

PRELIMINARY REPORT OF 070109

last update on Tue Jan 9 16:22:15 GMT 2007

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1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA_WVS_1P), global monitoring products (ASA_GM1_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

2 - Summary

2.1 - Instrument Unavailability

No unavailabilities during the reported period.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2007-01-08 00:00:00 to 2007-01-09 16:22:15

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	0	0	0	1	0
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	0	0	0	1	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	0	0	0	1	0
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	0	0	0	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	49	52	63	6	31
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	49	52	63	6	31
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	52	63	6	31
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	49	52	63	6	31

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

2.4 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20070108 084151
H	20070109 081014

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
☒

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.967385	0.007655	0.021290
7	P1	-3.130908	0.024152	0.037030
11	P1	-4.113879	0.025924	0.011036
15	P1	-6.340932	0.017272	0.035288
19	P1	-3.680378	0.004897	-0.021391
22	P1	-4.667059	0.014663	-0.017920
26	P1	-3.964369	0.008592	0.018852
30	P1	-5.909870	0.008644	-0.019837
3	P1	-16.575346	0.261255	0.113396
7	P1	-17.264582	0.189441	0.042257
11	P1	-17.197382	0.501418	-0.180816
15	P1	-13.036183	0.137118	0.085646
19	P1	-15.038582	0.097687	-0.090204
22	P1	-15.774112	0.518300	0.046955
26	P1	-15.077874	0.182790	0.091984
30	P1	-17.517206	0.495016	0.024798

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.798771	0.094126	0.024165
7	P2	-21.695808	0.092830	0.071449
11	P2	-15.560251	0.102092	0.052305
15	P2	-7.100461	0.108428	0.044575
19	P2	-9.183987	0.103153	0.050700
22	P2	-18.224804	0.096181	0.039540
26	P2	-16.600466	0.108035	0.022265
30	P2	-19.451180	0.089889	0.056056

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.239057	0.008815	0.020547
7	P3	-8.239057	0.008815	0.020547
11	P3	-8.239057	0.008815	0.020547
15	P3	-8.239057	0.008815	0.020547
19	P3	-8.239057	0.008815	0.020547
22	P3	-8.239057	0.008815	0.020547
26	P3	-8.239101	0.008815	0.020548
30	P3	-8.239101	0.008815	0.020548

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.930151	0.015335	0.003682
7	P1	-2.469348	0.018727	0.033091
11	P1	-2.849669	0.020009	0.047109
15	P1	-3.709082	0.032617	-0.020083
19	P1	-3.557956	0.020175	-0.002218
22	P1	-5.027026	0.023876	0.036315
26	P1	-6.047147	0.030460	-0.000223
30	P1	-5.357236	0.038400	-0.013508
3	P1	-11.748881	0.091985	0.030956
7	P1	-10.063246	0.113842	0.064041
11	P1	-10.361445	0.106593	0.012567
15	P1	-10.741453	0.180183	-0.015176
19	P1	-15.739220	0.131531	-0.022727
22	P1	-21.598236	1.453449	0.056015

26	P1	-16.040737	0.342886	0.135233
30	P1	-17.898491	0.400096	-0.050182

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.468010	0.129096	0.064247
7	P2	-22.216524	0.343681	0.090066
11	P2	-10.864906	0.124127	0.056052
15	P2	-4.991153	0.248778	0.043432
19	P2	-6.975852	0.279406	0.046814
22	P2	-8.258851	0.140108	0.032705
26	P2	-24.349459	0.210273	0.000044
30	P2	-21.941200	0.164510	0.088495

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.094350	0.004231	0.020877
7	P3	-8.094174	0.004213	0.022036
11	P3	-8.094367	0.004225	0.021436
15	P3	-8.094131	0.004215	0.020925
19	P3	-8.094186	0.004237	0.021305
22	P3	-8.094121	0.004234	0.021218
26	P3	-8.094410	0.004221	0.021122
30	P3	-8.094288	0.004194	0.021715

4.3 - cal pulses monitoring (all rows)

4.3.1 - Evolution for WVS



4.3.2 - Evolution for GM1



5 - RAW data statistics

No anomalies observed.

5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000560907
	stdev	1.66708e-07
MEAN Q	mean	0.000494306
	stdev	2.12710e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140439
	stdev	0.00125340
STDEV Q	mean	0.140844
	stdev	0.00127450



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007010[789]

The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070107_003113_000001412054_00274_25378_6459.N1	0	36
ASA_WSM_1PNPDE20070107_145122_000000852054_00283_25387_7247.N1	0	35
ASA_WSM_1PNPDE20070107_181429_000000852054_00285_25389_7367.N1	0	61
ASA_WSM_1PNPDE20070108_000036_000000852054_00288_25392_7771.N1	0	36
ASA_WSM_1PNPDE20070108_013811_000001412054_00289_25393_7975.N1	0	40



7 - Doppler Analysis

Preliminary report. The data is not yet controlled

7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)	
<input type="checkbox"/>	
	Acsending
<input type="checkbox"/>	
	Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler	
<input type="checkbox"/>	
	Acsending
<input type="checkbox"/>	
	Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX	
<input type="checkbox"/>	

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

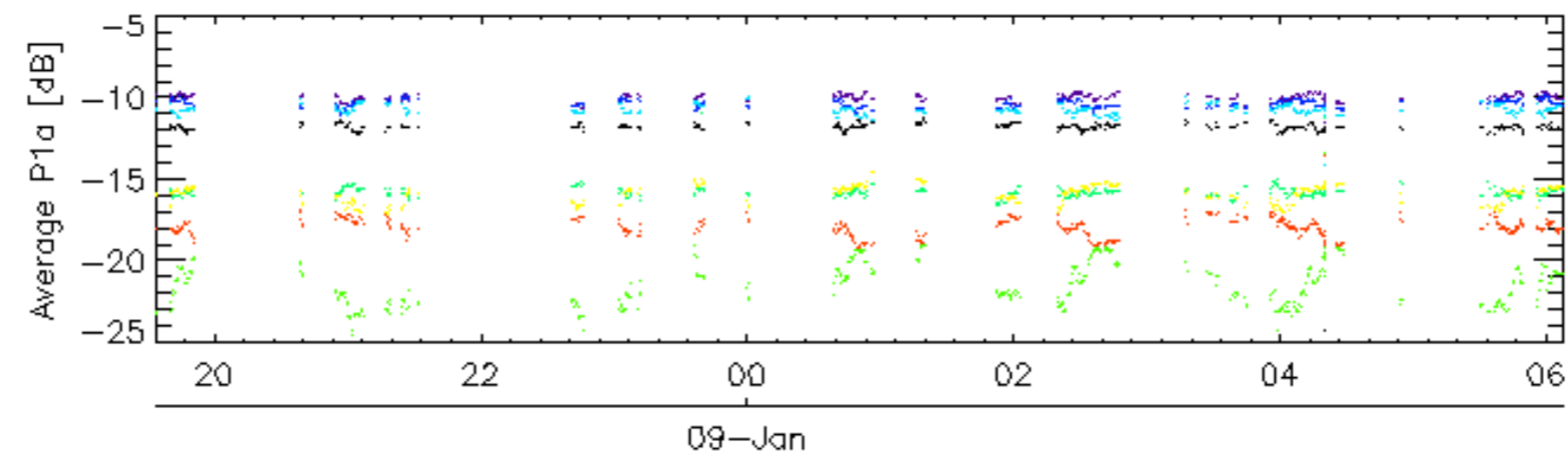
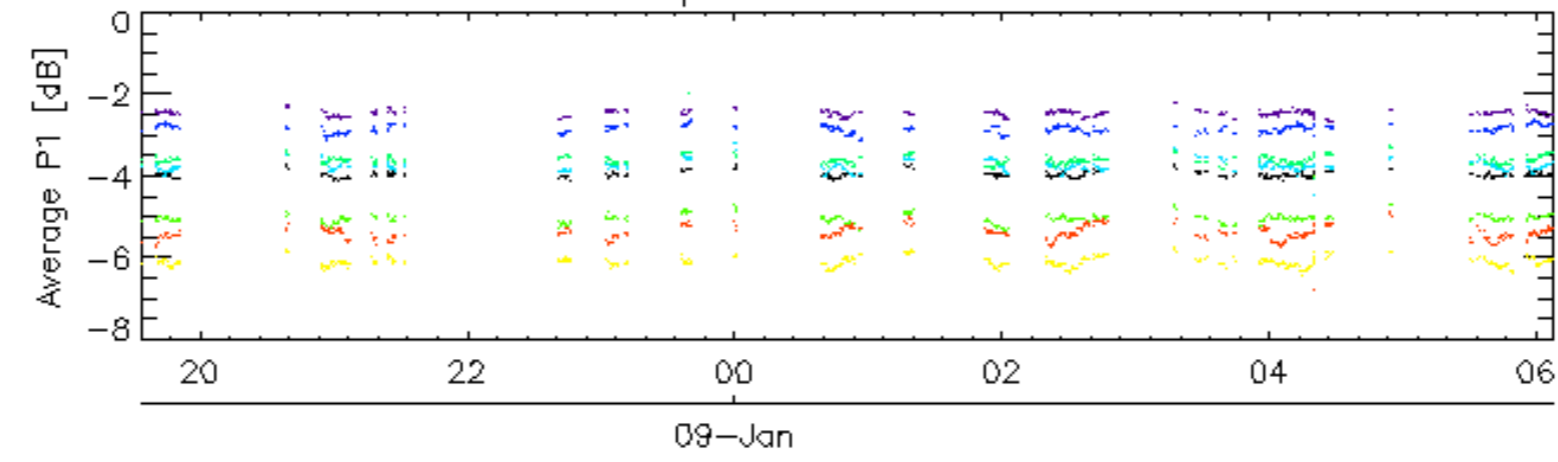
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

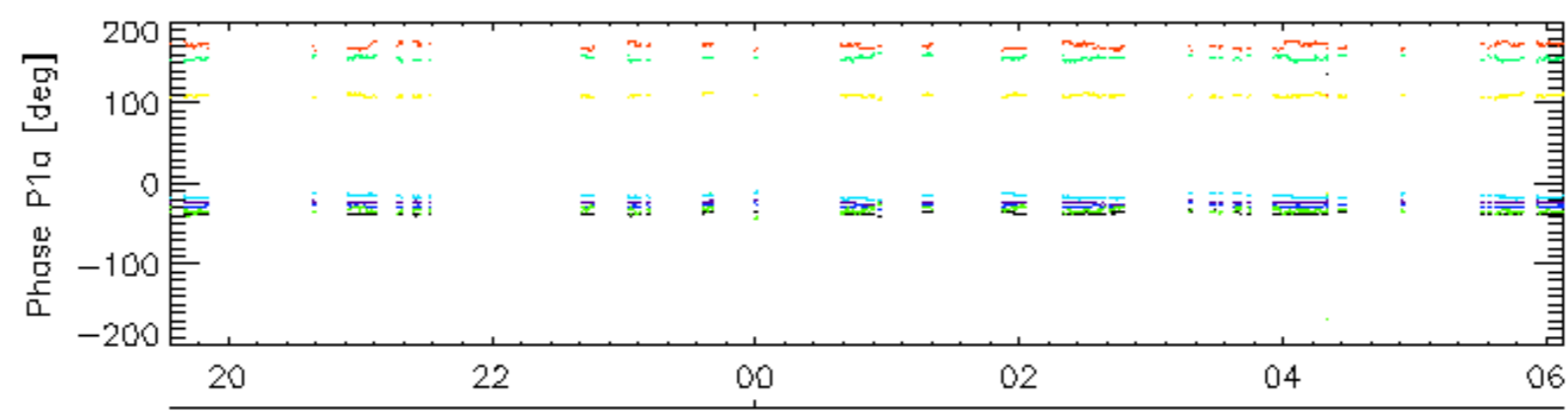
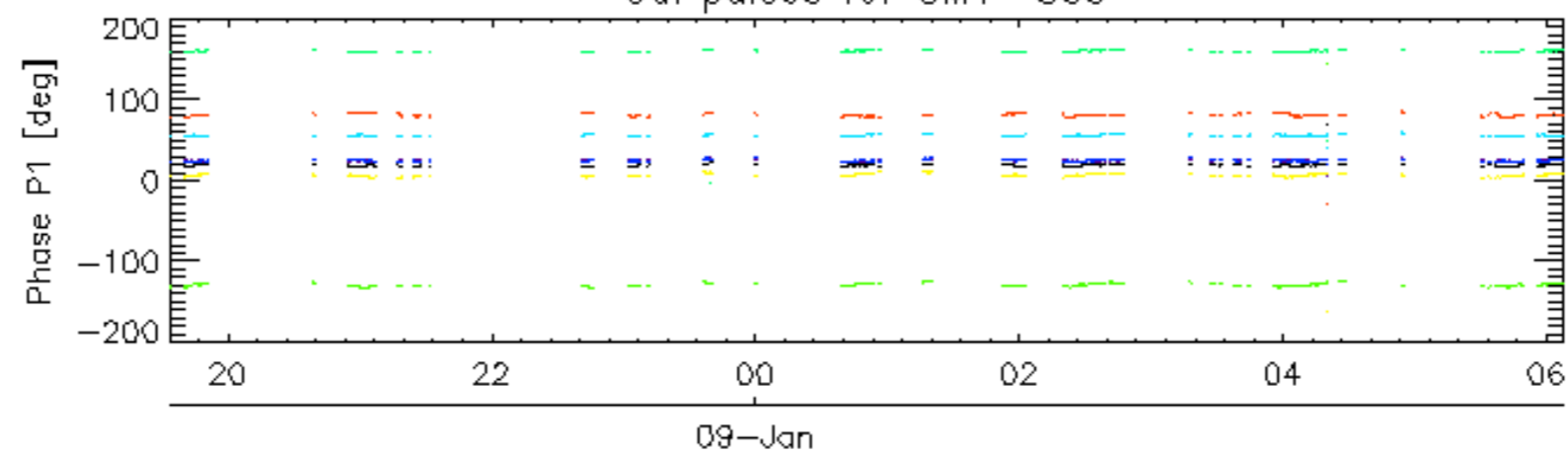
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

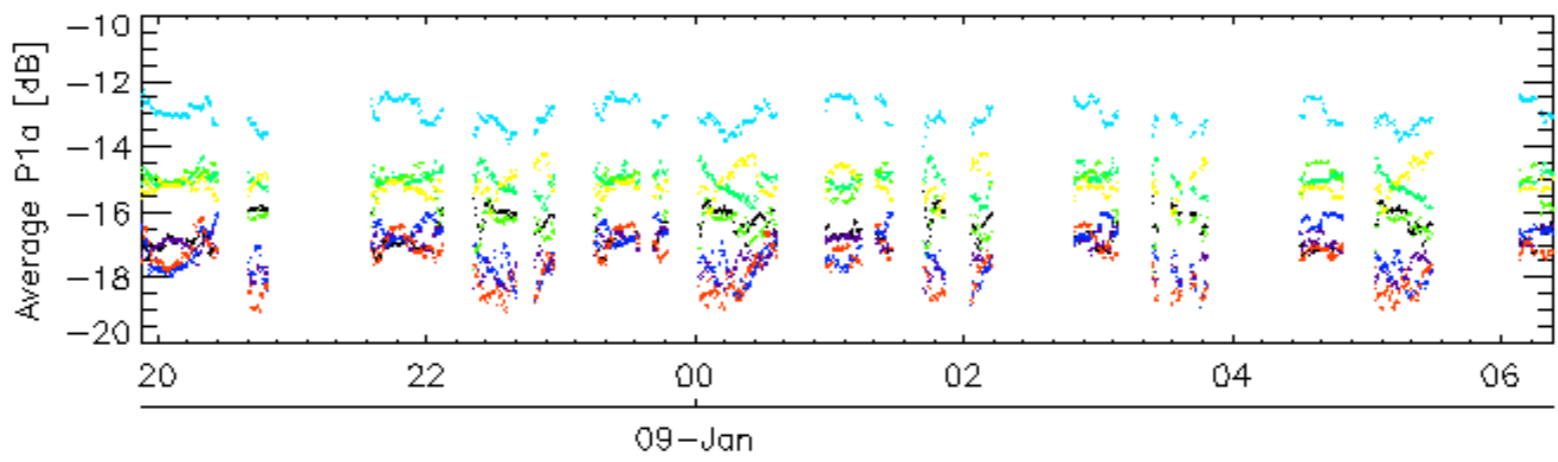
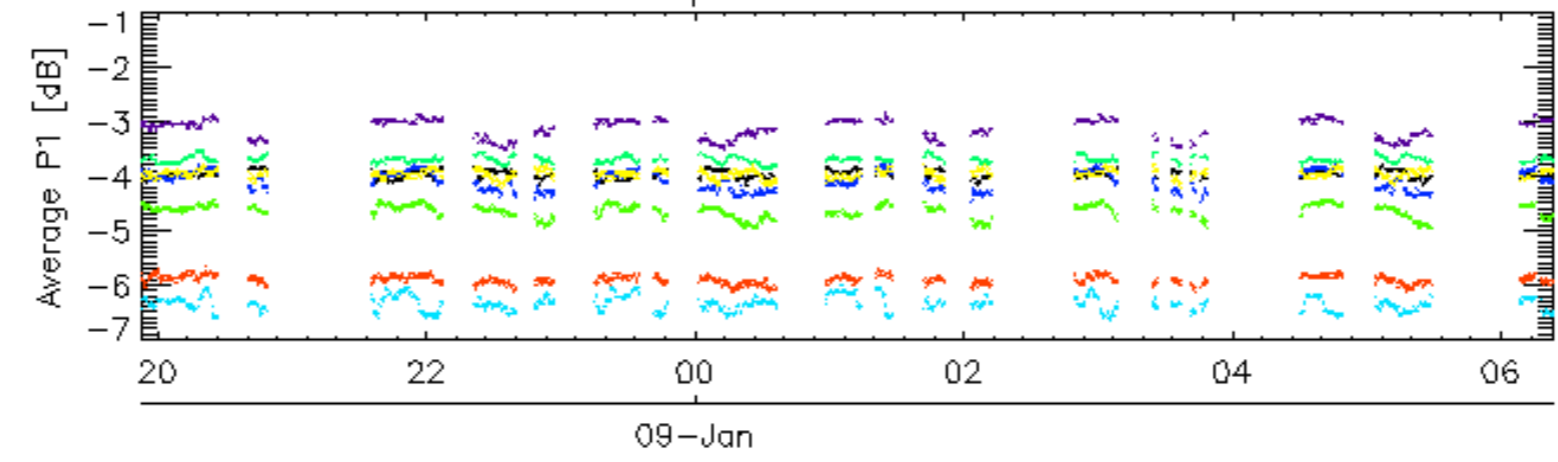


Cal pulses for GM1 SS3

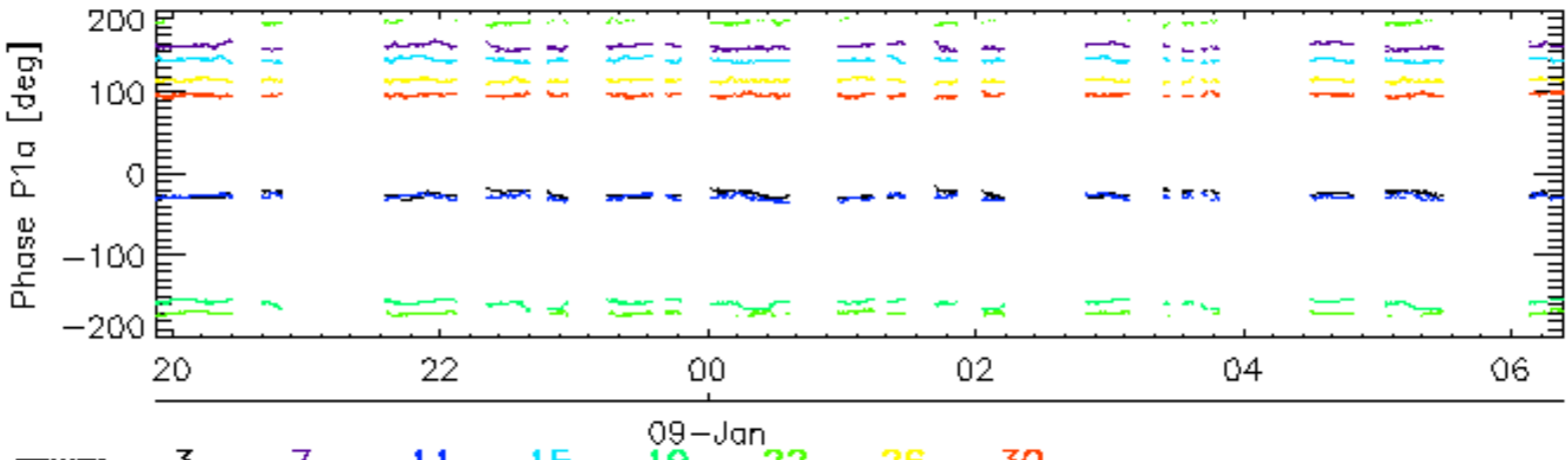
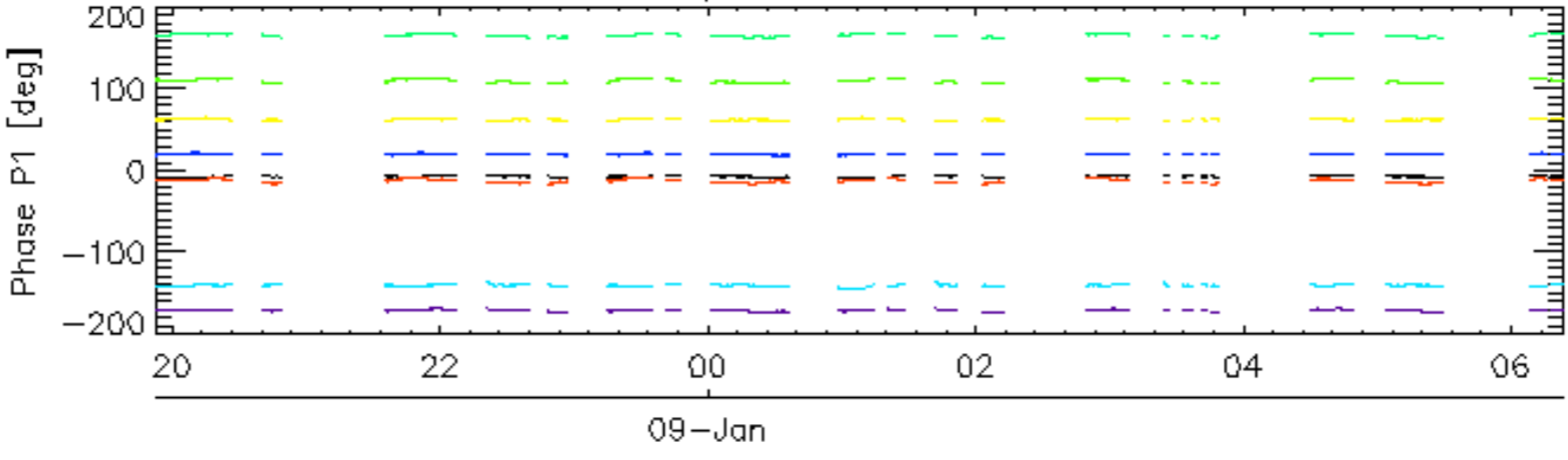


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

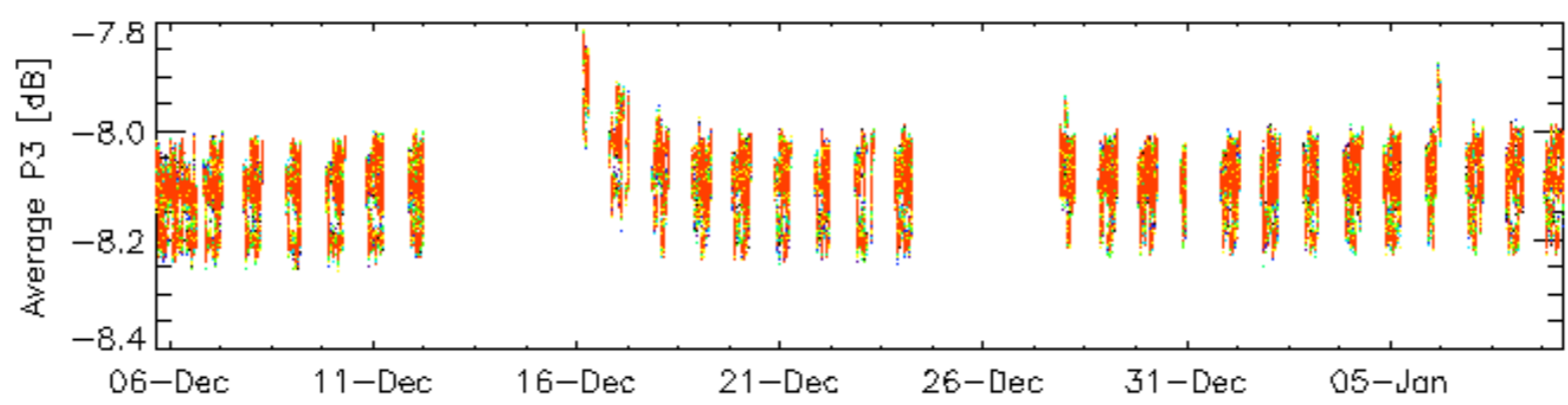
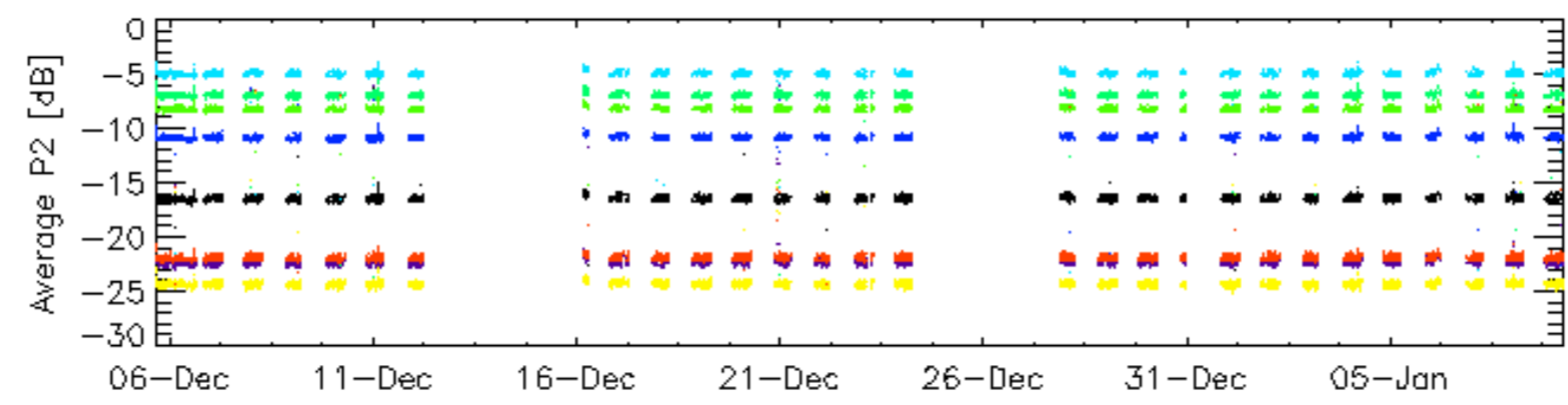
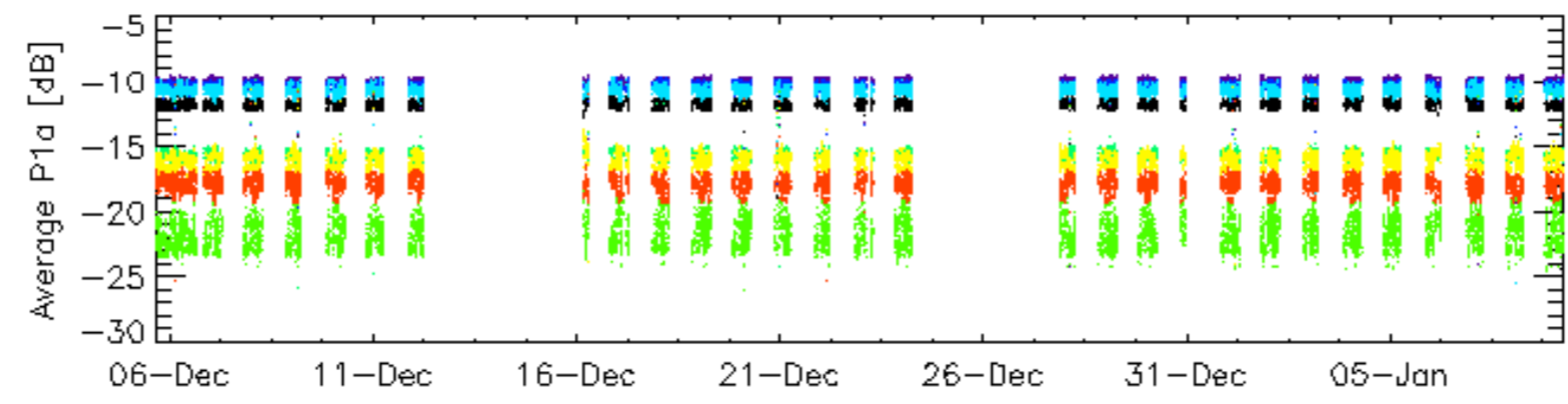
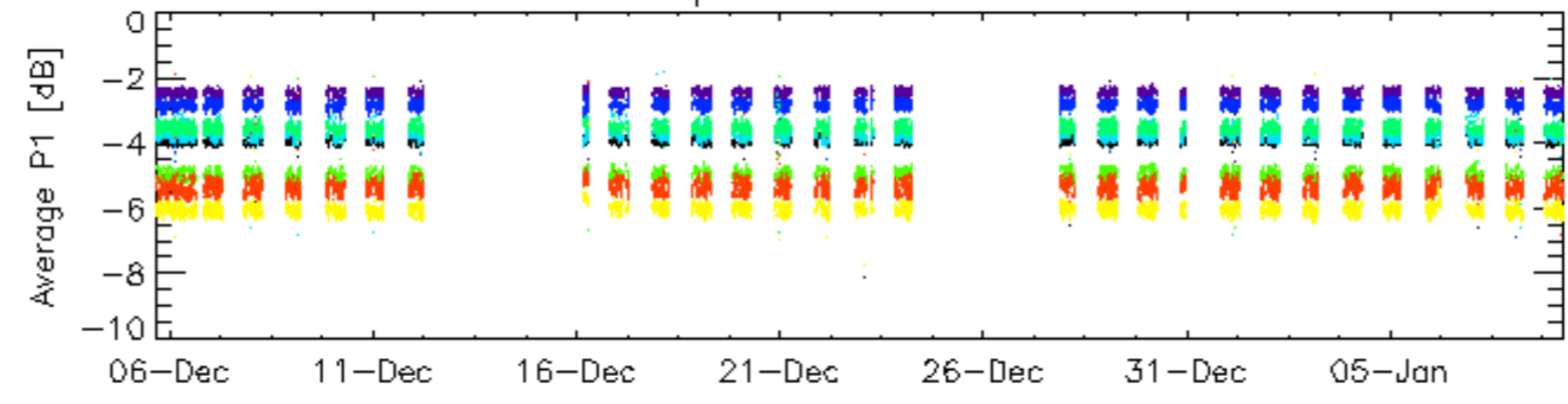


Cal pulses for WVS IS2



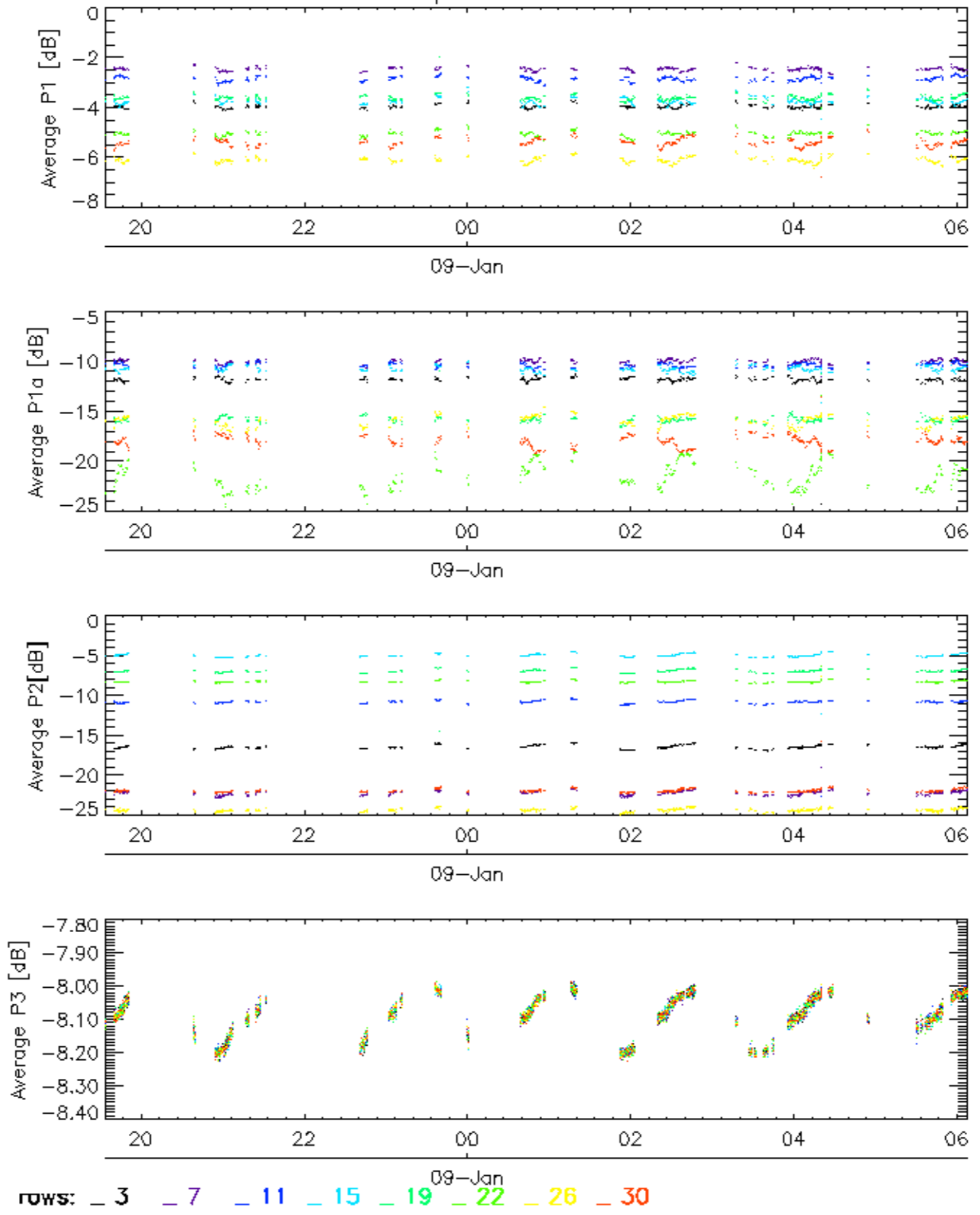
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

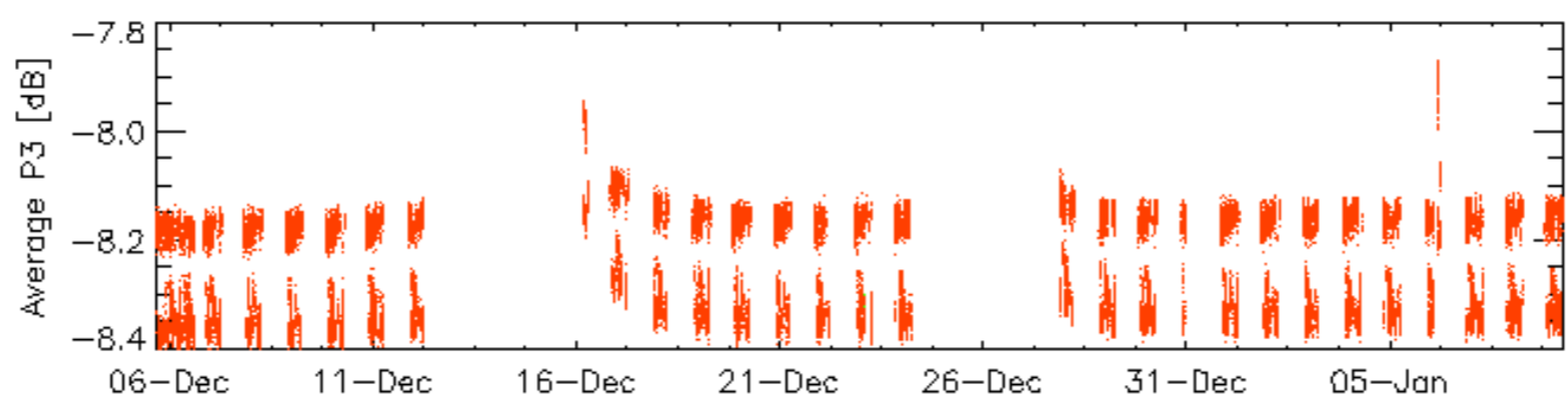
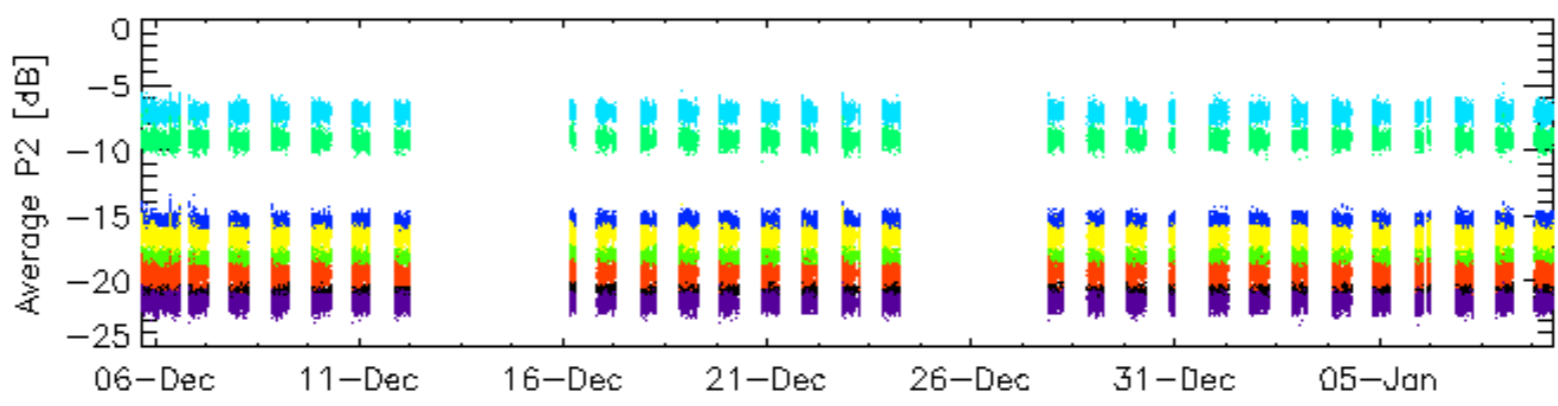
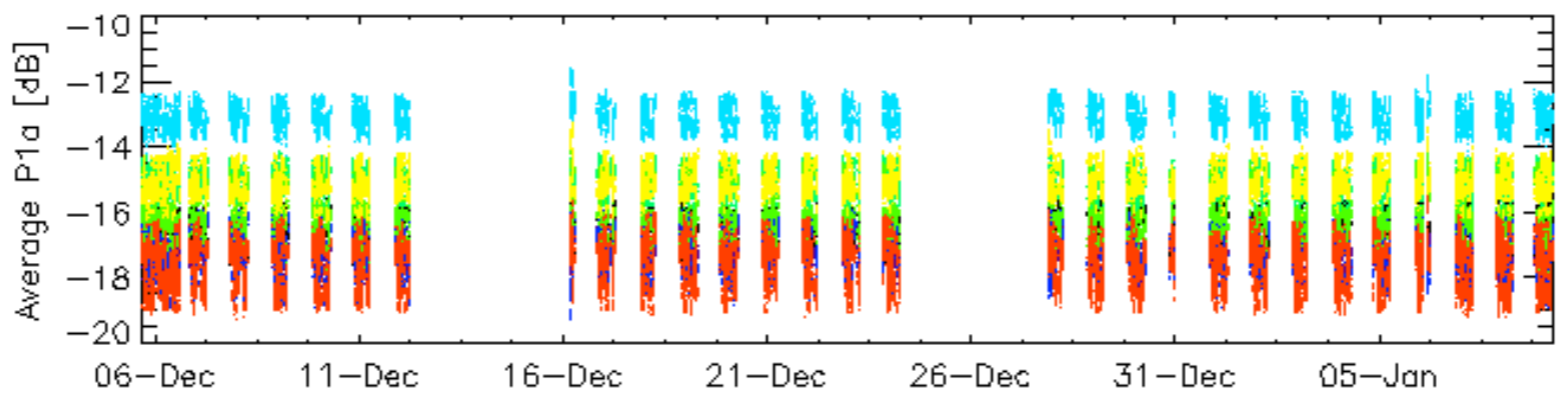
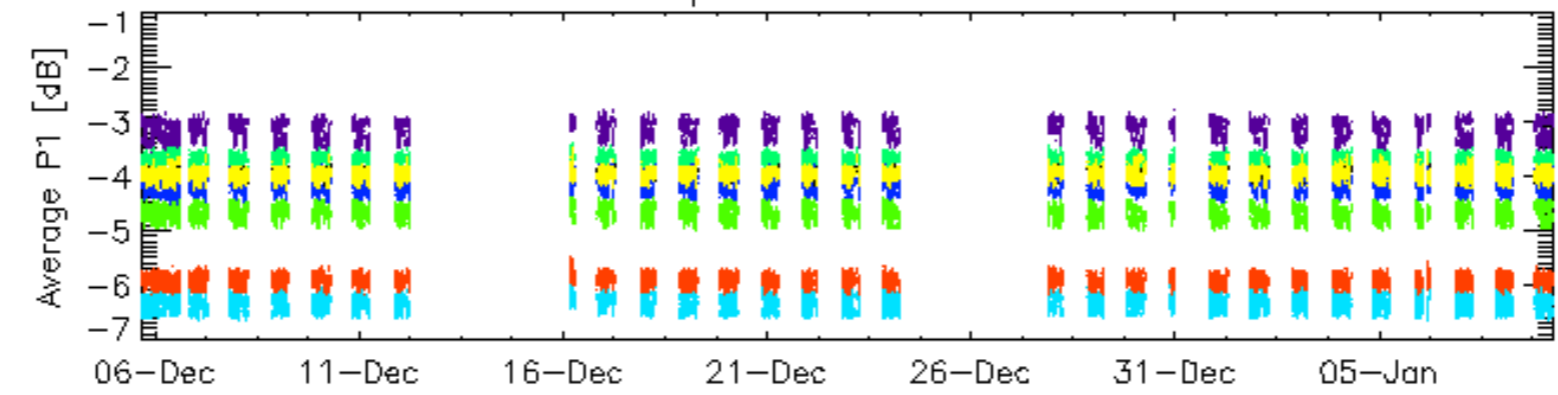


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

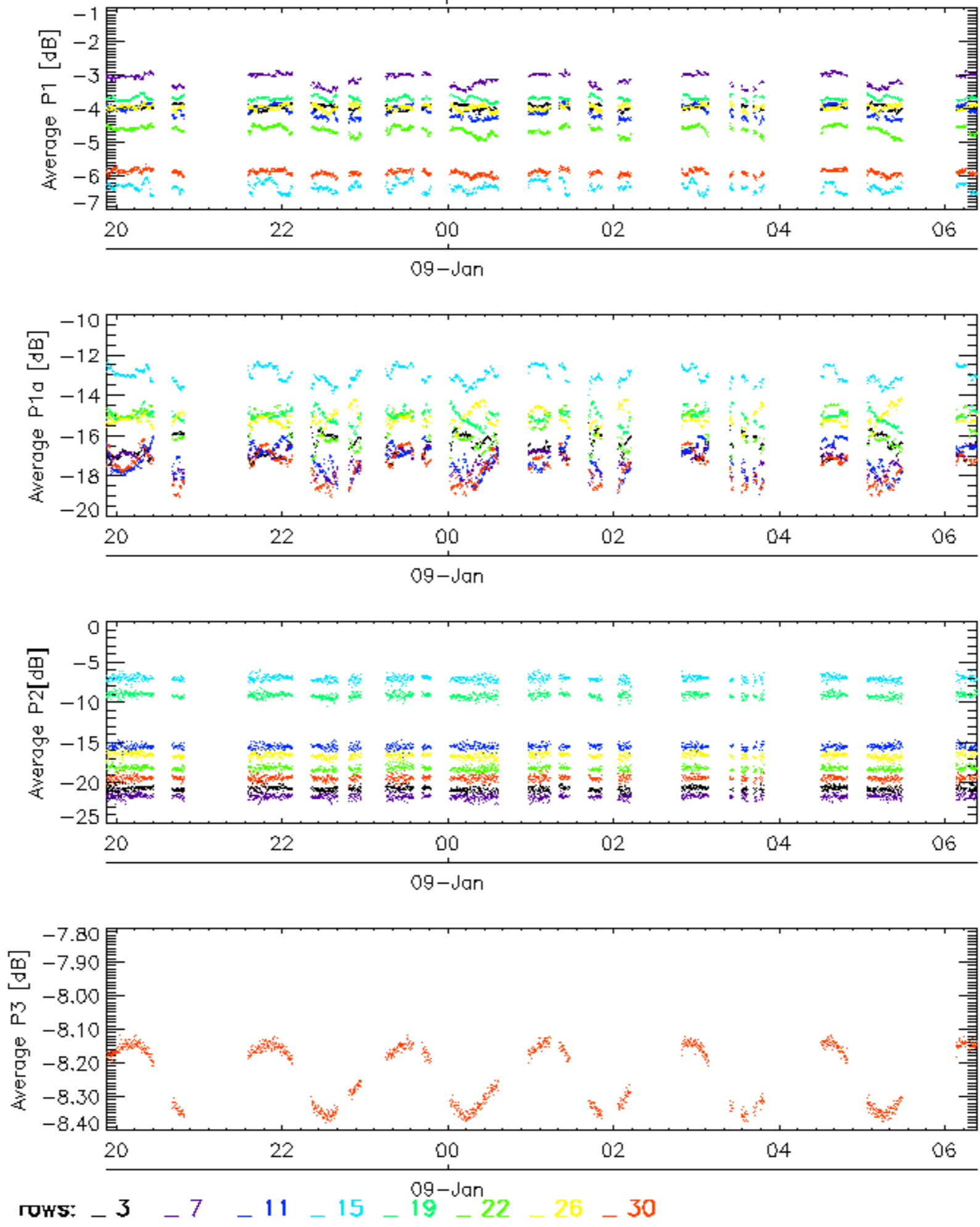


Cal pulses for WVS IS2



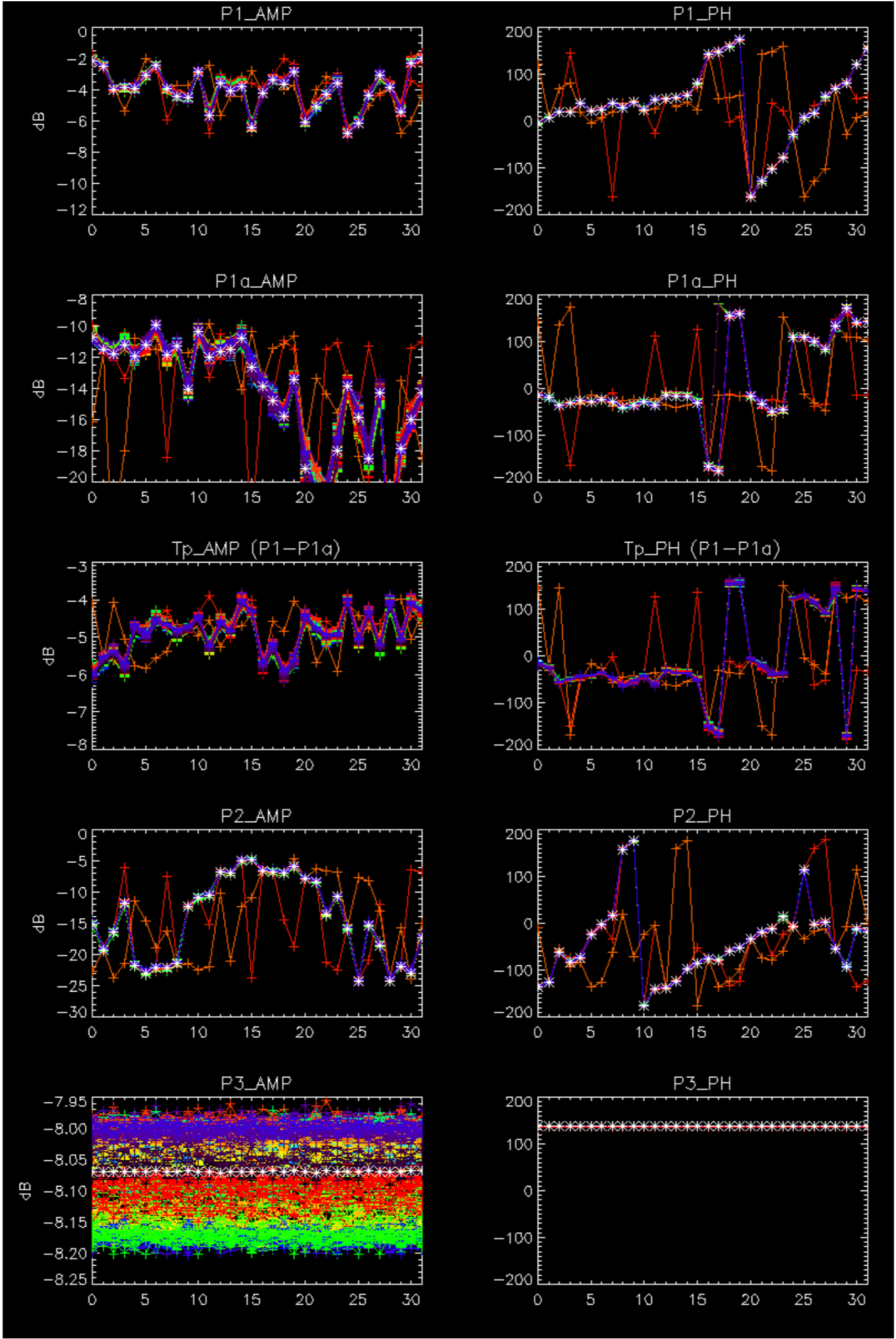
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

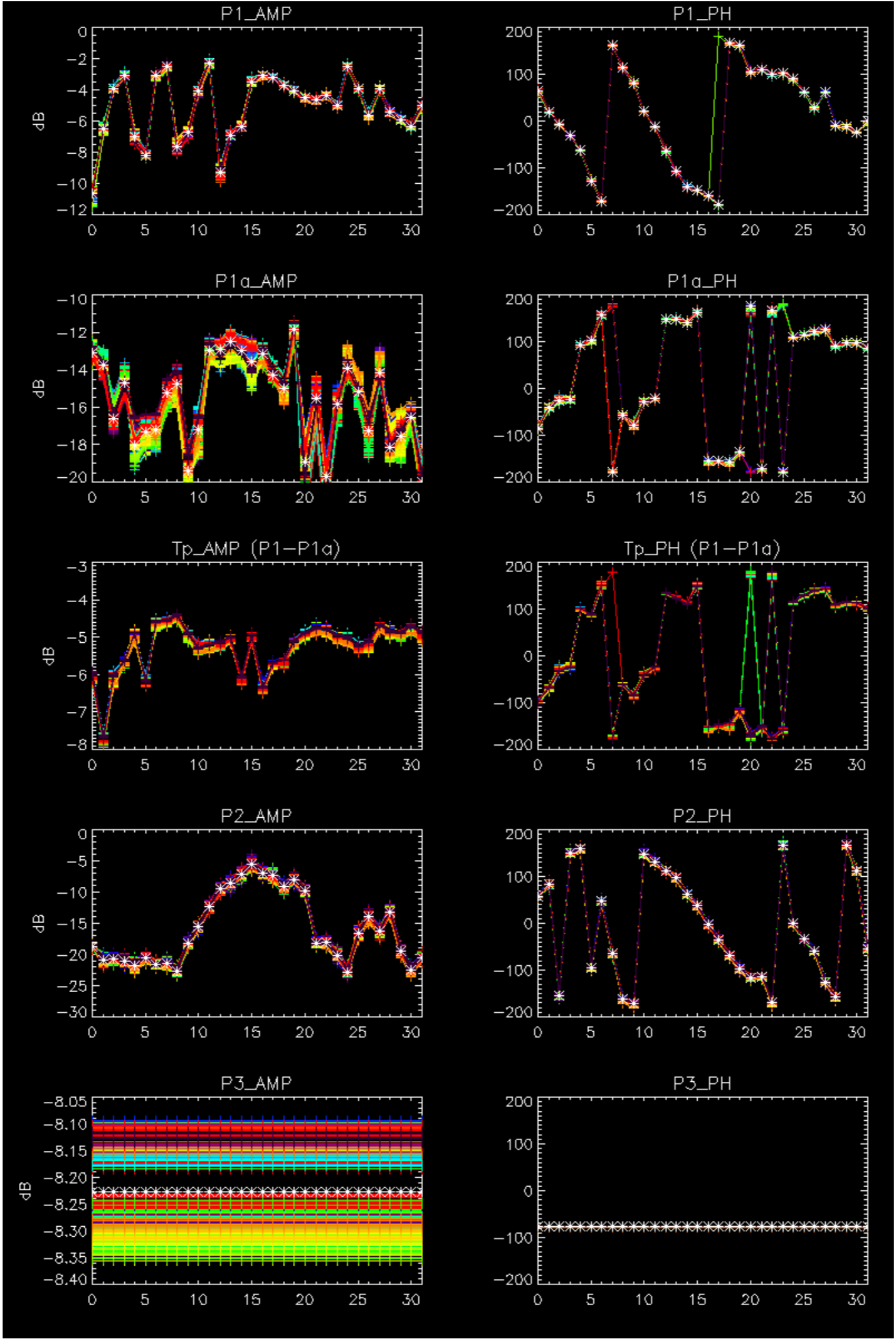
Cal pulses for WVS IS2



No anomalies observed on available browse products

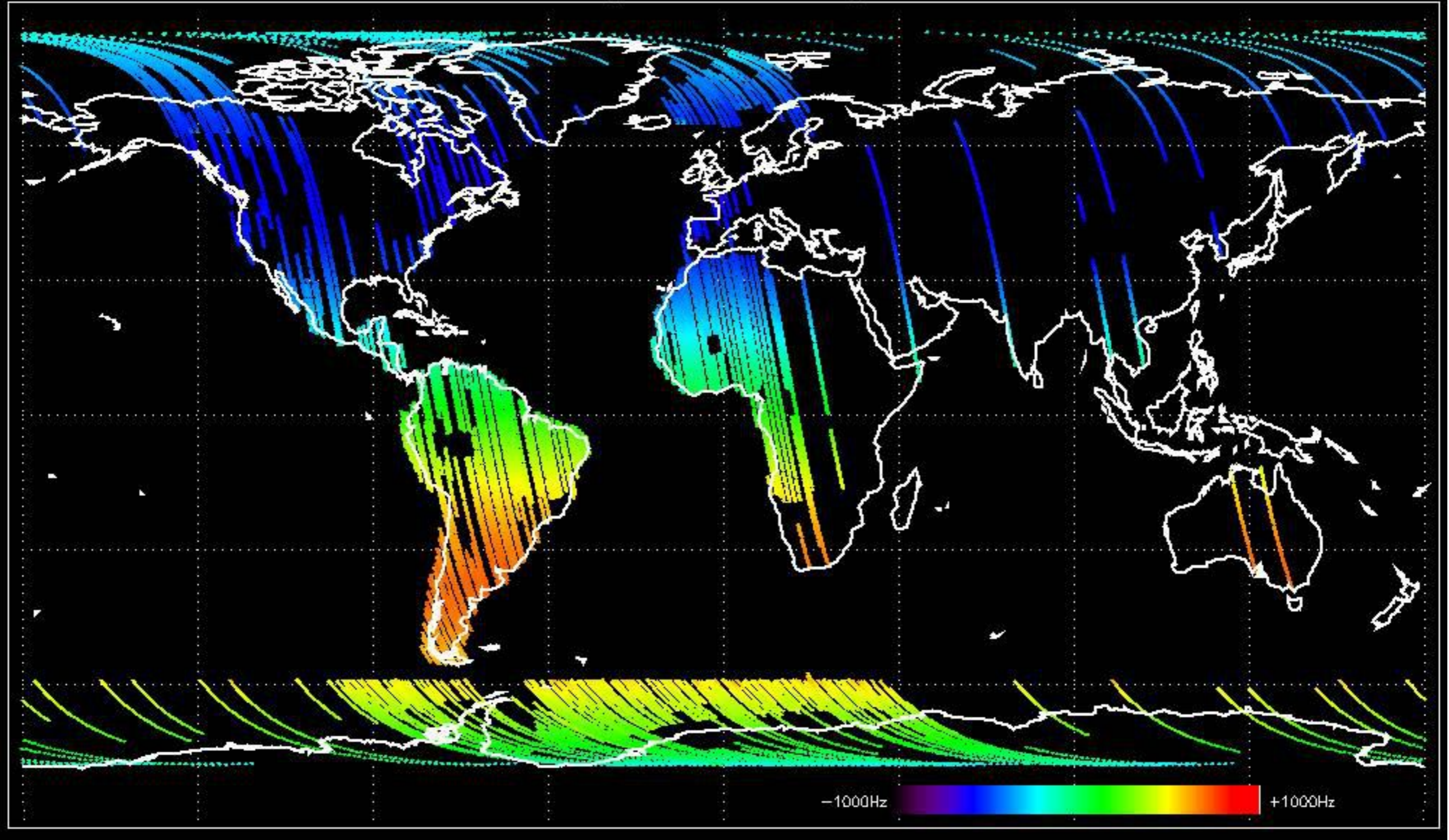
No anomalies observed.



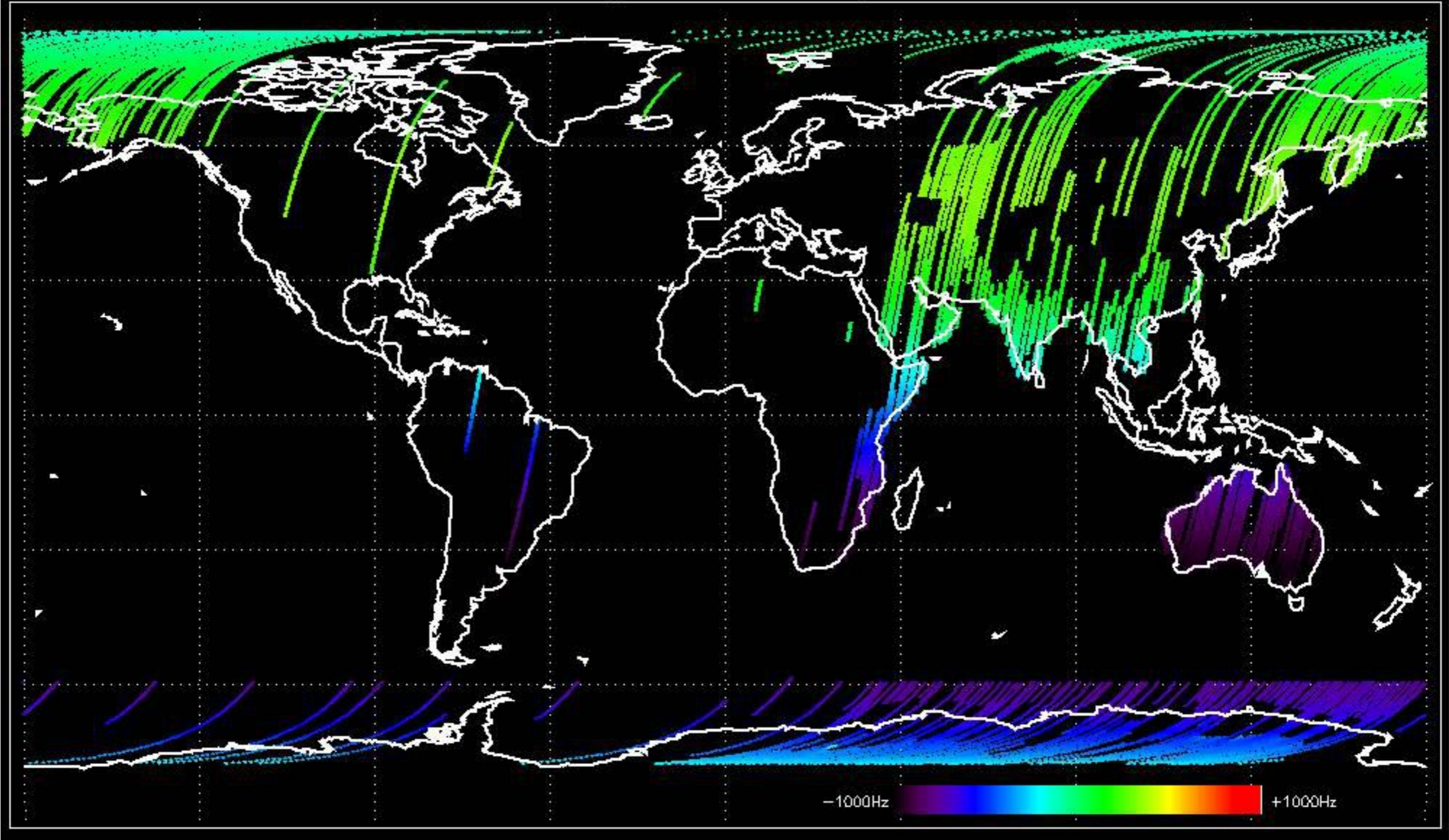


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

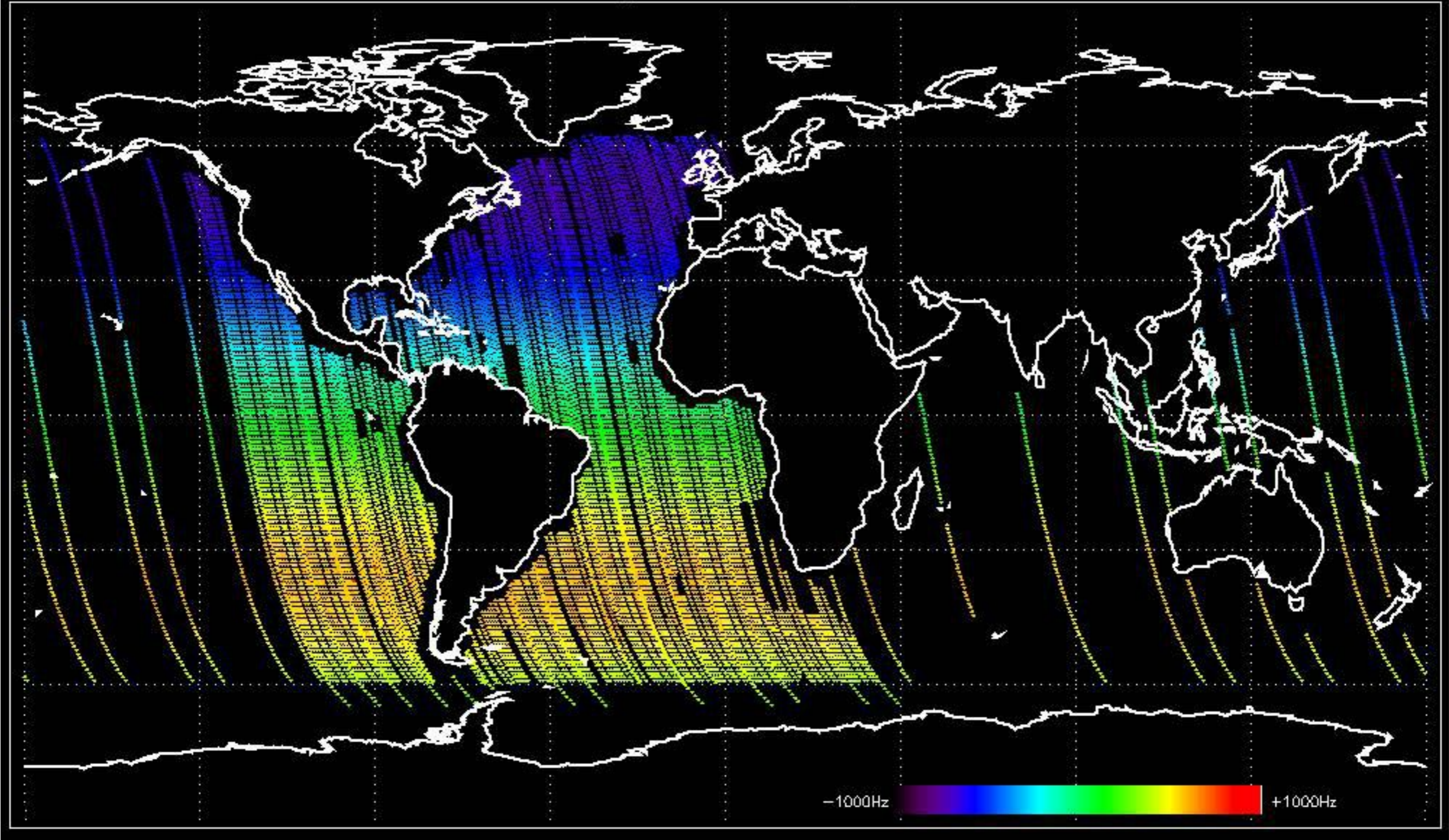
Doppler 'GM1' 'SS1' ascending



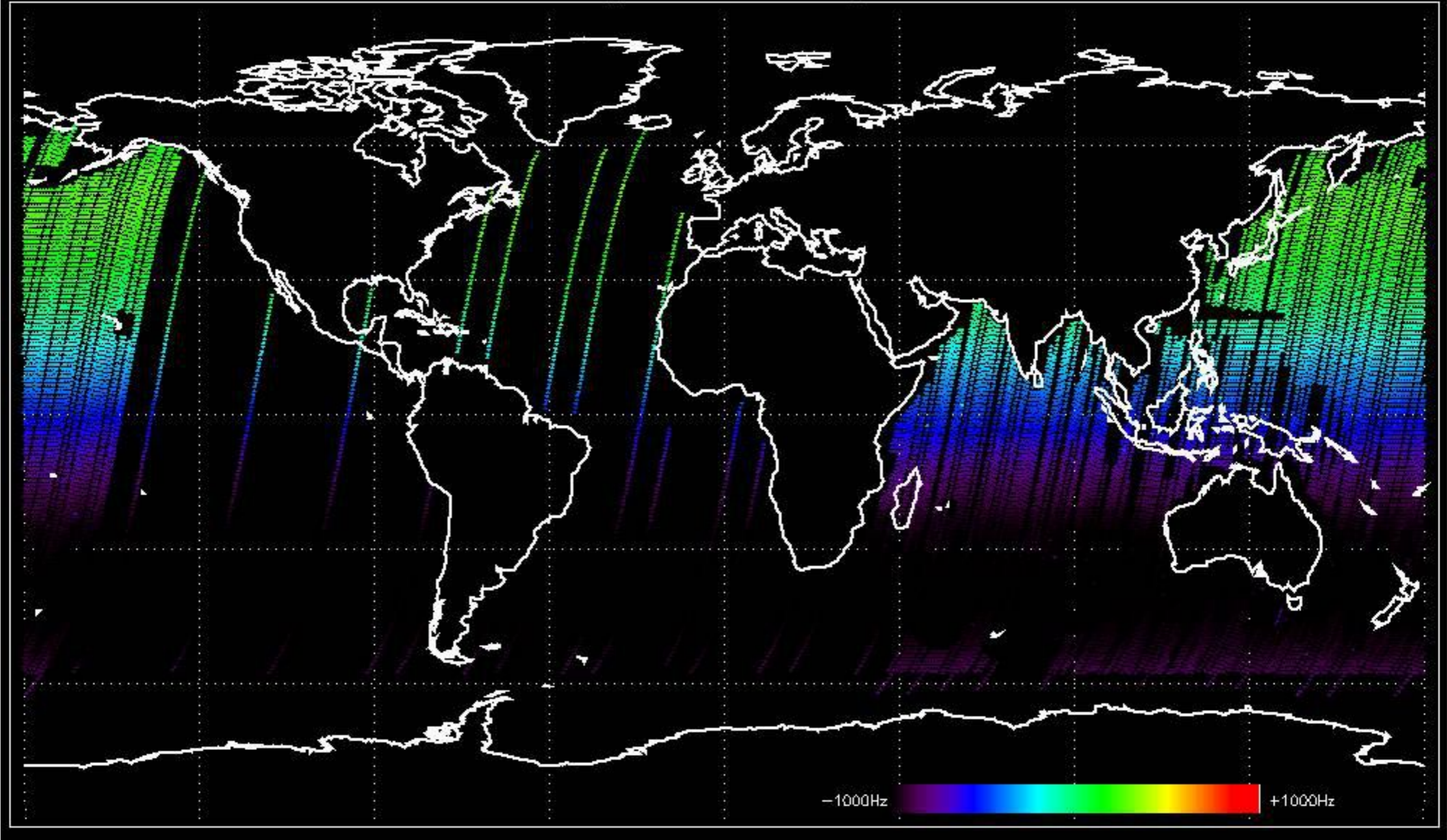
Doppler 'GM1' 'SS1' descending



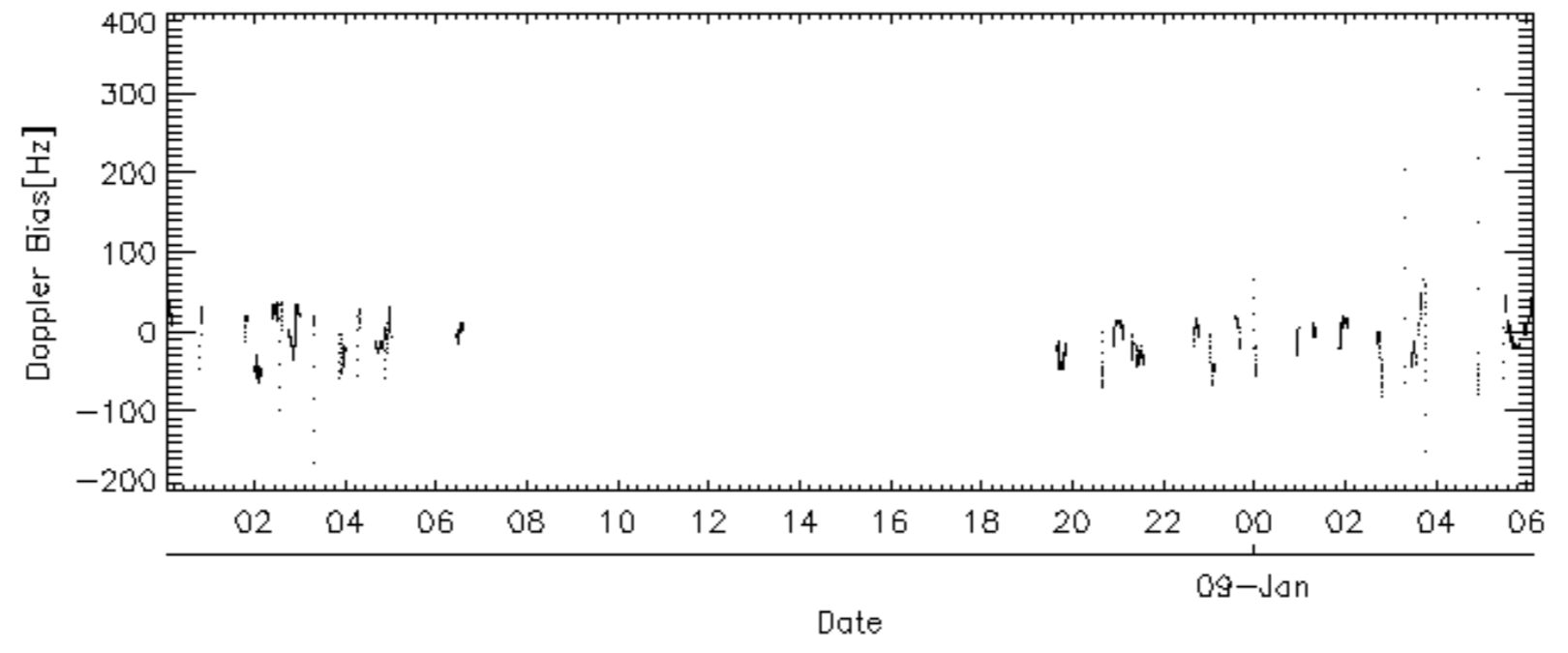
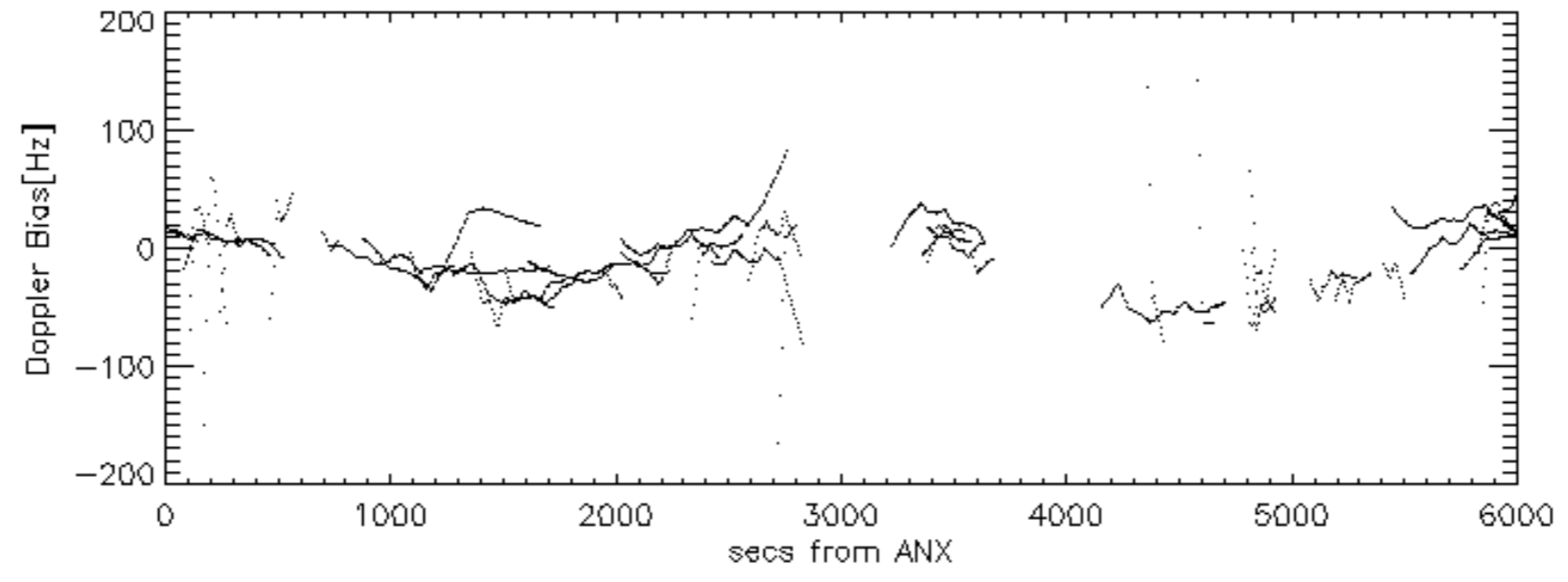
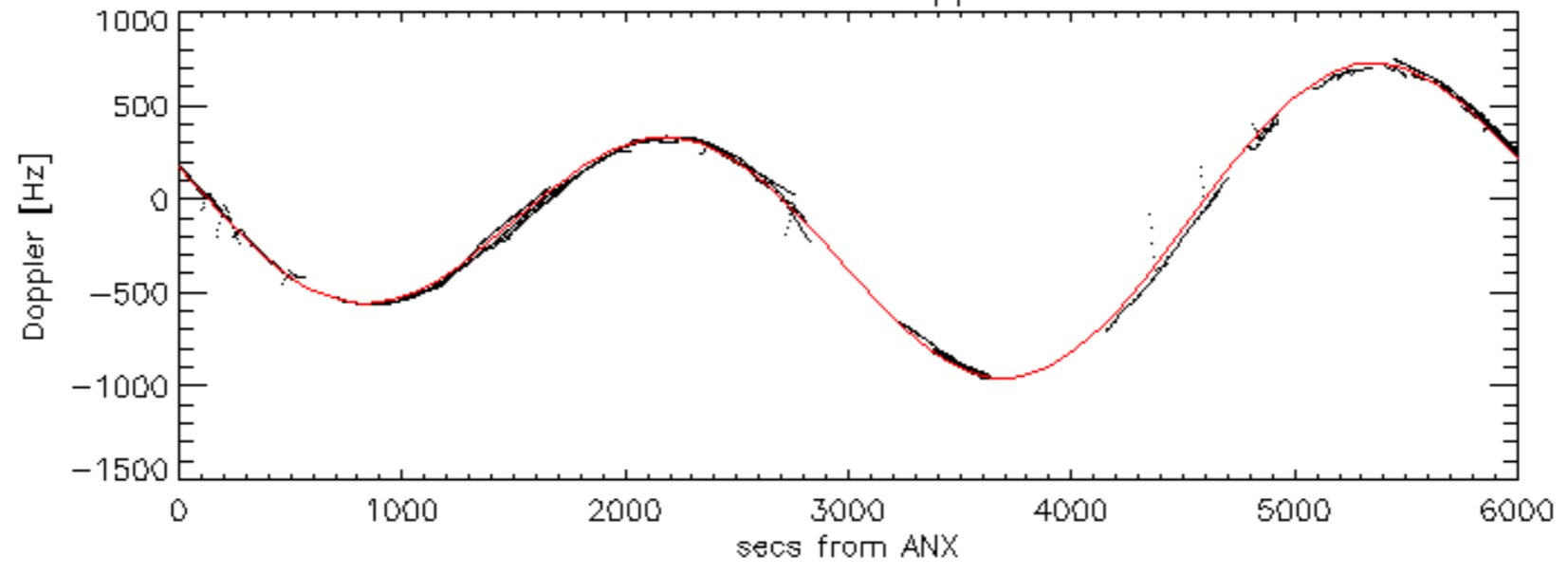
Doppler 'WVS' 'IS2' ascending

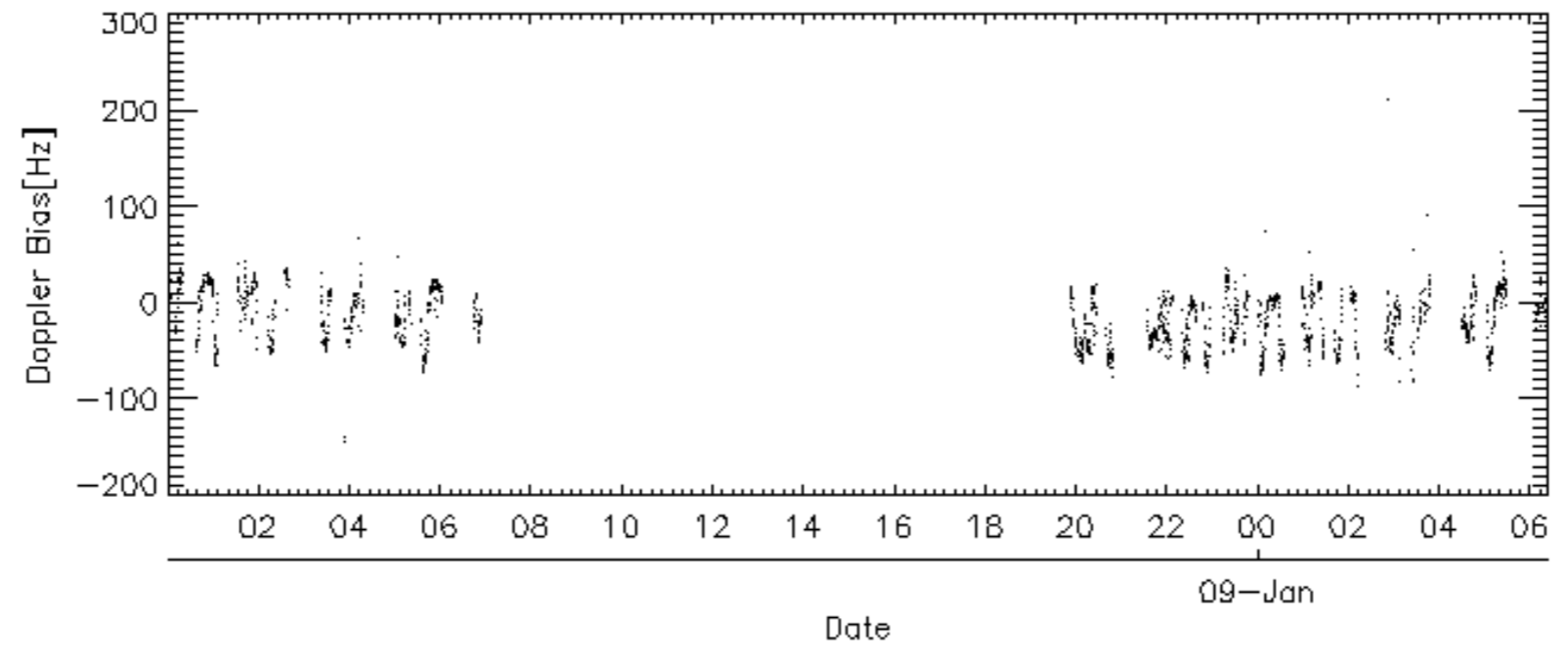
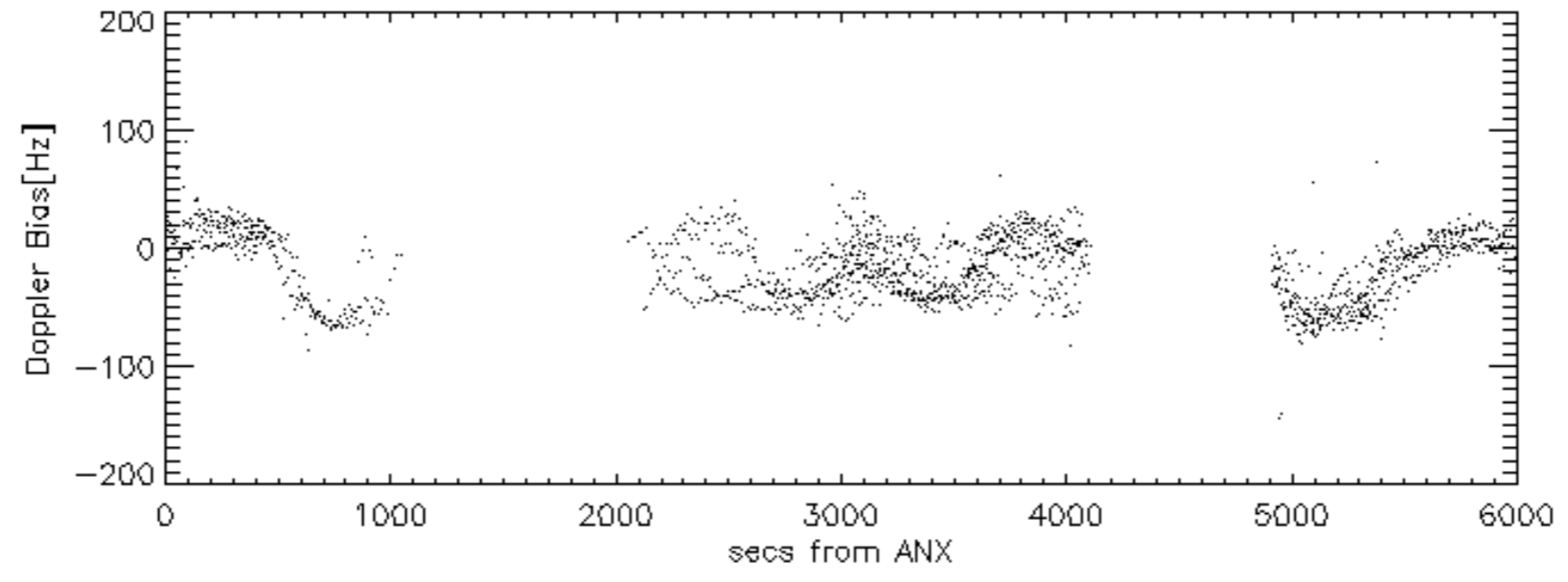
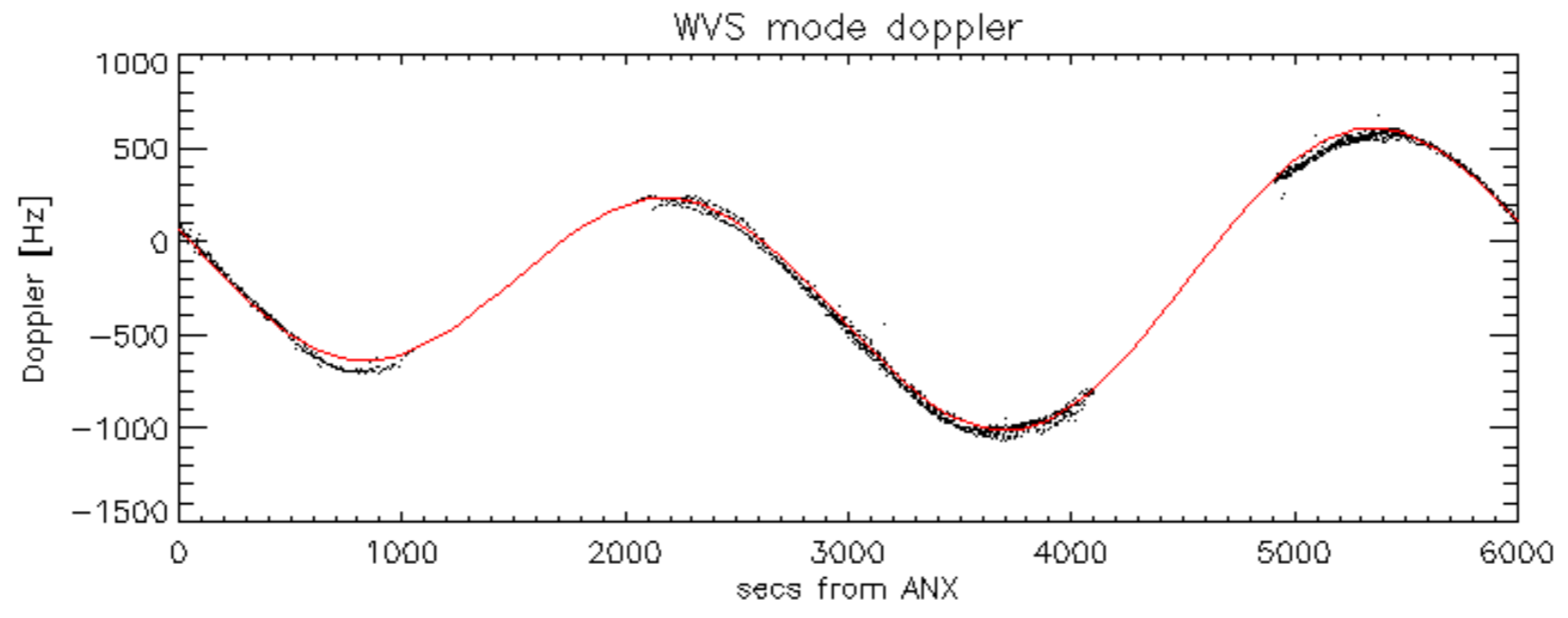


Doppler 'WVS' 'IS2' descending

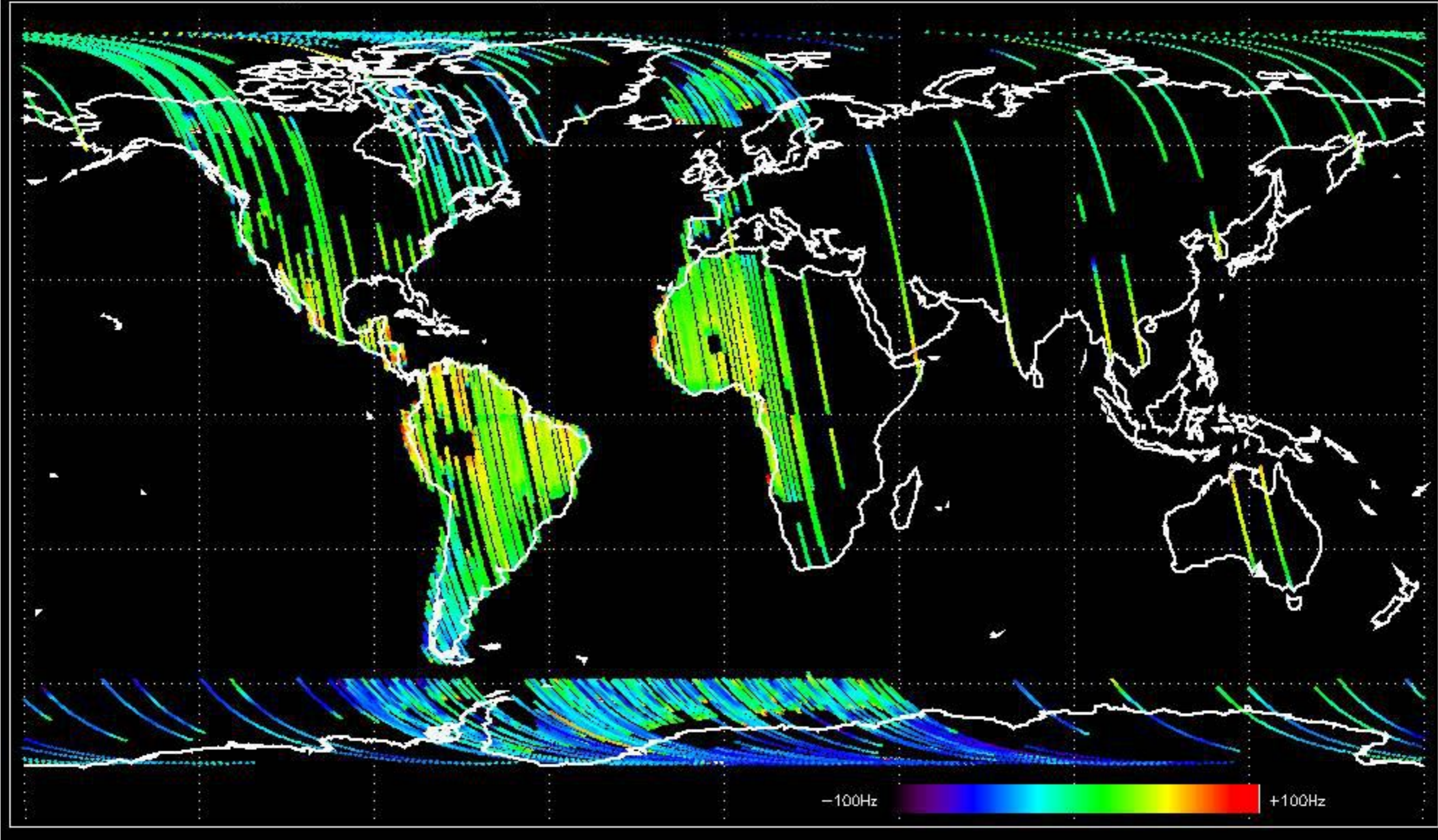


GM1 mode doppler

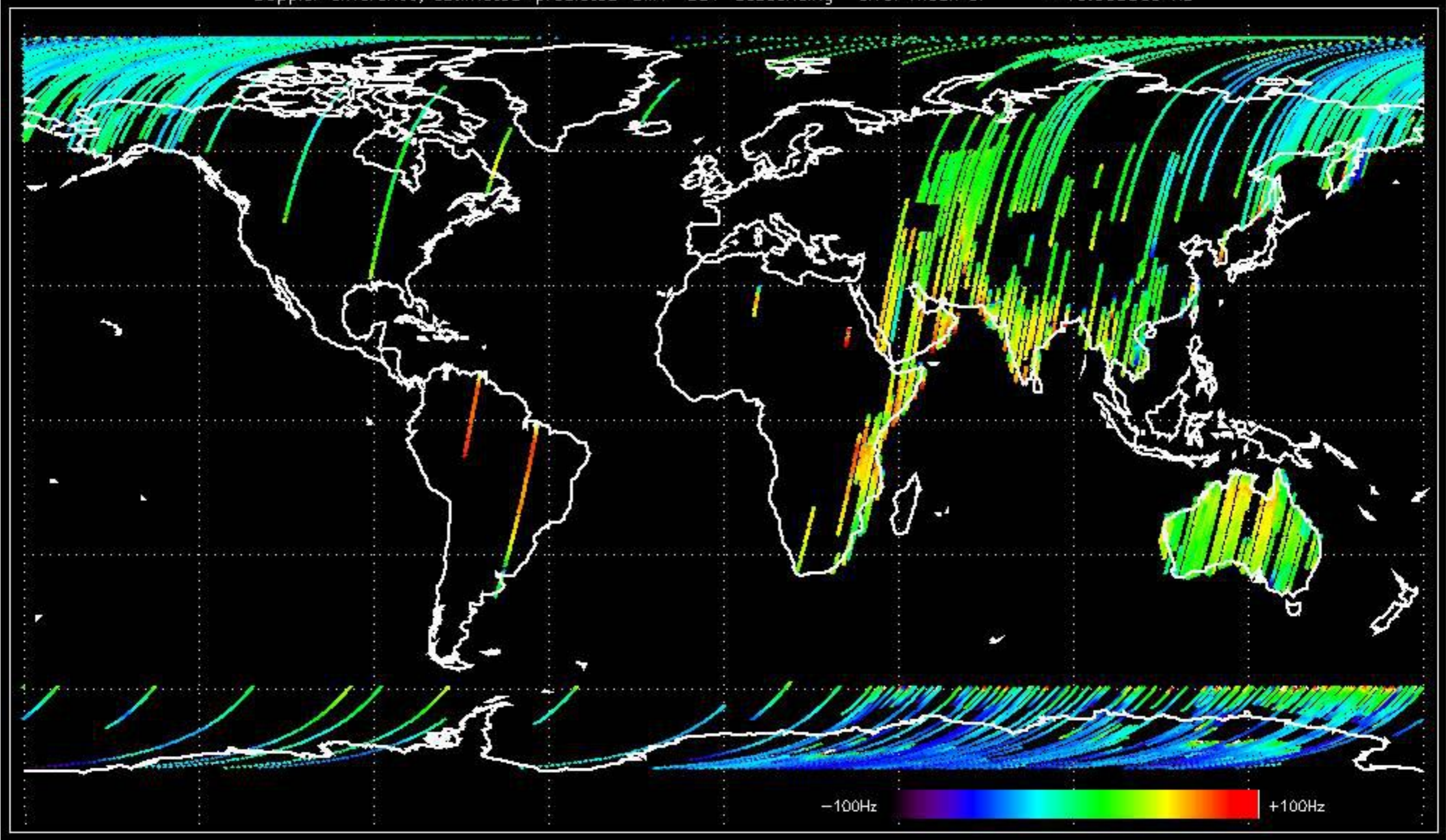




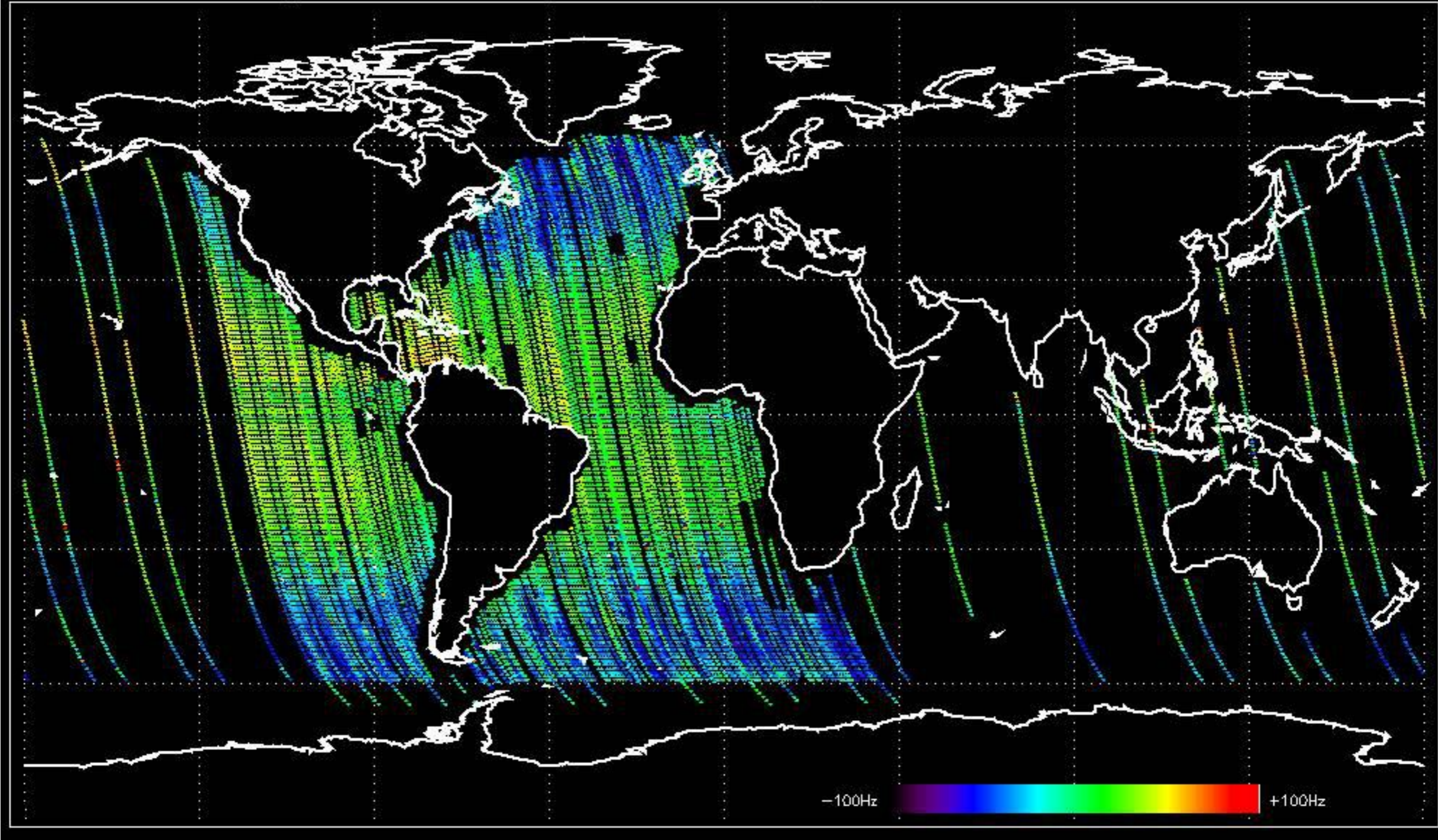
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.603834 Hz



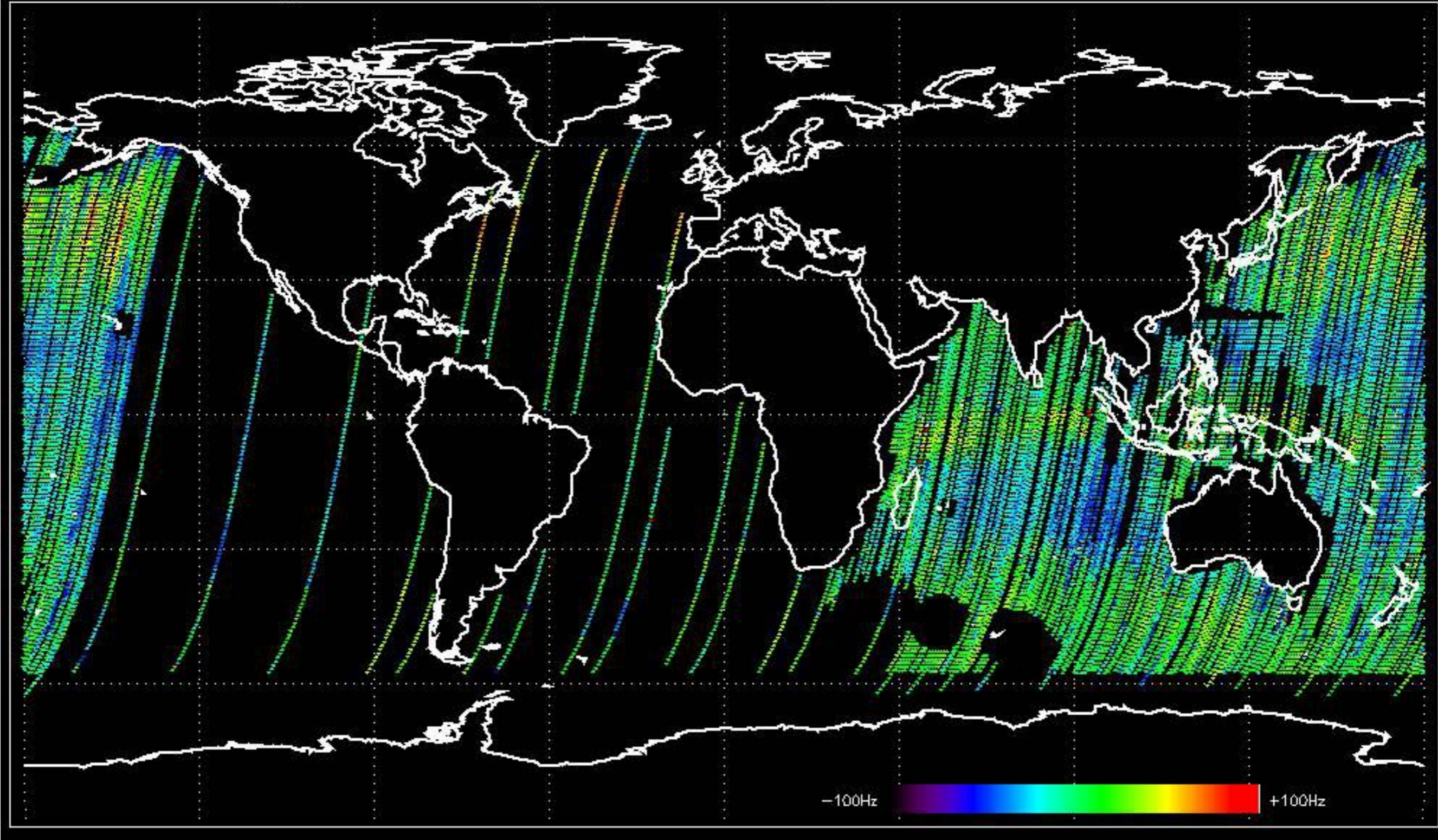
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.605060 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.355904 Hz

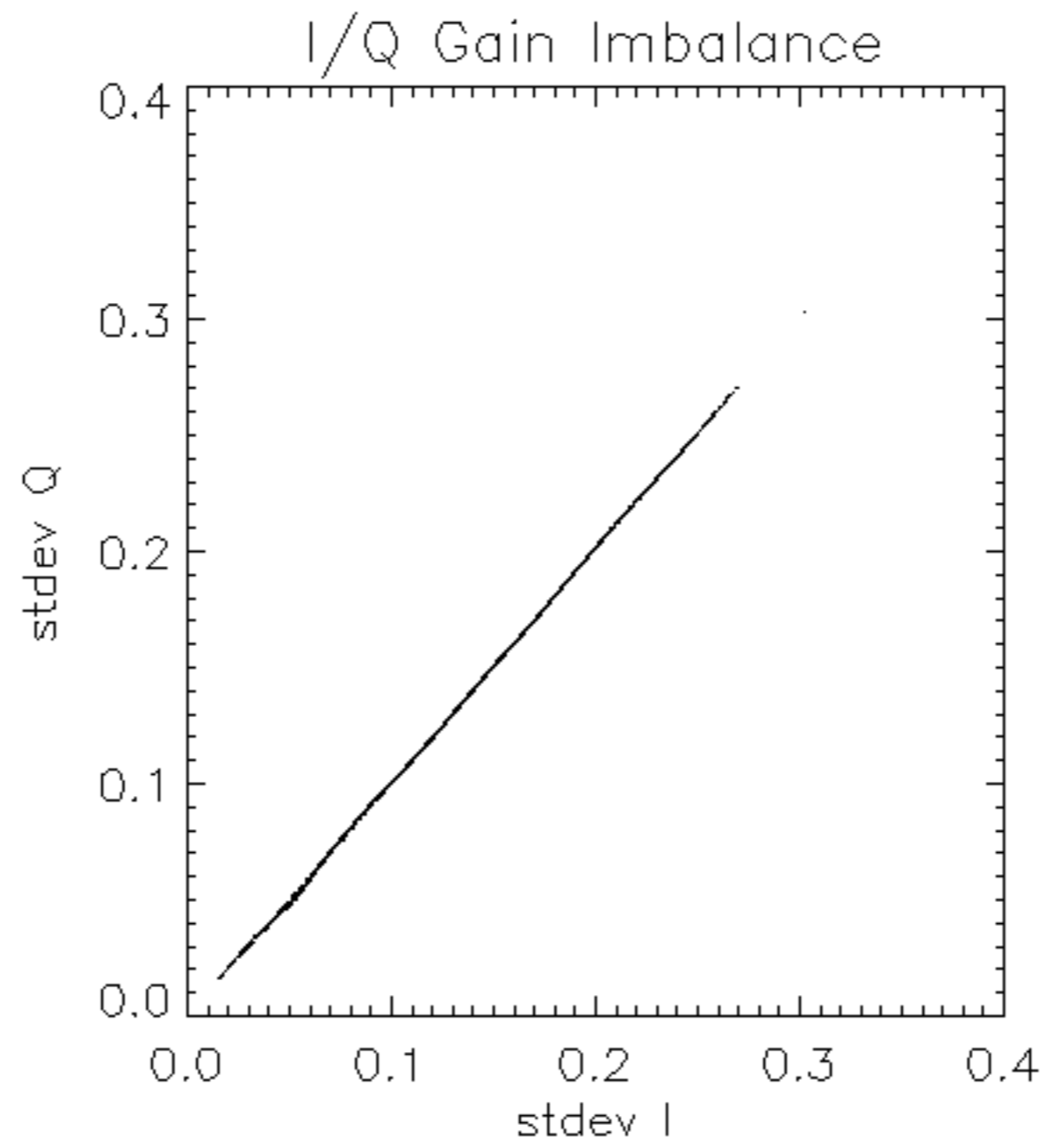


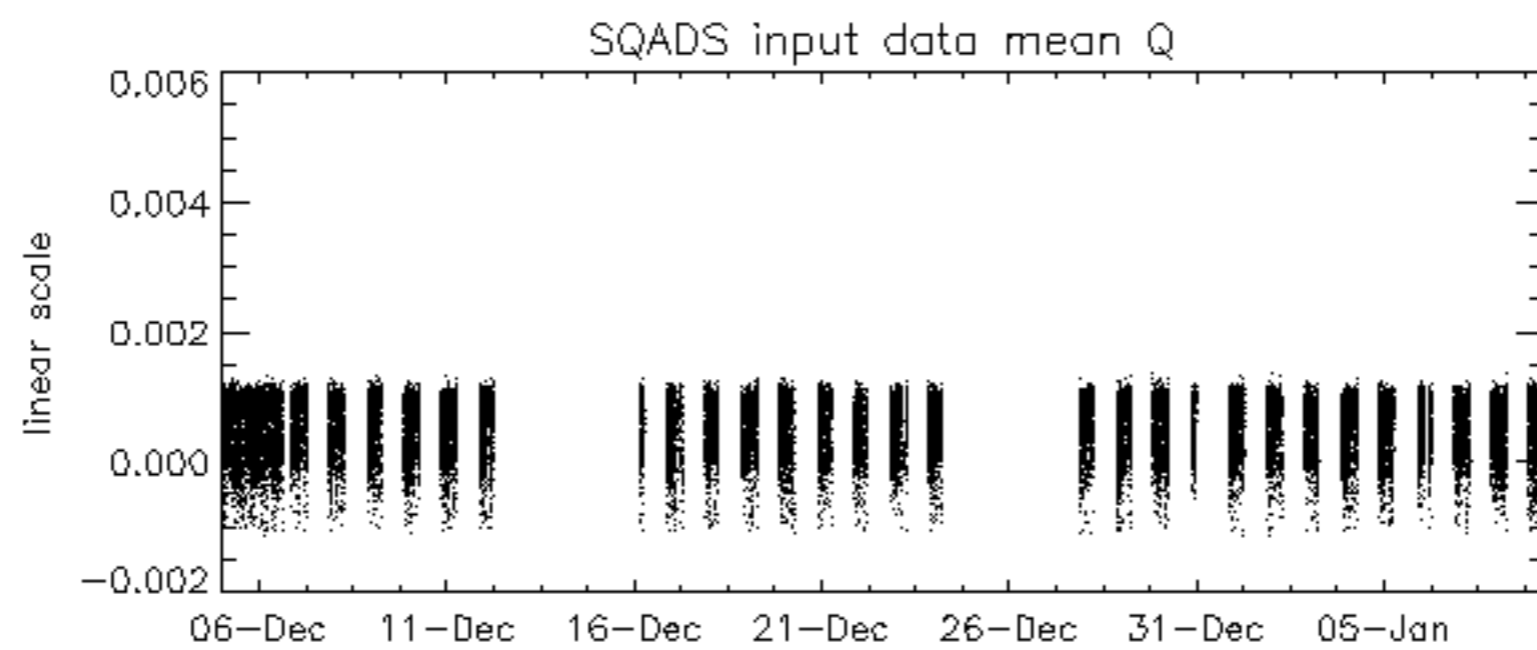
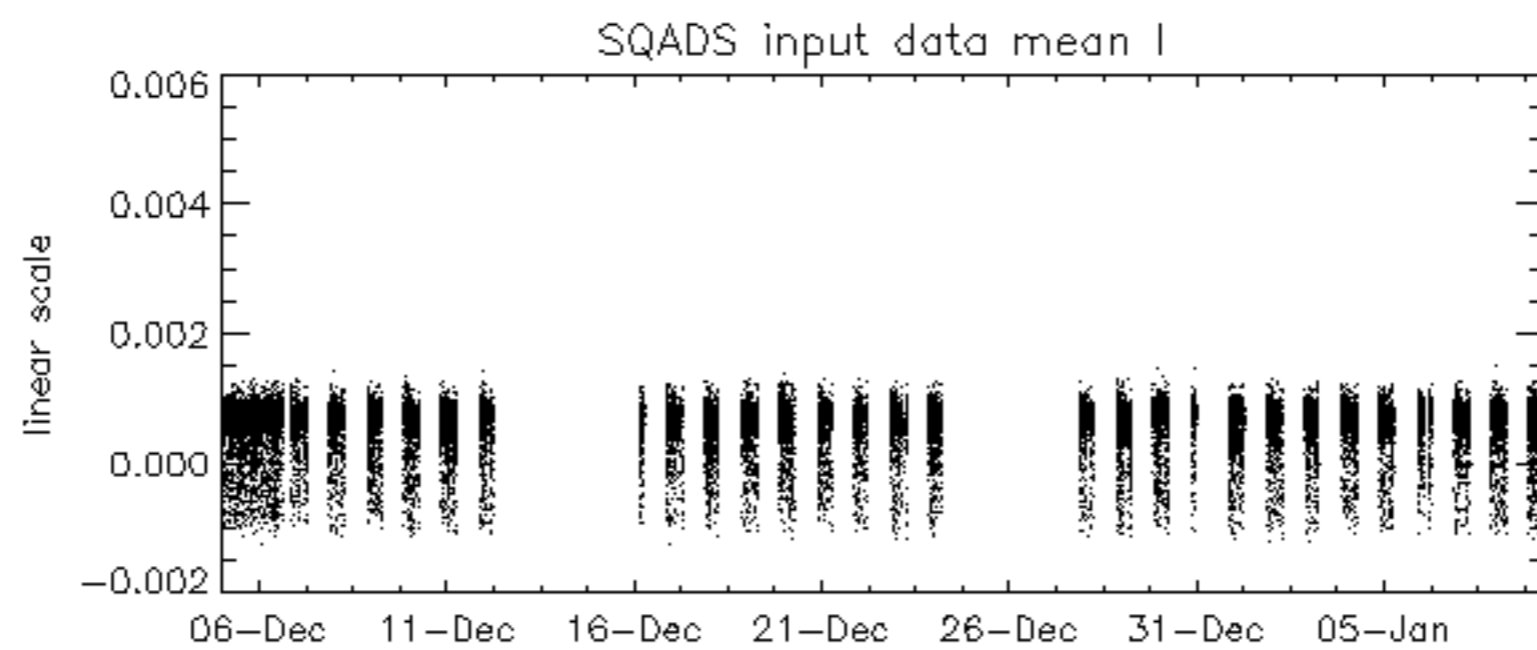
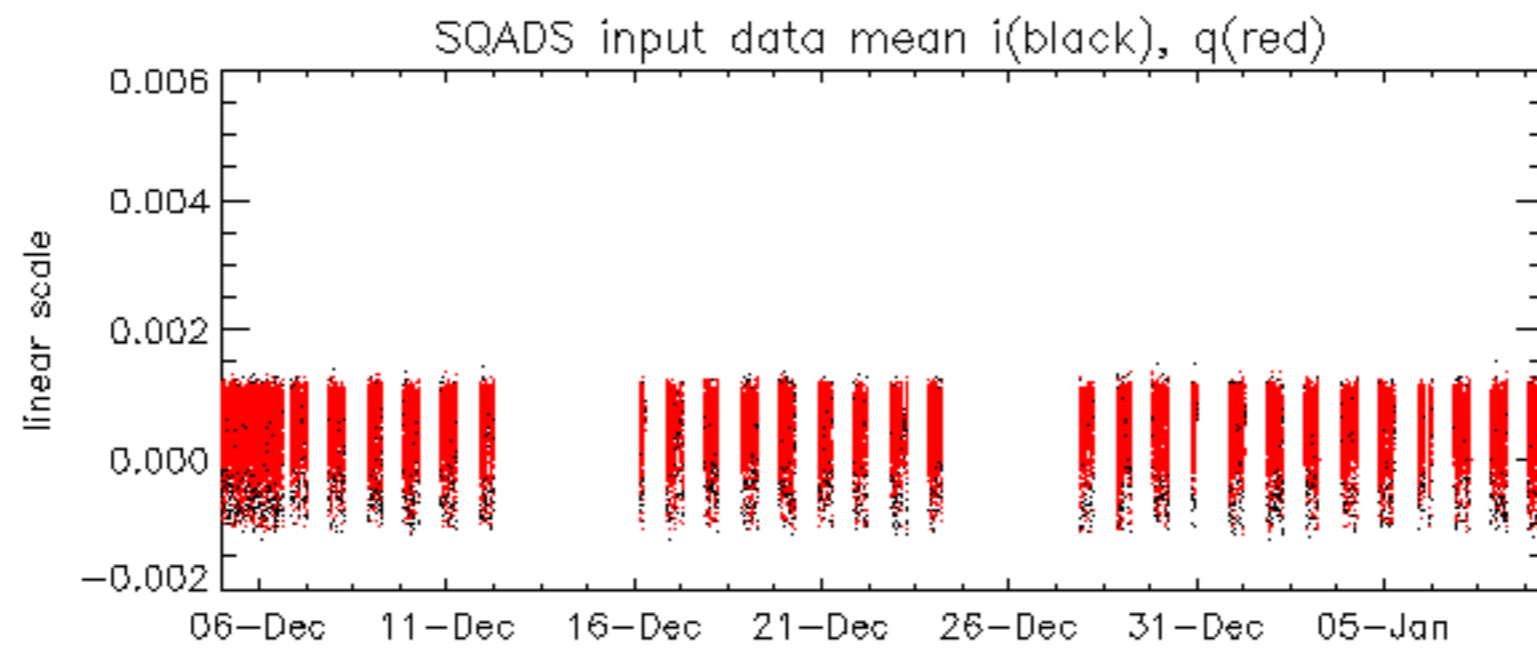
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.213250 Hz

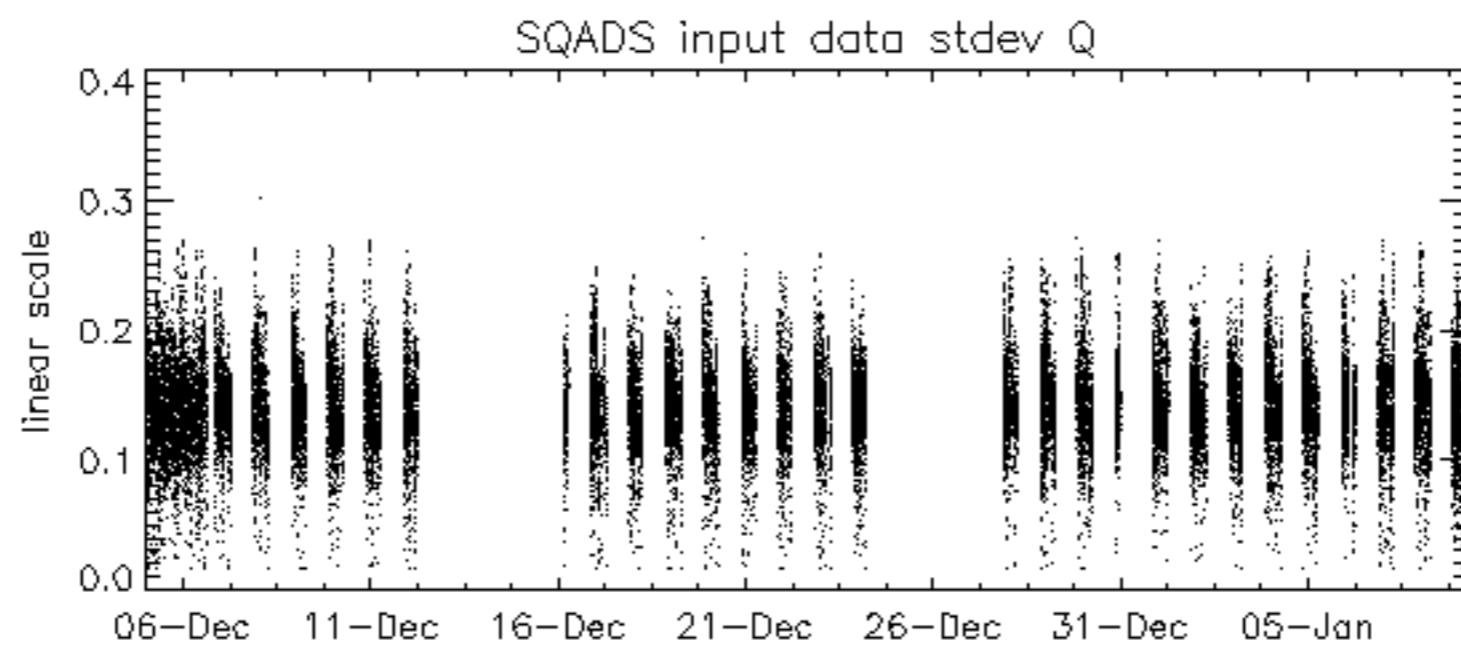
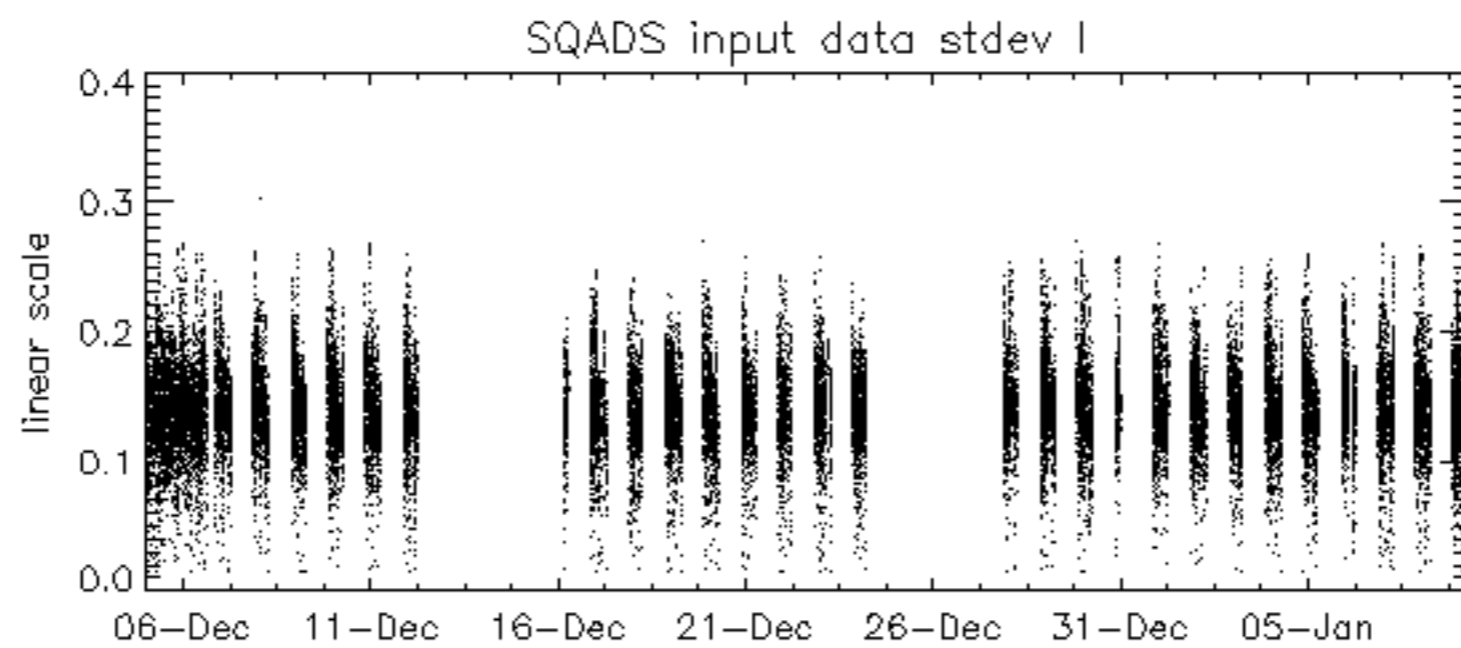
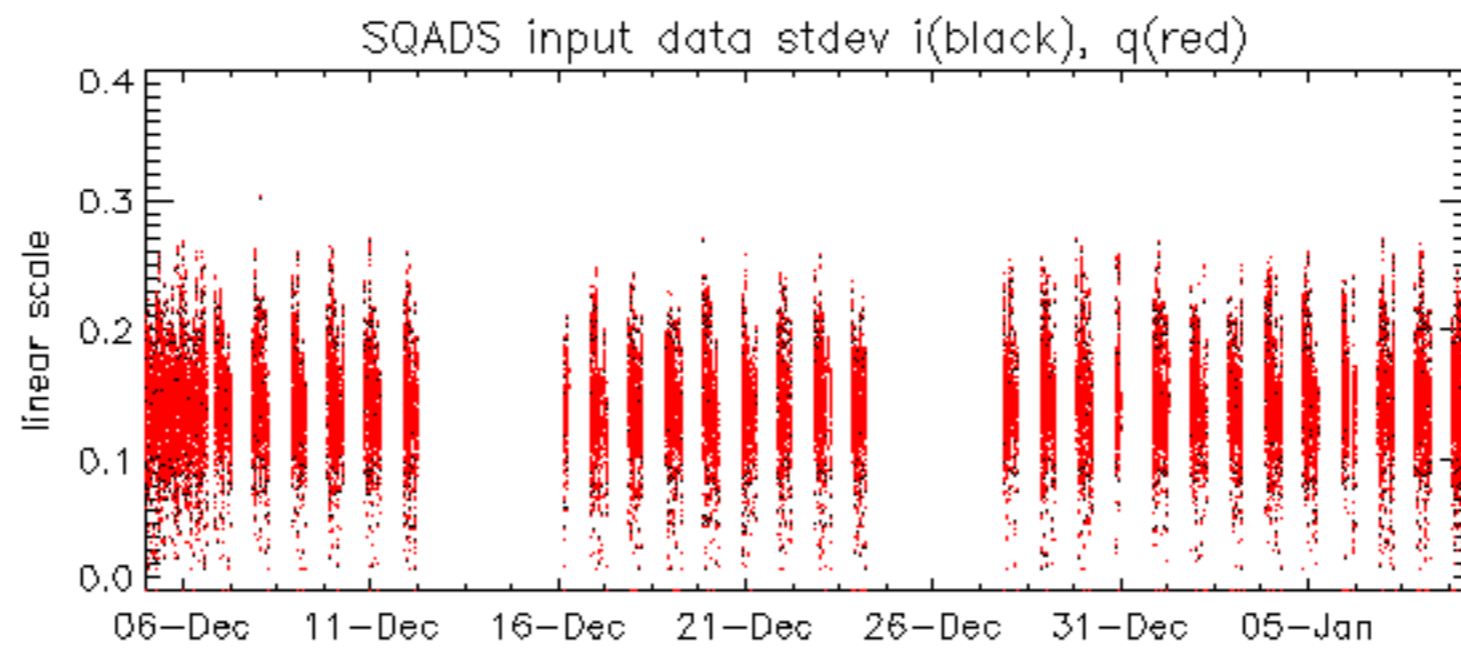


No anomalies observed on available MS products:

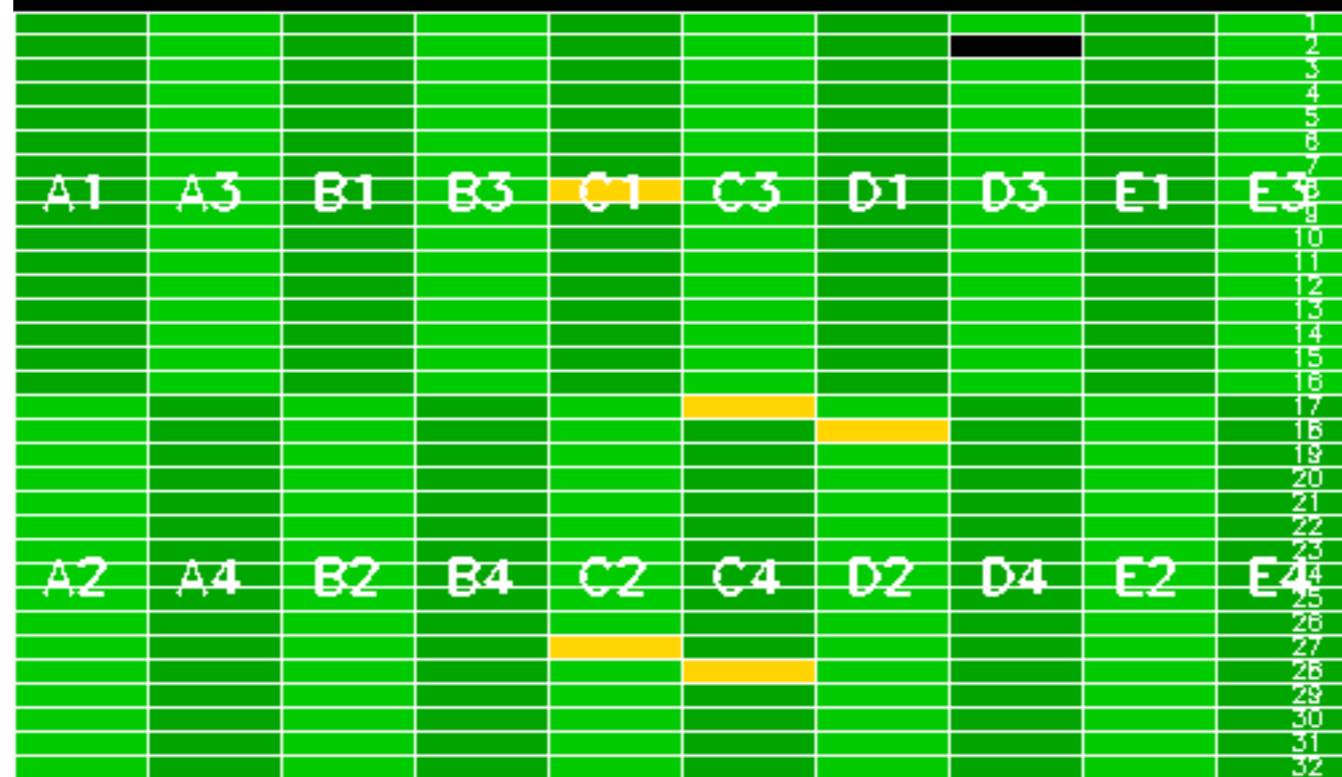
No anomalies observed.







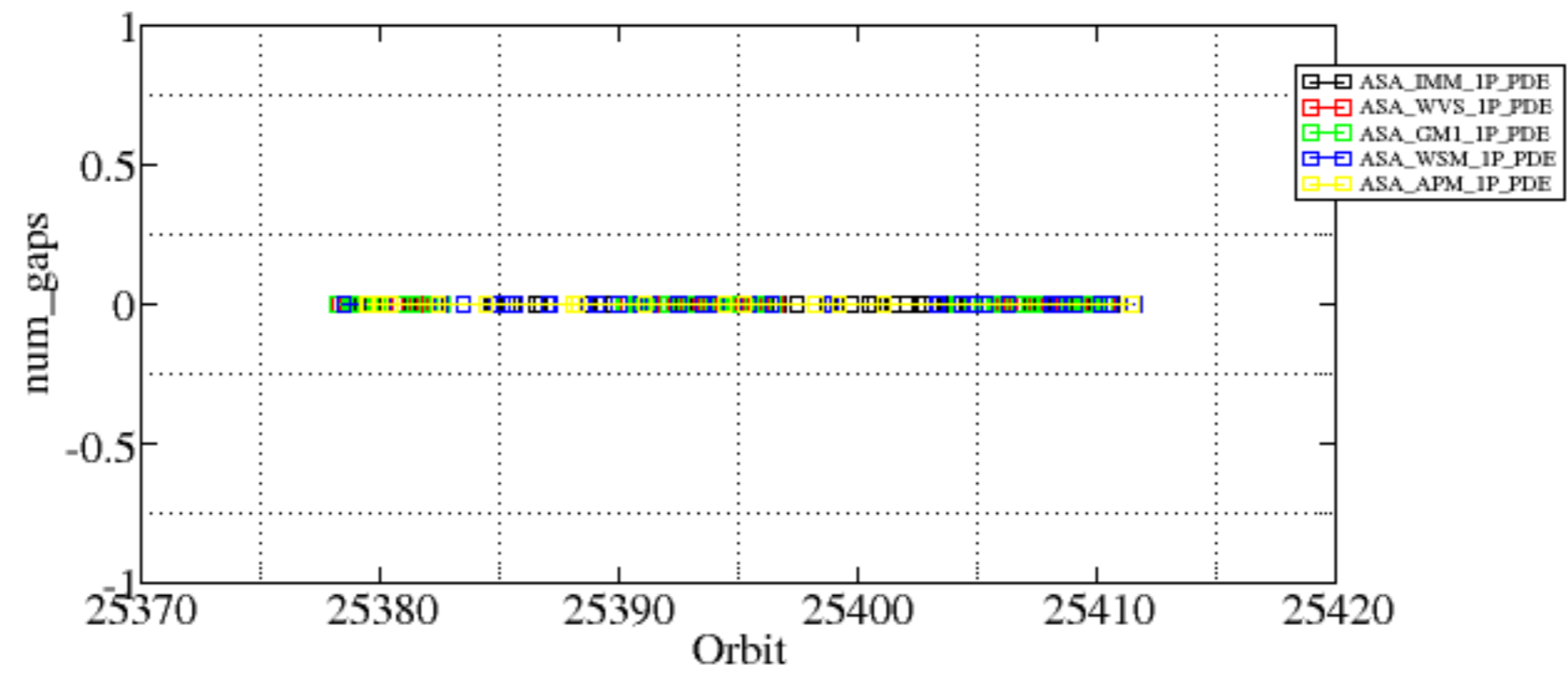
Reference: 2005-09-23 05:55:14 V TxGain
 Test : 2007-01-08 08:41:51 V

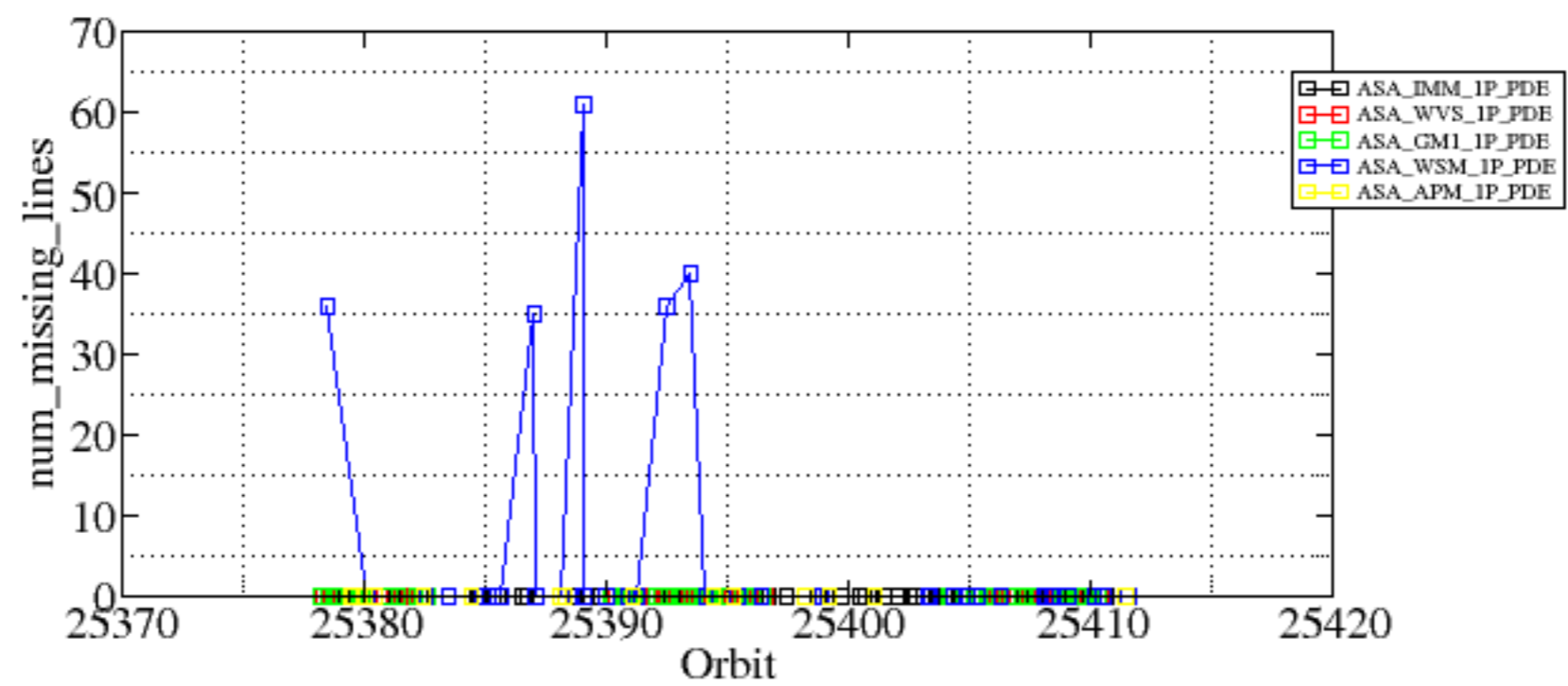


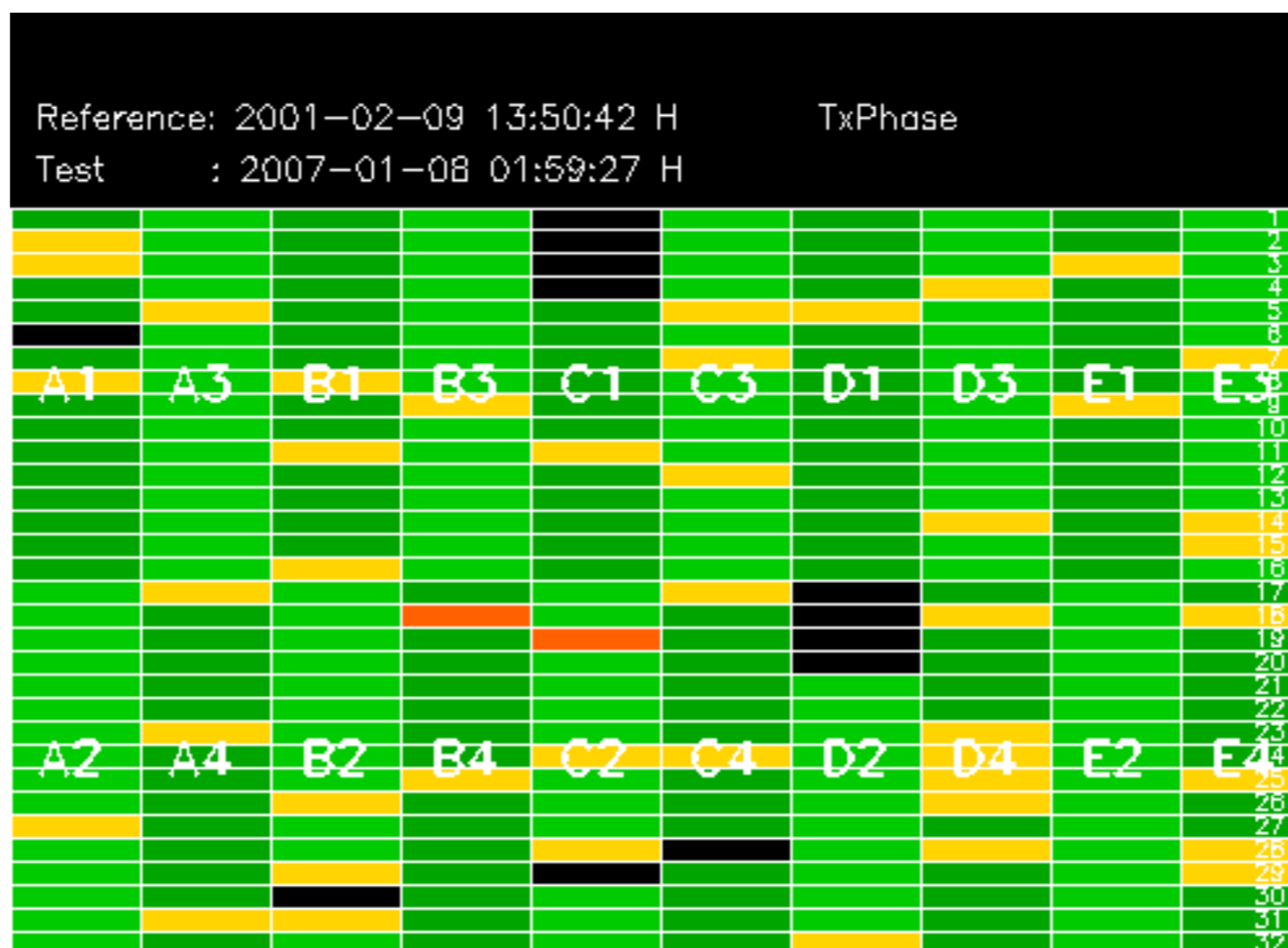
Summary of analysis for the last 3 days 2007010[789]

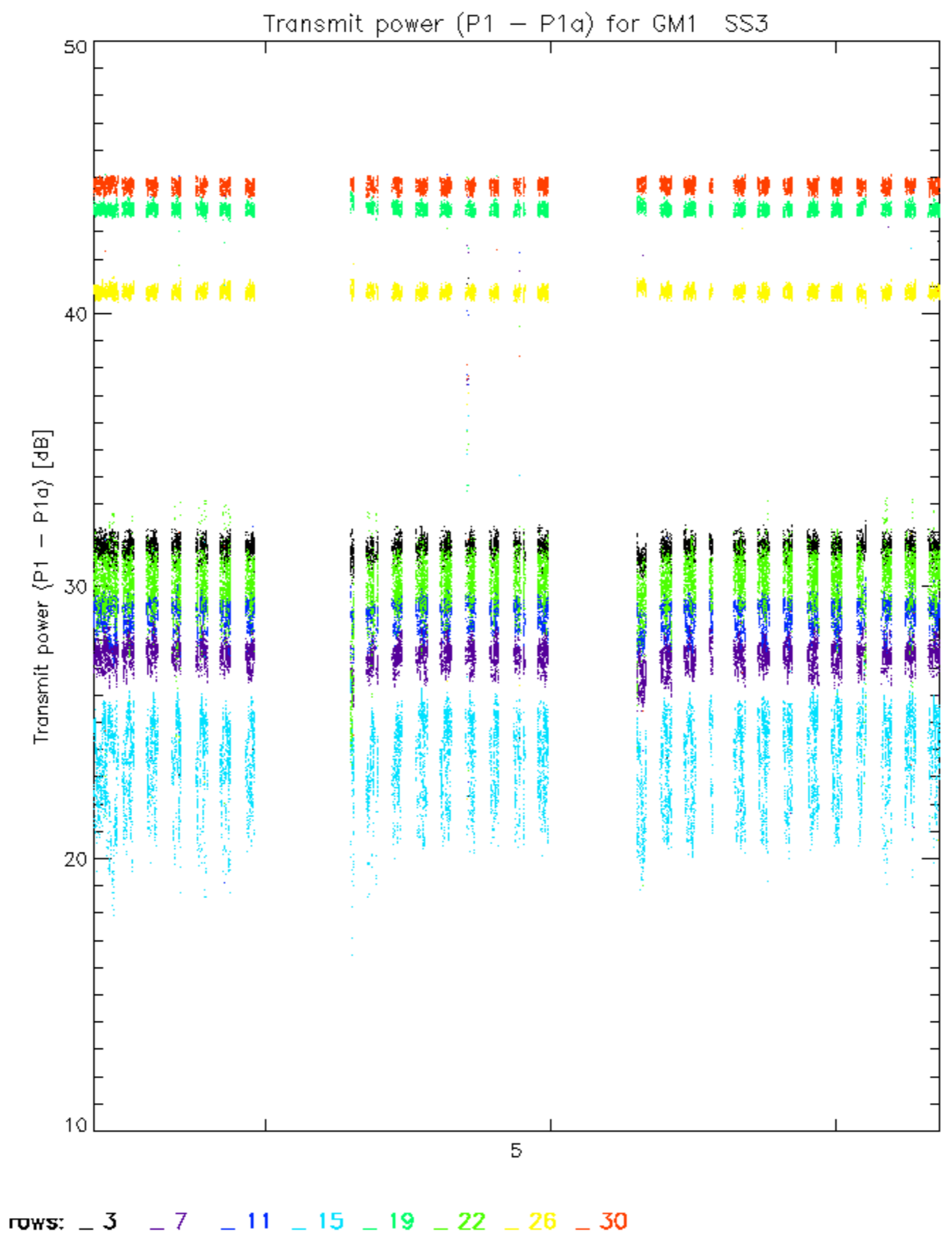
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

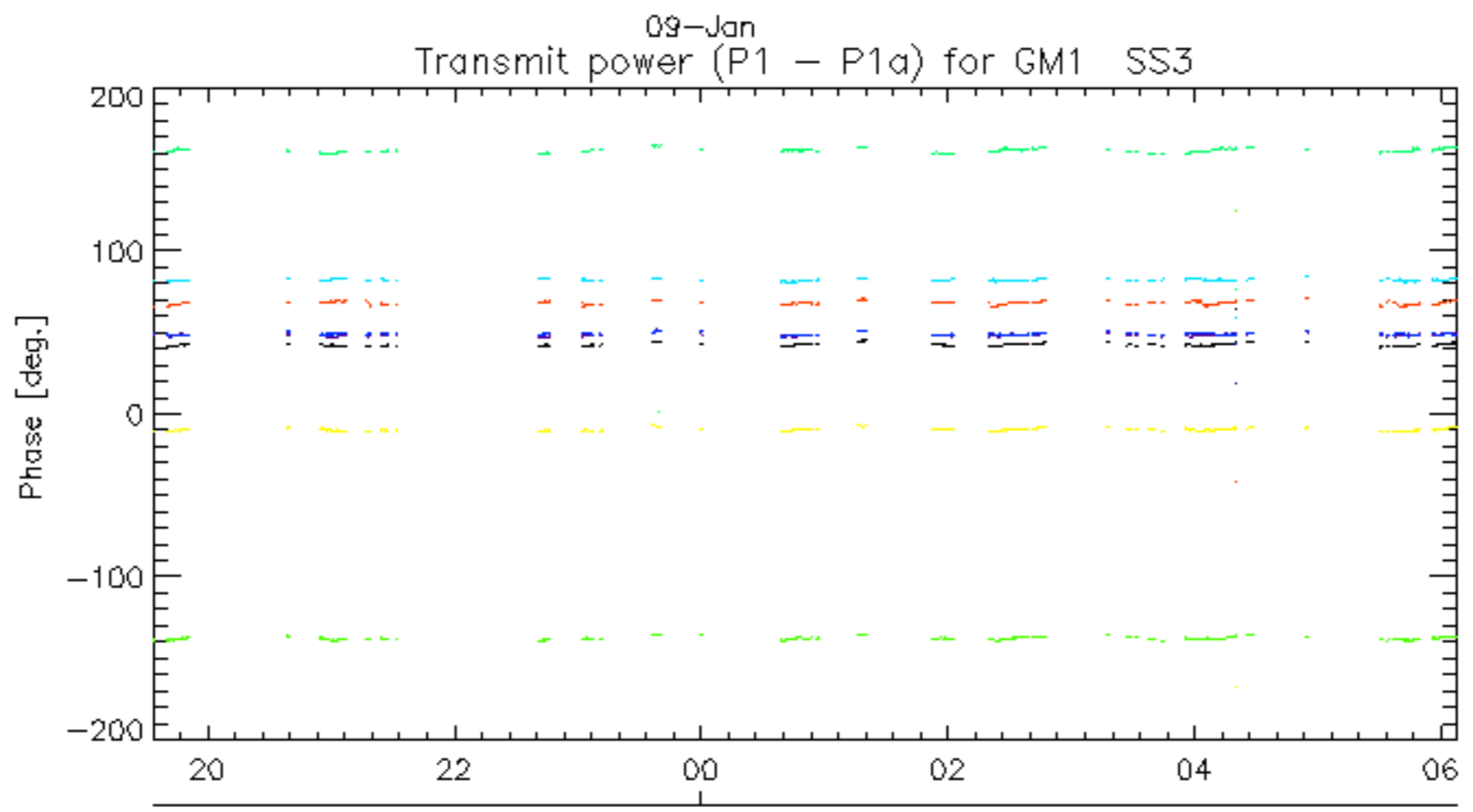
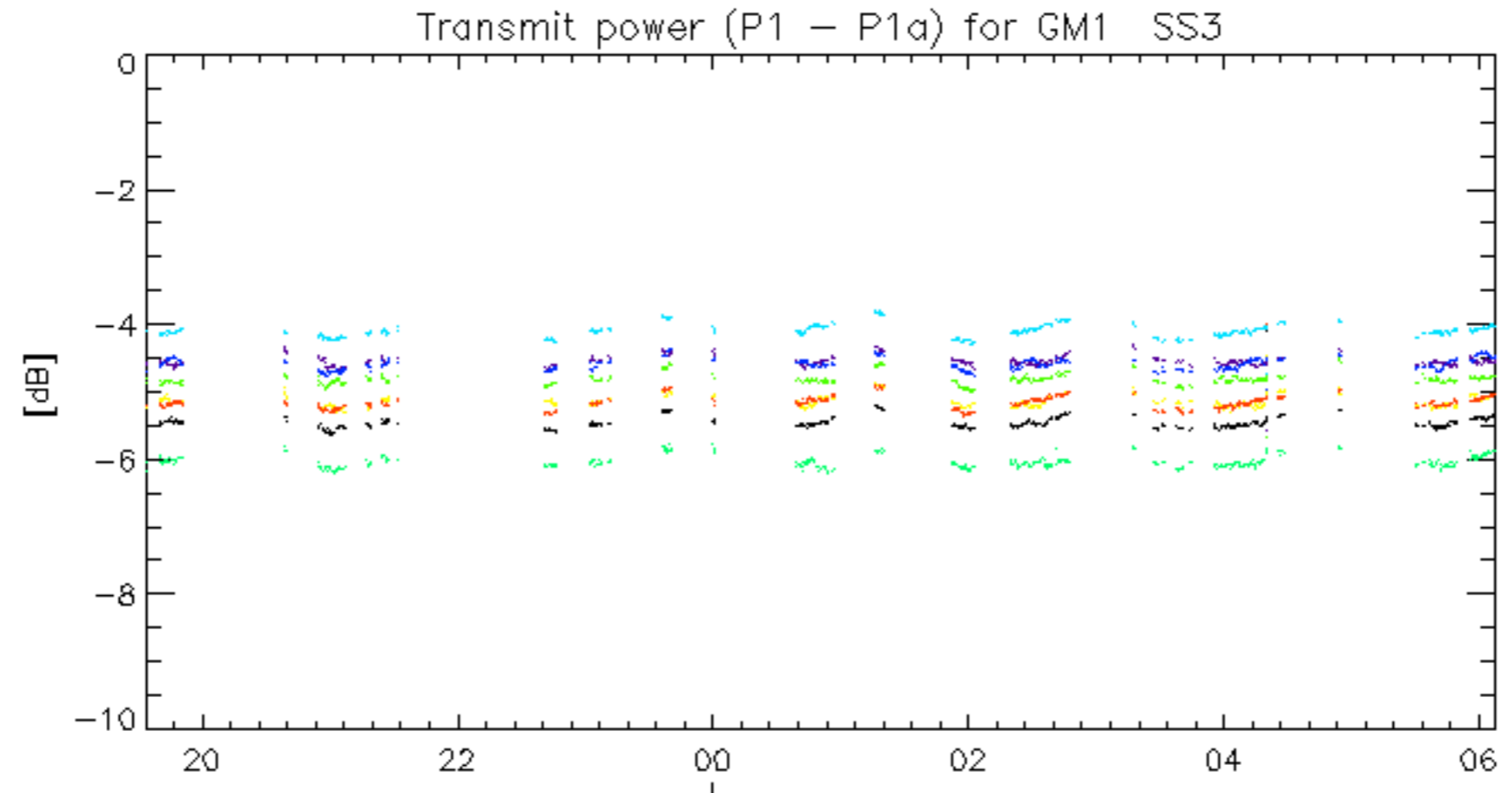
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070107_003113_000001412054_00274_25378_6459.N1	0	36
ASA_WSM_1PNPDE20070107_145122_000000852054_00283_25387_7247.N1	0	35
ASA_WSM_1PNPDE20070107_181429_000000852054_00285_25389_7367.N1	0	61
ASA_WSM_1PNPDE20070108_000036_000000852054_00288_25392_7771.N1	0	36
ASA_WSM_1PNPDE20070108_013811_000001412054_00289_25393_7975.N1	0	40



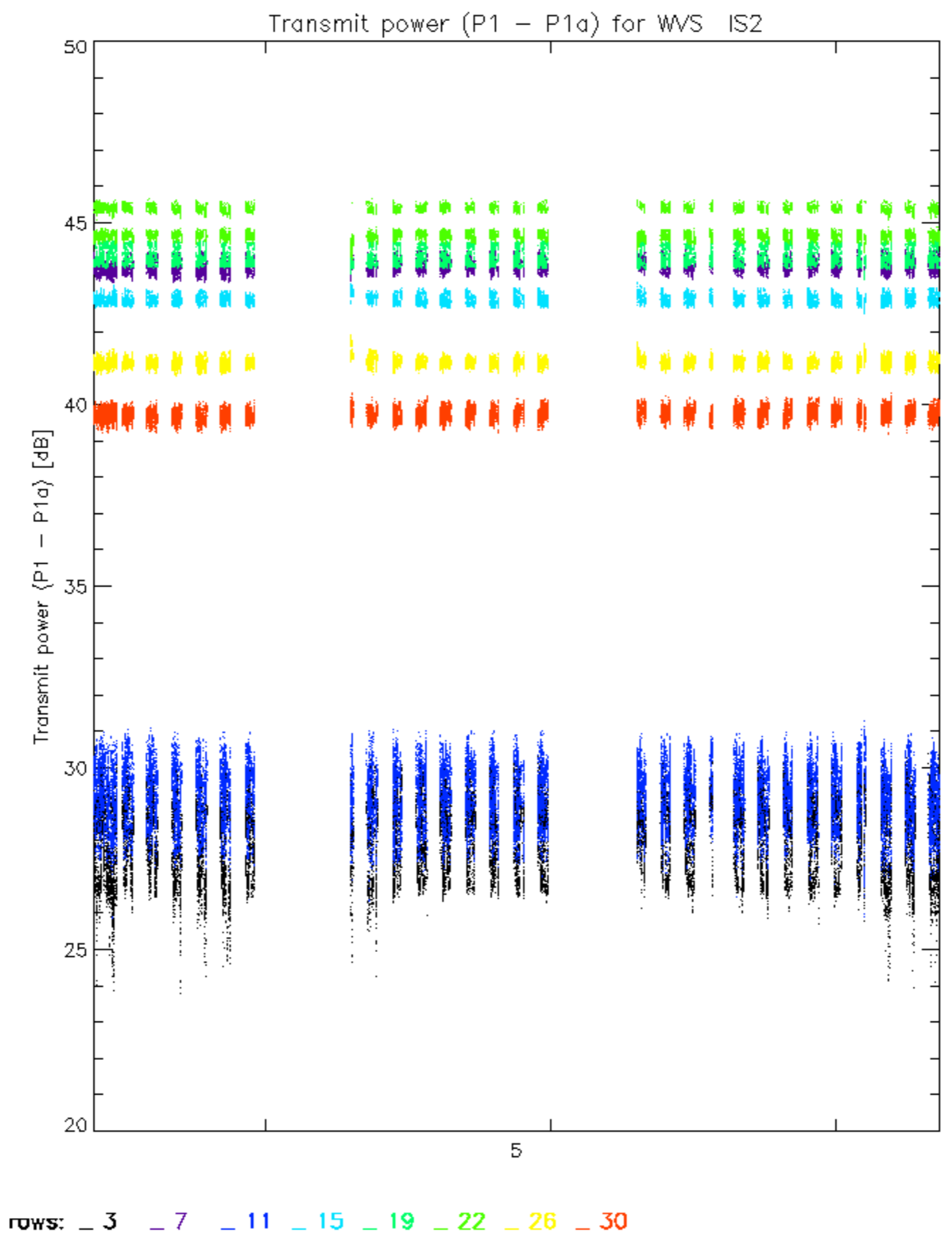


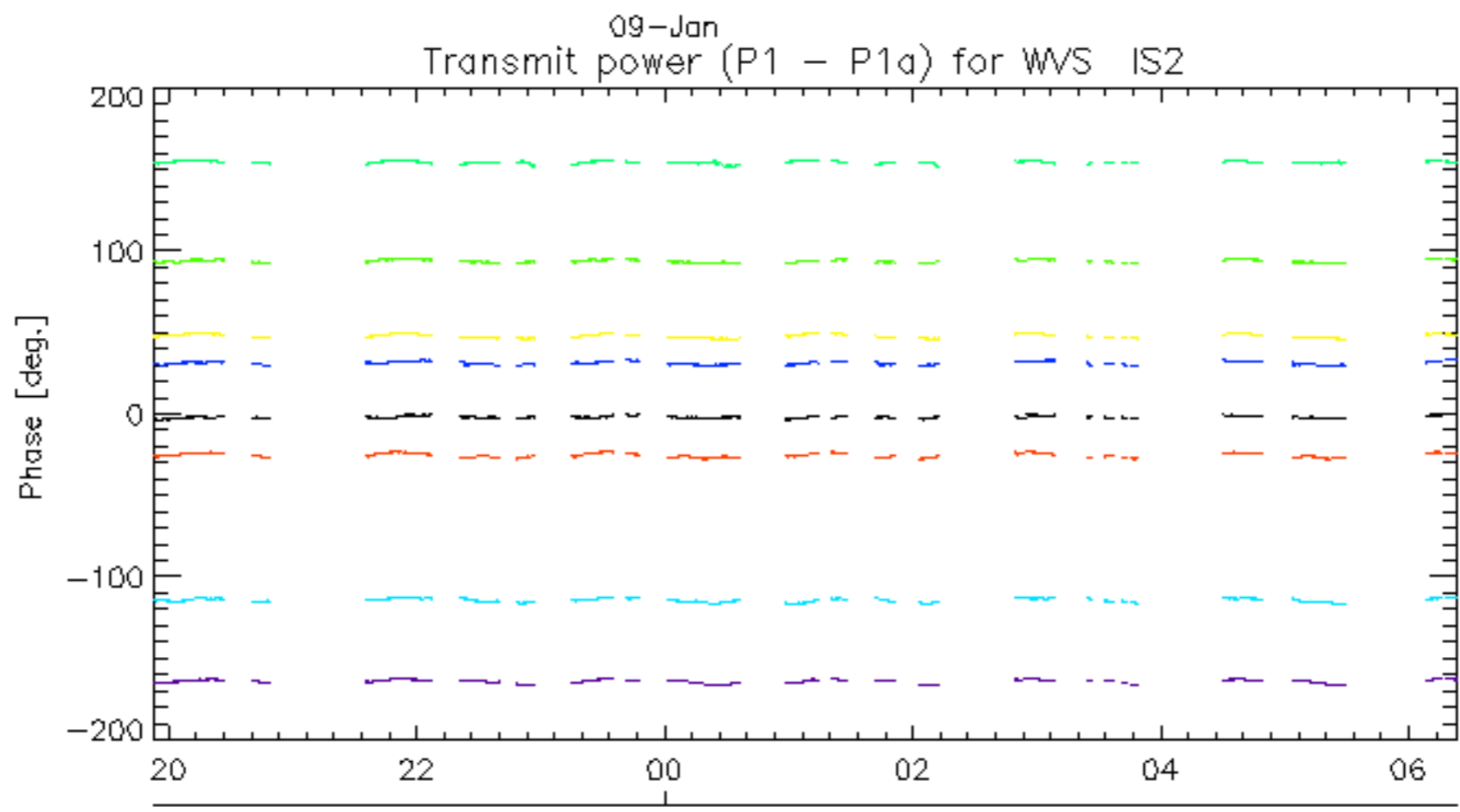
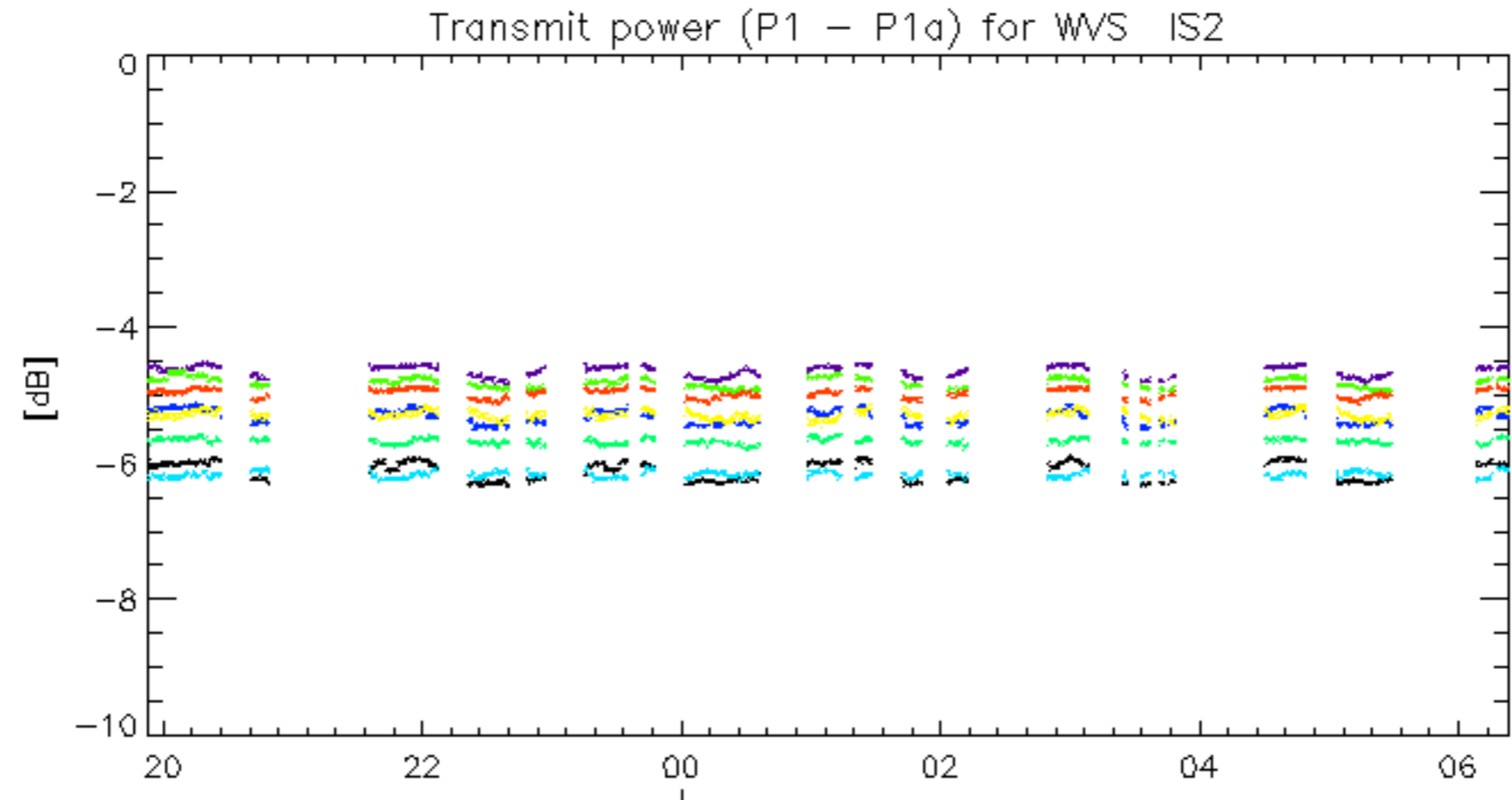






rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





09-Jan
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.