

DLV3 -

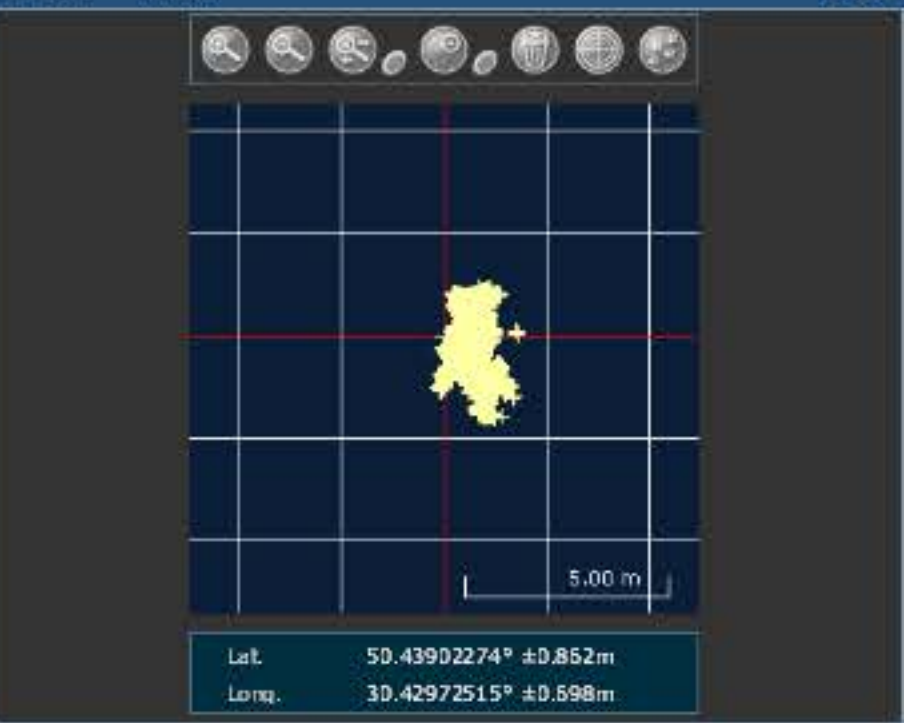
DLV3 - Constellation



DLV3 - Position

Latitude	50.43902274°	+/- 0.86m
Longitude	30.42972515°	+/- 0.70m
Hgt. (MSL)	191.083m	+/- 1.53m
Solution type	SBAS	
Ionospheric correction	Multi-frequency	
Advanced RTK status	N/A	
Solution age	0 seconds	
Differential age	5 seconds	
# of satellites used in solution	8	
	GPS	L1 L2 L5
	GLONASS	L1 L2
Solution status	Computed	
Tue 22/12/2015 13:06:52 GMT Tue 22/12/2015 15:06:52 Local		

DLV3 - Plan



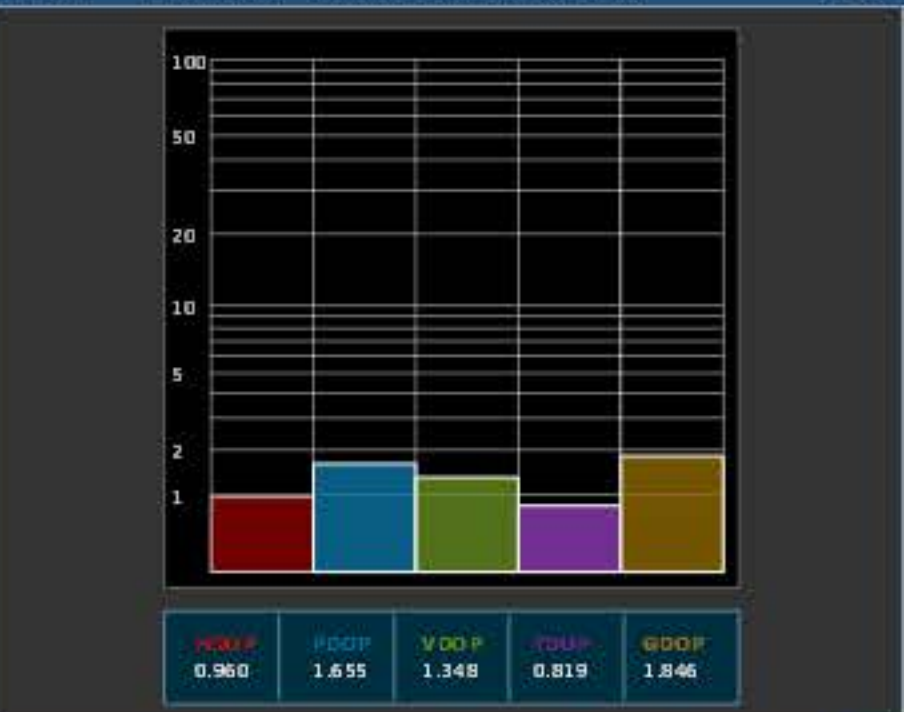
SV Details Mask Angle Details

PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - GPS Tracking Channel Status



DLV3 - Dilution Of Precision (DOP)



DLV3 - Console Window

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

Global View

abbreviation NAU
version 4.8.4
program Pegasus
comment Konin V., Shyshkov F. InsideGNSS, Jan-Feb 2015,
P.50 - 54
city Kiev
country Ukraine
site Laboratory satellite systems
date 26/12/2015

Range Domain

start: 07:21:31 22.12.2015 (week: 1876 sec: 199291)
end: 13:06:30 22.12.2015 (week: 1876 sec: 219990)
duration: 05:45:00 ..

quality

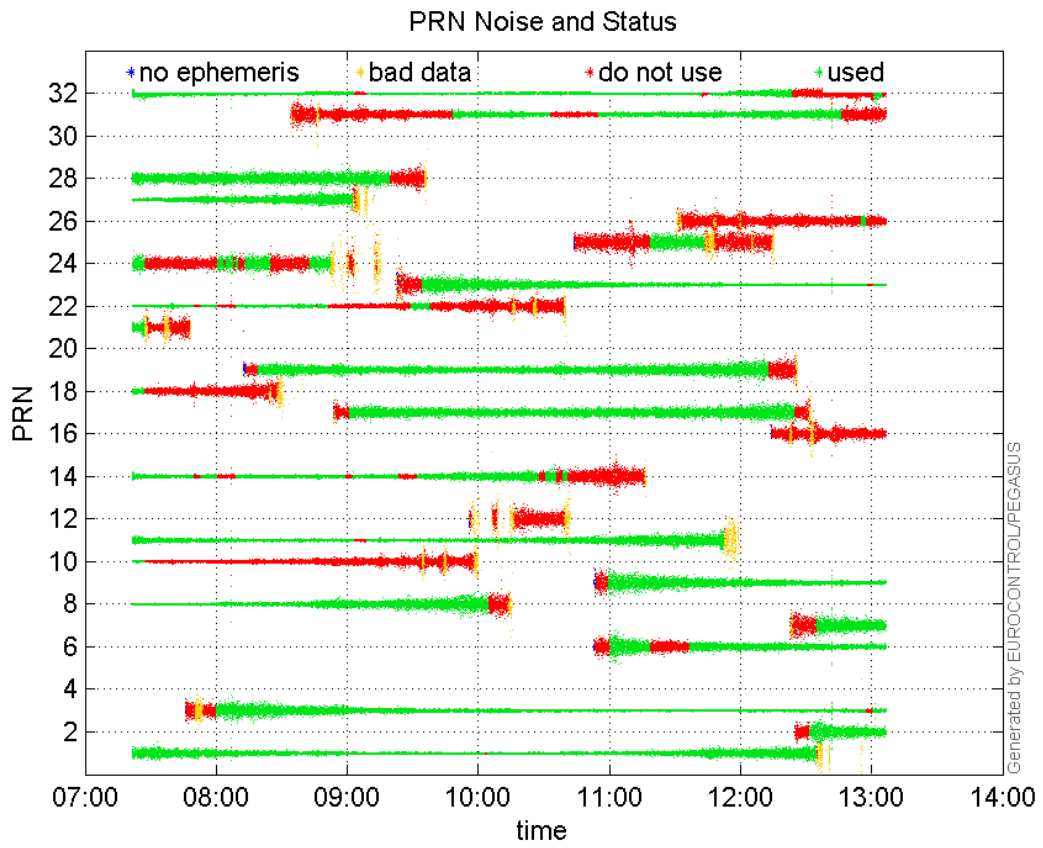
valid samples 20700
total samples 20700

PRN overview

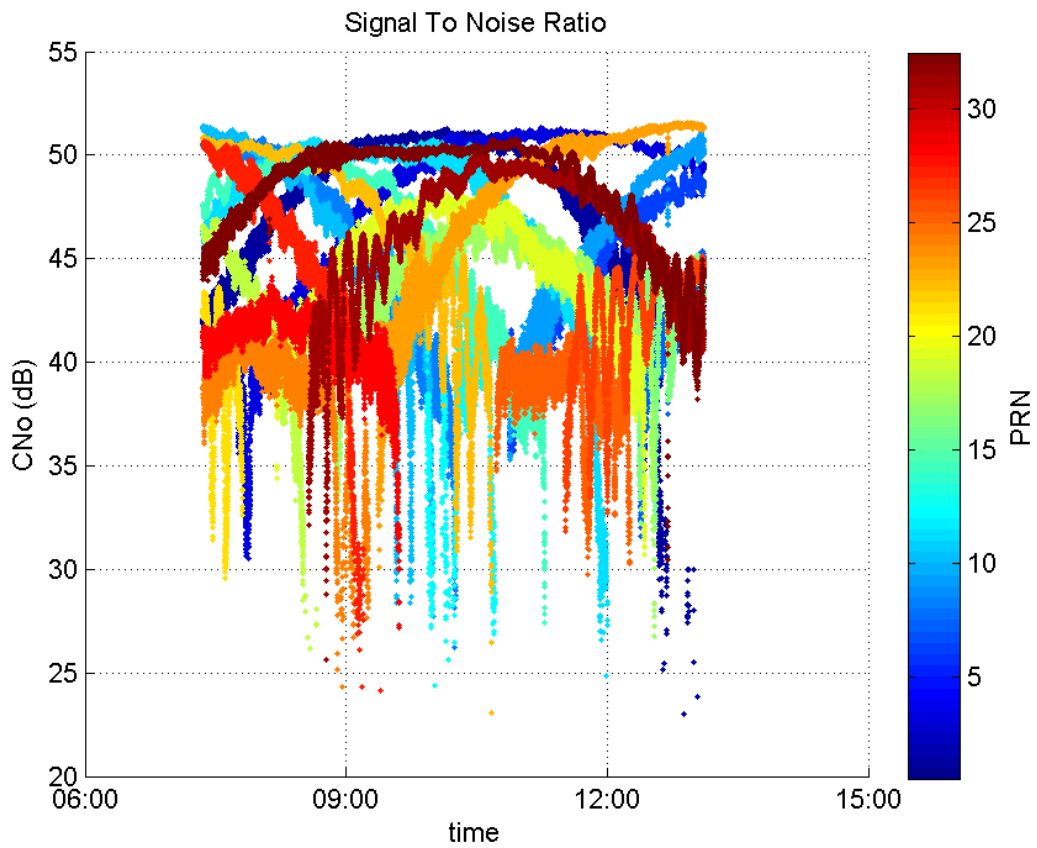
Number of Visible GPS Satellites 25
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



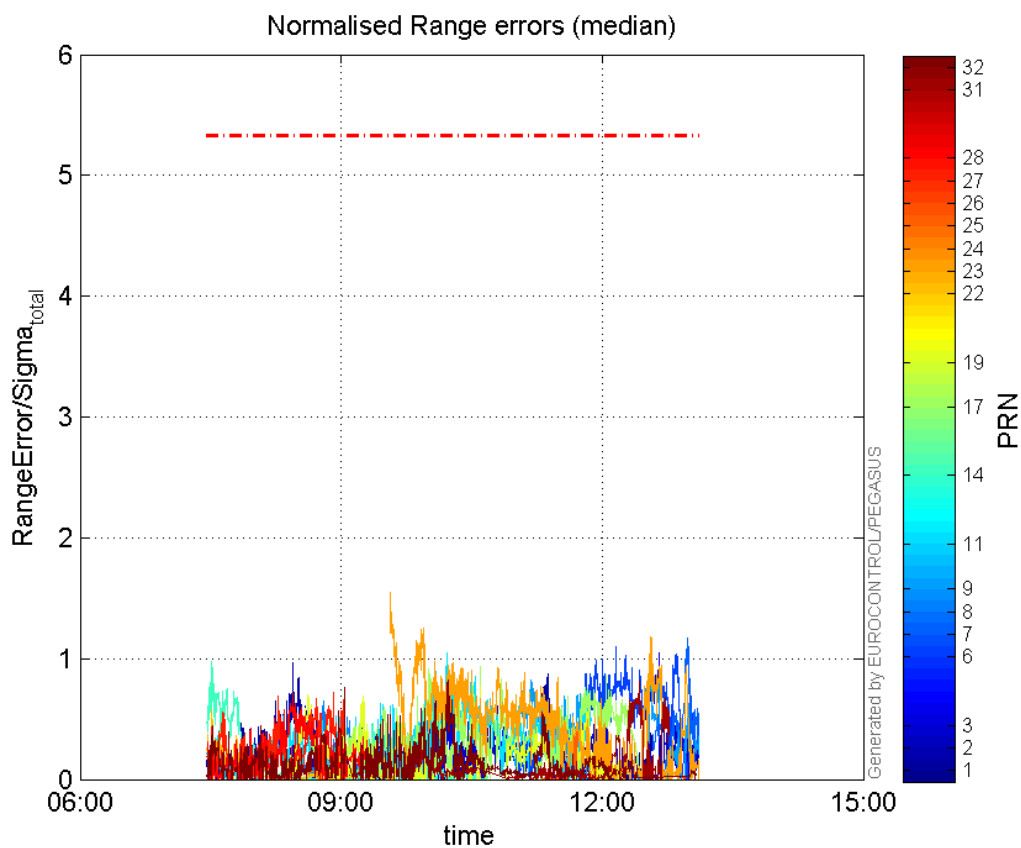
range errors

Number of Overbounding Norm Errors 0

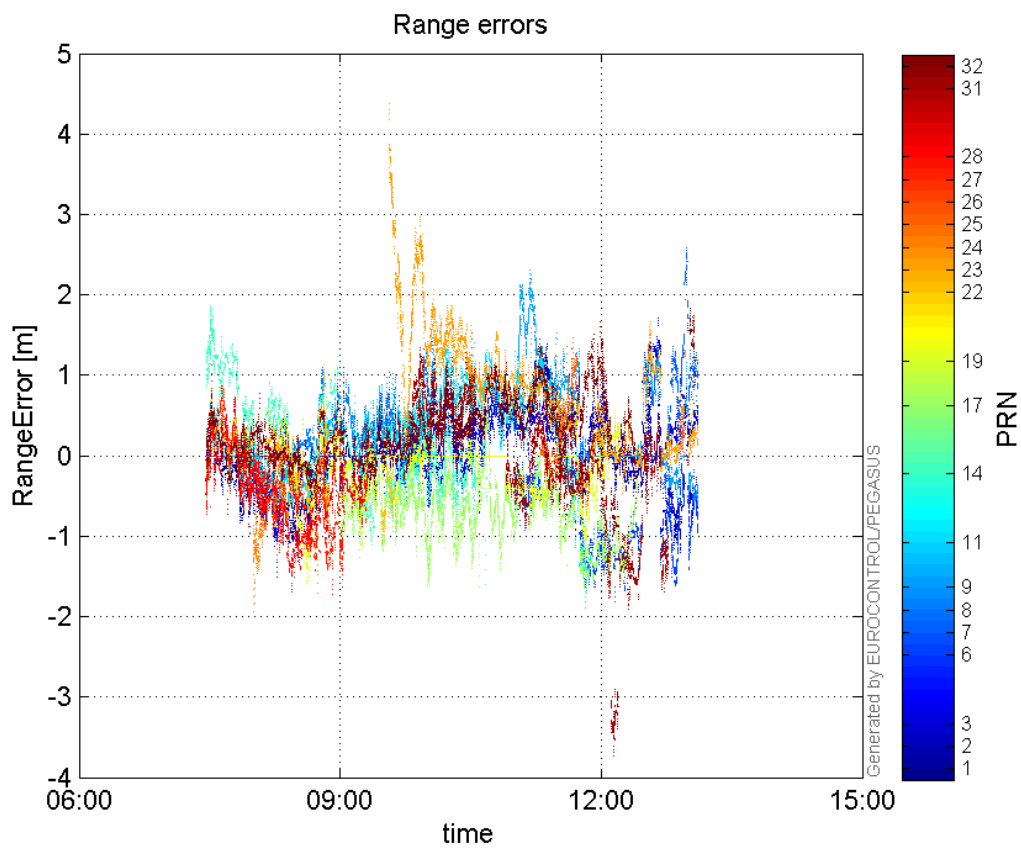
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1876	203193	1	0.964219	-1.49537	1.55087
1876	219283	2	0.498688	-1.20044	2.4072
1876	218362	3	1.04614	1.71745	1.6417
1876	216578	6	1.09396	-1.81764	1.66152
1876	219551	7	1.17412	2.57954	2.197
1876	204459	8	0.644043	1.10459	1.71508
1876	218335	9	0.870625	1.27891	1.46895
1876	209580	11	1.04801	1.52326	1.45348
1876	199829	14	0.971266	1.78854	1.84145
1876	210937	17	0.934515	-1.63472	1.74927
1876	210937	19	0.77579	-1.26289	1.62787
1876	199852	22	0.567987	0.807108	1.421
1876	207246	23	1.55143	4.37179	2.8179
1876	201960	24	0.171841	-1.14463	6.661
1876	214961	25	0.39839	1.24387	3.12223
1876	219317	26	0.0349832	0.804065	22.9843
1876	204877	27	0.720678	-1.71889	2.3851
1876	203188	28	0.711103	-1.68547	2.37022
1876	217518	31	0.813778	-1.78523	2.19375
1876	209652	32	0.819539	1.15368	1.40772

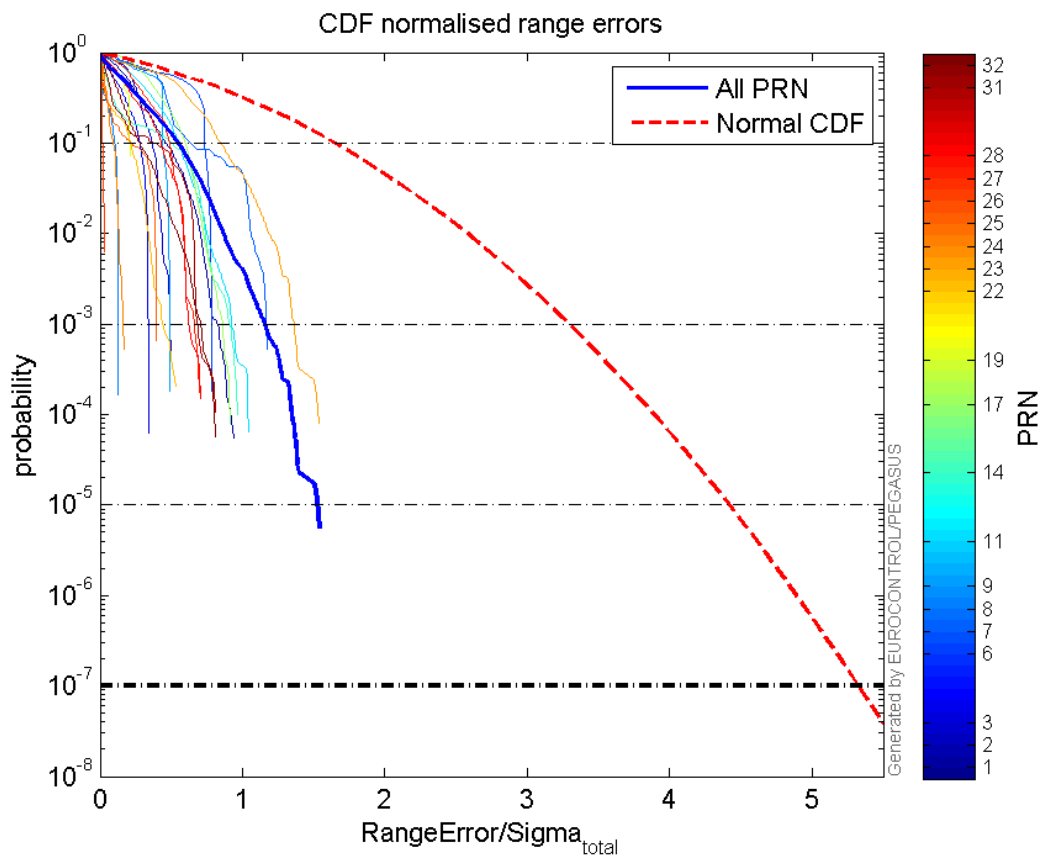
Normalised Range errors (median):



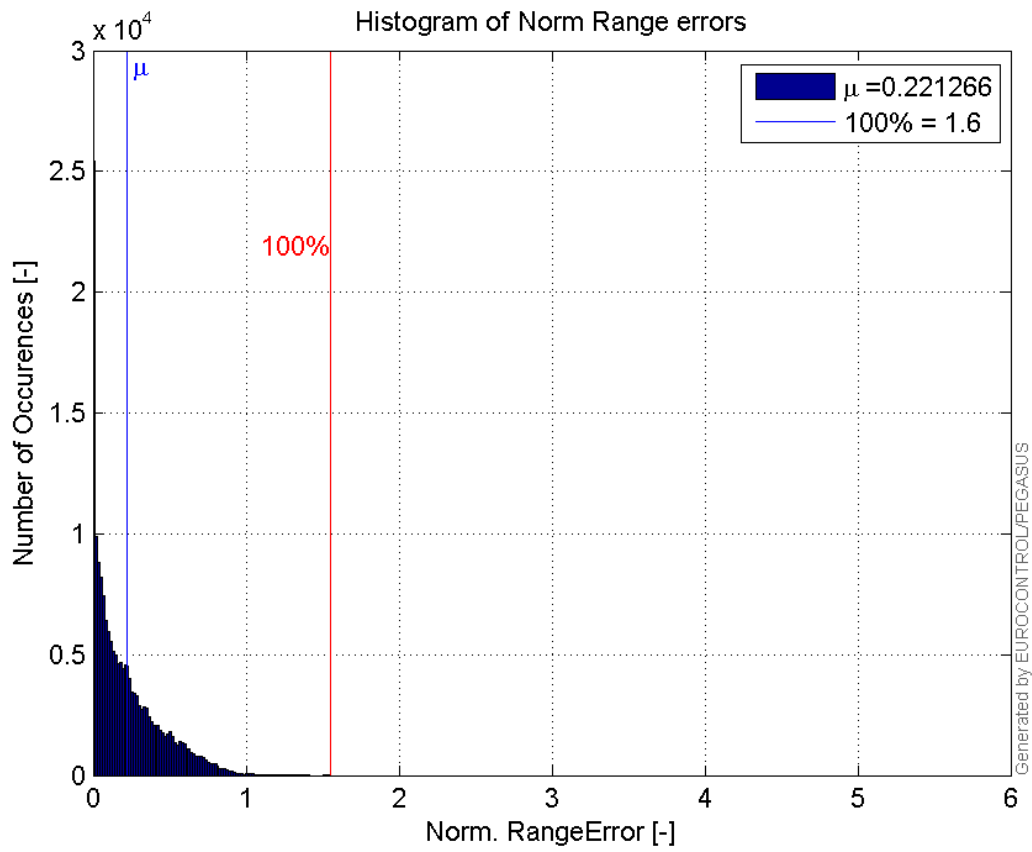
Range errors:



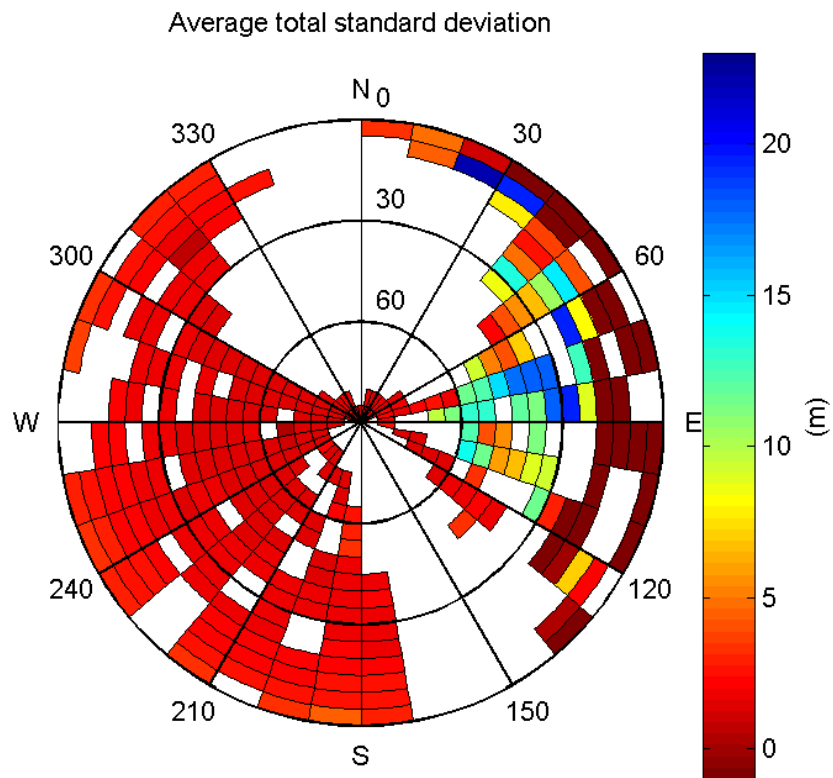
CDF normalised range errors:



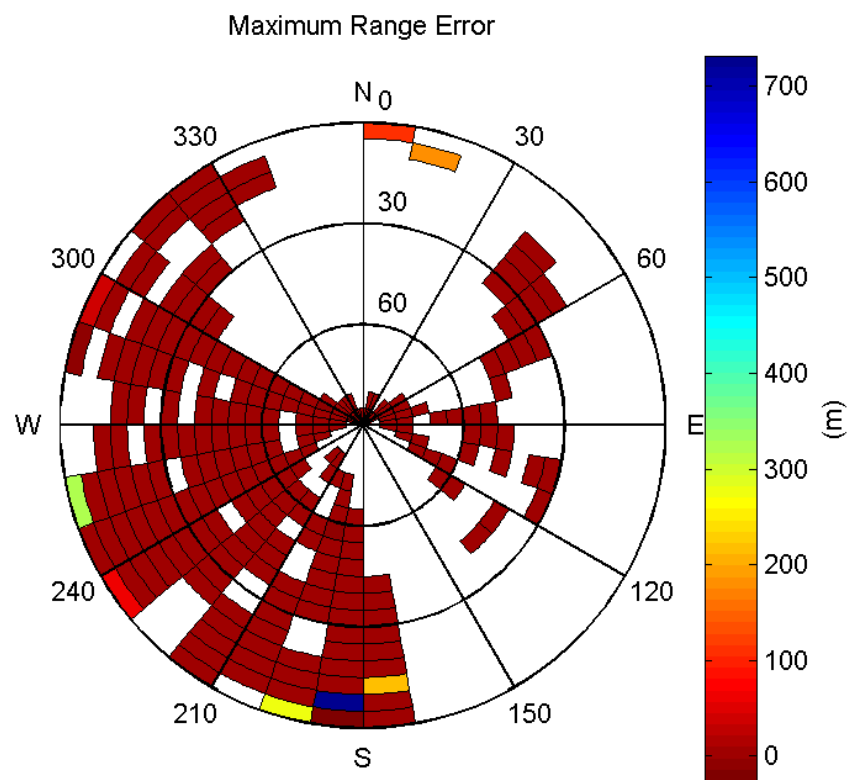
Histogram of Norm Range errors:



Sigma Sky Plot:

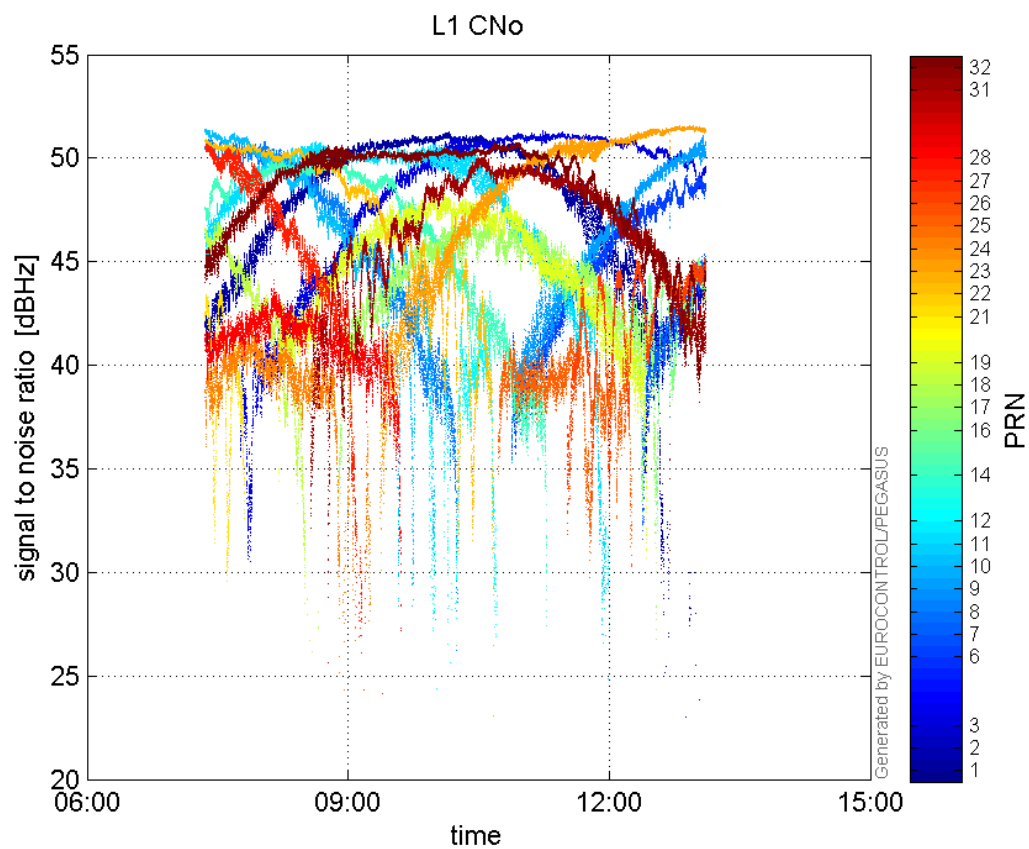


Norm Error Sky Plot:

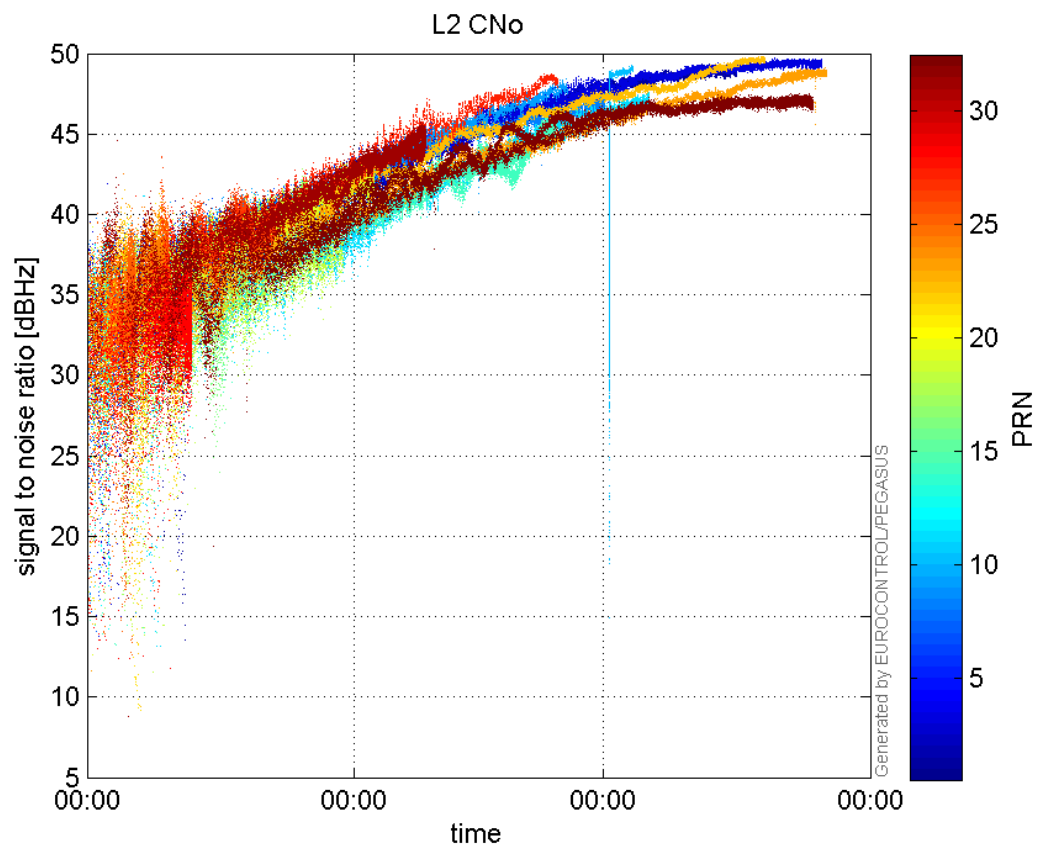


signal quality

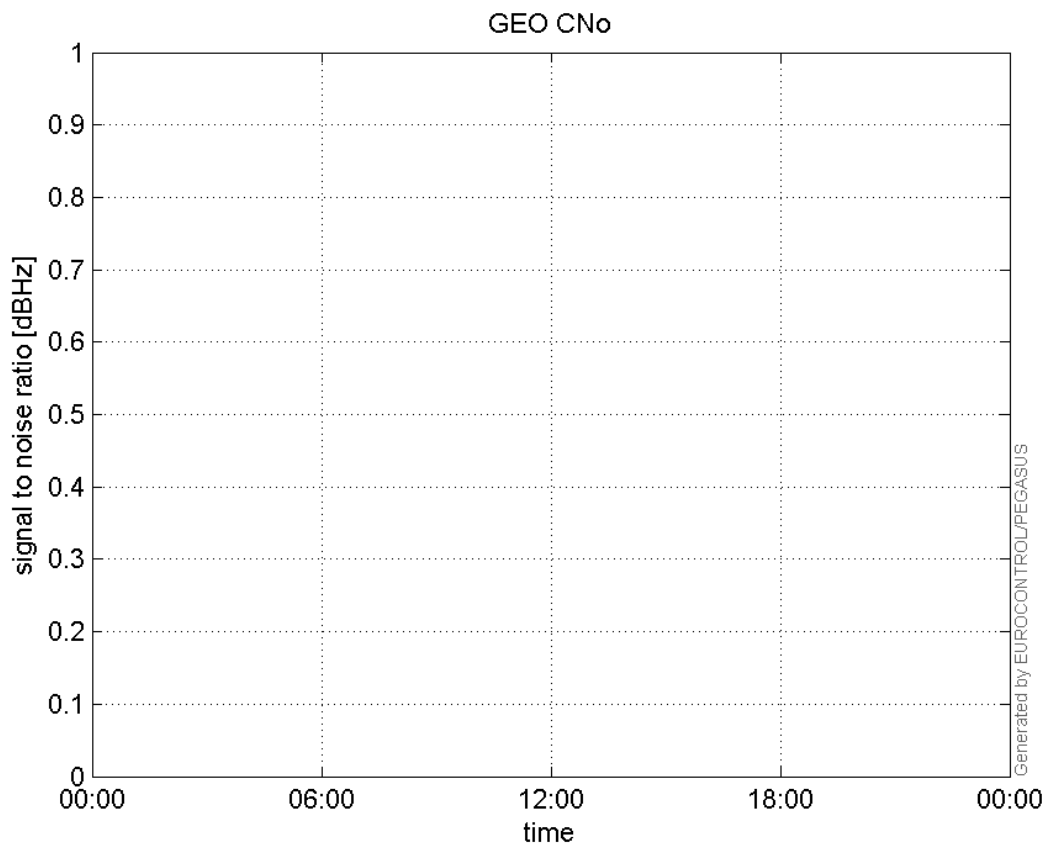
L1 CNo:



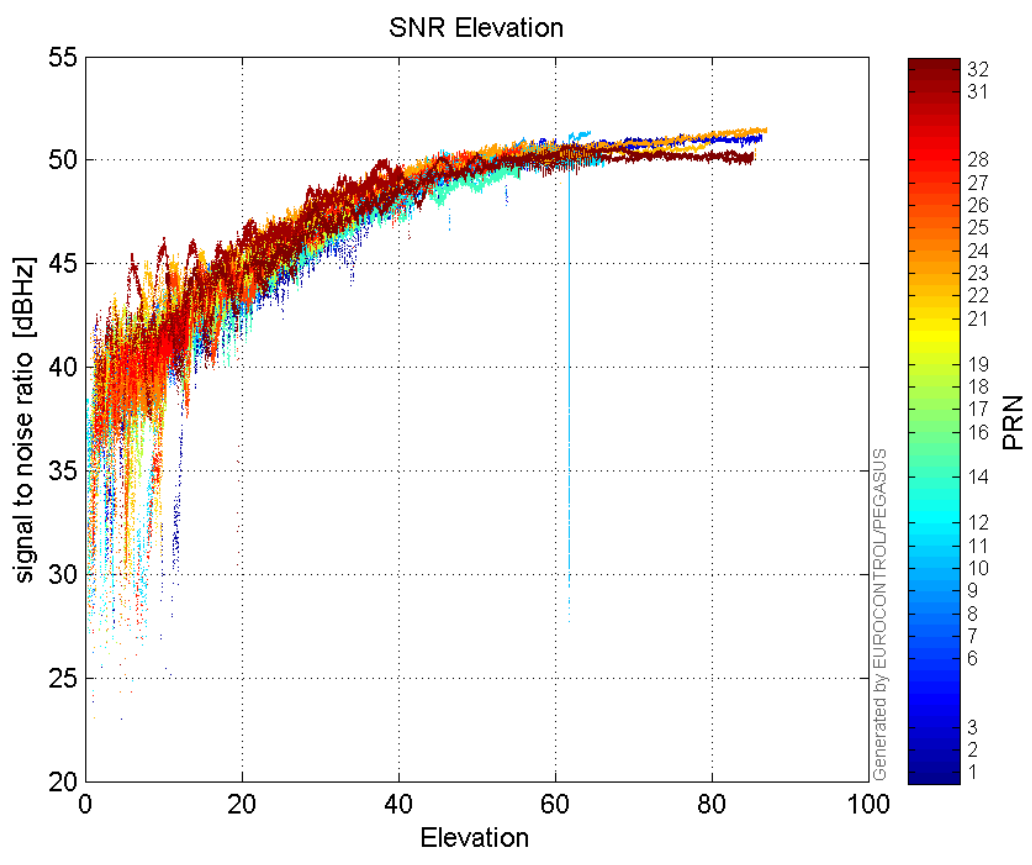
L2 CNo:



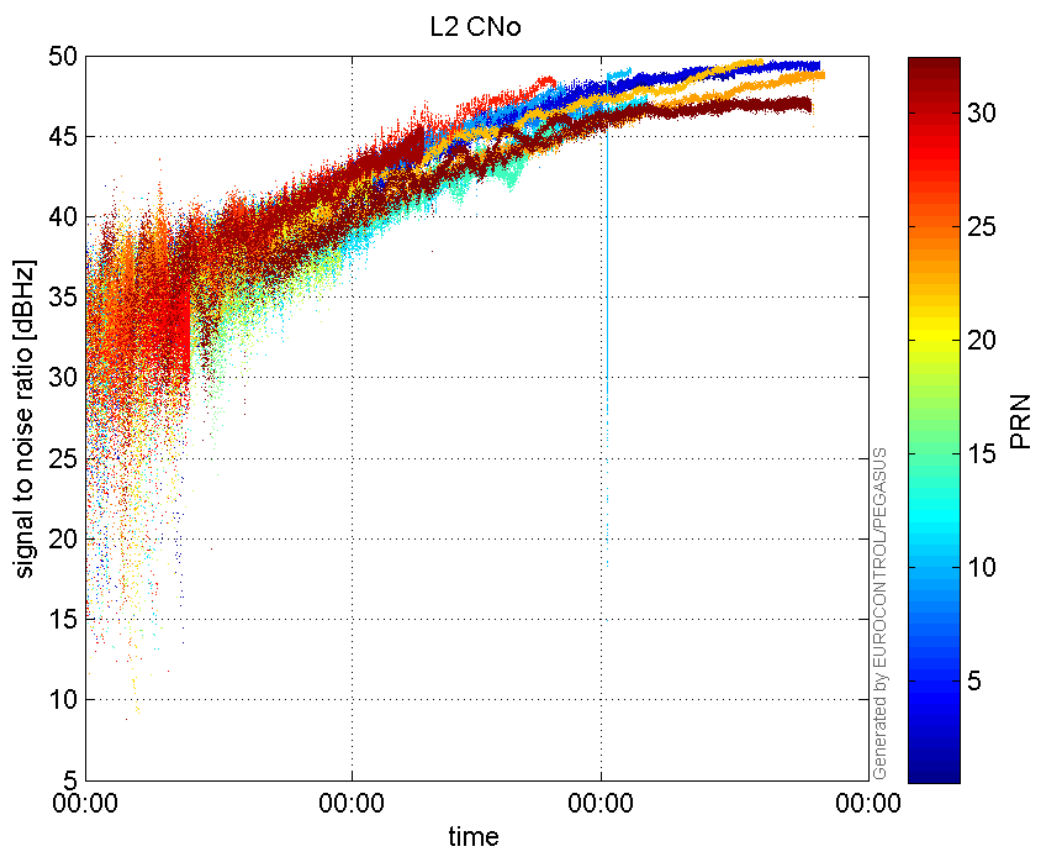
GEO CNo:



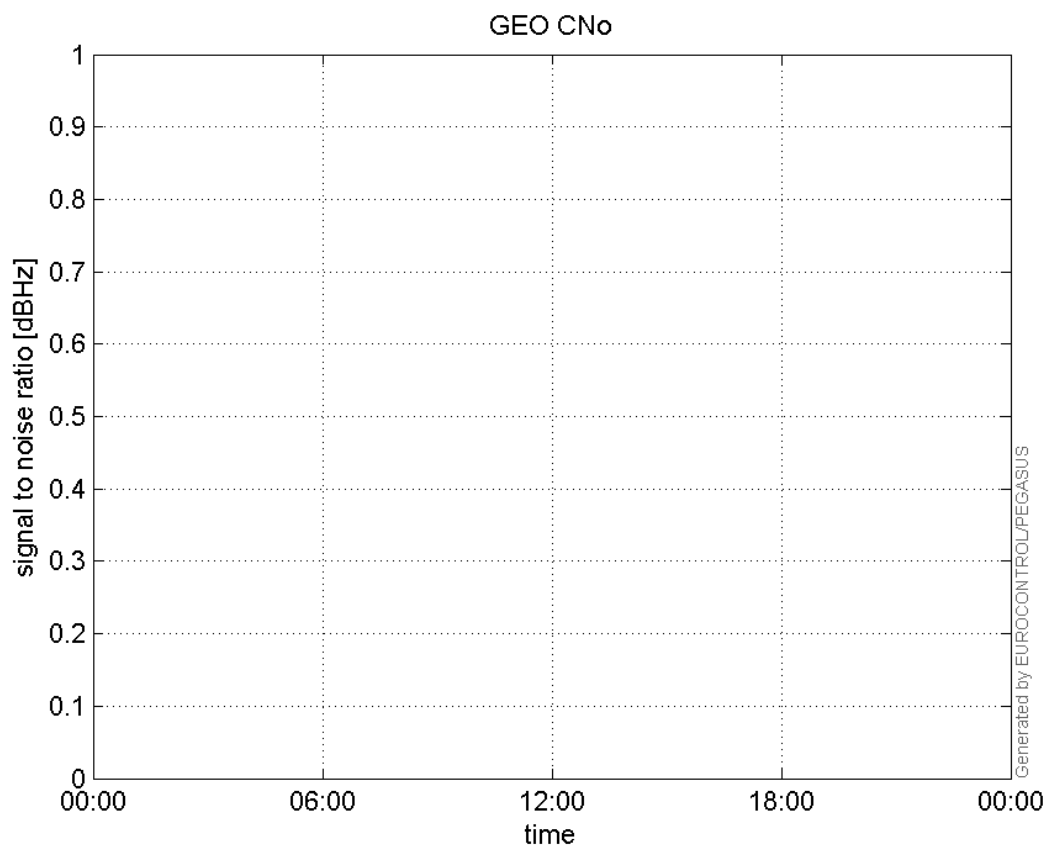
SNR Elevation:



L2 CNo:

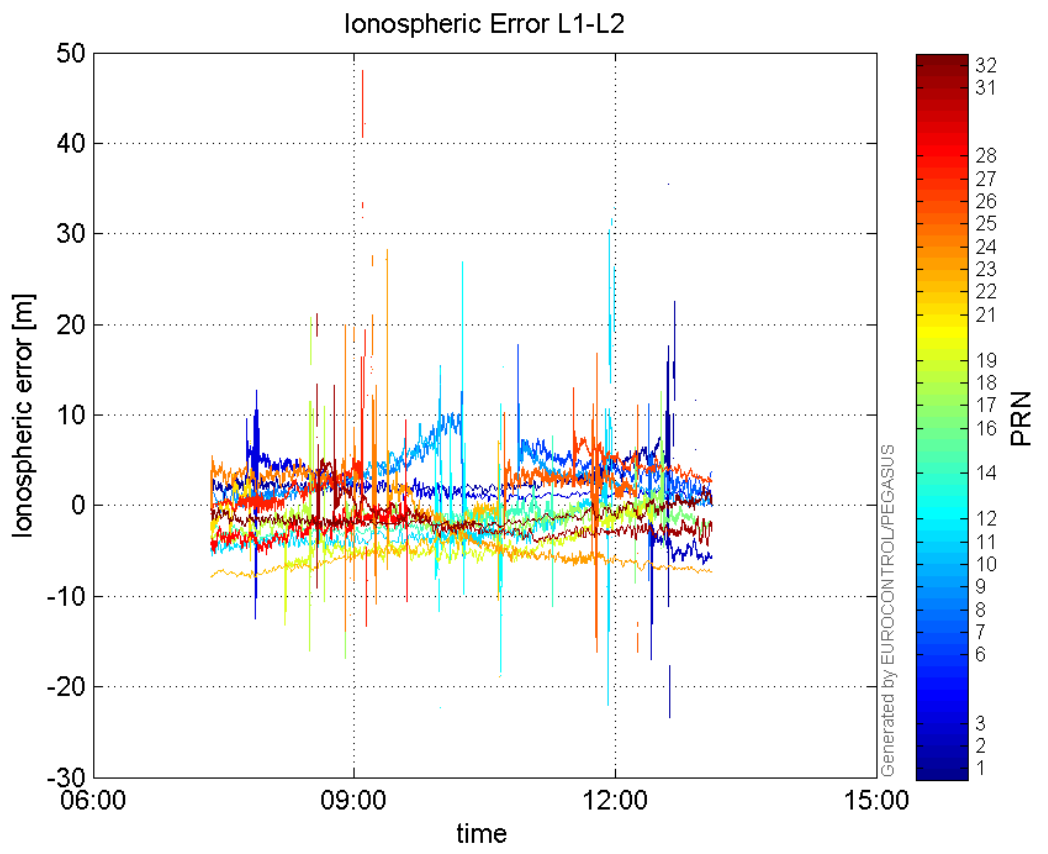


GEO CNo:



dual frequency

Ionospheric Error L1-L2:



Parameters

system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.4.0
input_prefix	system	D:/PegasusDateGob/job/2015_12_22EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_22EGNOS/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	223.6839
mi_numbers	results	0

Position Domain

start: 07:21:31 22.12.2015 (week: 1876 sec: 199291)
end: 13:06:30 22.12.2015 (week: 1876 sec: 219990)
duration: 05:45:00 ..

quality

valid samples 20339
total samples 20700

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 long

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	216578	1.95581	14.6113	0.133856	-2.15027	17.1904	0.125085
max normVer	211828	3.68736	34.2644	0.107615	-5.68726	39.053	0.145629
max HPE	219583	8.09641	102.874	0.0787022	-0.69122	31.8115	0.0217286
max VPE	211828	3.68736	34.2644	0.107615	-5.68726	39.053	0.145629
min HPL	218072	0.715645	8.68002	0.0824473	-1.04795	11.5016	0.0911131
min VPL	205342	0.400425	16.7707	0.0238764	-0.850783	11.0214	0.0771937

APV-I discontinuity events :

#	Epoch	duration	stable period
1	219495	115	19843

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	211026	1039	11374
2	219495	115	7255

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	211026	1039	11374
2	219495	115	7255

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	205345	1895	120
2	207353	54	1
3	208622	9448	1

First Glance analysis

Duration	20700
Number of Samples	20700
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	0
Logging Loss	0
Processing Loss	1.744
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
20339	20224	19116	1225	19116

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.46489	1.44299	1.3793	1.14413	1.3793
HPEScale 95%	NaN	4.0787	4.09799	4.26479	4.09799
VPE 95%	1.82576	1.82824	1.55571	1.0839	1.55571
VPEscale 95%	NaN	4.88003	3.36975	1.1656	3.36975

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.994346	0.939869	0.0602291	0.939869
measurements	0.98256	0.977005	0.923478	0.0591787	0.923478
Operational	0.98256	0.977005	0.923478	0.0591787	0.923478

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	1	46	128	46
Long	--	1	2	3	2
Independent	--	1	2	1	2
P(disc.)	NaN	0.000741693	0.00156937	0.0122449	0.00156937
P(slide)	NaN	0.000741693	0.00711446	0.311837	0.00711446

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

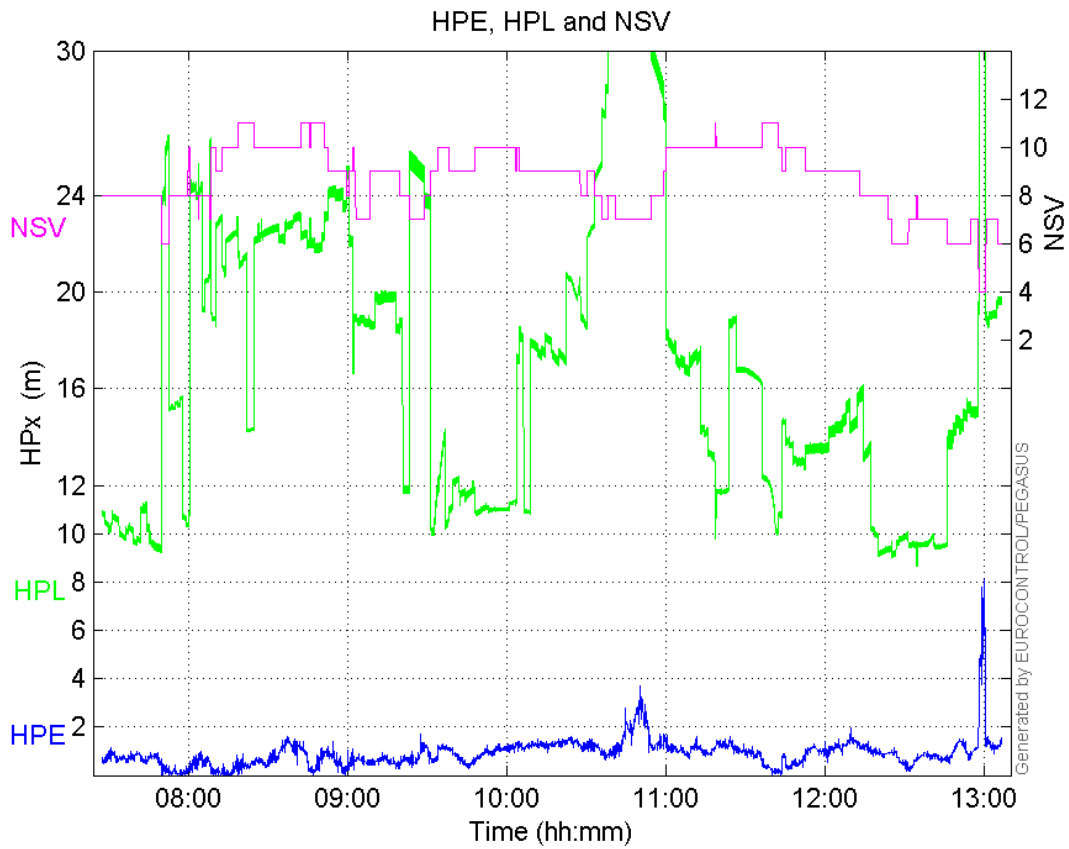
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	20339	20224	19116	1225	19116
SIS Availability	1	0.994346	0.939869	0.0602291	0.939869
Local Availability	0.98256	0.977005	0.923478	0.0591787	0.923478
Operational Availability	0.98256	0.977005	0.923478	0.0591787	0.923478
HPE 95%	1.46489	1.44299	1.3793	1.14413	1.3793
HPEScale 95%	NaN	4.0787	4.09799	4.26479	4.09799
VPE 95%	1.82576	1.82824	1.55571	1.0839	1.55571
VPEscale 95%	NaN	4.88003	3.36975	1.1656	3.36975
All Discontinuity Events	--	1	46	128	46
Long Discontinuity Events	--	1	2	3	2
Independent Discontinuity Events	--	1	2	1	2
P(discontinuity)	NaN	0.000741693	0.00156937	0.0122449	0.00156937
P(sliding window)	NaN	0.000741693	0.00711446	0.311837	0.00711446
All Integrity Events	0	0	0	0	0

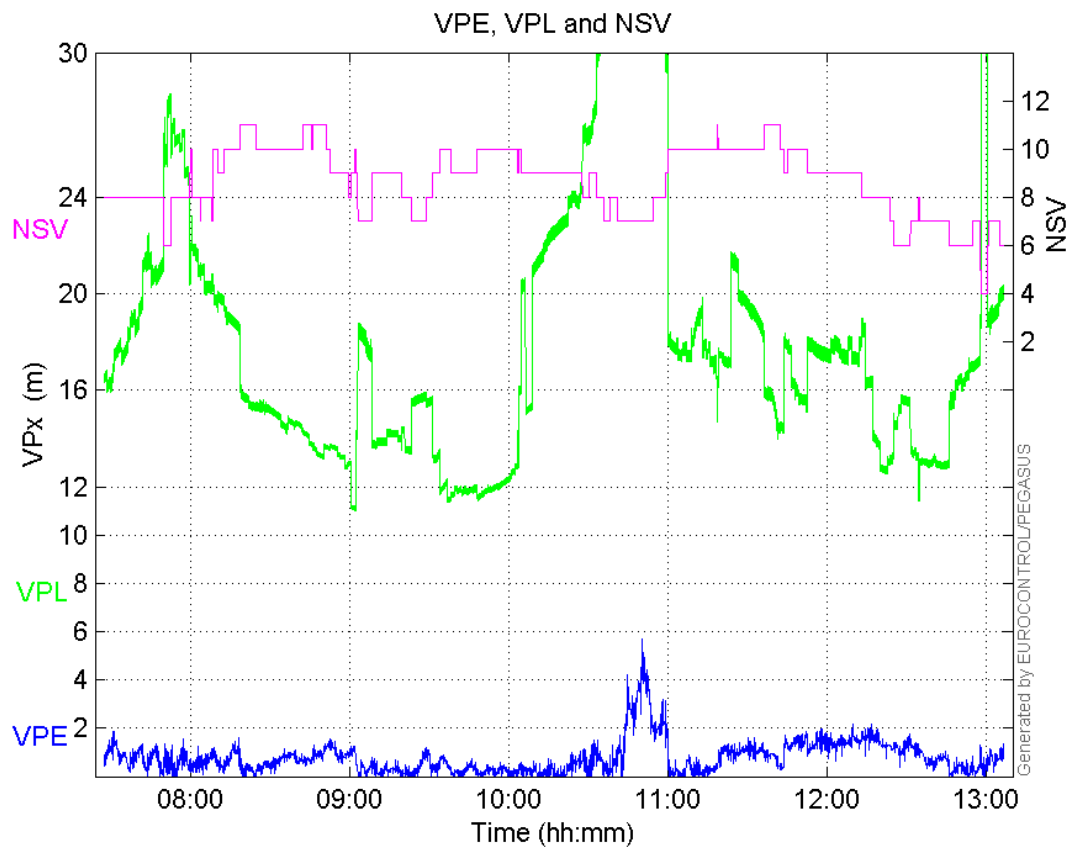
Horizontal Integrity Events	0	0	0	0	0
Vertical Integrity Events	0	0	0	0	0

Time Series

HPE, HPL and NSV:

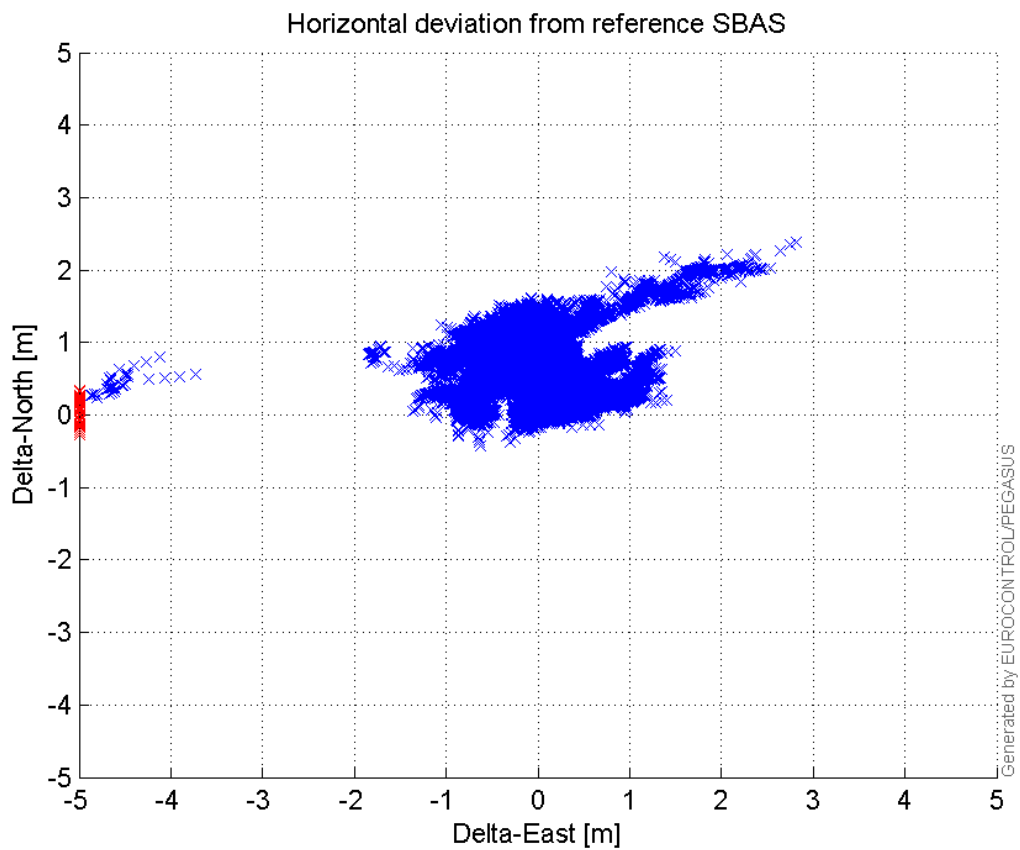


VPE, VPL and NSV:



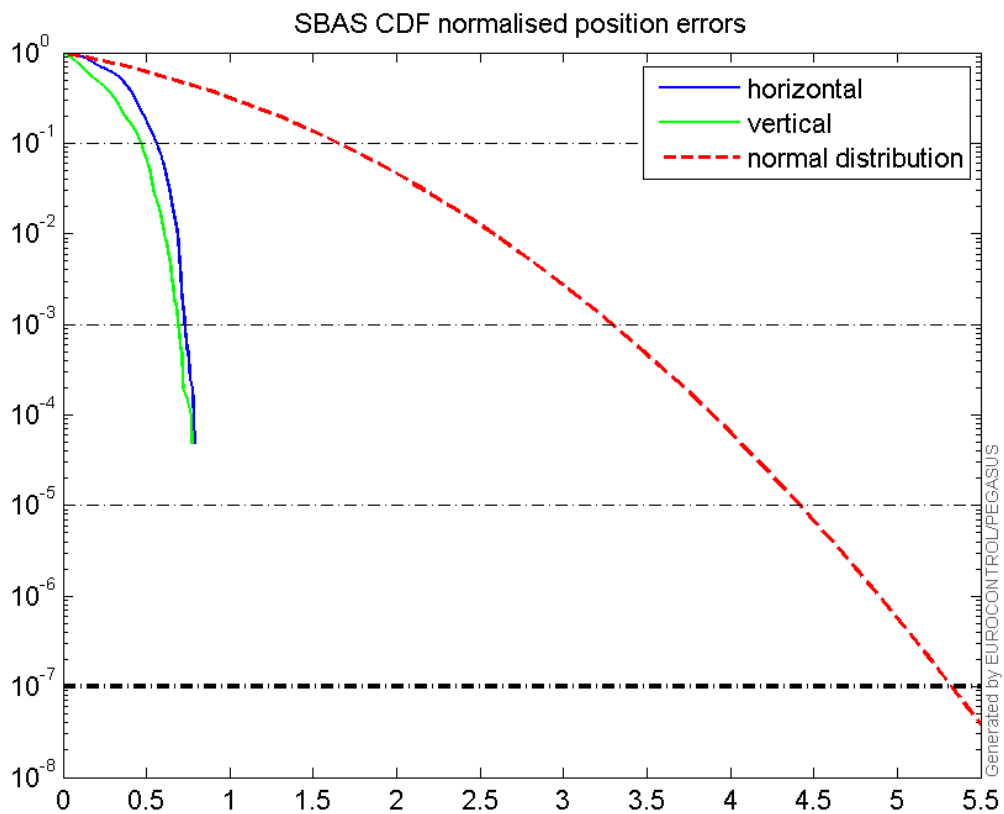
Horizontal deviation

Horizontal deviation from reference SBAS:



CDF position

SBAS CDF position domain:



Statistics

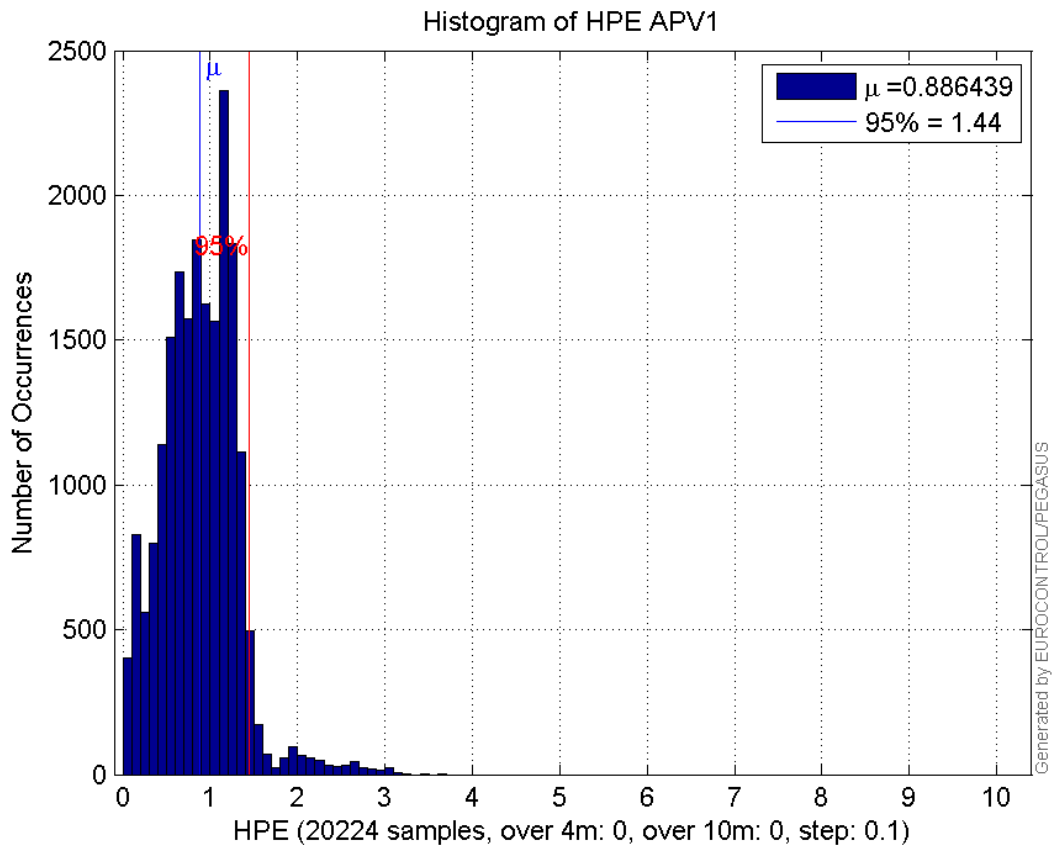
number	20224
sum	17927.333
sum2	19775.533
prctile95	1.4429858
prctile99	2.3977303
number	20224
sum	15979.096
sum2	21717.037
prctile95	1.8282418
prctile99	3.7178064
number	20224
sum	350609.9
sum2	6956275.7
prctile95	29.61553
prctile99	38.08594
number	20224
sum	375731.24
sum2	7896055
prctile95	36.39146
prctile99	42.603632
number	20224
sum	1136.9499

sum2 79.830329
prctile95 0.10196751
prctile99 0.11420675
number 20224
sum 869.31082
sum2 55.457833
prctile95 0.097600505
prctile99 0.11379172
number 19116
sum 16061.118
sum2 16110.207
prctile95 1.3793019
prctile99 1.5200141
number 19116
sum 13513.386
sum2 14084.293
prctile95 1.5557096
prctile99 1.9534963
number 19116
sum 312009.92
sum2 5601230.3
prctile95 24.71803
prctile99 28.222536
number 19116
sum 331611
sum2 6132839.4
prctile95 26.54518
prctile99 33.560704
number 19116
sum 1083.1173
sum2 76.763609
prctile95 0.10244974
prctile99 0.11452775
number 19116
sum 806.83242
sum2 50.502147
prctile95 0.096278514
prctile99 0.11205802

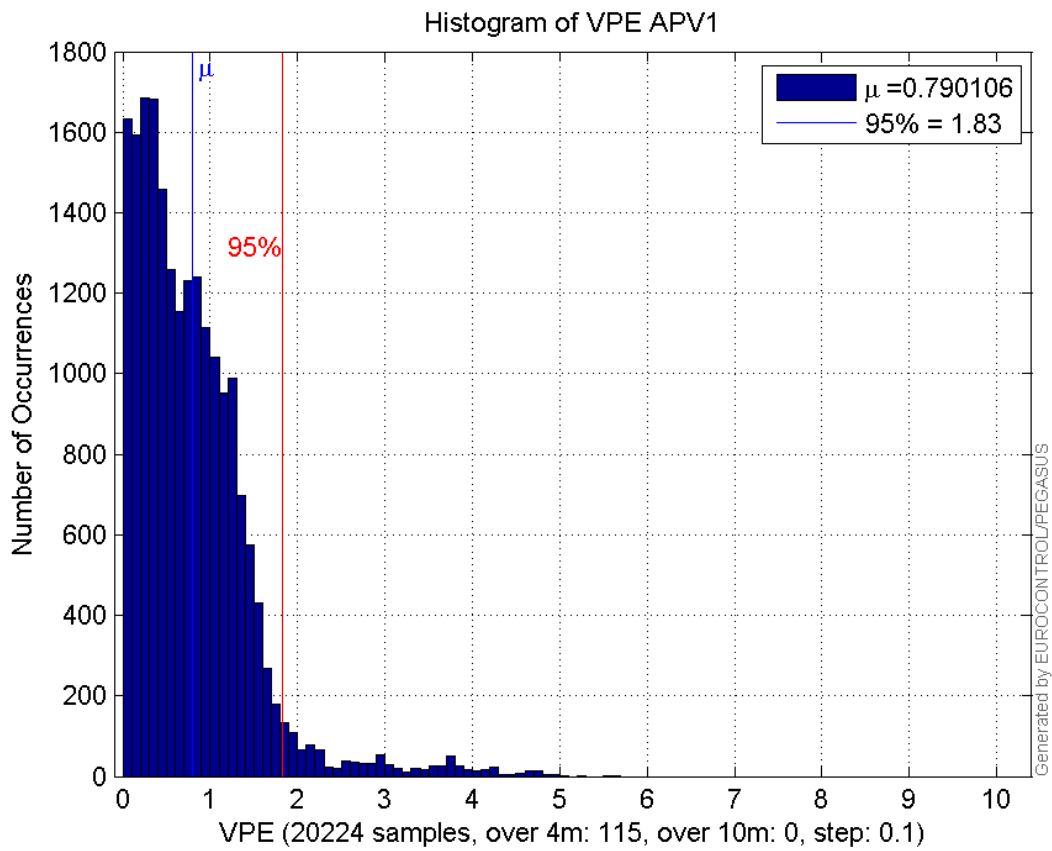
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	0.886439	0.438248	0.884882	1.44299	2.39773	0.98885
HPL	17.3363	6.58903	16.6937	29.6155	38.0859	18.5462
VPE	0.790106	0.670508	0.667958	1.82824	3.71781	1.03626
VPL	18.5785	6.72846	17.1887	36.3915	42.6036	19.7593

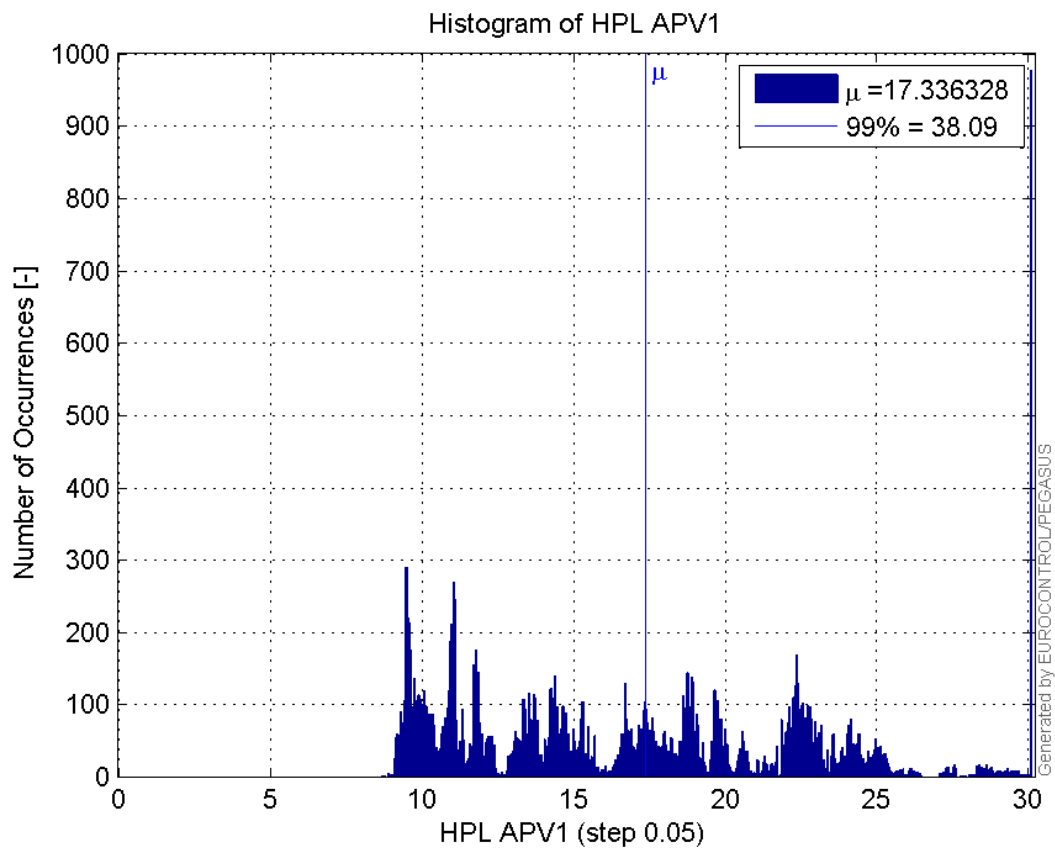
Histogram of HPE APV1:



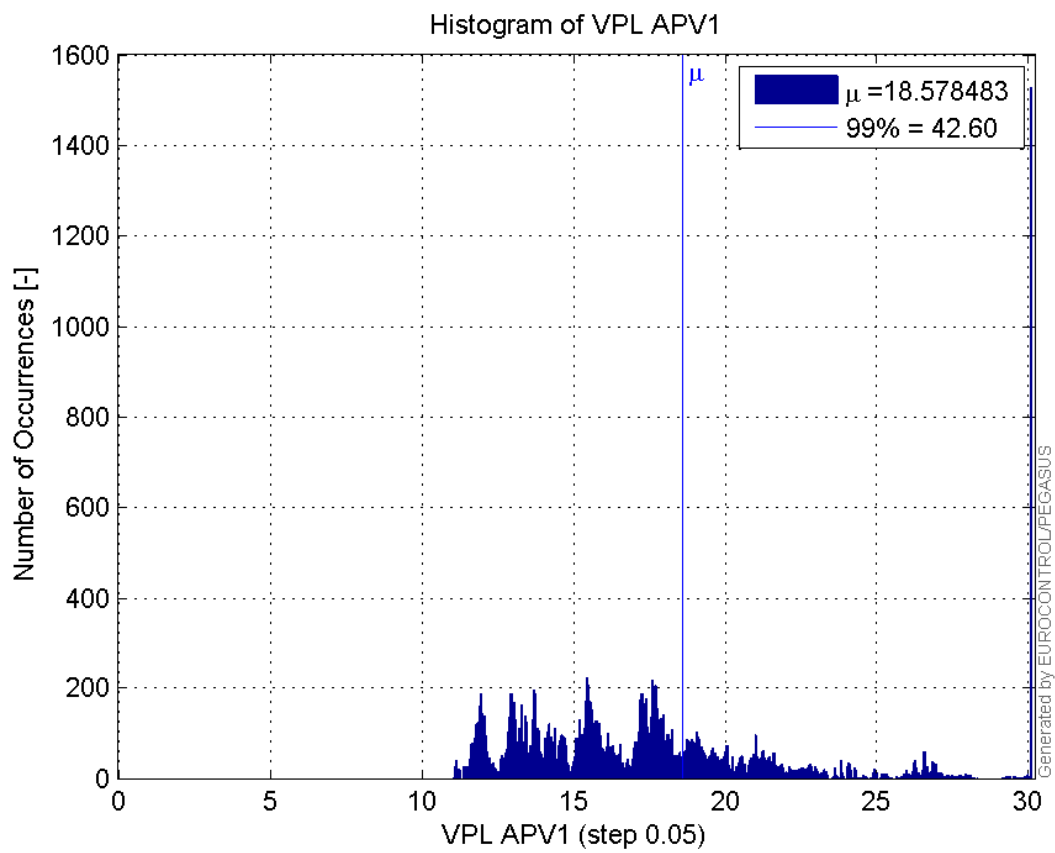
Histogram of VPE APV1:



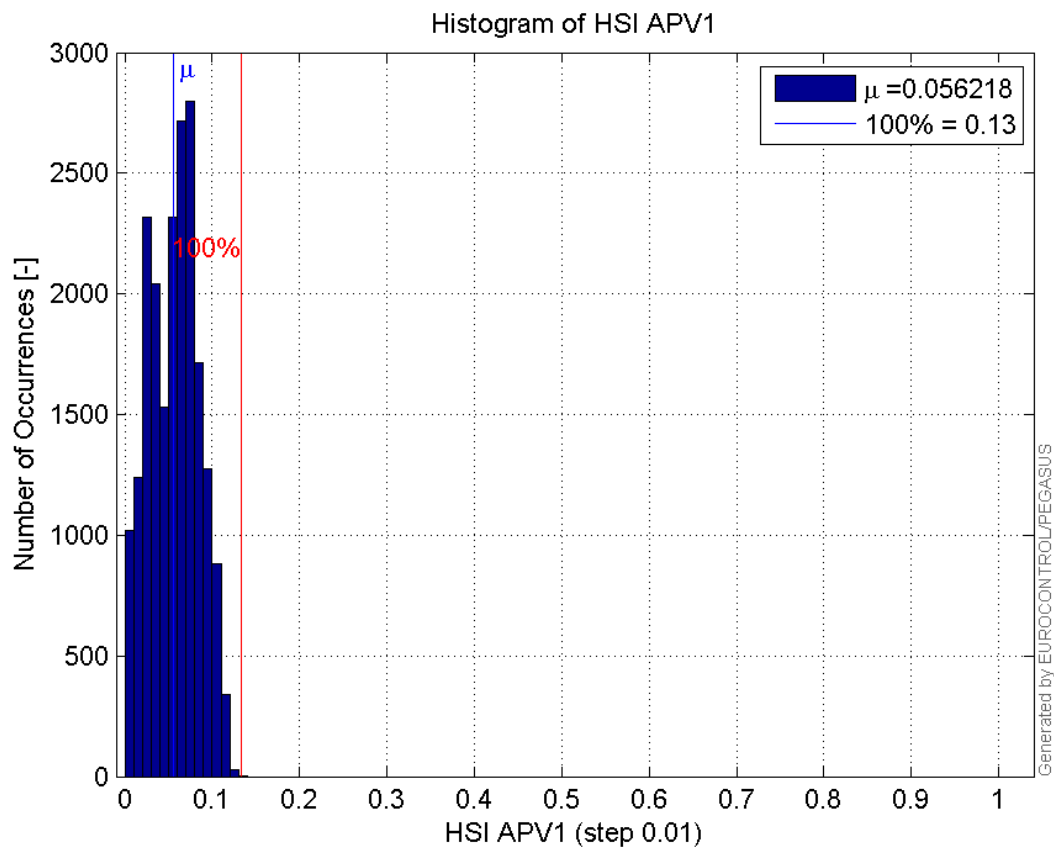
Histogram of HPL APV1:



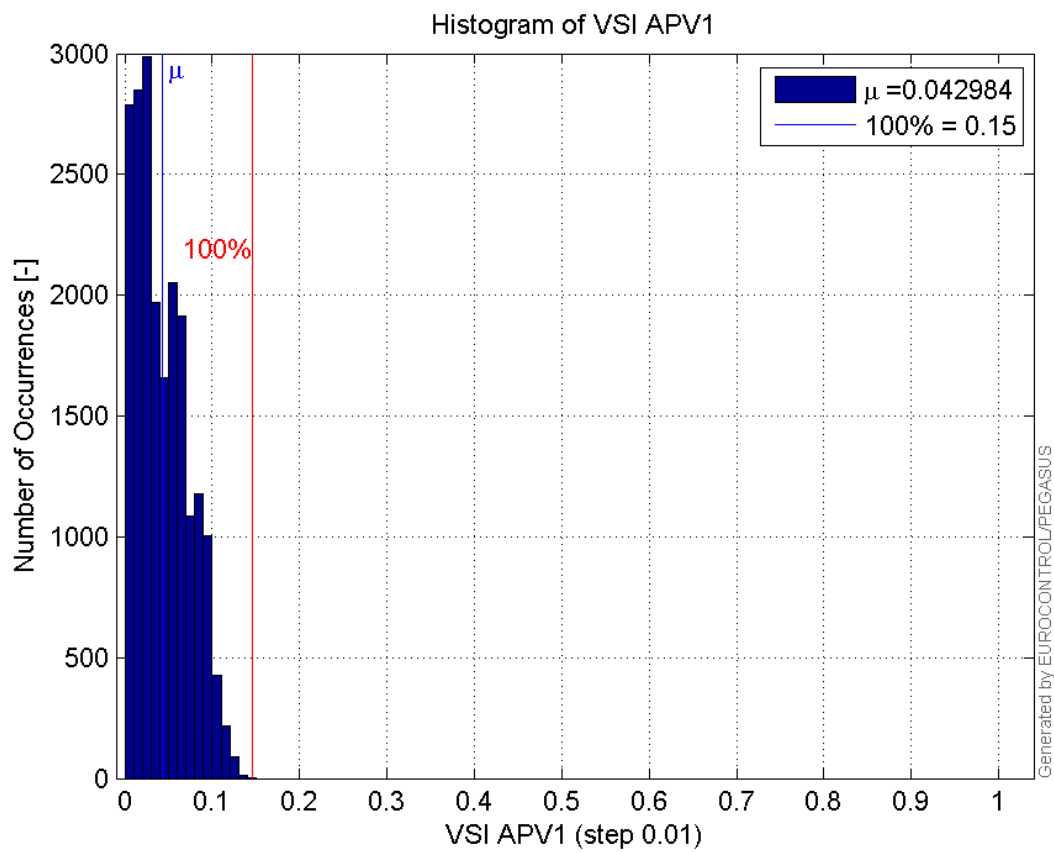
Histogram of VPL APV1:



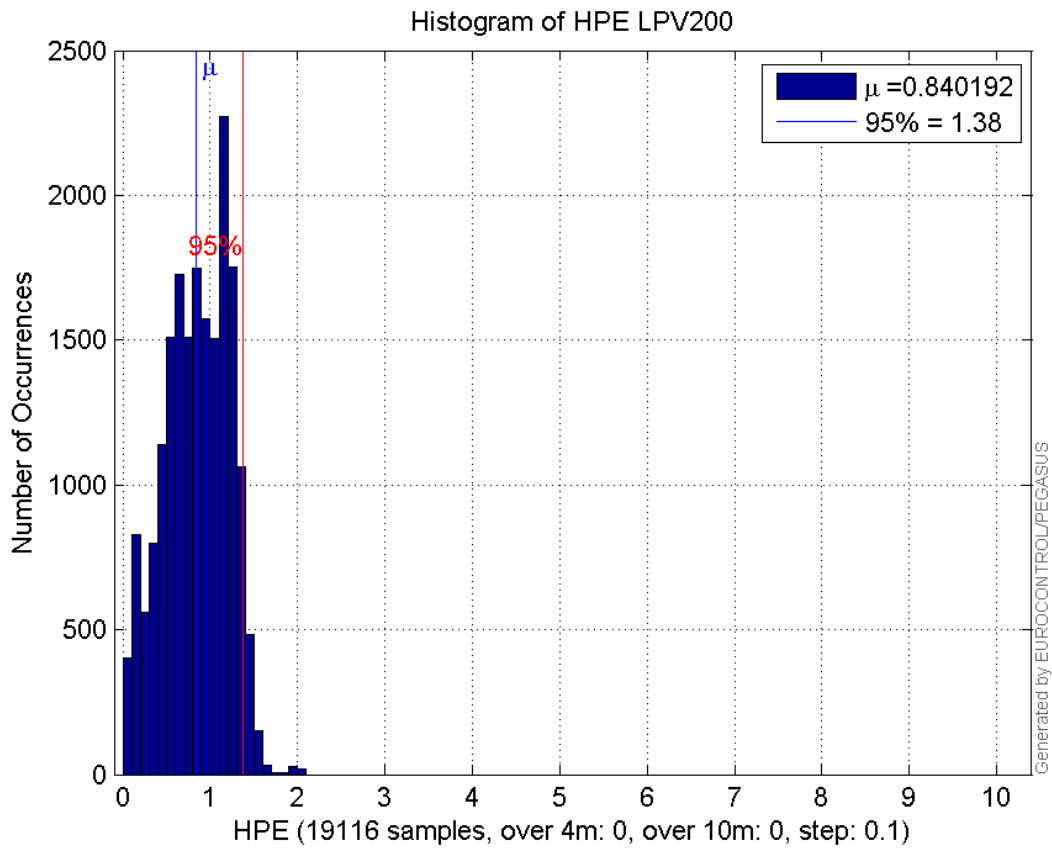
Histogram of HSI APV1:



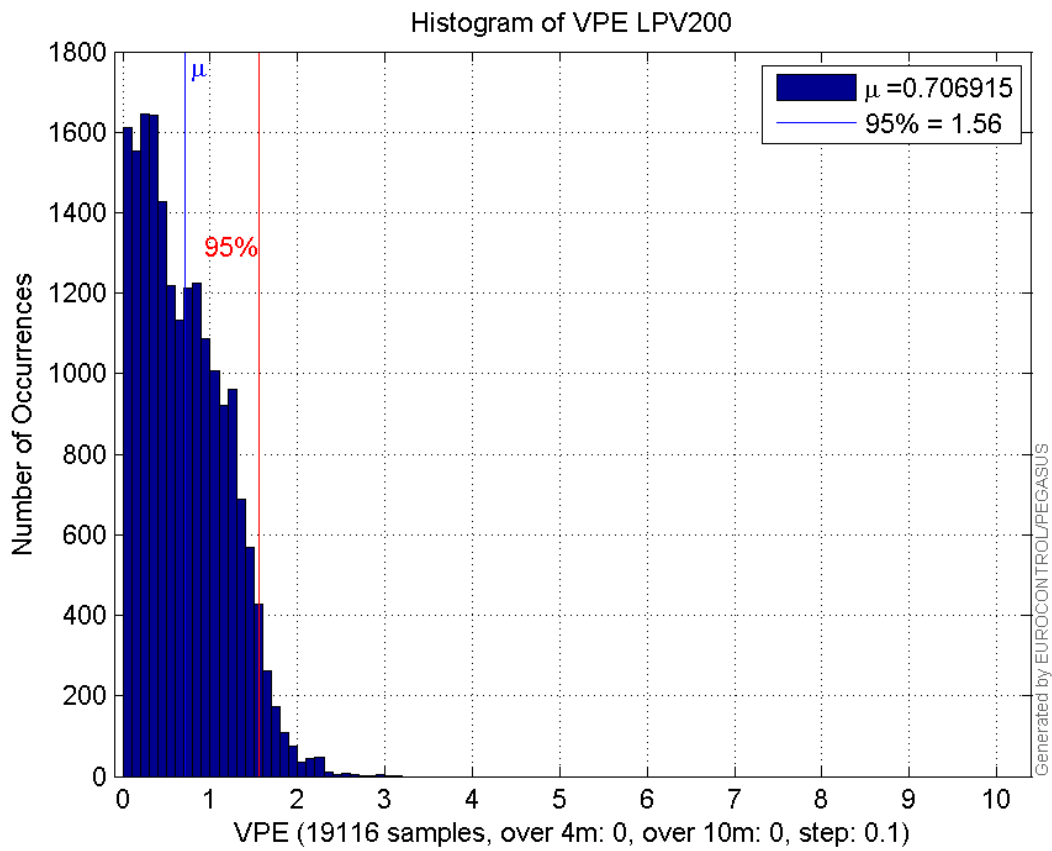
Histogram of VSI APV1:



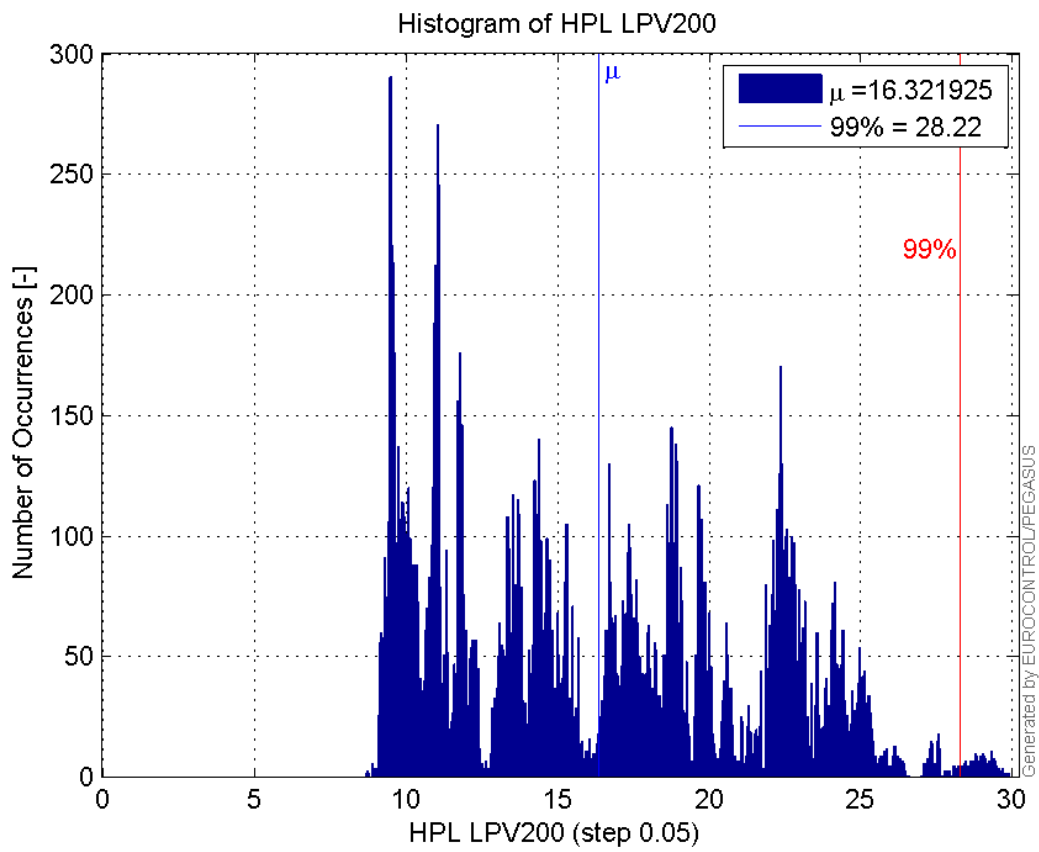
Histogram of HPE LPV200:



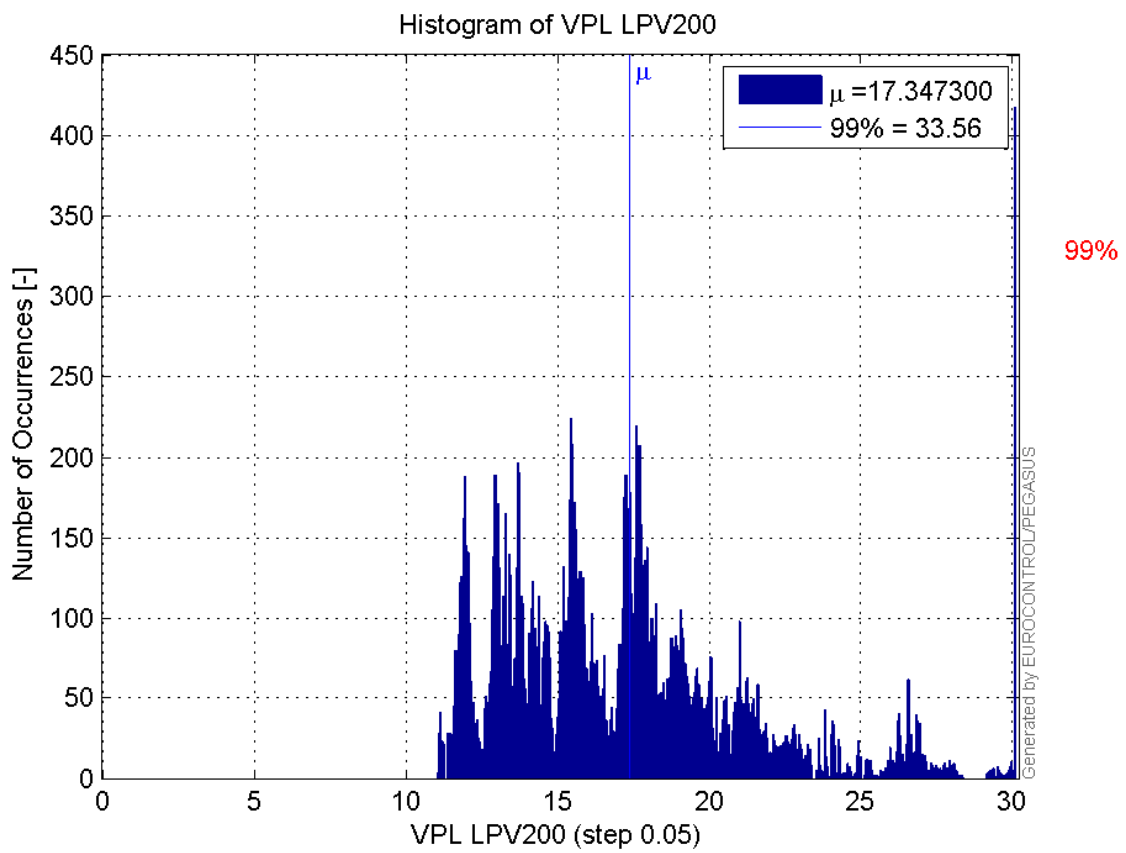
Histogram of VPE LPV200:



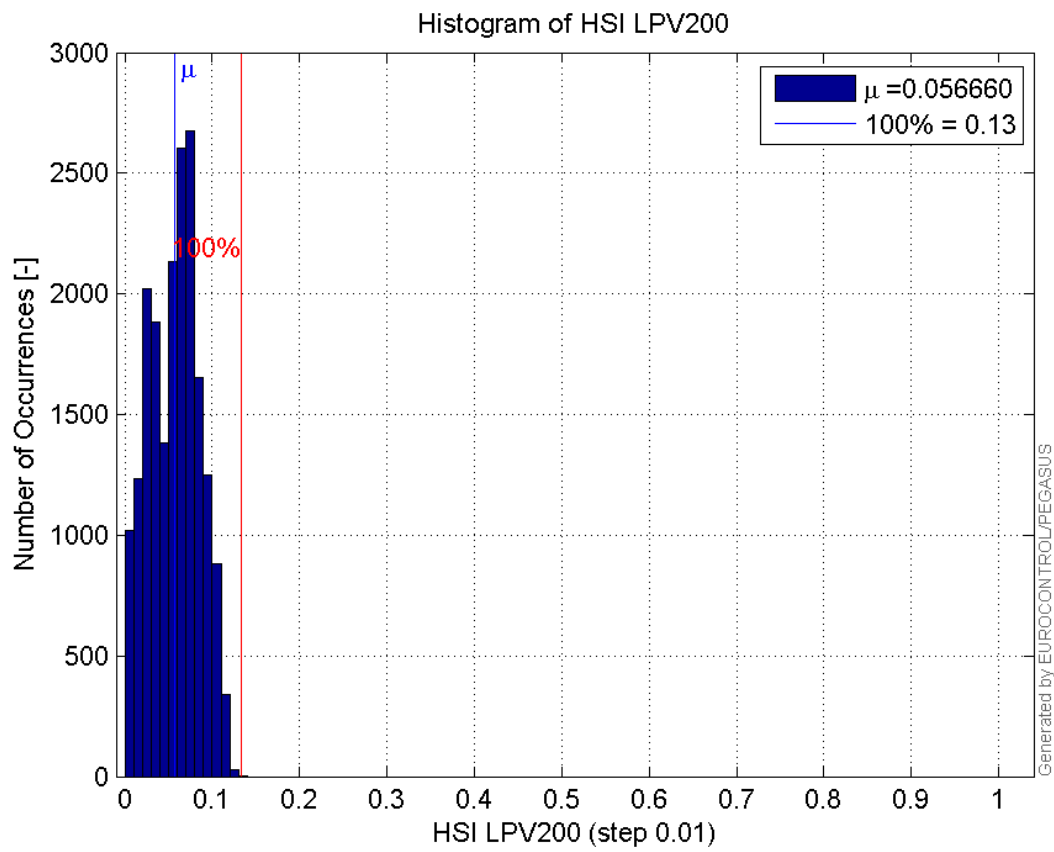
Histogram of HPL LPV200:



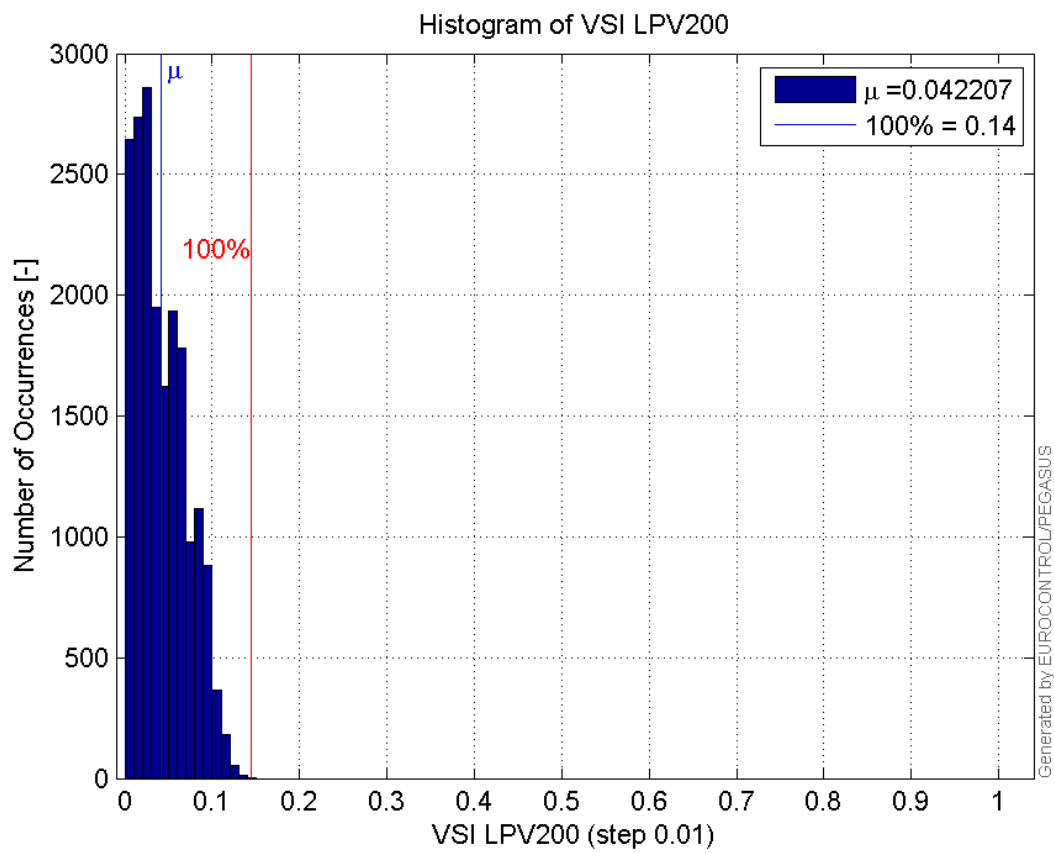
Histogram of VPL LPV200:



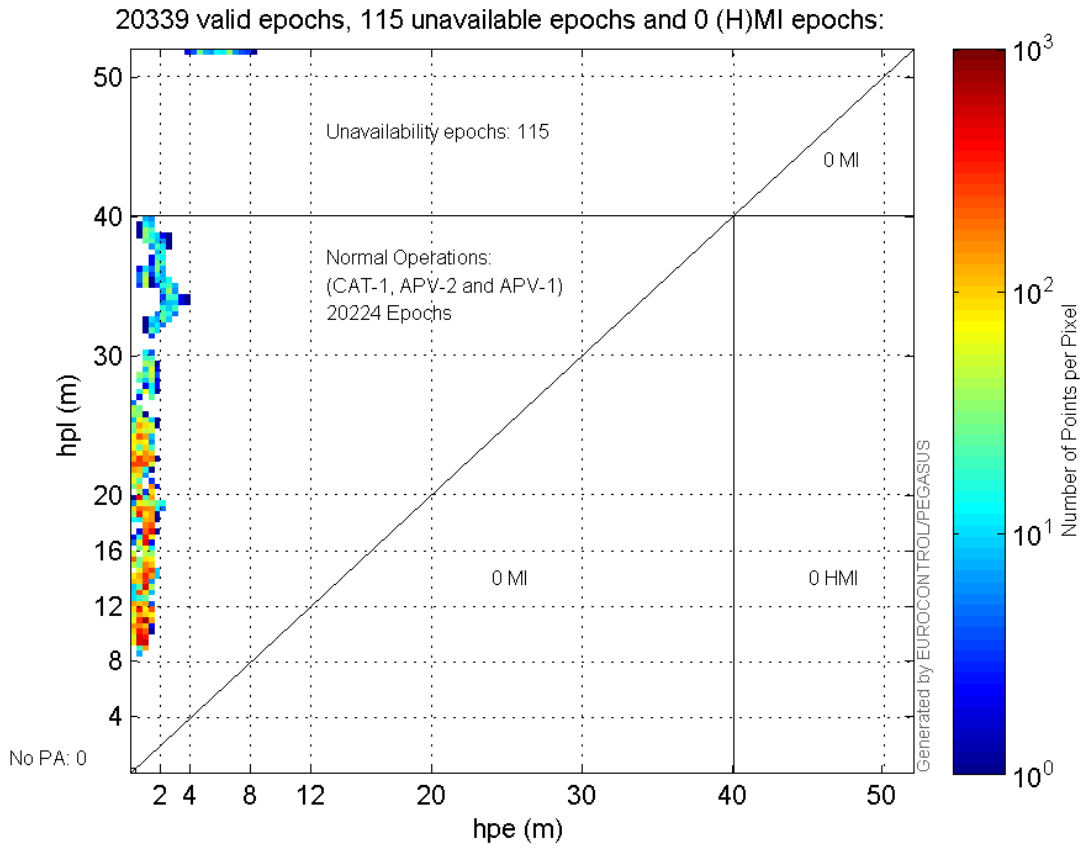
Histogram of HSI LPV200:



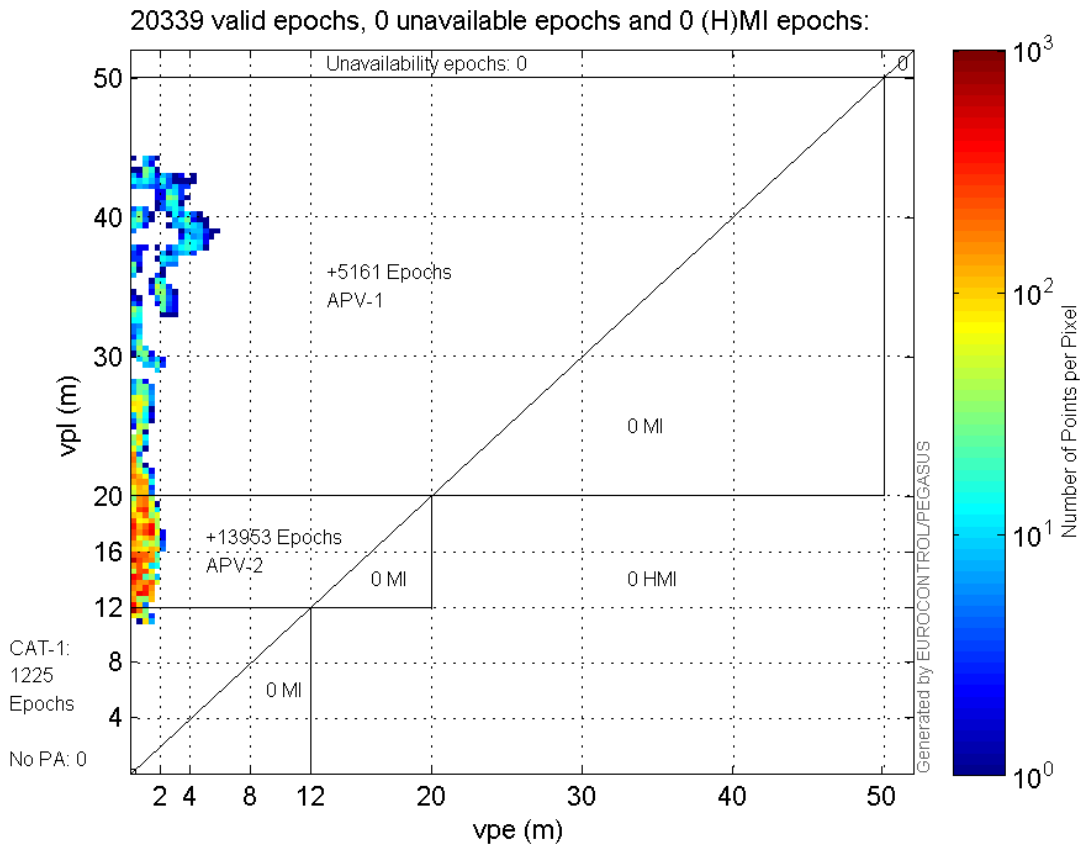
Histogram of VSI LPV200:



Horizontal_Stanford_Plot_SBAS:



Vertical_Stanford_Plot_SBAS:



Parameters

system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.4.0
input_prefix	system	D:/PegasusDateGob/job/2015_12_22EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_22EGNOS/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	223.6839
mi_numbers	results	0

SBAS Messages

start: 07:21:30.129 22.12.2015 (week: 1876 sec: 199290.129)
end: 13:06:30.129 22.12.2015 (week: 1876 sec: 219990.129)
duration: 05:45:3.35276e-06 ..

quality

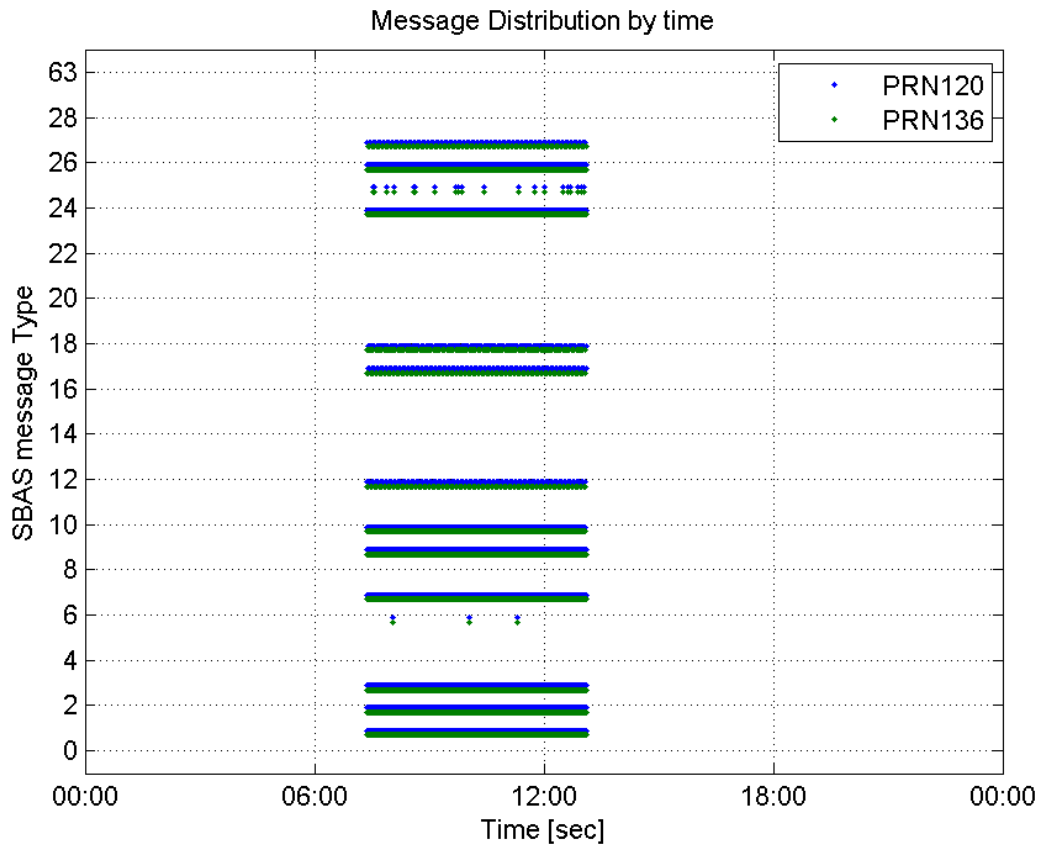
valid samples 41402
total samples 41402
number of SBAS PRNs 2

SBAS SIS Overview

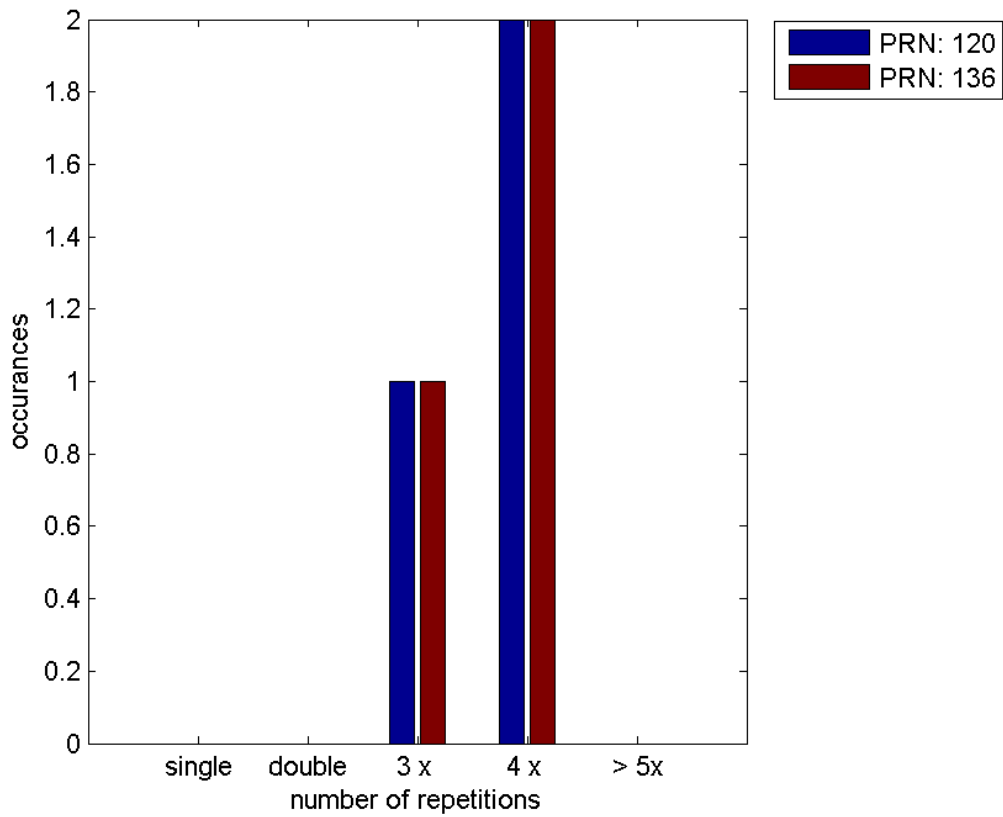
Message Type 6 repetitions :

	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:



SBAS SIS Analysis

PRN 120

Broadcast SBAS Messages :

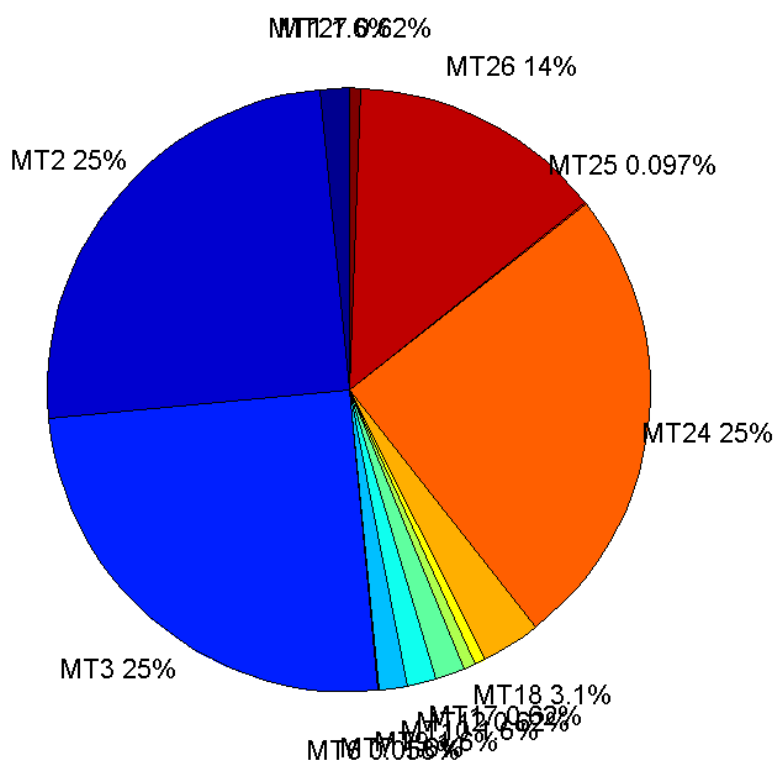
	number of messages	%
MT 0	0	0
MT 1	322	1.55548
MT 2	5170	24.9746
MT 3	5171	24.9795
MT 4	0	0
MT 5	0	0
MT 6	12	0.0579682
MT 7	322	1.55548
MT 9	322	1.55548
MT 10	322	1.55548
MT 12	129	0.623158
MT 17	129	0.623158
MT 18	645	3.11579
MT 24	5171	24.9795
MT 25	20	0.0966137
MT 26	2837	13.7047
MT 27	129	0.623158
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	20701	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.2835	0	0	0
MT 2	4	8	4.00348	3	0	0
MT 3	4	8	4.00329	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	7176	1064.64	2	2	2
MT 7	64	70	64.2835	0	0	0
MT 9	64	70	64.2835	0	0	0
MT 10	64	70	64.2835	0	0	0
MT 12	156	171	160.523	128	0	0
MT 17	160	167	160.555	0	0	0
MT 18	4	141	31.9488	0	0	0
MT 24	4	7	4.00348	0	0	0

MT 25	31	3240	1046.53	0	0	0
MT 26	4	32	7.28879	0	0	0
MT 27	156	169	160.555	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

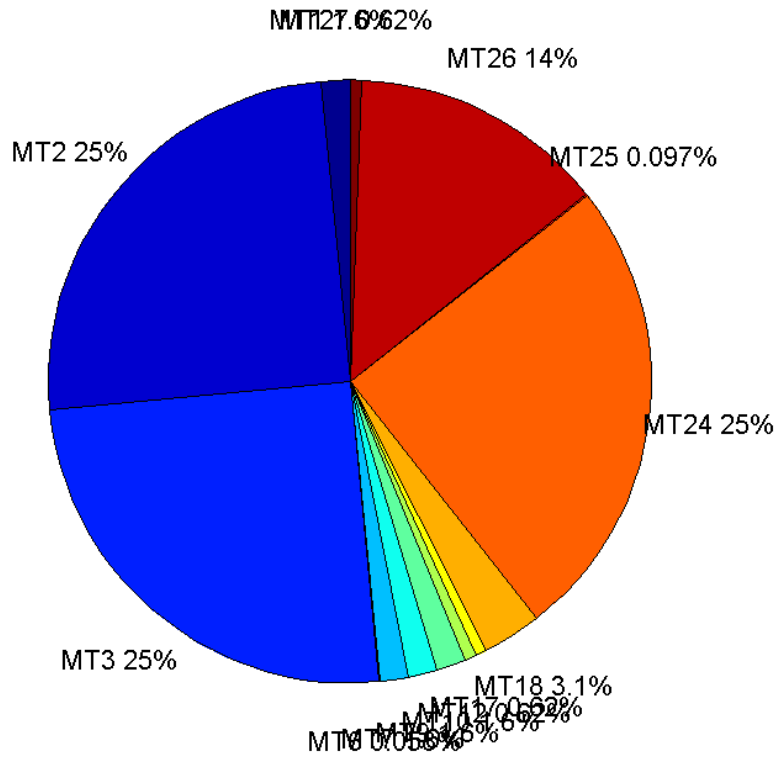
	number of messages	%
MT 0	0	0
MT 1	322	1.55548
MT 2	5170	24.9746
MT 3	5171	24.9795
MT 4	0	0
MT 5	0	0
MT 6	12	0.0579682

MT 7	323	1.56031
MT 9	322	1.55548
MT 10	322	1.55548
MT 12	129	0.623158
MT 17	129	0.623158
MT 18	645	3.11579
MT 24	5171	24.9795
MT 25	20	0.0966137
MT 26	2836	13.6998
MT 27	129	0.623158
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	20701	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	70	64.271	0	0	0
MT 2	4	8	4.00348	3	0	0
MT 3	4	8	4.00329	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	7176	1064.64	2	2	2
MT 7	64	70	64.2702	0	0	0
MT 9	64	70	64.2835	0	0	0
MT 10	64	71	64.2835	0	0	0
MT 12	156	167	160.555	128	0	0
MT 17	160	167	160.523	0	0	0
MT 18	4	143	31.9488	0	0	0
MT 24	4	7	4.00348	0	0	0
MT 25	31	3240	1046.53	0	0	0
MT 26	4	40	7.29982	0	0	0
MT 27	156	167	160.523	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_22EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_12_22EGNOS/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	17
Correction_mode	Configuration	SBAS MODE 0/2
Dual_Frequency	Configuration	no