

DLV3 - x

DLV3 - Constellation

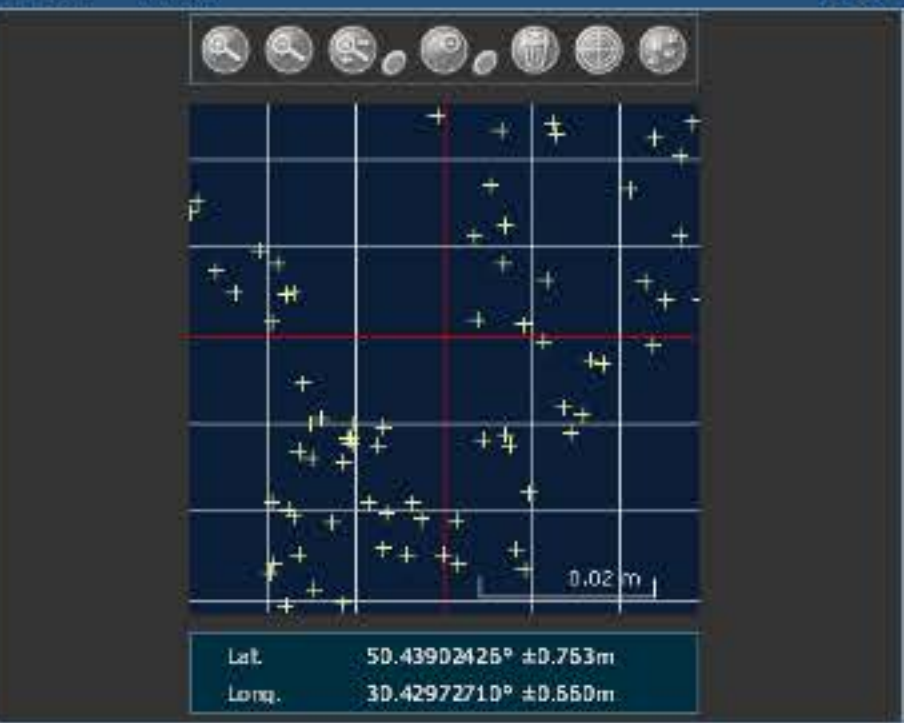


SV Details		Mask Angle Details		
PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - Position

Latitude	50.43902420°	+/-	0.76m
Longitude	30.42972710°	+/-	0.66m
Hgt. (MSL)	189.689m	+/-	1.35m
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	8		
	GPS	L1	L2
	GLO	L1	L2
Solution status	Computed		
Tue 01/12/2015 14:19:50 GMT			
Tue 01/12/2015 16:19:50 Local			

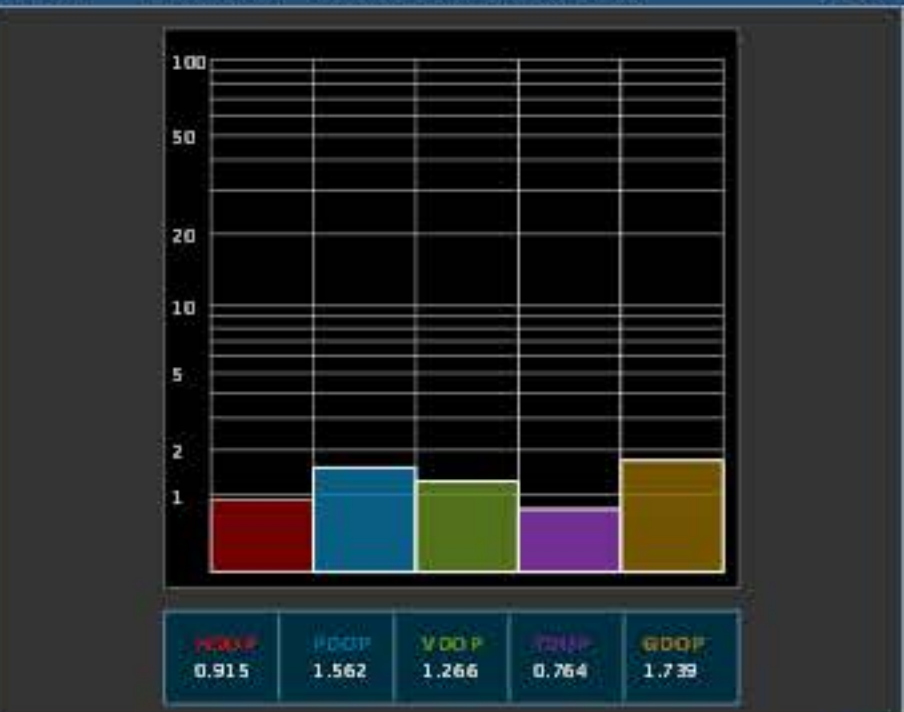
DLV3 - Plan



DLV3 - GPS Tracking Channel Status



DLV3 - Dilution Of Precision (DOP)



DLV3 - Console Window

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

ENTER

Global View

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

Range Domain

start: 07:58:46 01.12.2015 (week: 1873 sec: 201526)
end: 14:19:33 01.12.2015 (week: 1873 sec: 224373)
duration: 06:20:48 ..

quality

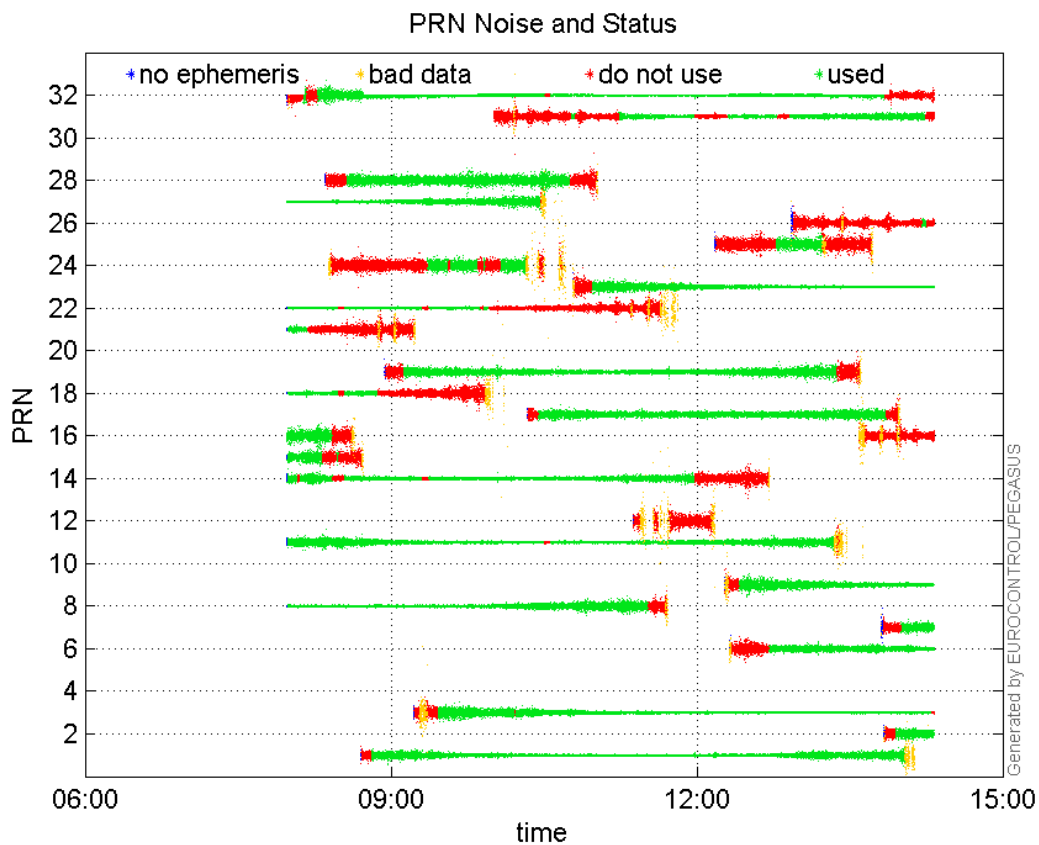
valid samples 22848
total samples 22848

PRN overview

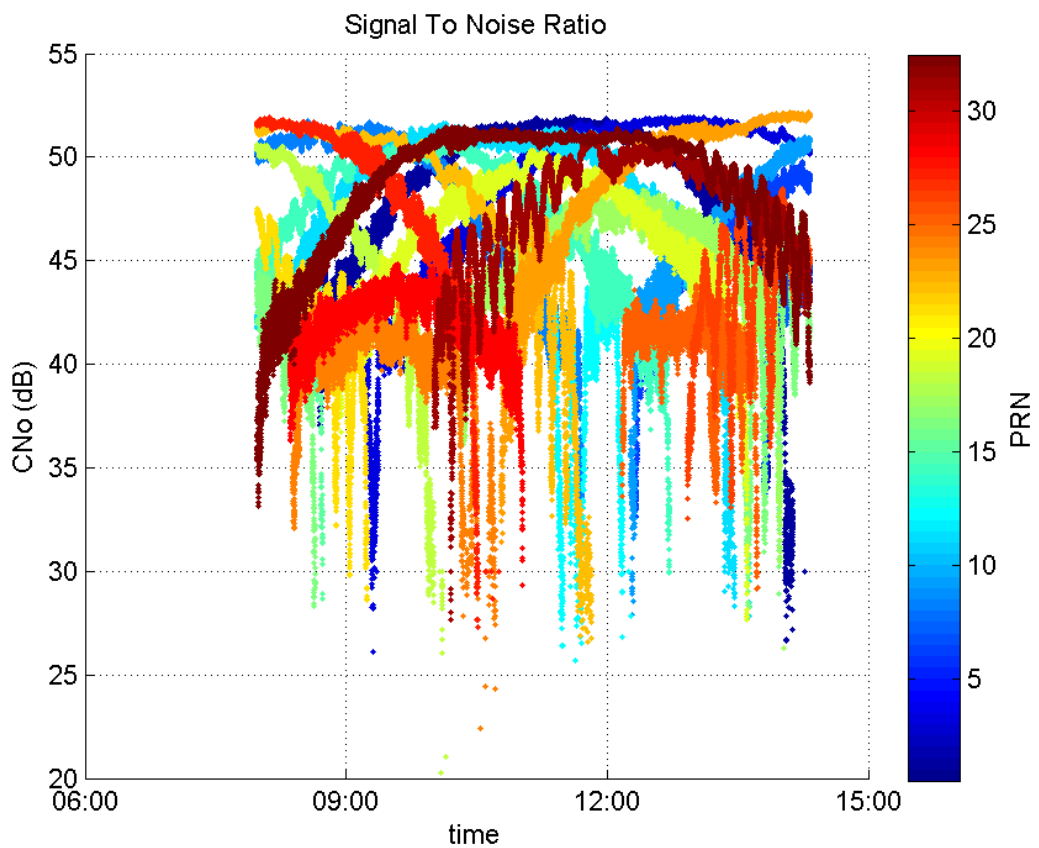
Number of Visible GPS Satellites 25
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



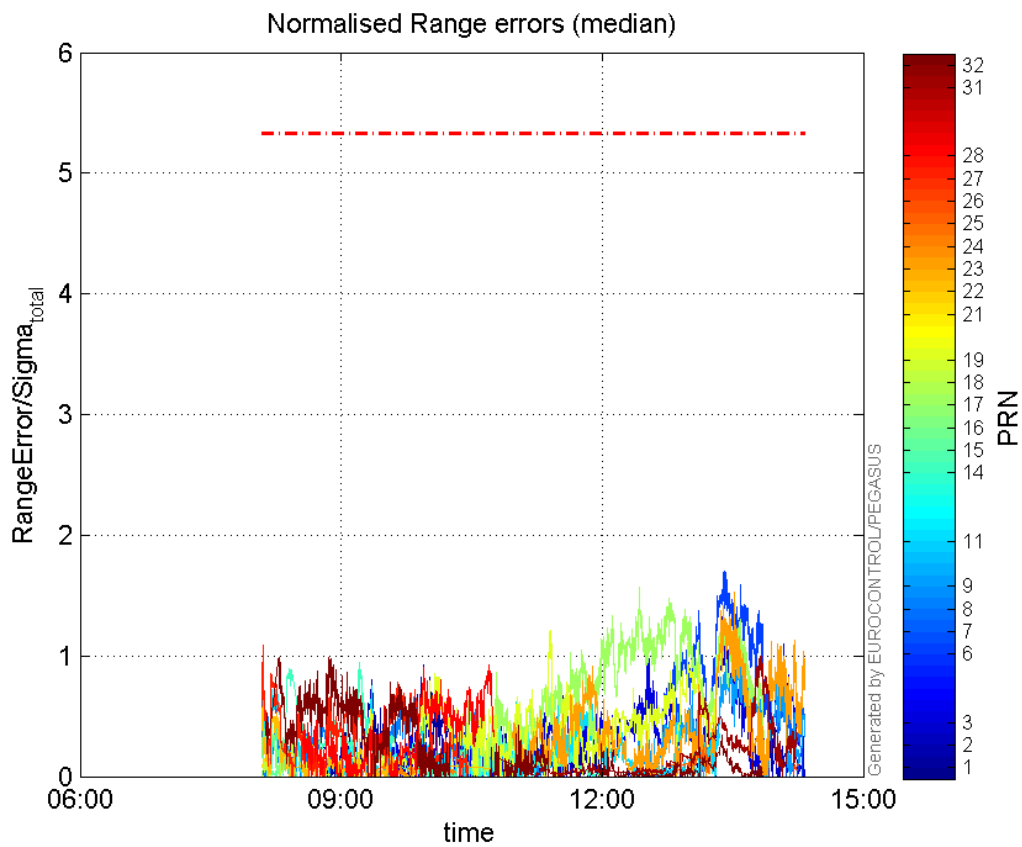
range errors

Number of Overbounding Norm Errors 0

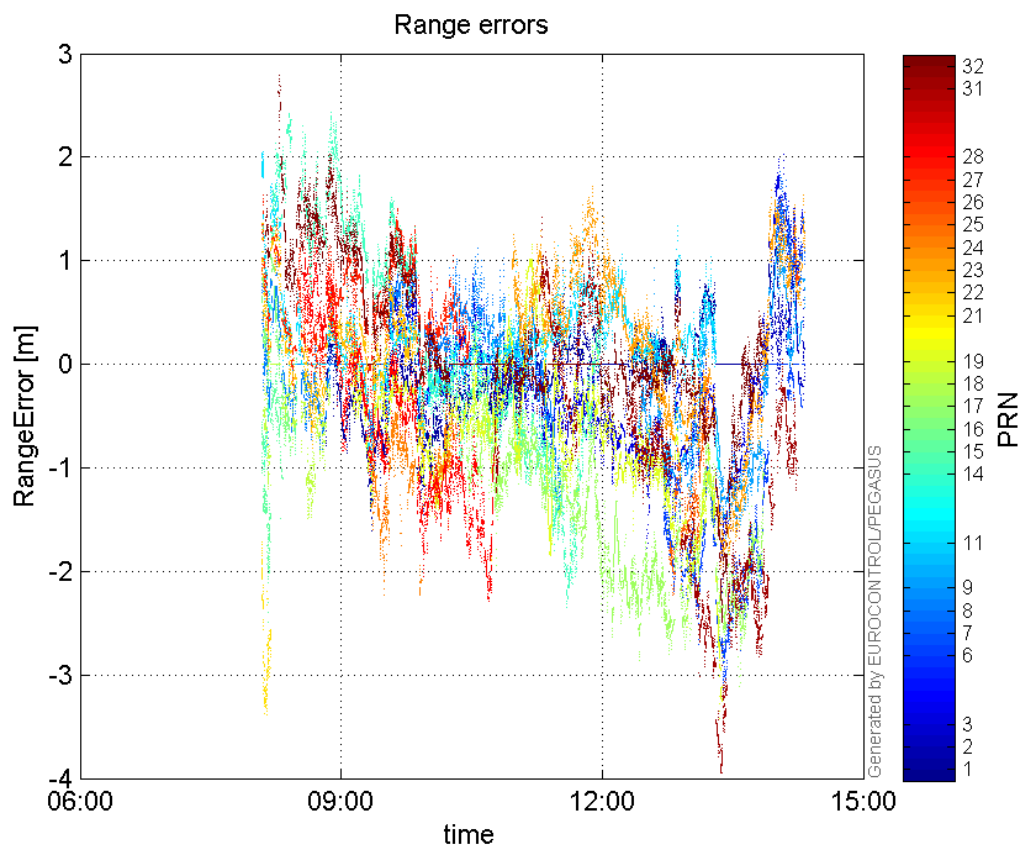
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1873	208619	1	0.924264	-1.45517	1.57441
1873	223983	2	0.464525	1.28297	2.76189
1873	220964	3	1.32193	-2.26443	1.71298
1873	221083	6	1.70181	-3.01561	1.772
1873	223380	7	0.685784	1.85649	2.70711
1873	206452	8	0.751704	-1.2544	1.66875
1873	221098	9	0.967652	-1.71193	1.76916
1873	201942	11	0.847666	2.03788	2.40411
1873	205941	14	0.946208	1.81945	1.92288
1873	202000	15	0.394697	-1.41289	3.57968
1873	202312	16	0.465037	1.29516	2.78507
1873	217550	17	1.57058	-2.85724	1.81922
1873	203206	18	0.364212	-0.795244	2.18347
1873	213841	19	1.20662	-1.84412	1.52833
1873	202037	21	0.143831	-3.3685	23.4198
1873	201948	22	0.580074	1.36487	2.35293
1873	221468	23	1.52992	-2.13946	1.39841
1873	207082	24	0.241463	-1.69136	7.00464
1873	220292	25	0.284648	-1.06315	3.73496
1873	224078	26	0.107507	0.893712	8.31307
1873	201963	27	1.08427	1.60275	1.47818
1873	211297	28	0.923417	-2.29202	2.4821
1873	222563	31	0.99506	-2.80205	2.81597
1873	204692	32	0.986236	2.0132	2.0413

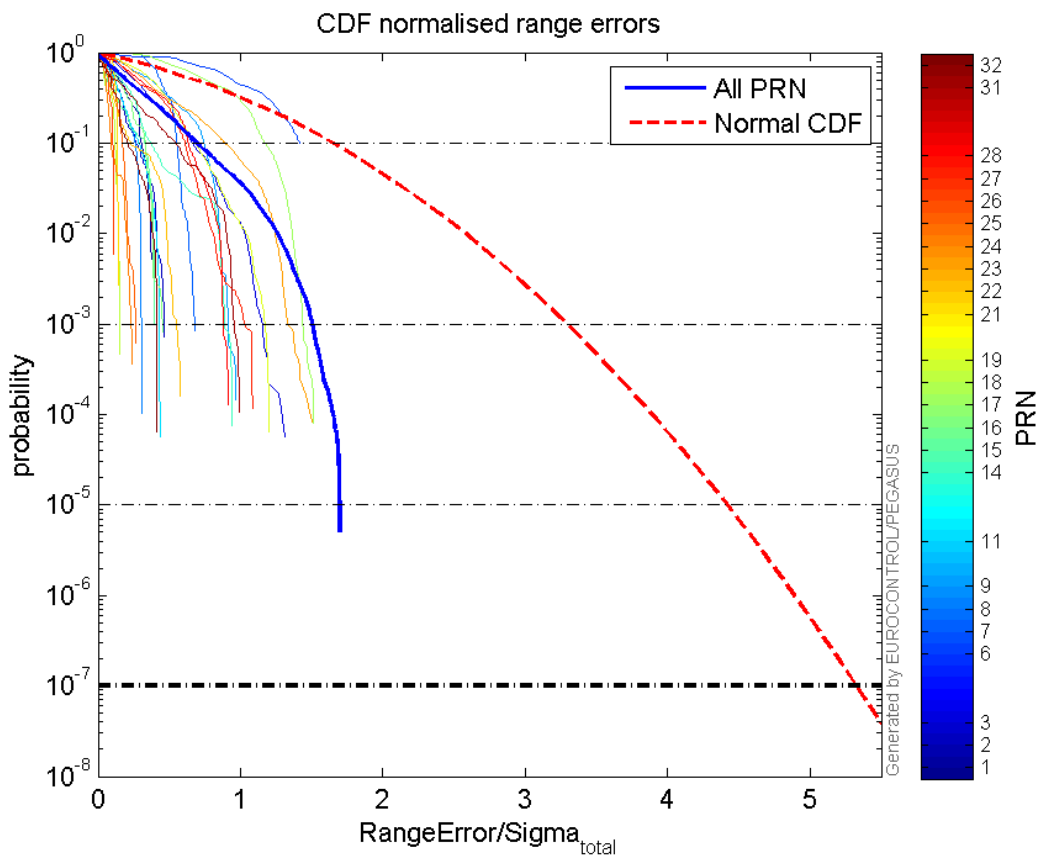
Normalised Range errors (median):



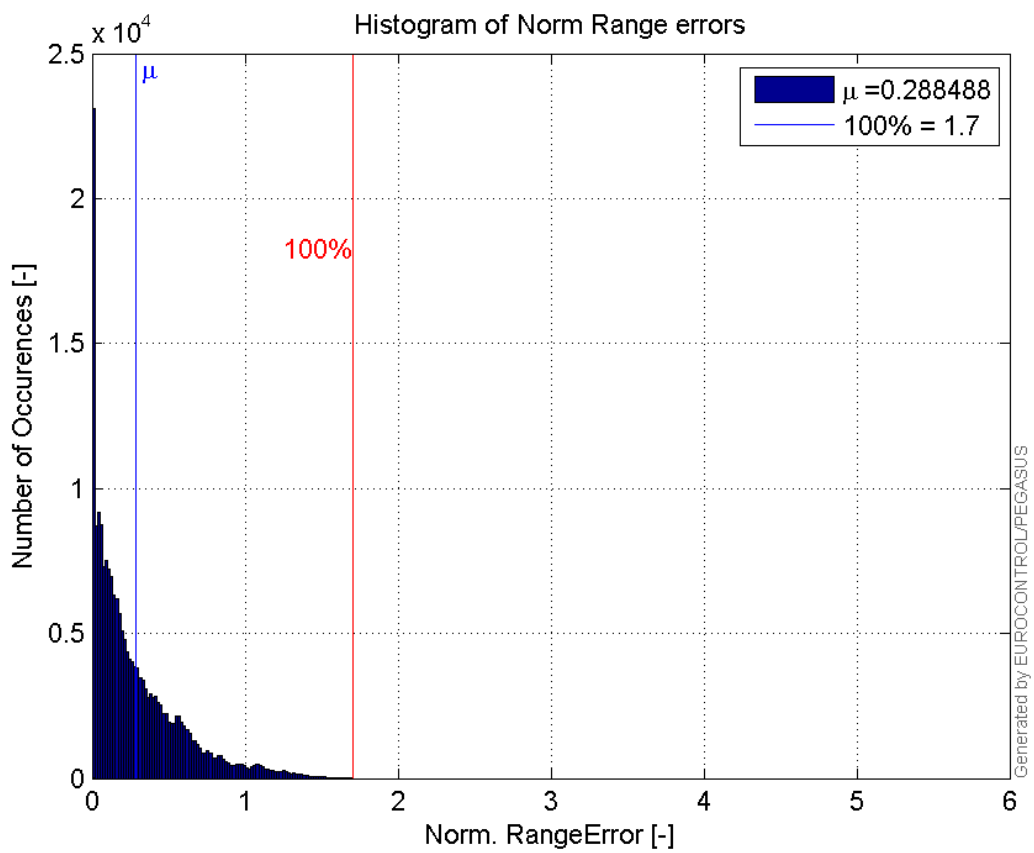
Range errors:



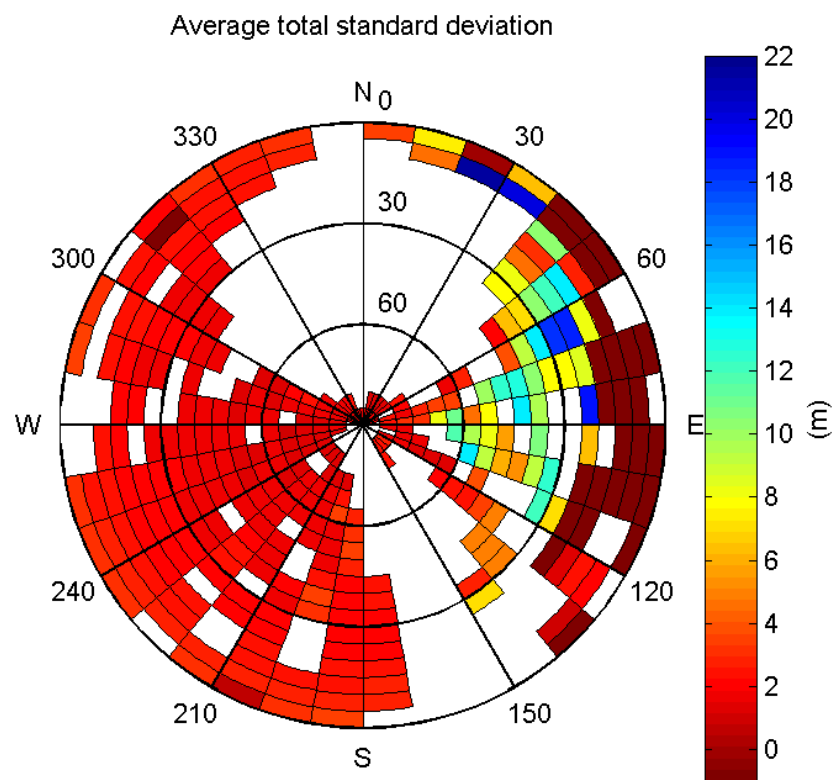
CDF normalised range errors:



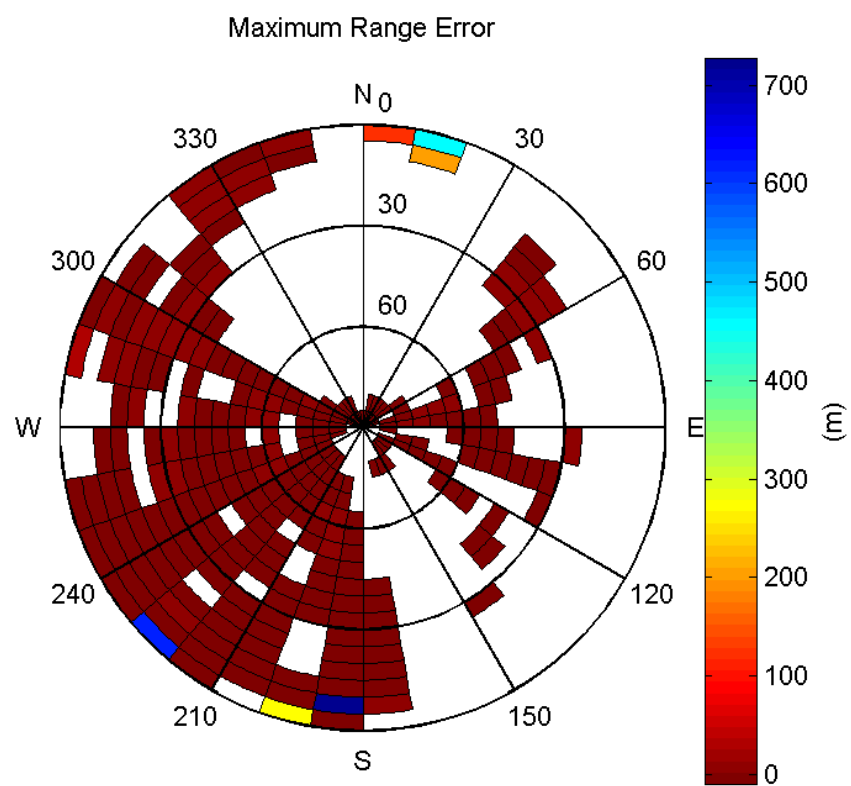
Histogram of Norm Range errors:



Sigma Sky Plot:

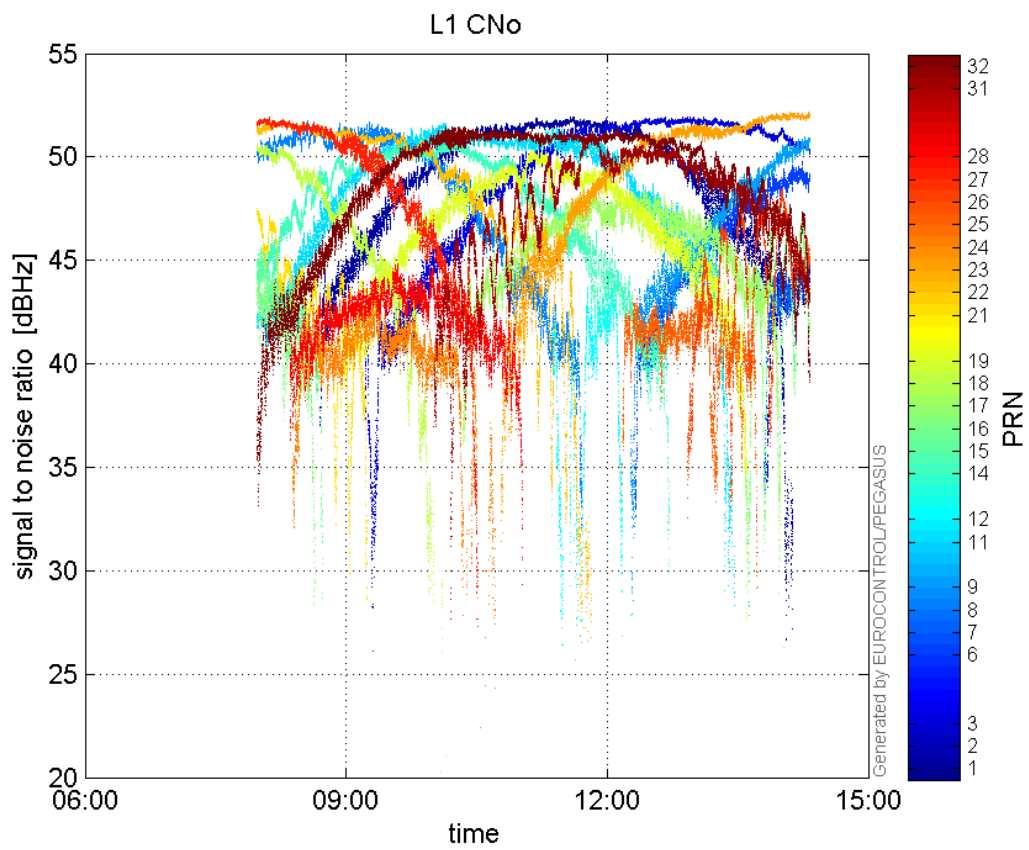


Norm Error Sky Plot:

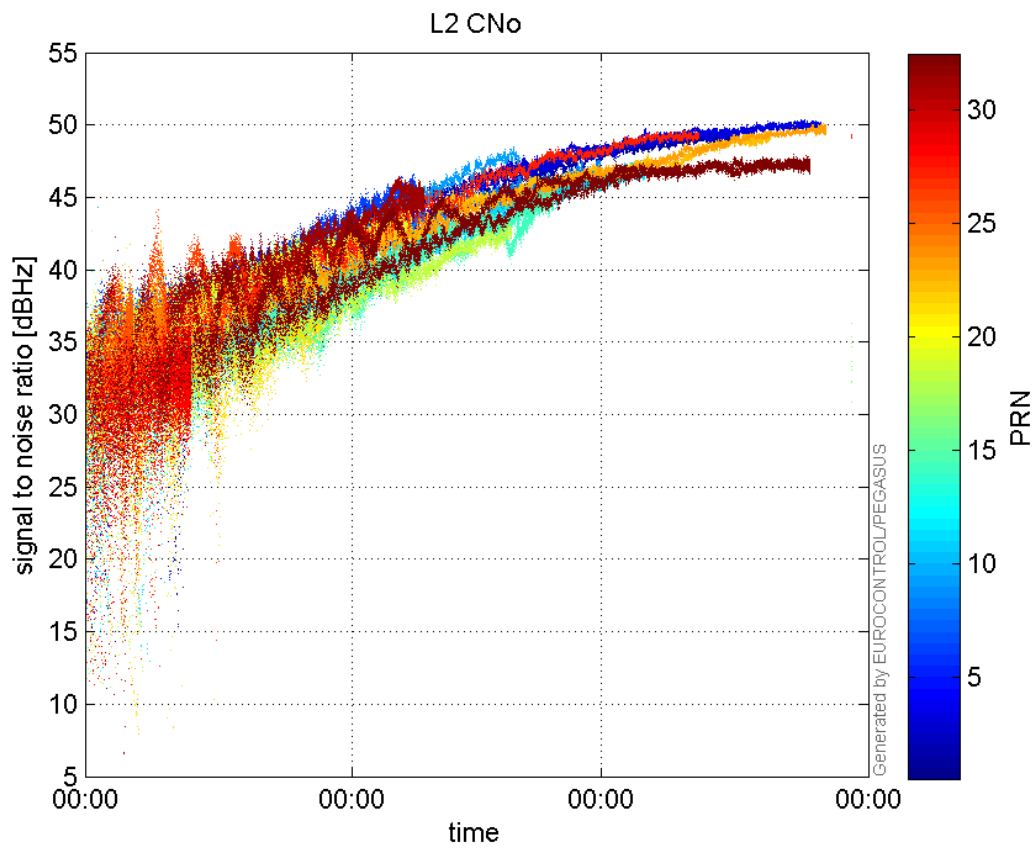


signal quality

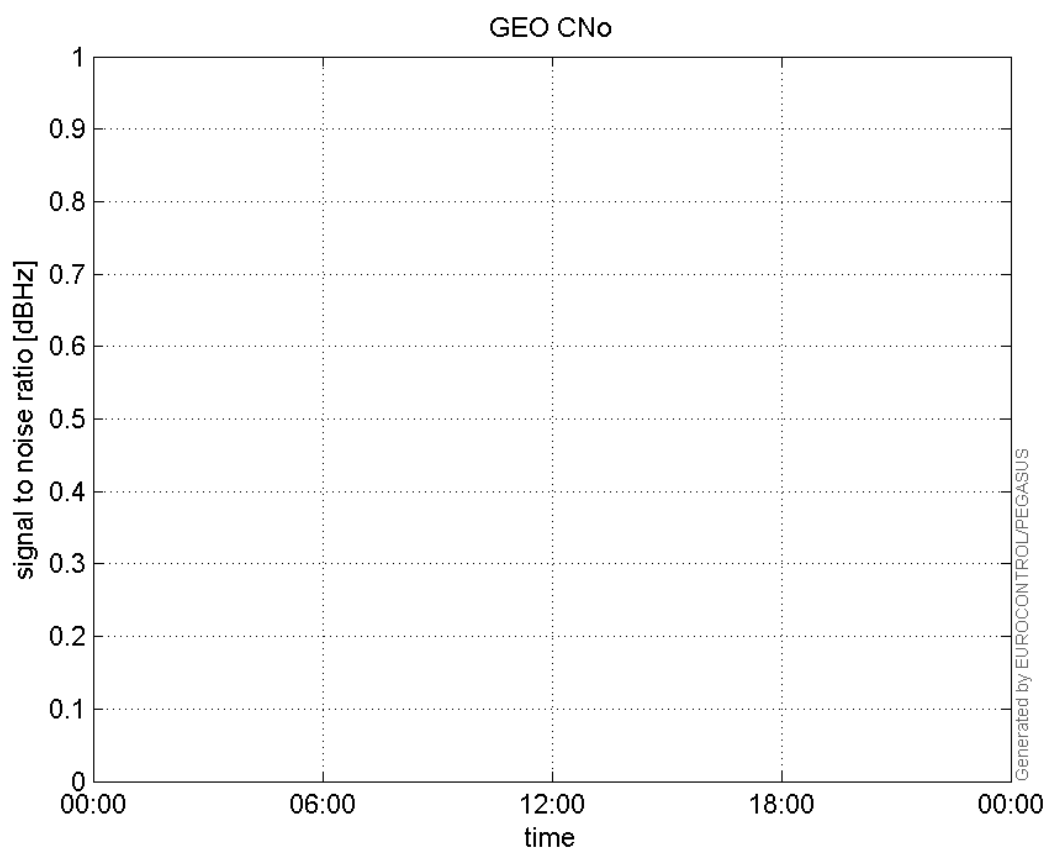
L1 CNo:



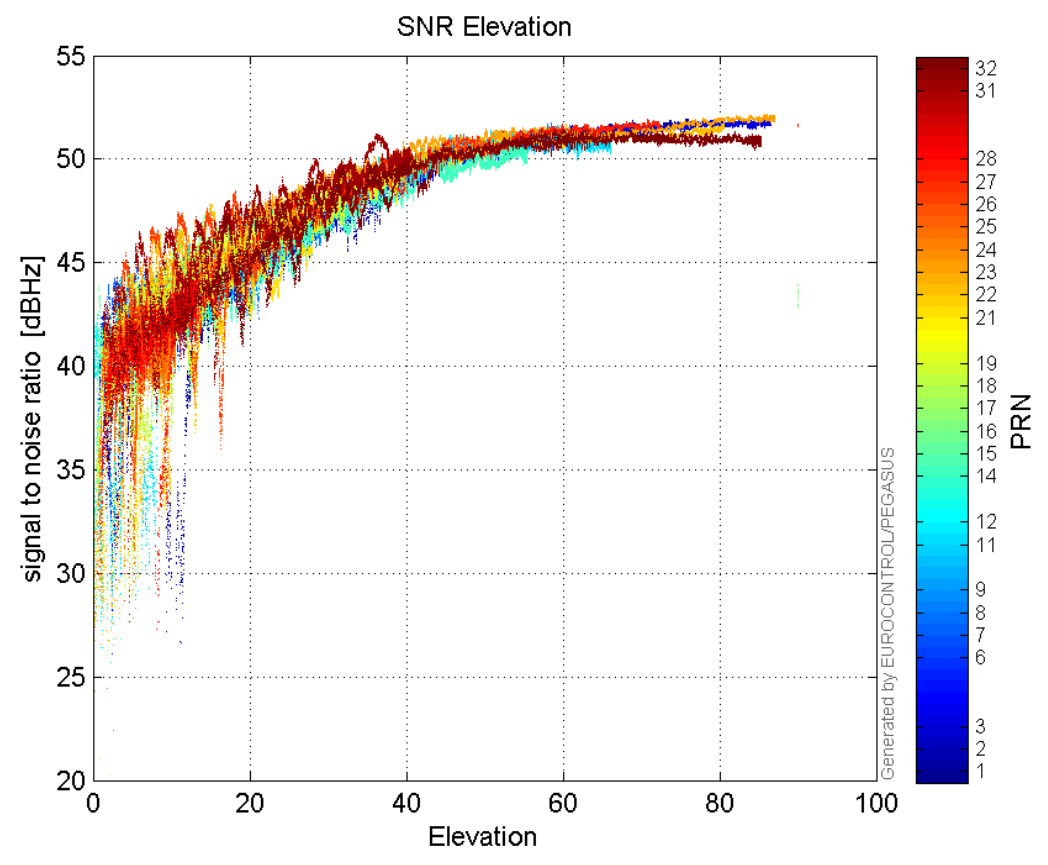
L2 CNo:



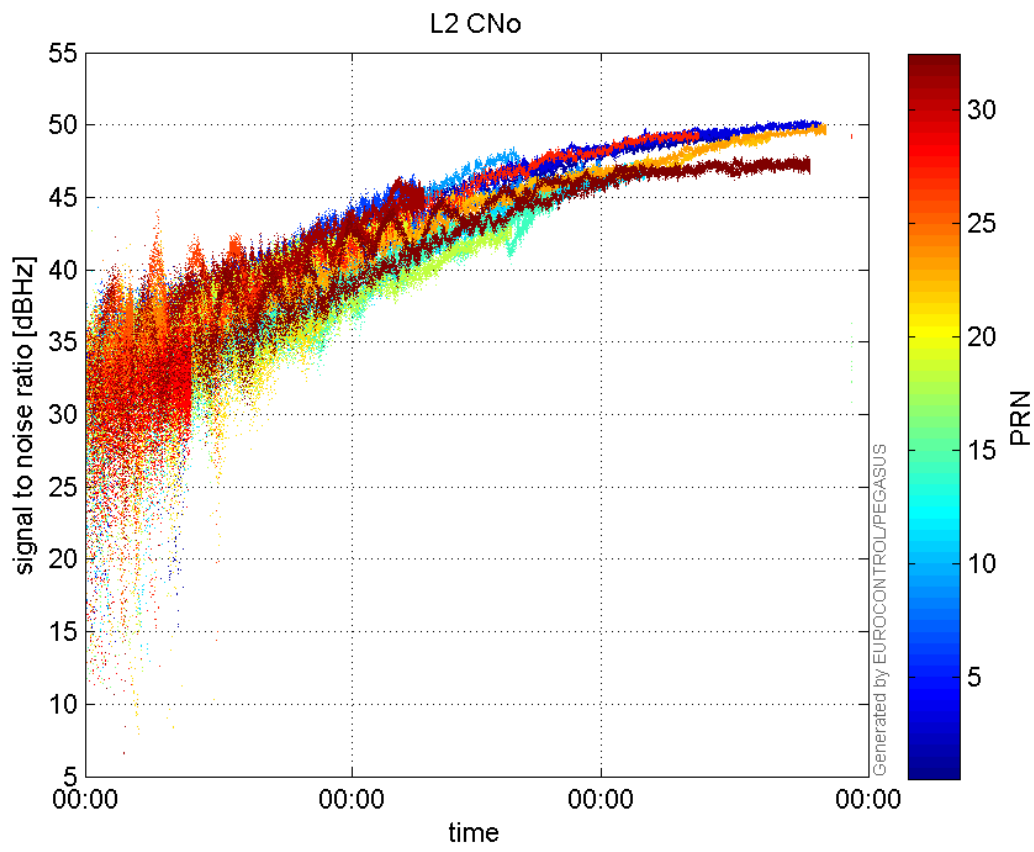
GEO CNo:



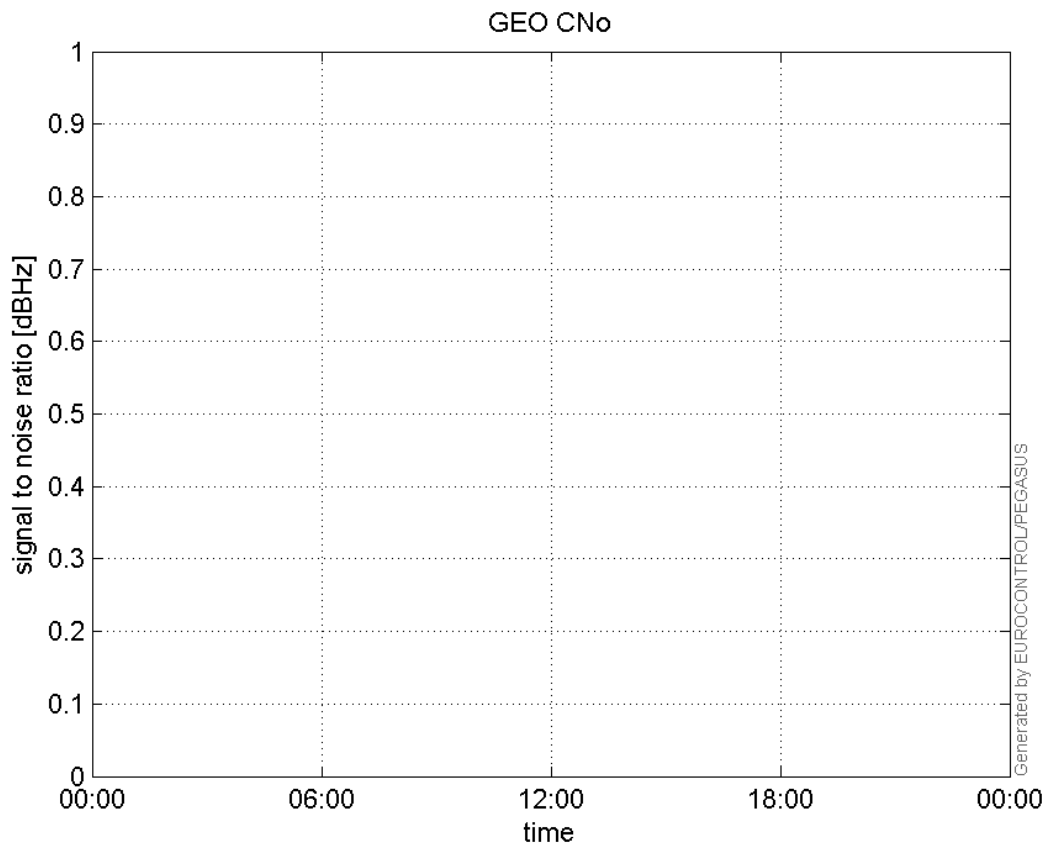
SNR Elevation:



L2 CNo:

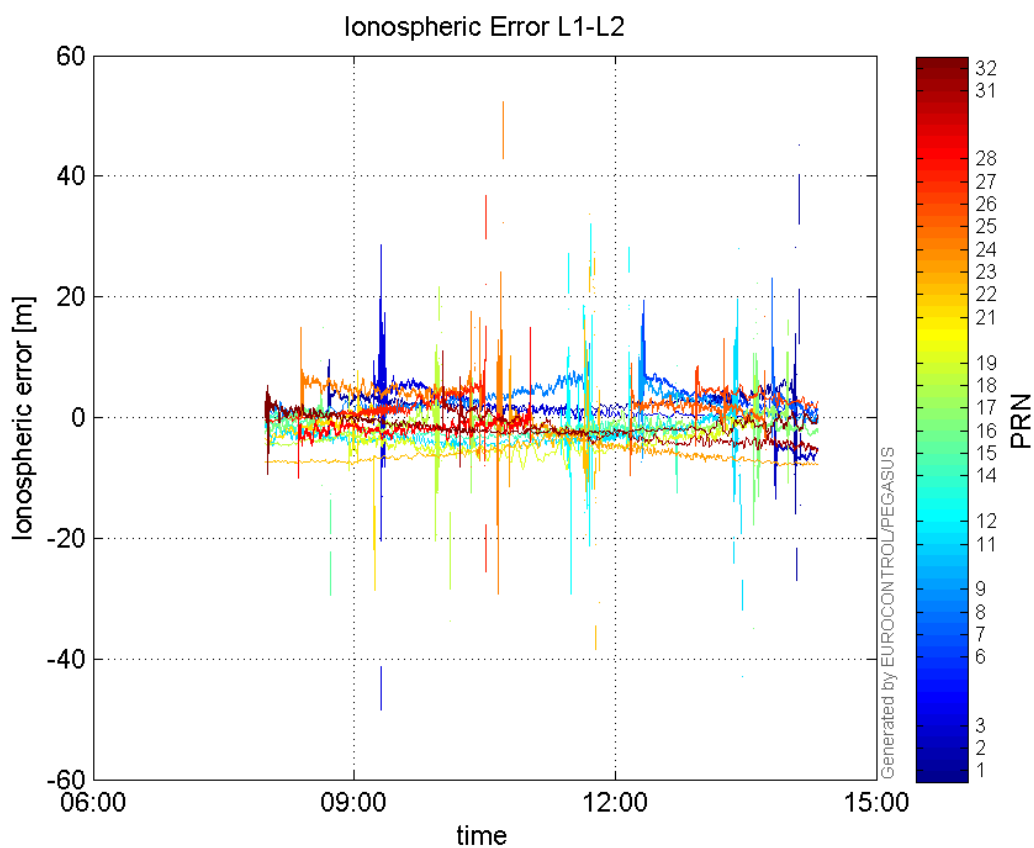


GEO CNo:



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_01EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_01EGNOS/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	30.4298
init_alt	results	238.041
mi_numbers	results	0

Position Domain

start: 07:58:46 01.12.2015 (week: 1873 sec: 201526)
end: 14:19:33 01.12.2015 (week: 1873 sec: 224373)
duration: 06:20:48 ..

quality

valid samples 22473
total samples 22848

Event tables

Position discontinuity events type no (0)
APV-I discontinuity events type all
APV-35m discontinuity events type all
LPV-200 discontinuity events type all
CAT-I discontinuity events type no (0)

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	222502	1.72654	10.3603	0.16665	-1.42447	13.7559	0.103554
max normVer	222827	1.23182	11.0711	0.111265	-2.41232	16.414	0.146967
max HPE	203484	3.75674	91.717	0.0409601	3.61583	62.6394	0.0577246
max VPE	203484	3.75674	91.717	0.0409601	3.61583	62.6394	0.0577246
min HPL	211599	0.760861	9.38905	0.0810371	-0.737701	13.658	0.0540123
min VPL	210483	0.912733	16.3542	0.0558103	-0.8002	11.4509	0.069881

APV-I discontinuity events :

#	Epoch	duration	stable period
1	203354	184	1453
2	209557	18	6019
3	216400	663	6825
4	217065	1	2
5	217069	1	3
6	217073	1	3

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	203354	184	1453
2	209557	18	6019
3	215914	1654	6339

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	203354	184	1453
2	209557	18	6019
3	215914	1654	6339

First Glance analysis

Duration	22848
Number of Samples	22848
Number of invalid sample	375
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.6413
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
22473	21605	20617	101	20617

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.17555	2.0778	1.85905	0.953326	1.85905
HPEscale 95%	NaN	4.78328	4.81462	3.324	4.81462
VPE 95%	2.30047	2.29658	2.24975	0.886674	2.24975
VPEscale 95%	NaN	5.68345	4.00009	0.918124	4.00009

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.961376	0.917412	0.00449428	0.917412
measurements	0.983587	0.945597	0.902355	0.00442052	0.902355
Operational	0.983587	0.945597	0.902355	0.00442052	0.902355

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	6	3	--	3
Long	--	3	3	--	3
Independent	--	3	3	--	3
P(disc.)	NaN	0.00208285	0.00218266	NaN	0.00218266
P(slide)	NaN	0.00245314	0.00218266	NaN	0.00218266

Integrity events :

	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m

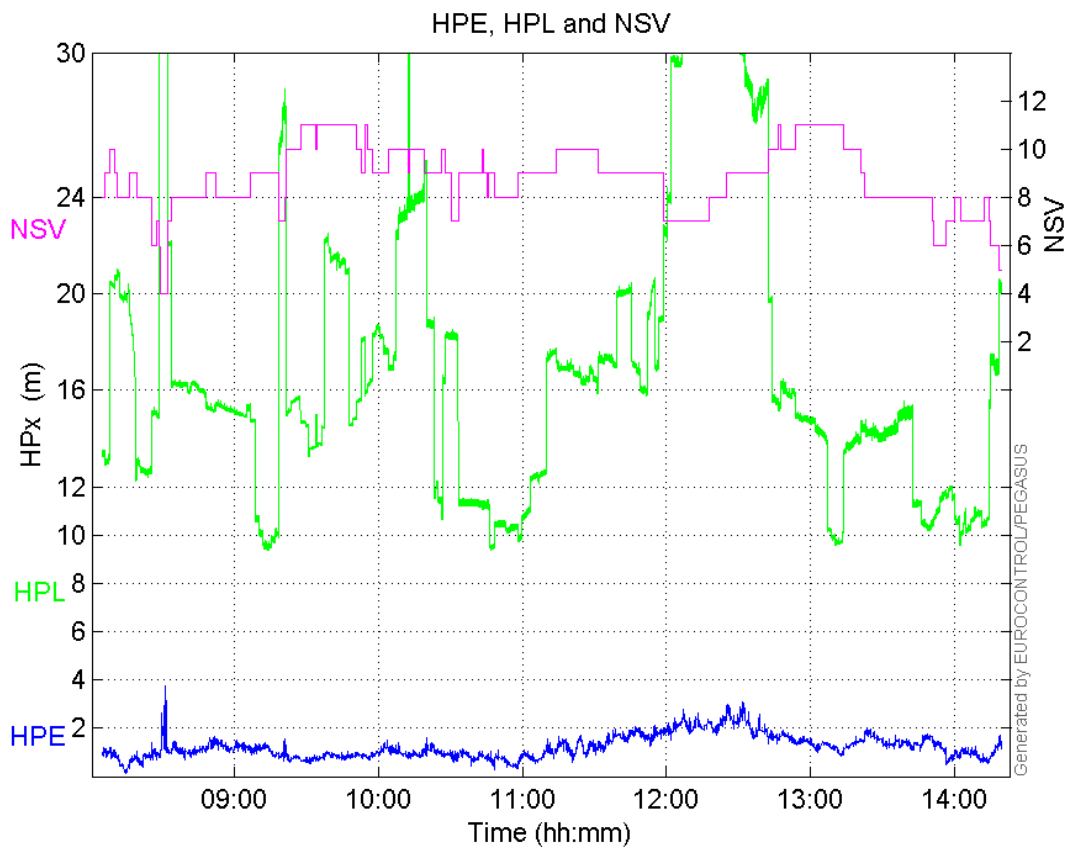
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

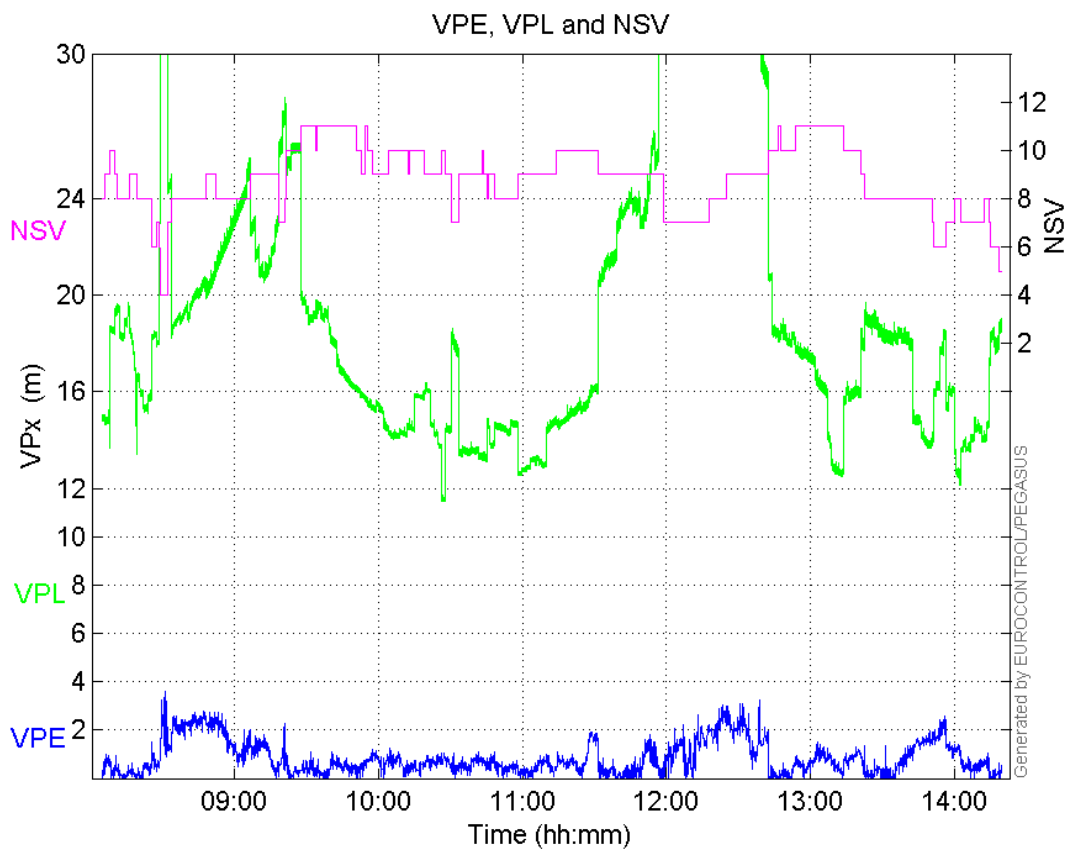
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	22473	21605	20617	101	20617
SIS Availability	1	0.961376	0.917412	0.00449428	0.917412
Local Availability	0.983587	0.945597	0.902355	0.00442052	0.902355
Operational Availability	0.983587	0.945597	0.902355	0.00442052	0.902355
HPE 95%	2.17555	2.0778	1.85905	0.953326	1.85905
HPEScale 95%	NaN	4.78328	4.81462	3.324	4.81462
VPE 95%	2.30047	2.29658	2.24975	0.886674	2.24975
VPEscale 95%	NaN	5.68345	4.00009	0.918124	4.00009
All Discontinuity Events	--	6	3	--	3
Long Discontinuity Events	--	3	3	--	3
Independent Discontinuity Events	--	3	3	--	3
P(discontinuity)	NaN	0.00208285	0.00218266	NaN	0.00218266
P(sliding window)	NaN	0.00245314	0.00218266	NaN	0.00218266
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:

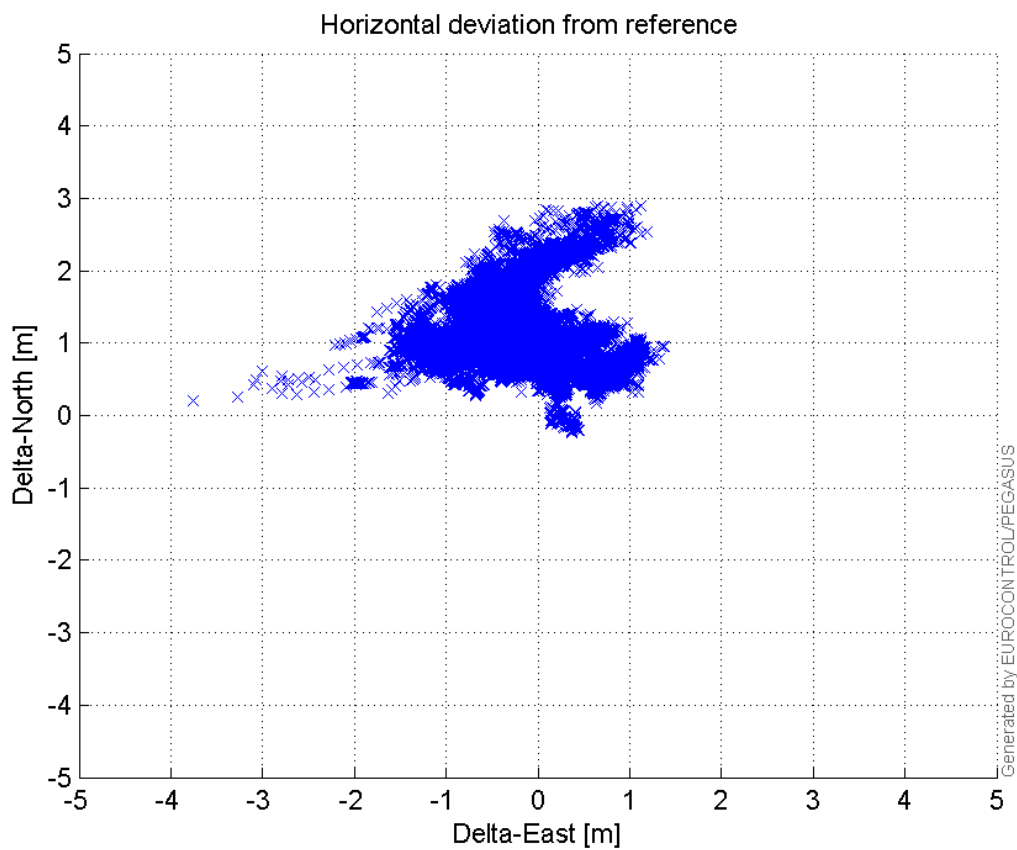


VPE, VPL and NSV:



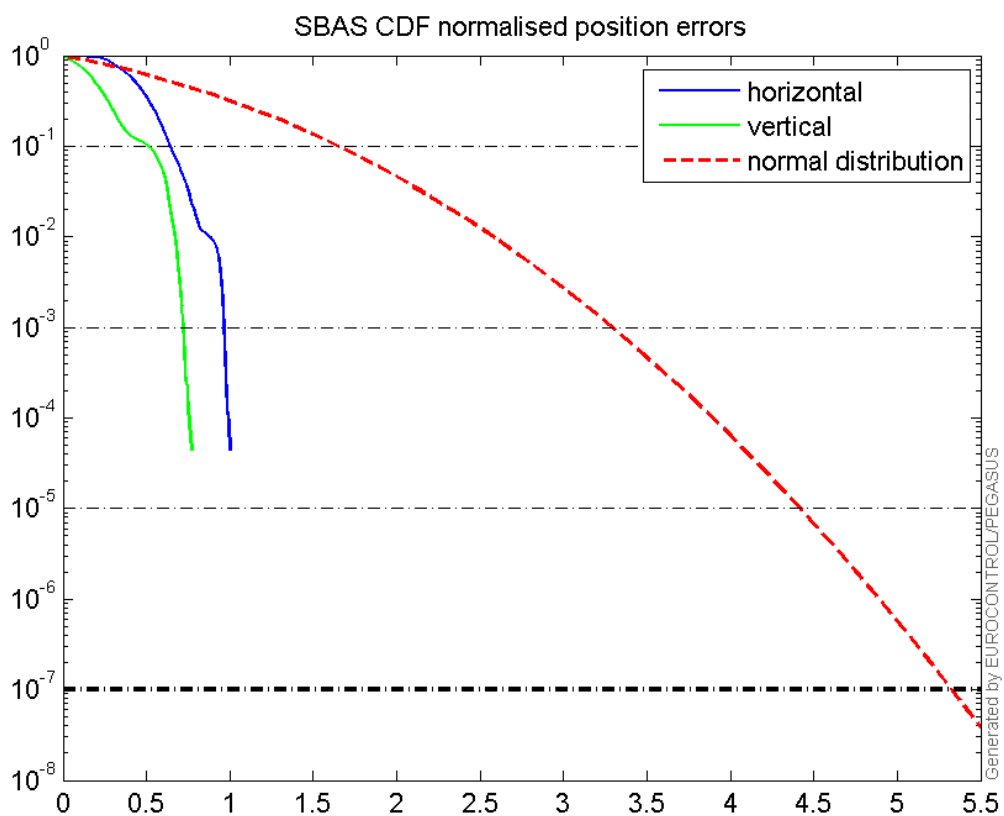
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

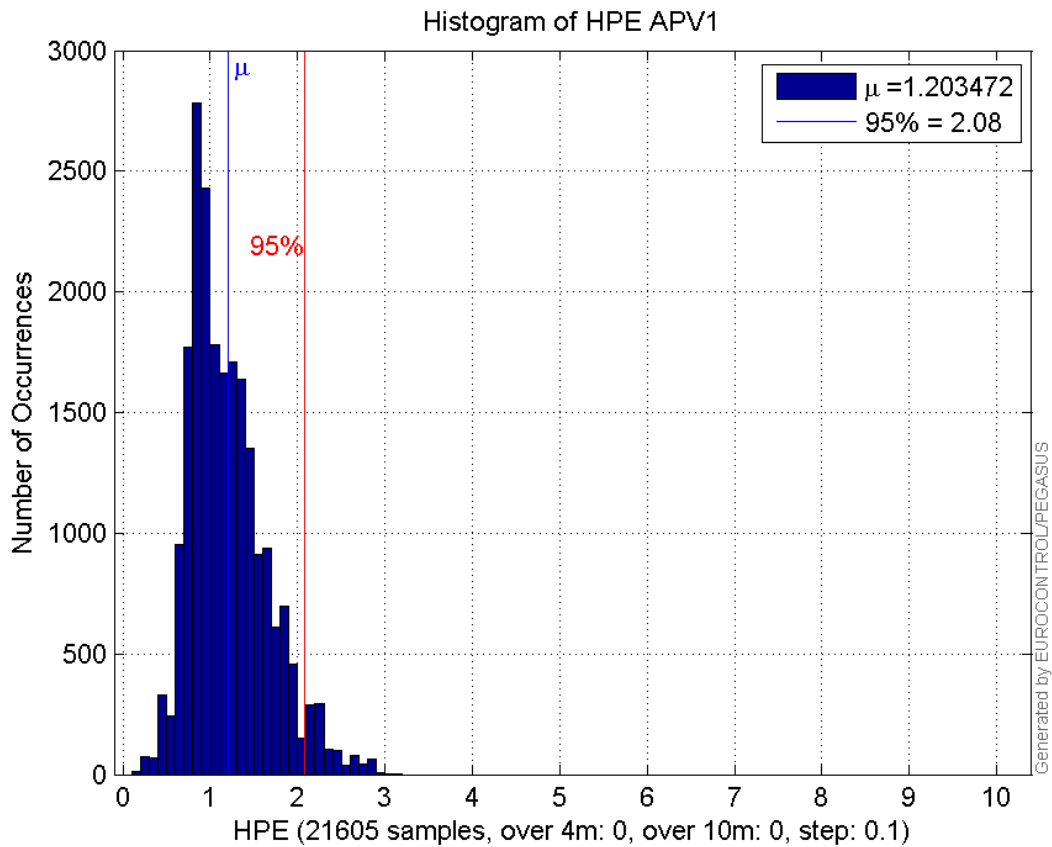
number	21605
sum	26001.014
sum2	35591.969
prctile95	2.0777988
prctile99	2.5584382
number	21605
sum	17916.059
sum2	24326.191
prctile95	2.2965807
prctile99	2.6002731
number	21605
sum	360754.54
sum2	6759912.3
prctile95	29.61095
prctile99	37.438915
number	21605
sum	418681.47
sum2	9088059.7
prctile95	33.595
prctile99	44.72107
number	21605
sum	1630.1922
sum2	136.82203
prctile95	0.11958198
prctile99	0.14803871
number	21605
sum	935.65595
sum2	61.761854
prctile95	0.11366907
prctile99	0.12616293
number	20617
sum	23899.985
sum2	31056.701
prctile95	1.8590486
prctile99	2.4248246
number	20617
sum	16285.32
sum2	21127.413
prctile95	2.249752
prctile99	2.5286164
number	20617
sum	328985.97
sum2	5706793.5
prctile95	27.214025
prctile99	30.587091
number	20617
sum	377590.69
sum2	7363568.7
prctile95	28.919315

prctile99 33.363198
number 20617
sum 1563.1742
sum2 132.13674
prctile95 0.12036539
prctile99 0.14988031
number 20617
sum 896.80667
sum2 59.943896
prctile95 0.11428818
prctile99 0.12641395

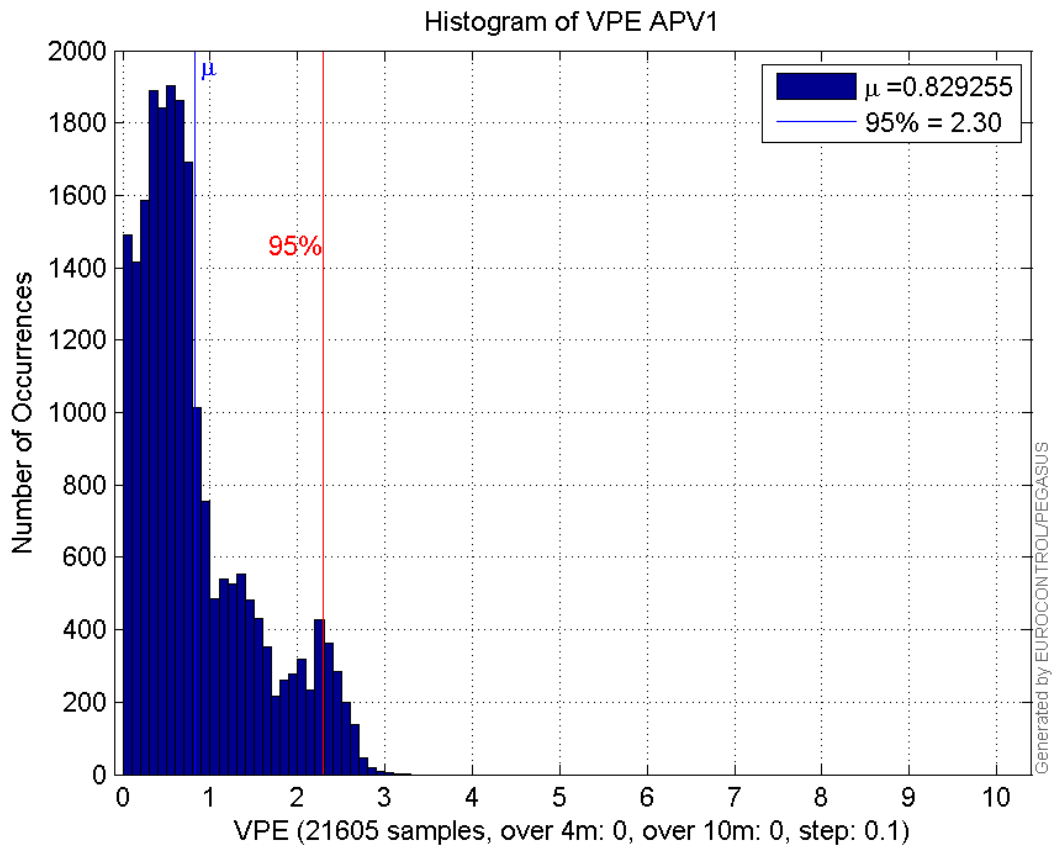
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.20347	0.446161	1.12688	2.0778	2.55844	1.28351
HPL	16.6977	5.83727	15.4328	29.611	37.4389	17.6886
VPE	0.829255	0.662048	0.639956	2.29658	2.60027	1.06111
VPL	19.3789	6.71609	17.9344	33.595	44.7211	20.5097

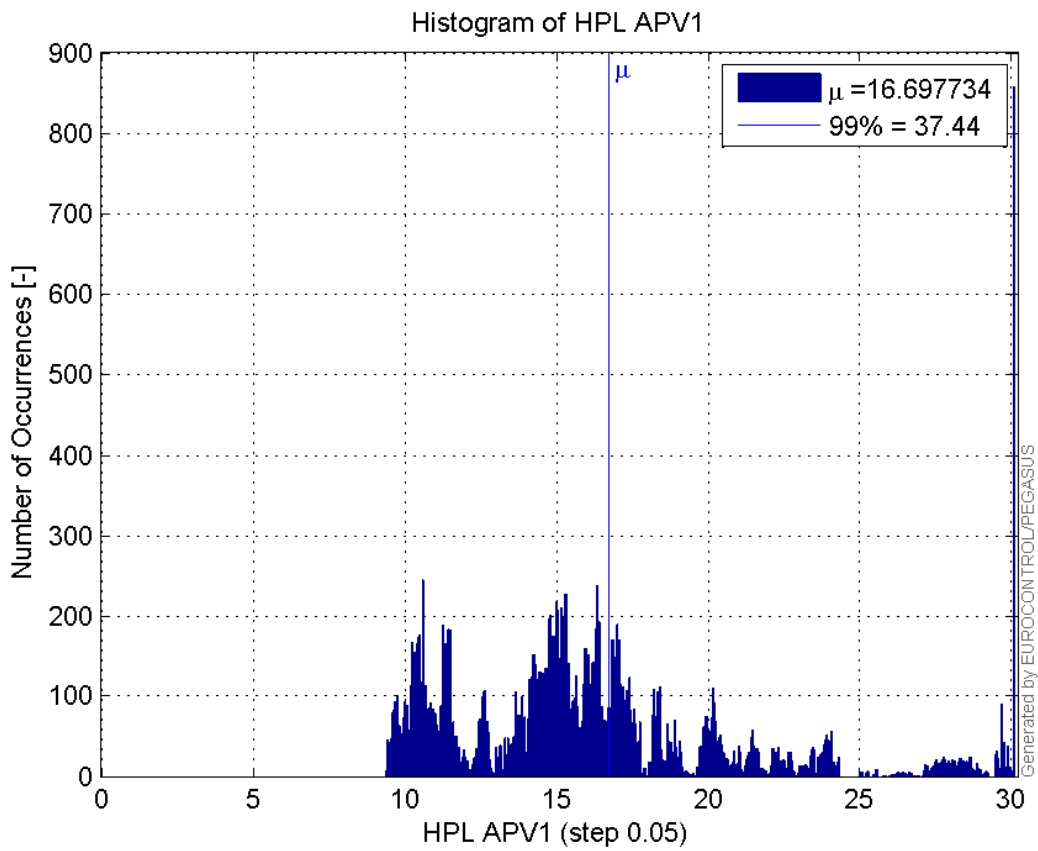
Histogram of HPE APV1:



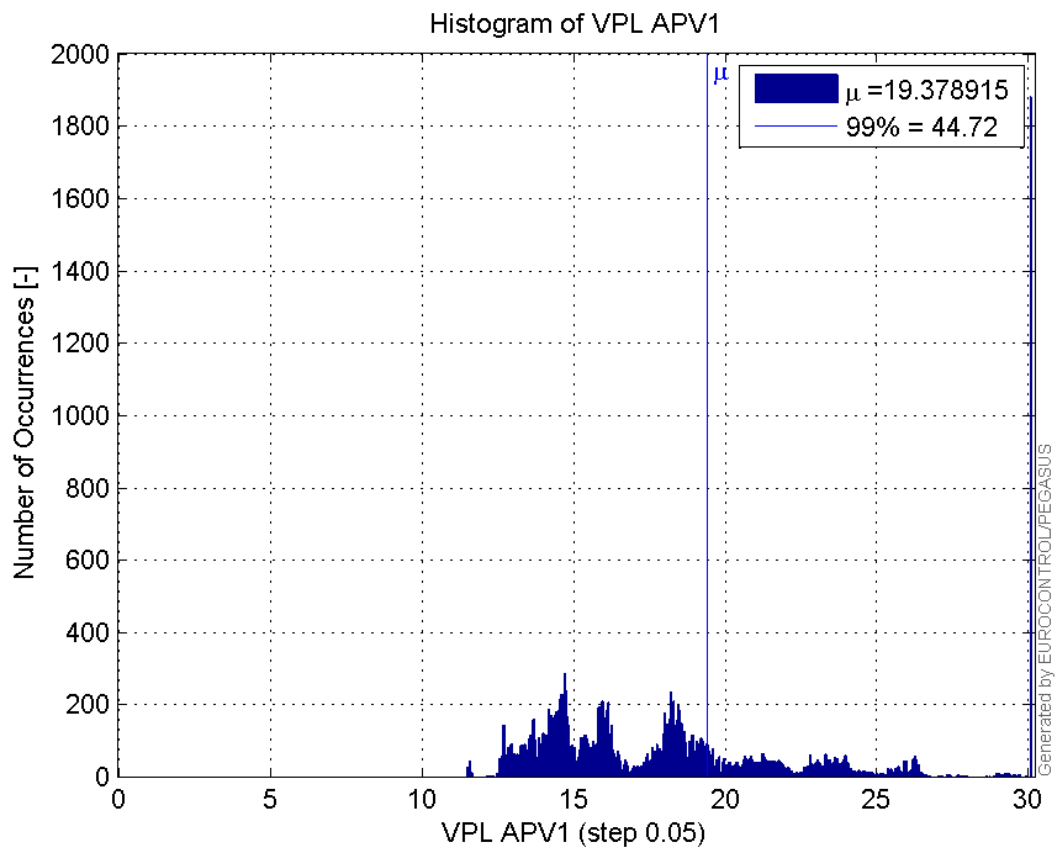
Histogram of VPE APV1:



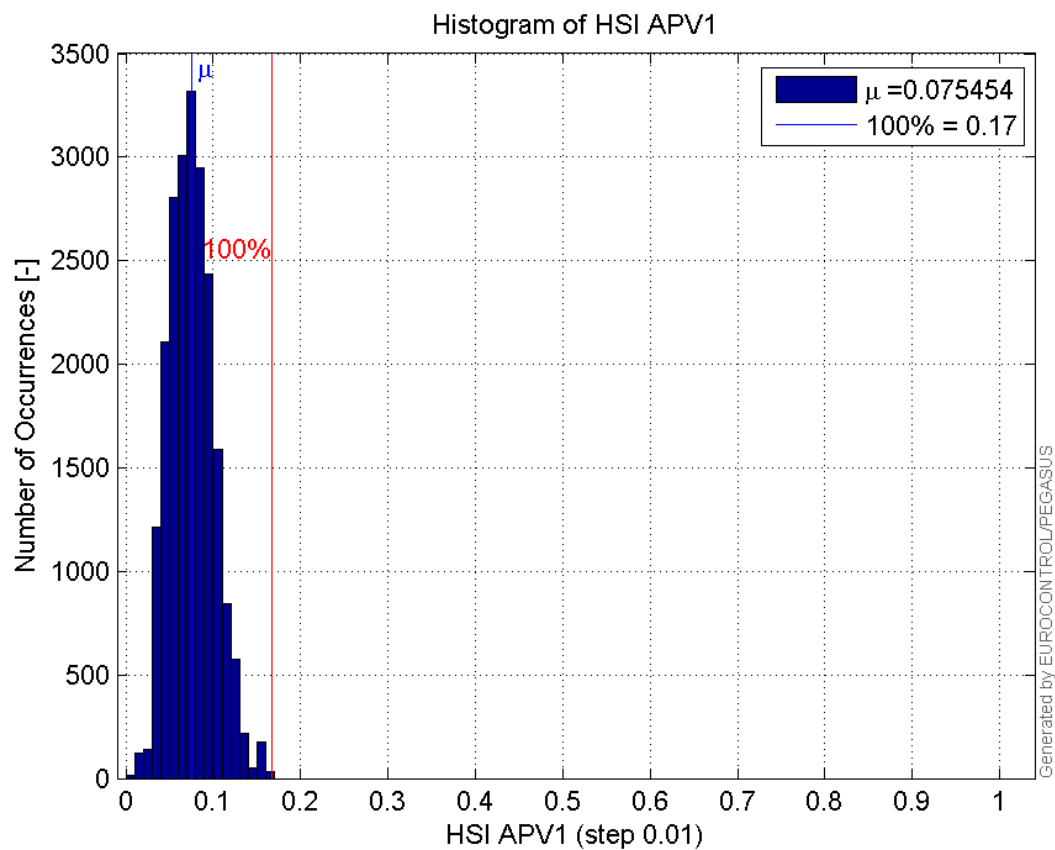
Histogram of HPL APV1:



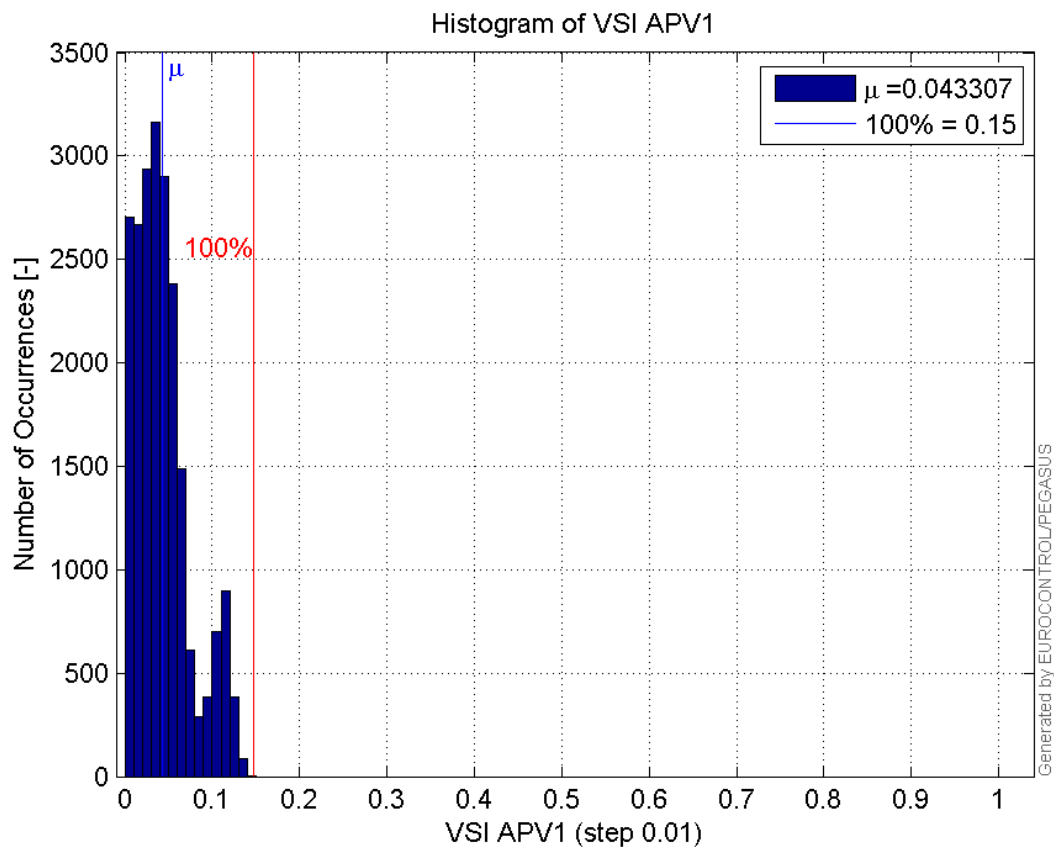
Histogram of VPL APV1:



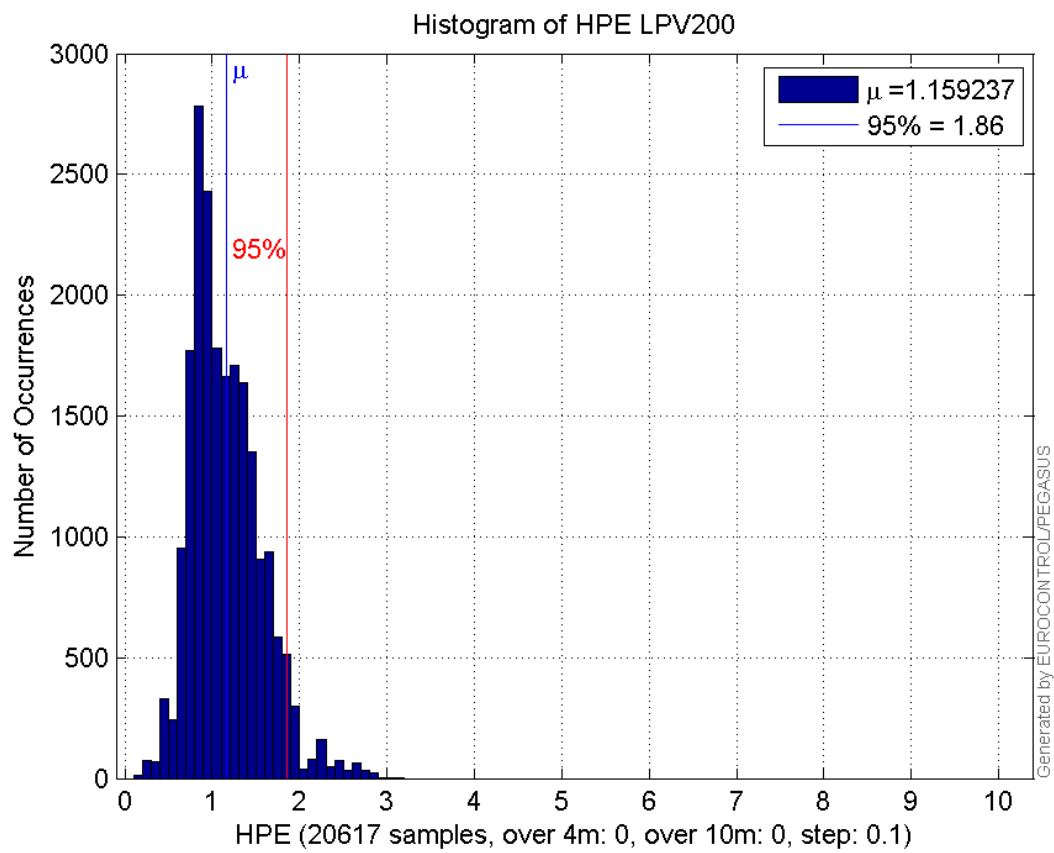
Histogram of HSI APV1:



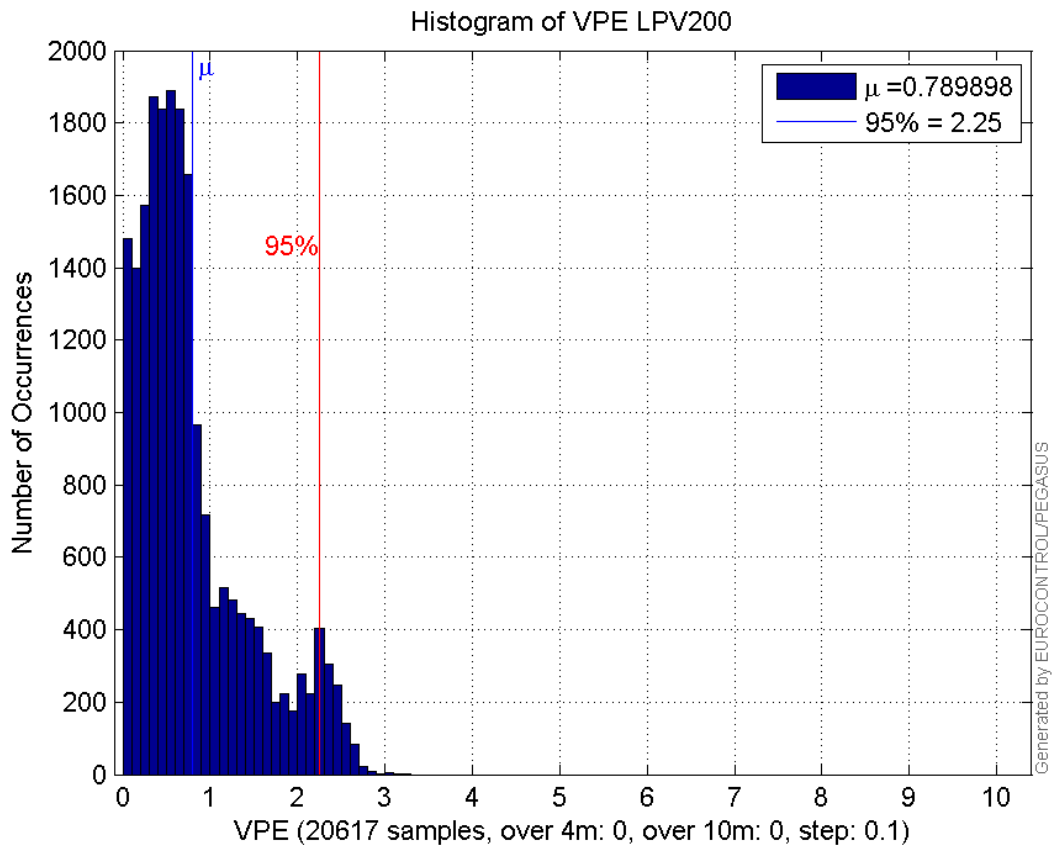
Histogram of VSI APV1:



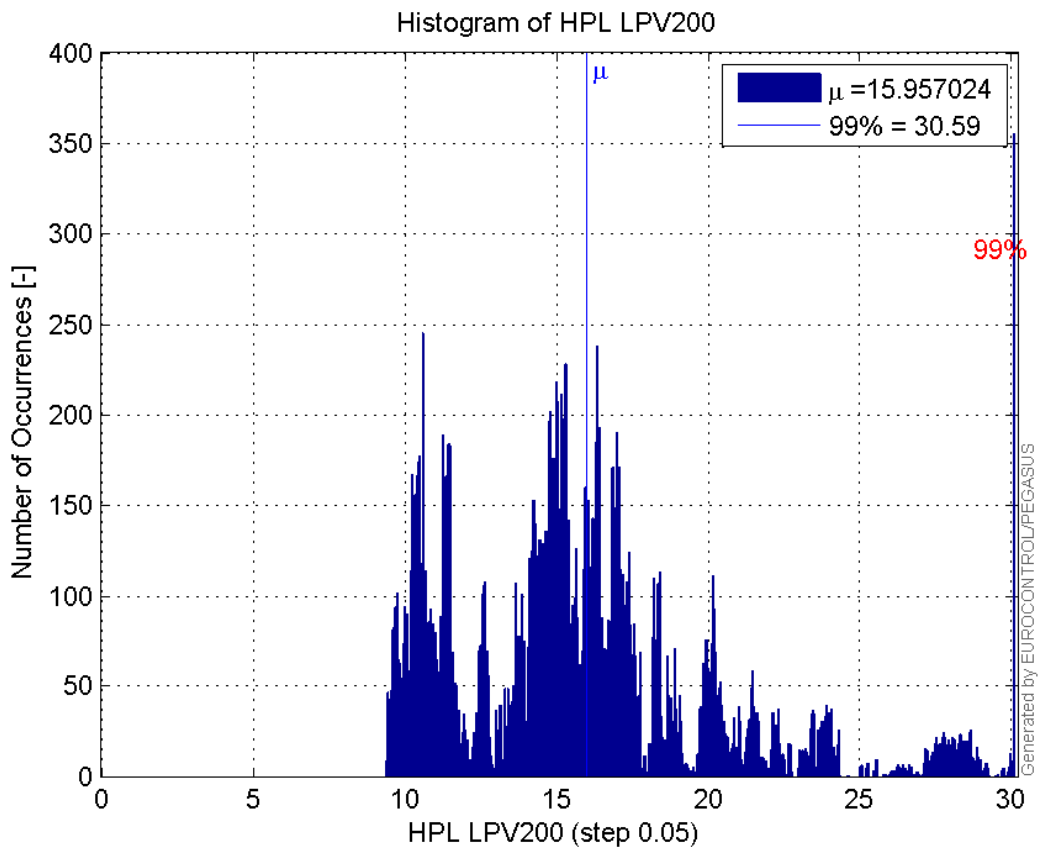
Histogram of HPE LPV200:



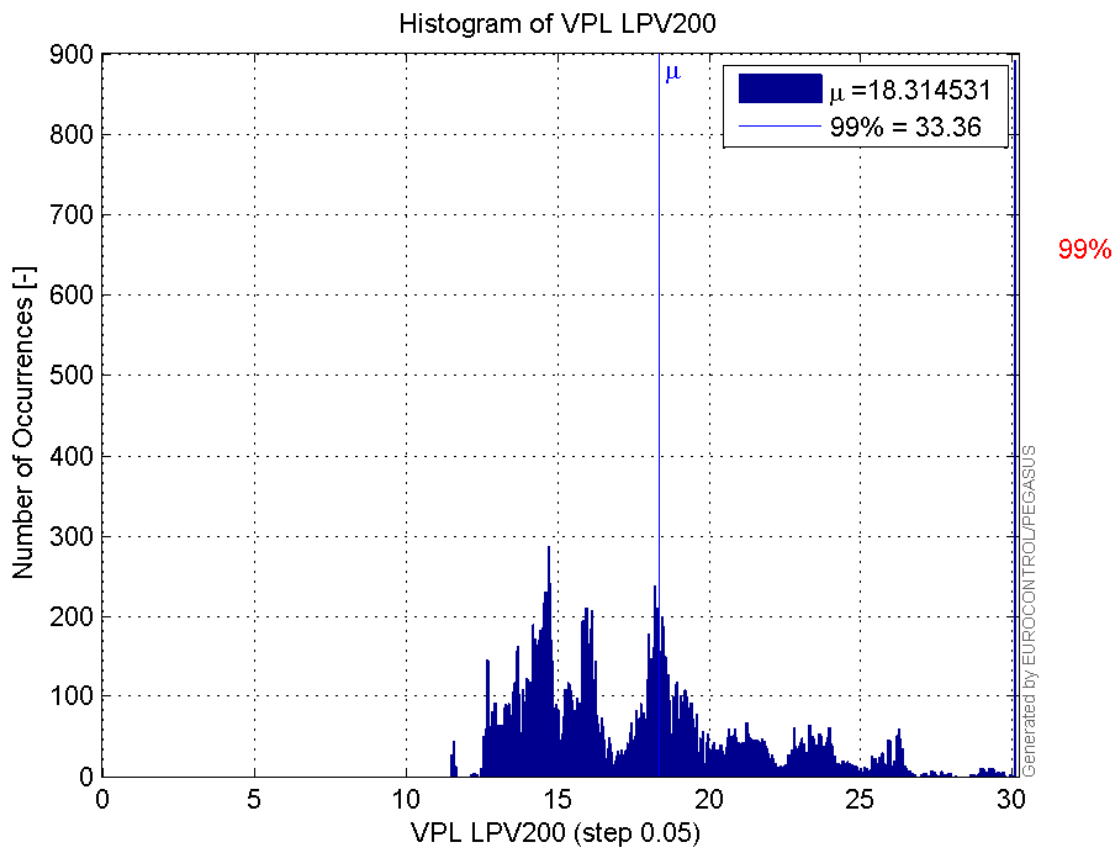
Histogram of VPE LPV200:



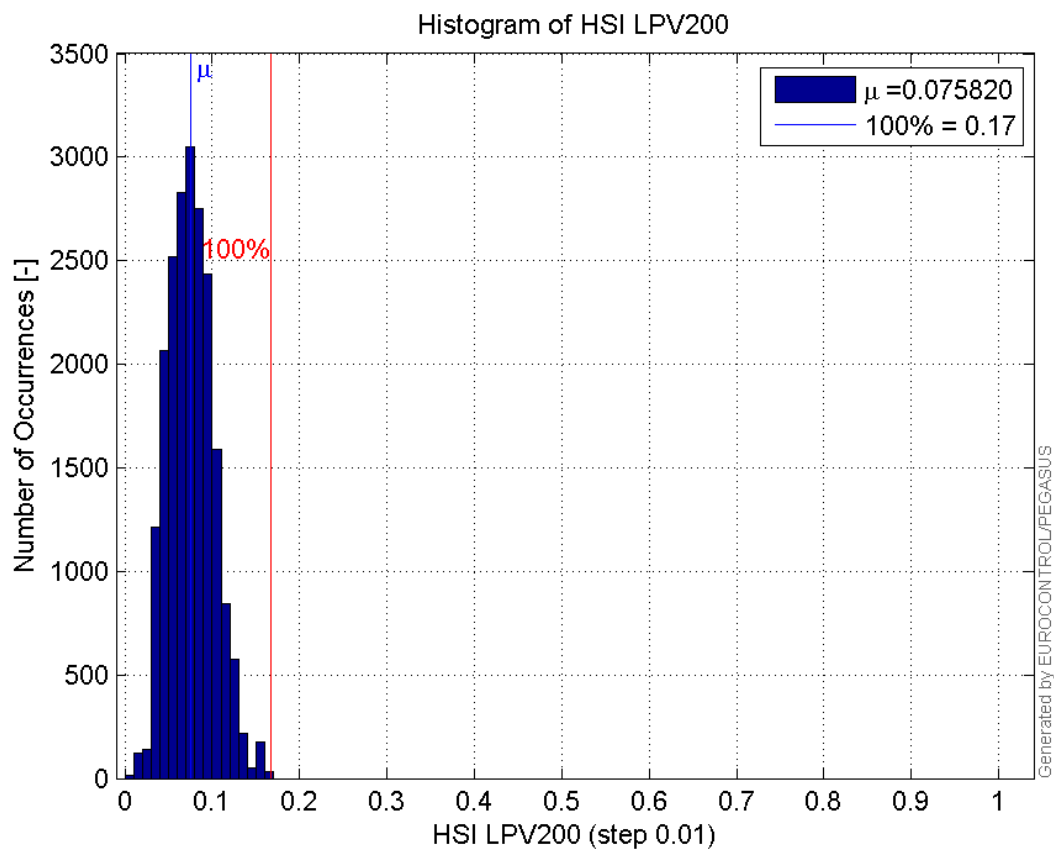
Histogram of HPL LPV200:



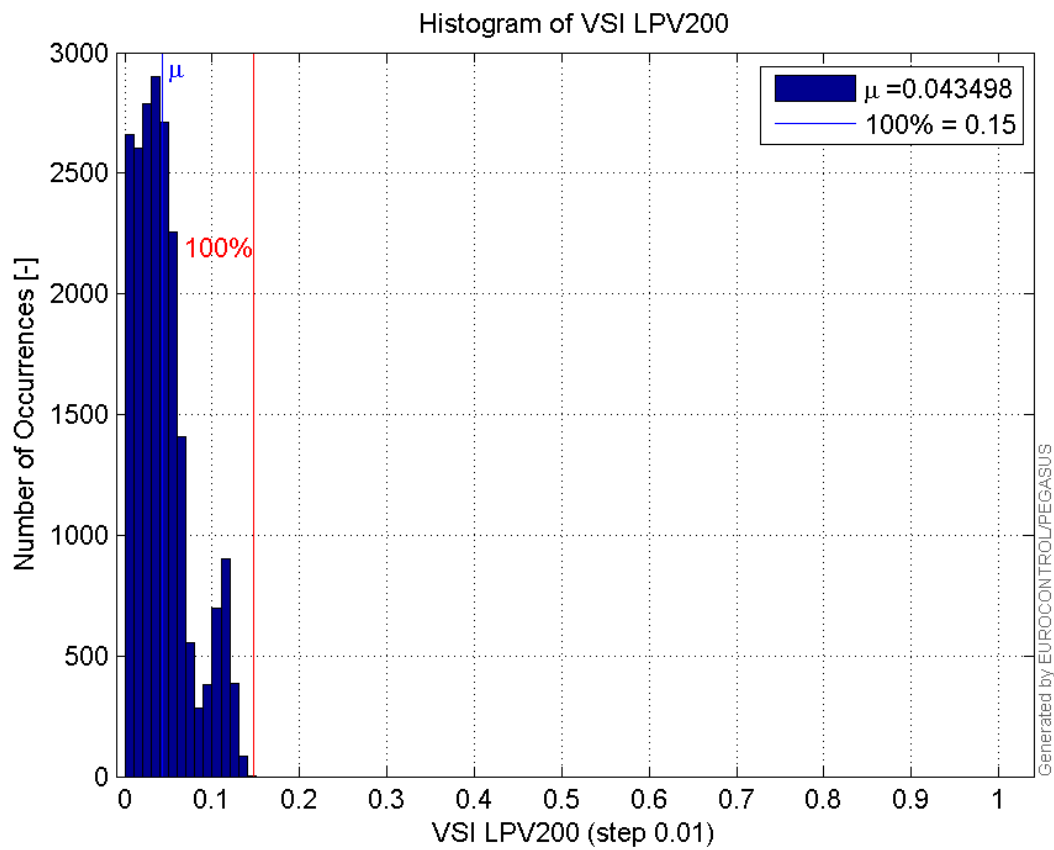
Histogram of VPL LPV200:



Histogram of HSI LPV200:

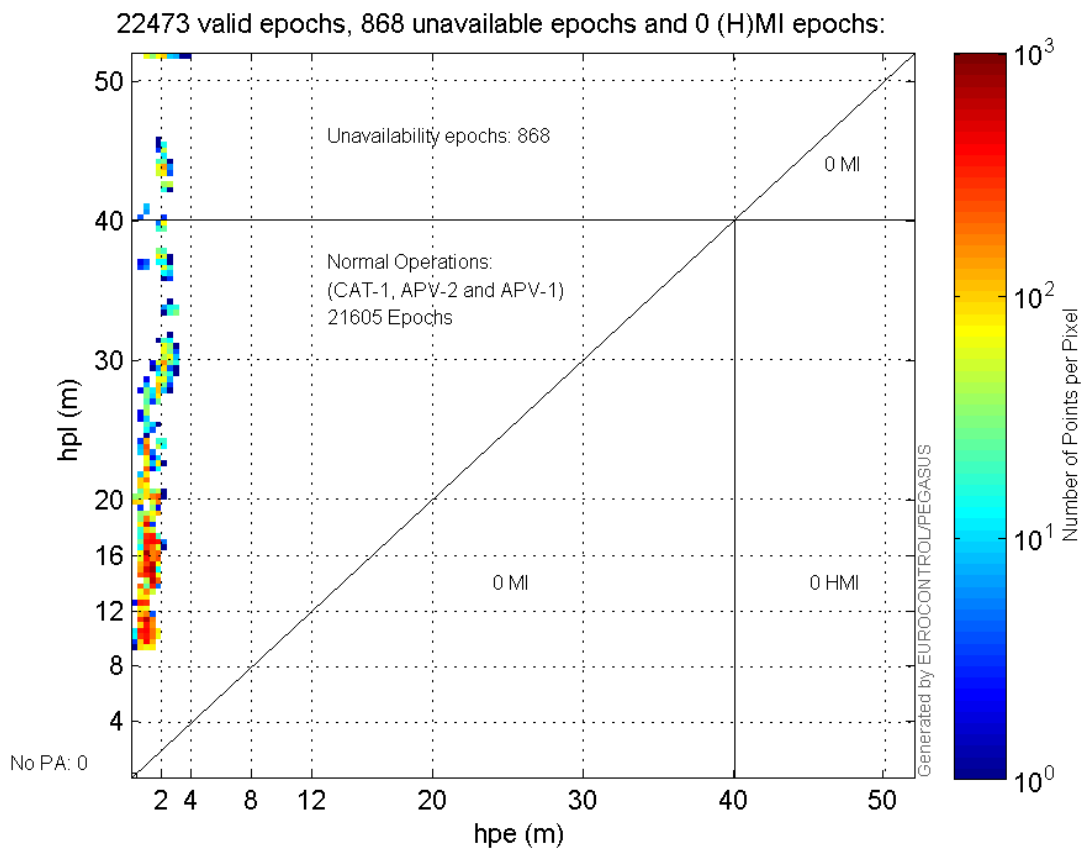


Histogram of VSI LPV200:



Stanford Plots

Horizontal_Stanford_Plot_SBAS:



results

Name	Section	Value
init_lat	results	50.4391
init_lon	results	30.4298
init_alt	results	238.041
mi_numbers	results	0

SBAS Messages

start: 07:58:45.129 01.12.2015 (week: 1873 sec: 201525.129)
end: 14:19:32.129 01.12.2015 (week: 1873 sec: 224372.129)
duration: 06:20:47 ..

quality

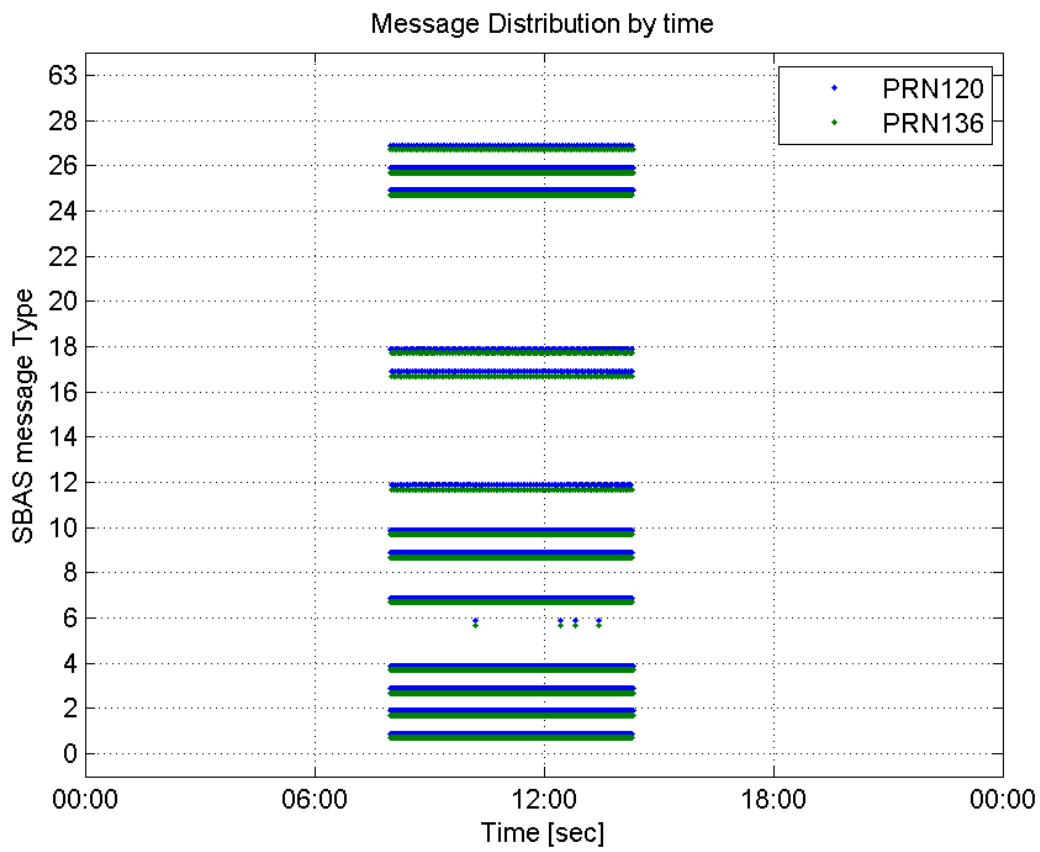
valid samples 45696
total samples 45696
number of SBAS PRNs 2

SBAS SIS Overview

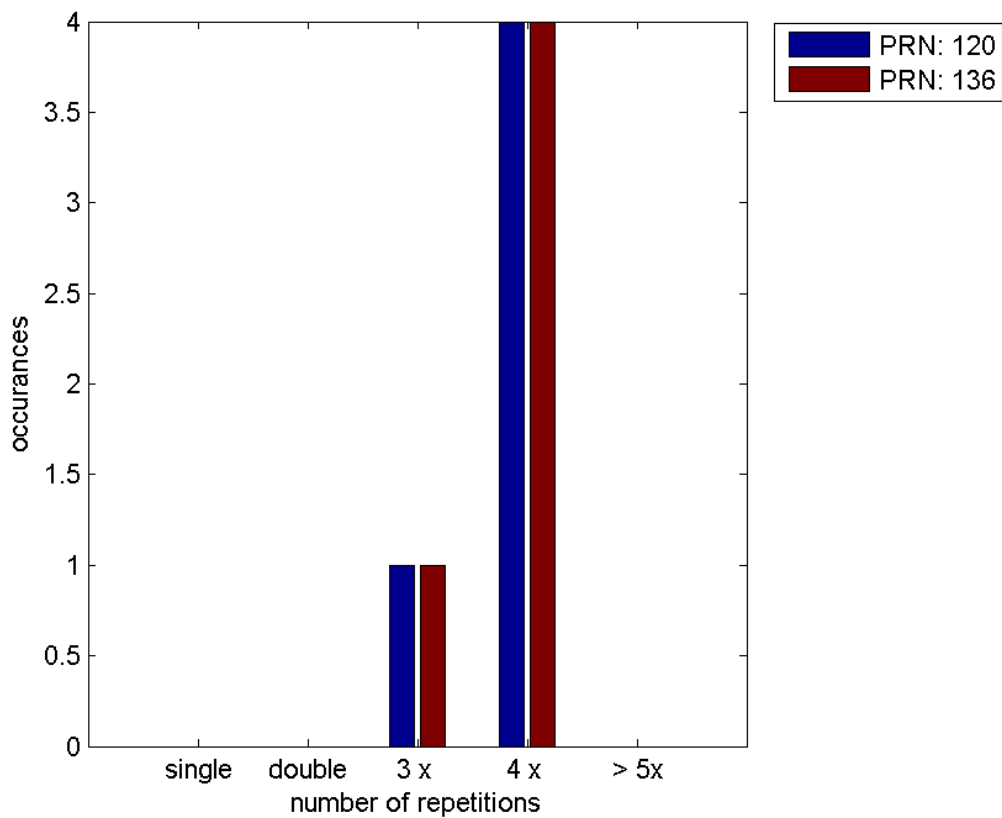
Message Type 6 repetitions :

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

 Message Distribution by time:



Message Type 6 repetitions:



Broadcast SBAS Messages :

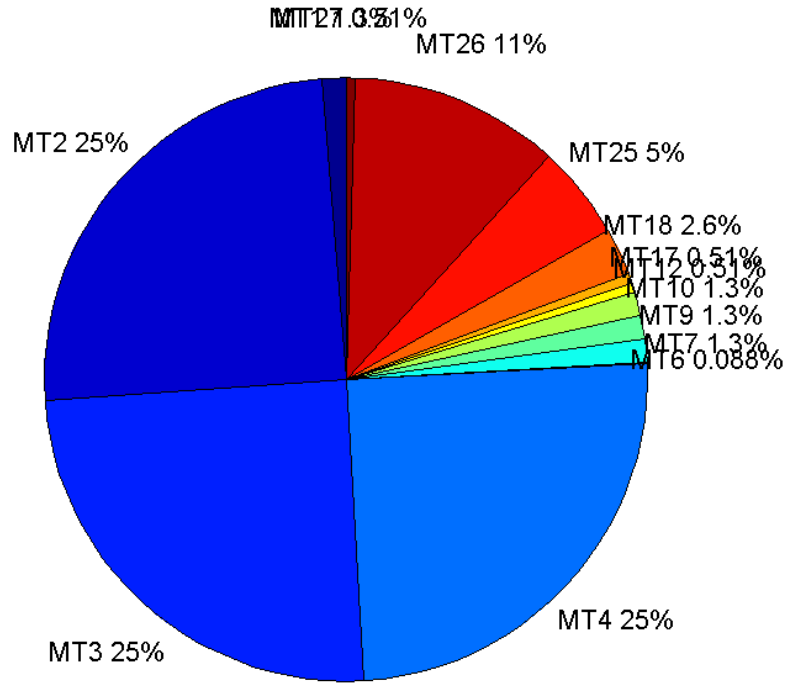
	number of messages	%
MT 0	0	0
MT 1	287	1.25613
MT 2	5680	24.8599
MT 3	5680	24.8599
MT 4	5680	24.8599
MT 5	0	0
MT 6	20	0.087535
MT 7	287	1.25613
MT 9	287	1.25613
MT 10	287	1.25613
MT 12	116	0.507703
MT 17	117	0.51208
MT 18	585	2.5604
MT 24	0	0
MT 25	1145	5.01138
MT 26	2560	11.2045
MT 27	117	0.51208
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22848	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.6014	0	0	0
MT 2	4	9	4.02272	5	0	0
MT 3	4	9	4.02254	5	0	0
MT 4	4	9	4.02272	5	0	0
MT 5	--	--	--	--	--	--
MT 6	1	8010	609.737	4	3	4
MT 7	76	81	79.6434	0	0	0
MT 9	75	81	79.5874	0	0	0
MT 10	76	87	79.6573	0	0	0
MT 12	188	205	196.191	115	0	0
MT 17	188	201	196.121	0	0	0
MT 18	4	171	39.0171	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	44	19.9458	0	0	0
MT						

26	4	44	8.92614	0	0	0
MT 27	188	201	196.155	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

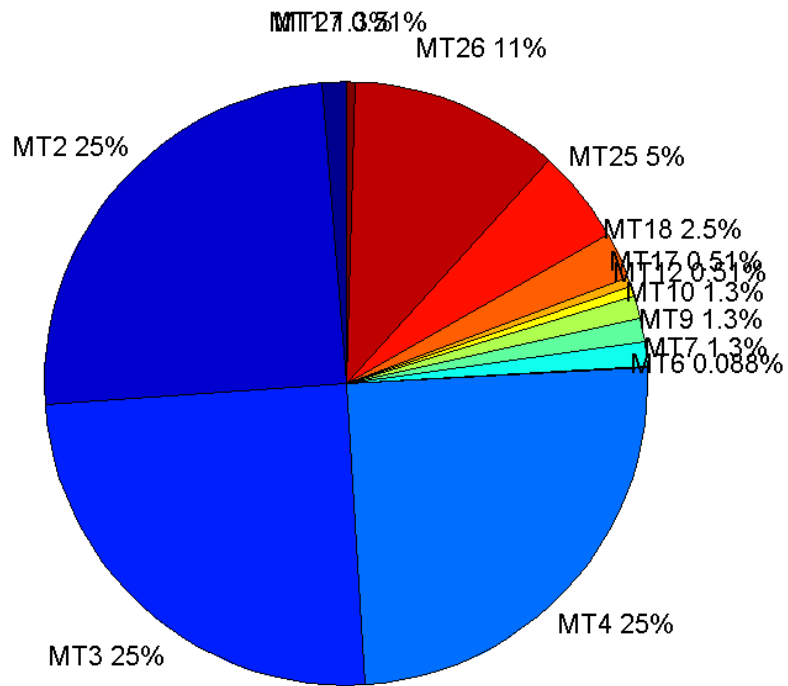
	number of messages	%
MT 0	0	0
MT 1	287	1.25613
MT 2	5680	24.8599
MT 3	5681	24.8643
MT 4	5681	24.8643
MT 5	0	0
MT 6	20	0.087535
MT 7	287	1.25613
MT 9	287	1.25613

MT 10	287	1.25613
MT 12	116	0.507703
MT 17	116	0.507703
MT 18	580	2.53852
MT 24	0	0
MT 25	1148	5.02451
MT 26	2561	11.2089
MT 27	117	0.51208
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22848	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.6084	0	0	0
MT 2	4	8	4.02201	5	0	0
MT 3	4	8	4.02218	5	0	0
MT 4	4	8	4.02201	5	0	0
MT 5	--	--	--	--	--	--
MT 6	1	8010	609.947	4	3	4
MT 7	76	83	79.6503	0	0	0
MT 9	76	86	79.6783	0	0	0
MT 10	76	82	79.6364	0	0	0
MT 12	184	201	196.409	115	0	0
MT 17	188	201	196.443	0	0	0
MT 18	1	170	39.0708	0	0	0
MT 24	--	--	--	--	--	--
MT 25	2	58	19.8675	0	0	0
MT 26	3	52	8.92188	0	0	0
MT 27	184	201	196.414	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_01EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_12_01EGNOS/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