

PRELIMINARY REPORT OF 060329

last update on Wed Mar 29 16:56:56 GMT 2006

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2006-03-28 00:00:00 to 2006-03-29 16:56:56

PDHS-K

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
----------------	-----	-----	-----	-----	-----

PDHS-E

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
----------------	-----	-----	-----	-----	-----

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	20060325 064353
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"/>

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)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.000360	0.009125	0.012844
7	P1	-3.013754	0.008488	-0.019549
11	P1	-4.059515	0.017936	-0.014961
15	P1	-6.098572	0.019771	-0.051127
19	P1	-3.304251	0.006452	-0.046967
22	P1	-4.464423	0.014150	-0.021611
26	P1	-4.139843	0.020907	0.075169
30	P1	-5.783658	0.175546	0.198369
3	P1	-16.962582	0.257405	0.075815
7	P1	-16.753197	0.102840	-0.099959
11	P1	-16.474043	0.308708	0.032442
15	P1	-13.054200	0.093457	-0.006501
19	P1	-13.963913	0.049828	-0.088640
22	P1	-15.594693	0.460001	-0.070586
26	P1	-15.770940	0.300589	0.128755
30	P1	-16.515560	0.317198	-0.137746

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.373264	0.086850	0.074891
7	P2	-22.338987	0.096406	0.132167
11	P2	-16.213644	0.100727	0.035670
15	P2	-7.165884	0.097471	-0.013801
19	P2	-9.134864	0.089524	-0.025705
22	P2	-17.958527	0.087921	-0.071141
26	P2	-16.224730	0.093799	-0.076916
30	P2	-19.651686	0.084205	-0.005859

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.195393	0.005508	-0.001052
7	P3	-8.195393	0.005508	-0.001052
11	P3	-8.195393	0.005508	-0.001052
15	P3	-8.195393	0.005508	-0.001052
19	P3	-8.195393	0.005508	-0.001052
22	P3	-8.195393	0.005508	-0.001052

26	P3	-8.195393	0.005508	-0.001052
30	P3	-8.195394	0.005508	-0.001049

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.760425	0.009972	-0.015585
7	P1	-2.732048	0.008371	0.022950
11	P1	-2.929693	0.018217	-0.013155
15	P1	-3.567487	0.021085	-0.023395
19	P1	-3.382564	0.009496	0.010993
22	P1	-5.184802	0.023322	-0.009739
26	P1	-5.786292	0.036678	0.048946
30	P1	-5.186357	0.079789	0.127953
3	P1	-11.586717	0.039460	-0.073474
7	P1	-9.972673	0.048344	-0.027092
11	P1	-10.278690	0.058246	-0.020350
15	P1	-10.821334	0.108391	-0.049880
19	P1	-15.409570	0.074119	0.055532
22	P1	-20.295572	1.052709	-0.082468
26	P1	-16.270157	0.387501	0.169611
30	P1	-18.282131	0.578015	0.082316

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.065495	0.039054	0.134381
7	P2	-22.548084	0.084381	0.183678

11	P2	-11.222983	0.030321	0.058628
15	P2	-4.831653	0.028953	0.018182
19	P2	-6.843614	0.027616	0.022984
22	P2	-8.147081	0.026934	0.021435
26	P2	-23.964243	0.033785	-0.051666
30	P2	-22.075853	0.025164	0.027131

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.022134	0.002359	0.005527
7	P3	-8.022057	0.002352	0.005881
11	P3	-8.022067	0.002372	0.005815
15	P3	-8.022160	0.002359	0.006010
19	P3	-8.022058	0.002362	0.005740
22	P3	-8.022187	0.002356	0.005839
26	P3	-8.022139	0.002357	0.005726
30	P3	-8.022034	0.002363	0.005470

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	0.000568495
	stdev	1.68139e-07
MEAN Q	mean	0.000525656

stdev 2.16578e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139407
	stdev	0.00117039
STDEV Q	mean	0.139783
	stdev	0.00118932



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006032[789]

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_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDE20060327_001933_000002262046_00188_21284_2752.N1	0	35
ASA_WSM_1PNPDE20060327_065041_000000672046_00192_21288_2792.N1	0	7
ASA_WSM_1PNPDE20060327_162329_000002082046_00198_21294_2814.N1	0	49
ASA_WSM_1PNPDE20060327_180426_000002072046_00199_21295_2831.N1	0	21
ASA_WSM_1PNPDE20060327_202253_000000852046_00200_21296_2870.N1	0	67
ASA_WSM_1PNPDE20060327_234856_000002262046_00202_21298_2901.N1	0	34
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)

<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

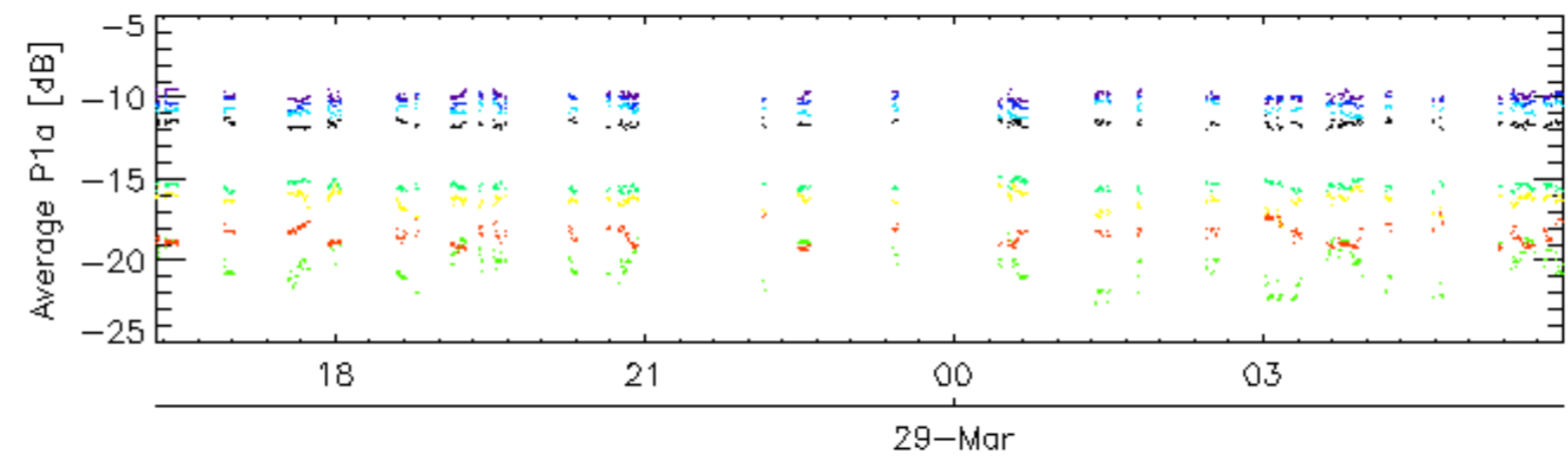
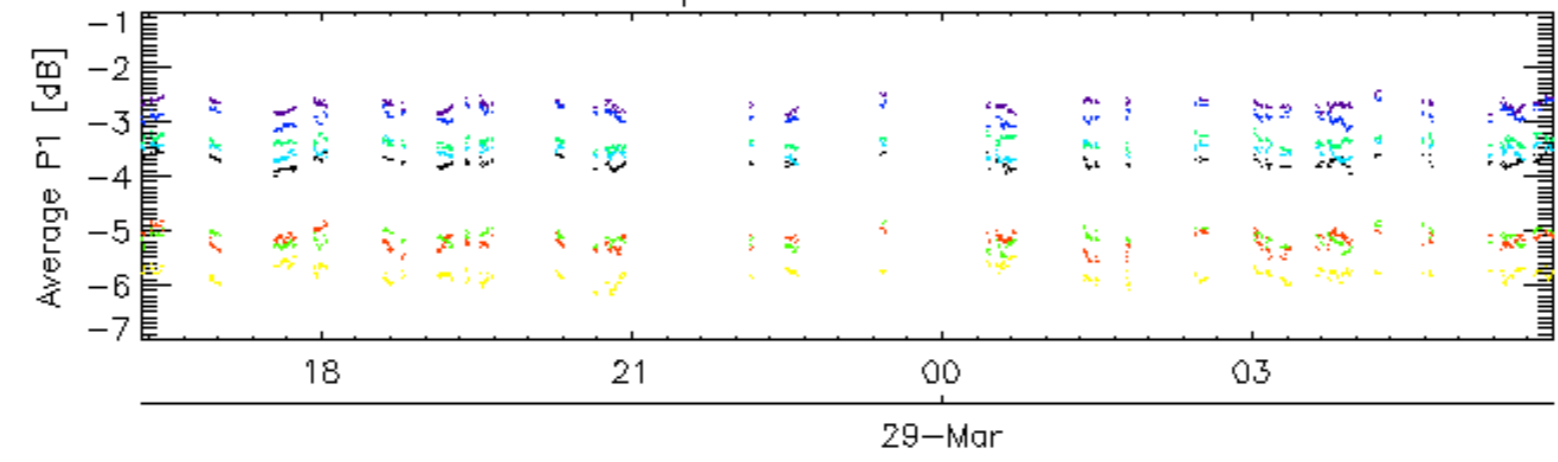
7.5 - Absolute Doppler for GM1

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

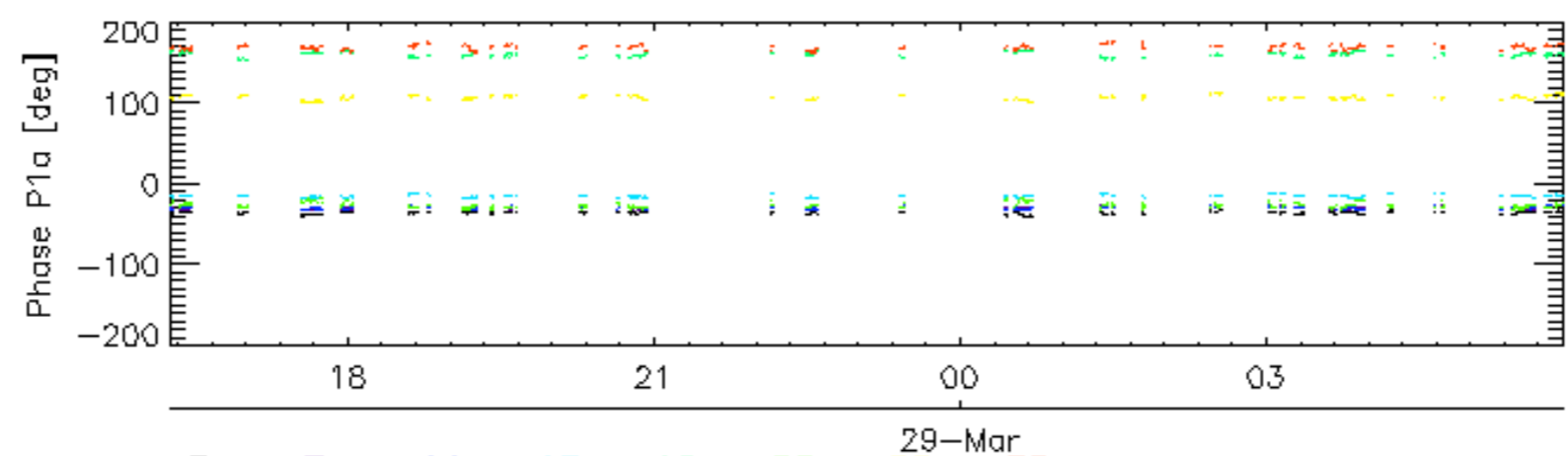
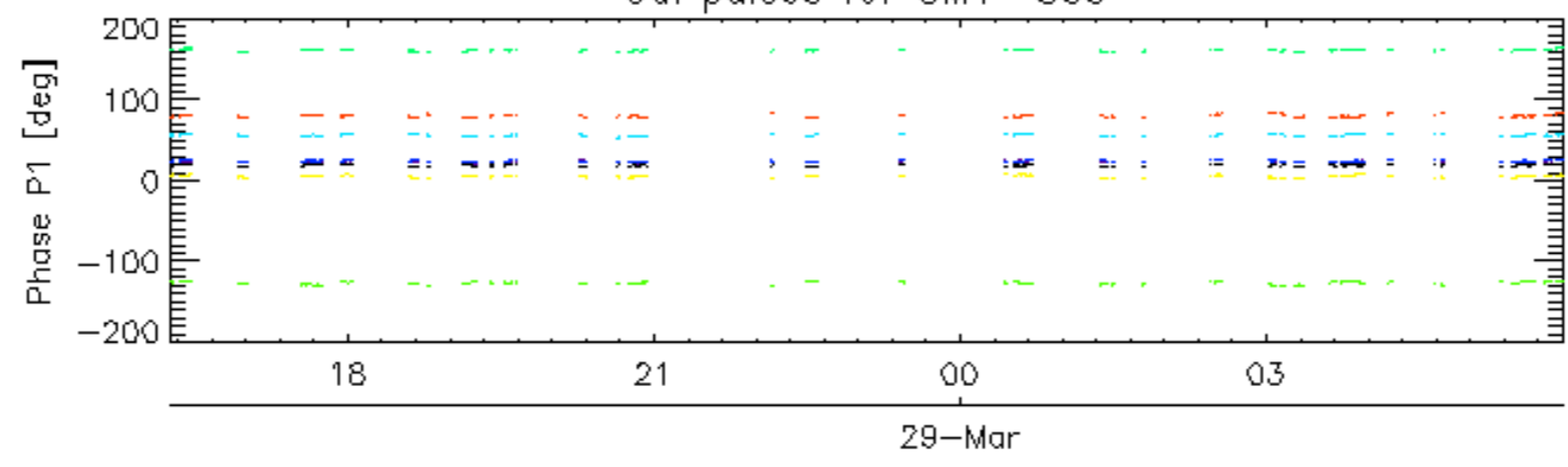
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

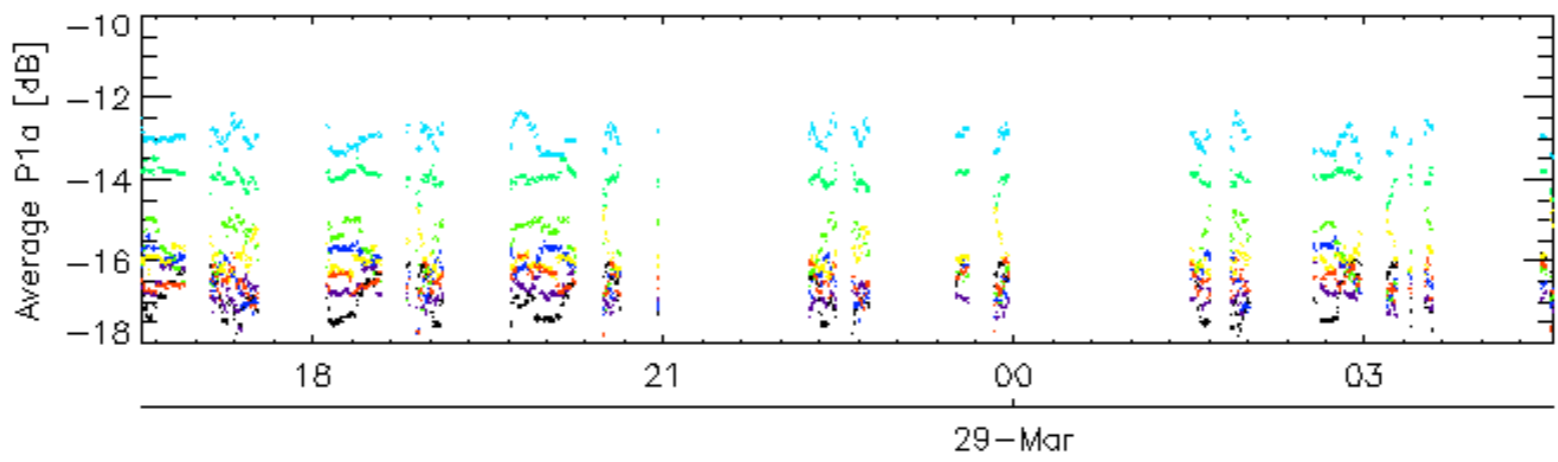
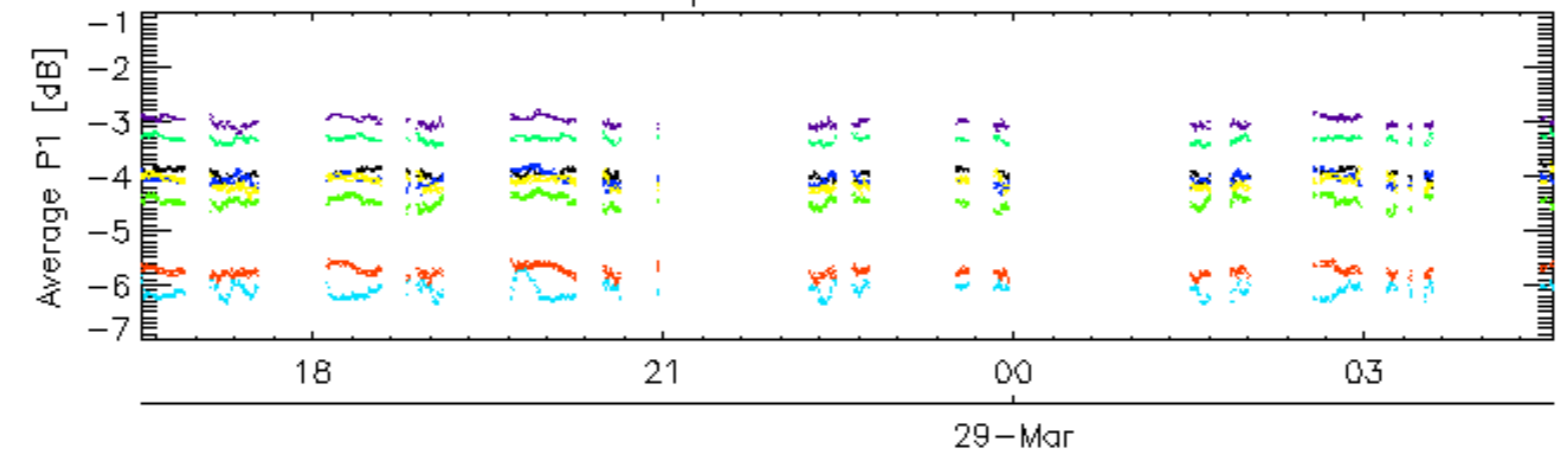


Cal pulses for GM1 SS3

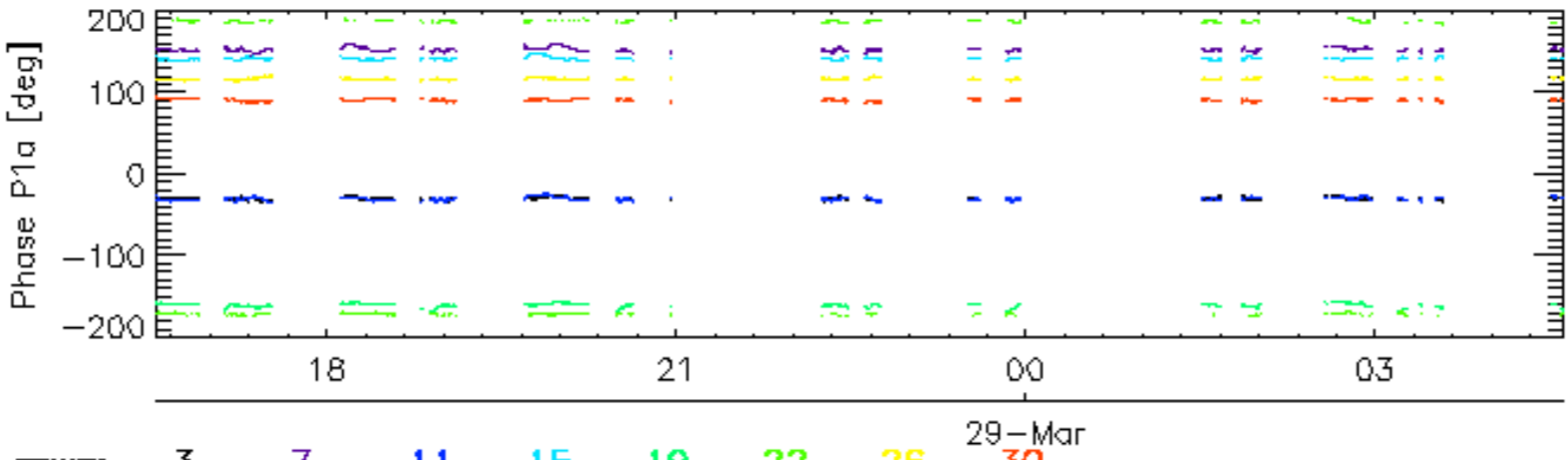
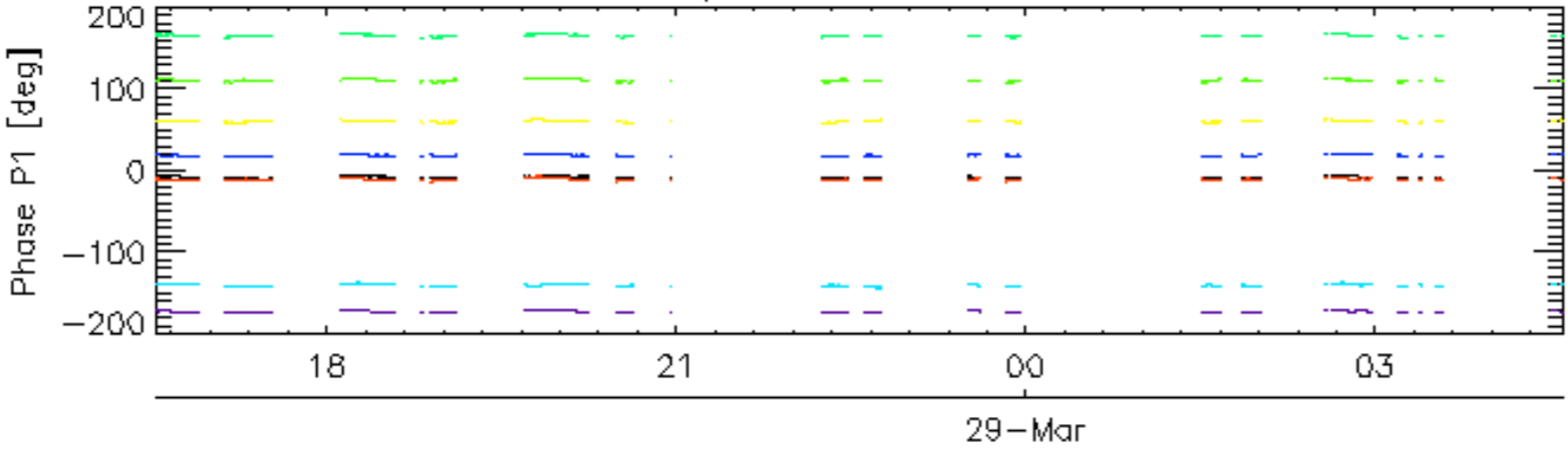


rows: **3** **7** **11** **15** **19** **22** **26** **30** 29-Mar

Cal pulses for WVS IS2

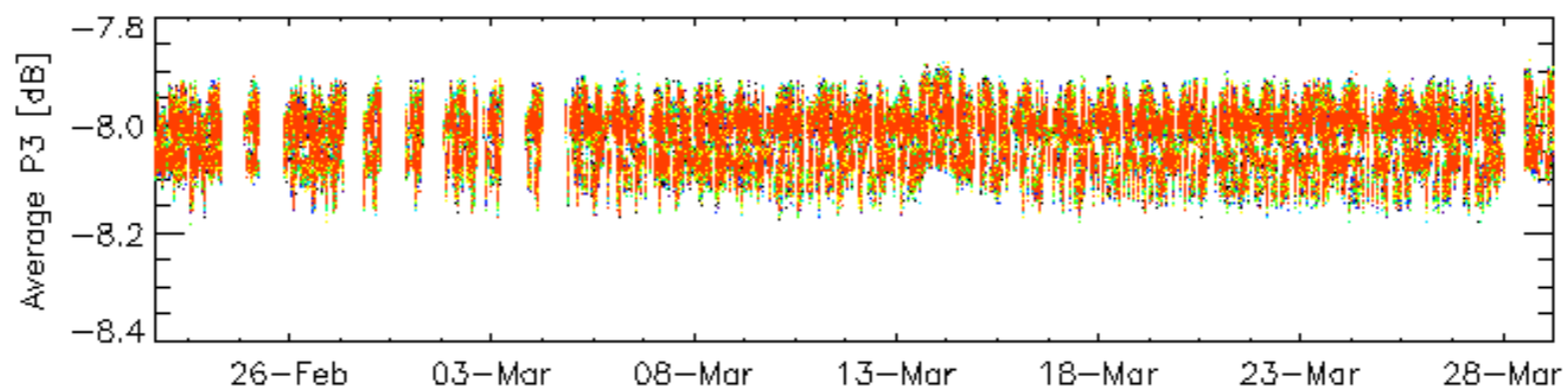
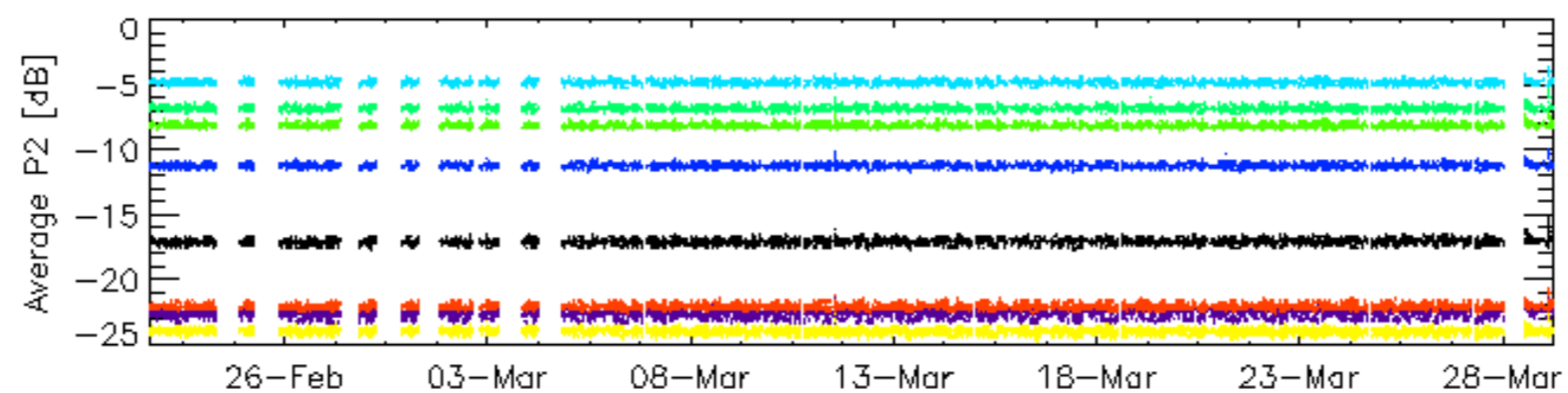
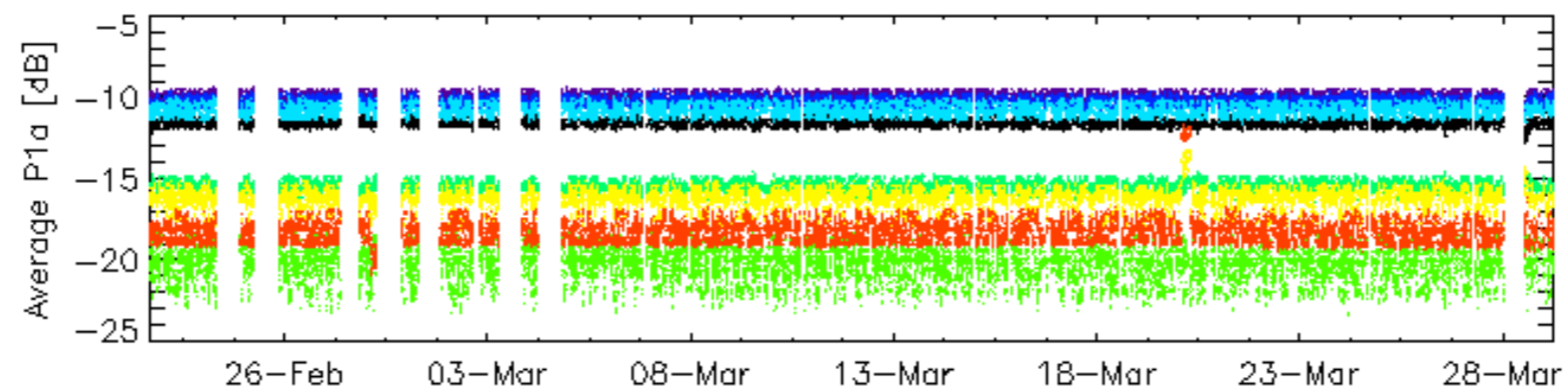
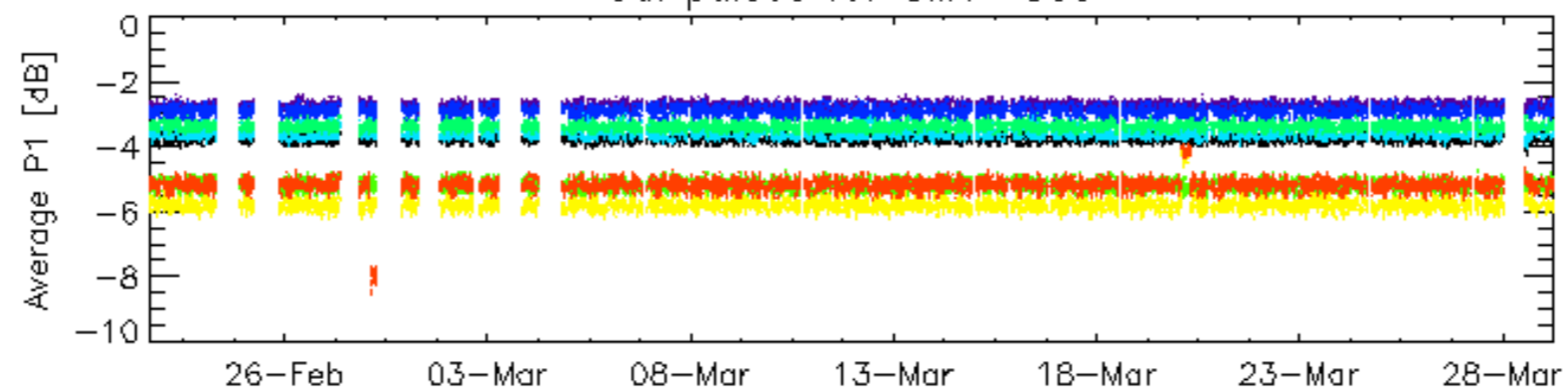


Cal pulses for WVS IS2



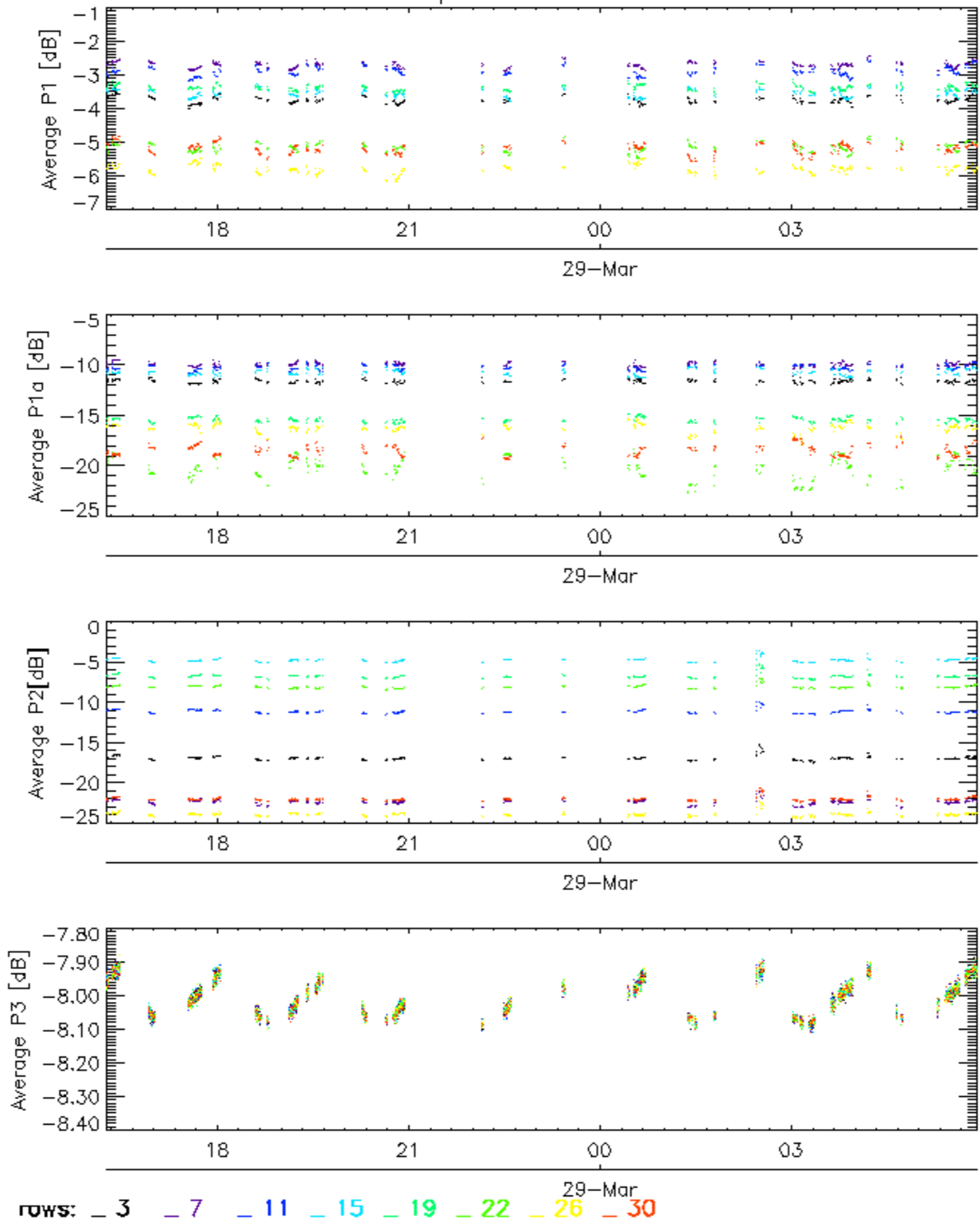
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

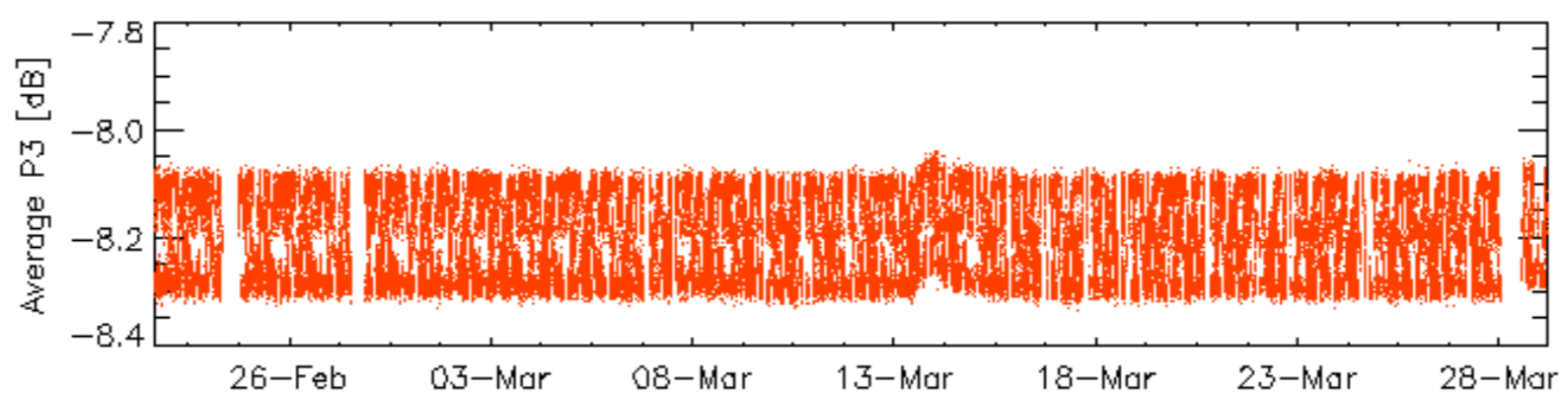
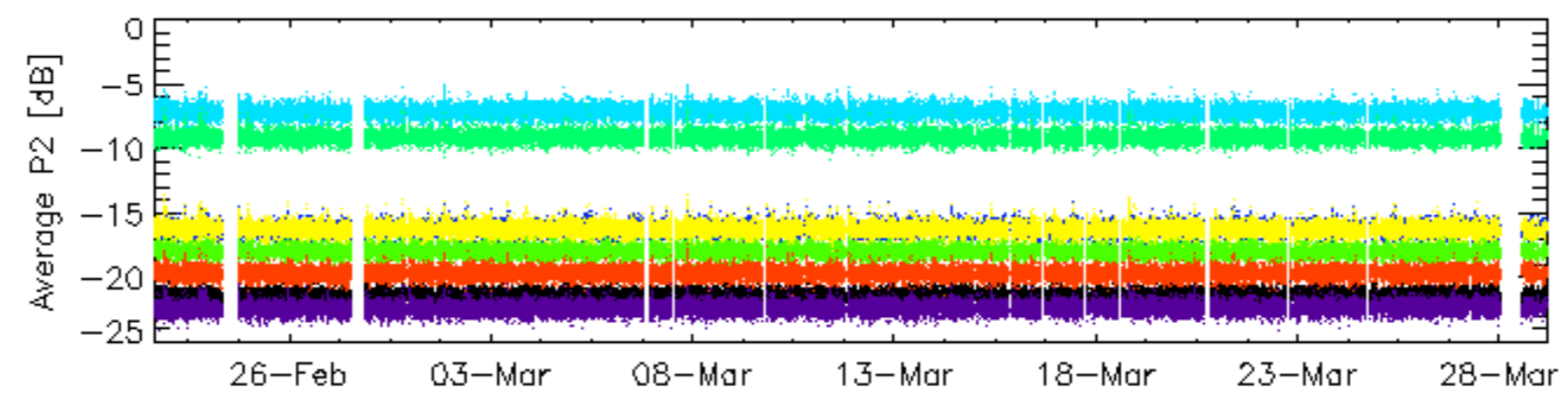
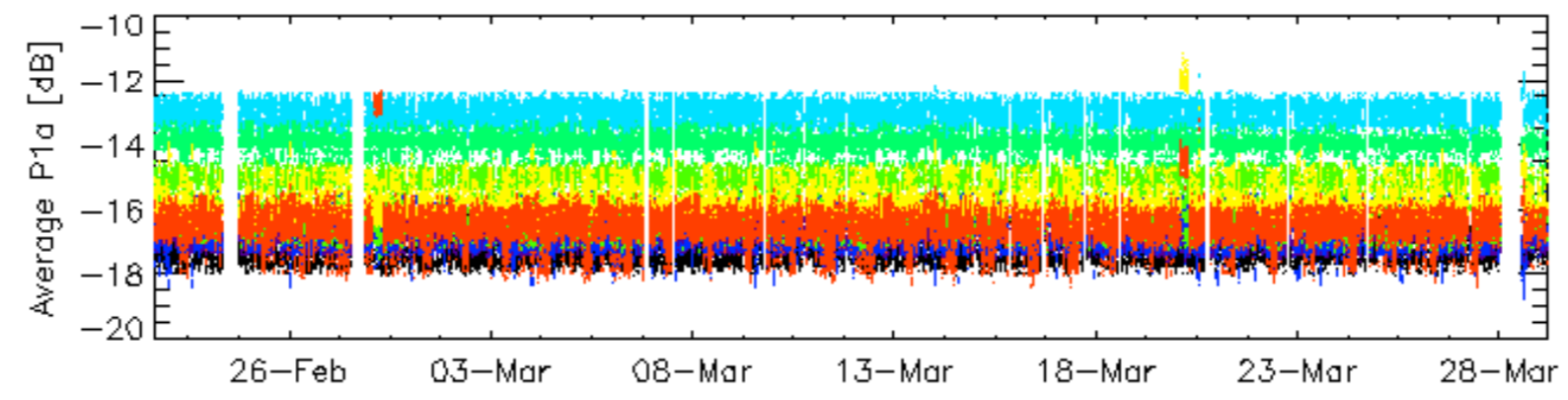
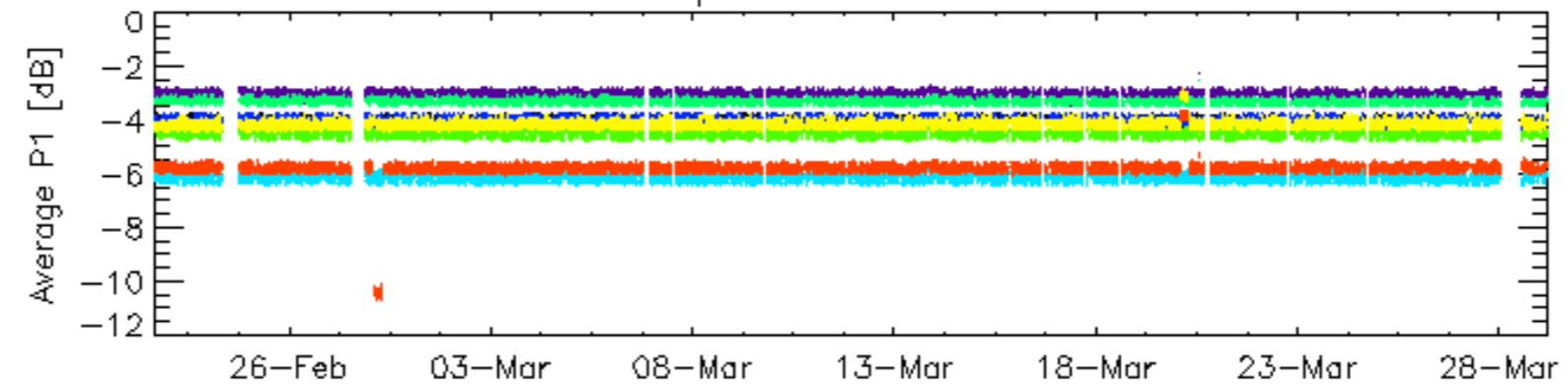


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

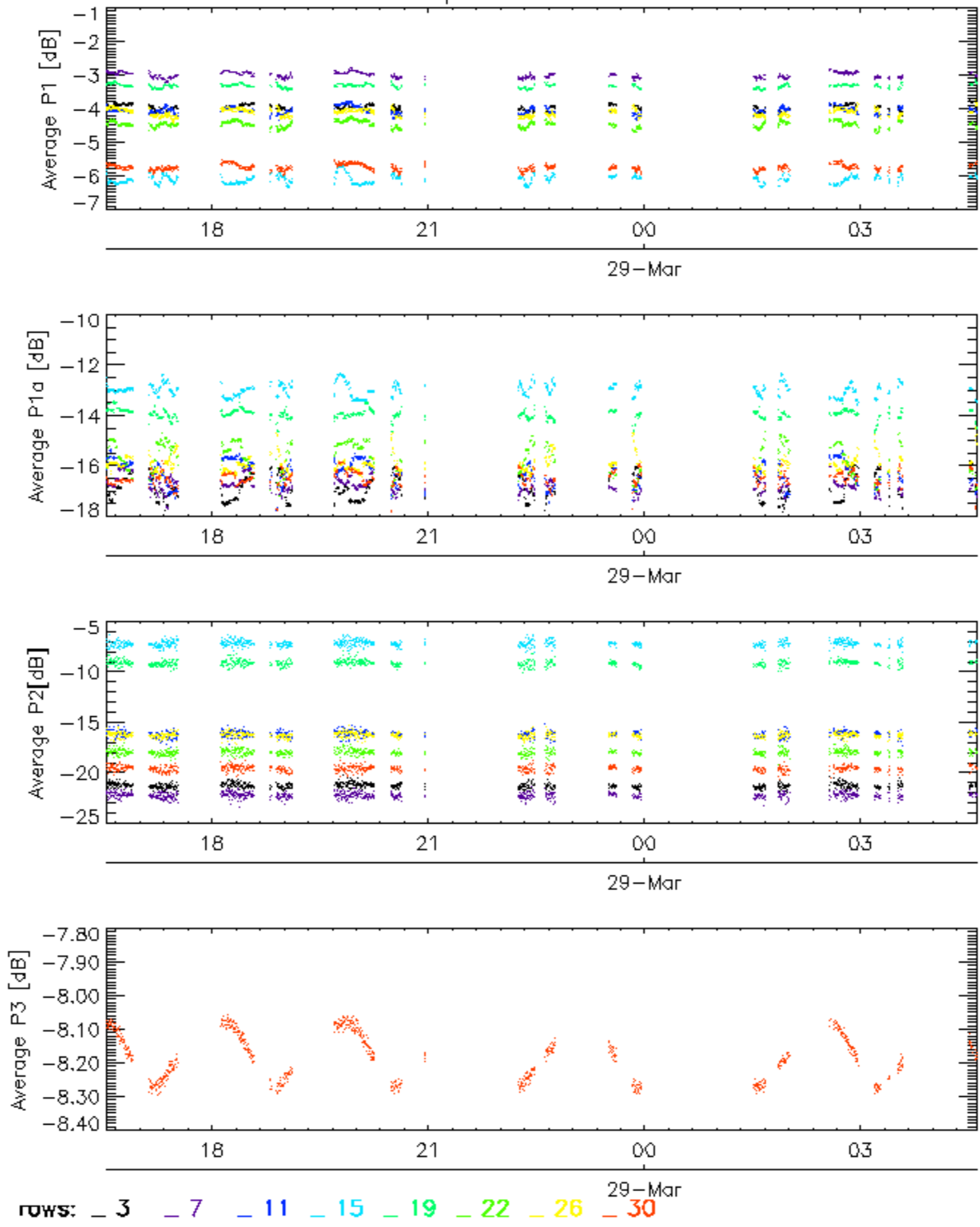


Cal pulses for WVS IS2

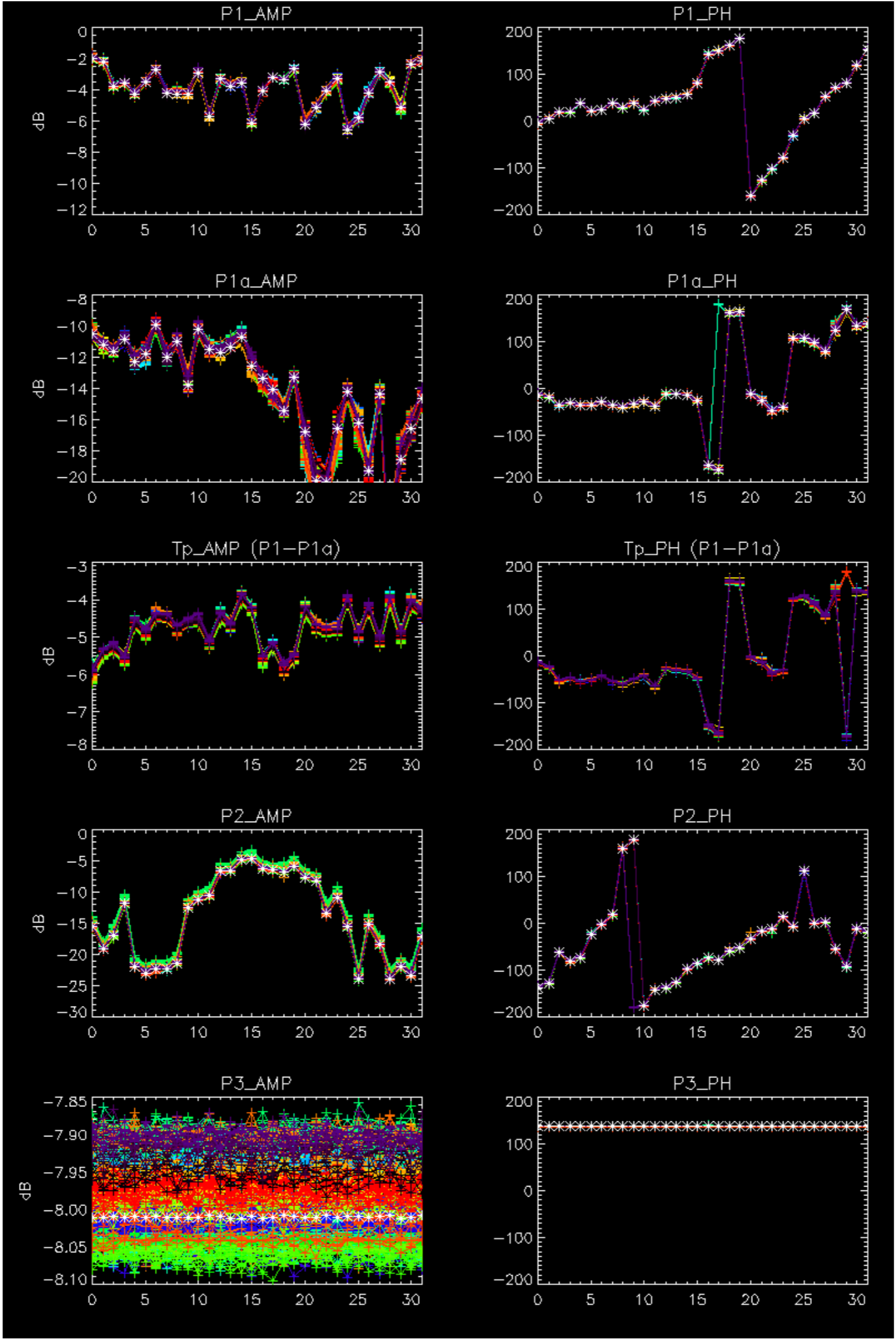


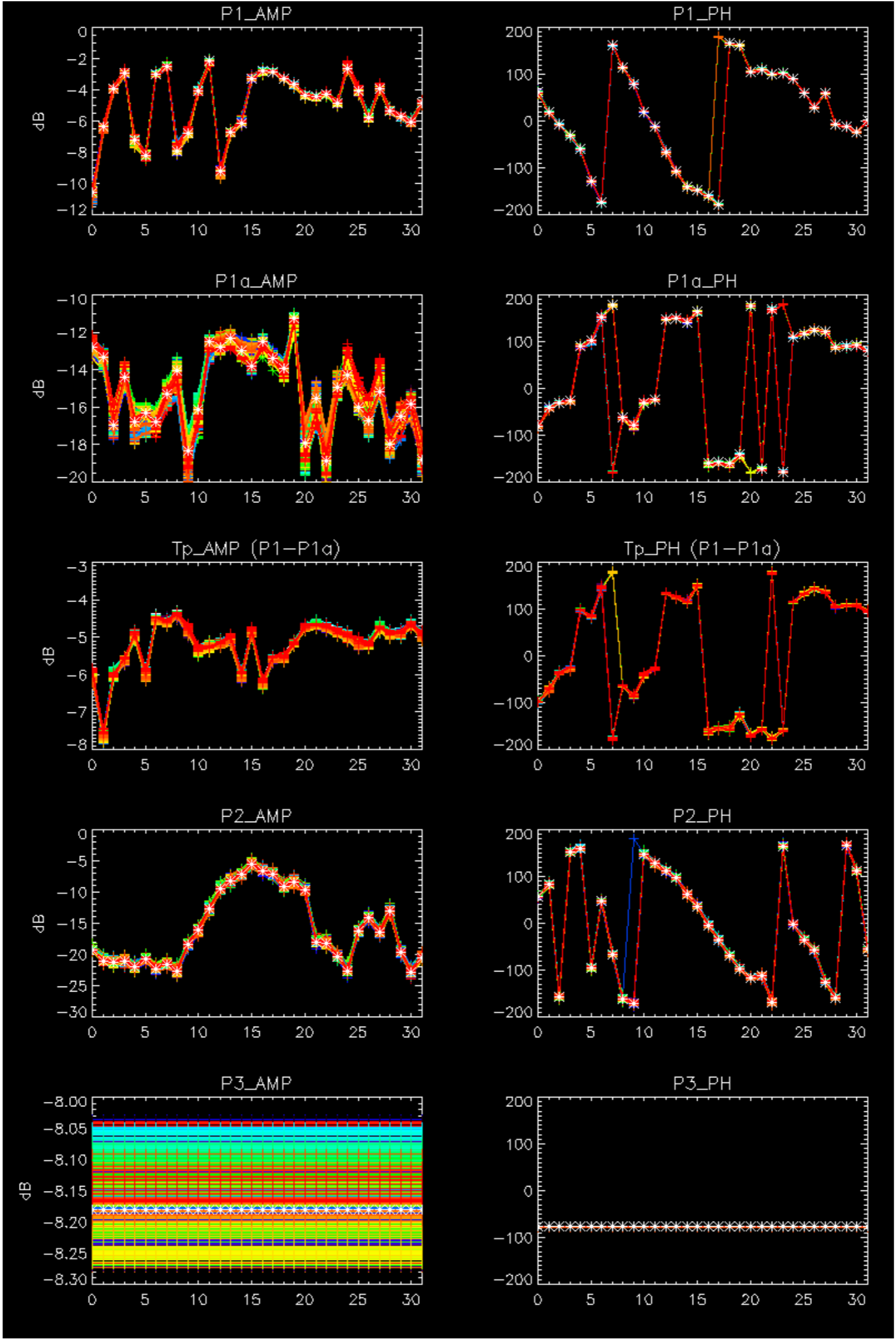
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



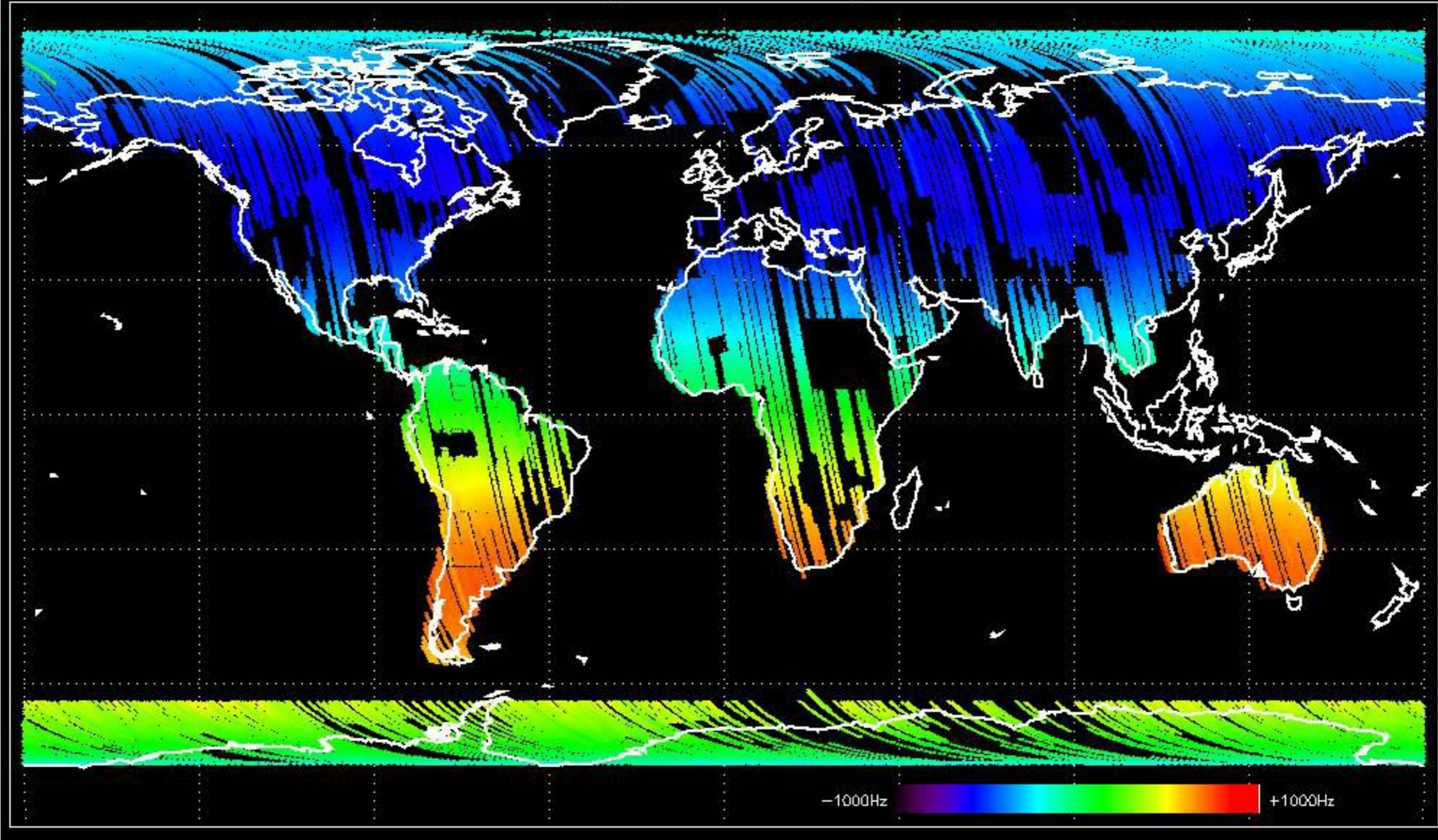
No anomalies observed.



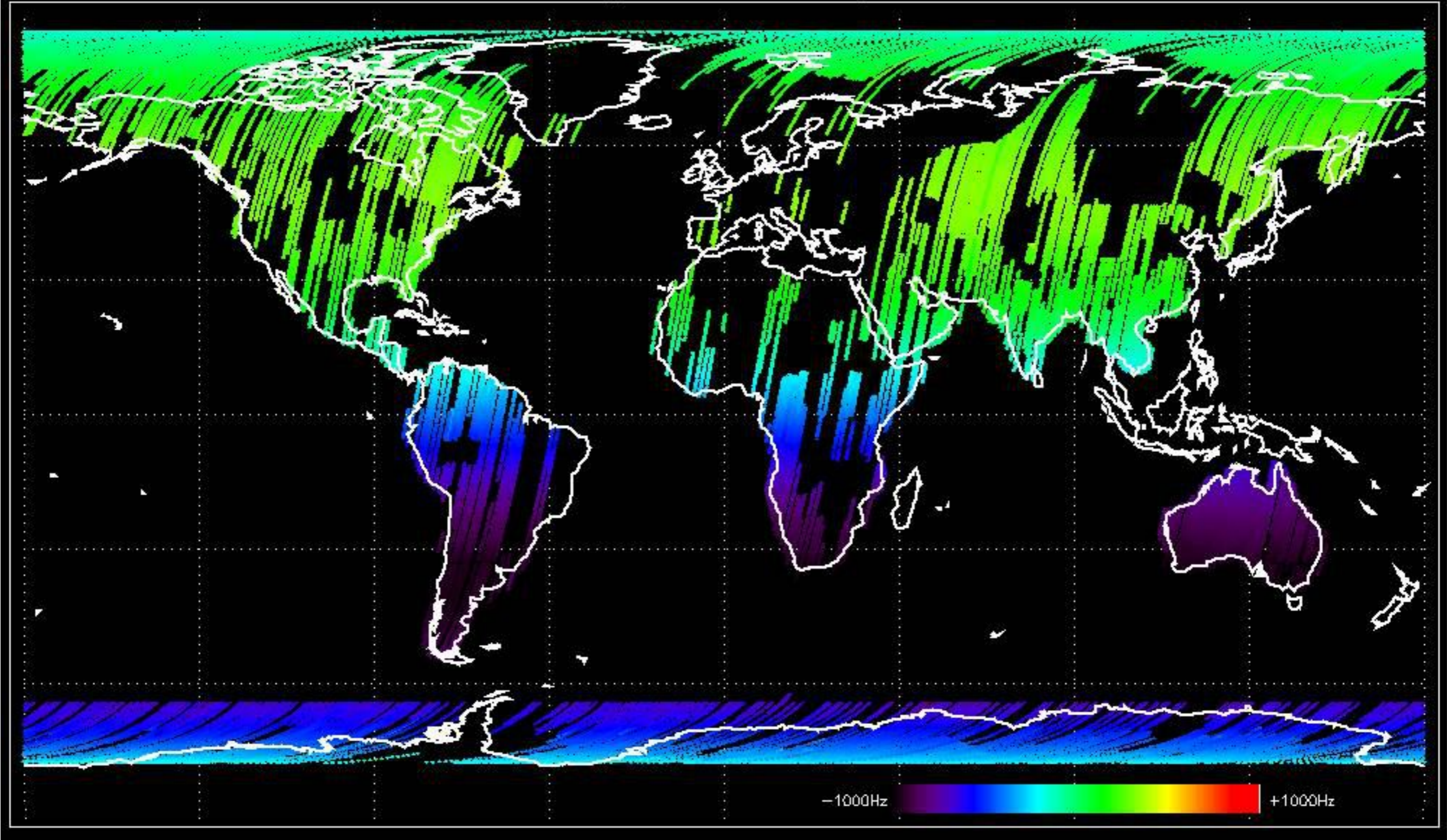


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

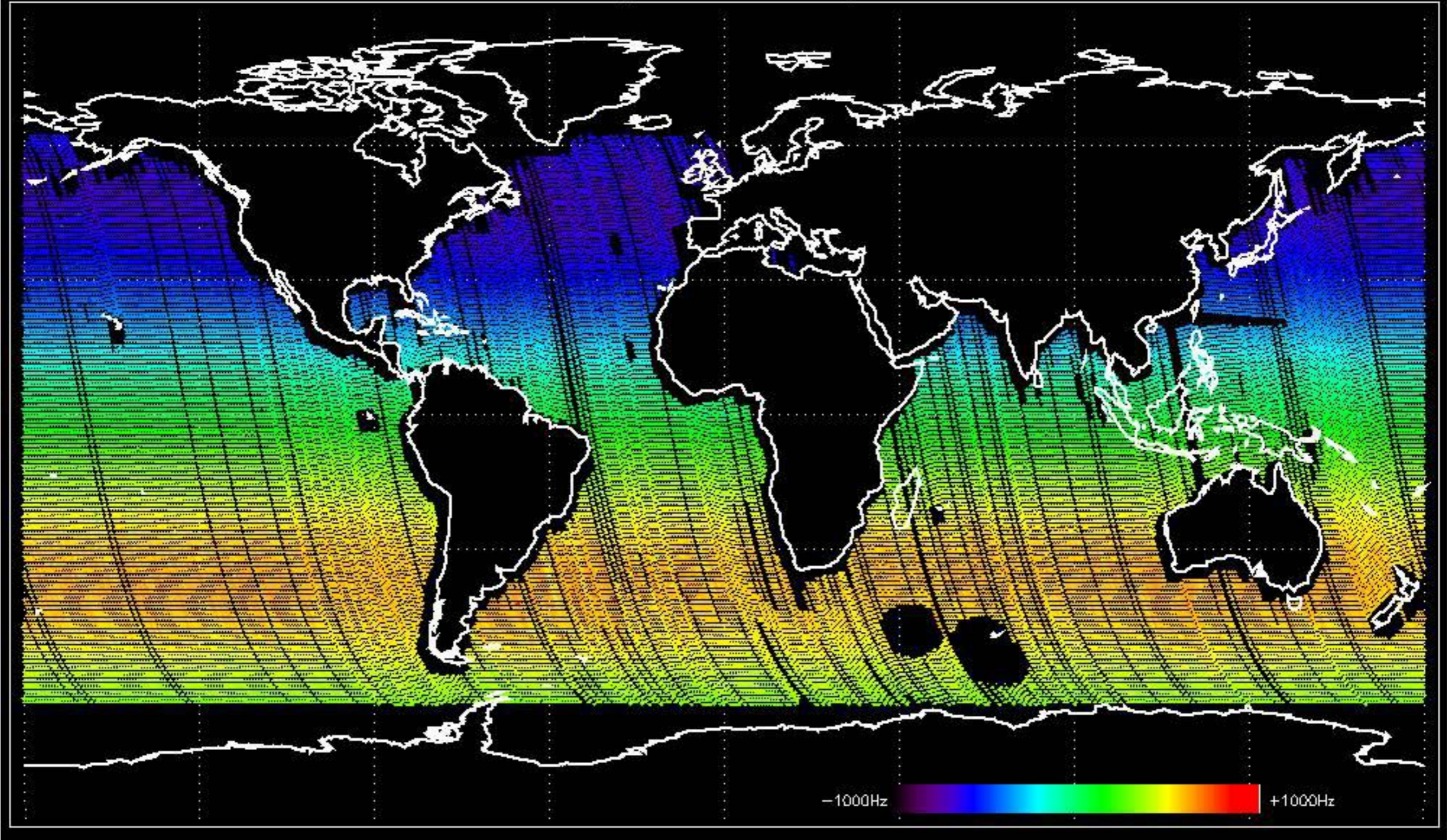
Doppler 'GM1' 'SS1' ascending



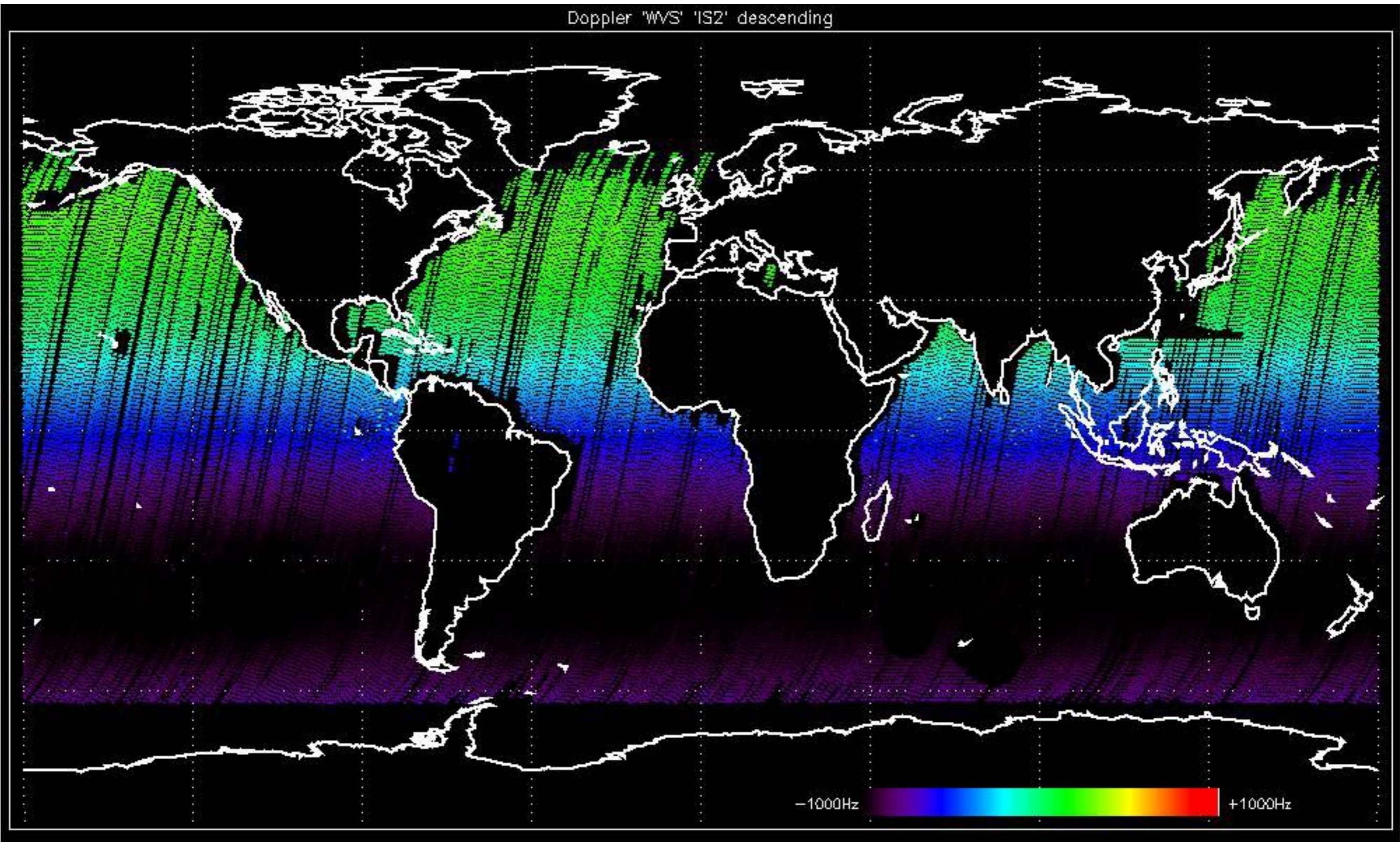
Doppler 'GM1' 'SS1' descending

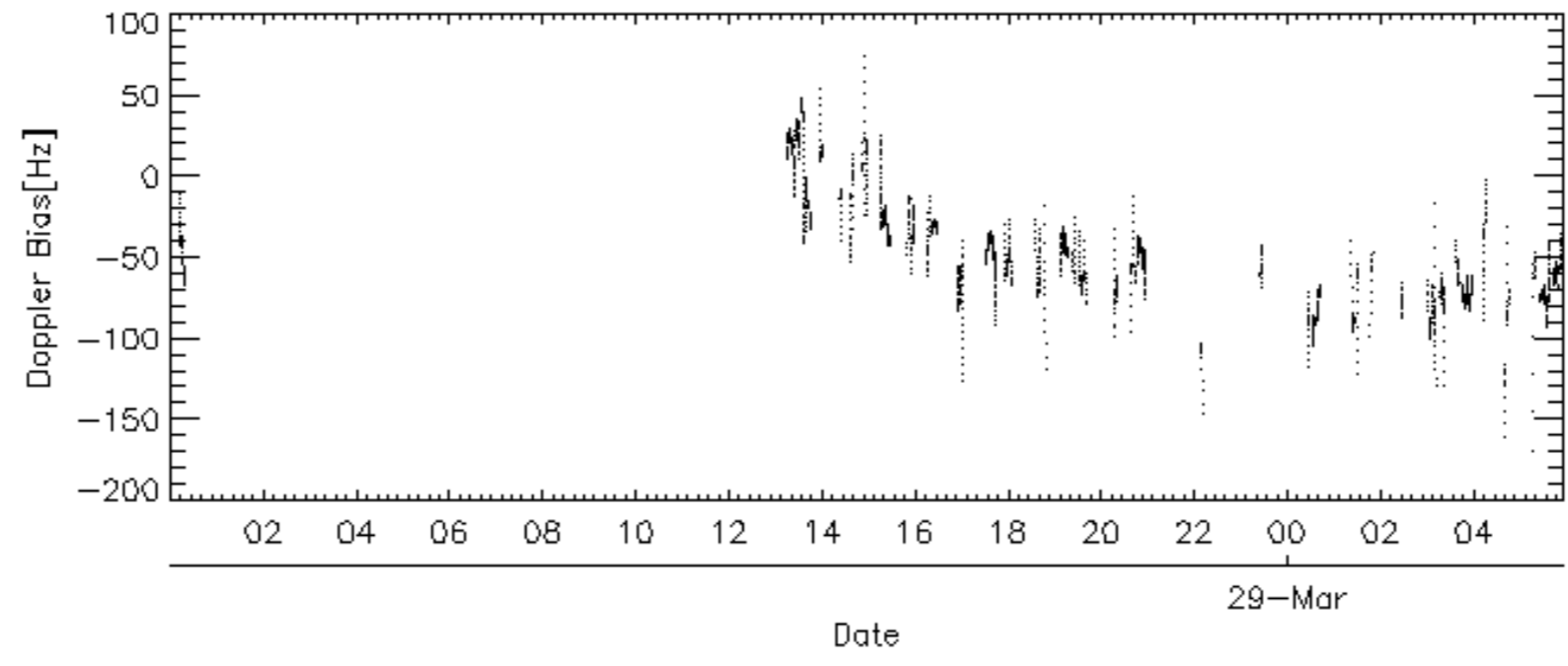
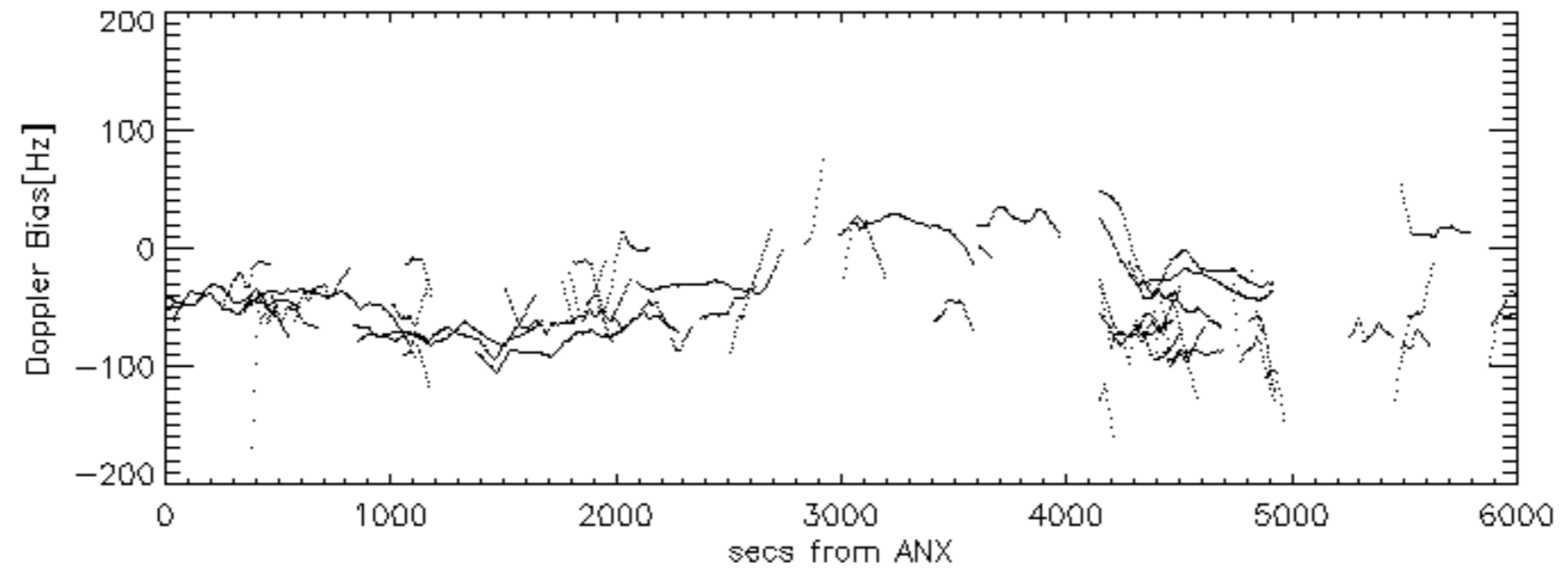
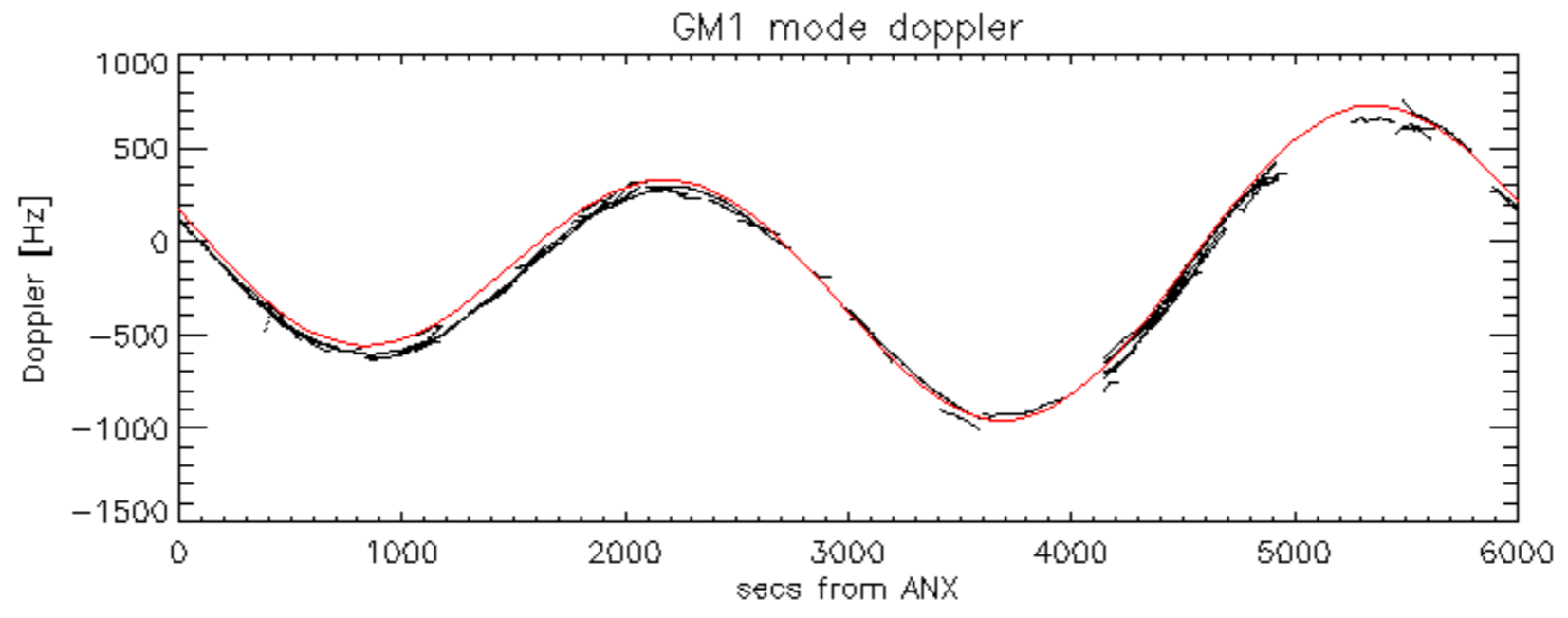


Doppler 'WVS' 'IS2' ascending

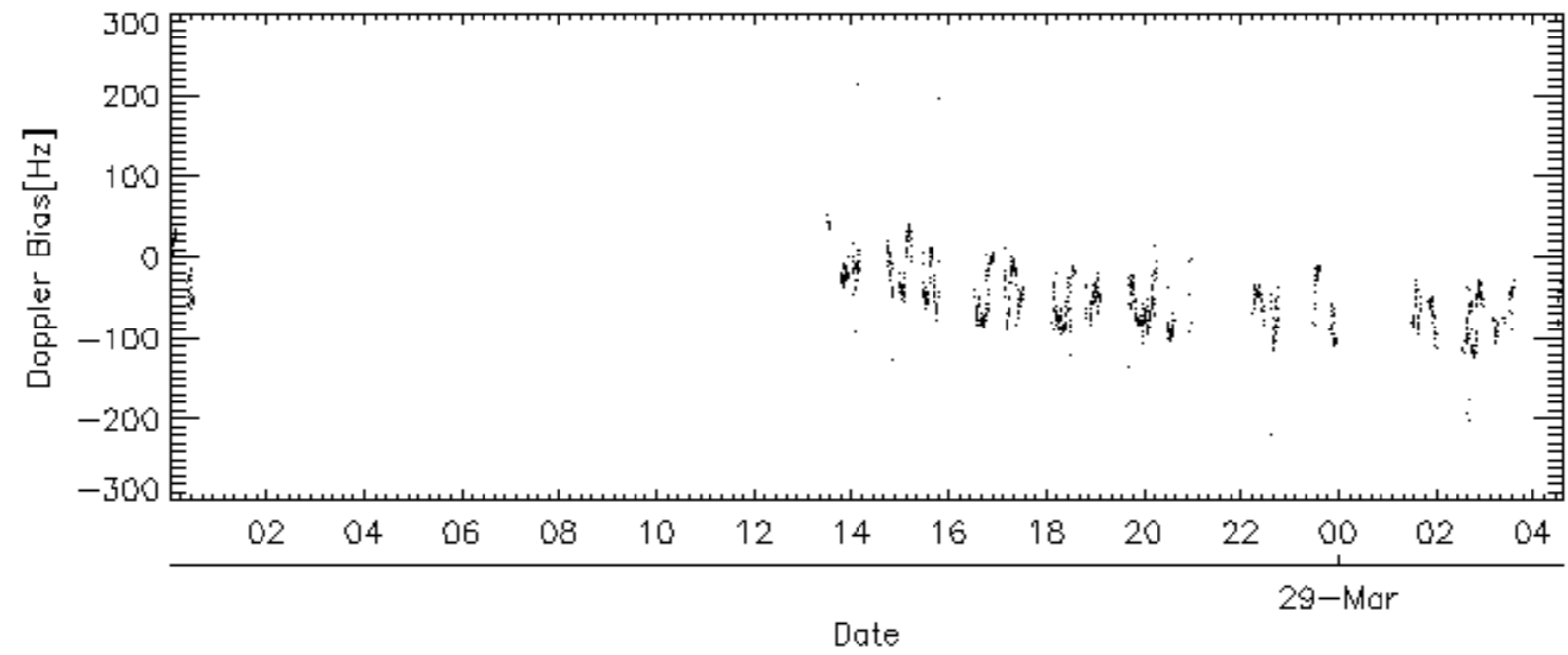
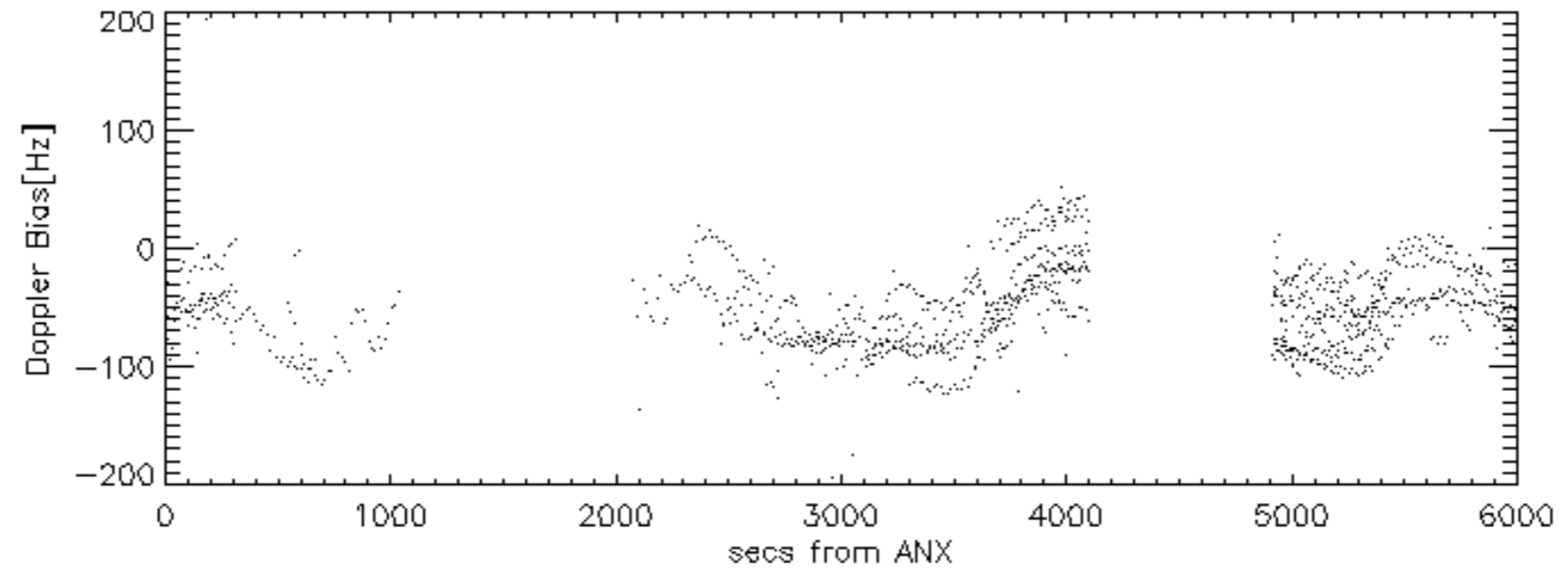
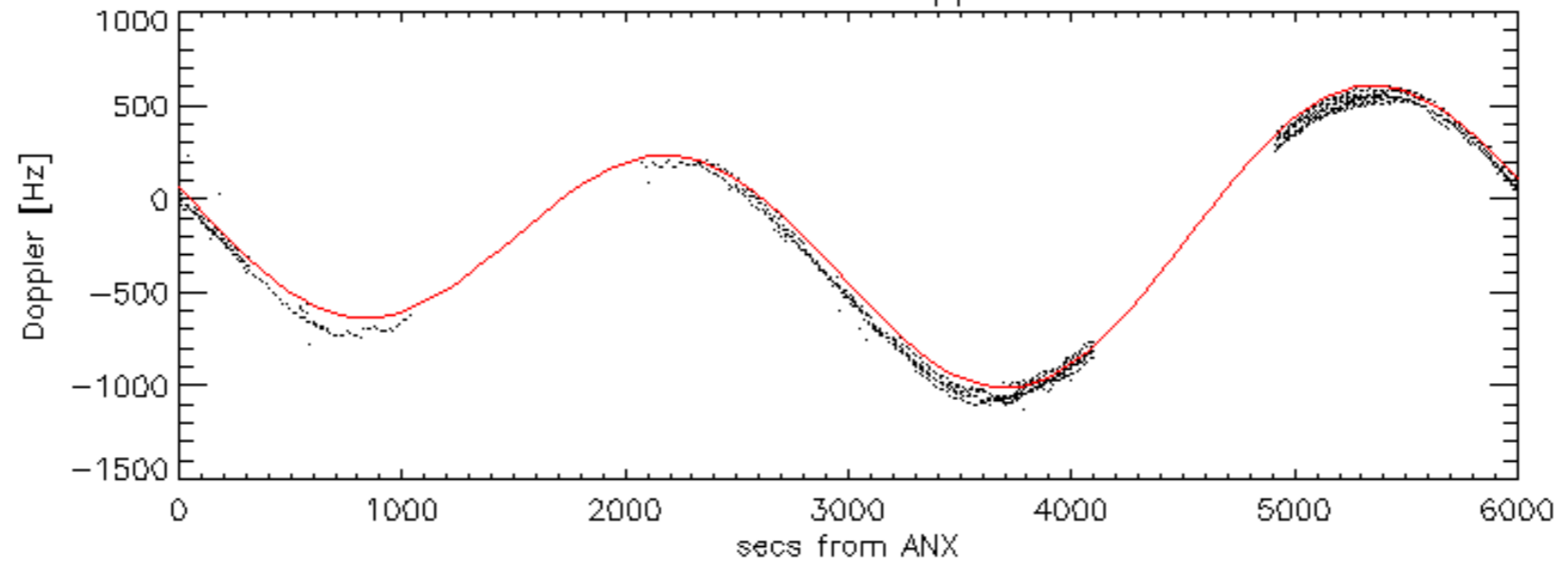


Doppler 'WVS' 'IS2' descending

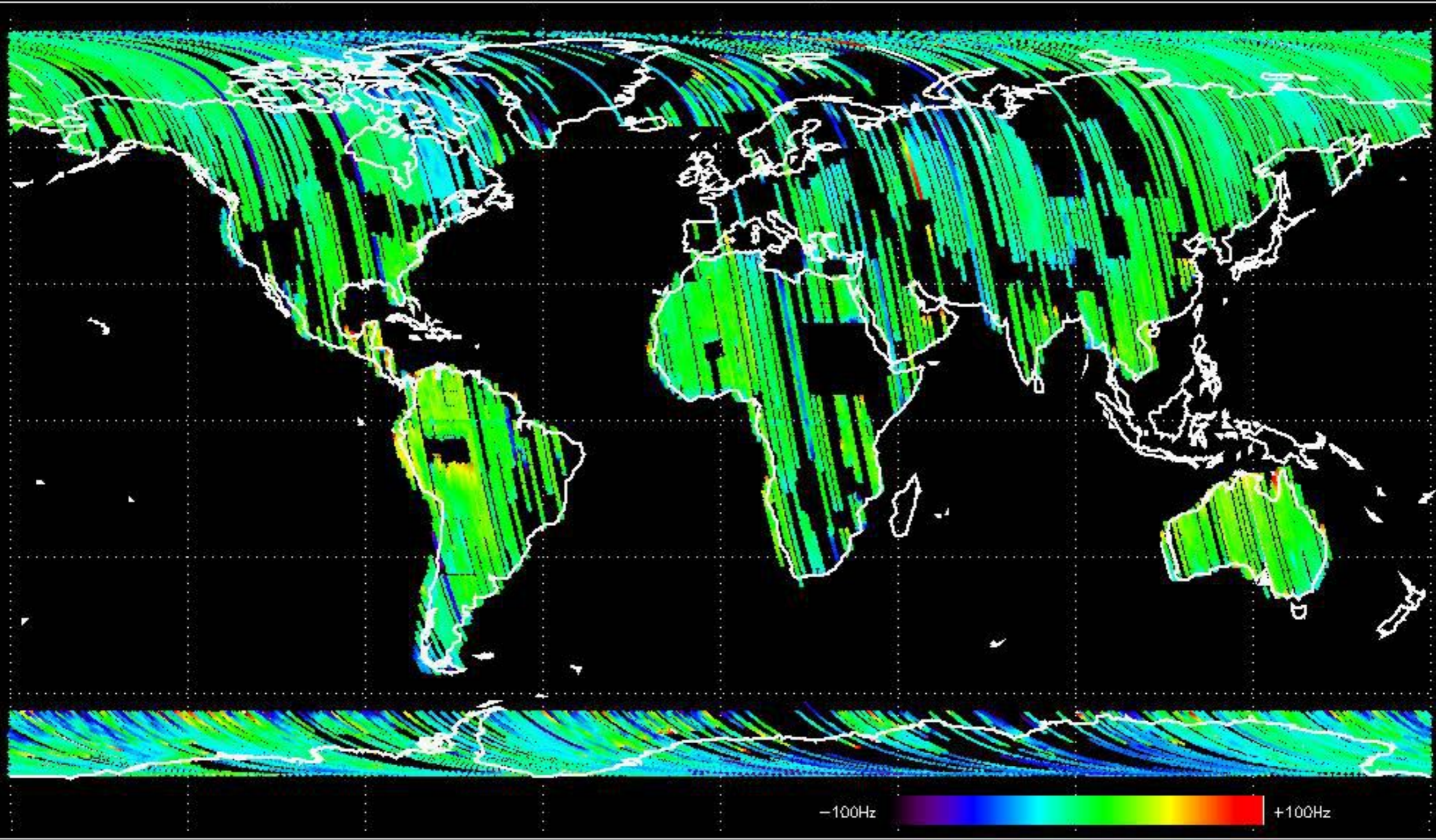




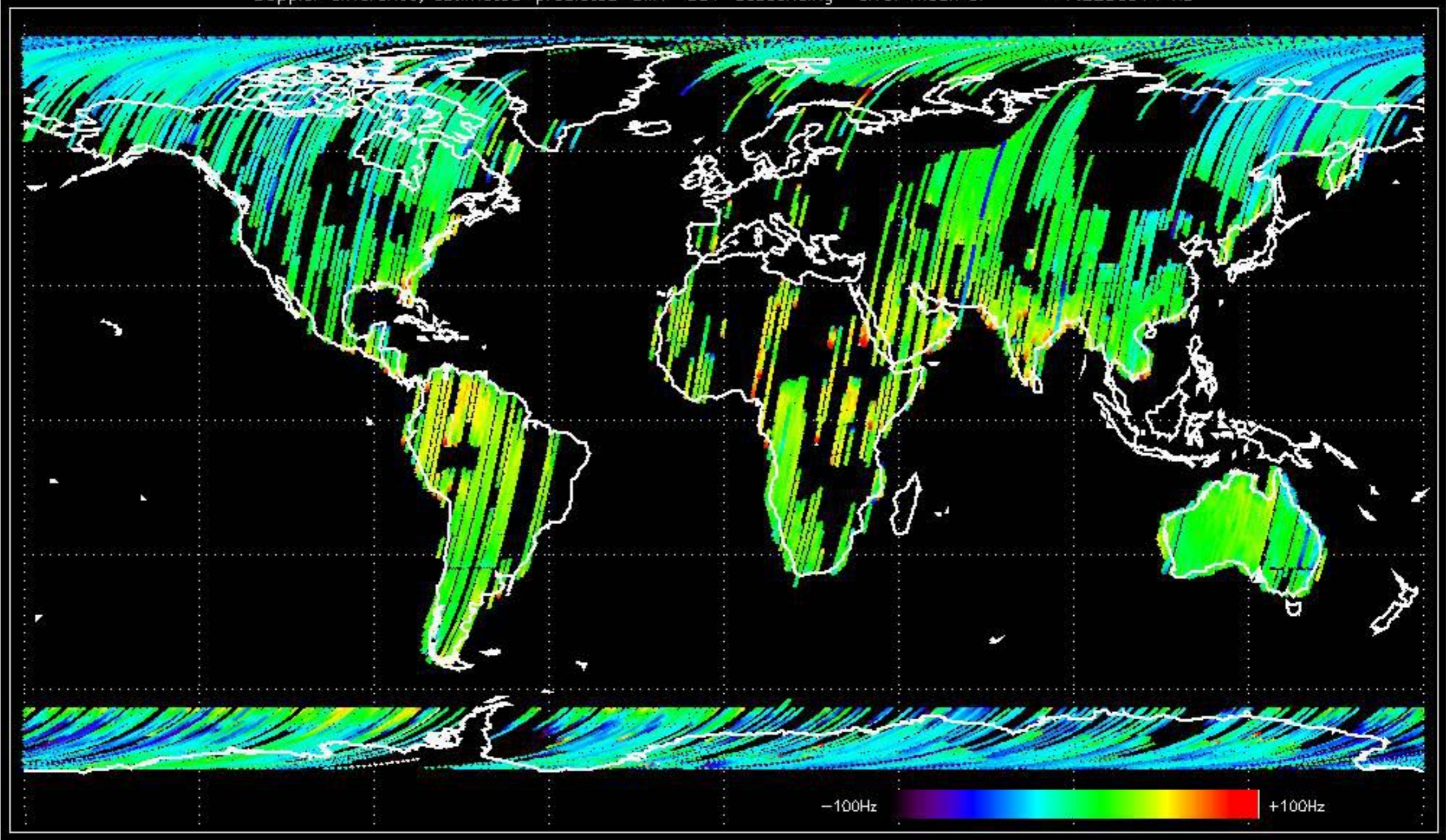
WVS mode doppler



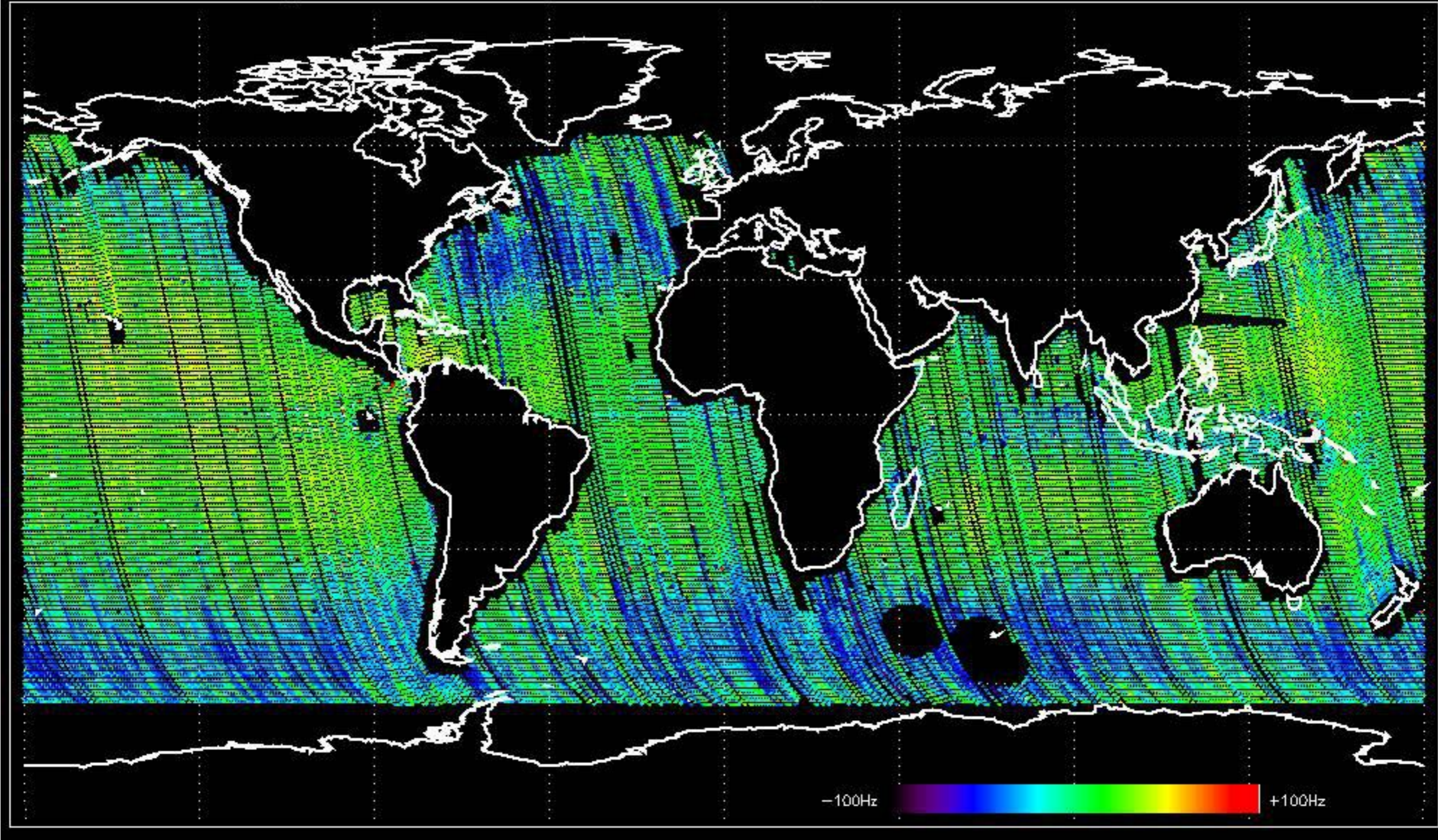
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.9987136 Hz



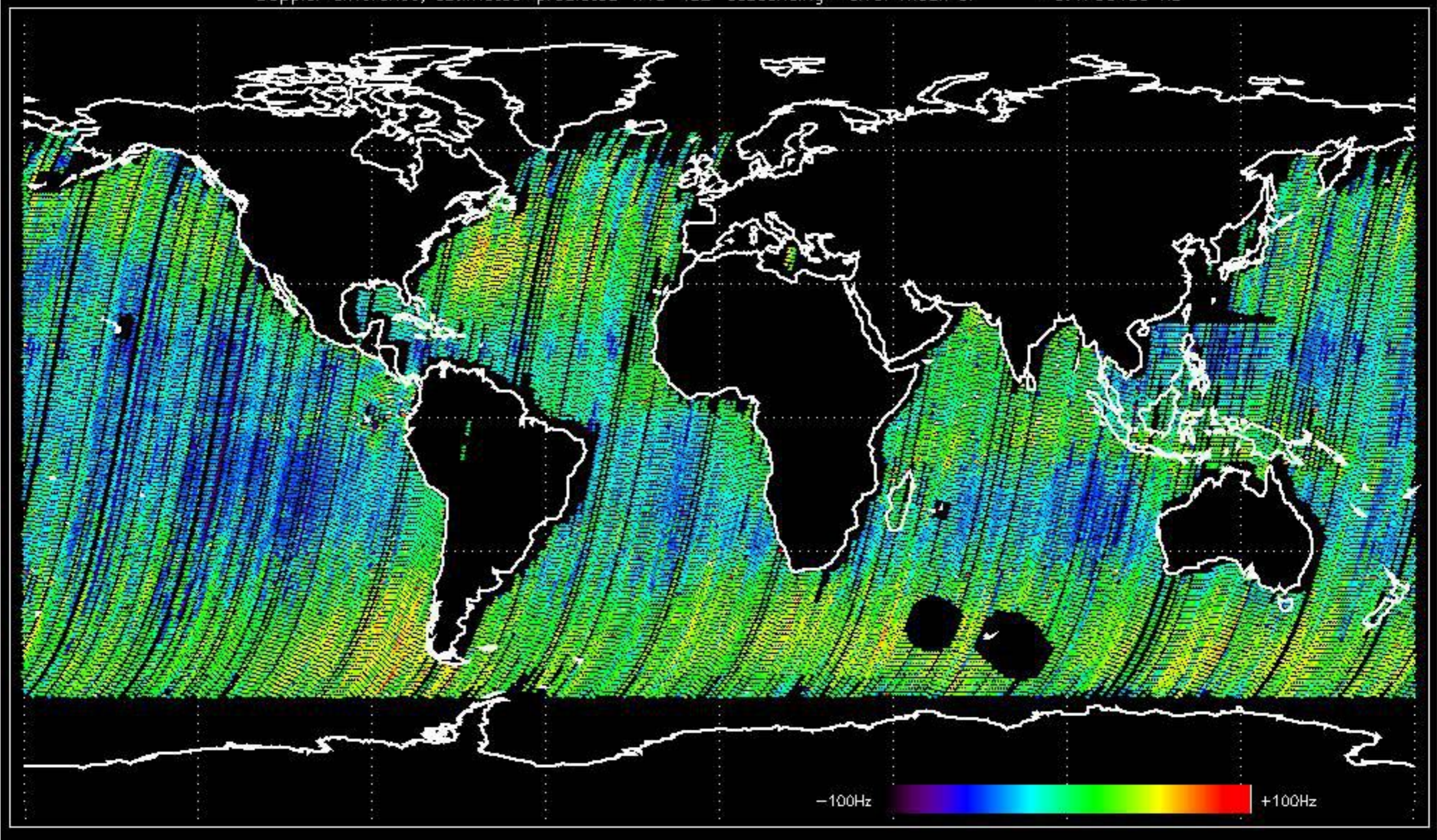
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.2286914 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.0891225 Hz



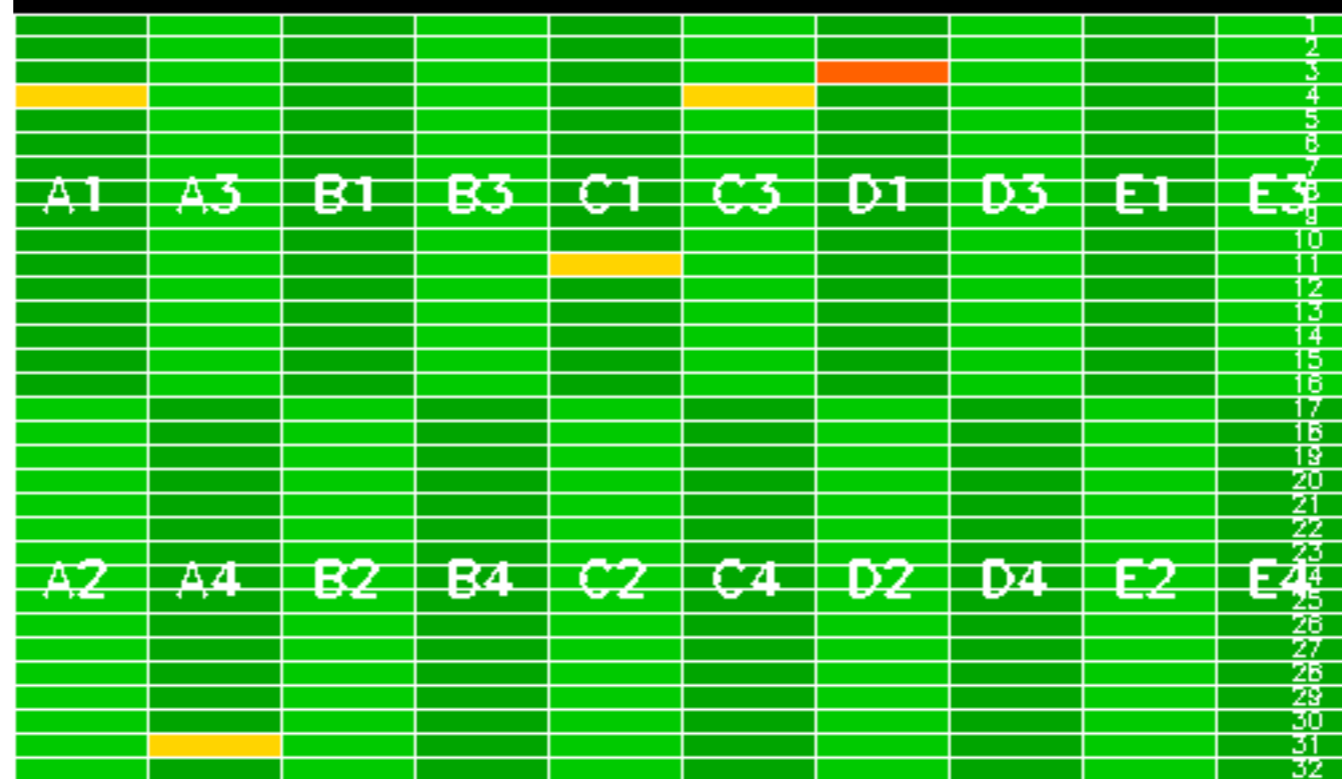
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.4766450 Hz

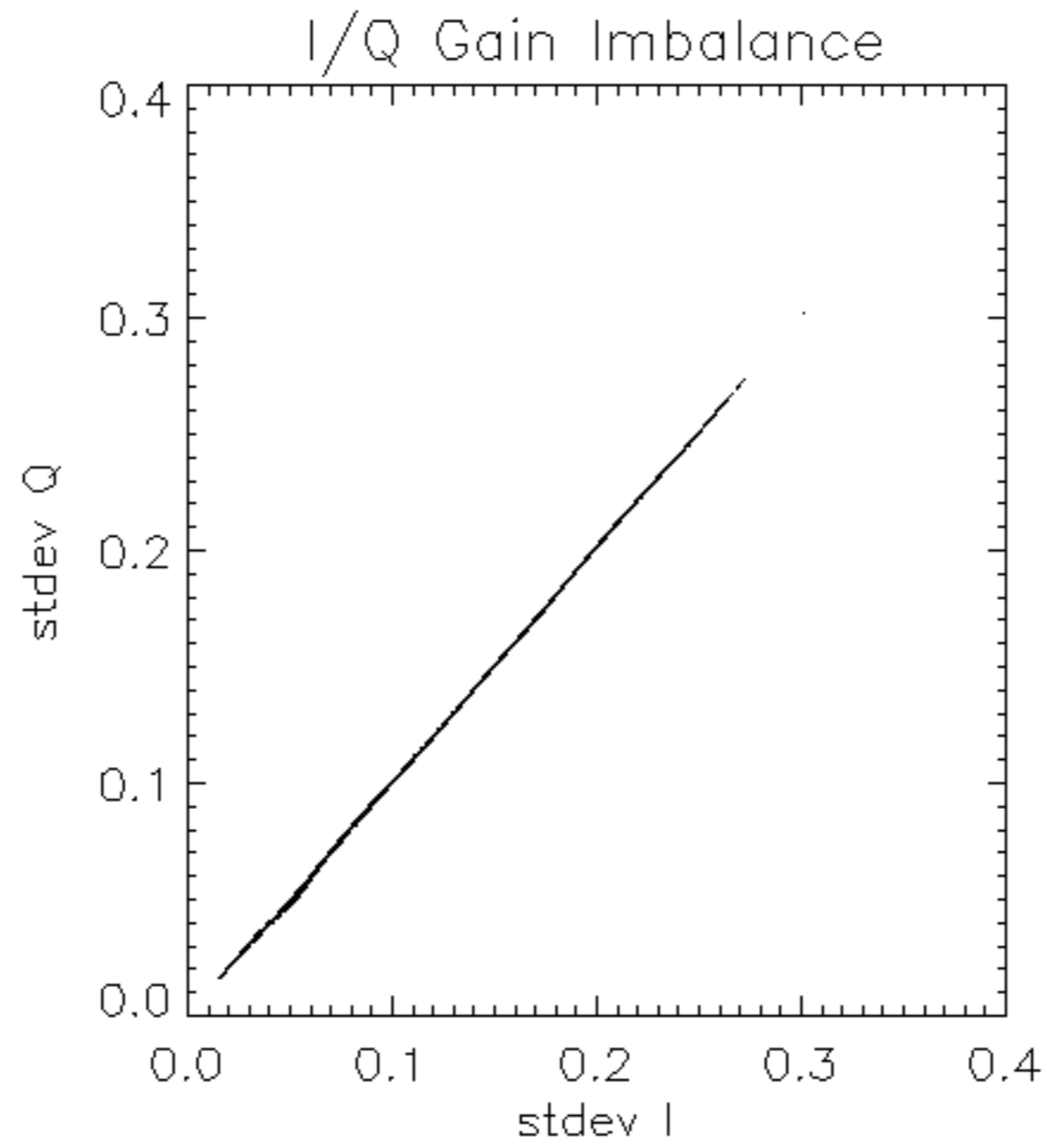


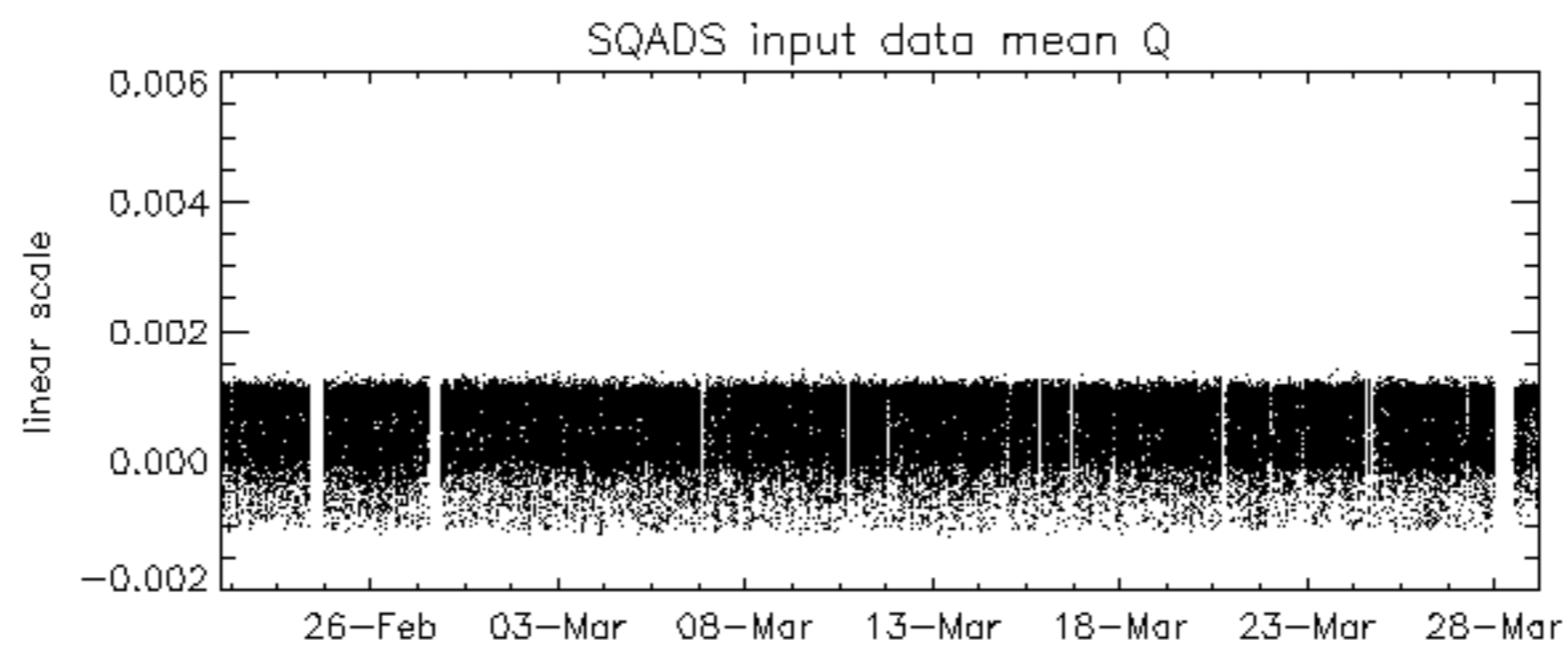
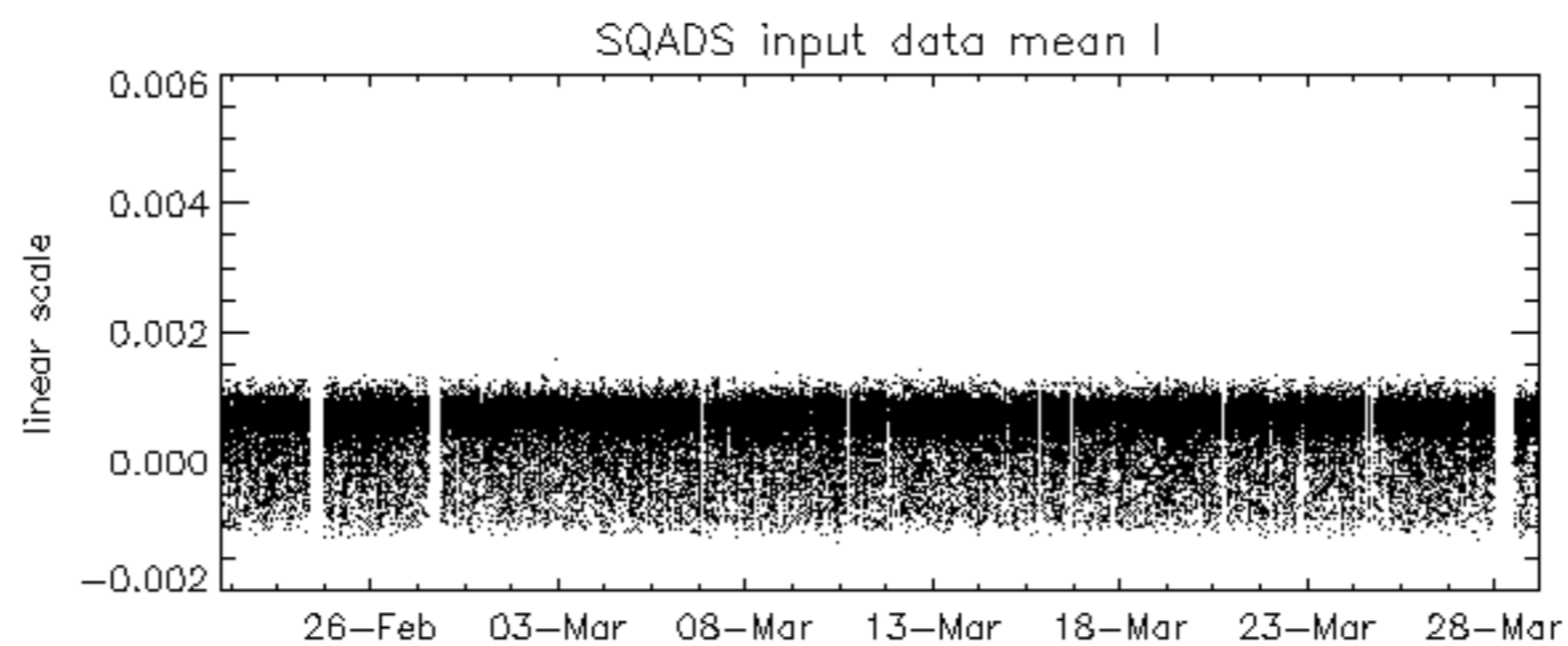
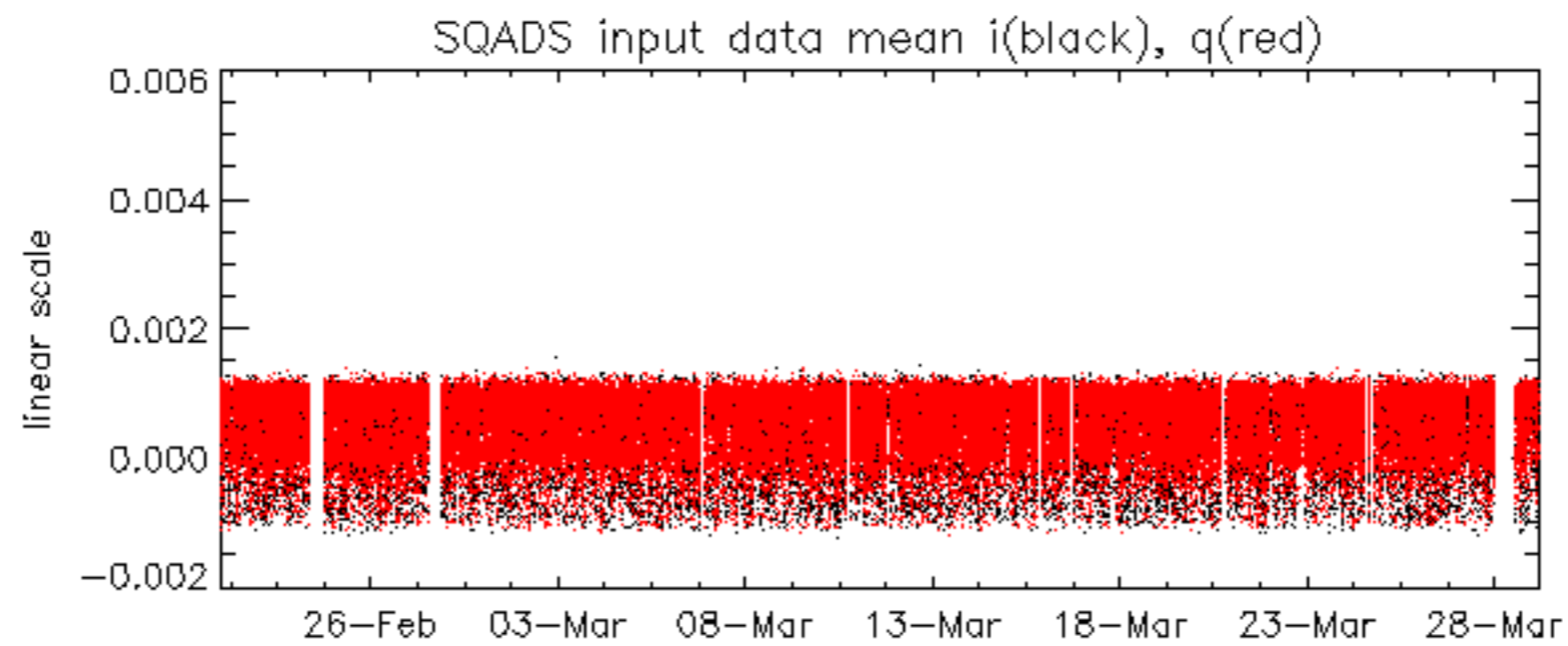
No anomalies observed on available MS products:

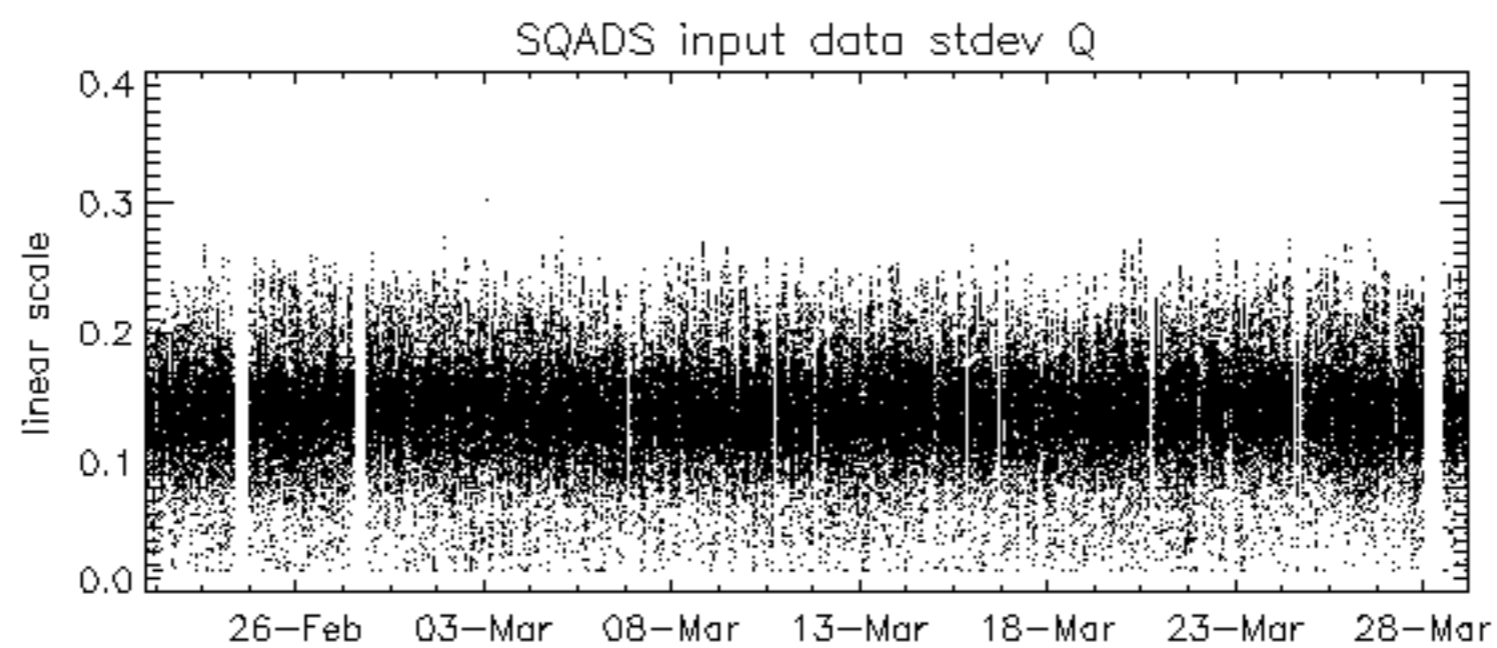
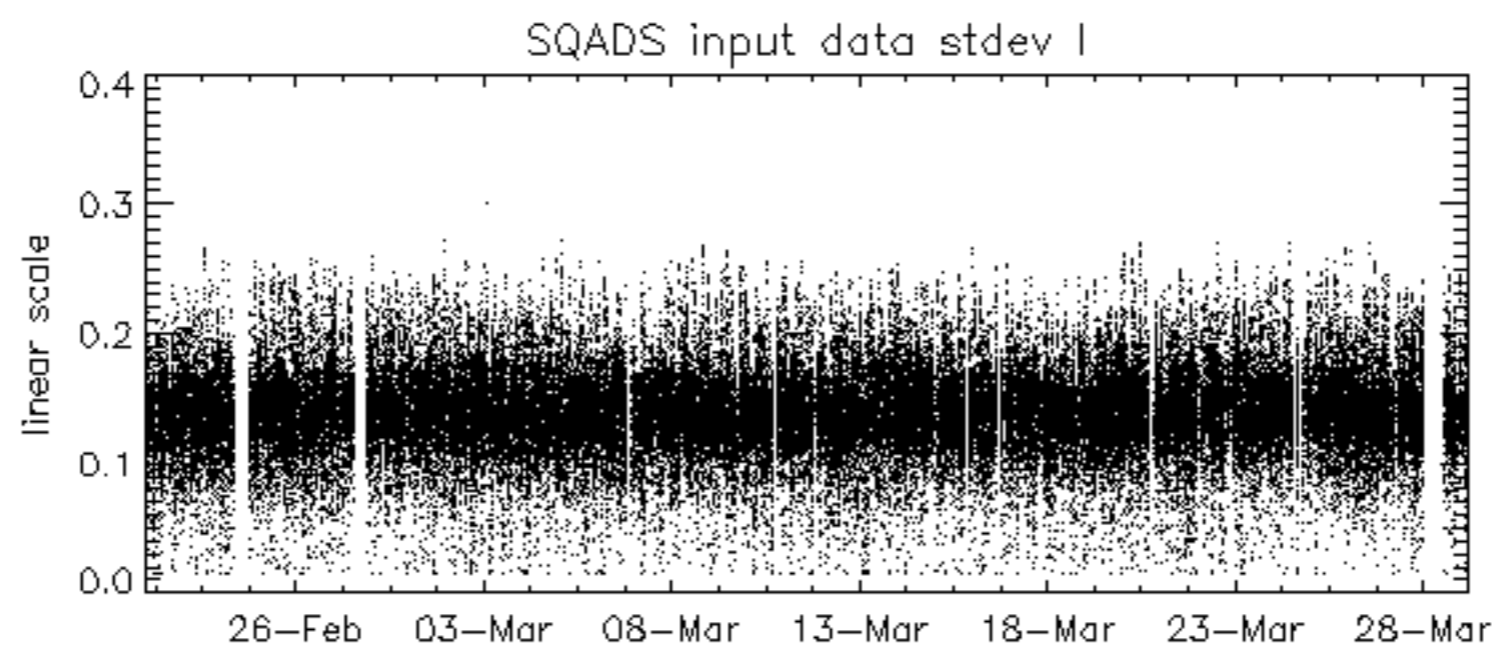
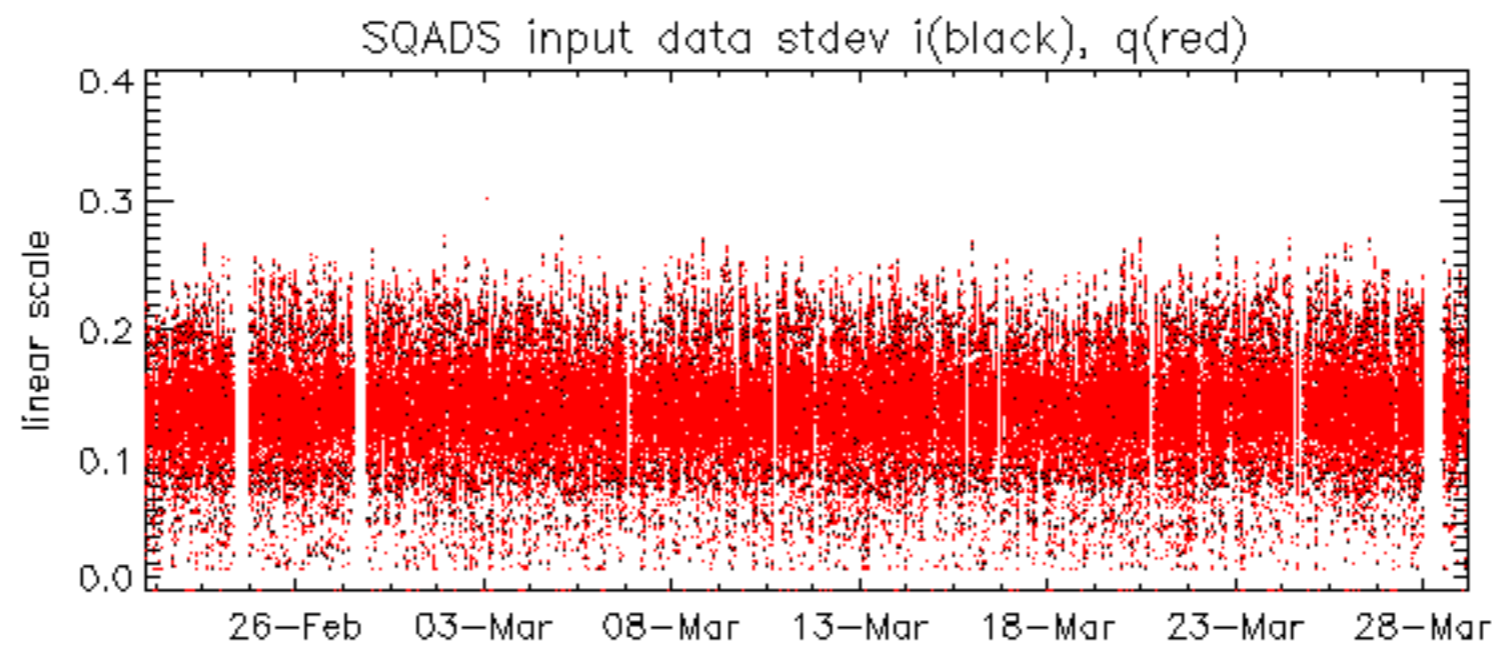
No anomalies observed.

Reference: 2005-09-29 07:47:20 V RxGain
 Test : 2006-03-25 06:43:53 V





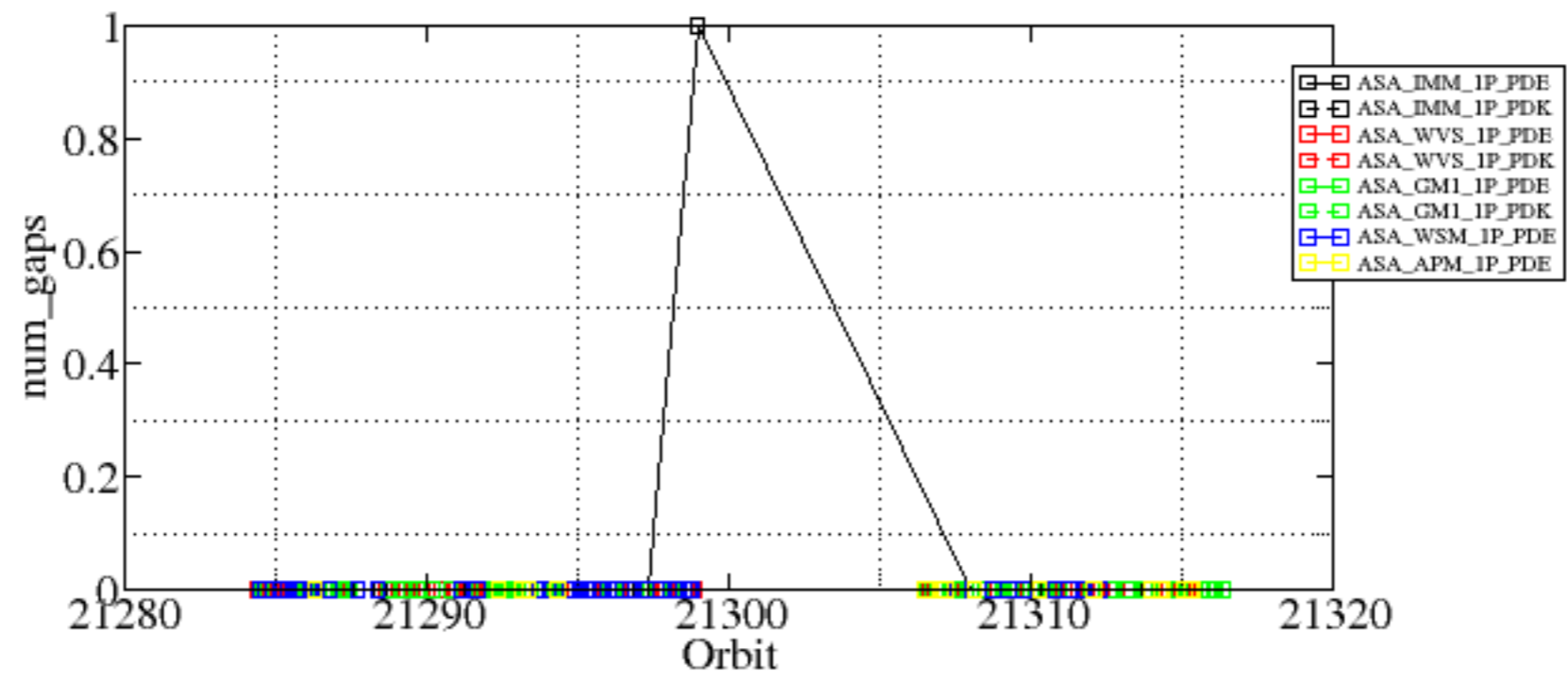


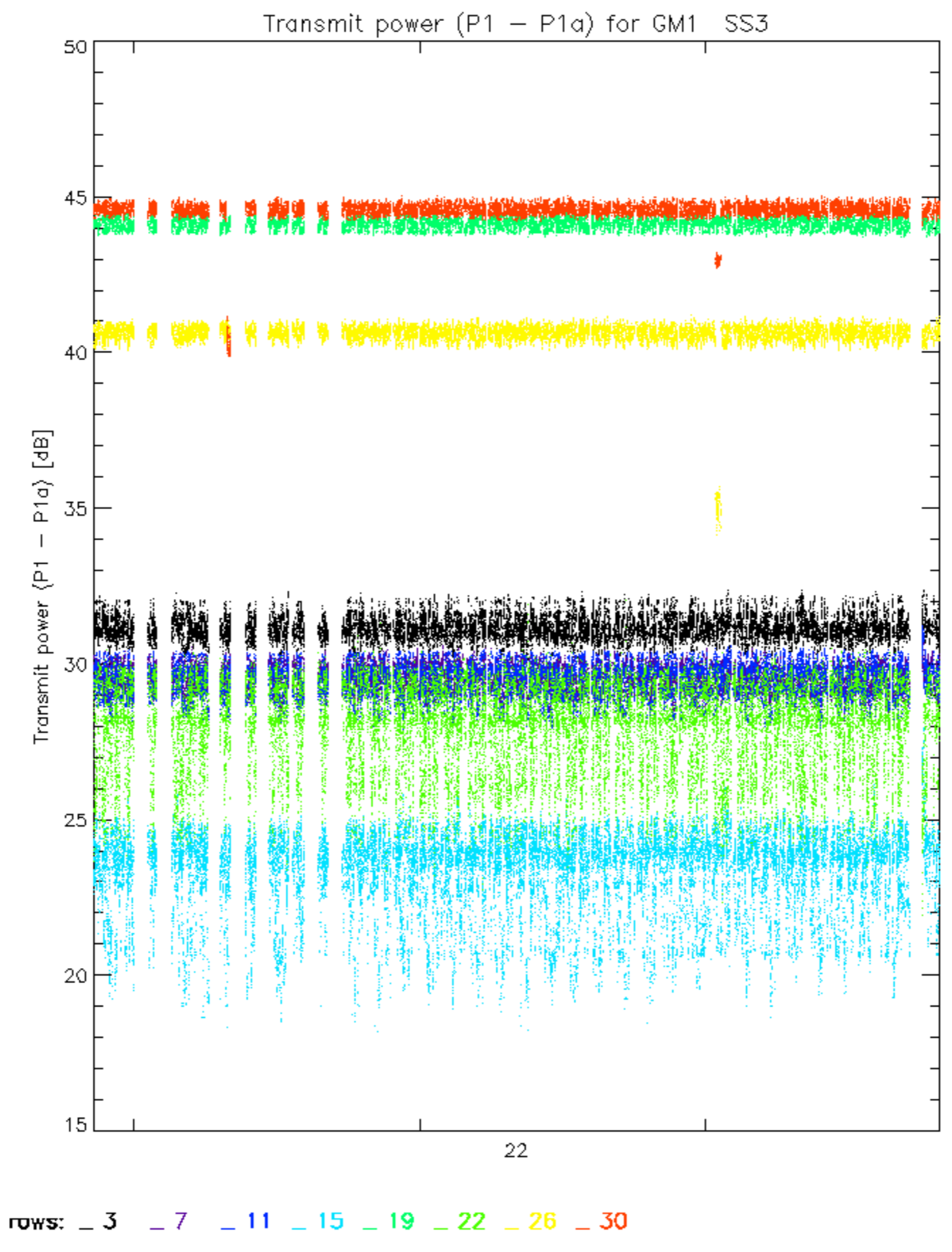


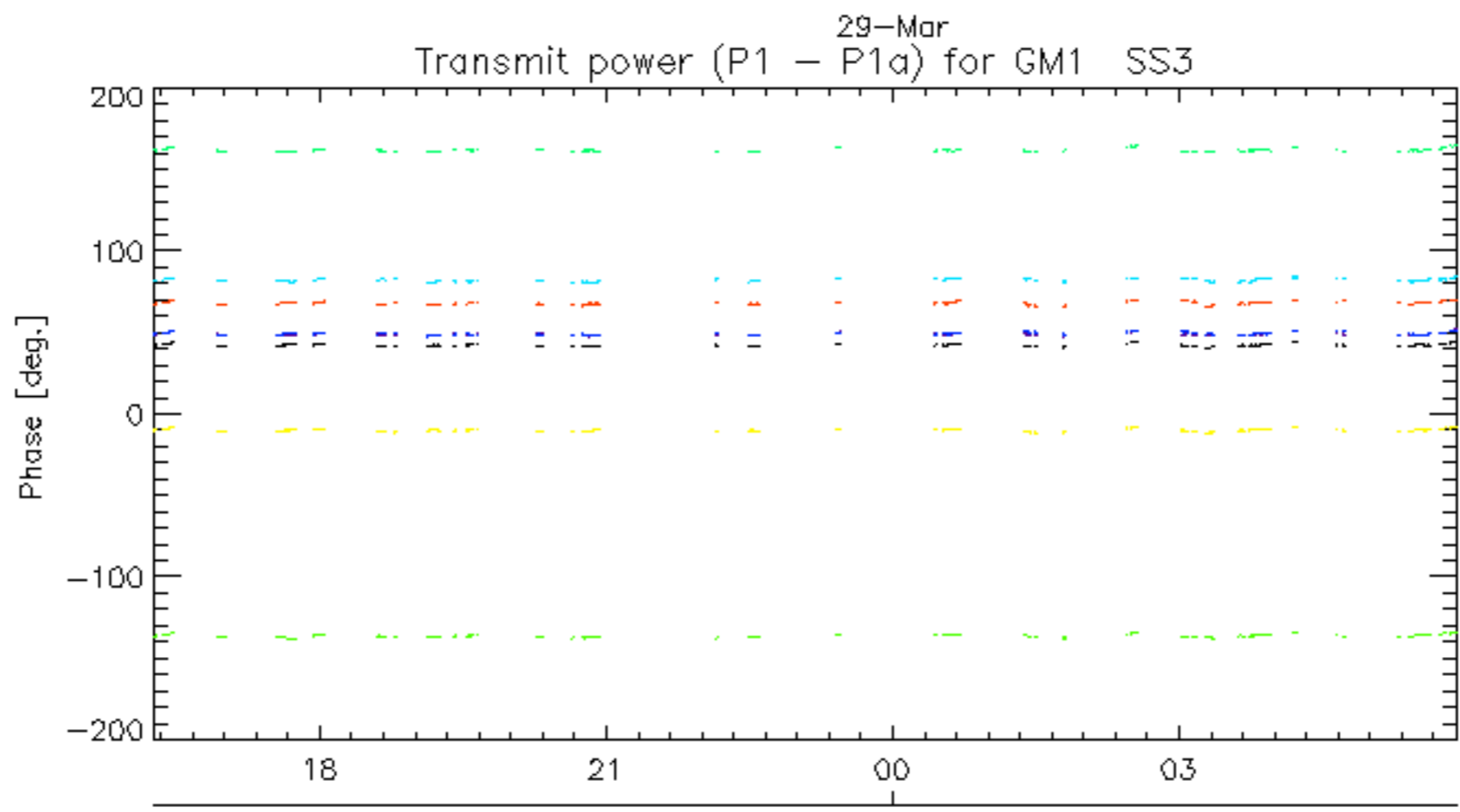
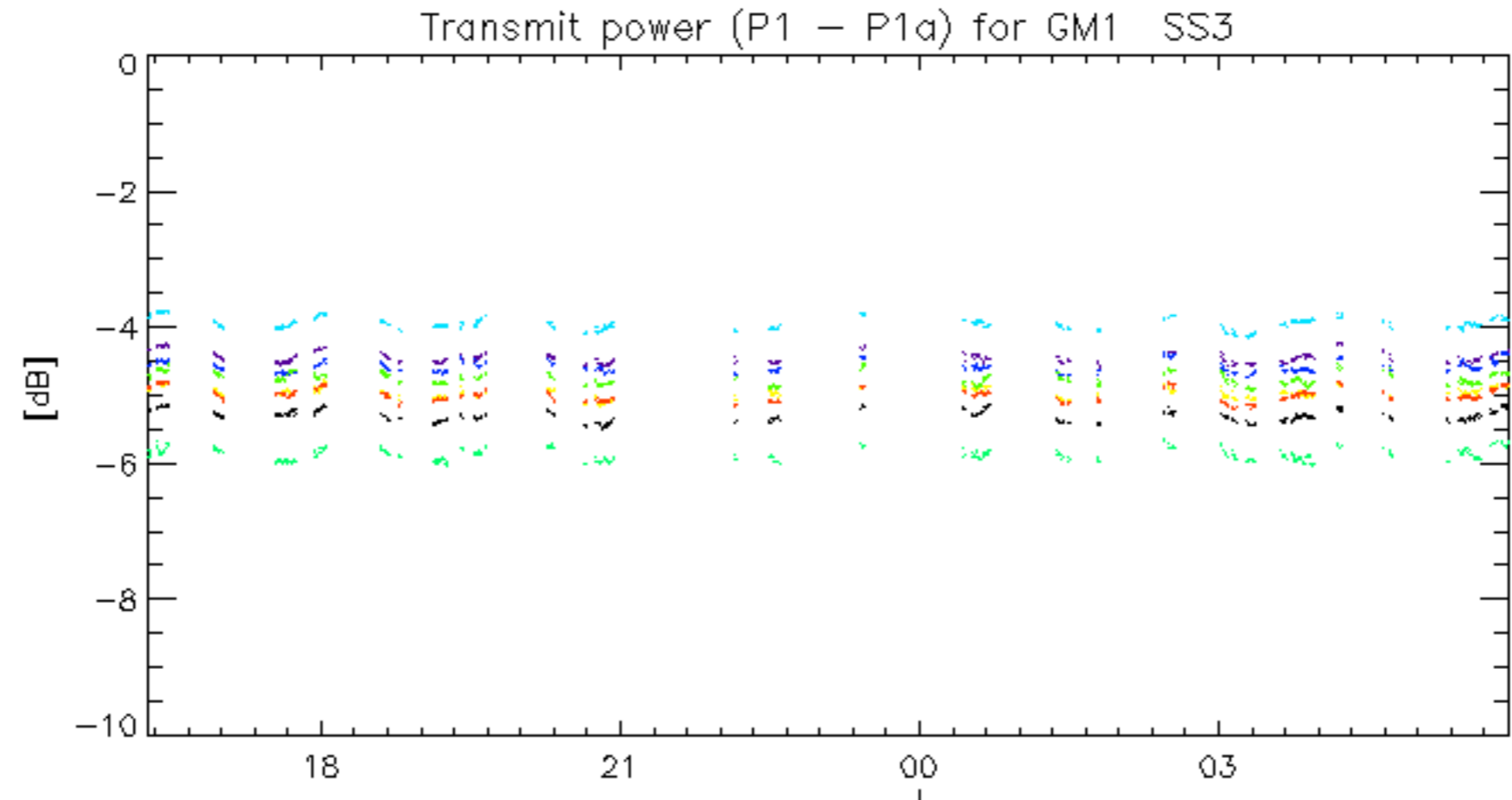
Summary of analysis for the last 3 days 2006032[789]

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

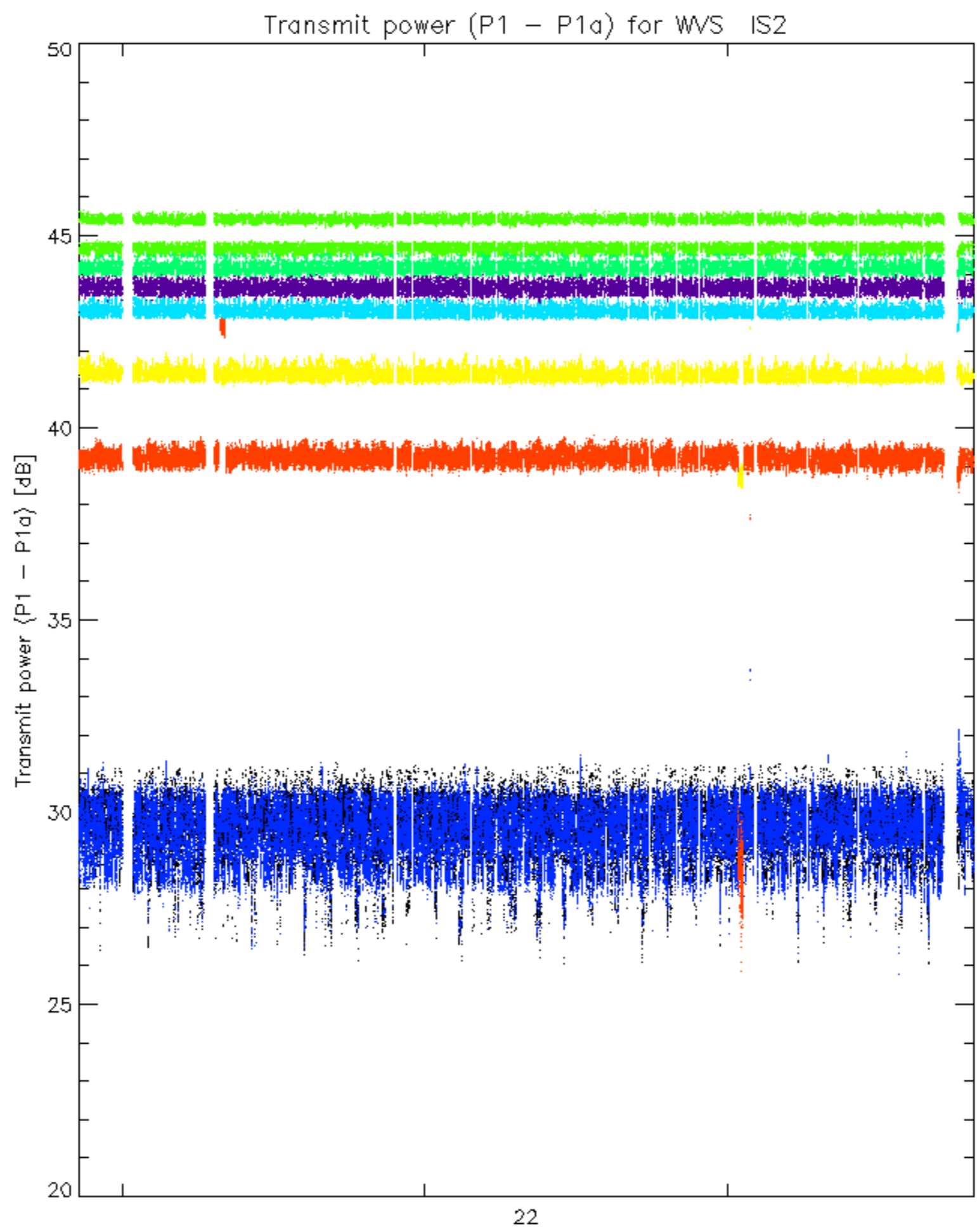
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060328_003704_000001362046_00202_21298_1625.N1	1	0
ASA_WSM_1PNPDE20060327_001933_000002262046_00188_21284_2752.N1	0	35
ASA_WSM_1PNPDE20060327_065041_000000672046_00192_21288_2792.N1	0	7
ASA_WSM_1PNPDE20060327_162329_000002082046_00198_21294_2814.N1	0	49
ASA_WSM_1PNPDE20060327_180426_000002072046_00199_21295_2831.N1	0	21
ASA_WSM_1PNPDE20060327_202253_000000852046_00200_21296_2870.N1	0	67
ASA_WSM_1PNPDE20060327_234856_000002262046_00202_21298_2901.N1	0	34
ASA_APM_1PNPDE20060328_141116_000000822046_00211_21307_0671.N1	0	21



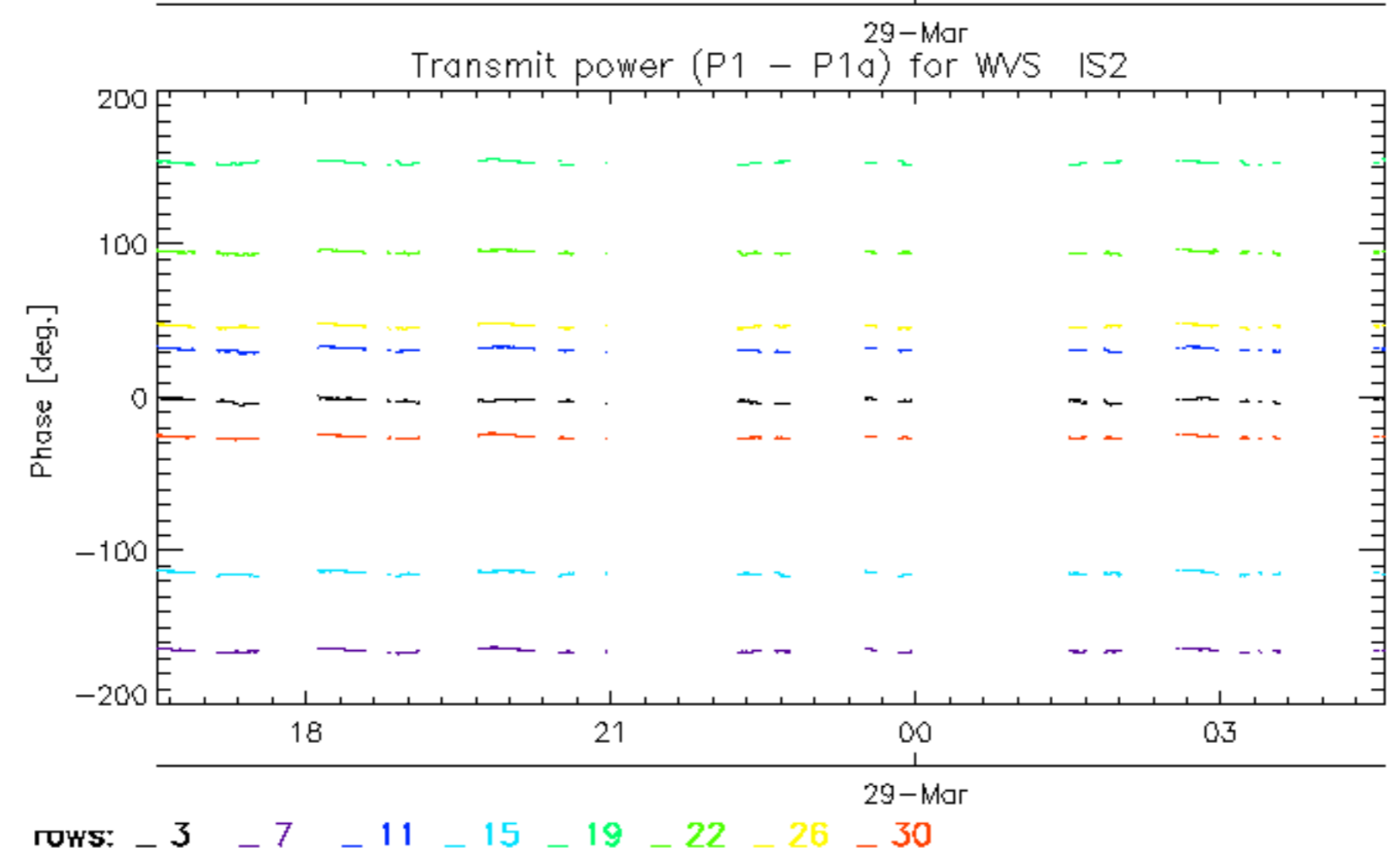
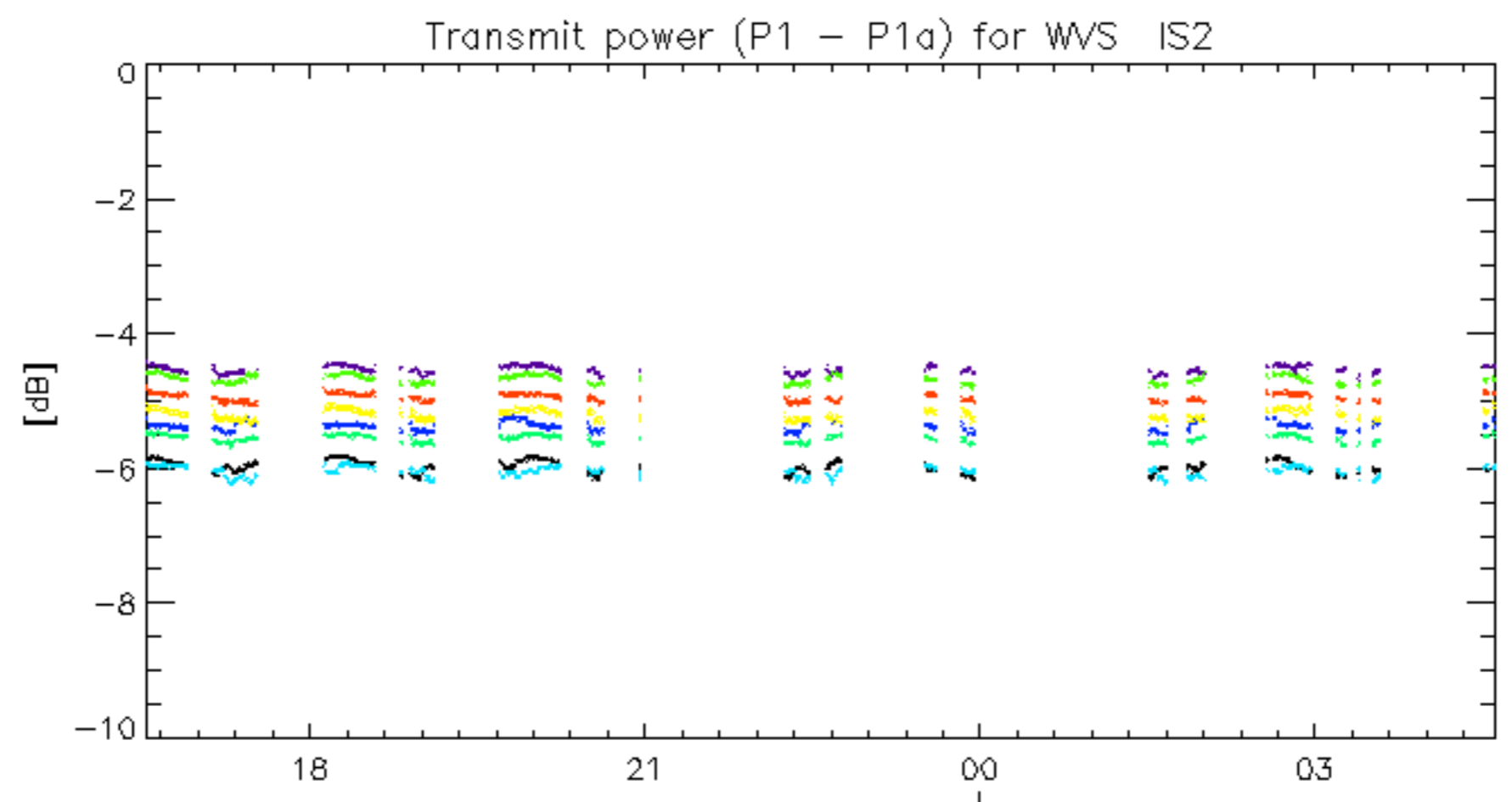




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



No unavailabilities during the reported period.