

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: 04:57:1.129 30.09.2015 (week: 1864 sec: 277021.129)
end: 12:12:38.129 30.09.2015 (week: 1864 sec: 303158.129)
duration: 07:15:37 ..

quality

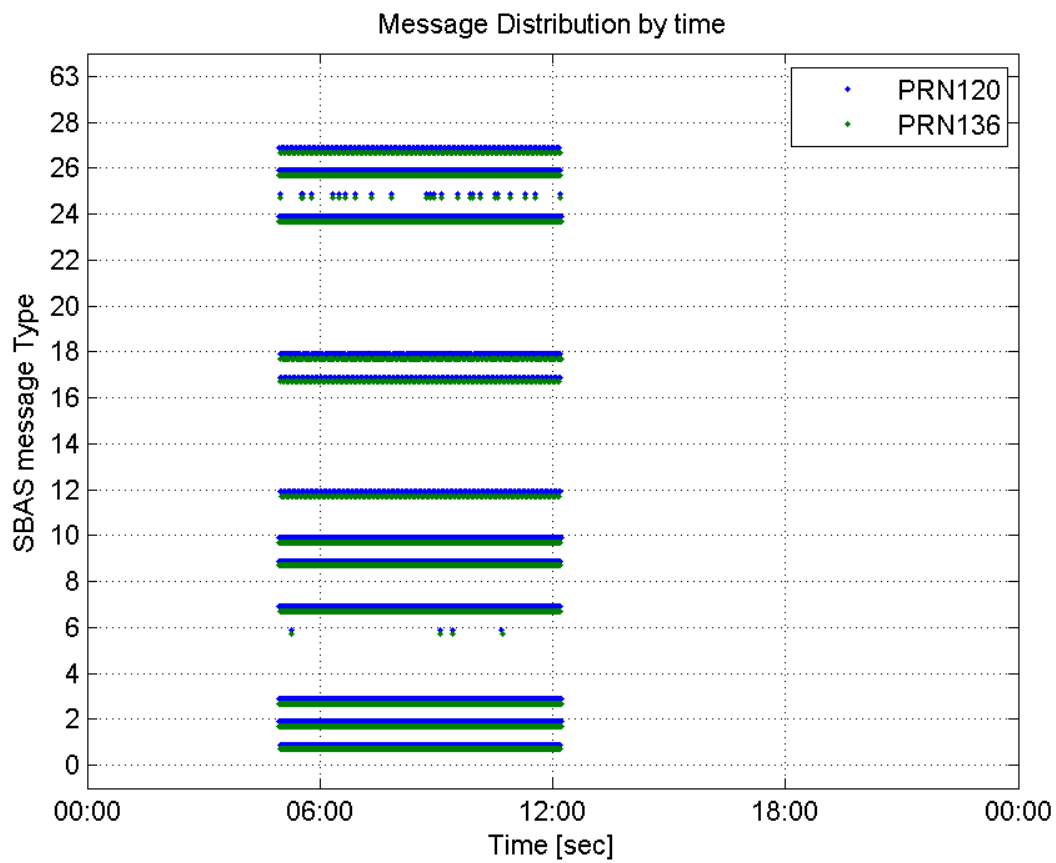
valid samples 52276
total samples 52276
number of SBAS PRNs 2

SBAS SIS Overview

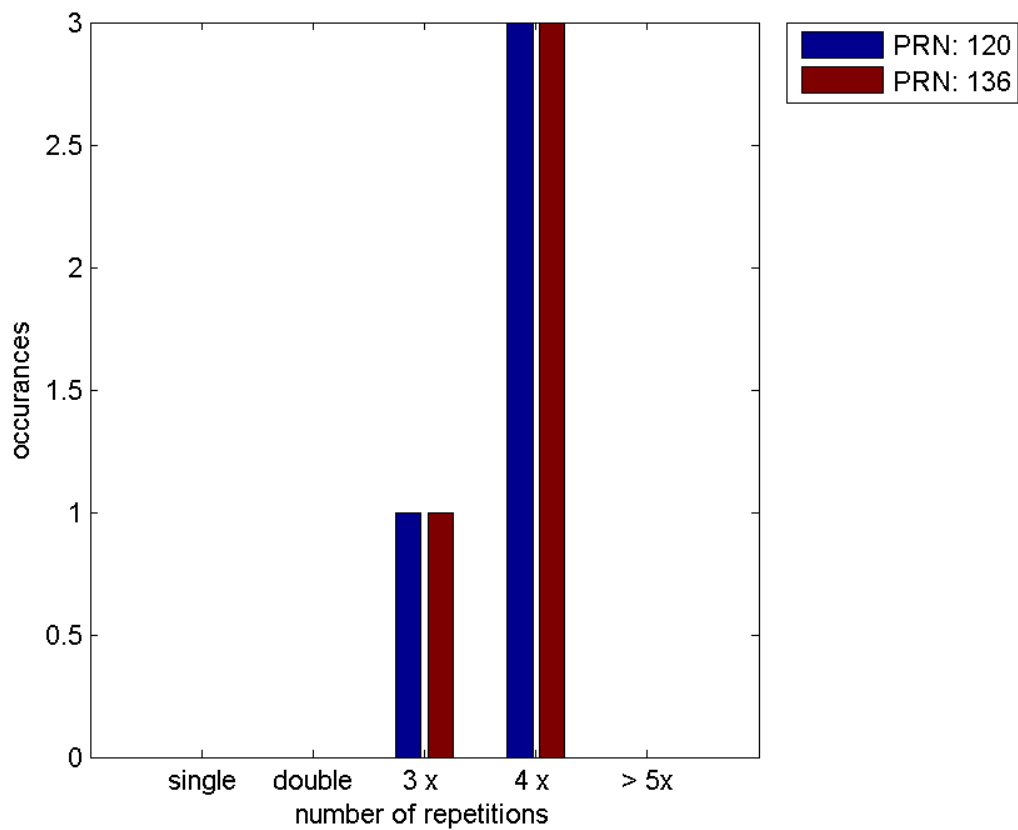
Message Type 6 repetitions :

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

Message Distribution by time:



Message Type 6 repetitions:



PRN 120

Broadcast SBAS Messages :

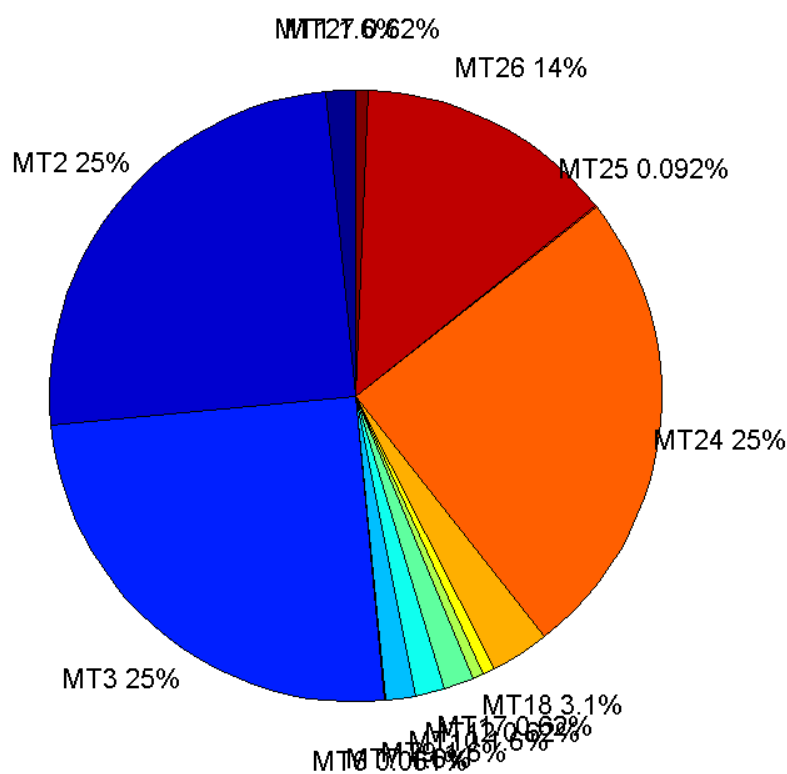
	number of messages	%
MT 0	0	0
MT 1	407	1.55712
MT 2	6527	24.9713
MT 3	6528	24.9751
MT 4	0	0
MT 5	0	0
MT 6	16	0.0612136
MT 7	407	1.55712
MT 9	407	1.55712
MT 10	408	1.56095
MT 12	163	0.623613
MT 17	163	0.623613
MT 18	815	3.11807
MT 24	6527	24.9713
MT 25	24	0.0918203
MT 26	3583	13.708
MT 27	163	0.623613
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	26138	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2069	0	0	0
MT 2	4	8	4.00429	4	0	0
MT 3	4	8	4.00429	4	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	13791	1296.27	3	3	3
MT 7	64	71	64.2069	0	0	0
MT 9	64	71	64.2069	0	0	0
MT 10	64	70	64.2138	0	0	0
MT 12	154	171	160.407	162	0	0
MT 17	160	167	160.432	0	0	0
MT 18	4	128	31.9681	0	0	0
MT 24	4	8	4.00444	0	0	0
MT						

25	124	3317	1133.78	0	0	0
MT 26	4	33	7.29397	0	0	0
MT 27	160	169	160.42	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

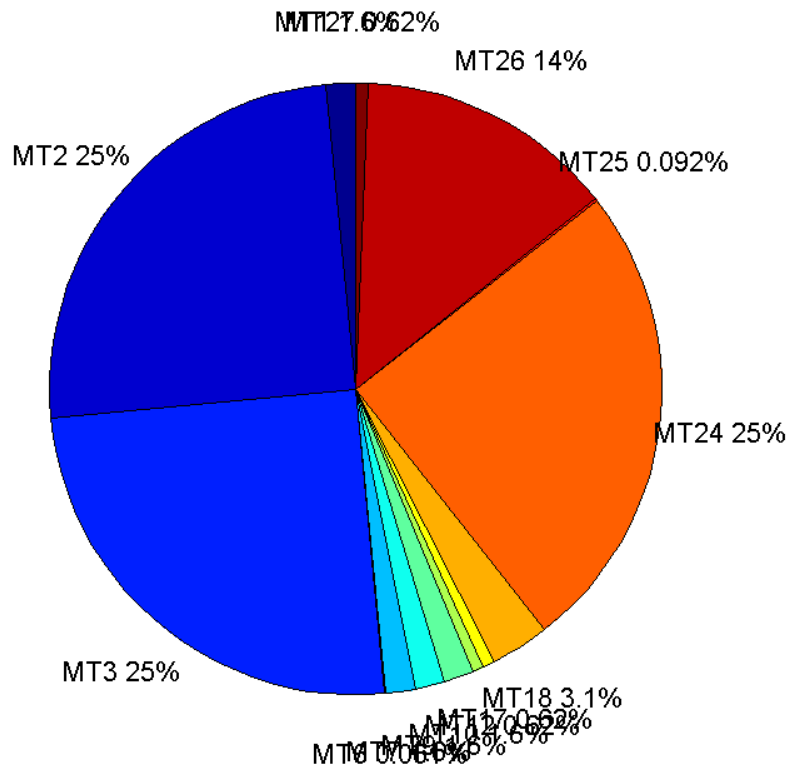
	number of messages	%
MT 0	0	0
MT 1	407	1.55712
MT 2	6528	24.9751
MT 3	6527	24.9713
MT 4	0	0
MT 5	0	0
MT 6	16	0.0612136

MT 7	407	1.55712
MT 9	407	1.55712
MT 10	407	1.55712
MT 12	162	0.619787
MT 17	162	0.619787
MT 18	814	3.11424
MT 24	6528	24.9751
MT 25	24	0.0918203
MT 26	3586	13.7195
MT 27	163	0.623613
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	26138	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.202	0	0	0
MT 2	4	8	4.00414	4	0	0
MT 3	4	8	4.00414	4	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	13791	1304.4	3	3	3
MT 7	64	70	64.2167	0	0	0
MT 9	64	70	64.2069	0	0	0
MT 10	64	71	64.2167	0	0	0
MT 12	156	169	160.435	161	0	0
MT 17	156	171	160.41	0	0	0
MT 18	4	151	31.9914	0	0	0
MT 24	4	8	4.00414	0	0	0
MT 25	124	3317	1133.78	0	0	0
MT 26	4	51	7.28257	0	0	0
MT 27	160	167	160.457	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_30/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/Egnos2015_09_30/02_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: 04:57:02 30.09.2015 (week: 1864 sec: 277022)
end: 12:12:39 30.09.2015 (week: 1864 sec: 303159)
duration: 07:15:38 ..

quality

valid samples 25777
total samples 26138

Event tables

Position discontinuity events type no (0)
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	284253	1.84693	10.8364	0.170438	2.02557	15.2976	0.132411
max normVer	296354	1.23197	8.67005	0.142095	3.01141	14.847	0.20283
max HPE	281147	3.52771	48.7176	0.0724115	3.16889	44.5165	0.0711846
max VPE	294718	1.6484	19.7549	0.0834428	3.77177	22.0133	0.171341
min HPL	296436	1.05992	8.11076	0.130681	2.64293	14.5482	0.181667
min VPL	300867	0.671407	14.0819	0.0476787	0.694934	13.0169	0.0533871

APV-I discontinuity events :

#	Epoch	duration	stable period
1	281098	120	3715
2	281538	320	320
3	281983	1	125
4	281987	1	3
5	281990	2	2
6	281994	2	2
7	281997	3	1
8	282001	822	1

9	293190	262	10367
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APV-35m discontinuity events :

#	Epoch	duration	stable period
1	281098	120	3715
2	281473	1350	255
3	293190	262	10367
4	298514	36	5062
5	298870	187	320

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	281098	120	3715
2	281473	1350	255
3	293190	262	10367
4	298514	36	5062
5	298870	187	320

First Glance analysis

Duration	26138
Number of Samples	26138
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.3811
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
25777	24244	23781	0	23781

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.20458	2.16251	1.96988	NaN	1.96988

HPEScale 95%	NaN	5.34452	5.36003	NaN	5.36003
VPE 95%	2.80292	2.79501	2.79792	NaN	2.79792
VPEscale 95%	NaN	7.59902	5.32903	NaN	5.32903

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.940528	0.922567	0	0.922567
measurements	0.986189	0.927538	0.909825	0	0.909825
Operational	0.986189	0.927538	0.909825	0	0.909825

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	9	28	--	28
Long	--	4	5	--	5
Independent	--	3	5	--	5
P(disc.)	NaN	0.00185613	0.00315378	NaN	0.00315378
P(slide)	NaN	0.00284607	0.00529835	NaN	0.00529835

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

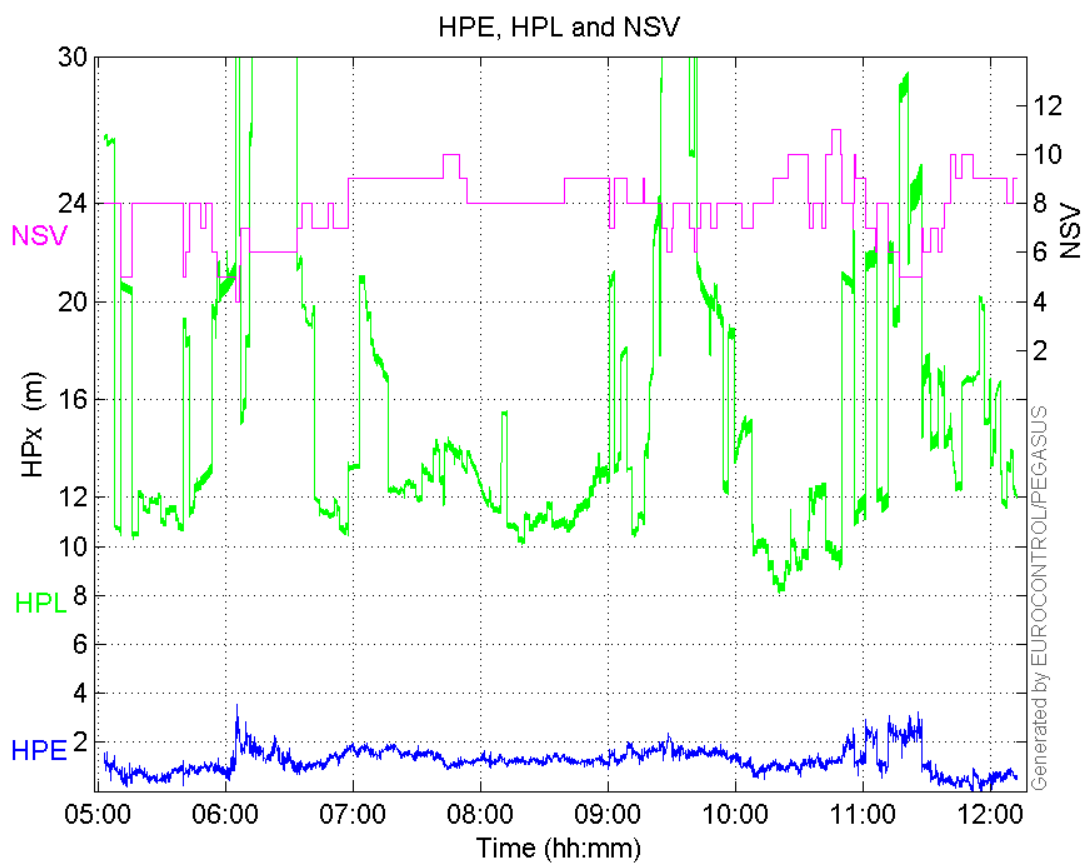
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	25777	24244	23781	0	23781
SIS Availability	1	0.940528	0.922567	0	0.922567
Local Availability	0.986189	0.927538	0.909825	0	0.909825
Operational Availability	0.986189	0.927538	0.909825	0	0.909825
HPE 95%	2.20458	2.16251	1.96988	NaN	1.96988
HPEScale 95%	NaN	5.34452	5.36003	NaN	5.36003
VPE 95%	2.80292	2.79501	2.79792	NaN	2.79792
VPEscale 95%	NaN	7.59902	5.32903	NaN	5.32903
All Discontinuity Events	--	9	28	--	28
Long Discontinuity Events	--	4	5	--	5
Independent Discontinuity Events	--	3	5	--	5
P(discontinuity)	NaN	0.00185613	0.00315378	NaN	0.00315378

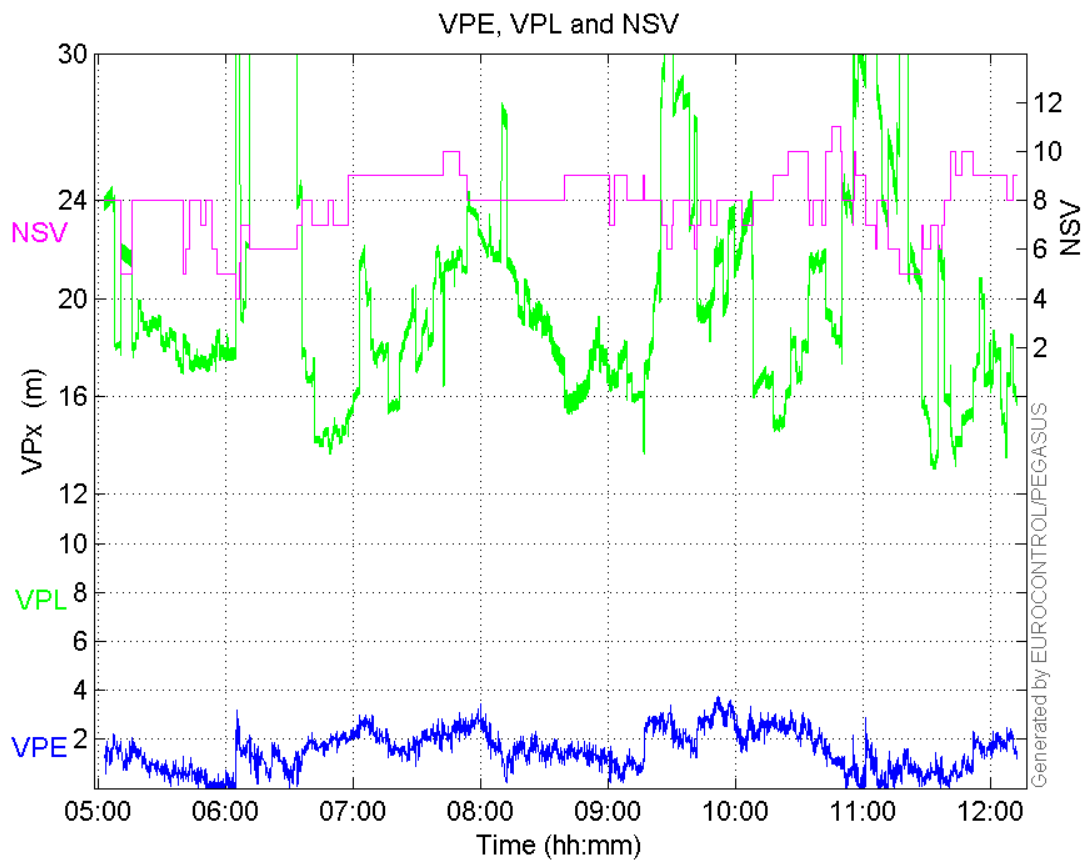
P(sliding window)	NaN	0.00284607	0.00529835	NaN	0.00529835
All Integrity Events	0	0	0	0	0
Horizontal Integrity Events	0	0	0	0	0
Vertical Integrity Events	0	0	0	0	0

Time Series

HPE, HPL and NSV:

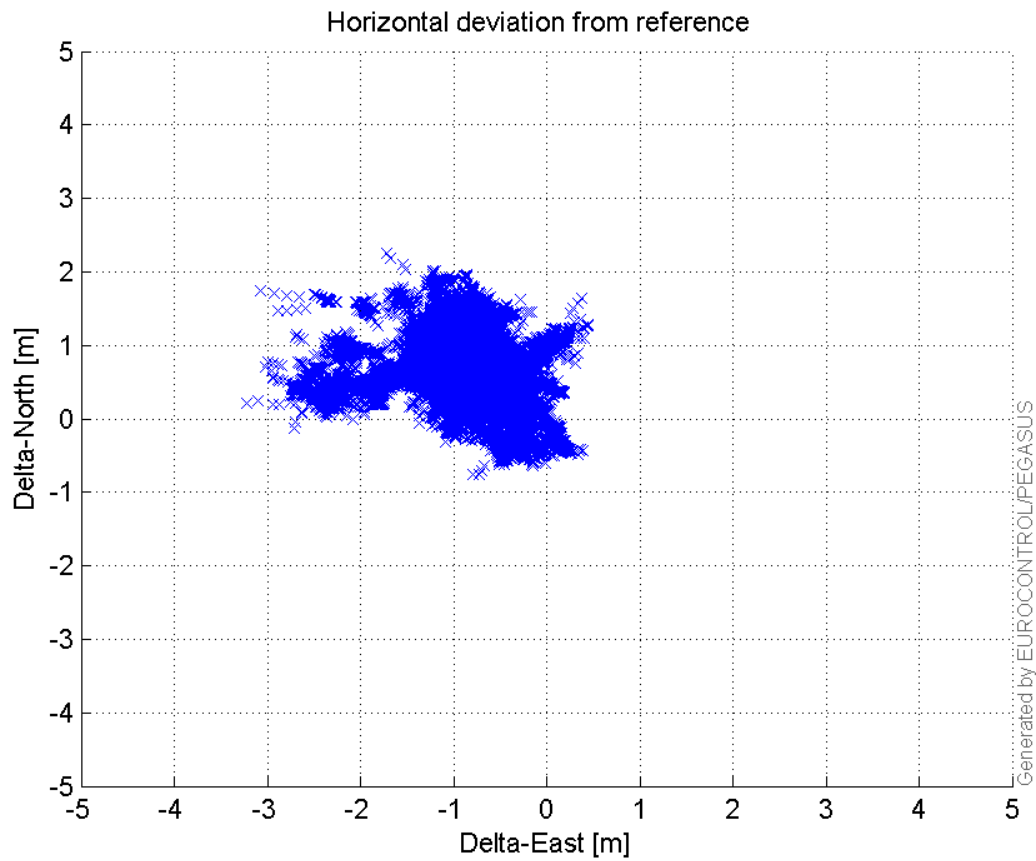


VPE, VPL and NSV:



Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

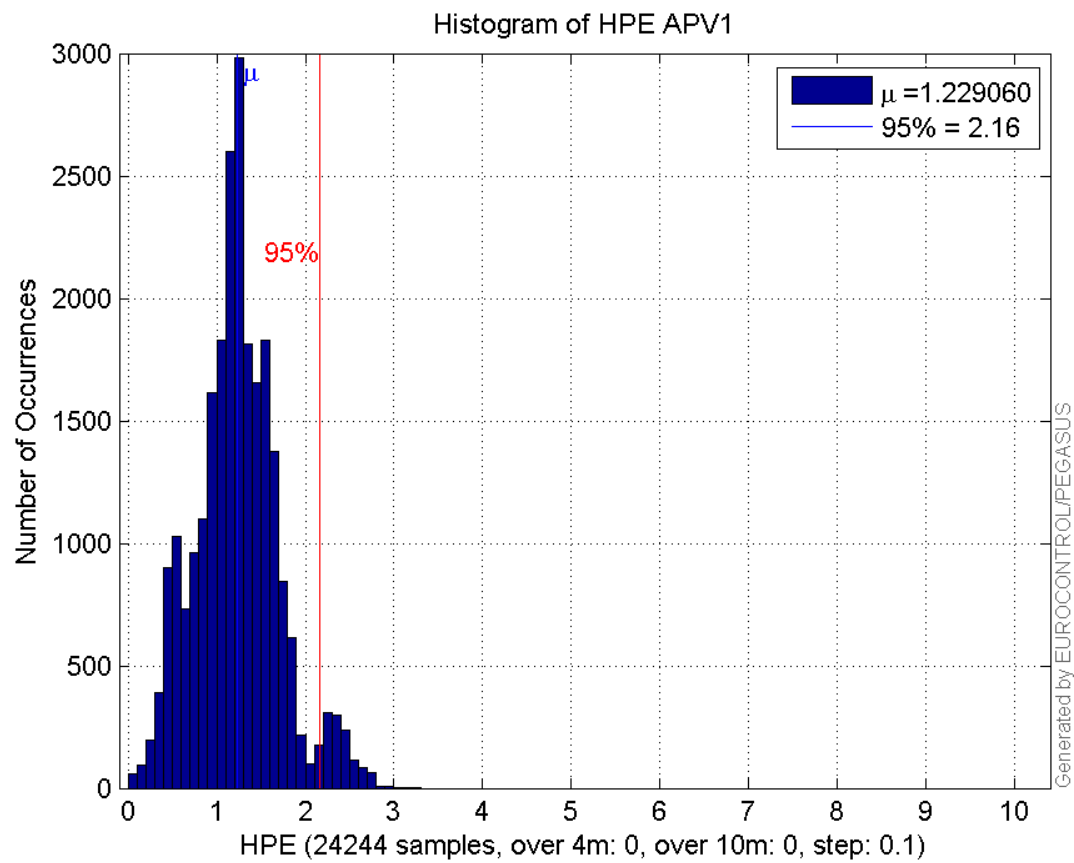
number	24244
sum	29797.335
sum2	42094.135
prctile95	2.1625069
prctile99	2.5251526
number	24244
sum	37801.916
sum2	73999.36
prctile95	2.7950079
prctile99	3.2678858
number	24244
sum	371332.19
sum2	6501081.4
prctile95	26.51062
prctile99	37.970084
number	24244
sum	480004.77
sum2	10060609
prctile95	28.52044
prctile99	38.975886
number	24244

sum 2082.6632
sum2 205.11586
prctile95 0.13361306
prctile99 0.14880998
number 24244
sum 1989.5133
sum2 208.25404
prctile95 0.1519805
prctile99 0.16834206
number 23781
sum 28872.536
sum2 40147.702
prctile95 1.9698782
prctile99 2.5024065
number 23781
sum 37165.139
sum2 73036.808
prctile95 2.7979231
prctile99 3.2768566
number 23781
sum 359435.4
sum2 6184472.3
prctile95 26.380925
prctile99 37.972976
number 23781
sum 461061.08
sum2 9275555.7
prctile95 27.825145
prctile99 30.581373
number 23781
sum 2044.0864
sum2 201.47504
prctile95 0.13400087
prctile99 0.1489451
number 23781
sum 1973.5898
sum2 207.64035
prctile95 0.15225794
prctile99 0.16851739

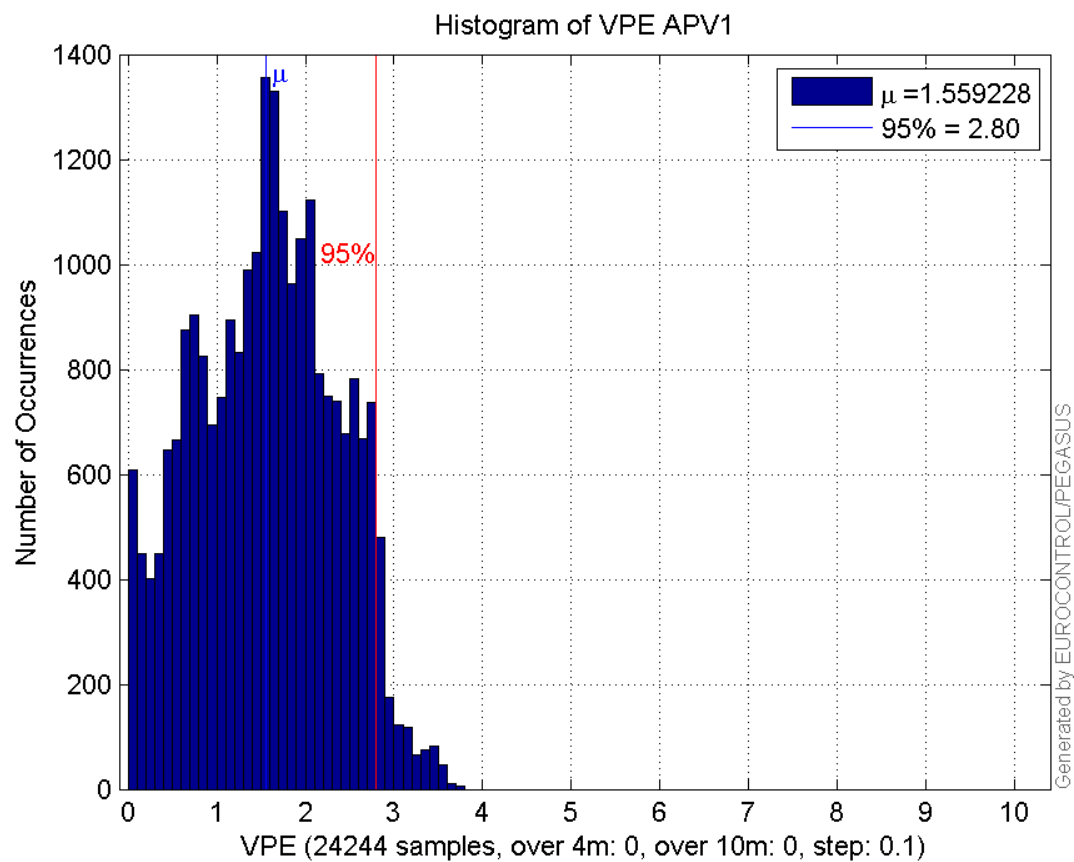
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.22906	0.475069	1.21876	2.16251	2.52515	1.31768
HPL	15.3165	5.79307	13.0422	26.5106	37.9701	16.3754
VPE	1.55923	0.788105	1.58432	2.79501	3.26789	1.74708
VPL	19.7989	4.79346	18.4818	28.5204	38.9759	20.3709

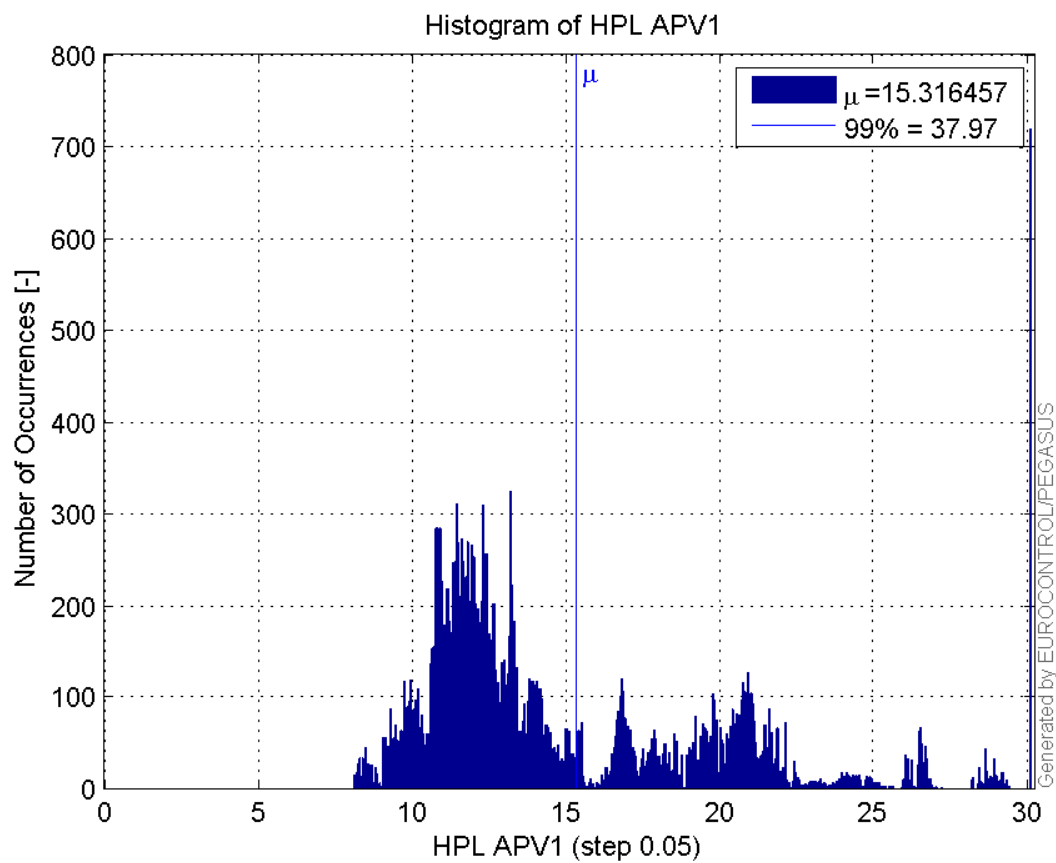
Histogram of HPE APV1:



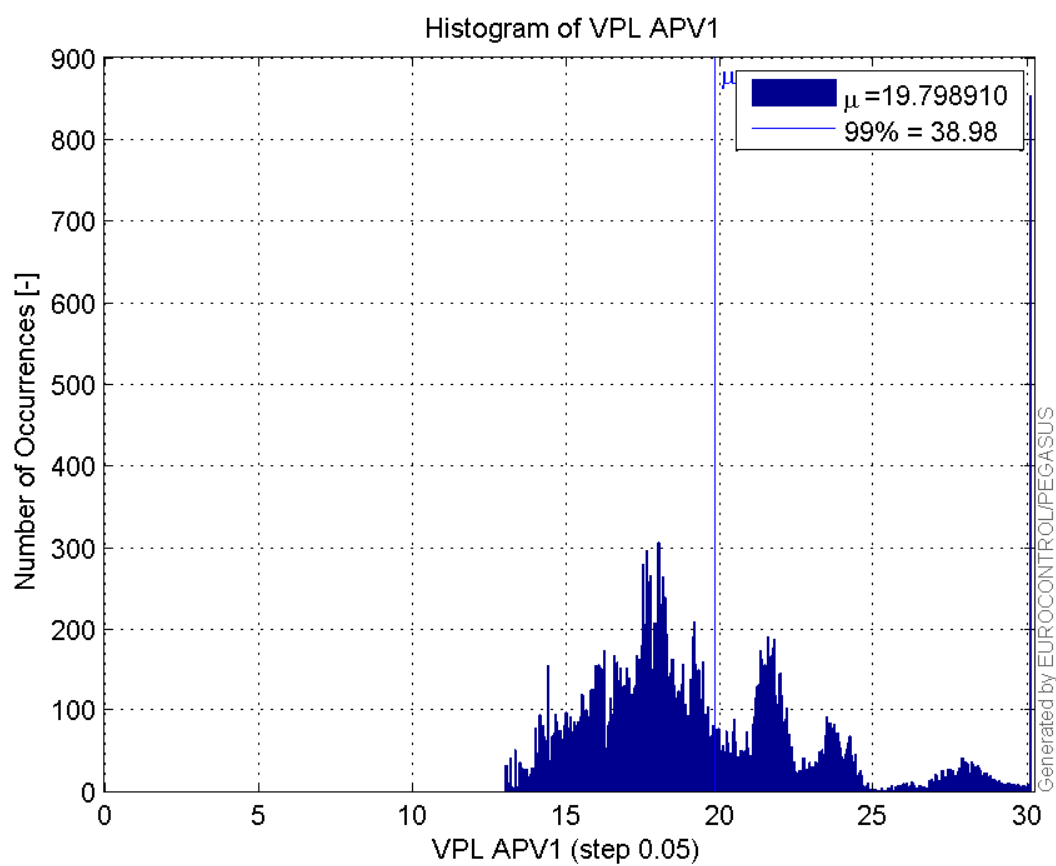
Histogram of VPE APV1:



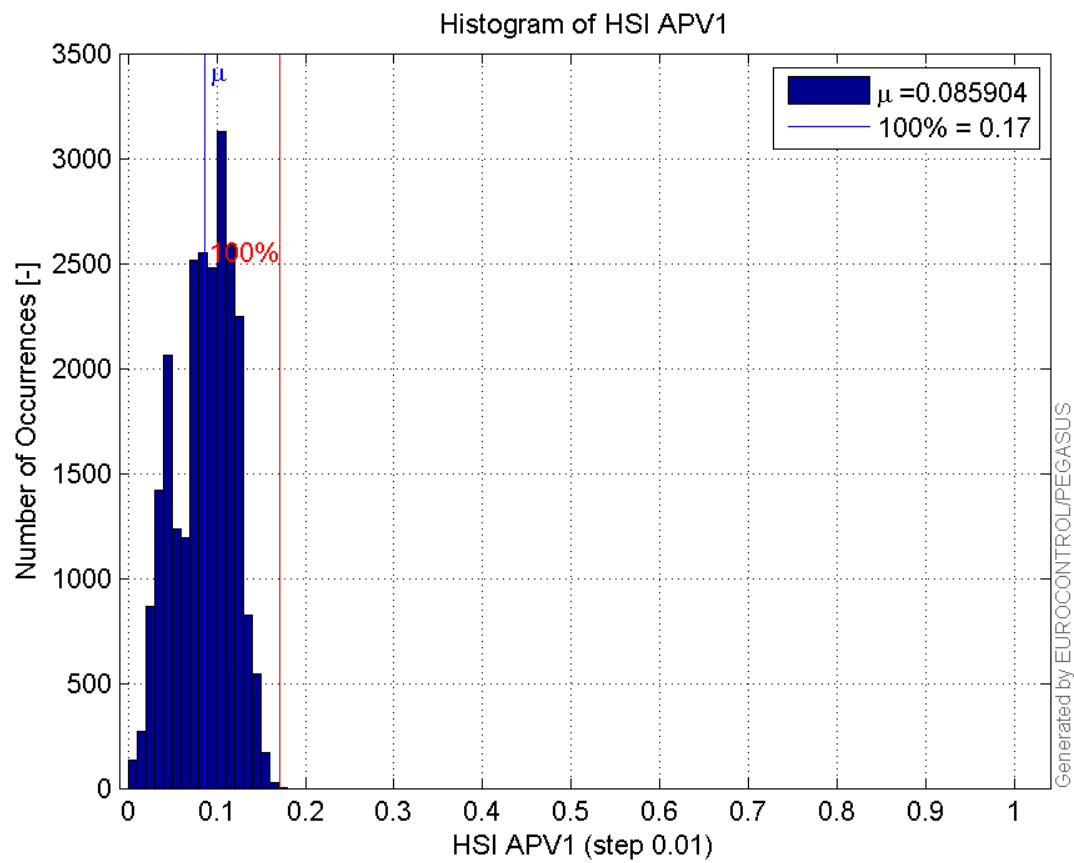
Histogram of HPL APV1:



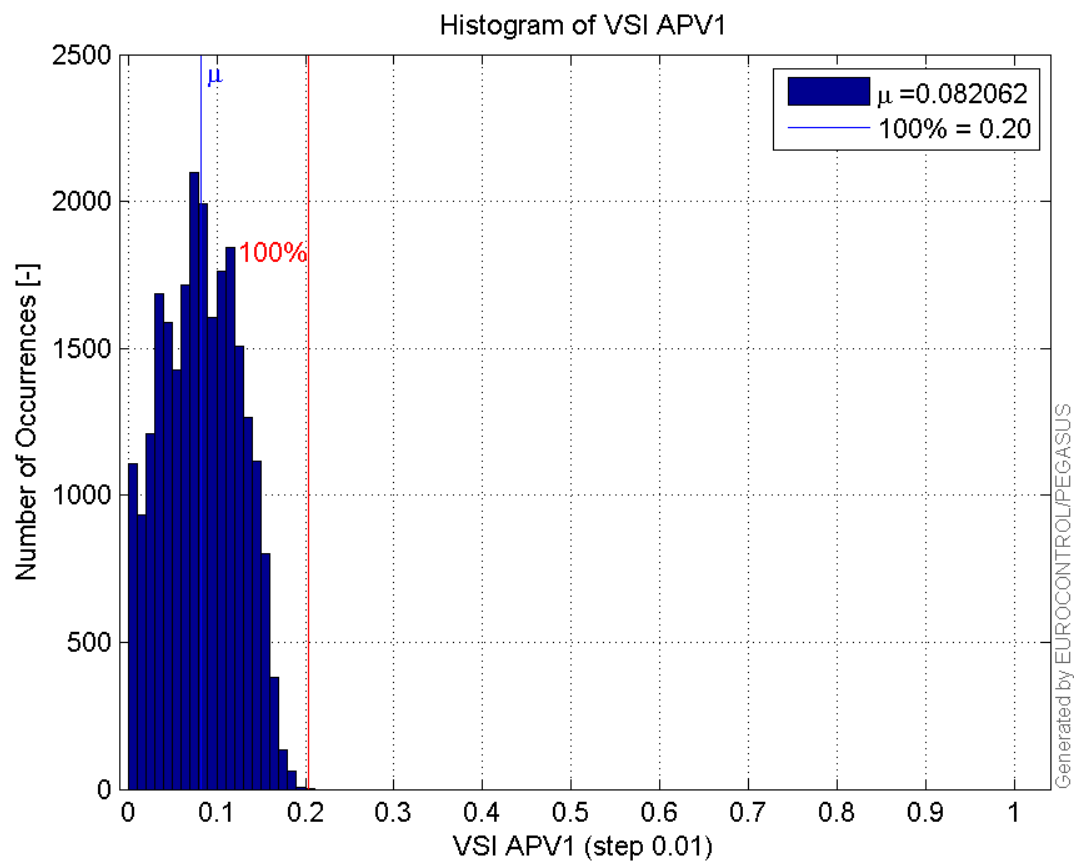
Histogram of VPL APV1:



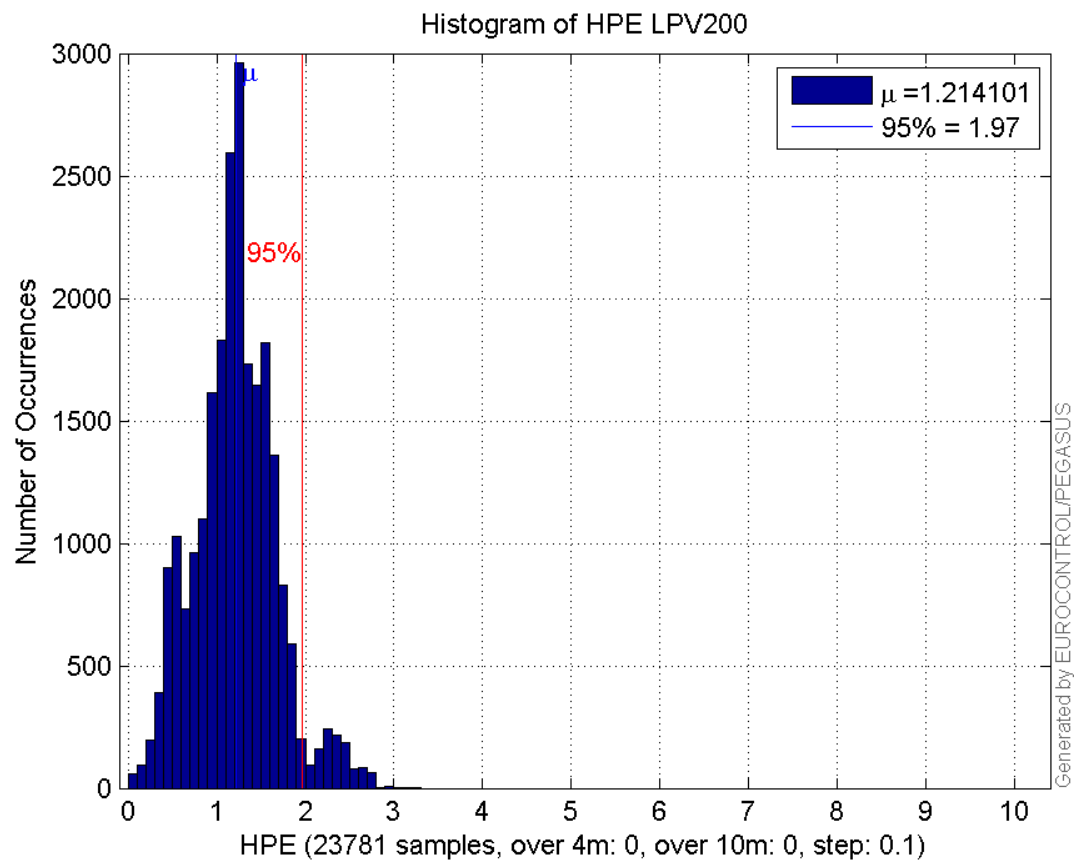
Histogram of HSI APV1:



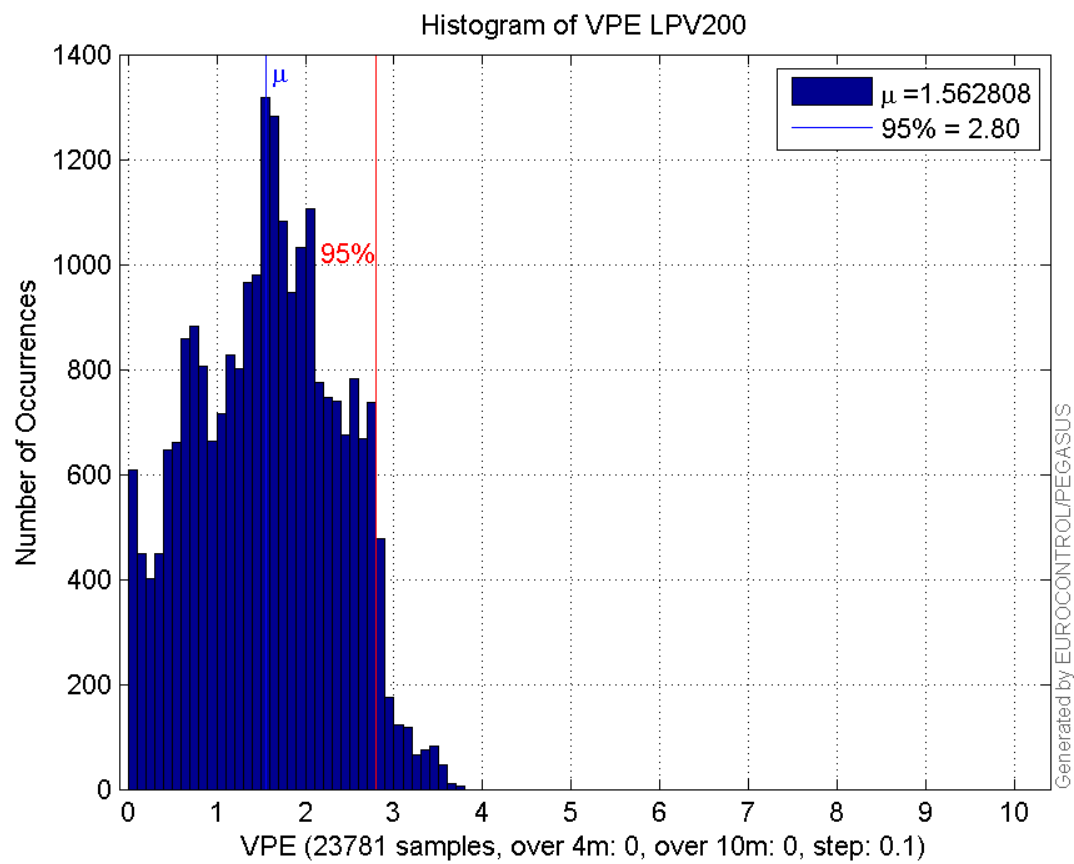
Histogram of VSI APV1:



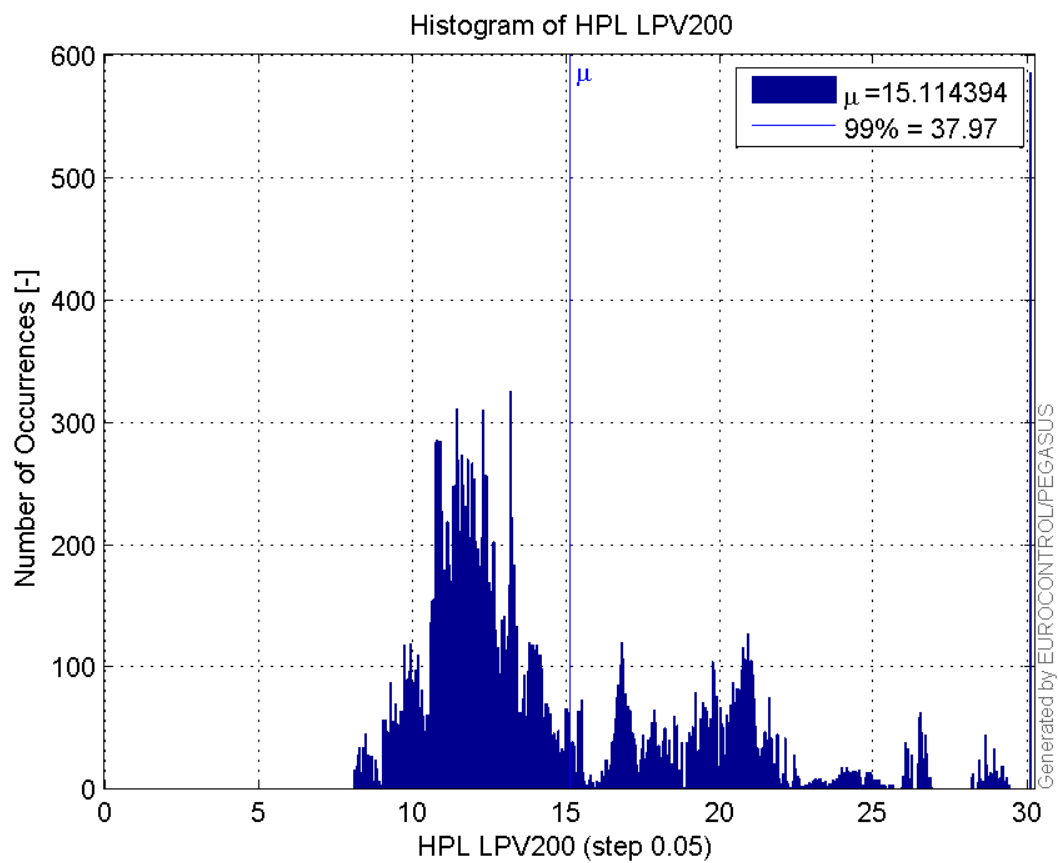
Histogram of HPE LPV200:



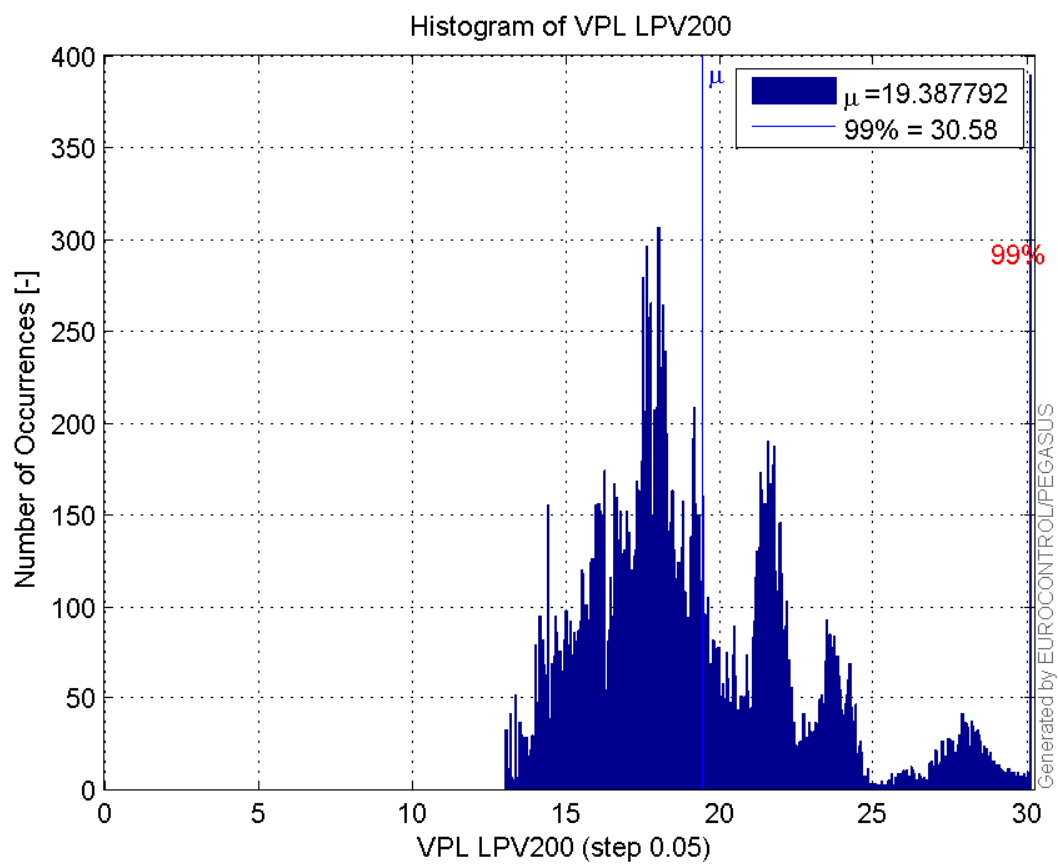
Histogram of VPE LPV200:



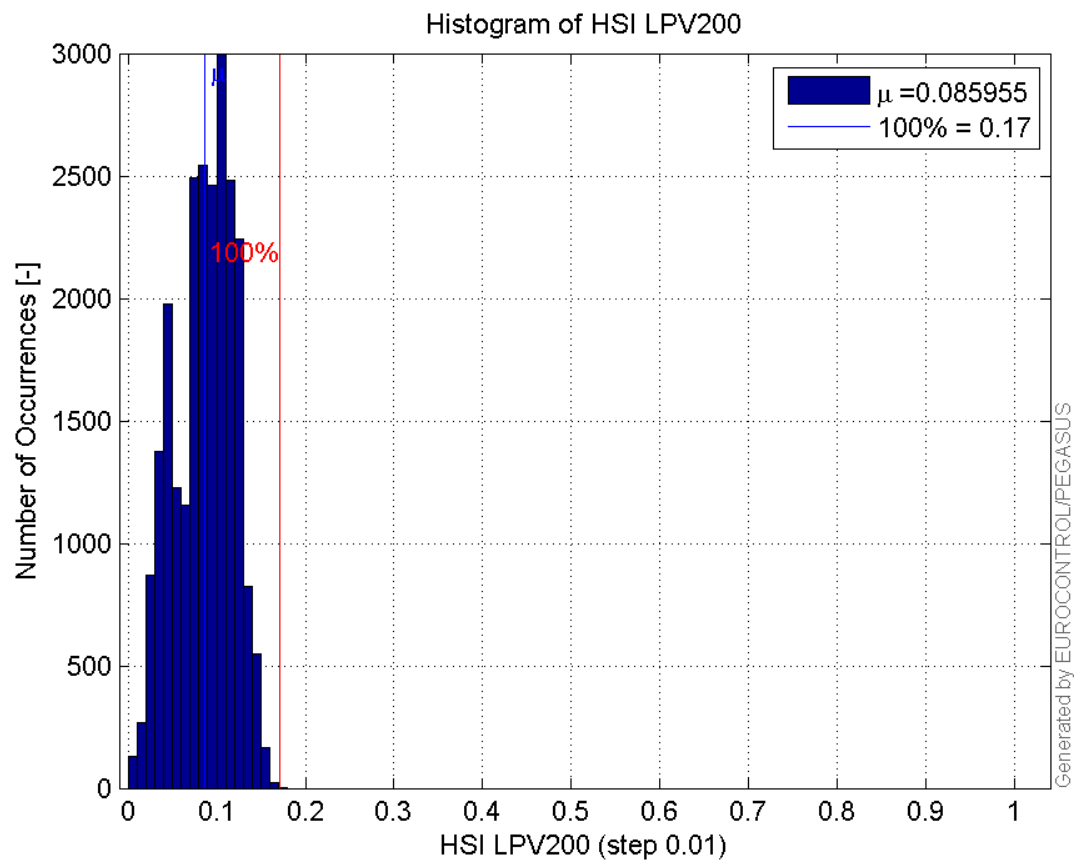
Histogram of HPL LPV200:



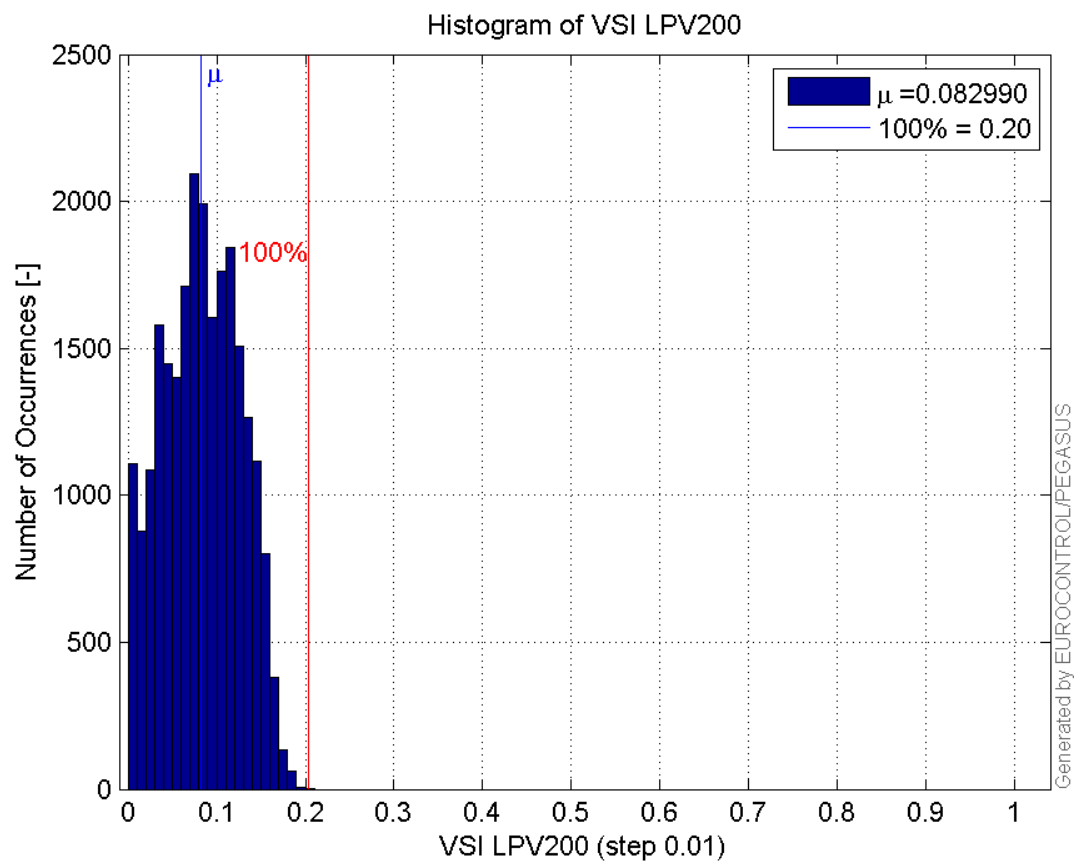
Histogram of VPL LPV200:



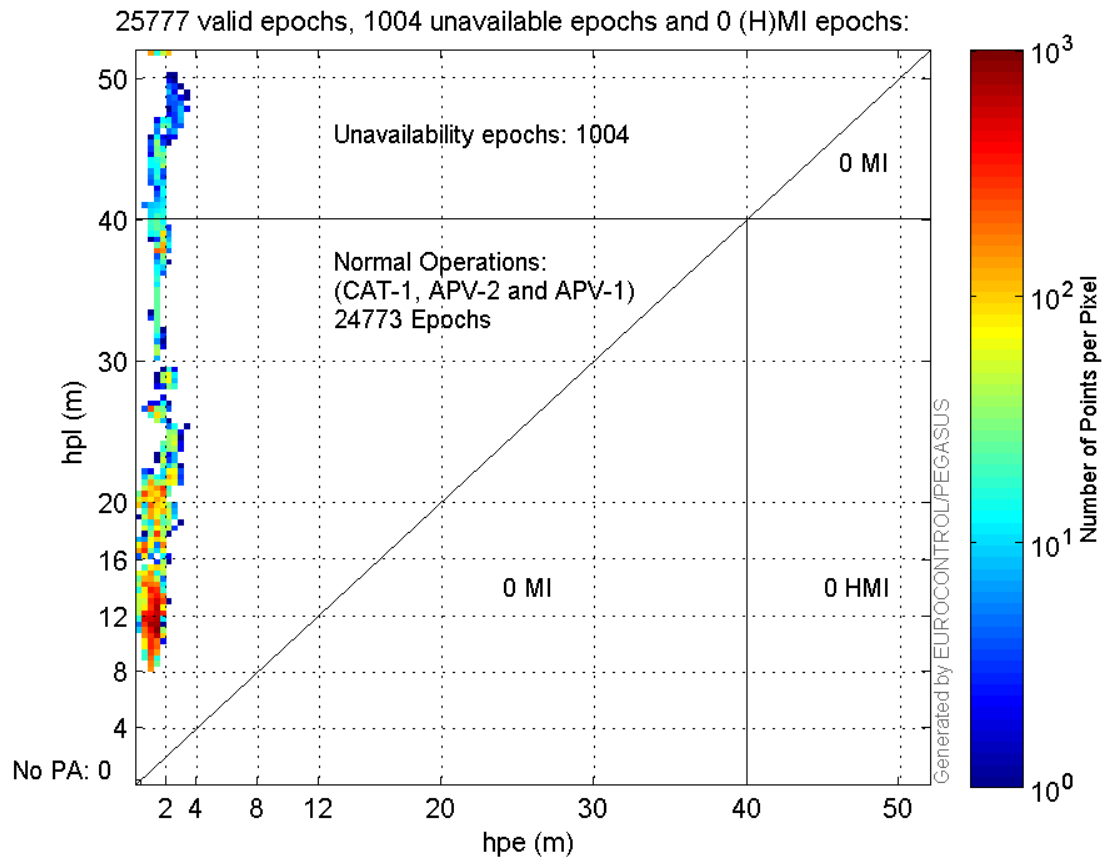
Histogram of HSI LPV200:



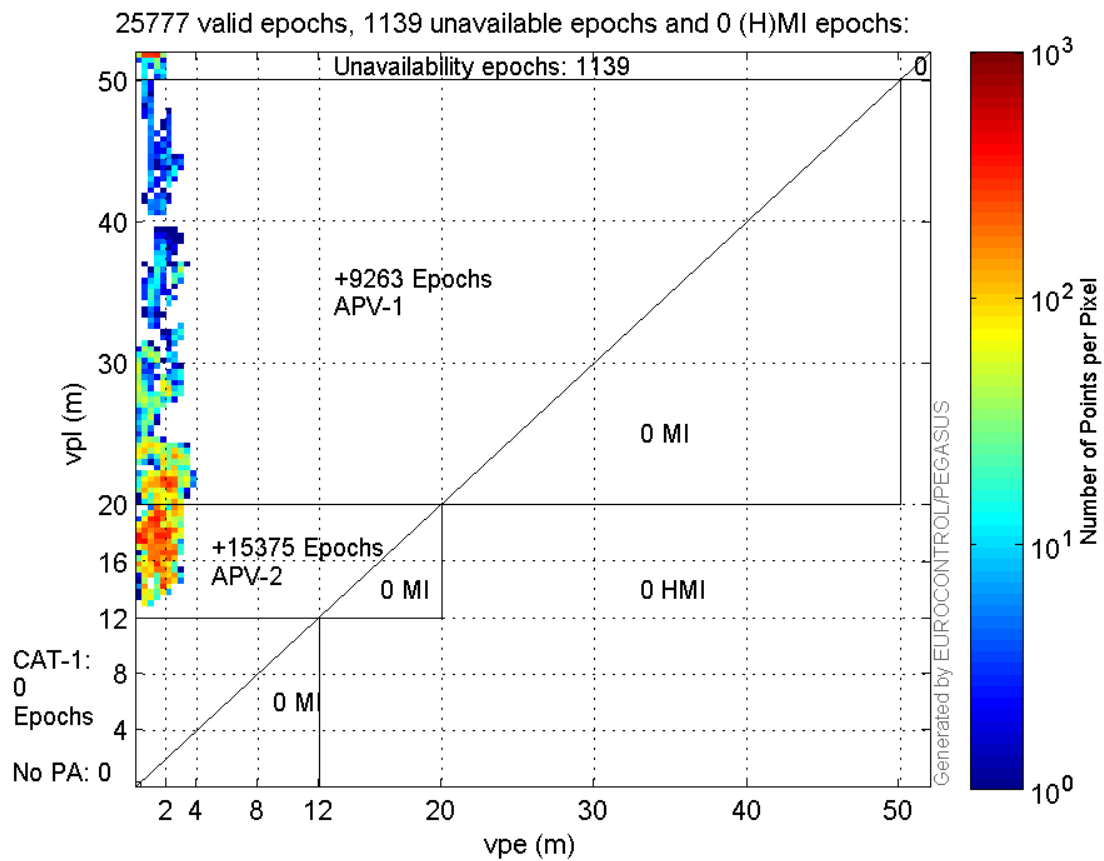
Histogram of VSI LPV200:



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_30/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_30/03_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	241.709
mi_numbers	results	0

Range Domain

start: 04:57:02 30.09.2015 (week: 1864 sec: 277022)
end: 12:12:39 30.09.2015 (week: 1864 sec: 303159)
duration: 07:15:38 ..

quality

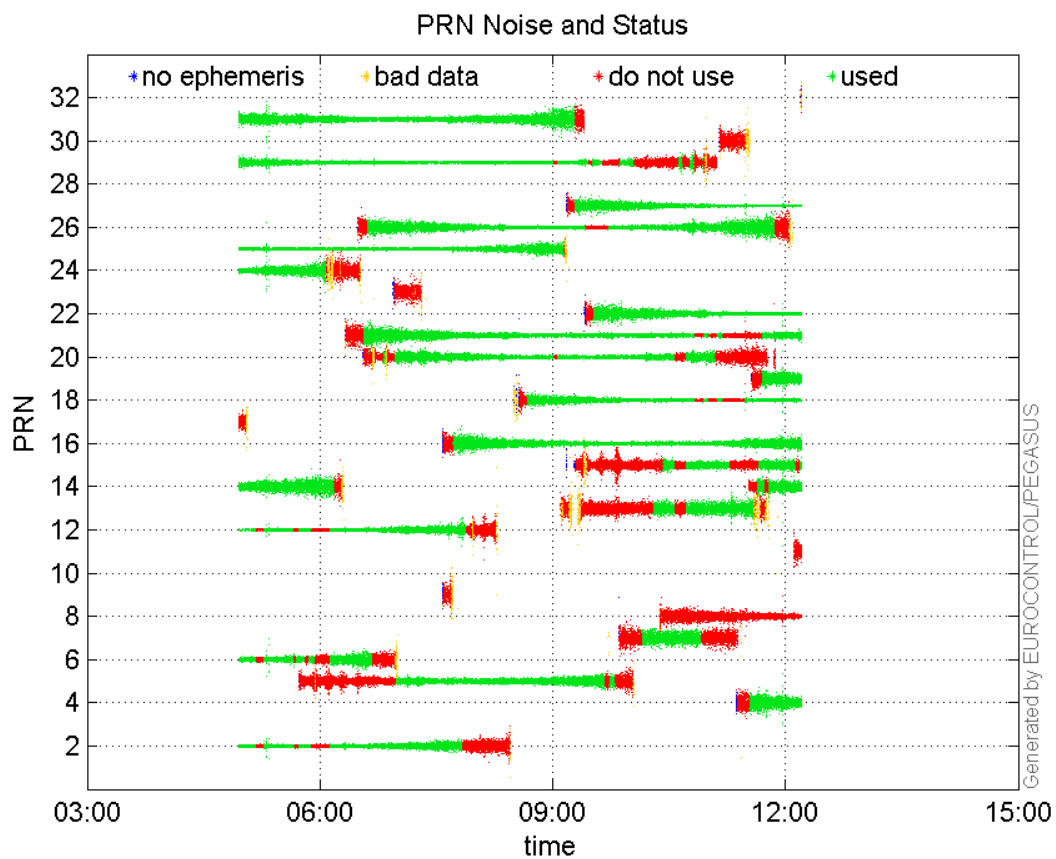
valid samples 26138
total samples 26138

PRN overview

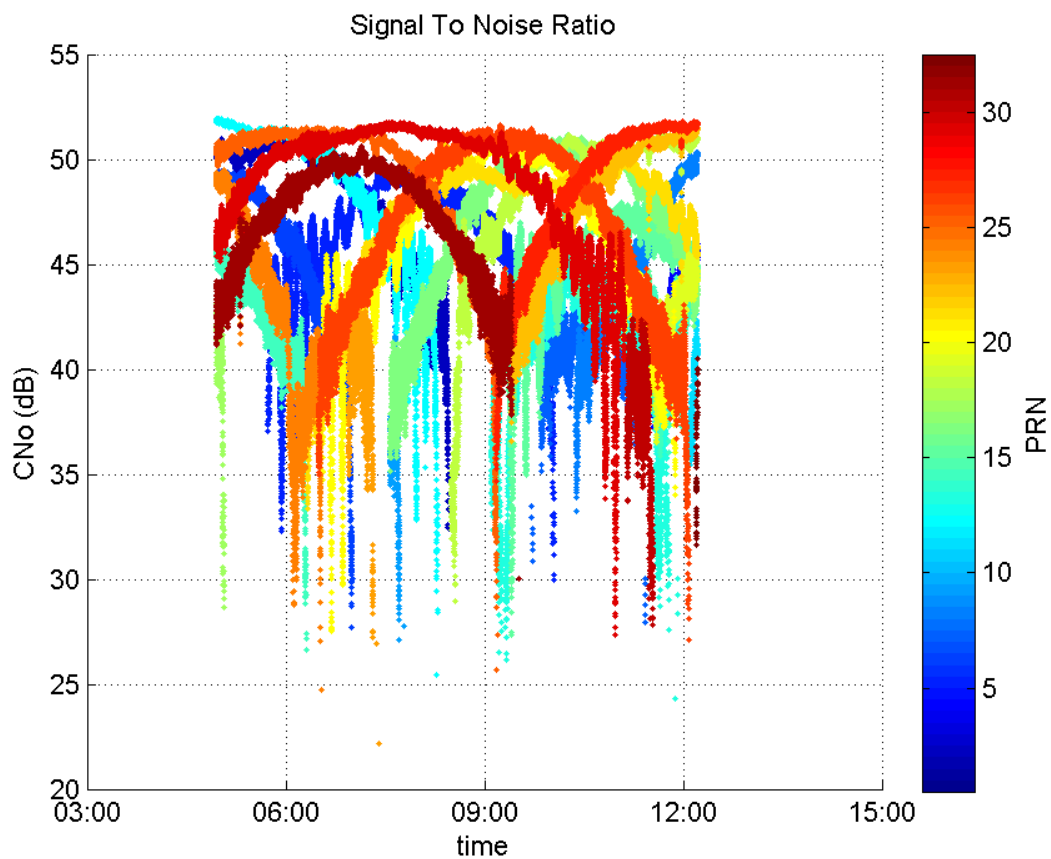
Number of Visible GPS Satellites 28
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



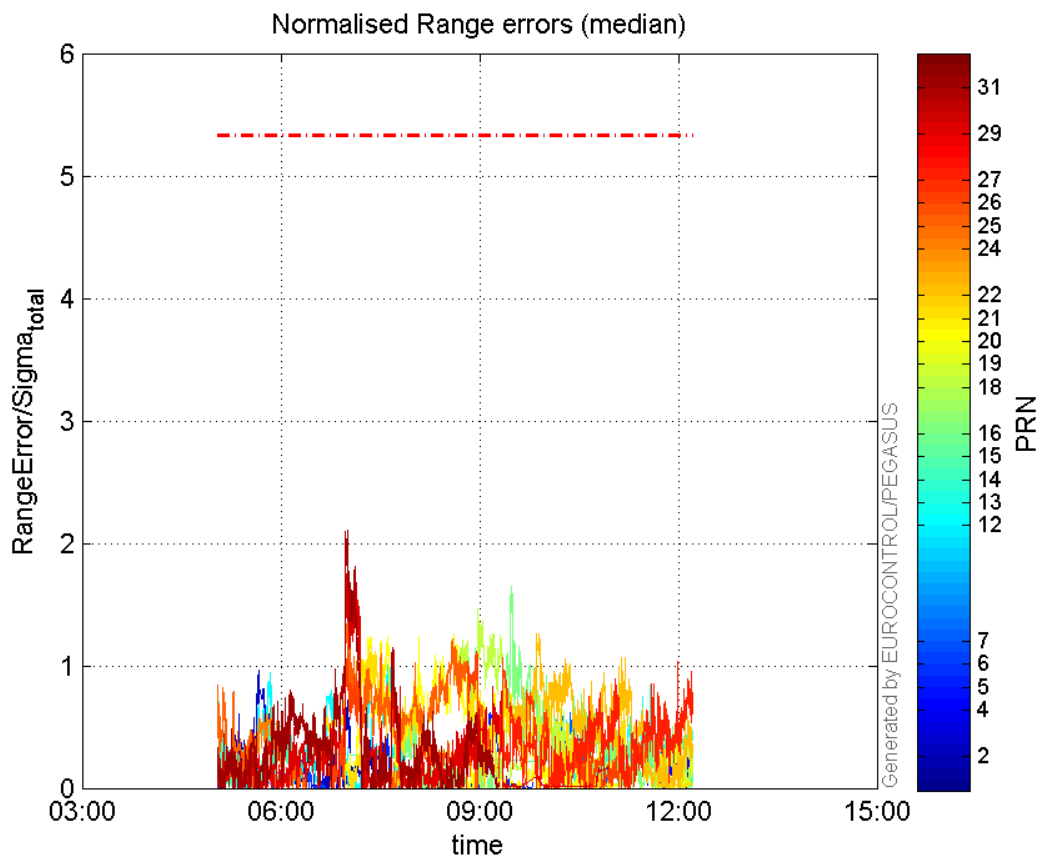
range errors

Number of Overbounding Norm Errors 0

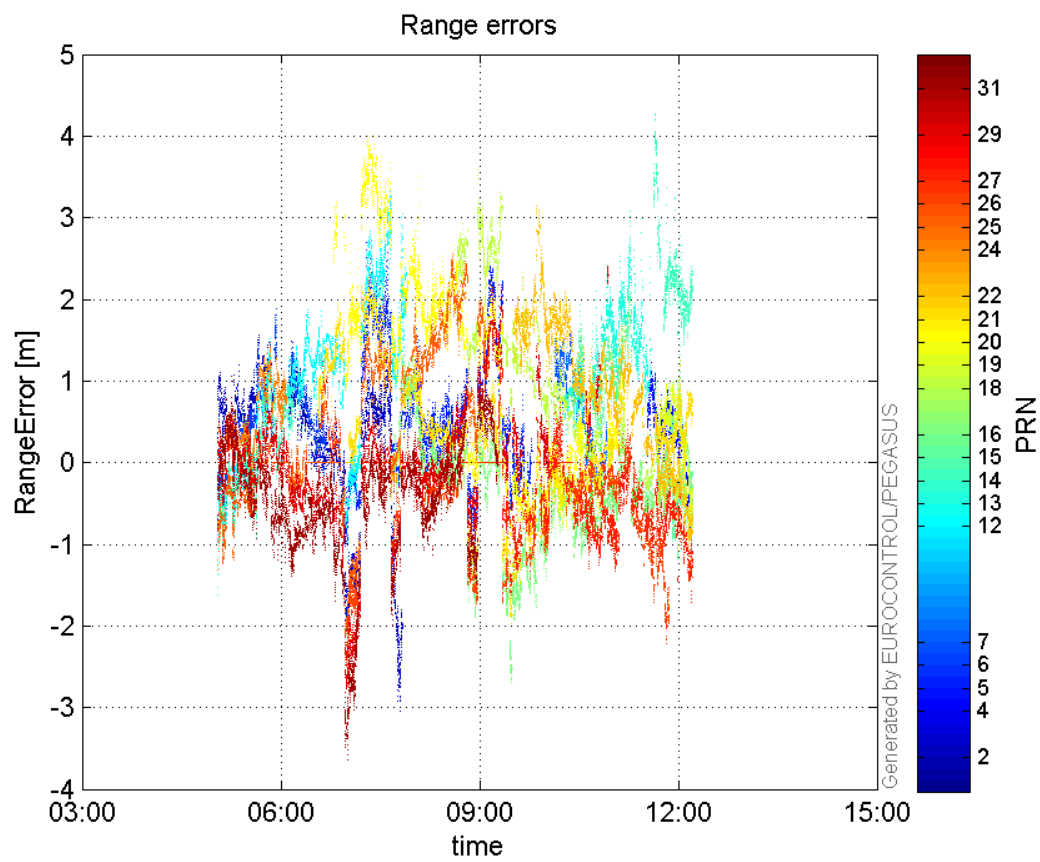
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1864	279604	2	0.966267	1.5614	1.61591
1864	300951	4	0.397758	1.22646	3.08342
1864	292322	5	0.75735	2.36963	3.12885
1864	281871	6	0.297059	0.995048	3.34966
1864	296553	7	0.613031	1.67576	2.73357
1864	286623	12	1.00121	3.12763	3.12385
1864	300875	13	0.838416	2.53073	3.01847
1864	277389	14	0.824635	-1.61682	1.96065
1864	299695	15	0.374241	2.13078	5.6936
1864	293349	16	1.65158	-2.5656	1.55343
1864	291505	18	1.4613	3.58696	2.45463
1864	302182	19	0.448318	0.987384	2.20242
1864	290183	20	1.25685	2.6618	2.11783
1864	286234	21	1.18008	2.14061	1.81396
1864	294845	22	1.26178	3.06318	2.42766
1864	280200	24	0.660435	1.46449	2.21745
1864	284418	25	1.46951	-2.34536	1.59601
1864	291426	26	1.11721	-1.66821	1.4932
1864	302355	27	1.03628	-1.45097	1.40018
1864	284418	29	1.96201	-3.08033	1.56999
1864	284418	31	2.10477	-3.63345	1.7263

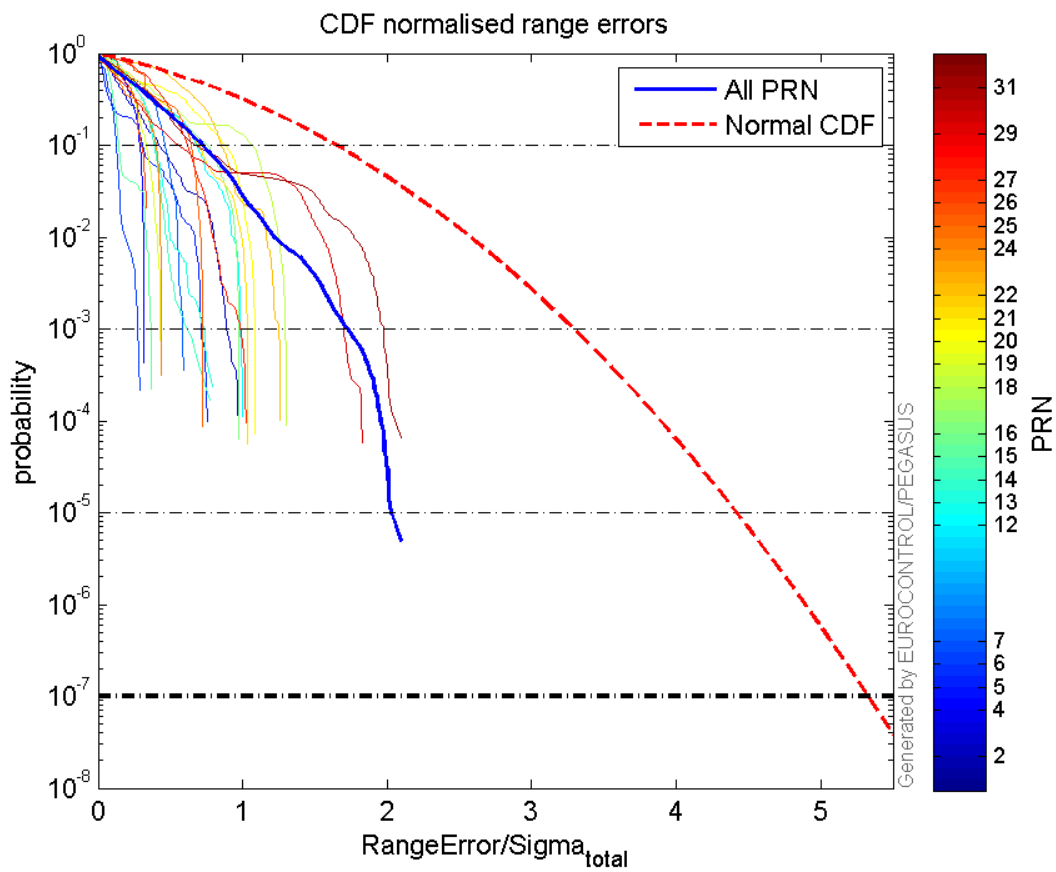
 Normalised Range errors (median):



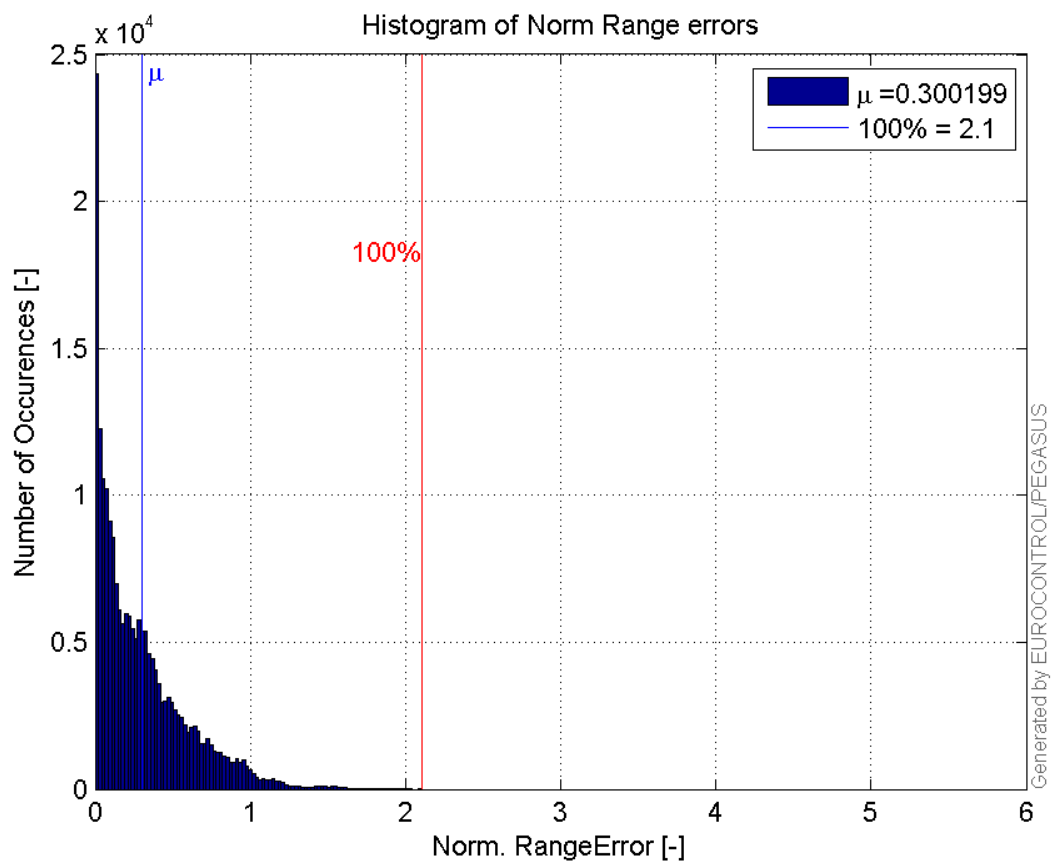
Range errors:



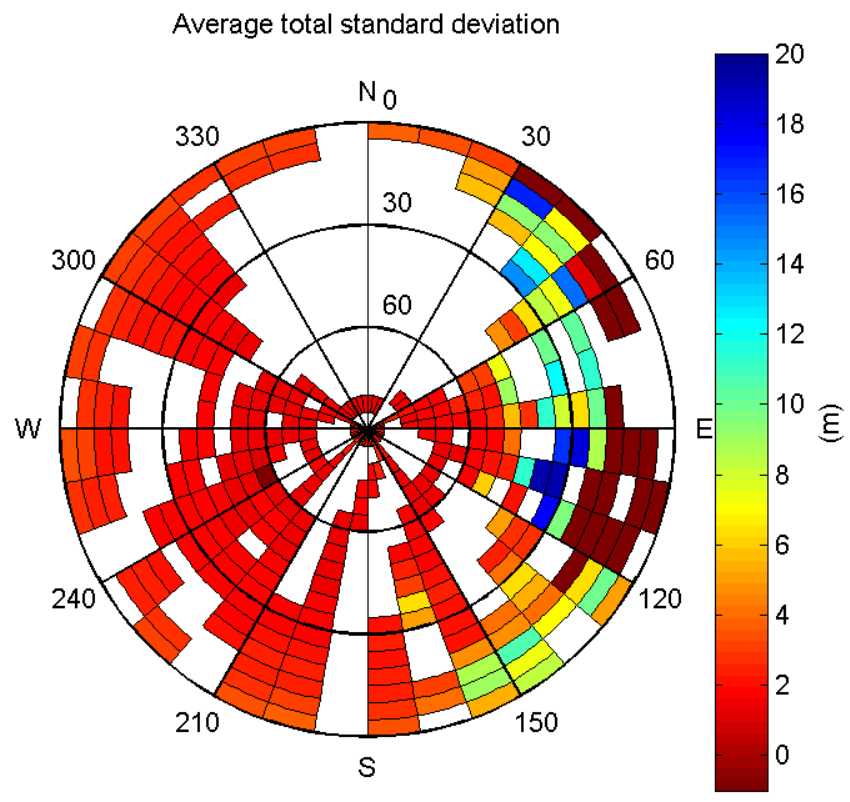
CDF normalised range errors:



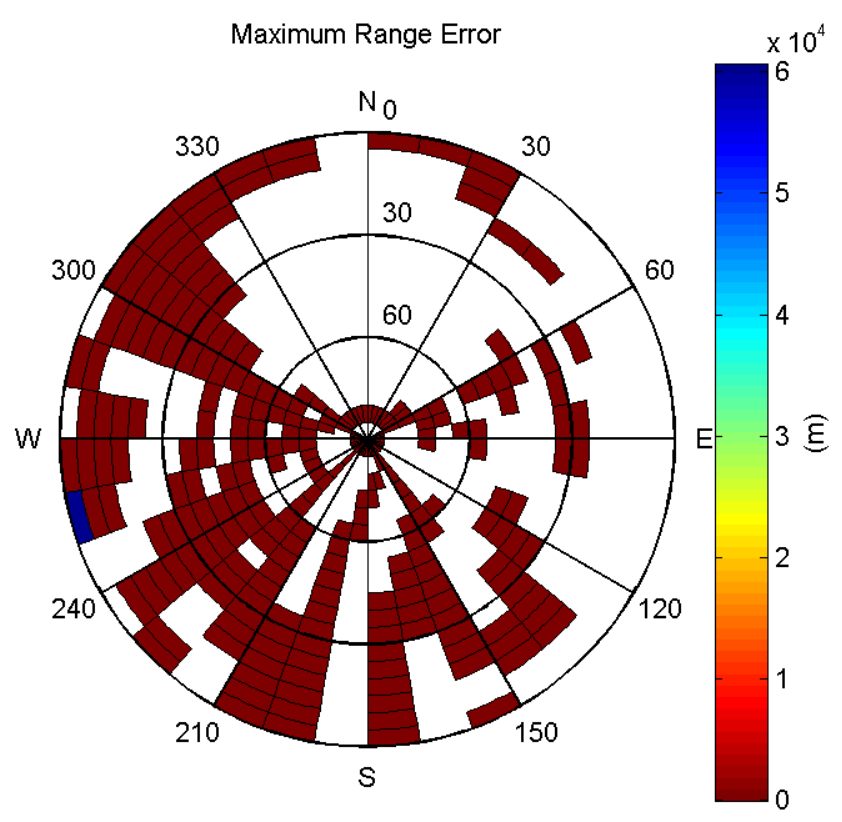
Histogram of Norm Range errors:



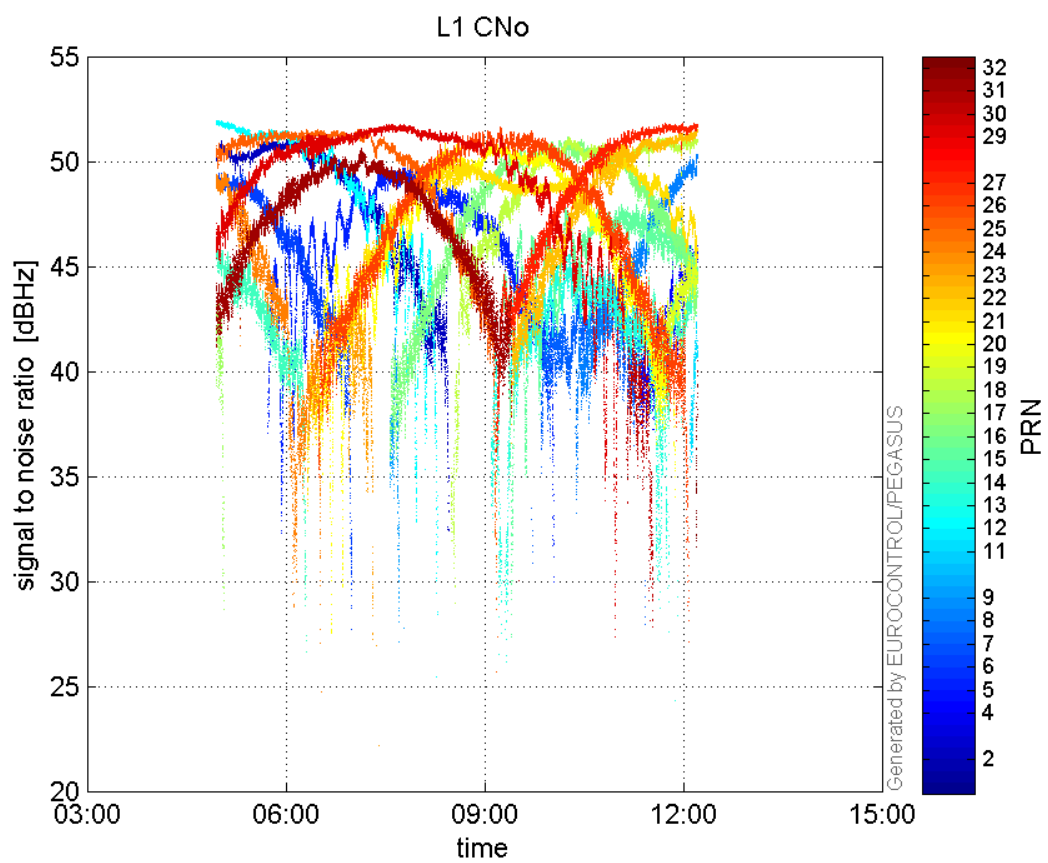
Sigma Sky Plot:



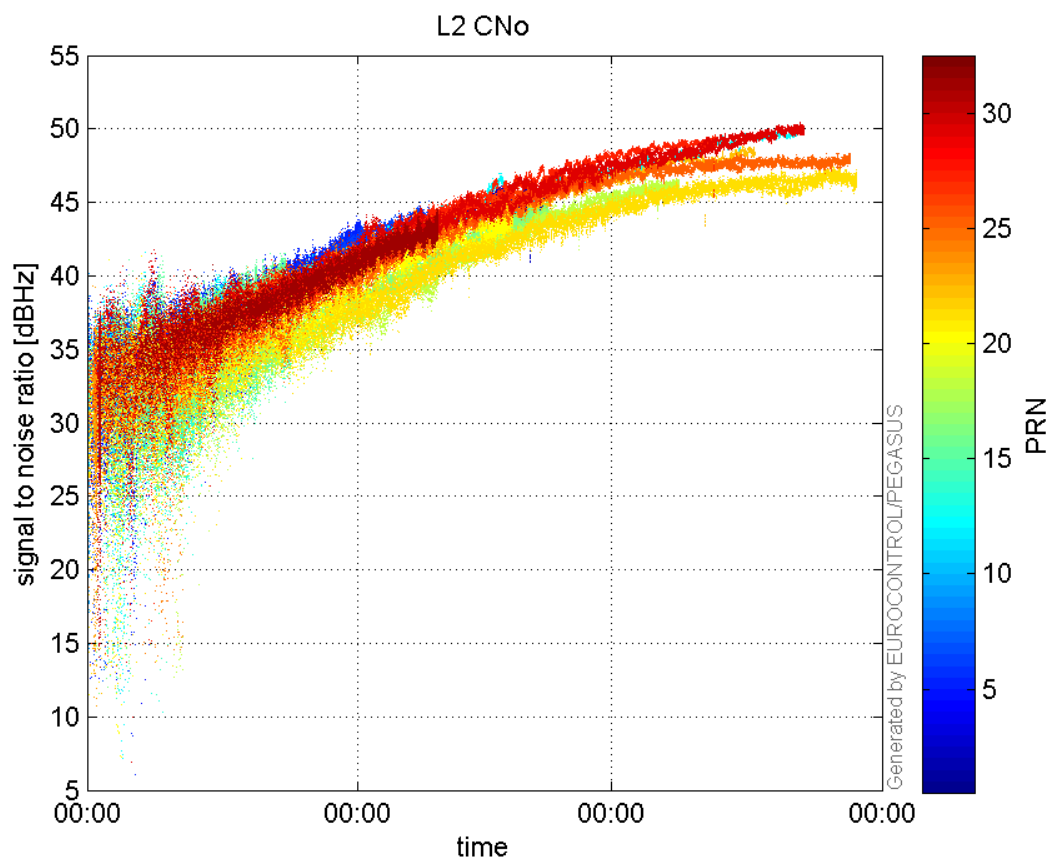
Norm Error Sky Plot:



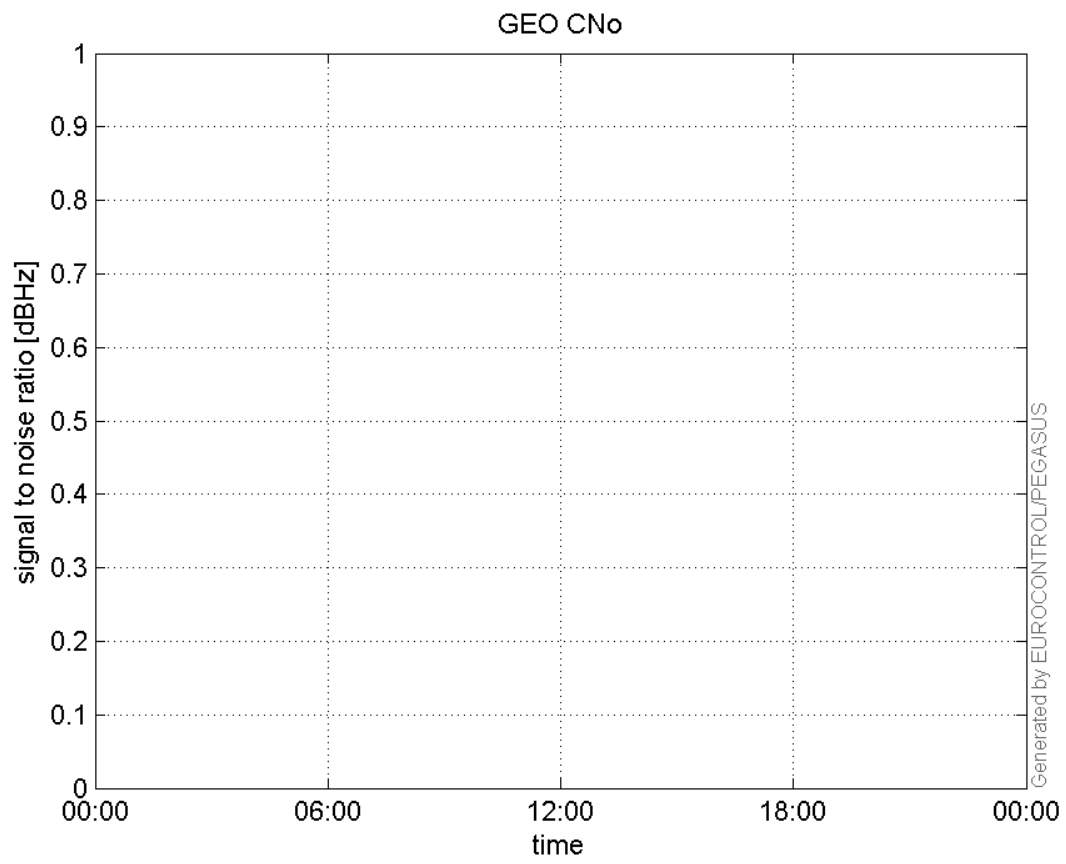
L1 CNo:



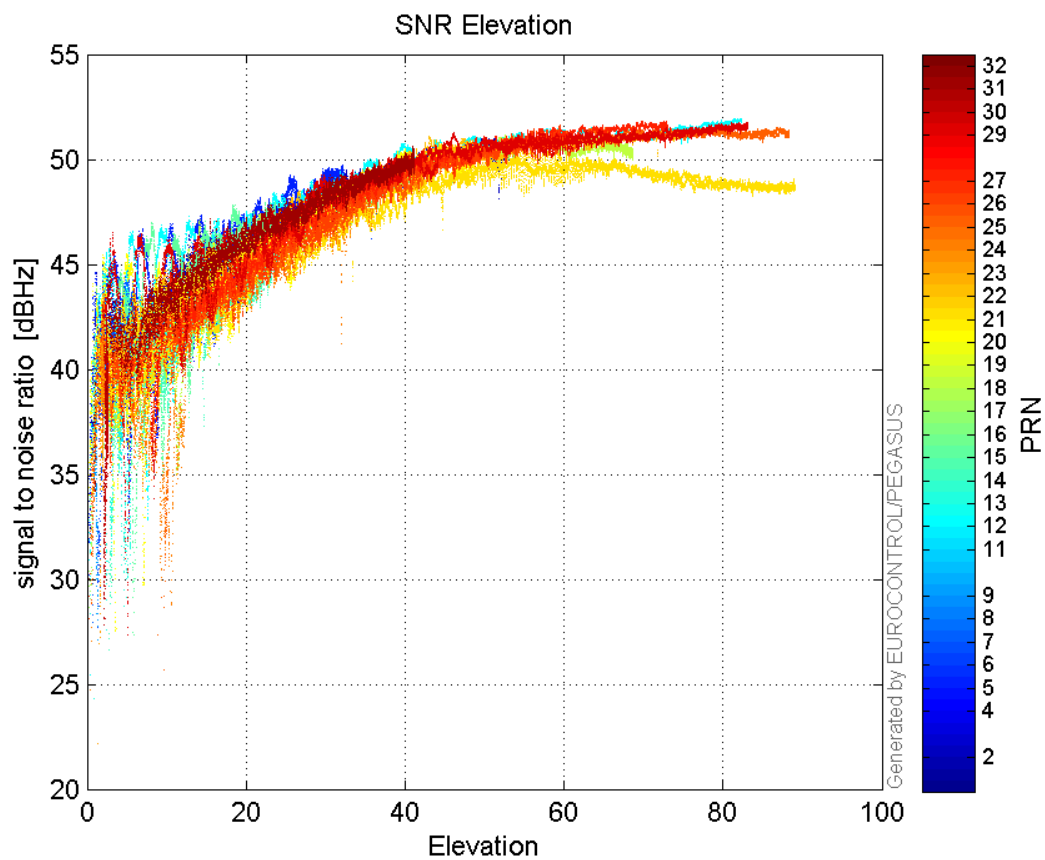
L2 CNo:



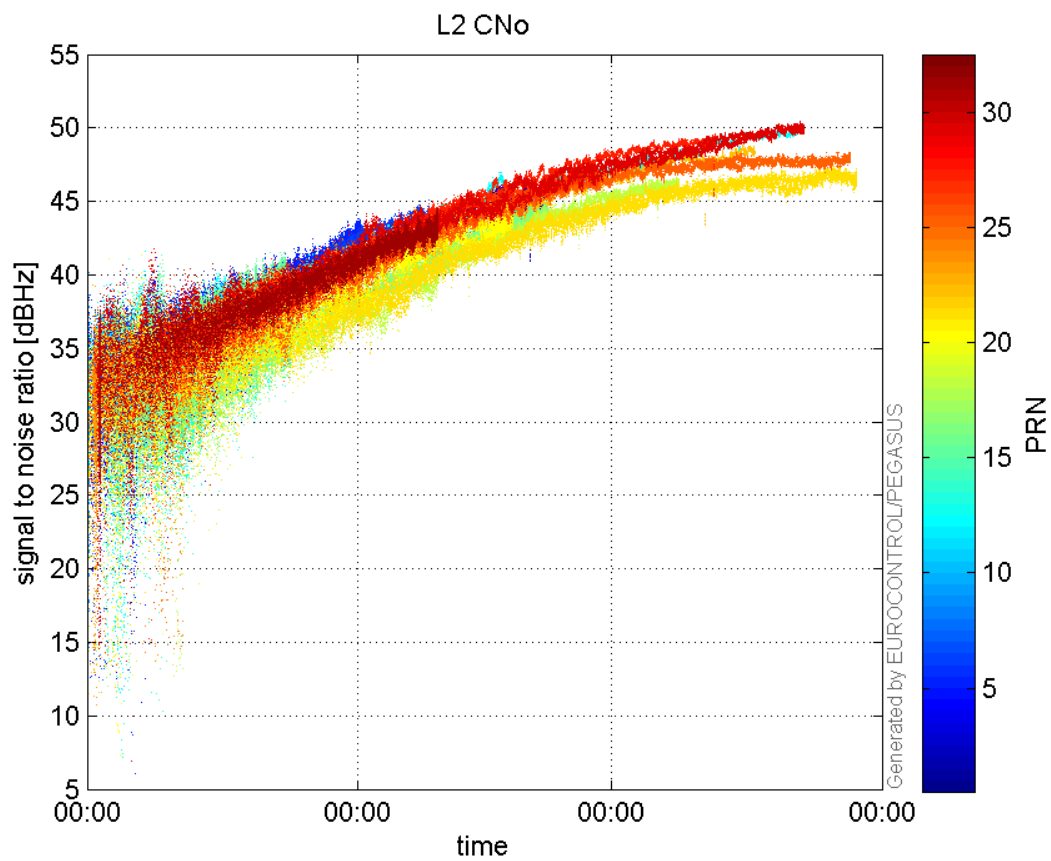
GEO CNo:



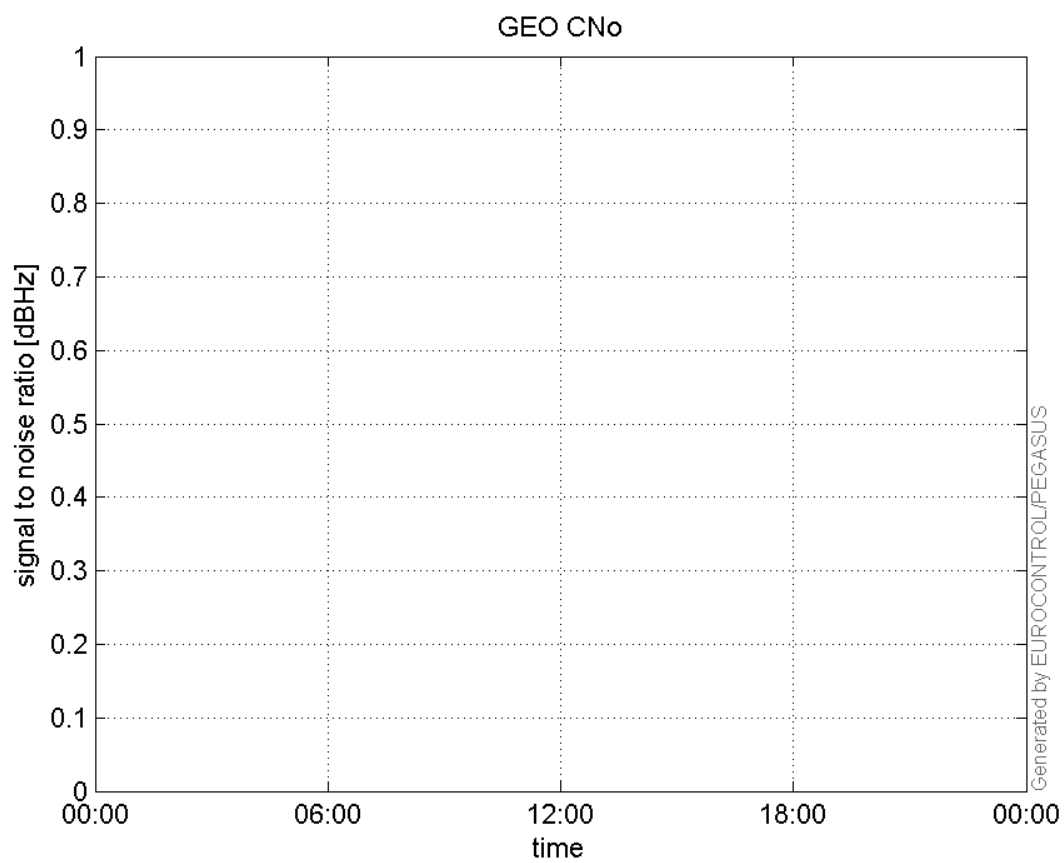
SNR Elevation:



L2 CNo:

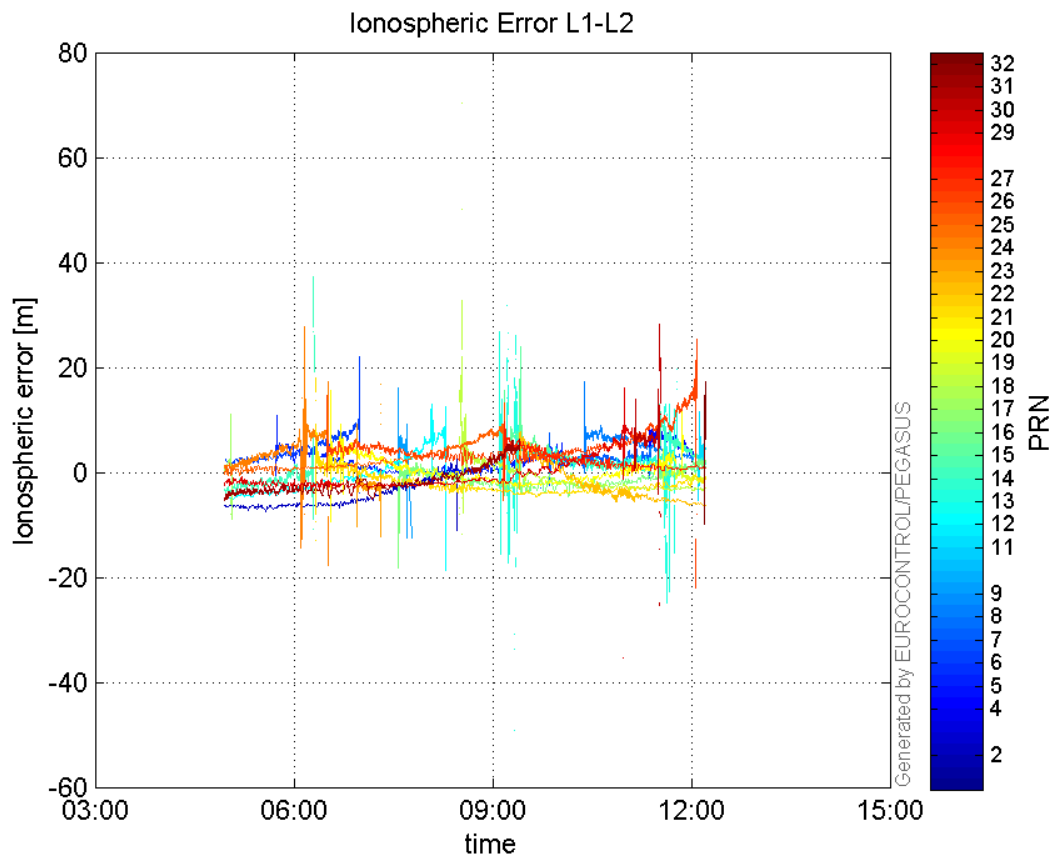


GEO CNo:



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_30/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/Egnos2015_09_30/03_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	241.709
mi_numbers	results	0