

# Global View

version 4.7  
 site Laboratory satellite systems  
 abbreviation NAU  
 country Kiev  
 comment  
 xsltemplate general  
 reportname report  
 date 15/10/2015

## GNSS\_Solution

### quality

**valid samples** 0  
**total samples** 0  
**PA samples** 0

## SBAS Messages

**start:** 04:55:0.128998 23.09.2015 ( week: 1863 sec: 276900.129 )  
**end:** 11:46:50.129 23.09.2015 ( week: 1863 sec: 301610.129 )  
**duration:** 06:51:50 ..

### quality

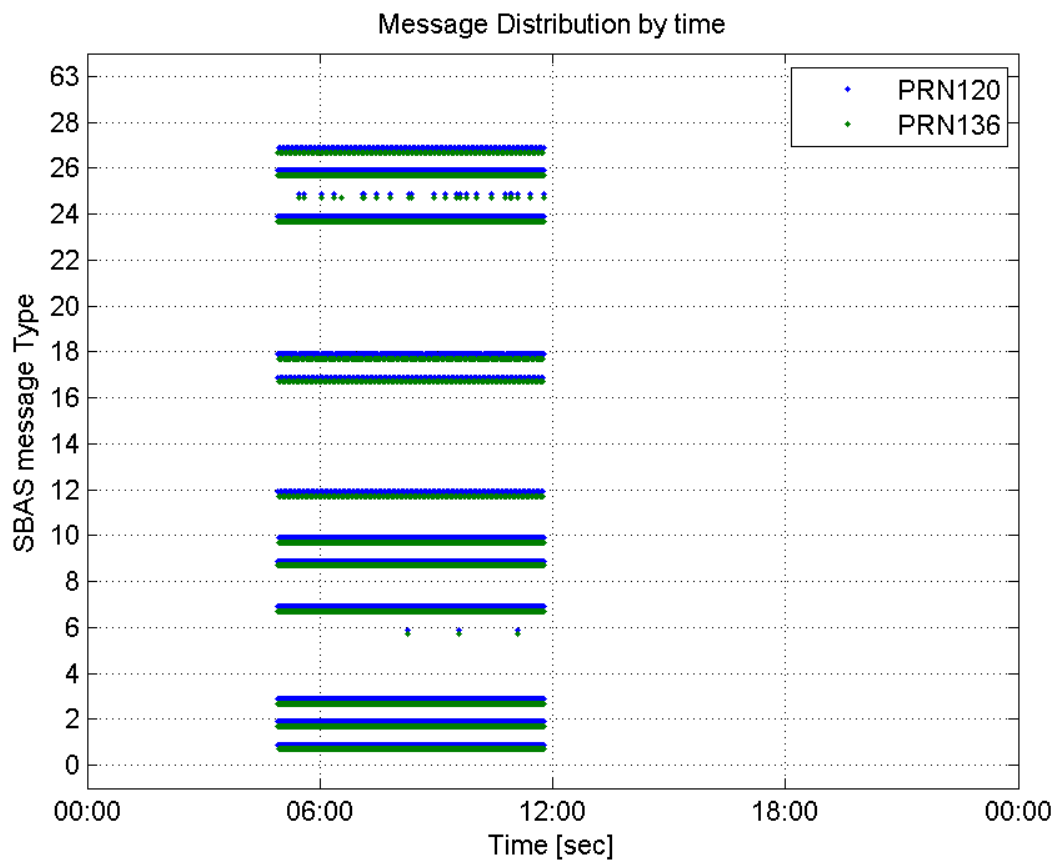
**valid samples** 49422  
**total samples** 49422  
**number of SBAS PRNs** 2

## SBAS SIS Overview

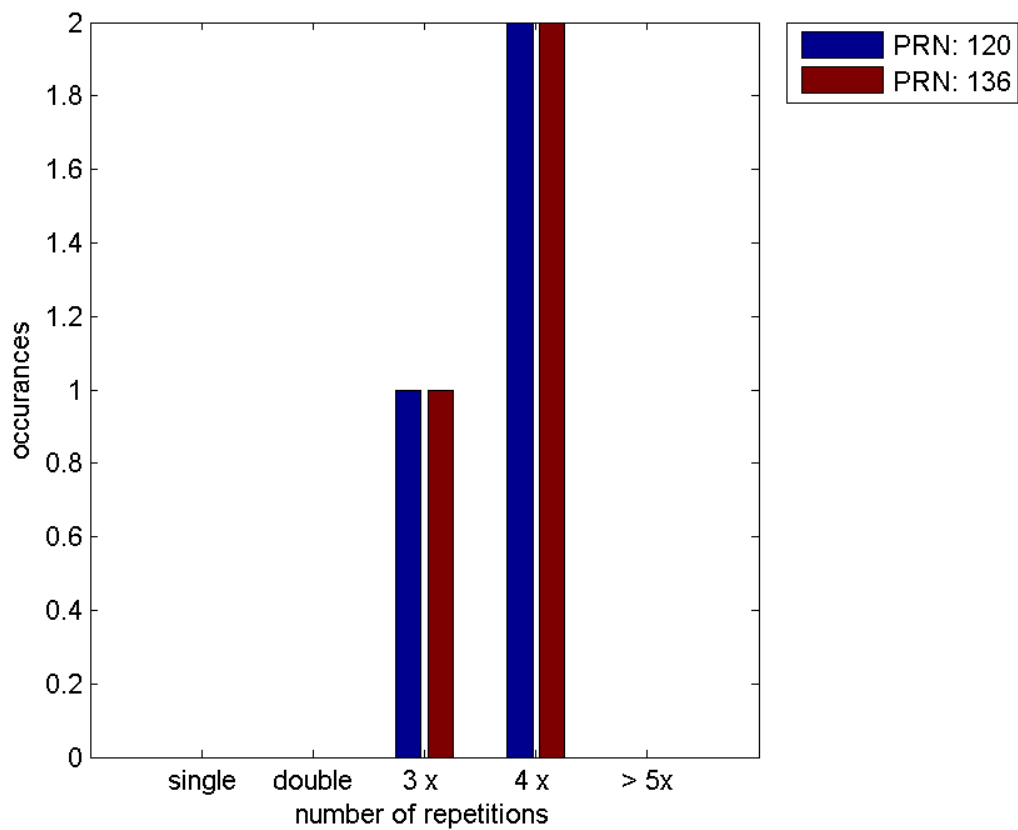
### Message Type 6 repetitions :

	single	double	3 x	4 x	> 5x
<b>PRN 120</b>	0	0	1	2	0
<b>PRN 136</b>	0	0	1	2	0

### Message Distribution by time:



**Message Type 6 repetitions:**



PRN 120

## Broadcast SBAS Messages :

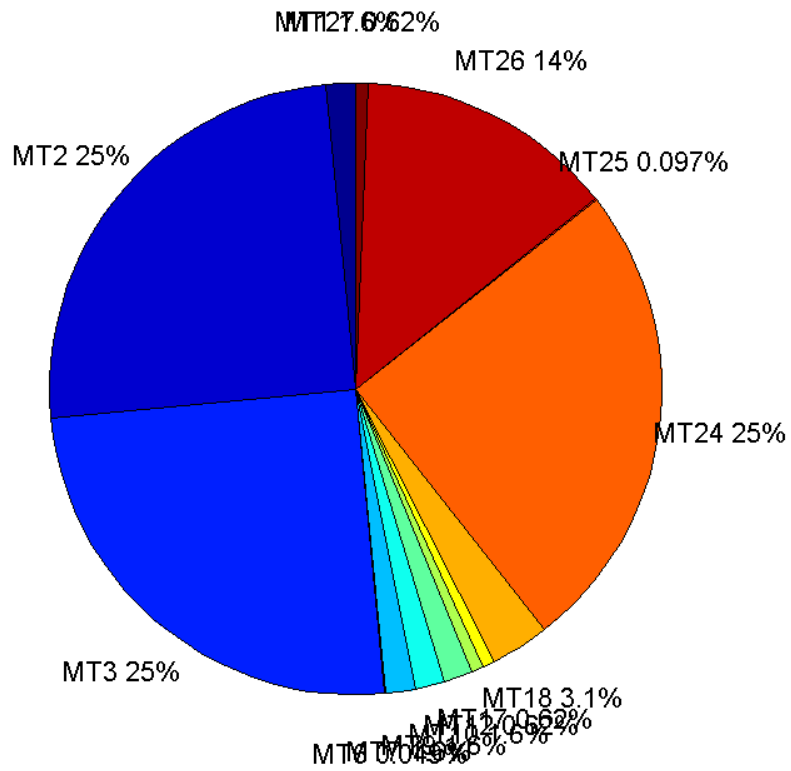
	number of messages	%
MT 0	0	0
MT 1	385	1.55801
MT 2	6172	24.9767
MT 3	6172	24.9767
MT 4	0	0
MT 5	0	0
MT 6	12	0.0485614
MT 7	385	1.55801
MT 9	385	1.55801
MT 10	384	1.55396
MT 12	154	0.623204
MT 17	154	0.623204
MT 18	770	3.11602
MT 24	6172	24.9767
MT 25	24	0.0971227
MT 26	3388	13.7105
MT 27	154	0.623204
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	24711	100

## Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2344	0	0	0
MT 2	4	8	4.00373	3	0	0
MT 3	4	8	4.00389	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	5482	922.909	2	2	2
MT 7	64	70	64.2448	0	0	0
MT 9	64	70	64.2344	0	0	0
MT 10	64	70	64.2559	0	0	0
MT 12	156	168	160.438	153	0	0
MT 17	156	168	160.412	0	0	0
MT 18	4	131	32.1066	0	0	0
MT 24	4	8	4.00373	0	0	0
MT						

25	16	2616	988	0	0	0
MT 26	4	32	7.29318	0	0	0
MT 27	153	171	160.431	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

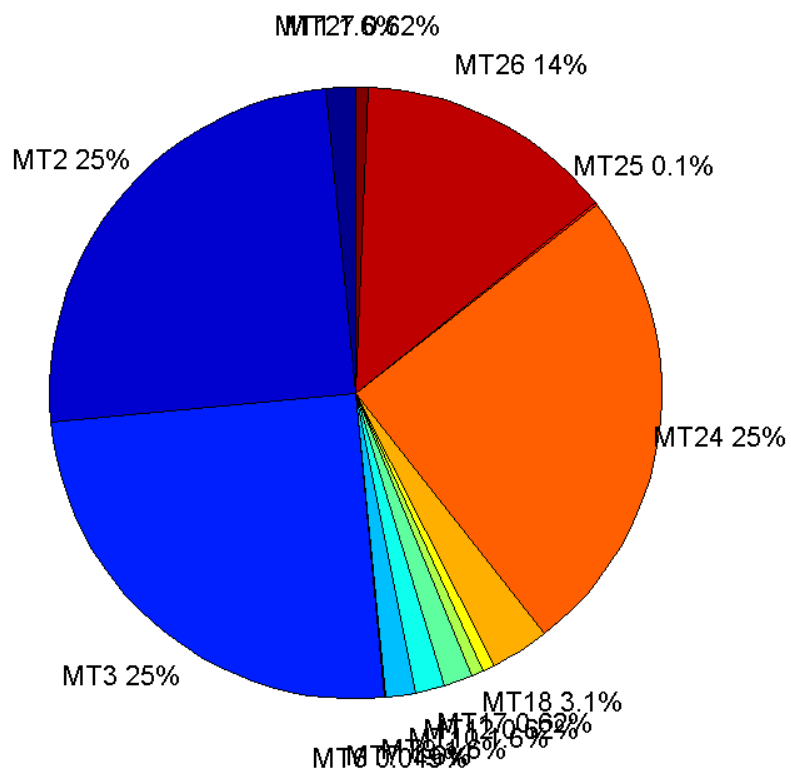
	number of messages	%
MT 0	0	0
MT 1	385	1.55801
MT 2	6172	24.9767
MT 3	6171	24.9727
MT 4	0	0
MT 5	0	0
MT 6	12	0.0485614

MT 7	385	1.55801
MT 9	385	1.55801
MT 10	384	1.55396
MT 12	154	0.623204
MT 17	154	0.623204
MT 18	770	3.11602
MT 24	6172	24.9767
MT 25	25	0.10117
MT 26	3388	13.7105
MT 27	154	0.623204
MT 28	0	0
MT 62	0	0
MT 63	0	0
<b>Total</b>	<b>24711</b>	<b>100</b>

## Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.224	0	0	0
MT 2	4	8	4.00389	3	0	0
MT 3	4	8	4.00405	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	5482	922.909	2	2	2
MT 7	64	70	64.2552	0	0	0
MT 9	64	70	64.2344	0	0	0
MT 10	64	70	64.2454	0	0	0
MT 12	156	169	160.412	153	0	0
MT 17	156	171	160.412	0	0	0
MT 18	4	148	31.9467	0	0	0
MT 24	4	8	4.00405	0	0	0
MT 25	16	2045	946.833	0	0	0
MT 26	4	51	7.29318	0	0	0
MT 27	156	168	160.412	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 136:



Parameters

System

Name	Section	Value
Name	System	Convertor
Version	System	4.3
Inputfile	System	D:/PegasusDat/Jobs/Egnos2015_09_23/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/Egnos2015_09_23/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	14
Correction_mode	Configuration	SBAS MODE 0
Dual_Frequency	Configuration	no

GBAS Messages

quality

valid samples 0  
total samples 0

## Position Domain

**start:** 04:55:01 23.09.2015 ( week: 1863 sec: 276901 )  
**end:** 11:46:50 23.09.2015 ( week: 1863 sec: 301610 )  
**duration:** 06:51:50 ..

### quality

**valid samples** 24349  
**total samples** 24710

### Event tables

**Position discontinuity events type** all  
**APV-I discontinuity events type** long  
**APV-35m discontinuity events type** long  
**LPV-200 discontinuity events type** long  
**CAT-I discontinuity events type** nothing

#### extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
<b>max normHor</b>	290578	2.55599	9.11046	0.280556	-0.0049549	19.0103	0.000260643
<b>max normVer</b>	297541	1.46727	11.6002	0.126487	2.64692	16.632	0.159146
<b>max HPE</b>	278248	4.19	55.6706	0.0752641	-2.47825	66.3666	0.0373418
<b>max VPE</b>	279654	3.50052	75.3658	0.0464471	10.3225	334.71	0.03084
<b>min HPL</b>	297989	2.17356	8.38762	0.25914	1.95402	16.2075	0.120563
<b>min VPL</b>	285555	2.70976	10.9192	0.248165	1.41371	12.769	0.110714

#### Position discontinuity events :

#	Epoch	duration	stable period
1	279105	483	1843

#### APV-I discontinuity events :

#	Epoch	duration	stable period
1	279033	803	600
2	283835	397	1
3	295035	108	1

#### APV-35m discontinuity events :

#	Epoch	duration	stable period
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1	279033	803	600
2	283323	909	1
3	295035	108	1

**LPV-200 discontinuity events :**

#	Epoch	duration	stable period
1	279033	803	600
2	283323	909	1
3	295035	108	1

**First Glance analysis**

<b>Duration</b>	24710
<b>Number of Samples</b>	24710
<b>Number of invalid sample</b>	361
<b>Number of no position solution samples</b>	483
<b>Number of missing sample</b>	0
<b>Logging Loss</b>	0
<b>Processing Loss</b>	1.4609
<b>Number of Misleading Information</b>	0
<b>Data gaps</b>	0
<b>Discontinuities</b>	1

**Number of Samples :**

Valid	APV-1	LPV-200	CAT-1	APV-35m
23866	21813	21271	0	21271

**Accuracy statistics :**

	Valid	APV-1	LPV-200	CAT-1	APV-35m
<b>HPE 95%</b>	2.83894	2.6747	2.67731	NaN	2.67731
<b>HPEscale 95%</b>	NaN	9.46422	9.4781	NaN	9.4781
<b>VPE 95%</b>	2.39188	2.36072	2.3744	NaN	2.3744
<b>VPEscale 95%</b>	NaN	6.11329	4.29108	NaN	4.29108

**Availability :**

	Valid	APV-1	LPV-200	CAT-1	APV-35m
<b>Signal in Space</b>	0.980163	0.895848	0.873588	0	0.873588
<b>measurements</b>	0.965844	0.88276	0.860826	0	0.860826
<b>Operational</b>	0.965844	0.88276	0.860826	0	0.860826



**Discontinuity events :**

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	1	26	49	--	49
Long	1	3	3	--	3
Independent	1	1	1	--	1
P(disc.)	0.000628509	0.000687663	0.000705185	NaN	0.000705185
P(slide)	0.000628509	0.00357585	0.00653472	NaN	0.00653472

**Integrity events :**

	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

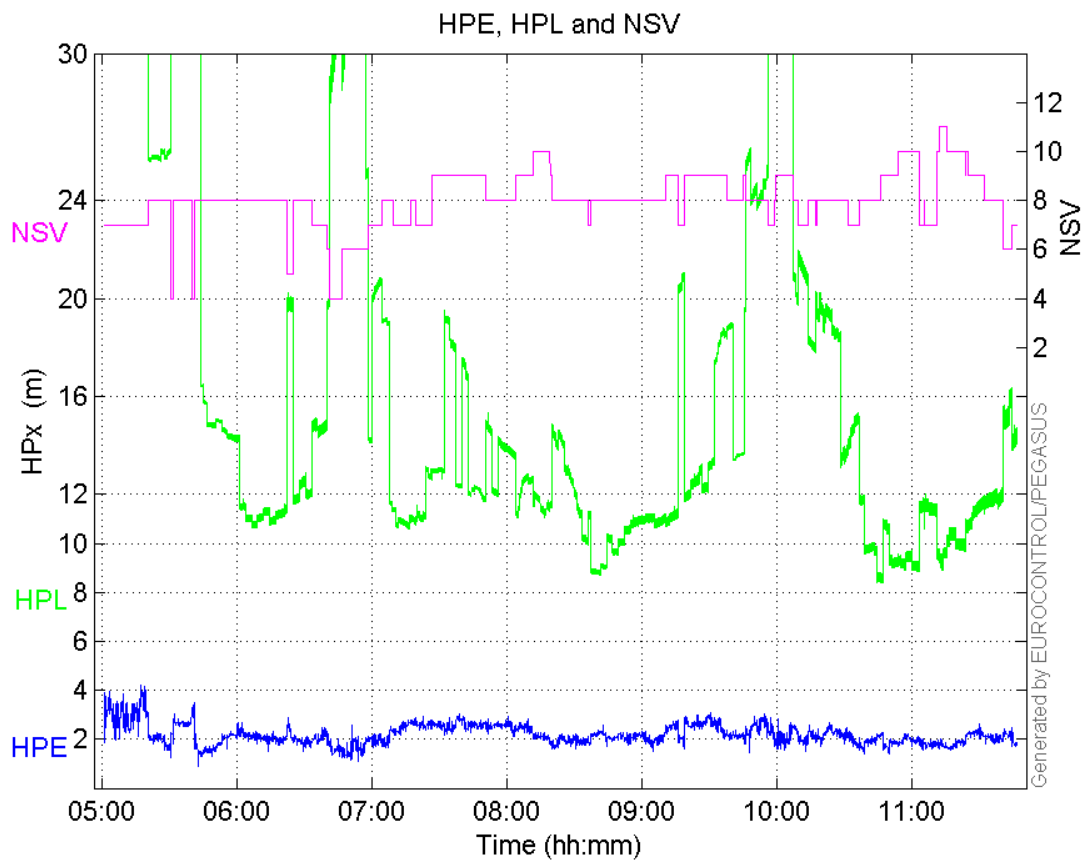
**Performance Summary :**

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	23866	21813	21271	0	21271
SIS Availability	0.980163	0.895848	0.873588	0	0.873588
Local Availability	0.965844	0.88276	0.860826	0	0.860826
Operational Availability	0.965844	0.88276	0.860826	0	0.860826
HPE 95%	2.83894	2.6747	2.67731	NaN	2.67731
HPEScale 95%	NaN	9.46422	9.4781	NaN	9.4781
VPE 95%	2.39188	2.36072	2.3744	NaN	2.3744
VPEscale 95%	NaN	6.11329	4.29108	NaN	4.29108
All Discontinuity Events	1	26	49	--	49
Long Discontinuity Events	1	3	3	--	3
Independent Discontinuity Events	1	1	1	--	1
P(discontinuity)	0.000628509	0.000687663	0.000705185	NaN	0.000705185
P(sliding window)	0.000628509	0.00357585	0.00653472	NaN	0.00653472
All Integrity Events	0	0	0	0	0
Horizontal Integrity Events	0	0	0	0	0
Vertical Integrity Events	0	0	0	0	0

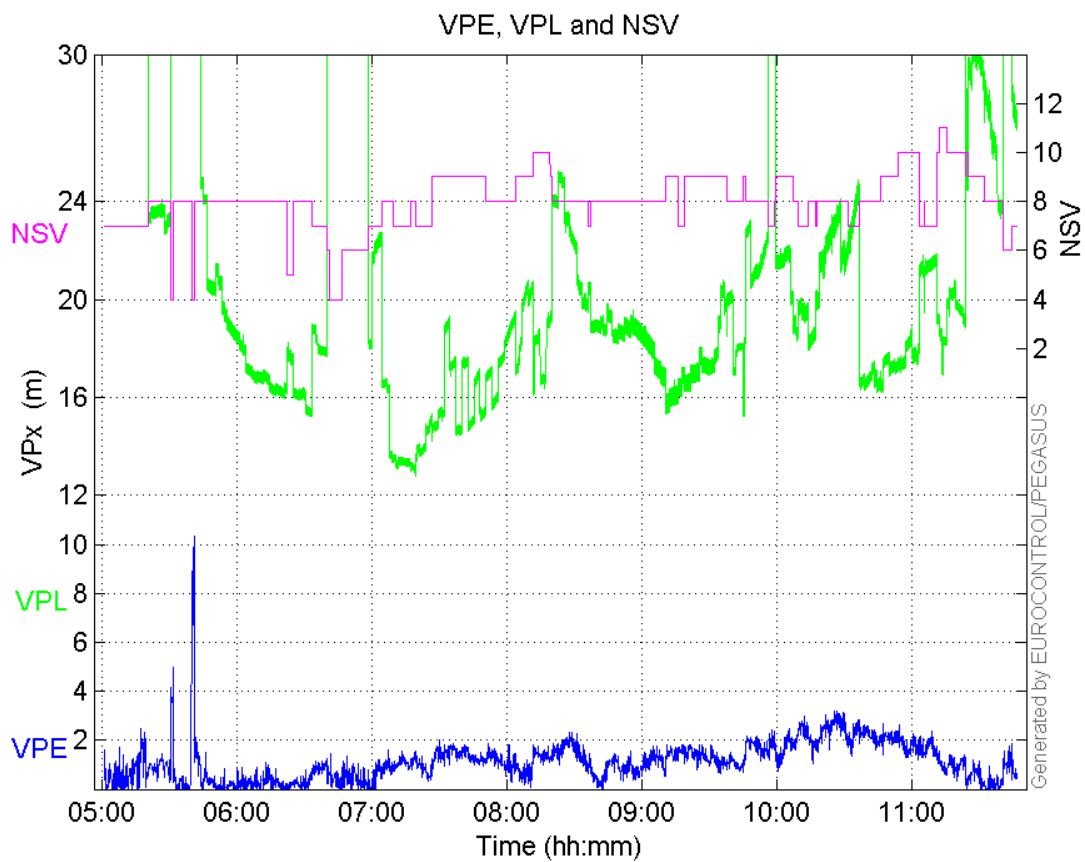
**Time Series**


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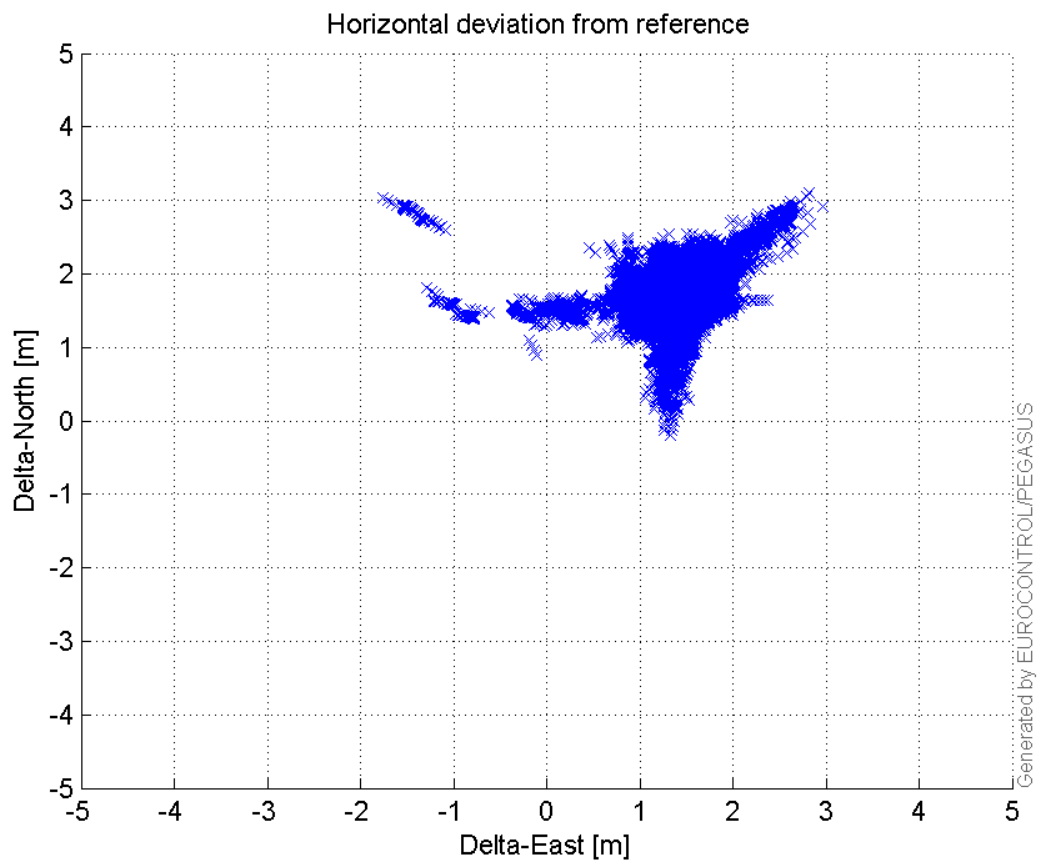
**HPE, HPL and NSV:**



**VPE, VPL and NSV:**

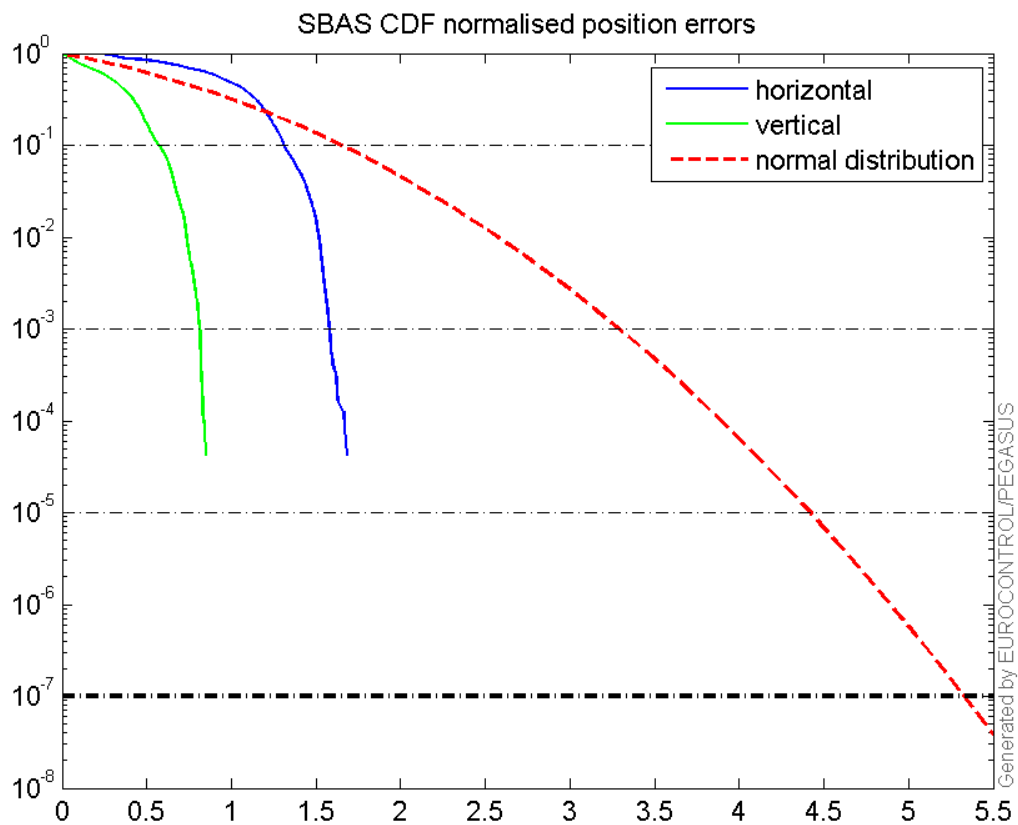


**Horizontal deviation from reference :**



**CDF position**

**SBAS CDF position domain:**



### Statistics

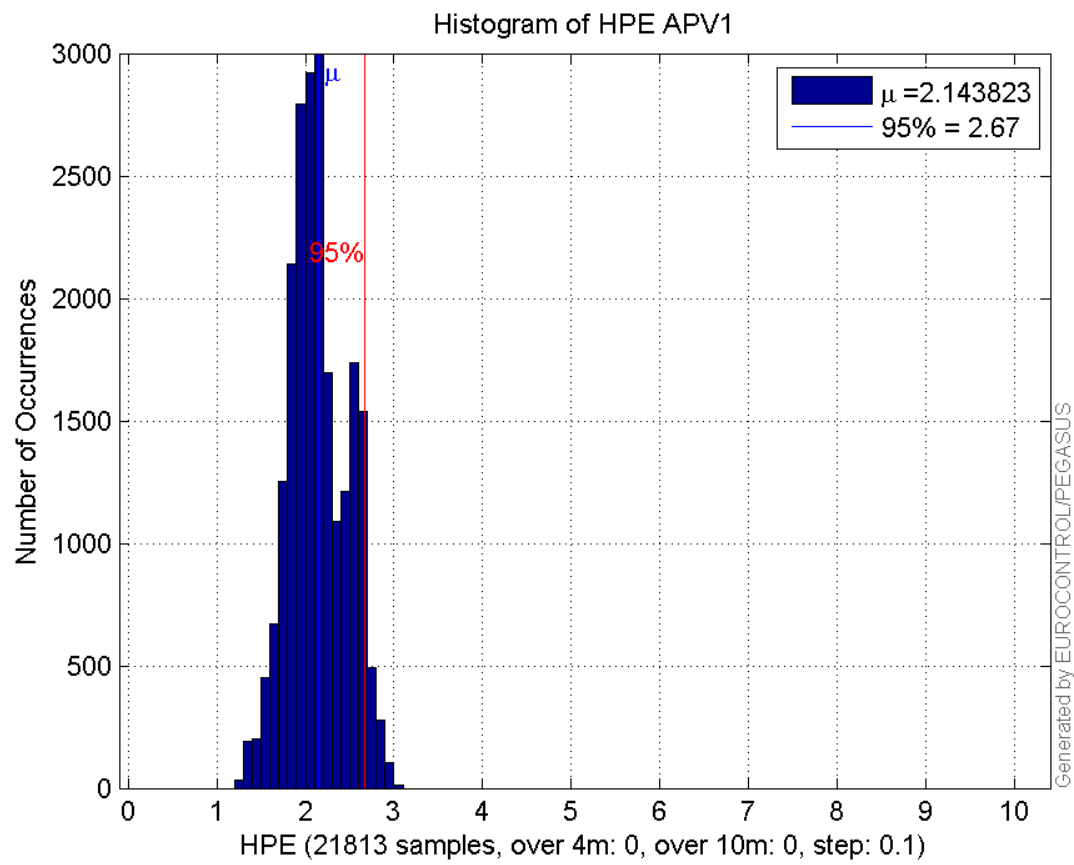
<b>number</b>	21813
<b>sum</b>	46763.221
<b>sum2</b>	102563.94
<b>prctile95</b>	2.6747028
<b>prctile99</b>	2.8541992
<b>number</b>	21813
<b>sum</b>	25083.102
<b>sum2</b>	38823.235
<b>prctile95</b>	2.3607188
<b>prctile99</b>	2.7578394
<b>number</b>	21813
<b>sum</b>	322135.28
<b>sum2</b>	5543505.2
<b>prctile95</b>	26.055345
<b>prctile99</b>	37.976058
<b>number</b>	21813
<b>sum</b>	433906.77
<b>sum2</b>	9177872.1
<b>prctile95</b>	29.94942
<b>prctile99</b>	39.557161
<b>number</b>	21813
<b>sum</b>	3545.7439
<b>sum2</b>	631.48293
<b>prctile95</b>	0.23660548
<b>prctile99</b>	0.25321159
<b>number</b>	21813

**sum** 1329.7651  
**sum2** 109.7741  
**prctile95** 0.12226589  
**prctile99** 0.13821134  
**number** 21271  
**sum** 45948.431  
**sum2** 101323.18  
**prctile95** 2.6773106  
**prctile99** 2.8588326  
**number** 21271  
**sum** 24869.821  
**sum2** 38707.103  
**prctile95** 2.3744044  
**prctile99** 2.7699289  
**number** 21271  
**sum** 305587.89  
**sum2** 5036746.4  
**prctile95** 25.668945  
**prctile99** 37.988674  
**number** 21271  
**sum** 412264.66  
**sum2** 8303532  
**prctile95** 27.616145  
**prctile99** 33.210176  
**number** 21271  
**sum** 3518.8978  
**sum2** 630.12098  
**prctile95** 0.23695252  
**prctile99** 0.25334608  
**number** 21271  
**sum** 1324.4787  
**sum2** 109.70371  
**prctile95** 0.12260224  
**prctile99** 0.13838492

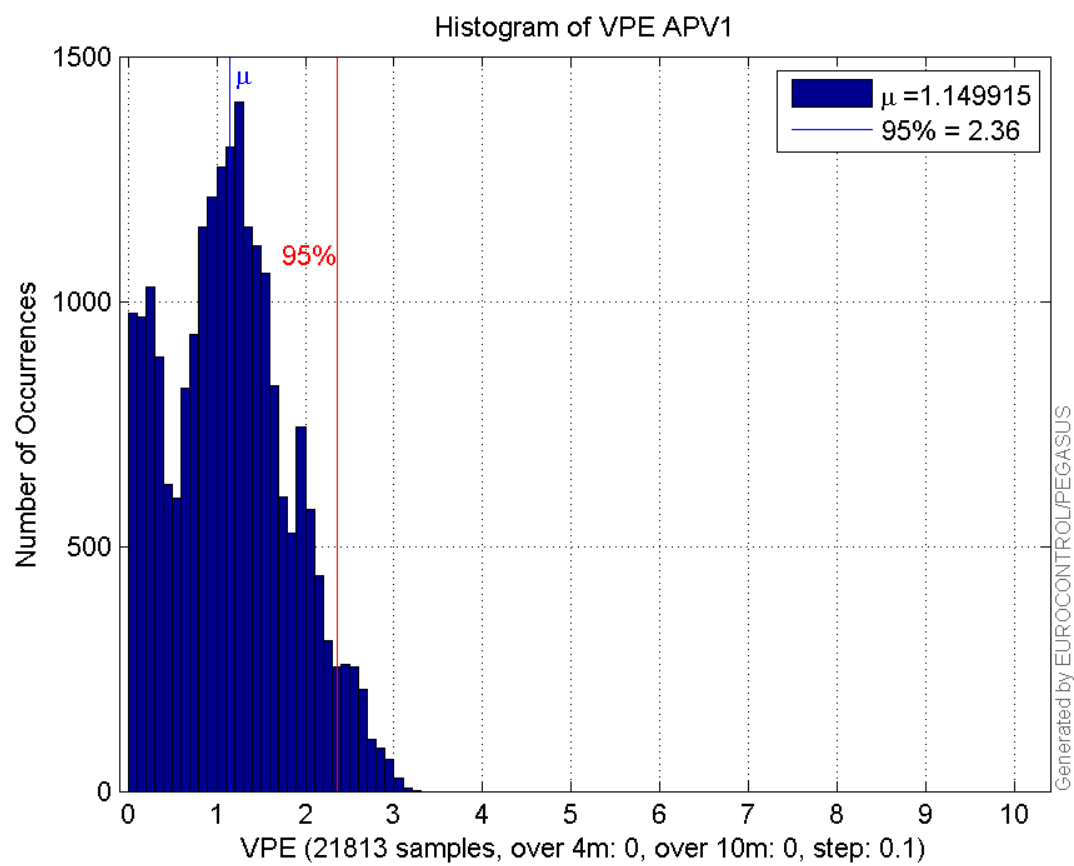
**Error and XPL Statistics :**

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
<b>HPE</b>	2.14382	0.325561	2.10894	2.6747	2.8542	2.1684
<b>HPL</b>	14.768	6.00369	12.347	26.0553	37.9761	15.9417
<b>VPE</b>	1.14992	0.676415	1.14326	2.36072	2.75784	1.3341
<b>VPL</b>	19.8921	5.00572	18.6812	29.9494	39.5572	20.5123

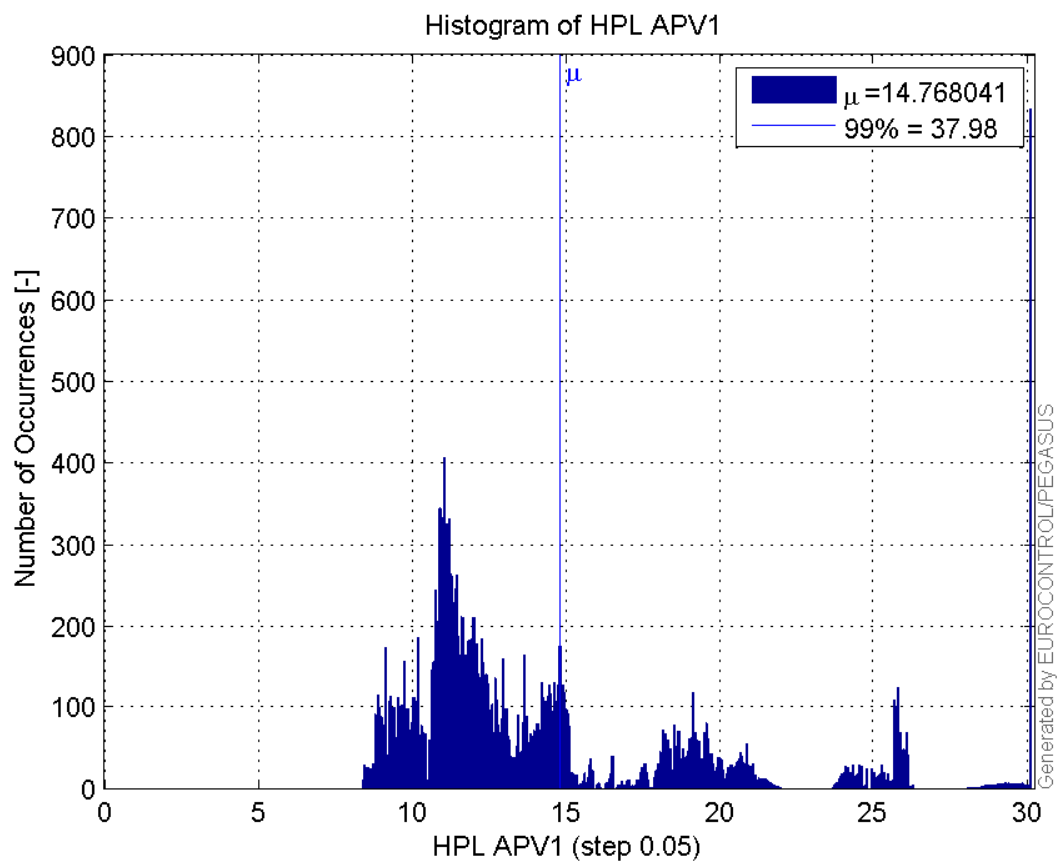
**Histogram of HPE APV1:**



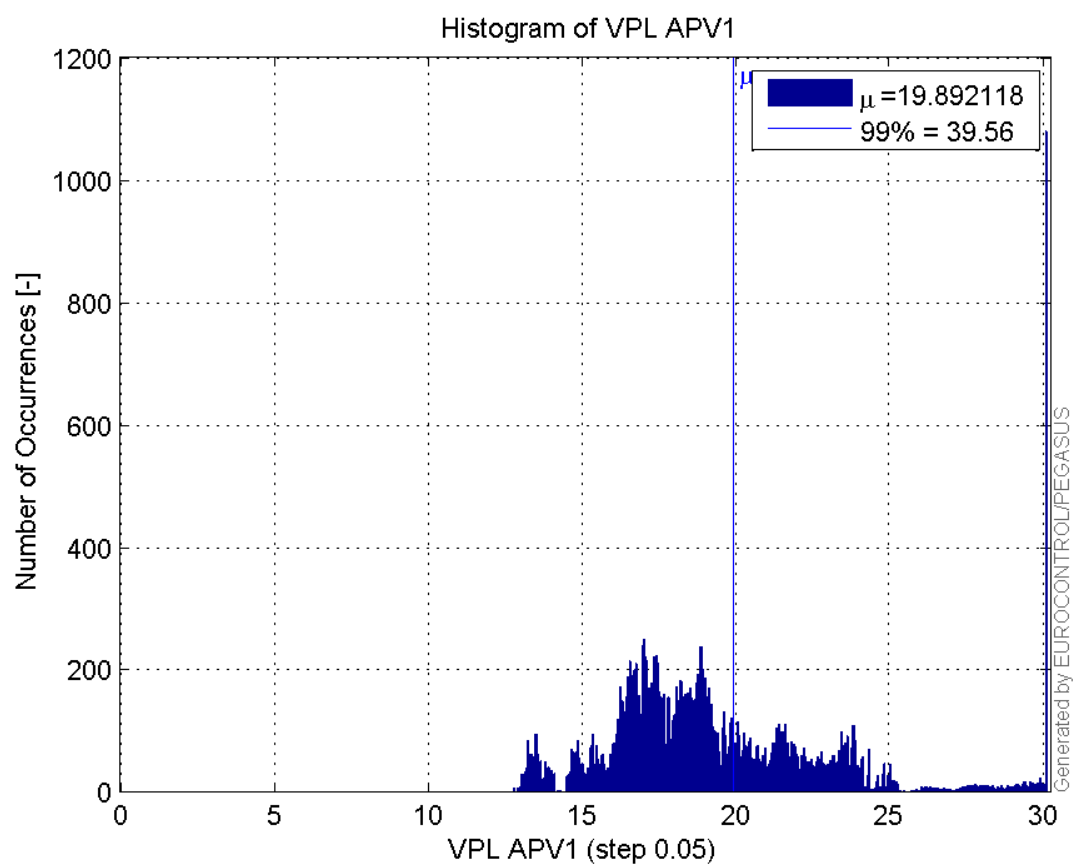
**Histogram of VPE APV1:**



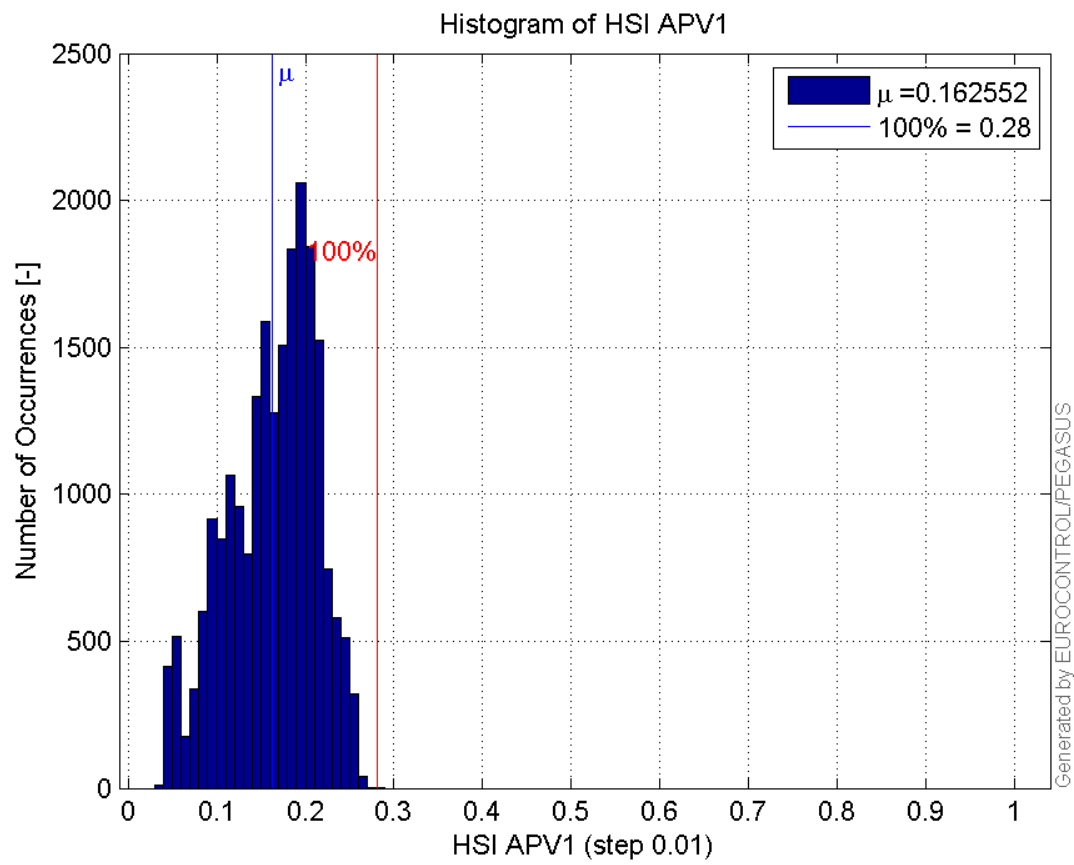
**Histogram of HPL APV1:**



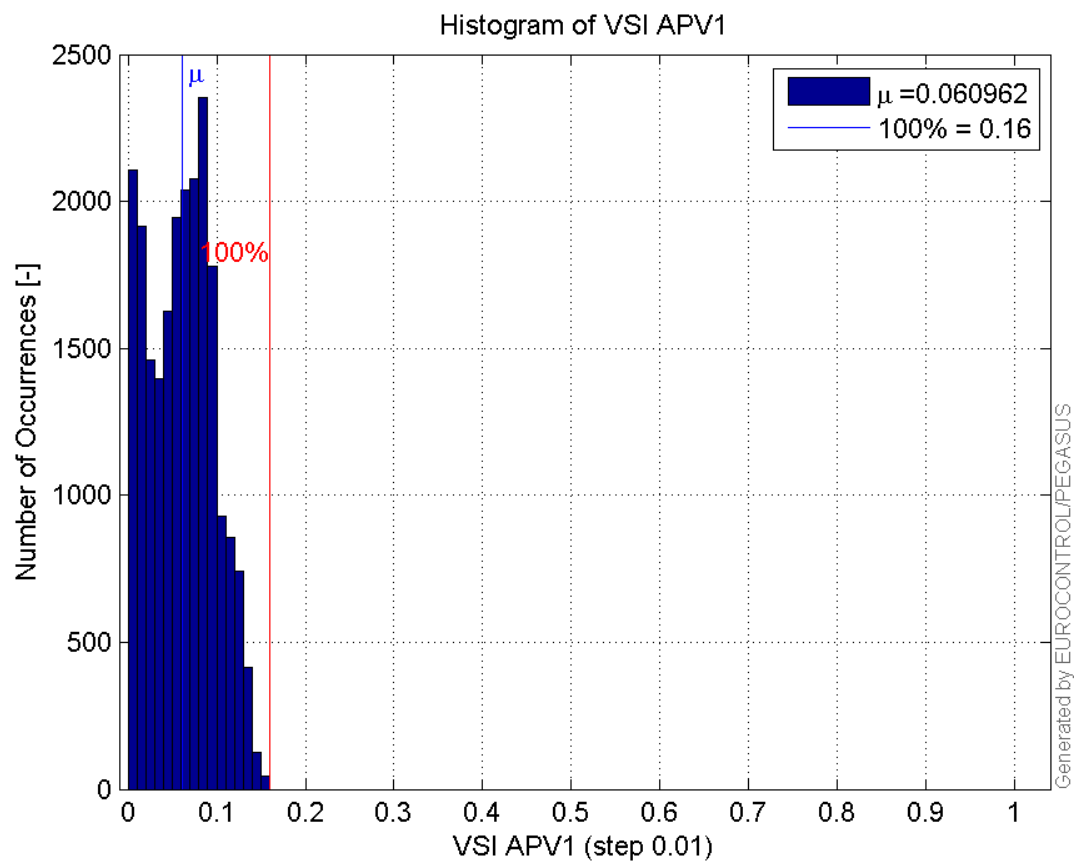
**Histogram of VPL APV1:**



**Histogram of HSI APV1:**

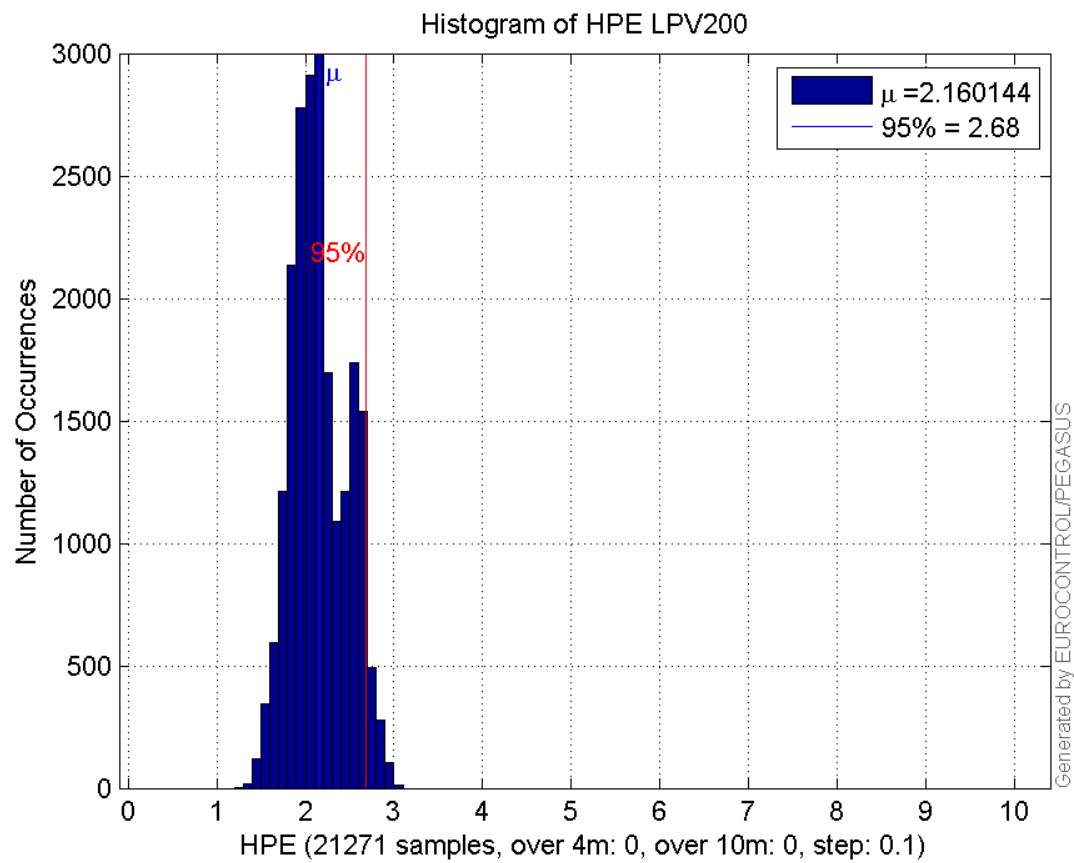


**Histogram of VSI APV1:**

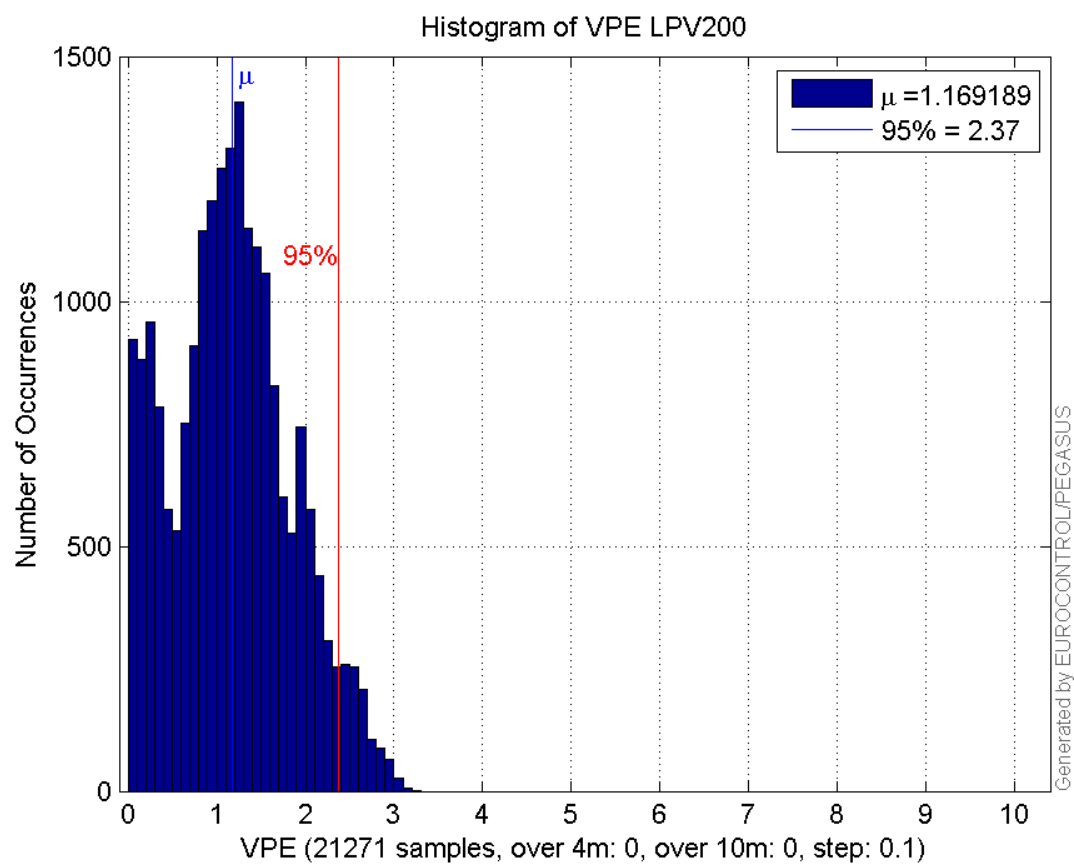


**Histogram of HPE LPV200:**

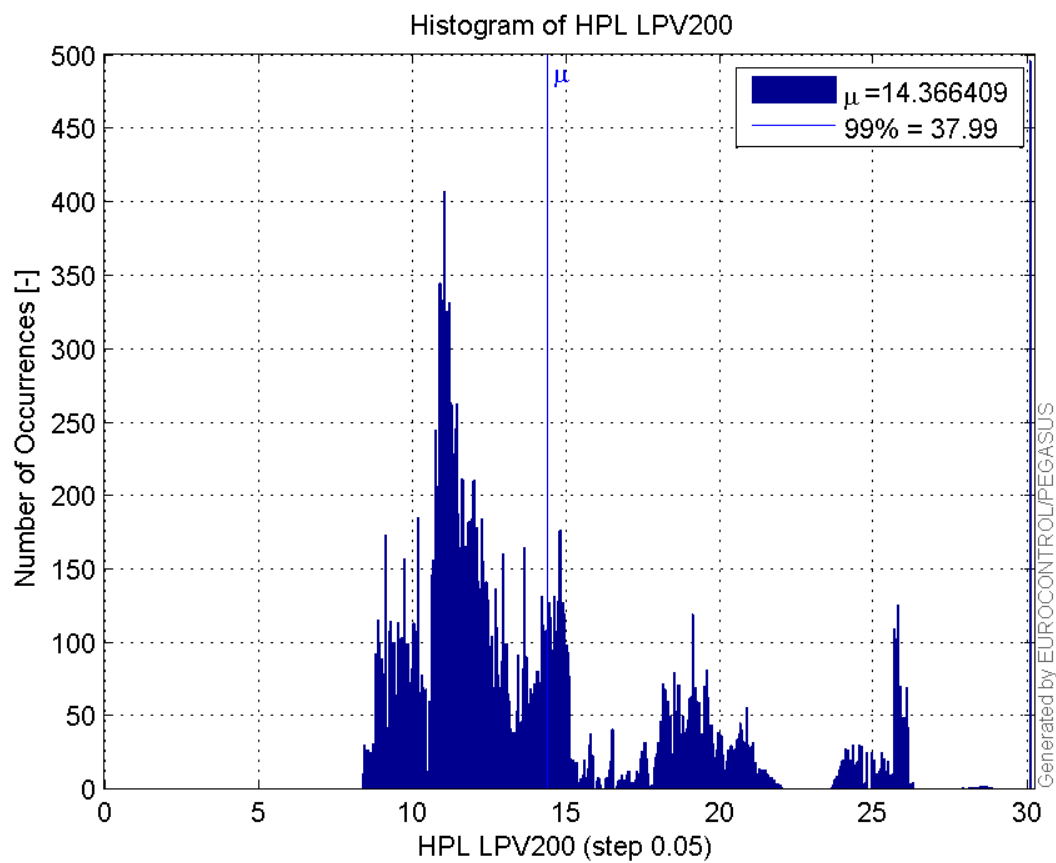




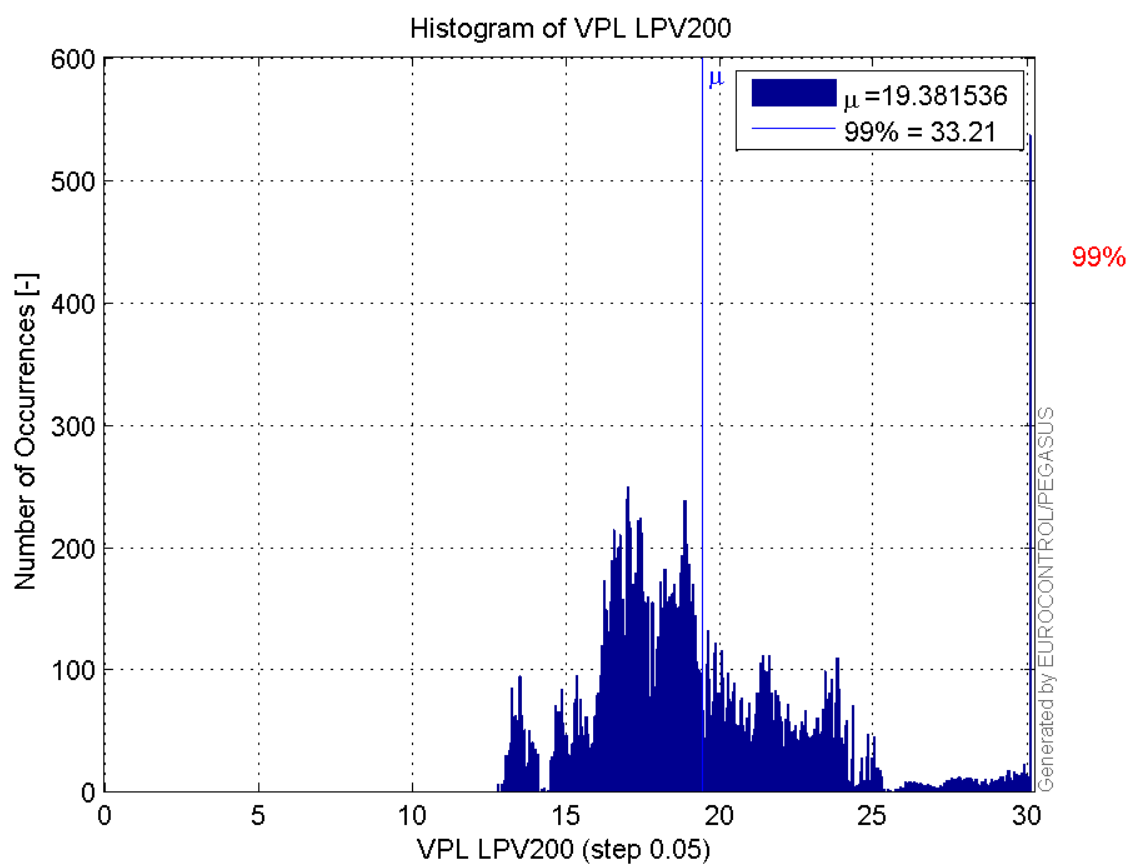
**Histogram of VPE LPV200:**



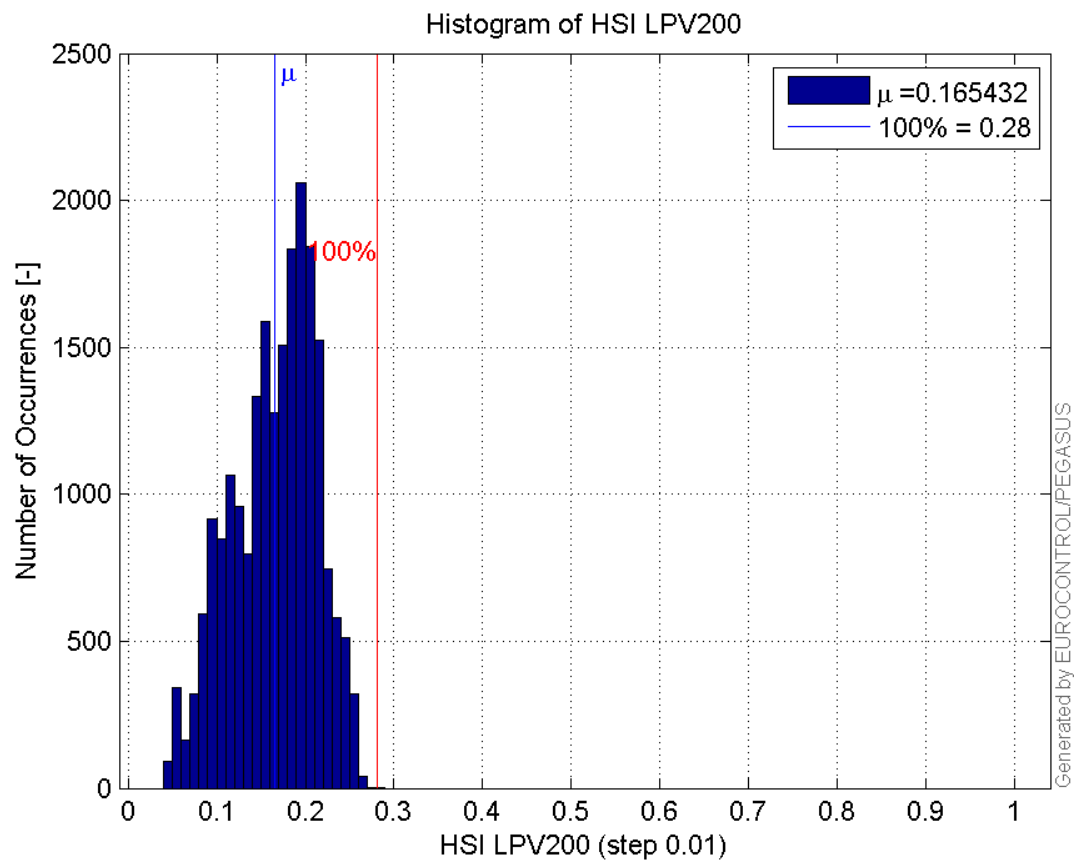
**Histogram of HPL LPV200:**



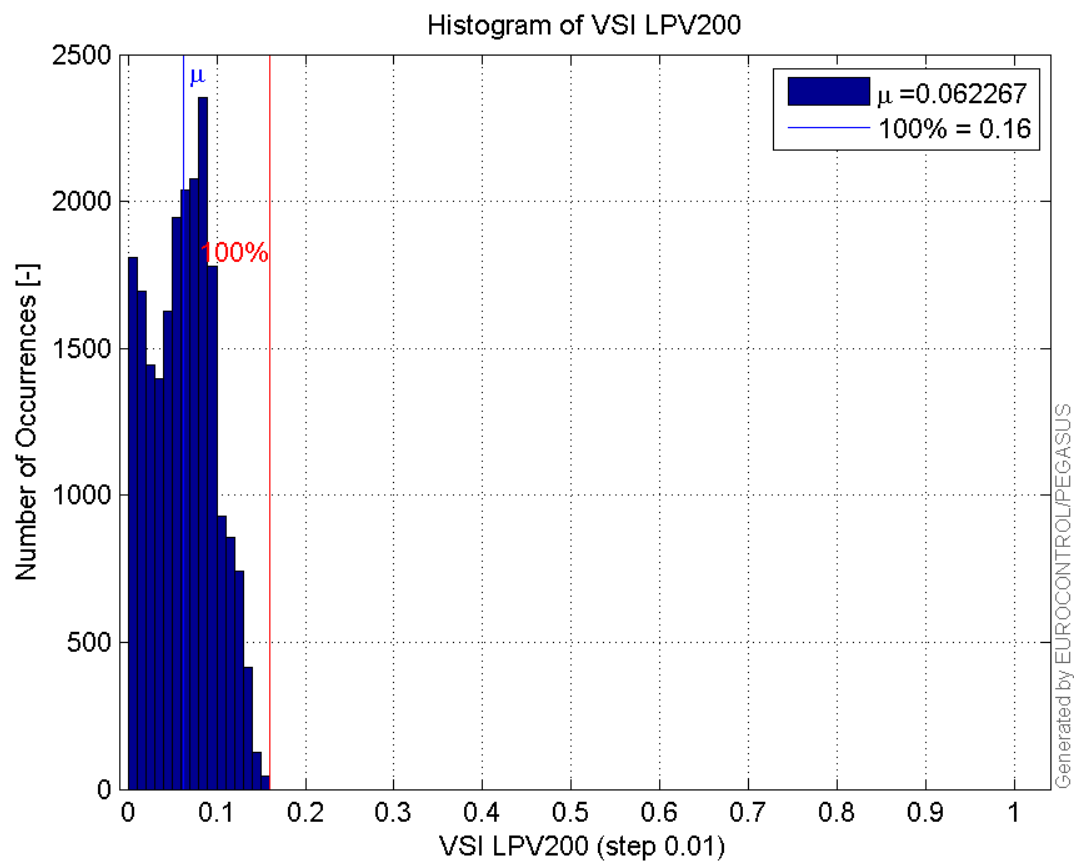
**Histogram of VPL LPV200:**



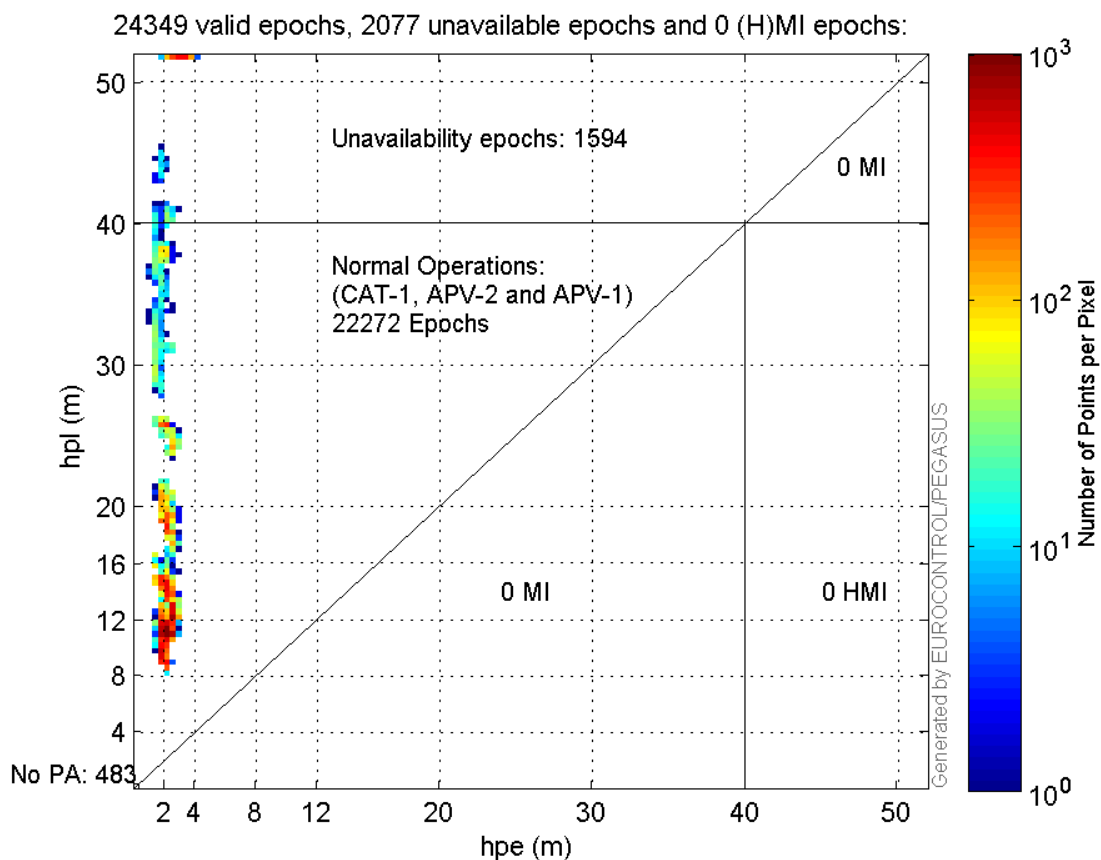
**Histogram of HSI LPV200:**



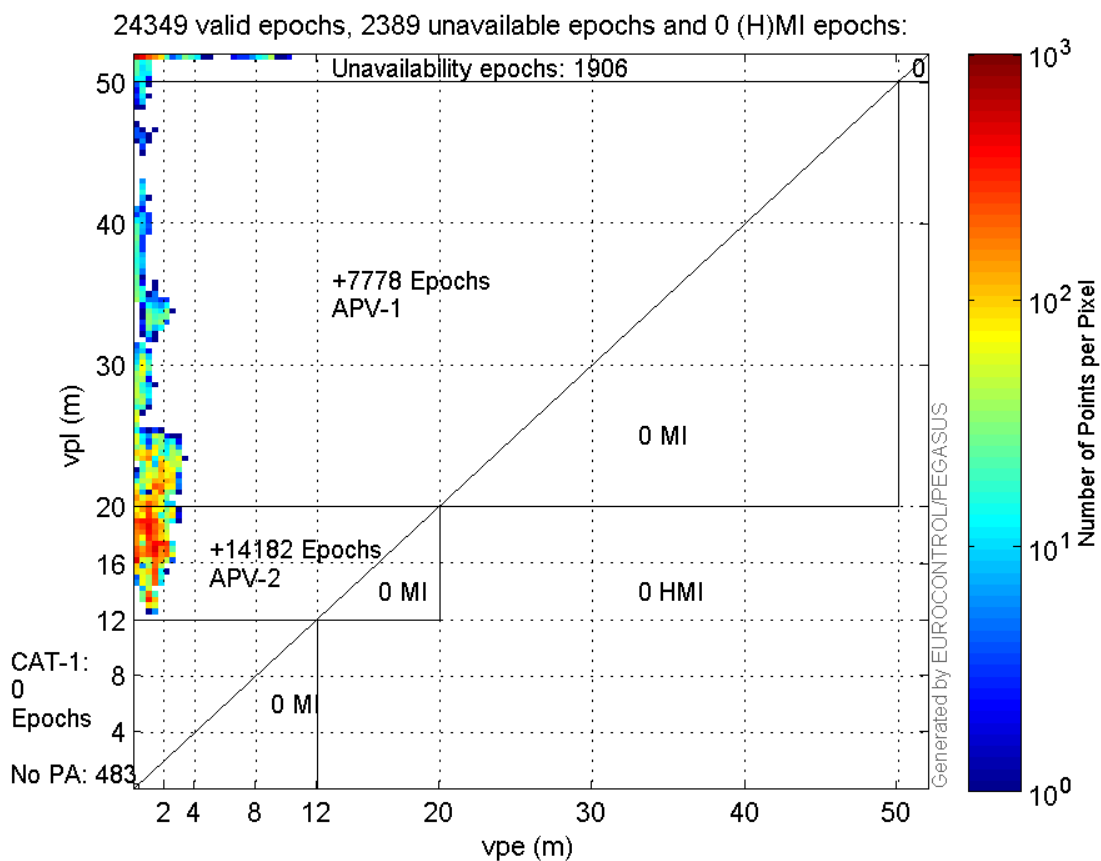
**Histogram of VSI LPV200:**



**Horizontal\_Stanford\_Plot\_SBAS:**



**Vertical\_Stanford\_Plot\_SBAS:**



## Parameters

## system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.2.1
input_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_23/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_23/03_GNSS_Solution/03_GNSS_Solution_sol

## settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	214.43
smoothing	settings	yes
smoothing_constant	settings	100
smoothing_max_gap	settings	10
smoothing_max_divergence	settings	3
min_elevation	settings	5
aad_model	settings	a
output_range_file	settings	yes
sbas_prn	settings	120
gnss_mode	settings	sbas

## results

Name	Section	Value
init_lat	results	50.4391
init_lon	results	30.4297
init_alt	results	229.1879
mi_numbers	results	0

## Range Domain

**start:** 04:55:01 23.09.2015 ( week: 1863 sec: 276901 )  
**end:** 11:46:50 23.09.2015 ( week: 1863 sec: 301610 )  
**duration:** 06:51:50 ..

## quality

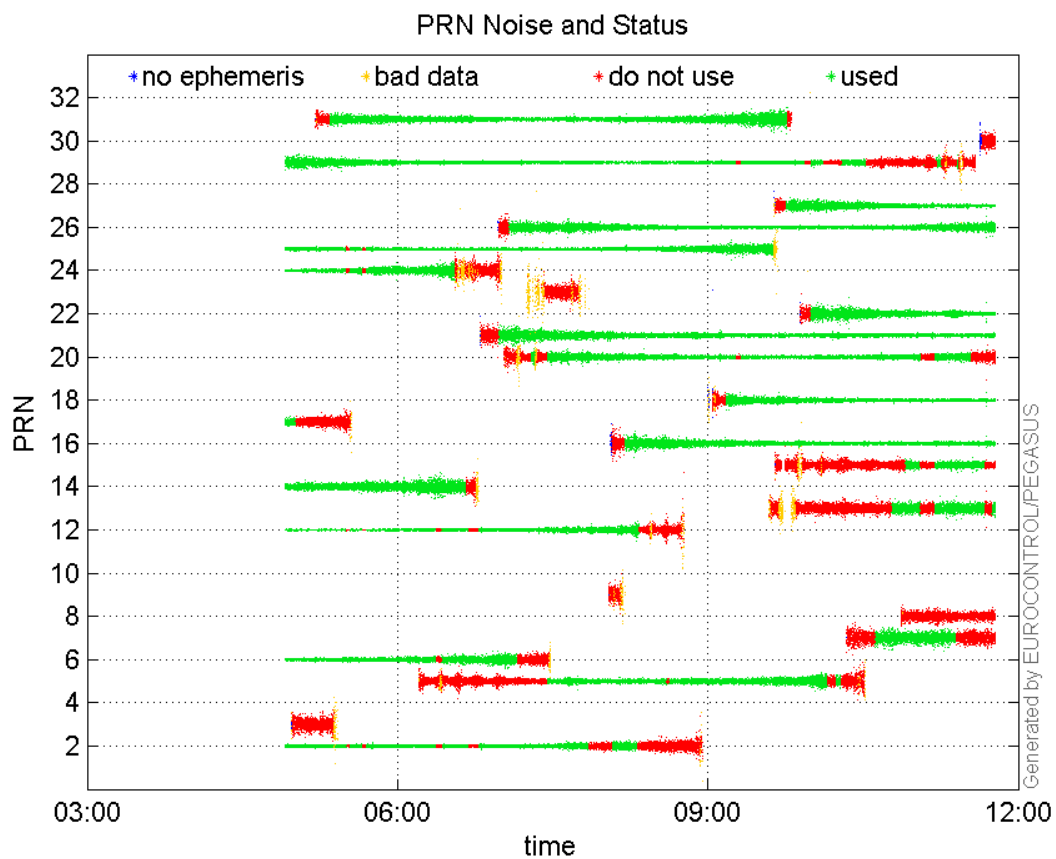
**valid samples** 24710  
**total samples** 24710

## PRN overview

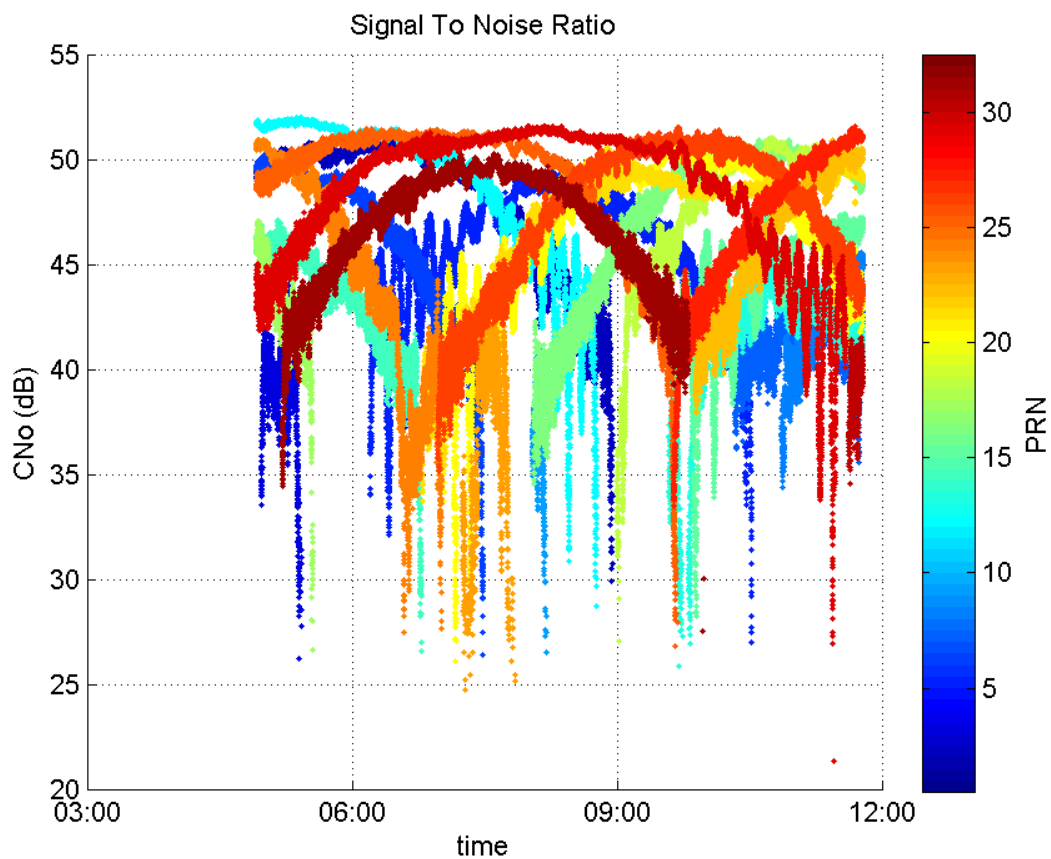
**Number of Visible GPS Satellites** 25  
**Number of Visible SBAS Satellites** 2

## signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



## range errors

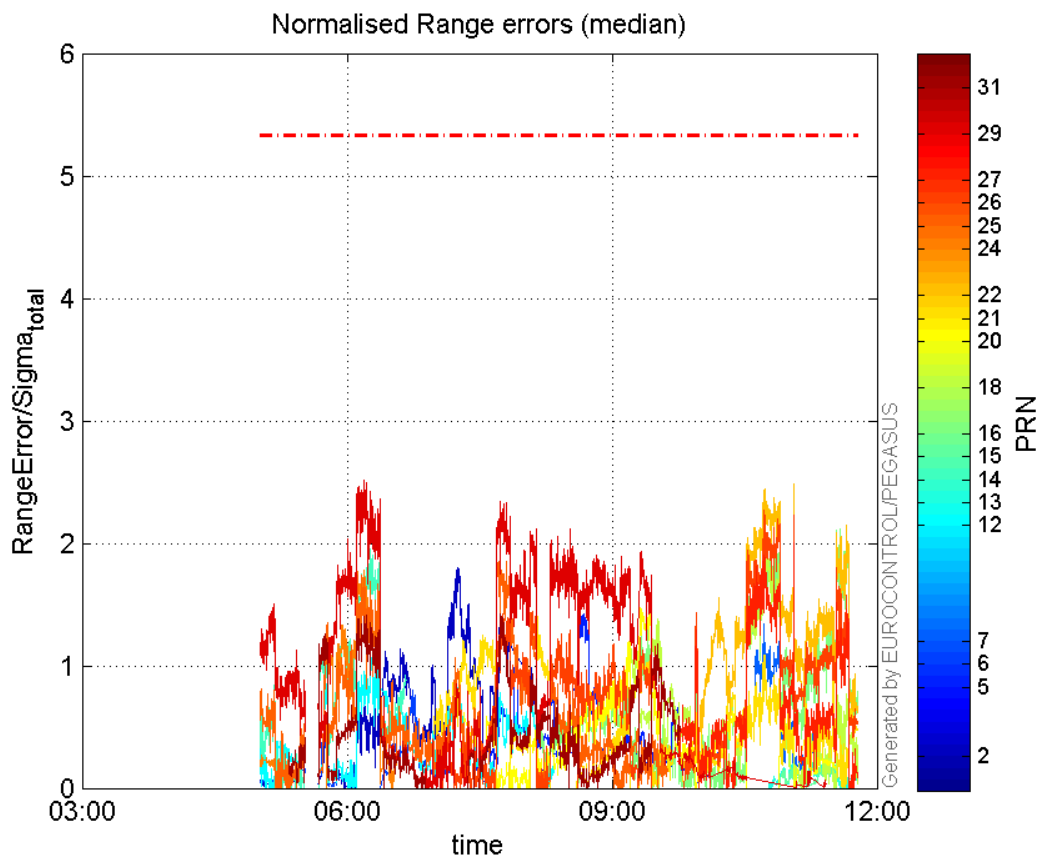
Number of Overbounding Norm Errors 0

## Max Norm Errors :

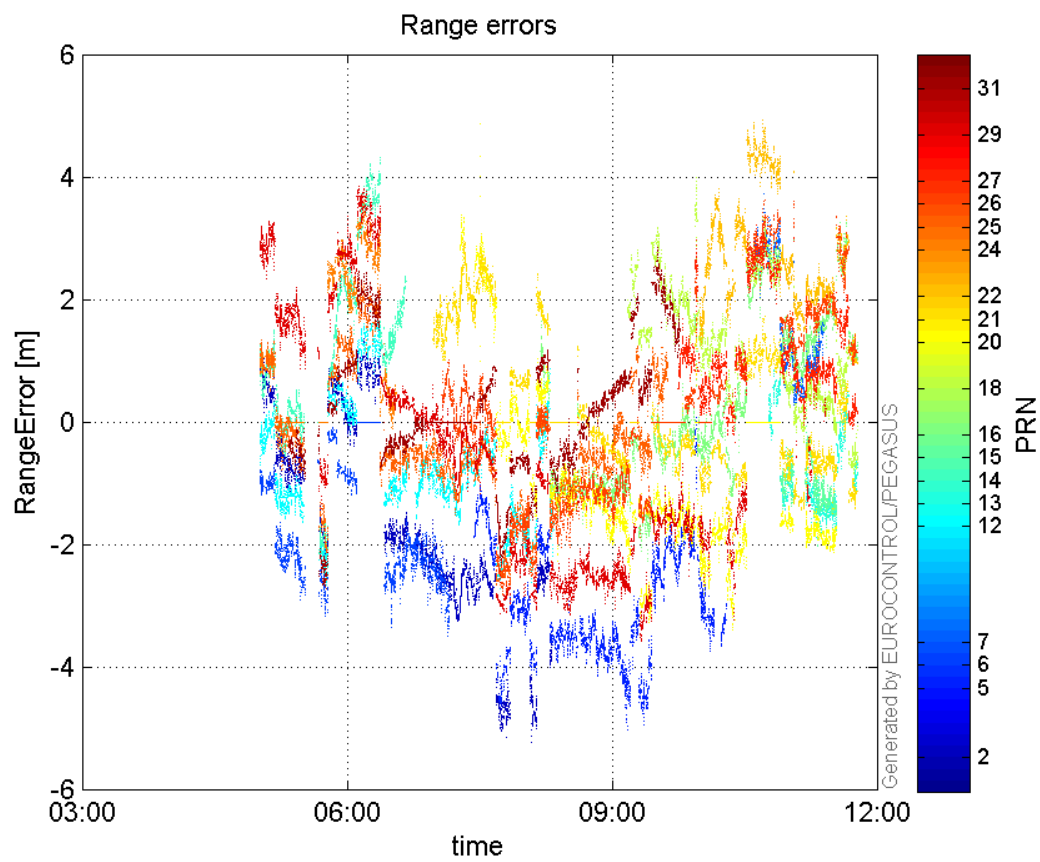
GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1863	285288	2	1.80575	-3.23176	1.7897
1863	290477	5	1.4253	-3.62499	2.54332
1863	283459	6	0.800406	-2.61046	3.26142
1863	297813	7	1.34618	3.725	2.76709
1863	281949	12	1.17456	1.8494	1.57455
1863	299706	13	0.386983	-1.77353	4.58297
1863	281739	14	1.95156	4.16745	2.13545
1863	299998	15	0.218874	-2.0234	9.24458
1863	301162	16	2.12966	3.26203	1.53171
1863	297813	18	1.98085	3.2336	1.63243
1863	293218	20	1.56375	-2.96791	1.89794
1863	288582	21	1.40078	2.40753	1.71871
1863	299002	22	2.48895	4.09316	1.64454
1863	281512	24	1.77979	3.68243	2.06902
1863	286875	25	1.99278	-2.80491	1.40754
1863	297813	26	2.27516	3.53062	1.55181
1863	299002	27	2.00353	3.00254	1.49862
1863	281512	29	2.51524	3.78168	1.50351
1863	287050	31	1.42557	-2.2626	1.58716

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 Normalised Range errors (median):

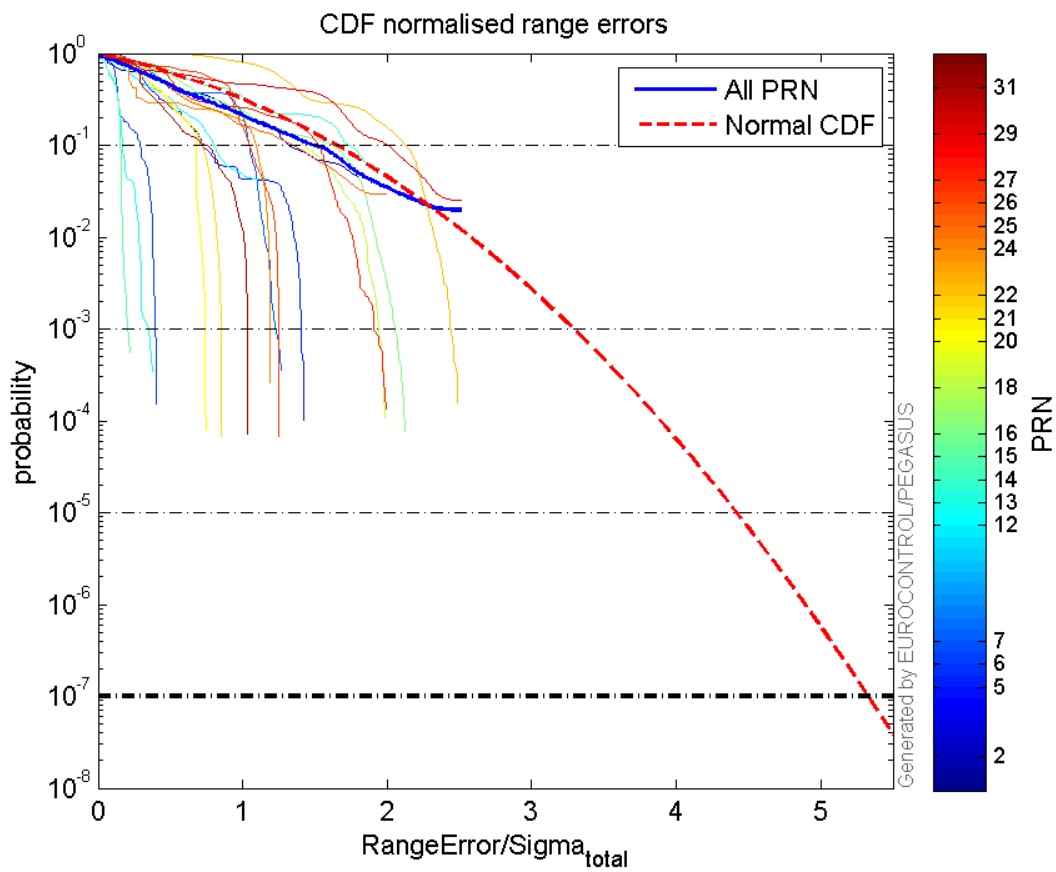


**Range errors:**

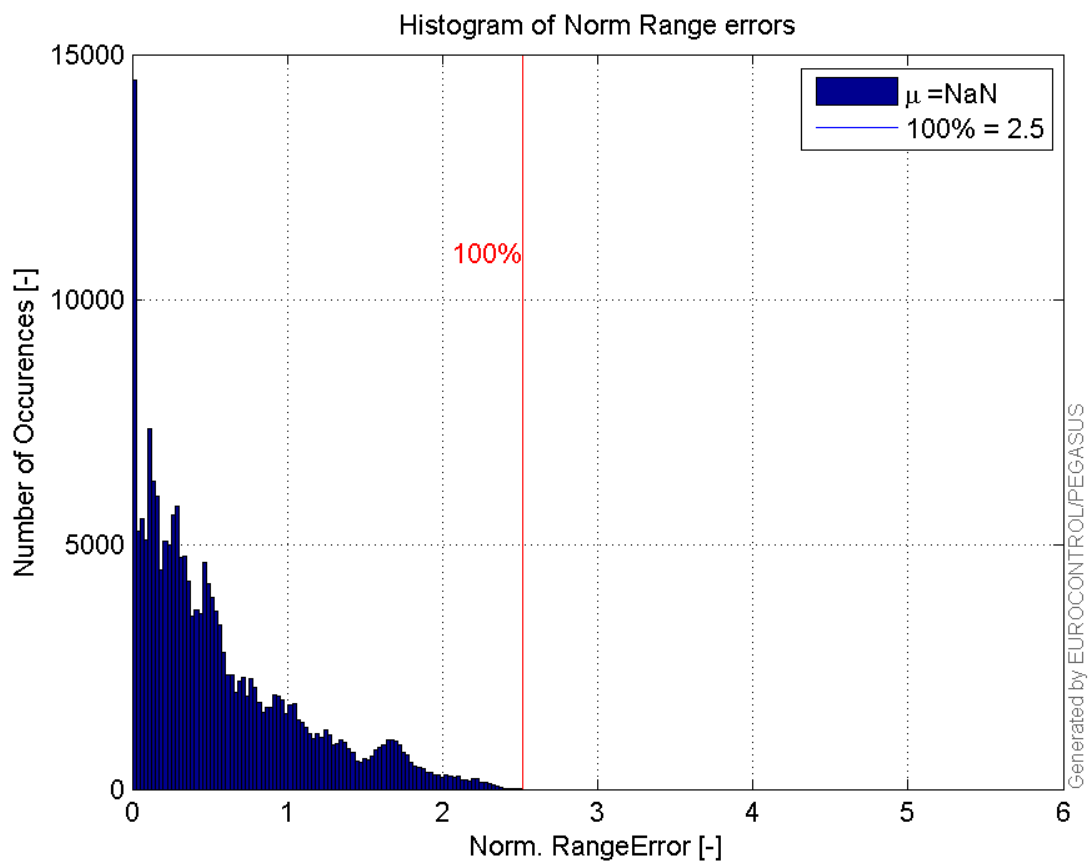


**CDF normalised range errors:**

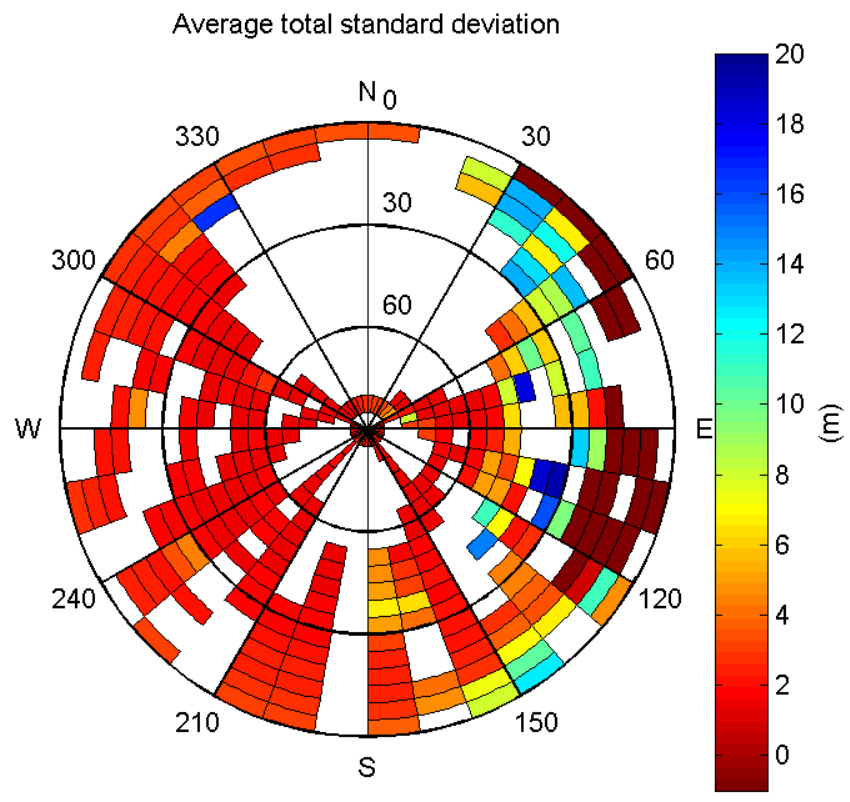




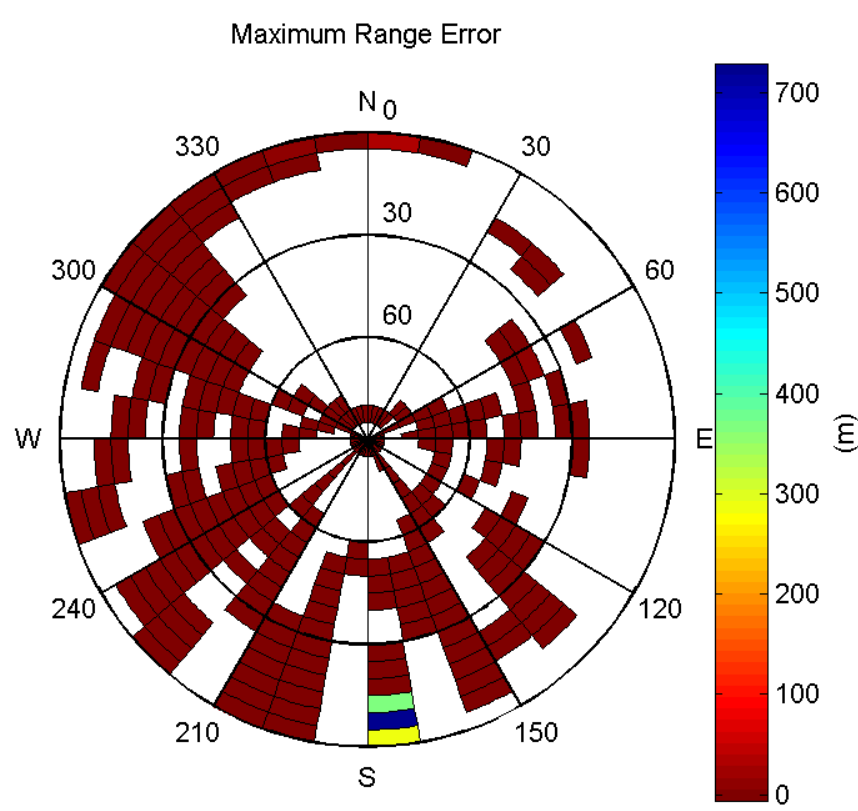
**Histogram of Norm Range errors:**



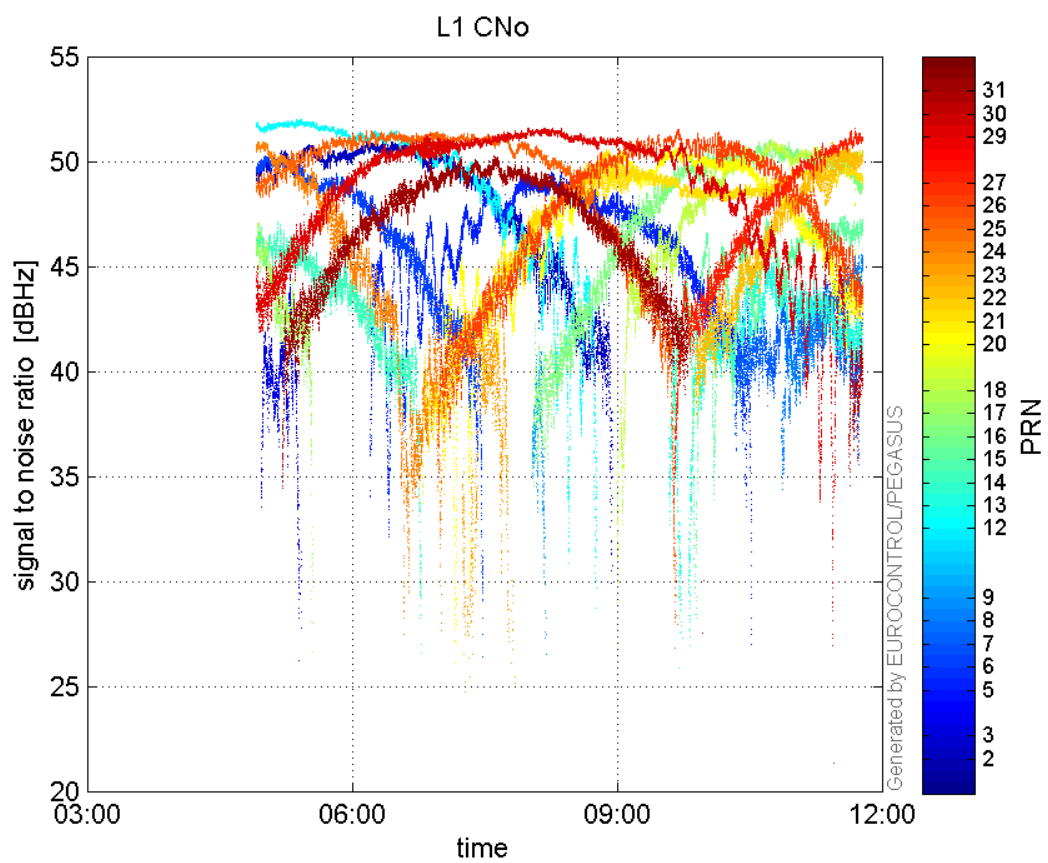
**Sigma Sky Plot:**



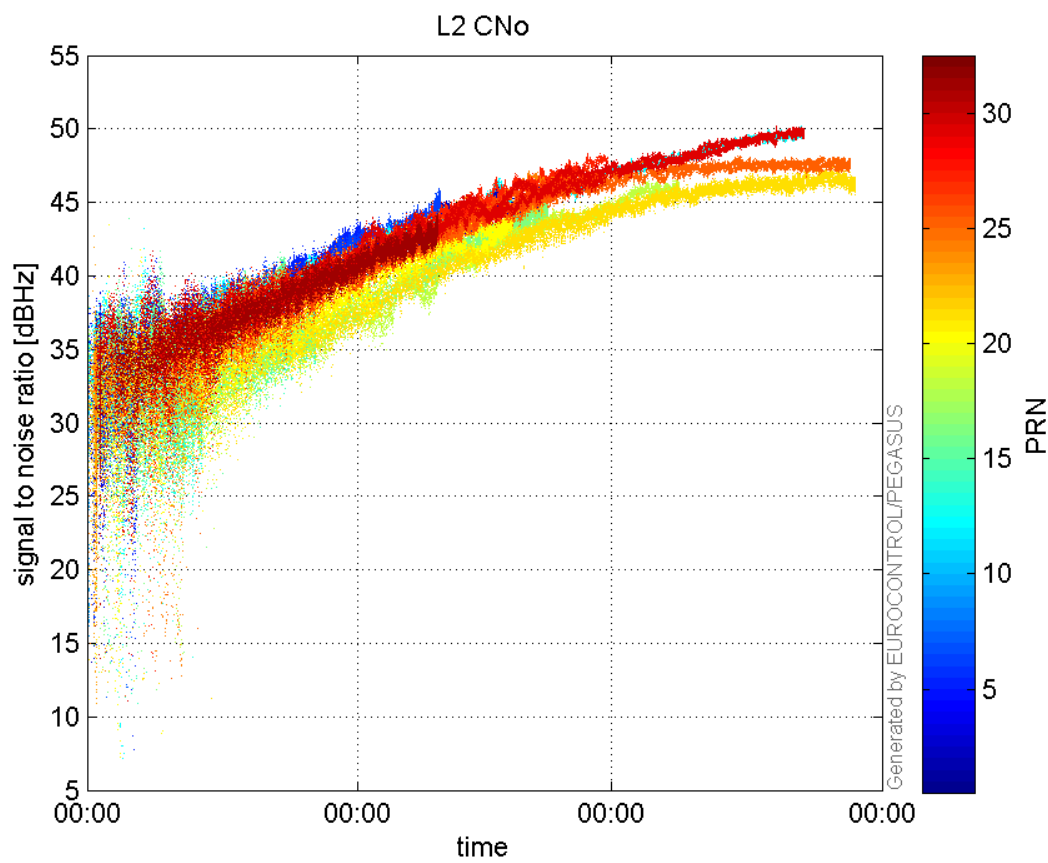
**Norm Error Sky Plot:**



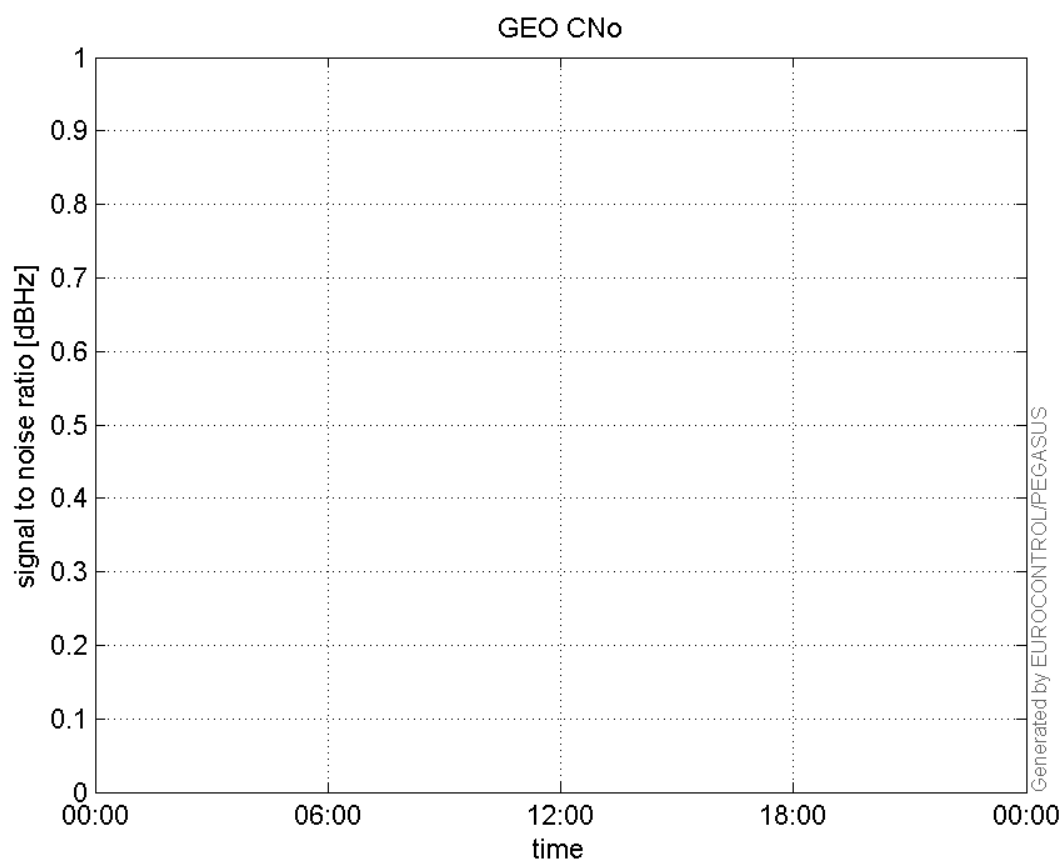
L1 CNo:



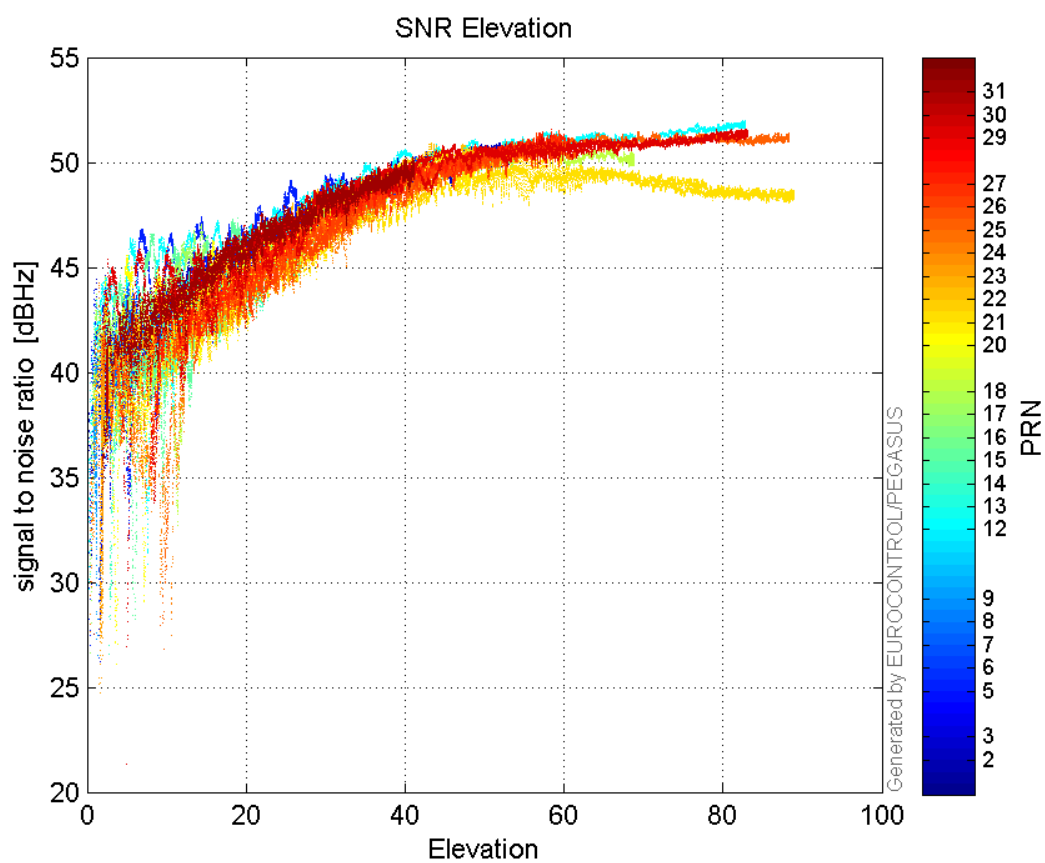
L2 CNo:



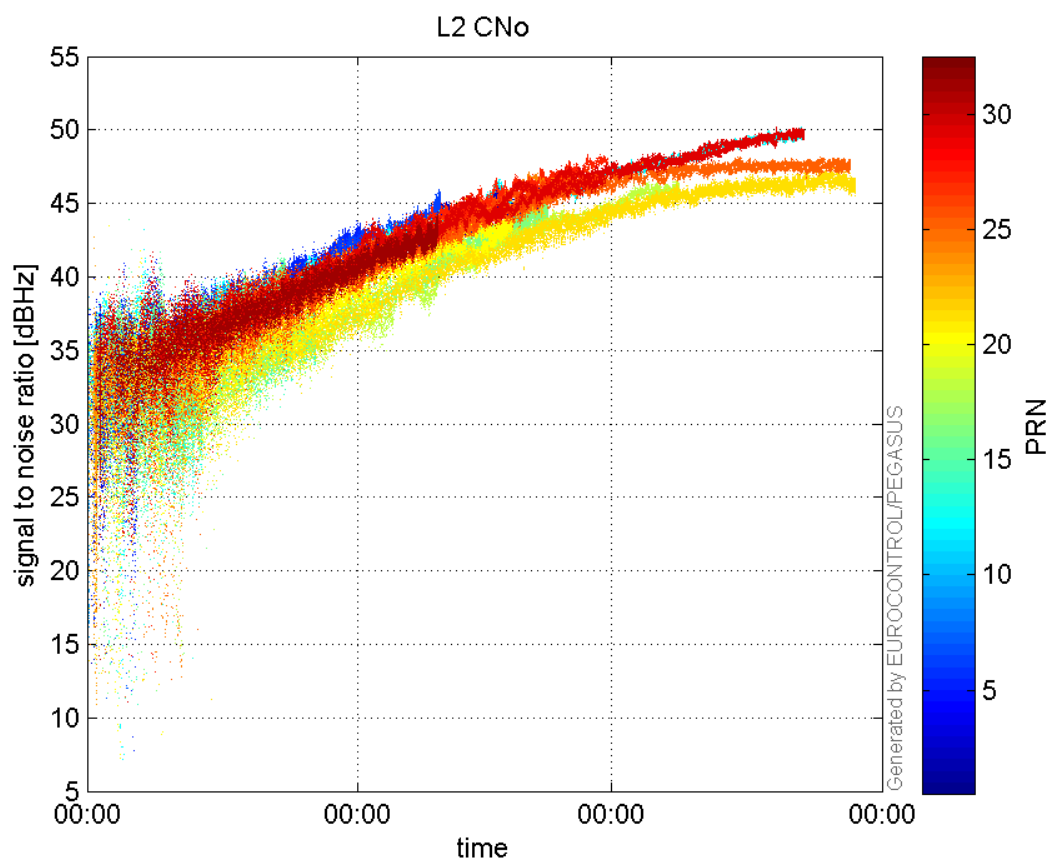
**GEO CNo:**



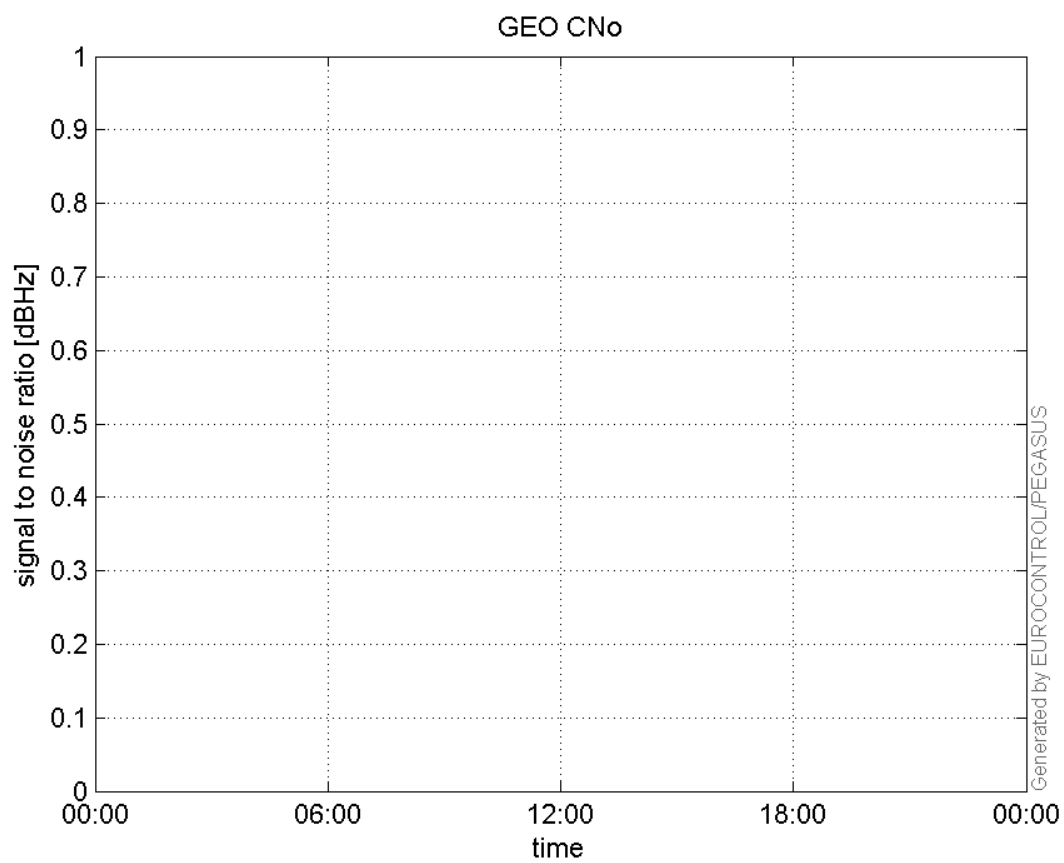
**SNR Elevation:**



**L2 CNo:**

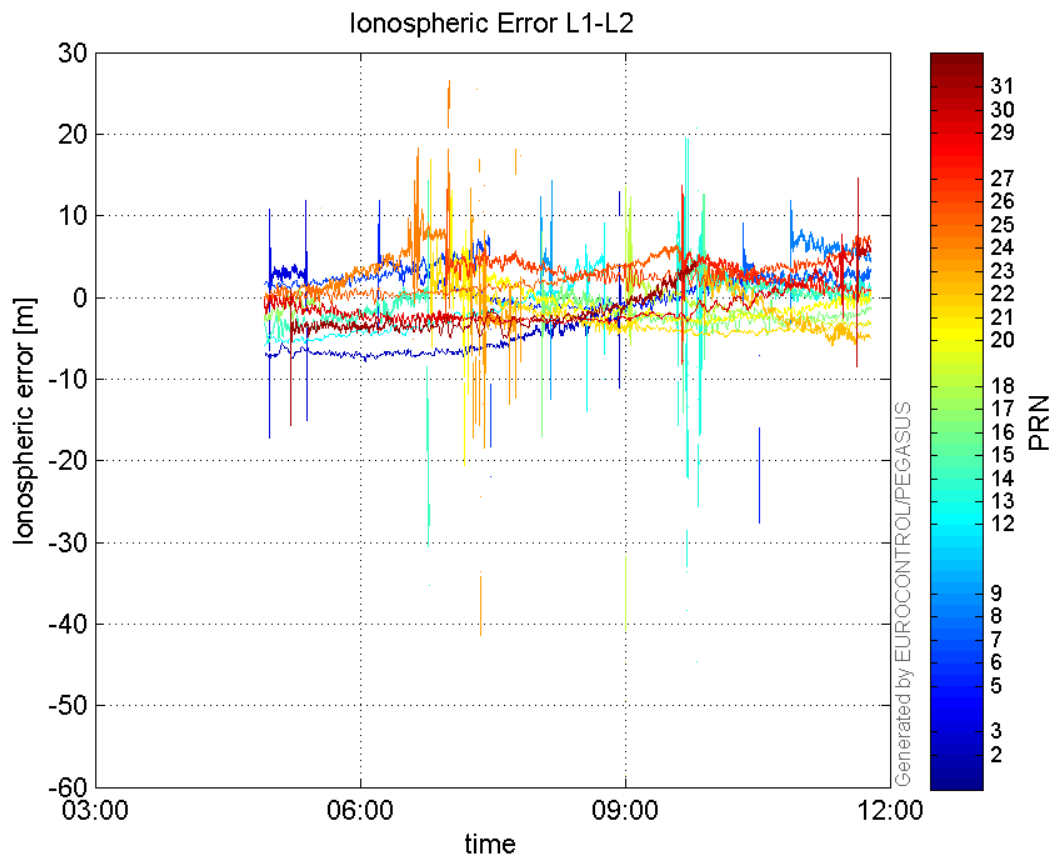


**GEO CNo:**



## dual frequency

## Ionospheric Error L1-L2:



## Parameters

## system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.2.1
input_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_23/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_23/03_GNSS_Solution/03_GNSS_Solution_sol

## settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	214.43
smoothing	settings	yes
smoothing_constant	settings	100
smoothing_max_gap	settings	10
smoothing_max_divergence	settings	3
min_elevation	settings	5
aad_model	settings	a
output_range_file	settings	yes
sbas_prn	settings	120

gnss_mode	settings	sbas
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**results**

Name	Section	Value
init_lat	results	50.4391
init_lon	results	30.4297
init_alt	results	229.1879
mi_numbers	results	0