

DLV3 - x

DLV3 - Constellation

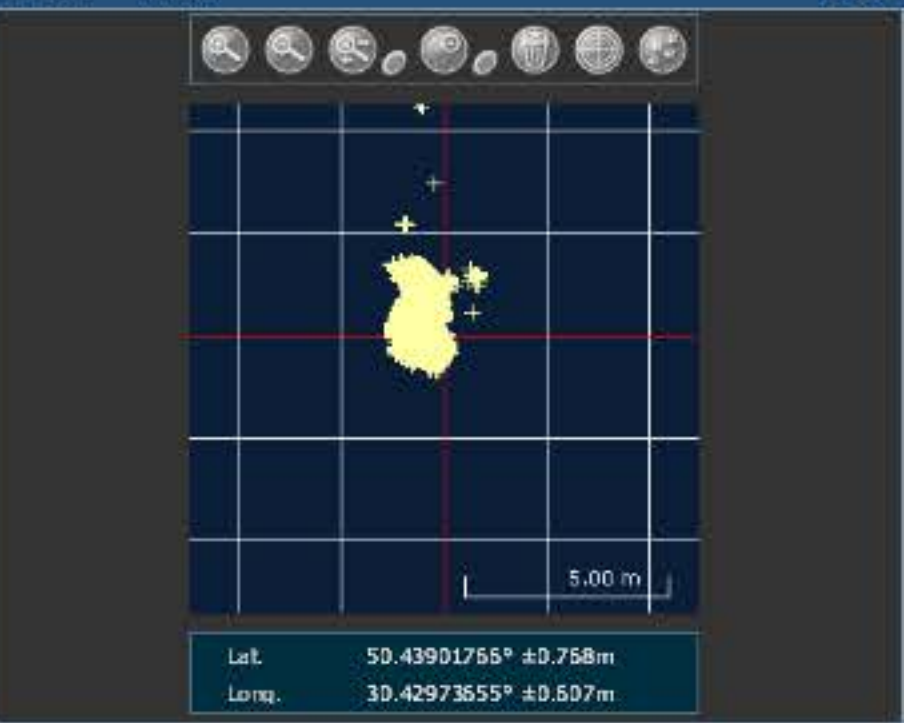


PRN	AZ	ELEV	C/No	STATUS
No SV				

DLV3 - Position

Latitude	50.43901755°	+/-	0.77m
Longitude	30.42973555°	+/-	0.51m
Hgt. (MSL)	190.958m	+/-	1.55m
Solution type	SBAS		
Iono 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
	GLO	L1	L2
Solution status	Computed		
Tue 08/12/2015 14:47:23 GMT			
Tue 08/12/2015 15:47:23 Local			

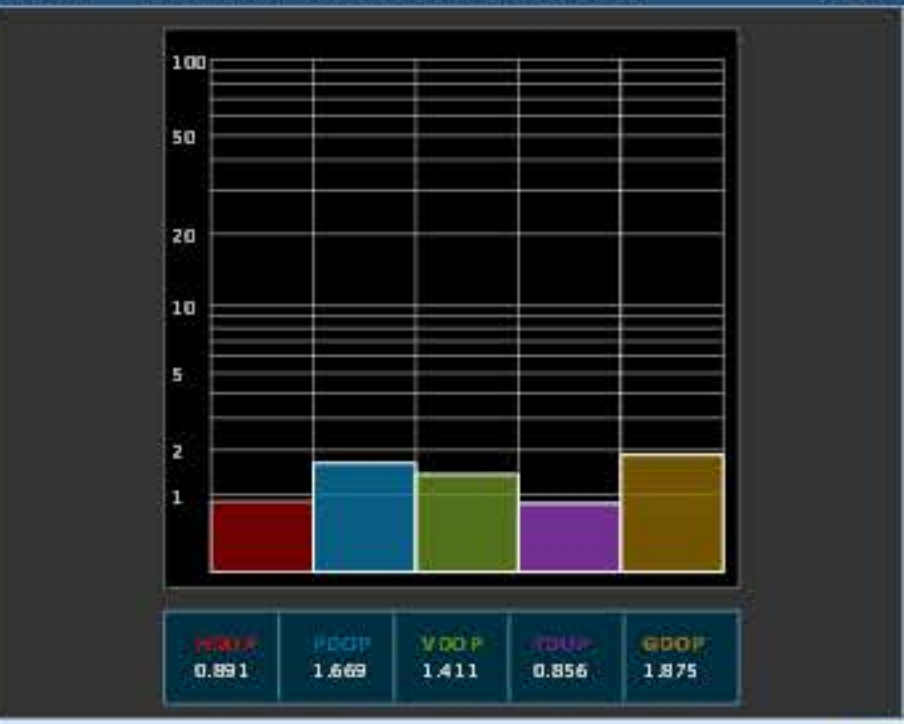
DLV3 - Plan



DLV3 - GPS Tracking Channel Status



DLV3 - Dilution Of Precision (DOP)



DLV3 - Console Window

```

assign 14 active 120 0 100
<OK
[COM1]
<OK
[COM1]
Command assign 14 active 120 0 100

```

DLV3 - Logging Control Window

COM1 (Current Port)

ENTER

Global View

country Ukraine
version 4.8.2
abbreviation NAU
city Kiev
comment Konin V., Shyshkov F. InsideGNSS, Jan-Feb 2015,
P.50 - 54
program Pegasus
site Laboratory satellite systems
date 08/12/2015

Range Domain

start: 07:20:06 08.12.2015 (week: 1874 sec: 199206)
end: 14:48:56 08.12.2015 (week: 1874 sec: 226136)
duration: 07:28:51 ..

quality

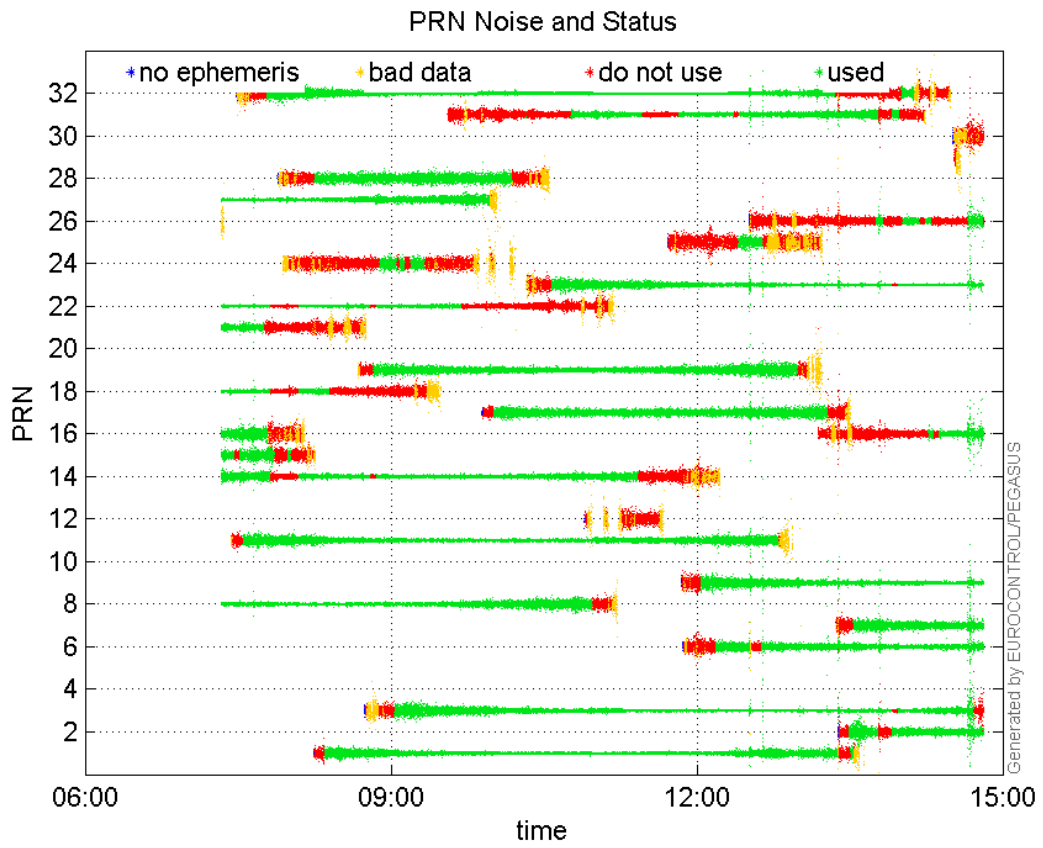
valid samples 26931
total samples 26931

PRN overview

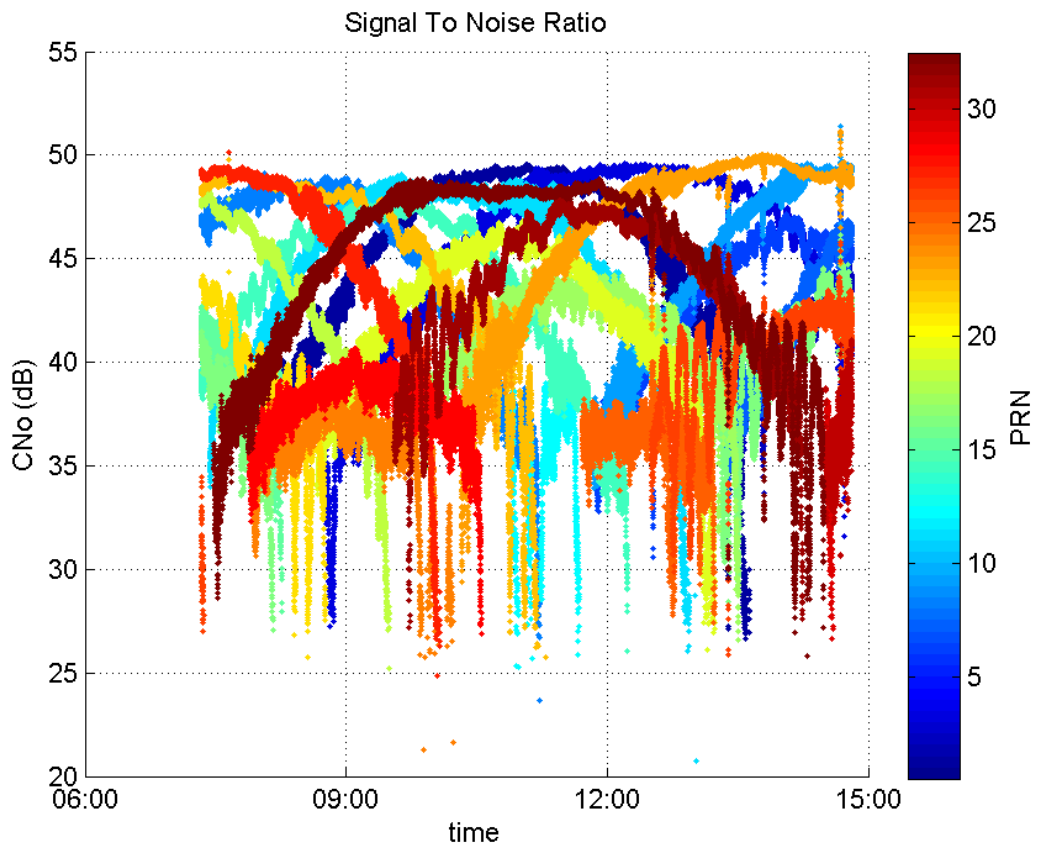
Number of Visible GPS Satellites 27
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



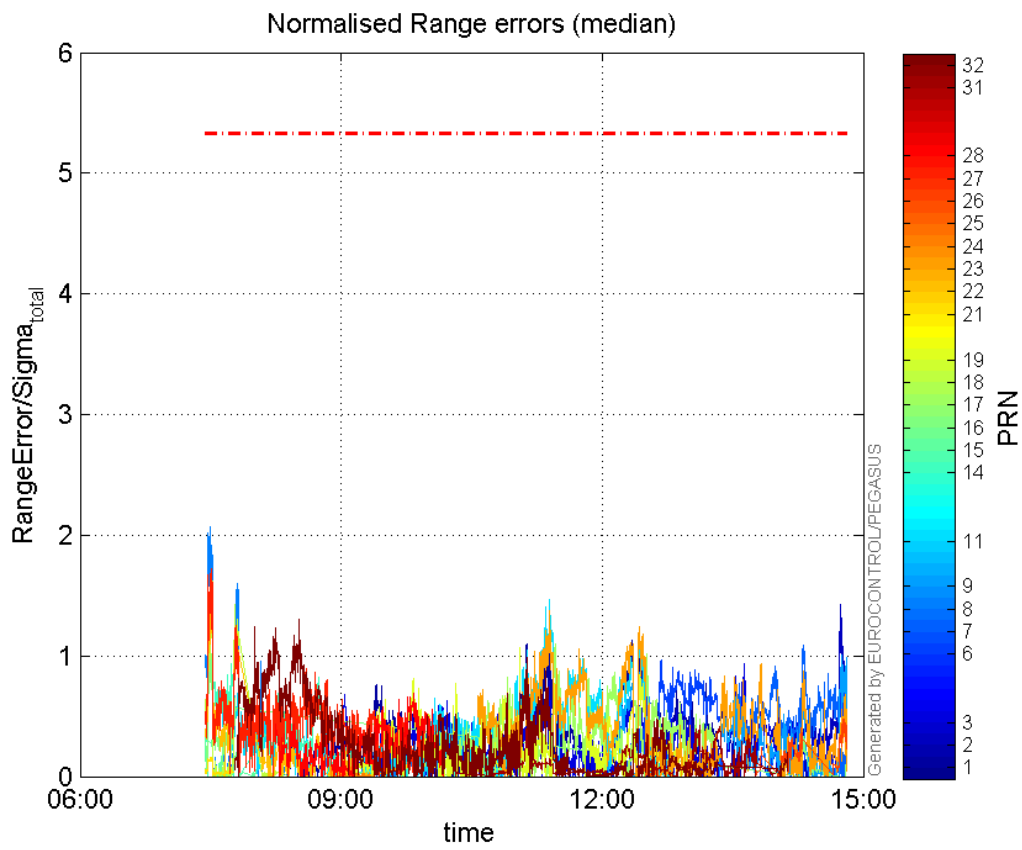
range errors

Number of Overbounding Norm Errors 0

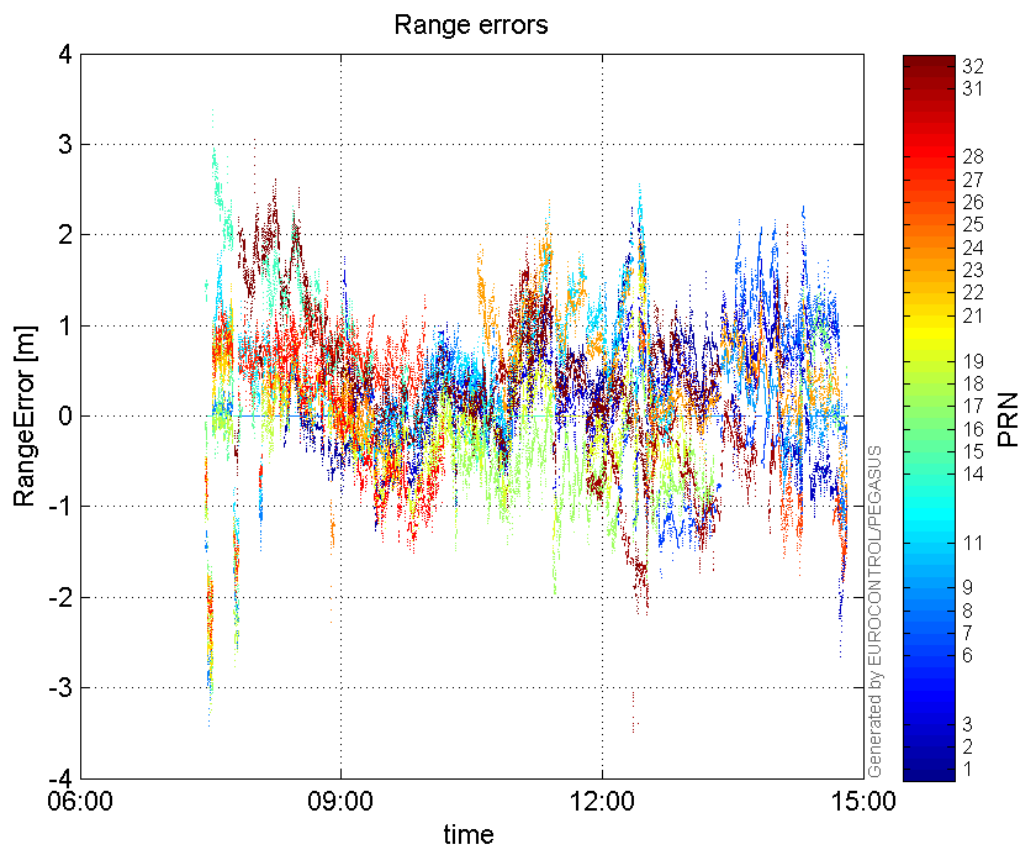
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1874	213840	1	1.16524	1.68431	1.44547
1874	225850	2	1.42712	-2.66254	1.86567
1874	221864	3	0.932805	1.56821	1.68118
1874	218434	6	0.9684	-1.78068	1.83878
1874	224322	7	1.09047	2.31561	2.1235
1874	199795	8	2.06477	-3.05087	1.47759
1874	225908	9	1.00631	-1.37745	1.36881
1874	213840	11	1.46993	2.30498	1.56809
1874	200654	14	0.931763	2.31288	2.48226
1874	199590	15	0.396348	-1.08954	2.74894
1874	199822	16	1.01496	-2.34051	2.30602
1874	214068	17	1.09551	-1.92421	1.75645
1874	199849	18	1.70987	-3.24137	1.89568
1874	212571	19	1.06921	1.73679	1.62437
1874	199822	21	0.154959	-2.91008	18.7796
1874	199850	22	1.56251	-2.28516	1.4625
1874	213840	23	1.37049	2.3908	1.74449
1874	204793	24	0.0922381	-2.27261	24.6385
1874	217588	25	0.1279	2.21248	17.2984
1874	225992	26	0.47232	-1.80824	3.82842
1874	199821	27	1.72496	-2.44567	1.41781
1874	208197	28	0.688807	-1.50924	2.19109
1874	212876	31	0.433587	1.97341	4.55137
1874	203464	32	1.30501	2.5185	1.92987

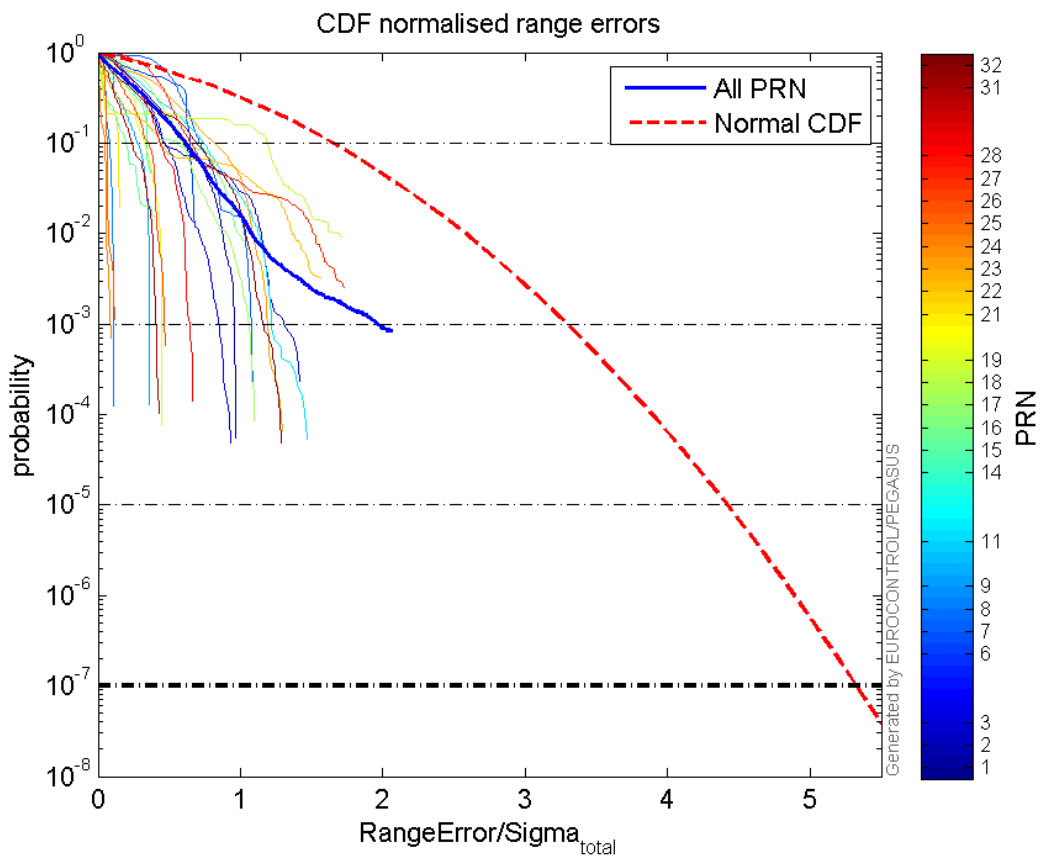
Normalised Range errors (median):



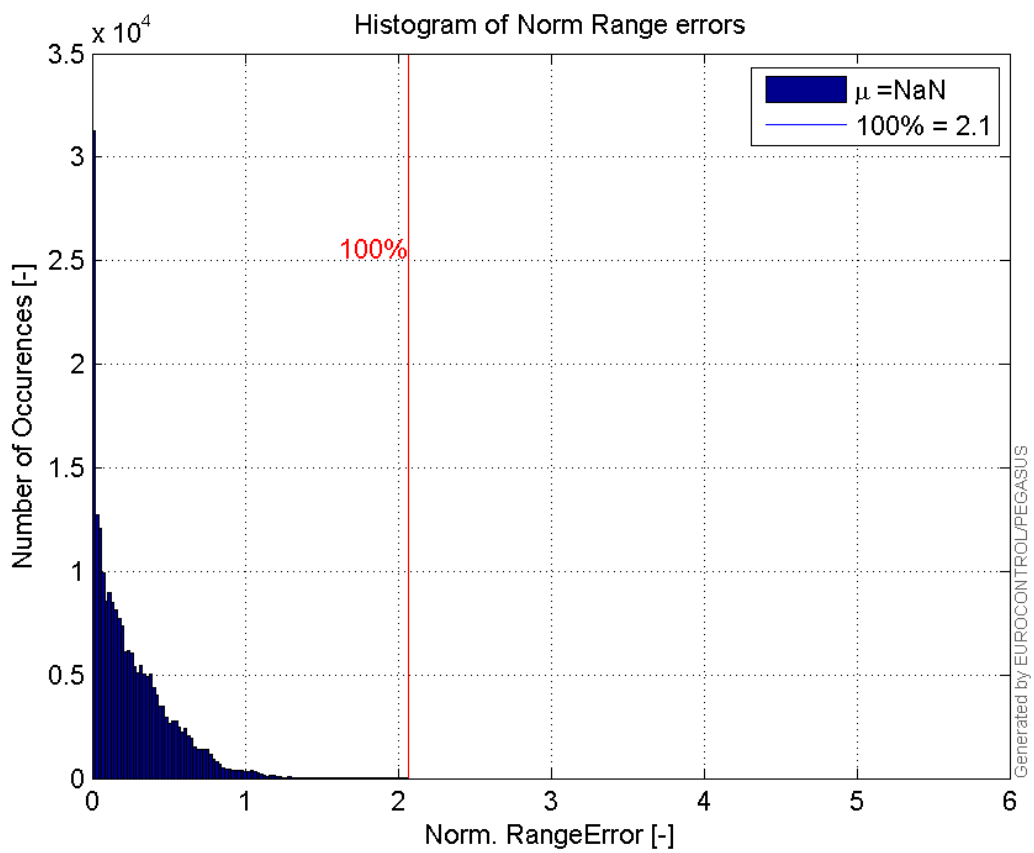
Range errors:



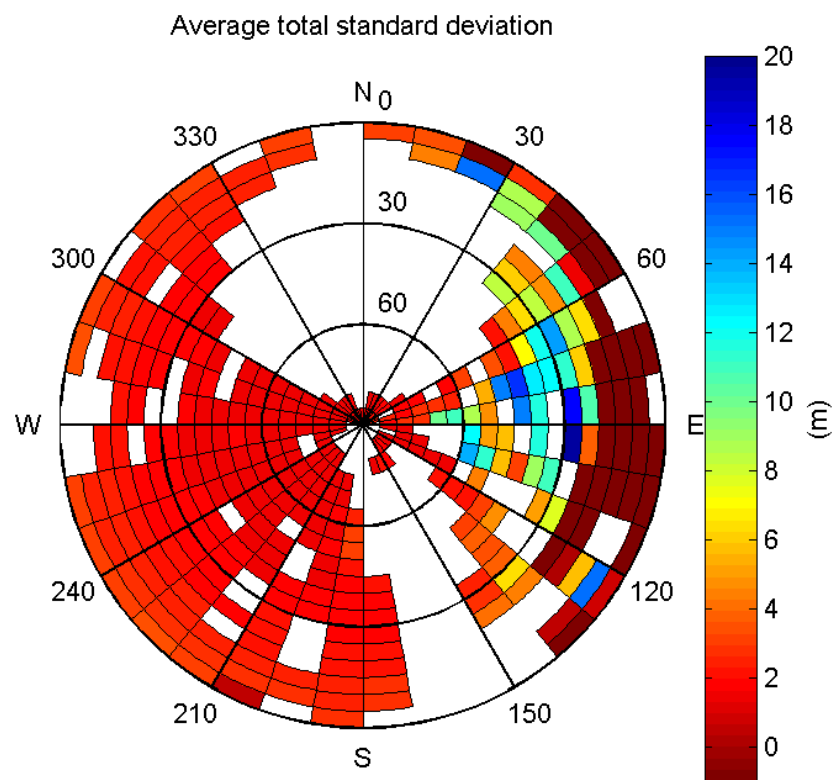
CDF normalised range errors:



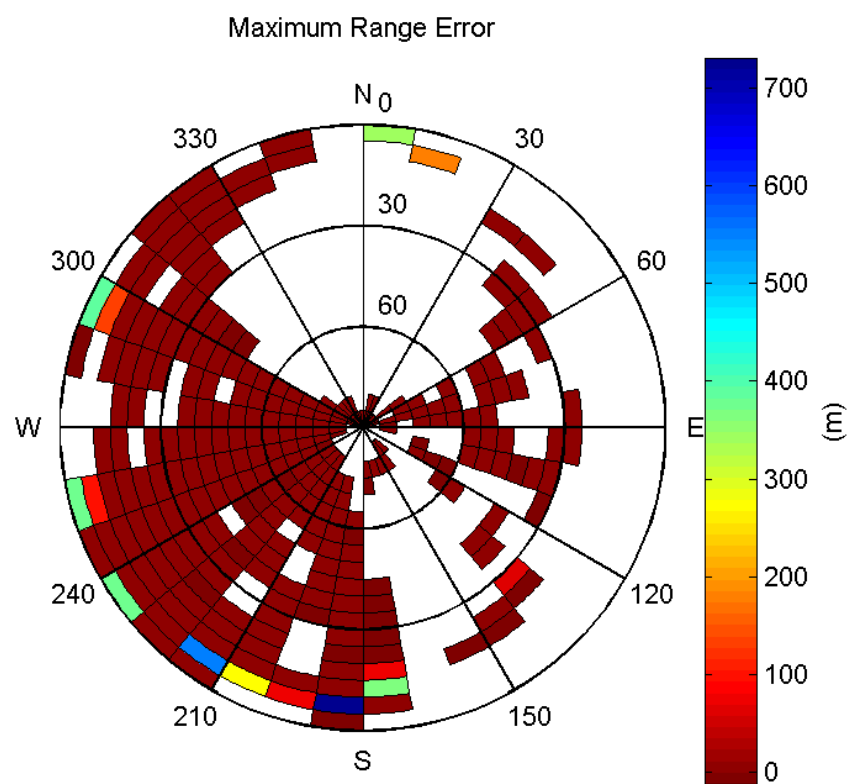
Histogram of Norm Range errors:



Sigma Sky Plot:

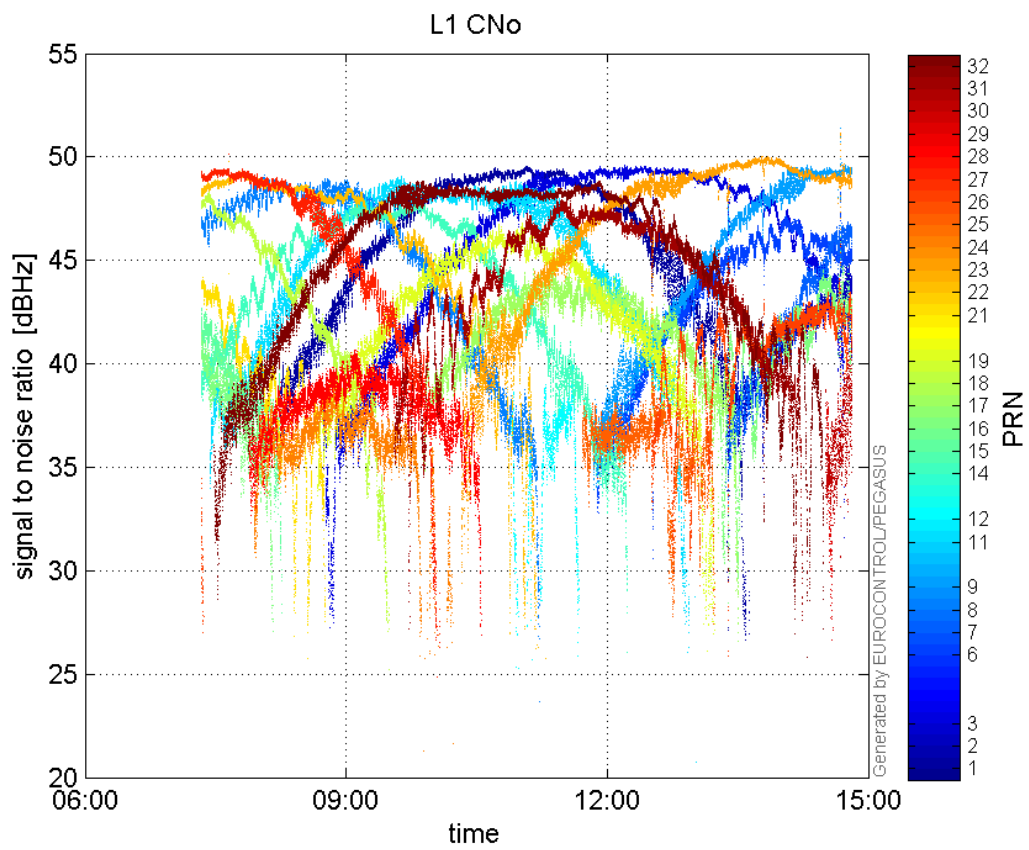


Norm Error Sky Plot:

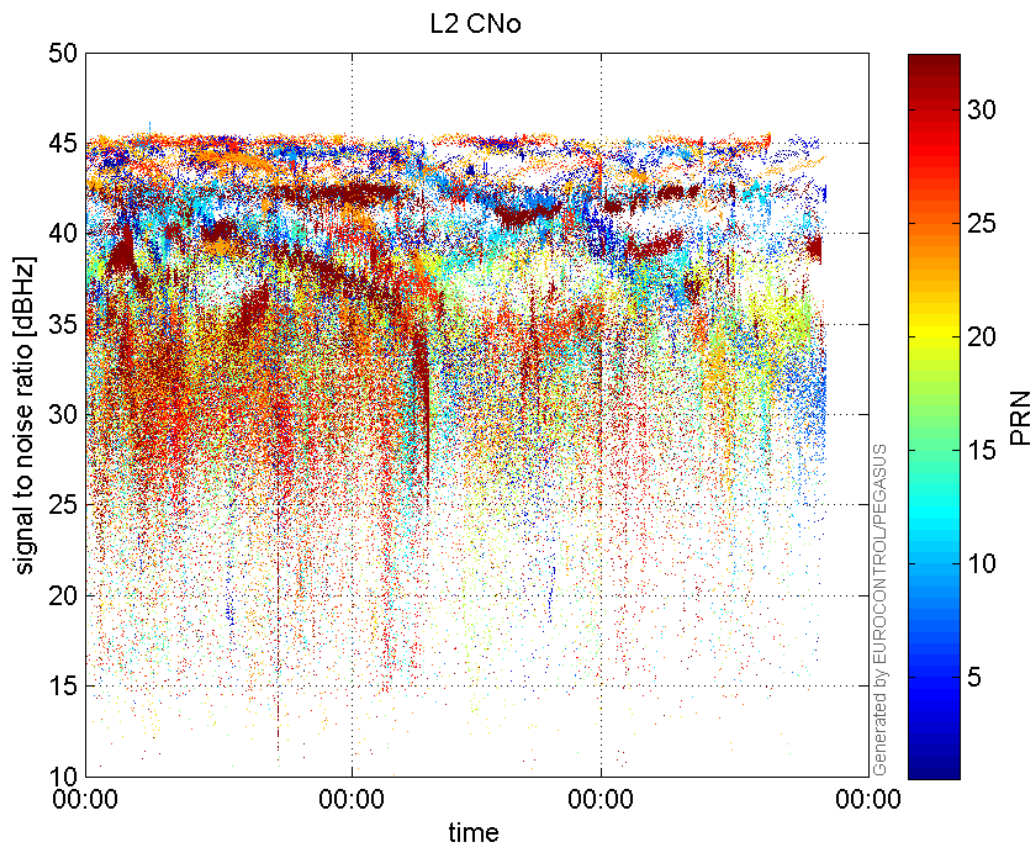


signal quality

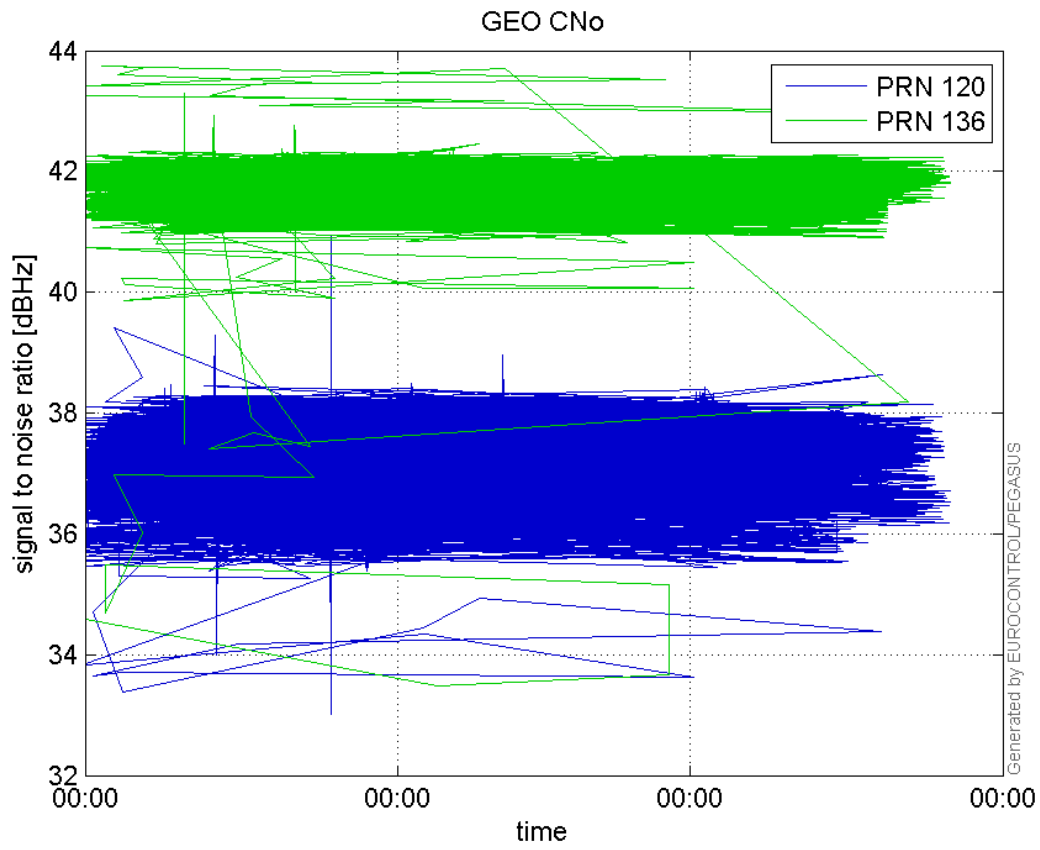
L1 CNo:



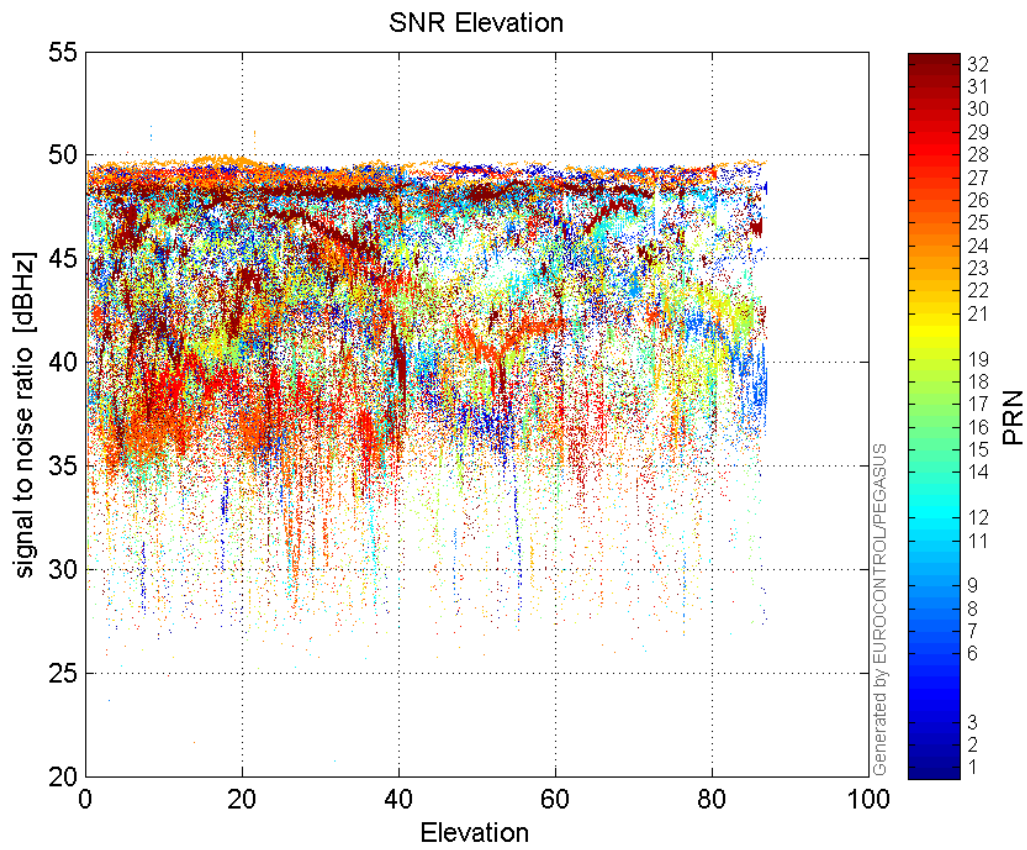
L2 CNo:



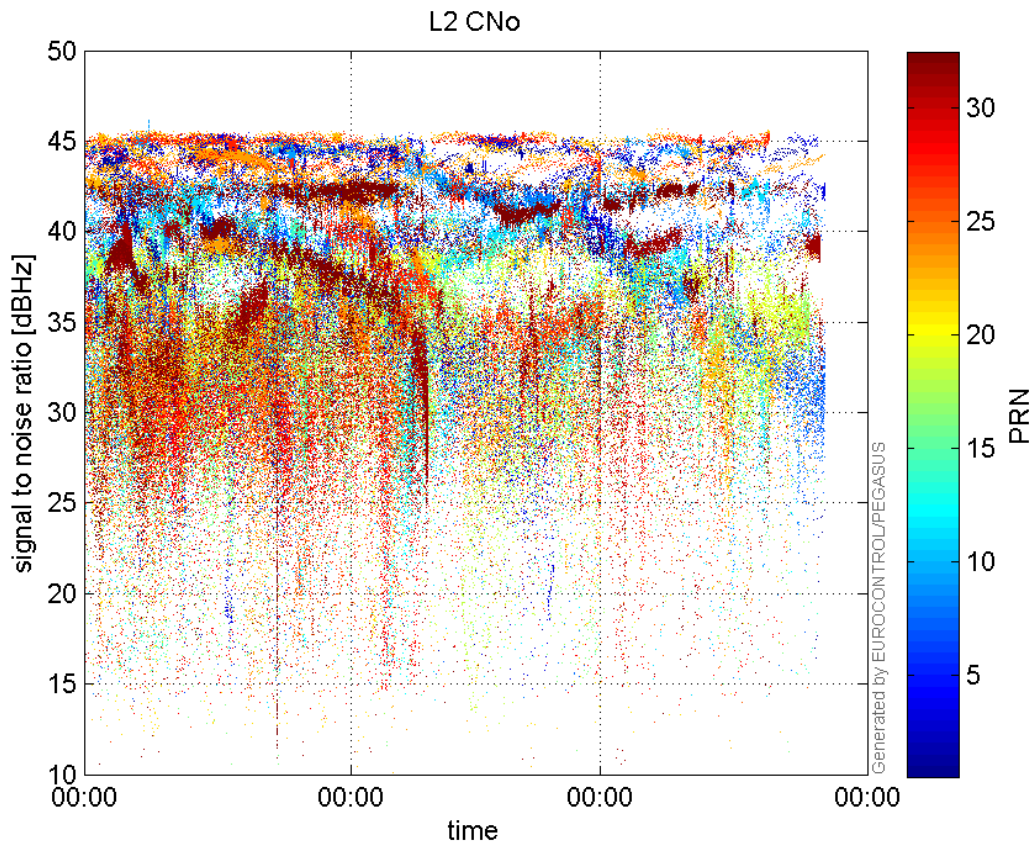
GEO CNo:



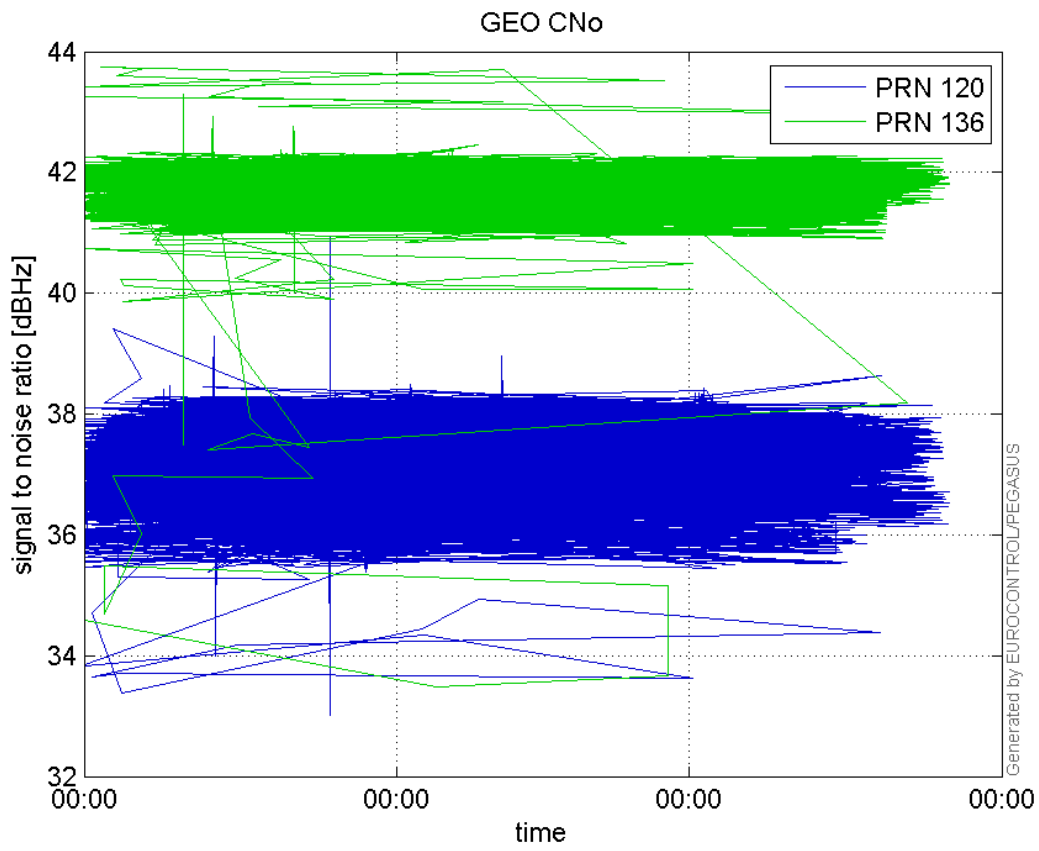
SNR Elevation:



L2 CNo:

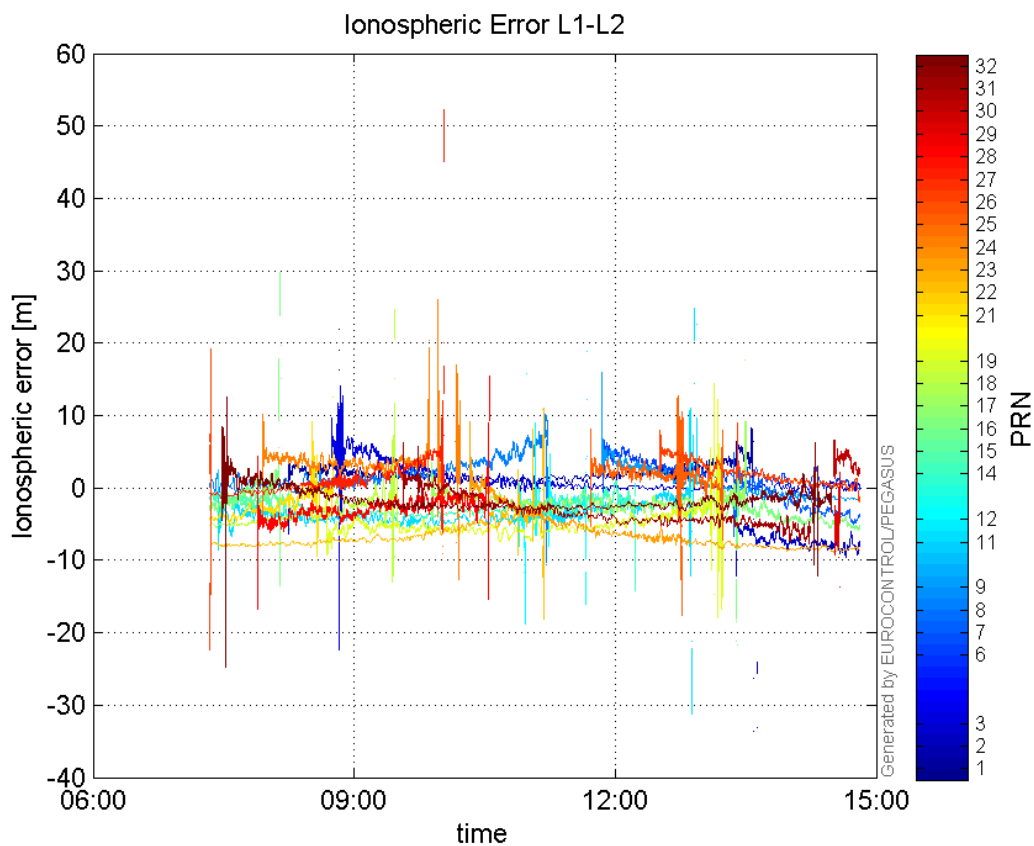


GEO CNo:



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_08EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_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	30.4298
init_alt	results	245.6474
mi_numbers	results	0

Position Domain

start: 07:20:06 08.12.2015 (week: 1874 sec: 199206)
end: 14:48:56 08.12.2015 (week: 1874 sec: 226136)
duration: 07:28:51 ..

quality

valid samples 26570
total samples 26931

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	225850	1.84515	11.7413	0.15715	-0.468483	20.6155	0.0227248
max normVer	202484	1.42354	15.1427	0.0940085	3.12834	18.3735	0.170264
max HPE	201220	5.53536	105.711	0.0523631	4.80363	66.1399	0.0726284
max VPE	201220	5.53536	105.711	0.0523631	4.80363	66.1399	0.0726284
min HPL	218315	1.03109	7.98022	0.129206	-0.517107	12.6707	0.0408113
min VPL	211142	0.484315	10.9449	0.0442503	-0.424331	11.7833	0.0360112

APV-I discontinuity events :

#	Epoch	duration	stable period
1	201100	423	1510
2	201671	253	148
3	222915	163	20991

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	201100	423	1510
2	201671	253	148
3	214585	859	12661
4	222595	253	6980
5	222915	163	67

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	201100	423	1510
2	201671	253	148
3	214585	859	12661
4	222595	253	6980
5	222915	163	67

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	211302	4	1
2	211371	4	1

First Glance analysis

Duration	26931
Number of Samples	26931
Number of invalid sample	361
Number of no position solution samples	23
Number of missing sample	0
Logging Loss	0
Processing Loss	1.3405
Number of Misleading Information	0
Data gaps	0
Discontinuities	0

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
26547	25708	24509	153	24509

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.70291	1.63439	1.53657	0.74692	1.53657
HPEscale 95%	NaN	4.46485	4.49796	2.72392	4.49796
VPE 95%	2.20626	2.07688	2.09316	0.403992	2.09316
VPEscale 95%	NaN	4.67957	3.30431	0.410123	3.30431

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	0.999134	0.967557	0.922431	0.00575837	0.922431
measurements	0.985741	0.954588	0.910066	0.00568119	0.910066
Operational	0.985741	0.954588	0.910066	0.00568119	0.910066

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	3	48	65	48
Long	--	3	5	2	5

Independent	--	3	5	0	5
P(disc.)	NaN	0.00175043	0.0030601	0	0.0030601
P(slide)	NaN	0.00175043	0.00648741	0.679739	0.00648741

Integrity events :

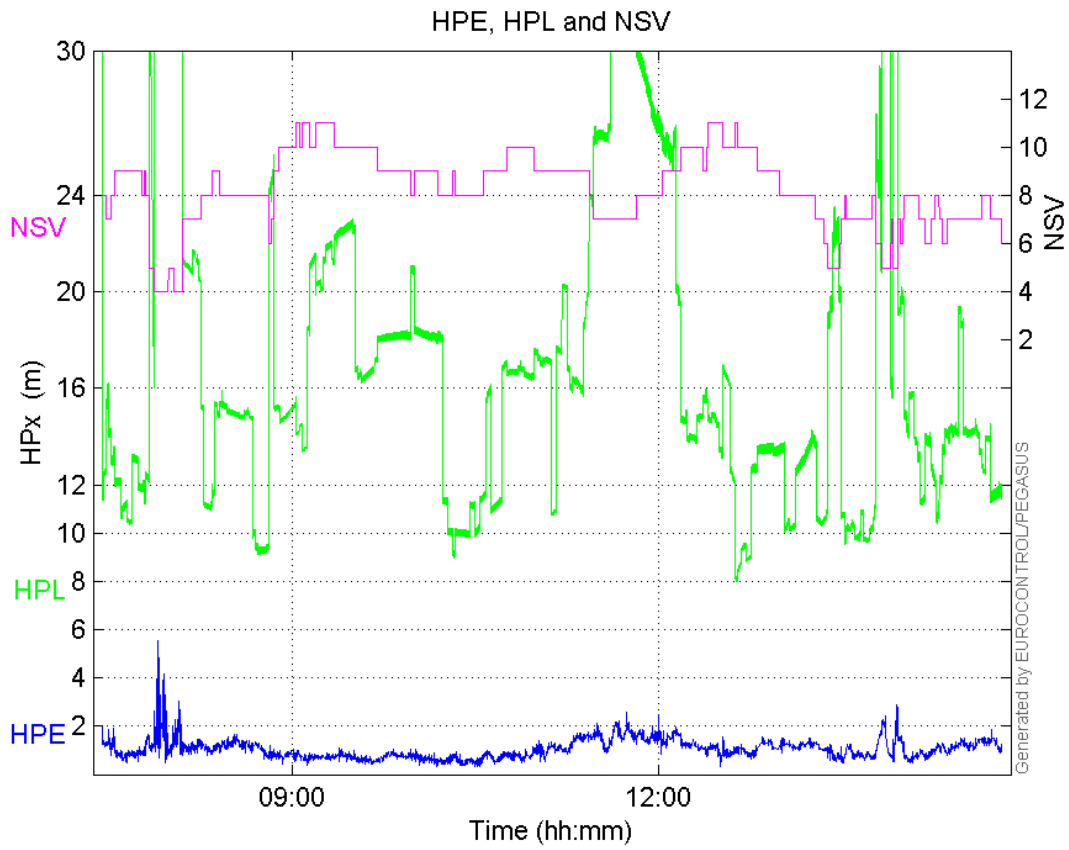
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

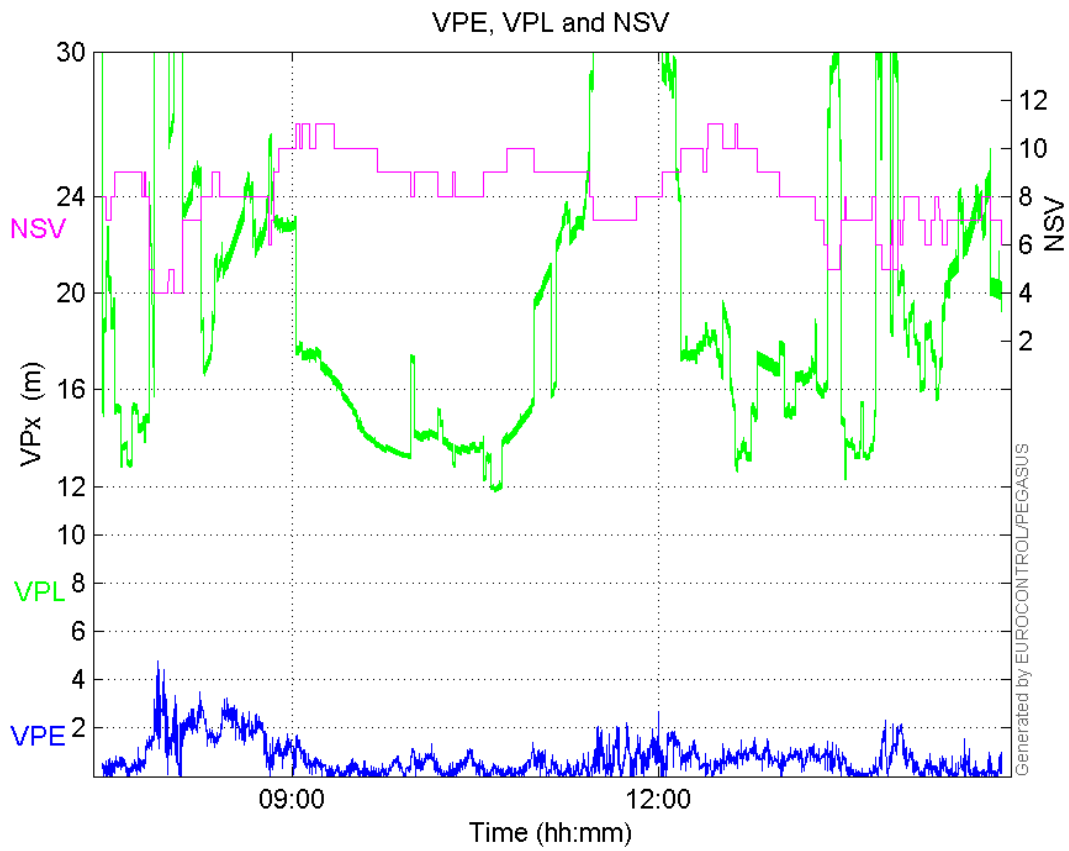
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	26547	25708	24509	153	24509
SIS Availability	0.999134	0.967557	0.922431	0.00575837	0.922431
Local Availability	0.985741	0.954588	0.910066	0.00568119	0.910066
Operational Availability	0.985741	0.954588	0.910066	0.00568119	0.910066
HPE 95%	1.70291	1.63439	1.53657	0.74692	1.53657
HPEscale 95%	NaN	4.46485	4.49796	2.72392	4.49796
VPE 95%	2.20626	2.07688	2.09316	0.403992	2.09316
VPEscale 95%	NaN	4.67957	3.30431	0.410123	3.30431
All Discontinuity Events	--	3	48	65	48
Long Discontinuity Events	--	3	5	2	5
Independent Discontinuity Events	--	3	5	0	5
P(discontinuity)	NaN	0.00175043	0.0030601	0	0.0030601
P(sliding window)	NaN	0.00175043	0.00648741	0.679739	0.00648741
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:

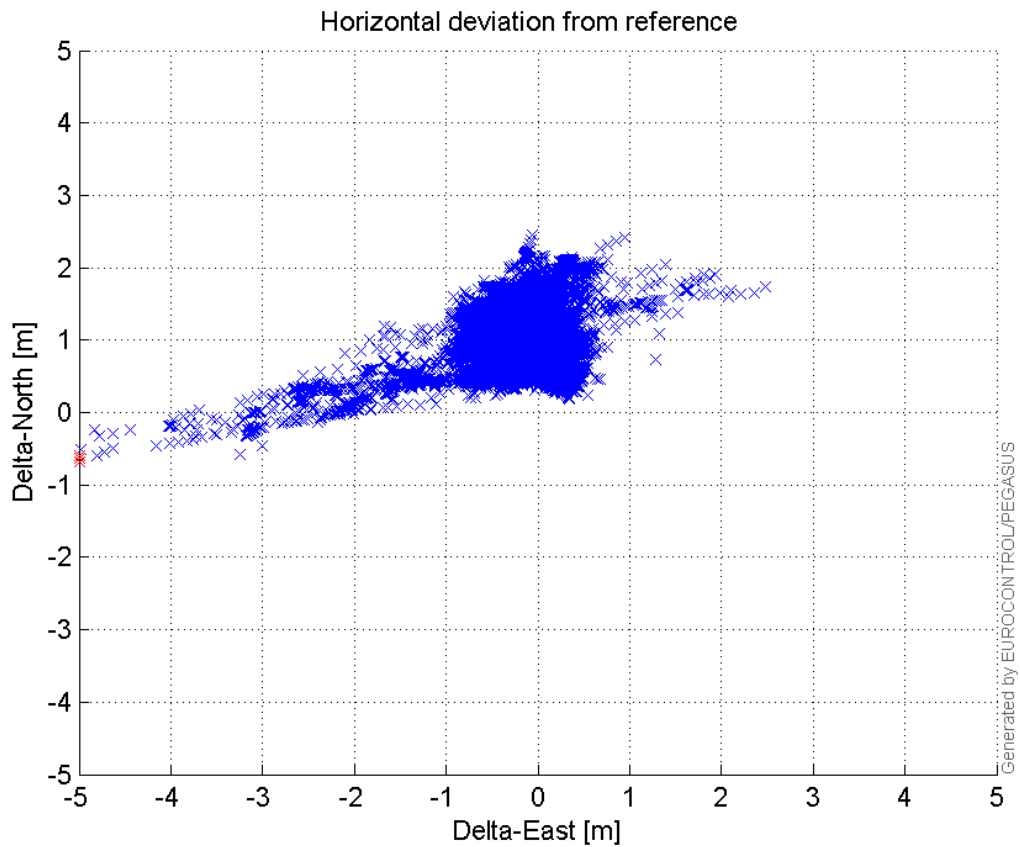


VPE, VPL and NSV:



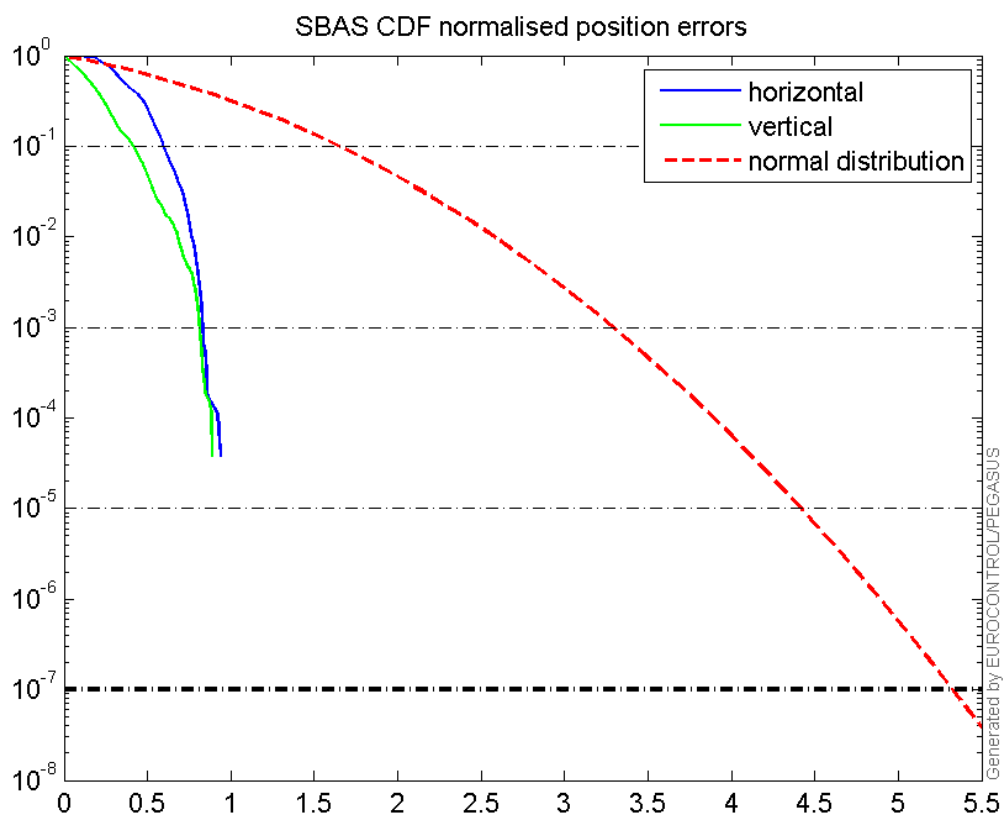
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

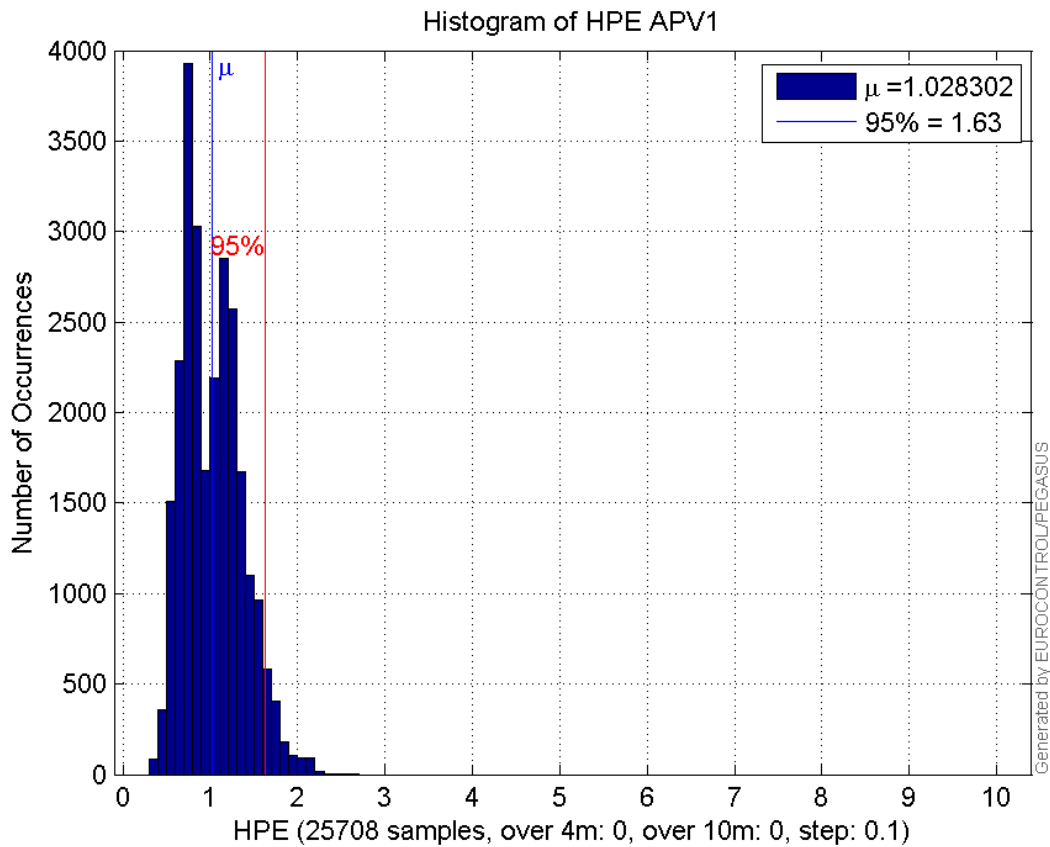
number	25708
sum	26435.576
sum2	30118.762
prctile95	1.6343932
prctile99	1.9676191
number	25708
sum	18211.998
sum2	22765.188
prctile95	2.0768823
prctile99	2.6829813
number	25708
sum	431288.06
sum2	8198410.2
prctile95	29.73697
prctile99	35.438206
number	25708
sum	509659.93
sum2	11268675
prctile95	34.65596
prctile99	40.537502
number	25708
sum	1701.8069
sum2	128.63123
prctile95	0.11162133
prctile99	0.12779132
number	25708
sum	922.1787
sum2	54.615273
prctile95	0.093591415
prctile99	0.12805023
number	24509
sum	24435.712
sum2	26653.254
prctile95	1.5365699
prctile99	1.7223526
number	24509
sum	17210.81
sum2	21591.533
prctile95	2.0931619
prctile99	2.6912088
number	24509
sum	391059.29
sum2	6844015.1
prctile95	26.37873
prctile99	29.08962
number	24509
sum	462383.37
sum2	9399076.1
prctile95	29.975855

prctile99 34.066452
number 24509
sum 1642.1277
sum2 125.55213
prctile95 0.11244911
prctile99 0.12844642
number 24509
sum 896.85161
sum2 53.872442
prctile95 0.094408954
prctile99 0.12846068

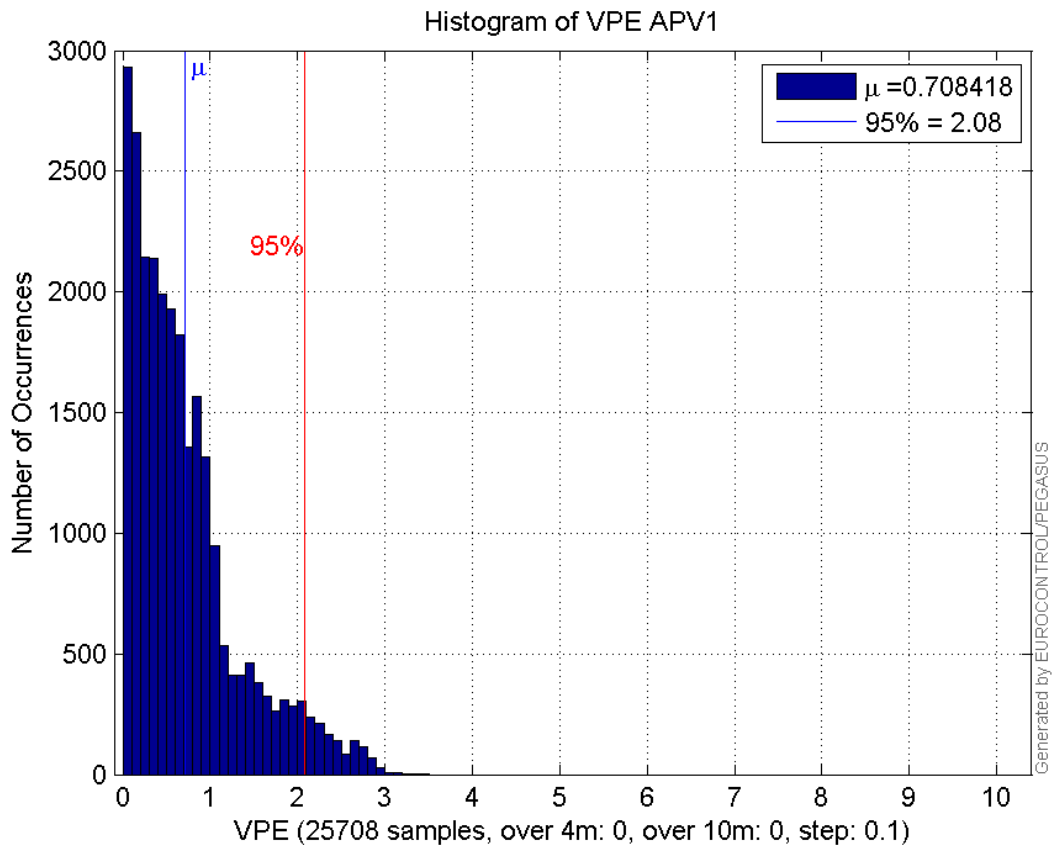
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.0283	0.337893	0.999489	1.63439	1.96762	1.08239
HPL	16.7764	6.12033	15.1026	29.737	35.4382	17.8579
VPE	0.708418	0.619426	0.551445	2.07688	2.68298	0.941026
VPL	19.825	6.731	17.5911	34.656	40.5375	20.9364

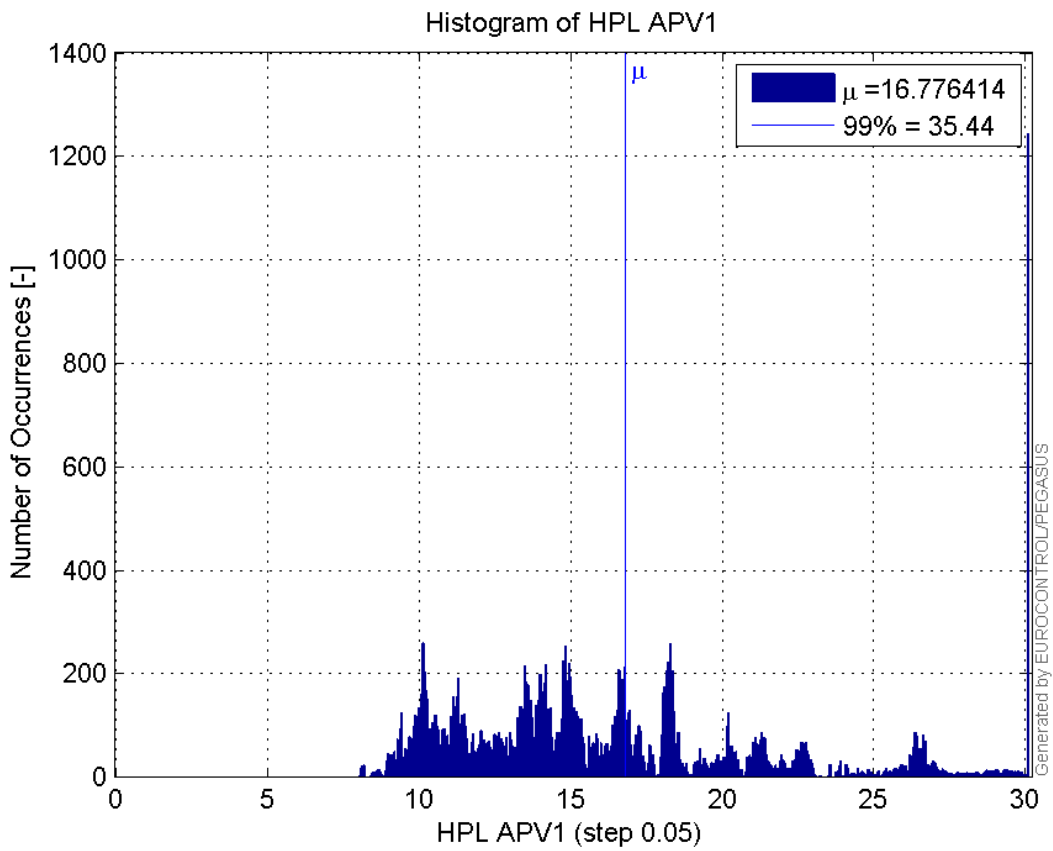
Histogram of HPE APV1:



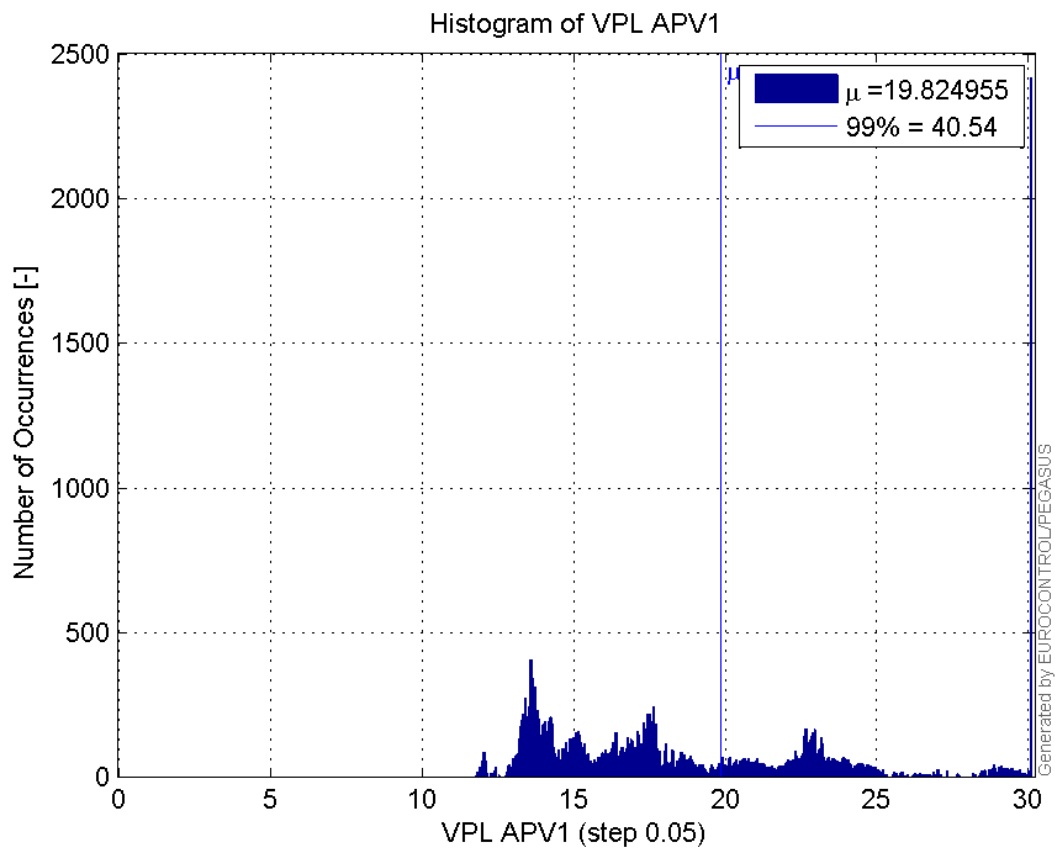
Histogram of VPE APV1:



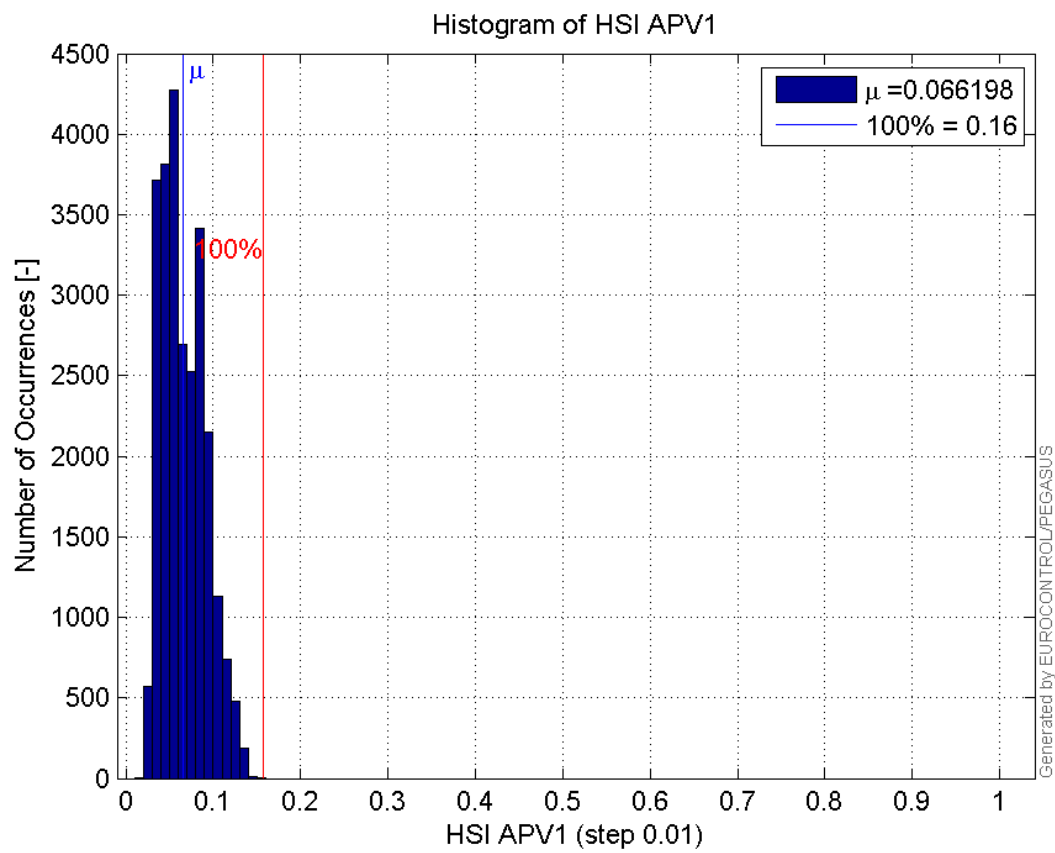
Histogram of HPL APV1:



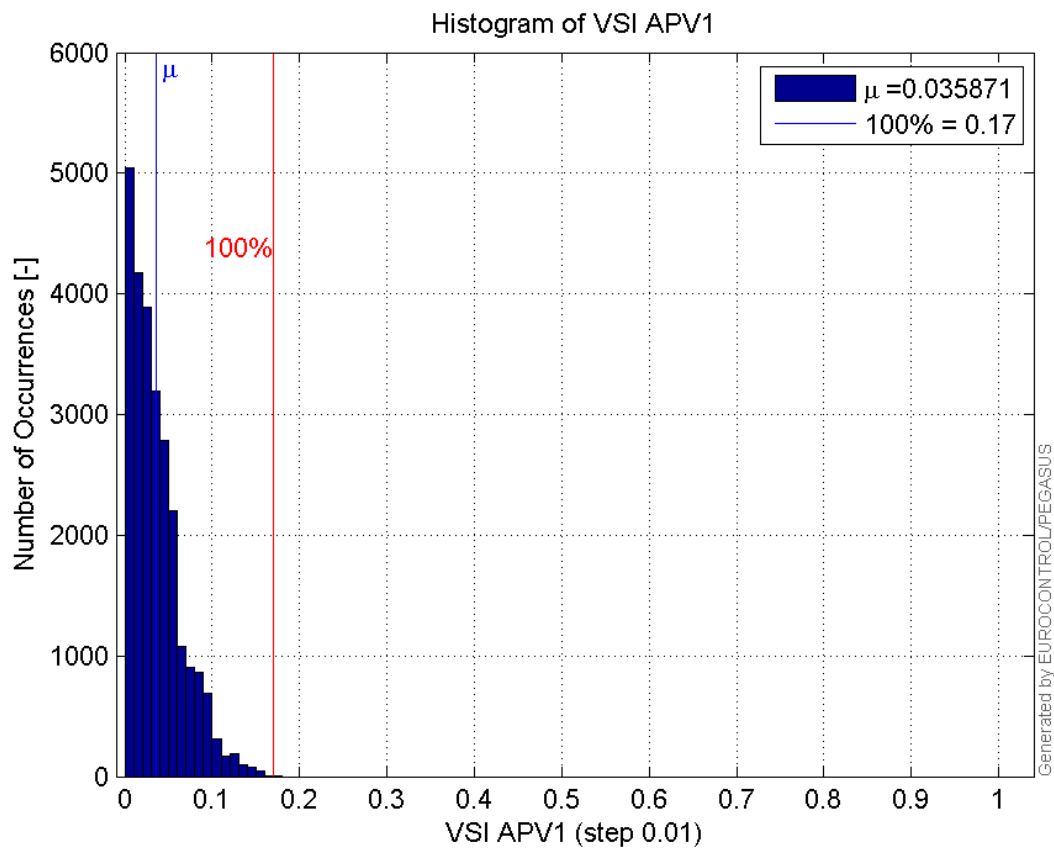
Histogram of VPL APV1:



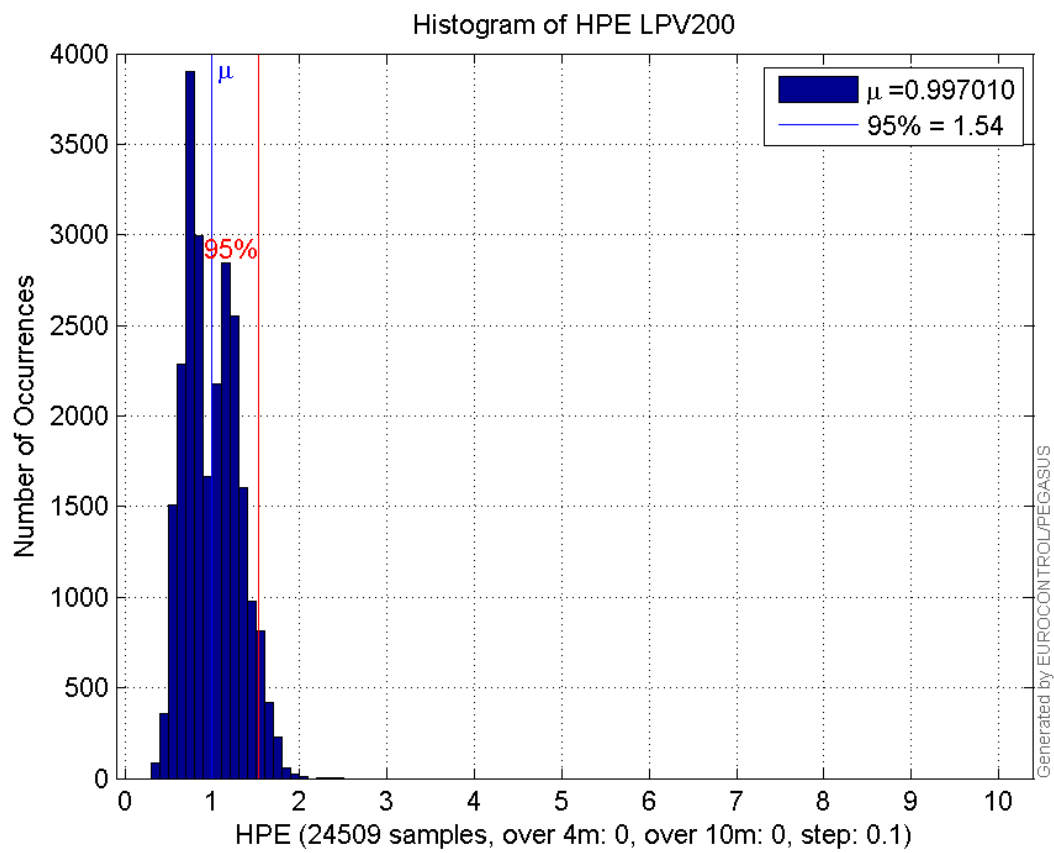
Histogram of HSI APV1:



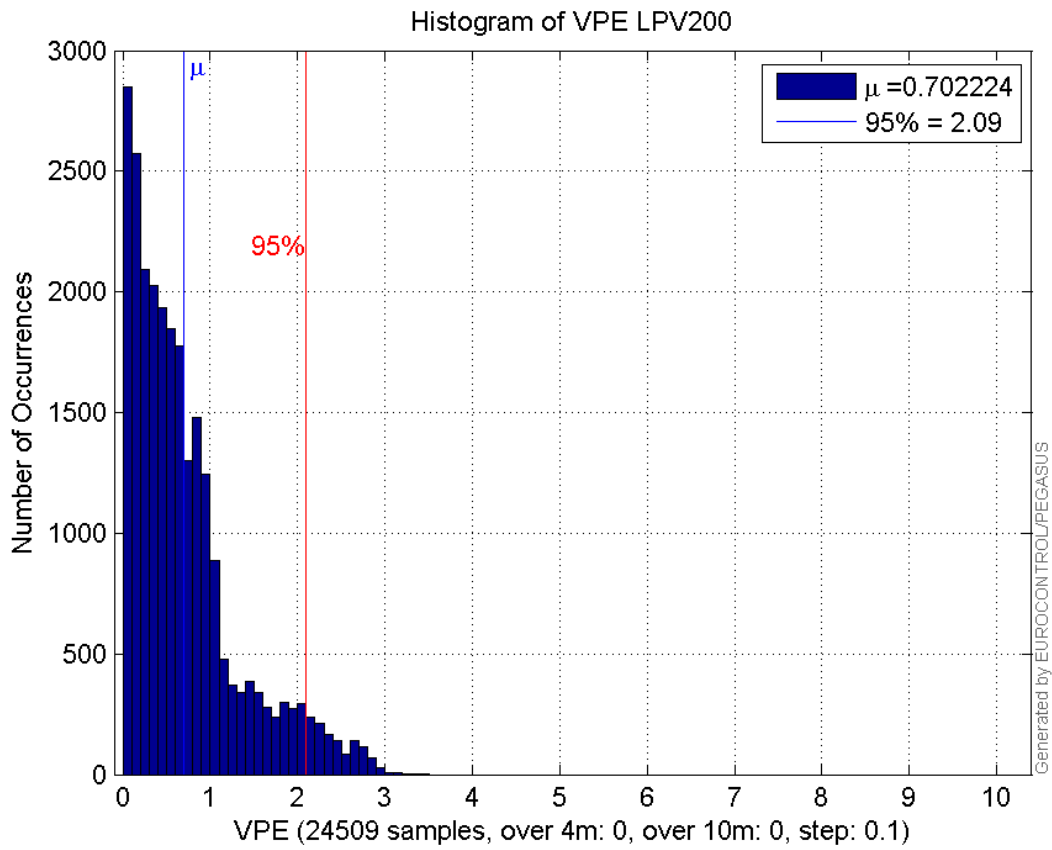
Histogram of VSI APV1:



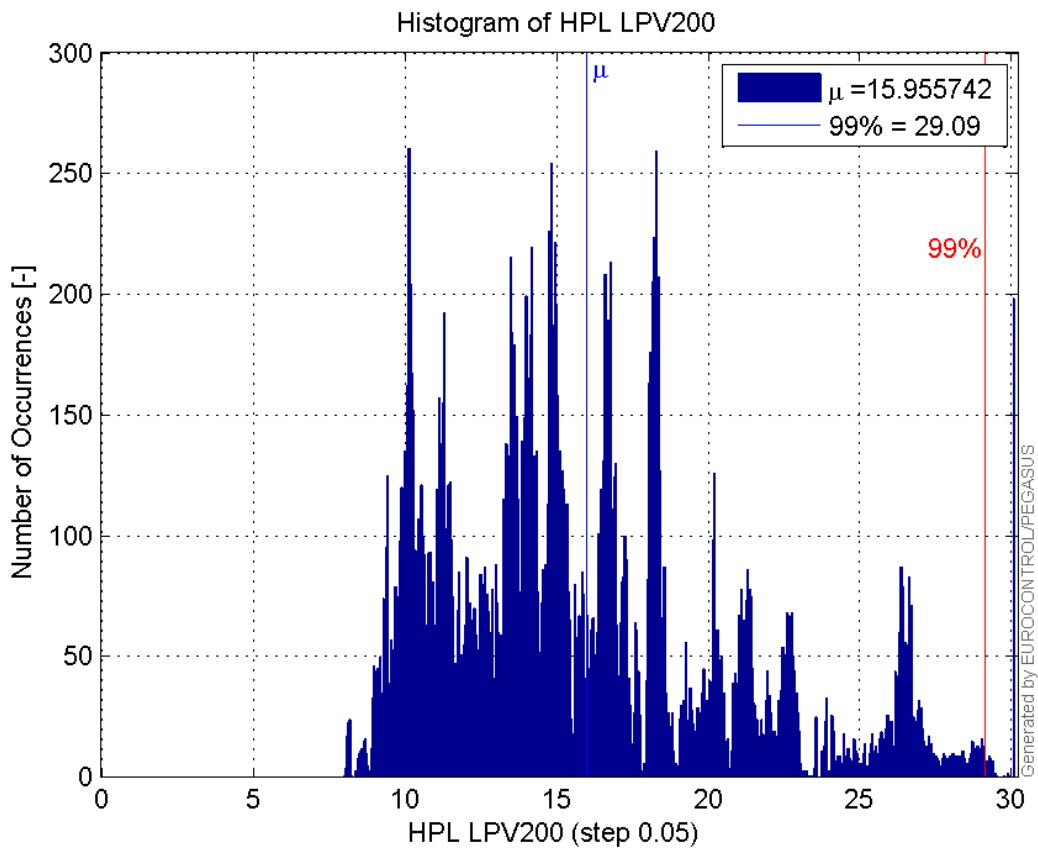
Histogram of HPE LPV200:



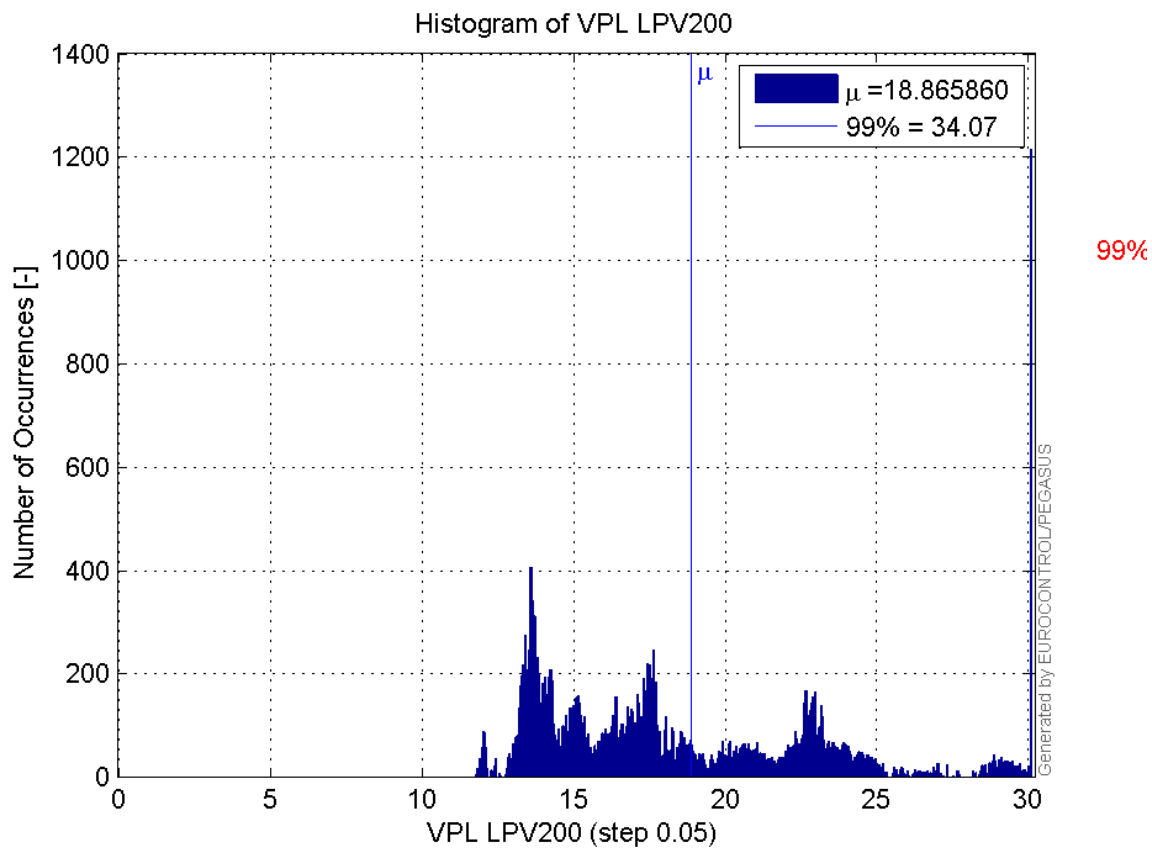
Histogram of VPE LPV200:



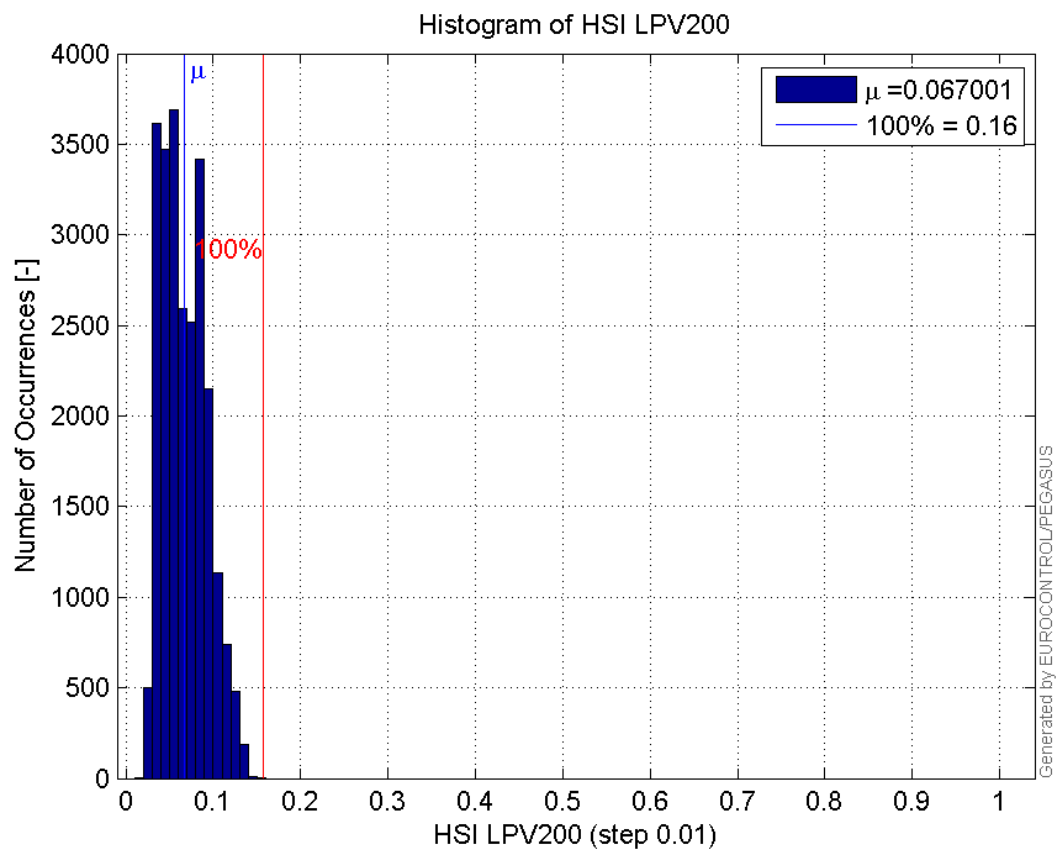
Histogram of HPL LPV200:



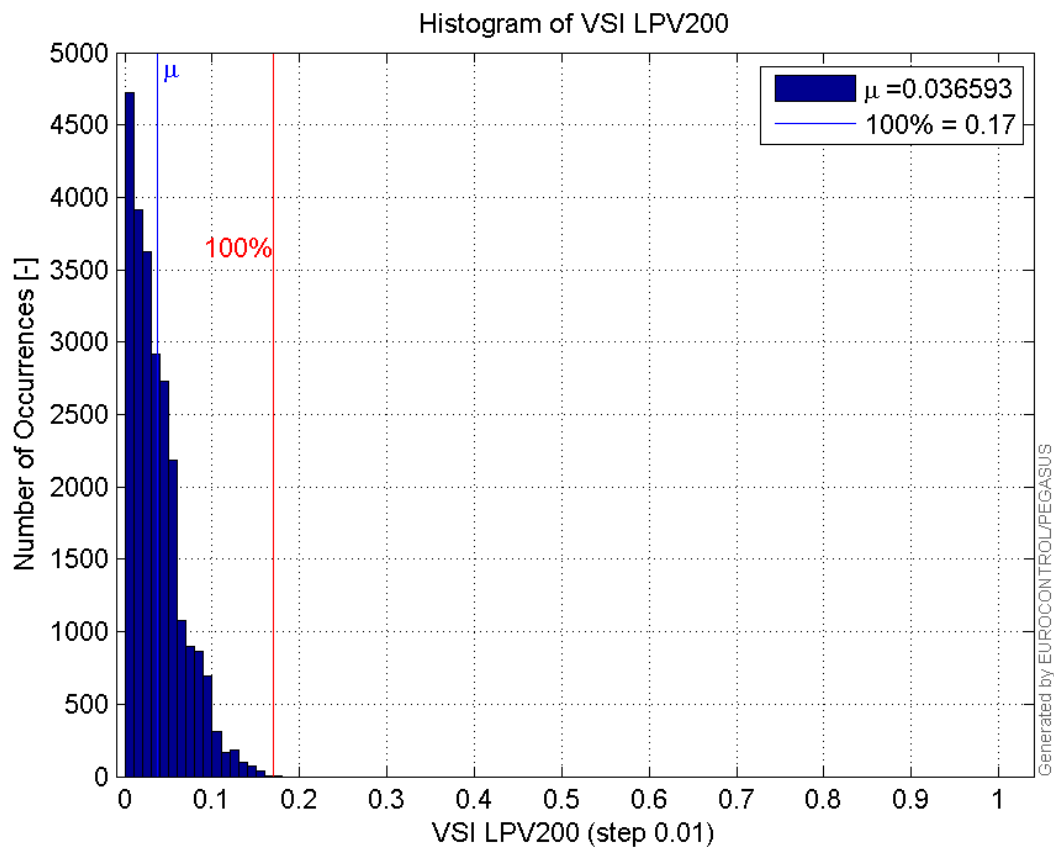
Histogram of VPL LPV200:



Histogram of HSI LPV200:

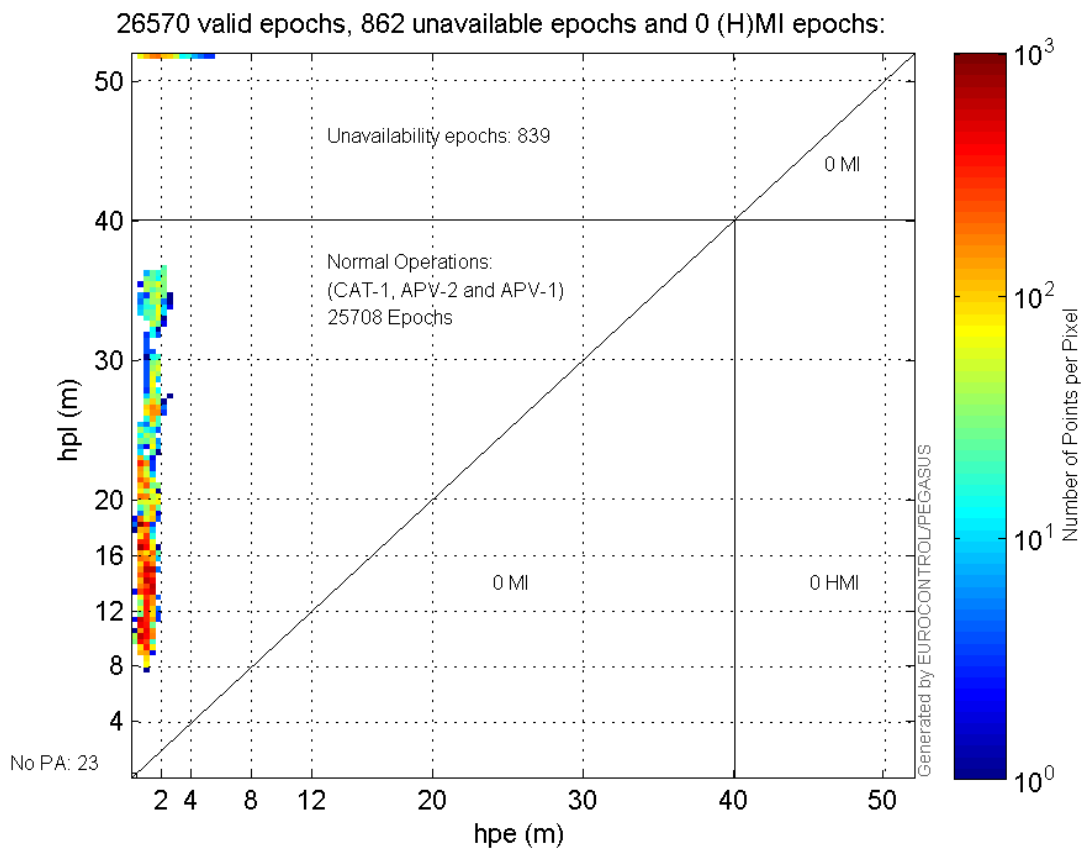


Histogram of VSI LPV200:

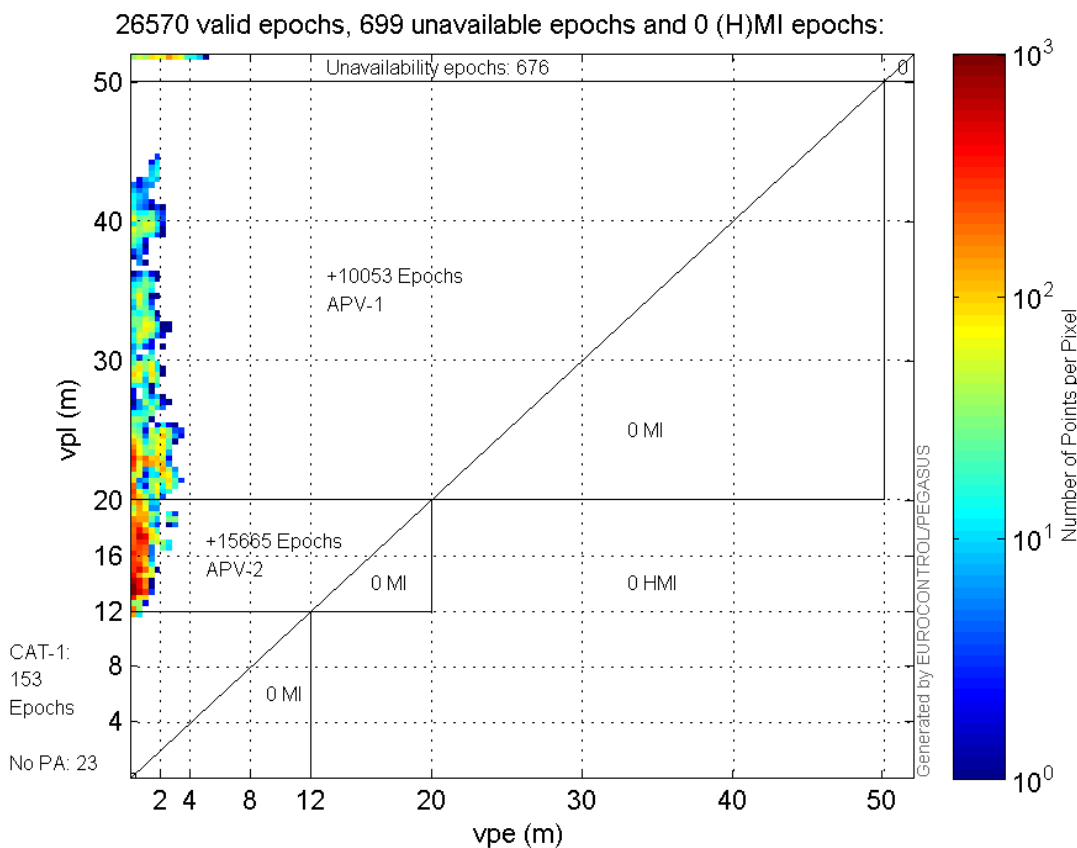


Stanford Plots

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_08EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_12_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	30.4298
init_alt	results	245.6474
mi_numbers	results	0

SBAS Messages

start: 07:20:51.129 08.12.2015 (week: 1874 sec: 199205.129)
end: 14:48:56.129 08.12.2015 (week: 1874 sec: 226136.129)
duration: 07:28:51 ..

quality

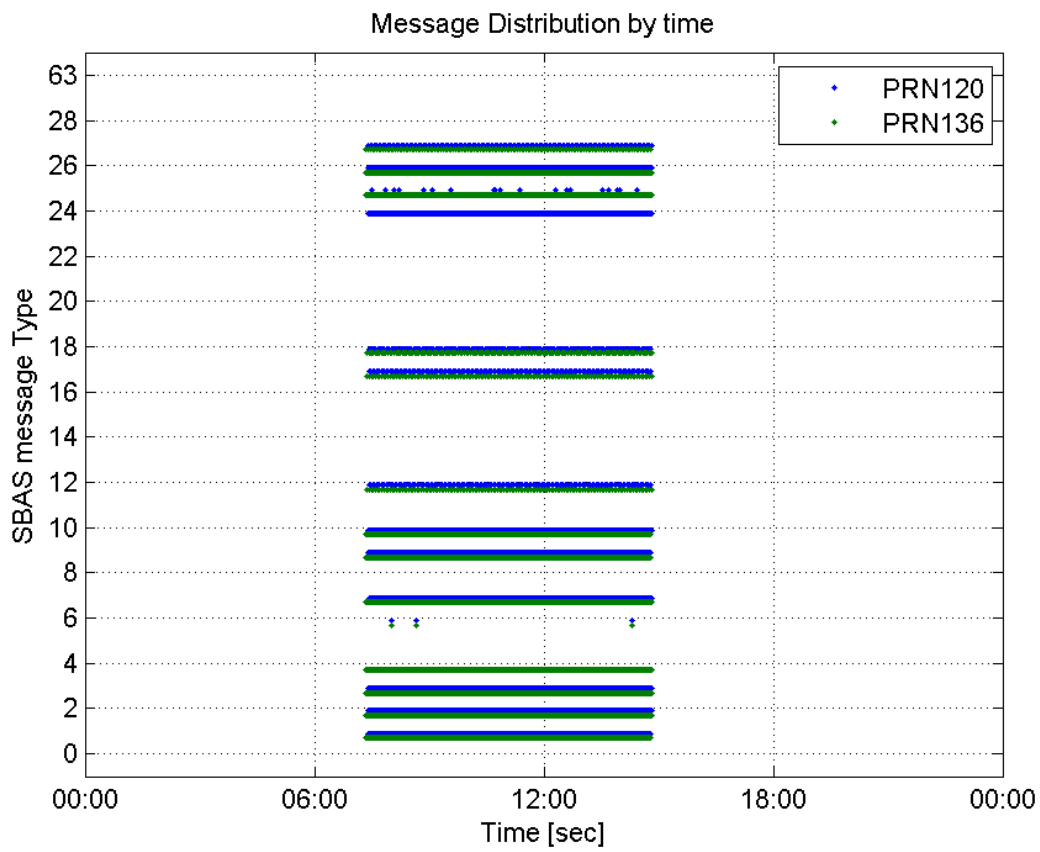
valid samples 53596
total samples 53596
number of SBAS PRNs 2

SBAS SIS Overview

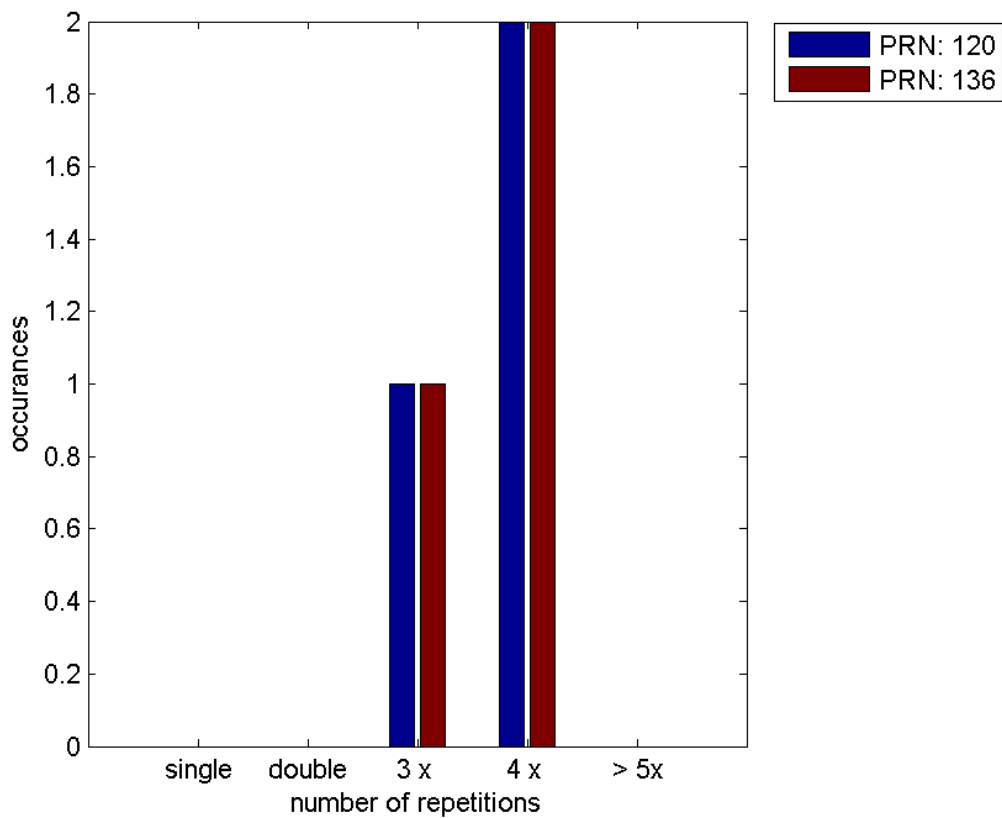
Message Type 6 repetitions :

	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:



Broadcast SBAS Messages :

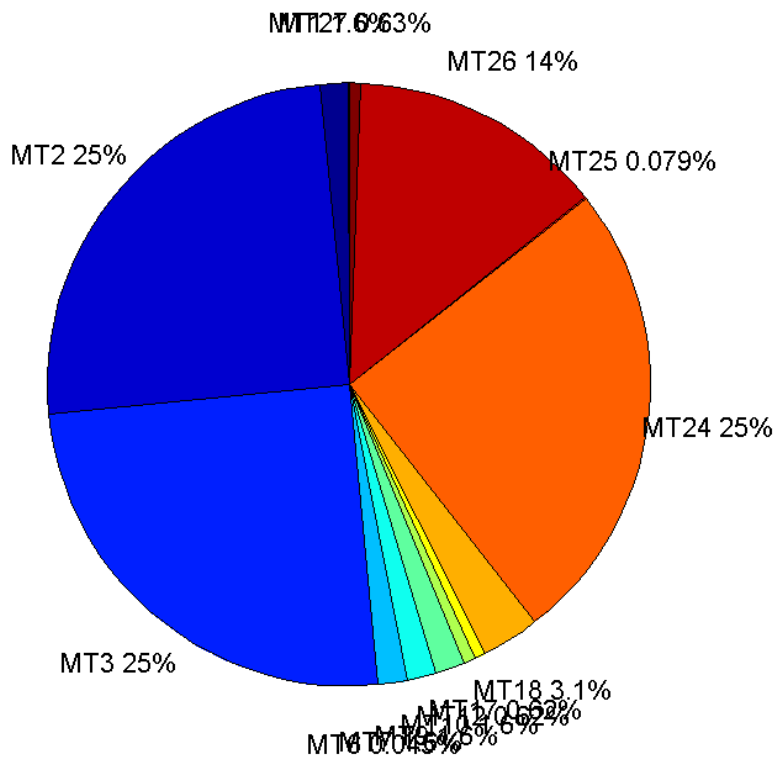
	number of messages	%
MT 0	0	0
MT 1	415	1.55641
MT 2	6660	24.9775
MT 3	6660	24.9775
MT 4	0	0
MT 5	0	0
MT 6	12	0.0450045
MT 7	415	1.55641
MT 9	415	1.55641
MT 10	416	1.56016
MT 12	166	0.622562
MT 17	166	0.622562
MT 18	830	3.11281
MT 24	6660	24.9775
MT 25	21	0.0787579
MT 26	3661	13.7301
MT 27	167	0.626313
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	26664	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	64	69	64.1932	0	0	0
MT 2	4	8	4.0036	3	0	0
MT 3	4	8	4.0036	3	0	0
MT 4	--	--	--	--	--	--
MT 5	--	--	--	--	--	--
MT 6	1	20277	2059.55	2	2	2
MT 7	64	69	64.1932	0	0	0
MT 9	64	69	64.1932	0	0	0
MT 10	64	69	64.1831	0	0	0
MT 12	156	167	160.315	165	0	0
MT 17	156	167	160.315	0	0	0
MT 18	4	139	31.9421	0	0	0
MT 24	4	8	4.0036	0	0	0
MT 25	41	4077	1246.45	0	0	0
MT						

26	4	33	7.28415	0	0	0
MT 27	156	167	160.337	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

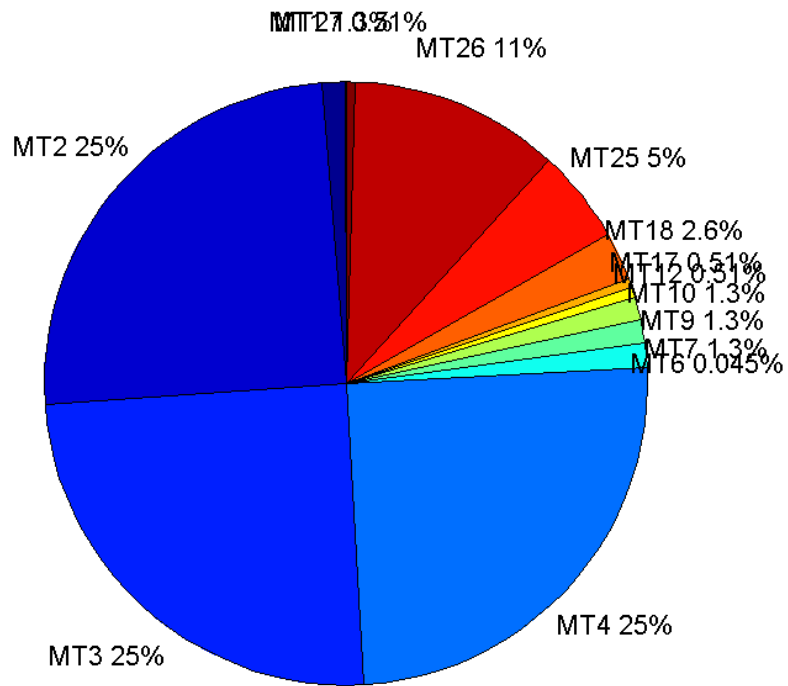
	number of messages	%
MT 0	0	0
MT 1	338	1.25501
MT 2	6694	24.8552
MT 3	6694	24.8552
MT 4	6695	24.8589
MT 5	0	0
MT 6	12	0.0445567
MT 7	339	1.25873
MT 9	338	1.25501

MT 10	338	1.25501
MT 12	138	0.512402
MT 17	138	0.512402
MT 18	690	2.56201
MT 24	0	0
MT 25	1349	5.00891
MT 26	3031	11.2543
MT 27	138	0.512402
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	26932	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	82	79.6024	0	0	0
MT 2	4	8	4.02301	3	0	0
MT 3	4	8	4.02316	3	0	0
MT 4	4	8	4.02316	3	0	0
MT 5	--	--	--	--	--	--
MT 6	1	20277	2059.55	2	2	2
MT 7	75	84	79.5296	0	0	0
MT 9	76	84	79.5668	0	0	0
MT 10	76	84	79.5786	0	0	0
MT 12	185	201	195.401	137	0	0
MT 17	181	201	195.401	0	0	0
MT 18	4	174	38.9115	0	0	0
MT 24	--	--	--	--	--	--
MT 25	2	60	19.9614	0	0	0
MT 26	4	52	8.88713	0	0	0
MT 27	184	201	195.431	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_08EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_12_08EGNOS/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