

Global View

version 4.7
 site Laboratory satellite systems
 abbreviation NAU
 country Kiev
 comment
 xsltemplate general
 reportname report
 date 20/10/2015

GNSS_Solution

quality

valid samples 0
total samples 0
PA samples 0

SBAS Messages

start: 05:40:39.129 08.09.2015 (week: 1861 sec: 193239.129)
end: 11:58:34.129 08.09.2015 (week: 1861 sec: 215914.129)
duration: 06:17:55 ..

quality

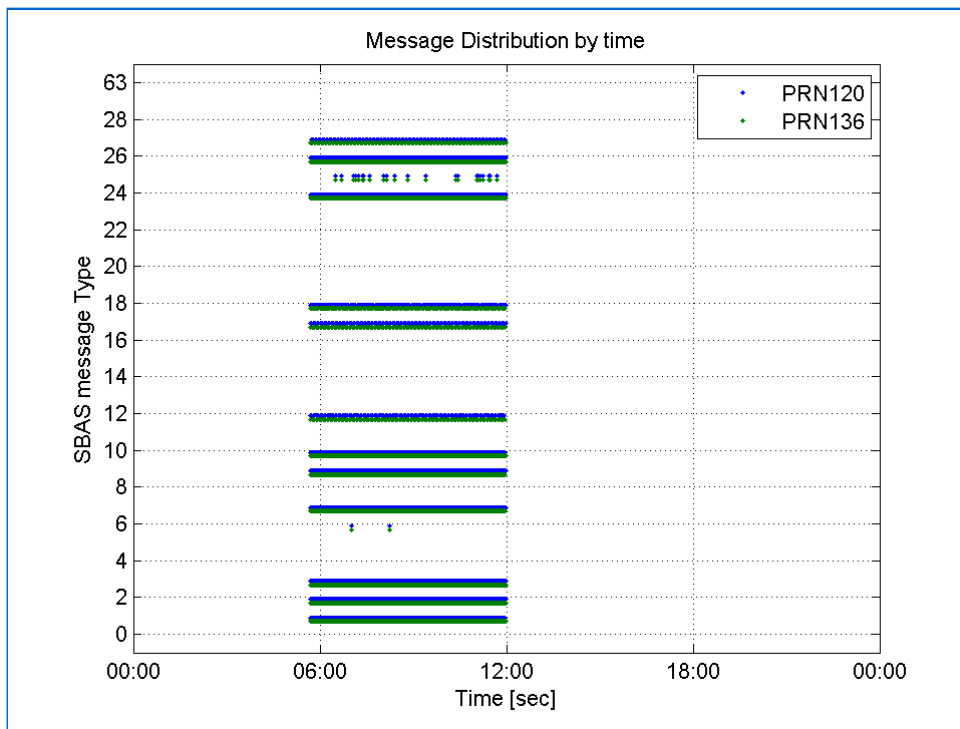
valid samples 45352
total samples 45352
number of SBAS PRNs 2

SBAS SIS Overview

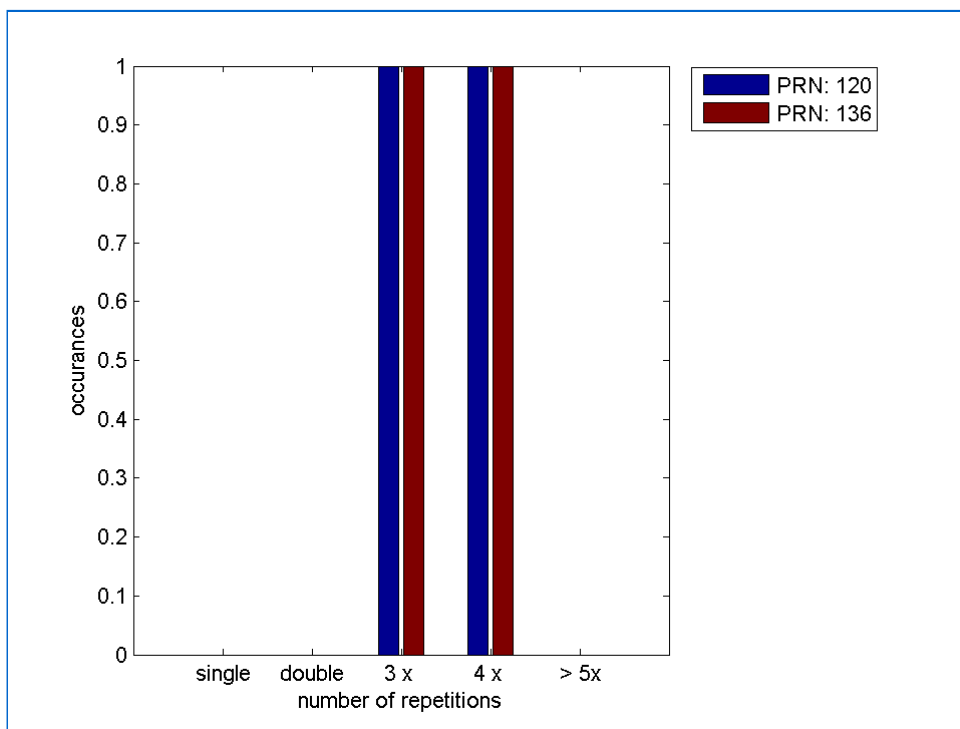
Message Type 6 repetitions :

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

Message Distribution by time:



Message Type 6 repetitions:



SBAS SIS Analysis

PRN 120

Broadcast SBAS Messages :

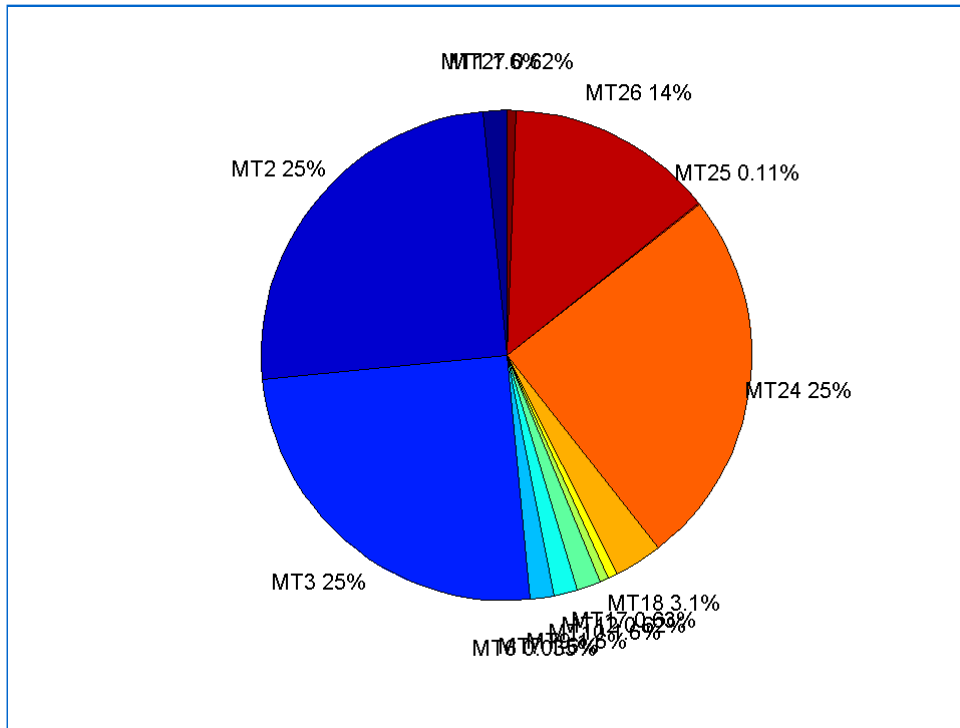
	number of messages	%
MT 0	0	0
MT 1	353	1.55671
MT 2	5664	24.978
MT 3	5665	24.9824
MT 4	0	0

MT 5	0	0
MT 6	8	0.0352796
MT 7	353	1.55671
MT 9	353	1.55671
MT 10	353	1.55671
MT 12	141	0.621803
MT 17	142	0.626213
MT 18	710	3.13106
MT 24	5664	24.978
MT 25	24	0.105839
MT 26	3105	13.6929
MT 27	141	0.621803
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22676	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	68	64.2443	0	0	0
MT 2	4	7	4.00318	2	0	0
MT 3	4	7	4.00318	2	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	4453	637	1	1	1
MT 7	64	68	64.2443	0	0	0
MT 9	64	68	64.2443	0	0	0
MT 10	64	68	64.2443	0	0	0
MT 12	156	167	160.5	140	0	0
MT 17	156	167	160.468	0	0	0
MT 18	4	131	31.969	0	0	0
MT 24	4	7	4.00318	0	0	0
MT 25	3	3512	813.087	0	0	0
MT 26	4	32	7.29317	0	0	0
MT 27	156	171	160.5	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

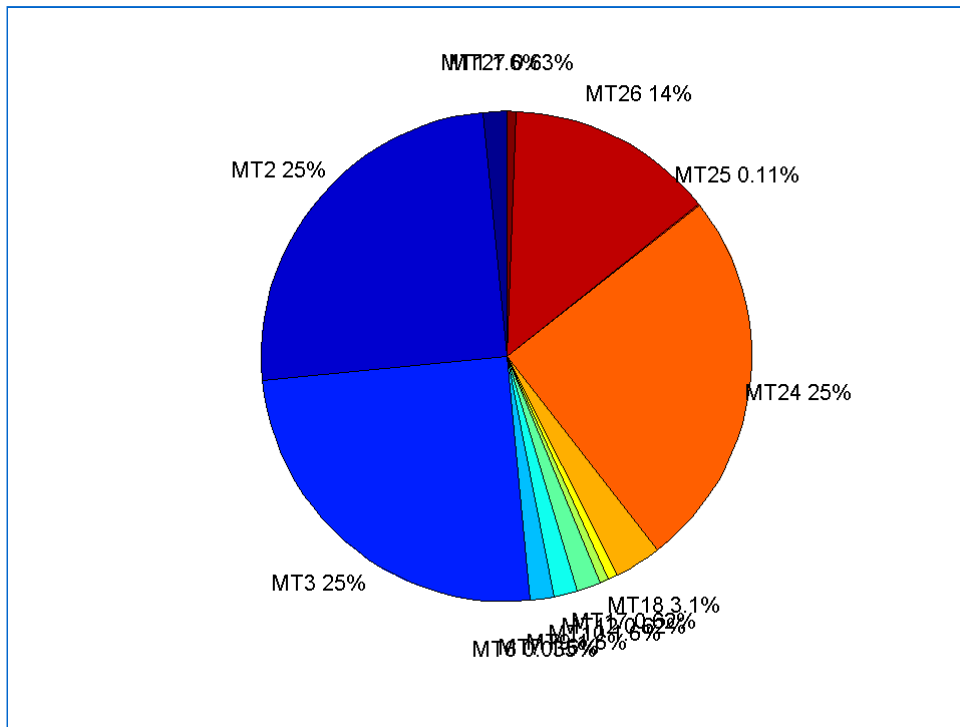
	number of messages	%
MT 0	0	0
MT 1	353	1.55671
MT 2	5664	24.978
MT 3	5665	24.9824
MT 4	0	0
MT 5	0	0
MT 6	8	0.0352796
MT 7	353	1.55671
MT 9	353	1.55671
MT 10	353	1.55671
MT 12	141	0.621803
MT 17	141	0.621803
MT 18	705	3.10901
MT 24	5664	24.978
MT 25	24	0.105839
MT 26	3110	13.7149
MT 27	142	0.626213
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22676	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	68	64.2443	0	0	0
MT 2	4	7	4.00318	2	0	0
MT 3	4	7	4.00318	2	0	0
MT 4	--	--	--	--	--	--

MT 5	--	--	--	--	--	--
MT 6	1	4453	637	1	1	1
MT 7	64	71	64.2557	0	0	0
MT 9	64	68	64.2443	0	0	0
MT 10	64	68	64.2557	0	0	0
MT 12	156	171	160.5	140	0	0
MT 17	156	168	160.471	0	0	0
MT 18	4	147	31.946	0	0	0
MT 24	4	7	4.00318	0	0	0
MT 25	3	3512	813.087	0	0	0
MT 26	4	51	7.29173	0	0	0
MT 27	156	167	160.496	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:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/01_User/01_User
Outputfile	System	D:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/02_Convertor/02_Convertor

Configuration

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

GBAS Messages

quality

valid samples 0
total samples 0

Position Domain

start: 05:40:39 08.09.2015 (week: 1861 sec: 193239)
end: 11:58:34 08.09.2015 (week: 1861 sec: 215914)
duration: 06:17:56 ..

quality

valid samples 22315
total samples 22676

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	202920	1.69762	10.3337	0.16428	0.101202	13.2072	0.0076626
max normVer	199396	0.895865	15.6371	0.057291	-1.55829	17.4901	0.0890954
max HPE	194699	2.39764	55.8663	0.0429175	-2.89013	59.4137	0.0486442
max VPE	194699	2.39764	55.8663	0.0429175	-2.89013	59.4137	0.0486442
min HPL	215478	0.855582	7.66377	0.11164	0.529296	14.182	0.0373217
min VPL	202860	1.37999	10.3061	0.133901	0.153789	12.8578	0.0119608

APV-I discontinuity events :

#	Epoch	duration	stable period
1	194504	1285	904
2	200488	285	4699
3	201219	167	1
4	201736	101	323
5	201839	163	2

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	194315	1474	715
2	200488	285	4699
3	200933	480	160
4	201462	62	49
5	201736	101	212
6	201839	163	2
7	202048	1	46

8	202052	1	3
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LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	194315	1474	715
2	200488	285	4699
3	200933	480	160
4	201462	62	49
5	201736	101	212
6	201839	163	2
7	202048	1	46
8	202052	1	3

First Glance analysis

Duration	22676
Number of Samples	22676
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.592
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
22315	20284	19748	0	19748

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.55901	1.54058	1.54316	NaN	1.54316
HPEscale 95%	NaN	5.2276	5.2382	NaN	5.2382
VPE 95%	0.914699	0.85797	0.862045	NaN	0.862045
VPEscale 95%	NaN	2.49462	1.75492	NaN	1.75492

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.908985	0.884965	0	0.884965
measurements	0.98408	0.894514	0.870877	0	0.870877
Operational	0.98408	0.894514	0.870877	0	0.870877

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	25	8	--	8
Long	--	5	6	--	6
Independent	--	3	5	--	5
P(disc.)	NaN	0.0022185	0.00379785	NaN	0.00379785
P(slide)	NaN	0.00596529	0.00481061	NaN	0.00481061

Integrity events :

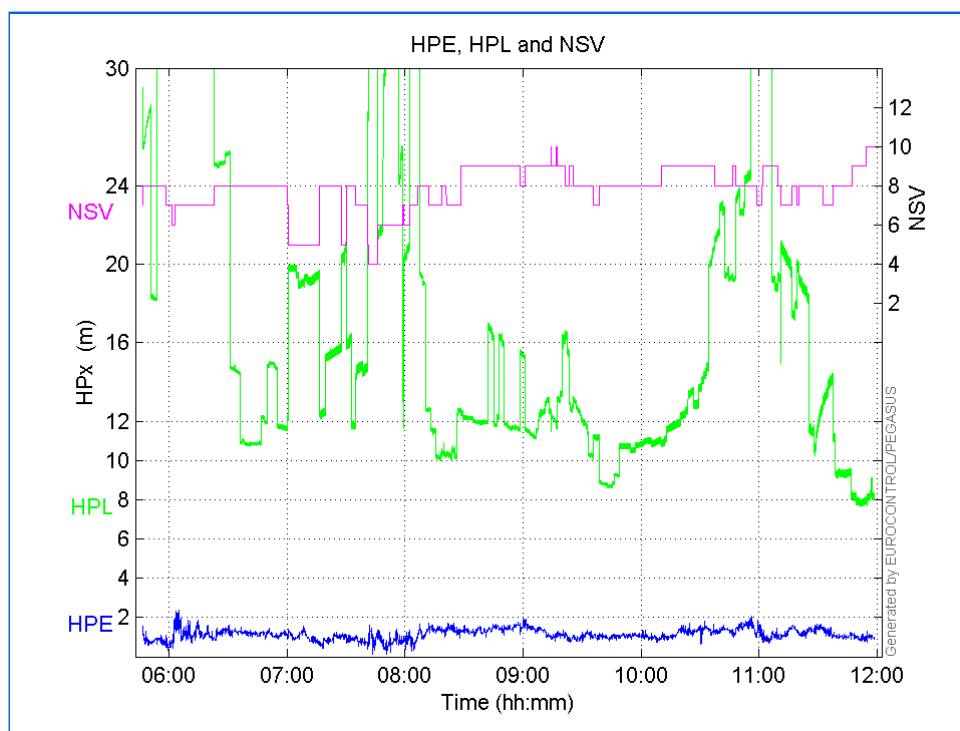
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

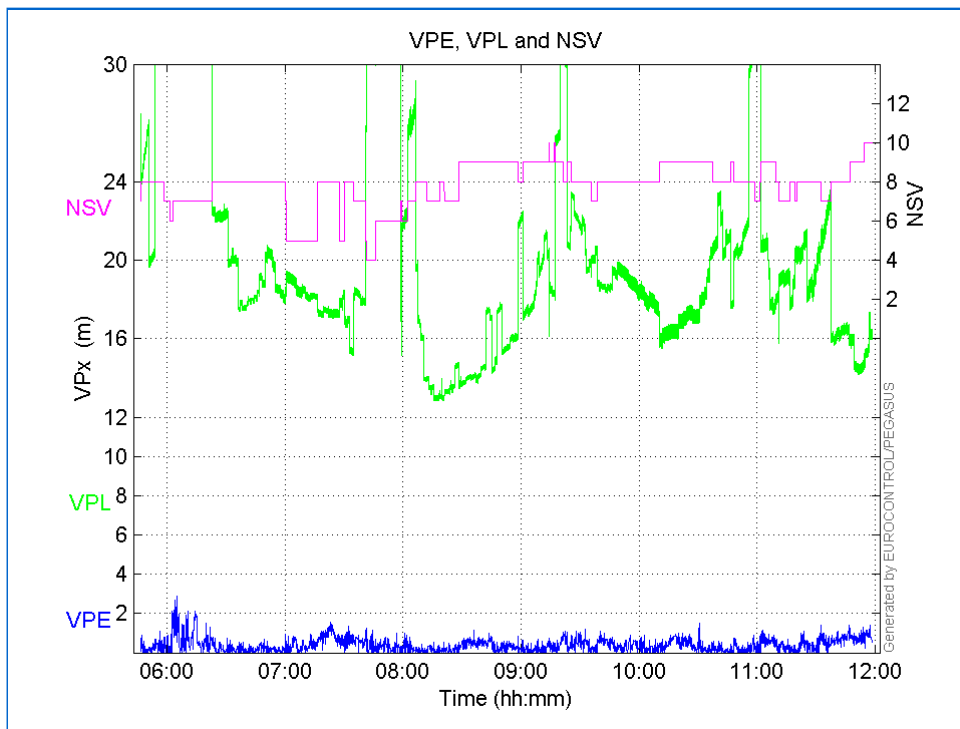
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	22315	20284	19748	0	19748
SIS Availability	1	0.908985	0.884965	0	0.884965
Local Availability	0.98408	0.894514	0.870877	0	0.870877
Operational Availability	0.98408	0.894514	0.870877	0	0.870877
HPE 95%	1.55901	1.54058	1.54316	NaN	1.54316
HPEscale 95%	NaN	5.2276	5.2382	NaN	5.2382
VPE 95%	0.914699	0.85797	0.862045	NaN	0.862045
VPEscale 95%	NaN	2.49462	1.75492	NaN	1.75492
All Discontinuity Events	--	25	8	--	8
Long Discontinuity Events	--	5	6	--	6
Independent Discontinuity Events	--	3	5	--	5
P(discontinuity)	NaN	0.0022185	0.00379785	NaN	0.00379785
P(sliding window)	NaN	0.00596529	0.00481061	NaN	0.00481061
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:

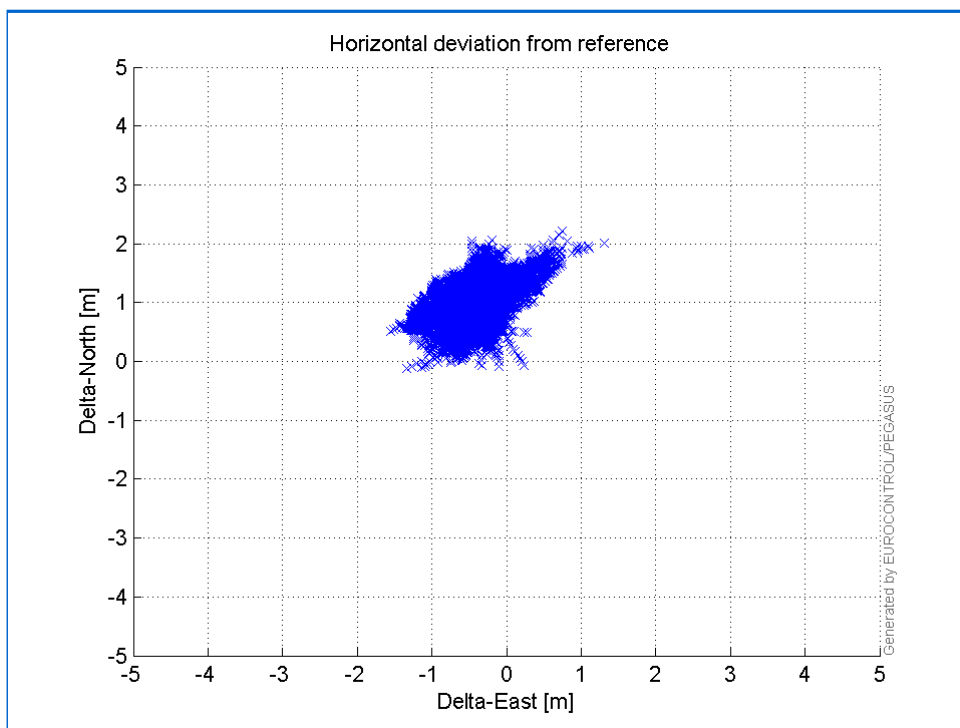


VPE, VPL and NSV:



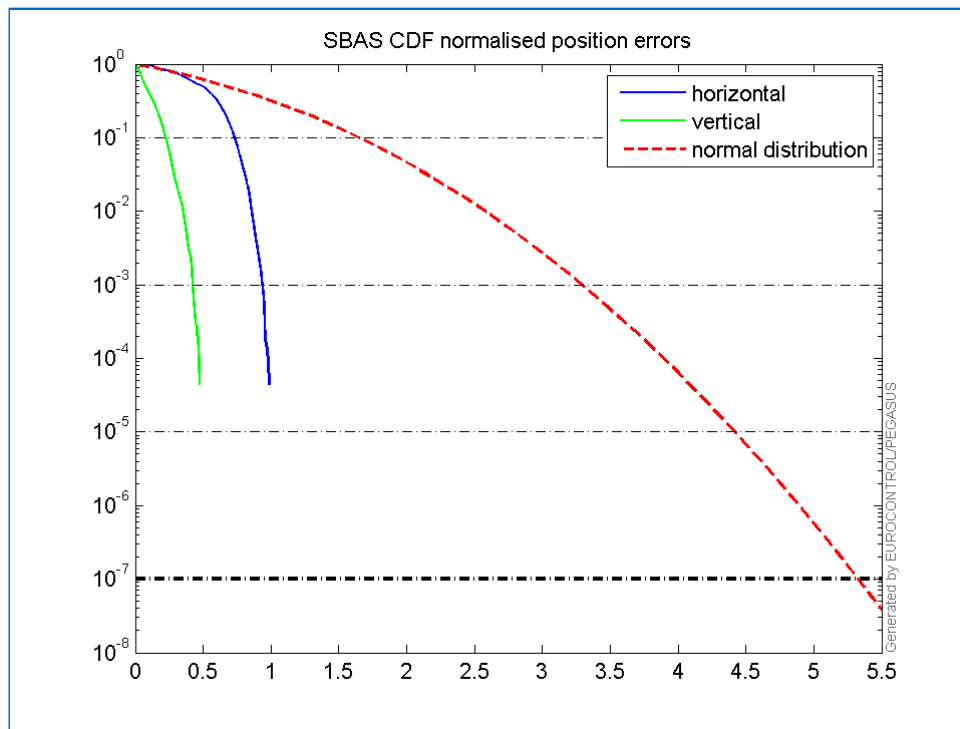
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

```

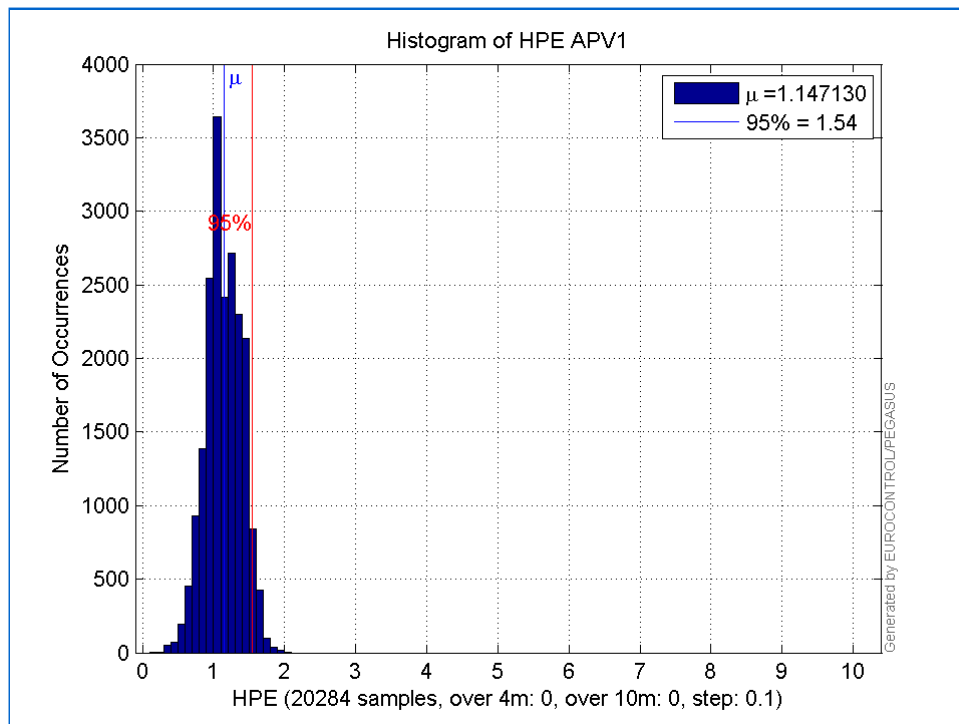
number 20284
sum 23268.389
sum2 27966.083
prctile95 1.5405797
prctile99 1.6795535
number 20284
sum 7458.1991
sum2 4226.2116
prctile95 0.8579701
prctile99 1.1117832
number 20284
sum 322282.89
sum2 6076002.4
prctile95 31.8059
prctile99 37.86987
number 20284
sum 398415.37
sum2 8439381.8
prctile95 31.81723
prctile99 46.219708
number 20284
sum 1694.4511
sum2 162.02512
prctile95 0.13069001
prctile99 0.14326851
number 20284
sum 405.88093
sum2 13.255442
prctile95 0.049892385
prctile99 0.066571731
number 19748
sum 22933.439
sum2 27743.037
prctile95 1.5431585
prctile99 1.6814613
number 19748
sum 7281.661

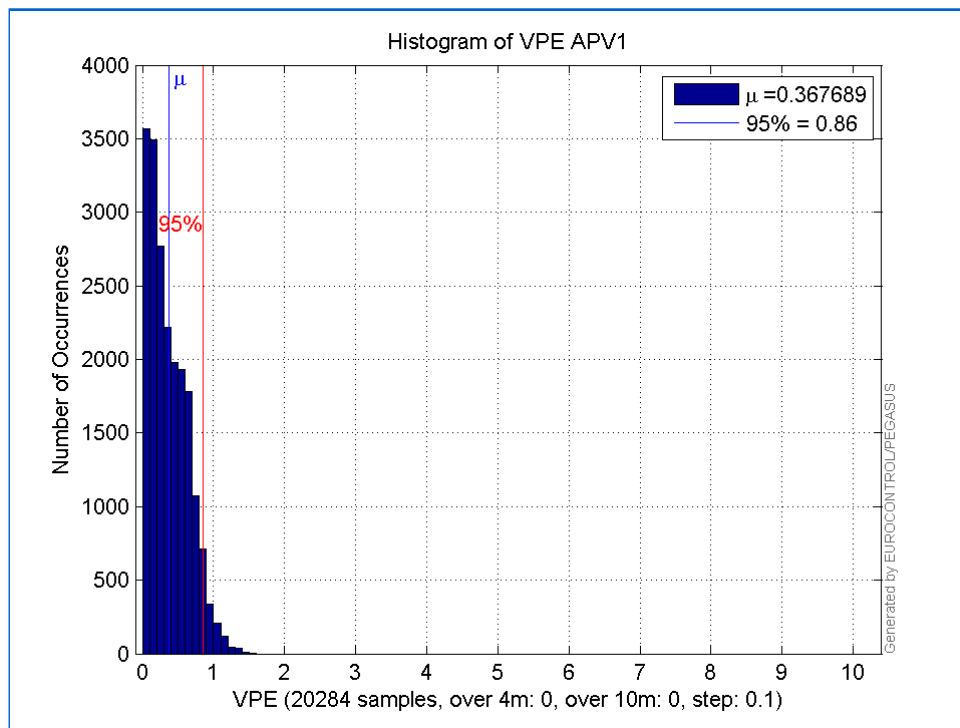
```

sum2 4150.9802
prctile95 0.86204511
prctile99 1.1141599
number 19748
sum 305209.35
sum2 5527694.8
prctile95 30.1656
prctile99 37.928414
number 19748
sum 375808.46
sum2 7467746.8
prctile95 29.97288
prctile99 32.835344
number 19748
sum 1683.8709
sum2 161.80127
prctile95 0.13095502
prctile99 0.14343653
number 19748
sum 401.68833
sum2 13.21255
prctile95 0.050140532
prctile99 0.066708254

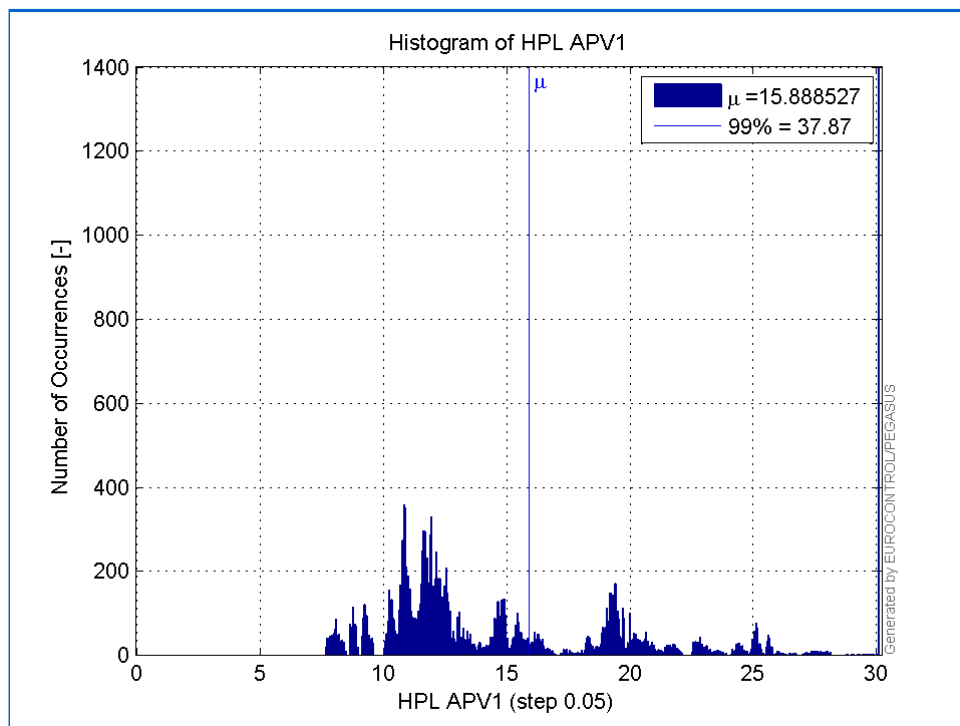
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.14713	0.250642	1.13136	1.54058	1.67955	1.17419
HPL	15.8885	6.8632	12.8348	31.8059	37.8699	17.3074
VPE	0.367689	0.270482	0.313163	0.85797	1.11178	0.456456
VPL	19.6419	5.50092	18.4223	31.8172	46.2197	20.3976

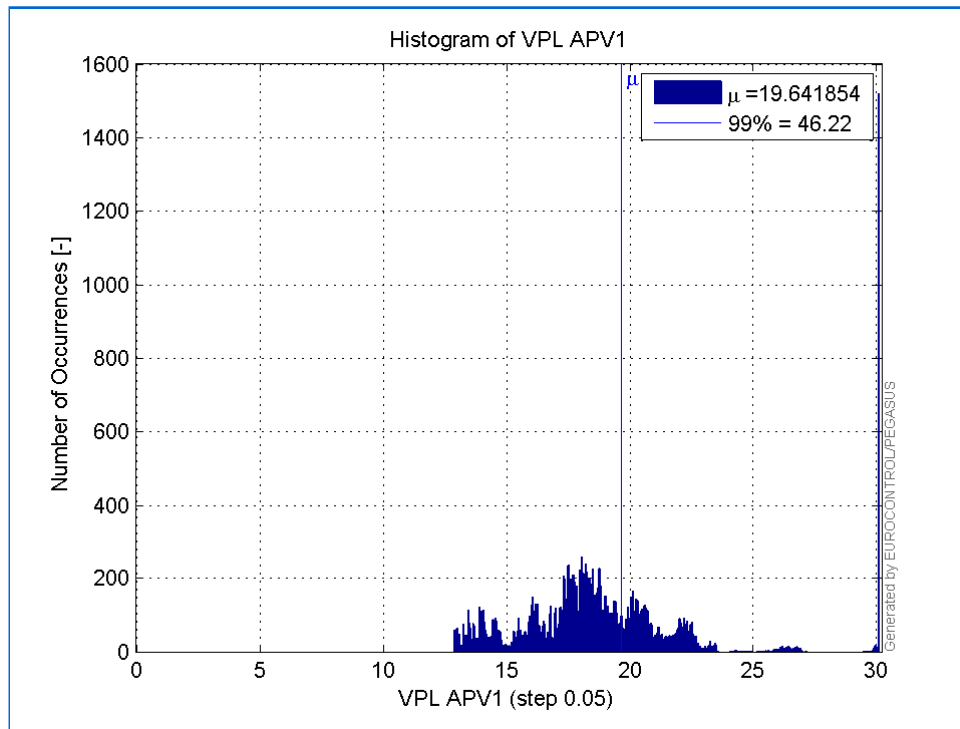
Histogram of HPE APV1:

Histogram of VPE APV1:



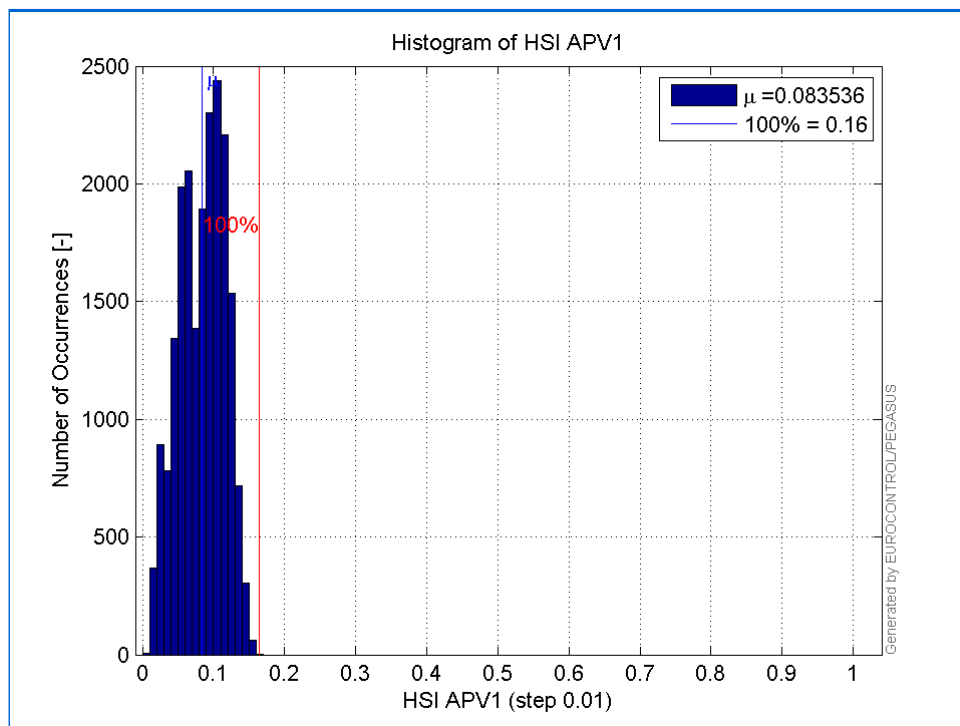
Histogram of HPL APV1:



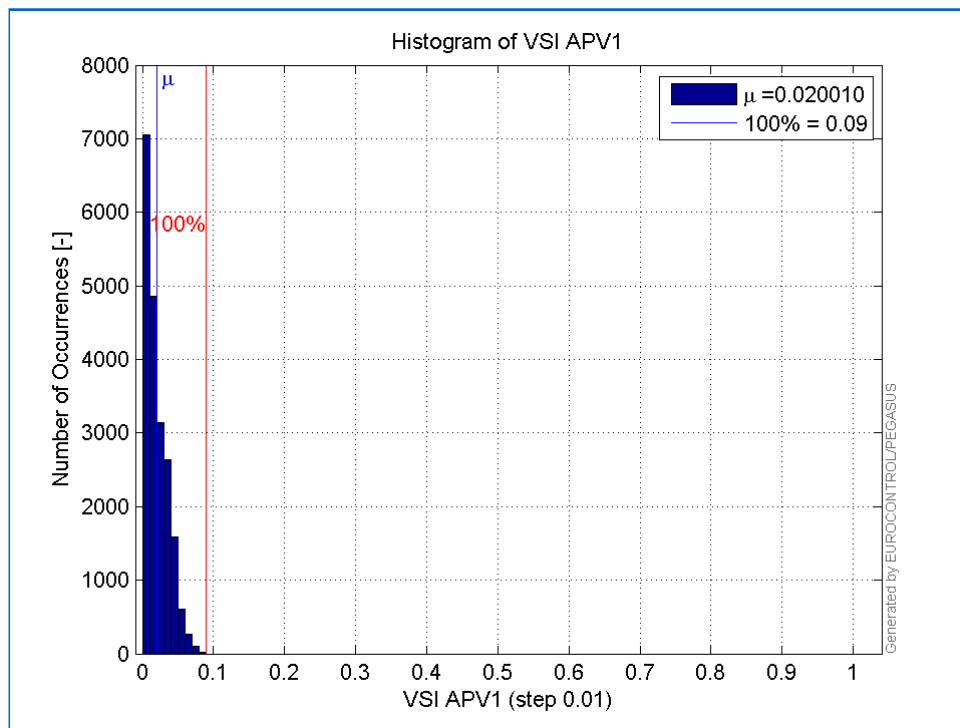
Histogram of VPL APV1:



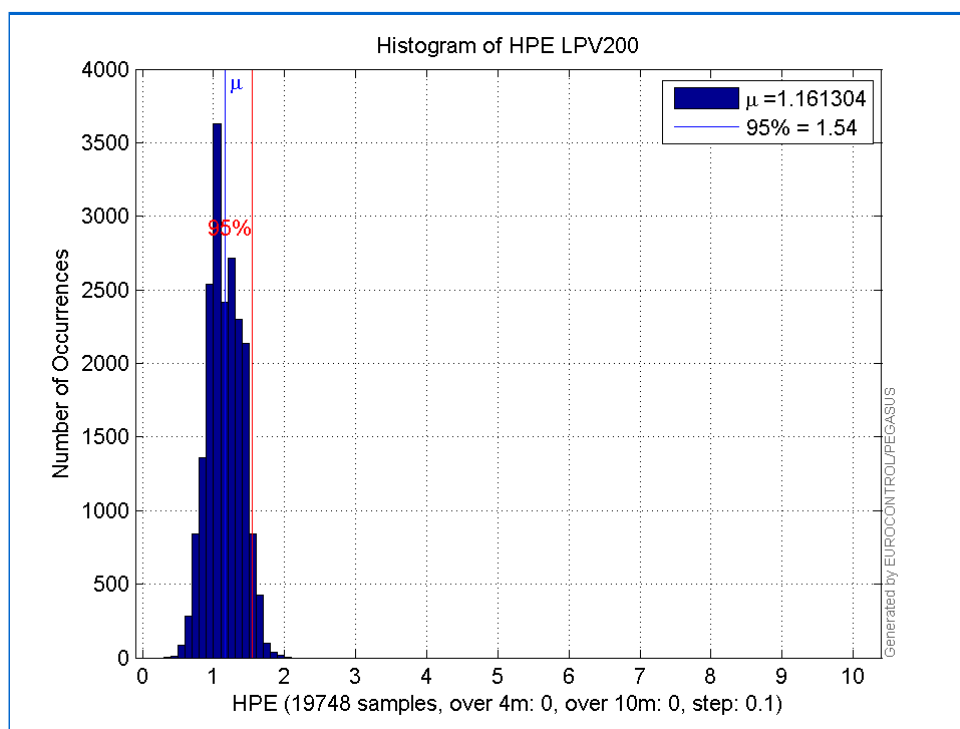
Histogram of HSI APV1:



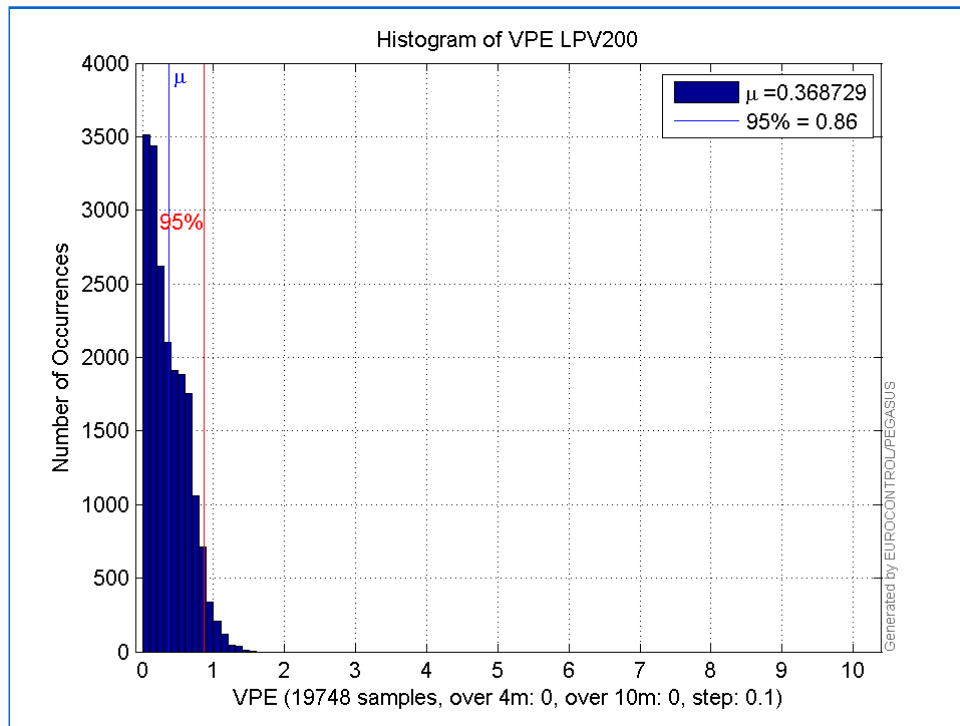
Histogram of VSI APV1:



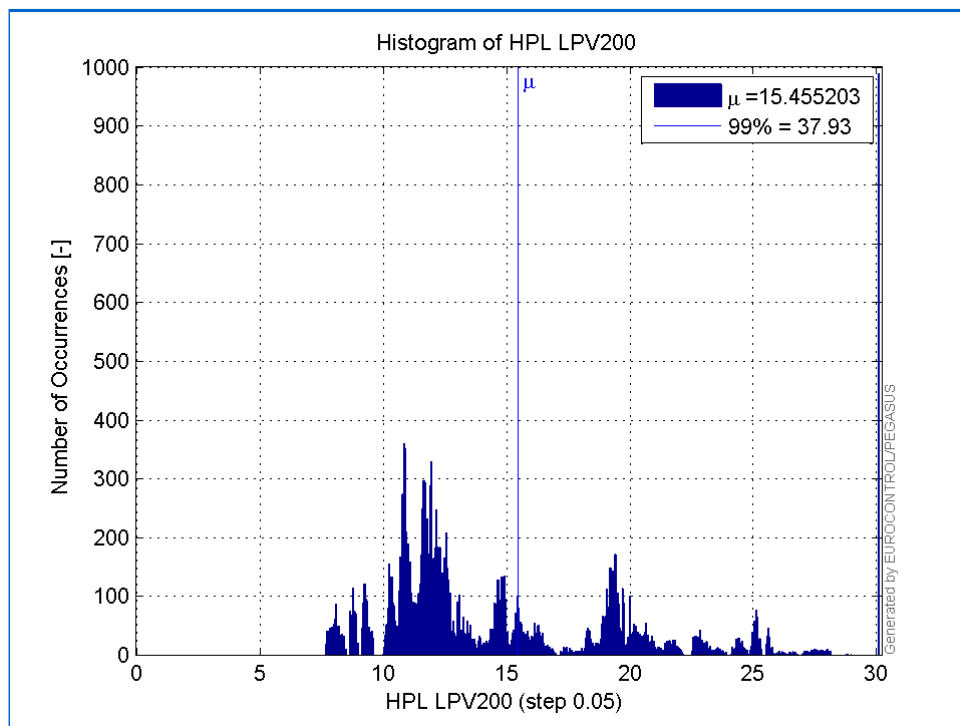
Histogram of HPE LPV200:



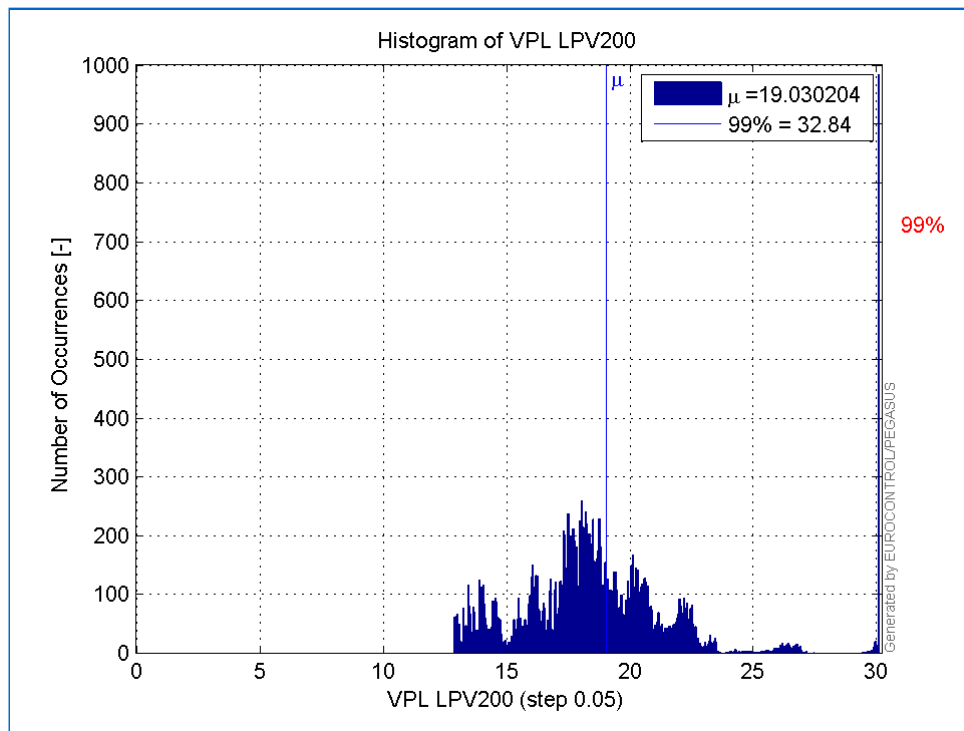
Histogram of VPE LPV200:



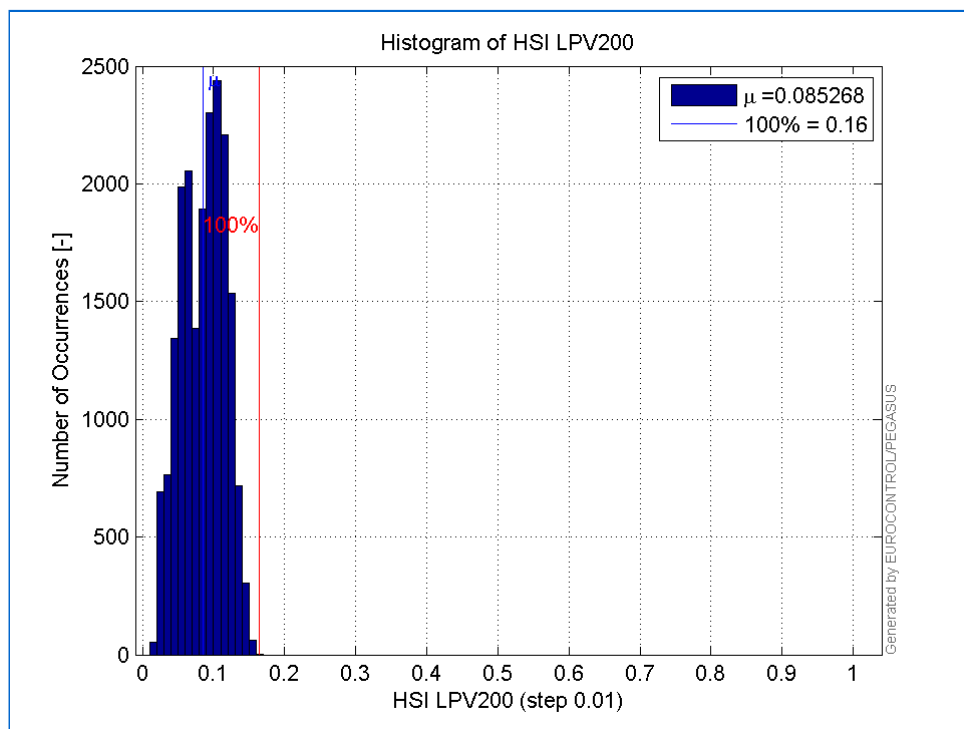
Histogram of HPL LPV200:



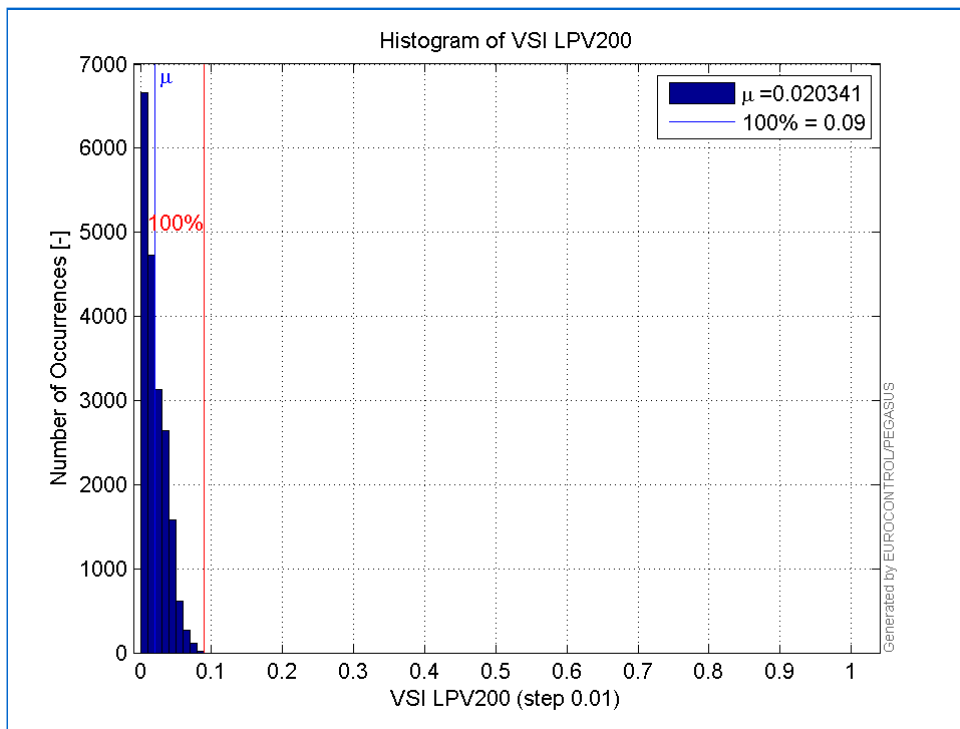
Histogram of VPL LPV200:



Histogram of HSI LPV200:

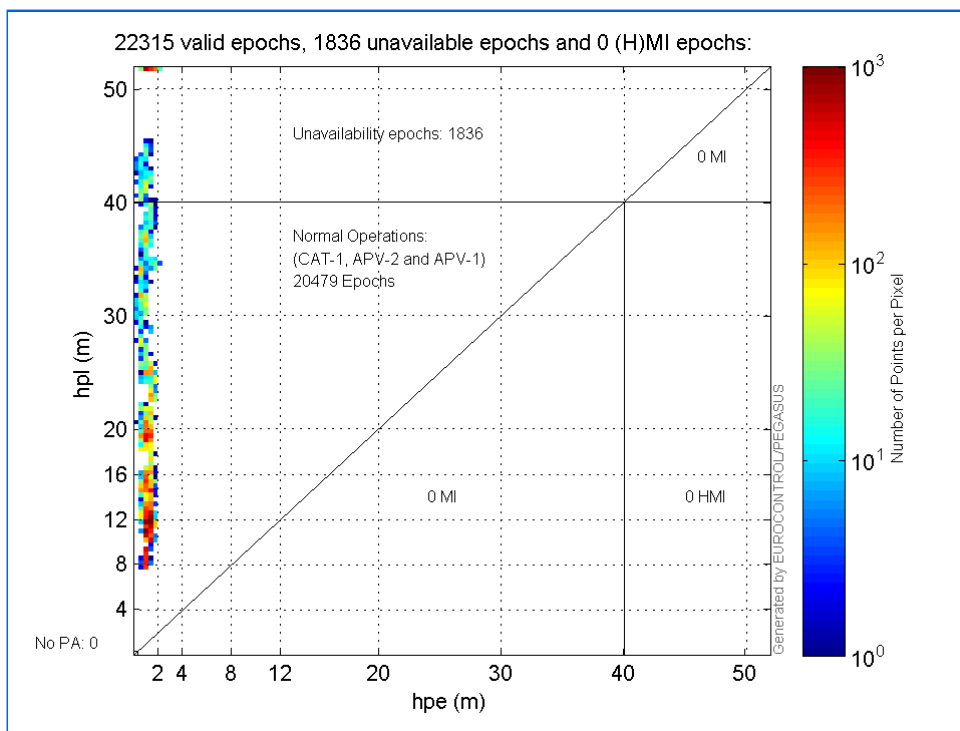


Histogram of VSI LPV200:

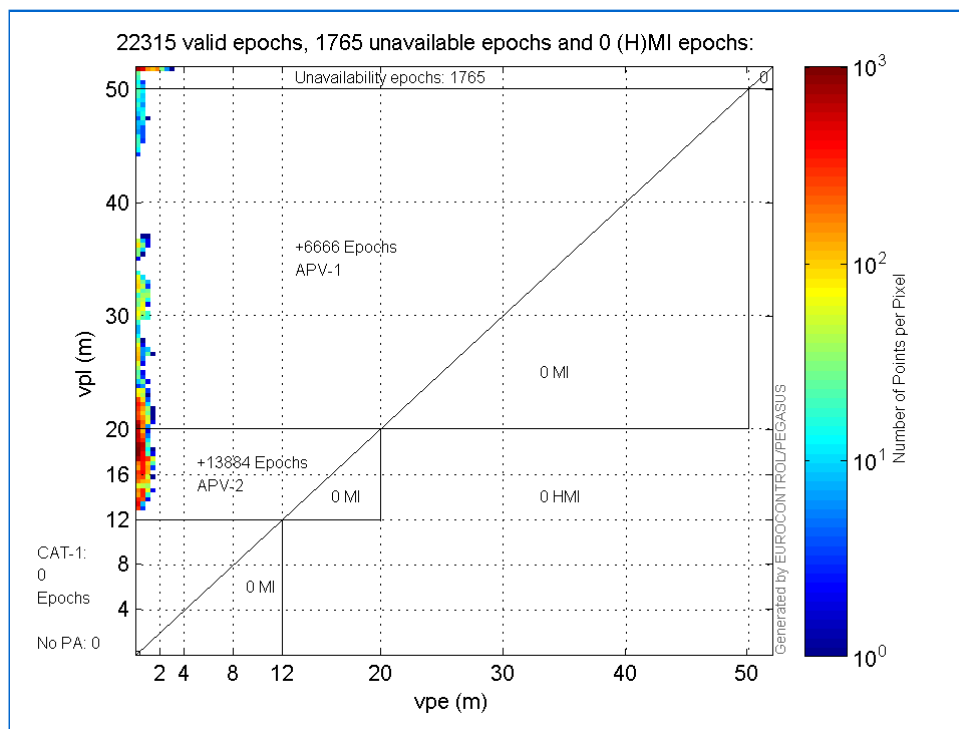


Stanford Plots

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:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/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	50.4391
init_lon	results	30.4297
init_alt	results	265.7537
mi_numbers	results	0

Range Domain

start: 05:40:39 08.09.2015 (week: 1861 sec: 193239)

end: 11:58:34 08.09.2015 (week: 1861 sec: 215914)
duration: 06:17:56 ..

quality

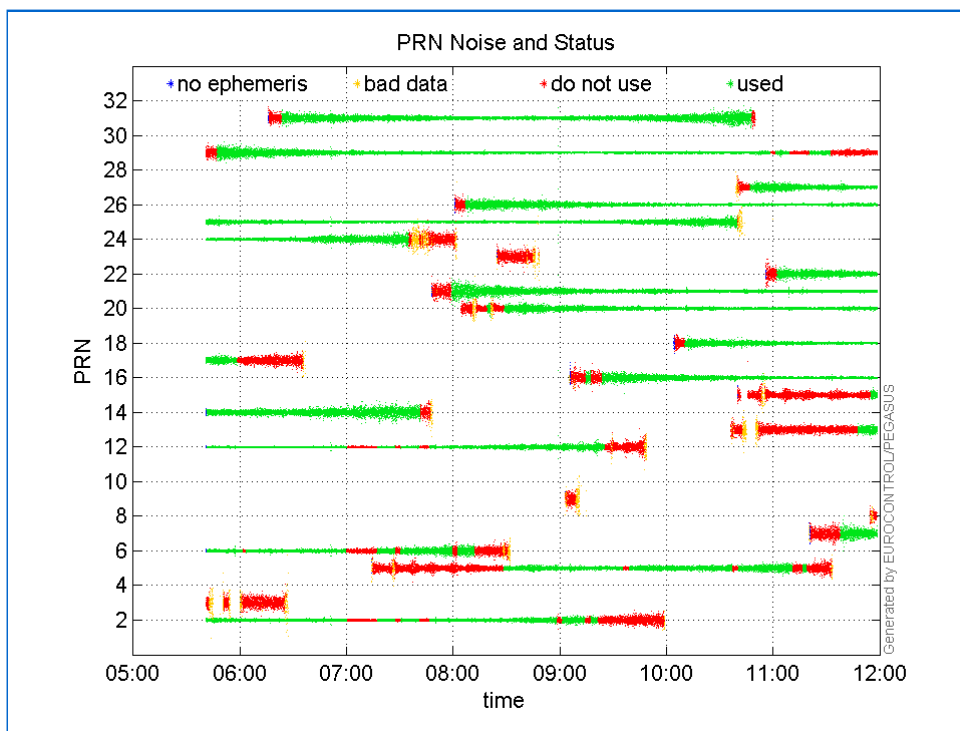
valid samples 22676
total samples 22676

PRN overview

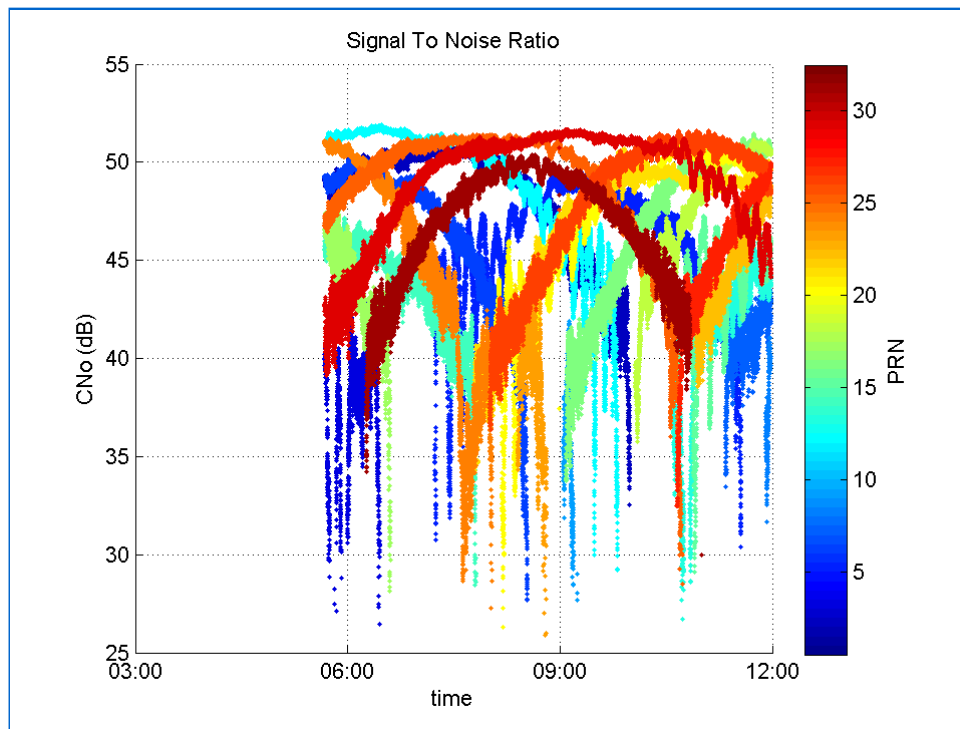
Number of Visible GPS Satellites 24
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



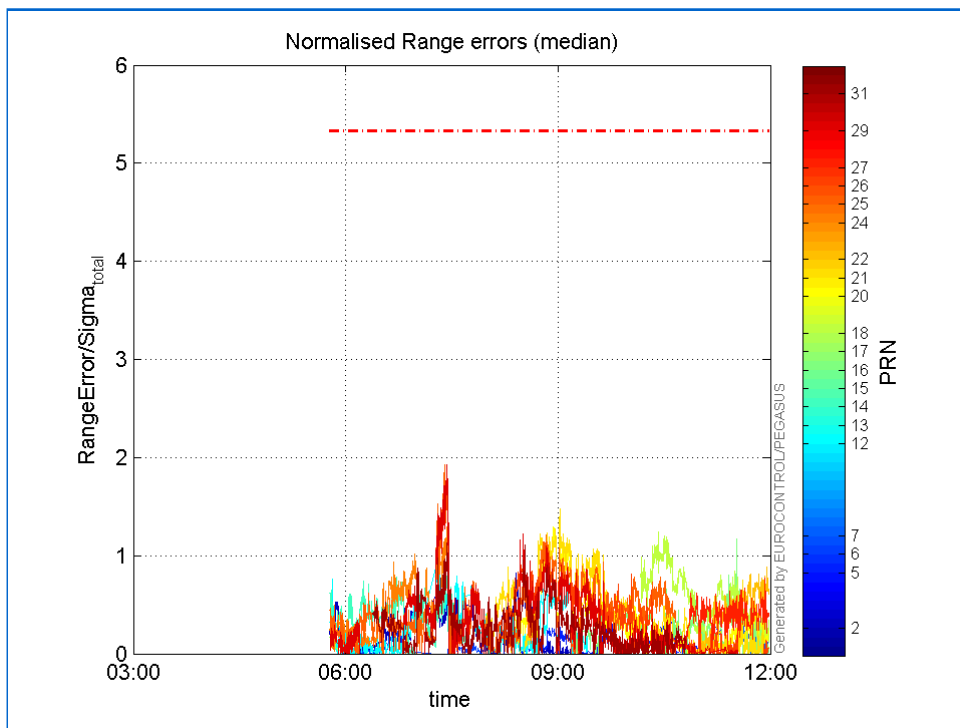
range errors

Number of Overbounding Norm Errors 0

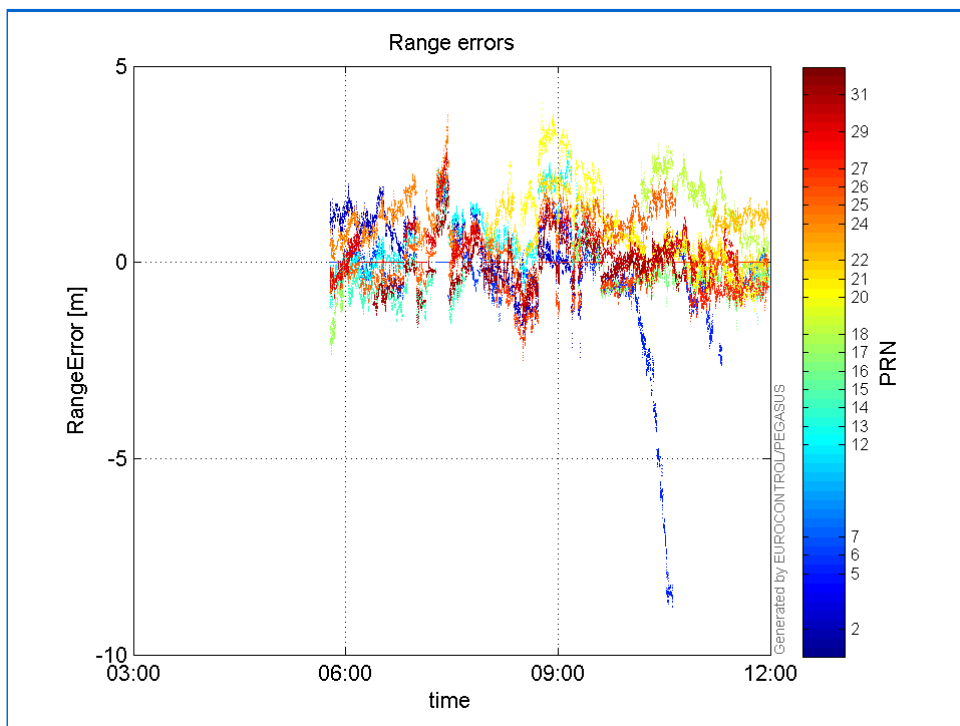
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1861	203081	2	0.819267	-1.61908	1.97625
1861	213066	5	0.365977	-2.00731	5.4848
1861	197103	6	0.251572	-0.884663	3.51654
1861	214666	7	0.291525	-0.807551	2.77009
1861	199098	12	1.21871	2.41611	1.98252
1861	215519	13	0.35814	-0.995496	2.77962
1861	199559	14	0.787786	1.78082	2.26054
1861	215685	15	0.0948139	-0.532597	5.61729
1861	214273	16	1.17191	-1.7169	1.46505
1861	193682	17	0.177242	-2.35288	13.2749
1861	210293	18	1.24616	3.02715	2.42917
1861	204978	20	1.28892	3.57791	2.77589
1861	205301	21	1.47373	2.67961	1.81825
1861	215817	22	0.882848	1.56715	1.7751
1861	199593	24	1.38585	3.76424	2.7162
1861	199418	25	1.92975	2.59116	1.34274
1861	203412	26	1.09299	-2.49149	2.27951
1861	215697	27	0.775106	-1.2219	1.57643
1861	199557	29	1.92184	2.82091	1.46782
1861	199559	31	1.12747	1.88272	1.66987

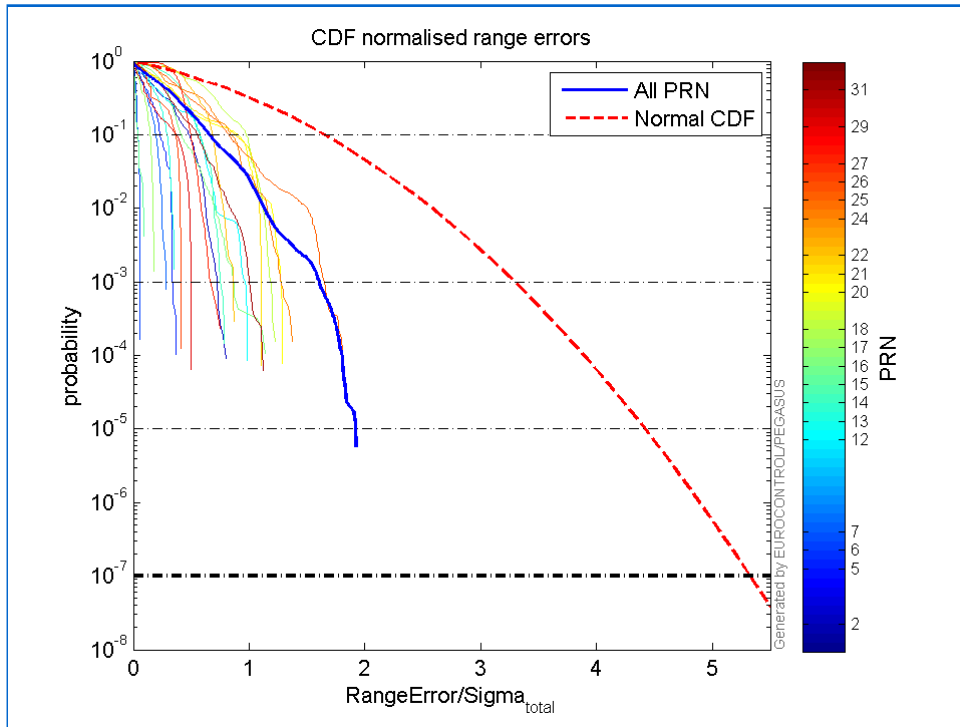
Normalised Range errors (median):



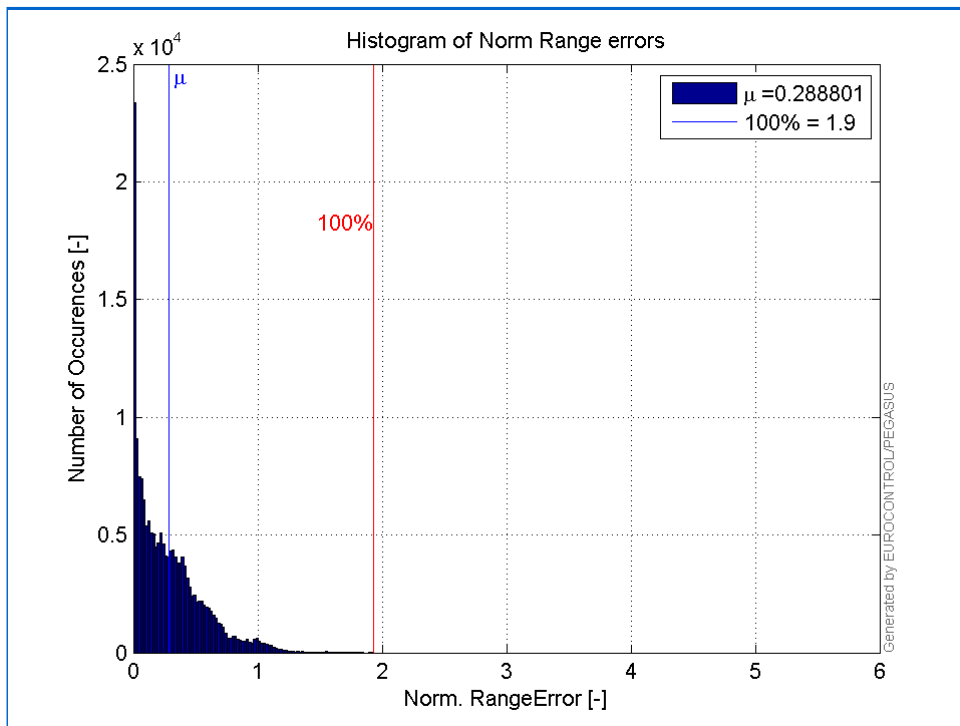
Range errors:



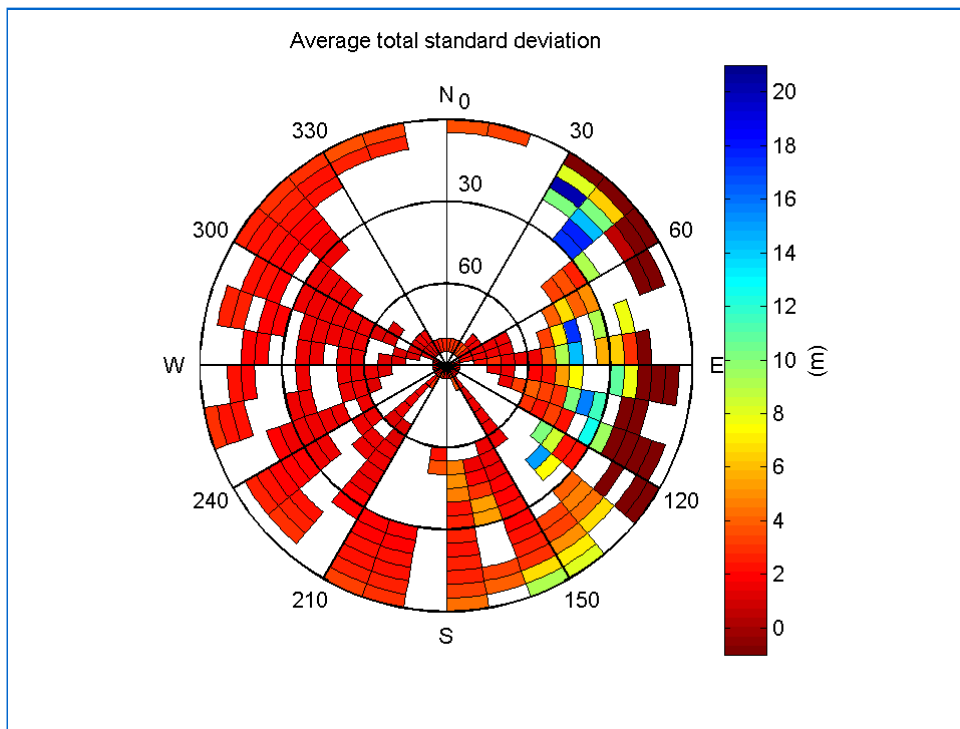
CDF normalised range errors:



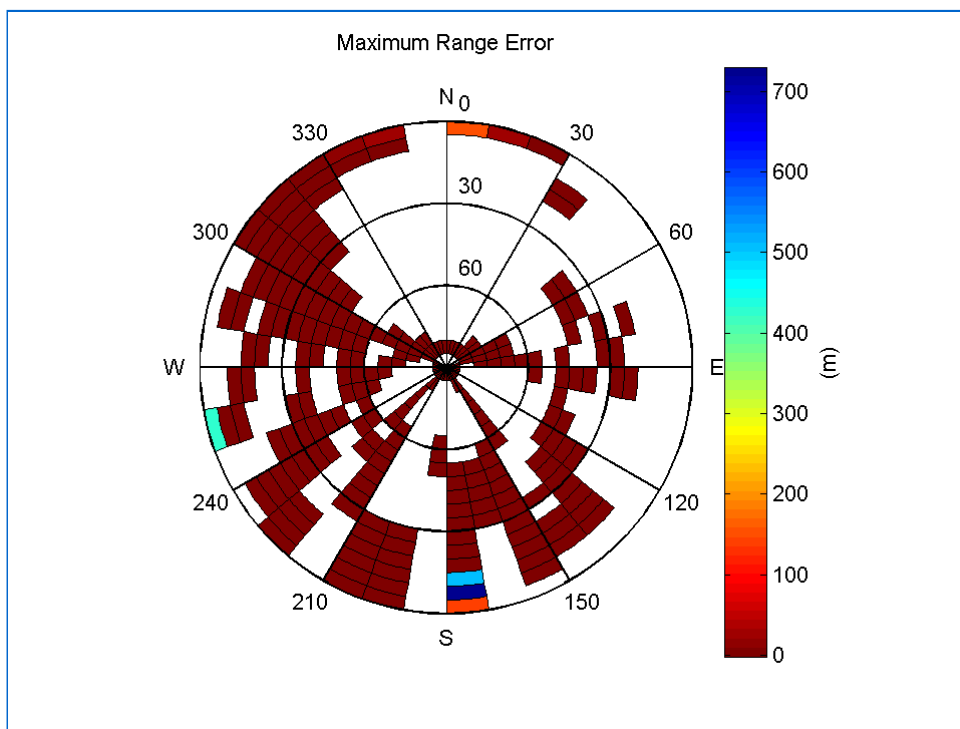
Histogram of Norm Range errors:



Sigma Sky Plot:

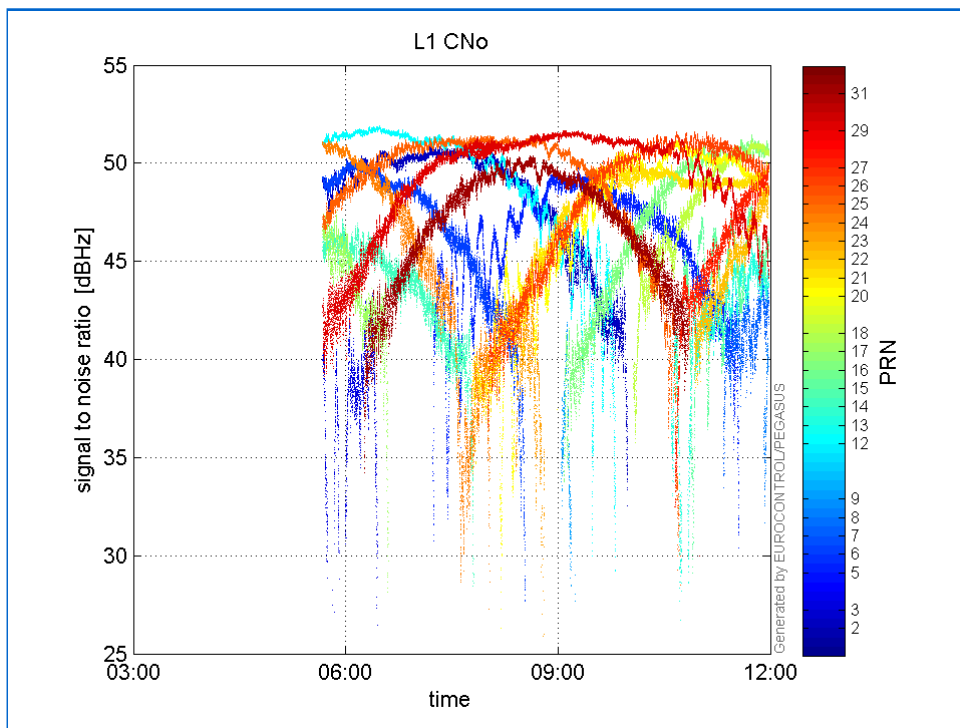


Norm Error Sky Plot:

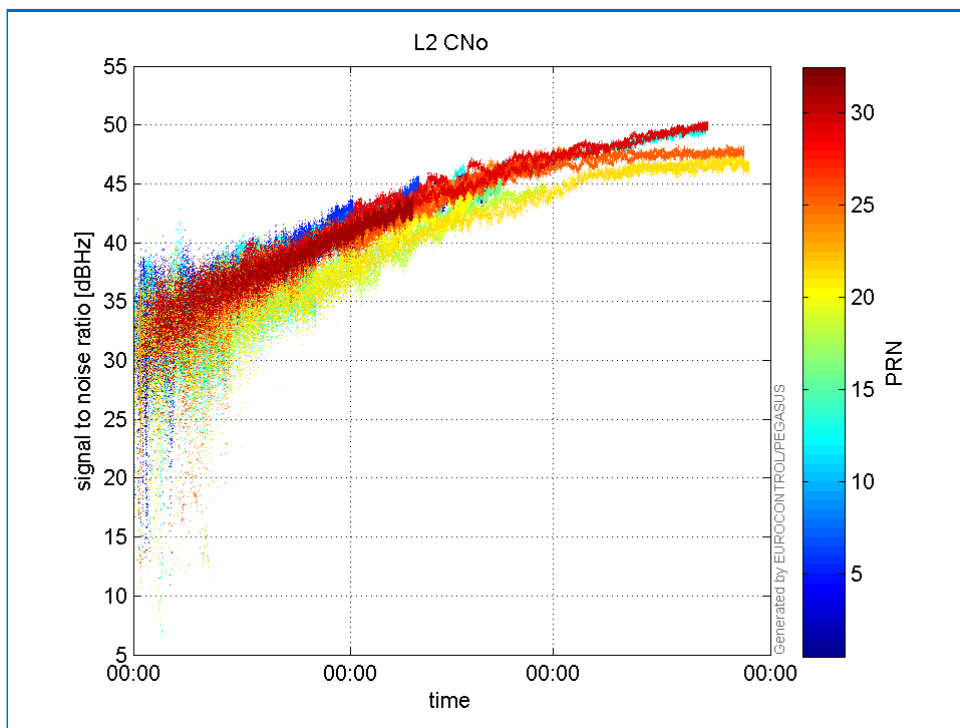


signal quality

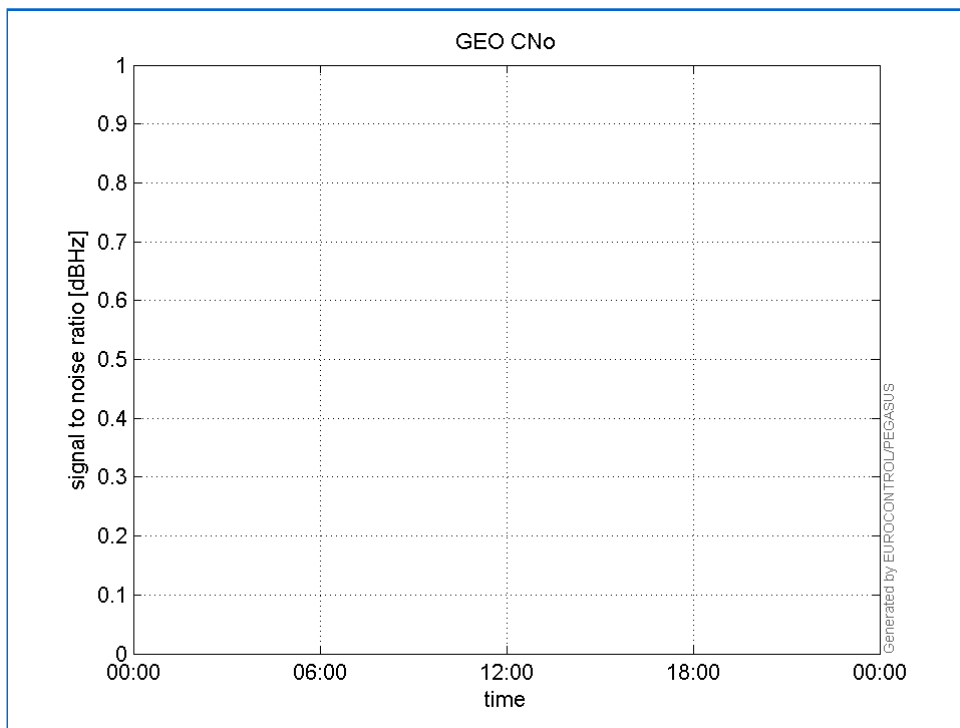
L1 CNo:



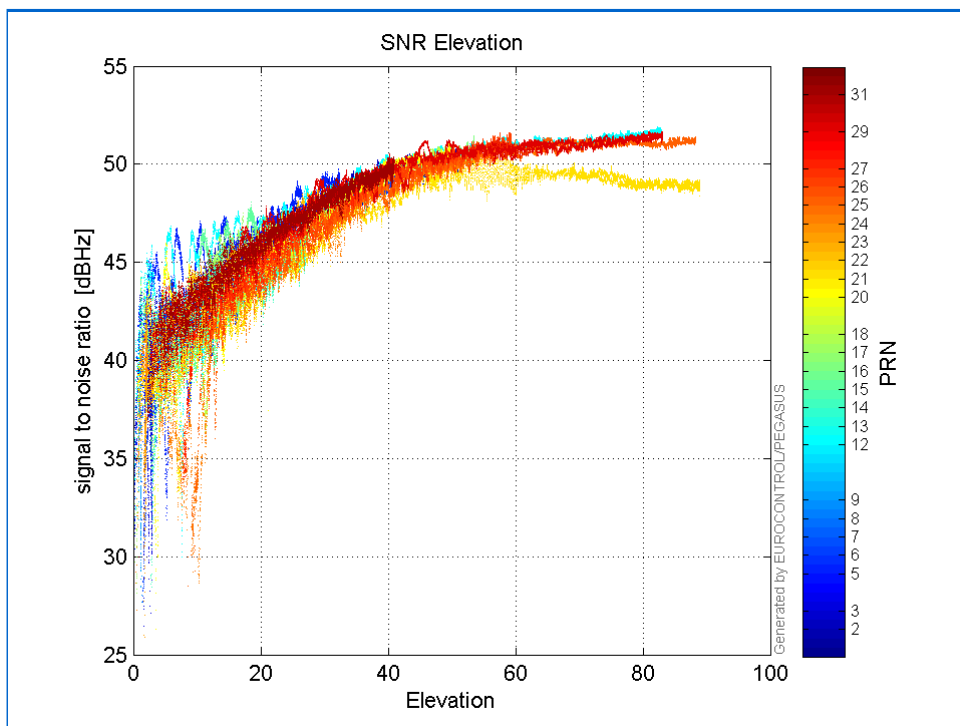
L2 CNo:



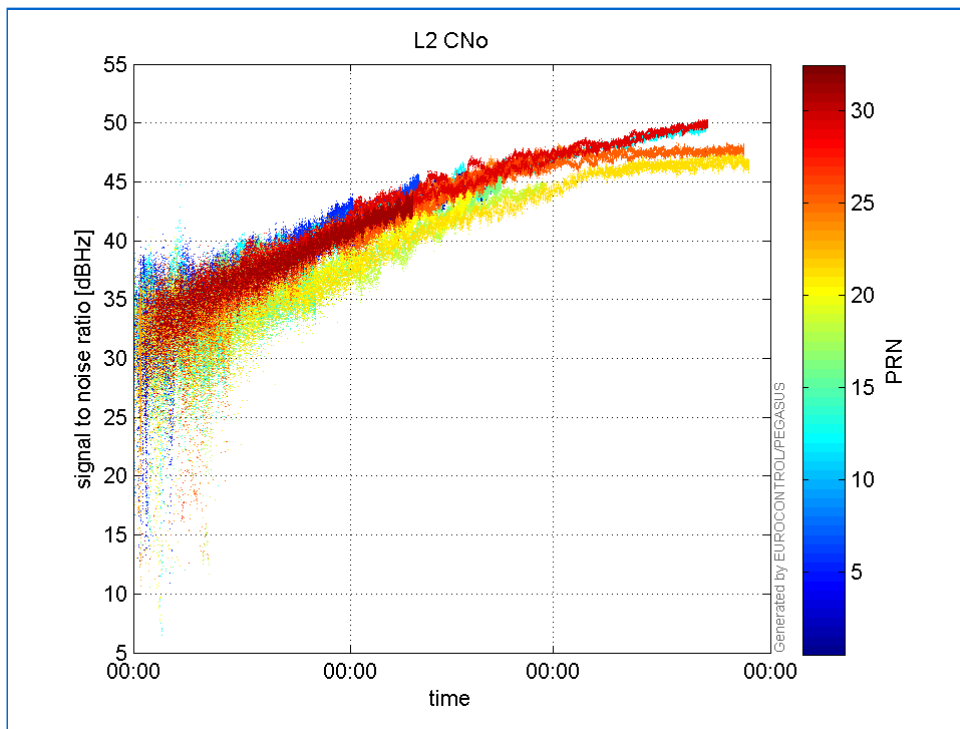
GEO CNo:



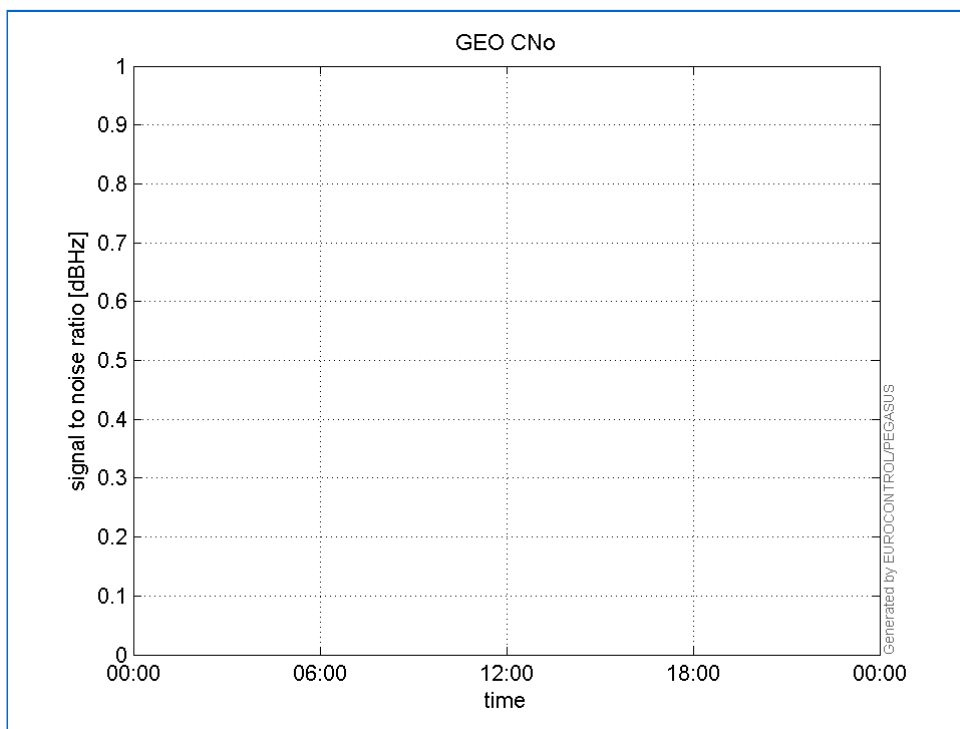
SNR Elevation:



L2 CNo:

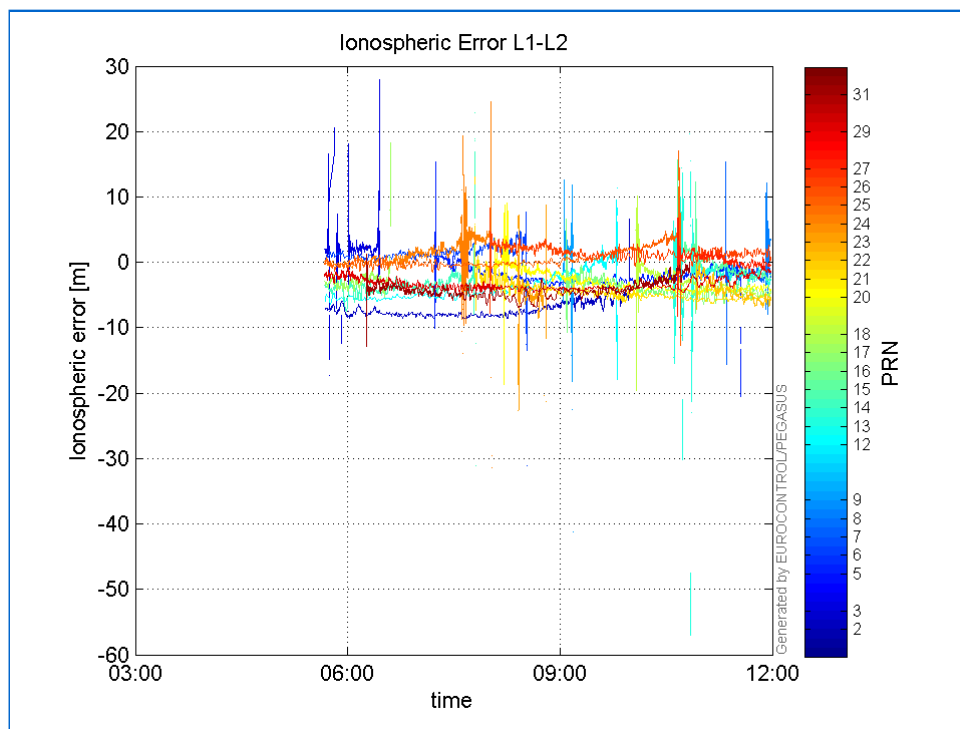


GEO CNo:



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:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PEGASUS_DAT_job/JOB/2015_09_08EGNOS/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	50.4391
init_lon	results	30.4297
init_alt	results	265.7537
mi_numbers	results	0