

Global View

site Laboratory satellite systems
 abbreviation NAU
 country Ukraine
 city Kiev
 comment
 program Pegasus
 version 4.8.2
 date 27/10/2015

SBAS Messages

start: 07:23:59.129 27.10.2015 (week: 1868 sec: 199439.129)
end: 13:34:4.129 27.10.2015 (week: 1868 sec: 221644.129)
duration: 06:10:05 ..

quality

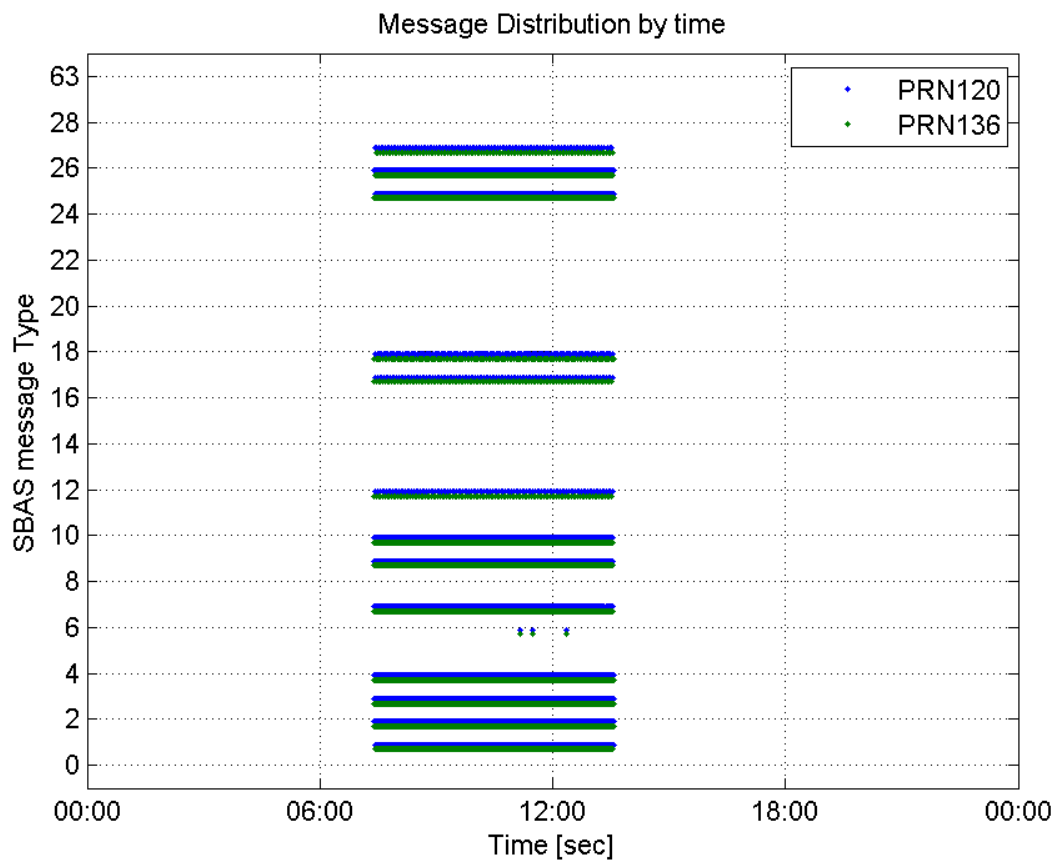
valid samples 44323
total samples 44323
number of SBAS PRNs 2

SBAS SIS Overview

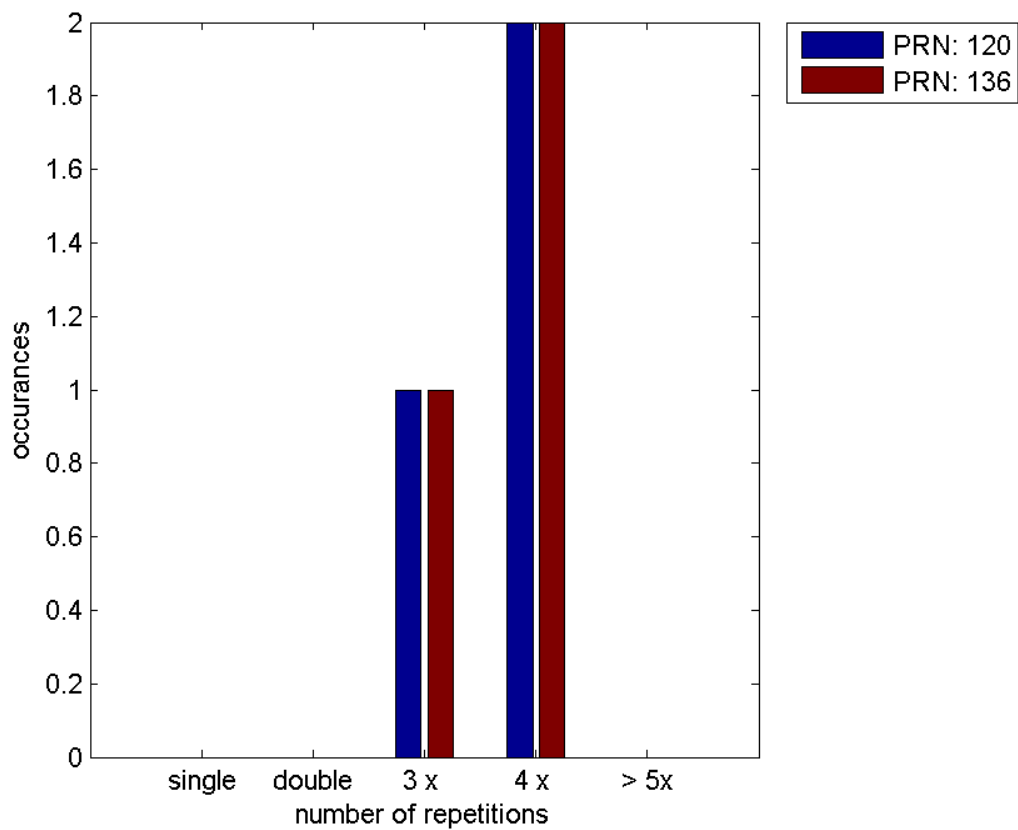
Message Type 6 repetitions :

	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:



PRN 120

Broadcast SBAS Messages :

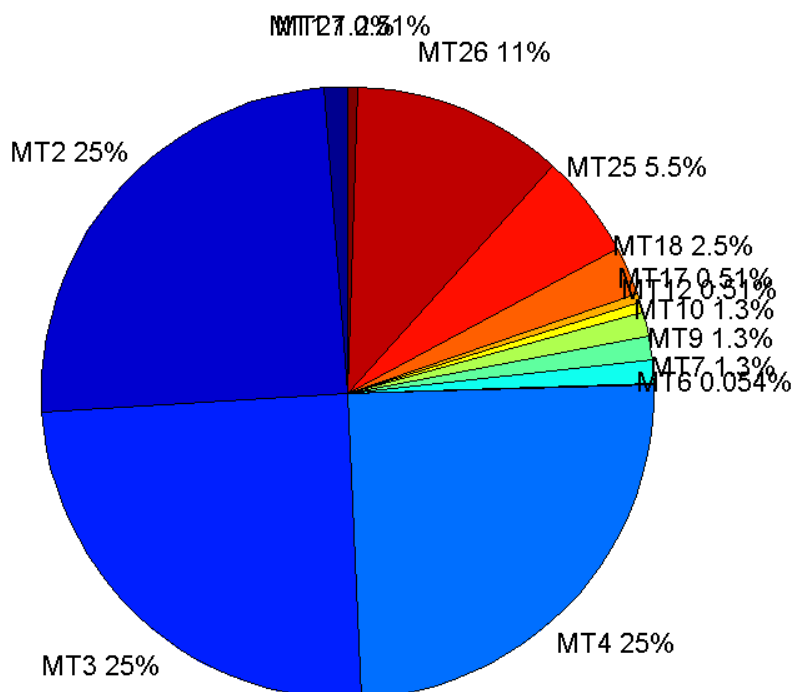
	number of messages	%
MT 0	0	0
MT 1	276	1.24791
MT 2	5470	24.7321
MT 3	5470	24.7321
MT 4	5470	24.7321
MT 5	0	0
MT 6	12	0.0542569
MT 7	277	1.25243
MT 9	277	1.25243
MT 10	277	1.25243
MT 12	113	0.510919
MT 17	113	0.510919
MT 18	563	2.54555
MT 24	0	0
MT 25	1208	5.46186
MT 26	2479	11.2086
MT 27	112	0.506398
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22117	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	160	80.5418	2	0	0
MT 2	4	60	4.05961	5	2	2
MT 3	4	61	4.05979	5	2	2
MT 4	4	56	4.05961	5	2	2
MT 5	--	--	--	--	--	--
MT 6	1	3103	391.545	2	2	2
MT 7	76	160	80.2101	1	0	0
MT 9	76	160	80.163	0	0	0
MT 10	76	160	80.2391	1	0	0
MT 12	189	203	196.33	112	0	0
MT 17	190	202	196.366	0	0	0
MT 18	4	186	39.1975	0	0	0
MT 24	--	--	--	--	--	--
MT						

25	1	79	18.3538	0	0	0
MT 26	2	61	8.95763	0	0	0
MT 27	188	394	198.135	0	0	0
MT 28	--	--	--	--	--	--
MT 62	--	--	--	--	--	--
MT 63	--	--	--	--	--	--

Message Distribution PRN 120:



SBAS SIS Analysis

PRN 136

Broadcast SBAS Messages :

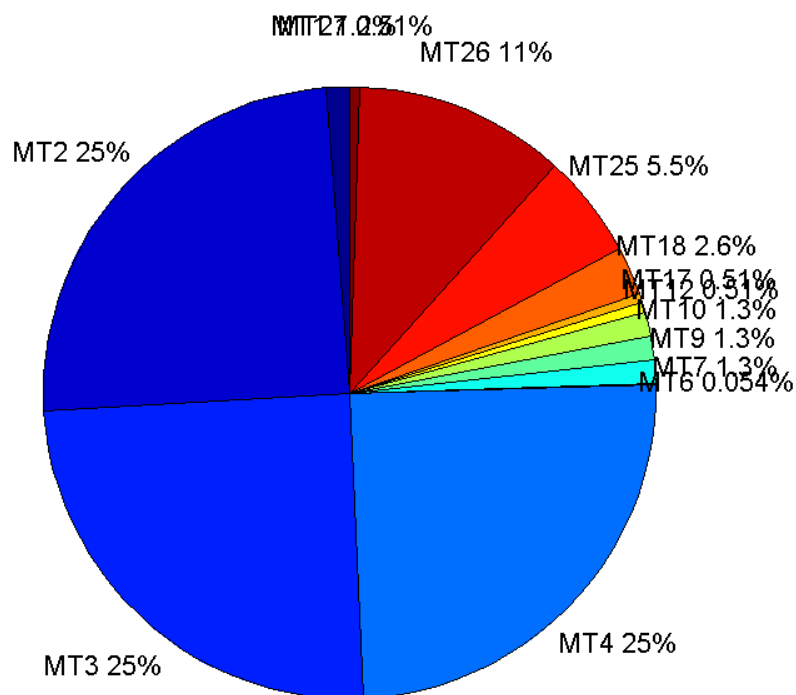
	number of messages	%
MT 0	0	0
MT 1	277	1.24741
MT 2	5491	24.7276
MT 3	5492	24.7321
MT 4	5491	24.7276
MT 5	0	0
MT 6	12	0.0540394

MT 7	278	1.25191
MT 9	278	1.25191
MT 10	278	1.25191
MT 12	113	0.508871
MT 17	113	0.508871
MT 18	568	2.55787
MT 24	0	0
MT 25	1216	5.476
MT 26	2486	11.1952
MT 27	113	0.508871
MT 28	0	0
MT 62	0	0
MT 63	0	0
Total	22206	100

Update intervals :

	Minimum [s]	Maximum [s]	Mean value	Exceed Max update	Exceed NPA timeout	Exceed PA timeout
MT 0	--	--	--	--	--	--
MT 1	76	82	79.8877	0	0	0
MT 2	4	8	4.0439	3	0	0
MT 3	4	8	4.04389	3	0	0
MT 4	4	8	4.0439	3	0	0
MT 5	--	--	--	--	--	--
MT 6	1	3103	391.909	2	2	2
MT 7	76	81	79.9314	0	0	0
MT 9	76	81	79.9025	0	0	0
MT 10	76	82	79.917	0	0	0
MT 12	190	203	196.366	112	0	0
MT 17	189	202	196.402	0	0	0
MT 18	4	181	39.1481	0	0	0
MT 24	--	--	--	--	--	--
MT 25	1	57	18.2691	0	0	0
MT 26	3	64	8.90664	0	0	0
MT 27	189	201	196.33	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:/PegasusDat/Jobs/2015_10_27EGNOS/01_User/01_User
Outputfile	System	D:/PegasusDat/Jobs/2015_10_27EGNOS/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

Position Domain

start: 07:23:59 27.10.2015 (week: 1868 sec: 199439)
end: 13:34:05 27.10.2015 (week: 1868 sec: 221645)
duration: 06:10:07 ..

quality

valid samples 21845

total samples 22207

Event tables

Position discontinuity events type all

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	205152	1.9224	10.8567	0.177071	1.51496	19.0867	0.0793726
max normVer	218974	1.91133	26.9181	0.0710054	-2.91117	16.0971	0.18085
max HPE	220880	3.22135	70.069	0.045974	-2.56947	70.1787	0.0366132
max VPE	218975	1.84875	26.3607	0.0701328	-2.91738	16.1442	0.180707
min HPL	214565	1.32535	8.62587	0.153648	0.0721579	19.3972	0.00372002
min VPL	210280	0.888958	9.77123	0.0909771	0.384163	11.9788	0.0320703

Position discontinuity events :

#	Epoch	duration	stable period
1	220352	26	20551
2	220880	49	502

APV-I discontinuity events :

#	Epoch	duration	stable period
1	220352	30	20551
2	220536	397	154

APV-35m discontinuity events :

#	Epoch	duration	stable period
1	219533	126	19732
2	219661	1	2
3	220352	30	690
4	220536	397	154

LPV-200 discontinuity events :

#	Epoch	duration	stable period
1	219533	126	19732
2	219661	1	2
3	220352	30	690
4	220536	397	154

CAT-I discontinuity events :

#	Epoch	duration	stable period
1	210280	5	0
2	210286	3	1
3	210290	3	1
4	210294	3	1
5	210298	3	1
6	210302	3	1
7	210306	3	1

First Glance analysis

Duration	22207
Number of Samples	22207
Number of invalid sample	362
Number of no position solution samples	75
Number of missing sample	0
Logging Loss	0
Processing Loss	1.6301
Number of Misleading Information	0
Data gaps	0
Discontinuities	2

Number of Samples :

Valid	APV-1	LPV-200	CAT-1	APV-35m
21770	21418	21291	8	21291

Accuracy statistics :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
HPE 95%	1.75946	1.75838	1.75895	0.976488	1.75895
HPEscale 95%	NaN	5.82427	5.82602	4.00109	5.82602

VPE 95%	1.77054	1.76547	1.76749	0.629534	1.76749
VPEscale 95%	NaN	5.0972	3.57432	0.630064	3.57432

Availability :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Signal in Space	0.996567	0.980453	0.97464	0.000366217	0.97464
measurements	0.980322	0.964471	0.958752	0.000360247	0.958752
Operational	0.980322	0.964471	0.958752	0.000360247	0.958752

Discontinuity events :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
All	2	2	4	7	4
Long	2	2	3	1	3
Independent	2	2	3	0	3
P(disc.)	0.00137804	0.00140069	0.00211357	0	0.00211357
P(slide)	0.00137804	0.00140069	0.00220751	0.75	0.00220751

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

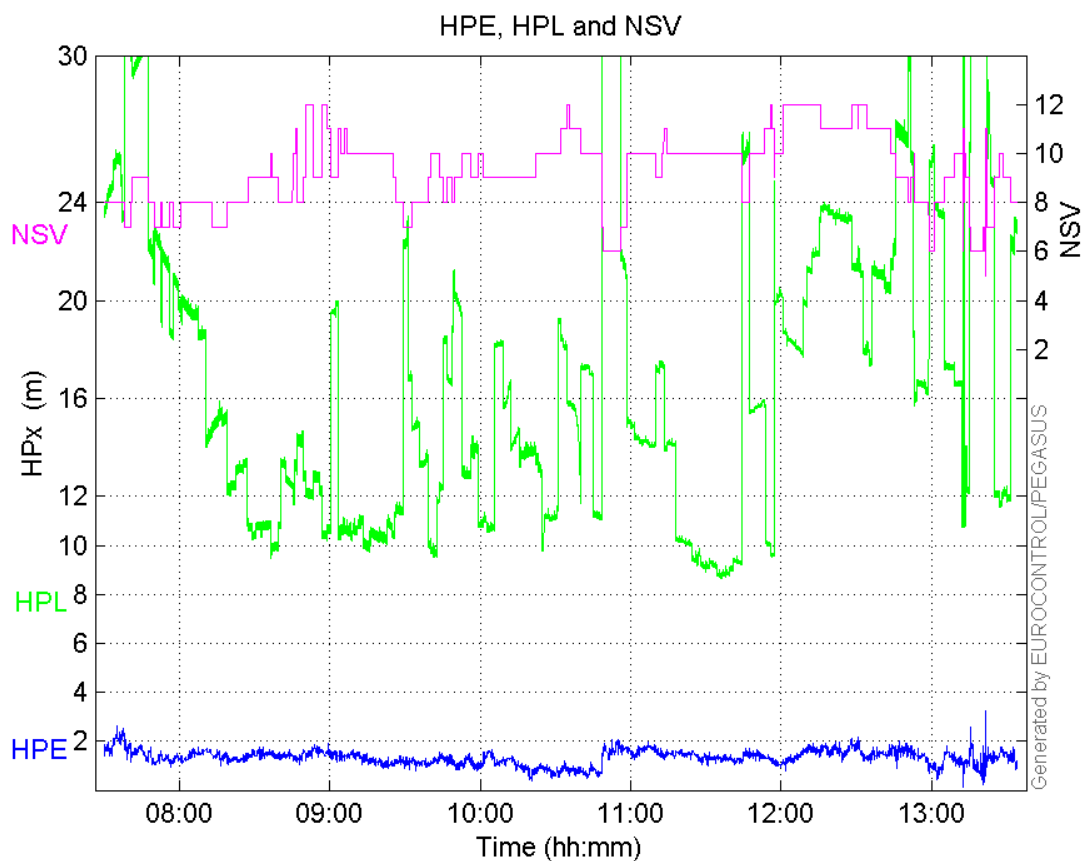
Performance Summary :

	Valid	APV-1	LPV-200	CAT-1	APV-35m
Samples	21770	21418	21291	8	21291
SIS Availability	0.996567	0.980453	0.97464	0.000366217	0.97464
Local Availability	0.980322	0.964471	0.958752	0.000360247	0.958752
Operational Availability	0.980322	0.964471	0.958752	0.000360247	0.958752
HPE 95%	1.75946	1.75838	1.75895	0.976488	1.75895
HPEScale 95%	NaN	5.82427	5.82602	4.00109	5.82602
VPE 95%	1.77054	1.76547	1.76749	0.629534	1.76749
VPEscale 95%	NaN	5.0972	3.57432	0.630064	3.57432
All Discontinuity Events	2	2	4	7	4
Long Discontinuity Events	2	2	3	1	3
Independent Discontinuity Events	2	2	3	0	3
P(discontinuity)	0.00137804	0.00140069	0.00211357	0	0.00211357
P(sliding window)	0.00137804	0.00140069	0.00220751	0.75	0.00220751
All Integrity Events	0	0	0	0	0
Horizontal Integrity	0	0	0	0	0

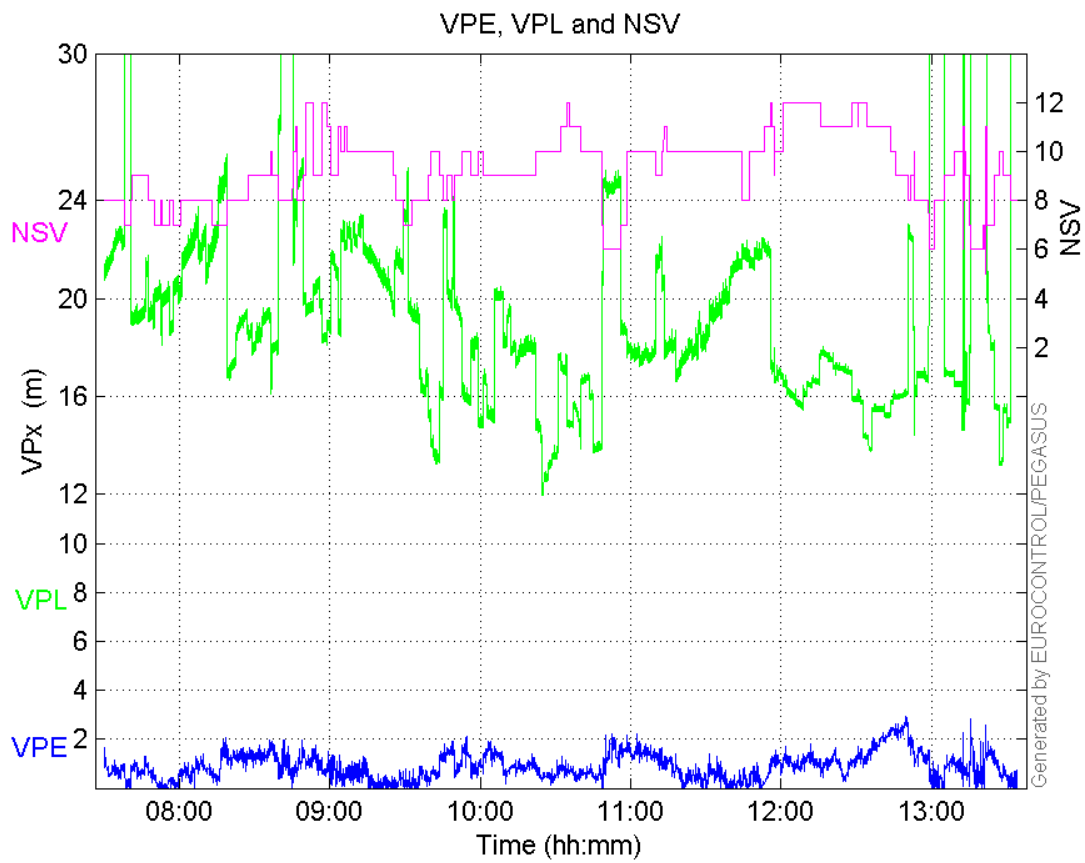
Events					
Vertical Integrity Events	0	0	0	0	0

Time Series

HPE, HPL and NSV:

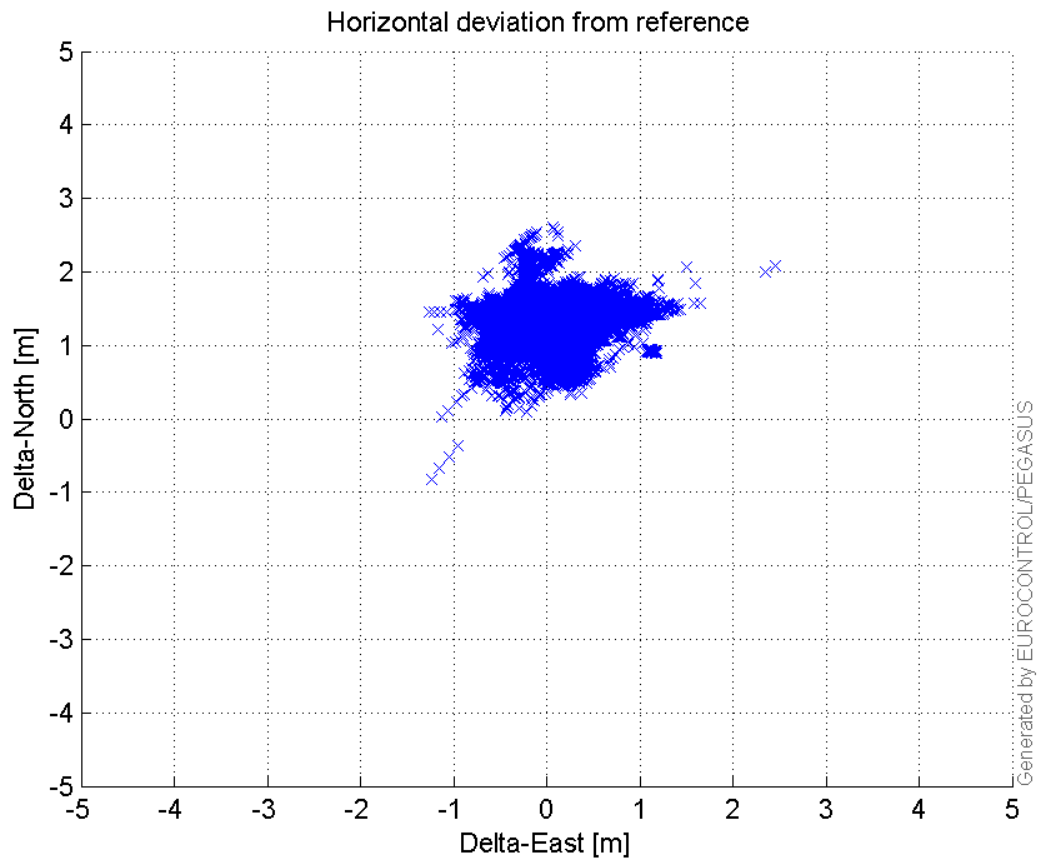


VPE, VPL and NSV:



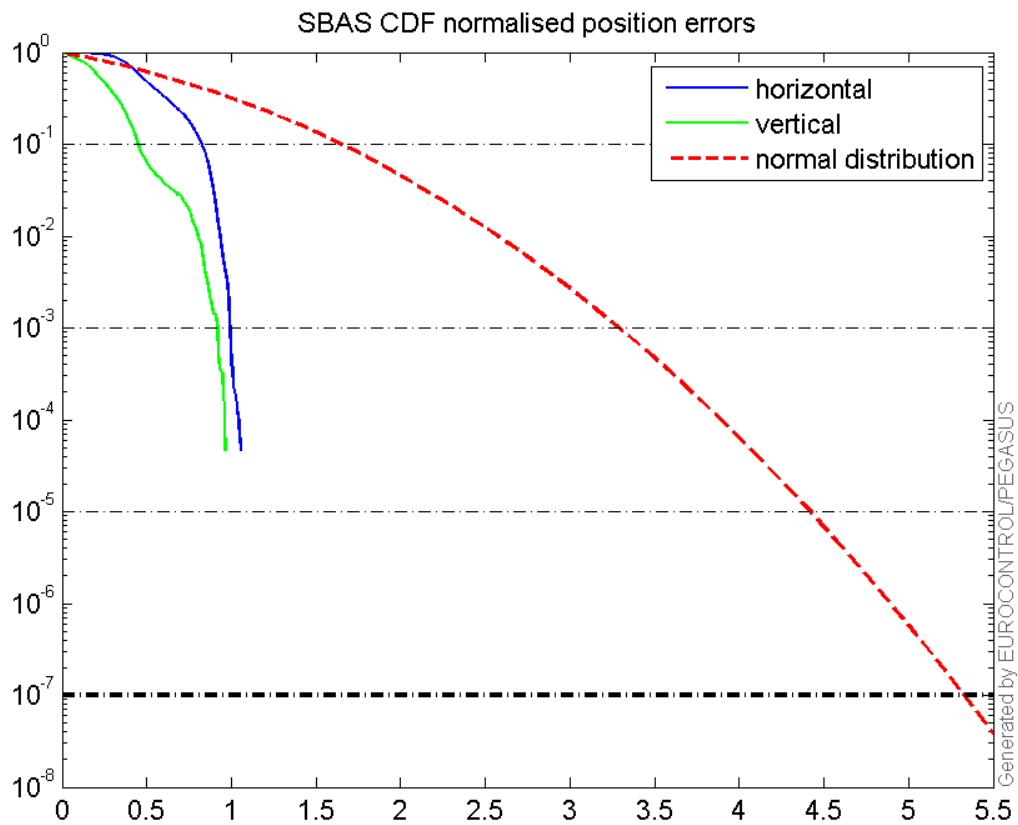
Horizontal deviation

Horizontal deviation from reference :



CDF position

SBAS CDF position domain:



Statistics

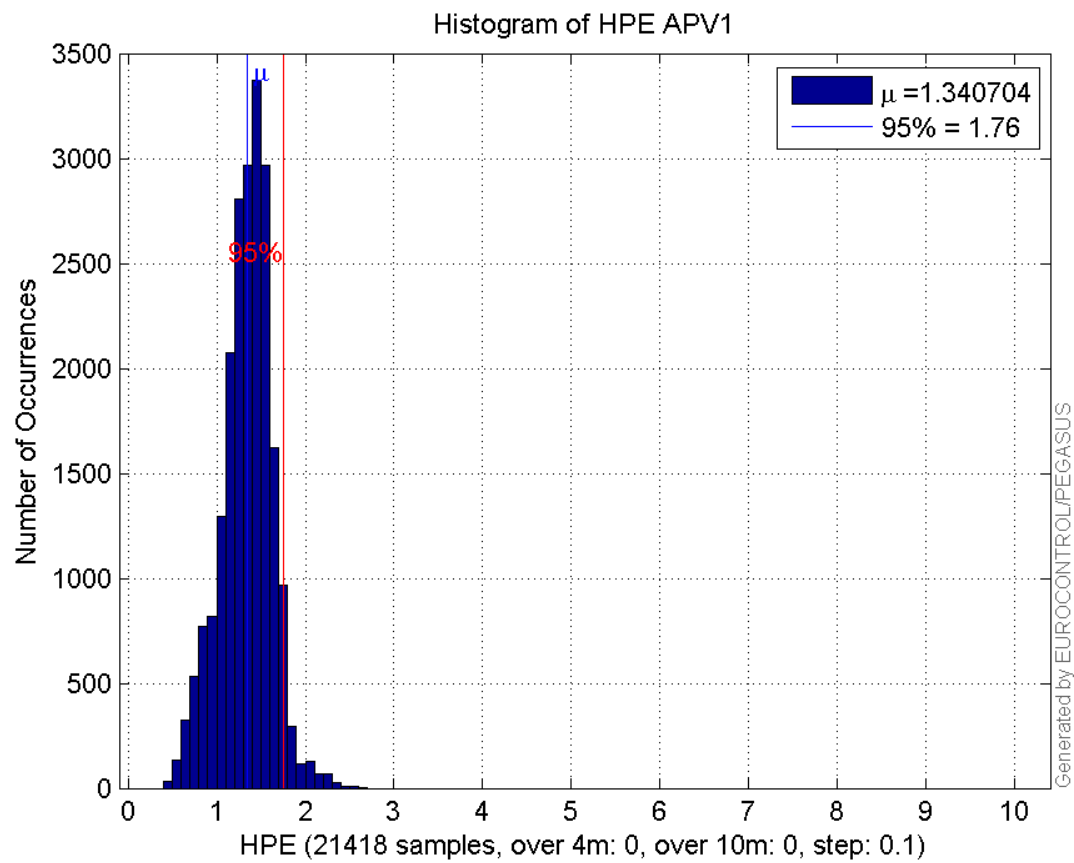
number	21418
sum	28715.202
sum2	40276.033
prctile95	1.7583819
prctile99	2.0598676
number	21418
sum	19021.118
sum2	22635.932
prctile95	1.7654729
prctile99	2.3741804
number	21418
sum	357968.93
sum2	6791337.2
prctile95	29.31936
prctile99	35.437088
number	21418
sum	412667.47
sum2	8280937.7
prctile95	25.22692
prctile99	31.887156
number	21418

sum 1904.092
sum2 190.83318
prctile95 0.14560666
prctile99 0.15540302
number 21418
sum 1046.3496
sum2 71.933697
prctile95 0.10194401
prctile99 0.15059569
number 21291
sum 28597.243
sum2 40165.499
prctile95 1.7589508
prctile99 2.0611894
number 21291
sum 18961.778
sum2 22602.961
prctile95 1.7674925
prctile99 2.3753393
number 21291
sum 354705.12
sum2 6707455
prctile95 29.347235
prctile99 35.441347
number 21291
sum 407856.74
sum2 8098654.5
prctile95 24.91103
prctile99 31.657489
number 21291
sum 1899.5026
sum2 190.6659
prctile95 0.14565053
prctile99 0.1554733
number 21291
sum 1044.7844
sum2 71.910796
prctile95 0.10212347
prctile99 0.15062892

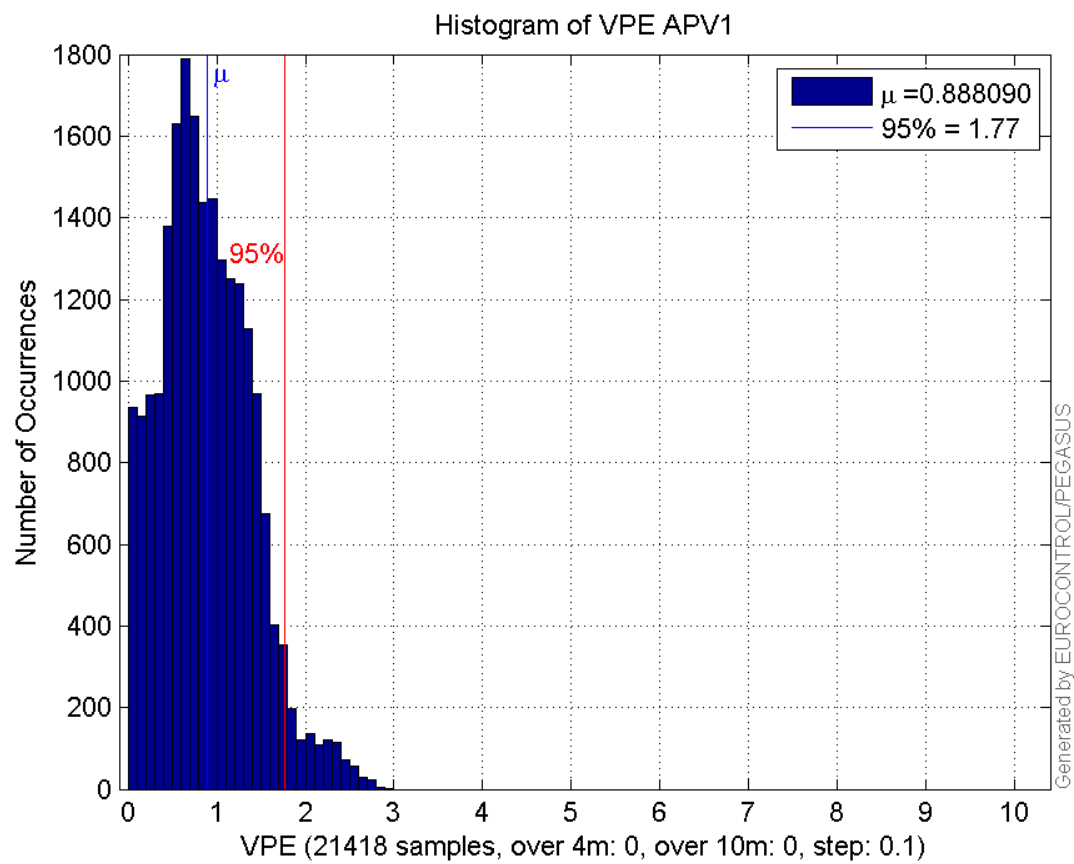
Error and XPL Statistics :

	Mean Value	Standard Deviation	50% Value	95% Value	99% Value	RMS Value
HPE	1.3407	0.288084	1.36237	1.75838	2.05987	1.3713
HPL	16.7135	6.1439	15.2804	29.3194	35.4371	17.8069
VPE	0.88809	0.517854	0.83028	1.76547	2.37418	1.02804
VPL	19.2673	3.92499	18.4789	25.2269	31.8872	19.663

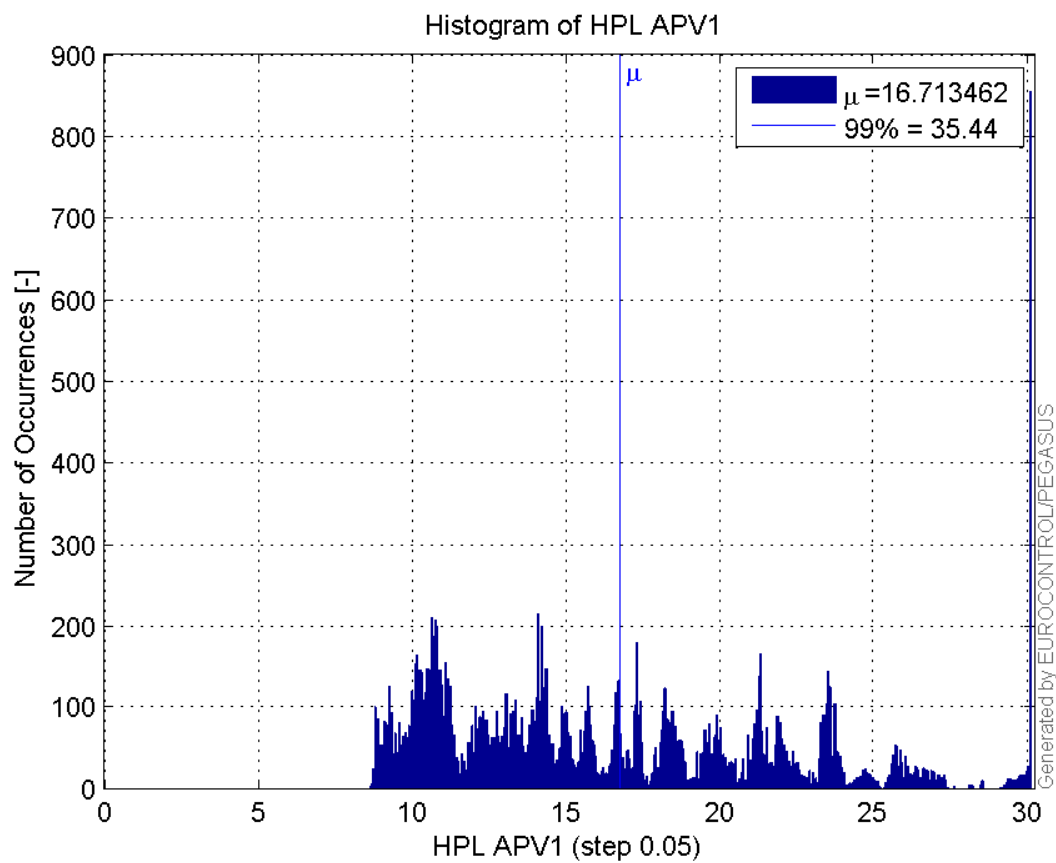
Histogram of HPE APV1:



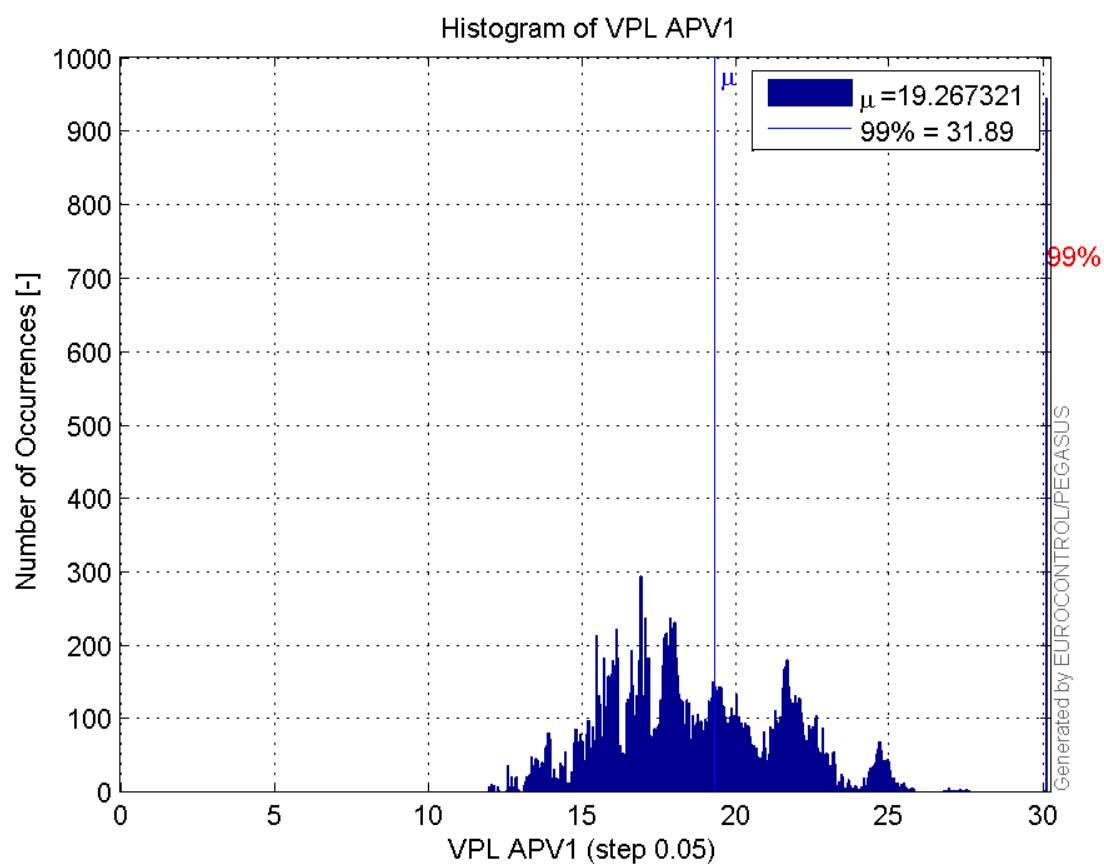
Histogram of VPE APV1:



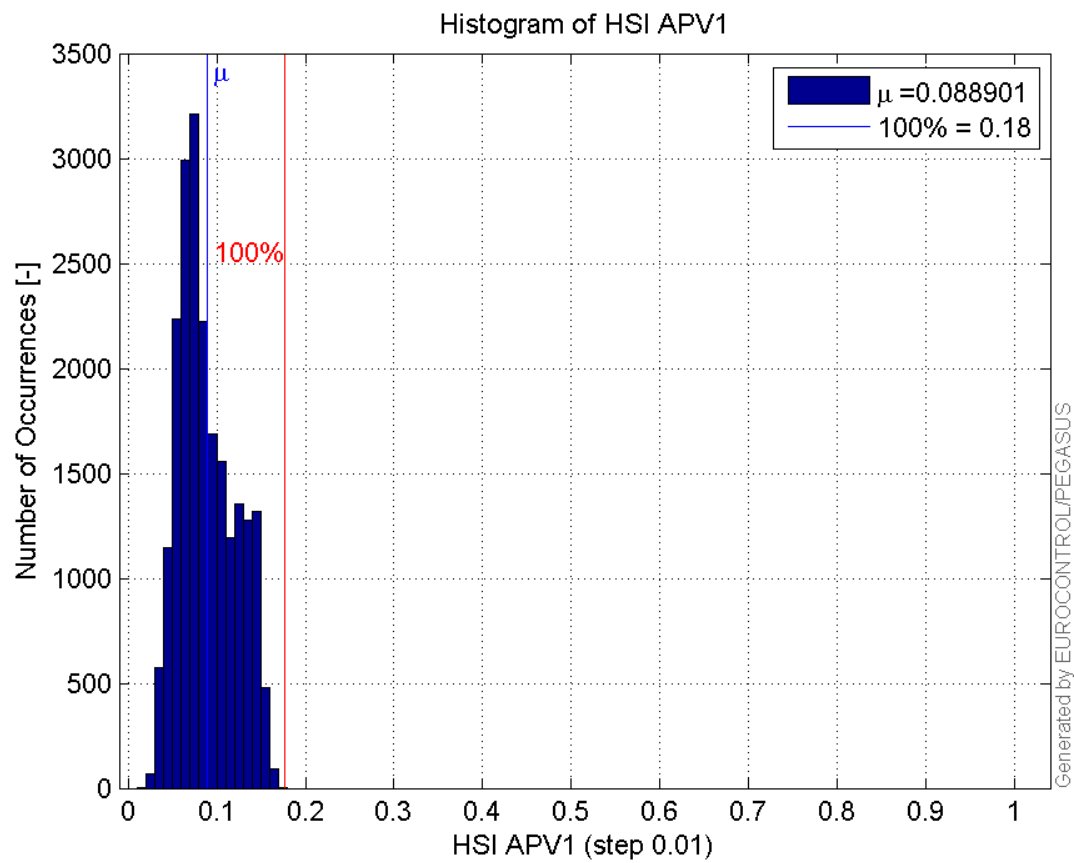
Histogram of HPL APV1:



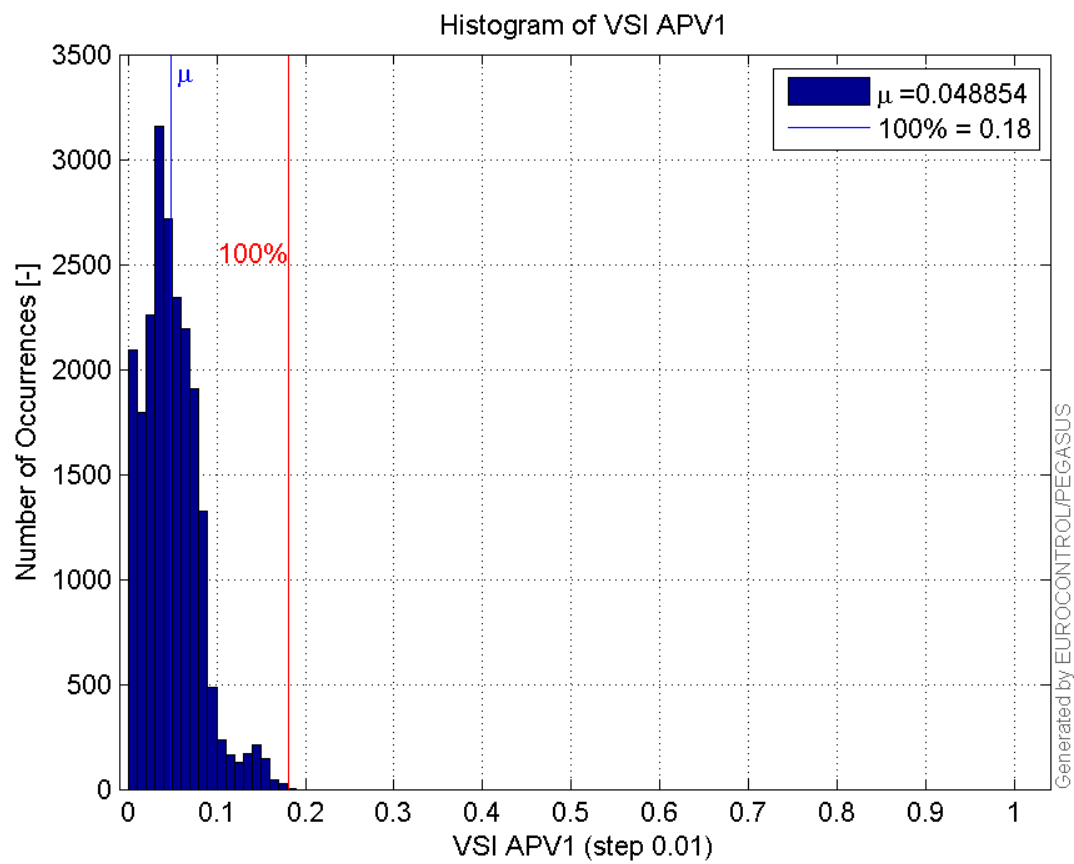
Histogram of VPL APV1:



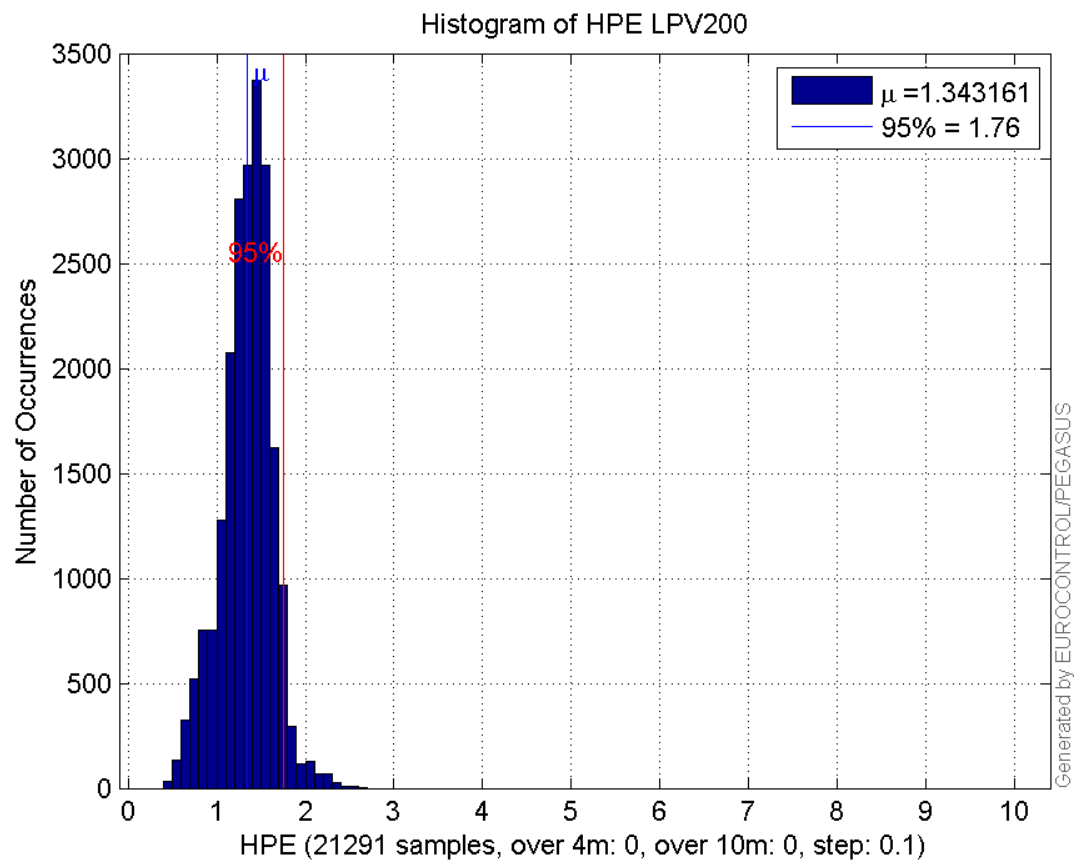
Histogram of HSI APV1:



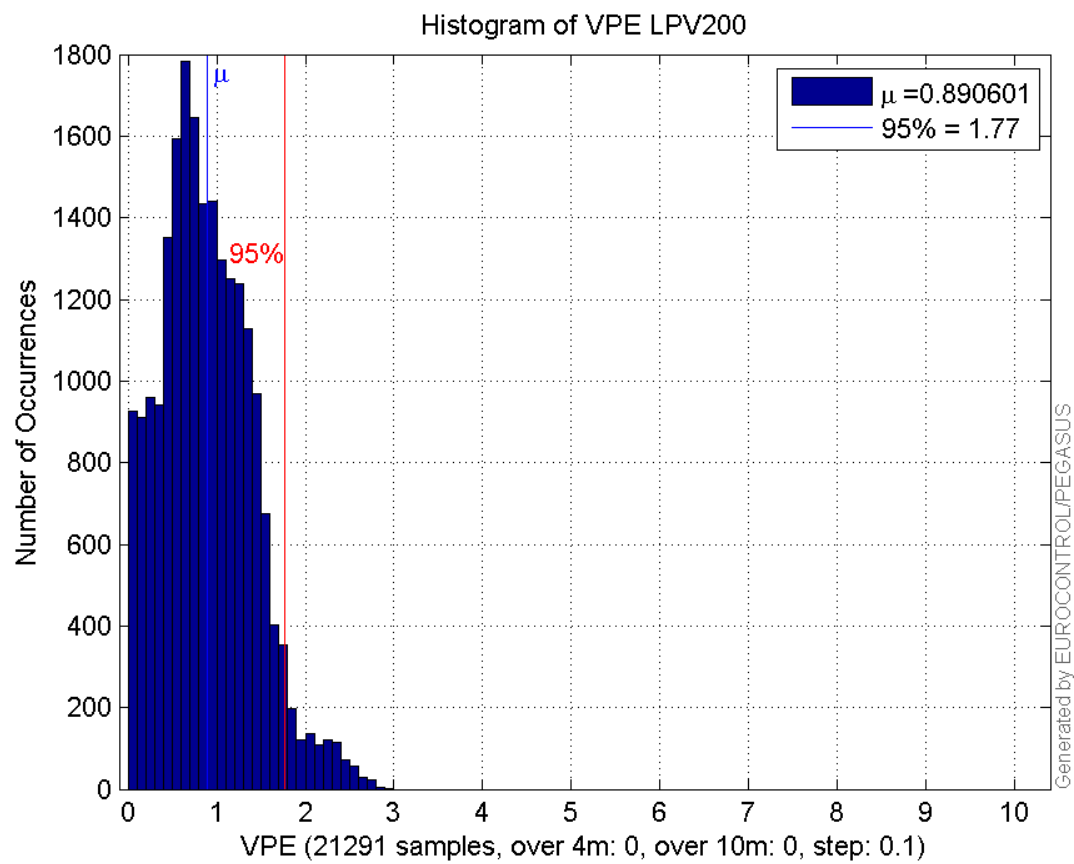
Histogram of VSI APV1:



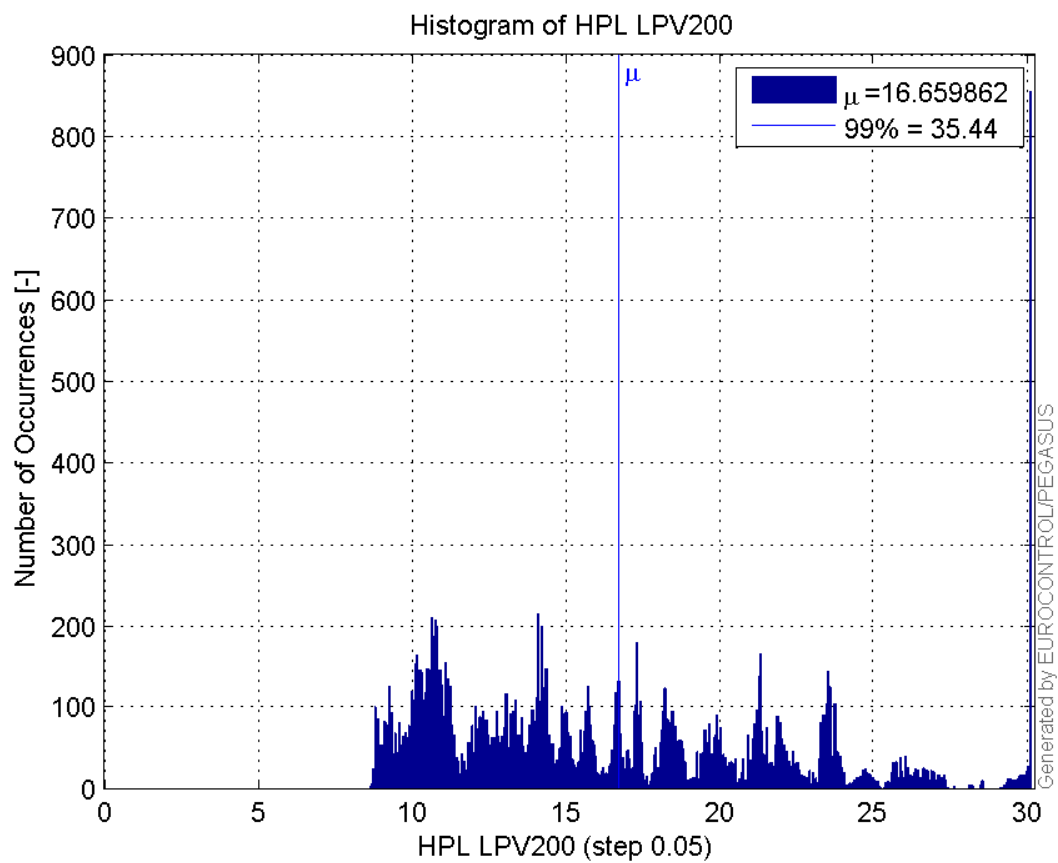
Histogram of HPE LPV200:



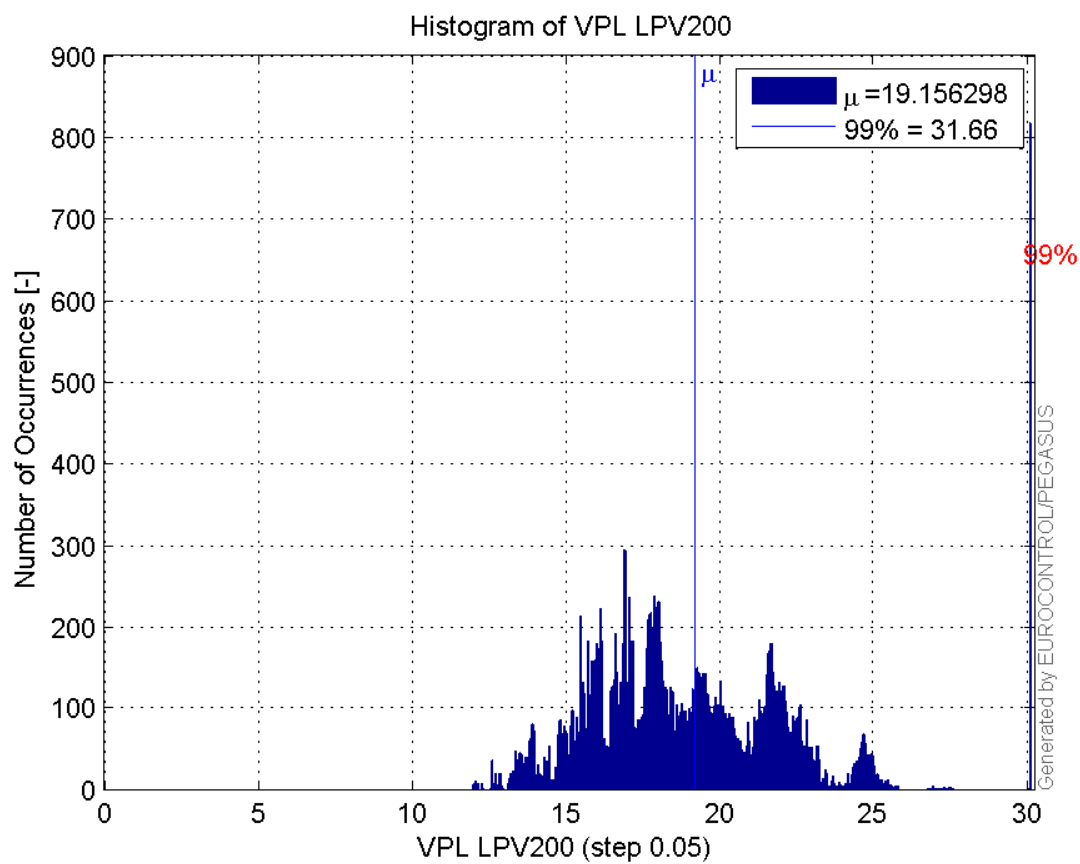
Histogram of VPE LPV200:



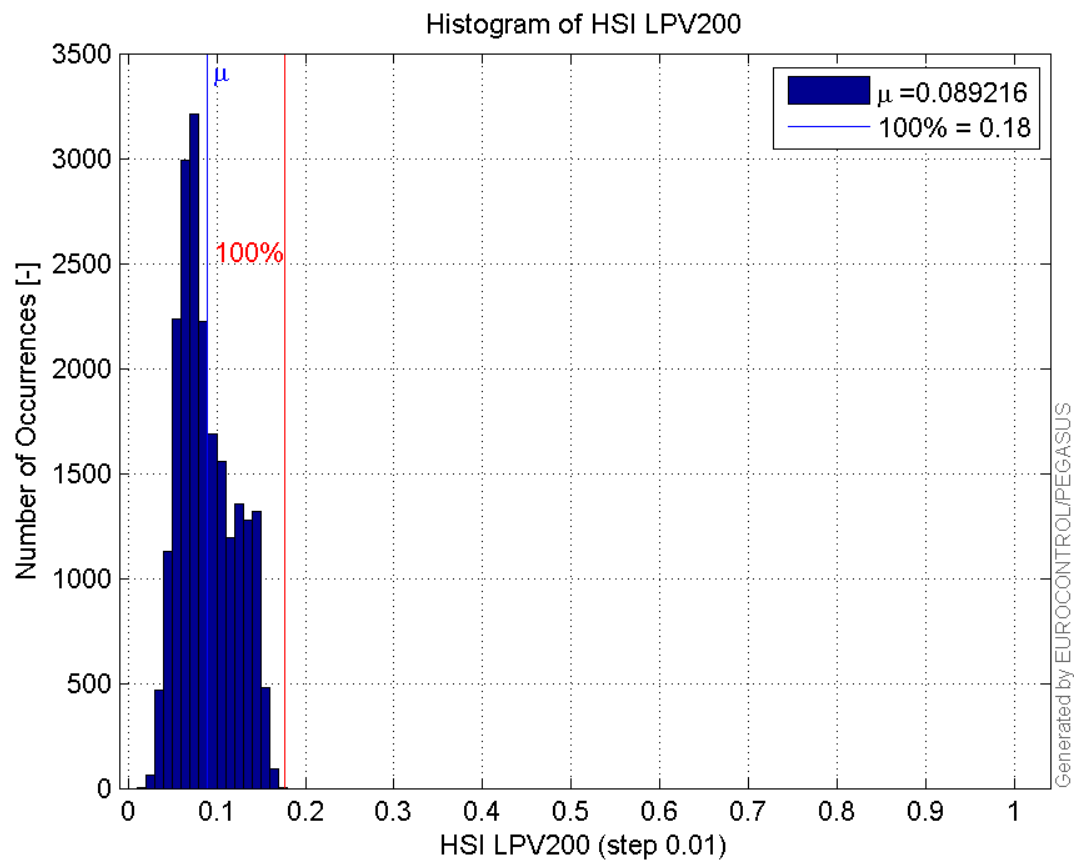
Histogram of HPL LPV200:



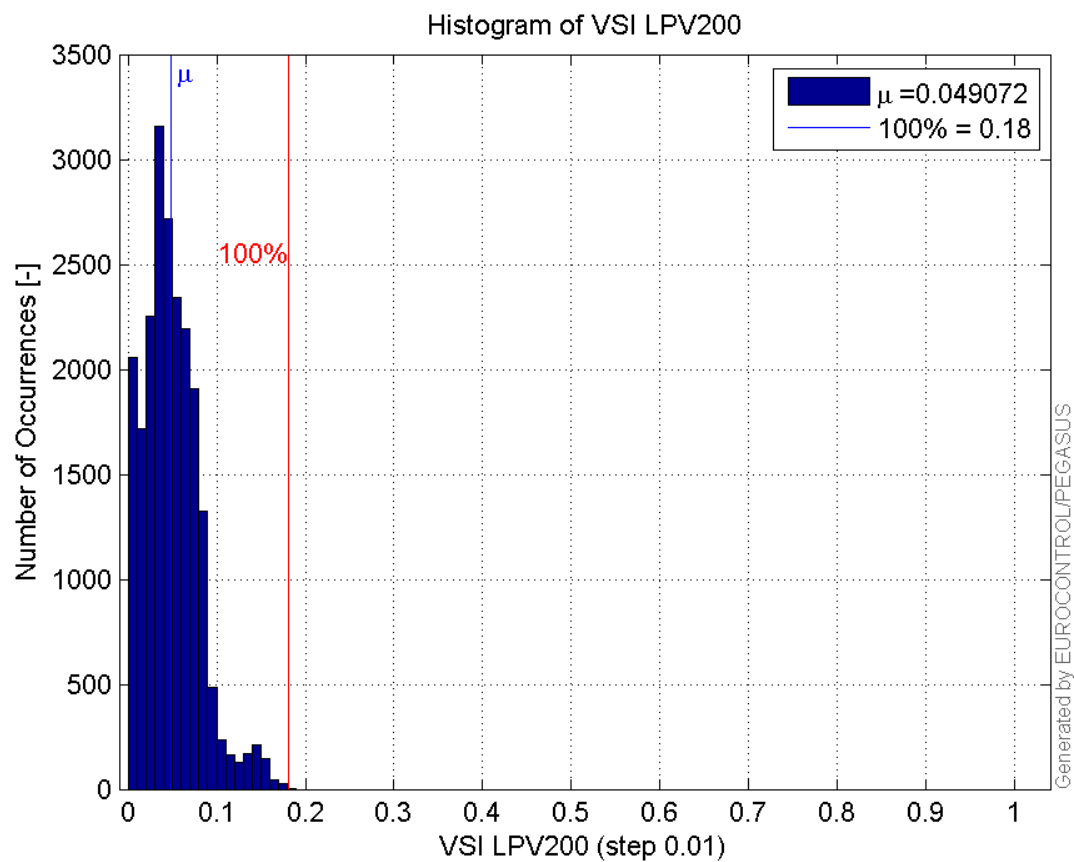
Histogram of VPL LPV200:



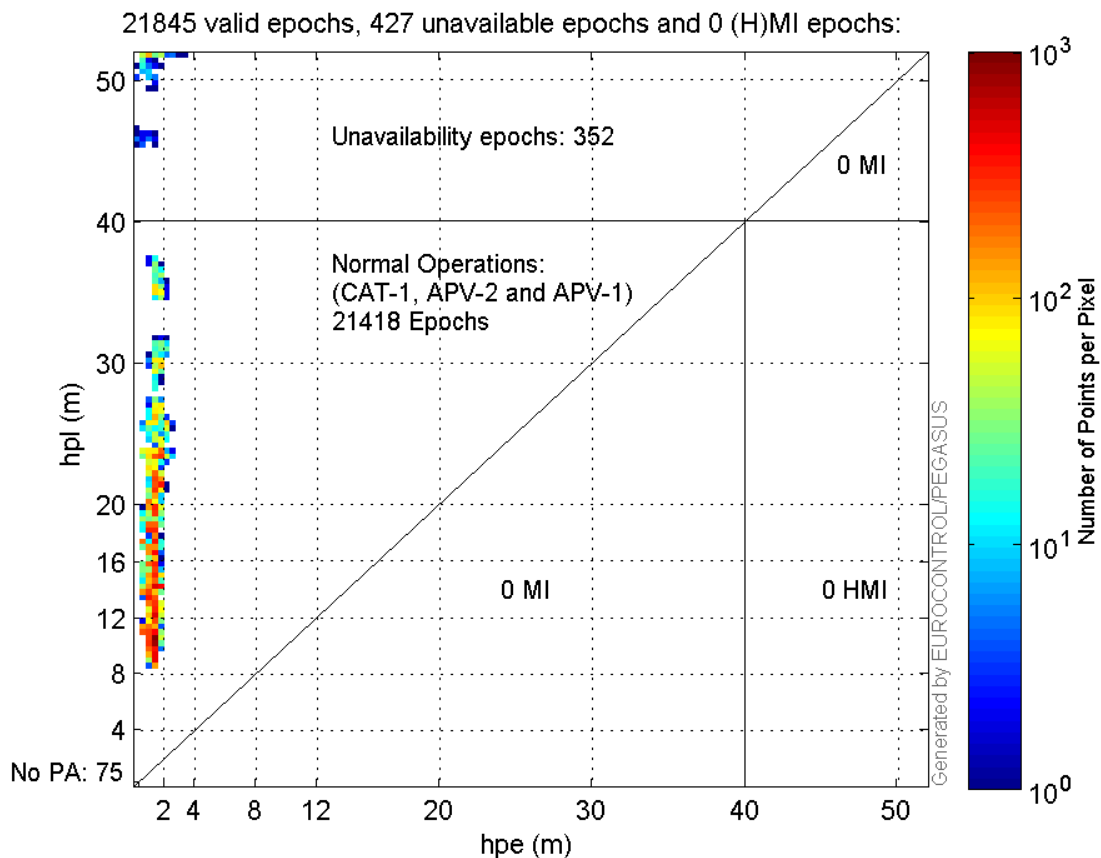
Histogram of HSI LPV200:



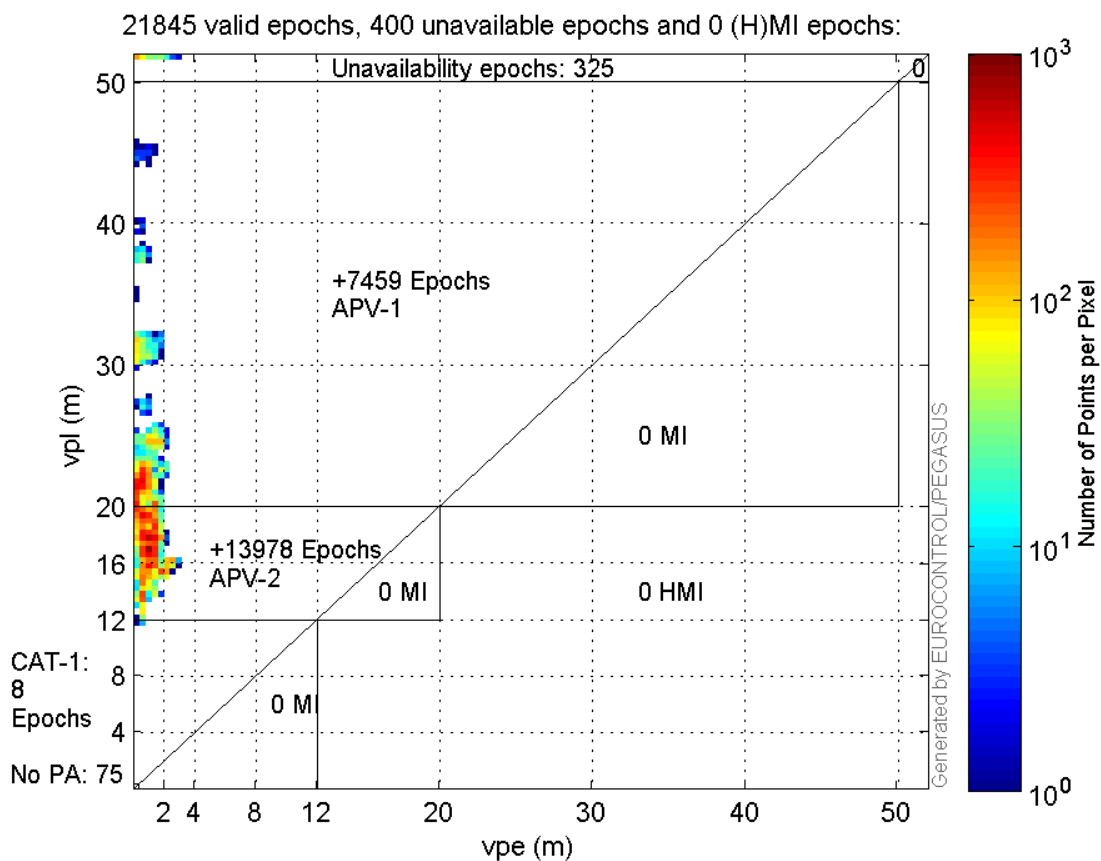
Histogram of VSI LPV200:



Horizontal_Stanford_Plot_SBAS:



Vertical_Stanford_Plot_SBAS:



Parameters

system

Name	Section	Value
name	system	GNSS_Solution
version	system	4.8.2.1
input_prefix	system	D:/PegasusDat/Jobs/2015_10_27EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/2015_10_27EGNOS/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	30.4297
init_alt	results	235.0175
mi_numbers	results	0

Range Domain

start: 07:23:59 27.10.2015 (week: 1868 sec: 199439)
end: 13:34:05 27.10.2015 (week: 1868 sec: 221645)
duration: 06:10:07 ..

quality

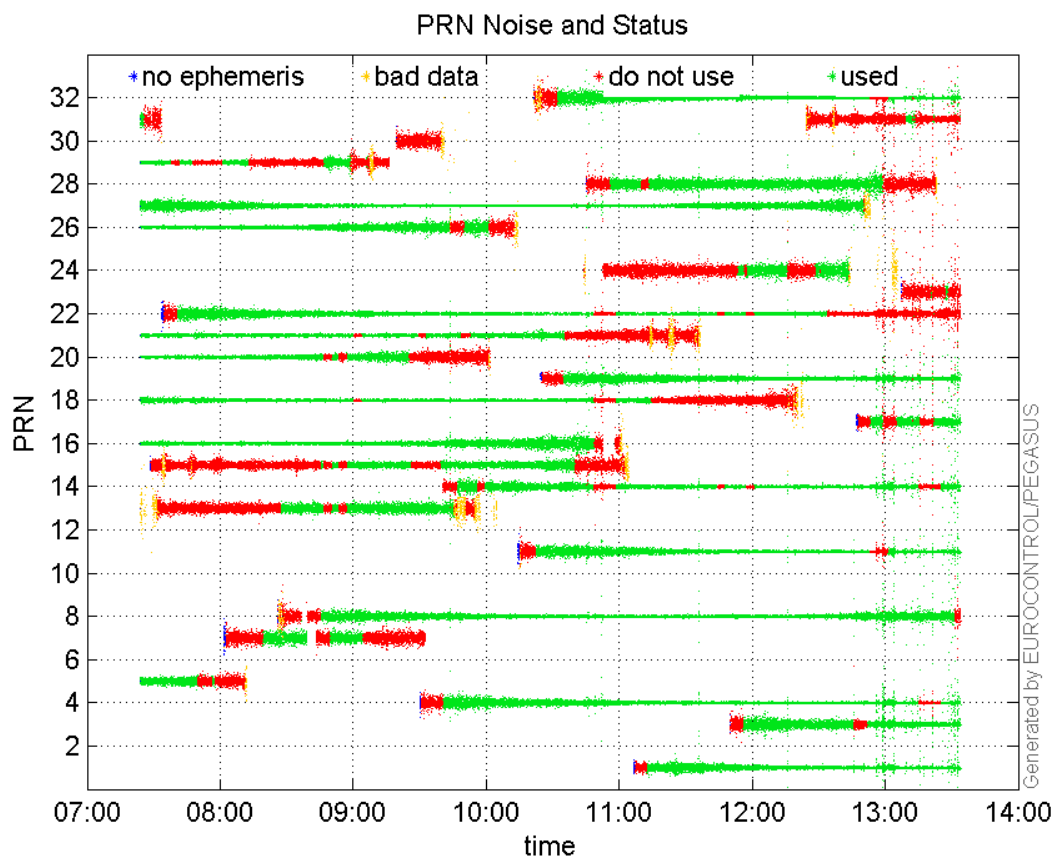
valid samples 22207
total samples 22207

PRN overview

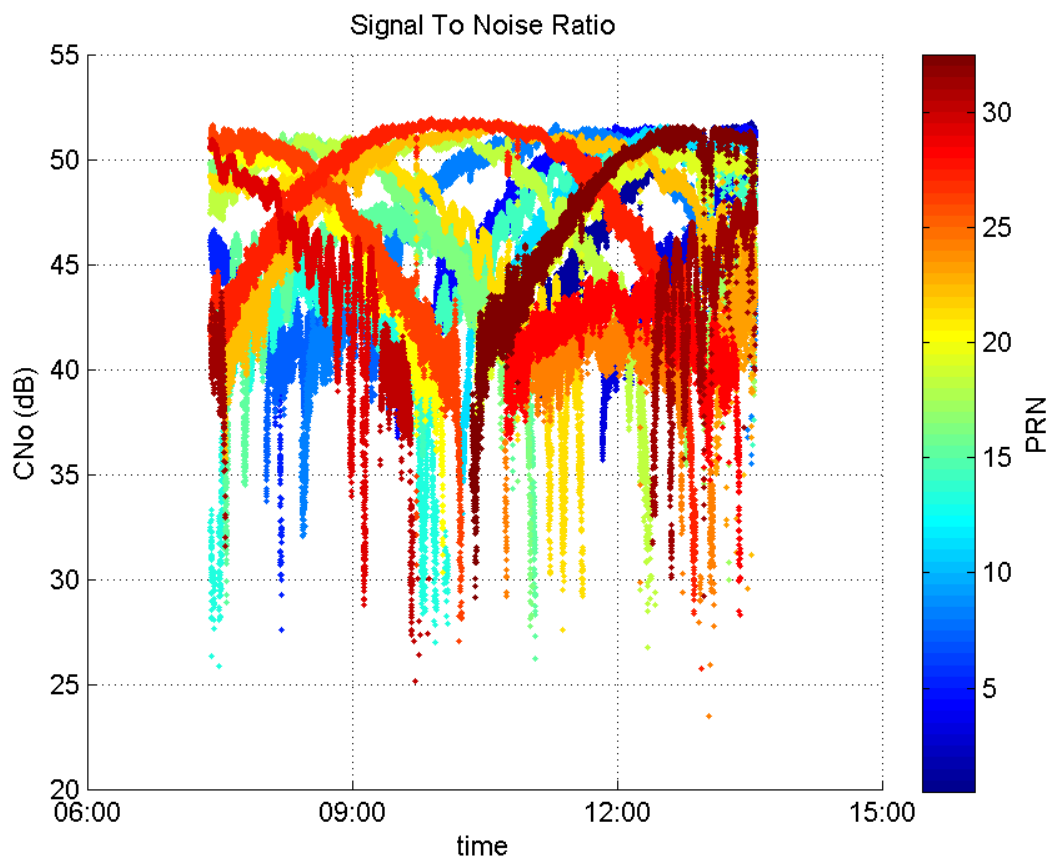
Number of Visible GPS Satellites 26
Number of Visible SBAS Satellites 2

signal quality and status

PRN Noise and Status:



Signal To Noise Ratio:



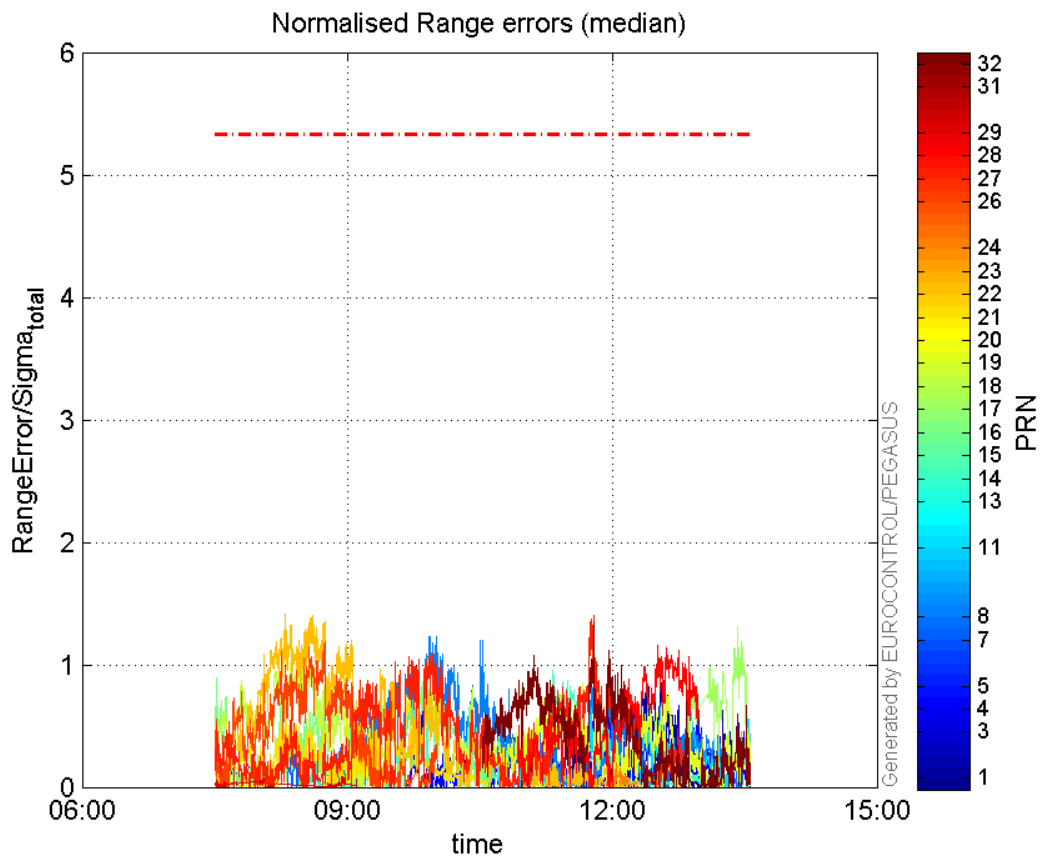
range errors

Number of Overbounding Norm Errors 0

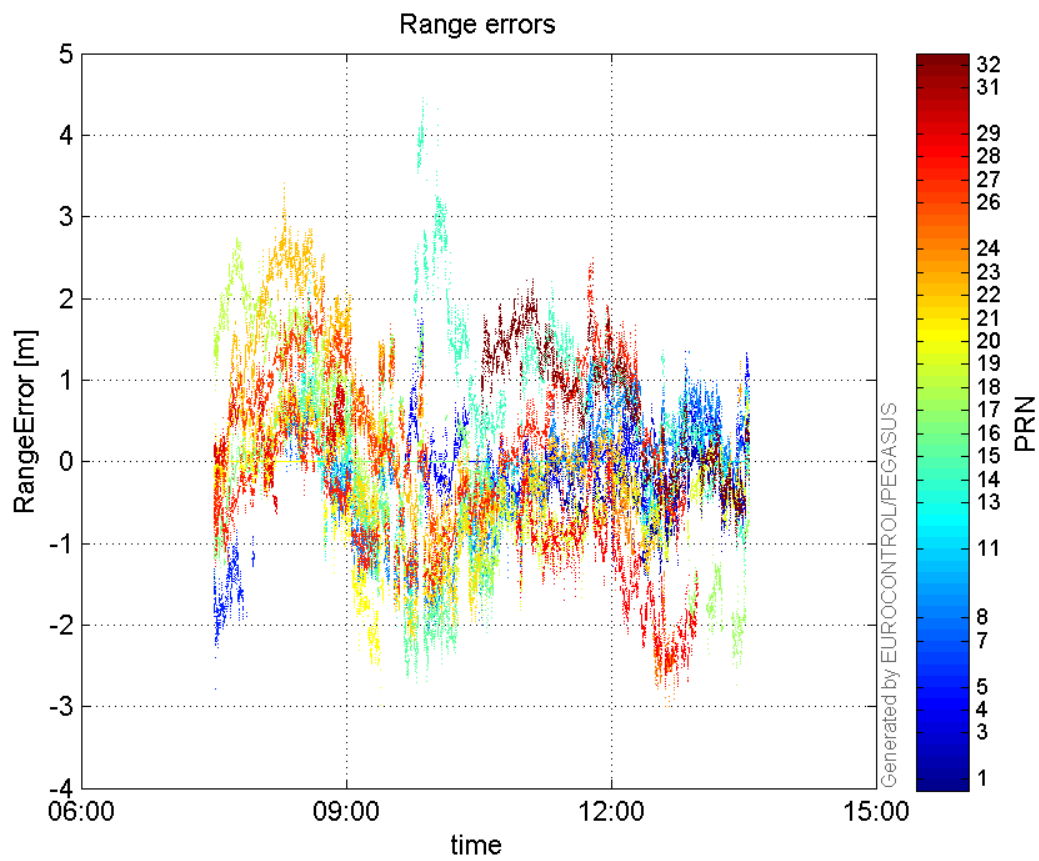
Max Norm Errors :

GPS Week	GPS Second	PRN	Norm Error	Range Error	Sigma
1868	217968	1	0.996772	-1.65513	1.66049
1868	218728	3	0.672725	-1.27134	1.88983
1868	219033	4	0.861503	1.3498	1.5668
1868	199894	5	0.244274	-2.77908	11.3769
1868	203118	7	0.405654	1.16439	2.87041
1868	208583	8	1.22721	-2.03138	1.65529
1868	217441	11	0.791213	-1.38618	1.75197
1868	207801	13	0.734065	-2.16205	2.94531
1868	208466	14	1.0524	4.38302	4.16477
1868	209081	15	0.749582	-2.47246	3.29845
1868	199885	16	0.890186	-1.62902	1.82998
1868	221110	17	1.31023	-2.7342	2.08681
1868	203653	18	1.04914	1.99135	1.89808
1868	214799	19	0.855703	-1.66228	1.94259
1868	205731	20	0.235543	-2.3082	9.79951
1868	207739	21	0.727292	-2.12661	2.92401
1868	202695	22	1.41419	3.4085	2.41021
1868	221294	23	0.457391	1.22802	2.68483
1868	218022	24	0.369247	-2.71304	7.3475
1868	204299	26	1.18915	2.16948	1.8244
1868	215242	27	1.40188	2.49987	1.78323
1868	217837	28	1.15625	-2.74345	2.37271
1868	205020	29	0.0856101	0.918764	10.732
1868	220384	31	0.0616429	0.323127	5.24191
1868	215241		1.34732	2.41808	1.79474

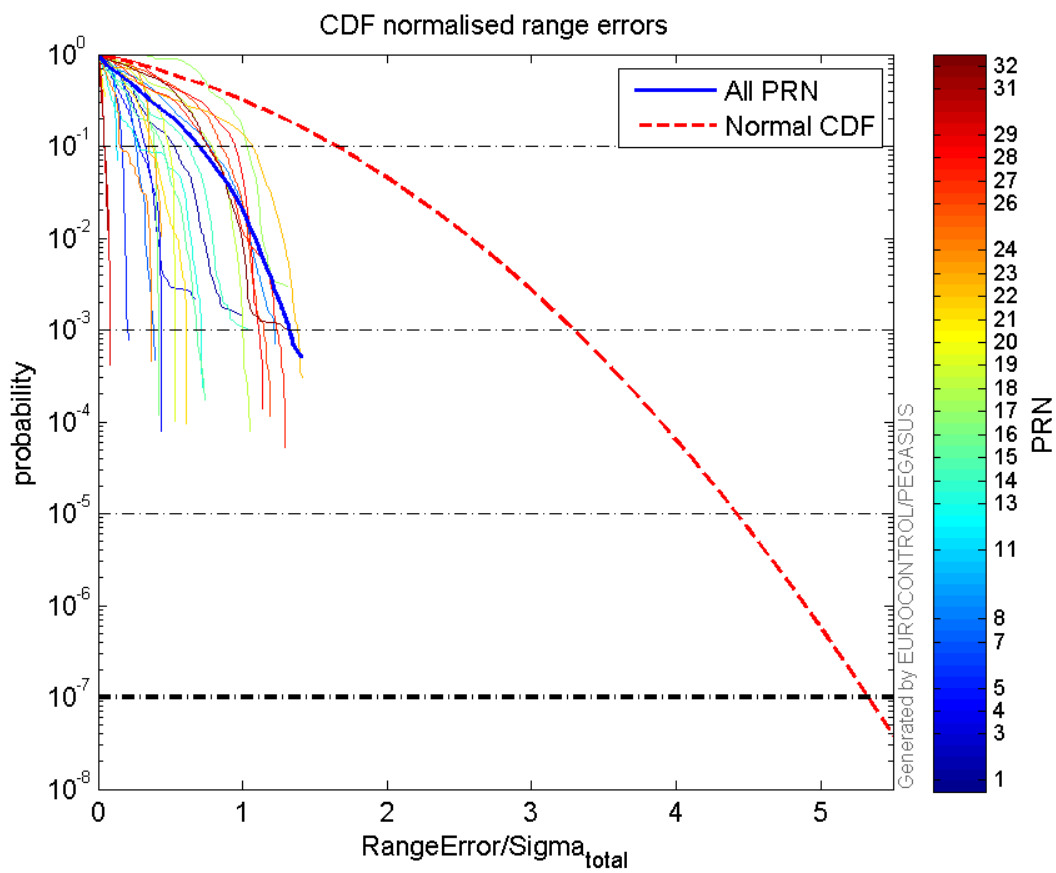
Normalised Range errors (median):



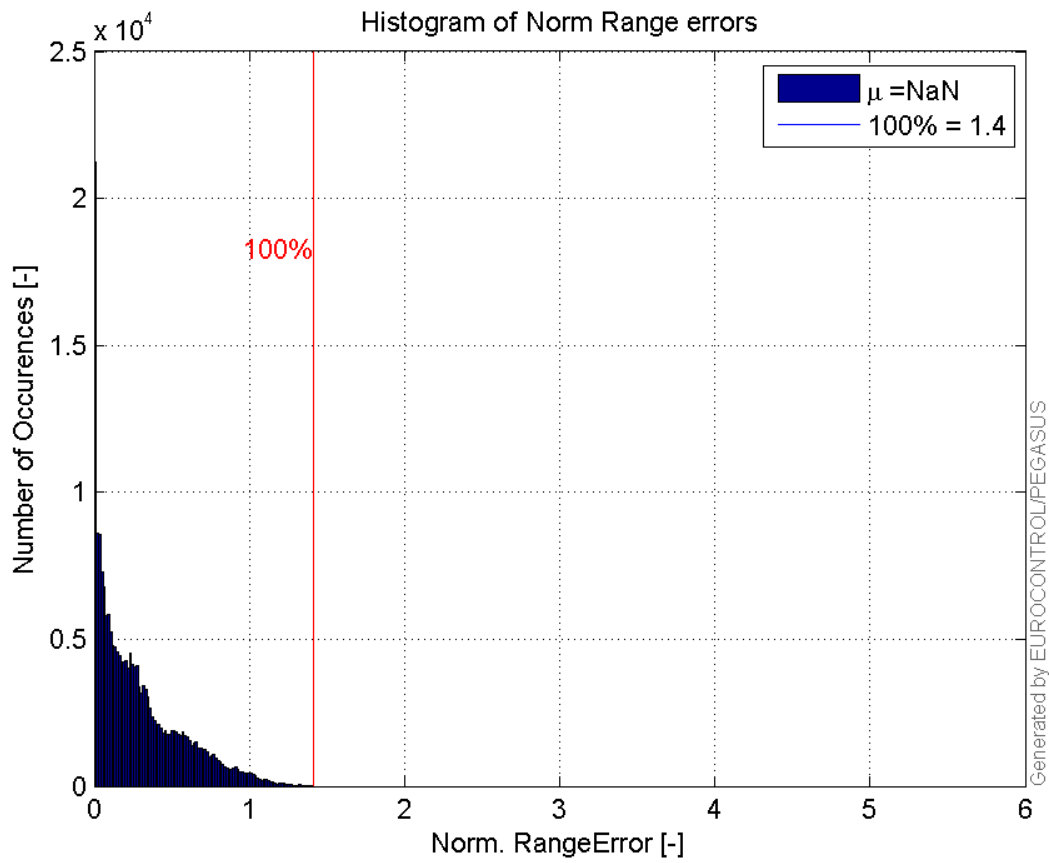
Range errors:



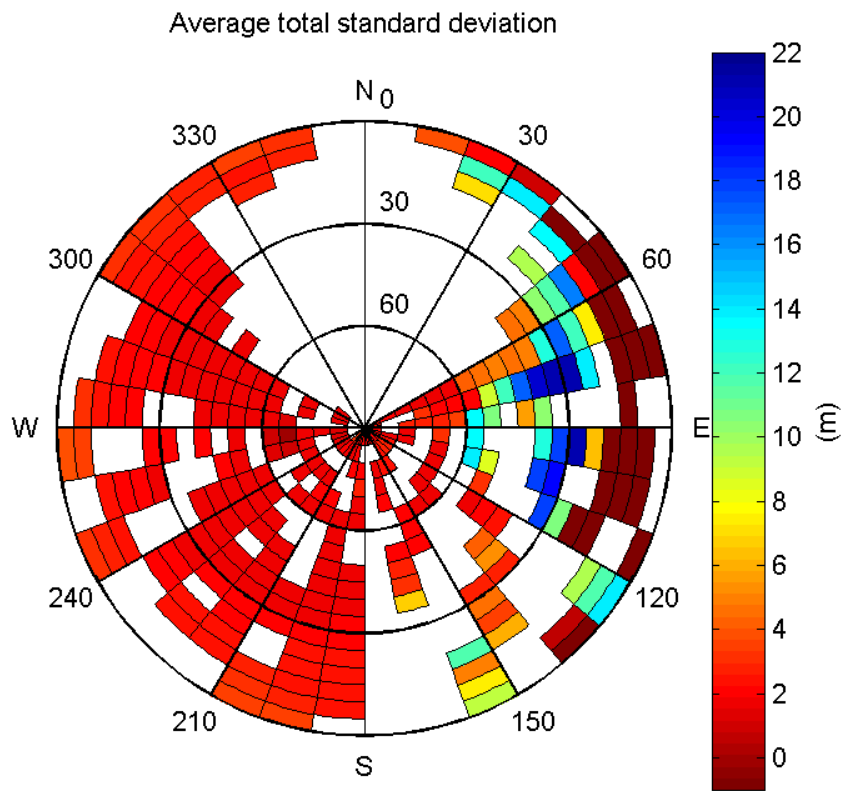
CDF normalised range errors:



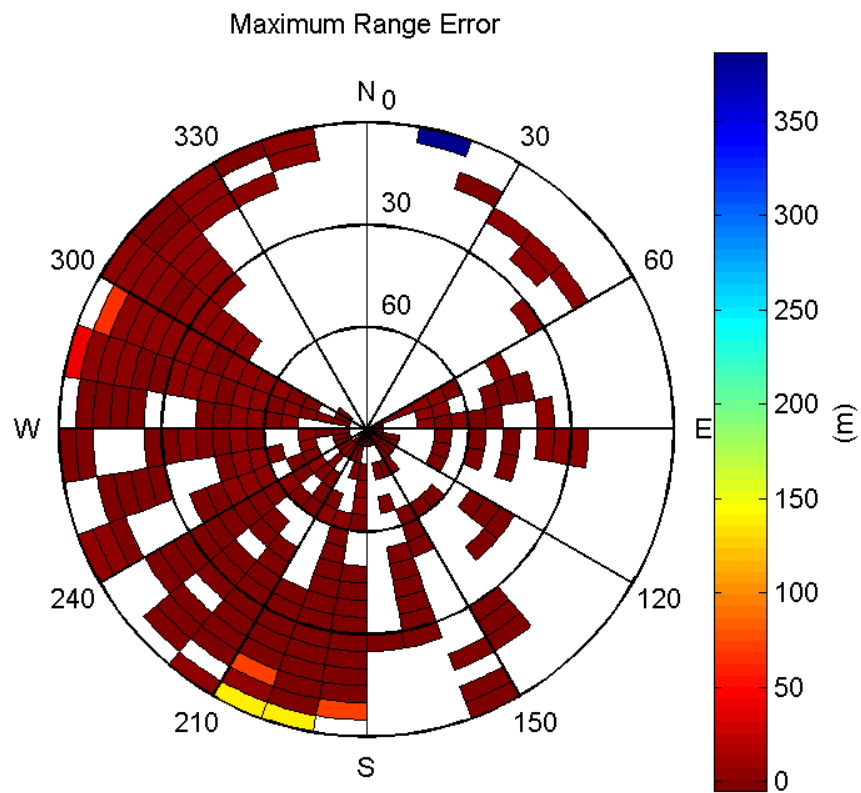
Histogram of Norm Range errors:



Sigma Sky Plot:

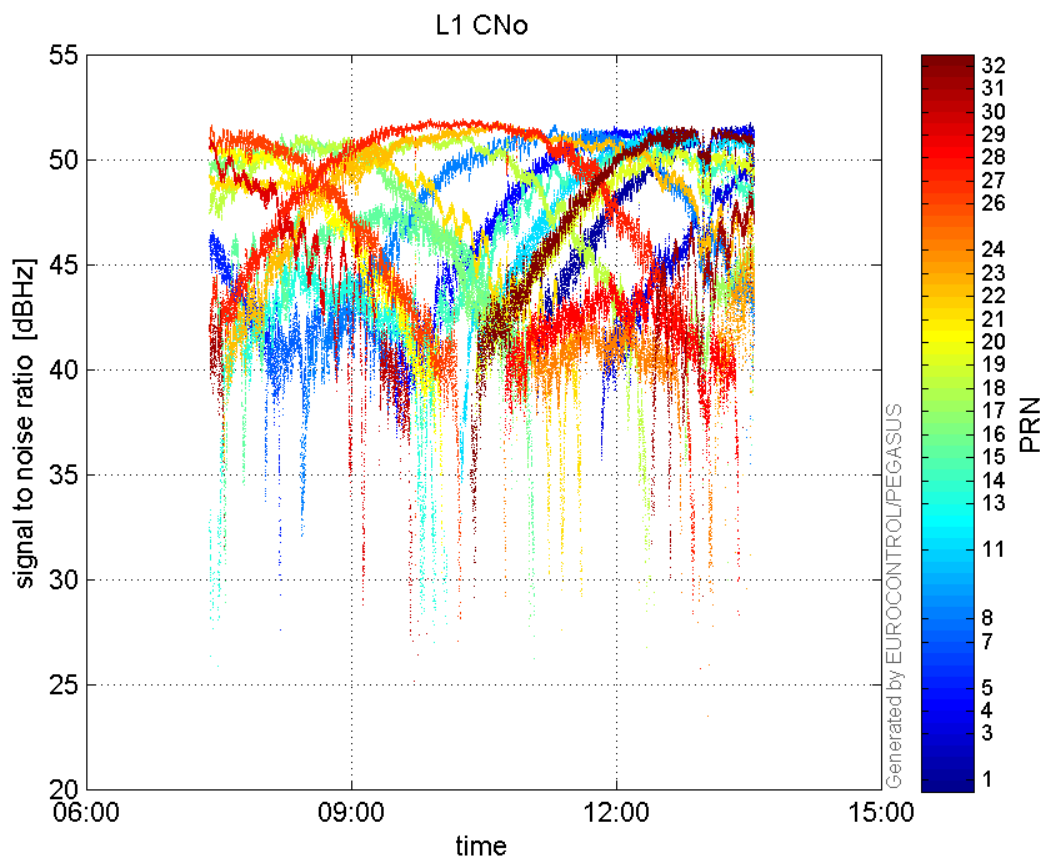


Norm Error Sky Plot:

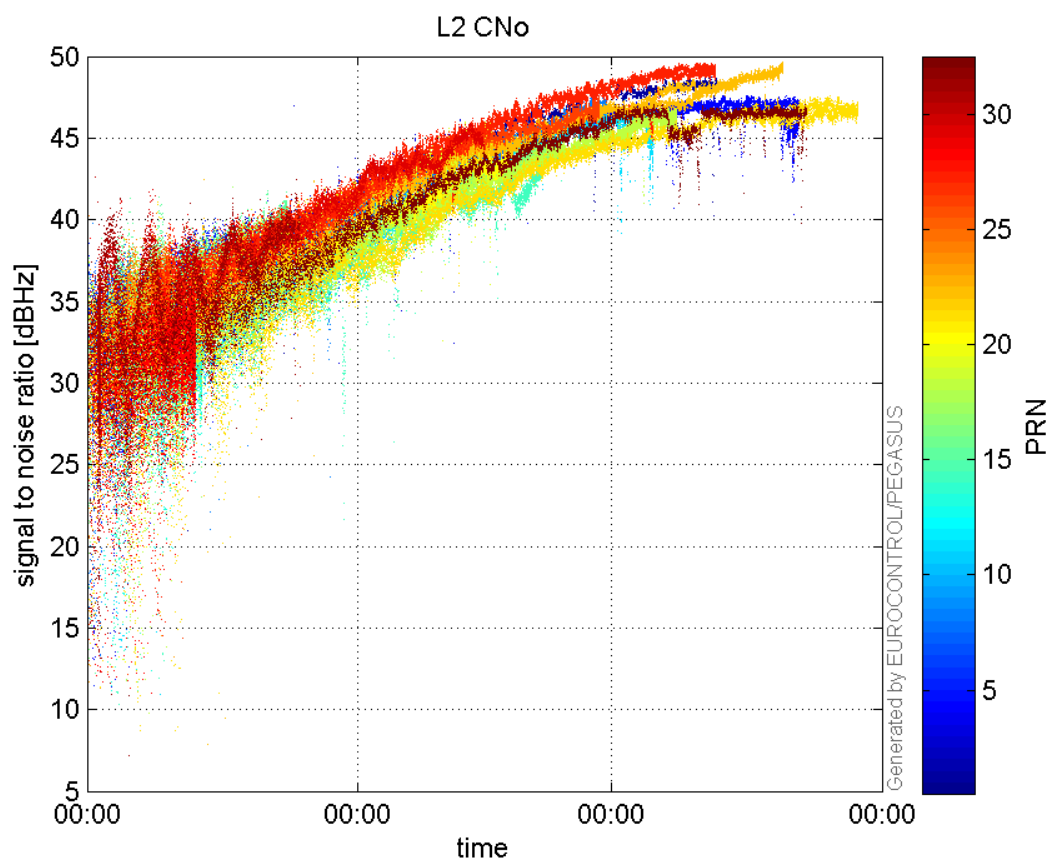


signal quality

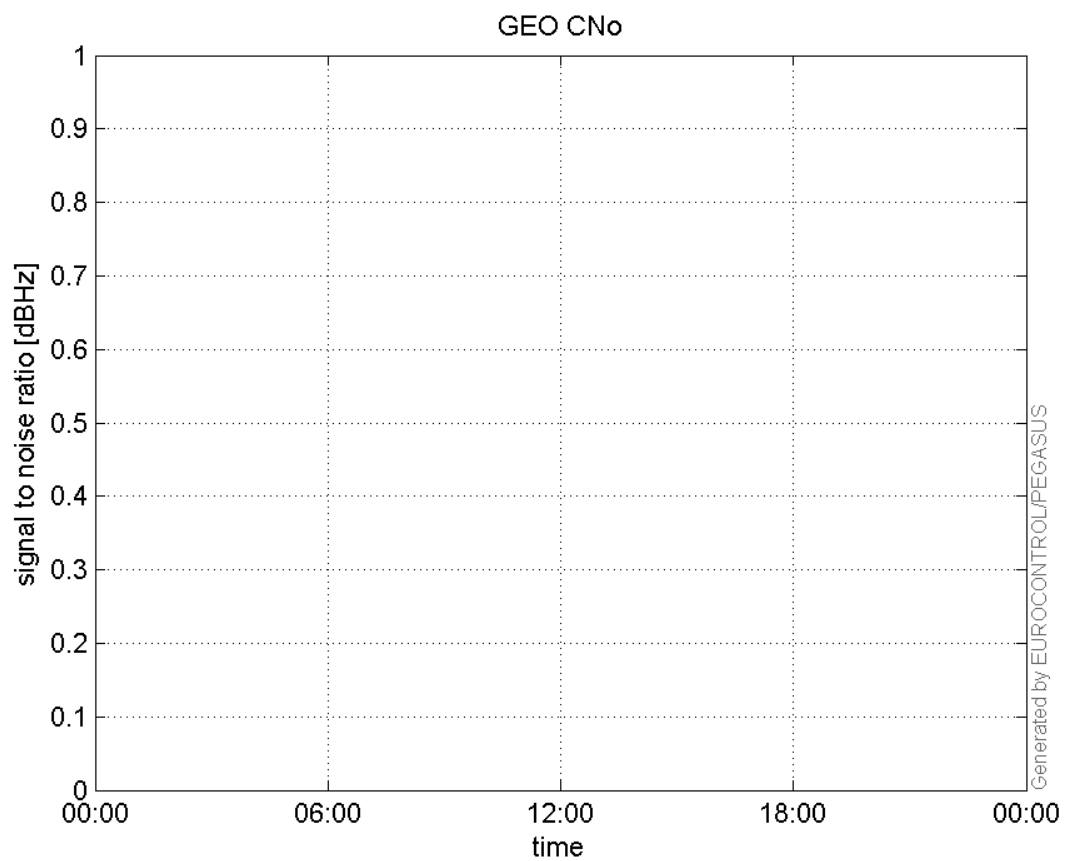
L1 CNo:



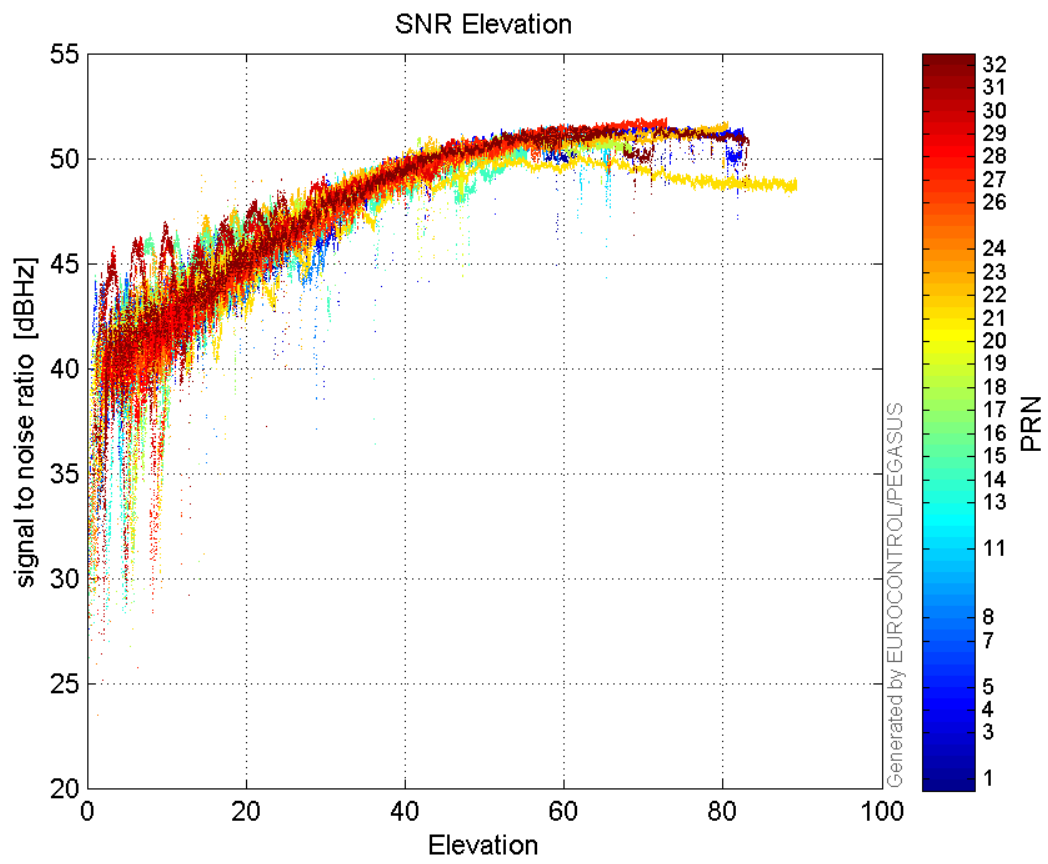
L2 CNo:



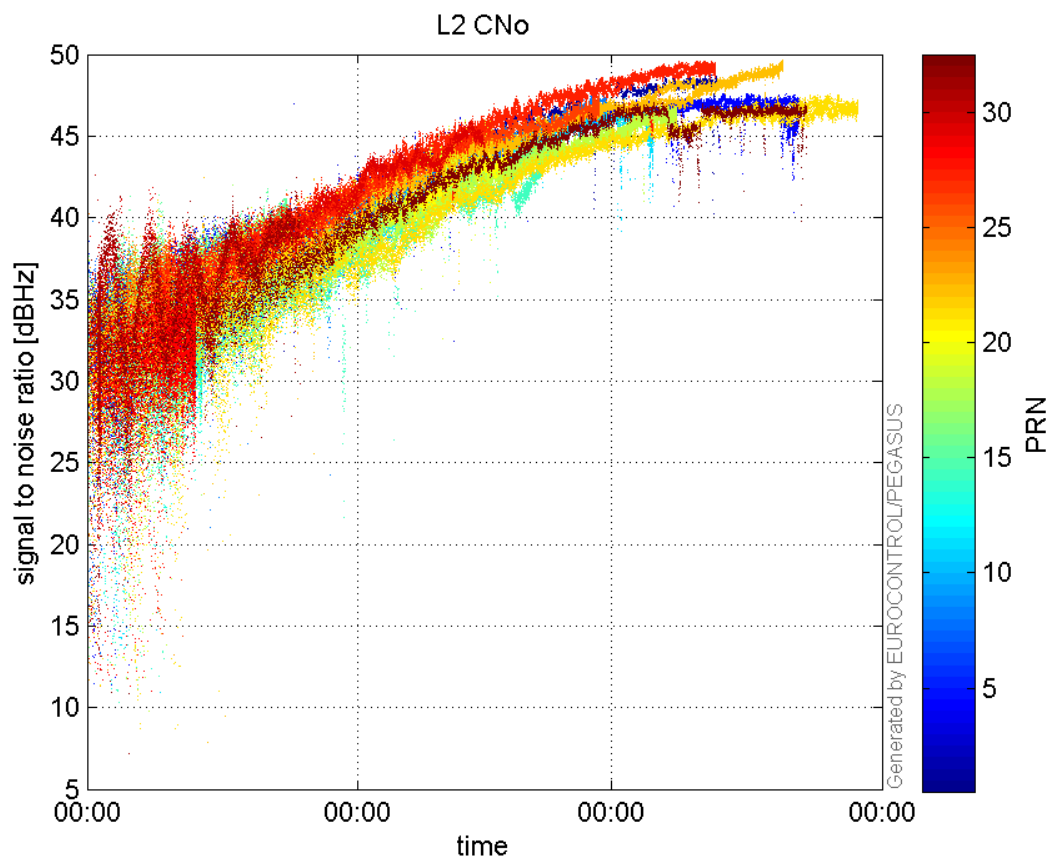
GEO CNo:



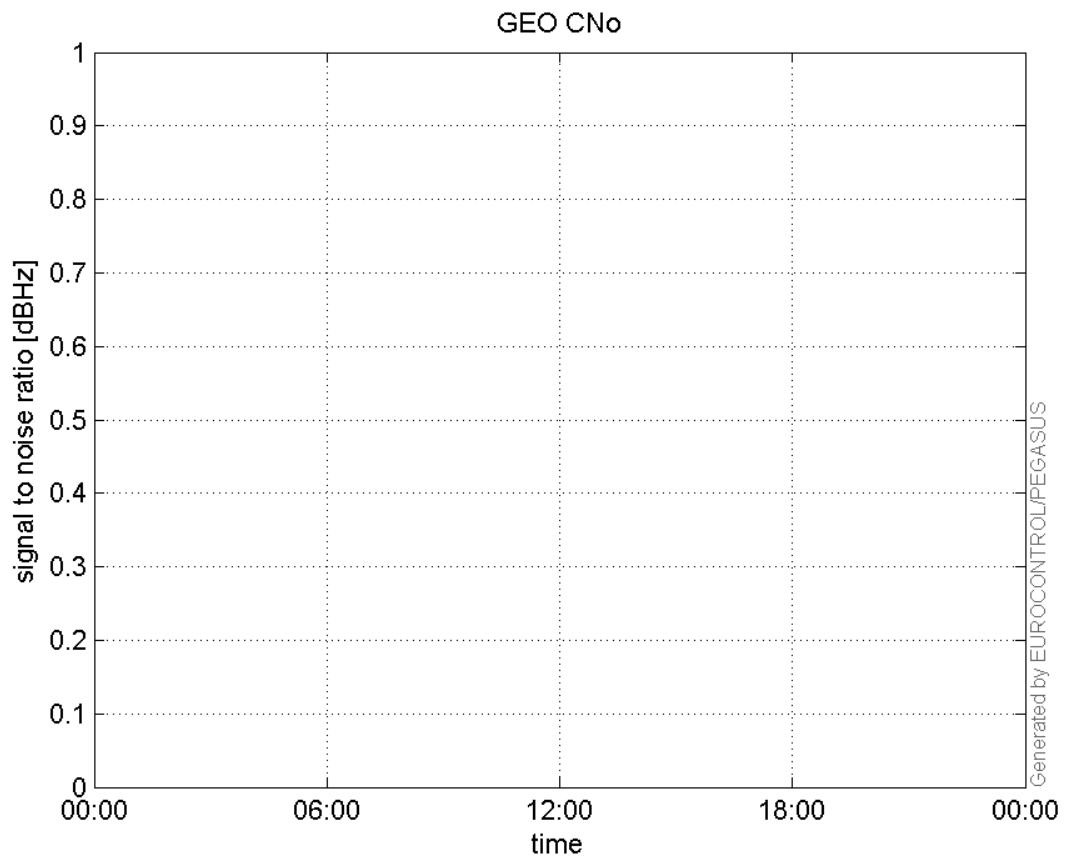
SNR Elevation:



L2 CNo:

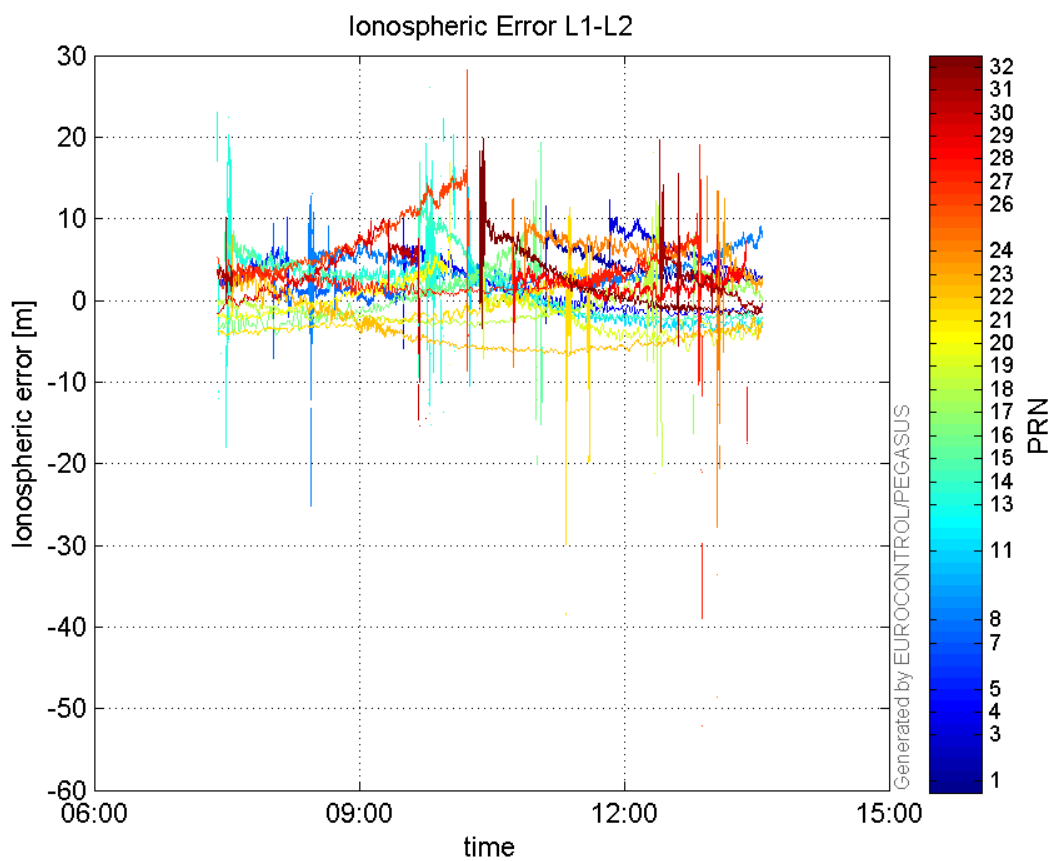


GEO CNo:



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:/PegasusDat/Jobs/2015_10_27EGNOS/02_Convertor/02_Convertor
output_prefix	system	D:/PegasusDat/Jobs/2015_10_27EGNOS/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	30.4297
init_alt	results	235.0175
mi_numbers	results	0