

Global View

site Laboratory satellite systems
 abbreviation NAU
 country Ukraine
 city Kiev
 comment
 program Pegasus
 version 4.8.2
 date 20/10/2015

SBAS Messages

start: 05:50:16.129 15.09.2015 (week: 1862 sec: 193816.129)
end: 13:22:11.129 15.09.2015 (week: 1862 sec: 220931.129)
duration: 07:31:55 ..

quality

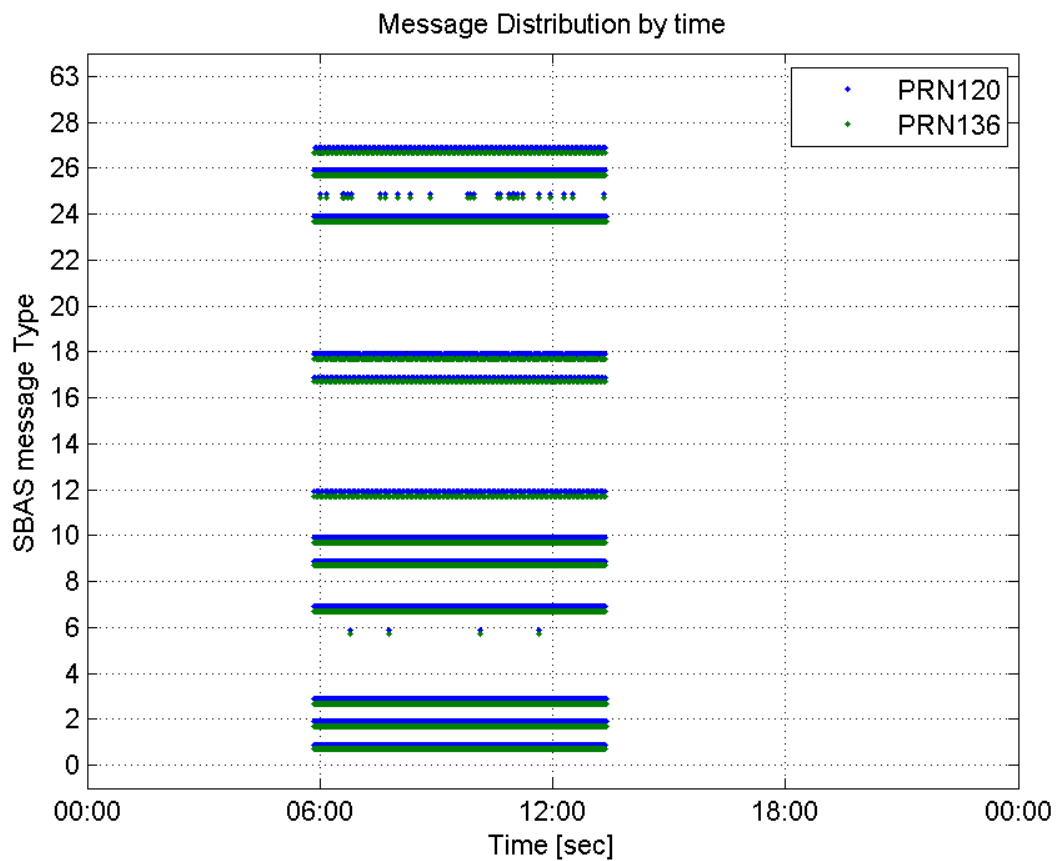
valid samples 54232
total samples 54232
number of SBAS PRNs 2

SBAS SIS Overview

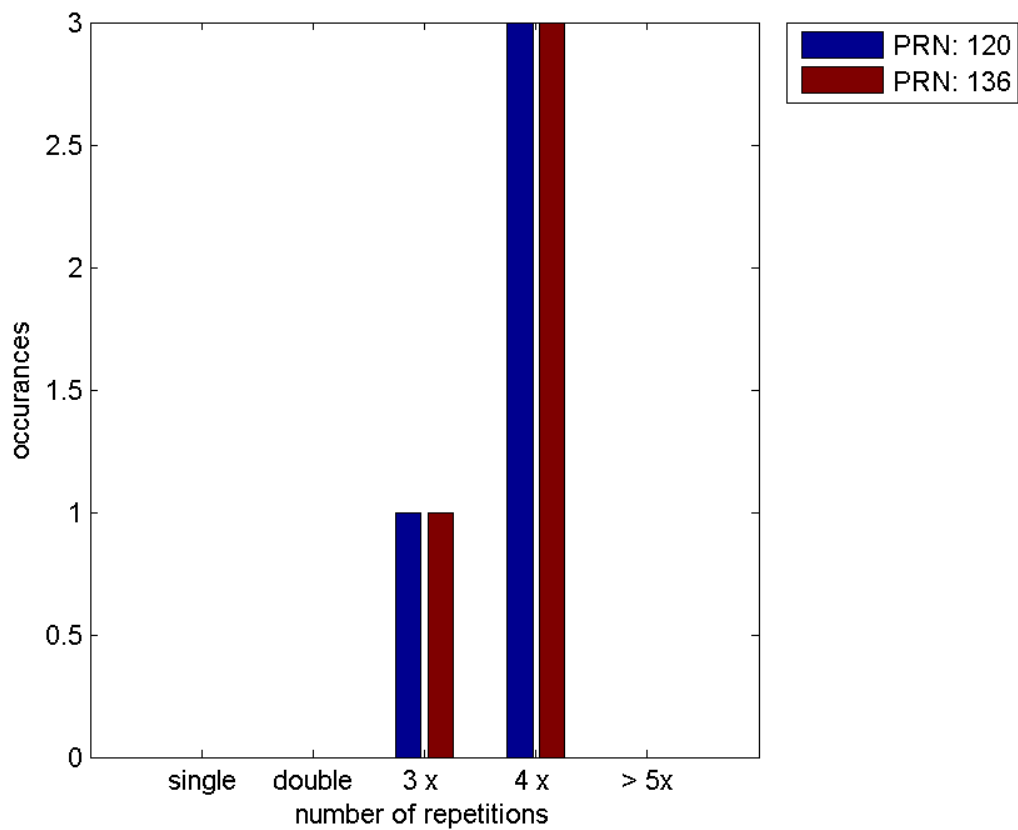
Message Type 6 repetitions :

	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 :

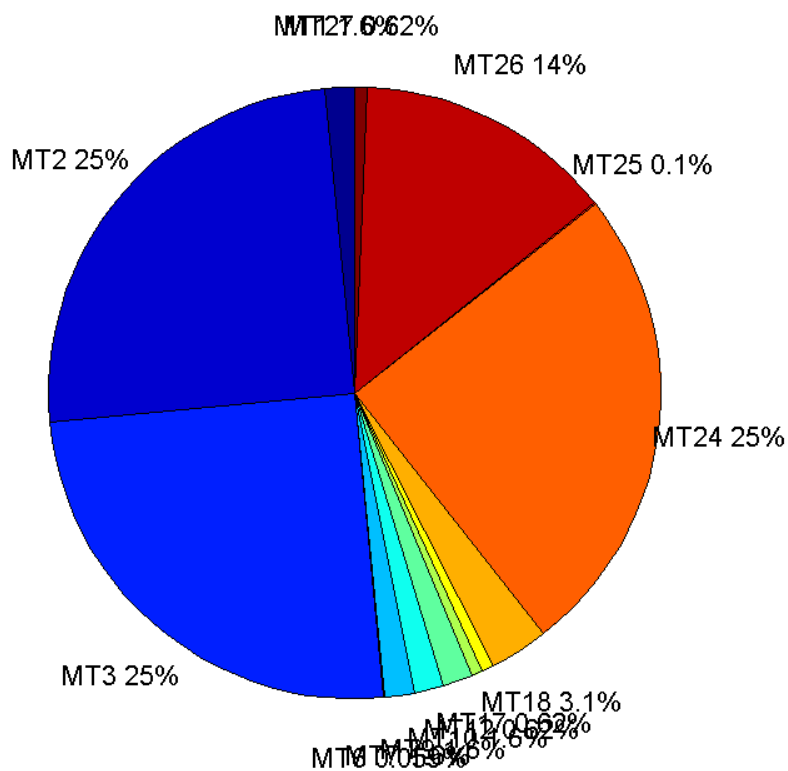
	number of messages	%
MT 0	0	0
MT 1	422	1.55628
MT 2	6772	24.9742
MT 3	6773	24.9779
MT 4	0	0
MT 5	0	0
MT 6	16	0.0590058
MT 7	422	1.55628
MT 9	422	1.55628
MT 10	422	1.55628
MT 12	169	0.623248
MT 17	169	0.623248
MT 18	845	3.11624
MT 24	6772	24.9742
MT 25	28	0.10326
MT 26	3715	13.7004
MT 27	169	0.623248
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	27116	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2613	0	0	0
MT 2	4	8	4.00414	4	0	0
MT 3	4	8	4.00399	4	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	8460	1168.8	3	3	3
MT 7	64	70	64.2708	0	0	0
MT 9	64	70	64.2613	0	0	0
MT 10	64	70	64.2803	0	0	0
MT 12	156	169	160.512	168	0	0
MT 17	156	171	160.512	0	0	0
MT 18	4	131	31.9976	0	0	0
MT 24	4	8	4.00399	0	0	0
MT						

25	31	3381	976.667	0	0	0
MT 26	4	32	7.2951	0	0	0
MT 27	156	169	160.512	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

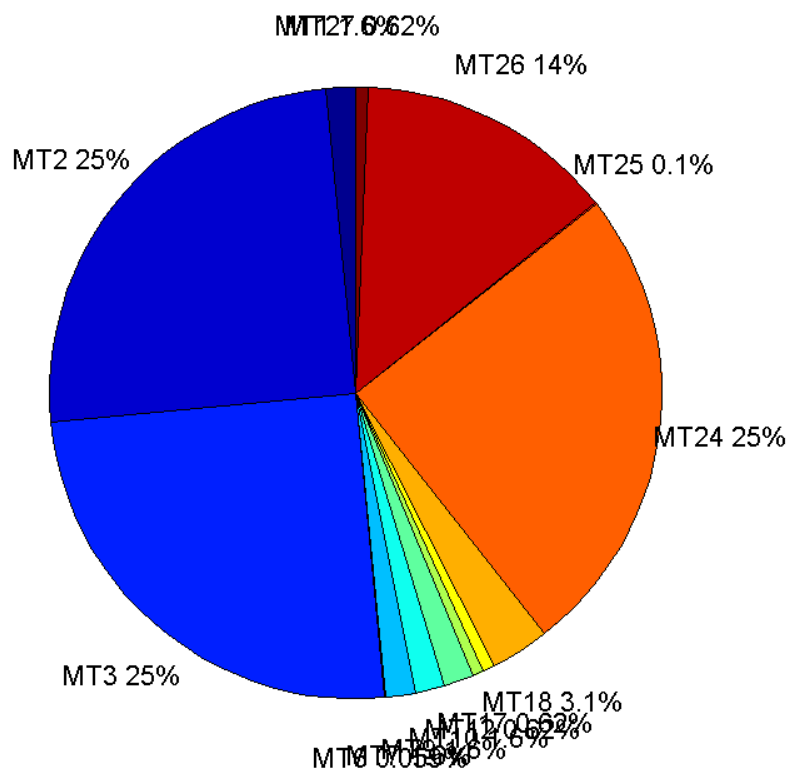
	number of messages	%
MT 0	0	0
MT 1	422	1.55628
MT 2	6773	24.9779
MT 3	6772	24.9742
MT 4	0	0
MT 5	0	0
MT 6	16	0.0590058

MT 7	422	1.55628
MT 9	422	1.55628
MT 10	422	1.55628
MT 12	169	0.623248
MT 17	169	0.623248
MT 18	845	3.11624
MT 24	6772	24.9742
MT 25	28	0.10326
MT 26	3715	13.7004
MT 27	169	0.623248
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	27116	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2613	0	0	0
MT 2	4	8	4.00399	4	0	0
MT 3	4	8	4.00399	4	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	8460	1169.2	3	3	3
MT 7	64	70	64.2613	0	0	0
MT 9	64	73	64.2613	0	0	0
MT 10	64	70	64.2708	0	0	0
MT 12	156	169	160.512	168	0	0
MT 17	157	169	160.512	0	0	0
MT 18	4	151	31.9787	0	0	0
MT 24	4	8	4.00414	0	0	0
MT 25	31	3381	976.667	0	0	0
MT 26	4	48	7.29941	0	0	0
MT 27	156	168	160.536	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/2015_09_15EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/2015_09_15EGNOS/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	15
Correction_mode	Configuration	SBAS MODE 0/2
Dual_Frequency	Configuration	no

Position Domain

start: 05:50:17 15.09.2015 (week: 1862 sec: 193817)
end: 13:22:12 15.09.2015 (week: 1862 sec: 220932)
duration: 07:31:56 ..

quality

valid samples 26755

total samples 27116

Event tables

Position discontinuity events type no (0)

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
max normHor	200958	0.903135	10.3308	0.0874216	-0.161749	12.9331	0.0125066
max normVer	197723	1.1877	18.5783	0.0639292	-1.97109	17.2664	0.114158
max HPE	199295	1.34256	31.4618	0.0426727	-1.19726	43.1188	0.0277666
max VPE	210683	0.438713	43.1743	0.0101614	2.1456	39.9514	0.0537052
min HPL	206231	0.381743	8.5509	0.0446436	-0.362614	18.1432	0.0199862
min VPL	201006	0.633749	10.0773	0.0628888	0.256037	12.2094	0.0209705

APV-I discontinuity events :

#	Epoch	duration	stable period
1	199549	128	5371
2	199709	24	32
3	210578	160	10845
4	210750	57	12

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	198763	170	4585
2	199093	640	160
3	199825	15	92
4	204967	17	5127
5	210578	160	5594
6	210750	57	12

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	198763	170	4585
2	199093	640	160
3	199825	15	92
4	204967	17	5127
5	210578	160	5594
6	210750	57	12

First Glance analysis

Duration	27116
Number of Samples	27116
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.3313
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
26755	26348	25656	0	25656

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	0.721445	0.720935	0.718195	NaN	0.718195
HPEscale 95%	NaN	2.03705	2.05339	NaN	2.05339
VPE 95%	1.1361	1.12784	1.13012	NaN	1.13012
VPEscale 95%	NaN	3.14265	2.21492	NaN	2.21492

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.984788	0.958924	0	0.958924
measurements	0.986687	0.971677	0.946157	0	0.946157
Operational	0.986687	0.971677	0.946157	0	0.946157

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	27	31	--	31
Long	--	4	6	--	6
Independent	--	3	5	--	5
P(disc.)	NaN	0.00170791	0.00292329	NaN	0.00292329
P(slide)	NaN	0.00417489	0.0061584	NaN	0.0061584

Integrity events :

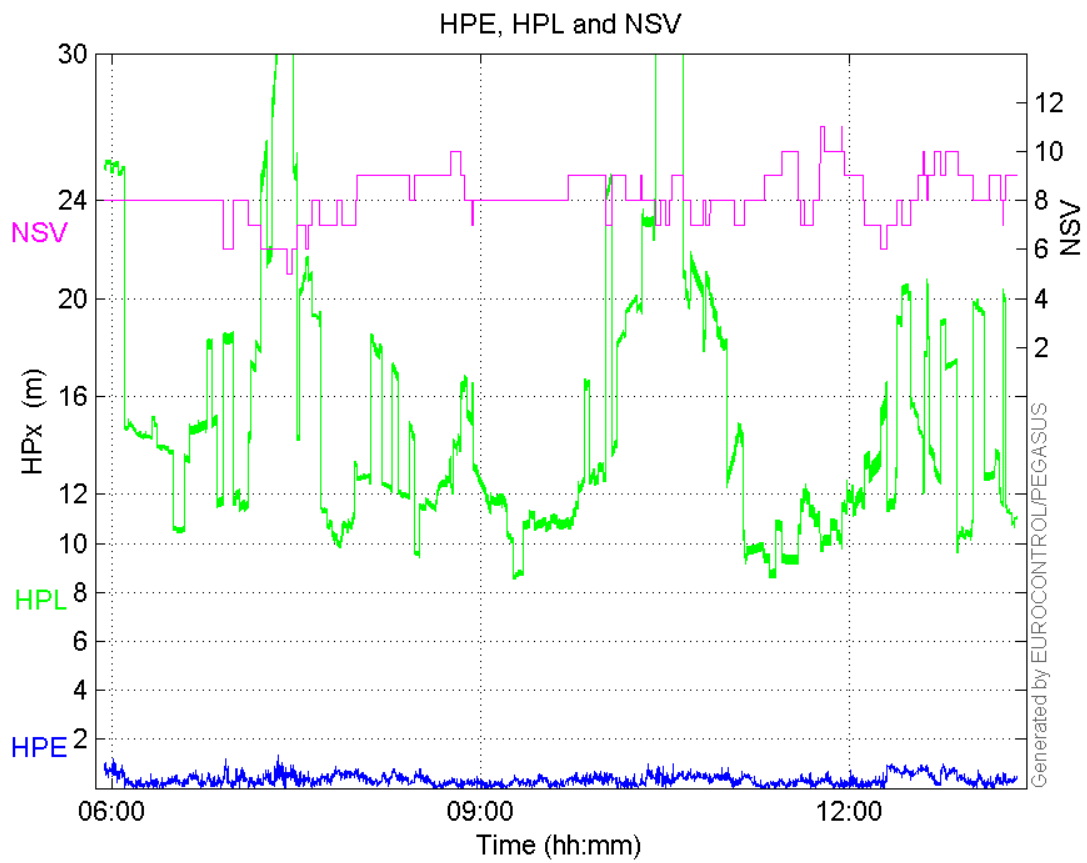
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

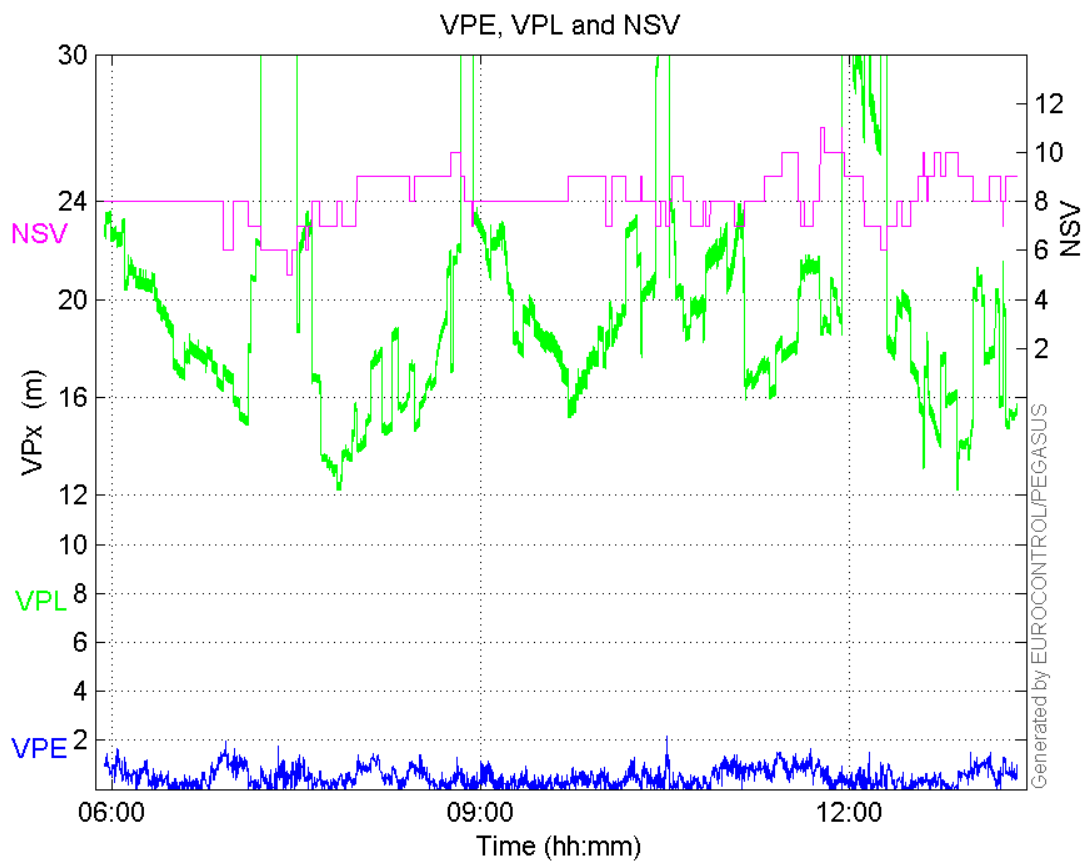
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	26755	26348	25656	0	25656
SIS Availability	1	0.984788	0.958924	0	0.958924
Local Availability	0.986687	0.971677	0.946157	0	0.946157
Operational Availability	0.986687	0.971677	0.946157	0	0.946157
HPE 95%	0.721445	0.720935	0.718195	NaN	0.718195
HPEscale 95%	NaN	2.03705	2.05339	NaN	2.05339
VPE 95%	1.1361	1.12784	1.13012	NaN	1.13012
VPEscale 95%	NaN	3.14265	2.21492	NaN	2.21492
All Discontinuity Events	--	27	31	--	31
Long Discontinuity Events	--	4	6	--	6
Independent Discontinuity Events	--	3	5	--	5
P(discontinuity)	NaN	0.00170791	0.00292329	NaN	0.00292329
P(sliding window)	NaN	0.00417489	0.0061584	NaN	0.0061584
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

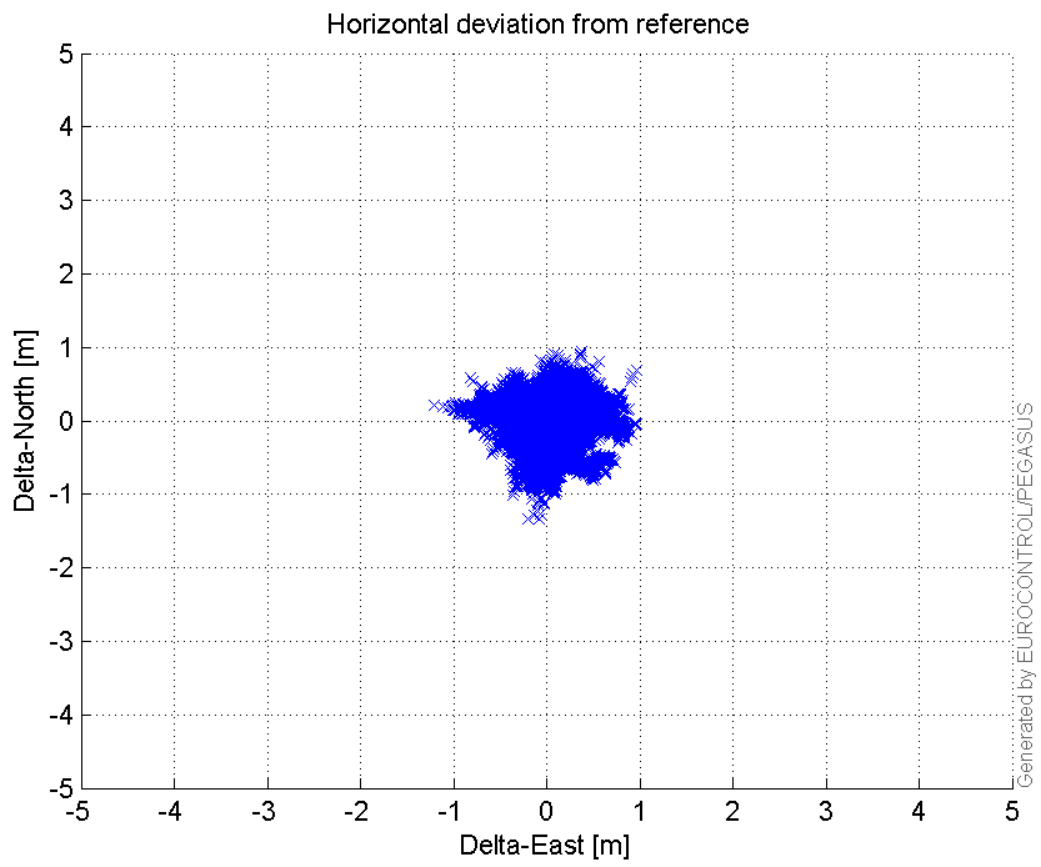
HPE, HPL and NSV:



VPE, VPL and NSV:

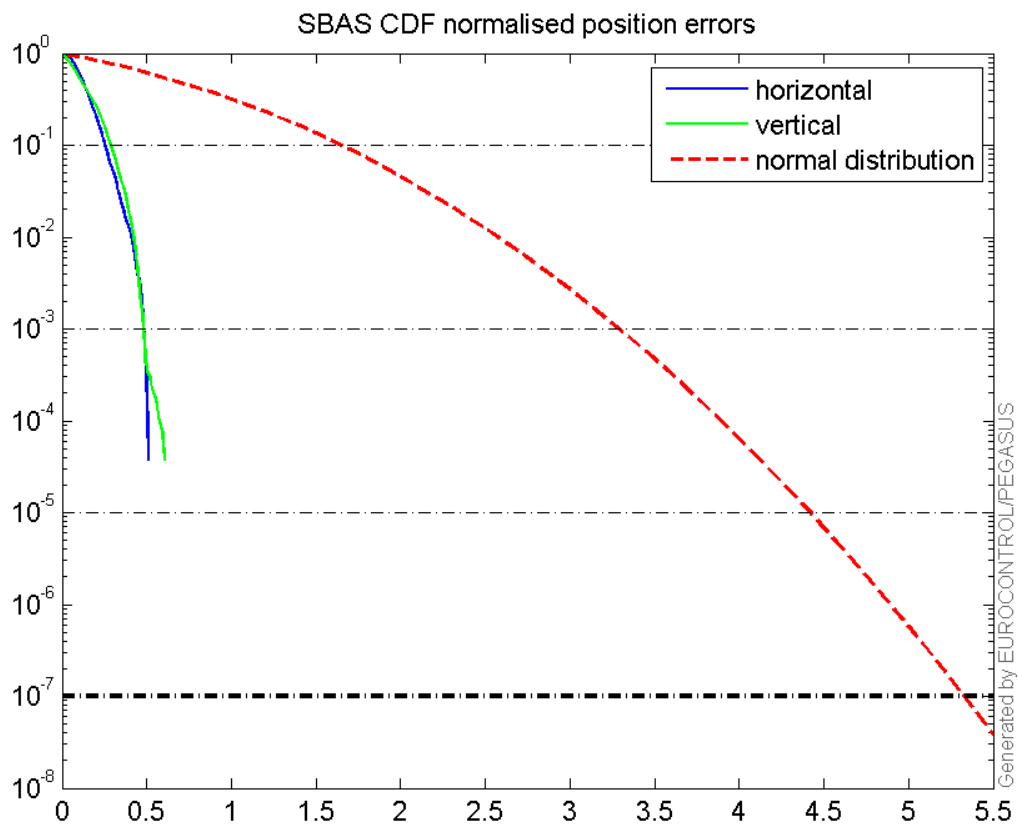


Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

```

number 26348
sum 8848.0891
sum2 4014.2752
prctile95 0.72093543
prctile99 0.86128222
number 26348
sum 12932.97
sum2 9474.7686
prctile95 1.127841
prctile99 1.3757813
number 26348
sum 397684.83
sum2 6797243.1
prctile95 25.49562
prctile99 34.935412
number 26348
sum 529582.47
sum2 11483345
prctile95 31.99323
prctile99 44.440748
number 26348
sum 616.16563
sum2 19.661722
prctile95 0.05092635
prctile99 0.068363062
number 26348

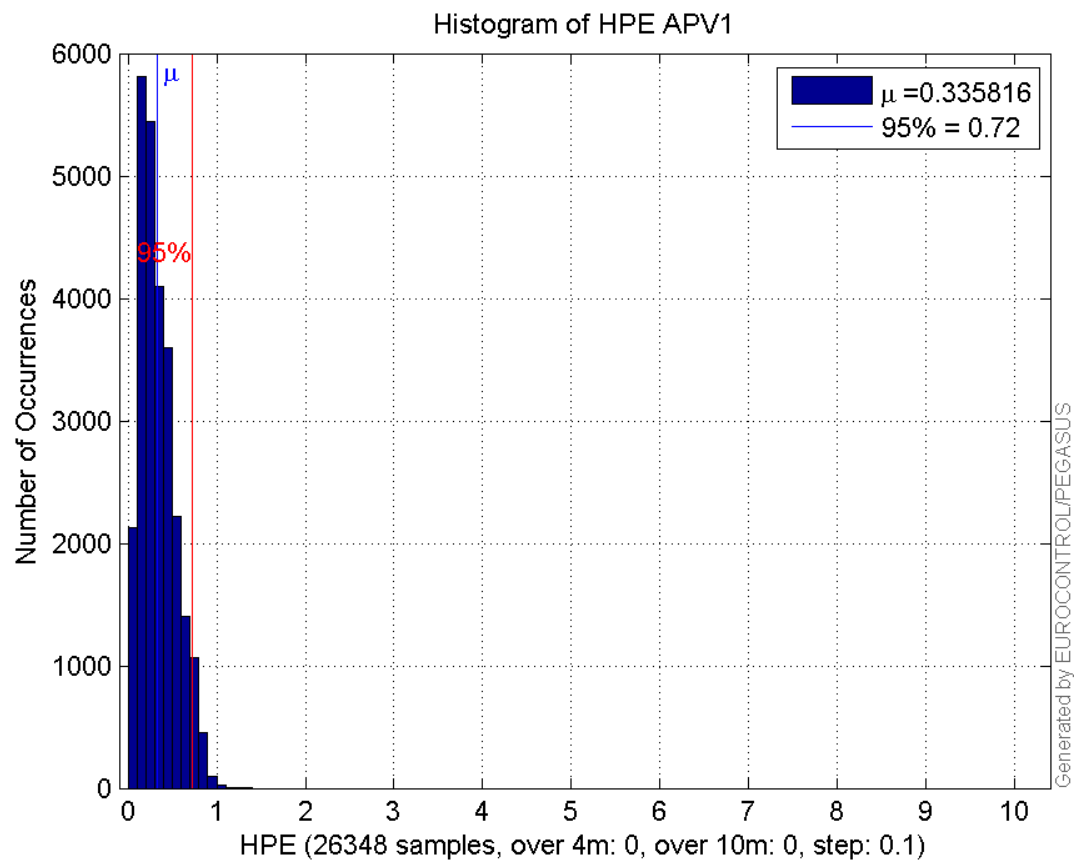
```

sum 686.52279
sum2 27.922741
prctile95 0.062852959
prctile99 0.079267879
number 25656
sum 8544.5916
sum2 3840.4925
prctile95 0.71819504
prctile99 0.85509738
number 25656
sum 12588.064
sum2 9234.4418
prctile95 1.1301206
prctile99 1.3828426
number 25656
sum 377074.19
sum2 6169136.9
prctile95 24.65813
prctile99 33.801172
number 25656
sum 500240.77
sum2 10228795
prctile95 30.94173
prctile99 32.853952
number 25656
sum 606.11949
sum2 19.476874
prctile95 0.051334752
prctile99 0.068588158
number 25656
sum 678.46277
sum2 27.792698
prctile95 0.063283528
prctile99 0.079406581

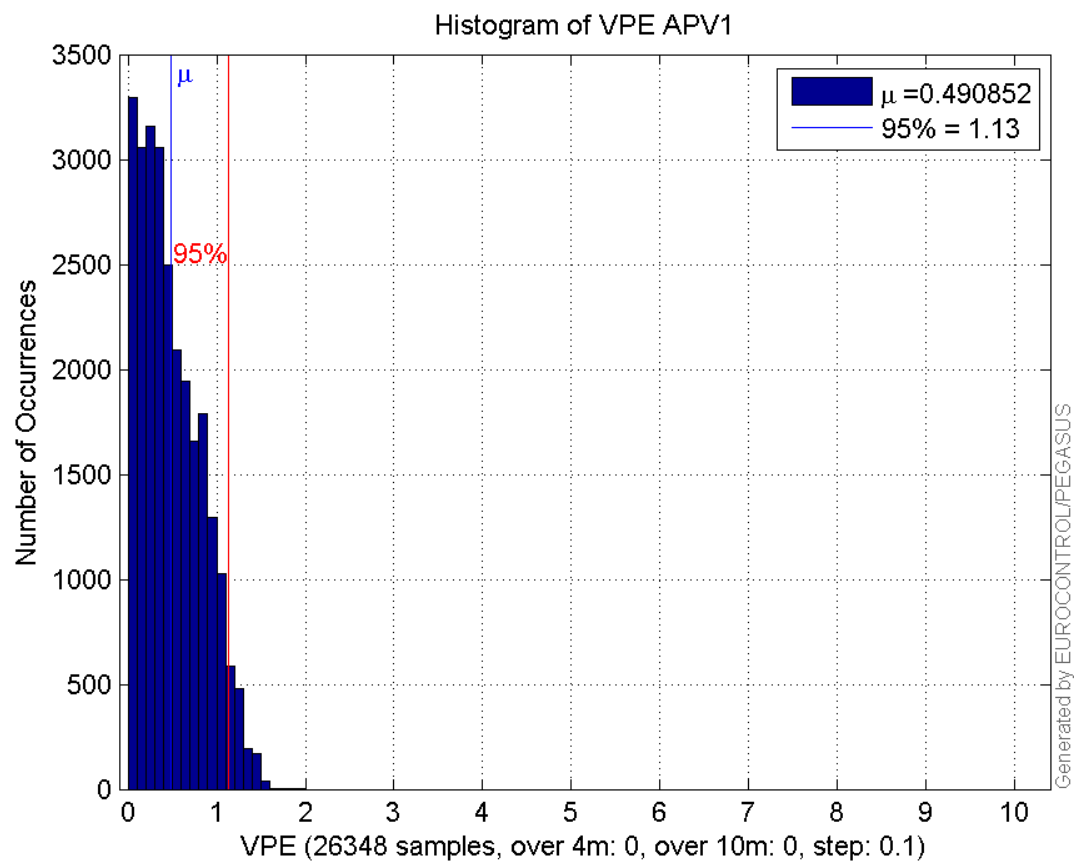
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	0.335816	0.198959	0.295828	0.720935	0.861282	0.390328
HPL	15.0935	5.4923	13.1108	25.4956	34.9354	16.0617
VPE	0.490852	0.344485	0.422469	1.12784	1.37578	0.599667
VPL	20.0995	5.64302	18.6744	31.9932	44.4407	20.8766

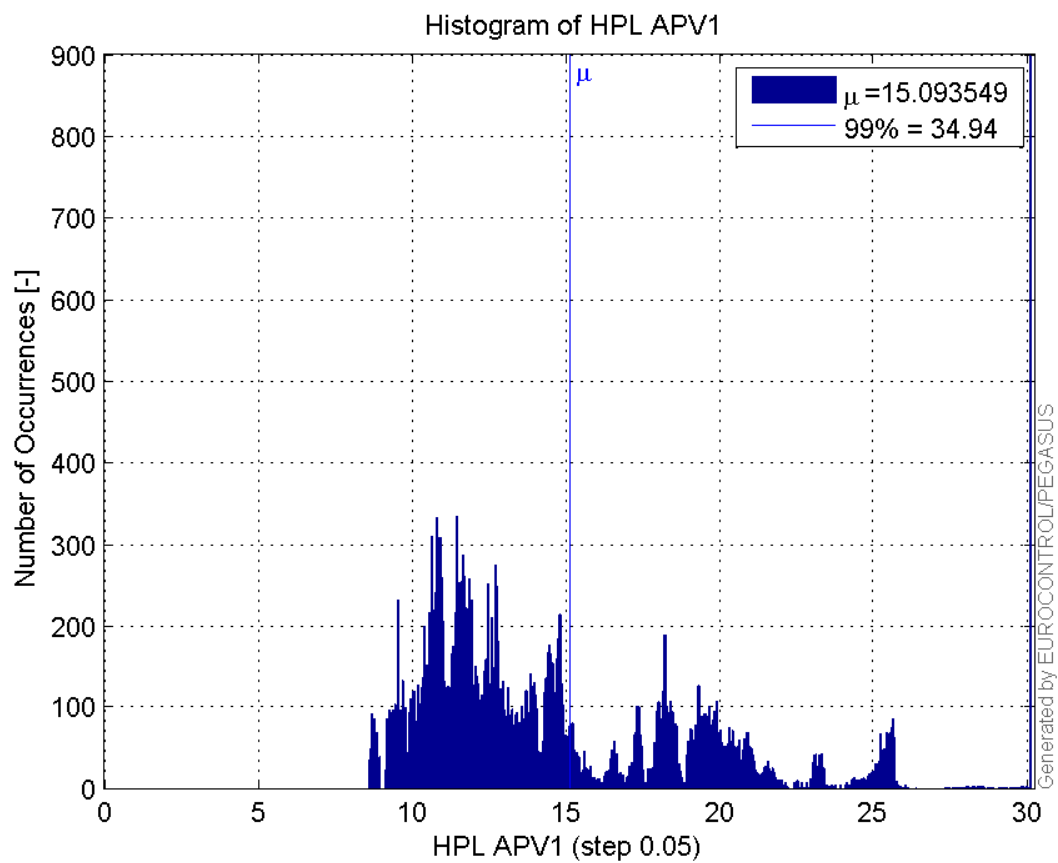
Histogram of HPE APV1:



Histogram of VPE APV1:

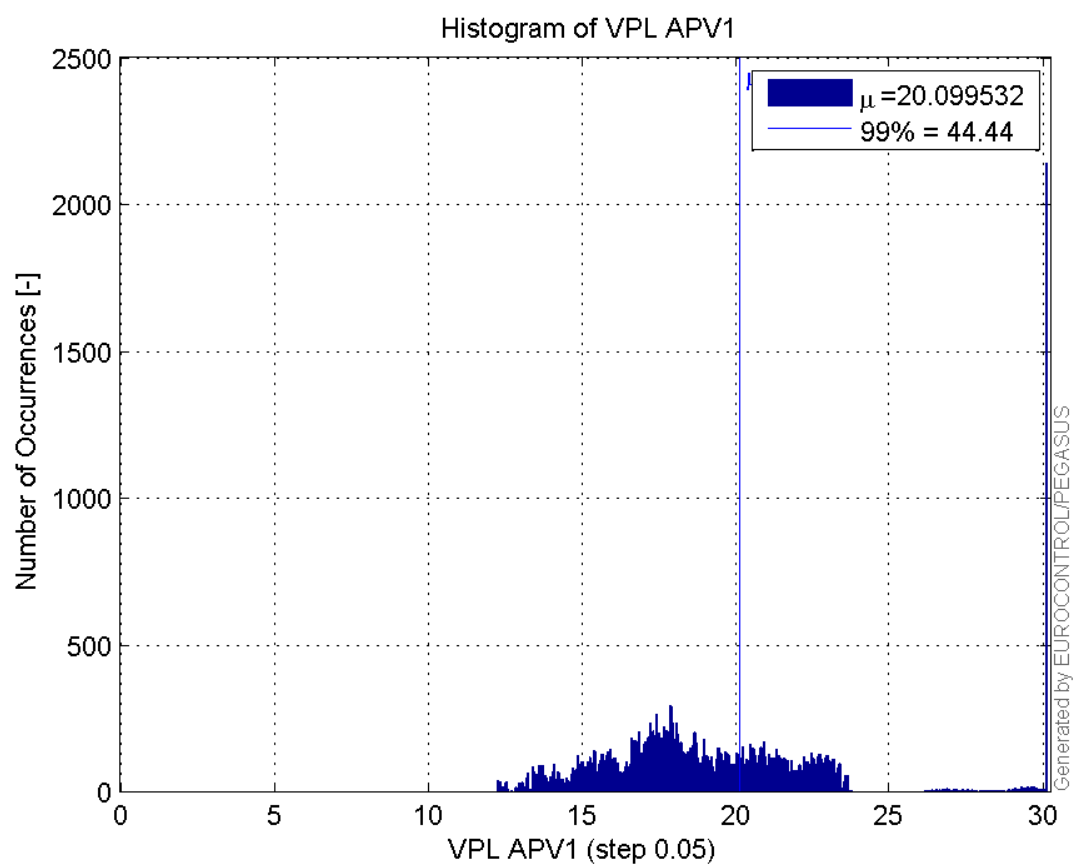


Histogram of HPL APV1:

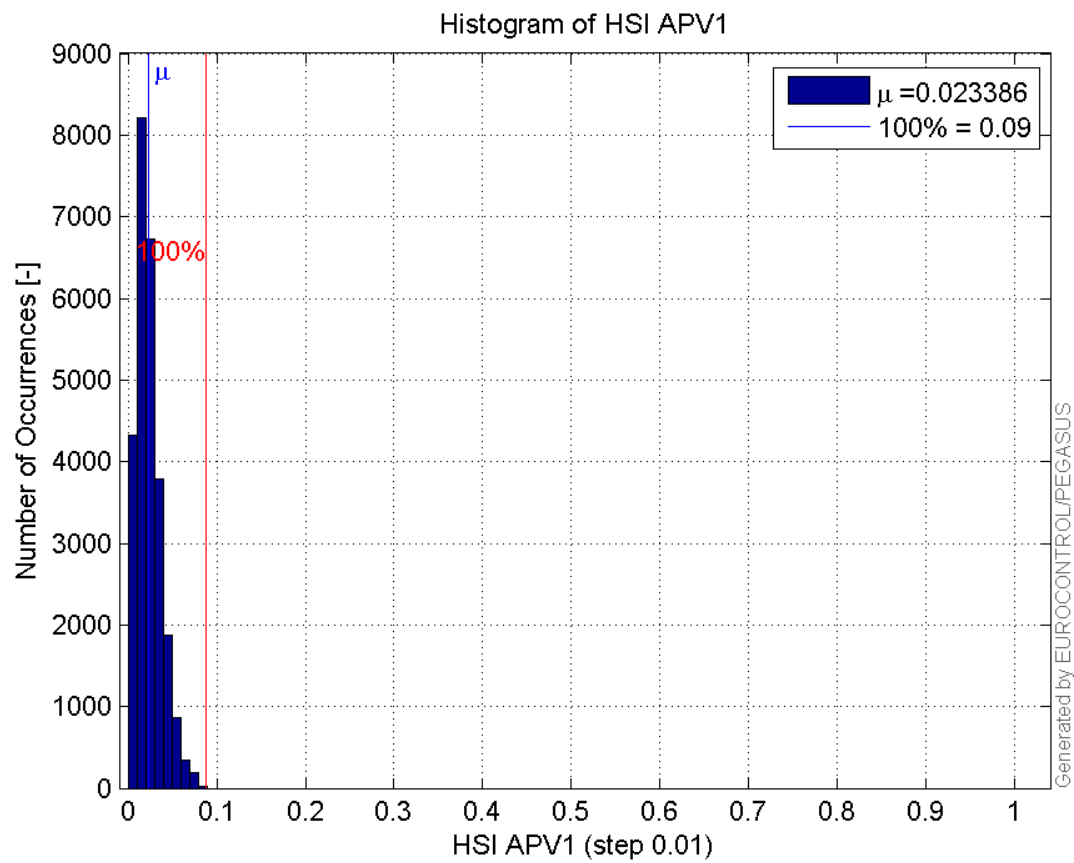


99

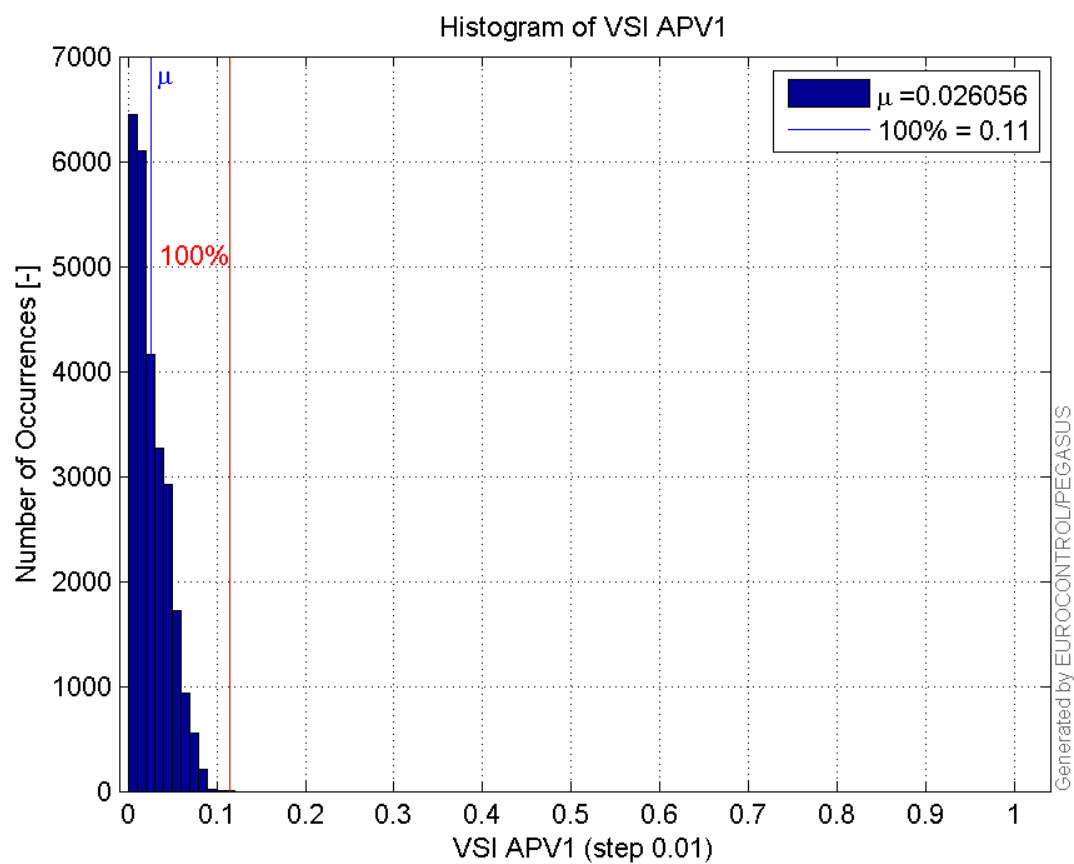
Histogram of VPL APV1:



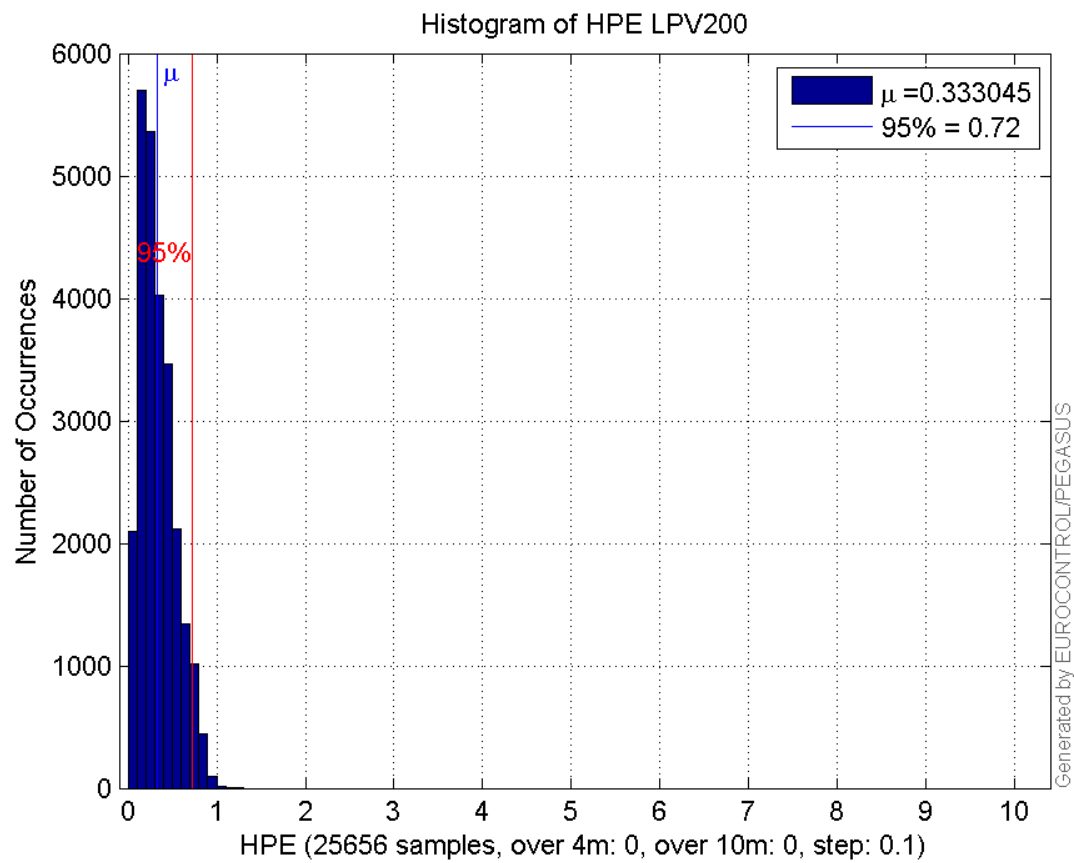
Histogram of HSI APV1:



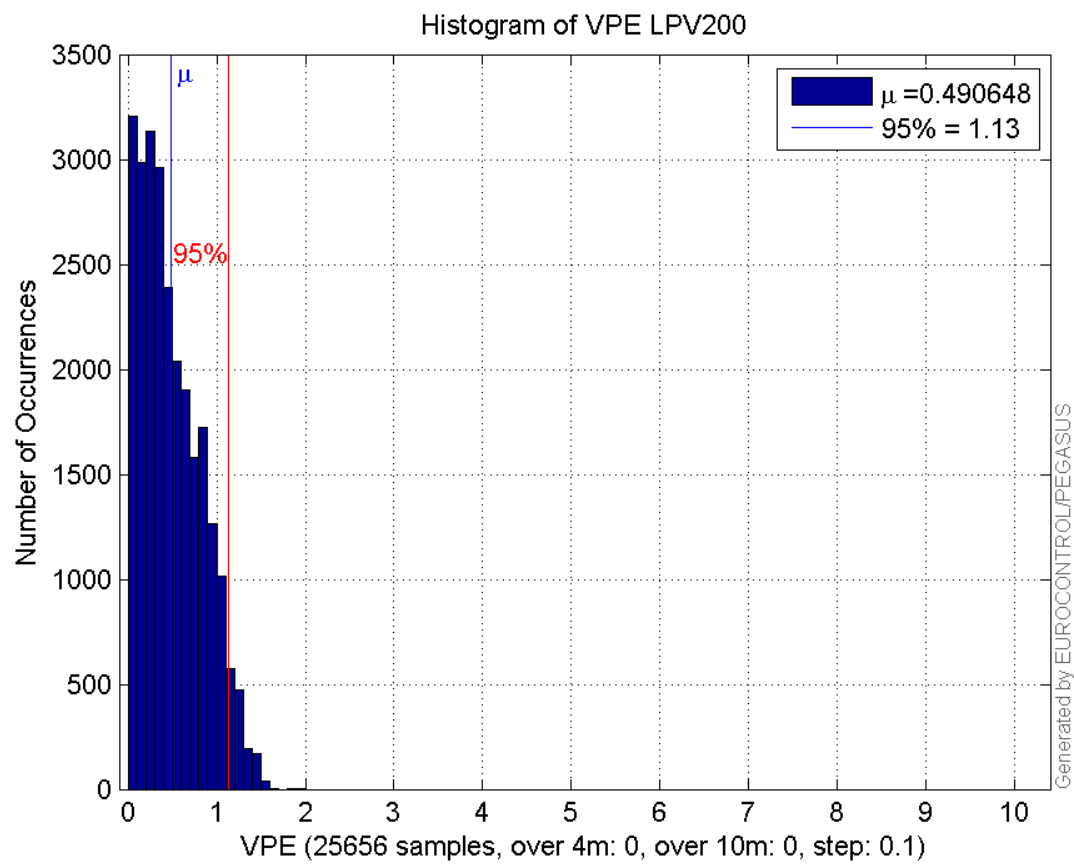
Histogram of VSI APV1:



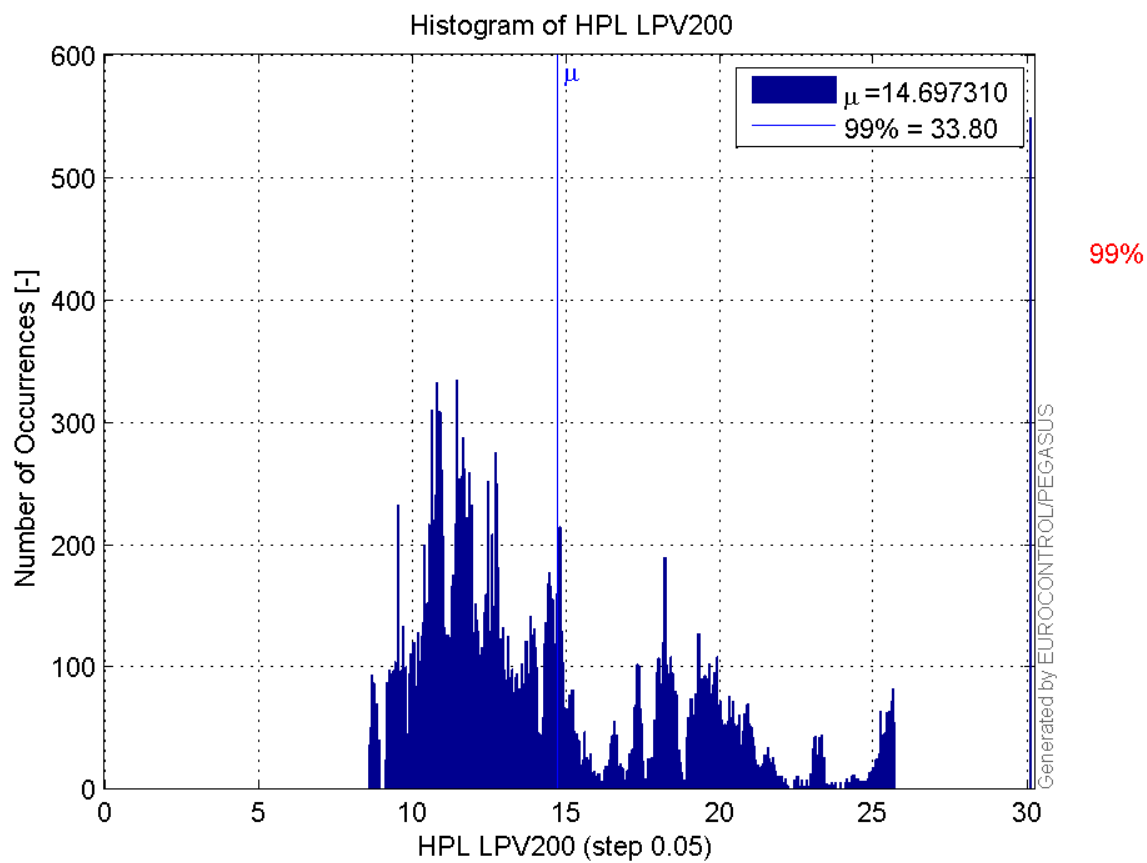
Histogram of HPE LPV200:



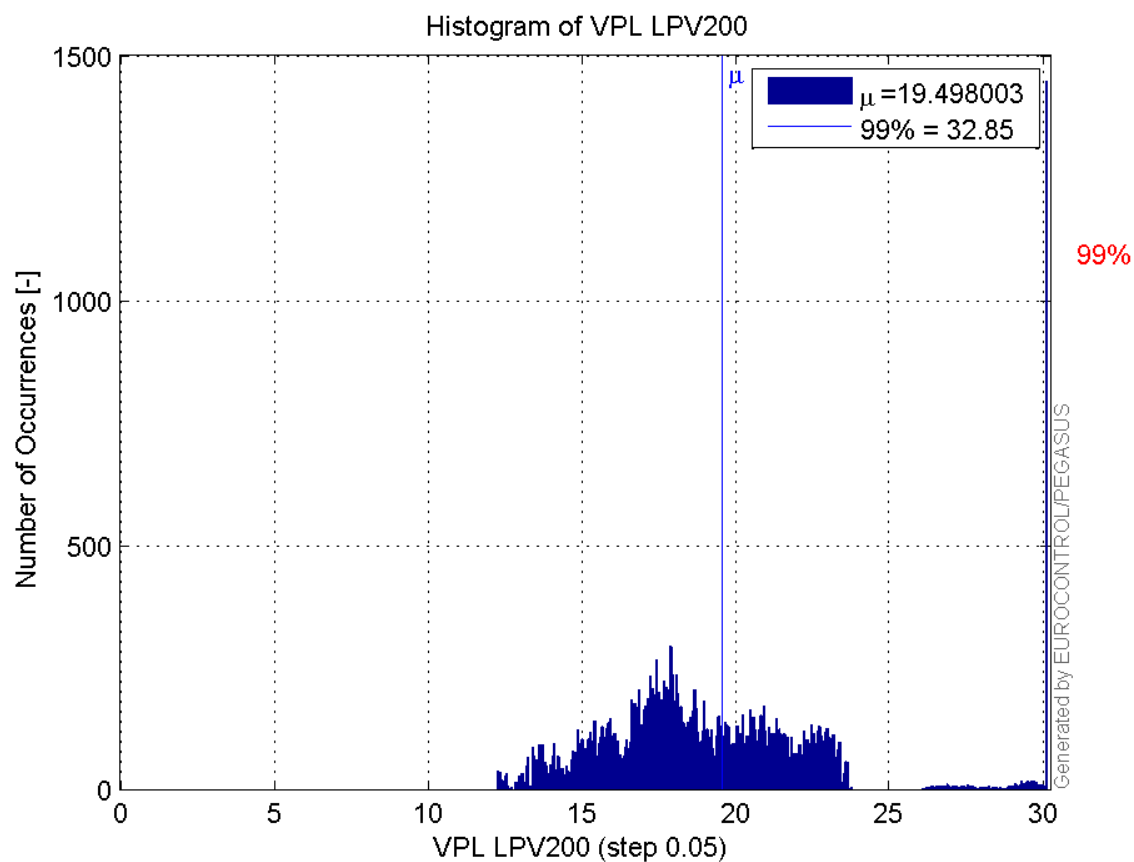
Histogram of VPE LPV200:



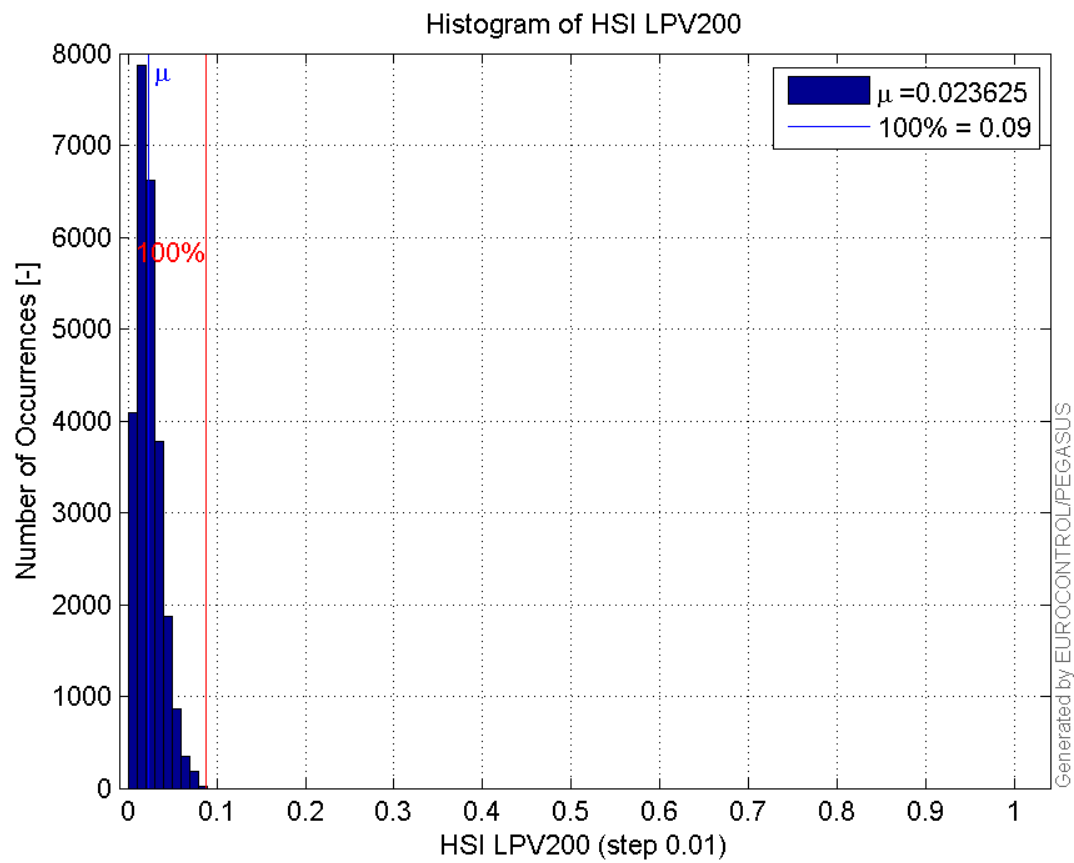
Histogram of HPL LPV200:



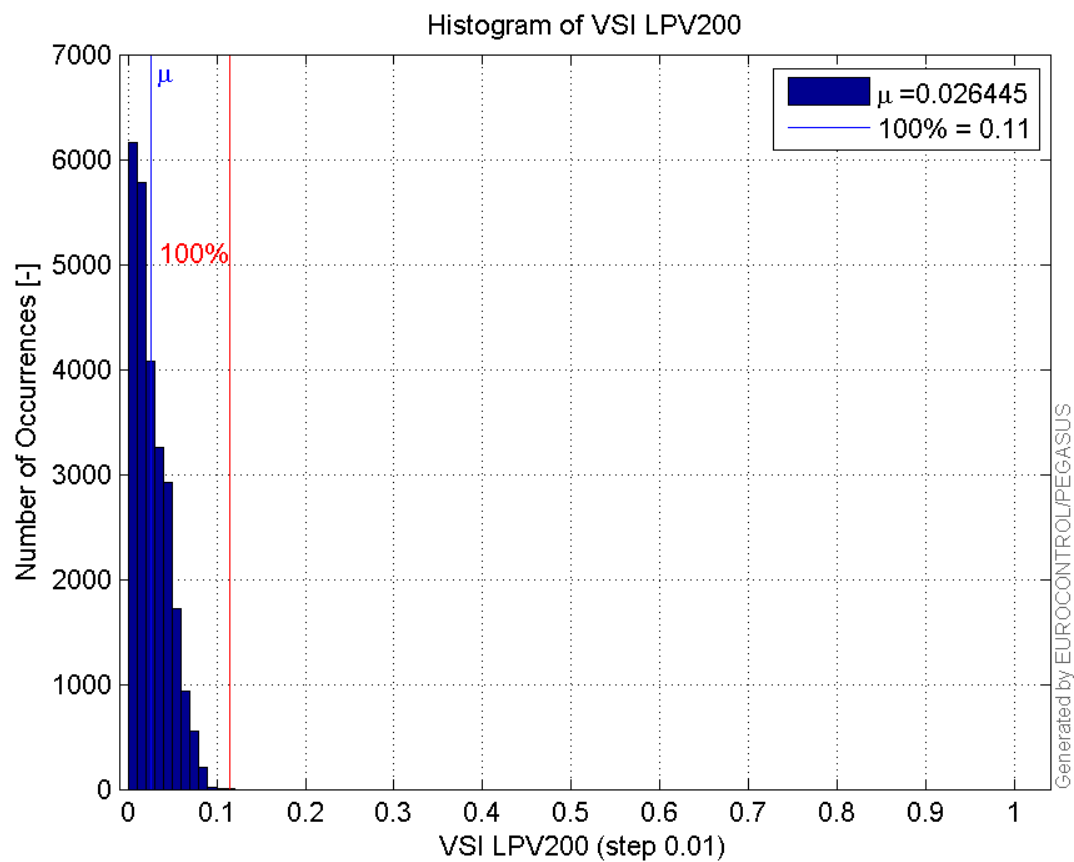
Histogram of VPL LPV200:



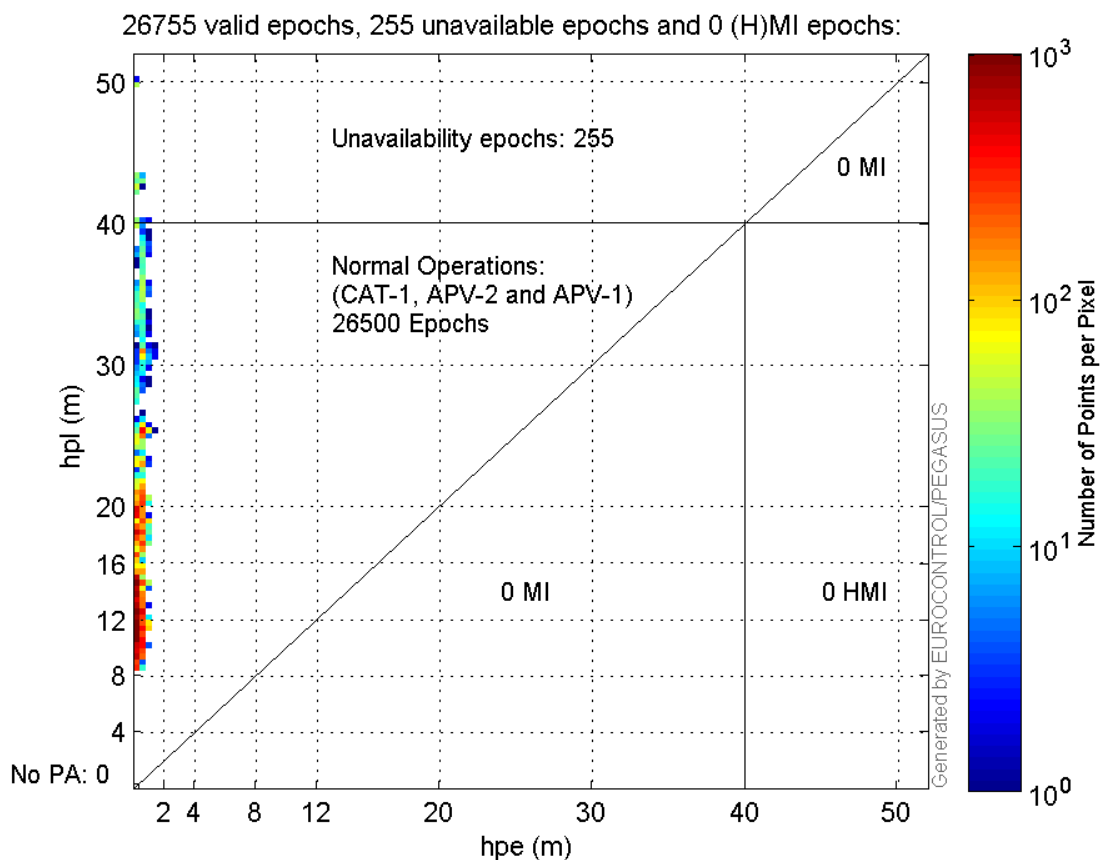
Histogram of HSI LPV200:



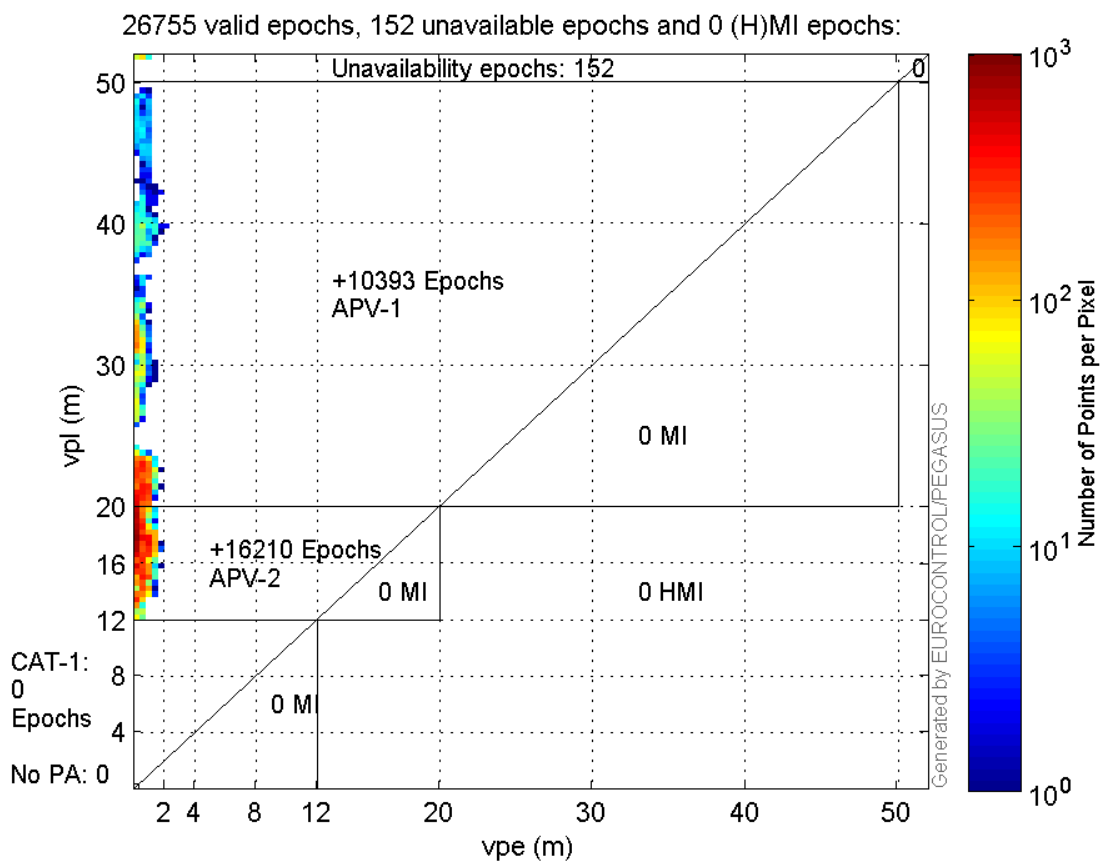
Histogram of VSI LPV200:



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/2015_09_15EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/2015_09_15EGNOS/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	50.439
init_lon	results	30.4297
init_alt	results	223.4497
mi_numbers	results	0

Range Domain

start: 05:50:17 15.09.2015 (week: 1862 sec: 193817)
end: 13:22:12 15.09.2015 (week: 1862 sec: 220932)
duration: 07:31:56 ..

quality

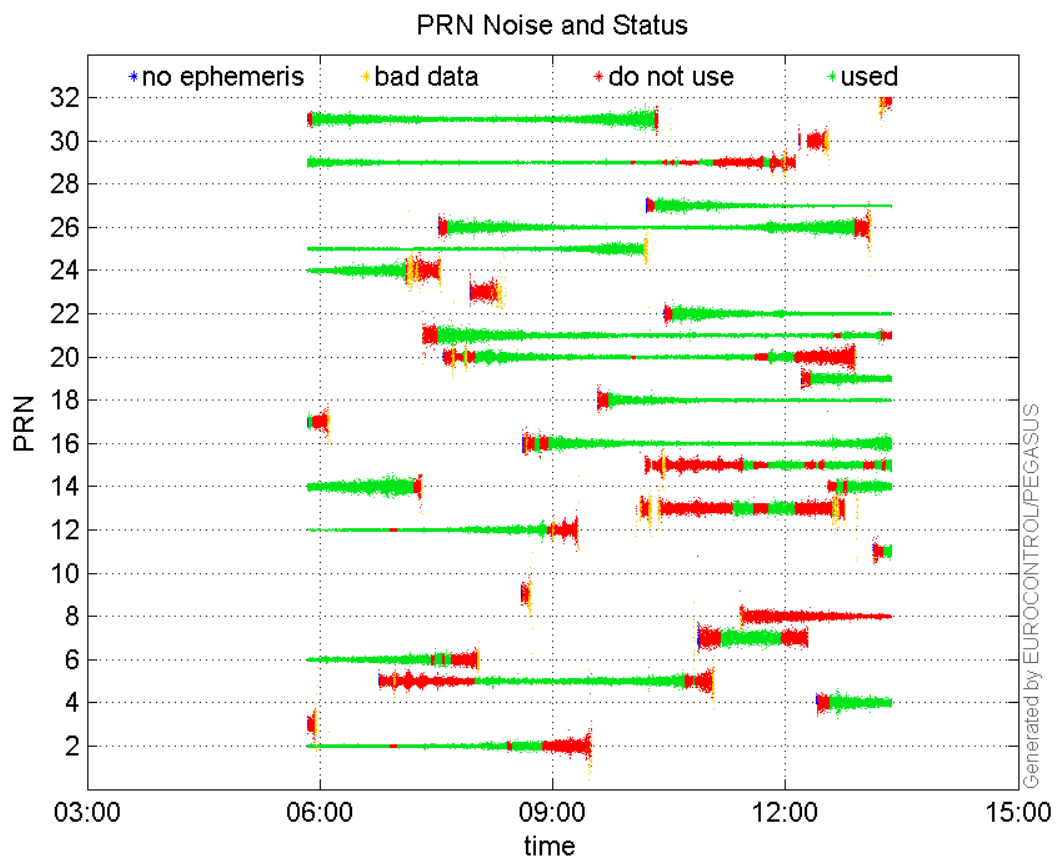
valid samples 27116
total samples 27116

PRN overview

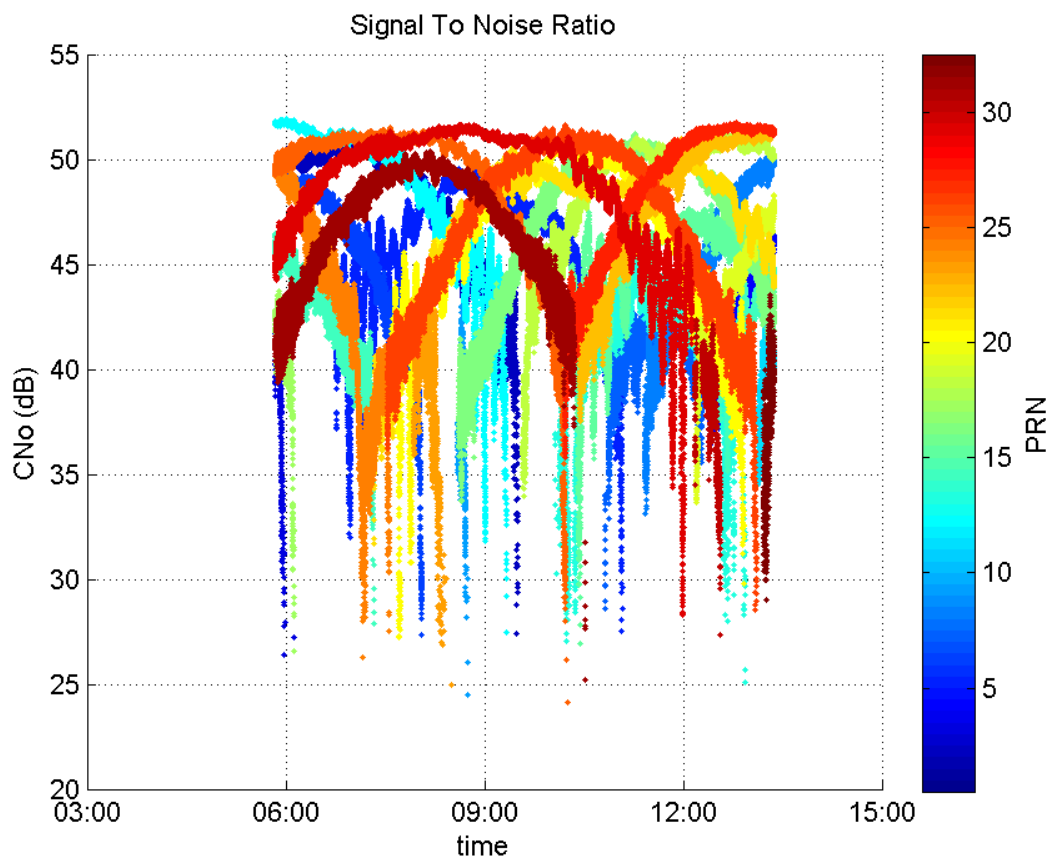
Number of Visible GPS Satellites 29
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



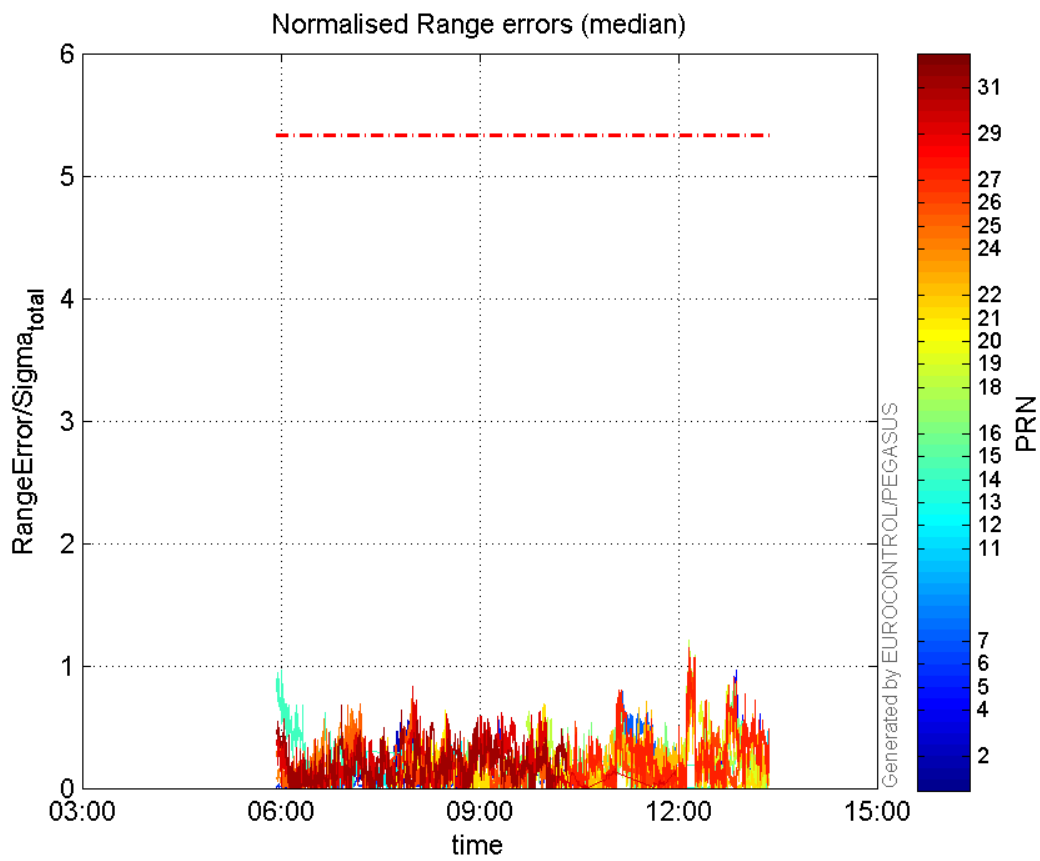
range errors

Number of Overbounding Norm Errors 0

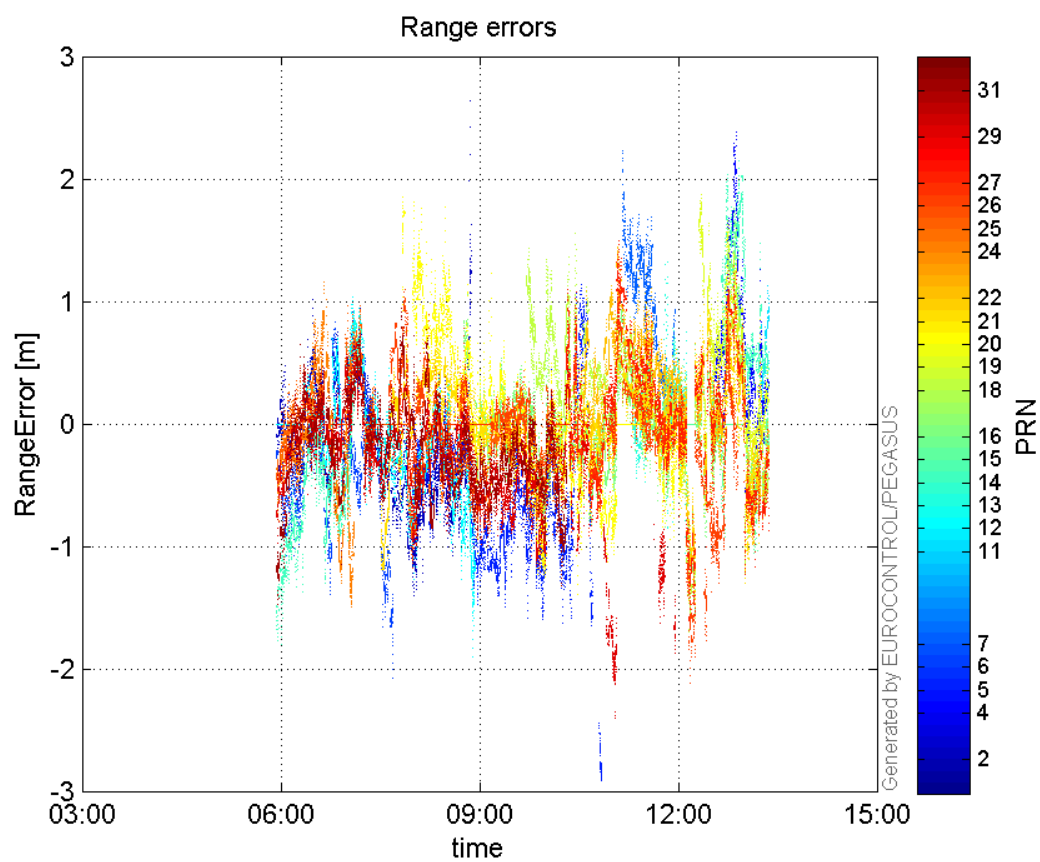
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1862	201290	2	0.556648	-1.05119	1.88843
1862	219160	4	0.962876	2.38159	2.47342
1862	206236	5	0.551254	-1.39794	2.53594
1862	195103	6	0.179562	-1.0764	5.99457
1862	212962	7	0.791314	2.23205	2.82068
1862	220869	11	0.46606	1.12535	2.4146
1862	198334	12	0.569996	1.0313	1.80931
1862	215402	13	0.29373	1.31674	4.48282
1862	194445	14	0.9657	-1.80323	1.86728
1862	220438	15	0.24878	-0.73173	2.94128
1862	216891	16	1.02999	-1.61654	1.56947
1862	216607	18	1.20648	-1.69329	1.40349
1862	218672	19	0.842484	1.6605	1.97096
1862	203302	20	0.634462	1.76679	2.78471
1862	216875	21	0.870223	-1.44817	1.66414
1862	216891	22	0.994045	-1.46654	1.47532
1862	198227	24	0.643857	-1.49121	2.31605
1862	201593	25	0.787377	-1.17553	1.49296
1862	216634	26	1.01663	-2.1174	2.08277
1862	216611	27	1.15009	-1.60306	1.39386
1862	201593	29	0.827878	-1.11639	1.3485
1862	197723	31	0.676225	-1.15274	1.70467

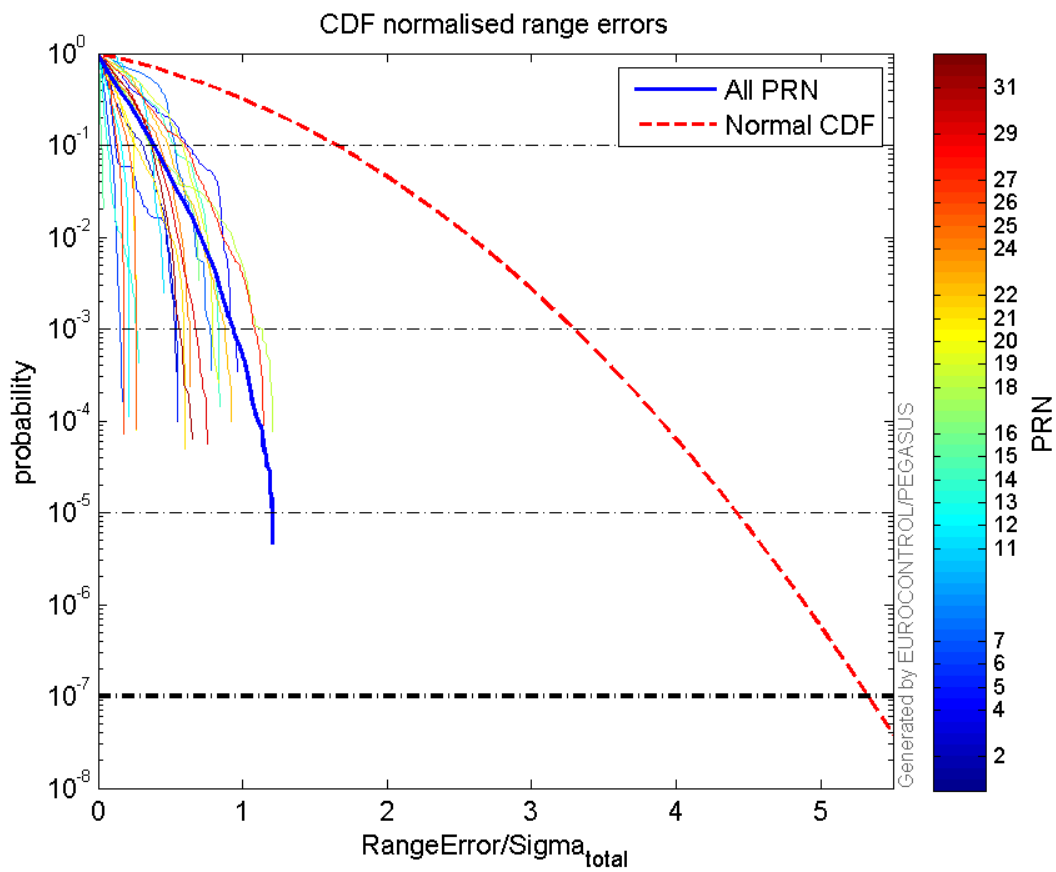
Normalised Range errors (median):



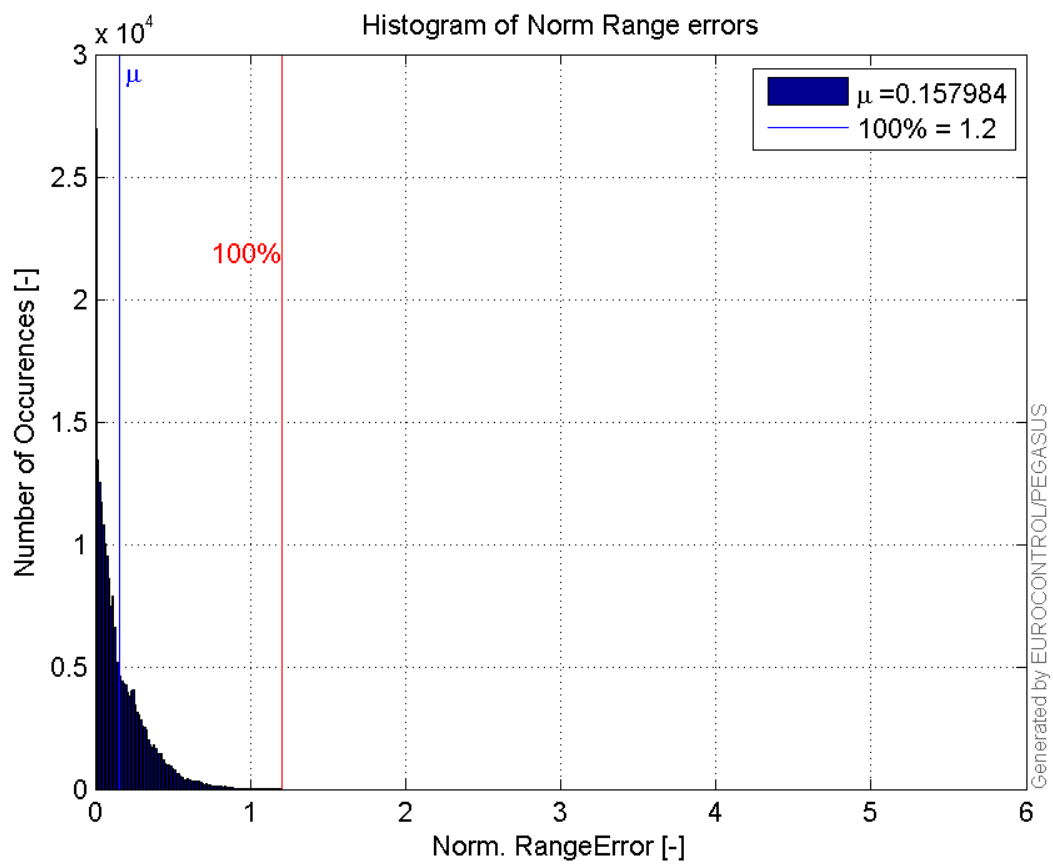
Range errors:



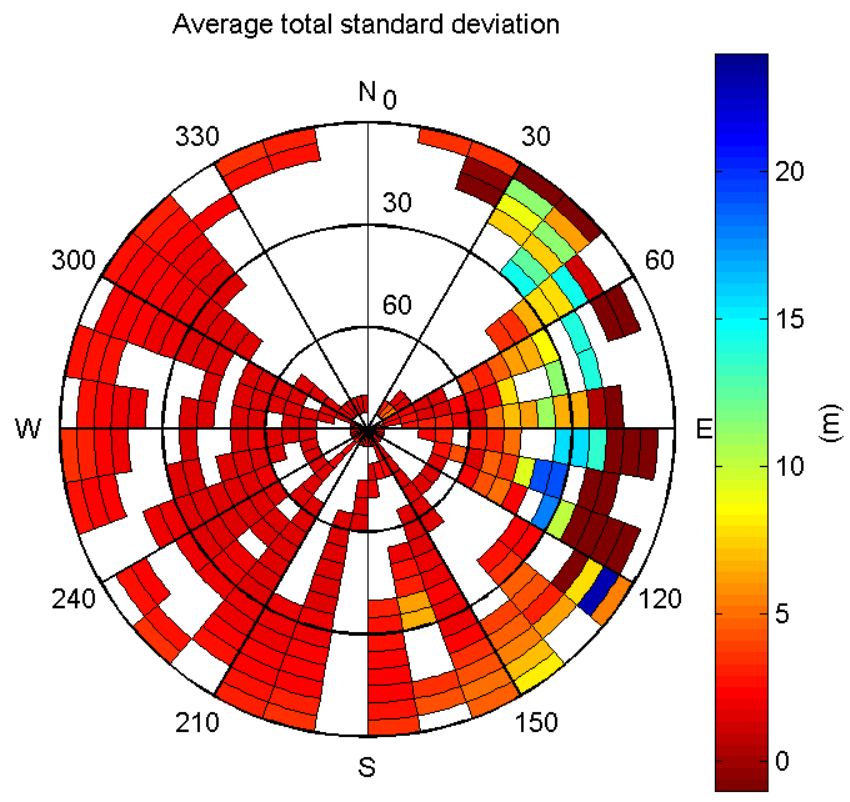
CDF normalised range errors:



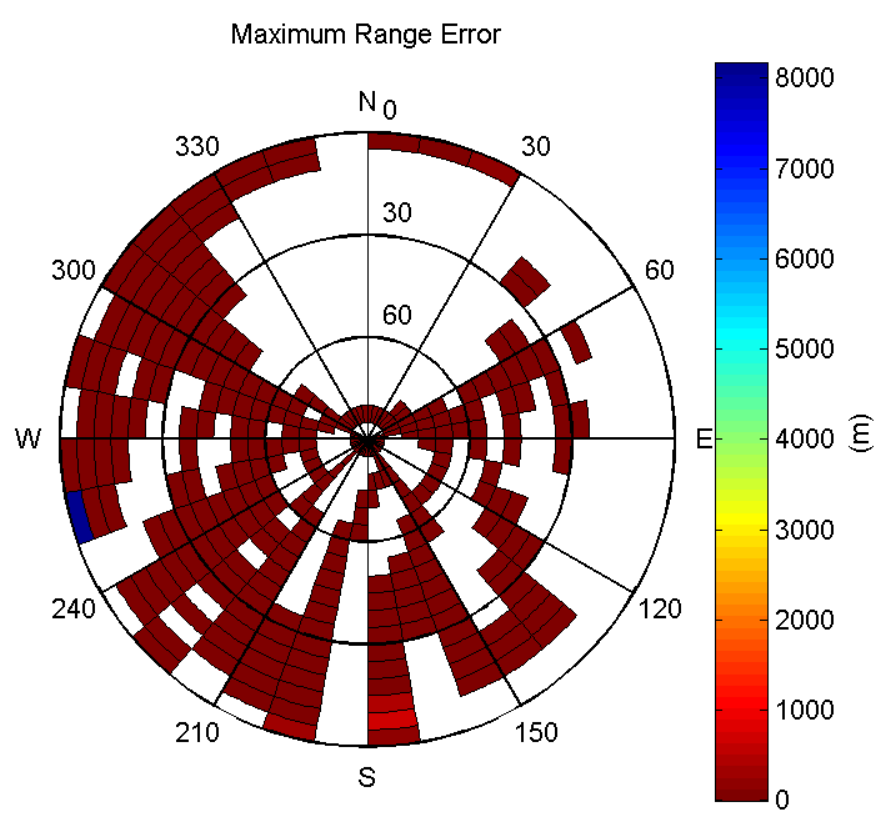
Histogram of Norm Range errors:



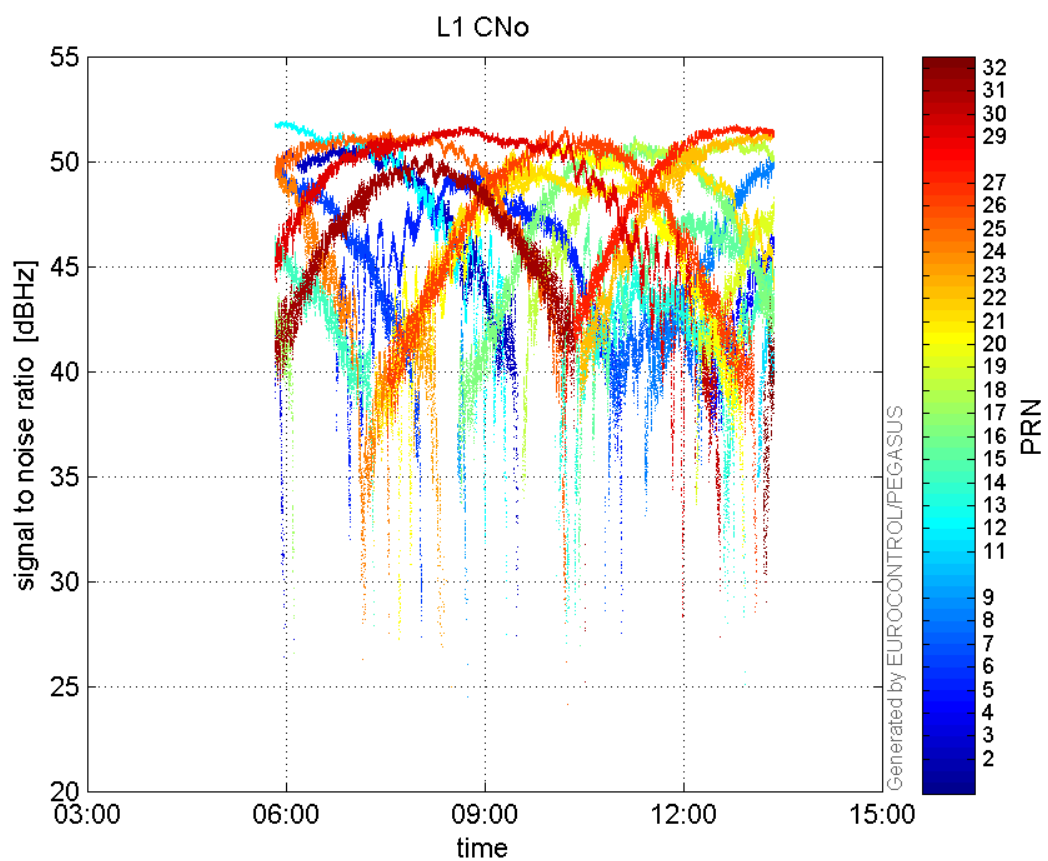
Sigma Sky Plot:



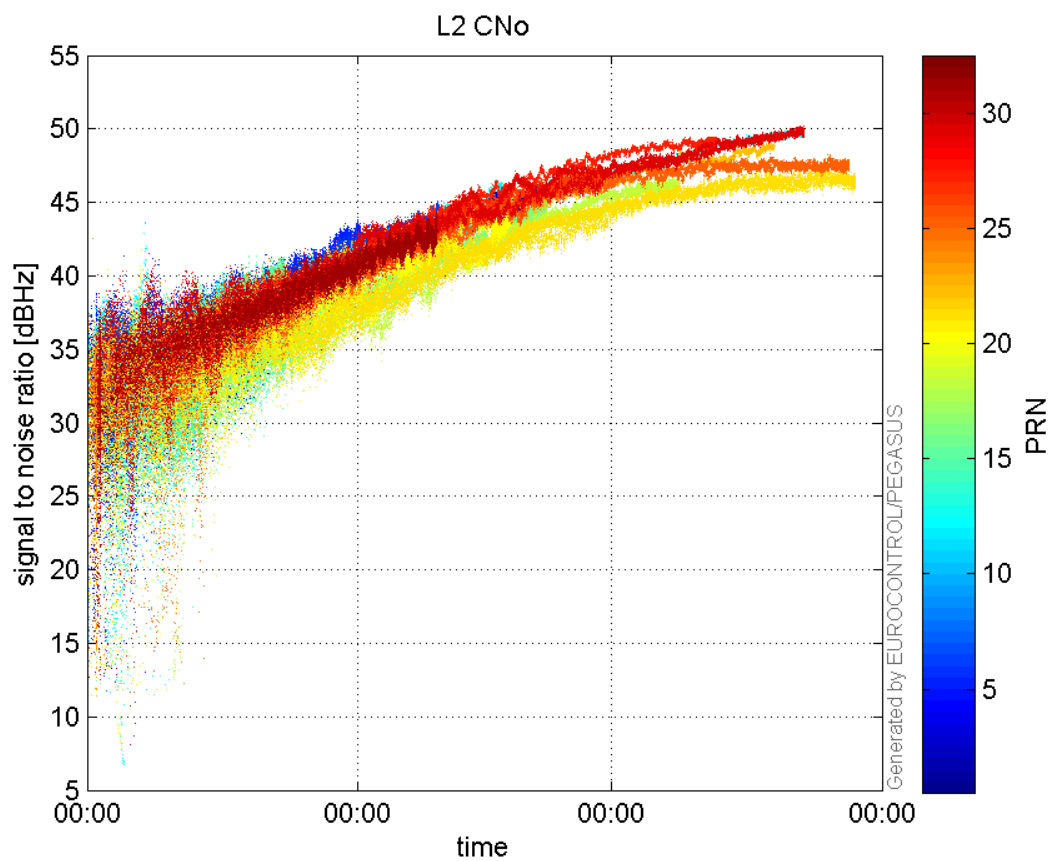
Norm Error Sky Plot:



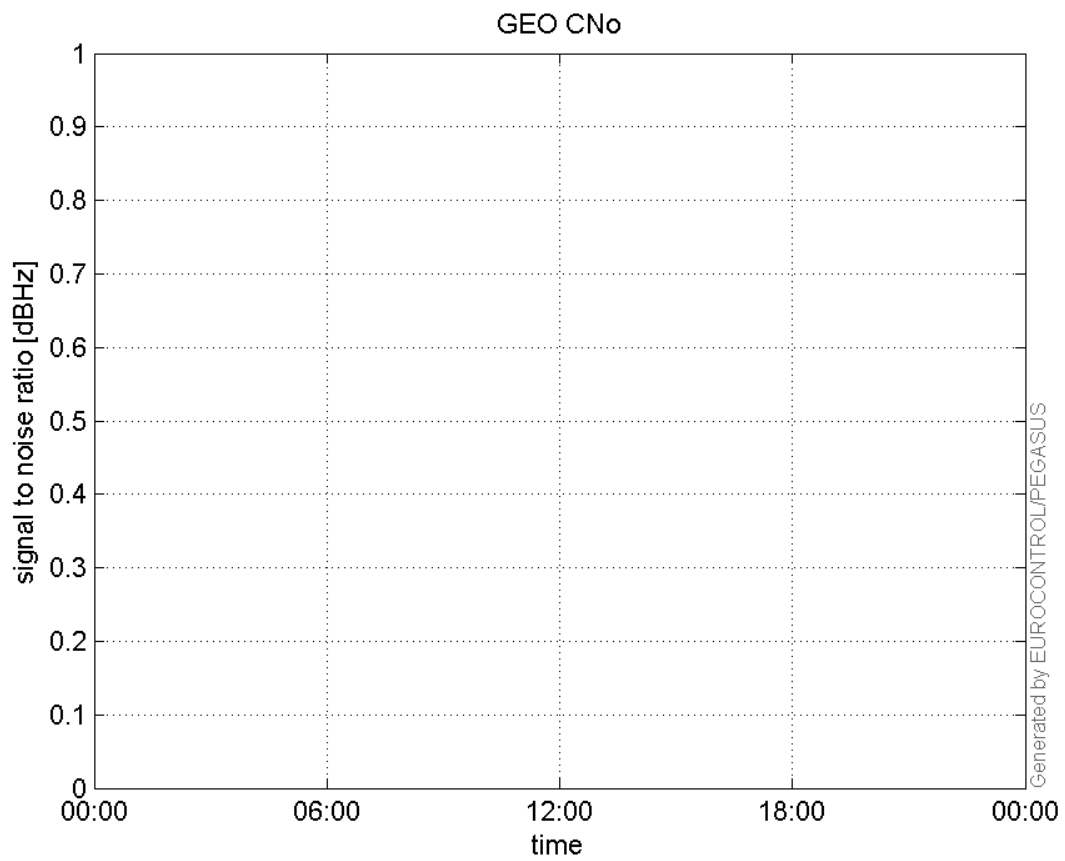
L1 CNo:



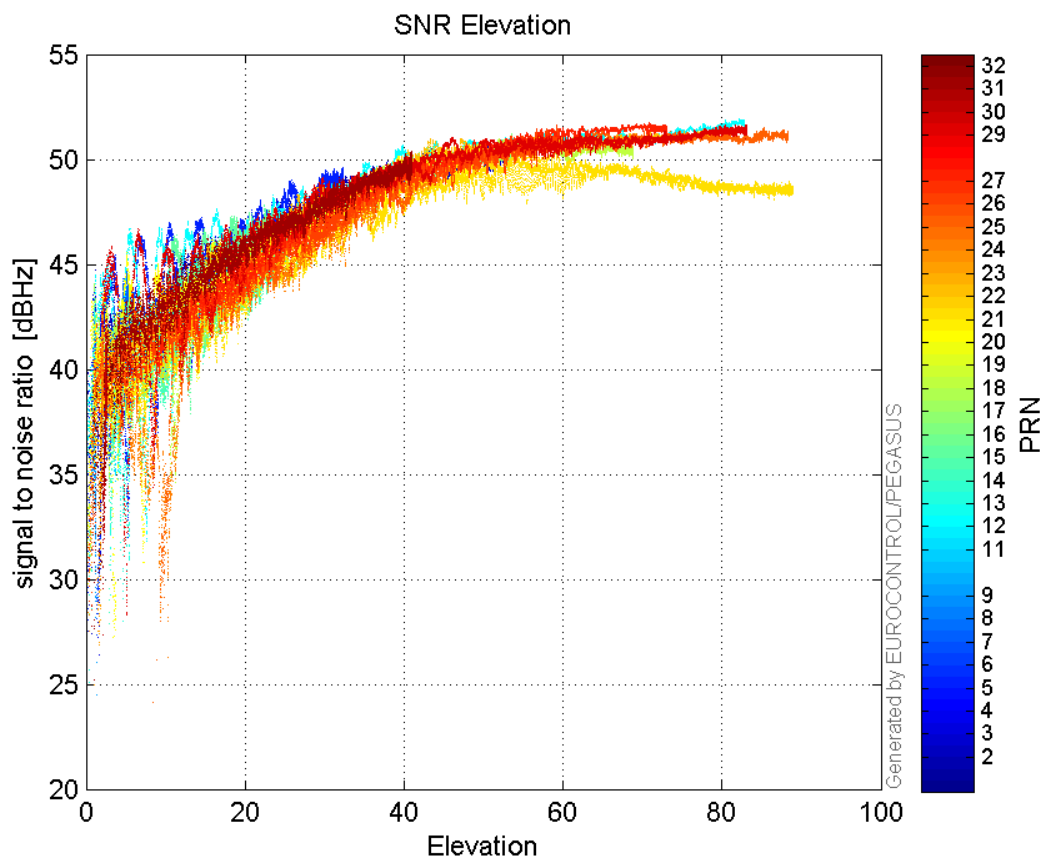
L2 CNo:



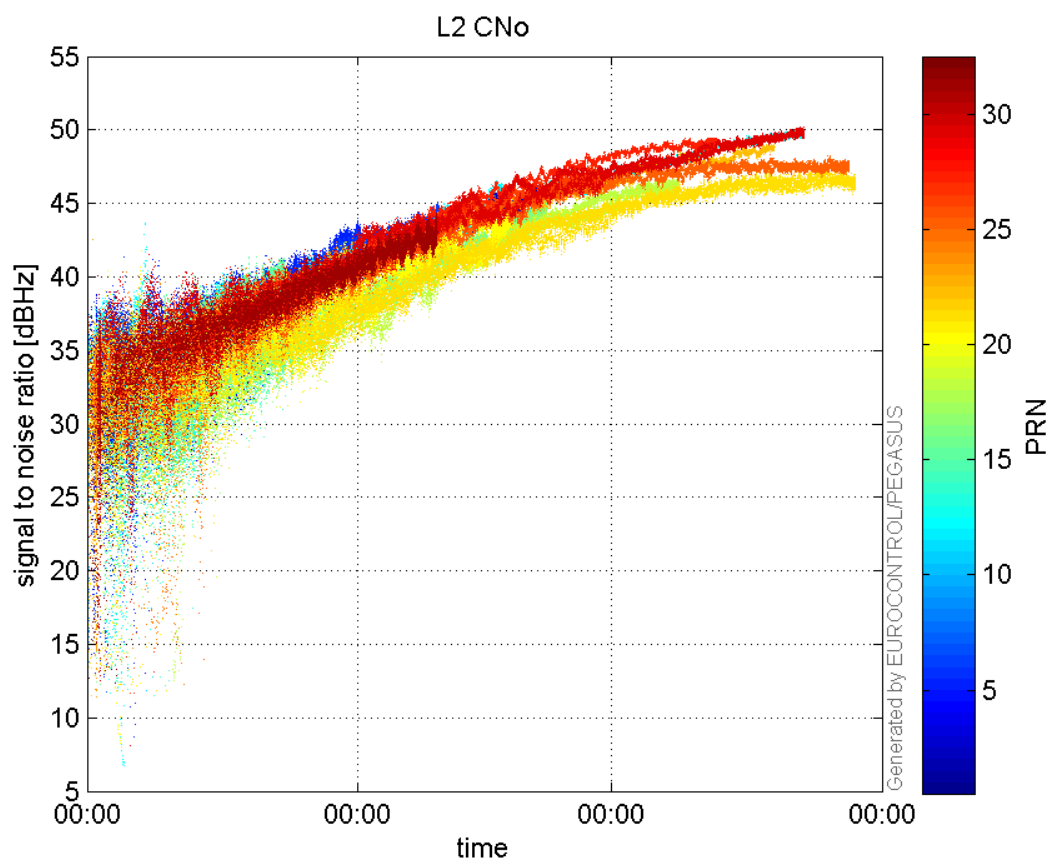
GEO CNo:



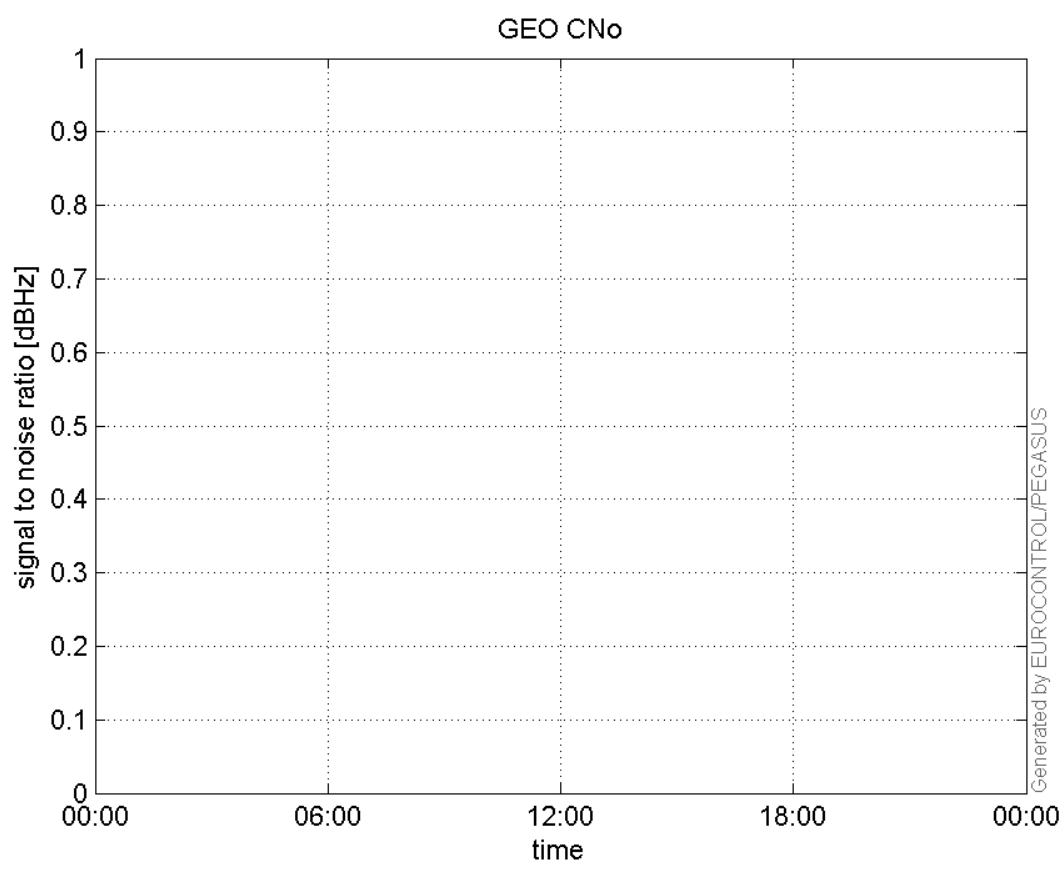
SNR Elevation:



L2 CNo:

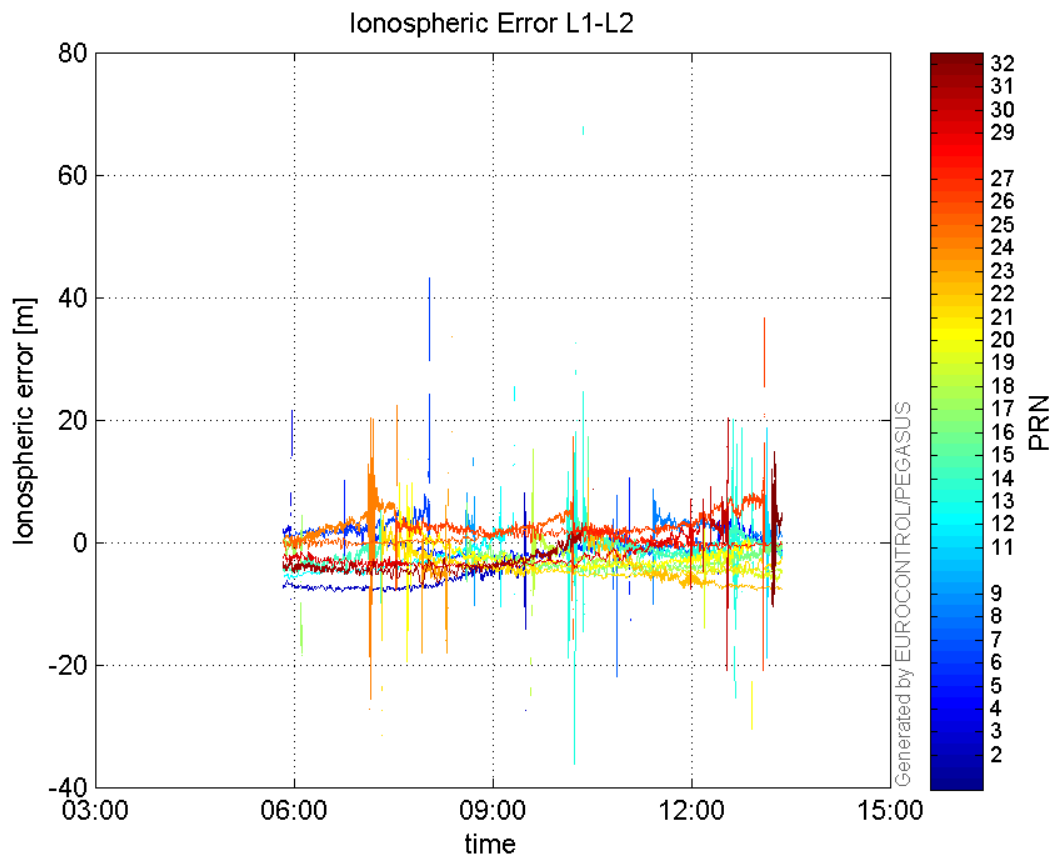


GEO CNo:



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/2015_09_15EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/2015_09_15EGNOS/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	50.439
init_lon	results	30.4297
init_alt	results	223.4497
mi_numbers	results	0