

PRELIMINARY REPORT OF 070323

last update on Fri Mar 23 17:54:39 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-03-22 00:00:00 to 2007-03-23 17:54:40

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	39	69	14	4	31
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	39	69	14	4	31
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	39	69	14	4	31
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	69	14	4	31

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	41	48	28	10	60
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	41	48	28	10	60
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	41	48	28	10	60
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	48	28	10	60

2.3 - Browse Visual Inspection

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	20070321 073835
H	20070323 074026

MSM in V/V polarisation

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

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
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☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
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☒

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)
3	P1a	-15.116609	0.119731	0.010699
7	P1a	-17.471165	0.104987	-0.072797
11	P1a	-17.260700	0.346736	0.067051
15	P1a	-12.883541	0.088457	0.043932
19	P1a	-15.156529	0.075703	-0.018427
22	P1a	-15.450550	0.613376	-0.244444
26	P1a	-15.059764	0.572921	-0.090580
30	P1a	-17.371647	0.321243	-0.087102

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.740722	0.010472	-0.005852
7	P1	-3.132821	0.008537	0.008389
11	P1	-4.165152	0.015326	-0.029946
15	P1	-6.375329	0.016502	0.030518
19	P1	-3.774569	0.007717	-0.025344
22	P1	-4.667970	0.062594	-0.062642
26	P1	-3.919519	0.051360	0.007297
30	P1	-5.904428	0.097327	-0.053921

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.643042	0.092604	0.082294
7	P2	-21.607145	0.081926	0.033589
11	P2	-15.519882	0.099095	0.077706
15	P2	-7.074194	0.093901	-0.012278
19	P2	-9.103688	0.083381	0.018080
22	P2	-18.091784	0.076994	0.069194

26	P2	-16.552189	0.086492	-0.024618
30	P2	-19.326777	0.079899	0.097398

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.232919	0.006644	0.021094
7	P3	-8.232919	0.006644	0.021094
11	P3	-8.232919	0.006644	0.021094
15	P3	-8.232919	0.006644	0.021094
19	P3	-8.232919	0.006644	0.021094
22	P3	-8.232919	0.006644	0.021094
26	P3	-8.232897	0.006643	0.021159
30	P3	-8.232897	0.006643	0.021159

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.092125	0.054338	-0.097867
7	P1a	-10.069742	0.147587	-0.003487
11	P1a	-10.680695	0.066918	-0.044757
15	P1a	-10.944302	0.142133	0.110366
19	P1a	-15.707341	0.071809	-0.140636
22	P1a	-20.869890	1.551164	0.161403
26	P1a	-15.237984	0.311411	0.040857
30	P1a	-18.361906	0.770470	0.192643

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.411139	0.044403	-0.069920
7	P1	-2.425615	0.026461	-0.004609

11	P1	-2.922615	0.020482	0.008155
15	P1	-3.849038	0.041429	-0.020201
19	P1	-3.560215	0.011039	-0.035118
22	P1	-5.030787	0.034228	0.075998
26	P1	-5.945967	0.057430	0.011378
30	P1	-5.270929	0.032058	-0.006166

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.100815	0.036300	-0.004409
7	P2	-21.952536	0.059878	-0.006074
11	P2	-10.637114	0.033411	0.029078
15	P2	-4.827316	0.030571	-0.009482
19	P2	-6.809067	0.033508	0.018316
22	P2	-8.077187	0.034960	0.006502
26	P2	-24.287451	0.041189	0.059785
30	P2	-21.717846	0.042819	0.080613

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.059781	0.003991	0.003029
7	P3	-8.059672	0.003987	0.002959
11	P3	-8.059731	0.003989	0.002815
15	P3	-8.059909	0.003990	0.002576
19	P3	-8.059779	0.003999	0.003727
22	P3	-8.059806	0.003993	0.002640
26	P3	-8.059581	0.003965	0.003252
30	P3	-8.059766	0.003986	0.002156

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	
	stdev	
MEAN Q	mean	
	stdev	



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	
	stdev	
STDEV Q	mean	
	stdev	



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[123]

The assumption 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_IMM_1PNPDK20070321_134012_000003212056_00325_26431_9071.N1	0	1
ASA_IMM_1PNPDK20070321_134114_000002592056_00325_26431_8917.N1	0	1

ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDE20070321_163800_000000972056_00327_26433_1254.N1	0	10
ASA_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDE20070322_142631_000000852056_00340_26446_2539.N1	0	16
ASA_WSM_1PNPDE20070322_192709_000000922056_00343_26449_2782.N1	9	431
ASA_WSM_1PNPDE20070322_233442_000002632056_00345_26451_3189.N1	0	32
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_WSM_1PNPDK20070321_214927_000002322056_00330_26436_9457.N1	0	3
ASA_WSM_1PNPDK20070323_120612_000003232056_00352_26458_0909.N1	0	1
ASA_WSM_1PNPDK20070323_135453_000000862056_00354_26460_1049.N1	0	17

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

Ascending

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

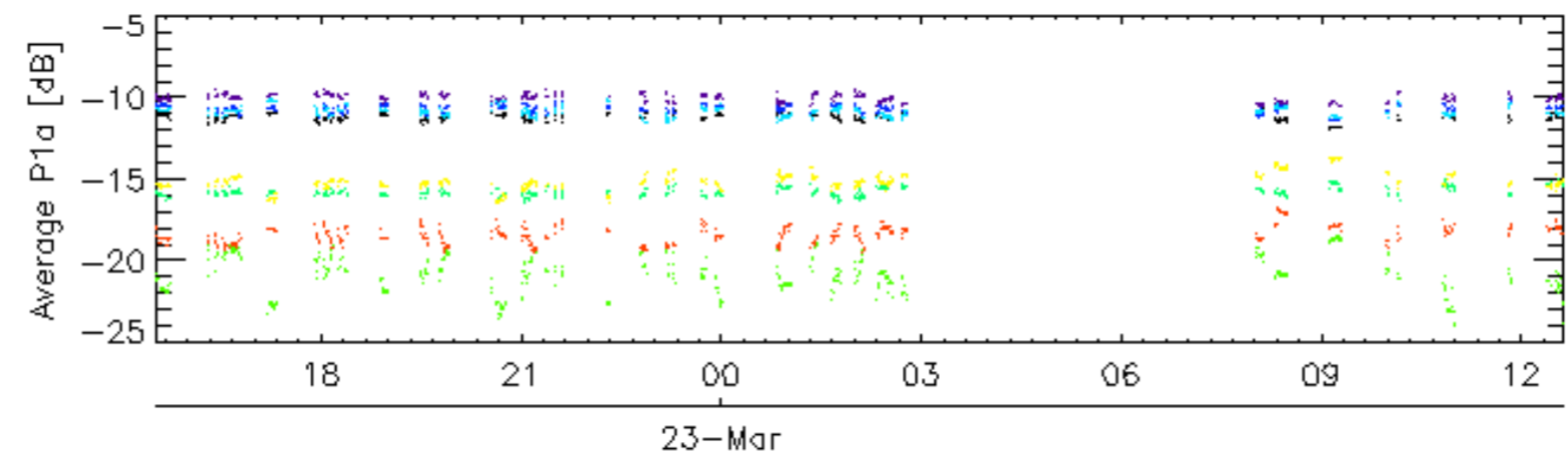
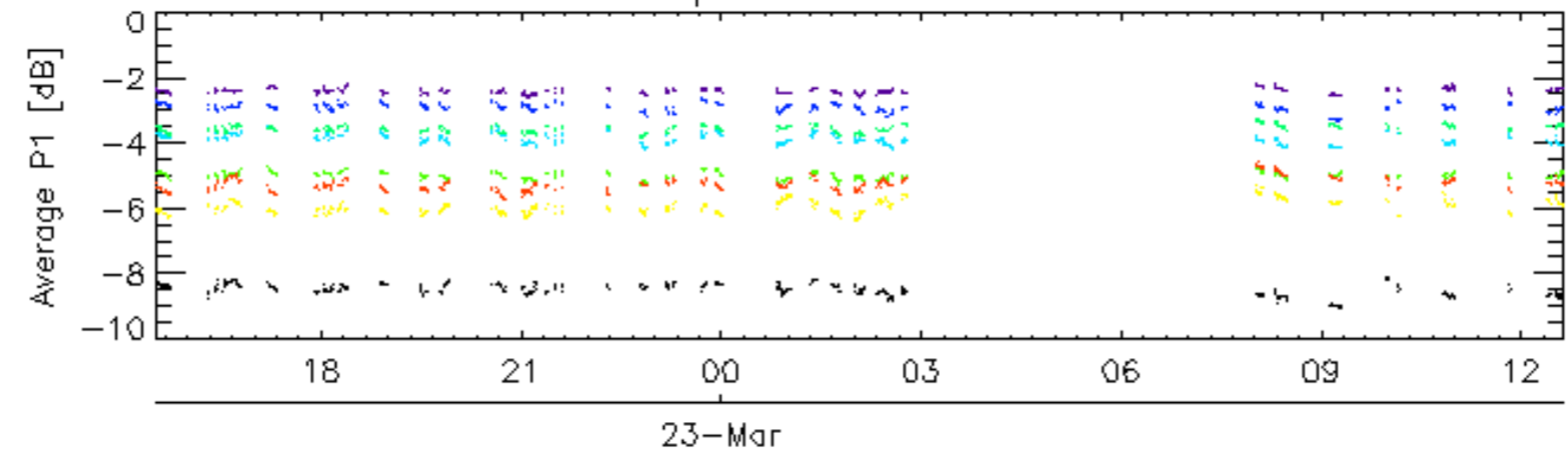
Ascending

Descending

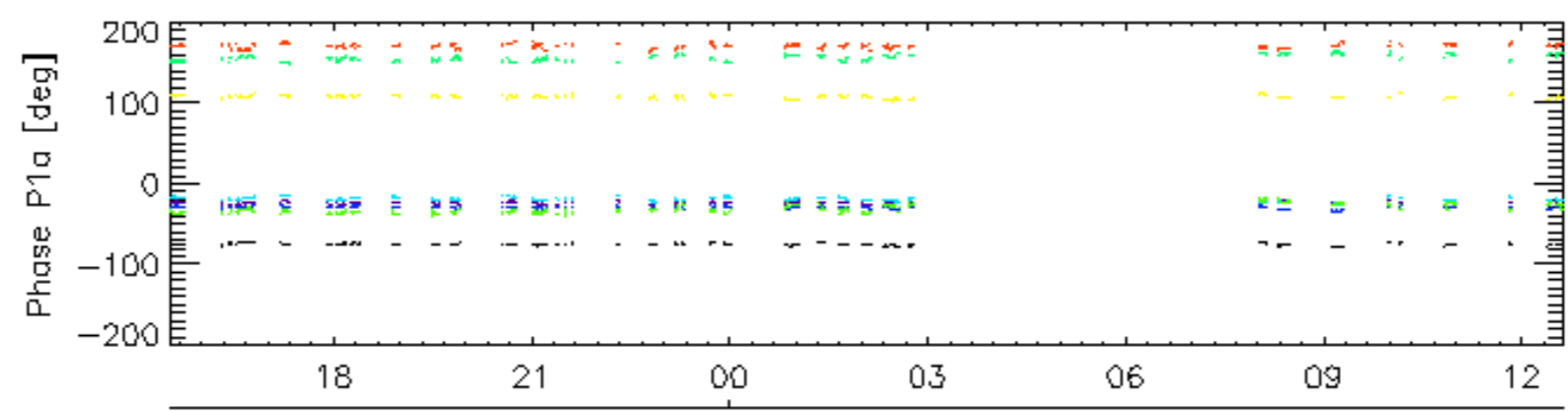
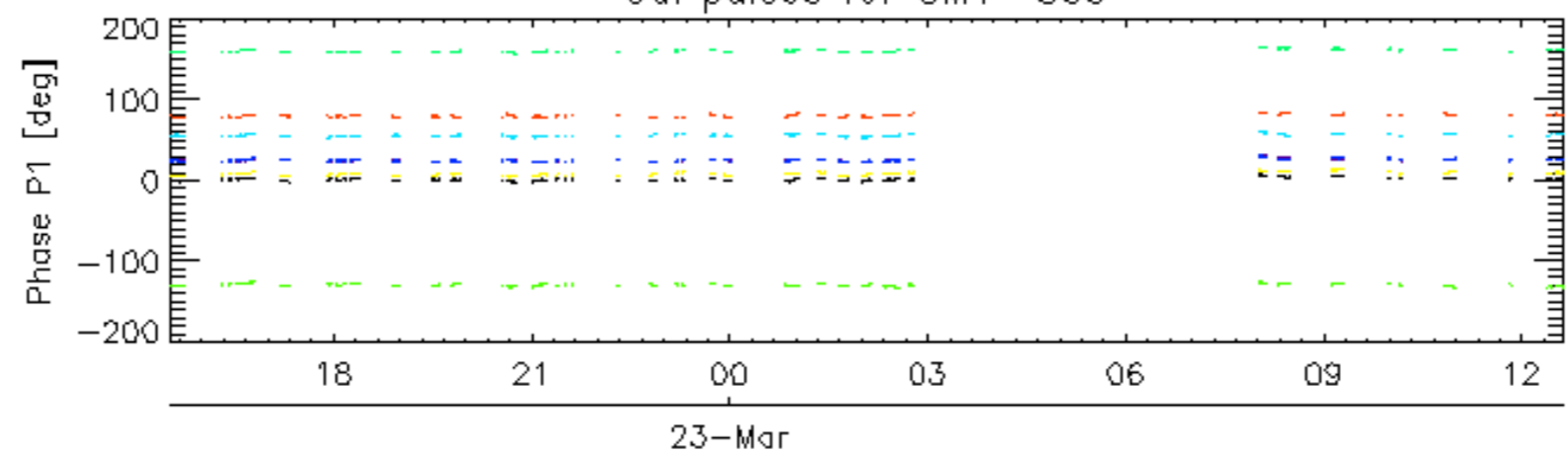
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

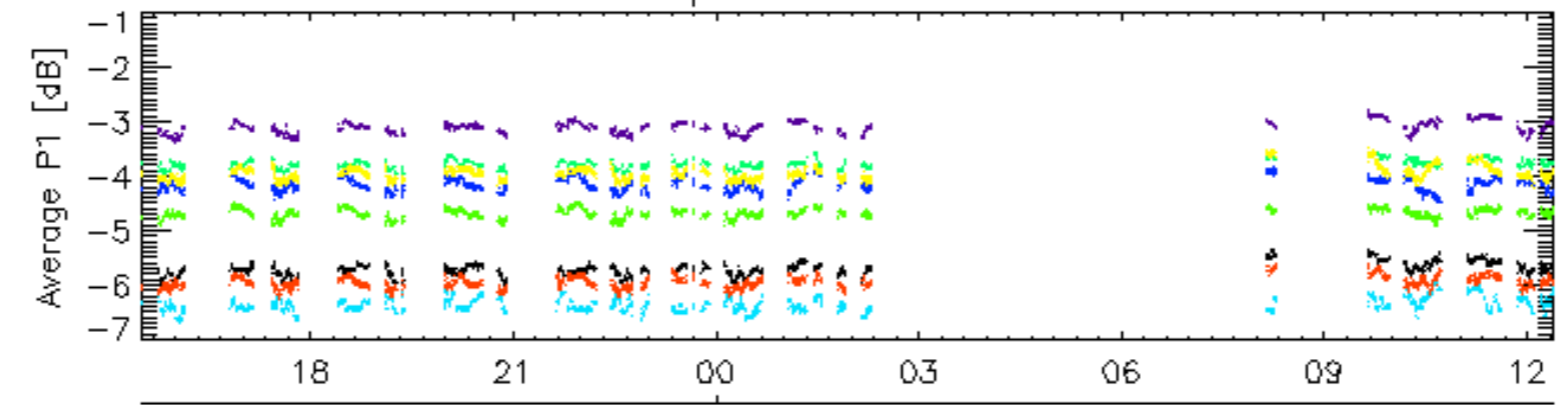


Cal pulses for GM1 SS3

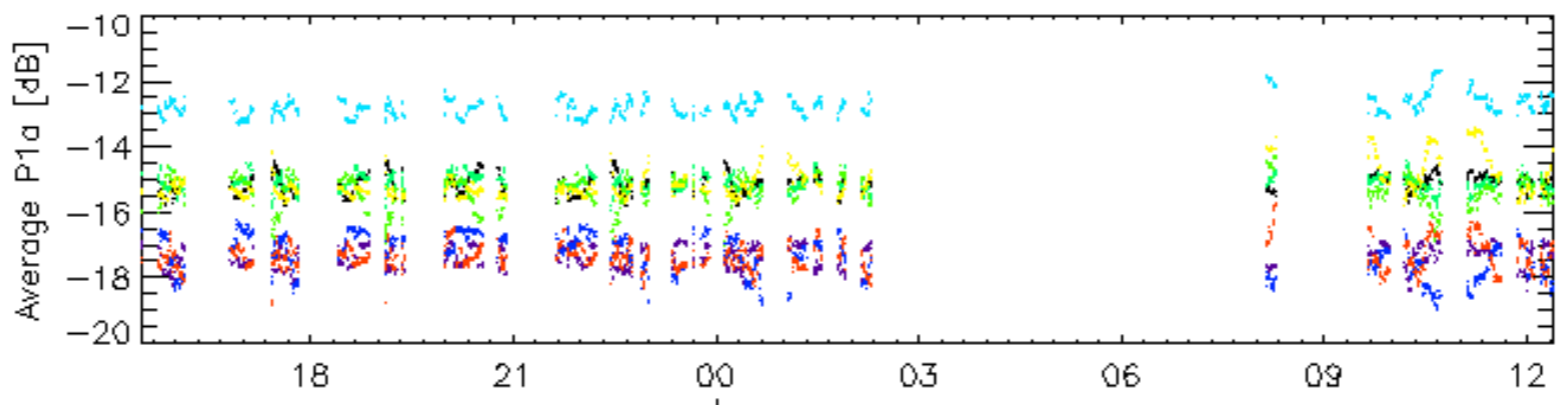


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

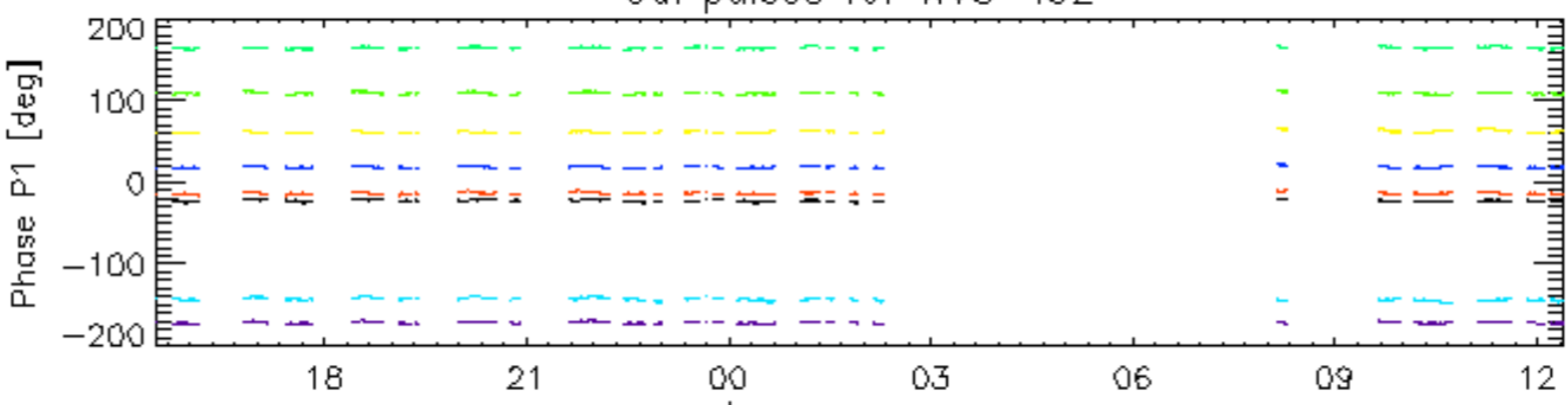


23-Mar

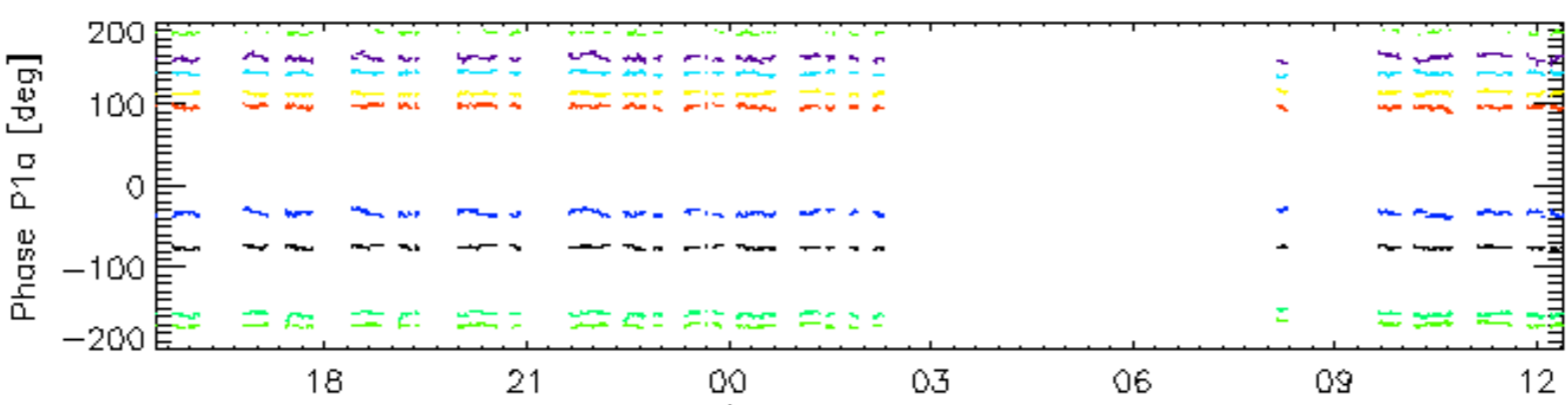


23-Mar

Cal pulses for WVS IS2



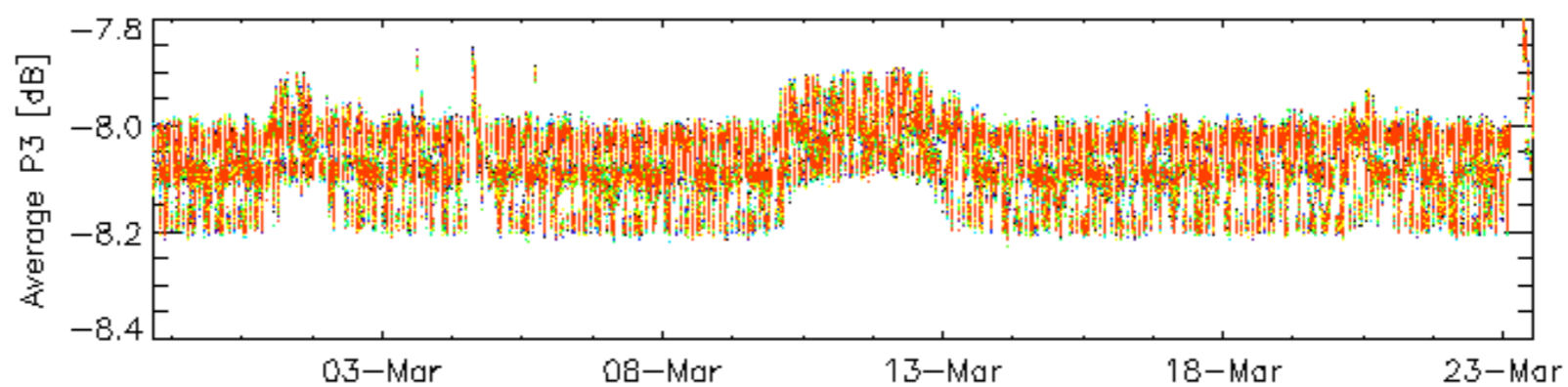
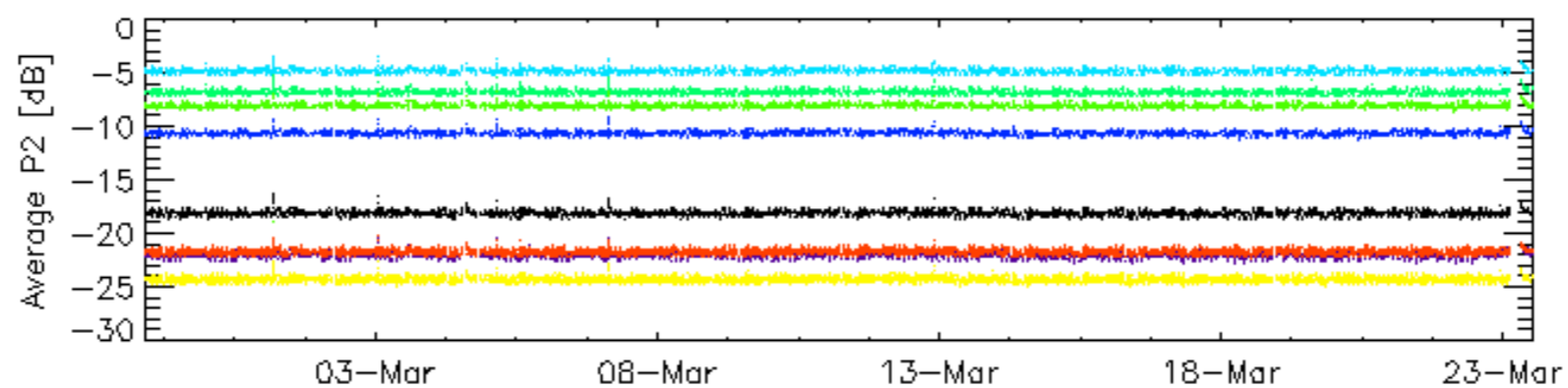
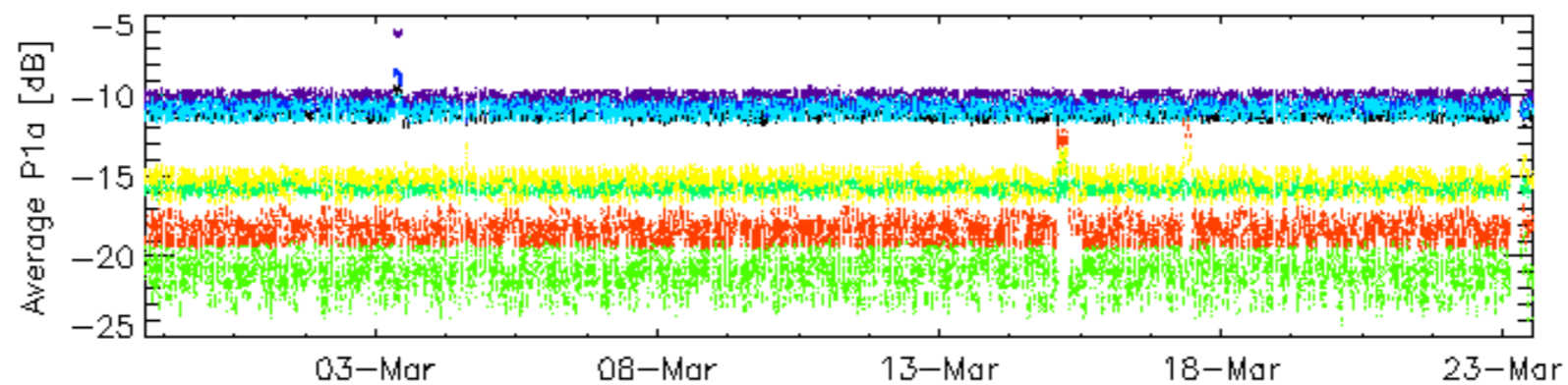
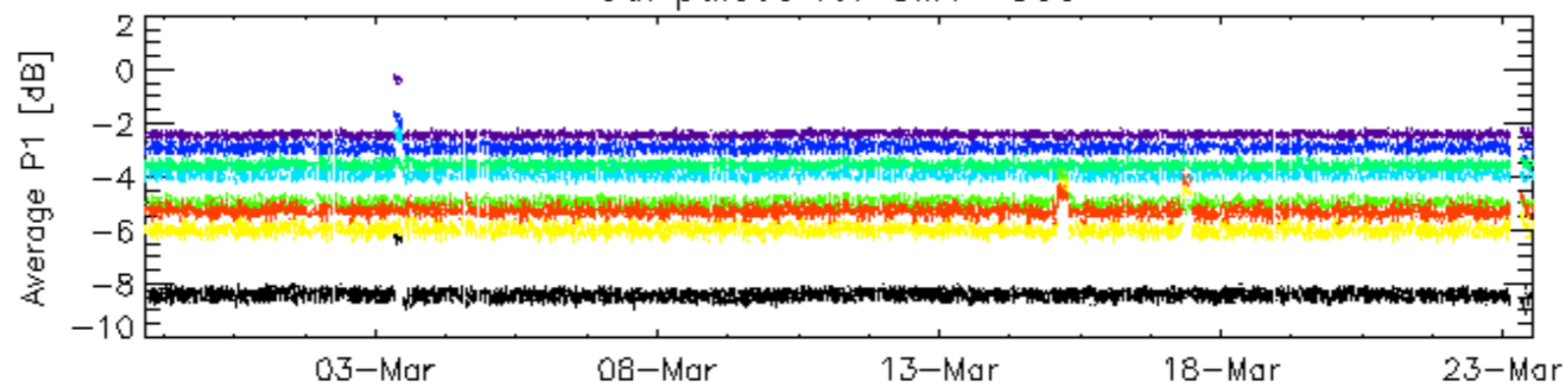
23-Mar



23-Mar

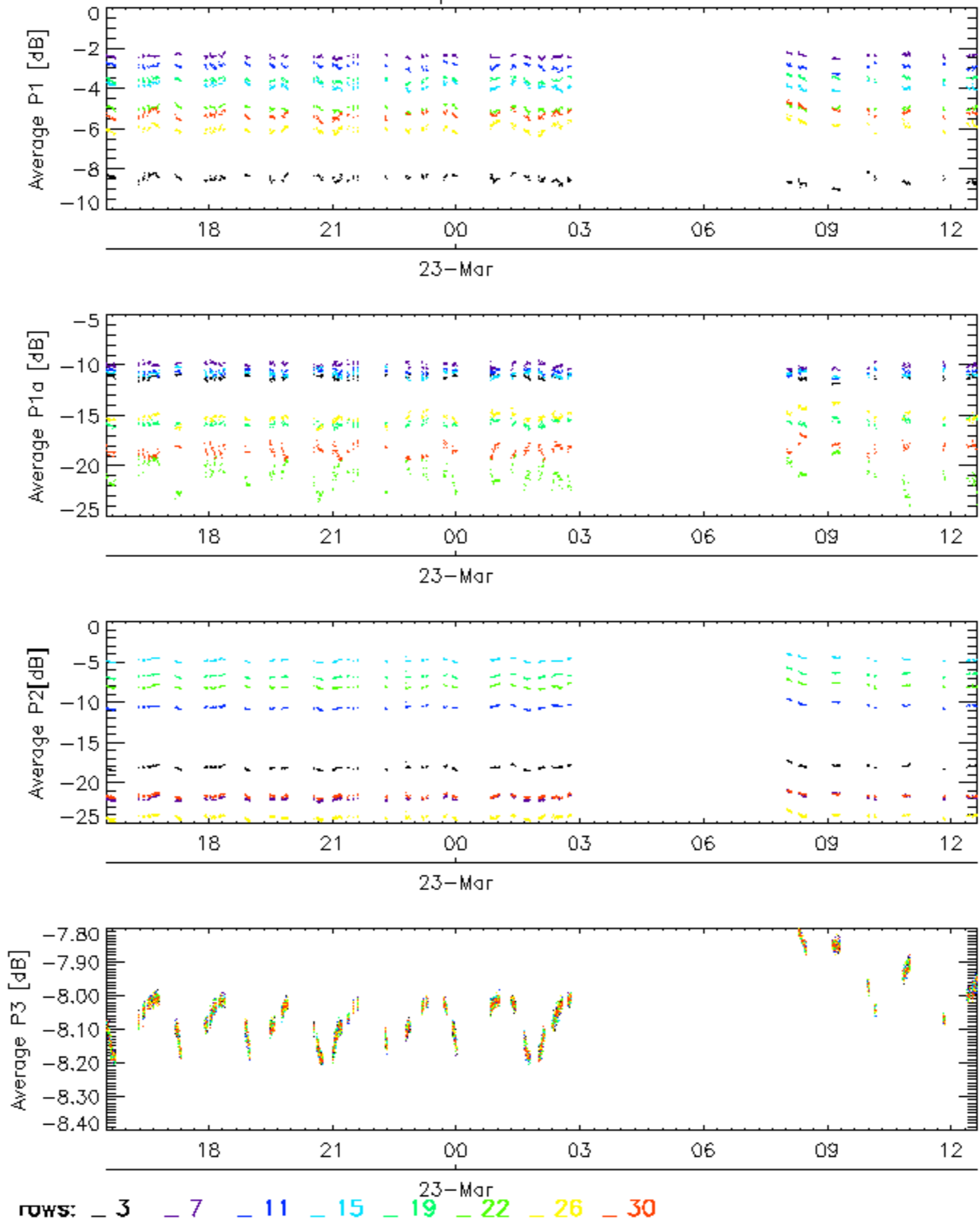
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

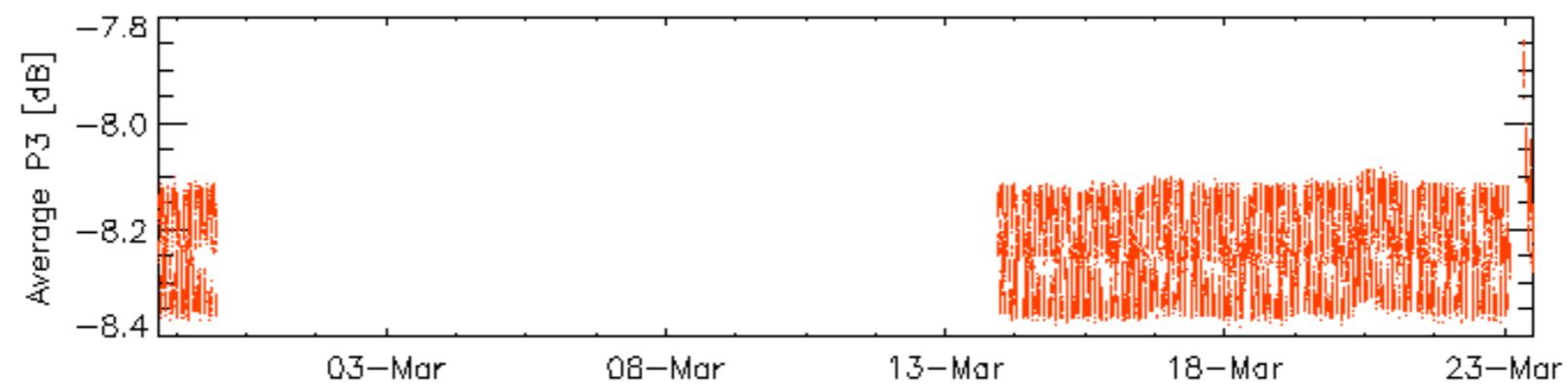
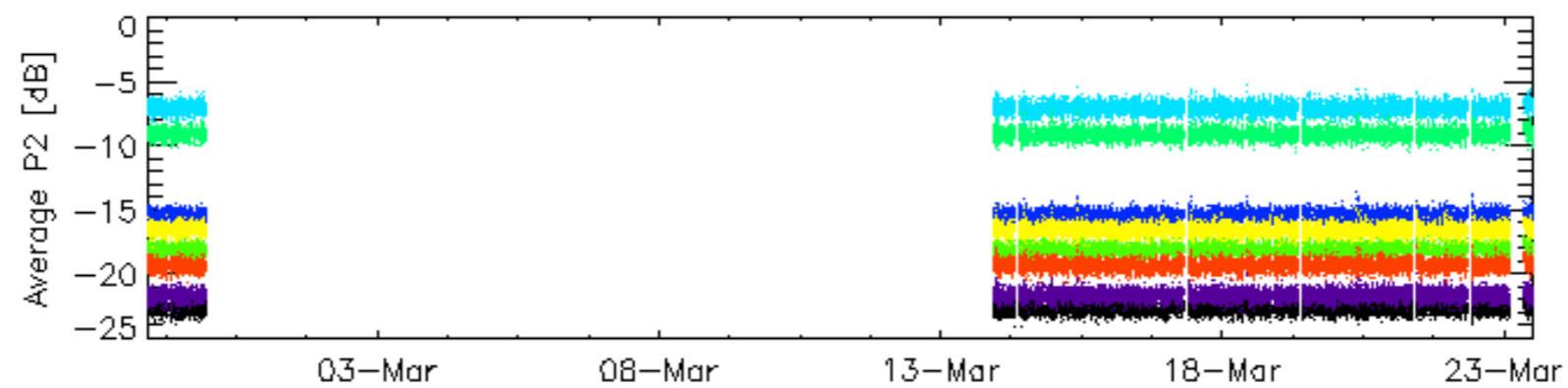
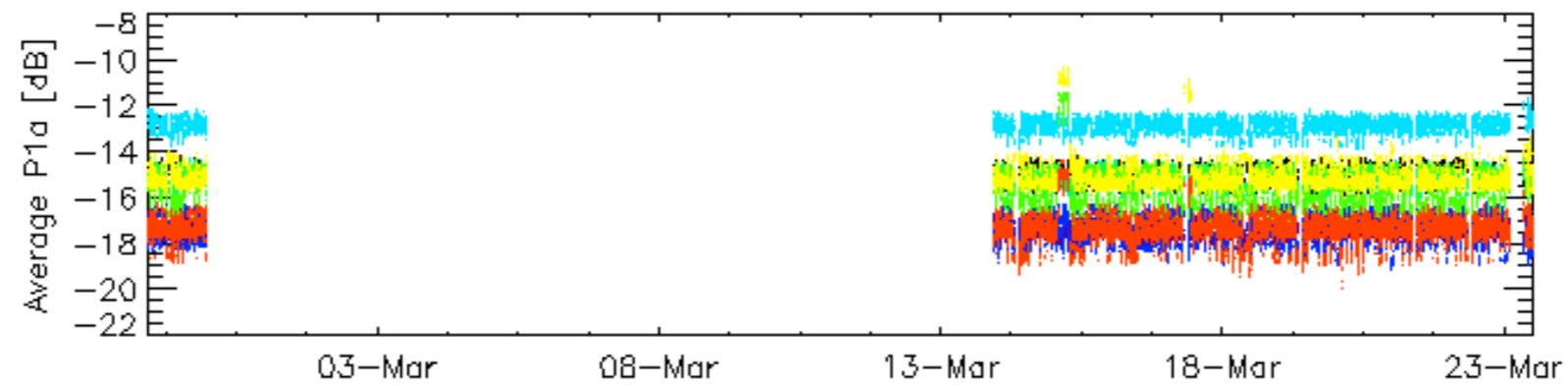
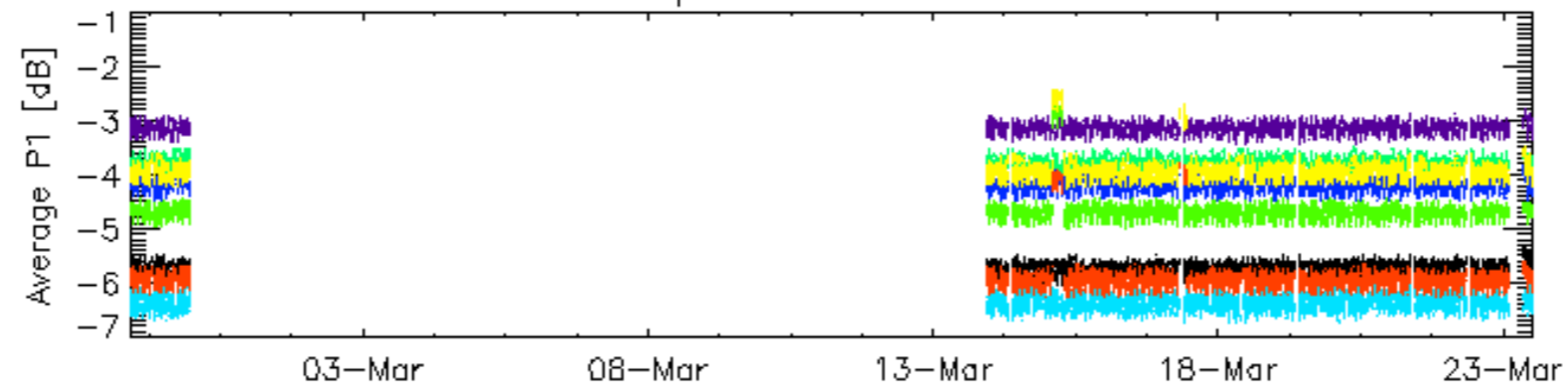


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

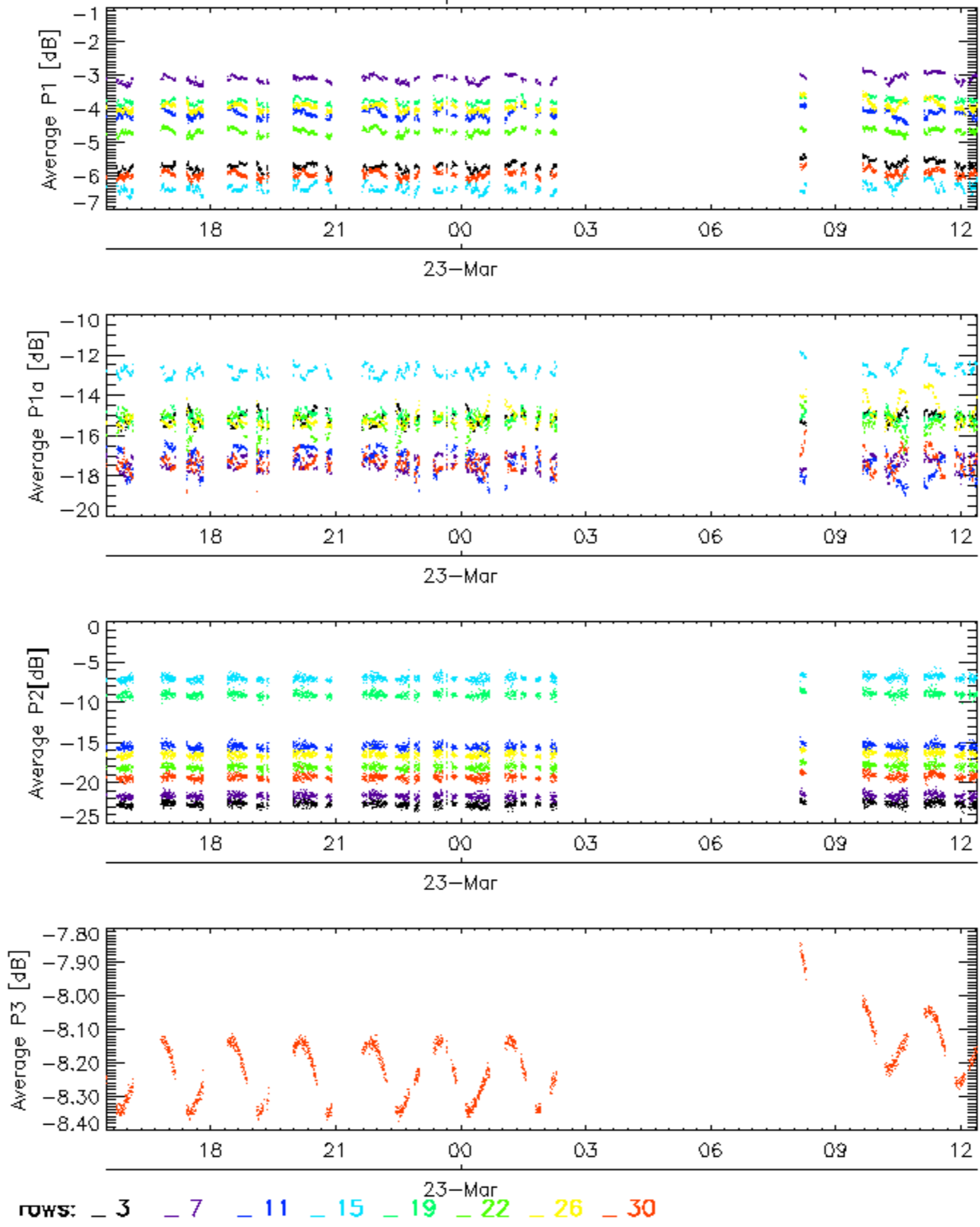


Cal pulses for WVS IS2

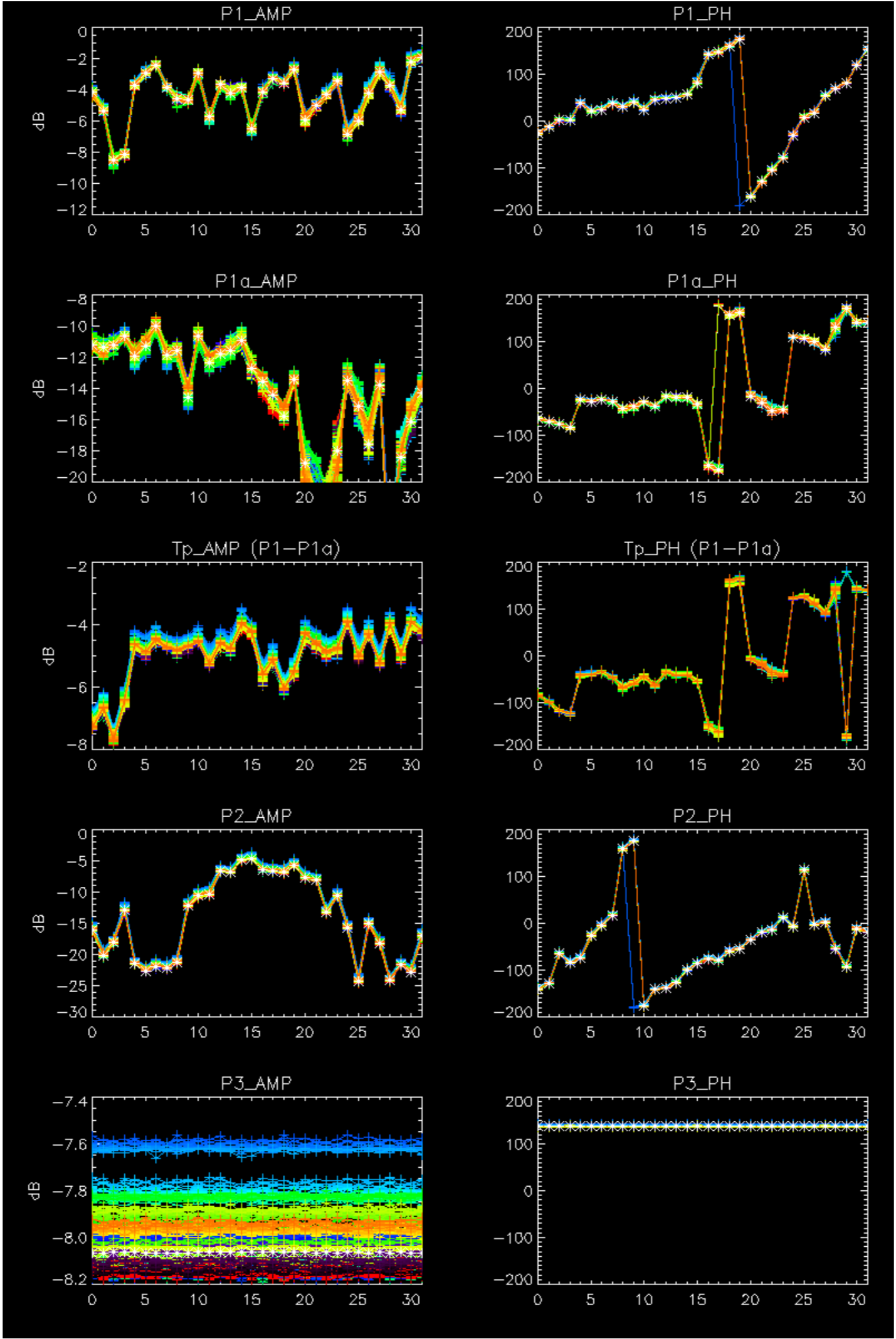


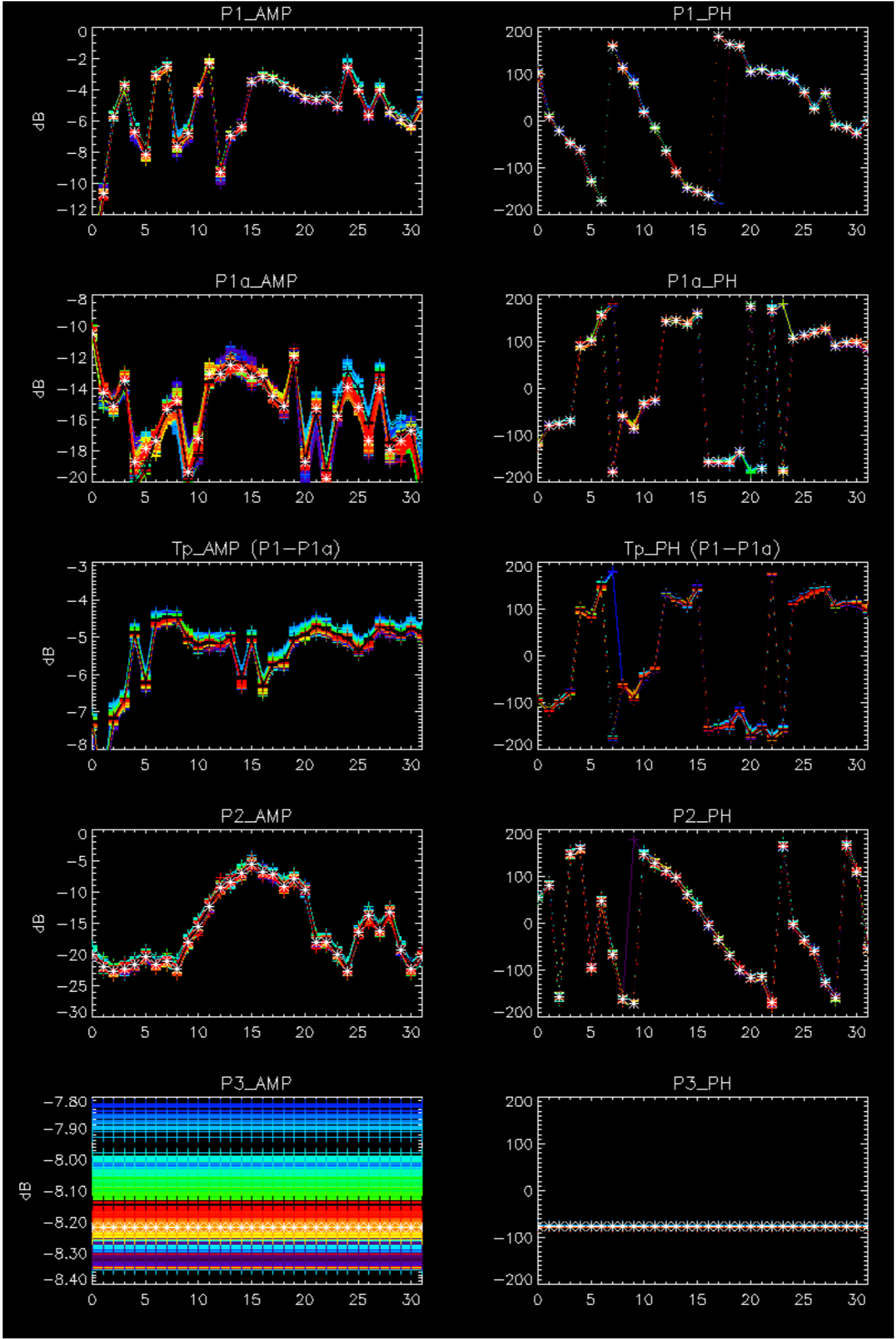
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



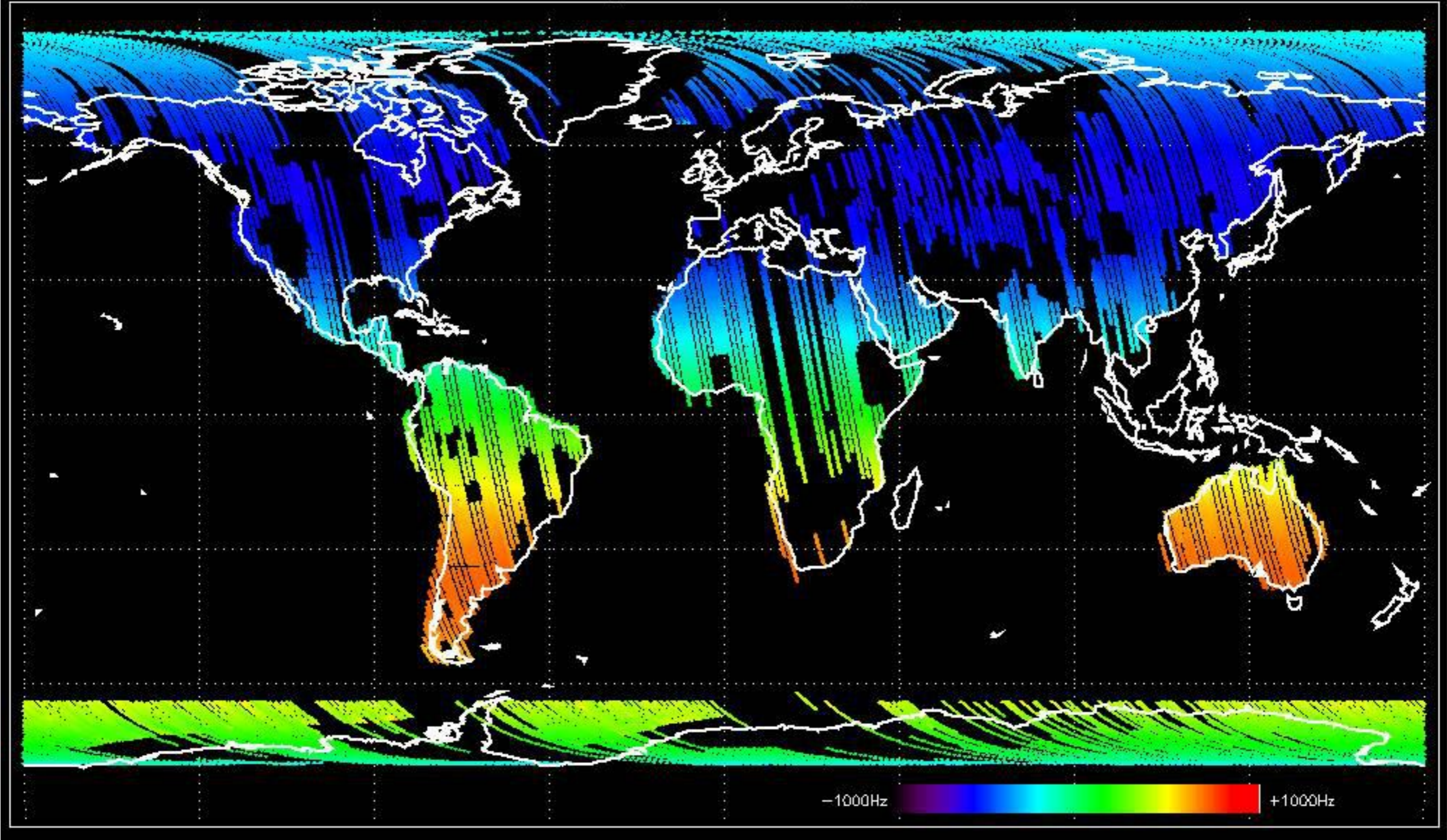
No anomalies observed.



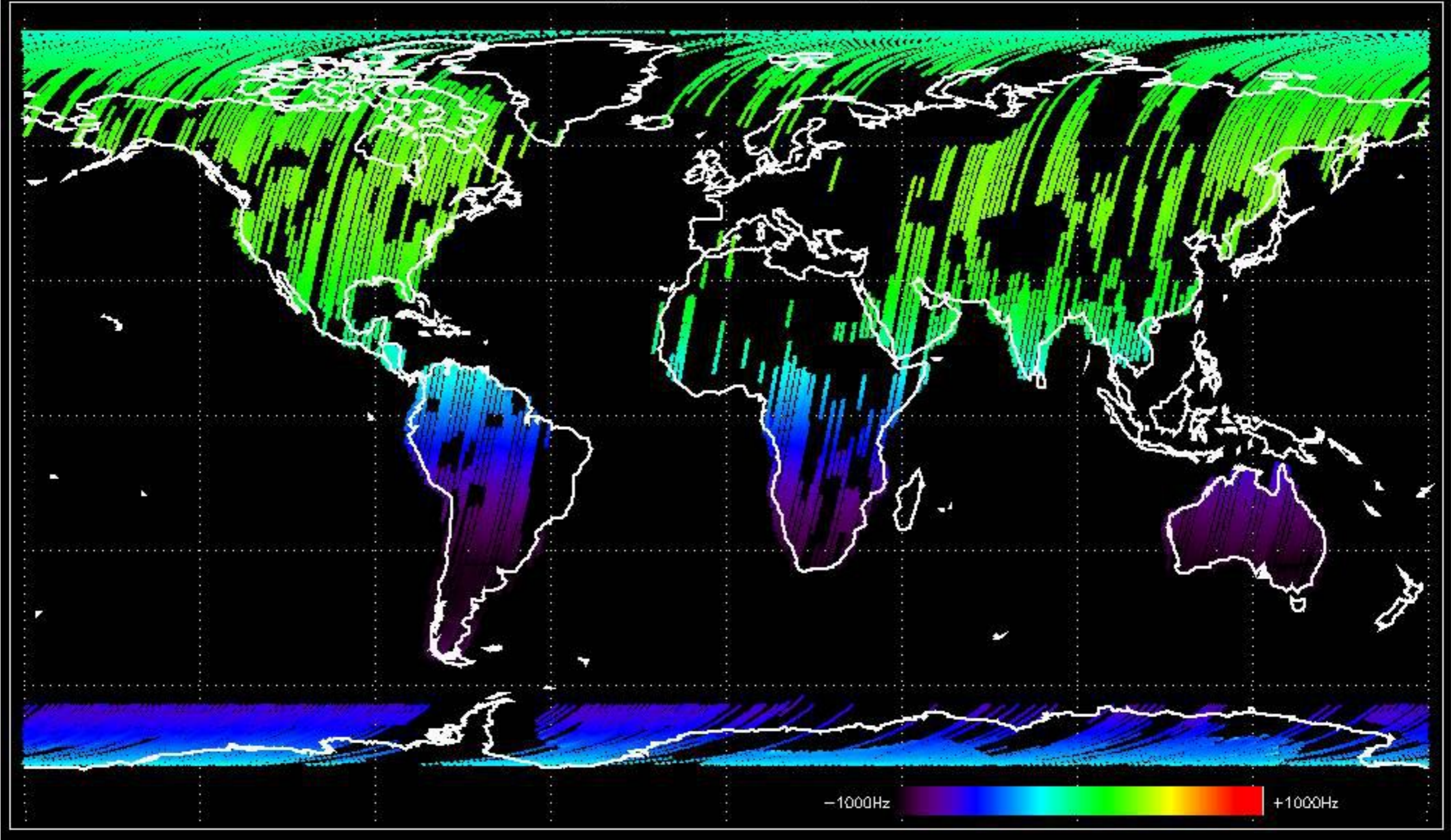


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

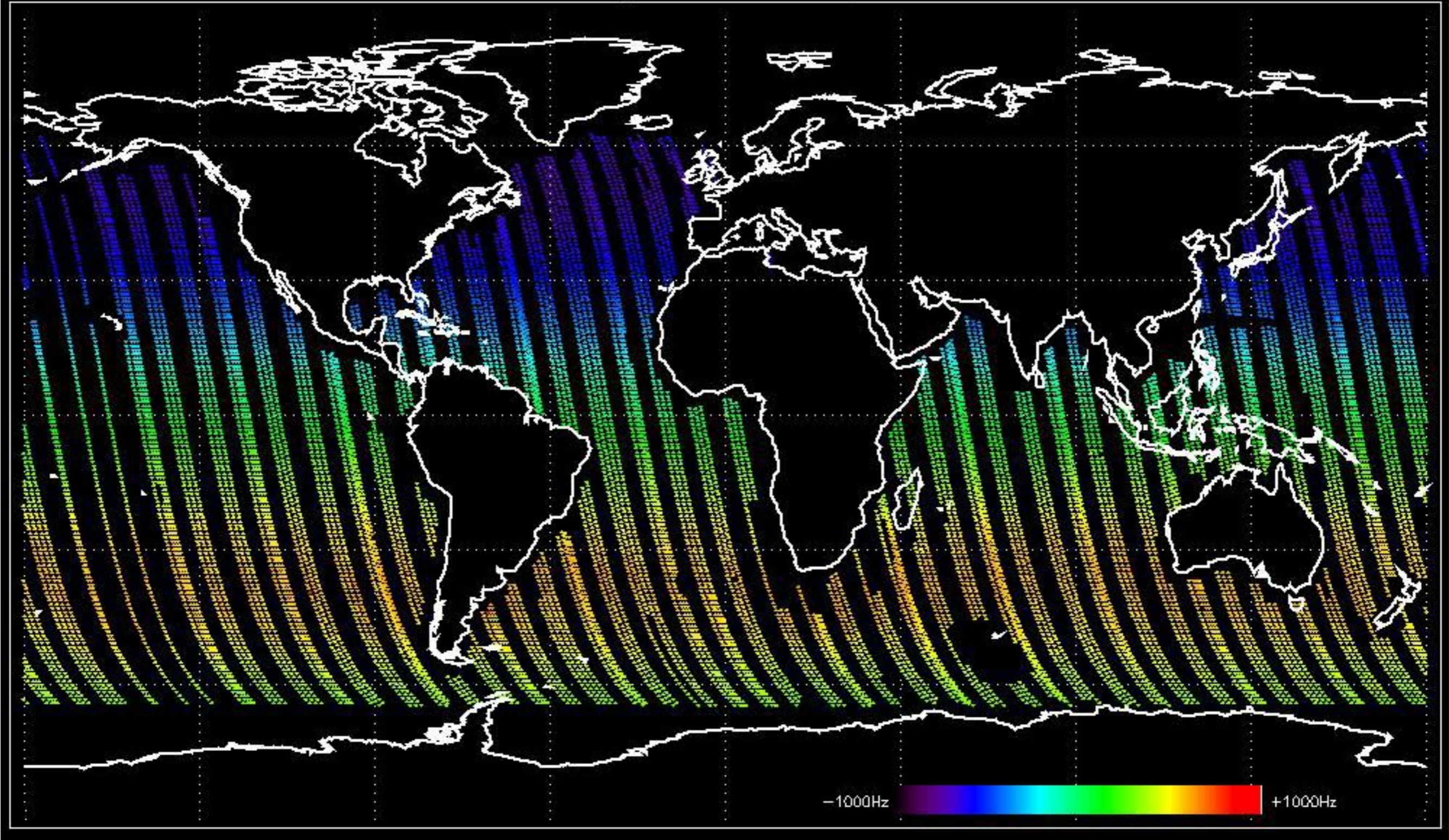
Doppler 'GM1' 'SS1' ascending



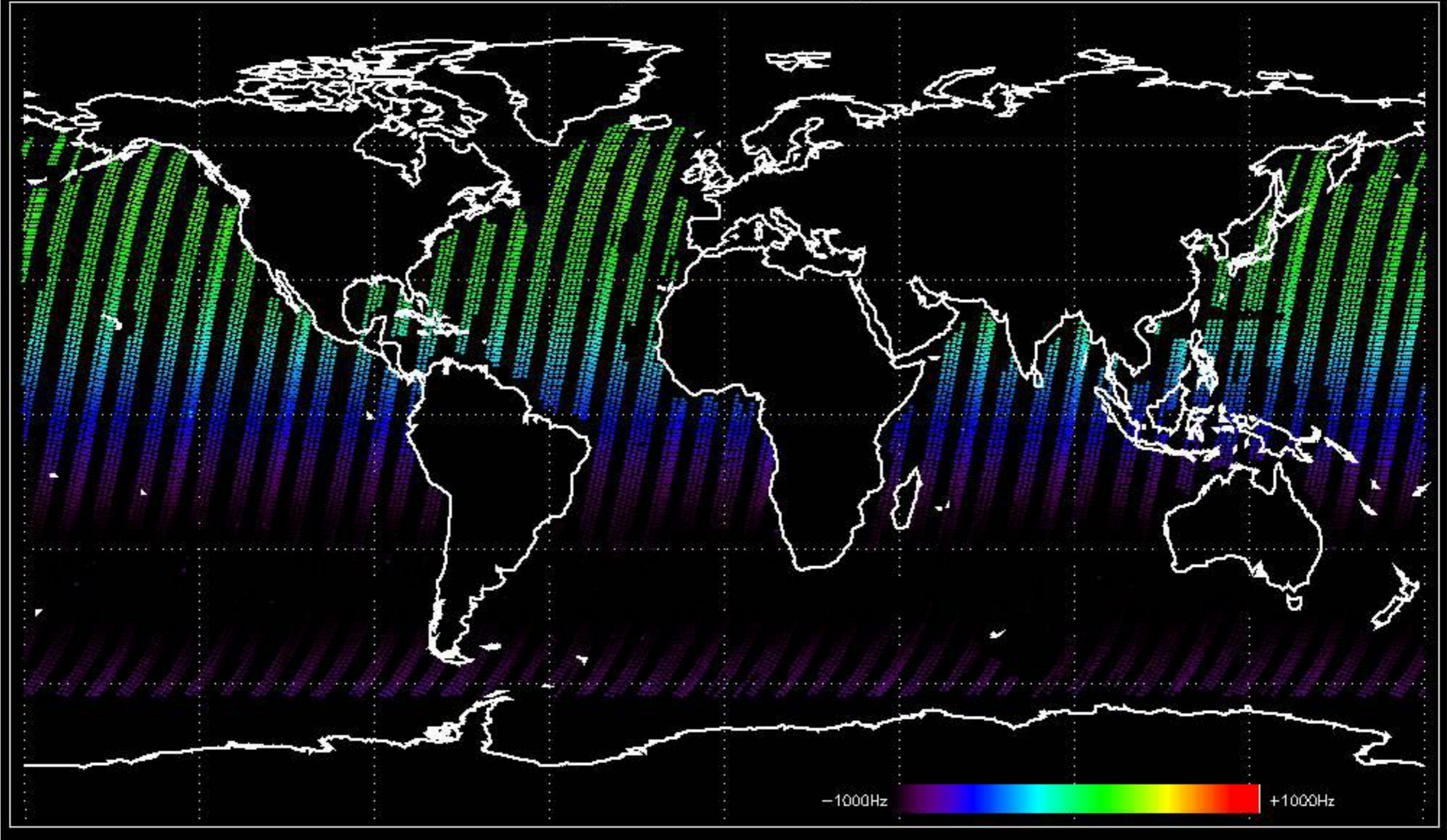
Doppler 'GM1' 'SS1' descending

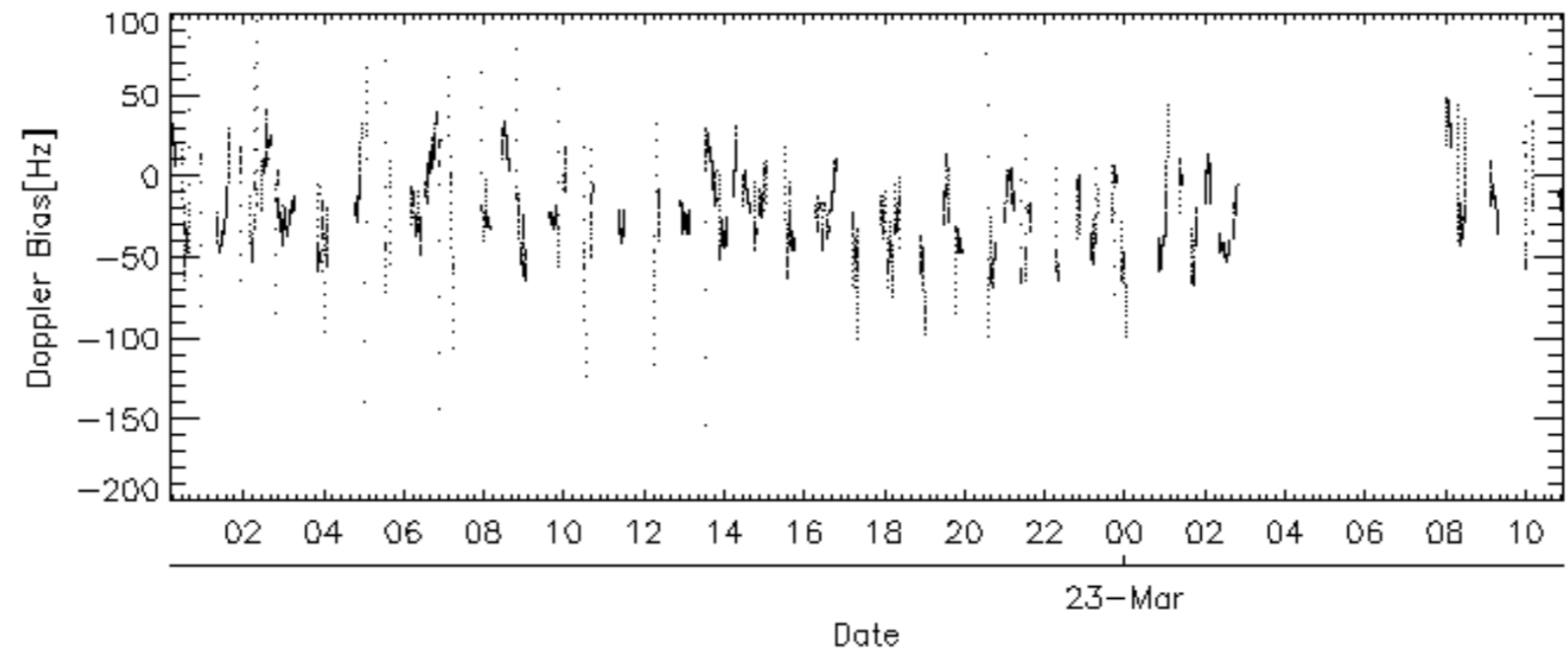
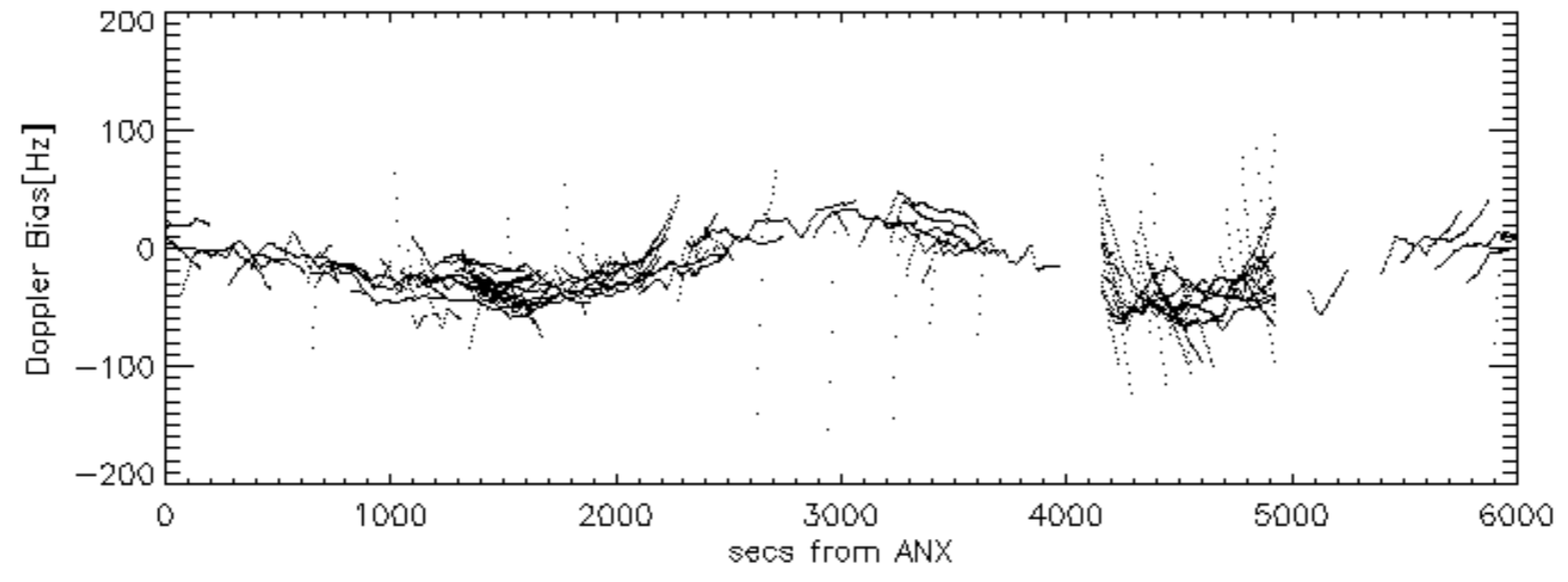
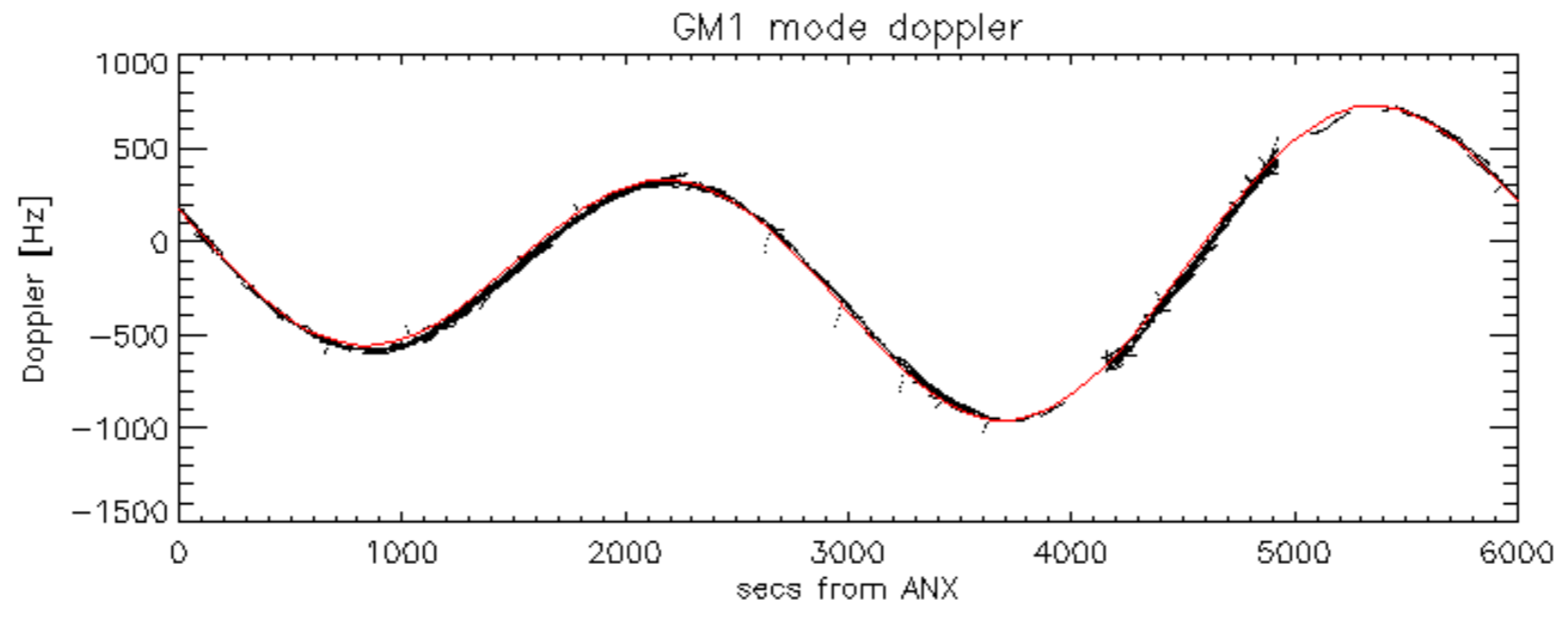


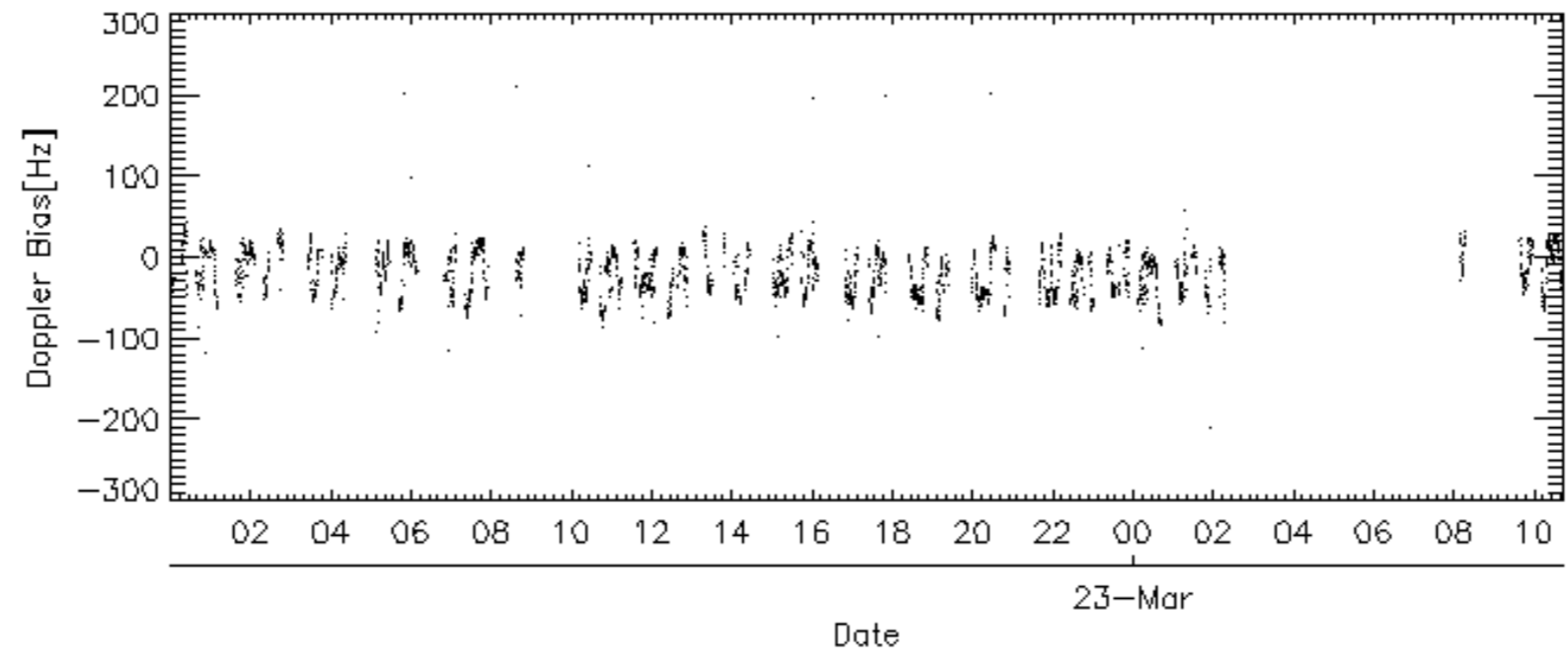
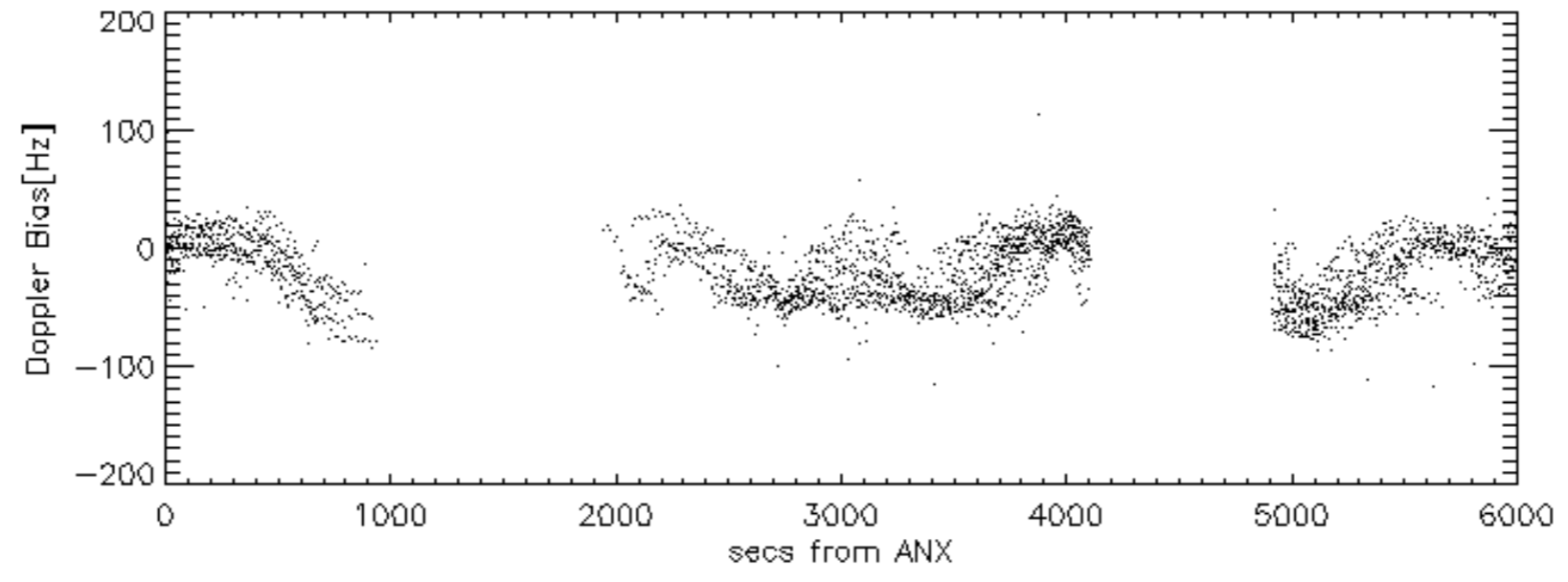
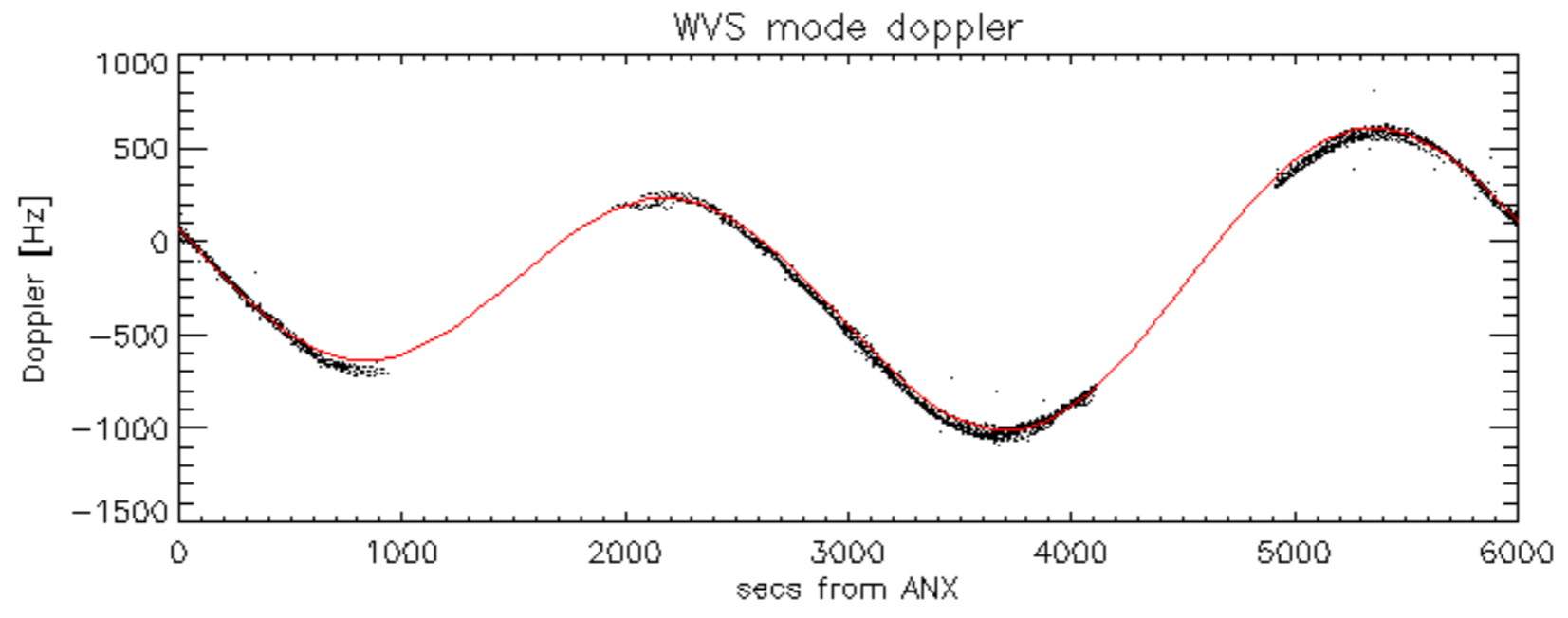
Doppler 'WVS' 'IS2' ascending



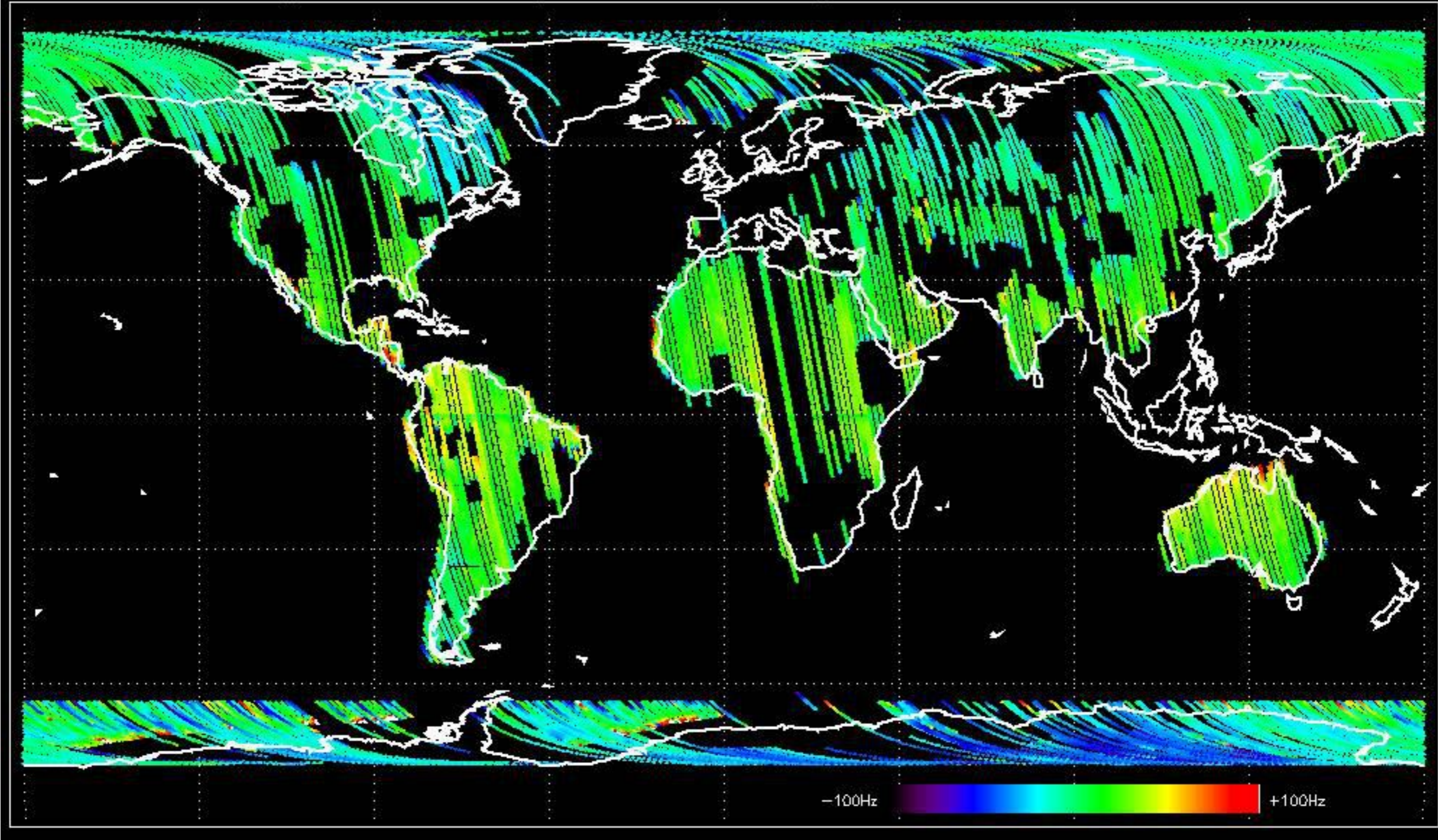
Doppler 'WVS' 'IS2' descending



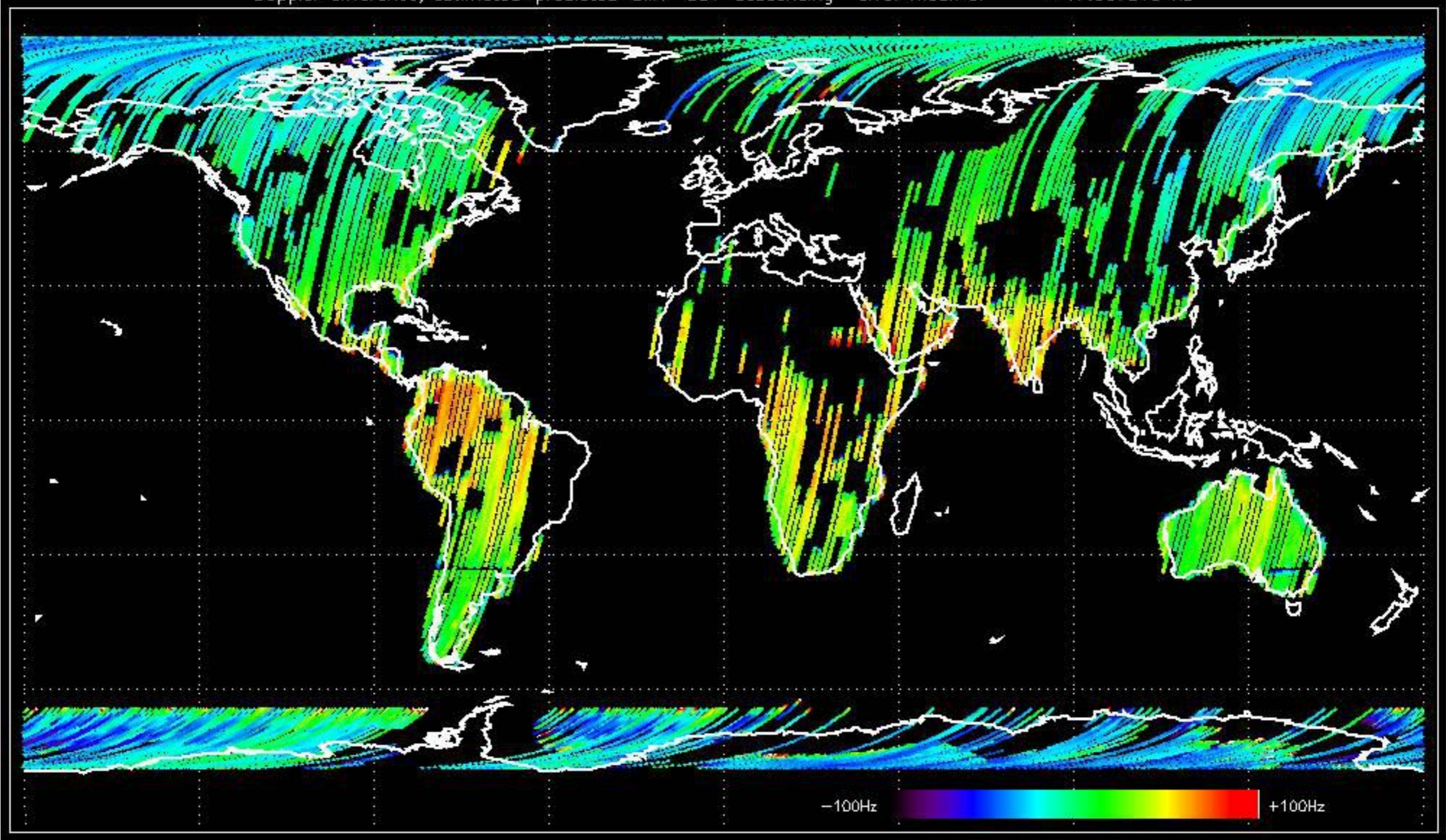




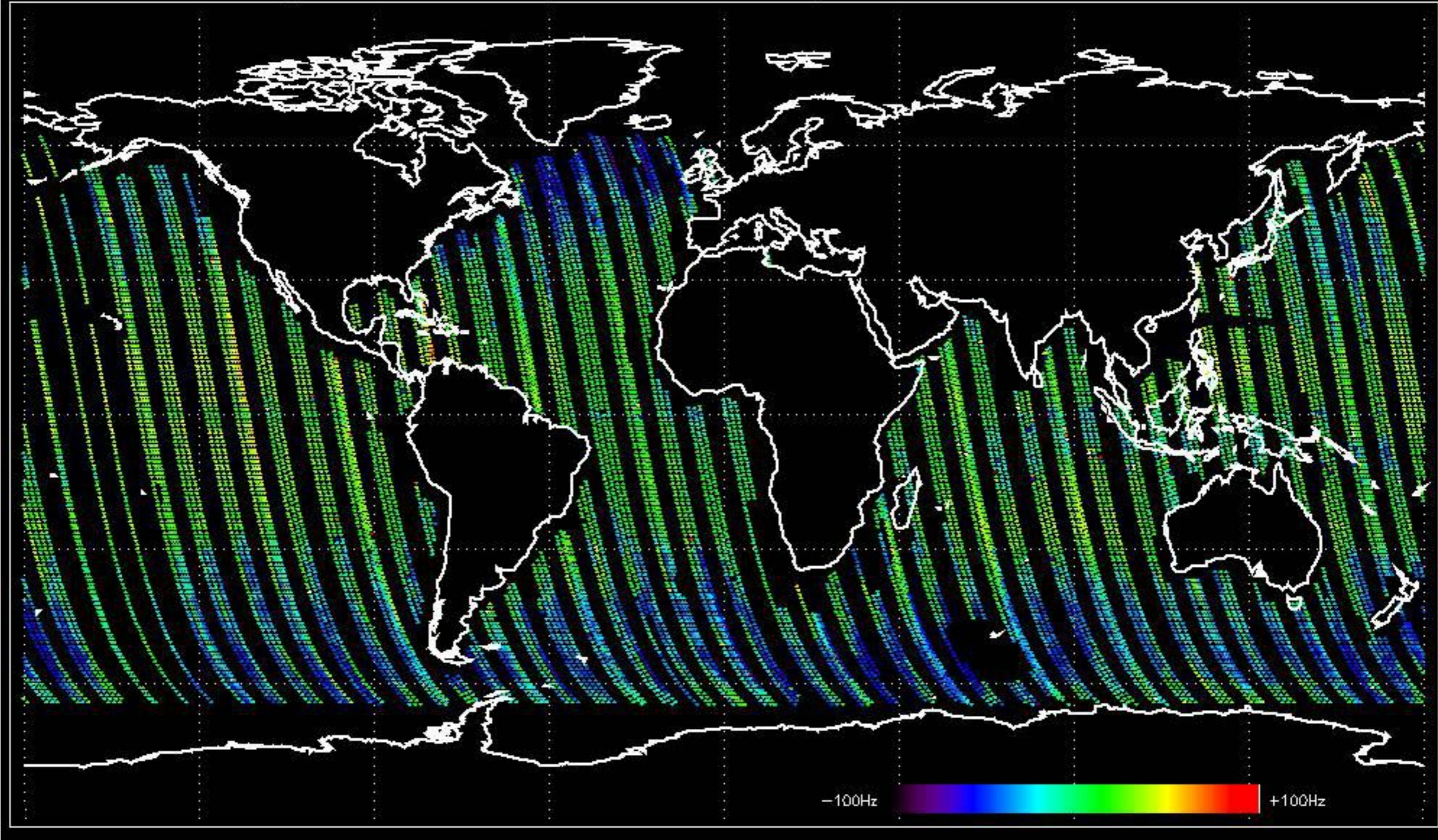
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.427314 Hz



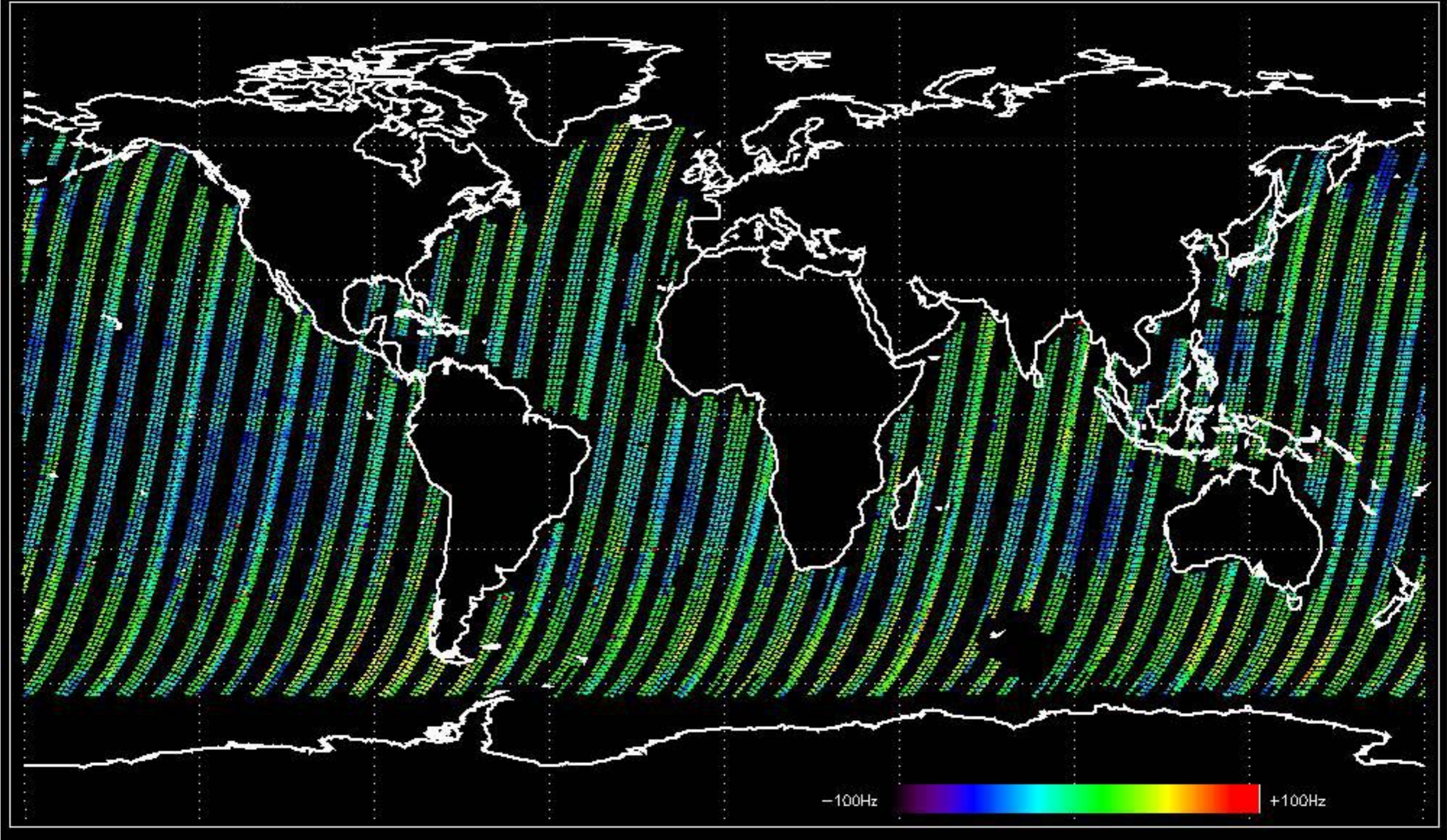
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.007819 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -16.169660 Hz

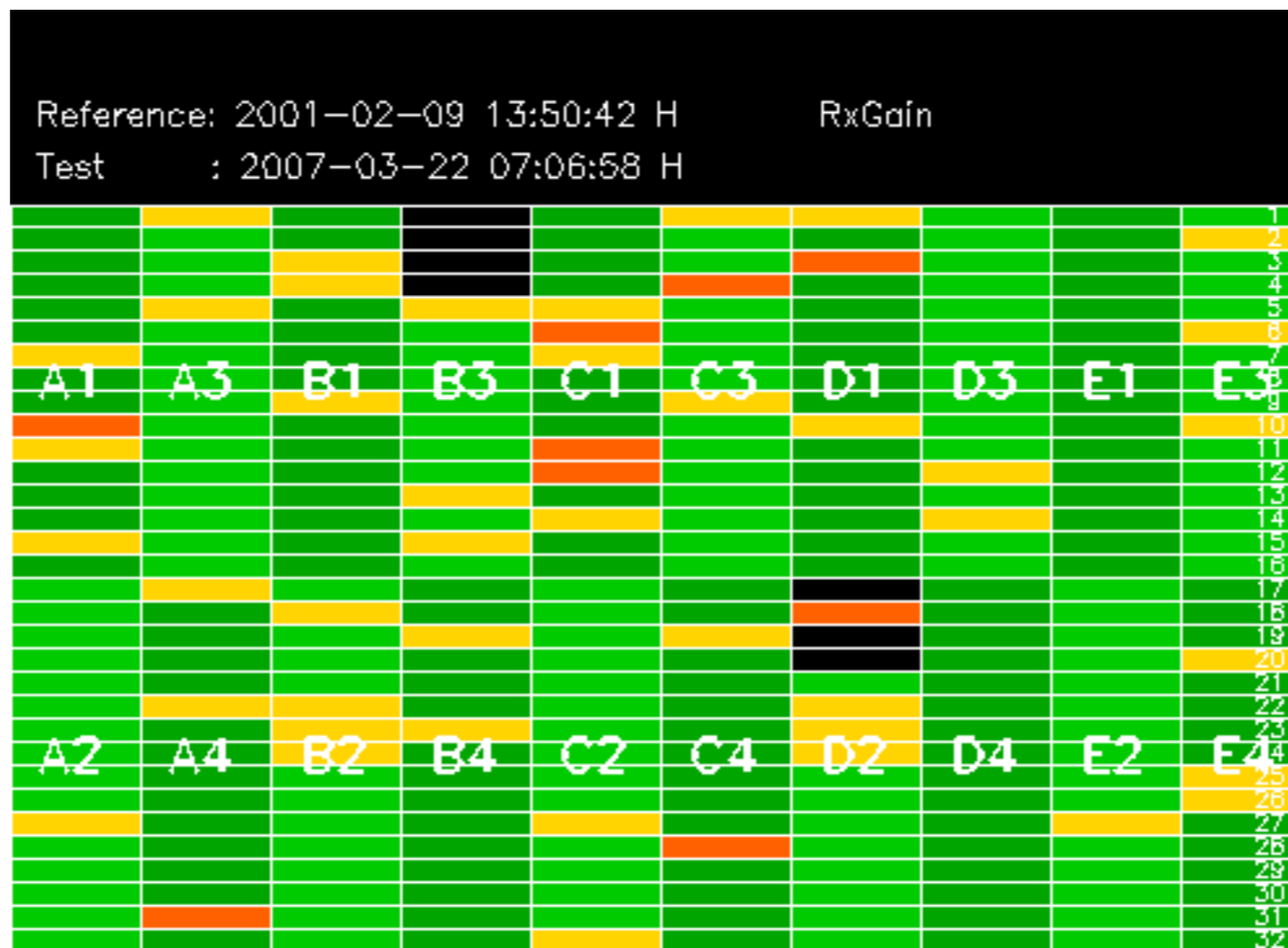


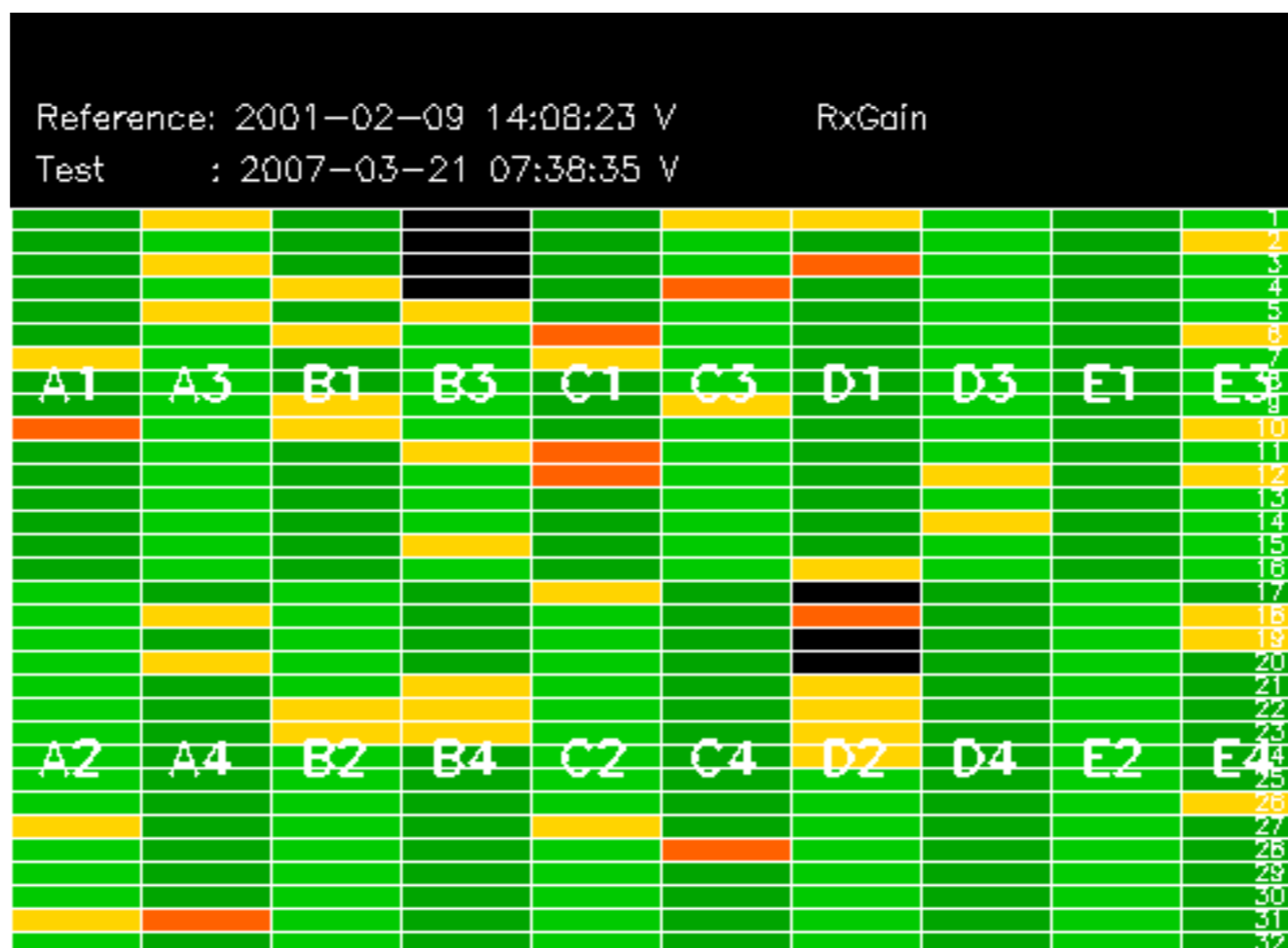
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.687763 Hz

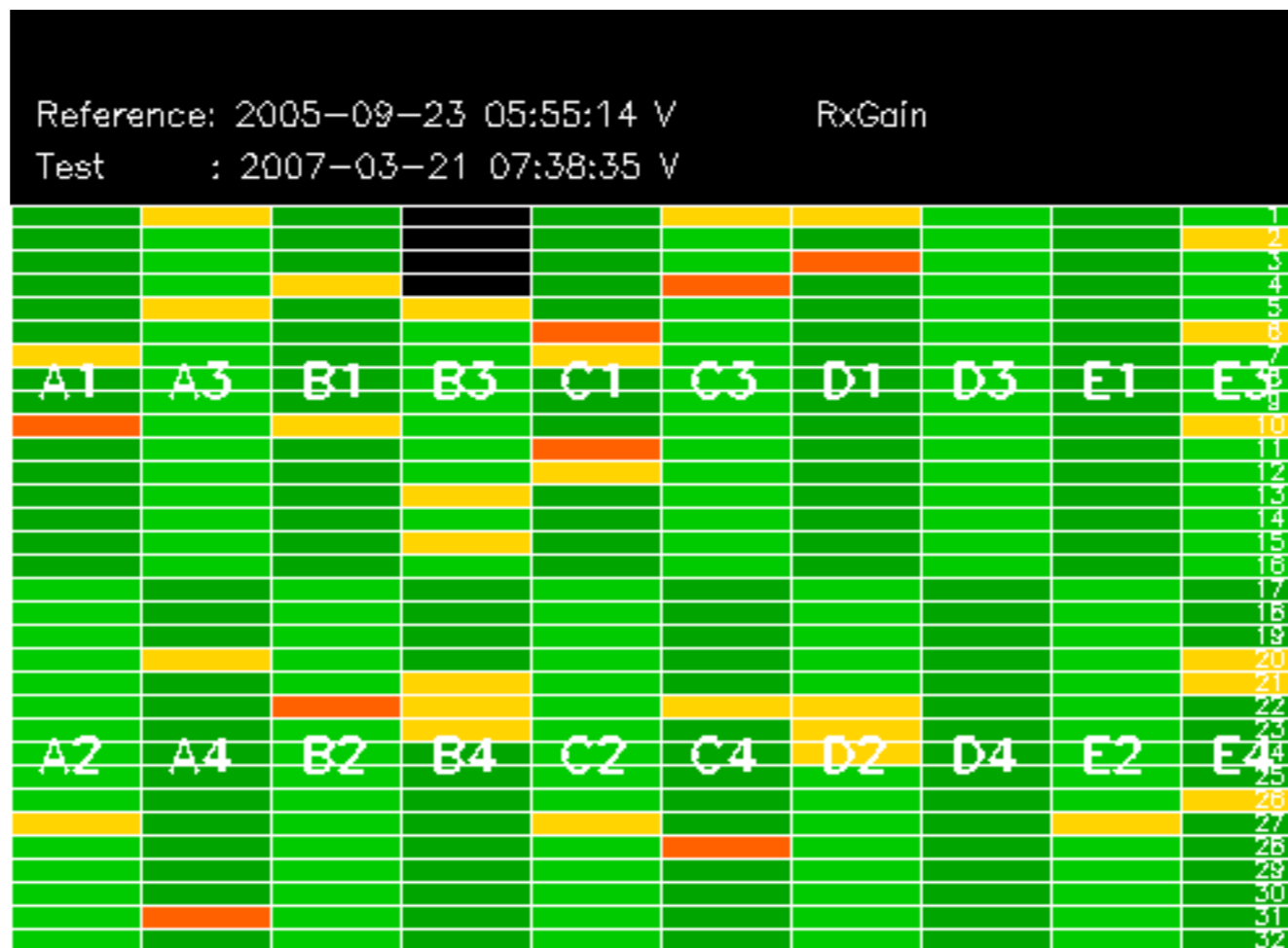


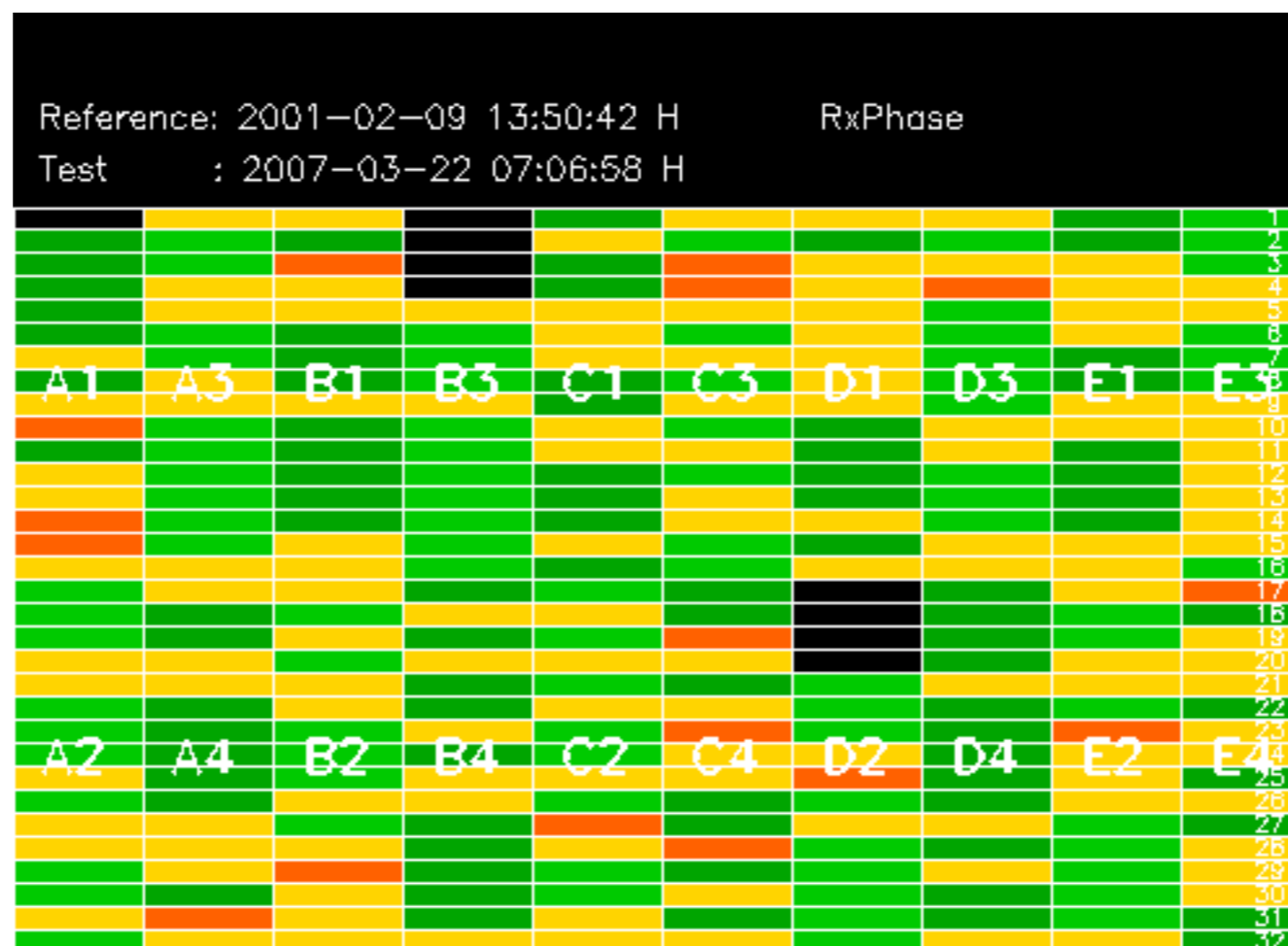
No anomalies observed on available MS products:

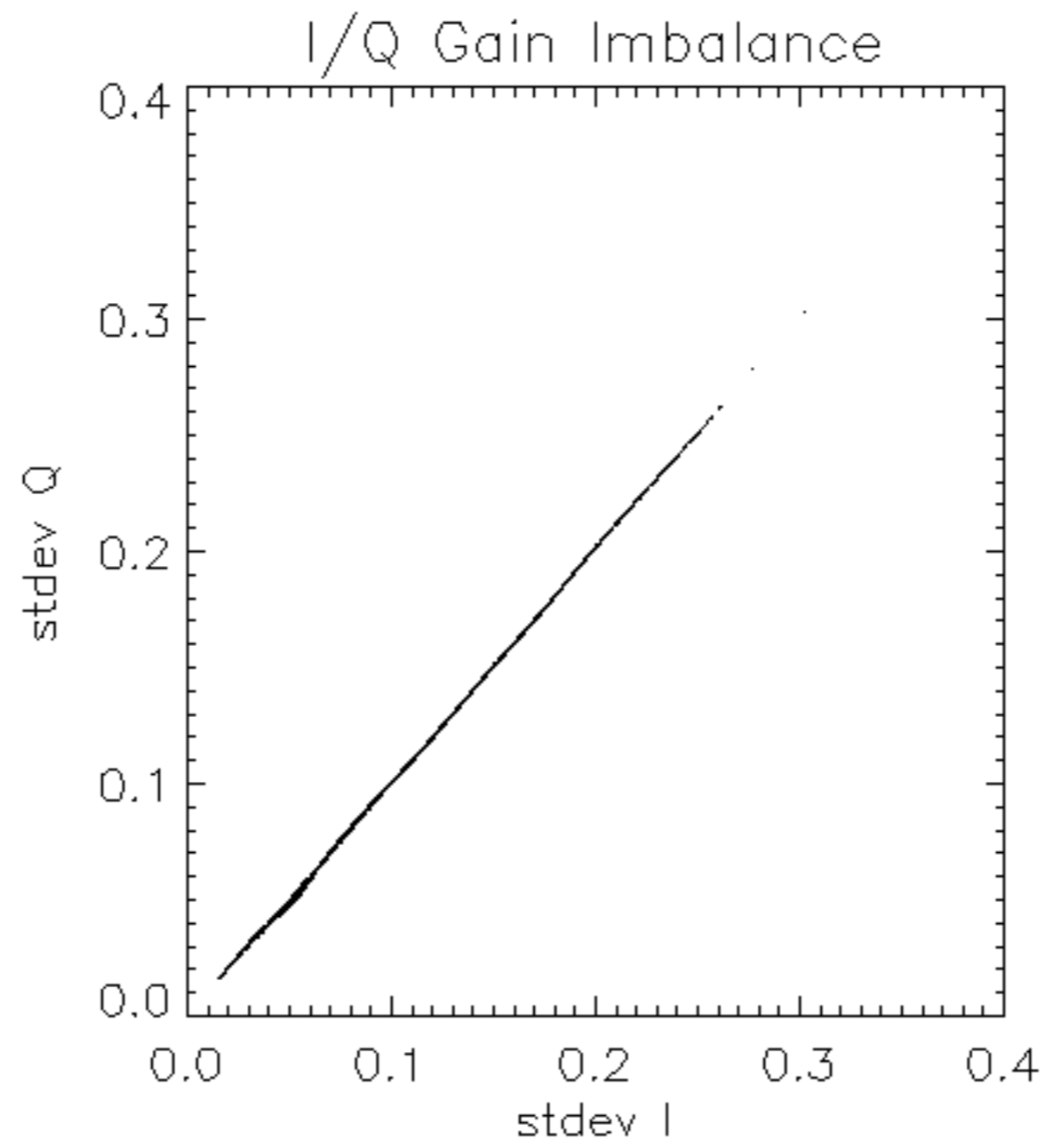
No anomalies observed.

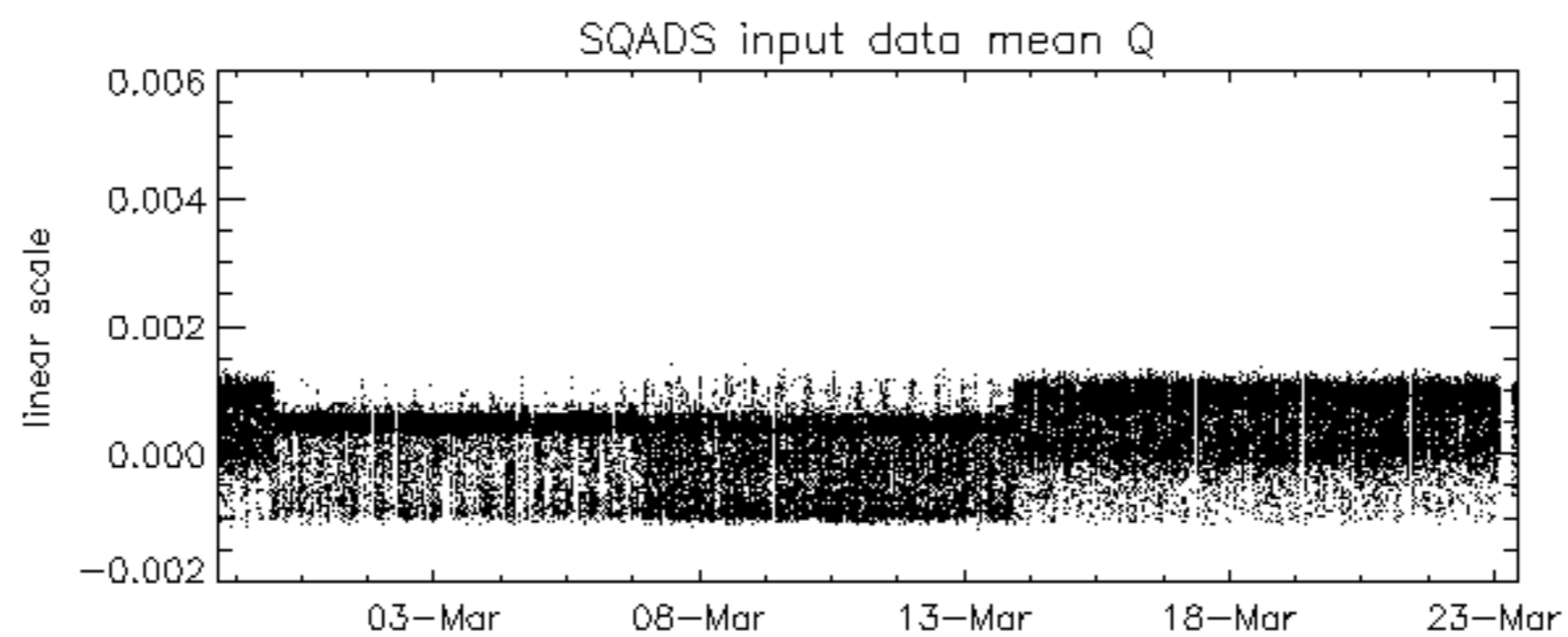
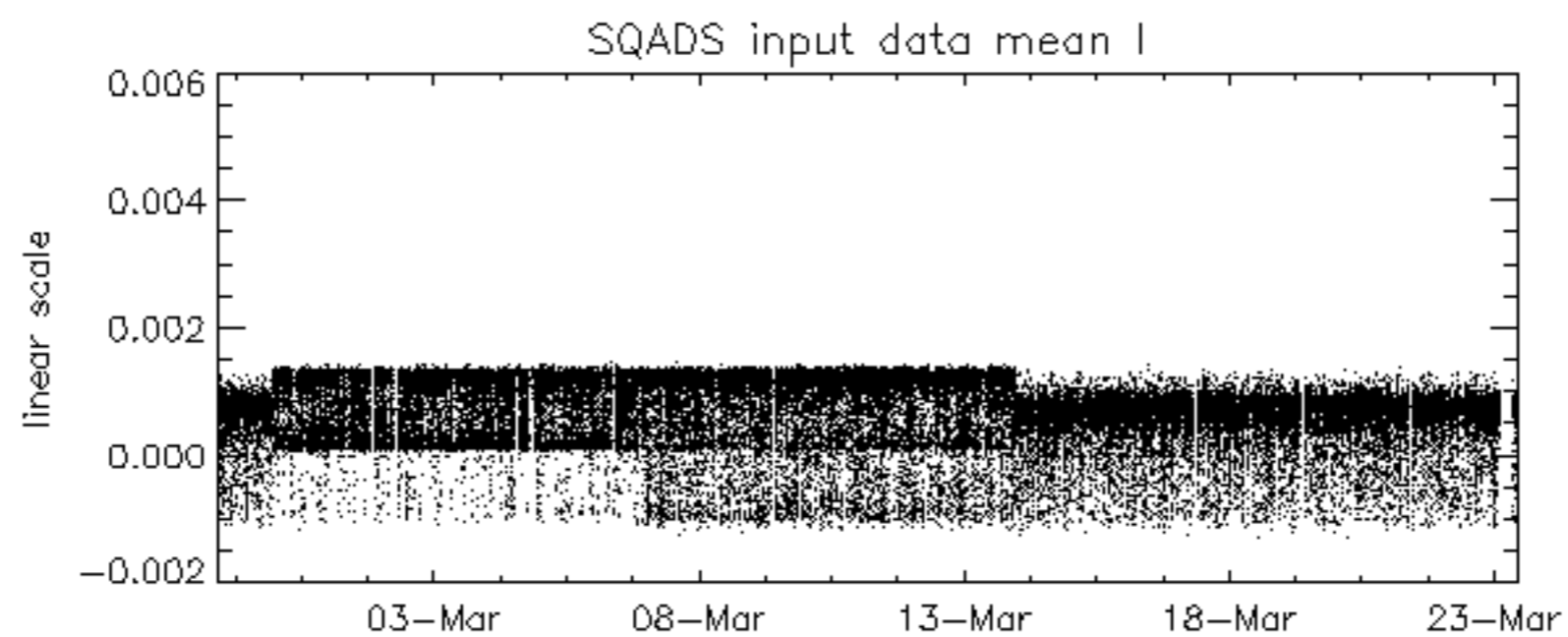
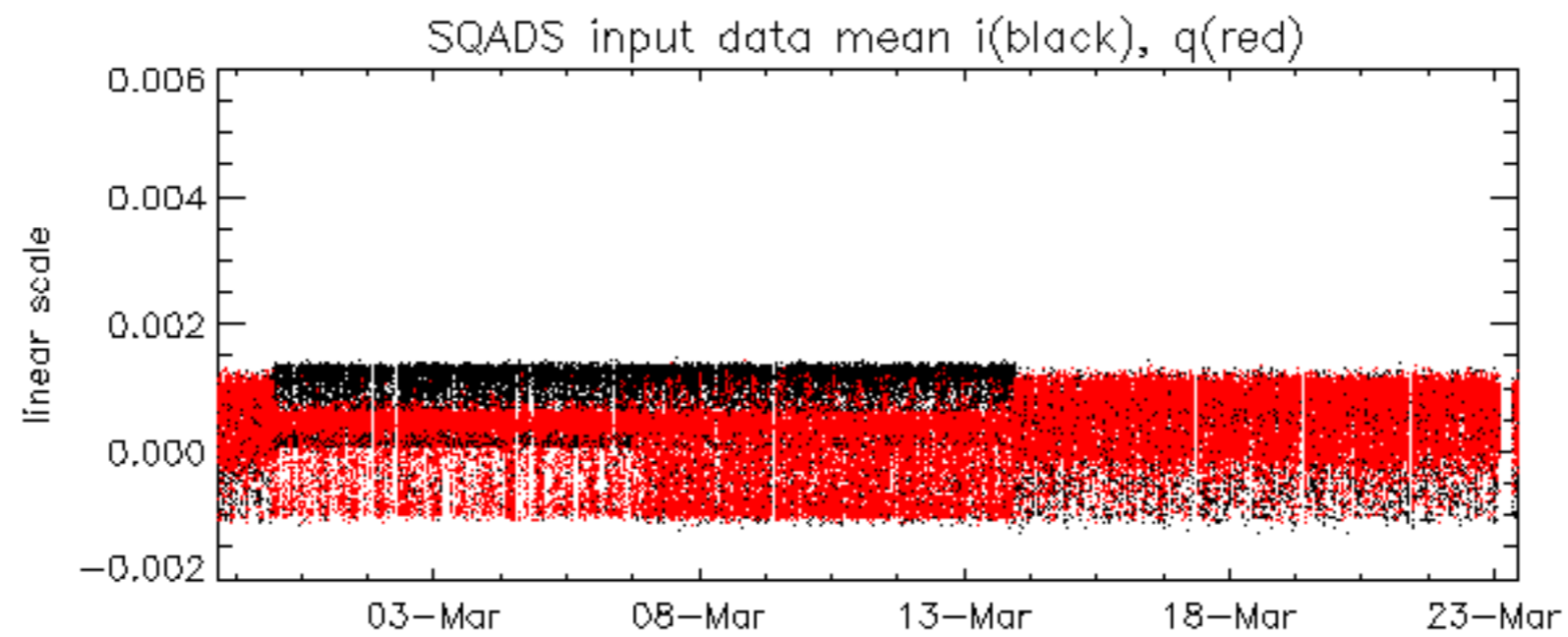


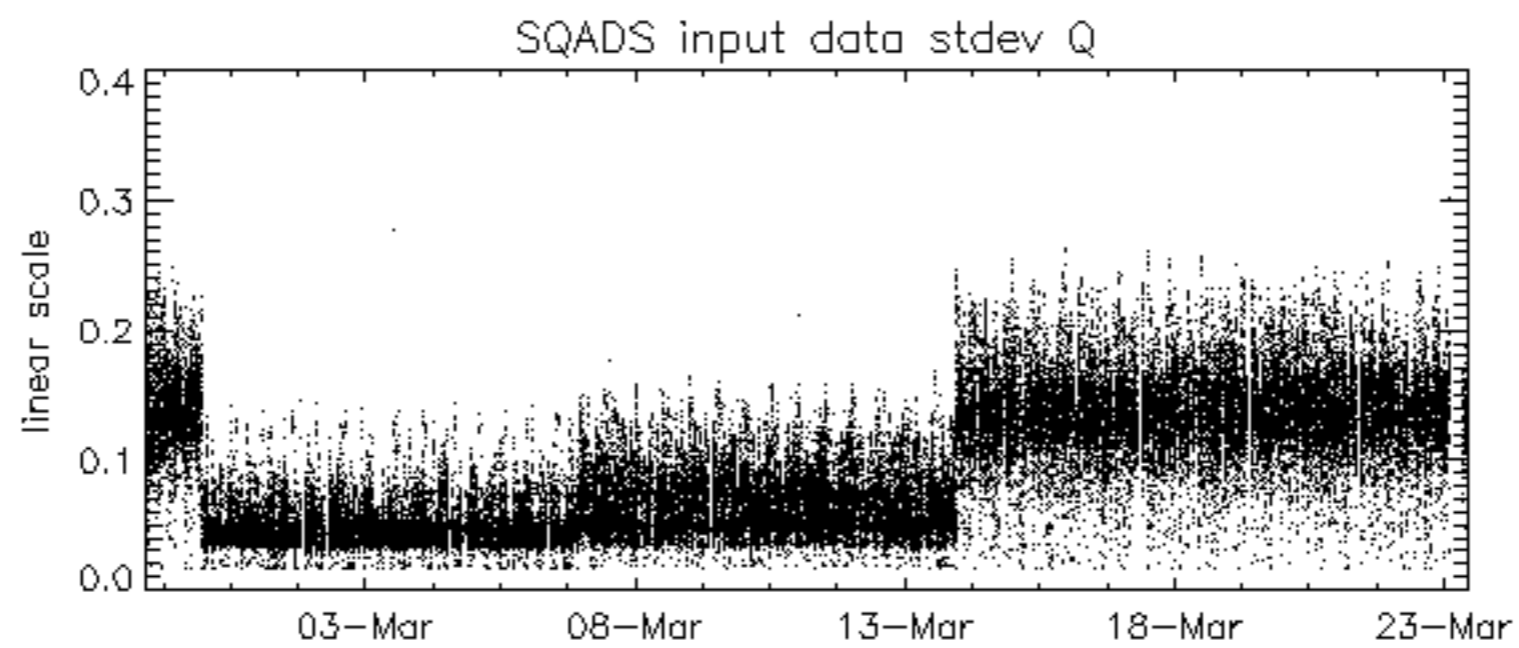
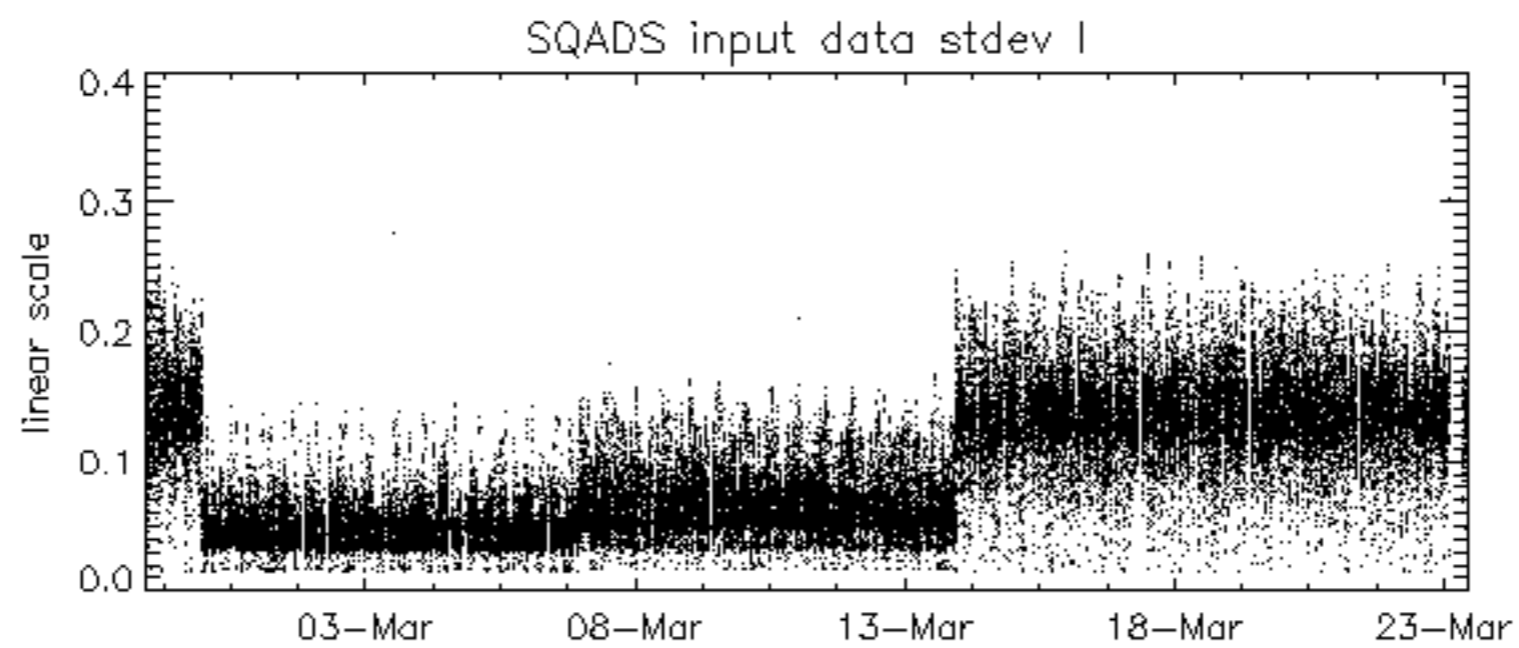
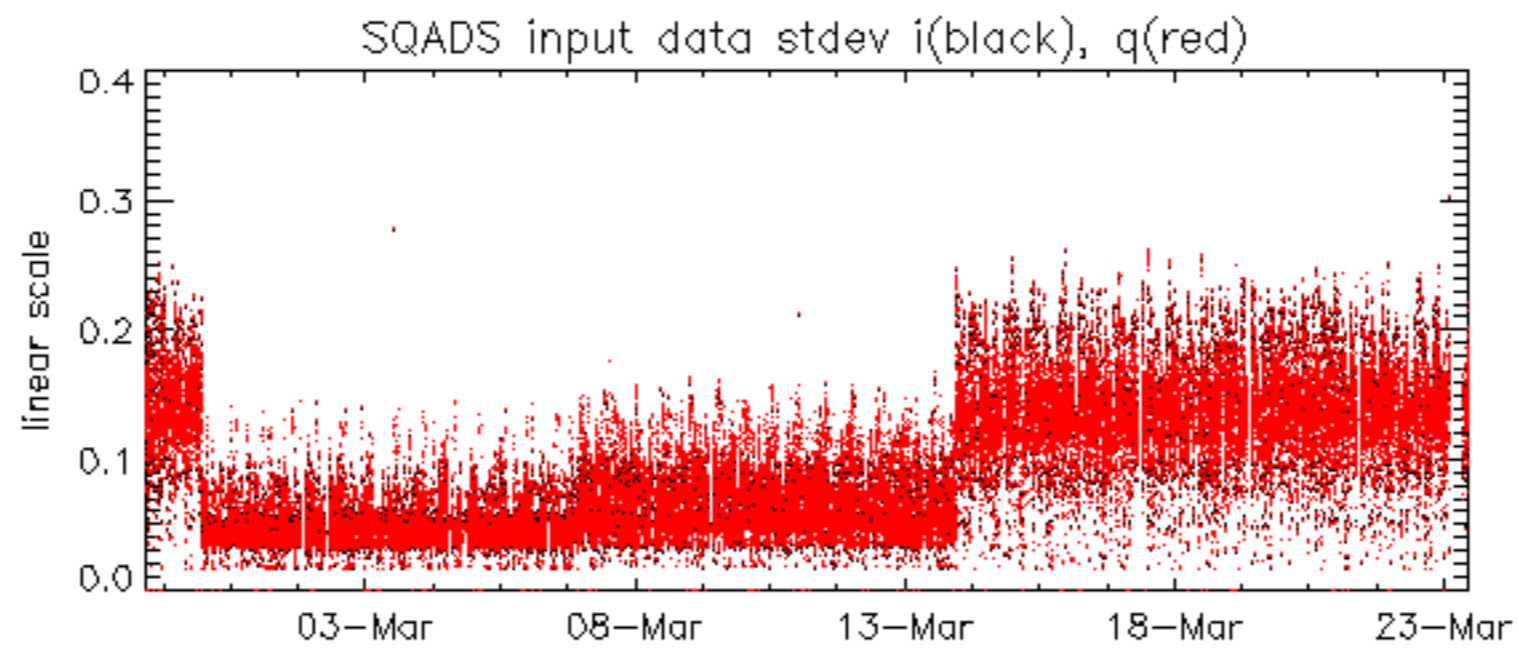




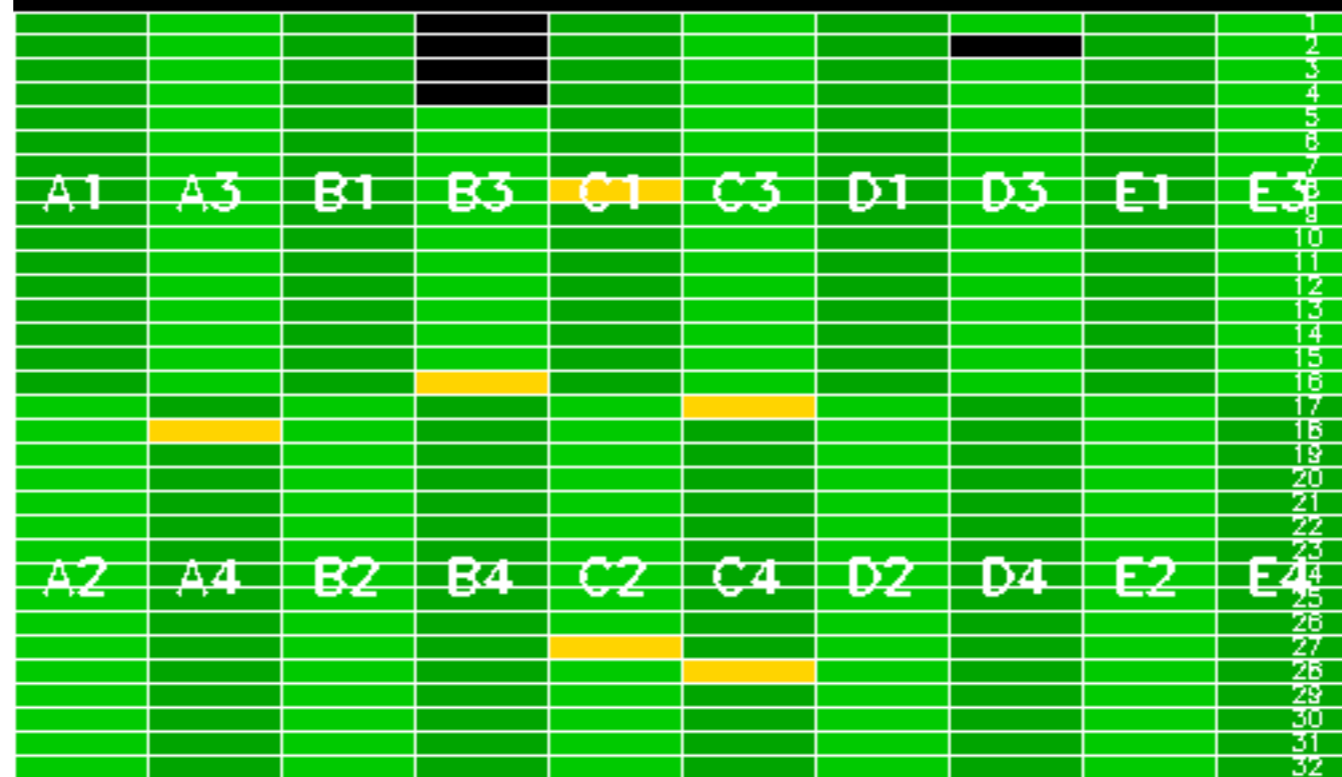








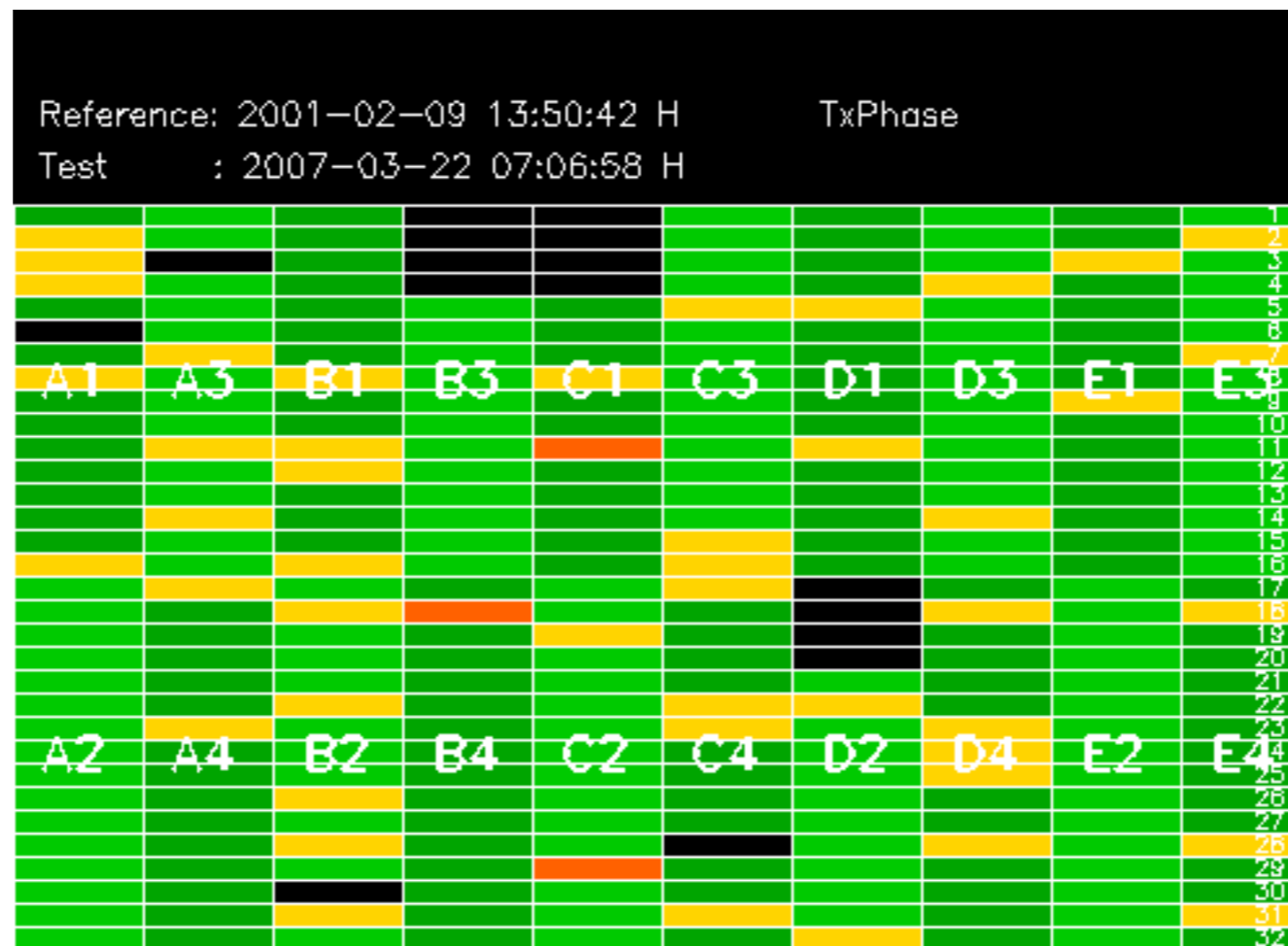
Reference: 2005-09-23 05:55:14 V TxGain
 Test : 2007-03-21 07:38:35 V

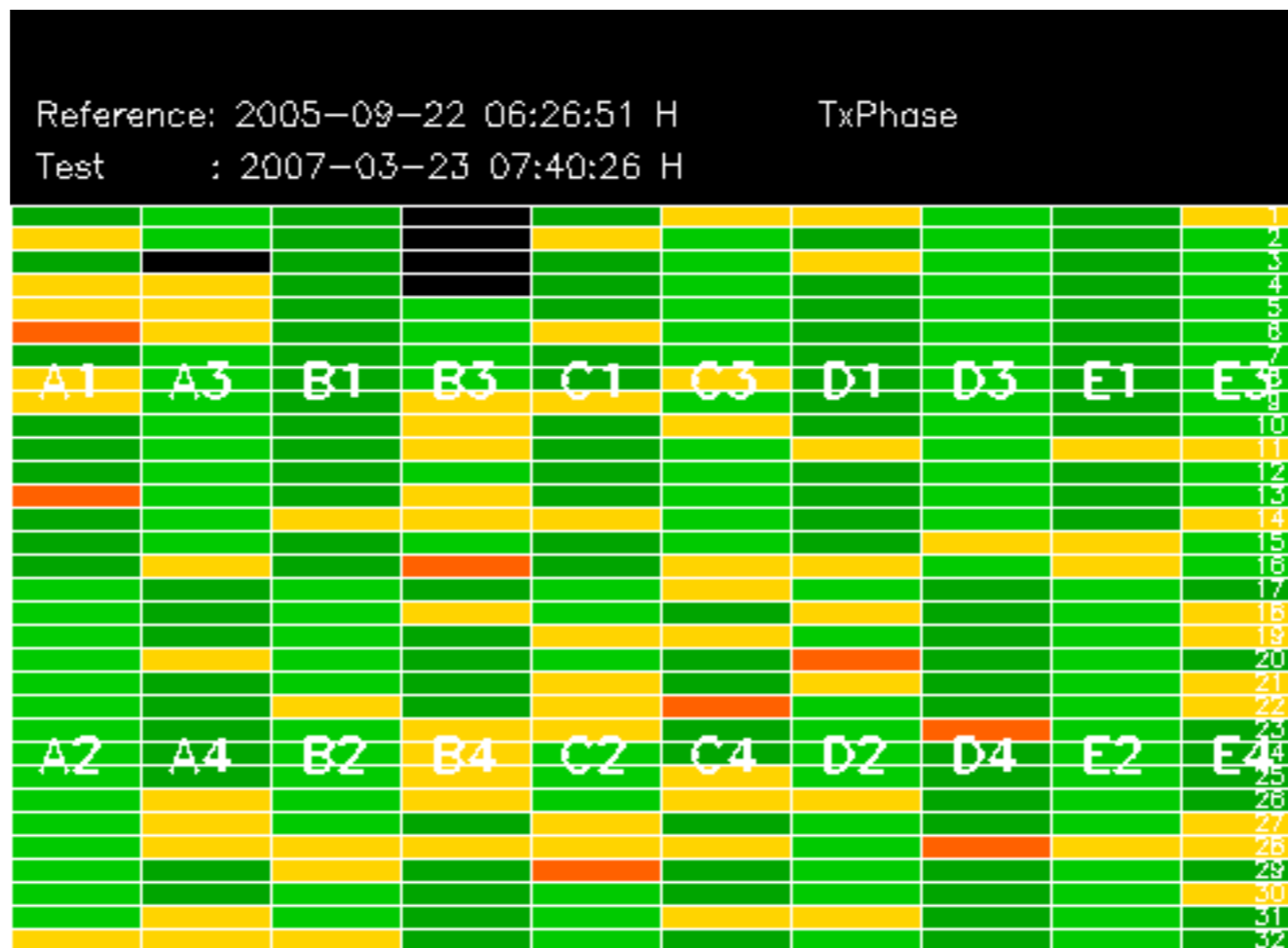


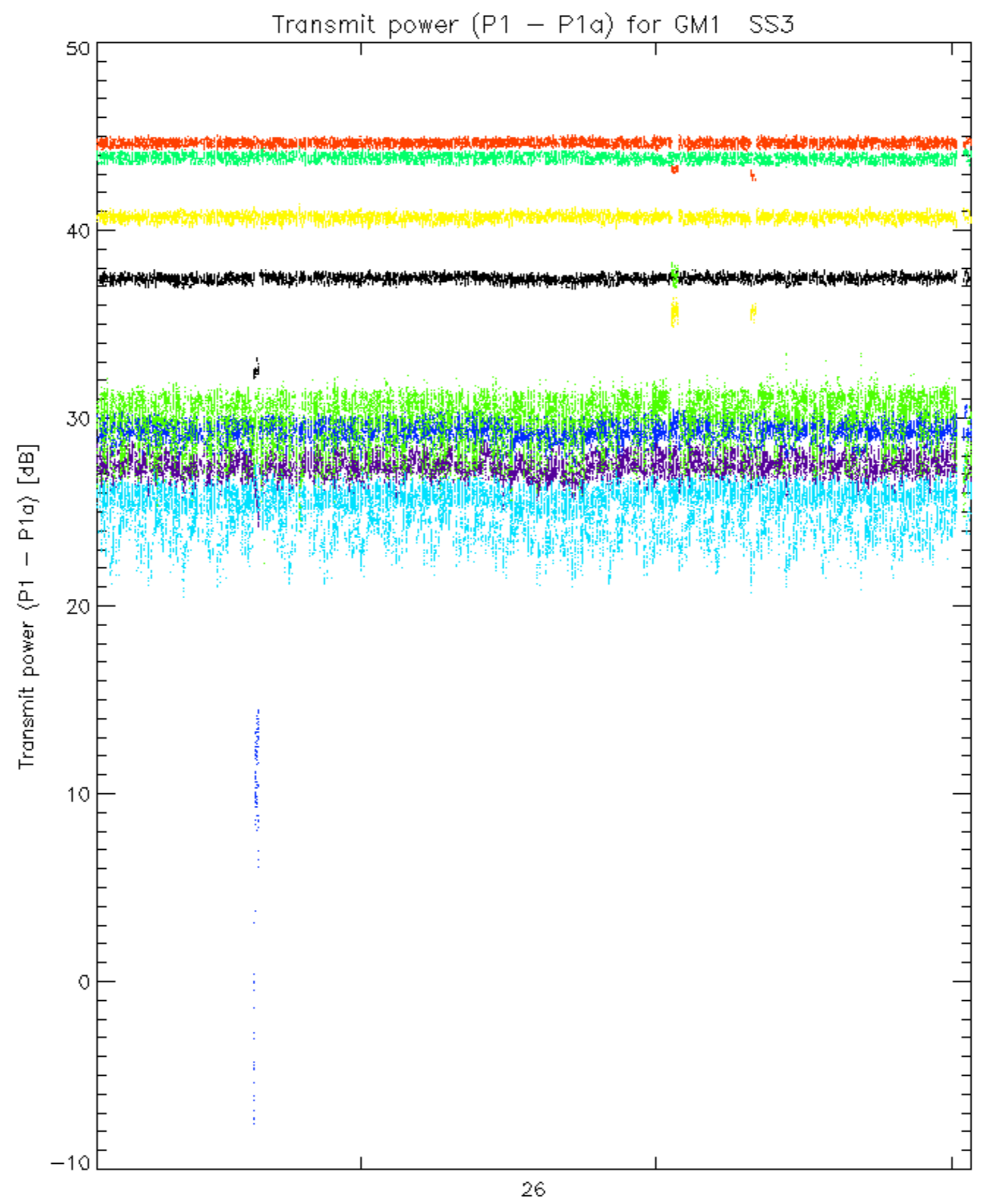
Summary of analysis for the last 3 days 2007032[123]

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

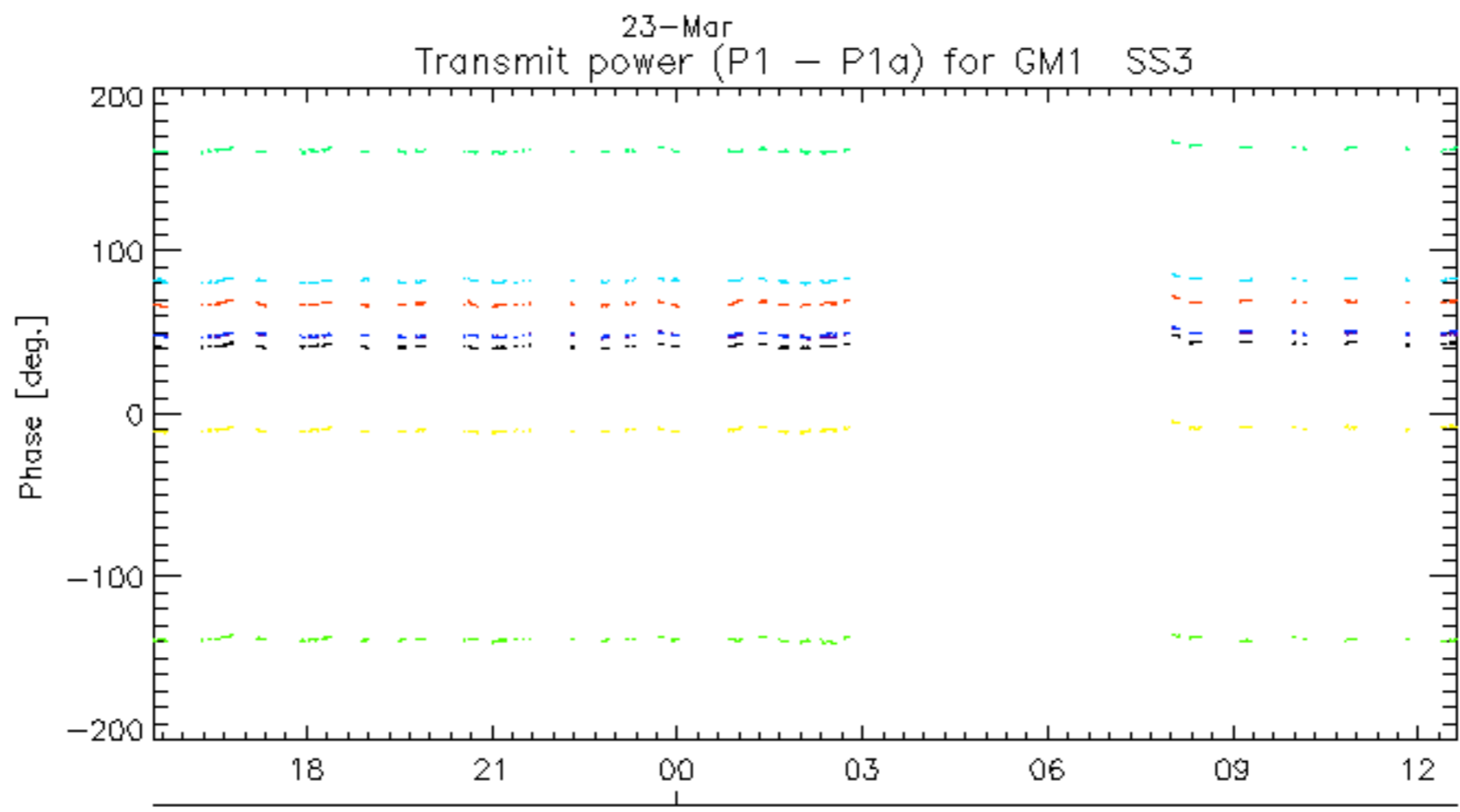
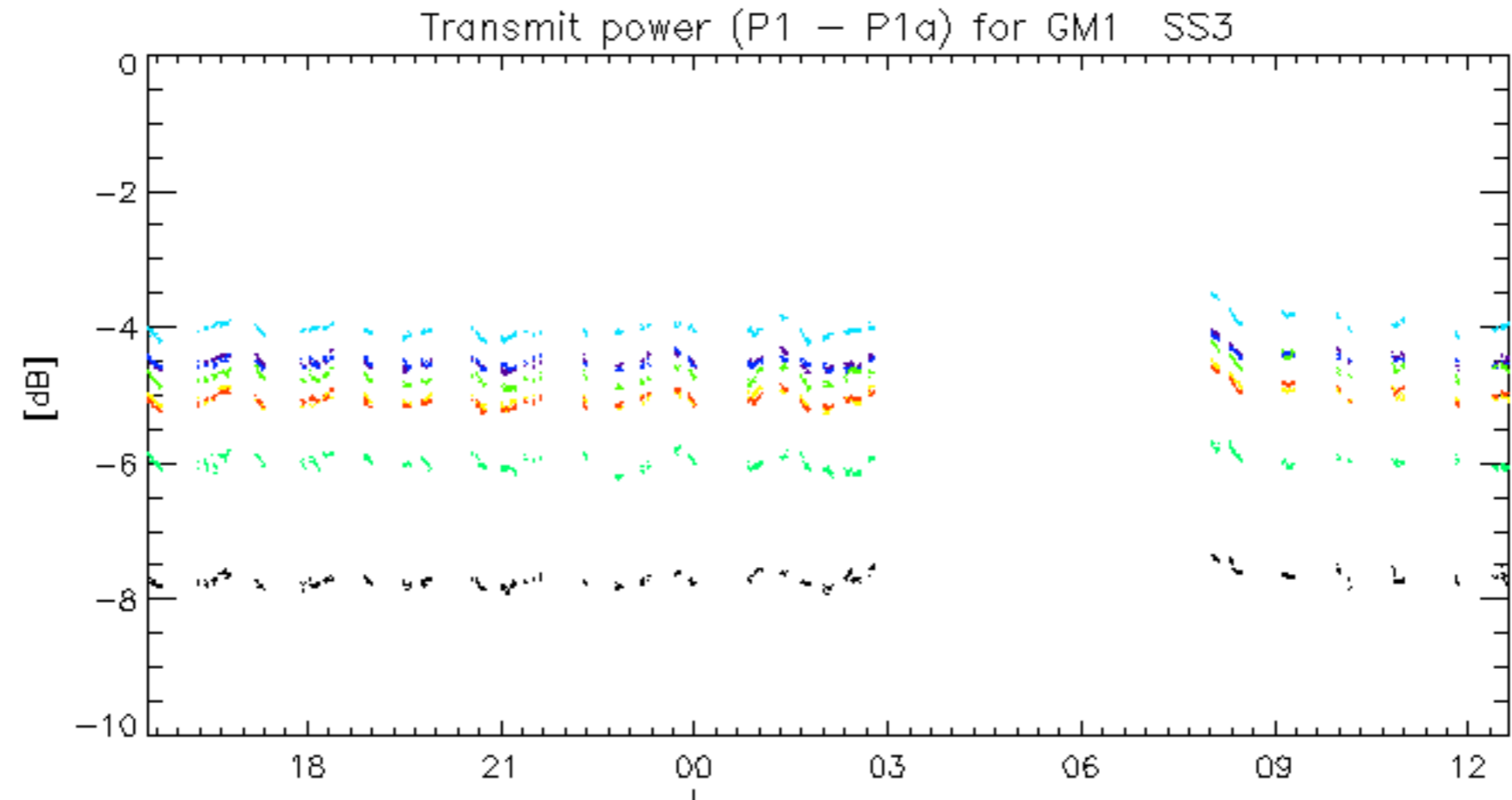
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20070321_134012_000003212056_00325_26431_9071.N1	0	1
ASA_IMM_1PNPDK20070321_134114_000002592056_00325_26431_8917.N1	0	1
ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDE20070321_163800_000000972056_00327_26433_1254.N1	0	10
ASA_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDE20070322_142631_000000852056_00340_26446_2539.N1	0	16
ASA_WSM_1PNPDE20070322_192709_000000922056_00343_26449_2782.N1	9	431
ASA_WSM_1PNPDE20070322_233442_000002632056_00345_26451_3189.N1	0	32
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_WSM_1PNPDK20070321_214927_000002322056_00330_26436_9457.N1	0	3
ASA_WSM_1PNPDK20070323_120612_000003232056_00352_26458_0909.N1	0	1
ASA_WSM_1PNPDK20070323_135453_000000862056_00354_26460_1049.N1	0	17





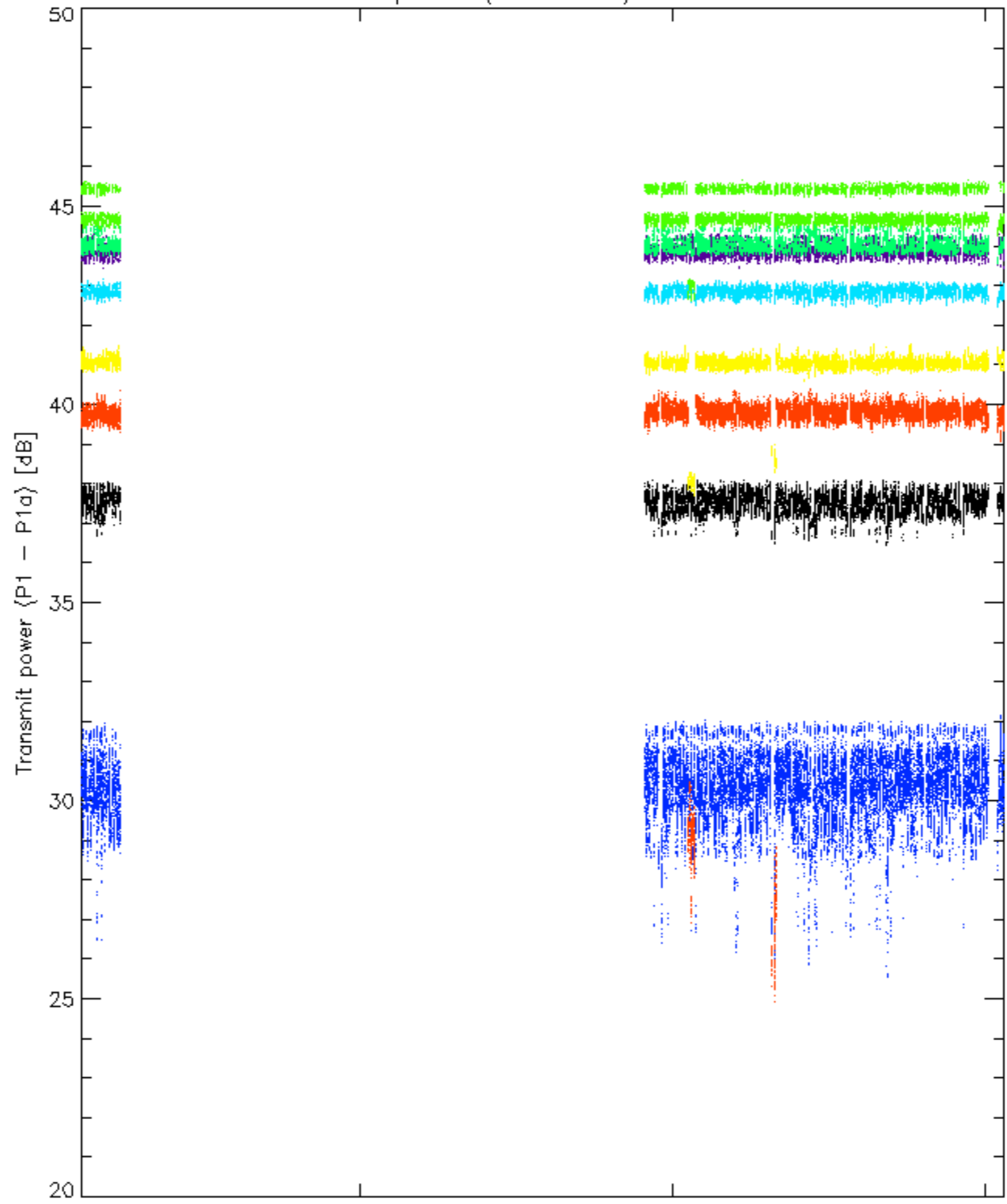


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

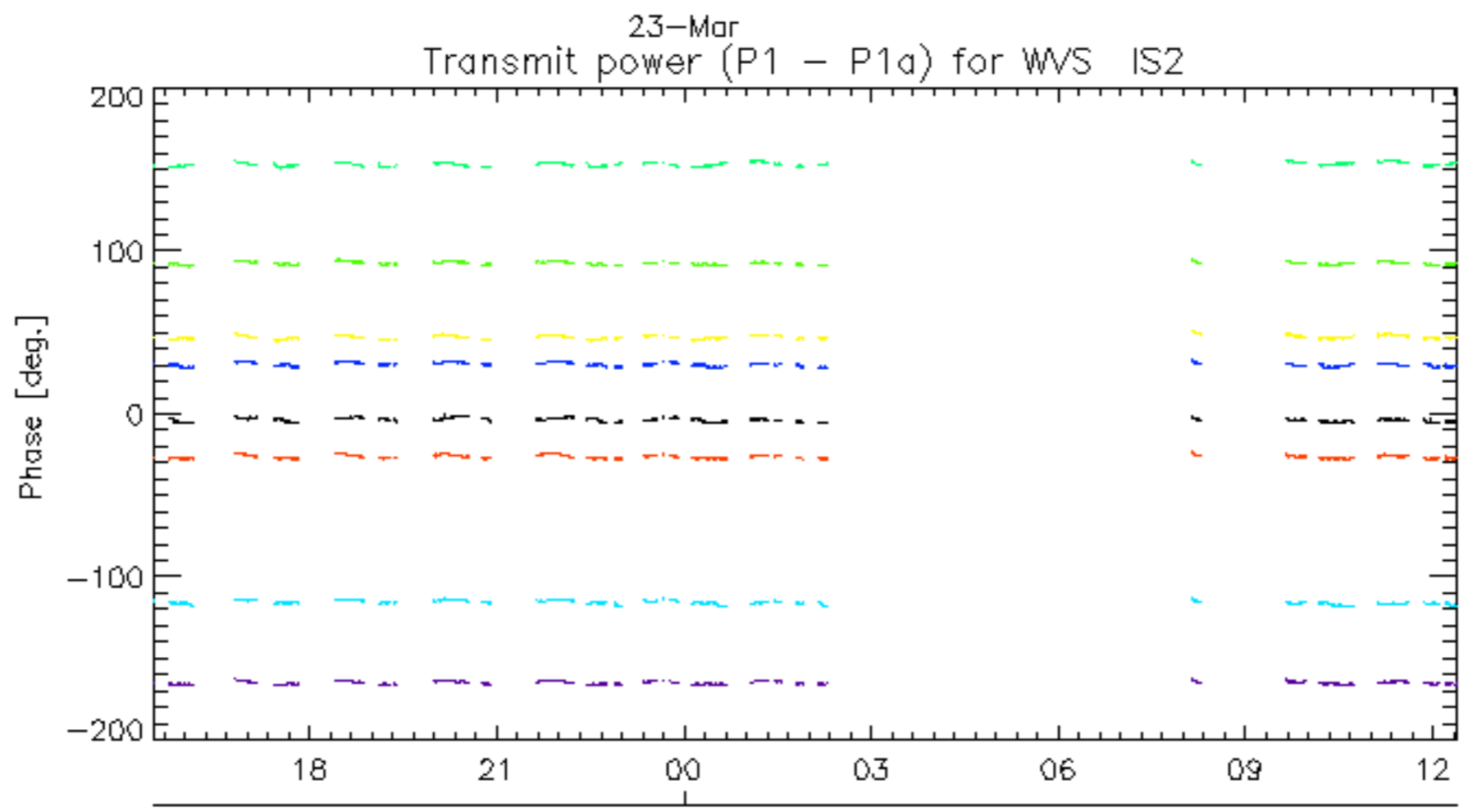
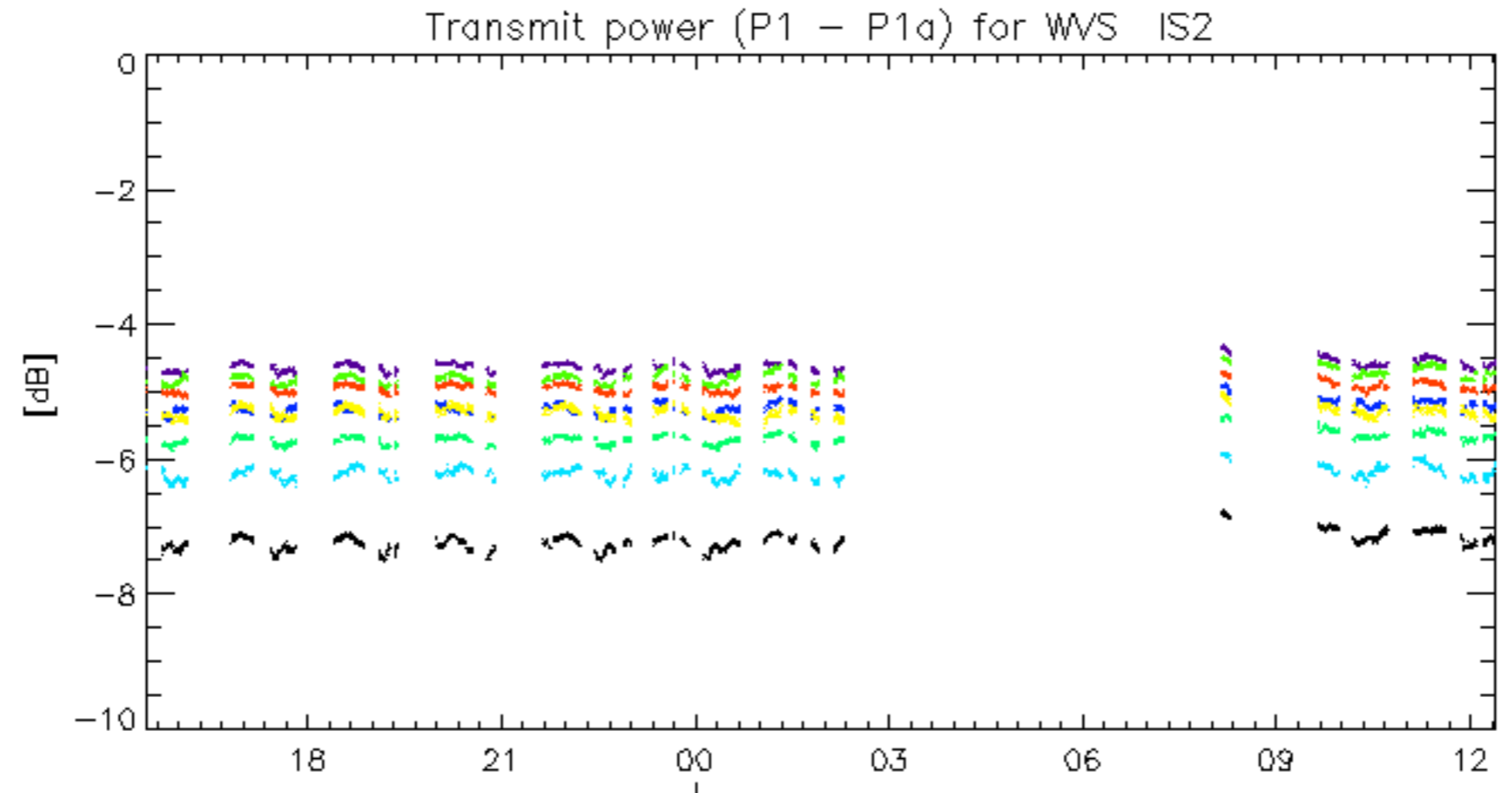


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.