

Global View

version 4.7
 site NAU
 abbreviation Laboratory satellite systems
 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: 07:43:1.129 28.09.2015 (week: 1864 sec: 114181.129)
end: 12:42:59.129 28.09.2015 (week: 1864 sec: 132179.129)
duration: 04:59:58 ..

quality

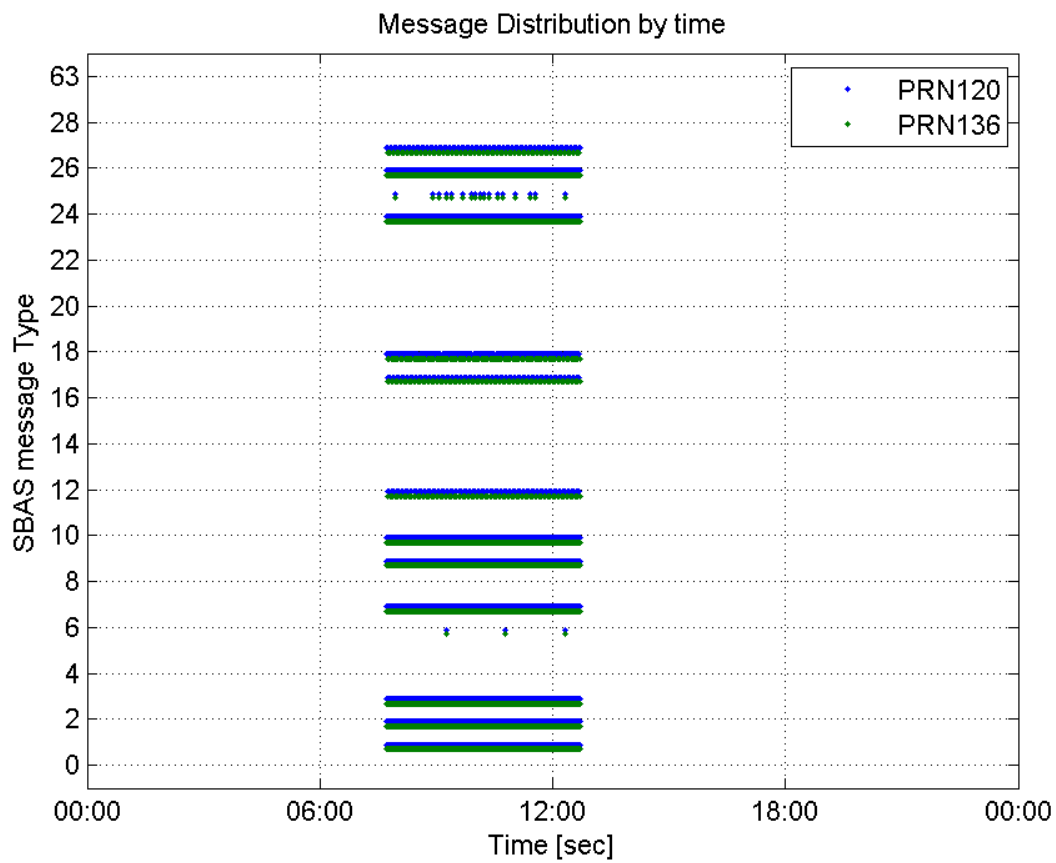
valid samples 35998
total samples 35998
number of SBAS PRNs 2

SBAS SIS Overview

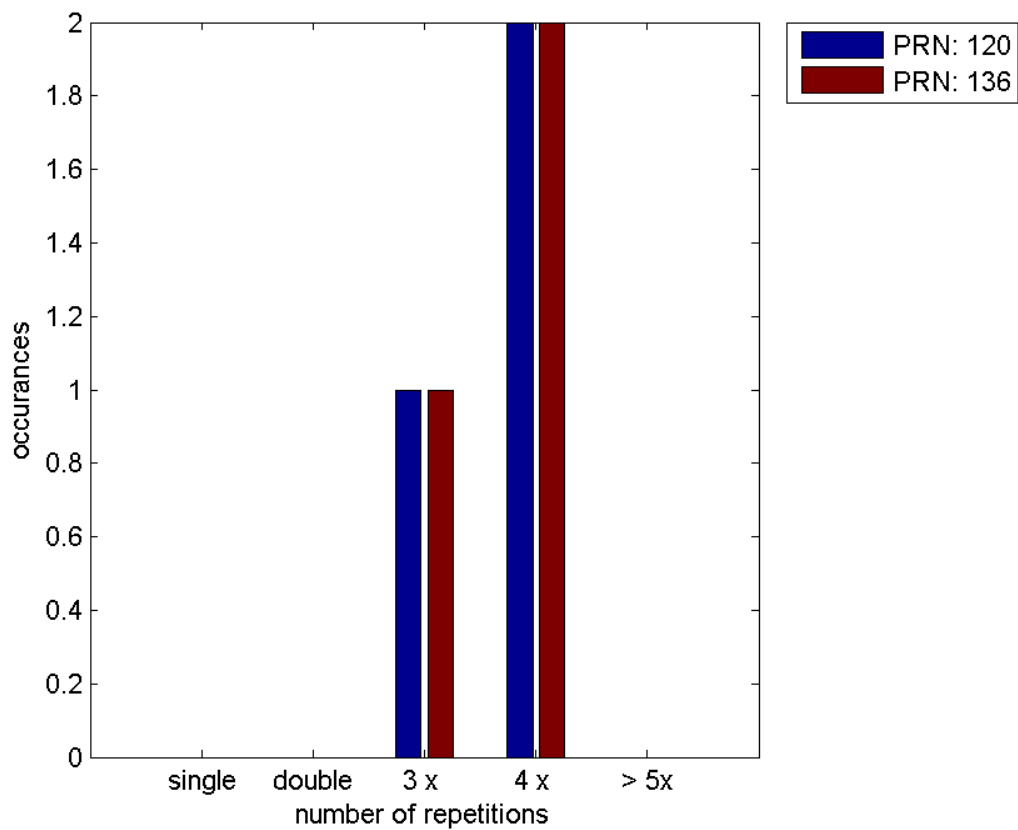
Message Type 6 repetitions :

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

Message Distribution by time:



Message Type 6 repetitions:



PRN 120

Broadcast SBAS Messages :

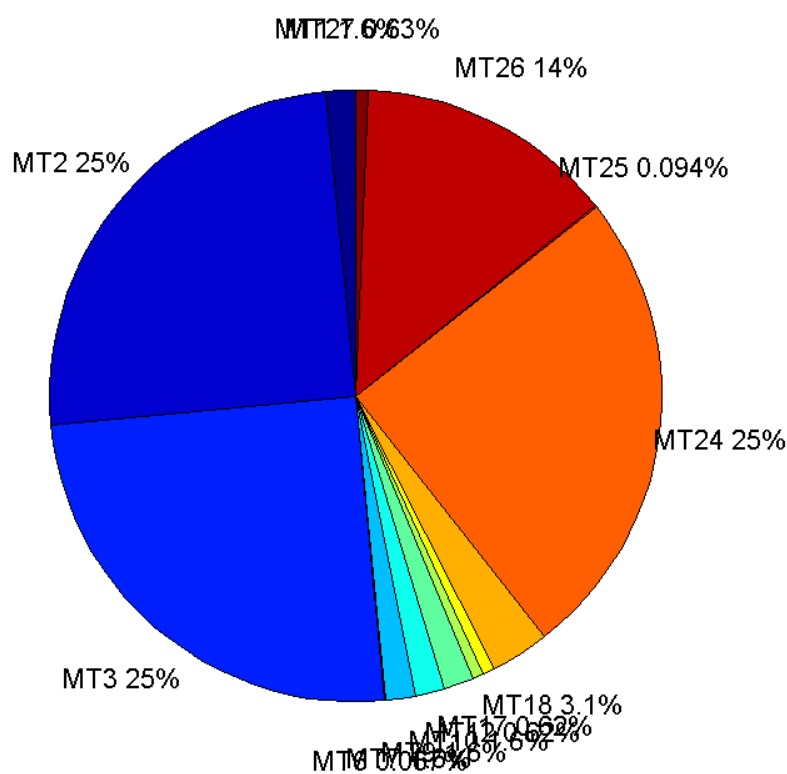
	number of messages	%
MT 0	0	0
MT 1	280	1.55564
MT 2	4496	24.9792
MT 3	4495	24.9736
MT 4	0	0
MT 5	0	0
MT 6	12	0.0666704
MT 7	280	1.55564
MT 9	280	1.55564
MT 10	280	1.55564
MT 12	112	0.622257
MT 17	112	0.622257
MT 18	560	3.11128
MT 24	4496	24.9792
MT 25	17	0.0944497
MT 26	2466	13.7008
MT 27	113	0.627813
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	17999	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2796	0	0	0
MT 2	4	7	4.00378	3	0	0
MT 3	4	8	4.00356	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	5577	1004.64	2	2	2
MT 7	64	70	64.2796	0	0	0
MT 9	64	70	64.2796	0	0	0
MT 10	64	73	64.2652	0	0	0
MT 12	156	166	160.559	111	0	0
MT 17	160	166	160.559	0	0	0
MT 18	4	130	31.9535	0	0	0
MT 24	4	8	4.00378	0	0	0
MT						

25	340	3420	987	0	0	0
MT 26	4	33	7.29655	0	0	0
MT 27	160	169	160.589	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

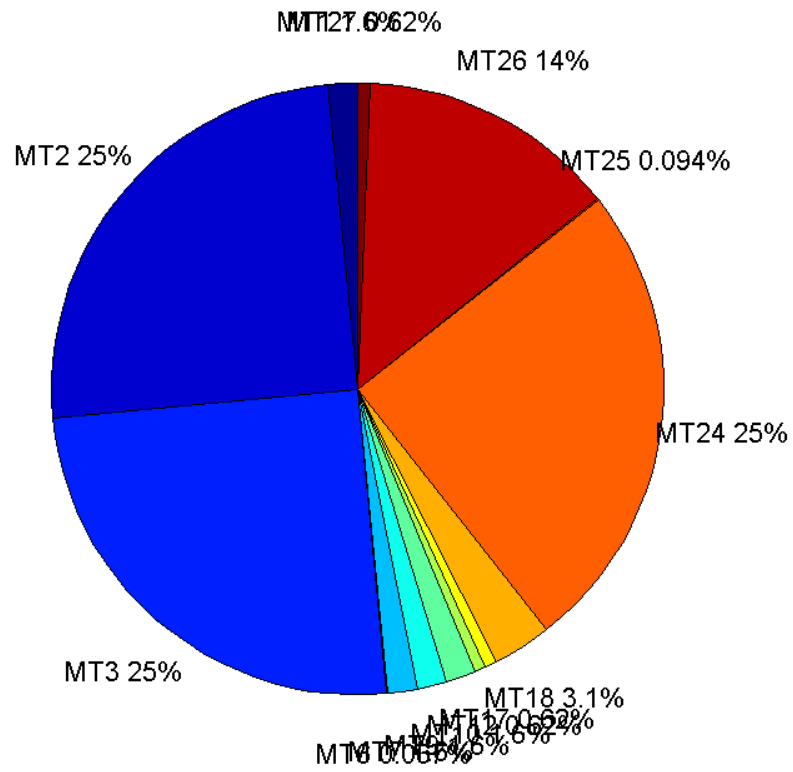
	number of messages	%
MT 0	0	0
MT 1	280	1.55564
MT 2	4496	24.9792
MT 3	4496	24.9792
MT 4	0	0
MT 5	0	0
MT 6	12	0.0666704

MT 7	280	1.55564
MT 9	280	1.55564
MT 10	280	1.55564
MT 12	112	0.622257
MT 17	112	0.622257
MT 18	560	3.11128
MT 24	4495	24.9736
MT 25	17	0.0944497
MT 26	2467	13.7063
MT 27	112	0.622257
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	17999	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2796	0	0	0
MT 2	4	8	4.00378	3	0	0
MT 3	4	7	4.00378	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	5577	1004.64	2	2	2
MT 7	64	70	64.2796	0	0	0
MT 9	64	70	64.2796	0	0	0
MT 10	64	73	64.2652	0	0	0
MT 12	160	169	160.595	111	0	0
MT 17	156	169	160.559	0	0	0
MT 18	4	148	31.9177	0	0	0
MT 24	4	8	4.00356	0	0	0
MT 25	340	3420	987	0	0	0
MT 26	4	46	7.29684	0	0	0
MT 27	160	166	160.595	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_28/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/Egnos2015_09_28/02_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: 07:43:01 28.09.2015 (week: 1864 sec: 114181)
end: 12:43:00 28.09.2015 (week: 1864 sec: 132180)
duration: 05:00:00 ..

quality

valid samples 17639
total samples 18000

Event tables

Position discontinuity events type no (0)
APV-I discontinuity events type long
APV-35m discontinuity events type all
LPV-200 discontinuity events type all
CAT-I discontinuity events type nothing

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	116885	1.79295	10.1029	0.177469	0.600274	19.0446	0.0315194
max normVer	127952	3.36936	25.2772	0.133296	-2.66761	21.962	0.121465
max HPE	127952	3.36936	25.2772	0.133296	-2.66761	21.962	0.121465
max VPE	127400	1.9522	47.4334	0.0411566	-3.66448	52.6475	0.069604
min HPL	131645	1.16727	9.73199	0.119942	0.0884539	13.2684	0.00666651
min VPL	130085	1.36507	9.97127	0.1369	0.647128	12.2912	0.0526497

APV-I discontinuity events :

#	Epoch	duration	stable period
1	127358	242	2014

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	124850	496	10308
2	126371	1	1025
3	126375	1	3
4	126379	1	3
5	126383	1	3
6	126387	1	3
7	126391	1	3
8	126395	1	3

9	126558	160	162
10	127358	242	640

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	124850	496	10308
2	126371	1	1025
3	126375	1	3
4	126379	1	3
5	126383	1	3
6	126387	1	3
7	126391	1	3
8	126395	1	3
9	126558	160	162
10	127358	242	640

First Glance analysis

Duration	18000
Number of Samples	18000
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	2.0056
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
17639	17367	16734	0	16734

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.07801	2.07896	2.08191	NaN	2.08191
HPEscale 95%	NaN	6.09947	6.10704	NaN	6.10704
VPE 95%	1.59311	1.45827	1.34806	NaN	1.34806
VPEscale 95%	NaN	3.18532	2.23256	NaN	2.23256

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.98458	0.948693	0	0.948693

measurements	0.979944	0.964833	0.929667	0	0.929667
Operational	0.979944	0.964833	0.929667	0	0.929667

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	25	10	--	10
Long	--	1	3	--	3
Independent	--	1	3	--	3
P(disc.)	NaN	0.000863707	0.00268914	NaN	0.00268914
P(slide)	NaN	0.00535498	0.00466117	NaN	0.00466117

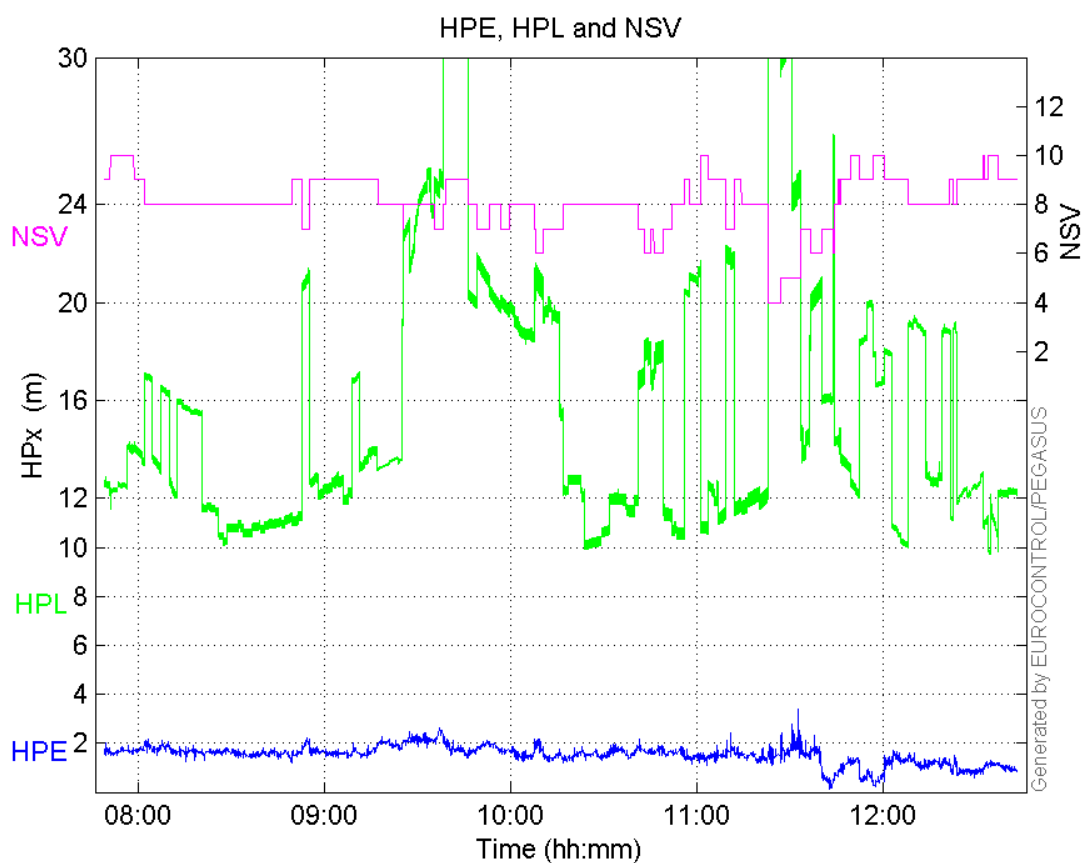
Integrity events :

	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

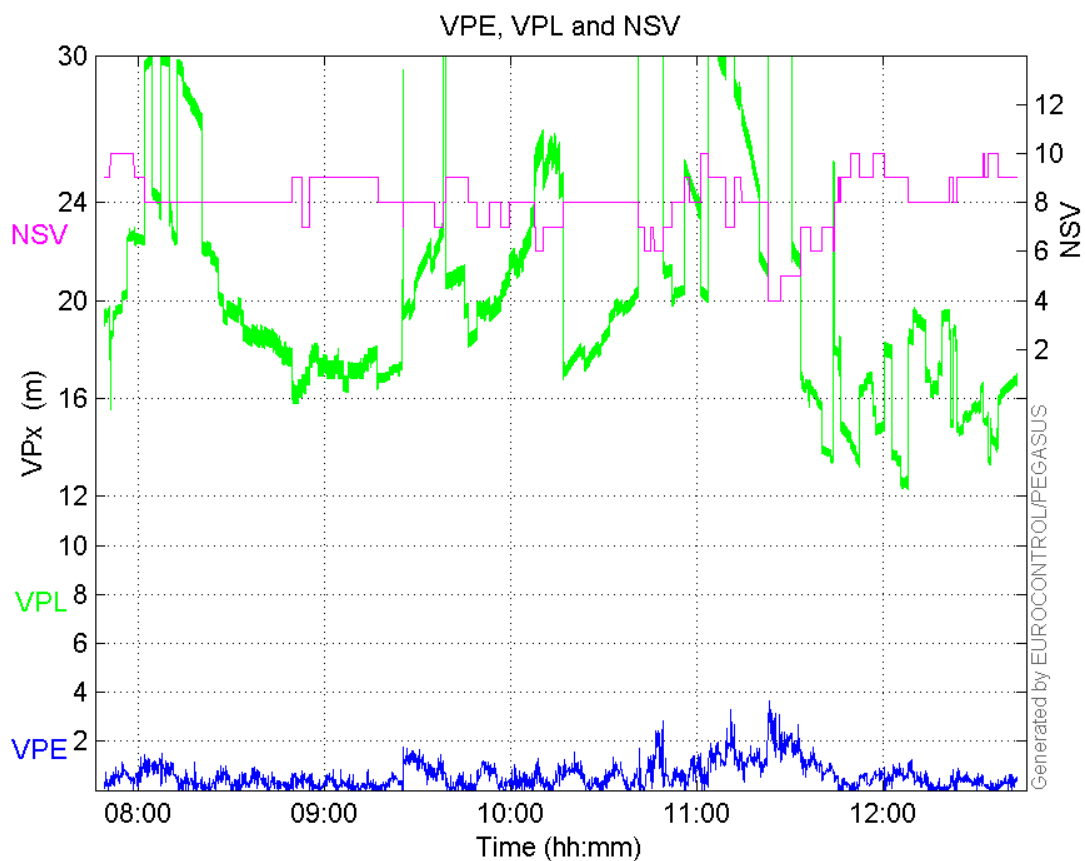
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	17639	17367	16734	0	16734
SIS Availability	1	0.98458	0.948693	0	0.948693
Local Availability	0.979944	0.964833	0.929667	0	0.929667
Operational Availability	0.979944	0.964833	0.929667	0	0.929667
HPE 95%	2.07801	2.07896	2.08191	NaN	2.08191
HPEscale 95%	NaN	6.09947	6.10704	NaN	6.10704
VPE 95%	1.59311	1.45827	1.34806	NaN	1.34806
VPEscale 95%	NaN	3.18532	2.23256	NaN	2.23256
All Discontinuity Events	--	25	10	--	10
Long Discontinuity Events	--	1	3	--	3
Independent Discontinuity Events	--	1	3	--	3
P(discontinuity)	NaN	0.000863707	0.00268914	NaN	0.00268914
P(sliding window)	NaN	0.00535498	0.00466117	NaN	0.00466117
All Integrity Events	0	0	0	0	0
Horizontal Integrity Events	0	0	0	0	0
Vertical Integrity Events	0	0	0	0	0

HPE, HPL and NSV:

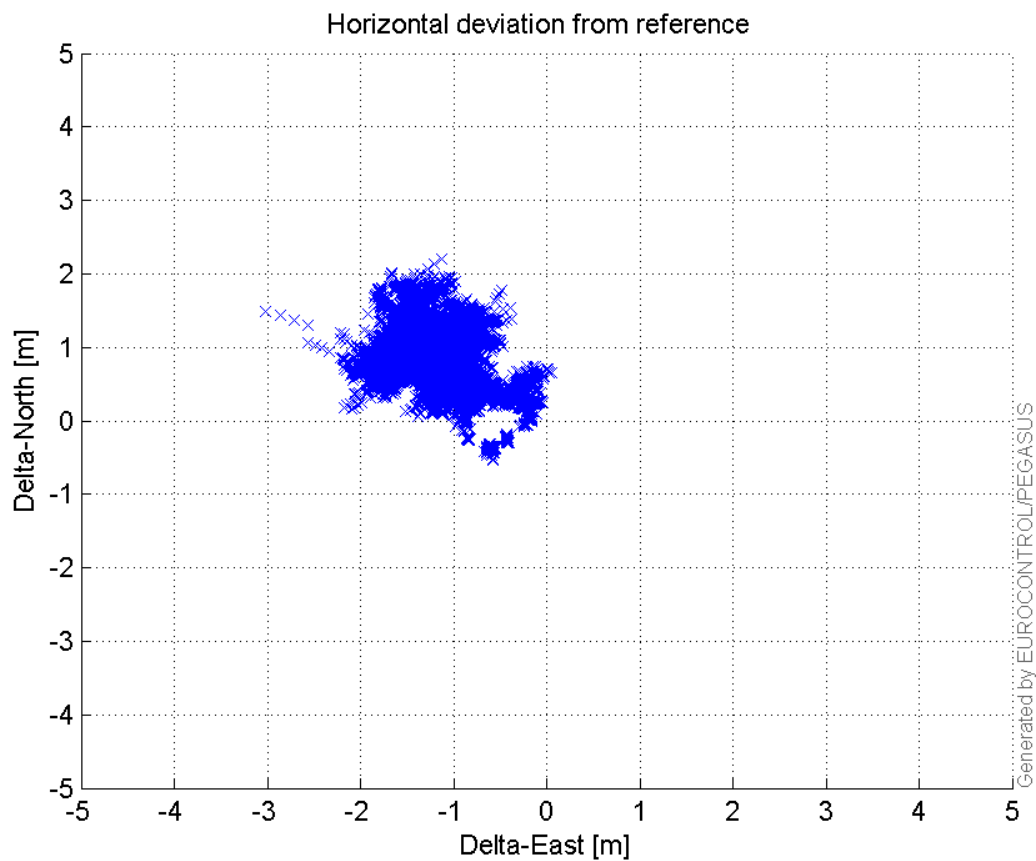


VPE, VPL and NSV:



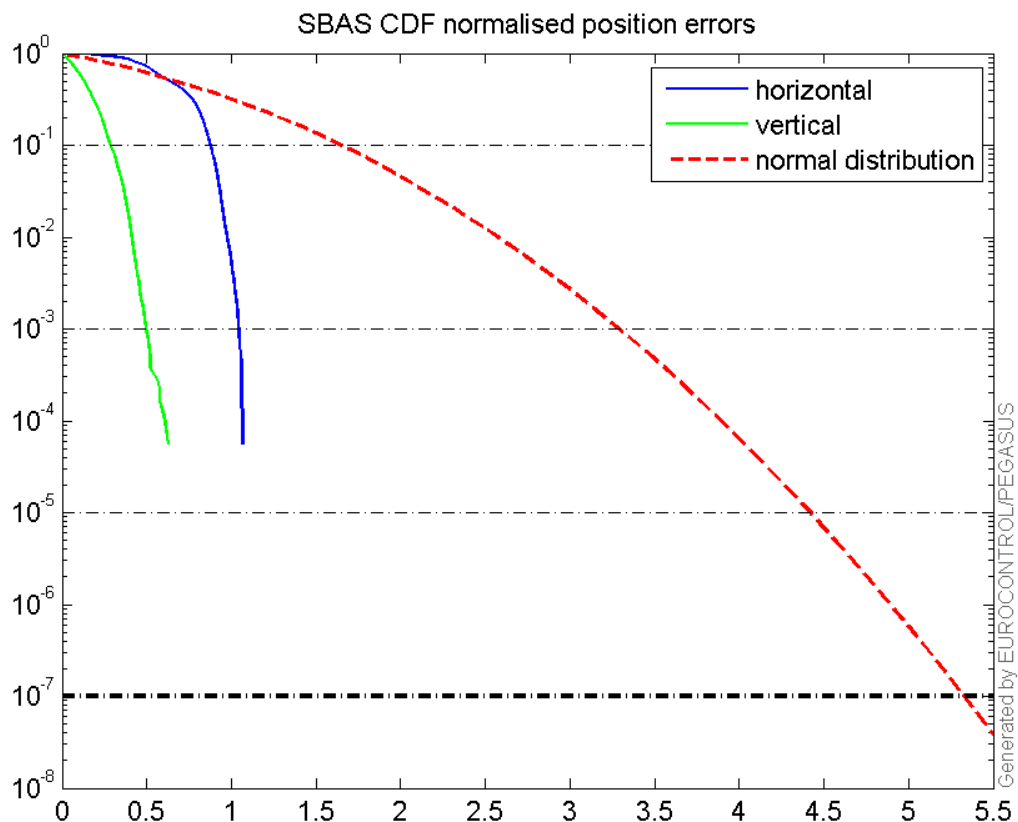
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

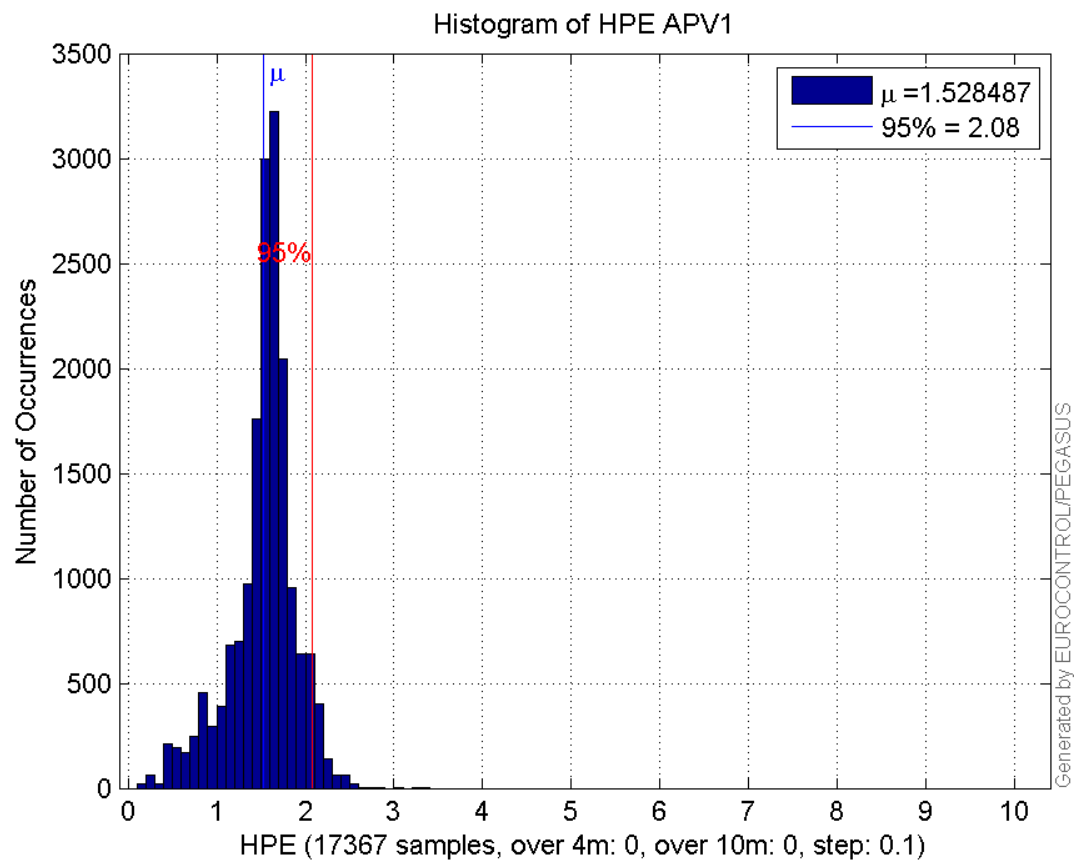
number	17367
sum	26545.235
sum2	42929.404
prctile95	2.0789588
prctile99	2.2772645
number	17367
sum	9953.9145
sum2	9338.3084
prctile95	1.4582698
prctile99	2.1015676
number	17367
sum	273204.29
sum2	4830155.4
prctile95	25.01064
prctile99	36.628343
number	17367
sum	362931.42
sum2	8253048.5
prctile95	32.393385
prctile99	46.285349
number	17367
sum	1825.0397
sum2	211.62507
prctile95	0.1524868
prctile99	0.16248235
number	17367

sum 469.18554
sum2 18.858998
prctile95 0.063706347
prctile99 0.07716467
number 16734
sum 25463.816
sum2 41073.534
prctile95 2.0819076
prctile99 2.2804631
number 16734
sum 9165.4811
sum2 7984.5117
prctile95 1.3480599
prctile99 1.8272754
number 16734
sum 261495.2
sum2 4610907.9
prctile95 25.09626
prctile99 36.651508
number 16734
sum 335465.61
sum2 7051236.7
prctile95 29.6363
prctile99 32.756028
number 16734
sum 1765.9712
sum2 206.04117
prctile95 0.1526759
prctile99 0.16273168
number 16734
sum 450.58977
sum2 18.075055
prctile95 0.063787339
prctile99 0.077243214

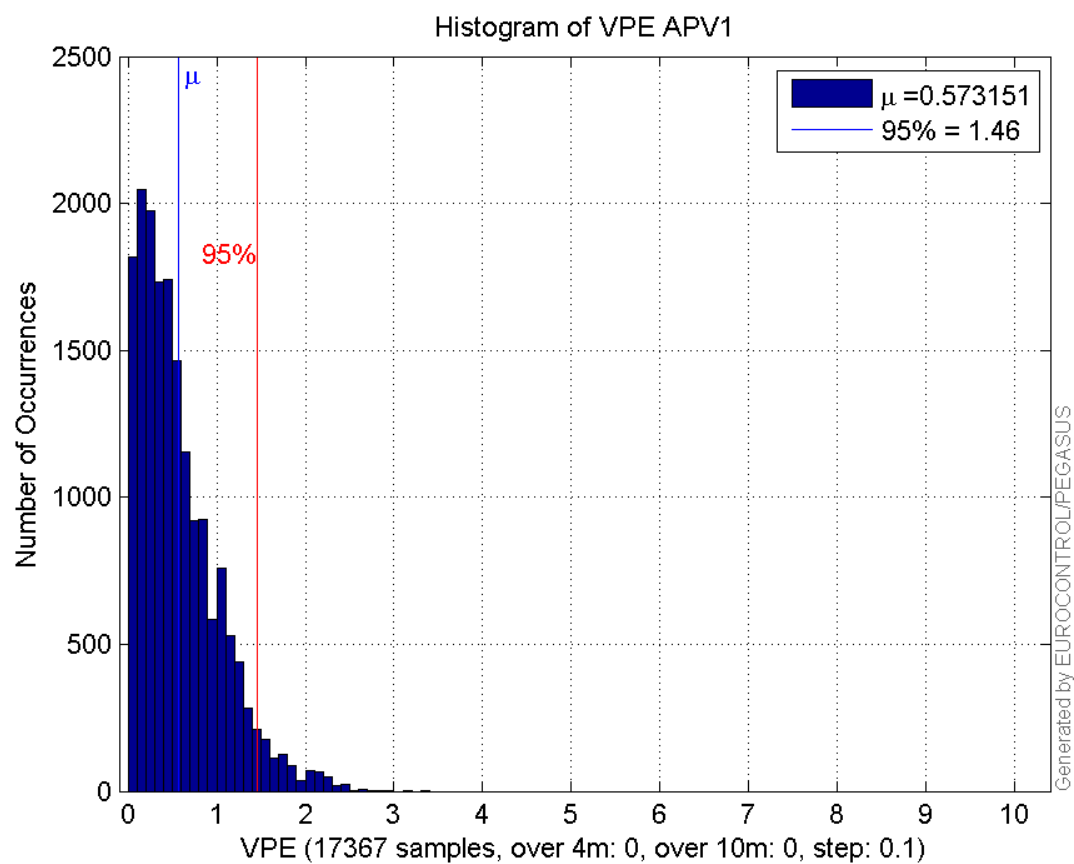
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.52849	0.36828	1.58403	2.07896	2.27726	1.57223
HPL	15.7312	5.53649	13.3598	25.0106	36.6283	16.677
VPE	0.573151	0.457399	0.460848	1.45827	2.10157	0.733283
VPL	20.8978	6.20485	19.4061	32.3934	46.2853	21.7994

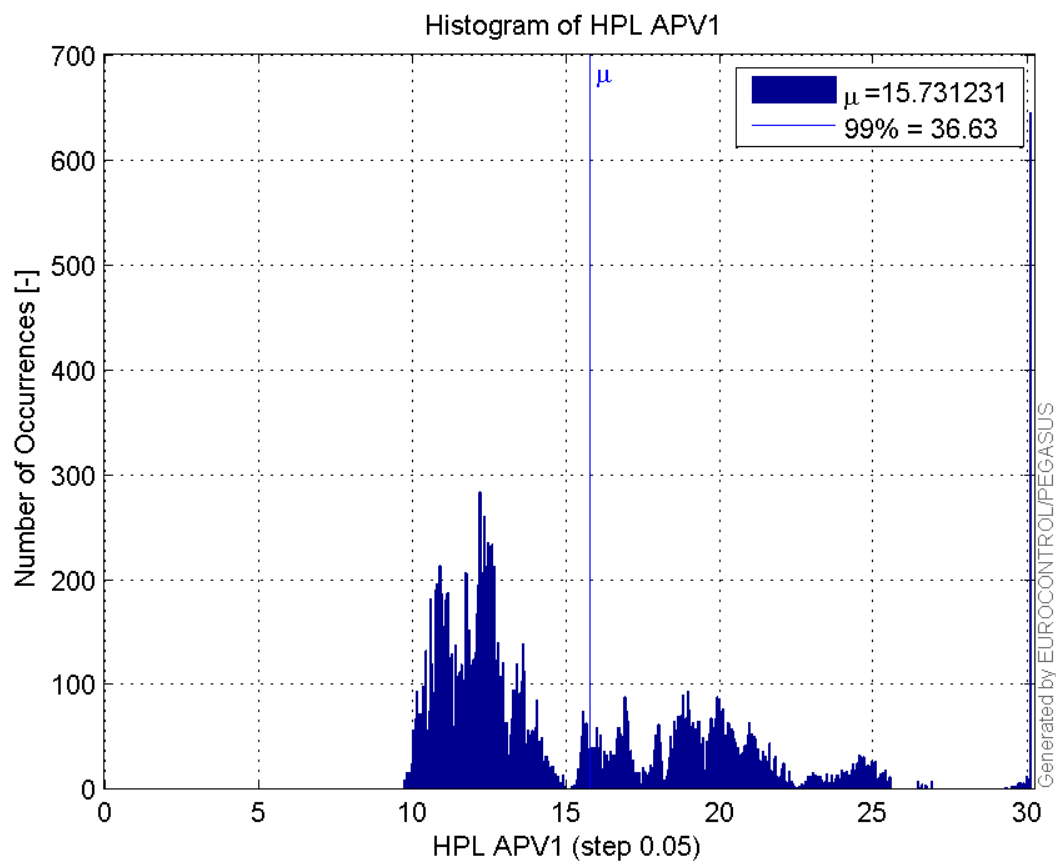
Histogram of HPE APV1:



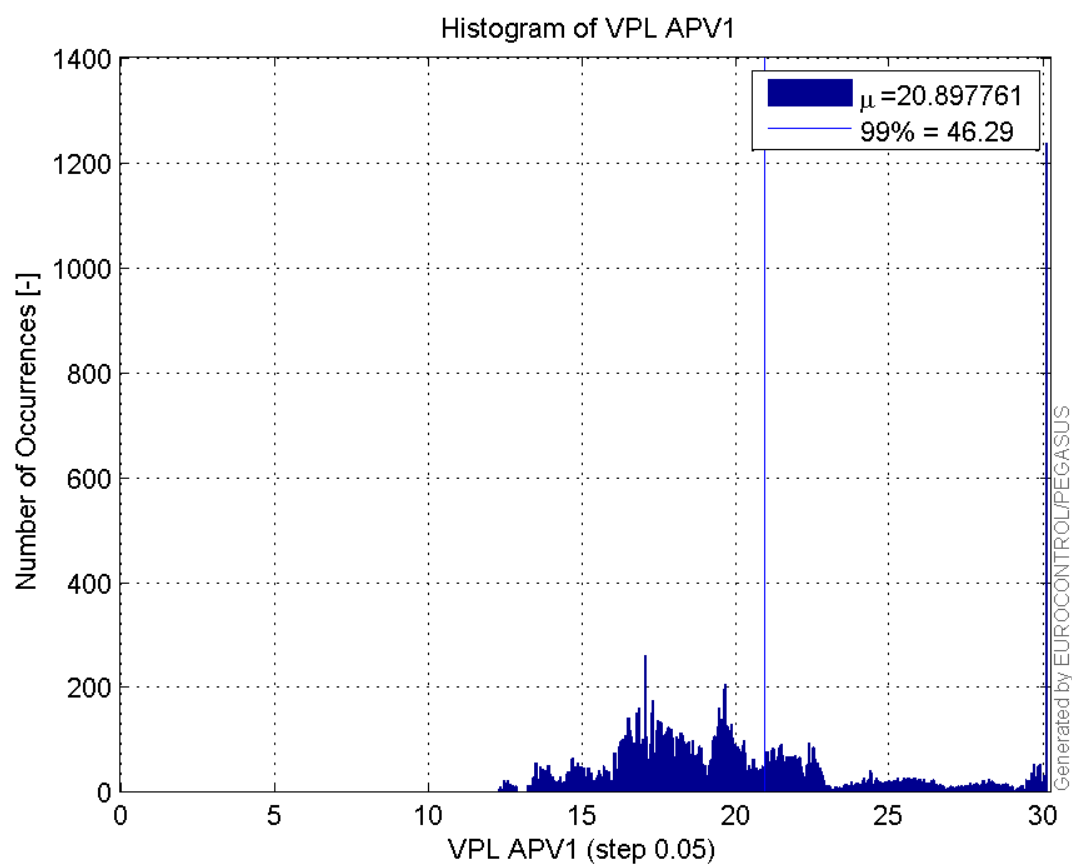
Histogram of VPE APV1:



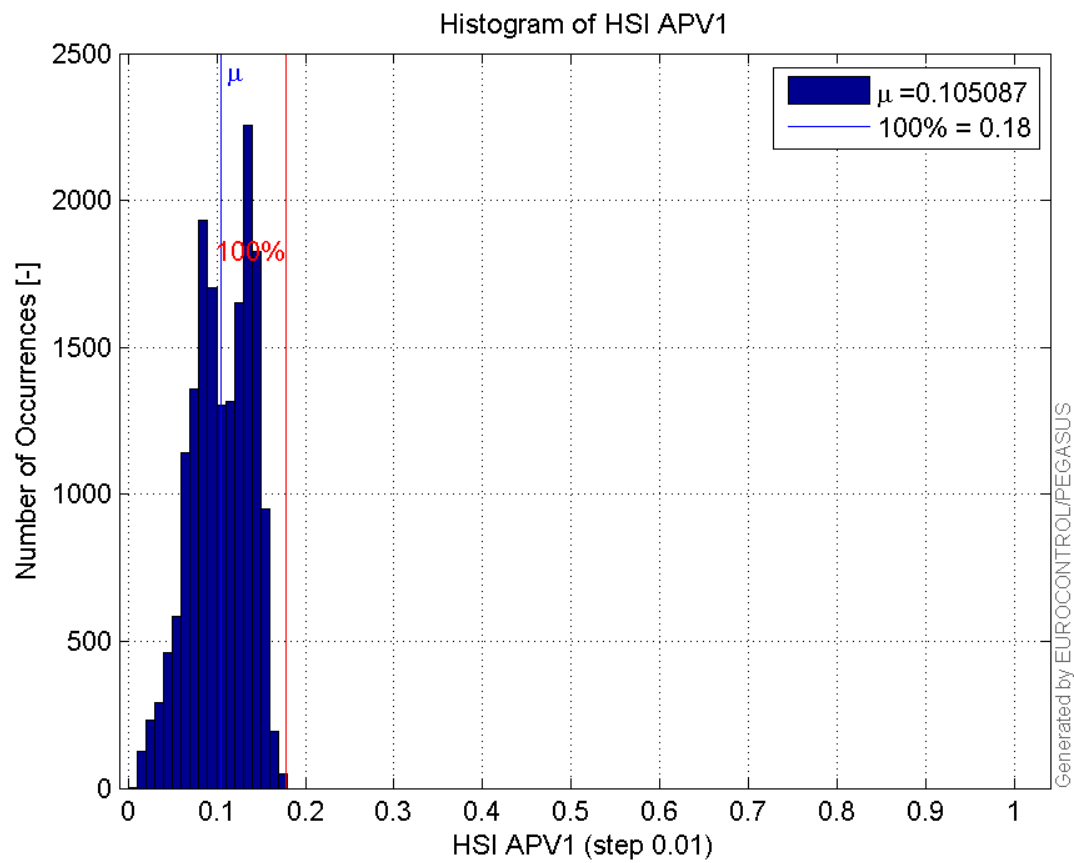
Histogram of HPL APV1:



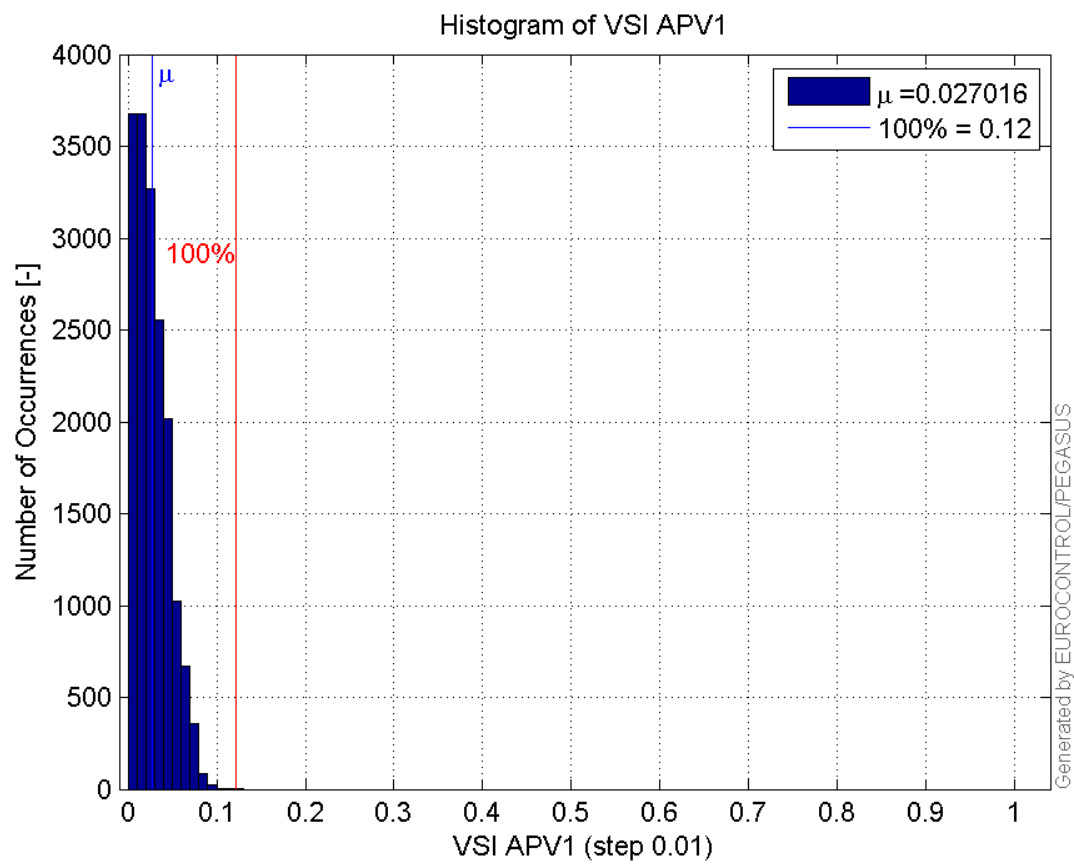
Histogram of VPL APV1:



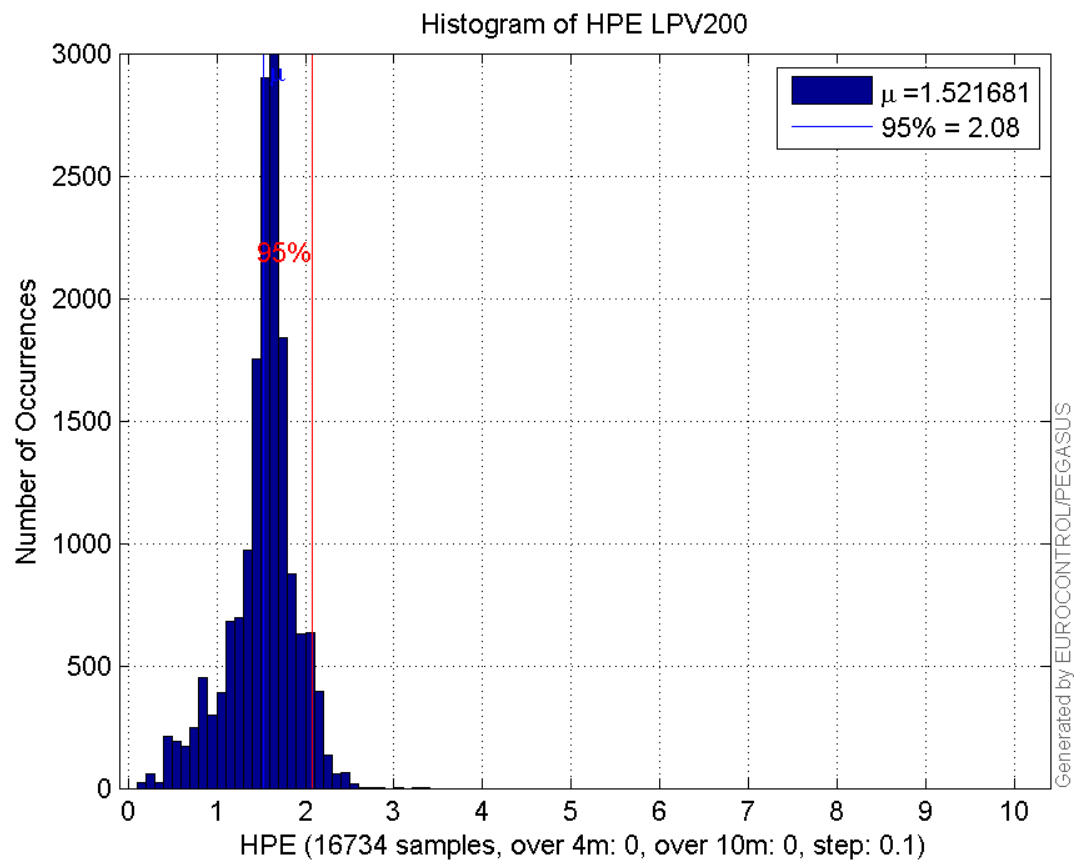
Histogram of HSI APV1:



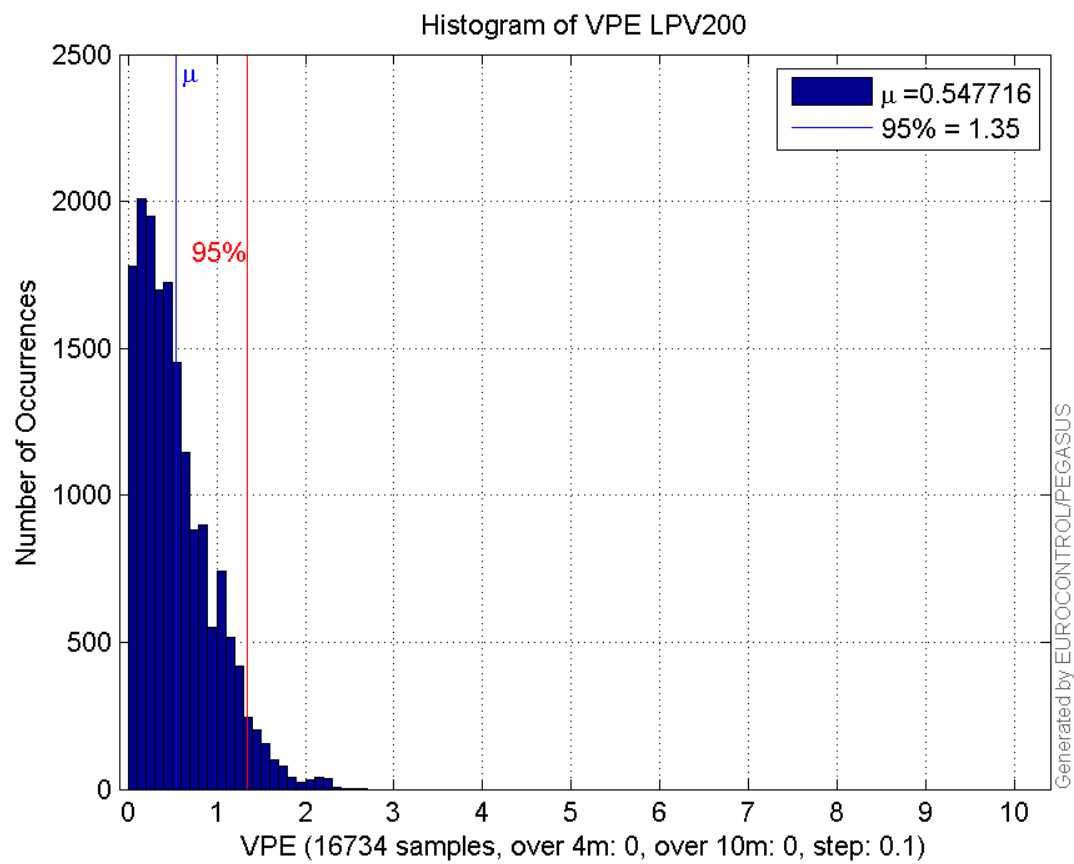
Histogram of VSI APV1:



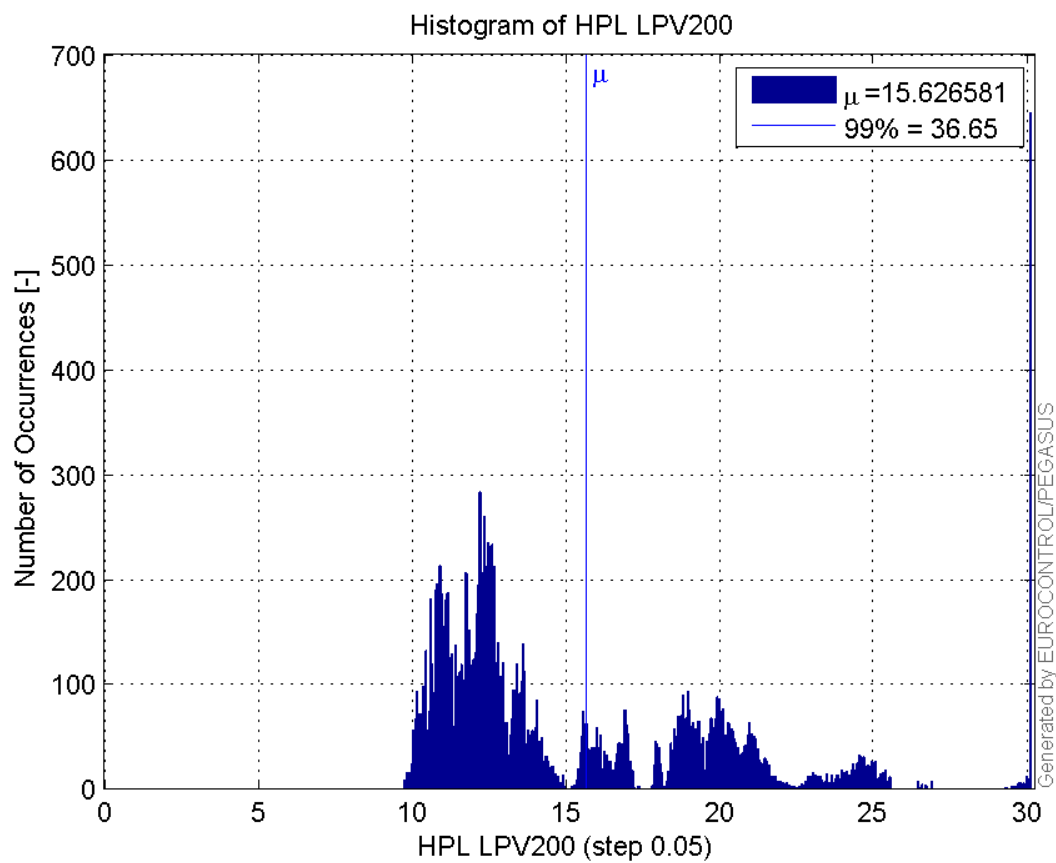
Histogram of HPE LPV200:



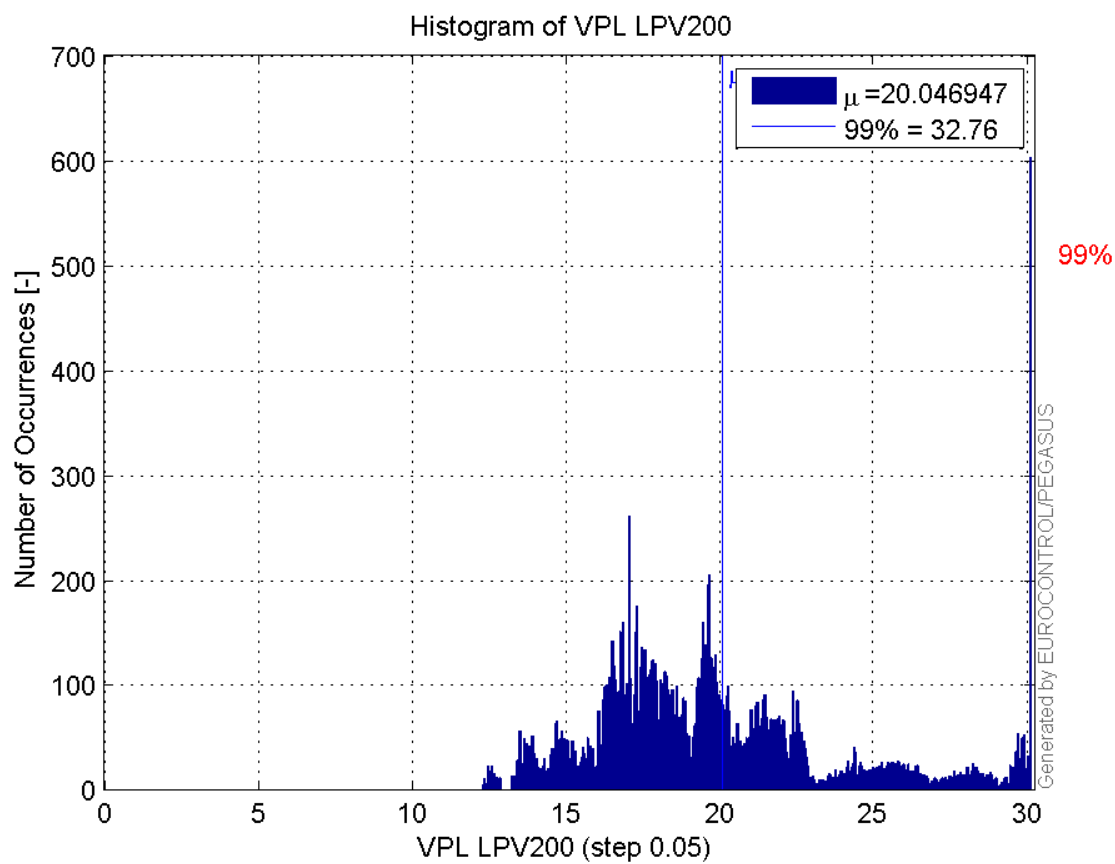
Histogram of VPE LPV200:



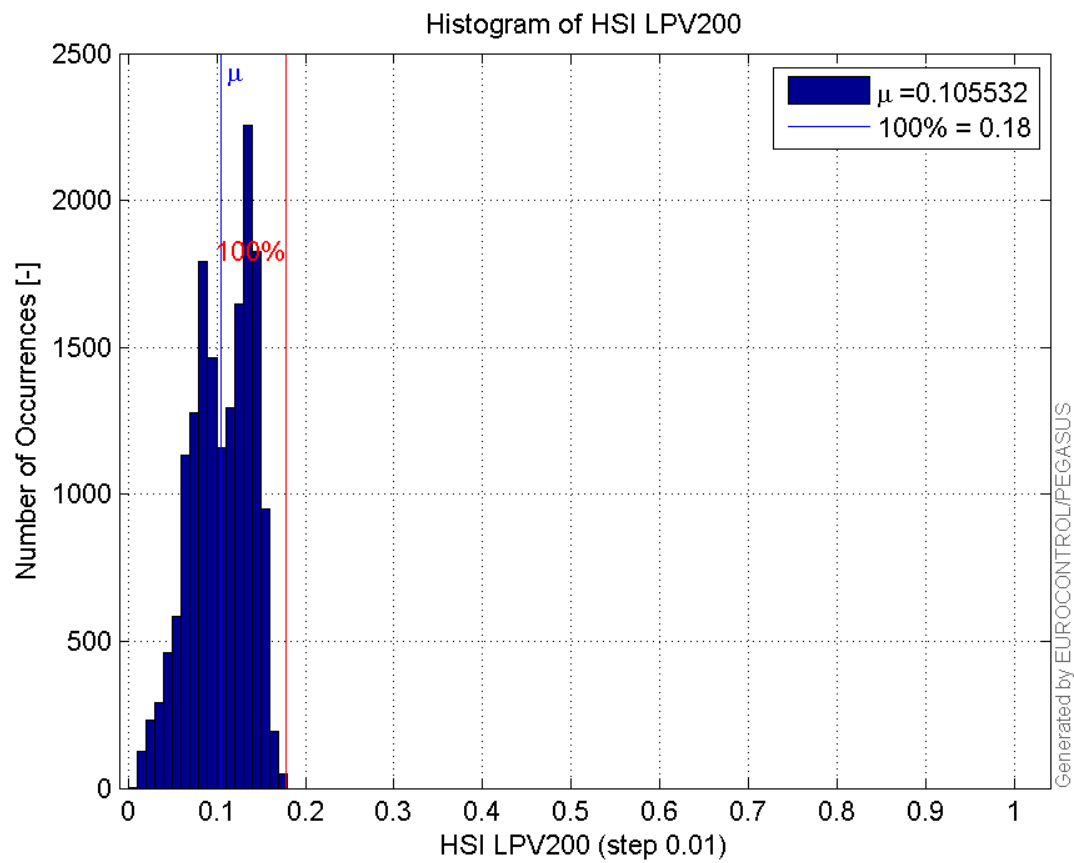
Histogram of HPL LPV200:



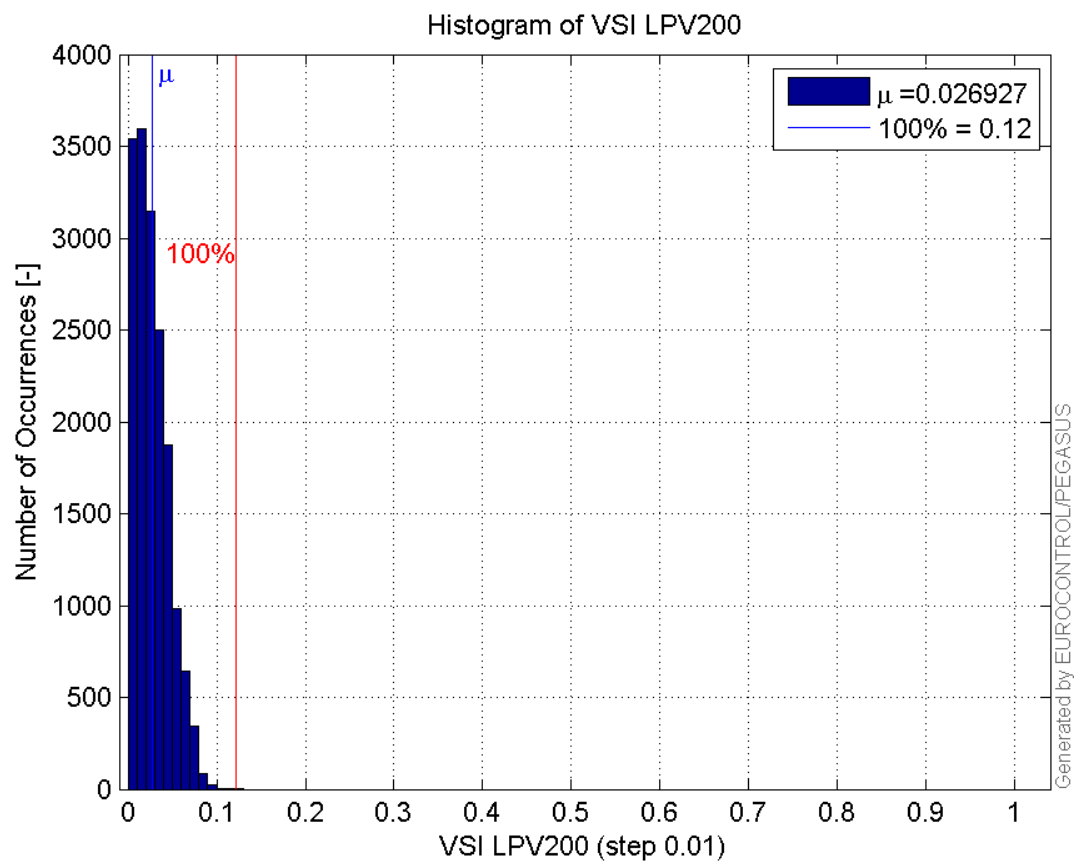
Histogram of VPL LPV200:



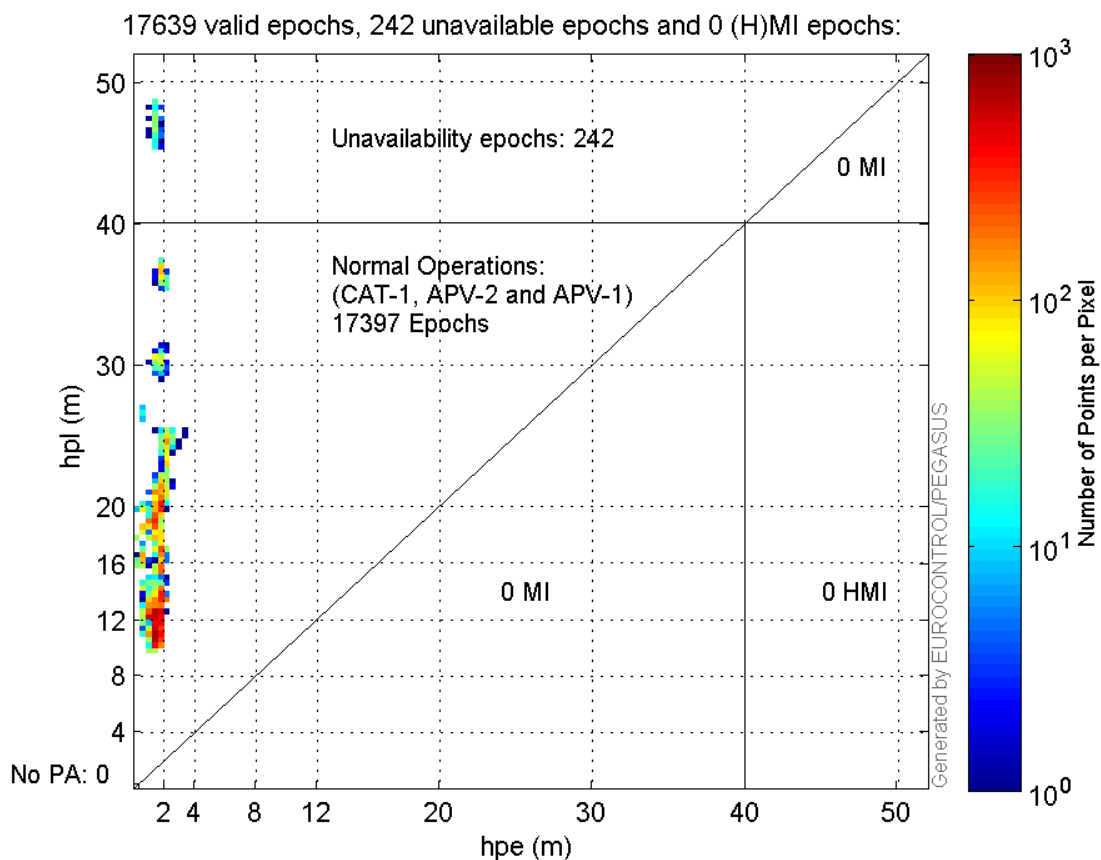
Histogram of HSI LPV200:



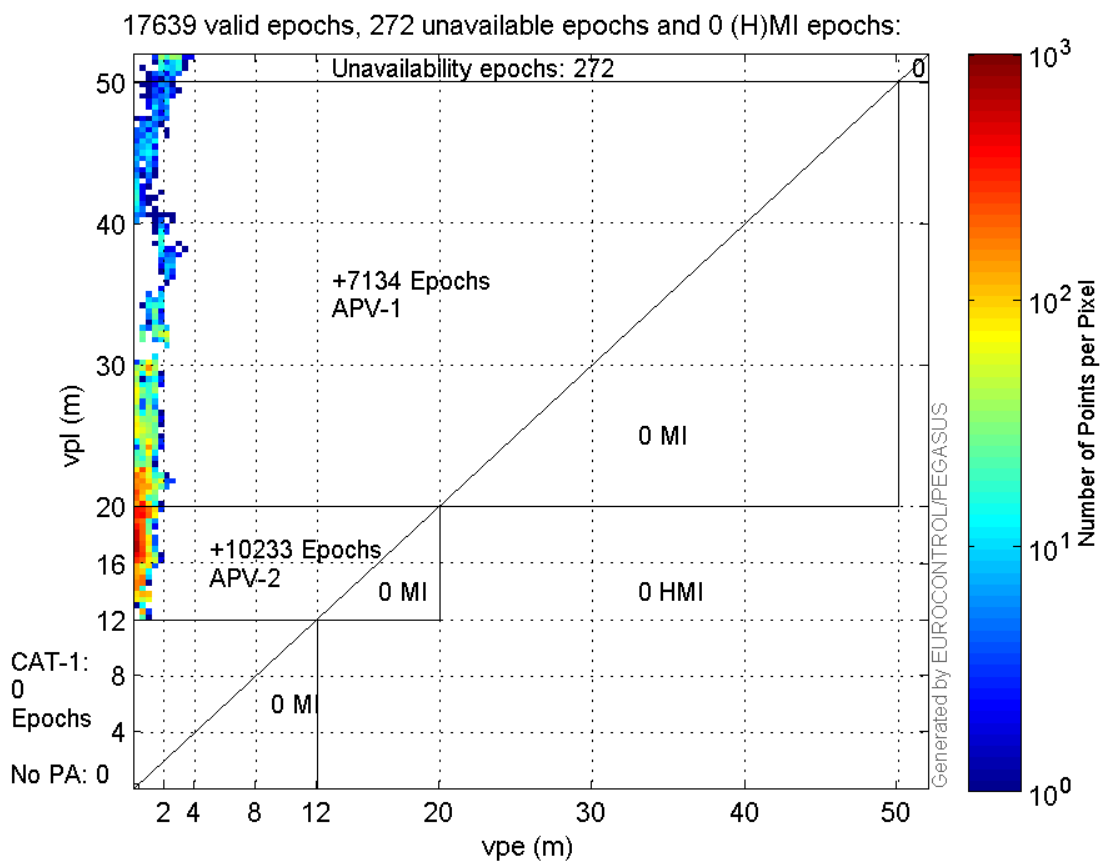
Histogram of VSI LPV200:



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_28/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_28/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	215.271
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	50.4389
init_lon	results	30.4297
init_alt	results	249.4065
mi_numbers	results	0

Range Domain

start: 07:43:01 28.09.2015 (week: 1864 sec: 114181)
end: 12:43:00 28.09.2015 (week: 1864 sec: 132180)
duration: 05:00:00 ..

quality

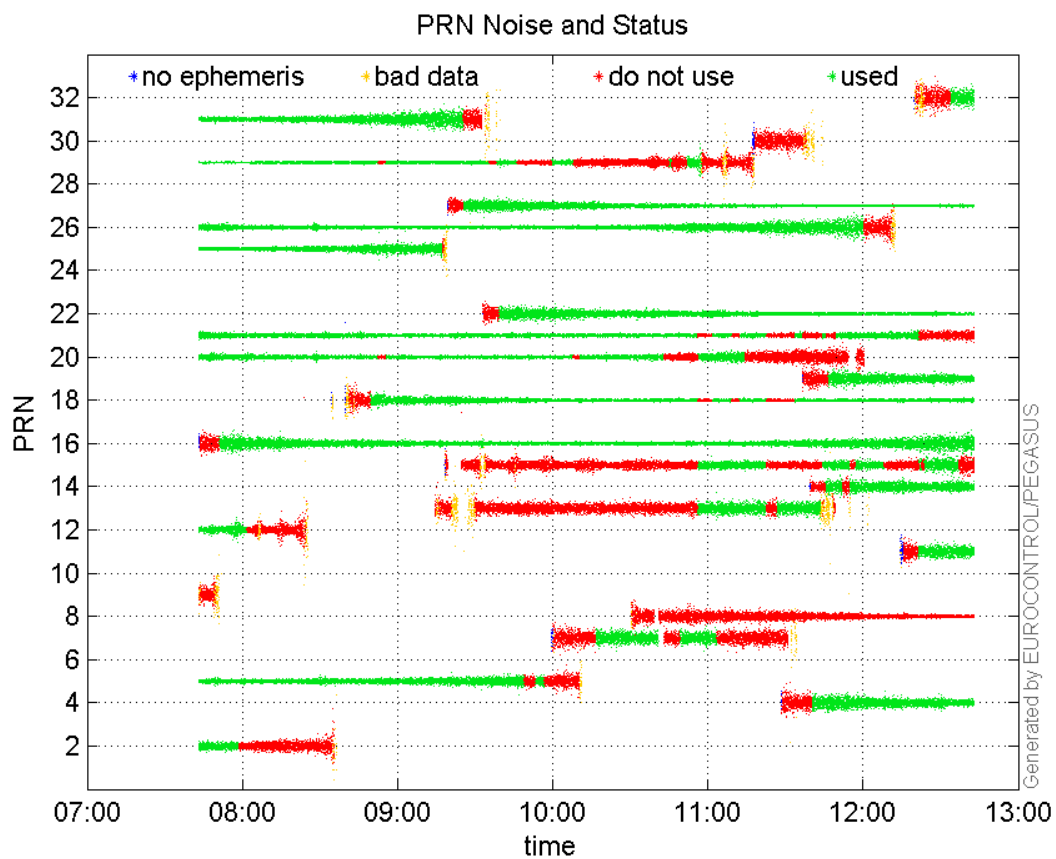
valid samples 18000
total samples 18000

PRN overview

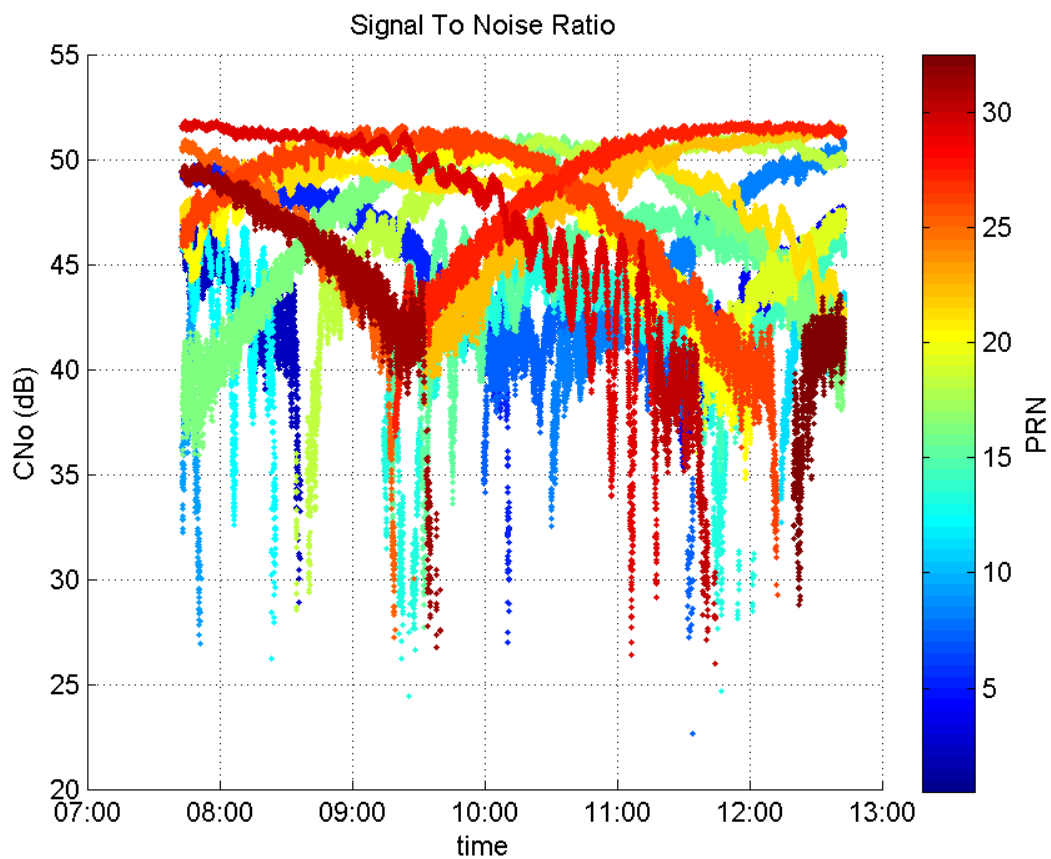
Number of Visible GPS Satellites 24
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



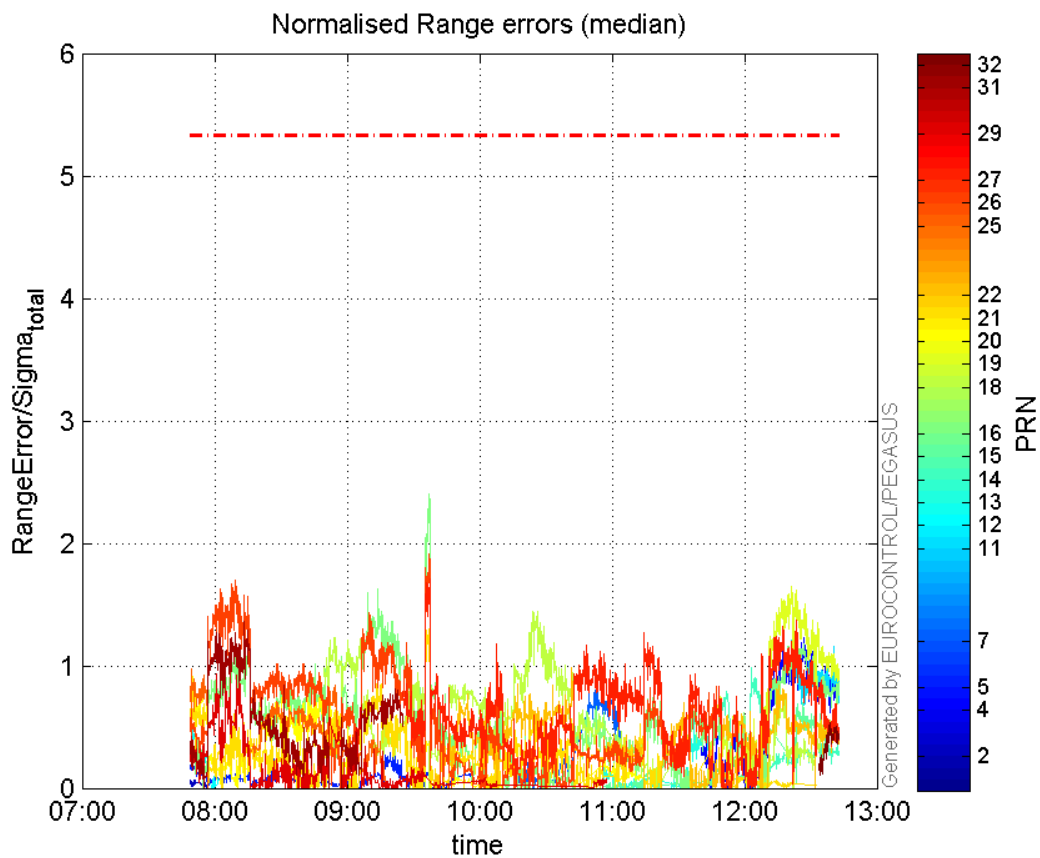
range errors

Number of Overbounding Norm Errors 0

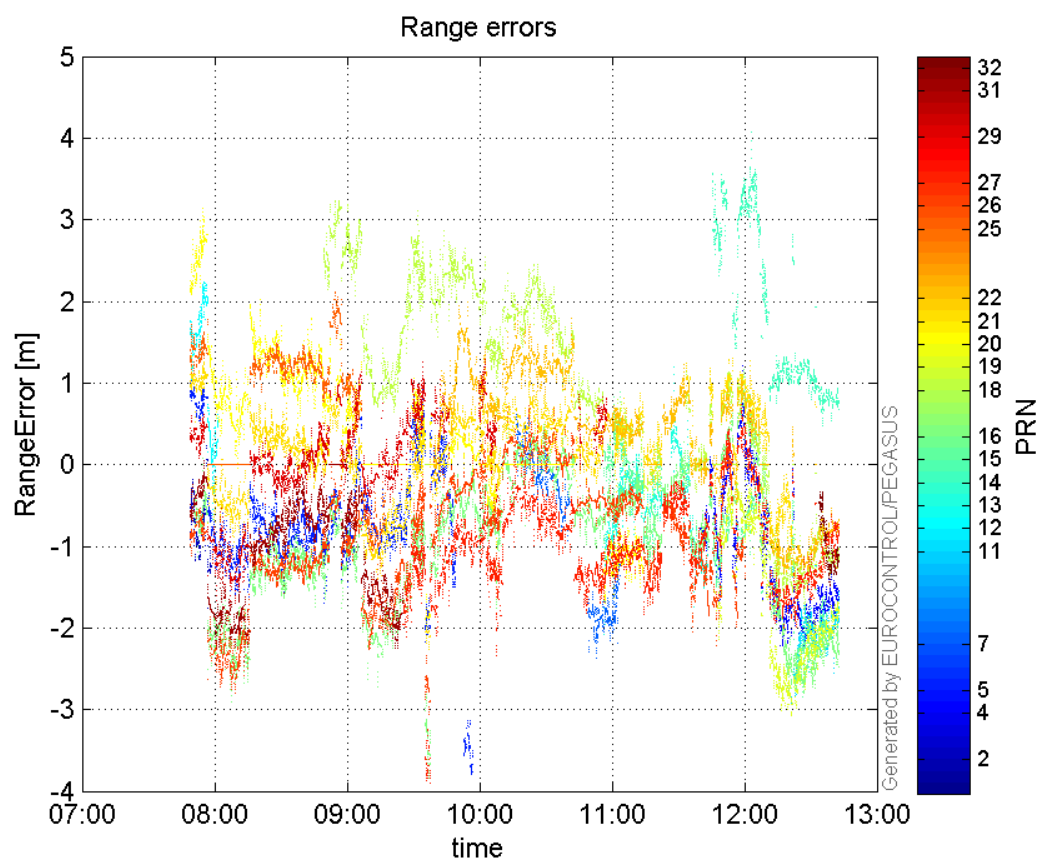
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1864	115016	2	0.0746716	-1.75494	23.5021
1864	131223	4	1.2283	-2.27706	1.85384
1864	119978	5	0.291243	-1.16939	4.01518
1864	125573	7	0.865018	-2.37611	2.7469
1864	130883	11	1.21393	-3.06153	2.52199
1864	114542	12	0.537464	1.7624	3.2791
1864	128234	13	0.583738	-1.73804	2.97742
1864	129794	14	0.987782	4.07972	4.13018
1864	130950	15	0.775757	-2.43894	3.14395
1864	121026	16	2.40727	-3.74057	1.55386
1864	123980	18	1.44426	2.363	1.63613
1864	130881	19	1.65282	-3.02866	1.83242
1864	114612	20	0.909114	2.75972	3.03562
1864	121036	21	1.30226	-2.23685	1.71767
1864	124888	22	0.98571	1.78969	1.81564
1864	114576	25	0.970204	1.71247	1.76506
1864	121034	26	1.91568	-2.96999	1.55036
1864	121053	27	1.706	-3.9075	2.29045
1864	115623	29	1.03631	-1.72969	1.66909
1864	116000	31	1.35766	-2.41489	1.77871
1864	131935	32	0.535433	-1.48713	2.77742

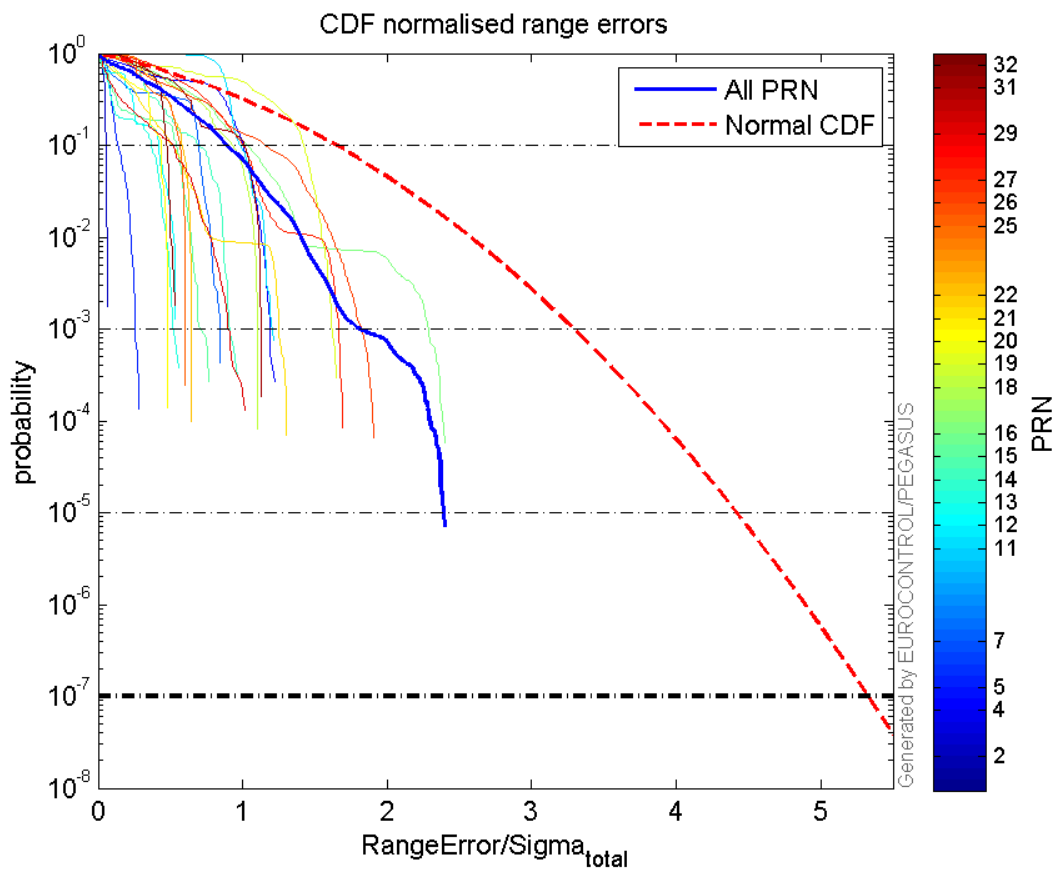
 Normalised Range errors (median):



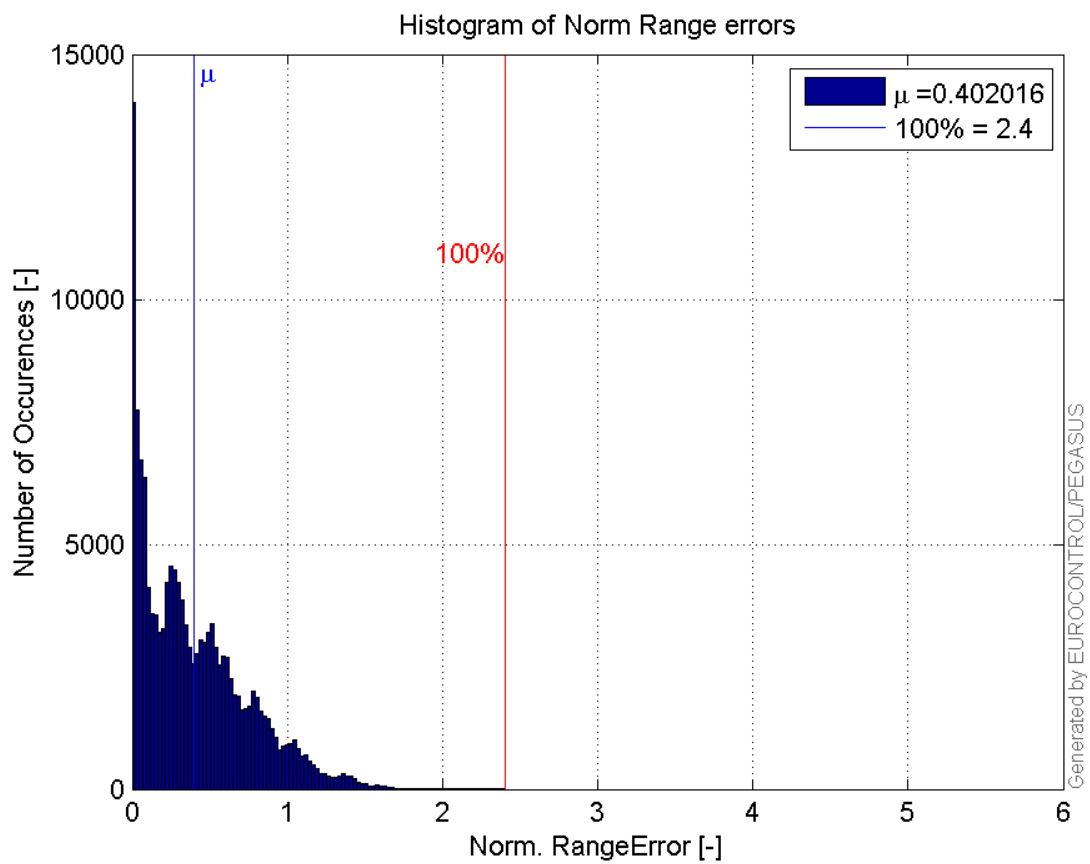
Range errors:



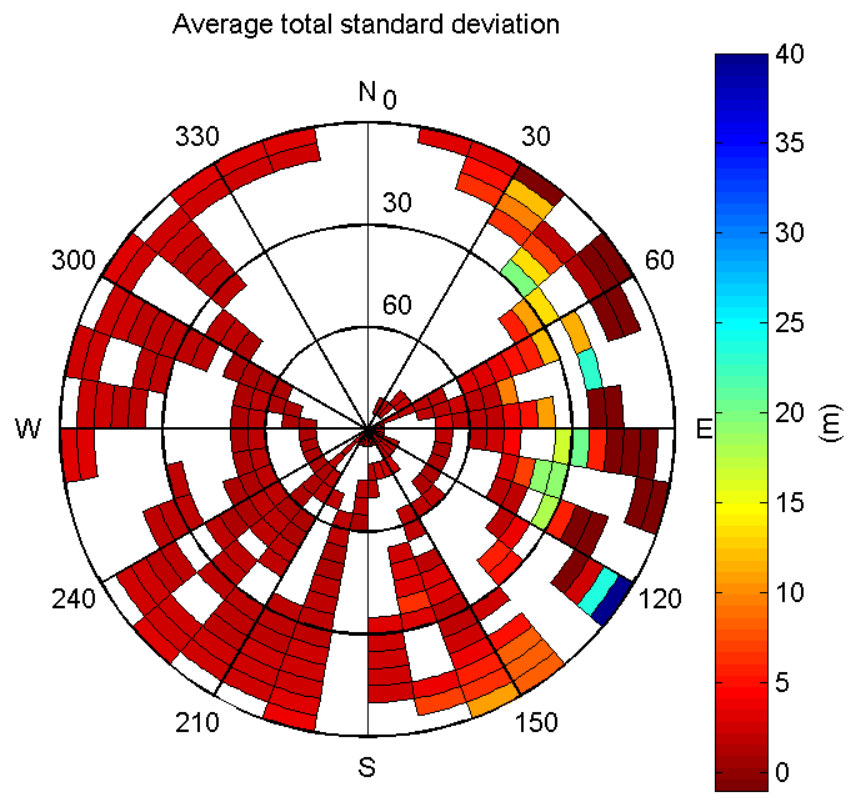
CDF normalised range errors:



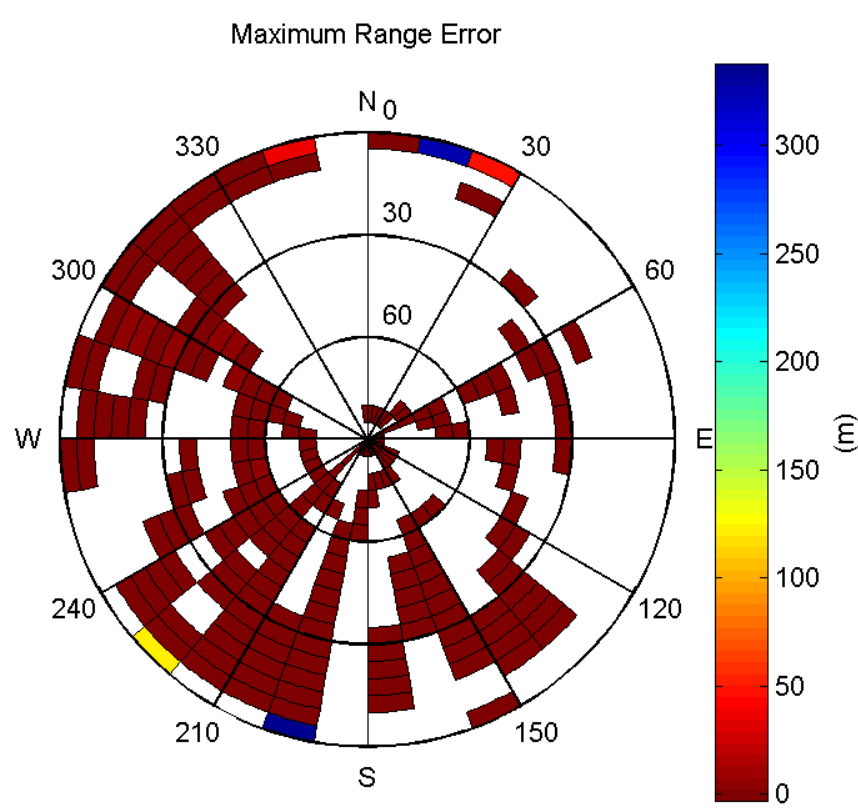
Histogram of Norm Range errors:



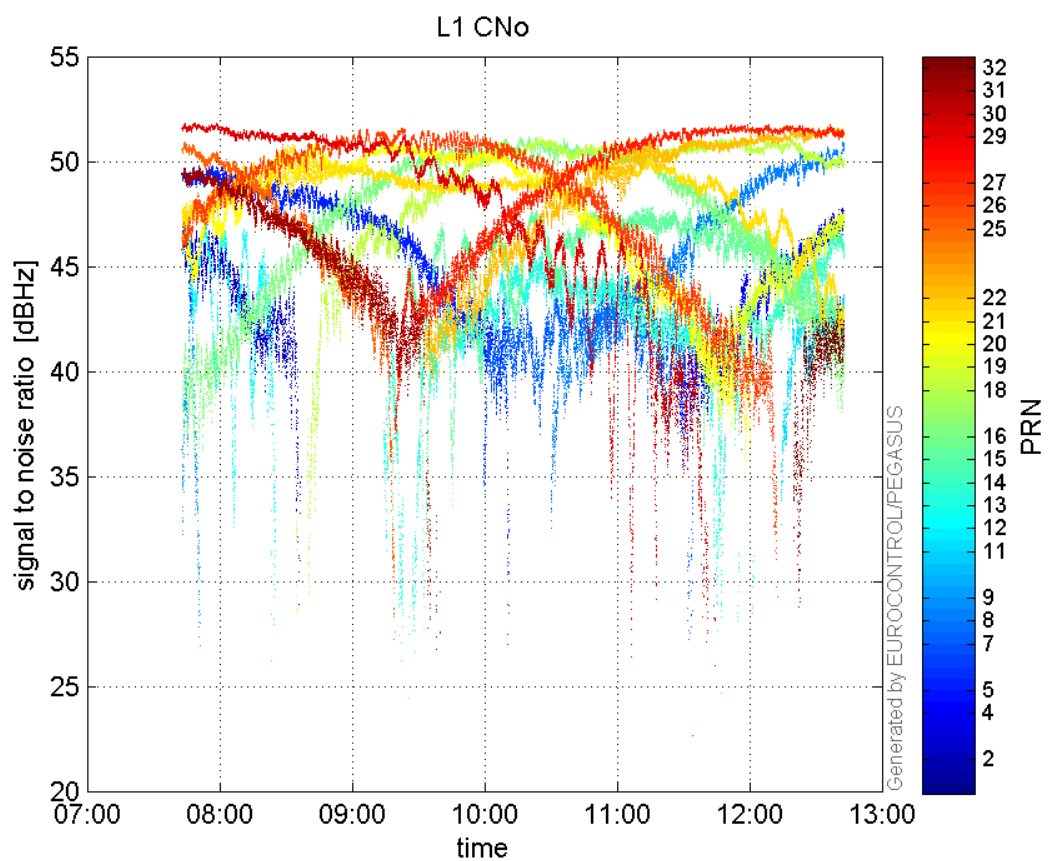
Sigma Sky Plot:



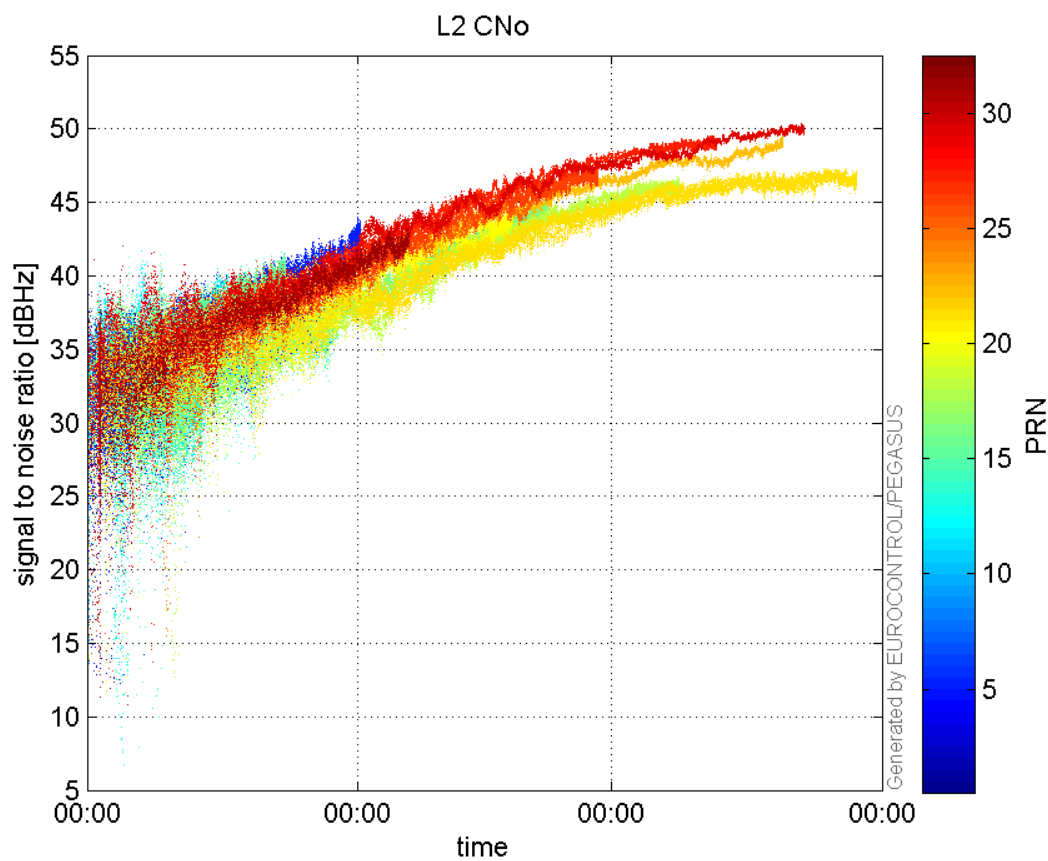
Norm Error Sky Plot:



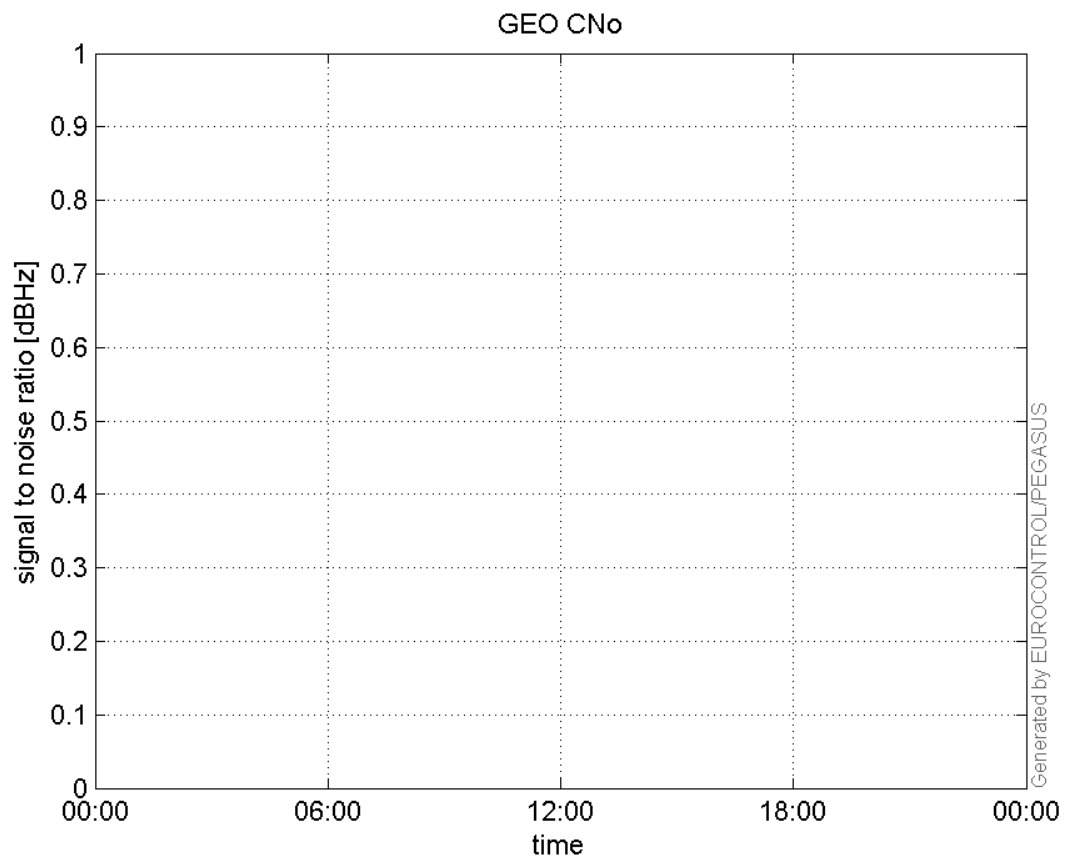
L1 CNo:



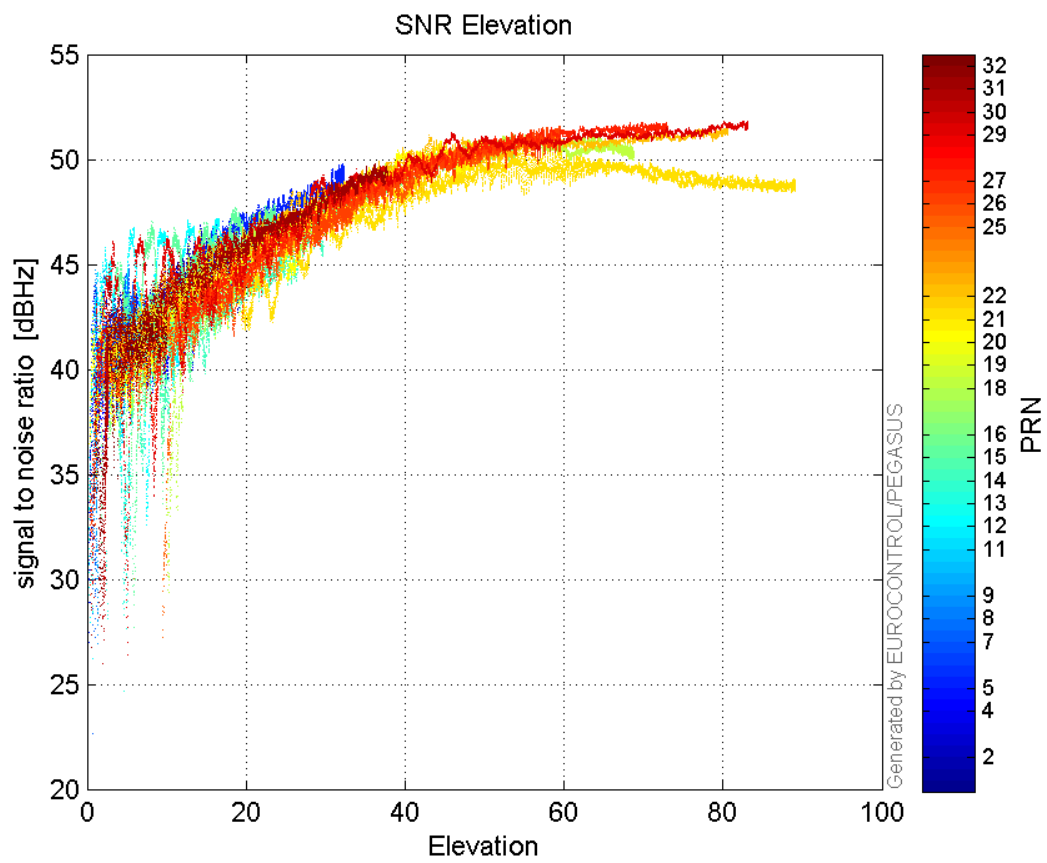
L2 CNo:



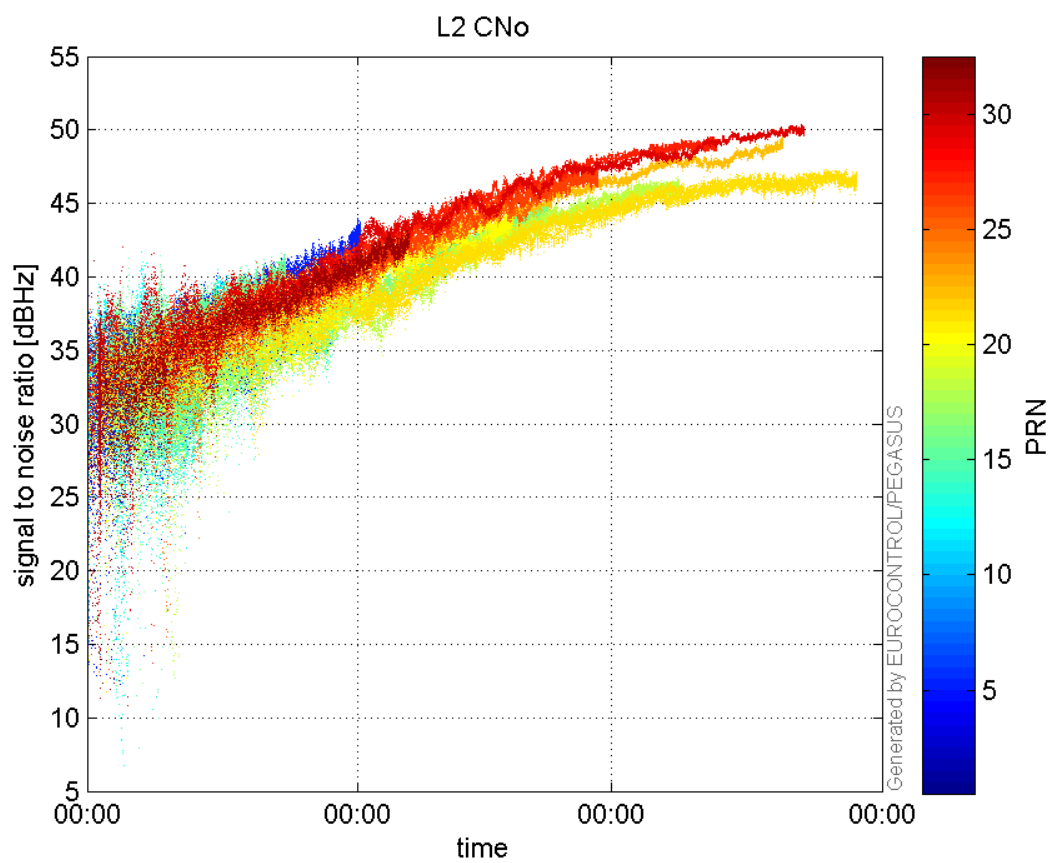
GEO CNo:



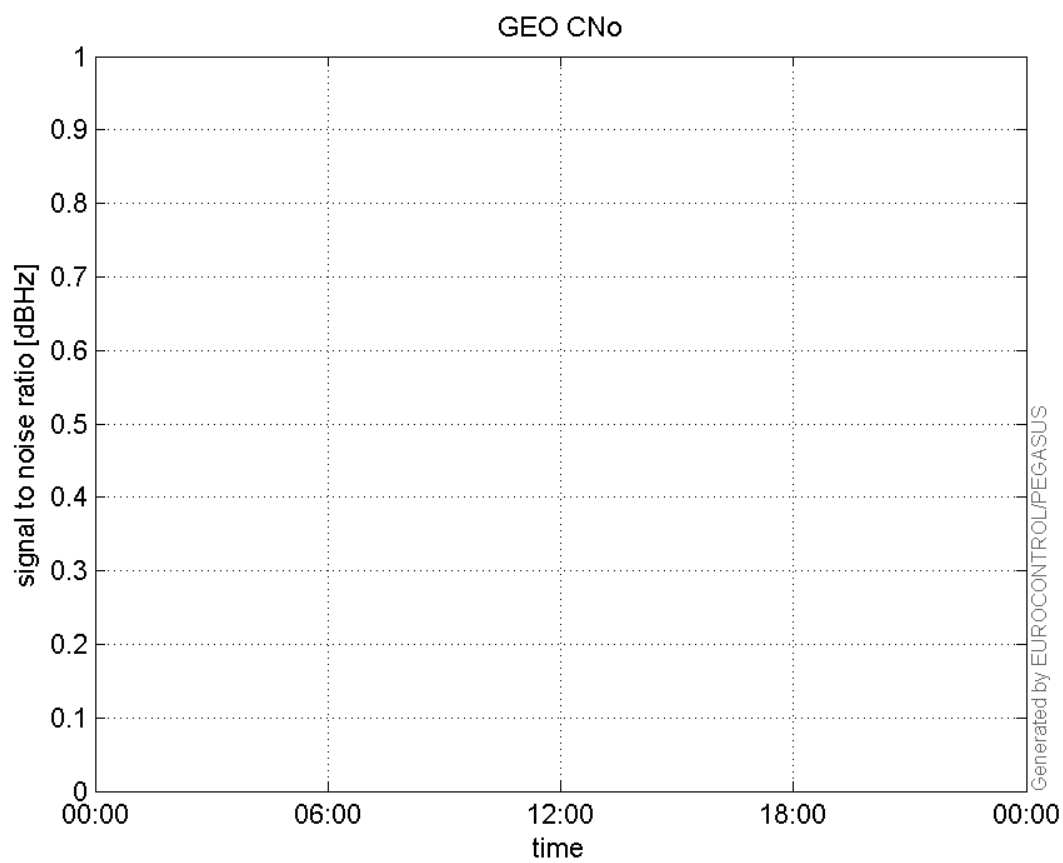
SNR Elevation:



L2 CNo:

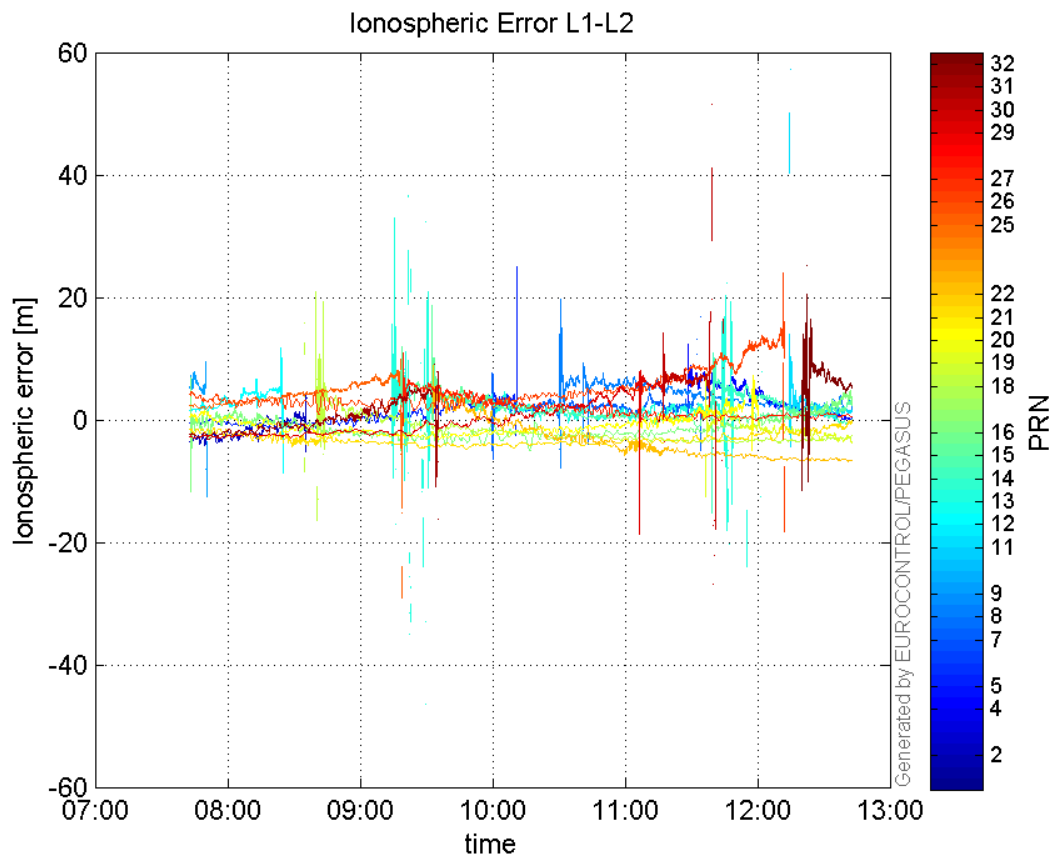


GEO CNo:



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_28/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_28/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	215.271
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	50.4389
init_lon	results	30.4297
init_alt	results	249.4065
mi_numbers	results	0