

DLV3 - x

DLV3 - Constellation

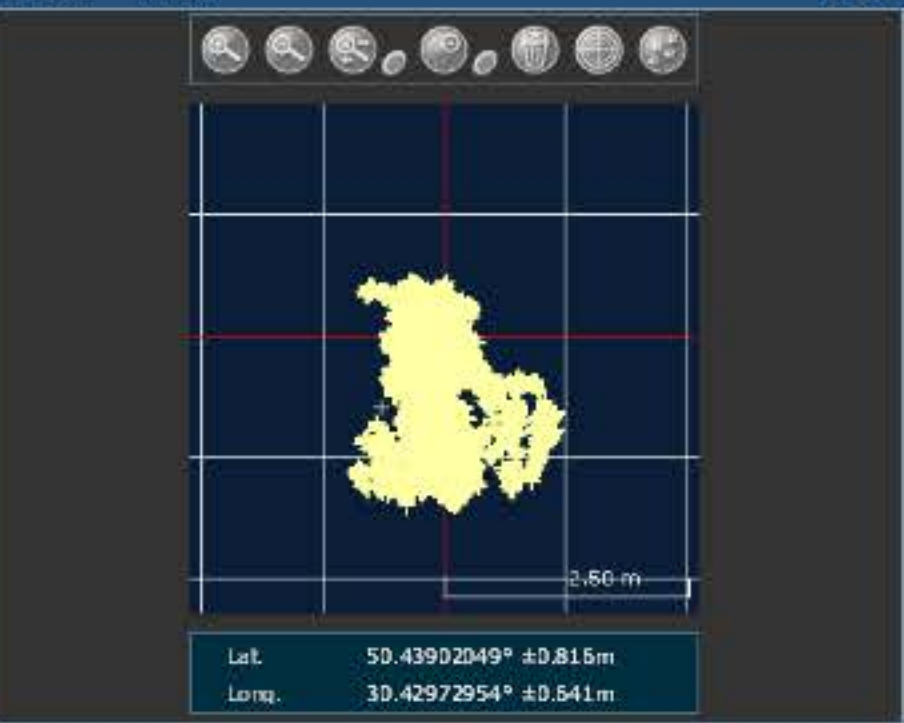


SV Details		Mask Angle Details		
PRN	AZ	ELEV	C/No	STATUS
No SV				

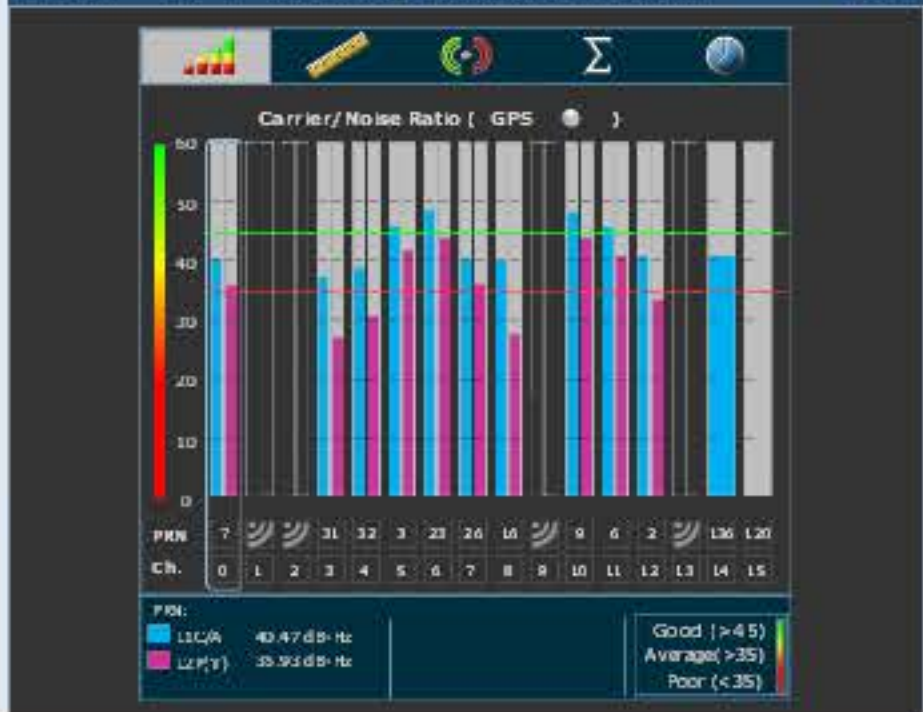
DLV3 - Position

Latitude	50.43902049°	+/-	0.82m
Longitude	30.42972954°	+/-	0.54m
Hgt. (MSL)	190.925m	+/-	1.45m
Solution type	SBAS		
Ionospheric correction	Multi-frequency		
Advanced RTK status	N/A		
Solution age	0 second		
Differential age	7 seconds		
# of satellites used in solution	8		
	GPS	L1	L2
	GLO	L1	L2
Solution status	Computed		
Fri 04/12/2015 14:23:15 GMT			
Fri 04/12/2015 16:23:15 Local			

DLV3 - Plan



DLV3 - GPS Tracking Channel Status



DLV3 - Dilution Of Precision (DOP)



DLV3 - Console Window

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

DLV3 - Logging Control Window

COM1 (Current Port)

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 06/12/2015

Position Domain

start: 07:23:50 04.12.2015 (week: 1873 sec: 458630)
end: 14:29:10 04.12.2015 (week: 1873 sec: 484150)
duration: 07:05:21 ..

quality

valid samples 25150
total samples 25521

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 all

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	464290	1.42158	9.06773	0.156773	2.27253	21.8315	0.104094
max normVer	463377	1.36211	9.74456	0.139781	2.6811	17.8263	0.150401
max HPE	461832	4.98351	83.658	0.05957	-1.0485	55.8617	0.0187697
max VPE	464470	1.29777	9.89738	0.131123	2.70491	23.6687	0.114282
min HPL	464265	1.34003	8.91085	0.150381	1.77563	21.1628	0.0839035
min VPL	460340	0.883124	9.19914	0.0960007	0.463021	11.594	0.0399363

APV-I discontinuity events :

#	Epoch	duration	stable period
1	461258	5	2257
2	461831	310	568

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	461258	5	2257
2	461831	310	568

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	461258	5	2257
2	461831	310	568

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	460386	235	47
2	460622	3	1
3	460626	3	1
4	460630	2	1
5	460634	2	2
6	460638	2	2
7	460642	2	2
8	460646	2	2
9	460650	2	2
10	460654	2	2
11	460658	2	2
12	460662	2	2
13	460666	2	2
14	460669	13	1

First Glance analysis

Duration	25521
Number of Samples	25521
Number of invalid sample	371
Number of no position solution samples	11113
Number of missing sample	0
Logging Loss	0
Processing Loss	1.4537
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
14037	13721	13721	71	13721

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.63965	1.54084	1.54084	1.01641	1.54084
HPEscale 95%	NaN	4.94724	4.94724	4.25843	4.94724
VPE 95%	1.91612	1.92314	1.92314	0.525157	1.92314
VPEscale 95%	NaN	4.43363	3.10354	0.53424	3.10354

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	0.558131	0.545567	0.545567	0.00282306	0.545567
measurements	0.550018	0.537636	0.537636	0.00278202	0.537636
Operational	0.550018	0.537636	0.537636	0.00278202	0.537636

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	2	2	14	2
Long	--	2	2	2	2
Independent	--	2	2	1	2
P(disc.)	NaN	0.00218643	0.00218643	0.211268	0.00218643
P(slide)	NaN	0.00218643	0.00218643	0.521127	0.00218643

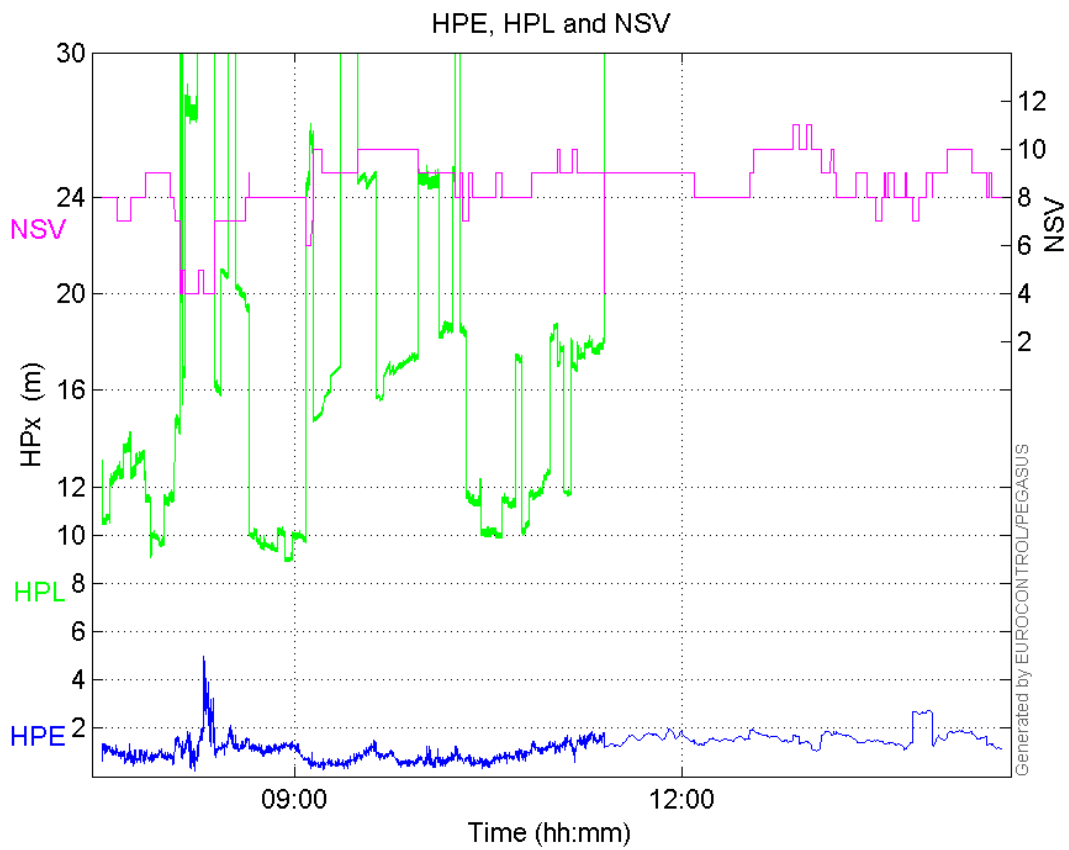
Integrity events :

	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

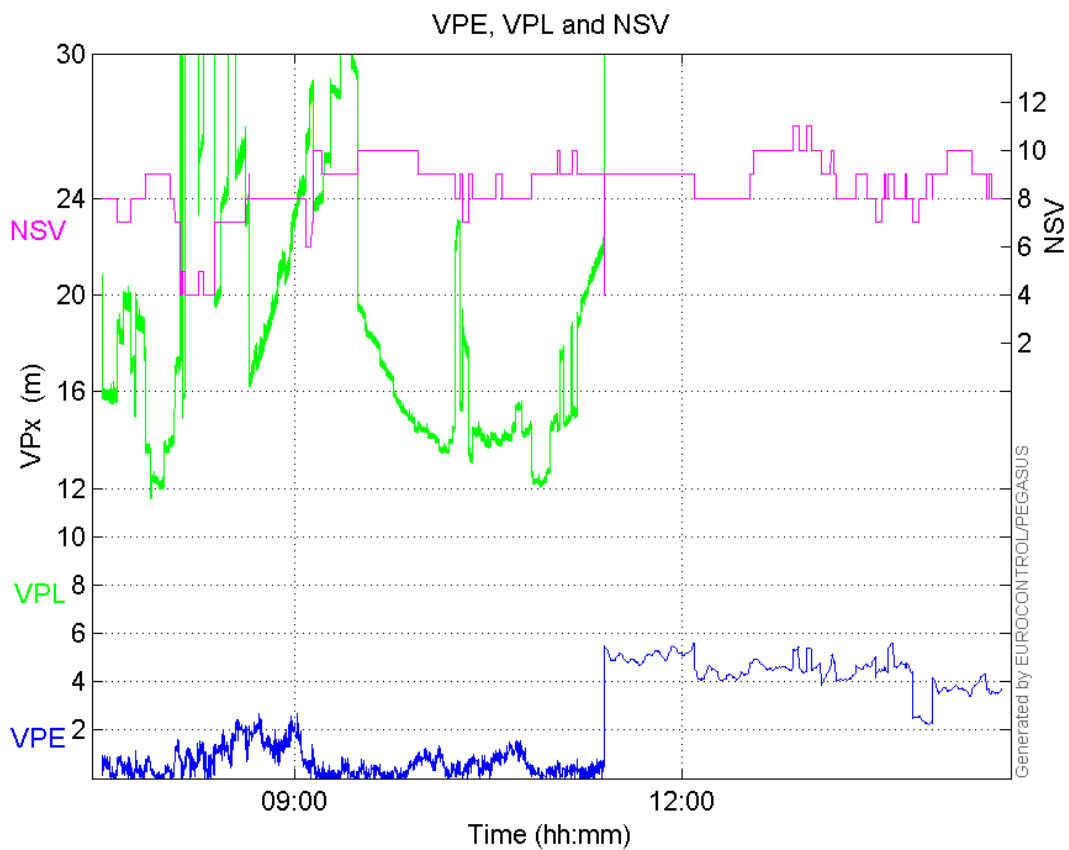
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	14037	13721	13721	71	13721
SIS Availability	0.558131	0.545567	0.545567	0.00282306	0.545567
Local Availability	0.550018	0.537636	0.537636	0.00278202	0.537636
Operational Availability	0.550018	0.537636	0.537636	0.00278202	0.537636
HPE 95%	1.63965	1.54084	1.54084	1.01641	1.54084
HPEScale 95%	NaN	4.94724	4.94724	4.25843	4.94724
VPE 95%	1.91612	1.92314	1.92314	0.525157	1.92314
VPEscale 95%	NaN	4.43363	3.10354	0.53424	3.10354
All Discontinuity Events	--	2	2	14	2
Long Discontinuity Events	--	2	2	2	2
Independent Discontinuity Events	--	2	2	1	2
P(discontinuity)	NaN	0.00218643	0.00218643	0.211268	0.00218643
P(sliding window)	NaN	0.00218643	0.00218643	0.521127	0.00218643
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:**

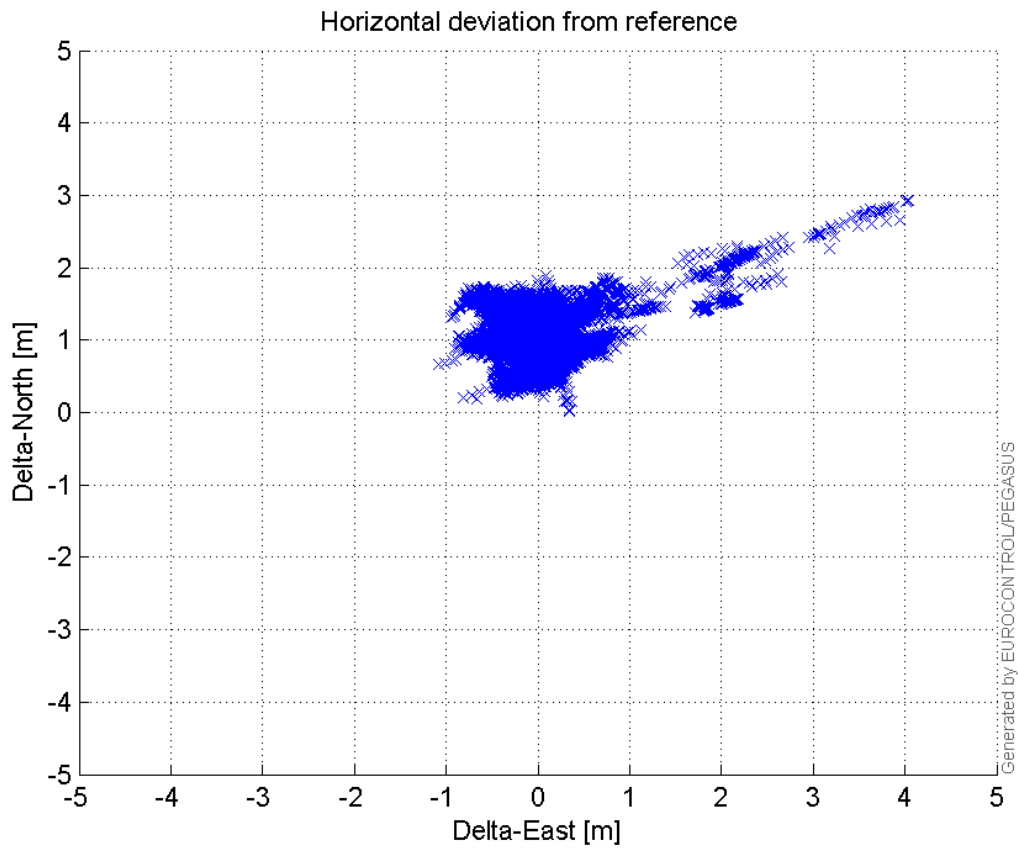


VPE, VPL and NSV:



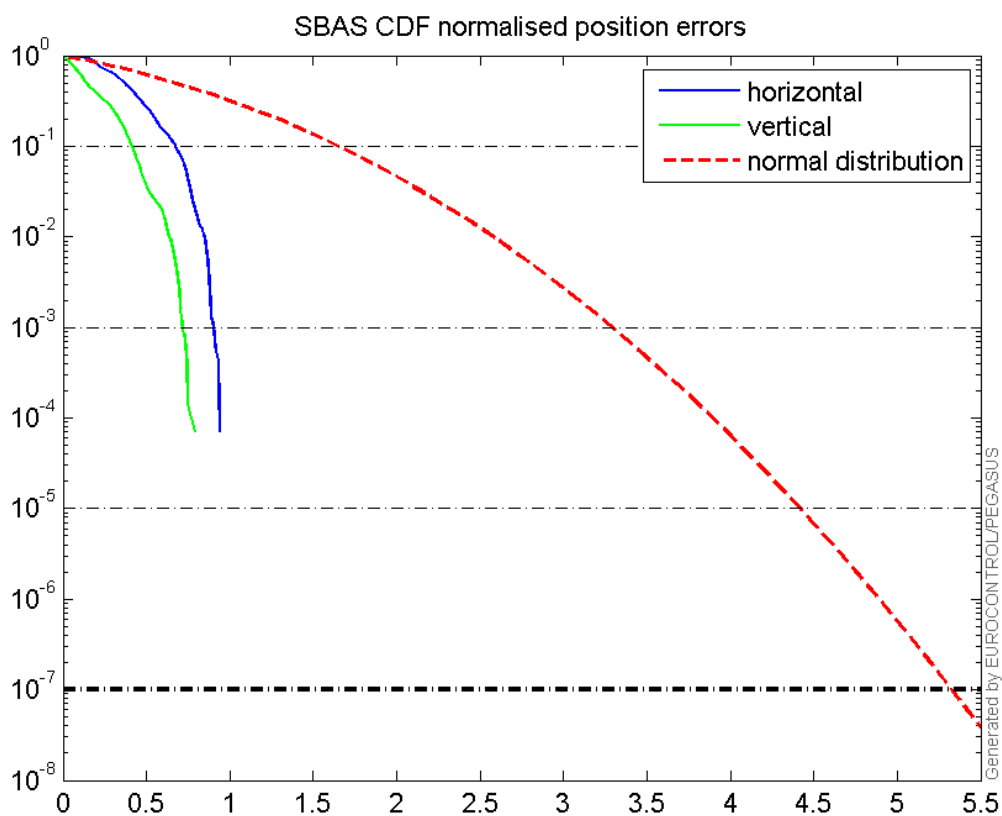
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

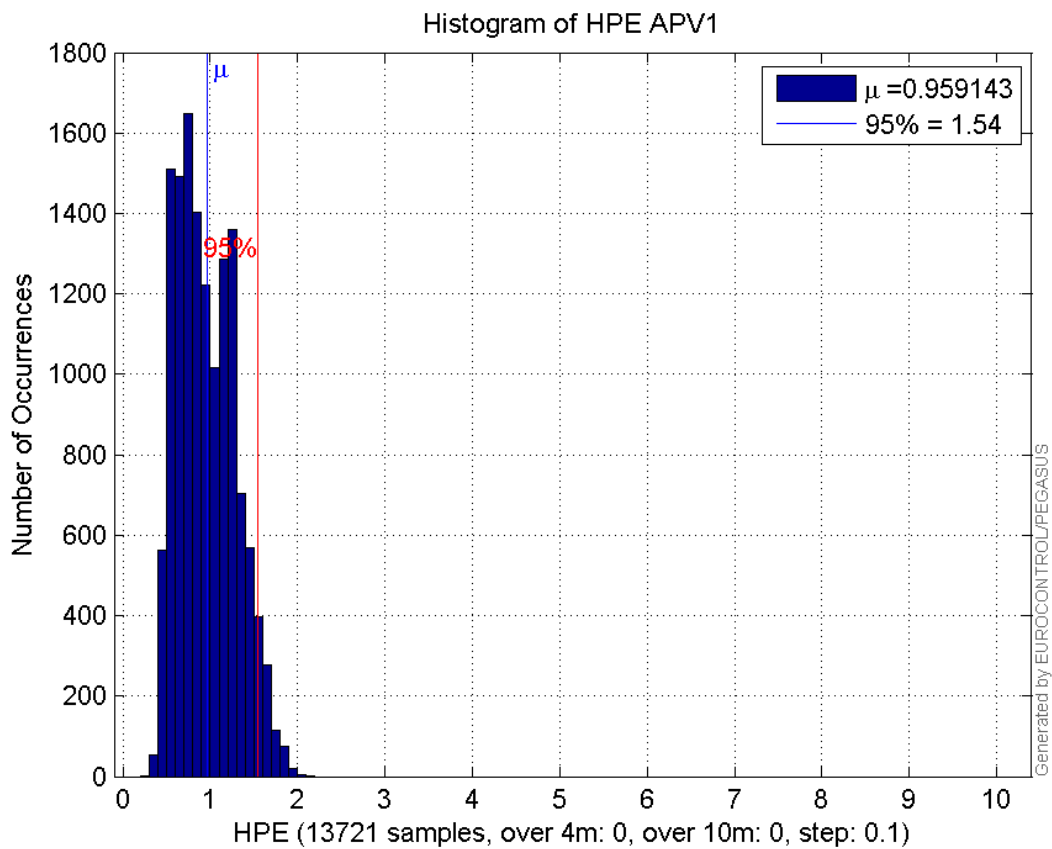
number	13721
sum	13160.401
sum2	14106.605
prctile95	1.5408404
prctile99	1.7606823
number	13721
sum	9133.5527
sum2	10426.881
prctile95	1.9231417
prctile99	2.2119281
number	13721
sum	233825.03
sum2	4723351.7
prctile95	35.254865
prctile99	37.571864
number	13721
sum	259076.61
sum2	5313654.2
prctile95	31.663185
prctile99	32.703563
number	13721
sum	896.85546
sum2	72.102226
prctile95	0.12368107
prctile99	0.14139767
number	13721
sum	496.63575
sum2	29.561809
prctile95	0.088672605
prctile99	0.12025123
number	13721
sum	13160.401
sum2	14106.605
prctile95	1.5408404
prctile99	1.7606823
number	13721
sum	9133.5527
sum2	10426.881
prctile95	1.9231417
prctile99	2.2119281
number	13721
sum	233825.03
sum2	4723351.7
prctile95	35.254865
prctile99	37.571864
number	13721
sum	259076.61
sum2	5313654.2
prctile95	31.663185

prctile99 32.703563
number 13721
sum 896.85546
sum2 72.102226
prctile95 0.12368107
prctile99 0.14139767
number 13721
sum 496.63575
sum2 29.561809
prctile95 0.088672605
prctile99 0.12025123

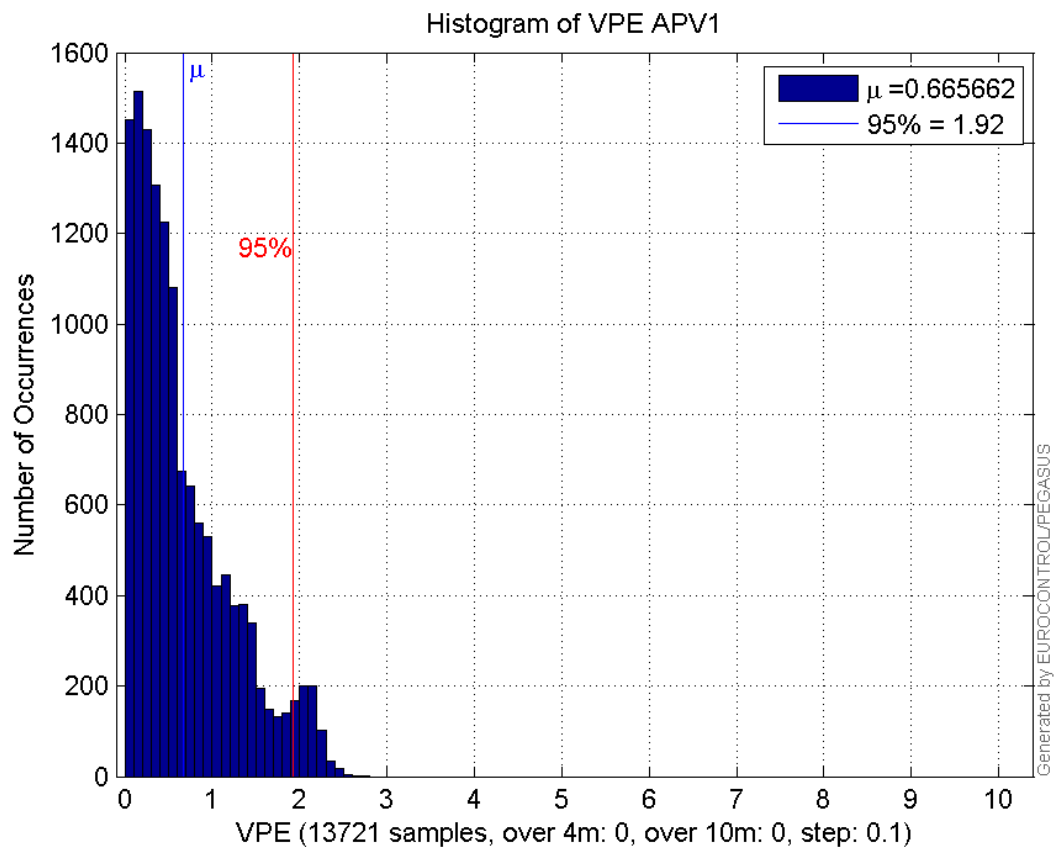
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	0.959143	0.328871	0.912764	1.54084	1.76068	1.01395
HPL	17.0414	7.33738	16.0011	35.2549	37.5719	18.5538
VPE	0.665662	0.562884	0.492945	1.92314	2.21193	0.871735
VPL	18.8818	5.54489	17.4016	31.6632	32.7036	19.679

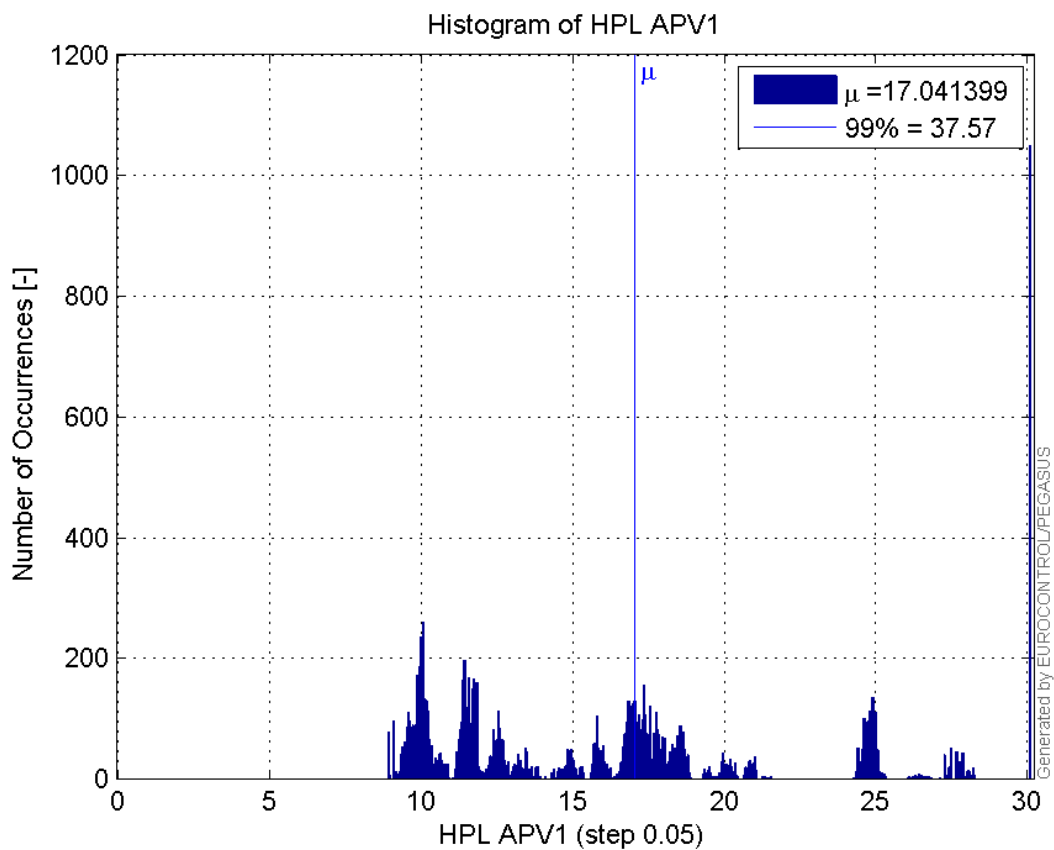
Histogram of HPE APV1:



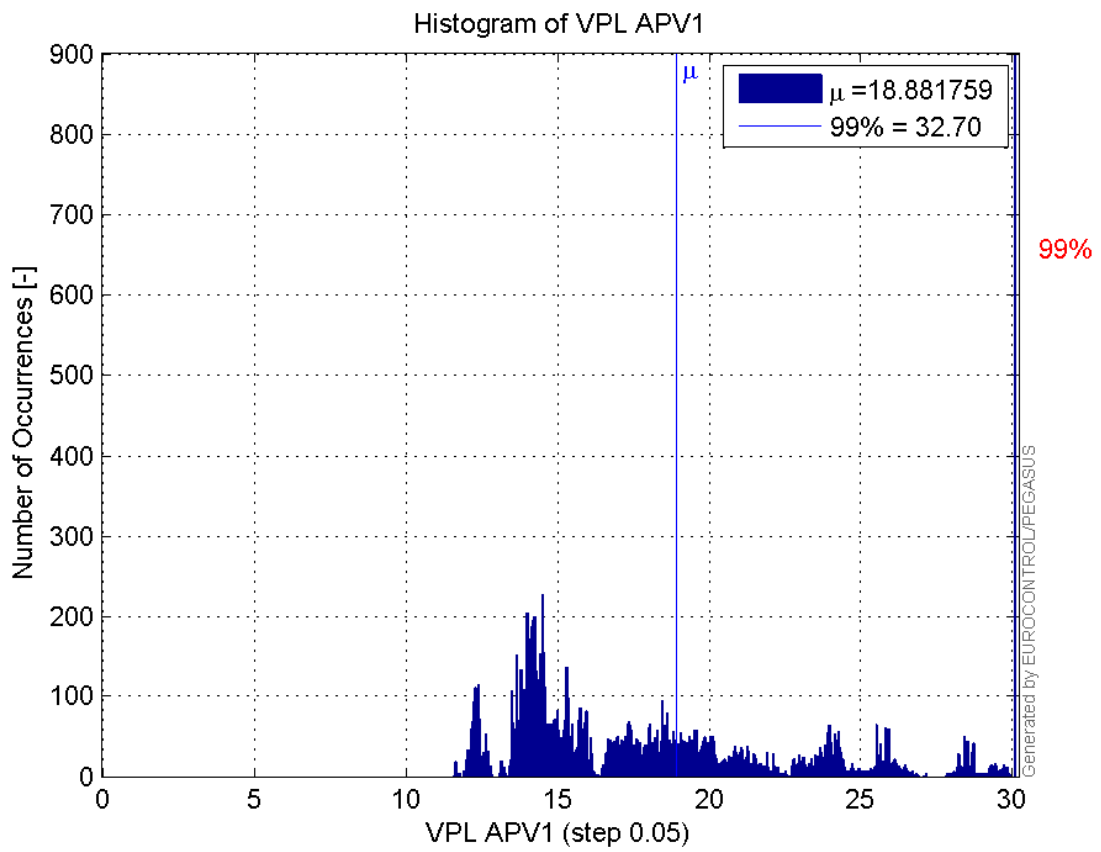
Histogram of VPE APV1:



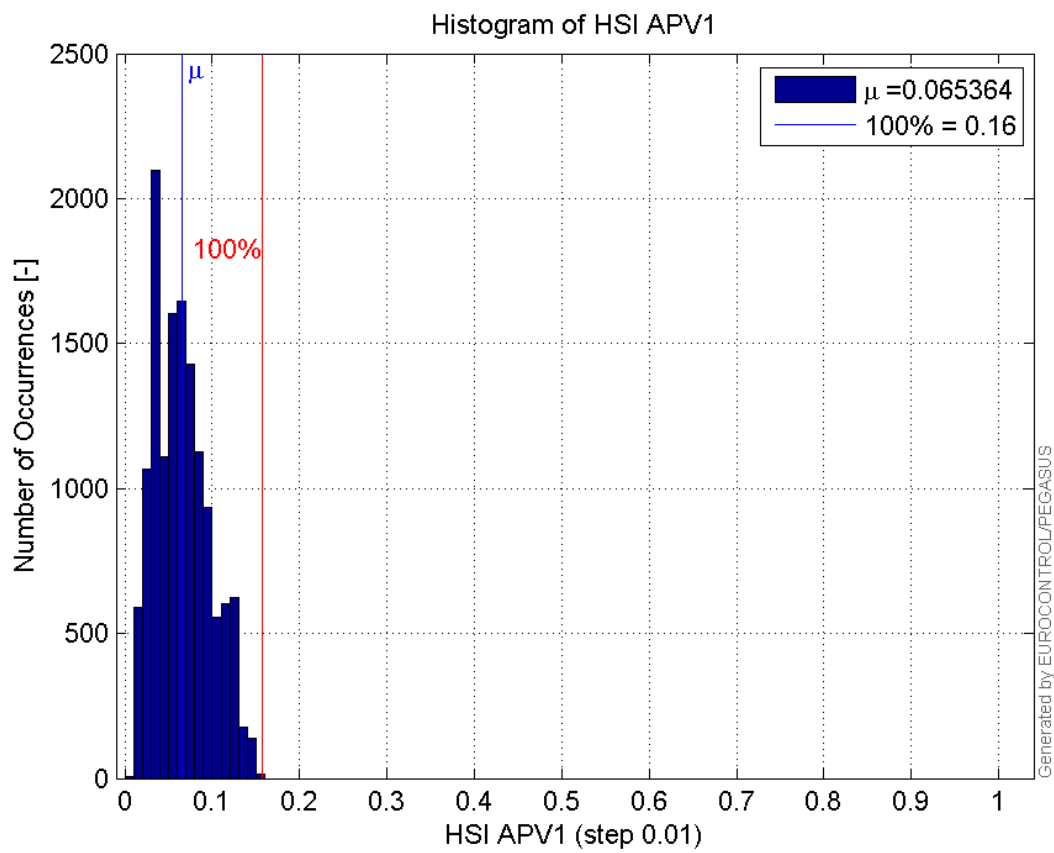
Histogram of HPL APV1:



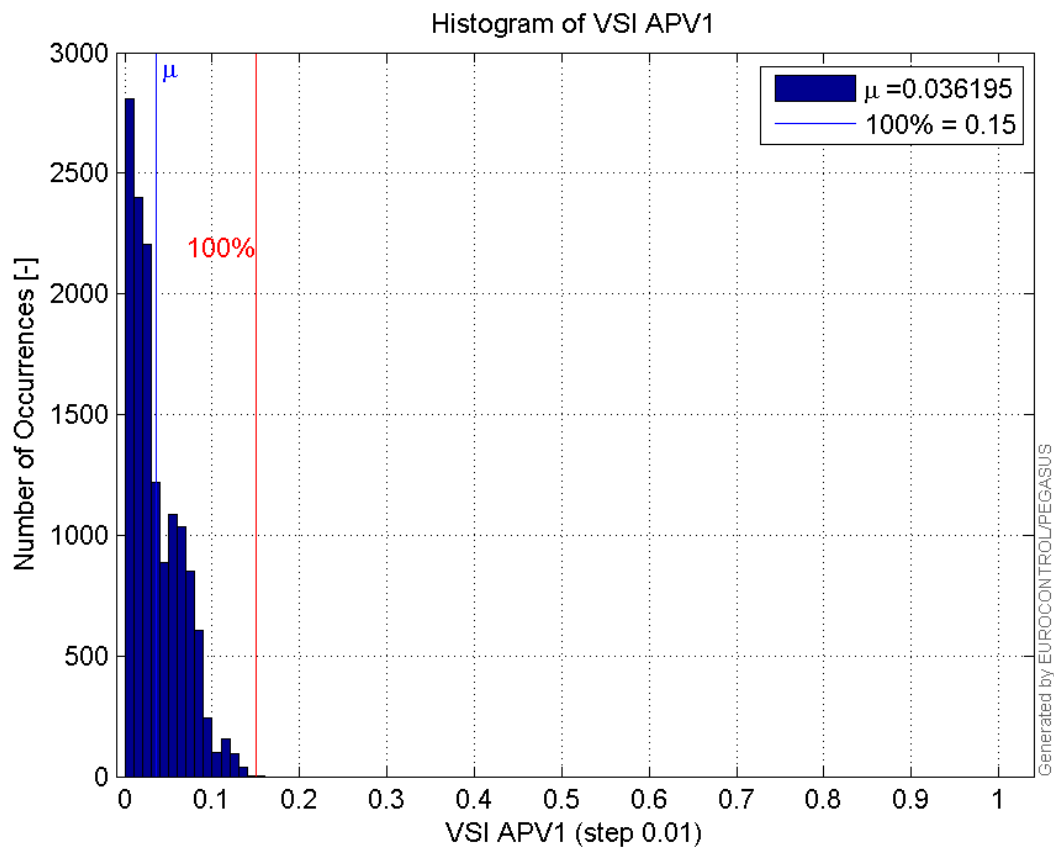
Histogram of VPL APV1:



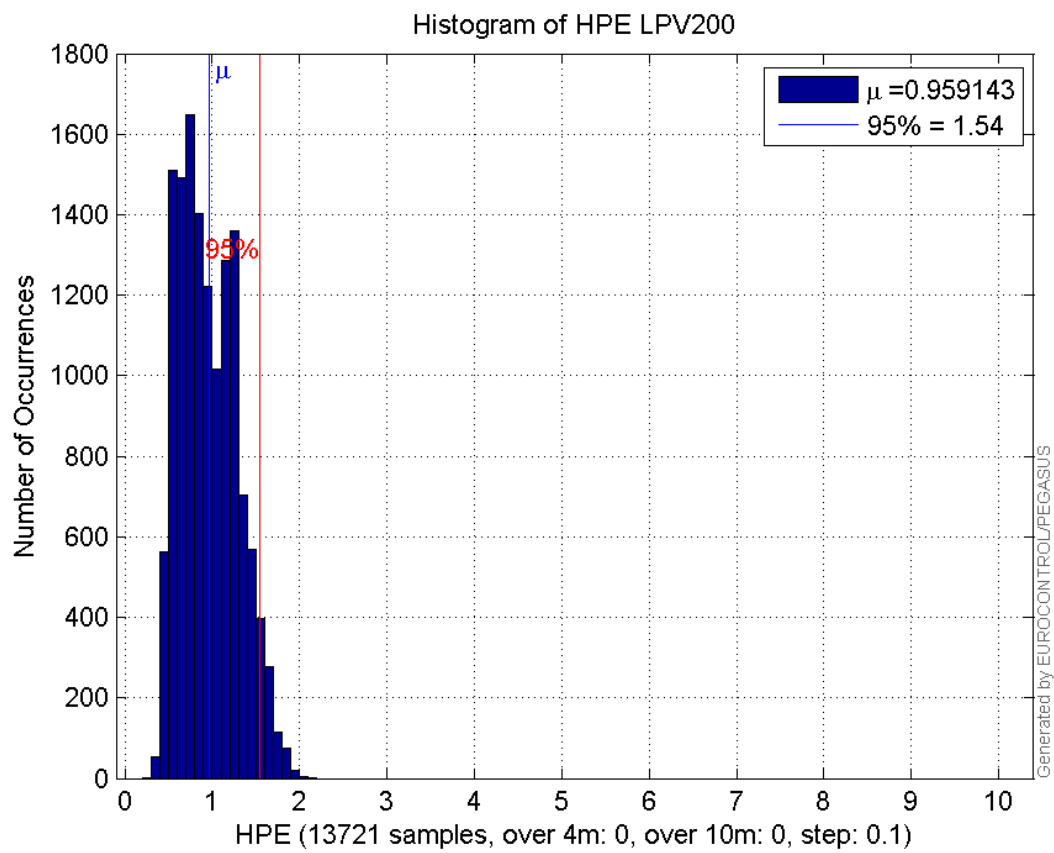
Histogram of HSI APV1:



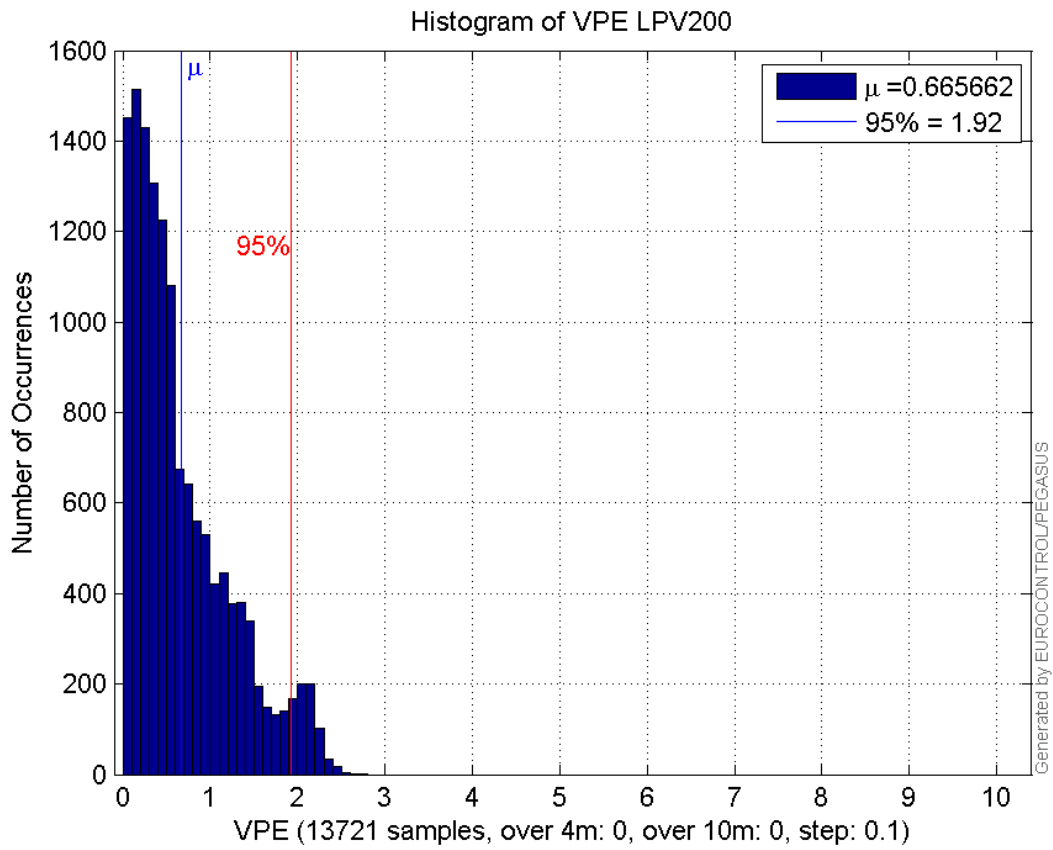
Histogram of VSI APV1:



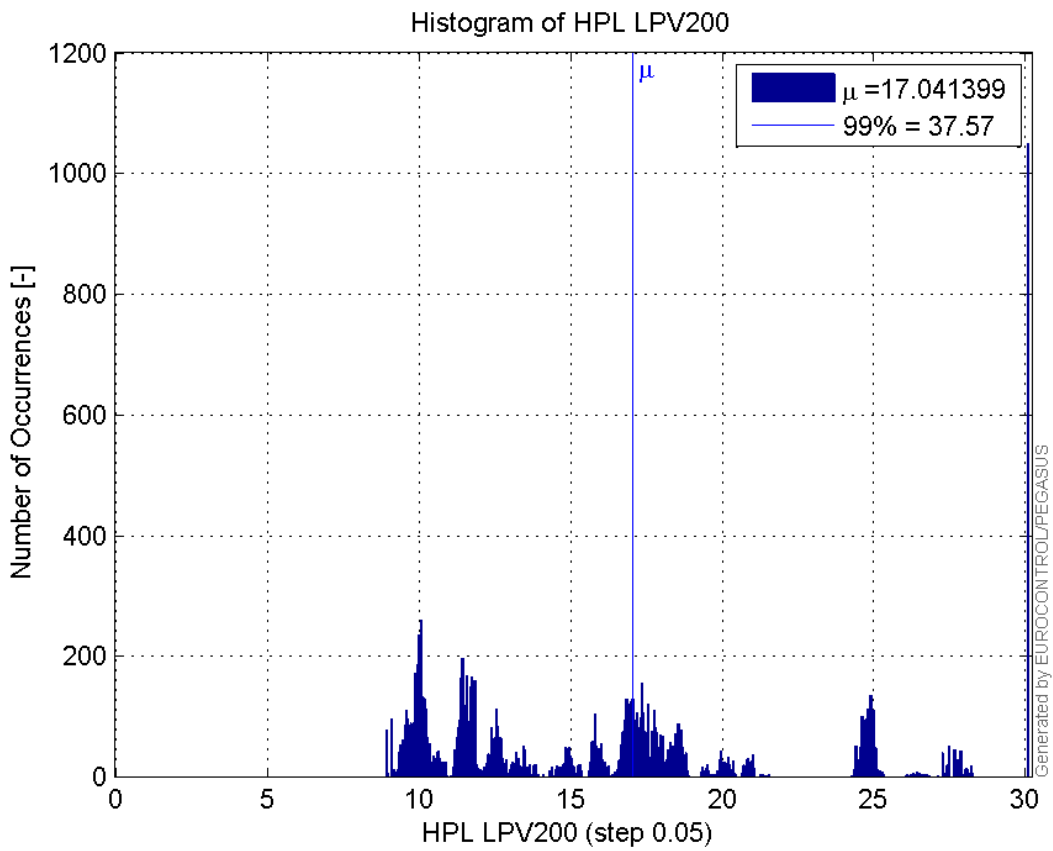
Histogram of HPE LPV200:



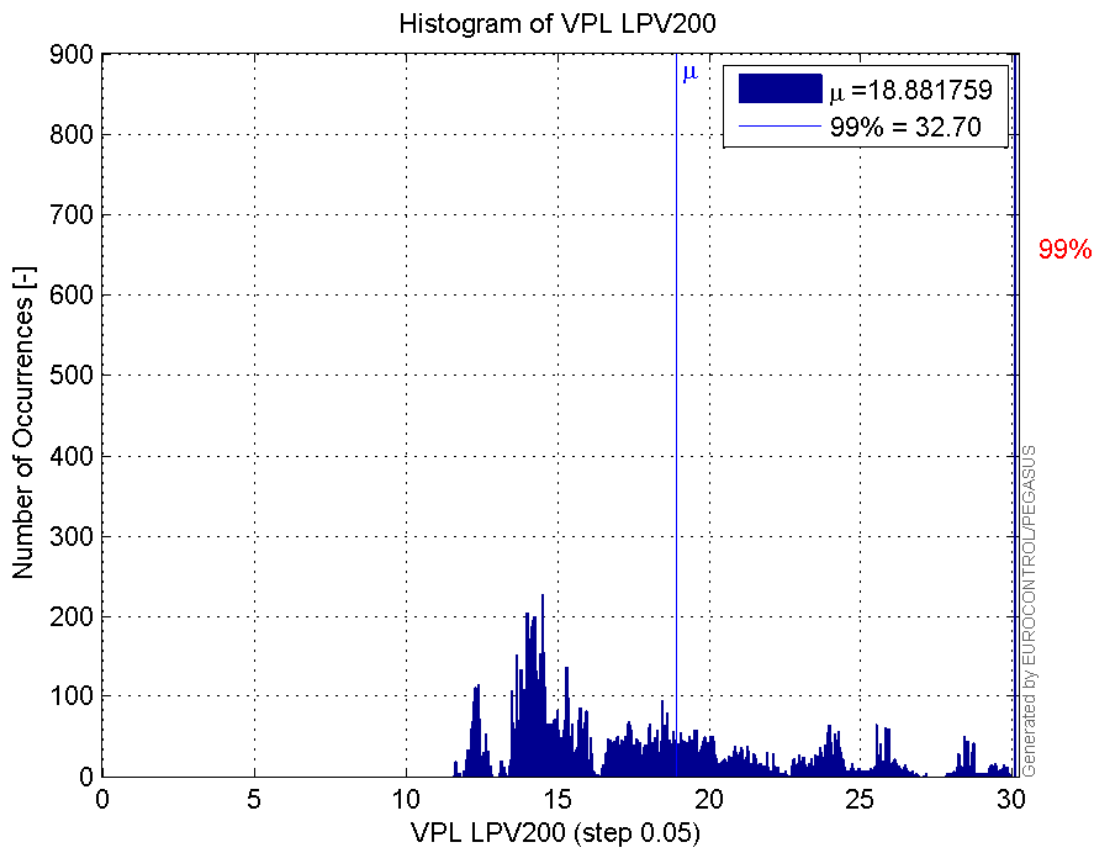
Histogram of VPE LPV200:



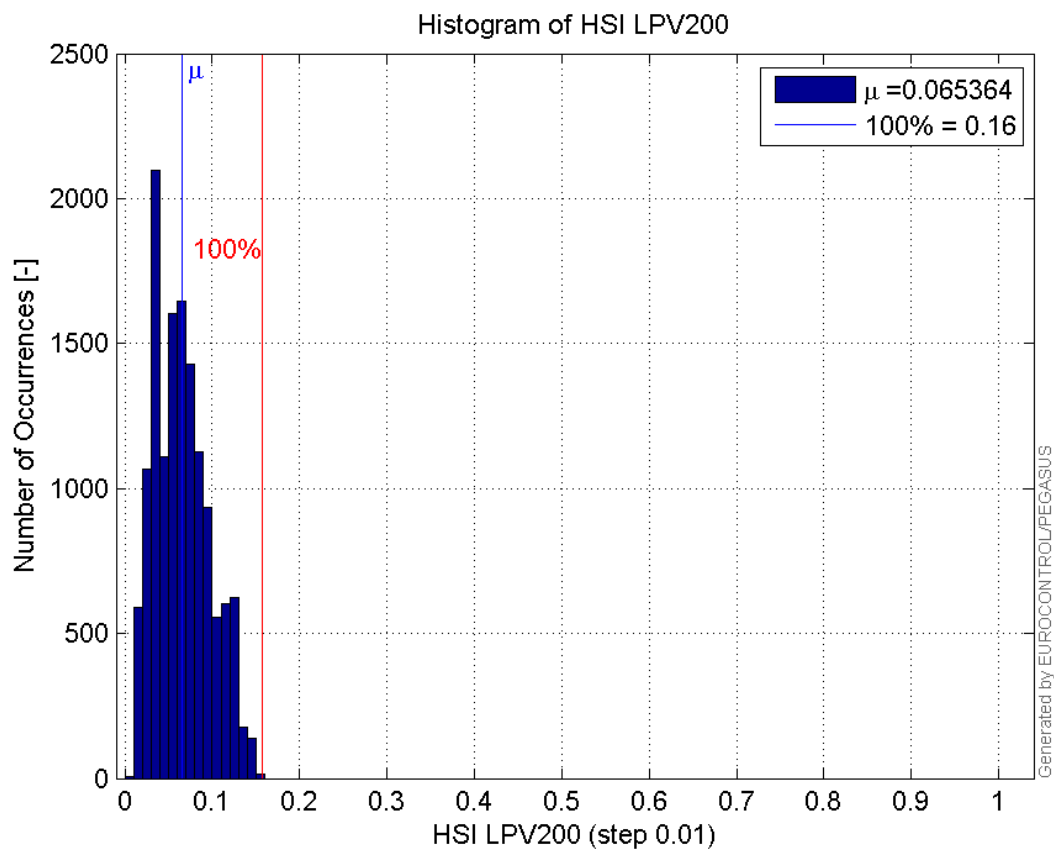
Histogram of HPL LPV200:



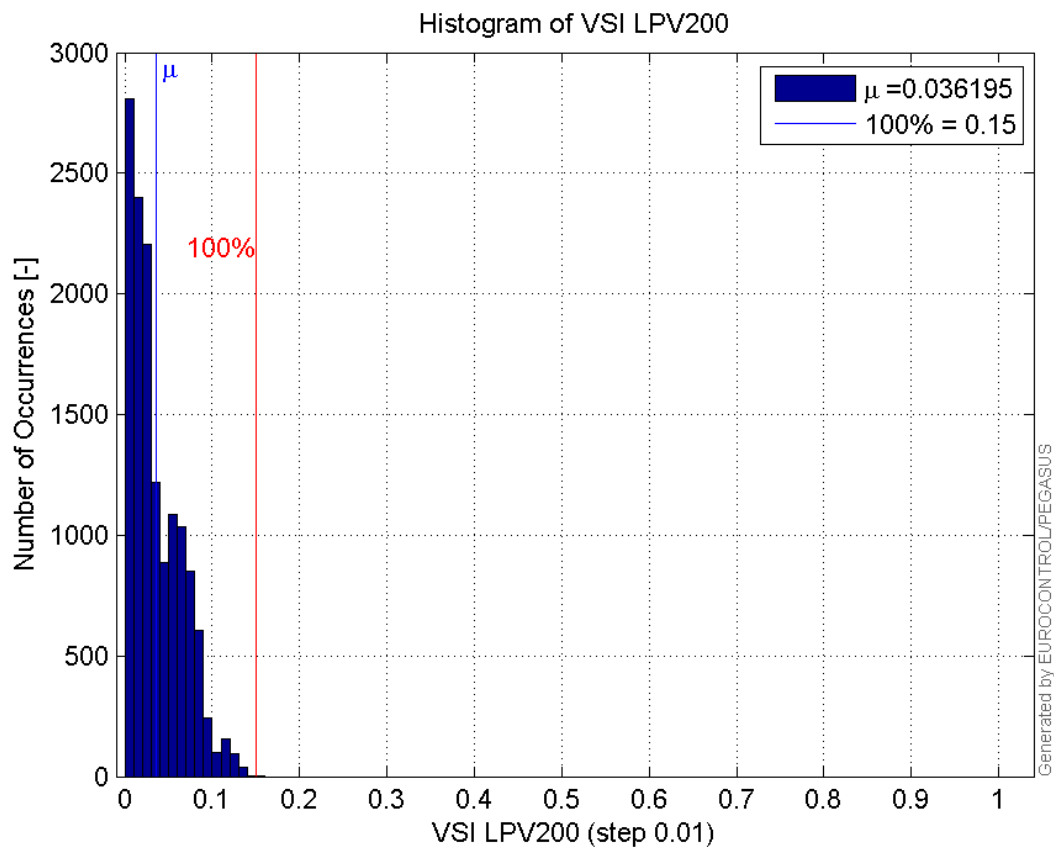
Histogram of VPL LPV200:



Histogram of HSI LPV200:

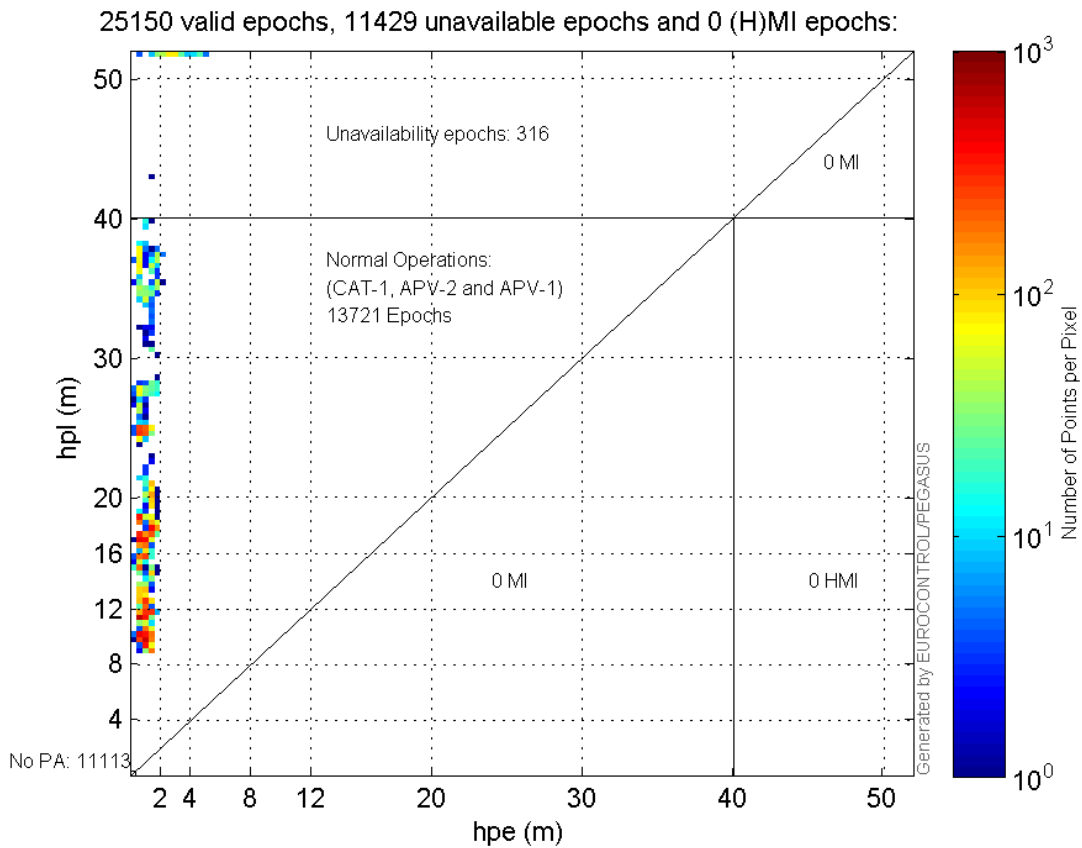


Histogram of VSI LPV200:

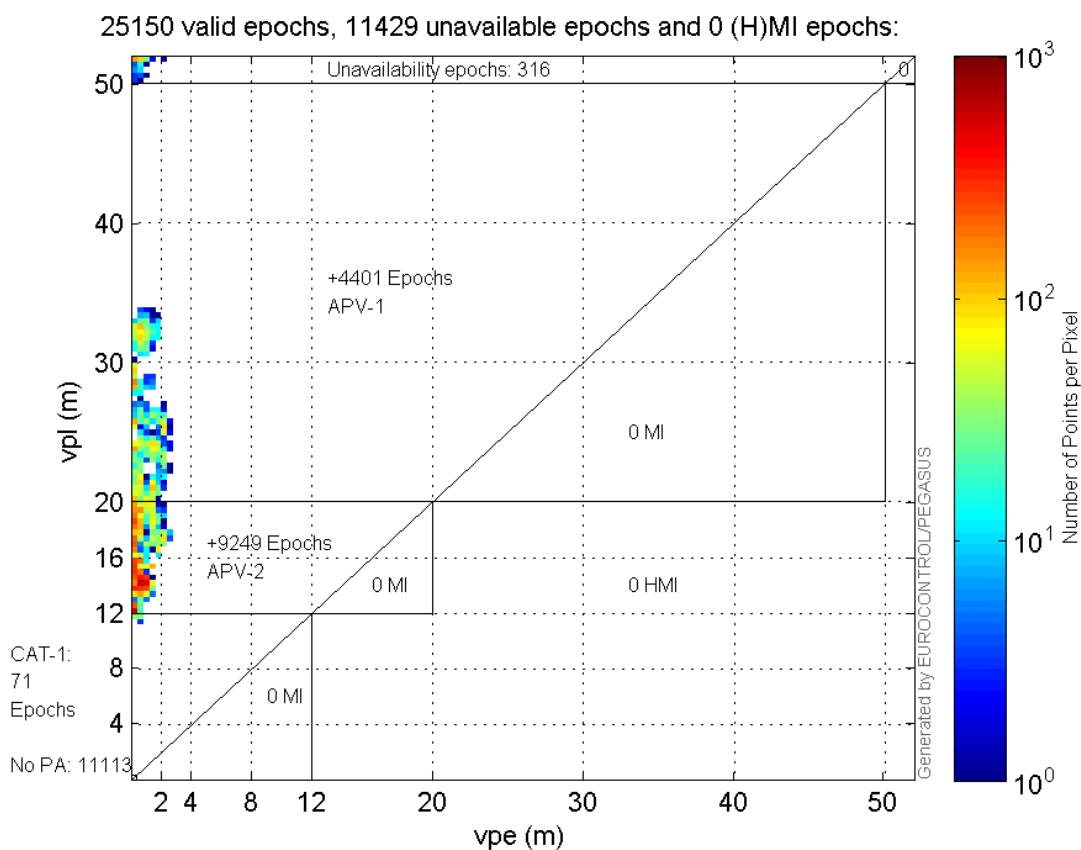


Stanford Plots

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_12_04EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_04EGNOS/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	50.4389
init_lon	results	30.4296
init_alt	results	250.817
mi_numbers	results	0

SBAS Messages

start: 07:23:49.129 04.12.2015 (week: 1873 sec: 458629.129)
end: 14:29:10.129 04.12.2015 (week: 1873 sec: 484150.129)
duration: 07:05:21 ..

quality

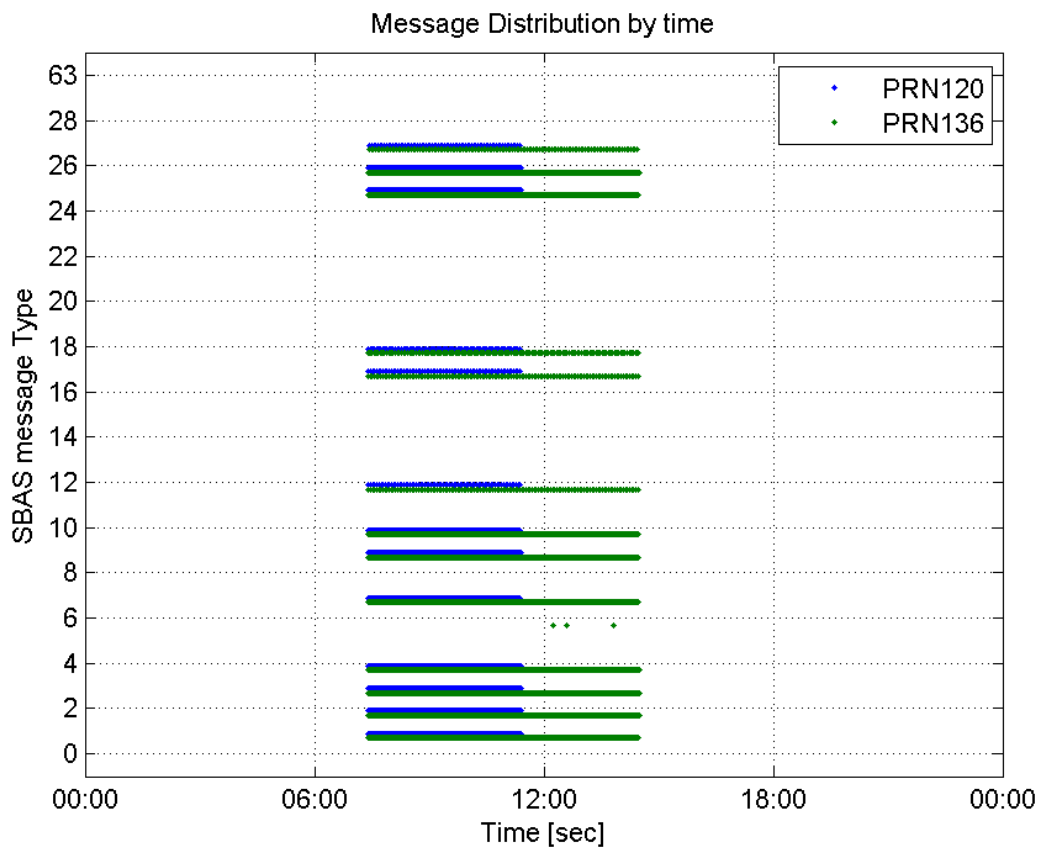
valid samples 39920
total samples 39920
number of SBAS PRNs 2

SBAS SIS Overview

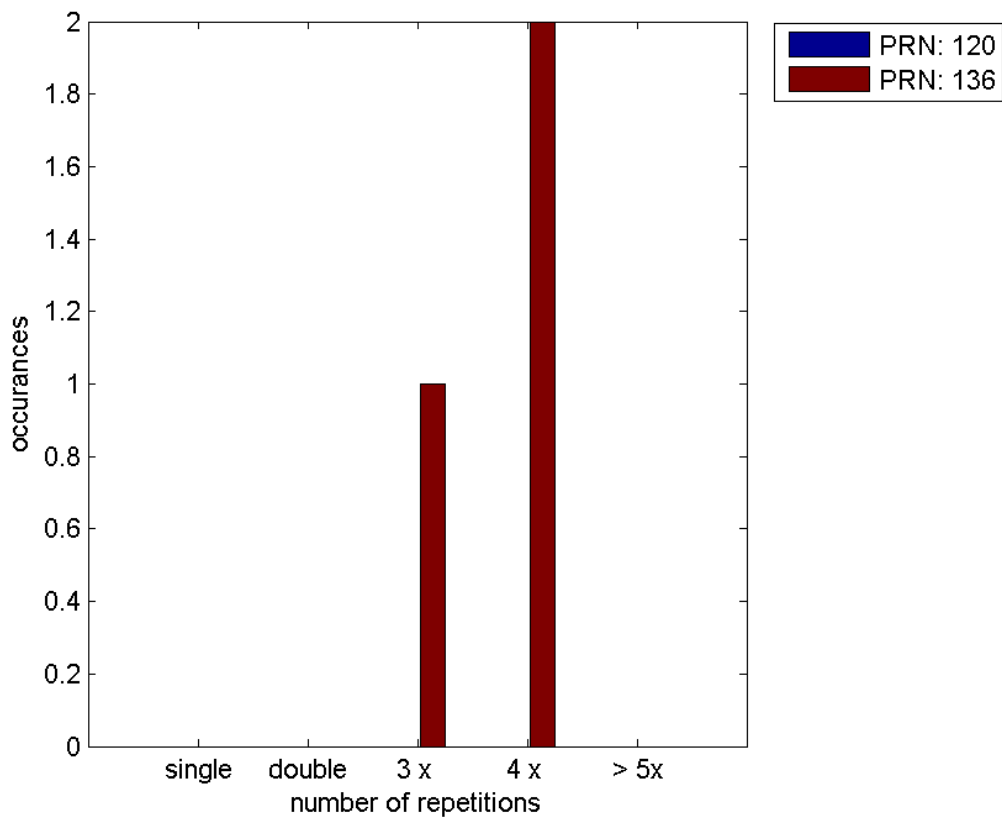
Message Type 6 repetitions :

	single	double	3 x	4 x	> 5x
PRN 120	0	0	0	0	0
PRN 136	0	0	1	2	0

 Message Distribution by time:



Message Type 6 repetitions:



Broadcast SBAS Messages :

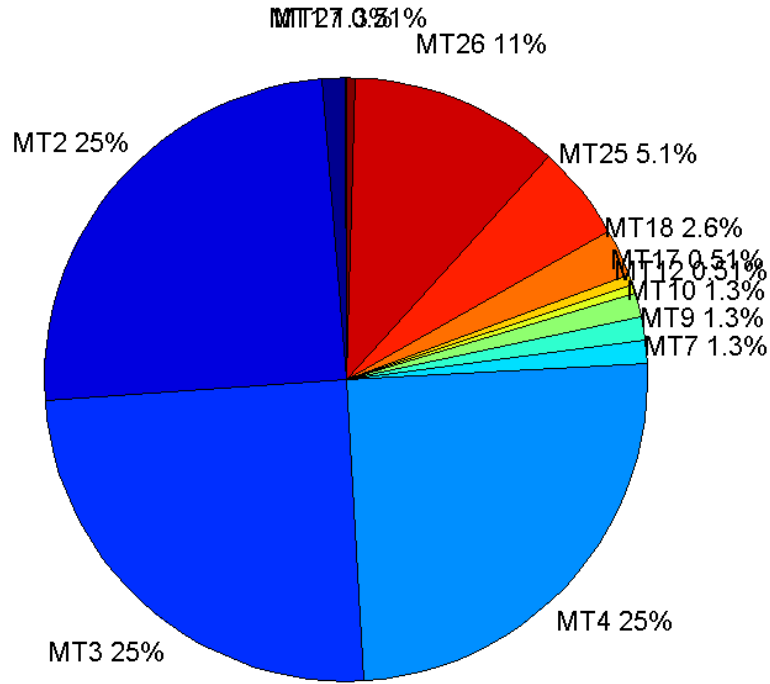
	number of messages	%
MT 0	0	0
MT 1	181	1.25712
MT 2	3579	24.8576
MT 3	3579	24.8576
MT 4	3578	24.8507
MT 5	0	0
MT 6	0	0
MT 7	180	1.25017
MT 9	181	1.25712
MT 10	181	1.25712
MT 12	74	0.51396
MT 17	74	0.51396
MT 18	370	2.5698
MT 24	0	0
MT 25	729	5.0632
MT 26	1619	11.2446
MT 27	73	0.507015
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	14398	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	81	79.6611	0	0	0
MT 2	4	5	4.02348	0	0	0
MT 3	4	5	4.02348	0	0	0
MT 4	4	5	4.02376	0	0	0
MT 5	--	--	--	--	--	--
MT 6	--	--	--	--	--	--
MT 7	76	81	79.6369	0	0	0
MT 9	76	81	79.6833	0	0	0
MT 10	76	81	79.5722	0	0	0
MT 12	184	201	195.329	73	0	0
MT 17	187	201	195.329	0	0	0
MT 18	4	168	38.7398	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	57	19.7404	0	0	0
MT						

26	4	39	8.88937	0	0	0
MT 27	185	201	195.306	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

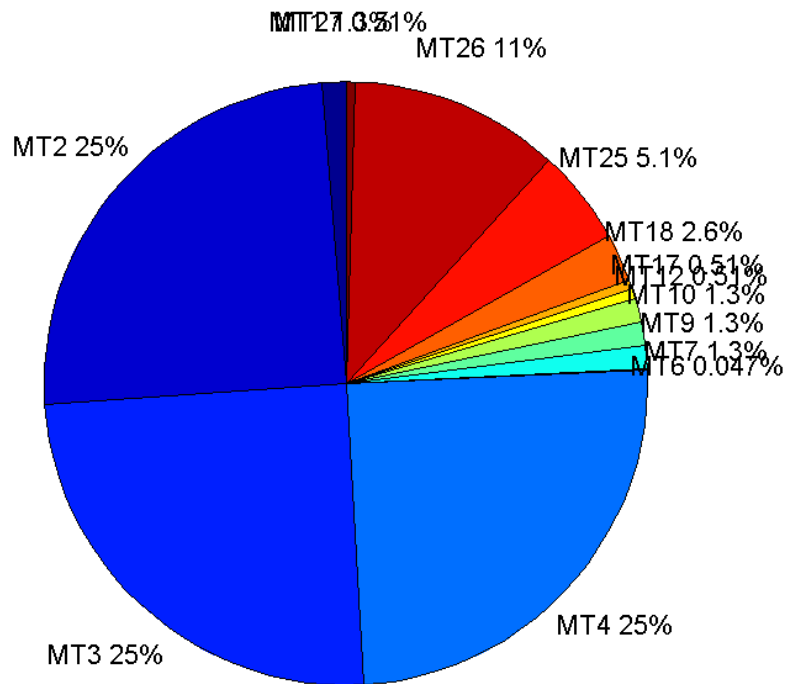
	number of messages	%
MT 0	0	0
MT 1	321	1.25774
MT 2	6337	24.8296
MT 3	6337	24.8296
MT 4	6337	24.8296
MT 5	0	0
MT 6	12	0.0470183
MT 7	320	1.25382
MT 9	320	1.25382

MT 10	320	1.25382
MT 12	131	0.513283
MT 17	131	0.513283
MT 18	654	2.5625
MT 24	0	0
MT 25	1298	5.08581
MT 26	2874	11.2609
MT 27	130	0.509364
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	25522	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	82	79.6844	0	0	0
MT 2	4	8	4.02746	3	0	0
MT 3	4	8	4.02746	3	0	0
MT 4	4	8	4.02746	3	0	0
MT 5	--	--	--	--	--	--
MT 6	1	4316	514.364	2	2	2
MT 7	76	82	79.7586	0	0	0
MT 9	76	81	79.7085	0	0	0
MT 10	76	81	79.6583	0	0	0
MT 12	181	201	195.285	130	0	0
MT 17	185	201	195.315	0	0	0
MT 18	4	169	38.9127	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	48	19.6623	0	0	0
MT 26	3	54	8.86704	0	0	0
MT 27	188	201	195.287	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_04EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_12_04EGNOS/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: 07:23:50 04.12.2015 (week: 1873 sec: 458630)
end: 14:29:10 04.12.2015 (week: 1873 sec: 484150)
duration: 07:05:21 ..

quality

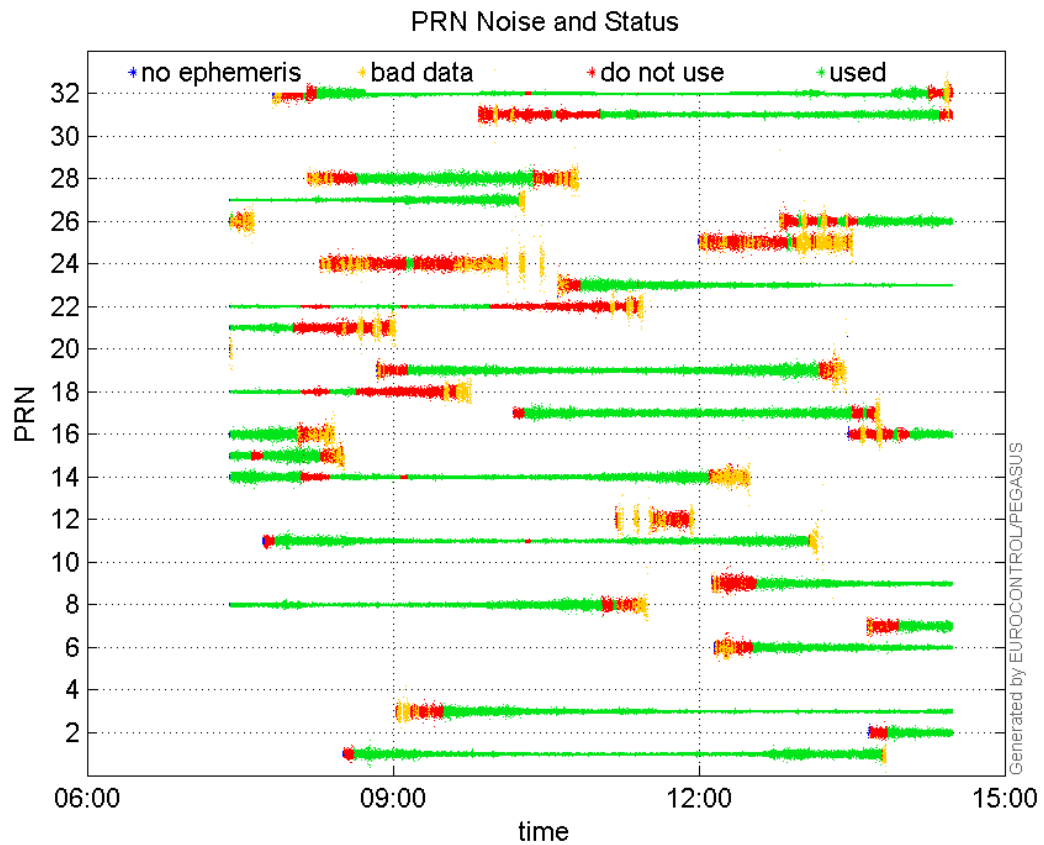
valid samples 25521
total samples 25521

PRN overview

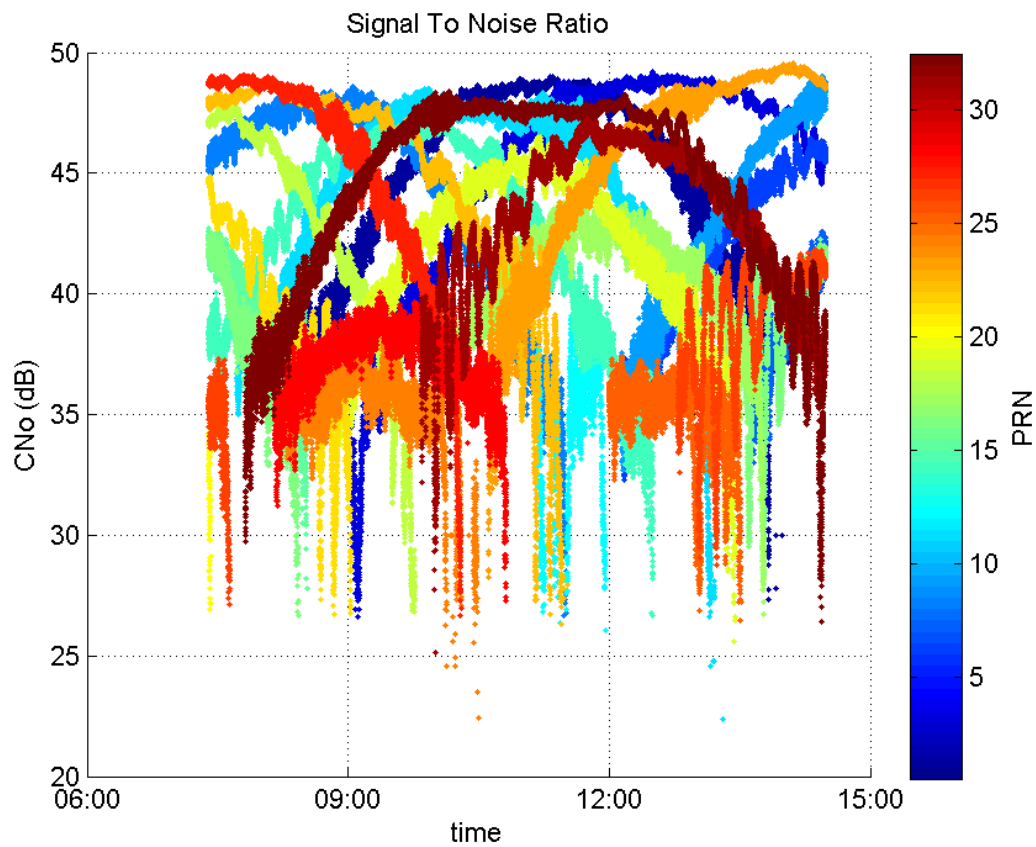
Number of Visible GPS Satellites 26
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



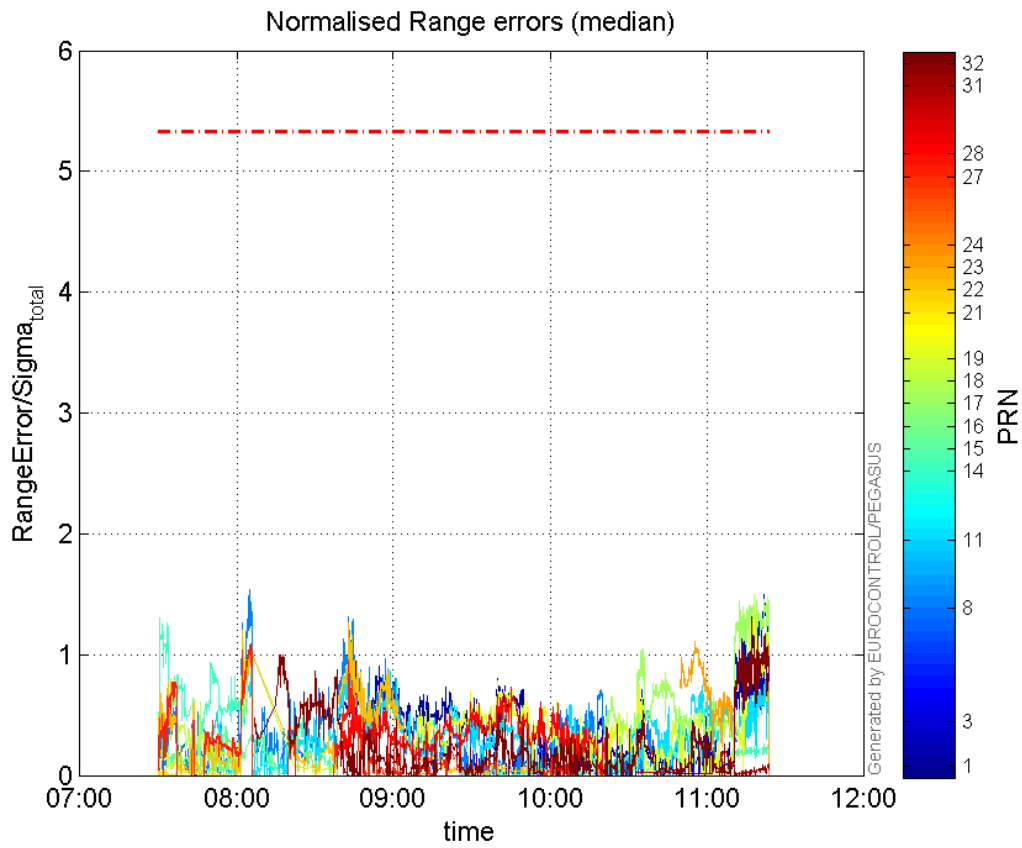
range errors

Number of Overbounding Norm Errors 0

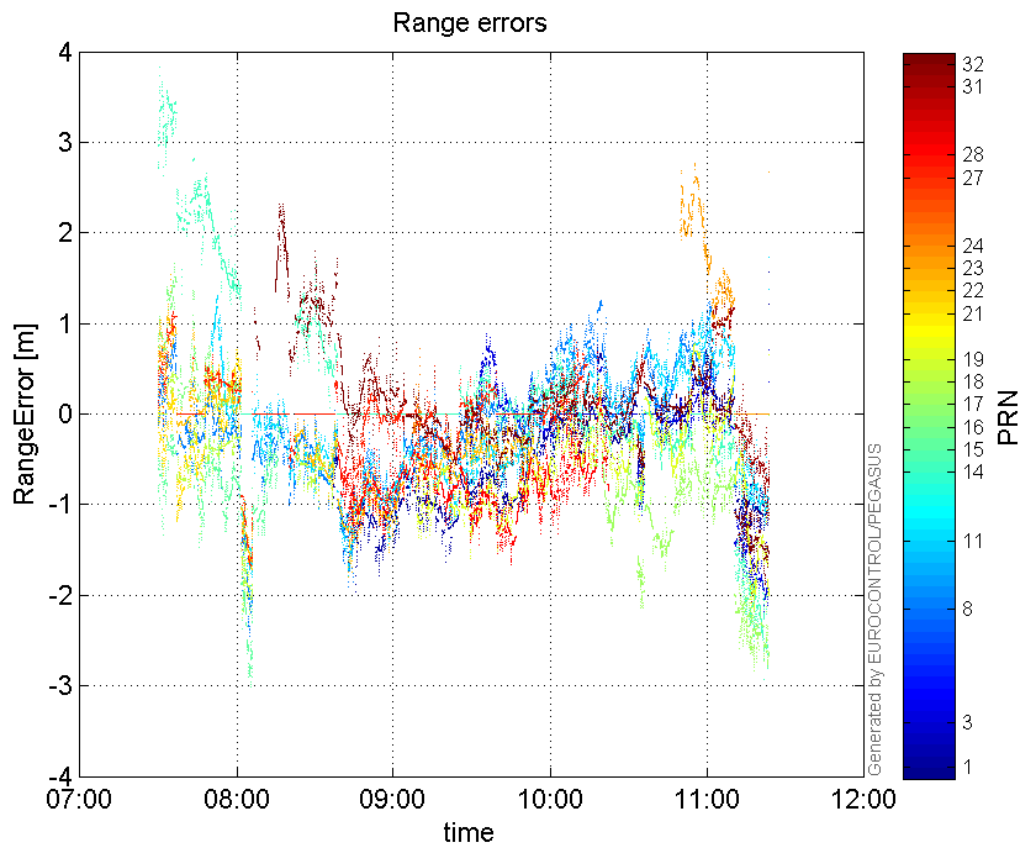
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1873	472426	1	0.994713	-1.41444	1.42196
1873	472919	3	1.50115	-2.14808	1.43096
1873	461106	8	1.54134	-2.38259	1.54579
1873	463373	11	1.01288	-1.78062	1.75798
1873	459019	14	1.29922	3.83146	2.94904
1873	459940	15	0.496364	-1.47135	2.96426
1873	459377	16	0.818815	1.66348	2.03156
1873	472696	17	1.49674	-2.83913	1.89688
1873	460940	18	1.15886	-2.24806	1.93989
1873	472693	19	1.37295	-2.11661	1.54166
1873	459421	21	0.0793242	-1.19096	15.0138
1873	463377	22	1.26693	-1.8048	1.42454
1873	471330	23	1.10763	2.75441	2.48677
1873	465005	24	0.0336721	-0.823987	24.4709
1873	461124	27	1.0877	-1.67588	1.54075
1873	467113	28	0.730692	-1.66151	2.27388
1873	472000	31	0.258518	1.39348	5.39027
1873	472638	32	1.31131	-2.06912	1.5779

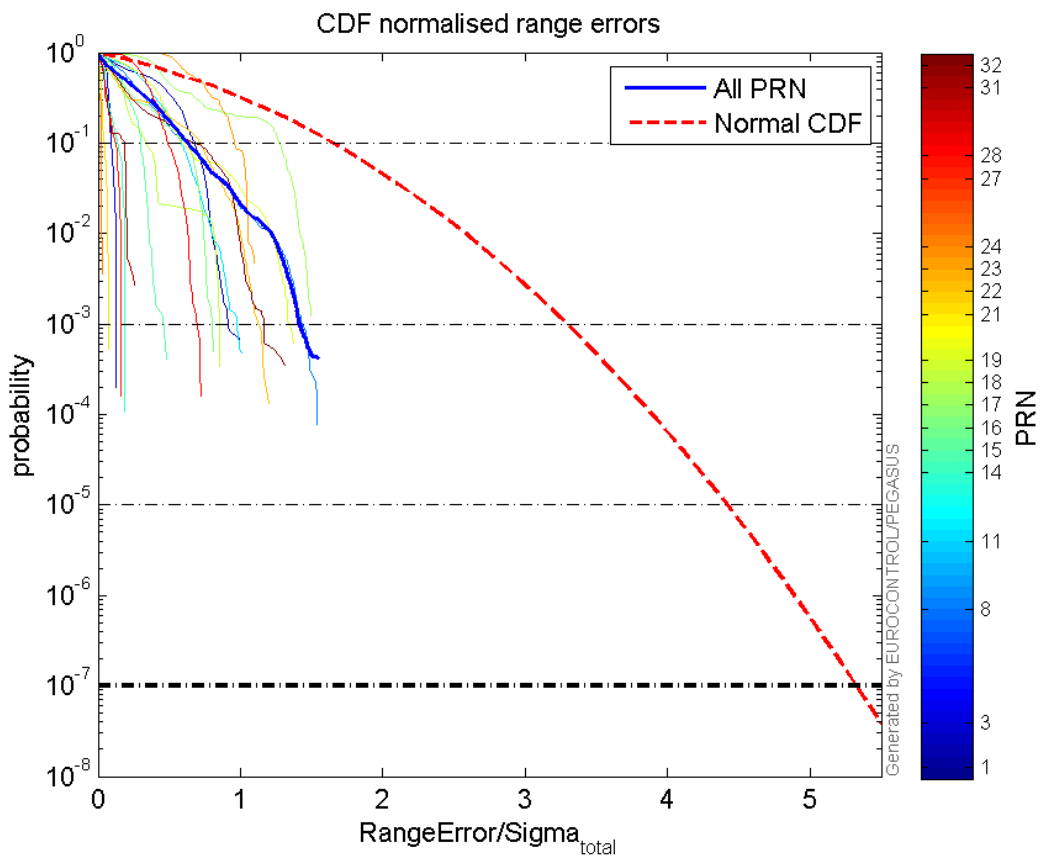
Normalised Range errors (median):



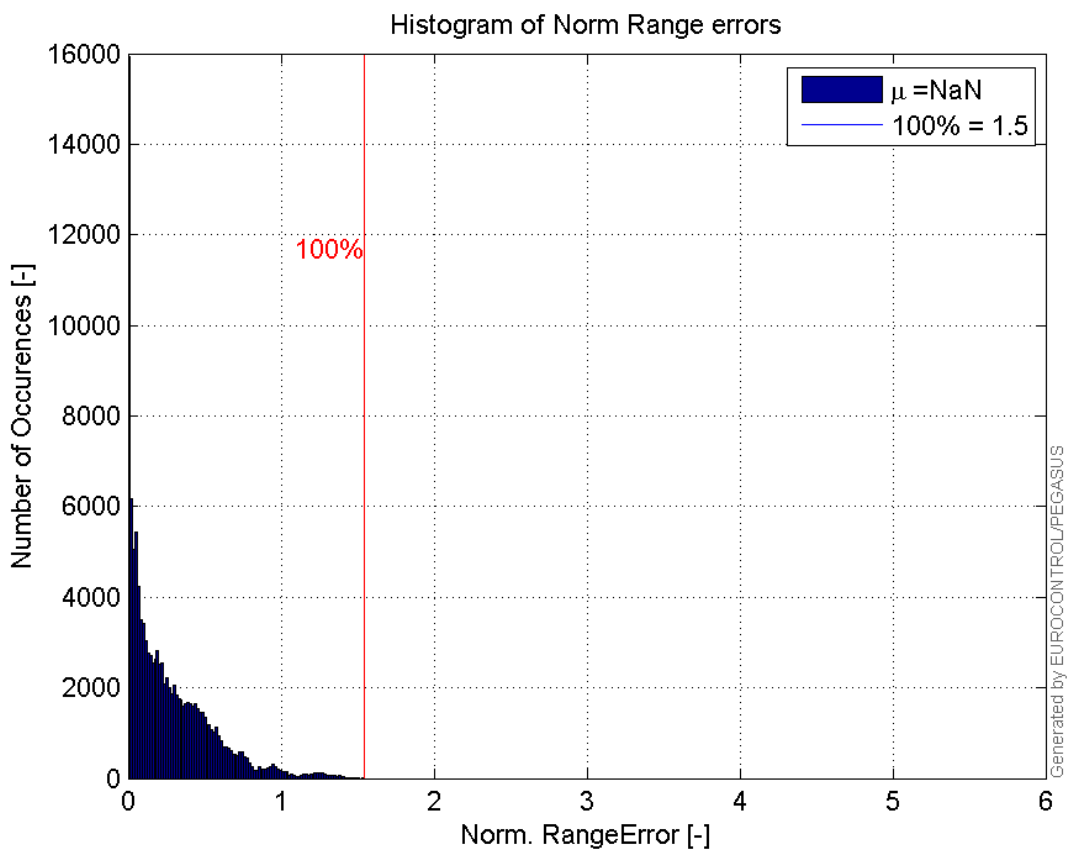
Range errors:



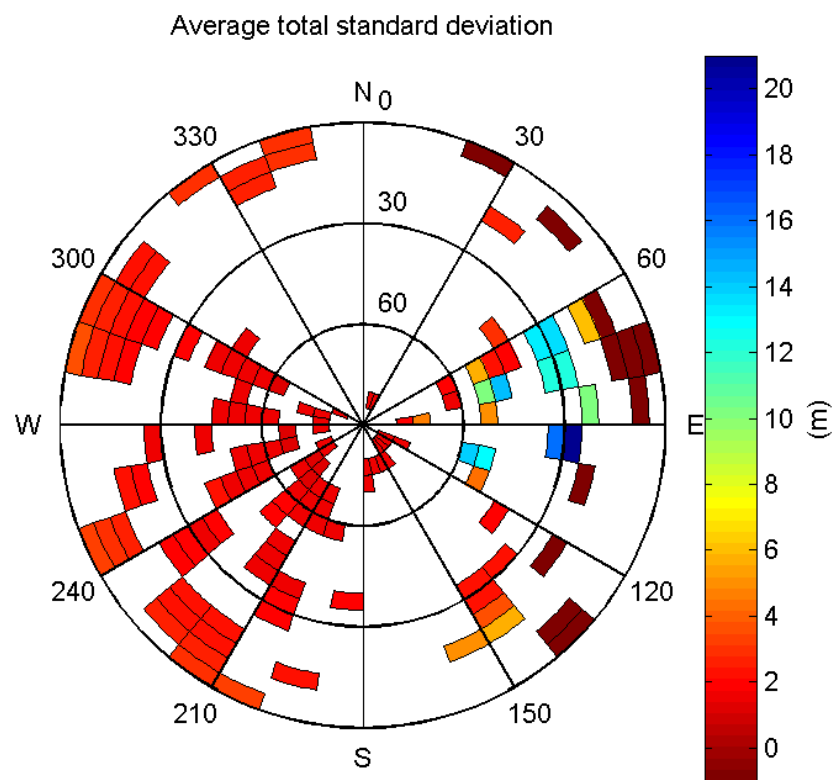
CDF normalised range errors:



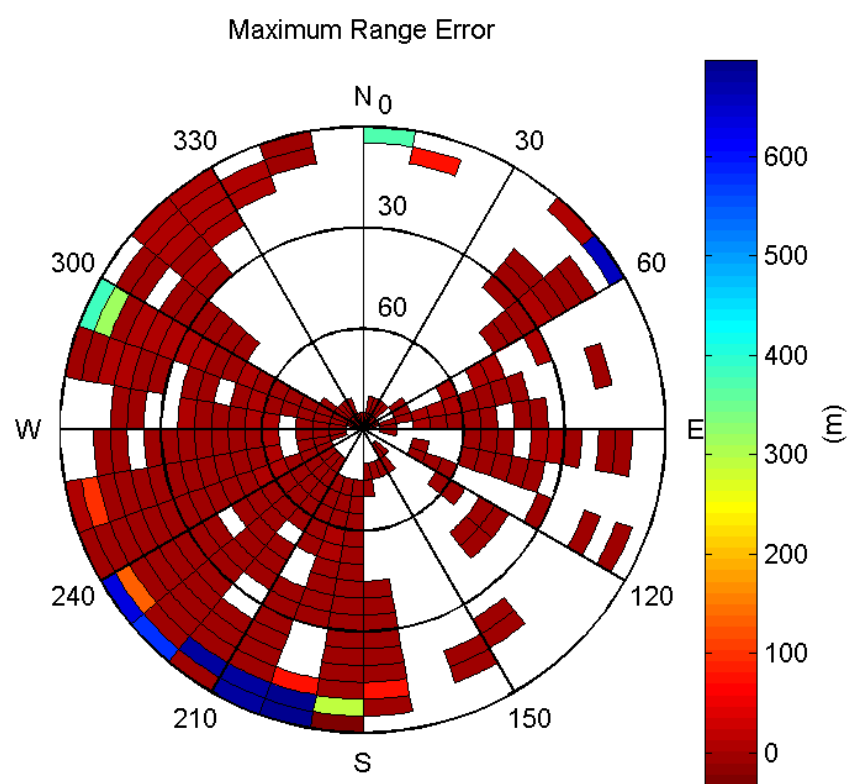
Histogram of Norm Range errors:



Sigma Sky Plot:

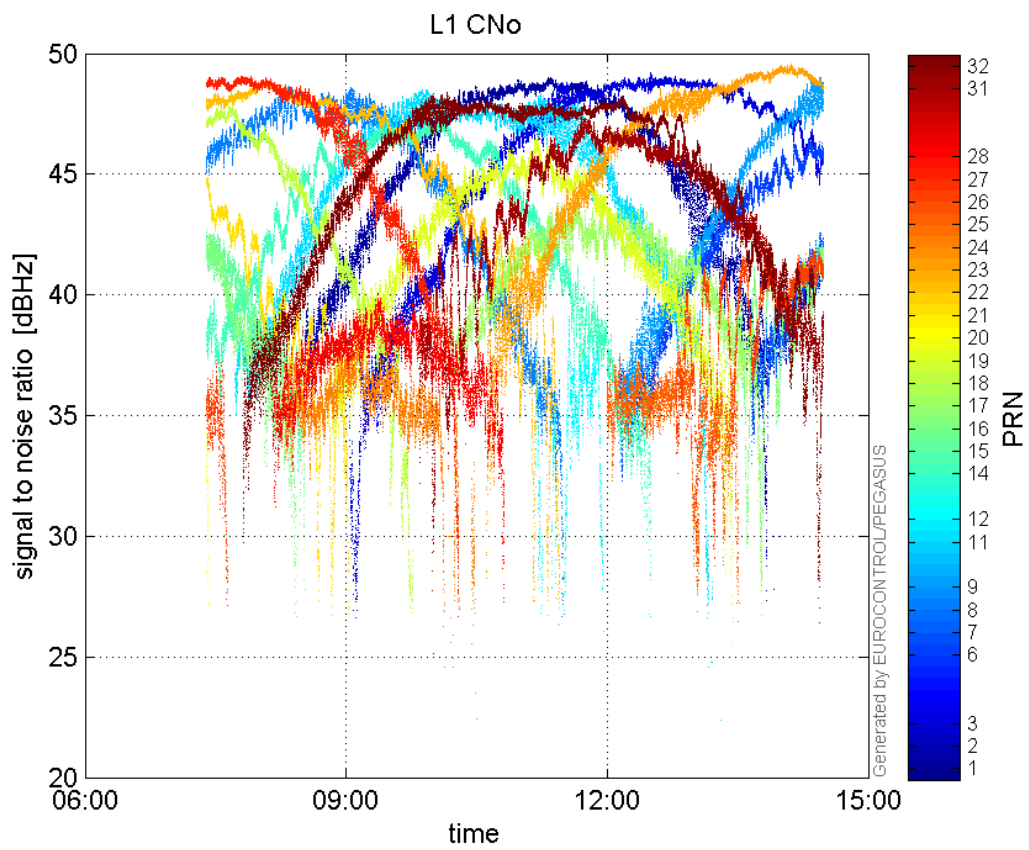


Norm Error Sky Plot:

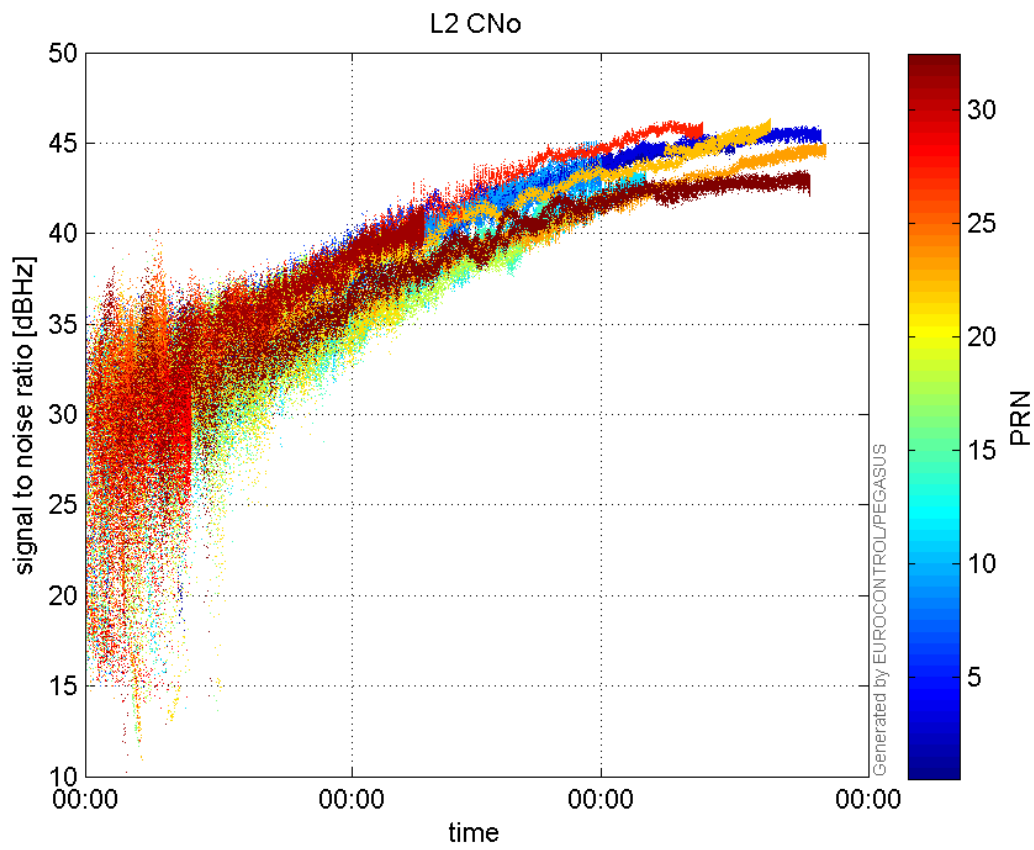


signal quality

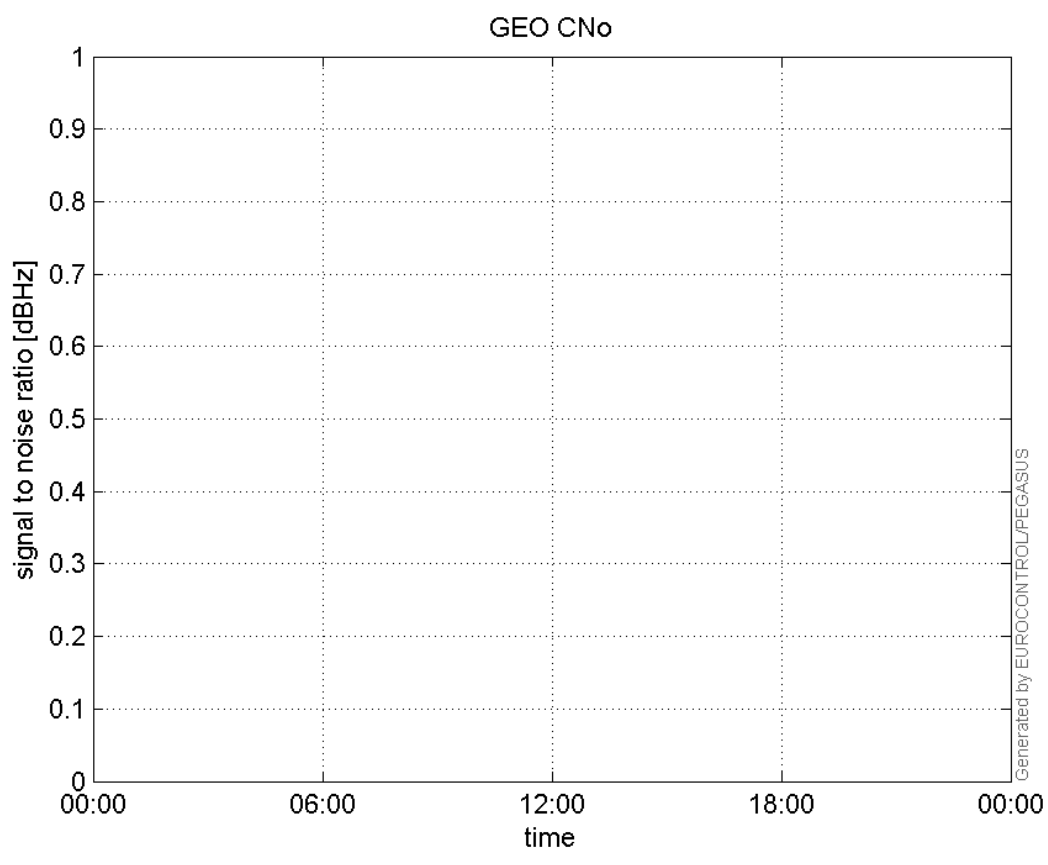
L1 CNo:



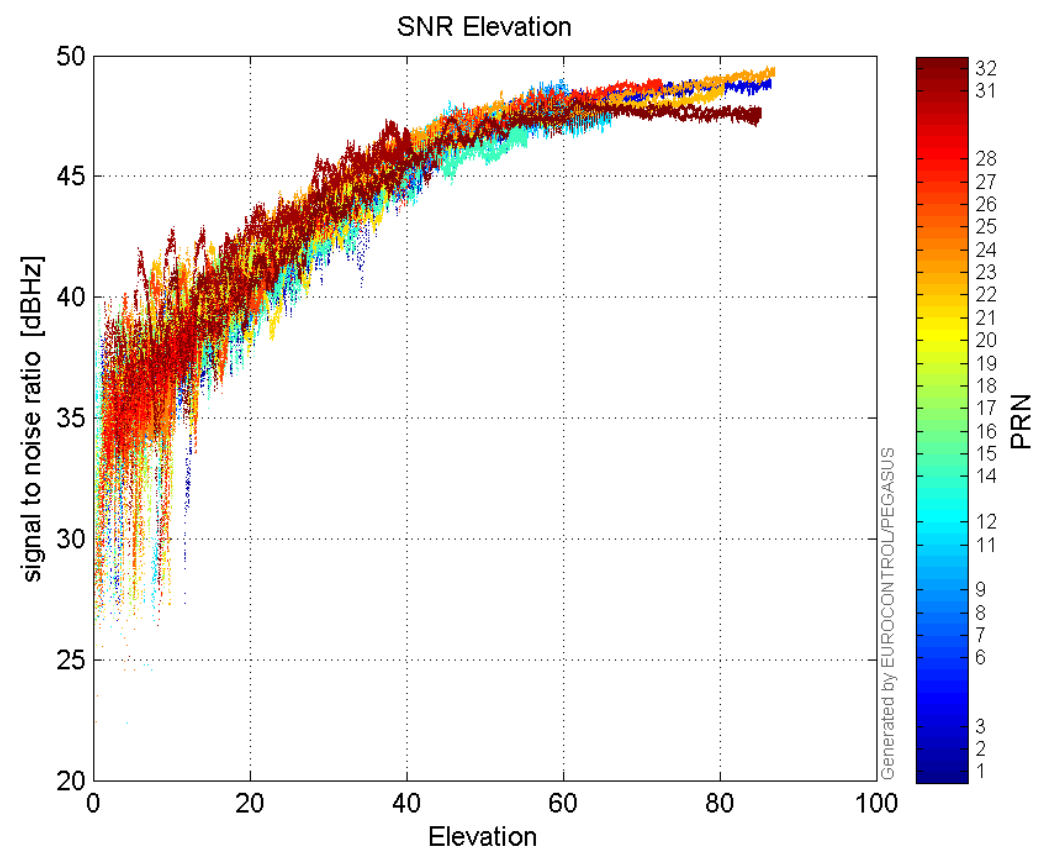
L2 CNo:



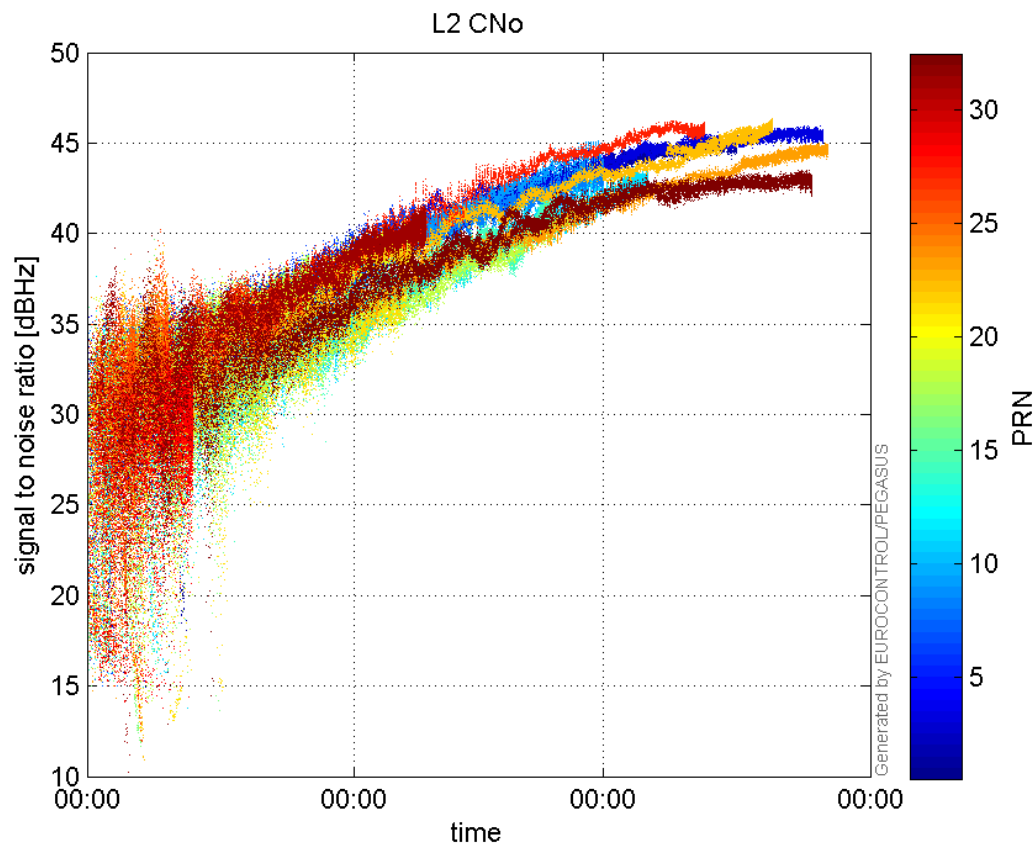
GEO CNo:



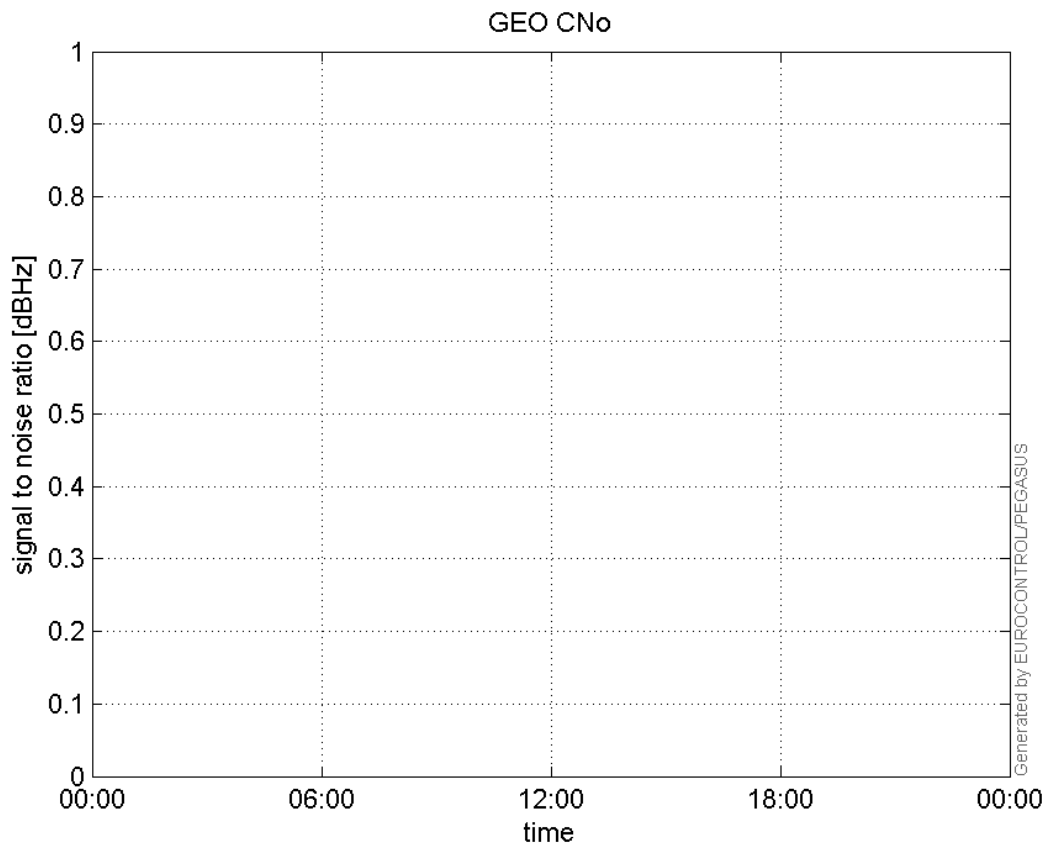
SNR Elevation:



L2 CNo:

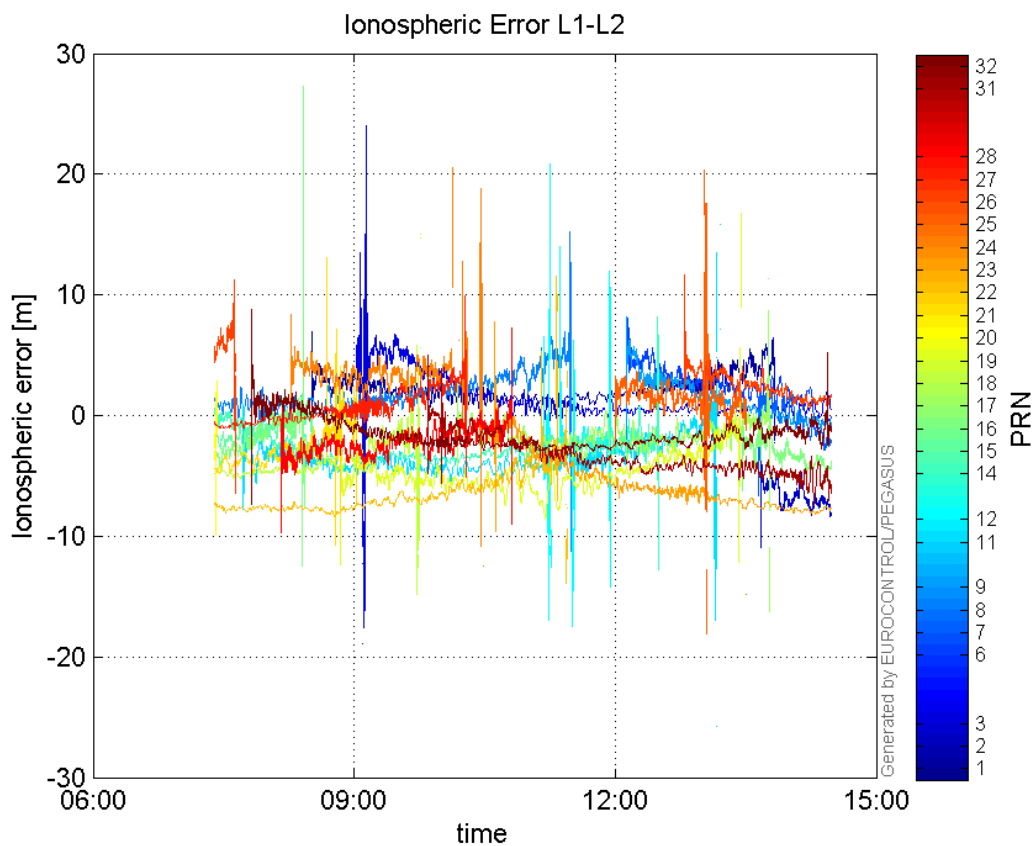


GEO CNo:



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_04EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_04EGNOS/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	50.4389
init_lon	results	30.4296
init_alt	results	250.817
mi_numbers	results	0