

Global View

version 4.7
 site NAU
 abbreviation Laboratory satellite systems
 country Kiev
 comment
 xsltemplate general
 reportname report
 date 16/10/2015

GNSS_Solution

quality

valid samples 0
total samples 0
PA samples 0

SBAS Messages

start: 07:42:47.129 05.10.2015 (week: 1865 sec: 114167.129)
end: 13:23:58.129 05.10.2015 (week: 1865 sec: 134638.129)
duration: 05:41:11 ..

quality

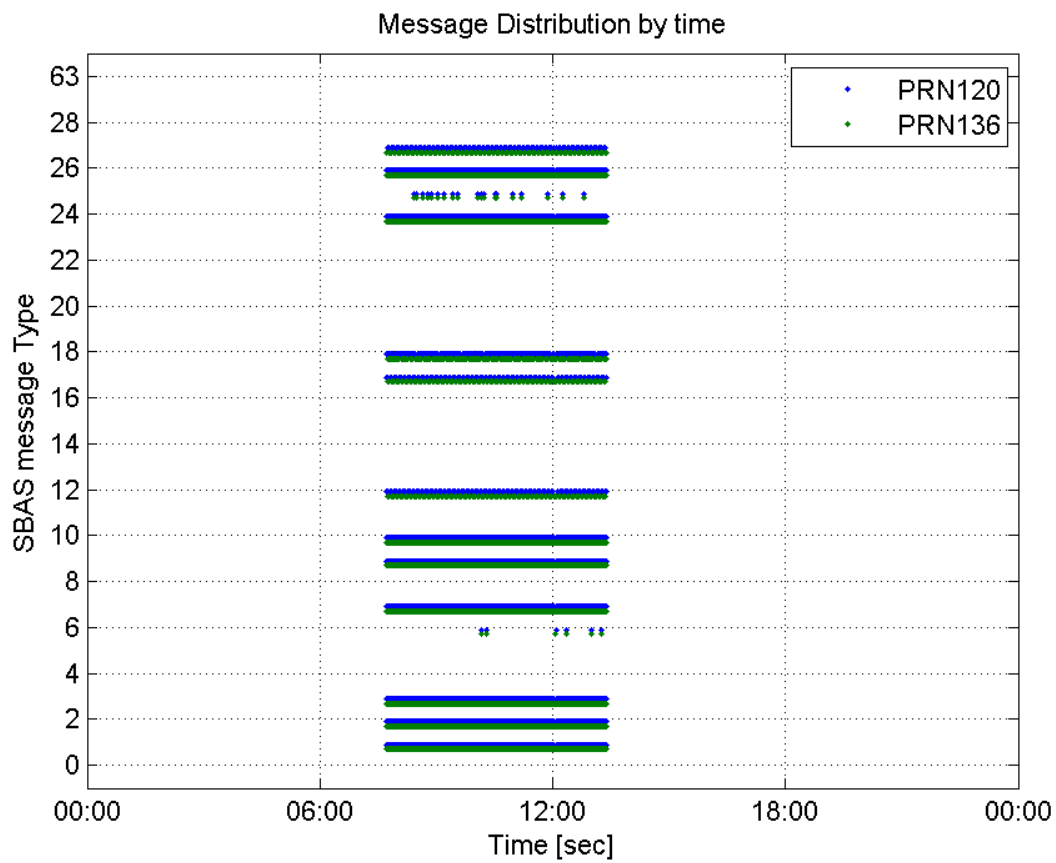
valid samples 40743
total samples 40743
number of SBAS PRNs 2

SBAS SIS Overview

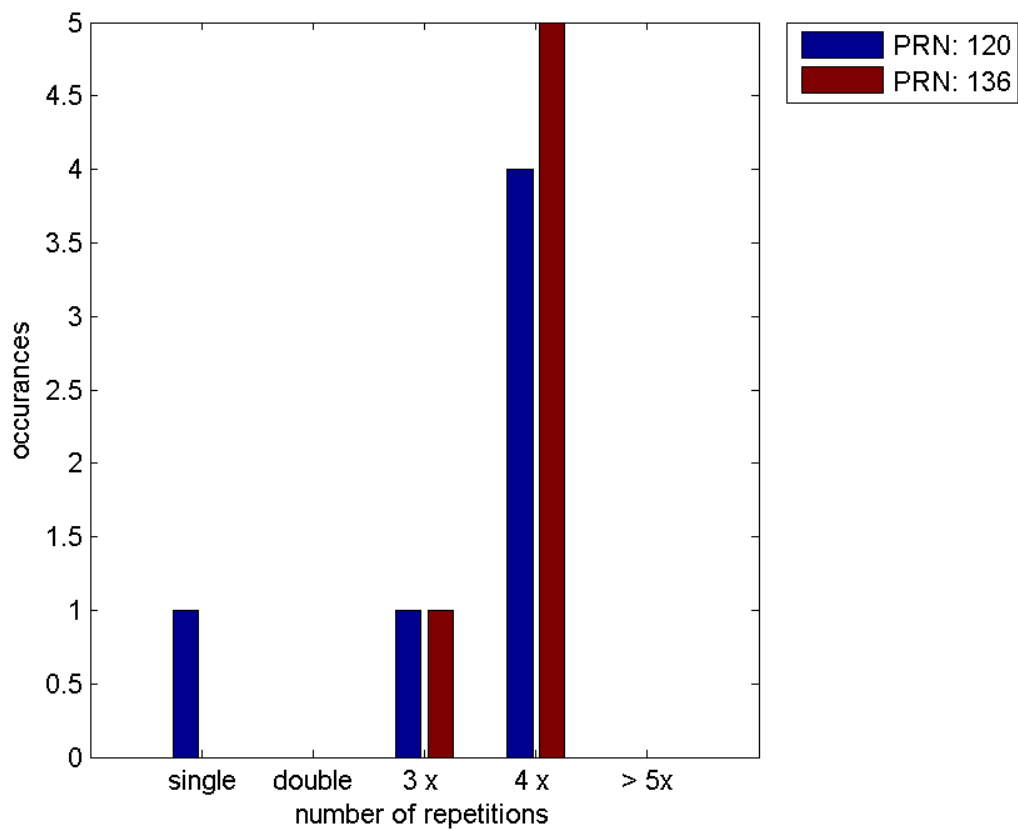
Message Type 6 repetitions :

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

Message Distribution by time:



Message Type 6 repetitions:



PRN 120

Broadcast SBAS Messages :

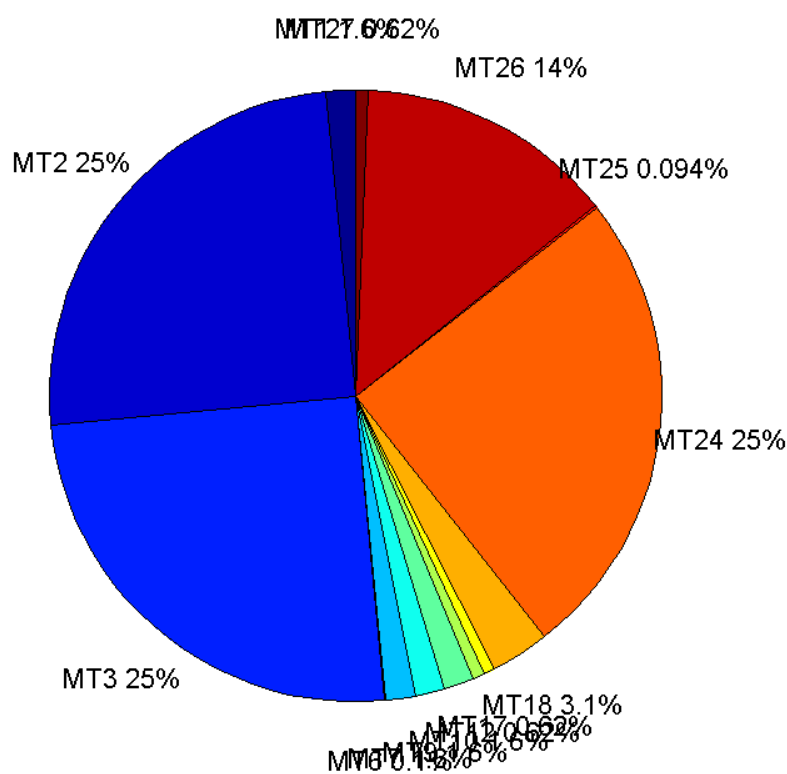
	number of messages	%
MT 0	0	0
MT 1	315	1.55394
MT 2	5061	24.9667
MT 3	5060	24.9618
MT 4	0	0
MT 5	0	0
MT 6	21	0.103596
MT 7	316	1.55888
MT 9	315	1.55394
MT 10	315	1.55394
MT 12	126	0.621578
MT 17	126	0.621578
MT 18	630	3.10789
MT 24	5060	24.9618
MT 25	19	0.09373
MT 26	2781	13.7191
MT 27	126	0.621578
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	20271	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	259	64.9204	1	0	0
MT 2	4	205	4.04526	6	1	1
MT 3	4	208	4.04606	6	1	1
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	6557	559.55	5	5	5
MT 7	64	259	64.9048	1	0	1
MT 9	64	325	65.1242	0	0	0
MT 10	64	259	64.9076	1	0	1
MT 12	159	485	163.144	125	1	1
MT 17	159	485	163.144	0	0	0
MT 18	4	301	32.4213	1	0	0
MT 24	4	204	4.04527	0	0	0
MT						

25	130	2403	879.556	0	0	0
MT 26	4	207	7.35576	0	0	0
MT 27	156	325	161.832	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

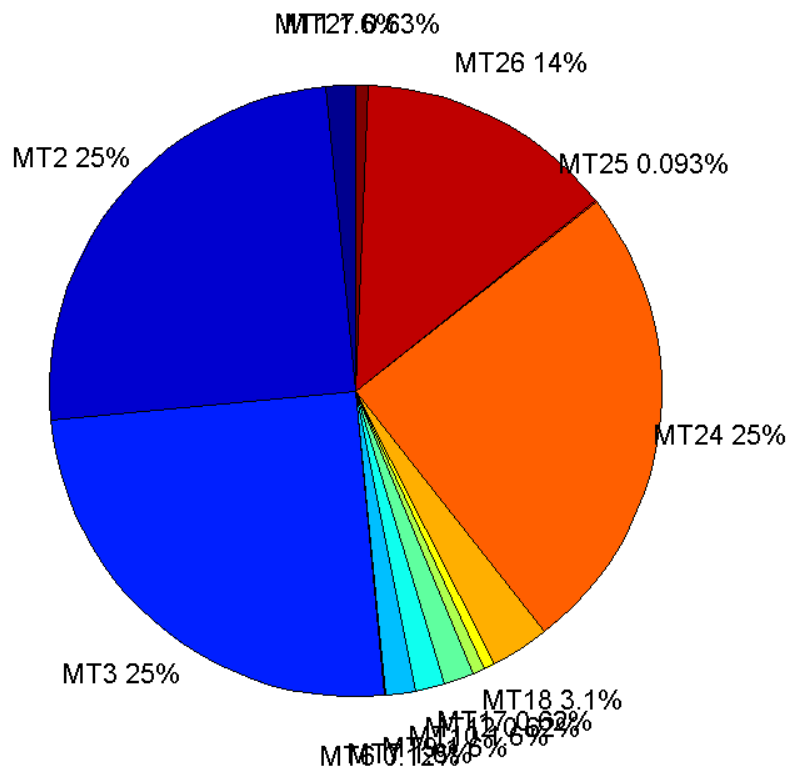
	number of messages	%
MT 0	0	0
MT 1	318	1.55334
MT 2	5110	24.9609
MT 3	5110	24.9609
MT 4	0	0
MT 5	0	0
MT 6	24	0.117233

MT 7	318	1.55334
MT 9	318	1.55334
MT 10	319	1.55823
MT 12	127	0.62036
MT 17	127	0.62036
MT 18	637	3.11157
MT 24	5110	24.9609
MT 25	19	0.0928097
MT 26	2807	13.7114
MT 27	128	0.625244
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	20472	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.3438	0	0	0
MT 2	4	8	4.00607	6	0	0
MT 3	4	8	4.00626	6	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	6380	486.435	5	5	5
MT 7	64	70	64.3438	0	0	0
MT 9	64	70	64.3312	0	0	0
MT 10	64	74	64.3553	0	0	0
MT 12	156	170	160.516	126	0	0
MT 17	156	170	160.516	0	0	0
MT 18	4	147	32.0645	0	0	0
MT 24	4	8	4.00626	0	0	0
MT 25	130	2403	879.556	0	0	0
MT 26	4	47	7.28902	0	0	0
MT 27	156	170	160.543	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_10_05/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/Egnos2015_10_05/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	14
Correction_mode	Configuration	SBAS MODE 0/2
Dual_Frequency	Configuration	no

GBAS Messages

quality

valid samples 0
total samples 0

Position Domain

start: 07:42:48 05.10.2015 (week: 1865 sec: 114168)
end: 13:23:59 05.10.2015 (week: 1865 sec: 134639)
duration: 05:41:12 ..

quality

valid samples 20111
total samples 20472

Event tables

Position discontinuity events type all
APV-I discontinuity events type all
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
max normHor	124048	2.0693	9.86189	0.209828	2.24606	18.808	0.11942
max normVer	132286	1.56285	11.701	0.133565	4.52171	20.63	0.219181
max HPE	119315	2.53445	36.6457	0.0691608	3.77181	32.4387	0.116275
max VPE	131054	1.72395	54.9562	0.0313695	4.88372	48.7228	0.100235
min HPL	122259	1.20557	8.40445	0.143445	2.59728	15.415	0.16849
min VPL	126873	0.506347	14.0655	0.0359992	1.5501	14.6646	0.105703

Position discontinuity events :

#	Epoch	duration	stable period
1	129736	269	15207

APV-I discontinuity events :

#	Epoch	duration	stable period
1	119394	10	4865
2	120011	356	607
3	129735	274	9368
4	130809	327	800

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	119394	10	4865
2	120011	356	607
3	129735	274	5187
4	130809	327	800

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	119394	10	4865
2	120011	356	607
3	129735	274	5187
4	130809	327	800

First Glance analysis

Duration	20472
Number of Samples	20472
Number of invalid sample	361
Number of no position solution samples	269
Number of missing sample	0
Logging Loss	0
Processing Loss	1.7634
Number of Misleading Information	0
Data gaps	0
Discontinuities	1

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
19842	19144	19113	0	19113

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.70972	1.70383	1.70393	NaN	1.70393
HPEscale 95%	NaN	5.60078	5.60087	NaN	5.60087
VPE 95%	3.97922	3.99149	3.99202	NaN	3.99202
VPEscale 95%	NaN	9.18522	6.43005	NaN	6.43005

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	0.986624	0.951917	0.950375	0	0.950375
measurements	0.969226	0.935131	0.933617	0	0.933617
Operational	0.969226	0.935131	0.933617	0	0.933617

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	1	4	20	--	20
Long	1	4	4	--	4
Independent	1	4	4	--	4
P(disc.)	0.000755972	0.00313414	0.00313922	NaN	0.00313922
P(slide)	0.000755972	0.00313414	0.00554596	NaN	0.00554596

Integrity events :

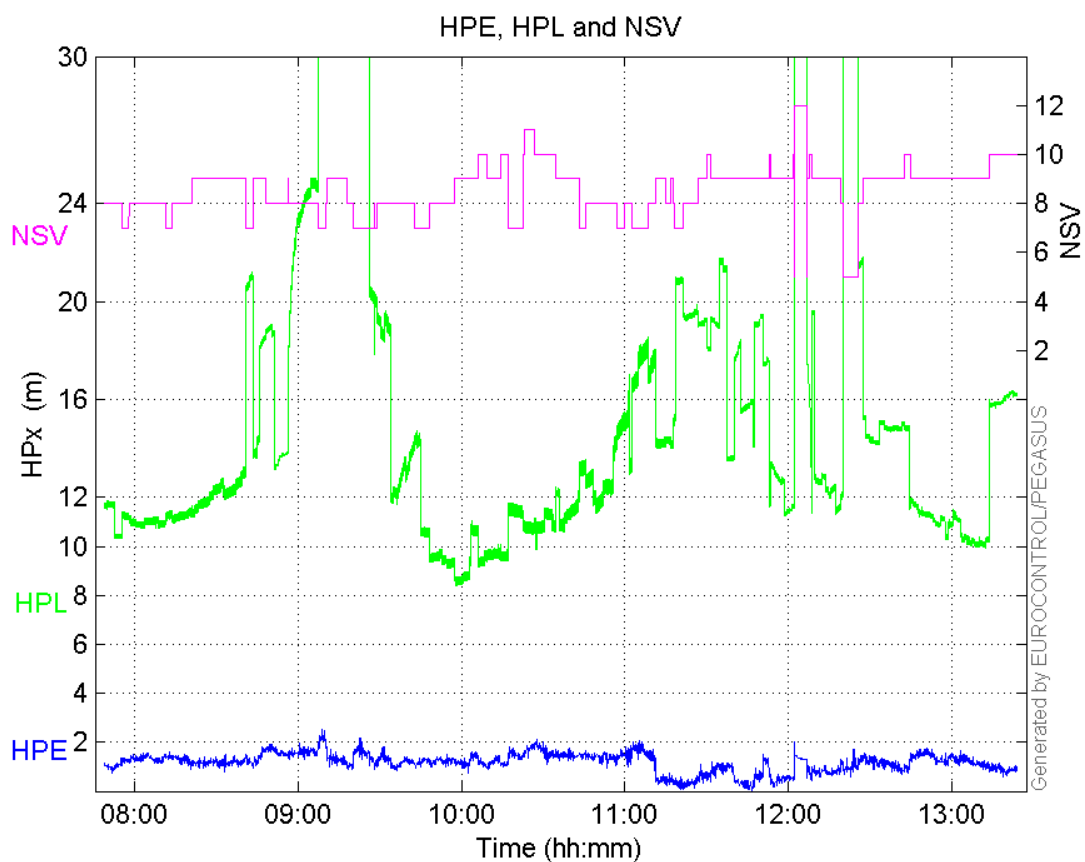
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

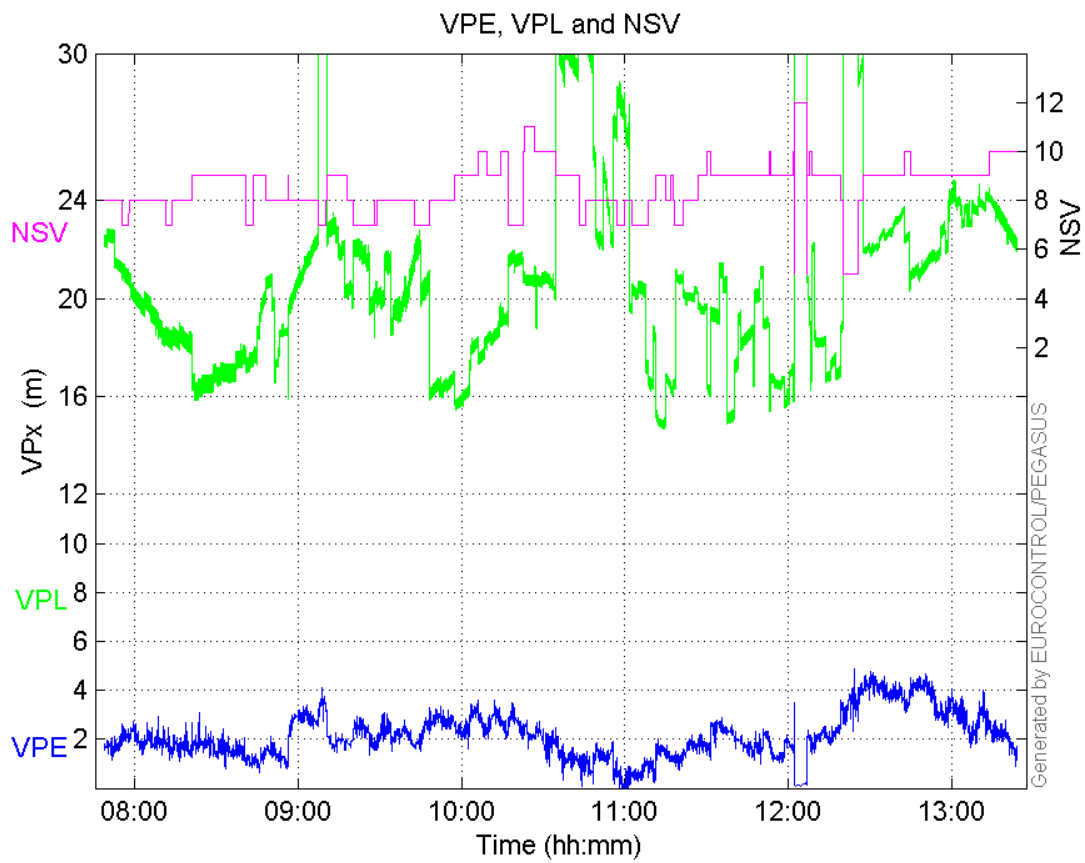
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	19842	19144	19113	0	19113
SIS Availability	0.986624	0.951917	0.950375	0	0.950375
Local Availability	0.969226	0.935131	0.933617	0	0.933617
Operational Availability	0.969226	0.935131	0.933617	0	0.933617
HPE 95%	1.70972	1.70383	1.70393	NaN	1.70393
HPEScale 95%	NaN	5.60078	5.60087	NaN	5.60087
VPE 95%	3.97922	3.99149	3.99202	NaN	3.99202
VPEscale 95%	NaN	9.18522	6.43005	NaN	6.43005
All Discontinuity Events	1	4	20	--	20
Long Discontinuity Events	1	4	4	--	4
Independent Discontinuity Events	1	4	4	--	4
P(discontinuity)	0.000755972	0.00313414	0.00313922	NaN	0.00313922
P(sliding window)	0.000755972	0.00313414	0.00554596	NaN	0.00554596
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

HPE, HPL and NSV:

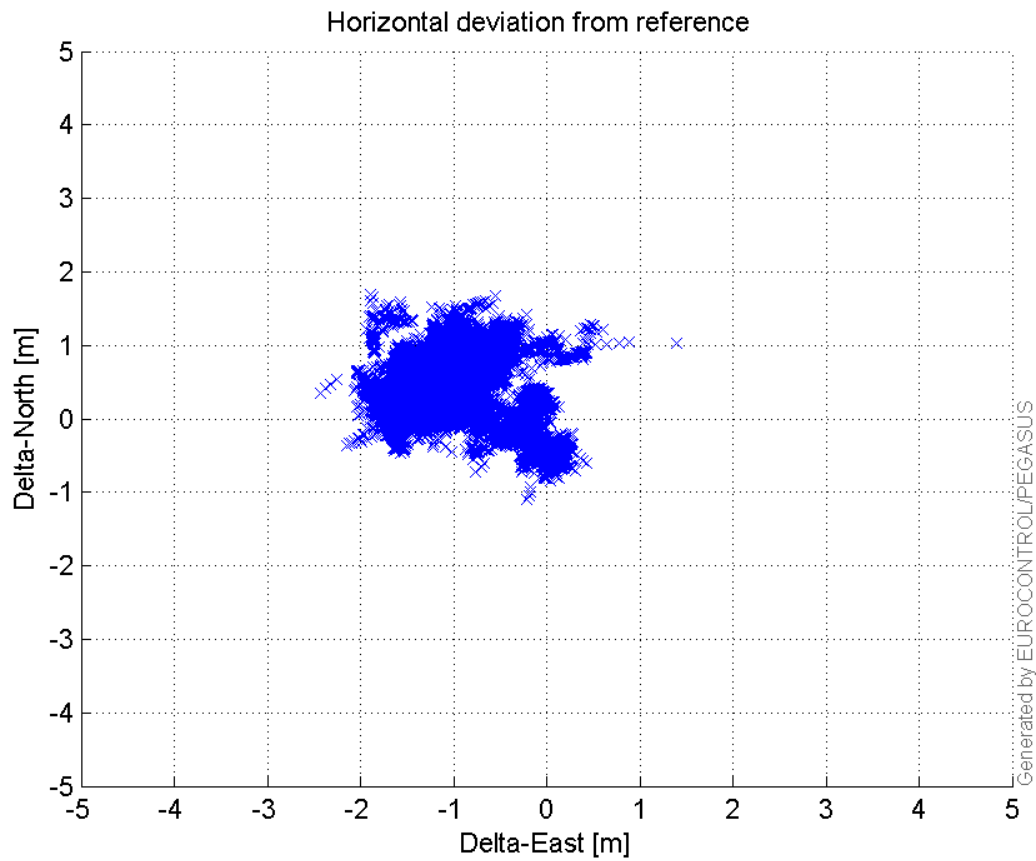


VPE, VPL and NSV:



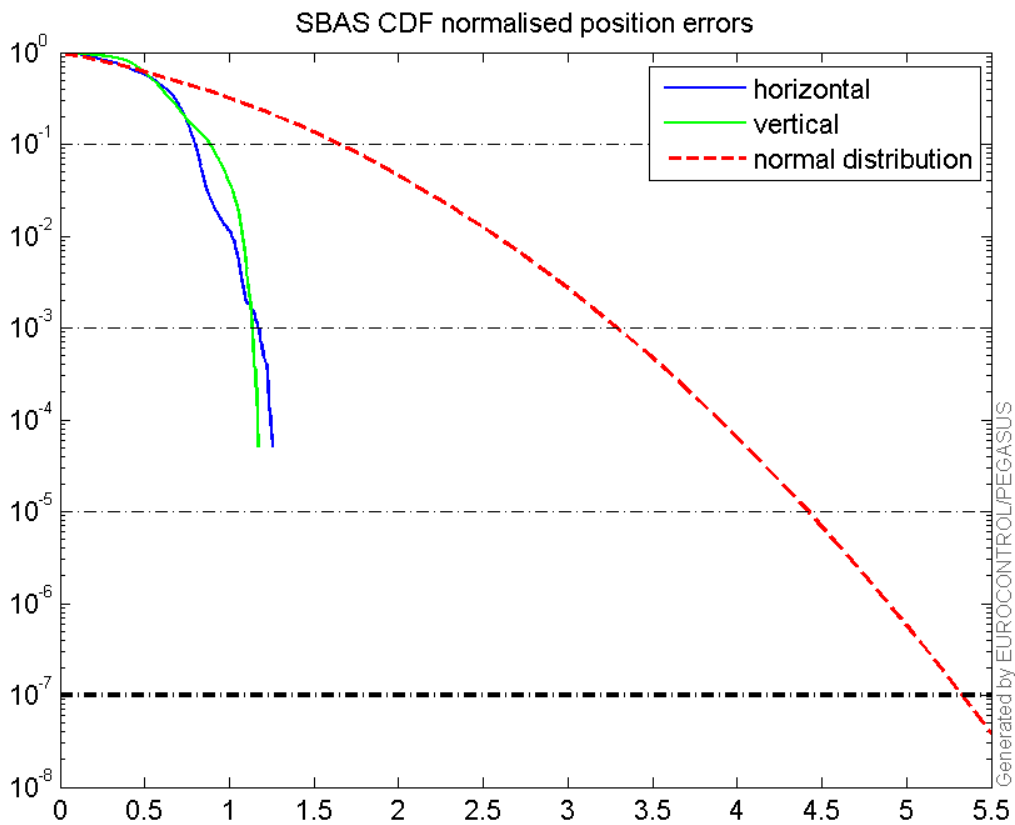
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

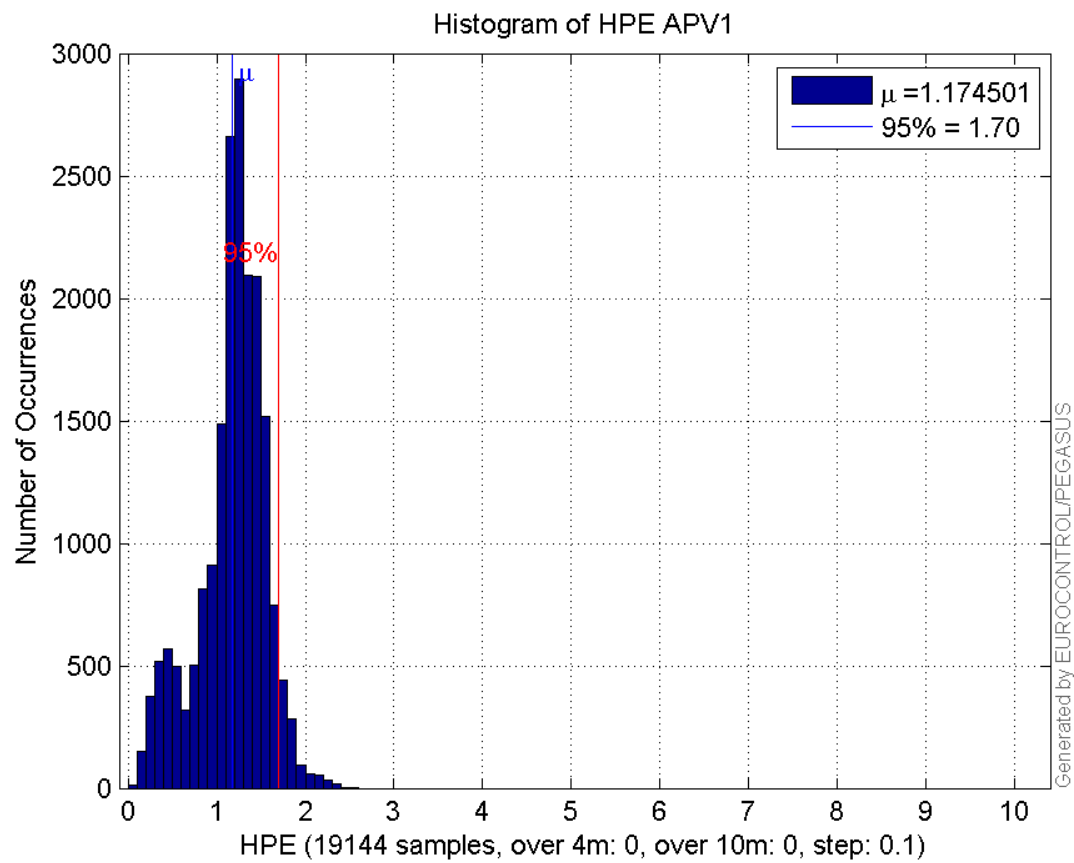
number	19144
sum	22484.64
sum2	29182.621
prctile95	1.7038256
prctile99	1.9605976
number	19144
sum	41074.966
sum2	103085.57
prctile95	3.9914933
prctile99	4.3659325
number	19144
sum	280624.81
sum2	4753212.9
prctile95	24.44952
prctile99	38.78104
number	19144
sum	393697.93
sum2	8354073
prctile95	29.29686
prctile99	33.513498
number	19144

sum 1709.0287
sum2 179.77984
prctile95 0.14001947
prctile99 0.16993745
number 19144
sum 2036.8795
sum2 250.35813
prctile95 0.18370438
prctile99 0.20225491
number 19113
sum 22438.406
sum2 29113.502
prctile95 1.703927
prctile99 1.9610626
number 19113
sum 41019.939
sum2 102986.59
prctile95 3.9920228
prctile99 4.3663322
number 19113
sum 280242.94
sum2 4748508.6
prctile95 24.455655
prctile99 38.78228
number 19113
sum 392602.82
sum2 8315385.9
prctile95 29.22071
prctile99 33.296746
number 19113
sum 1705.2752
sum2 179.32423
prctile95 0.14002181
prctile99 0.16998662
number 19113
sum 2035.3218
sum2 250.27882
prctile95 0.18371576
prctile99 0.20226529

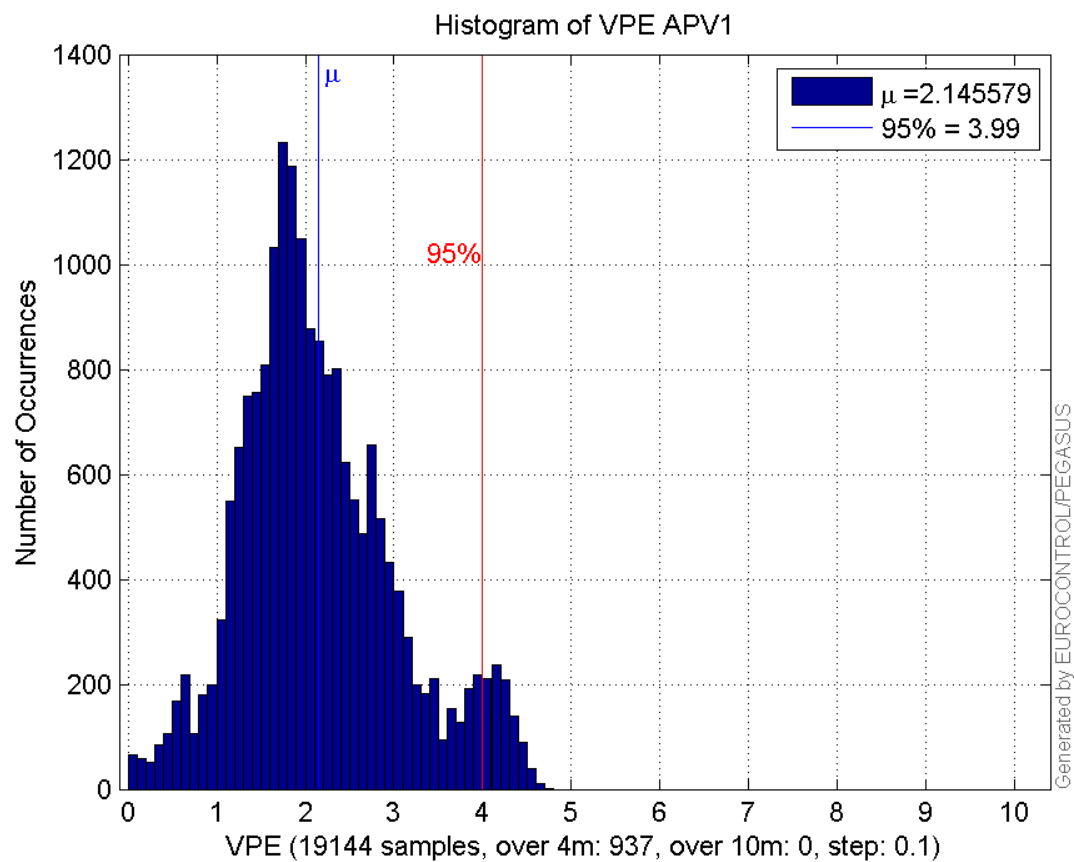
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.1745	0.380697	1.22534	1.70383	1.9606	1.23466
HPL	14.6586	5.78045	12.6051	24.4495	38.781	15.7571
VPE	2.14558	0.883899	2.0001	3.99149	4.36593	2.32051
VPL	20.5651	3.66863	20.1864	29.2969	33.5135	20.8897

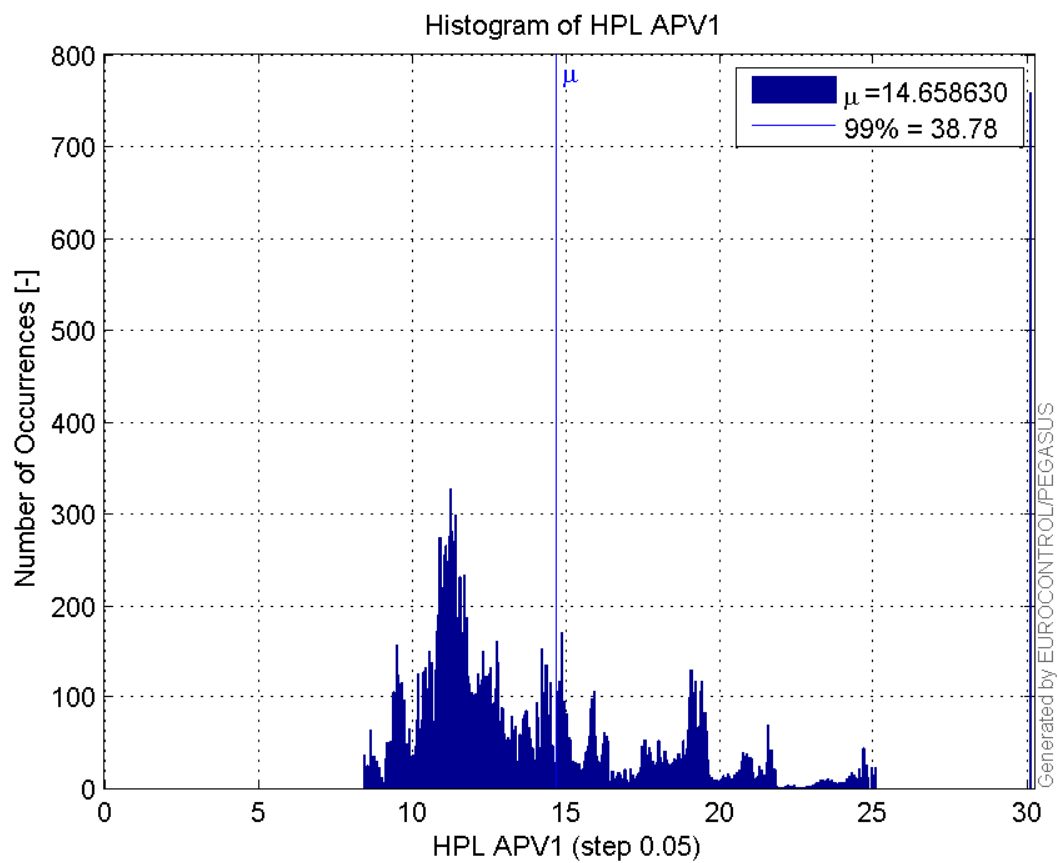
Histogram of HPE APV1:



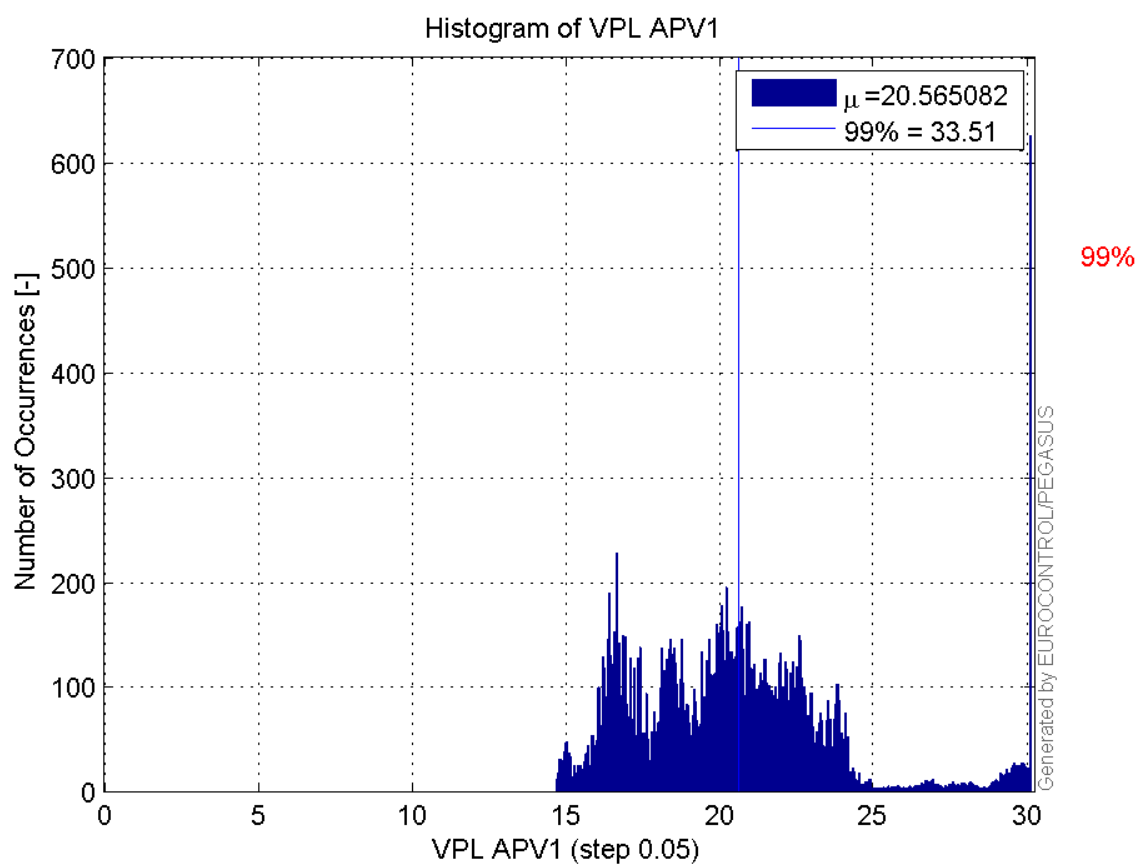
Histogram of VPE APV1:



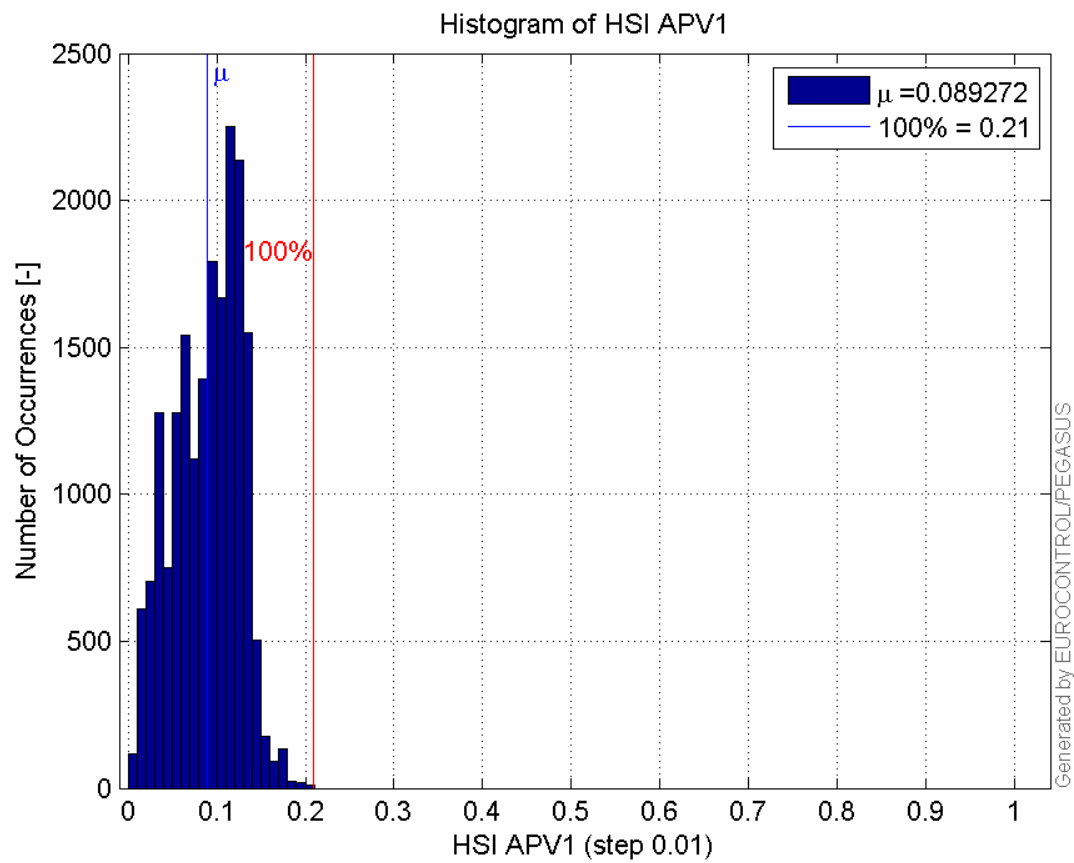
Histogram of HPL APV1:



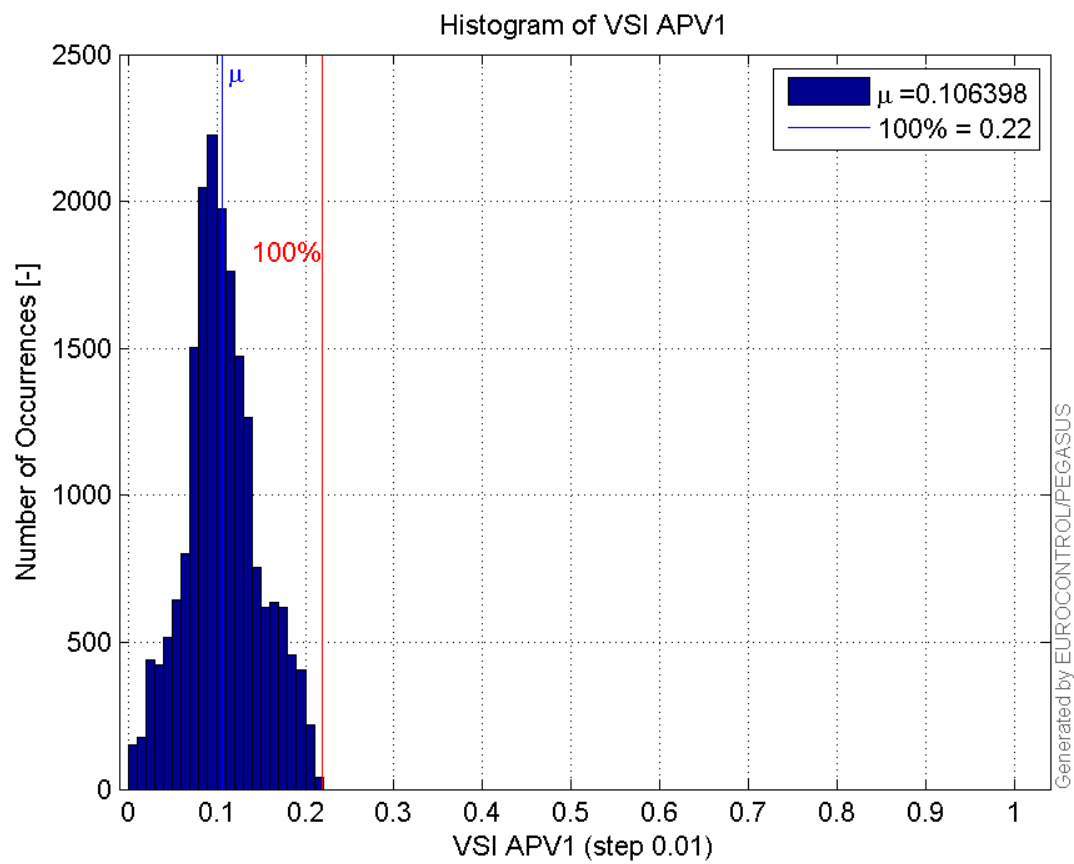
Histogram of VPL APV1:



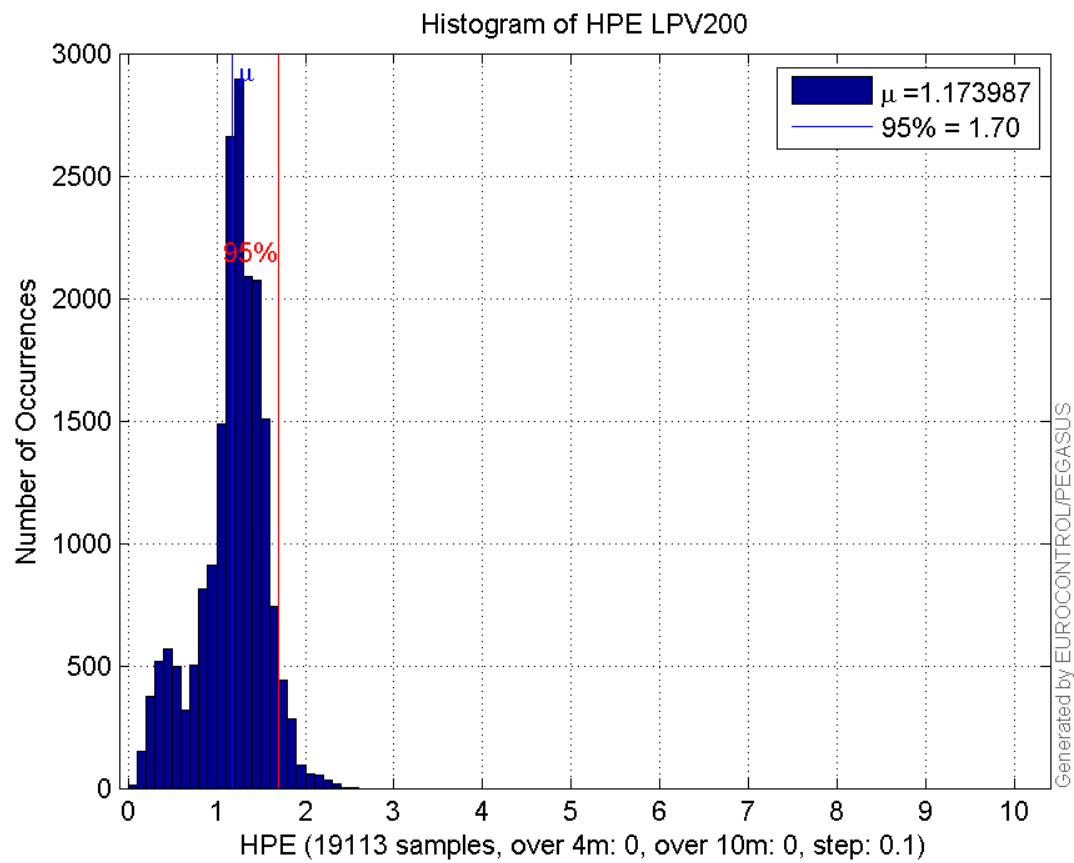
Histogram of HSI APV1:



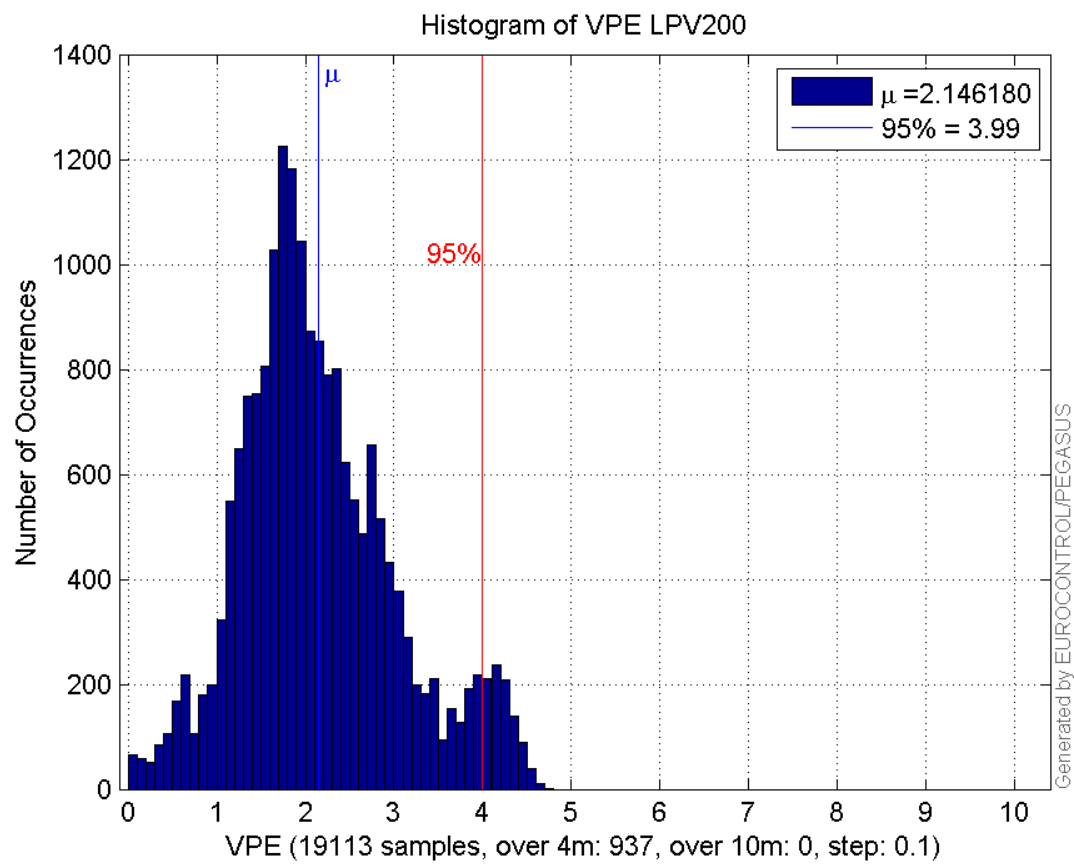
Histogram of VSI APV1:



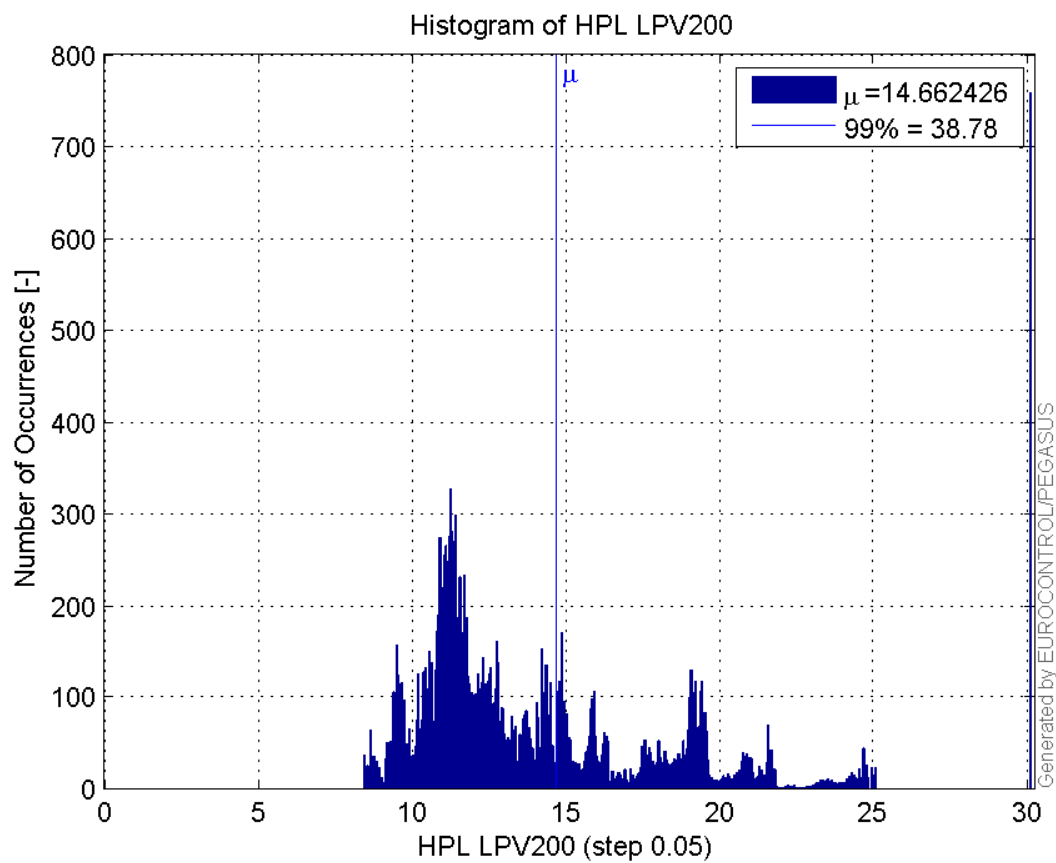
Histogram of HPE LPV200:



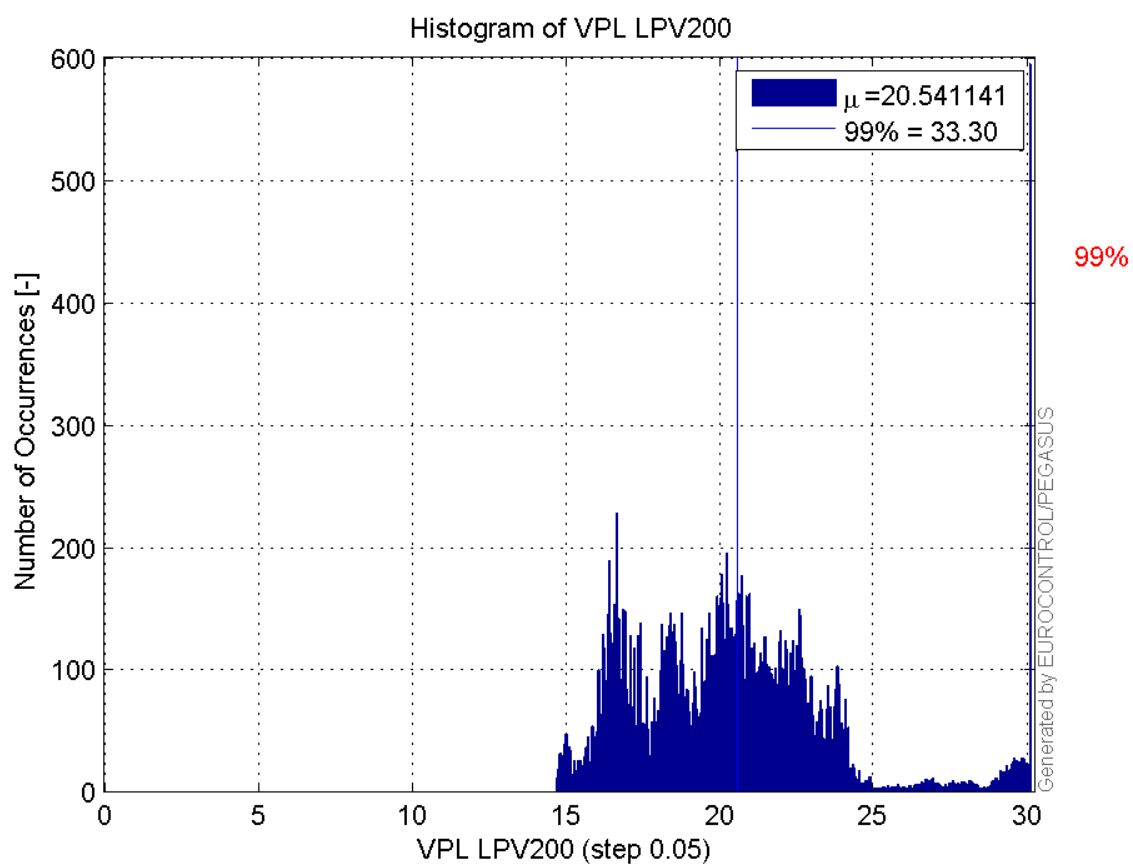
Histogram of VPE LPV200:



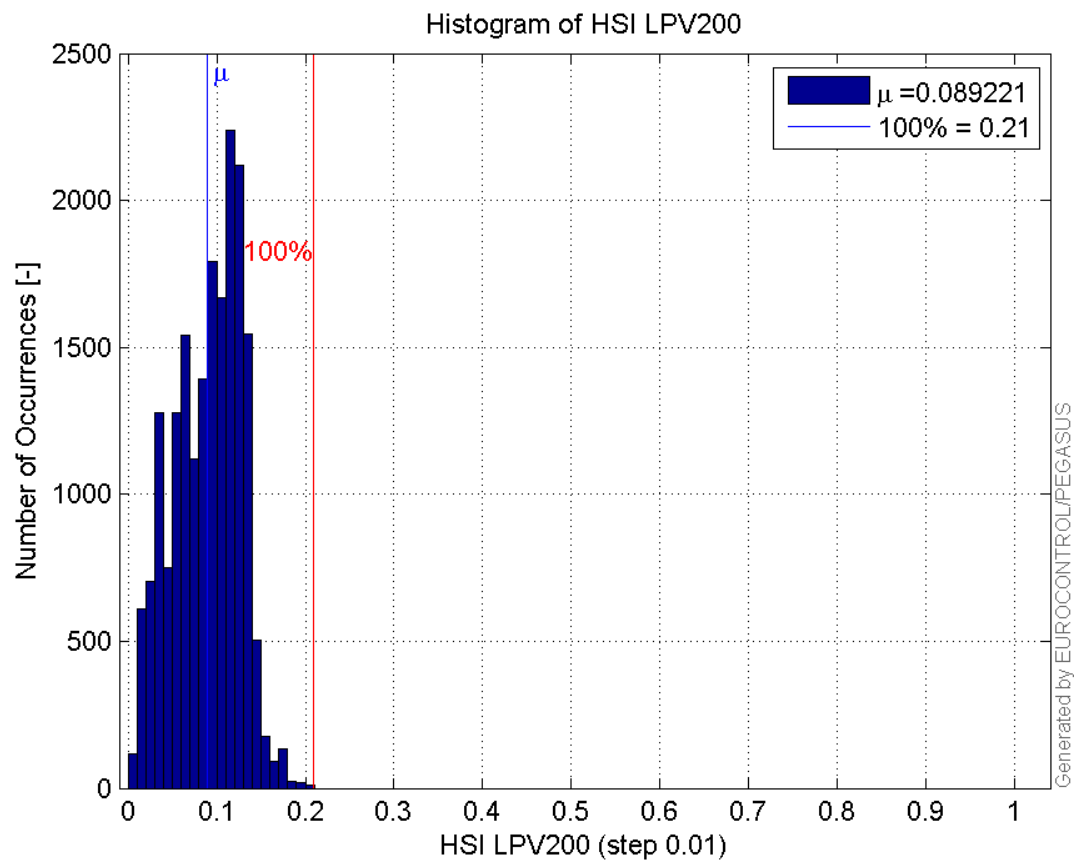
Histogram of HPL LPV200:



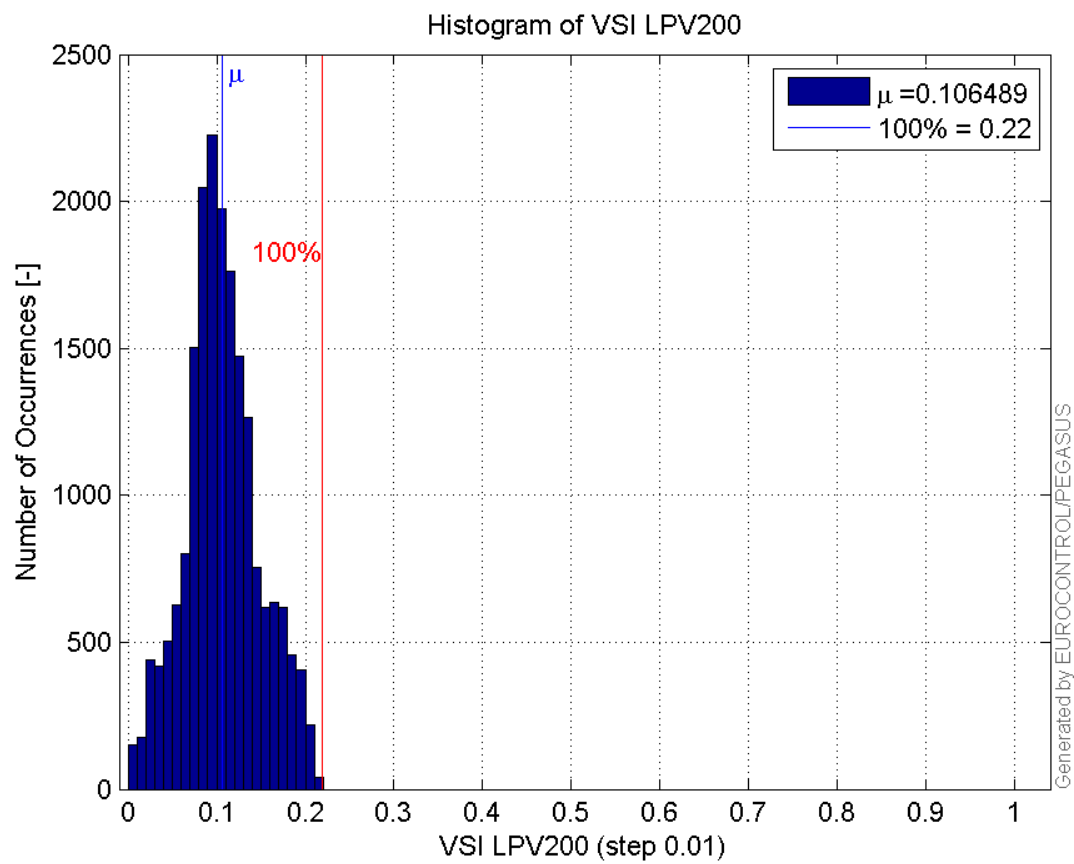
Histogram of VPL LPV200:



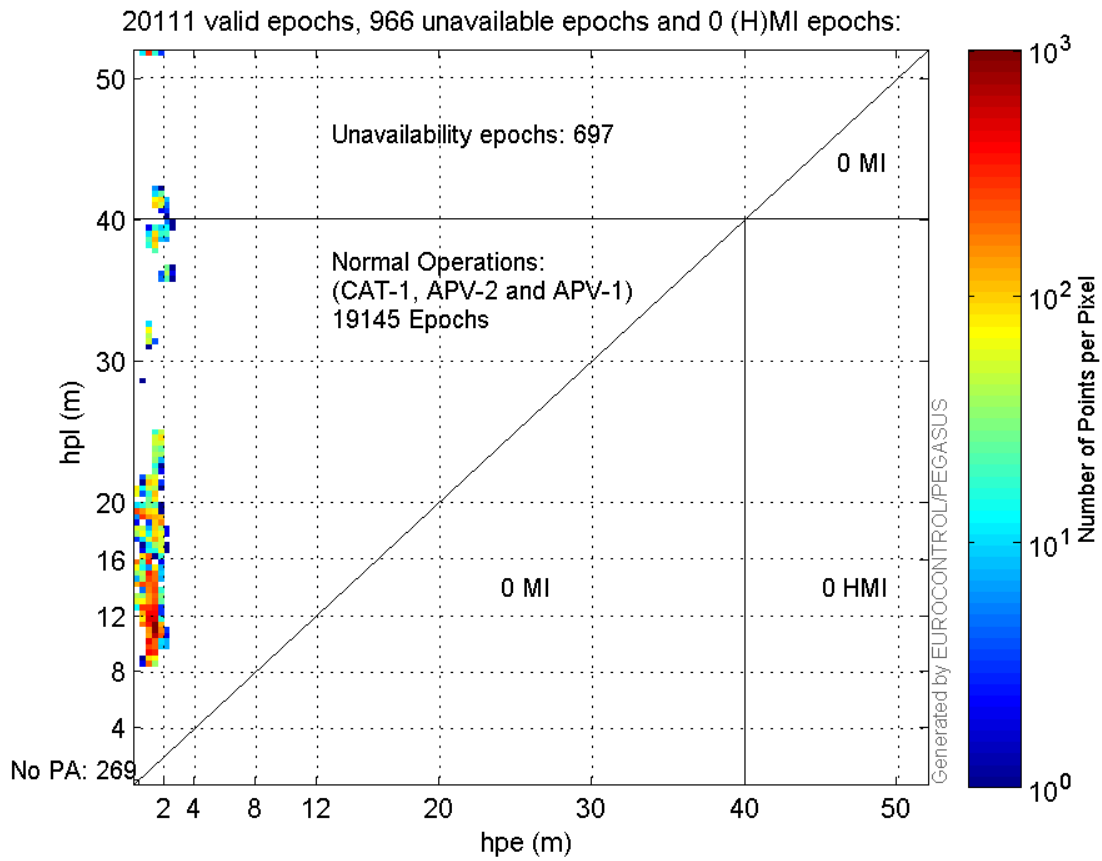
Histogram of HSI LPV200:



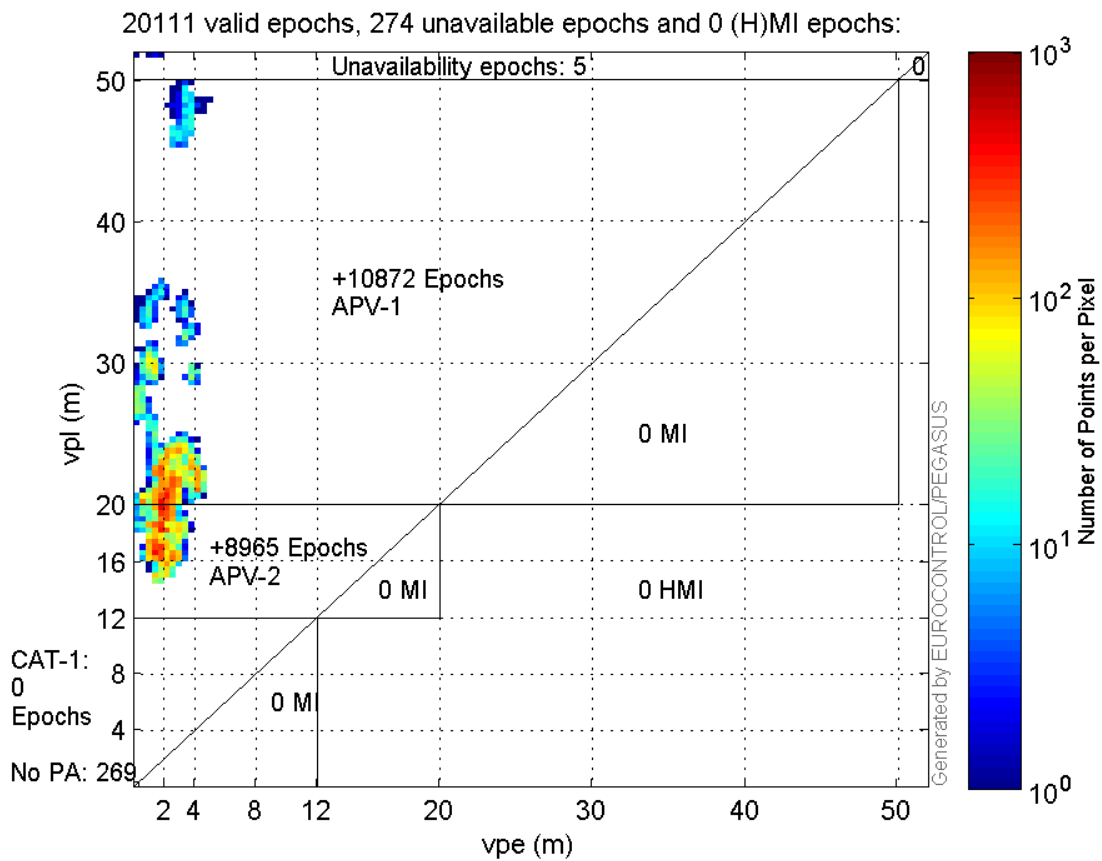
Histogram of VSI LPV200:



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_10_05/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_10_05/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	213.452
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	50.439
init_lon	results	30.4296
init_alt	results	240.3902
mi_numbers	results	0

Range Domain

start: 07:42:48 05.10.2015 (week: 1865 sec: 114168)
end: 13:23:59 05.10.2015 (week: 1865 sec: 134639)
duration: 05:41:12 ..

quality

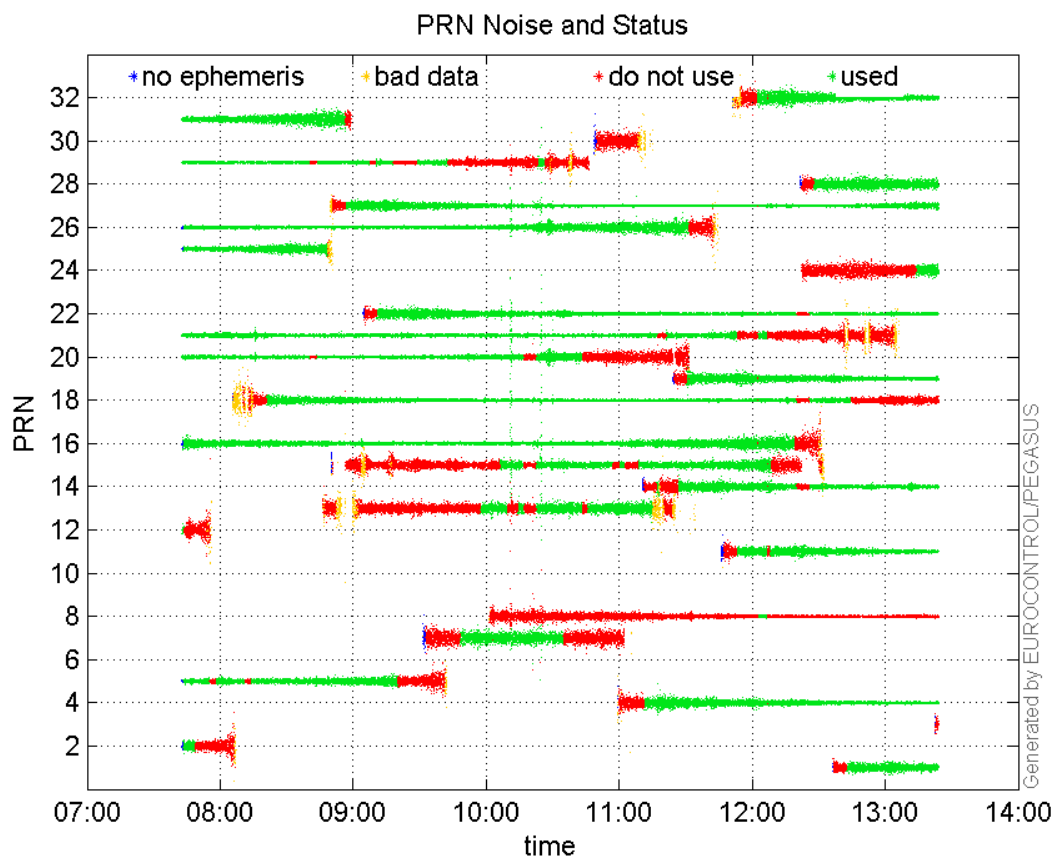
valid samples 20472
total samples 20472

PRN overview

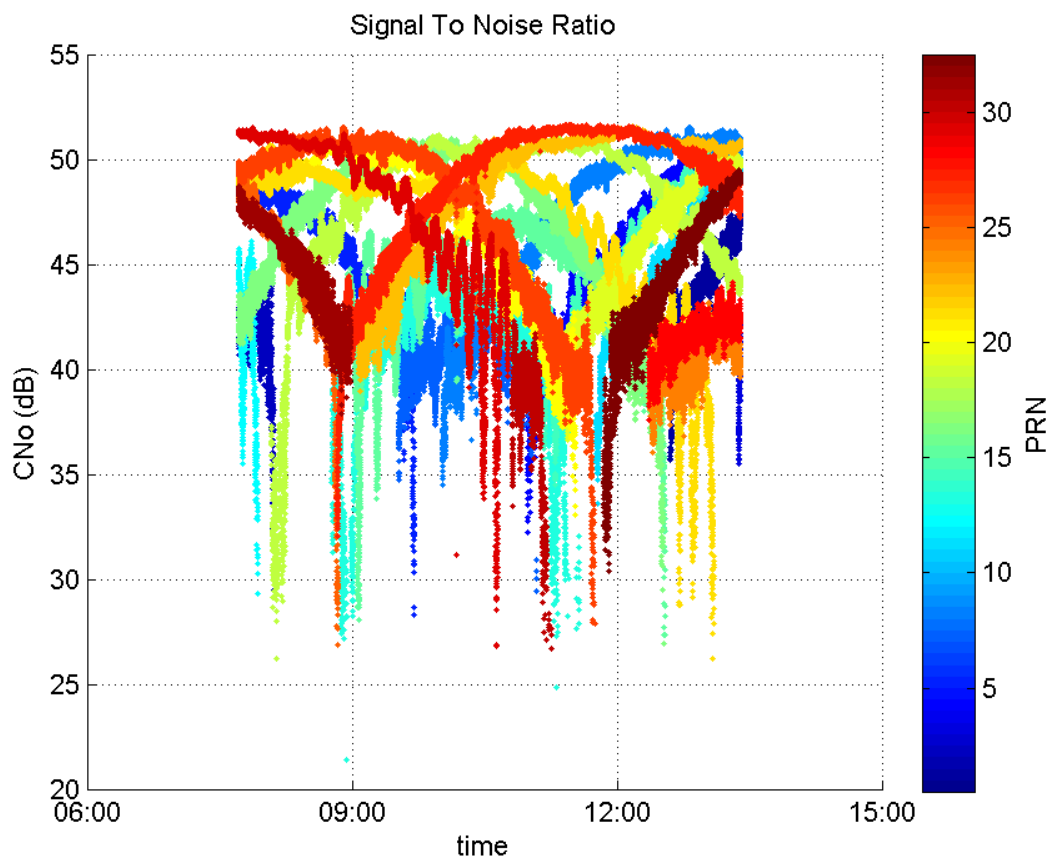
Number of Visible GPS Satellites 27
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



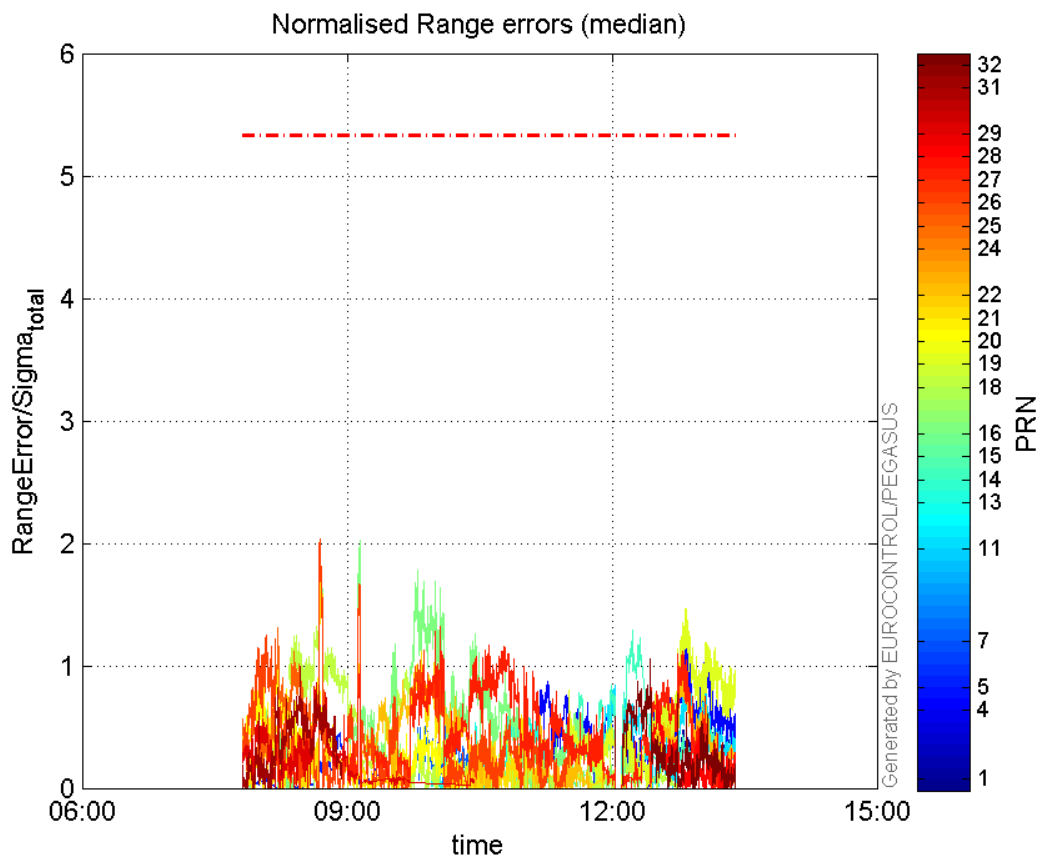
range errors

Number of Overbounding Norm Errors 0

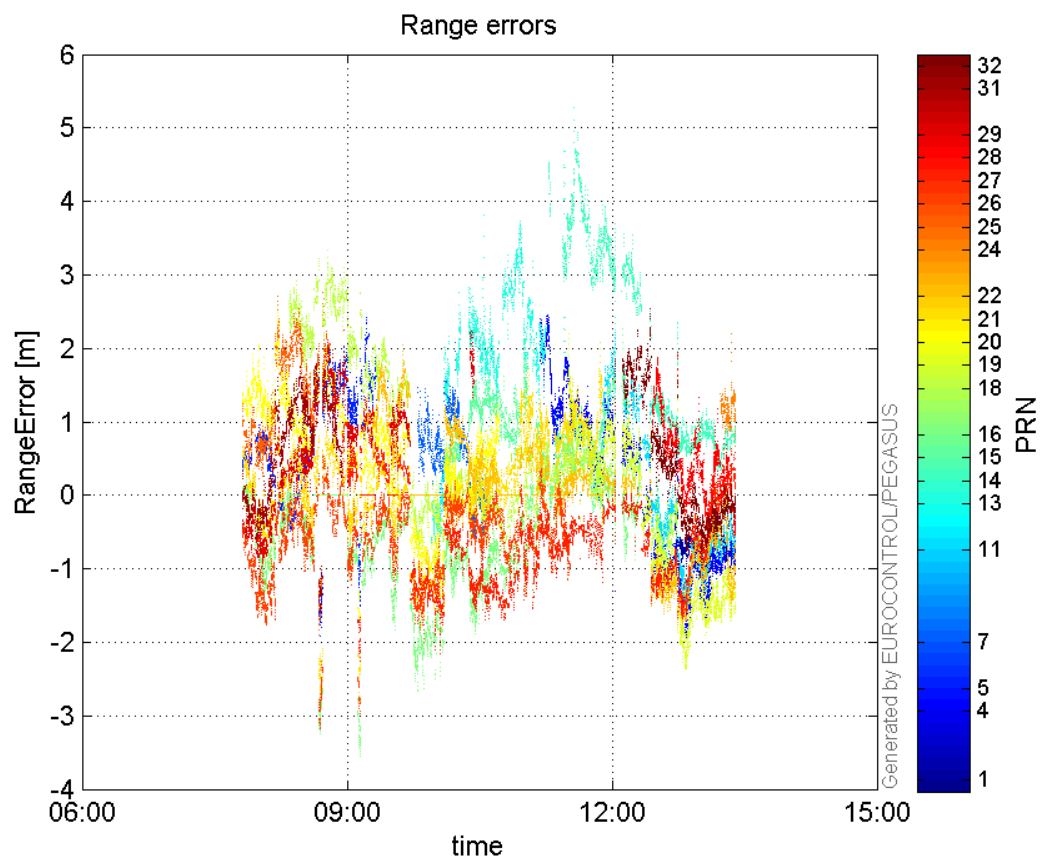
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1865	133471	1	0.573556	-1.18435	2.06493
1865	132644	4	1.22401	-1.8872	1.54181
1865	118295	5	0.456626	1.81115	3.96637
1865	123232	7	0.679229	2.07895	3.06076
1865	132676	11	0.861077	-1.48974	1.73009
1865	126372	13	0.6463	3.18878	4.9339
1865	130430	14	1.28802	3.54329	2.75095
1865	129735	15	0.559596	1.96271	3.50737
1865	119312	16	2.03034	-3.44931	1.69888
1865	117637	18	1.38743	3.22521	2.32459
1865	132623	19	1.46747	-2.35203	1.60278
1865	115976	20	1.08824	2.54352	2.33727
1865	117698	21	1.70496	-2.61492	1.53371
1865	132286	22	0.990374	-1.76622	1.78339
1865	134453	24	0.0996346	2.19974	22.0781
1865	115976	25	1.31298	2.70937	2.06352
1865	117698	26	2.03342	-3.10281	1.52591
1865	122606	27	1.32563	-2.15688	1.62706
1865	132263	28	0.774908	1.93569	2.49796
1865	117541	29	0.857219	1.46096	1.7043
1865	116875	31	0.992562	2.18946	2.20587
1865	131141	32	1.05944	2.53715	2.3948

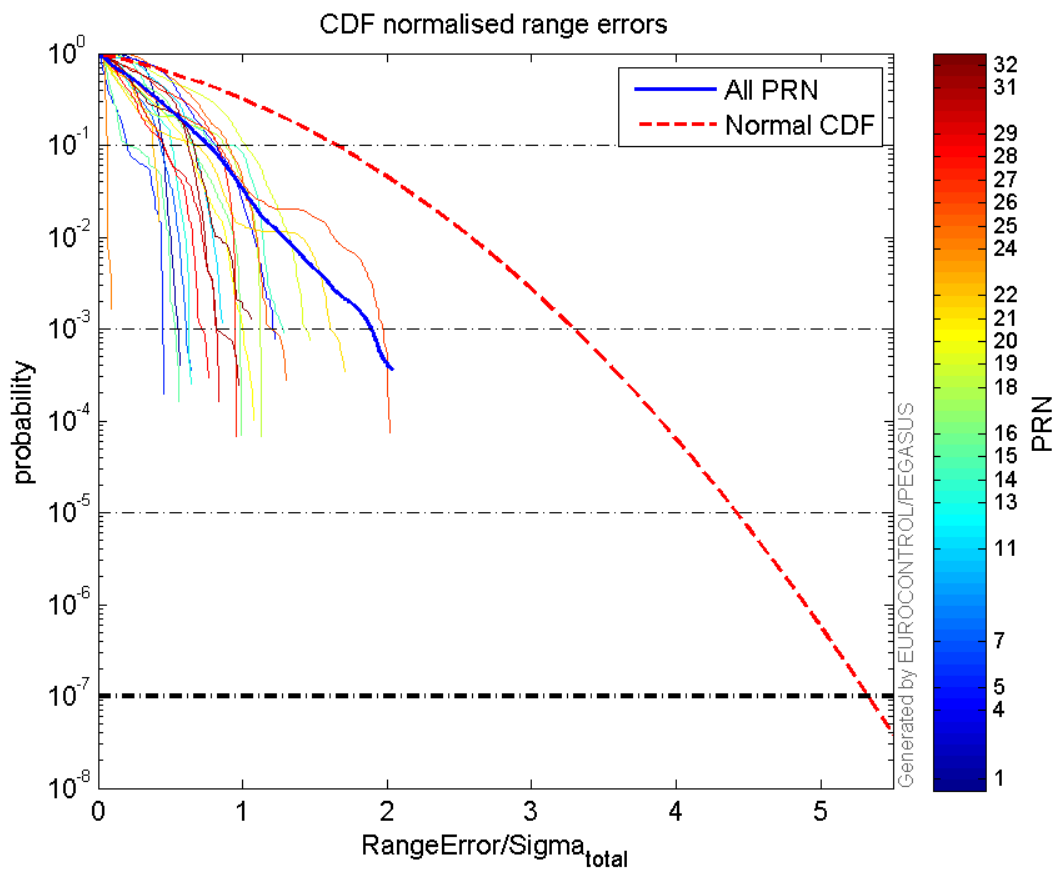
Normalised Range errors (median):



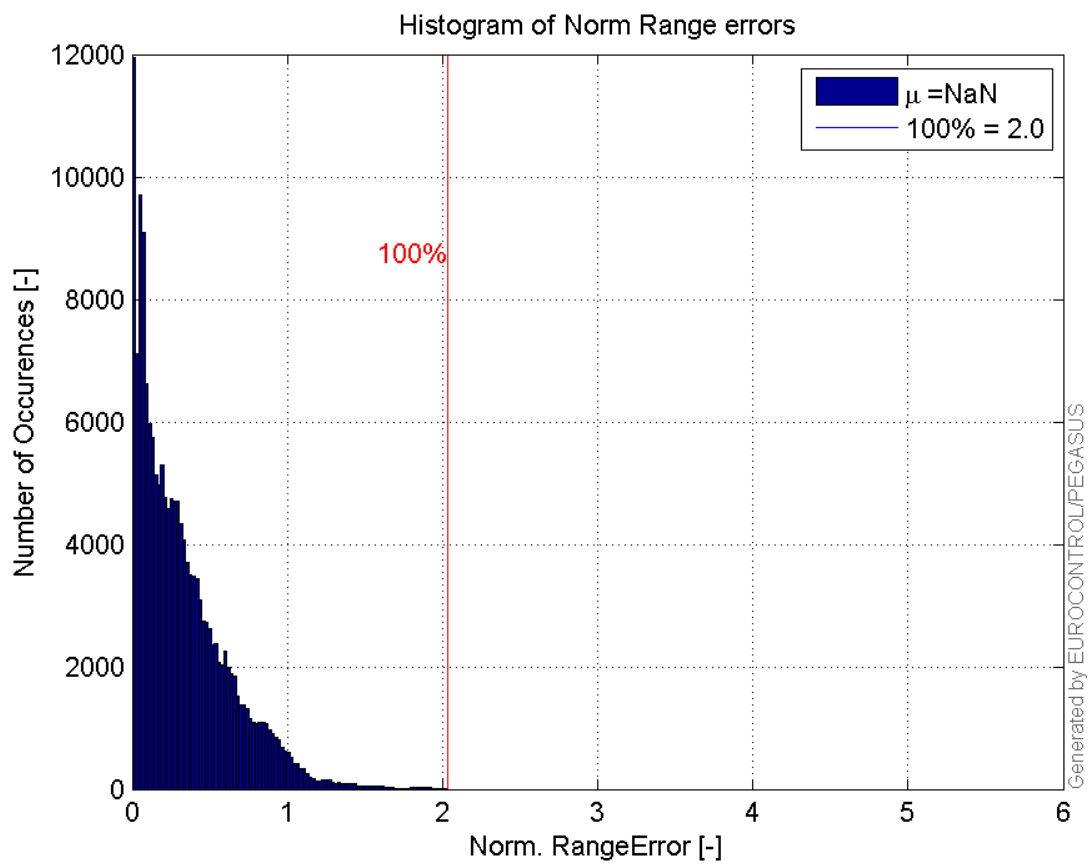
Range errors:



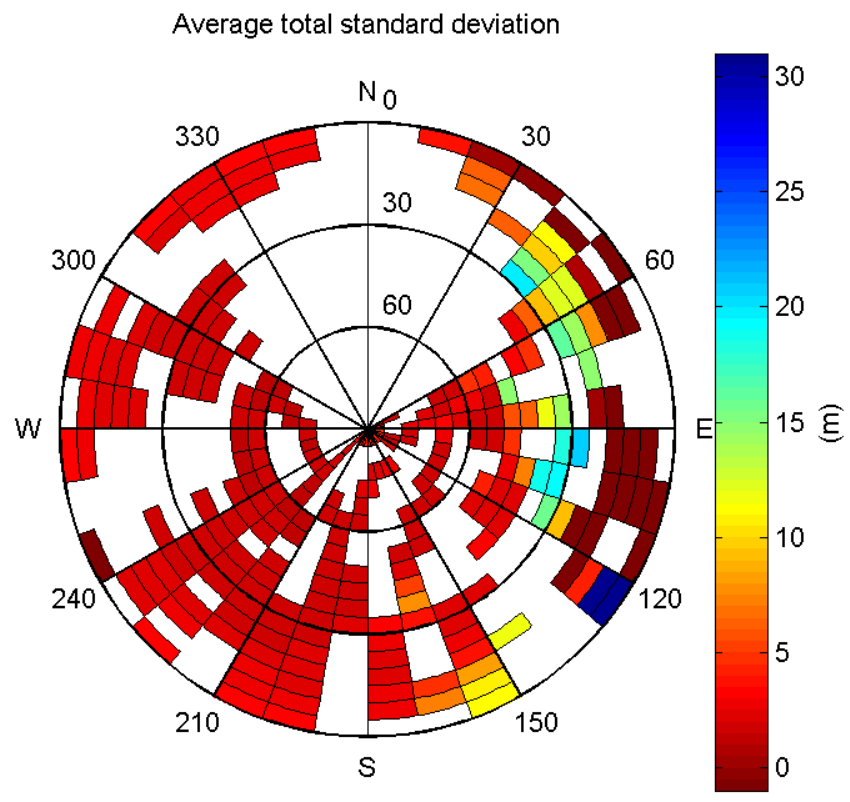
CDF normalised range errors:



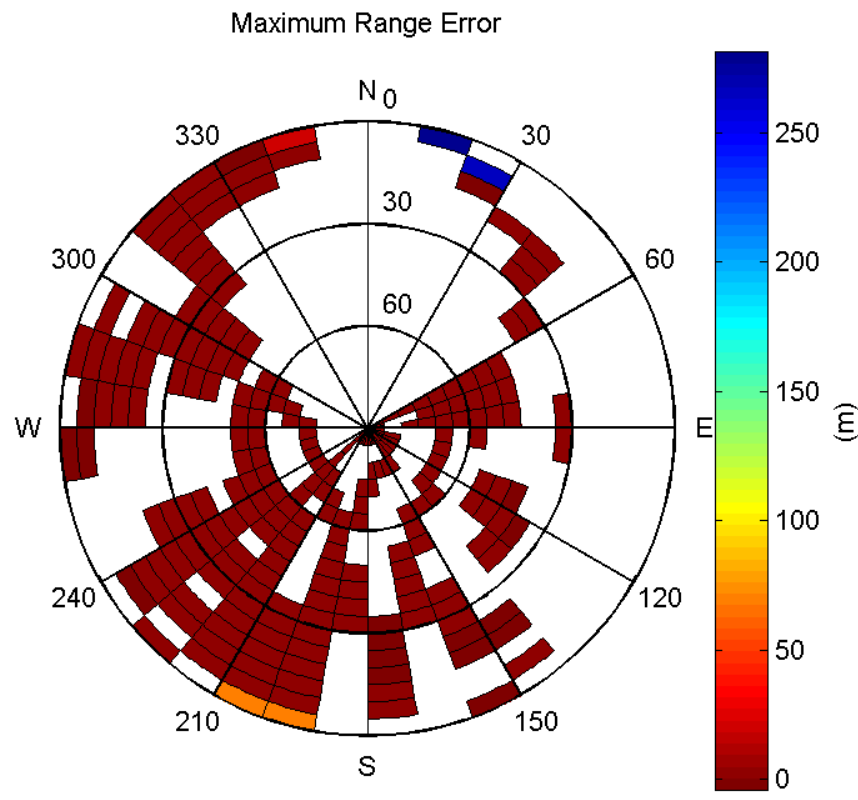
Histogram of Norm Range errors:



Sigma Sky Plot:

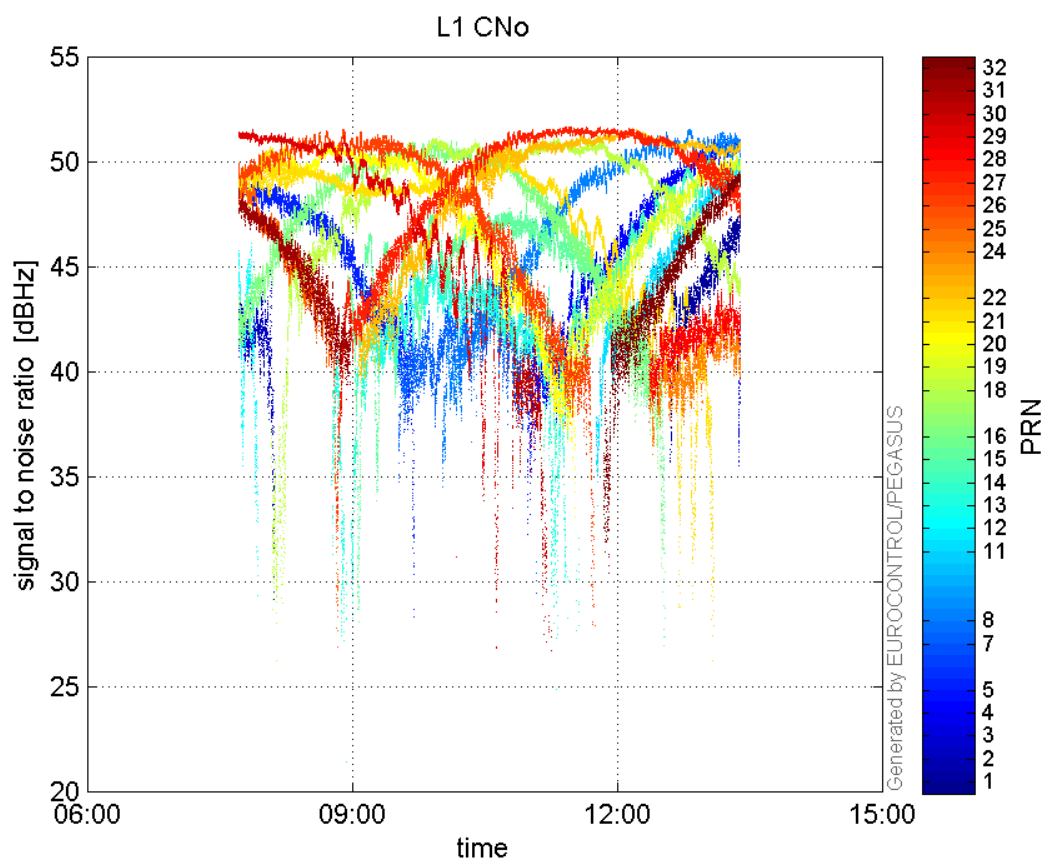


Norm Error Sky Plot:

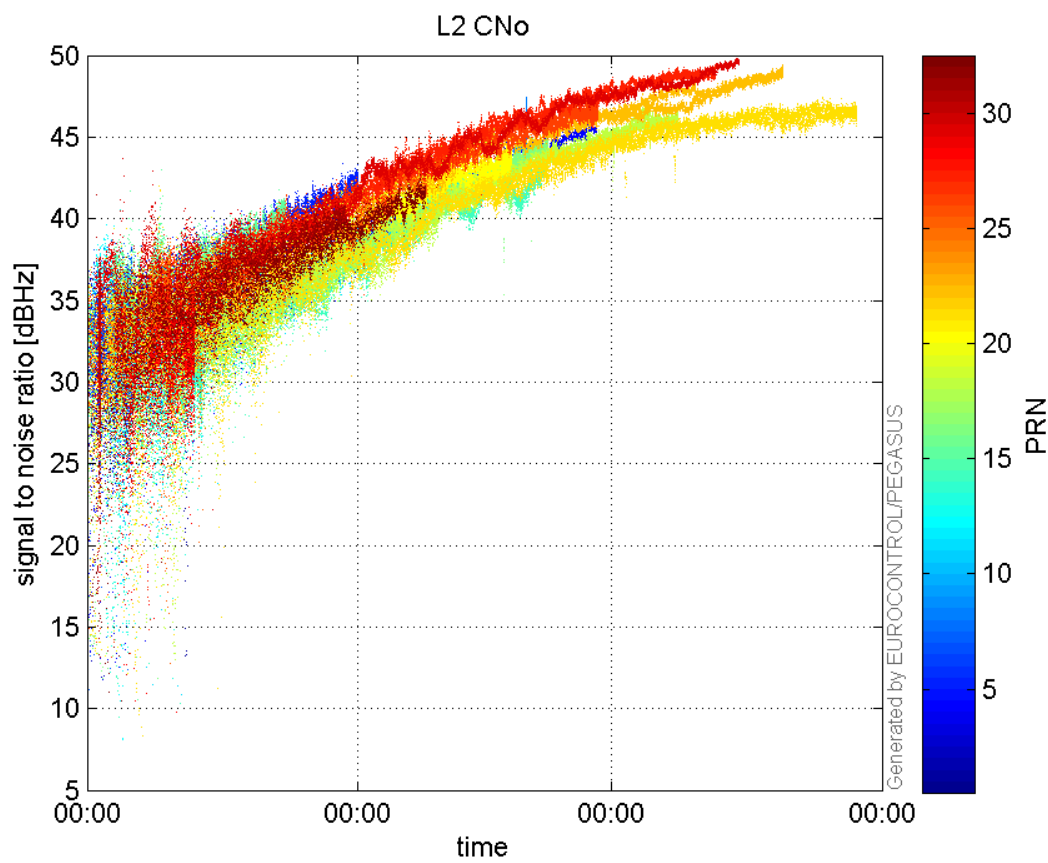


signal quality

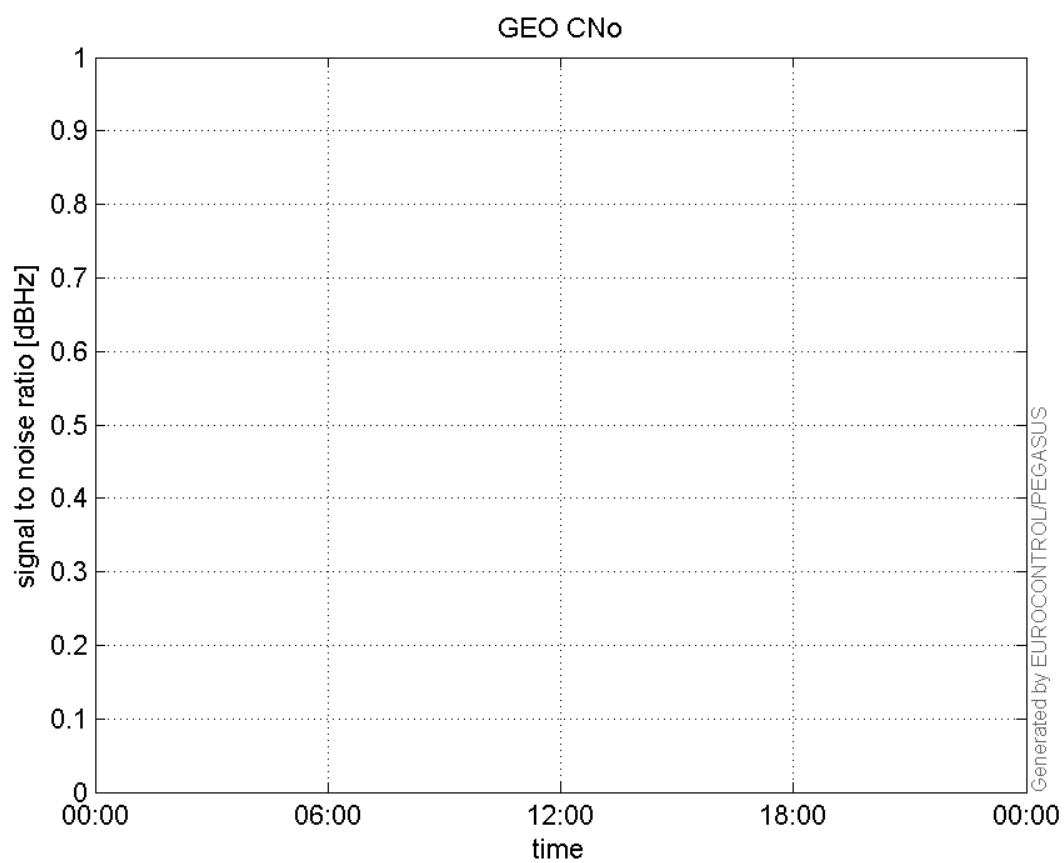
L1 CNo:



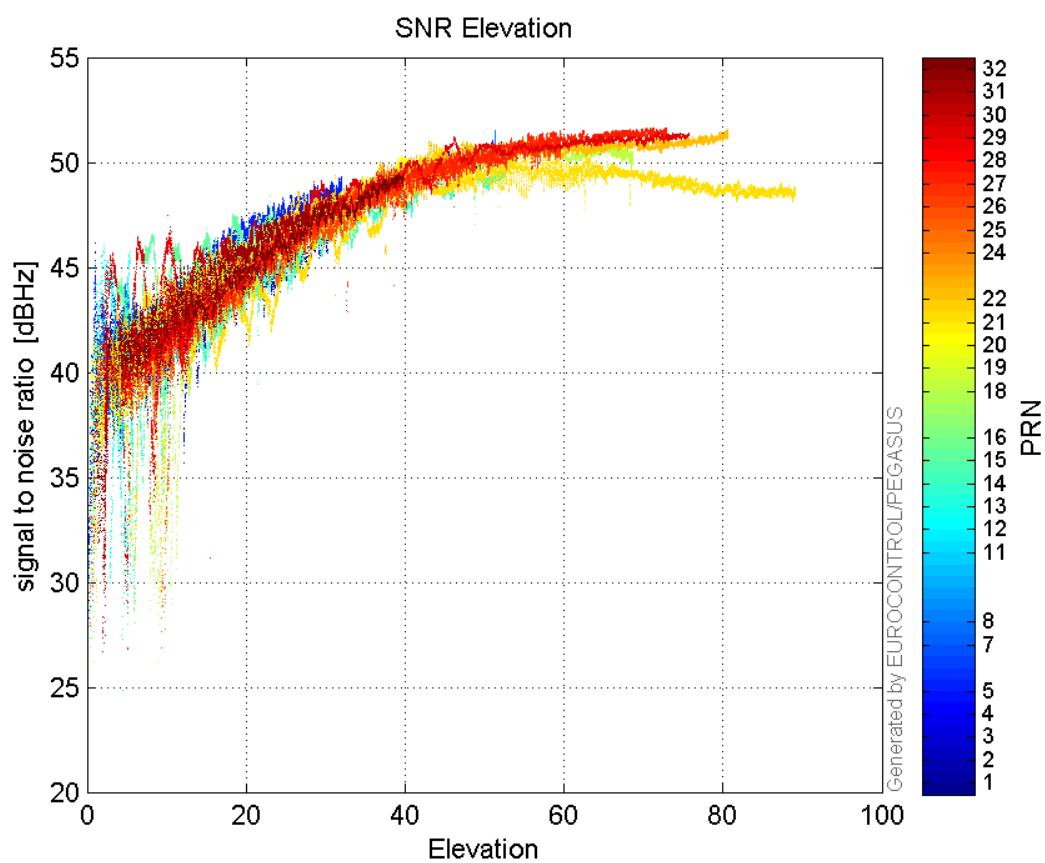
L2 CNo:



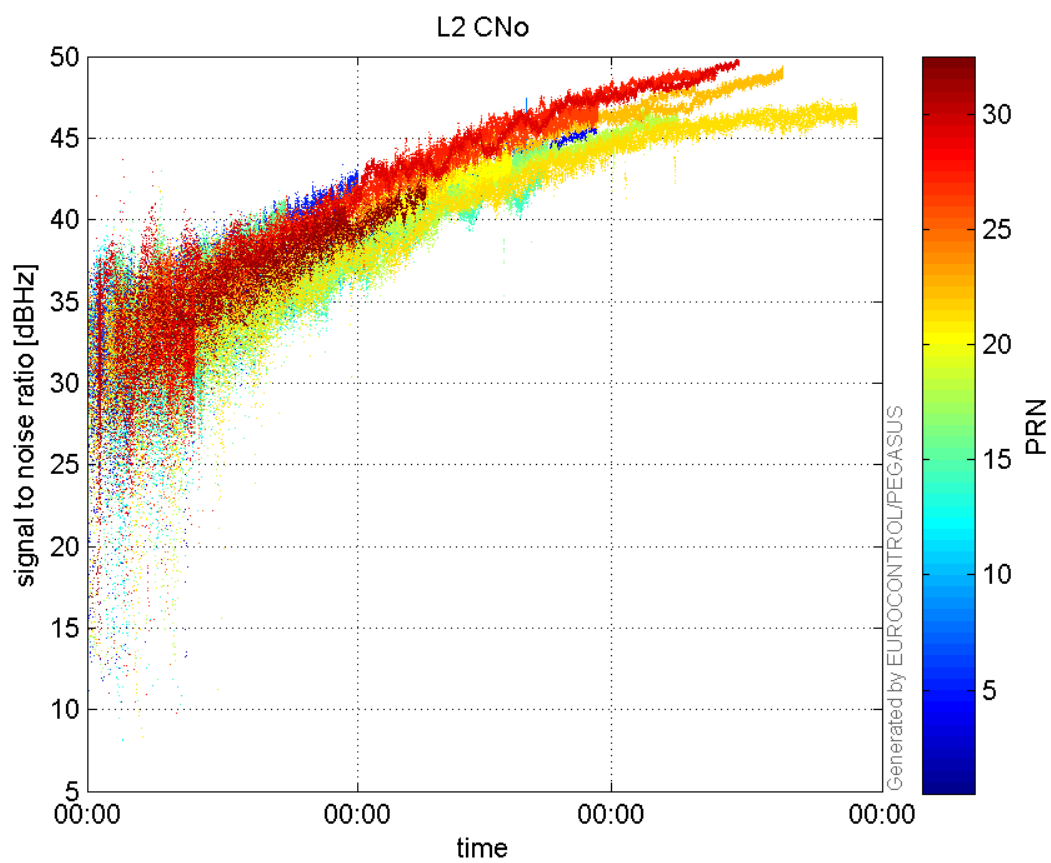
GEO CNo:



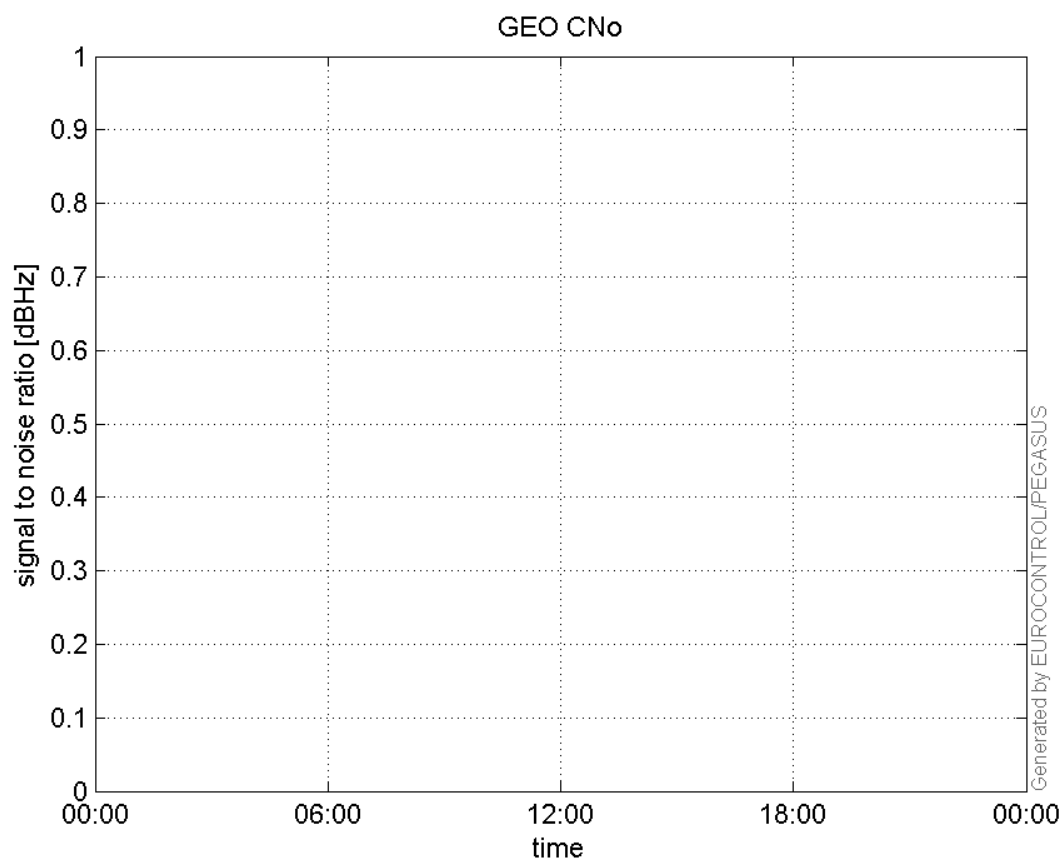
SNR Elevation:



L2 CNo:

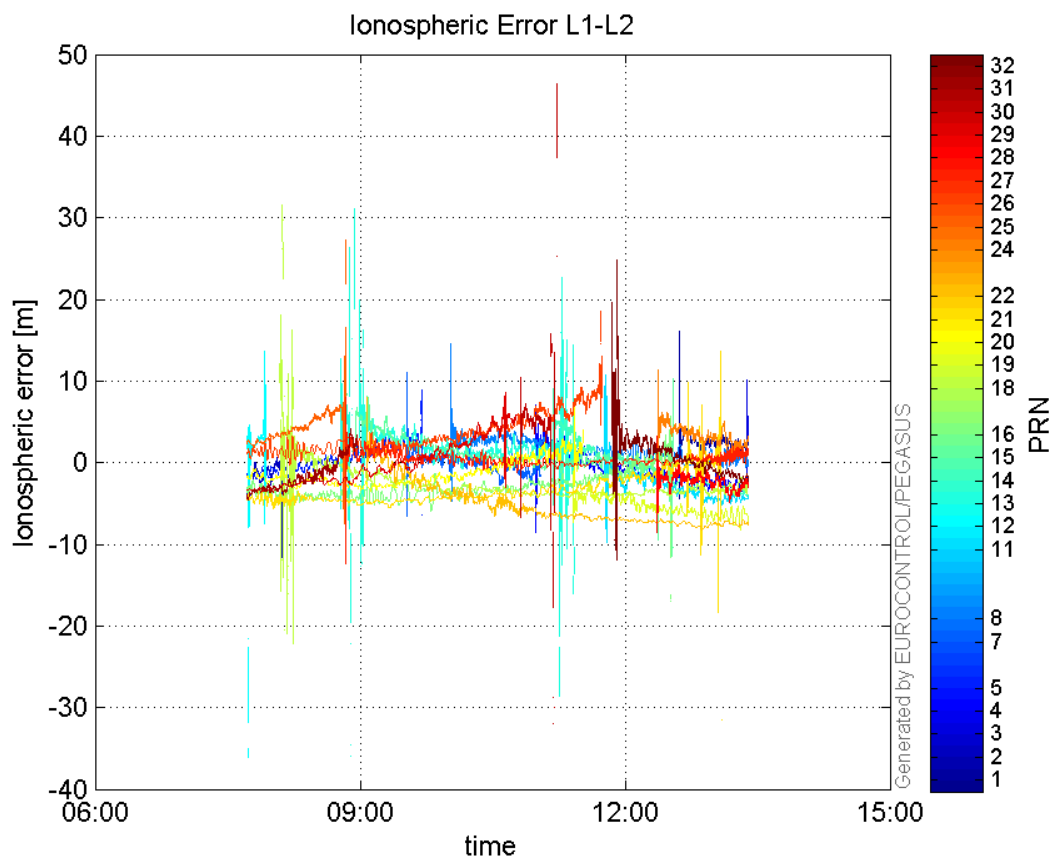


GEO CNo:



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_10_05/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_10_05/03_GNSS_Solution/03_GNSS_Solution_sol

settings

Name	Section	Value
ref_lat	settings	50.439
ref_lon	settings	30.4297
ref_alt	settings	213.452
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	50.439
init_lon	results	30.4296
init_alt	results	240.3902
mi_numbers	results	0