

DLV3 - x

DLV3 - Constellation

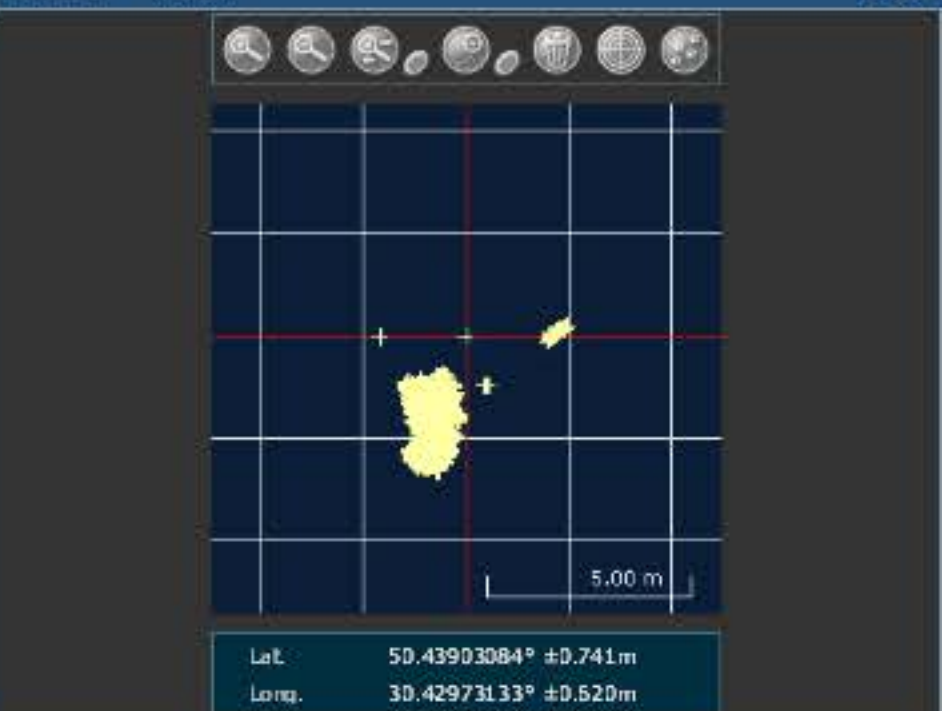


PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - Position

Latitude	50.43903084°	+/- 0.74m
Longitude	30.42973133°	+/- 0.52m
Hgt. (MSL)	190.506m	+/- 1.40m
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	9	
	GPS: L1, L2, L5	
	GLO: L1, L2	
Solution status	Computed	
Thu 19/11/2015 14:24:02 GMT		
Thu 19/11/2015 16:24:02 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

city Kiev
 country Ukraine
 abbreviation NAU
 site Laboratory satellite systems
 version 4.8.2
 program Pegasus
 comment Konin V., Shyshkov F. InsideGNSS, Jan-Feb 2015,
 P.50 - 54
 date 22/11/2015

Position Domain

start: 06:47:31 19.11.2015 (week: 1871 sec: 370051)
end: 14:25:10 19.11.2015 (week: 1871 sec: 397510)
duration: 07:37:40 ..

quality

valid samples 27099
total samples 27460

Event tables

Position discontinuity events type all
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	380906	1.69107	9.39684	0.179962	3.80707	17.5938	0.216387
max normVer	380794	1.66268	9.77003	0.170182	4.07057	17.4923	0.232706
max HPE	378531	7.05311	103.698	0.0680159	-3.17591	59.2638	0.0535893
max VPE	380794	1.66268	9.77003	0.170182	4.07057	17.4923	0.232706
min HPL	370551	0.925024	7.89405	0.11718	0.377862	14.5565	0.0259583
min VPL	377859	1.01982	10.0649	0.101324	1.62352	11.7677	0.137964

Position discontinuity events :

#	Epoch	duration	stable period
1	395216	66	24804

APV-I discontinuity events :

#	Epoch	duration	stable period
1	378498	595	8086
2	395215	345	16122

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	378498	595	8086
2	392253	969	2
3	395215	362	1993

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	378498	595	8086
2	392253	969	2
3	395215	362	1993

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	377849	1	0
2	377853	1	3

First Glance analysis

Duration	27460
Number of Samples	27460
Number of invalid sample	361
Number of no position solution samples	66
Number of missing sample	0
Logging Loss	0
Processing Loss	1.3146
Number of Misleading Information	0
Data gaps	0
Discontinuities	1

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
27033	26159	25128	10	25128

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	2.12174	1.91916	1.78578	1.04416	1.78578
HPEScale 95%	NaN	4.73102	4.75074	4.20628	4.75074
VPE 95%	2.88533	2.8281	2.84233	1.66212	2.84233
VPEscale 95%	NaN	7.70006	5.46226	1.6668	5.46226

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	0.997564	0.965312	0.927267	0.000369017	0.927267
measurements	0.98445	0.952622	0.915076	0.000364166	0.915076
Operational	0.98445	0.952622	0.915076	0.000364166	0.915076

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	1	2	26	2	26
Long	1	2	3	0	3
Independent	1	2	2	0	2
P(disc.)	0.000554877	0.00114683	0.00119389	0	0.00119389
P(slide)	0.000554877	0.00114683	0.00370105	0.3	0.00370105

Integrity events :

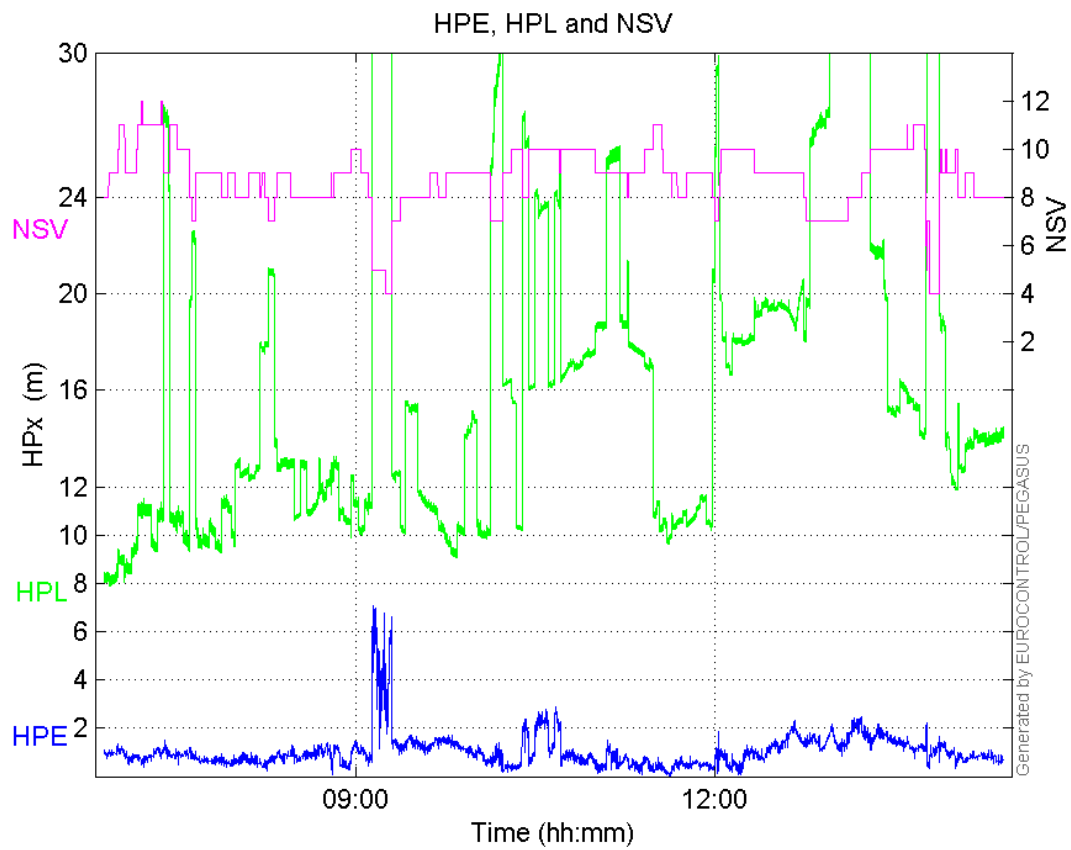
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

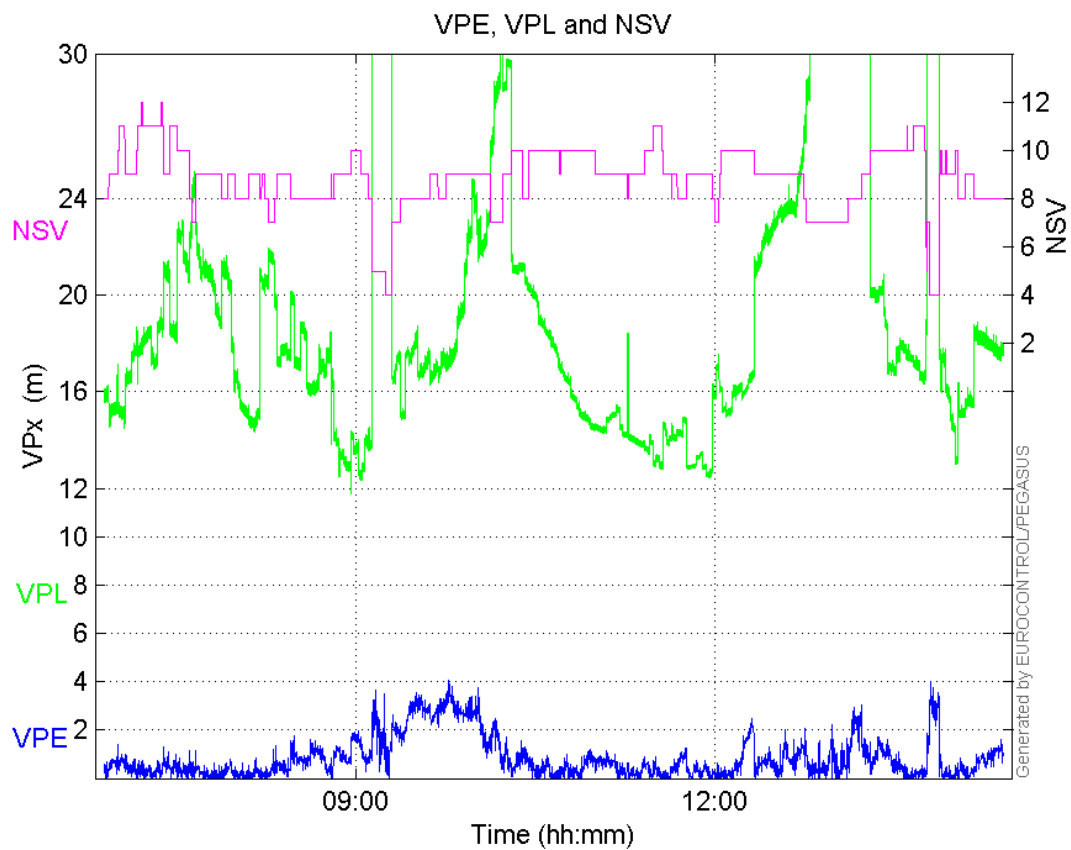
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	27033	26159	25128	10	25128
SIS Availability	0.997564	0.965312	0.927267	0.000369017	0.927267
Local Availability	0.98445	0.952622	0.915076	0.000364166	0.915076
Operational Availability	0.98445	0.952622	0.915076	0.000364166	0.915076
HPE 95%	2.12174	1.91916	1.78578	1.04416	1.78578
HPEscale 95%	NaN	4.73102	4.75074	4.20628	4.75074
VPE 95%	2.88533	2.8281	2.84233	1.66212	2.84233
VPEscale 95%	NaN	7.70006	5.46226	1.6668	5.46226
All Discontinuity Events	1	2	26	2	26
Long Discontinuity Events	1	2	3	0	3
Independent Discontinuity Events	1	2	2	0	2
P(discontinuity)	0.000554877	0.00114683	0.00119389	0	0.00119389
P(sliding window)	0.000554877	0.00114683	0.00370105	0.3	0.00370105
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:

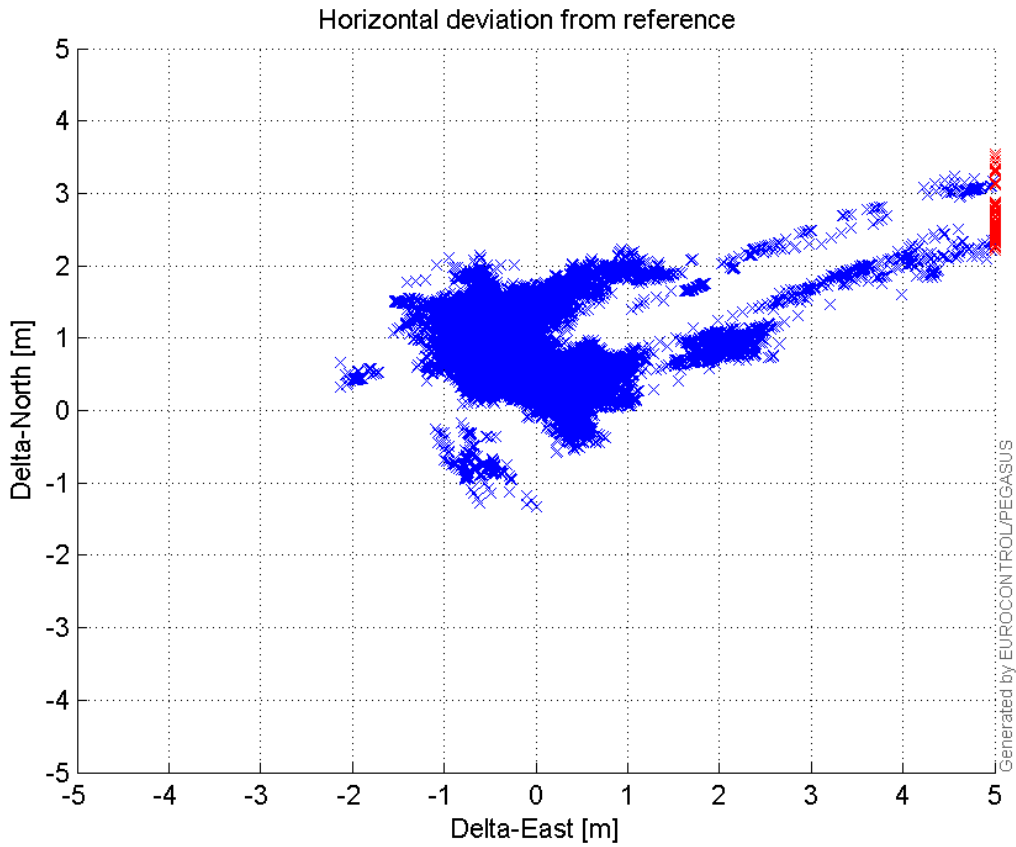


VPE, VPL and NSV:



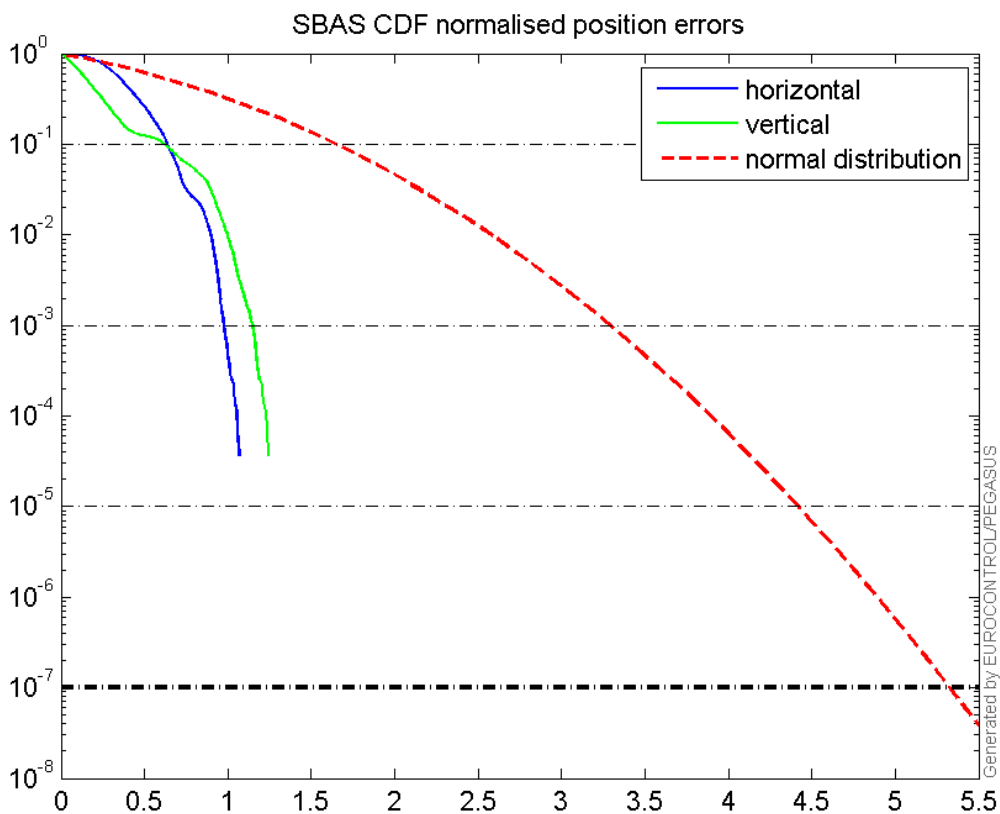
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

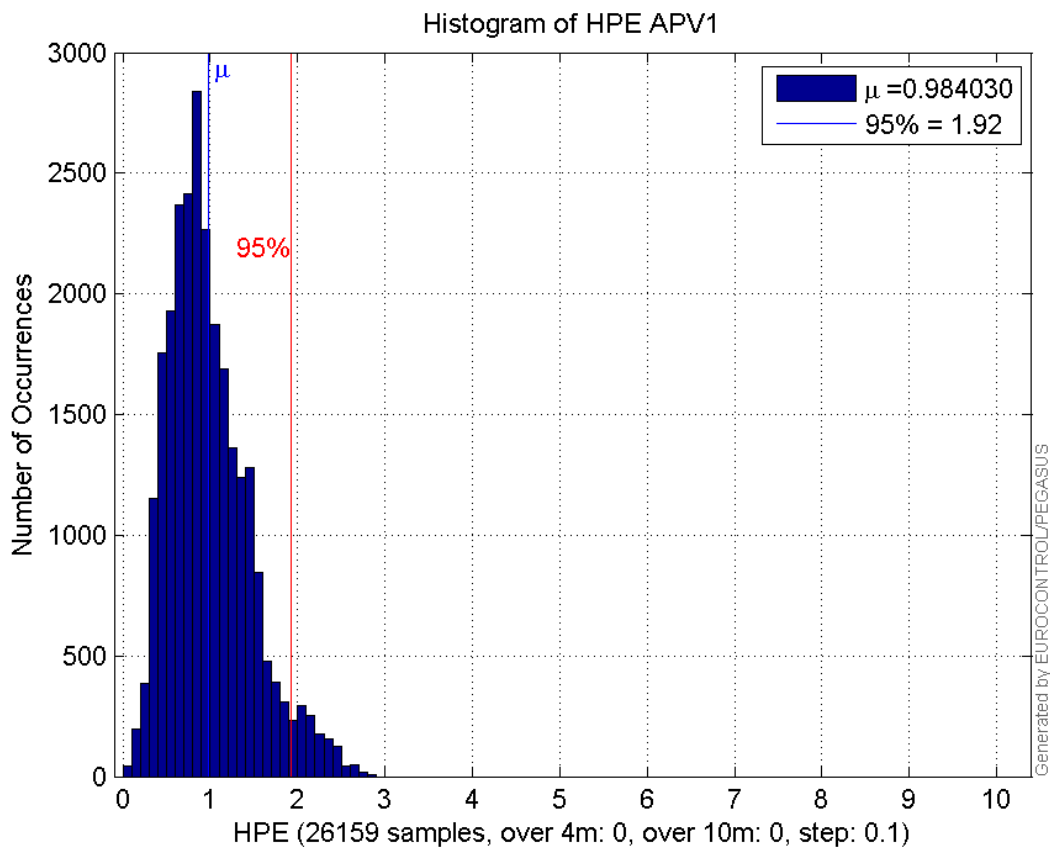
number	26159
sum	25741.231
sum2	31048.926
prctile95	1.9191564
prctile99	2.3781146
number	26159
sum	21424.995
sum2	34831.594
prctile95	2.8280988
prctile99	3.2395803
number	26159
sum	421047.11
sum2	7901456.4
prctile95	30.627475
prctile99	37.593093
number	26159
sum	500738.18
sum2	10531221
prctile95	33.17025
prctile99	41.553757
number	26159
sum	1717.2723
sum2	136.48573
prctile95	0.11827542
prctile99	0.1498096
number	26159
sum	1154.8751
sum2	102.67607
prctile95	0.15400111
prctile99	0.18719108
number	25128
sum	24003.562
sum2	27948.224
prctile95	1.7857777
prctile99	2.3621701
number	25128
sum	20134.943
sum2	32530.878
prctile95	2.8423343
prctile99	3.2496103
number	25128
sum	384557.13
sum2	6602671.7
prctile95	26.78037
prctile99	30.875366
number	25128
sum	459782.2
sum2	8899606.4
prctile95	28.5274

prctile99 33.231738
number 25128
sum 1667.446
sum2 133.88135
prctile95 0.11876842
prctile99 0.1501432
number 25128
sum 1121.6625
sum2 101.11084
prctile95 0.15606448
prctile99 0.18779603

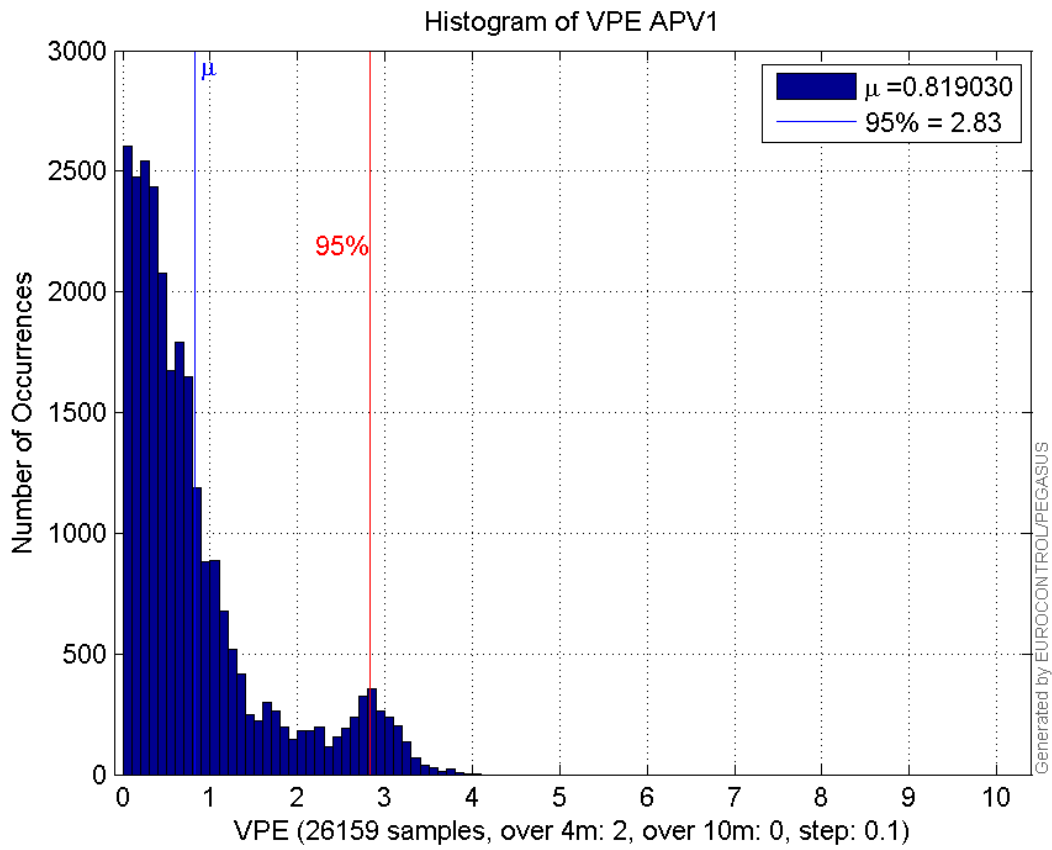
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	0.98403	0.467573	0.899721	1.91916	2.37811	1.08946
HPL	16.0957	6.55633	14.1889	30.6275	37.5931	17.3797
VPE	0.81903	0.812865	0.556056	2.8281	3.23958	1.15392
VPL	19.1421	6.01385	17.4571	33.1703	41.5538	20.0645

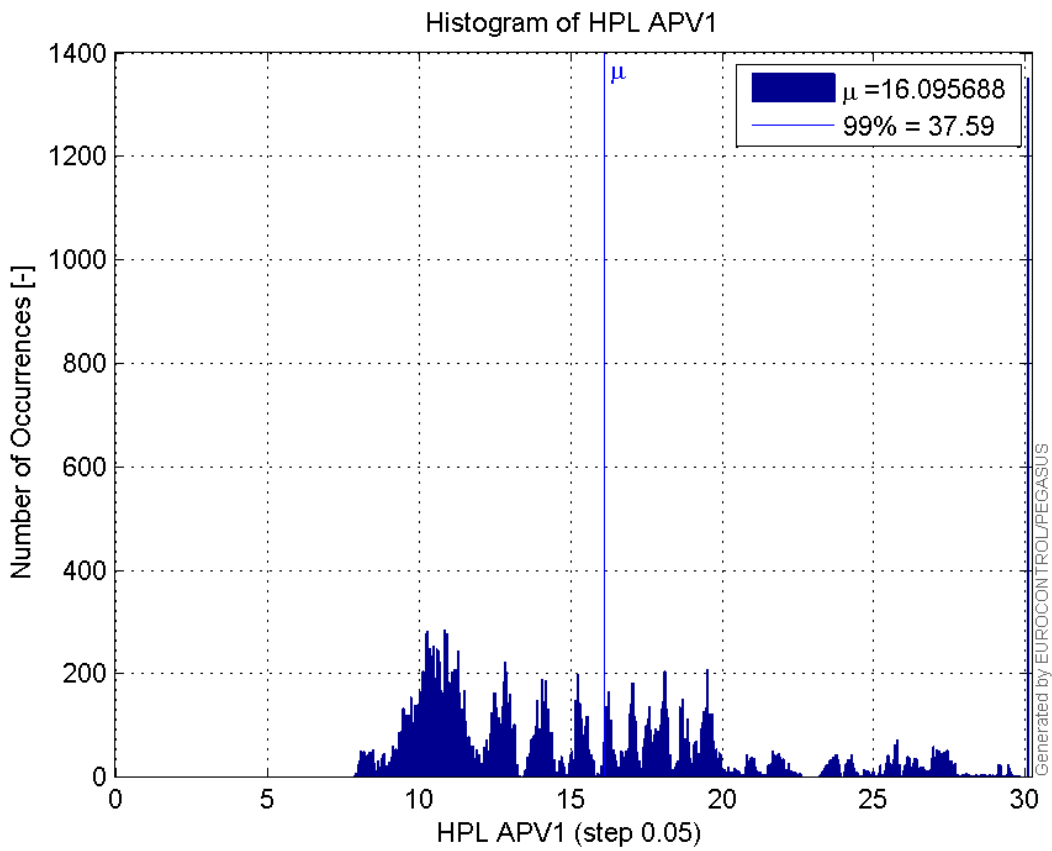
Histogram of HPE APV1:



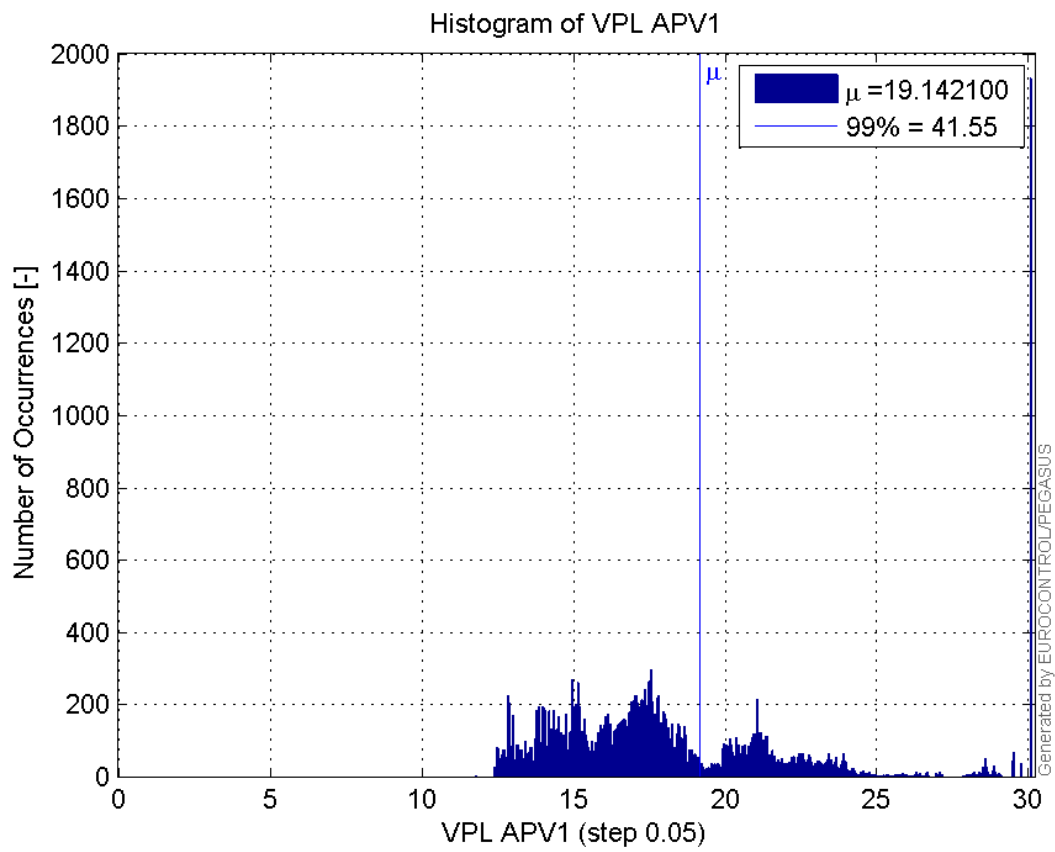
Histogram of VPE APV1:



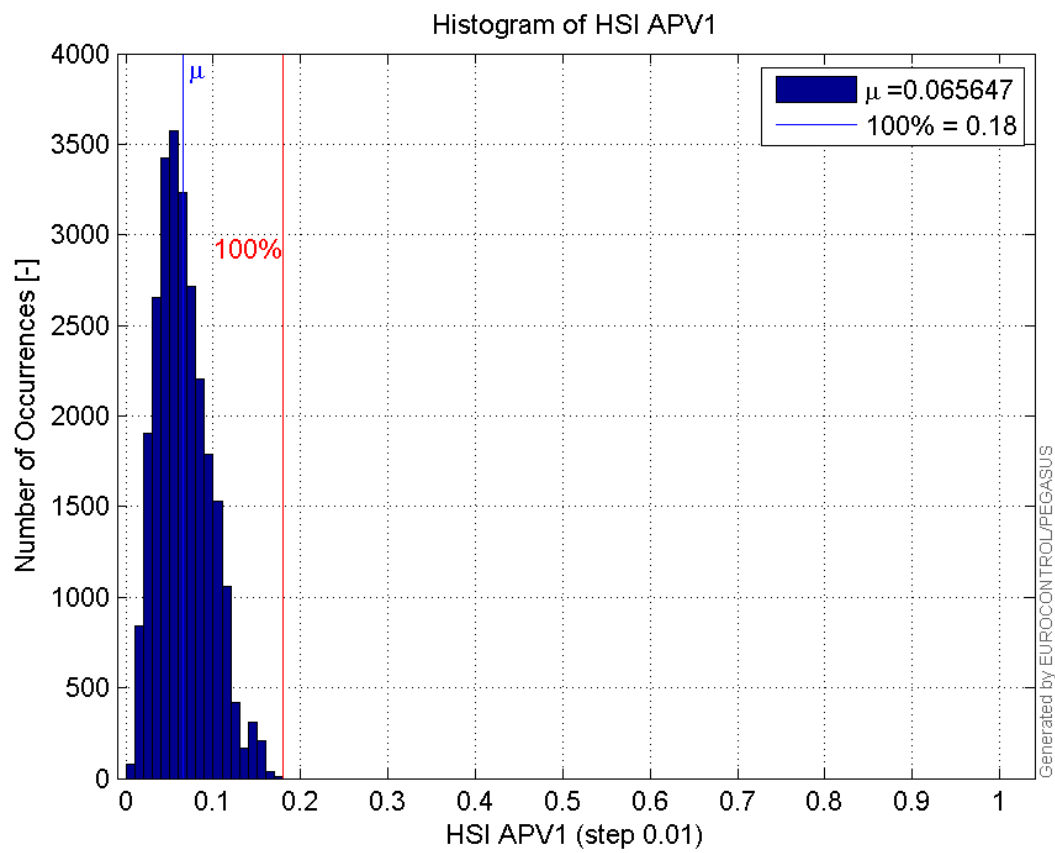
Histogram of HPL APV1:



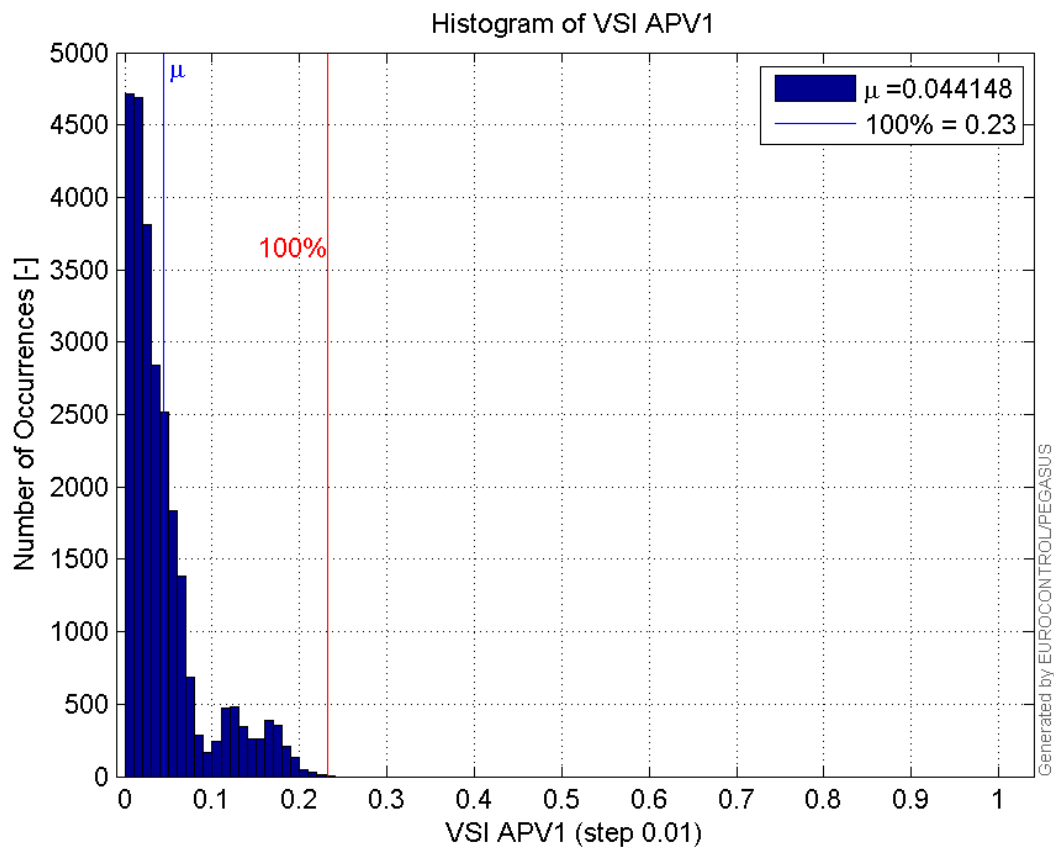
Histogram of VPL APV1:



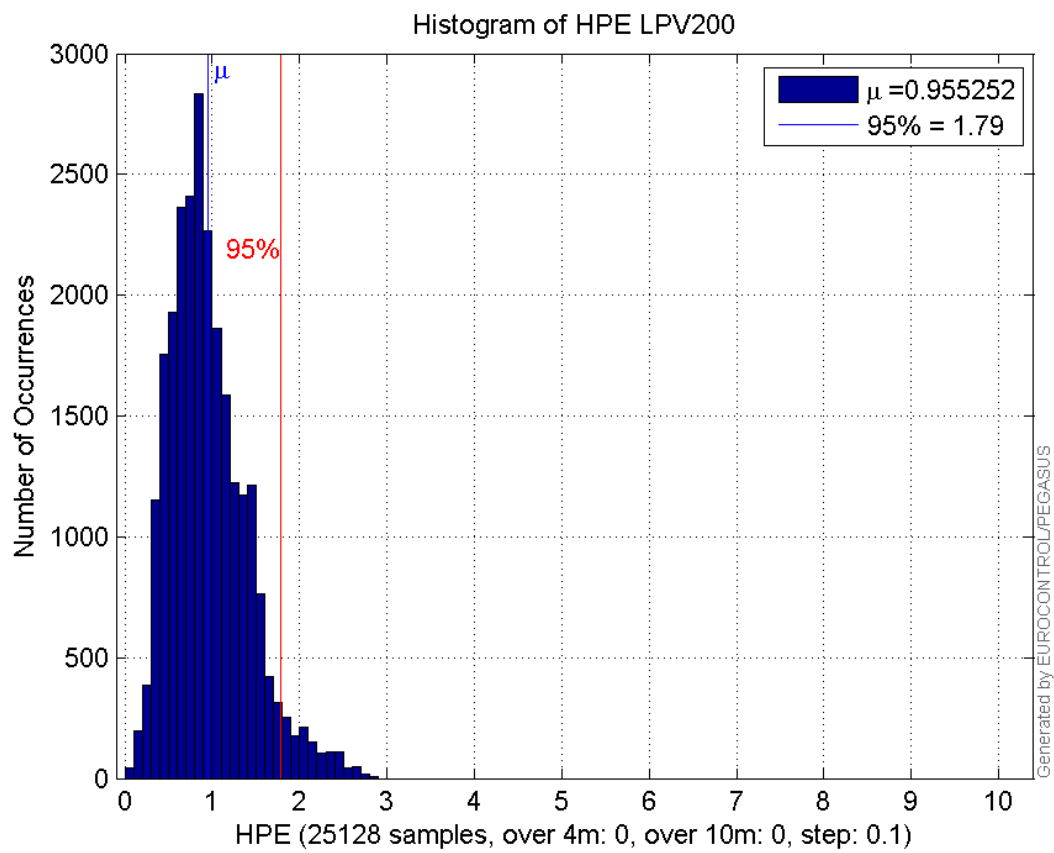
Histogram of HSI APV1:



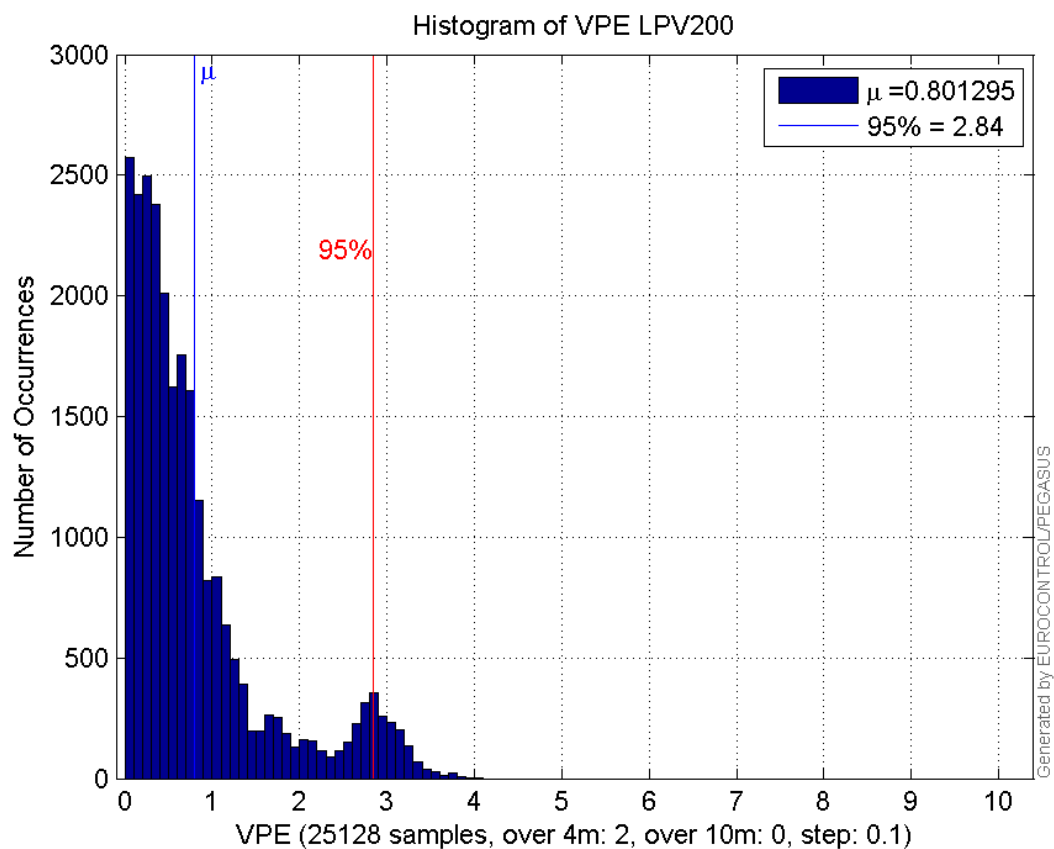
Histogram of VSI APV1:



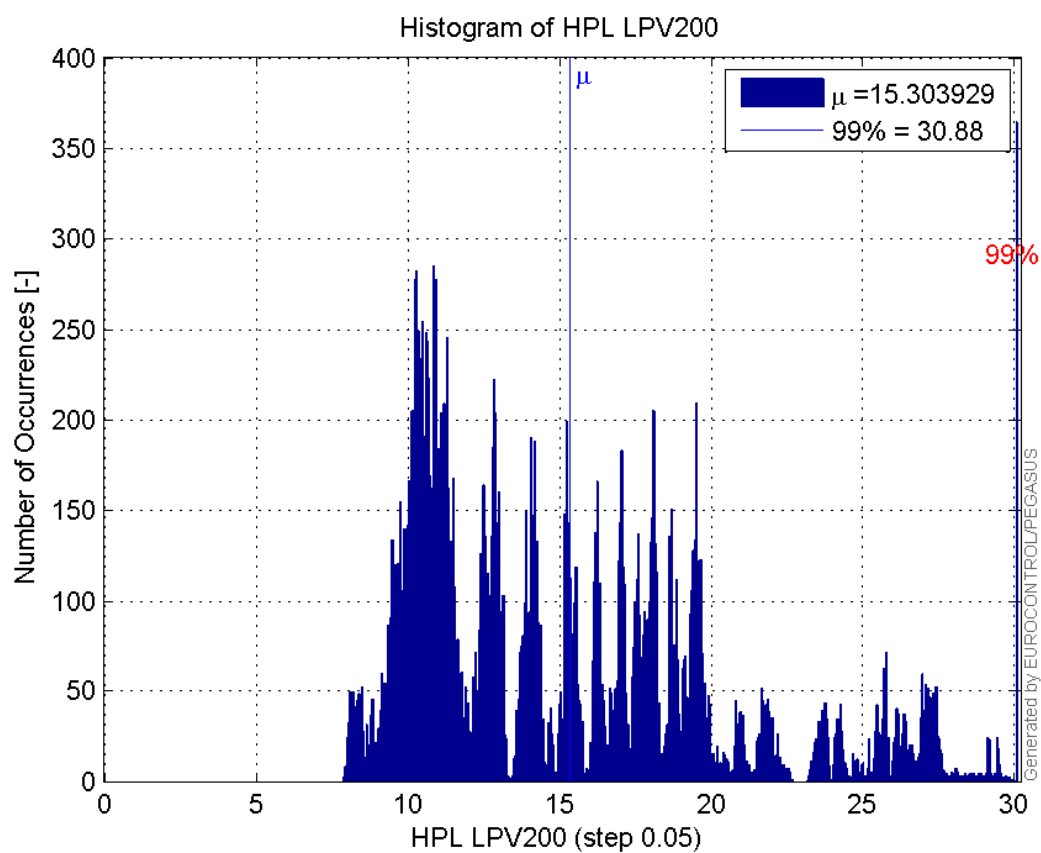
Histogram of HPE LPV200:



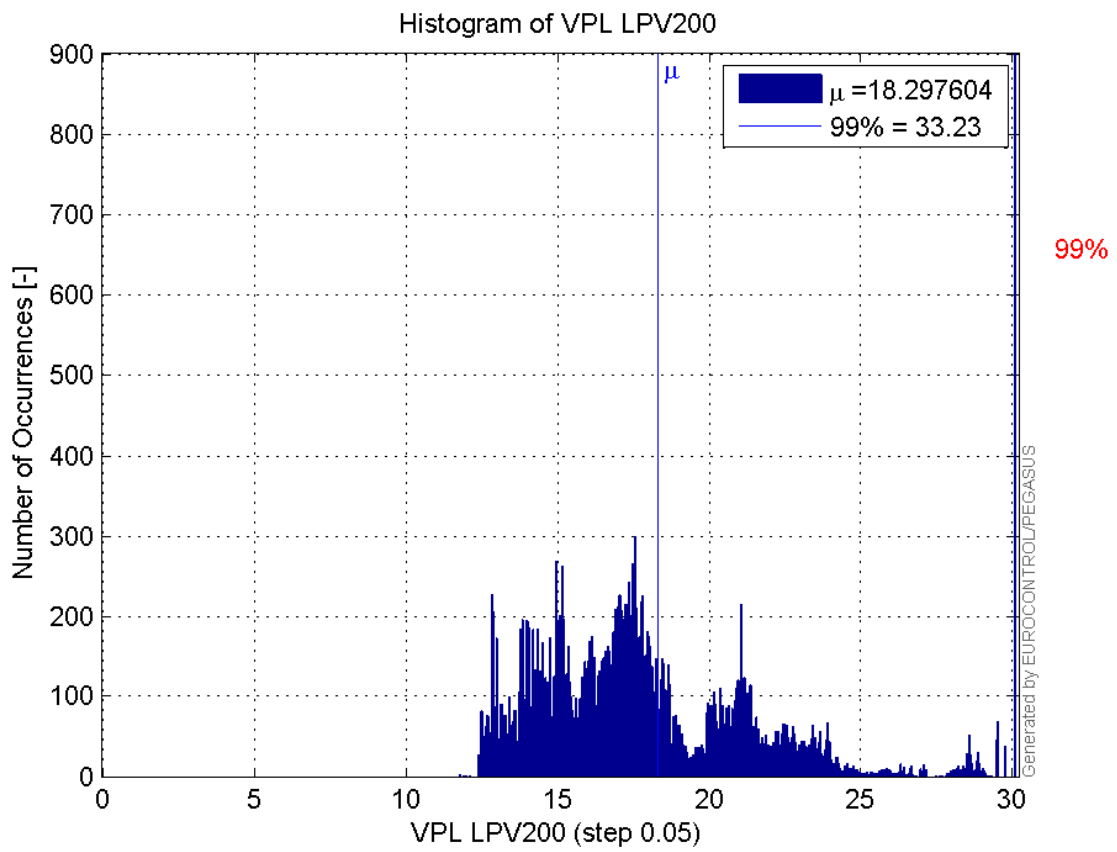
Histogram of VPE LPV200:



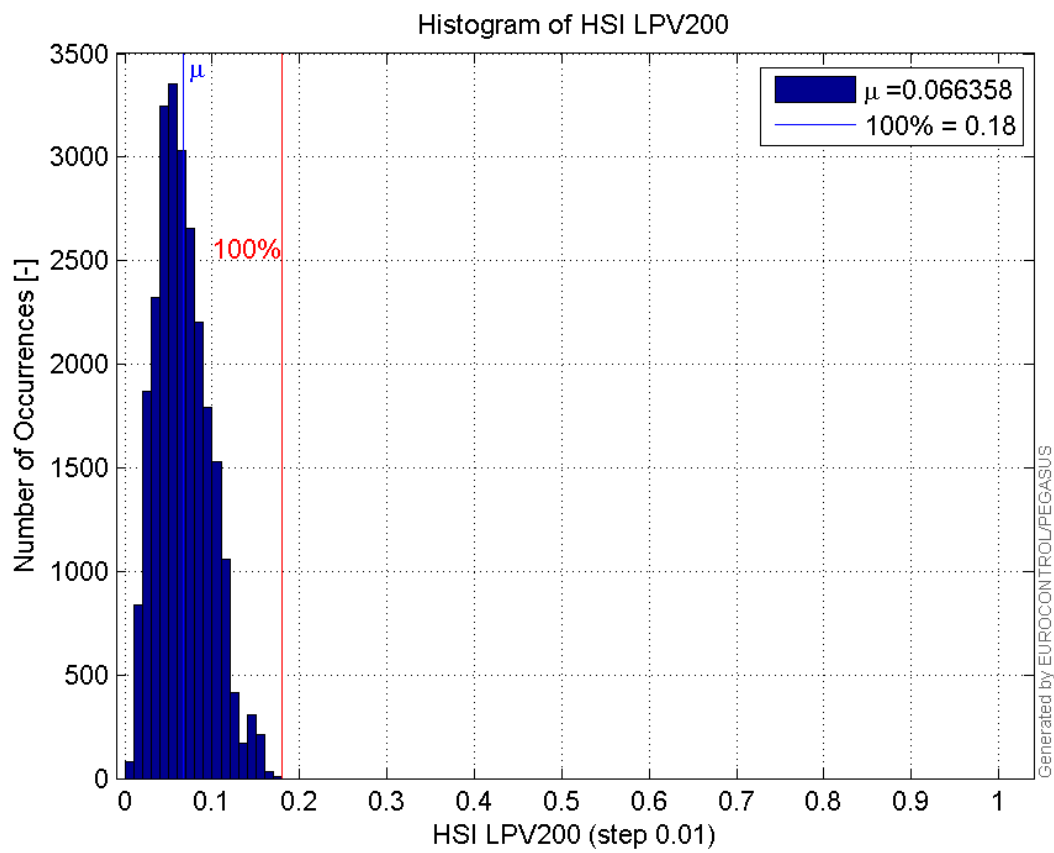
Histogram of HPL LPV200:



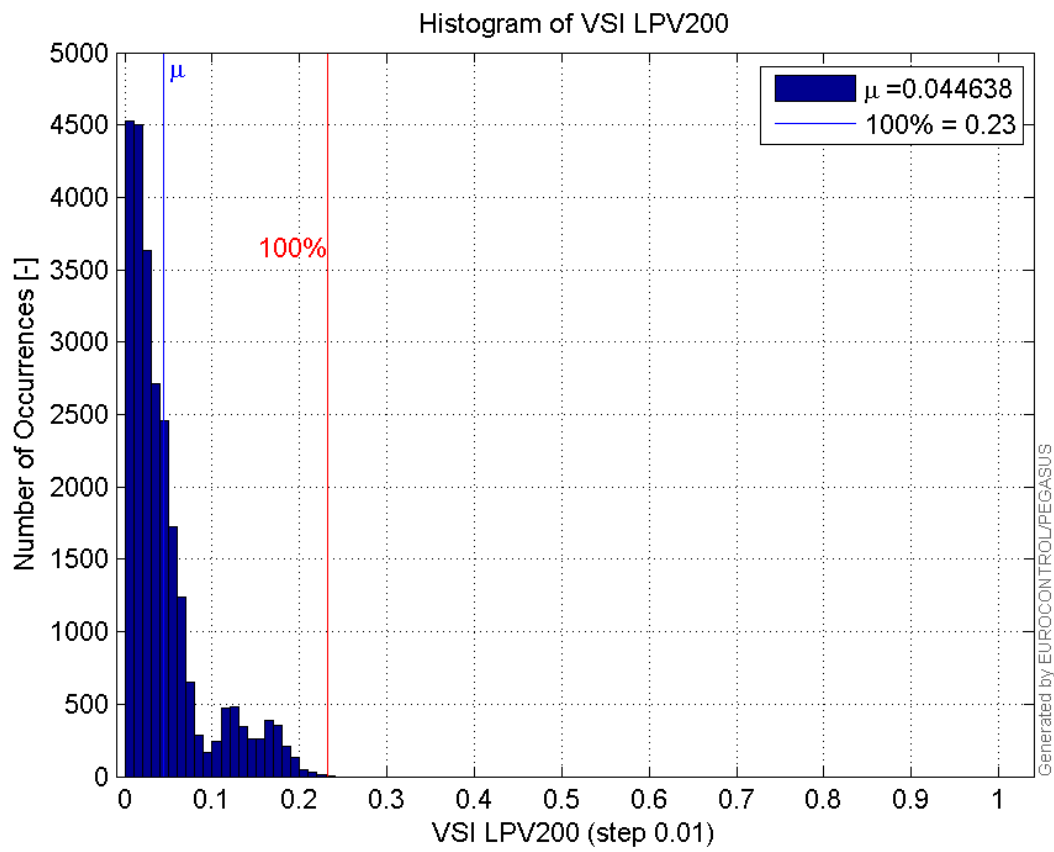
Histogram of VPL LPV200:



Histogram of HSI LPV200:

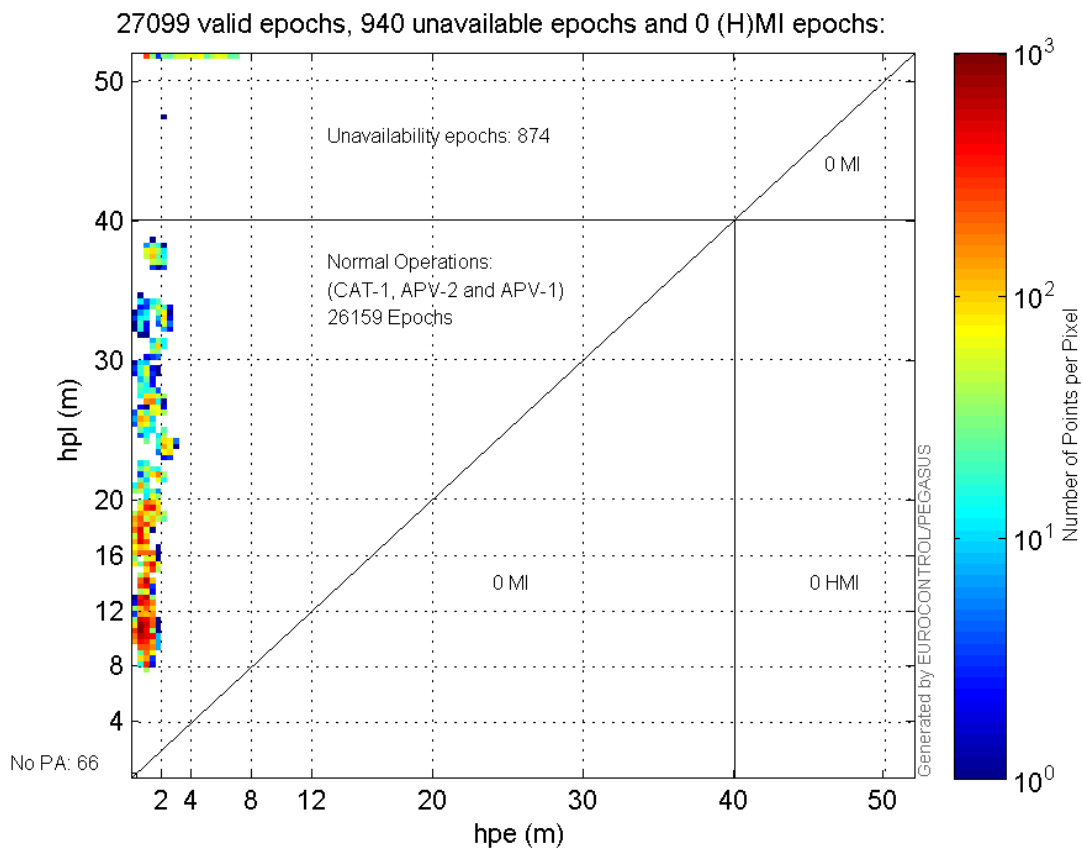


Histogram of VSI LPV200:

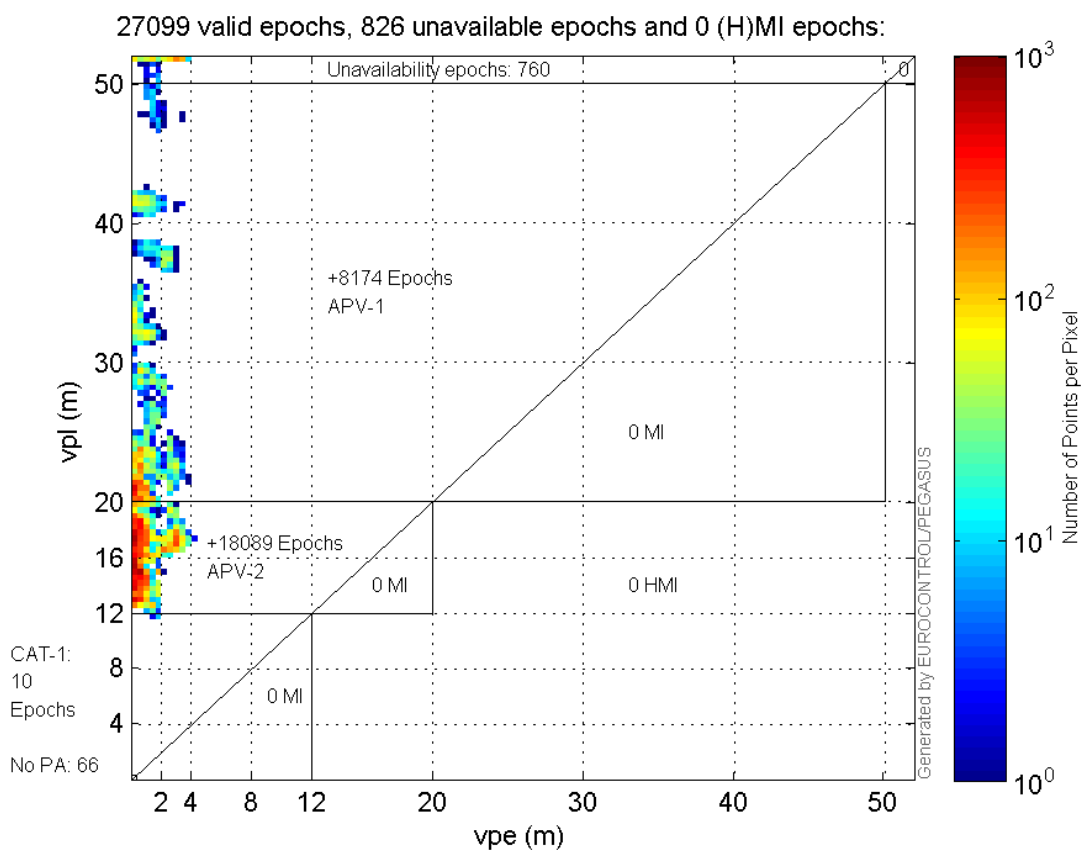


Stanford Plots

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:/PegasusDateGob/job/2015_11_19EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_19EGNOS/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	228.358
mi_numbers	results	0

SBAS Messages

start: 06:47:30.129 19.11.2015 (week: 1871 sec: 370050.129)
end: 14:25:9.129 19.11.2015 (week: 1871 sec: 397509.129)
duration: 07:37:39 ..

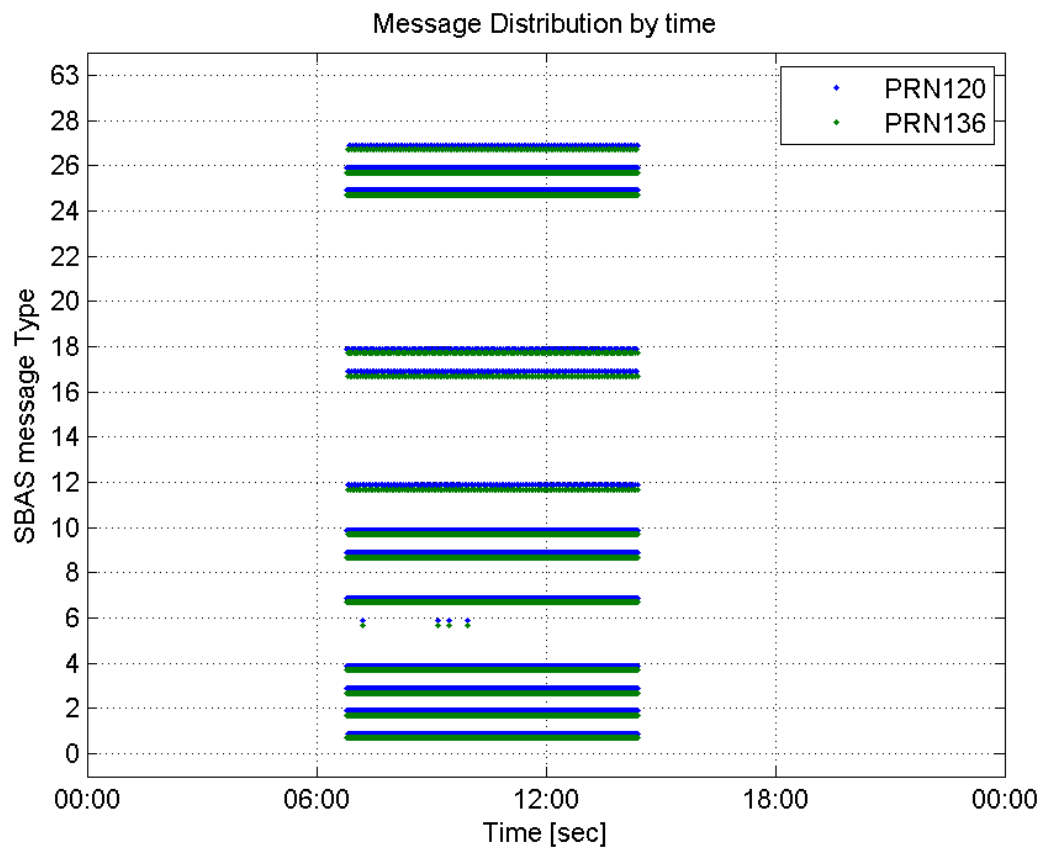
quality

valid samples 54918
total samples 54918
number of SBAS PRNs 2

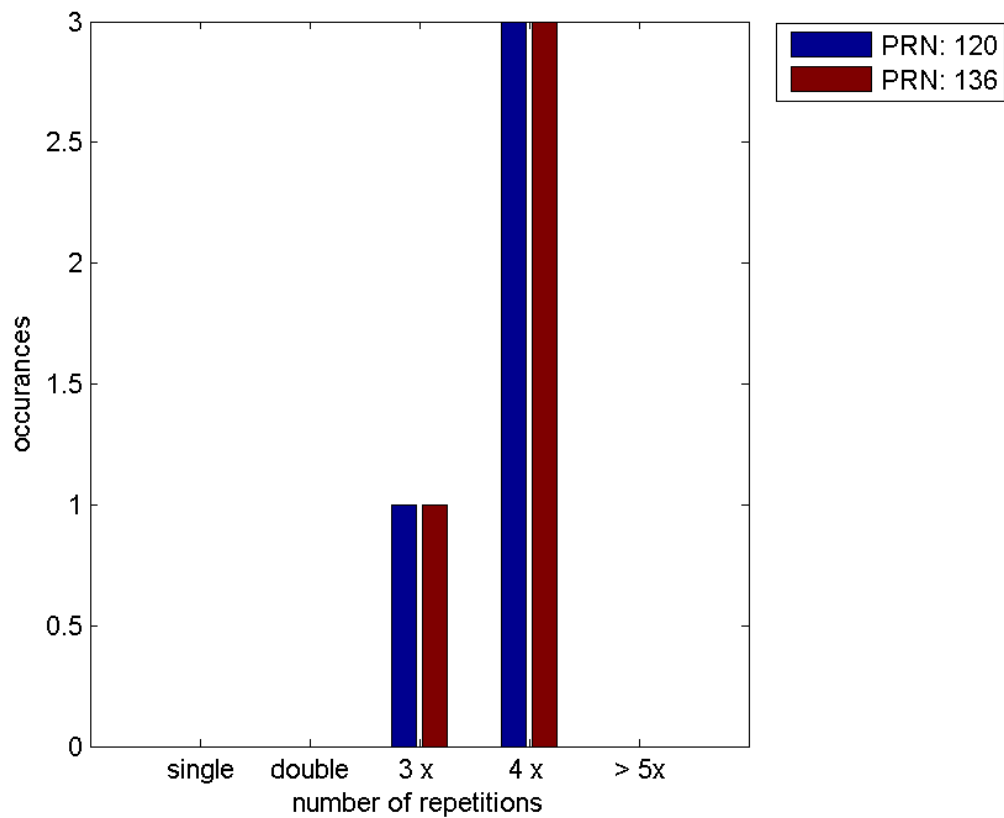
SBAS SIS Overview**Message Type 6 repetitions :**

	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:



Broadcast SBAS Messages :

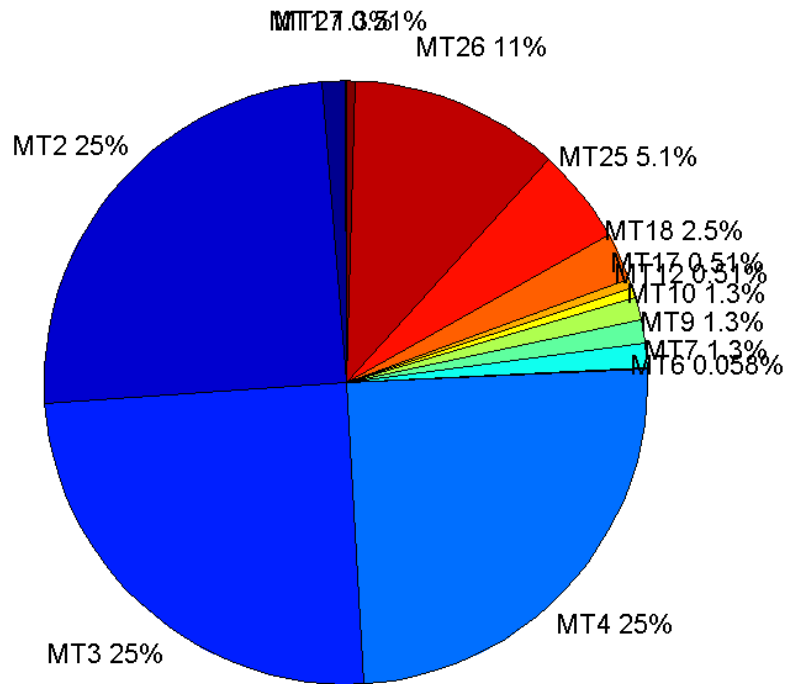
	number of messages	%
MT 0	0	0
MT 1	344	1.25282
MT 2	6818	24.8307
MT 3	6818	24.8307
MT 4	6819	24.8343
MT 5	0	0
MT 6	16	0.0582708
MT 7	344	1.25282
MT 9	345	1.25646
MT 10	344	1.25282
MT 12	140	0.50987
MT 17	140	0.50987
MT 18	700	2.54935
MT 24	0	0
MT 25	1411	5.13876
MT 26	3079	11.2135
MT 27	140	0.50987
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	27458	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	86	79.7055	0	0	0
MT 2	4	8	4.02728	4	0	0
MT 3	4	8	4.02787	5	0	0
MT 4	4	7	4.02713	4	0	0
MT 5	--	--	--	--	--	--
MT 6	1	7048	653	3	3	3
MT 7	75	81	79.7522	0	0	0
MT 9	76	83	79.7762	0	0	0
MT 10	75	84	79.7259	0	0	0
MT 12	184	201	196.165	139	0	0
MT 17	188	202	196.165	0	0	0
MT 18	4	169	39.0486	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	58	19.4518	0	0	0
MT						

26	2	40	8.91845	0	0	0
MT 27	188	201	196.137	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

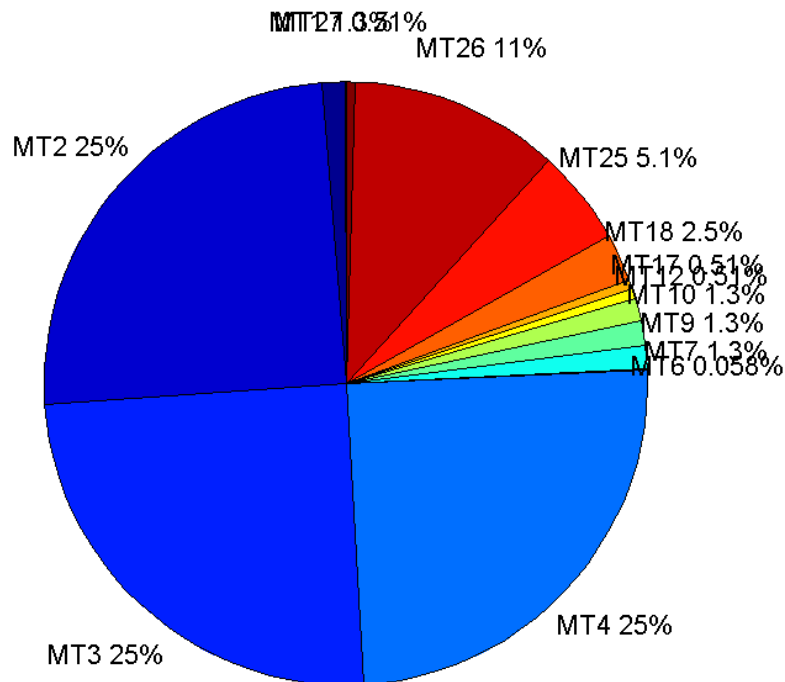
	number of messages	%
MT 0	0	0
MT 1	344	1.25273
MT 2	6819	24.8325
MT 3	6818	24.8288
MT 4	6818	24.8288
MT 5	0	0
MT 6	16	0.0582666
MT 7	344	1.25273
MT 9	345	1.25637

MT 10	344	1.25273
MT 12	140	0.509832
MT 17	140	0.509832
MT 18	700	2.54916
MT 24	0	0
MT 25	1411	5.13838
MT 26	3081	11.22
MT 27	140	0.509832
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	27460	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.7464	0	0	0
MT 2	4	8	4.02728	4	0	0
MT 3	4	7	4.02728	4	0	0
MT 4	4	8	4.02743	4	0	0
MT 5	--	--	--	--	--	--
MT 6	1	7051	653.2	3	3	3
MT 7	76	84	79.7347	0	0	0
MT 9	76	87	79.7355	0	0	0
MT 10	73	81	79.6997	0	0	0
MT 12	185	202	196.072	139	0	0
MT 17	185	203	196.101	0	0	0
MT 18	4	169	39.0458	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	58	19.473	0	0	0
MT 26	2	56	8.91071	0	0	0
MT 27	188	201	196.122	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_11_19EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_11_19EGNOS/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

Range Domain

start: 06:47:31 19.11.2015 (week: 1871 sec: 370051)
end: 14:25:10 19.11.2015 (week: 1871 sec: 397510)
duration: 07:37:40 ..

quality

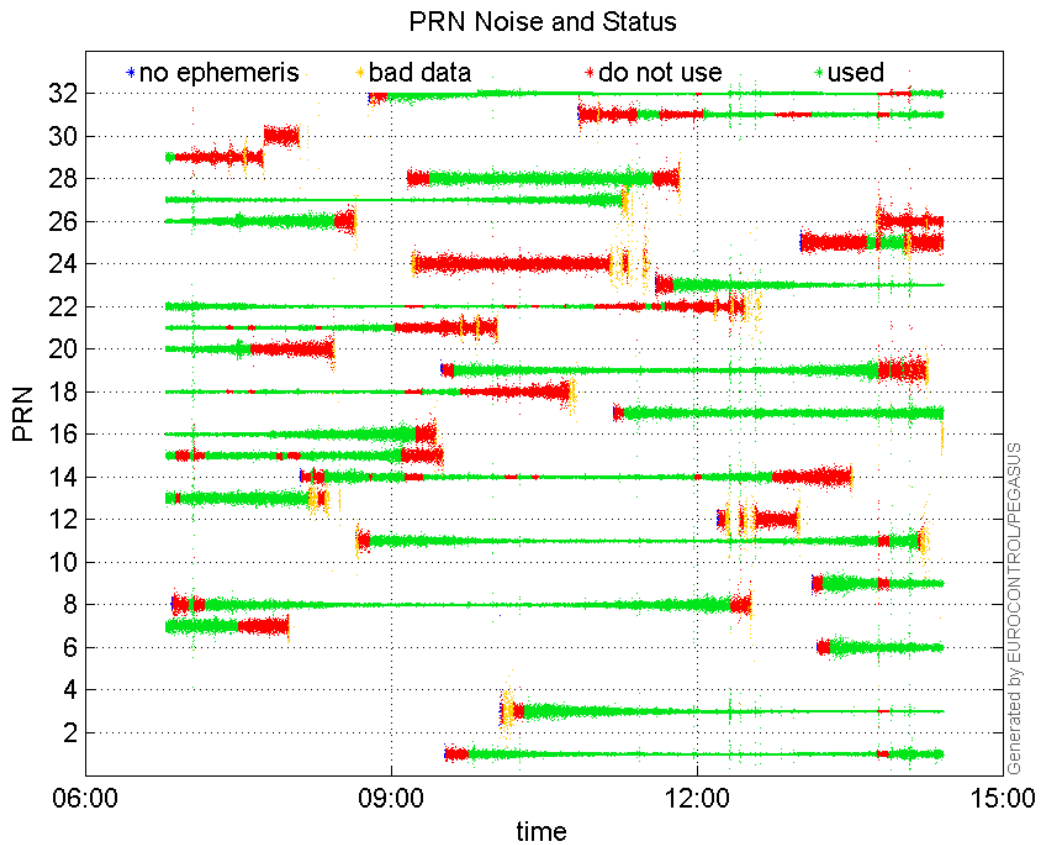
valid samples 27460
total samples 27460

PRN overview

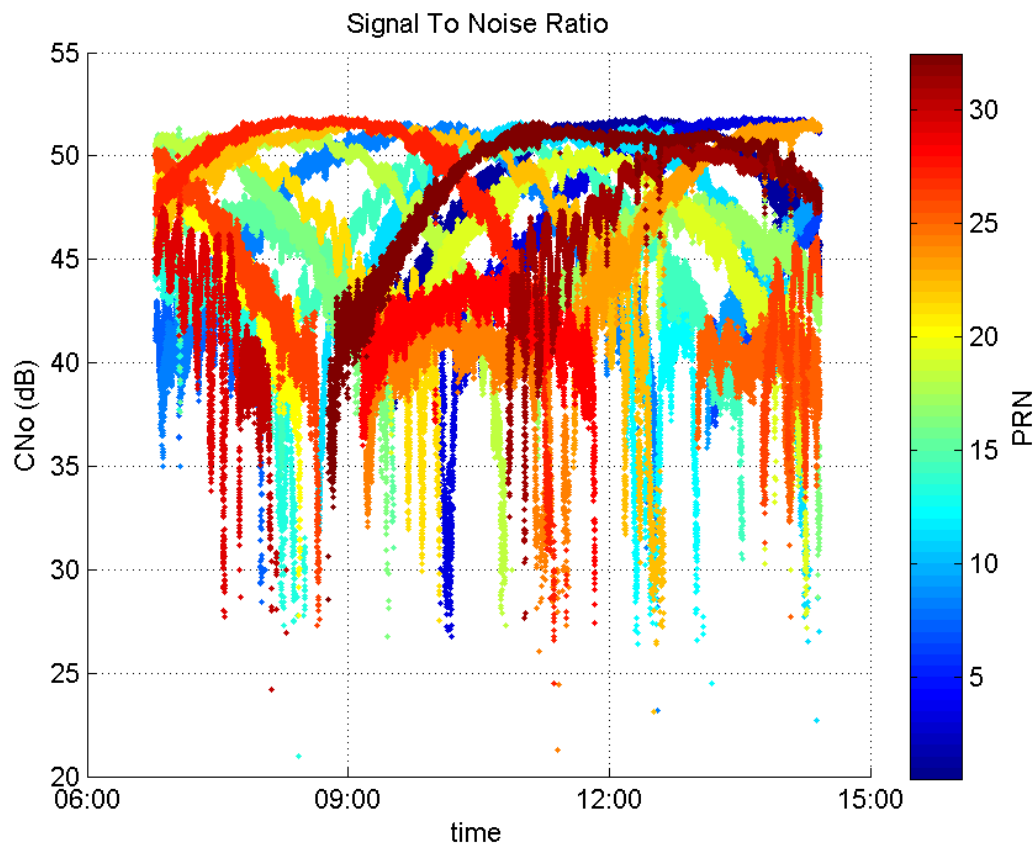
Number of Visible GPS Satellites 28
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



range errors

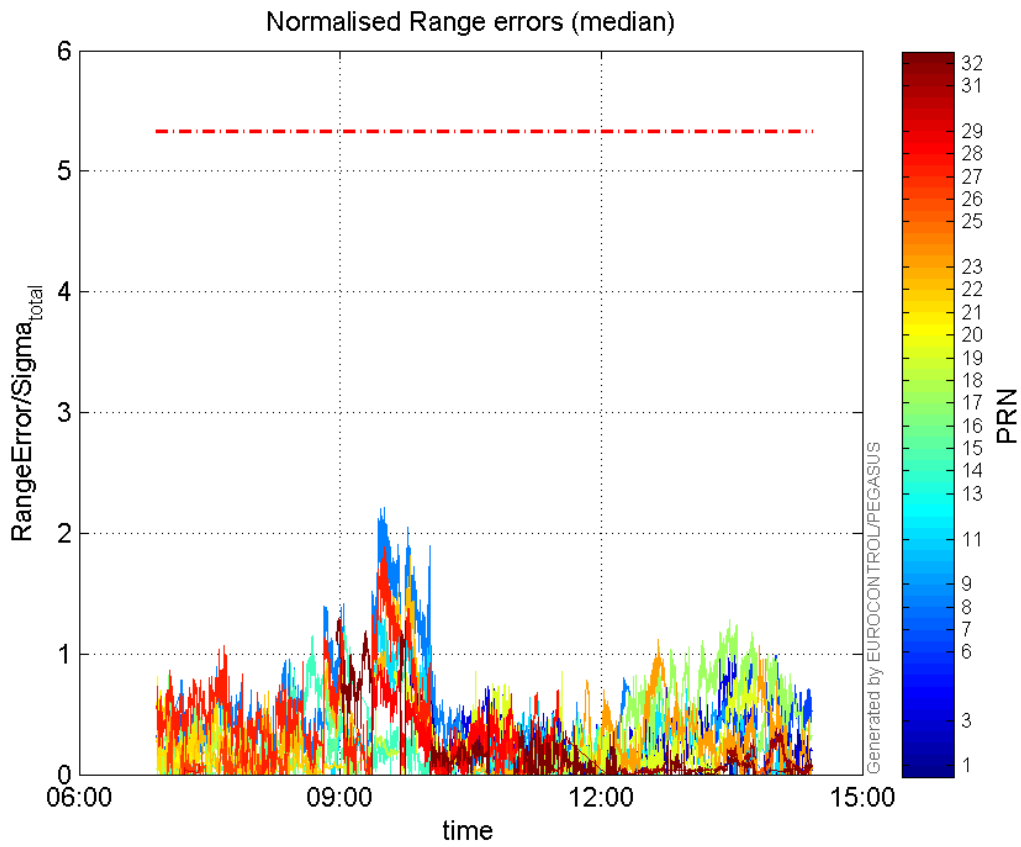
Number of Overbounding Norm Errors 0

Max Norm Errors :

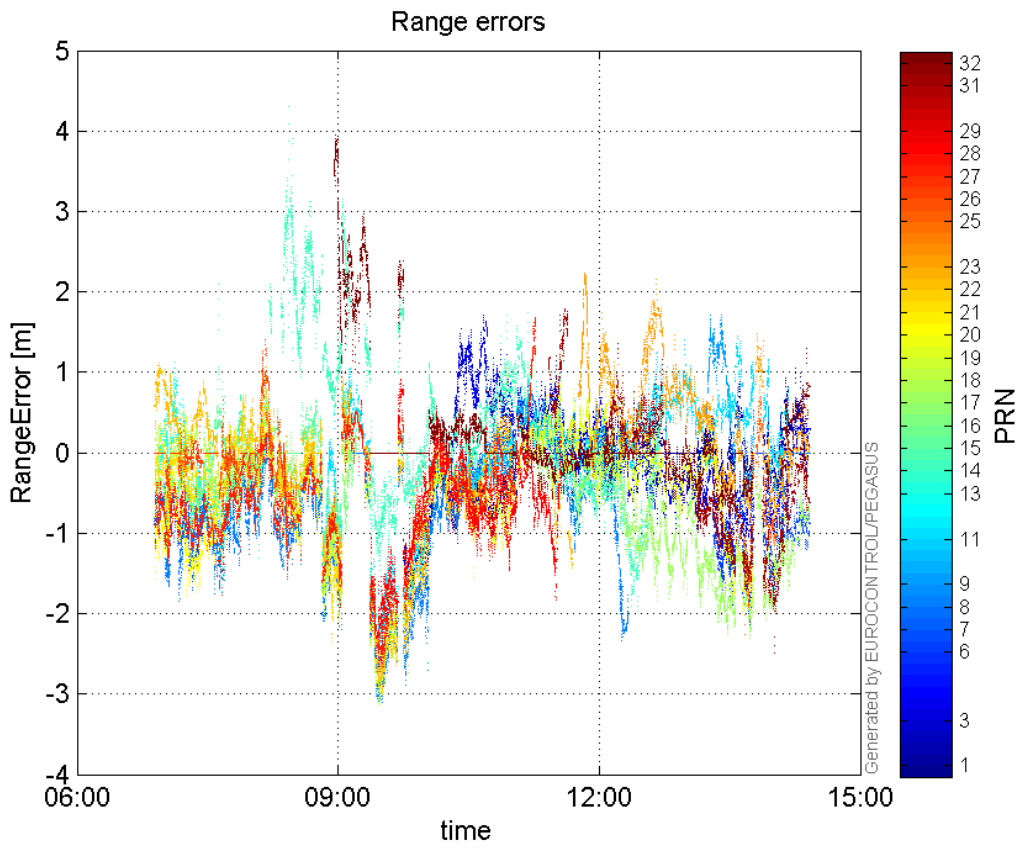
GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1871	381081	1	0.959157	-1.89021	1.9707
1871	394330	3	1.07064	-1.88559	1.76119
1871	395042	6	1.00303	-2.17522	2.16864
1871	371980	7	0.615088	-1.70198	2.76705
1871	379809	8	2.21346	-3.05109	1.37842
1871	393851	9	0.597026	1.70919	2.86285
1871	379659	11	1.37985	-2.62069	1.89926
1871	374971	13	0.446122	1.37849	3.08995
1871	378192	14	1.23129	3.11697	2.53148
1871	377577	15	0.314269	-1.28391	4.08538
1871	370904	16	0.822626	-1.21184	1.47314
1871	394105	17	1.28539	-2.19843	1.71032
1871	378022	18	1.09487	-2.08784	1.90692
1871	380266	19	0.932487	-2.57168	2.75787
1871	370422	20	0.808771	-1.56225	1.93164
1871	373186	21	0.716273	-1.28704	1.79686
1871	380906	22	1.81341	-2.74247	1.51233
1871	391134	23	1.12105	2.15714	1.92421
1871	396054	25	0.335485	-1.1949	3.56171
1871	374961	26	0.544649	1.40866	2.58636

1871	379808	27	1.88351	-2.63496	1.39896
1871	379659	28	0.913855	-2.47469	2.70797
1871	372156	29	0.0918895	-0.959012	10.4366
1871	396054	31	0.387685	-2.4895	6.42146
1871	377959	32	1.29201	3.8955	3.01507

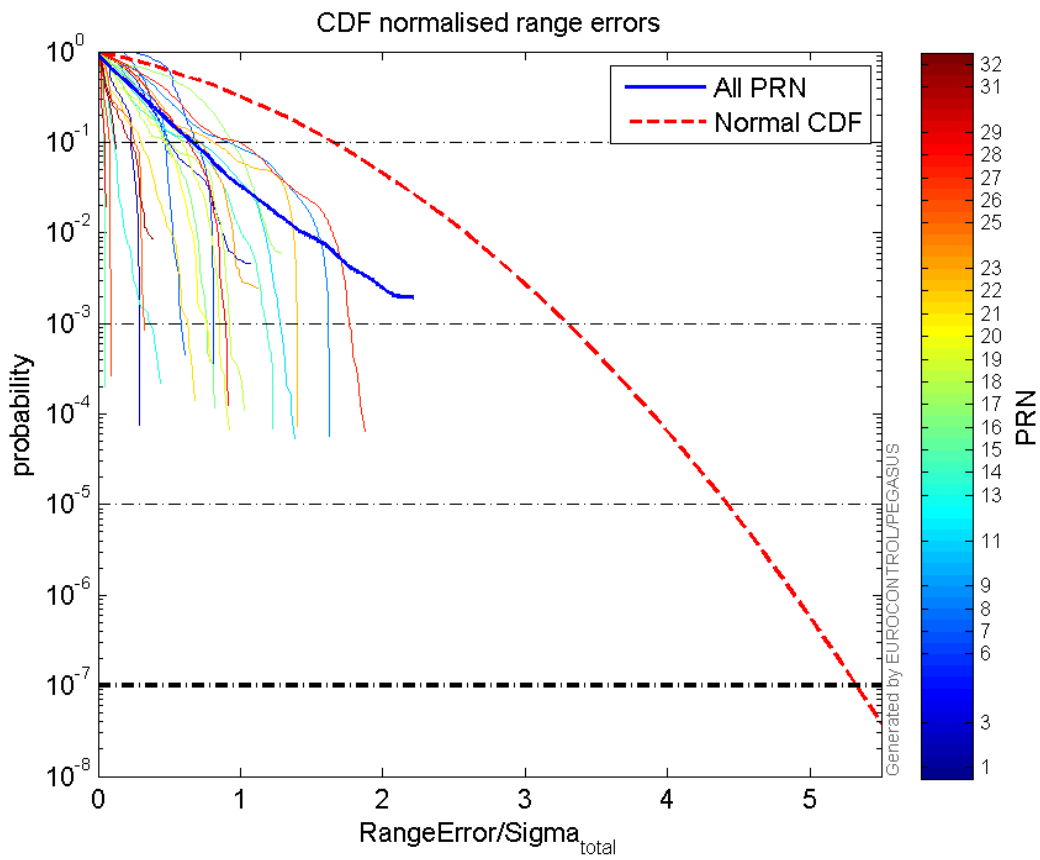
Normalised Range errors (median):



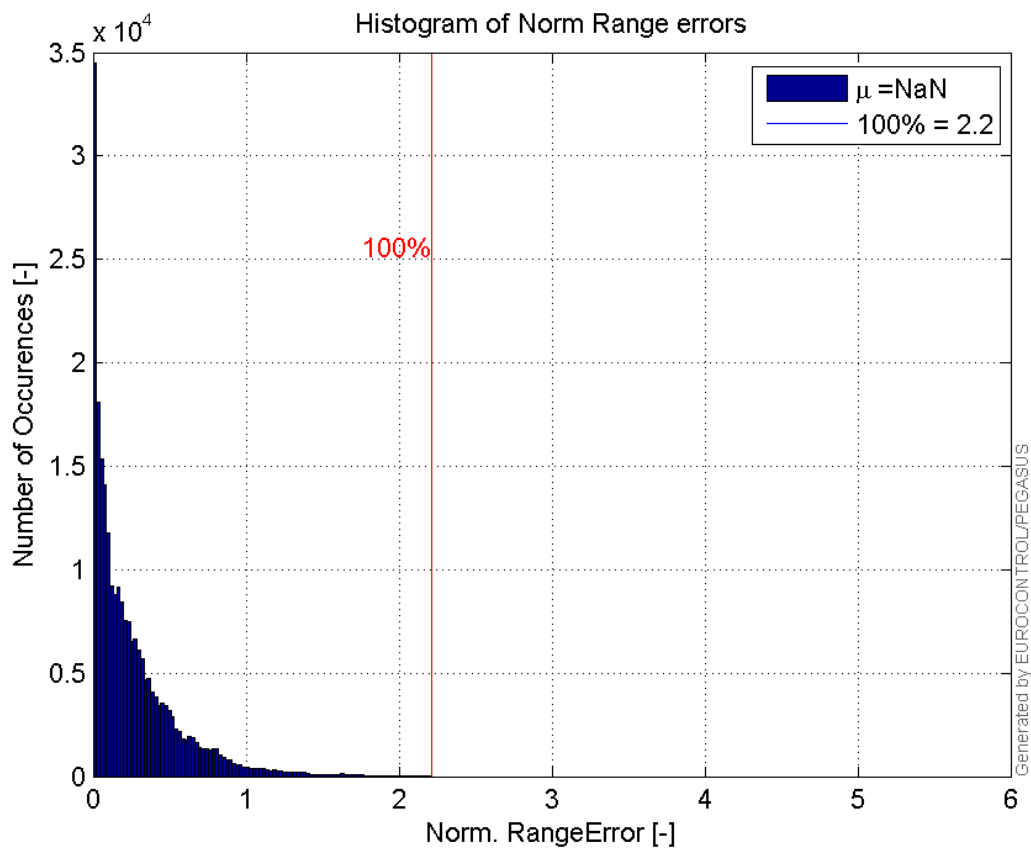
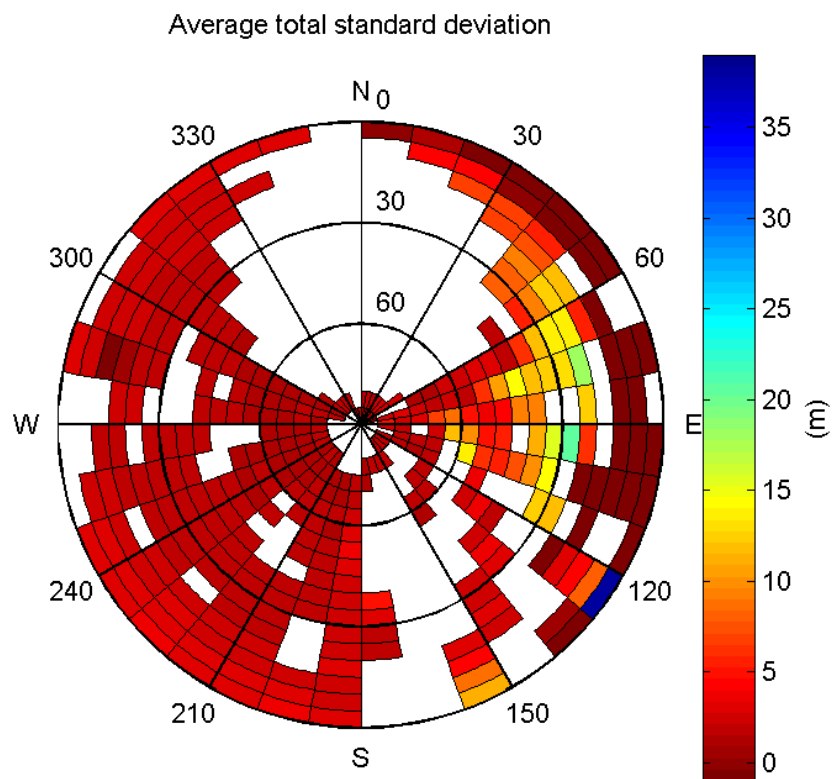
Range errors:

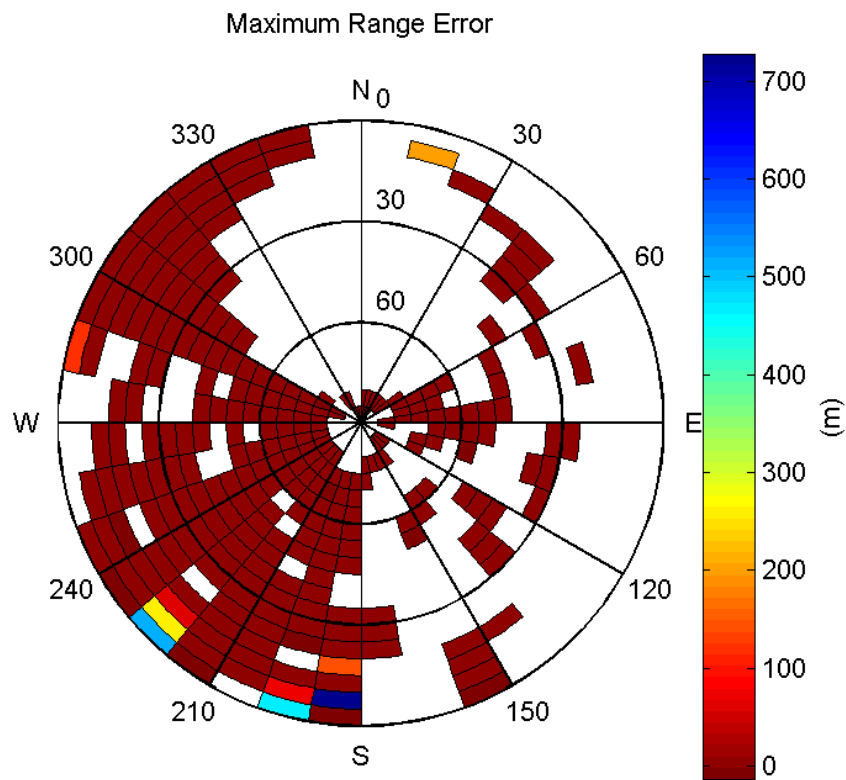


CDF normalised range errors:



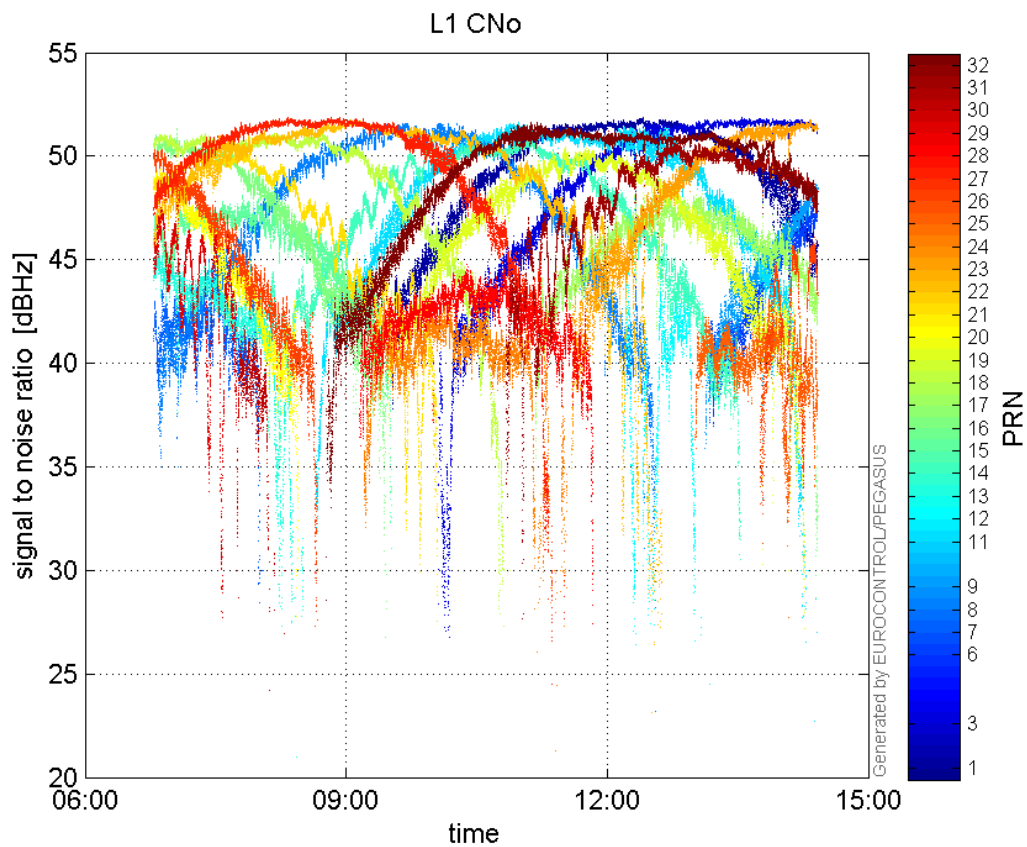
Histogram of Norm Range errors:

**Sigma Sky Plot:****Norm Error Sky Plot:**

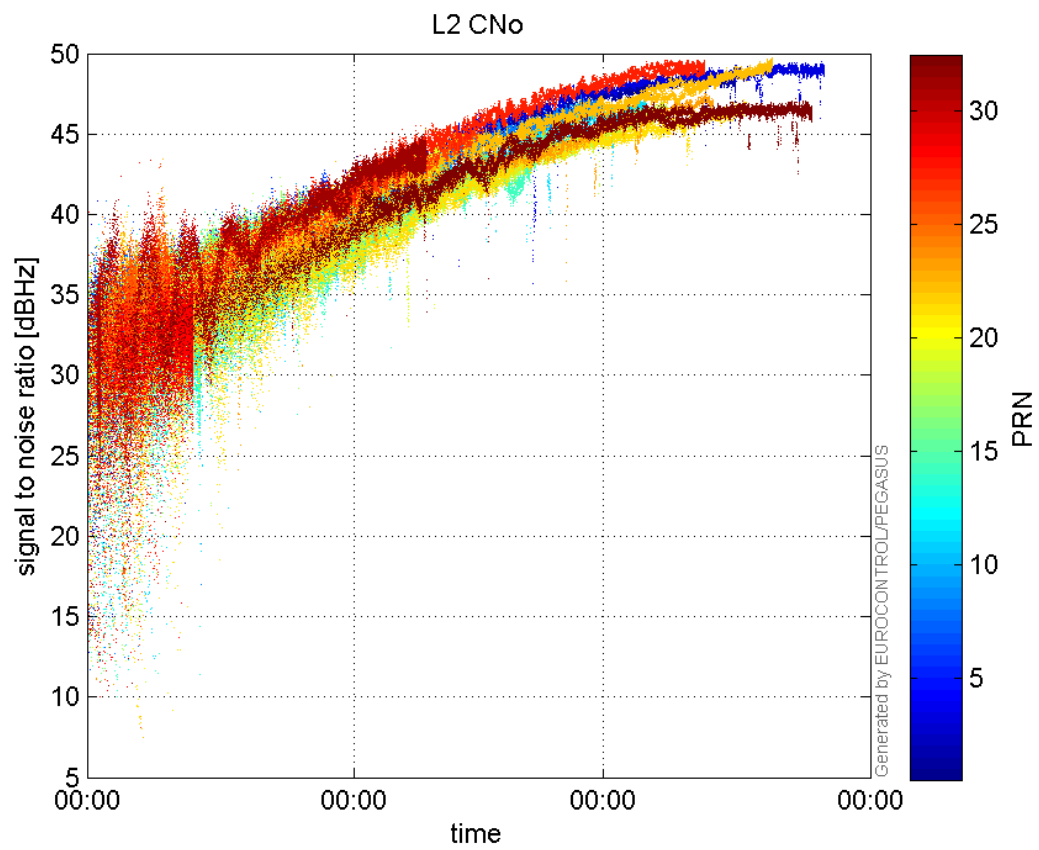


signal quality

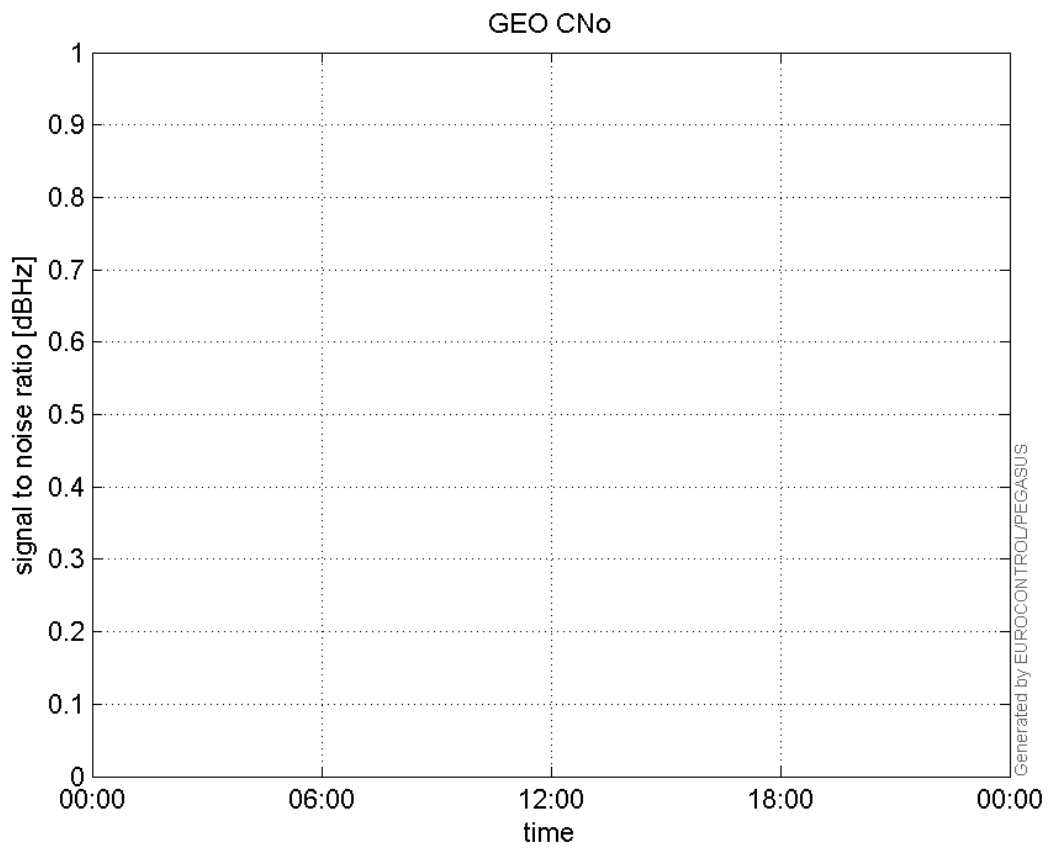
L1 CNo:



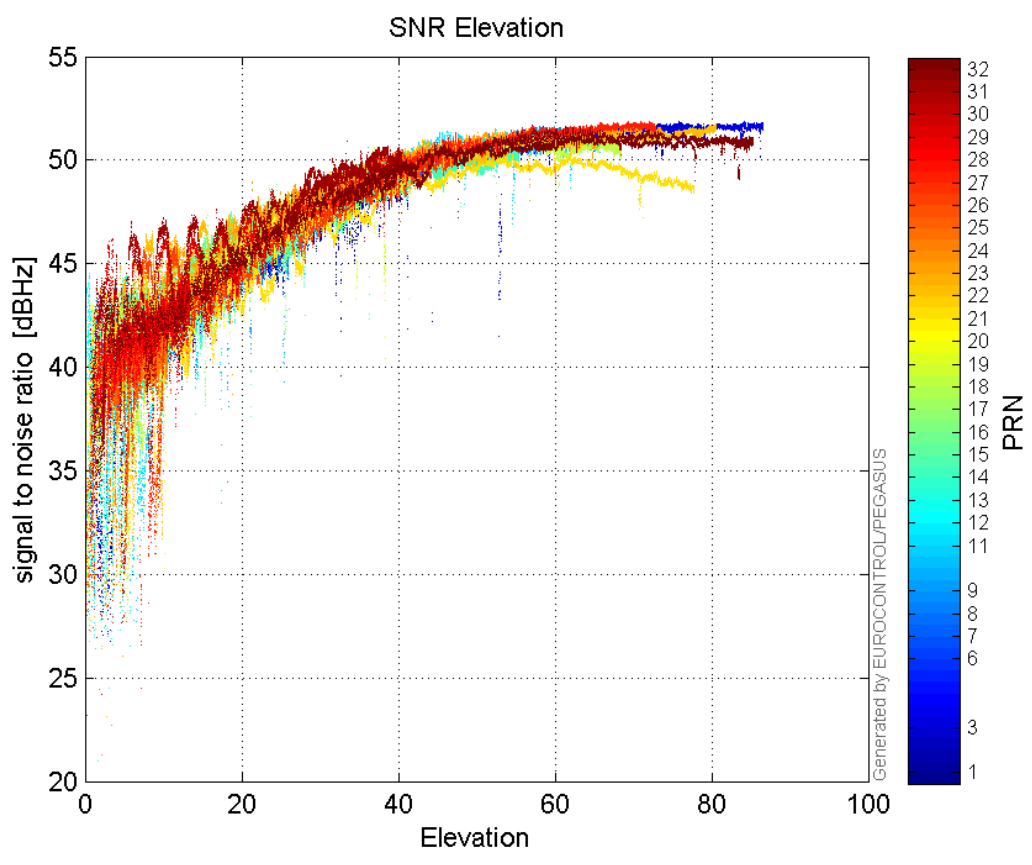
L2 CNo:



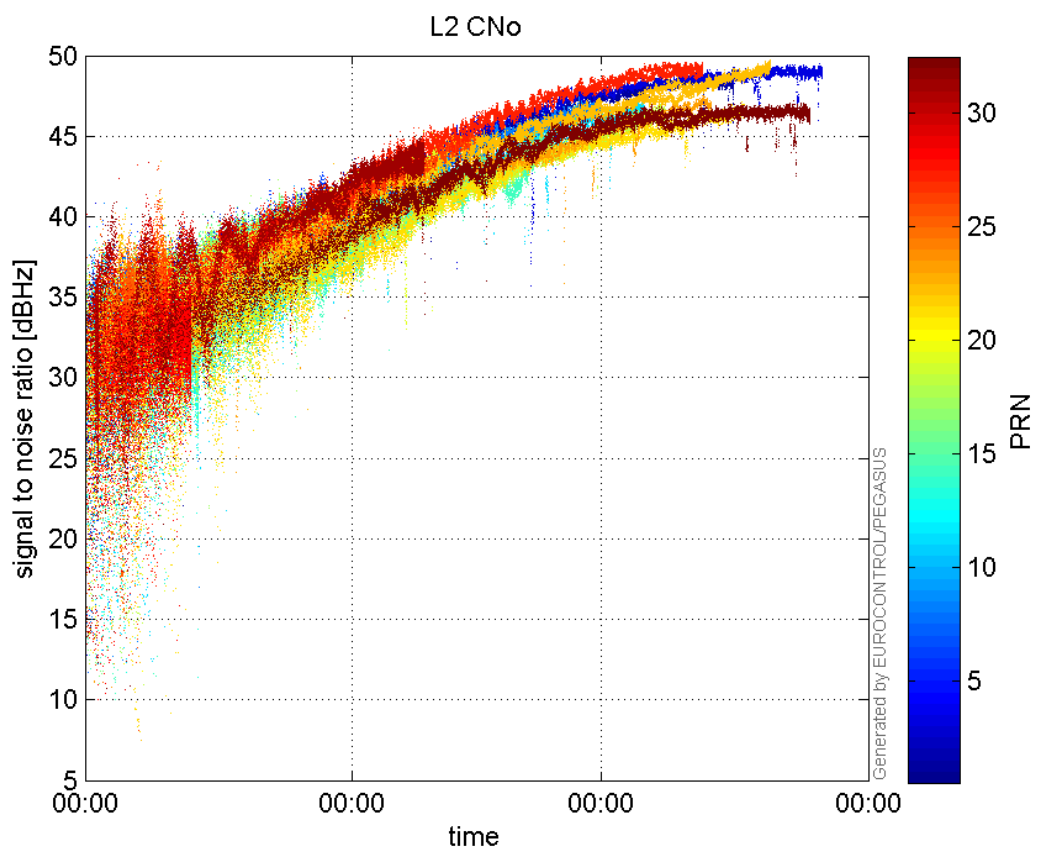
GEO CNo:



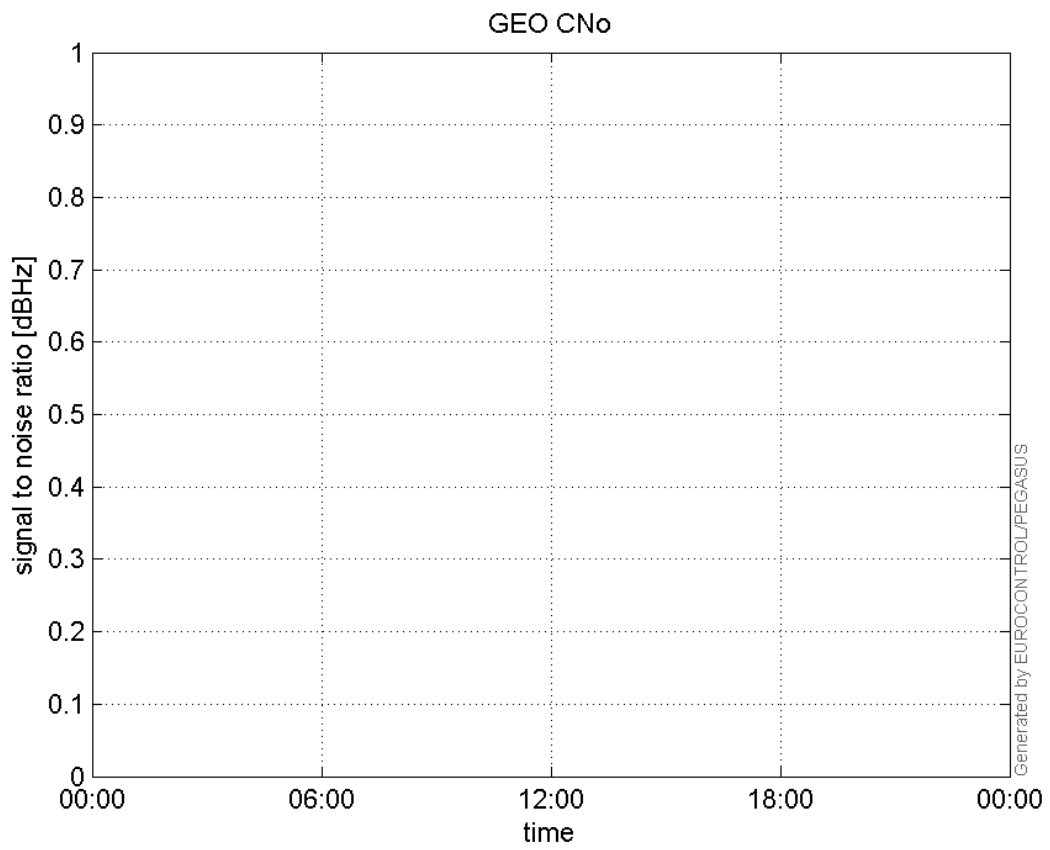
SNR Elevation:



L2 CNo:

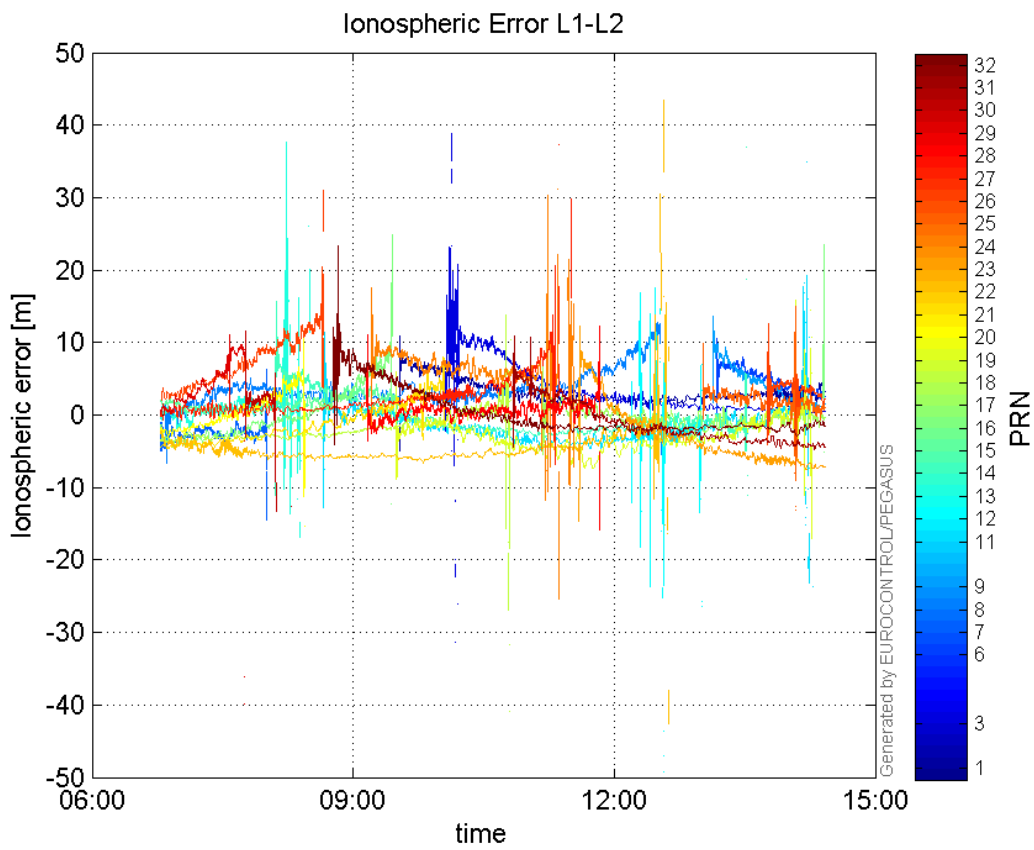


GEO CNo:



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_11_19EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_19EGNOS/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	228.358
mi_numbers	results	0