

REPORT OF 050503

last update on Tue May 3 12:09:07 GMT 2005

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1 - Introduction

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 2005-05-02 00:00:00 to 2005-05-03 12:09:07

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	20	42	0	8	5
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	20	42	0	8	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	20	42	0	8	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	20	42	0	8	5

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	39	52	5	8	2
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	39	52	5	8	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	39	52	5	8	2
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	39	52	5	8	2

2.3 - Browse Visual Inspection

2.2 - Browse Visual Inspection

No anomalies observed from browse visual inspection

2.4 - Data Analysis

2.3 - 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	20050502 180523
H	20050501 183700

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

⊗
⊗

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

<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	-3.348289	0.006752	-0.001111
7	P1	-3.113181	0.012111	0.025739
11	P1	-4.668990	0.026200	0.027109
15	P1	-5.579474	0.043496	0.114023
19	P1	-3.712561	0.004165	-0.031728
22	P1	-4.574546	0.012593	-0.065185
26	P1	-4.894125	0.019875	0.048669
30	P1	-7.159847	0.026400	0.061291
3	P1	-15.775023	0.079773	0.200842
7	P1	-15.516619	0.086285	0.100482
11	P1	-21.215734	0.240097	-0.188565
15	P1	-11.472510	0.032311	0.131928
19	P1	-14.322654	0.032053	-0.042693
22	P1	-15.875908	0.327890	-0.242400
26	P1	-17.628952	0.179943	0.033003
30	P1	-17.878624	0.305238	0.045394

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.045208	0.082938	-0.028631
7	P2	-22.222996	0.103959	-0.047204
11	P2	-14.177311	0.109818	0.167229
15	P2	-7.078457	0.092929	-0.070716
19	P2	-9.649571	0.095736	-0.006683
22	P2	-16.882788	0.097415	-0.025674

26	P2	-16.470192	0.097090	-0.059929
30	P2	-18.824390	0.085746	0.010669

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.167034	0.004109	-0.007066
7	P3	-8.167034	0.004109	-0.007066
11	P3	-8.167033	0.004109	-0.007067
15	P3	-8.167033	0.004109	-0.007067
19	P3	-8.167033	0.004109	-0.007067
22	P3	-8.167033	0.004109	-0.007067
26	P3	-8.167033	0.004109	-0.007067
30	P3	-8.167034	0.004109	-0.007066

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	-2.753567	0.012309	-0.057592
7	P1	-3.005463	0.031249	0.048549
11	P1	-3.980142	0.016971	0.046829
15	P1	-3.540709	0.022084	0.062796
19	P1	-3.623389	0.014616	-0.025497
22	P1	-5.680773	0.047449	0.098746
26	P1	-7.310445	0.024566	-0.028909
30	P1	-6.276538	0.061398	-0.002675
3	P1	-10.758736	0.045166	-0.060556
7	P1	-10.394650	0.151254	-0.084311

11	P1	-12.558682	0.099000	0.013506
15	P1	-11.676816	0.070131	0.154525
19	P1	-15.610832	0.060331	-0.045105
22	P1	-25.102388	1.885866	-1.046183
26	P1	-15.619270	0.286268	-0.218050
30	P1	-20.182032	1.241267	-0.158683

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.753204	0.039792	-0.060844
7	P2	-22.285452	0.047357	0.045948
11	P2	-10.056553	0.057641	0.066873
15	P2	-5.054236	0.038193	-0.115867
19	P2	-6.880111	0.053163	-0.082817
22	P2	-7.091550	0.038835	-0.059253
26	P2	-23.893332	0.038337	-0.089225
30	P2	-21.920244	0.043072	-0.080411

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.003429	0.003675	-0.007508
7	P3	-8.003456	0.003670	-0.007523
11	P3	-8.003406	0.003665	-0.007132
15	P3	-8.003543	0.003676	-0.007561
19	P3	-8.003532	0.003673	-0.007255
22	P3	-8.003506	0.003656	-0.007276
26	P3	-8.003525	0.003665	-0.007047
30	P3	-8.003528	0.003679	-0.007141

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	0.000476982
	stdev	2.16655e-07
MEAN Q	mean	0.000489834
	stdev	2.35193e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128974
	stdev	0.00105827
STDEV Q	mean	0.129235
	stdev	0.00107002



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005050[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_1PNPDK20050501_124044_000000372036_00482_16568_3555.N1	1	0
ASA_WSM_1PNPDE20050501_031250_000001282036_00476_16562_9906.N1	0	28



7 - Doppler Analysis

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

6.1 - Unbiased Doppler Error for WVS

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

6.2 - Absolute Doppler for WVS

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

6.3 - Doppler evolution versus ANX for WVS

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

6.4 - Unbiased Doppler Error for GM1

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

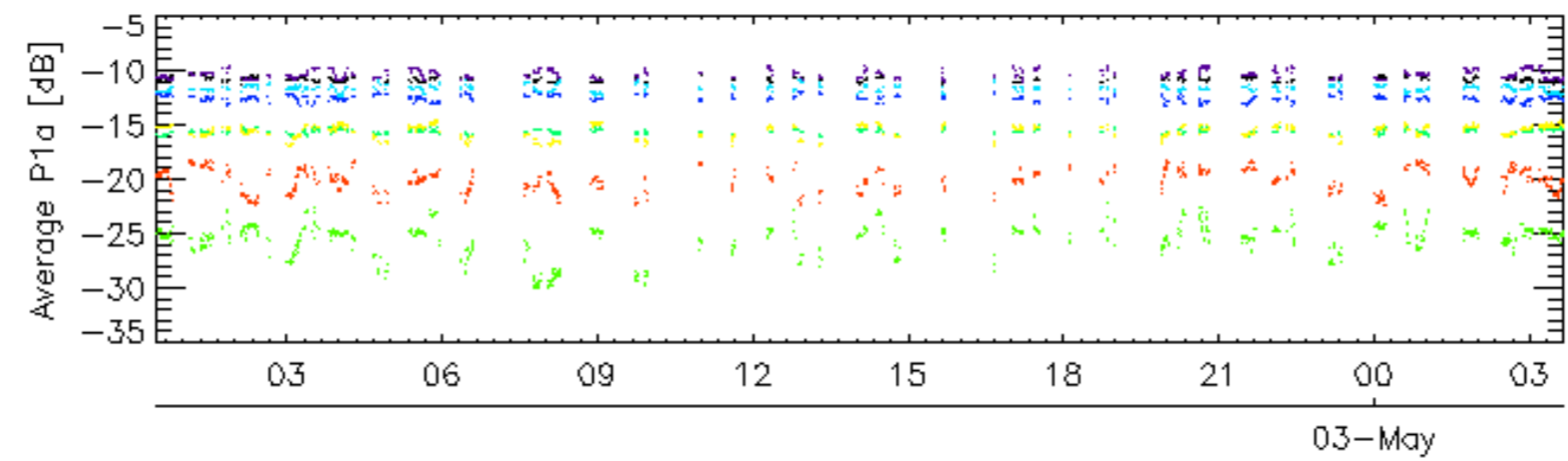
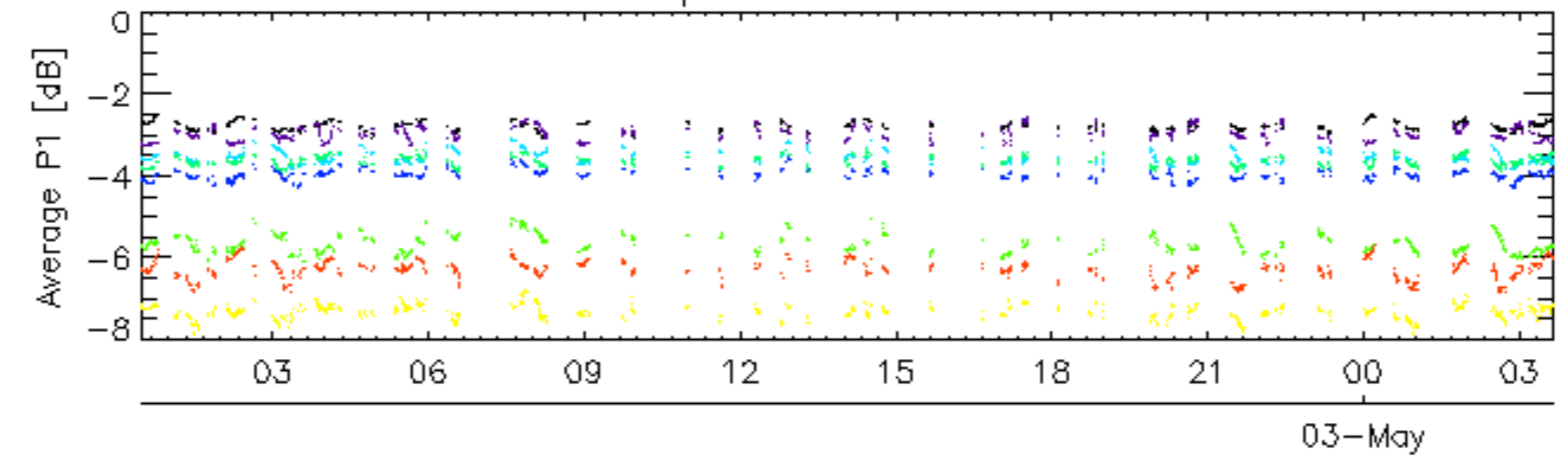
6.5 - Absolute Doppler for GM1

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

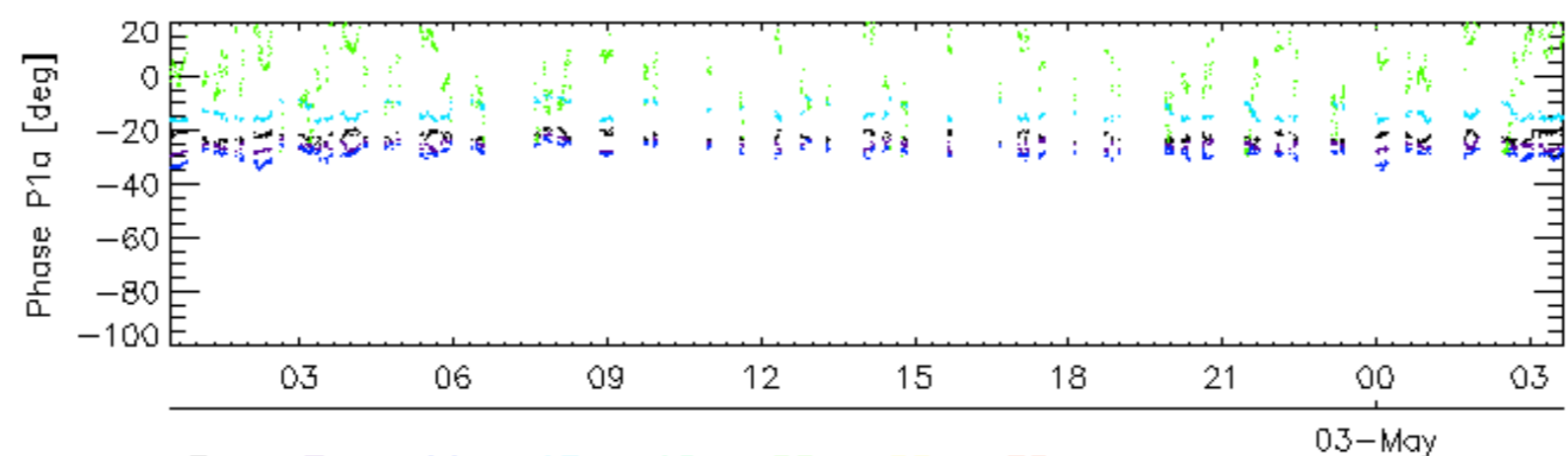
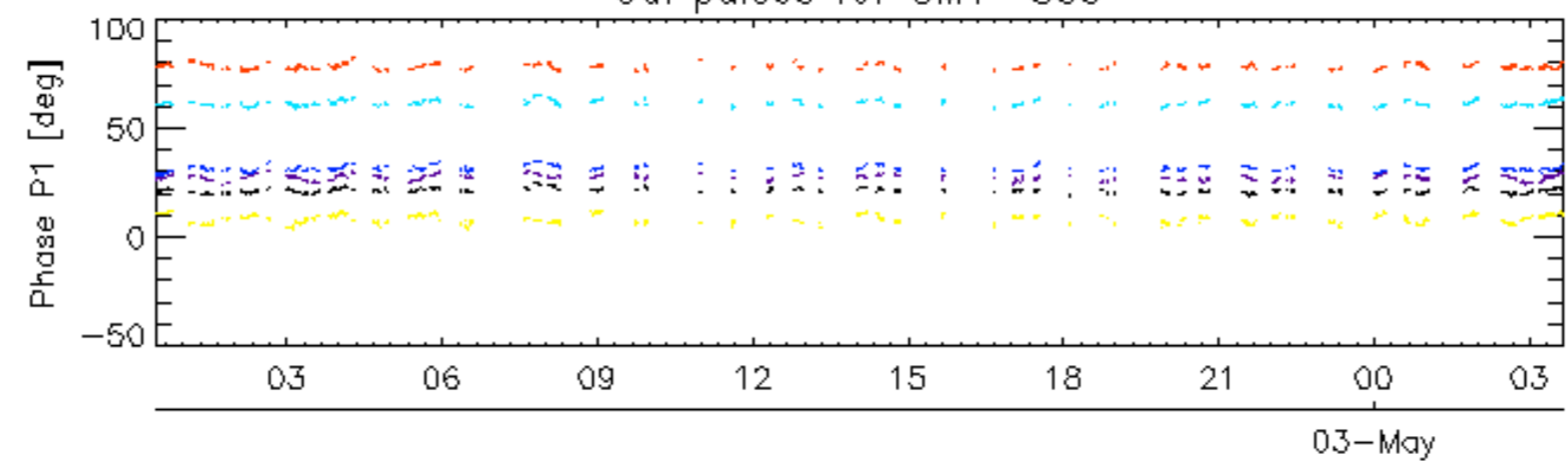
6.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

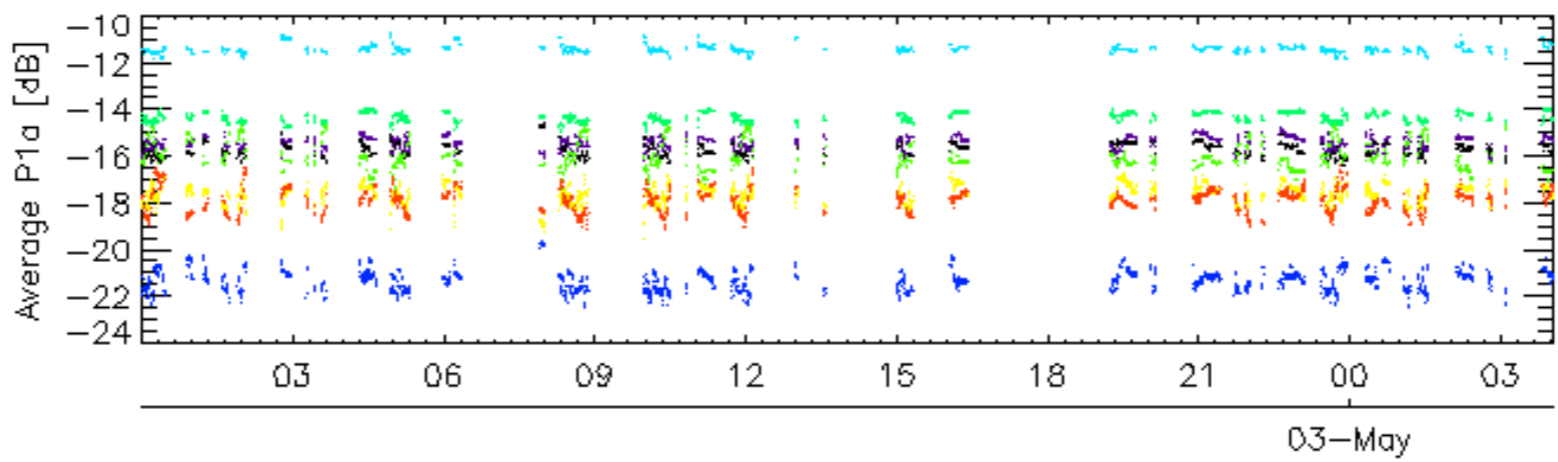
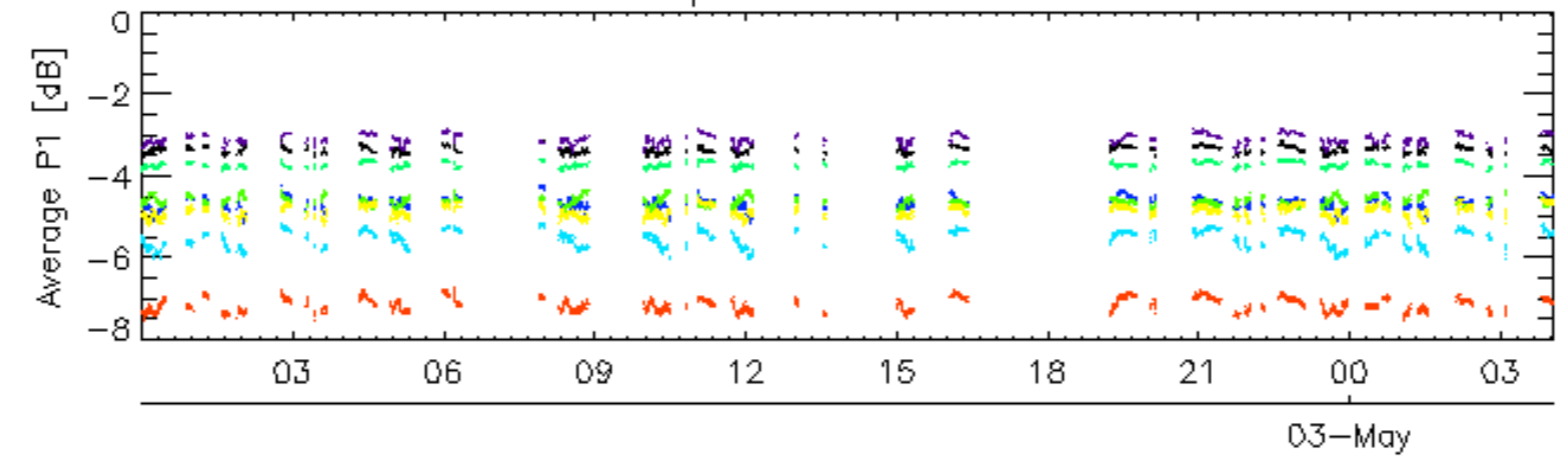


Cal pulses for GM1 SS3

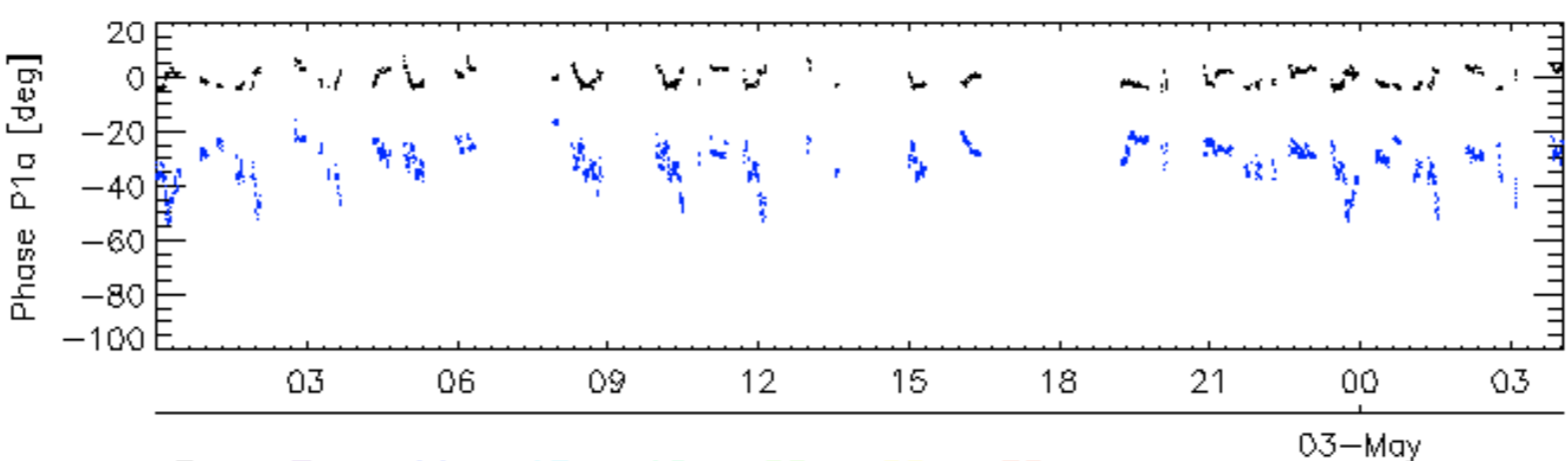
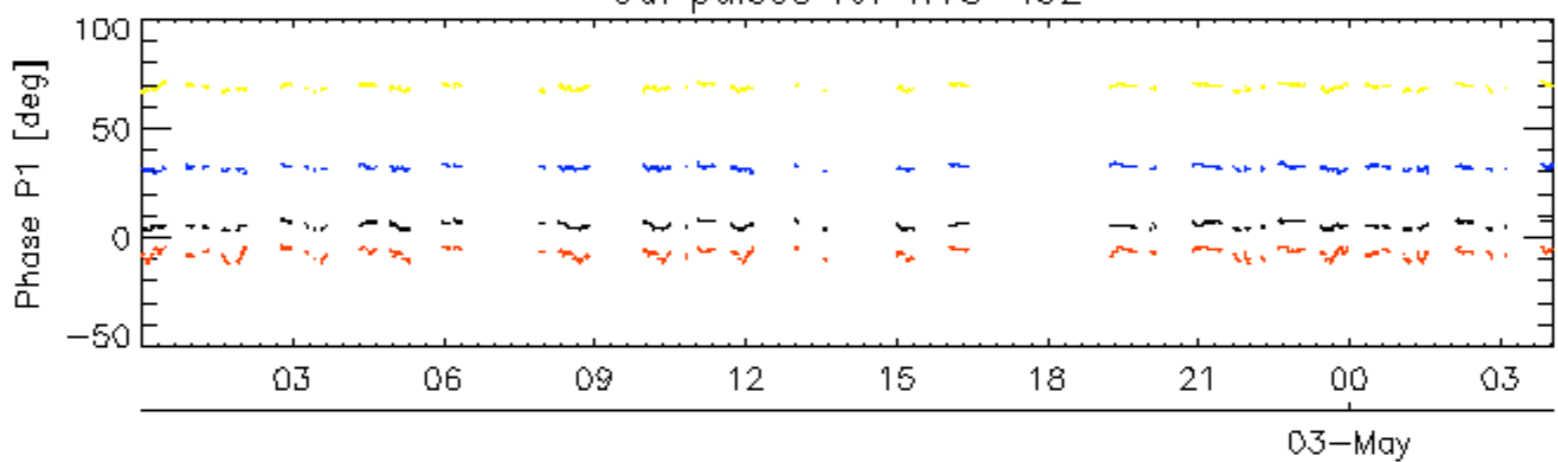


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

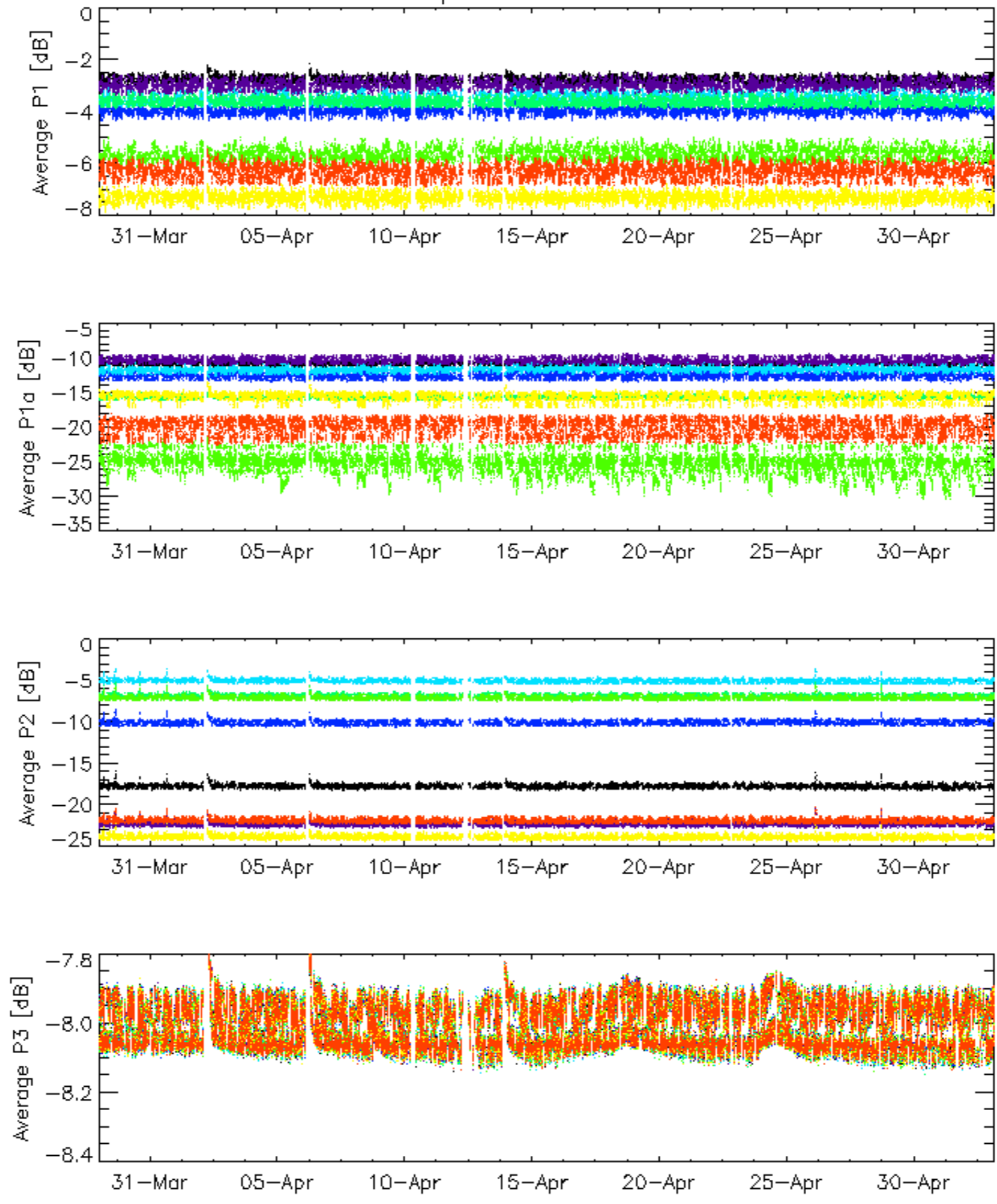


Cal pulses for WVS IS2



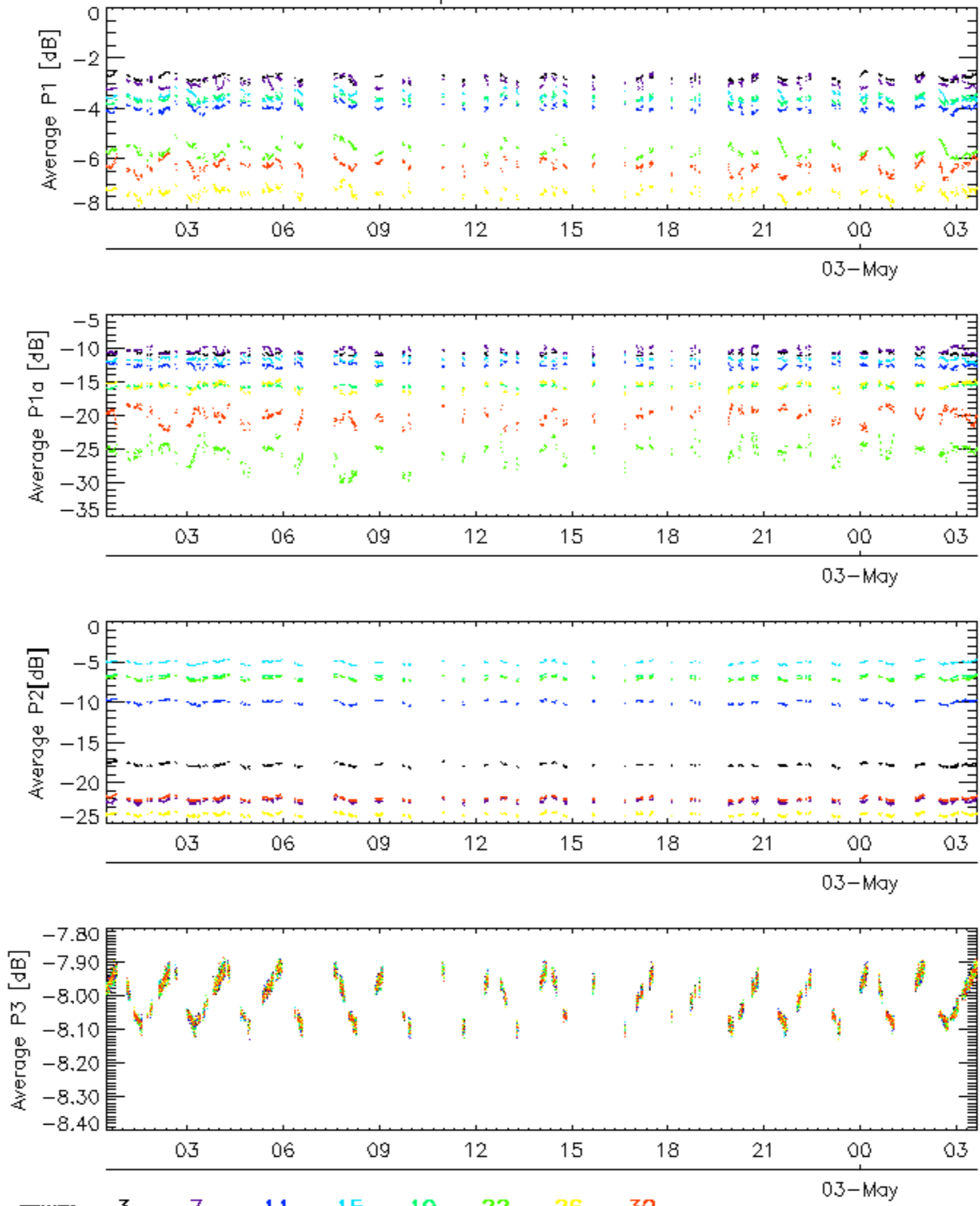
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

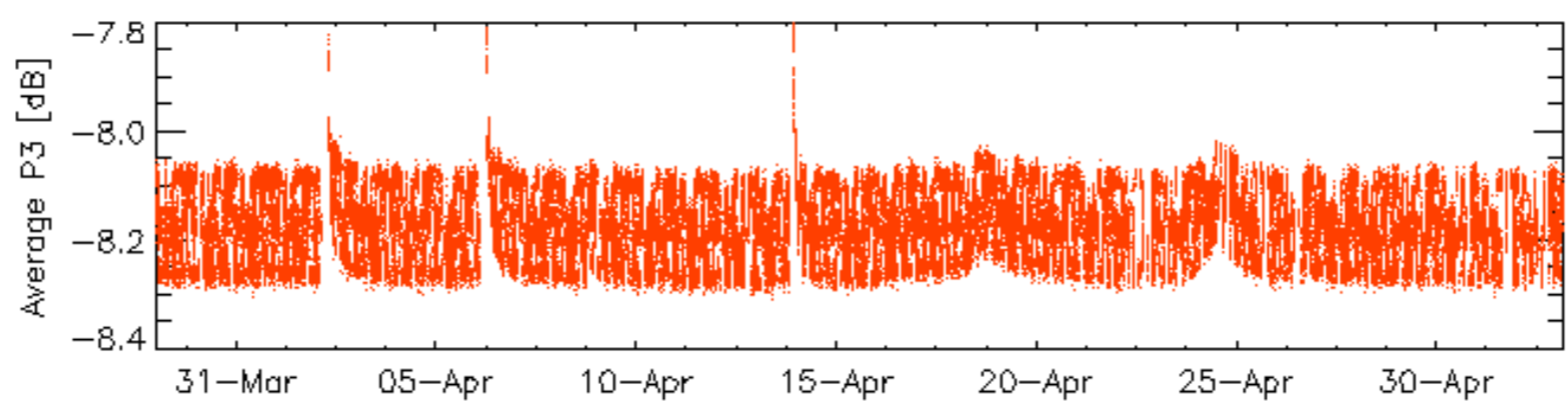
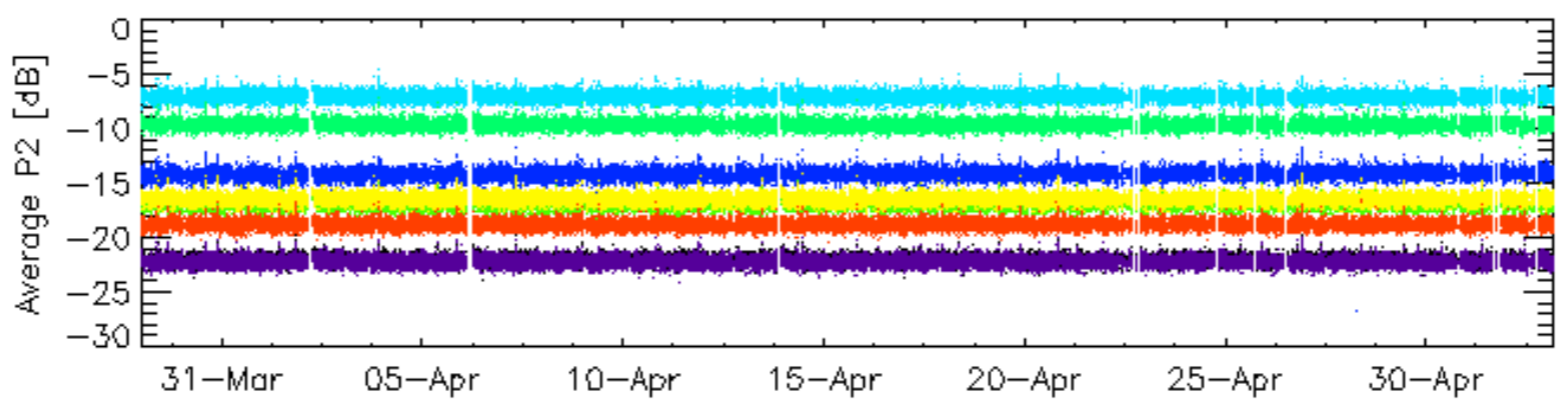
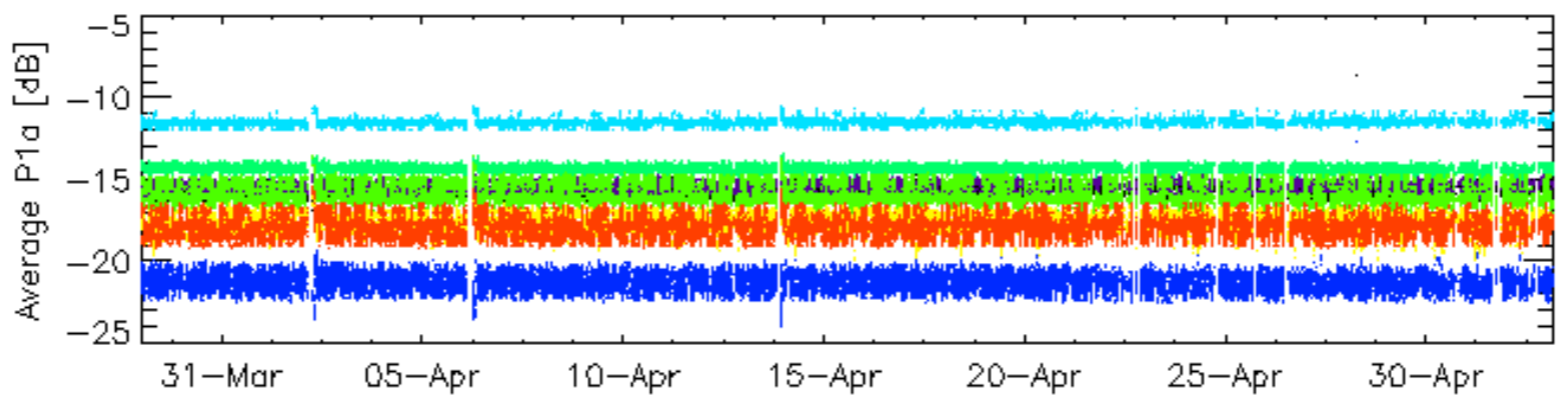
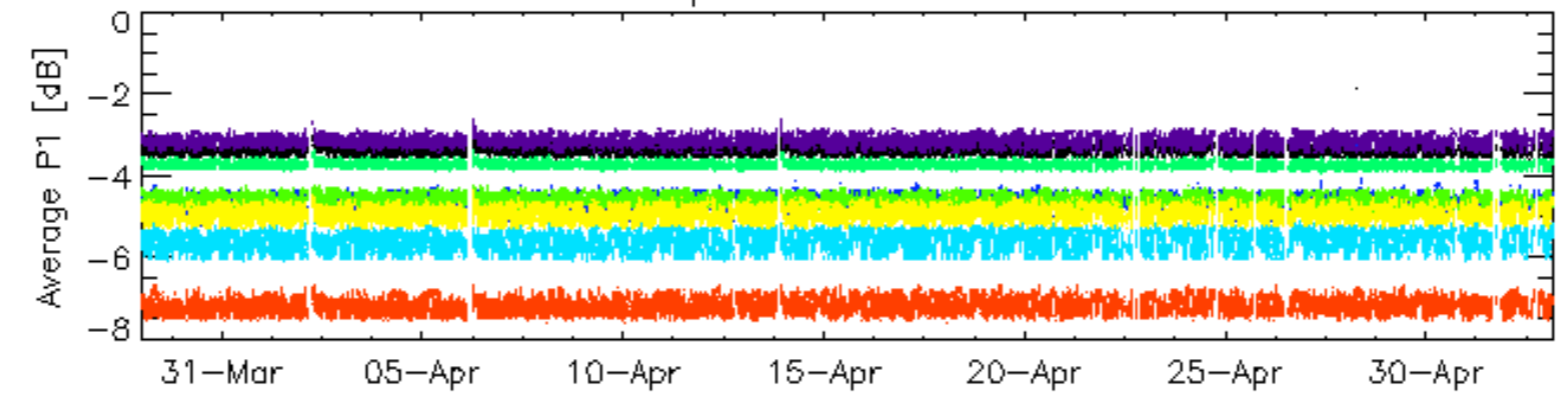


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

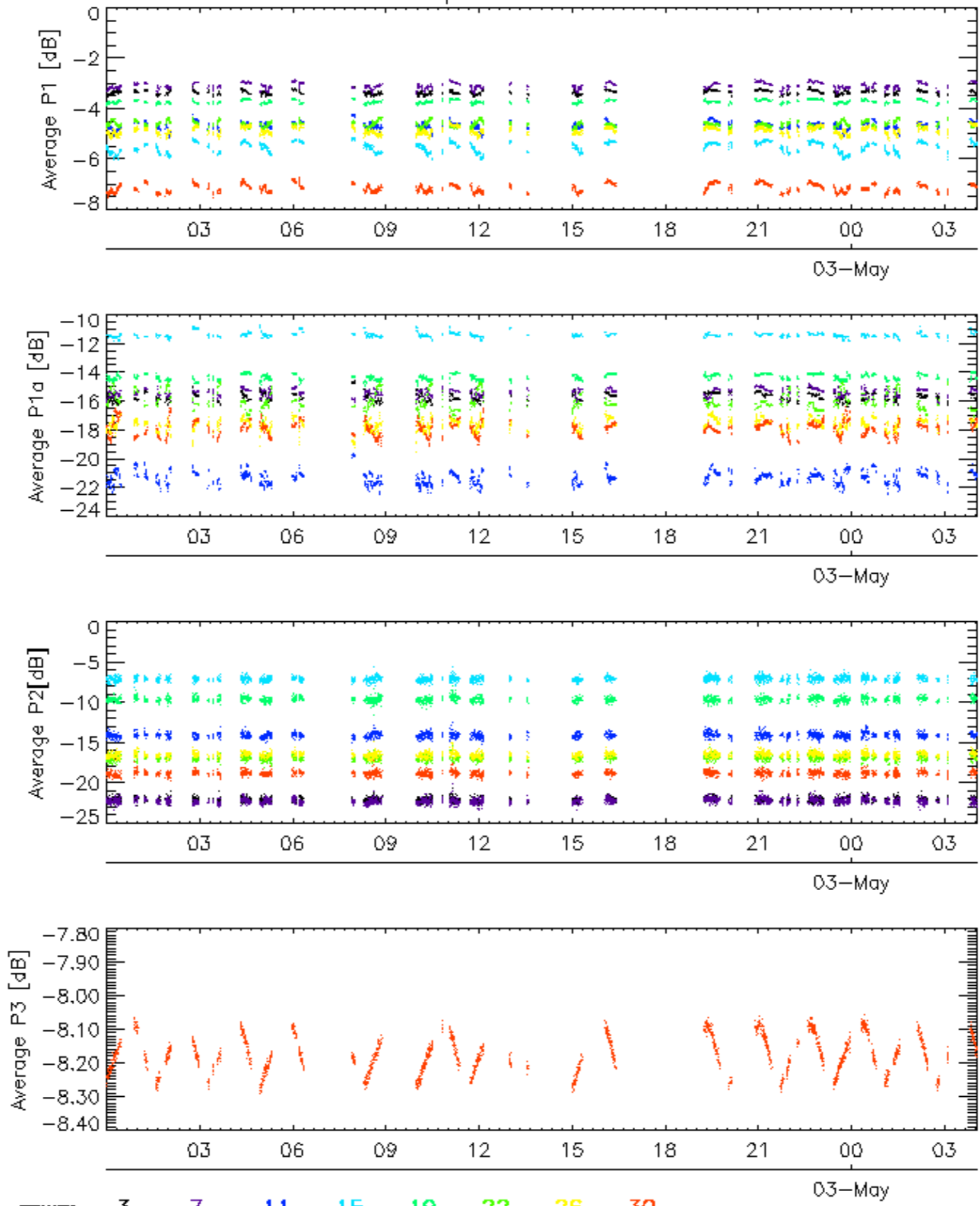


Cal pulses for WVS IS2



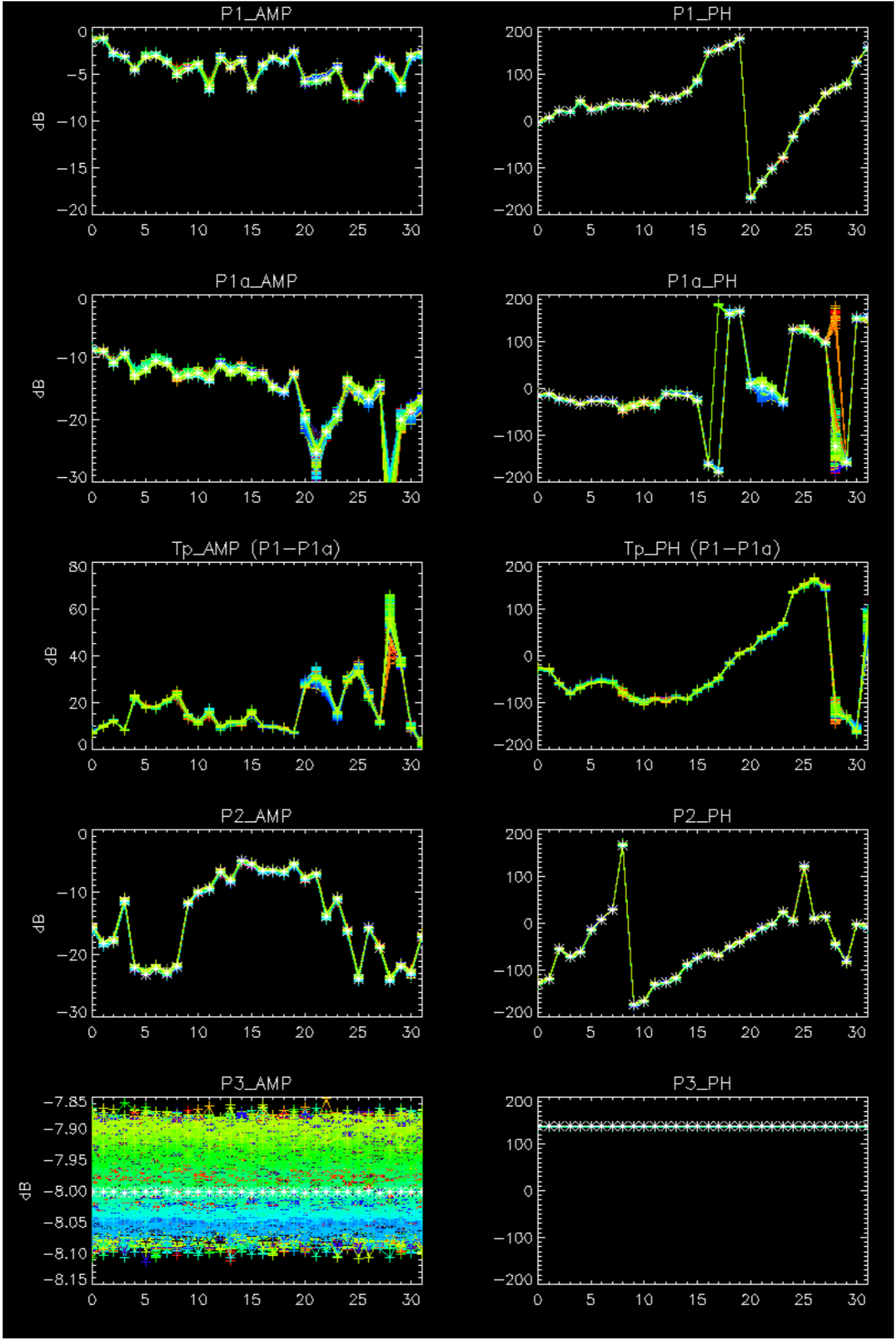
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

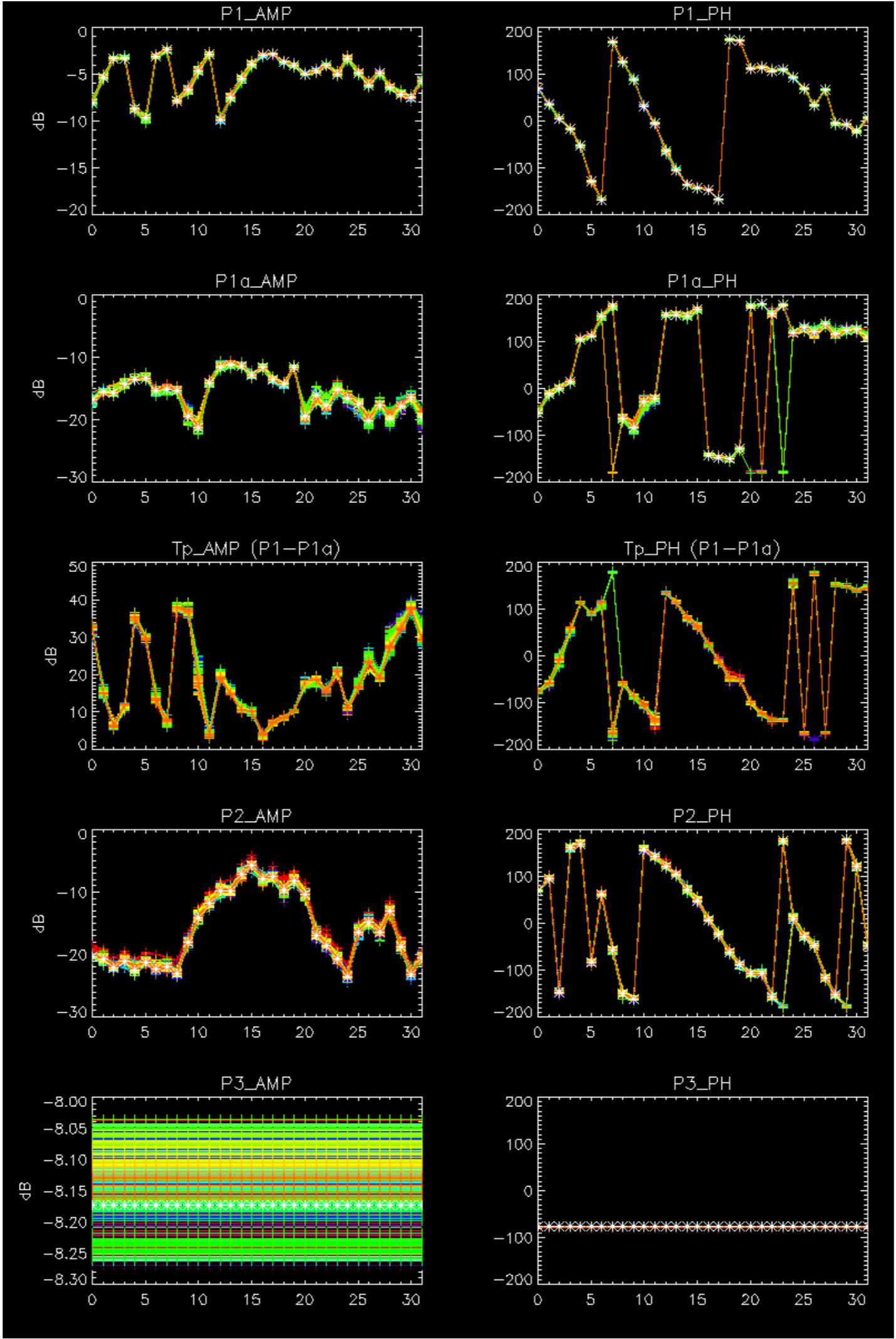
Cal pulses for WVS IS2



No anomalies observed from browse visual inspection

No anomalies observed.

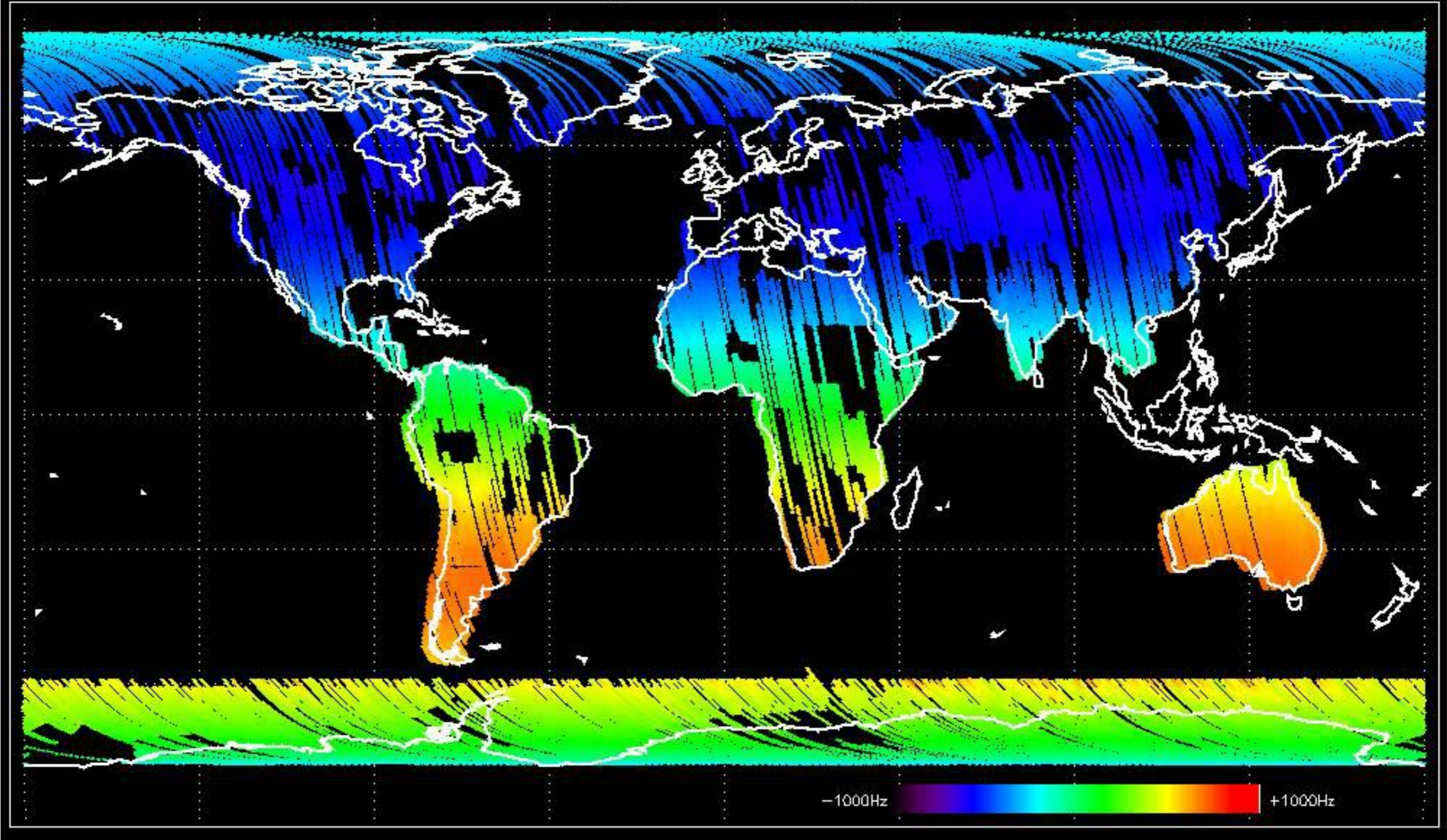




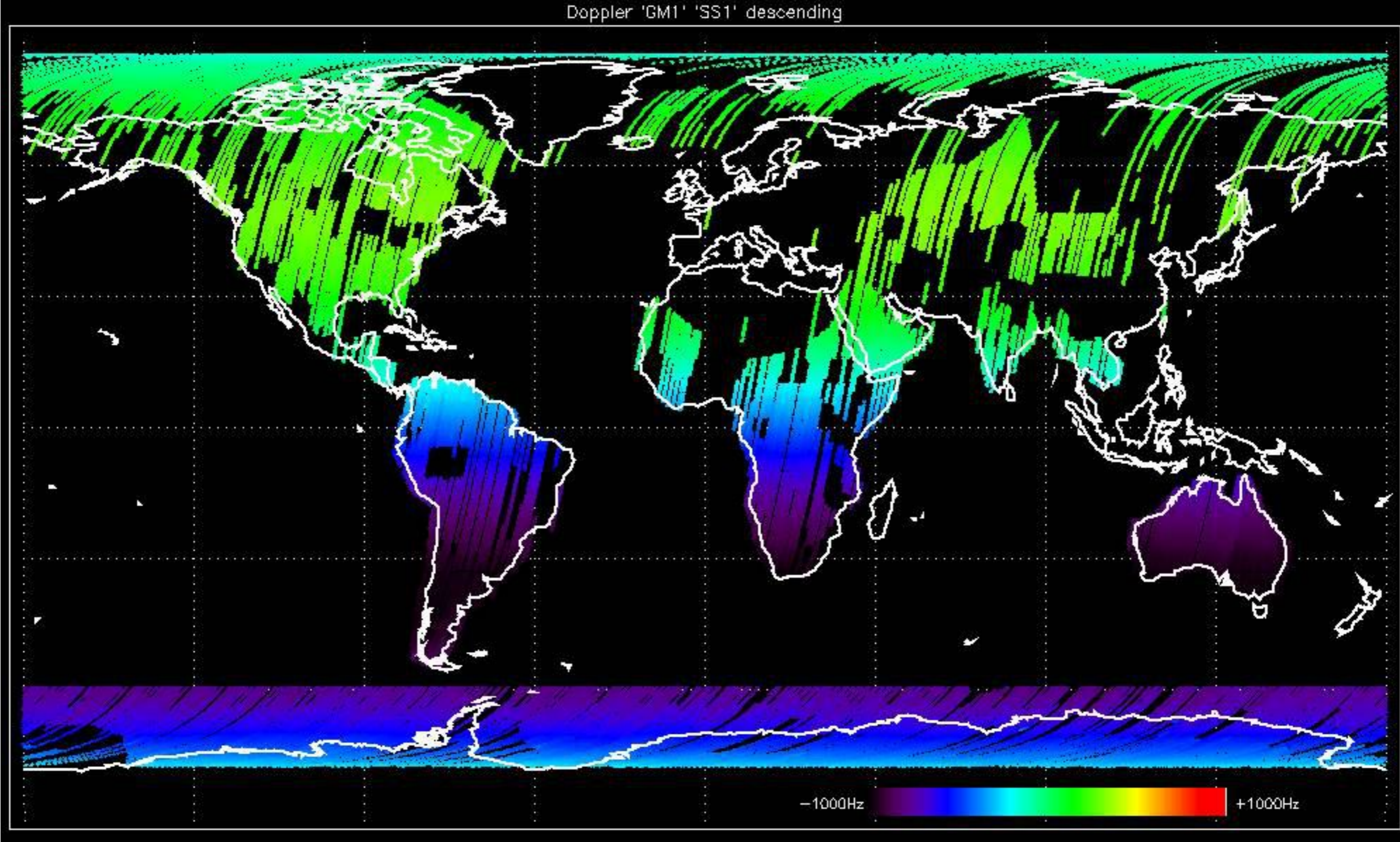
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

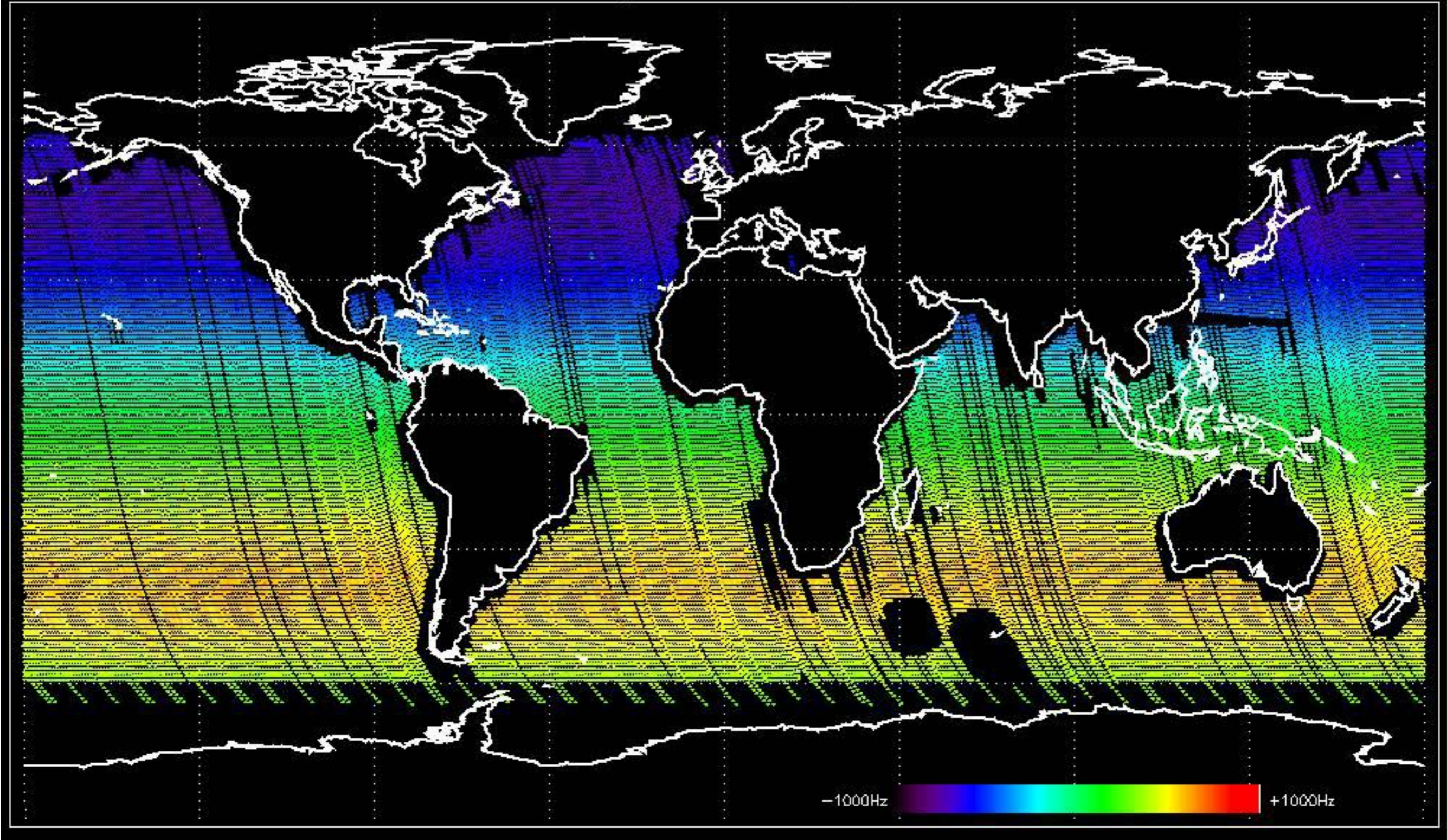
Doppler 'GM1' 'SS1' ascending



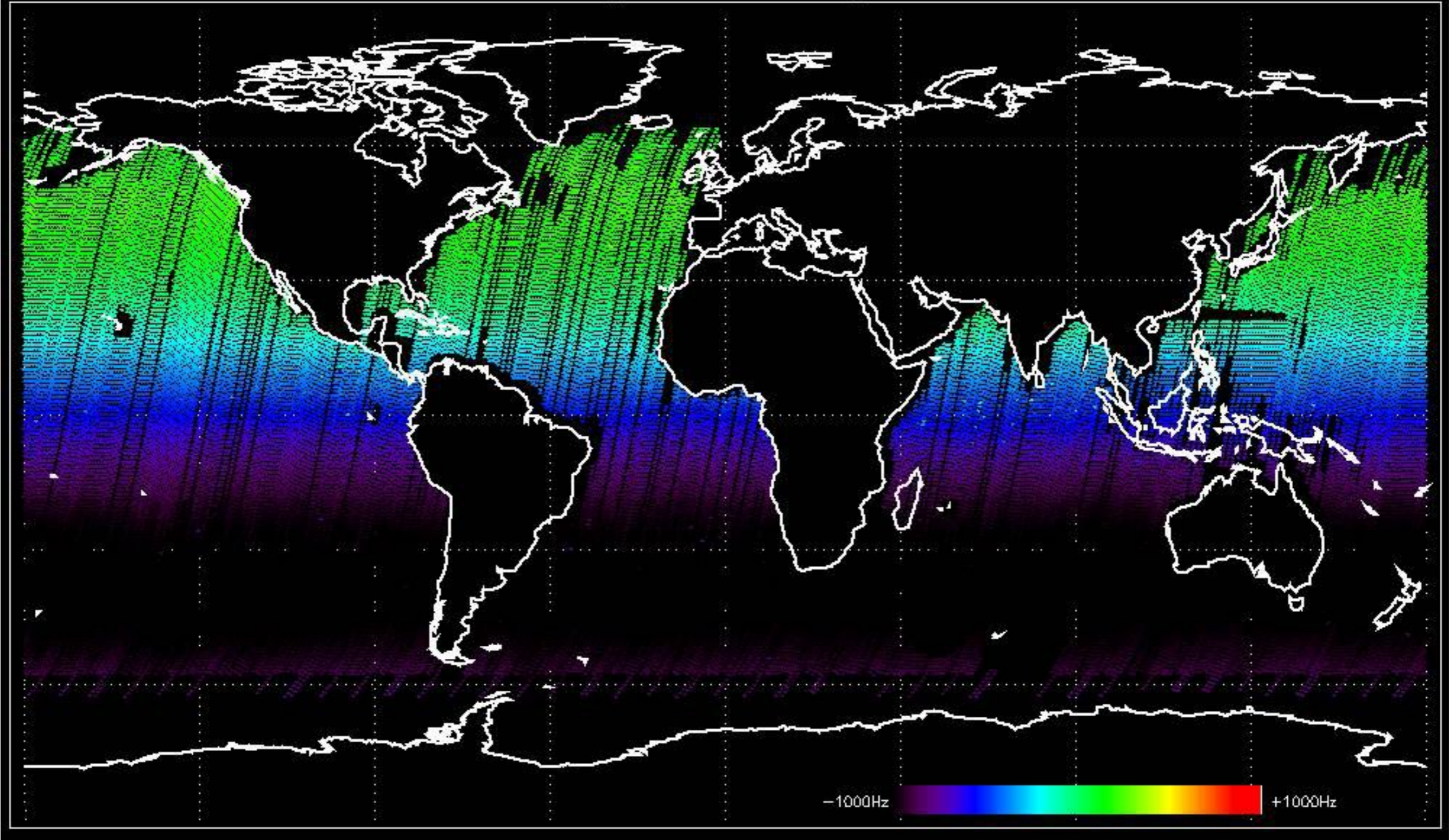
Doppler 'GM1' 'SS1' descending



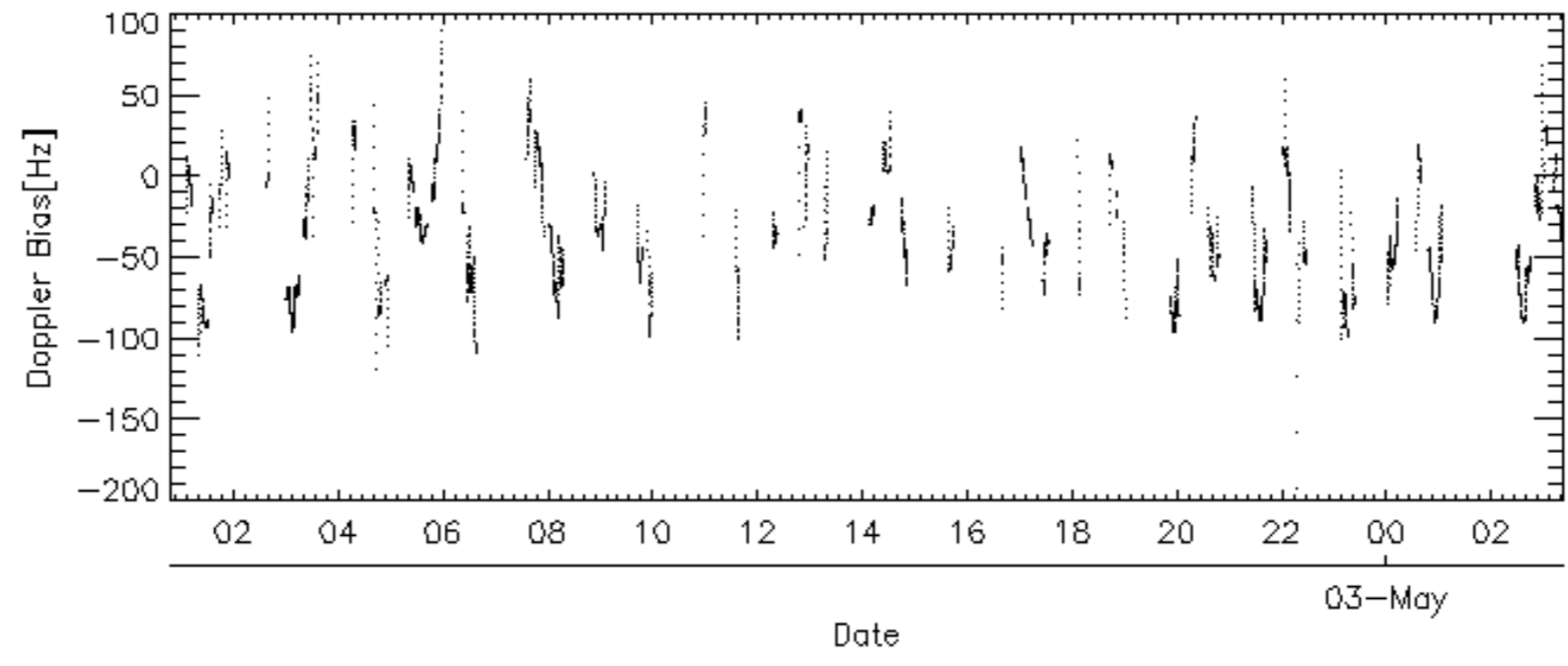
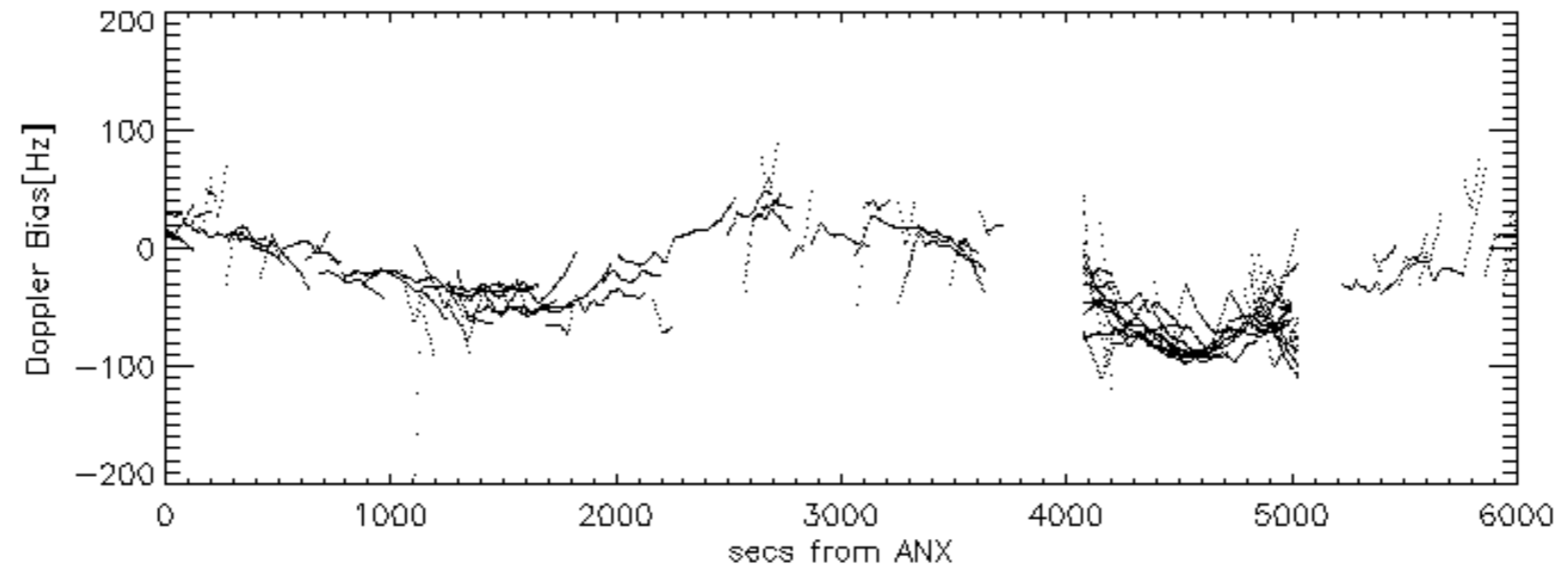
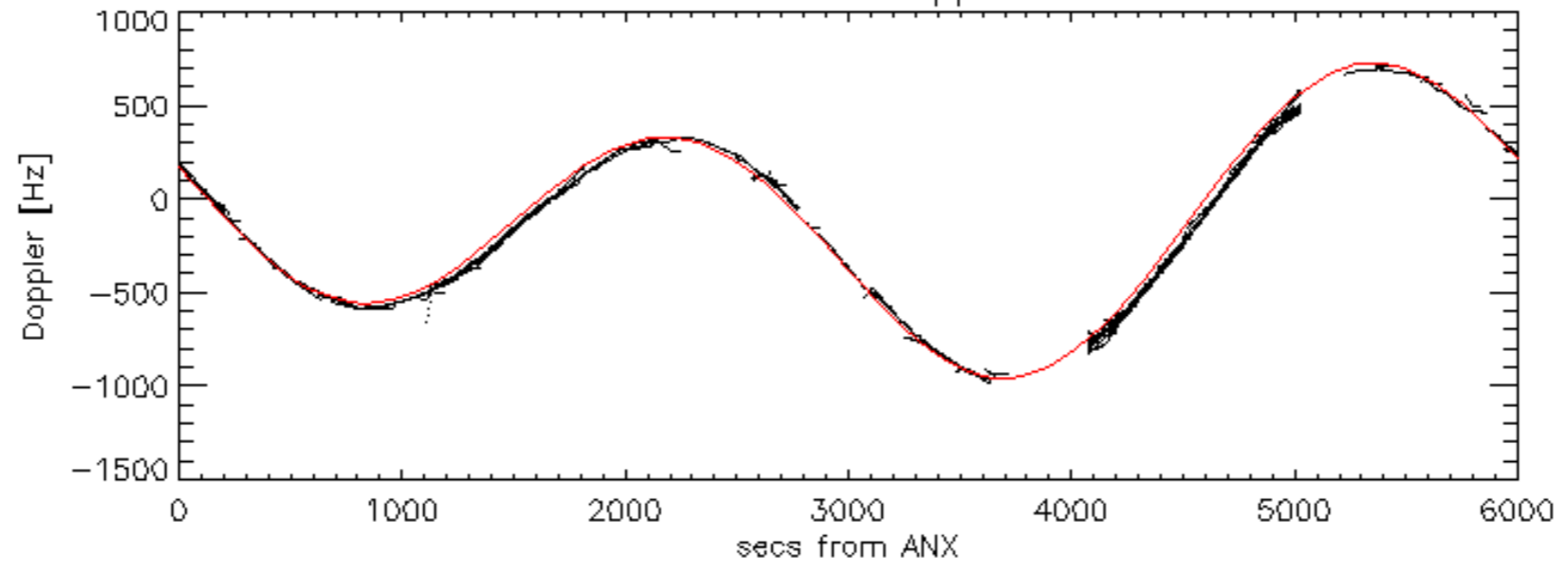
Doppler 'WVS' 'IS2' ascending

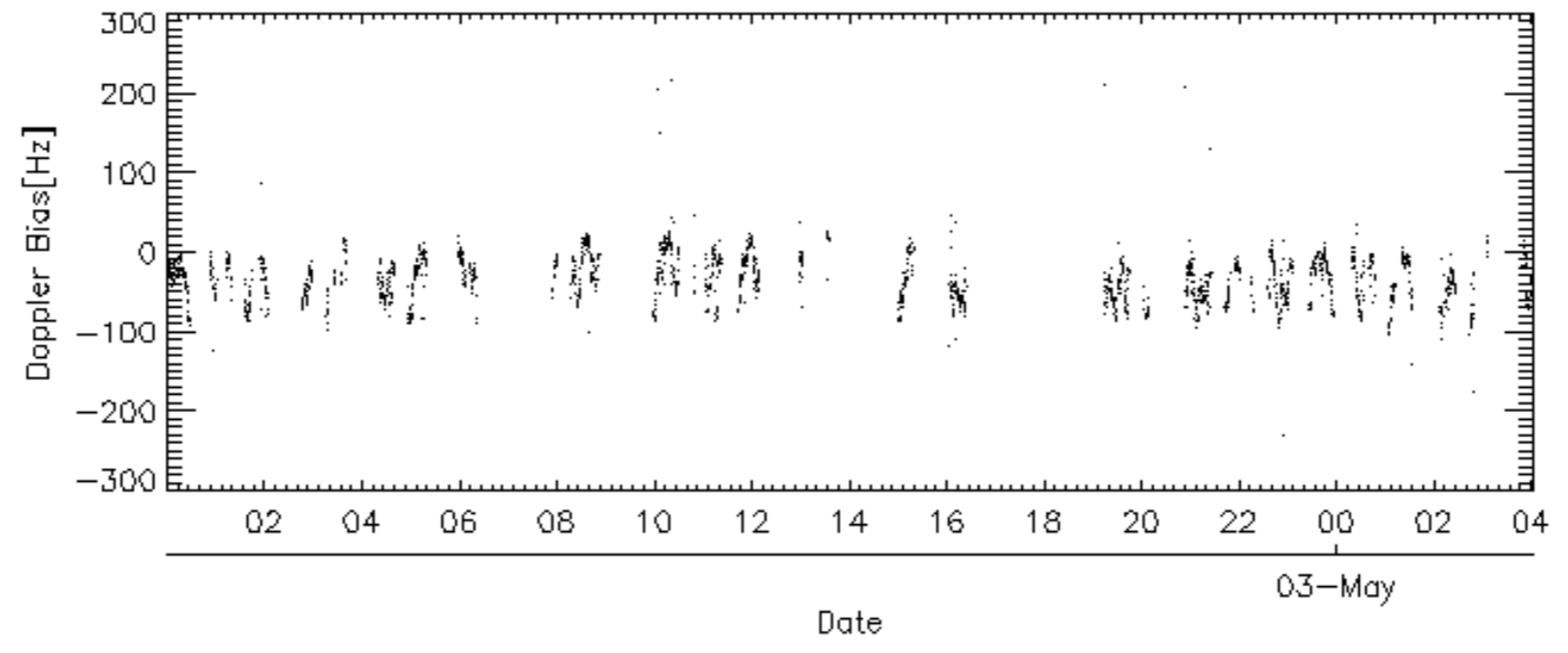
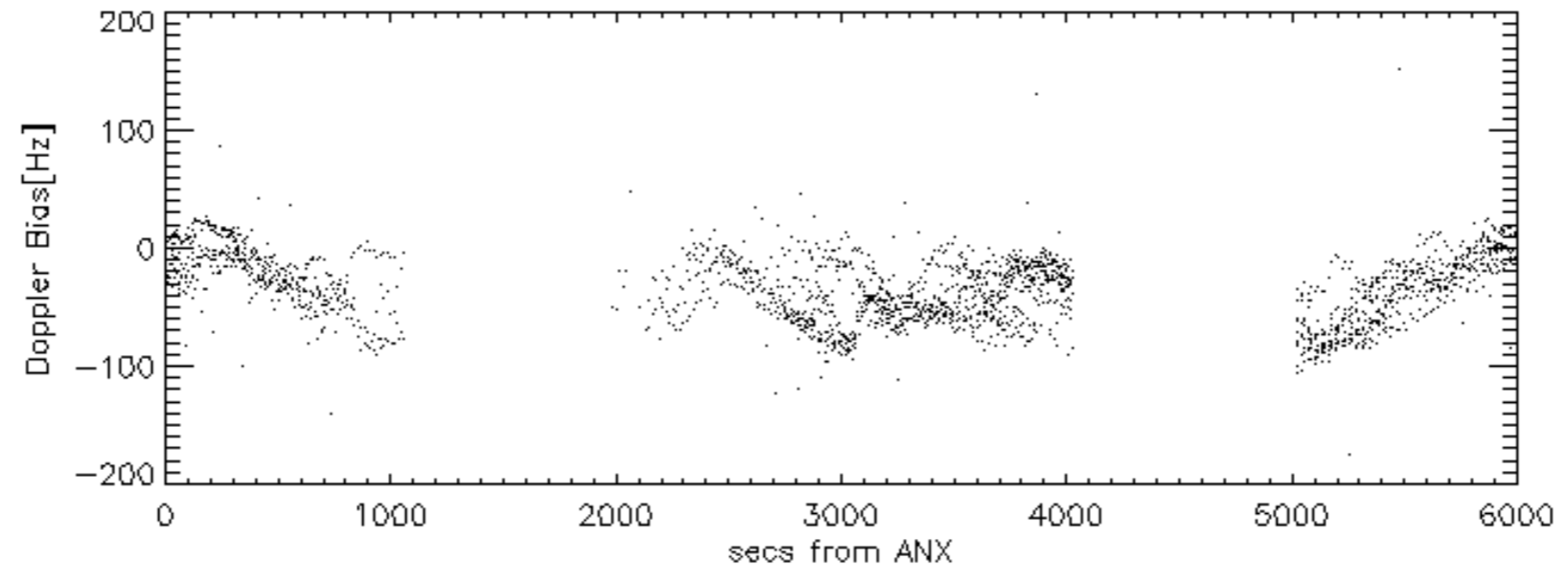
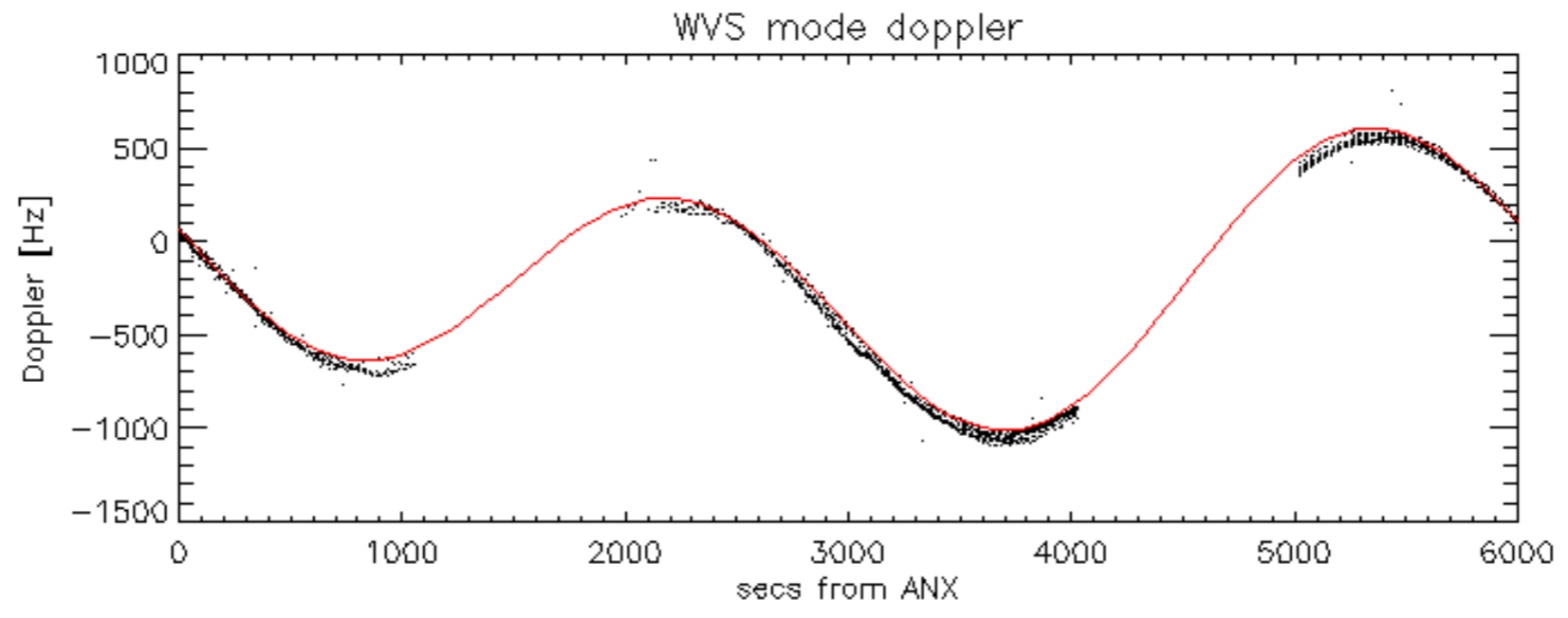


Doppler 'WVS' 'IS2' descending

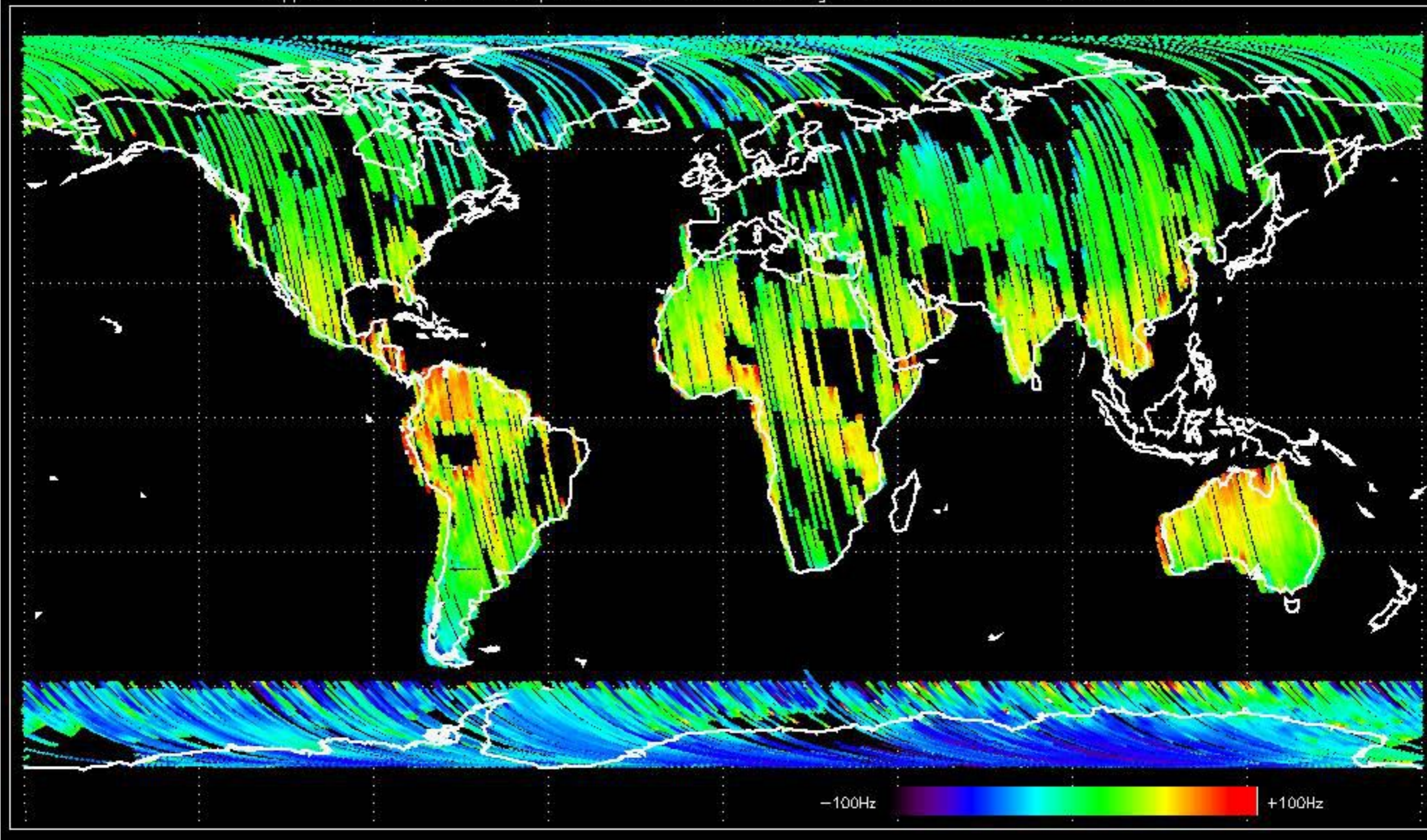


GM1 mode doppler

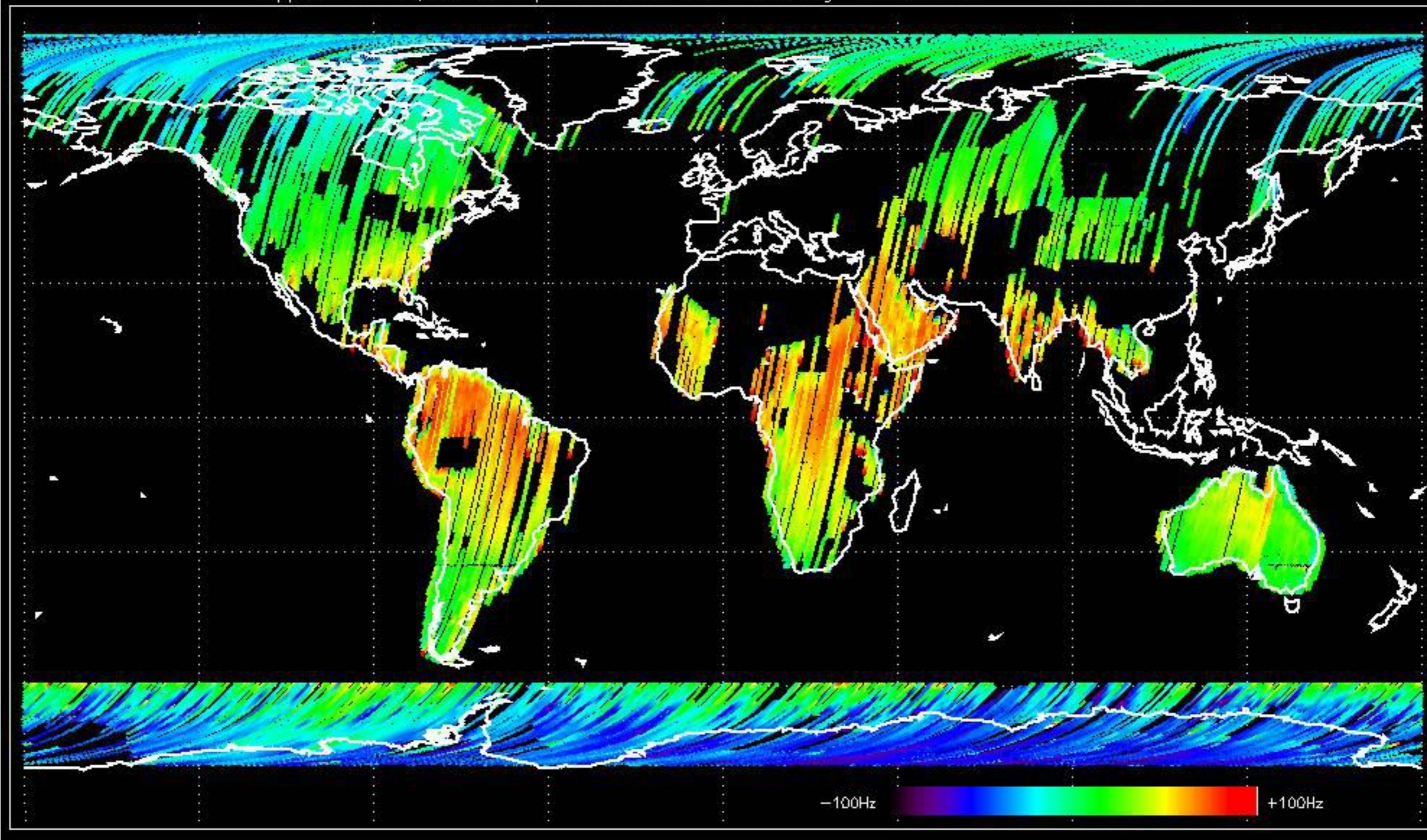




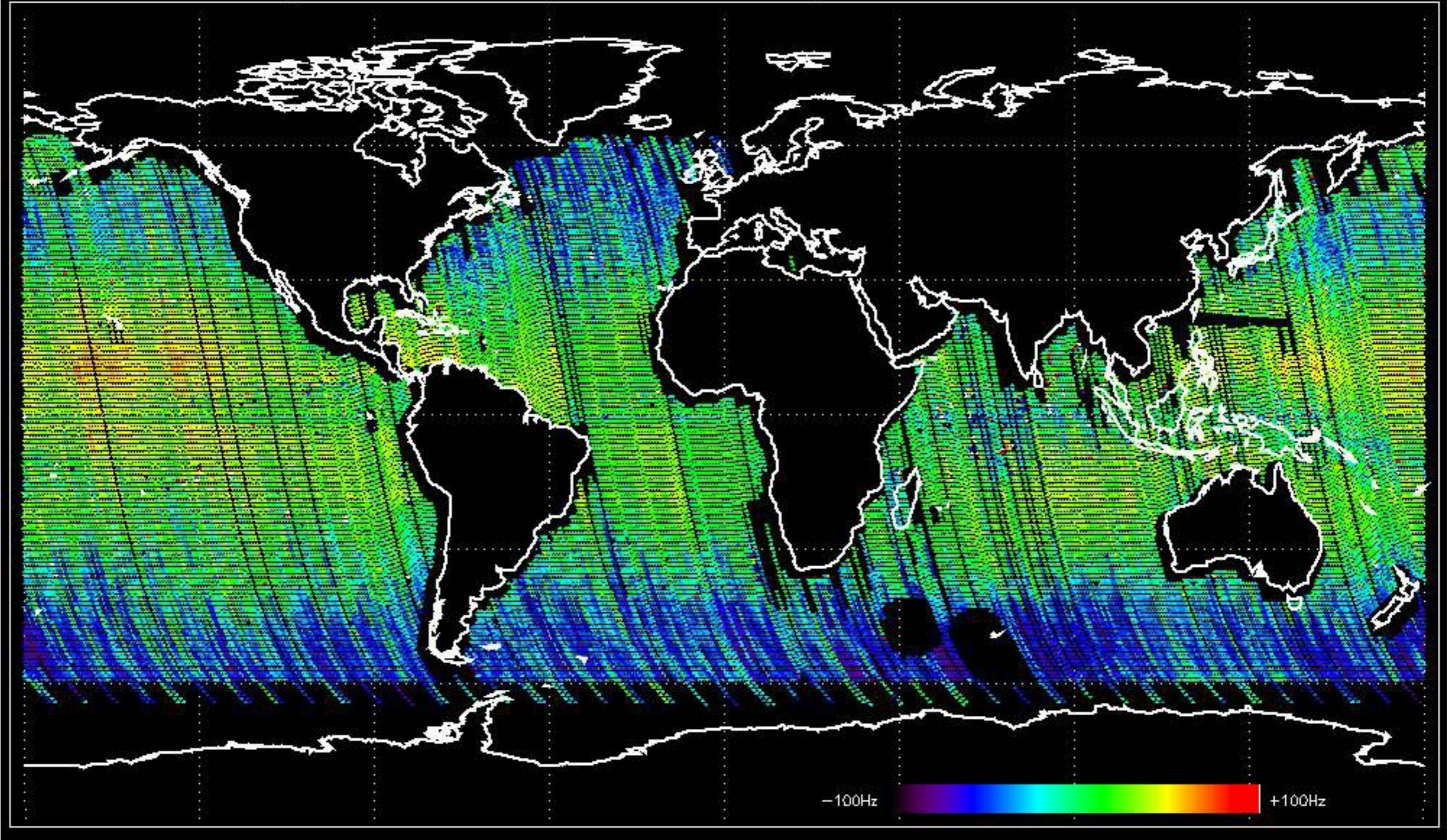
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -38.640483 Hz



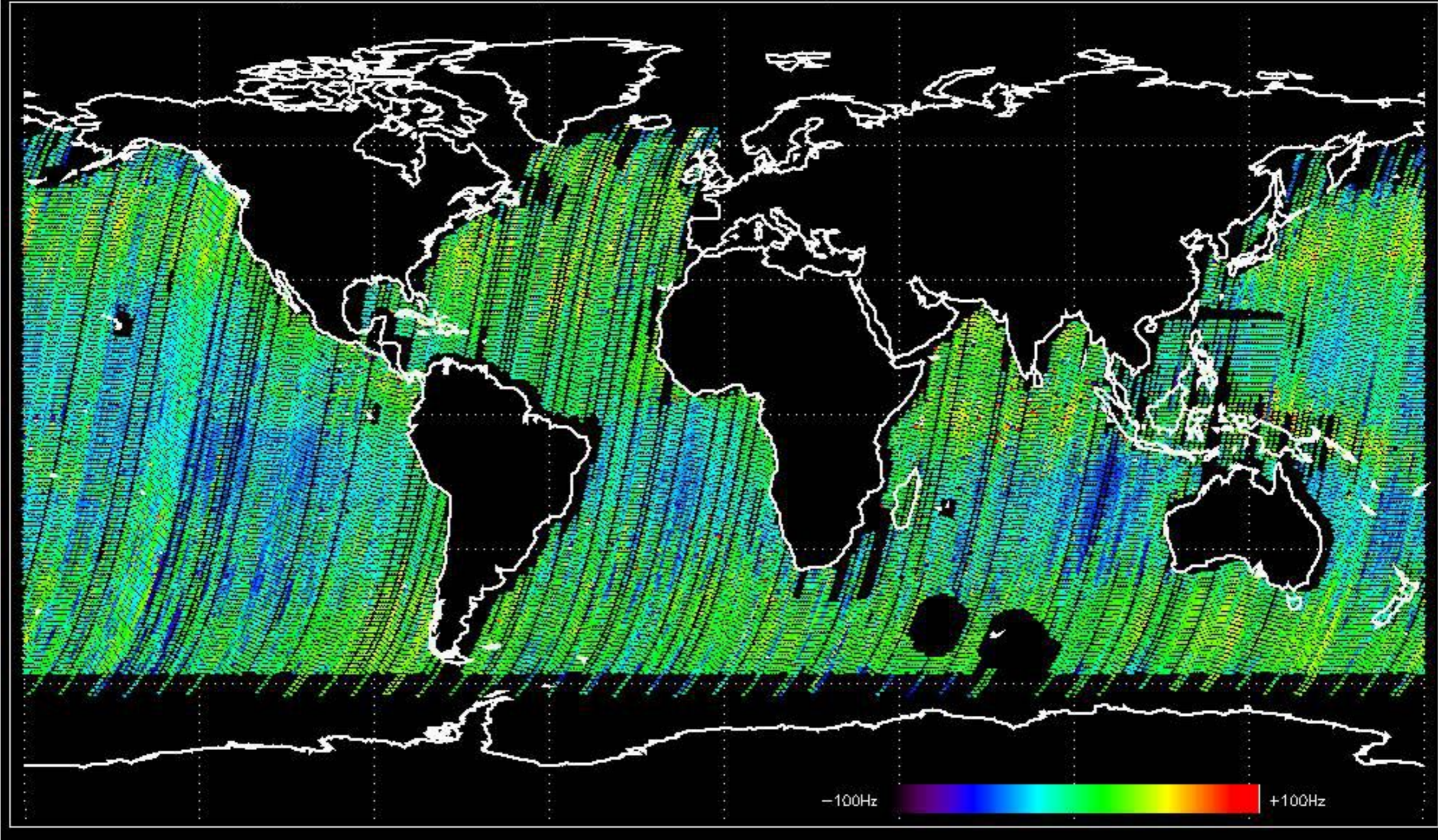
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -30.388738 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.289551 Hz

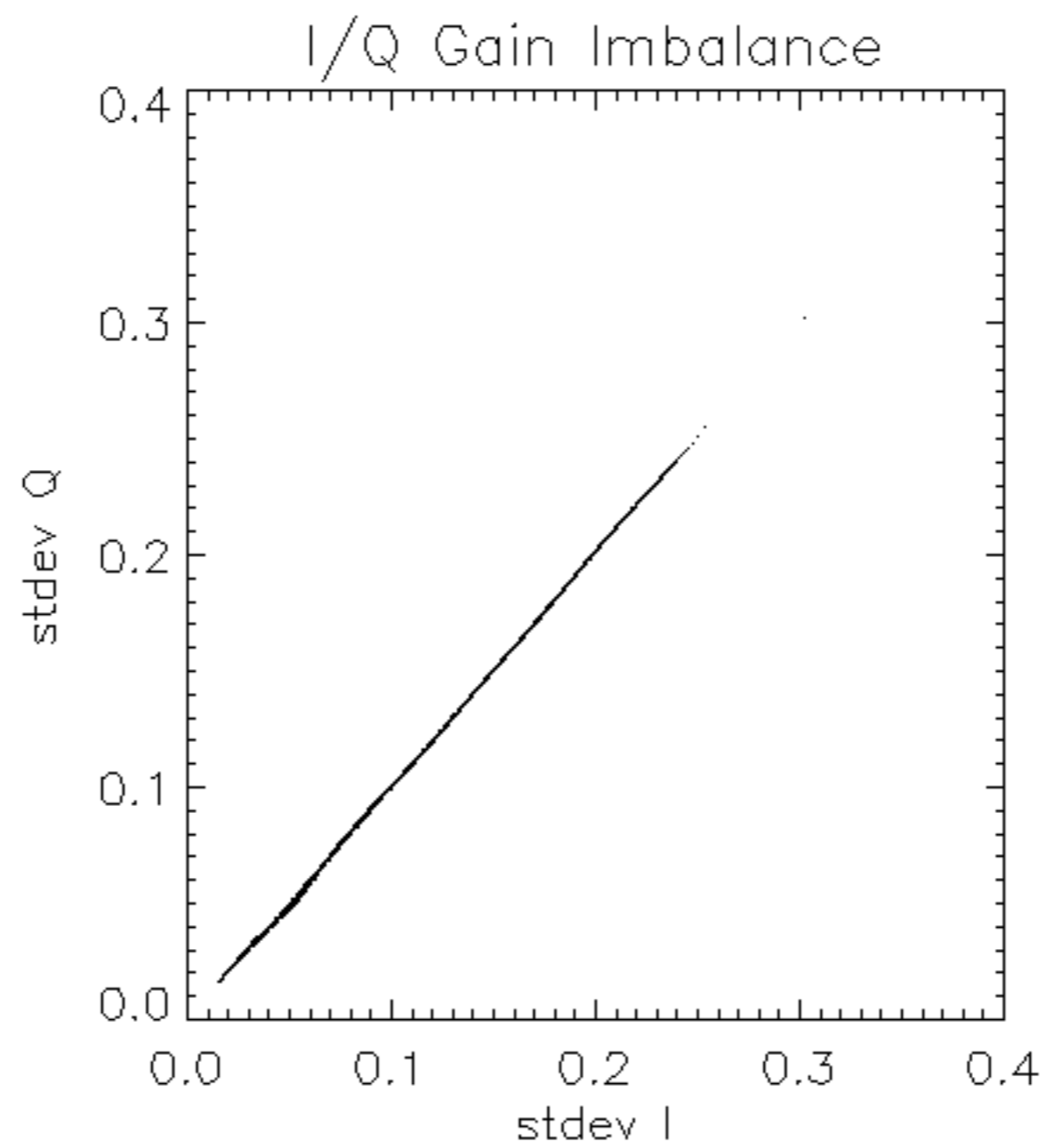


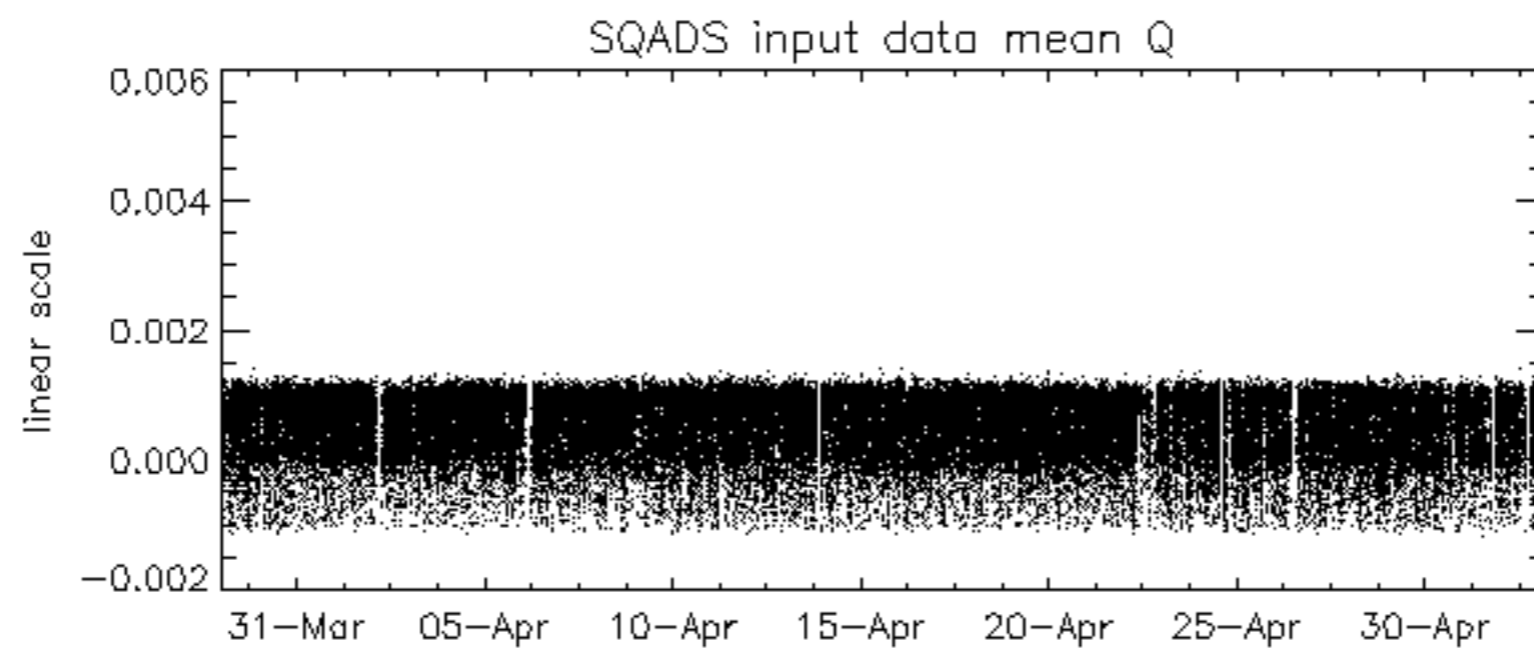
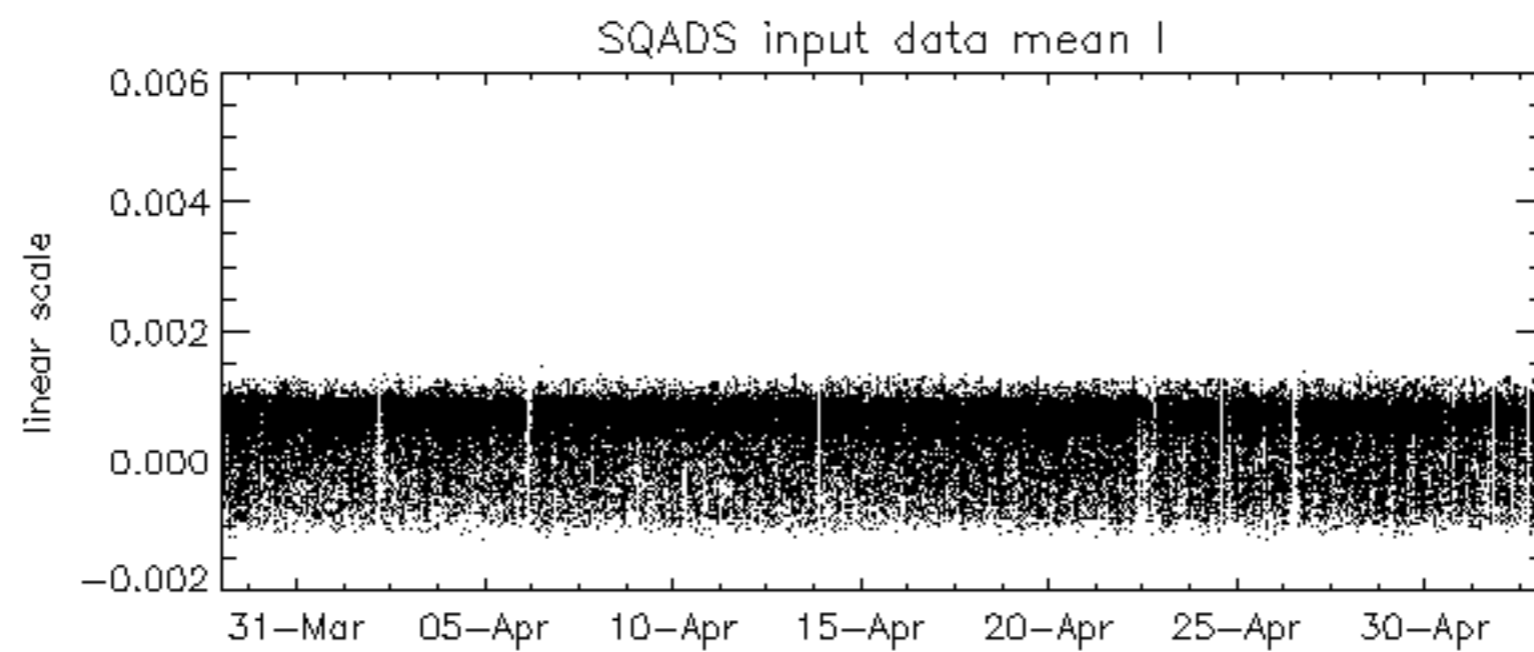
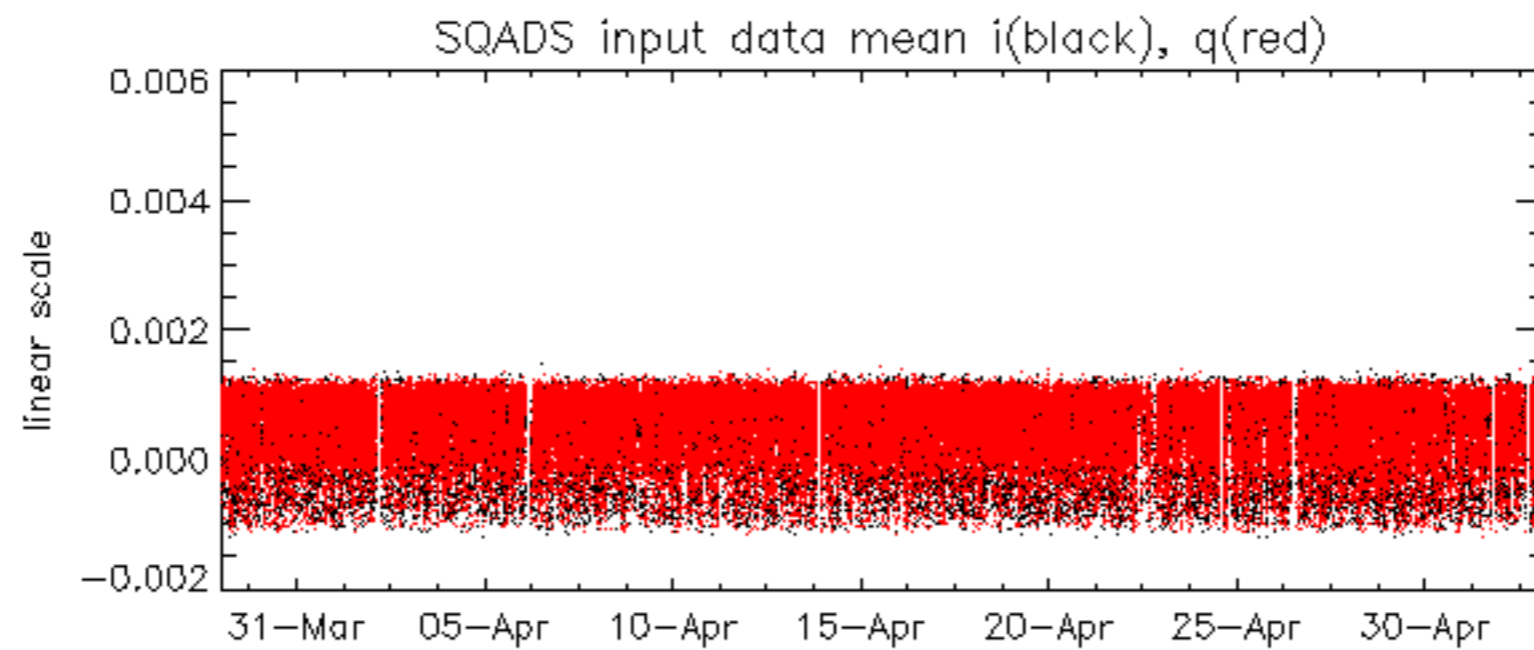
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.326296 Hz

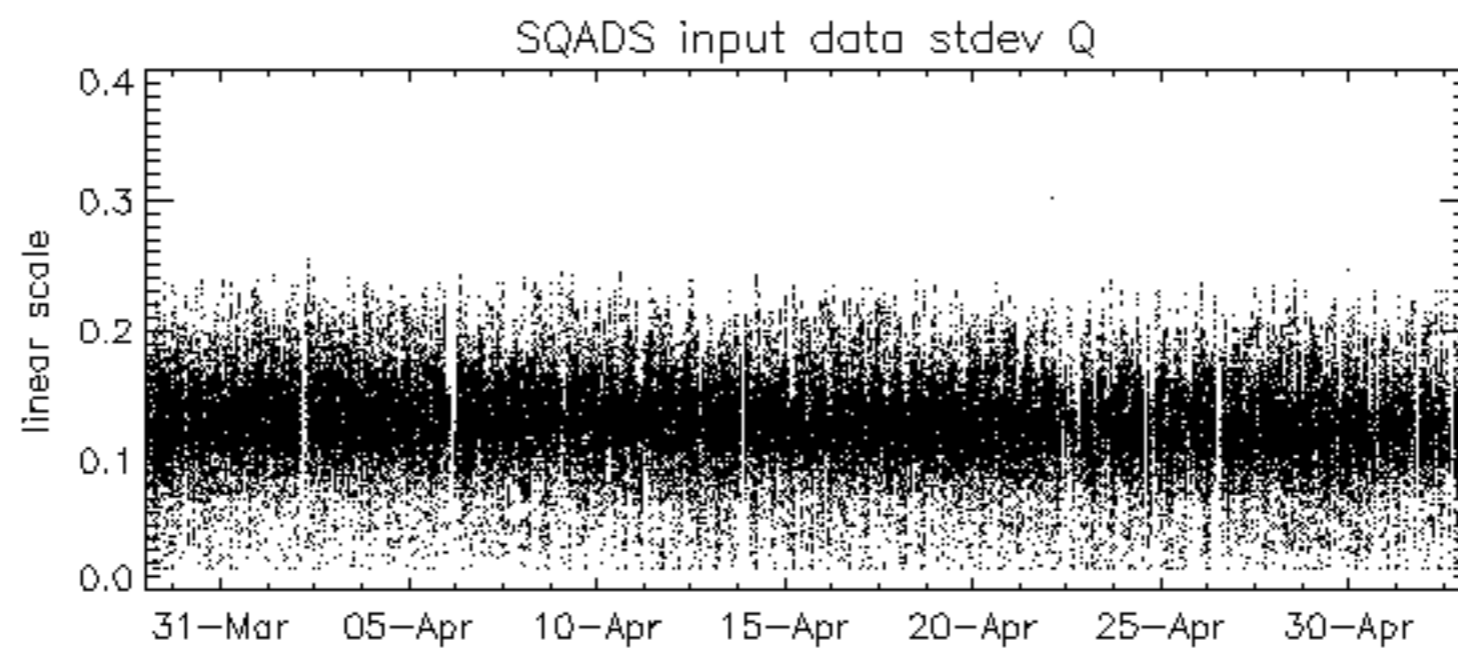
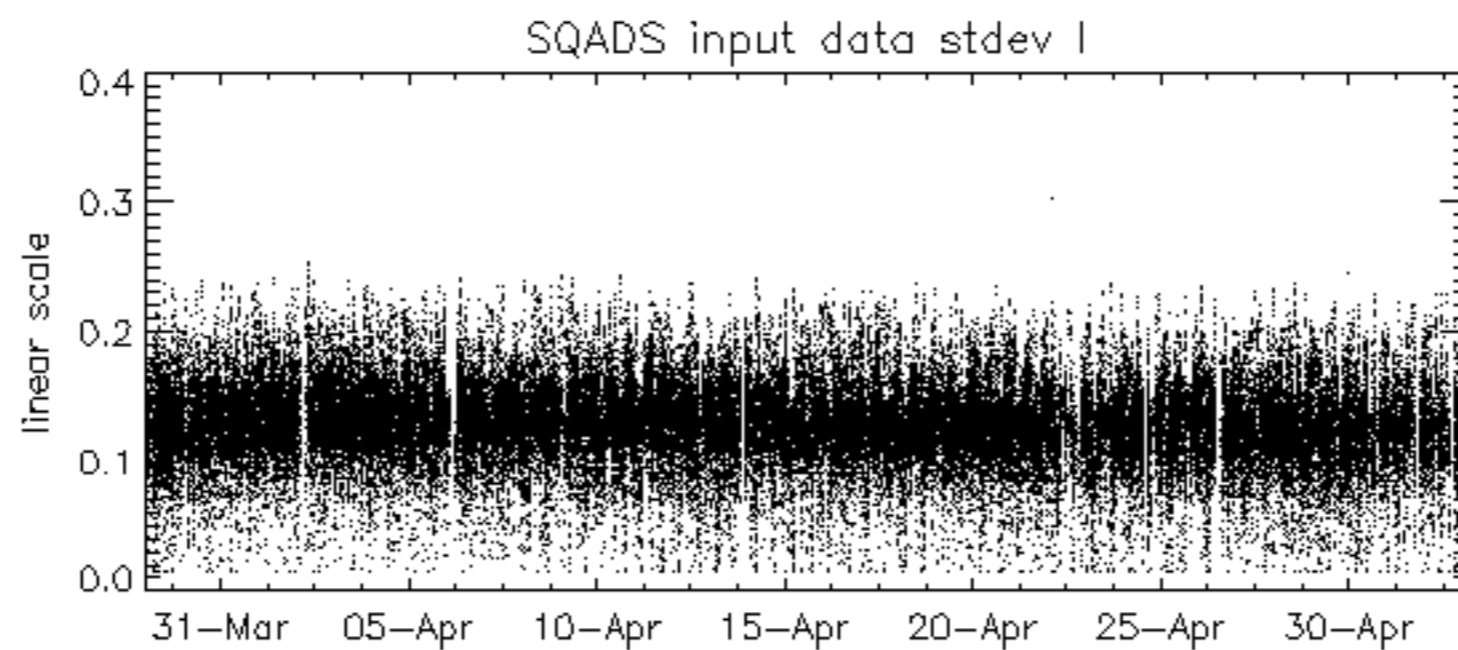
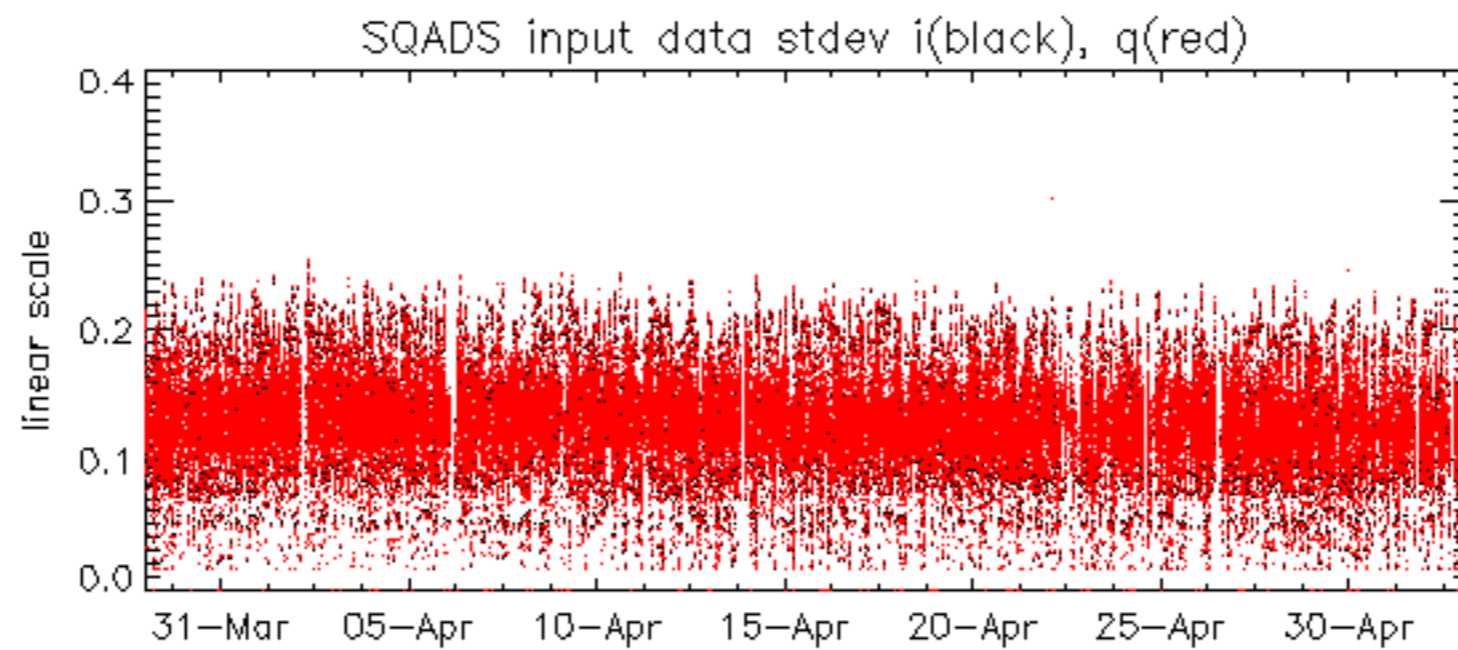


No anomalies observed on available MS products:

No anomalies observed.



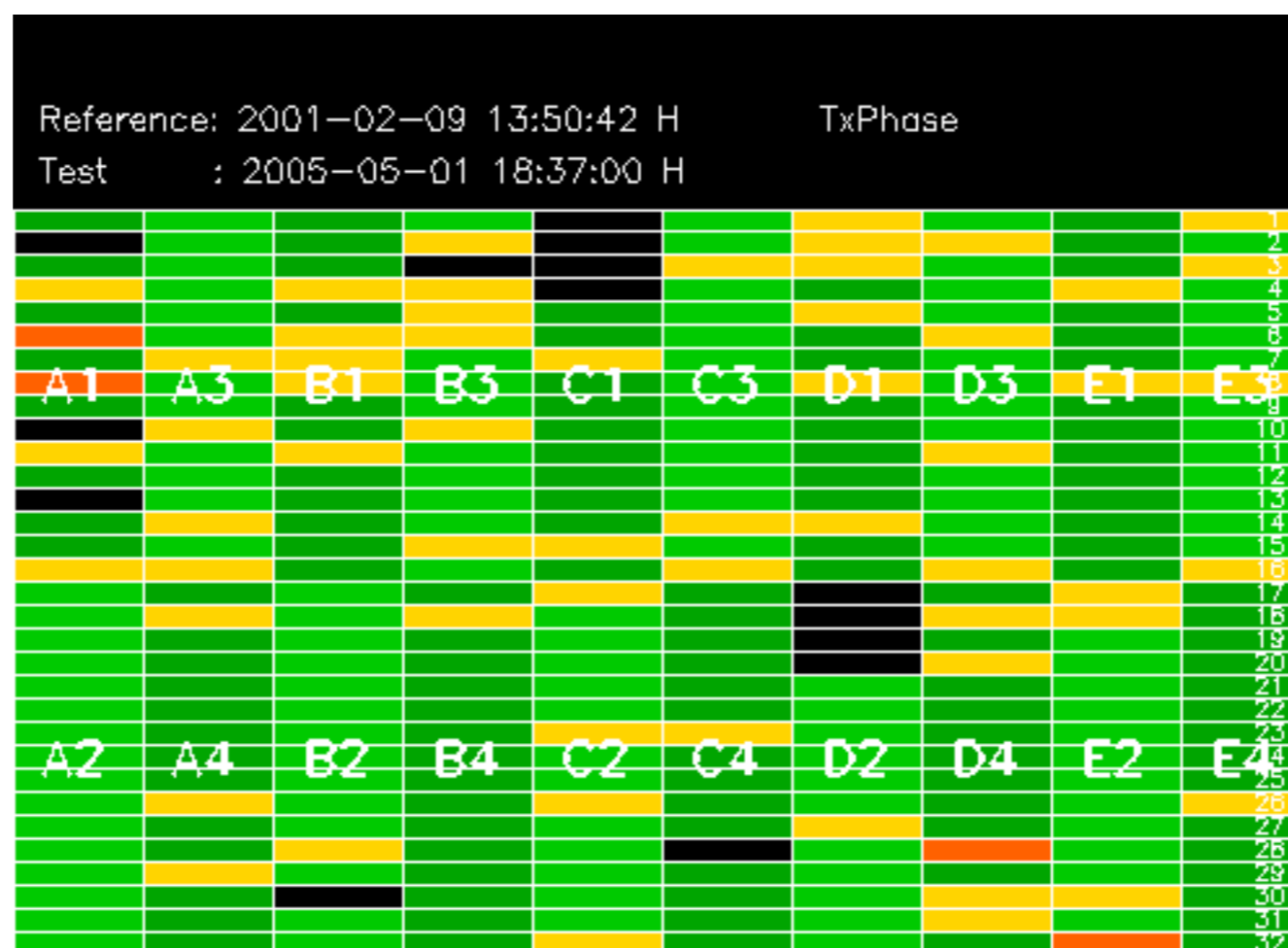


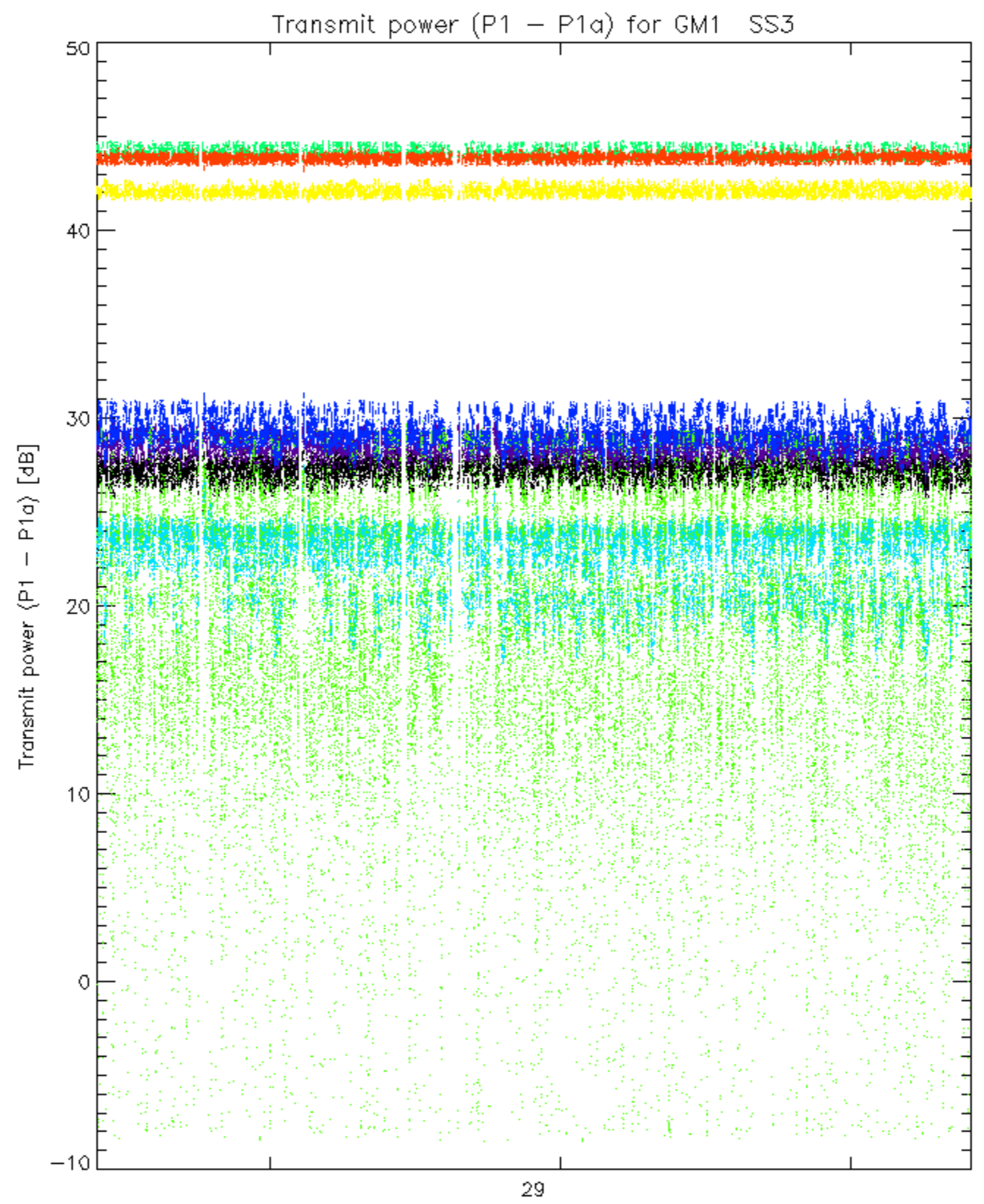


Summary of analysis for the last 3 days 2005050[123]

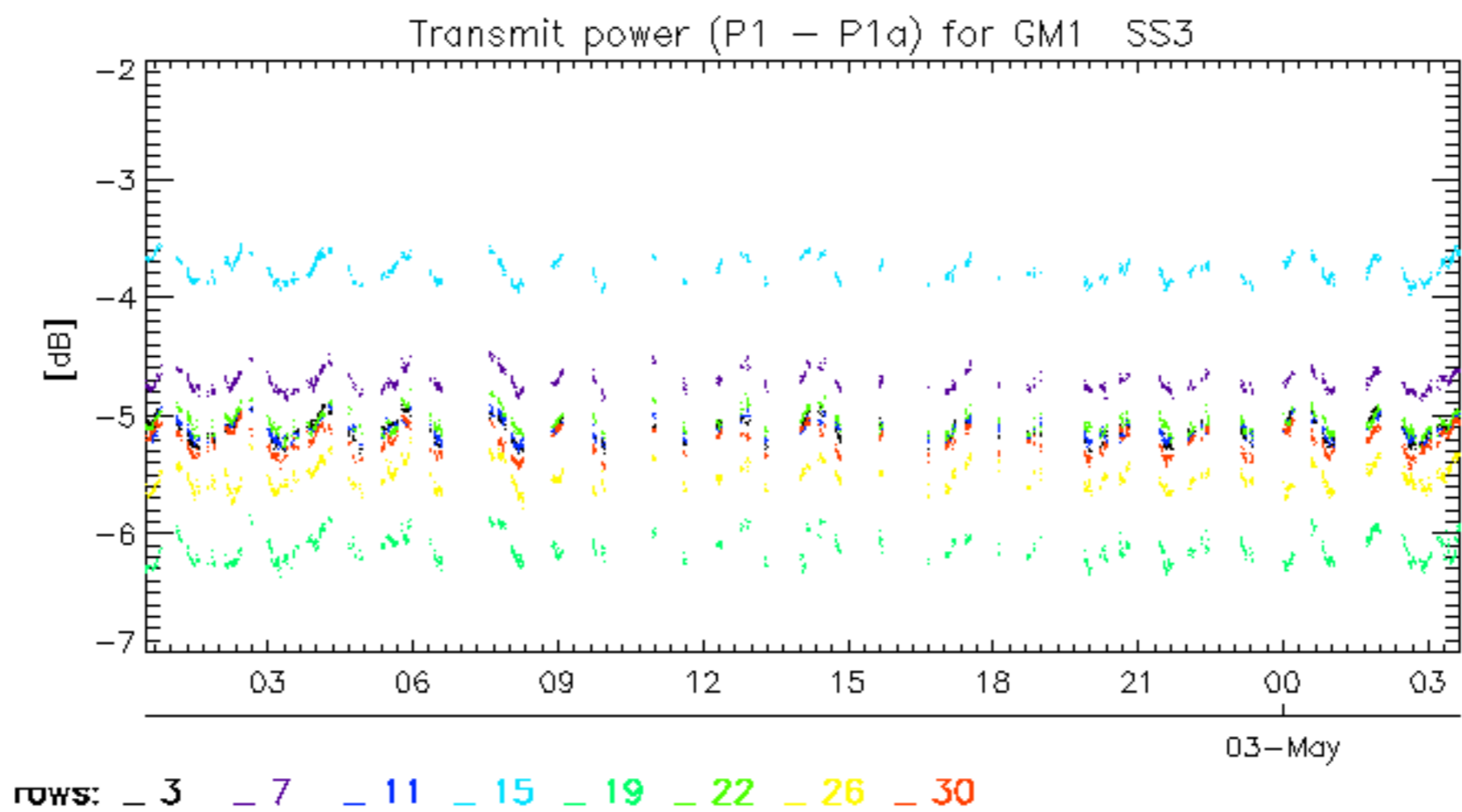
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

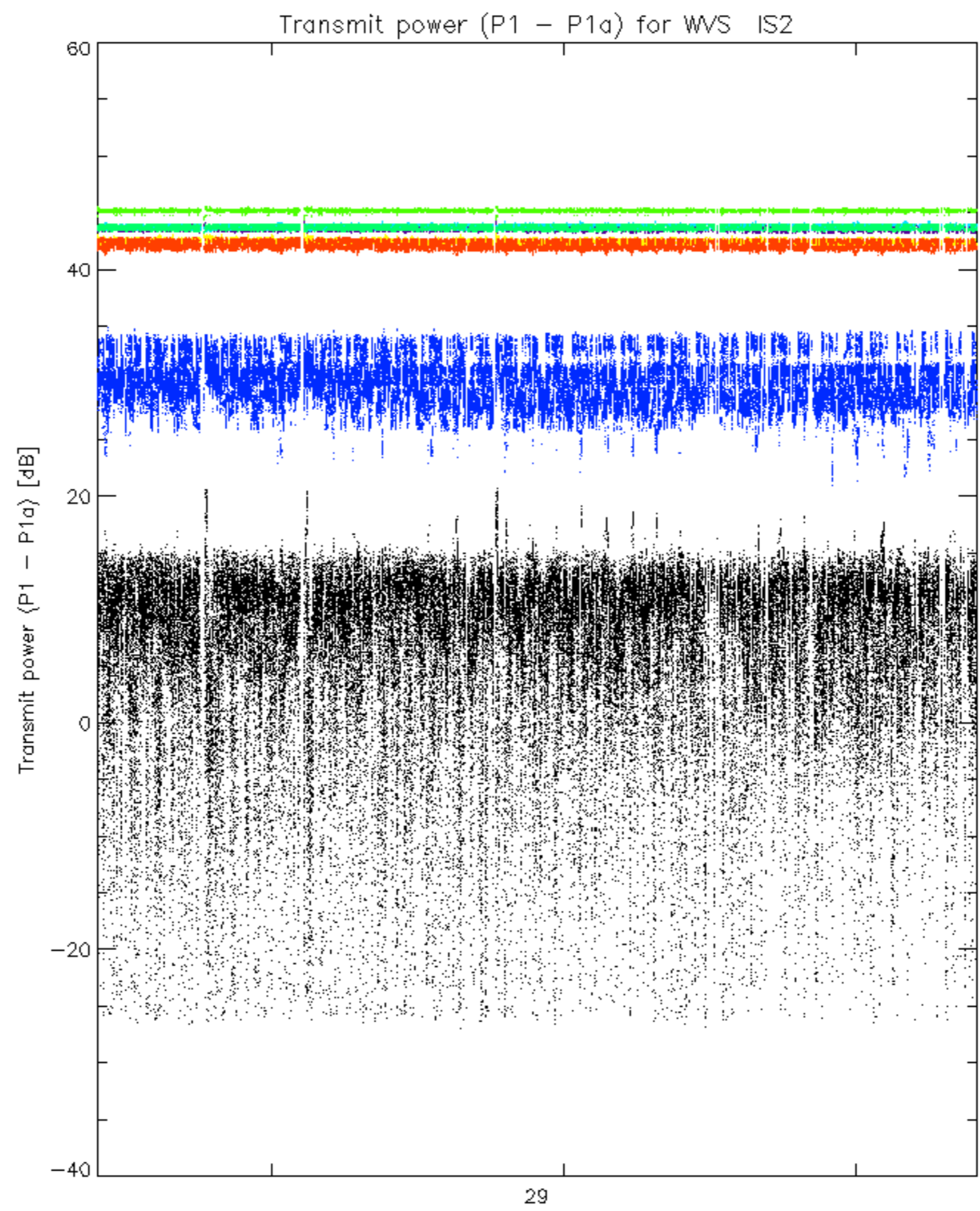
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050501_124044_000000372036_00482_16568_3555.N1	1	0
ASA_WSM_1PNPDE20050501_031250_000001282036_00476_16562_9906.N1	0	28
ASA_WSM_1PNPDE20050501_141216_000001282036_00483_16569_9791.N1	0	27



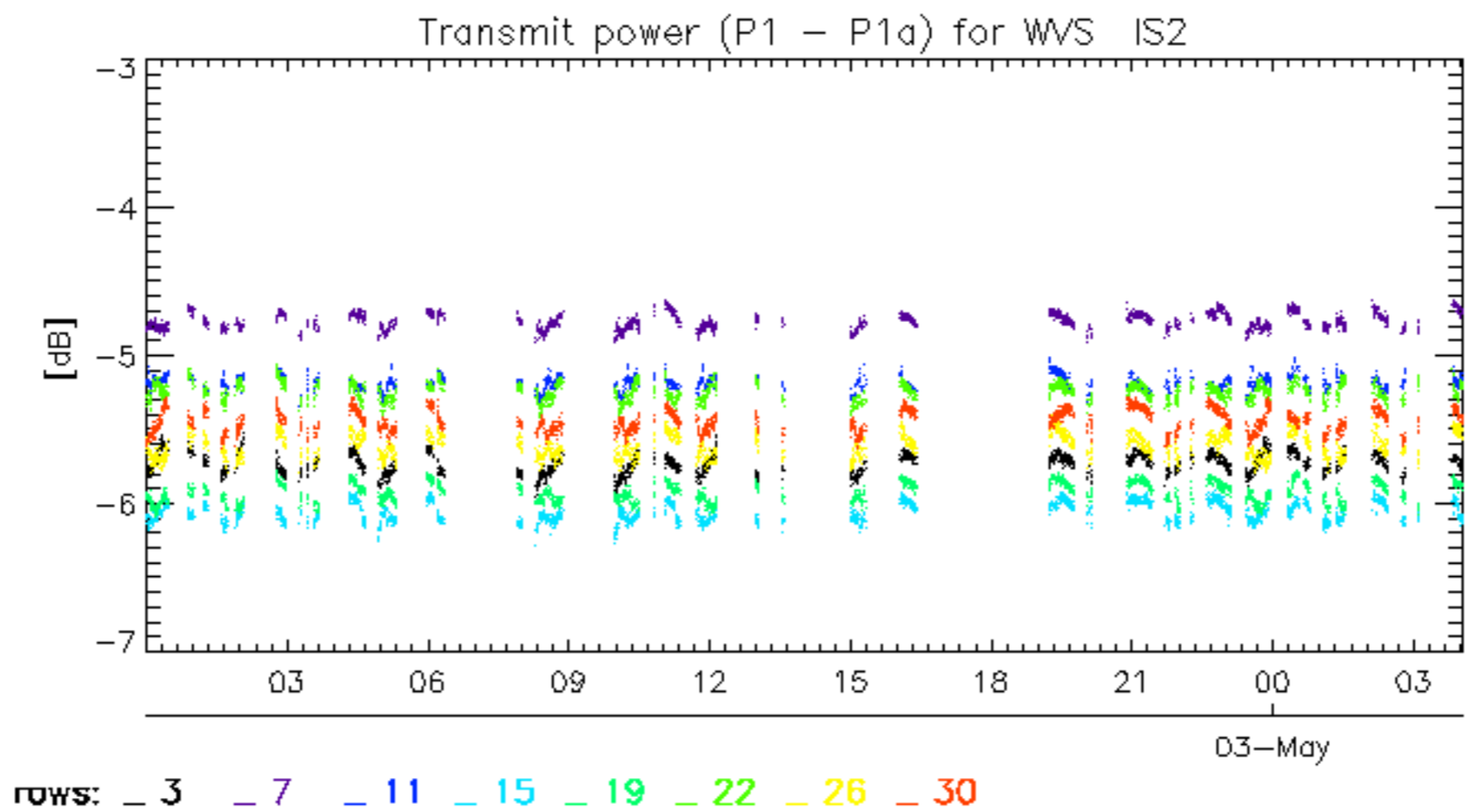


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.