath data showing complete coverage

2.2 Coordinate Reference System

Horizontal Datum:	North American Datum of 1983
Coordinate System:	United States Forestry Service Region 6 Albers
Vertical Datum:	North American Vertical Datum of 1988
Geoid Model:	Geoid12B
Units of Reference:	Meters

2.3 Lidar Point Cloud Statistics

Table 3 illustrates the overall lidar point cloud statistics for this project.

Point Cloud Statistics	
Category	**Value**
Total Points	123,132,354,633
Nominal Pulse Spacing (m)	0.4665
Nominal Pulse Density (pls/m²)	4.60
Nominal Pulse Spacing (ft)	1.5304
Nominal Pulse Density (pls/ft²)	0.43
Total Aggregate Points	107,638,314,591
Aggregate Nominal Pulse Spacing (m)	0.2701
Aggregate Nominal Pulse Density (pls/m²)	13.71
Aggregate Nominal Pulse Spacing (ft)	0.8861
Aggregate Nominal Pulse Density (pls/ft²)	1.27

Table 3: Lidar Point Cloud Statistics

2.4 Lidar Classification

The calibrated point cloud data from the laser sensor was merged to produce processed (*.las) file(s) including but not limited to 3D position, intensity, and time-stamp. A filtering methodology was utilized to produce a multi-return surface elevation model dataset with bare-earth conditions. GeoCue, TerraScan, and TerraModeler software was used for the initial batch processing and manual editing of the (*.las) point clouds. Outlined in Table 4 are the classification codes utilized for this project.

ASPRS Standard Lidar Point Classes	
Code	**Description**
1	Unclassified
2	Ground
7	Low Noise

Table 4: Point Cloud Classification Scheme

Section 3: Relative Accuracy Assessment

3.1 Expected Horizontal Positional Error

As described in Section 7.5 of the ASPRS Positional Accuracy Standards for Digital Geospatial Data the horizontal errors in lidar data are largely a function of GNSS positional error, INS angular error, and flying altitude. Therefore, lidar data collected with GNSS error of 8cm and the IMU error of 0.00427 degrees at an altitude of 1,965m; the expected radial horizontal positional error will be $RMSE_r$ = 28.5cm.

3.2 Calibration of Lidar Point Cloud

LiDAR ranging data were initially calibrated using previous best parameters for this instrument and aircraft. Using a combination of GeoCue, and TerraSolid's TerraScan and TerraMatch the overlapping swath point clouds are corrected for any orientation or linear deviations to obtain the best fit swath-to-swath calibration. Relative calibration was evaluated using advanced plane-matching analysis and parameter corrections derived. This process was repeated interactively until residual errors between overlapping swaths, across all project missions, was reduced to 2 cm or less. A final analysis of the calibrated LiDAR is preformed using a TerraMatch Tie Line report for an overall statistical model of the project area.

3.3 Relative Vertical Accuracy

Upon completion of the data calibration, Atlantic runs a complete set of Delta-Z (dZ) ortho images. A user-defined color ramp is applied depicting the offsets between overlapping swaths based on project specifications. The dZ orthos provide an opportunity to review the data calibration in a qualitative manner. Atlantic assigns green to all offset values that fall below the required interswath accuracy RMSDz requirement of the project. A yellow color is assigned for offsets that fall between the RMSDz value and 1.5x of that value. Finally, red values are assigned to all values that fall beyond 1.5x of the RMSDz requirements of the project.

No Data	0m to 0.06m	0.06m to 0.12m	0.12m to 0.18m	> 0.18m

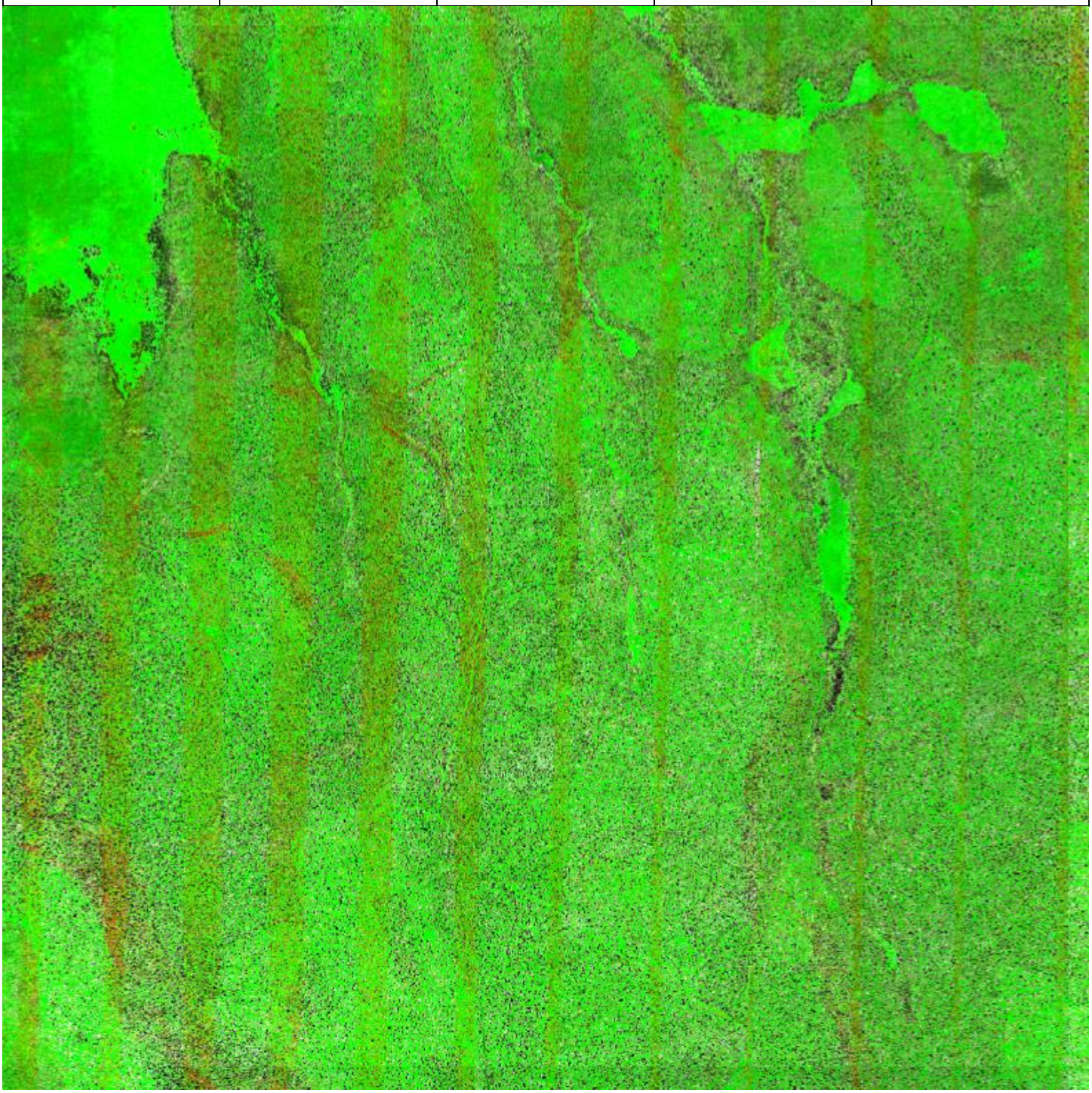


Figure 3: dZ ortho sample

3.4 Interswath Accuracy Results

An overall statistical assessment of the relative accuracy using TerraMatch Tie Line Report between lidar swaths can be found in Tables 5, 6, 7, and 8 below. The values provided are in meters.

Average Magnitudes Per Line											
Line	X	Y	Z	Line	X	Y	Z	Line	X	Y	Z
1	-	-	0.015	387	-	-	0.023	1175	-	-	0.018
2	-	-	0.018	388	-	-	0.020	1176	-	-	0.015
3	-	-	0.015	389	-	-	0.021	1177	-	-	0.015
4	-	-	0.016	390	-	-	0.026	1178	-	-	0.016
5	-	-	0.016	391	-	-	0.021	1179	-	-	0.016
6	-	-	0.017	392	-	-	0.022	1180	-	-	0.020
7	-	-	0.016	796	-	-	0.019	1181	-	-	0.016
8	-	-	0.015	797	-	-	0.020	1182	-	-	0.018
9	-	-	0.016	798	-	-	0.021	1183	-	-	0.016
10	-	-	0.017	799	-	-	0.021	1184	-	-	0.016
11	-	-	0.017	800	-	-	0.021	1185	-	-	0.016
12	-	-	0.018	801	-	-	0.021	1186	-	-	0.017
13	-	-	0.018	802	-	-	0.021	1187	-	-	0.016
14	-	-	0.018	803	0.026	0.021	0.020	1188	-	-	0.017
15	-	-	0.018	804	0.009	0.008	0.021	1189	-	-	0.016
16	-	-	0.019	805	0.009	0.008	0.018	1190	-	-	0.017
17	-	-	0.018	806	-	-	0.018	1191	-	-	0.017
18	-	-	0.018	807	-	-	0.022	1192	-	-	0.018
19	-	-	0.019	808	-	-	0.021	1193	-	-	0.018
20	-	-	0.017	809	-	-	0.021	1194	-	-	0.018
21	-	-	0.018	810	-	-	0.023	1195	-	-	0.016
22	-	-	0.017	811	-	-	0.021	1196	-	-	0.017
23	-	-	0.017	812	-	-	0.019	1197	-	-	0.014
24	-	-	0.017	813	-	-	0.020	1198	-	-	0.015
25	-	-	0.017	814	-	-	0.020	1199	-	-	0.015
26	-	-	0.018	815	-	-	0.021	1200	-	-	0.017
27	-	-	0.017	816	-	-	0.022	1201	-	-	0.017
28	-	-	0.018	817	-	-	0.018	1202	-	-	0.017
29	-	-	0.018	818	0.037	0.009	0.016	1203	-	-	0.017
30	-	-	0.018	819	0.023	0.006	0.018	1204	-	-	0.017
31	0.000	0.027	0.020	820	0.034	0.005	0.020	1205	-	-	0.016
32	0.000	0.011	0.020	821	-	-	0.019	1206	-	-	0.016
33	0.000	0.038	0.019	822	-	-	0.020	1207	-	-	0.016
34	-	-	0.020	823	-	-	0.018	1208	-	-	0.016
35	-	-	0.020	824	-	-	0.020	1209	-	-	0.016
36	-	-	0.020	825	-	-	0.018	1210	-	-	0.021
37	-	-	0.019	826	-	-	0.015	1211	-	-	0.023
38	-	-	0.018	827	-	-	0.024	1212	-	-	0.025

39	0.008	0.034	0.018	**828**	-	-	0.018	**1213**	-	-	0.018
40	0.002	0.006	0.018	**829**	-	-	0.020	**1214**	-	-	0.022
41	0.006	0.029	0.017	**830**	-	-	0.022	**1215**	-	-	0.021
42	-	-	0.017	**831**	-	-	0.020	**1216**	-	-	0.015
43	-	-	0.018	**832**	-	-	0.018	**1217**	-	-	0.020
44	-	-	0.018	**833**	-	-	0.018	**1218**	-	-	0.019
45	-	-	0.018	**834**	-	-	0.020	**1219**	-	-	0.017
46	-	-	0.018	**835**	-	-	0.019	**1220**	-	-	0.017
47	-	-	0.020	**836**	-	-	0.019	**1221**	-	-	0.016
48	-	-	0.017	**837**	-	-	0.021	**1222**	-	-	0.016
49	-	-	0.017	**838**	-	-	0.019	**1223**	-	-	0.017
50	0.009	0.019	0.017	**839**	-	-	0.020	**1224**	-	-	0.018
51	0.004	0.018	0.017	**840**	-	-	0.023	**1225**	-	-	0.018
52	0.011	0.031	0.017	**841**	-	-	0.020	**1226**	-	-	0.017
53	-	-	0.017	**842**	-	-	0.021	**1227**	-	-	0.018
54	-	-	0.018	**843**	-	-	0.014	**1228**	-	-	0.018
55	-	-	0.017	**844**	-	-	0.017	**1229**	-	-	0.018
56	-	-	0.018	**845**	-	-	0.016	**1230**	-	-	0.018
57	-	-	0.018	**846**	0.013	0.017	0.019	**1231**	-	-	0.019
58	-	-	0.019	**847**	0.008	0.006	0.017	**1232**	-	-	0.018
59	-	-	0.018	**848**	0.015	0.012	0.018	**1233**	-	-	0.017
60	-	-	0.018	**849**	0.018	0.006	0.017	**1234**	-	-	0.017
61	-	-	0.018	**850**	0.048	0.052	0.018	**1235**	-	-	0.018
62	-	-	0.018	**851**	0.051	0.055	0.018	**1236**	-	-	0.018
63	-	-	0.018	**852**	0.039	0.027	0.017	**1237**	-	-	0.018
64	-	-	0.017	**853**	0.029	0.022	0.017	**1238**	-	-	0.020
65	-	-	0.016	**854**	0.017	0.013	0.017	**1239**	-	-	0.020
66	-	-	0.017	**855**	0.023	0.015	0.017	**1240**	-	-	0.020
67	-	-	0.016	**856**	0.027	0.012	0.017	**1241**	-	-	0.018
68	-	-	0.015	**857**	-	-	0.017	**1242**	-	-	0.017
69	-	-	0.016	**858**	-	-	0.017	**1243**	-	-	0.017
70	-	-	0.016	**859**	0.023	0.001	0.017	**1244**	-	-	0.017
71	-	-	0.017	**860**	0.023	0.001	0.017	**1245**	-	-	0.017
72	0.007	0.014	0.018	**861**	-	-	0.018	**1246**	-	-	0.017
73	0.016	0.041	0.018	**862**	-	-	0.017	**1247**	-	-	0.017
74	0.024	0.065	0.020	**863**	-	-	0.017	**1248**	-	-	0.020
75	-	-	0.020	**864**	-	-	0.016	**1249**	-	-	0.018
76	-	-	0.019	**865**	-	-	0.017	**1250**	-	-	0.019
77	-	-	0.019	**866**	0.017	0.022	0.017	**1251**	-	-	0.018
78	-	-	0.012	**867**	0.008	0.011	0.018	**1252**	-	-	0.018
79	-	-	0.017	**868**	0.007	0.009	0.018	**1253**	-	-	0.019
80	-	-	0.019	**869**	0.002	0.003	0.018	**1254**	-	-	0.018
81	-	-	0.020	**870**	-	-	0.017	**1255**	-	-	0.019
82	-	-	0.017	**871**	-	-	0.016	**1256**	-	-	0.024

83	-	-	0.019	**872**	-	-	0.017	**1257**	-	-	0.022
84	-	-	0.020	**873**	-	-	0.017	**1258**	-	-	0.016
85	-	-	0.023	**874**	-	-	0.018	**1259**	0.012	0.018	0.014
86	-	-	0.020	**875**	-	-	0.017	**1260**	0.049	0.041	0.018
87	-	-	0.021	**876**	-	-	0.017	**1261**	0.041	0.032	0.019
88	-	-	0.019	**877**	-	-	0.017	**1262**	0.028	0.033	0.021
89	-	-	0.012	**878**	-	-	0.018	**1263**	0.028	0.022	0.020
90	-	-	0.015	**879**	-	-	0.018	**1264**	0.018	0.023	0.020
91	-	-	0.017	**880**	-	-	0.022	**1265**	0.017	0.017	0.020
92	-	-	0.018	**881**	-	-	0.020	**1266**	0.016	0.016	0.021
93	-	-	0.017	**882**	0.023	0.014	0.017	**1267**	0.021	0.022	0.021
94	-	-	0.016	**883**	-	-	0.025	**1268**	0.028	0.022	0.020
95	-	-	0.017	**884**	-	-	0.021	**1269**	0.027	0.017	0.019
96	-	-	0.017	**885**	-	-	0.019	**1270**	-	-	0.019
97	-	-	0.018	**886**	-	-	0.021	**1271**	-	-	0.019
98	-	-	0.018	**887**	-	-	0.023	**1272**	-	-	0.020
99	-	-	0.018	**888**	-	-	0.022	**1273**	-	-	0.020
100	-	-	0.018	**889**	-	-	0.023	**1274**	-	-	0.021
101	-	-	0.019	**890**	-	-	0.019	**1275**	-	-	0.021
102	-	-	0.018	**891**	0.003	0.018	0.021	**1276**	-	-	0.019
103	-	-	0.019	**892**	0.022	0.048	0.019	**1277**	-	-	0.018
104	-	-	0.019	**893**	0.012	0.022	0.021	**1278**	-	-	0.018
105	-	-	0.019	**894**	0.031	0.067	0.022	**1279**	-	-	0.019
106	-	-	0.019	**895**	0.017	0.022	0.022	**1280**	-	-	0.019
107	-	-	0.019	**896**	0.008	0.032	0.021	**1281**	-	-	0.020
108	-	-	0.019	**897**	0.012	0.016	0.019	**1282**	-	-	0.025
109	-	-	0.020	**898**	-	-	0.022	**1283**	-	-	0.022
110	-	-	0.020	**899**	-	-	0.020	**1284**	0.072	0.049	0.023
111	-	-	0.019	**900**	-	-	0.022	**1285**	-	-	0.029
112	-	-	0.018	**901**	-	-	0.021	**1286**	-	-	0.022
113	-	-	0.018	**902**	-	-	0.024	**1287**	-	-	0.020
114	-	-	0.018	**903**	-	-	0.024	**1288**	-	-	0.025
115	-	-	0.019	**904**	-	-	0.021	**1289**	-	-	0.025
116	-	-	0.019	**905**	0.001	0.010	0.019	**1290**	-	-	0.023
117	-	-	0.020	**906**	0.005	0.012	0.020	**1291**	-	-	0.022
118	-	-	0.019	**907**	0.006	0.012	0.017	**1292**	-	-	0.022
119	-	-	0.018	**908**	0.023	0.002	0.021	**1293**	-	-	0.024
120	-	-	0.019	**909**	-	-	0.021	**1294**	-	-	0.027
121	-	-	0.020	**910**	-	-	0.021	**1295**	-	-	0.026
122	-	-	0.014	**911**	-	-	0.021	**1296**	-	-	0.027
123	-	-	0.016	**912**	0.021	0.022	0.018	**1297**	-	-	0.026
124	-	-	0.017	**913**	-	-	0.020	**1298**	-	-	0.024
125	-	-	0.016	**914**	0.014	0.007	0.018	**1299**	-	-	0.023
126	-	-	0.016	**915**	-	-	0.018	**1300**	-	-	0.024

127	-	-	0.016	**916**	0.018	0.001	0.017	**1301**	-	-	0.024
128	-	-	0.016	**917**	-	-	0.016	**1302**	-	-	0.023
129	-	-	0.015	**918**	-	-	0.020	**1303**	-	-	0.019
130	-	-	0.015	**919**	-	-	0.016	**1304**	-	-	0.025
131	-	-	0.016	**920**	-	-	0.020	**1305**	-	-	0.025
132	-	-	0.016	**921**	-	-	0.018	**1306**	-	-	0.023
133	-	-	0.015	**922**	-	-	0.020	**1307**	-	-	0.021
134	-	-	0.016	**923**	-	-	0.018	**1308**	-	-	0.022
135	-	-	0.019	**924**	-	-	0.019	**1309**	-	-	0.037
136	-	-	0.020	**925**	-	-	0.019	**1310**	-	-	0.021
137	-	-	0.013	**926**	-	-	0.018	**1311**	-	-	0.022
138	-	-	0.015	**927**	-	-	0.020	**1312**	0.009	0.018	0.019
139	-	-	0.015	**928**	-	-	0.021	**1313**	-	-	0.016
140	-	-	0.016	**929**	-	-	0.022	**1314**	-	-	0.021
141	-	-	0.016	**930**	-	-	0.019	**1315**	-	-	0.020
142	-	-	0.016	**931**	-	-	0.018	**1316**	-	-	0.019
143	-	-	0.015	**932**	-	-	0.019	**1317**	-	-	0.021
144	-	-	0.015	**933**	-	-	0.018	**1318**	-	-	0.020
147	-	-	0.026	**934**	-	-	0.021	**1319**	-	-	0.017
148	-	-	0.025	**935**	-	-	0.021	**1320**	-	-	0.017
149	0.005	0.098	0.017	**936**	-	-	0.020	**1321**	-	-	0.018
150	-	-	0.018	**937**	-	-	0.020	**1322**	-	-	0.017
151	0.018	0.000	0.017	**938**	-	-	0.019	**1323**	-	-	0.018
152	0.019	0.000	0.017	**939**	-	-	0.019	**1324**	-	-	0.016
153	0.001	0.000	0.018	**940**	-	-	0.018	**1325**	0.019	0.013	0.013
154	-	-	0.016	**941**	0.027	0.022	0.018	**1326**	0.019	0.013	0.017
155	-	-	0.018	**942**	-	-	0.017	**1327**	-	-	0.018
156	-	-	0.017	**943**	-	-	0.018	**1328**	-	-	0.018
157	0.026	0.013	0.017	**944**	0.025	0.020	0.018	**1329**	-	-	0.019
158	0.021	0.013	0.018	**945**	-	-	0.018	**1330**	-	-	0.017
159	0.011	0.010	0.018	**946**	-	-	0.017	**1331**	-	-	0.018
160	0.063	0.002	0.019	**947**	-	-	0.019	**1332**	-	-	0.017
161	0.071	0.002	0.018	**948**	-	-	0.019	**1333**	-	-	0.017
162	0.091	0.002	0.019	**949**	-	-	0.019	**1334**	-	-	0.015
163	0.030	0.020	0.018	**950**	-	-	0.022	**1335**	-	-	0.017
164	0.016	0.018	0.018	**951**	-	-	0.020	**1336**	-	-	0.018
165	0.031	0.012	0.017	**952**	-	-	0.018	**1337**	-	-	0.014
166	-	-	0.018	**953**	-	-	0.018	**1338**	-	-	0.018
167	0.034	0.024	0.017	**954**	-	-	0.017	**1339**	-	-	0.018
168	0.023	0.020	0.019	**955**	-	-	0.017	**1340**	-	-	0.018
169	0.067	0.042	0.018	**956**	-	-	0.018	**1341**	-	-	0.018
170	0.007	0.029	0.018	**957**	0.007	0.024	0.018	**1342**	-	-	0.018
171	0.007	0.029	0.019	**958**	-	-	0.024	**1343**	-	-	0.018
172	0.008	0.002	0.019	**959**	-	-	0.022	**1344**	0.040	0.013	0.017

173	0.035	0.027	0.018	**960**	-	-	0.022	**1345**	0.041	0.013	0.014
174	0.061	0.048	0.017	**961**	-	-	0.029	**1346**	-	-	0.020
175	0.041	0.029	0.017	**962**	-	-	0.018	**1347**	-	-	0.018
176	-	-	0.018	**963**	-	-	0.018	**1348**	-	-	0.017
177	-	-	0.018	**964**	-	-	0.017	**1349**	-	-	0.022
178	0.002	0.000	0.020	**965**	-	-	0.019	**1350**	-	-	0.018
179	-	-	0.019	**966**	-	-	0.019	**1351**	-	-	0.019
180	-	-	0.023	**967**	0.019	0.041	0.018	**1352**	-	-	0.019
181	-	-	0.026	**968**	0.023	0.038	0.018	**1353**	-	-	0.020
182	0.002	0.002	0.020	**969**	0.090	0.084	0.020	**1354**	-	-	0.021
183	0.021	0.016	0.021	**970**	-	-	0.019	**1355**	-	-	0.021
184	0.034	0.038	0.020	**971**	-	-	0.020	**1356**	-	-	0.021
185	0.028	0.006	0.019	**972**	-	-	0.020	**1357**	-	-	0.021
186	-	-	0.019	**973**	-	-	0.018	**1358**	-	-	0.020
187	-	-	0.020	**974**	-	-	0.019	**1359**	-	-	0.019
188	0.006	0.017	0.018	**975**	0.011	0.033	0.020	**1360**	-	-	0.020
189	0.006	0.017	0.020	**976**	0.003	0.005	0.022	**1361**	-	-	0.019
190	0.007	0.009	0.020	**977**	0.015	0.019	0.021	**1362**	-	-	0.021
191	0.011	0.014	0.022	**978**	-	-	0.021	**1363**	-	-	0.022
192	-	-	0.023	**979**	0.019	0.016	0.022	**1364**	-	-	0.022
193	-	-	0.015	**980**	-	-	0.021	**1365**	-	-	0.022
194	-	-	0.015	**981**	0.014	0.028	0.019	**1366**	-	-	0.021
195	-	-	0.025	**982**	-	-	0.020	**1367**	-	-	0.021
196	-	-	0.020	**983**	-	-	0.020	**1368**	-	-	0.021
197	0.036	0.007	0.020	**984**	-	-	0.020	**1369**	0.025	0.001	0.021
198	0.031	0.025	0.019	**985**	-	-	0.024	**1370**	0.051	0.002	0.021
199	0.018	0.006	0.021	**986**	-	-	0.020	**1371**	0.023	0.001	0.021
200	0.011	0.009	0.019	**987**	-	-	0.022	**1372**	-	-	0.020
201	-	-	0.021	**988**	-	-	0.023	**1373**	-	-	0.017
202	-	-	0.023	**989**	-	-	0.023	**1374**	-	-	0.020
203	-	-	0.011	**990**	-	-	0.021	**1375**	-	-	0.018
204	-	-	0.026	**991**	-	-	0.026	**1376**	-	-	0.021
205	-	-	0.025	**992**	-	-	0.019	**1377**	-	-	0.019
206	-	-	0.024	**993**	-	-	0.020	**1378**	-	-	0.020
207	-	-	0.016	**994**	-	-	0.020	**1379**	-	-	0.021
208	-	-	0.016	**995**	-	-	0.019	**1380**	-	-	0.021
209	-	-	0.019	**996**	-	-	0.020	**1381**	-	-	0.034
210	-	-	0.018	**997**	-	-	0.019	**1382**	-	-	0.031
211	-	-	0.017	**998**	-	-	0.023	**1383**	-	-	0.029
212	-	-	0.018	**999**	-	-	0.020	**1384**	-	-	0.029
213	-	-	0.018	**1000**	-	-	0.019	**1385**	-	-	0.029
214	-	-	0.018	**1001**	-	-	0.018	**1386**	-	-	0.029
215	-	-	0.019	**1002**	-	-	0.021	**1387**	-	-	0.029
216	-	-	0.019	**1003**	-	-	0.018	**1388**	-	-	0.030

217	0.019	0.047	0.020	**1004**	-	-	0.019	**1389**	-	-	0.029
218	0.019	0.047	0.019	**1005**	-	-	0.020	**1390**	-	-	0.029
219	-	-	0.019	**1006**	-	-	0.020	**1391**	-	-	0.027
220	-	-	0.014	**1007**	-	-	0.019	**1392**	-	-	0.027
221	-	-	0.015	**1008**	-	-	0.020	**1393**	-	-	0.025
222	-	-	0.017	**1009**	0.035	0.027	0.019	**1394**	-	-	0.025
223	-	-	0.018	**1010**	0.009	0.007	0.019	**1395**	-	-	0.027
224	-	-	0.018	**1011**	-	-	0.021	**1396**	-	-	0.026
225	-	-	0.020	**1012**	-	-	0.020	**1397**	-	-	0.028
226	-	-	0.018	**1013**	-	-	0.020	**1398**	-	-	0.029
227	-	-	0.018	**1014**	-	-	0.023	**1399**	-	-	0.030
228	-	-	0.018	**1015**	0.013	0.010	0.019	**1400**	-	-	0.026
229	-	-	0.019	**1016**	0.013	0.010	0.019	**1401**	-	-	0.027
230	-	-	0.018	**1017**	0.020	0.015	0.019	**1402**	-	-	0.029
231	-	-	0.018	**1018**	0.027	0.020	0.019	**1403**	-	-	0.027
232	-	-	0.015	**1019**	-	-	0.019	**1404**	-	-	0.027
233	-	-	0.017	**1020**	-	-	0.020	**1405**	-	-	0.025
234	0.000	0.003	0.017	**1021**	-	-	0.020	**1406**	-	-	0.024
235	-	-	0.017	**1022**	-	-	0.020	**1407**	-	-	0.021
236	-	-	0.018	**1023**	-	-	0.018	**1408**	-	-	0.032
237	-	-	0.019	**1024**	-	-	0.020	**1409**	-	-	0.035
238	-	-	0.018	**1025**	-	-	0.019	**1410**	-	-	0.031
239	-	-	0.024	**1026**	-	-	0.020	**1411**	-	-	0.025
240	-	-	0.017	**1027**	-	-	0.020	**1412**	-	-	0.027
241	-	-	0.017	**1028**	-	-	0.020	**1413**	-	-	0.028
242	-	-	0.016	**1029**	0.019	0.021	0.020	**1414**	-	-	0.029
243	-	-	0.017	**1030**	0.023	0.025	0.018	**1415**	-	-	0.028
244	-	-	0.017	**1031**	0.023	0.027	0.019	**1416**	0.098	0.150	0.028
245	-	-	0.018	**1032**	0.021	0.031	0.019	**1417**	0.282	0.010	0.028
246	-	-	0.016	**1033**	0.011	0.035	0.019	**1418**	0.072	0.076	0.028
247	-	-	0.017	**1034**	0.007	0.030	0.019	**1419**	0.169	0.006	0.030
248	-	-	0.016	**1035**	0.019	0.021	0.020	**1420**	0.128	0.096	0.032
249	-	-	0.018	**1036**	-	-	0.022	**1421**	-	-	0.035
250	-	-	0.019	**1037**	-	-	0.022	**1422**	0.022	0.017	0.018
251	-	-	0.018	**1038**	-	-	0.028	**1423**	0.011	0.016	0.019
252	-	-	0.018	**1039**	-	-	0.029	**1424**	0.036	0.035	0.022
253	-	-	0.018	**1040**	-	-	0.013	**1425**	0.017	0.019	0.020
254	-	-	0.019	**1041**	-	-	0.015	**1426**	0.061	0.071	0.021
255	-	-	0.017	**1042**	-	-	0.013	**1427**	-	-	0.020
256	-	-	0.018	**1043**	-	-	0.018	**1428**	0.027	0.015	0.021
257	0.006	0.041	0.020	**1044**	-	-	0.019	**1429**	0.013	0.021	0.022
258	-	-	0.019	**1045**	-	-	0.017	**1430**	0.040	0.053	0.021
259	-	-	0.018	**1046**	-	-	0.019	**1431**	0.024	0.022	0.020
260	-	-	0.018	**1047**	-	-	0.018	**1432**	0.022	0.024	0.021

261	-	-	0.017	**1048**	-	-	0.018	**1433**	0.028	0.025	0.020
262	-	-	0.019	**1049**	-	-	0.020	**1434**	0.025	0.021	0.021
263	-	-	0.018	**1050**	-	-	0.020	**1435**	-	-	0.020
264	-	-	0.019	**1051**	-	-	0.018	**1436**	0.025	0.011	0.019
265	-	-	0.019	**1052**	-	-	0.020	**1437**	0.060	0.025	0.022
266	-	-	0.018	**1053**	-	-	0.018	**1438**	0.035	0.015	0.020
267	-	-	0.019	**1054**	-	-	0.019	**1439**	-	-	0.020
268	-	-	0.020	**1055**	-	-	0.018	**1440**	-	-	0.020
269	-	-	0.020	**1056**	-	-	0.021	**1441**	-	-	0.020
270	-	-	0.020	**1057**	-	-	0.020	**1442**	-	-	0.020
271	-	-	0.017	**1058**	-	-	0.019	**1443**	-	-	0.020
272	-	-	0.018	**1059**	-	-	0.018	**1444**	-	-	0.020
273	-	-	0.019	**1060**	-	-	0.018	**1445**	-	-	0.018
274	-	-	0.017	**1061**	-	-	0.019	**1446**	-	-	0.022
275	-	-	0.018	**1062**	-	-	0.019	**1447**	-	-	0.022
276	-	-	0.018	**1063**	-	-	0.019	**1448**	-	-	0.021
277	-	-	0.018	**1064**	-	-	0.018	**1449**	-	-	0.022
278	-	-	0.019	**1065**	-	-	0.019	**1450**	-	-	0.021
279	0.019	0.090	0.019	**1066**	-	-	0.021	**1451**	-	-	0.019
280	-	-	0.019	**1067**	-	-	0.021	**1452**	0.029	0.020	0.021
281	-	-	0.020	**1068**	-	-	0.014	**1453**	-	-	0.019
282	-	-	0.019	**1070**	-	-	0.032	**1454**	0.066	0.019	0.020
283	-	-	0.019	**1071**	-	-	0.024	**1455**	0.030	0.022	0.020
284	-	-	0.020	**1072**	-	-	0.021	**1456**	-	-	0.018
285	-	-	0.018	**1073**	-	-	0.019	**1457**	0.026	0.016	0.020
286	-	-	0.016	**1074**	-	-	0.020	**1458**	0.072	0.032	0.019
287	-	-	0.025	**1075**	-	-	0.020	**1459**	-	-	0.021
288	-	-	0.023	**1076**	-	-	0.019	**1460**	-	-	0.020
289	-	-	0.022	**1077**	-	-	0.020	**1461**	-	-	0.019
290	-	-	0.023	**1078**	-	-	0.019	**1462**	0.061	0.090	0.019
291	-	-	0.020	**1079**	-	-	0.018	**1463**	0.068	0.118	0.017
292	-	-	0.021	**1080**	-	-	0.018	**1464**	0.008	0.015	0.024
293	-	-	0.020	**1081**	-	-	0.018	**1465**	0.019	0.046	0.022
294	-	-	0.019	**1082**	-	-	0.018	**1466**	-	-	0.020
295	-	-	0.020	**1083**	-	-	0.019	**1467**	0.030	0.018	0.021
296	-	-	0.020	**1084**	-	-	0.020	**1468**	-	-	0.025
297	-	-	0.019	**1085**	-	-	0.020	**1469**	0.214	0.050	0.026
298	-	-	0.020	**1086**	-	-	0.022	**1470**	0.049	0.033	0.023
299	-	-	0.021	**1087**	-	-	0.017	**1471**	0.049	0.022	0.021
300	-	-	0.020	**1088**	-	-	0.018	**1472**	0.013	0.035	0.020
301	-	-	0.019	**1089**	-	-	0.018	**1473**	0.005	0.013	0.021
302	-	-	0.019	**1090**	-	-	0.016	**1474**	0.017	0.013	0.021
303	-	-	0.019	**1091**	-	-	0.017	**1475**	0.042	0.024	0.022
304	-	-	0.018	**1092**	-	-	0.018	**1476**	0.047	0.023	0.022

305	-	-	0.019	**1093**	-	-	0.018	**1477**	0.040	0.029	0.022
306	-	-	0.019	**1094**	-	-	0.018	**1478**	0.030	0.018	0.020
307	-	-	0.019	**1095**	-	-	0.022	**1479**	0.036	0.021	0.021
308	-	-	0.019	**1096**	-	-	0.021	**1480**	-	-	0.023
309	-	-	0.018	**1097**	-	-	0.018	**1481**	0.014	0.009	0.023
310	-	-	0.019	**1098**	-	-	0.018	**1482**	0.049	0.048	0.020
311	-	-	0.019	**1099**	-	-	0.018	**1483**	0.044	0.033	0.021
312	-	-	0.018	**1100**	-	-	0.018	**1484**	0.041	0.038	0.022
313	-	-	0.018	**1101**	-	-	0.017	**1485**	0.024	0.013	0.022
314	-	-	0.019	**1102**	-	-	0.018	**1486**	0.025	0.014	0.022
315	-	-	0.019	**1103**	-	-	0.018	**1487**	0.045	0.037	0.022
316	-	-	0.020	**1104**	-	-	0.017	**1488**	-	-	0.022
317	-	-	0.022	**1105**	-	-	0.016	**1489**	-	-	0.021
318	-	-	0.017	**1106**	-	-	0.017	**1490**	0.021	0.030	0.021
319	-	-	0.018	**1107**	-	-	0.020	**1491**	-	-	0.022
320	-	-	0.018	**1108**	-	-	0.019	**1492**	0.021	0.031	0.023
321	-	-	0.018	**1109**	-	-	0.019	**1493**	0.036	0.017	0.023
322	-	-	0.019	**1110**	-	-	0.016	**1494**	-	-	0.018
323	-	-	0.019	**1111**	-	-	0.018	**1495**	-	-	0.030
324	-	-	0.018	**1112**	-	-	0.035	**1496**	-	-	0.022
325	-	-	0.018	**1113**	-	-	0.022	**1497**	-	-	0.021
326	-	-	0.021	**1114**	-	-	0.020	**1498**	-	-	0.021
327	-	-	0.021	**1115**	-	-	0.017	**1499**	-	-	0.022
328	-	-	0.019	**1116**	-	-	0.016	**1500**	-	-	0.022
329	-	-	0.023	**1117**	-	-	0.016	**1501**	-	-	0.021
330	-	-	0.021	**1118**	-	-	0.016	**1502**	-	-	0.021
331	-	-	0.021	**1119**	-	-	0.017	**1503**	-	-	0.021
332	-	-	0.019	**1120**	-	-	0.018	**1504**	-	-	0.023
333	-	-	0.019	**1121**	-	-	0.017	**1505**	-	-	0.021
334	-	-	0.020	**1122**	-	-	0.016	**1506**	-	-	0.021
335	0.038	0.016	0.020	**1123**	-	-	0.016	**1507**	-	-	0.022
336	0.012	0.067	0.020	**1124**	-	-	0.017	**1508**	-	-	0.023
337	0.015	0.026	0.020	**1125**	-	-	0.019	**1509**	0.179	0.016	0.022
338	0.011	0.014	0.018	**1126**	-	-	0.018	**1510**	-	-	0.022
339	0.014	0.047	0.019	**1127**	-	-	0.016	**1511**	-	-	0.020
340	0.022	0.035	0.018	**1128**	-	-	0.016	**1512**	-	-	0.021
341	-	-	0.016	**1129**	-	-	0.015	**1513**	-	-	0.022
342	-	-	0.018	**1130**	-	-	0.015	**1514**	-	-	0.021
343	-	-	0.019	**1131**	-	-	0.015	**1515**	-	-	0.021
344	-	-	0.020	**1132**	-	-	0.015	**1516**	-	-	0.020
345	-	-	0.021	**1133**	-	-	0.014	**1517**	-	-	0.020
346	-	-	0.021	**1134**	-	-	0.016	**1518**	-	-	0.022
347	-	-	0.020	**1135**	-	-	0.015	**1519**	-	-	0.019
348	-	-	0.020	**1136**	-	-	0.014	**1520**	-	-	0.018

349	-	-	0.022	**1137**	-	-	0.015	**1521**	-	-	0.020
350	-	-	0.007	**1138**	-	-	0.014	**1522**	-	-	0.019
351	-	-	0.007	**1139**	-	-	0.015	**1523**	-	-	0.019
352	-	-	0.022	**1140**	-	-	0.016	**1524**	-	-	0.020
353	-	-	0.024	**1141**	-	-	0.016	**1525**	-	-	0.021
354	-	-	0.025	**1142**	-	-	0.016	**1526**	-	-	0.023
355	-	-	0.025	**1143**	-	-	0.015	**1527**	-	-	0.023
356	-	-	0.024	**1144**	-	-	0.016	**1528**	-	-	0.021
357	-	-	0.023	**1145**	-	-	0.015	**1529**	-	-	0.019
358	-	-	0.023	**1146**	-	-	0.019	**1530**	-	-	0.022
359	-	-	0.020	**1147**	-	-	0.020	**1531**	-	-	0.021
360	-	-	0.023	**1148**	-	-	0.018	**1532**	-	-	0.021
361	-	-	0.019	**1149**	-	-	0.018	**1533**	-	-	0.023
362	-	-	0.021	**1150**	-	-	0.016	**1534**	-	-	0.021
363	-	-	0.022	**1151**	-	-	0.017	**1535**	-	-	0.021
364	-	-	0.022	**1152**	-	-	0.015	**1536**	-	-	0.020
365	-	-	0.021	**1153**	-	-	0.017	**1537**	-	-	0.021
366	-	-	0.020	**1154**	-	-	0.017	**1538**	-	-	0.021
367	0.024	0.046	0.020	**1155**	-	-	0.018	**1539**	-	-	0.021
368	0.024	0.046	0.022	**1156**	-	-	0.018	**1540**	-	-	0.022
369	-	-	0.022	**1157**	-	-	0.018	**1541**	-	-	0.022
370	-	-	0.021	**1158**	-	-	0.015	**1542**	0.053	0.094	0.021
371	0.013	0.024	0.022	**1159**	-	-	0.016	**1543**	-	-	0.022
372	0.035	0.047	0.023	**1160**	-	-	0.015	**1544**	-	-	0.020
373	-	-	0.022	**1161**	-	-	0.013	**1545**	0.033	0.034	0.020
374	-	-	0.022	**1162**	-	-	0.017	**1546**	0.041	0.043	0.022
375	-	-	0.022	**1163**	-	-	0.017	**1547**	0.015	0.028	0.024
376	-	-	0.022	**1164**	-	-	0.019	**1548**	0.032	0.024	0.021
377	-	-	0.021	**1165**	-	-	0.022	**1549**	0.031	0.028	0.021
378	-	-	0.021	**1166**	-	-	0.021	**1550**	0.024	0.013	0.020
379	-	-	0.021	**1167**	-	-	0.021	**1551**	0.088	0.035	0.020
380	-	-	0.021	**1168**	-	-	0.020	**1552**	-	-	0.022
381	0.002	0.043	0.020	**1169**	-	-	0.020	**1553**	0.045	0.009	0.022
382	0.000	0.009	0.022	**1170**	-	-	0.019	**1554**	-	-	0.023
383	0.001	0.042	0.022	**1171**	-	-	0.018	**1555**	0.033	0.052	0.022
384	0.001	0.028	0.022	**1172**	-	-	0.021	**1556**	0.002	0.005	0.023
385	-	-	0.020	**1173**	-	-	0.022	**1557**	0.011	0.021	0.024
386	-	-	0.023	**1174**	-	-	0.019				

Table 5: Average Tie Line Magnitudes per Line

Internal Observation Statistics			
Category	**X**	**Y**	**Z**
Average Magnitude	0.023	0.021	0.019
RMS Values	0.037	0.034	0.026
Maximum Values	0.282	0.234	0.168
Observation Weight	2133.0	2133.0	3726319.0

Table 6: Tie Line Observation Statistics

Overall Relative Accuracy	
Category	**Mismatch**
Average 3D Mismatch	0.01932
Average XY Mismatch	0.03584
Average Z Mismatch	0.01931

Table 7: Relative Accuracy Results

TerraMatch Tie Lines	
Category	**Observations**
Section Lines	1,405,567
Roof Lines	862

Table 8: Total Tie Lines

Section 4: Vertical Accuracy Assessment

4.1 Ground Surveyed Control Points

A total of three hundred and five (305) control points were collected for this project. Point cloud data accuracy was tested against a Triangulated Irregular Network (TIN) constructed from lidar points in clear and open areas. A clear and open area can be characterized with respect to topographic and ground cover variation such that a minimum of 5 times the NPS exists with less than 1/3 of the $RMSE_Z$ deviation from a low-slope plane. Slopes that exceed 10 percent were avoided.

4.2 Vertical Accuracy

Below are the vertical accuracy reporting requirements for this project:

Vertical Accuracy Reporting Requirements in Meters:

$RMSE_Z \leq 10.0$cm (Bare-Earth)
FVA ≤ 19.6cm 95% Confidence Level (Bare-Earth)

Vertical Accuracy Reporting Requirements in Feet:

$RMSE_Z \leq 0.328$ft (Bare-Earth)
FVA ≤ 0.643ft 95% Confidence Level (Bare-Earth)

*The terms FVA (Fundamental Vertical Accuracy), SVA (Supplemental Vertical Accuracy) and CVA (Consolidated Vertical Accuracy) are from the National Digital Elevation Program (NDEP) Guidelines for Digital Elevation Data (2004). The term FVA refers to open terrain, urban and levee classes; the term SVA refers to classes tested that are in addition or supplemental to the open terrain; the term CVA refers to the consolidated accuracy of the data from all classes (FVA + SVA).

4.3 Control Point Distribution

The following graphic depicts the location and distribution of the control points established for this project.

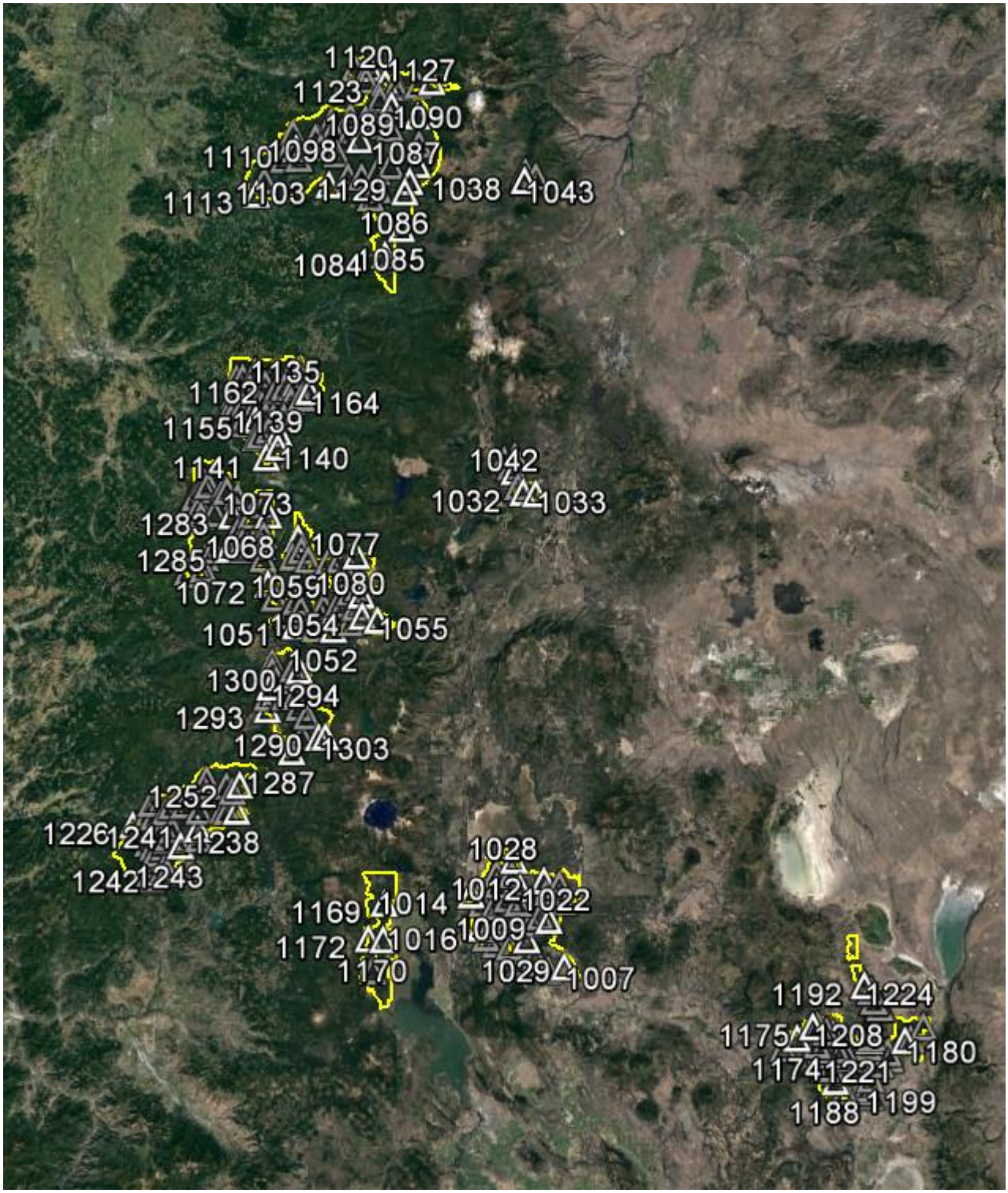


Figure 4: Control Point Distribution

4.4 Control Point Assessment

A vertical accuracy assessment of the control points against the lidar point cloud bare-earth can be found in Table 9 below. The coordinates provided are in NAD83, USFS R6 Albers, NAVD88 (Geoid12B), Meters.

Control Point Assessment						
PointID	**Easting**	**Northing**	**KnownZ**	**LaserZ**	**Description**	**DeltaZ**
1001	459281.253	968939.256	1417.198	1417.160	Control Point	-0.038
1002	455863.180	954693.162	1323.797	1323.780	Control Point	-0.017
1003	458560.180	952920.557	1384.875	1384.830	Control Point	-0.045
1004	462231.379	952133.748	1317.131	1317.090	Control Point	-0.041
1005	465162.790	947729.419	1357.610	1357.470	Control Point	-0.140
1006	472498.232	945579.301	1496.440	1496.500	Control Point	0.060
1007	476903.419	946386.458	1513.571	1513.480	Control Point	-0.091
1008	469008.139	949437.583	1459.461	1459.400	Control Point	-0.061
1009	473052.761	959025.722	1668.496	1668.460	Control Point	-0.036
1010	476850.104	964089.539	1449.487	1449.460	Control Point	-0.027
1011	476032.936	968501.342	1457.661	1457.650	Control Point	-0.011
1012	471902.354	969754.092	1512.237	1512.250	Control Point	0.013
1013	463202.819	971599.158	1410.197	1410.240	Control Point	0.043
1014	452142.274	966338.124	1387.974	1387.980	Control Point	0.006
1015	455108.341	963998.040	1544.324	1544.270	Control Point	-0.054
1016	454416.756	957370.950	1388.810	1388.750	Control Point	-0.060
1017	461870.858	958877.400	1494.899	1494.810	Control Point	-0.089
1018	458300.810	963042.564	1416.552	1416.540	Control Point	-0.012
1019	464776.355	963888.549	1393.186	1393.150	Control Point	-0.036
1020	468125.442	958480.605	1422.192	1422.200	Control Point	0.008
1021	457298.990	958114.287	1379.734	1379.760	Control Point	0.026
1022	465441.980	967828.455	1422.436	1422.460	Control Point	0.024
1023	472568.451	966712.631	1502.684	1502.660	Control Point	-0.024
1024	470656.936	960098.612	1573.760	1573.690	Control Point	-0.070
1025	466974.414	953920.000	1391.477	1391.490	Control Point	0.013
1026	464341.820	959413.531	1459.955	1459.980	Control Point	0.025
1027	459083.546	971762.613	1418.981	1419.010	Control Point	0.029
1028	463936.298	975457.913	1385.764	1385.660	Control Point	-0.104
1029	466928.379	953912.208	1391.598	1391.590	Control Point	-0.008
1030	461904.517	965072.347	1409.741	1409.710	Control Point	-0.031
1031	467025.036	1076007.036	1315.462	1315.470	Control Point	0.008
1032	468410.973	1074394.096	1306.666	1306.540	Control Point	-0.126
1033	471777.696	1073998.594	1341.003	1341.050	Control Point	0.047
1034	465167.511	1081420.722	1545.710	1545.750	Control Point	0.040
1035	466337.339	1084188.071	1469.602	1469.510	Control Point	-0.092
1036	463484.522	1083201.514	1869.944	1869.870	Control Point	-0.074
1037	470372.637	1158869.486	933.530	933.420	Control Point	-0.110

1038	470381.585	1158865.650	933.519	933.490	Control Point	-0.029
1039	470380.859	1158860.427	933.620	933.620	Control Point	0.000
1040	473449.067	1159843.624	1361.622	1361.620	Control Point	-0.002
1041	470678.650	1161131.190	877.017	877.030	Control Point	0.013
1042	466153.150	1080092.604	1397.349	1397.420	Control Point	0.071
1043	470363.096	1158852.812	934.288	934.260	Control Point	-0.028
1044	398160.635	1072665.898	736.099	736.030	Control Point	-0.069
1045	398002.805	1064288.134	1157.582	1157.630	Control Point	0.048
1046	397678.105	1058111.588	1004.924	1004.850	Control Point	-0.074
1047	400673.474	1047484.825	1205.839	1205.670	Control Point	-0.169
1048	400188.399	1047120.470	1230.349	1230.320	Control Point	-0.029
1049	404298.649	1042561.409	1189.787	1189.720	Control Point	-0.067
1050	404286.305	1042561.650	1190.780	1190.720	Control Point	-0.060
1051	406072.290	1039734.870	1802.131	1802.140	Control Point	0.009
1052	416389.388	1038607.365	1527.940	1527.900	Control Point	-0.040
1053	420956.560	1040311.982	1741.005	1740.930	Control Point	-0.075
1054	424244.300	1041922.758	1179.855	1179.860	Control Point	0.005
1055	428338.013	1040799.148	1609.850	1609.850	Control Point	0.000
1056	422504.681	1044446.772	1099.323	1099.330	Control Point	0.007
1057	412552.544	1043181.403	1507.764	1507.730	Control Point	-0.034
1058	418097.818	1045924.858	1464.871	1464.970	Control Point	0.099
1059	419609.829	1052319.234	1811.598	1811.540	Control Point	-0.058
1060	420387.021	1053209.101	1603.537	1603.590	Control Point	0.053
1061	423459.796	1049739.820	1499.686	1499.690	Control Point	0.004
1062	423366.545	1049802.307	1489.801	1489.820	Control Point	0.019
1063	421254.027	1048642.311	1172.756	1172.700	Control Point	-0.056
1064	418595.223	1057412.919	1574.947	1574.950	Control Point	0.003
1065	415472.756	1057058.895	1756.410	1756.350	Control Point	-0.060
1066	409926.303	1057476.724	1670.445	1670.310	Control Point	-0.135
1067	405727.118	1058314.244	1409.216	1409.120	Control Point	-0.096
1068	407271.122	1063282.029	860.673	860.600	Control Point	-0.073
1069	408111.449	1060029.830	1457.530	1457.430	Control Point	-0.100
1070	394733.054	1069829.564	1271.266	1271.140	Control Point	-0.126
1071	397472.146	1061313.416	939.949	939.860	Control Point	-0.089
1072	398842.425	1051125.198	1108.170	1108.100	Control Point	-0.070
1073	399402.378	1069787.199	969.680	969.580	Control Point	-0.100
1074	406490.247	1046371.070	1111.503	1111.440	Control Point	-0.063
1075	407683.904	1044233.976	1011.927	1011.820	Control Point	-0.107
1076	416471.183	1042886.587	1682.544	1682.460	Control Point	-0.084
1077	423006.728	1058367.306	1548.647	1548.580	Control Point	-0.067
1078	413871.374	1044744.845	1517.927	1517.950	Control Point	0.023
1079	419289.867	1045345.890	1571.972	1571.890	Control Point	-0.082
1080	424153.712	1047698.746	1555.796	1555.850	Control Point	0.054

1081	420758.823	1055516.951	1374.154	1374.100	Control Point	-0.054
1082	411500.700	1038910.527	1178.024	1178.000	Control Point	-0.024
1083	420071.433	1052267.753	1822.623	1822.620	Control Point	-0.003
1084	432227.413	1139451.652	986.952	986.930	Control Point	-0.022
1085	436807.633	1146546.603	1155.569	1155.570	Control Point	0.001
1086	437887.518	1156476.589	1266.442	1266.360	Control Point	-0.082
1087	441324.626	1163886.739	955.390	955.440	Control Point	0.050
1088	441958.269	1169417.581	849.231	849.140	Control Point	-0.091
1089	441700.071	1177067.394	1310.109	1310.080	Control Point	-0.029
1090	434681.420	1180072.301	1158.271	1158.250	Control Point	-0.021
1091	434183.356	1174036.360	940.165	940.150	Control Point	-0.015
1092	434187.994	1163726.835	1106.058	1106.000	Control Point	-0.058
1093	430499.382	1157296.186	1116.930	1117.010	Control Point	0.080
1094	430421.107	1162179.201	977.970	978.030	Control Point	0.060
1095	429999.732	1174796.097	888.263	888.260	Control Point	-0.003
1096	431557.244	1181929.041	962.156	962.120	Control Point	-0.036
1097	427539.250	1176679.728	1383.131	1383.130	Control Point	-0.001
1098	425936.330	1171057.483	791.122	791.220	Control Point	0.098
1099	426239.510	1160881.016	879.929	879.990	Control Point	0.061
1100	426251.618	1160939.677	877.665	877.700	Control Point	0.035
1101	428579.766	1155087.528	895.479	895.530	Control Point	0.051
1102	422528.958	1160987.724	1099.485	1099.420	Control Point	-0.065
1103	417349.338	1158957.711	1152.171	1152.150	Control Point	-0.021
1104	419665.583	1167311.415	1066.743	1066.750	Control Point	0.007
1105	422278.859	1171056.542	687.795	687.760	Control Point	-0.035
1106	423413.080	1177467.103	1052.124	1052.030	Control Point	-0.094
1107	418777.065	1173760.759	1107.693	1107.580	Control Point	-0.113
1108	413813.845	1171788.384	458.616	458.640	Control Point	0.024
1109	408565.862	1169233.239	373.695	373.670	Control Point	-0.025
1110	408510.497	1169112.340	372.534	372.430	Control Point	-0.104
1111	405092.072	1166207.361	418.927	419.010	Control Point	0.083
1112	399734.439	1160578.959	325.403	325.360	Control Point	-0.043
1113	397549.267	1156879.097	312.458	312.470	Control Point	0.012
1114	415251.790	1169093.033	577.486	577.420	Control Point	-0.066
1115	409250.780	1166341.077	1126.430	1126.360	Control Point	-0.070
1116	407748.983	1173229.677	742.414	742.390	Control Point	-0.024
1117	418200.767	1176181.627	796.962	796.950	Control Point	-0.012
1118	424845.455	1190589.408	1209.238	1209.230	Control Point	-0.008
1119	428819.434	1190578.348	581.899	581.910	Control Point	0.011
1120	428874.577	1190555.766	585.121	585.070	Control Point	-0.051
1121	427908.788	1187306.481	491.493	491.550	Control Point	0.057
1122	429499.494	1192513.935	1136.649	1136.490	Control Point	-0.159
1123	433059.418	1186393.487	1043.949	1043.840	Control Point	-0.109

1124	436275.574	1185566.317	800.875	800.870	Control Point	-0.005
1125	435856.594	1185064.806	736.504	736.440	Control Point	-0.064
1126	441986.740	1185575.480	1078.738	1078.630	Control Point	-0.108
1127	445740.139	1186431.765	1480.706	1480.640	Control Point	-0.066
1128	414336.365	1172206.081	543.628	543.620	Control Point	-0.008
1129	439246.175	1159305.230	1100.224	1100.190	Control Point	-0.034
1130	439246.175	1159305.230	1100.224	1100.190	Control Point	-0.034
1131	396509.371	1108612.020	943.712	943.700	Control Point	-0.012
1132	396501.275	1108547.036	945.055	945.080	Control Point	0.025
1133	401375.093	1107935.349	954.755	954.780	Control Point	0.025
1134	405870.562	1107706.683	825.062	825.110	Control Point	0.048
1135	407553.520	1105300.807	605.868	605.860	Control Point	-0.008
1136	408860.752	1101280.980	1294.758	1294.740	Control Point	-0.018
1137	406038.592	1100438.191	1101.913	1101.860	Control Point	-0.053
1138	404075.647	1096012.600	1223.942	1223.940	Control Point	-0.002
1139	402579.604	1091839.822	989.445	989.400	Control Point	-0.045
1140	402287.268	1088123.835	1091.033	1091.020	Control Point	-0.013
1141	399028.517	1085390.361	994.151	994.100	Control Point	-0.051
1142	397514.706	1091512.145	851.831	851.760	Control Point	-0.071
1143	399111.991	1096560.084	1248.193	1248.120	Control Point	-0.073
1144	398151.699	1099486.192	1017.354	1017.350	Control Point	-0.004
1145	399130.135	1105141.819	373.217	373.250	Control Point	0.033
1146	401164.309	1096054.715	1110.039	1110.050	Control Point	0.011
1147	391381.380	1106967.396	607.856	607.850	Control Point	-0.006
1148	393008.787	1107012.431	758.032	757.950	Control Point	-0.082
1149	394940.159	1104219.633	320.167	320.220	Control Point	0.053
1150	397090.191	1100415.426	838.725	838.720	Control Point	-0.005
1151	393010.097	1099139.038	983.466	983.280	Control Point	-0.186
1152	390605.230	1102253.360	588.595	588.520	Control Point	-0.075
1153	389661.399	1096234.799	353.201	353.200	Control Point	-0.001
1154	393028.635	1096131.149	524.912	524.930	Control Point	0.018
1155	396391.094	1095622.189	1060.752	1060.780	Control Point	0.028
1156	396269.247	1090833.534	712.475	712.500	Control Point	0.025
1157	392723.233	1094652.400	713.752	713.630	Control Point	-0.122
1158	388463.275	1096299.768	336.925	336.950	Control Point	0.025
1159	399967.365	1092723.855	1309.115	1309.060	Control Point	-0.055
1160	402007.075	1103300.693	743.949	743.970	Control Point	0.021
1161	402005.326	1103301.927	743.934	743.920	Control Point	-0.014
1162	403253.661	1105172.533	466.990	466.990	Control Point	0.000
1163	408120.076	1108719.746	1027.671	1027.650	Control Point	-0.021
1164	411031.492	1102956.961	728.998	728.990	Control Point	-0.008
1165	404407.002	1104294.423	636.081	636.120	Control Point	0.039
1166	406456.798	1104216.188	708.228	708.200	Control Point	-0.028

1167	399132.414	1105138.434	372.997	373.040	Control Point	0.043
1168	396395.977	1095623.841	1061.025	1061.220	Control Point	0.195
1169	428572.124	964462.289	1312.566	1312.560	Control Point	-0.006
1170	428035.004	954670.394	1400.508	1400.480	Control Point	-0.028
1171	425002.485	946301.328	1586.908	1586.980	Control Point	0.072
1172	424038.355	955007.177	1672.267	1672.200	Control Point	-0.067
1173	535748.677	923115.538	1643.493	1643.480	Control Point	-0.013
1174	539524.825	925852.540	1948.538	1948.540	Control Point	0.002
1175	543801.803	928830.693	1834.494	1834.440	Control Point	-0.054
1176	547504.092	927369.815	1621.704	1621.690	Control Point	-0.014
1177	554526.408	917161.505	1773.675	1773.700	Control Point	0.025
1178	561844.072	918376.878	1765.915	1765.940	Control Point	0.025
1179	564041.900	921443.636	1919.333	1919.380	Control Point	0.047
1180	568776.440	924569.631	1745.456	1745.350	Control Point	-0.106
1181	573843.655	928149.111	1716.153	1716.060	Control Point	-0.093
1182	570304.260	924905.661	1848.693	1848.610	Control Point	-0.083
1183	564539.874	919763.844	1782.347	1782.280	Control Point	-0.067
1184	559206.402	914422.843	1644.990	1644.920	Control Point	-0.070
1185	553260.415	917174.191	1692.865	1692.830	Control Point	-0.035
1186	546949.151	917492.417	2028.294	2028.340	Control Point	0.046
1187	546208.300	922515.577	1924.647	1924.600	Control Point	-0.047
1188	549714.542	913940.030	1839.753	1839.750	Control Point	-0.003
1189	562150.643	933655.255	1705.741	1705.650	Control Point	-0.091
1190	559708.488	938019.748	1801.427	1801.310	Control Point	-0.117
1191	560517.206	935399.151	1780.539	1780.390	Control Point	-0.149
1192	558011.154	939646.722	1886.415	1886.360	Control Point	-0.055
1193	559722.712	925682.681	2003.167	2003.310	Control Point	0.143
1194	558951.718	909687.302	1569.436	1569.480	Control Point	0.044
1195	556239.435	919664.504	1850.043	1850.060	Control Point	0.017
1196	558722.399	923066.060	2003.156	2003.220	Control Point	0.064
1197	557966.592	910632.023	1558.064	1558.130	Control Point	0.066
1198	556763.718	911917.422	1551.812	1551.870	Control Point	0.058
1199	557574.948	911236.581	1552.606	1552.690	Control Point	0.084
1200	544839.382	923933.749	1777.040	1776.960	Control Point	-0.080
1201	551468.285	918450.241	1708.358	1708.380	Control Point	0.022
1202	550142.296	922503.018	1747.483	1747.420	Control Point	-0.063
1203	549128.951	926980.134	1639.596	1639.540	Control Point	-0.056
1204	552107.628	910959.351	1762.184	1762.190	Control Point	0.006
1205	553171.330	920126.291	1760.329	1760.370	Control Point	0.041
1206	562152.580	933655.419	1705.762	1705.680	Control Point	-0.082
1207	547497.381	927351.053	1621.835	1621.850	Control Point	0.015
1208	543845.064	928828.863	1832.486	1832.490	Control Point	0.004
1209	545052.460	929078.803	1628.883	1628.890	Control Point	0.007

1210	549110.783	927003.681	1639.843	1639.800	Control Point	-0.043
1211	544852.694	923940.566	1776.428	1776.380	Control Point	-0.048
1212	546953.096	917486.312	2028.074	2028.130	Control Point	0.056
1213	548555.216	917799.200	1970.729	1970.670	Control Point	-0.059
1214	550144.634	916645.418	1829.459	1829.450	Control Point	-0.009
1215	552441.887	917643.455	1696.420	1696.410	Control Point	-0.010
1216	552457.814	917654.626	1696.215	1696.160	Control Point	-0.055
1217	550939.495	921286.018	1729.677	1729.630	Control Point	-0.047
1218	550366.968	922505.782	1744.516	1744.330	Control Point	-0.186
1219	547451.223	921168.501	1961.236	1961.070	Control Point	-0.166
1220	562143.182	933638.742	1706.652	1706.550	Control Point	-0.102
1221	559113.999	924823.341	2046.281	2046.410	Control Point	0.129
1222	560545.733	935420.139	1778.038	1777.940	Control Point	-0.098
1223	559753.270	938099.554	1797.678	1797.600	Control Point	-0.078
1224	557980.216	939673.010	1882.158	1882.140	Control Point	-0.018
1225	386532.030	990061.971	1305.080	1305.080	Control Point	0.000
1226	360675.256	986892.832	436.474	436.470	Control Point	-0.004
1227	367890.600	984548.823	983.936	983.920	Control Point	-0.016
1228	362454.491	984306.332	406.065	405.920	Control Point	-0.145
1229	369834.442	982617.361	1282.819	1282.950	Control Point	0.131
1230	362995.070	983725.421	412.886	412.880	Control Point	-0.006
1231	365093.699	989970.199	839.112	839.140	Control Point	0.028
1232	366494.812	988978.305	810.907	810.850	Control Point	-0.057
1233	374846.061	992124.860	464.887	464.800	Control Point	-0.087
1234	371525.784	991890.540	416.899	416.820	Control Point	-0.079
1235	380125.360	996981.503	765.960	765.940	Control Point	-0.020
1236	381104.621	998734.783	720.876	720.850	Control Point	-0.026
1237	386435.248	996921.844	911.465	911.380	Control Point	-0.085
1238	389058.489	990091.851	1402.106	1402.110	Control Point	0.004
1239	385341.844	990344.380	1301.539	1301.490	Control Point	-0.049
1240	369797.650	973803.631	1020.739	1020.760	Control Point	0.021
1241	378422.403	985546.835	1228.477	1228.410	Control Point	-0.067
1242	368326.955	974187.586	904.363	904.360	Control Point	-0.003
1243	373584.136	981056.609	1304.059	1303.970	Control Point	-0.089
1244	369160.019	975099.470	794.917	794.770	Control Point	-0.147
1245	365477.513	971971.504	988.867	988.840	Control Point	-0.027
1246	365036.423	973828.491	979.480	979.530	Control Point	0.050
1247	366116.834	980761.906	496.063	496.100	Control Point	0.037
1248	370281.546	983408.306	1236.657	1236.550	Control Point	-0.107
1249	371510.282	985362.324	910.926	910.850	Control Point	-0.076
1250	378856.051	990342.588	709.332	709.420	Control Point	0.088
1251	378625.169	982869.759	1162.087	1162.070	Control Point	-0.017
1252	390077.555	997110.500	1039.657	1039.510	Control Point	-0.147

1253	388061.151	995462.633	742.961	742.950	Control Point	-0.011
1254	365844.830	992675.887	353.239	353.260	Control Point	0.021
1255	380475.574	994865.994	642.352	642.320	Control Point	-0.032
1256	369766.936	990374.341	436.856	436.810	Control Point	-0.046
1257	362082.022	984647.514	410.780	410.670	Control Point	-0.110
1258	364671.964	981863.813	442.631	442.580	Control Point	-0.051
1259	365291.609	975978.875	775.611	775.540	Control Point	-0.071
1260	366830.768	979143.994	537.531	537.400	Control Point	-0.131
1261	365211.501	972593.784	950.766	950.660	Control Point	-0.106
1262	382213.607	1077125.032	416.441	416.400	Control Point	-0.041
1263	392745.087	1060553.500	1417.877	1417.840	Control Point	-0.037
1264	383138.744	1078272.917	628.184	628.190	Control Point	0.006
1265	390752.058	1065505.943	833.728	833.610	Control Point	-0.118
1266	387572.848	1077451.890	604.665	604.530	Control Point	-0.135
1267	379582.335	1075004.652	376.659	376.630	Control Point	-0.029
1268	390993.600	1074858.672	1074.638	1074.530	Control Point	-0.108
1269	390896.357	1065320.728	839.155	839.030	Control Point	-0.125
1270	394930.175	1062037.176	1453.360	1453.210	Control Point	-0.150
1271	391928.644	1064017.550	912.156	912.070	Control Point	-0.086
1272	384158.679	1060707.938	1155.714	1155.710	Control Point	-0.004
1273	381948.923	1058724.605	1228.118	1228.210	Control Point	0.092
1274	377034.621	1054923.888	950.457	950.590	Control Point	0.133
1275	380832.209	1054171.998	1185.193	1185.270	Control Point	0.077
1276	381006.464	1069977.820	658.127	658.040	Control Point	-0.087
1277	379312.005	1074953.079	374.487	374.440	Control Point	-0.047
1278	379994.367	1071307.169	422.257	422.250	Control Point	-0.007
1279	381337.394	1055642.622	1267.568	1267.670	Control Point	0.102
1280	393640.996	1061532.566	1354.276	1354.210	Control Point	-0.066
1281	384709.356	1070602.797	997.176	997.200	Control Point	0.024
1282	382315.259	1078909.530	544.507	544.500	Control Point	-0.007
1283	389427.844	1069848.411	1323.881	1323.820	Control Point	-0.061
1284	392030.544	1062316.253	1057.918	1057.830	Control Point	-0.088
1285	388357.982	1060816.514	1588.301	1588.320	Control Point	0.019
1286	388214.428	1076538.600	772.726	772.640	Control Point	-0.086
1287	404355.842	1005860.277	1605.688	1605.780	Control Point	0.092
1288	402673.429	1020960.915	979.592	979.550	Control Point	-0.042
1289	407254.340	1009716.931	1436.733	1436.640	Control Point	-0.093
1290	413613.542	1009660.930	1808.490	1808.450	Control Point	-0.040
1291	408731.939	1015425.637	1600.951	1600.980	Control Point	0.029
1292	405578.667	1020805.002	1038.263	1038.250	Control Point	-0.013
1293	398022.712	1017395.406	1368.207	1368.190	Control Point	-0.017
1294	398858.137	1023365.408	1012.811	1012.720	Control Point	-0.091
1295	400558.344	1025271.176	923.671	923.590	Control Point	-0.081

1296	399585.280	1029997.180	930.993	930.960	Control Point	-0.033
1297	399524.354	1027747.995	604.816	604.810	Control Point	-0.006
1298	405011.851	1026504.089	751.264	751.260	Control Point	-0.004
1299	403461.935	1024983.331	743.331	743.240	Control Point	-0.091
1300	406938.867	1027666.507	776.215	776.160	Control Point	-0.055
1301	403028.767	1020629.870	991.113	991.120	Control Point	0.007
1302	406635.307	1017753.945	1096.800	1096.740	Control Point	-0.060
1303	411788.182	1009548.450	1733.501	1733.450	Control Point	-0.051
1304	405249.679	1028122.676	972.244	972.160	Control Point	-0.084
1305	398036.036	1020677.600	1191.479	1191.460	Control Point	-0.019

Table 9: Lidar Bare-Earth Assessment

4.5 Vertical Accuracy Results

An overall statistical assessment of the check points can be found in Tables 10 and 11 below. The values provided are in meters.

Control Points Error Statistics								
Land Cover Category	**# of points**	**Min**	**Max**	**Mean**	**Median**	**Skew**	**Std Dev**	**$RMSE_Z$**
Control Points	305	-0.186	0.195	-0.028	-0.027	0.188	0.061	0.067

Table 10: Control Points Error Statistics

Control Points Vertical Accuracy Assessment				
Land Cover Category	**# of Points**	**FVA — Fundamental Vertical Accuracy ($RMSE_Z$ x 1.9600)**	**CVA — Consolidated Vertical Accuracy (95th Percentile)**	**SVA — Supplemental Vertical Accuracy (95th Percentile)**
Control Points	305	0.132	0.072	N/A

Table 11: Control Points Vertical Accuracy Assessment

Section 5: Certification

5.1 Limitations of Use

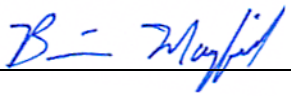
The accuracy assessment confirms that the data may be used for the intended applications stated in the **Project Purpose** section of this document. The dataset may also be used as a topographic input for other applications but the user should be aware that this lidar dataset was designed with a specific purpose and was not intended to meet specifications and/or requirements of users outside of the USDA Forest Service.

It should also be noted that lidar points do not represent a continuous surface model. Lidar points are discrete measurements of the surface and any values derived within a triangle of three lidar points are interpolated. As such, the user should not use the resultant lidar dataset for vertical placement of a planimetric feature such as a headwall, building footprint or any other planimetric feature unless there is an associated lidar point that can be reasonably located on this structure.

Consideration should be given by the end user of this dataset to the fact that this lidar dataset was developed differently and that previous lidar datasets that may be available for this geographic location. It is likely that the data in this project was created using different geodetic control, a different Geoid, newer lidar technology and more up-to-date processing techniques. As such, any direct comparative analysis performed between this dataset and previous datasets could result in misleading or inaccurate results. Users are encouraged to proceed with caution while performing this type of comparative analysis and to completely understand the variables that make each of these datasets unique and not corollary.

It is encouraged that the user refers to the full FGDC Metadata and project reports for a complete understanding on the content of this dataset.

I, hereby, certify to the extent of my knowledge that the statements and statistics represented in this document are true and factual.



Brian J. Mayfield, ASPRS Certified Photogrammetrist #R1276

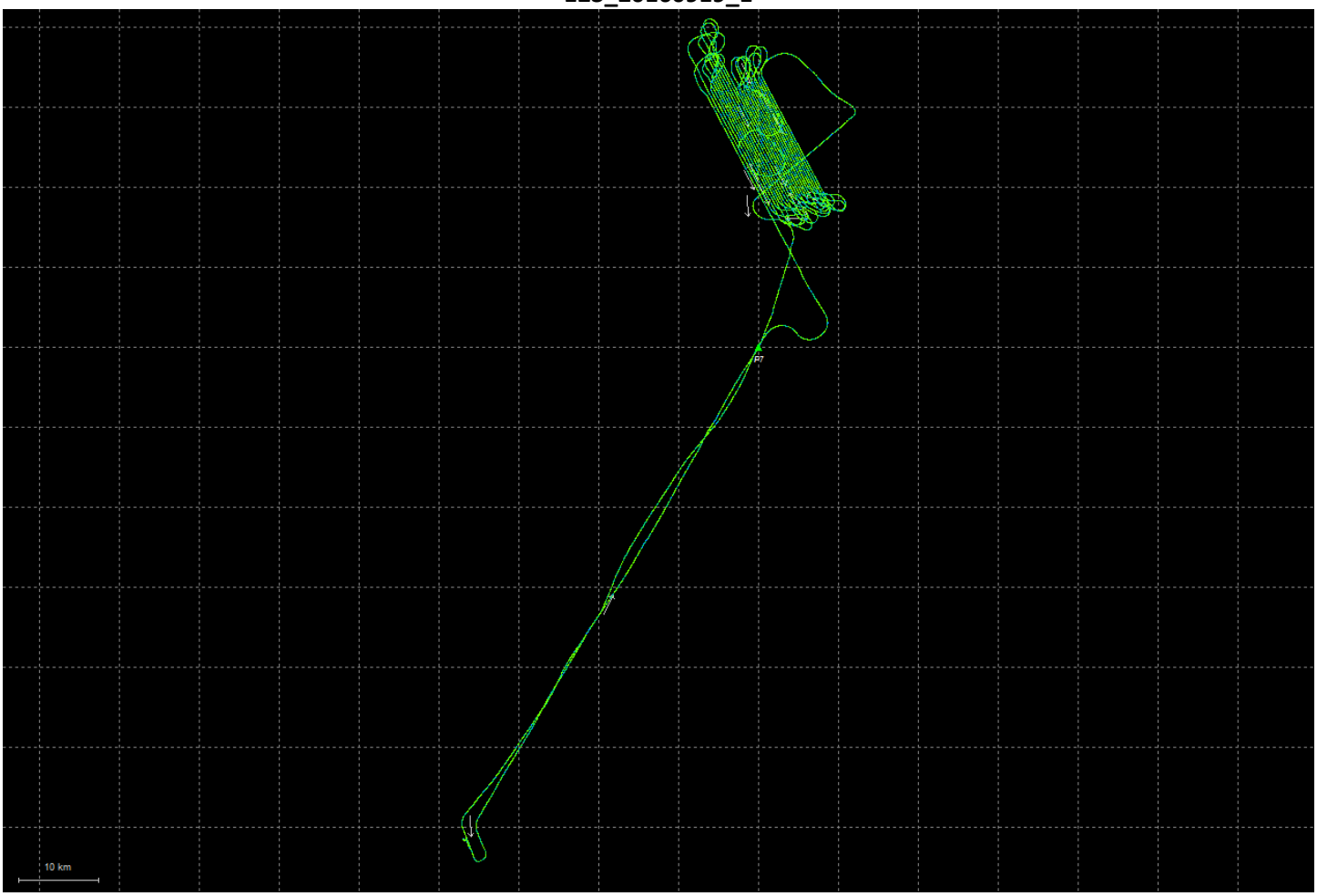
Section 6: GPS Processing

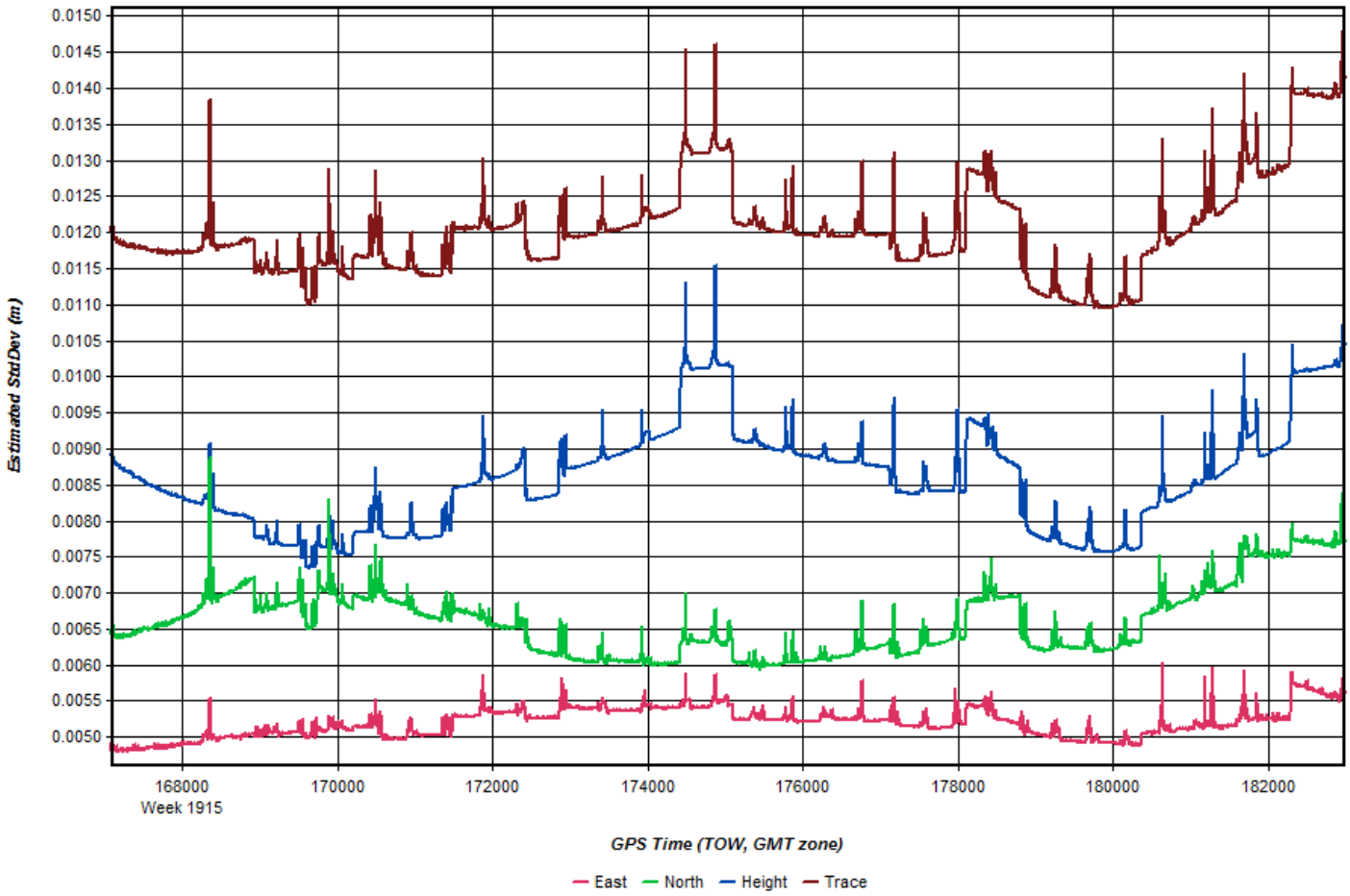
Inertial Explorer Version 8.60.5025

Plots by Mission: Coverage Map, Estimated Position Accuracy, Number of Satellites, Combined Separation, and PDOP.

Coverage Map	The Coverage Map plot shows the Aircraft GPS-IMU Trajectory in reference to localized GPS Reference Stations.
Estimated Position Accuracy	The Estimated Position Accuracy plot shows the standard deviations of the east, north, and up directions versus time for the solution. The total standard deviation with a distance dependent component is also plotted.
Number of Satellites	Plots the number of satellites used in the solution as a function of time. The number of GPS satellites, GLONASS satellites, and the total number of satellites are distinguished with separate lines.
Combined Separation	Plots the north, east, and height position difference between any two solutions loaded into the project. This is most often the forward and reverse processing results, unless other solutions have been loaded from the Combine Solutions dialog. Plotting the difference between forward and reverse solutions can be very helpful in quality checking. When processing both directions, no information is shared between forward and reverse processing. Thus both directions are processed independently of each other. When forward and reverse solutions agree closely, it helps provide confidence in the solution. To a lesser extent, this plot can also help gauge solution accuracy.
PDOP	PDOP is a unit less number which indicates how favorable the satellite geometry is to 3D positioning accuracy. A strong satellite geometry, where the PDOP is low, occurs when satellites are well distributed in each direction (north, south, east and west) as well as directly overhead. Values in the range of 1-2 indicate very good satellite geometry, 2-3 are adequate in the sense that they do not generally, by themselves, limit positioning accuracy. Values between 3 and 4 are considered marginal, and values approaching or exceeding 5 can be considered poor. PDOP spikes can occur on aircraft turns were the antenna angle is unfavorable, these spikes while aesthetically unfavorable do not generally reduce the accuracy of the acquired data.

123_20160919_1

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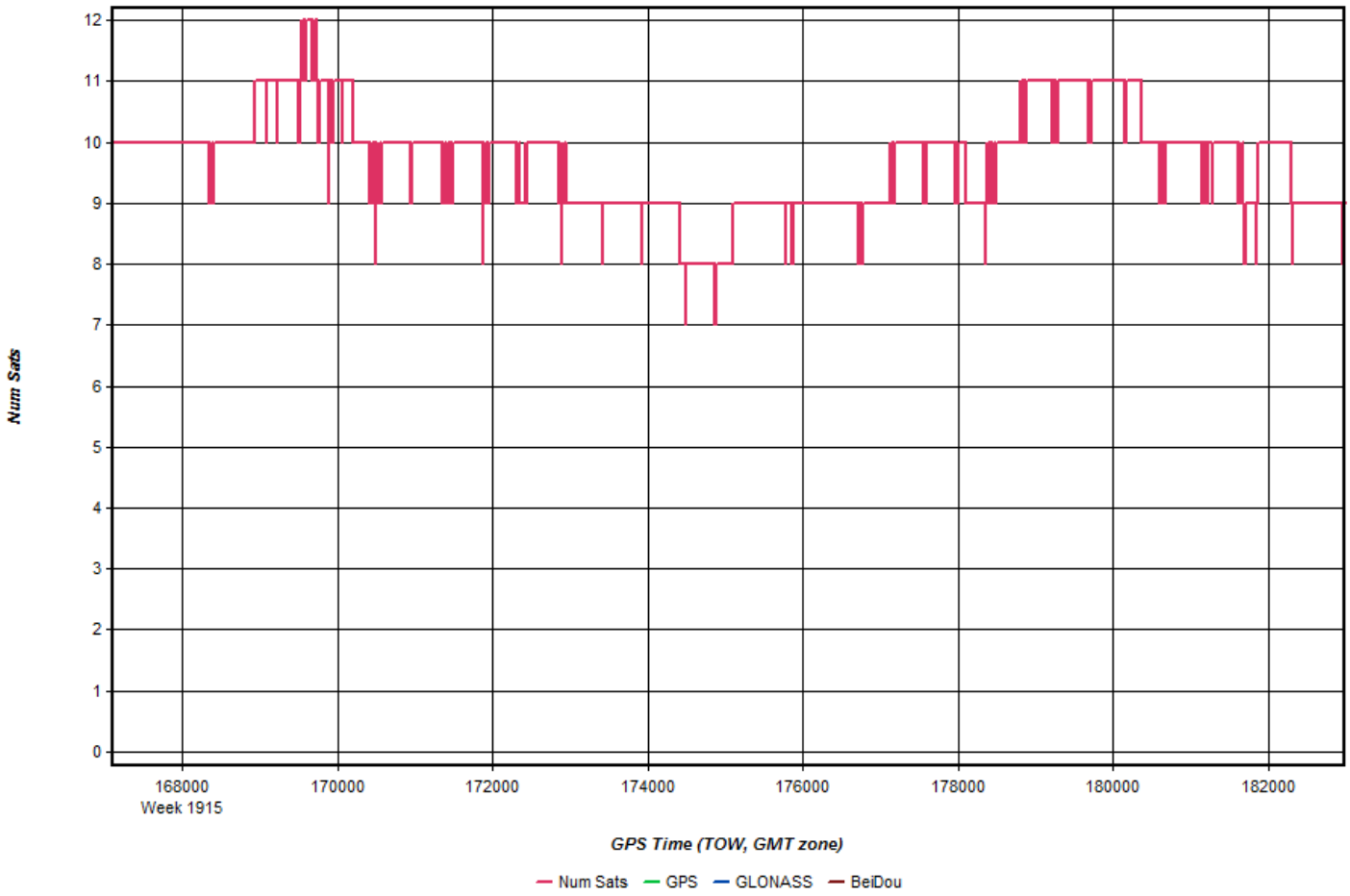
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
168000
Week 1915
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
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10
9
8
7
6
5
4
3
2
1
0
168000
Week 1915
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176000
178000
180000
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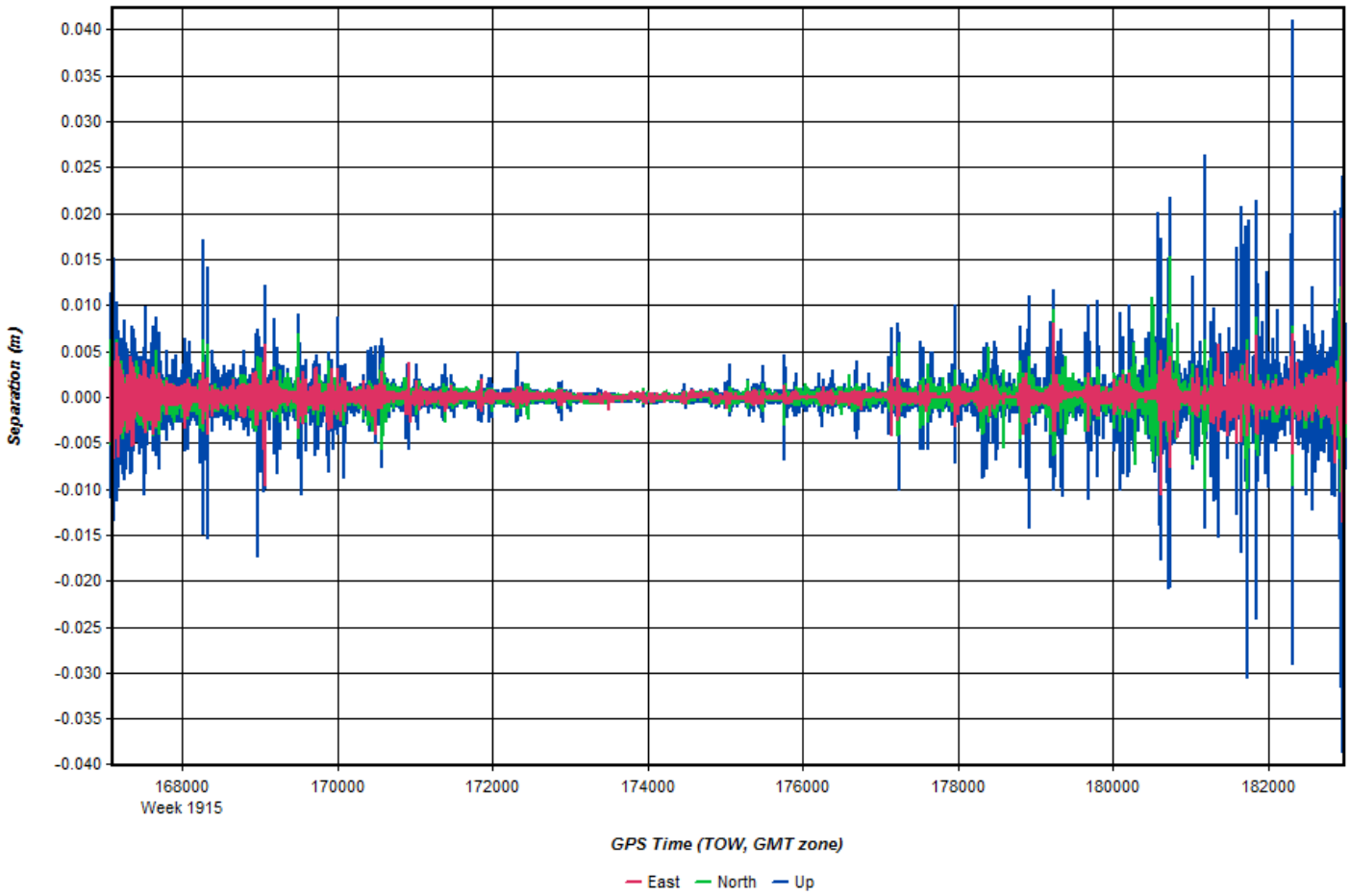
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou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0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
Separation (m)
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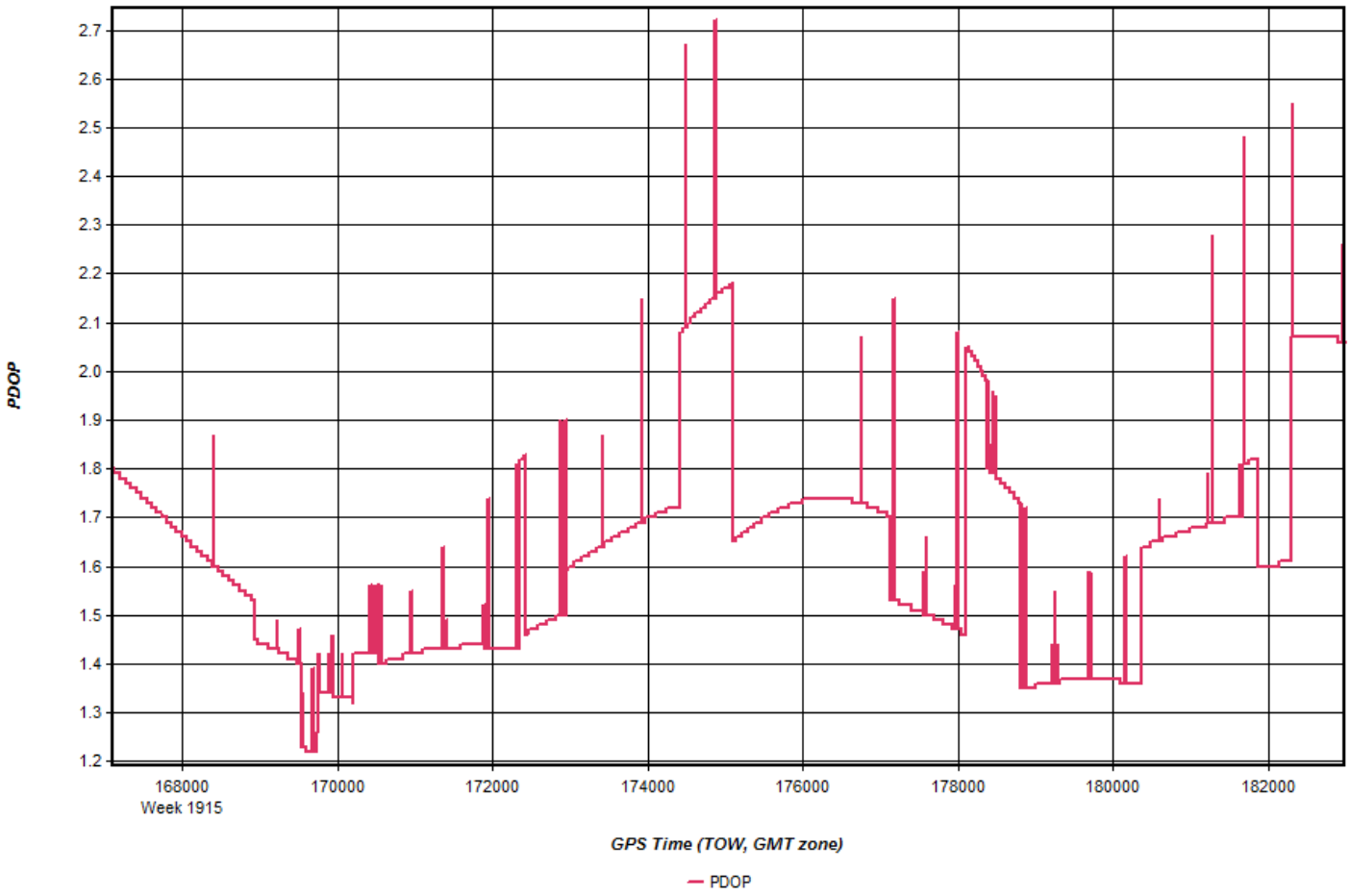
Week 1915
170000
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
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2.6
2.5
2.4
2.3
2.2
2.1
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1.8
1.7
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1.5
1.4
1.3
1.2
168000
Week 1915
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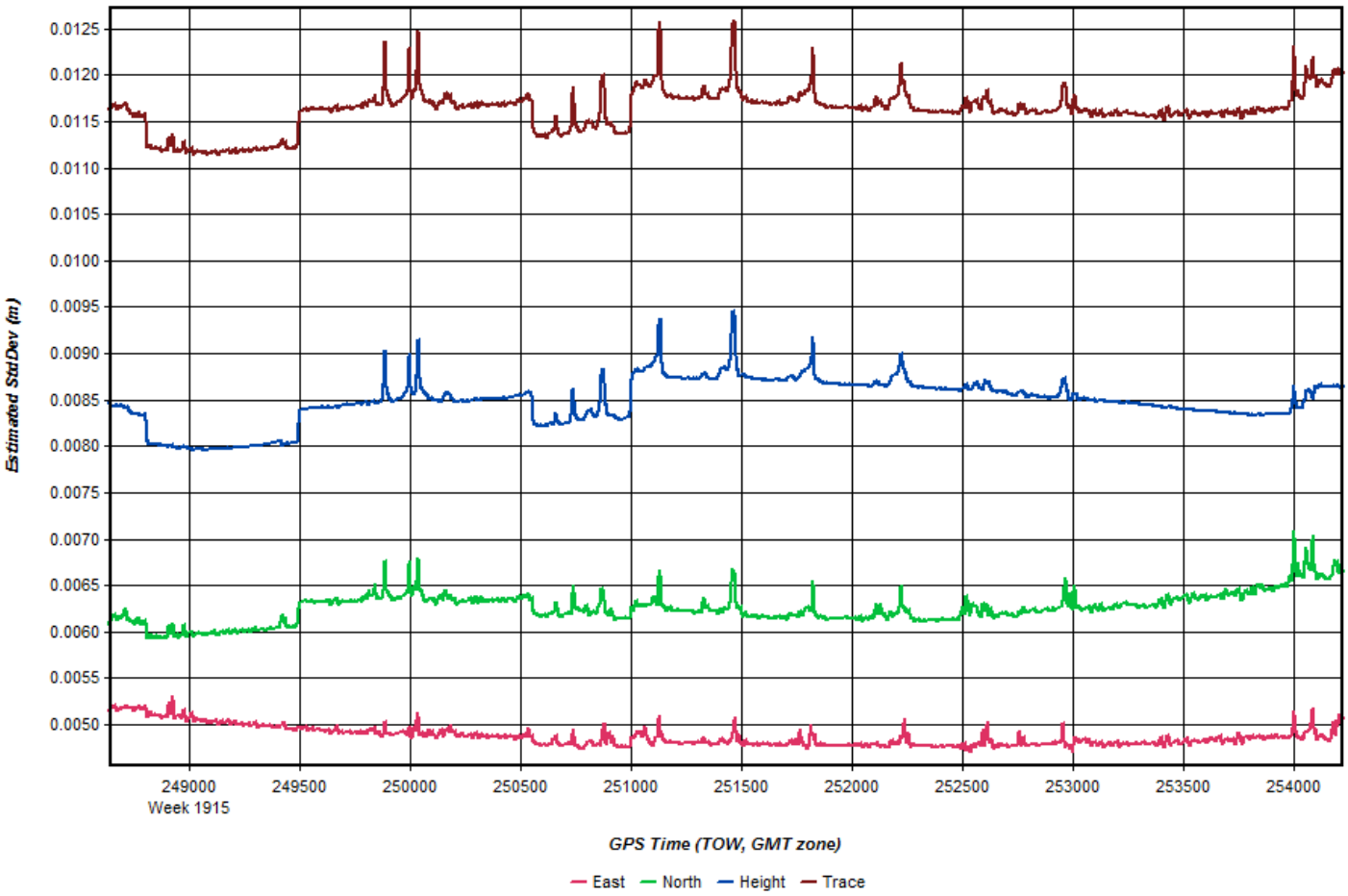
172000
174000
176000
178000
180000
182000
GPS Time (TOW, GMT zone)
PDOP

123_20160920_1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0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
249000
Week 1915
249500
250000
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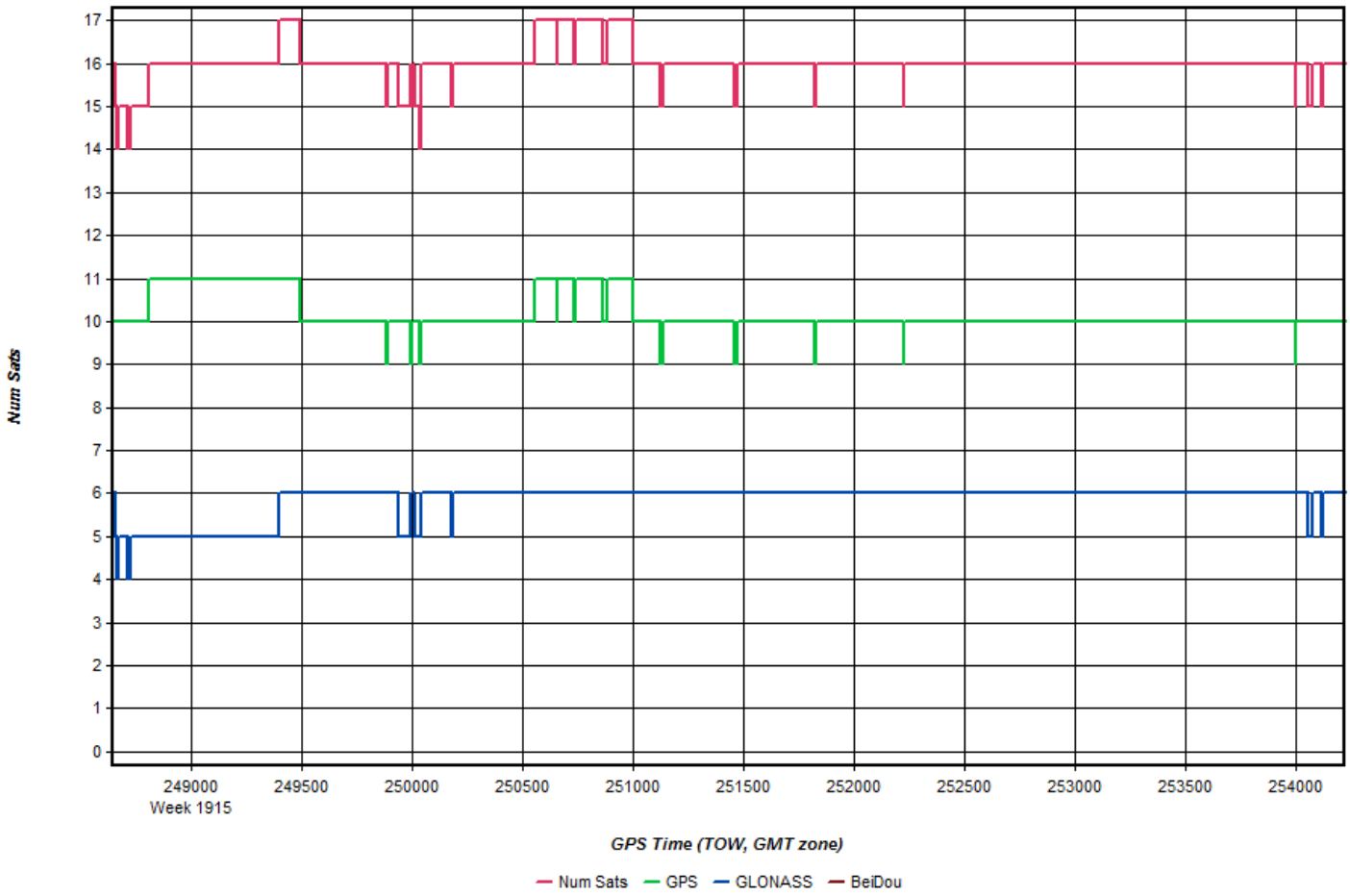
252000
252500
253000
253500
254000
GPS Time (TOW, GMT zone)
East
North
Height
Trace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4
3
2
1
0
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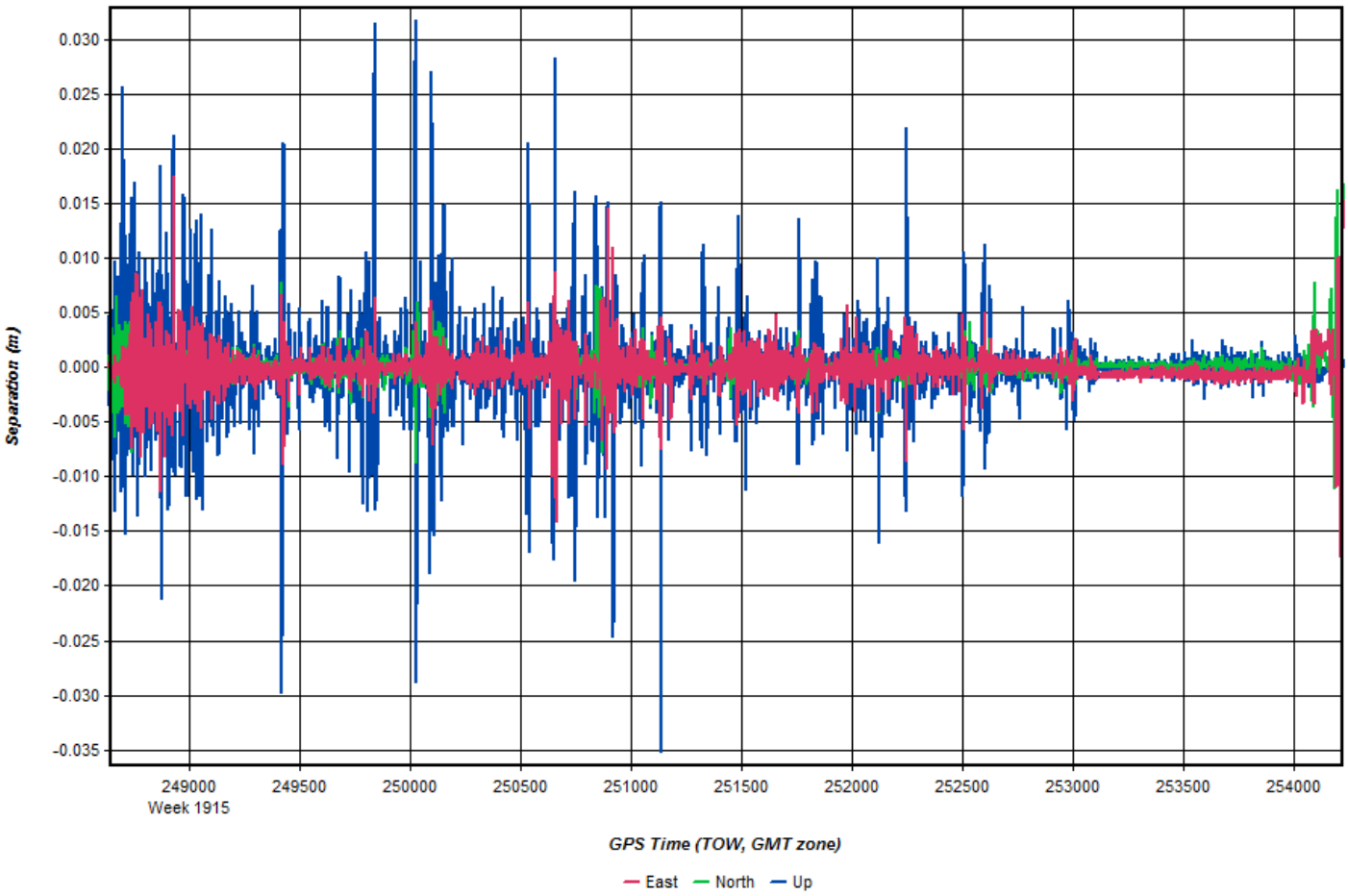
Week 1915
249500
250000
250500
251000
251500
252000
252500
253000
253500
254000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou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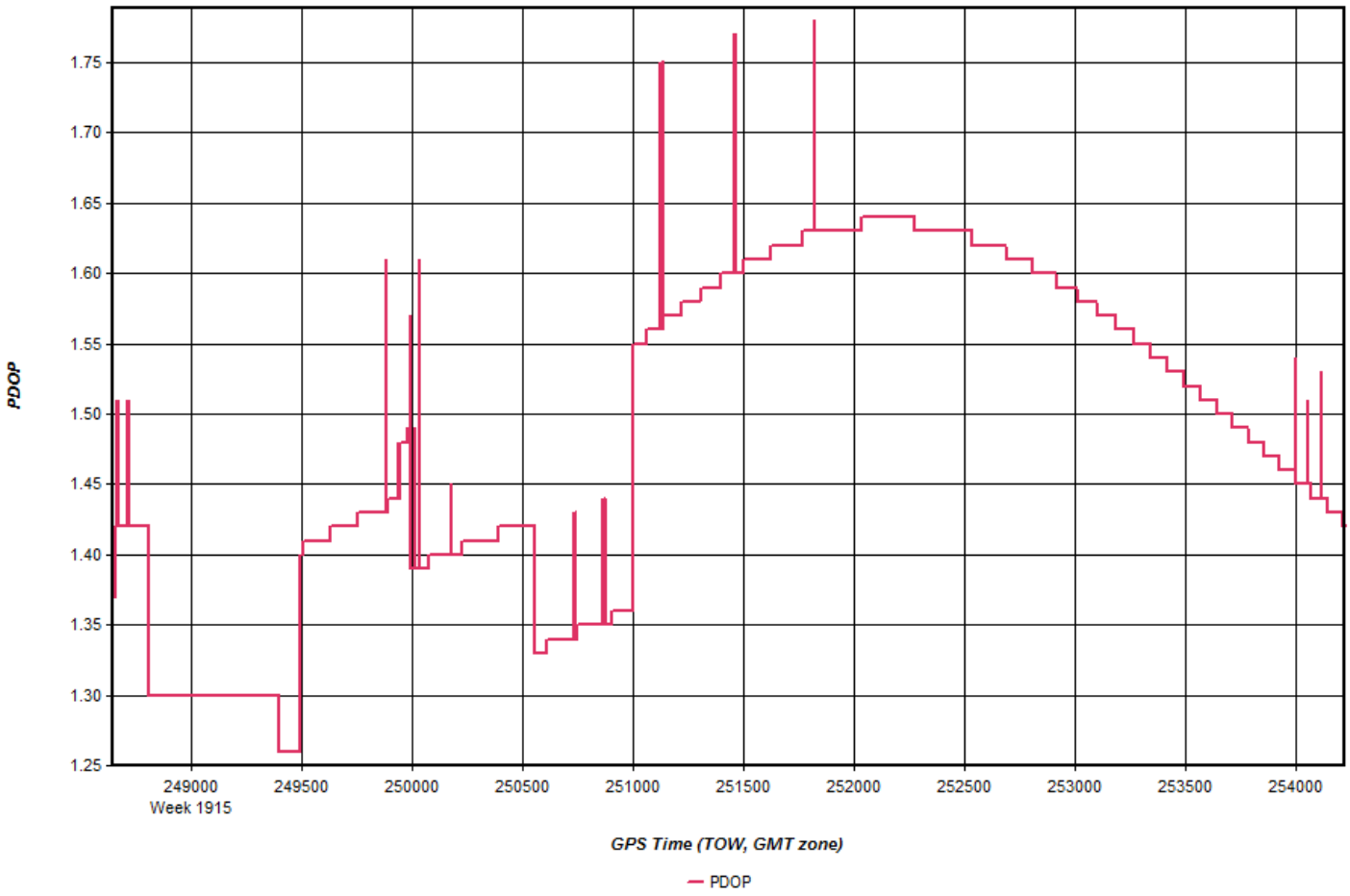
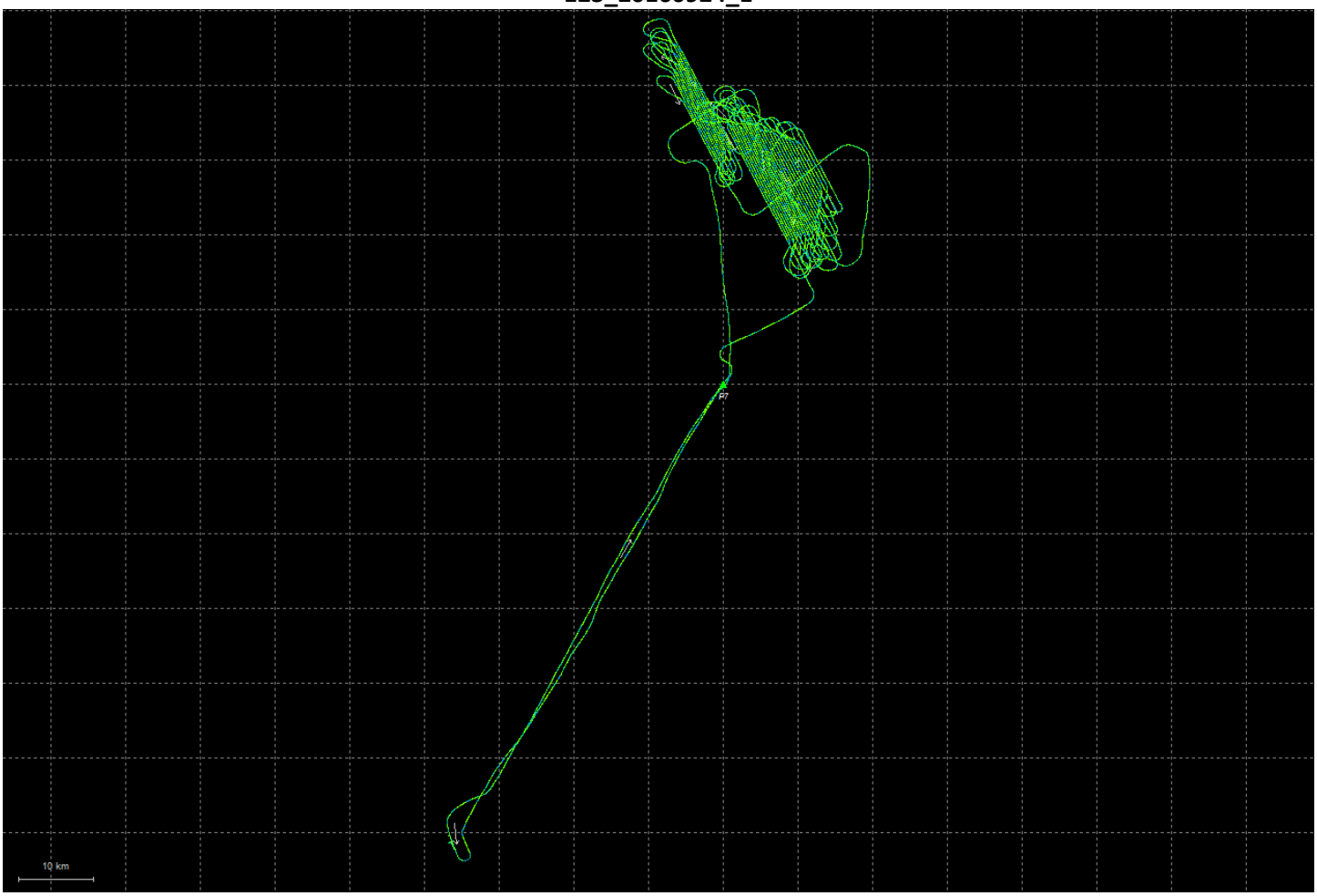
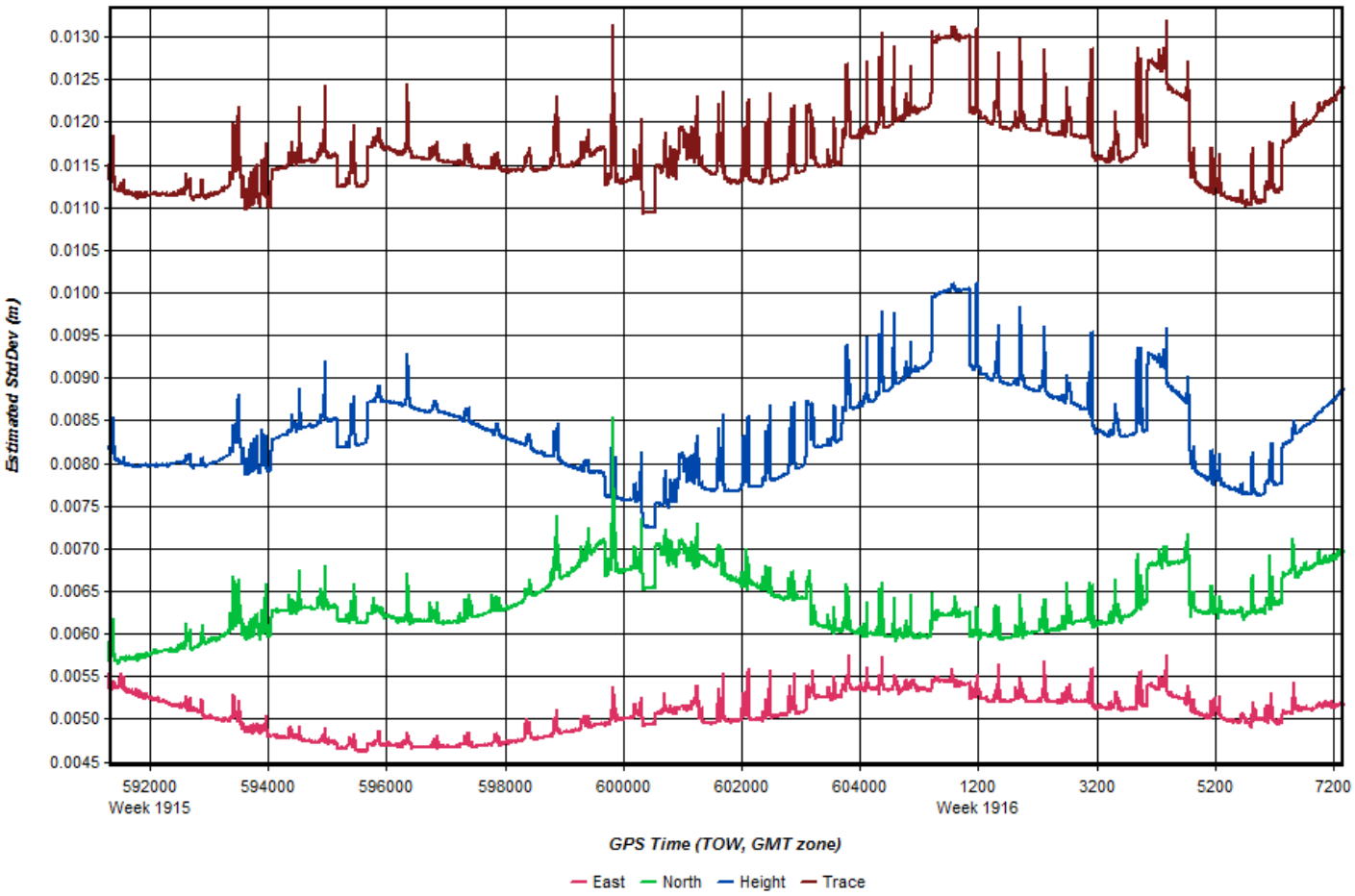
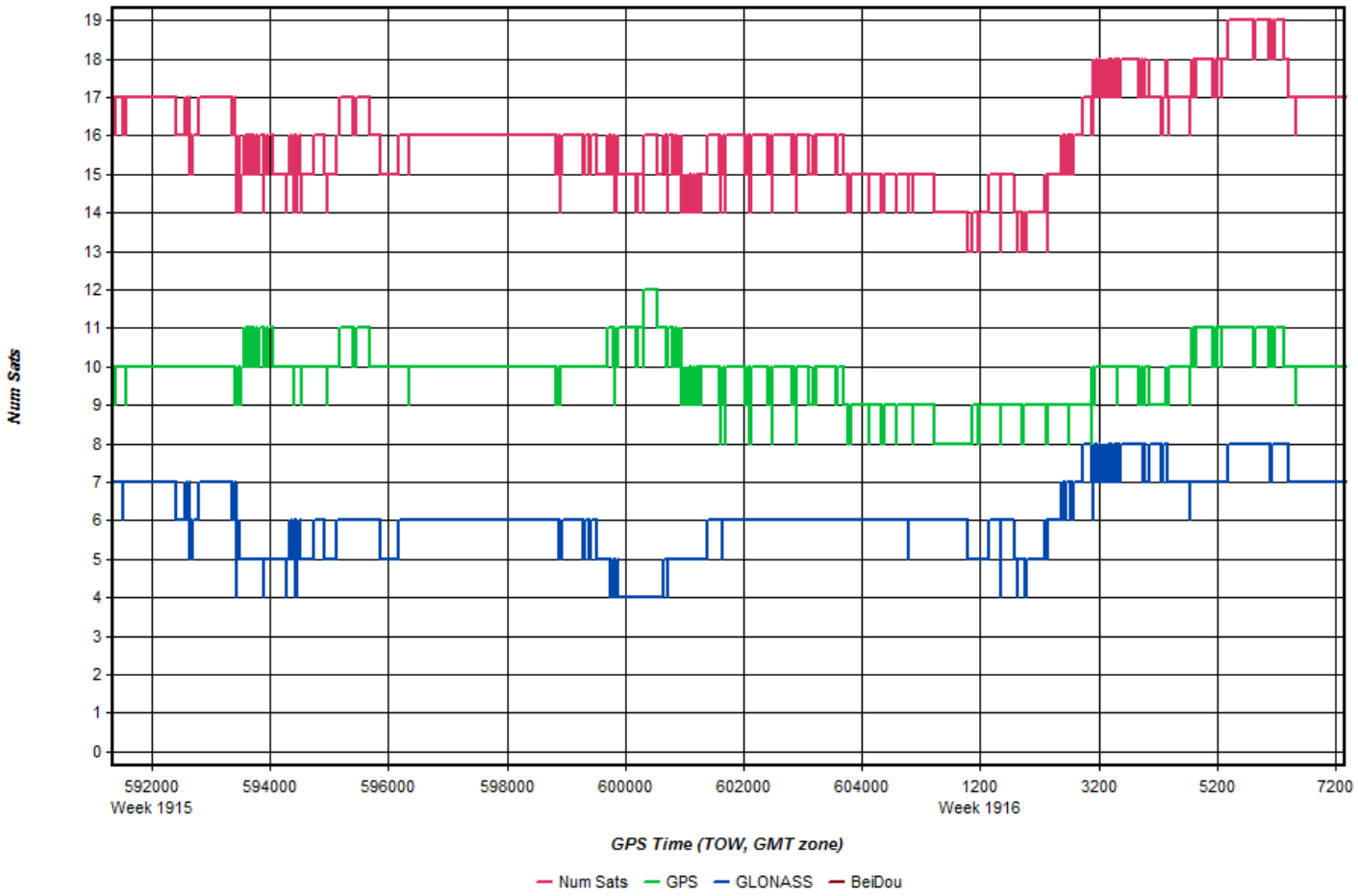
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
Separation (m)
249000
Week 1915
249500
250000
250500
251000
251500
252000
252500
253000
253500
254000
GPS Time (TOW, GMT zone)
East
North
Up

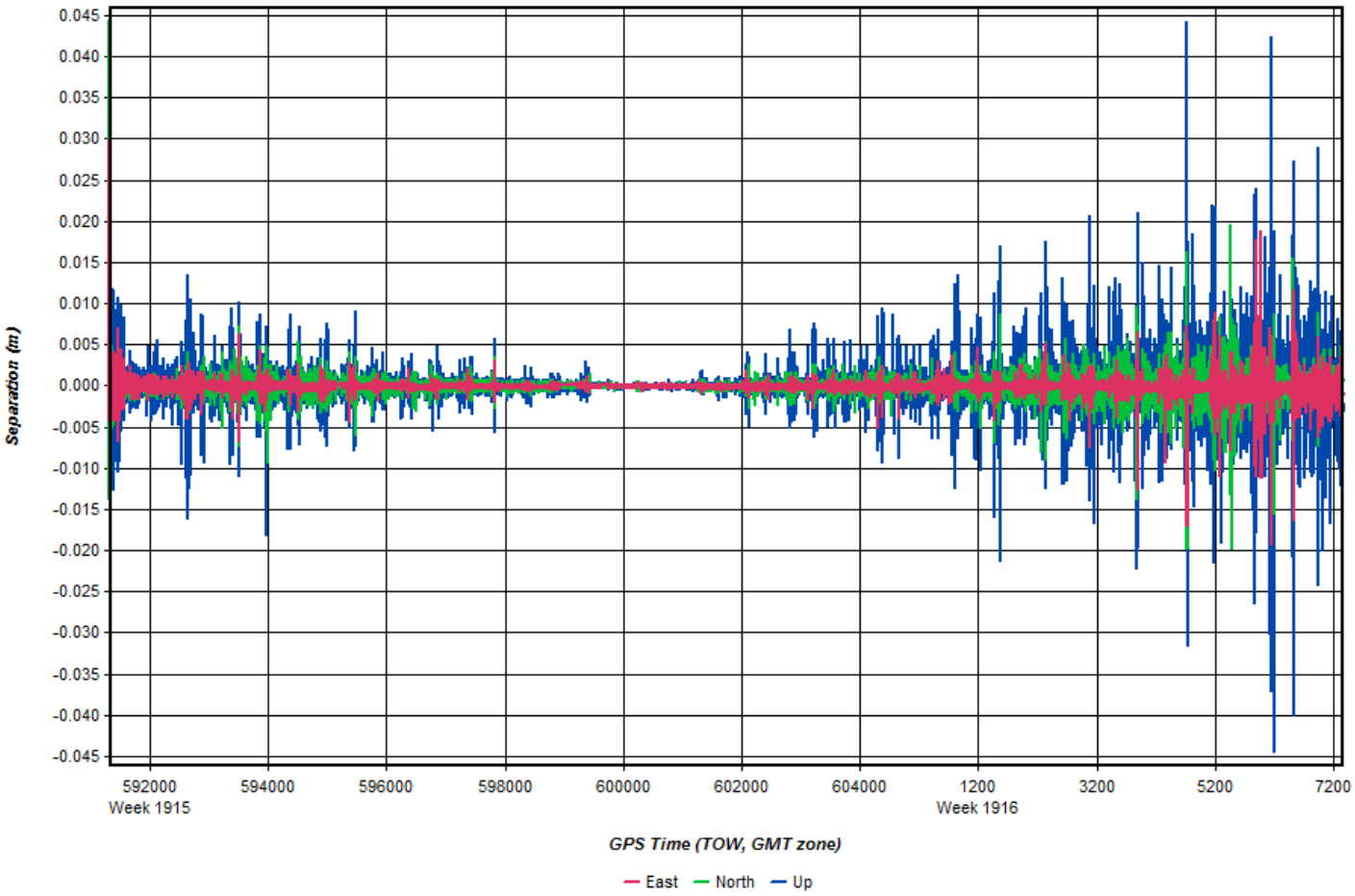

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
249000
Week 1915
249500
250000
250500
251000
251500
252000
252500
253000
253500
254000
GPS Time (TOW, GMT zone)
PDOP

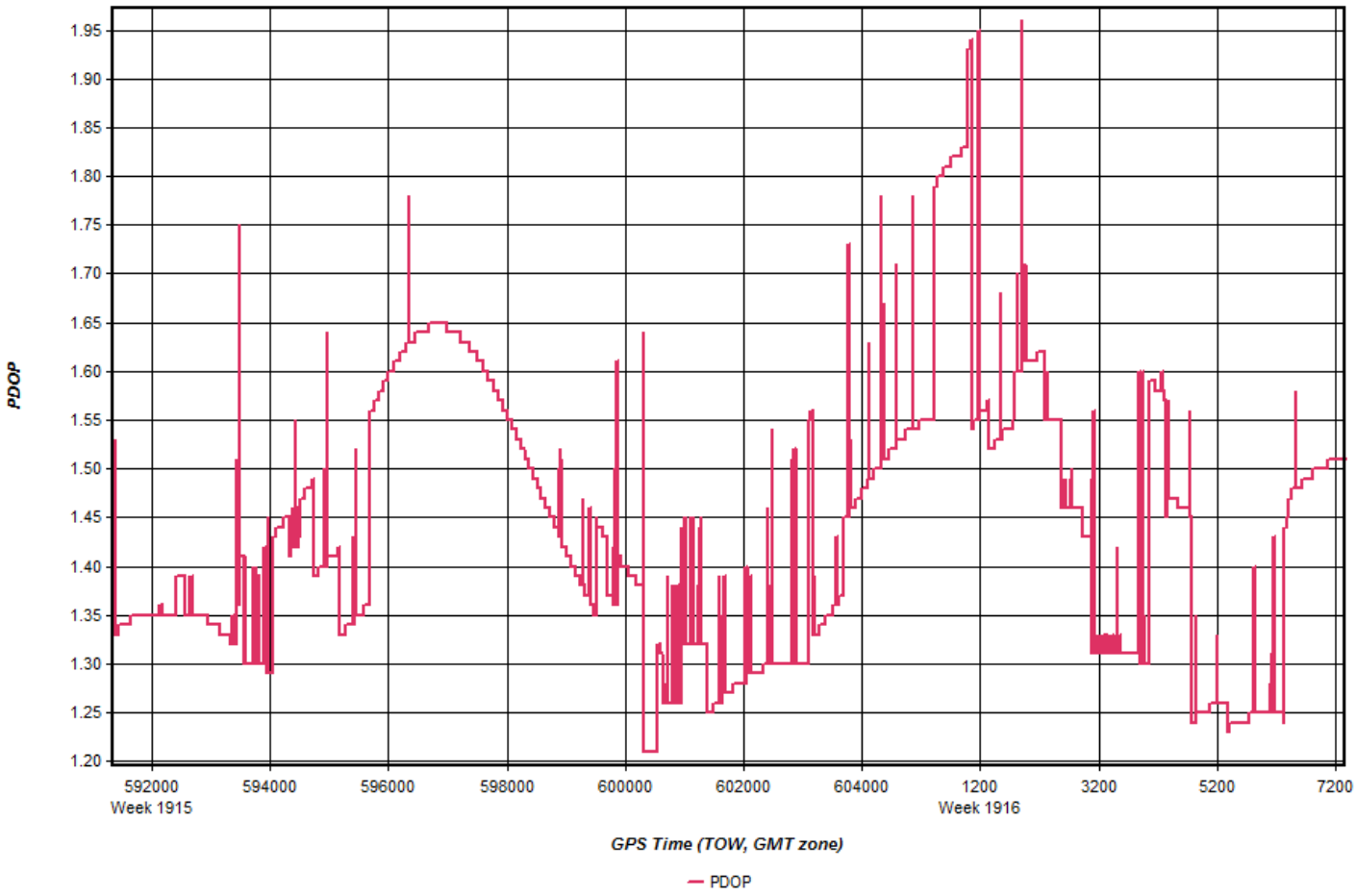
123_20160924_1



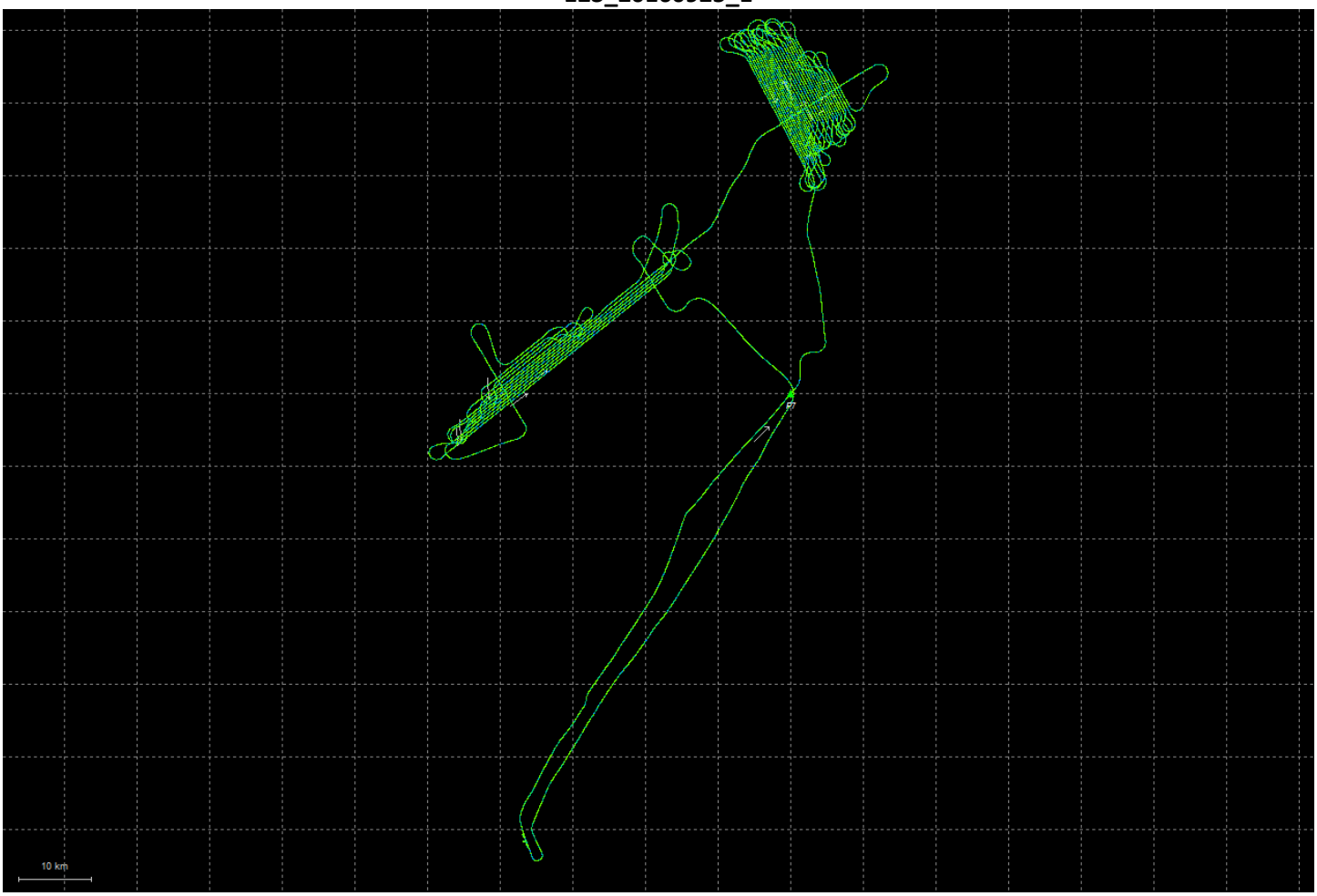

Estimated StdDev (m)
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
592000
Week 1915
594000
596000
598000
600000
602000
604000
1200
Week 1916
3200
5200
7200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

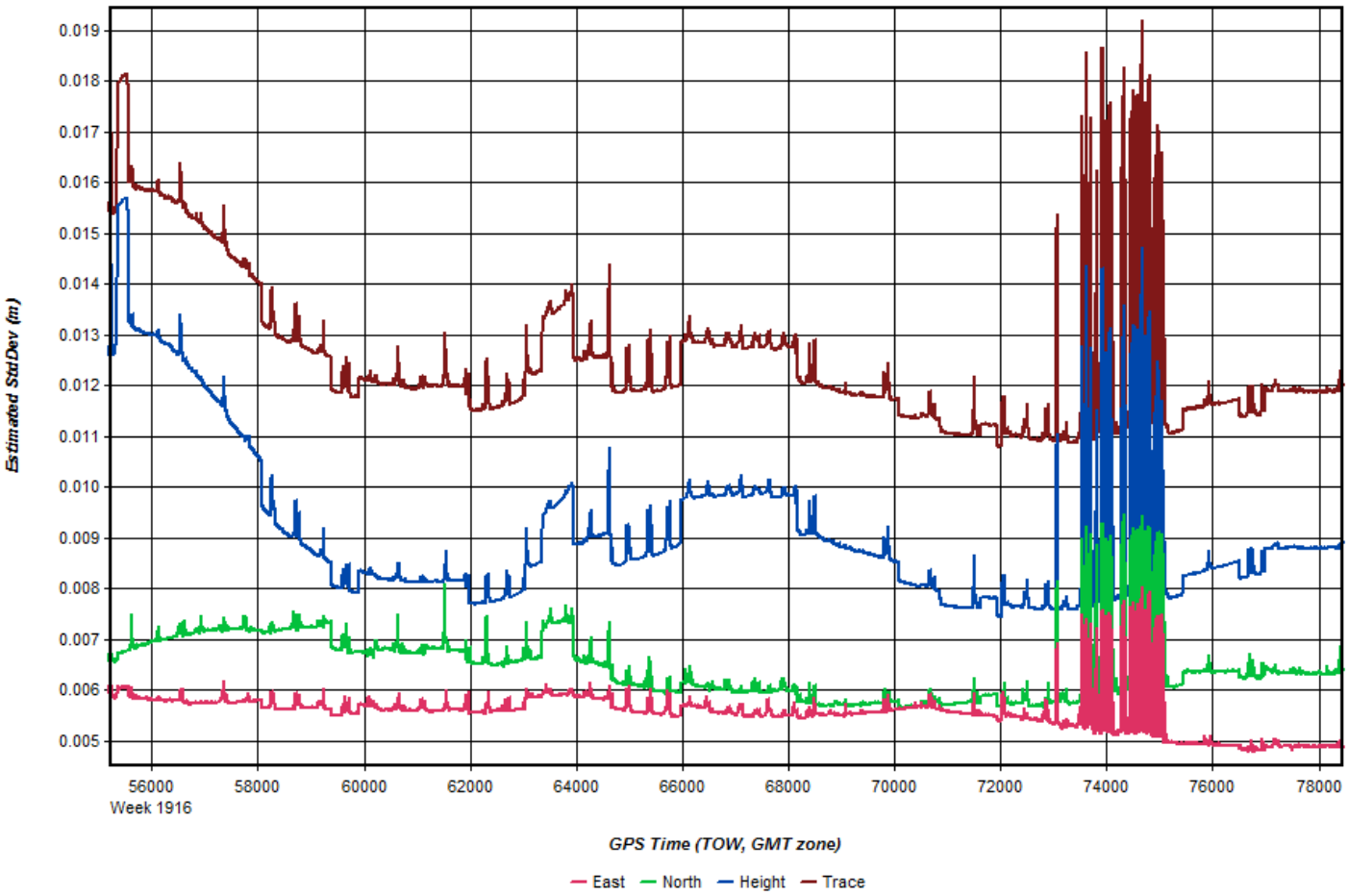

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
592000
Week 1915
594000
596000
598000
600000
602000
604000
1200
Week 1916
3200
5200
7200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

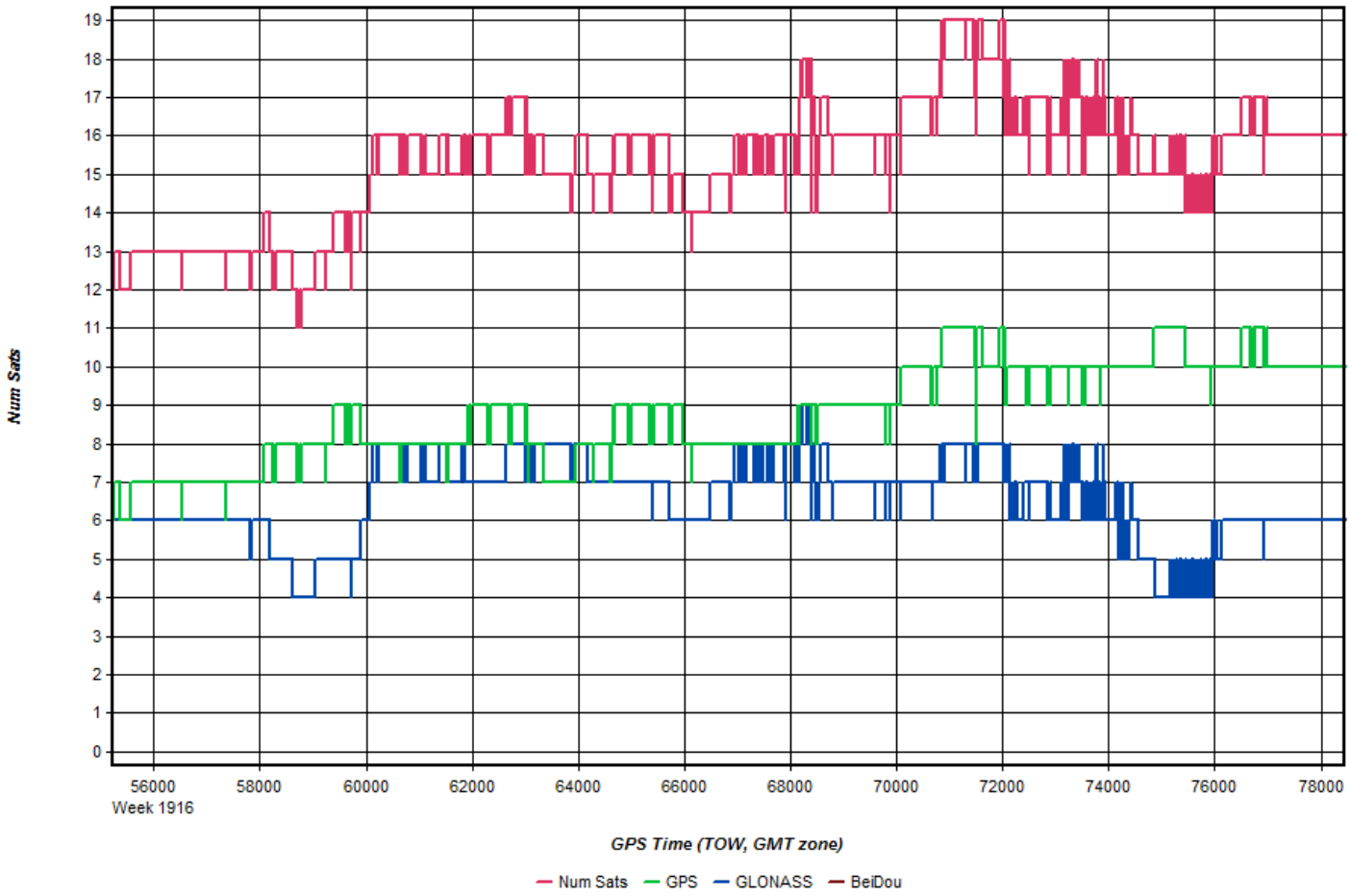

0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
Separation (m)
592000
Week 1915
594000
596000
598000
600000
602000
604000
1200
Week 1916
3200
5200
7200
GPS Time (TOW, GMT zone)
East
North
Up

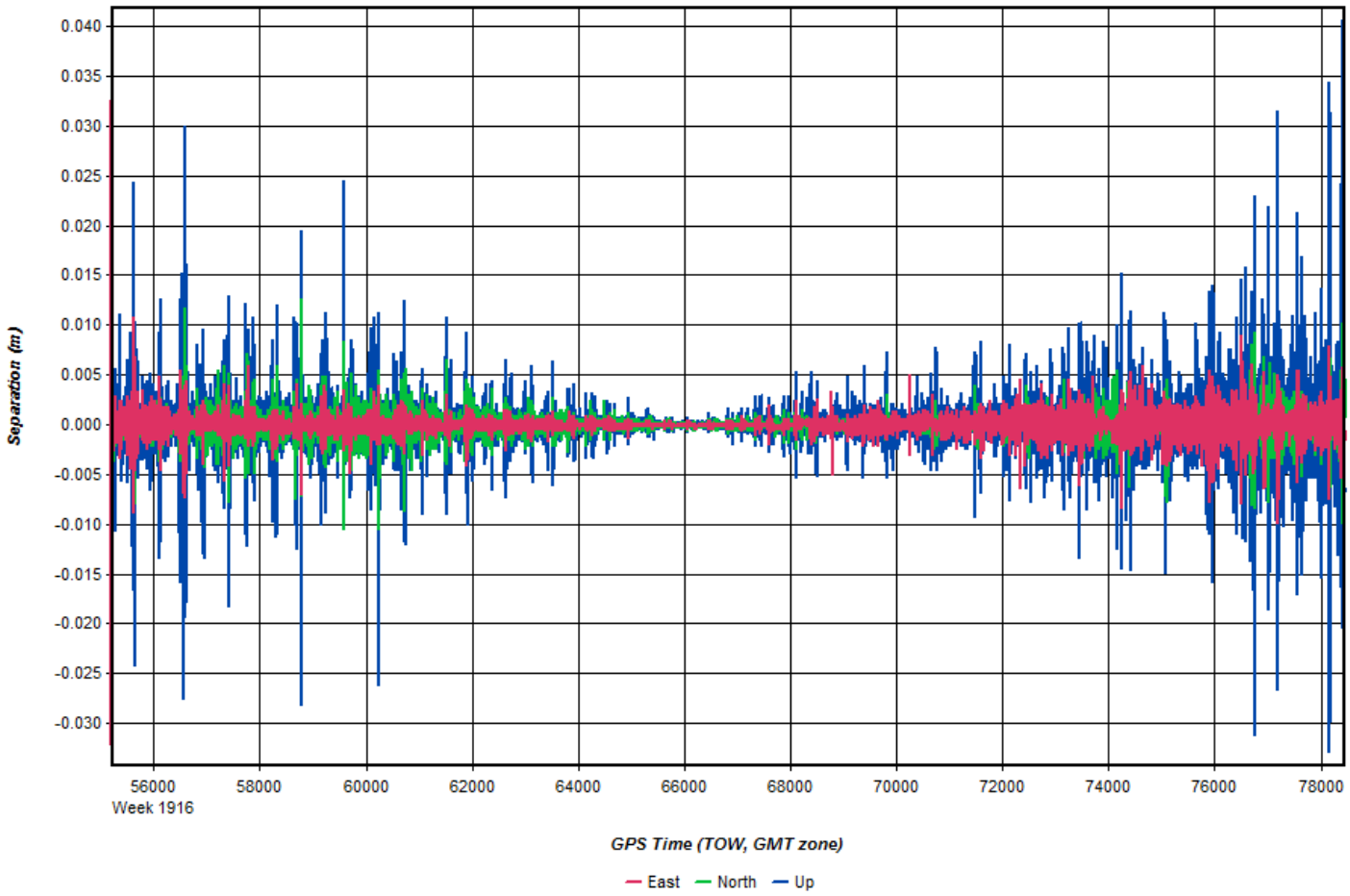

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
592000
Week 1915
594000
596000
598000
600000
602000
604000
1200
Week 1916
3200
5200
7200
GPS Time (TOW, GMT zone)
PDOP

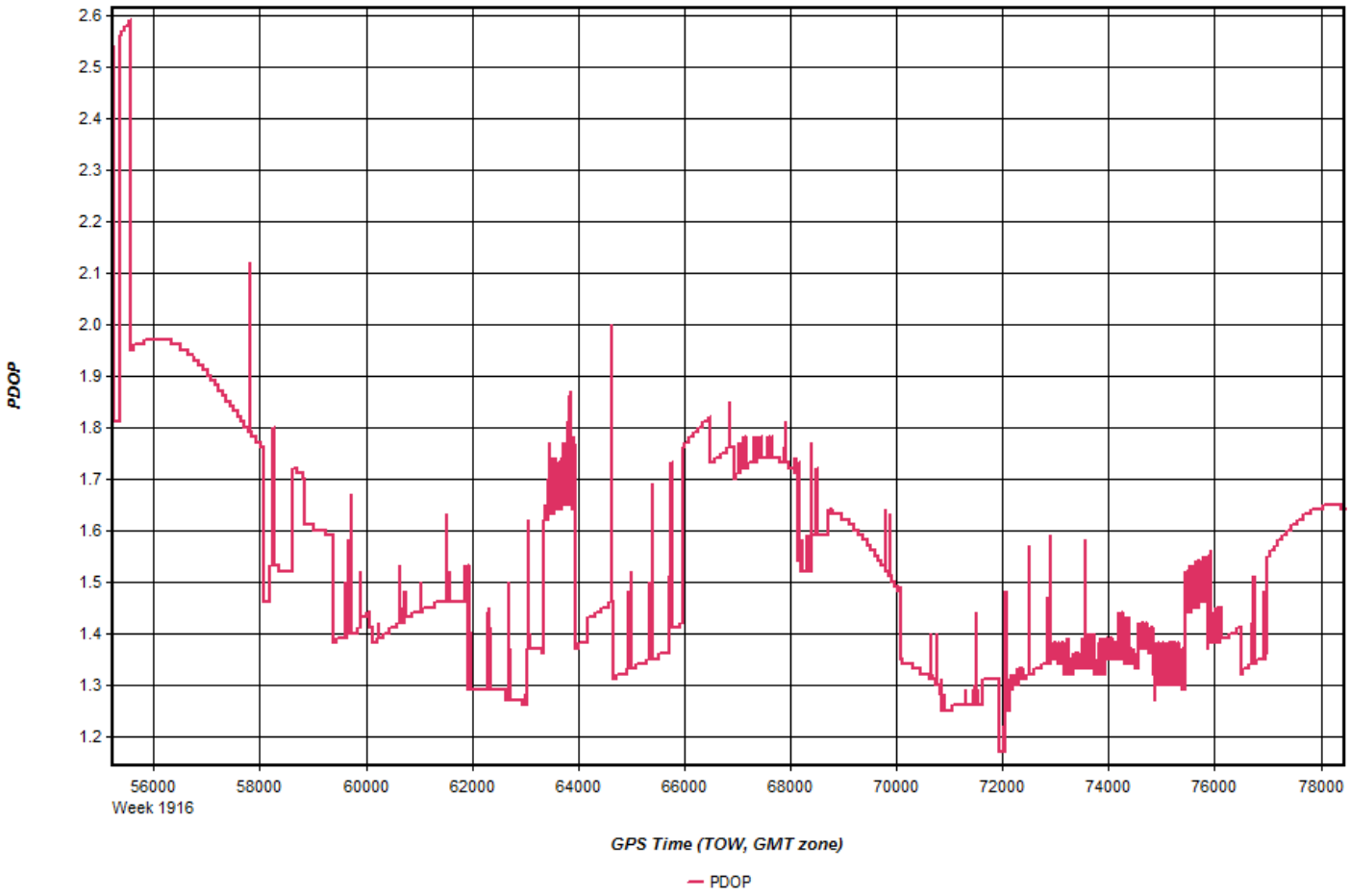
123_20160925_1



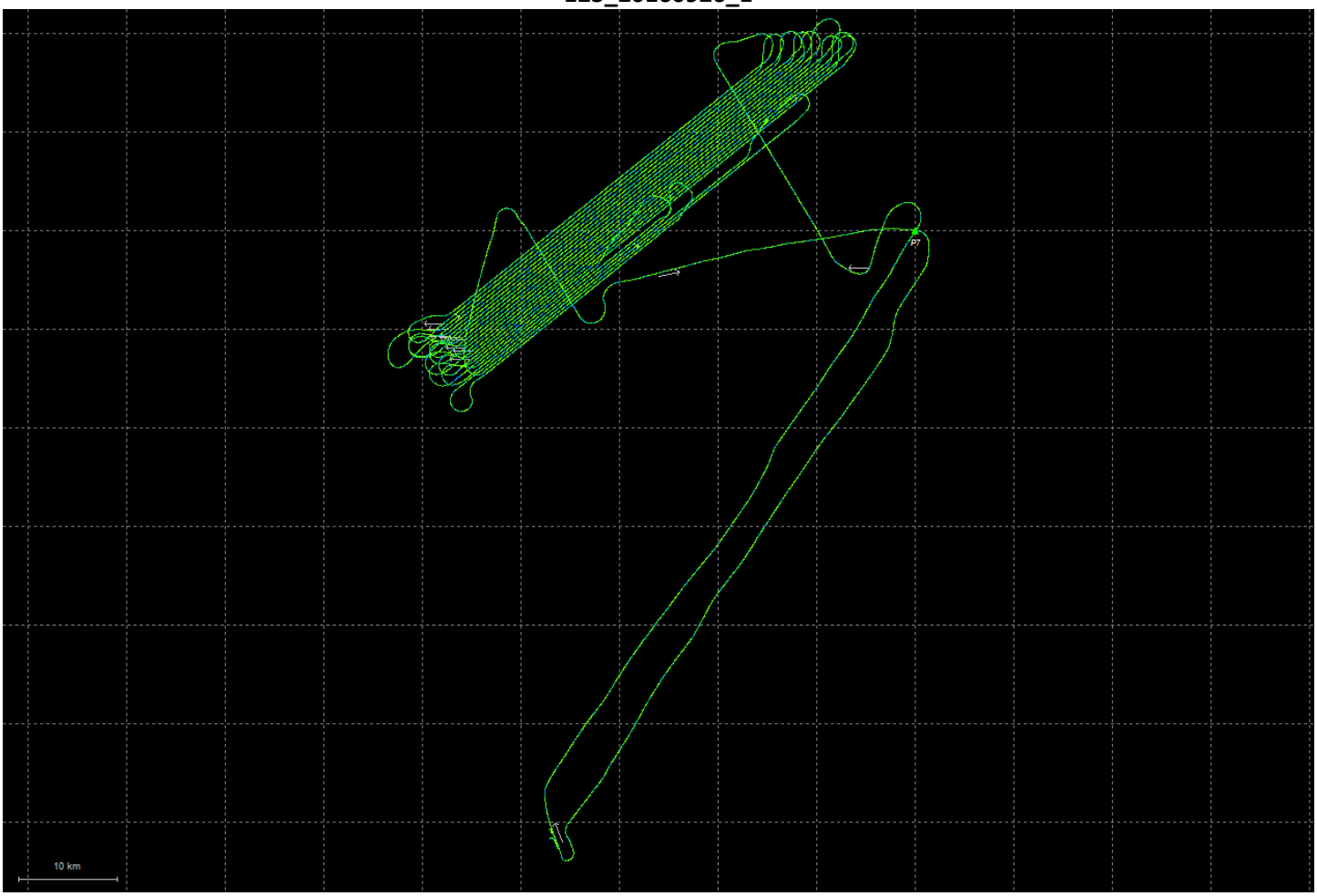

Estimated StdDev (m)
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
78000
Week 1916
GPS Time (TOW, GMT zone)
East
North
Height
Trace

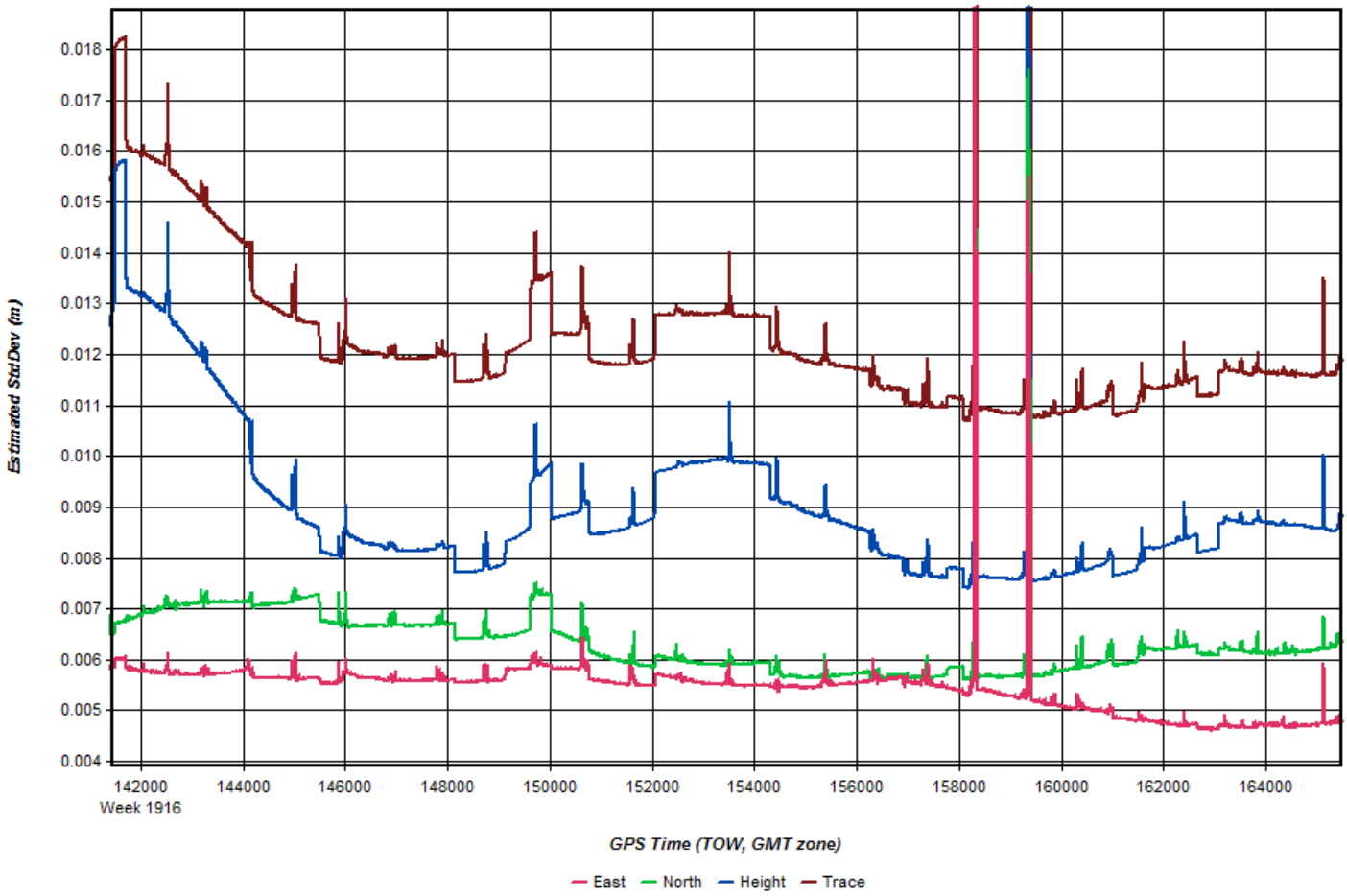

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
78000
Week 1916
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

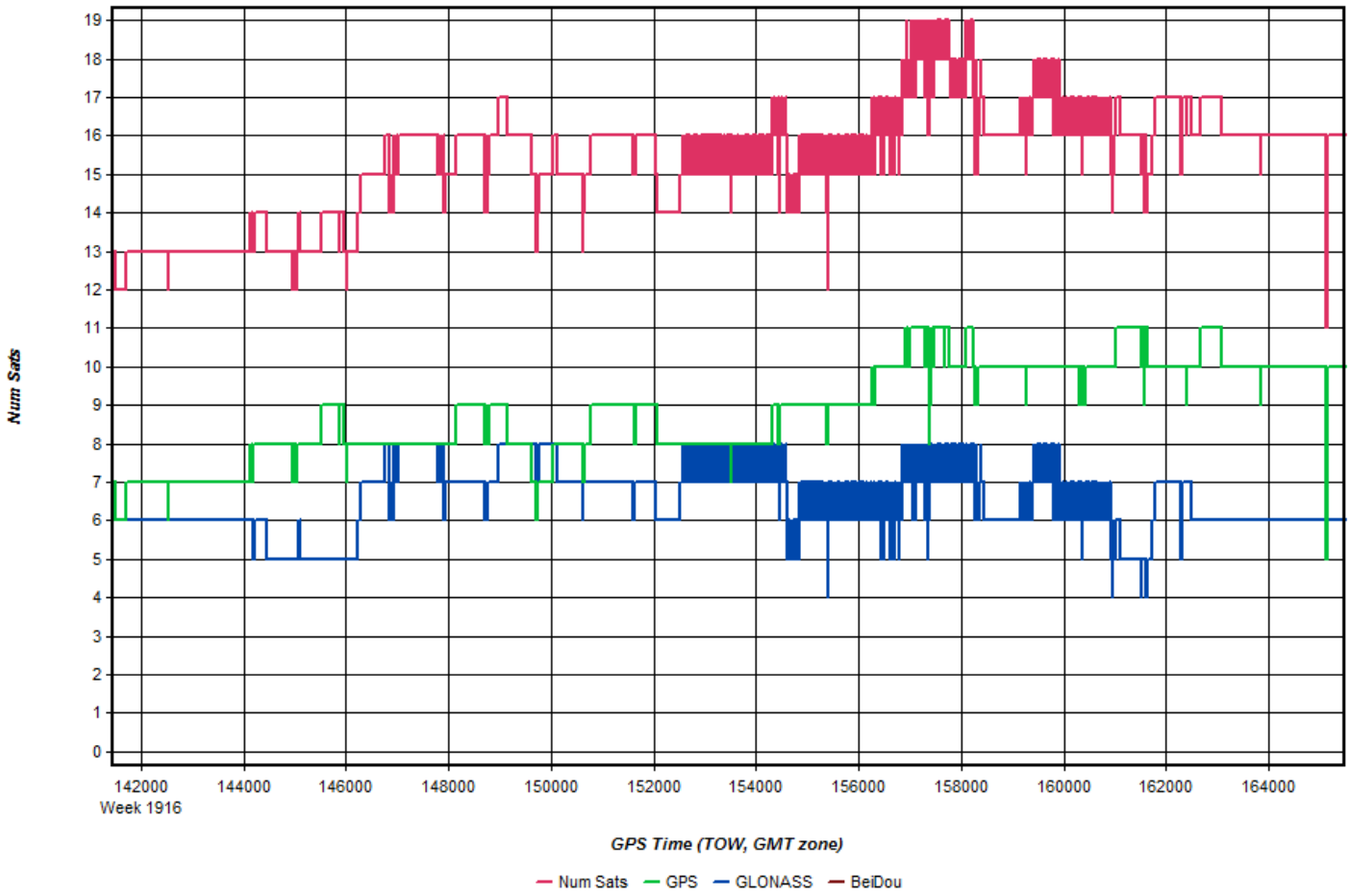

Separation (m)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
56000
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
78000
Week 1916
GPS Time (TOW, GMT zone)
East
North
Up

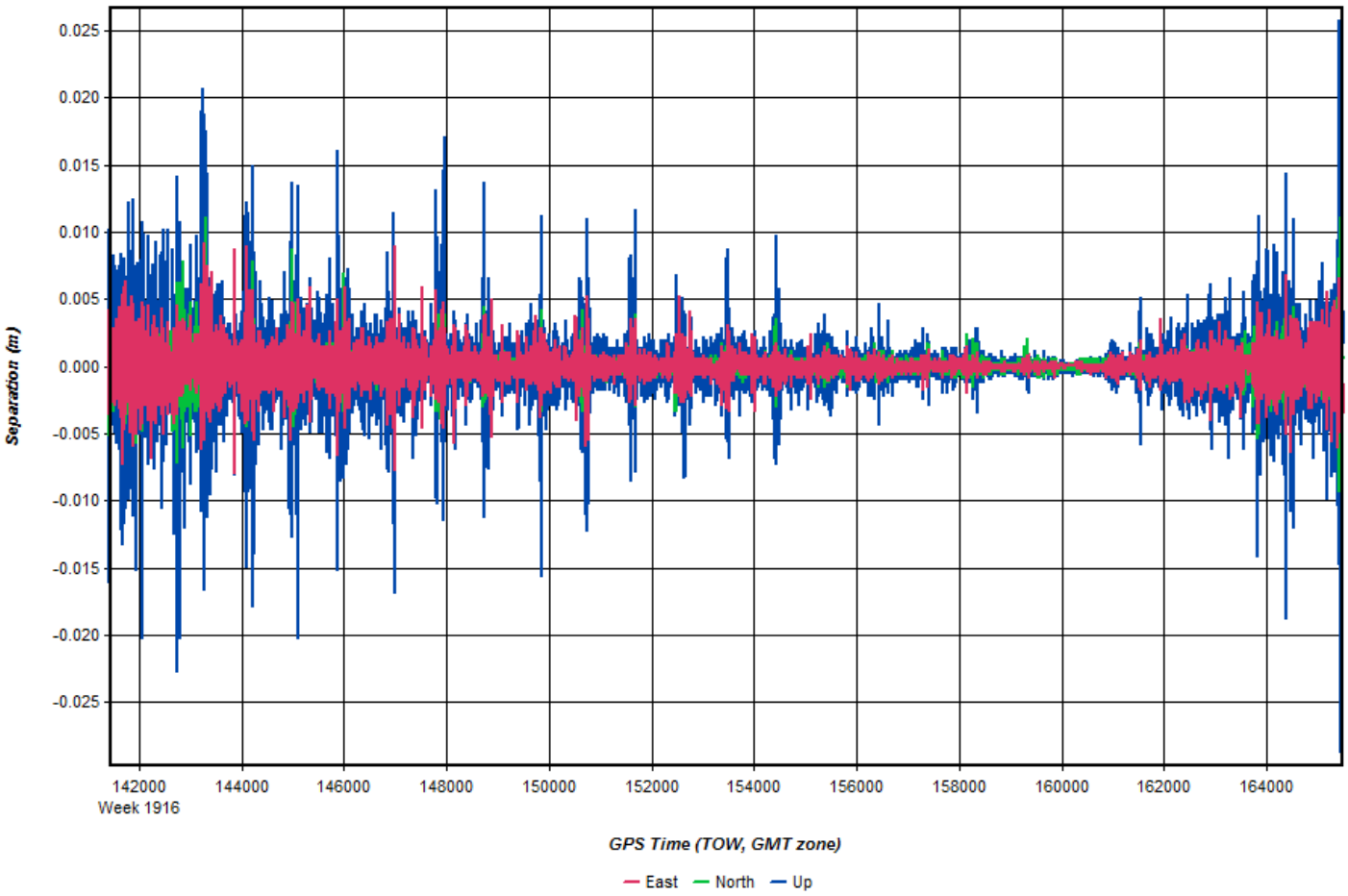

PDOP
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
56000
Week 1916
58000
60000
62000
64000
66000
68000
70000
72000
74000
76000
78000
GPS Time (TOW, GMT zone)
PDOP

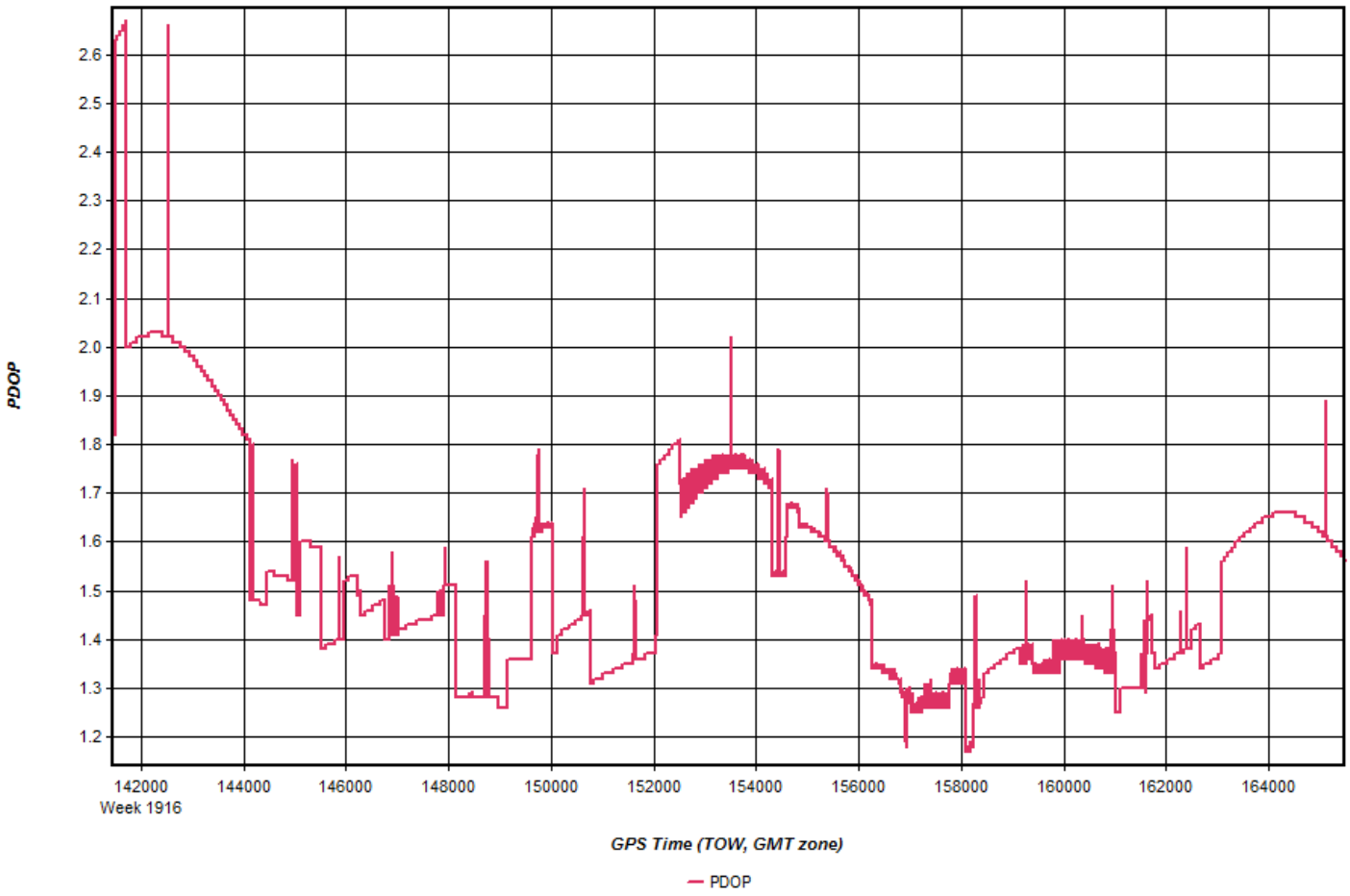
123_20160926_1



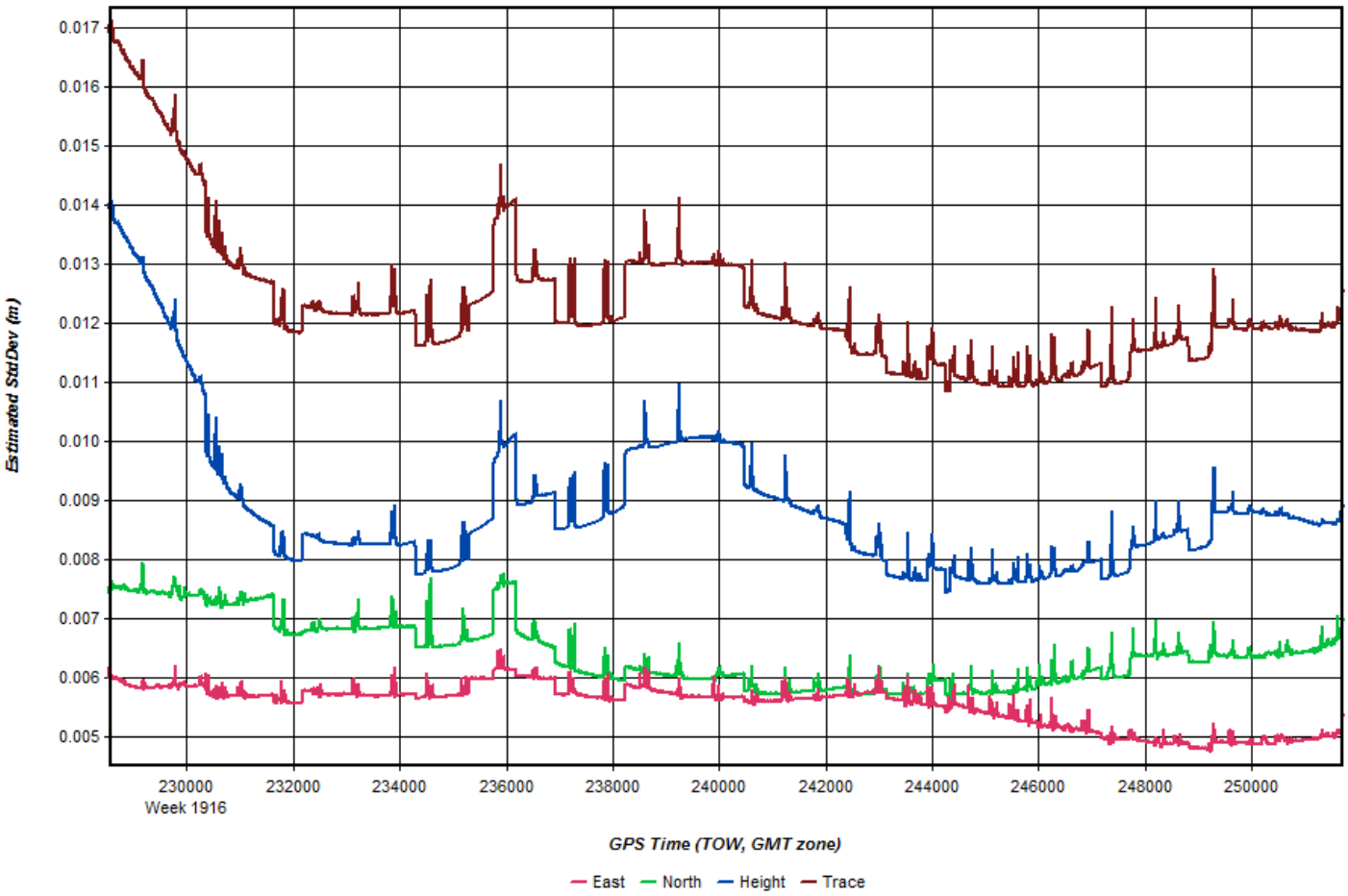

Estimated StdDev (m)
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
142000
Week 1916
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
164000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

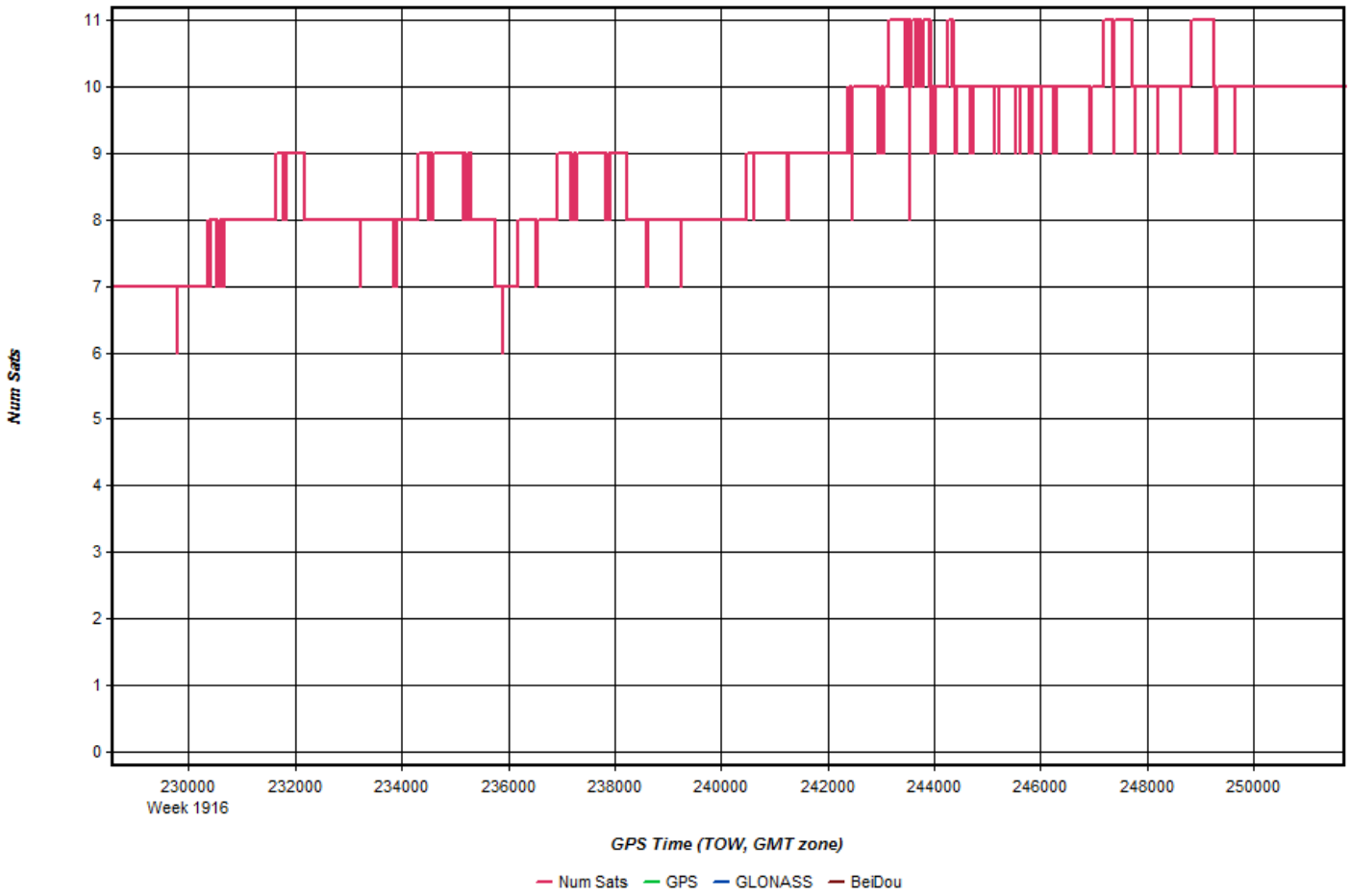

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
142000
Week 1916
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
164000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

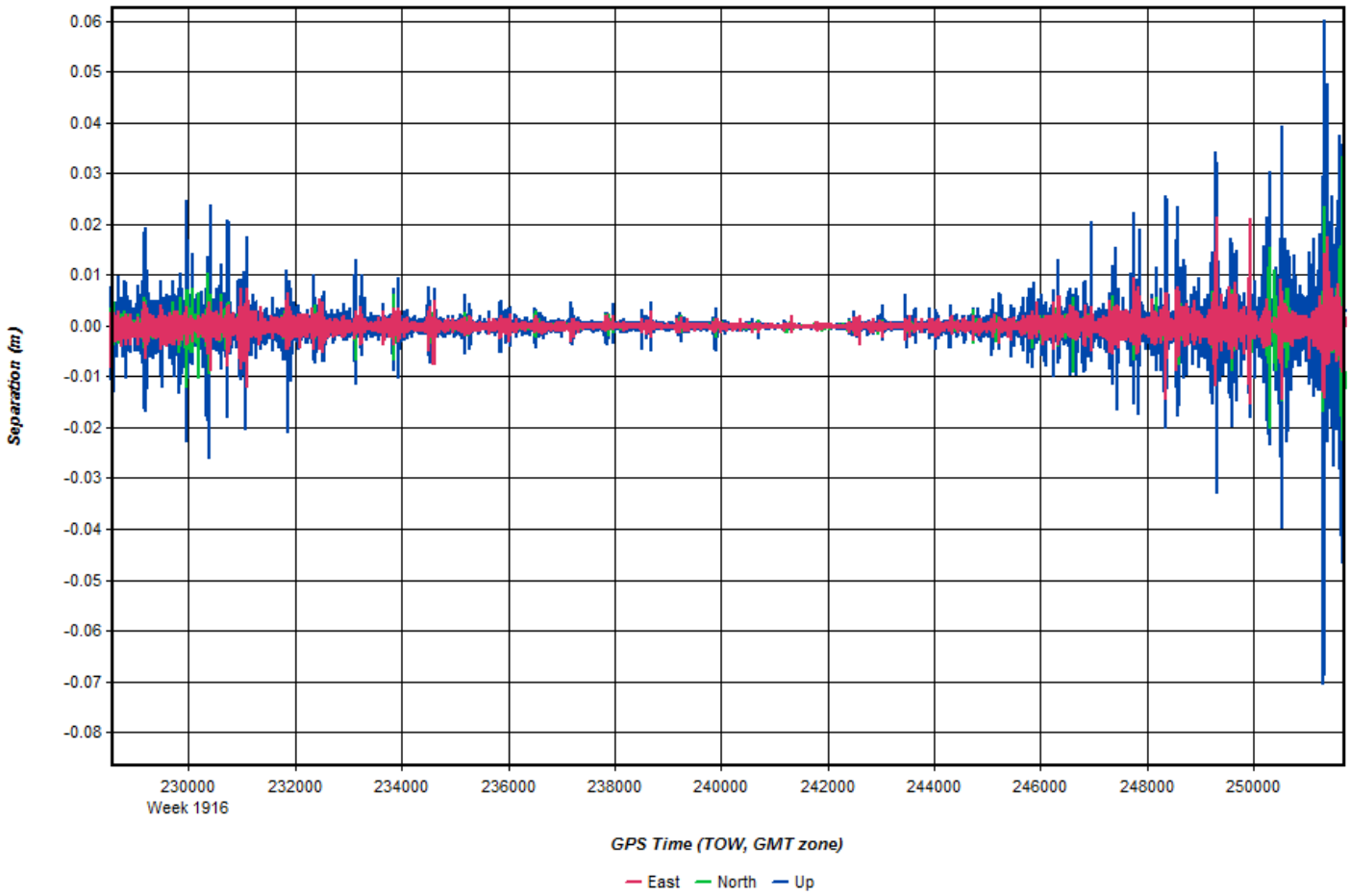

0.025
0.020
0.015
0.010
0.005
0.000
-0.005
-0.010
-0.015
-0.020
-0.025
Separation (m)
142000
Week 1916
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
164000
GPS Time (TOW, GMT zone)
East
North
Up

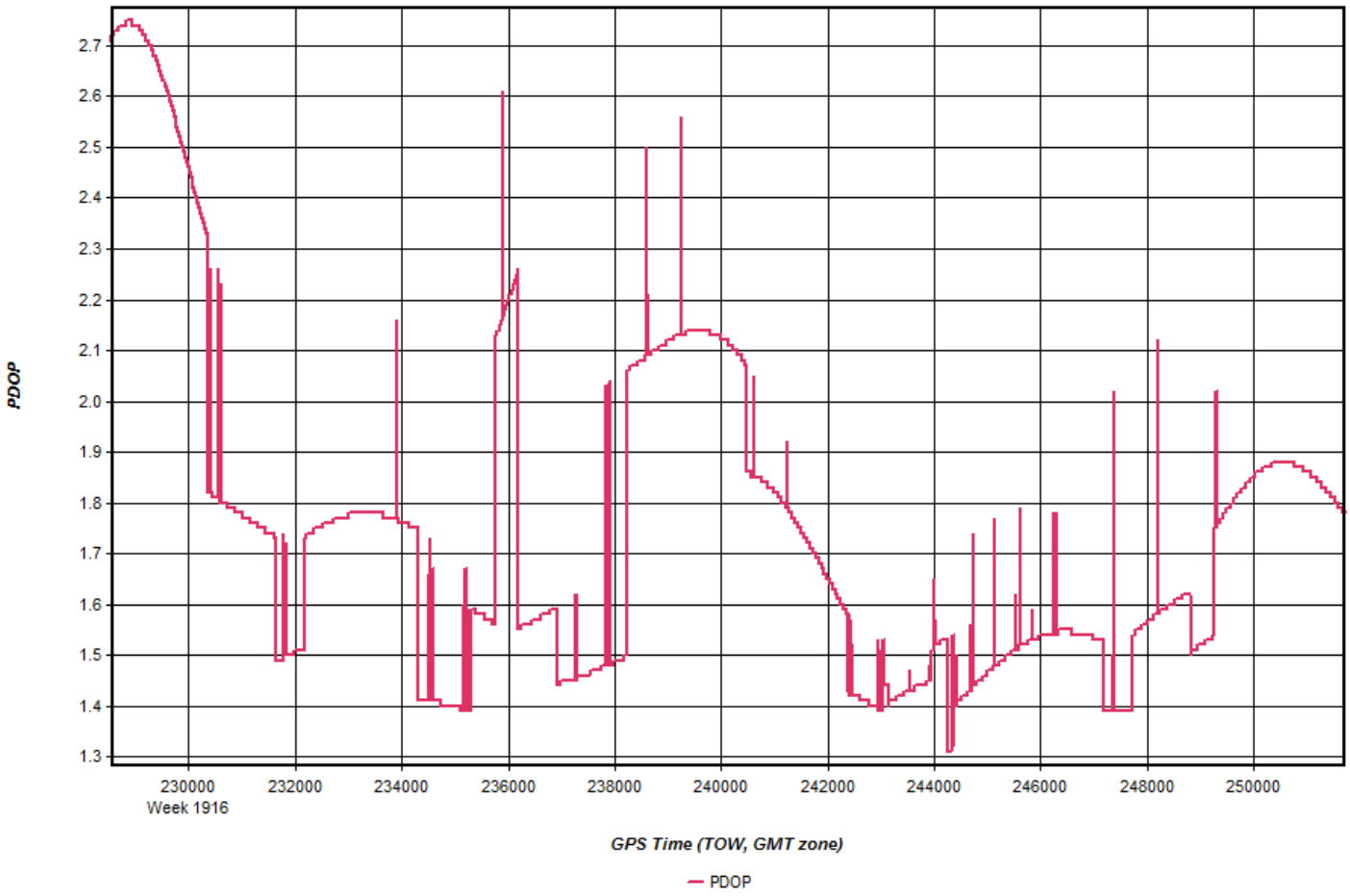

PDOP
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
142000
Week 1916
144000
146000
148000
150000
152000
154000
156000
158000
160000
162000
164000
GPS Time (TOW, GMT zone)
PDOP

123_20160927_1

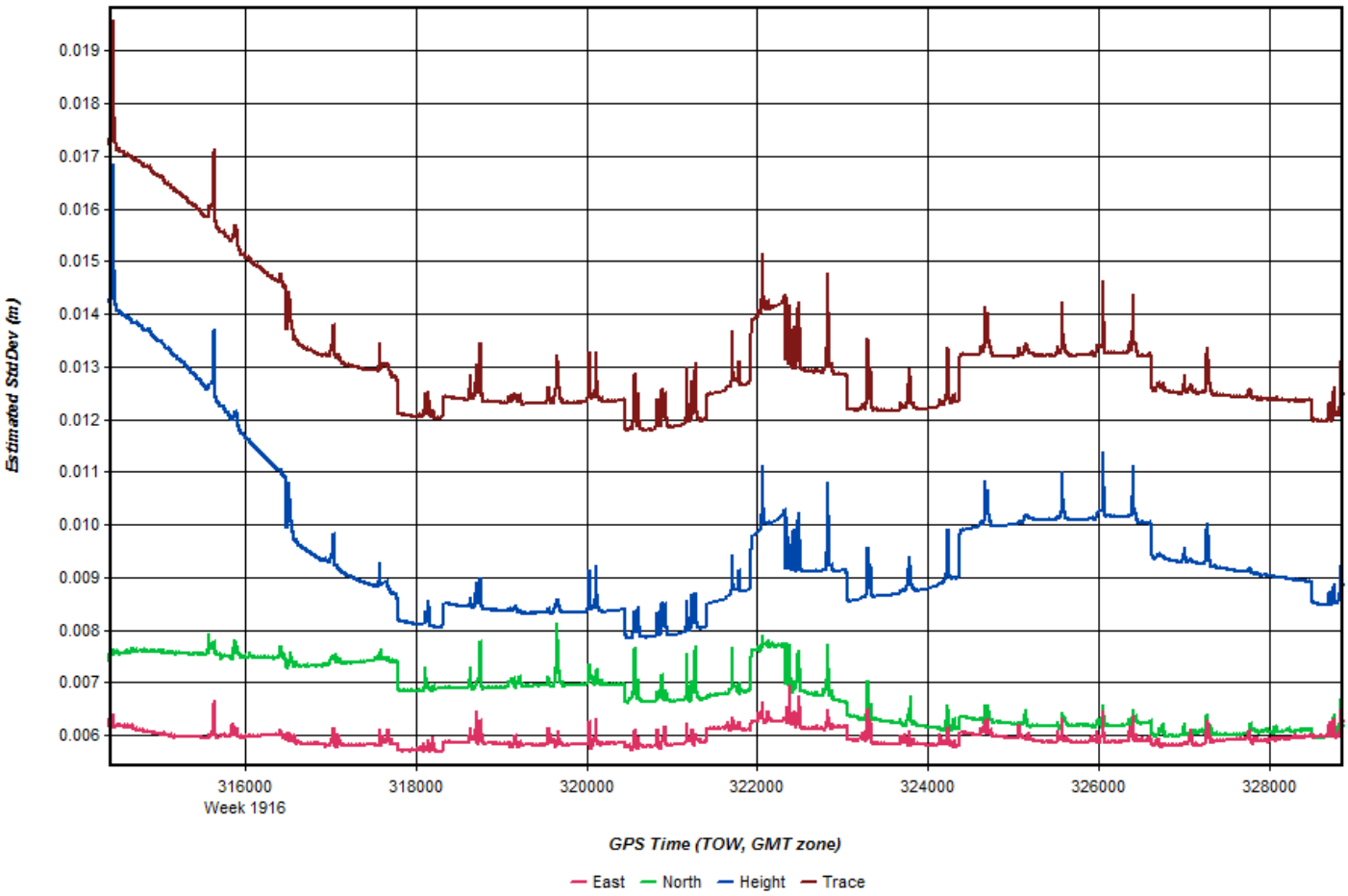

Estimated StdDev (m)
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
230000
Week 1916
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

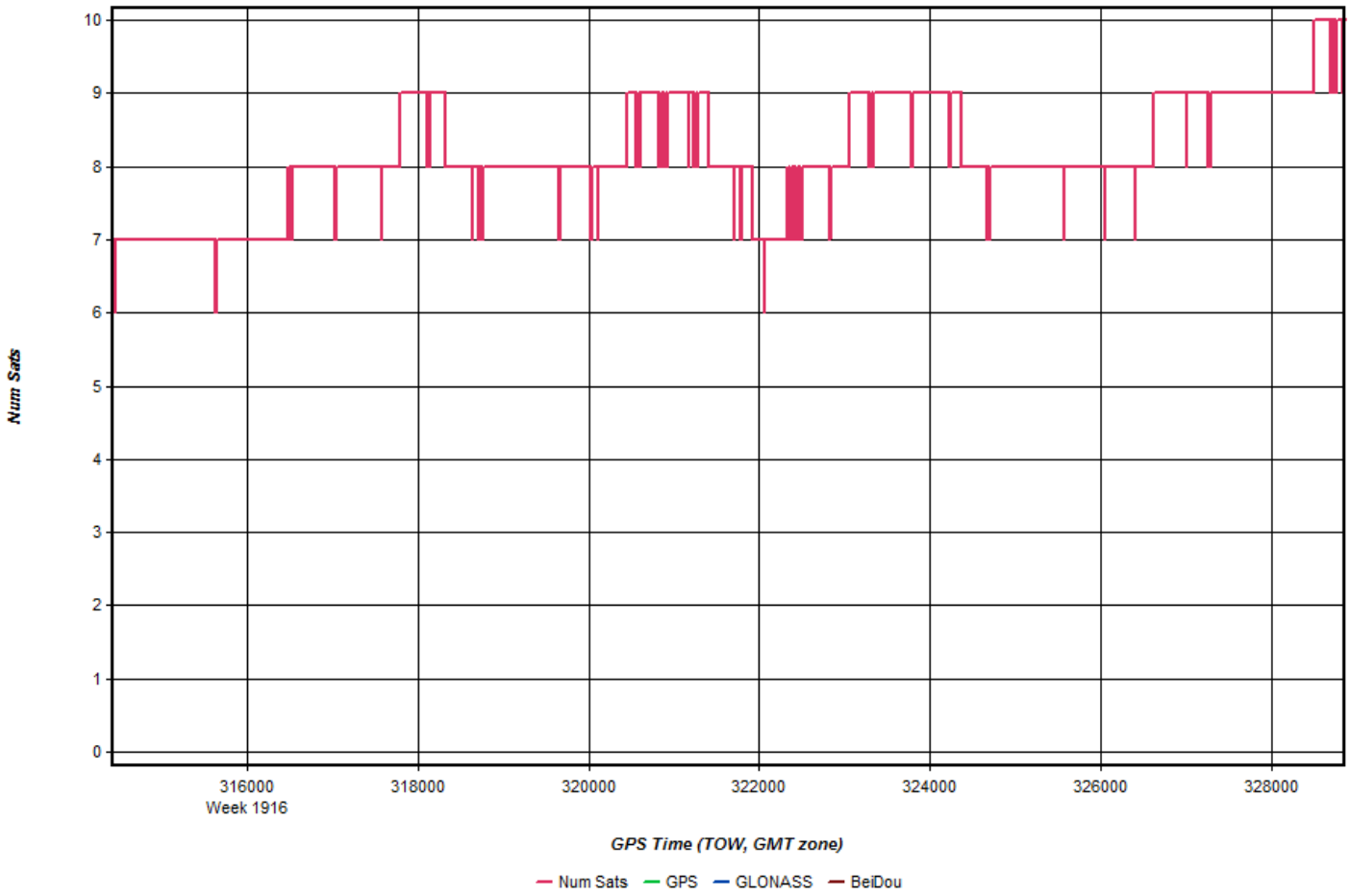

Num Sats
11
10
9
8
7
6
5
4
3
2
1
0
230000
Week 1916
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

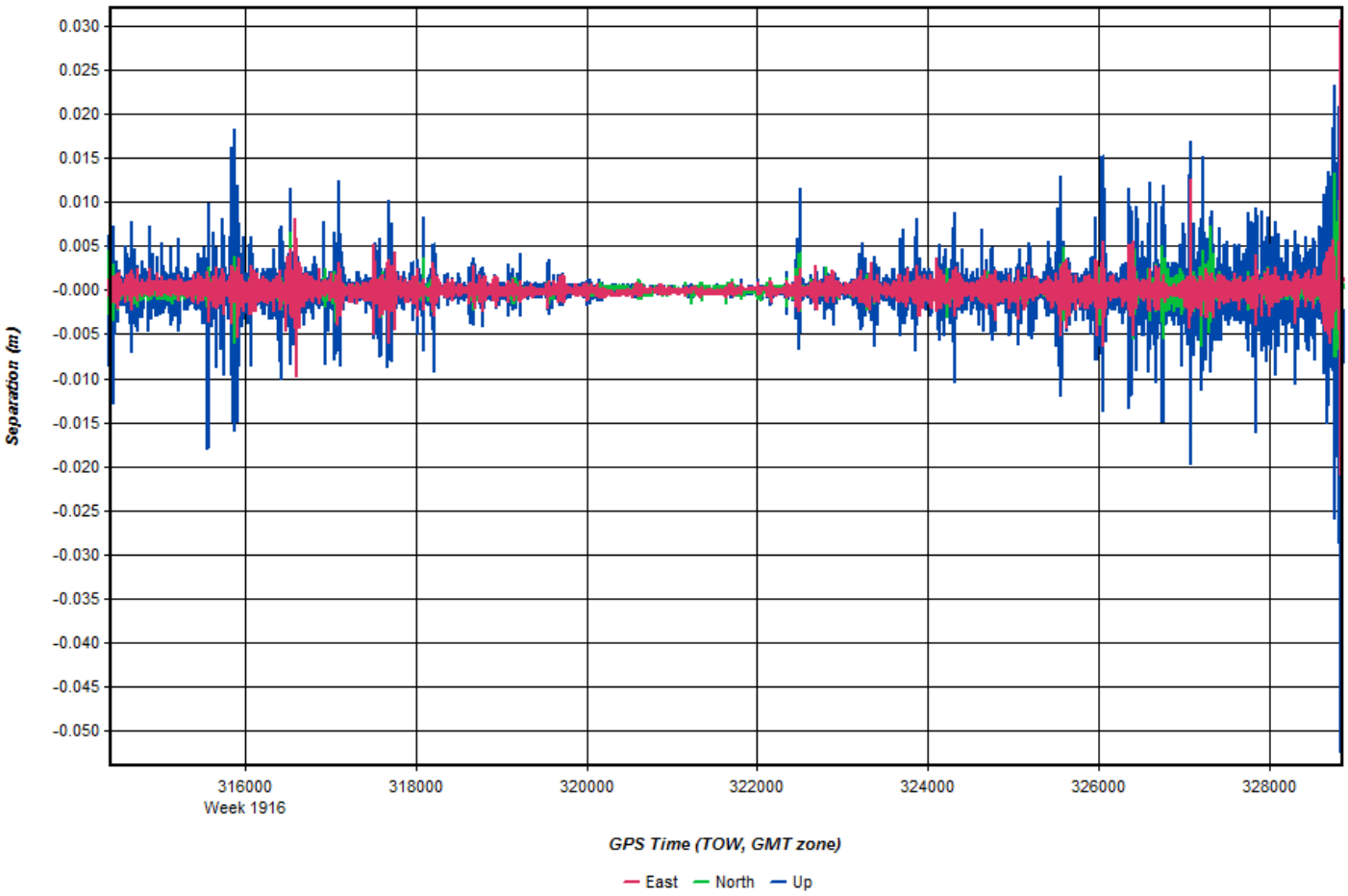

0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
-0.07
-0.08
Separation (m)
230000
Week 1916
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
East
North
Up

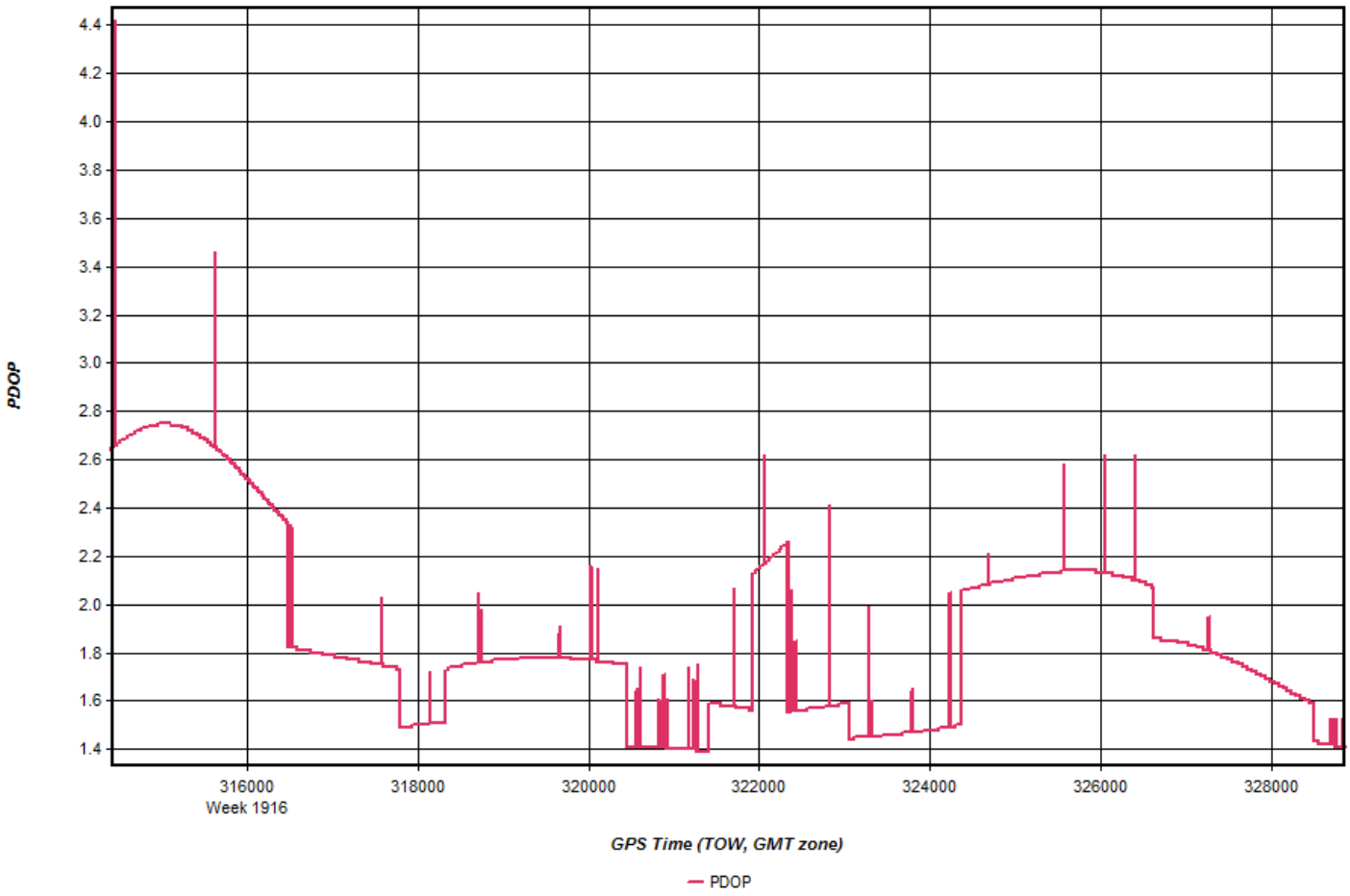

PDOP
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
230000
Week 1916
232000
234000
236000
238000
240000
242000
244000
246000
248000
250000
GPS Time (TOW, GMT zone)
PDOP

123_20160928_1

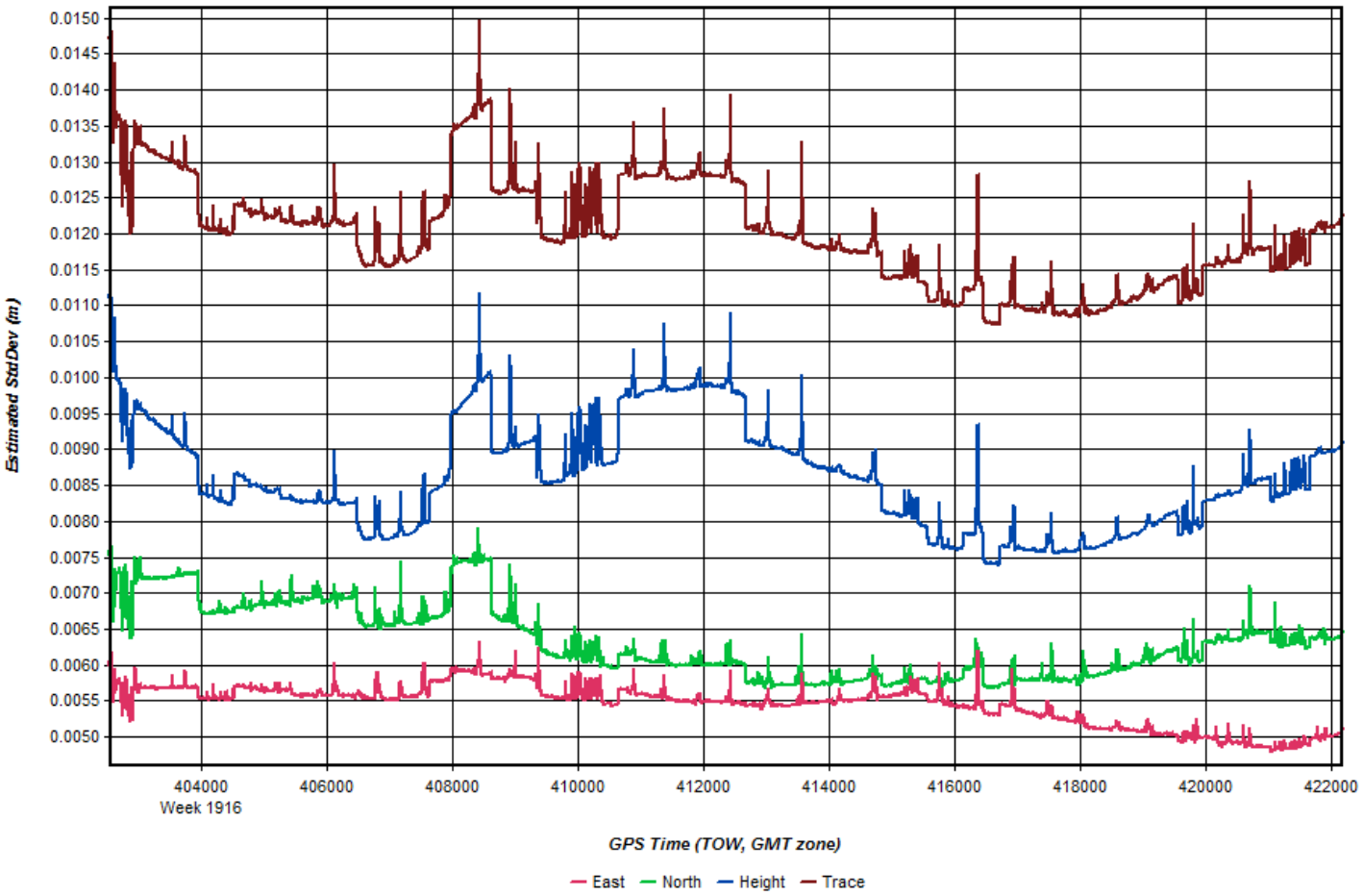

Estimated StdDev (m)
0.019
0.018
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
316000
Week 1916
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

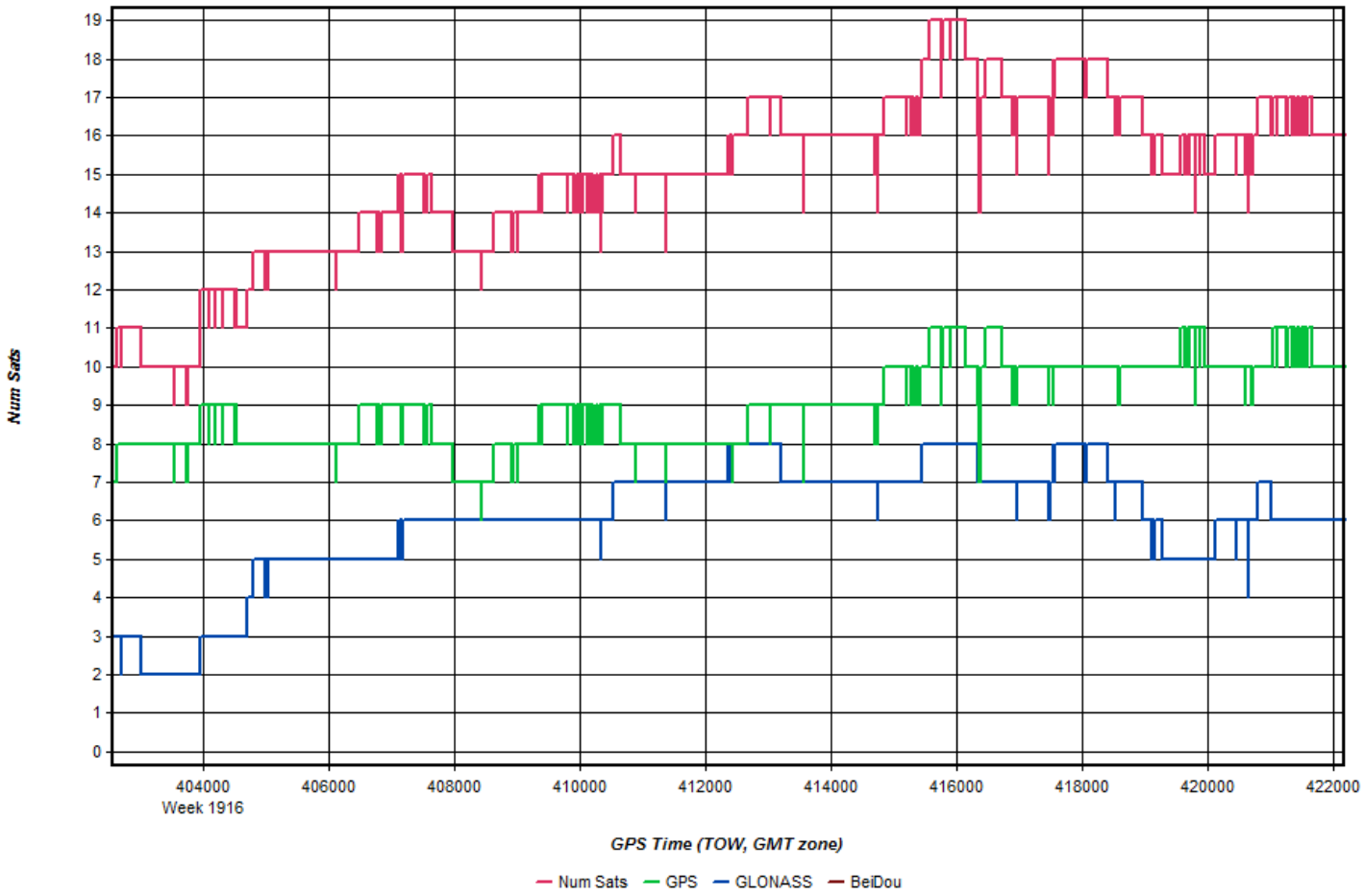

Num Sats
10
9
8
7
6
5
4
3
2
1
0
316000
Week 1916
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

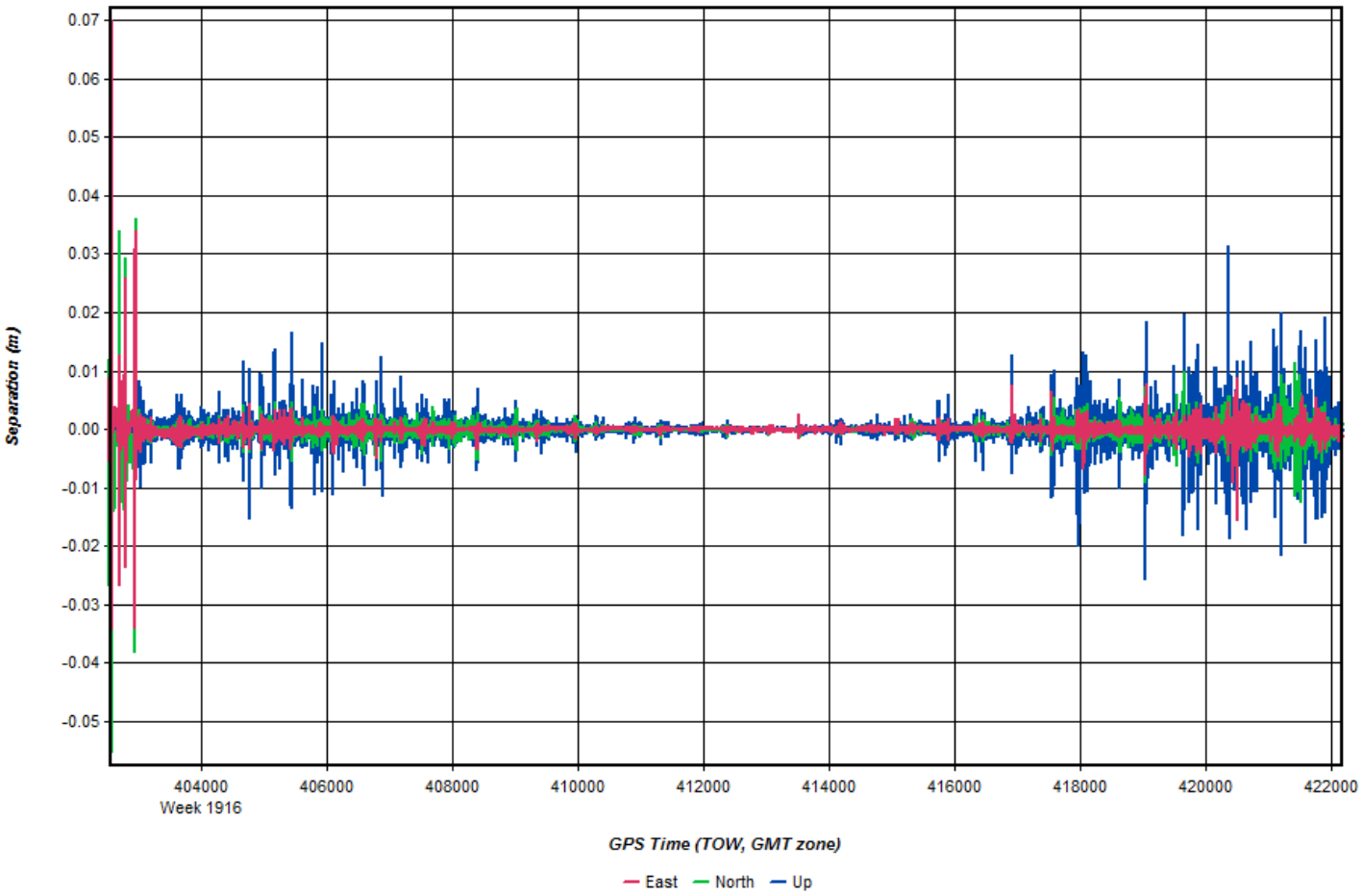

0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
Separation (m)
316000
Week 1916
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Up

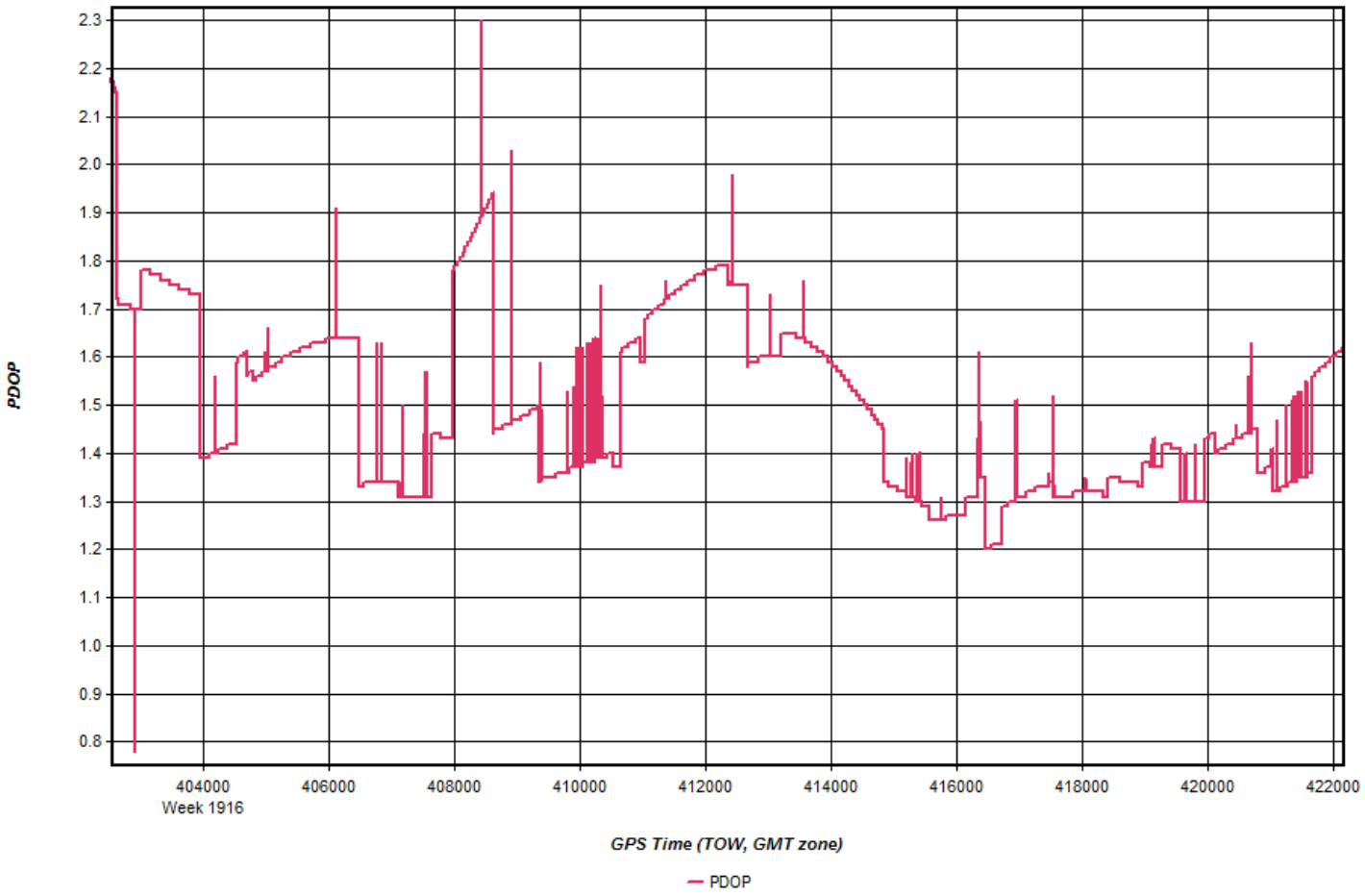

PDOP
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
316000
Week 1916
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
PDOP

123_20160929_1

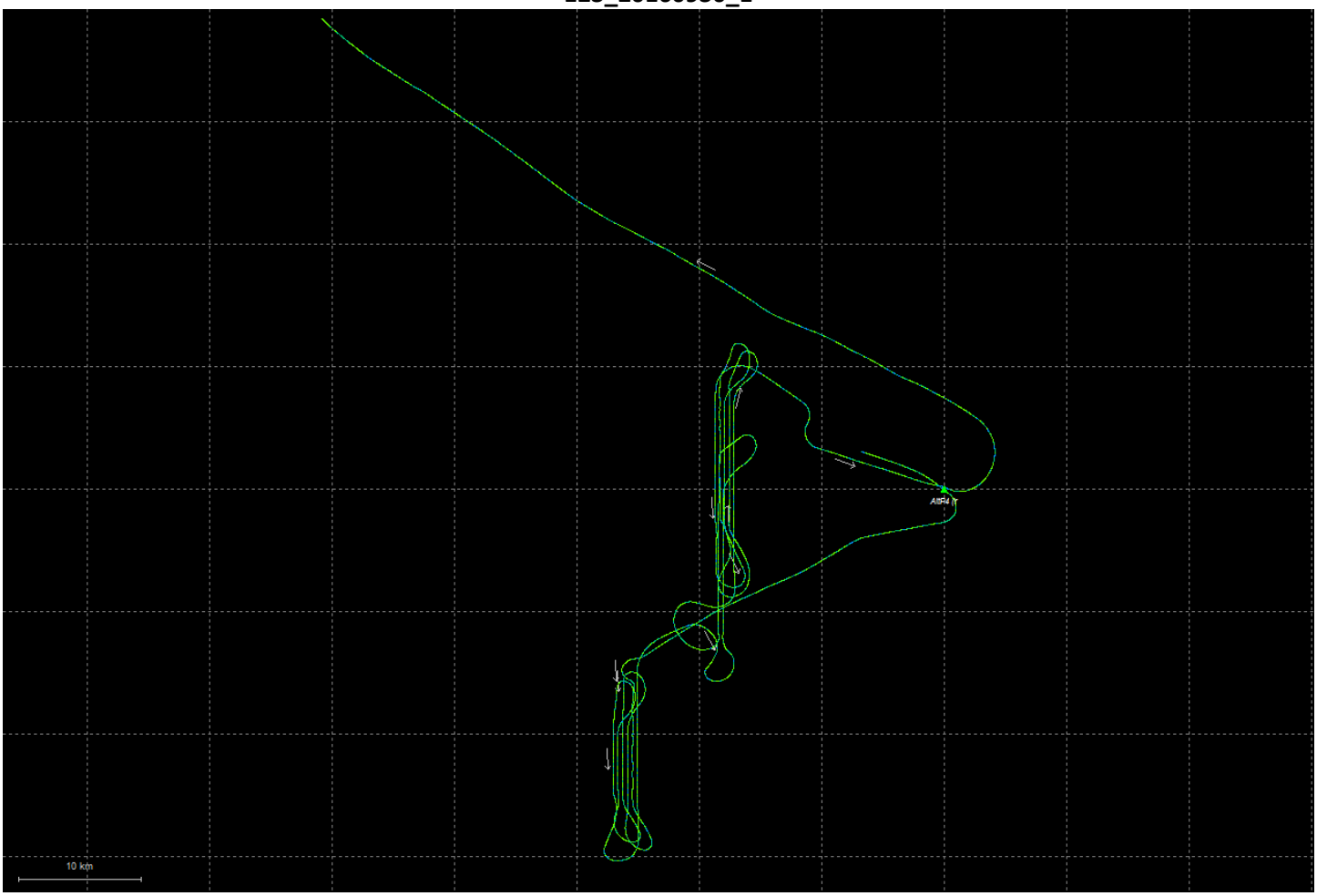

Estimated StdDev (m)
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
404000
Week 1916
406000
408000
410000
412000
414000
416000
418000
420000
422000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

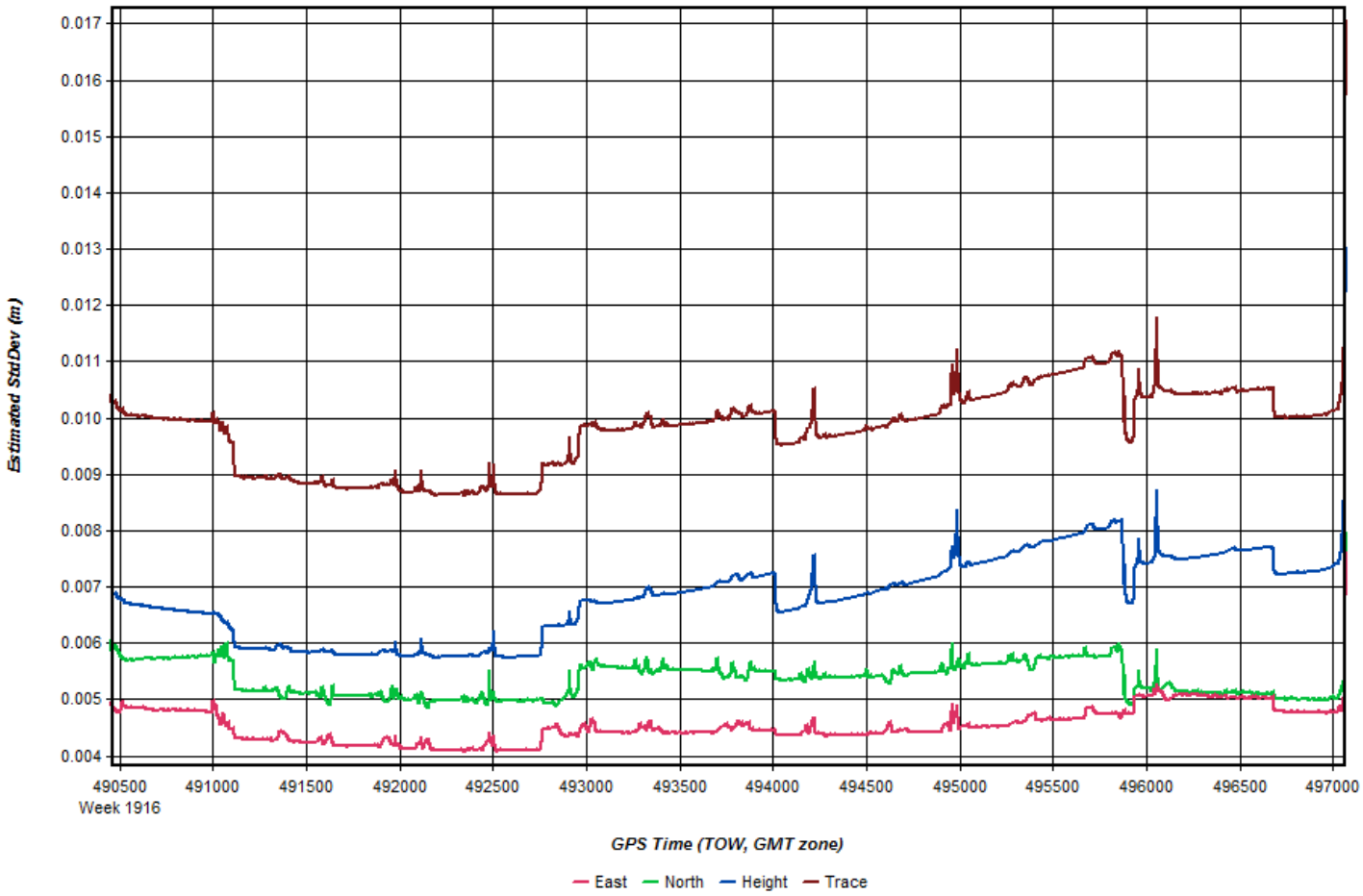

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
404000
Week 1916
406000
408000
410000
412000
414000
416000
418000
420000
422000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

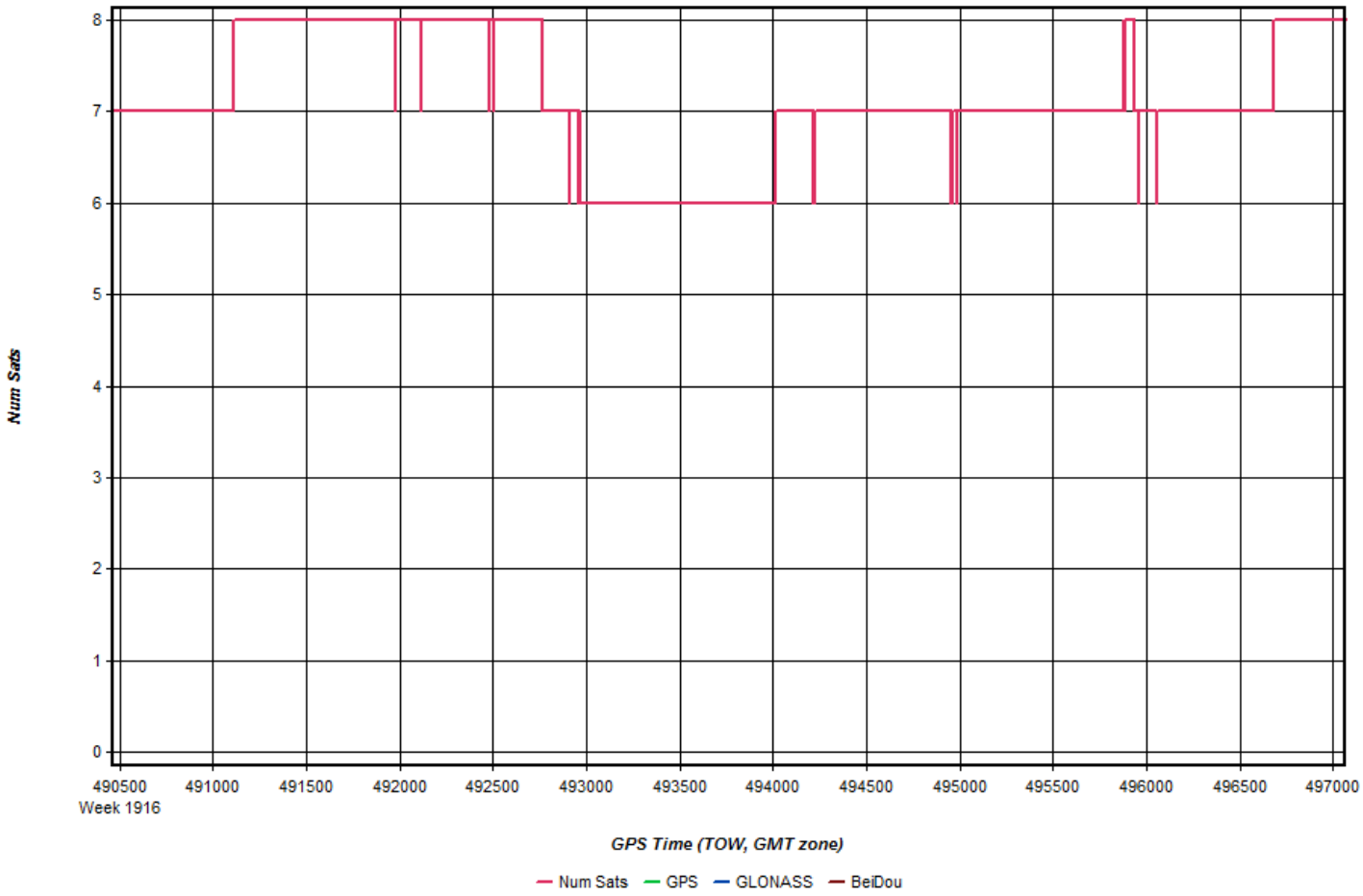

0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
Separation (m)
404000
Week 1916
406000
408000
410000
412000
414000
416000
418000
420000
422000
GPS Time (TOW, GMT zone)
East
North
Up

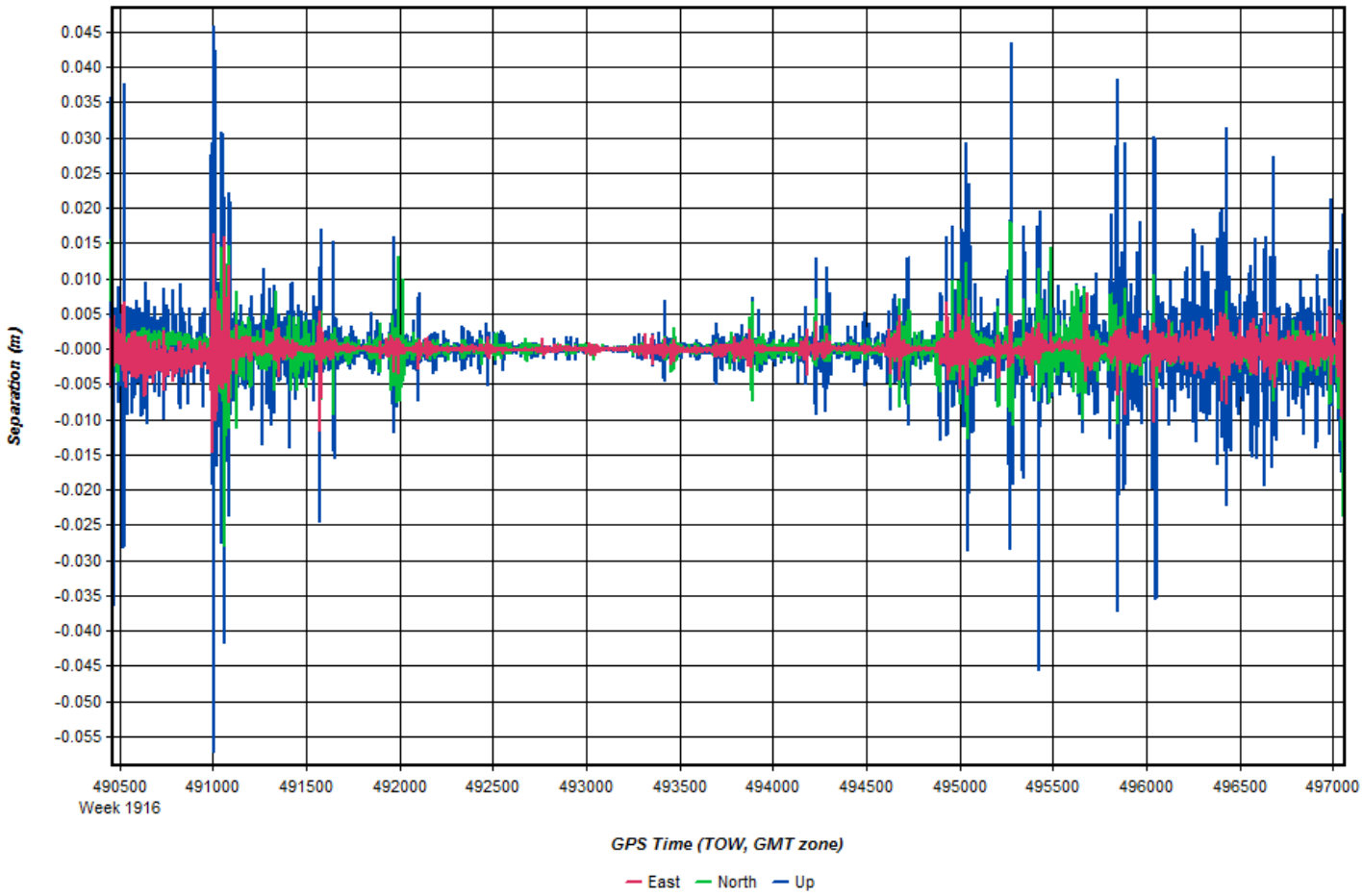

PDOP
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
404000
Week 1916
406000
408000
410000
412000
414000
416000
418000
420000
422000
GPS Time (TOW, GMT zone)
PDOP

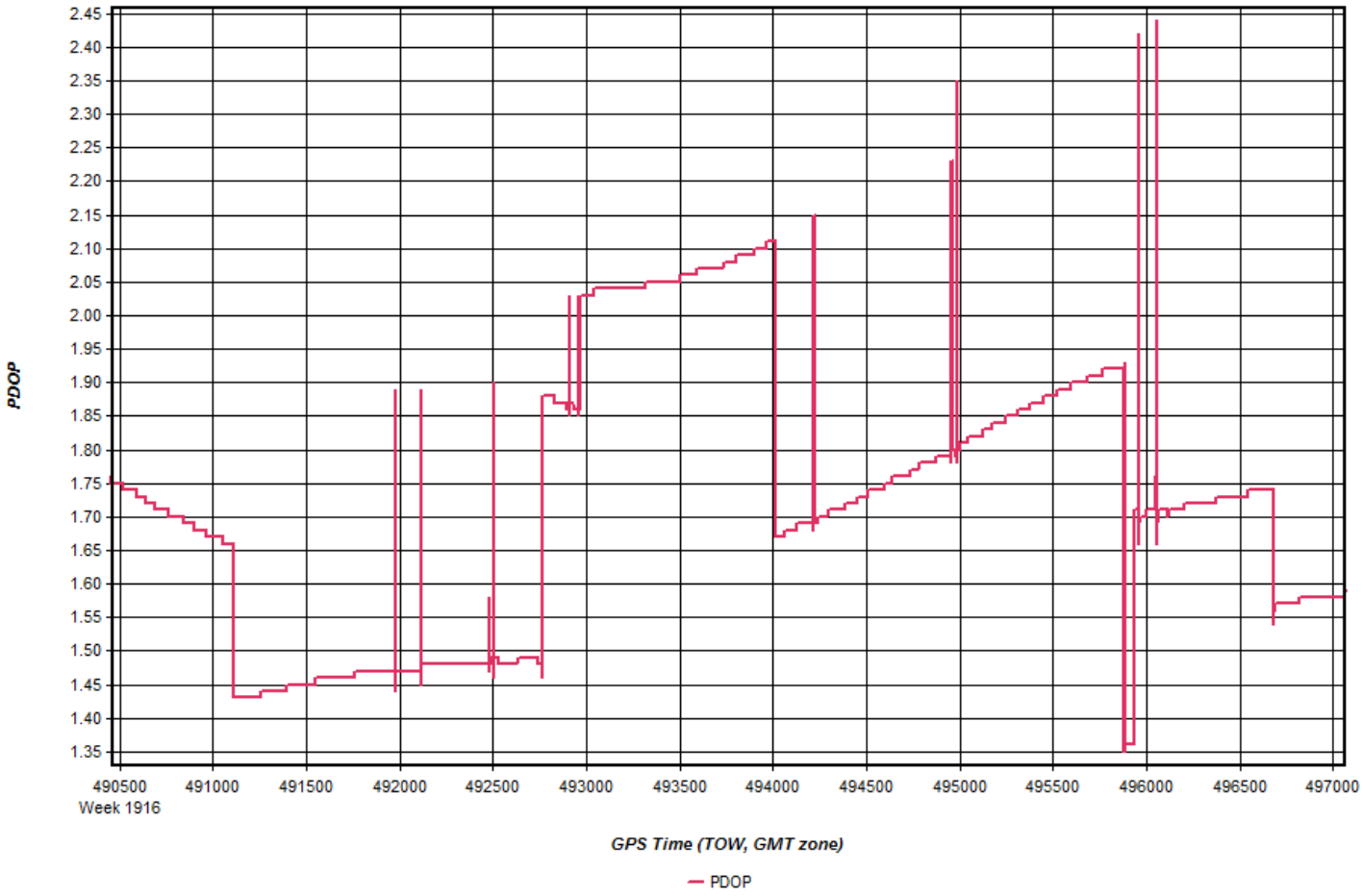
123_20160930_1



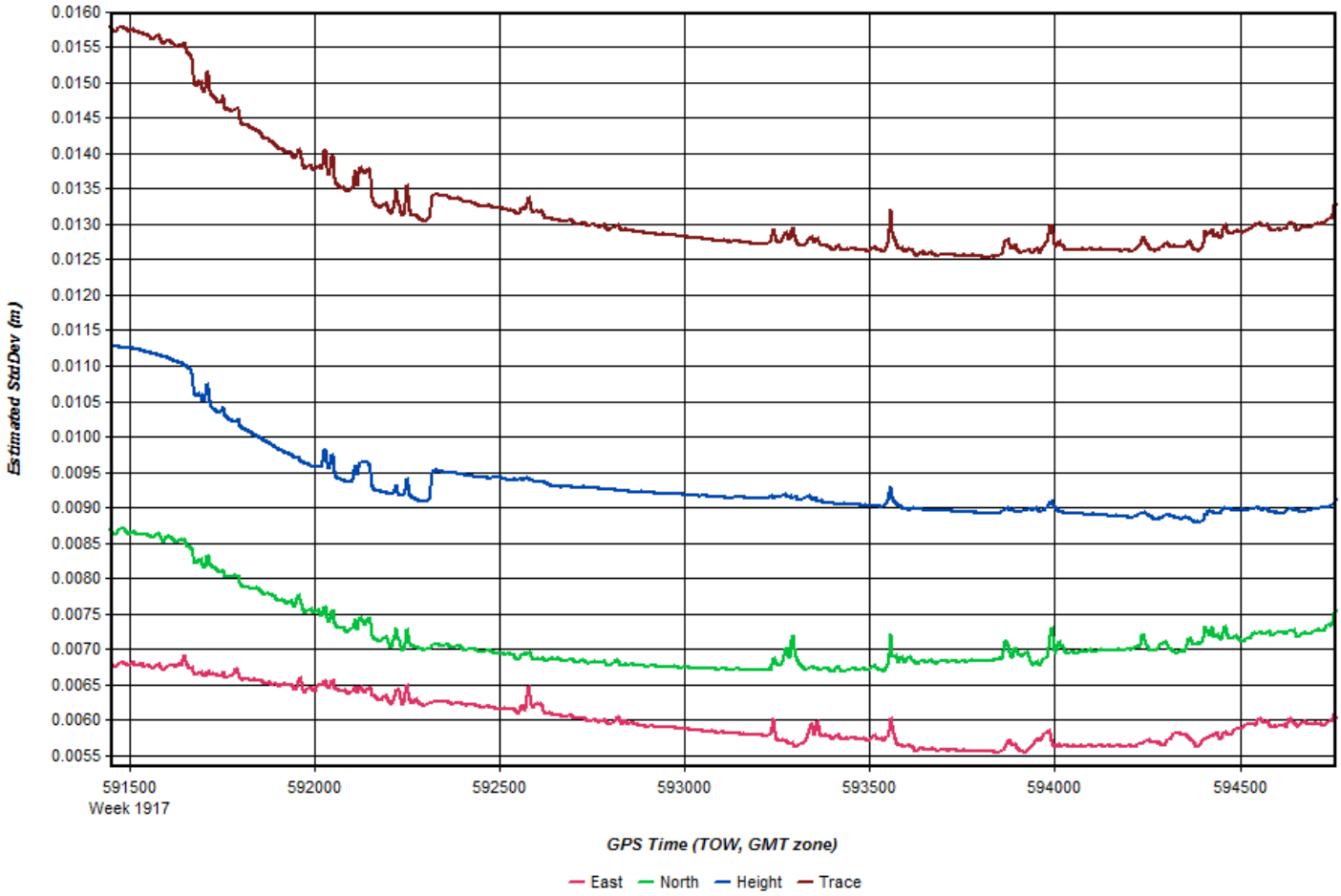

Estimated StdDev (m)
0.017
0.016
0.015
0.014
0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
490500
Week 1916
491000
491500
492000
492500
493000
493500
494000
494500
495000
495500
496000
496500
497000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

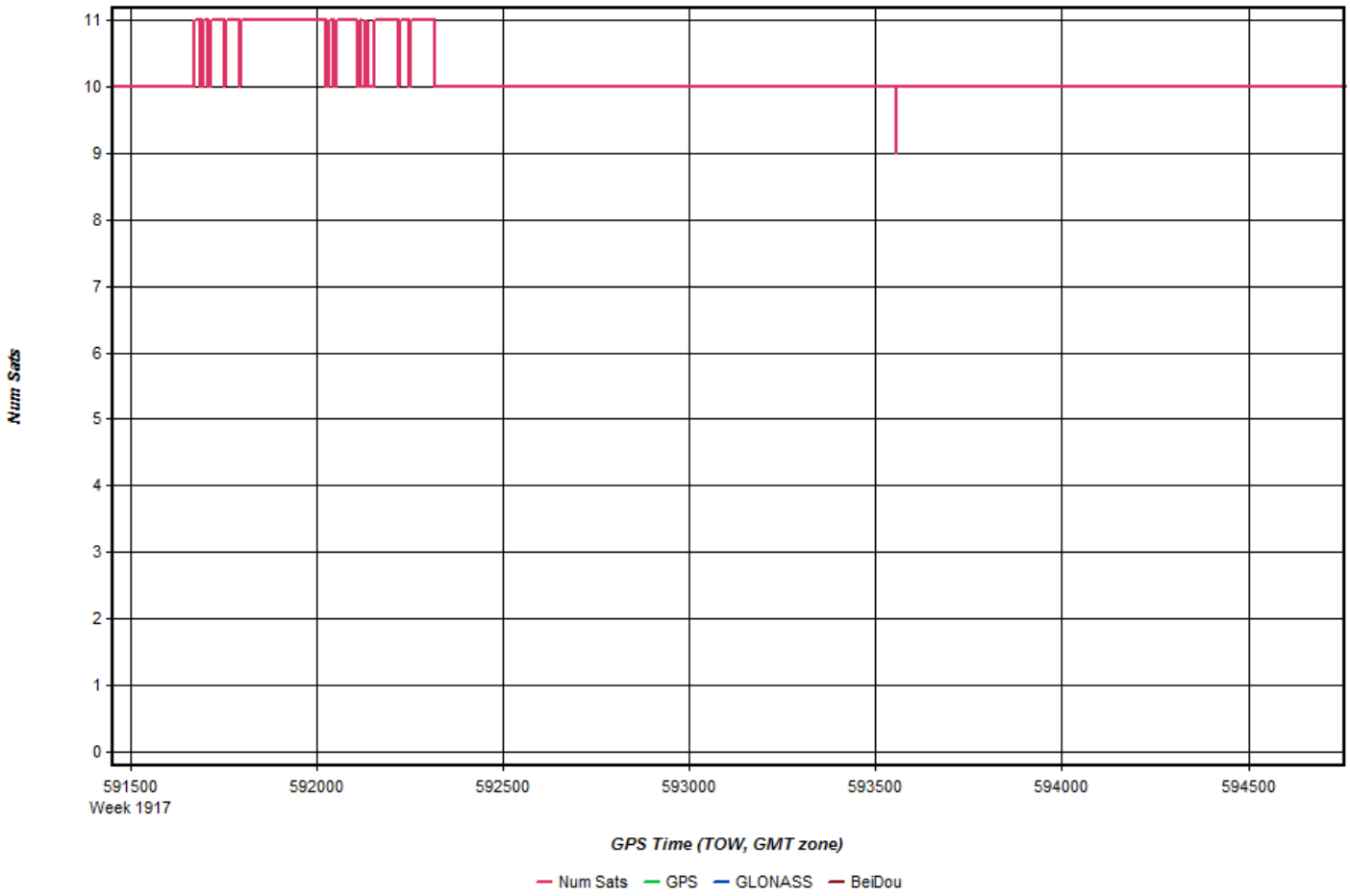

Num Sats
8
7
6
5
4
3
2
1
0
490500
Week 1916
491000
491500
492000
492500
493000
493500
494000
494500
495000
495500
496000
496500
497000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

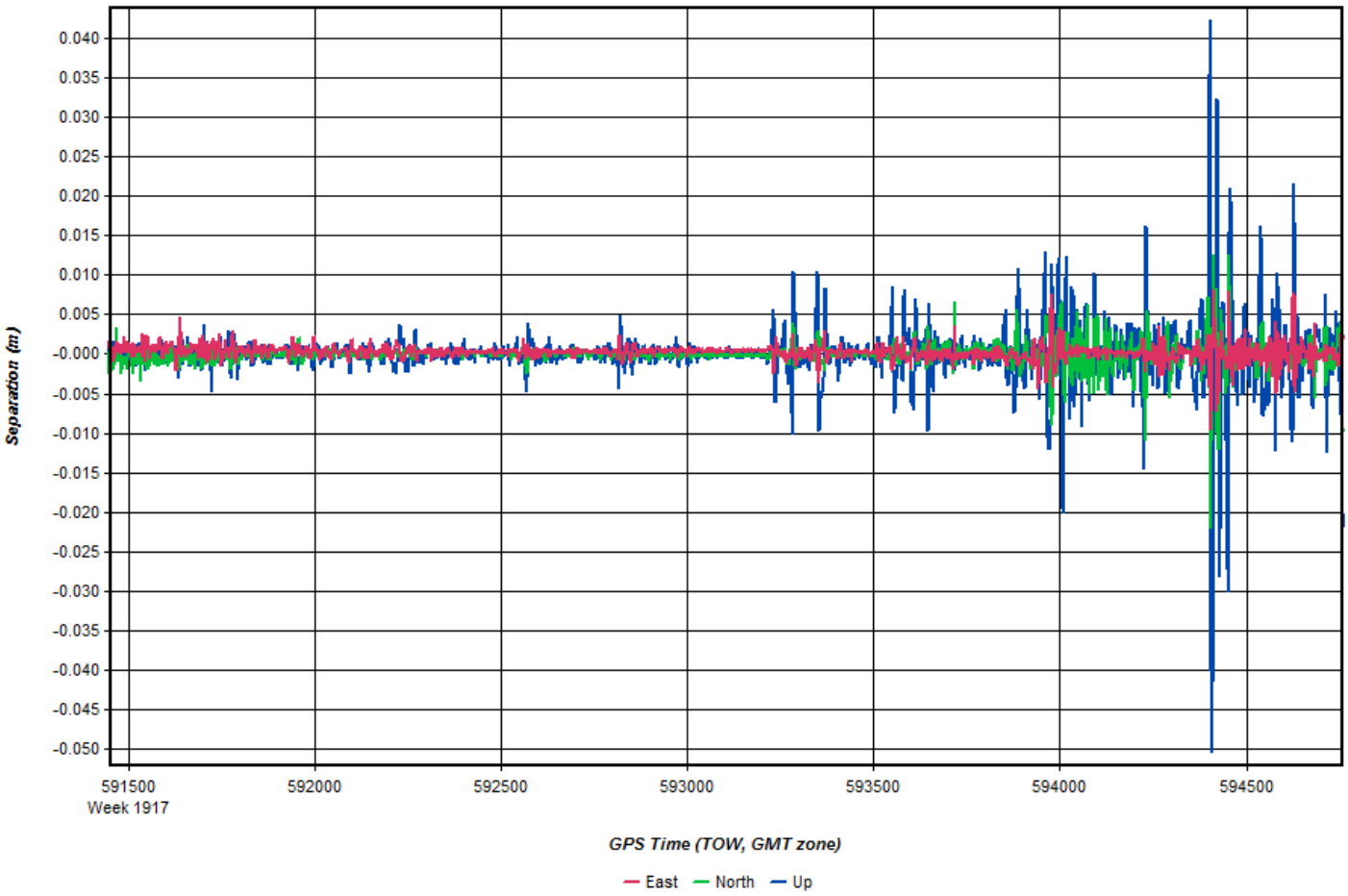

0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
Separation (m)
490500
Week 1916
491000
491500
492000
492500
493000
493500
494000
494500
495000
495500
496000
496500
497000
GPS Time (TOW, GMT zone)
East
North
Up

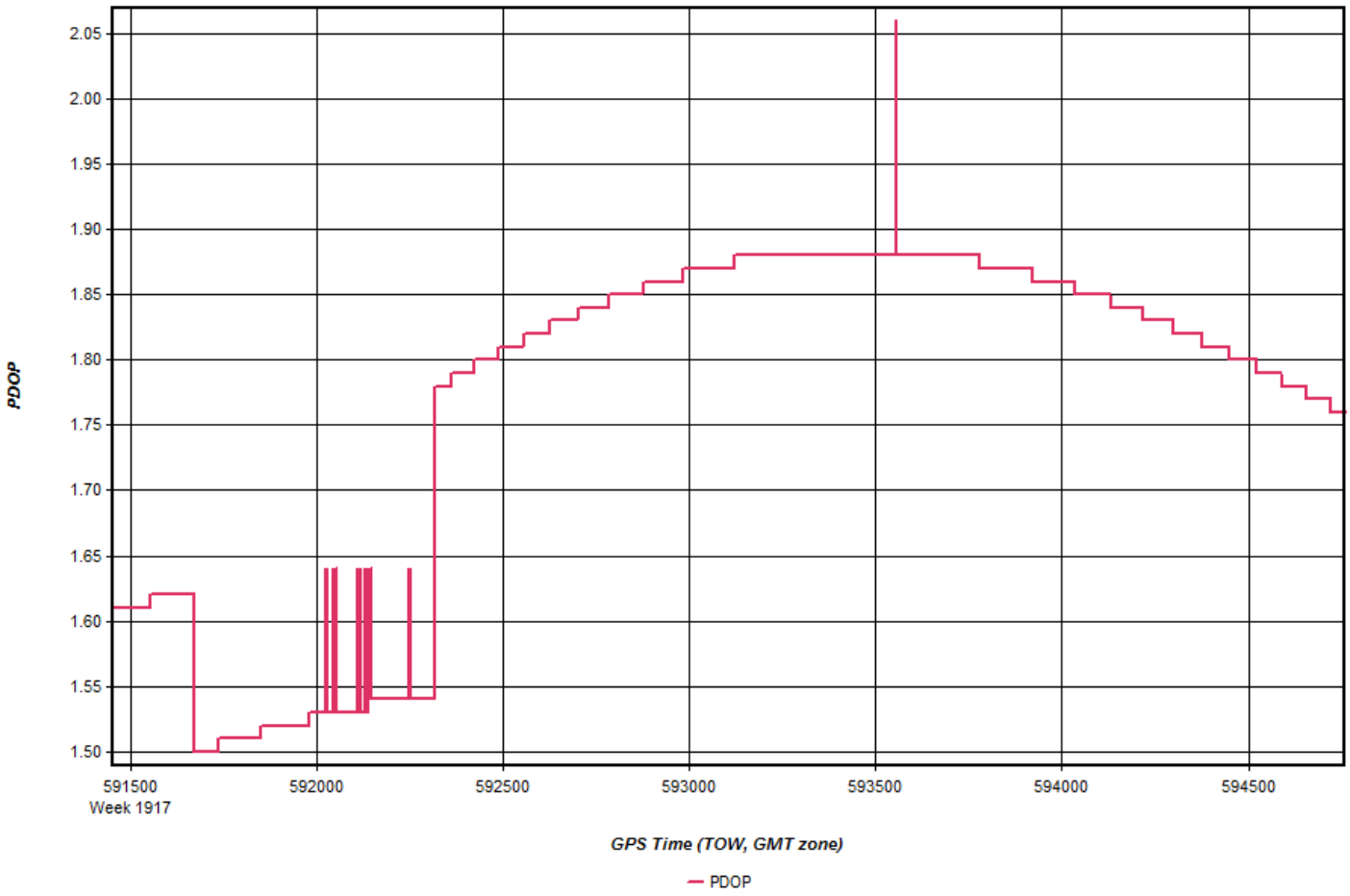

PDOP
2.45
2.40
2.35
2.30
2.25
2.20
2.15
2.10
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
490500
Week 1916
491000
491500
492000
492500
493000
493500
494000
494500
495000
495500
496000
496500
497000
GPS Time (TOW, GMT zone)
PDOP

123_20161008_1

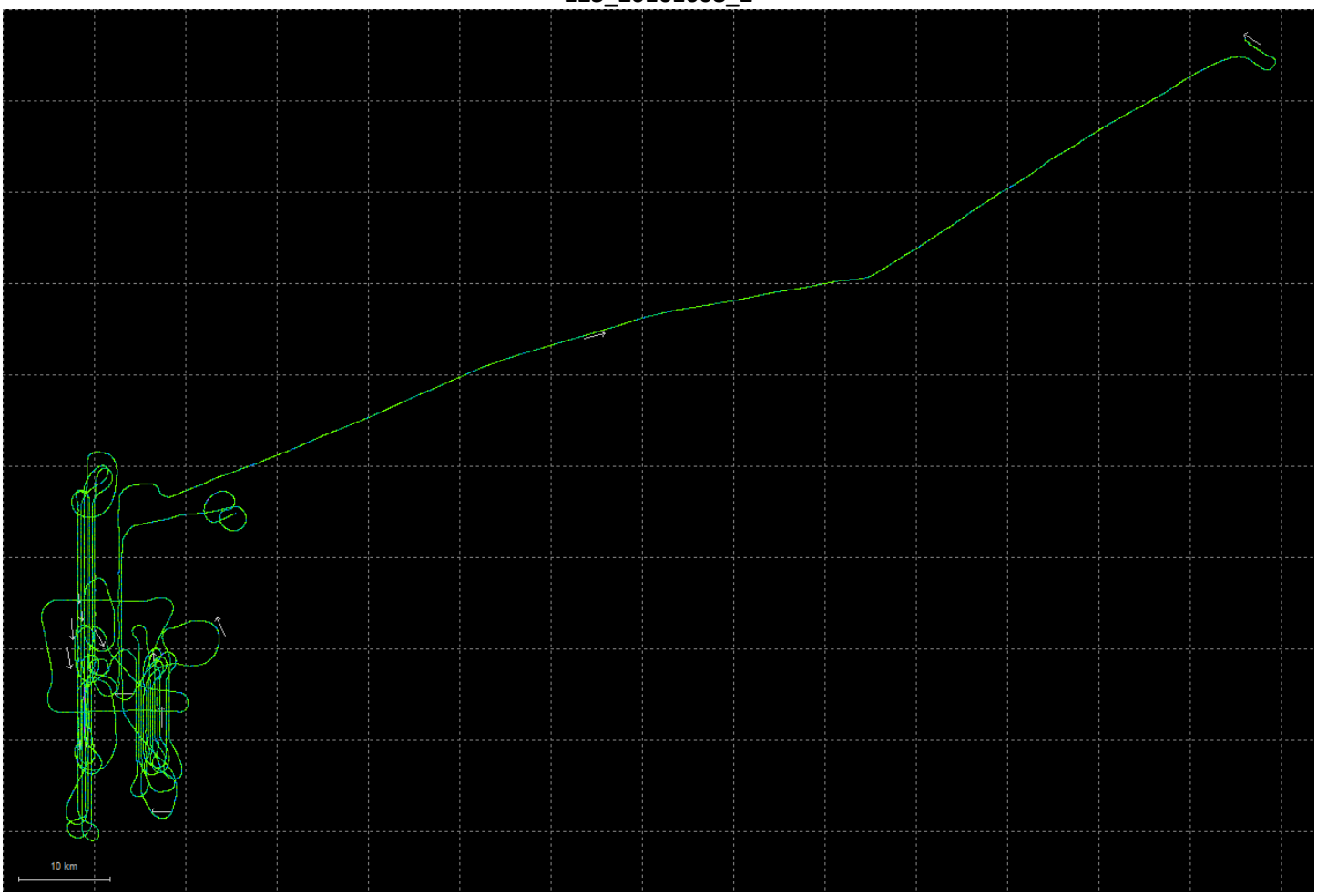

Estimated StdDev (m)
0.0160
0.0155
0.0150
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
591500
Week 1917
592000
592500
593000
593500
594000
594500
GPS Time (TOW, GMT zone)
East
North
Height
Trace

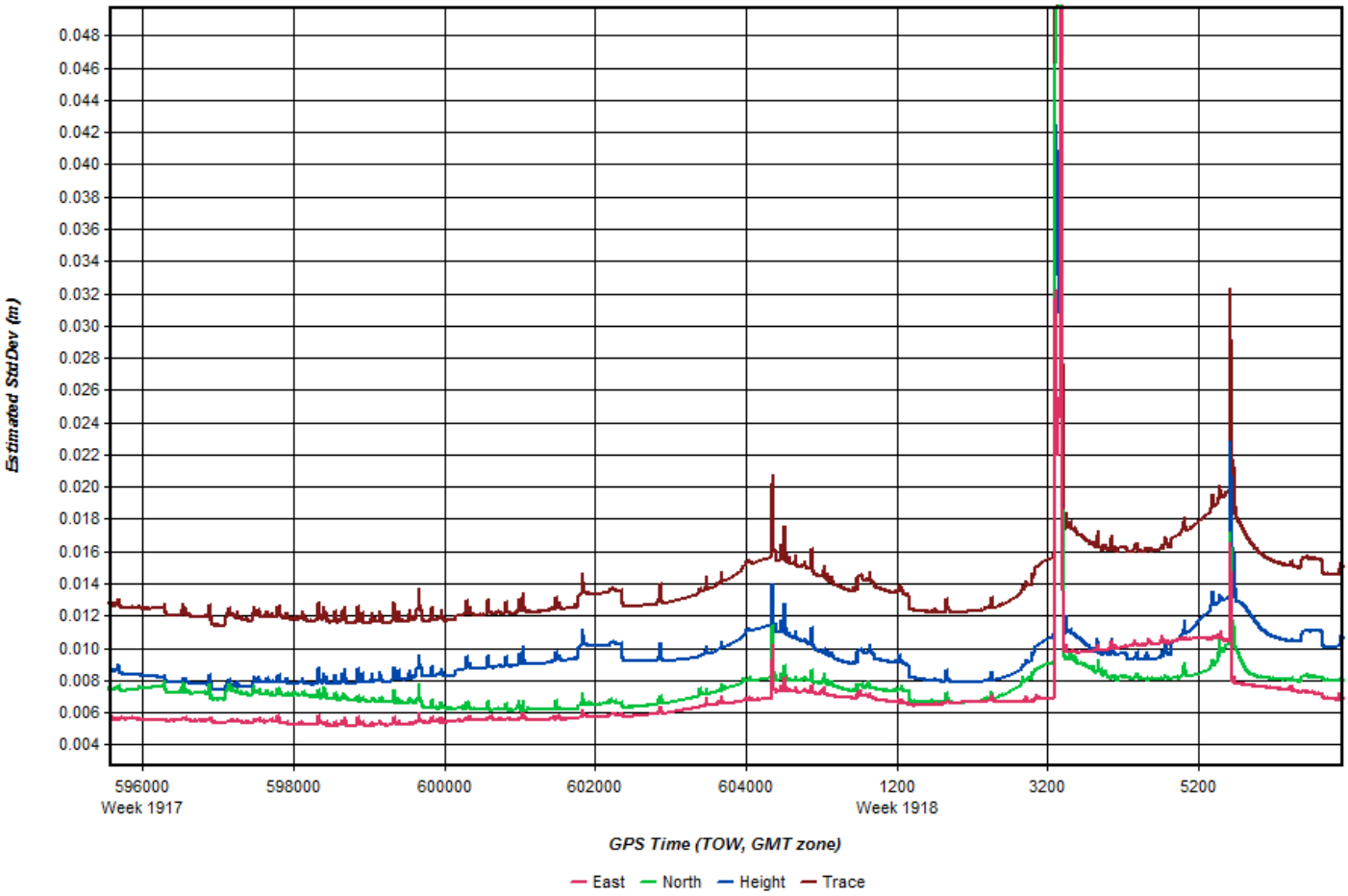

Num Sats
11
10
9
8
7
6
5
4
3
2
1
0
591500
Week 1917
592000
592500
593000
593500
594000
594500
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

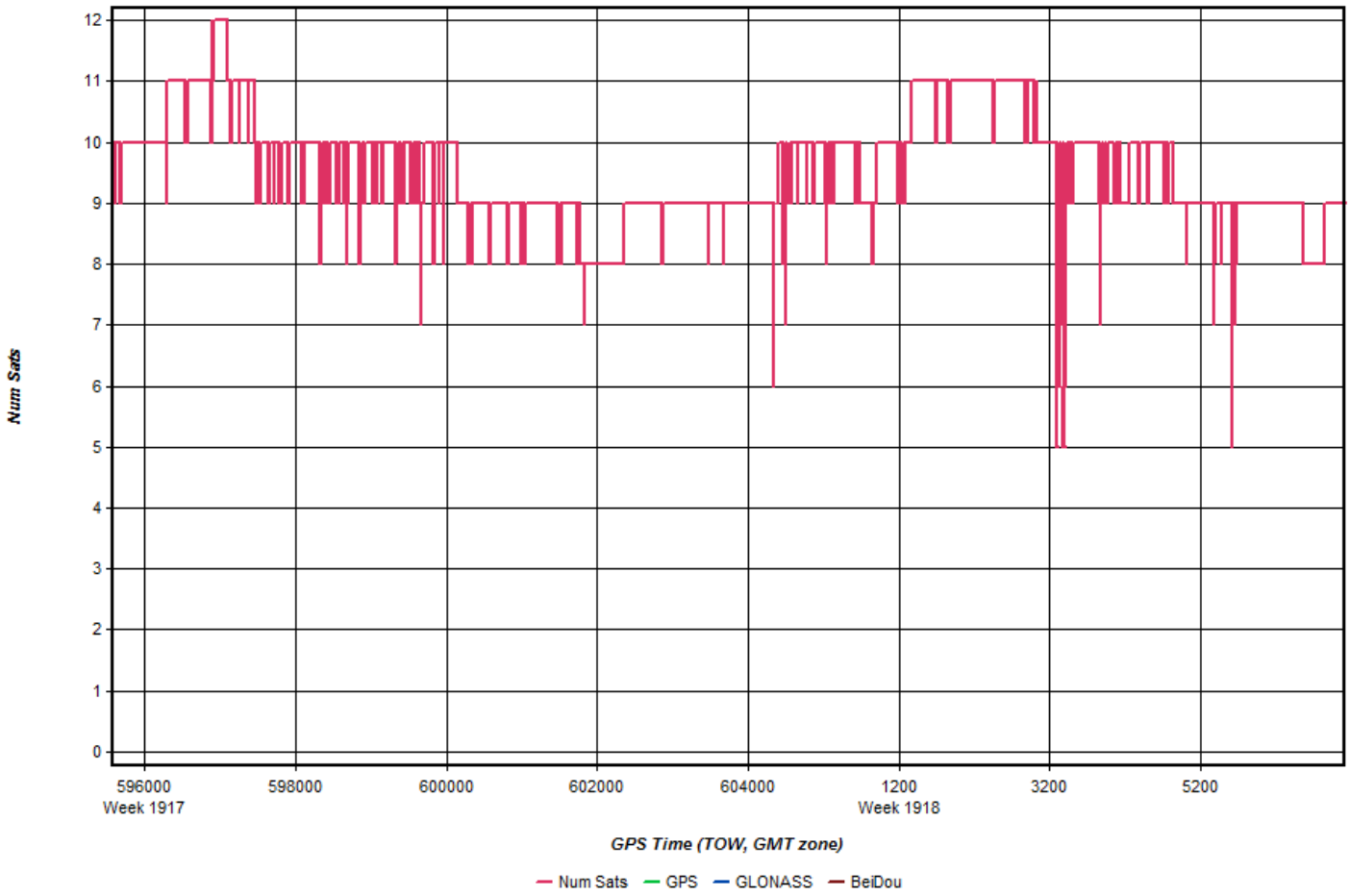

0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
Separation (m)
591500
Week 1917
592000
592500
593000
593500
594000
594500
GPS Time (TOW, GMT zone)
East
North
Up

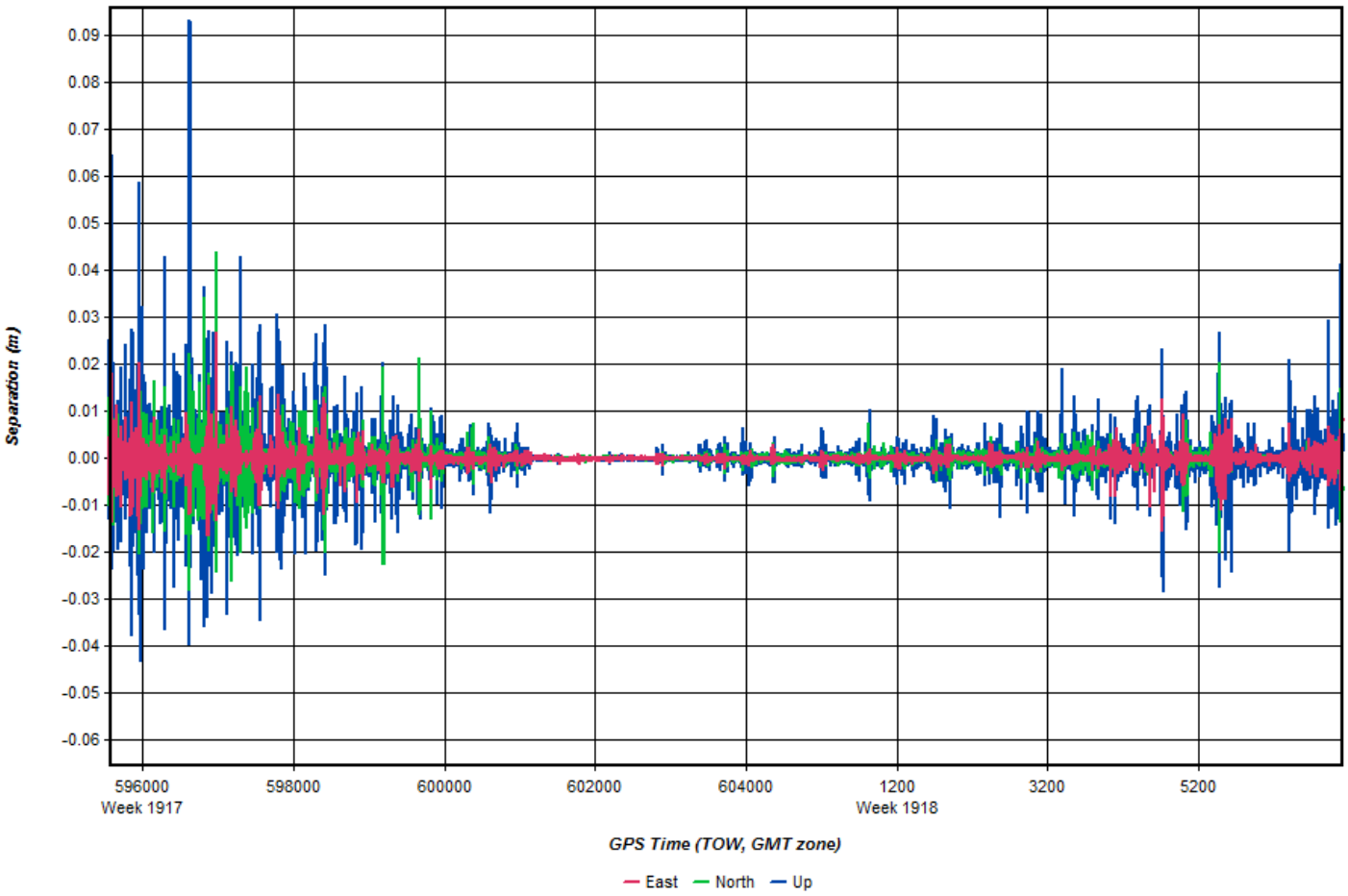

PDOP
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
591500
Week 1917
592000
592500
593000
593500
594000
594500
GPS Time (TOW, GMT zone)
PDOP

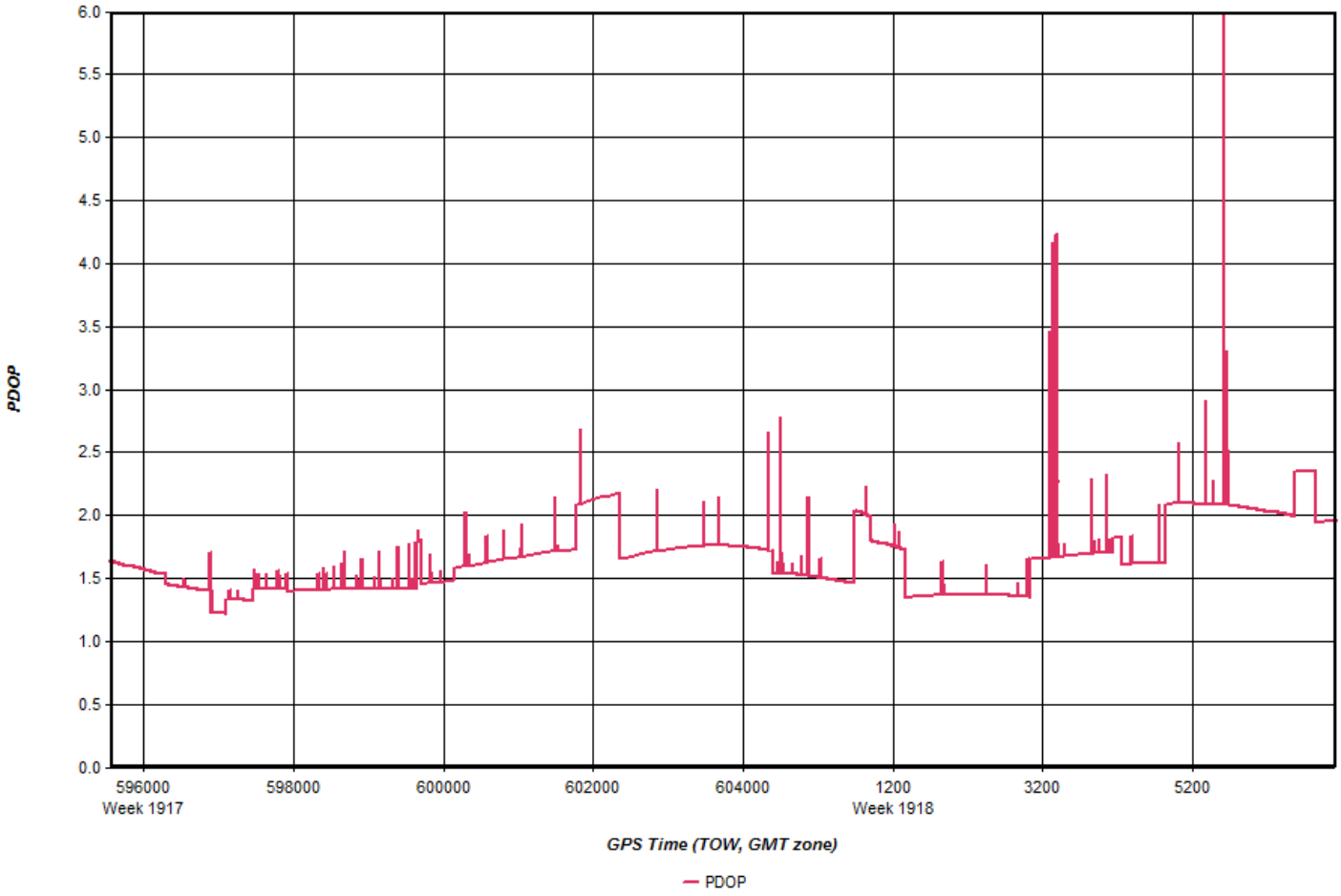
123_20161008_2



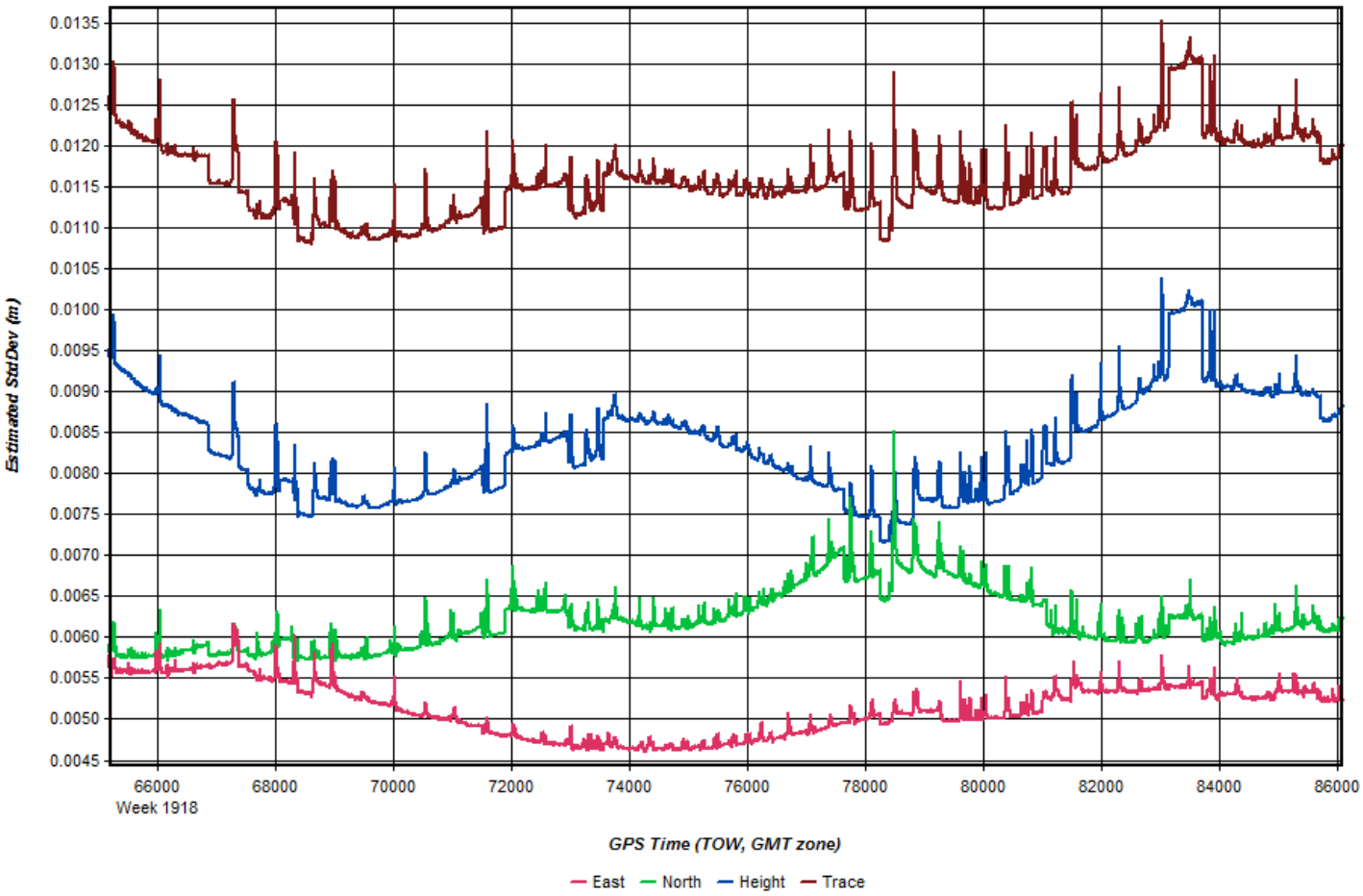

Estimated StdDev (m)
0.048
0.046
0.044
0.042
0.040
0.038
0.036
0.034
0.032
0.030
0.028
0.026
0.024
0.022
0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
596000
Week 1917
598000
600000
602000
604000
1200
Week 1918
3200
5200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

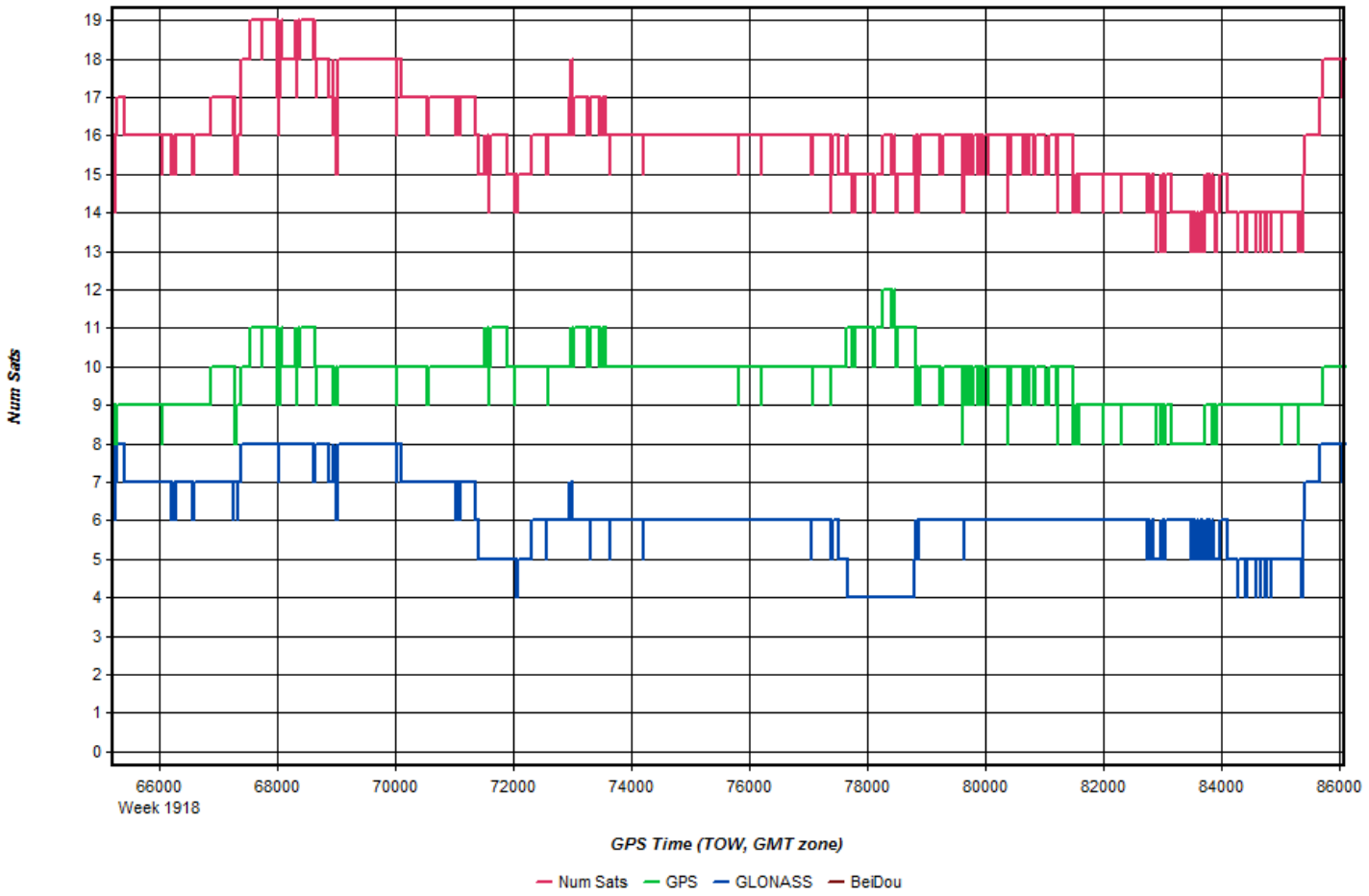

Num Sats
12
11
10
9
8
7
6
5
4
3
2
1
0
596000
Week 1917
598000
600000
602000
604000
1200
Week 1918
3200
5200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

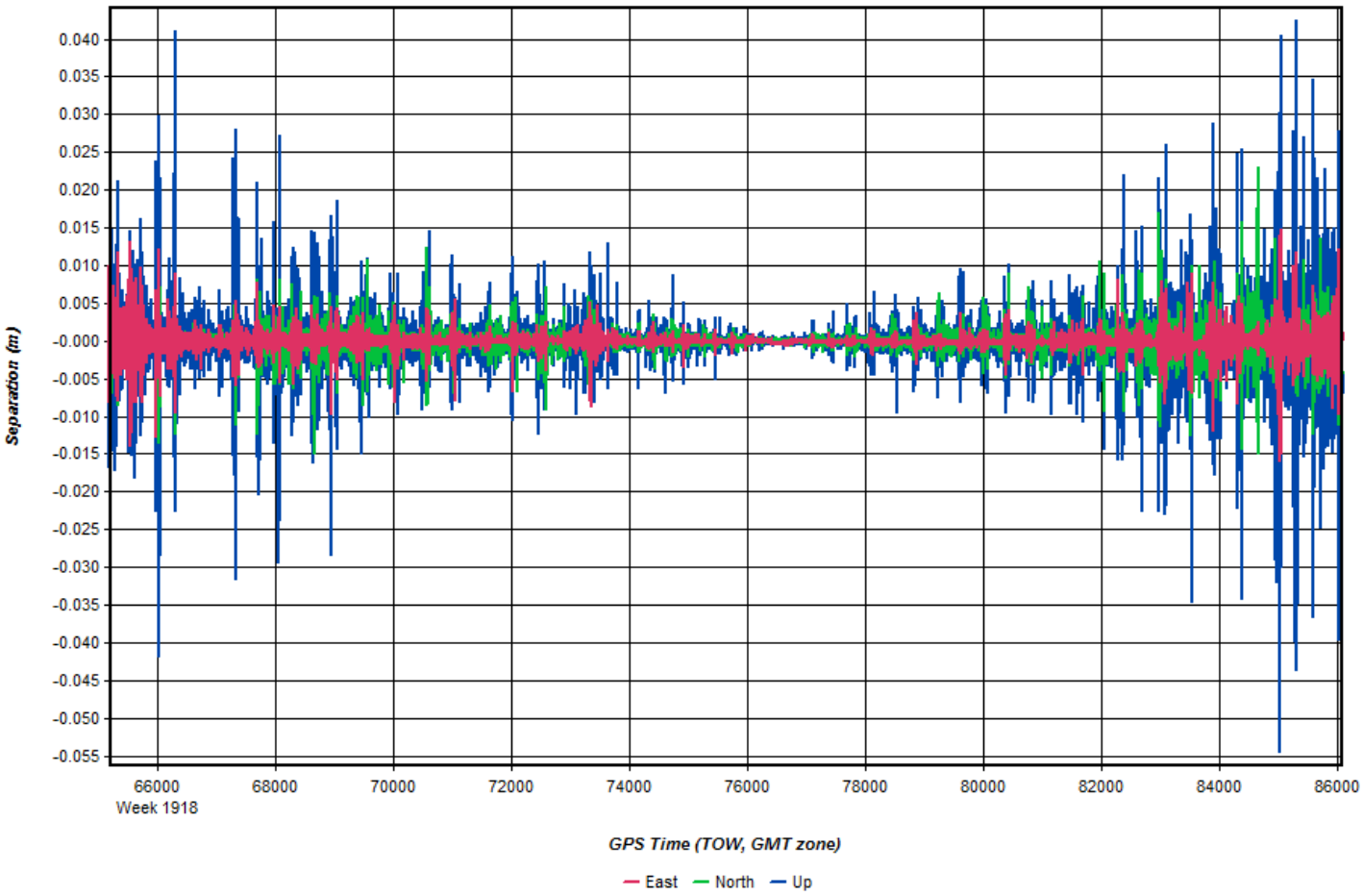

Separation (m)
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
-0.01
-0.02
-0.03
-0.04
-0.05
-0.06
596000
Week 1917
598000
600000
602000
604000
1200
Week 1918
3200
5200
GPS Time (TOW, GMT zone)
East
North
Up

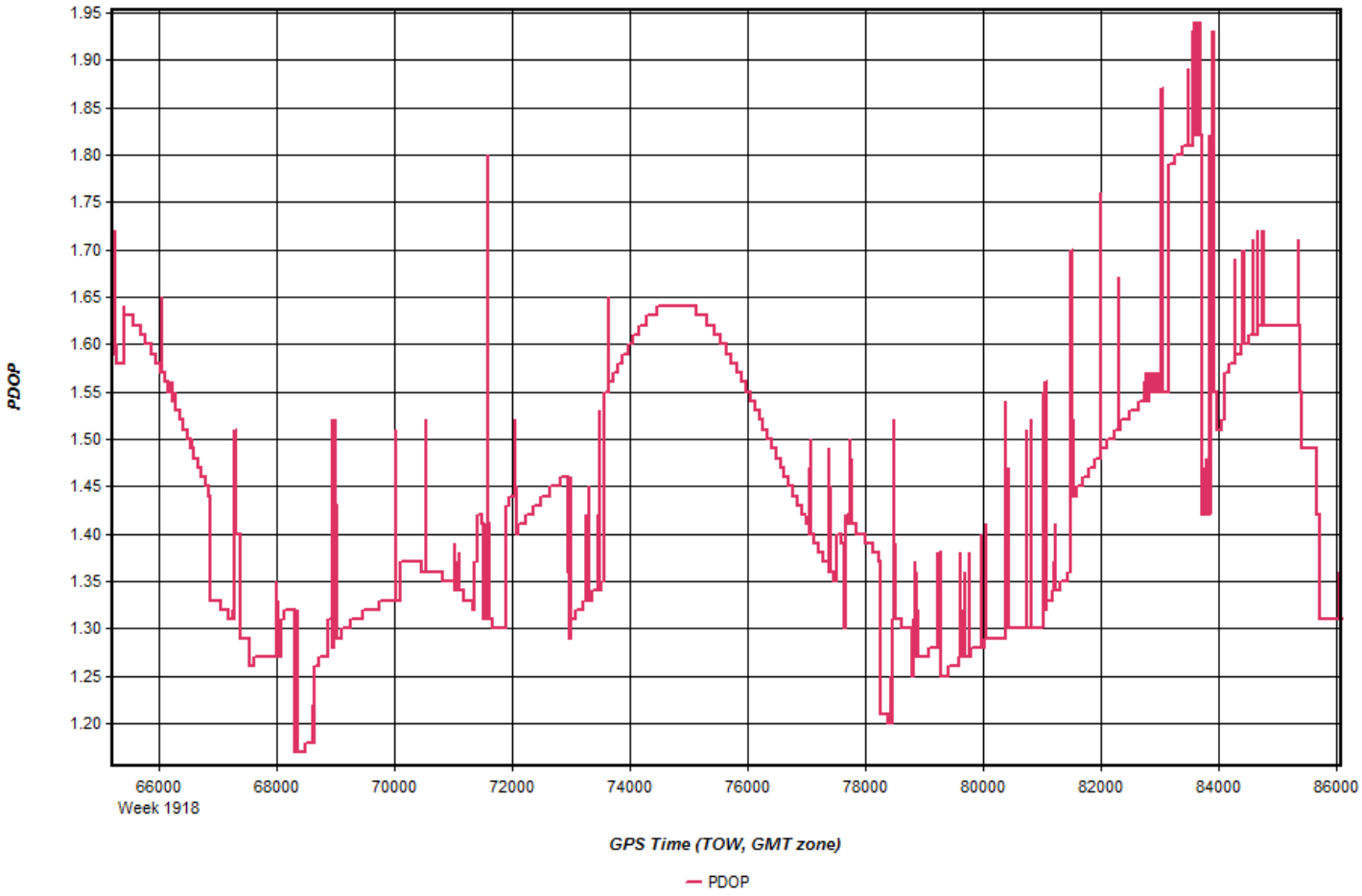

PDOP
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
596000
Week 1917
598000
600000
602000
604000
1200
Week 1918
3200
5200
GPS Time (TOW, GMT zone)
PDOP

123_20161009_1

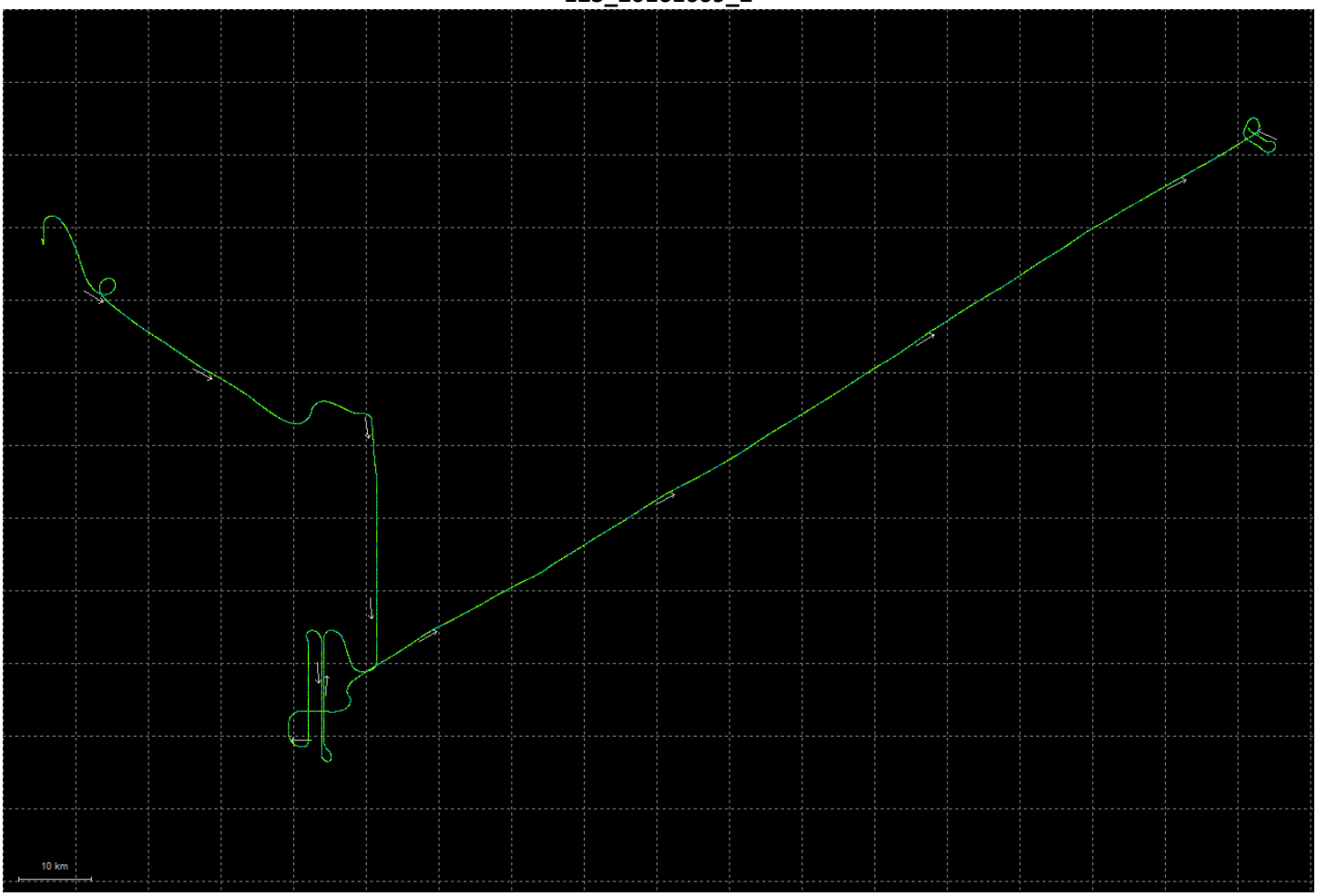

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
66000
Week 1918
68000
70000
72000
74000
76000
78000
80000
82000
84000
86000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

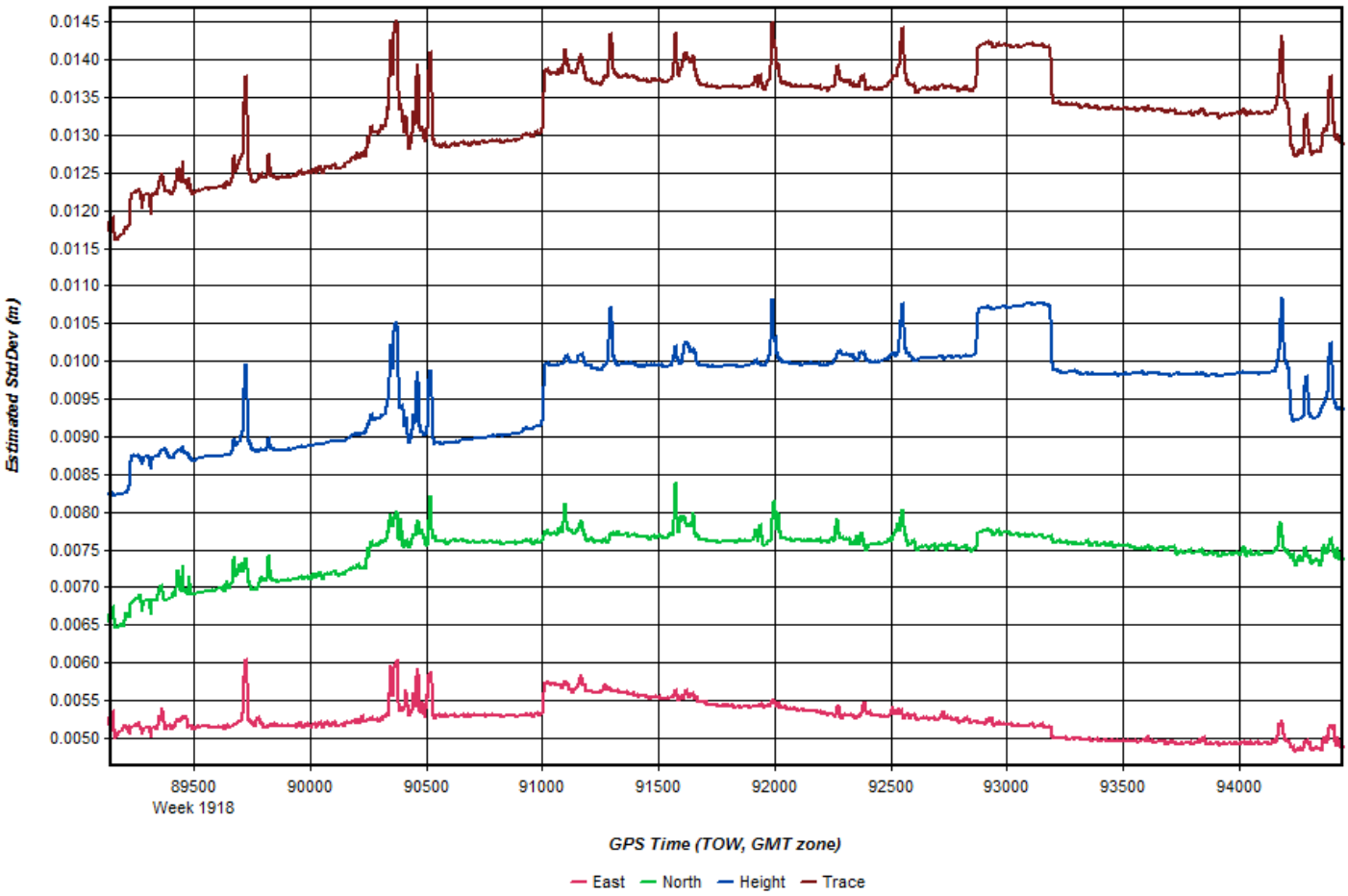

Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
66000
Week 1918
68000
70000
72000
74000
76000
78000
80000
82000
84000
86000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

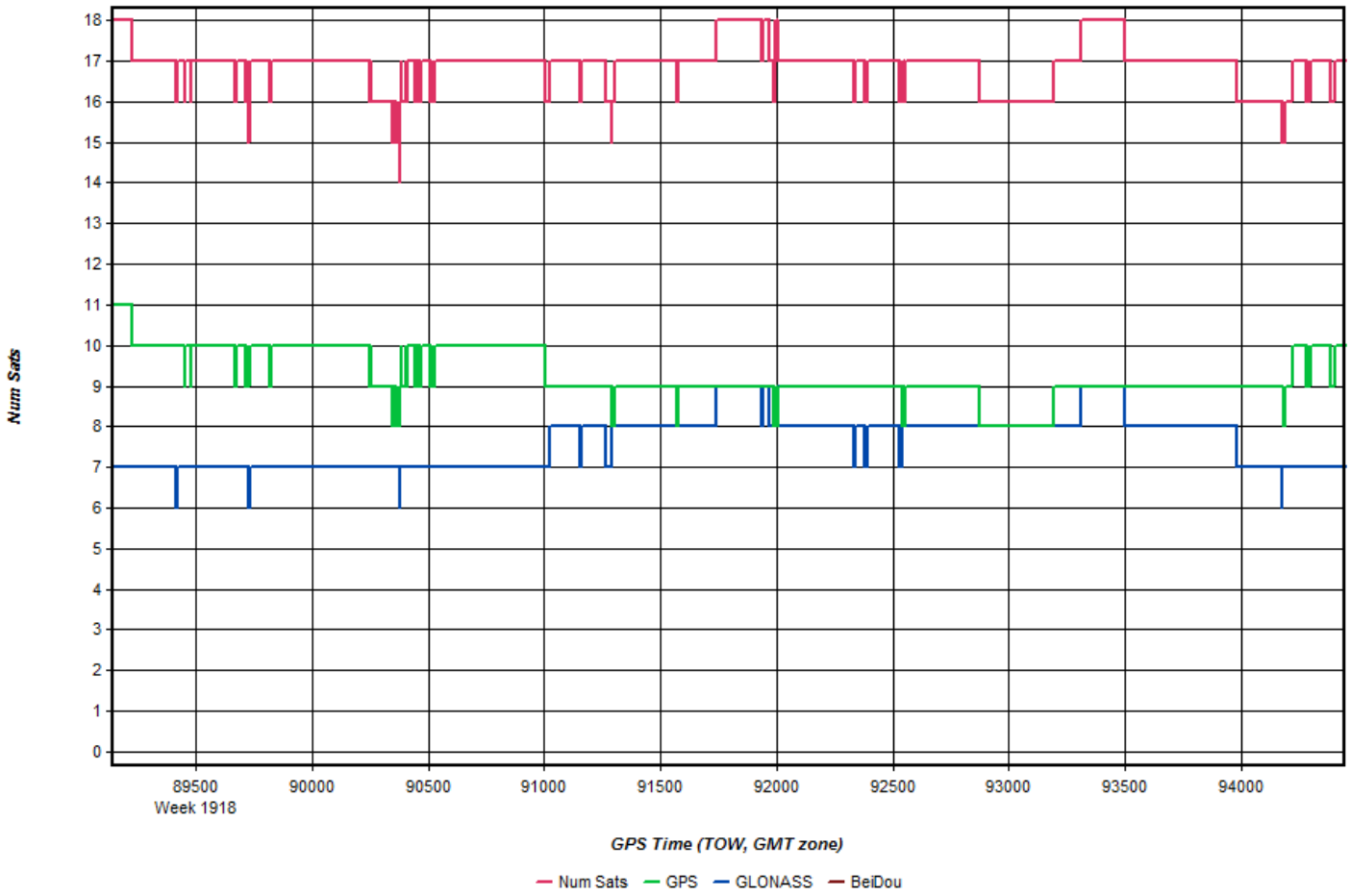

Separation (m)
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
-0.000
-0.005
-0.010
-0.015
-0.020
-0.025
-0.030
-0.035
-0.040
-0.045
-0.050
-0.055
66000
Week 1918
68000
70000
72000
74000
76000
78000
80000
82000
84000
86000
GPS Time (TOW, GMT zone)
East
North
Up

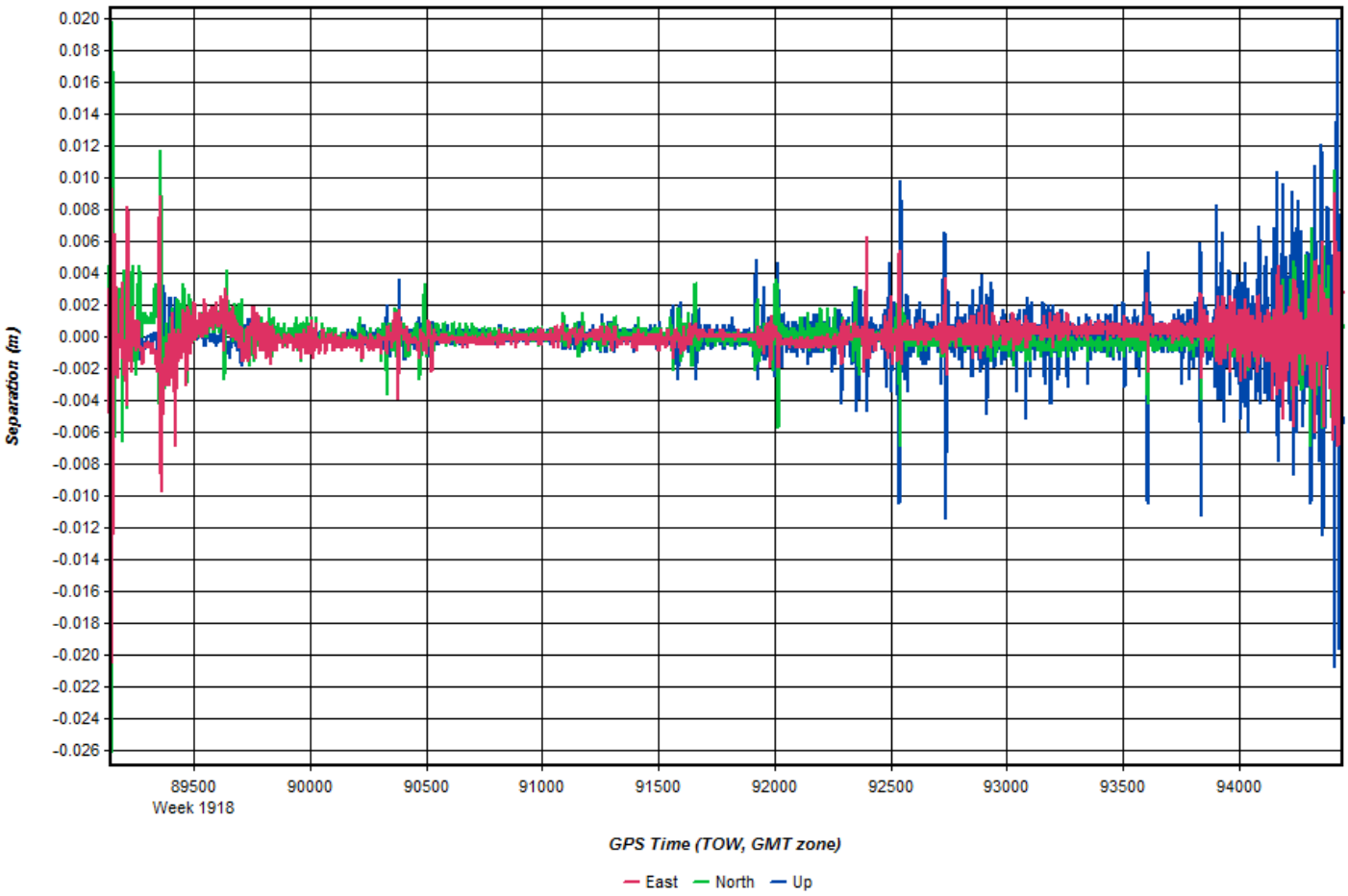

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
66000
Week 1918
68000
70000
72000
74000
76000
78000
80000
82000
84000
86000
GPS Time (TOW, GMT zone)
PDOP

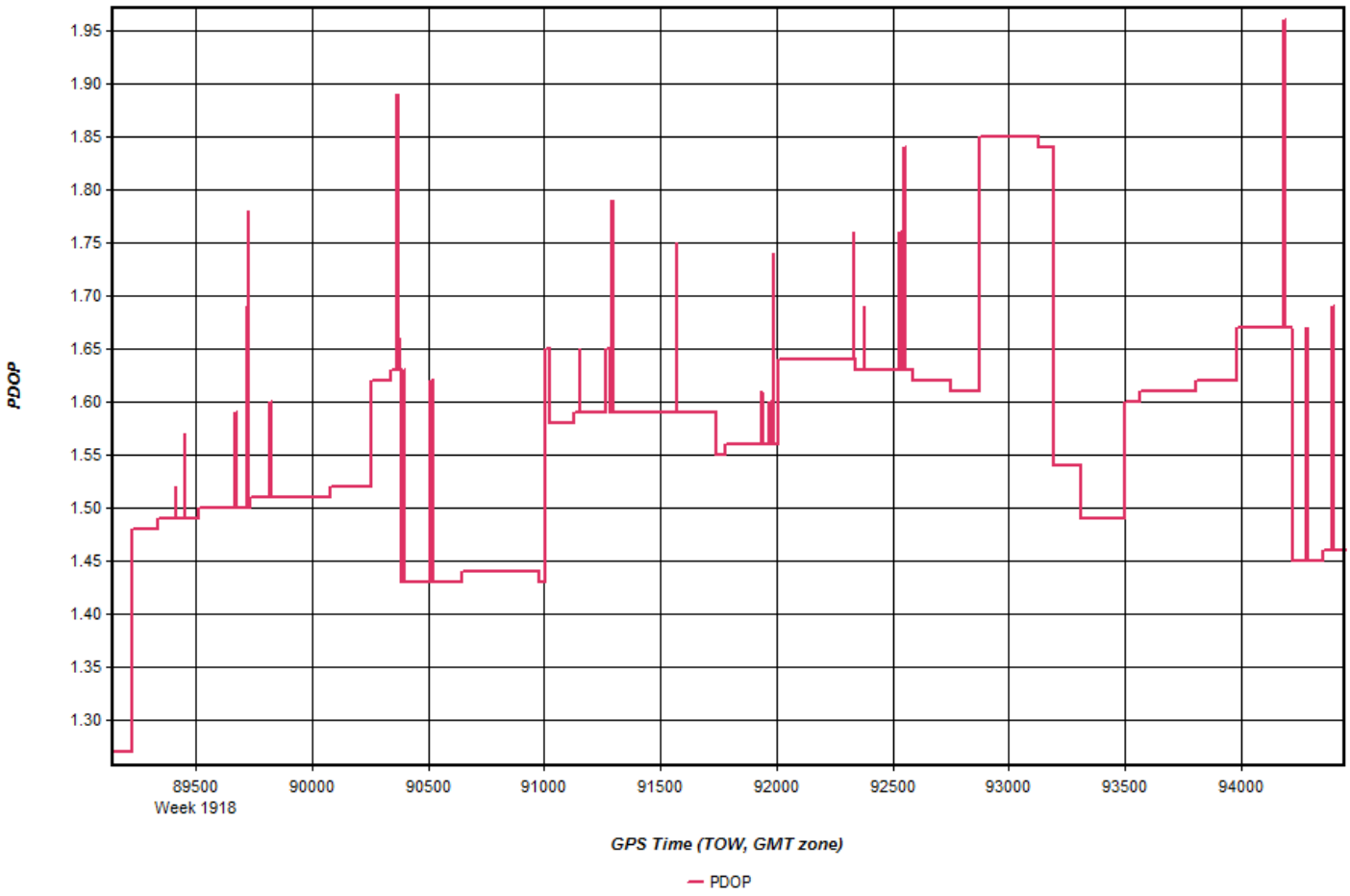
123_20161009_2



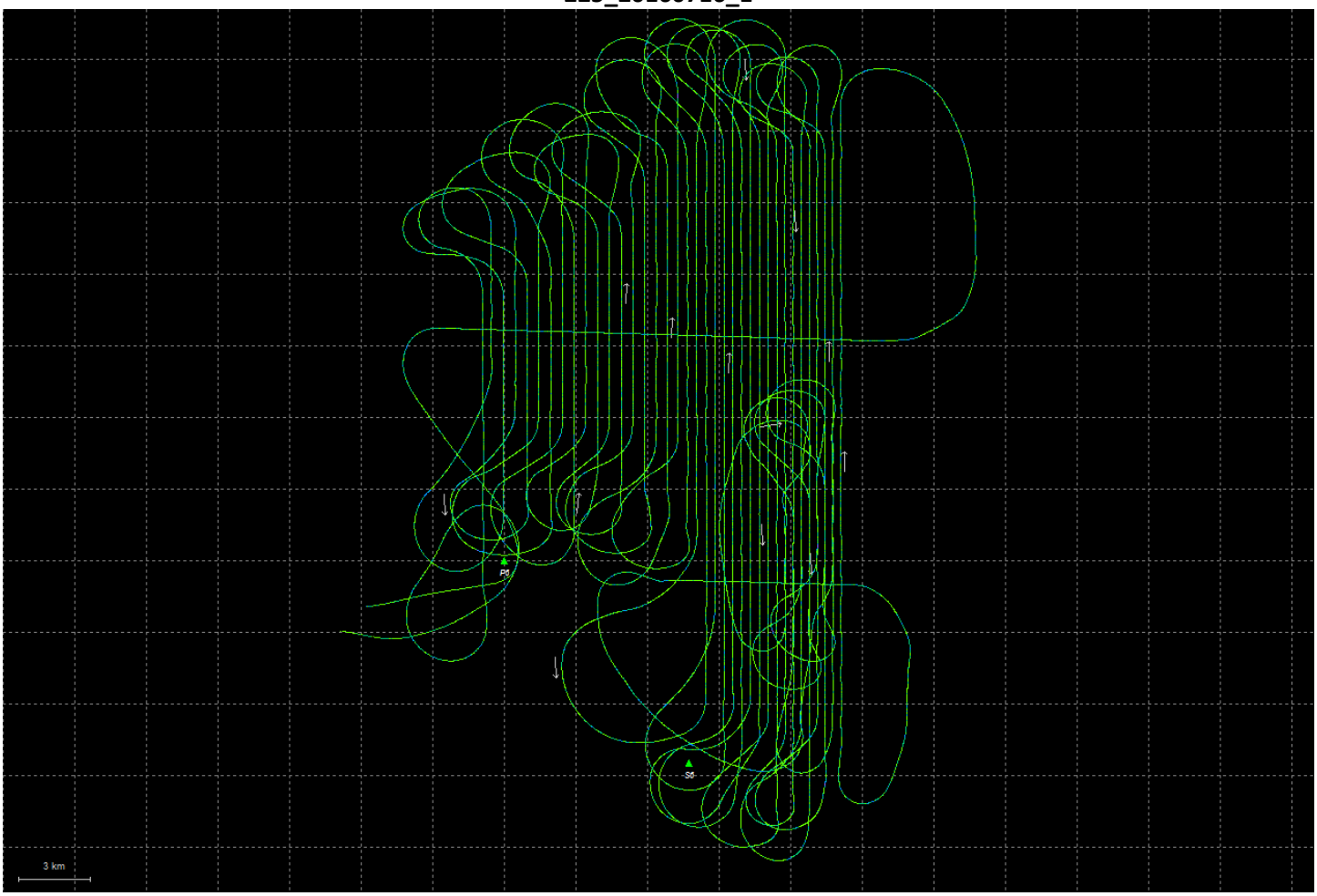

Estimated StdDev (m)
0.0145
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
89500
Week 1918
90000
90500
91000
91500
92000
92500
93000
93500
94000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

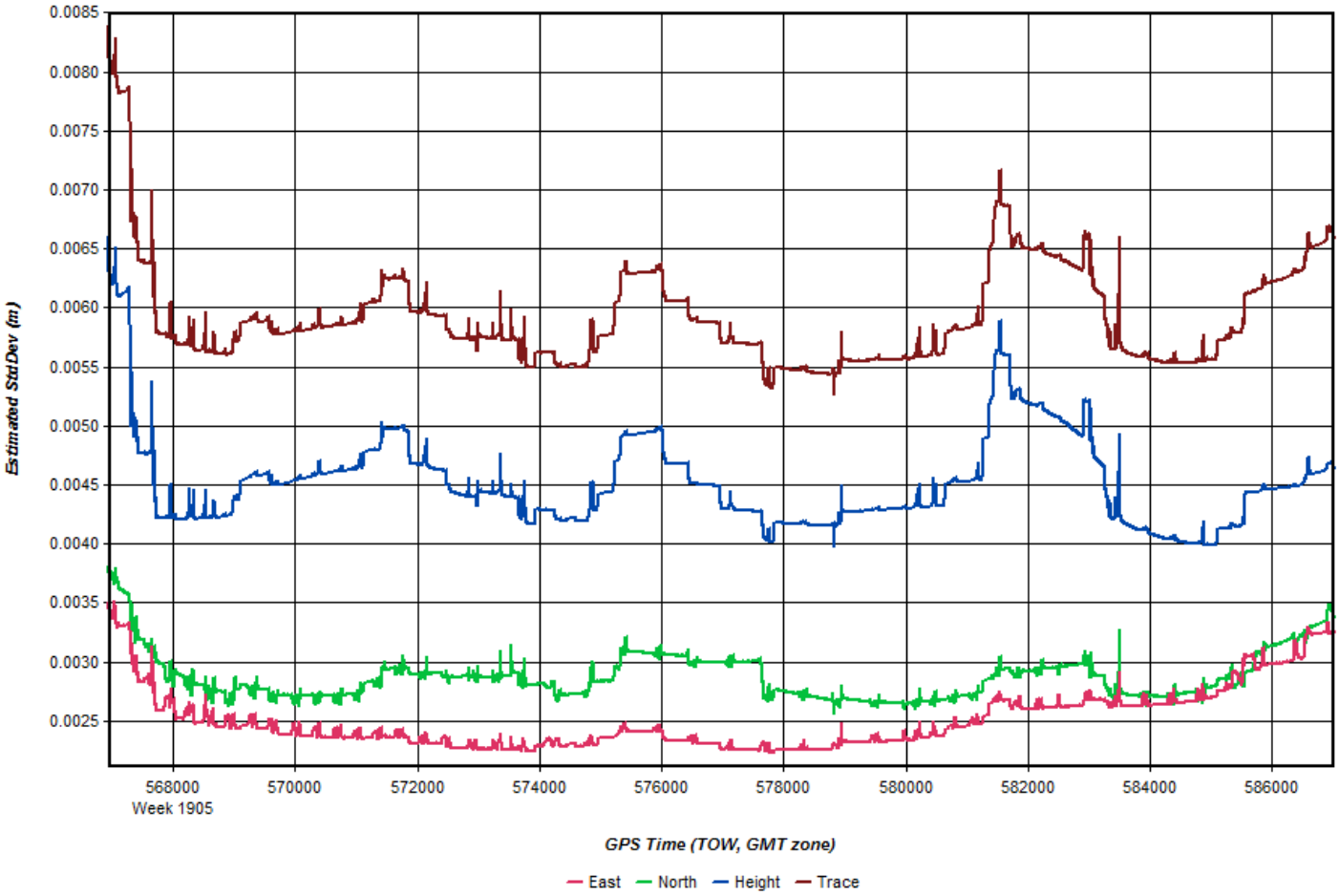

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
89500
Week 1918
90000
90500
91000
91500
92000
92500
93000
93500
94000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

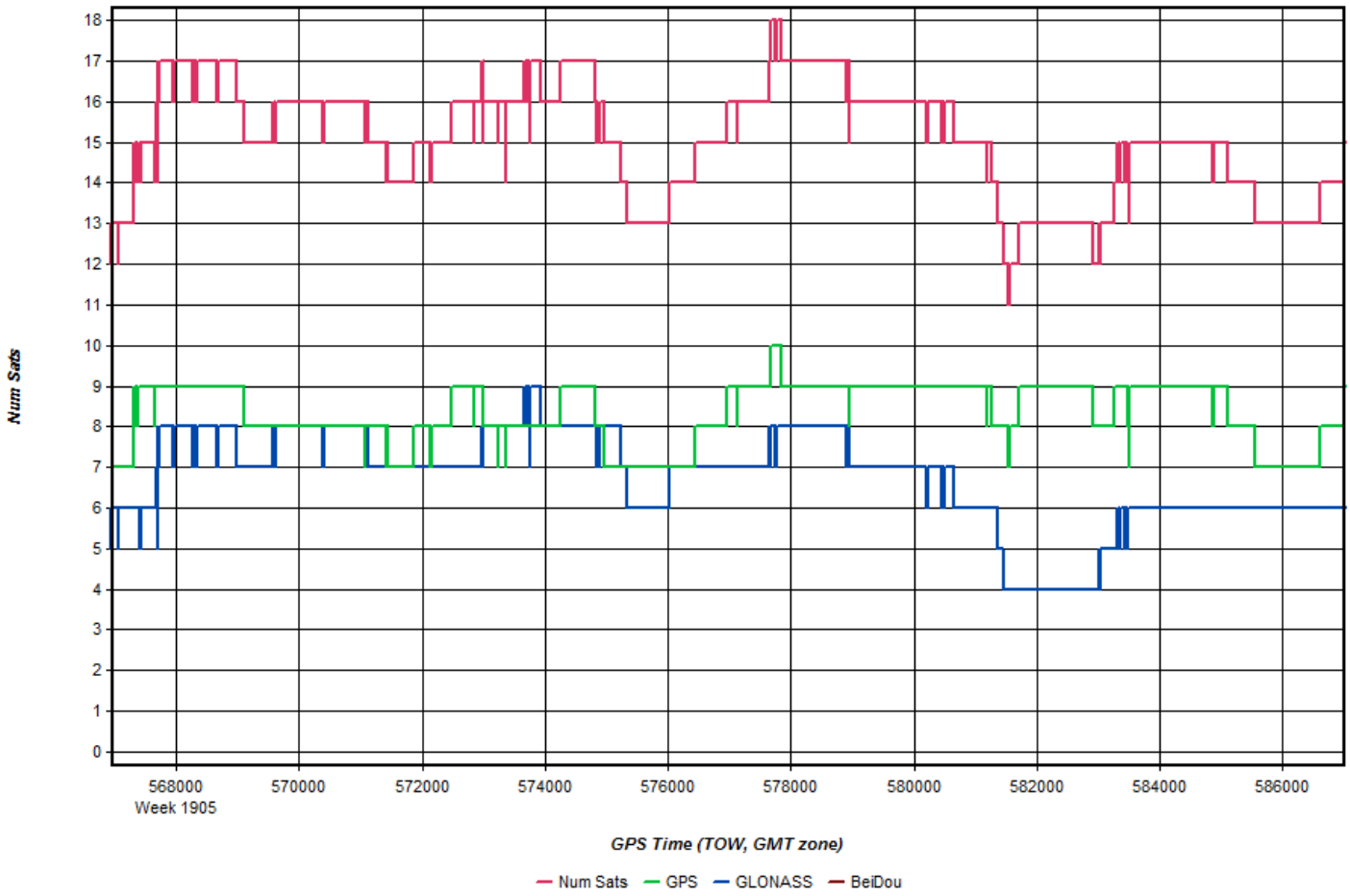

0.020
0.018
0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
-0.014
-0.016
-0.018
-0.020
-0.022
-0.024
-0.026
Separation (m)
89500
Week 1918
90000
90500
91000
91500
92000
92500
93000
93500
94000
GPS Time (TOW, GMT zone)
East
North
Up

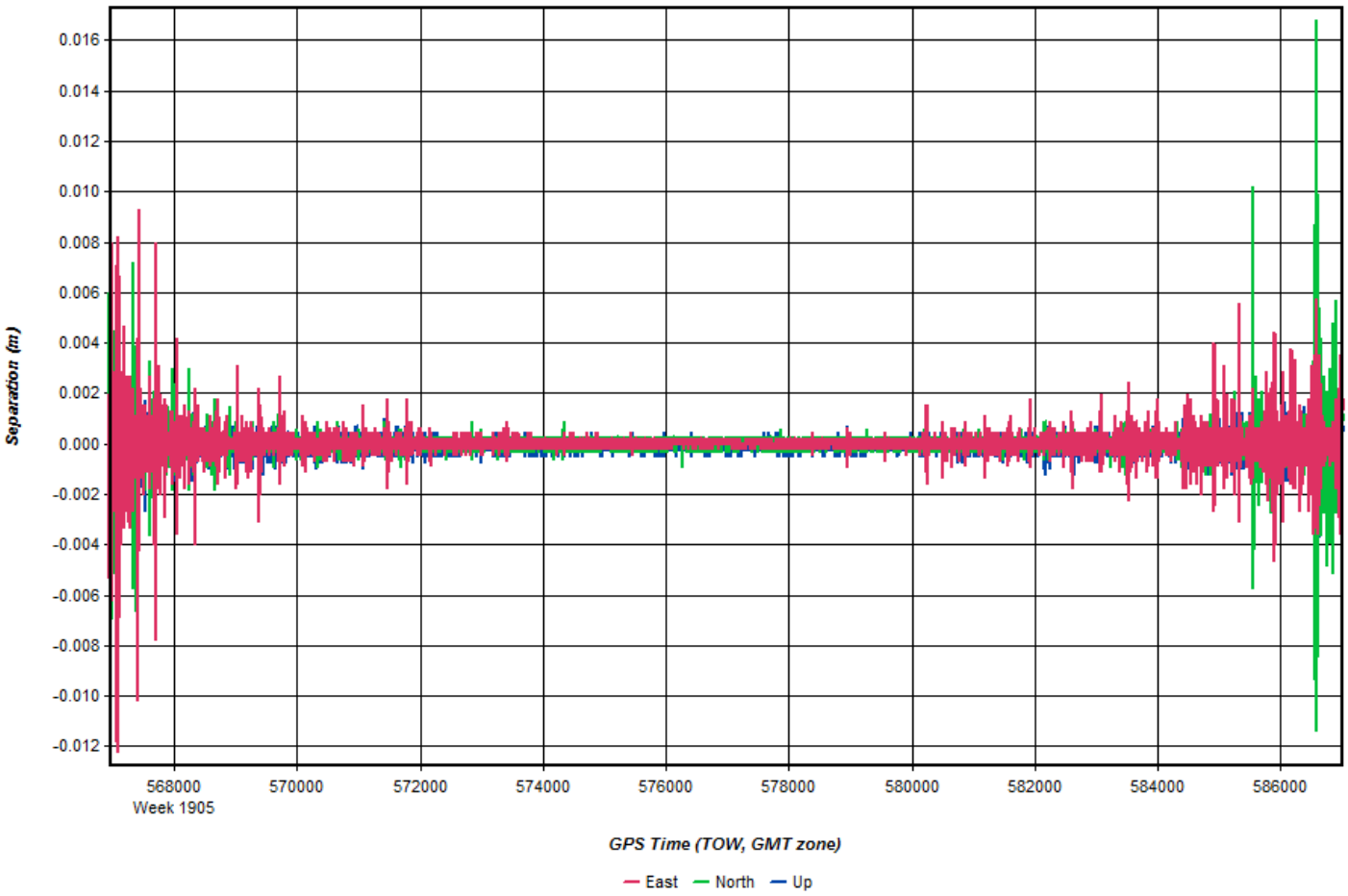

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
89500
Week 1918
90000
90500
91000
91500
92000
92500
93000
93500
94000
GPS Time (TOW, GMT zone)
PDOP

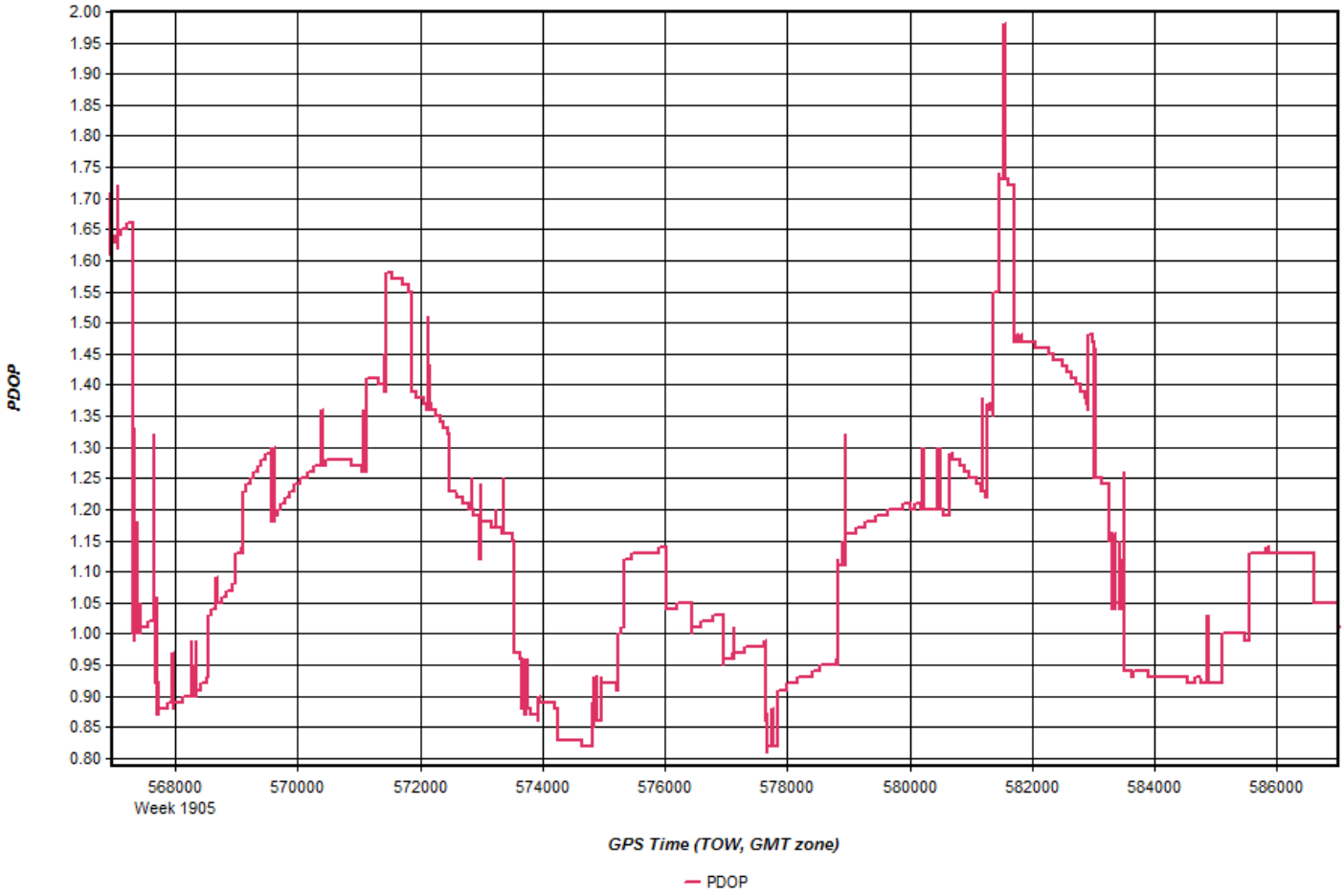
225_20160716_1



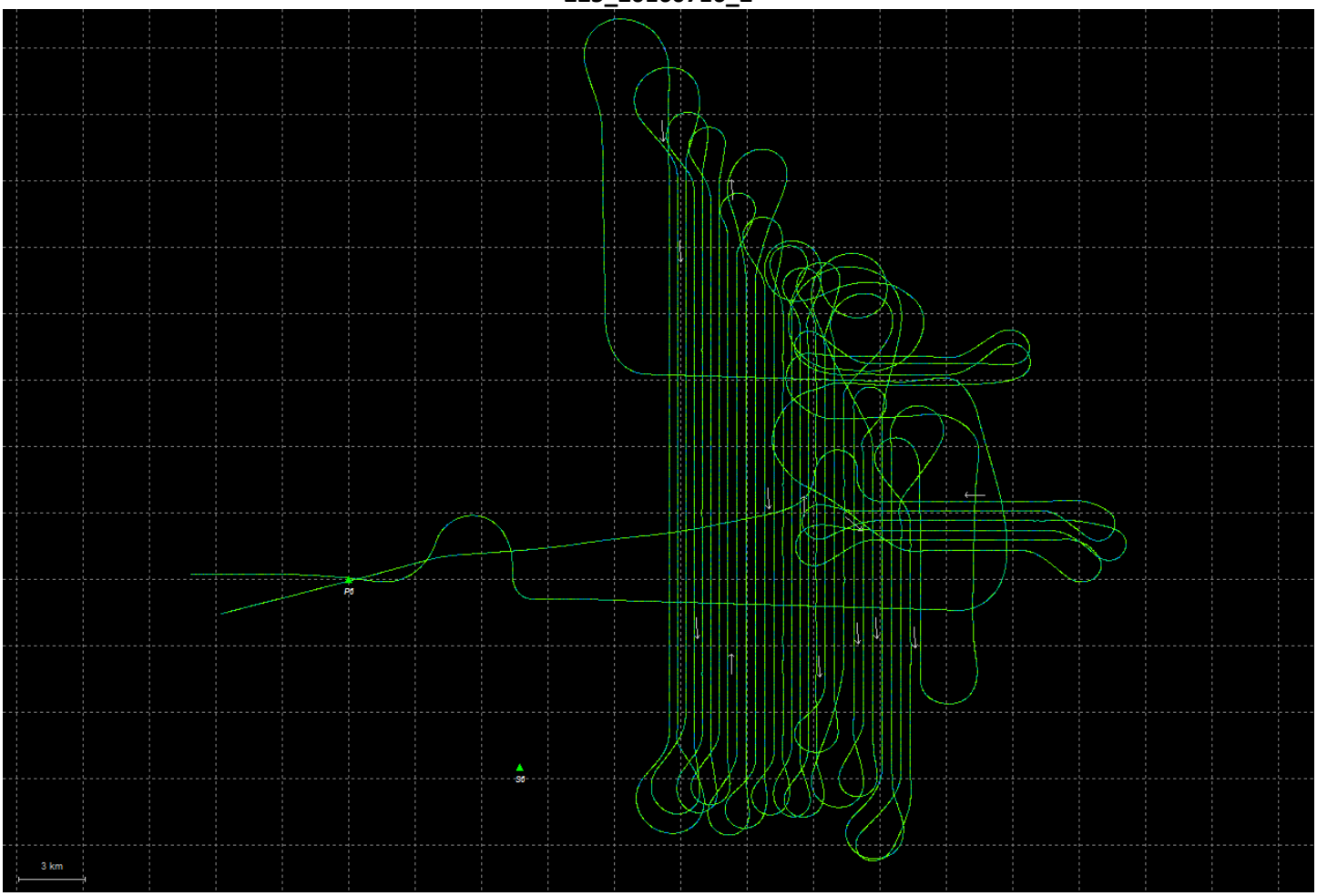

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
568000
Week 1905
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

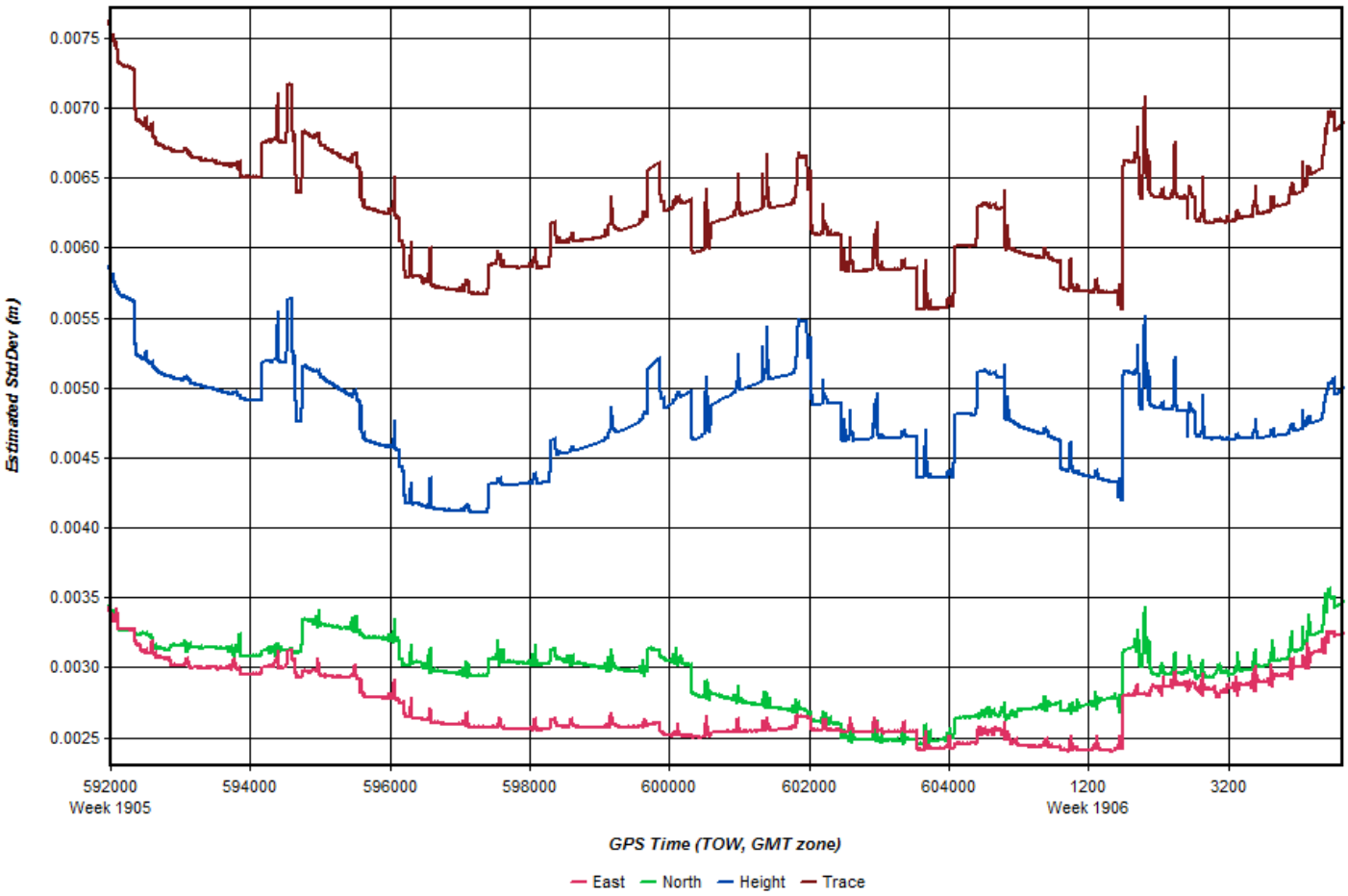

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
568000
Week 1905
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

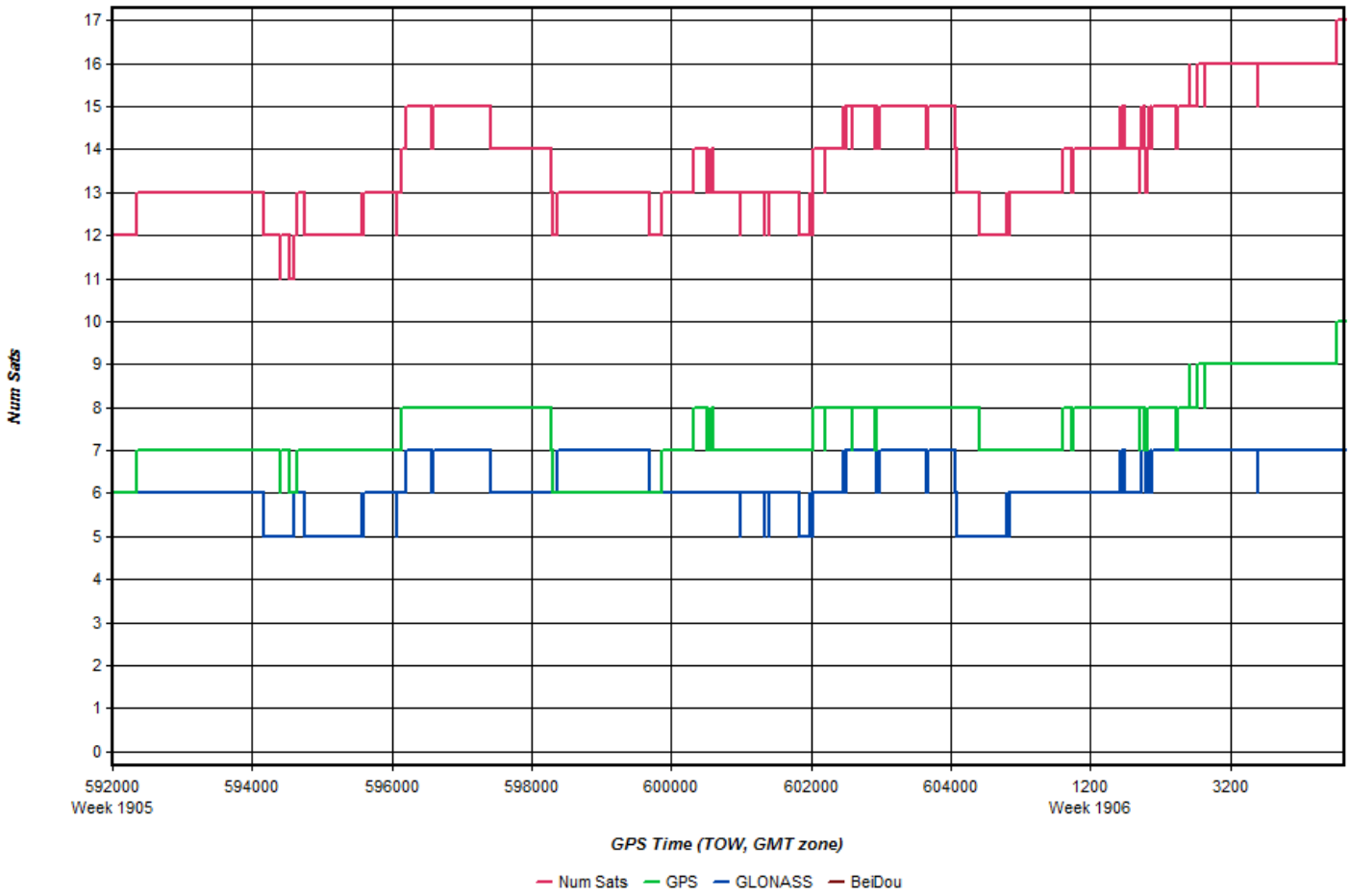

0.016
0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
Separation (m)
568000
Week 1905
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
East
North
Up

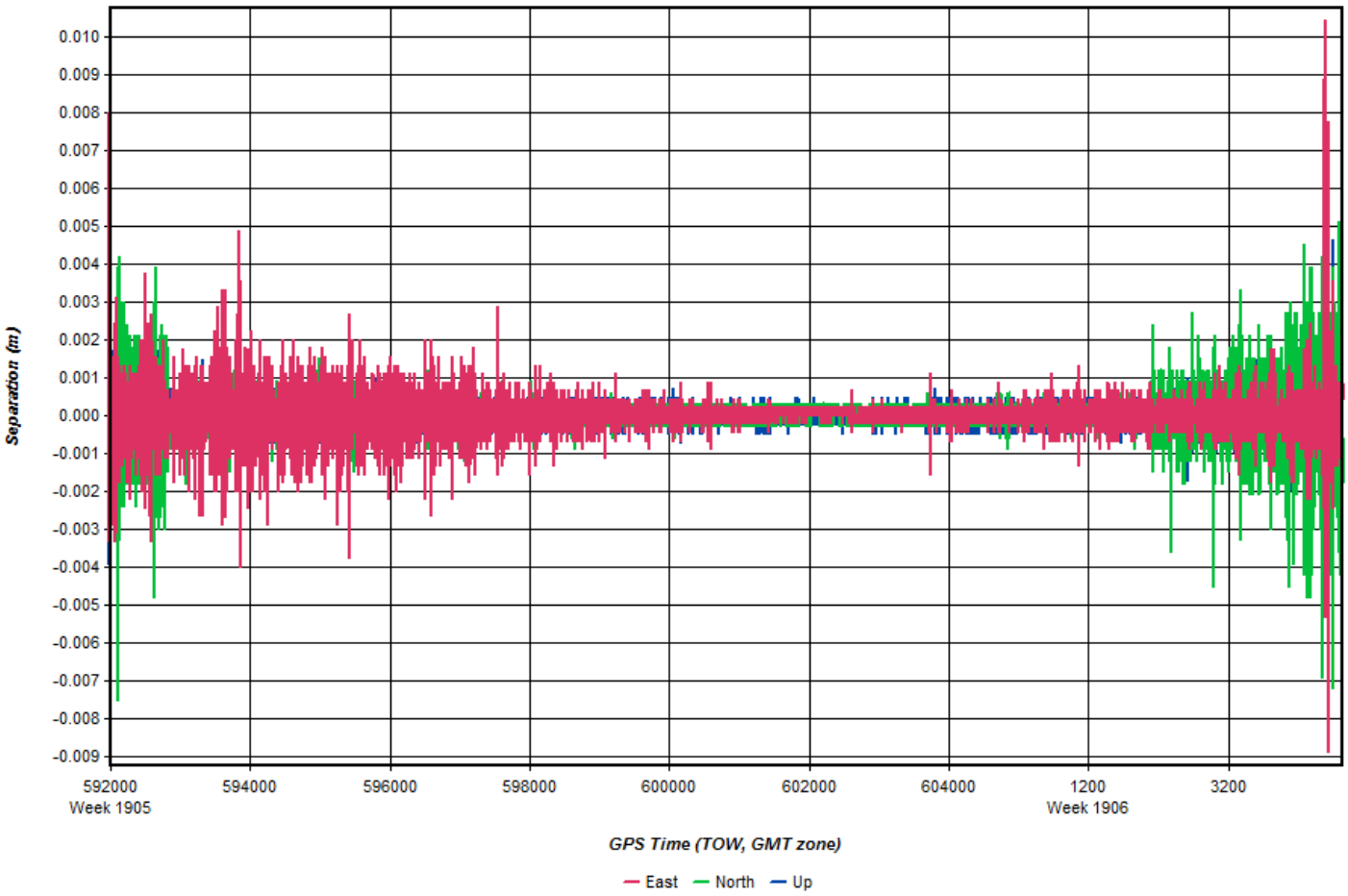

PDOP
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
0.80
568000
Week 1905
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
PDOP

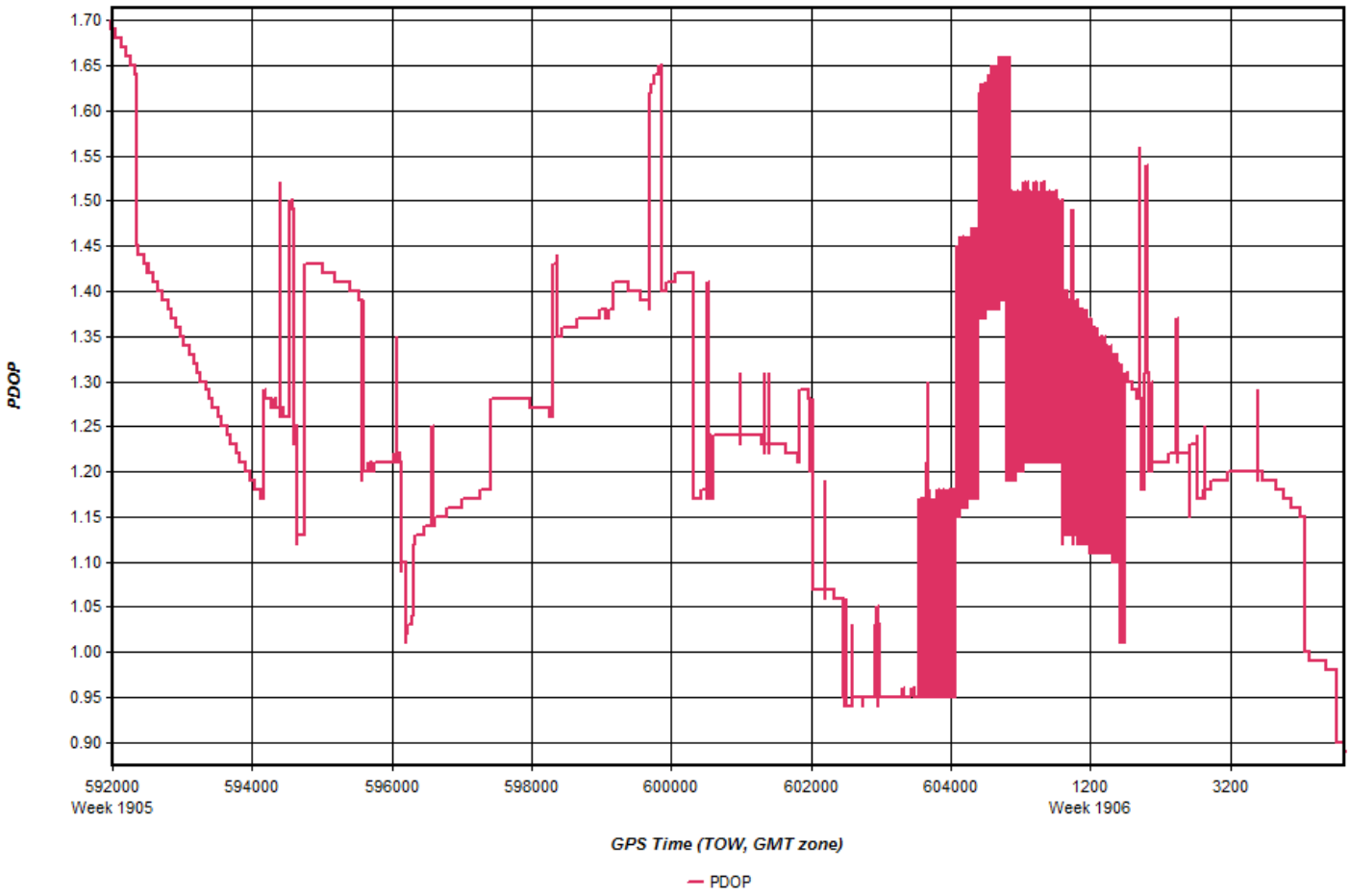
225_20160716_2



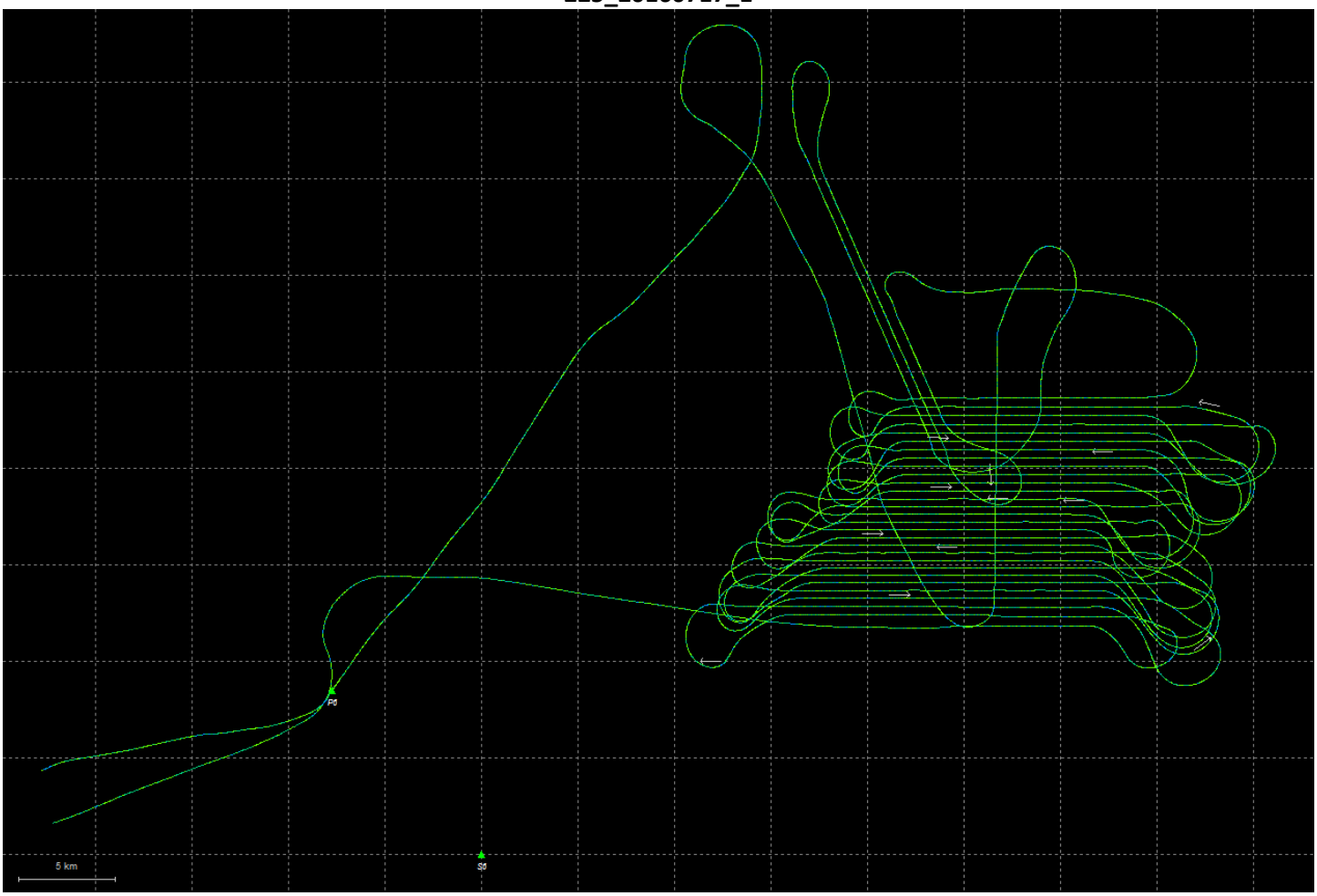

Estimated StdDev (m)
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
592000
Week 1905
594000
596000
598000
600000
602000
604000
1200
Week 1906
3200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

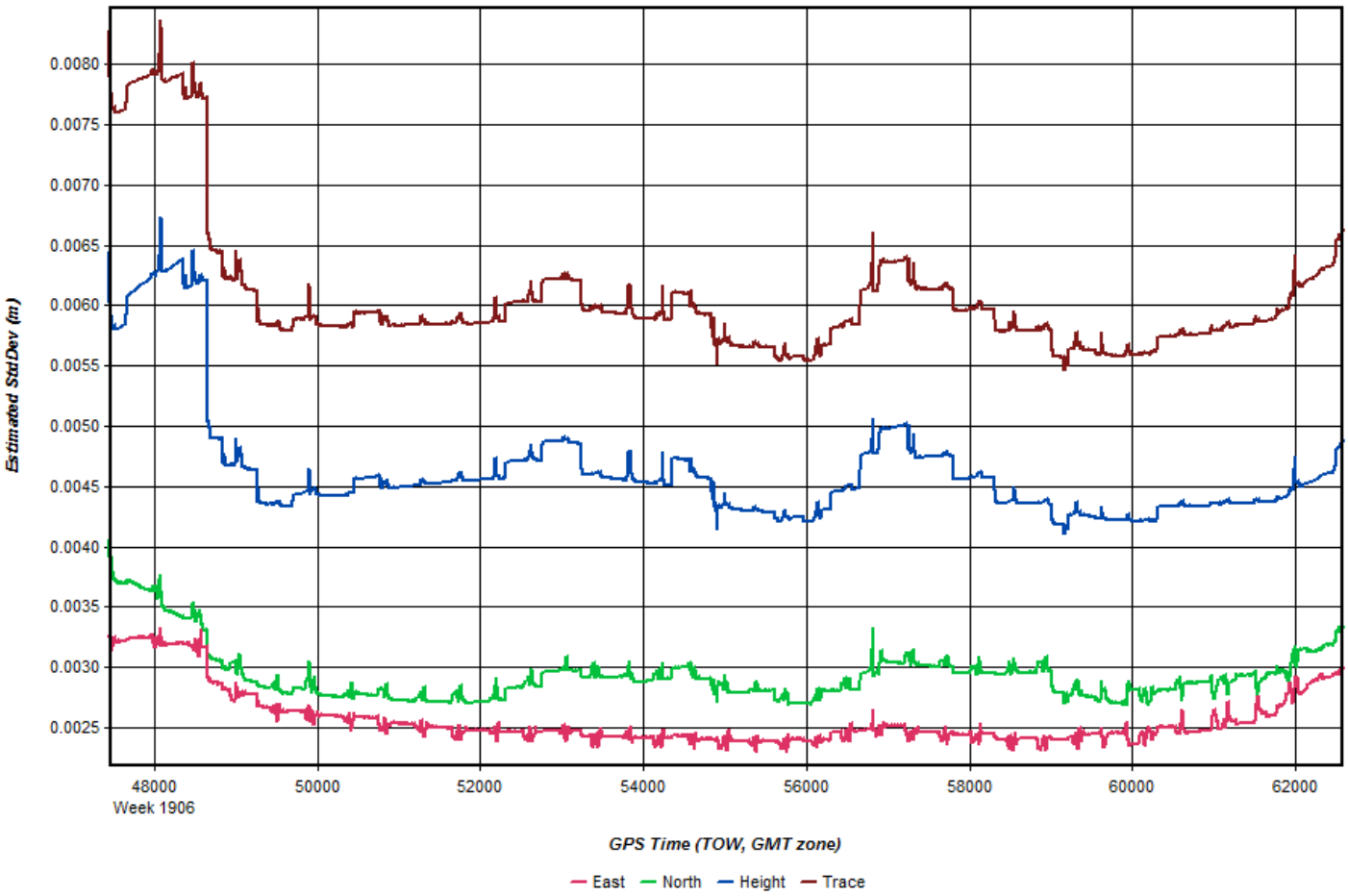

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
592000
Week 1905
594000
596000
598000
600000
602000
604000
1200
Week 1906
3200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

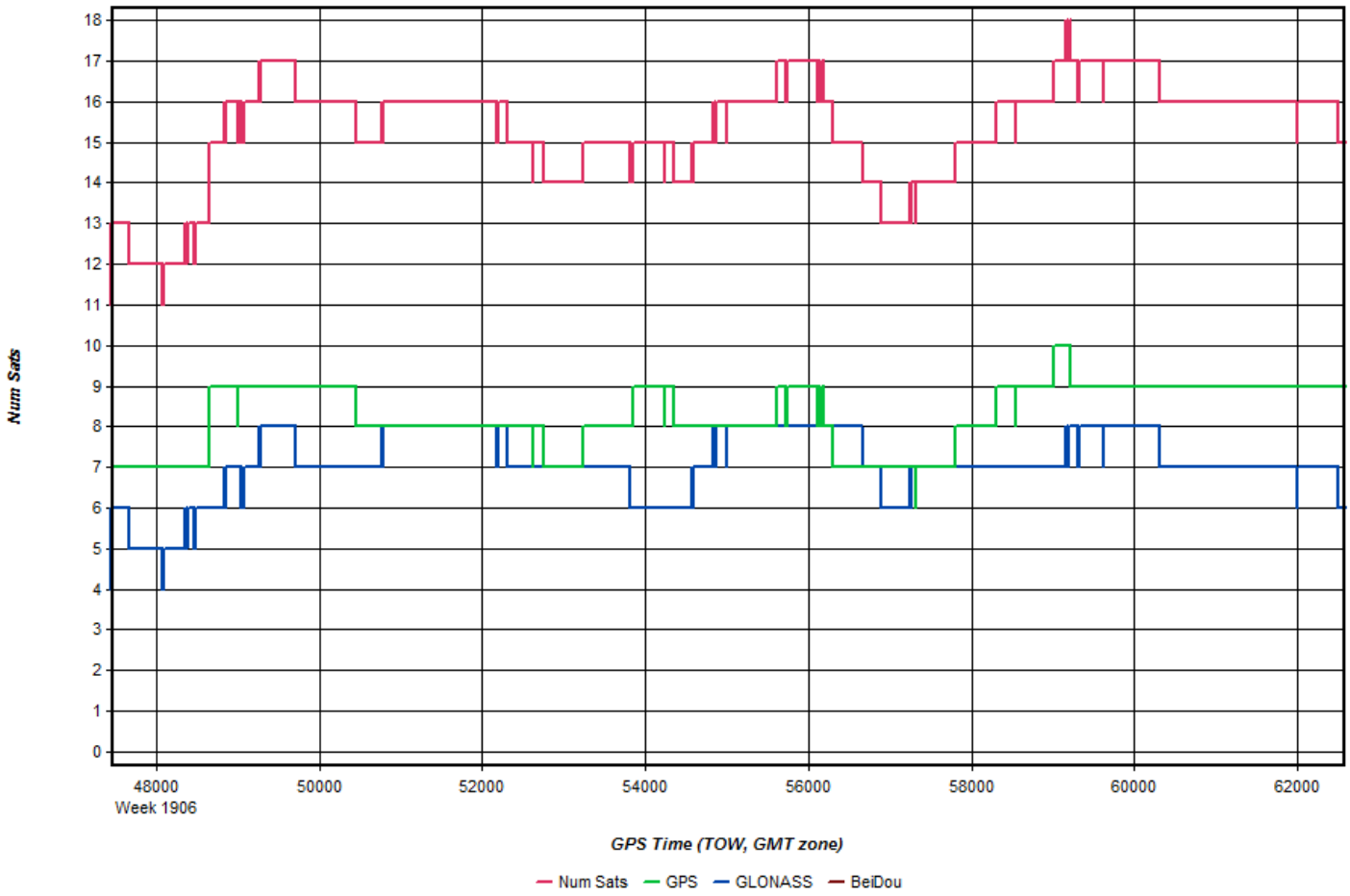

0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
Separation (m)
592000
Week 1905
594000
596000
598000
600000
602000
604000
1200
Week 1906
3200
GPS Time (TOW, GMT zone)
East
North
Up

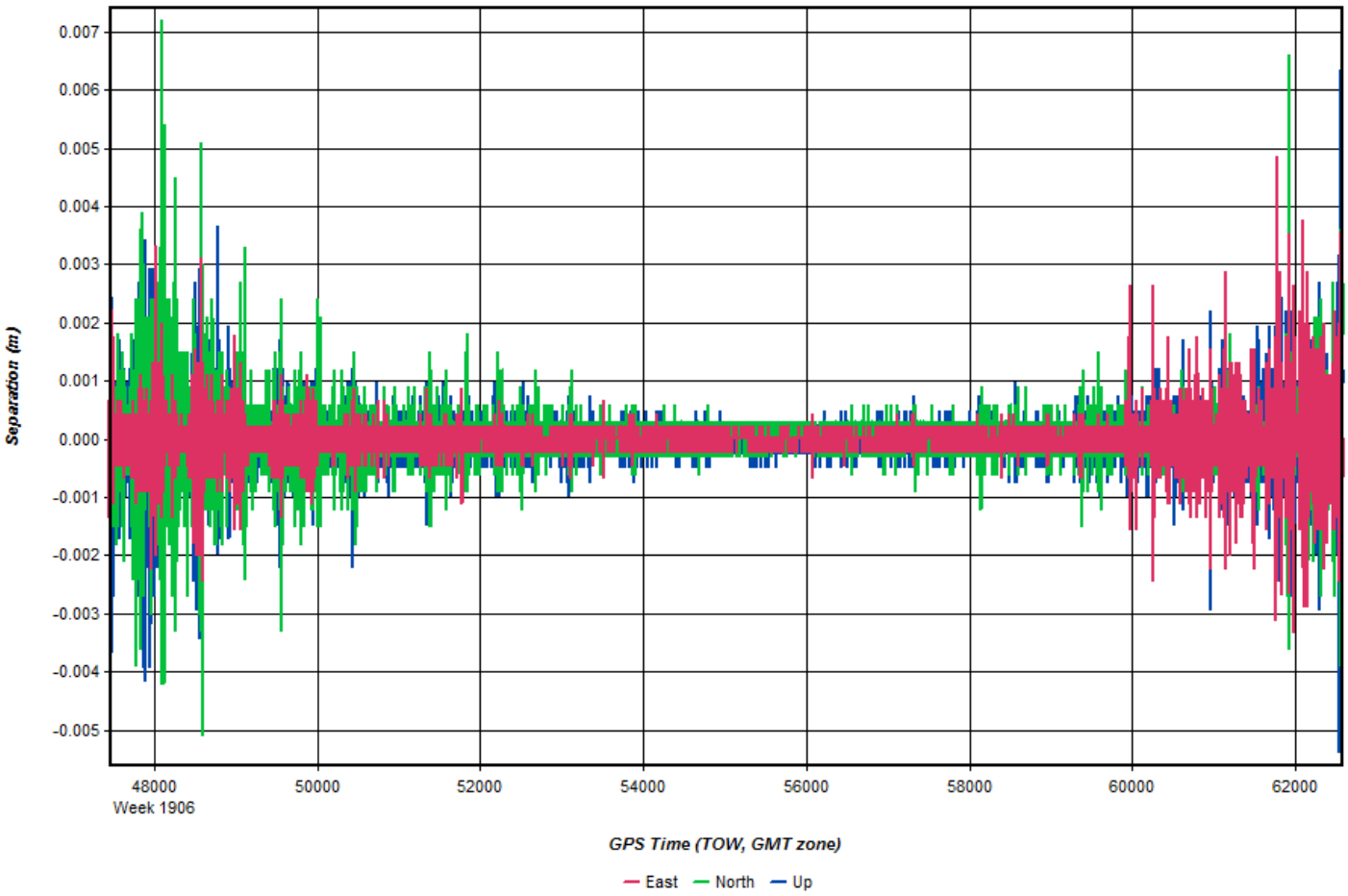

PDOP
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
592000
Week 1905
594000
596000
598000
600000
602000
604000
1200
Week 1906
3200
GPS Time (TOW, GMT zone)
PDOP

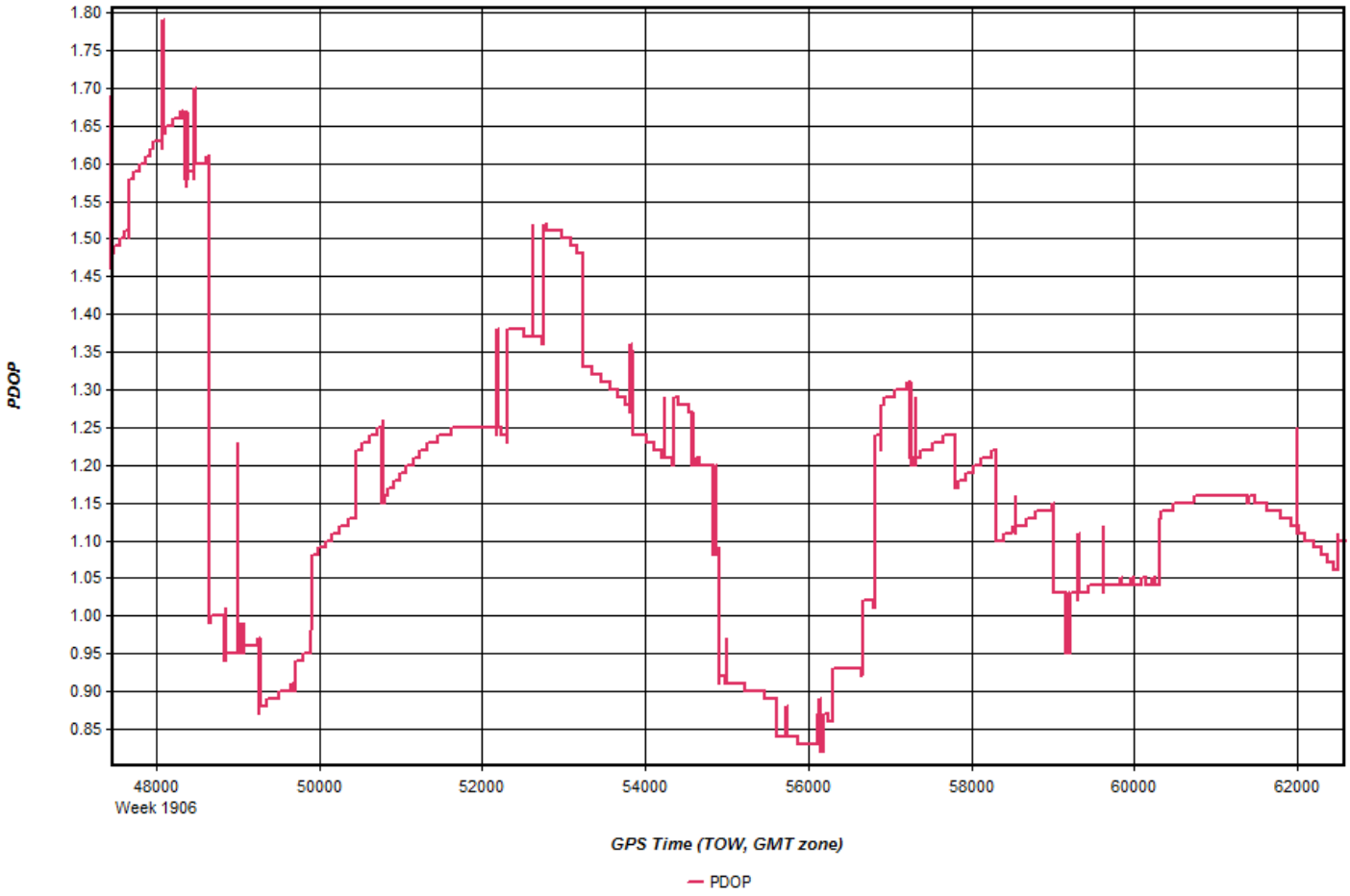
225_20160717_1



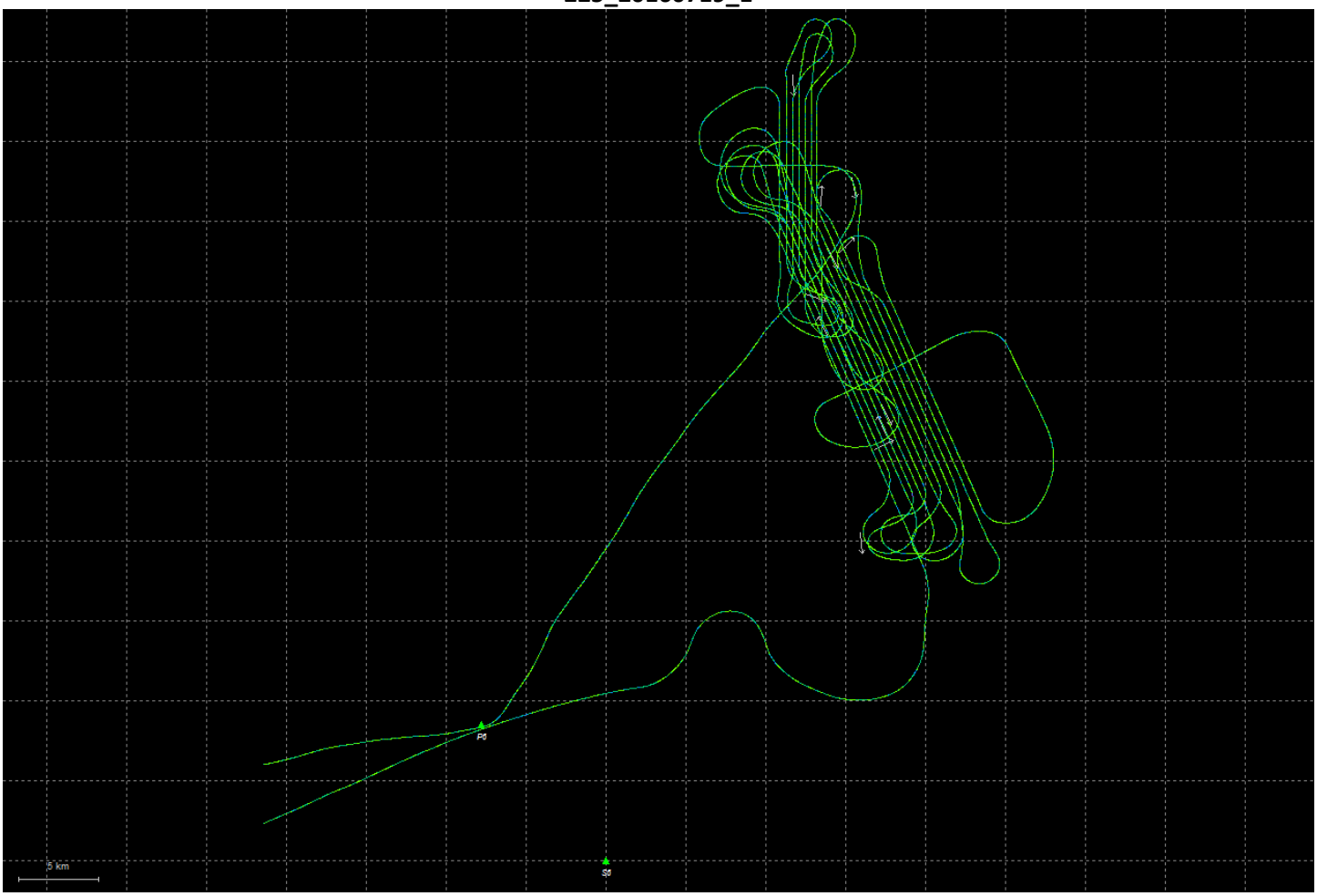

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
48000
Week 1906
50000
52000
54000
56000
58000
60000
62000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

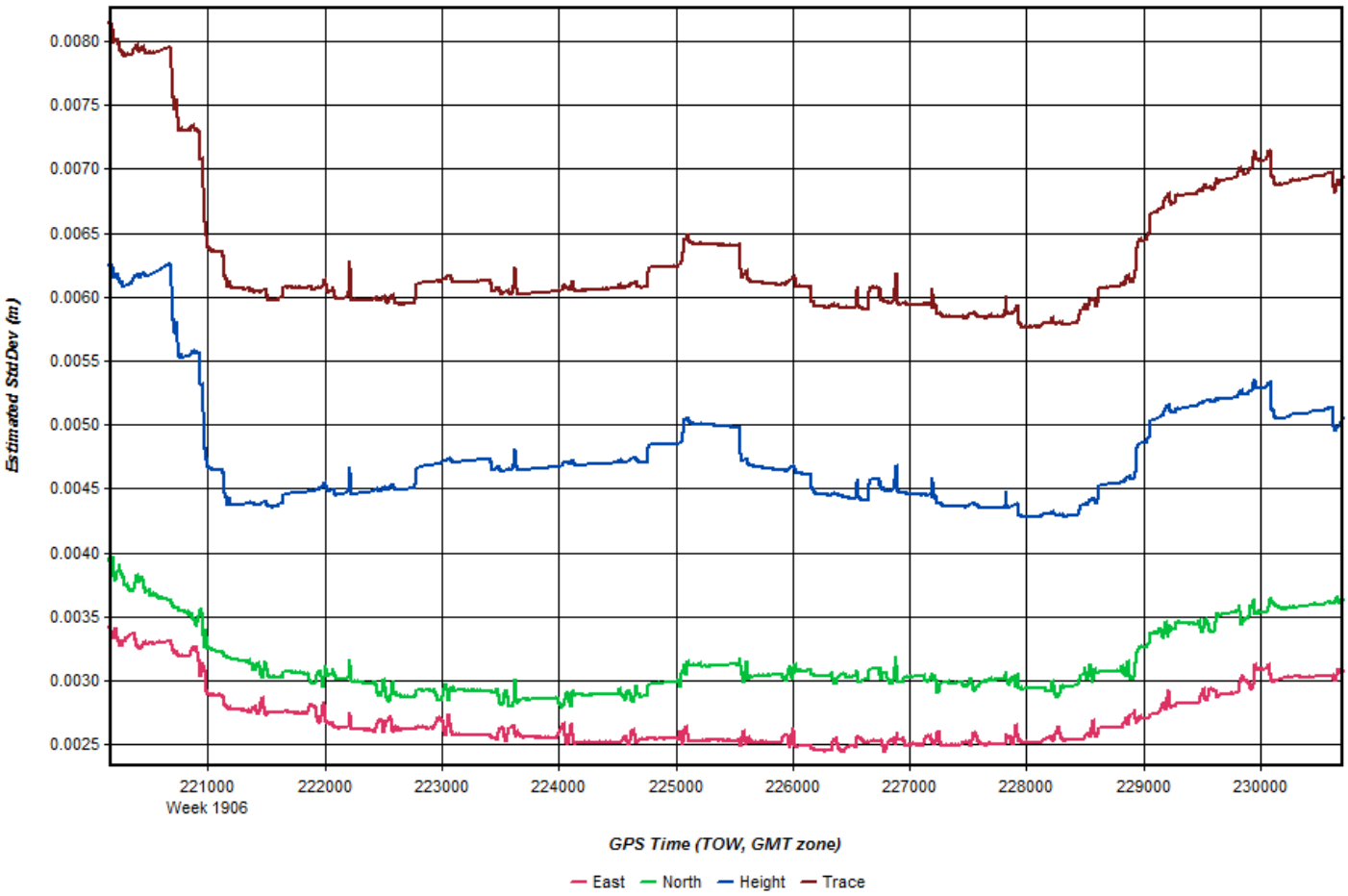

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
48000
Week 1906
50000
52000
54000
56000
58000
60000
62000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

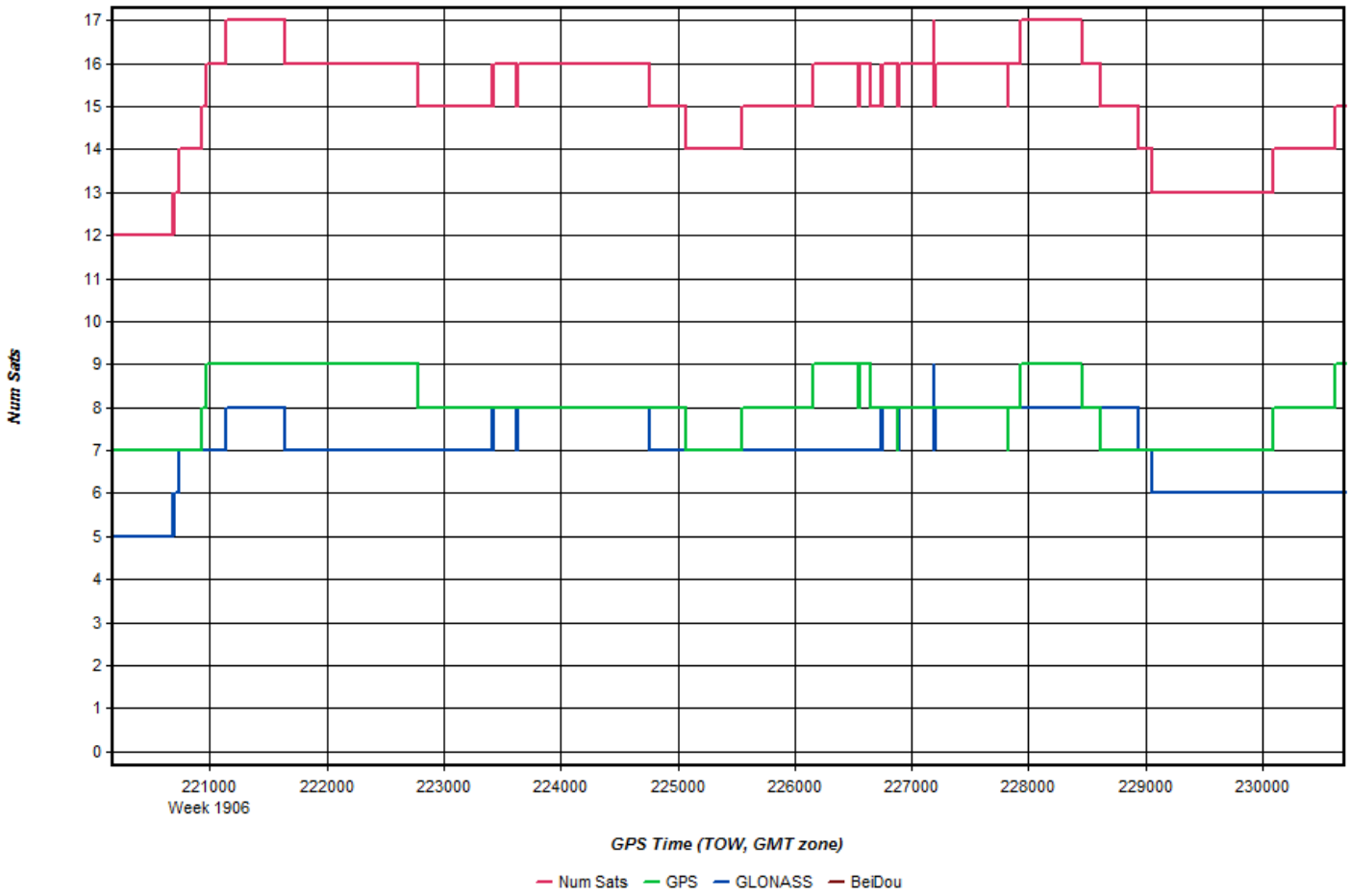

0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
Separation (m)
48000
Week 1906
50000
52000
54000
56000
58000
60000
62000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
48000
Week 1906
50000
52000
54000
56000
58000
60000
62000
GPS Time (TOW, GMT zone)
PDOP

225_20160719_1




Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
221000
Week 1906
222000
223000
224000
225000
226000
227000
228000
229000
230000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
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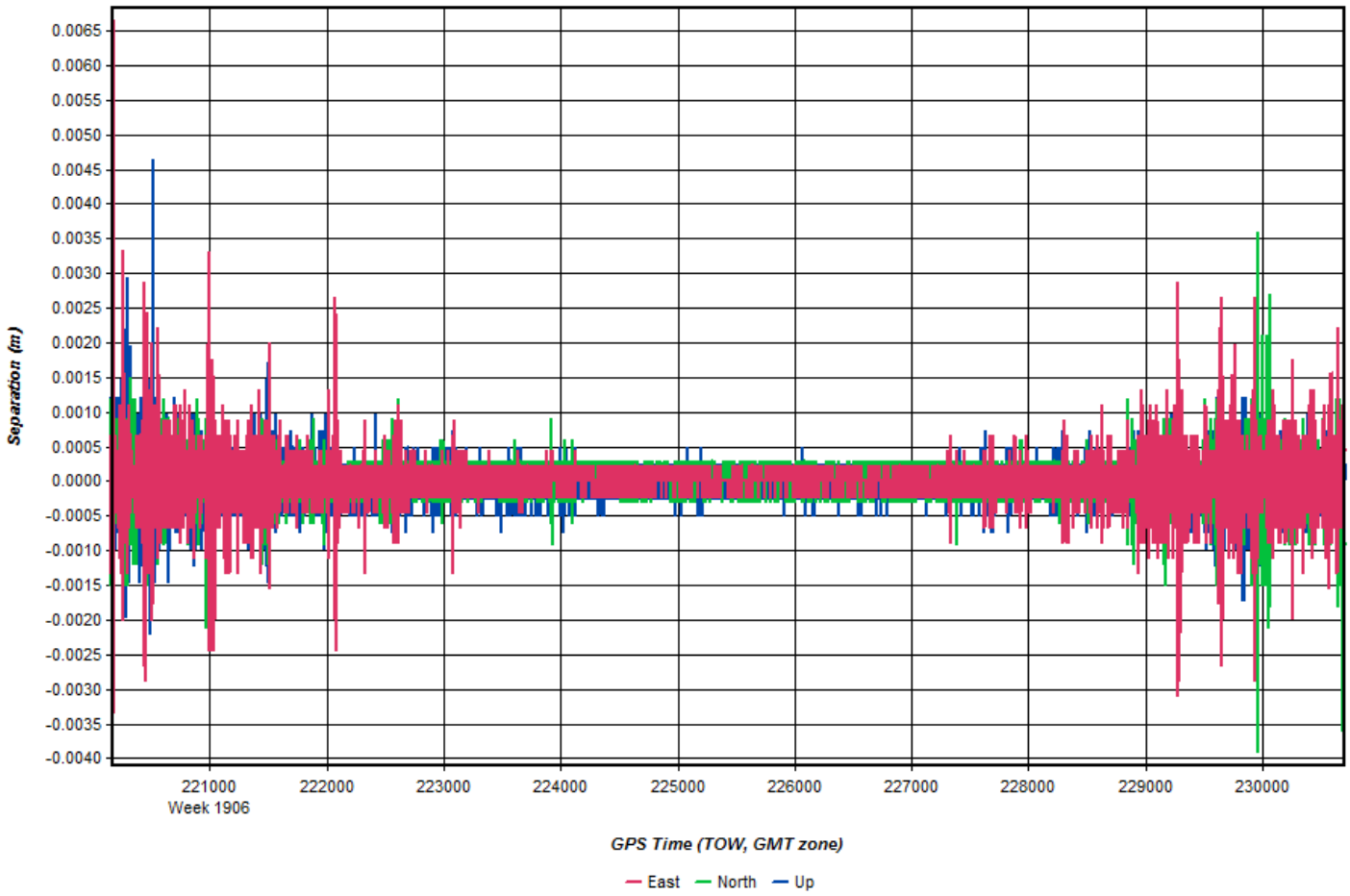
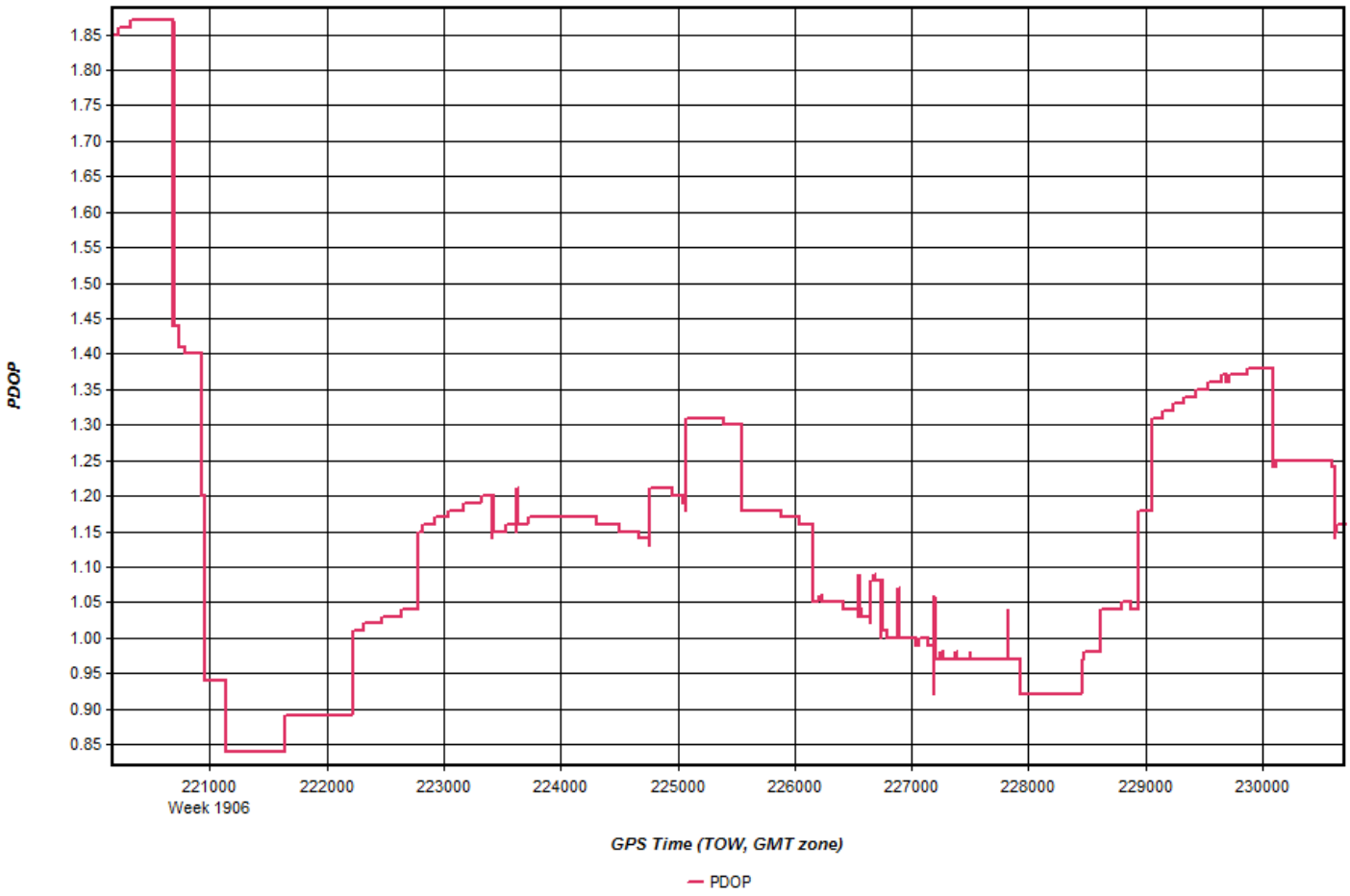
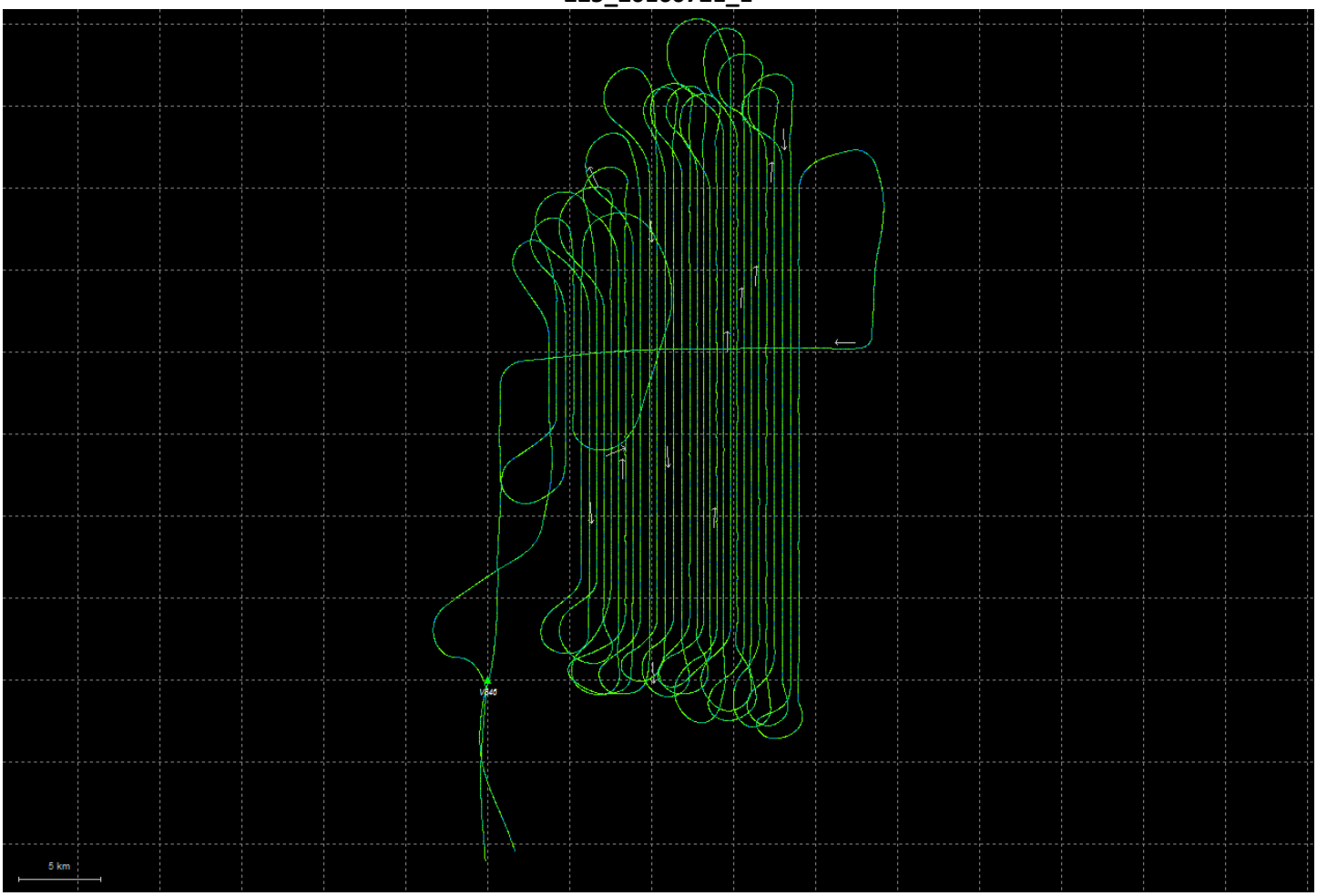
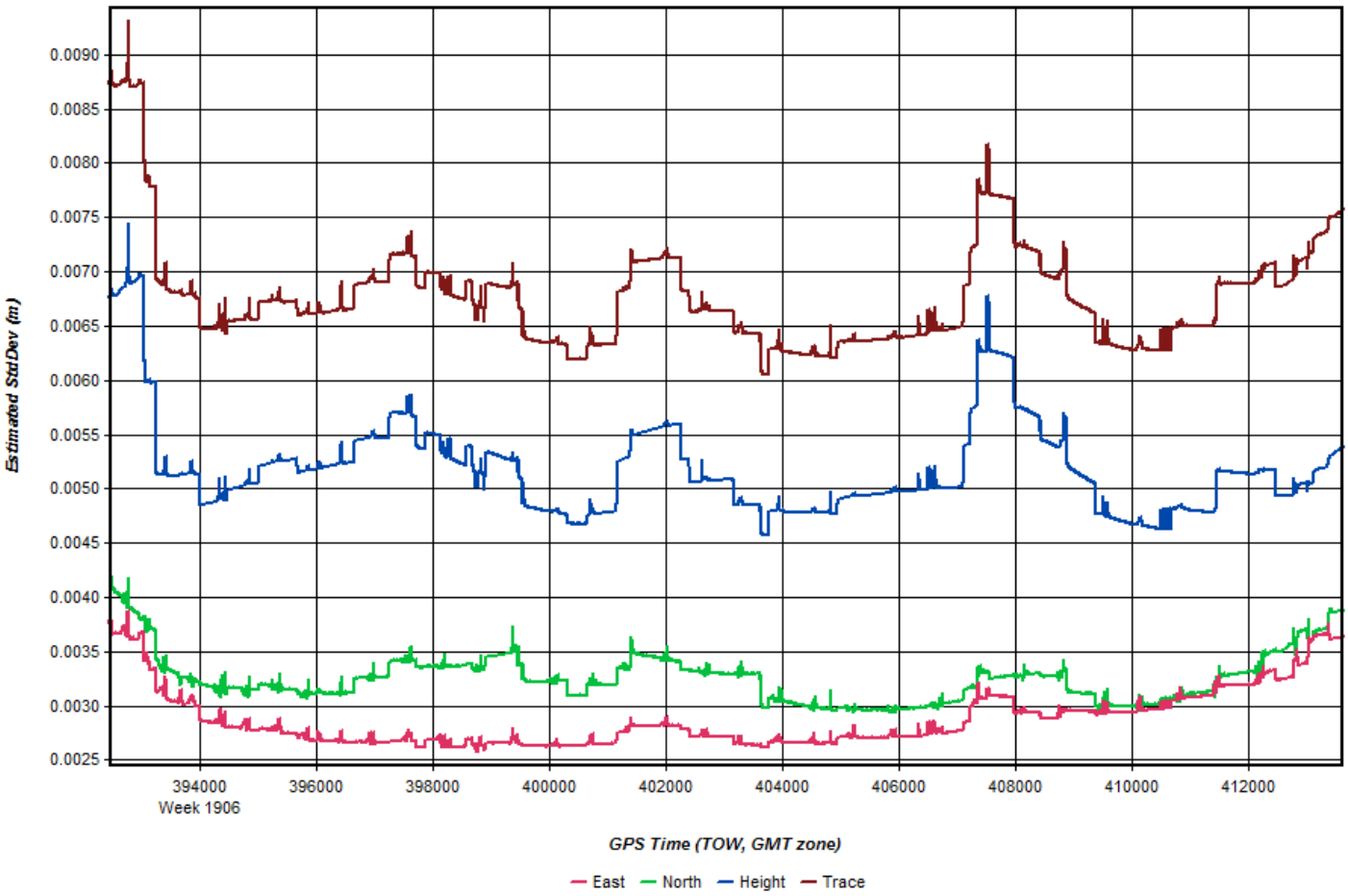
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
221000
Week 1906
222000
223000
224000
225000
226000
227000
228000
229000
230000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

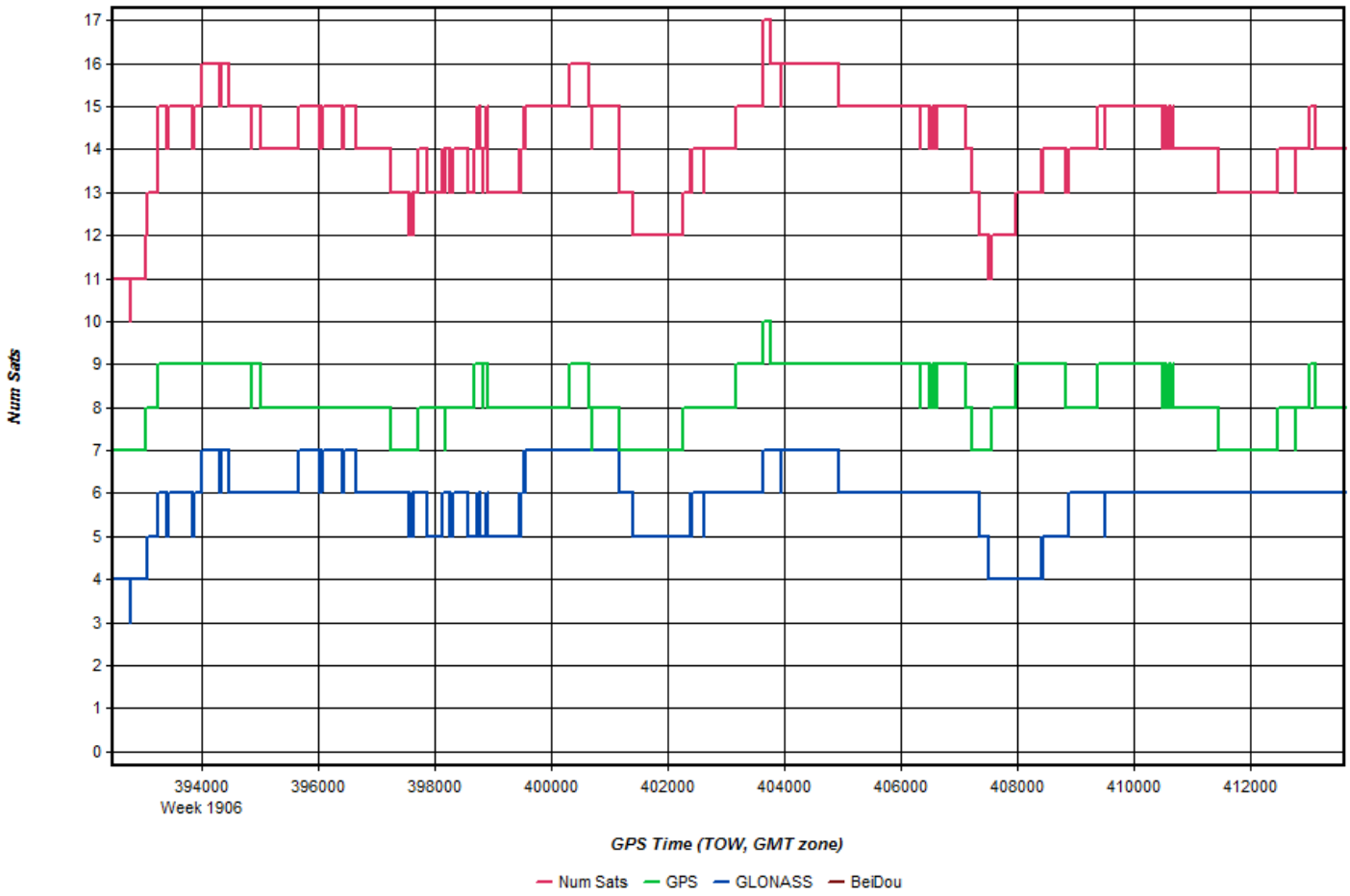

Separation (m)
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
221000
Week 1906
222000
223000
224000
225000
226000
227000
228000
229000
230000
GPS Time (TOW, GMT zone)
East
North
Up

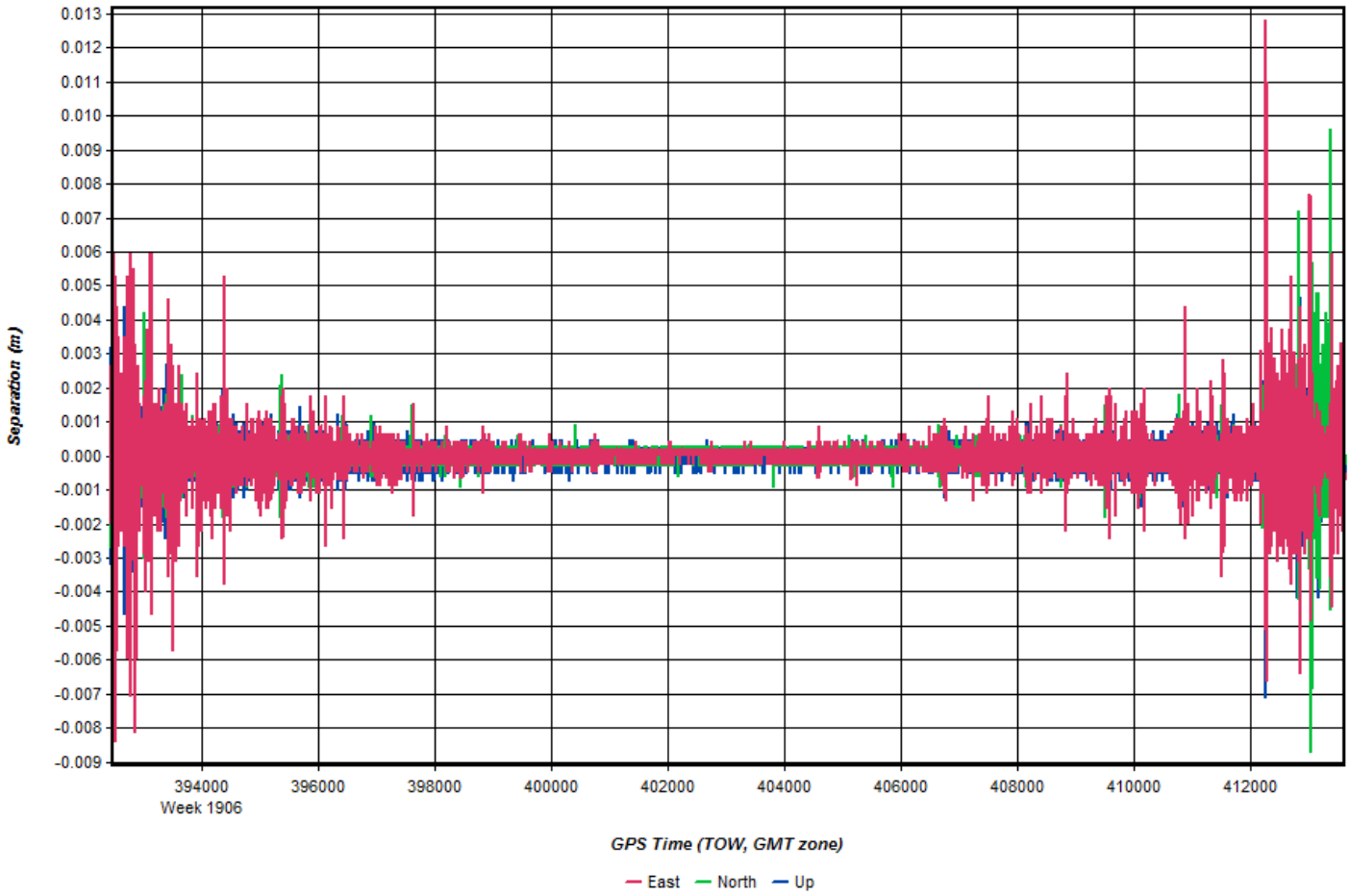

PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
221000
Week 1906
222000
223000
224000
225000
226000
227000
228000
229000
230000
GPS Time (TOW, GMT zone)
PDOP

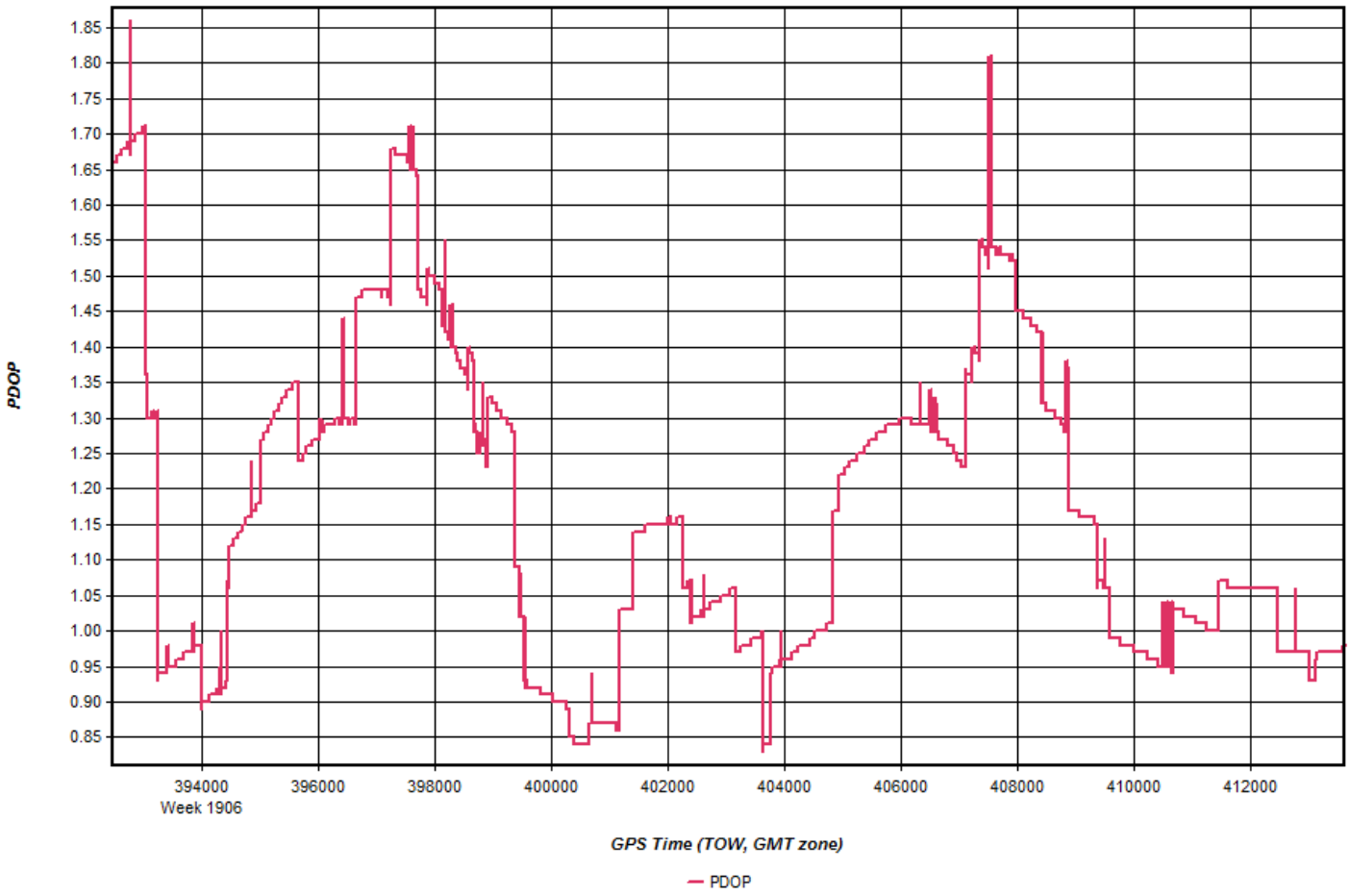
225_20160721_1



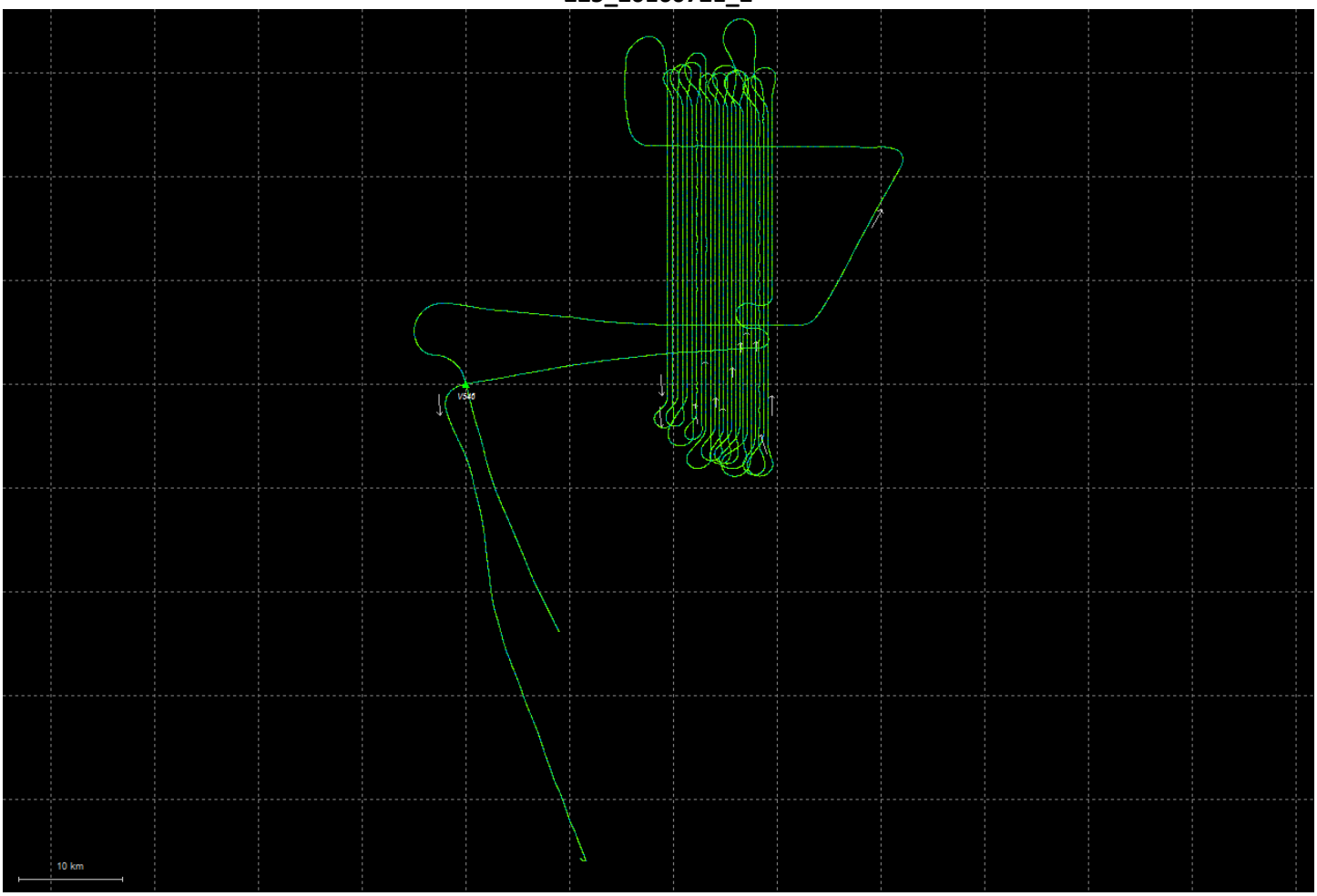

Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
394000
Week 1906
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

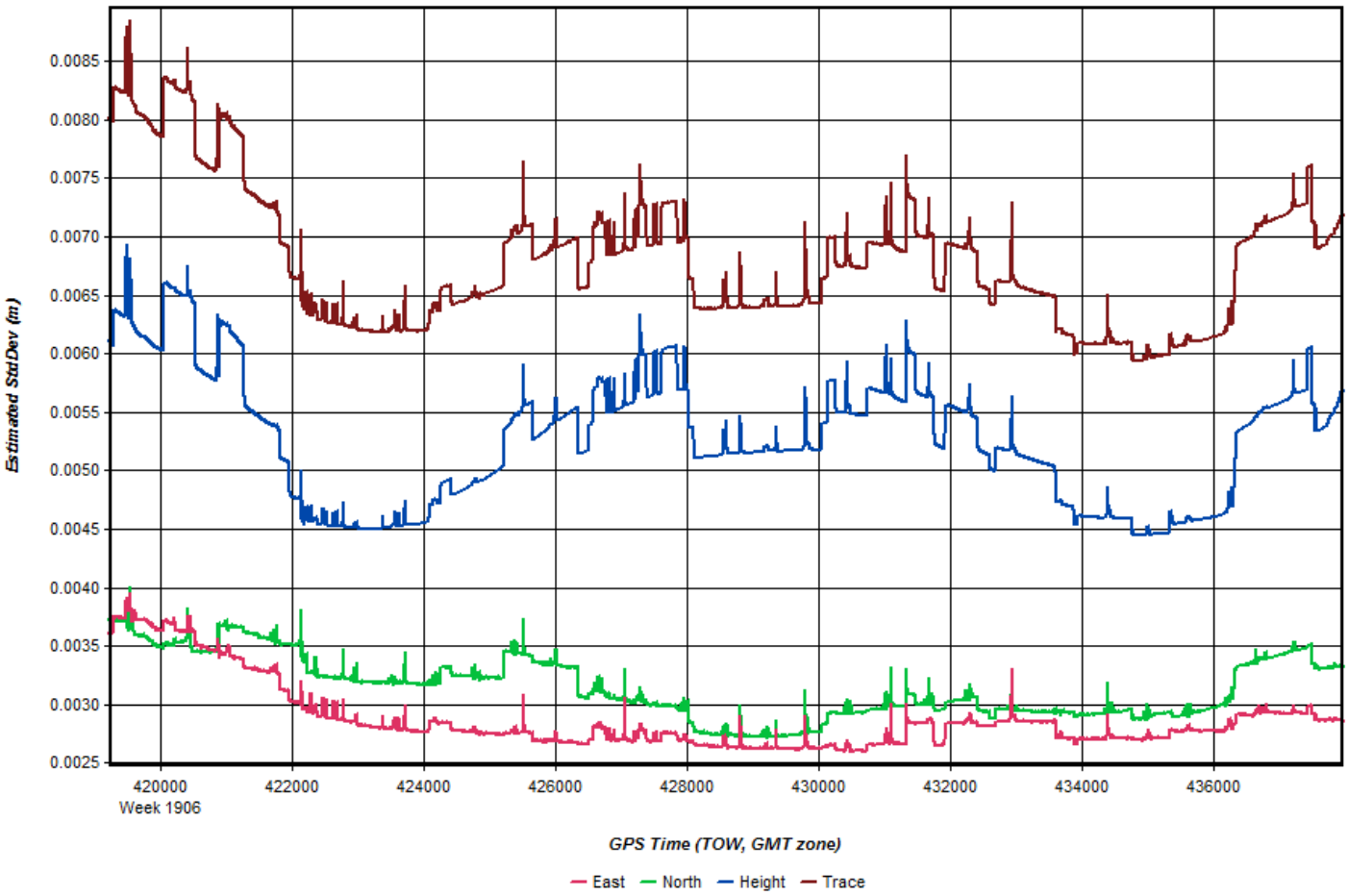

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
394000
Week 1906
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

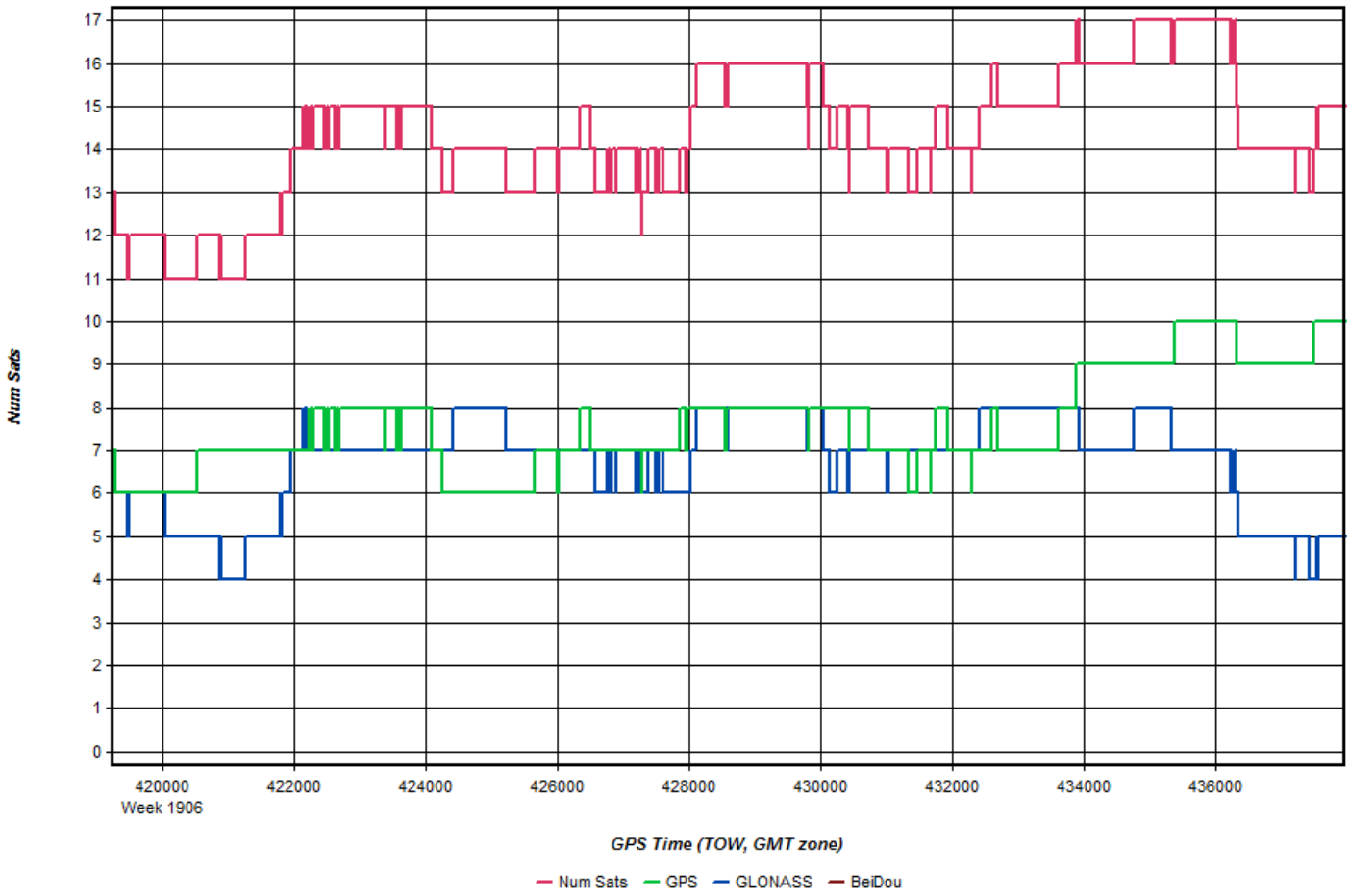

0.013
0.012
0.011
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
Separation (m)
394000
Week 1906
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
East
North
Up

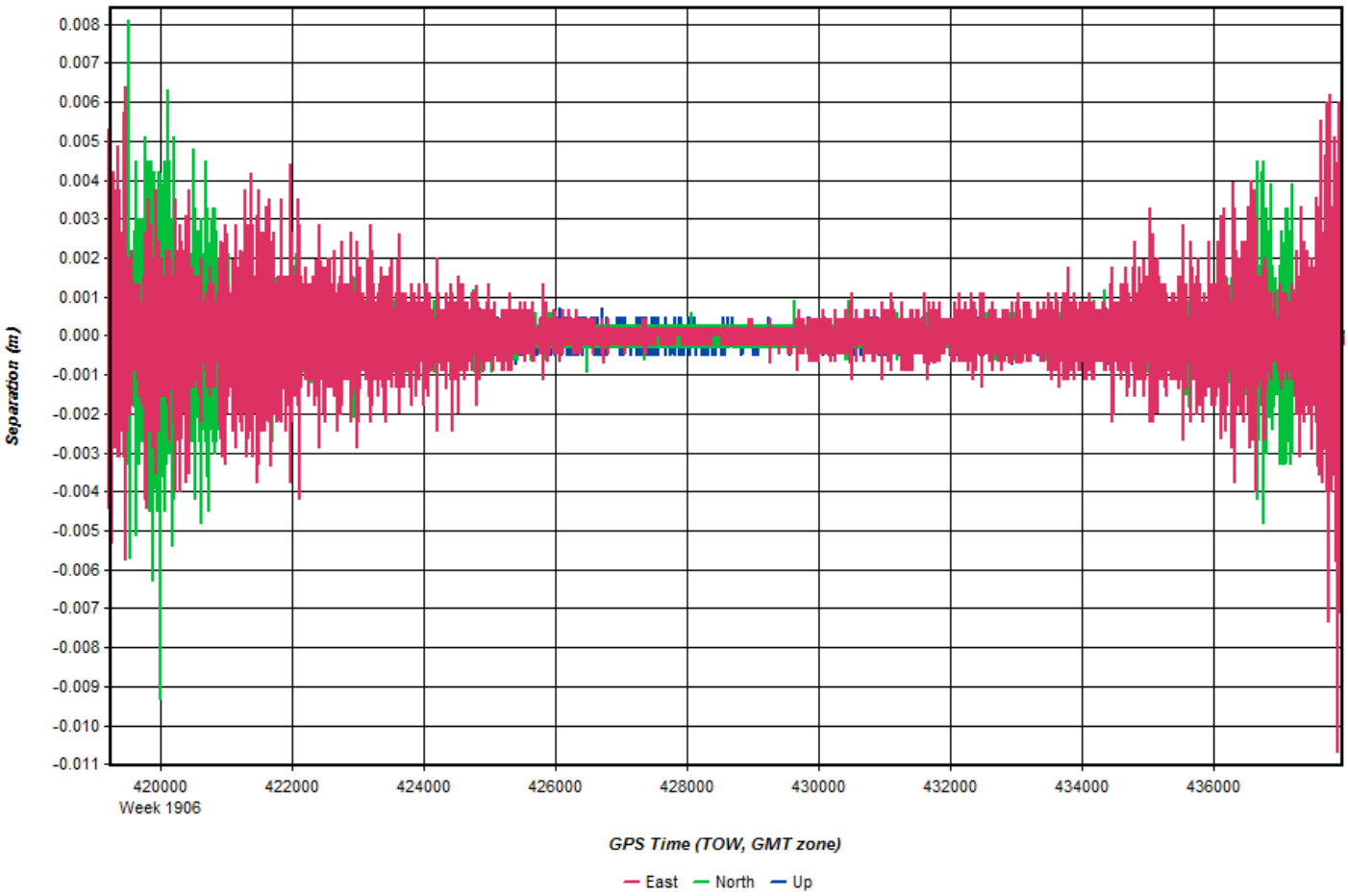

PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
394000
Week 1906
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
PDOP

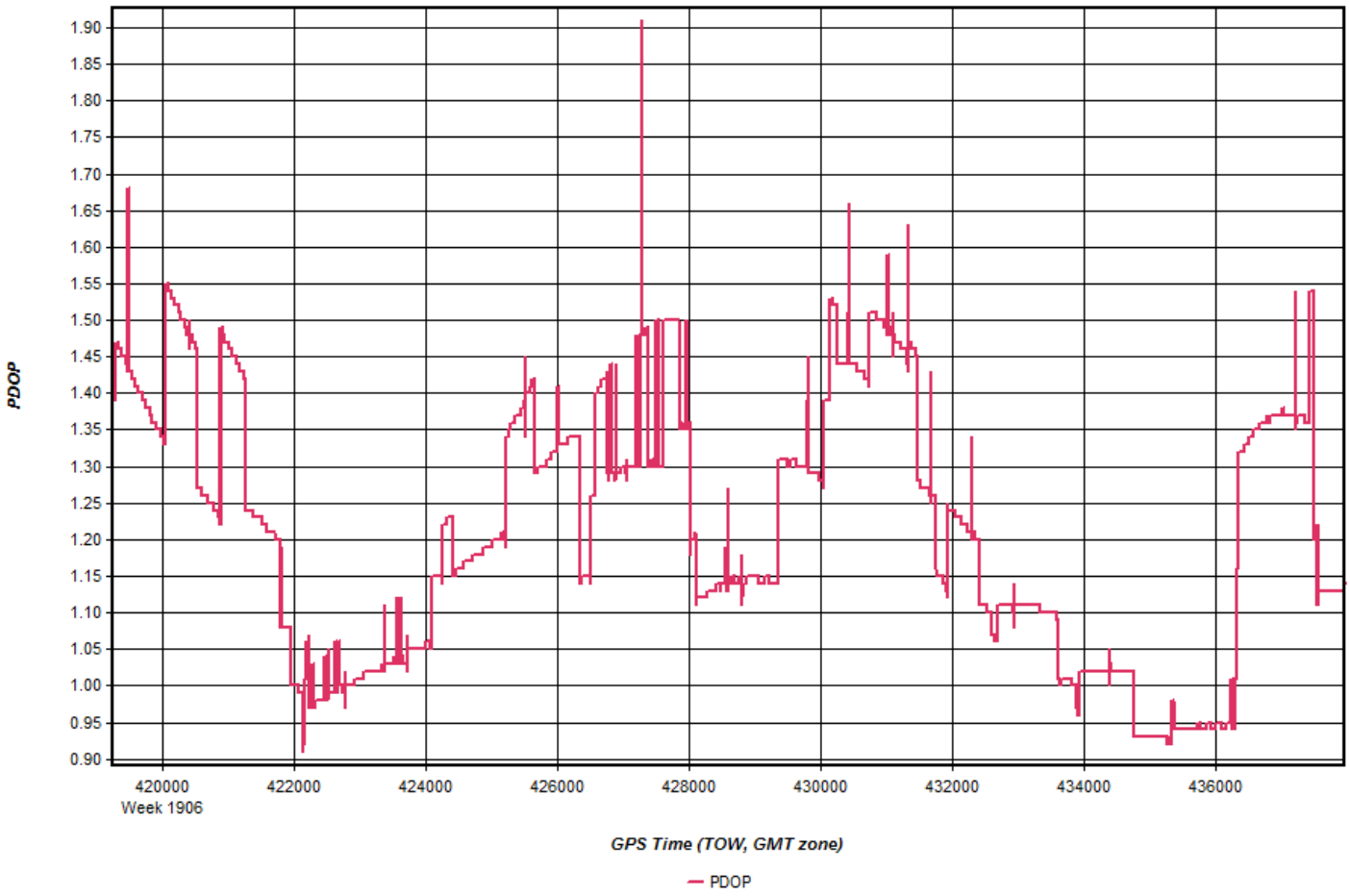
225_20160721_2




Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
420000
Week 1906
422000
424000
426000
428000
430000
432000
434000
436000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
420000
Week 1906
422000
424000
426000
428000
430000
432000
434000
436000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
-0.011
Separation (m)
420000
Week 1906
422000
424000
426000
428000
430000
432000
434000
436000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
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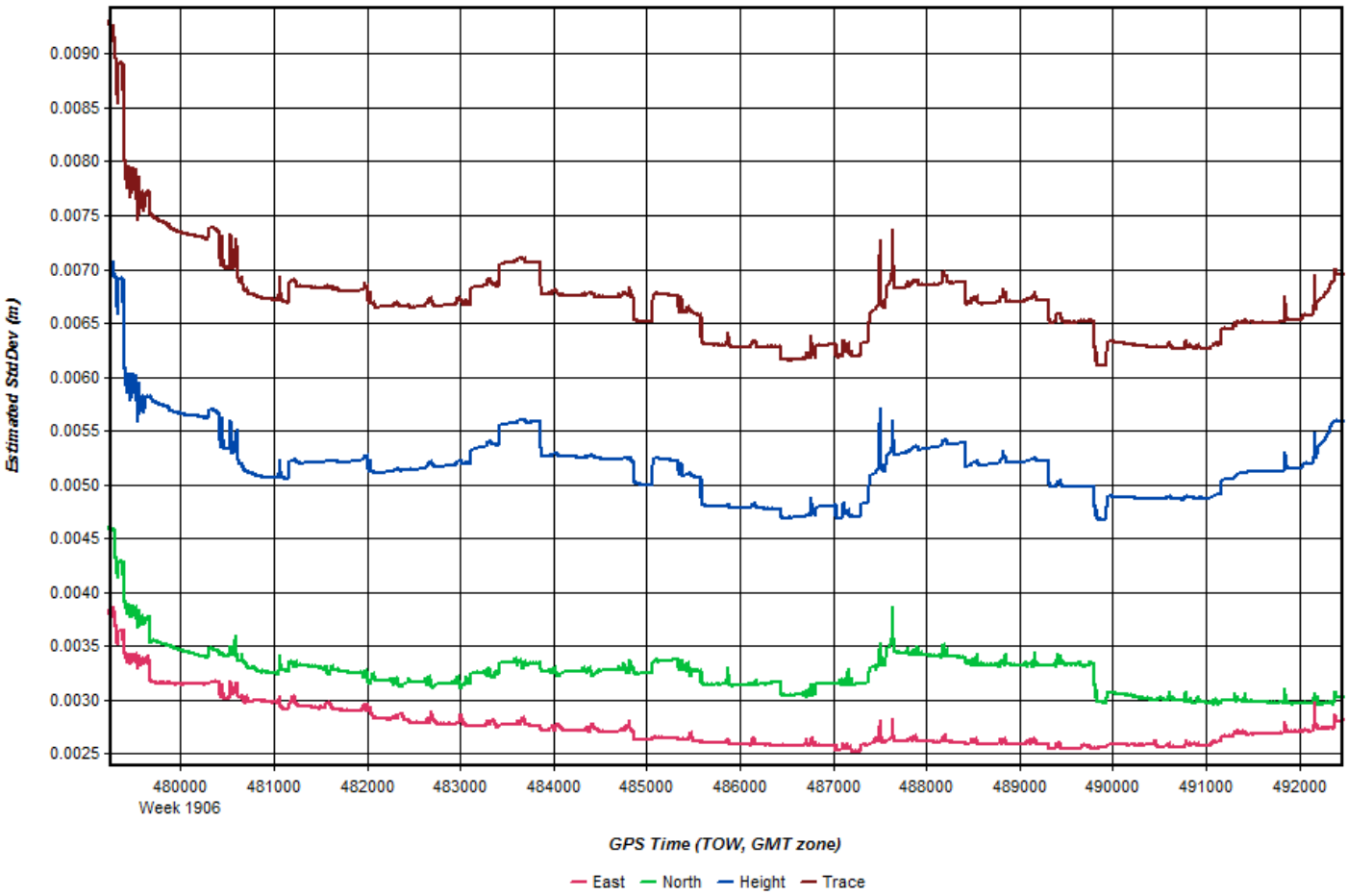
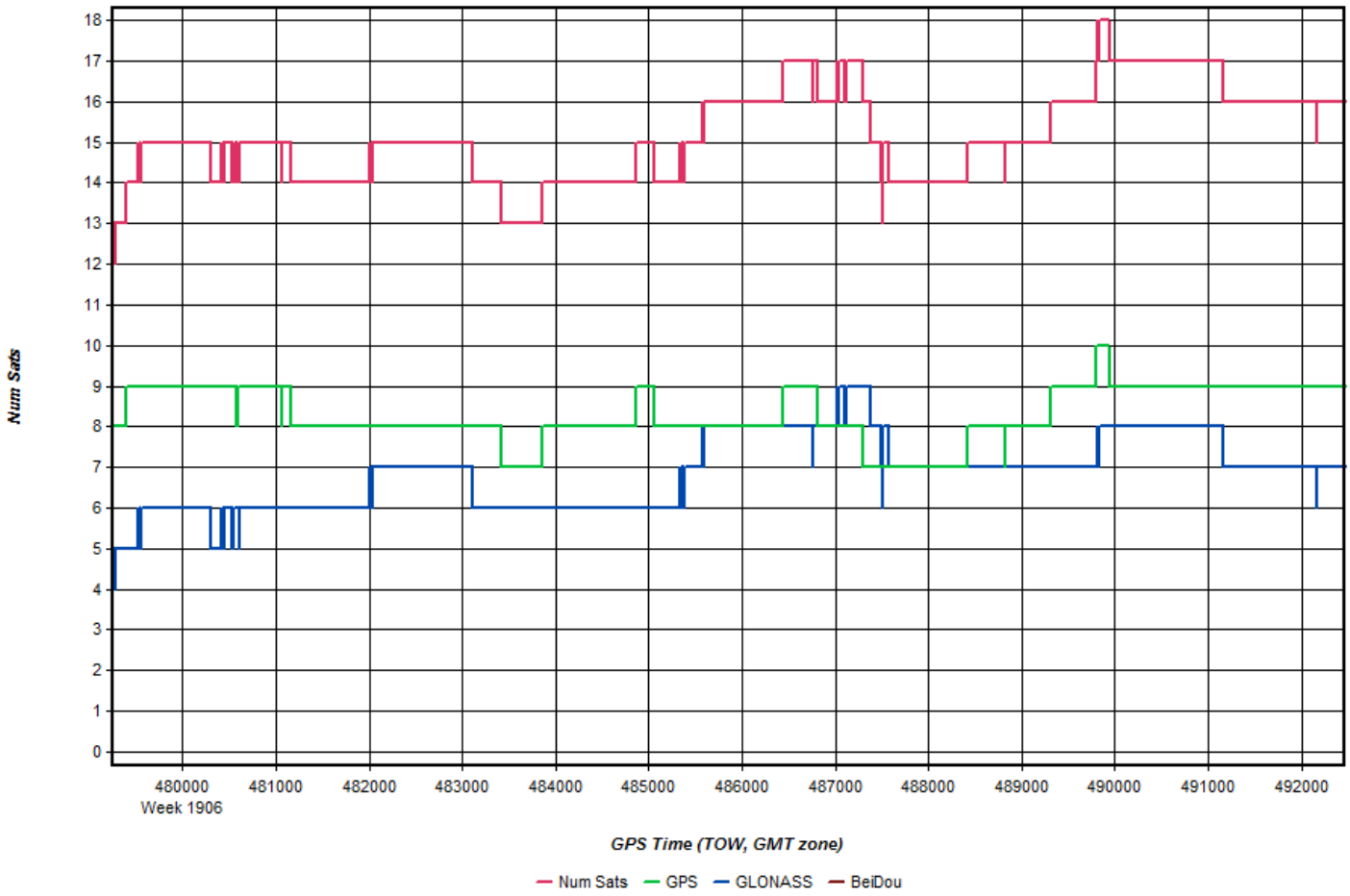
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
420000
Week 1906
422000
424000
426000
428000
430000
432000
434000
436000
GPS Time (TOW, GMT zone)
PDOP

225_20160722_1


Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
480000
Week 1906
481000
482000
483000
484000
485000
486000
487000
488000
489000
490000
491000
492000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
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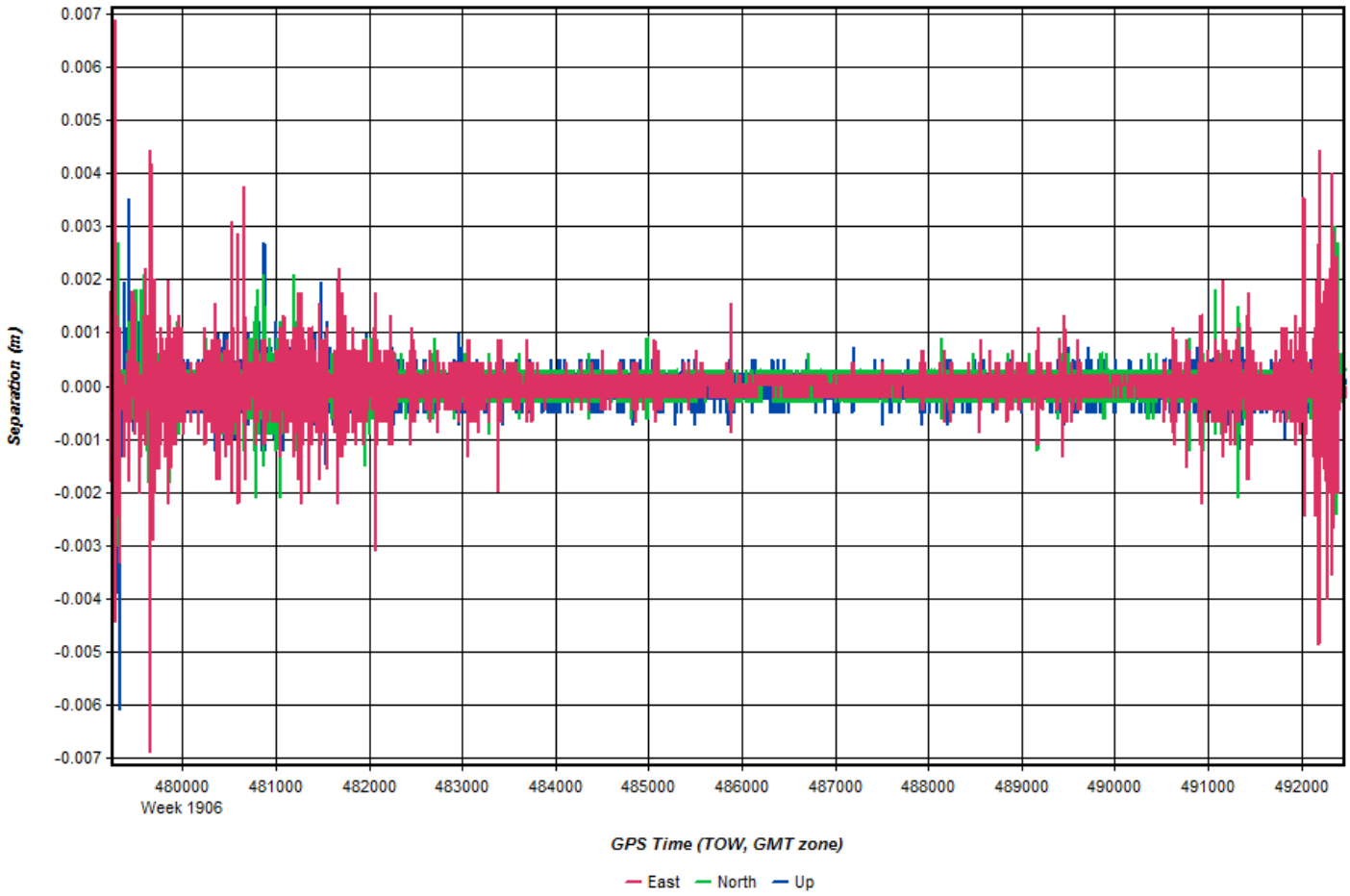
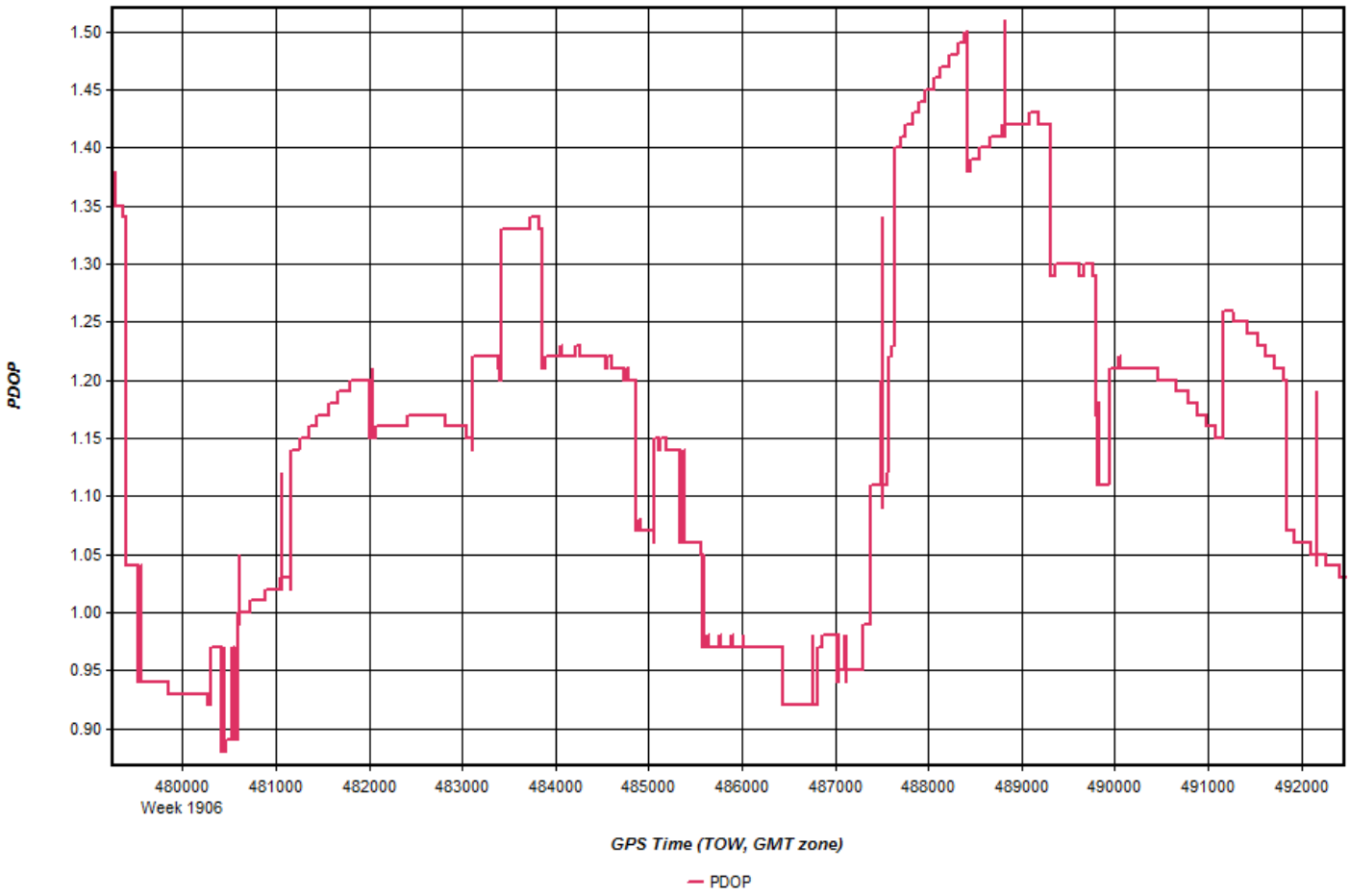
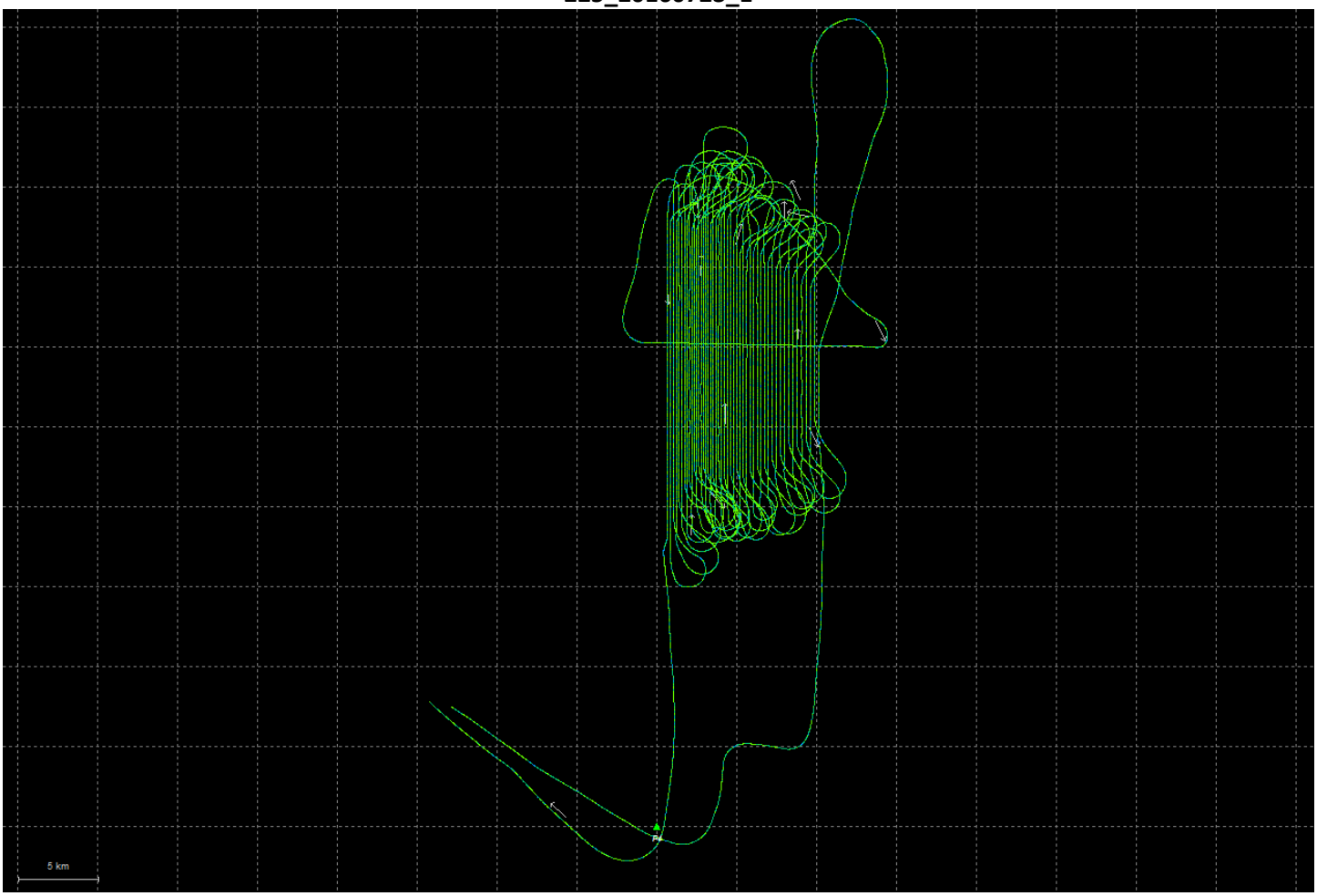
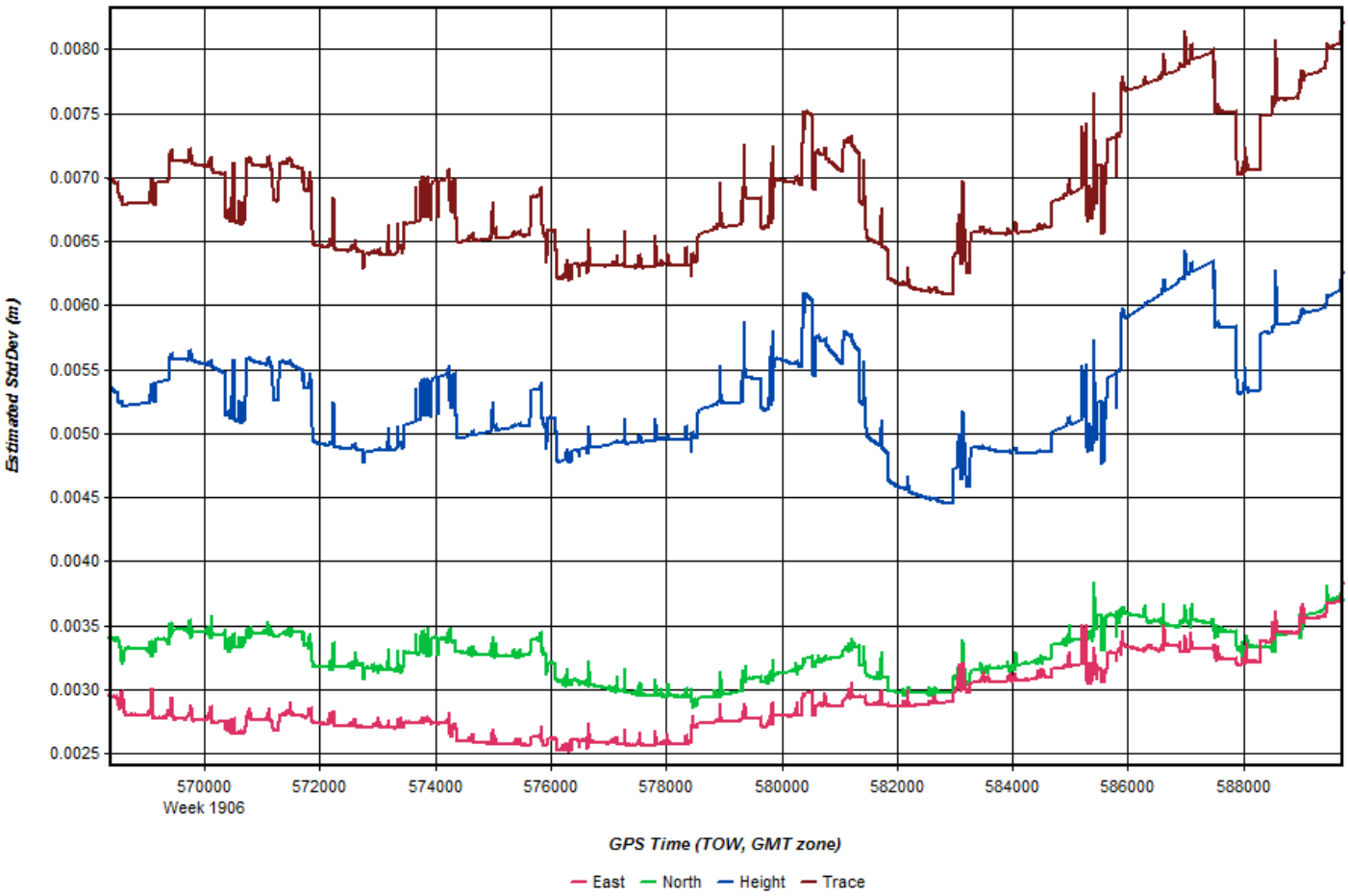
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
480000
Week 1906
481000
482000
483000
484000
485000
486000
487000
488000
489000
490000
491000
492000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

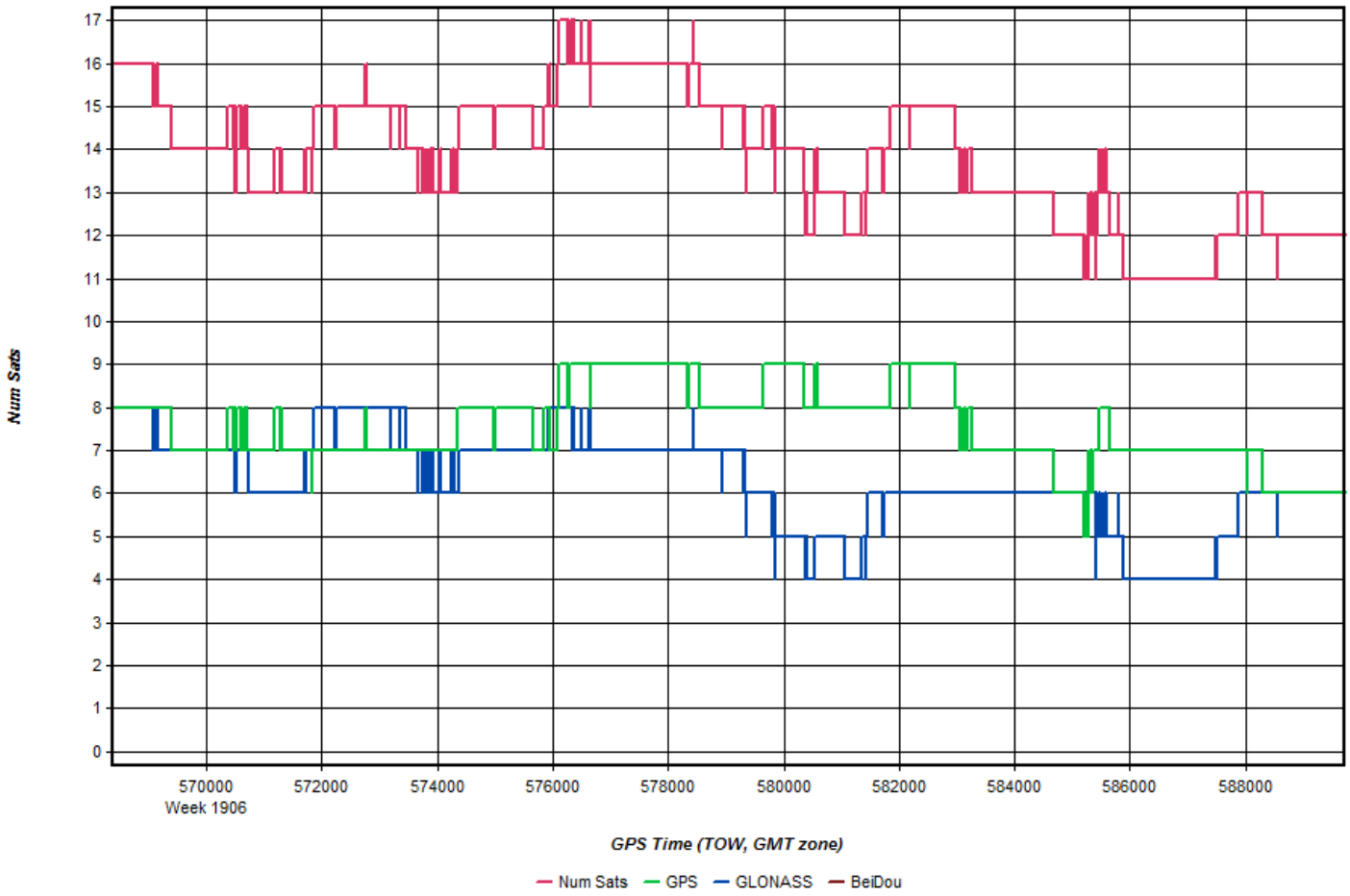

0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
Separation (m)
480000
Week 1906
481000
482000
483000
484000
485000
486000
487000
488000
489000
490000
491000
492000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
480000
Week 1906
481000
482000
483000
484000
485000
486000
487000
488000
489000
490000
491000
492000
GPS Time (TOW, GMT zone)
PDOP

225_20160723_1




Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
570000
Week 1906
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
17
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15
14
13
12
11
10
9
8
7
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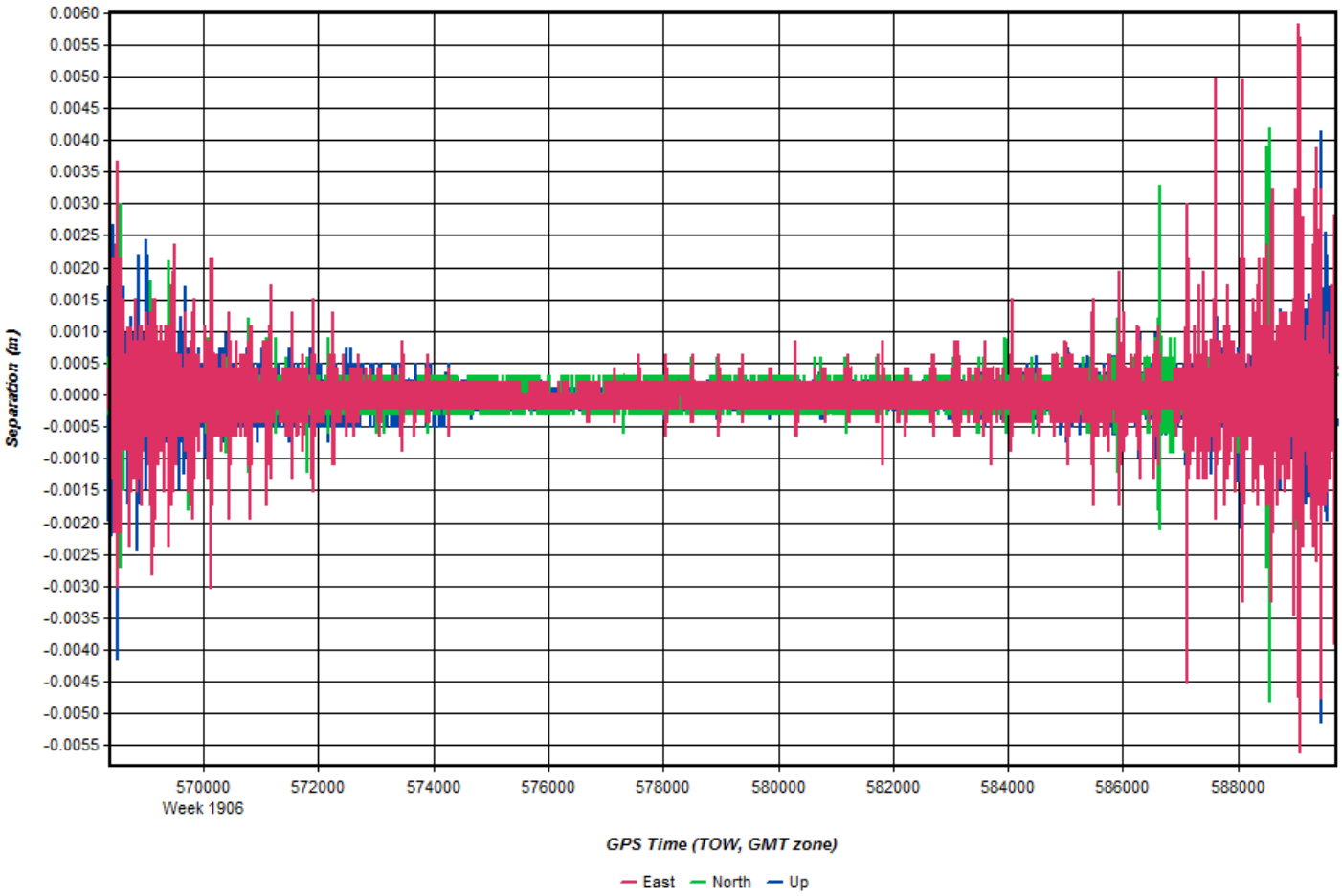
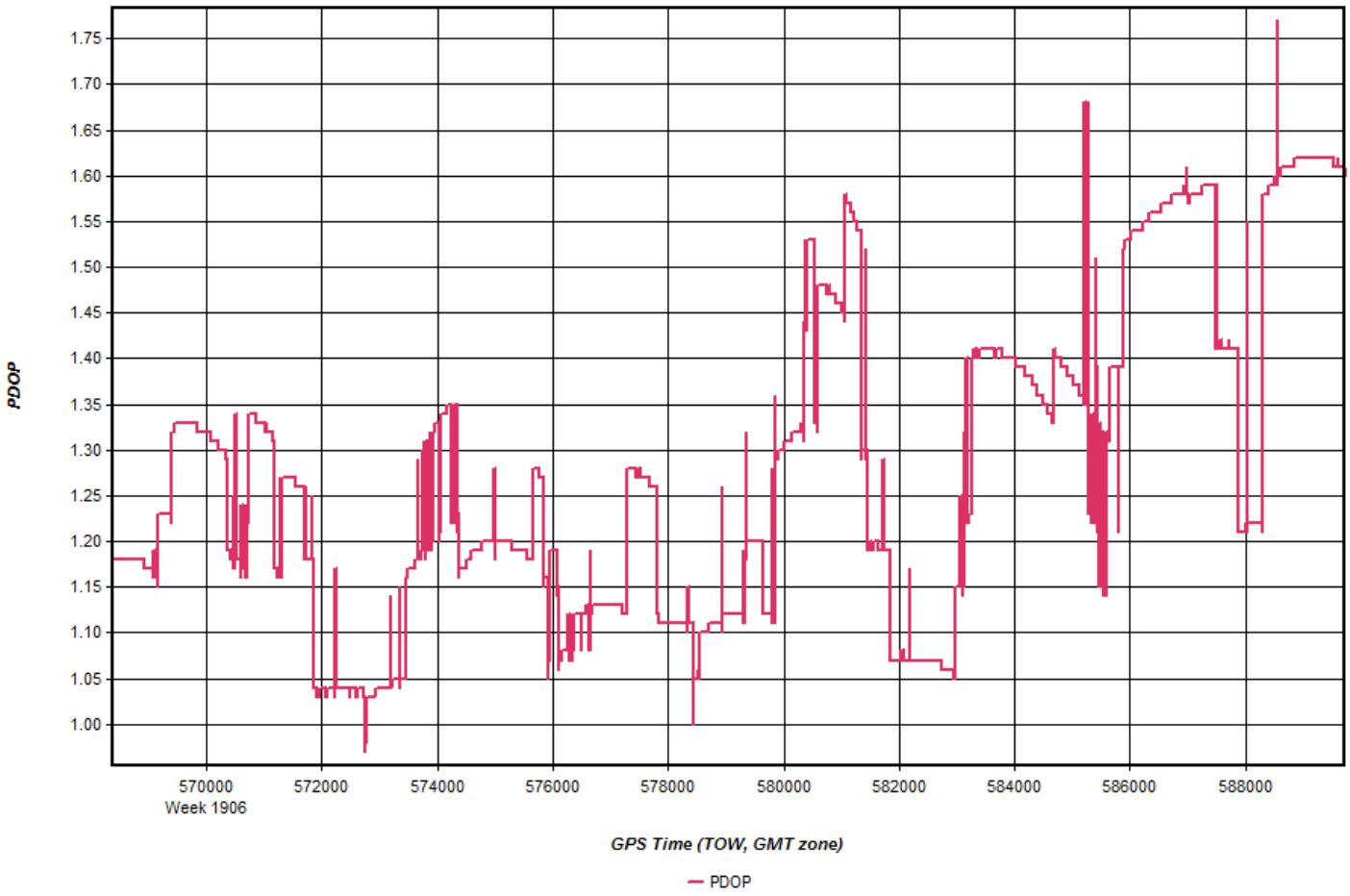
5
4
3
2
1
0
570000
Week 1906
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
Separation (m)
570000
Week 1906
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
570000
Week 1906
572000
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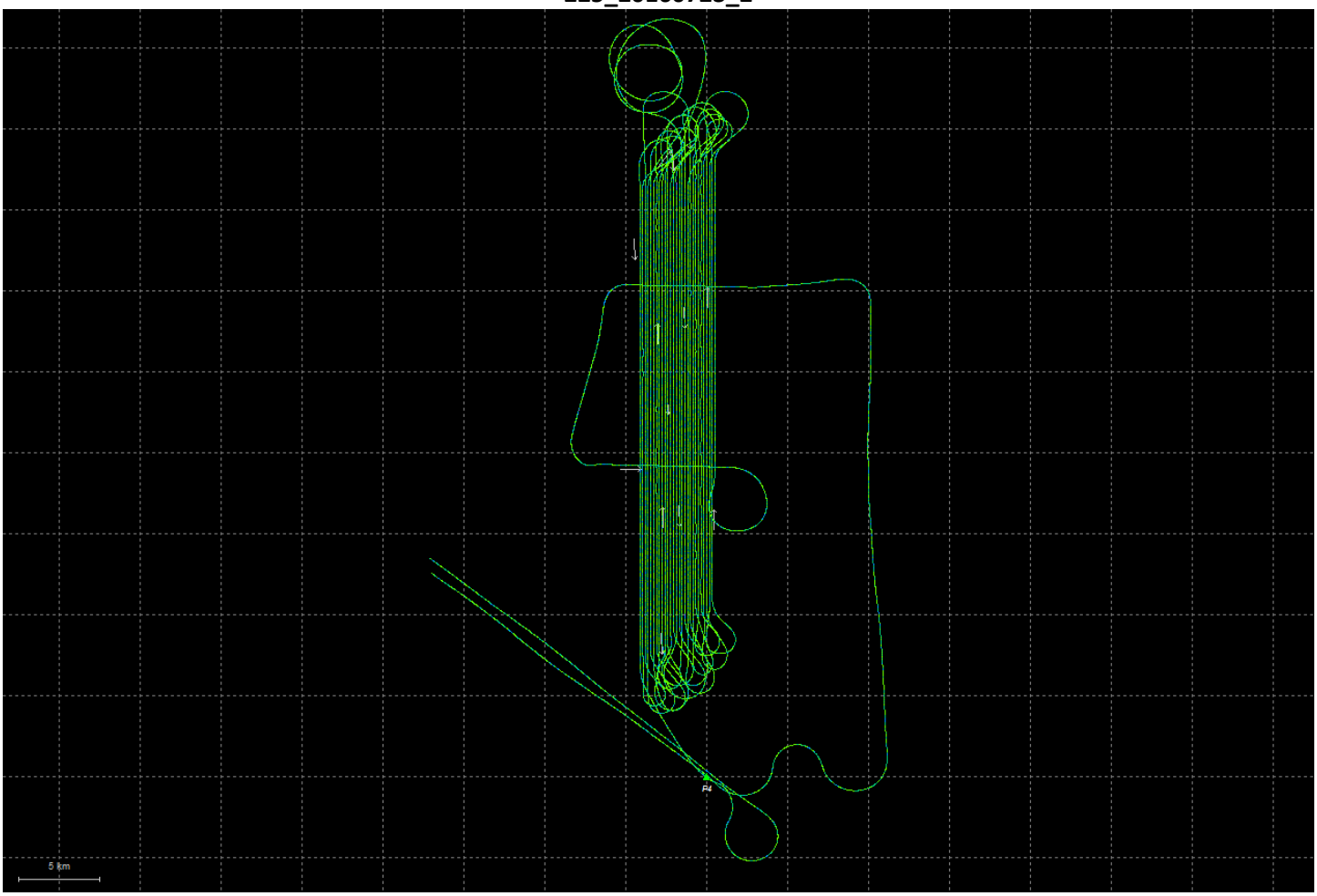
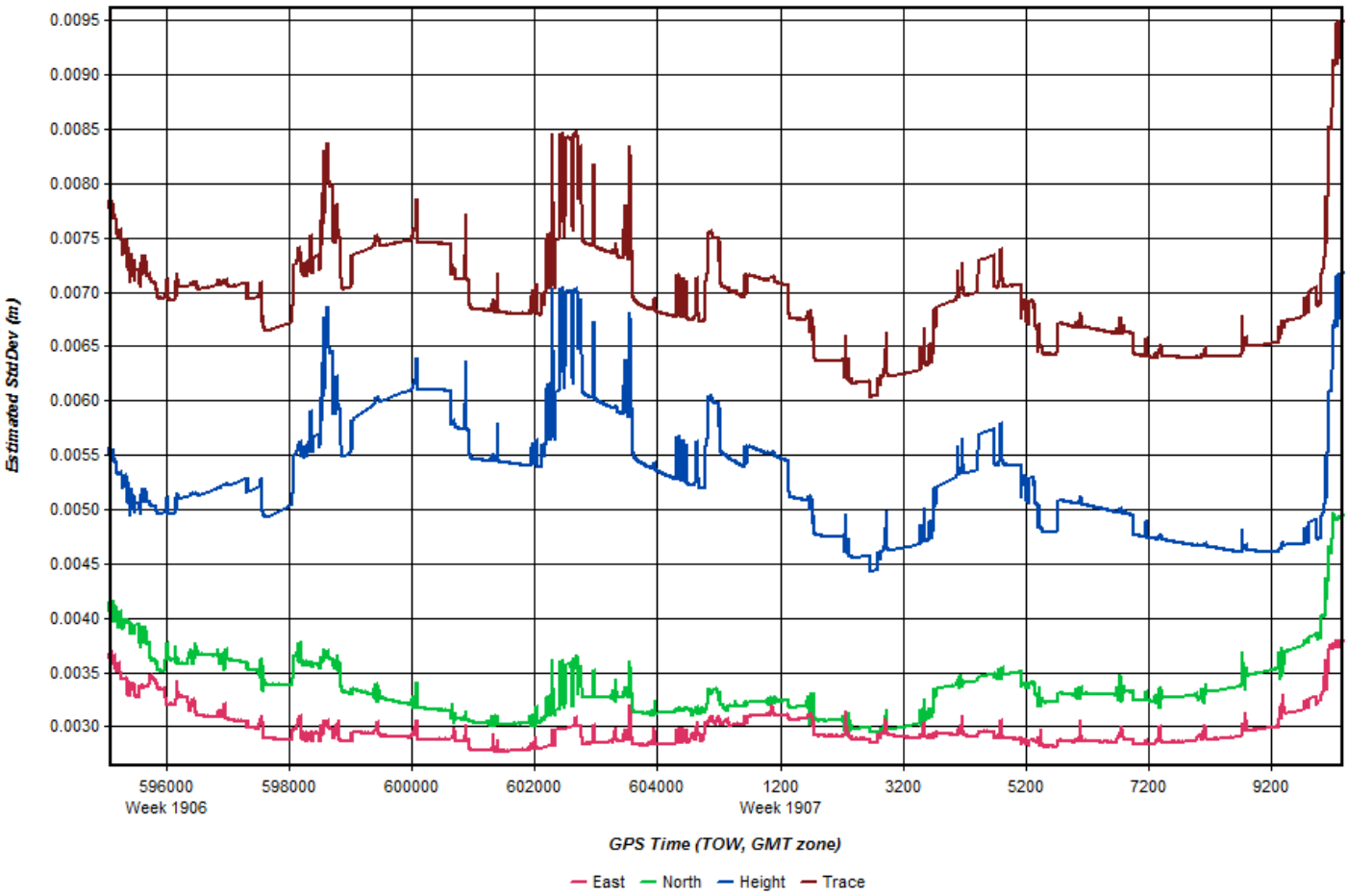
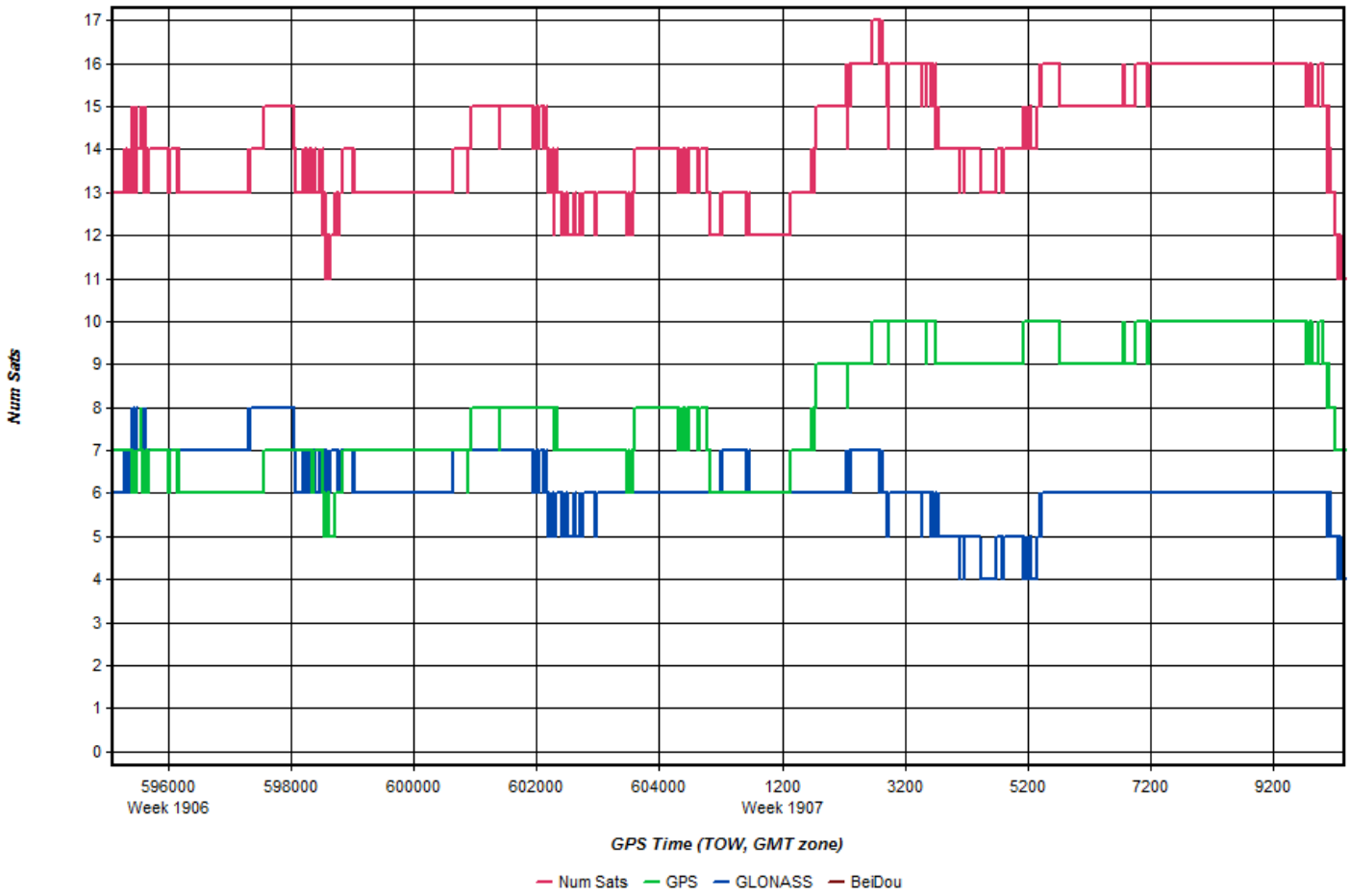
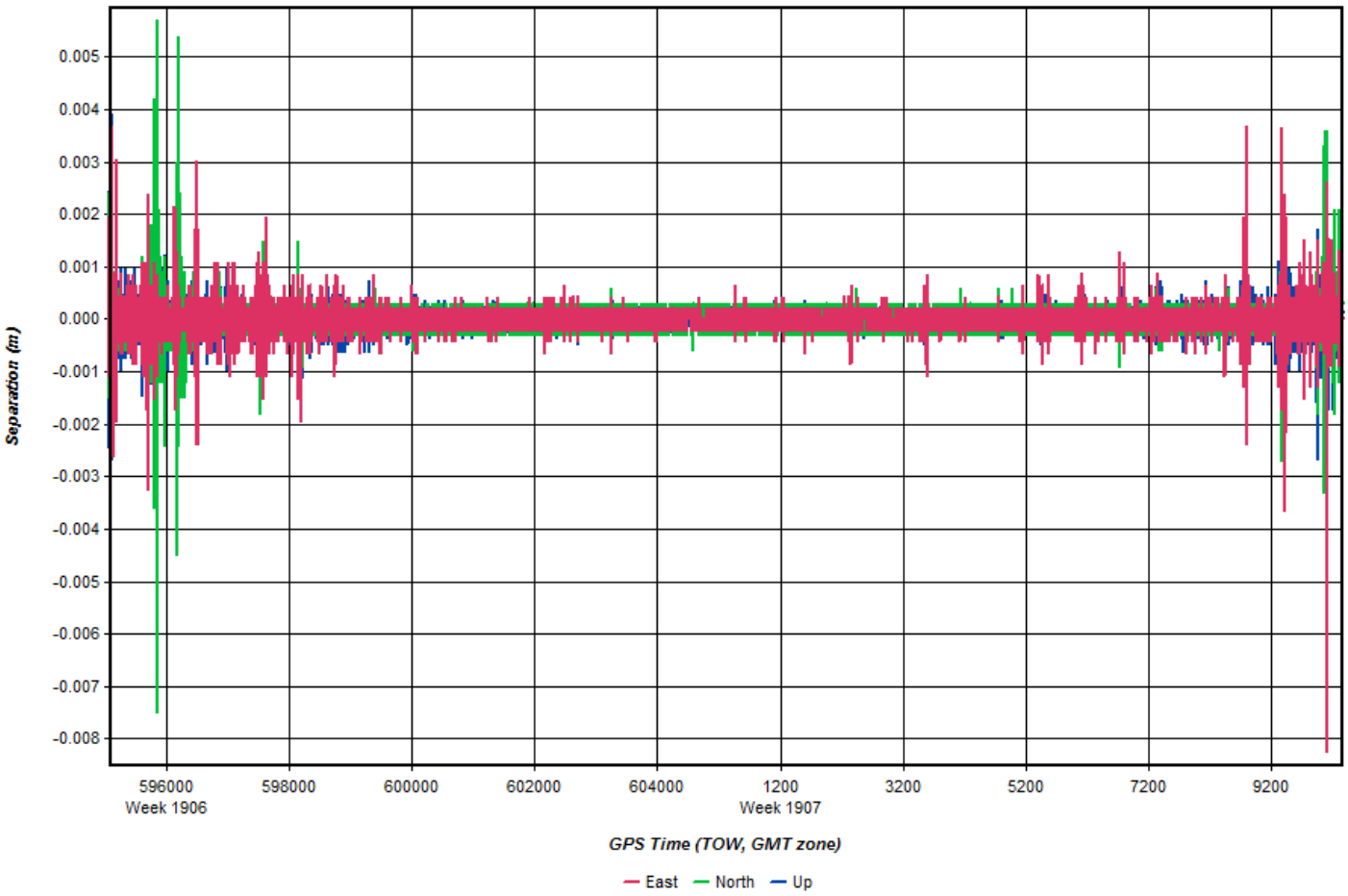
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
PDOP

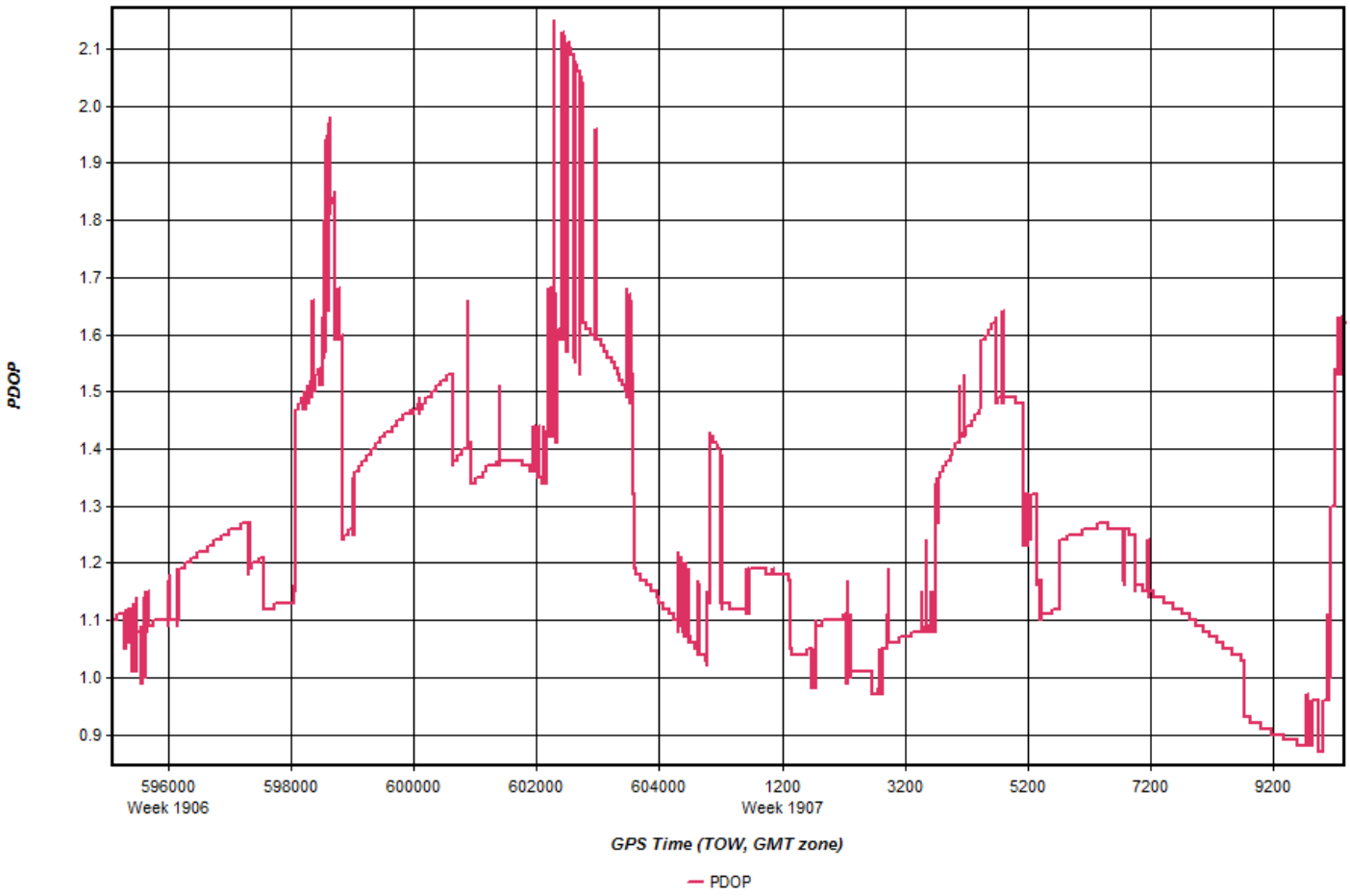
225_20160723_2



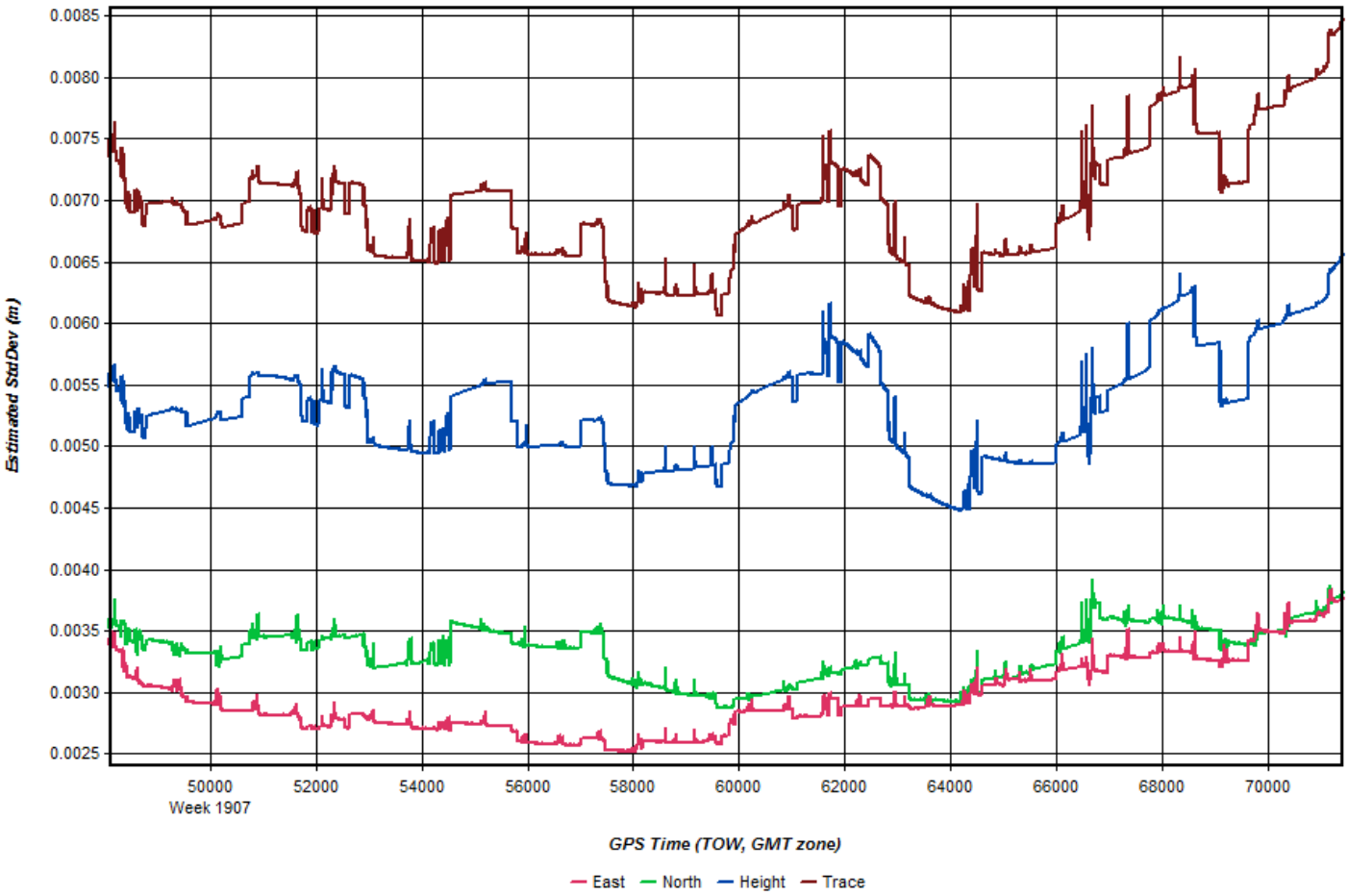

Estimated StdDev (m)
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
596000
Week 1906
598000
600000
602000
604000
1200
Week 1907
3200
5200
7200
9200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

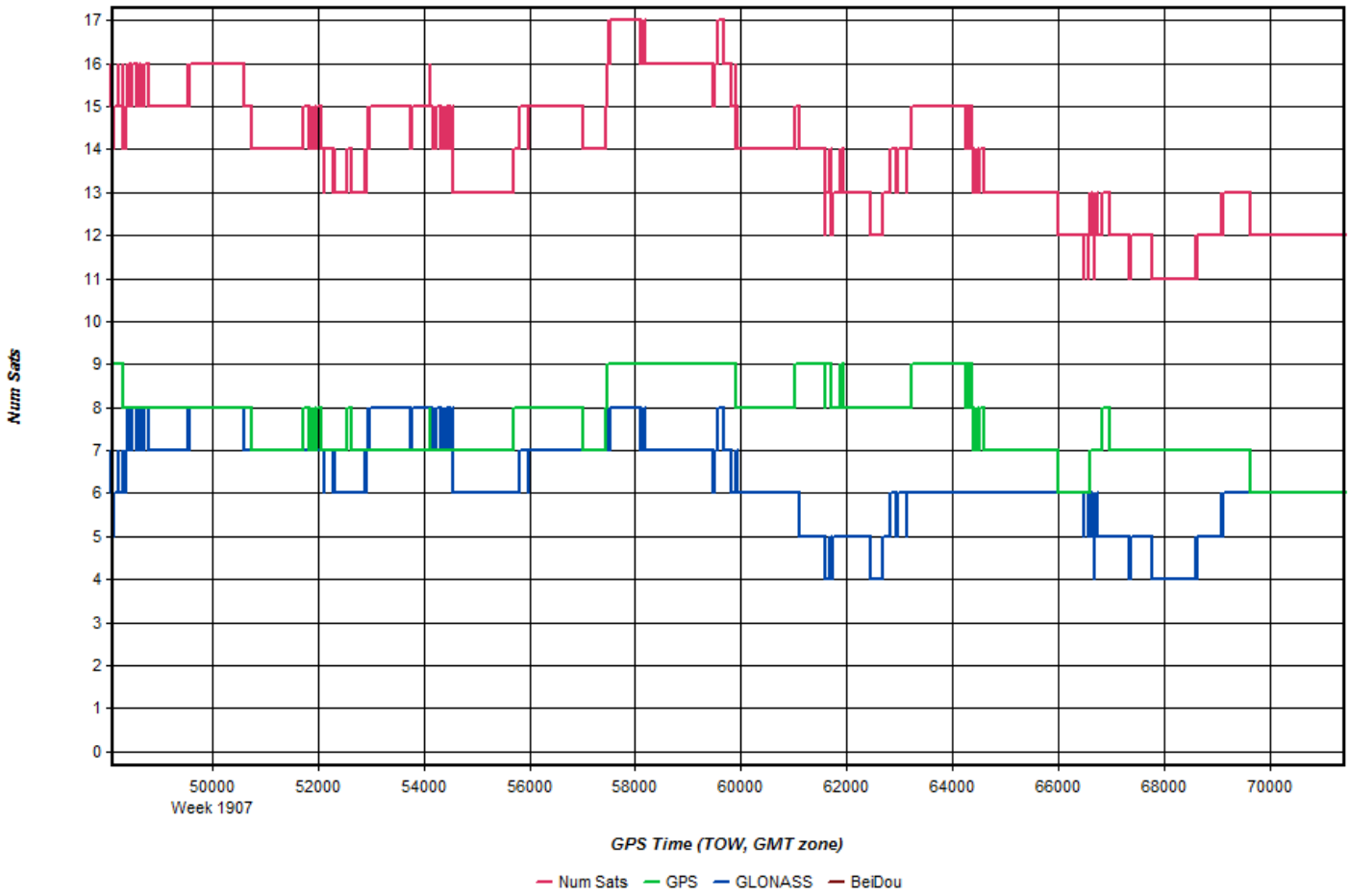

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
596000
Week 1906
598000
600000
602000
604000
1200
Week 1907
3200
5200
7200
9200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

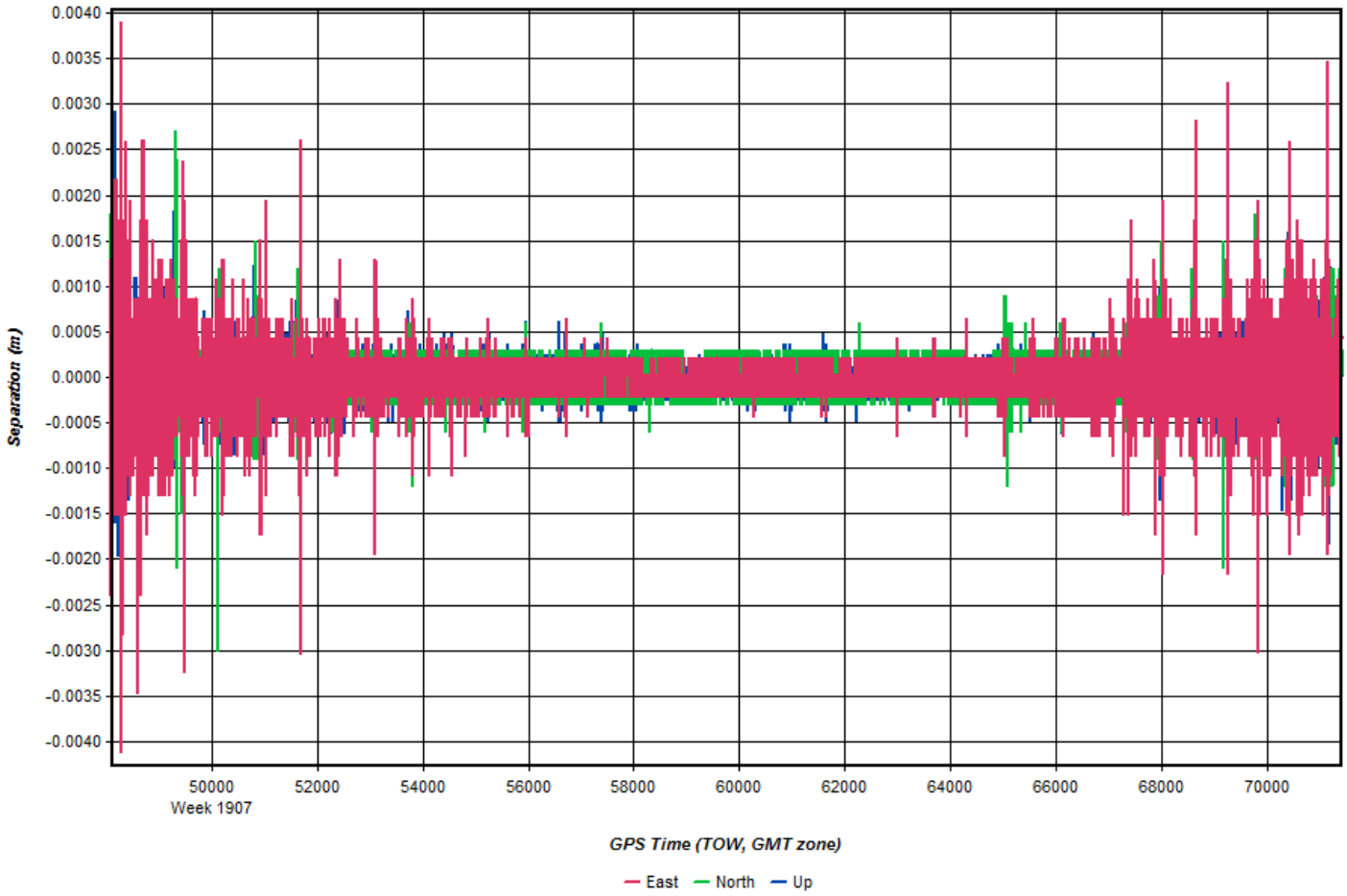

0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
Separation (m)
596000
Week 1906
598000
600000
602000
604000
1200
Week 1907
3200
5200
7200
9200
GPS Time (TOW, GMT zone)
East
North
Up

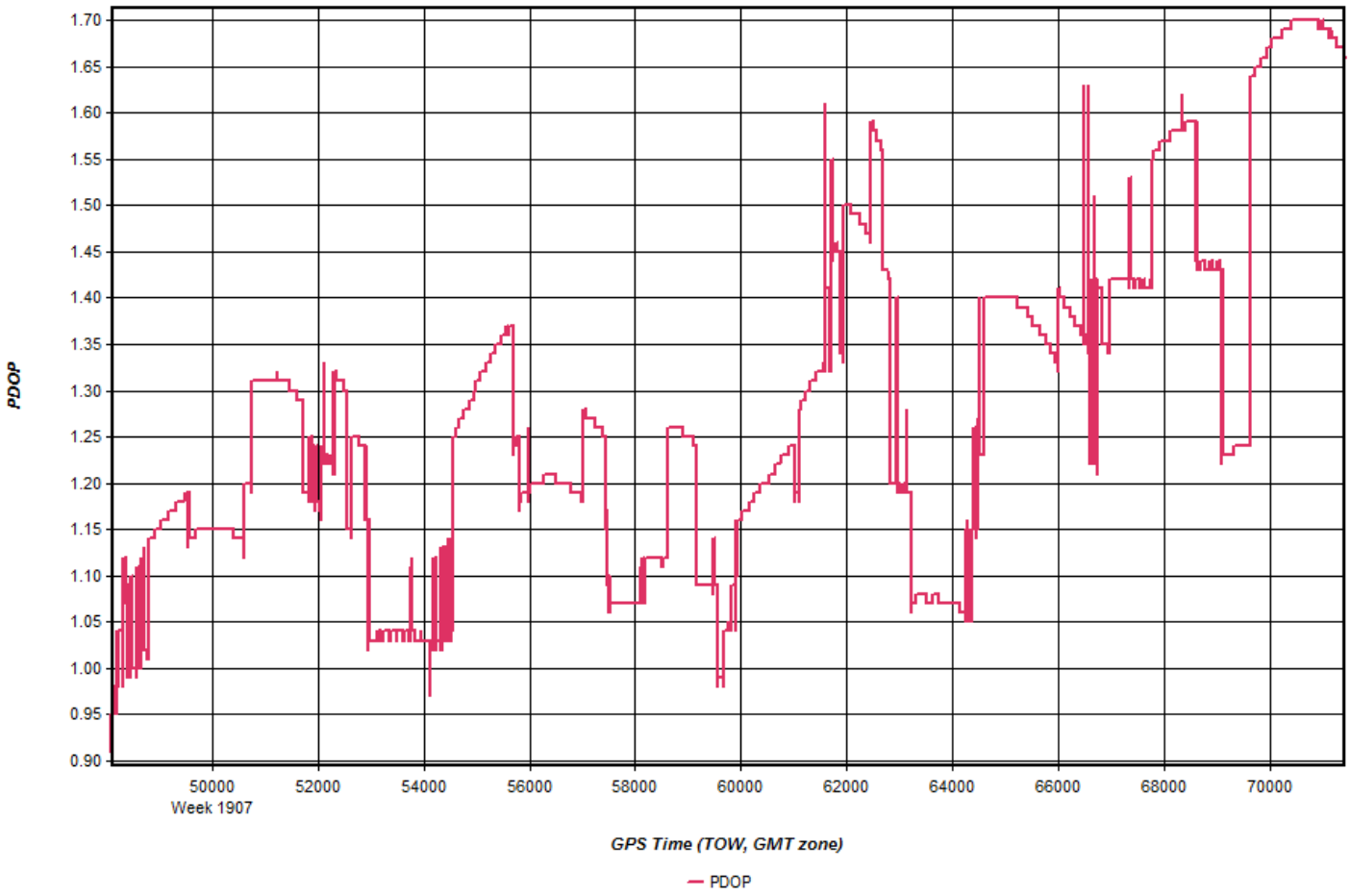

PDOP
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
596000
Week 1906
598000
600000
602000
604000
1200
Week 1907
3200
5200
7200
9200
GPS Time (TOW, GMT zone)
PDOP

225_20160724_1

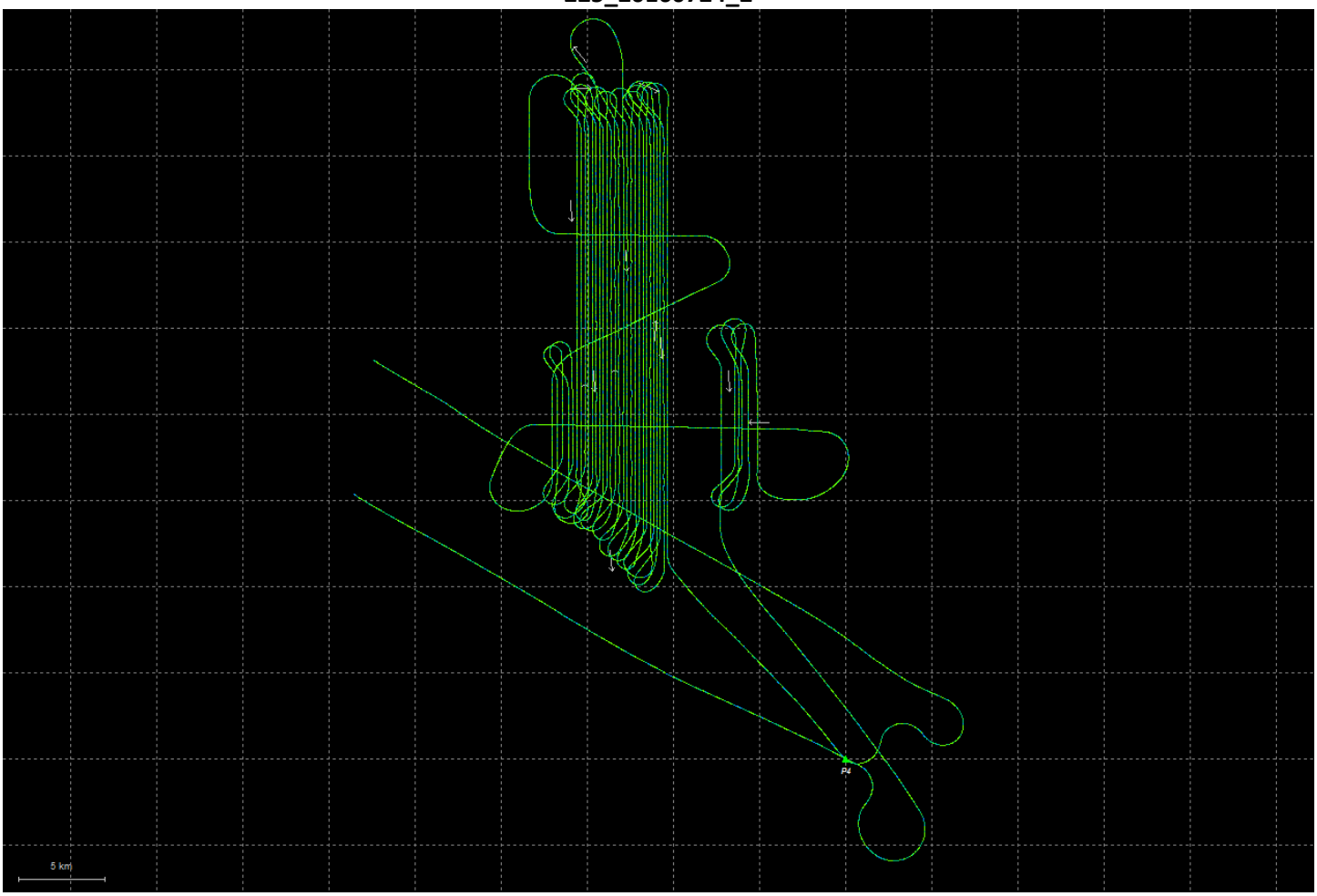

0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
Estimated StdDev (m)
50000
Week 1907
52000
54000
56000
58000
60000
62000
64000
66000
68000
70000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

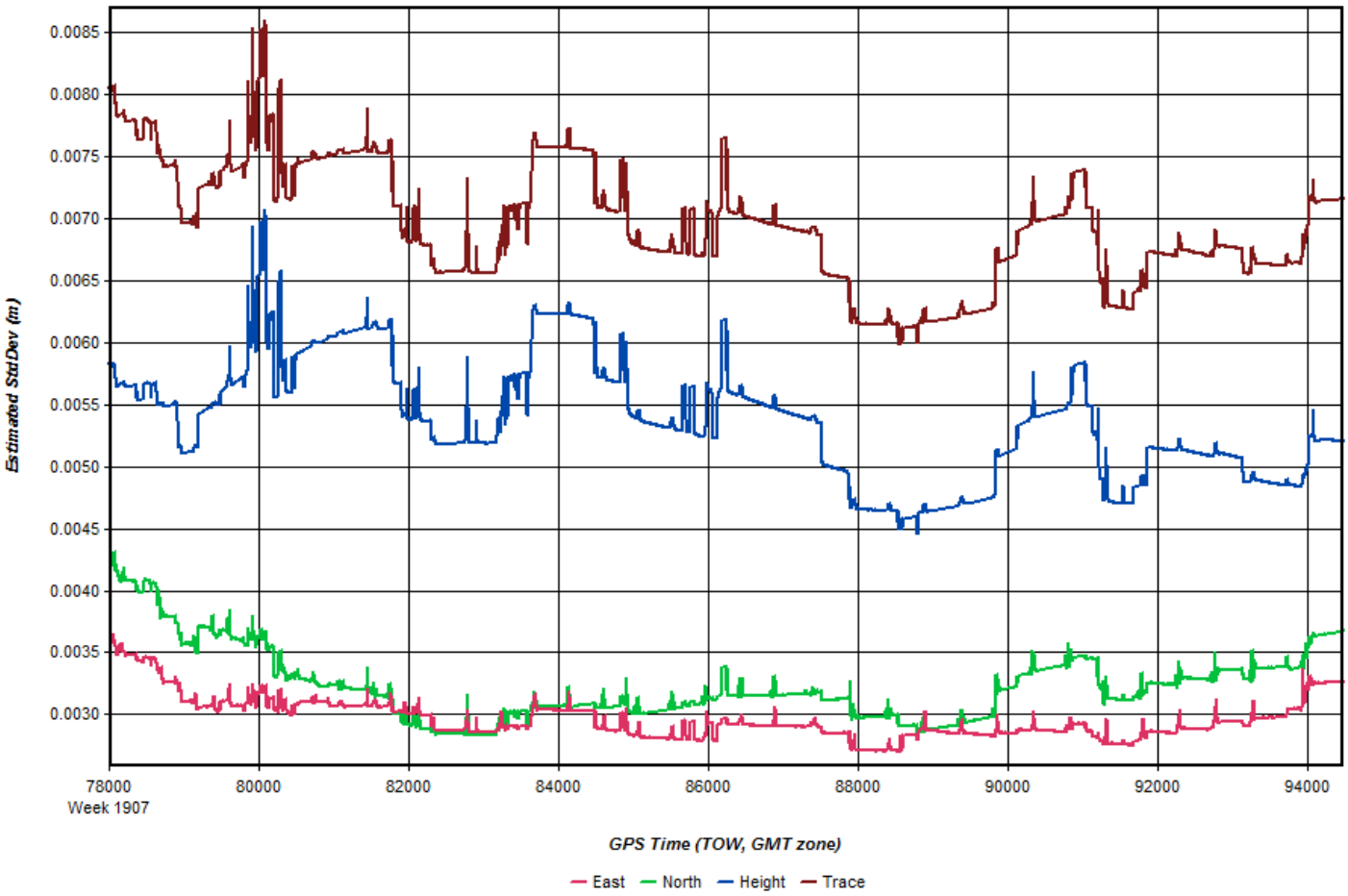

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
50000
Week 1907
52000
54000
56000
58000
60000
62000
64000
66000
68000
70000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

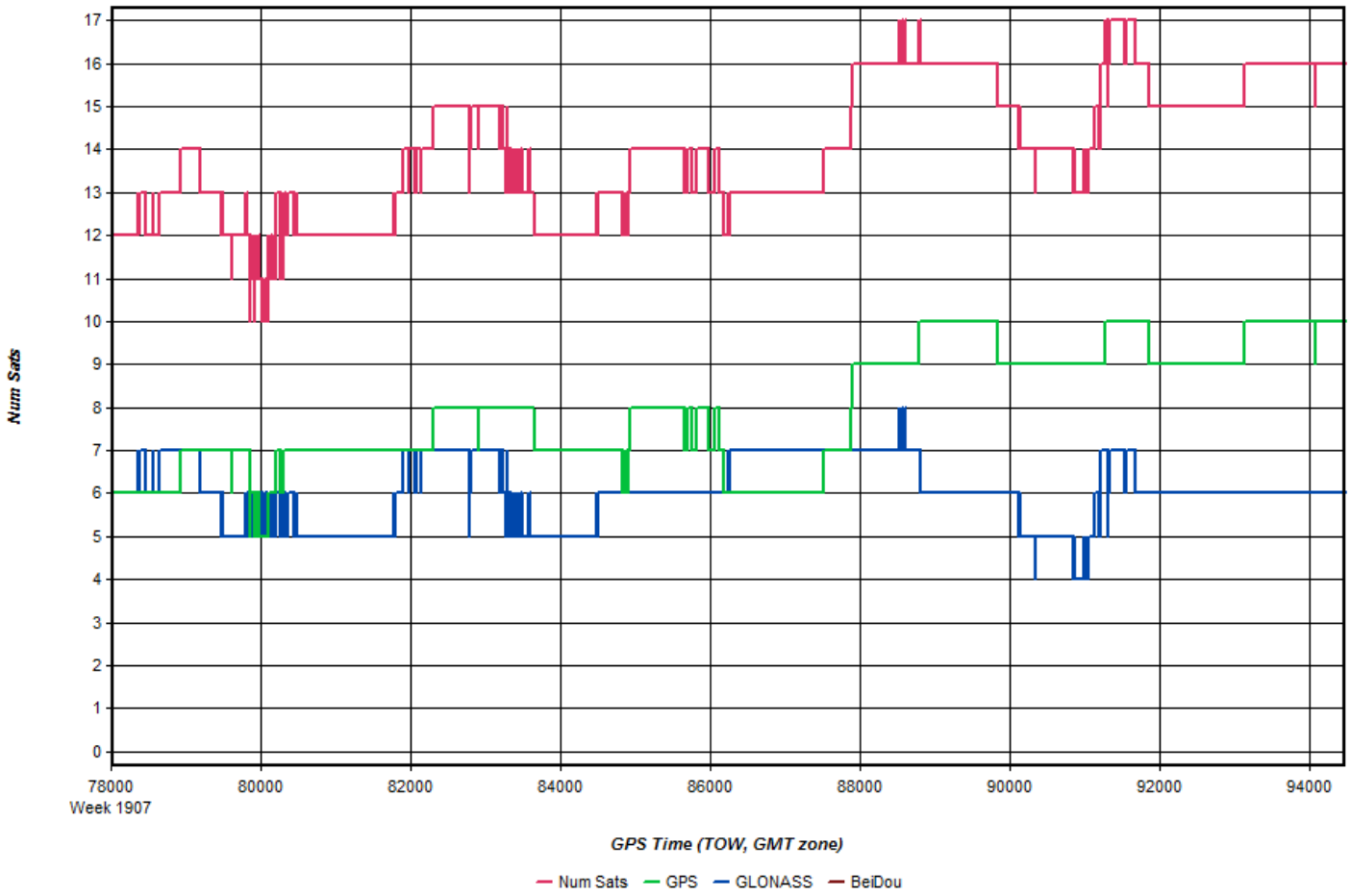

0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
Separation (m)
50000
Week 1907
52000
54000
56000
58000
60000
62000
64000
66000
68000
70000
GPS Time (TOW, GMT zone)
East
North
Up

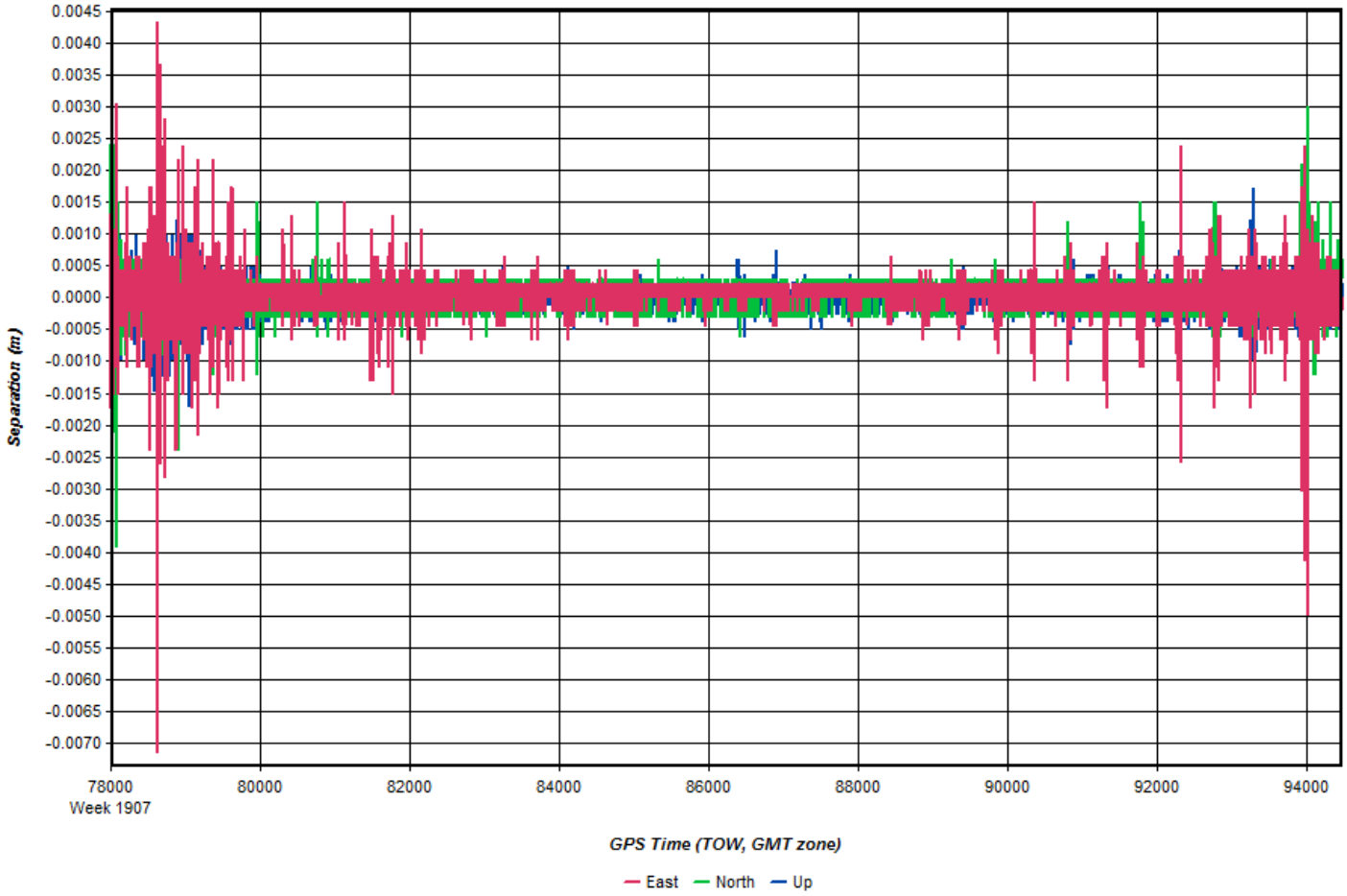

PDOP
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
50000
Week 1907
52000
54000
56000
58000
60000
62000
64000
66000
68000
70000
GPS Time (TOW, GMT zone)
PDOP

225_20160724_2



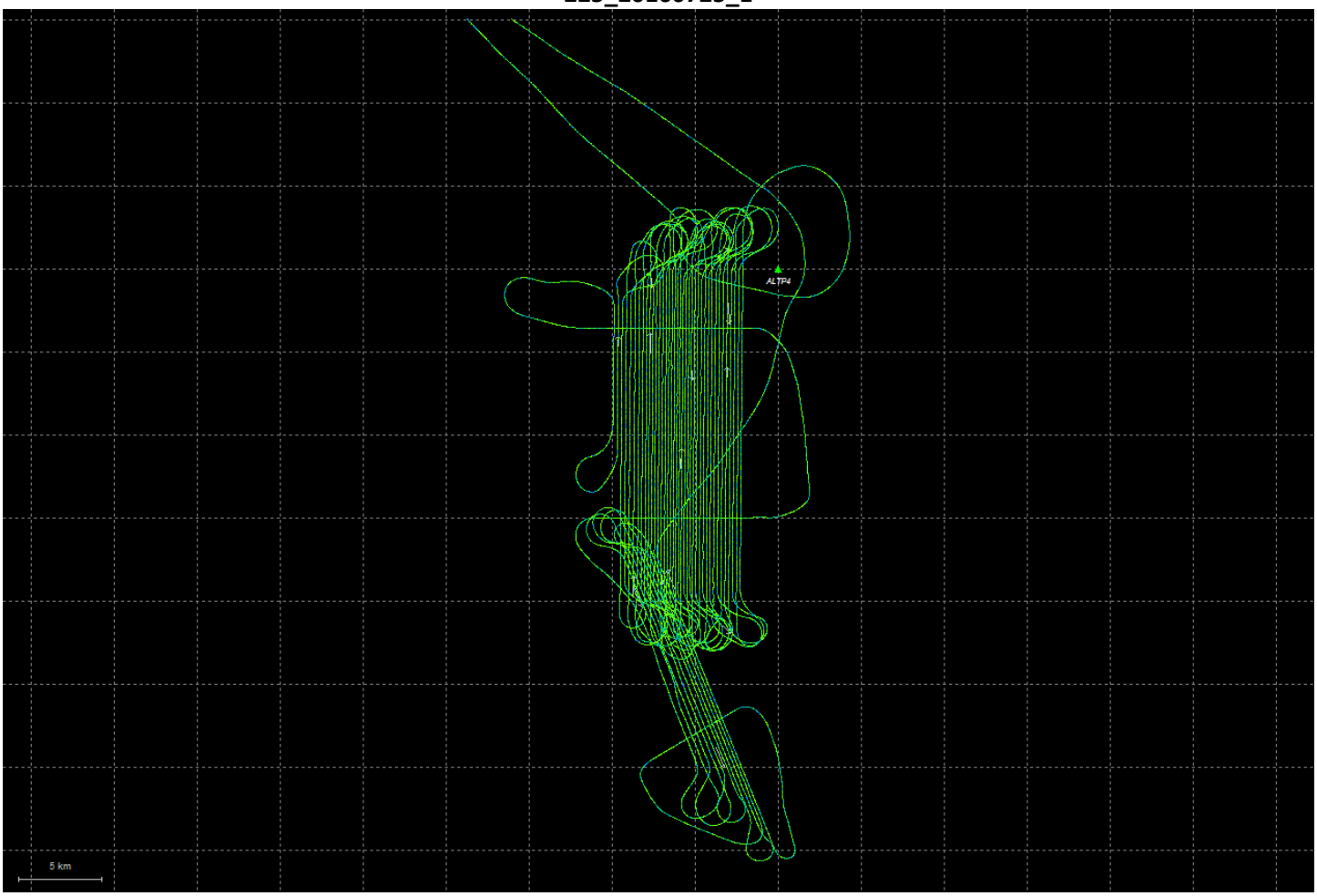

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
78000
Week 1907
80000
82000
84000
86000
88000
90000
92000
94000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

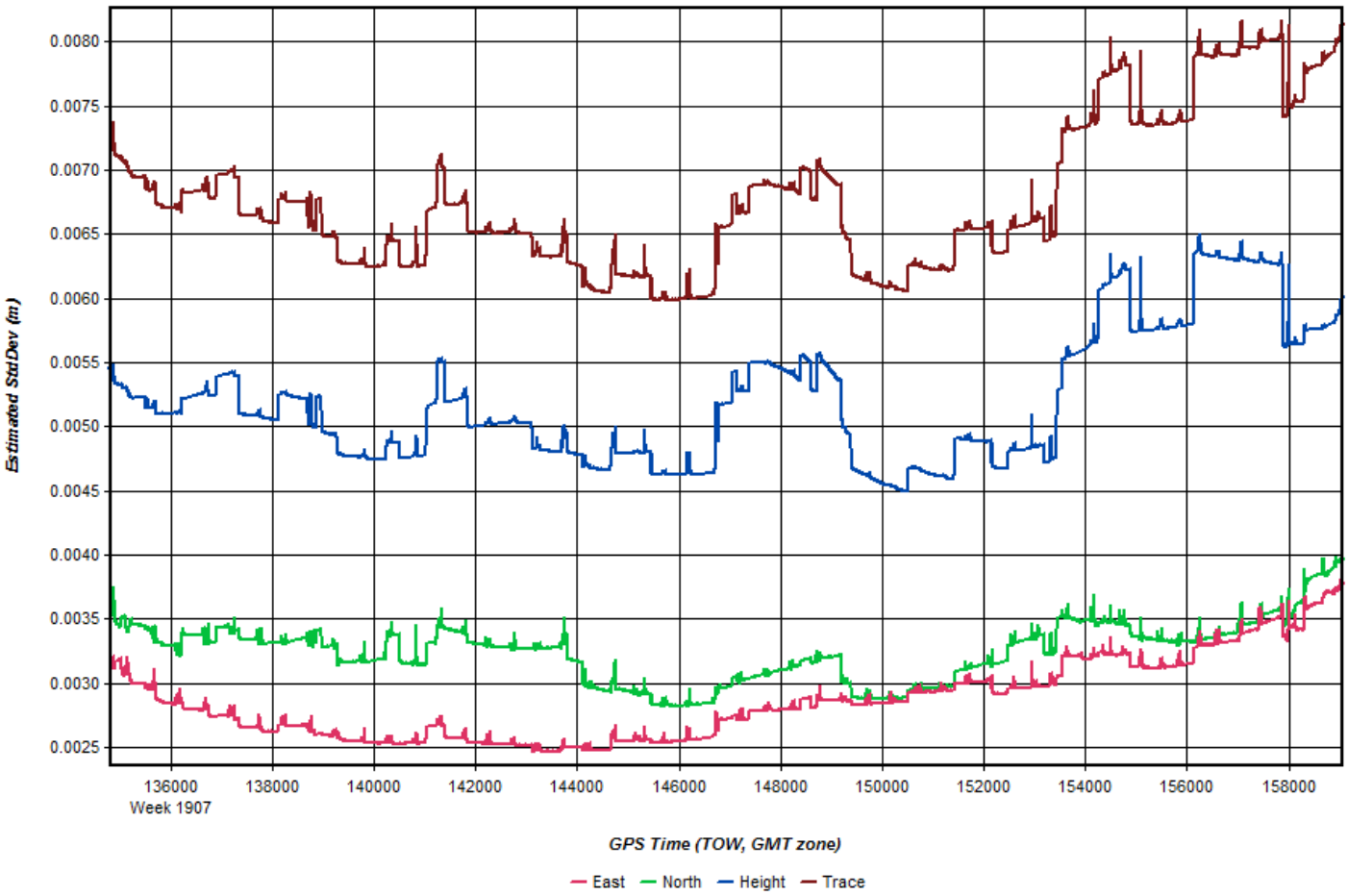

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
78000
Week 1907
80000
82000
84000
86000
88000
90000
92000
94000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

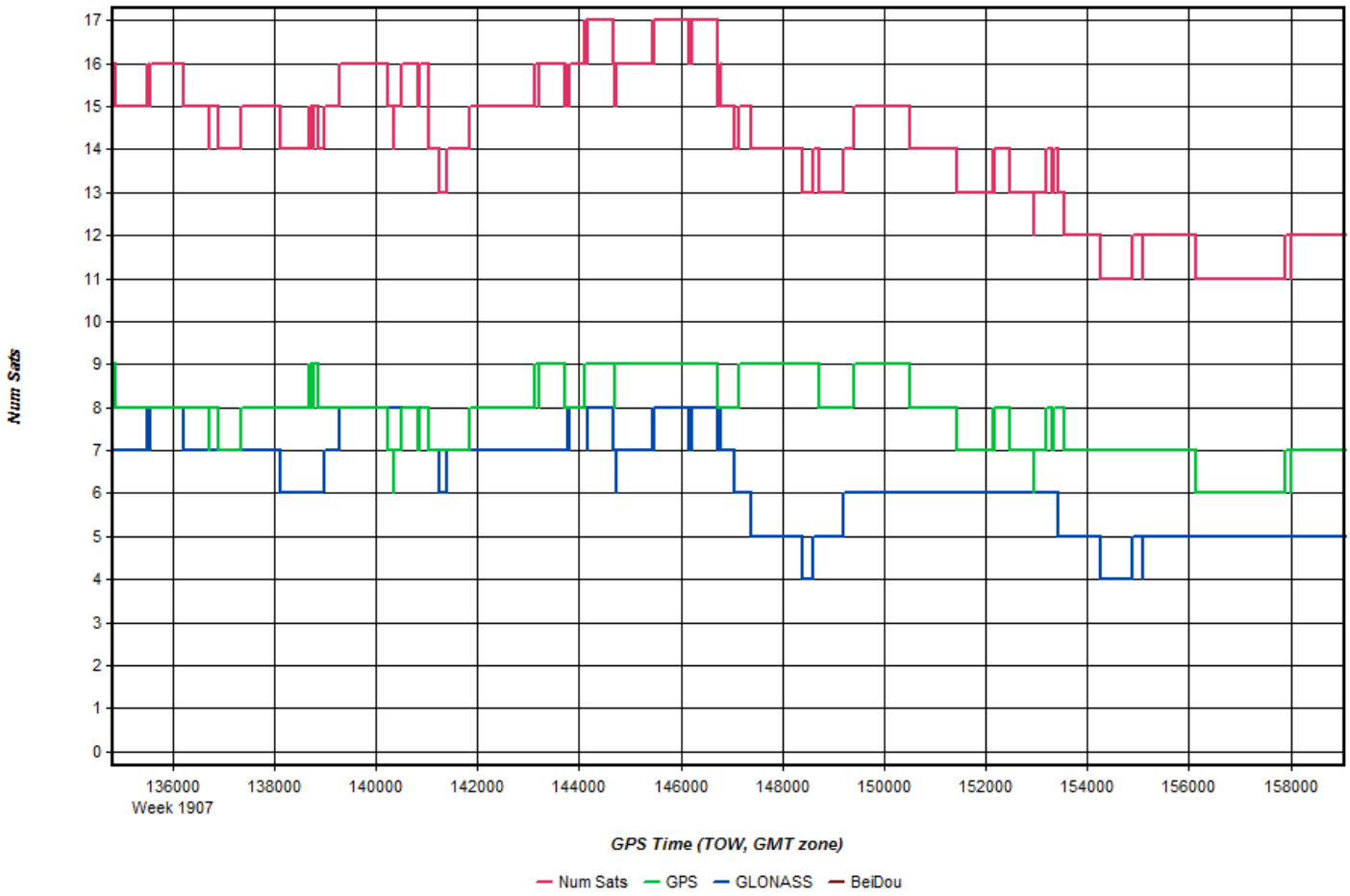

0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
-0.0060
-0.0065
-0.0070
Separation (m)
78000
Week 1907
80000
82000
84000
86000
88000
90000
92000
94000
GPS Time (TOW, GMT zone)
East
North
Up

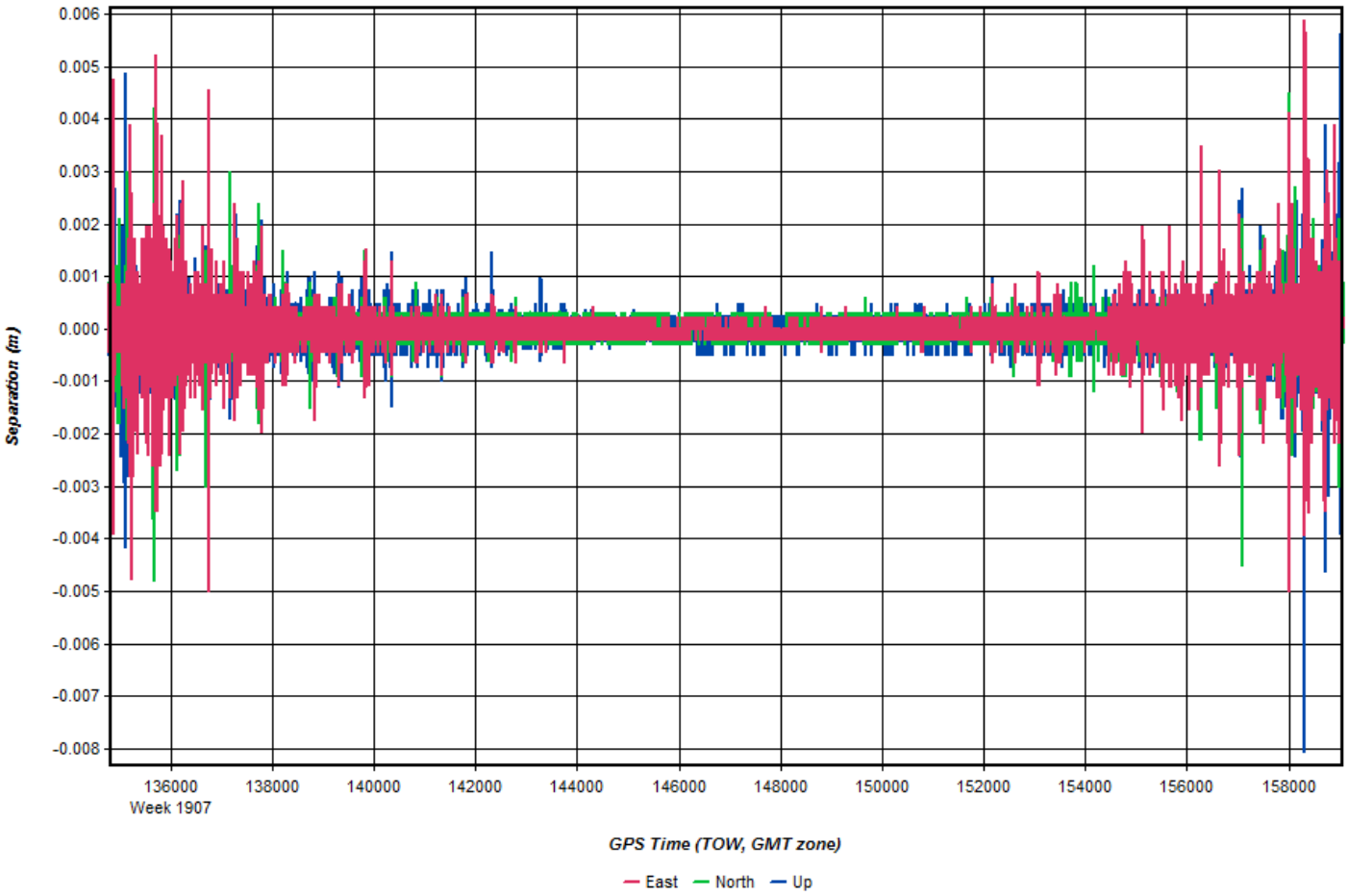

PDOP
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
78000
Week 1907
80000
82000
84000
86000
88000
90000
92000
94000
GPS Time (TOW, GMT zone)
PDOP

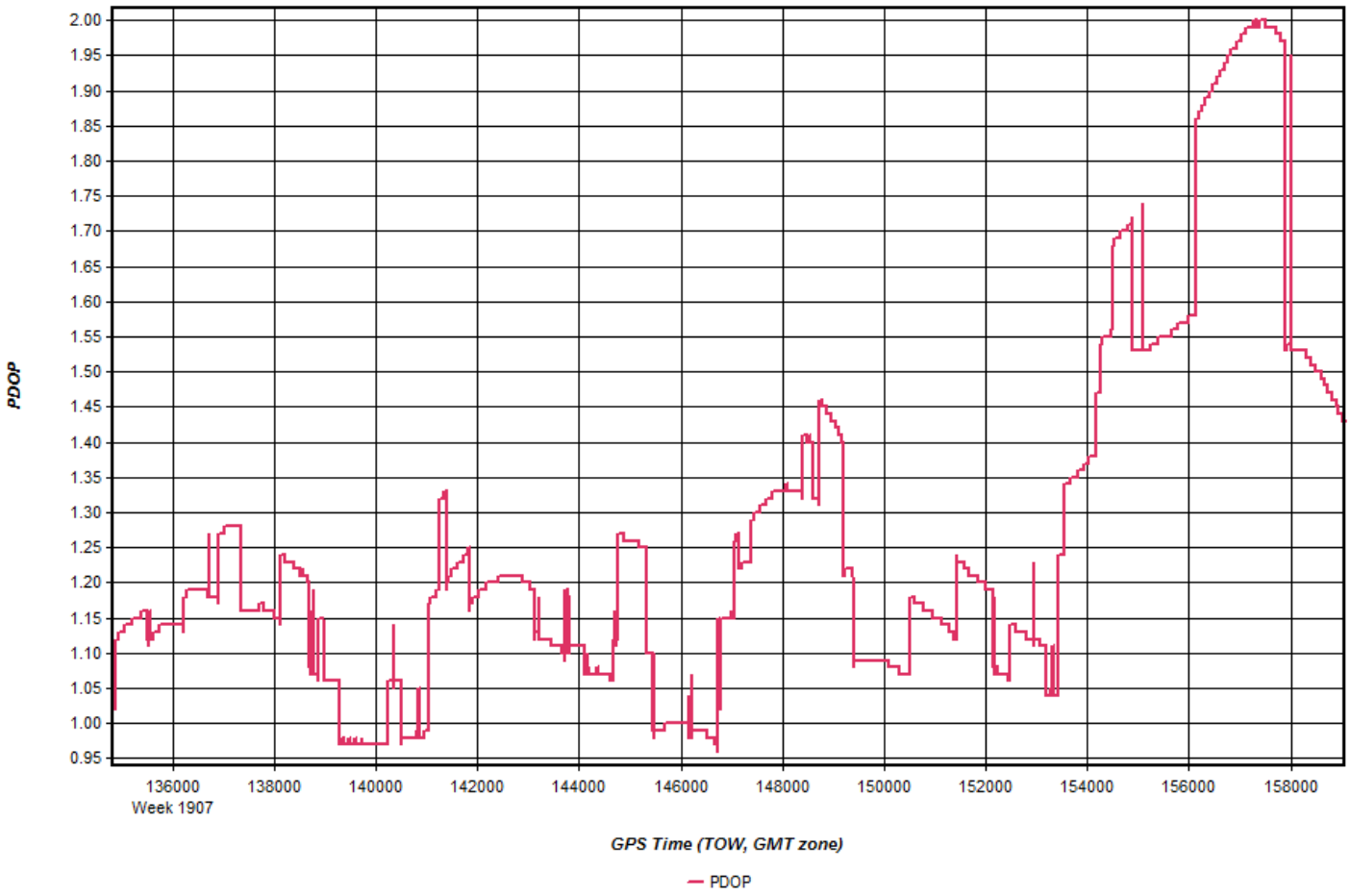
225_20160725_1



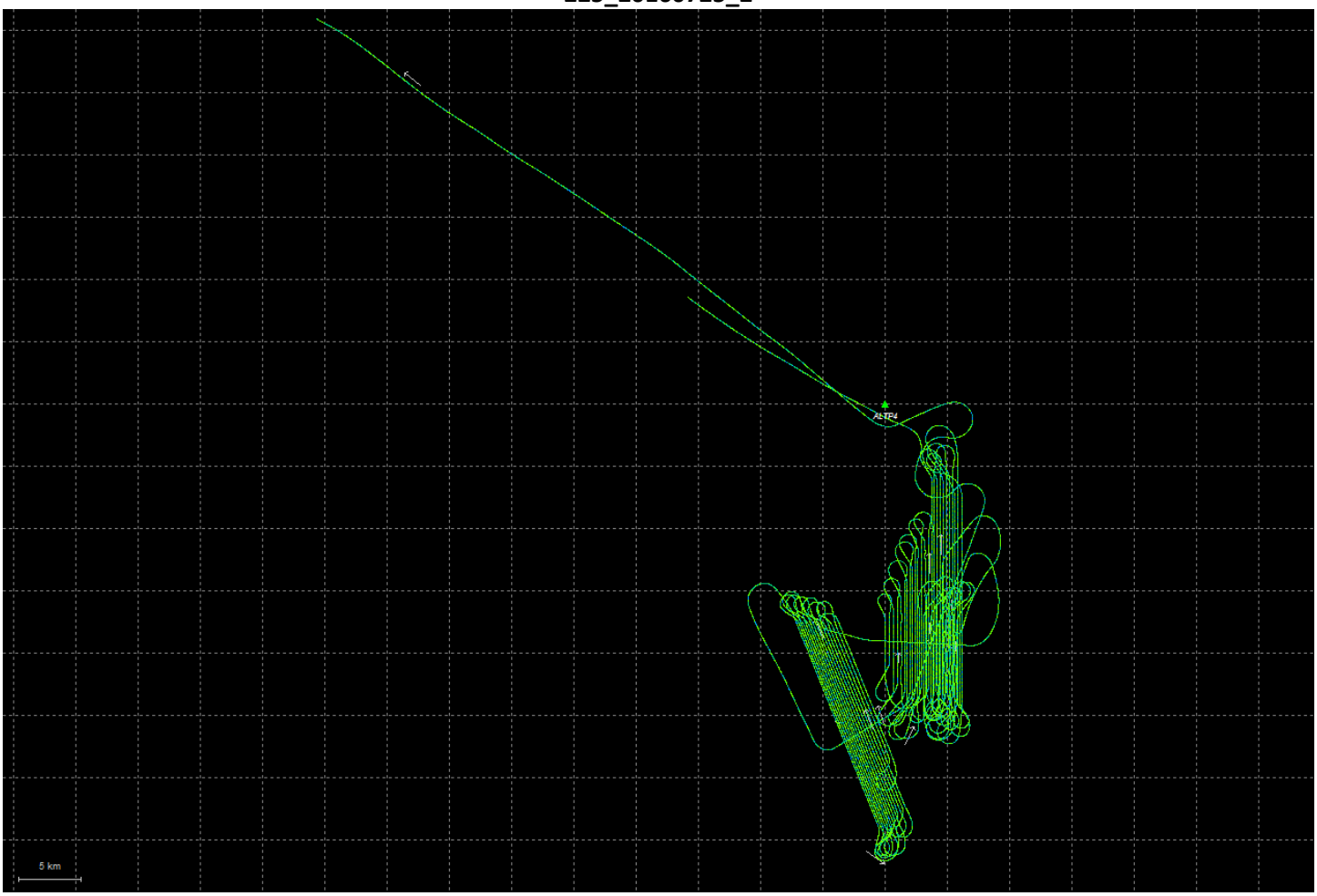

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
136000
Week 1907
138000
140000
142000
144000
146000
148000
150000
152000
154000
156000
158000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

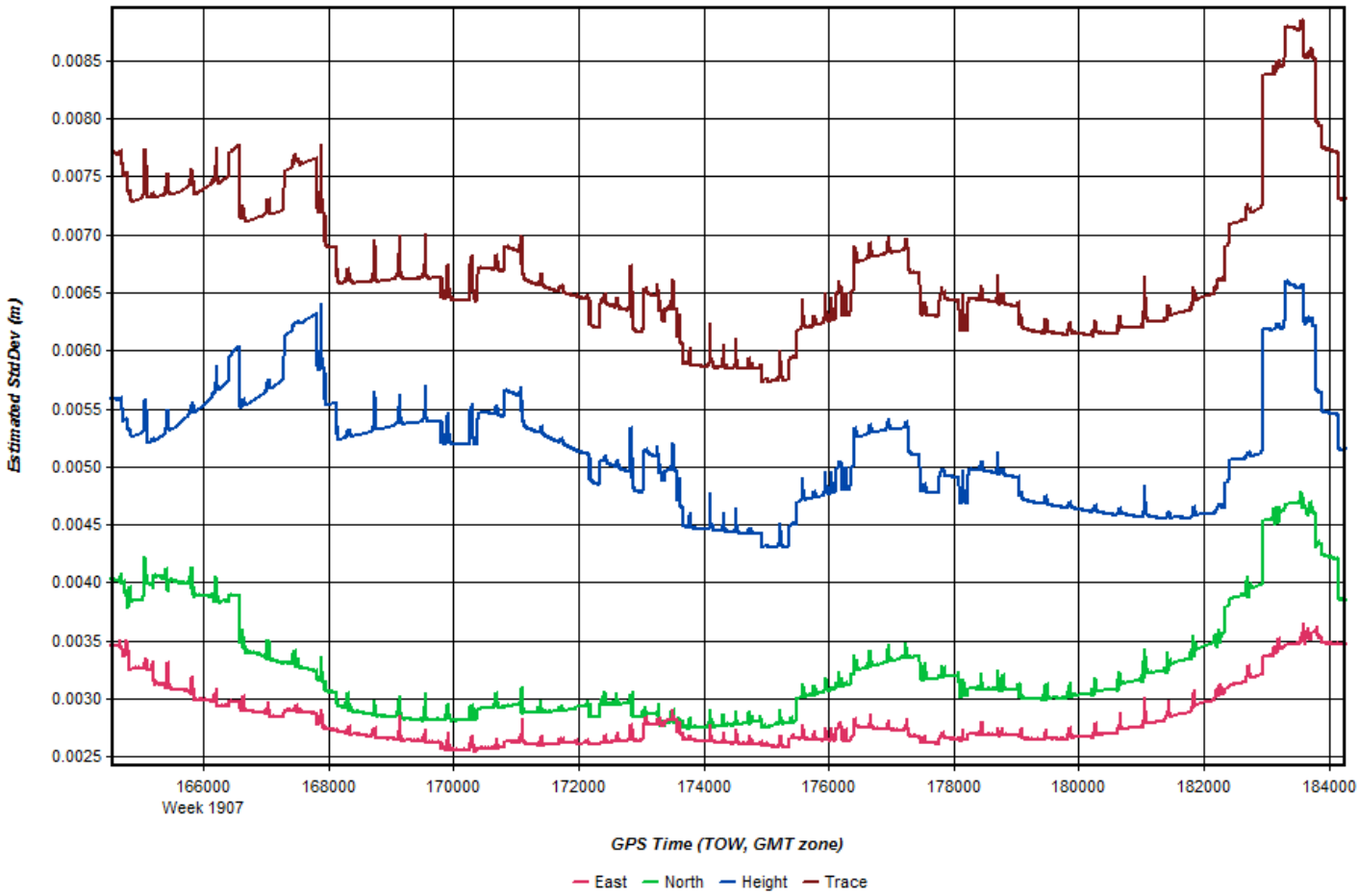

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
136000
Week 1907
138000
140000
142000
144000
146000
148000
150000
152000
154000
156000
158000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

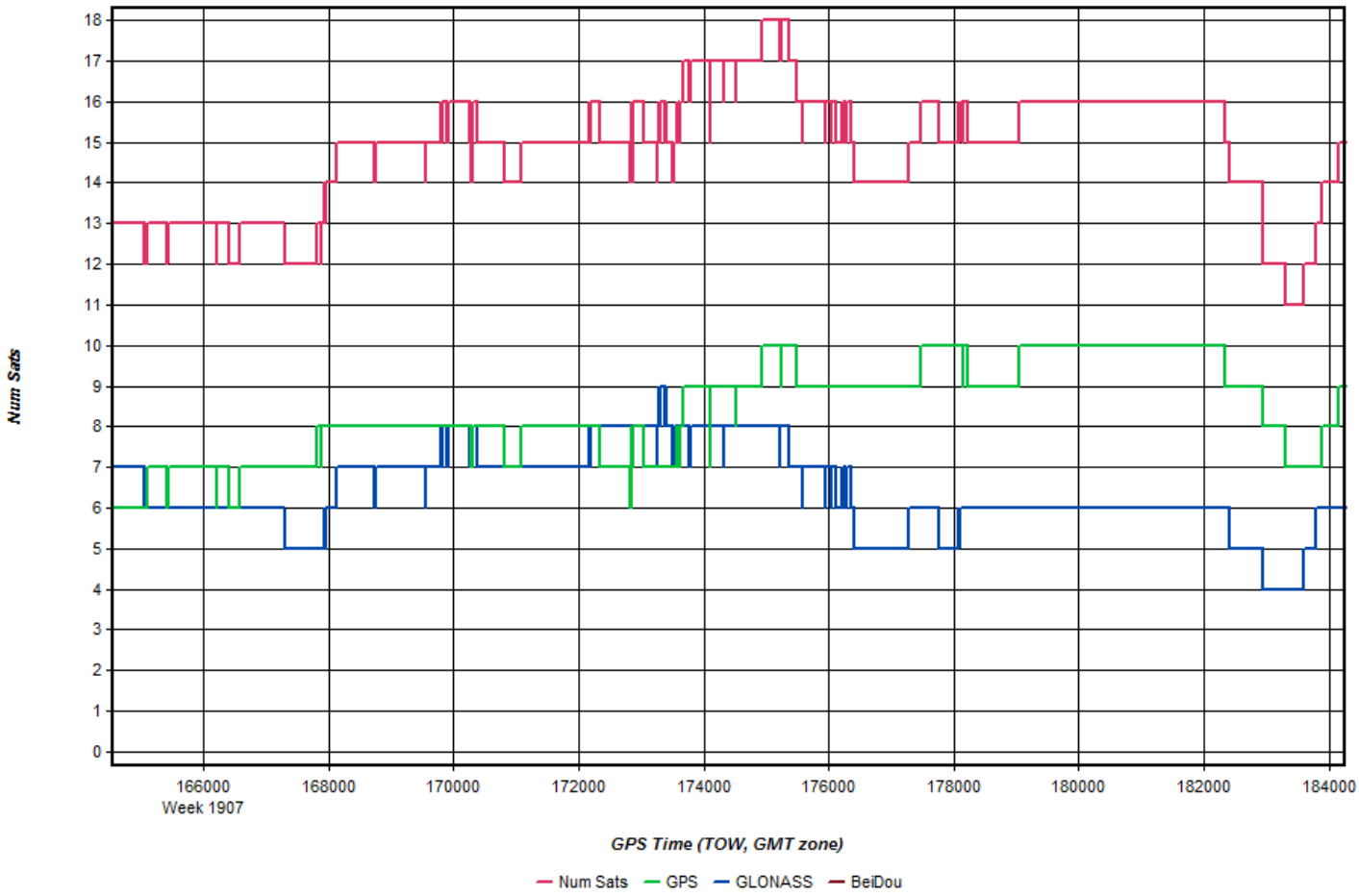

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
Separation (m)
136000
Week 1907
138000
140000
142000
144000
146000
148000
150000
152000
154000
156000
158000
GPS Time (TOW, GMT zone)
East
North
Up

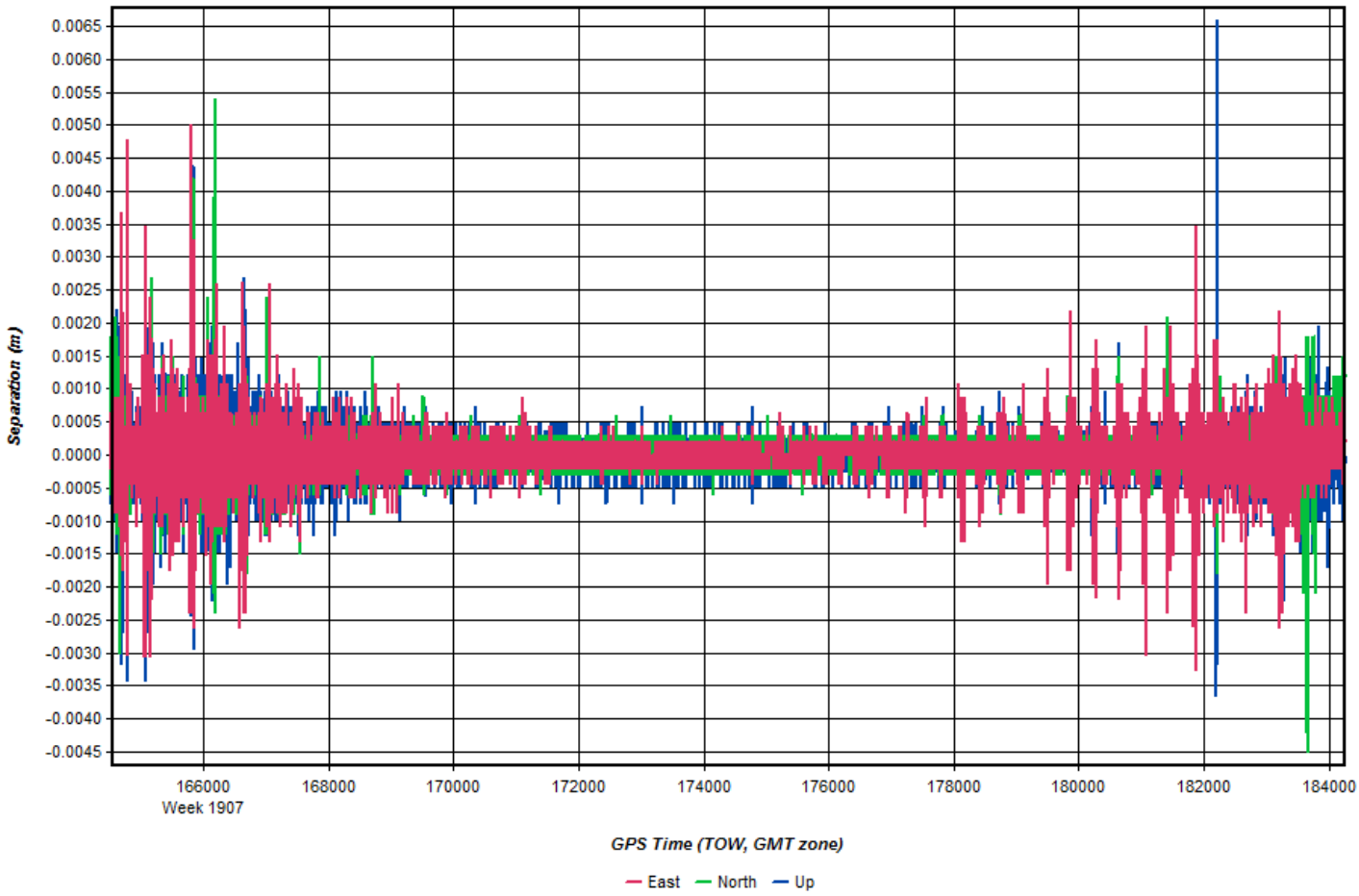

PDOP
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
136000
Week 1907
138000
140000
142000
144000
146000
148000
150000
152000
154000
156000
158000
GPS Time (TOW, GMT zone)
PDOP

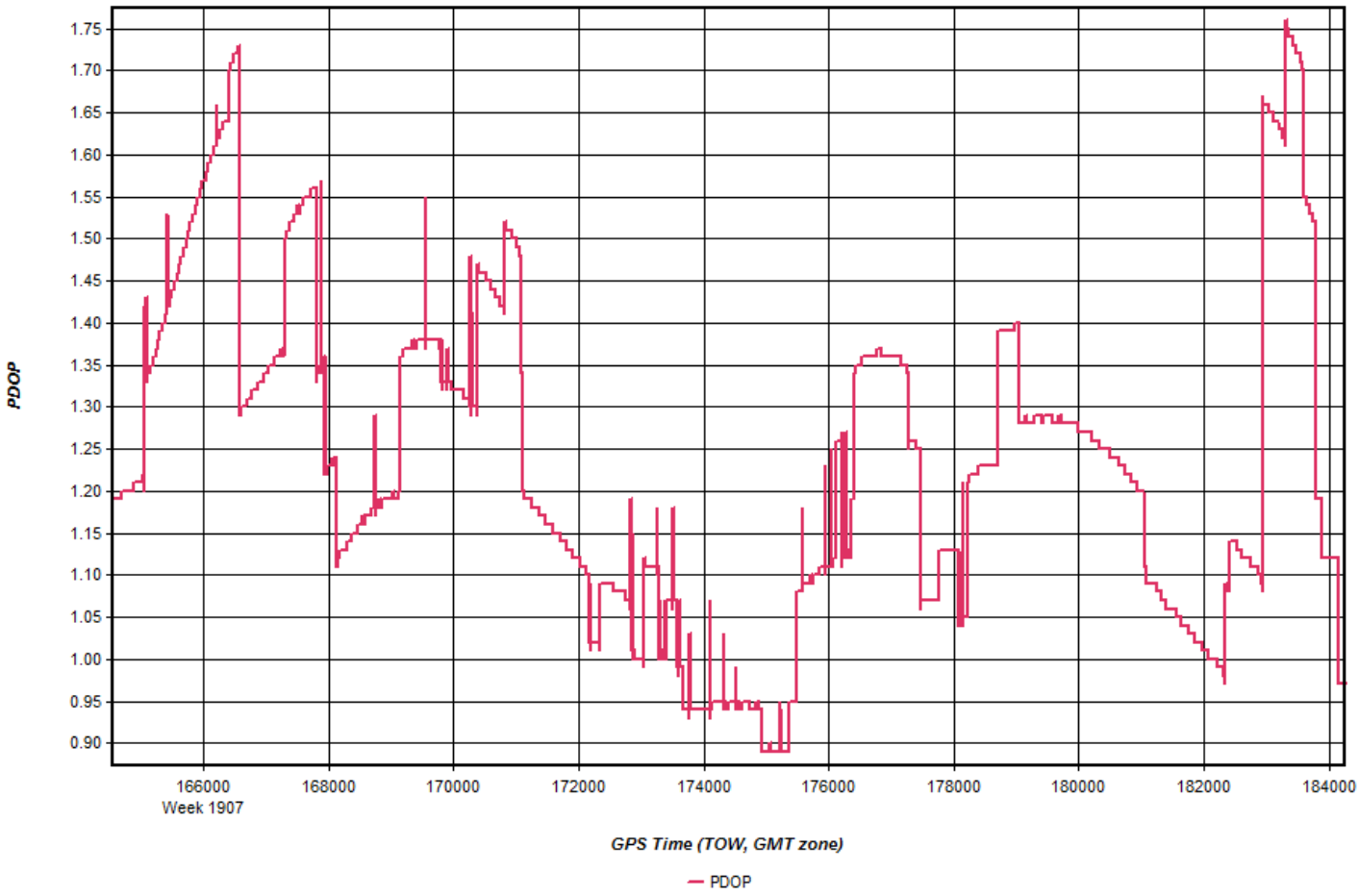
225_20160725_2



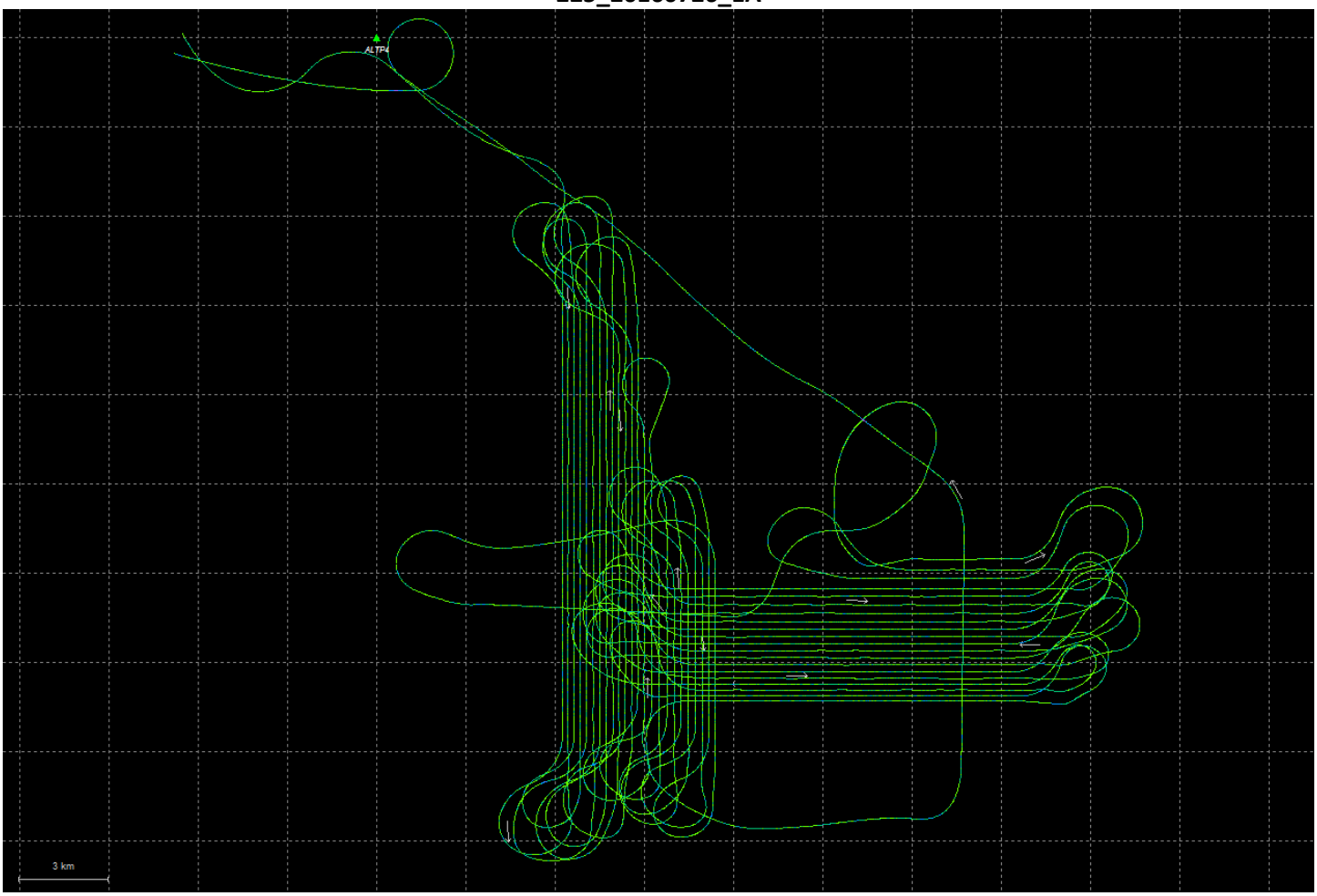

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
166000
Week 1907
168000
170000
172000
174000
176000
178000
180000
182000
184000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

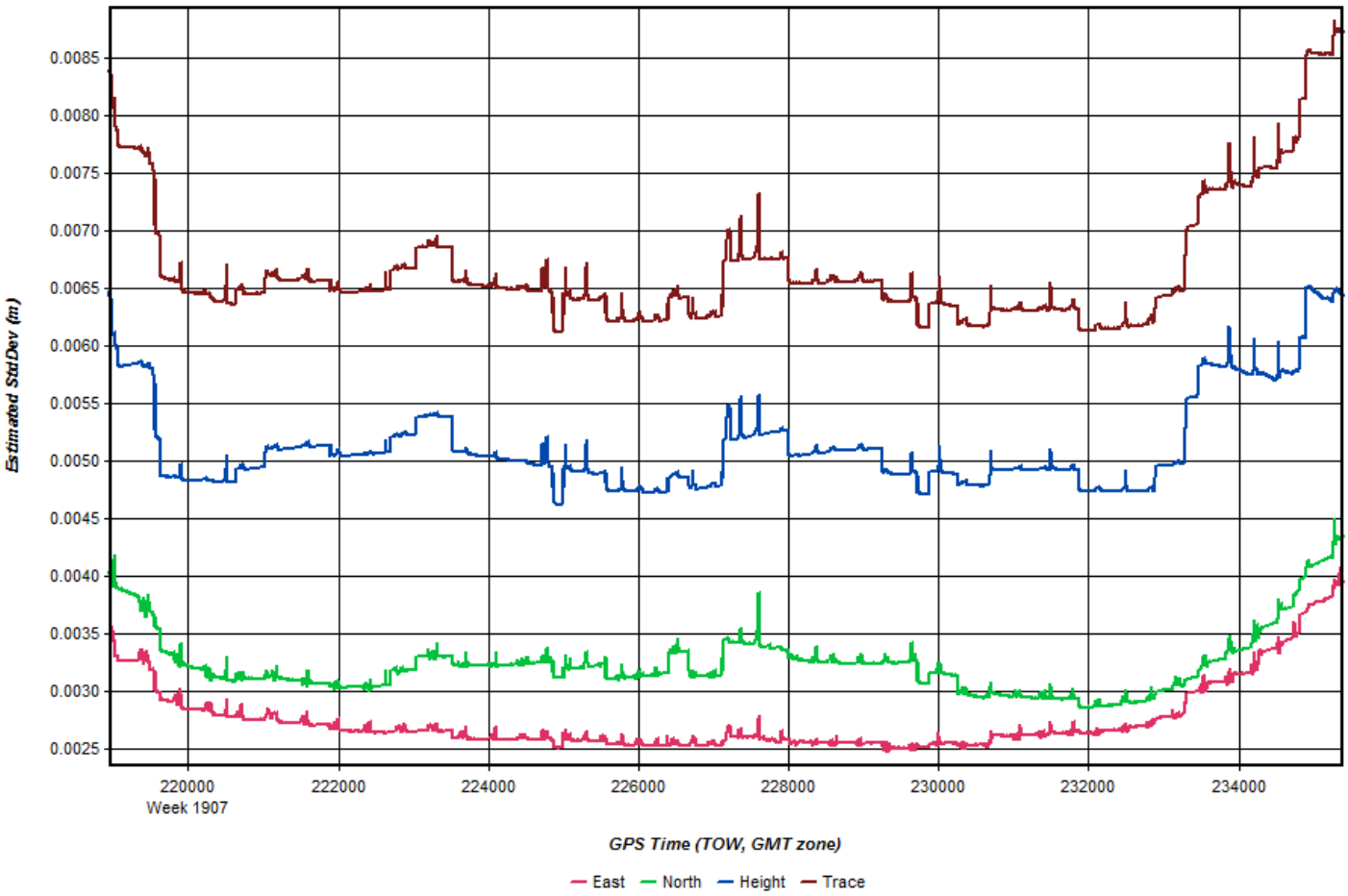

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
166000
Week 1907
168000
170000
172000
174000
176000
178000
180000
182000
184000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

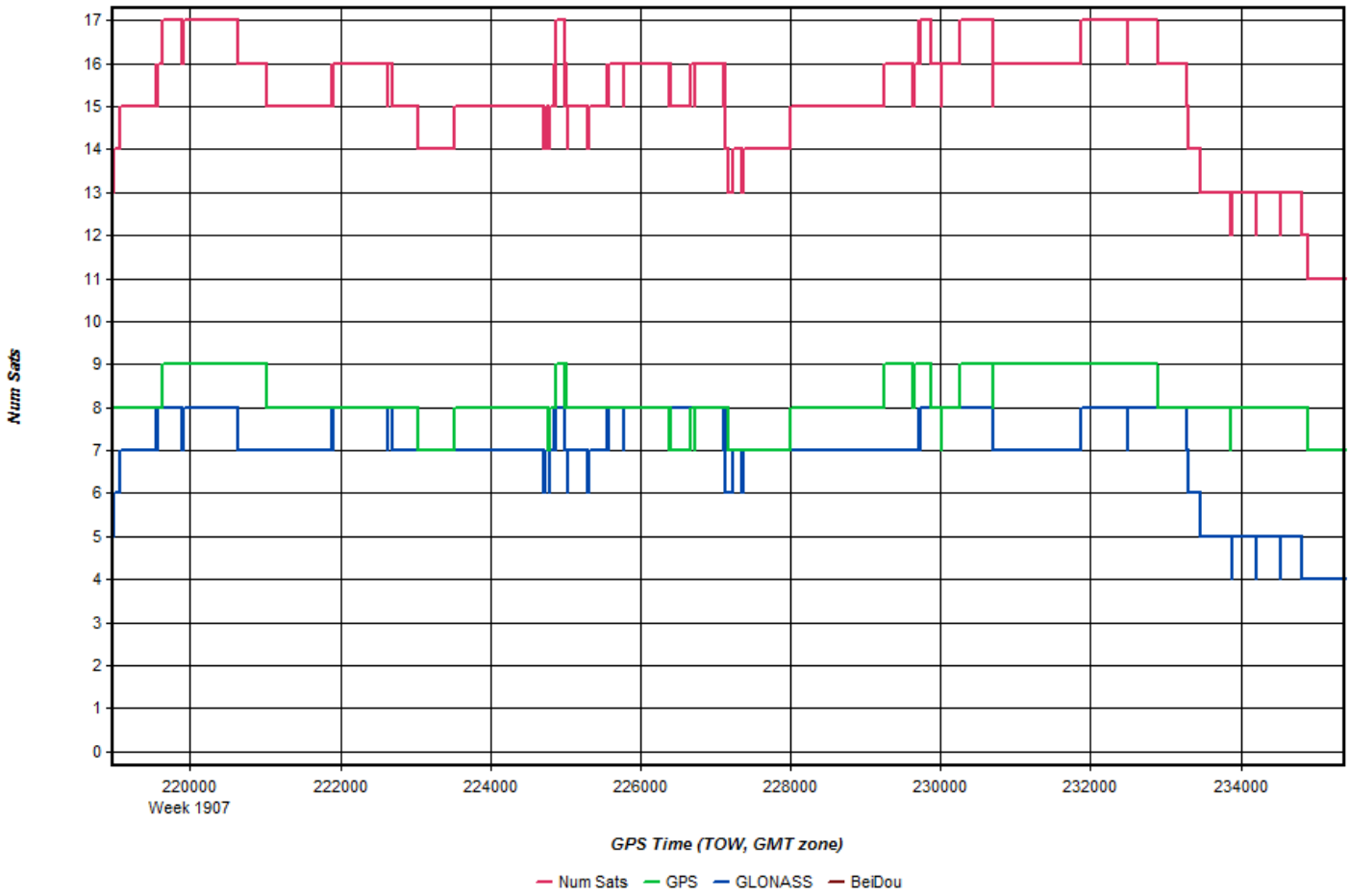

Separation (m)
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
166000
Week 1907
168000
170000
172000
174000
176000
178000
180000
182000
184000
GPS Time (TOW, GMT zone)
East
North
Up

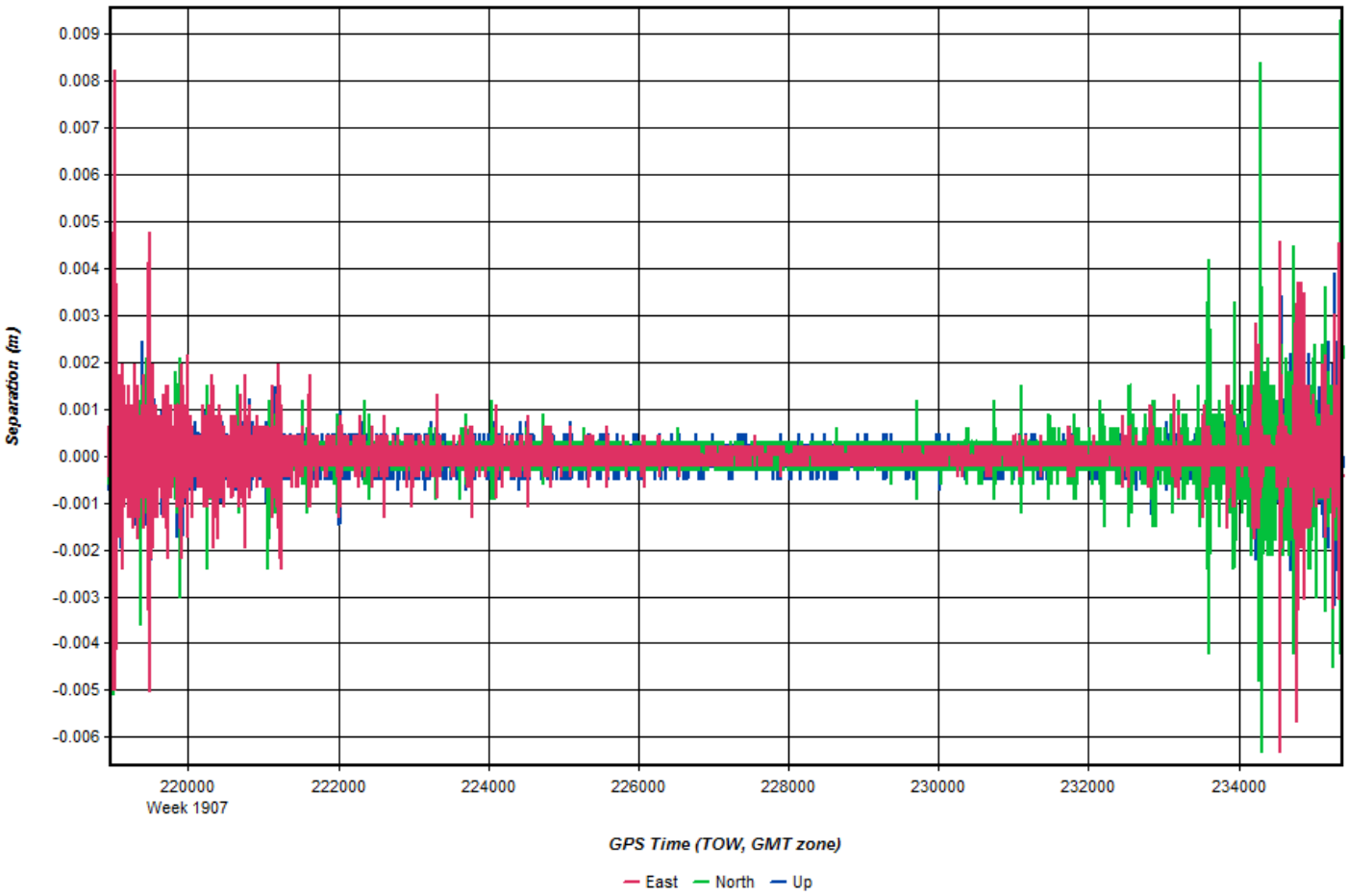

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
166000
Week 1907
168000
170000
172000
174000
176000
178000
180000
182000
184000
GPS Time (TOW, GMT zone)
PDOP

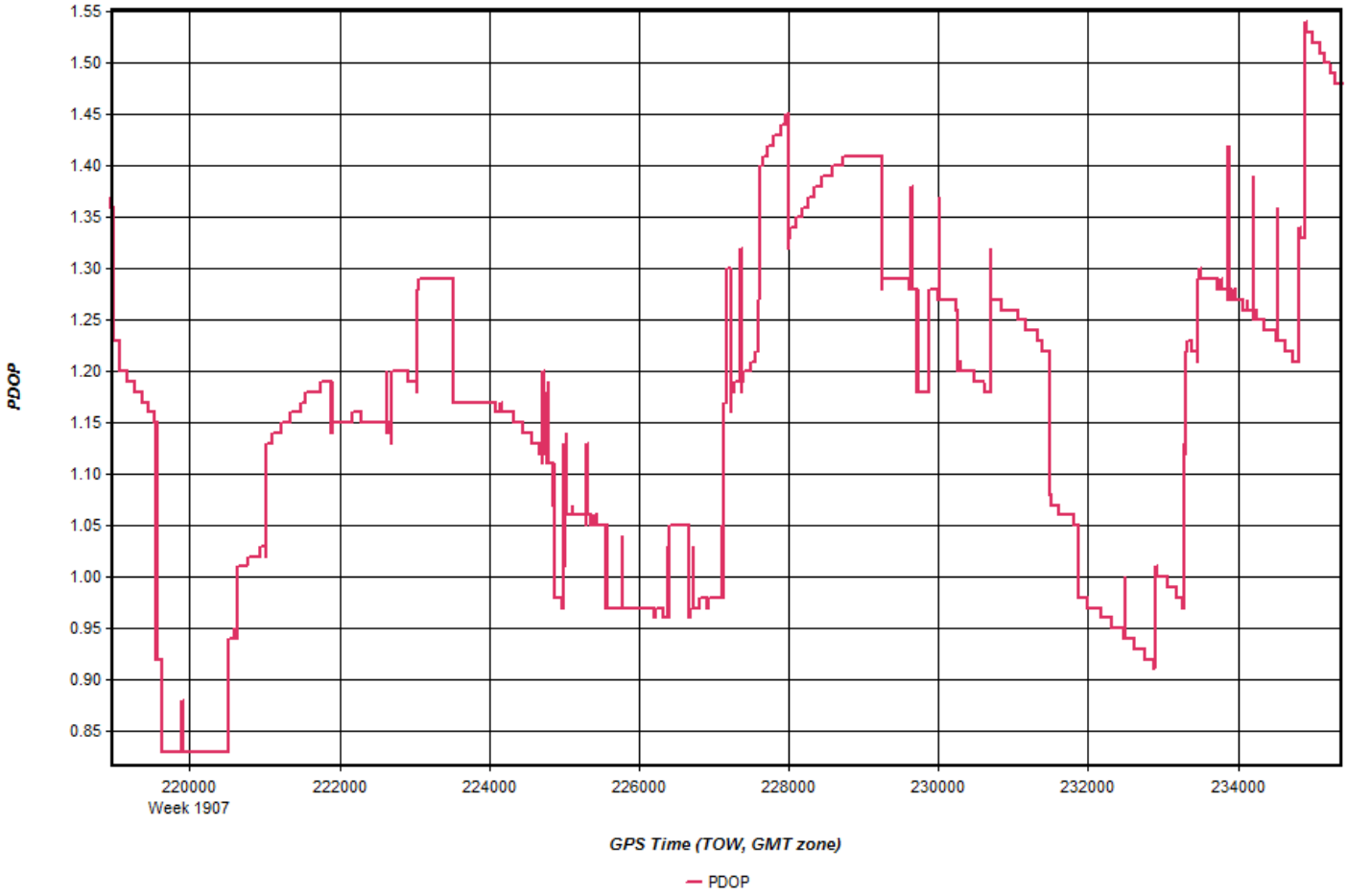
225_20160726_1A



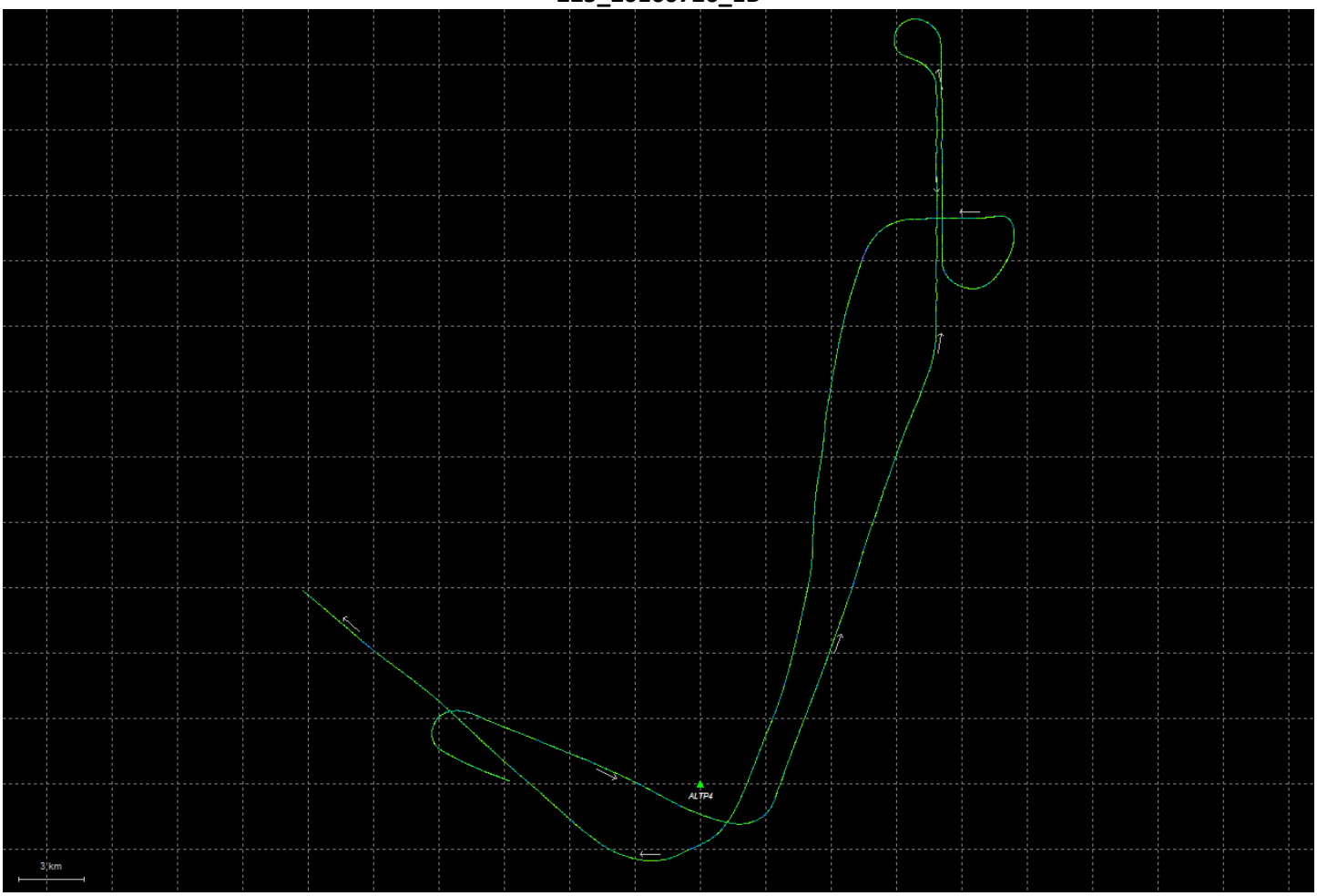

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
220000
Week 1907
222000
224000
226000
228000
230000
232000
234000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

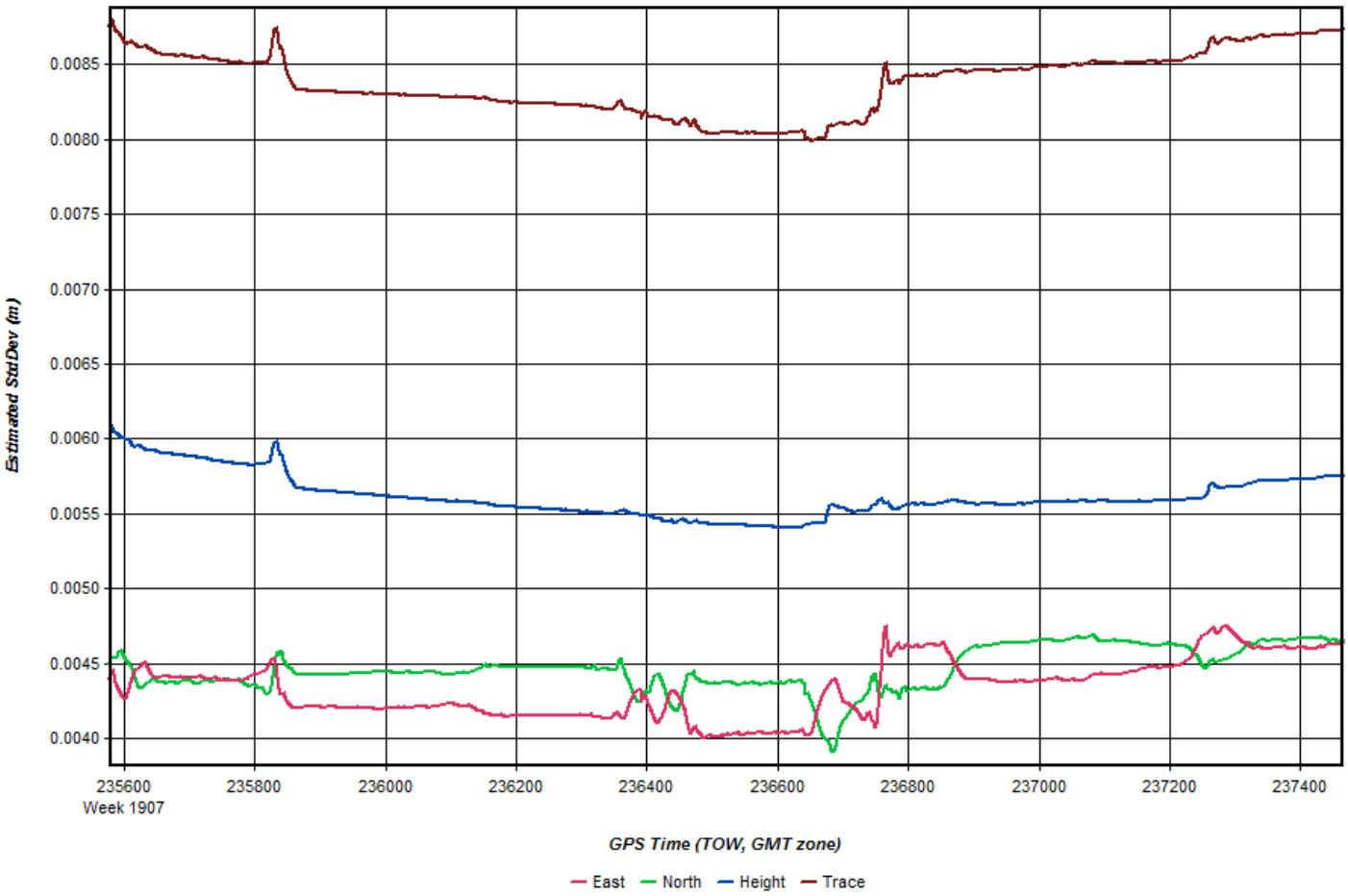

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
220000
Week 1907
222000
224000
226000
228000
230000
232000
234000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

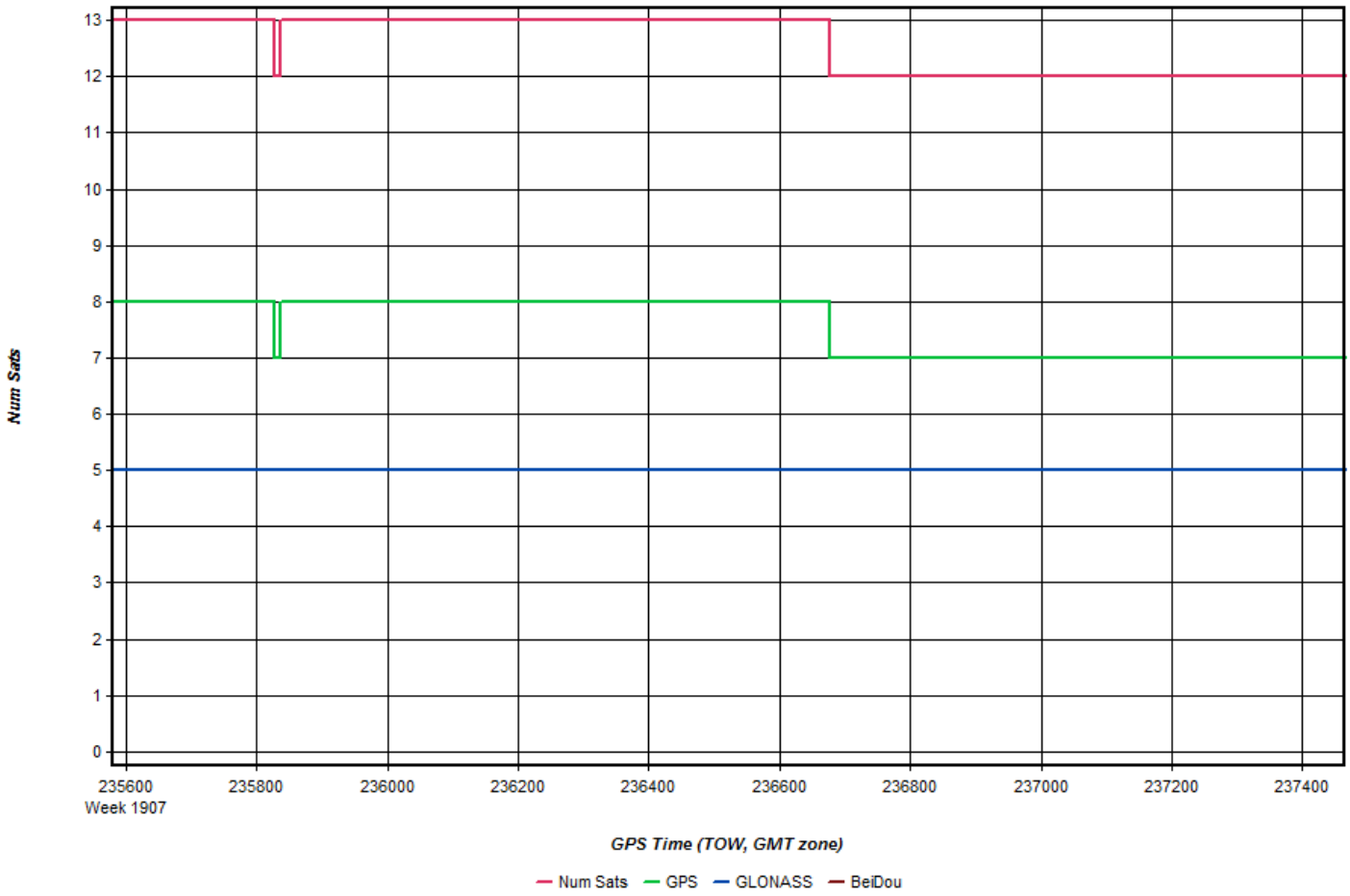

Separation (m)
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
220000
Week 1907
222000
224000
226000
228000
230000
232000
234000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
220000
Week 1907
222000
224000
226000
228000
230000
232000
234000
GPS Time (TOW, GMT zone)
PDOP

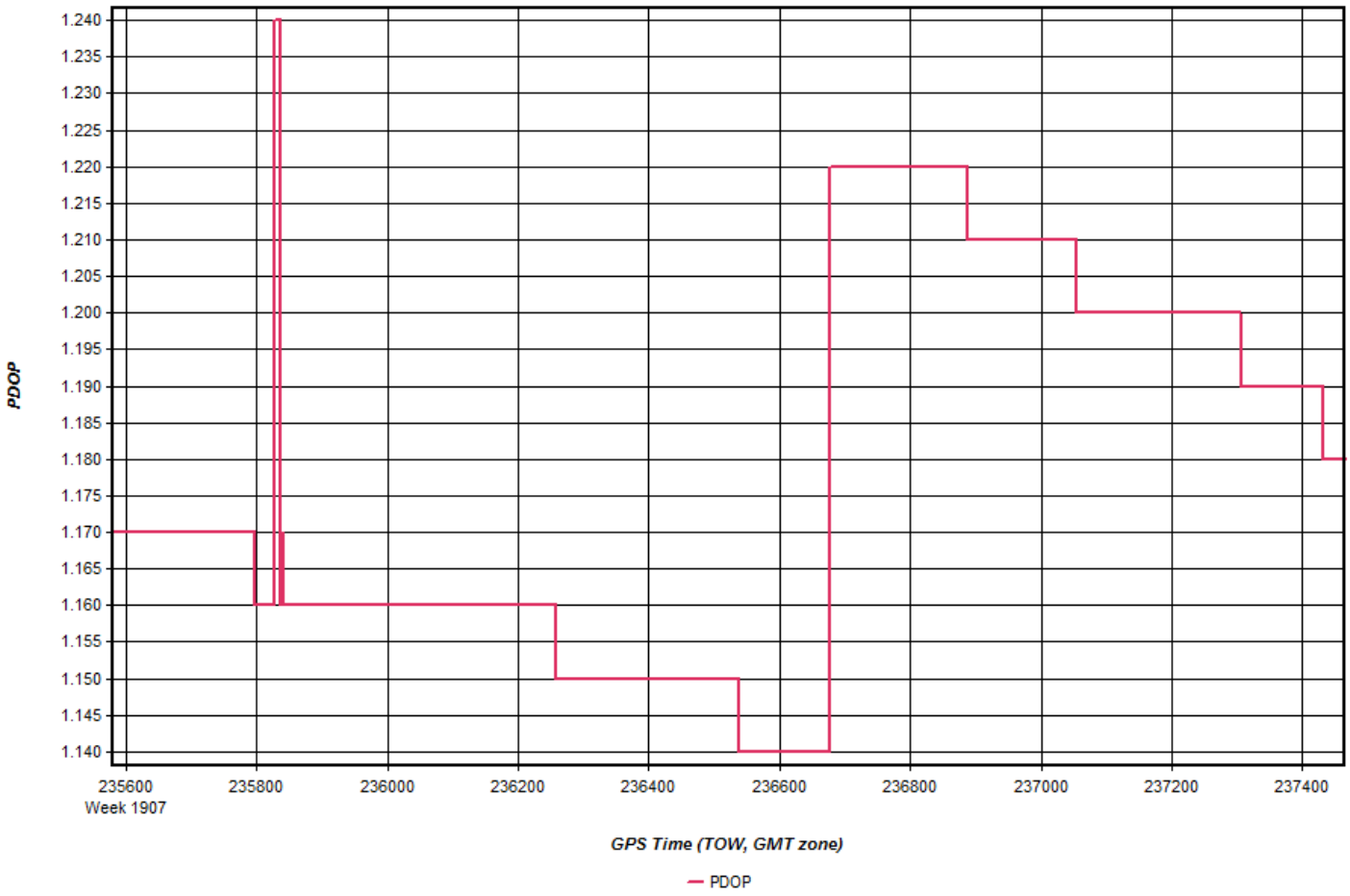
225_20160726_1B



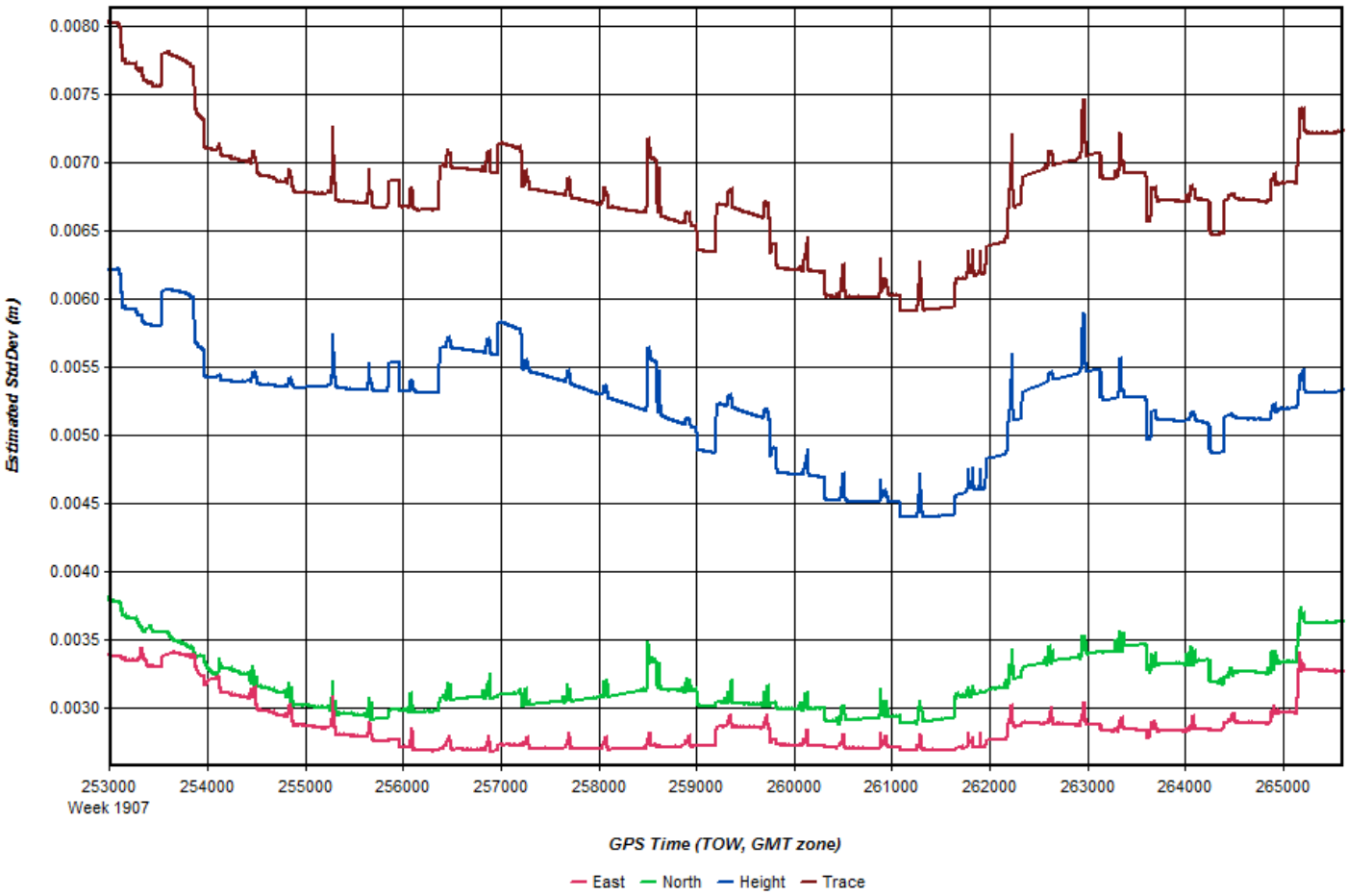

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
235600
Week 1907
235800
236000
236200
236400
236600
236800
237000
237200
237400
GPS Time (TOW, GMT zone)
East
North
Height
Trace

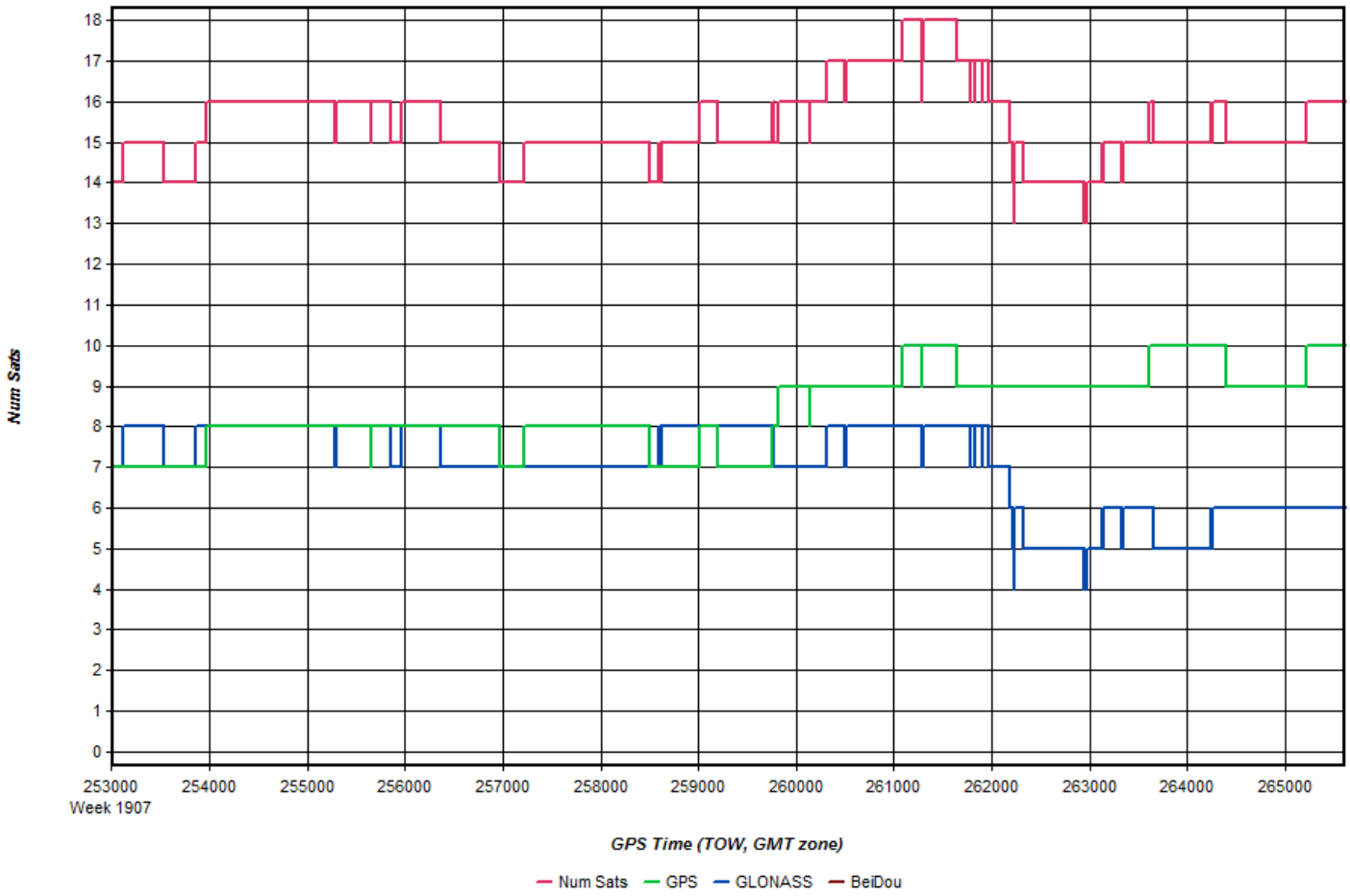

Num Sats
13
12
11
10
9
8
7
6
5
4
3
2
1
0
235600
Week 1907
235800
236000
236200
236400
236600
236800
237000
237200
237400
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

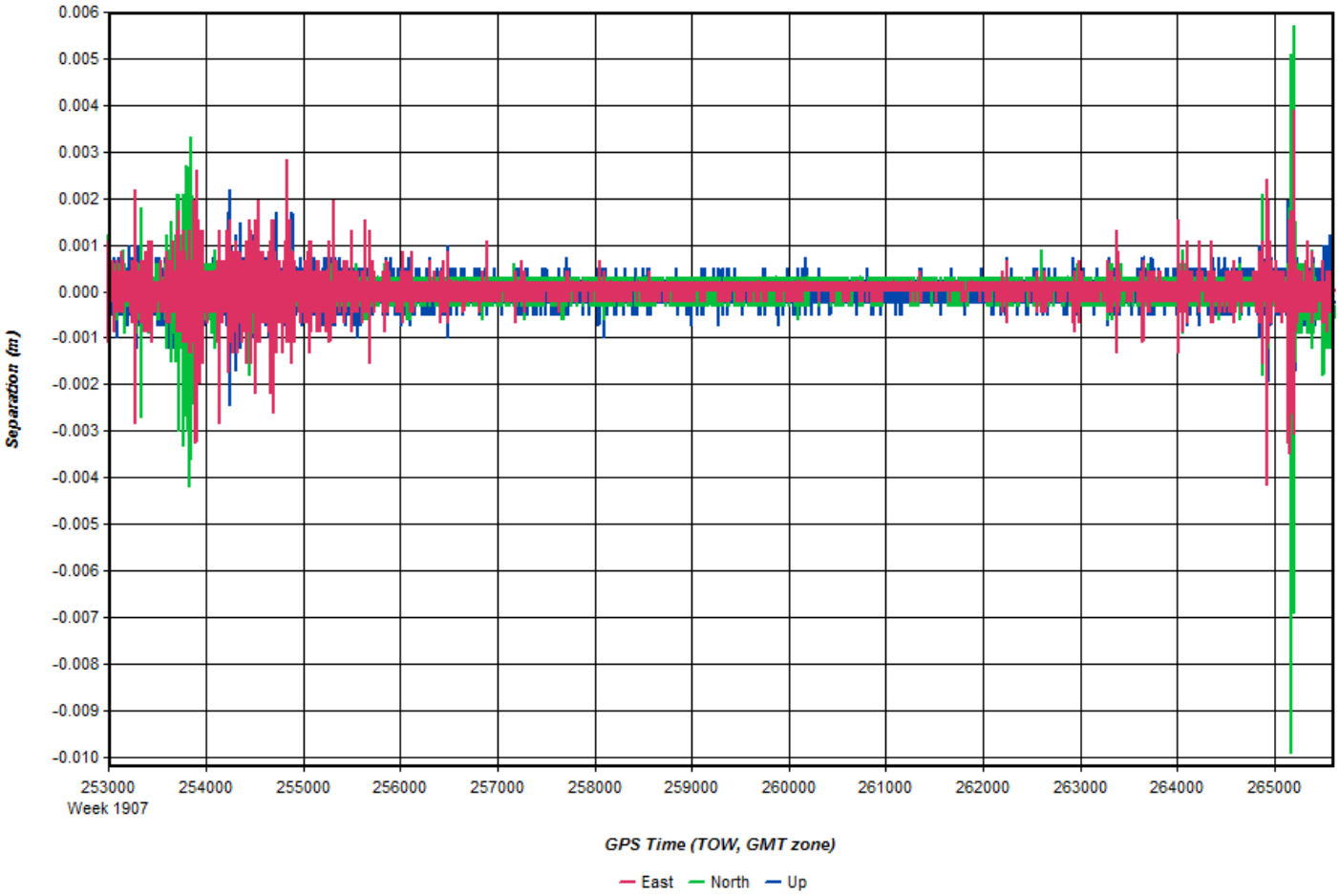

0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
Separation (m)
235600
Week 1907
235800
236000
236200
236400
236600
236800
237000
237200
237400
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.240
1.235
1.230
1.225
1.220
1.215
1.210
1.205
1.200
1.195
1.190
1.185
1.180
1.175
1.170
1.165
1.160
1.155
1.150
1.145
1.140
235600
Week 1907
235800
236000
236200
236400
236600
236800
237000
237200
237400
GPS Time (TOW, GMT zone)
PDOP

225_20160726_2

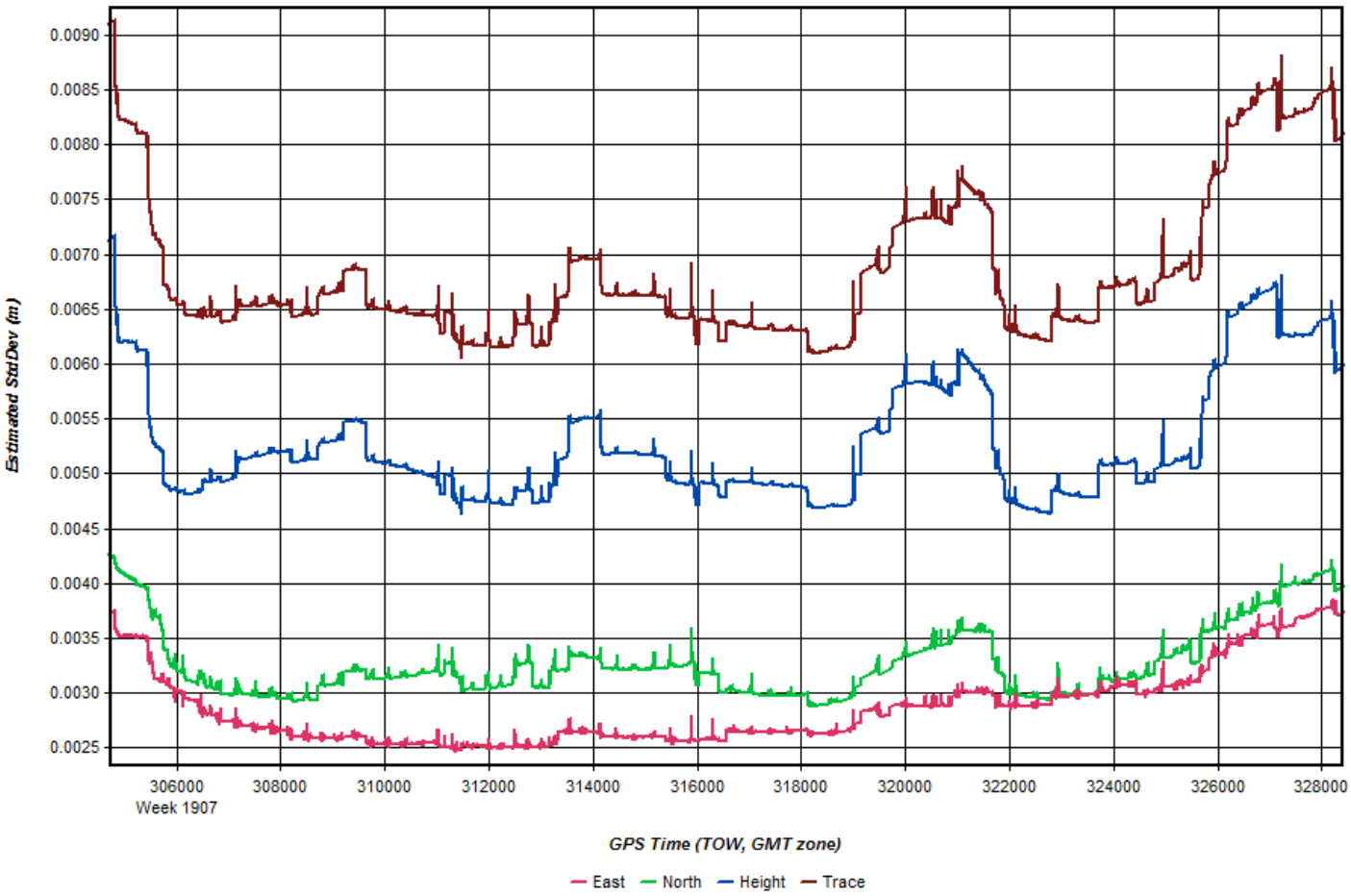

0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
Estimated StdDev (m)
253000
Week 1907
254000
255000
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
253000
Week 1907
254000
255000
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

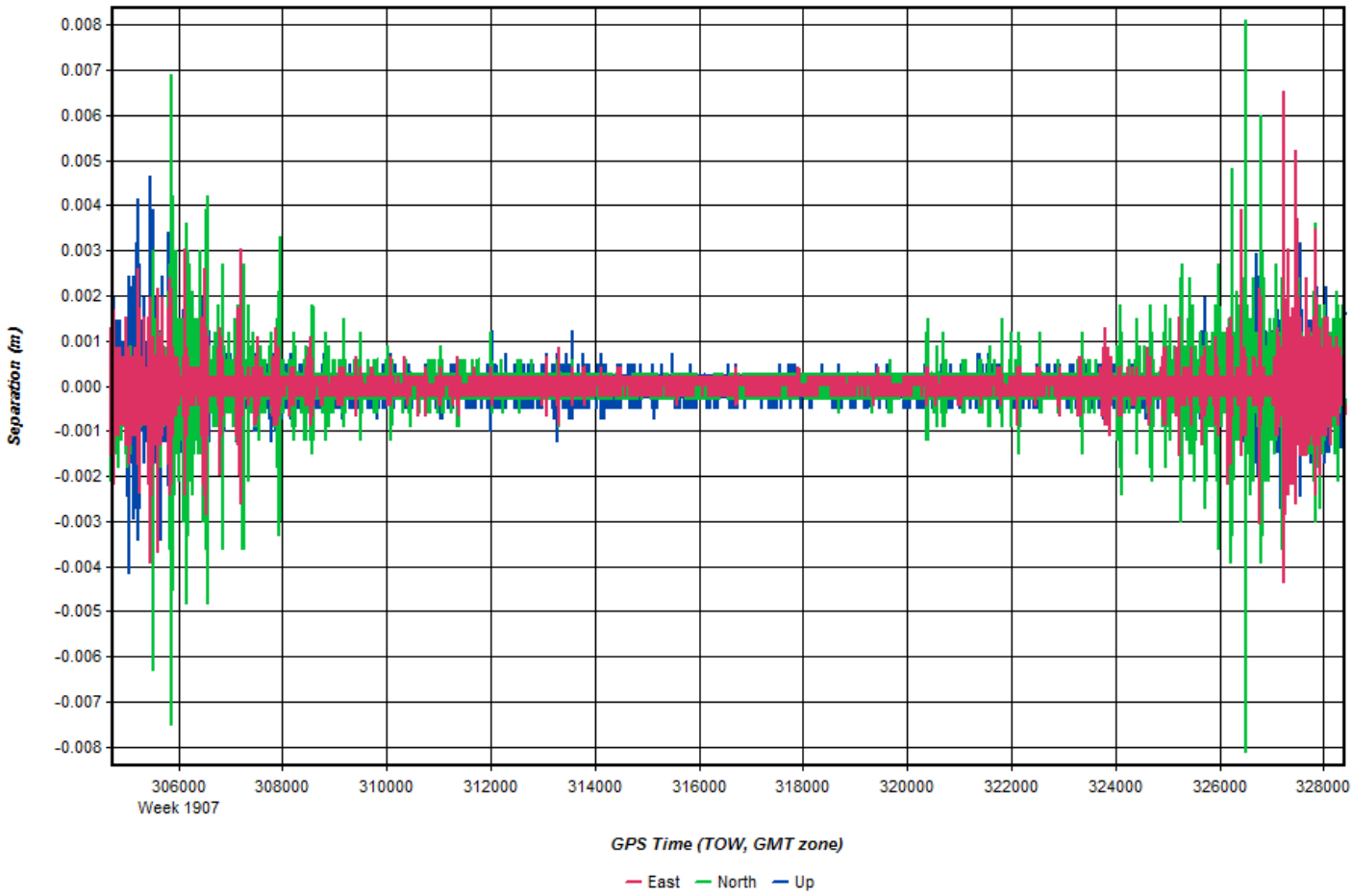

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
Separation (m)
253000
Week 1907
254000
255000
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
GPS Time (TOW, GMT zone)
East
North
Up

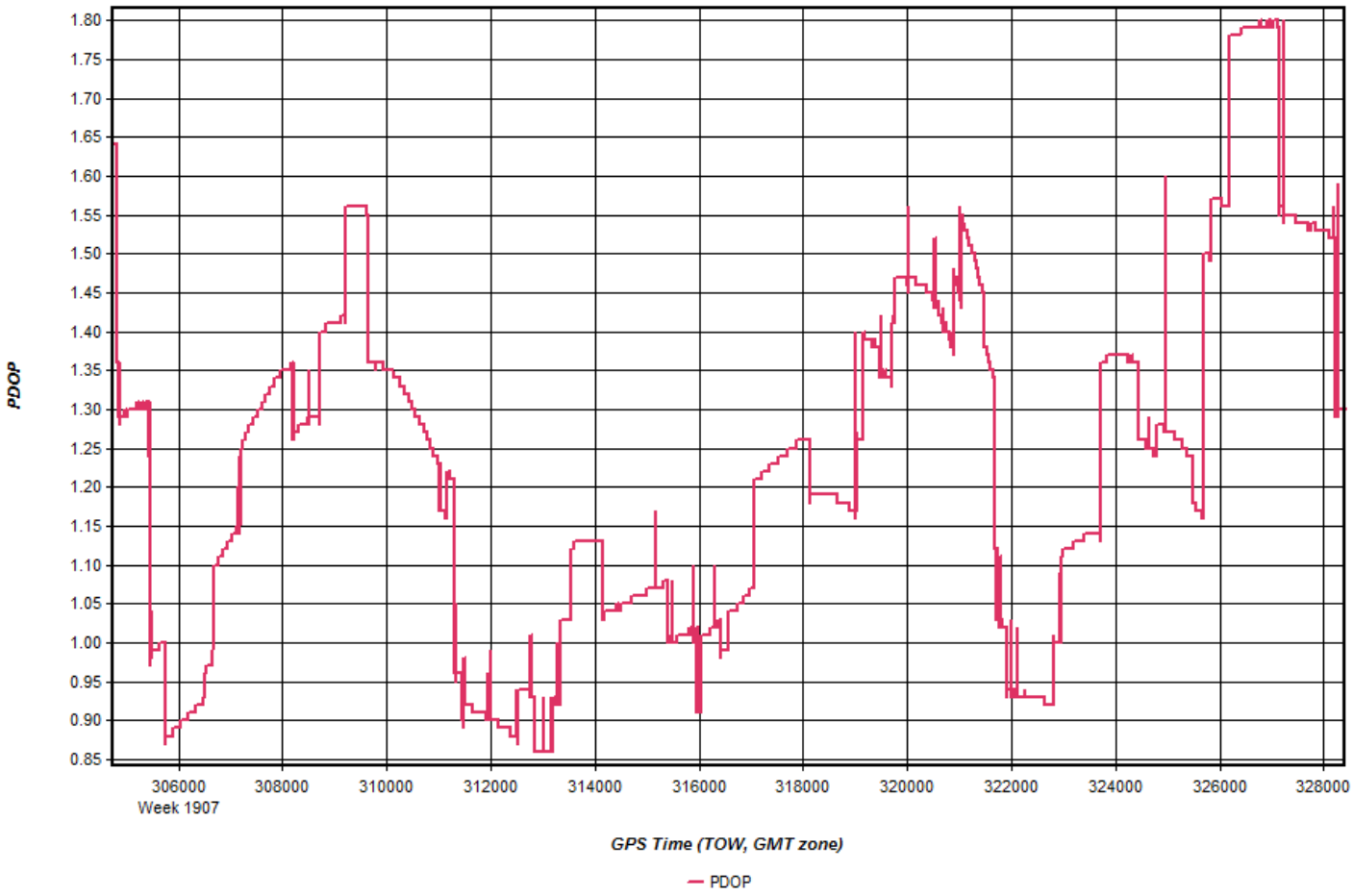

PDOP
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
253000
Week 1907
254000
255000
256000
257000
258000
259000
260000
261000
262000
263000
264000
265000
GPS Time (TOW, GMT zone)
PDOP

225_20160727_1

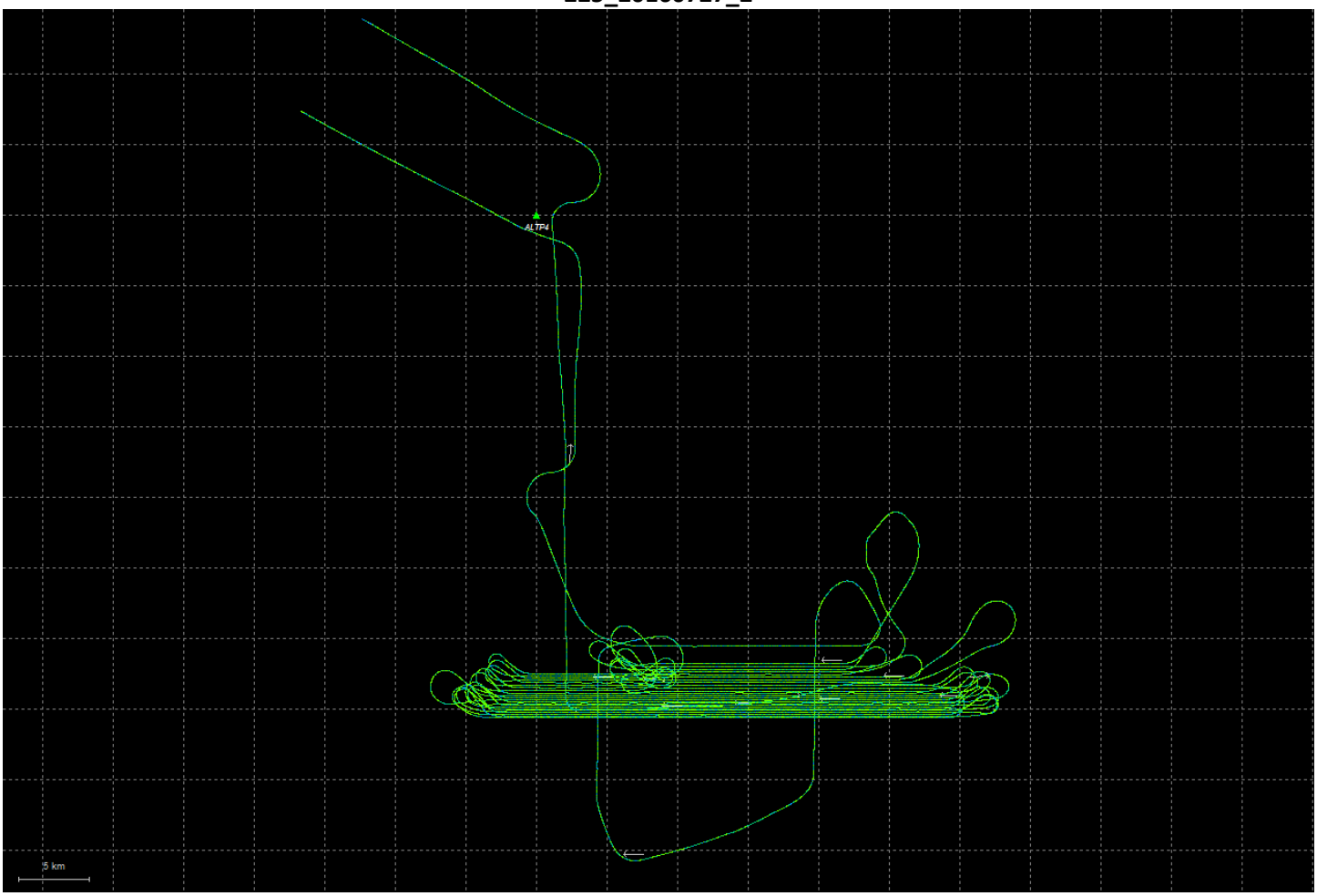

Estimated StdDev (m)
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
306000
Week 1907
308000
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

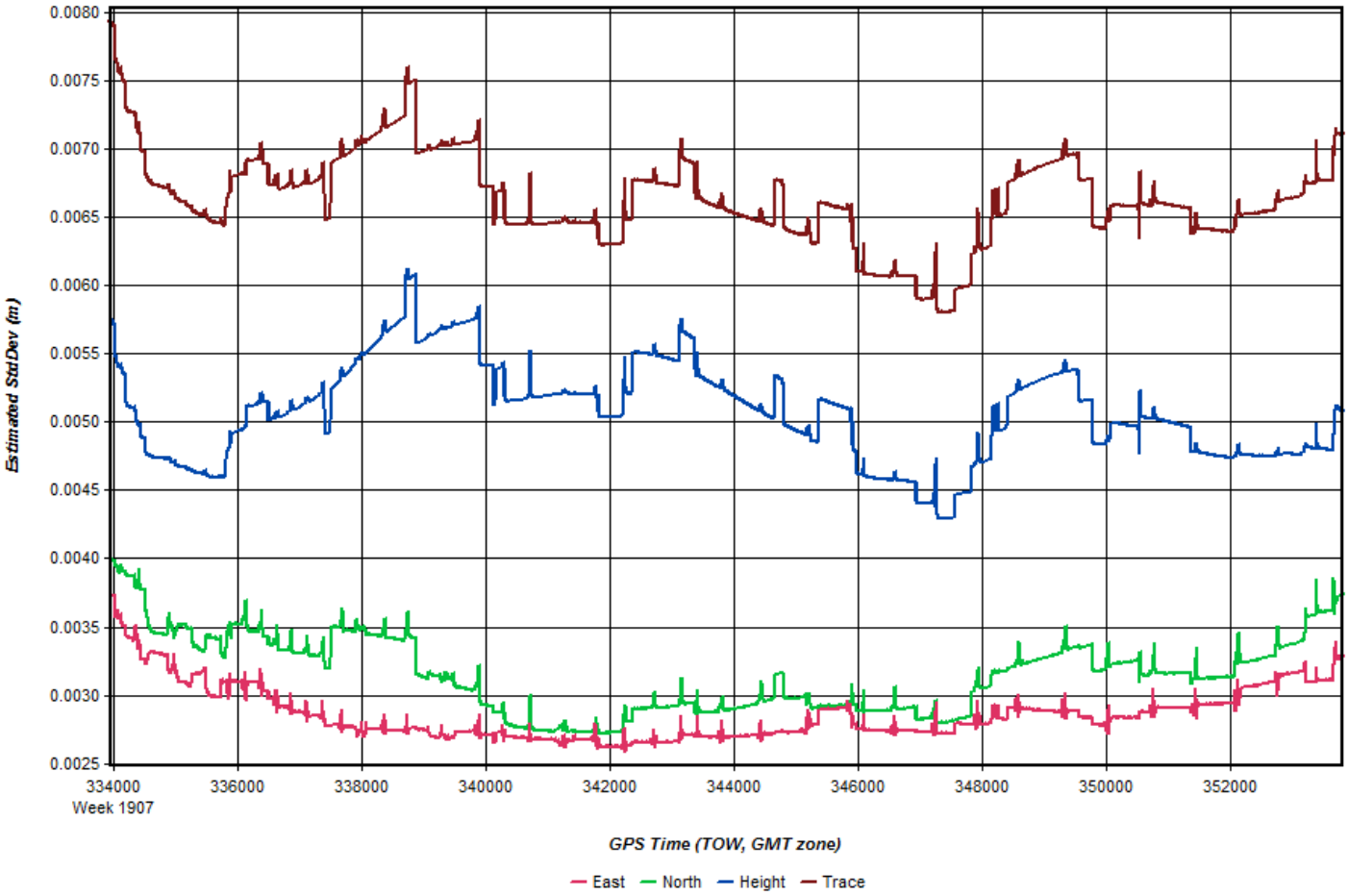

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
306000
Week 1907
308000
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

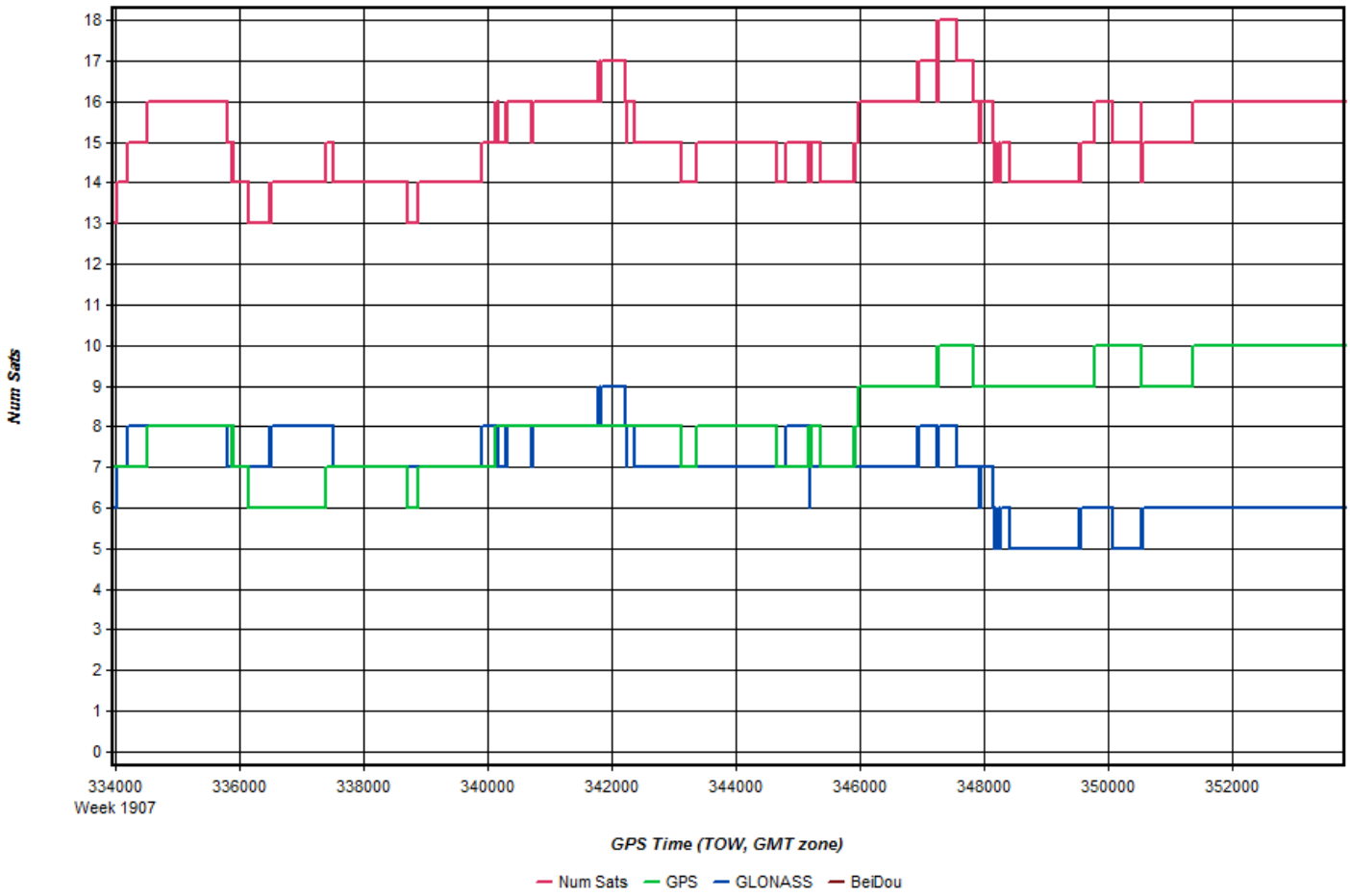

0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
Separation (m)
306000
Week 1907
308000
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
306000
Week 1907
308000
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
PDOP

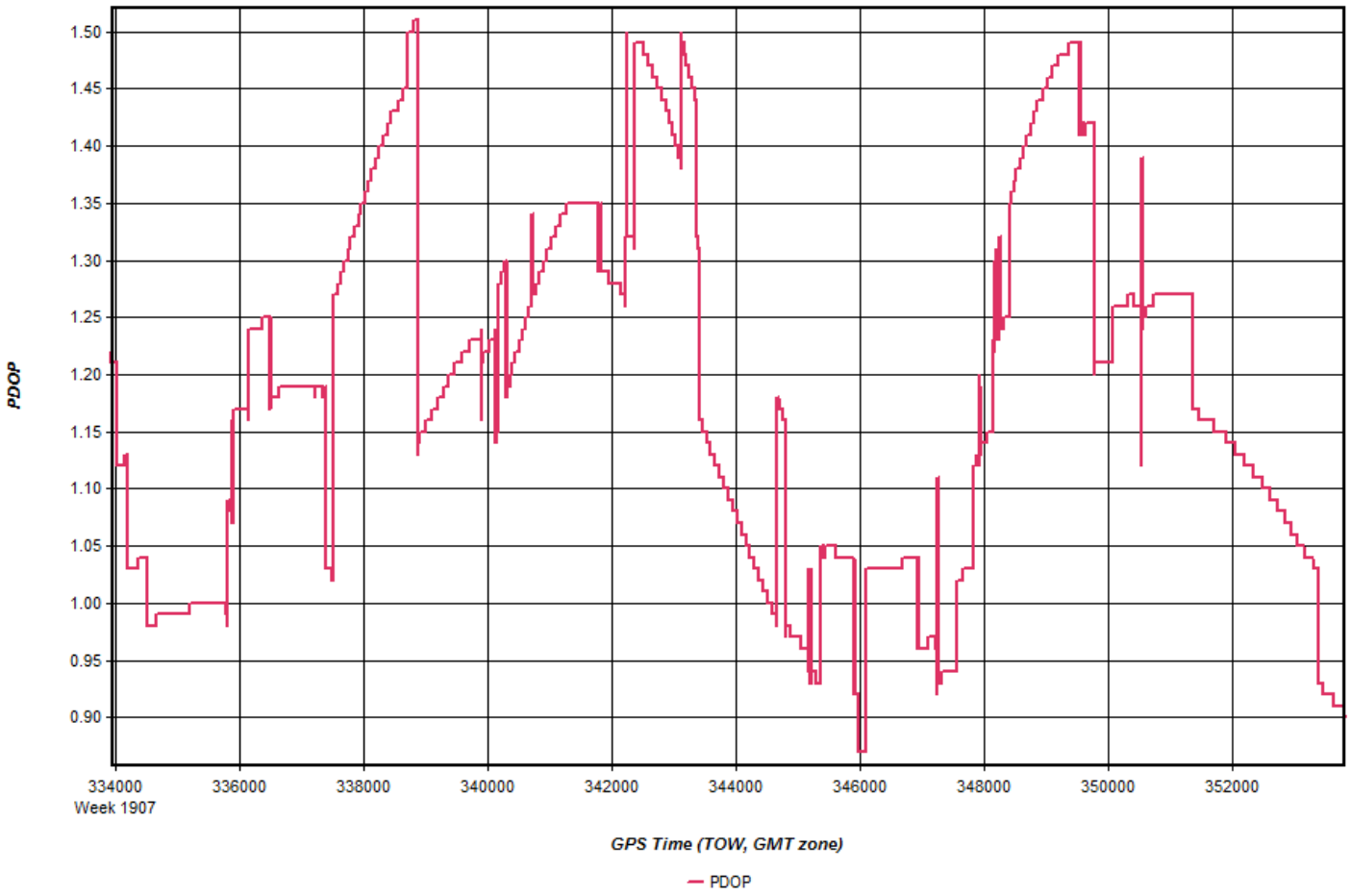
225_20160727_2



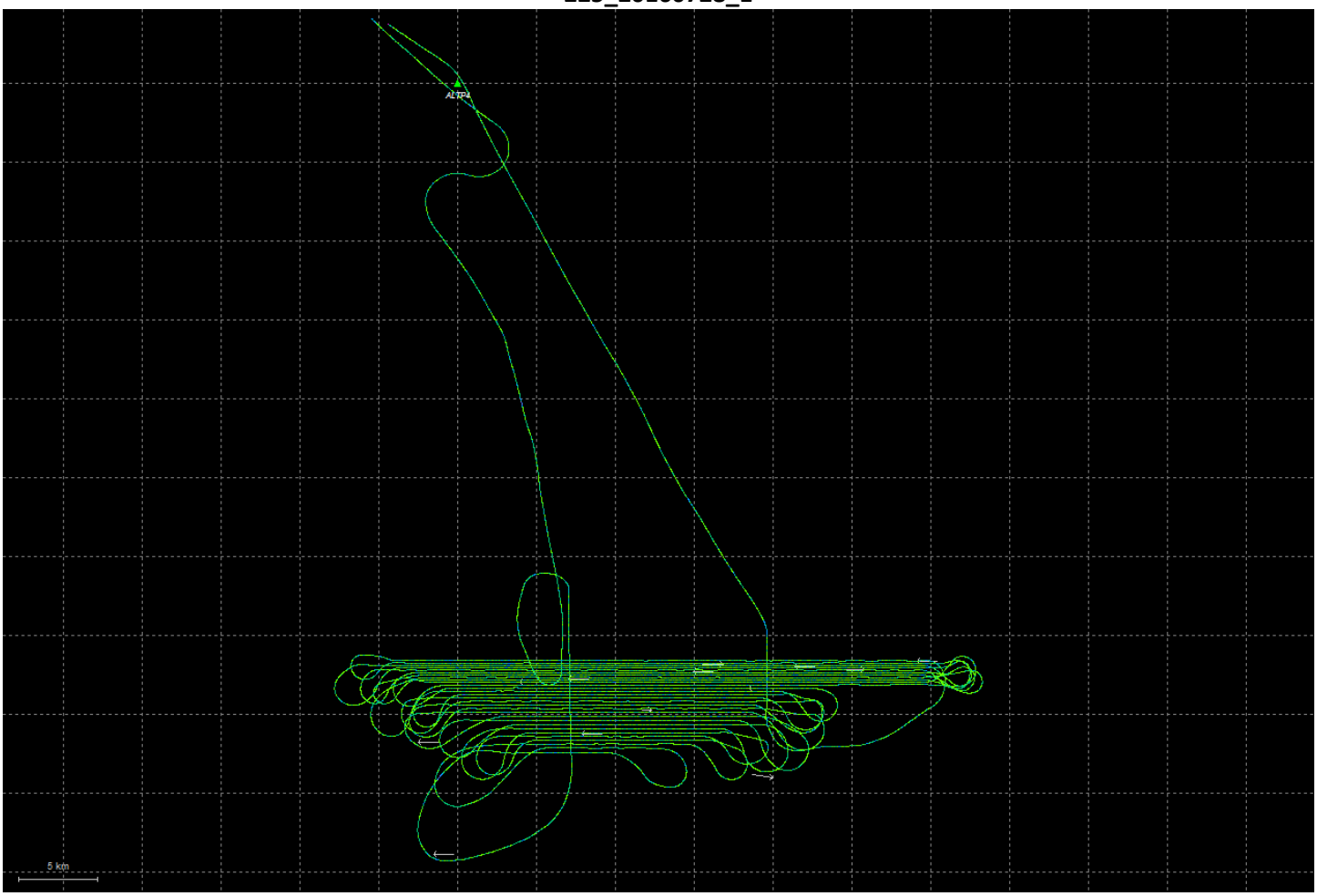

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
334000
Week 1907
336000
338000
340000
342000
344000
346000
348000
350000
352000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

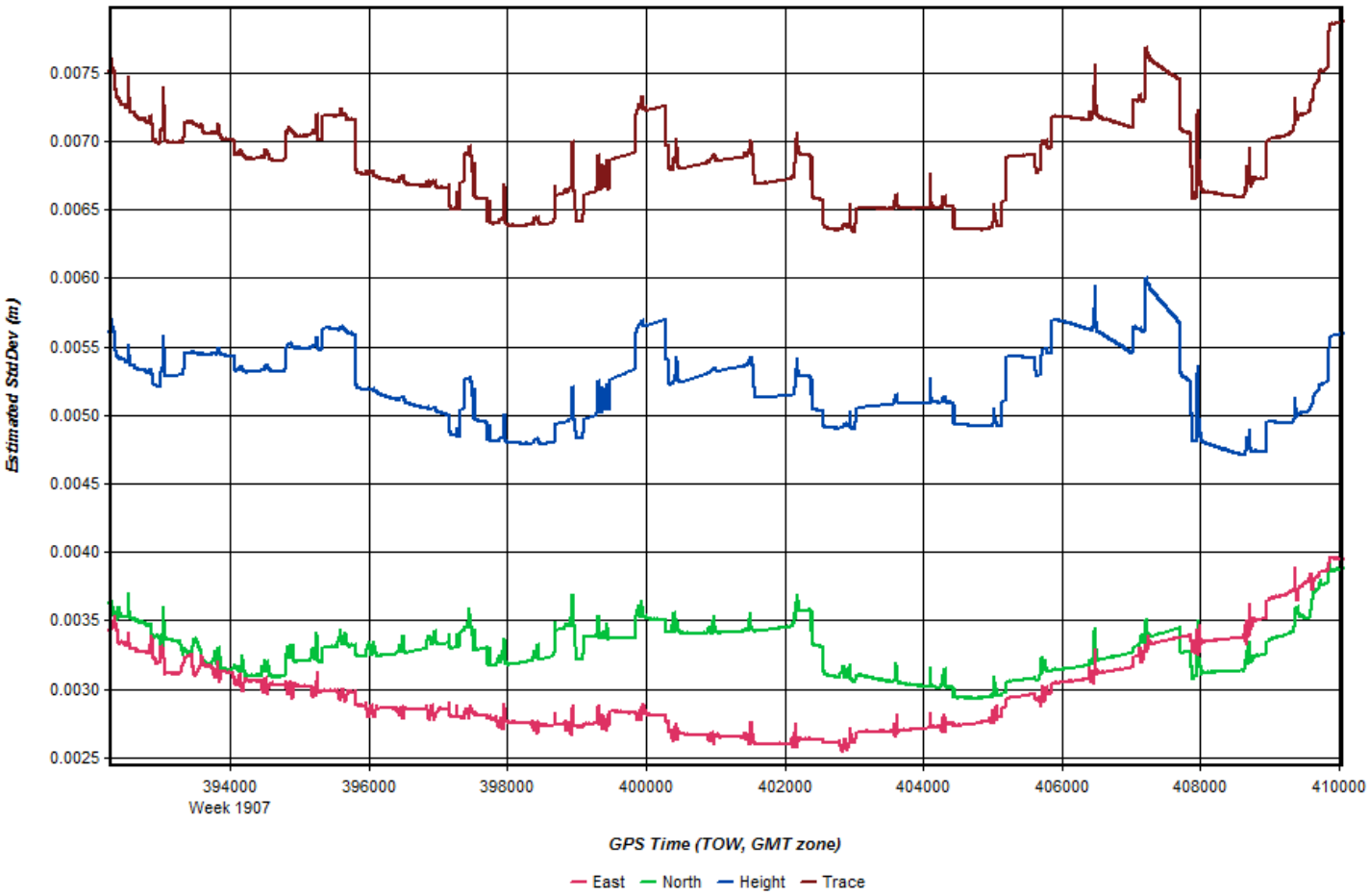

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
334000
Week 1907
336000
338000
340000
342000
344000
346000
348000
350000
352000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

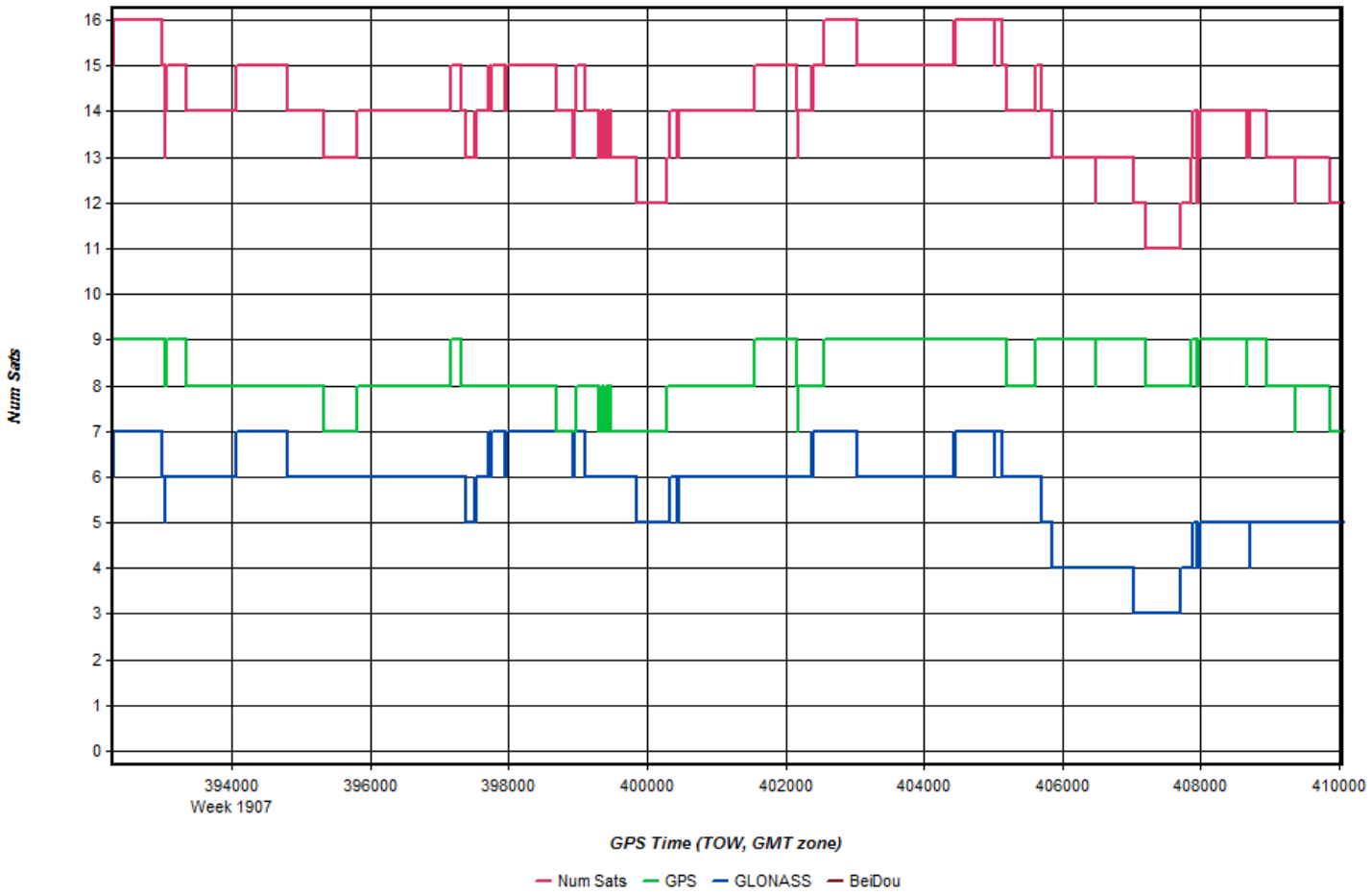

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
Separation (m)
334000
Week 1907
336000
338000
340000
342000
344000
346000
348000
350000
352000
GPS Time (TOW, GMT zone)
East
North
Up

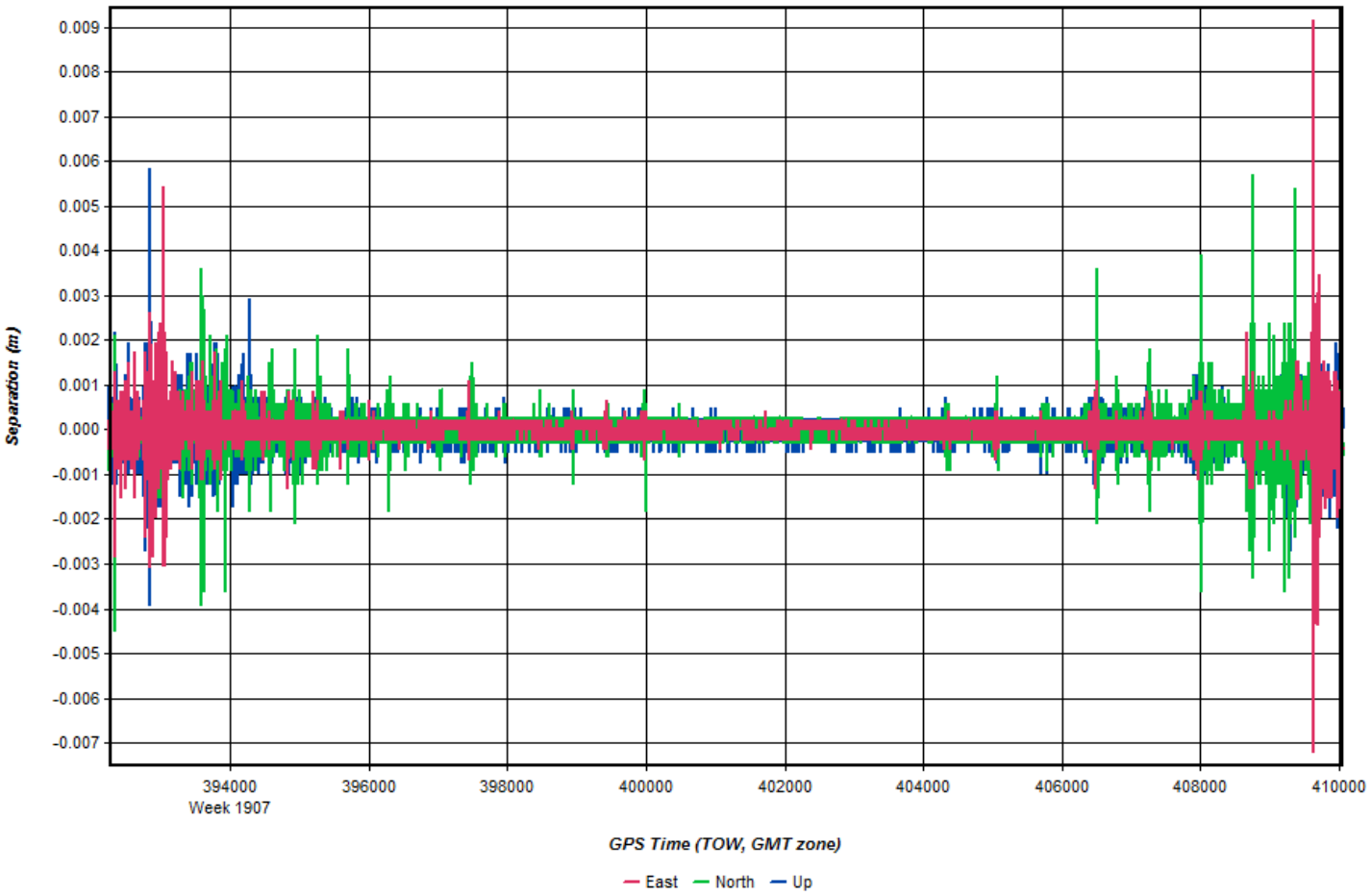

PDOP
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
334000
Week 1907
336000
338000
340000
342000
344000
346000
348000
350000
352000
GPS Time (TOW, GMT zone)
PDOP

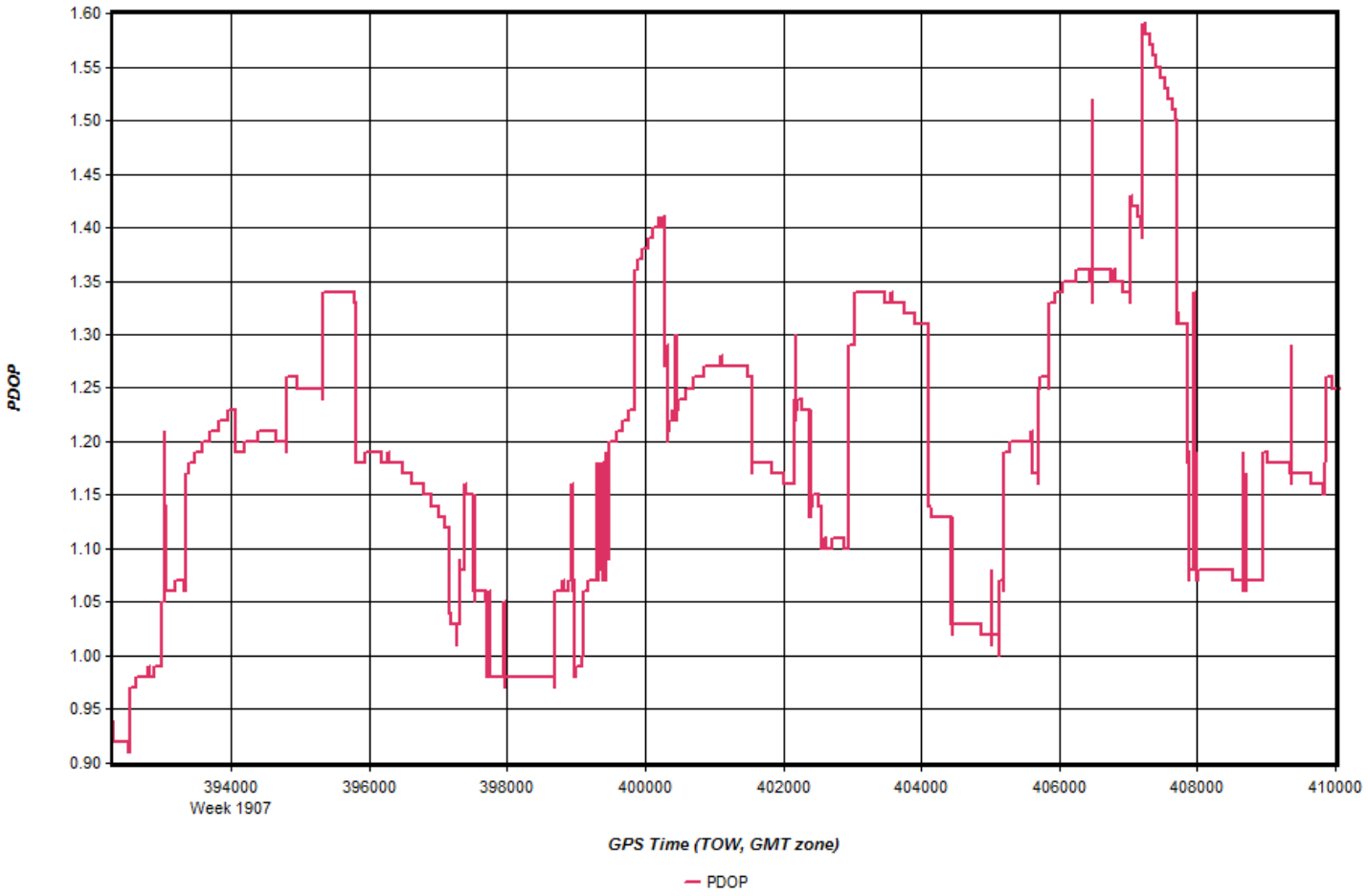
225_20160728_1



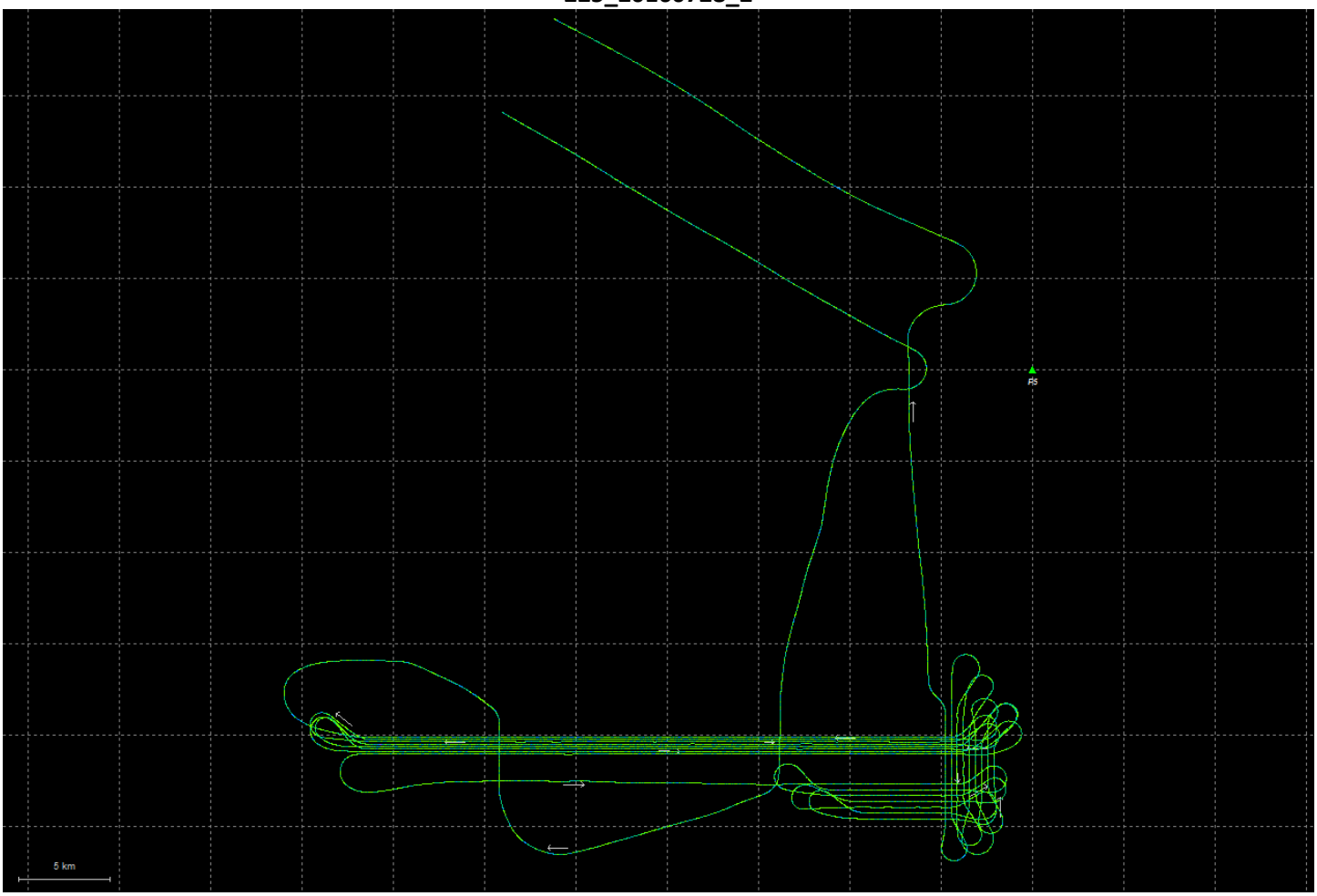

Estimated StdDev (m)
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
394000
Week 1907
396000
398000
400000
402000
404000
406000
408000
410000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

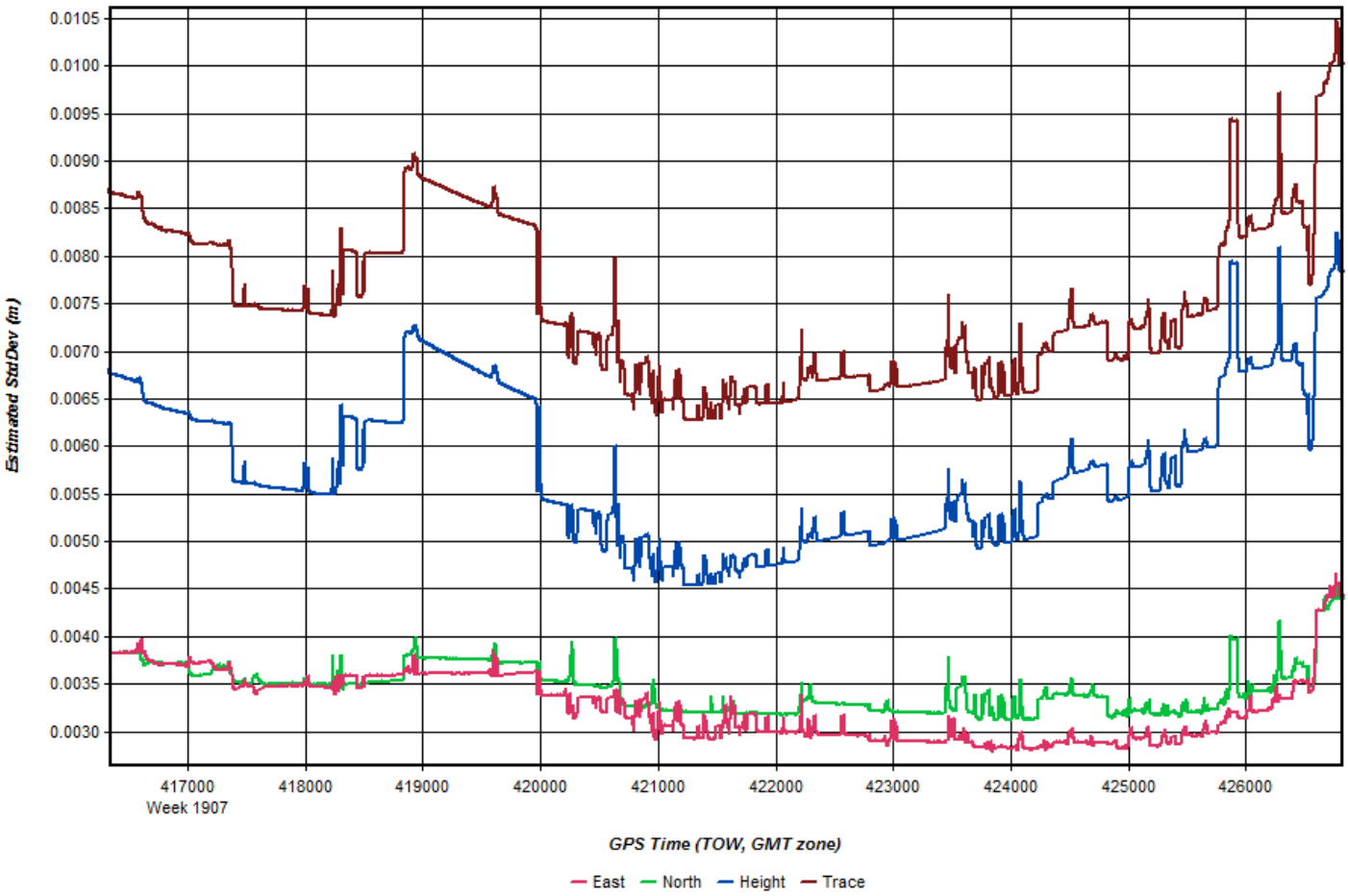

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
394000
Week 1907
396000
398000
400000
402000
404000
406000
408000
410000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

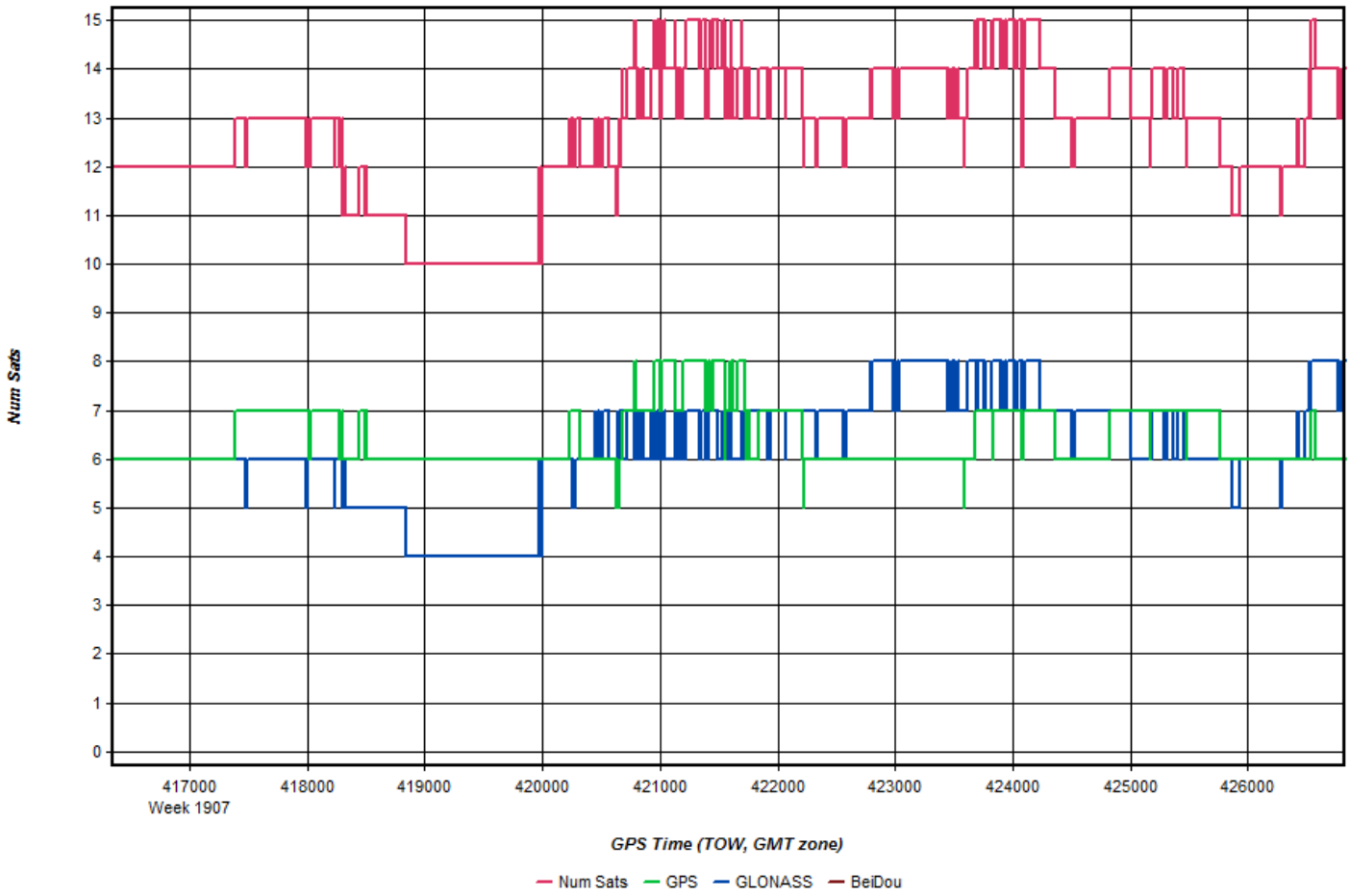

0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
Separation (m)
394000
Week 1907
396000
398000
400000
402000
404000
406000
408000
410000
GPS Time (TOW, GMT zone)
East
North
Up

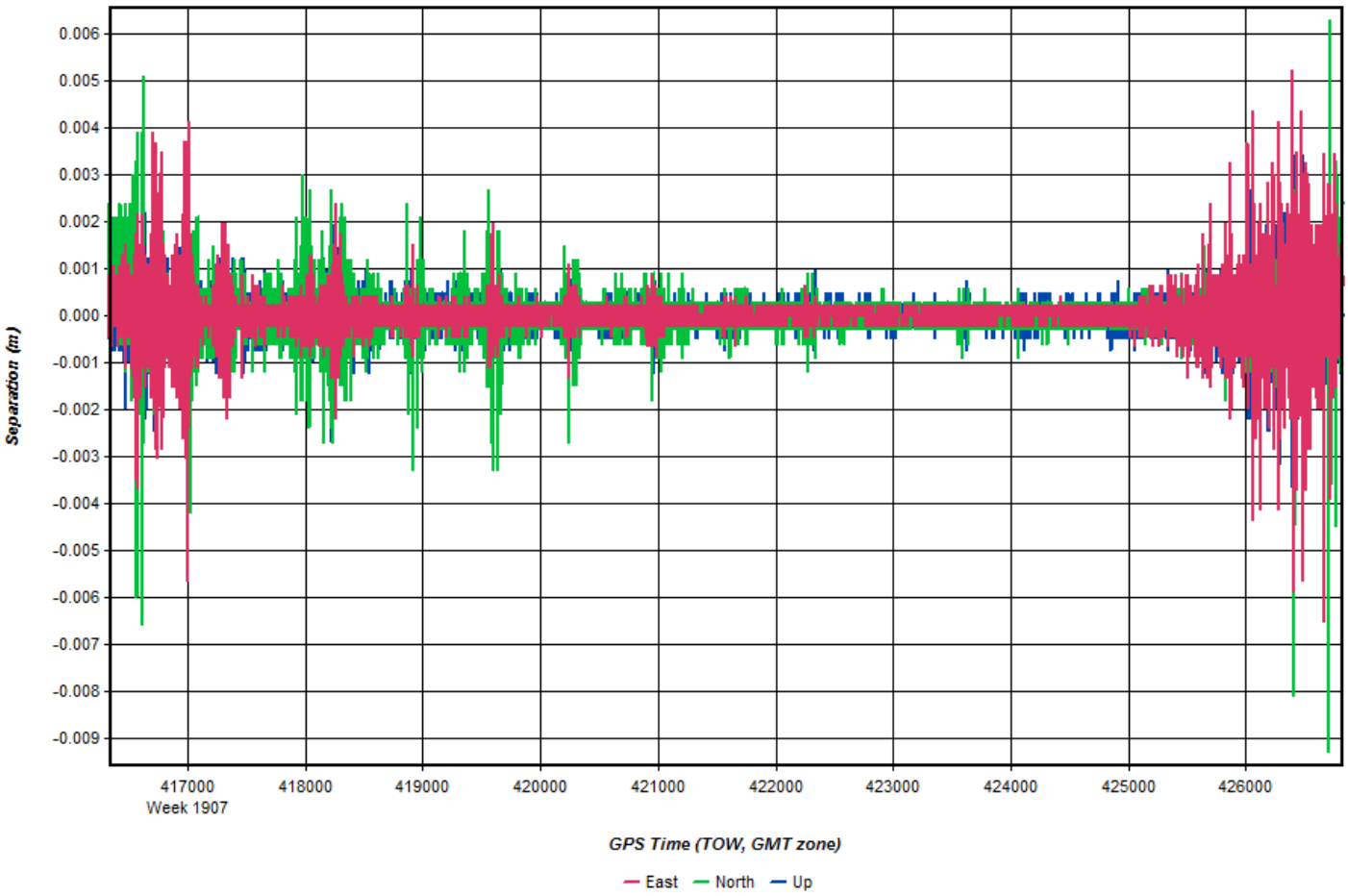

PDOP
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
394000
Week 1907
396000
398000
400000
402000
404000
406000
408000
410000
GPS Time (TOW, GMT zone)
PDOP

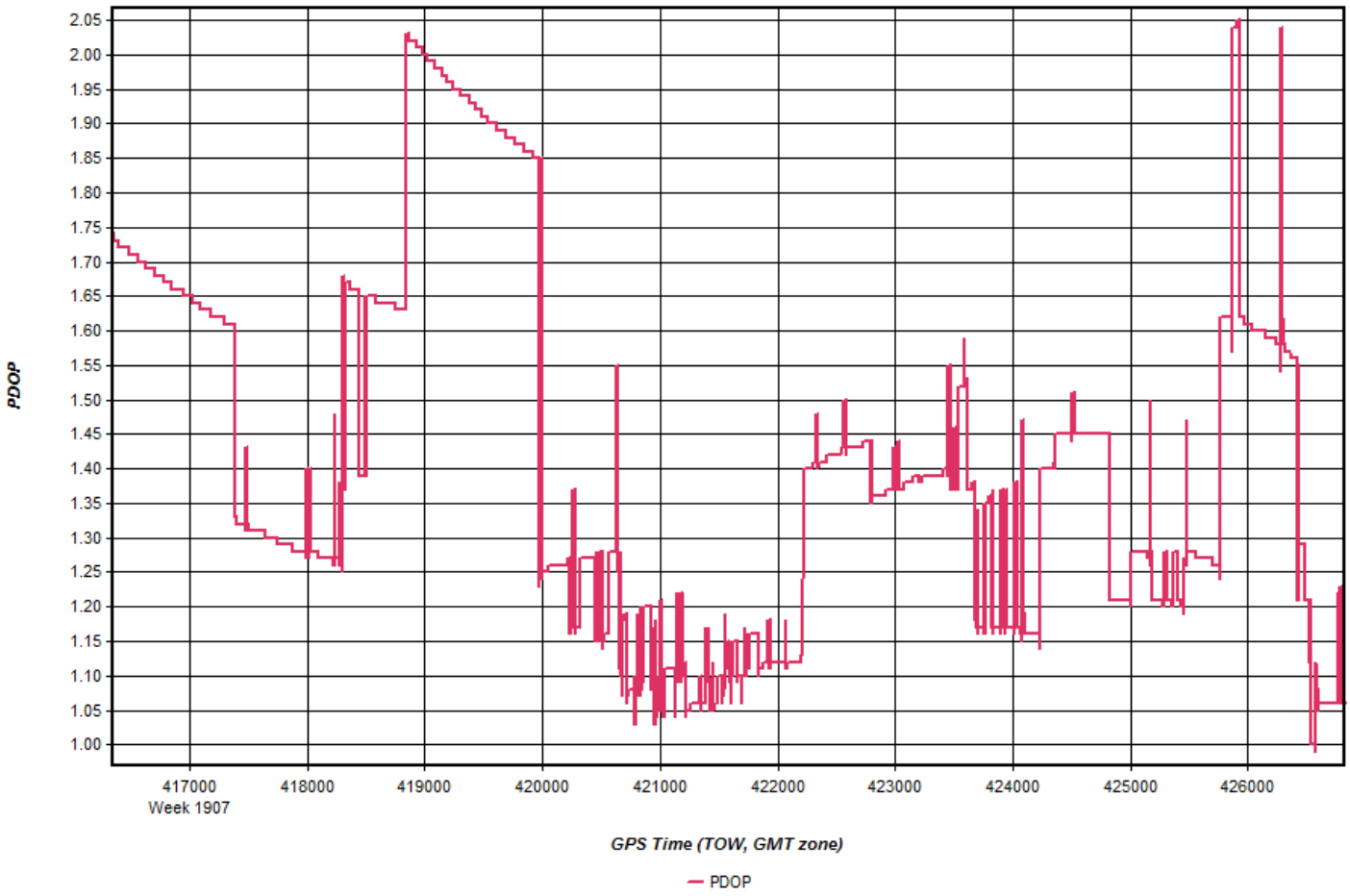
225_20160728_2



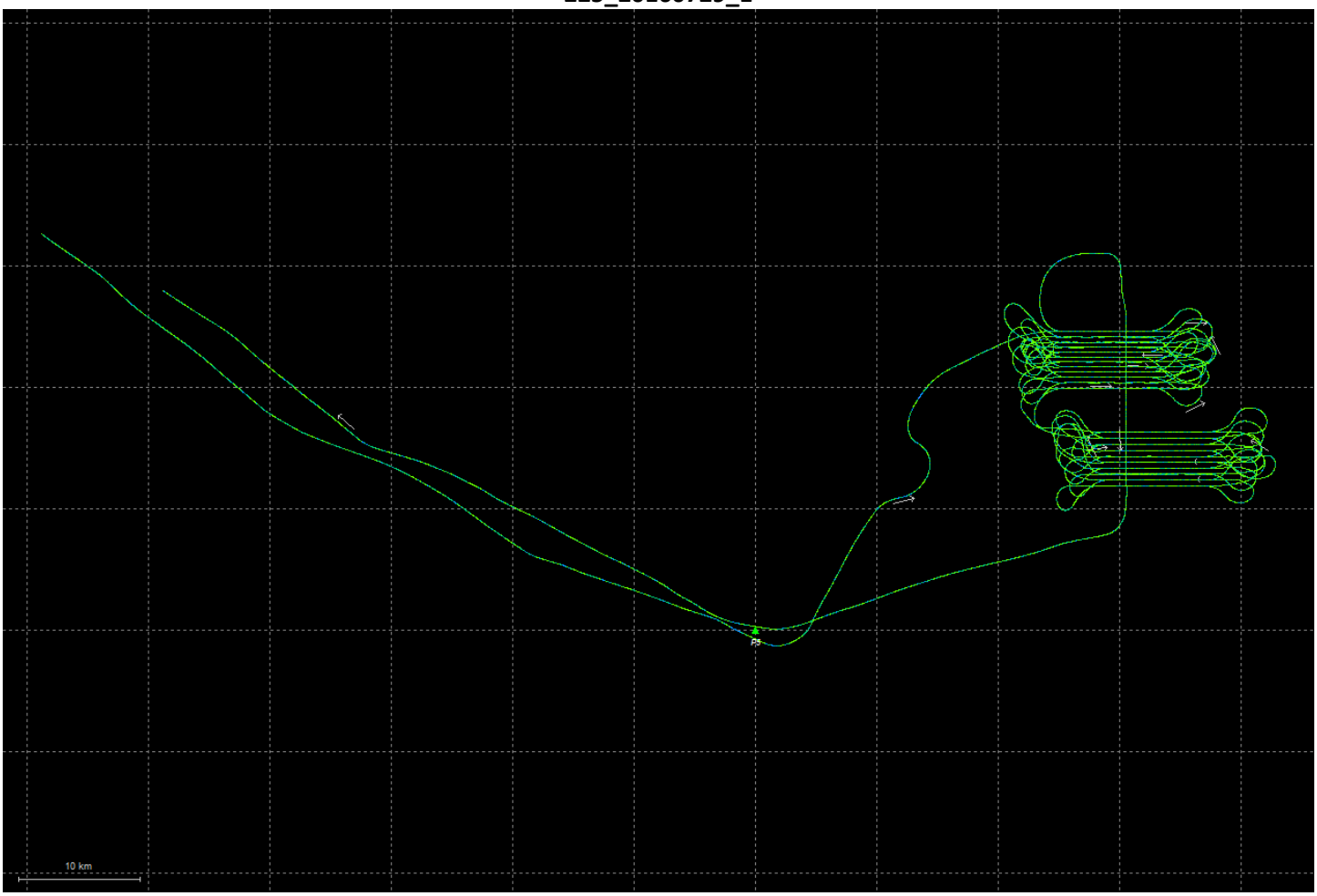

Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
417000
Week 1907
418000
419000
420000
421000
422000
423000
424000
425000
426000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

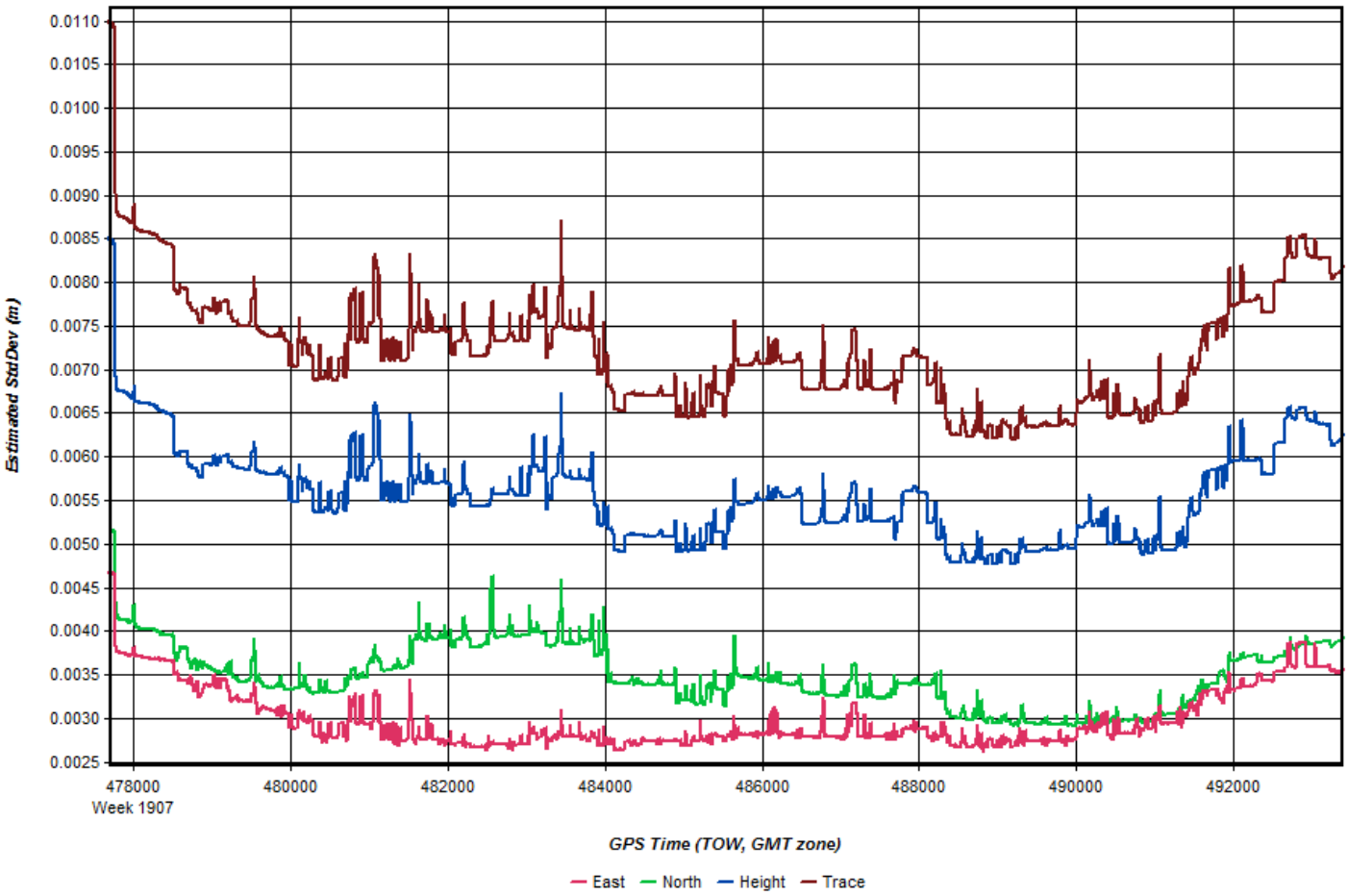

Num Sats
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
417000
Week 1907
418000
419000
420000
421000
422000
423000
424000
425000
426000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

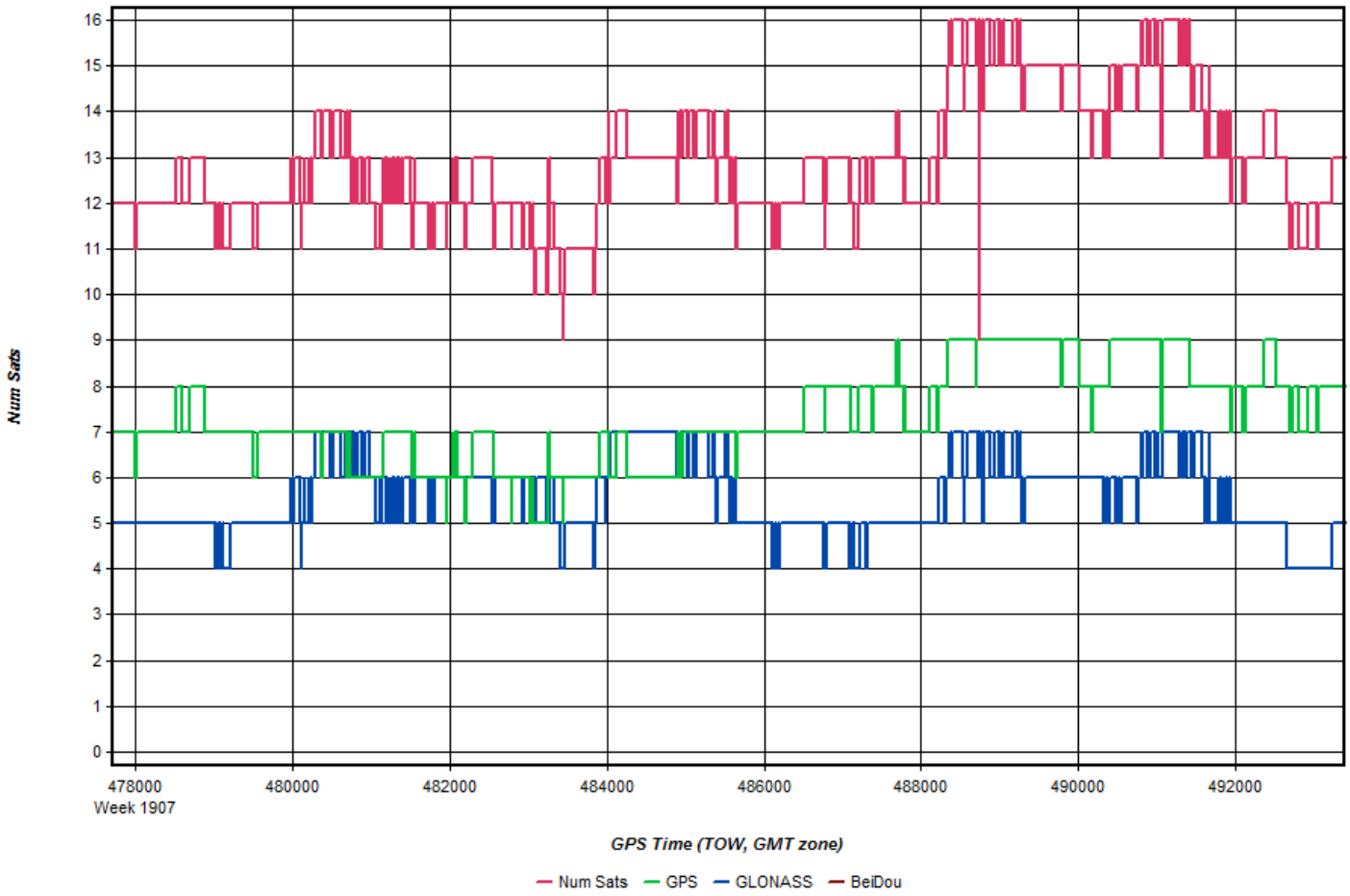

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
Separation (m)
417000
Week 1907
418000
419000
420000
421000
422000
423000
424000
425000
426000
GPS Time (TOW, GMT zone)
East
North
Up

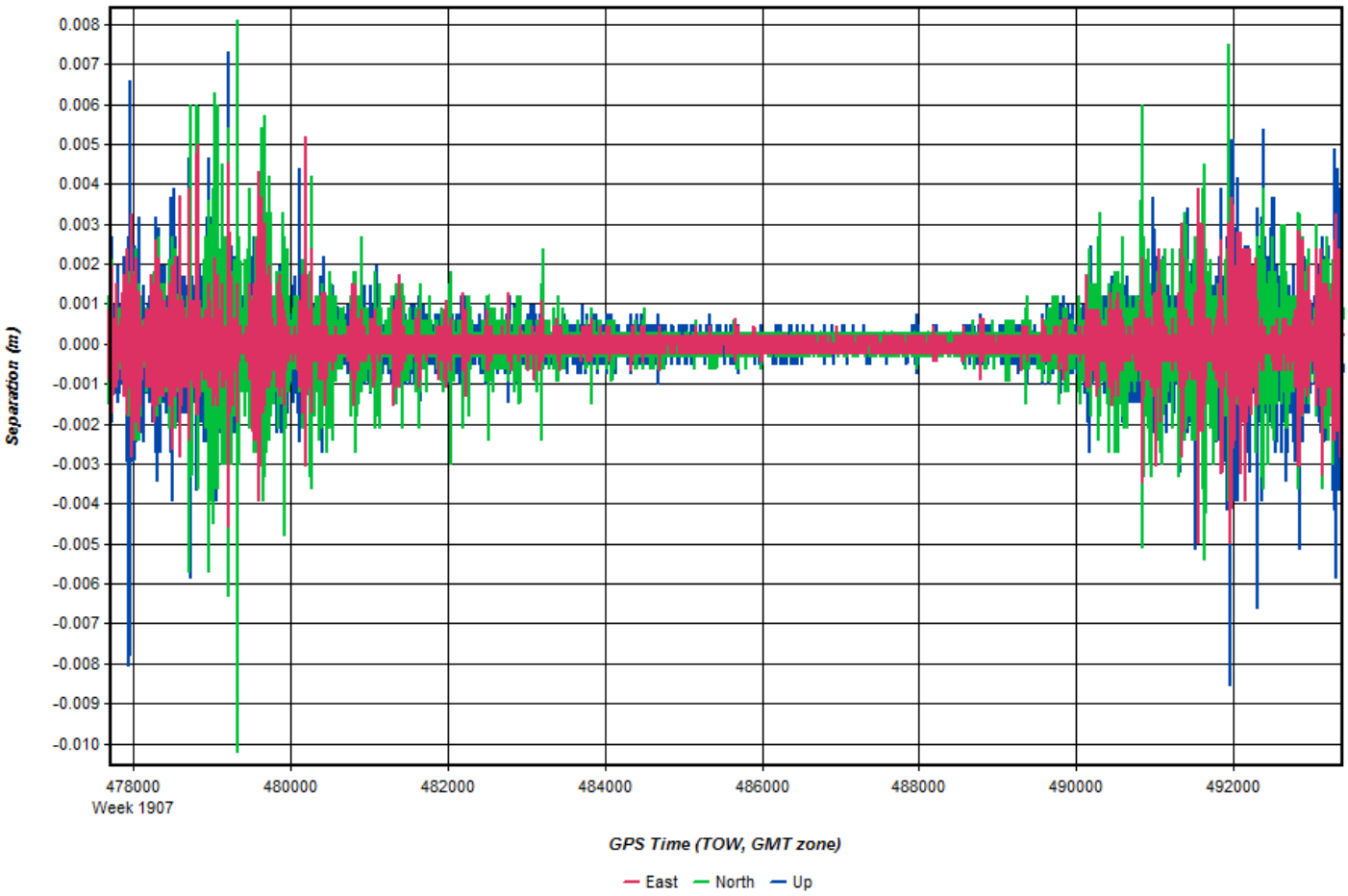

PDOP
2.05
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
417000
Week 1907
418000
419000
420000
421000
422000
423000
424000
425000
426000
GPS Time (TOW, GMT zone)
PDOP

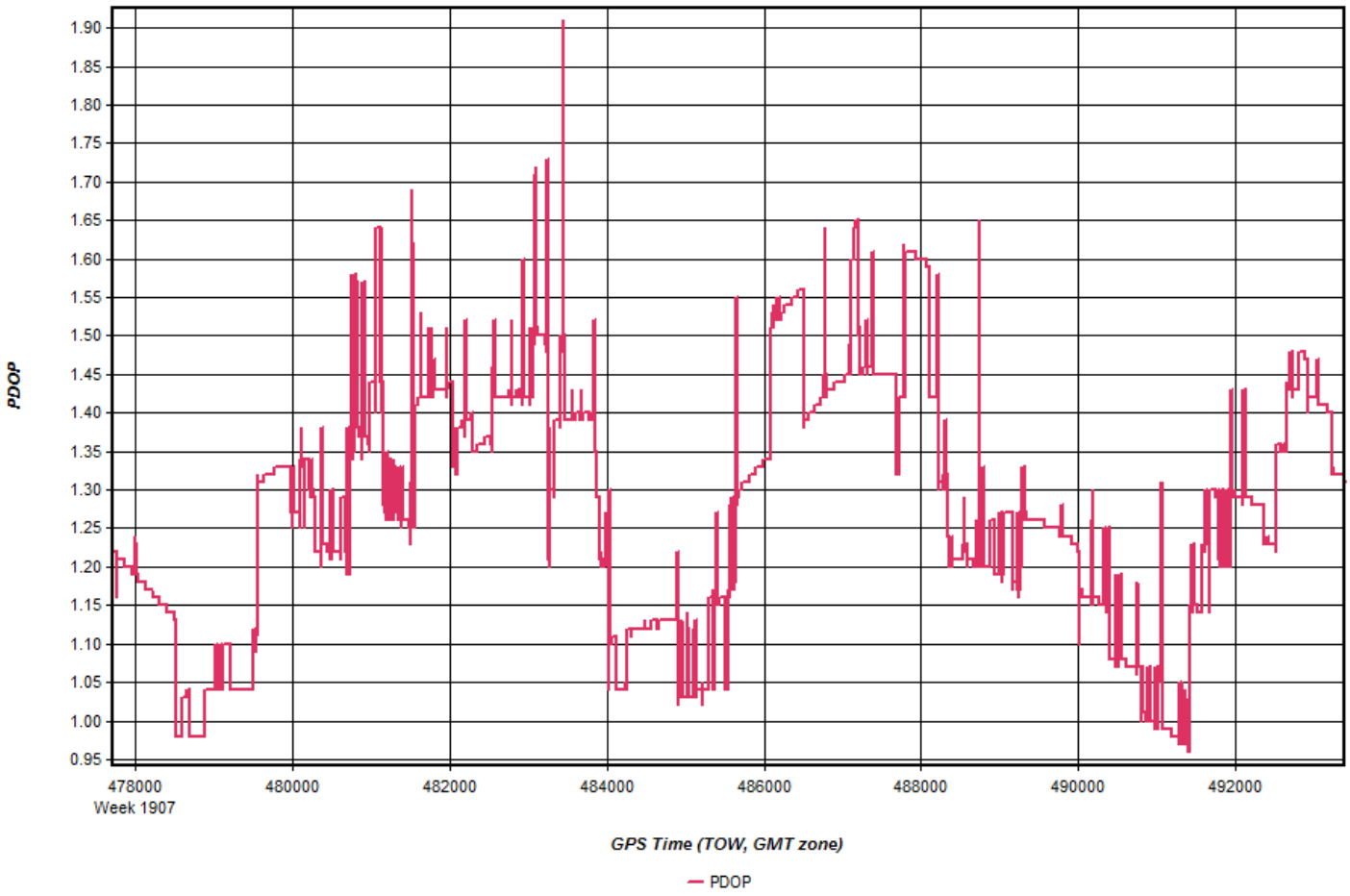
225_20160729_1



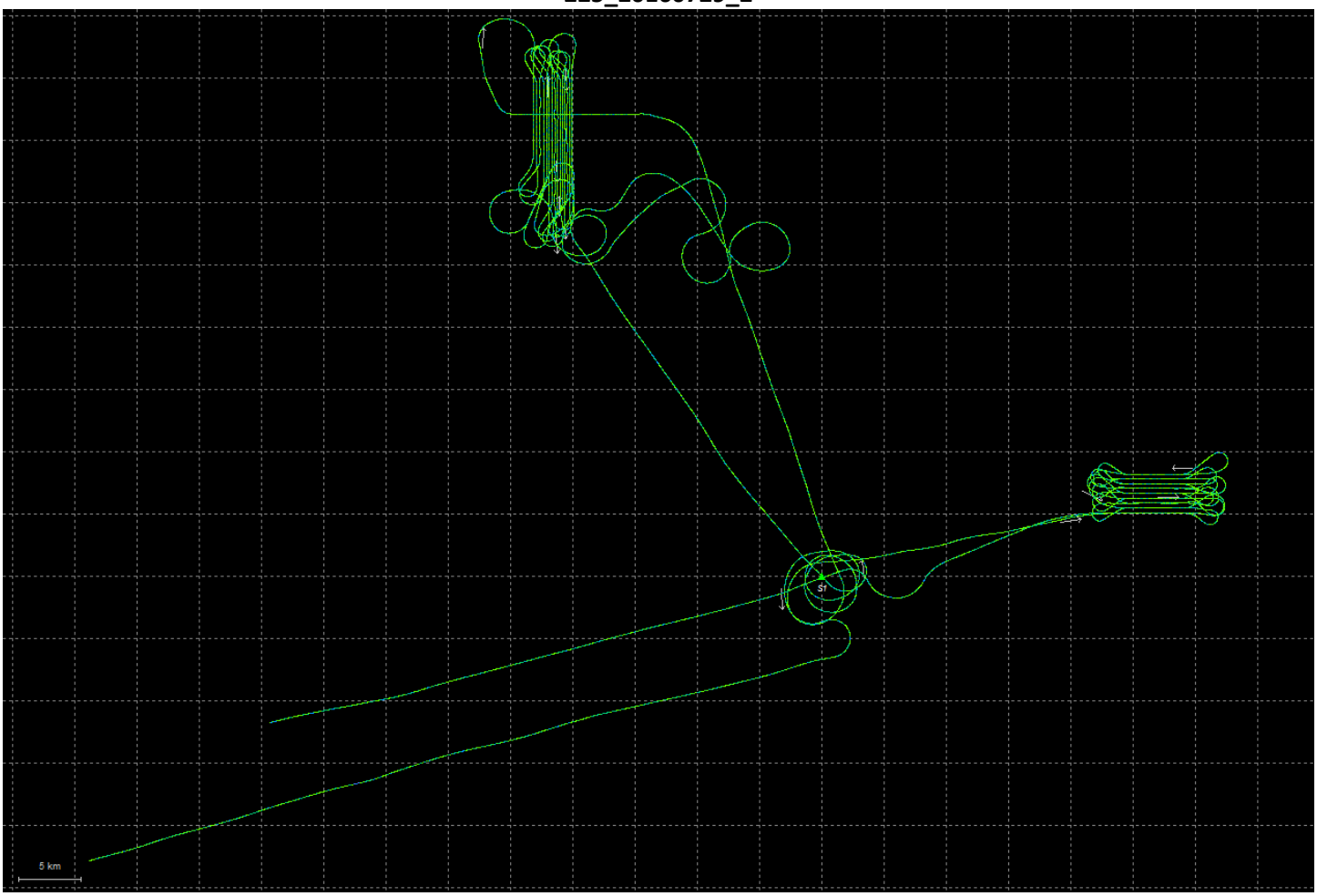

Estimated StdDev (m)
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
478000
Week 1907
480000
482000
484000
486000
488000
490000
492000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

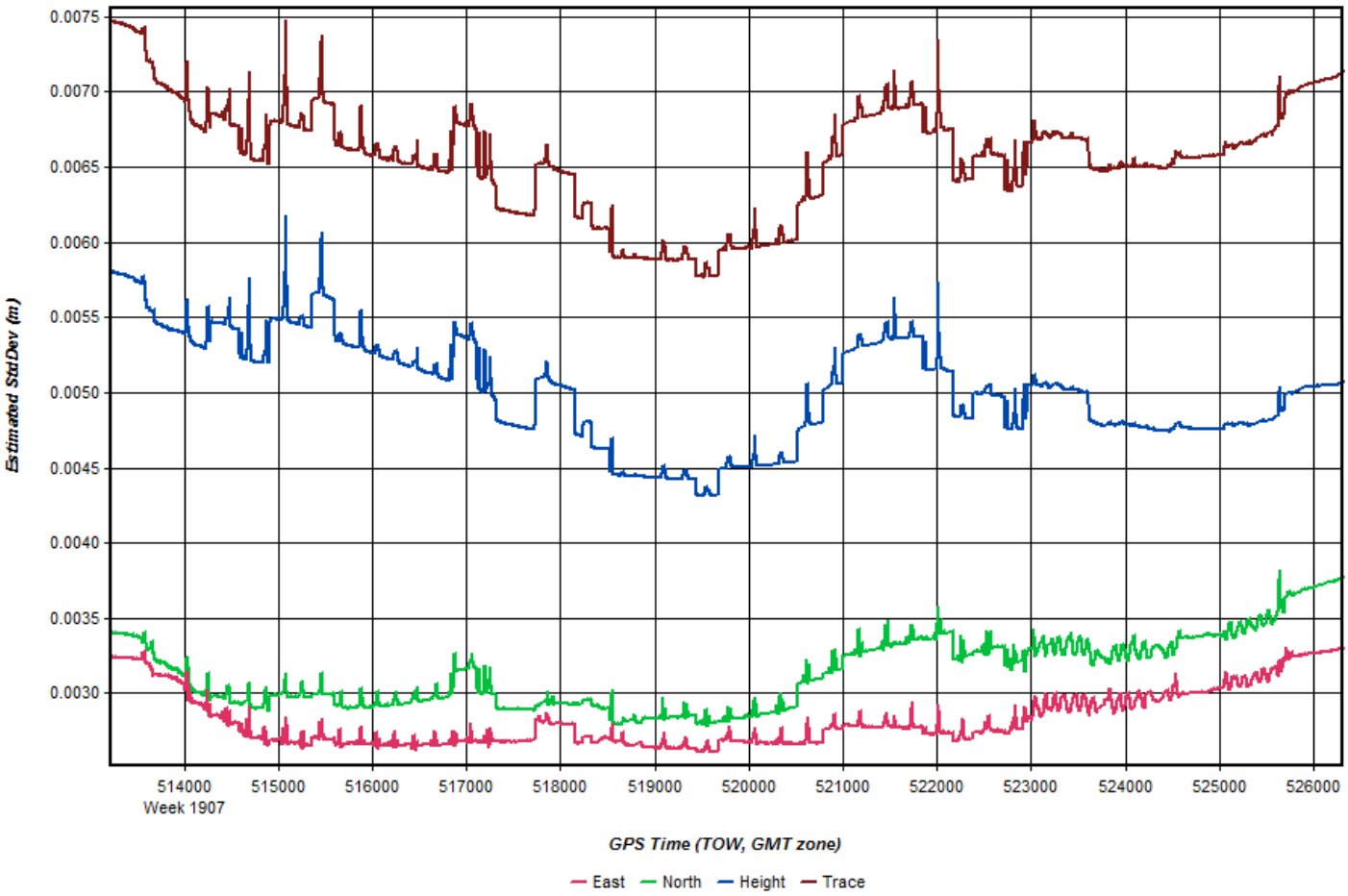

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
478000
Week 1907
480000
482000
484000
486000
488000
490000
492000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

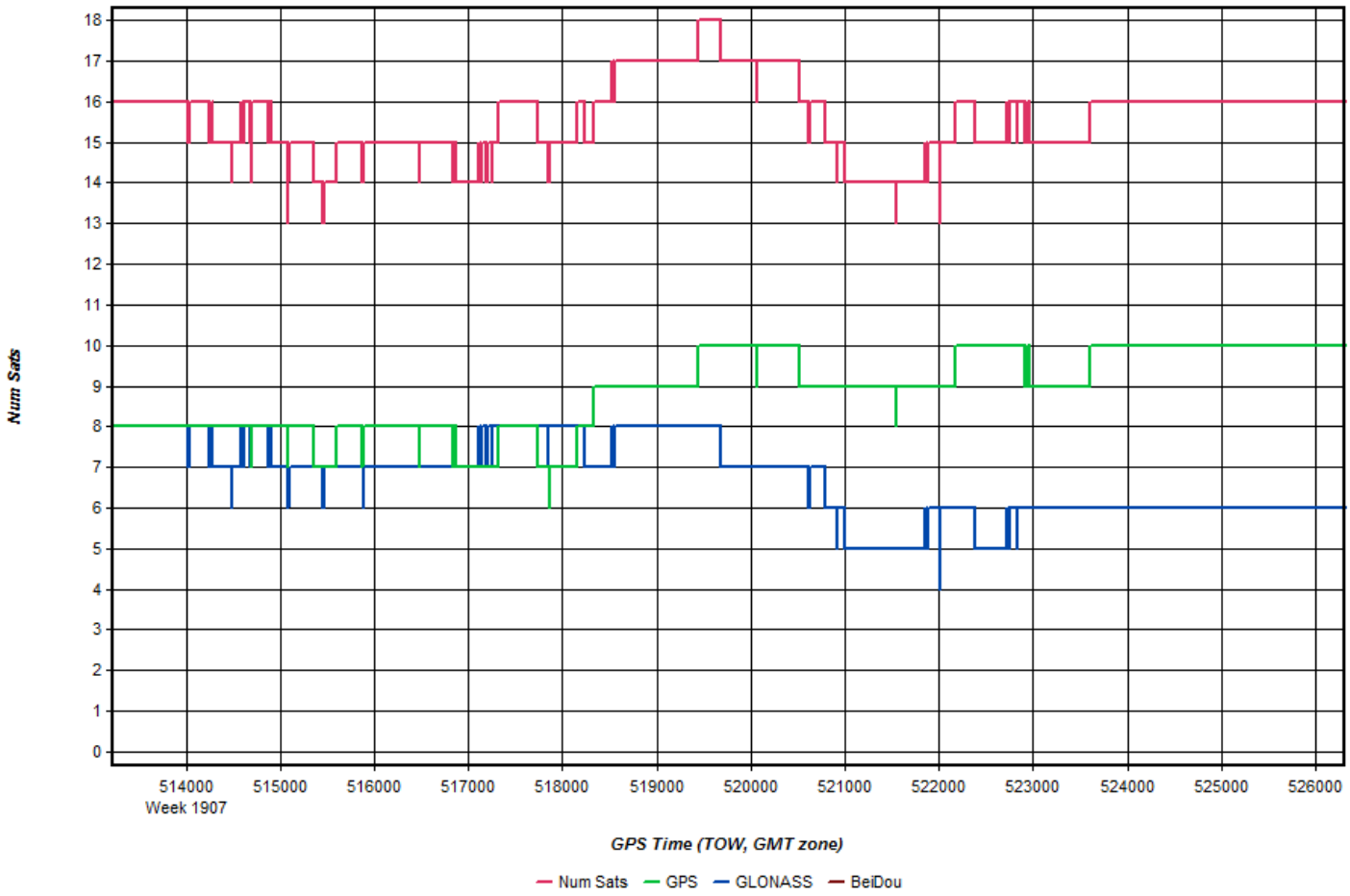

0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
Separation (m)
478000
Week 1907
480000
482000
484000
486000
488000
490000
492000
GPS Time (TOW, GMT zone)
East
North
Up

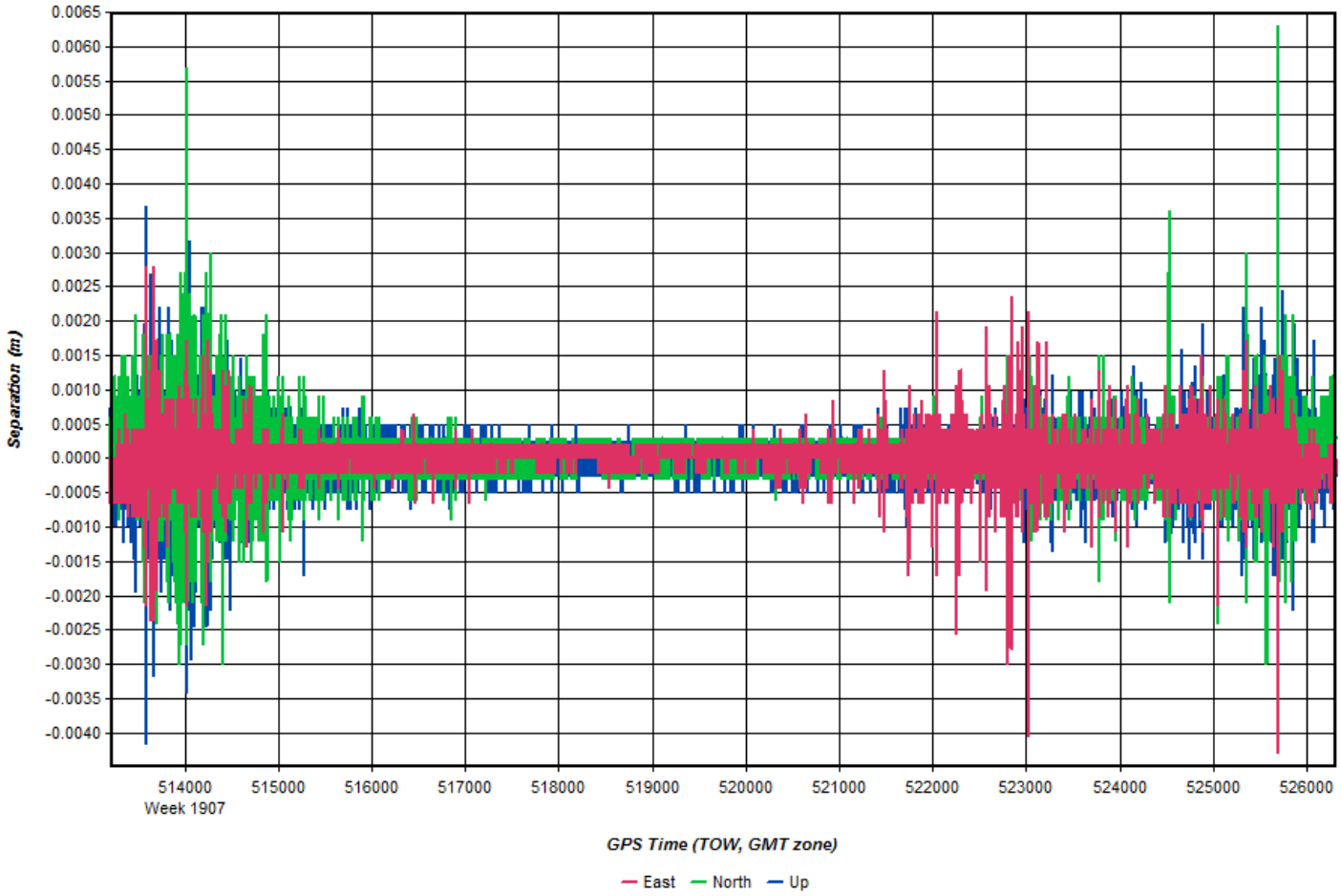

PDOP
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
478000
Week 1907
480000
482000
484000
486000
488000
490000
492000
GPS Time (TOW, GMT zone)
PDOP

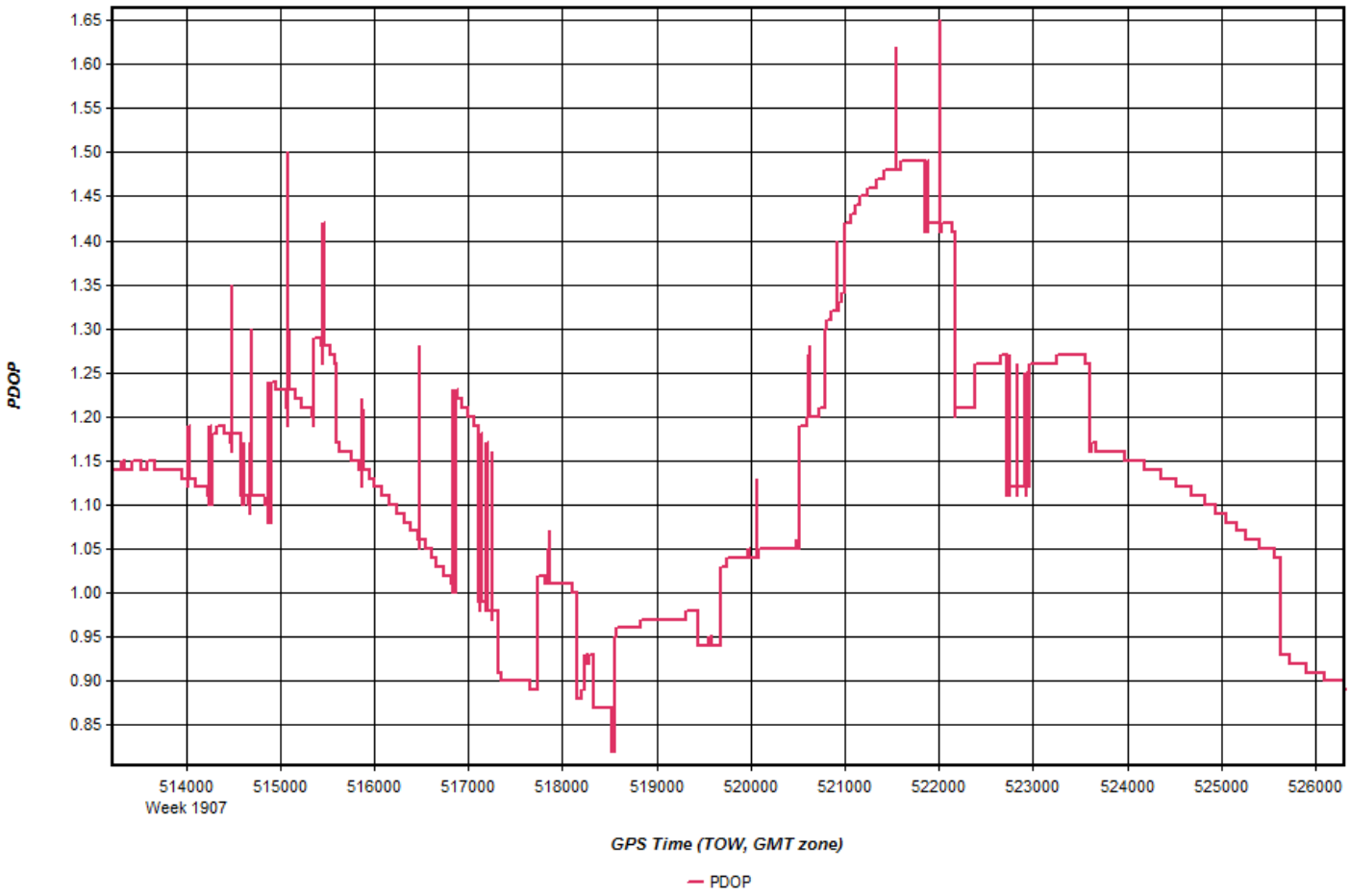
225_20160729_2



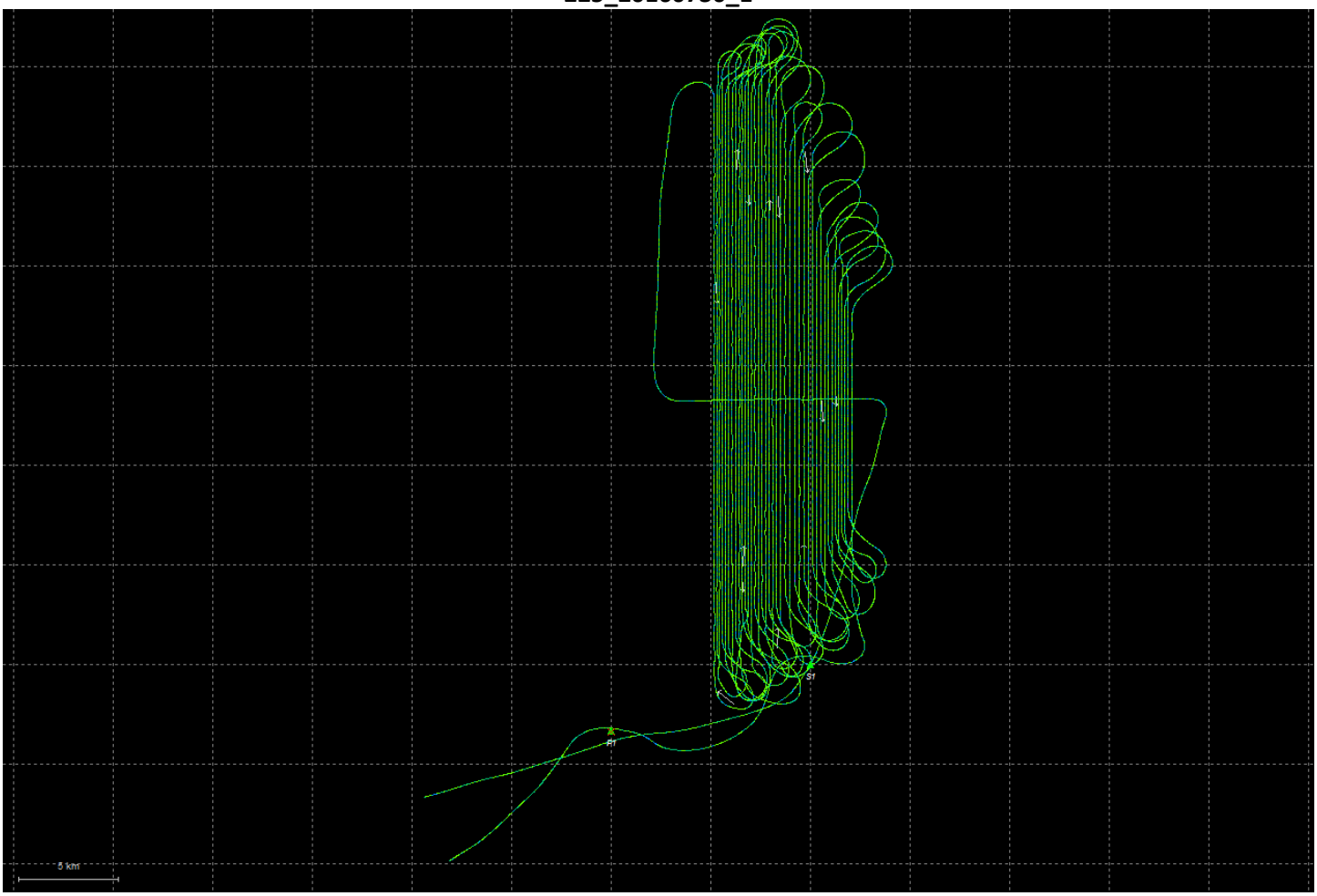

0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
Estimated StdDev (m)
514000
Week 1907
515000
516000
517000
518000
519000
520000
521000
522000
523000
524000
525000
526000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

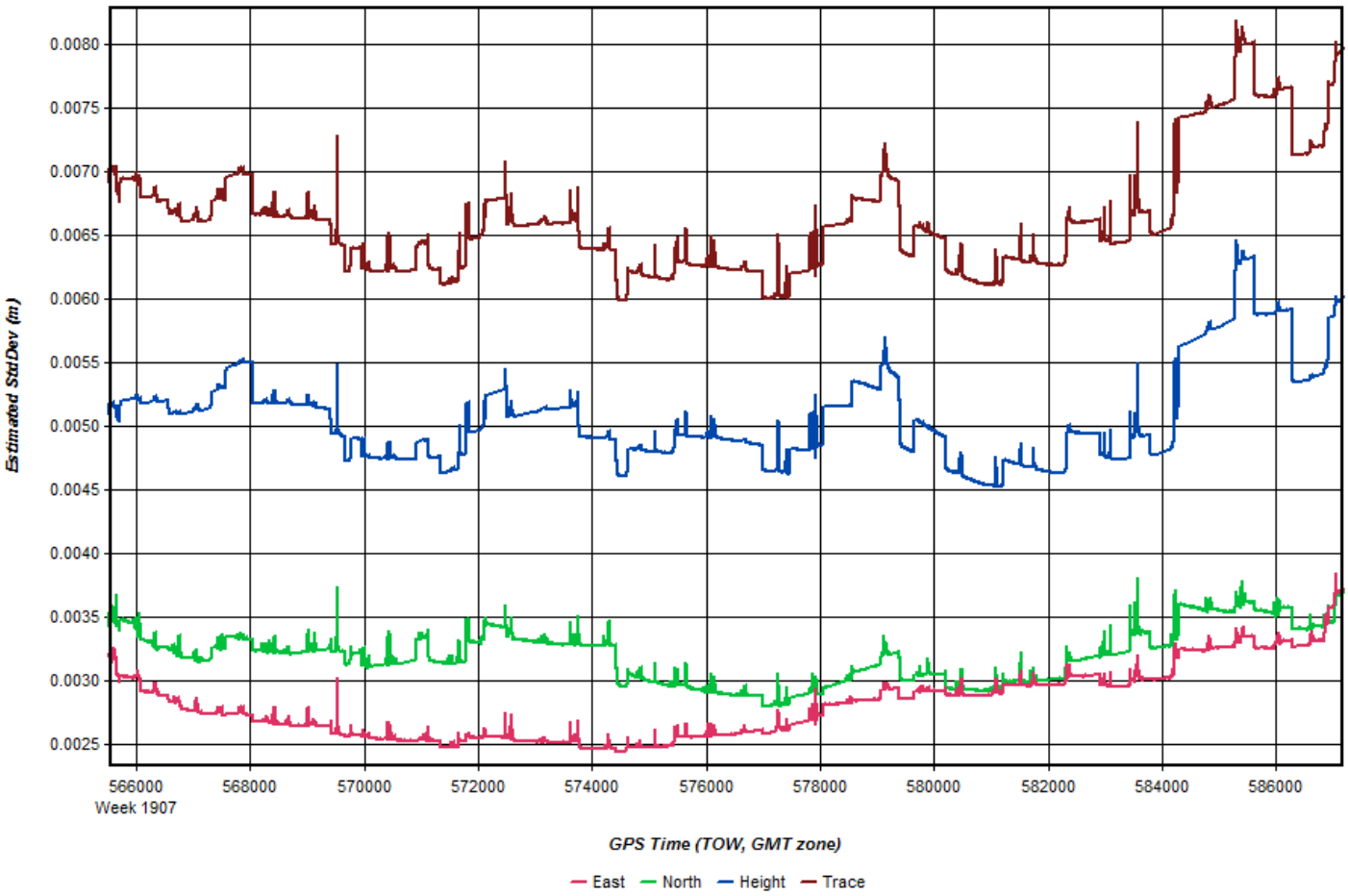

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
514000
Week 1907
515000
516000
517000
518000
519000
520000
521000
522000
523000
524000
525000
526000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


Separation (m)
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
514000
Week 1907
515000
516000
517000
518000
519000
520000
521000
522000
523000
524000
525000
526000
GPS Time (TOW, GMT zone)
East
North
Up

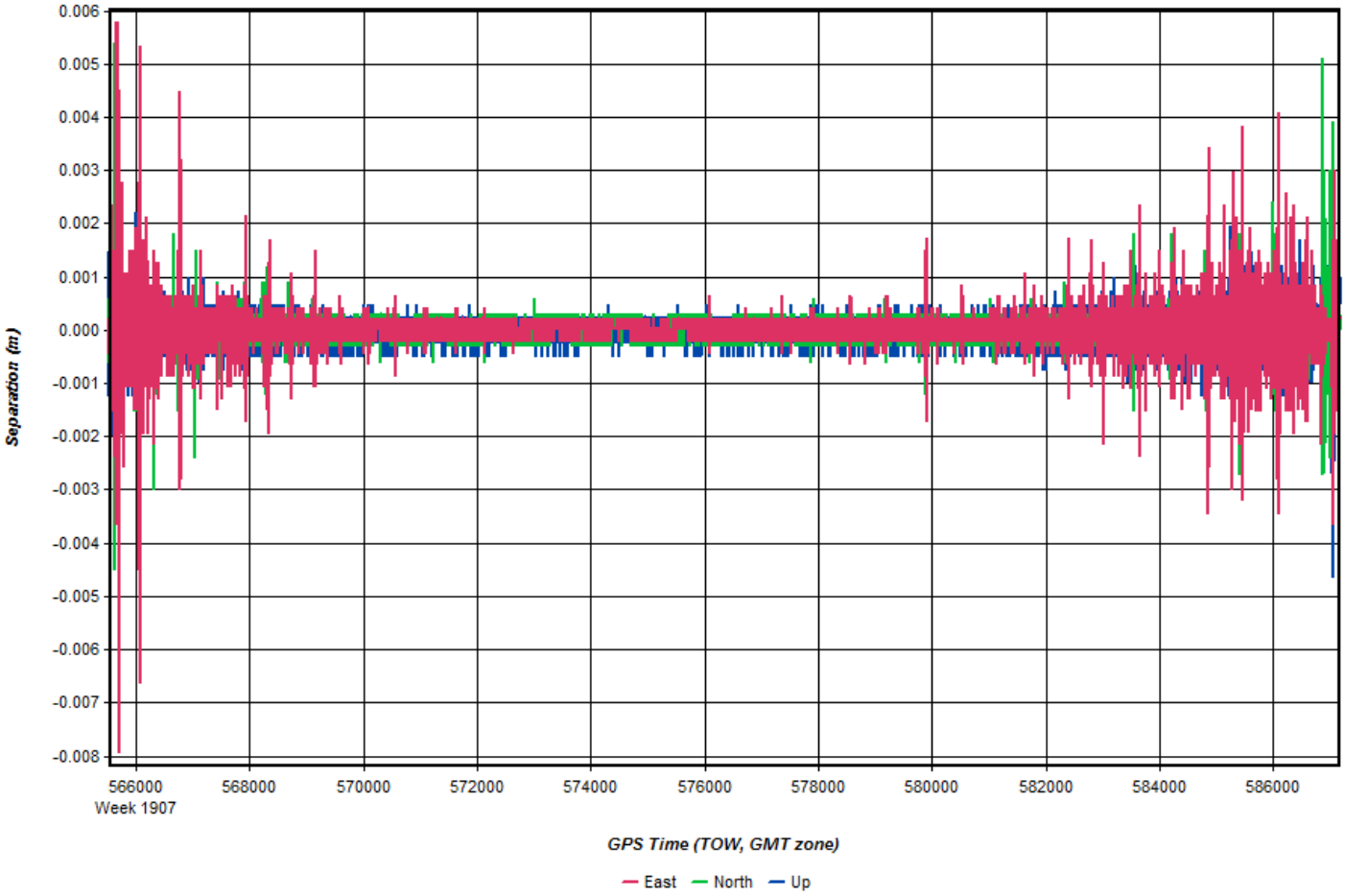

PDOP
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
514000
Week 1907
515000
516000
517000
518000
519000
520000
521000
522000
523000
524000
525000
526000
GPS Time (TOW, GMT zone)
PDOP

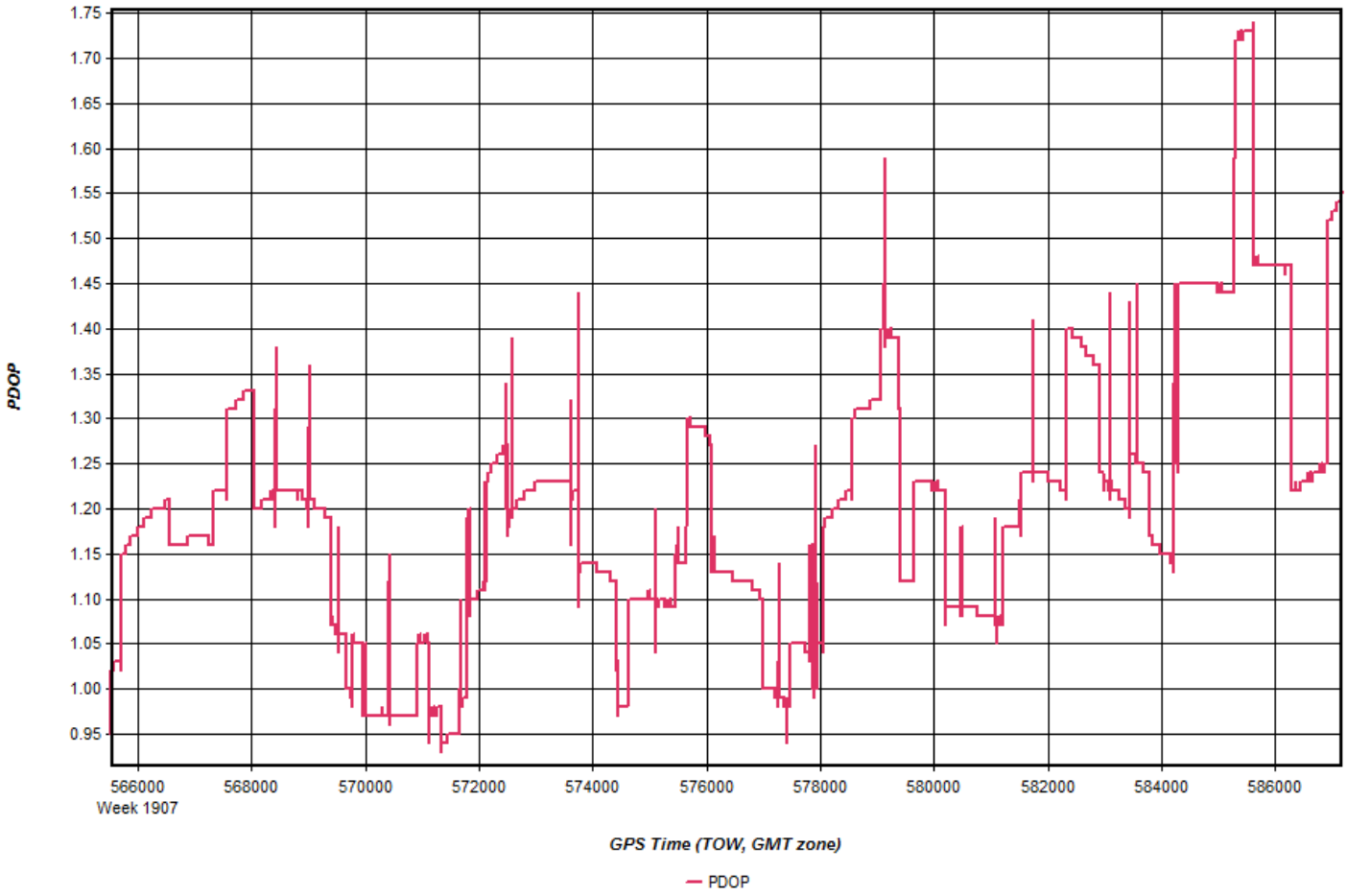
225_20160730_1



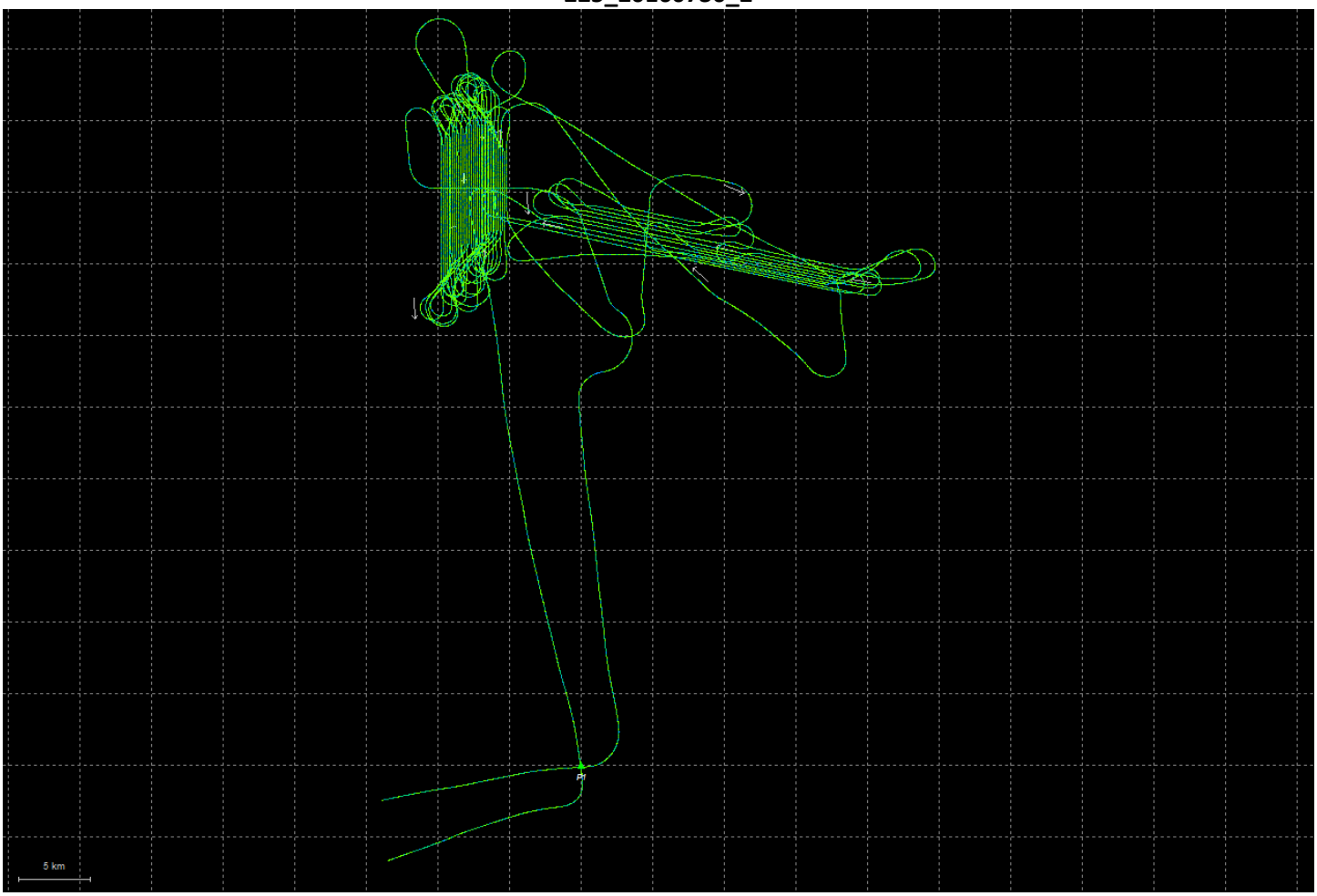

0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
Estimated StdDev (m)
566000
Week 1907
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

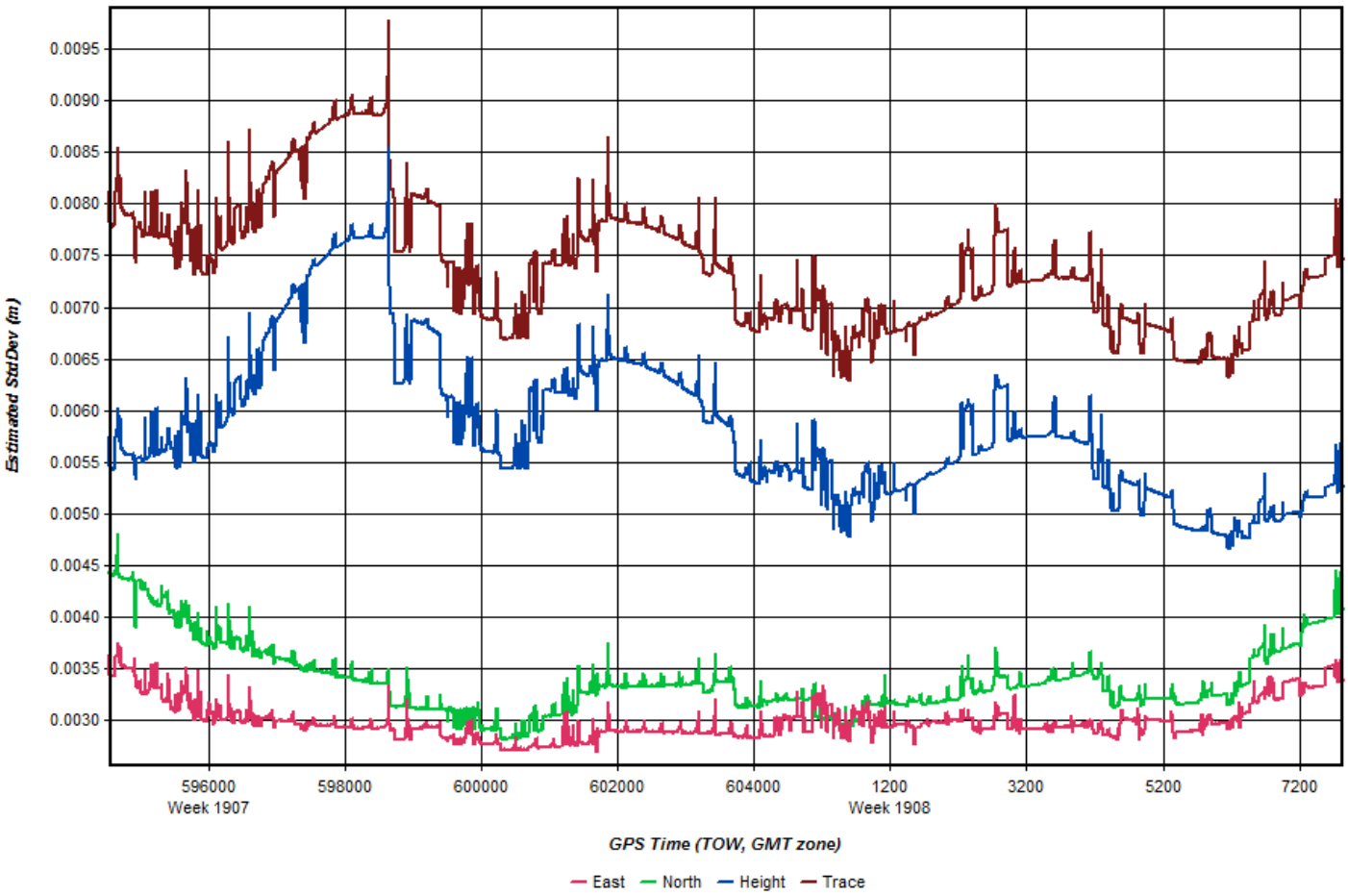

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
566000
Week 1907
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

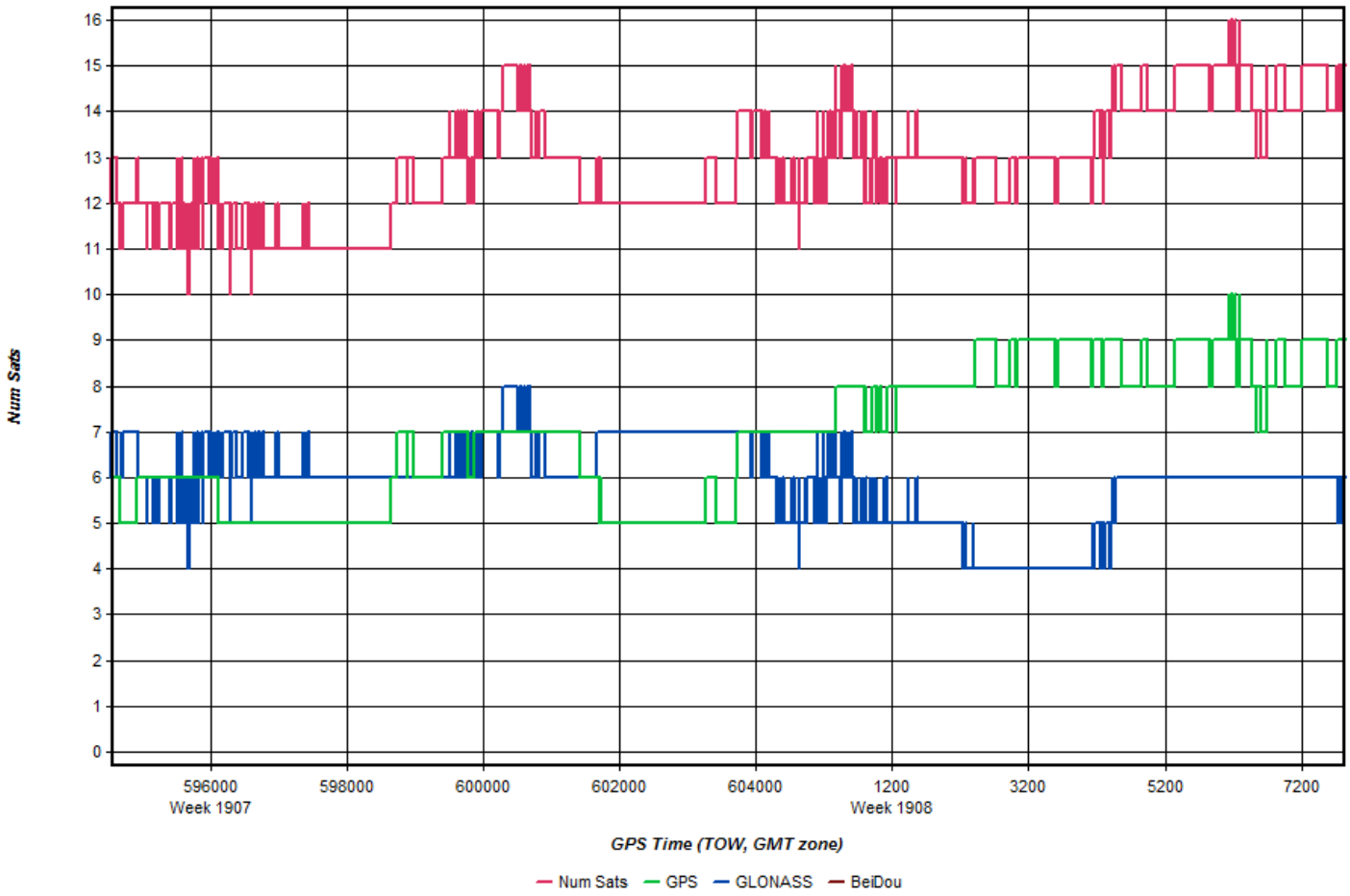

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
Separation (m)
566000
Week 1907
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
East
North
Up

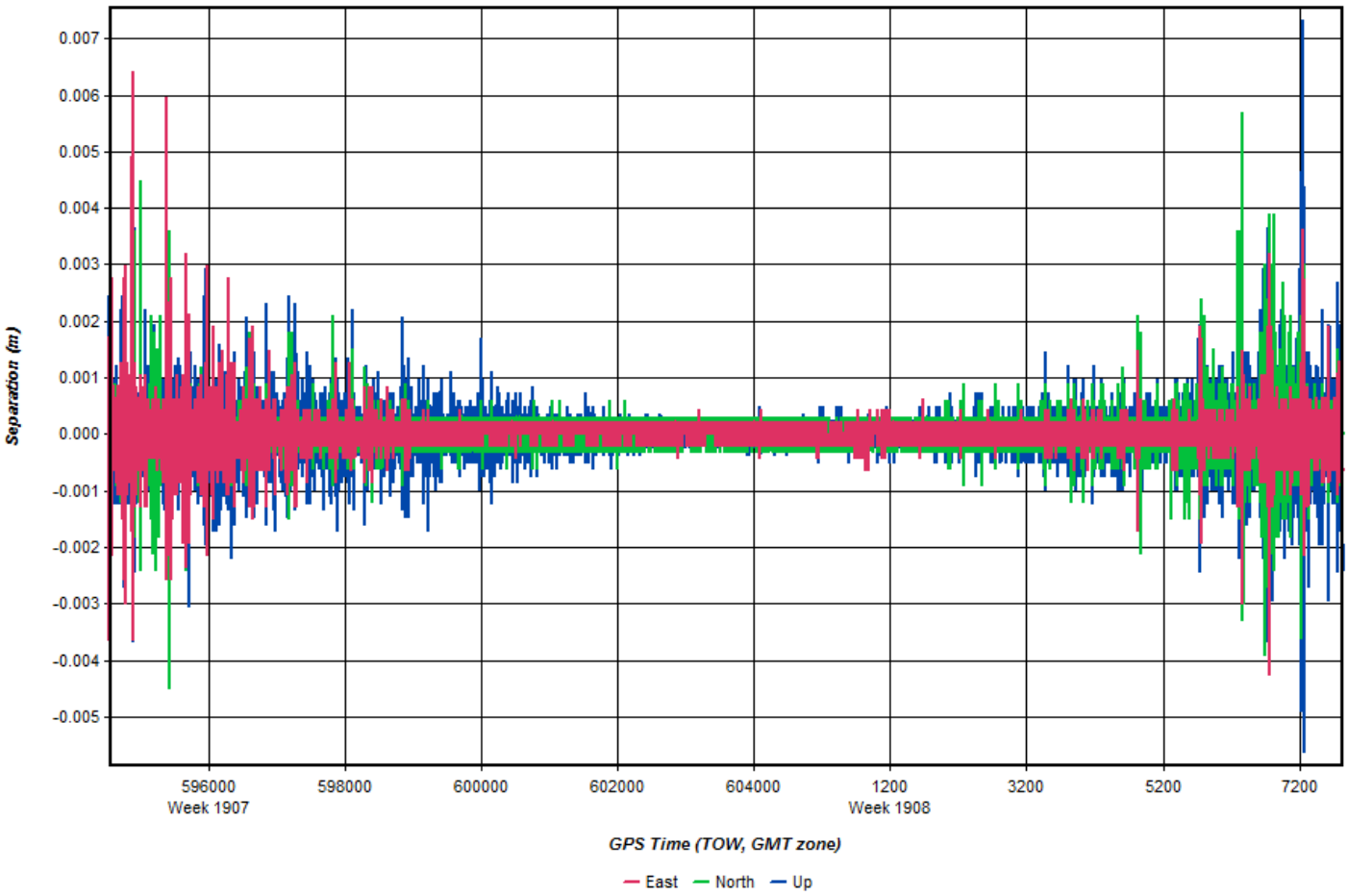

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
566000
Week 1907
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
GPS Time (TOW, GMT zone)
PDOP

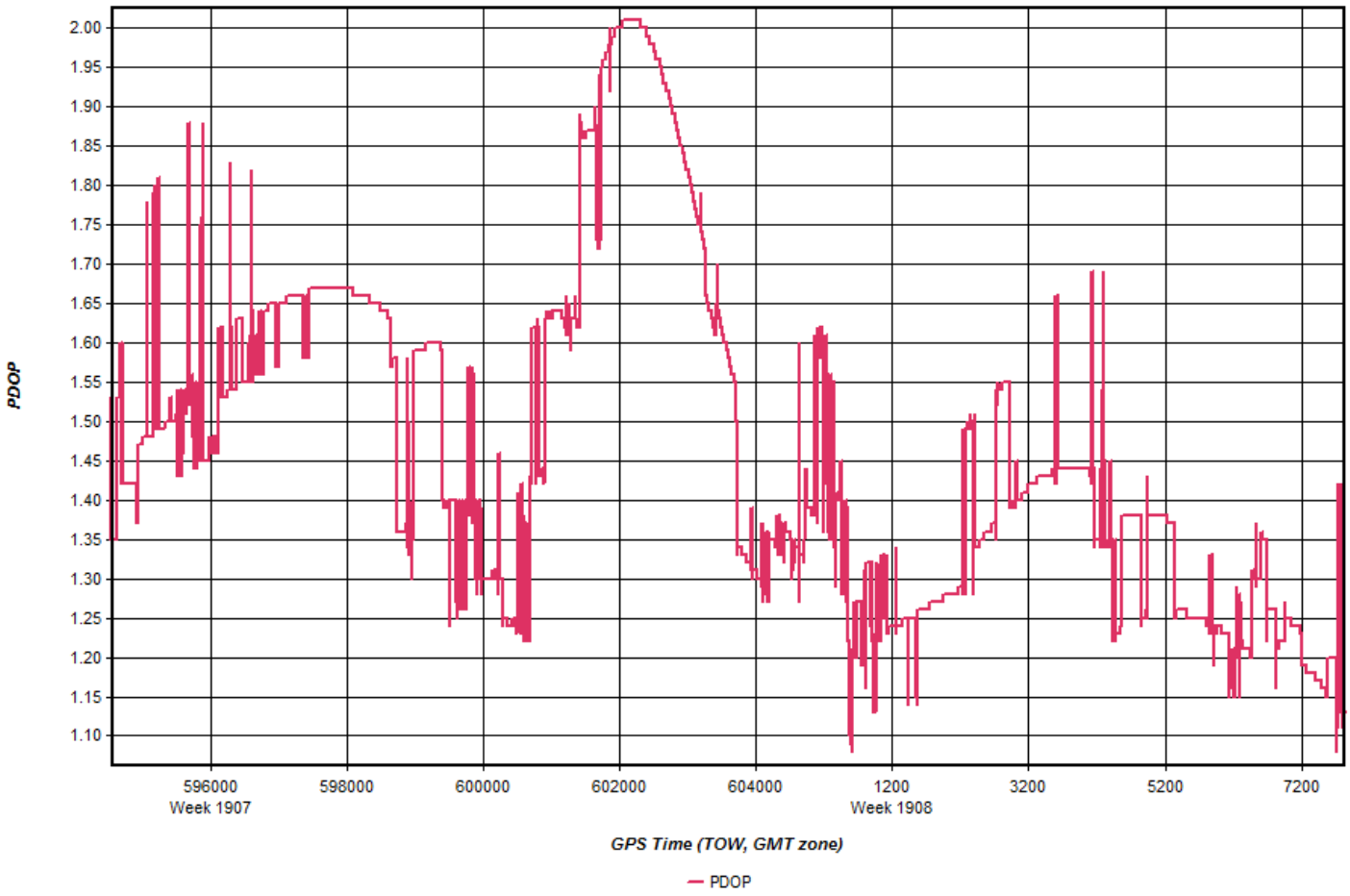
225_20160730_2



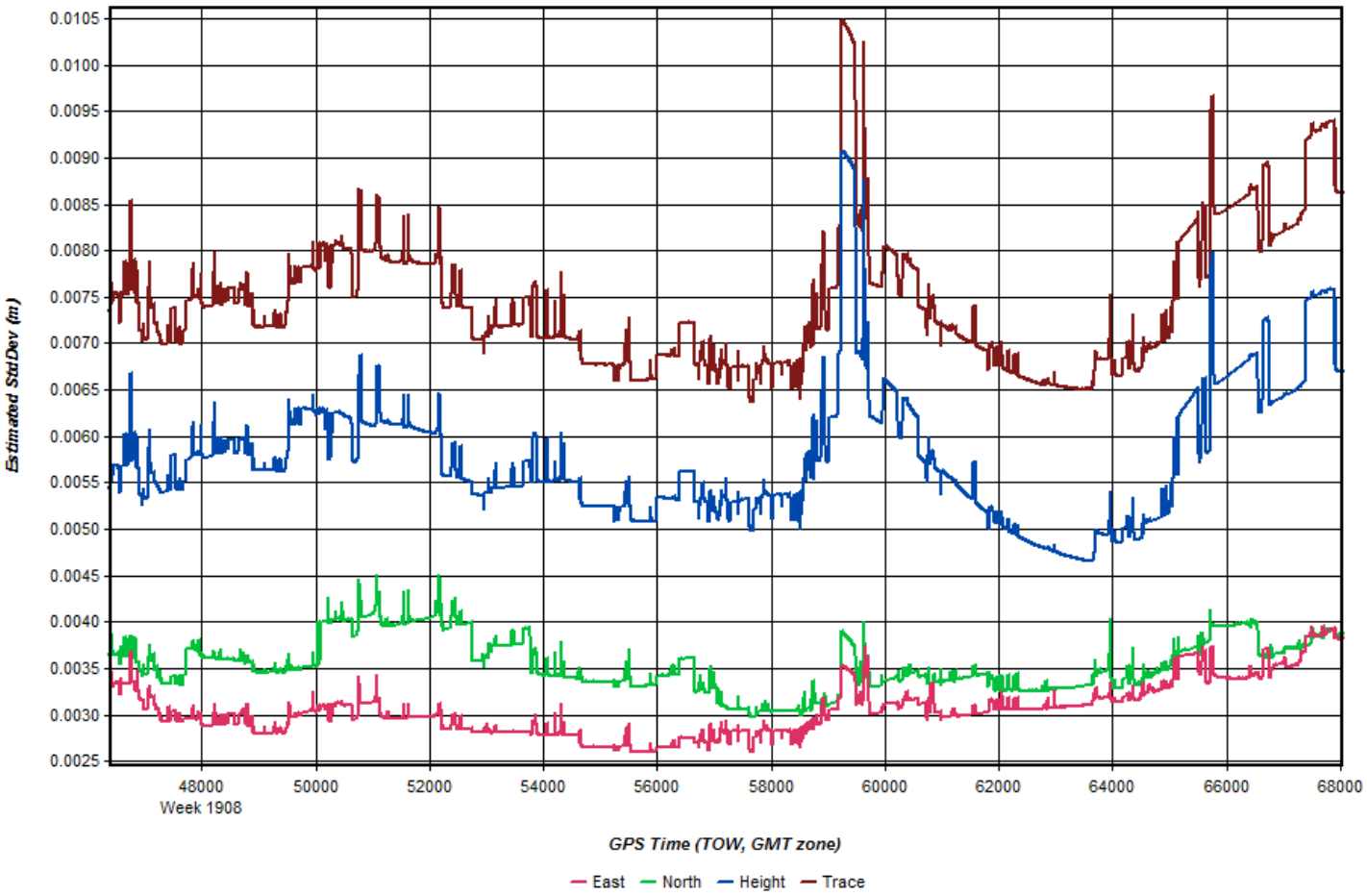

Estimated StdDev (m)
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
596000
Week 1907
598000
600000
602000
604000
1200
Week 1908
3200
5200
7200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

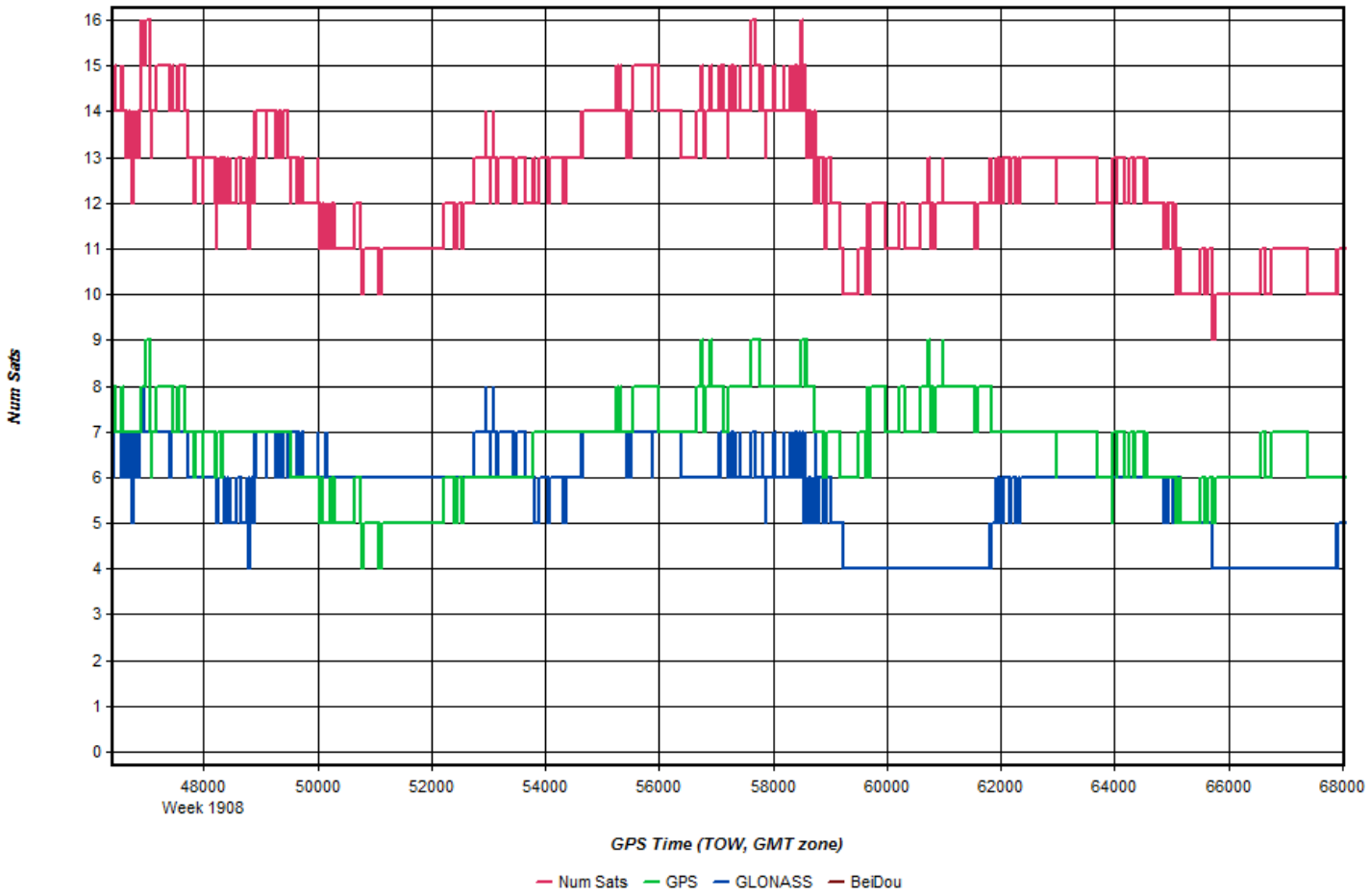

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
596000
Week 1907
598000
600000
602000
604000
1200
Week 1908
3200
5200
7200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

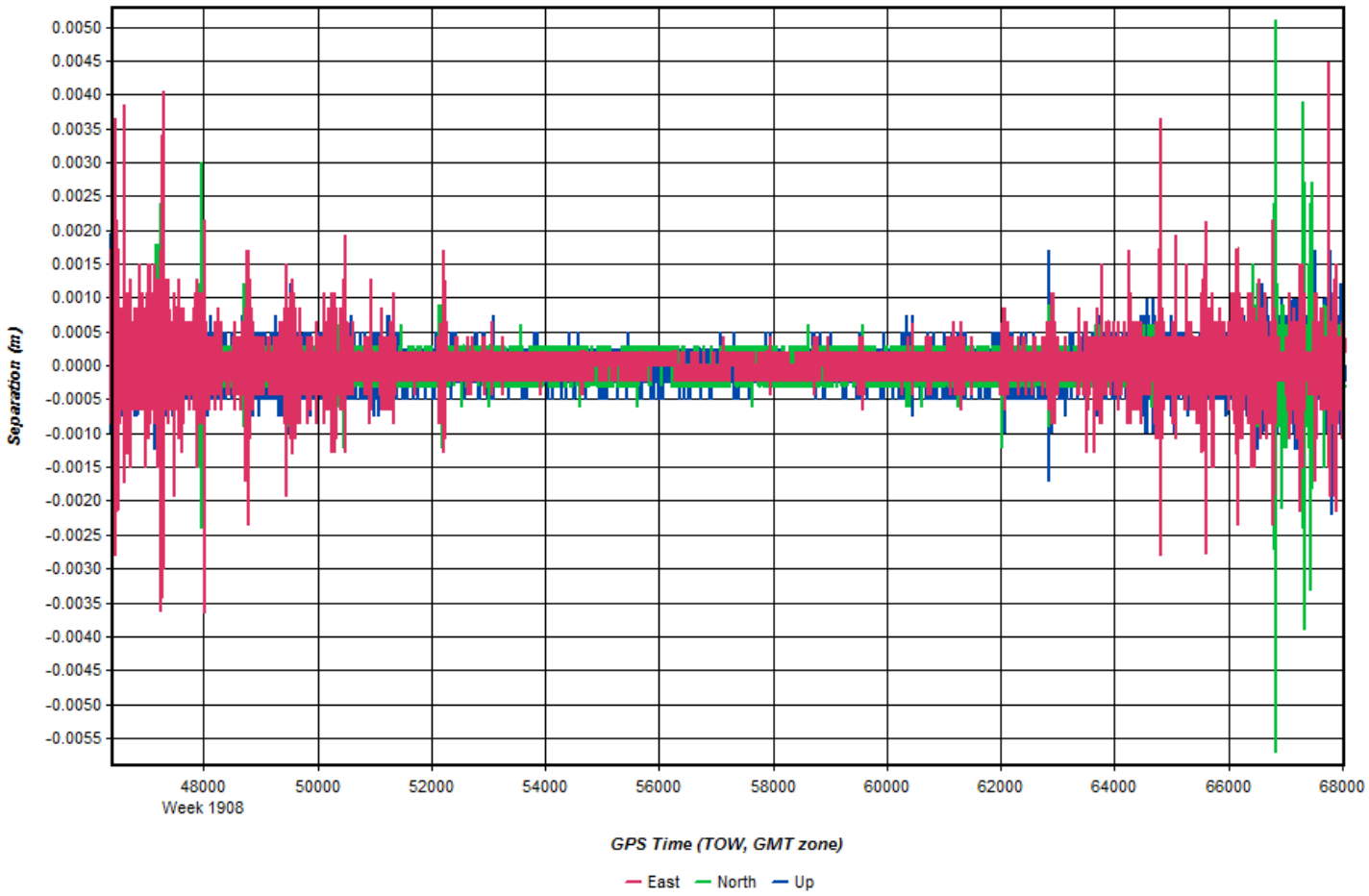

0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
Separation (m)
596000
Week 1907
598000
600000
602000
604000
1200
Week 1908
3200
5200
7200
GPS Time (TOW, GMT zone)
East
North
Up

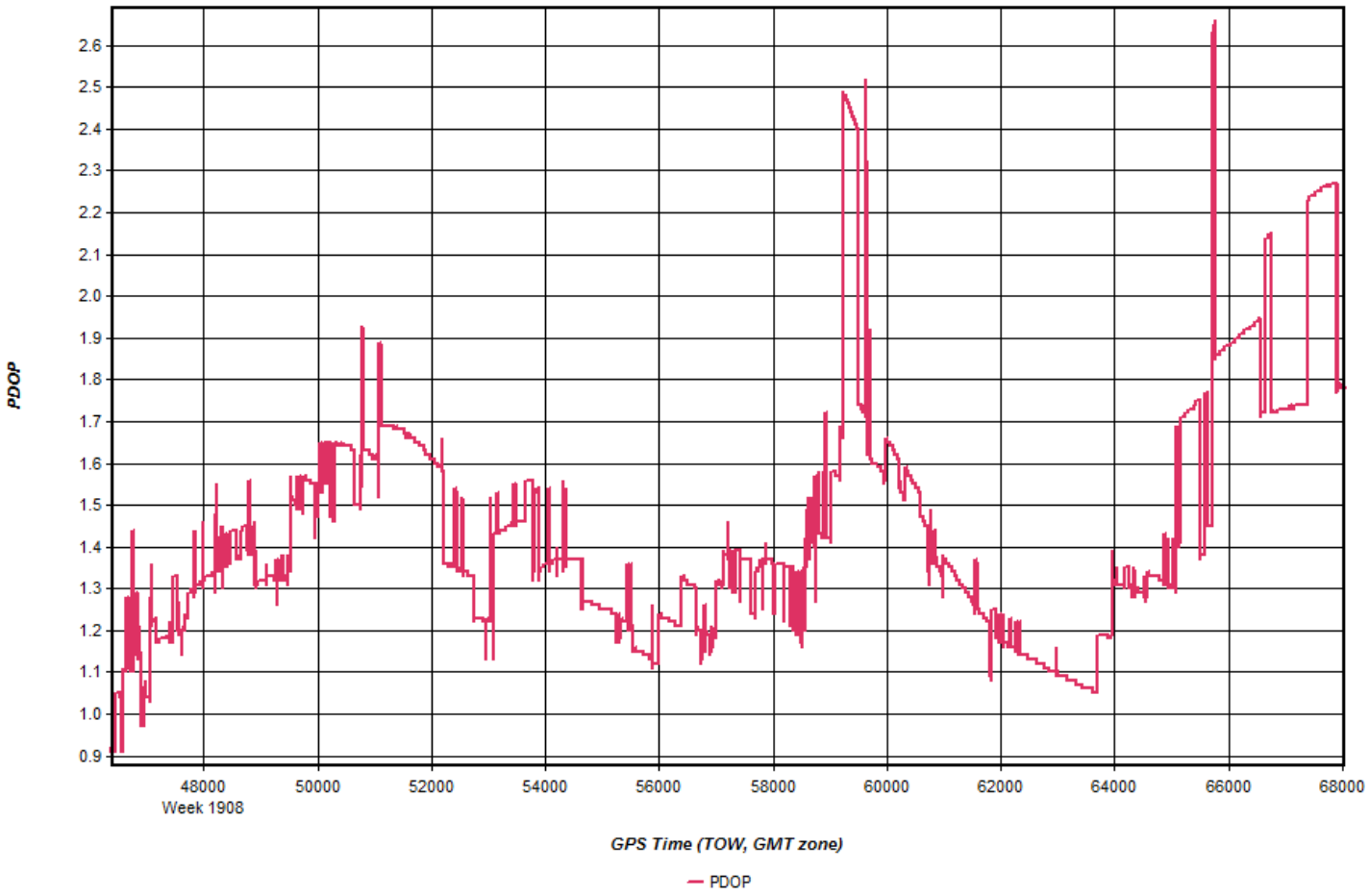

PDOP
2.00
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
596000
Week 1907
598000
600000
602000
604000
1200
Week 1908
3200
5200
7200
GPS Time (TOW, GMT zone)
PDOP

225_20160731_1

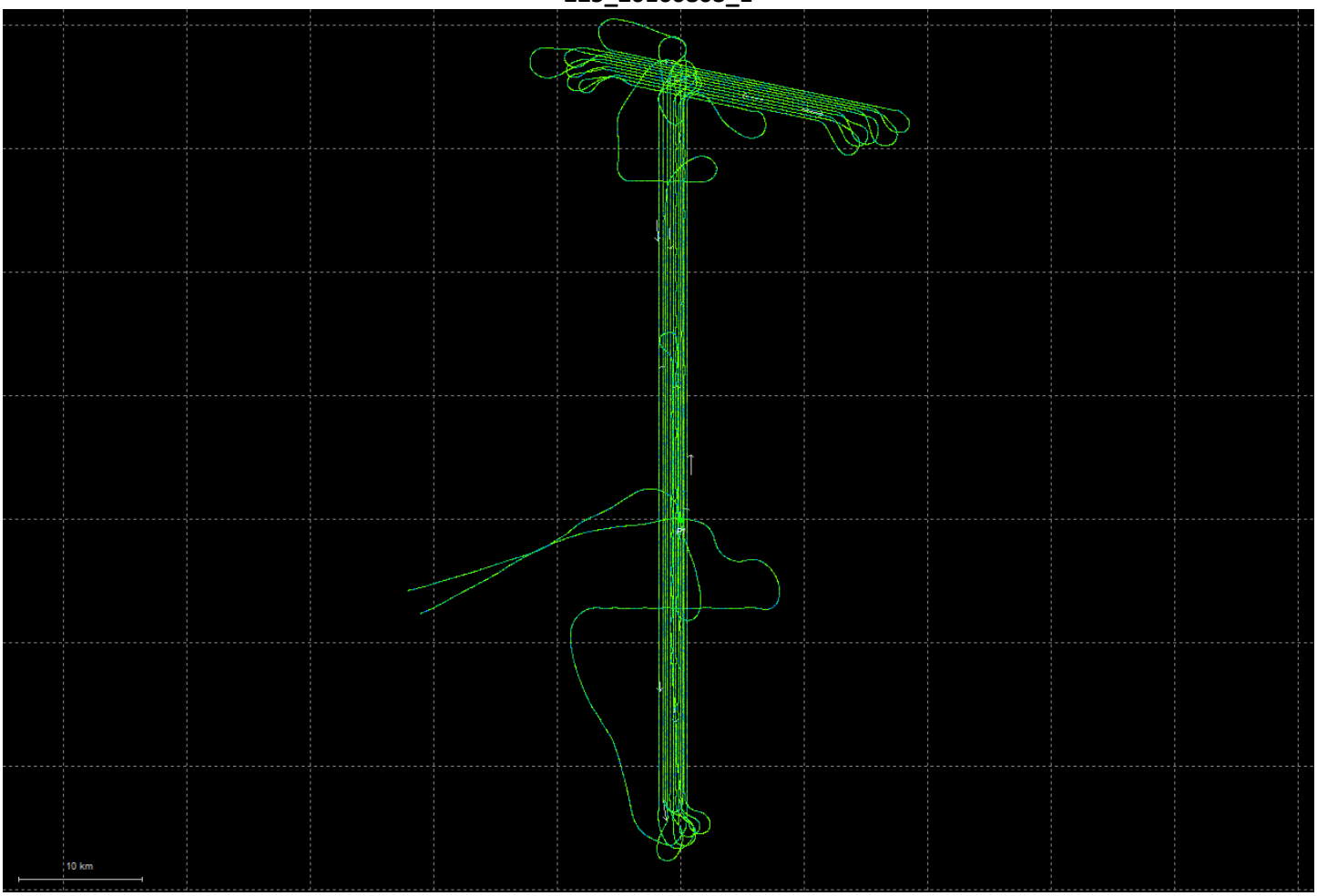

Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
48000
Week 1908
50000
52000
54000
56000
58000
60000
62000
64000
66000
68000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

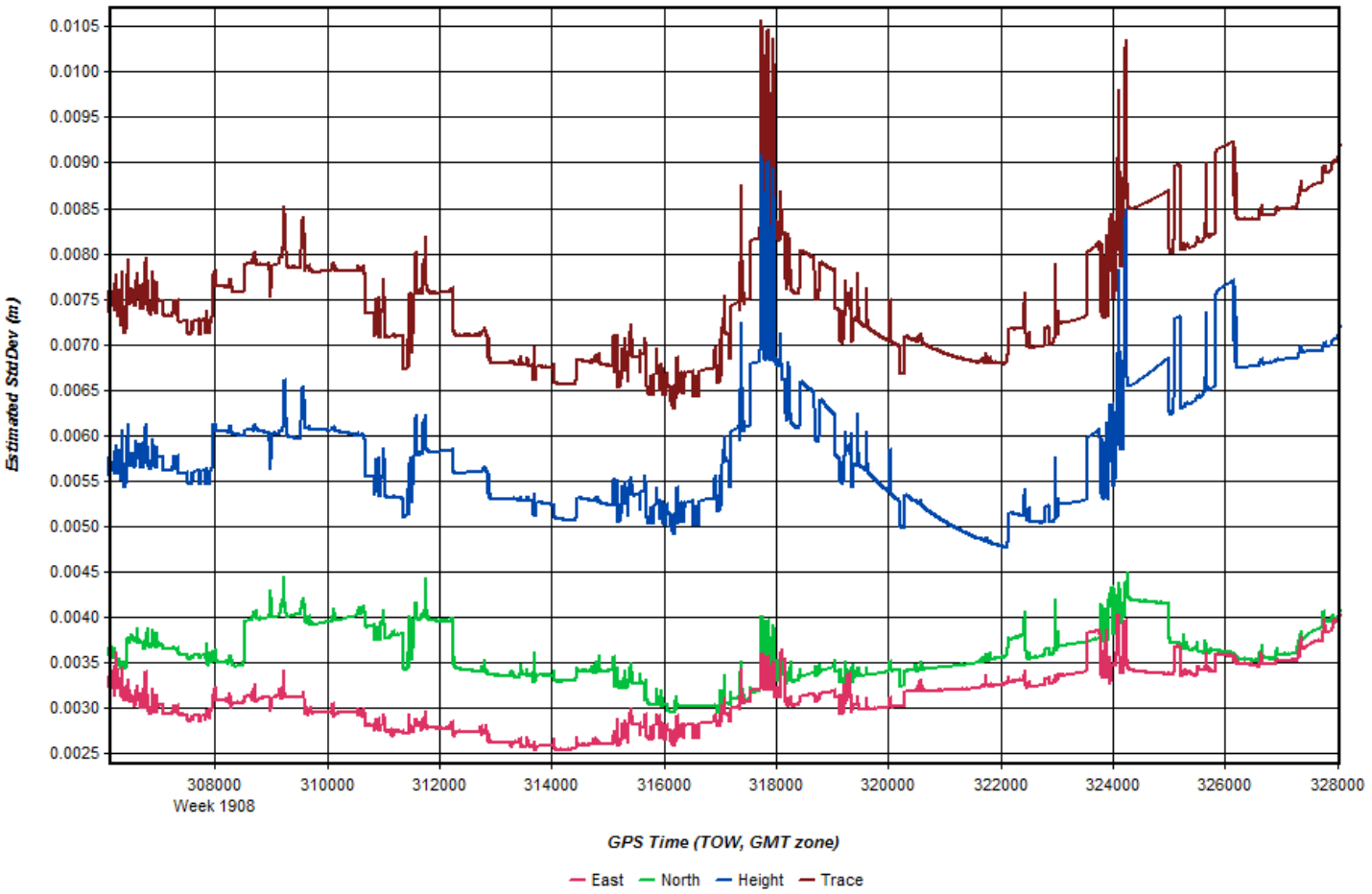

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
48000
Week 1908
50000
52000
54000
56000
58000
60000
62000
64000
66000
68000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

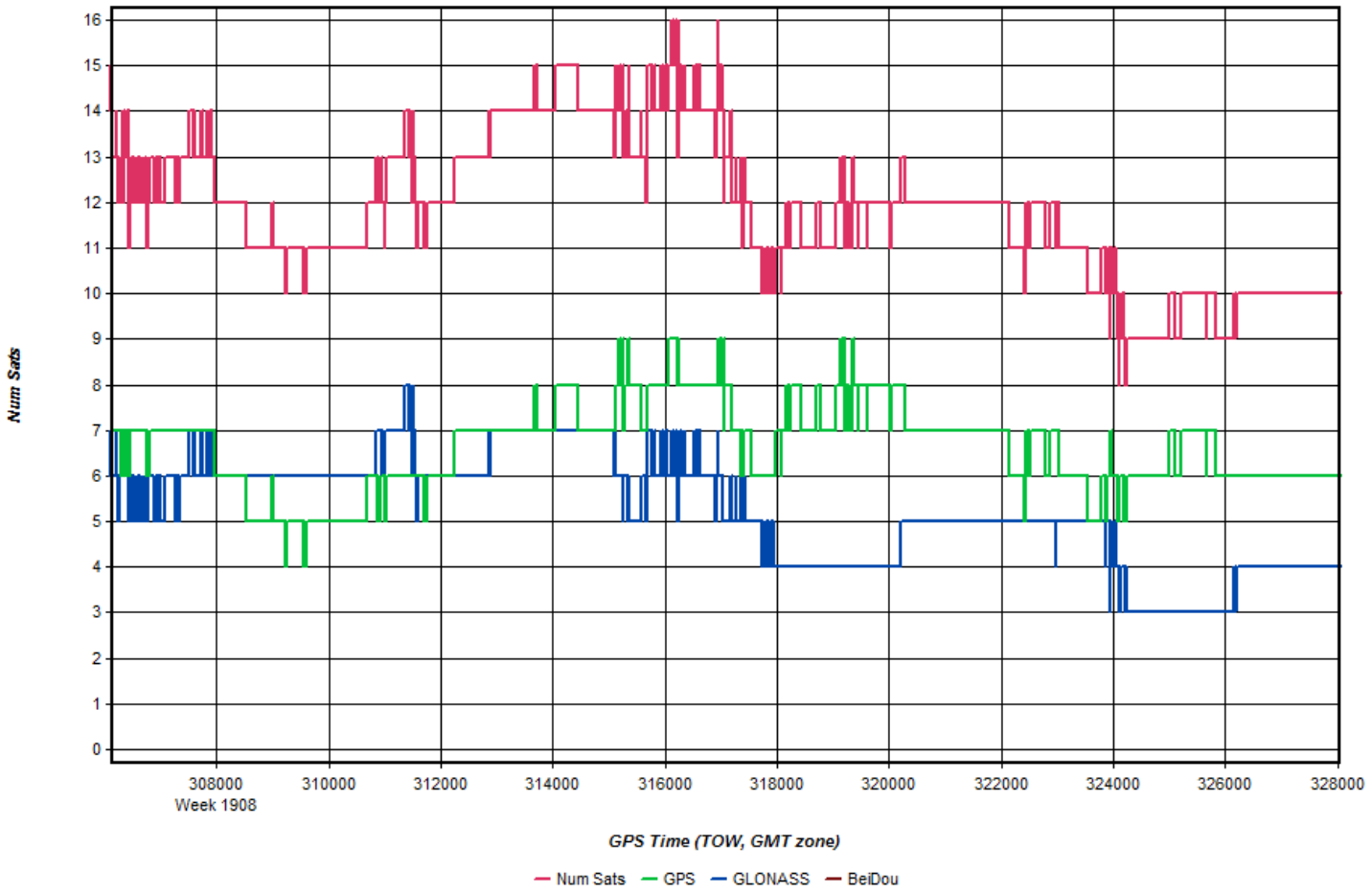

0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
Separation (m)
48000
Week 1908
50000
52000
54000
56000
58000
60000
62000
64000
66000
68000
GPS Time (TOW, GMT zone)
East
North
Up

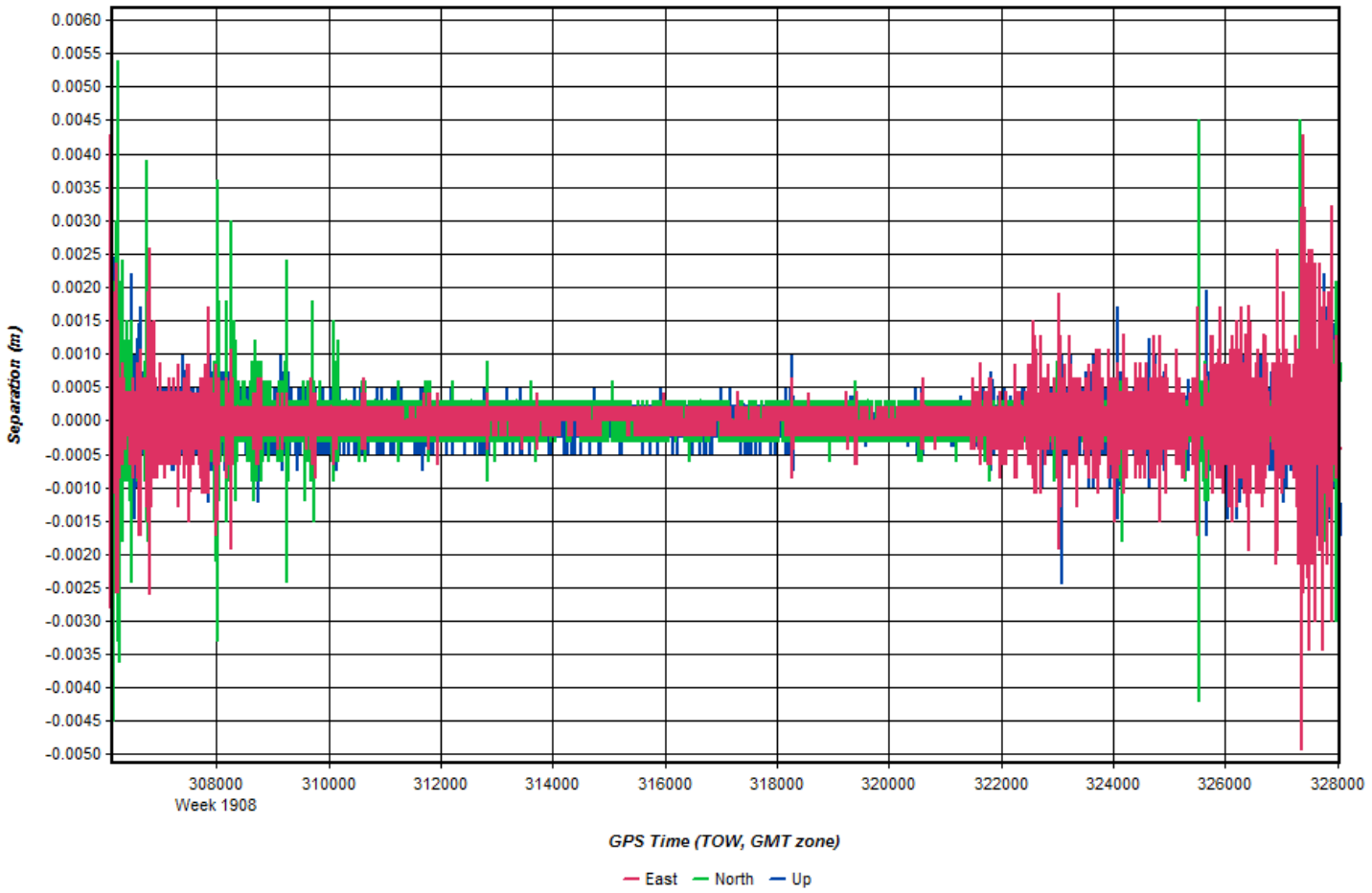

PDOP
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
48000
Week 1908
50000
52000
54000
56000
58000
60000
62000
64000
66000
68000
GPS Time (TOW, GMT zone)
PDOP

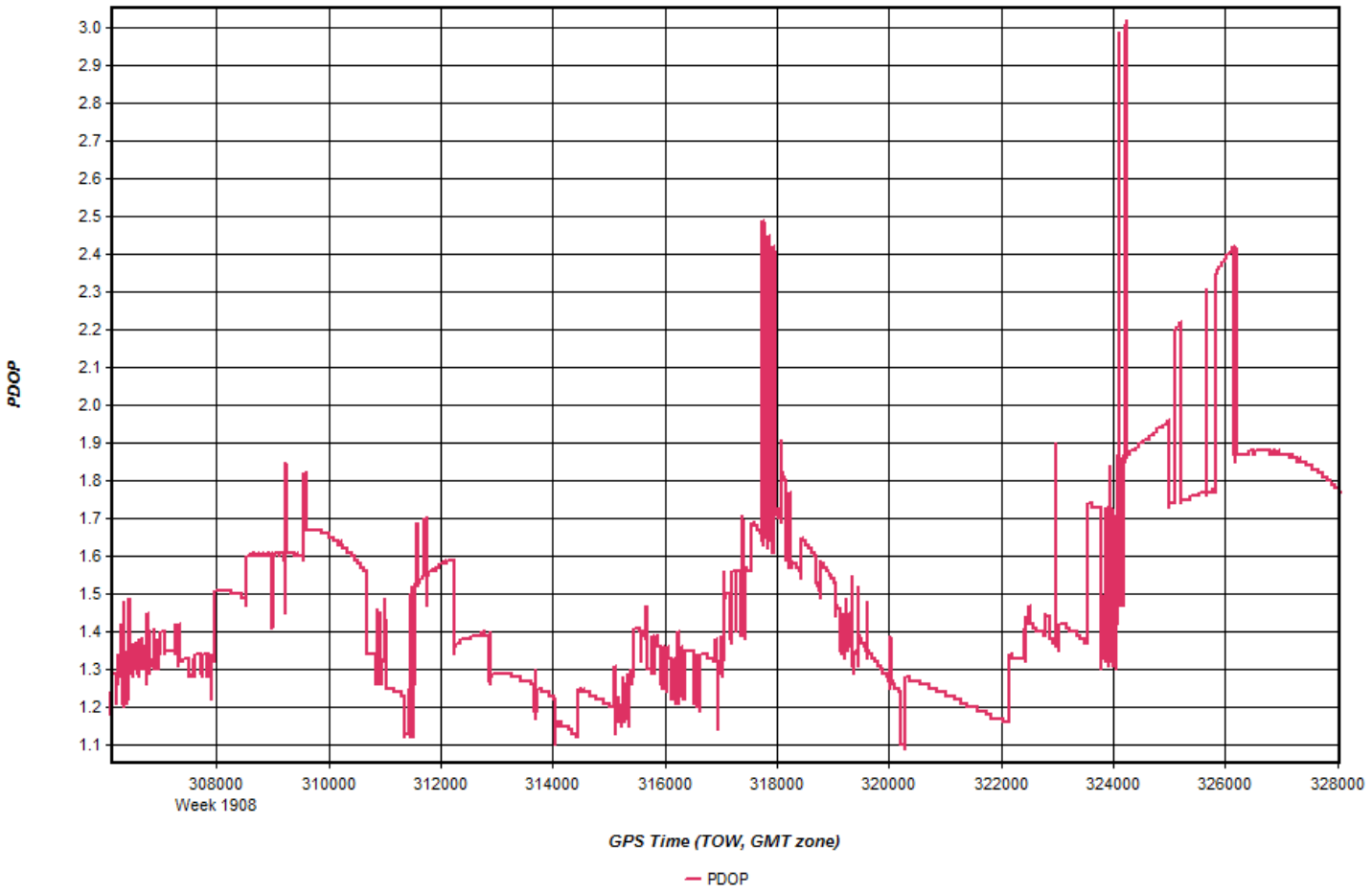
225_20160803_1



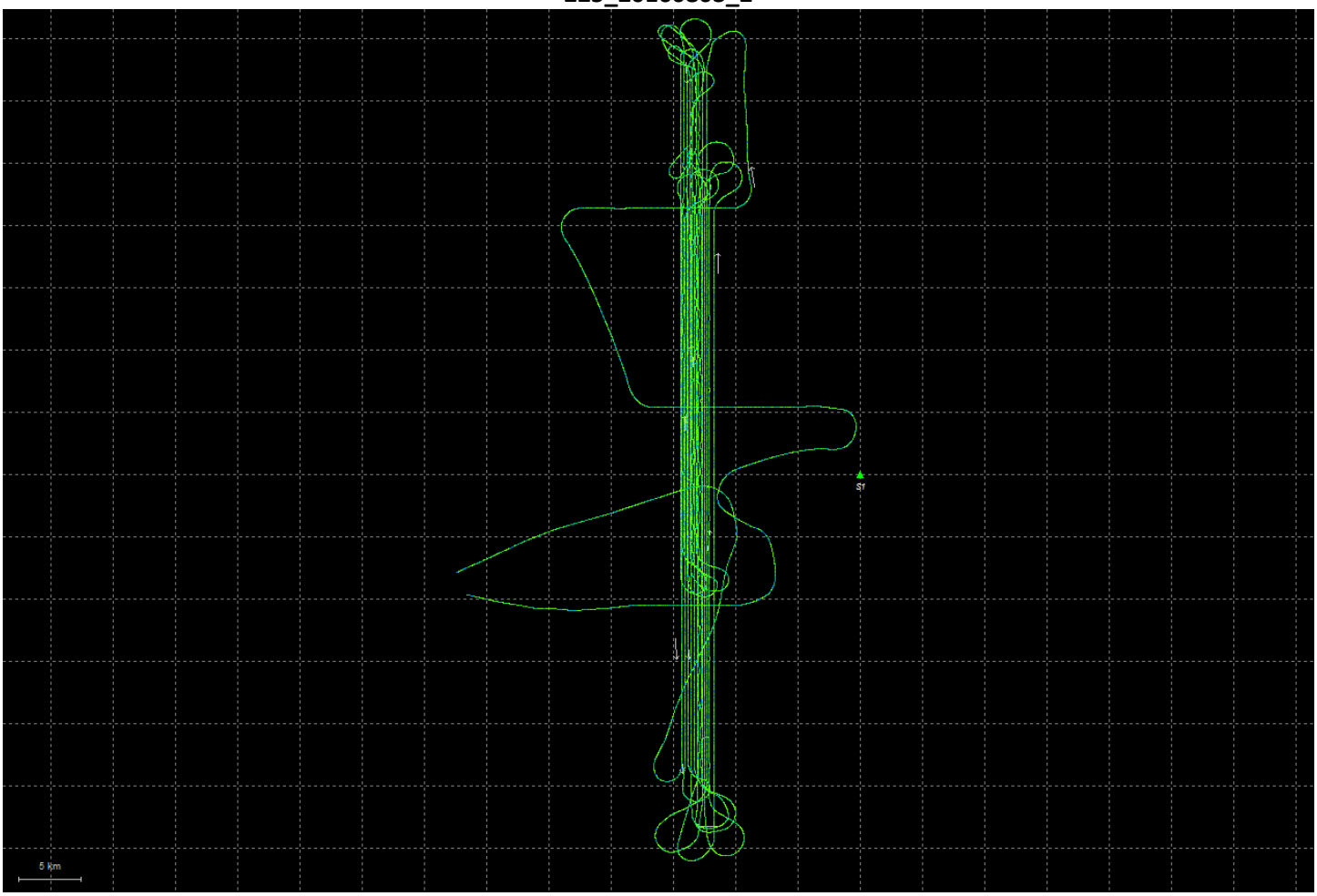

Estimated StdDev (m)
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
308000
Week 1908
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

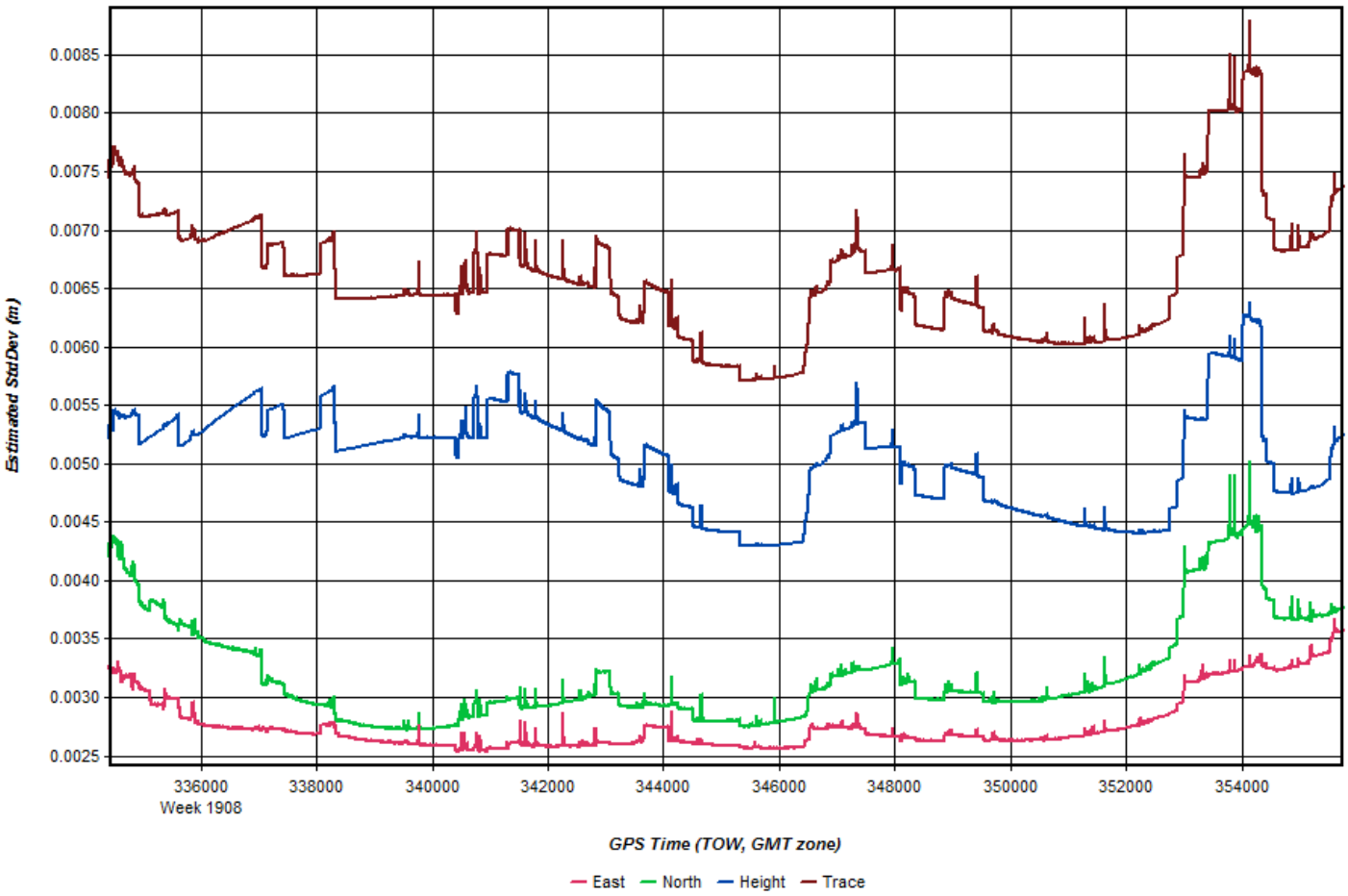

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
308000
Week 1908
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
Separation (m)
308000
Week 1908
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
East
North
Up

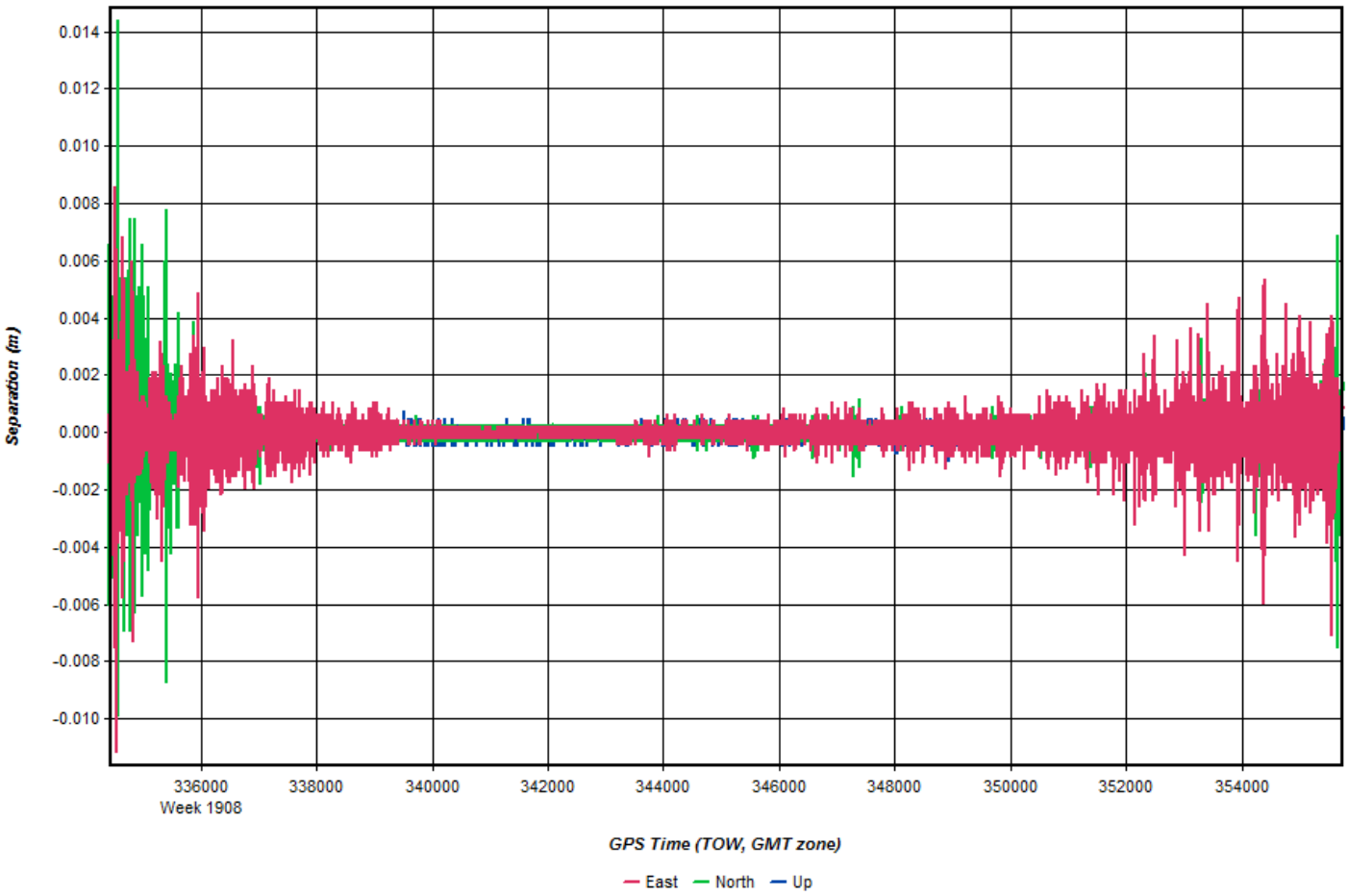

PDOP
3.0
2.9
2.8
2.7
2.6
2.5
2.4
2.3
2.2
2.1
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
308000
Week 1908
310000
312000
314000
316000
318000
320000
322000
324000
326000
328000
GPS Time (TOW, GMT zone)
PDOP

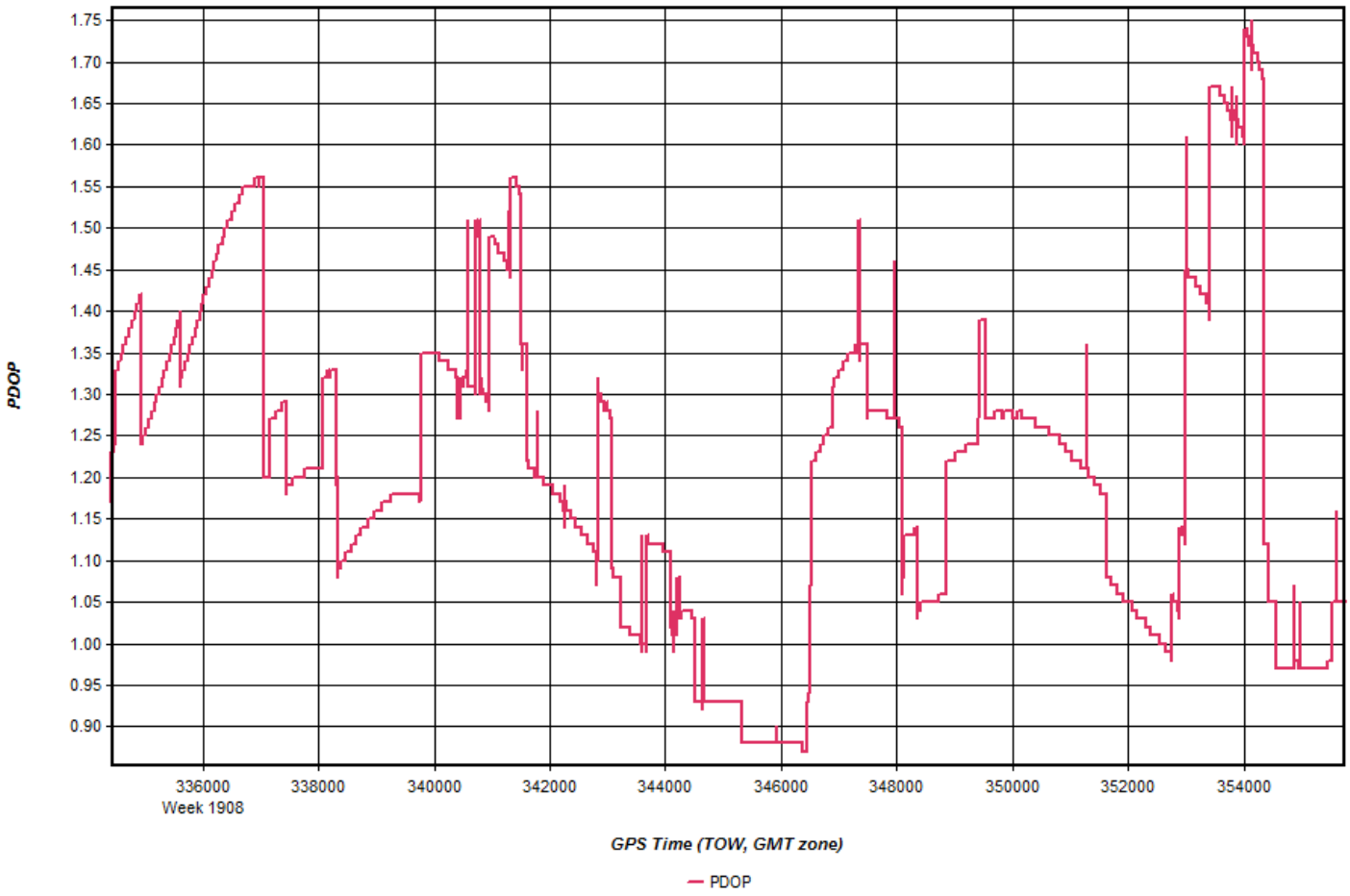
225_20160803_2



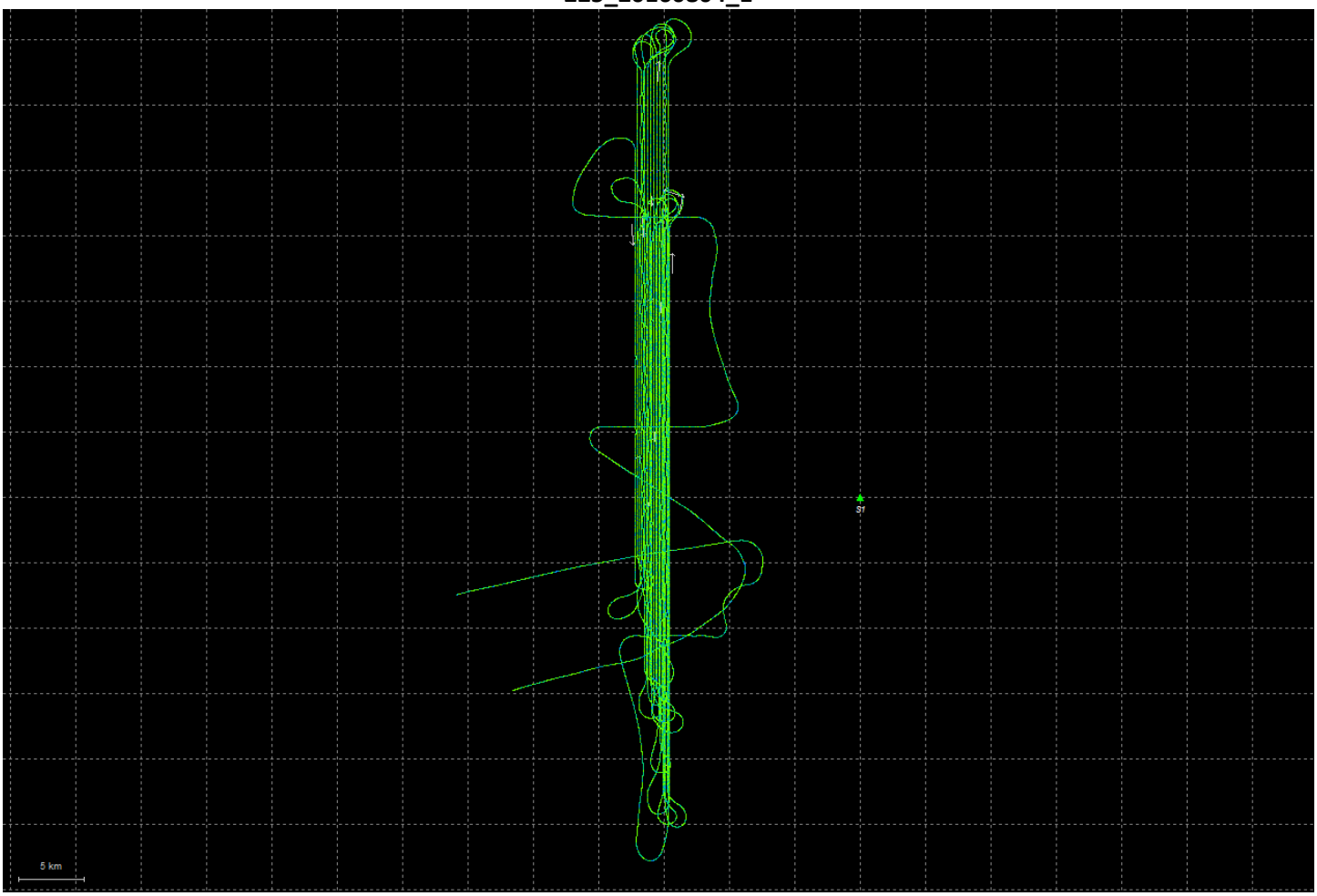

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
336000
Week 1908
338000
340000
342000
344000
346000
348000
350000
352000
354000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

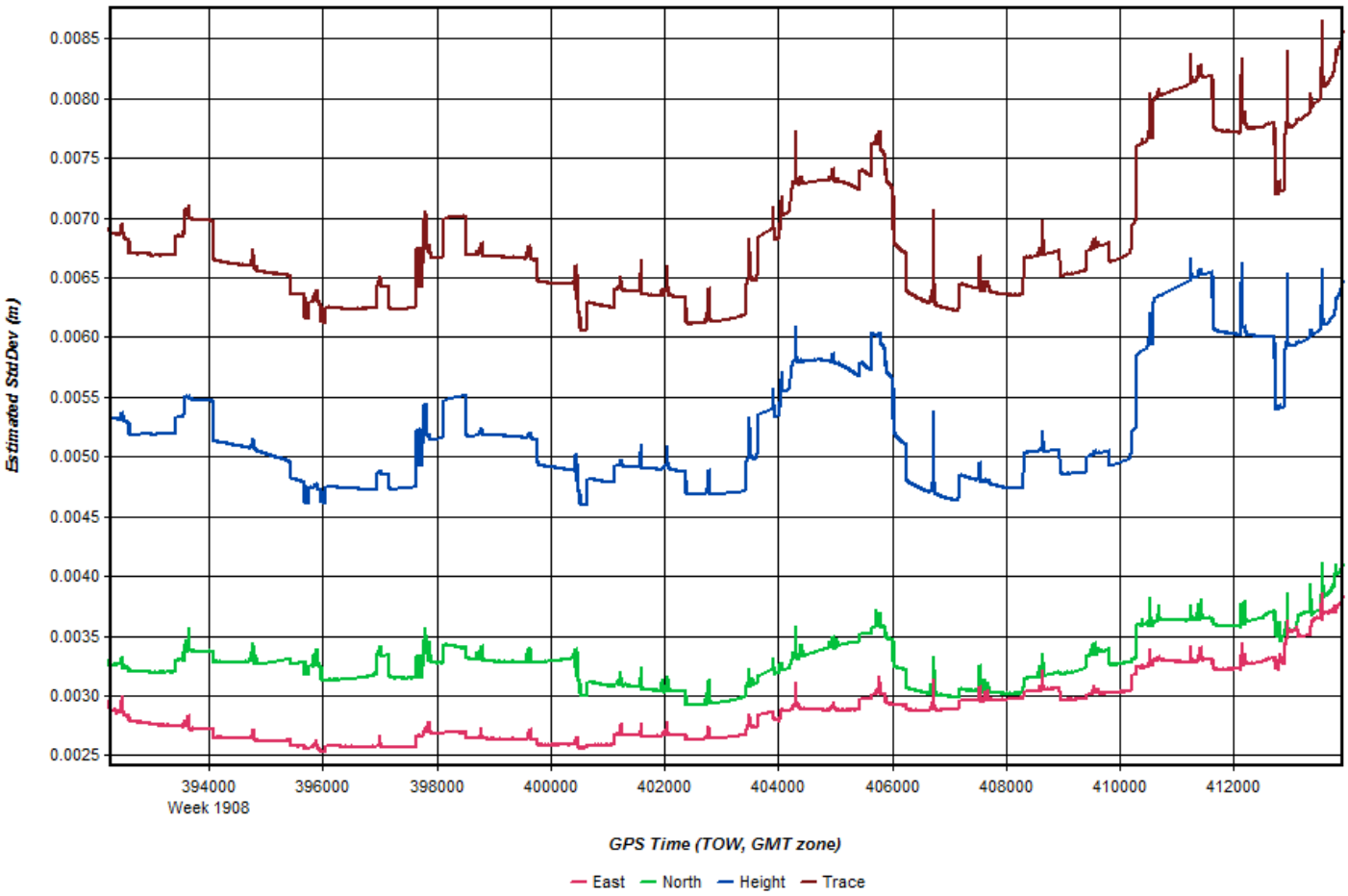

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
336000
Week 1908
338000
340000
342000
344000
346000
348000
350000
352000
354000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

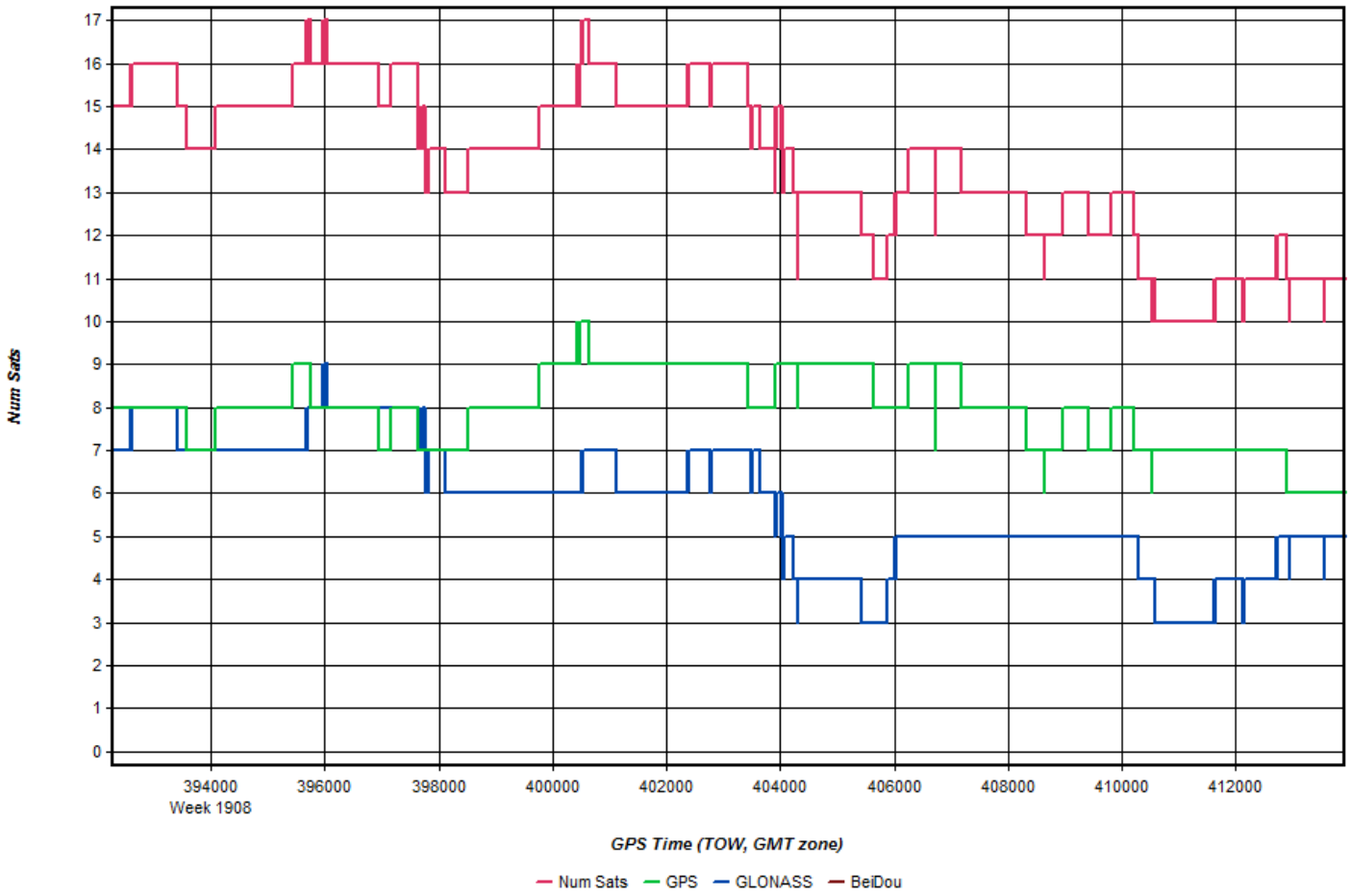

0.014
0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
Separation (m)
336000
Week 1908
338000
340000
342000
344000
346000
348000
350000
352000
354000
GPS Time (TOW, GMT zone)
East
North
Up

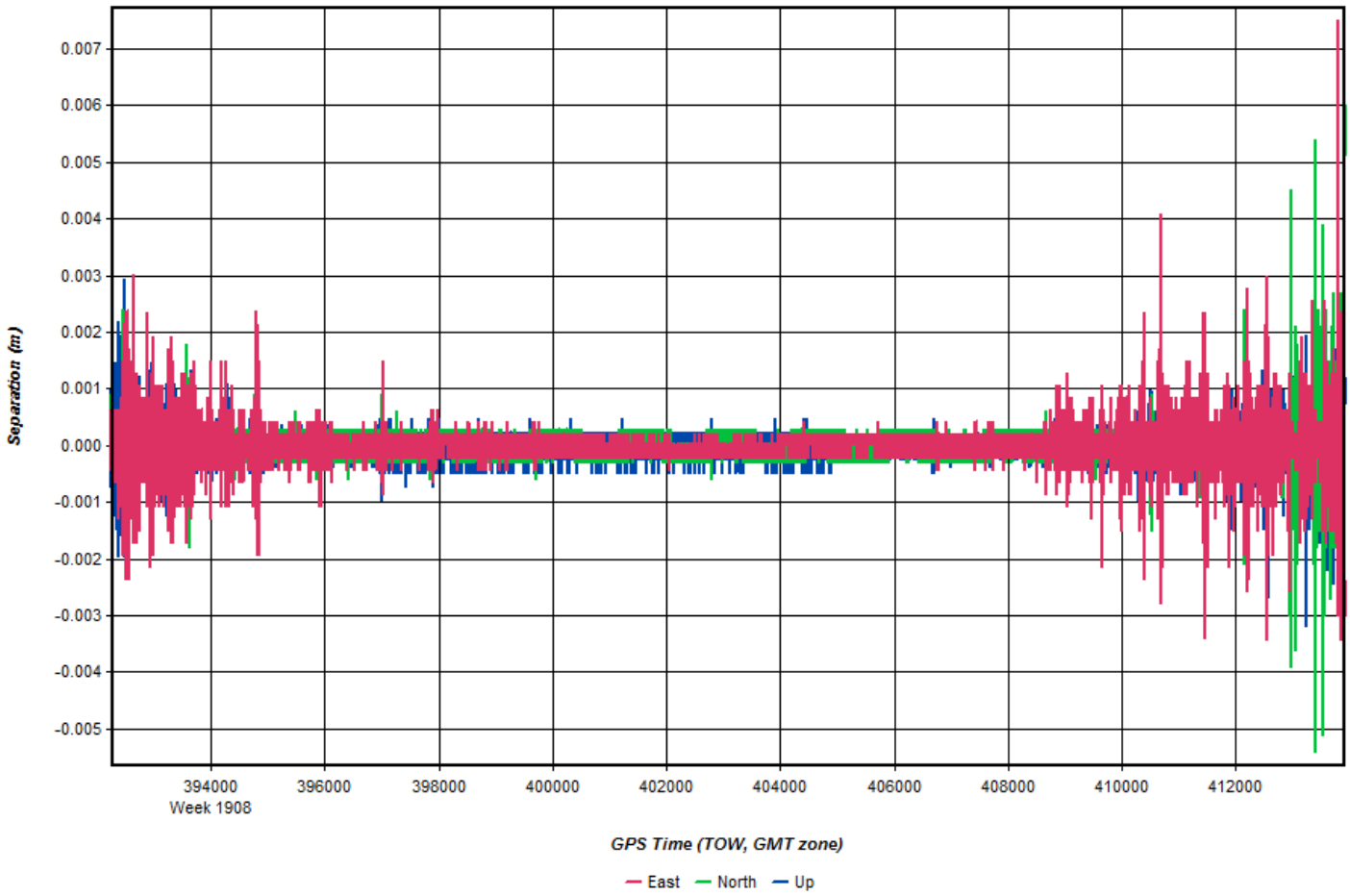

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
336000
Week 1908
338000
340000
342000
344000
346000
348000
350000
352000
354000
GPS Time (TOW, GMT zone)
PDOP

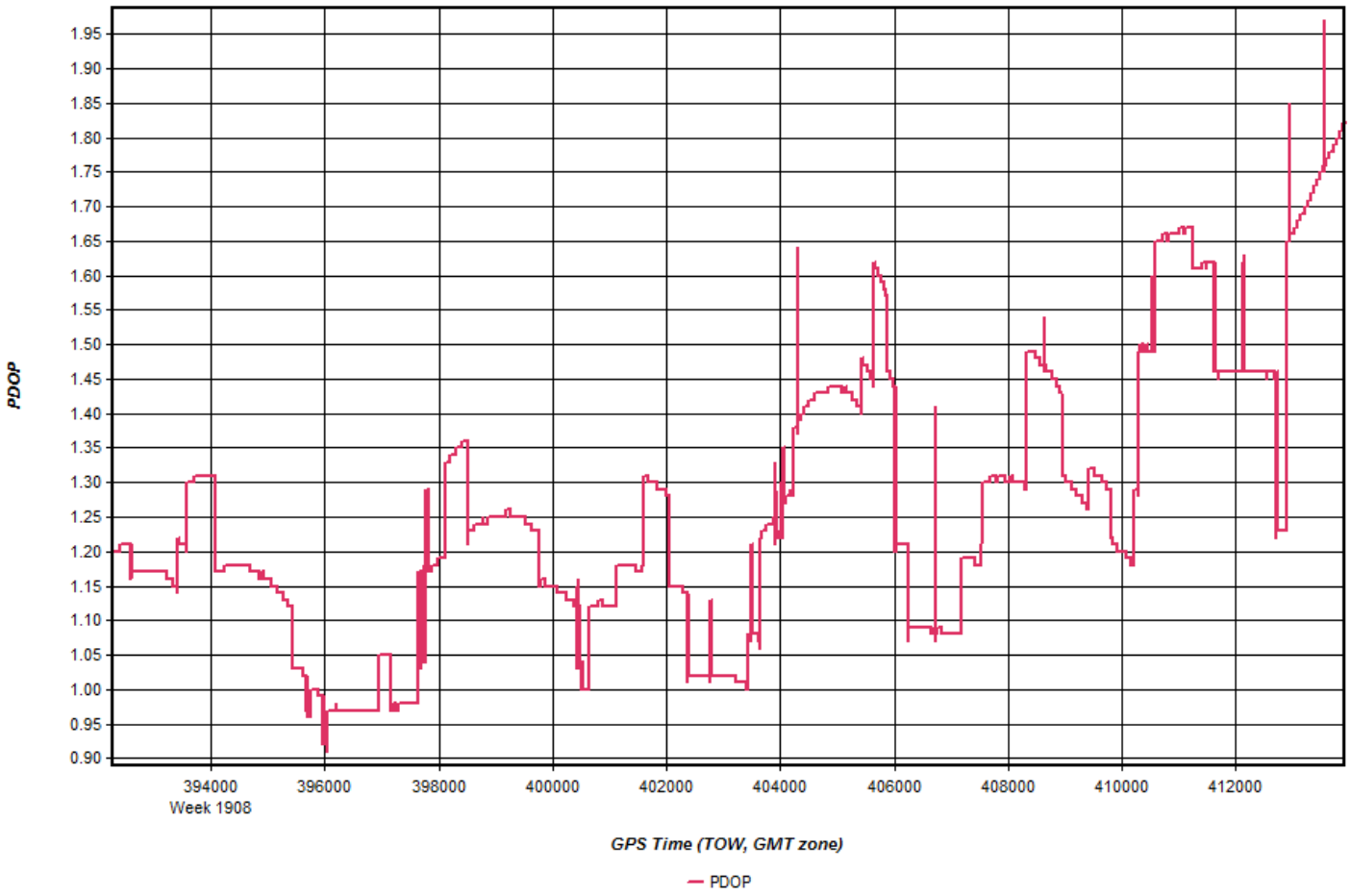
225_20160804_1




Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
394000
Week 1908
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
394000
Week 1908
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
Separation (m)
394000
Week 1908
396000
398000
400000
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
394000
Week 1908
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398000
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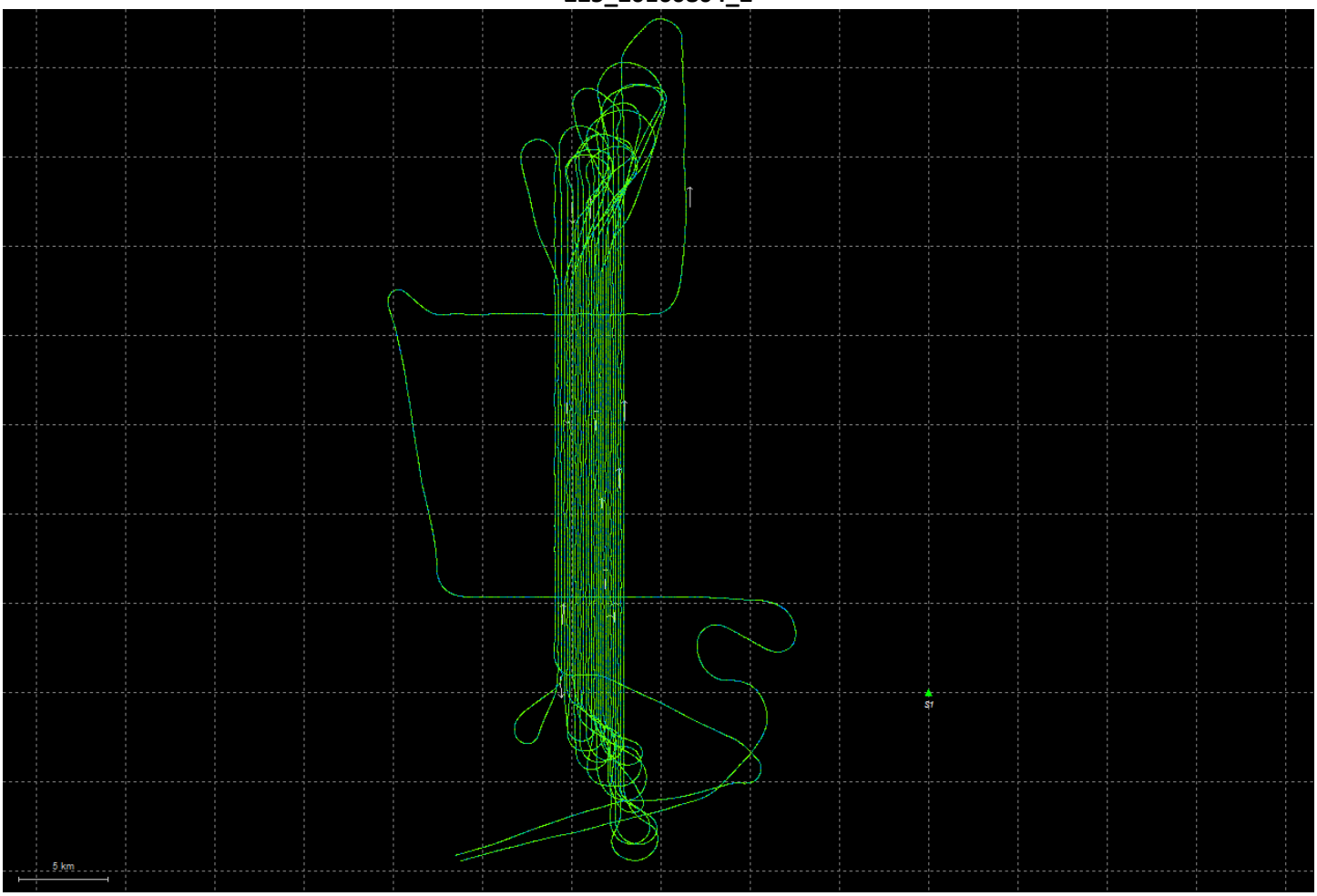
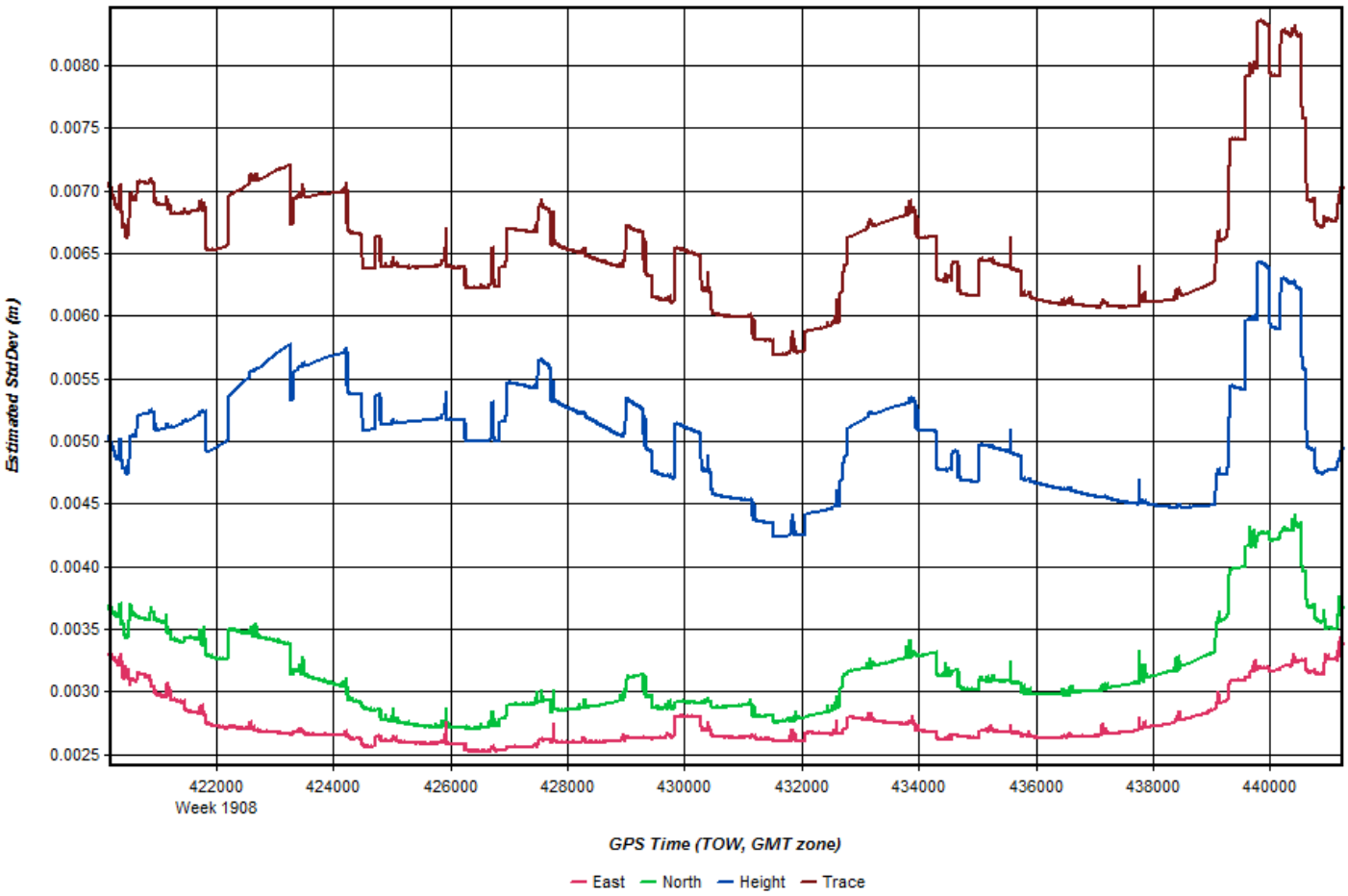
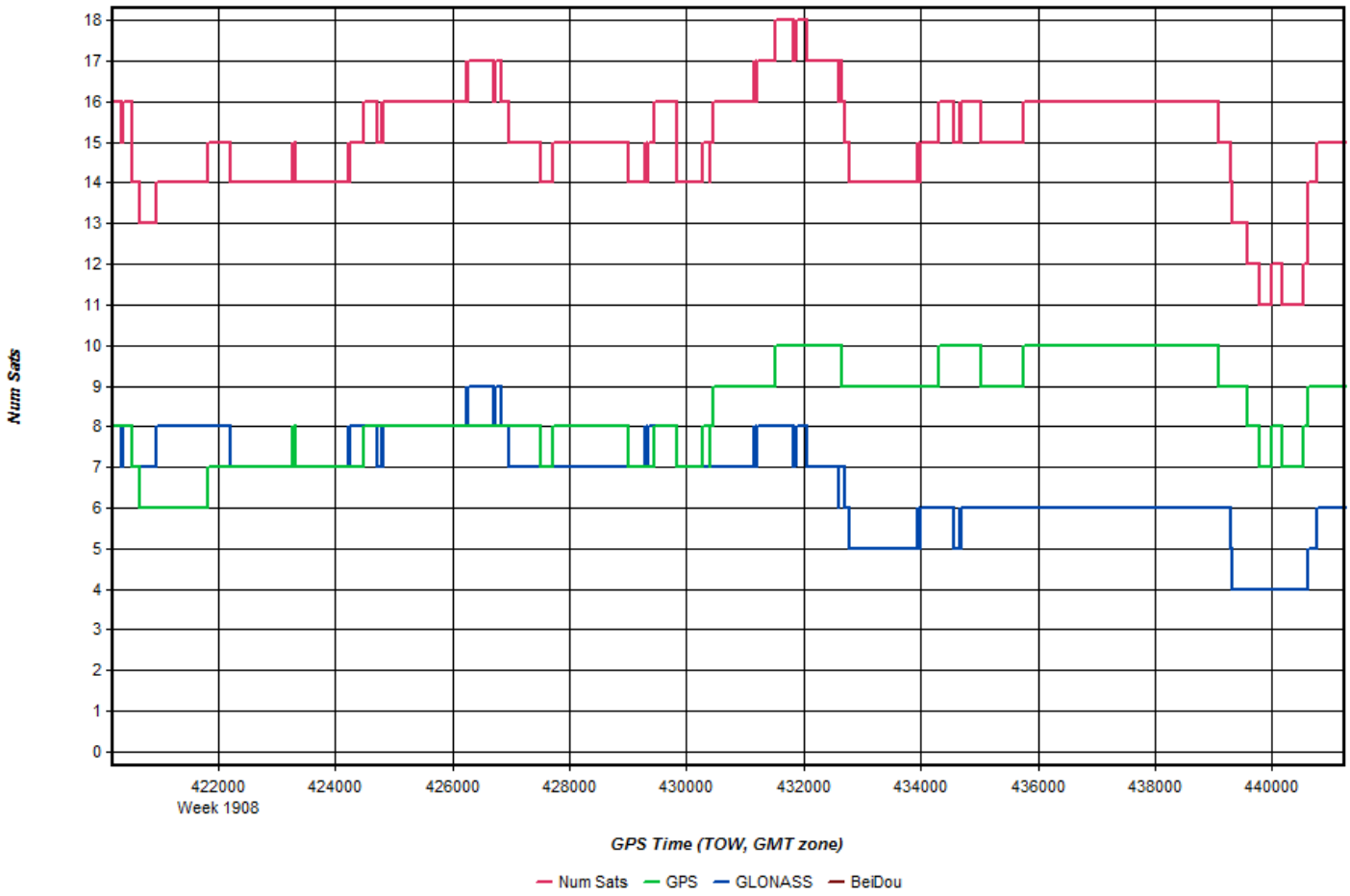
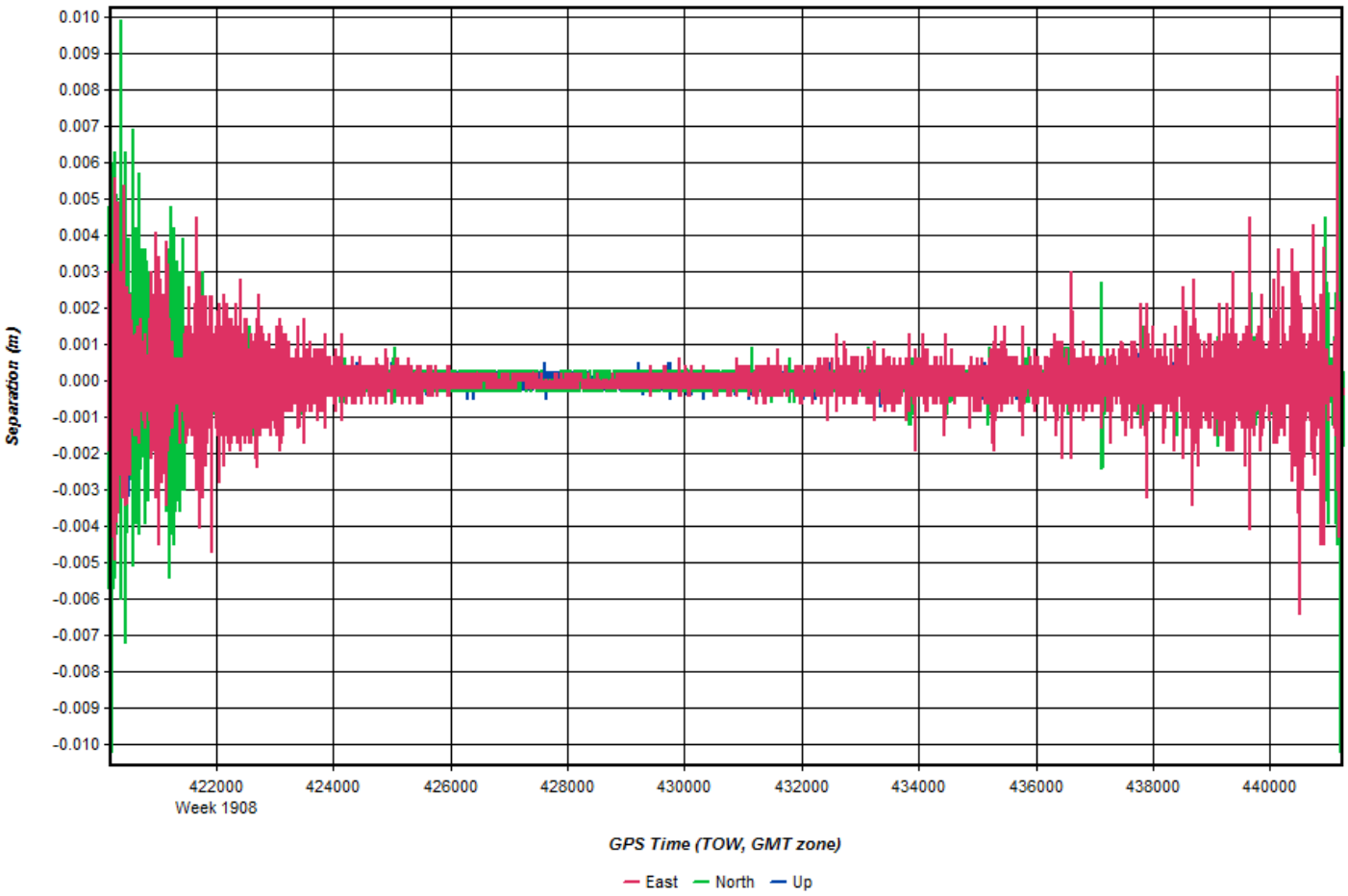
402000
404000
406000
408000
410000
412000
GPS Time (TOW, GMT zone)
PDOP

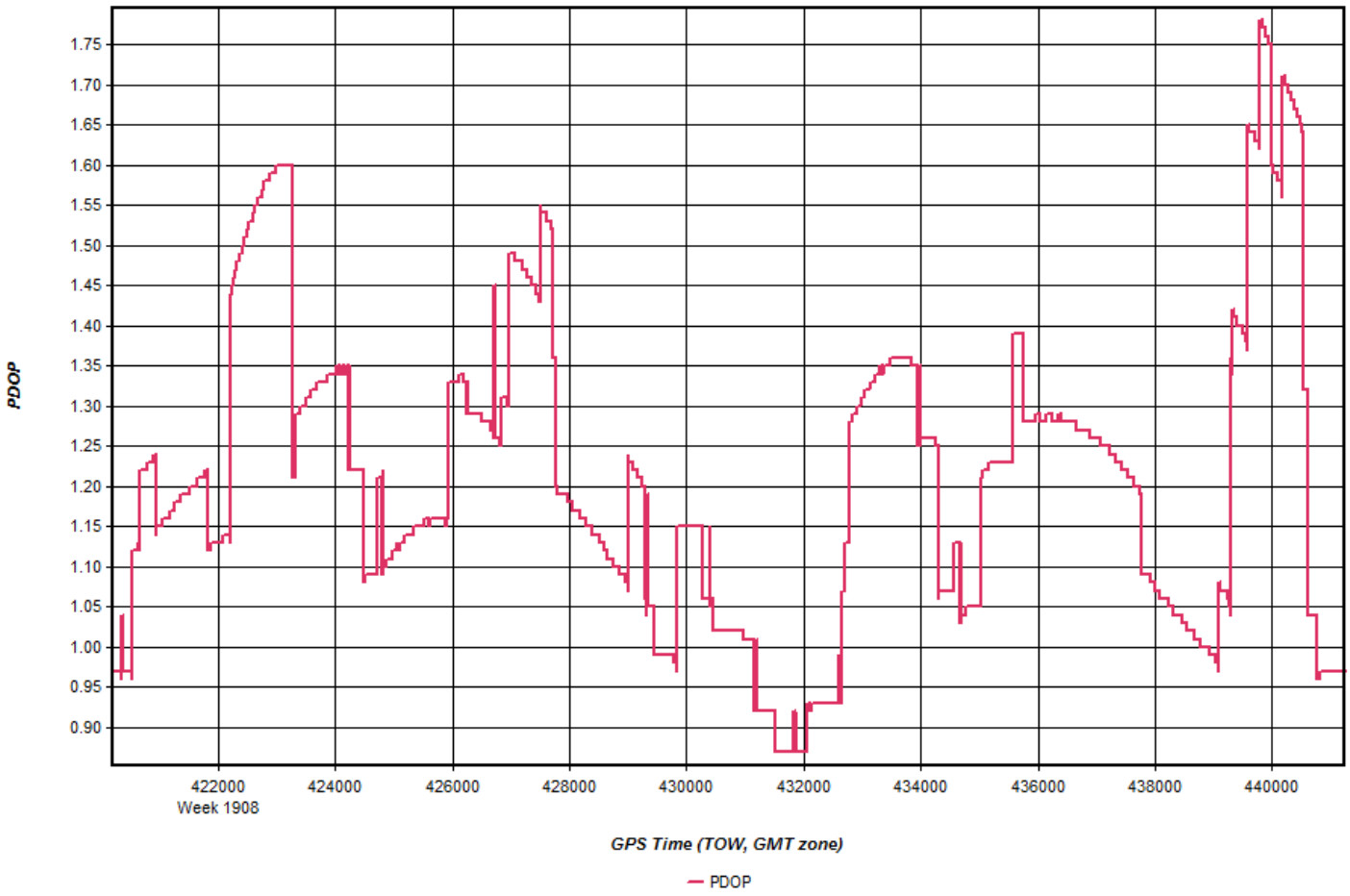
225_20160804_2



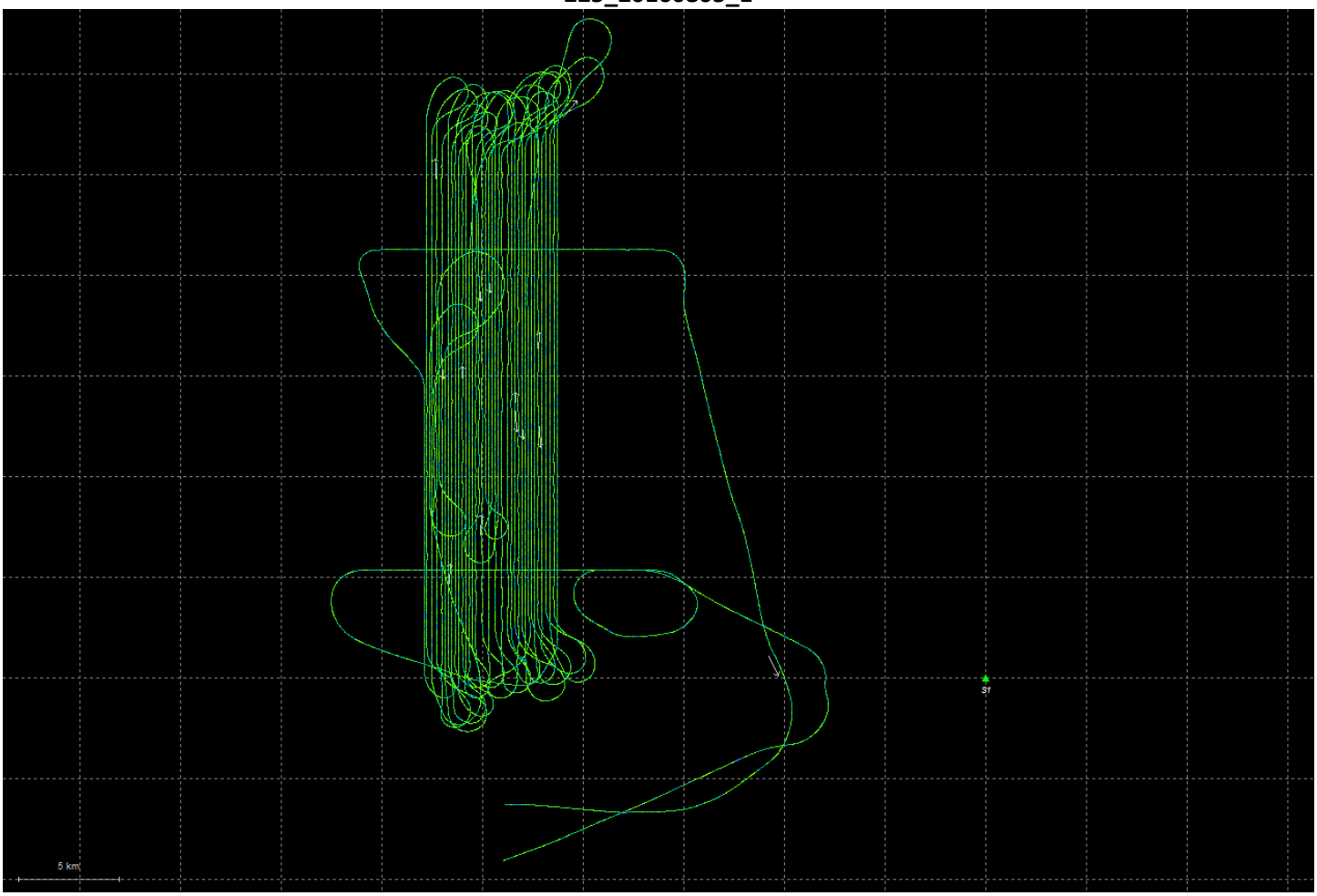

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
422000
Week 1908
424000
426000
428000
430000
432000
434000
436000
438000
440000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

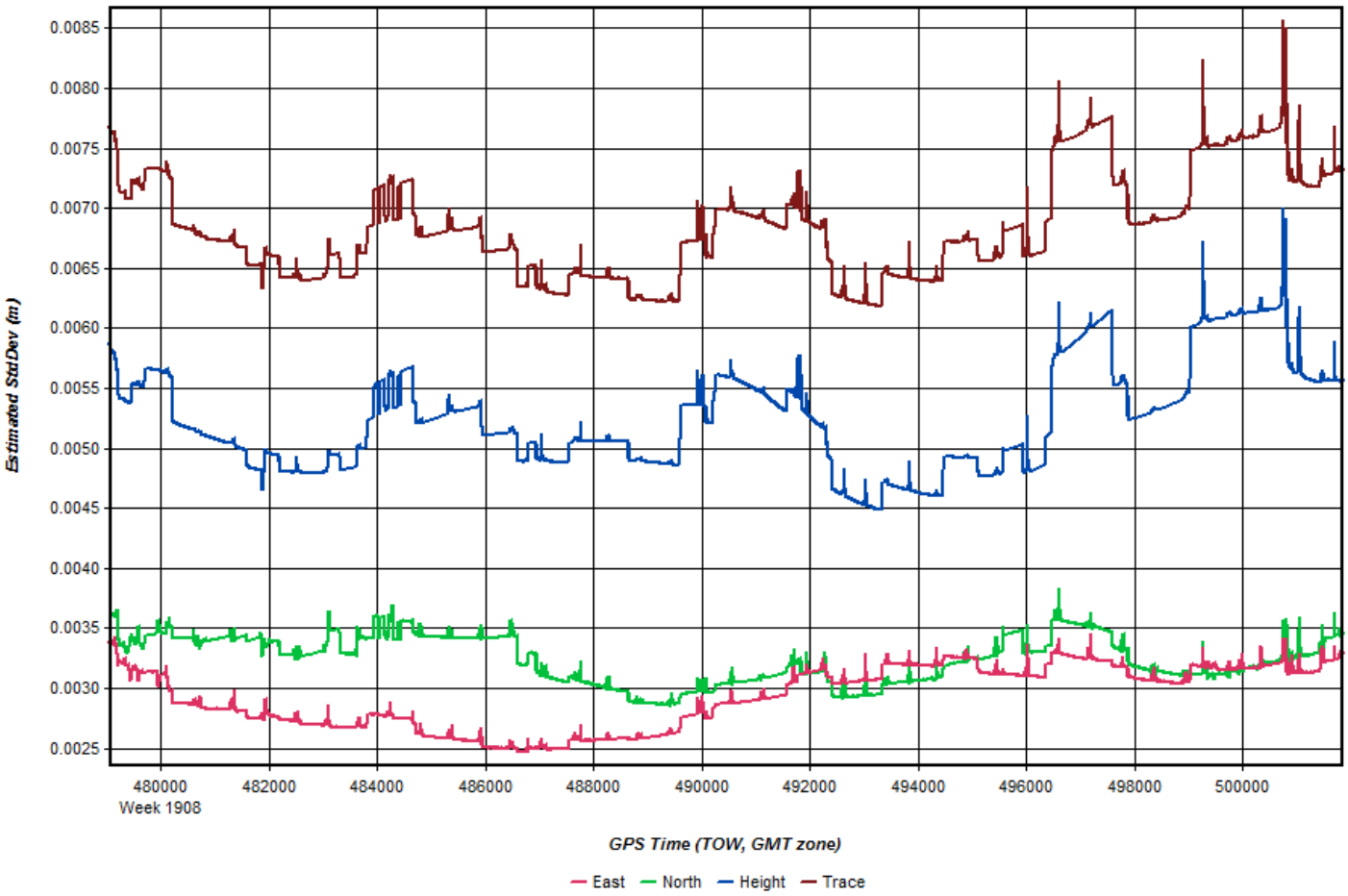

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
422000
Week 1908
424000
426000
428000
430000
432000
434000
436000
438000
440000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


Separation (m)
0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
422000
Week 1908
424000
426000
428000
430000
432000
434000
436000
438000
440000
GPS Time (TOW, GMT zone)
East
North
Up

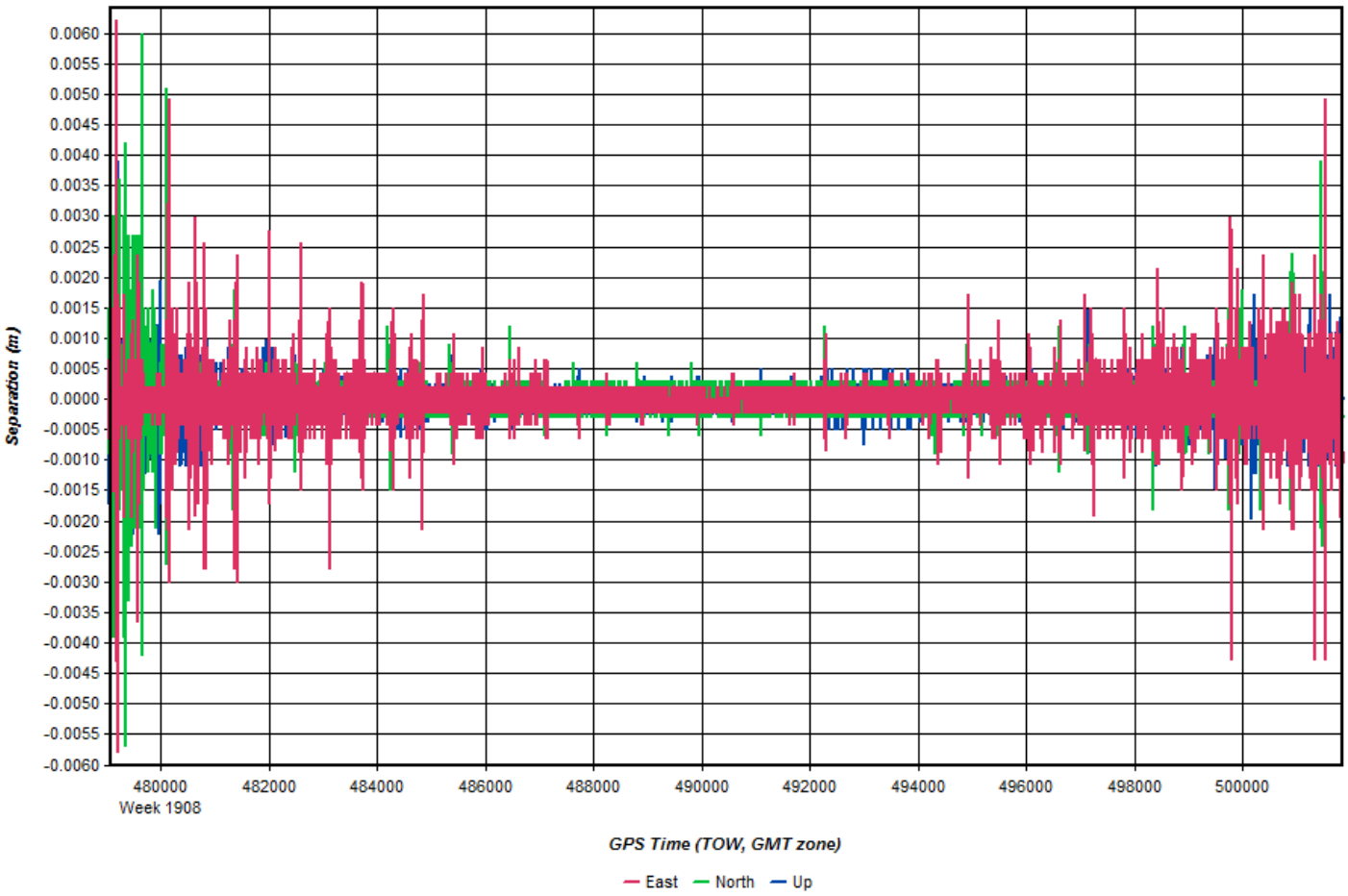

PDOP
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
422000
Week 1908
424000
426000
428000
430000
432000
434000
436000
438000
440000
GPS Time (TOW, GMT zone)
PDOP

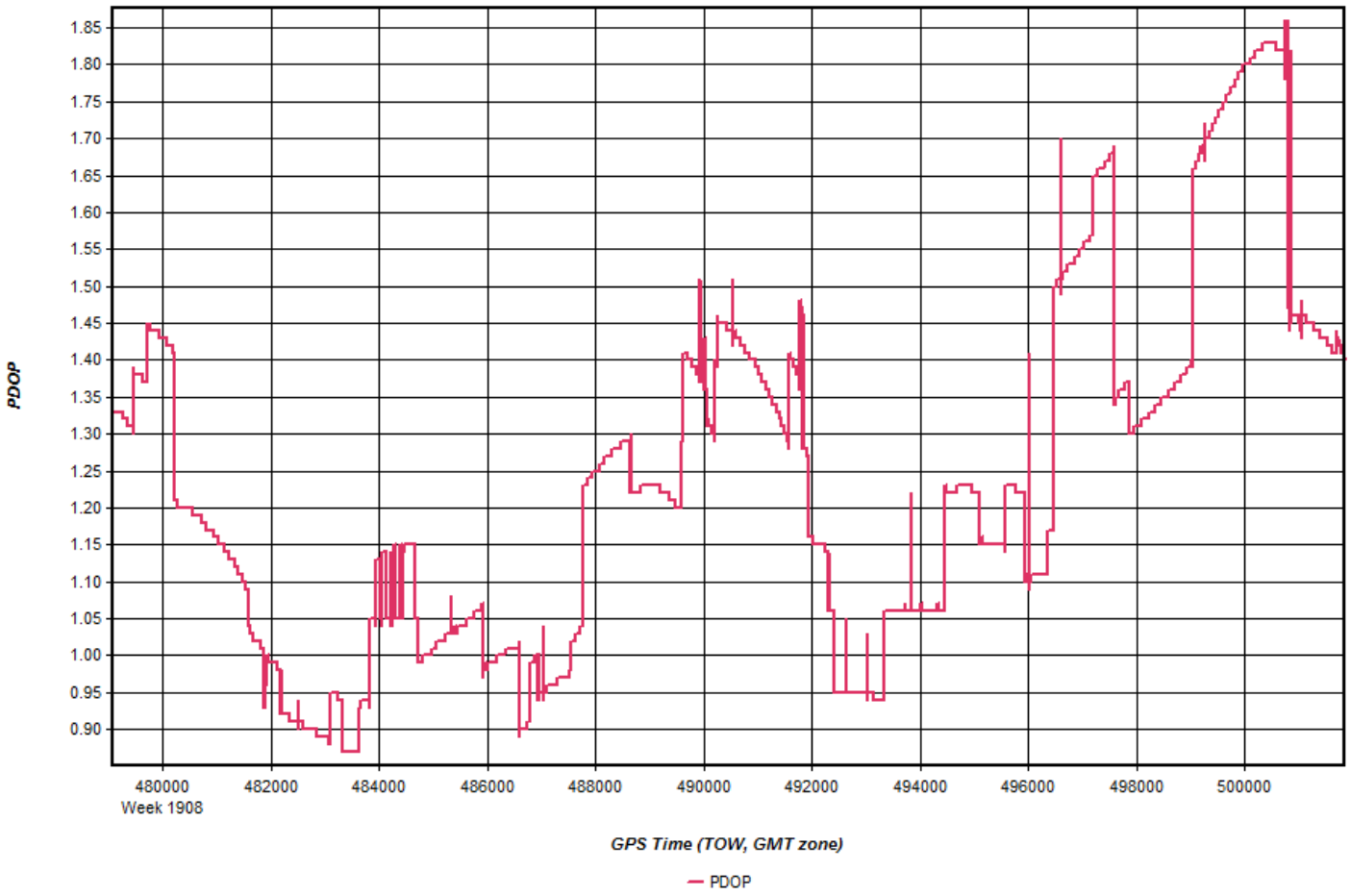
225_20160805_1



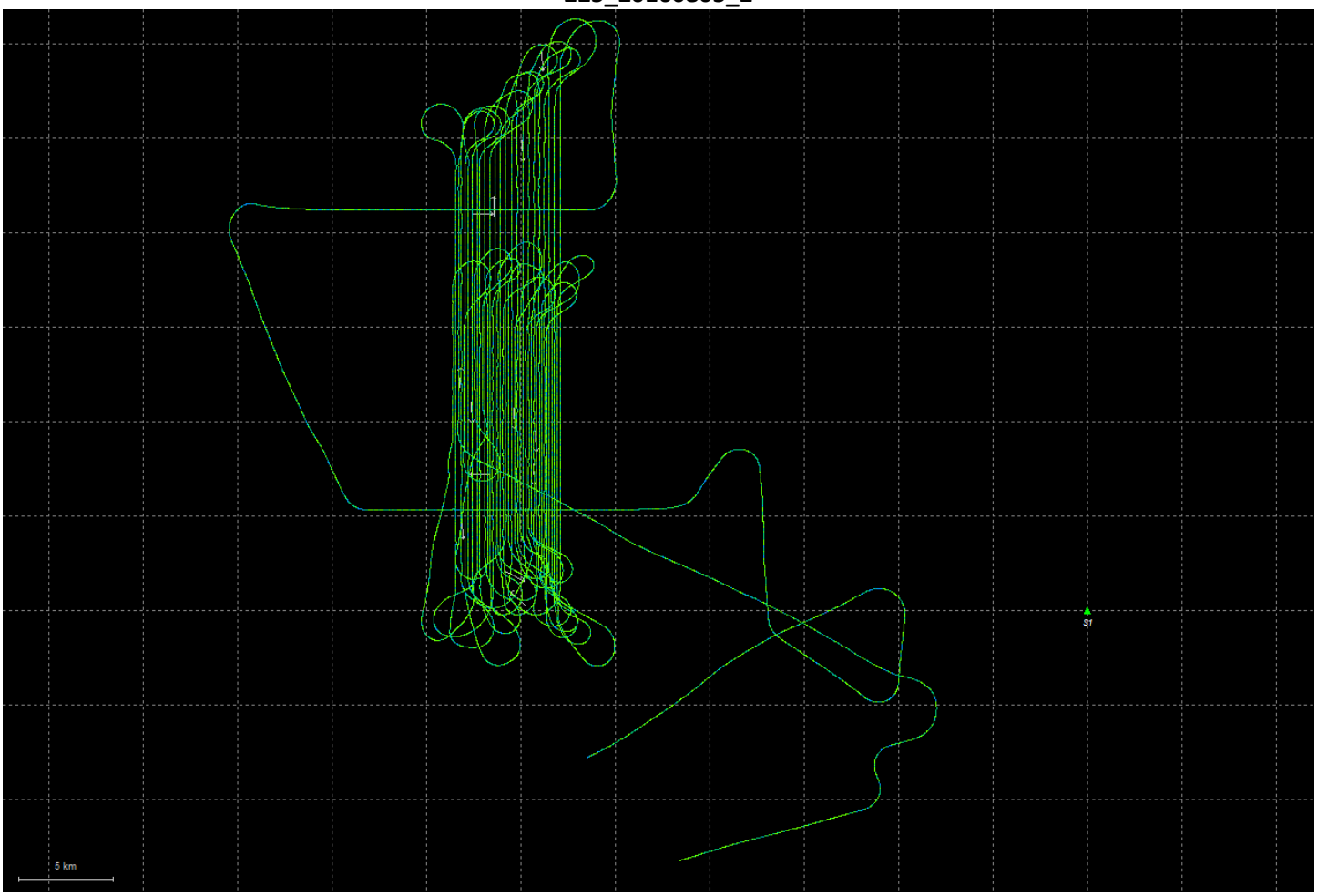

Estimated StdDev (m)
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
480000
Week 1908
482000
484000
486000
488000
490000
492000
494000
496000
498000
500000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

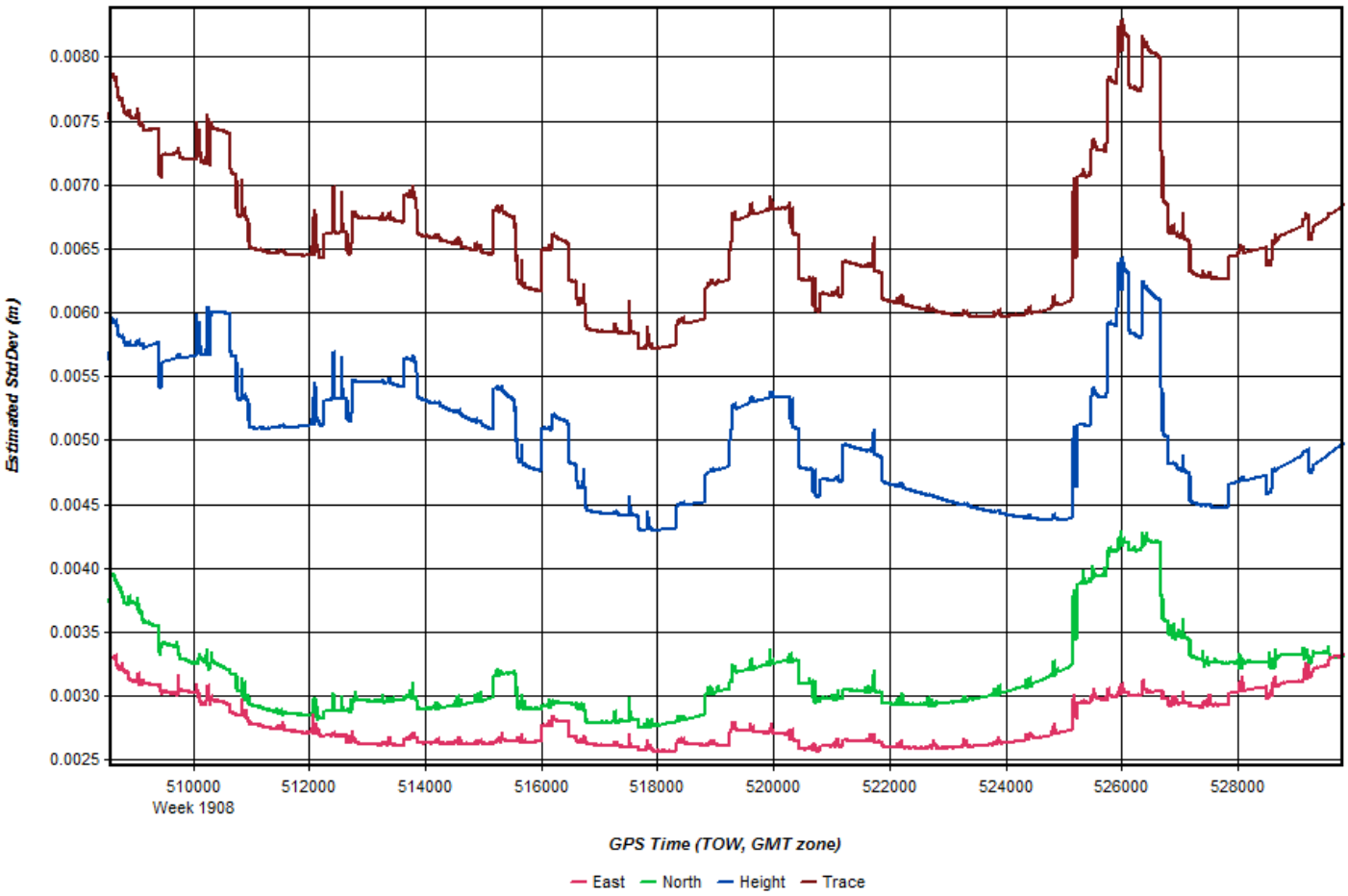

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
480000
Week 1908
482000
484000
486000
488000
490000
492000
494000
496000
498000
500000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

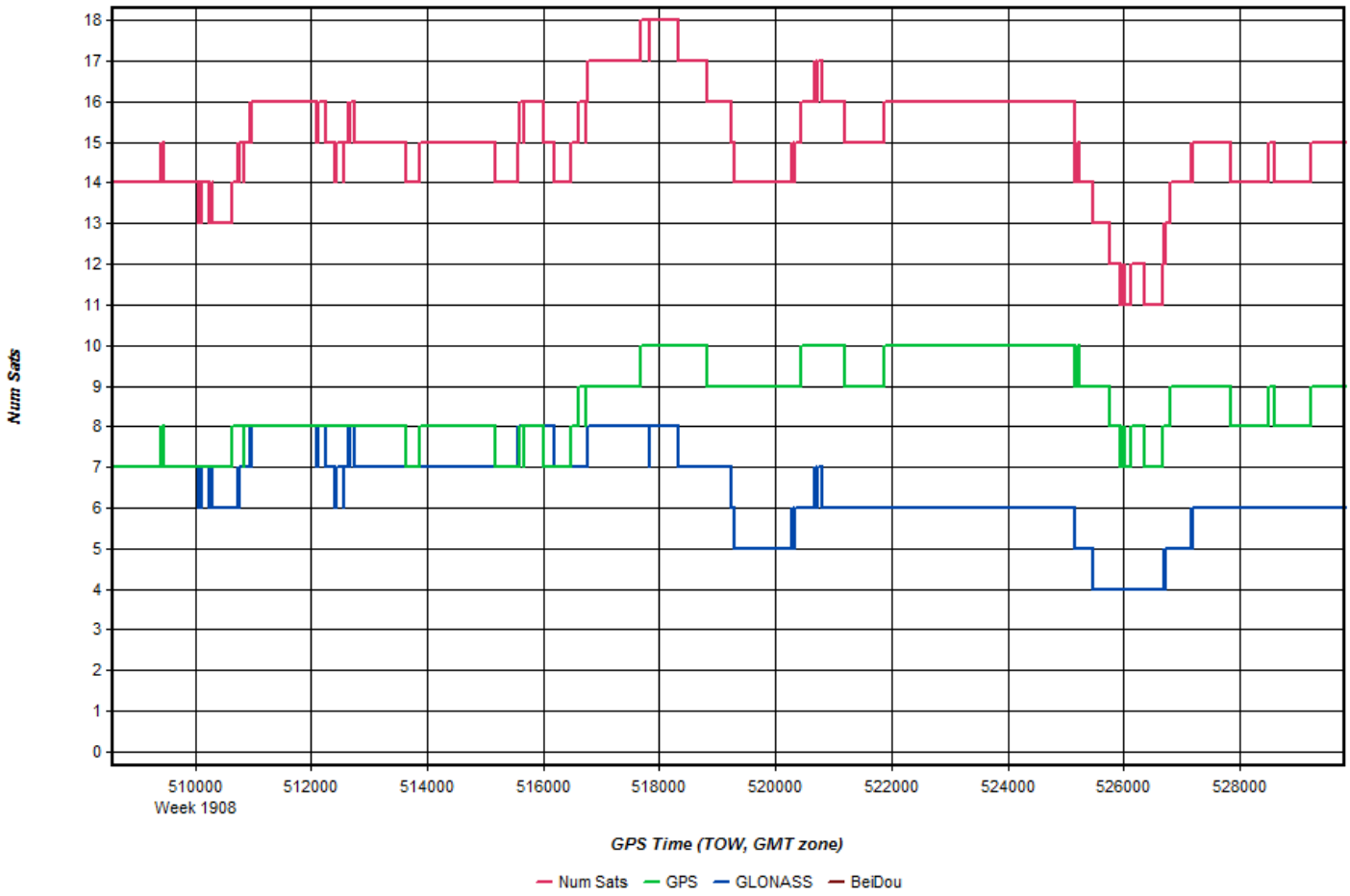

Separation (m)
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
-0.0060
480000
Week 1908
482000
484000
486000
488000
490000
492000
494000
496000
498000
500000
GPS Time (TOW, GMT zone)
East
North
Up

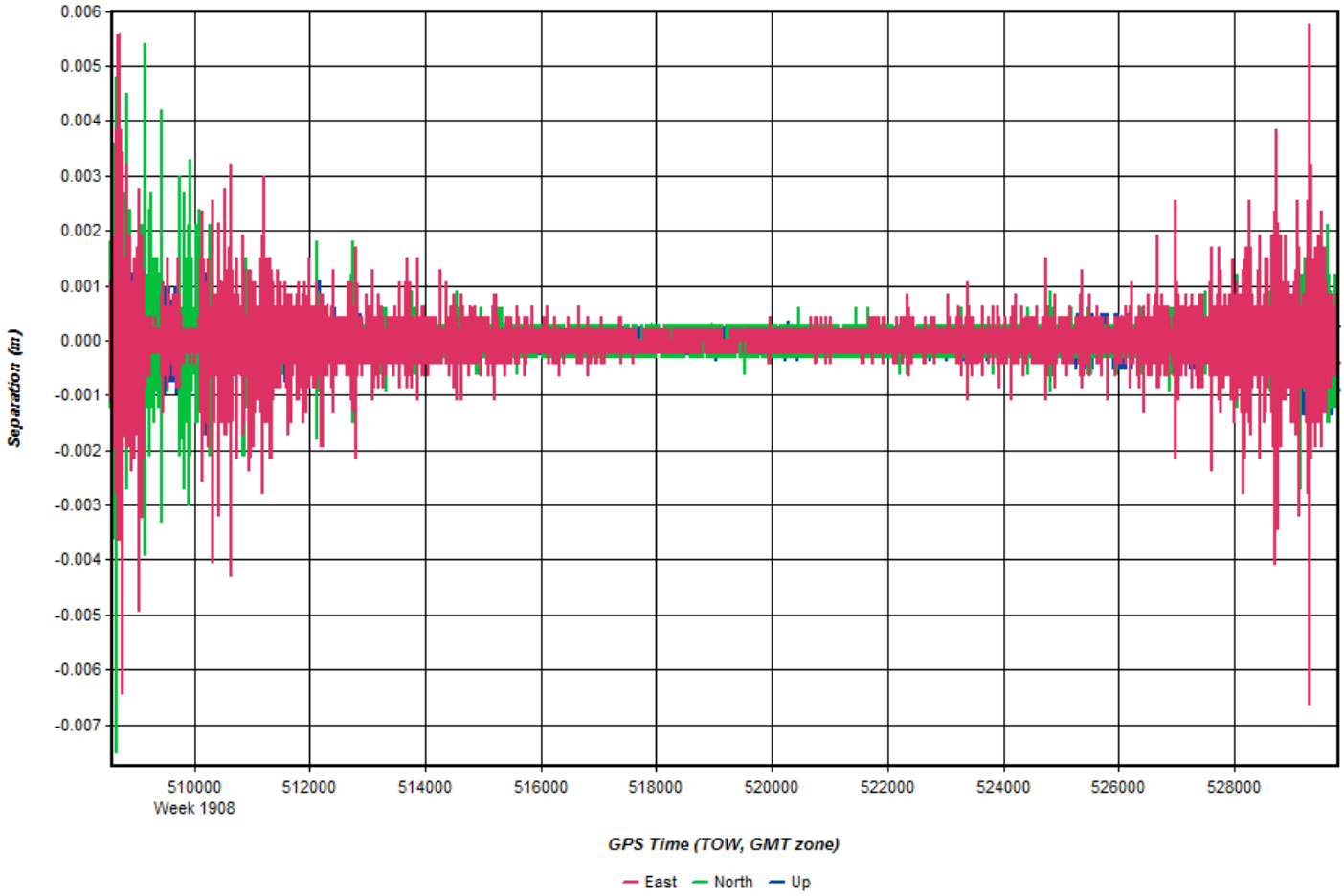

PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
480000
Week 1908
482000
484000
486000
488000
490000
492000
494000
496000
498000
500000
GPS Time (TOW, GMT zone)
PDOP

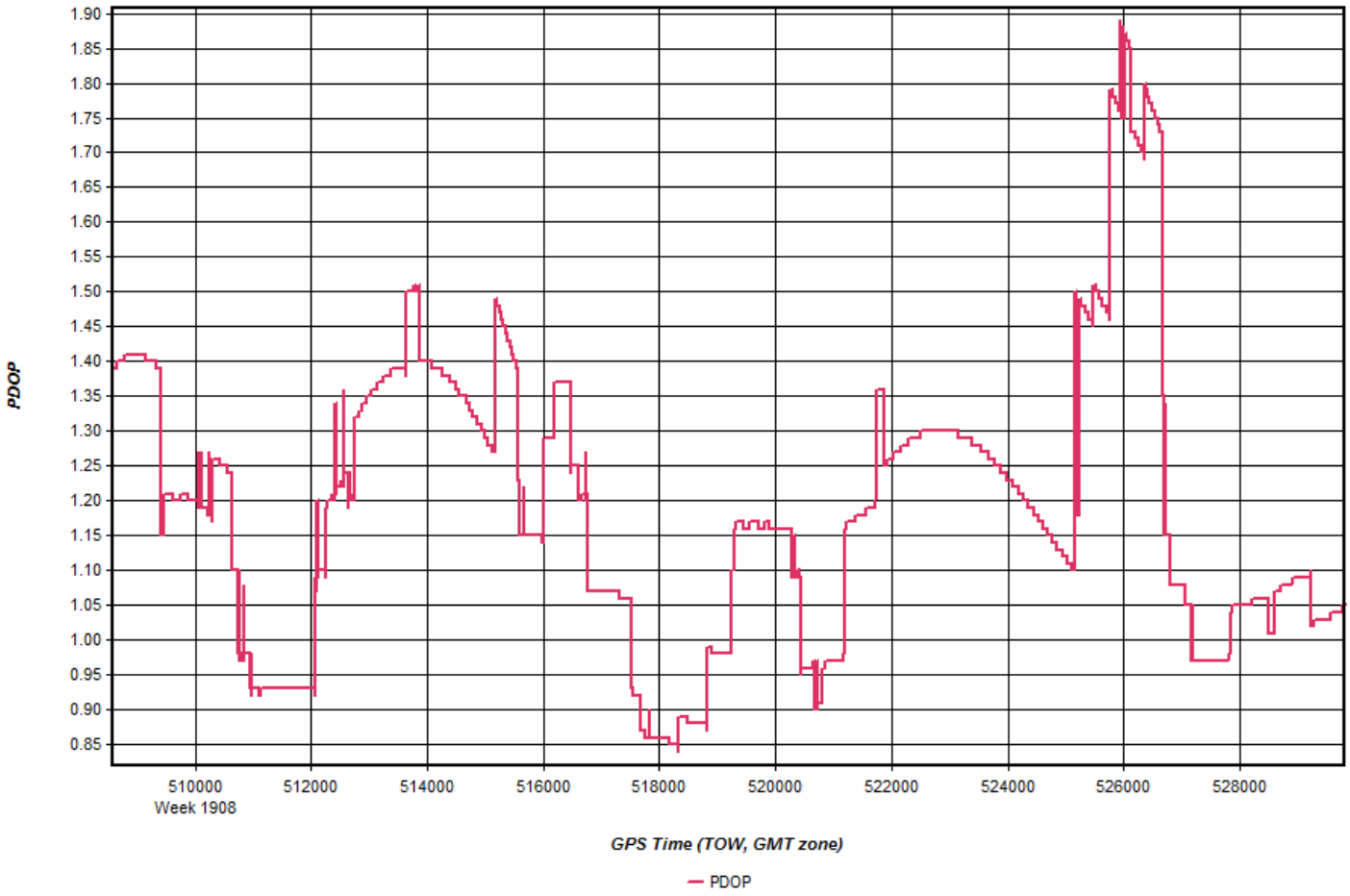
225_20160805_2



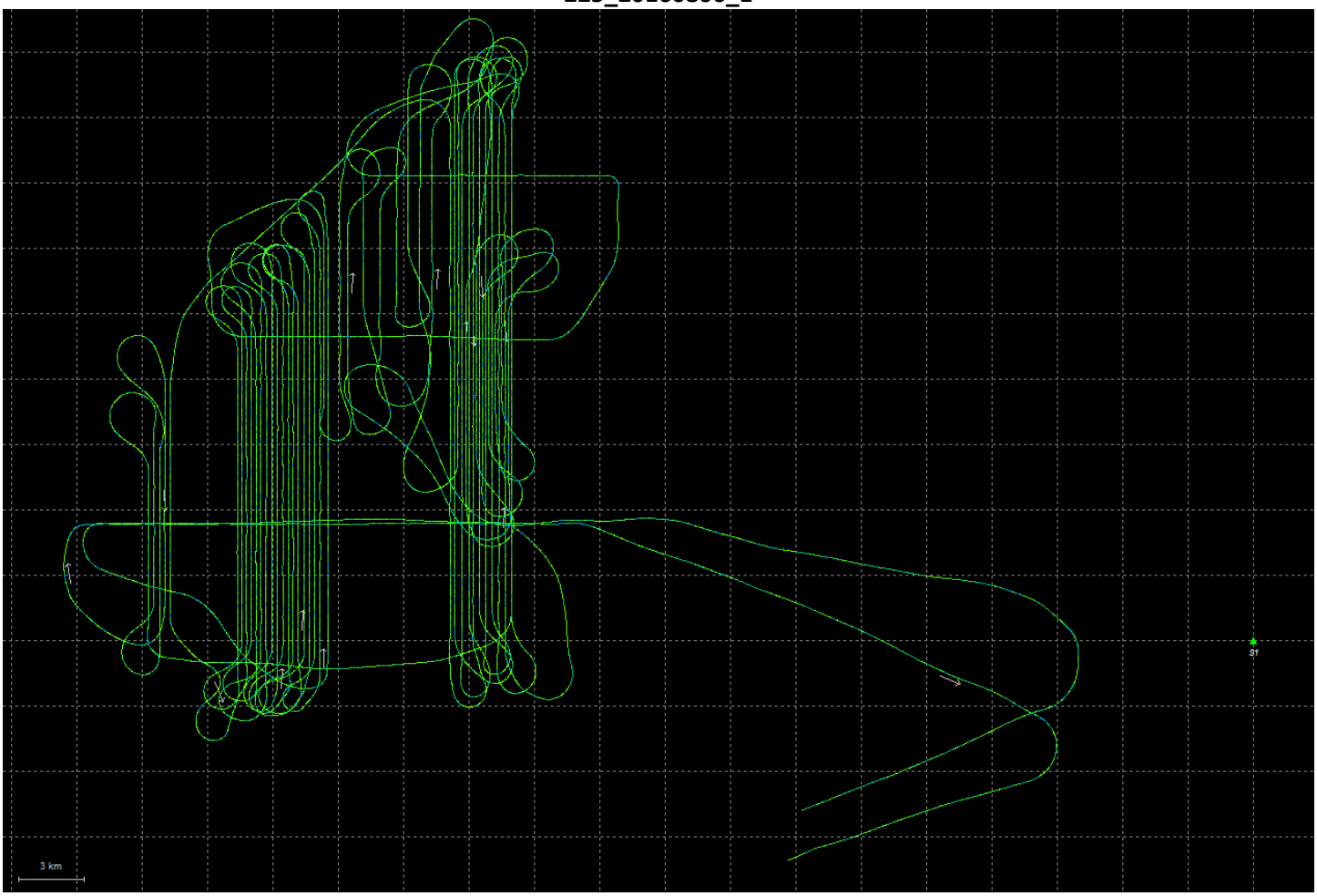

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
510000
Week 1908
512000
514000
516000
518000
520000
522000
524000
526000
528000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

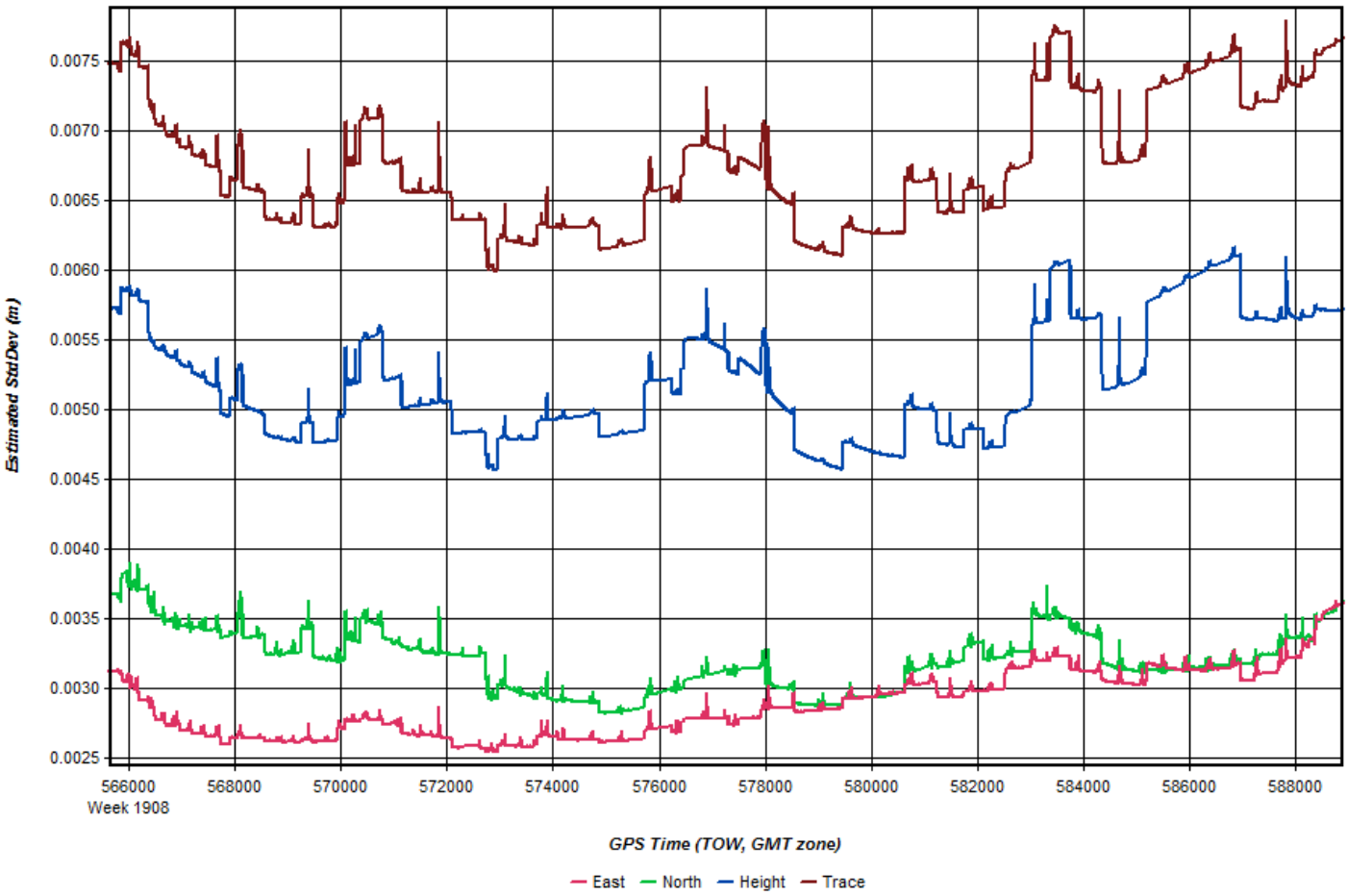

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
510000
Week 1908
512000
514000
516000
518000
520000
522000
524000
526000
528000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

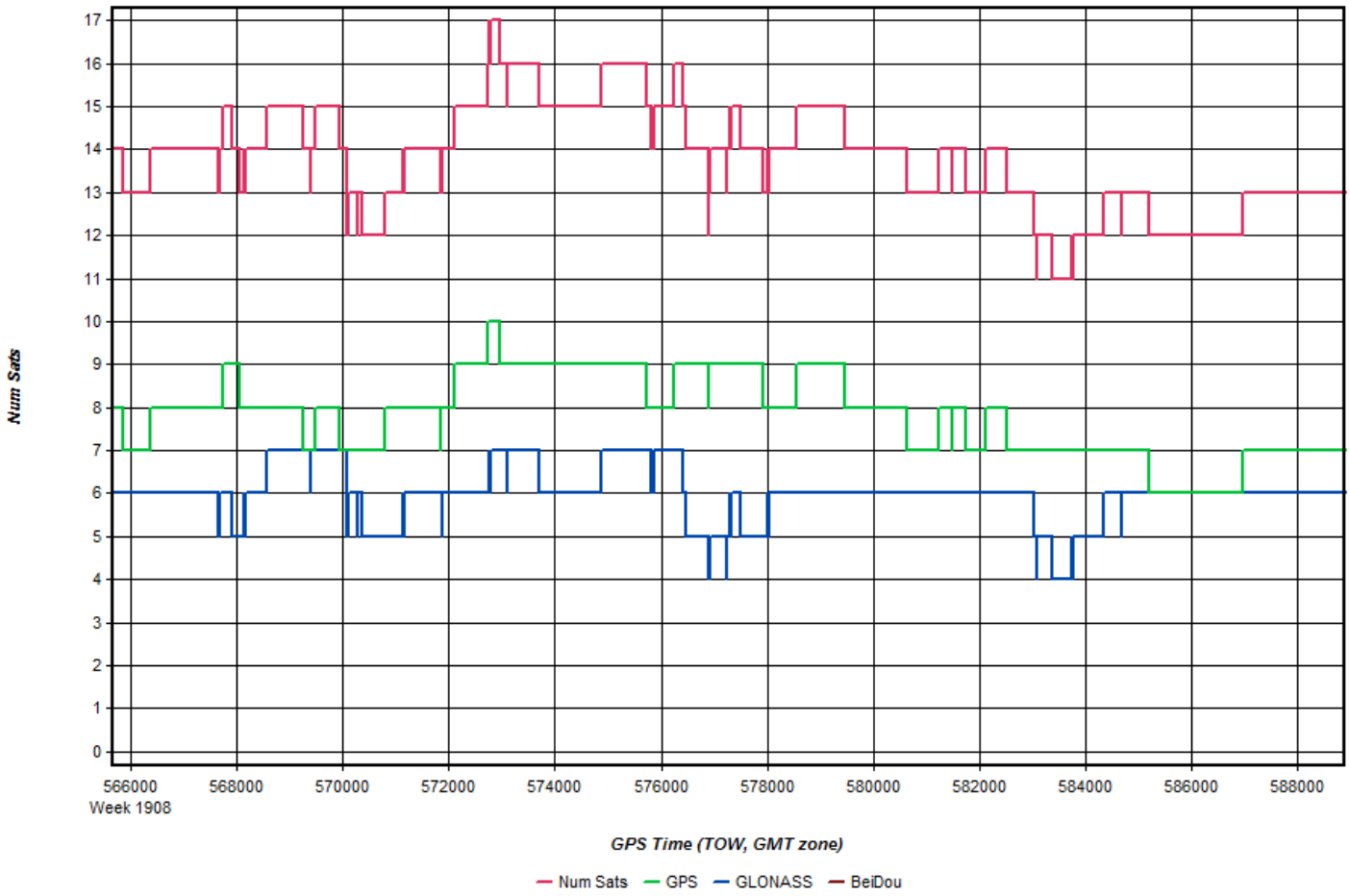

0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
Separation (m)
510000
Week 1908
512000
514000
516000
518000
520000
522000
524000
526000
528000
GPS Time (TOW, GMT zone)
East
North
Up

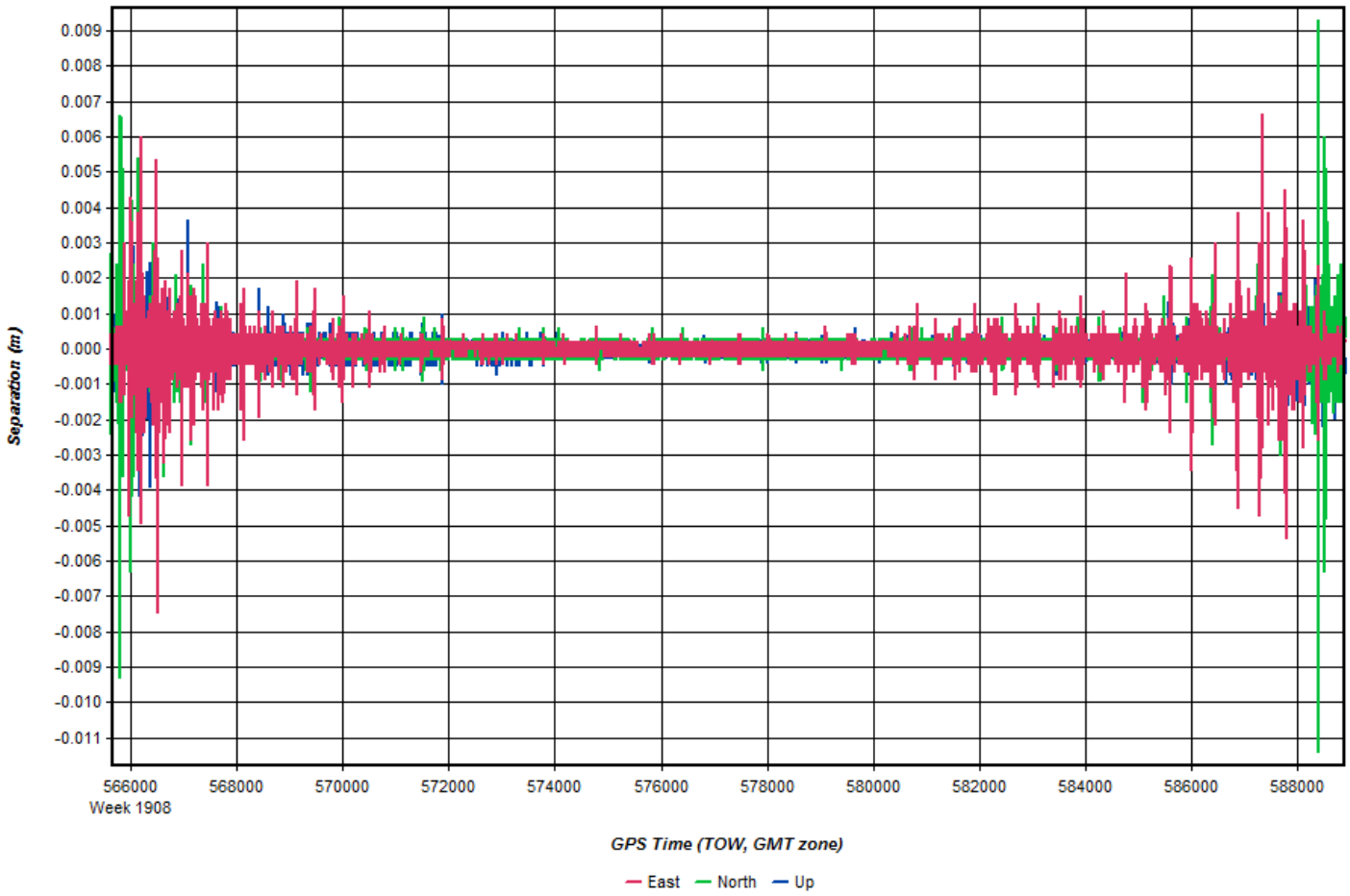

PDOP
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
510000
Week 1908
512000
514000
516000
518000
520000
522000
524000
526000
528000
GPS Time (TOW, GMT zone)
PDOP

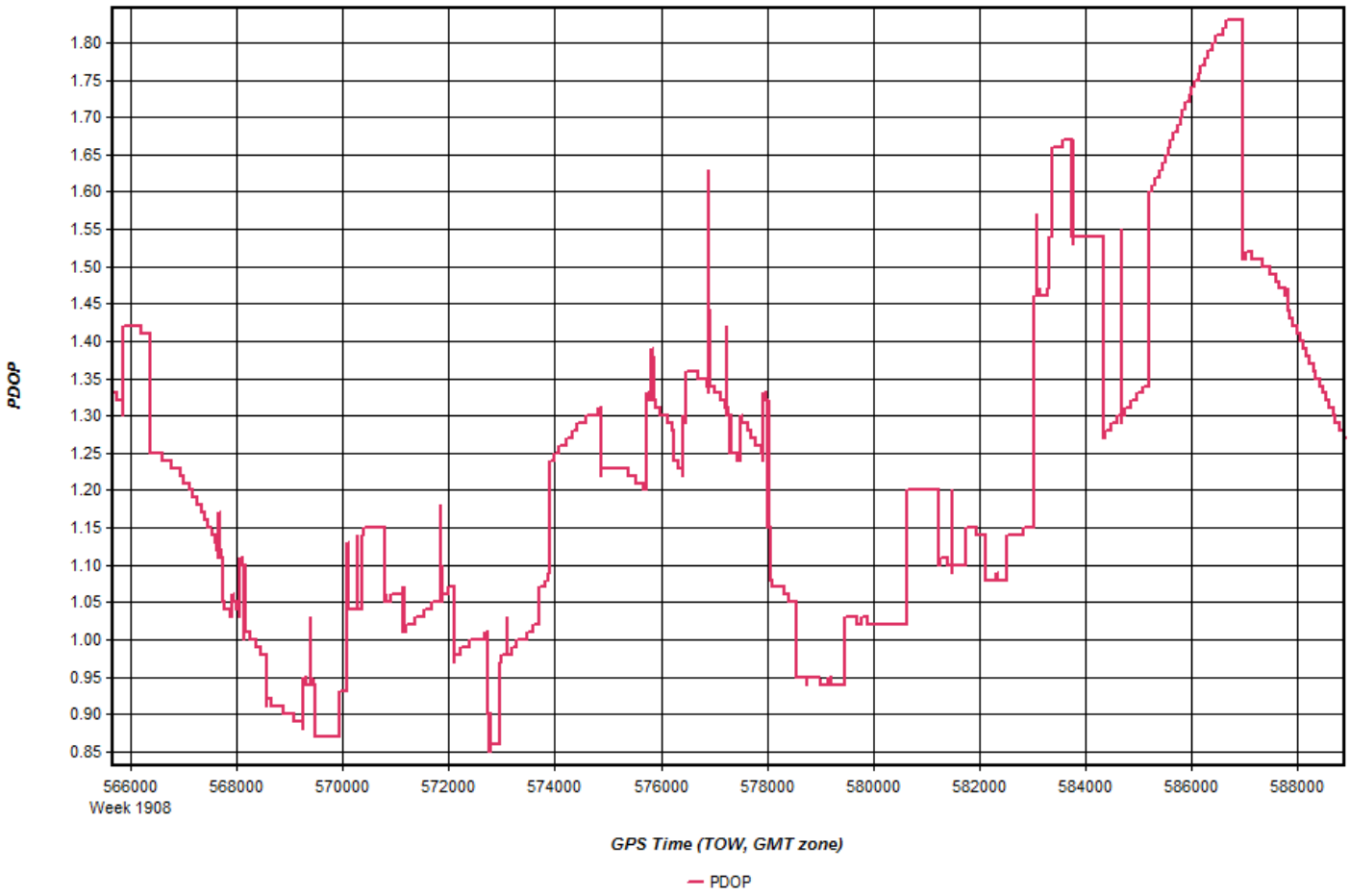
225_20160806_1



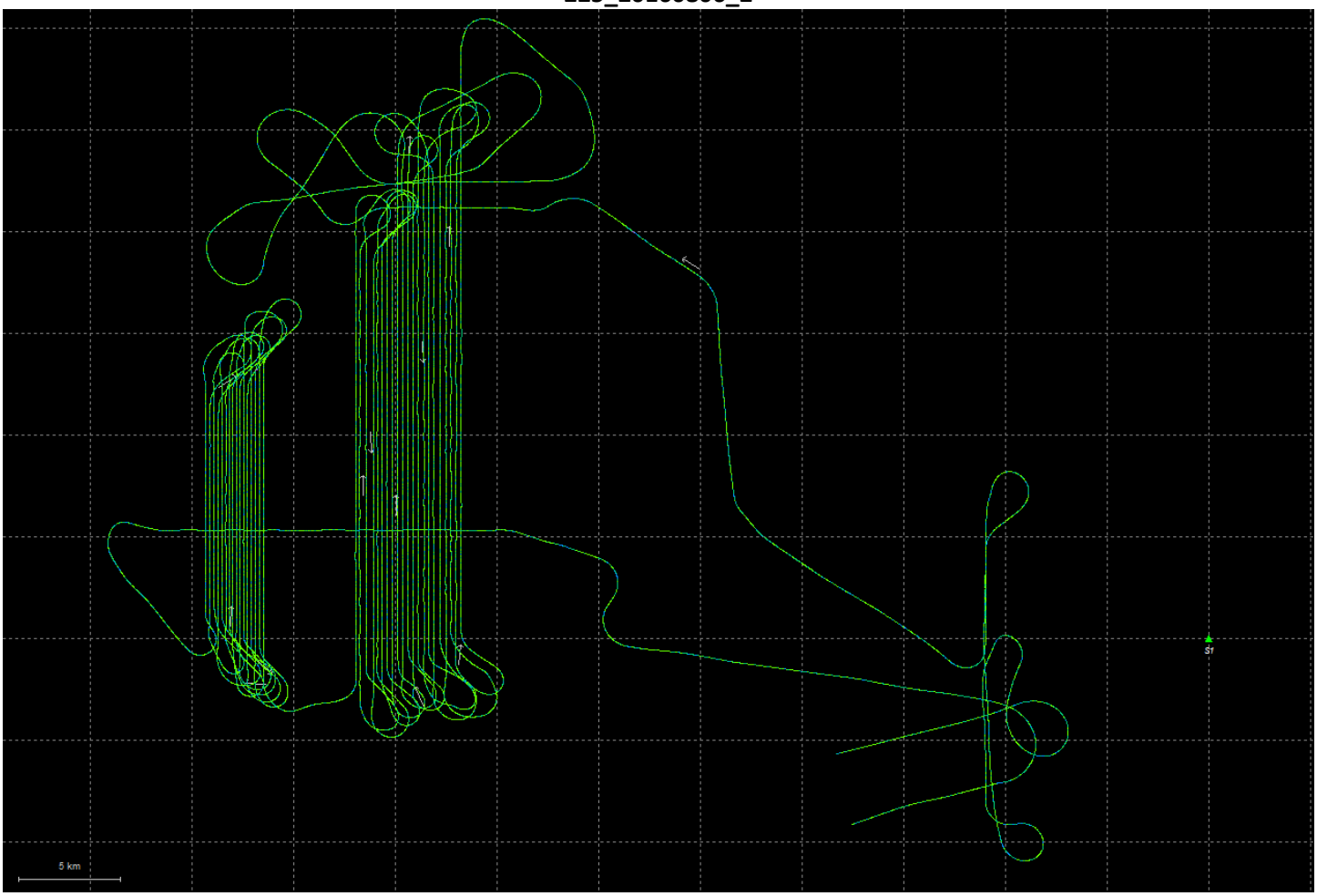

Estimated StdDev (m)
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
566000
Week 1908
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

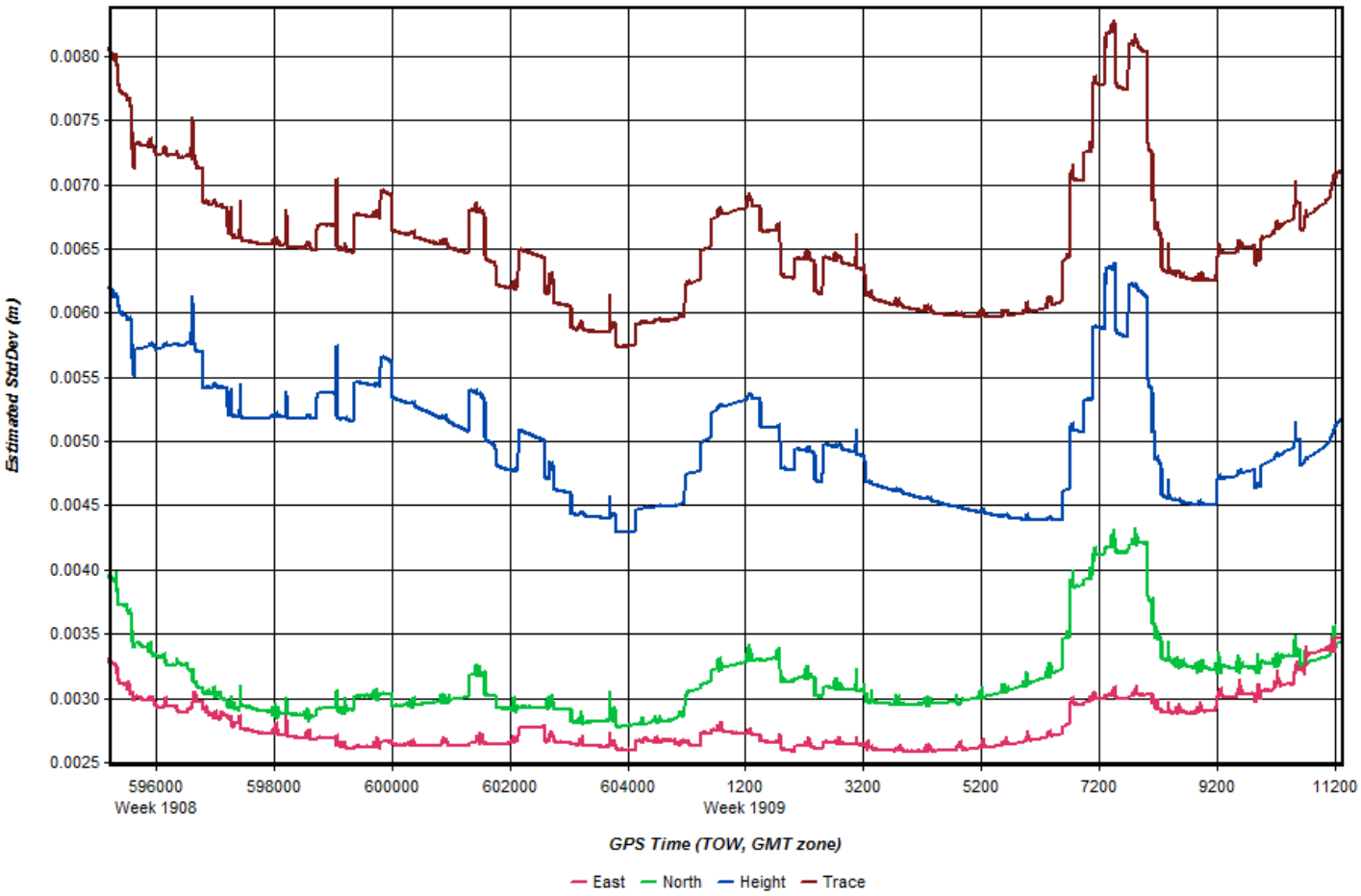

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
566000
Week 1908
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

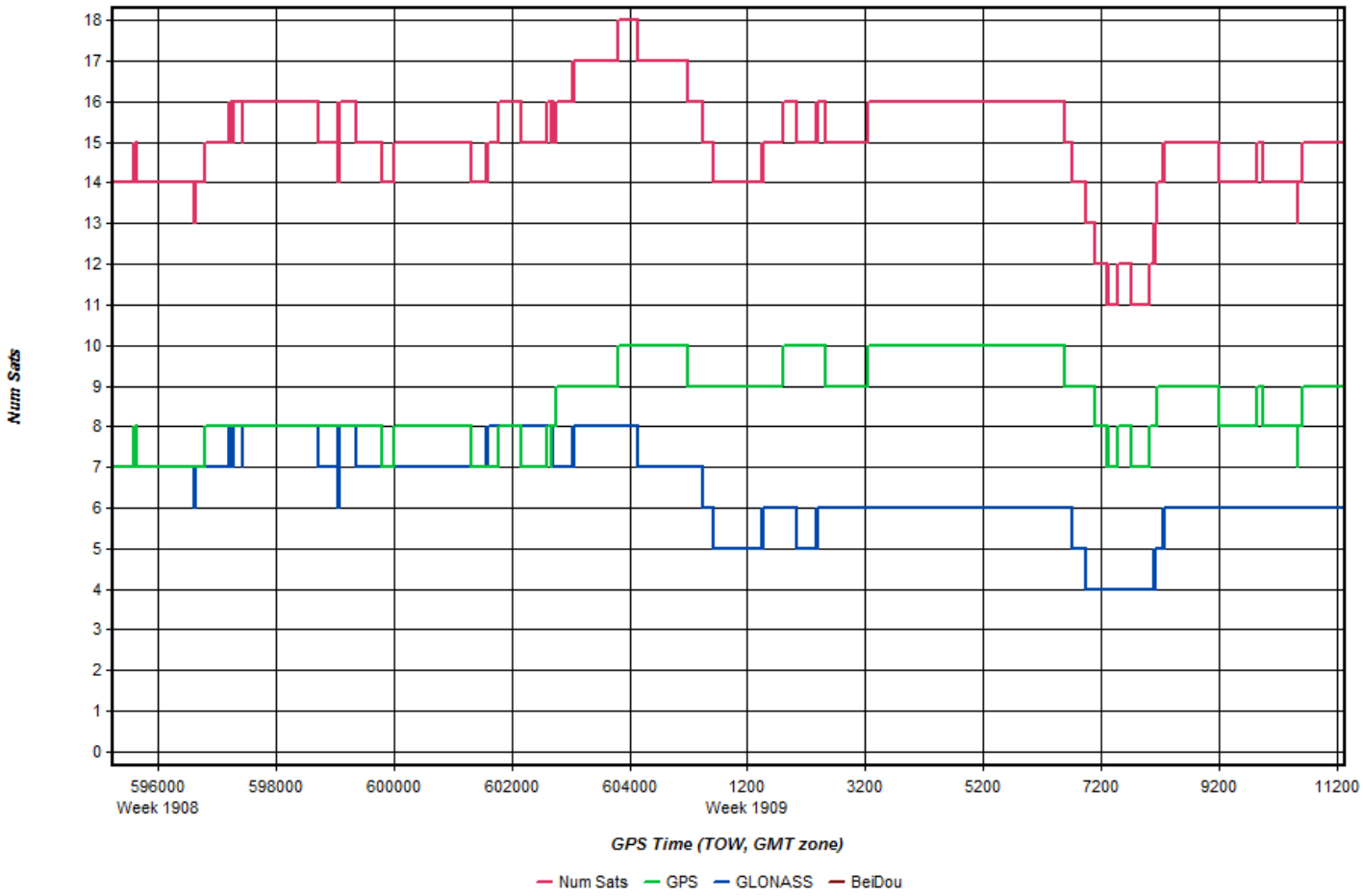

0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
-0.011
Separation (m)
566000
Week 1908
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
East
North
Up

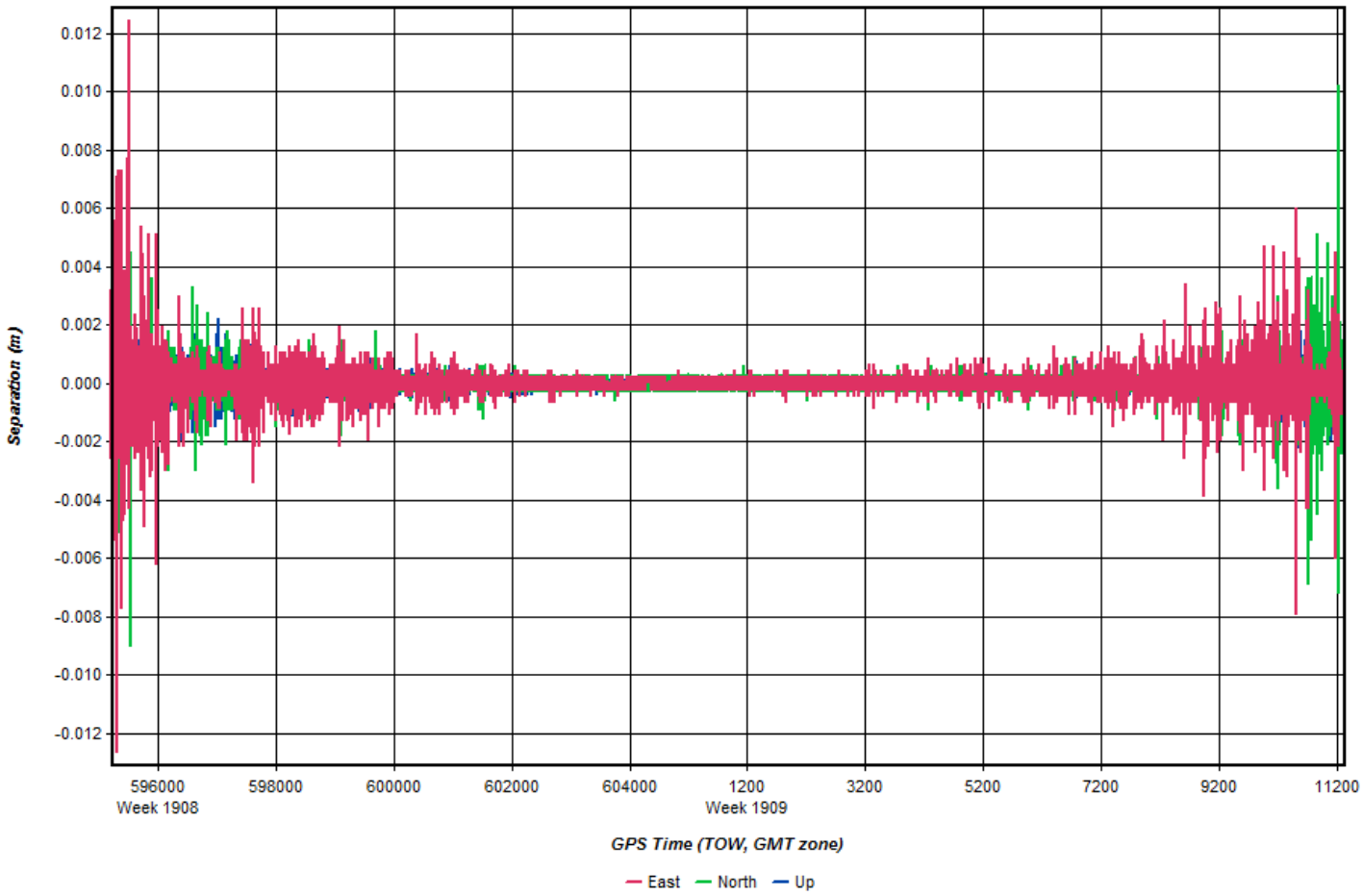

PDOP
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
566000
Week 1908
568000
570000
572000
574000
576000
578000
580000
582000
584000
586000
588000
GPS Time (TOW, GMT zone)
PDOP

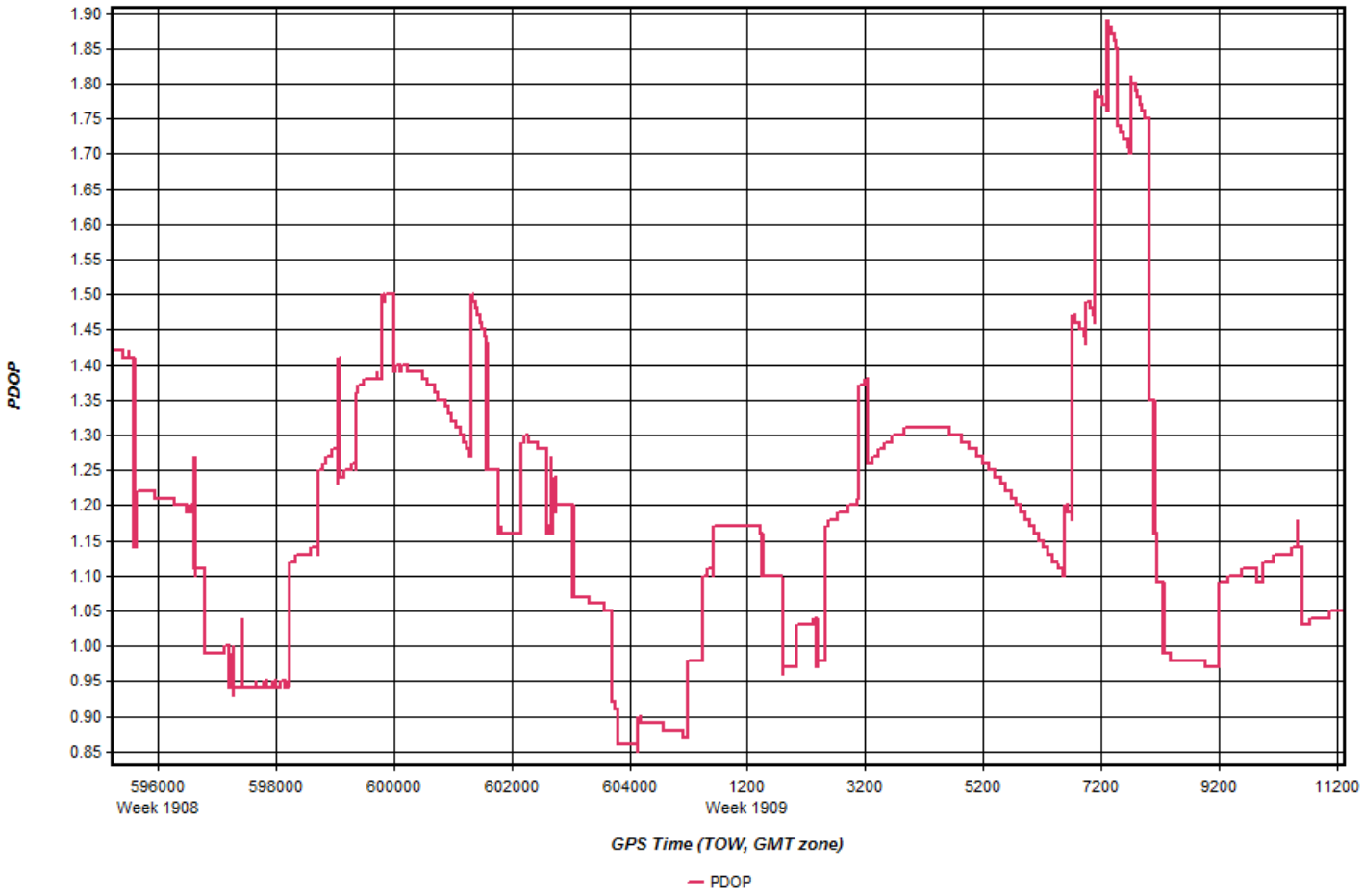
225_20160806_2



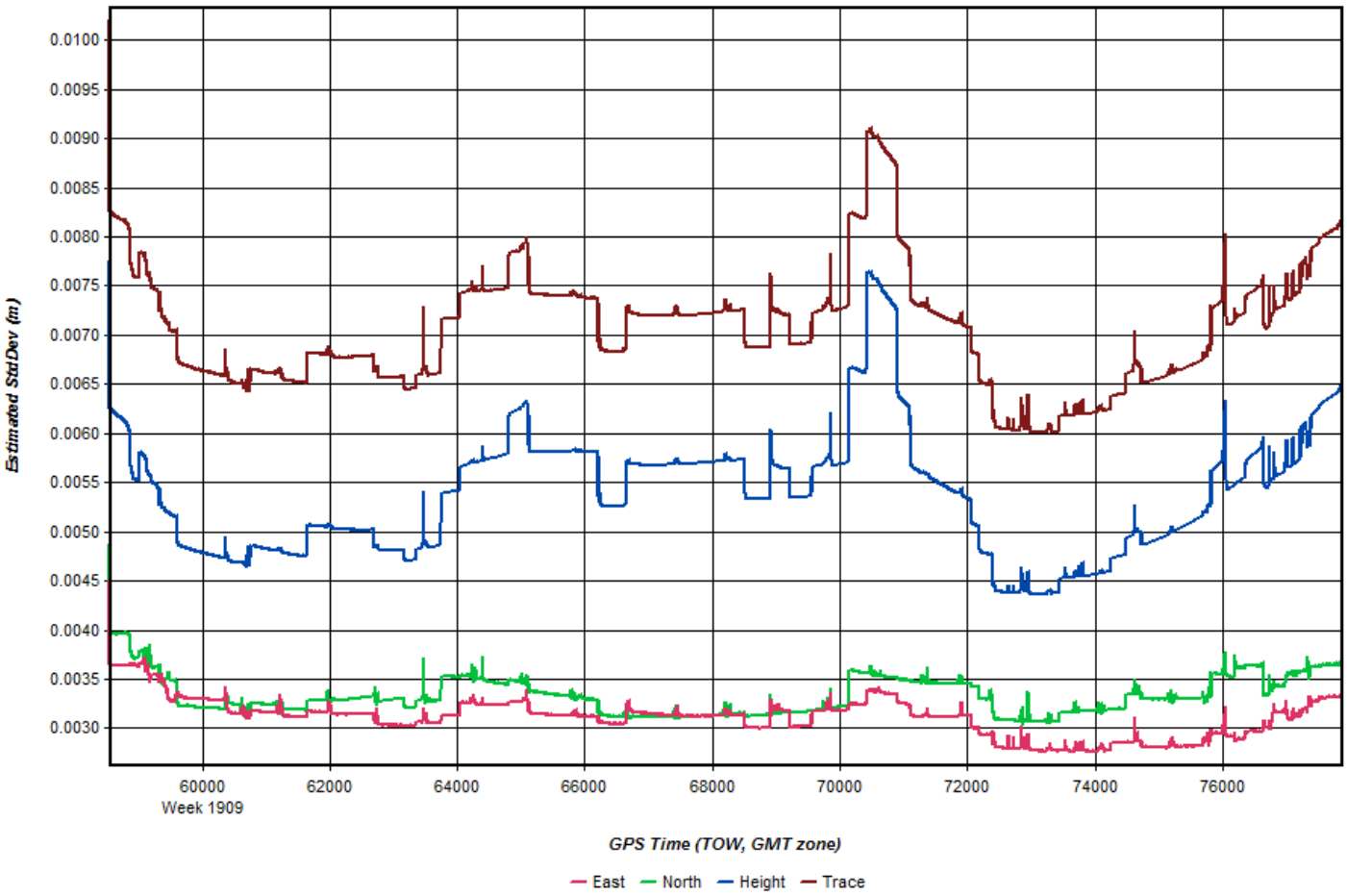

Estimated StdDev (m)
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
596000
Week 1908
598000
600000
602000
604000
1200
Week 1909
3200
5200
7200
9200
11200
GPS Time (TOW, GMT zone)
East
North
Height
Trace

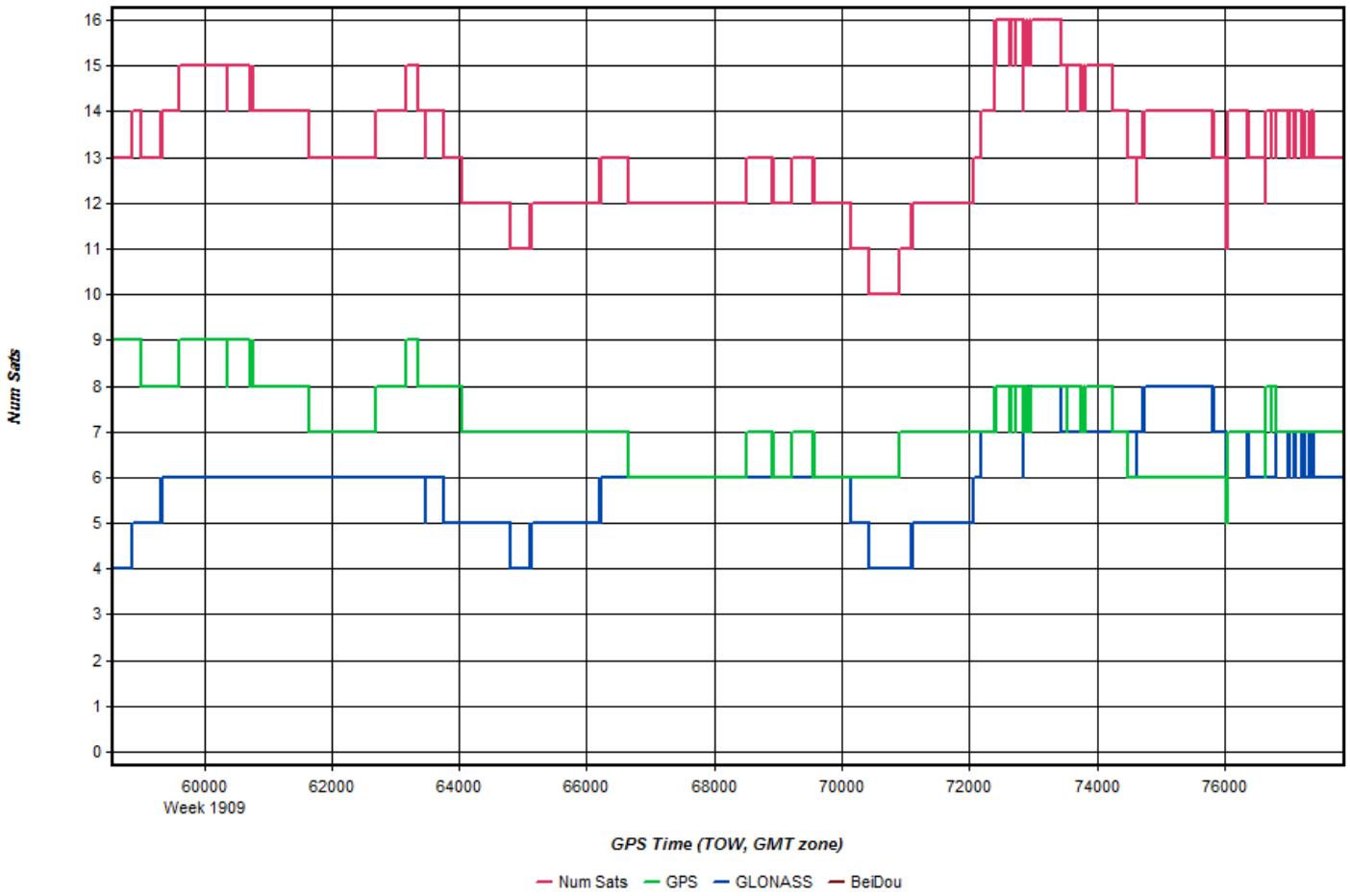

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
596000
Week 1908
598000
600000
602000
604000
1200
Week 1909
3200
5200
7200
9200
11200
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

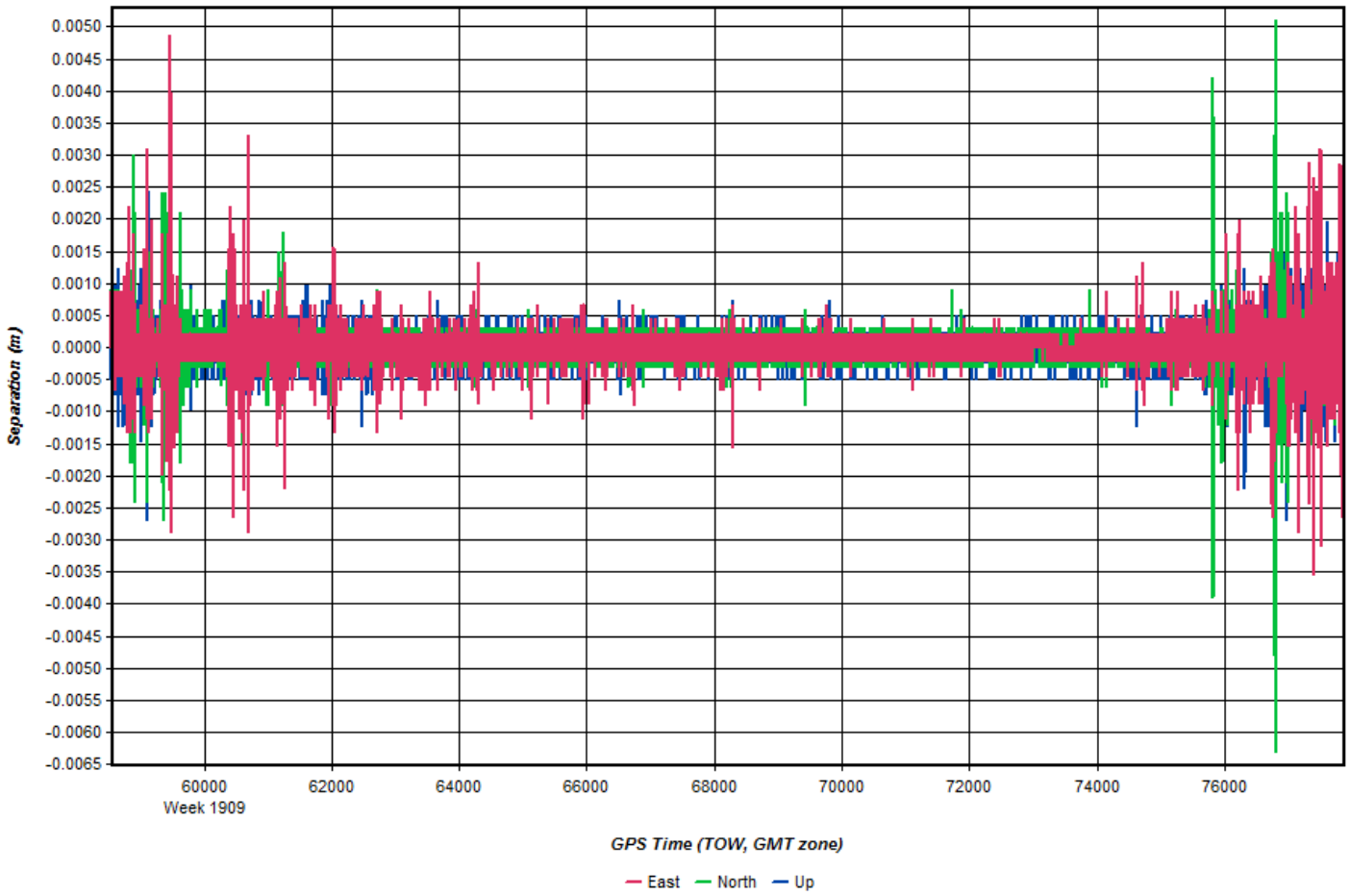

0.012
0.010
0.008
0.006
0.004
0.002
0.000
-0.002
-0.004
-0.006
-0.008
-0.010
-0.012
Separation (m)
596000
Week 1908
598000
600000
602000
604000
1200
Week 1909
3200
5200
7200
9200
11200
GPS Time (TOW, GMT zone)
East
North
Up

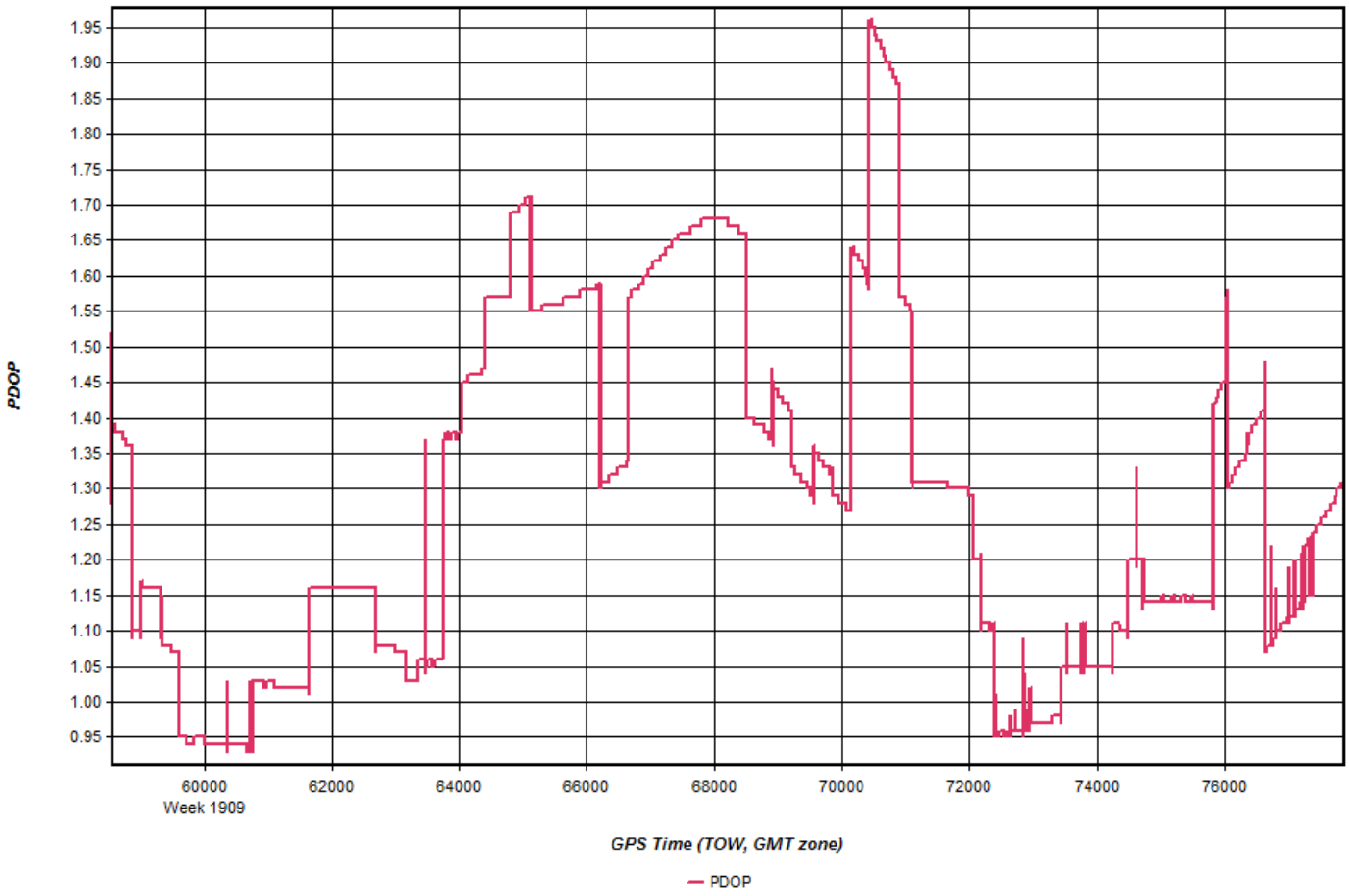

PDOP
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
0.85
596000
Week 1908
598000
600000
602000
604000
1200
Week 1909
3200
5200
7200
9200
11200
GPS Time (TOW, GMT zone)
PDOP

225_20160807_1

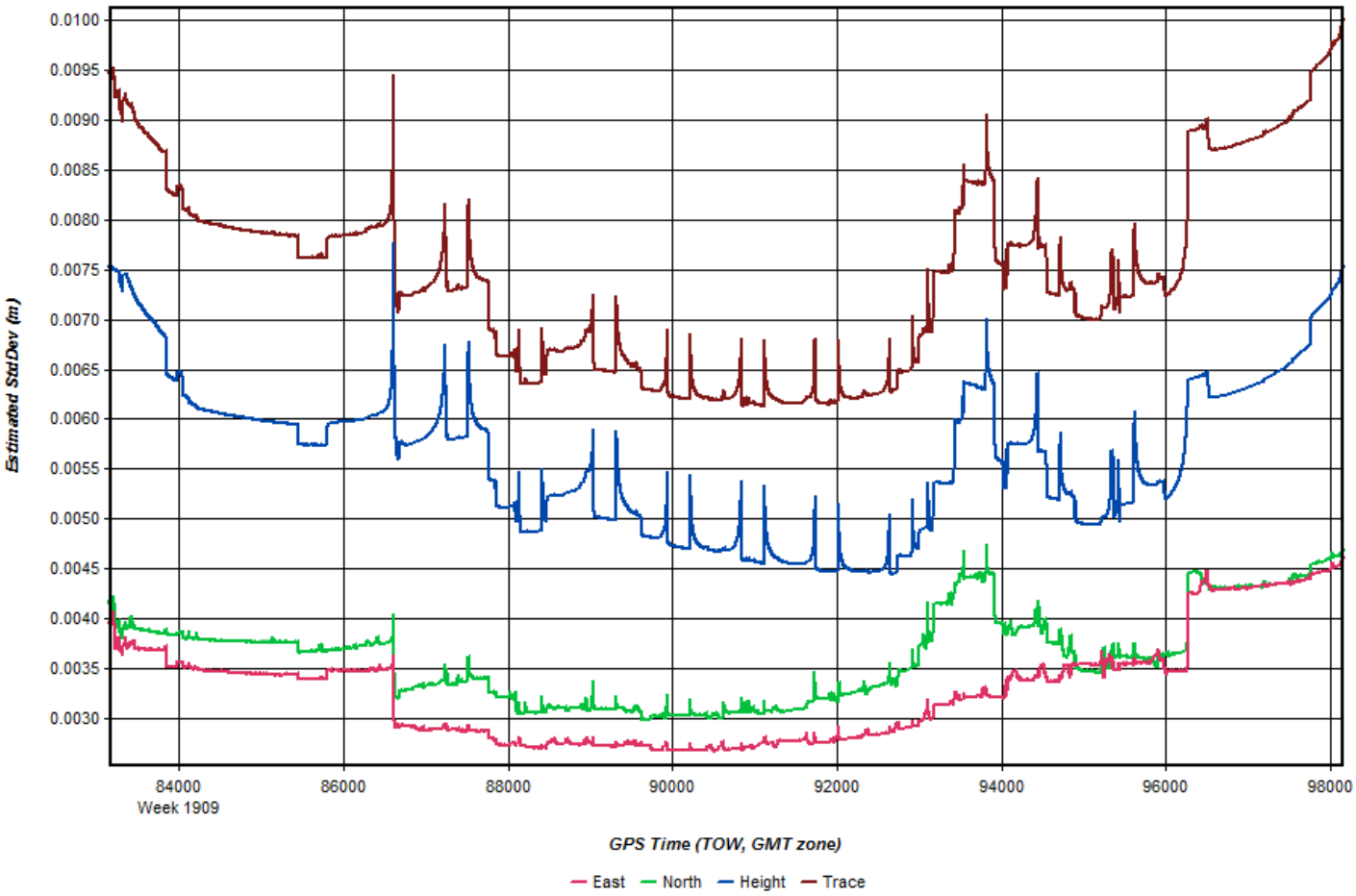

0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
Estimated StdDev (m)
60000
Week 1909
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

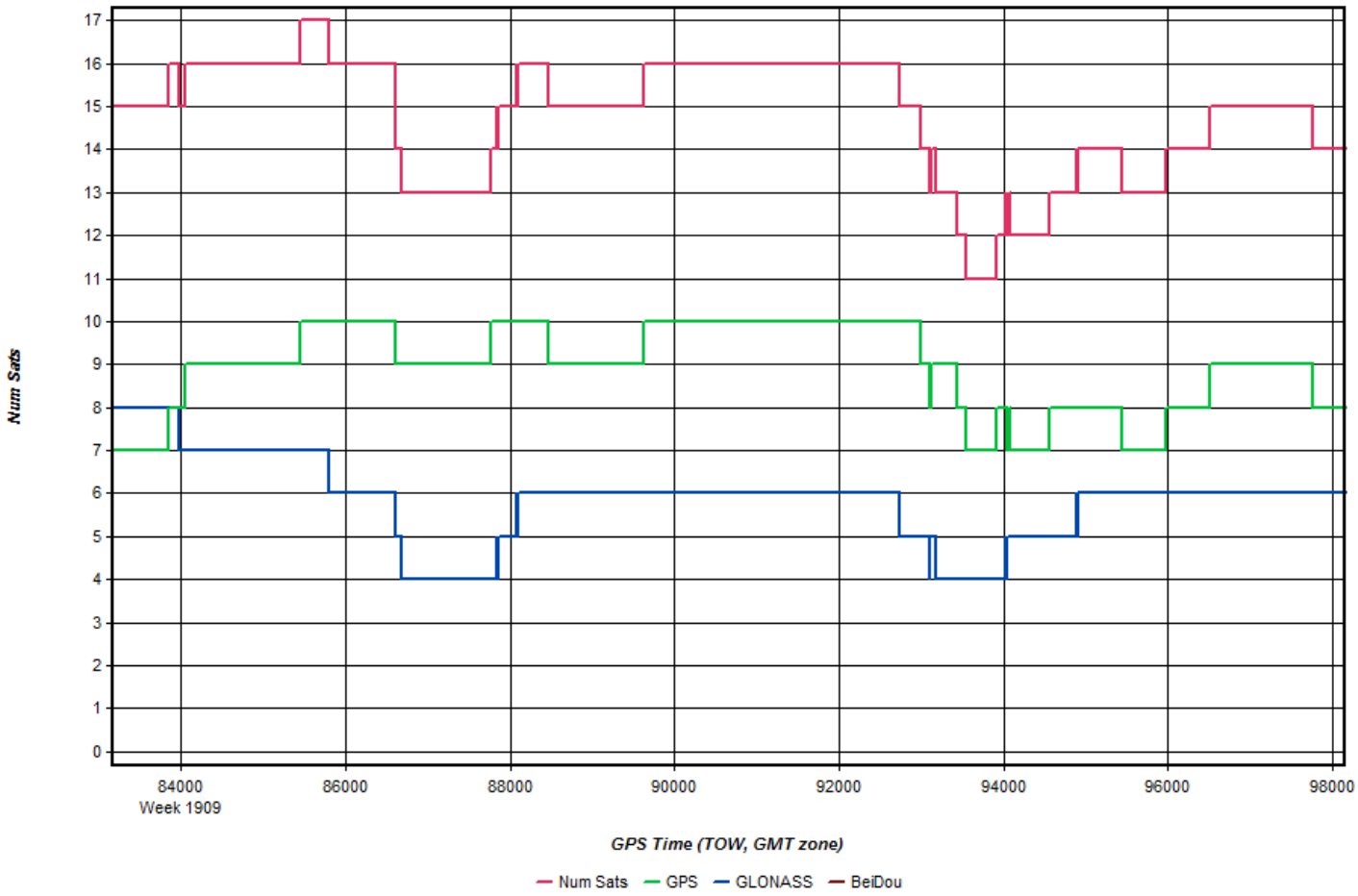

Num Sats
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
60000
Week 1909
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

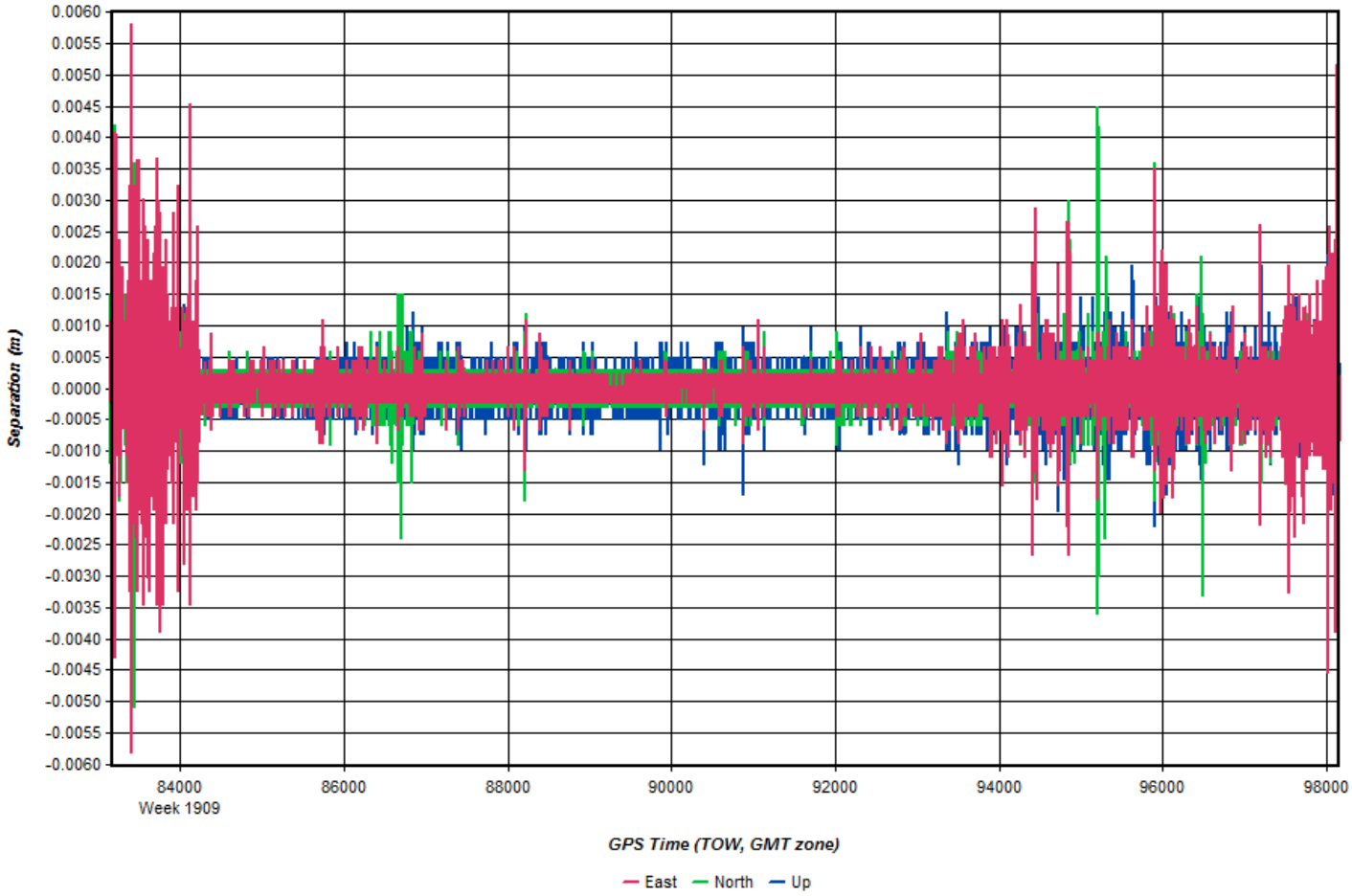

0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
-0.0060
-0.0065
Separation (m)
60000
Week 1909
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
East
North
Up

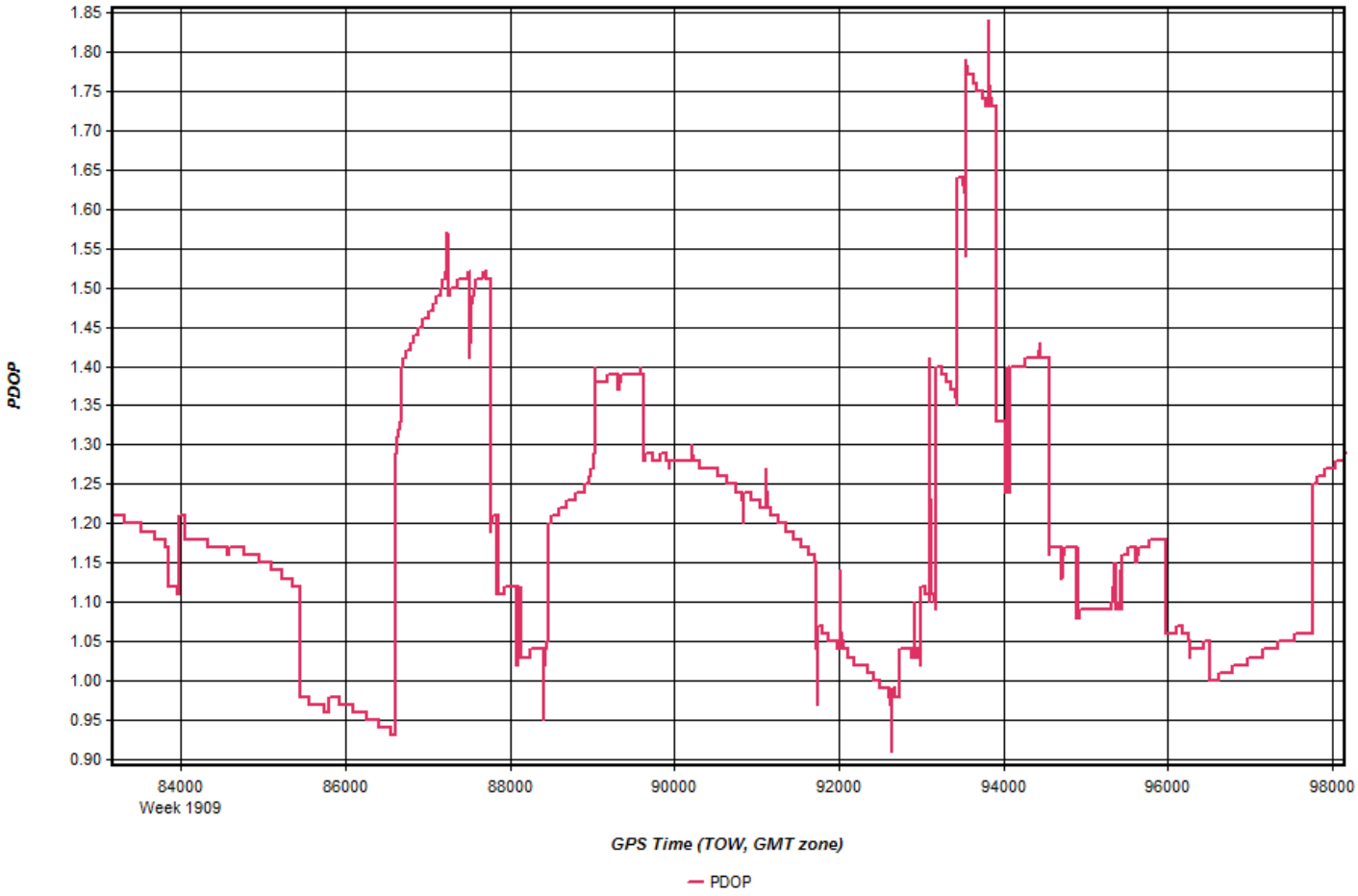

PDOP
1.95
1.90
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
60000
Week 1909
62000
64000
66000
68000
70000
72000
74000
76000
GPS Time (TOW, GMT zone)
PDOP

225_20160807_2

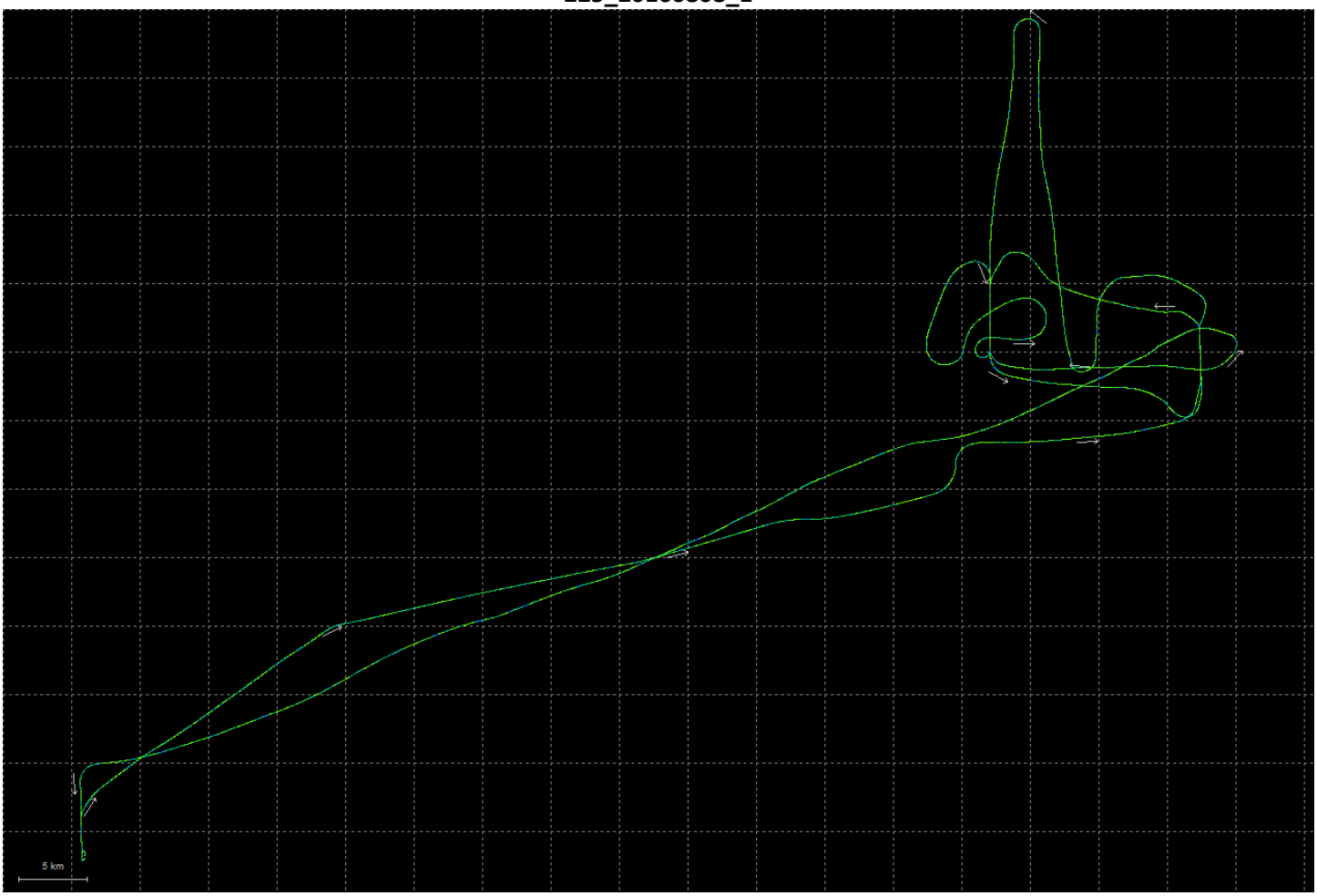

Estimated StdDev (m)
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
84000
Week 1909
86000
88000
90000
92000
94000
96000
98000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

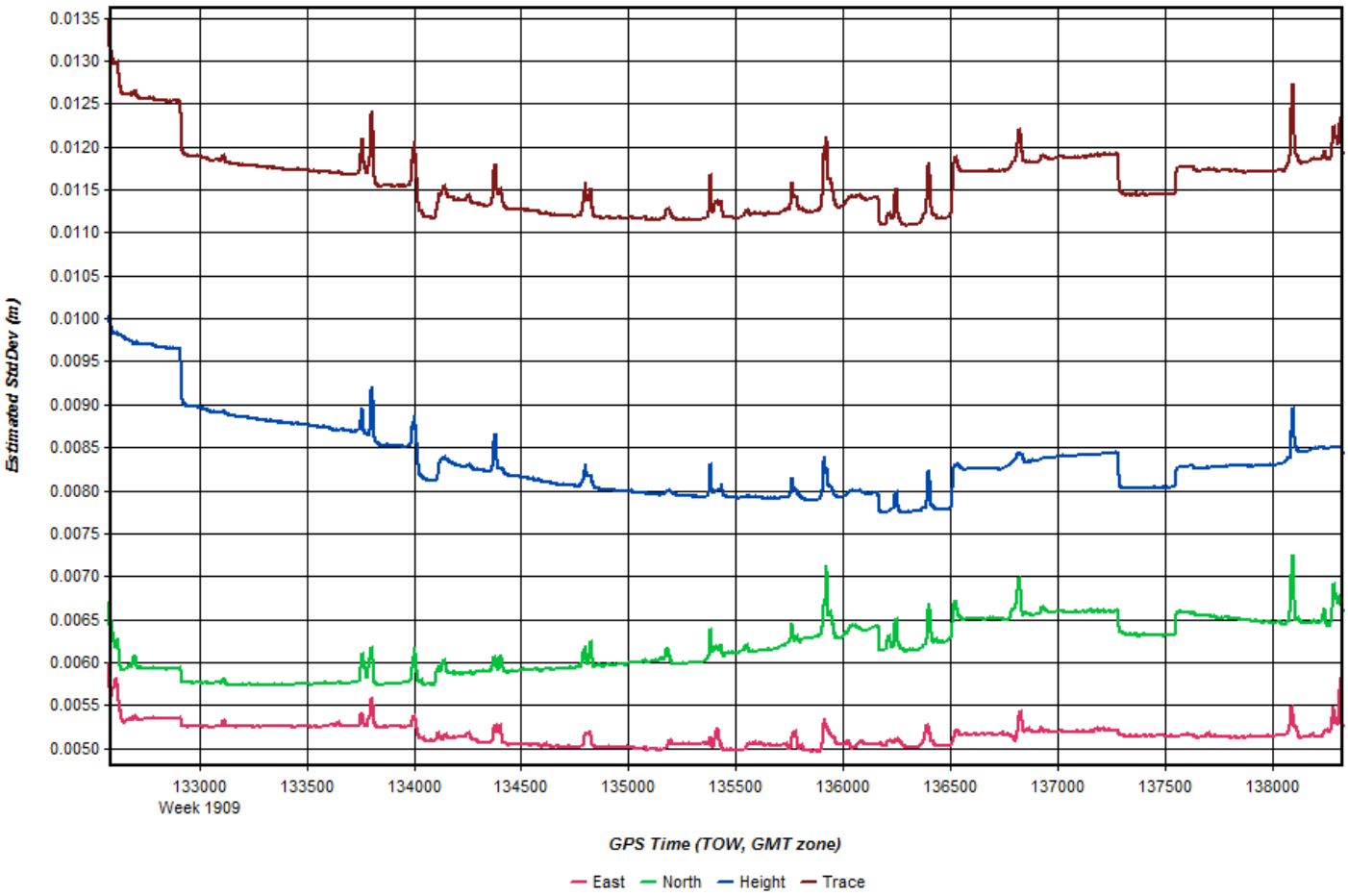

Num Sats
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
84000
Week 1909
86000
88000
90000
92000
94000
96000
98000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

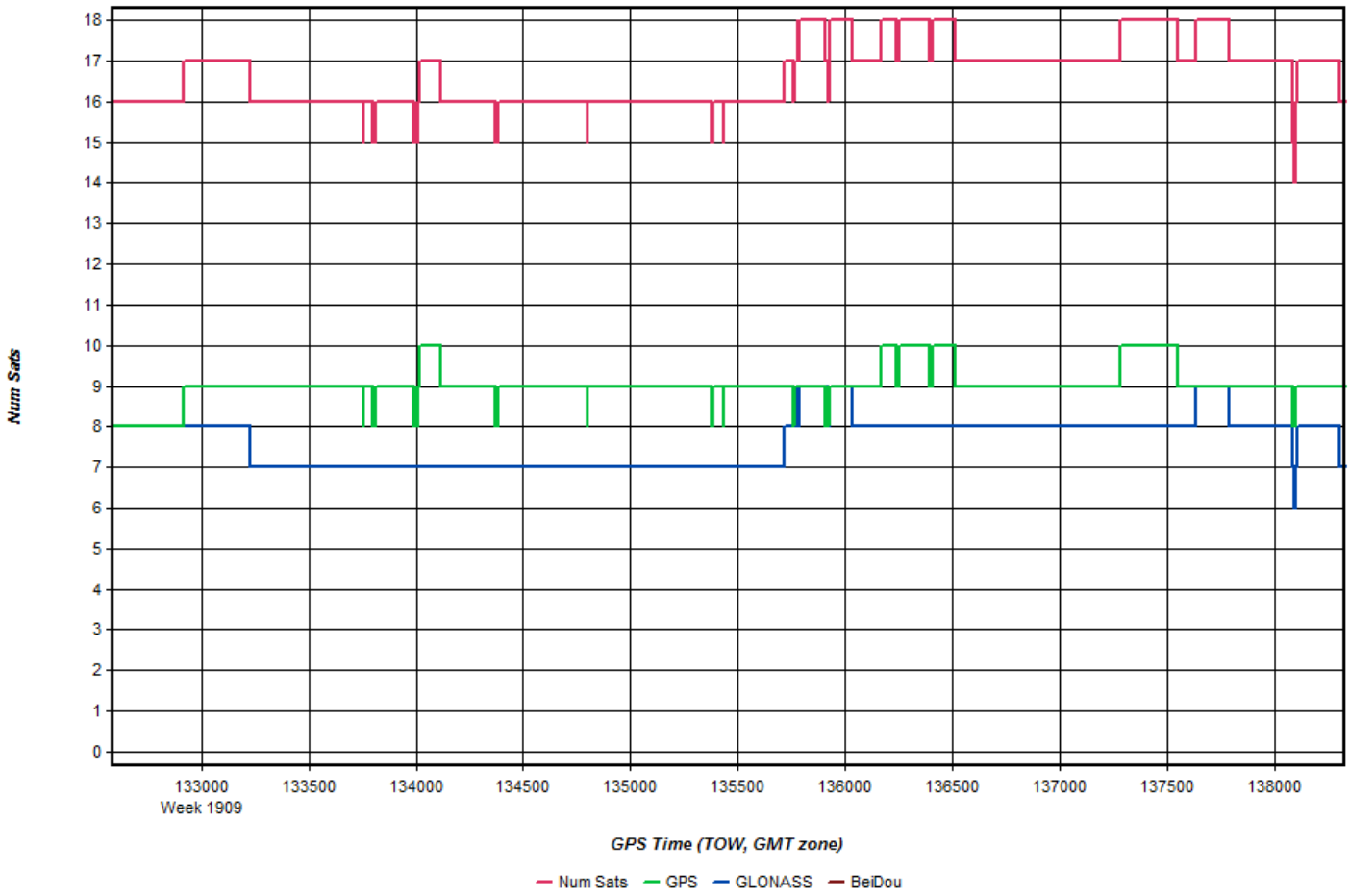

Separation (m)
0.0060
0.0055
0.0050
0.0045
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
-0.0030
-0.0035
-0.0040
-0.0045
-0.0050
-0.0055
-0.0060
84000
Week 1909
86000
88000
90000
92000
94000
96000
98000
GPS Time (TOW, GMT zone)
East
North
Up

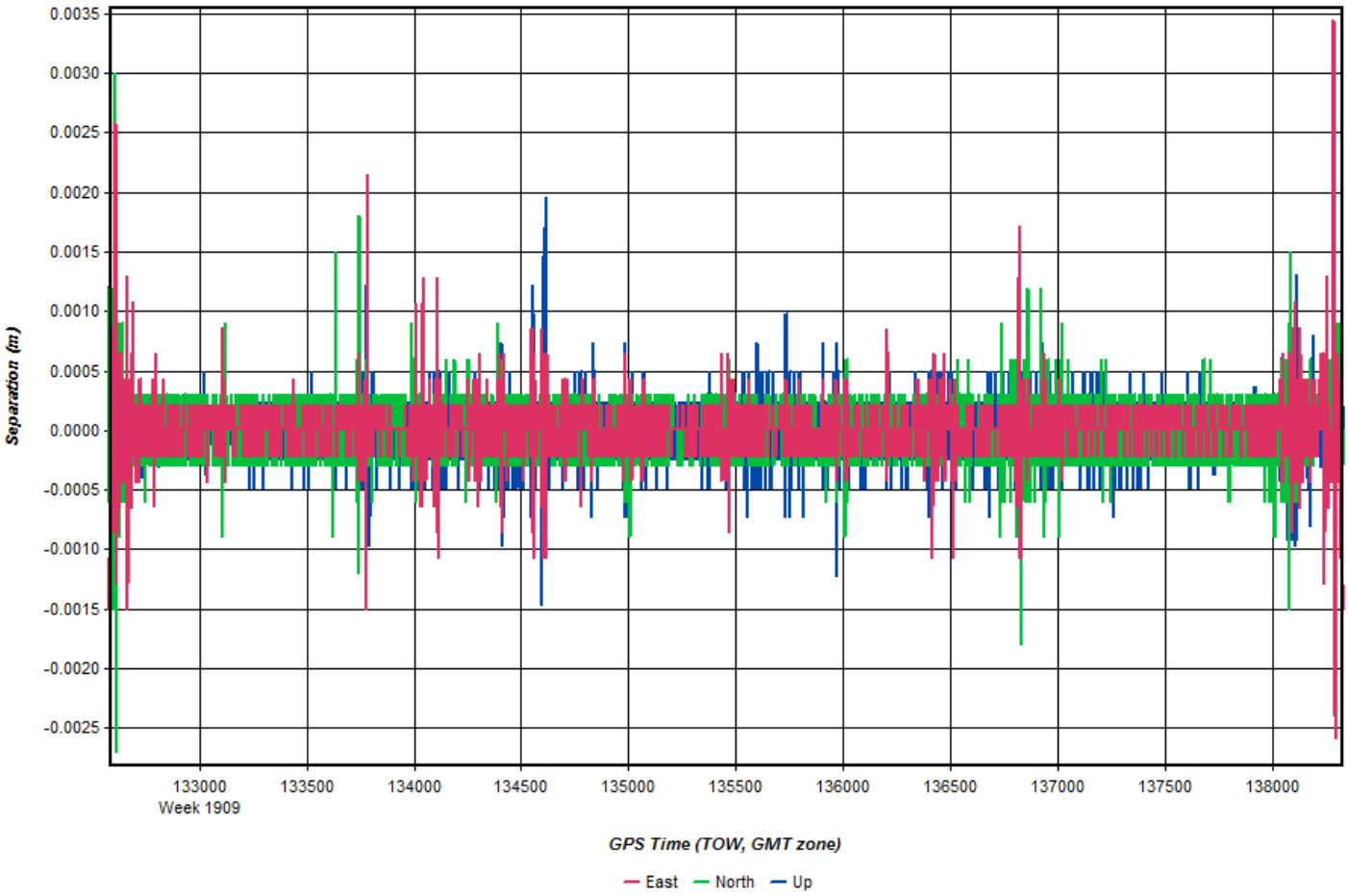

PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
1.15
1.10
1.05
1.00
0.95
0.90
84000
Week 1909
86000
88000
90000
92000
94000
96000
98000
GPS Time (TOW, GMT zone)
PDOP

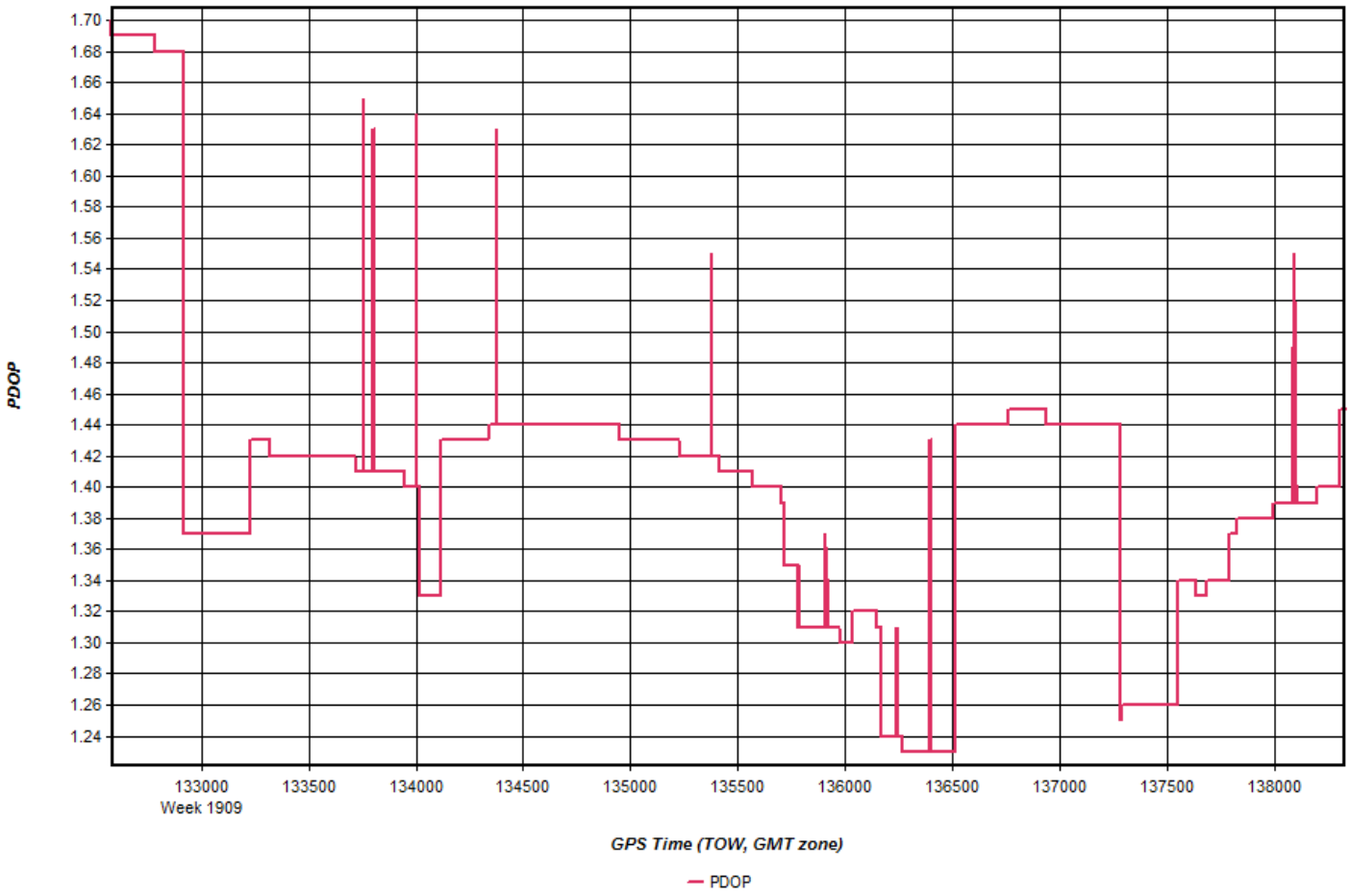
225_20160808_1



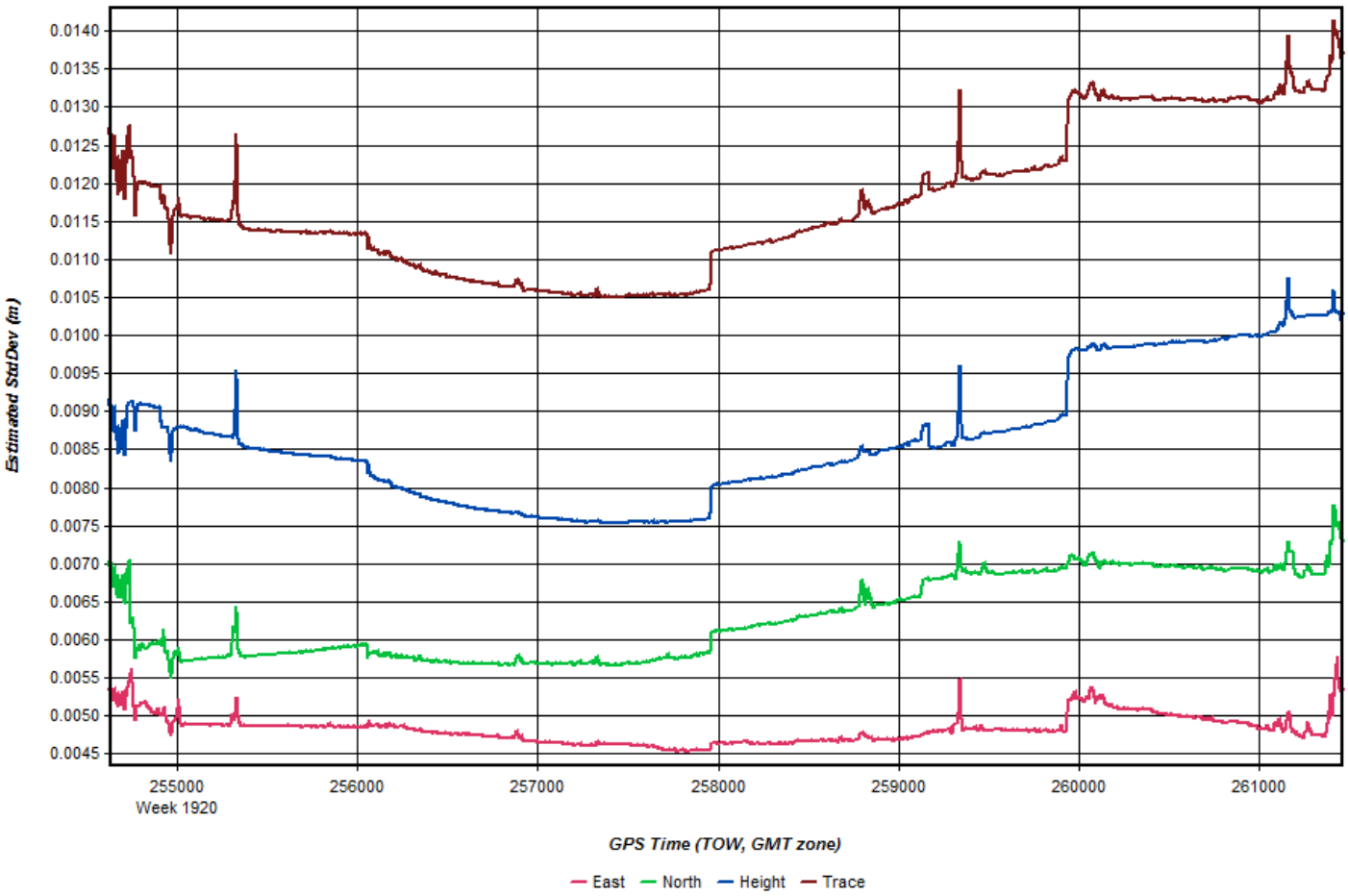

Estimated StdDev (m)
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
133000
Week 1909
133500
134000
134500
135000
135500
136000
136500
137000
137500
138000
GPS Time (TOW, GMT zone)
East
North
Height
Trace

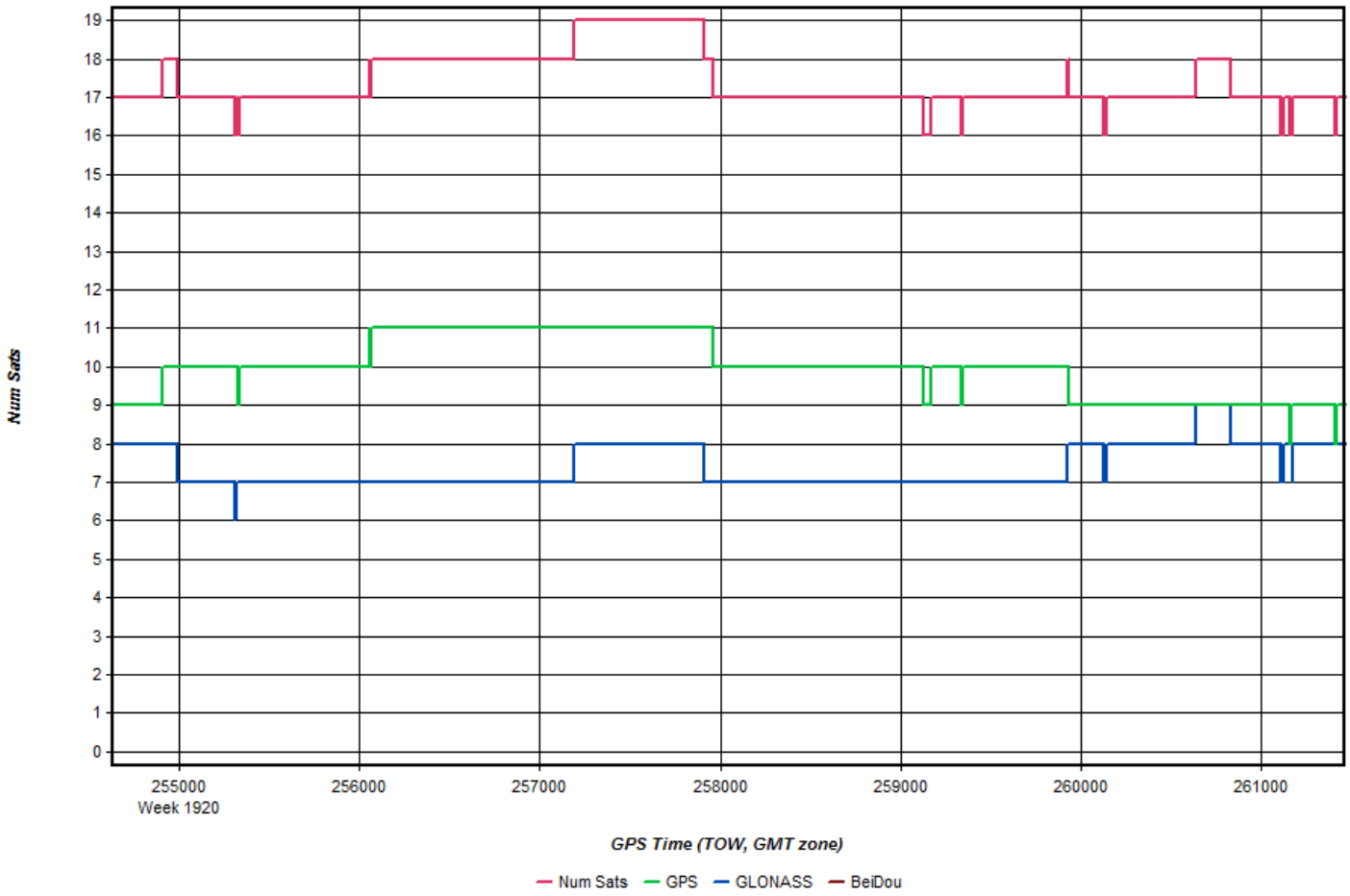

Num Sats
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
133000
Week 1909
133500
134000
134500
135000
135500
136000
136500
137000
137500
138000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou

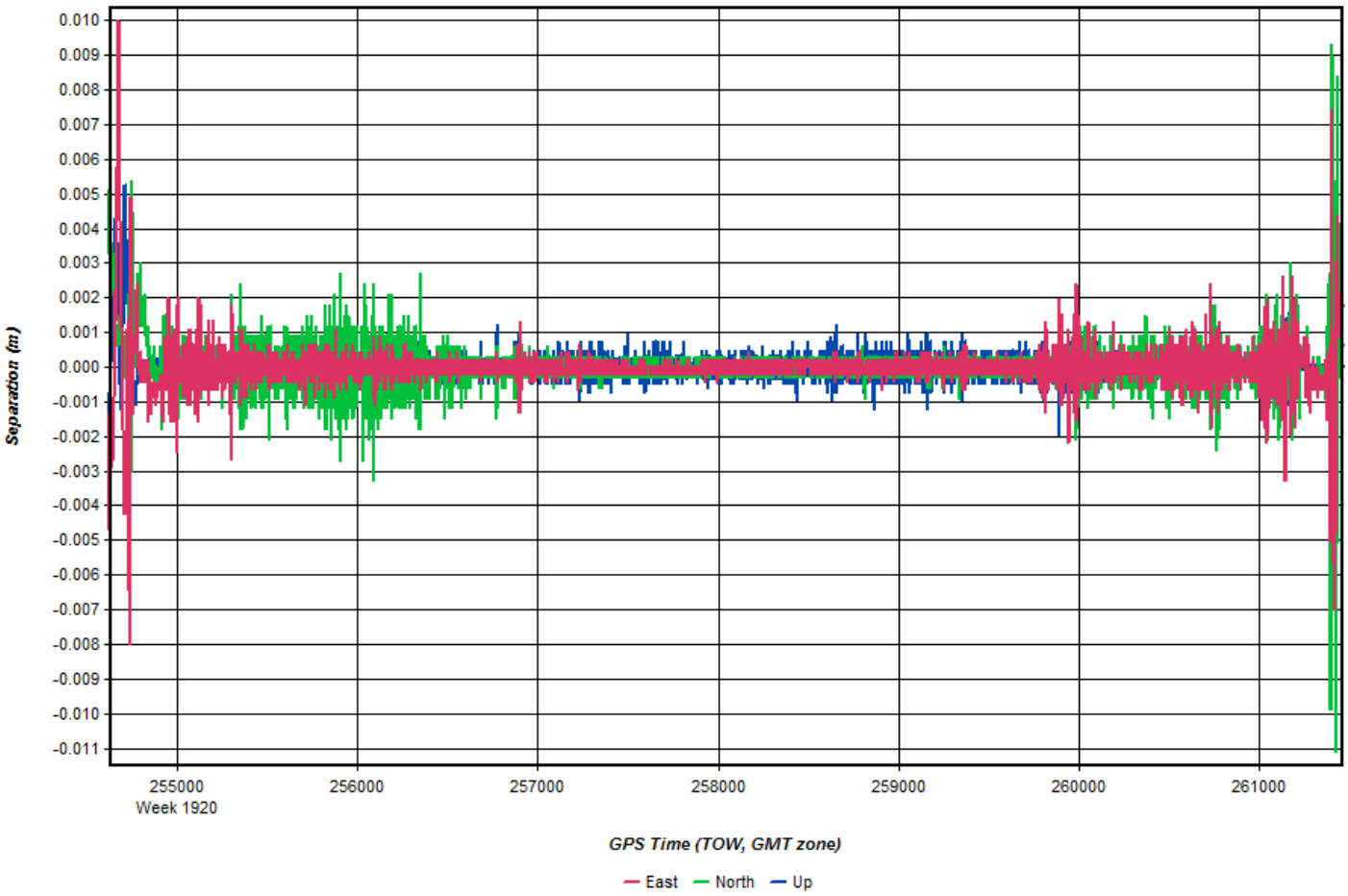

0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000
-0.0005
-0.0010
-0.0015
-0.0020
-0.0025
Separation (m)
133000
Week 1909
133500
134000
134500
135000
135500
136000
136500
137000
137500
138000
GPS Time (TOW, GMT zone)
East
North
Up

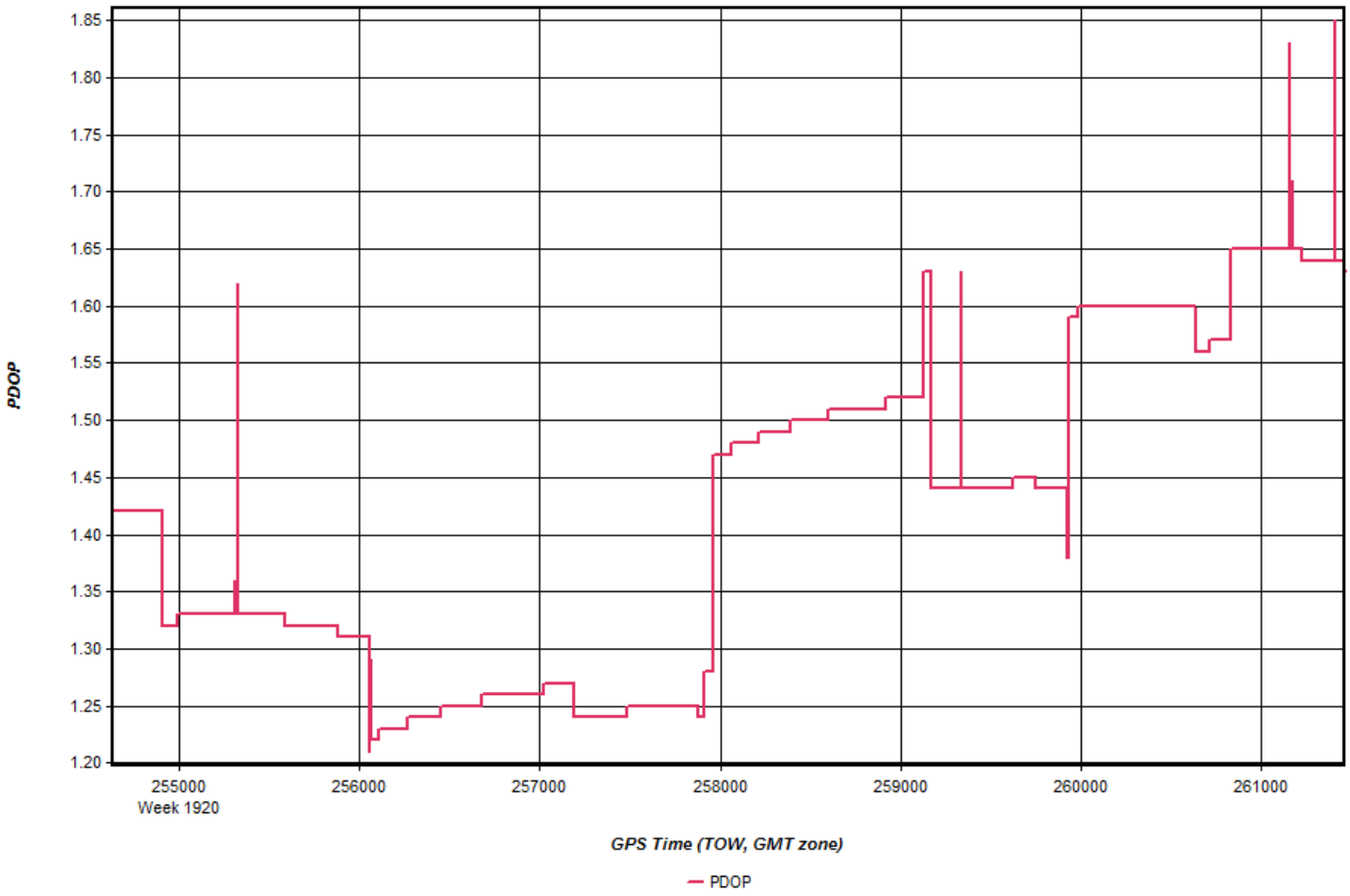

PDOP
1.70
1.68
1.66
1.64
1.62
1.60
1.58
1.56
1.54
1.52
1.50
1.48
1.46
1.44
1.42
1.40
1.38
1.36
1.34
1.32
1.30
1.28
1.26
1.24
133000
Week 1909
133500
134000
134500
135000
135500
136000
136500
137000
137500
138000
GPS Time (TOW, GMT zone)
PDOP

225_20161025_1


Estimated StdDev (m)
0.0140
0.0135
0.0130
0.0125
0.0120
0.0115
0.0110
0.0105
0.0100
0.0095
0.0090
0.0085
0.0080
0.0075
0.0070
0.0065
0.0060
0.0055
0.0050
0.0045
255000
Week 1920
256000
257000
258000
259000
260000
261000
GPS Time (TOW, GMT zone)
East
North
Height
Trace


Num Sats
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
0
255000
Week 1920
256000
257000
258000
259000
260000
261000
GPS Time (TOW, GMT zone)
Num Sats
GPS
GLONASS
BeiDou


0.010
0.009
0.008
0.007
0.006
0.005
0.004
0.003
0.002
0.001
0.000
-0.001
-0.002
-0.003
-0.004
-0.005
-0.006
-0.007
-0.008
-0.009
-0.010
-0.011
Separation (m)
255000
Week 1920
256000
257000
258000
259000
260000
261000
GPS Time (TOW, GMT zone)
East
North
Up


PDOP
1.85
1.80
1.75
1.70
1.65
1.60
1.55
1.50
1.45
1.40
1.35
1.30
1.25
1.20
255000
Week 1920
256000
257000
258000
259000
260000
261000
GPS Time (TOW, GMT zone)
PDOP