

Global View

program	Pegasus
comment	PRN 123??
city	Kiev
country	Ukraine
abbreviation	NAU
site	Laboratory satellite systems
version	4.8.2
date	03/11/2015

Range Domain

start: 07:21:01 03.11.2015 (week: 1869 sec: 199261)
end: 13:31:51 03.11.2015 (week: 1869 sec: 221511)
duration: 06:10:51 ..

quality

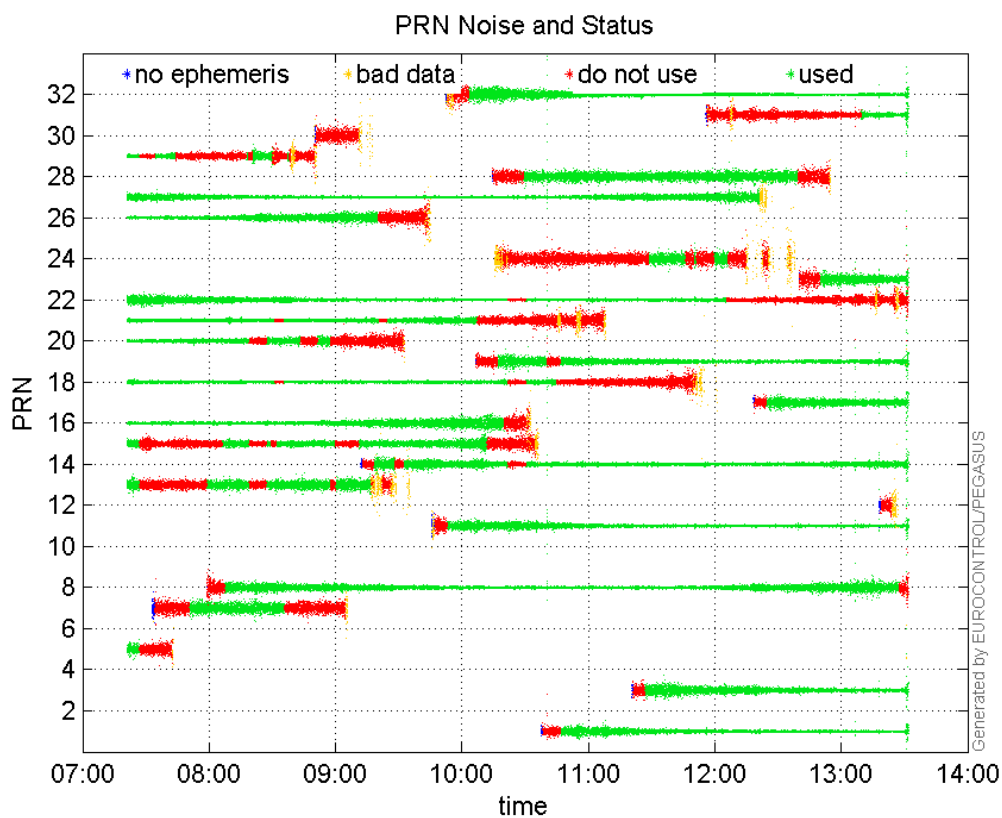
valid samples 22250
total samples 22250

PRN overview

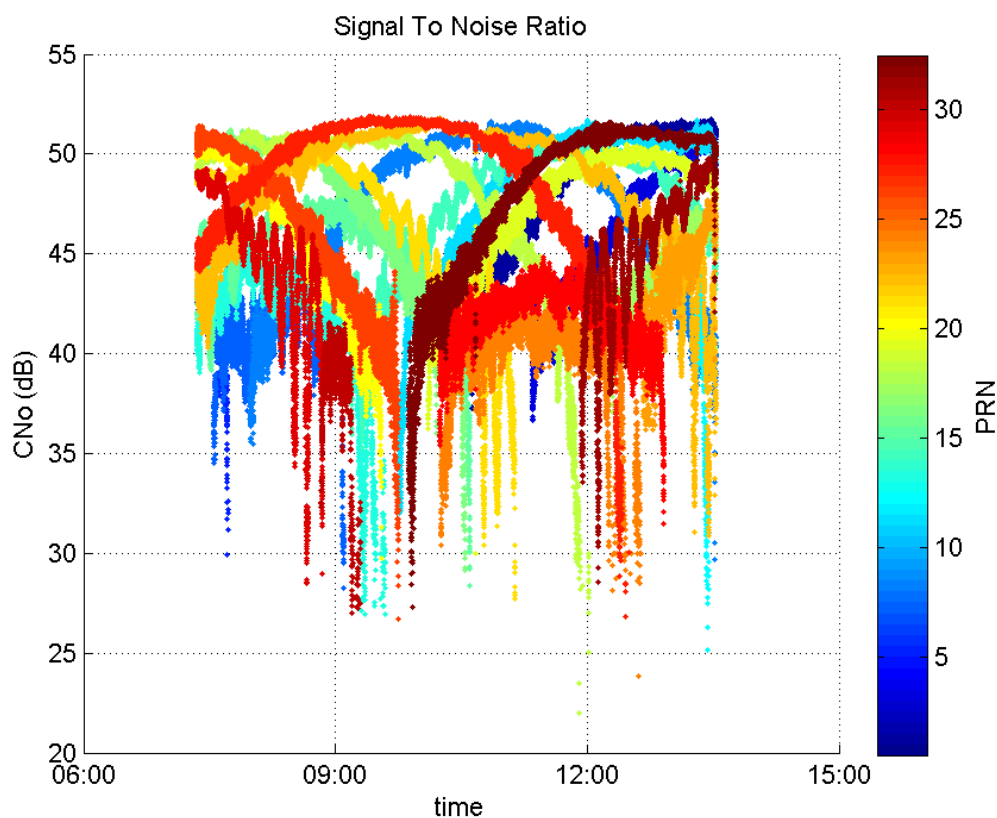
Number of Visible GPS Satellites 26
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



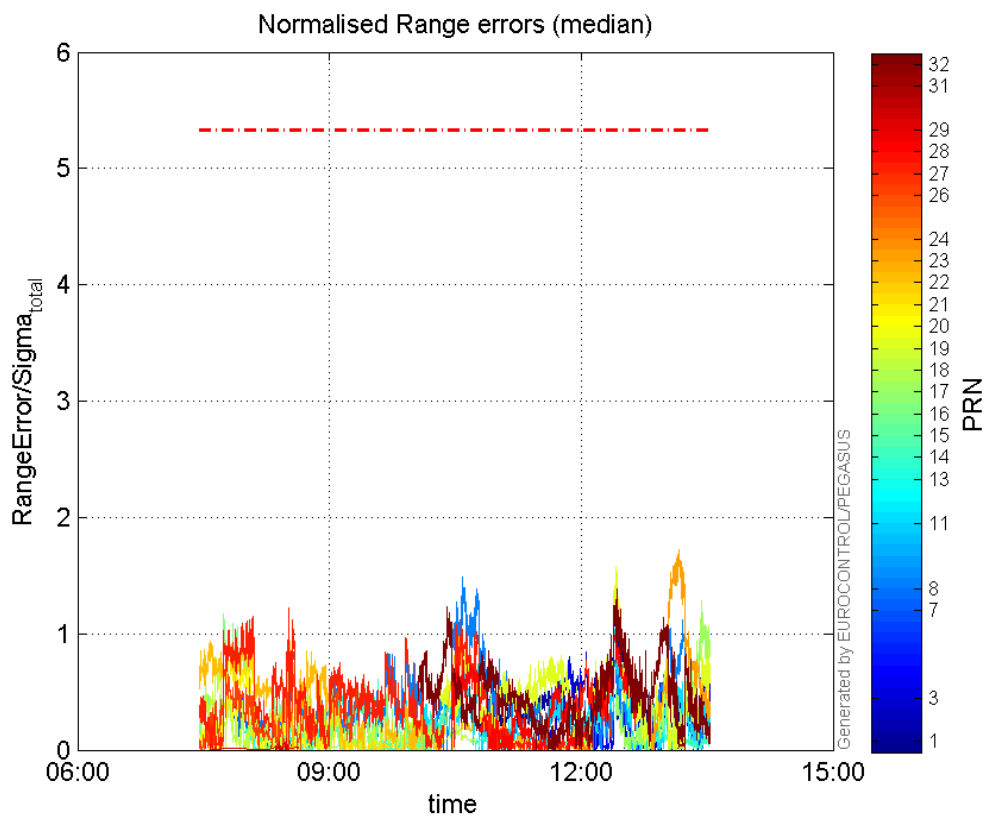
range errors

Number of Overbounding Norm Errors 0

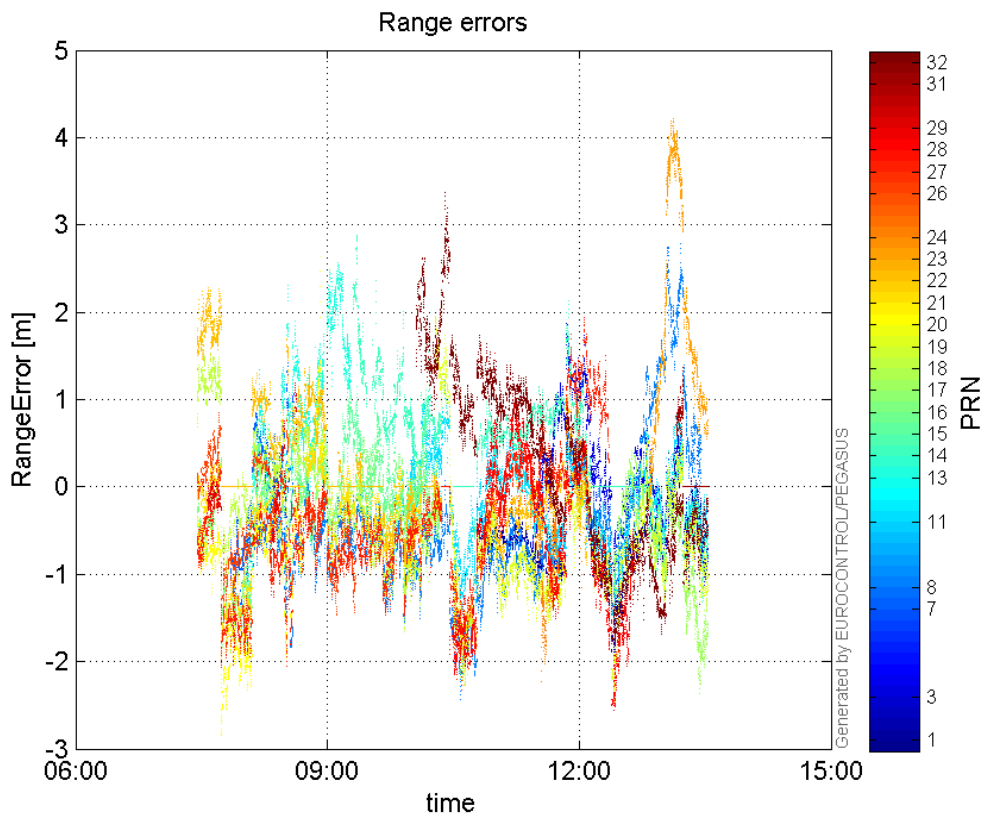
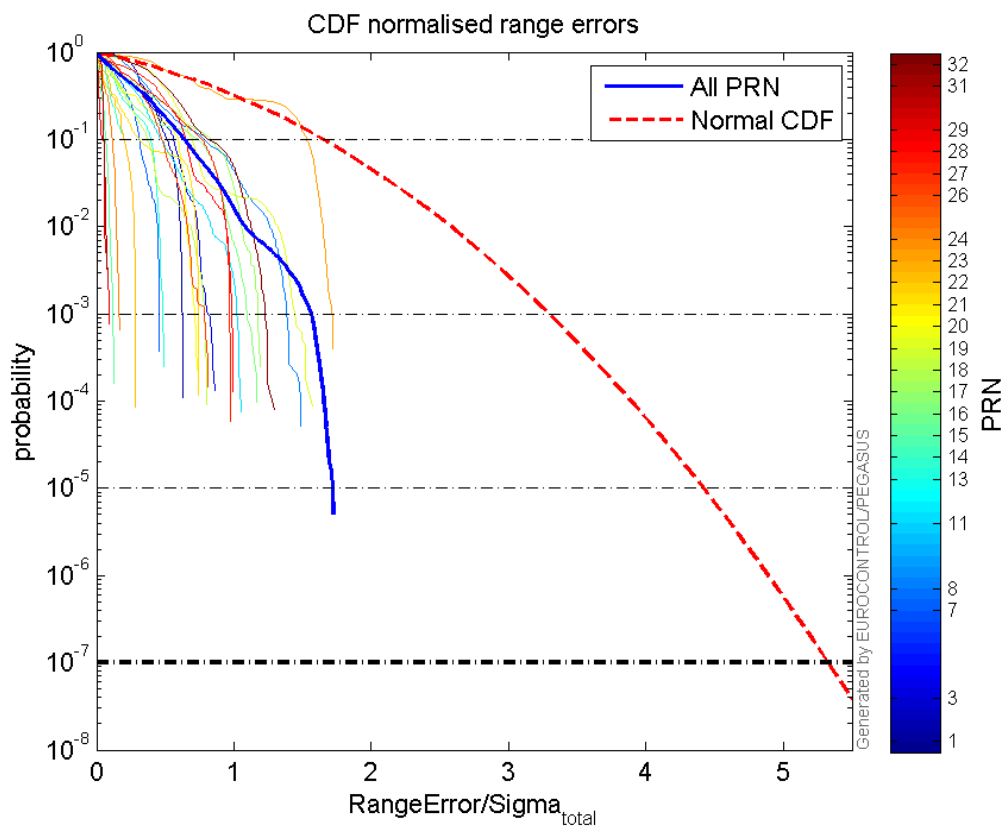
Max Norm Errors :

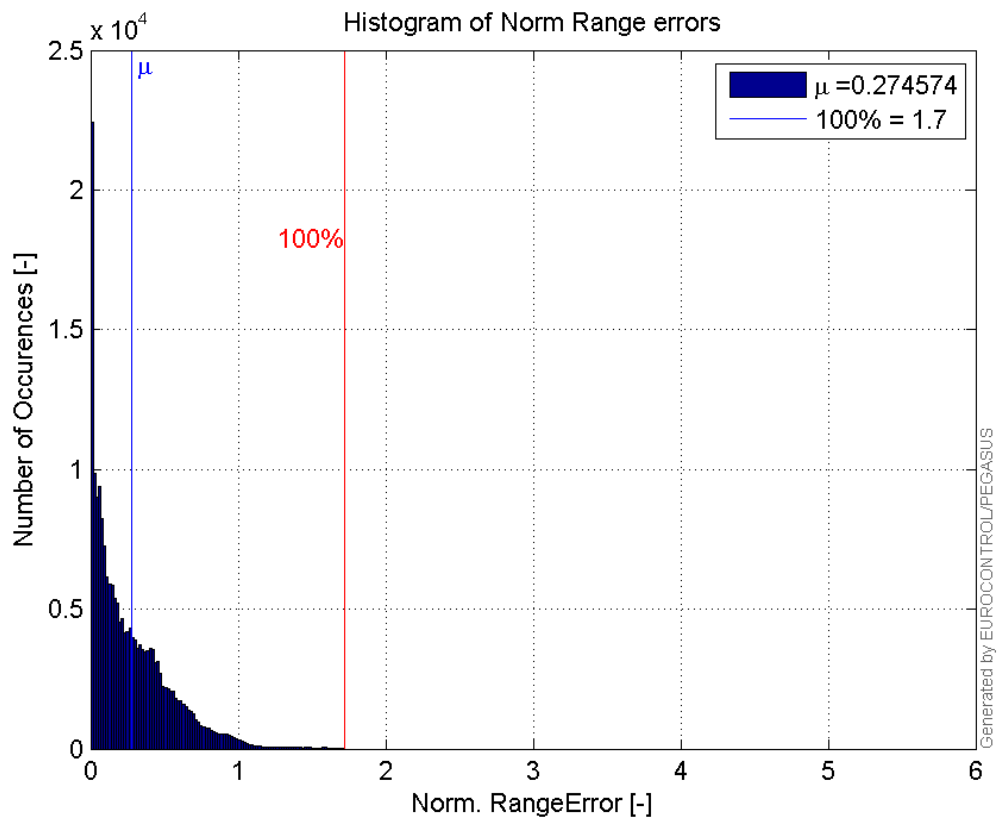
GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1869	217541	1	1.28875	-1.88977	1.46636
1869	221158	3	0.893137	-1.33734	1.49735
1869	201489	7	0.455994	-1.34429	2.94804
1869	210884	8	1.48759	-2.38274	1.60174
1869	217405	11	1.06358	-1.62952	1.53212
1869	205691	13	0.49171	2.53986	5.16536
1869	207277	14	0.60857	2.36832	3.89161
1869	209457	15	0.128926	0.983591	7.62913
1869	200659	16	1.17158	-1.82875	1.56093
1869	221158	17	1.27947	-2.36345	1.8472
1869	200301	18	0.80524	1.48588	1.84526
1869	217494	19	1.57524	-2.4332	1.54465
1869	201776	20	0.732488	-2.32608	3.17559
1869	200920	21	0.99935	-1.83394	1.83513
1869	210750	22	0.979096	-1.72447	1.76128
1869	220167	23	1.72233	4.05541	2.35461
1869	214384	24	0.18375	-2.23661	12.1721
1869	200661	26	0.807421	-1.54762	1.91674
1869	203439	27	1.22094	-2.05237	1.68097

1869	217495	28	1.01223	-2.556	2.52513
1869	203364	29	0.0945448	0.755135	7.98705
1869	220427	31	0.0753413	1.37374	18.2336
1869	217560	32	1.38742	-1.92902	1.39037

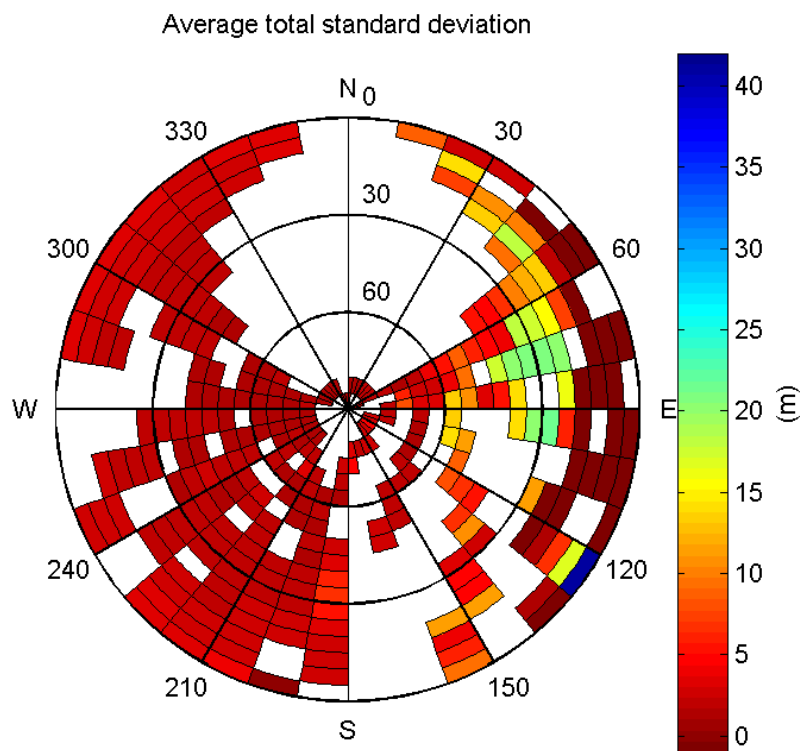
Normalised Range errors (median):

Range errors:

**CDF normalised range errors:****Histogram of Norm Range errors:**

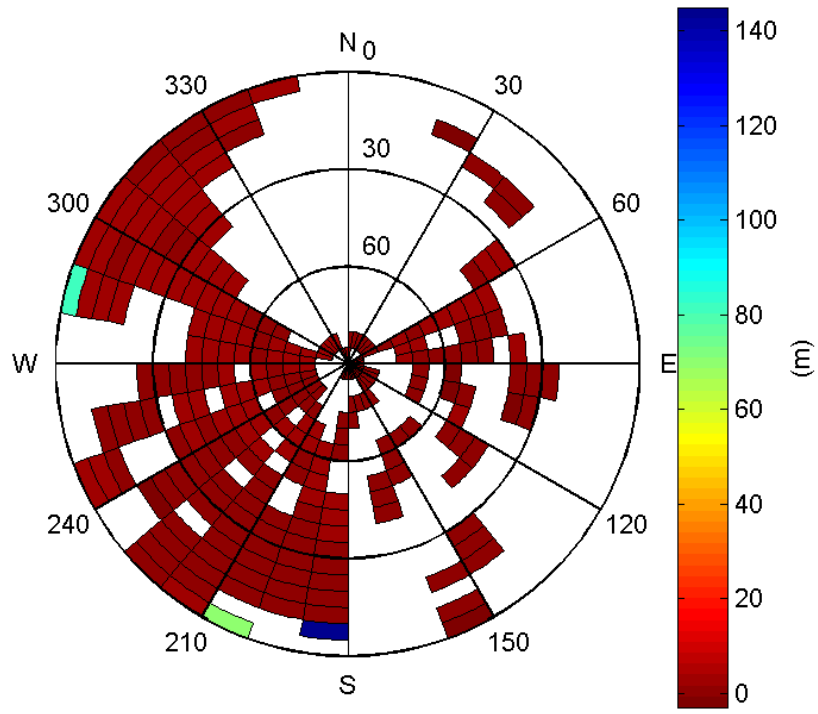


Sigma Sky Plot:



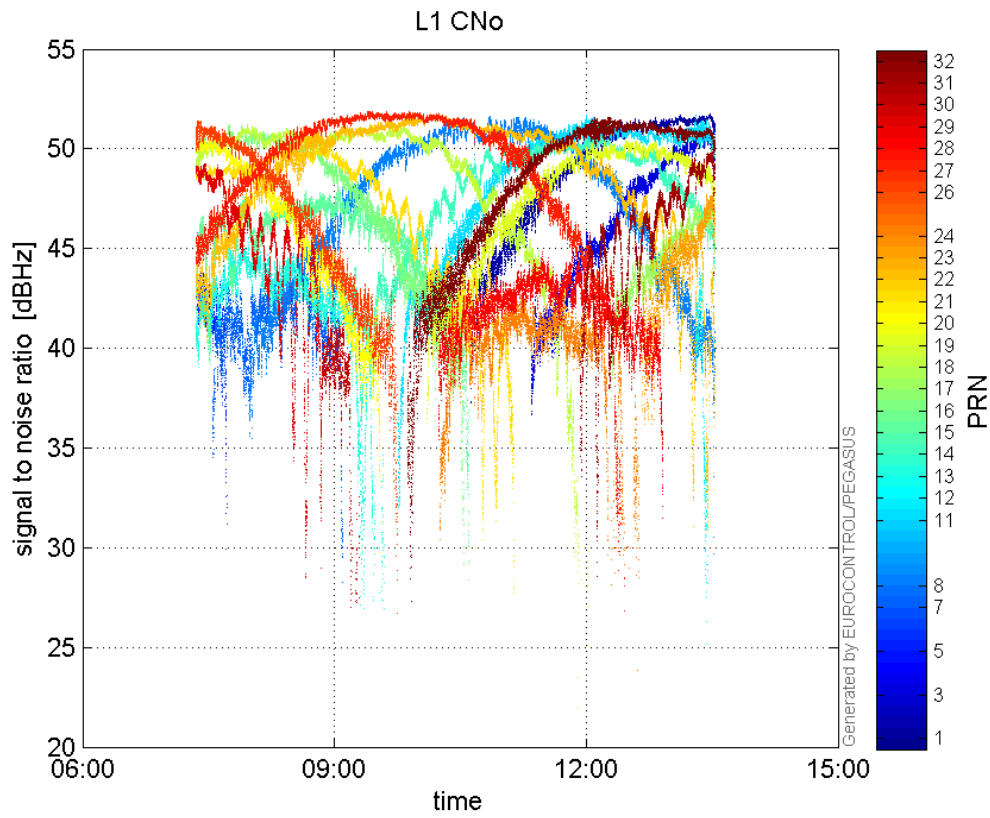
Norm Error Sky Plot:

Maximum Range Error

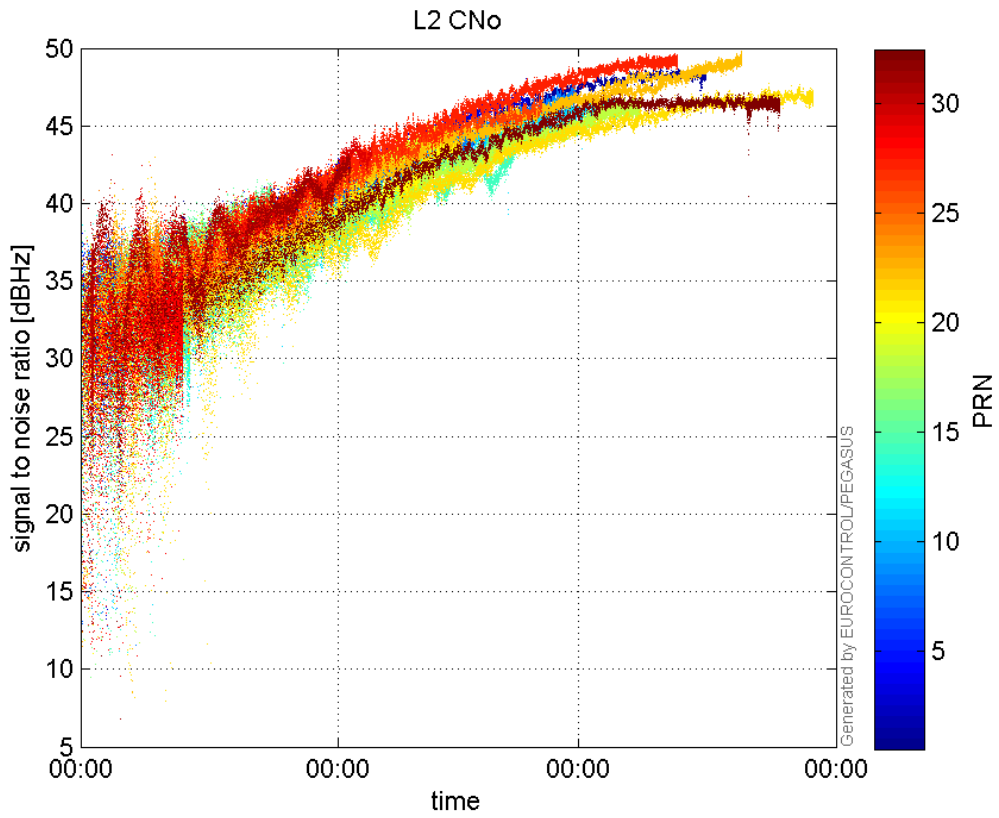


signal quality

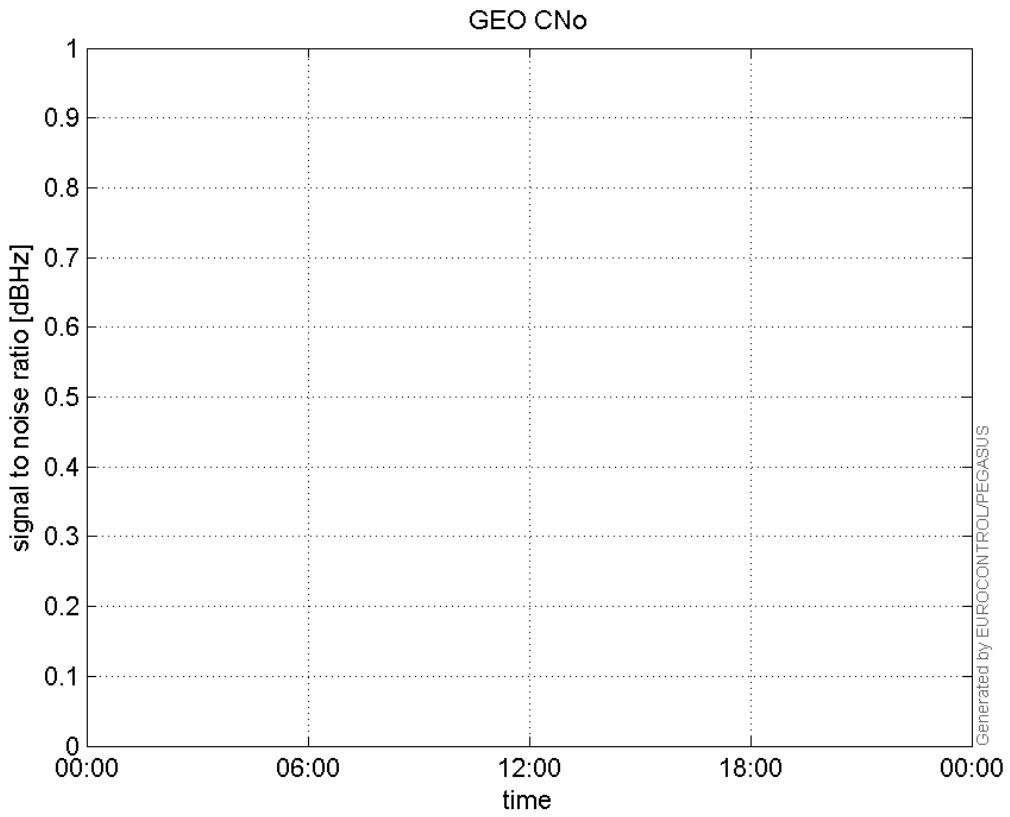
L1 CNo:



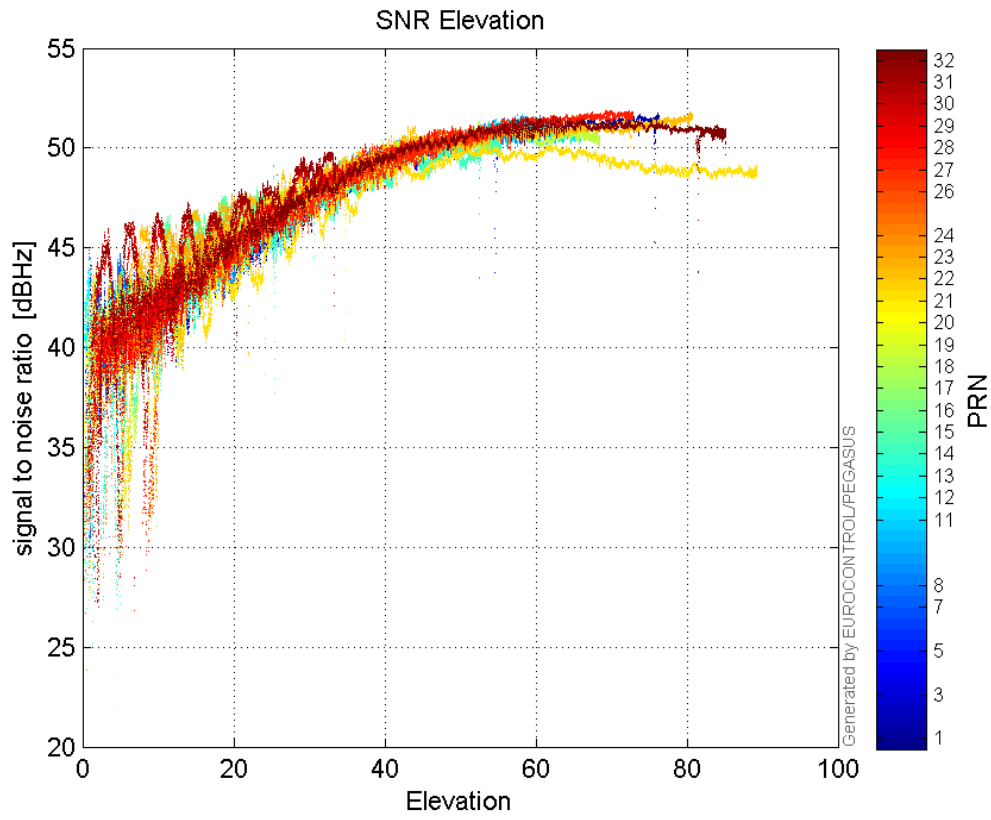
L2 CNo:



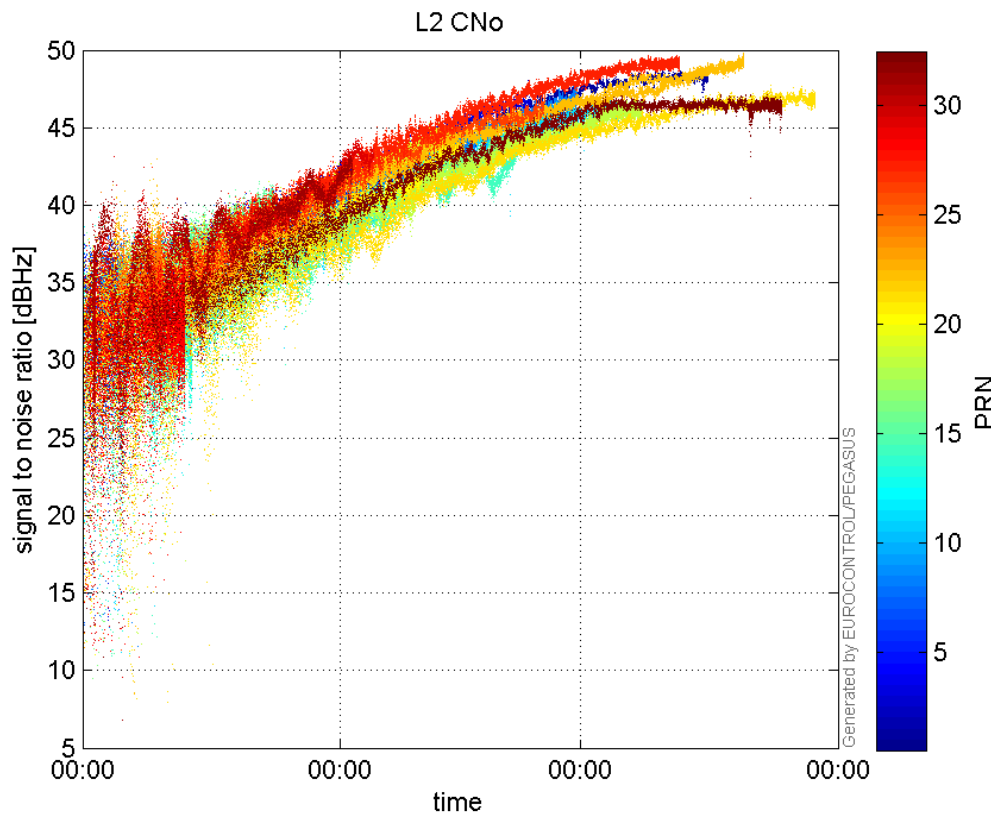
GEO CNo:



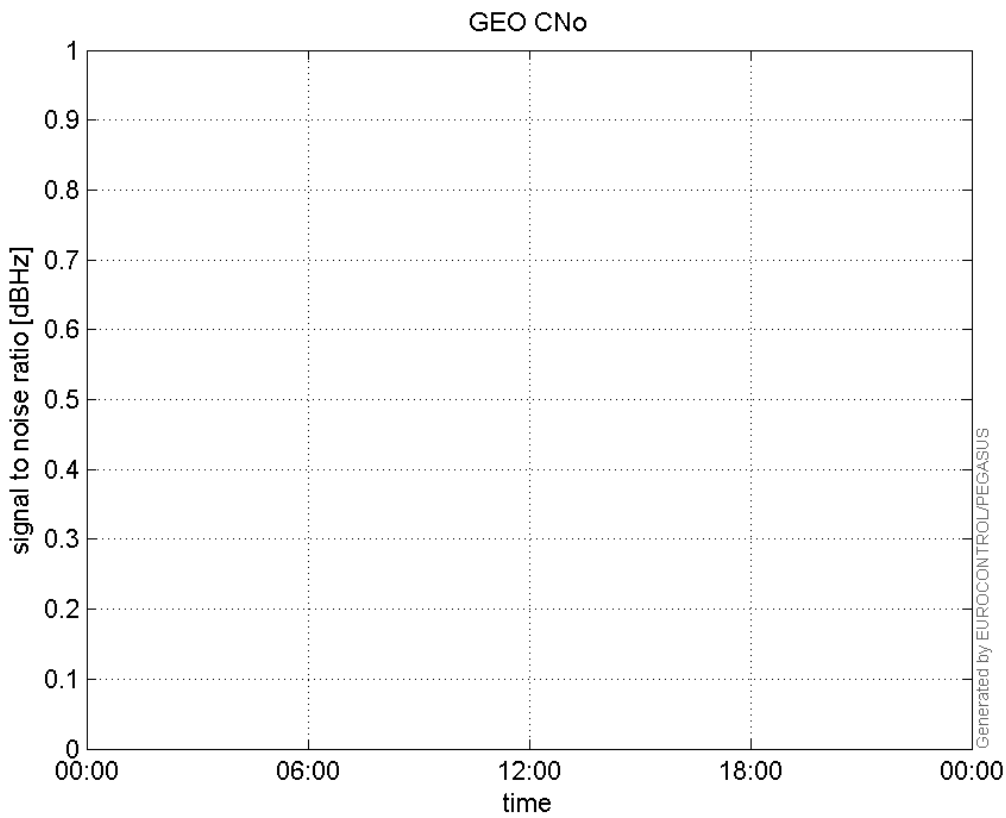
SNR Elevation:



L2 CNo:

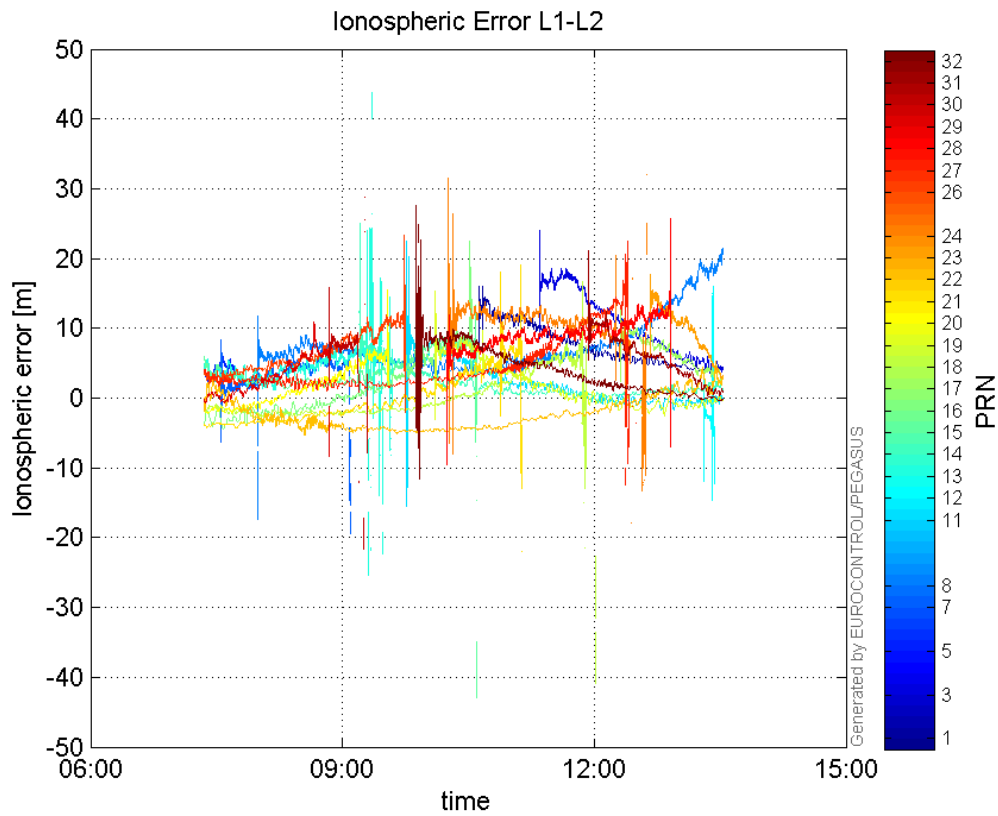


GEO CNo:



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_03_123EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_03_123EGNOS/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	123
gnss_mode	settings	sbas

results

Name	Section	Value
init_lat	results	50.439
init_lon	results	30.4297
init_alt	results	228.6625
mi_numbers	results	0

Position Domain

start: 07:21:01 03.11.2015 (week: 1869 sec: 199261)

end: 13:31:51 03.11.2015 (week: 1869 sec: 221511)

duration: 06:10:51 ..

quality

valid samples 21889

total samples 22250

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 nothing

extremes :

	Epoch	HPE	HPL	HPE/HPL	VPE	VPL	VPE/VPL
max normHor	210758	1.7631	12.7057	0.138764	2.43937	16.4077	0.148672

max normVer	219852	1.65967	15.9578	0.104004	3.11073	14.5731	0.213457
max HPE	210593	2.66027	25.1979	0.105575	2.50811	20.0152	0.12531
max VPE	213369	1.48327	19.8413	0.0747569	4.15292	40.4841	0.102582
min HPL	203228	0.646416	9.19465	0.0703035	0.488966	16.82	0.0290705
min VPL	219533	1.26863	12.2637	0.103446	1.9954	13.0254	0.153193

APV-I discontinuity events :

#	Epoch	duration	stable period
1	210109	256	10487
2	210367	3	2
3	210372	3	2
4	210377	1	2
5	210379	2	1
6	210483	2	102

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	210109	256	10487
2	210367	3	2
3	210372	3	2
4	210377	1	2
5	210379	2	1
6	210483	2	102
7	213051	945	2566

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	210109	256	10487
2	210367	3	2
3	210372	3	2
4	210377	1	2
5	210379	2	1
6	210483	2	102
7	213051	945	2566

First Glance analysis

Duration	22251
Number of Samples	22250
Number of invalid sample	361
Number of no position solution samples	0
Number of missing sample	1
Logging Loss	0.0044942
Processing Loss	1.6225
Number of Misleading Information	0
Data gaps	1
Discontinuities	1

Number of Samples :

--	--	--	--	--

Valid	APV-1	LPV-200	CAT-1	APV-35m
21889	21622	20677	0	20677

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.71591	1.71842	1.72884	NaN	1.72884
HPEscale 95%	NaN	4.14328	4.1593	NaN	4.1593
VPE 95%	2.7683	2.69115	2.61727	NaN	2.61727
VPEscale 95%	NaN	6.92736	4.89787	NaN	4.89787

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	1	0.987802	0.94463	0	0.94463
measurements	0.983775	0.971775	0.929303	0	0.929303
Operational	0.983731	0.971732	0.929262	0	0.929262

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	--	6	7	--	7
Long	--	1	2	--	2
Independent	--	1	2	--	2
P(disc.)	NaN	0.000693738	0.00145089	NaN	0.00145089
P(slide)	NaN	0.00171122	0.00251487	NaN	0.00251487

Integrity events :

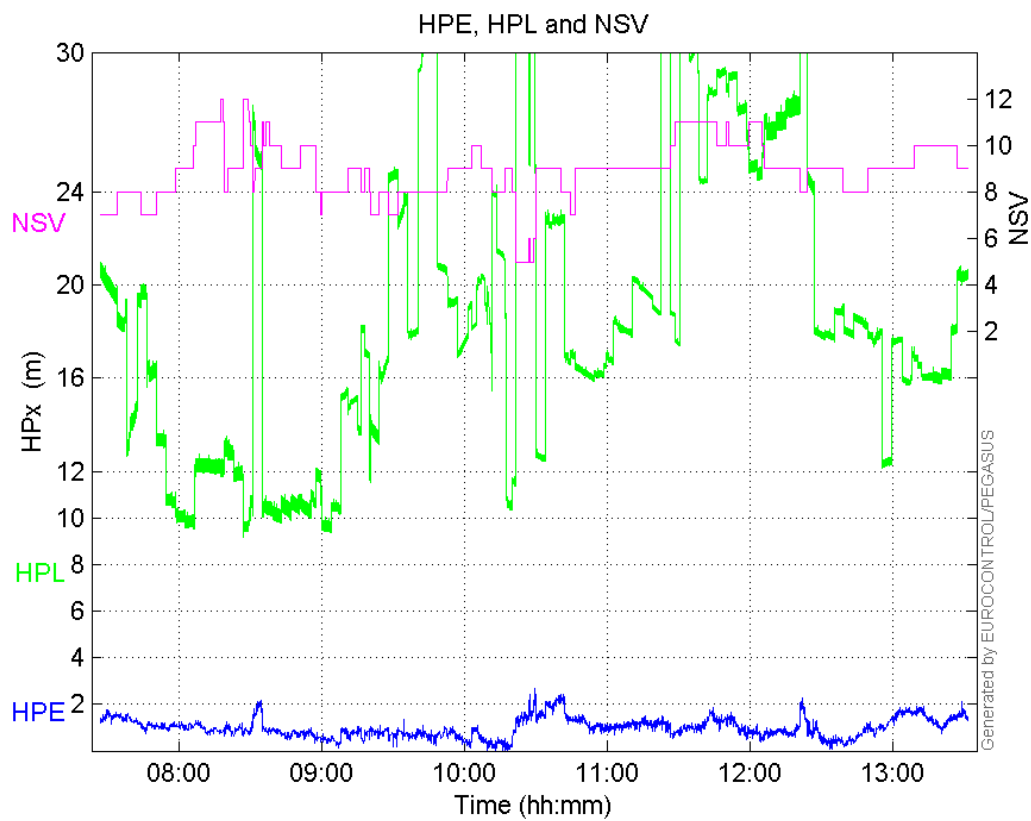
	MI	HMI APV-1	HMI LPV-200	HMI CAT-1	HMI APV-35m
Total	0	0	0	0	0
Horizontal	0	0	0	0	0
Vertical	0	0	0	0	0

Performance Summary :

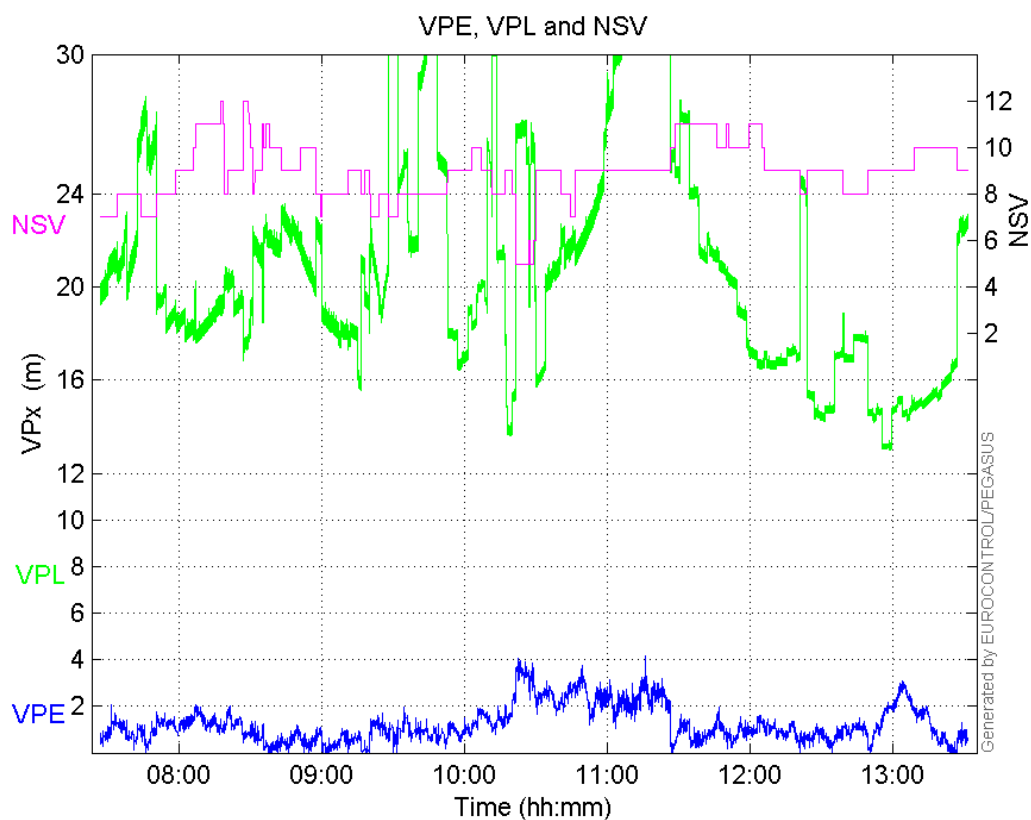
	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	21889	21622	20677	0	20677
SIS Availability	1	0.987802	0.94463	0	0.94463
Local Availability	0.983775	0.971775	0.929303	0	0.929303
Operational Availability	0.983731	0.971732	0.929262	0	0.929262
HPE 95%	1.71591	1.71842	1.72884	NaN	1.72884
HPEscale 95%	NaN	4.14328	4.1593	NaN	4.1593
VPE 95%	2.7683	2.69115	2.61727	NaN	2.61727
VPEscale 95%	NaN	6.92736	4.89787	NaN	4.89787
All Discontinuity Events	--	6	7	--	7
Long Discontinuity Events	--	1	2	--	2
Independent Discontinuity Events	--	1	2	--	2
P(discontinuity)	NaN	0.000693738	0.00145089	NaN	0.00145089
P(sliding window)	NaN	0.00171122	0.00251487	NaN	0.00251487
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:

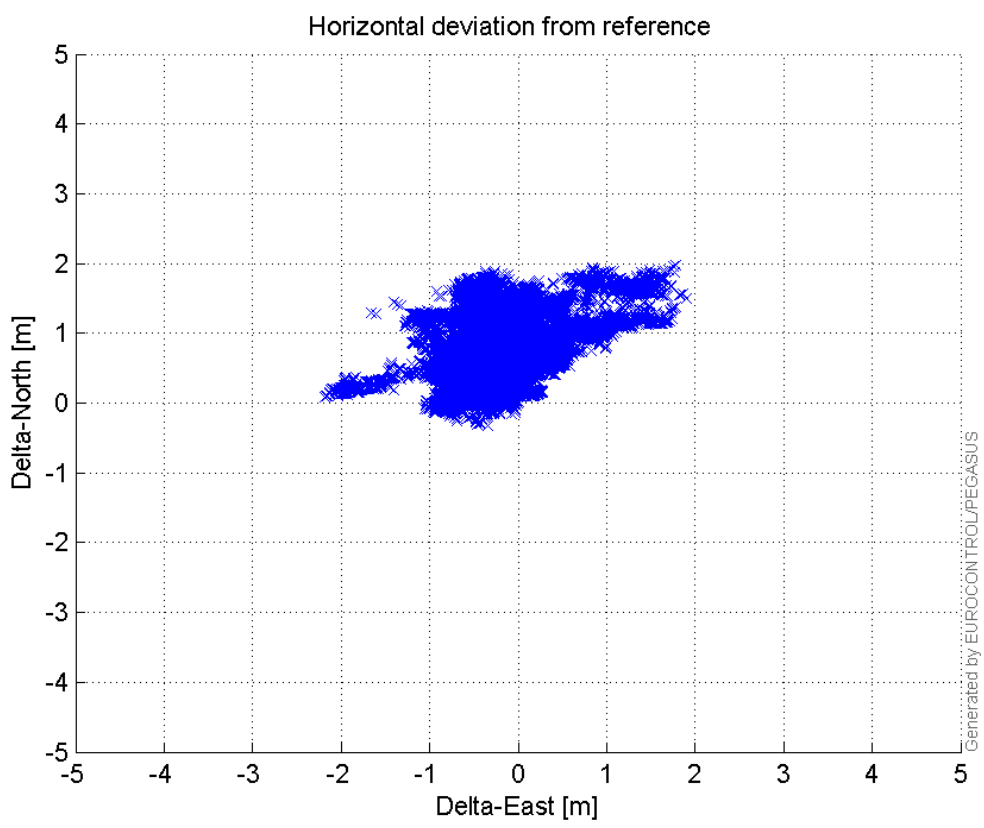


VPE, VPL and NSV:



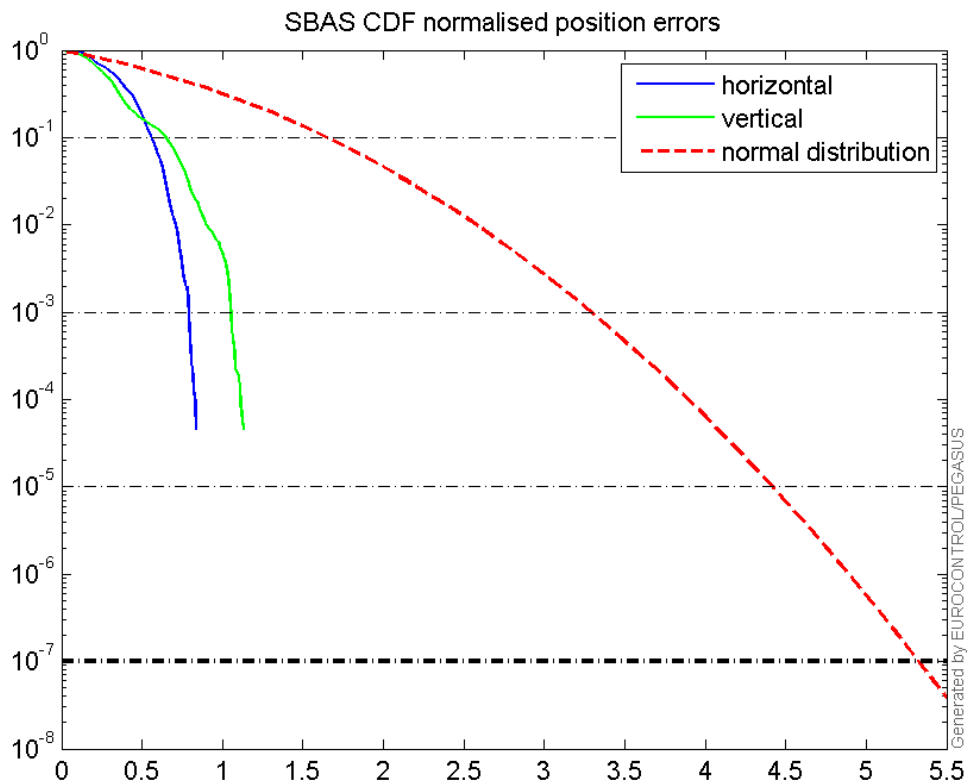
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

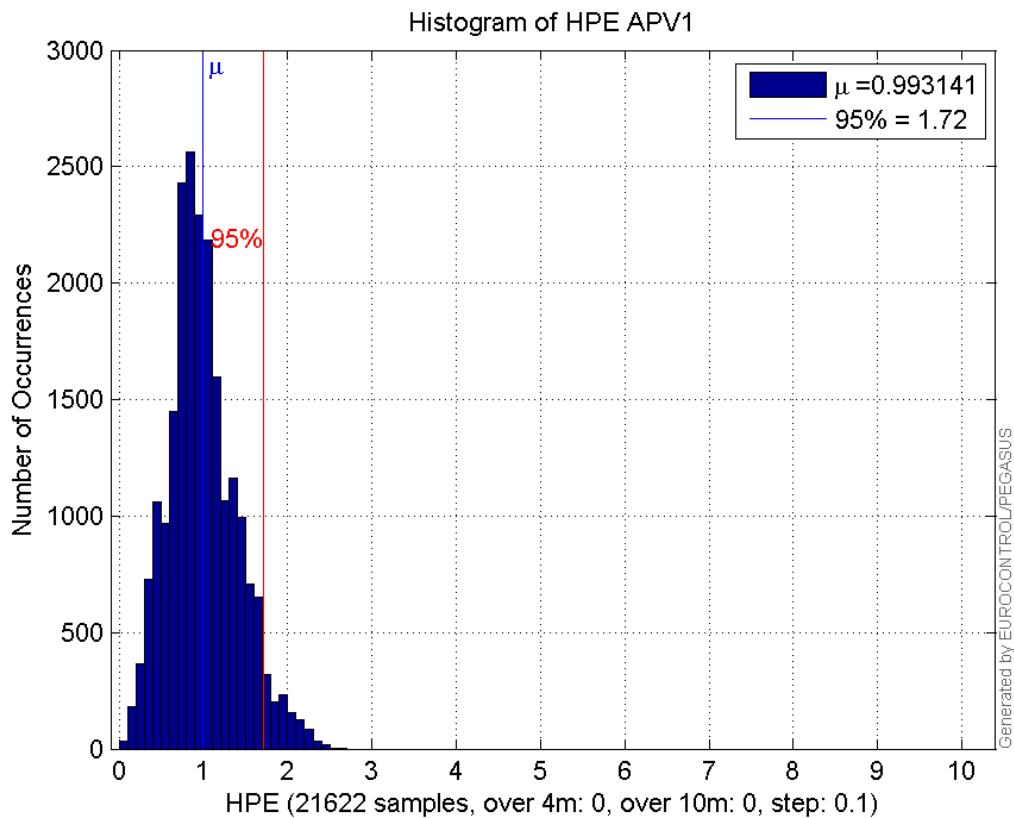
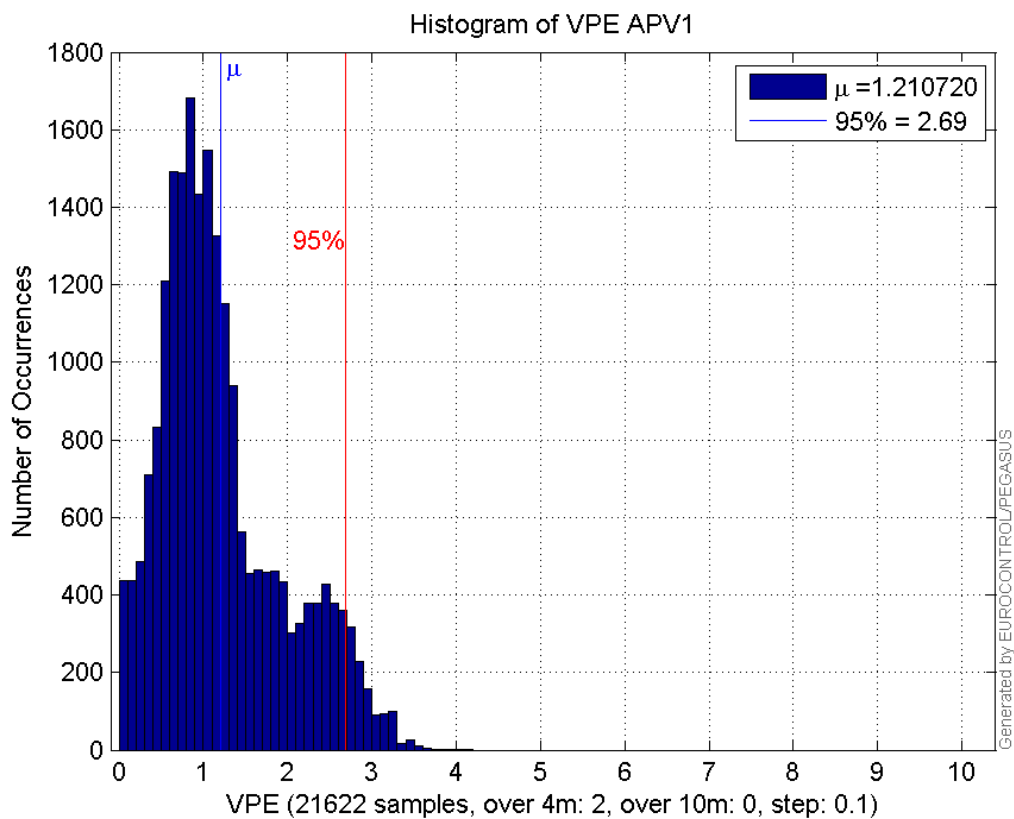
number	21622
sum	21473.691
sum2	24955.157
prctile95	1.718424
prctile99	2.1456873
number	21622
sum	26178.192
sum2	43409.338
prctile95	2.6911516
prctile99	3.1419667
number	21622
sum	407864.7
sum2	8618405.7
prctile95	30.21622
prctile99	36.42074
number	21622
sum	459275.3
sum2	10495181
prctile95	32.05496
prctile99	41.815528
number	21622
sum	1244.6806
sum2	86.797227
prctile95	0.10358198
prctile99	0.11832958
number	21622
sum	1276.948
sum2	105.3063

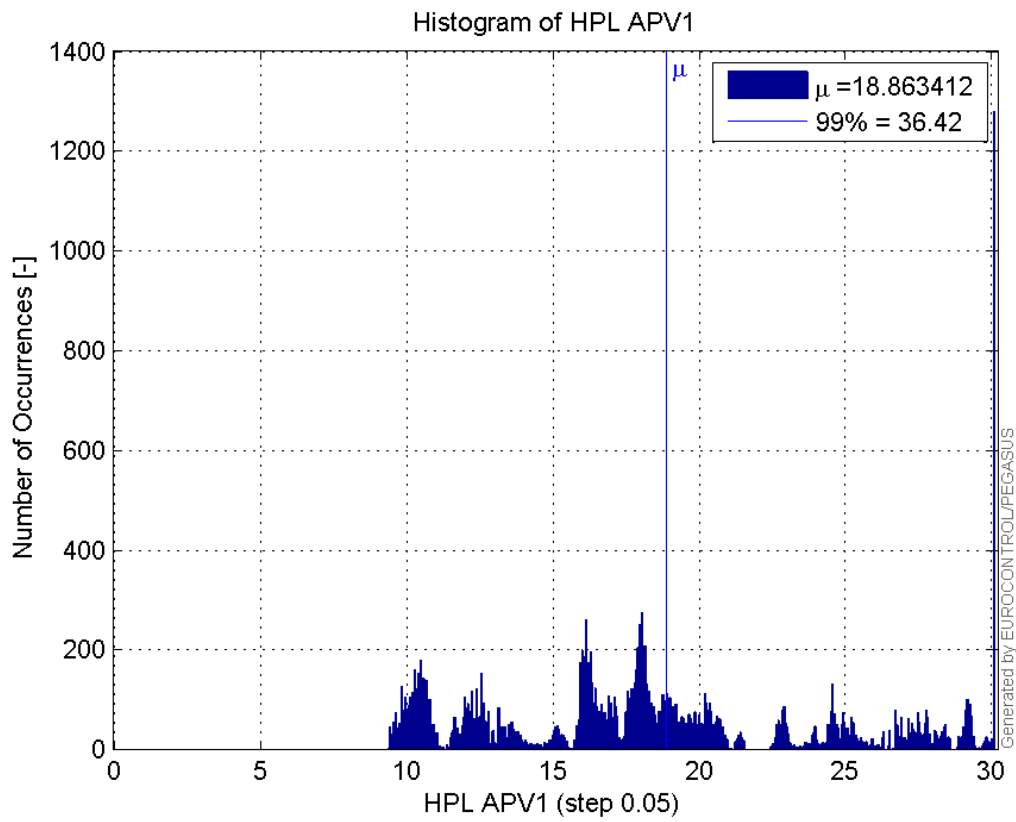
prctile95 0.1385472
prctile99 0.16938813
number 20677
sum 20384.794
sum2 23688.517
prctile95 1.7288402
prctile99 2.152773
number 20677
sum 23854.221
sum2 37556.045
prctile95 2.6172658
prctile99 3.1271087
number 20677
sum 385759.22
sum2 8057388.5
prctile95 30.041195
prctile99 36.276364
number 20677
sum 421133.49
sum2 8953979.3
prctile95 29.966365
prctile99 31.839433
number 20677
sum 1194.7876
sum2 84.00205
prctile95 0.10398252
prctile99 0.11870114
number 20677
sum 1219.2584
sum2 101.69028
prctile95 0.13993915
prctile99 0.1709278

Error and XPL Statistics :

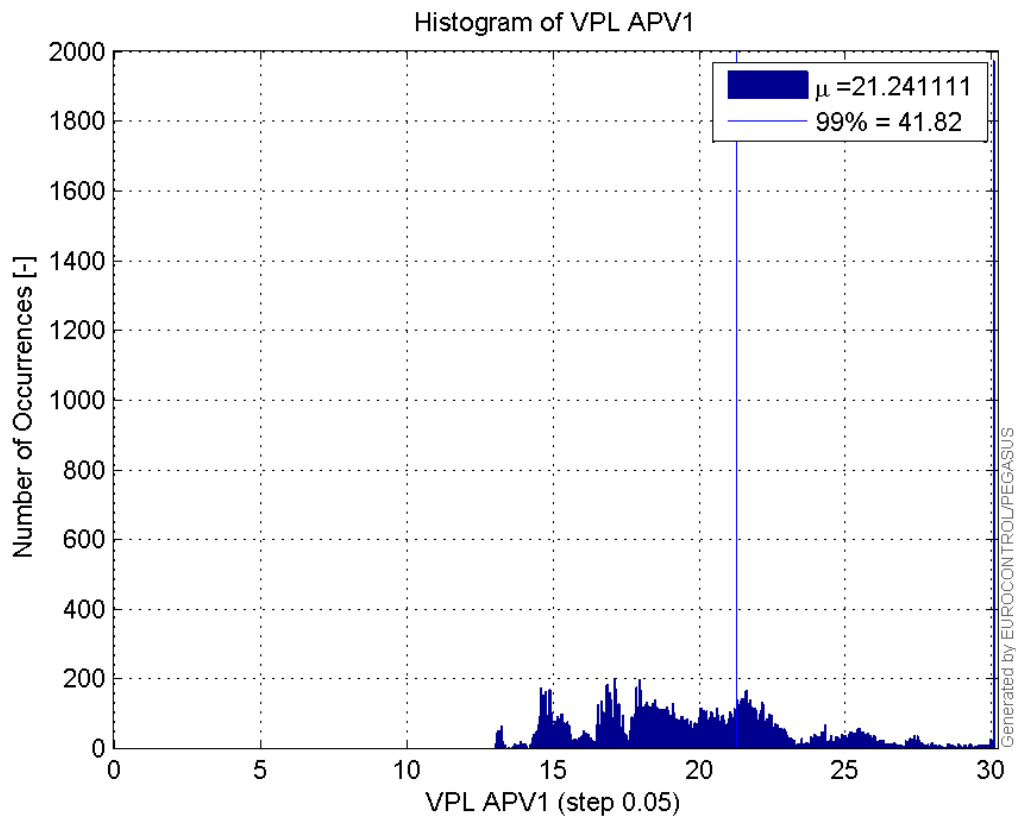
	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	0.993141	0.409677	0.947598	1.71842	2.14569	1.07432
HPL	18.8634	6.53972	17.9494	30.2162	36.4207	19.9648
VPE	1.21072	0.73609	1.03883	2.69115	3.14197	1.41691
VPL	21.2411	5.84897	20.0895	32.055	41.8155	22.0317

Histogram of HPE APV1:

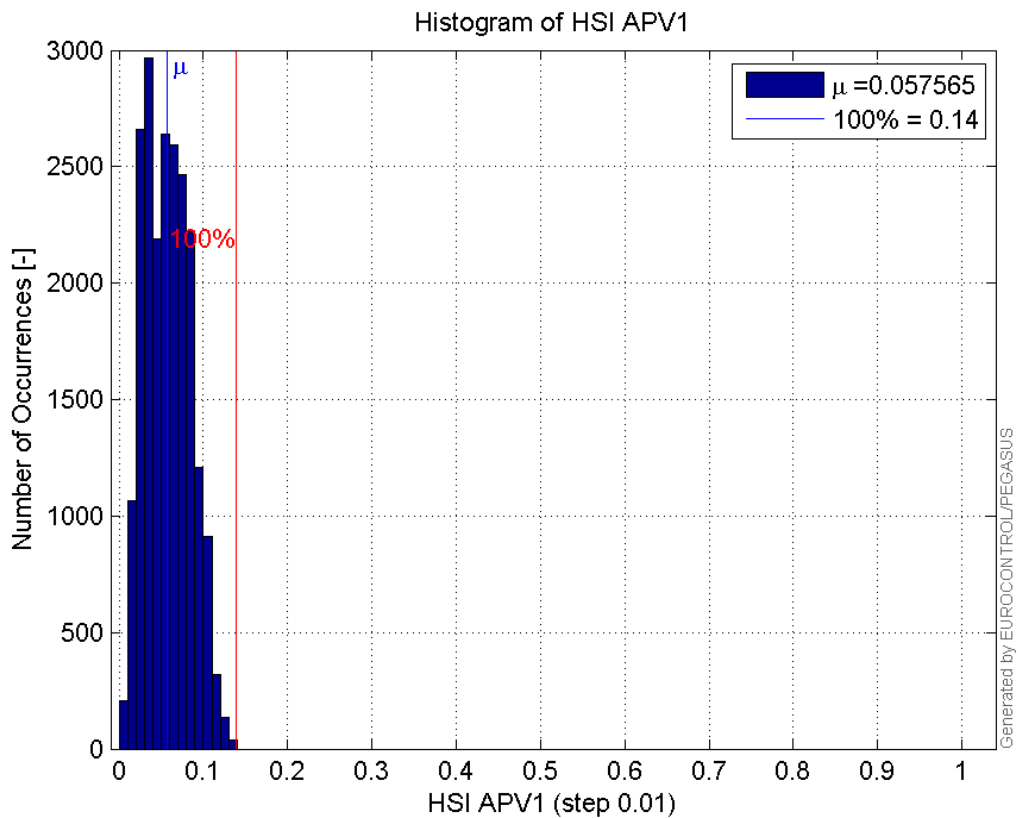
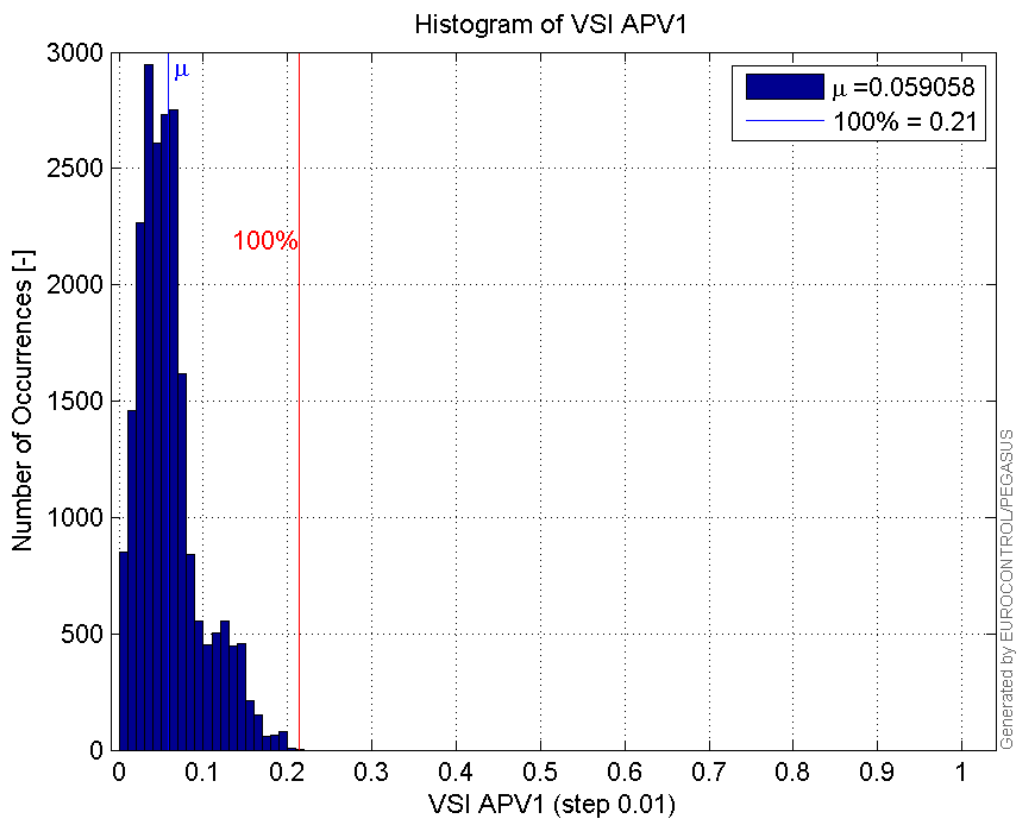
**Histogram of VPE APV1:****Histogram of HPL APV1:**

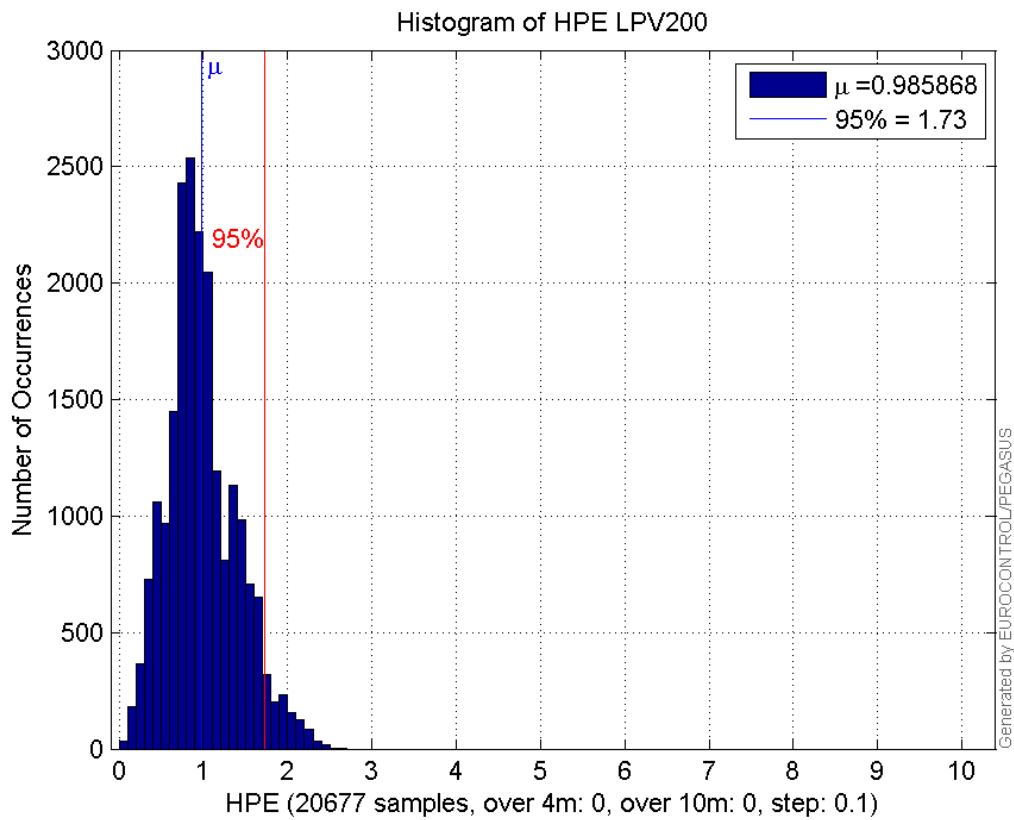


Histogram of VPL APV1:

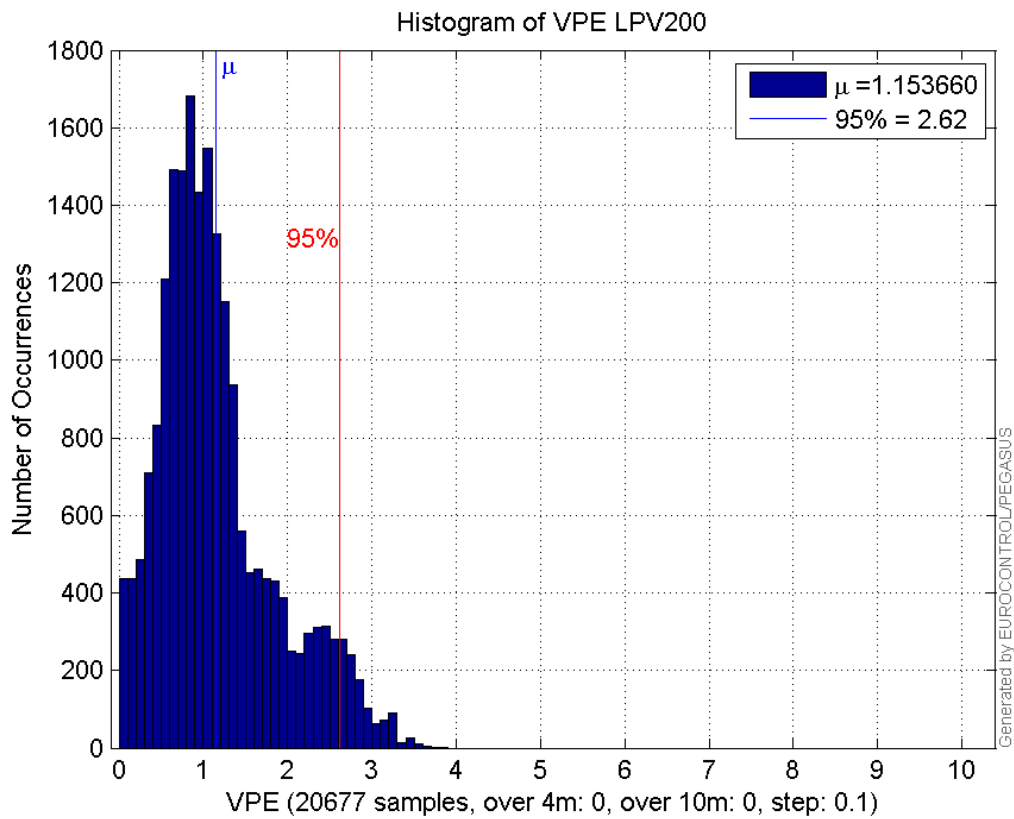


Histogram of HSI APV1:

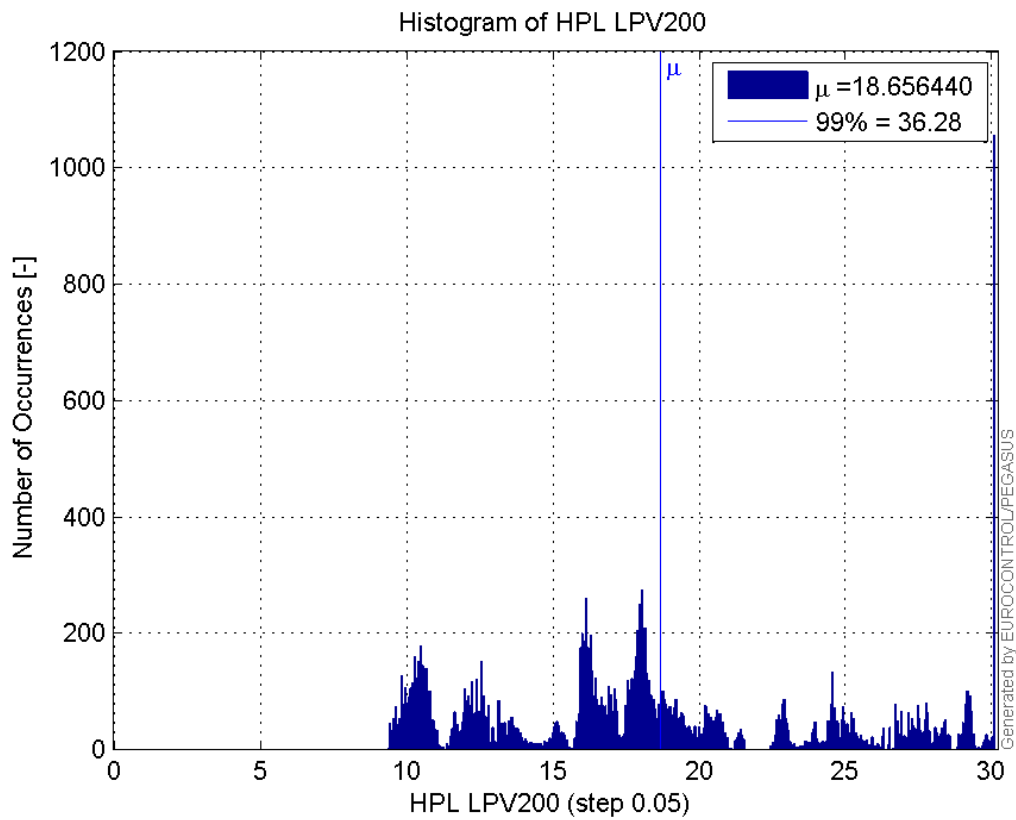
**Histogram of VSI APV1:****Histogram of HPE LPV200:**



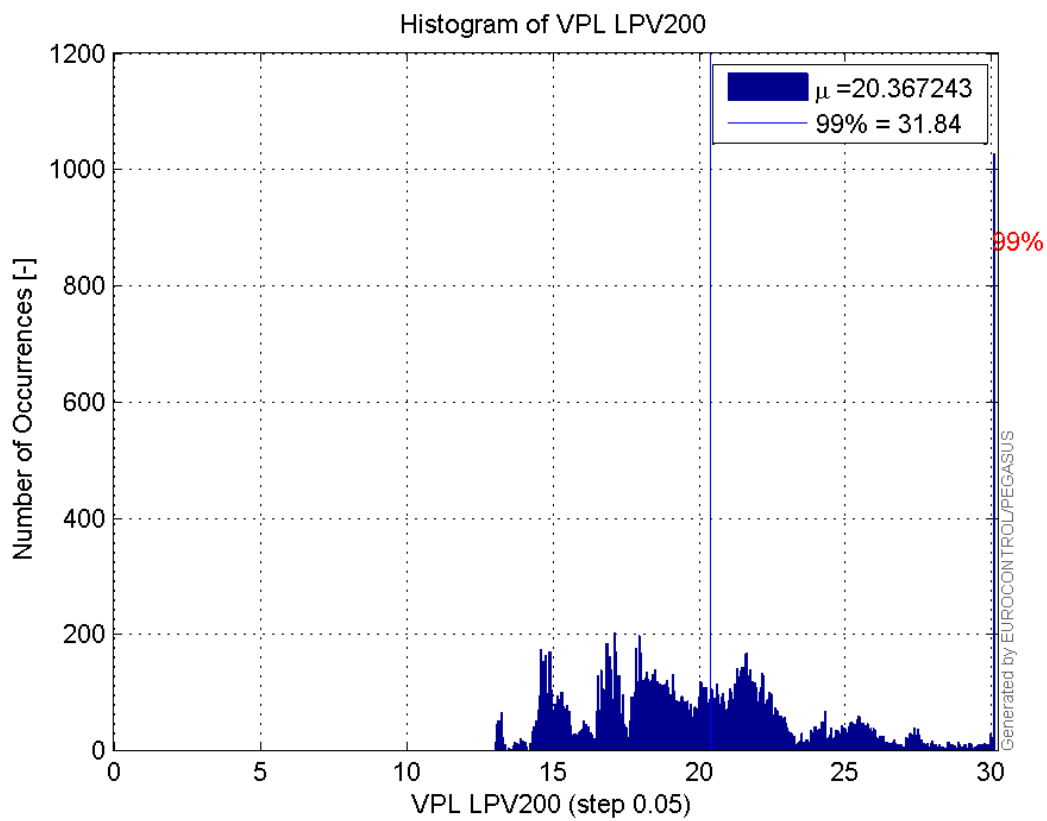
Histogram of VPE LPV200:



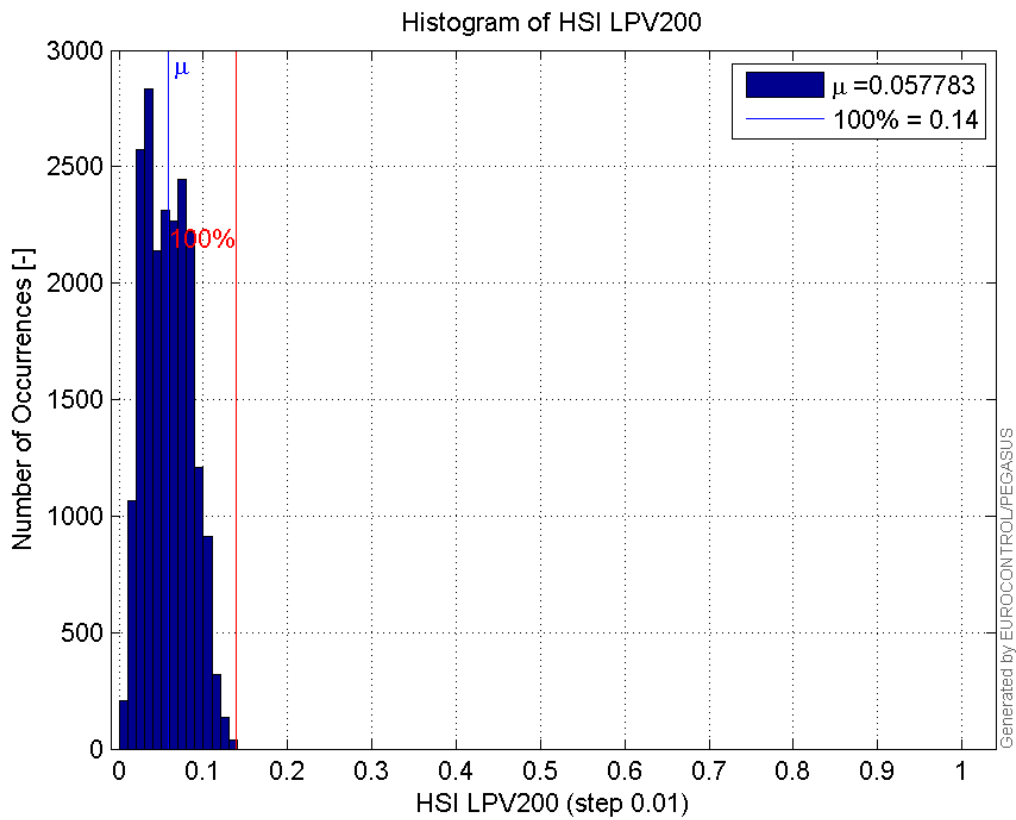
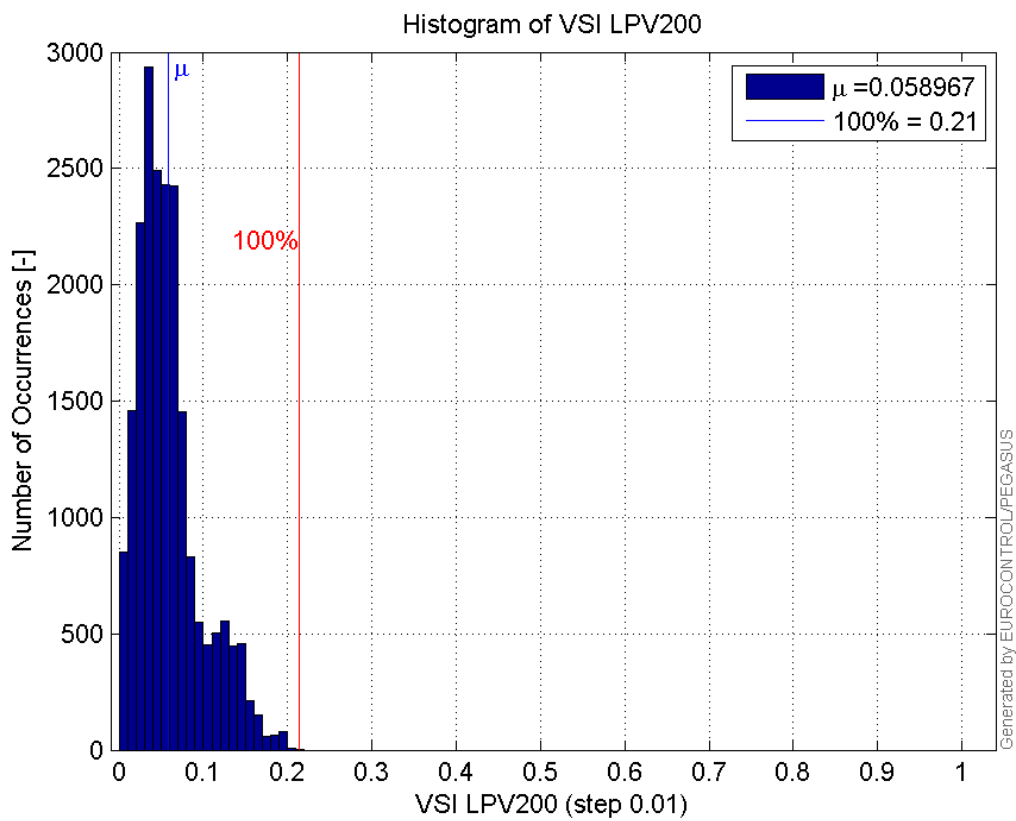
Histogram of HPL LPV200:

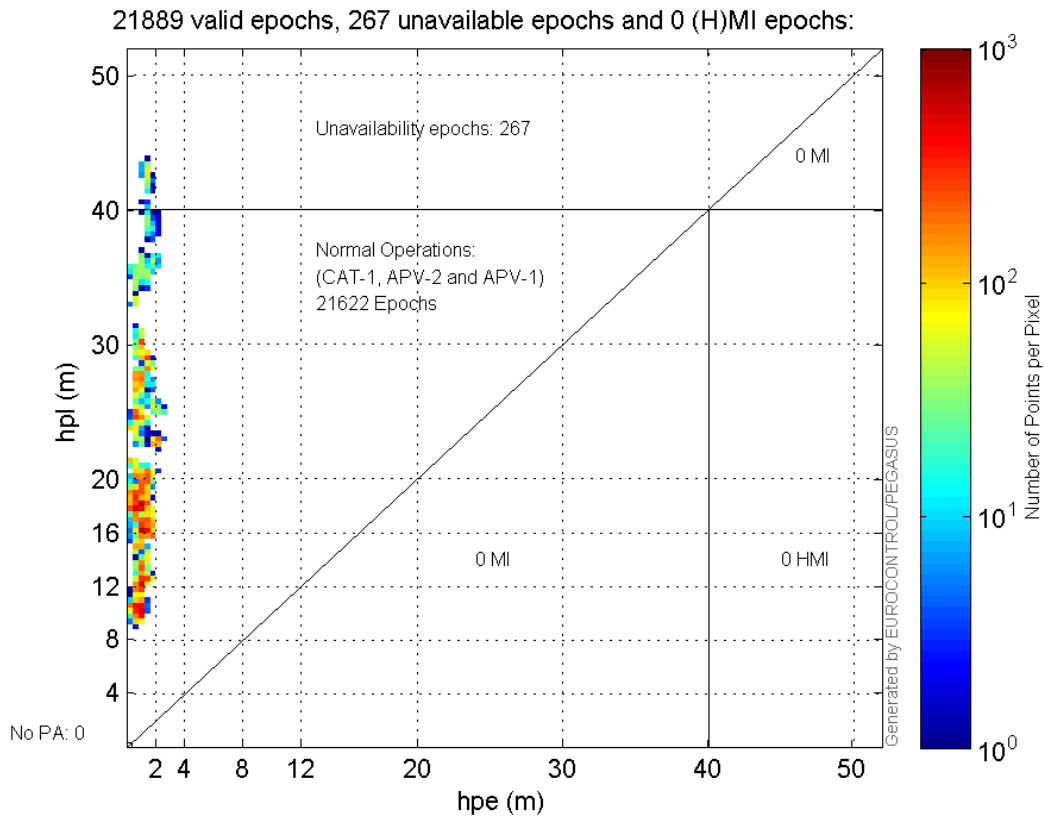


Histogram of VPL LPV200:

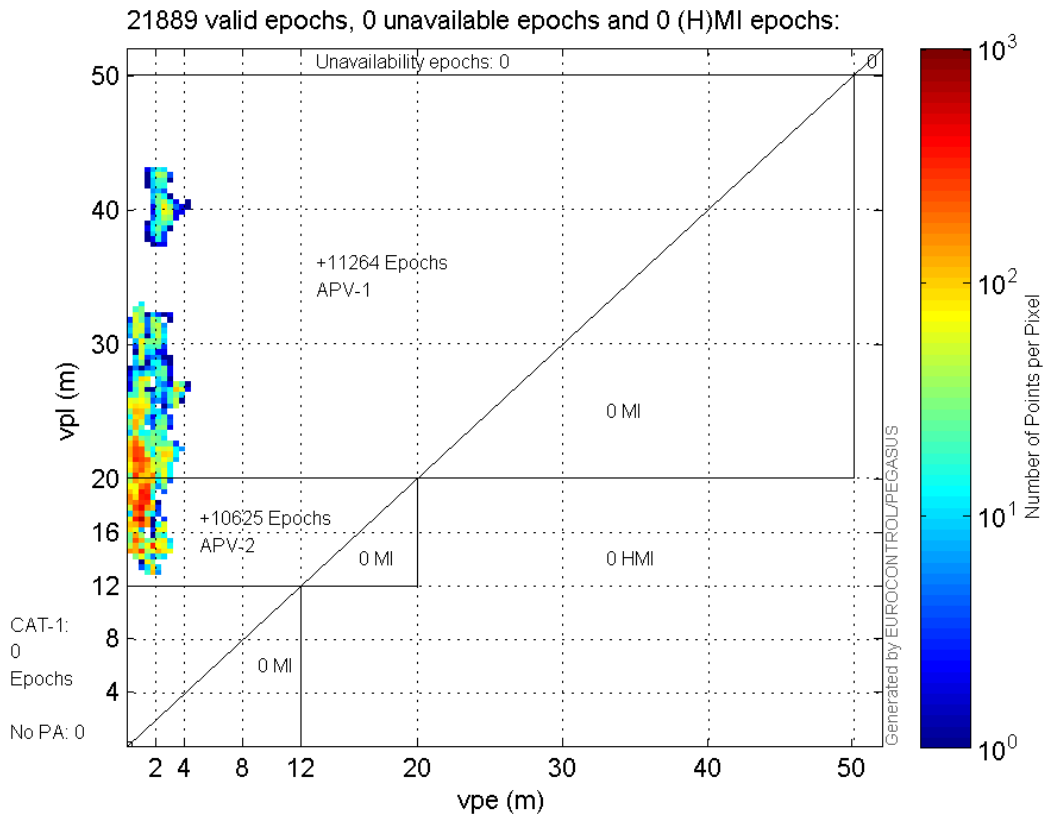


Histogram of HSI LPV200:

**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_03_123EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDateGob/job/2015_11_03_123EGNOS/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	123
gnss_mode	settings	sbas

results

Name	Section	Value
init_lat	results	50.439
init_lon	results	30.4297
init_alt	results	228.6625
mi_numbers	results	0

SBAS Messages

start: 07:21:1.129 03.11.2015 (week: 1869 sec: 199261.129)
end: 13:31:51.129 03.11.2015 (week: 1869 sec: 221511.129)
duration: 06:10:50 ..

quality

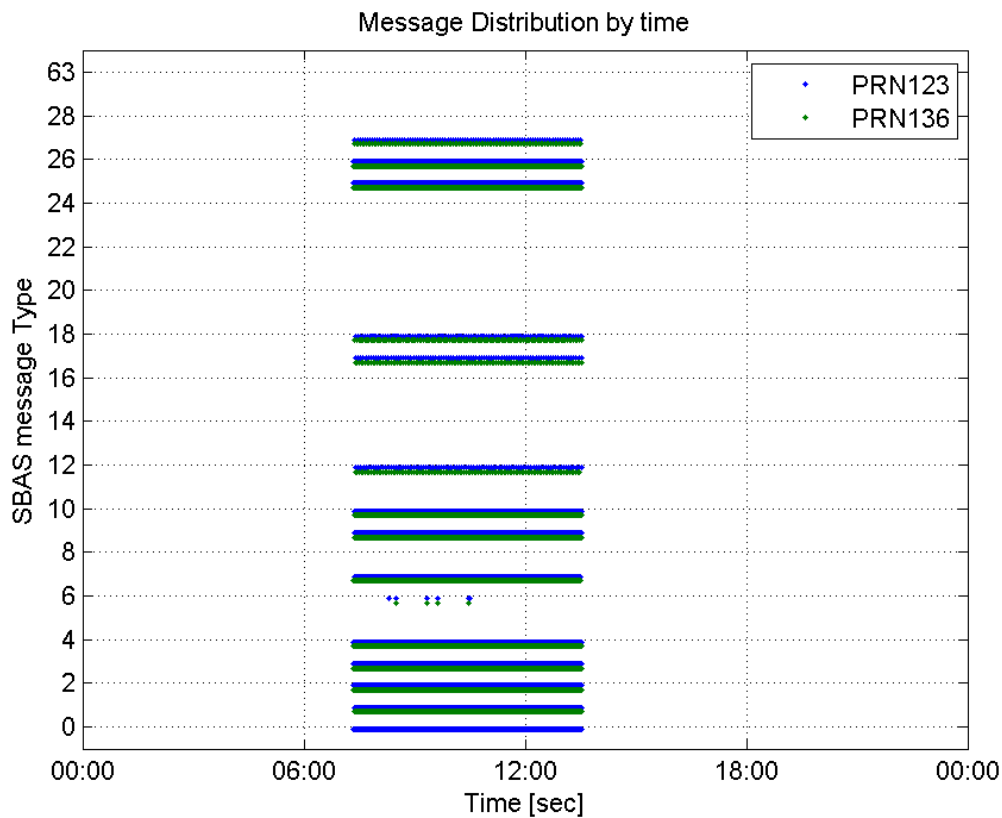
valid samples 44500
total samples 44500
number of SBAS PRNs 2

SBAS SIS Overview

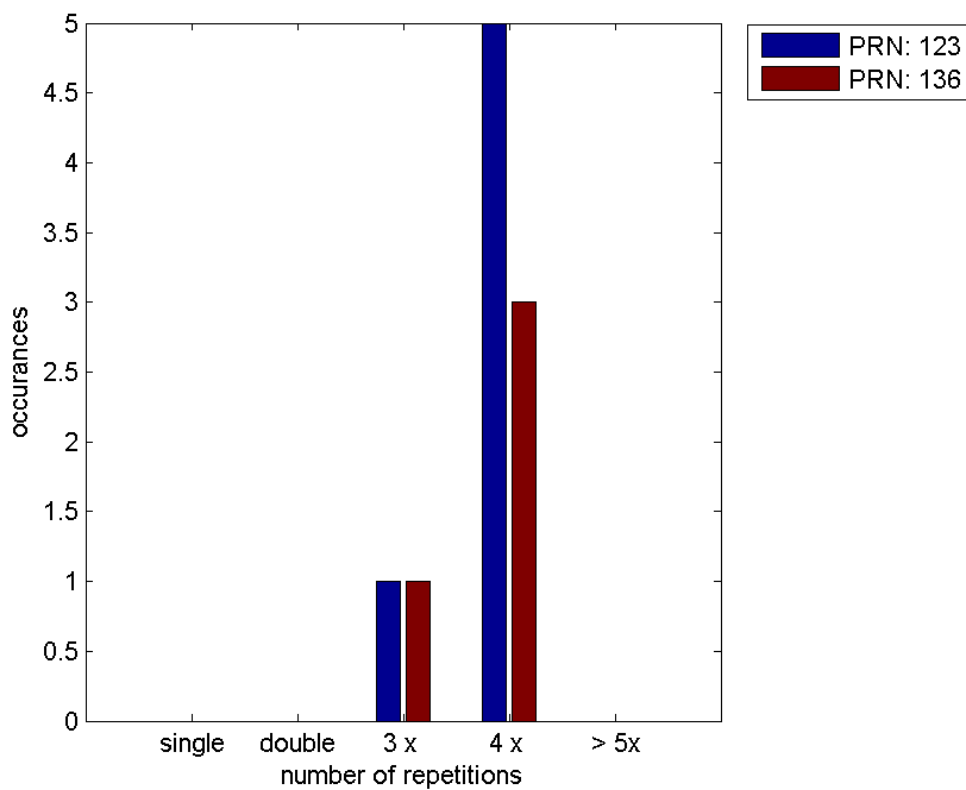
Message Type 6 repetitions :

	single	double	3 x	4 x	> 5x
PRN 123	0	0	1	5	0
PRN 136	0	0	1	3	0

Message Distribution by time:



Message Type 6 repetitions:



SBAS SIS Analysis

PRN 123

Broadcast SBAS Messages :



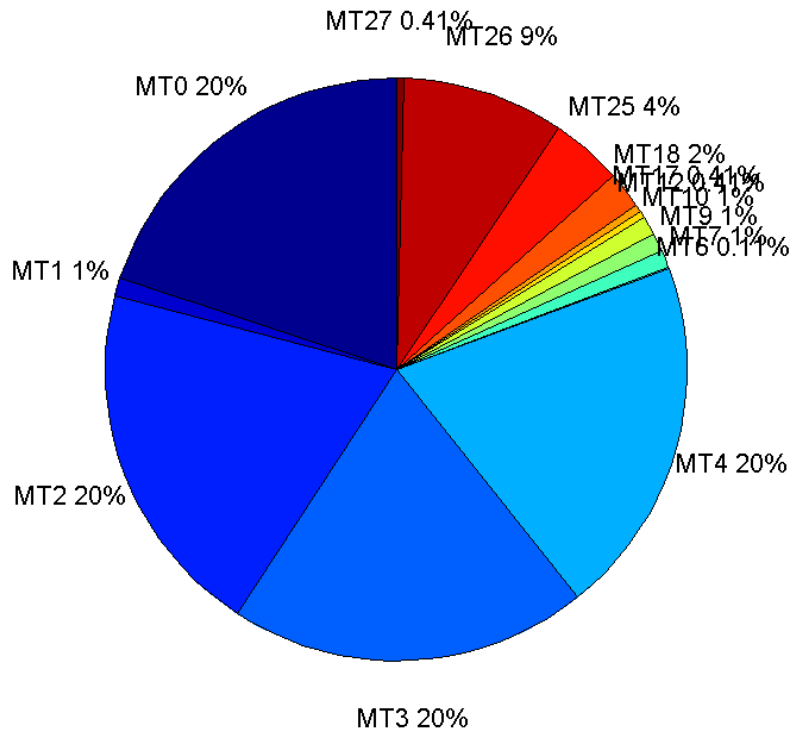
	number of messages	%
MT 0	4430	19.9101
MT 1	224	1.00674
MT 2	4429	19.9056
MT 3	4428	19.9011
MT 4	4428	19.9011
MT 5	0	0
MT 6	24	0.107865
MT 7	223	1.00225
MT 9	224	1.00674
MT 10	224	1.00674
MT 12	91	0.408989
MT 17	91	0.408989
MT 18	455	2.04494
MT 24	0	0
MT 25	888	3.99101
MT 26	2000	8.98876
MT 27	91	0.408989
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22250	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	5	10	5.0228	4	0	0
MT 1	95	102	99.5112	0	0	0
MT 2	5	10	5.02439	6	0	0
MT 3	5	9	5.02485	6	0	0
MT 4	5	10	5.02485	6	0	0
MT 5	--	--	--	--	--	--
MT 6	1	3047	340.435	5	5	5
MT 7	94	101	99.4189	0	0	0
MT 9	95	101	99.3991	0	0	0
MT 10	95	102	99.5561	0	0	0
MT 12	235	251	244.722	90	0	77
MT 17	230	252	244.722	0	0	0
MT 18	5	221	48.5705	0	0	0
MT 24	--	--	--	--	--	--
MT 25	3	75	25.0406	0	0	0
MT 26	4	57	11.1286	0	0	0
MT 27	232	251	244.678	0	0	0
MT						

28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 123:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

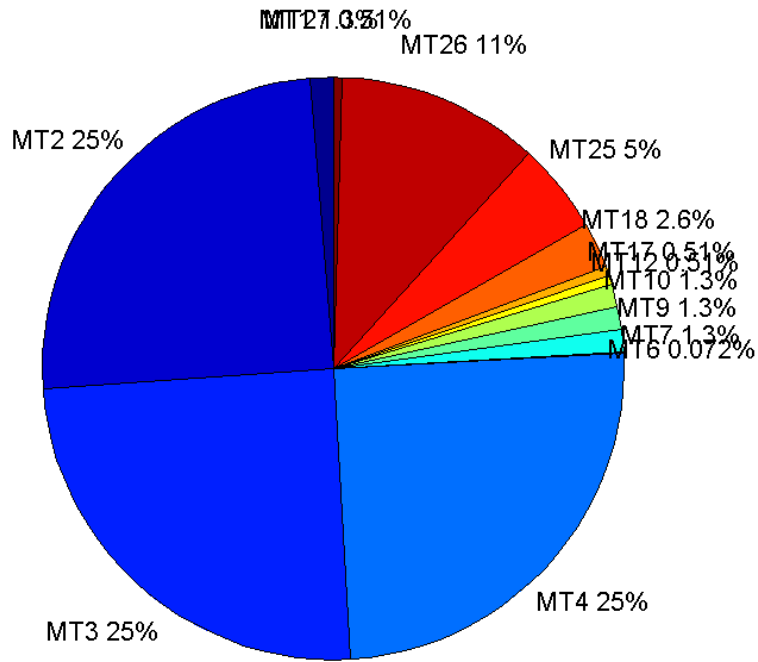
	number of messages	%
MT 0	0	0
MT 1	280	1.25843
MT 2	5529	24.8494
MT 3	5531	24.8584
MT 4	5531	24.8584
MT 5	0	0
MT 6	16	0.0719101
MT 7	280	1.25843
MT 9	280	1.25843
MT 10	280	1.25843
MT 12	113	0.507865
MT 17	114	0.51236
MT 18	570	2.5618
MT 24	0	0
MT 25	1111	4.99326

MT 26	2501	11.2404
MT 27	114	0.51236
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22250	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	75	82	79.4803	0	0	0
MT 2	4	8	4.02388	5	0	0
MT 3	4	8	4.02315	4	0	0
MT 4	4	8	4.02333	4	0	0
MT 5	--	--	--	--	--	--
MT 6	1	3046	474.067	3	3	3
MT 7	75	81	79.4946	0	0	0
MT 9	76	81	79.509	0	0	0
MT 10	76	81	79.4803	0	0	0
MT 12	181	201	195.643	112	0	0
MT 17	185	201	195.637	0	0	0
MT 18	4	170	38.9139	0	0	0
MT 24	--	--	--	--	--	--
MT 25	2	49	20.0315	0	0	0
MT 26	1	52	8.8828	0	0	0
MT 27	185	201	195.628	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_03_123EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDateGob/job/2015_11_03_123EGNOS/02_Convertor/02_Convertor

Configuration

Name	Section	Value
Receiver	Configuration	Novatel OEM4
Leap_Seconds	Configuration	15
Correction_mode	Configuration	SBAS MODE 0
Dual_Frequency	Configuration	no