

DLV3 - x

DLV3 - Constellation

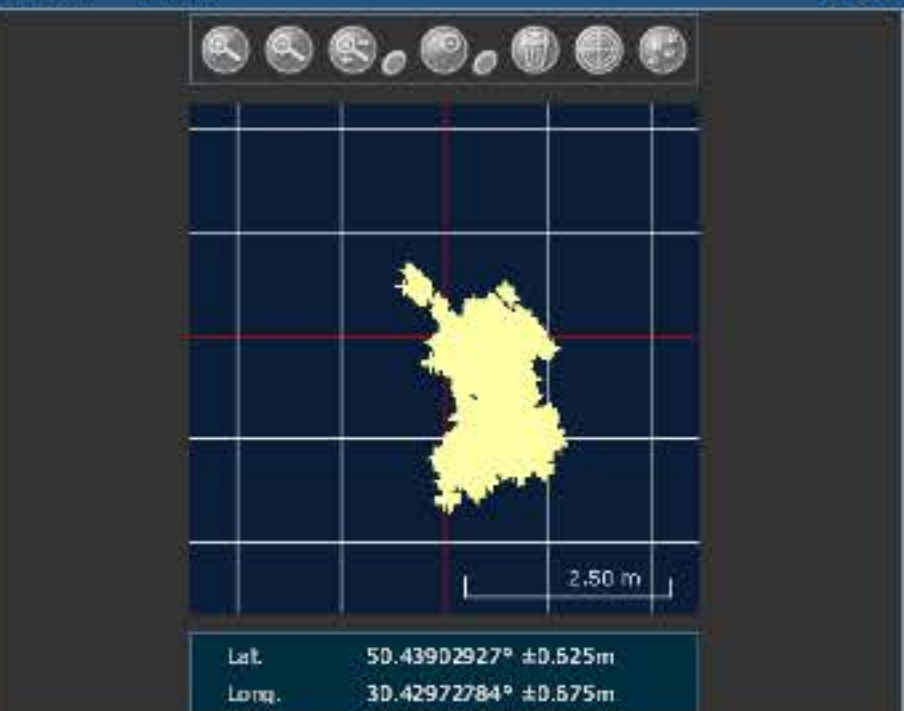


PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - Position

Latitude	50.43902927°	+/-	0.53m
Longitude	30.42972784°	+/-	0.58m
Hgt. (MSL)	190.275m	+/-	1.37m
Solution type	SBAS		
Ionospheric correction	Multi-frequency		
Advanced RTK status	N/A		
Solution age	0 second		
Differential age	5 seconds		
# of satellites used in solution	11		
	GPS	GLONASS	SBAS
	● L1 L2 L5	■ L1 L2	● L1 L2
Solution status	Computed		
Wed 02/12/2015 12:54:10 GMT			
Wed 02/12/2015 14:54:10 Local			

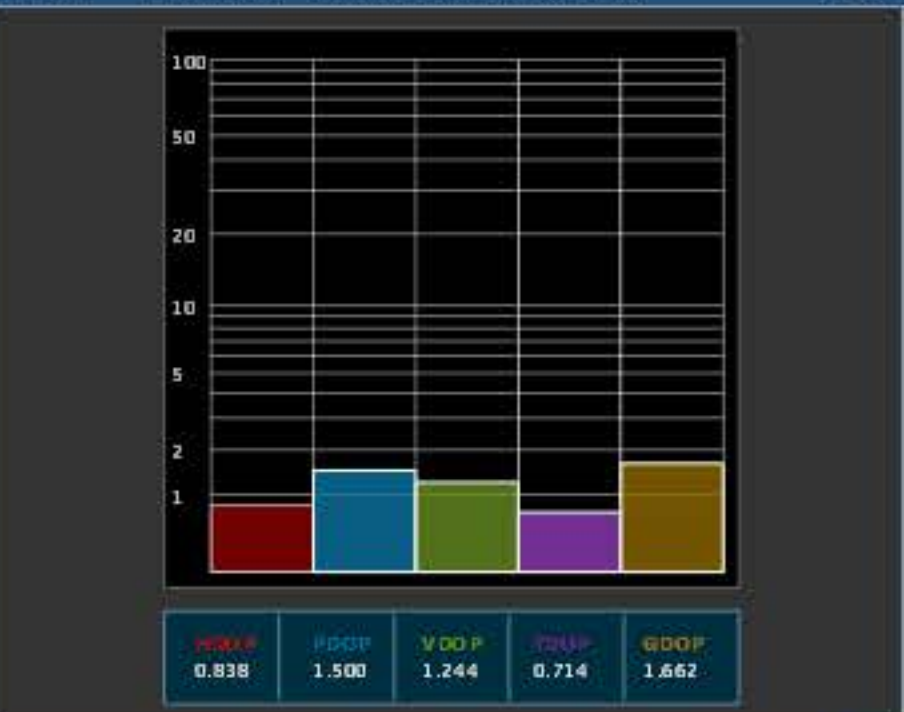
DLV3 - Plan



DLV3 - GPS Tracking Channel Status



DLV3 - Dilution Of Precision (DOP)



DLV3 - Console Window

```
<OK
[COM1]
<OK
[COM1]
<OK
[COM1]
```

Command ENTER

Global View

version 4.8.2
 site Laboratory satellite systems
 abbreviation NAU
 country Ukraine
 city Kiev
 comment Konin V., Shyshkov F. InsideGNSS, Jan-Feb 2015,
 P.50 - 54
 program Pegasus
 date 02/12/2015

SBAS Messages

start: 05:58:26.129 02.12.2015 (week: 1873 sec: 280706.129)
end: 12:53:44.129 02.12.2015 (week: 1873 sec: 305624.129)
duration: 06:55:18 ..

quality

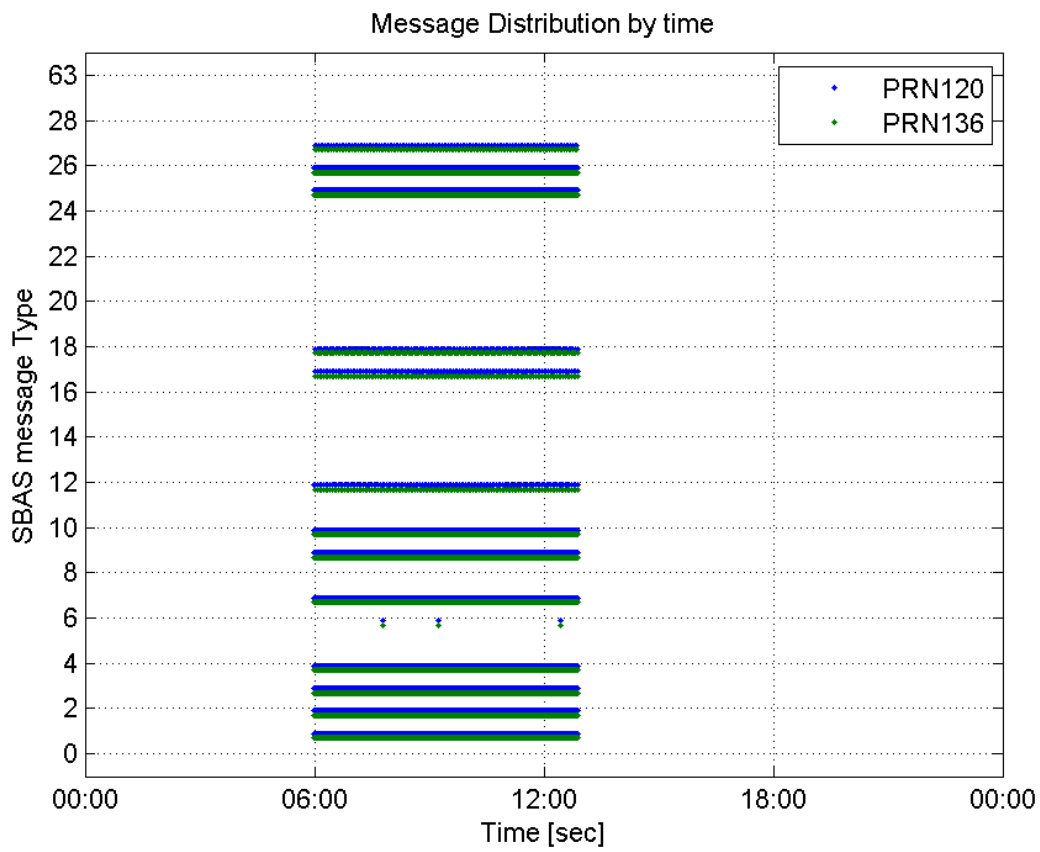
valid samples 49838
total samples 49838
number of SBAS PRNs 2

SBAS SIS Overview

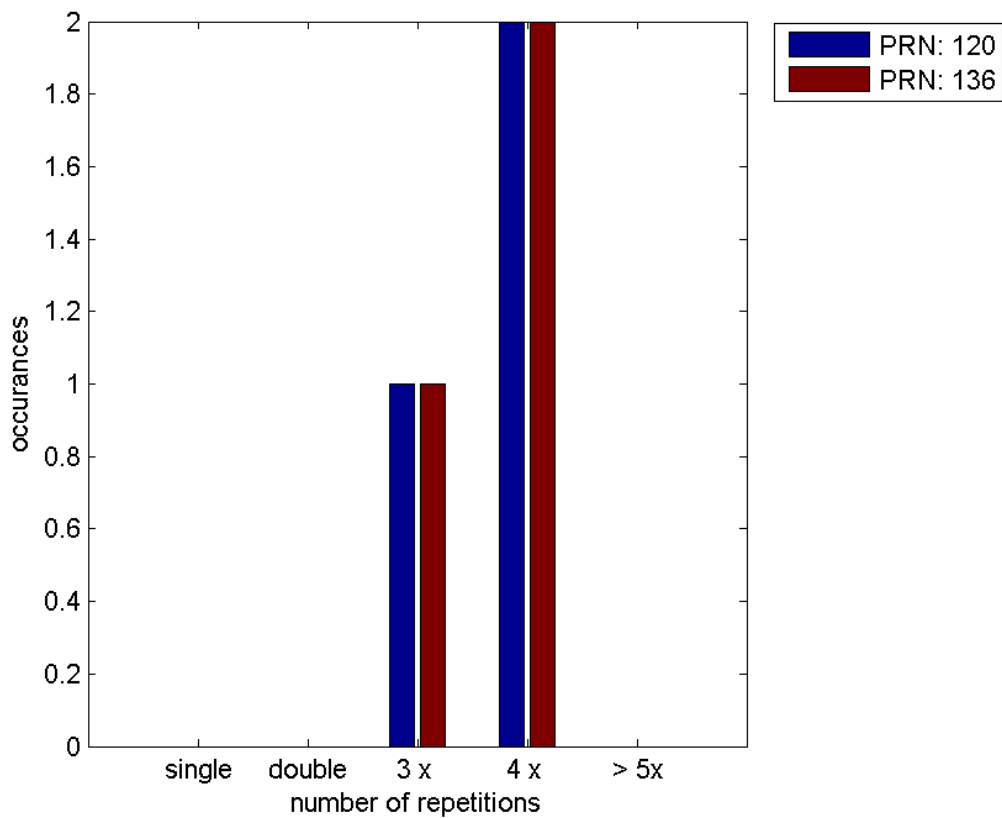
Message Type 6 repetitions :

	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:



Broadcast SBAS Messages :

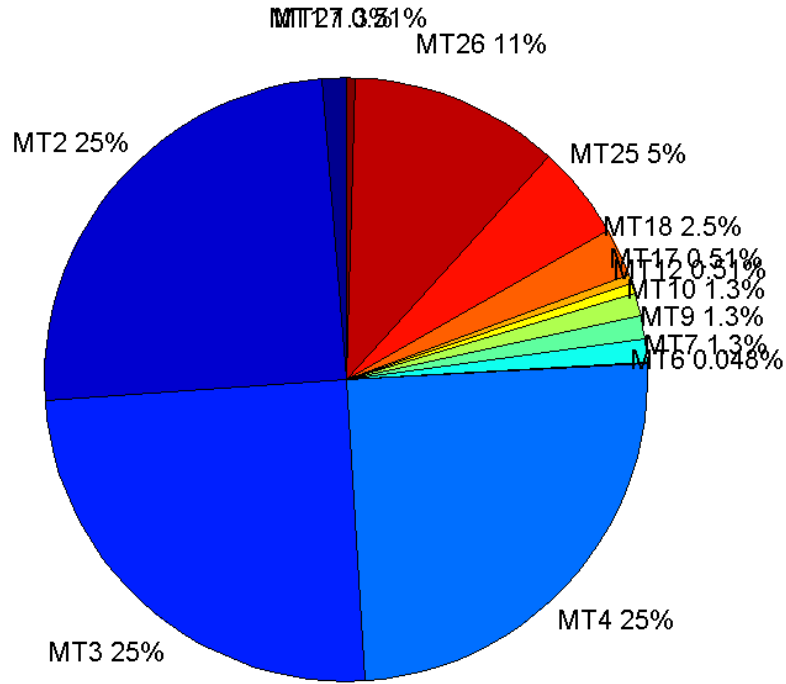
	number of messages	%
MT 0	0	0
MT 1	313	1.25607
MT 2	6195	24.8605
MT 3	6195	24.8605
MT 4	6194	24.8565
MT 5	0	0
MT 6	12	0.048156
MT 7	313	1.25607
MT 9	313	1.25607
MT 10	313	1.25607
MT 12	128	0.513664
MT 17	127	0.509651
MT 18	635	2.54826
MT 24	0	0
MT 25	1256	5.04033
MT 26	2798	11.2284
MT 27	127	0.509651
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	24919	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.6731	0	0	0
MT 2	4	8	4.0226	3	0	0
MT 3	4	8	4.02276	3	0	0
MT 4	4	8	4.02277	3	0	0
MT 5	--	--	--	--	--	--
MT 6	1	11467	1524.18	2	2	2
MT 7	75	84	79.5833	0	0	0
MT 9	76	83	79.6571	0	0	0
MT 10	75	81	79.6218	0	0	0
MT 12	188	201	195.921	127	0	0
MT 17	188	201	195.984	0	0	0
MT 18	4	168	38.9874	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	40	19.8327	0	0	0
MT						

26	2	40	8.90454	0	0	0
MT 27	188	201	195.952	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

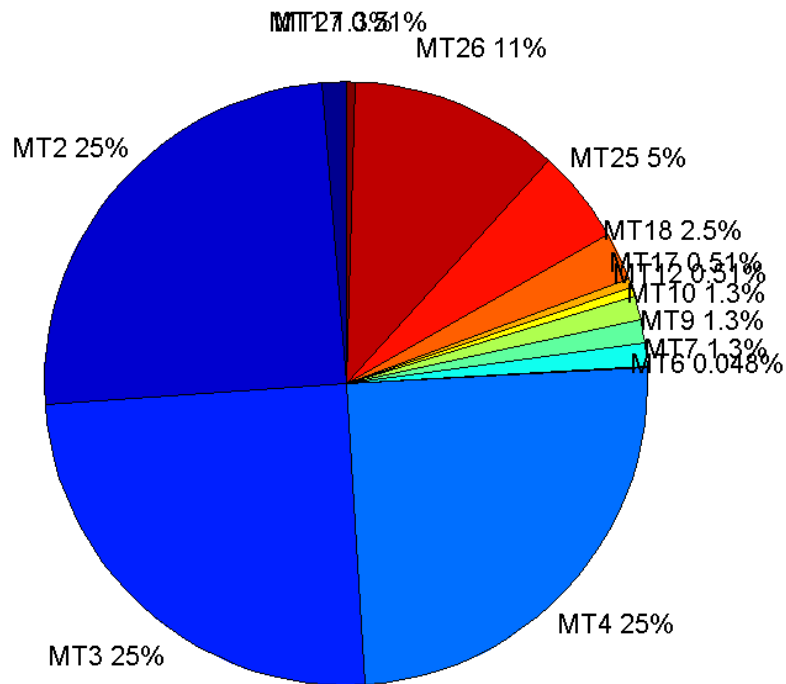
	number of messages	%
MT 0	0	0
MT 1	313	1.25607
MT 2	6196	24.8646
MT 3	6195	24.8605
MT 4	6195	24.8605
MT 5	0	0
MT 6	12	0.048156
MT 7	312	1.25206
MT 9	313	1.25607

MT 10	313	1.25607
MT 12	127	0.509651
MT 17	127	0.509651
MT 18	635	2.54826
MT 24	0	0
MT 25	1257	5.04434
MT 26	2797	11.2244
MT 27	127	0.509651
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	24919	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	80	79.6282	0	0	0
MT 2	4	8	4.02228	3	0	0
MT 3	4	8	4.02244	3	0	0
MT 4	4	8	4.02244	3	0	0
MT 5	--	--	--	--	--	--
MT 6	1	11467	1524.18	2	2	2
MT 7	75	81	79.6527	0	0	0
MT 9	76	81	79.6154	0	0	0
MT 10	76	87	79.5897	0	0	0
MT 12	188	201	196.032	126	0	0
MT 17	187	201	196.032	0	0	0
MT 18	4	172	39.0095	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	47	19.8312	0	0	0
MT 26	3	56	8.90844	0	0	0
MT 27	184	201	196	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:/PegasusDateGob/job/2015_12_02EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_12_02EGNOS/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	17
Correction_mode	Configuration	SBAS MODE 0
Dual_Frequency	Configuration	no

Position Domain

start: 05:58:26 02.12.2015 (week: 1873 sec: 280706)
end: 12:53:44 02.12.2015 (week: 1873 sec: 305624)
duration: 06:55:19 ..

quality

valid samples 24554
total samples 24919

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 all

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	286901	1.83578	11.2162	0.163673	0.463027	17.1458	0.0270053
max normVer	291099	1.33599	10.7649	0.124106	3.04748	19.0502	0.159971
max HPE	288959	7.91889	96.7041	0.0818879	-3.64103	55.7184	0.065347
max VPE	288968	7.24818	97.0024	0.0747217	-3.7965	56.392	0.0673234
min HPL	284697	1.23773	8.74856	0.141478	-0.652273	17.087	0.0381736
min VPL	288247	0.865495	9.59508	0.090202	0.293491	11.2479	0.026093

APV-I discontinuity events :

#	Epoch	duration	stable period
1	288939	39	7868

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	288939	39	7868
2	302554	978	13576

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	288939	39	7868
2	302554	978	13576

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	288071	1	13
2	288075	1	3
3	288079	1	3
4	288083	1	3
5	288087	1	3
6	288091	1	3
7	288095	1	3
8	288099	1	3
9	288101	134	1
10	288249	8351	14
11	296601	38	1

First Glance analysis

Duration	24919
Number of Samples	24919
Number of invalid sample	365
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.4647
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
24554	24515	23493	52	23493

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.09032	2.08392	1.97542	0.991325	1.97542
HPEscale 95%	NaN	4.96936	4.99669	4.2167	4.99669
VPE 95%	2.14412	2.13495	1.98842	0.86824	1.98842
VPEscale 95%	NaN	5.25698	3.71784	0.870016	3.71784

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.998412	0.956789	0.00211778	0.956789
measurements	0.985353	0.983787	0.942775	0.00208676	0.942775
Operational	0.985353	0.983787	0.942775	0.00208676	0.942775

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	1	38	11	38
Long	--	1	2	3	2
Independent	--	1	2	0	2
P(disc.)	NaN	0.00061187	0.00127698	0	0.00127698
P(slide)	NaN	0.00061187	0.00332014	0.961538	0.00332014

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

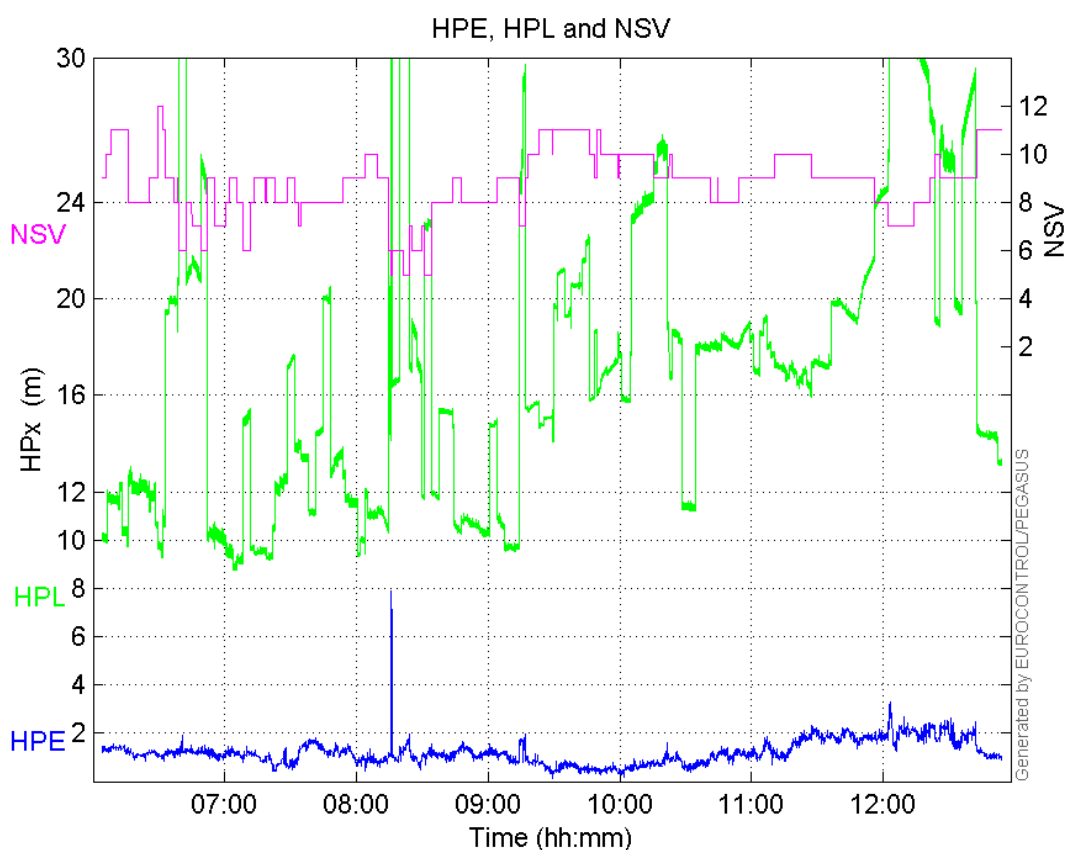
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	24554	24515	23493	52	23493
SIS Availability	1	0.998412	0.956789	0.00211778	0.956789

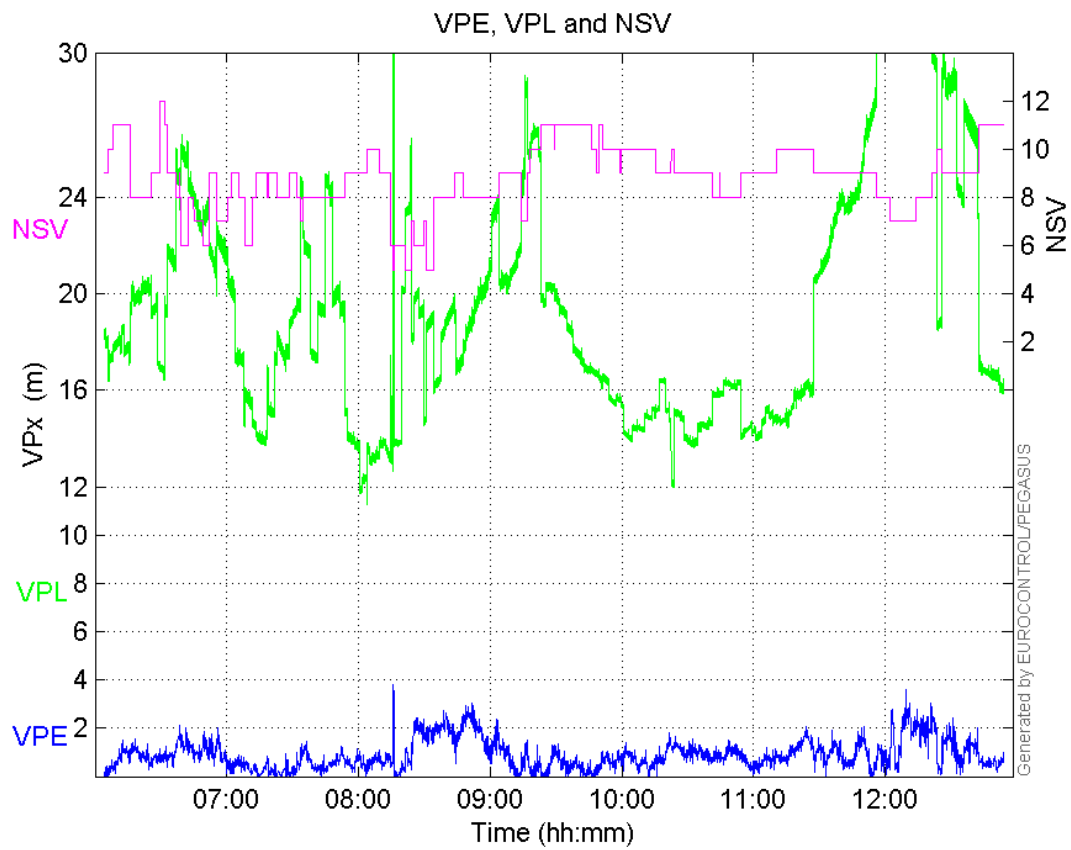
Local Availability	0.985353	0.983787	0.942775	0.00208676	0.942775
Operational Availability	0.985353	0.983787	0.942775	0.00208676	0.942775
HPE 95%	2.09032	2.08392	1.97542	0.991325	1.97542
HPEScale 95%	NaN	4.96936	4.99669	4.2167	4.99669
VPE 95%	2.14412	2.13495	1.98842	0.86824	1.98842
VPEscale 95%	NaN	5.25698	3.71784	0.870016	3.71784
All Discontinuity Events	--	1	38	11	38
Long Discontinuity Events	--	1	2	3	2
Independent Discontinuity Events	--	1	2	0	2
P(discontinuity)	NaN	0.00061187	0.00127698	0	0.00127698
P(sliding window)	NaN	0.00061187	0.00332014	0.961538	0.00332014
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:

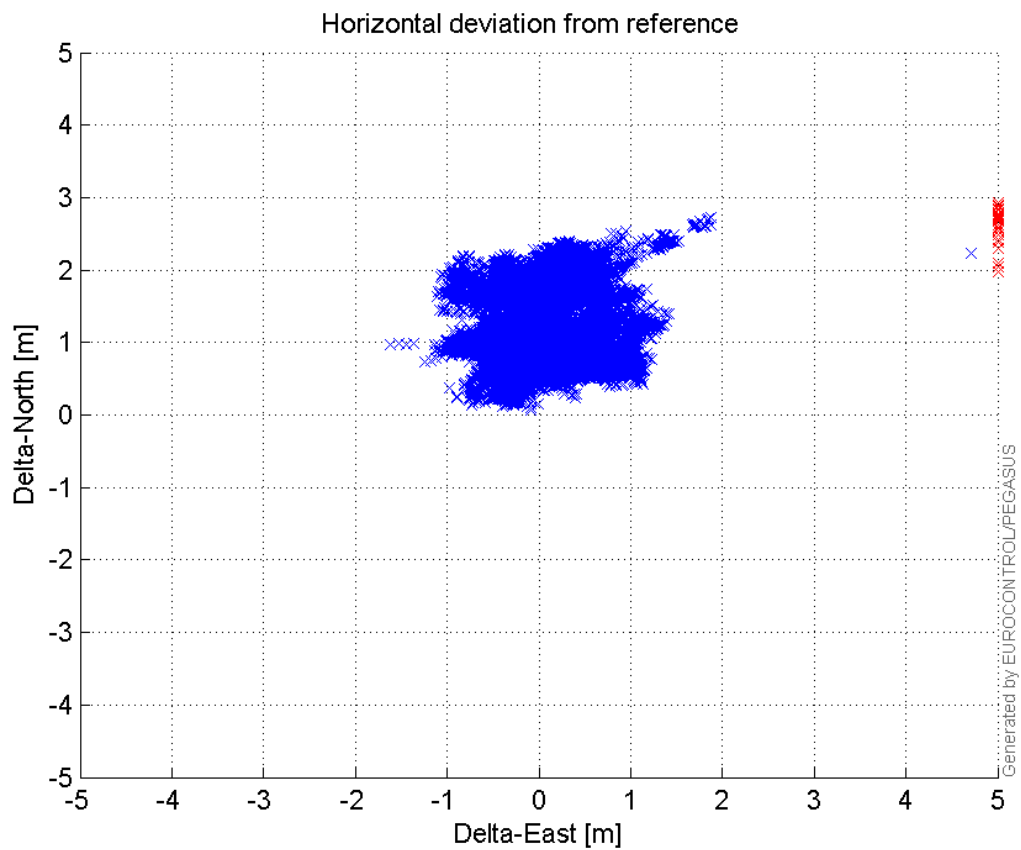


VPE, VPL and NSV:



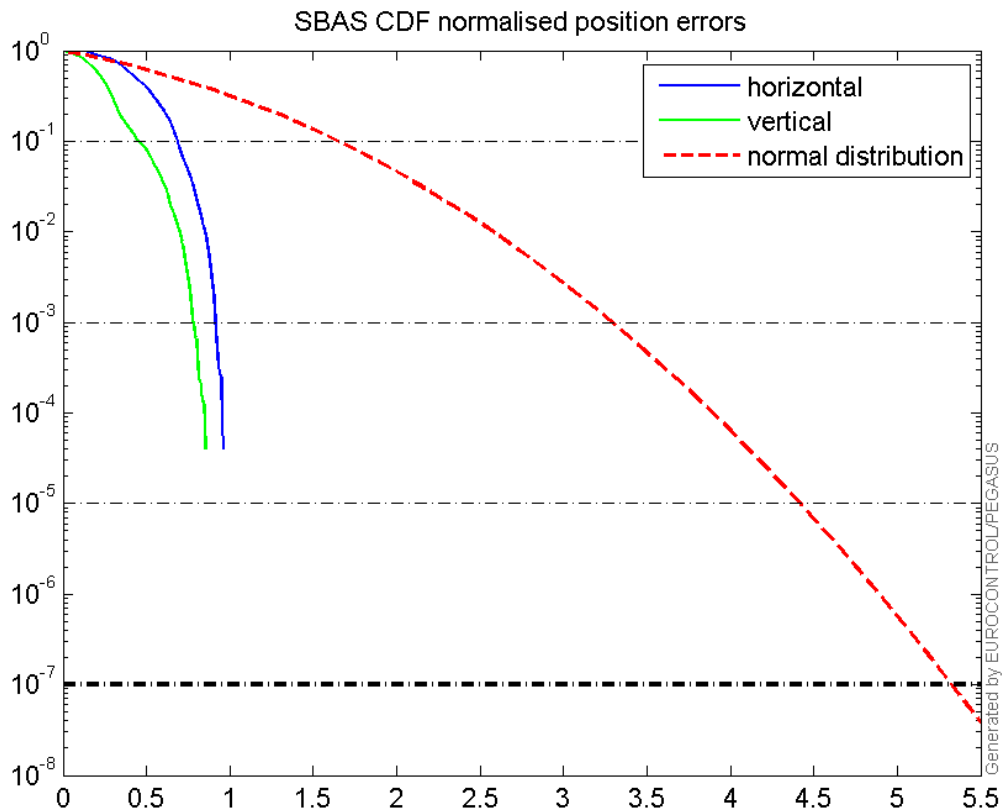
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

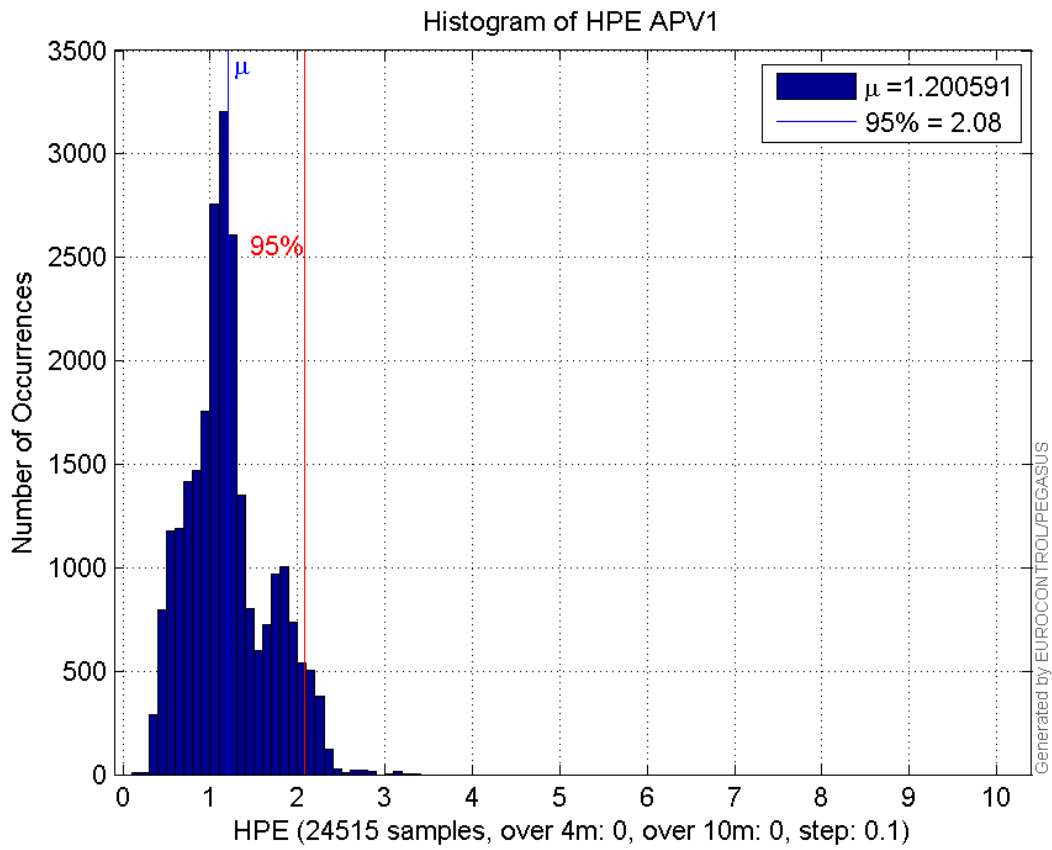
number	24515
sum	29432.483
sum2	40619.854
prctile95	2.0839161
prctile99	2.295917
number	24515
sum	22294.73
sum2	28581.353
prctile95	2.1349547
prctile99	2.530668
number	24515
sum	425990.87
sum2	8344527.4
prctile95	30.305475
prctile99	34.806725
number	24515
sum	486719.81
sum2	10515726
prctile95	32.183475
prctile99	40.011045
number	24515
sum	1827.1703

sum2 157.9972
prctile95 0.12423395
prctile99 0.1418987
number 24515
sum 1140.7728
sum2 72.544929
prctile95 0.10513953
prctile99 0.13131747
number 23493
sum 27331.213
sum2 36205.691
prctile95 1.9754213
prctile99 2.2486419
number 23493
sum 20359.971
sum2 24513.939
prctile95 1.9884226
prctile99 2.4448333
number 23493
sum 392413.28
sum2 7236594.8
prctile95 26.803535
prctile99 30.815541
number 23493
sum 447222.82
sum2 8984175.1
prctile95 27.9003
prctile99 32.065741
number 23493
sum 1763.0422
sum2 153.88729
prctile95 0.12491716
prctile99 0.14235667
number 23493
sum 1090.5435
sum2 69.808944
prctile95 0.10622406
prctile99 0.13164248

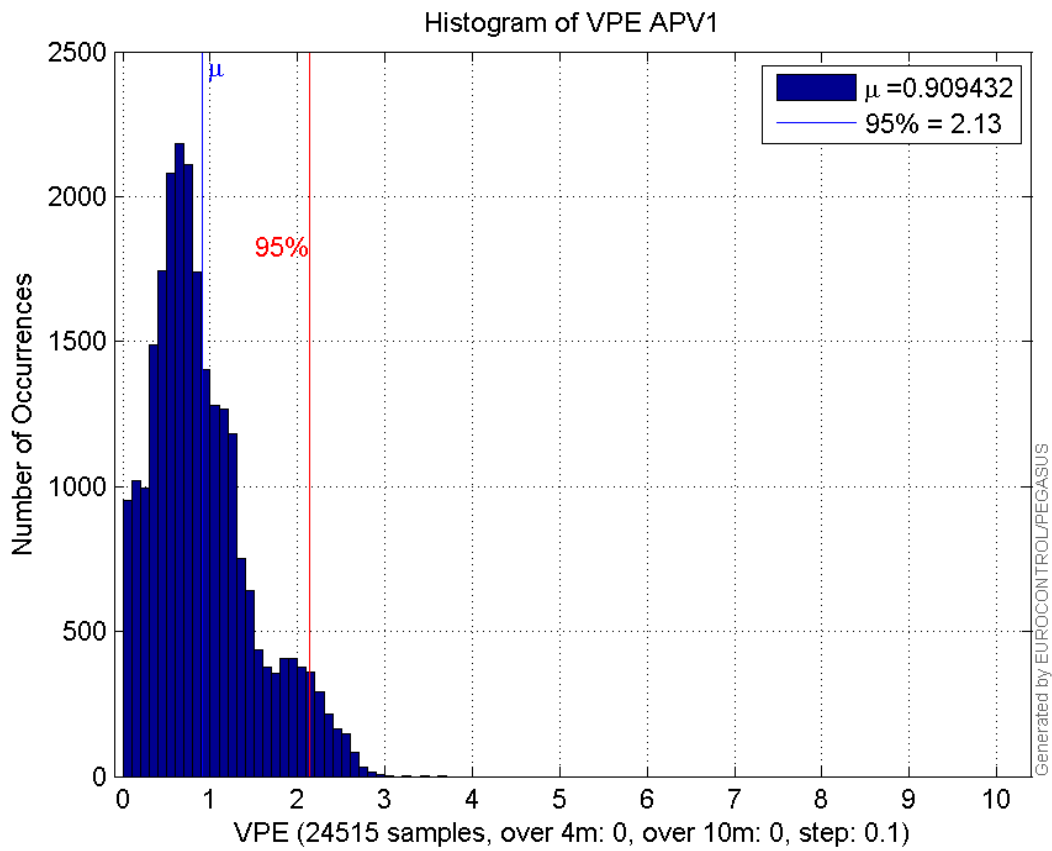
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.20059	0.464251	1.14717	2.08392	2.29592	1.28722
HPL	17.3767	6.19959	17.0124	30.3055	34.8067	18.4495
VPE	0.909432	0.582082	0.785963	2.13495	2.53067	1.07976
VPL	19.854	5.89681	18.5691	32.1835	40.011	20.7111

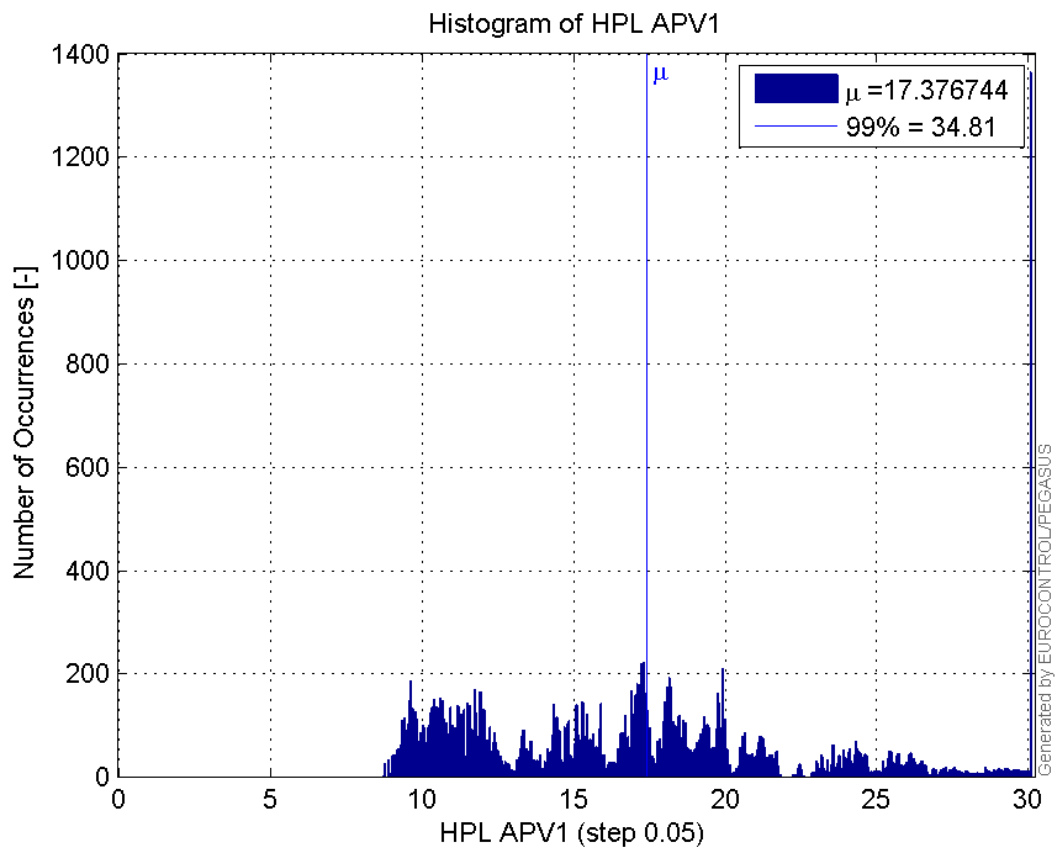
Histogram of HPE APV1:



Histogram of VPE APV1:

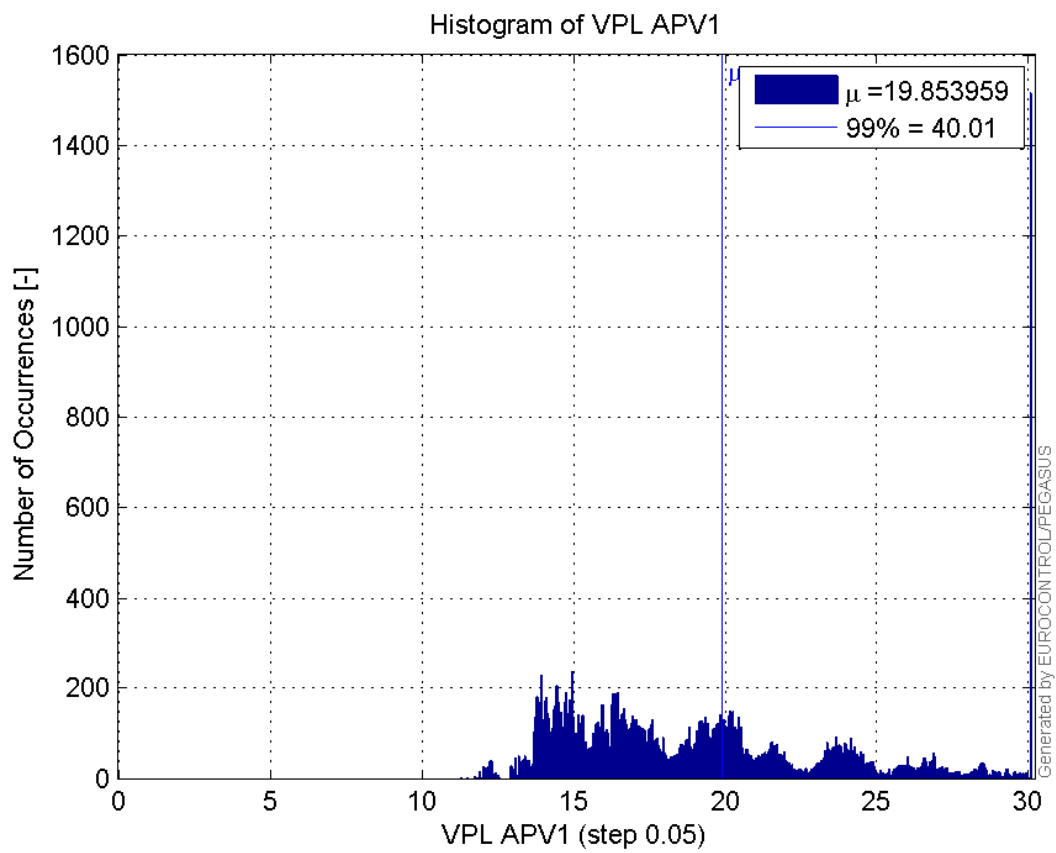


Histogram of HPL APV1:

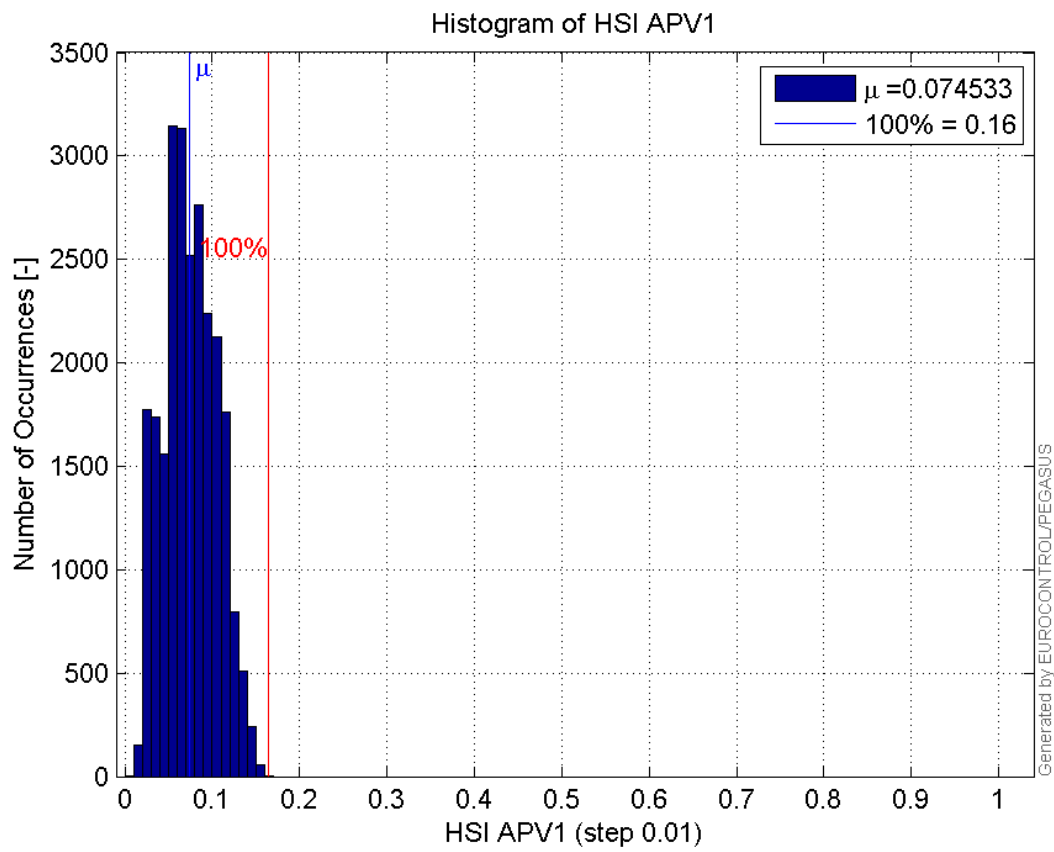


99

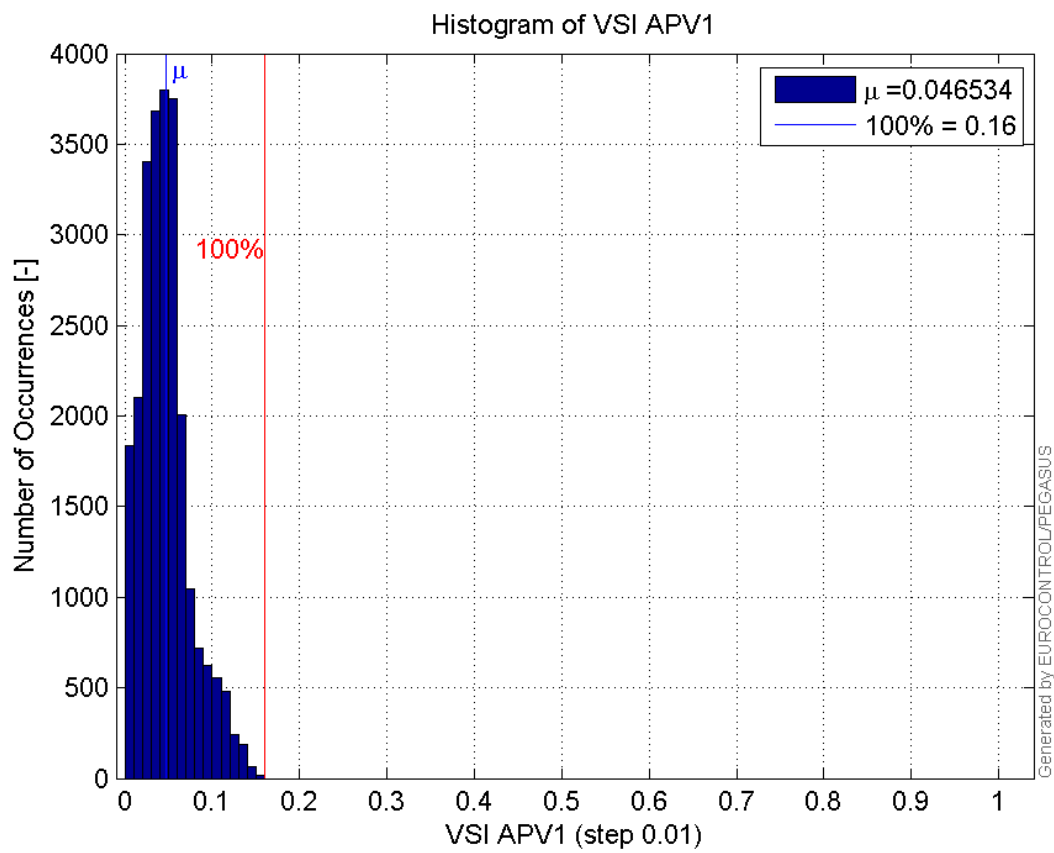
Histogram of VPL APV1:



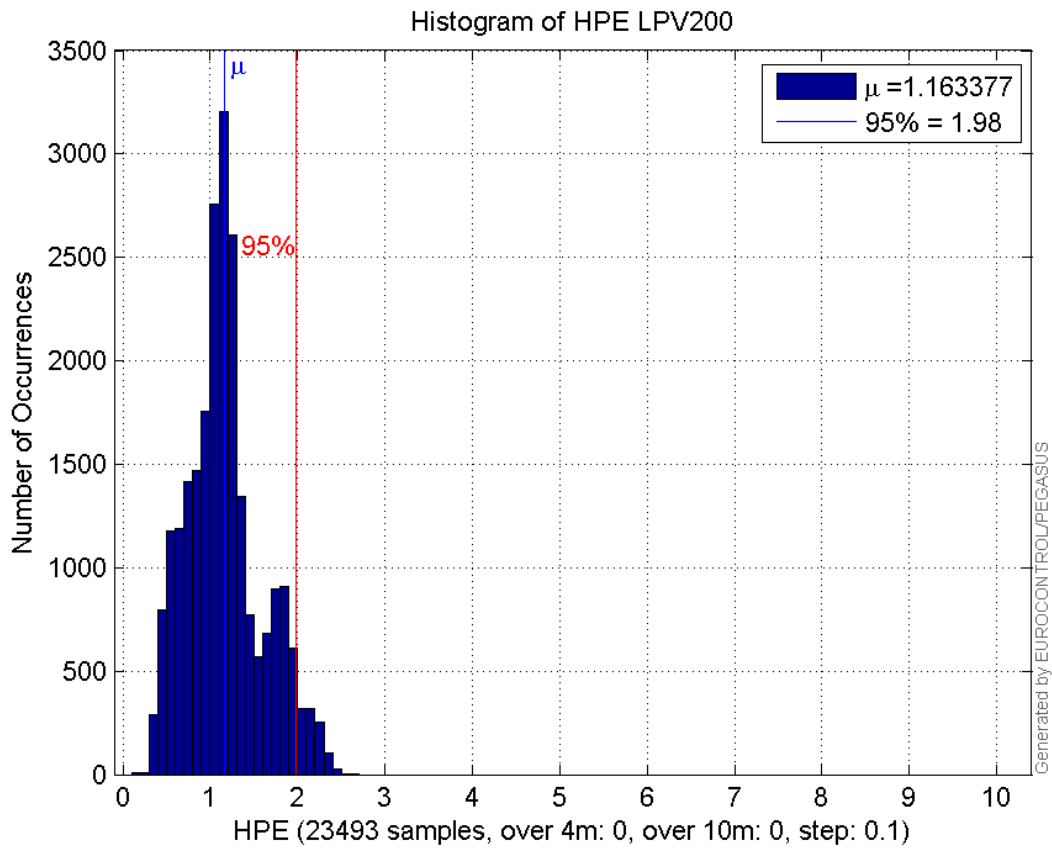
Histogram of HSI APV1:



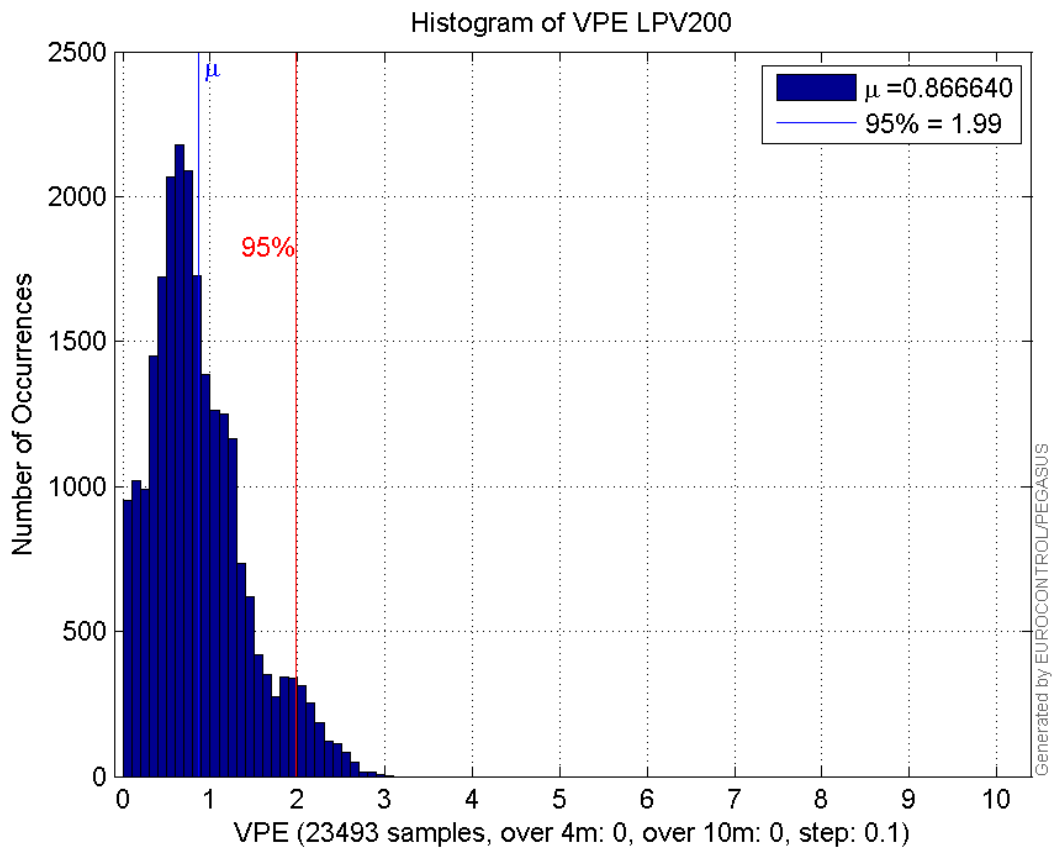
Histogram of VSI APV1:



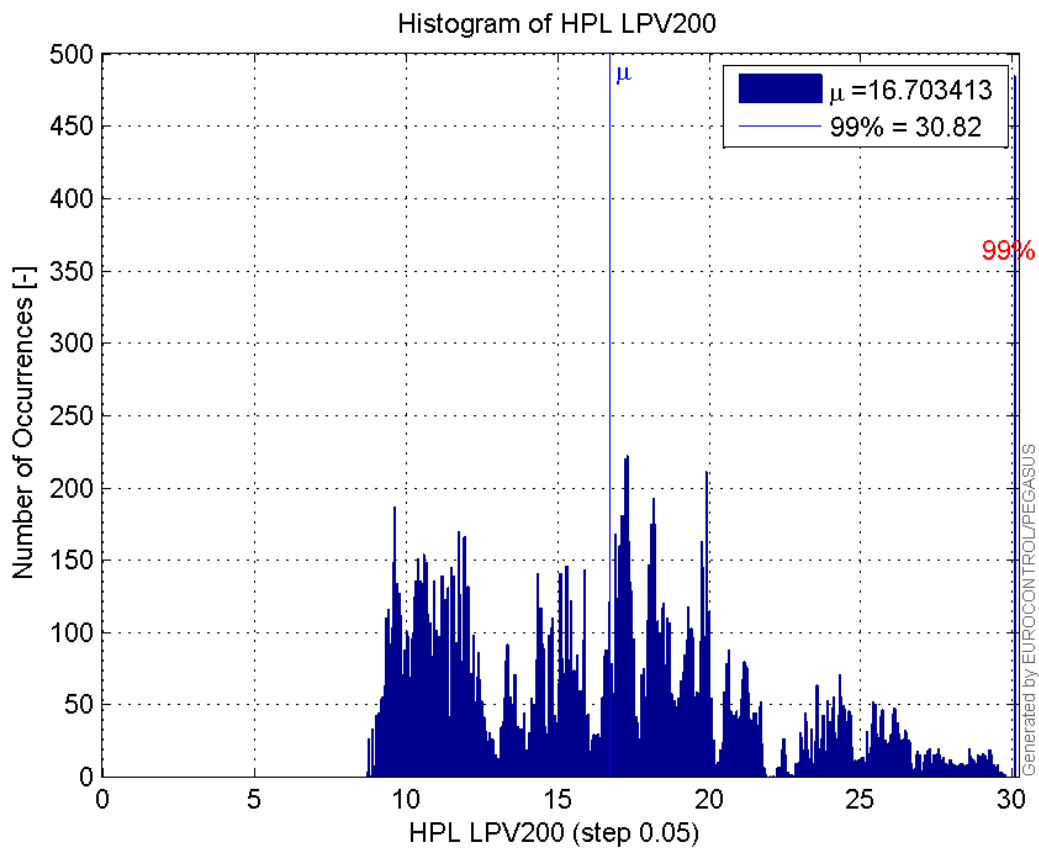
Histogram of HPE LPV200:



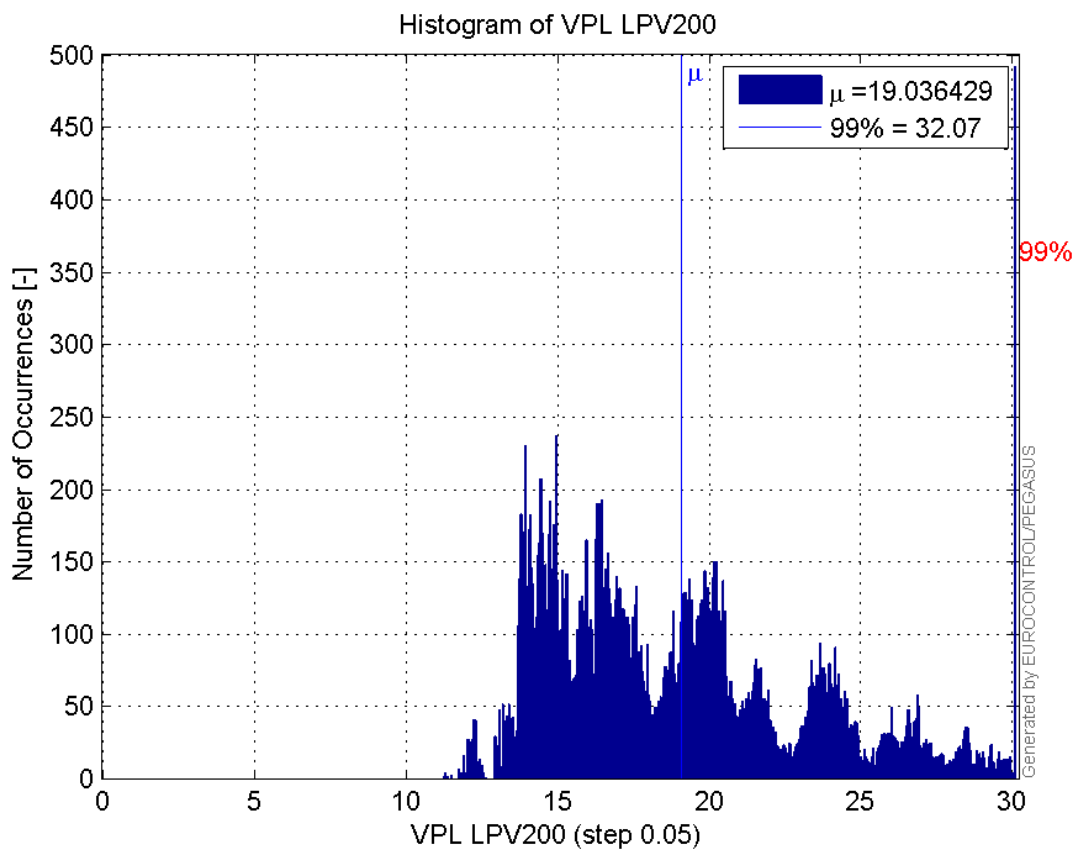
Histogram of VPE LPV200:



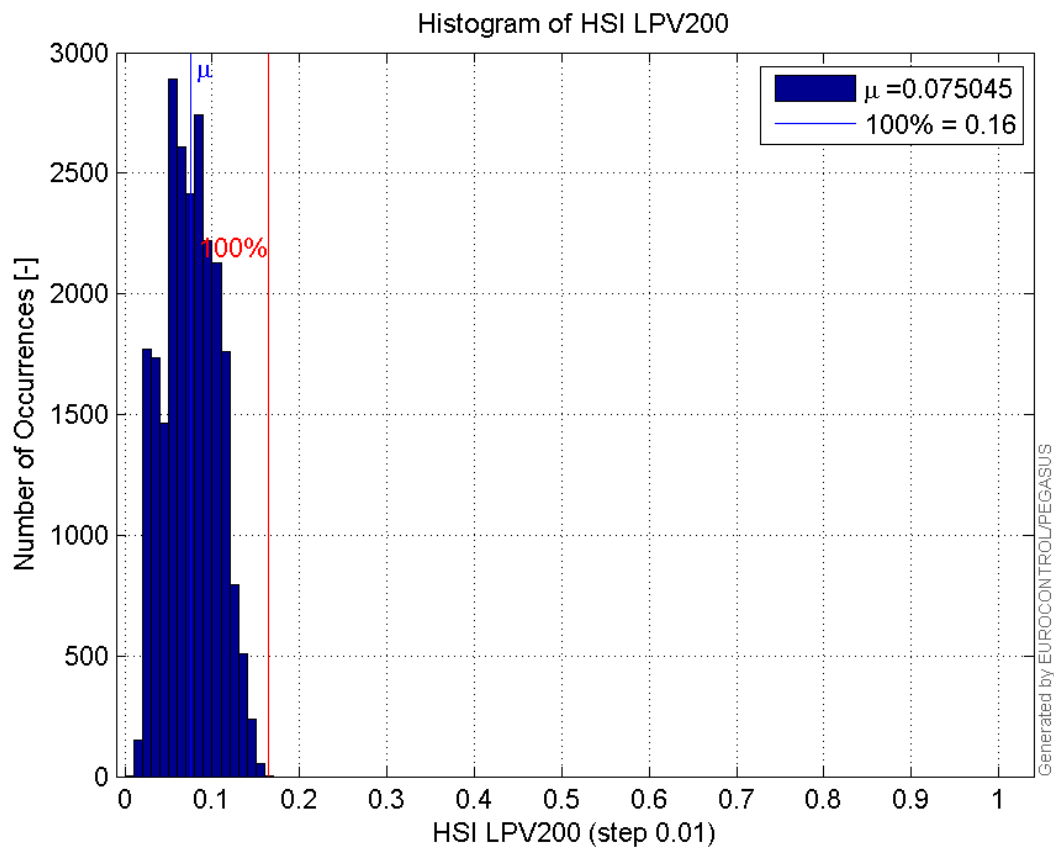
Histogram of HPL LPV200:



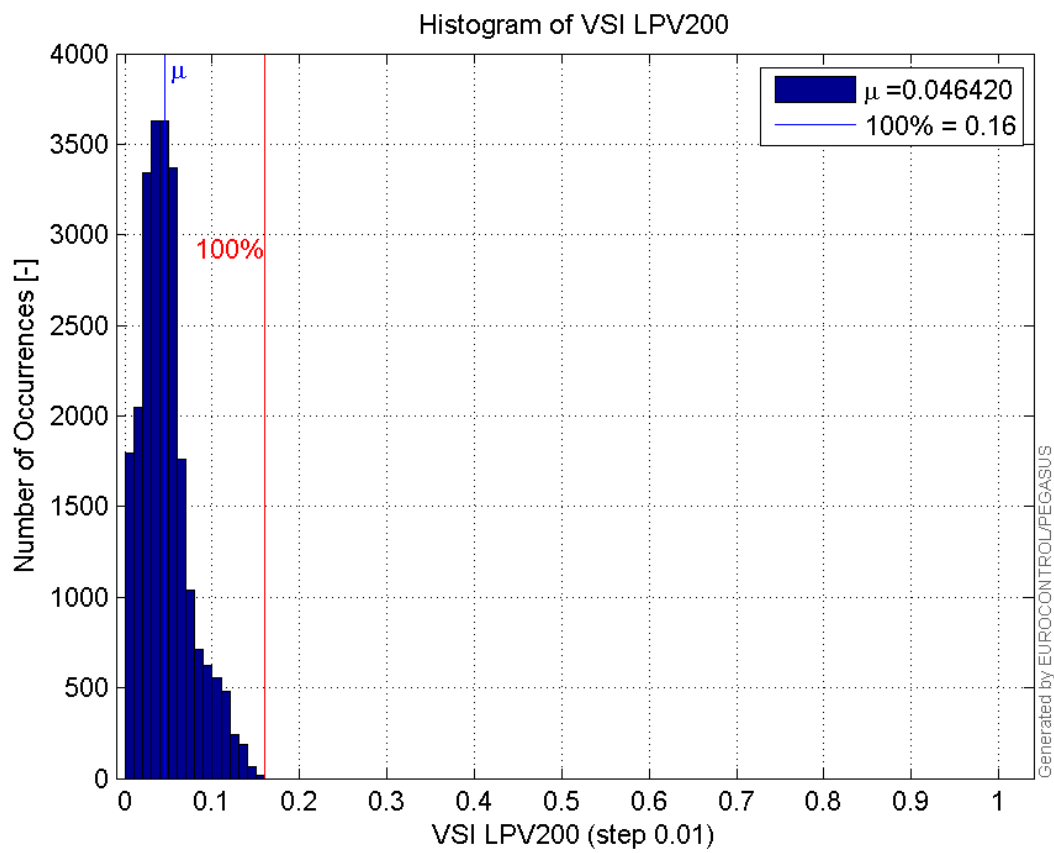
Histogram of VPL LPV200:



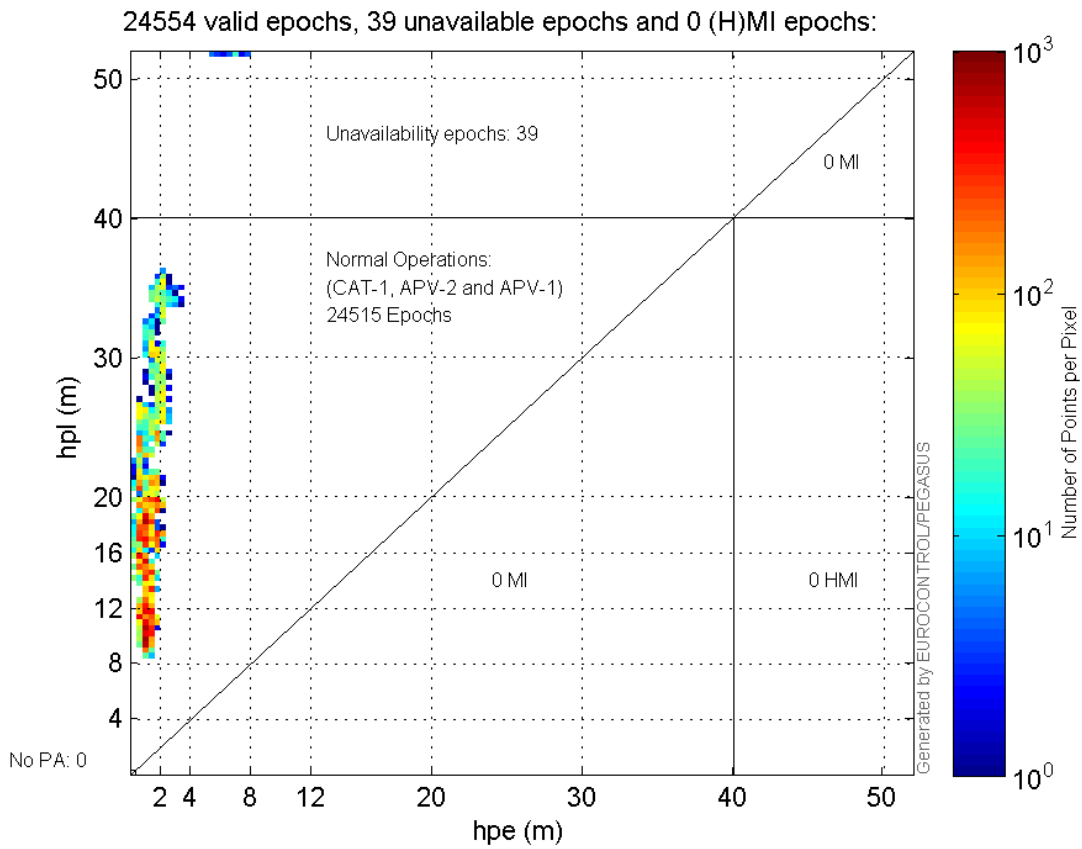
Histogram of HSI LPV200:



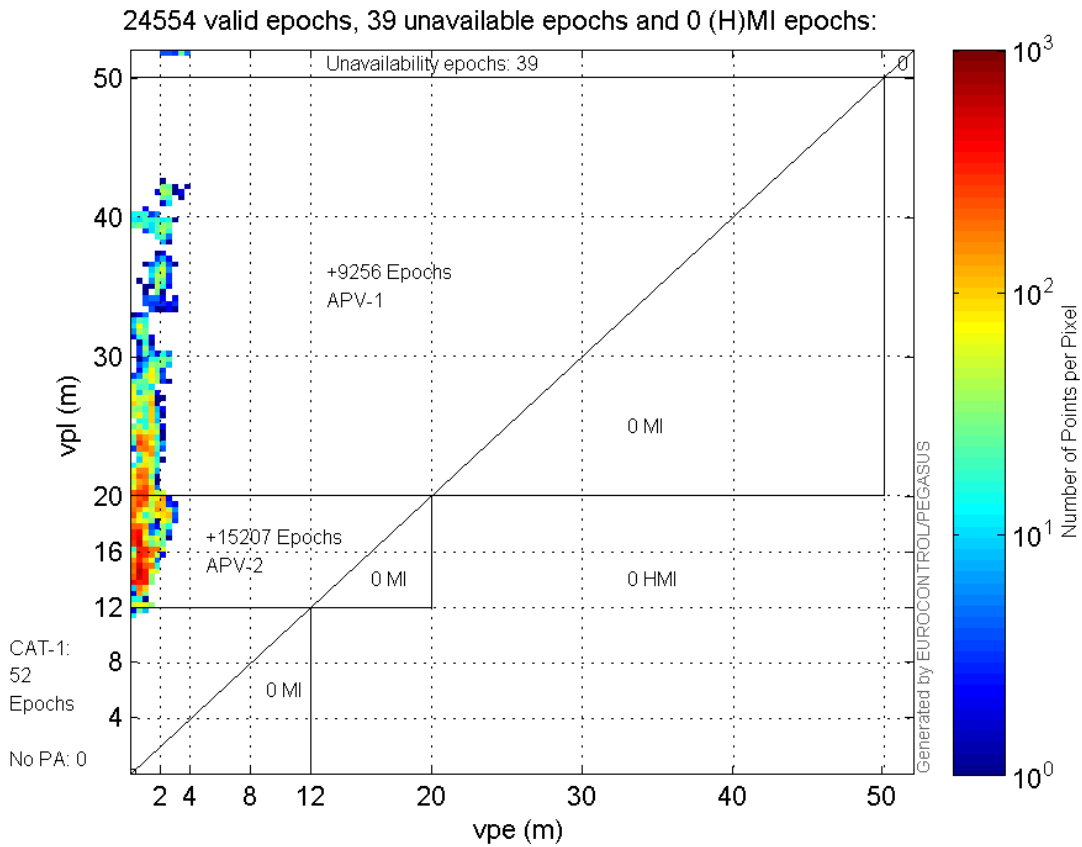
Histogram of VSI LPV200:



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:/PegasusDateGob/job/2015_12_02EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_02EGNOS/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	30.4298
init_alt	results	238.972
mi_numbers	results	0

Range Domain

start: 05:58:26 02.12.2015 (week: 1873 sec: 280706)
end: 12:53:44 02.12.2015 (week: 1873 sec: 305624)
duration: 06:55:19 ..

quality

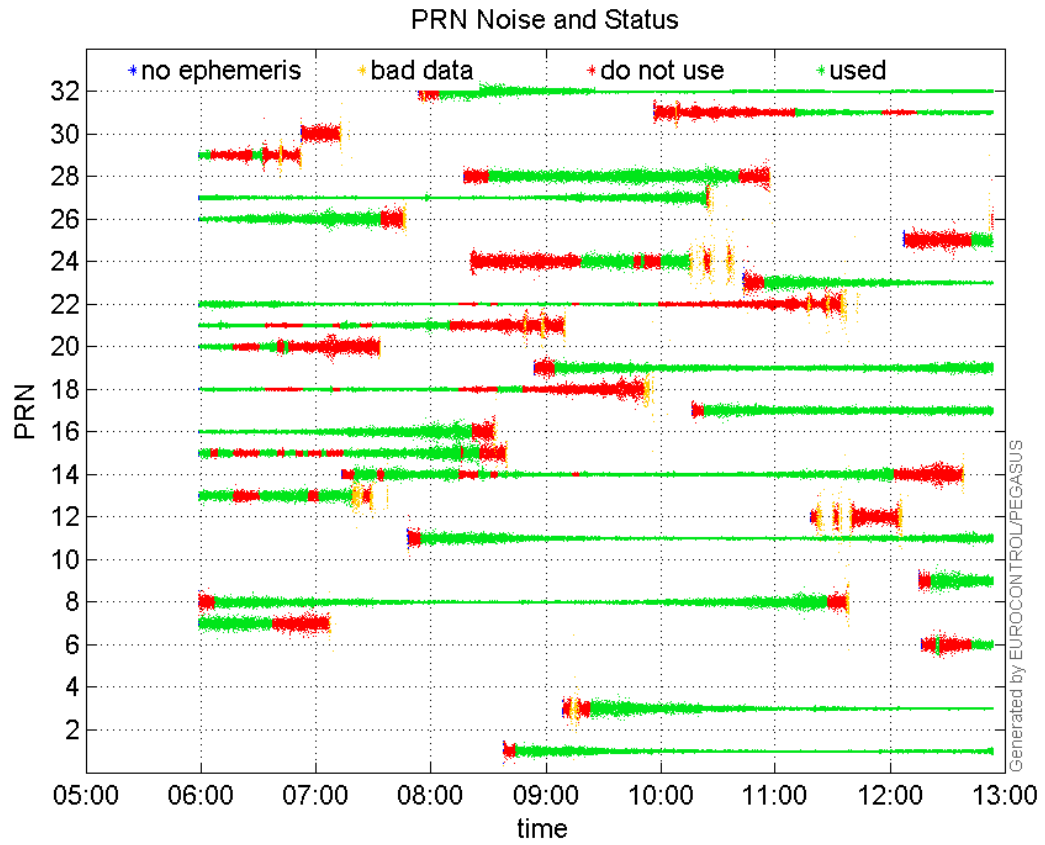
valid samples 24919
total samples 24919

PRN overview

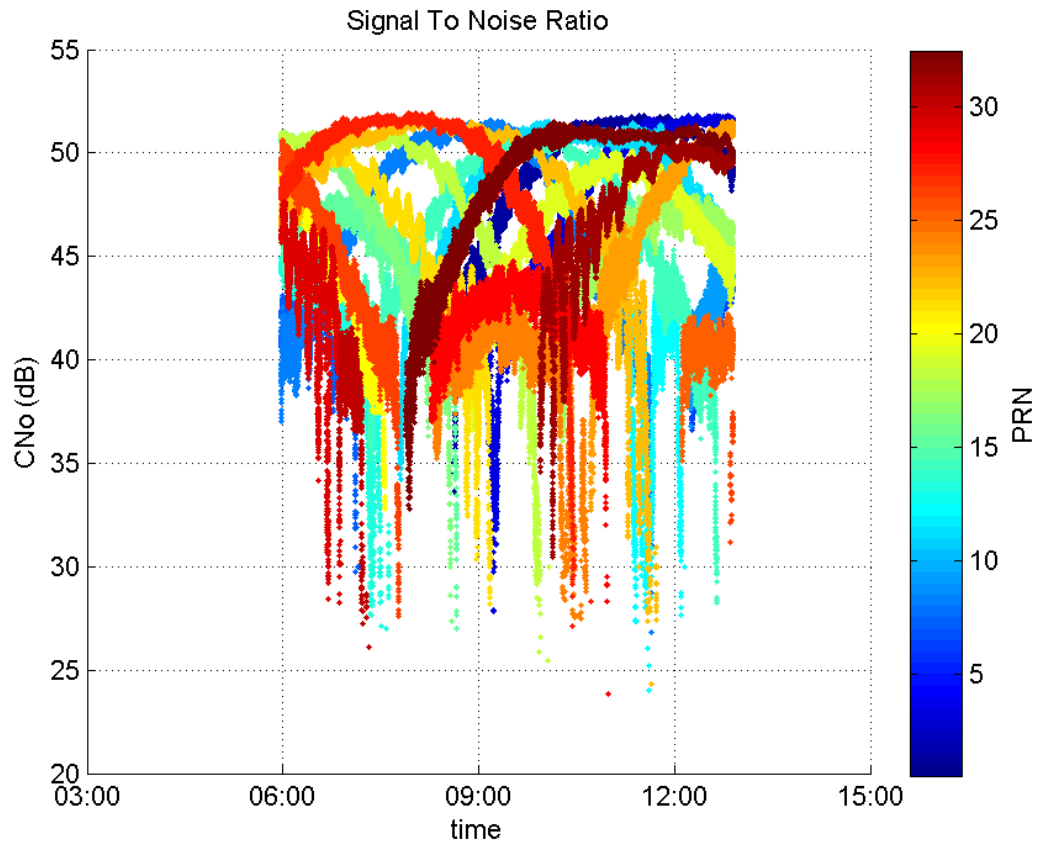
Number of Visible GPS Satellites 28
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



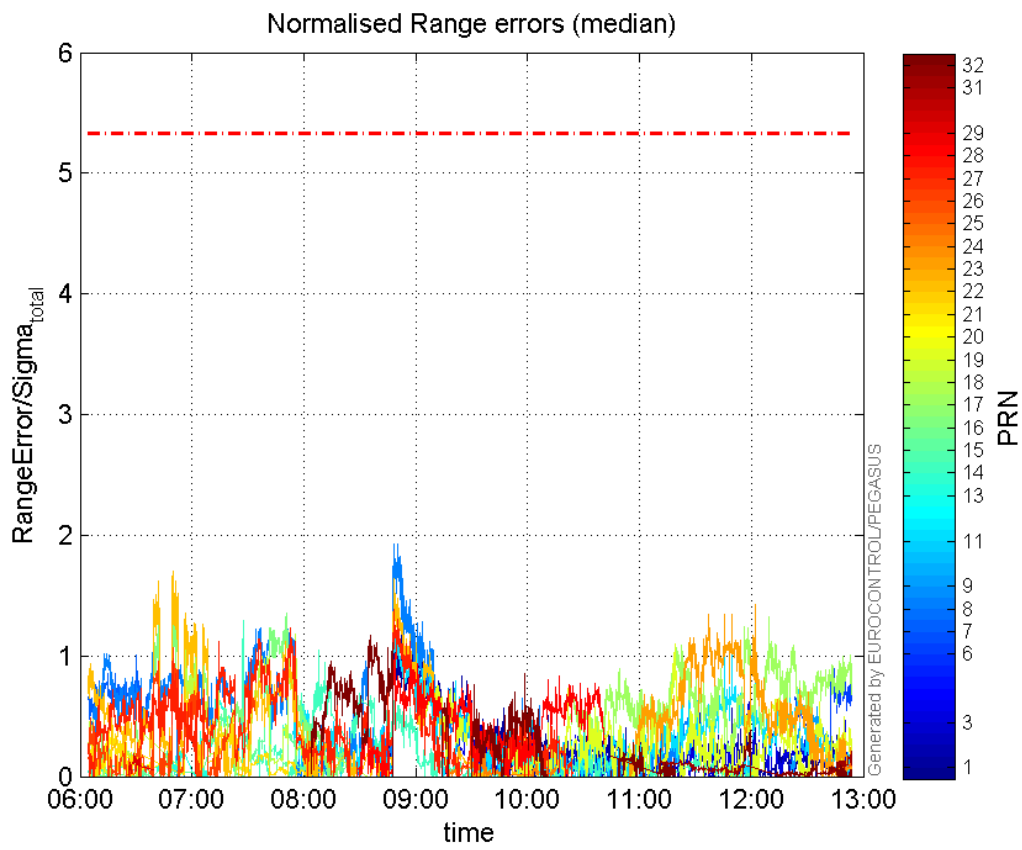
range errors

Number of Overbounding Norm Errors 0

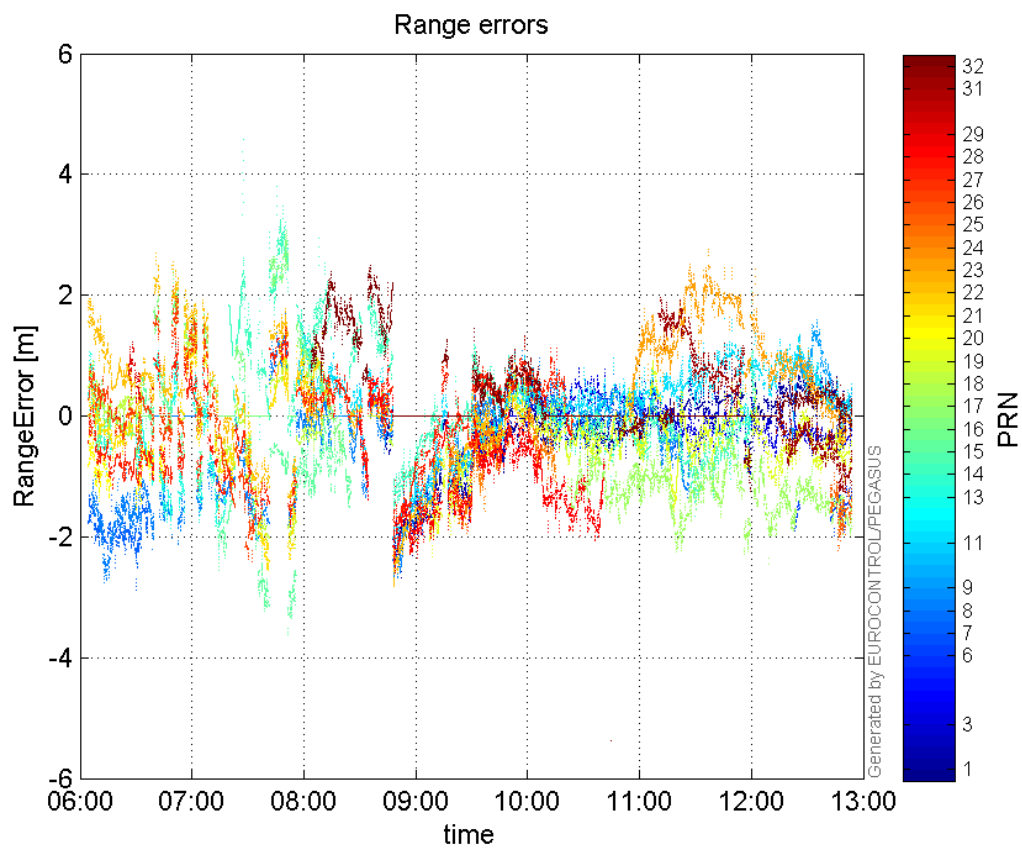
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1873	291125	1	1.20948	-2.66926	2.20695
1873	302359	3	0.632713	-0.952587	1.50556
1873	305061	6	0.898214	-1.99144	2.21712
1873	282594	7	1.00832	-2.89016	2.86632
1873	291011	8	1.93139	-2.65083	1.3725
1873	304520	9	0.575312	1.59641	2.77486
1873	290886	11	1.31942	-2.30713	1.7486
1873	285249	13	0.815958	-2.33894	2.86649
1873	286077	14	1.29094	4.58319	3.55026
1873	286716	15	0.781689	-3.22346	4.12371
1873	283816	16	1.51329	2.40057	1.58632
1873	302970	17	1.32	-2.451	1.85681
1873	284185	18	1.22221	1.8942	1.54981
1873	299929	19	1.10114	-1.71989	1.56192
1873	281724	20	0.359536	-1.35339	3.76428
1873	284173	21	0.828762	1.42062	1.71415
1873	283816	22	1.69842	2.54921	1.50093
1873	302510	23	1.42482	2.43395	1.70825
1873	293360	24	0.215196	-1.7549	8.15488
1873	305231	25	0.110394	-2.19437	19.8776
1873	283816	26	1.06615	2.14536	2.01225
1873	290886	27	1.38011	-2.01992	1.46359
1873	290943	28	1.02051	-2.58771	2.5357
1873	282564	29	0.194201	0.869588	4.47777
1873	305618	31	0.206355	-1.25734	6.09307
1873	290138	32	1.1752	2.48664	2.11592

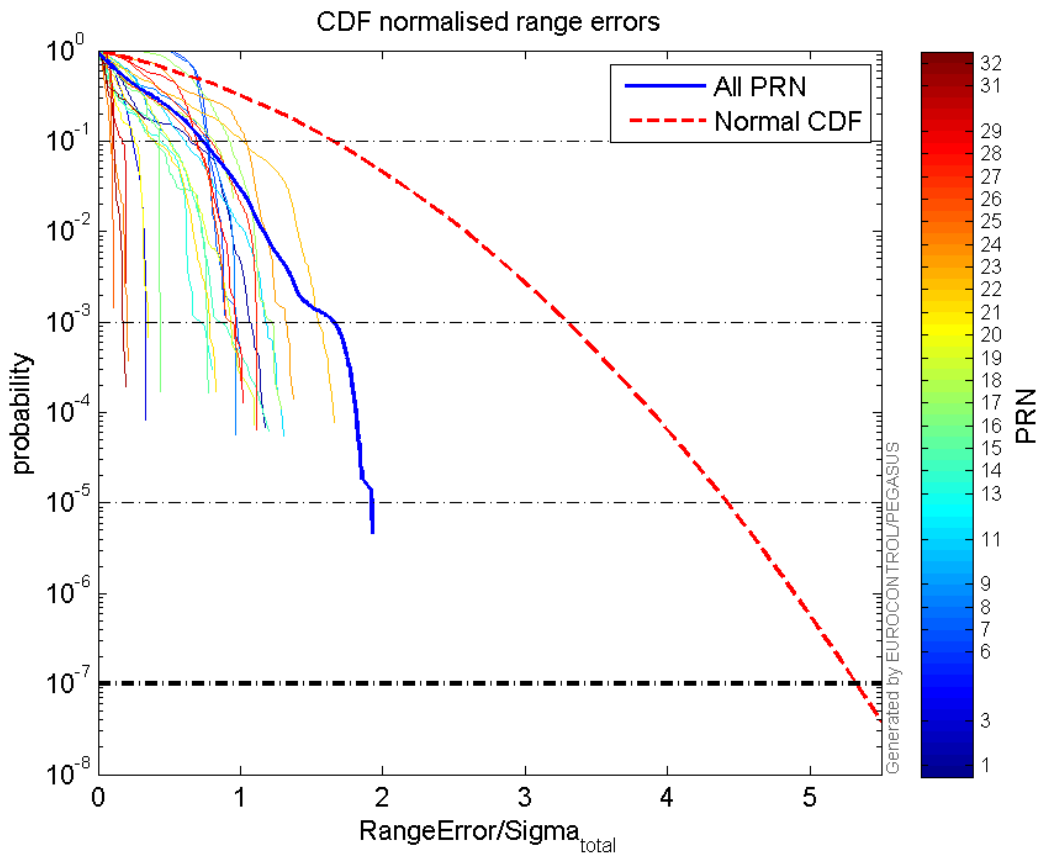
 Normalised Range errors (median):



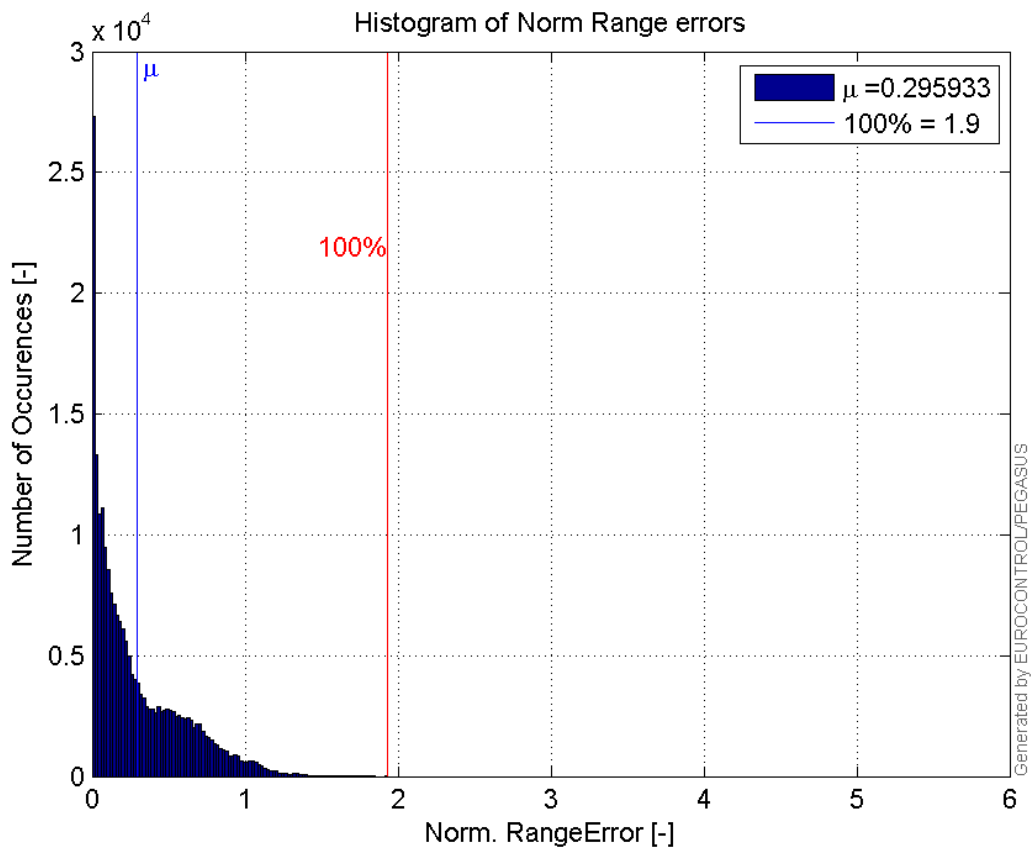
Range errors:



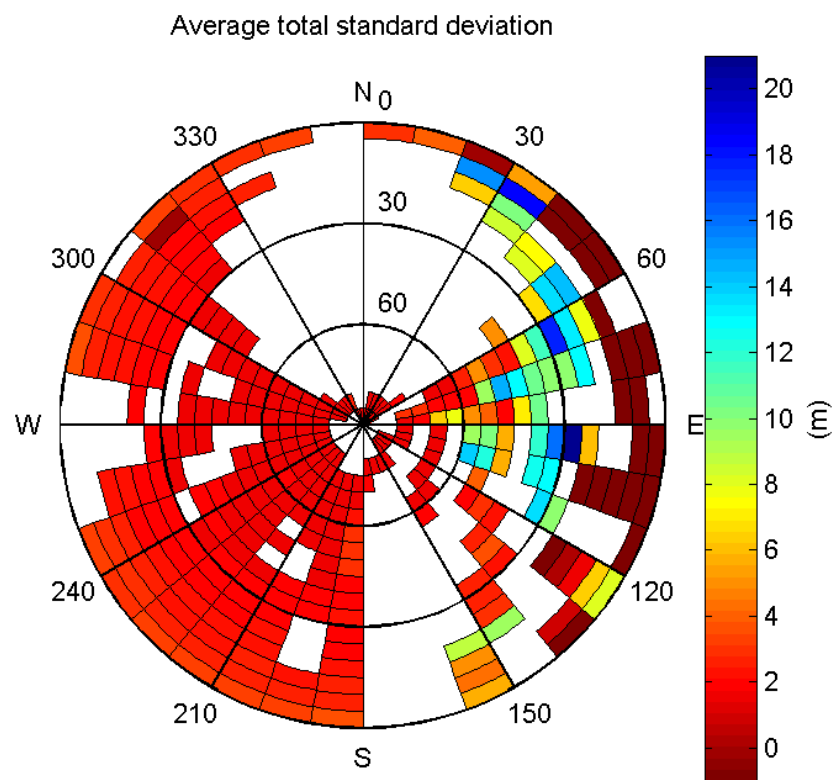
CDF normalised range errors:



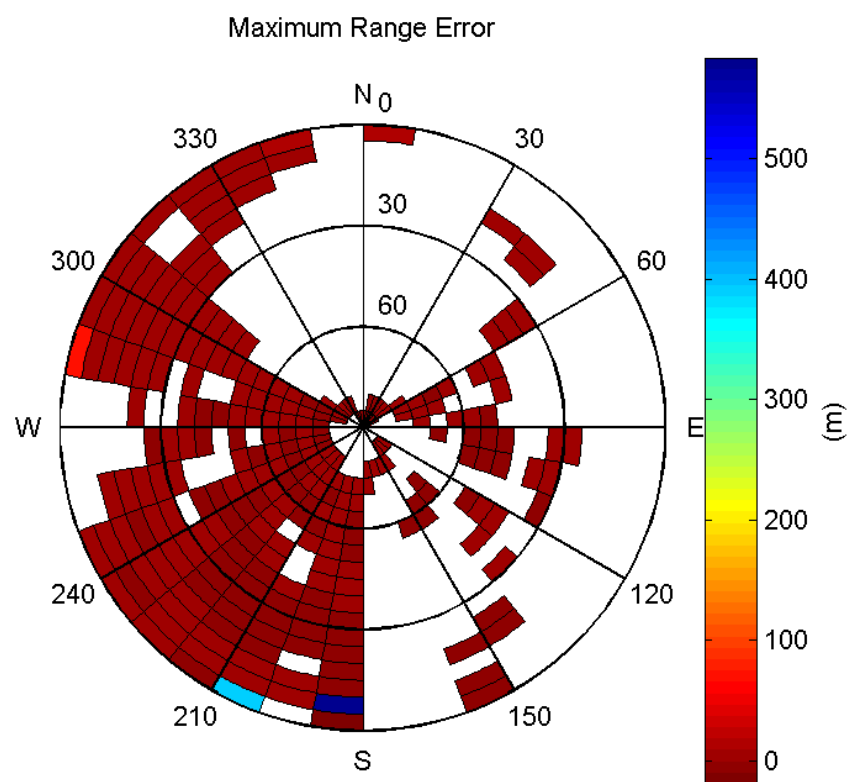
Histogram of Norm Range errors:



Sigma Sky Plot:

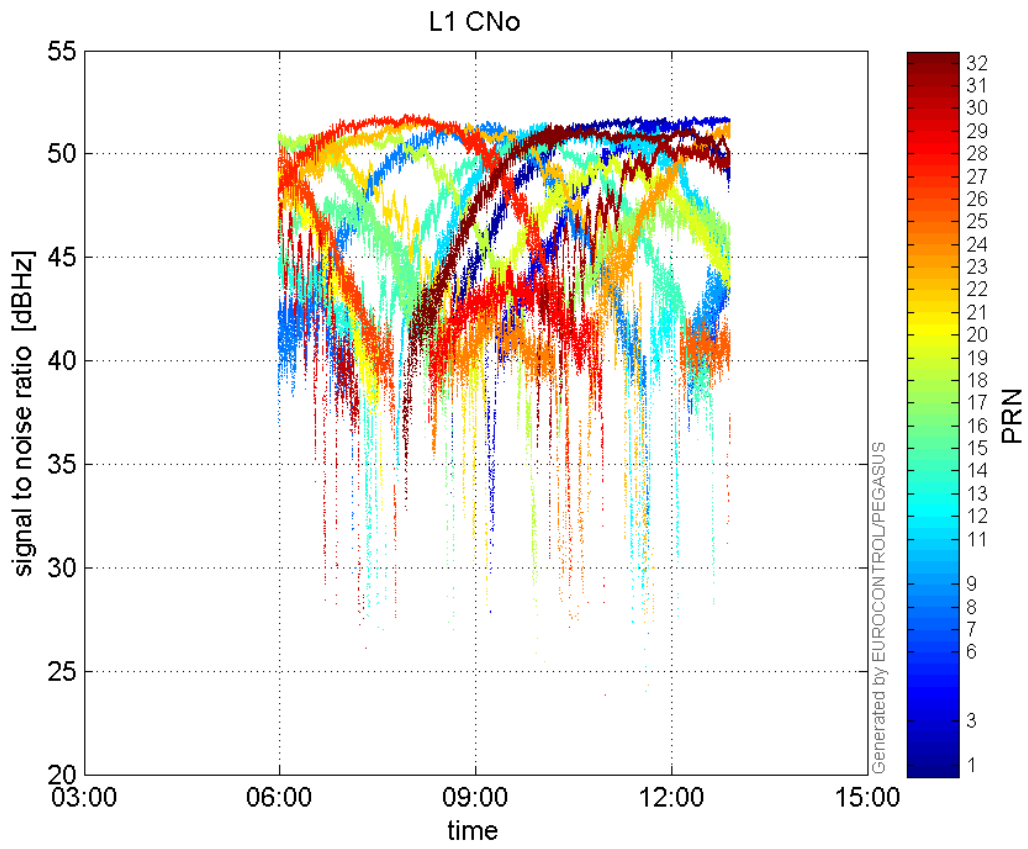


Norm Error Sky Plot:

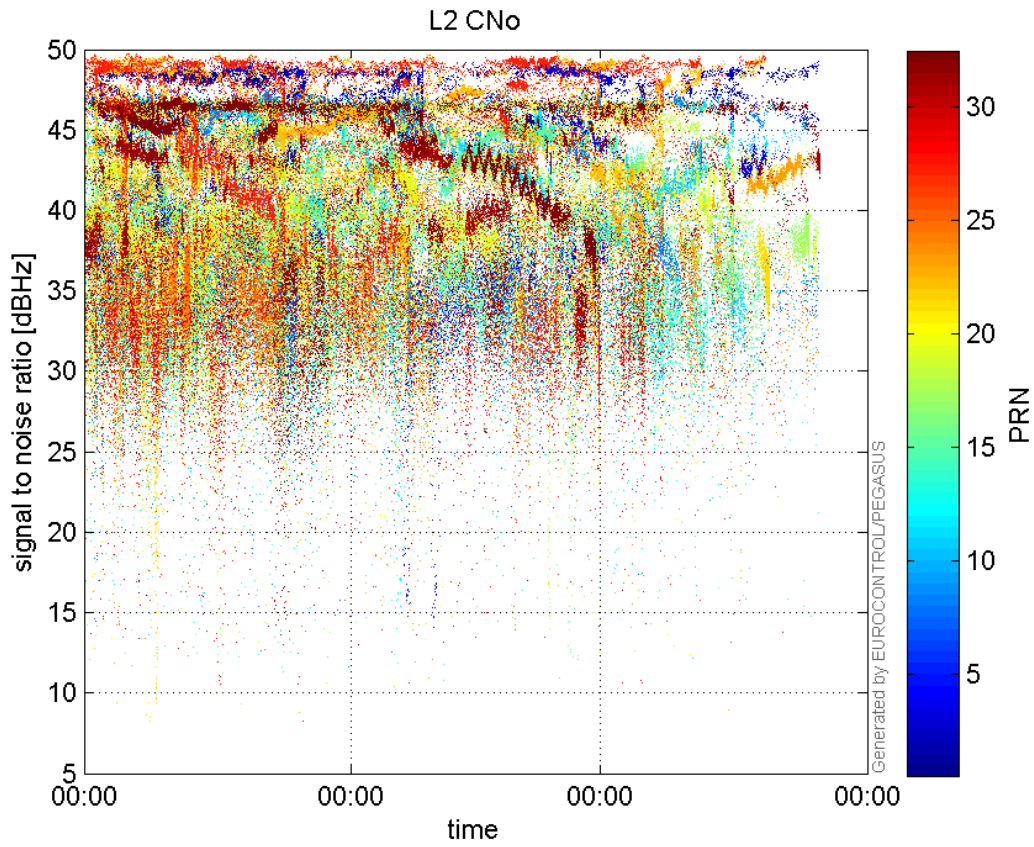


signal quality

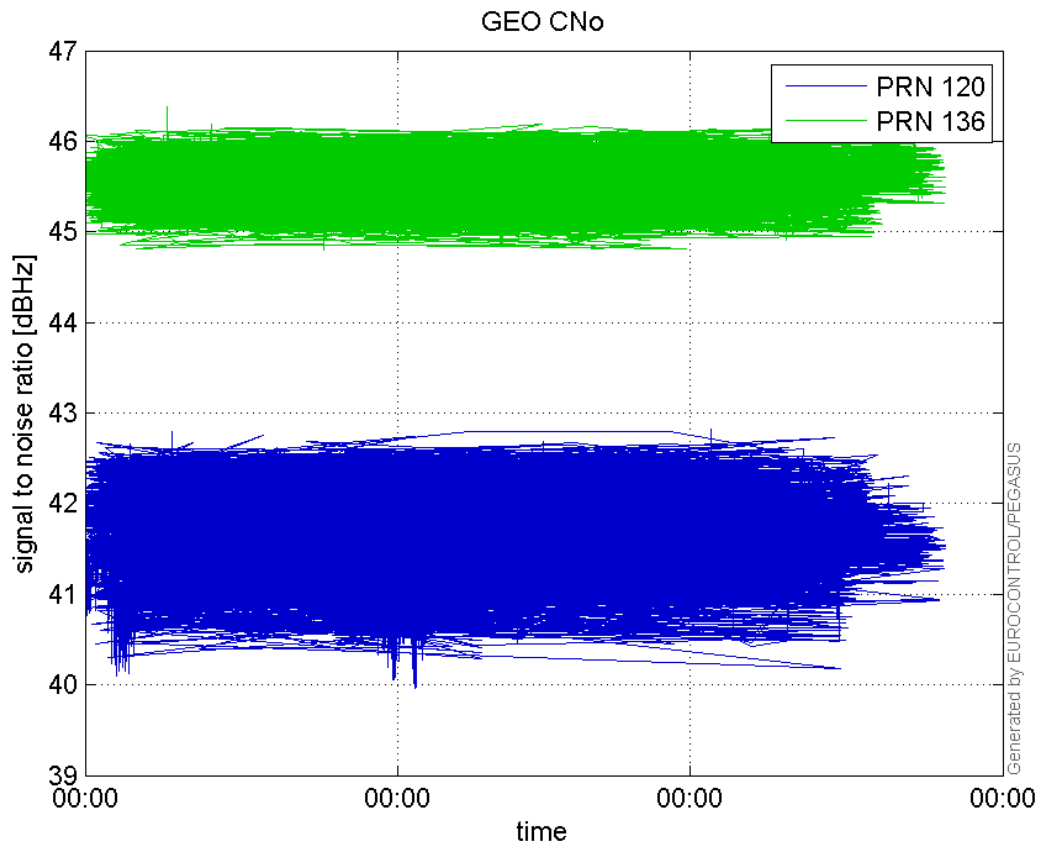
L1 CNo:



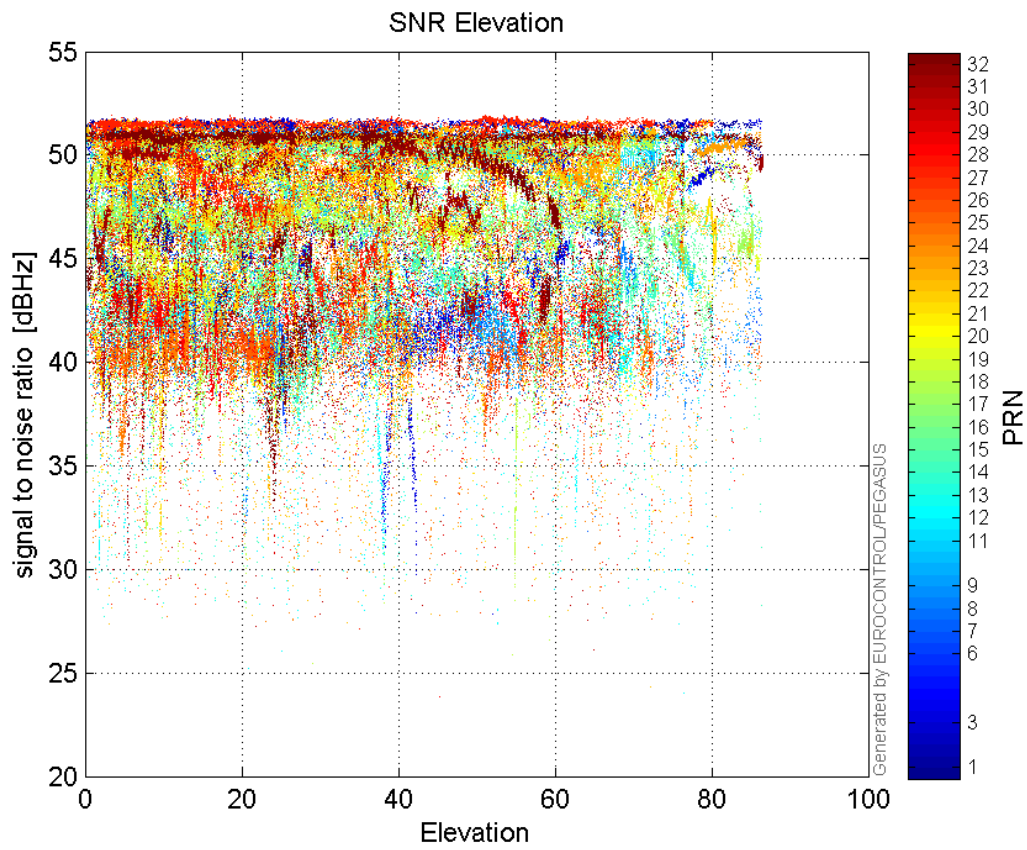
L2 CNo:



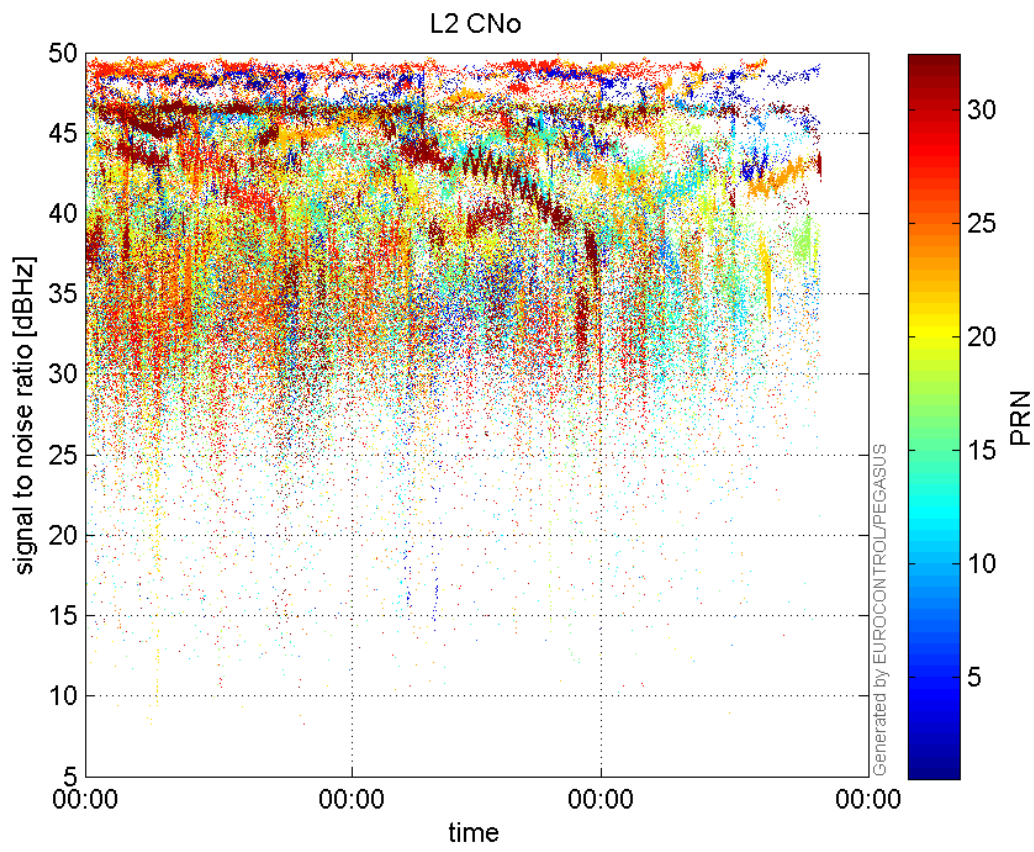
GEO CNo:



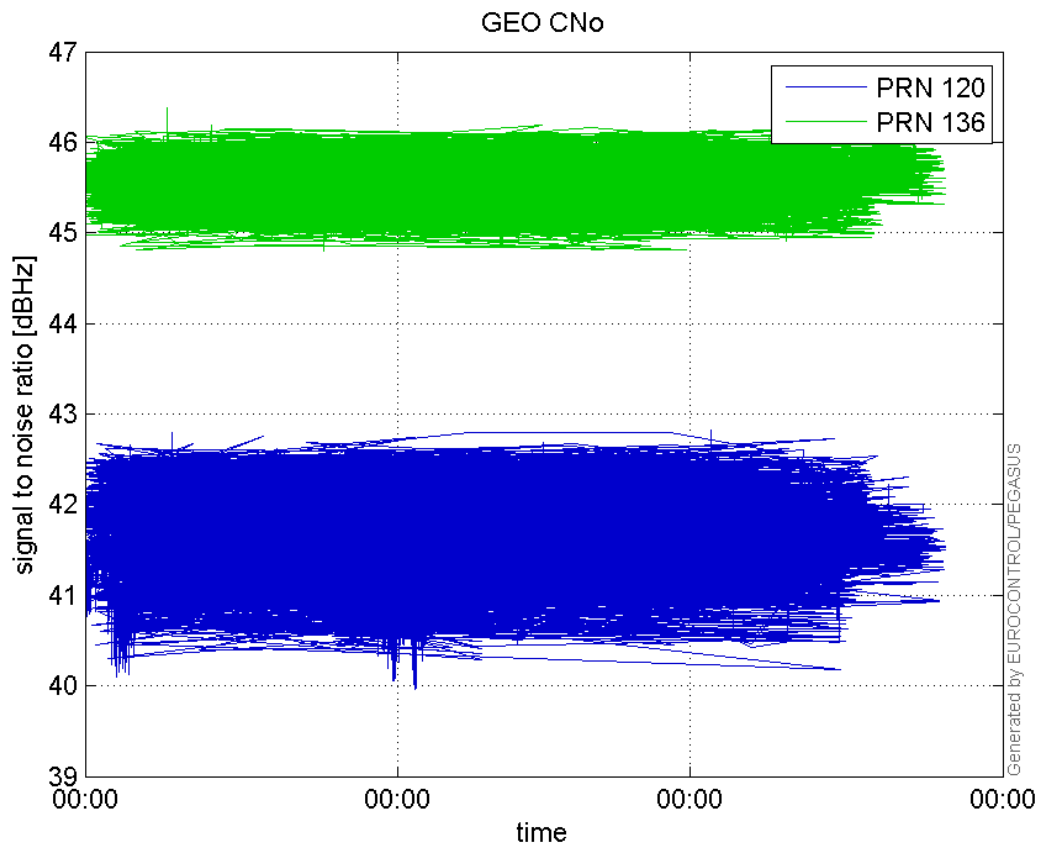
SNR Elevation:



L2 CNo:

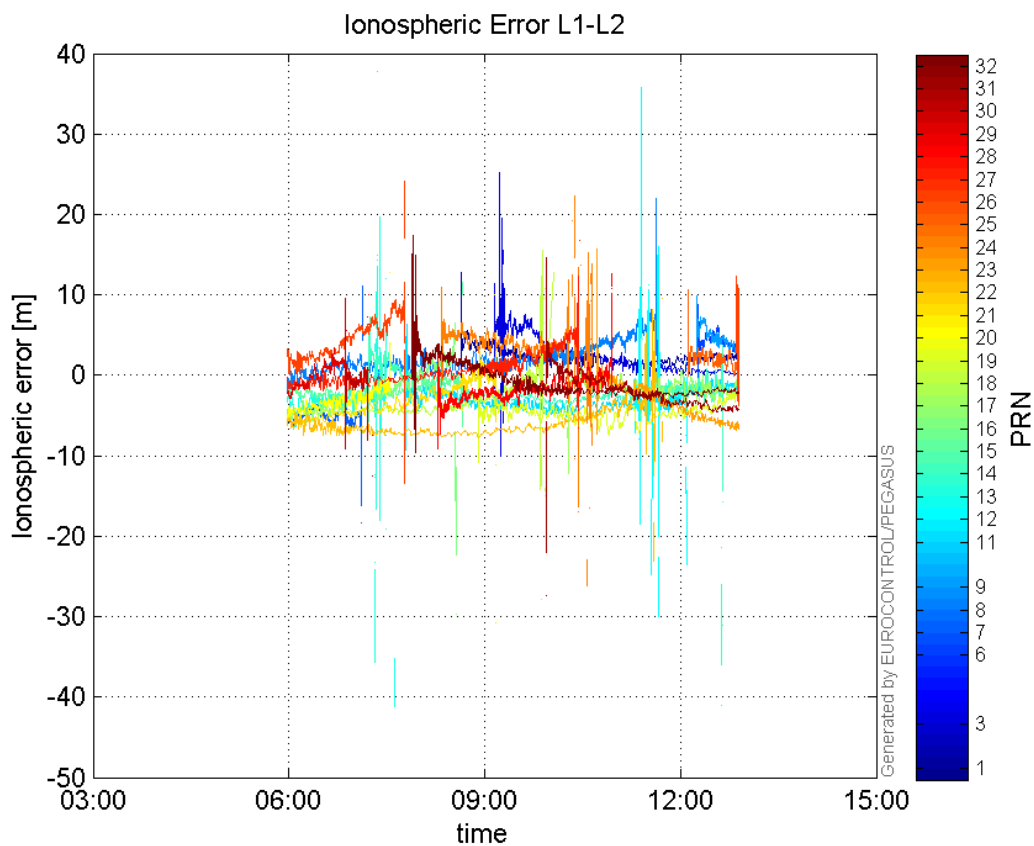


GEO CNo:



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:/PegasusDateGob/job/2015_12_02EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_02EGNOS/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	30.4298
init_alt	results	238.972
mi_numbers	results	0