

PRELIMINARY REPORT OF 050322

last update on Tue Mar 22 10:50:01 GMT 2005

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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 2005-03-21 00:00:00 to 2005-03-22 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	28	44	1	6	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	28	44	1	6	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	28	44	1	6	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	28	44	1	6	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	47	42	5	3	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	47	42	5	3	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	47	42	5	3	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	47	42	5	3	0

2.3 - Browse Visual Inspection

No anomalies observed from 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	20050320 053211
H	20050321 050034

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
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☒

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
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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	-3.359100	0.009913	0.046030
7	P1	-3.096492	0.007909	-0.021391
11	P1	-4.691453	0.025761	0.036792
15	P1	-5.652234	0.033599	0.045272
19	P1	-3.683086	0.003684	-0.019444
22	P1	-4.517358	0.012462	0.004281
26	P1	-4.945271	0.016460	0.033995
30	P1	-7.191813	0.018074	-0.007347
3	P1	-15.939405	0.170984	0.233127
7	P1	-15.523094	0.055429	-0.005175
11	P1	-20.966215	0.348970	-0.017709
15	P1	-11.578066	0.034214	0.010378
19	P1	-14.294753	0.023498	-0.053691
22	P1	-15.646033	0.306570	0.053355
26	P1	-17.606634	0.214118	-0.016385
30	P1	-17.968803	0.465964	-0.002596

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.088953	0.082913	0.067445
7	P2	-22.276730	0.094832	0.077515
11	P2	-14.408597	0.106310	0.224143
15	P2	-7.044337	0.091199	0.021084
19	P2	-9.633820	0.092947	0.025531
22	P2	-16.919153	0.092926	0.058965
26	P2	-16.445059	0.091779	0.023709
30	P2	-18.860737	0.082441	0.074389

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.165359	0.005002	0.012305
7	P3	-8.165359	0.005002	0.012305
11	P3	-8.165359	0.005002	0.012305
15	P3	-8.165359	0.005002	0.012305
19	P3	-8.165359	0.005002	0.012305
22	P3	-8.165359	0.005002	0.012305
26	P3	-8.165359	0.005002	0.012305
30	P3	-8.165359	0.005002	0.012305

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-2.720796	0.019150	0.062418
7	P1	-3.024042	0.040733	0.012860
11	P1	-3.987742	0.021021	0.033695
15	P1	-3.564825	0.025165	0.064242
19	P1	-3.594339	0.013252	-0.014534
22	P1	-5.747551	0.034887	0.031167
26	P1	-7.290874	0.025028	0.003515
30	P1	-6.227640	0.044181	-0.005298
3	P1	-10.728475	0.116095	0.146808
7	P1	-10.329630	0.160114	-0.043973
11	P1	-12.546943	0.115601	0.111809
15	P1	-11.752780	0.086341	0.102987
19	P1	-15.566577	0.043421	0.005488
22	P1	-24.505844	1.162316	-0.340954

26	P1	-15.483934	0.169328	-0.016376
30	P1	-20.220100	1.155672	0.003826

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.797213	0.033291	0.086639
7	P2	-22.362516	0.037449	0.097215
11	P2	-10.177251	0.049365	0.173986
15	P2	-4.980394	0.021435	0.000079
19	P2	-6.829705	0.031793	0.012363
22	P2	-7.096944	0.030897	0.069342
26	P2	-23.850084	0.027357	0.021241
30	P2	-21.897285	0.032758	0.037208

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.998712	0.002766	0.012310
7	P3	-7.998711	0.002770	0.011836
11	P3	-7.998627	0.002788	0.012189
15	P3	-7.998783	0.002776	0.012373
19	P3	-7.998676	0.002783	0.011875
22	P3	-7.998686	0.002768	0.011694
26	P3	-7.998671	0.002773	0.012055
30	P3	-7.998671	0.002782	0.012309

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	0.000454859
	stdev	2.25614e-07
MEAN Q	mean	0.000487718
	stdev	2.35583e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128050
	stdev	0.00104022
STDEV Q	mean	0.128297
	stdev	0.00105146



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005032[012]

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
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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

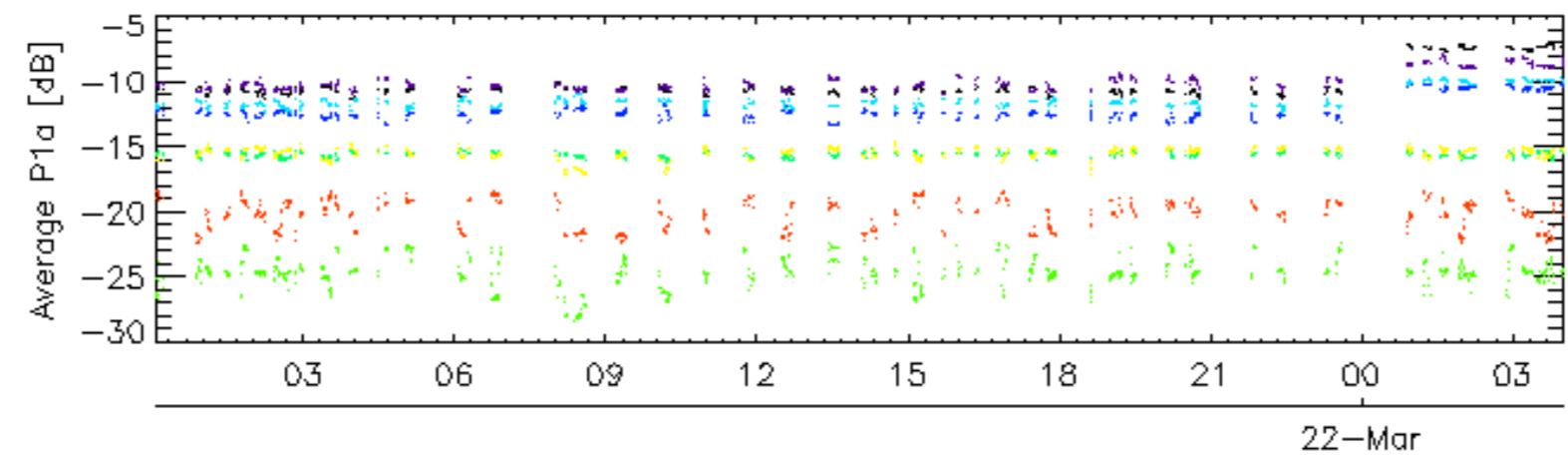
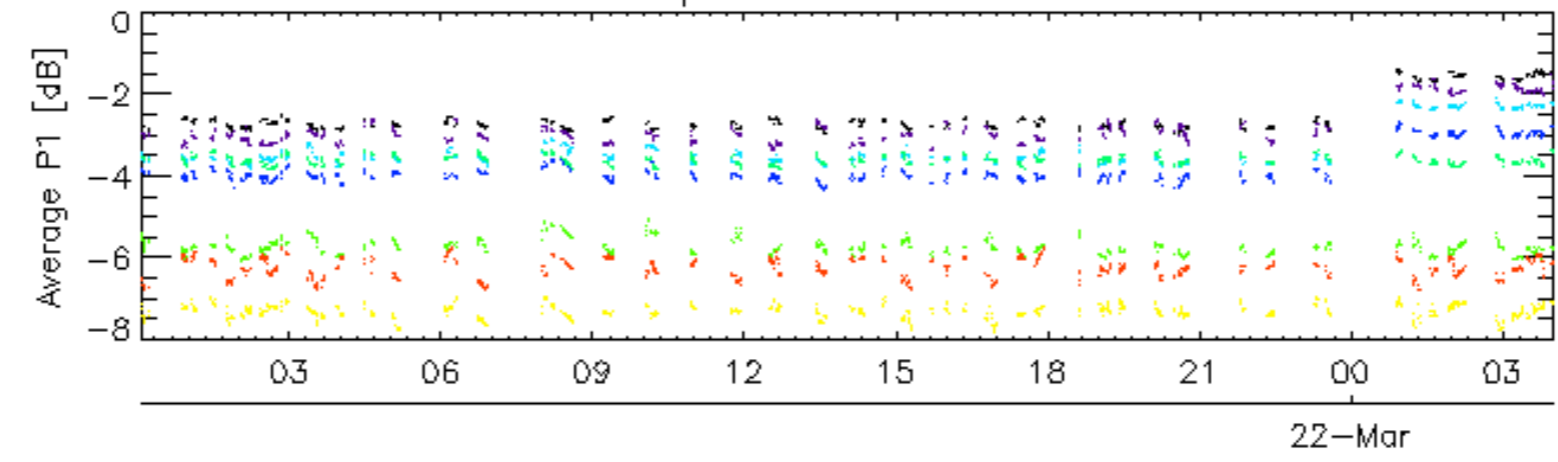
Ascending

Descending

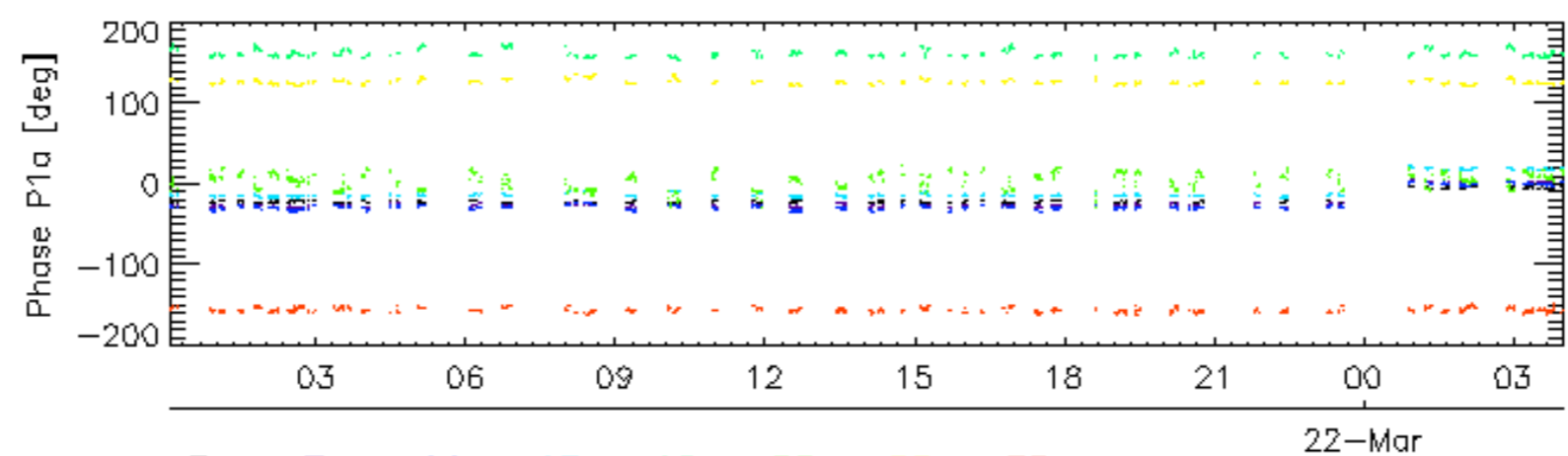
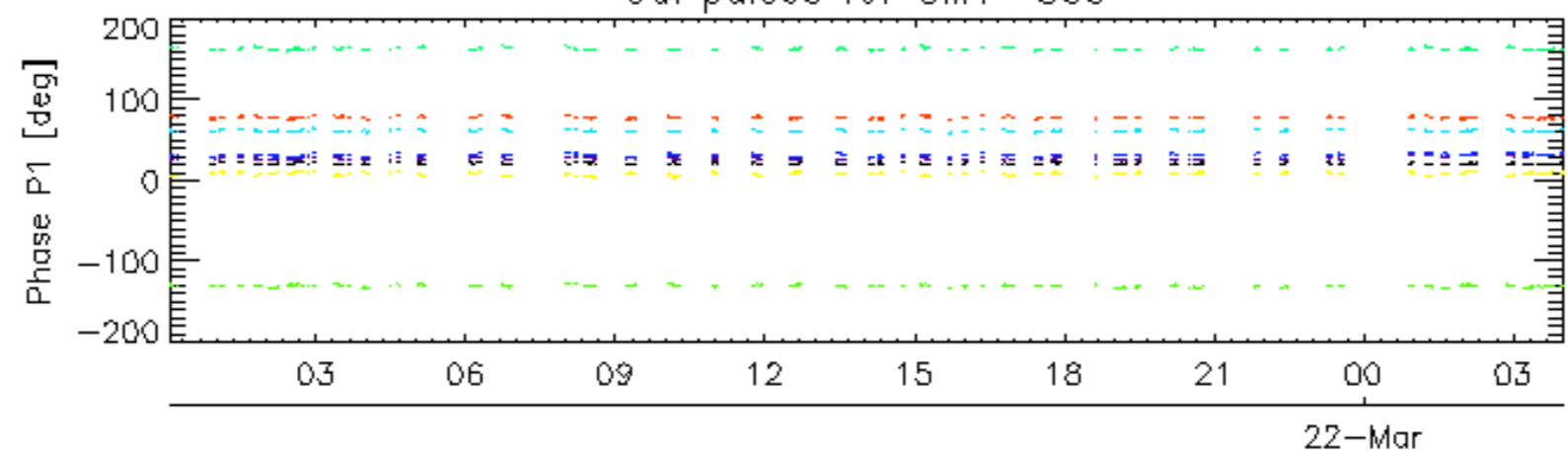
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

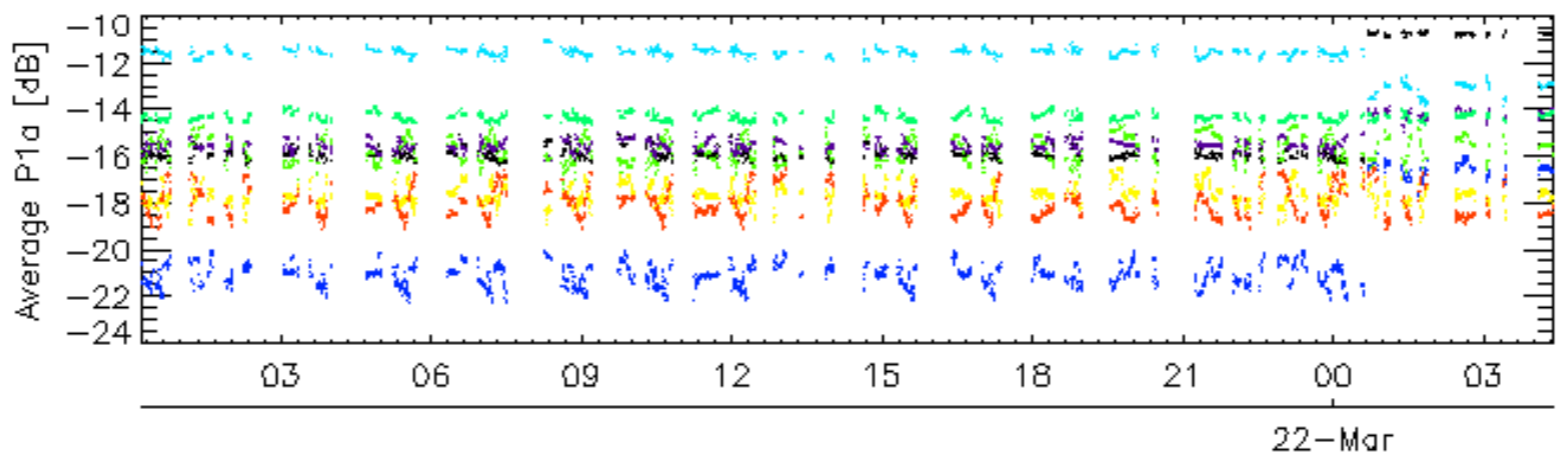
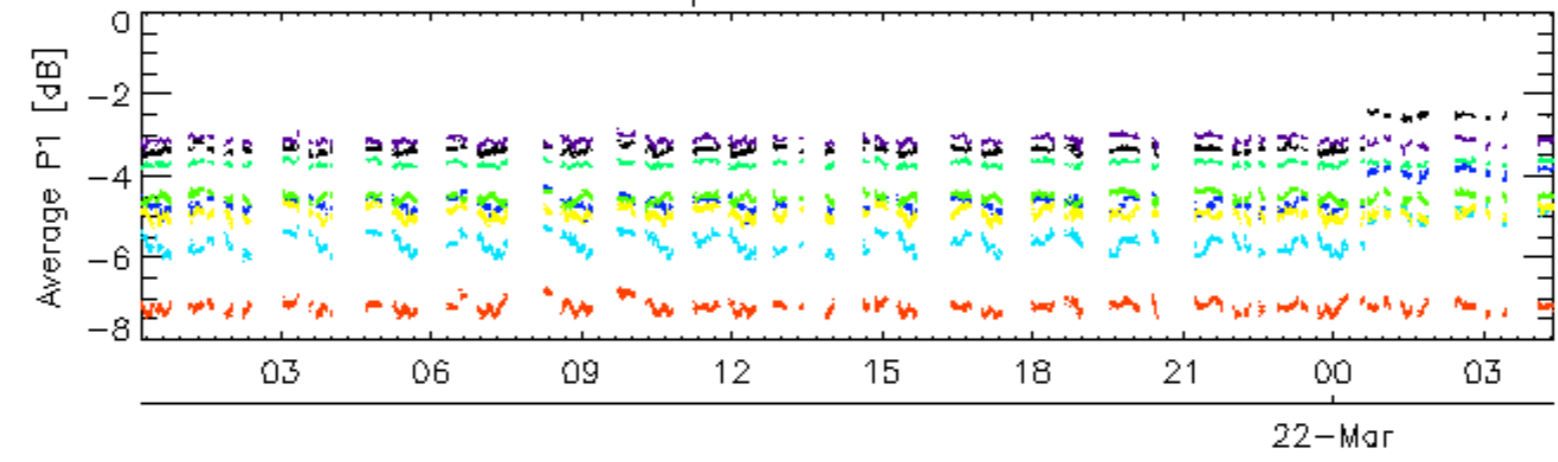


Cal pulses for GM1 SS3

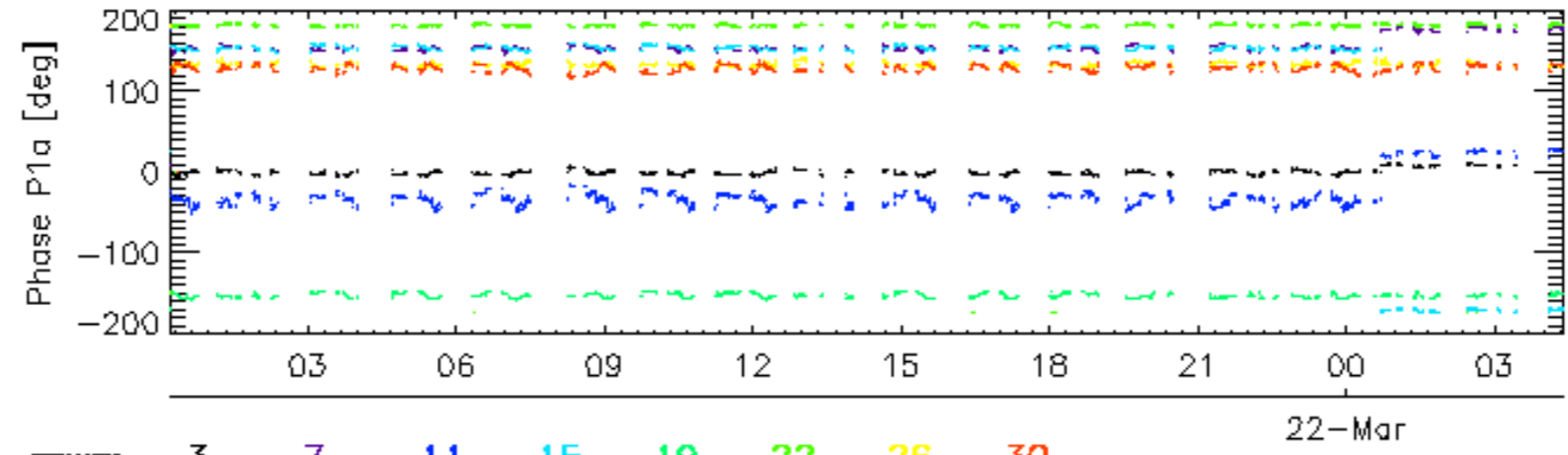
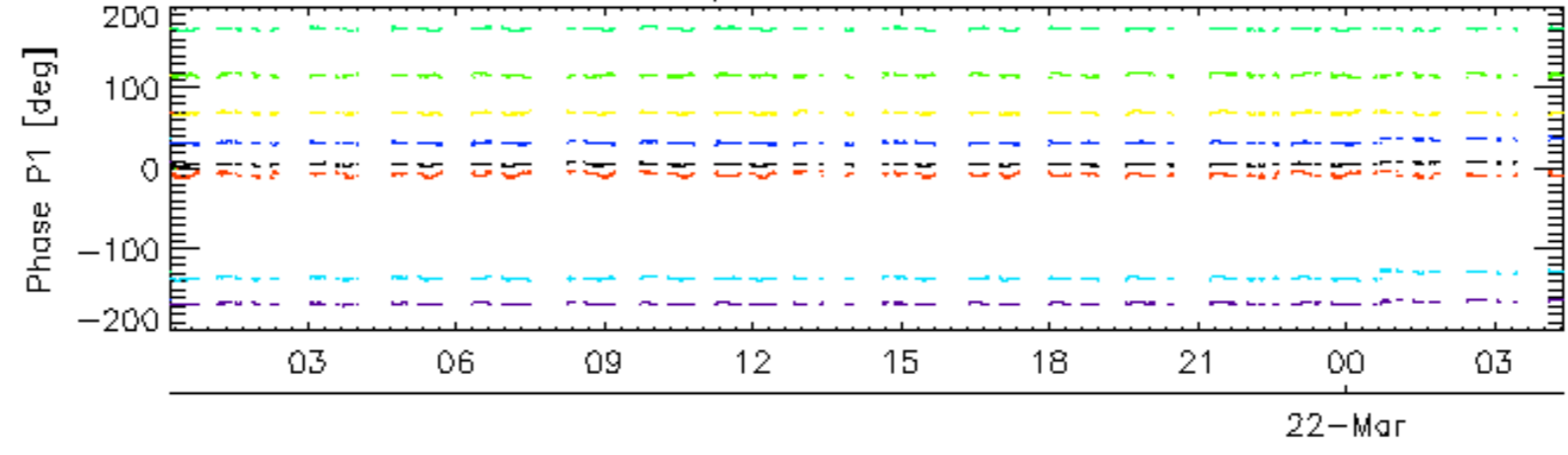


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

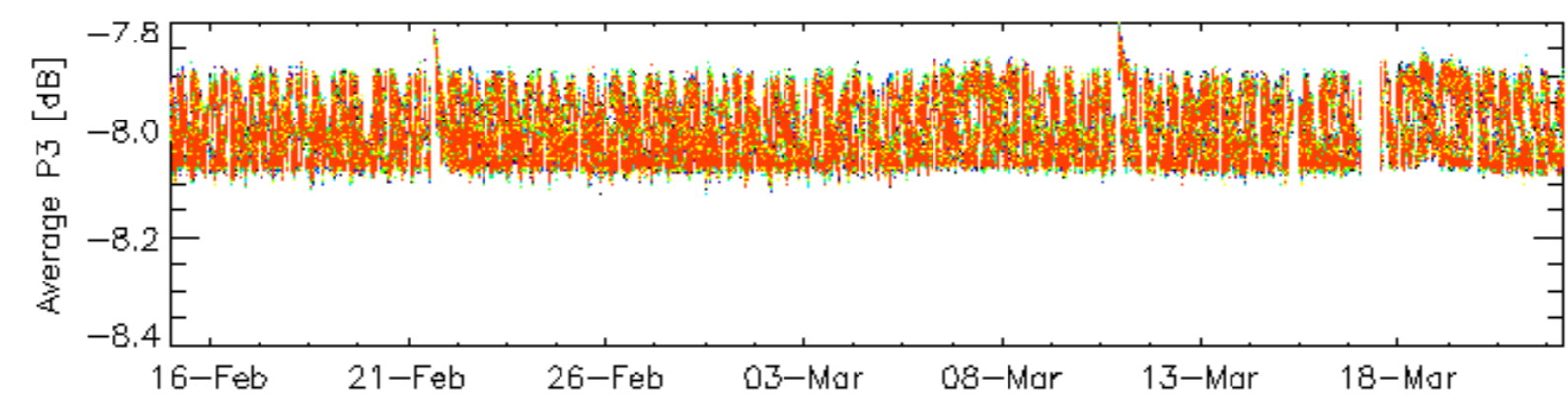
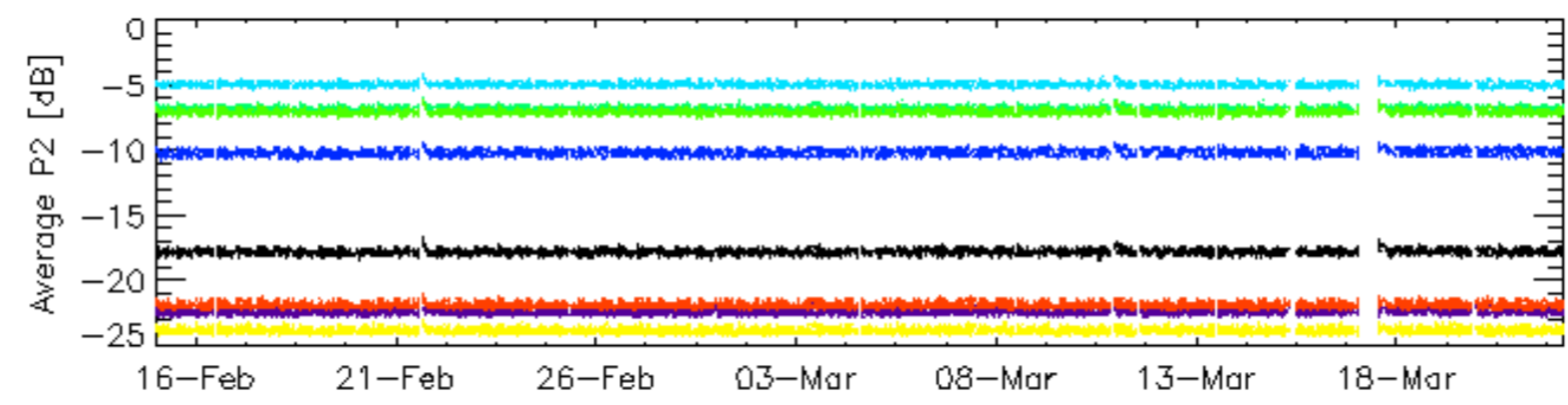
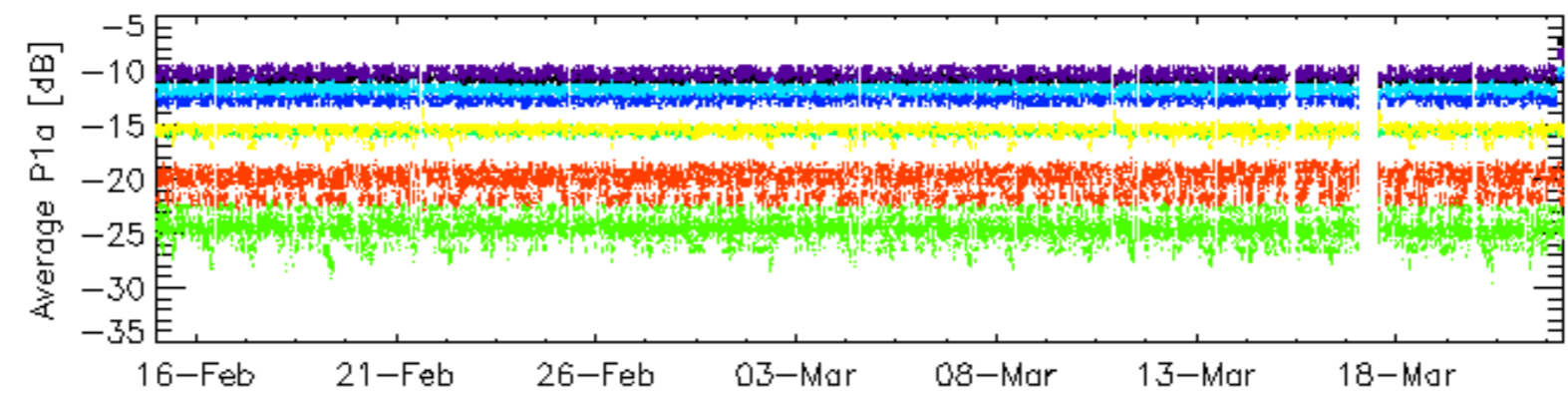
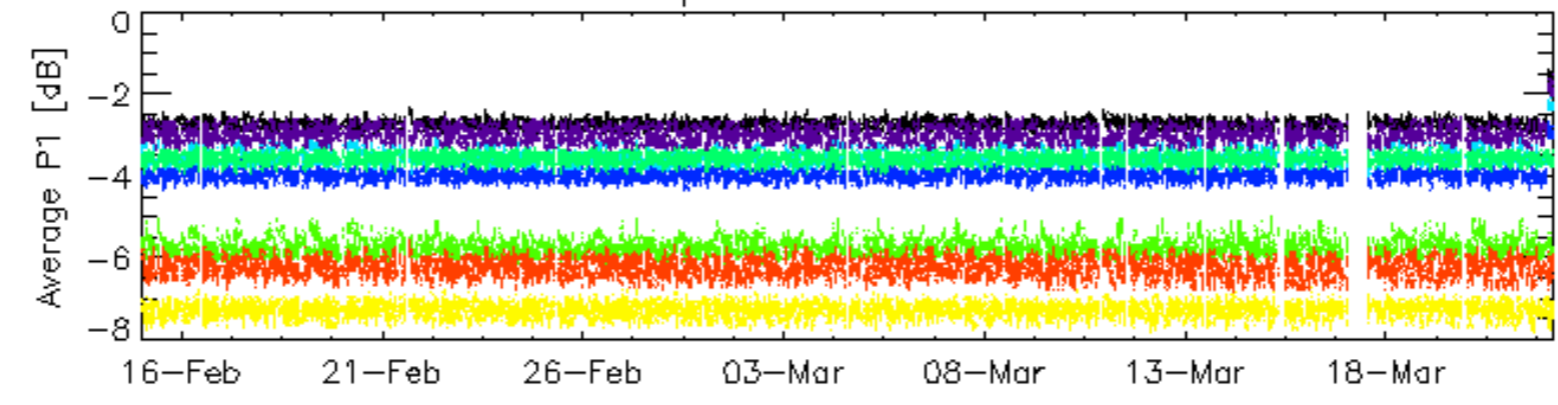


Cal pulses for WVS IS2



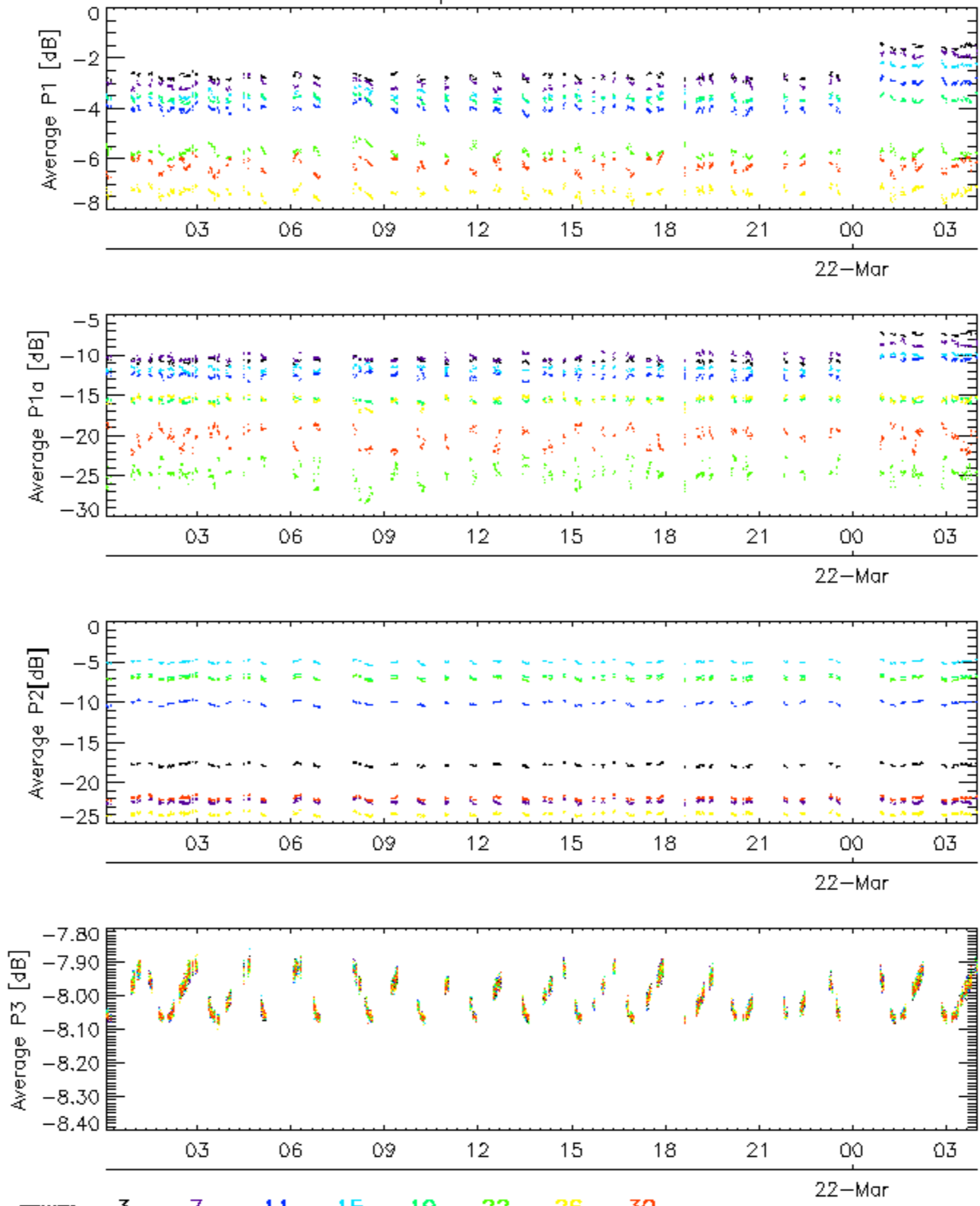
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

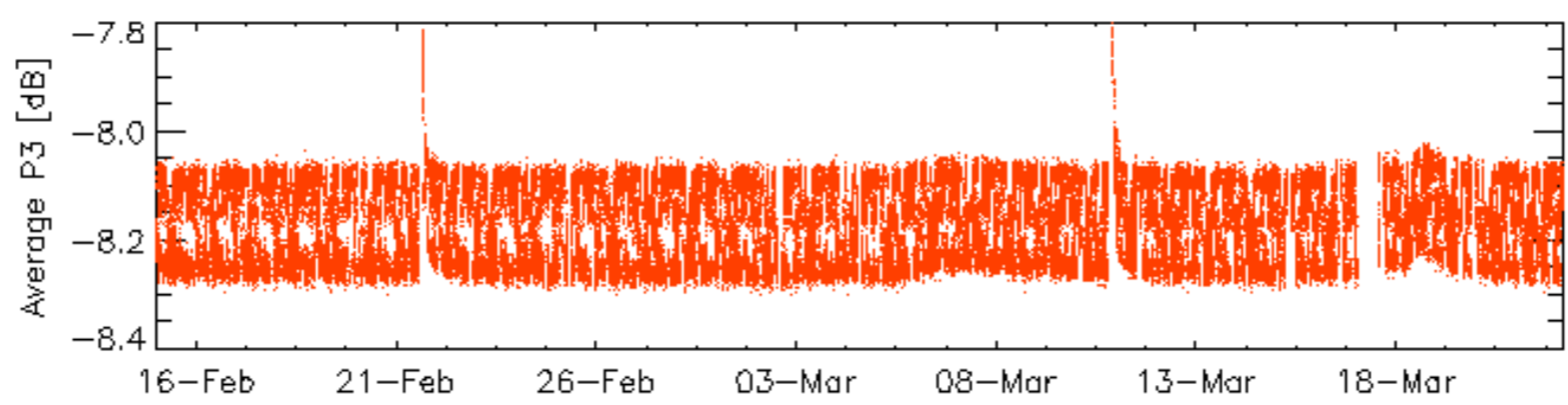
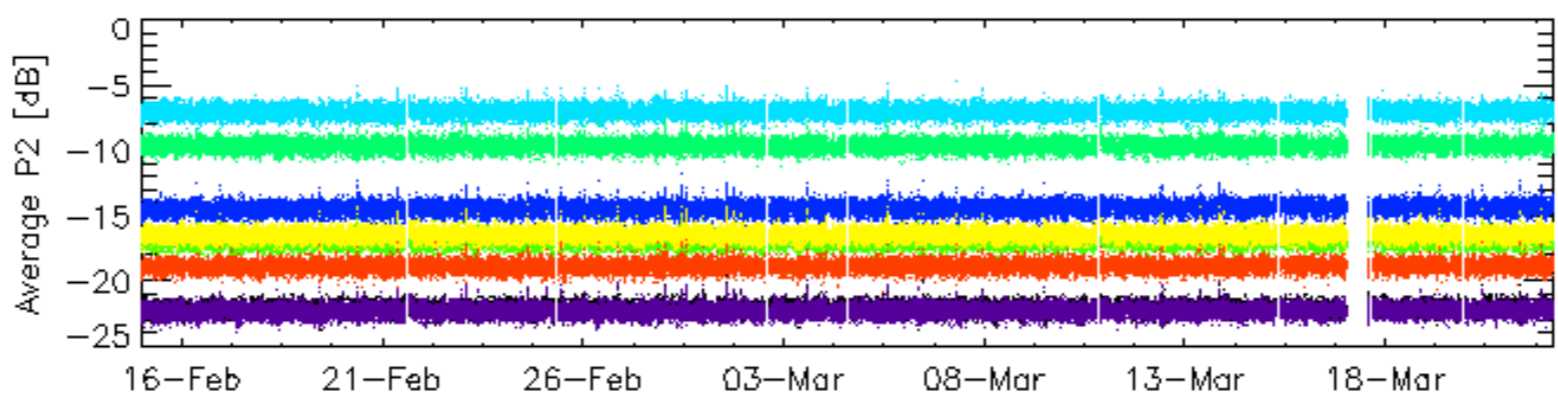
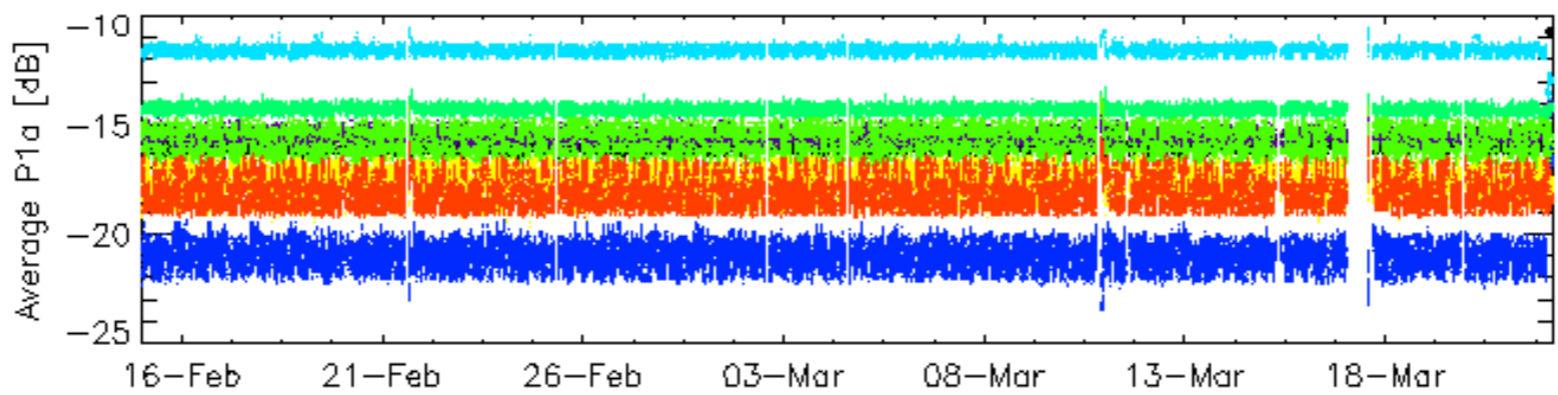
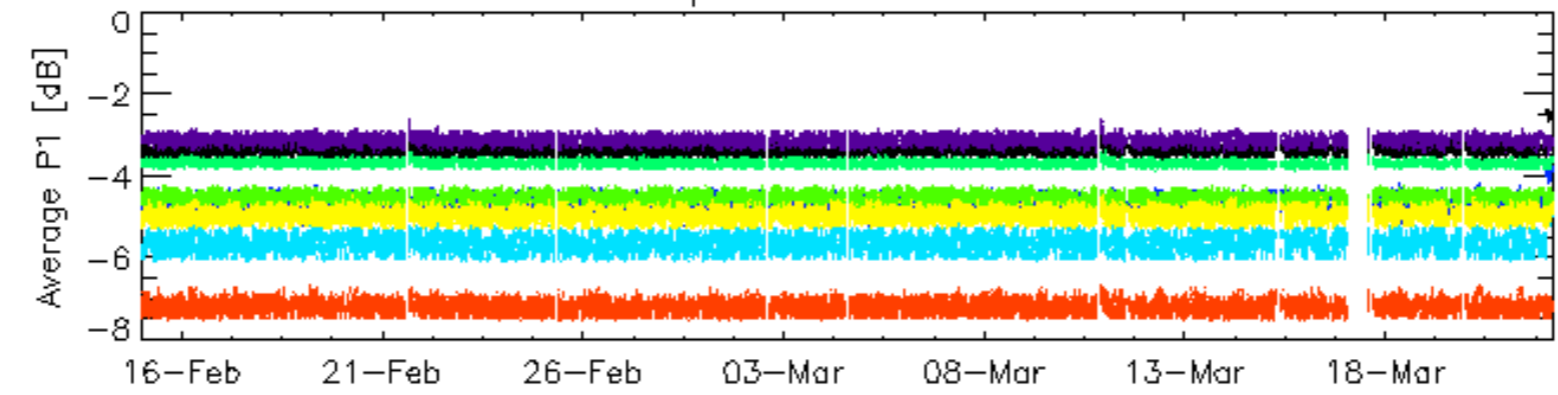


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

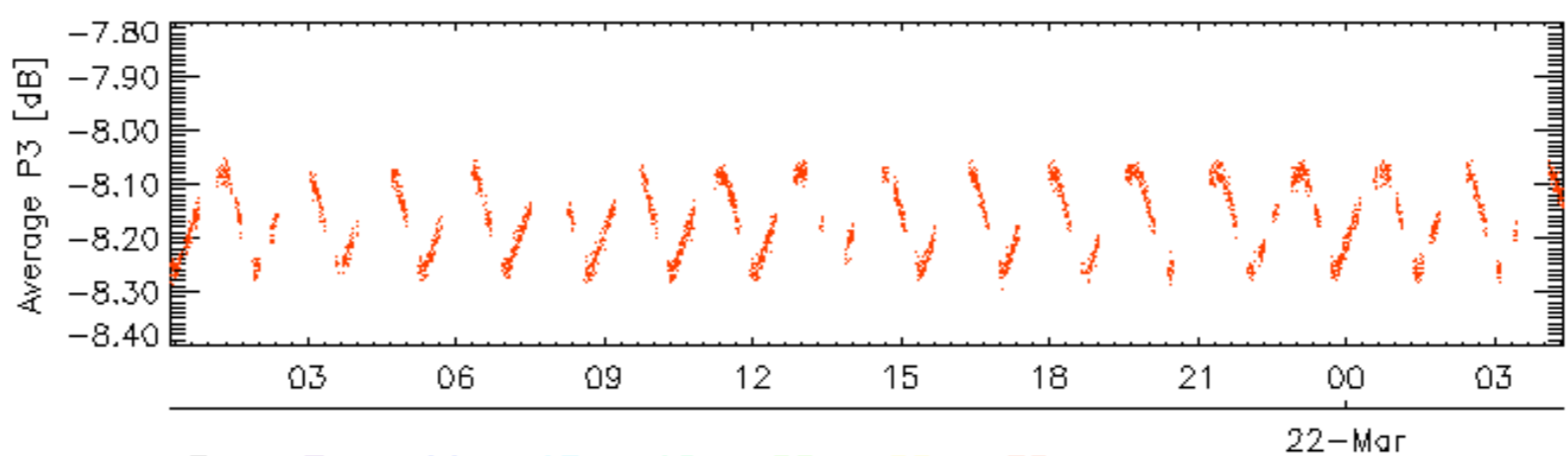
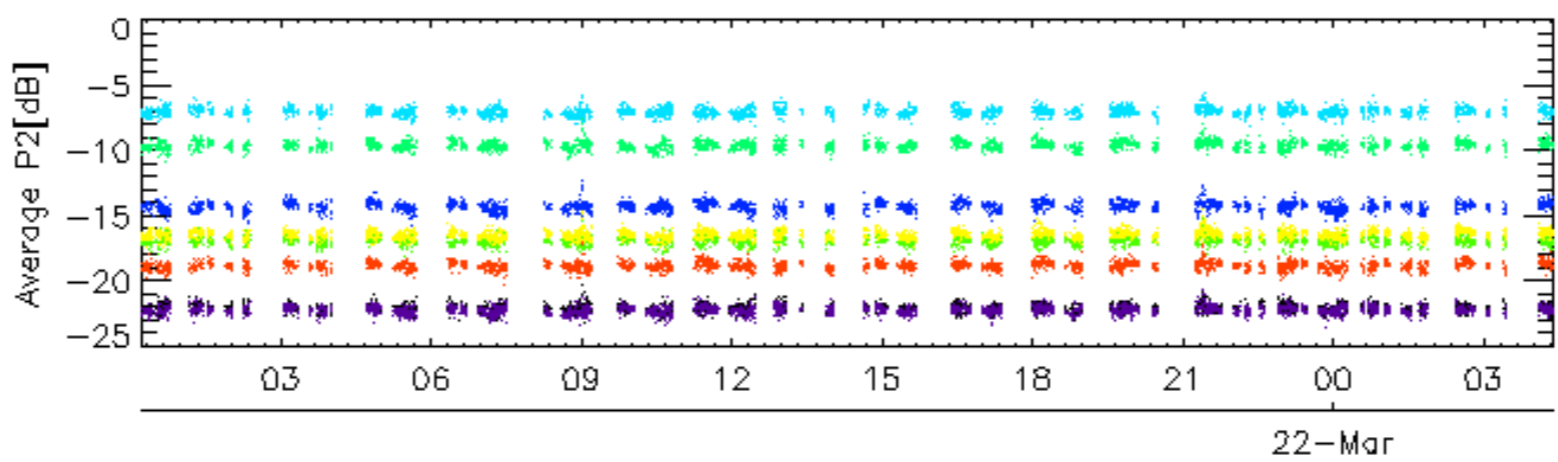
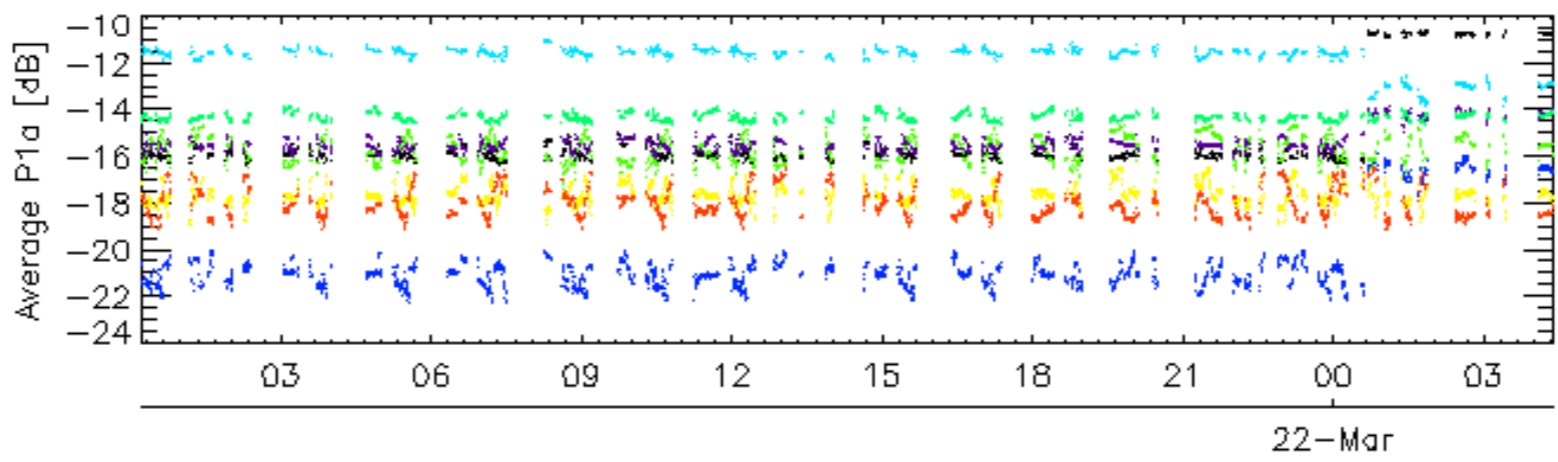
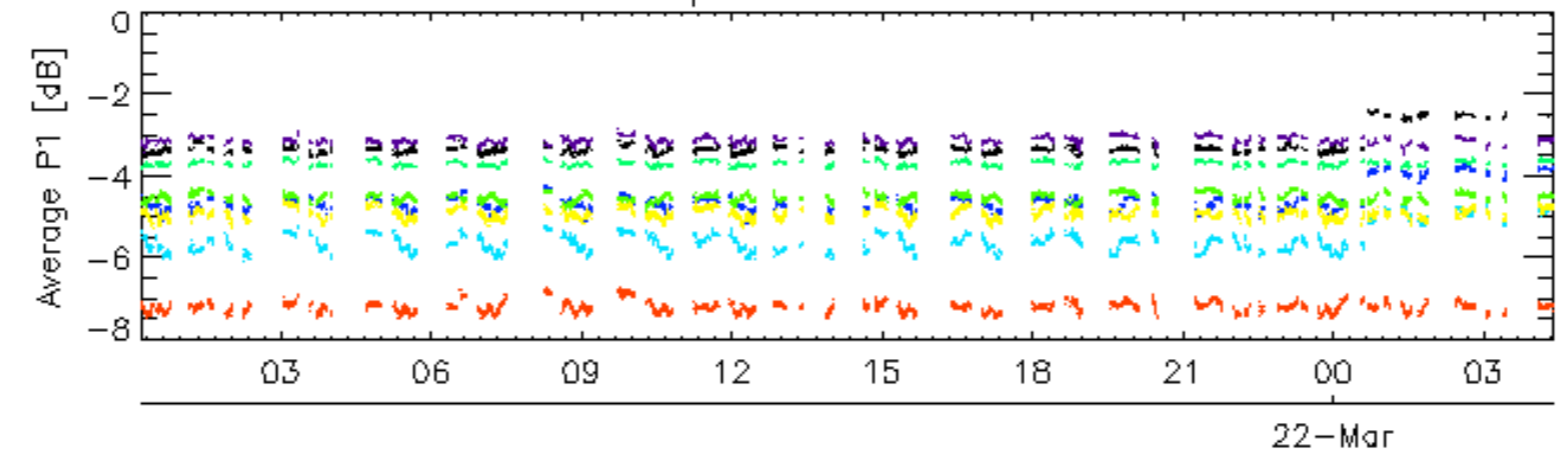


Cal pulses for WVS IS2



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

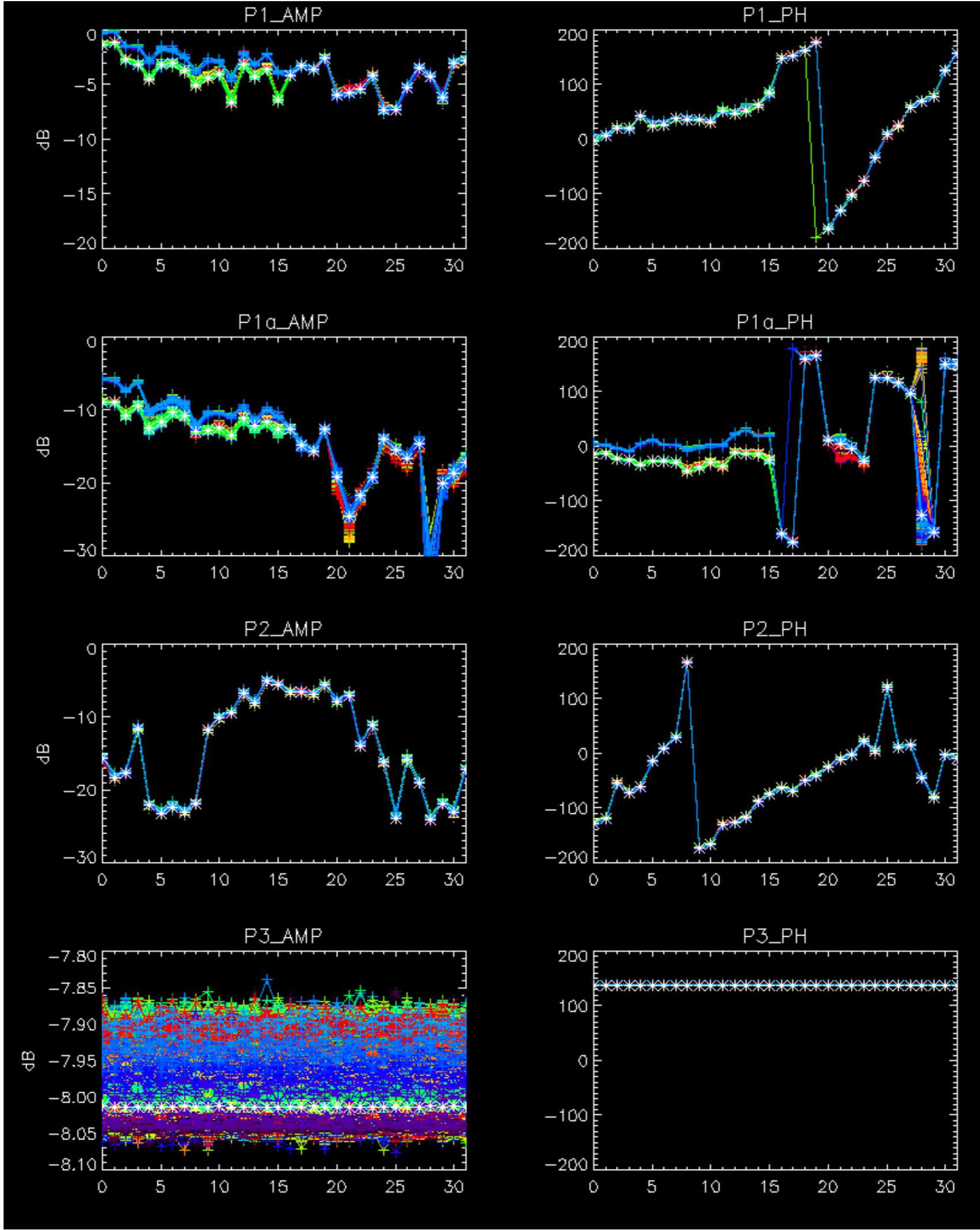
Cal pulses for WVS IS2

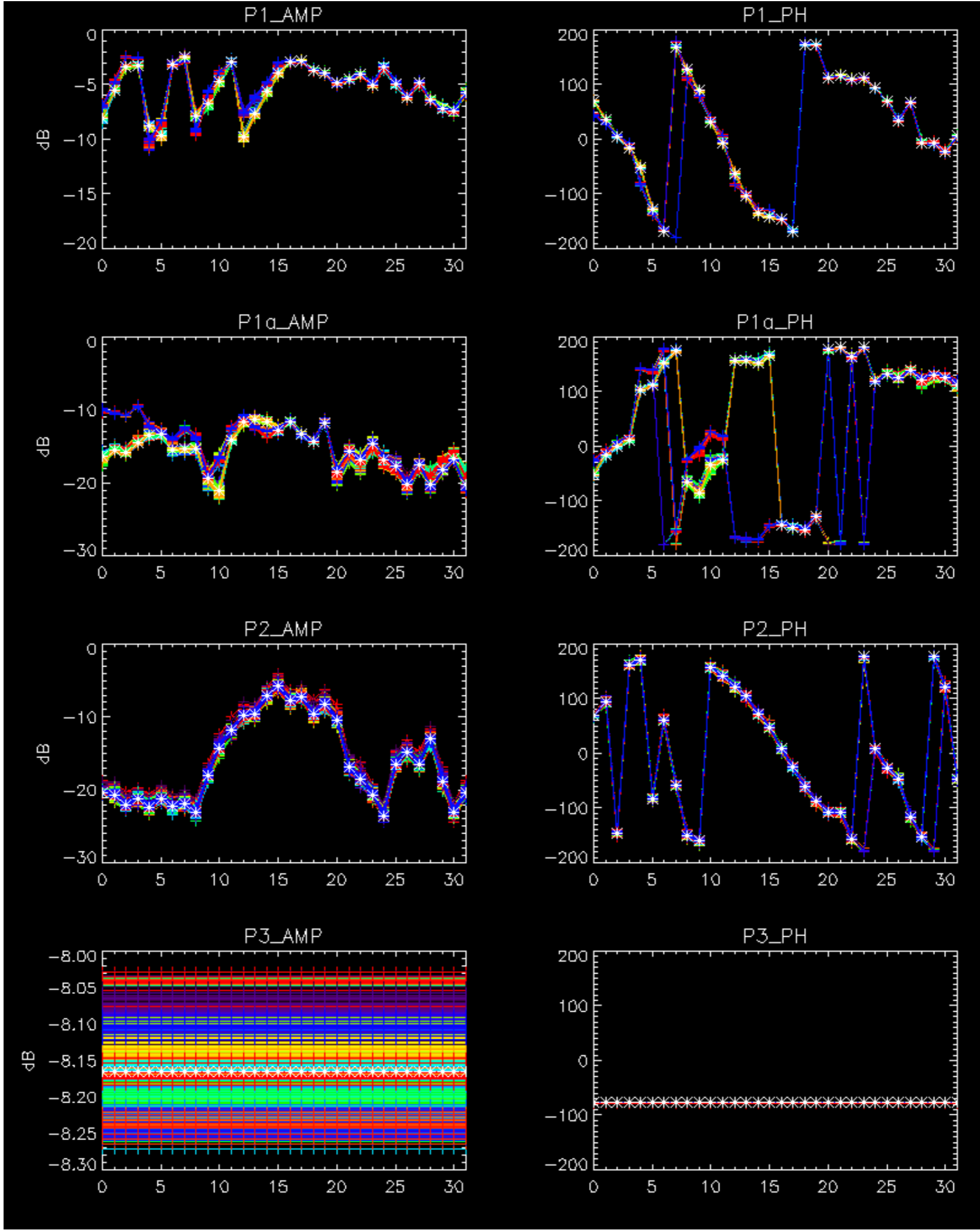


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed from browse visual inspection.

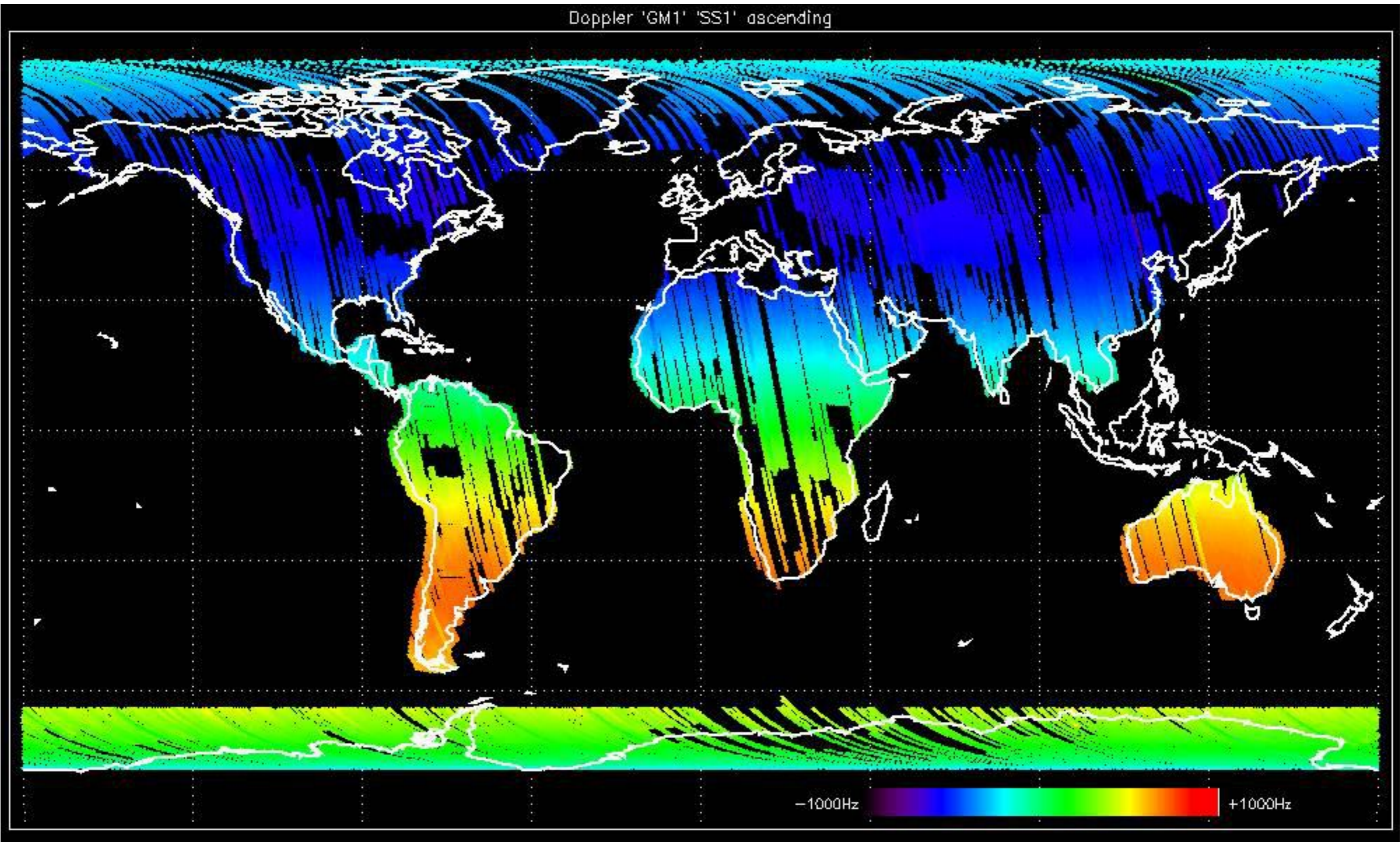
No anomalies observed.



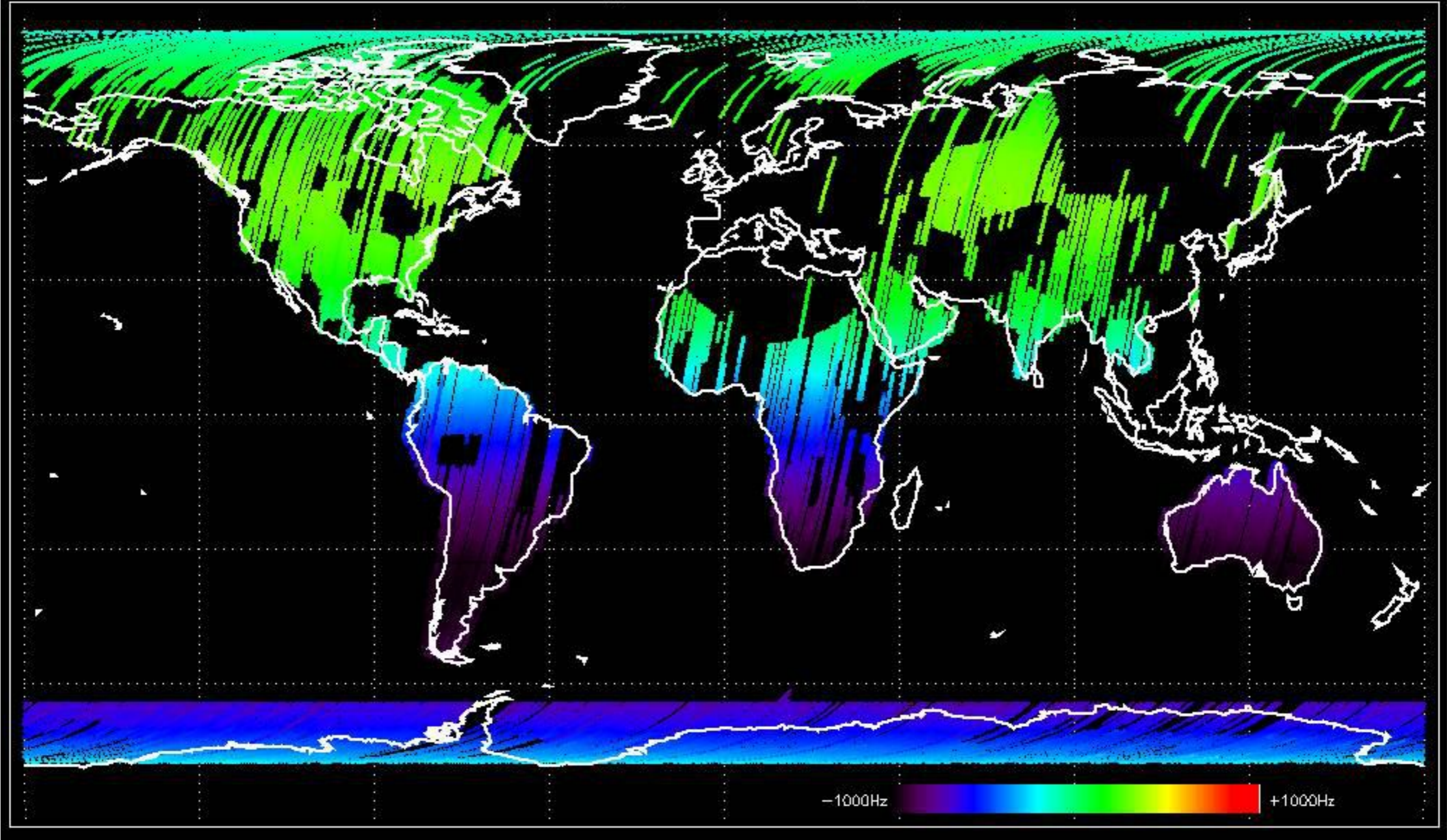


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

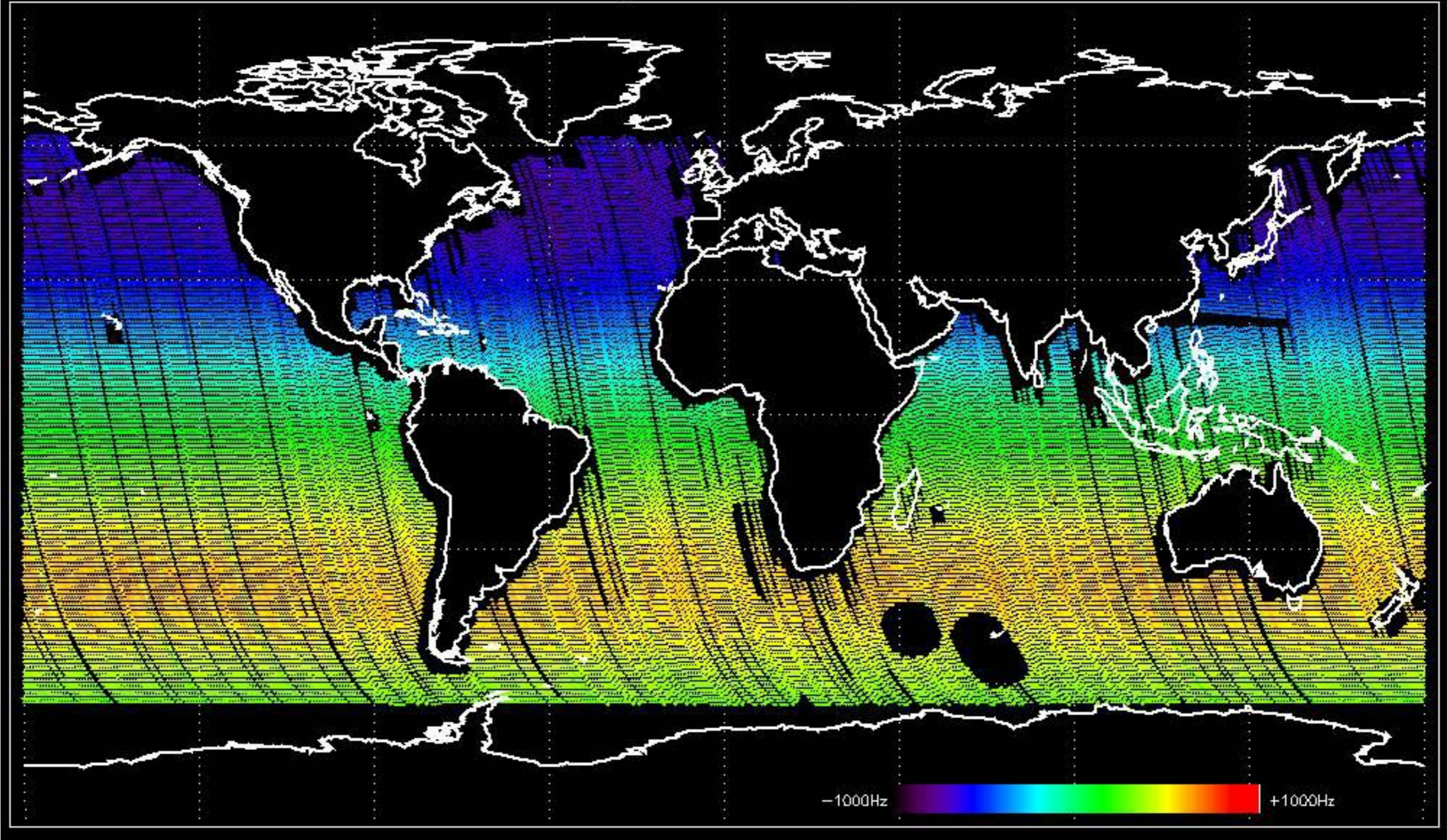
Doppler 'GM1' 'SS1' ascending



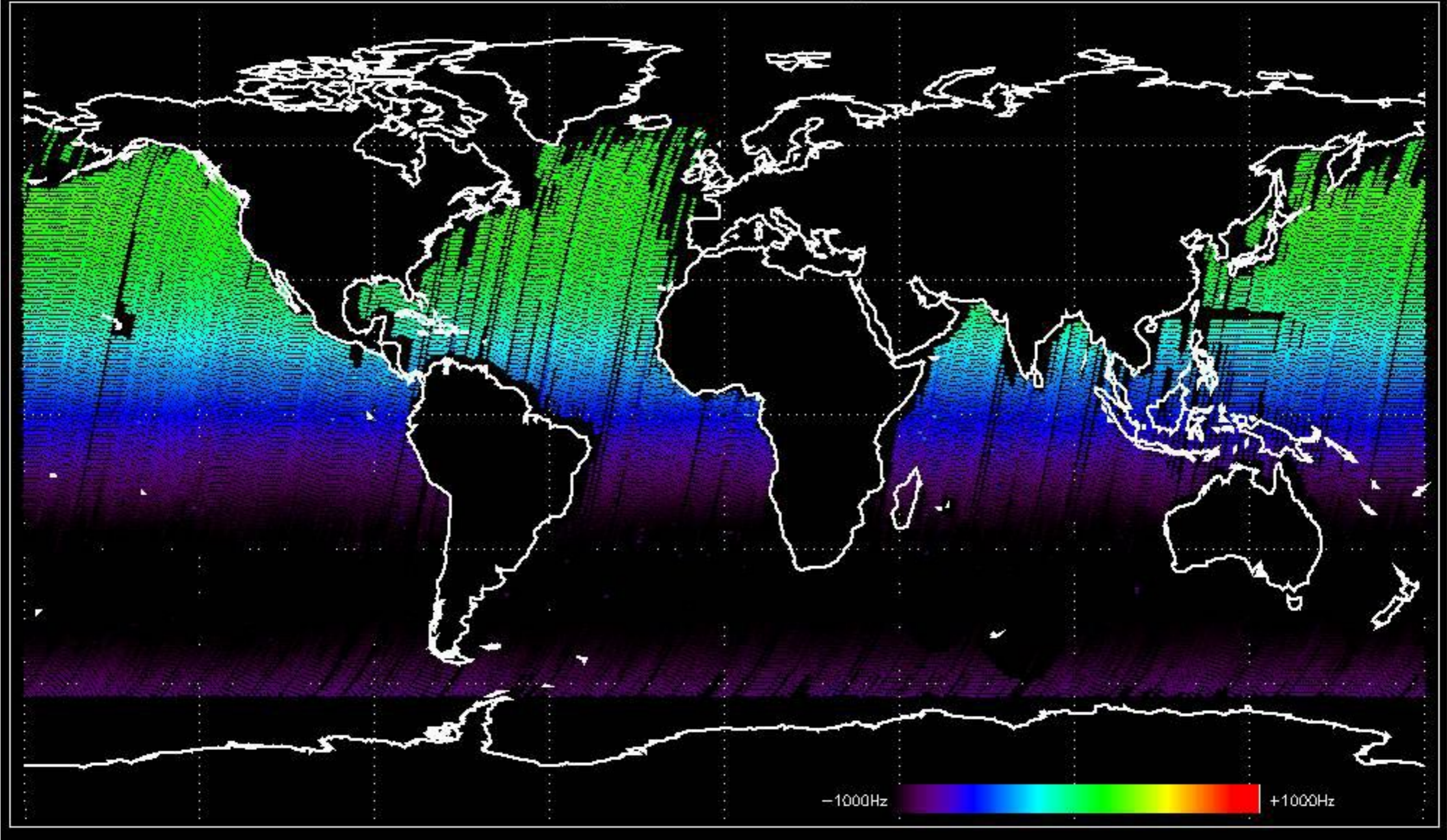
Doppler 'GM1' 'SS1' descending

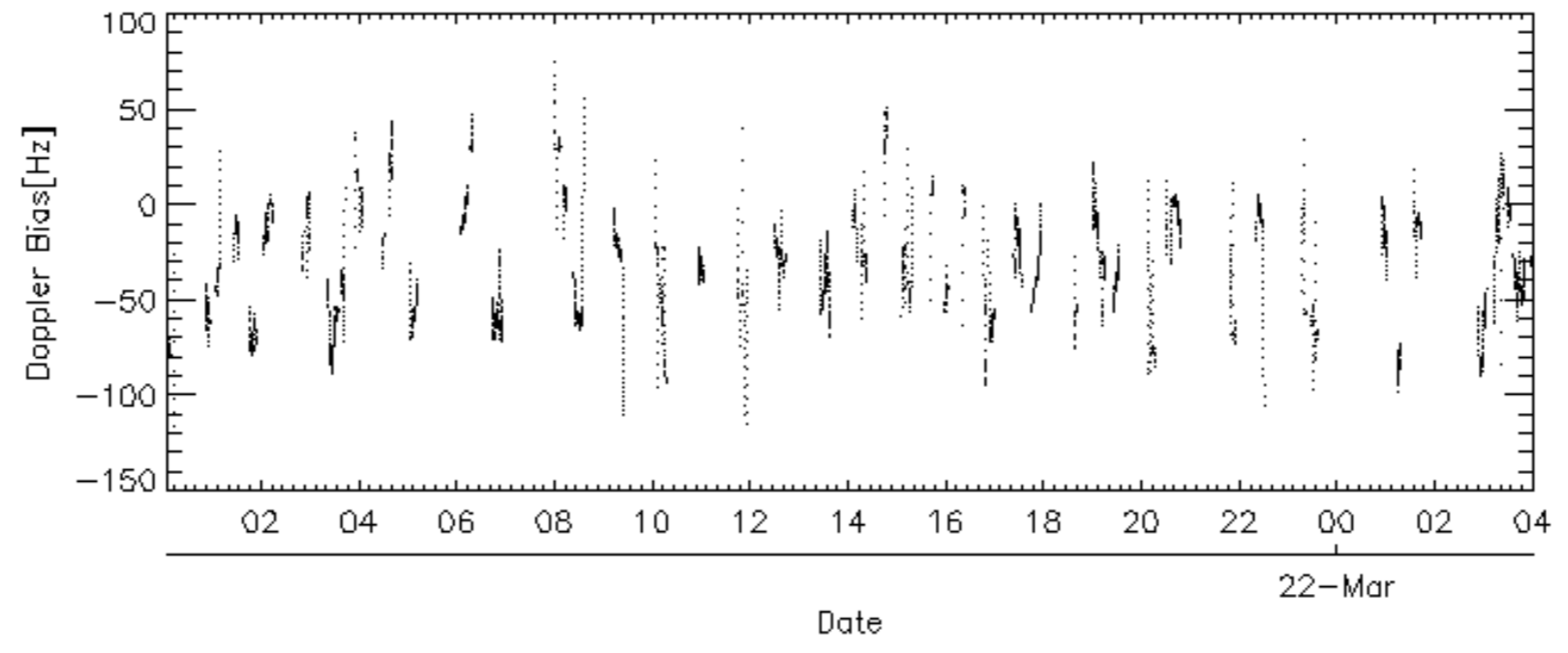
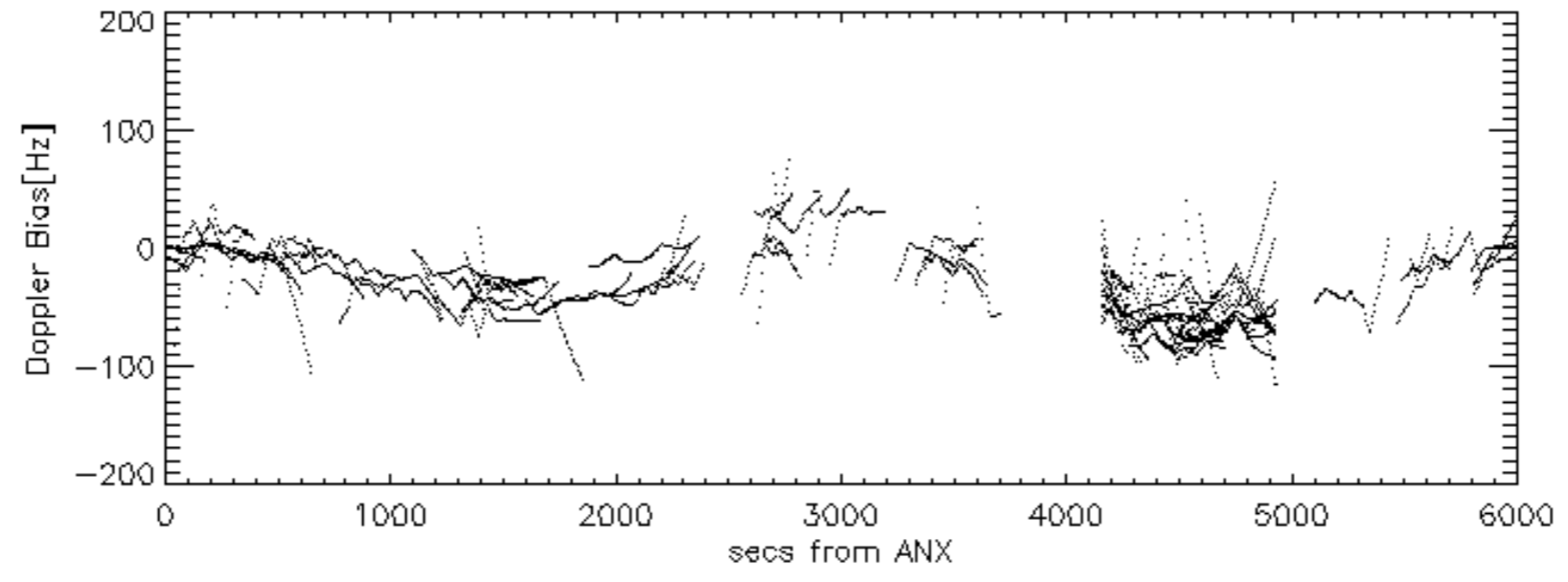
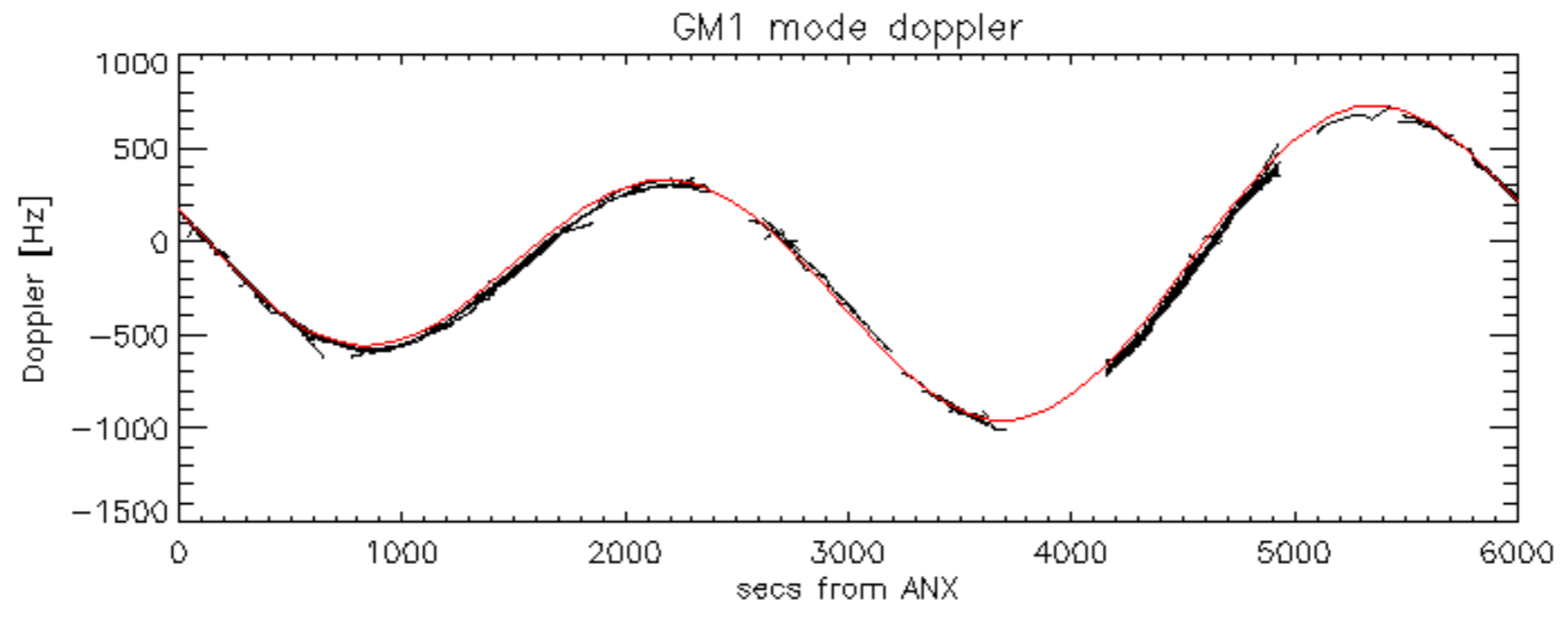


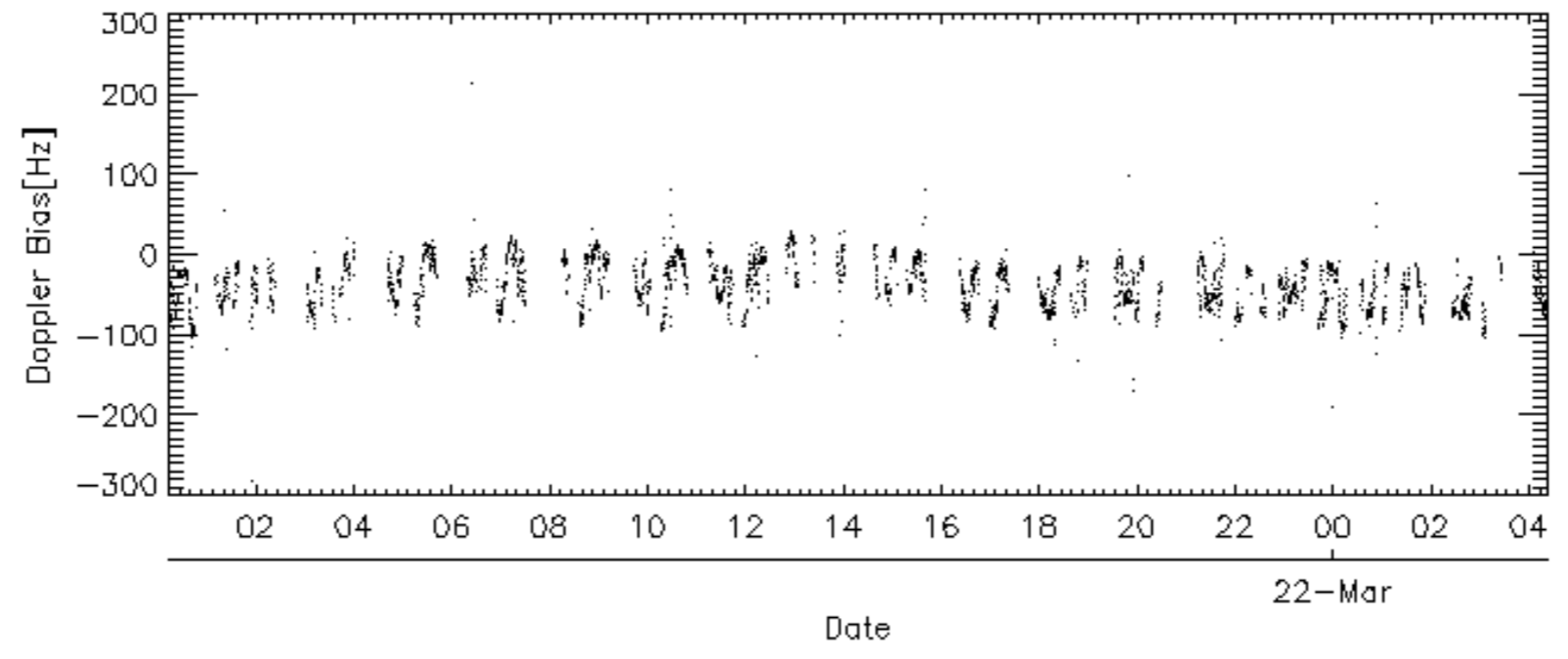
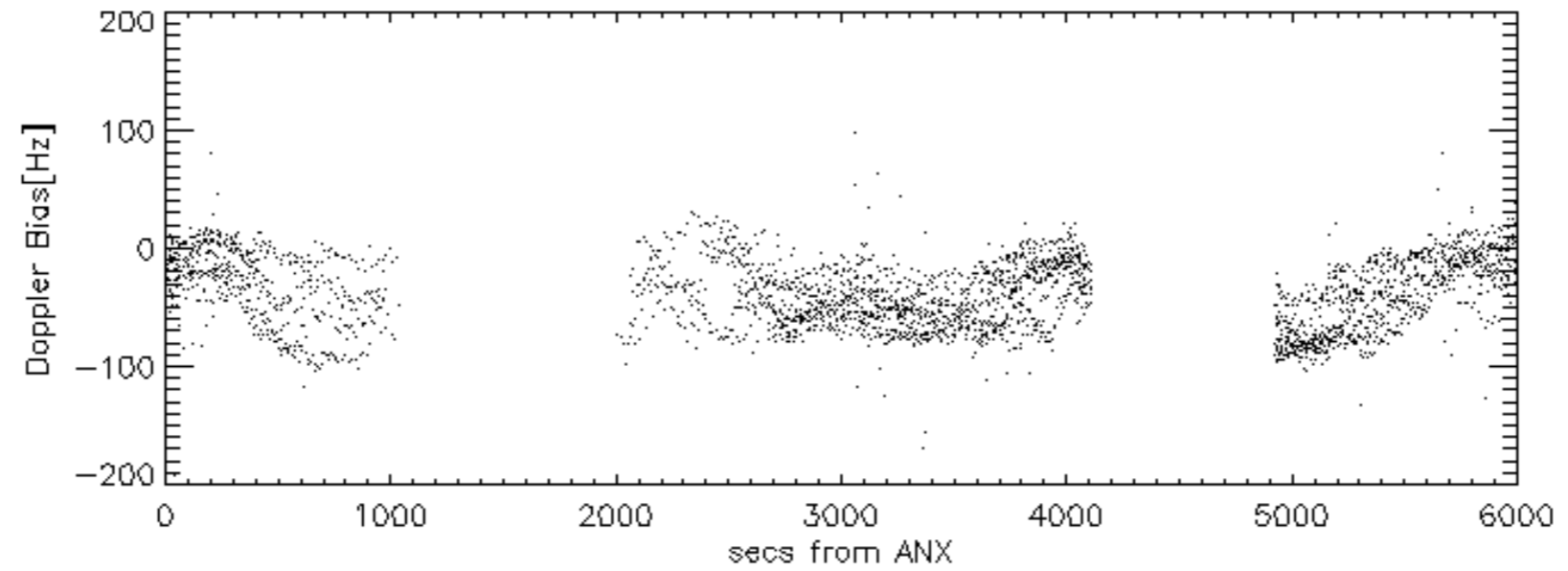
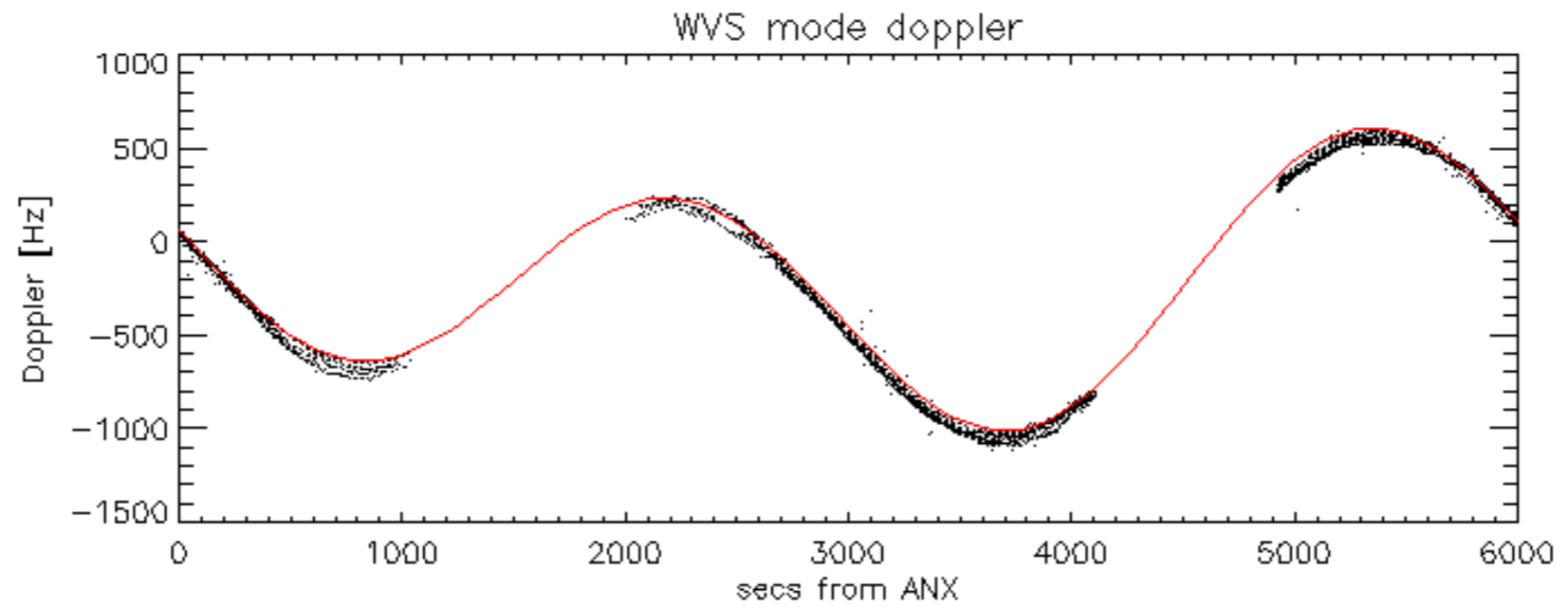
Doppler 'WVS' 'IS2' ascending



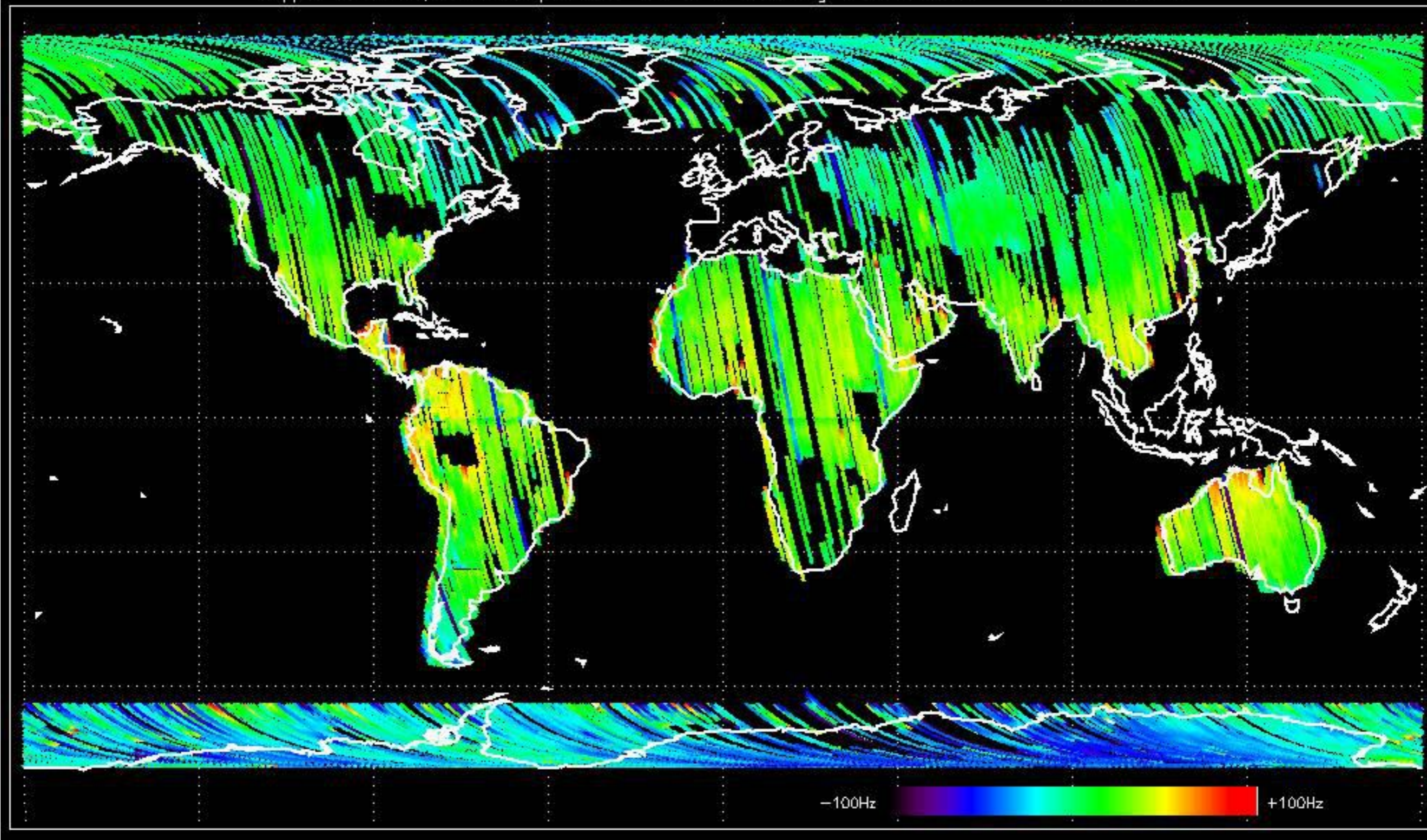
Doppler 'WVS' 'IS2' descending



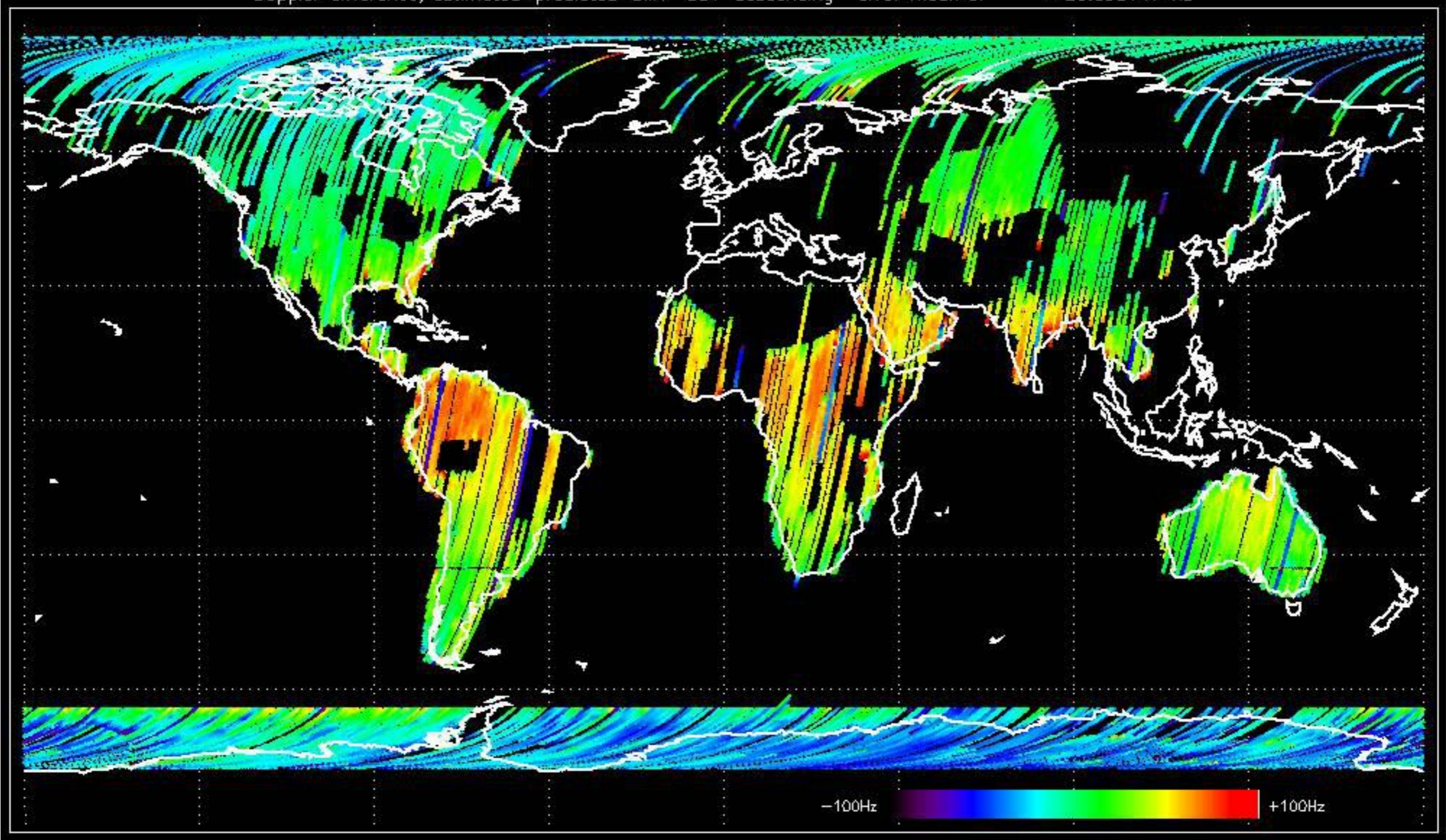




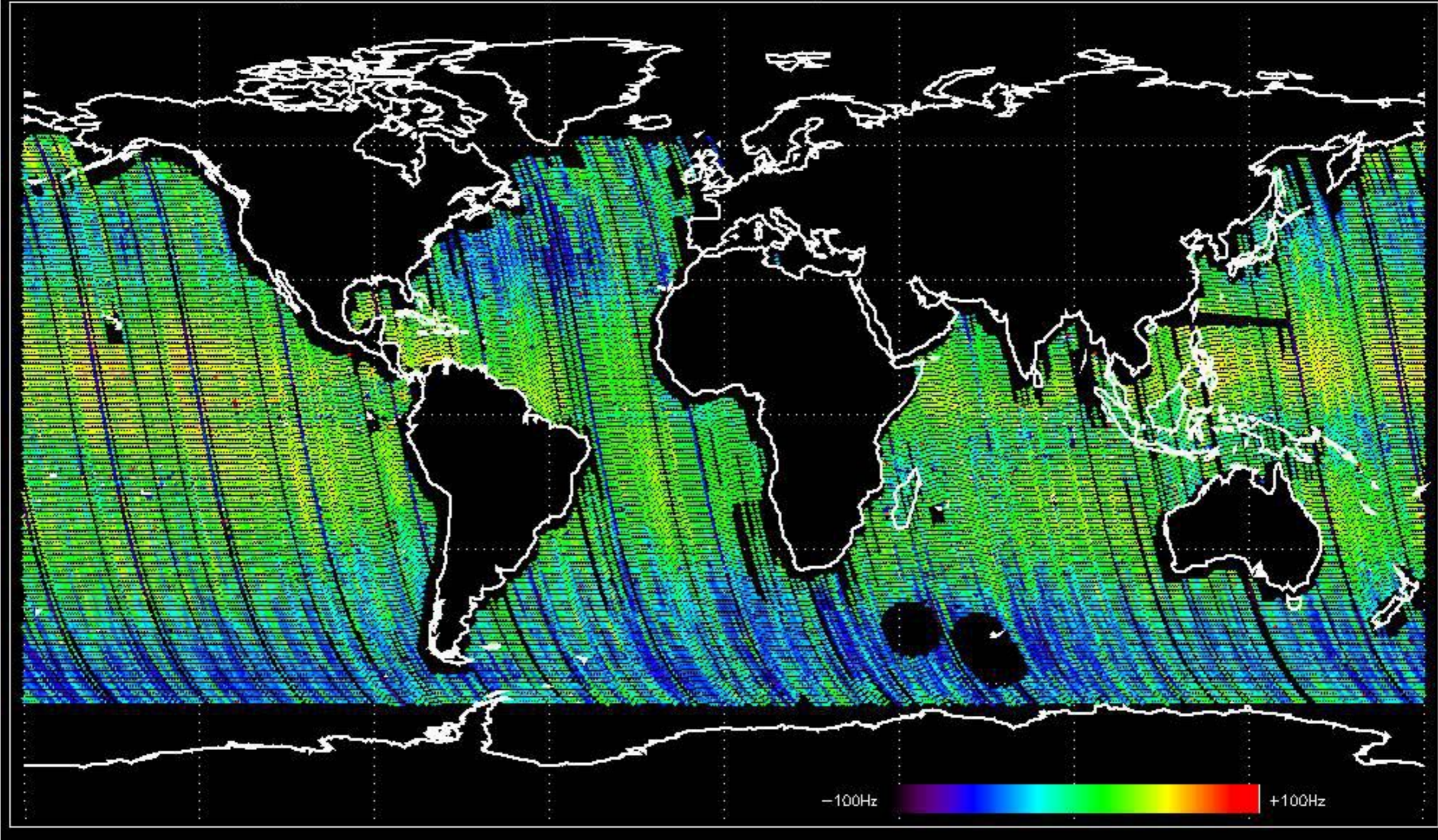
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.048927 Hz



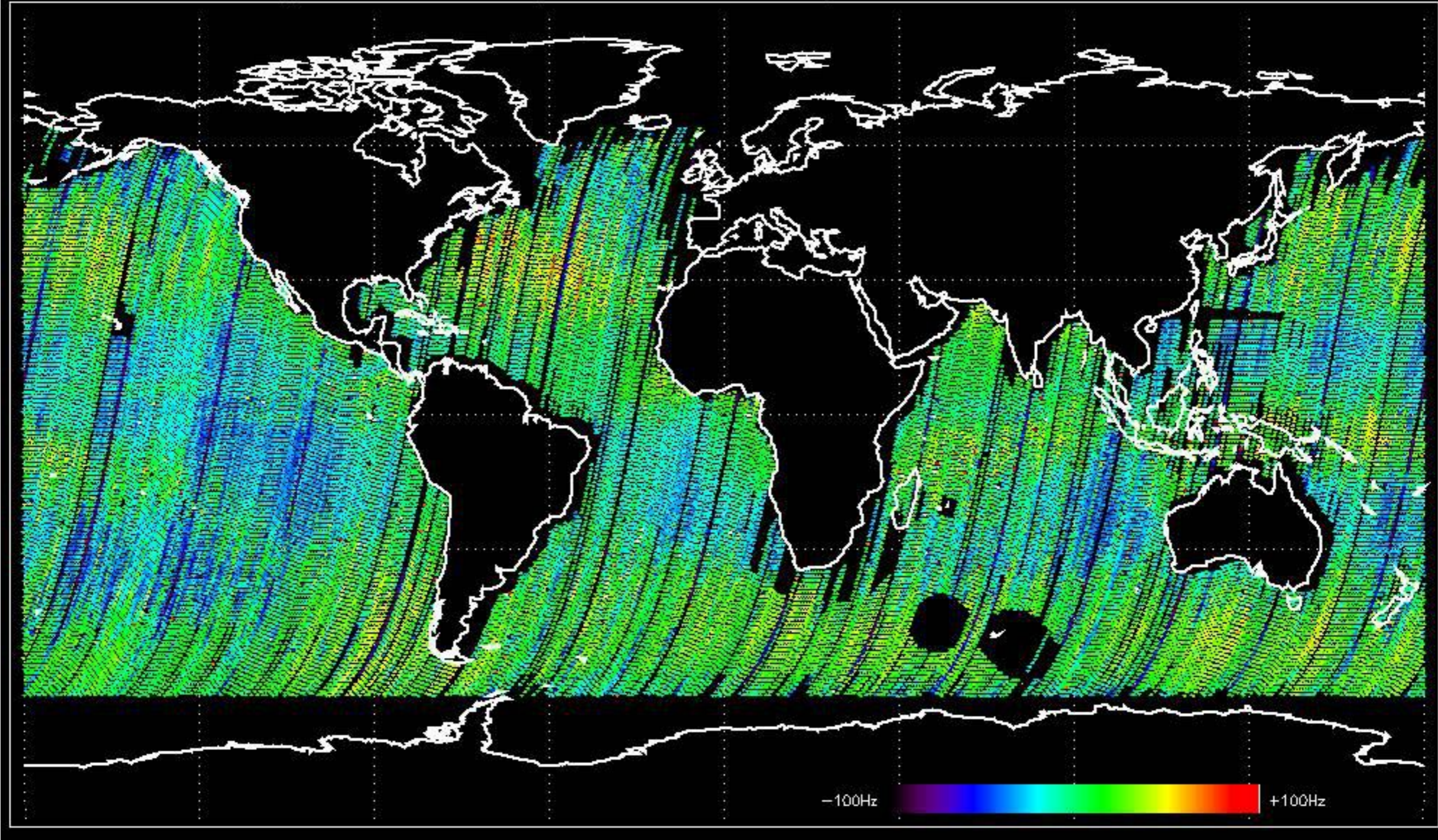
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.093147 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -36.971595 Hz

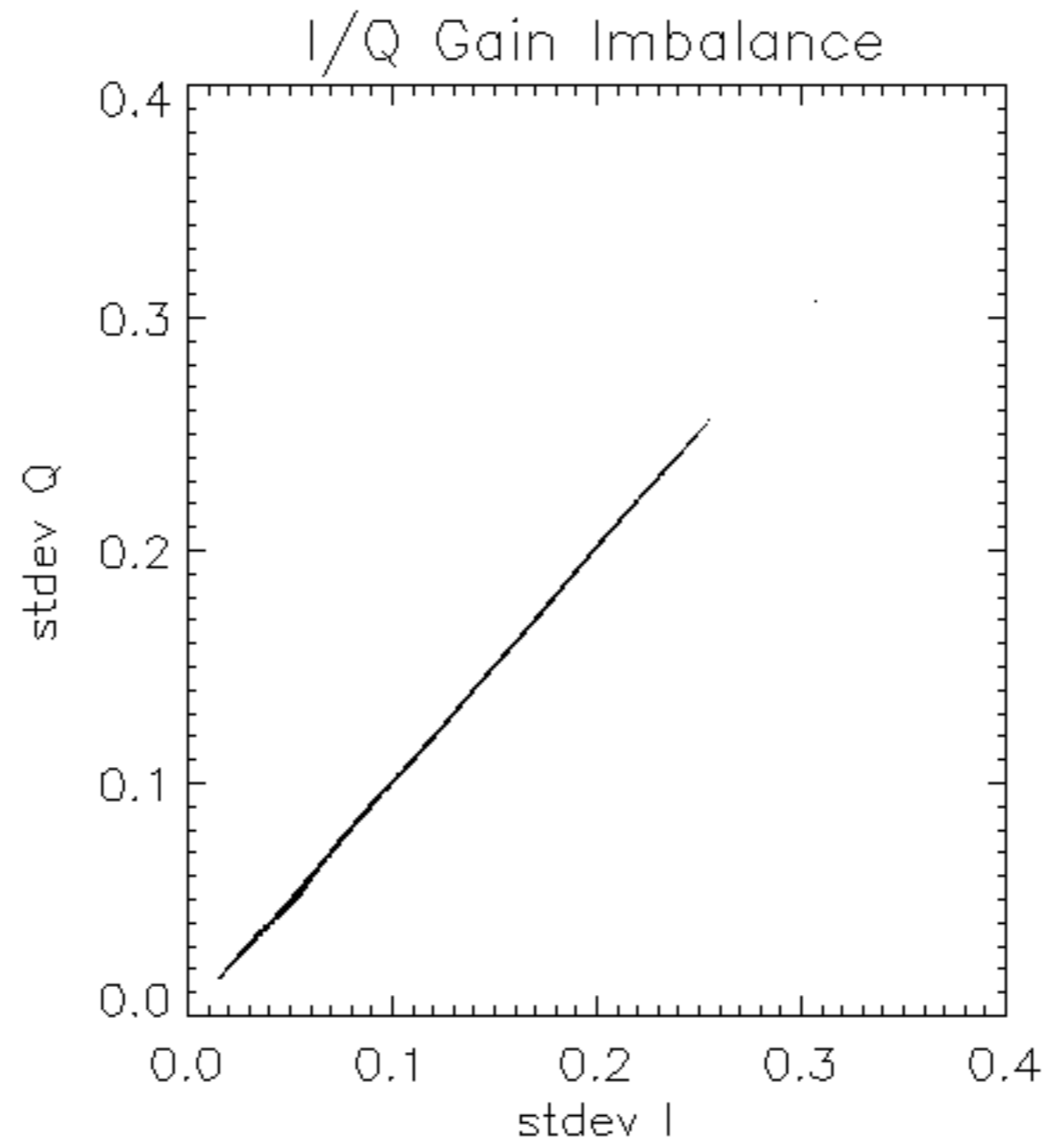


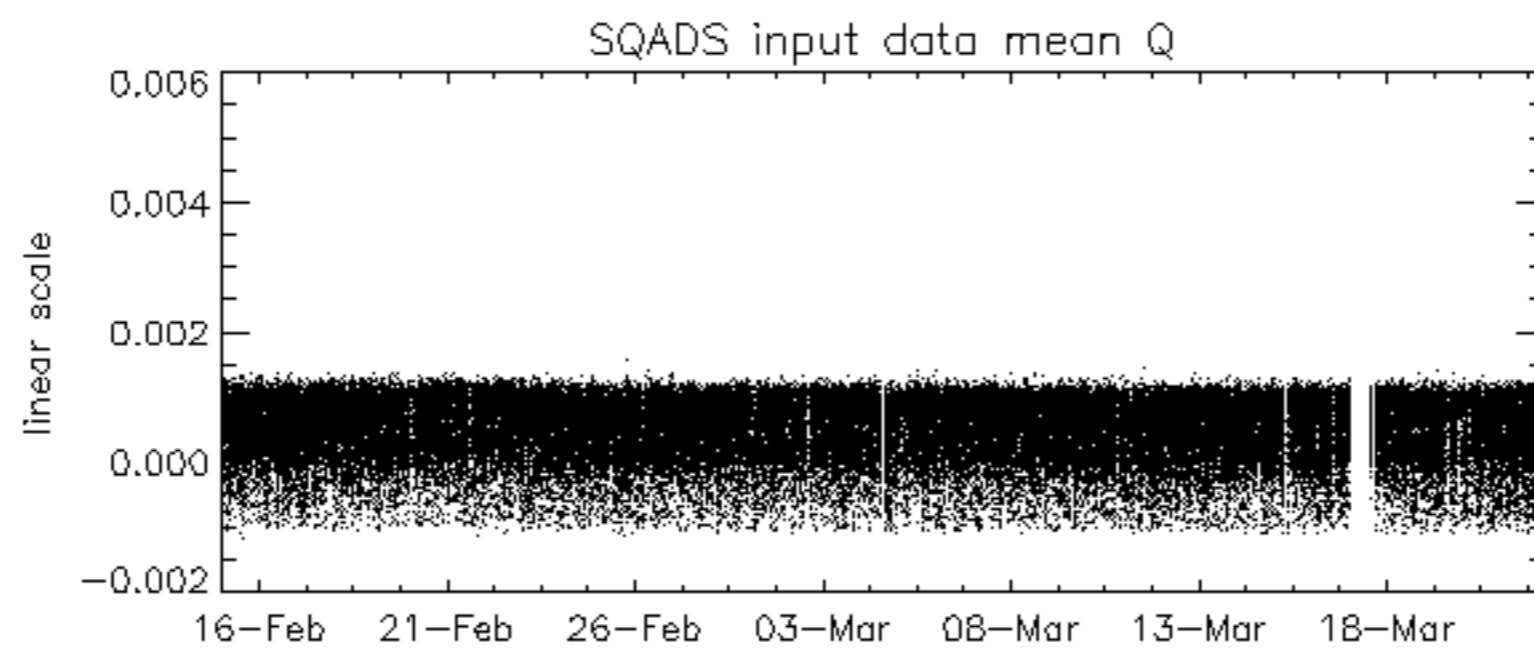
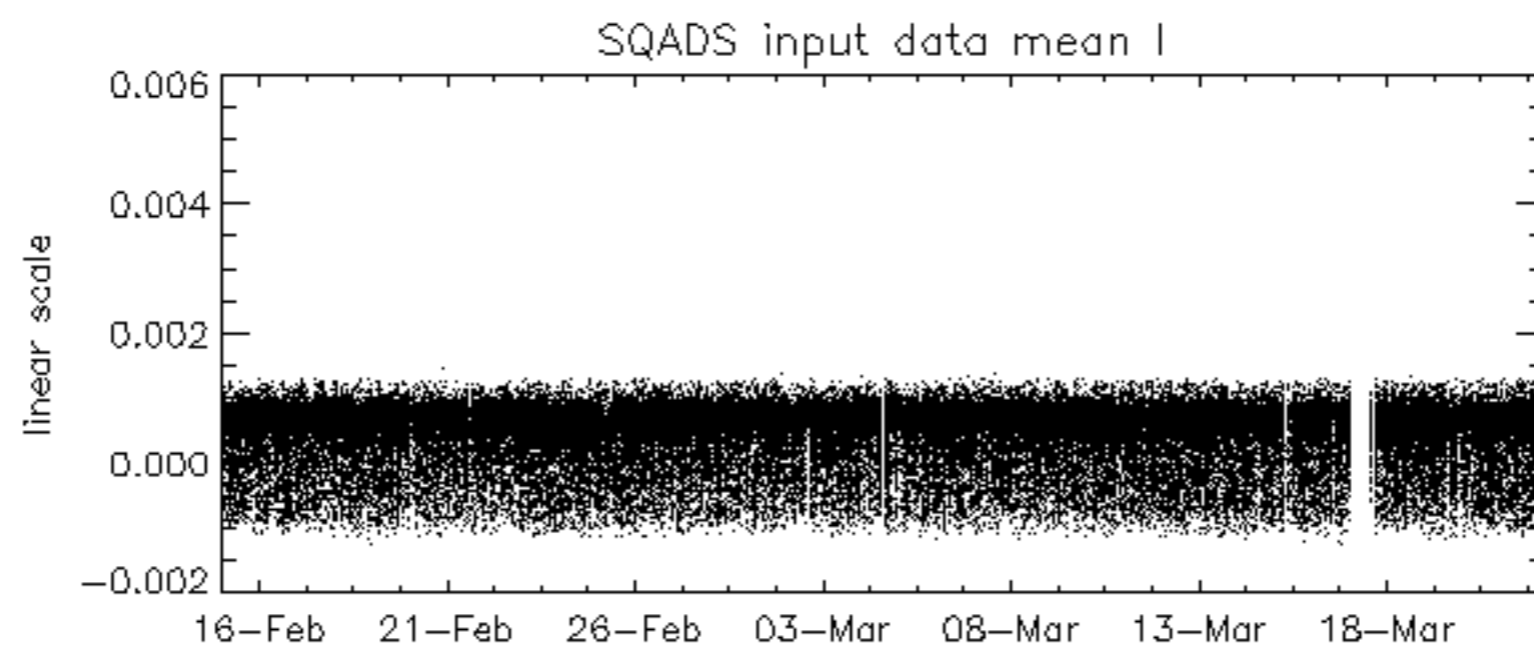
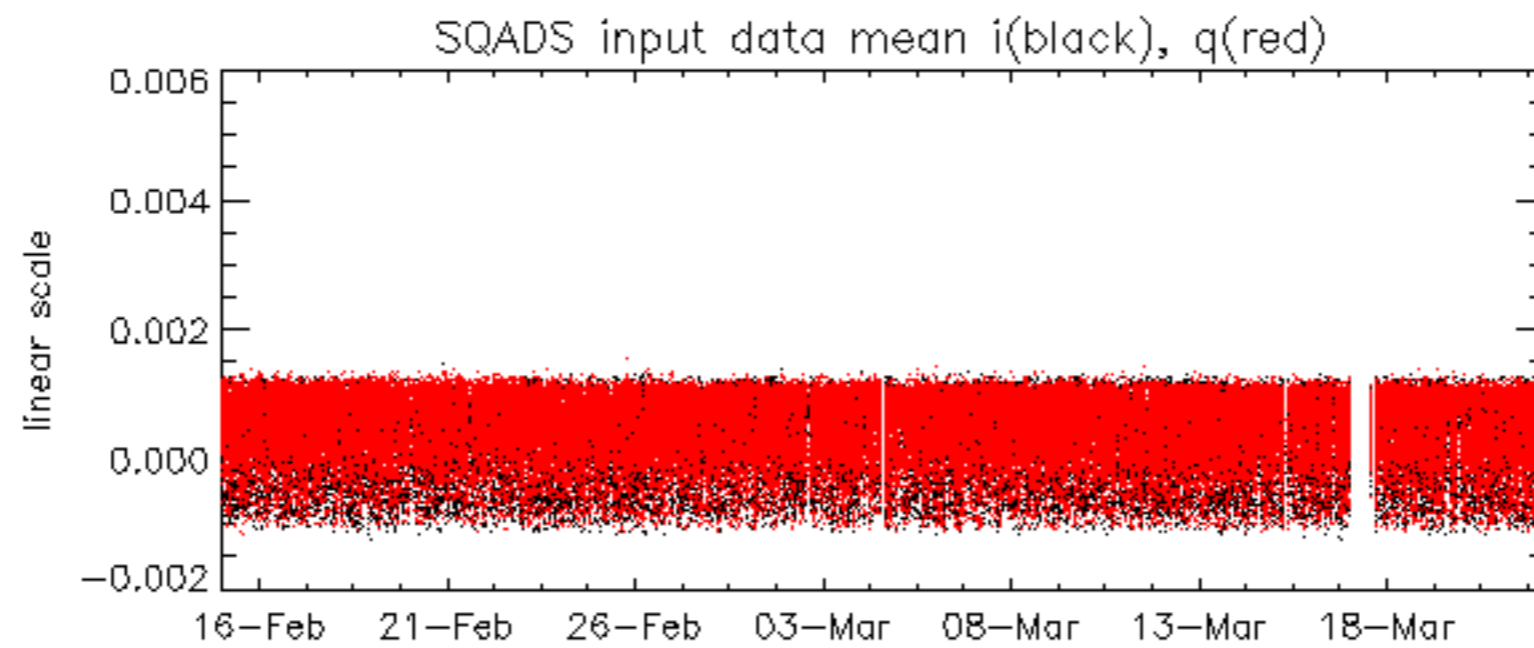
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.535893 Hz

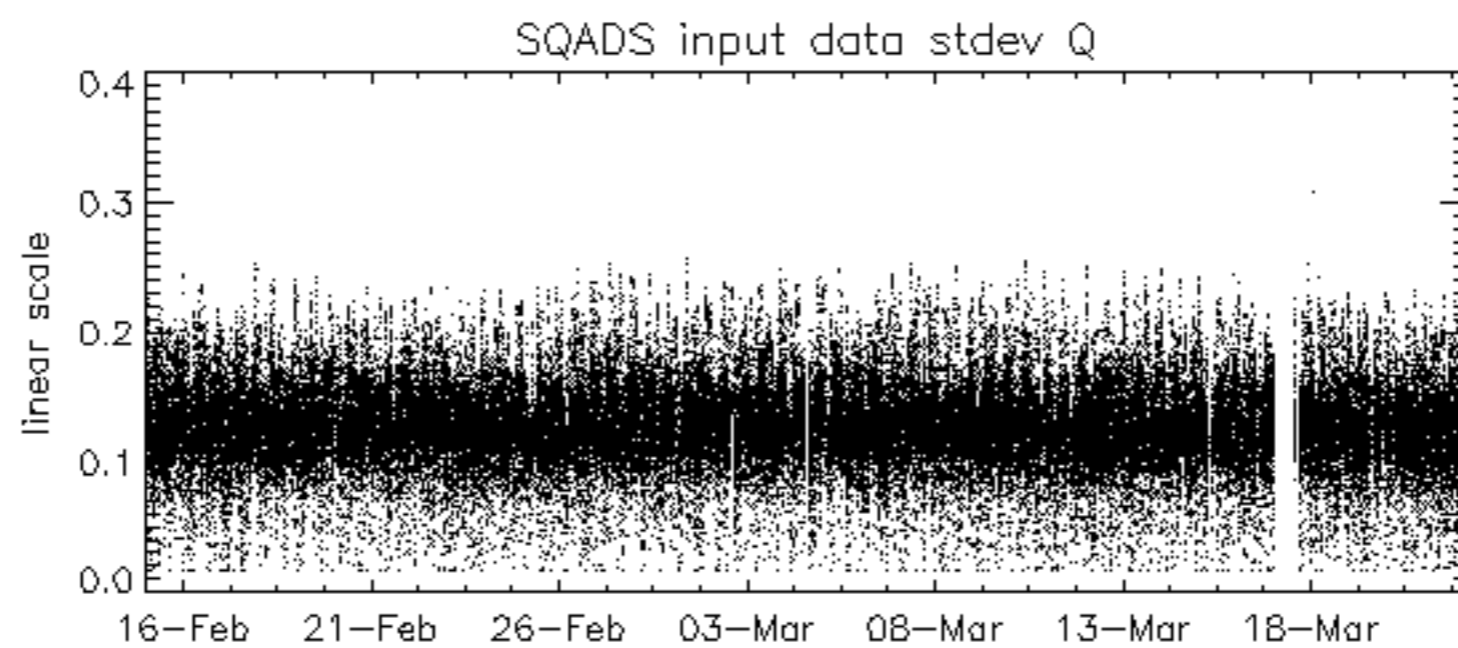
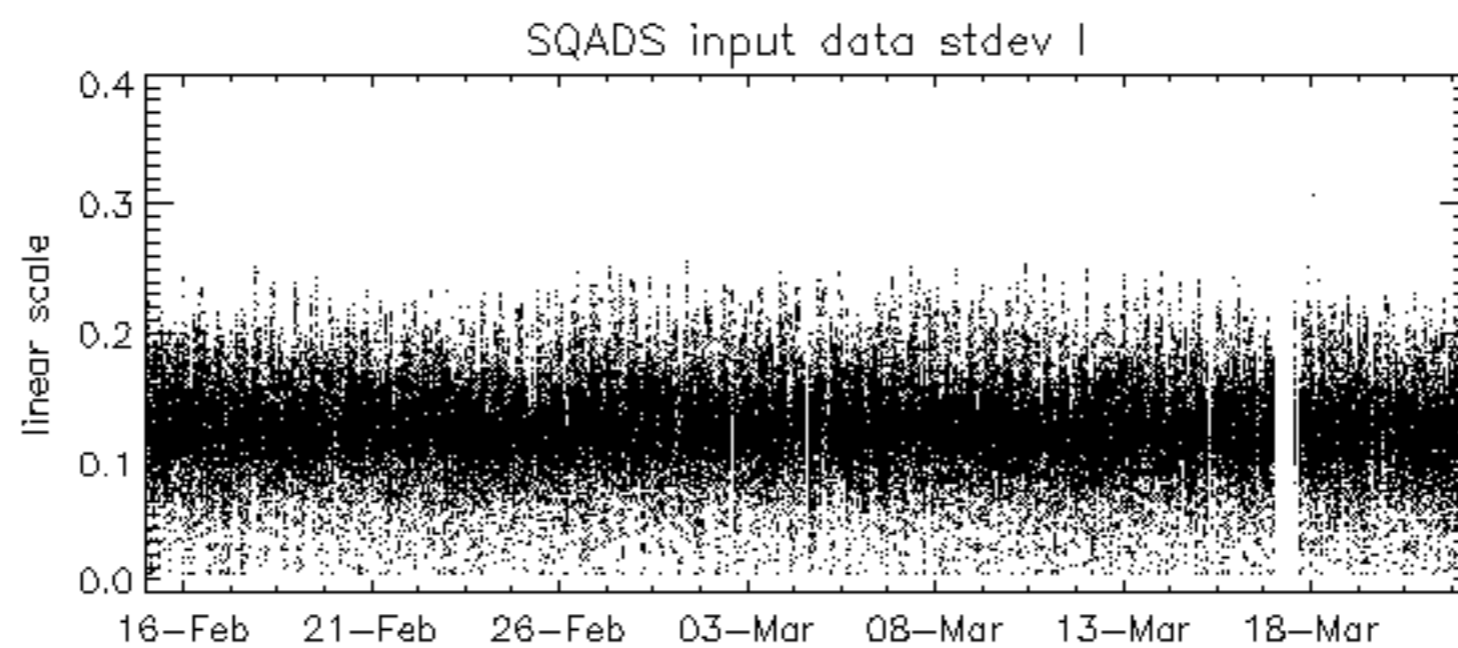
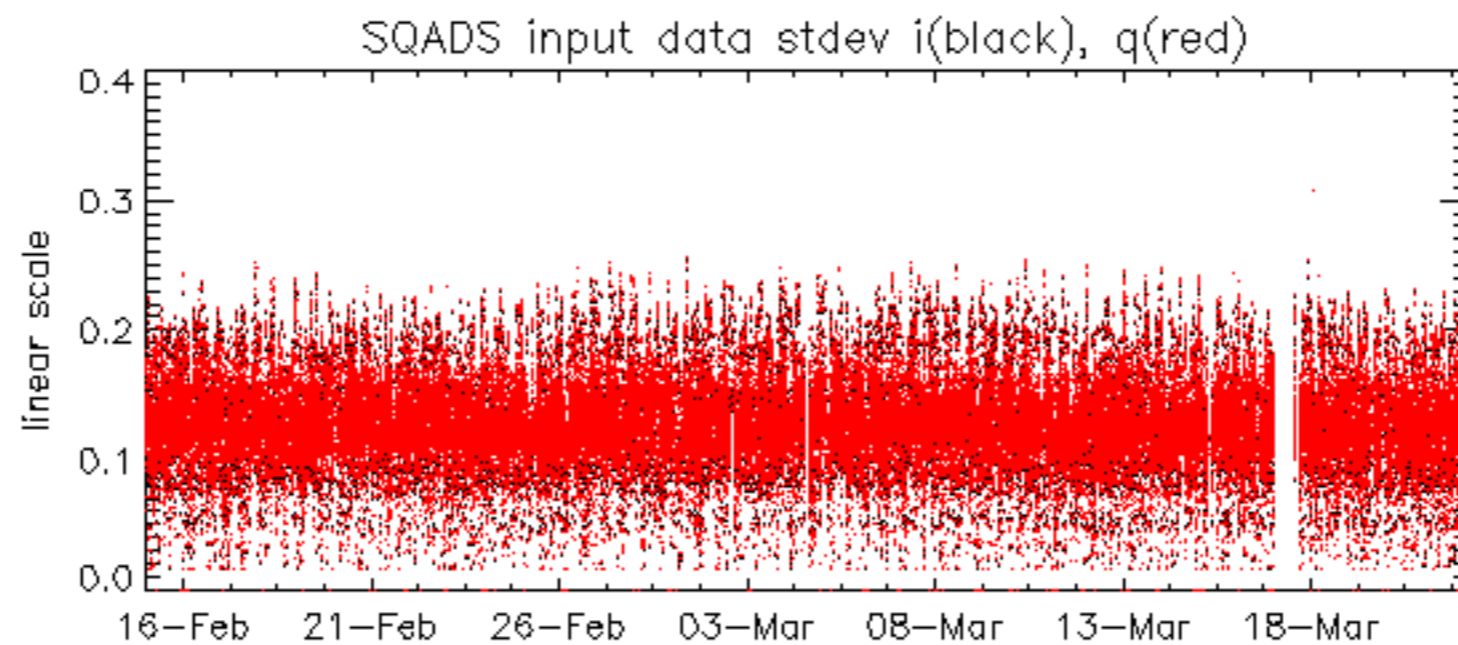


No anomalies observed on available MS products:

No anomalies observed.



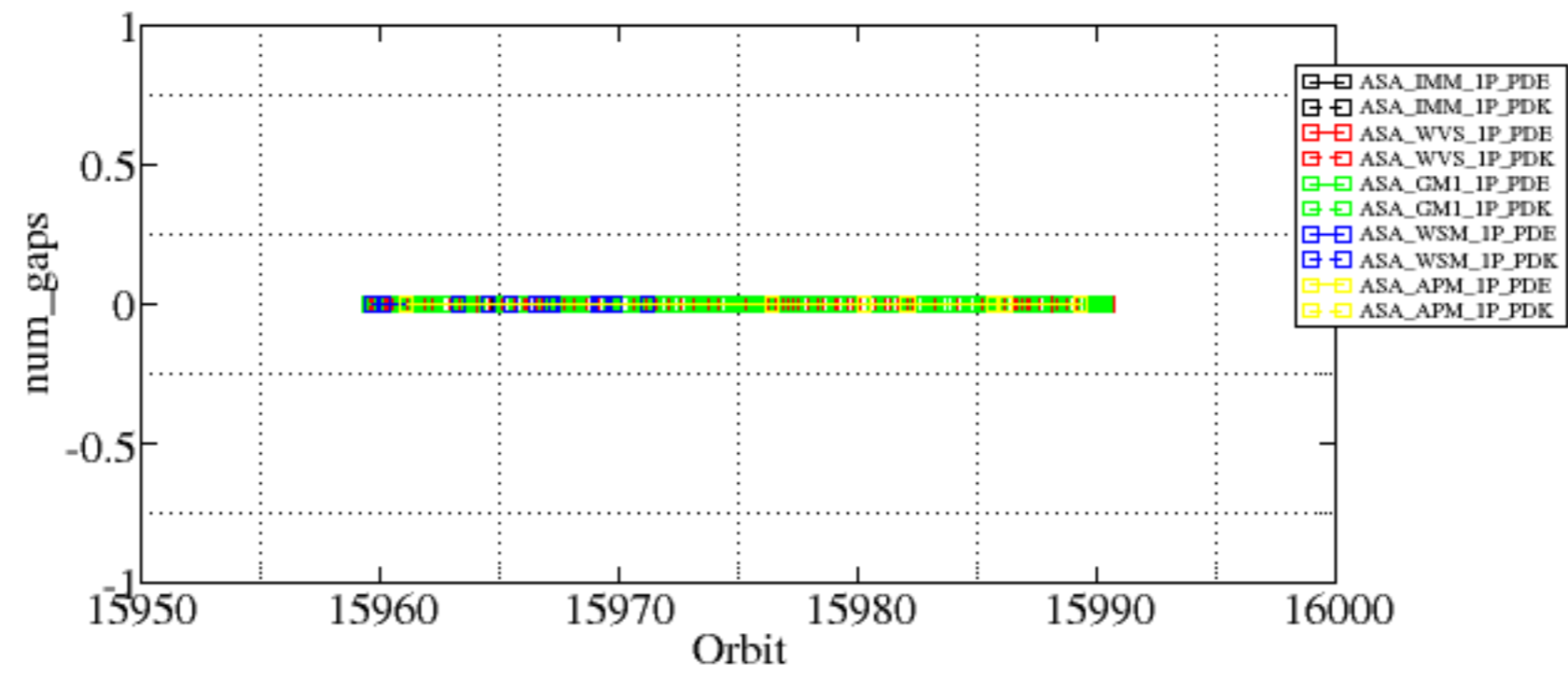


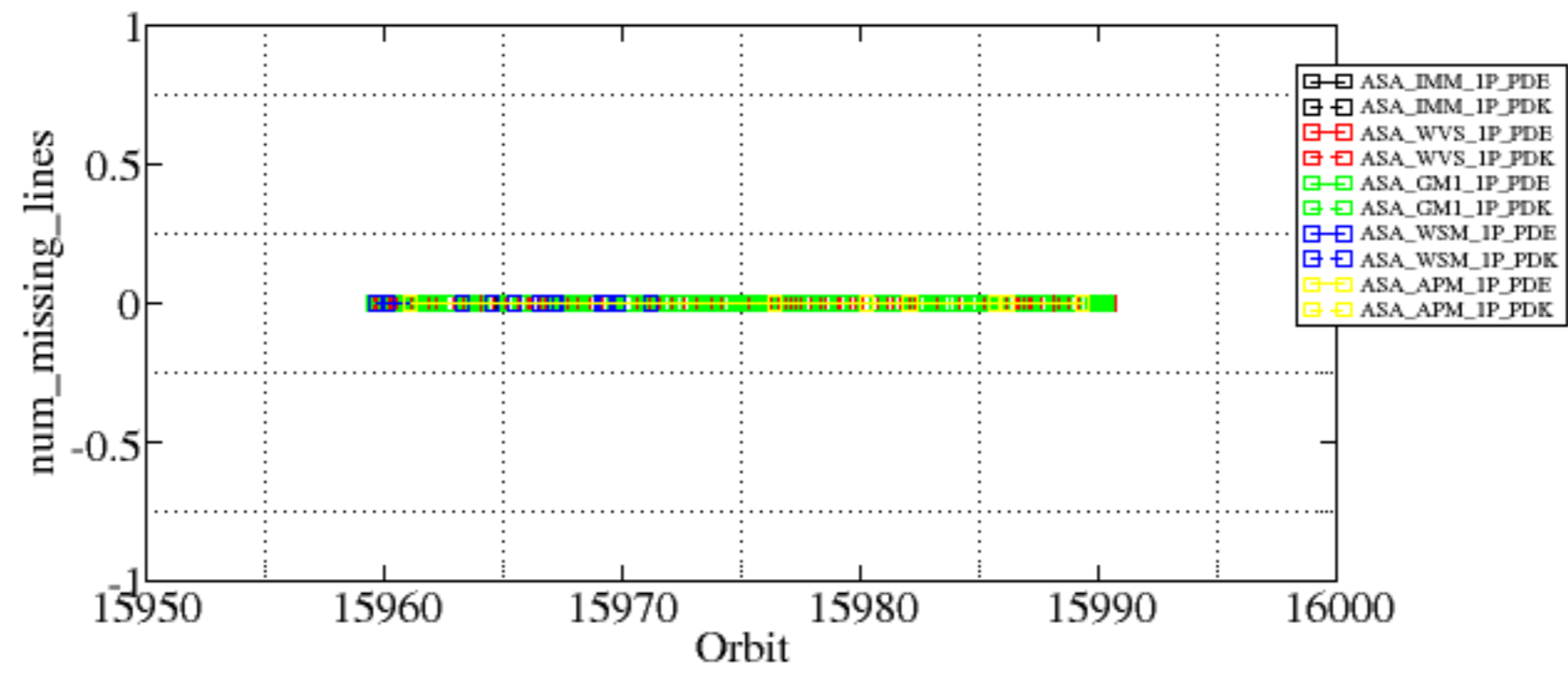


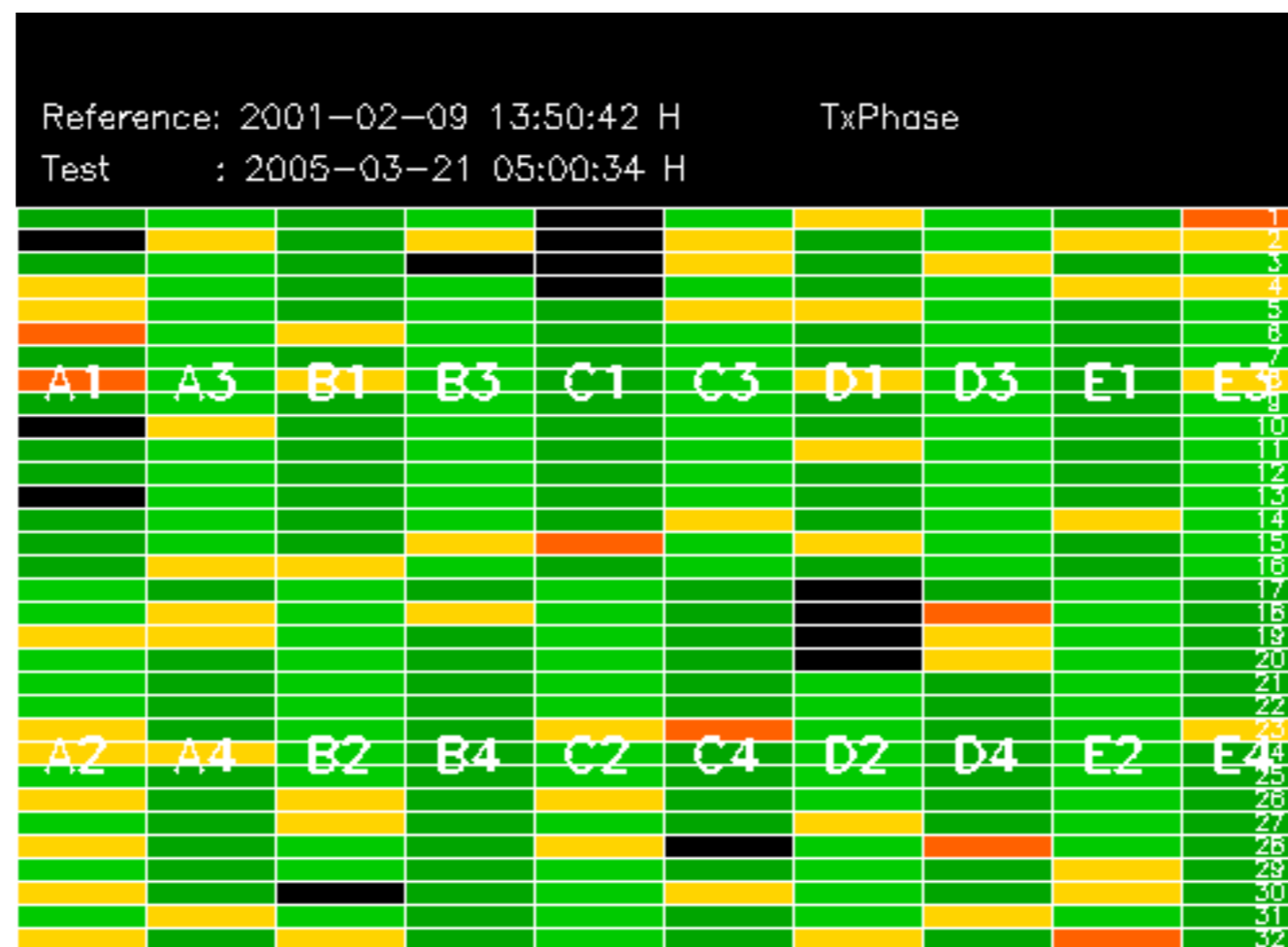
Summary of analysis for the last 3 days 2005032[012]

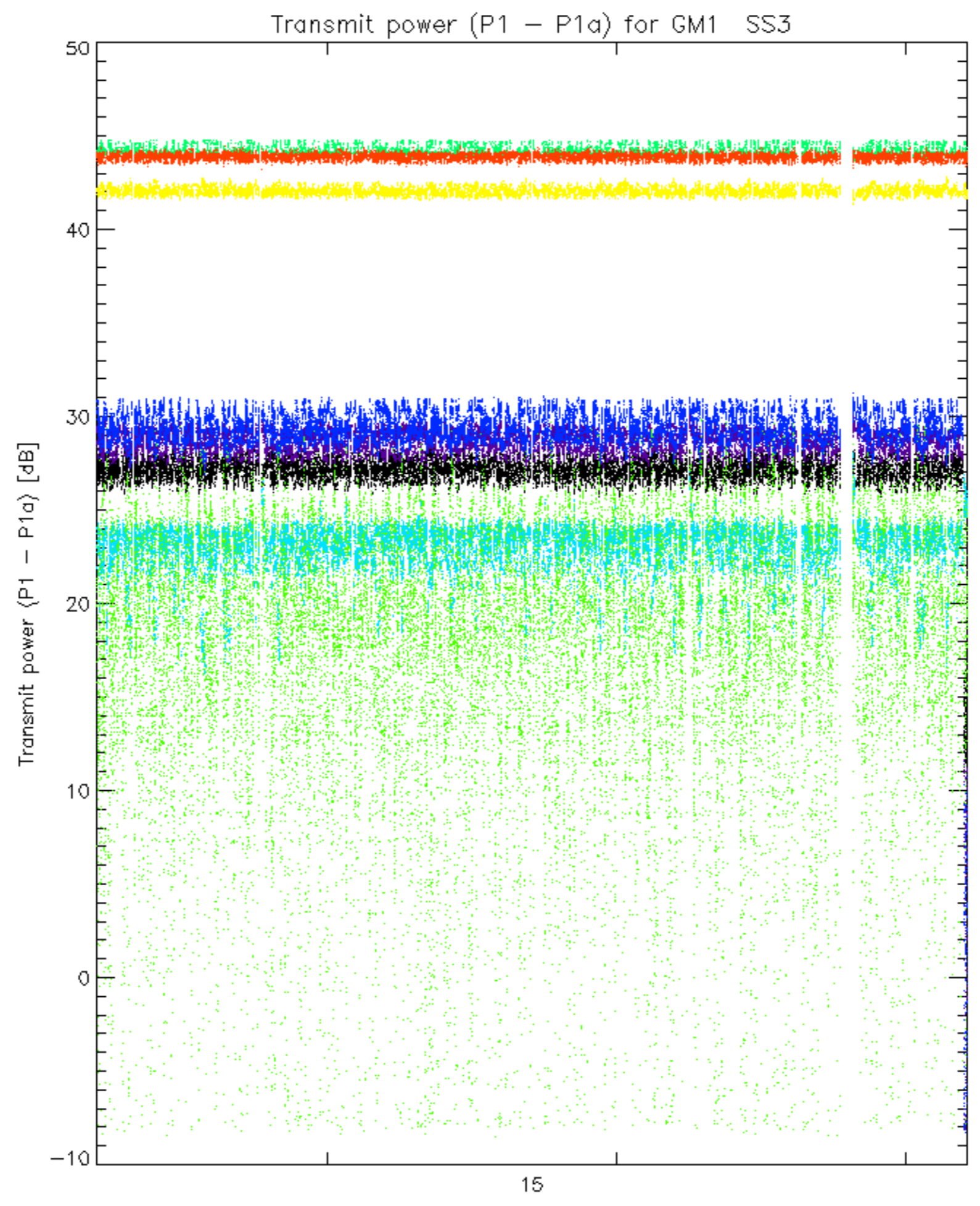
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
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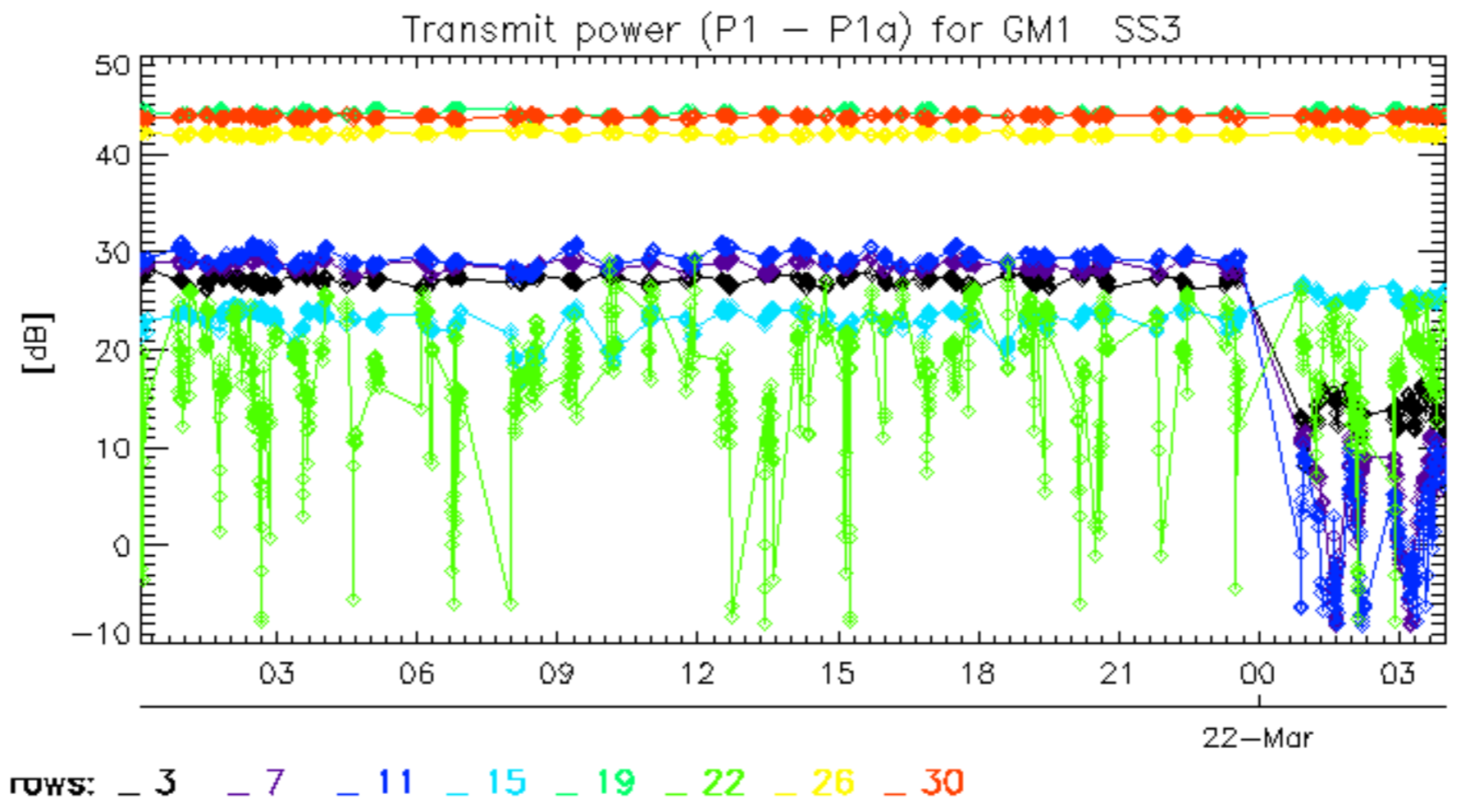


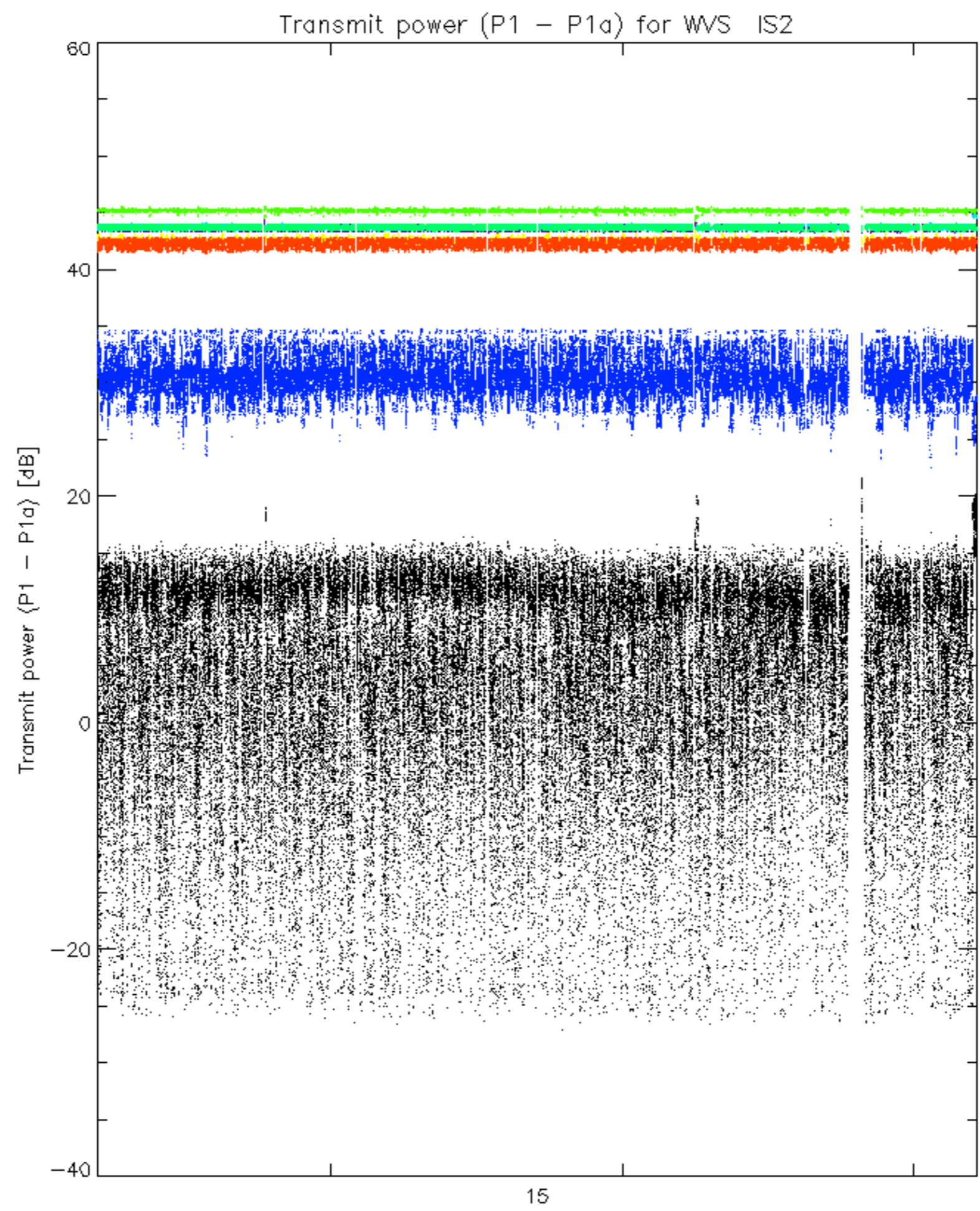


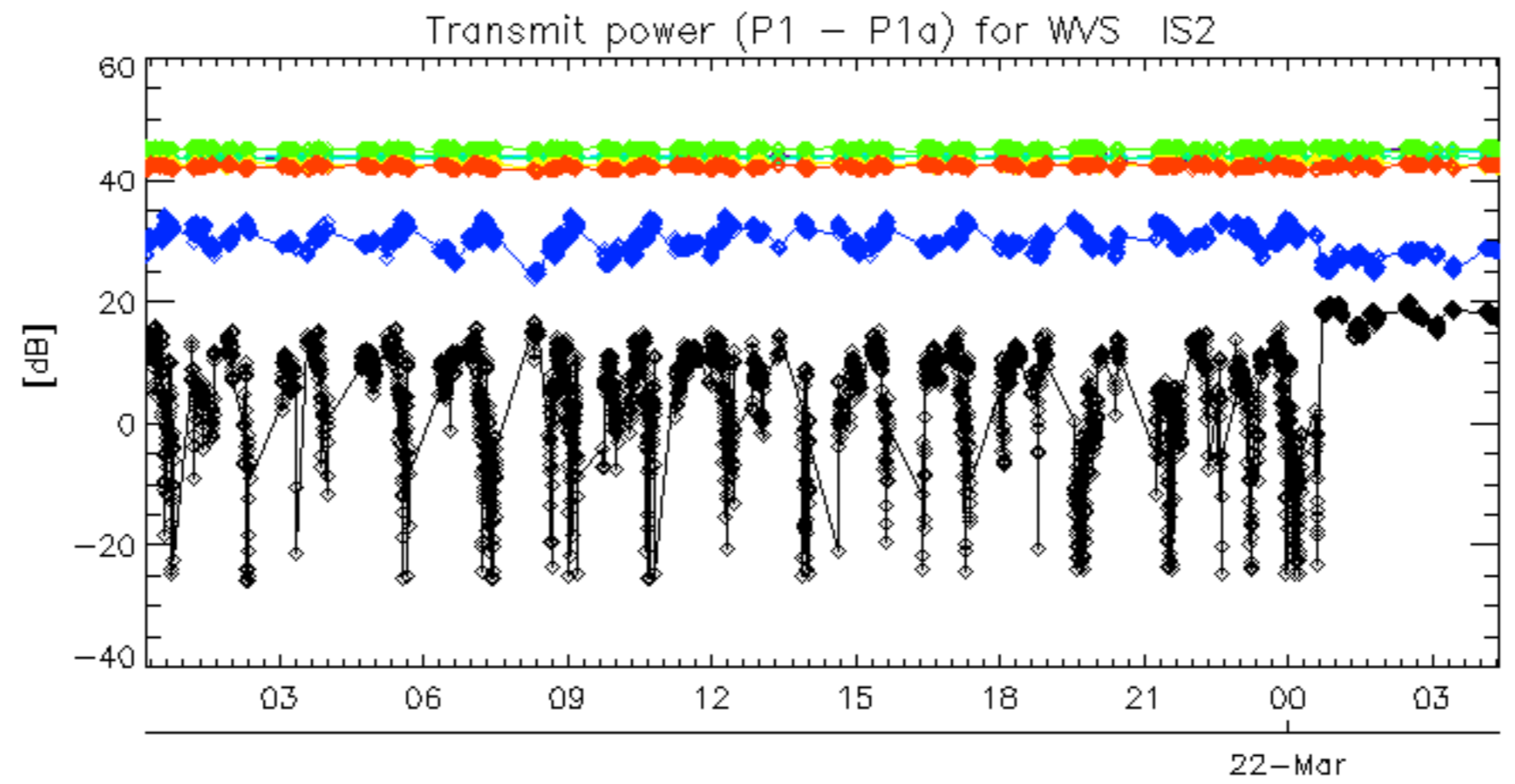




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30







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

No unavailabilities during the reported period.