

PRELIMINARY REPORT OF 060330

last update on Thu Mar 30 17:01:56 GMT 2006

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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 2006-03-29 00:00:00 to 2006-03-30 17:01:56

PDHS-K

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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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	20060329 043724
H	20060326 061216

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

<input type="checkbox"/>	<input type="checkbox"/>
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4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

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

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

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

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

<input type="checkbox"/>

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	-4.000195	0.009075	0.020953
7	P1	-3.014765	0.008415	-0.016068
11	P1	-4.059119	0.017678	-0.017686
15	P1	-6.100336	0.019415	-0.039322
19	P1	-3.305675	0.006414	-0.044507
22	P1	-4.465475	0.014120	-0.020918
26	P1	-4.137861	0.020860	0.068853
30	P1	-5.782860	0.175043	0.207051
3	P1	-16.958675	0.260893	0.103608
7	P1	-16.756981	0.103449	-0.092238
11	P1	-16.469738	0.305485	0.001066
15	P1	-13.054528	0.093556	0.011681
19	P1	-13.967055	0.049699	-0.088761
22	P1	-15.601021	0.461208	-0.075405
26	P1	-15.773876	0.295605	0.135021
30	P1	-16.518822	0.316749	-0.145839

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.370535	0.086840	0.078707
7	P2	-22.334515	0.095815	0.132773
11	P2	-16.210691	0.100652	0.043252
15	P2	-7.166444	0.096867	-0.004504
19	P2	-9.135978	0.089092	-0.020890
22	P2	-17.961651	0.087292	-0.062312
26	P2	-16.227228	0.093090	-0.065841
30	P2	-19.651979	0.083890	0.008970

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.194850	0.005472	0.002913
7	P3	-8.194850	0.005472	0.002913
11	P3	-8.194850	0.005472	0.002913
15	P3	-8.194850	0.005472	0.002913
19	P3	-8.194850	0.005472	0.002913
22	P3	-8.194850	0.005472	0.002913

26	P3	-8.194850	0.005472	0.002913
30	P3	-8.194851	0.005472	0.002917

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	-3.760327	0.010035	-0.017489
7	P1	-2.730532	0.008403	0.018642
11	P1	-2.929308	0.018337	-0.022146
15	P1	-3.566951	0.020984	-0.016961
19	P1	-3.382026	0.009499	0.022997
22	P1	-5.184113	0.023200	-0.007809
26	P1	-5.785835	0.036689	0.060425
30	P1	-5.185538	0.079946	0.136620
3	P1	-11.587644	0.039860	-0.078467
7	P1	-9.973220	0.048335	-0.045824
11	P1	-10.278926	0.058527	-0.036792
15	P1	-10.820183	0.108473	-0.043704
19	P1	-15.407960	0.074574	0.091581
22	P1	-20.299738	1.049716	-0.153304
26	P1	-16.265957	0.387601	0.166566
30	P1	-18.284061	0.578046	0.096305

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.059544	0.040358	0.145095
7	P2	-22.541506	0.086504	0.208348

11	P2	-11.219271	0.031415	0.076713
15	P2	-4.830347	0.029717	0.022144
19	P2	-6.841807	0.028645	0.037634
22	P2	-8.145849	0.027405	0.040105
26	P2	-23.965437	0.034951	-0.041513
30	P2	-22.073677	0.026319	0.032614

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.021109	0.002408	0.008787
7	P3	-8.020979	0.002401	0.009163
11	P3	-8.021036	0.002418	0.008972
15	P3	-8.021136	0.002408	0.009255
19	P3	-8.021023	0.002409	0.009095
22	P3	-8.021178	0.002398	0.008933
26	P3	-8.021126	0.002402	0.008954
30	P3	-8.020997	0.002411	0.008759

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	0.000569346
	stdev	1.68035e-07
MEAN Q	mean	0.000524434

stdev	2.16508e-07
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5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139544
	stdev	0.00118010
STDEV Q	mean	0.139922
	stdev	0.00119937



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006032[890]

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_1PNPDE20060320_141119_000001602046_00096_21192_1254.N1	1	0
ASA_IMM_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDK20060320_081910_000000862046_00093_21189_0874.N1	0	41
ASA_APM_1PNPDE20060328_141116_000000822046_00211_21307_0671.N1	0	21



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)

✘
Ascending
✘
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

✘
Ascending
✘
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

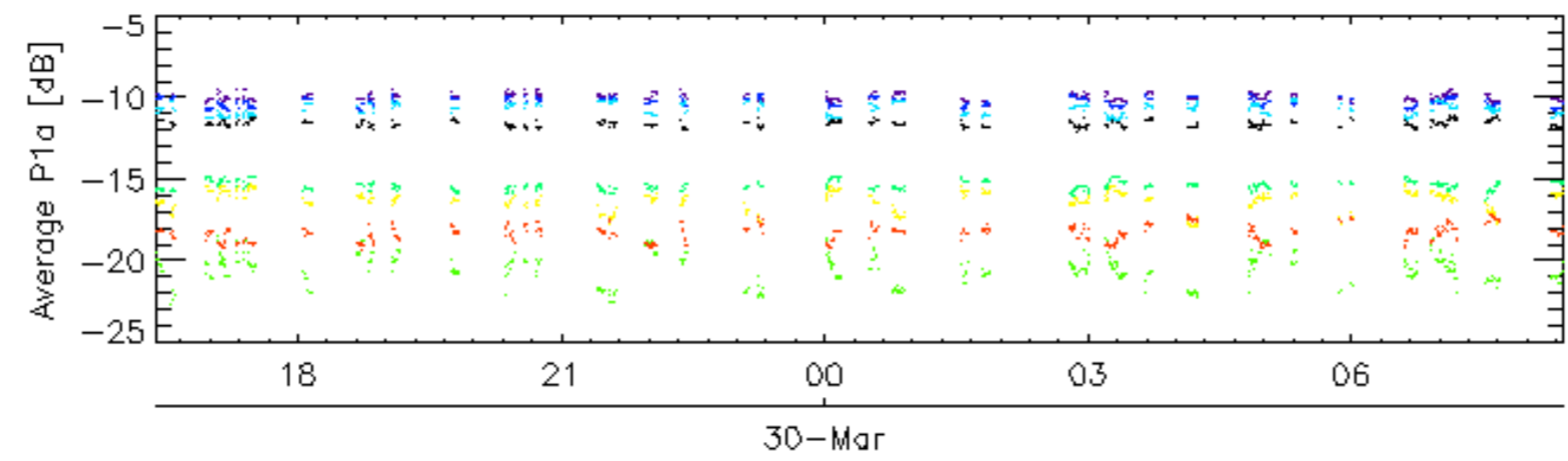
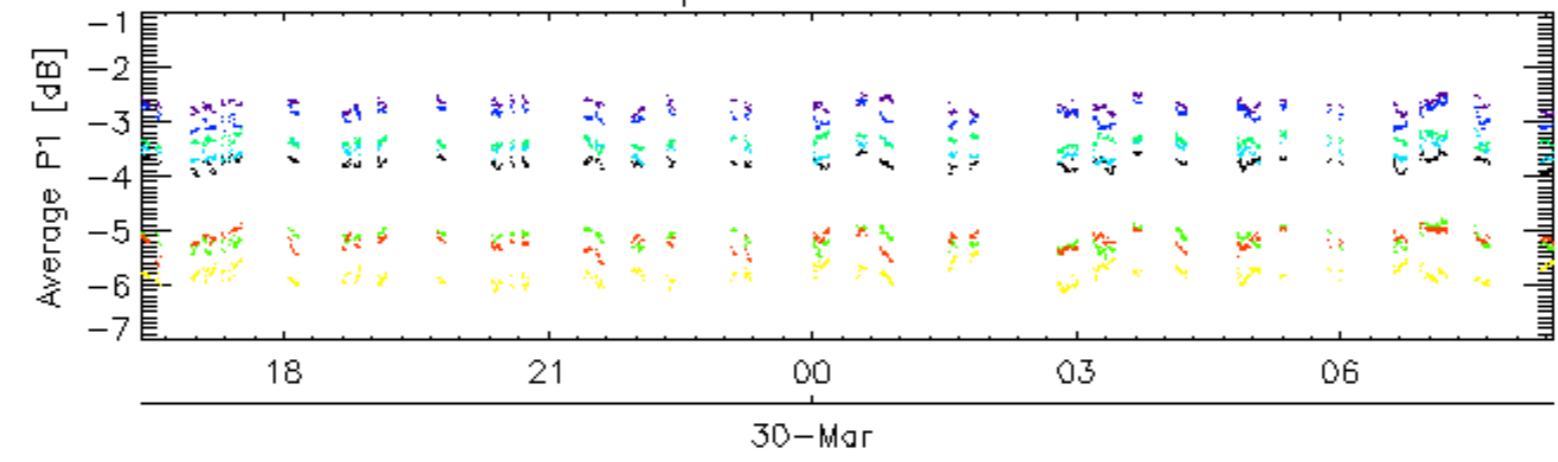
Ascending

Descending

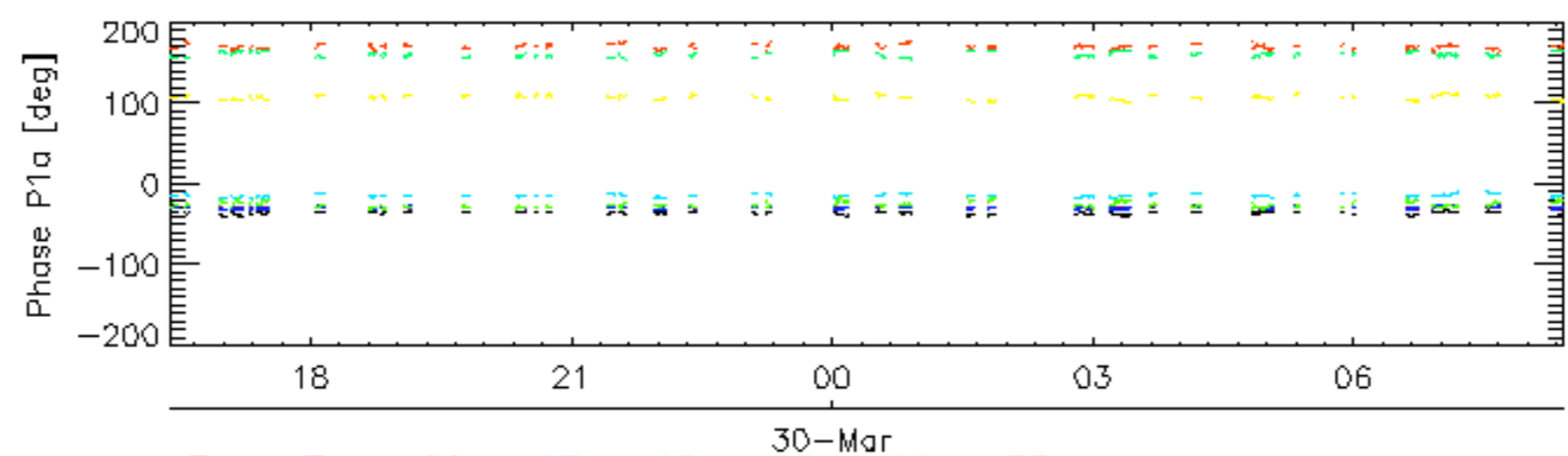
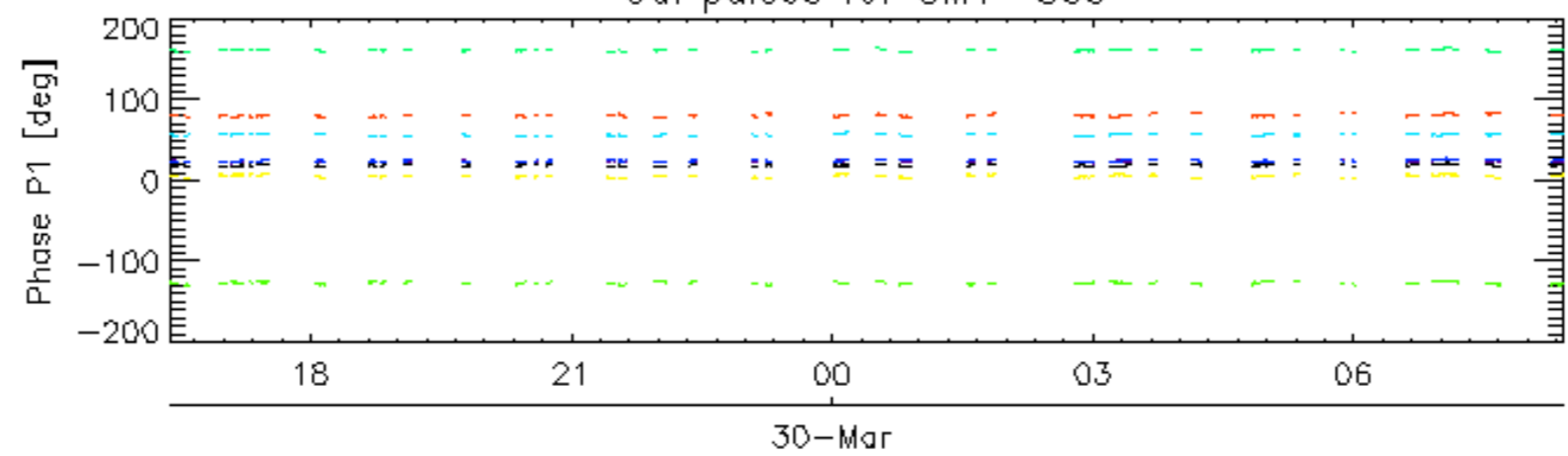
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

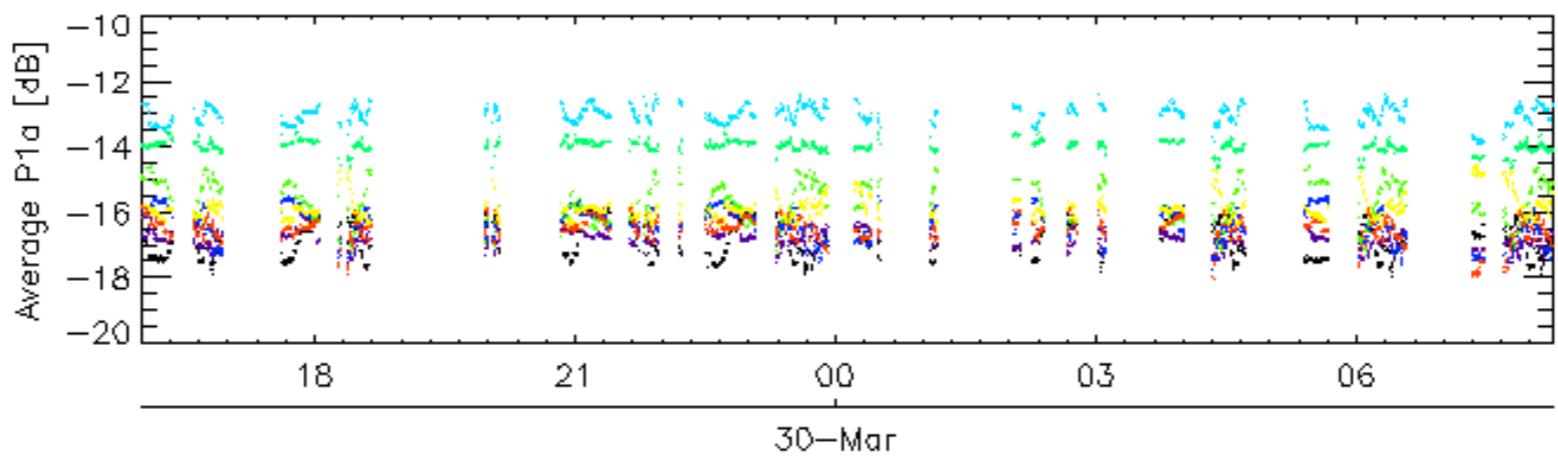
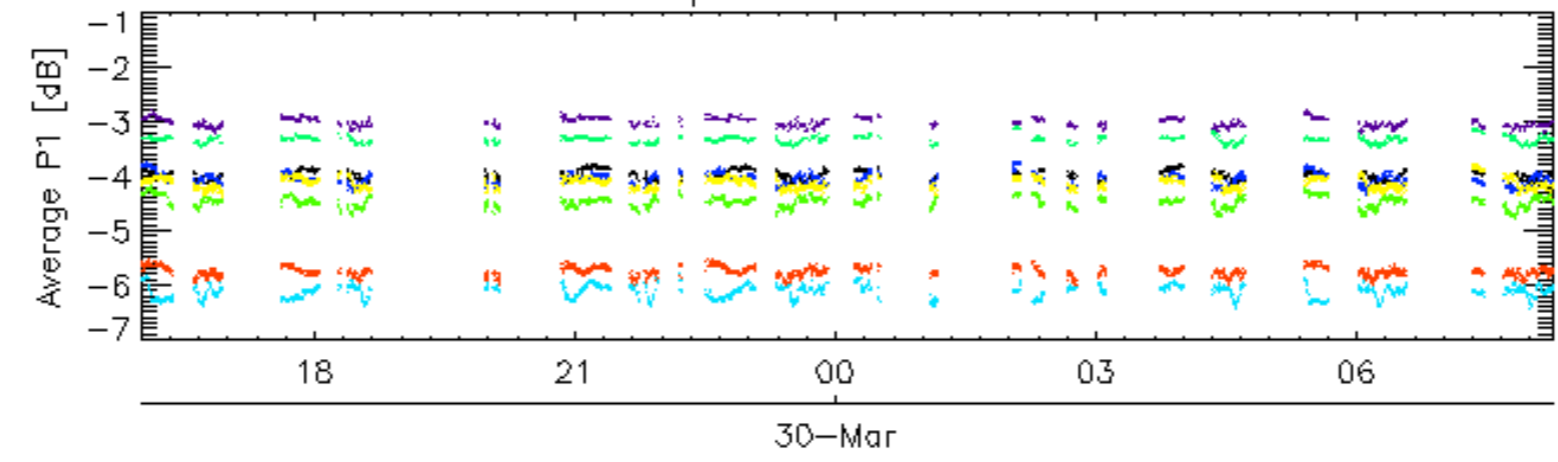


Cal pulses for GM1 SS3

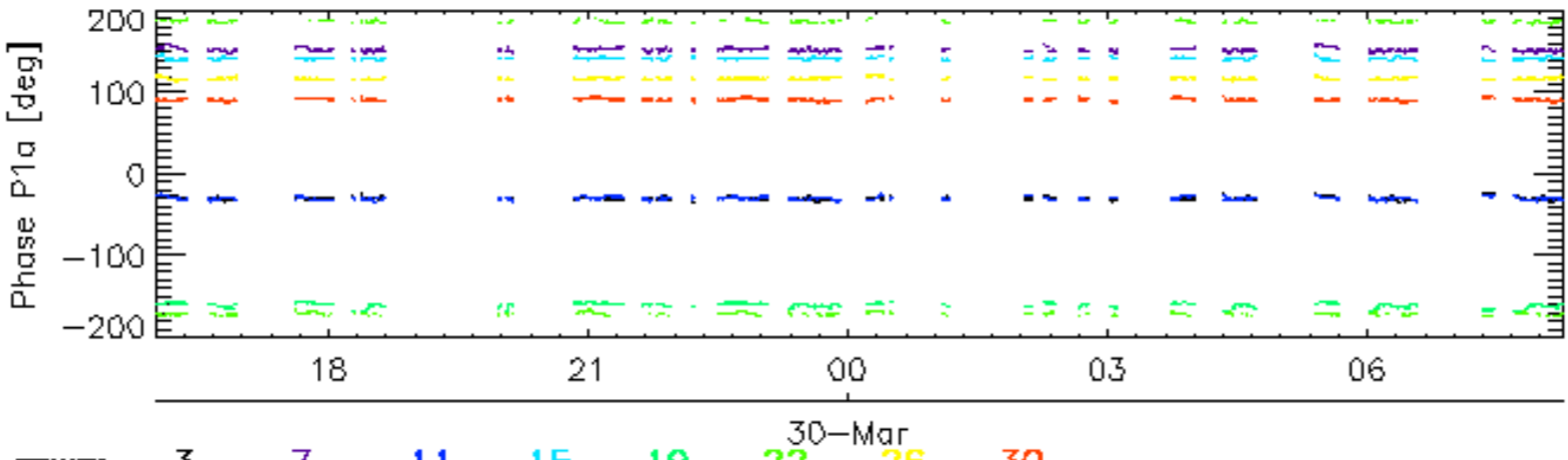
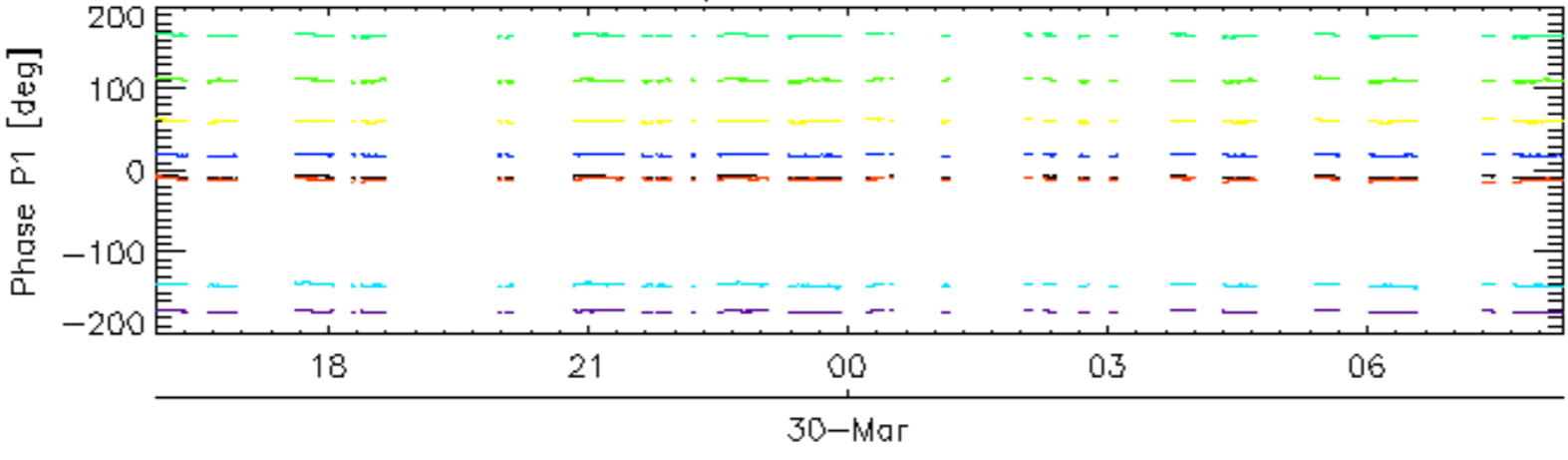


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

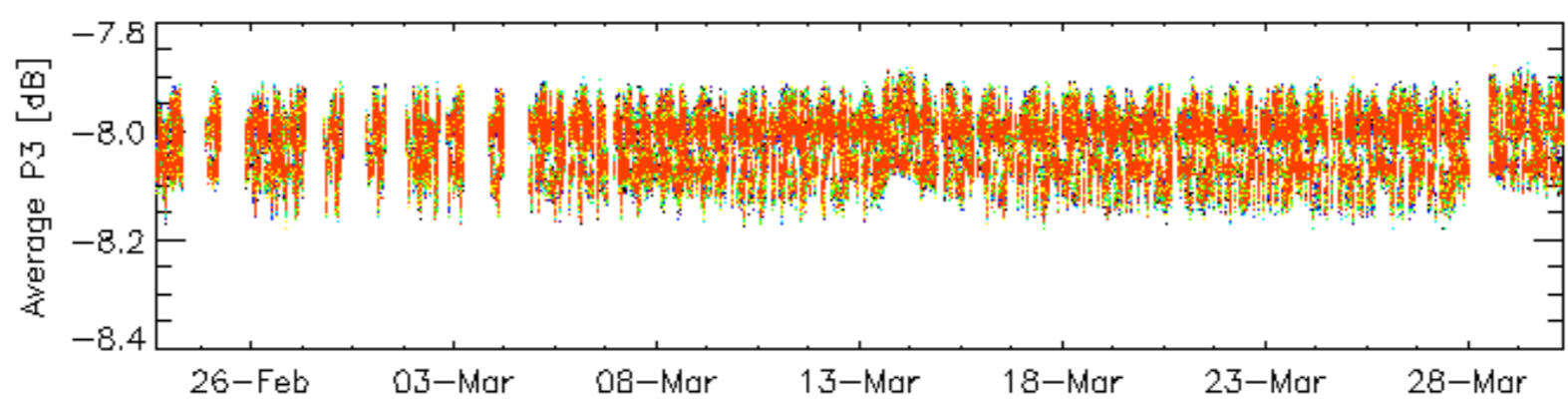
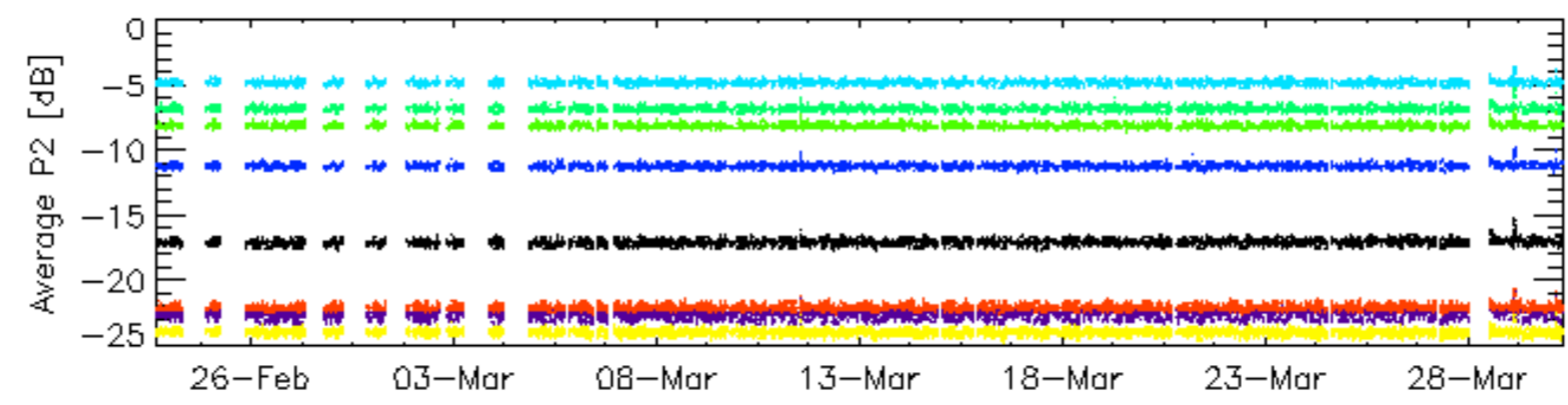
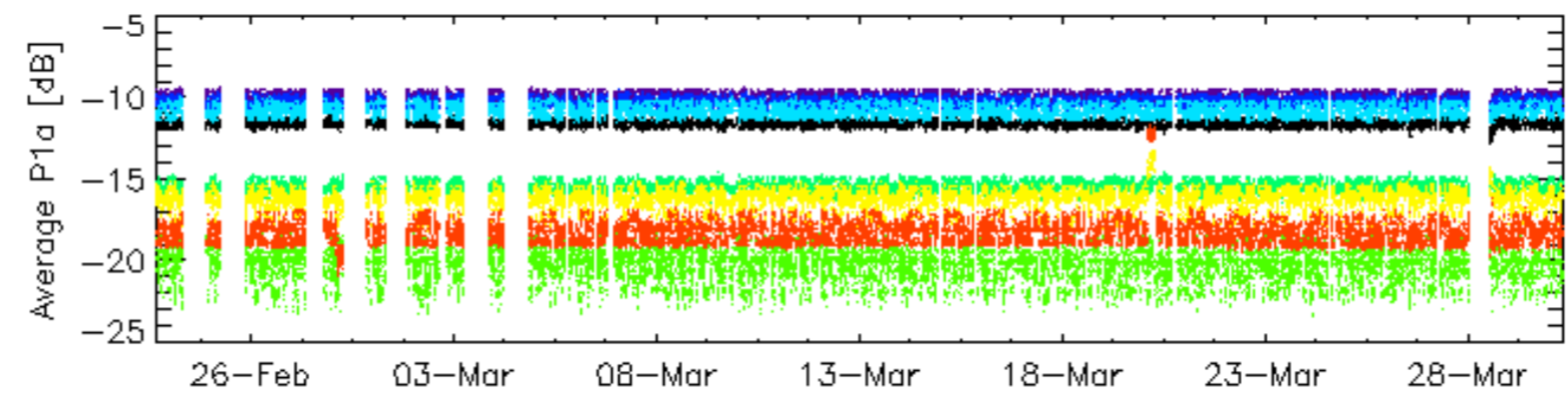
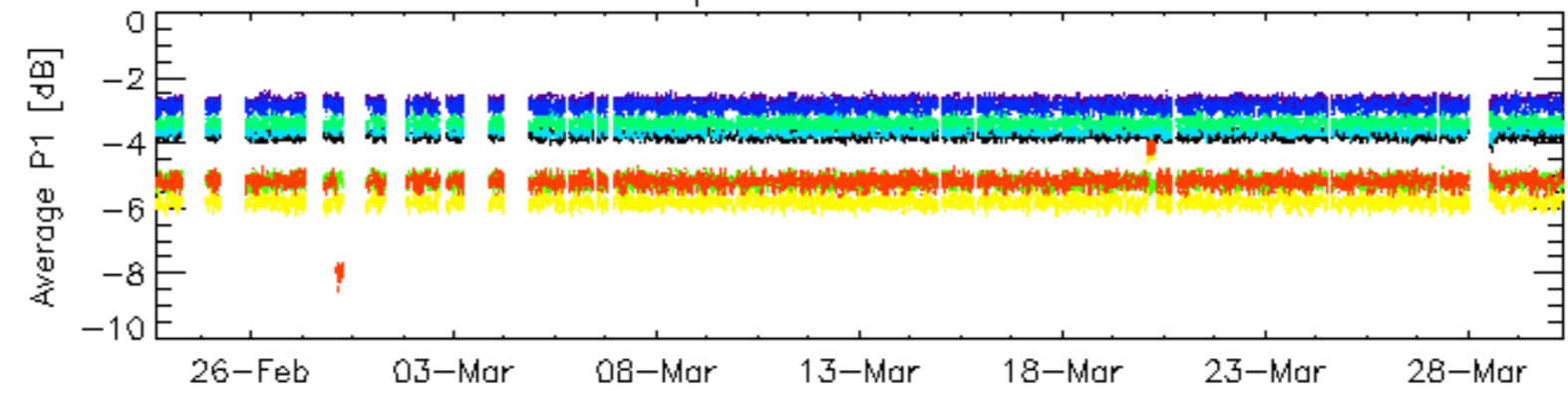


Cal pulses for WVS IS2



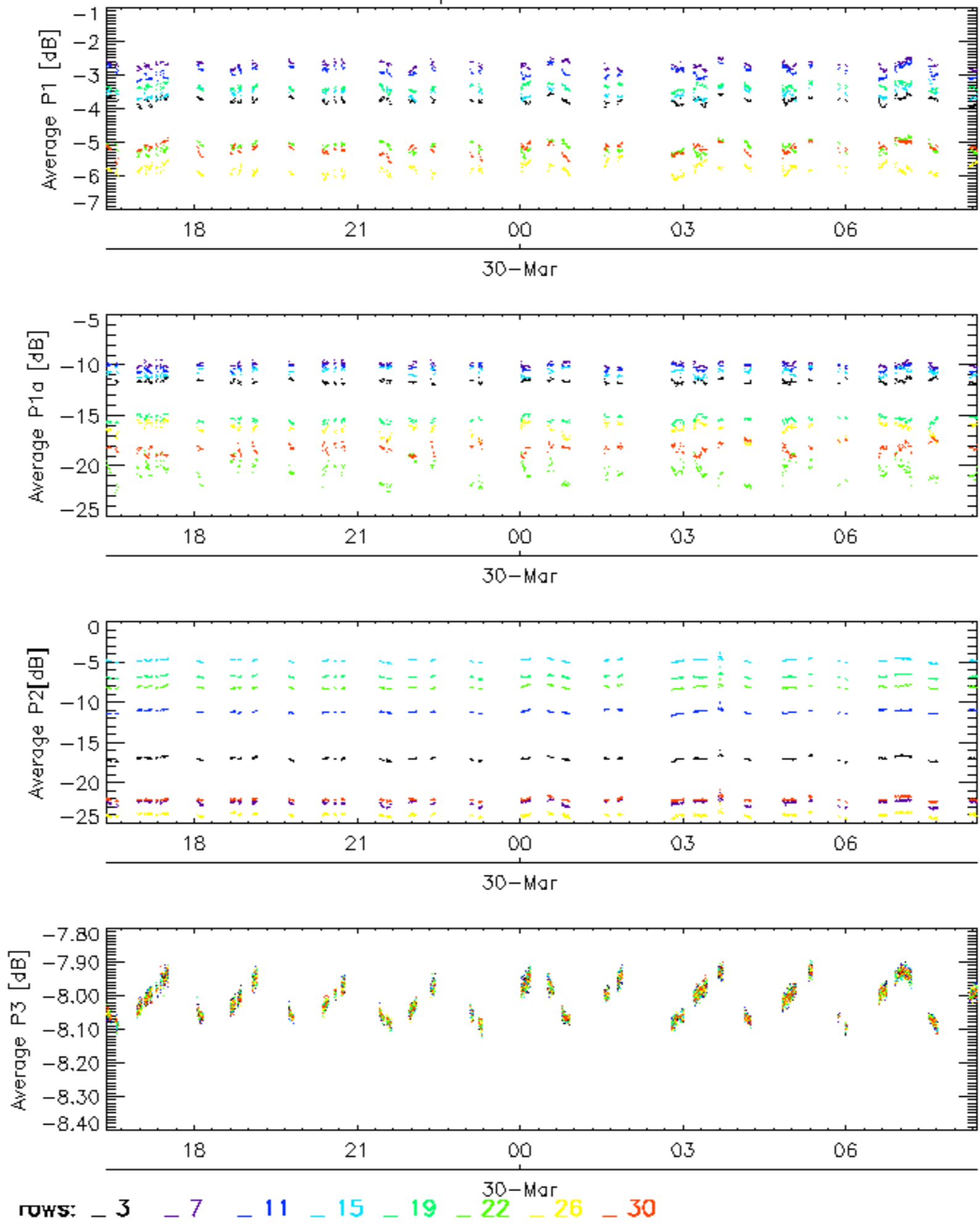
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

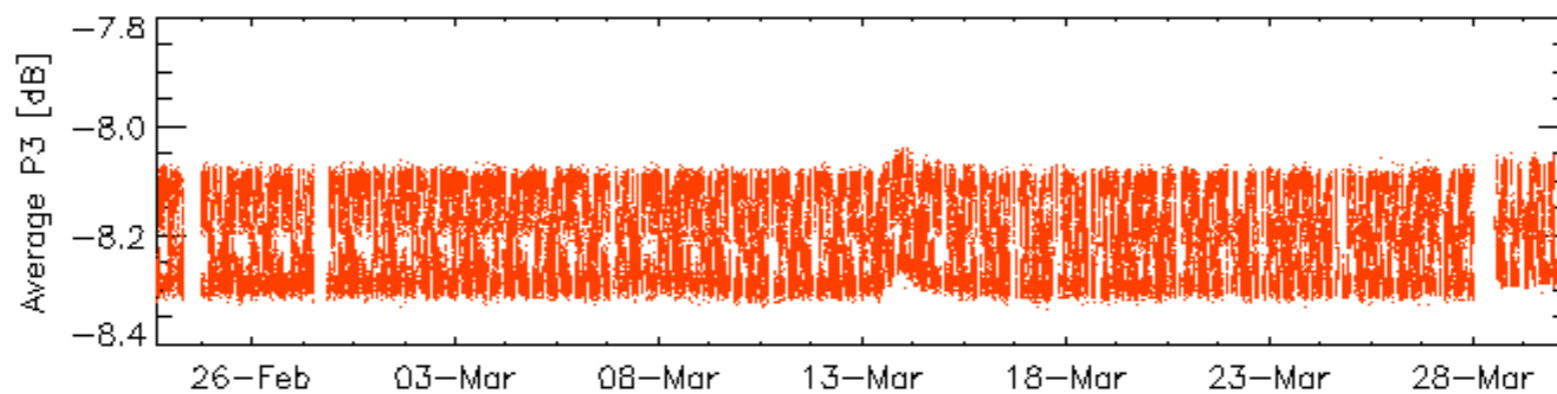
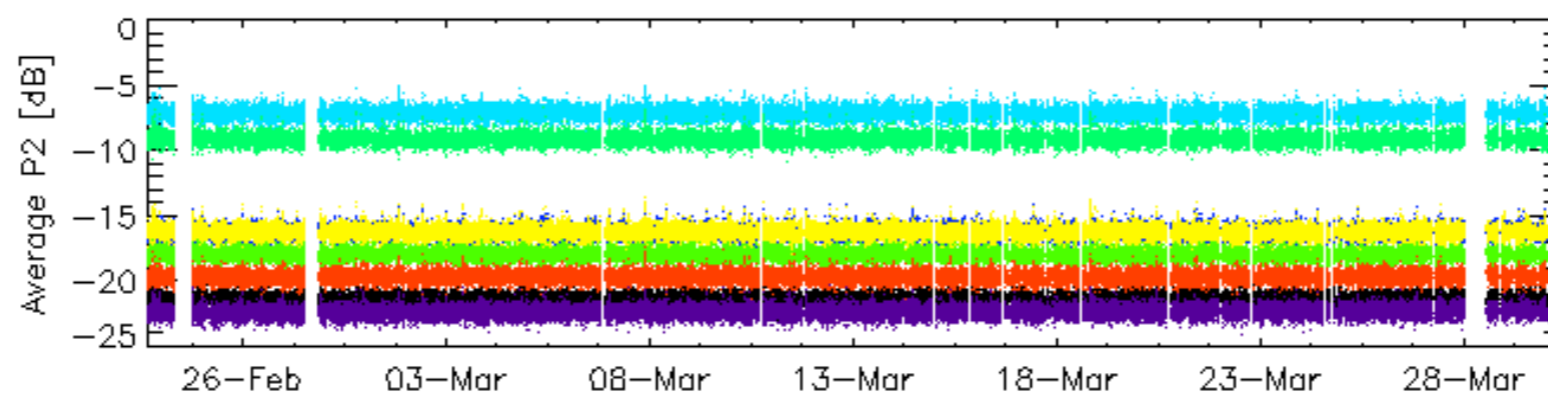
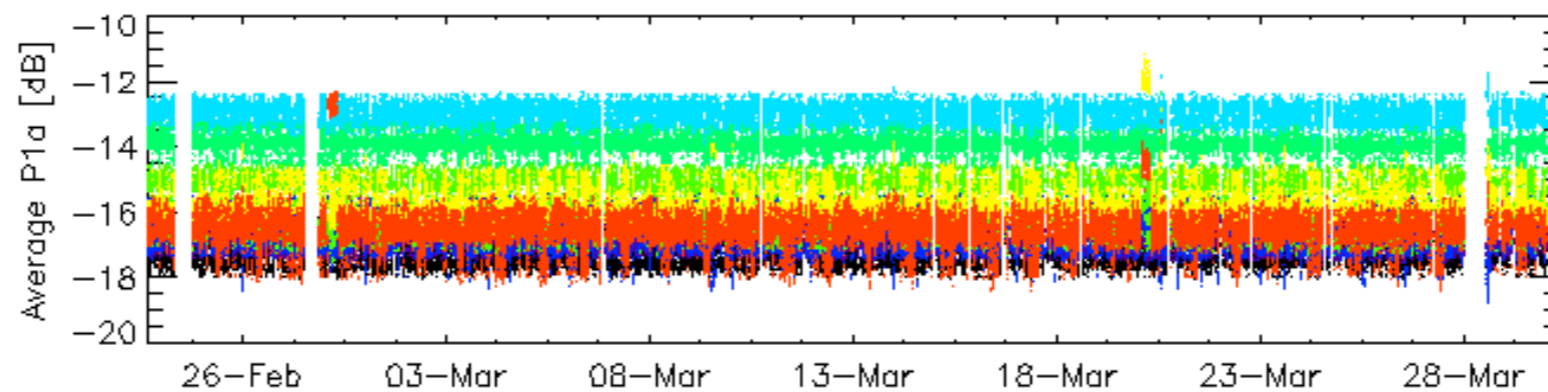
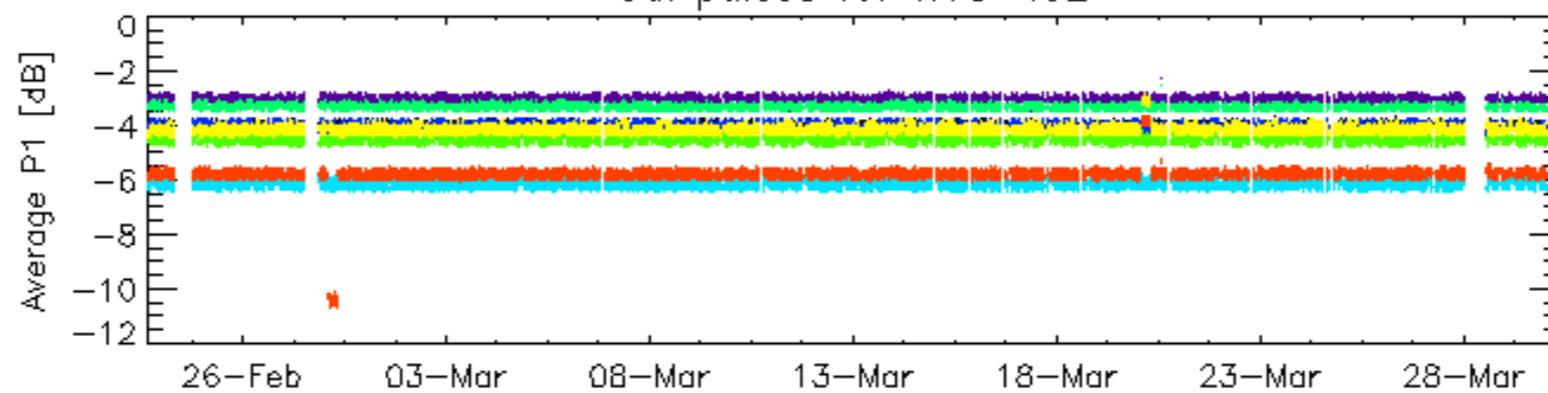


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

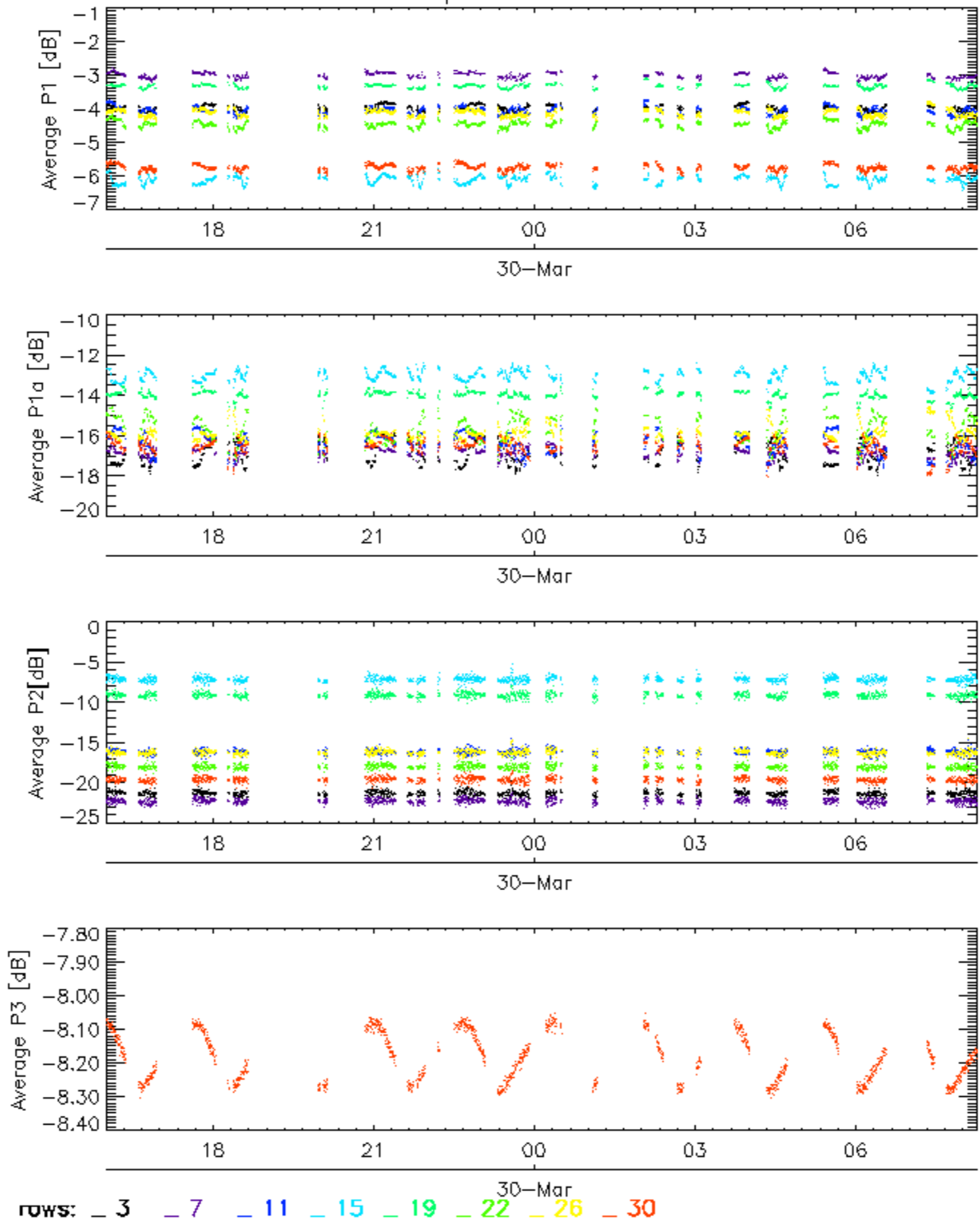


Cal pulses for WVS IS2



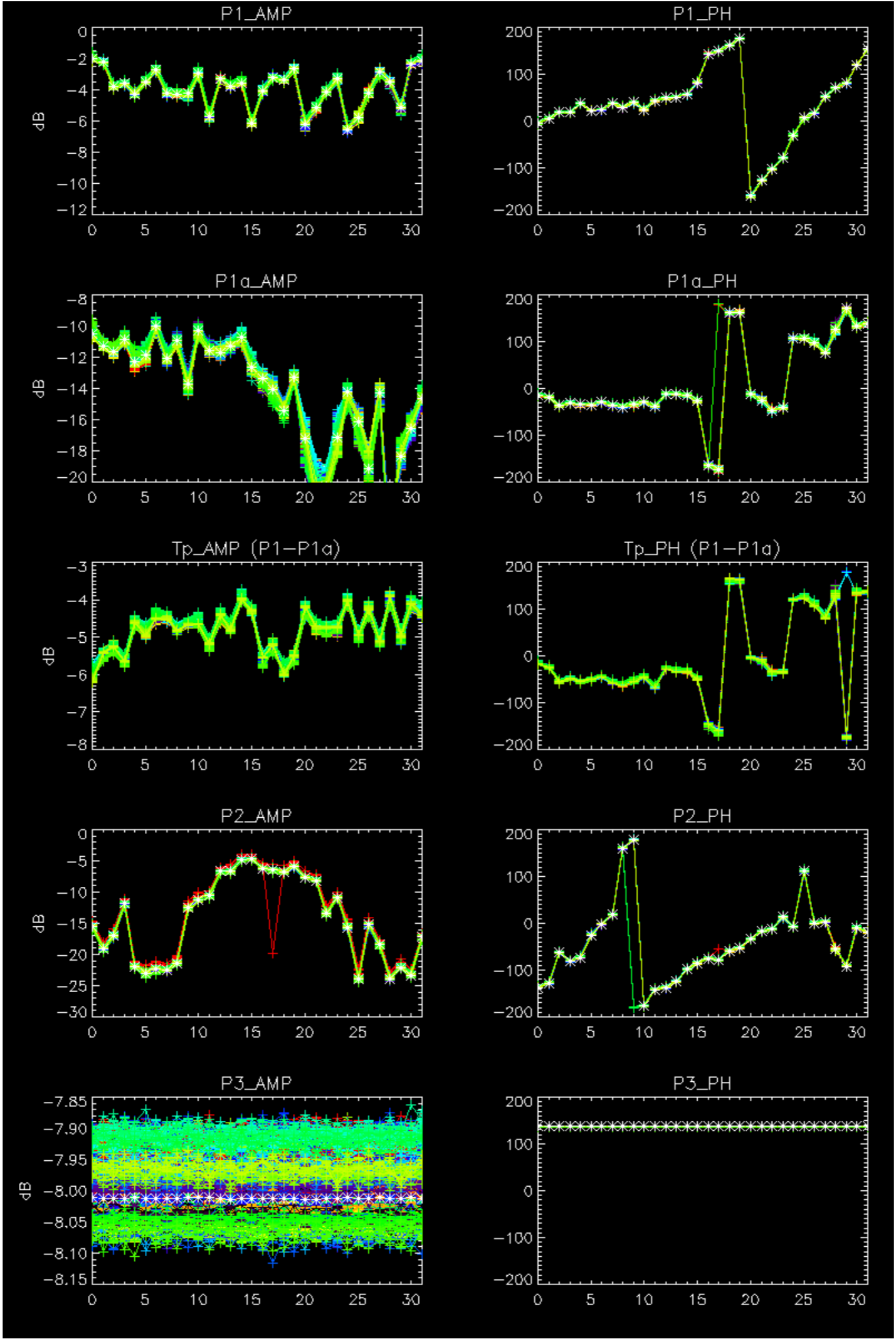
rows: [3](#) [7](#) [11](#) [15](#) [19](#) [22](#) [26](#) [30](#)

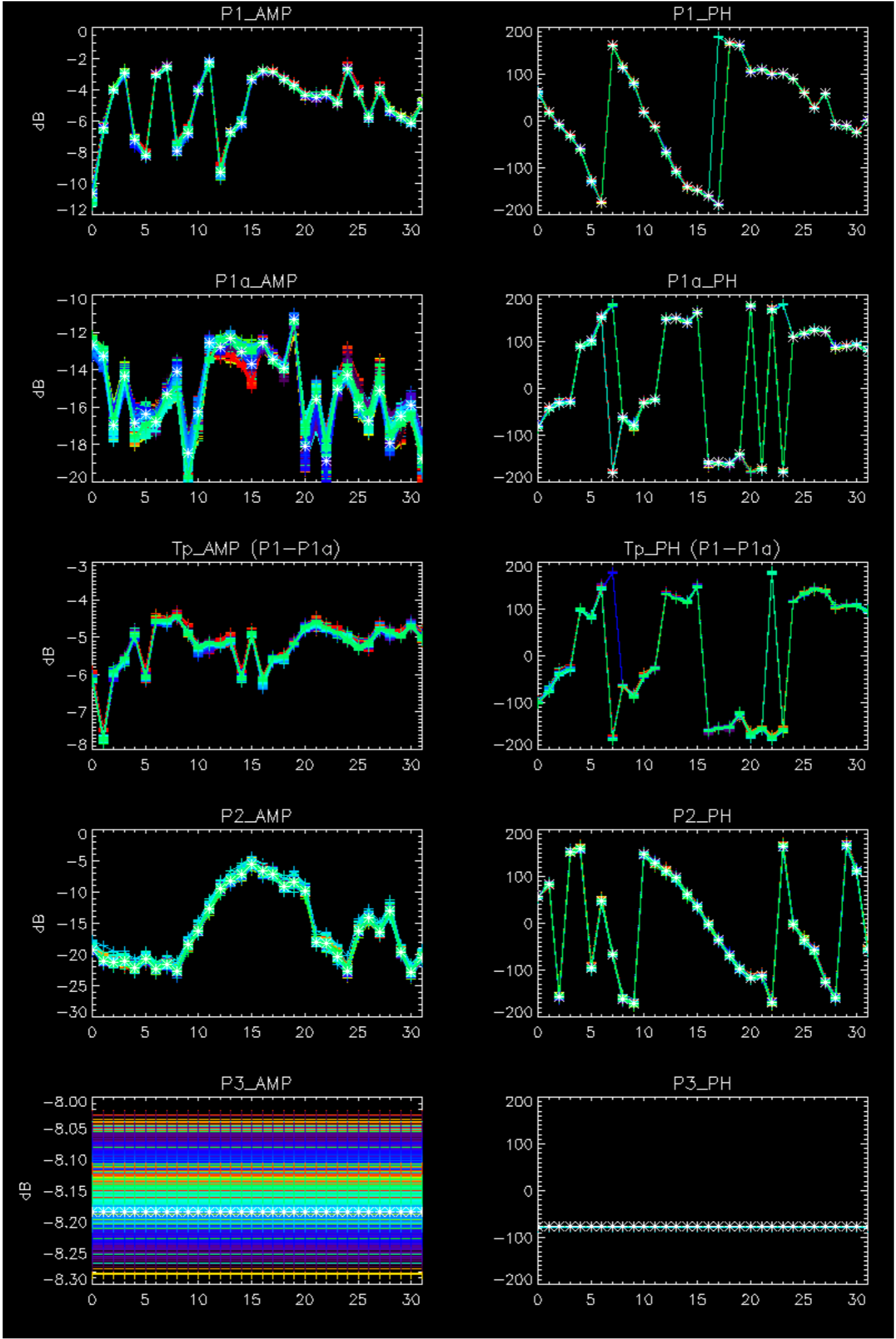
Cal pulses for WVS IS2



No anomalies observed on available browse products

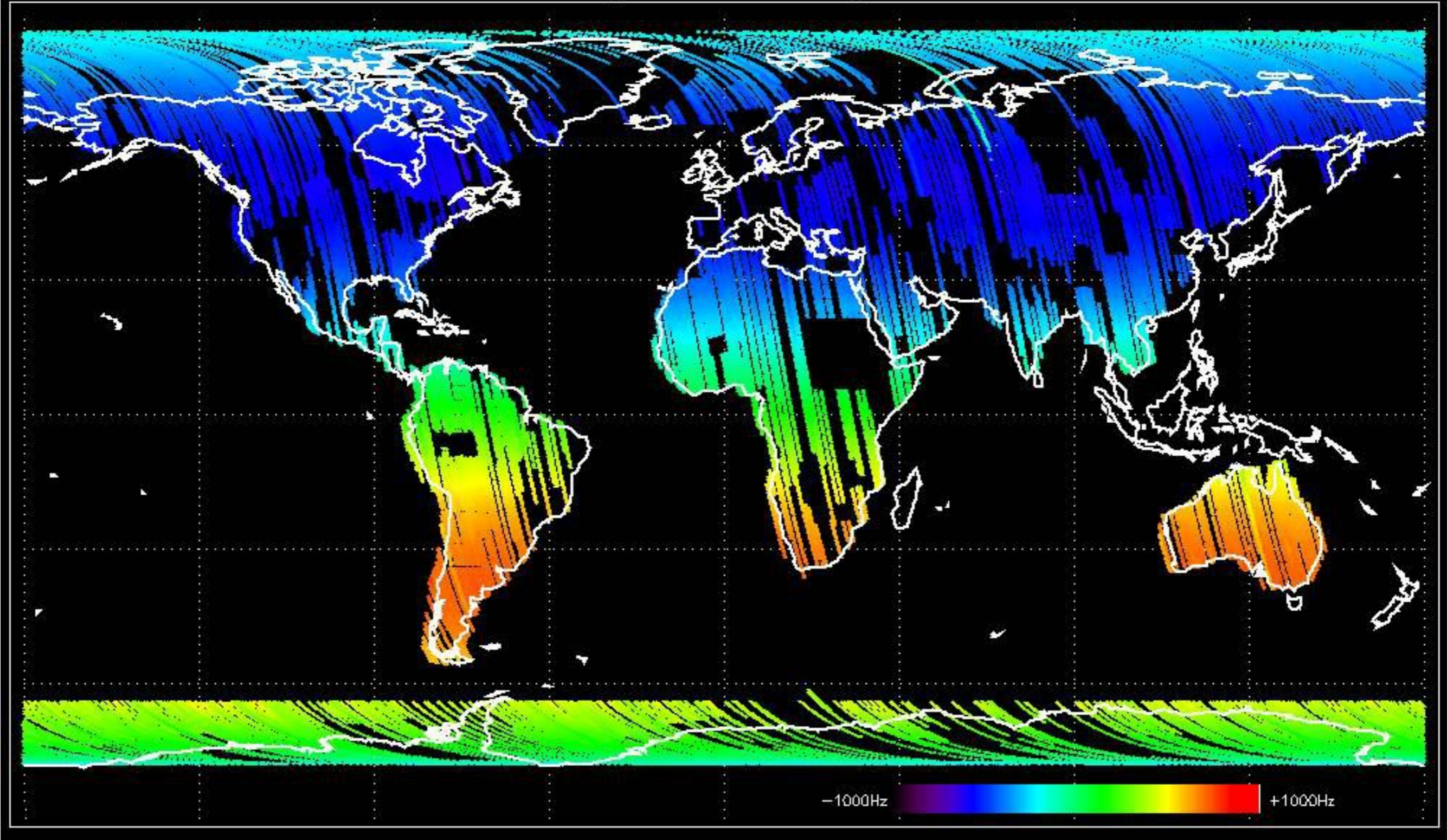
No anomalies observed.



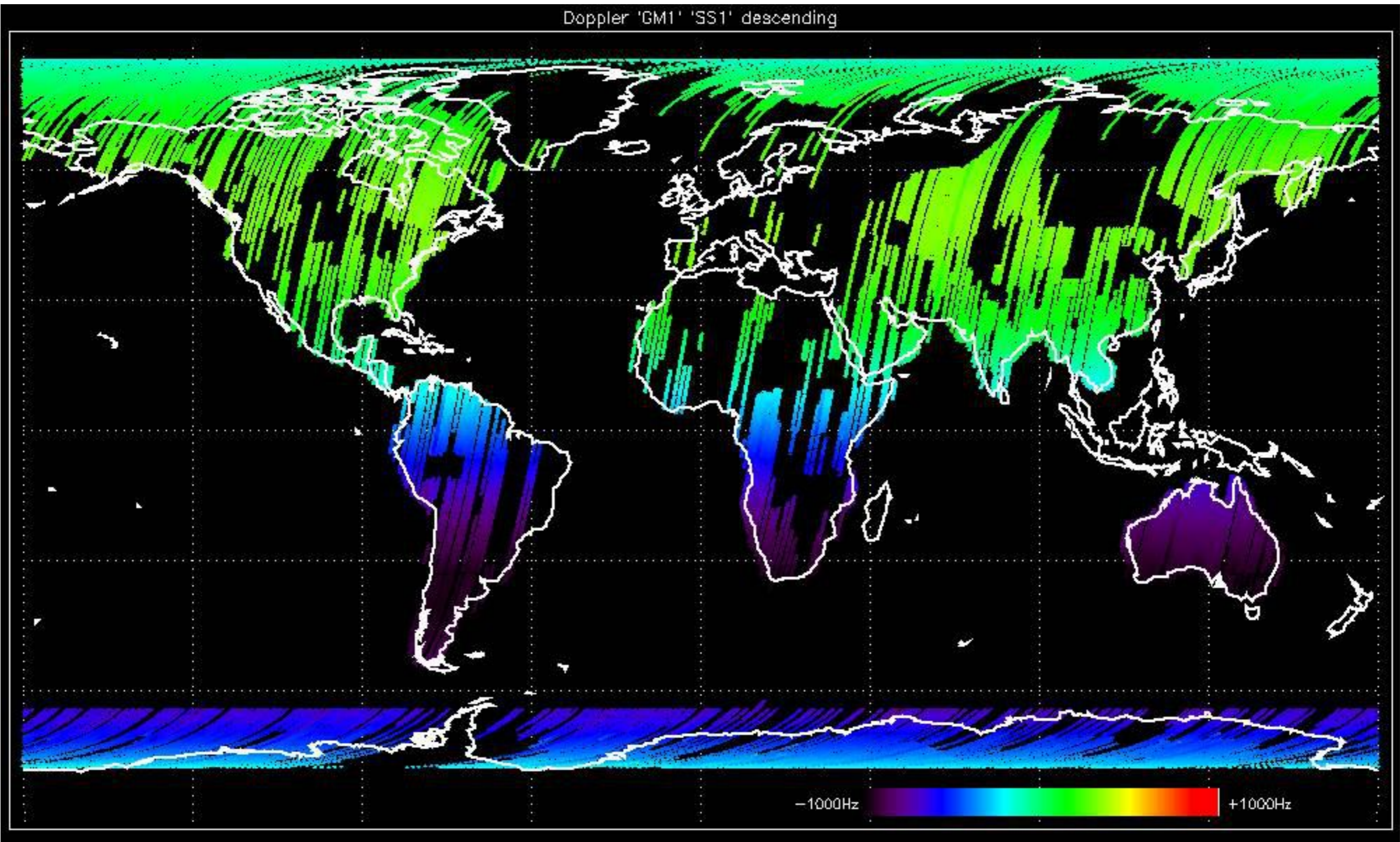


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

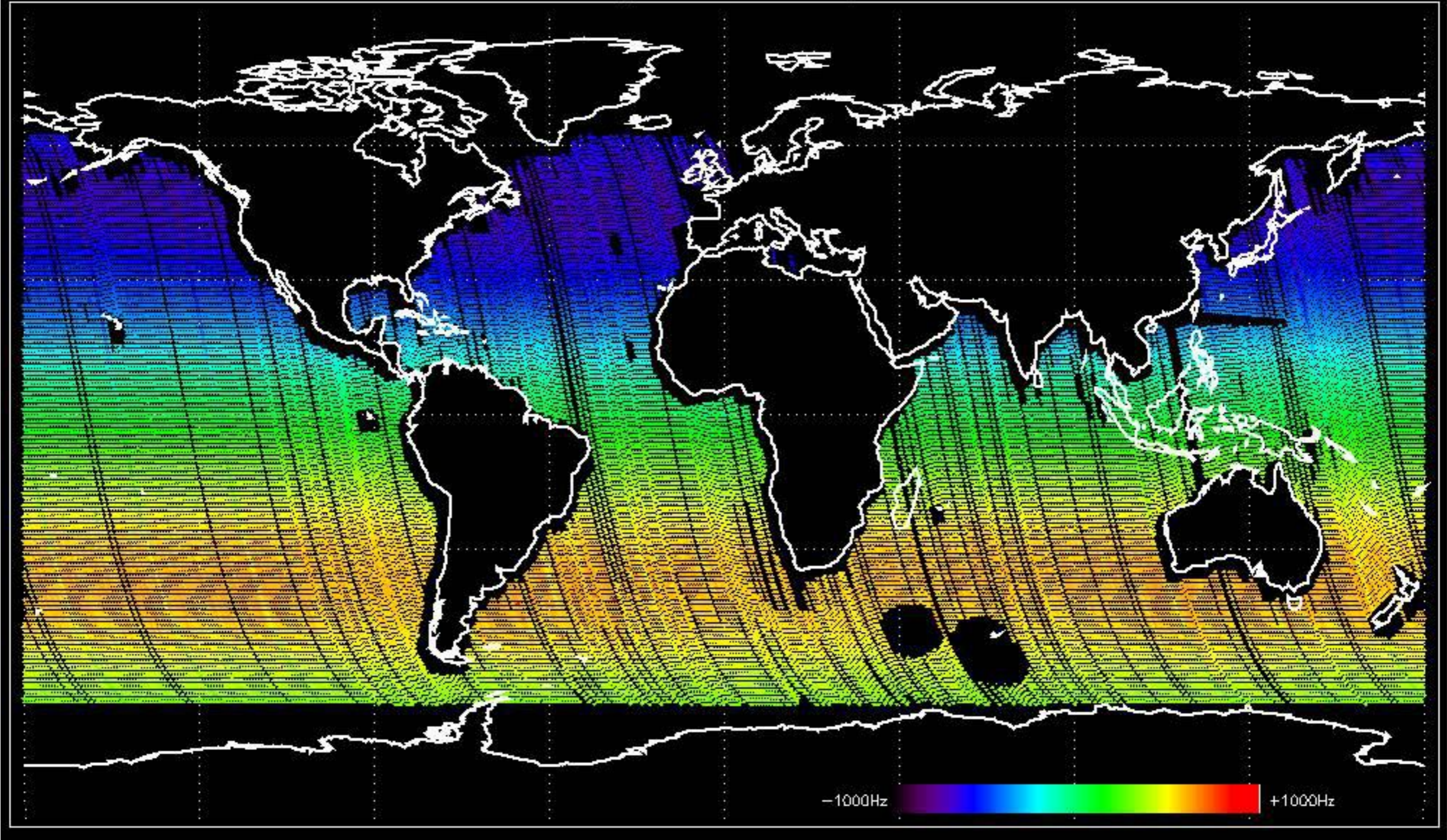
Doppler 'GM1' 'SS1' ascending



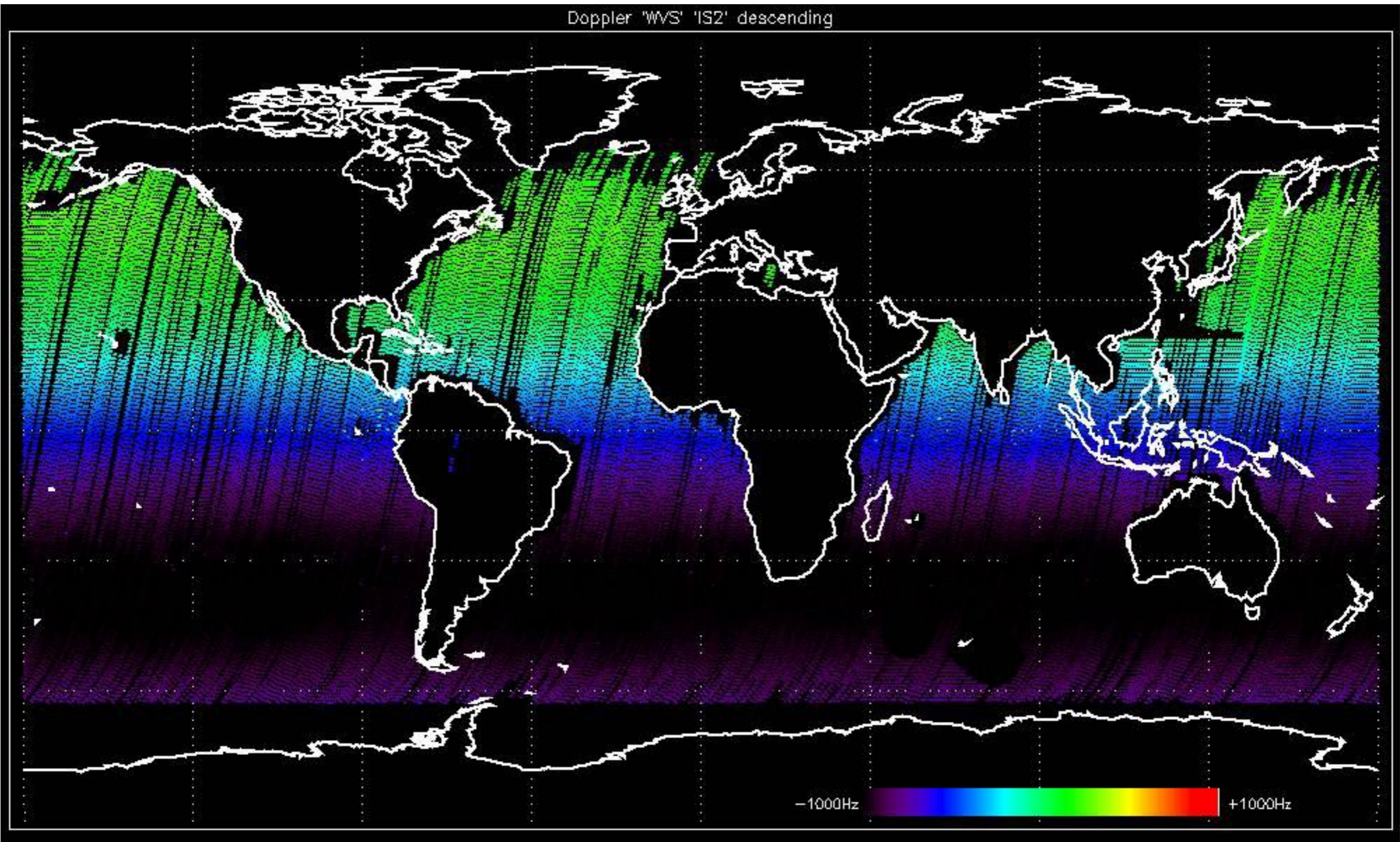
Doppler 'GM1' 'SS1' descending



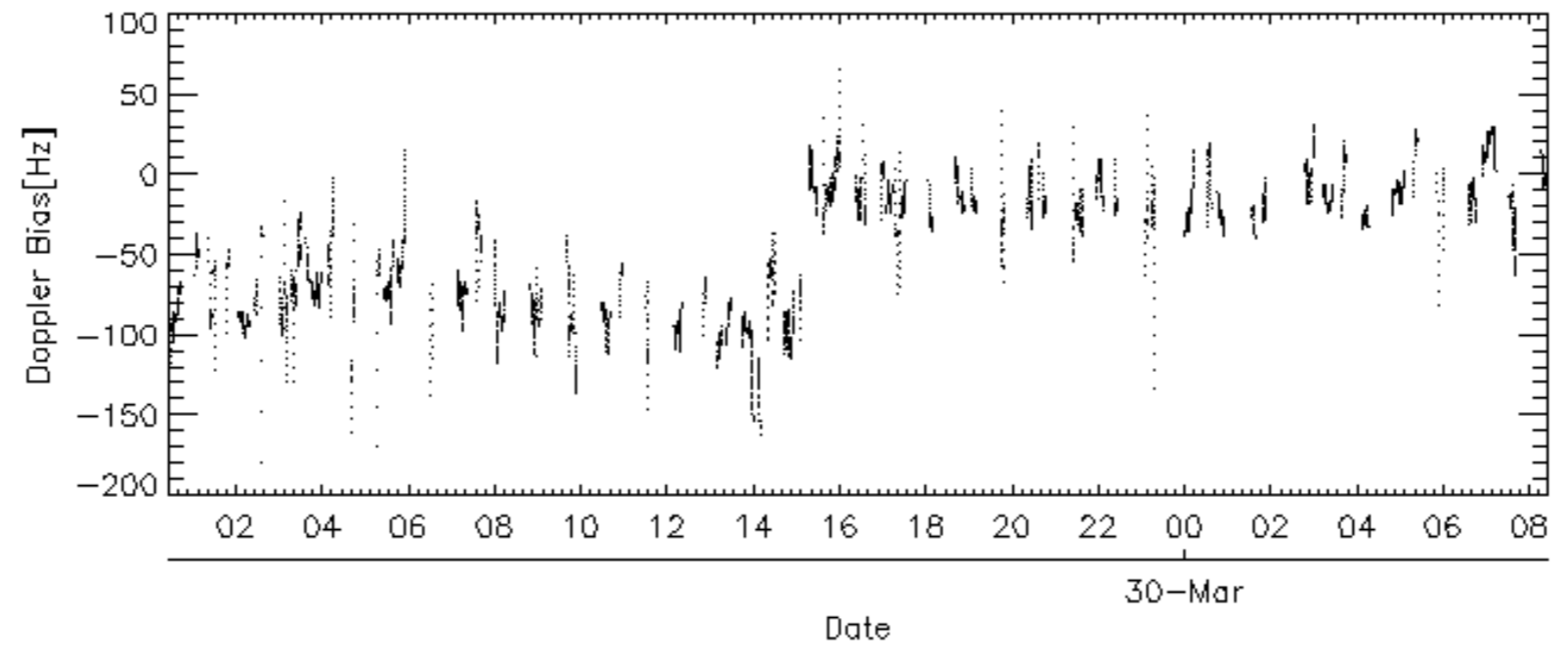
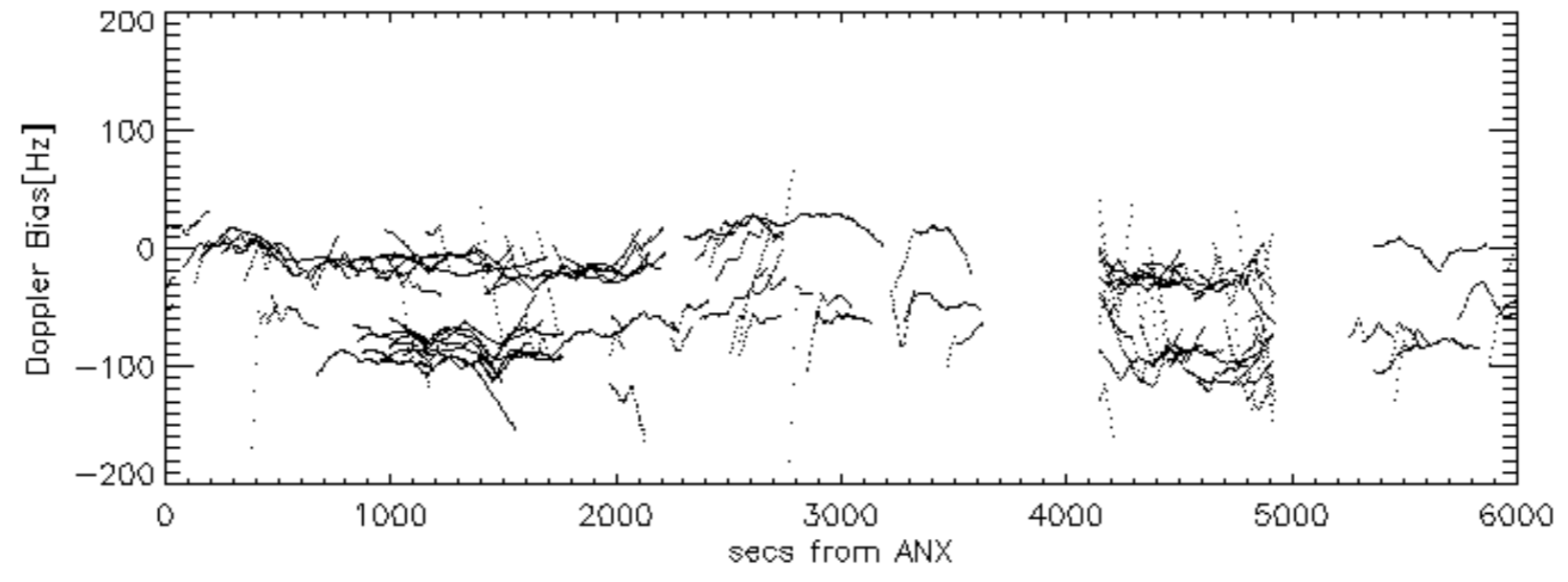
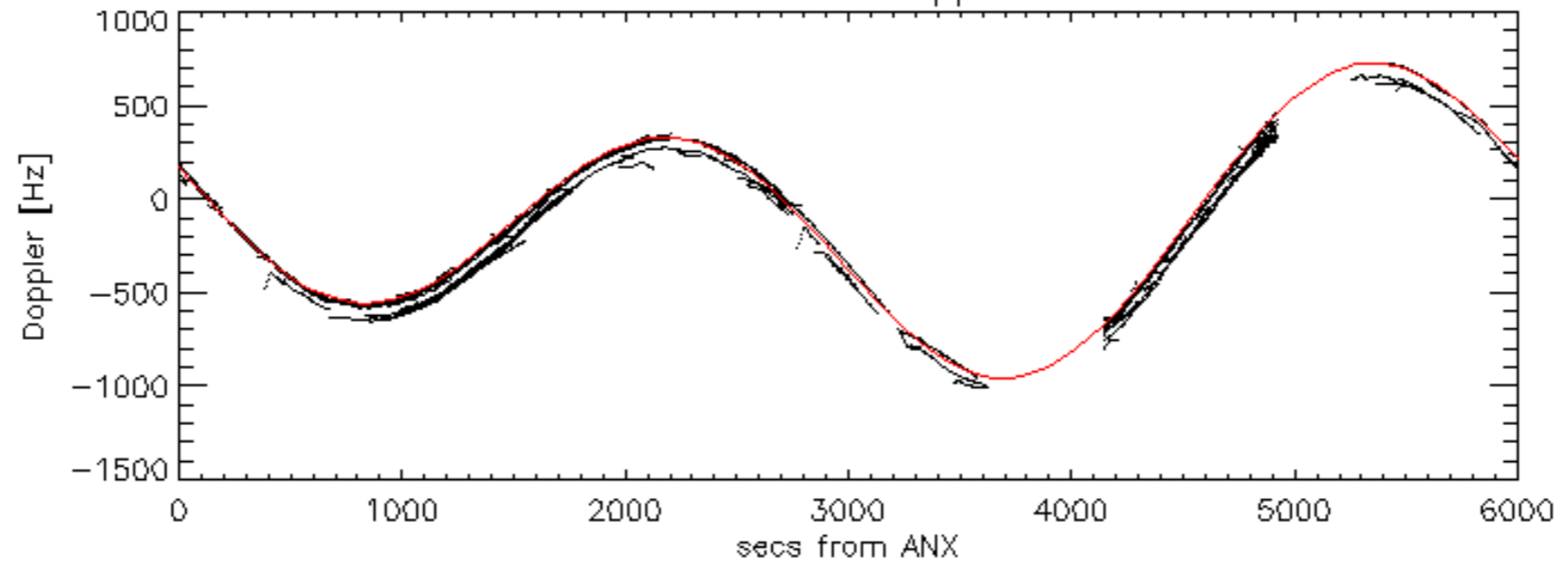
Doppler 'WVS' 'IS2' ascending

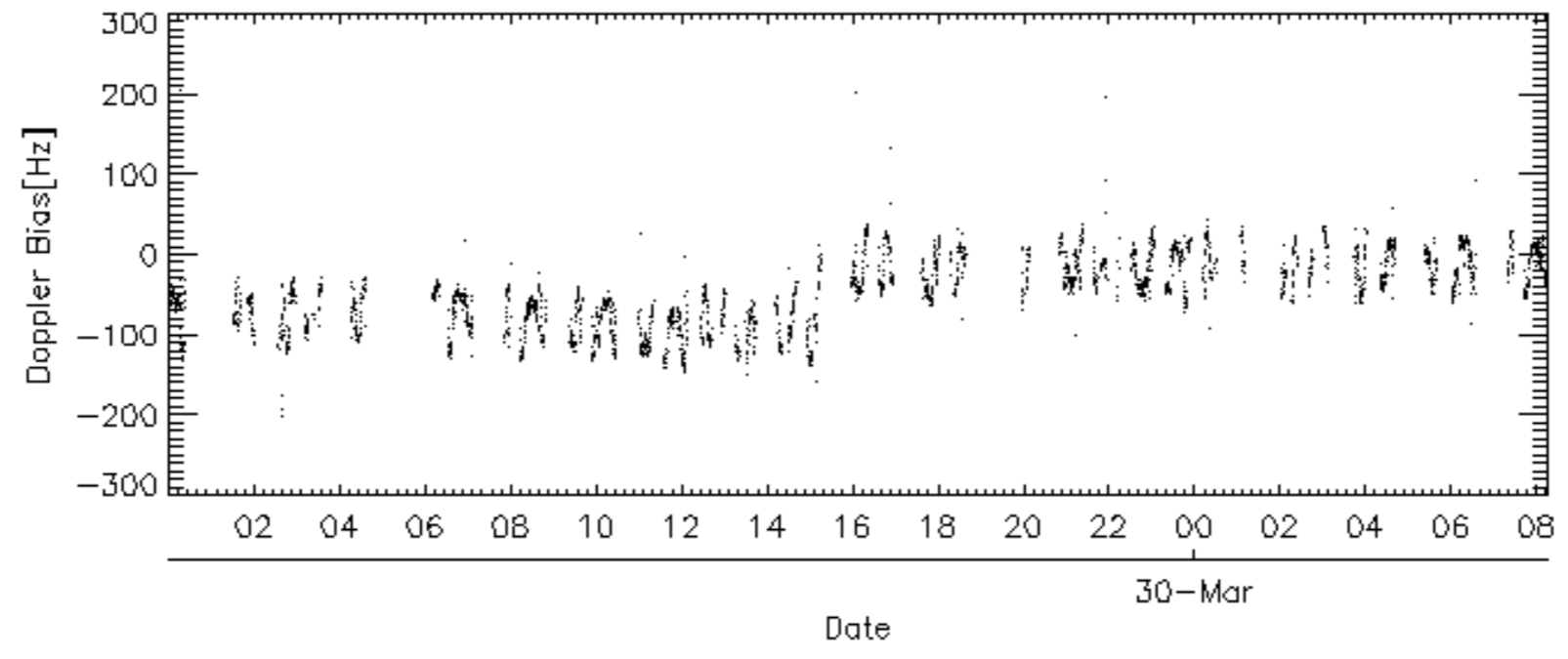
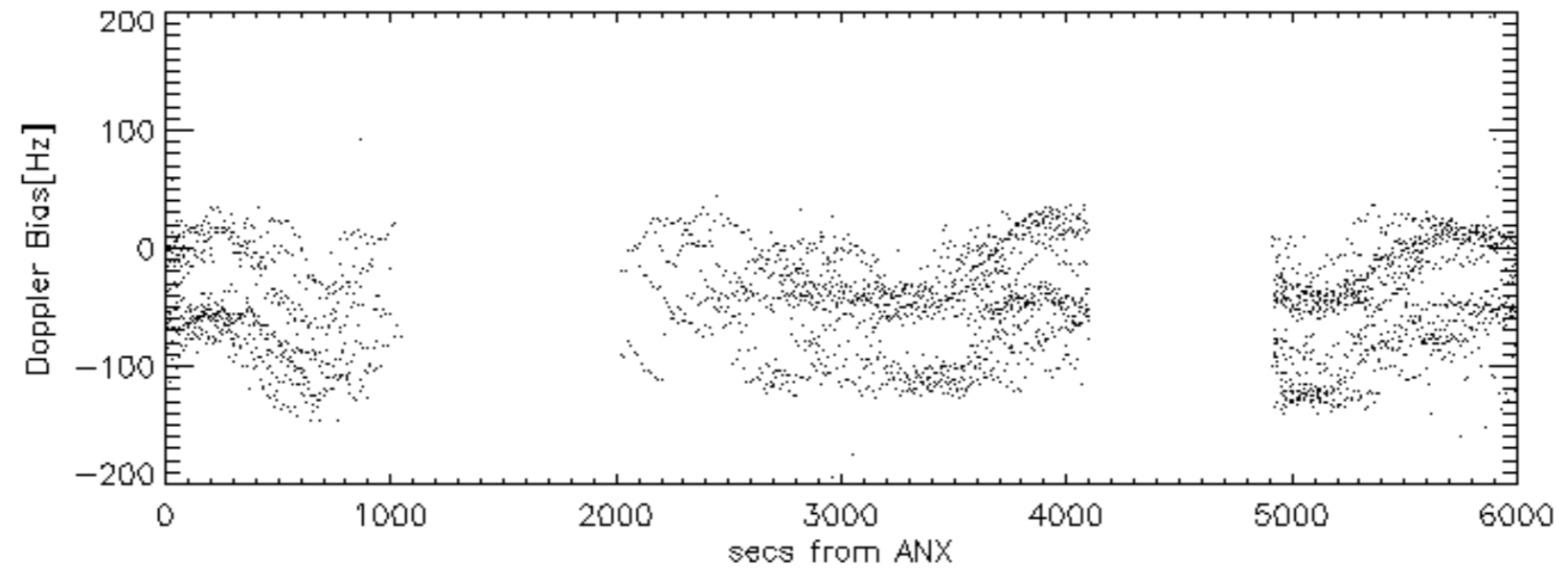
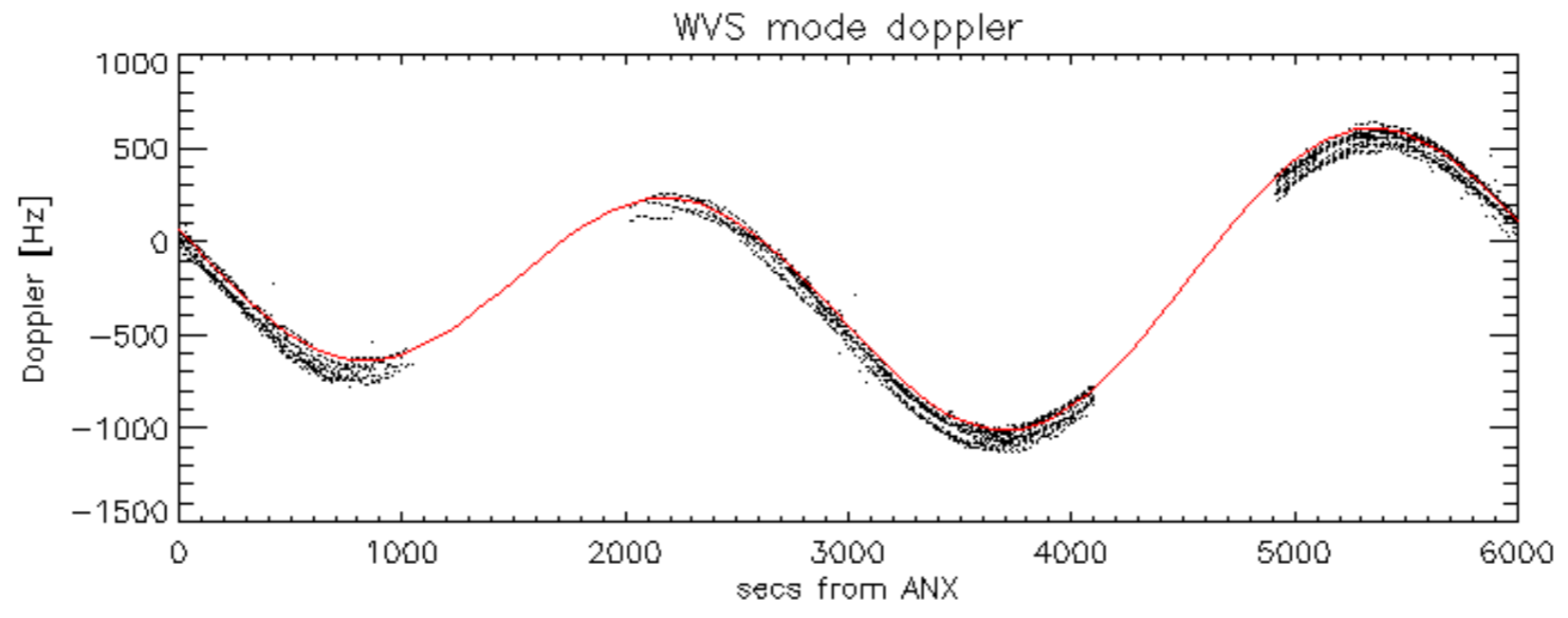


Doppler 'WVS' 'IS2' descending

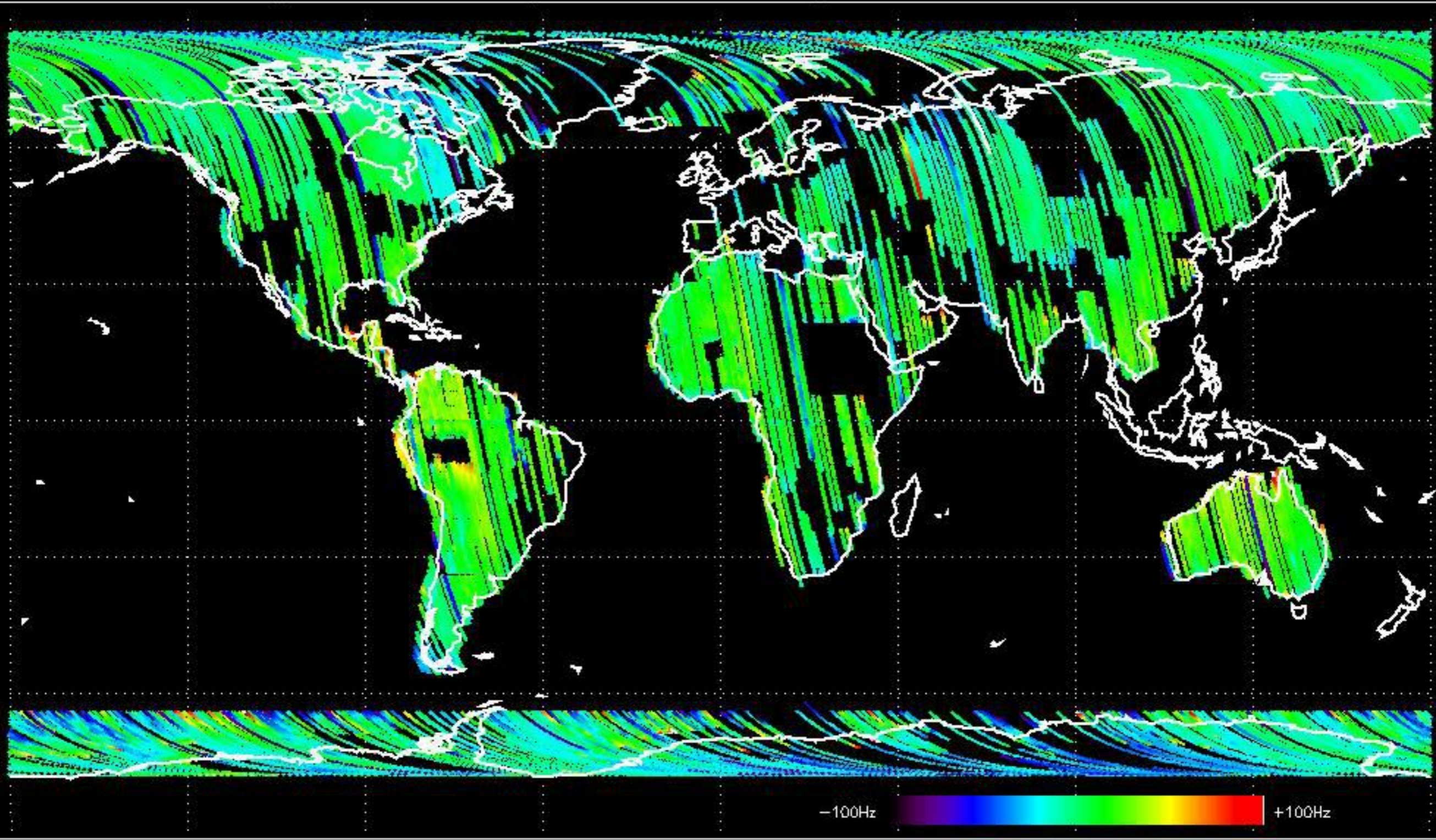


GM1 mode doppler

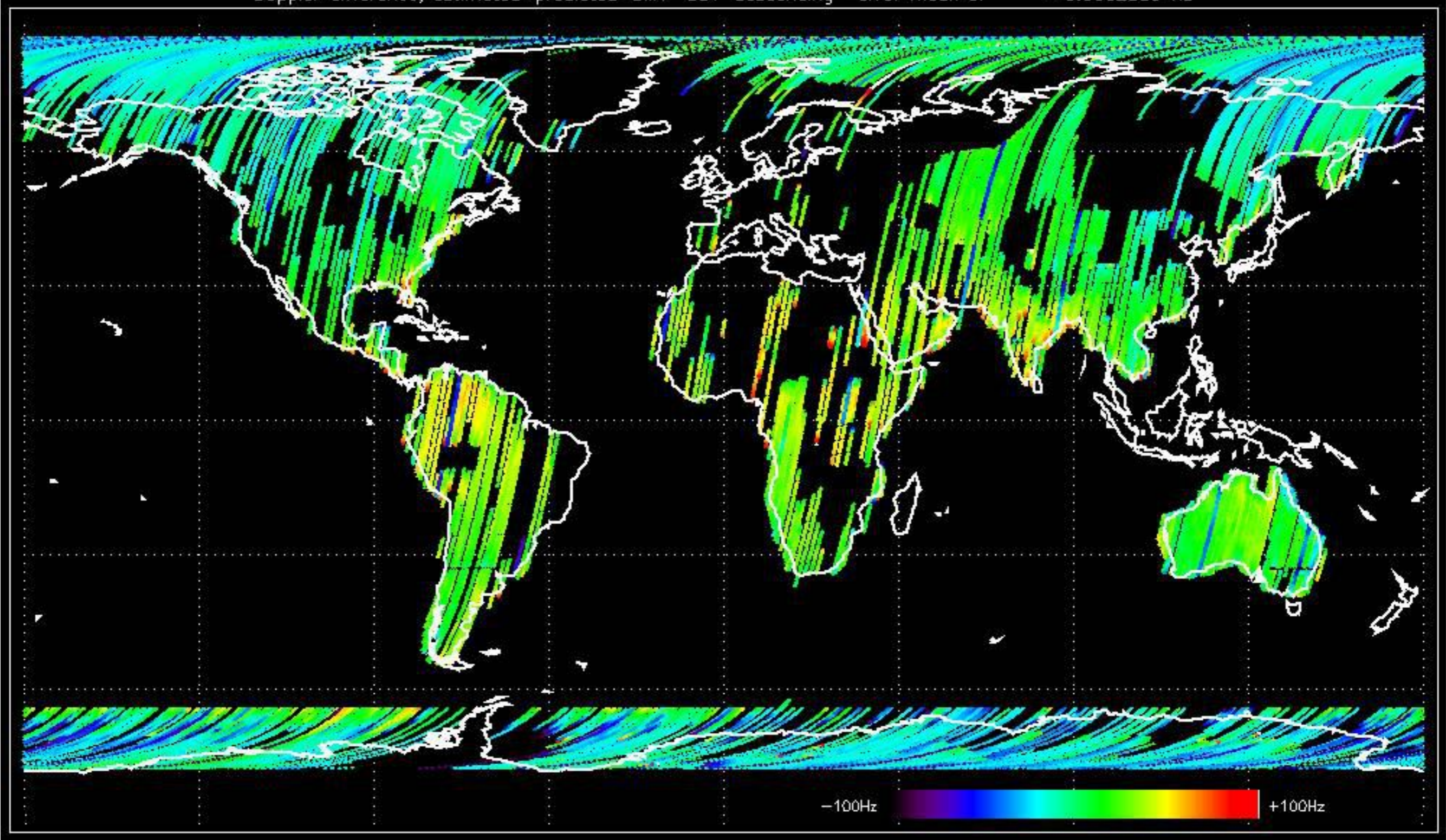




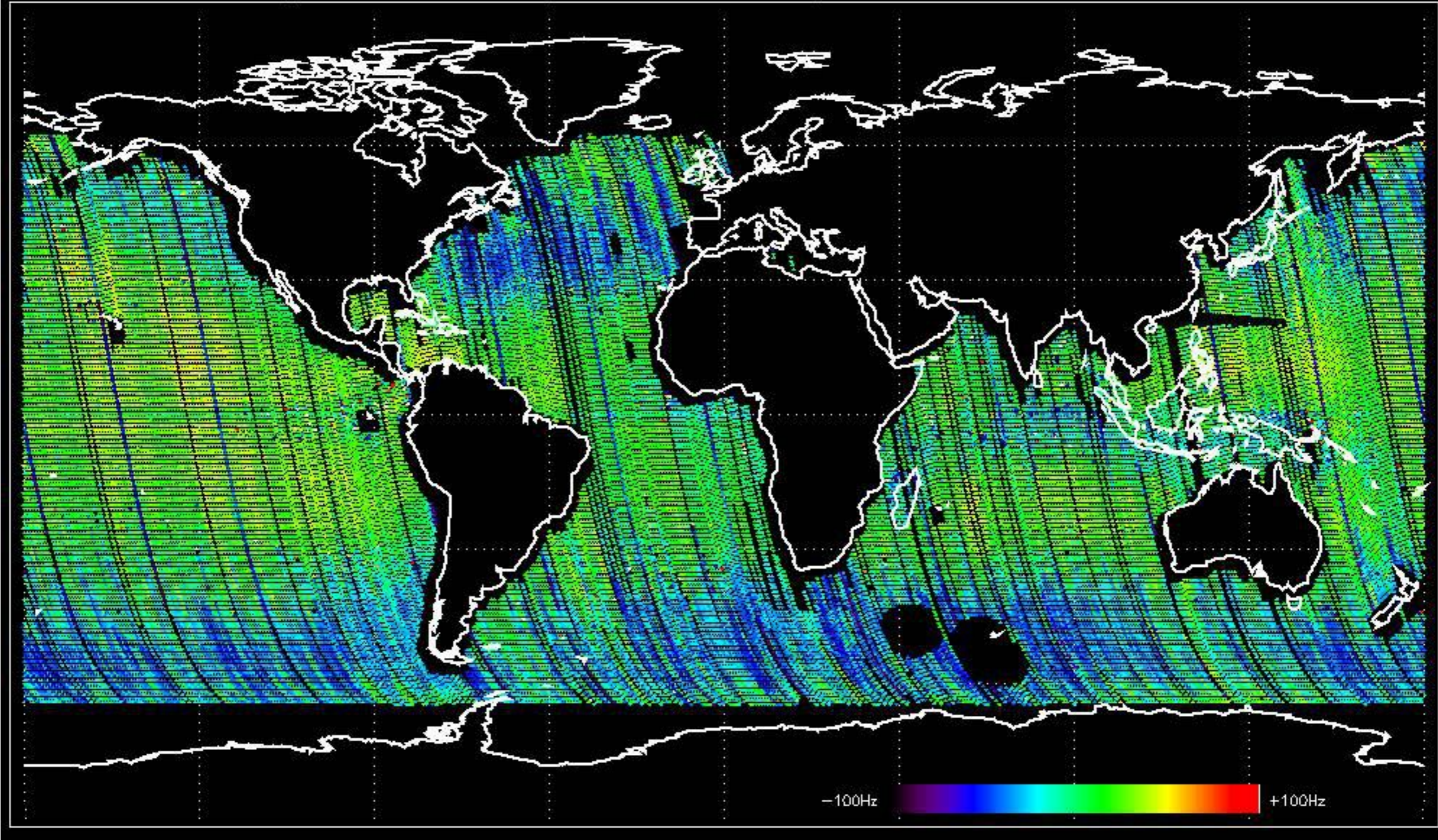
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.612604 Hz



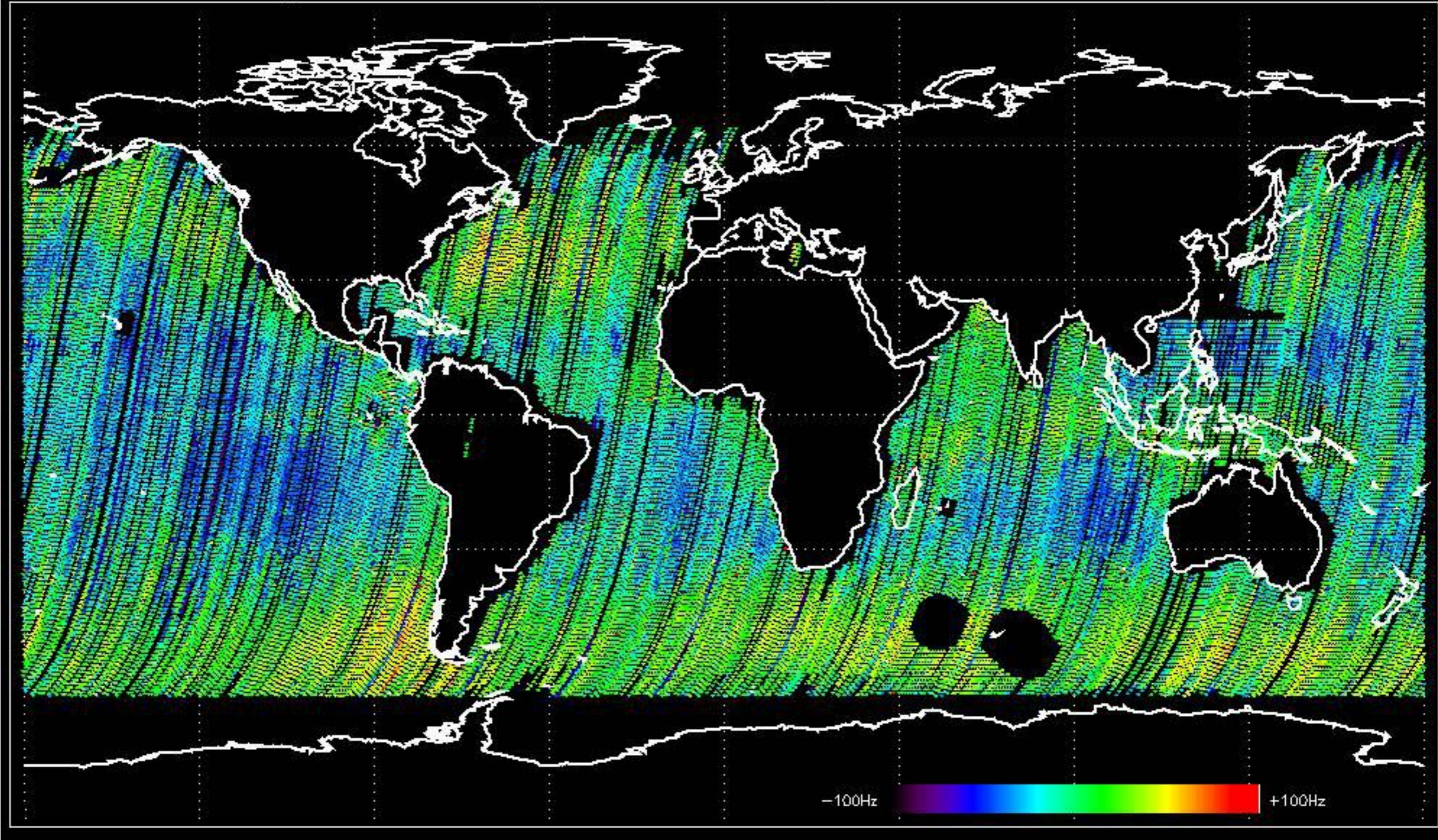
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.0062533 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.8648198 Hz

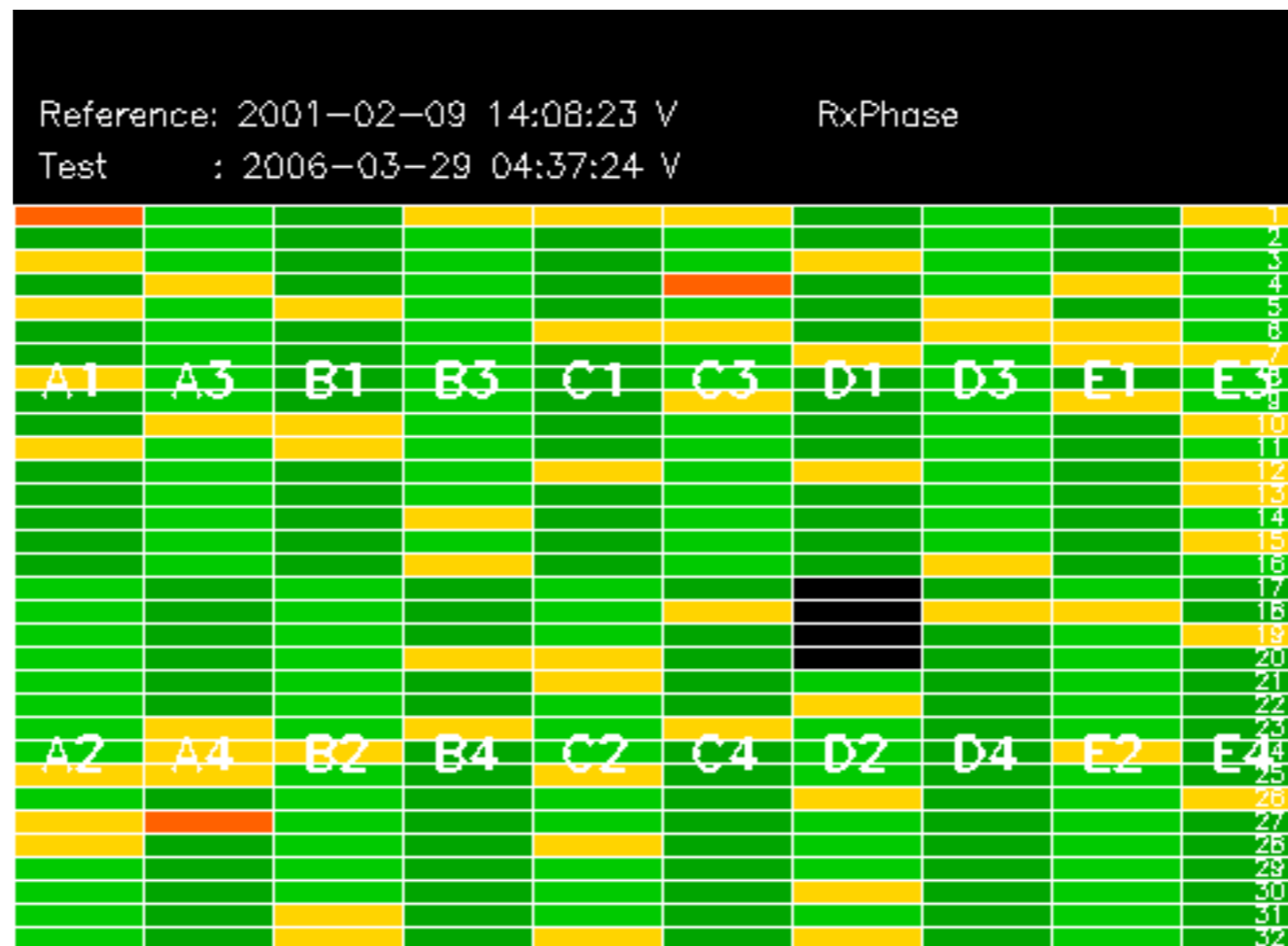


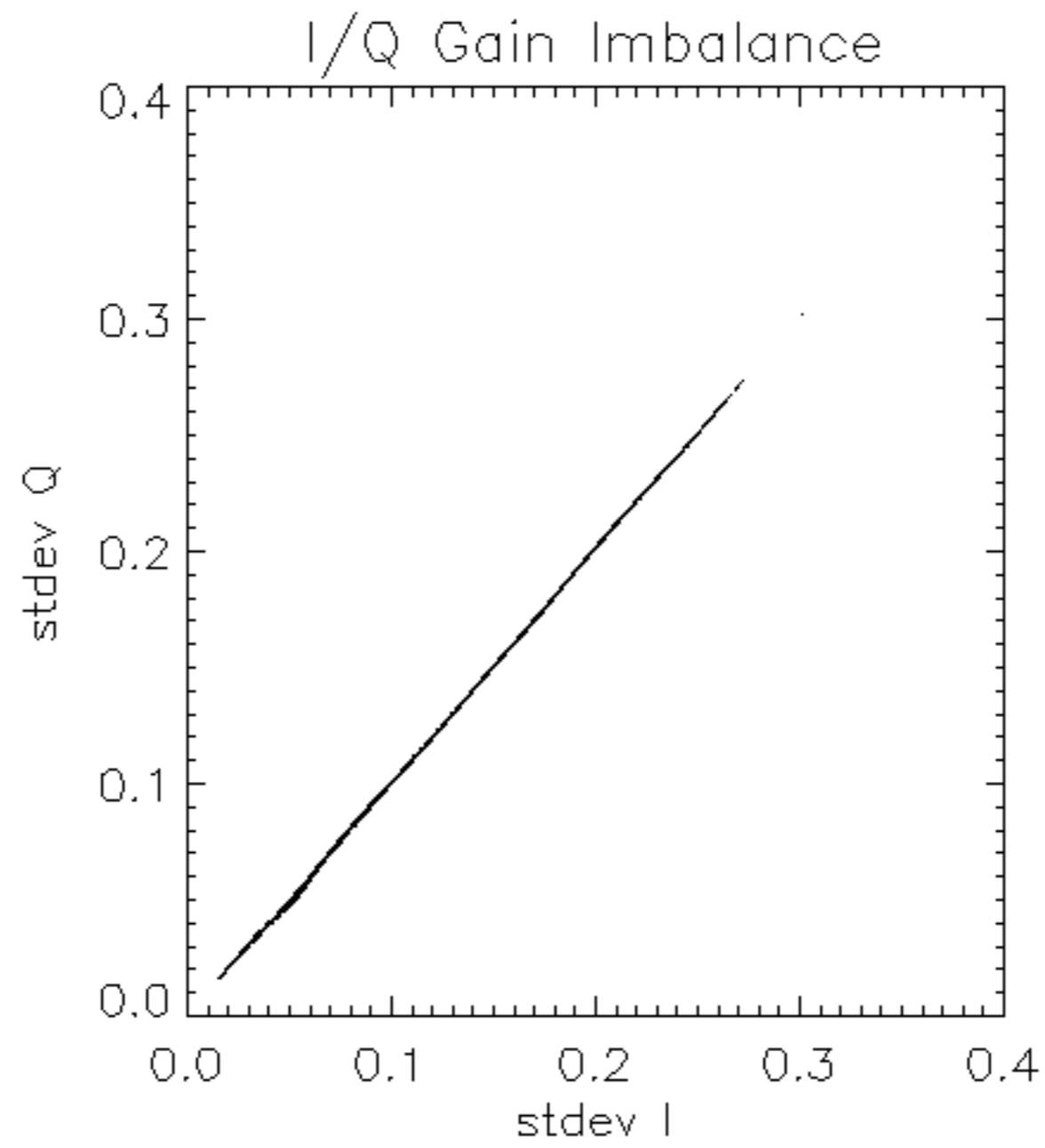
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.697682 Hz

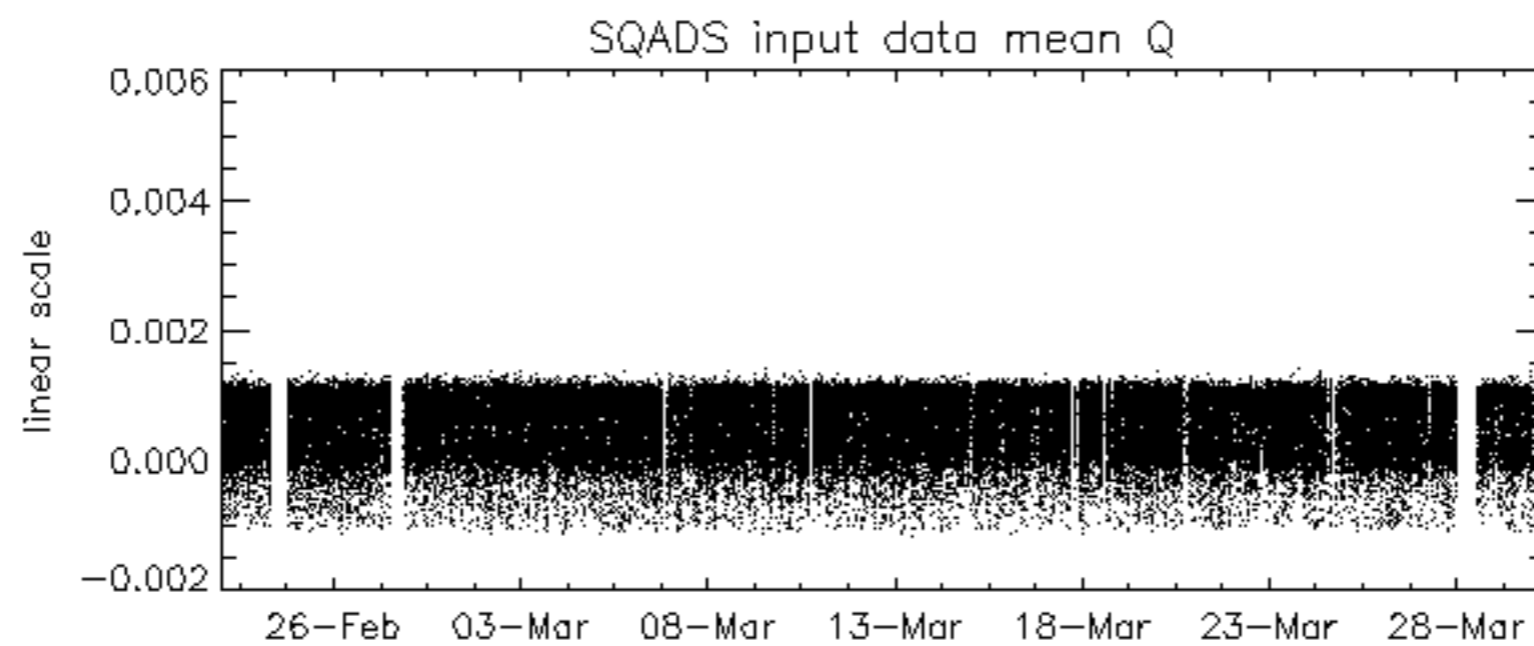
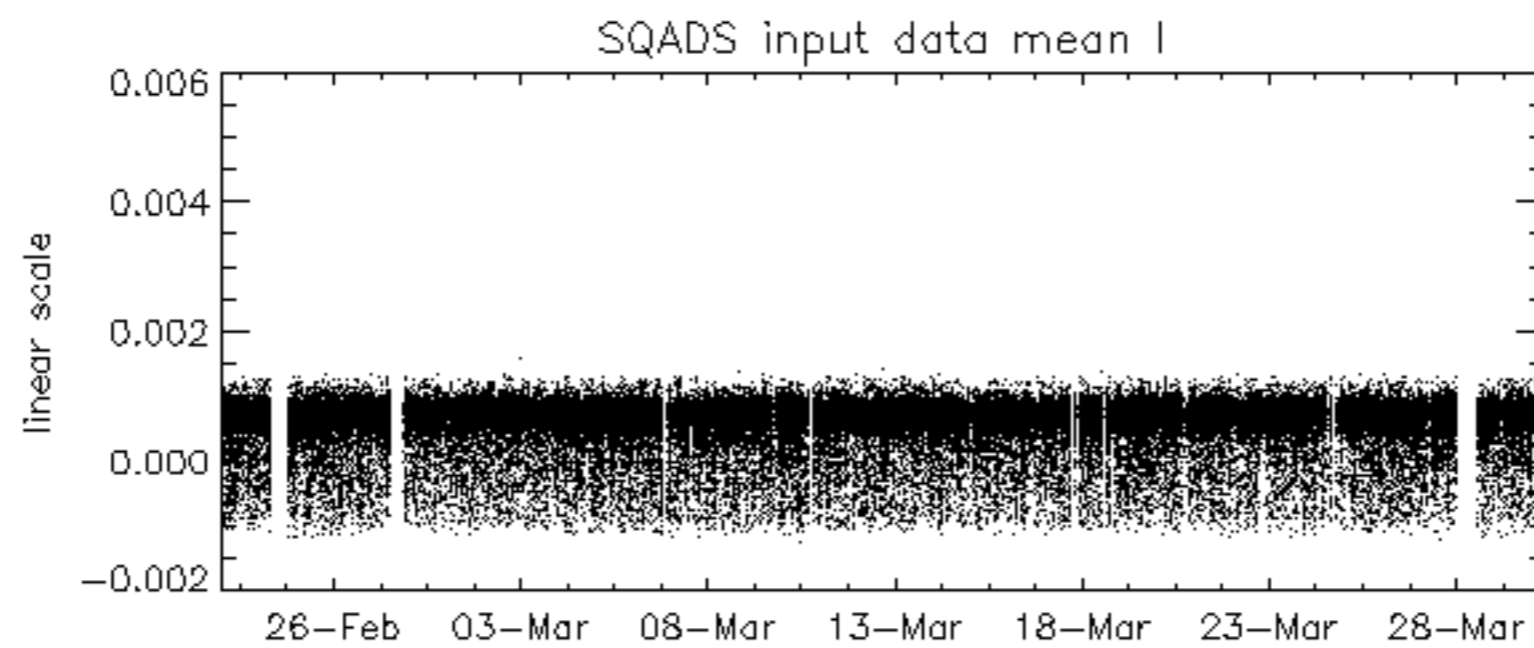
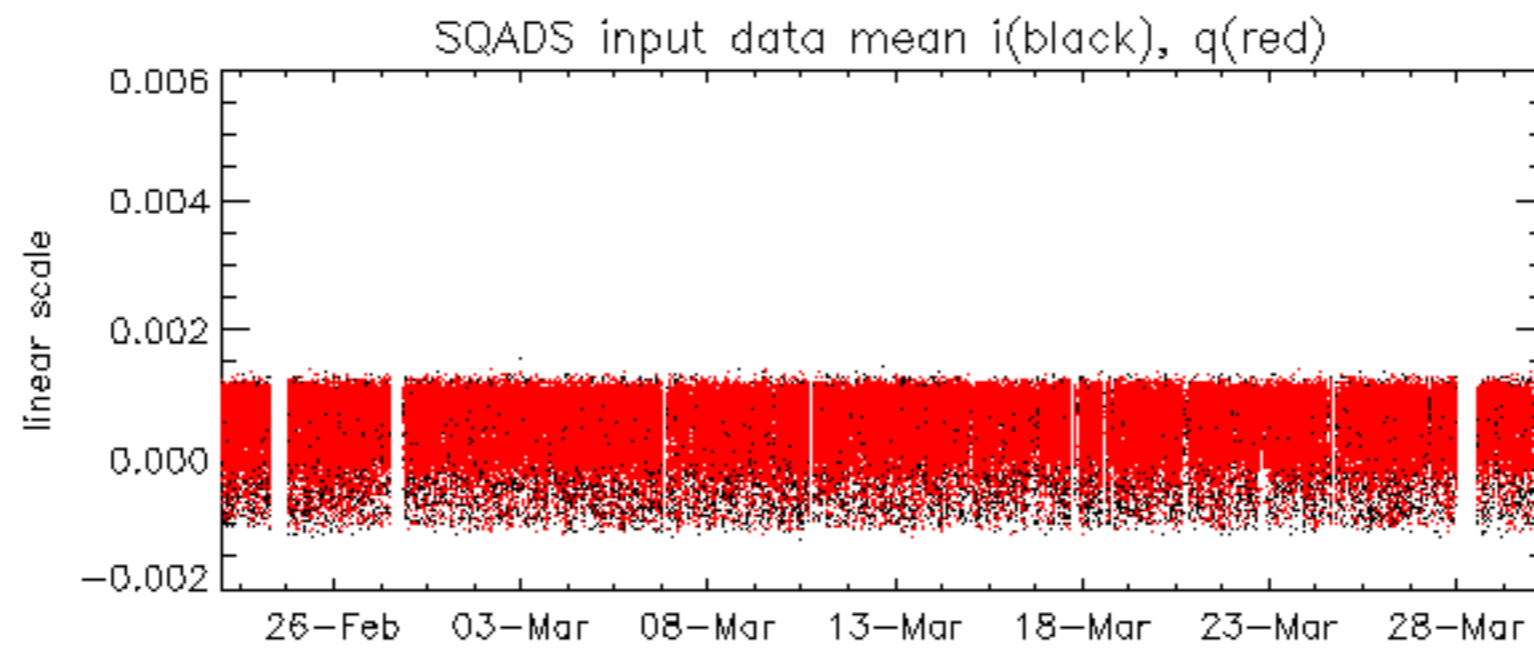


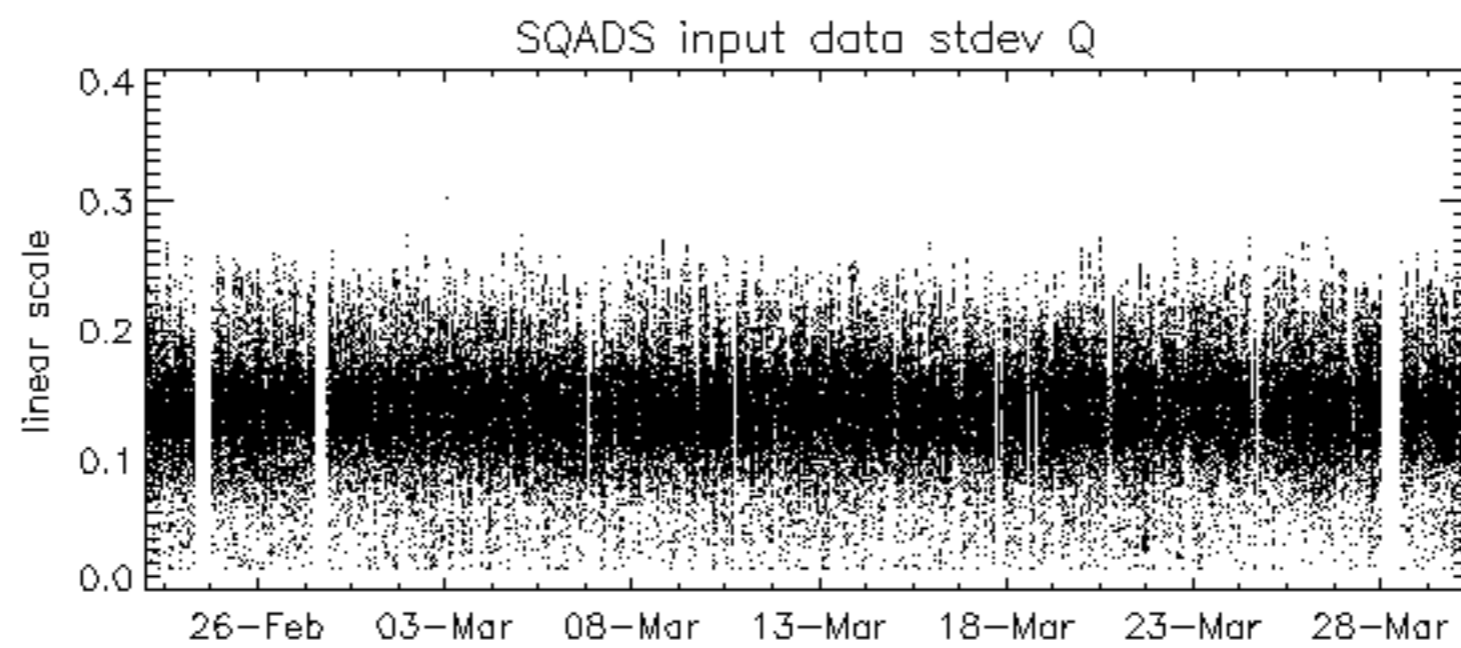
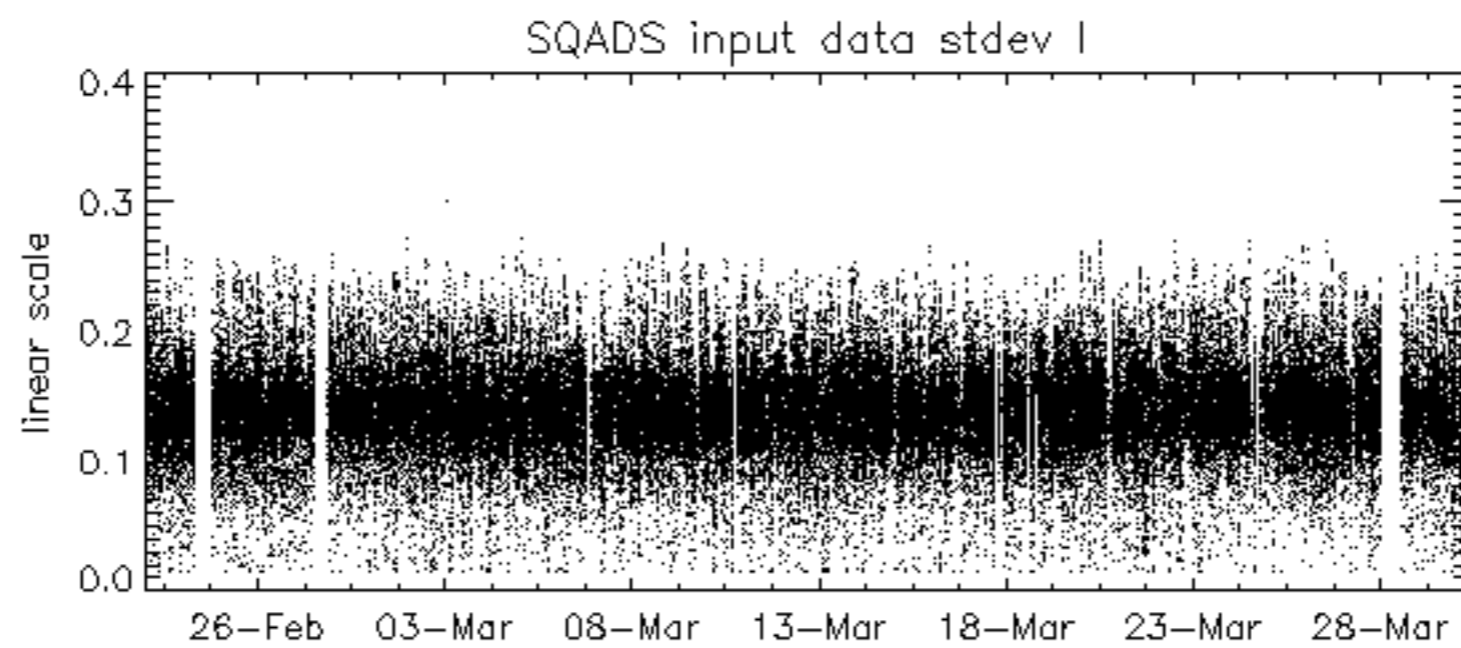
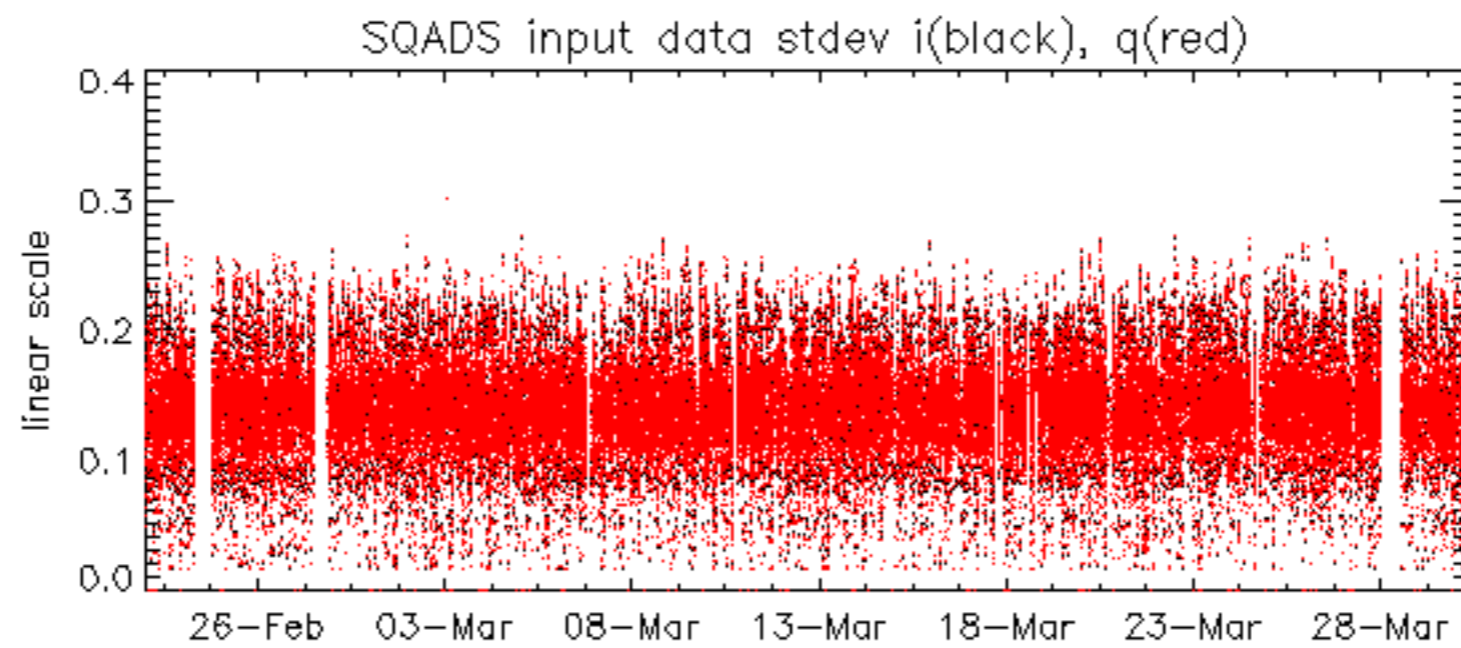
No anomalies observed on available MS products:

No anomalies observed.







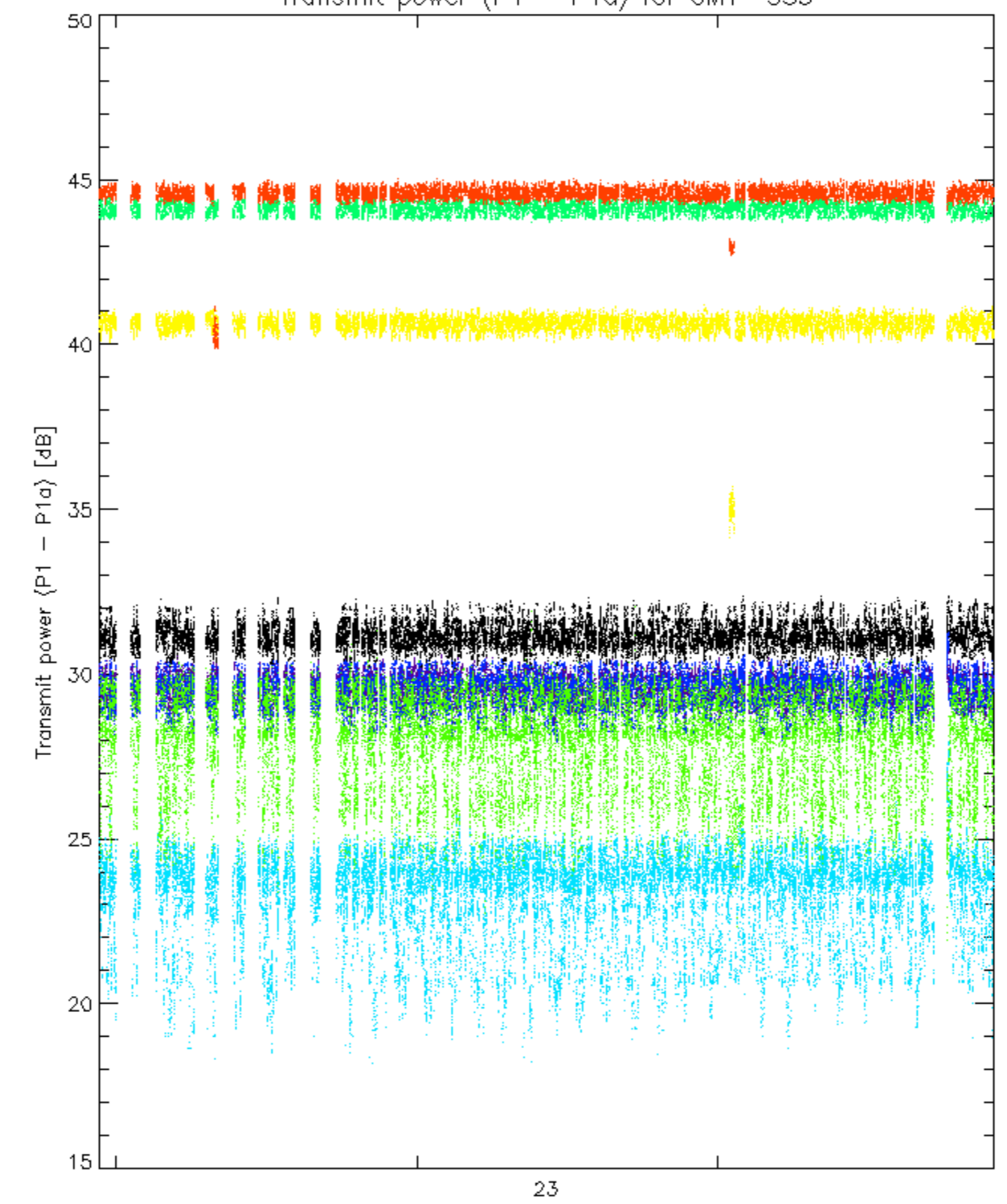


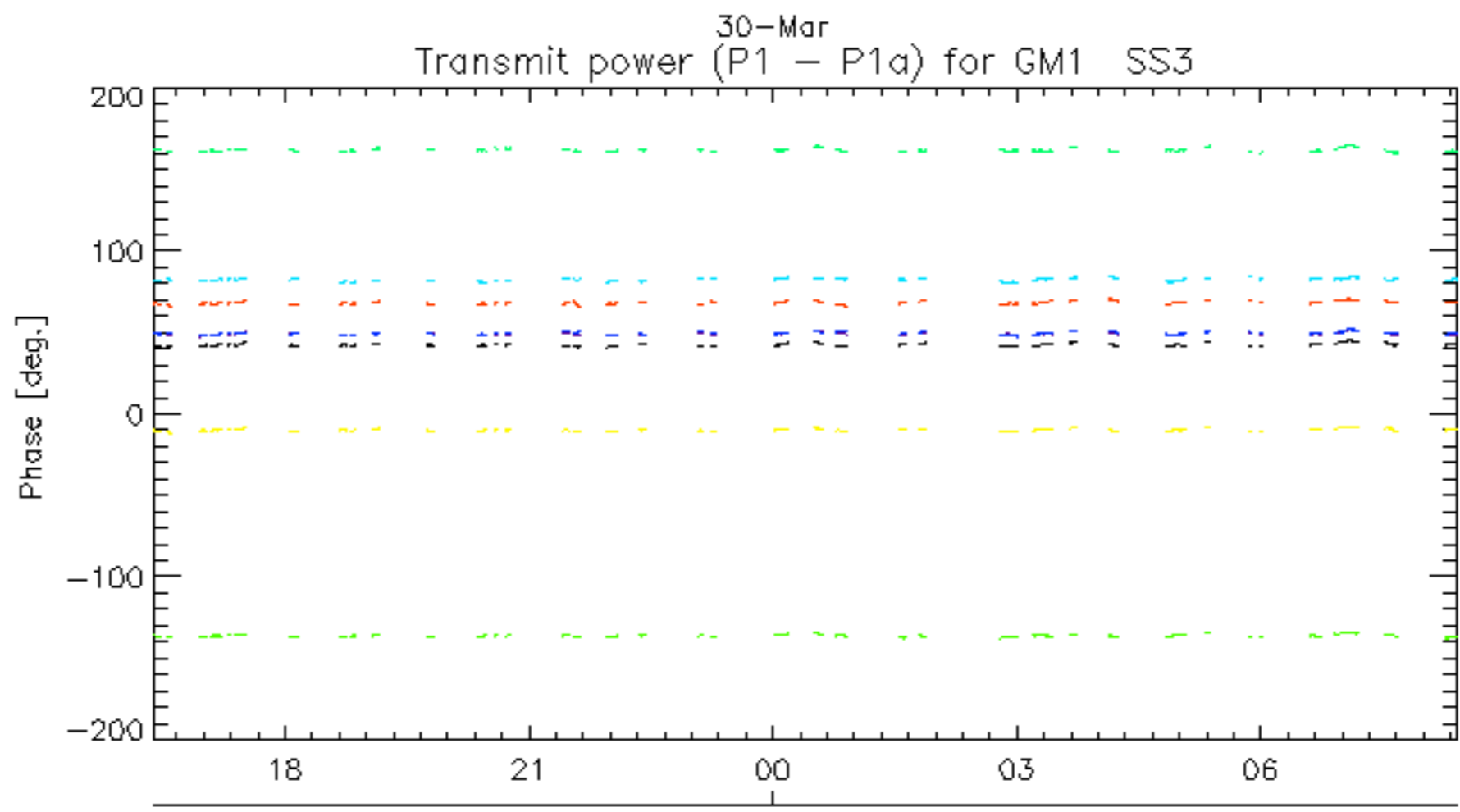
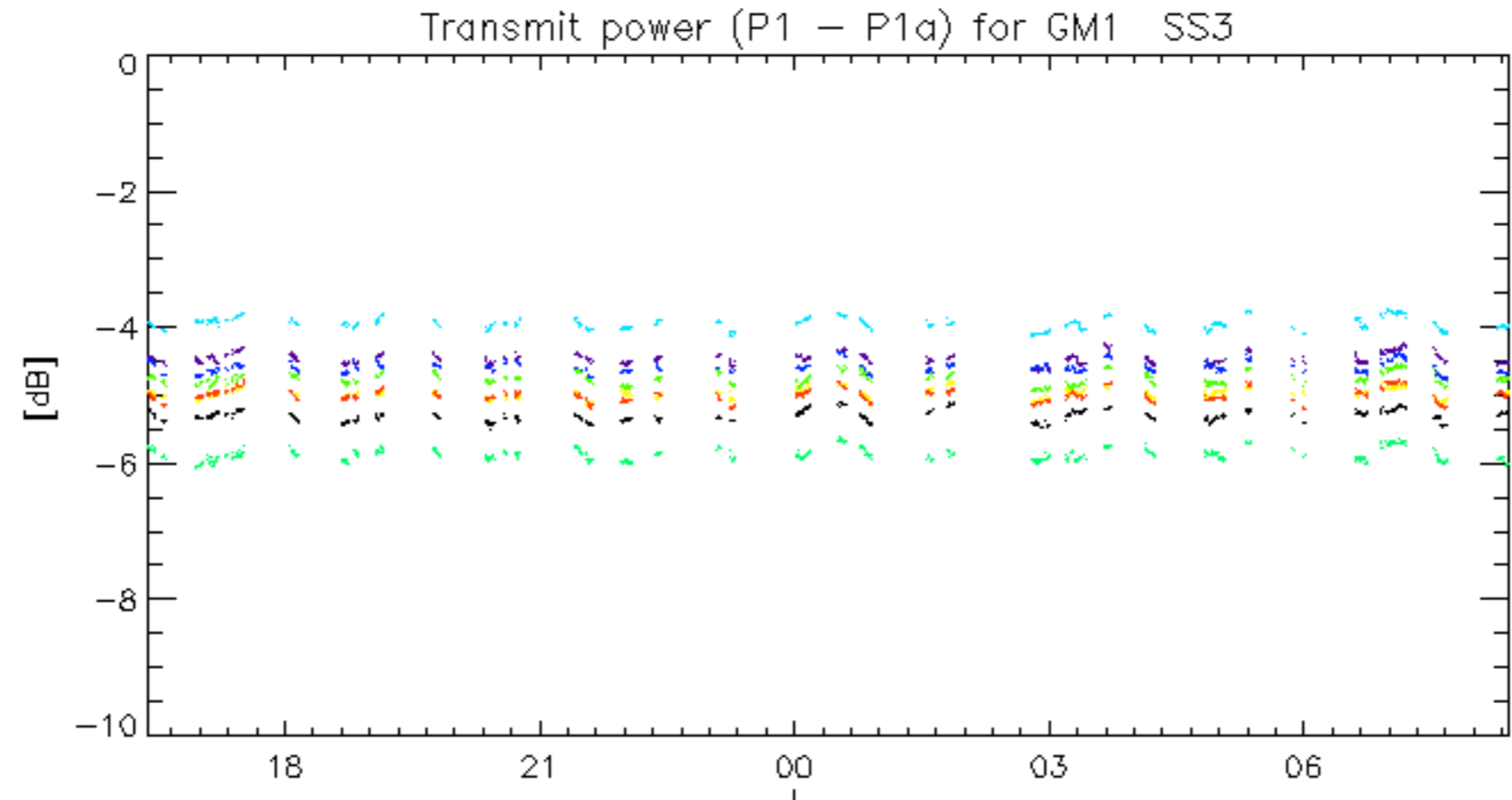
Summary of analysis for the last 3 days 2006032[890]

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

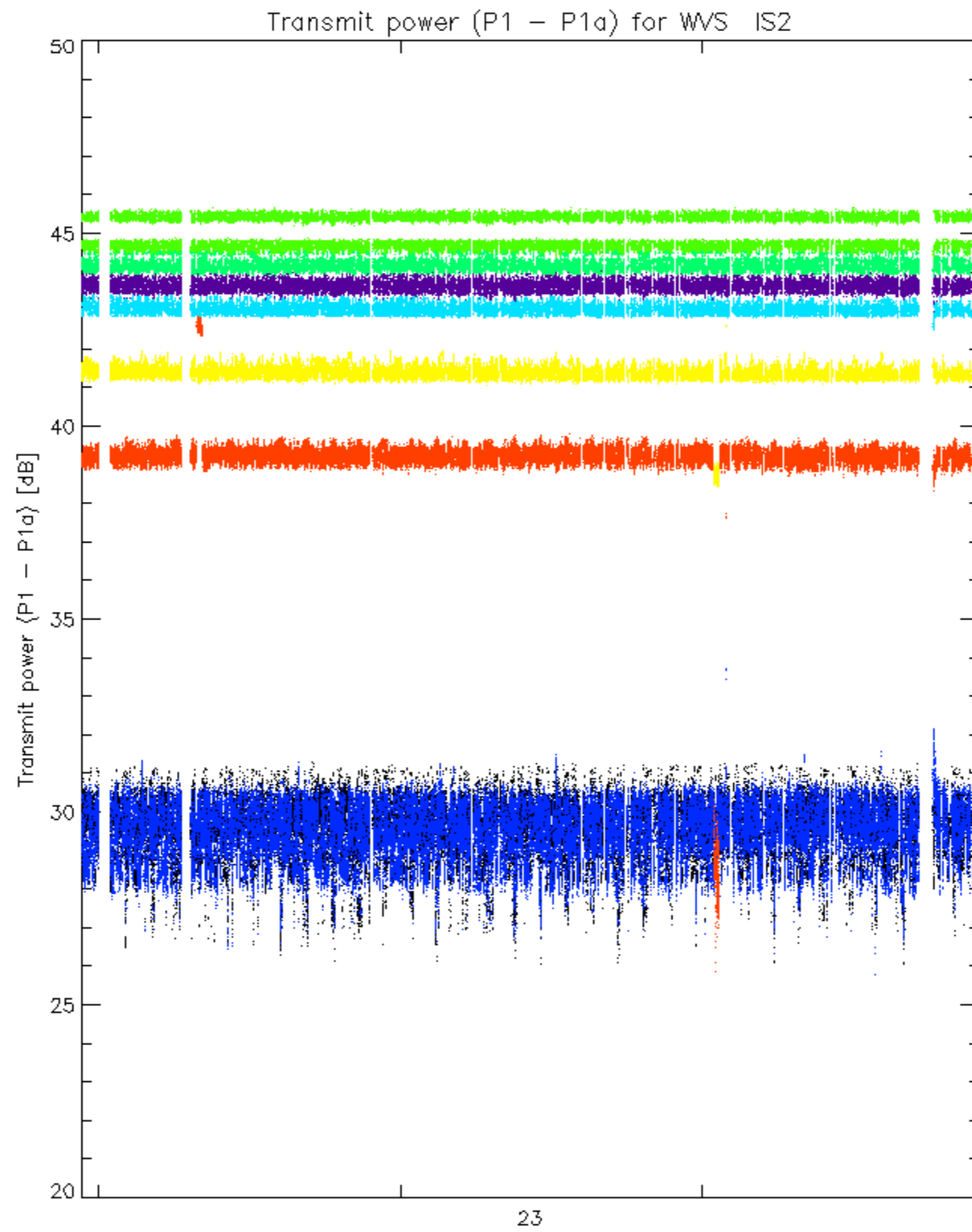
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060320_141119_000001602046_00096_21192_1254.N1	1	0
ASA_IMM_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDK20060320_081910_000000862046_00093_21189_0874.N1	0	41
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Transmit power (P1 - P1a) for GM1 SS3

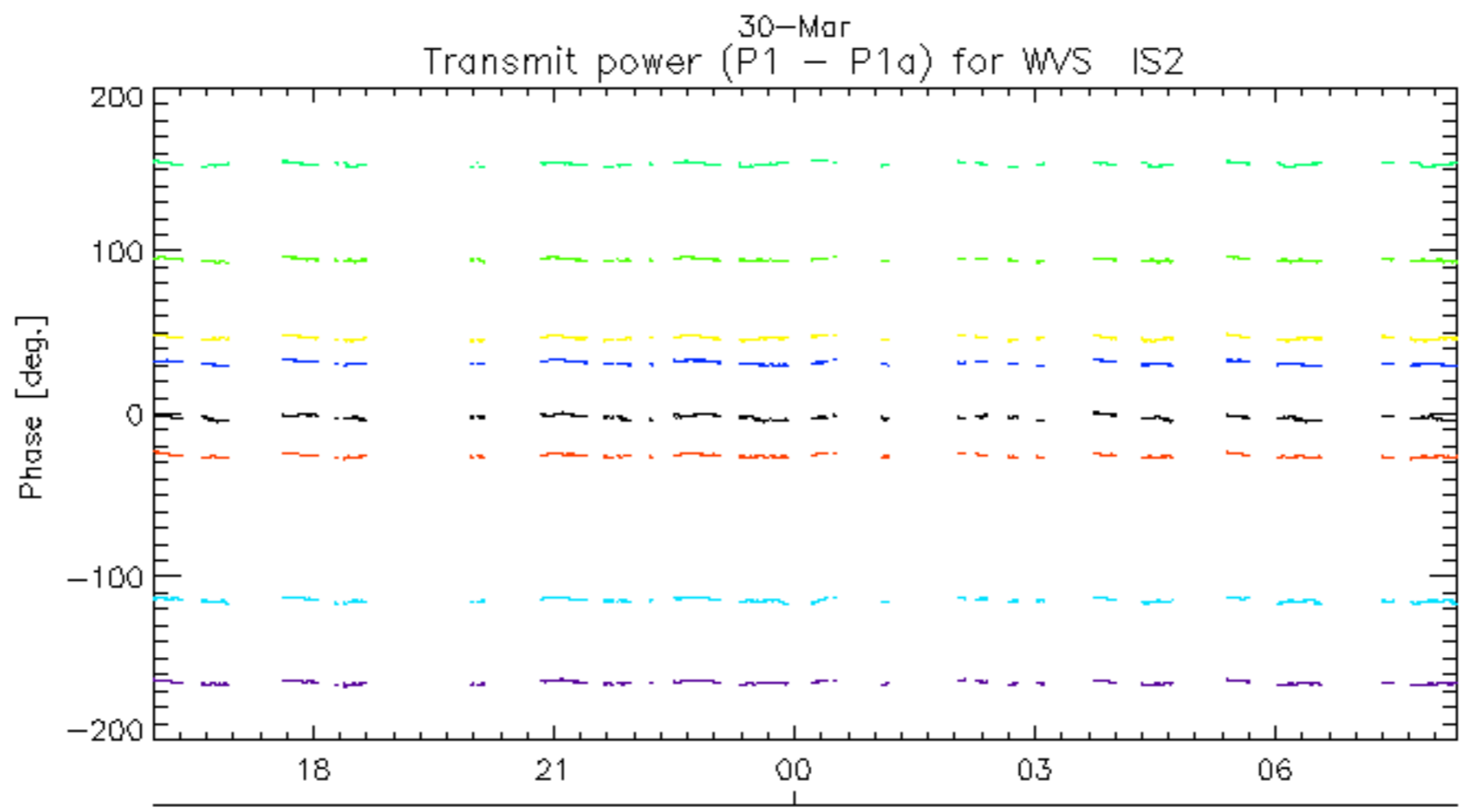
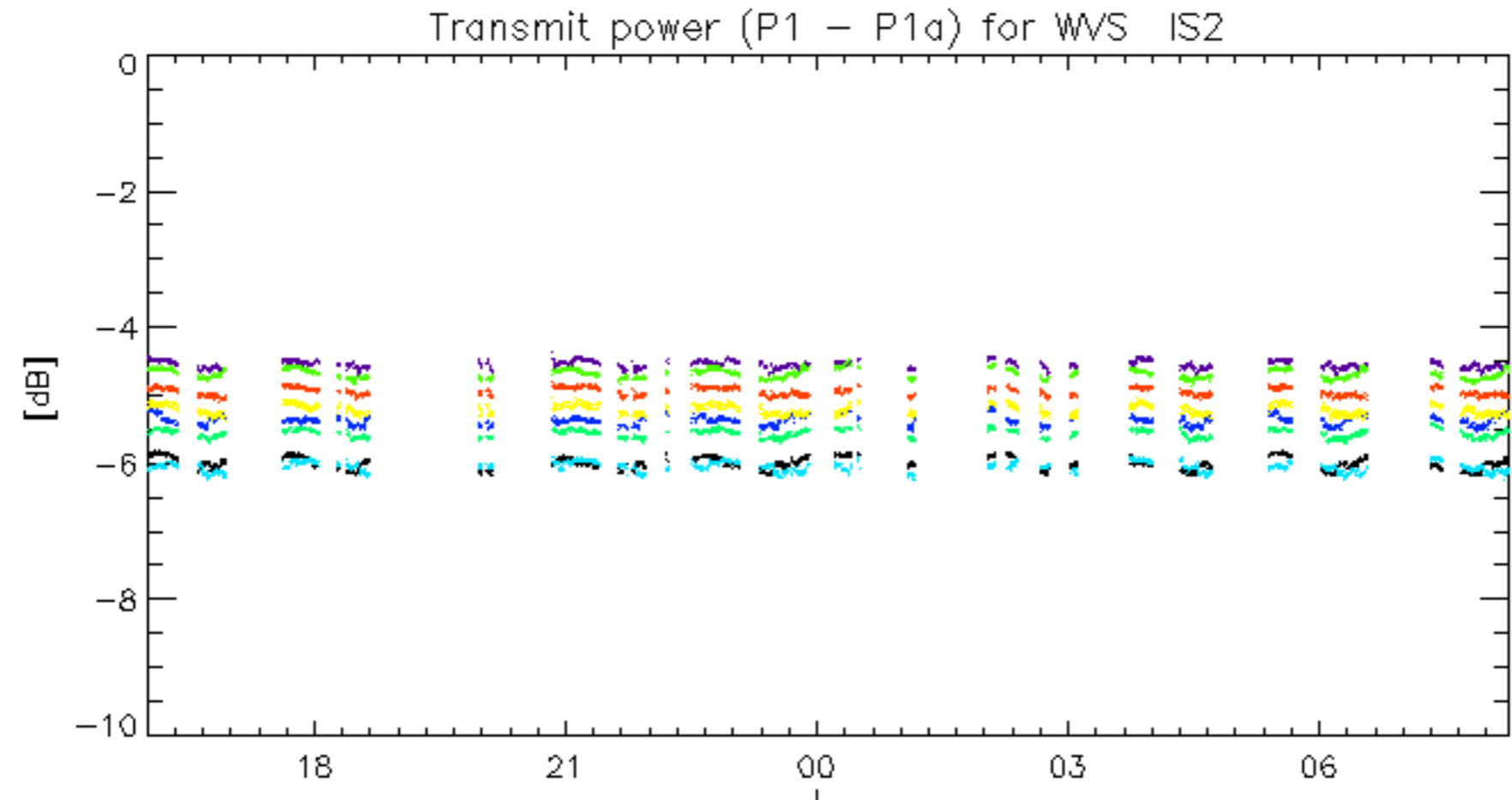




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.