

PRELIMINARY REPORT OF 050417

last update on Sun Apr 17 10:50:00 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 2005-04-16 00:00:00 to 2005-04-17 10:50:00

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	28	43	4	4	5
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	28	43	4	4	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	28	43	4	4	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	28	43	4	4	5

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	46	48	5	13	4
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	46	48	5	13	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	46	48	5	13	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	46	48	5	13	4

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	20050415 033426
H	20050416 030249

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
☒
☒

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.344219	0.013560	-0.008307
7	P1	-3.116748	0.009484	-0.005444
11	P1	-4.669612	0.031686	-0.002624
15	P1	-5.610321	0.043124	0.058653
19	P1	-3.701636	0.003992	-0.024289
22	P1	-4.545336	0.011912	-0.075506
26	P1	-4.912944	0.019716	0.042205
30	P1	-7.184077	0.022417	0.060757
3	P1	-15.802011	0.337587	0.042259
7	P1	-15.533092	0.084777	0.006047
11	P1	-21.083204	0.451713	-0.319307
15	P1	-11.536531	0.054159	0.145643
19	P1	-14.313869	0.027842	0.001476
22	P1	-15.767897	0.315549	-0.271044
26	P1	-17.632566	0.177446	0.033986
30	P1	-17.929649	0.370003	0.186957

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.052298	0.082079	0.038626
7	P2	-22.228912	0.097017	0.045164
11	P2	-14.250317	0.109049	0.148526
15	P2	-7.057834	0.091782	-0.036079
19	P2	-9.643387	0.094713	-0.033802
22	P2	-16.886808	0.096485	0.027647
26	P2	-16.453379	0.094207	-0.040506
30	P2	-18.828585	0.085709	-0.000052

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.166615	0.004539	-0.004865
7	P3	-8.166615	0.004539	-0.004865
11	P3	-8.166614	0.004539	-0.004860
15	P3	-8.166614	0.004539	-0.004860
19	P3	-8.166614	0.004539	-0.004860
22	P3	-8.166614	0.004539	-0.004860
26	P3	-8.166614	0.004539	-0.004860
30	P3	-8.166615	0.004539	-0.004863

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	-2.723786	0.026751	-0.084064
7	P1	-3.008071	0.046282	0.006155
11	P1	-3.981042	0.027510	-0.024343
15	P1	-3.544621	0.036838	-0.016901
19	P1	-3.612139	0.013817	-0.034439
22	P1	-5.712356	0.041798	0.070533
26	P1	-7.299543	0.025785	-0.031950
30	P1	-6.269676	0.059739	-0.083796
3	P1	-10.706849	0.165772	-0.112528
7	P1	-10.342455	0.176631	-0.074499
11	P1	-12.537304	0.140281	-0.104636
15	P1	-11.705211	0.100797	0.026768
19	P1	-15.591673	0.051790	-0.077912
22	P1	-24.793774	1.505780	-0.507149
26	P1	-15.550669	0.242286	-0.171233
30	P1	-20.147150	1.223446	0.131492

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.754871	0.039925	0.016696
7	P2	-22.310385	0.045137	0.041333
11	P2	-10.095476	0.058729	0.036439
15	P2	-5.016321	0.033035	-0.096975
19	P2	-6.857030	0.049560	-0.080435
22	P2	-7.081745	0.038289	-0.032693
26	P2	-23.866503	0.036924	-0.070463
30	P2	-21.900593	0.042006	-0.050565

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.002281	0.003458	-0.019560
7	P3	-8.002483	0.003442	-0.019164
11	P3	-8.002330	0.003449	-0.019372
15	P3	-8.002402	0.003452	-0.019544
19	P3	-8.002485	0.003453	-0.019669
22	P3	-8.002411	0.003440	-0.019356
26	P3	-8.002381	0.003445	-0.019269
30	P3	-8.002343	0.003448	-0.019465

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	0.000478069
	stdev	2.17653e-07
MEAN Q	mean	0.000489362
	stdev	2.34357e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129502
	stdev	0.00105590
STDEV Q	mean	0.129767
	stdev	0.00106782



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005041[567]

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_1PNPDK20050415_124323_000000532036_00253_16339_2504.N1	1	0
ASA_WVS_1PNPDE20050415_222023_000000002036_00258_16344_8313.N1	1	0
ASA_WSM_1PNPDE20050415_141605_000000672036_00254_16340_7052.N1	0	30







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

✘

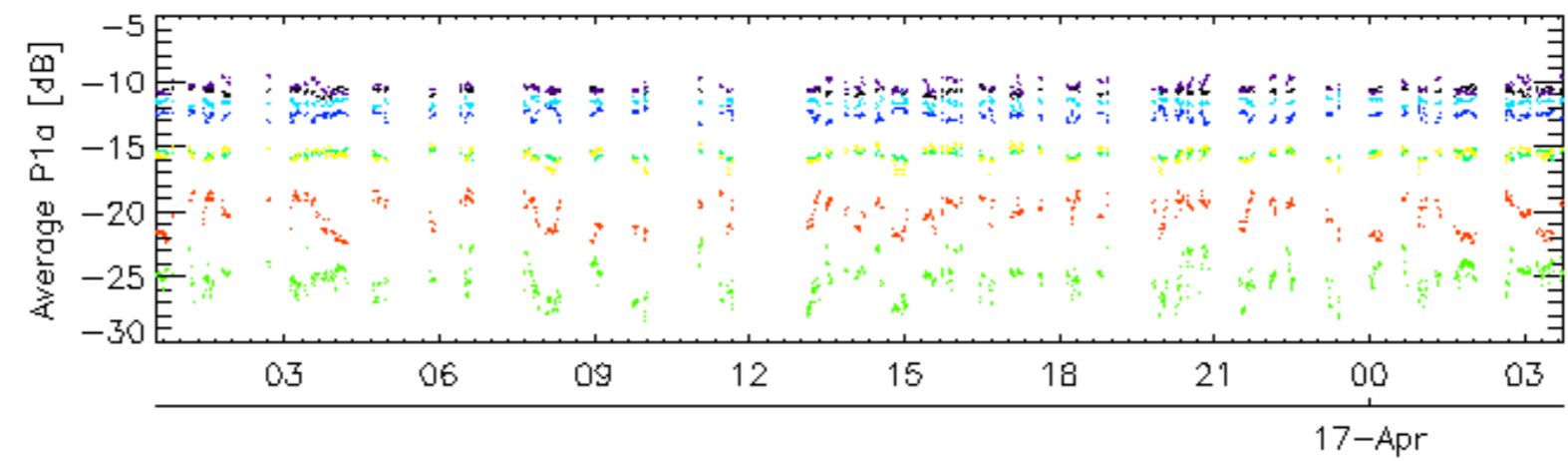
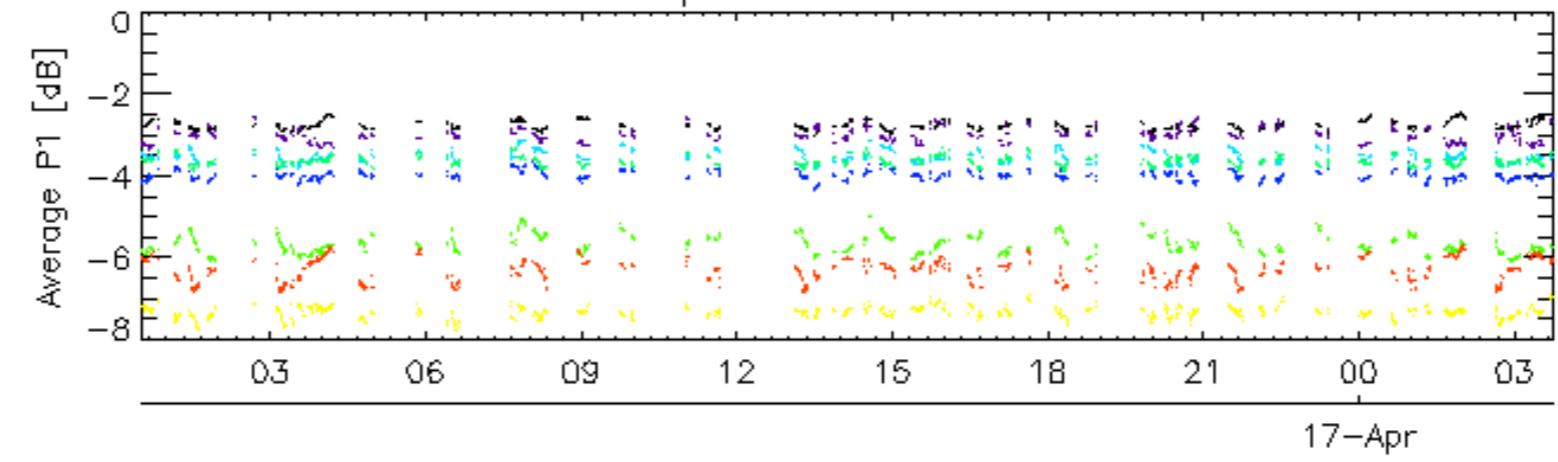
Descending

7.6 - Doppler evolution versus ANX for GM1

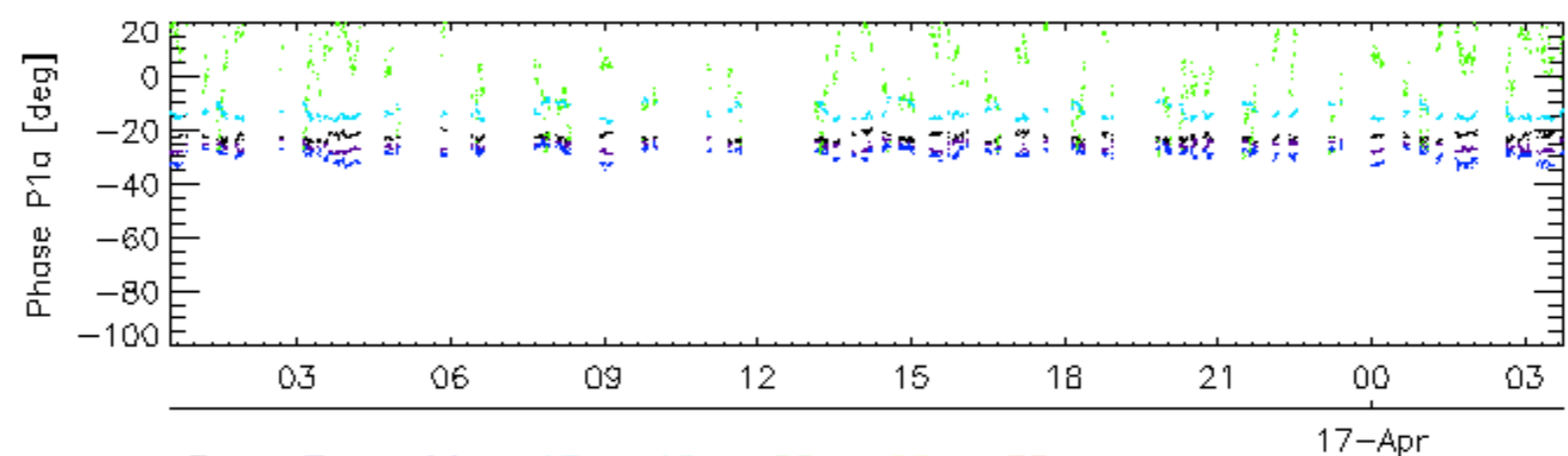
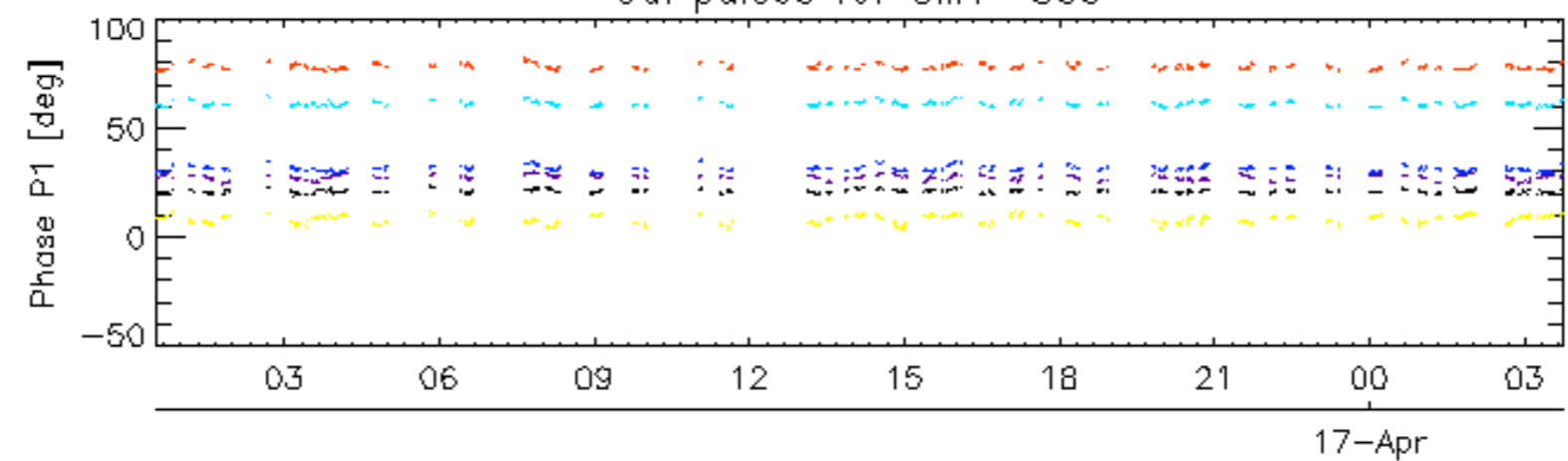
Evolution Doppler error versus ANX

✘

Cal pulses for GM1 SS3

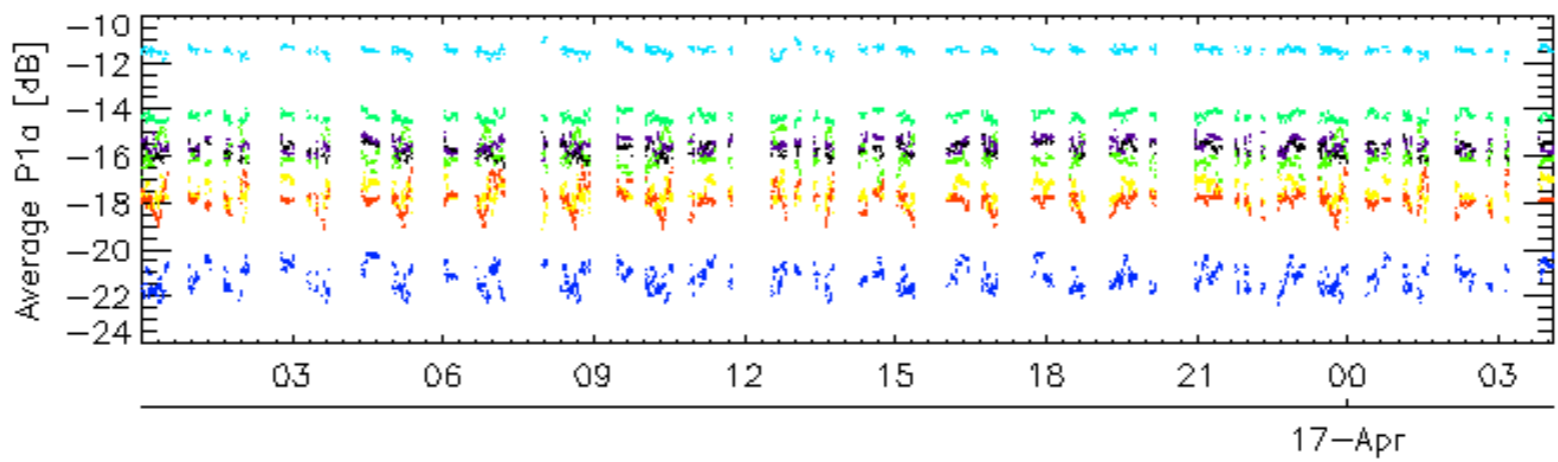
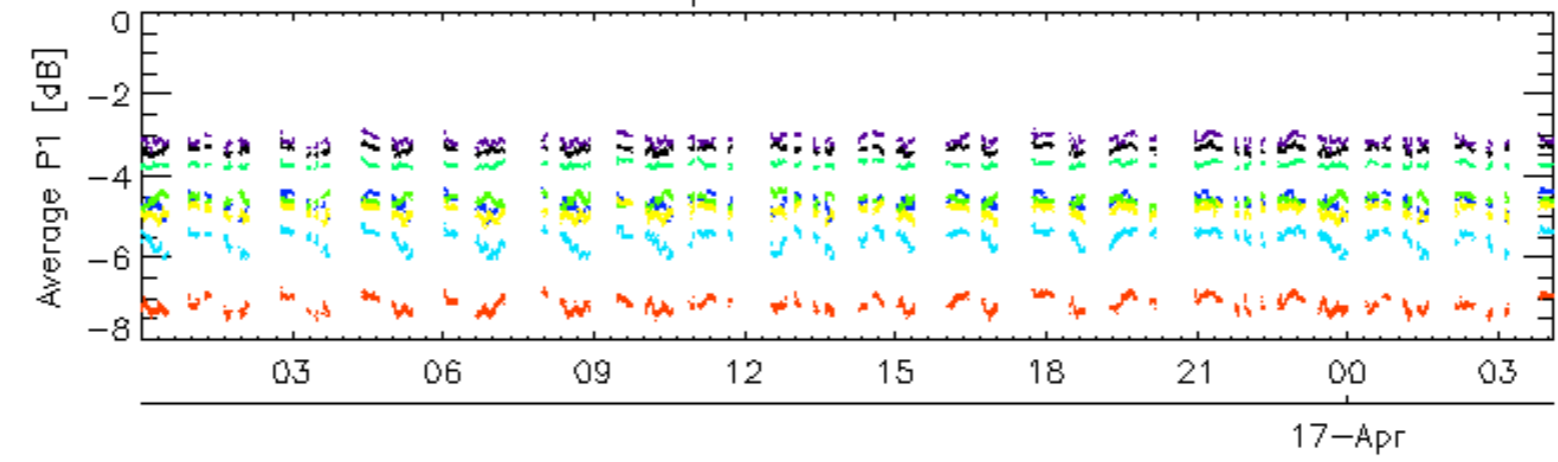


Cal pulses for GM1 SS3

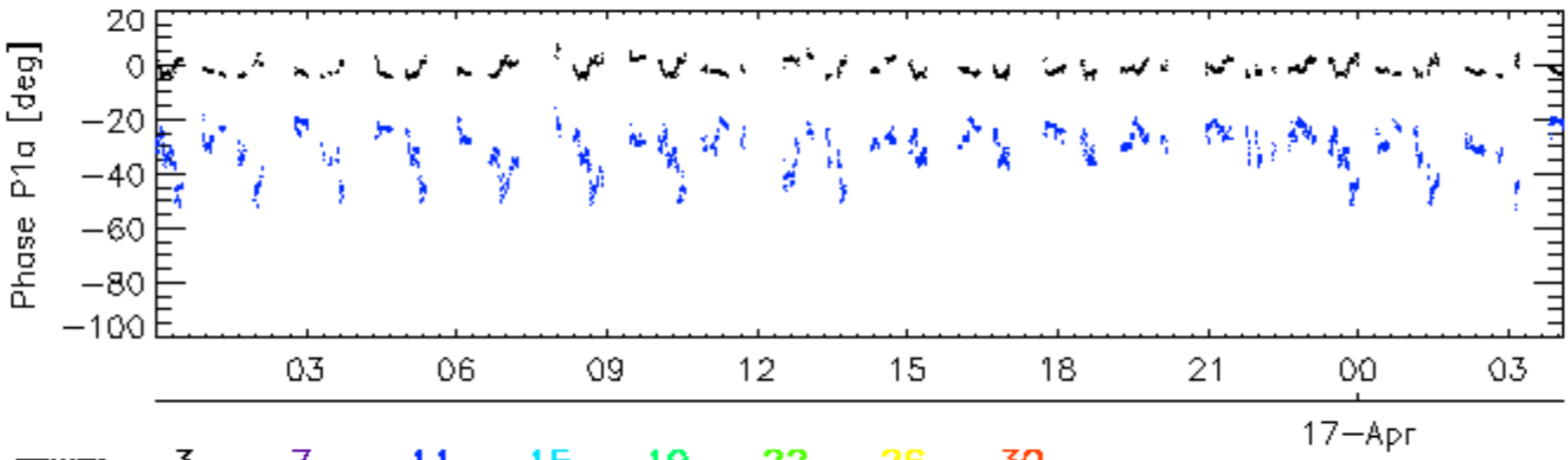
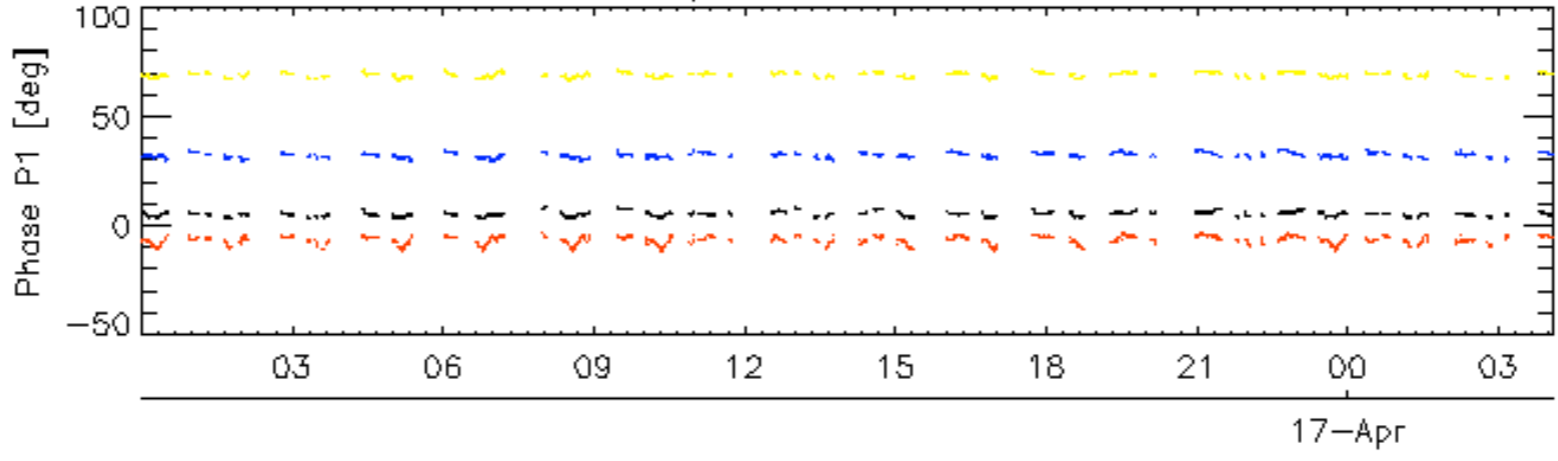


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

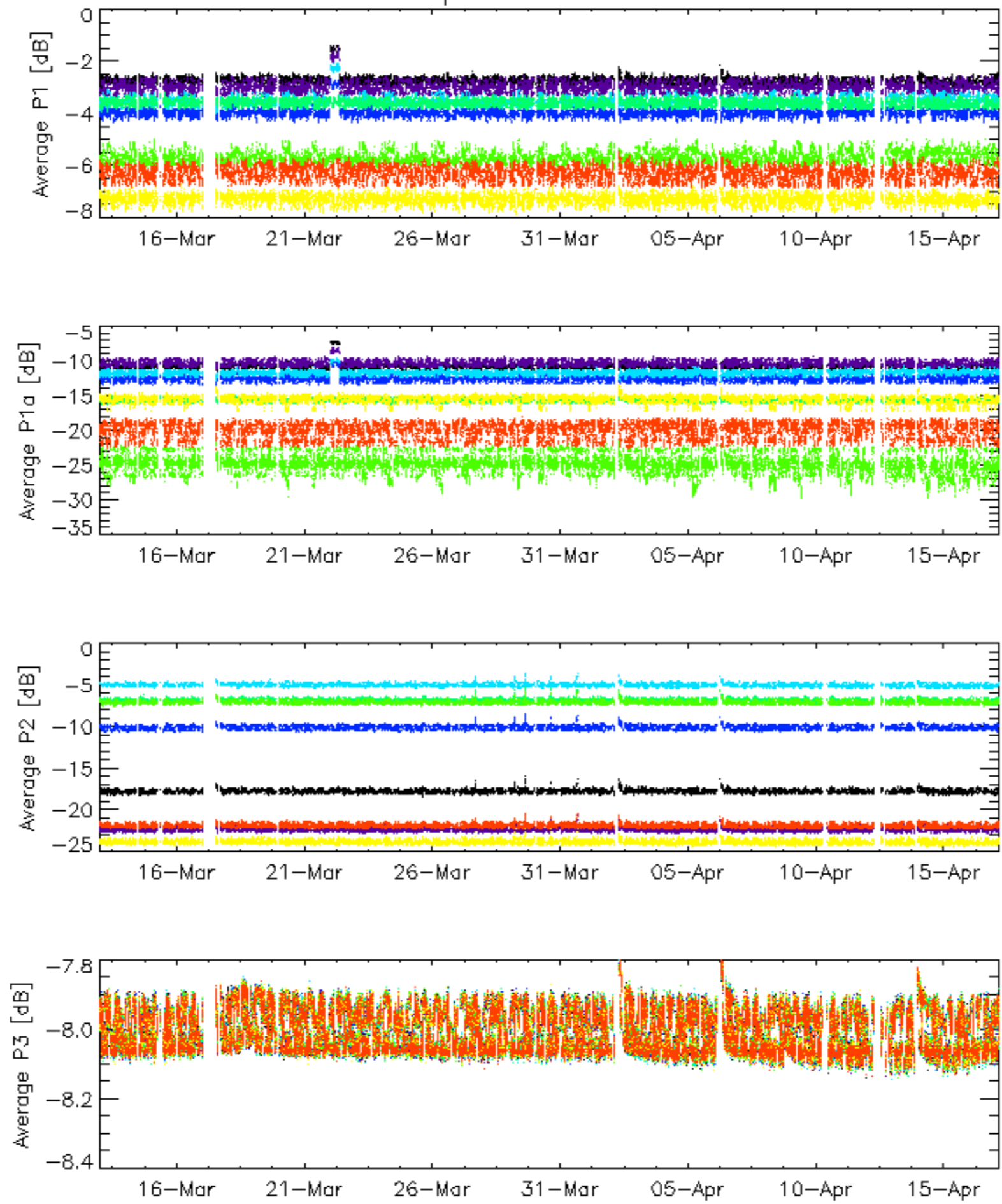


Cal pulses for WVS IS2



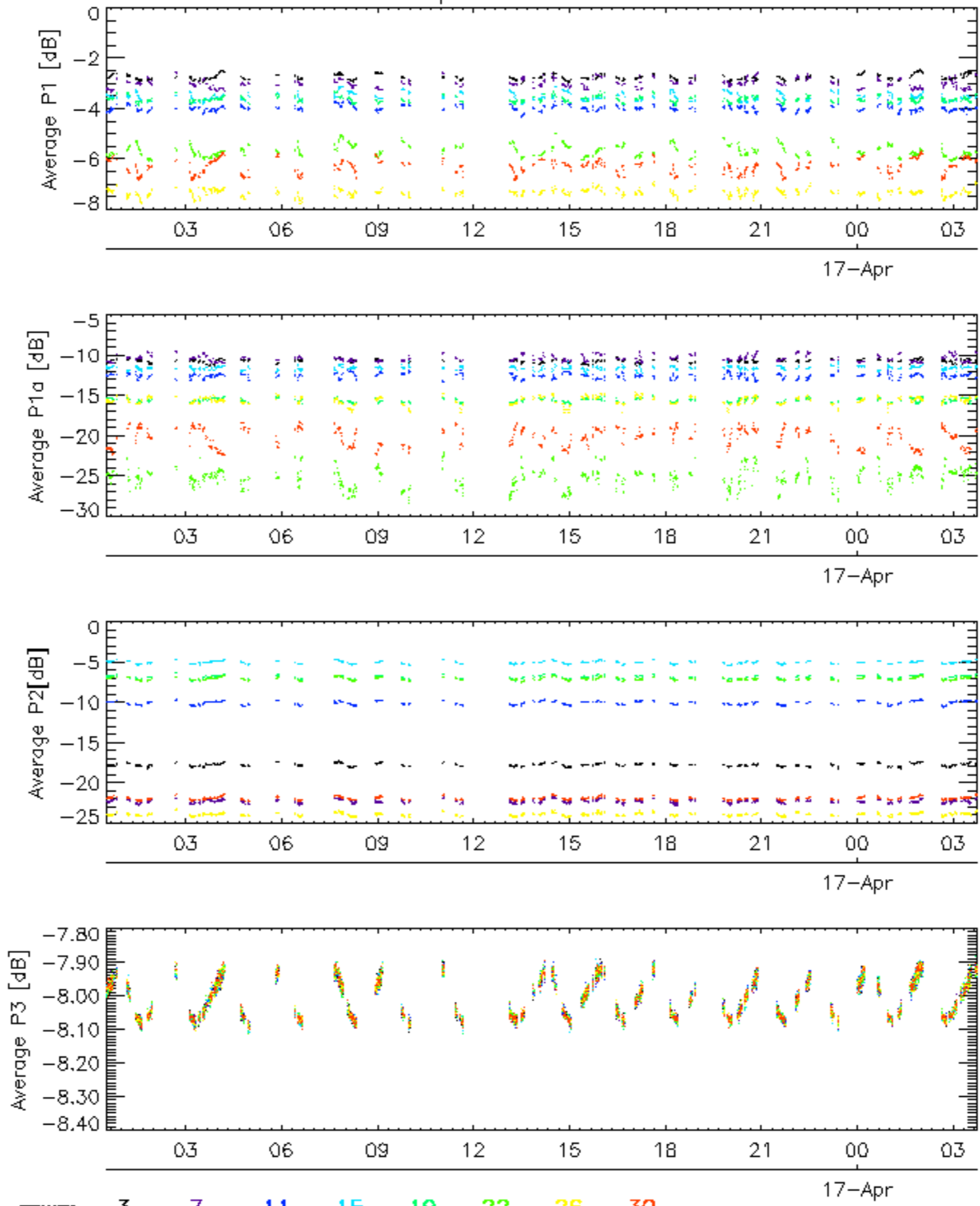
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



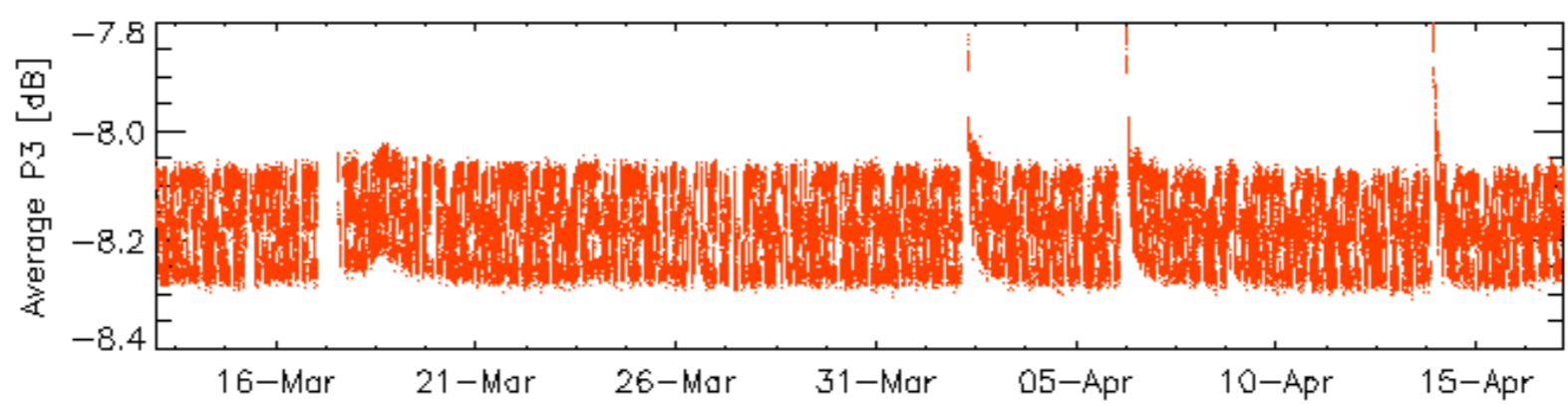
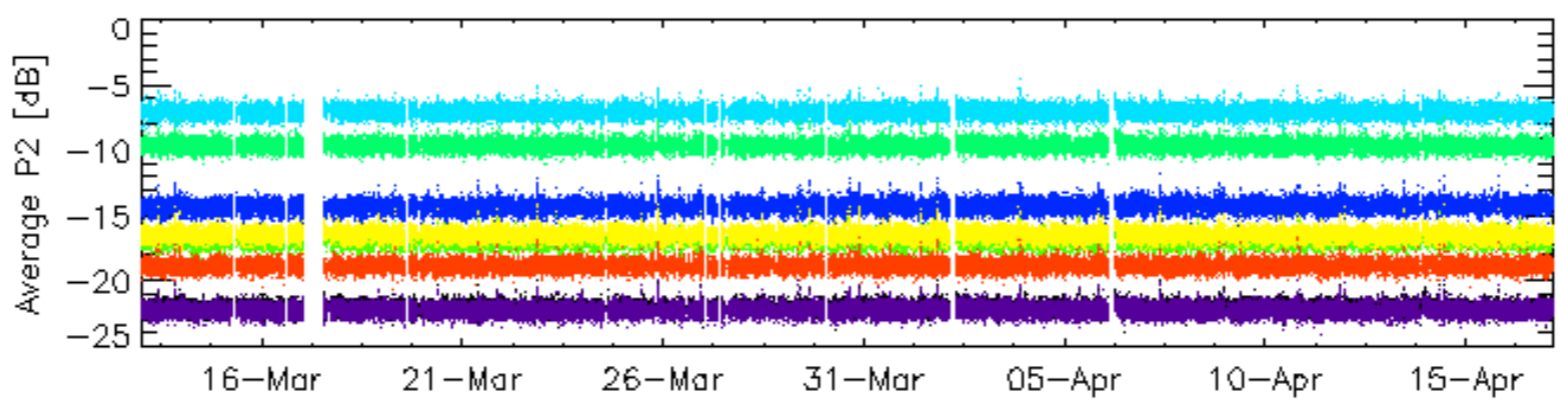
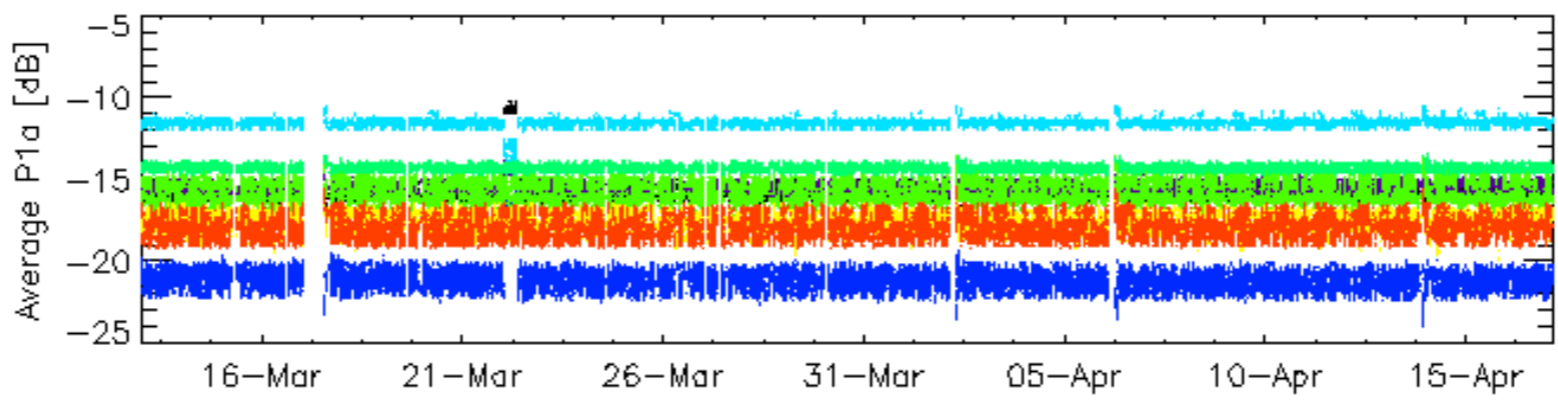
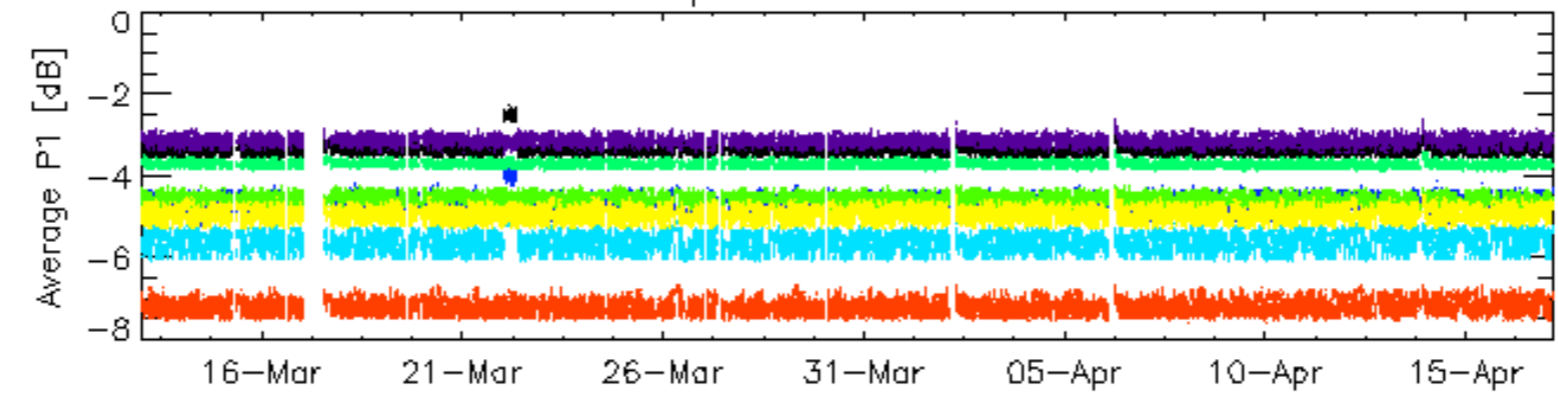
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3



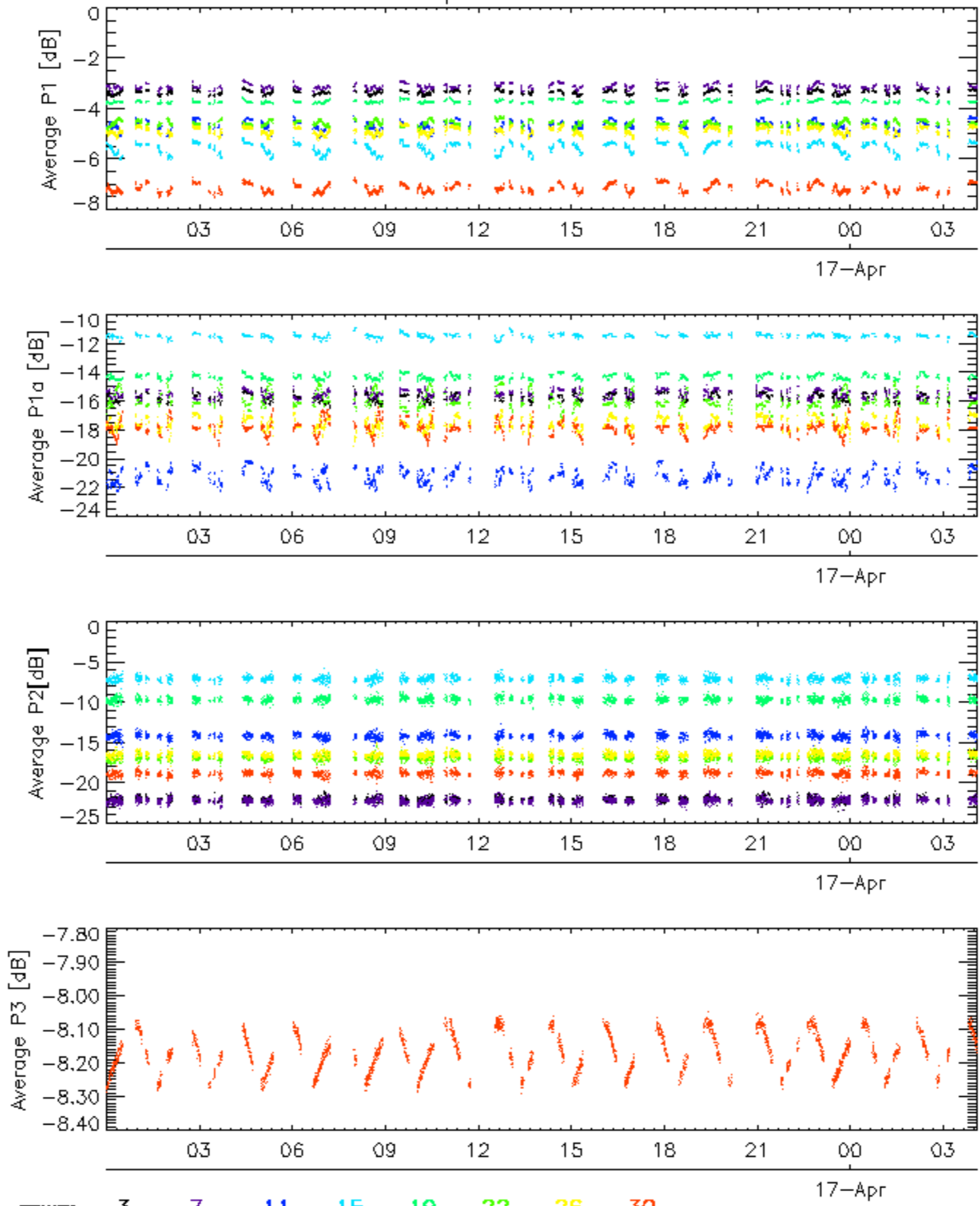
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



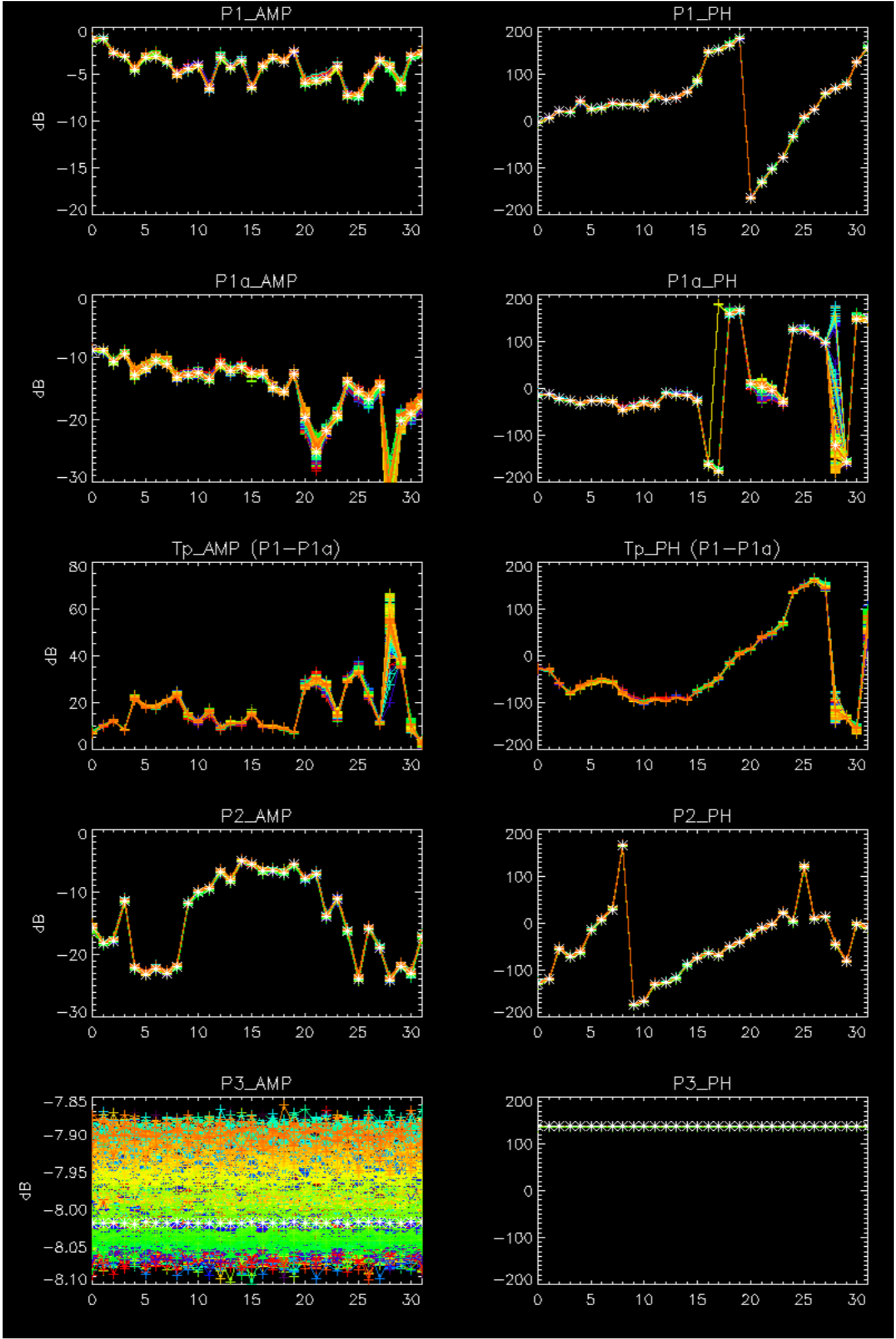
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

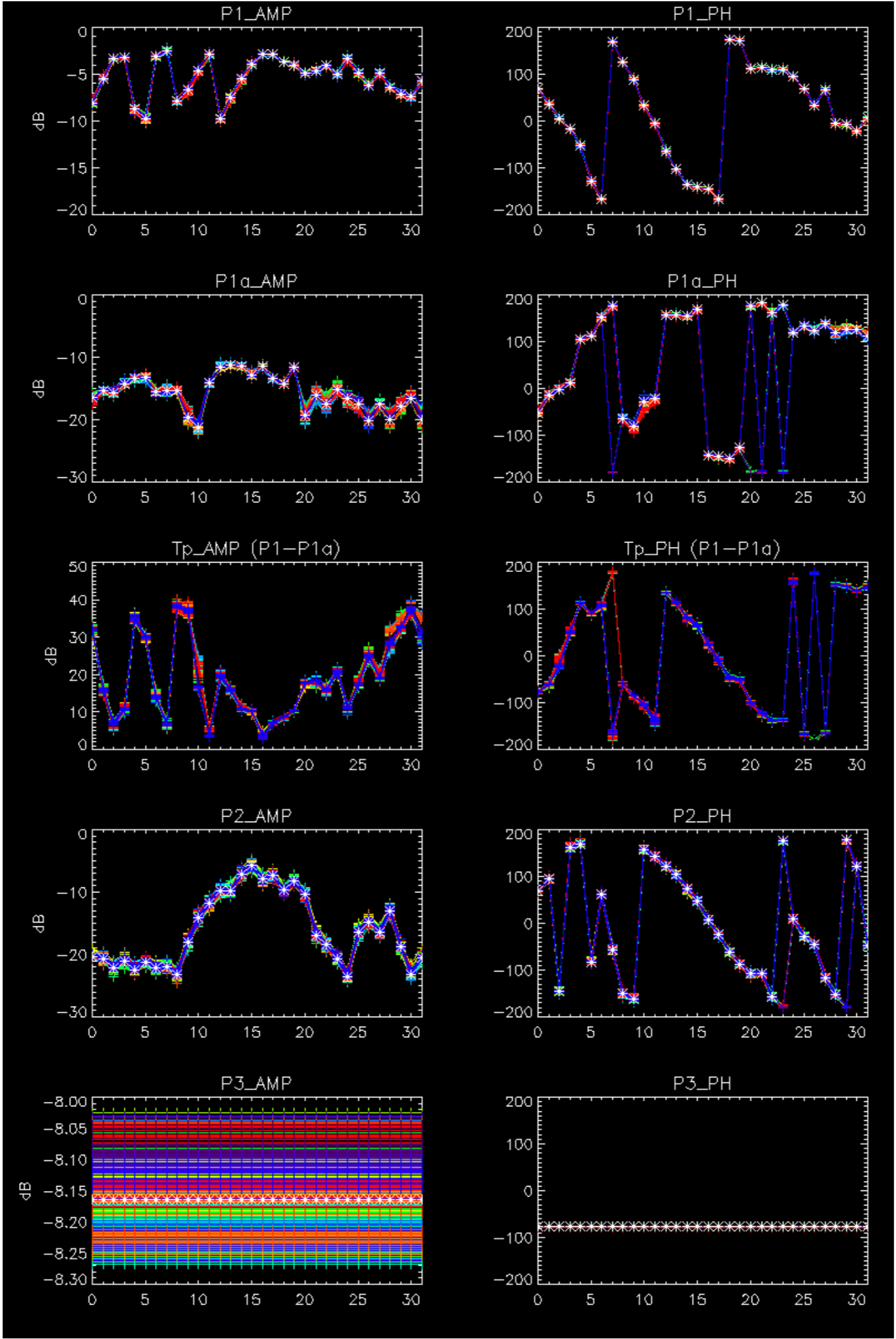
Cal pulses for WVS IS2



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

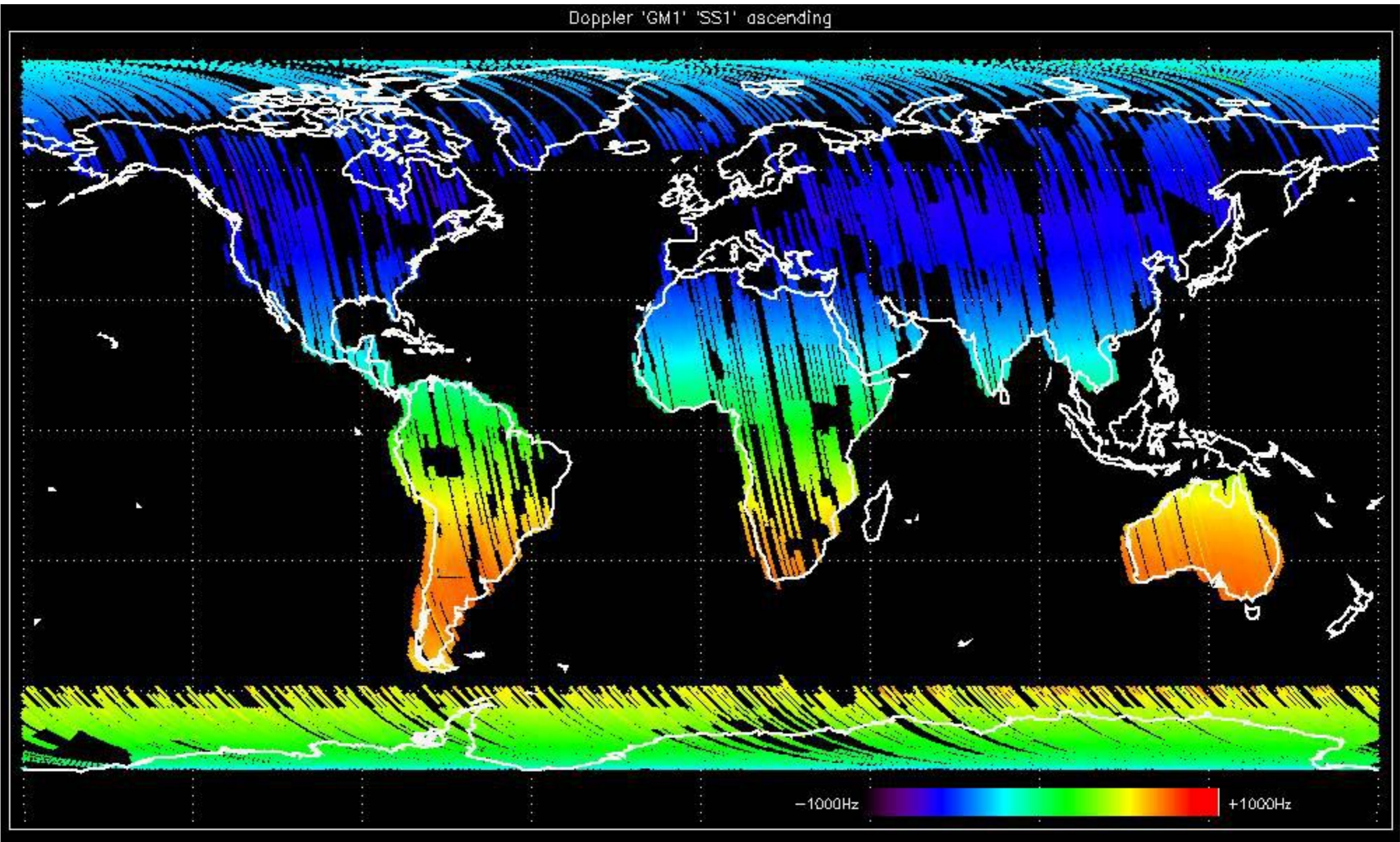
No anomalies observed.



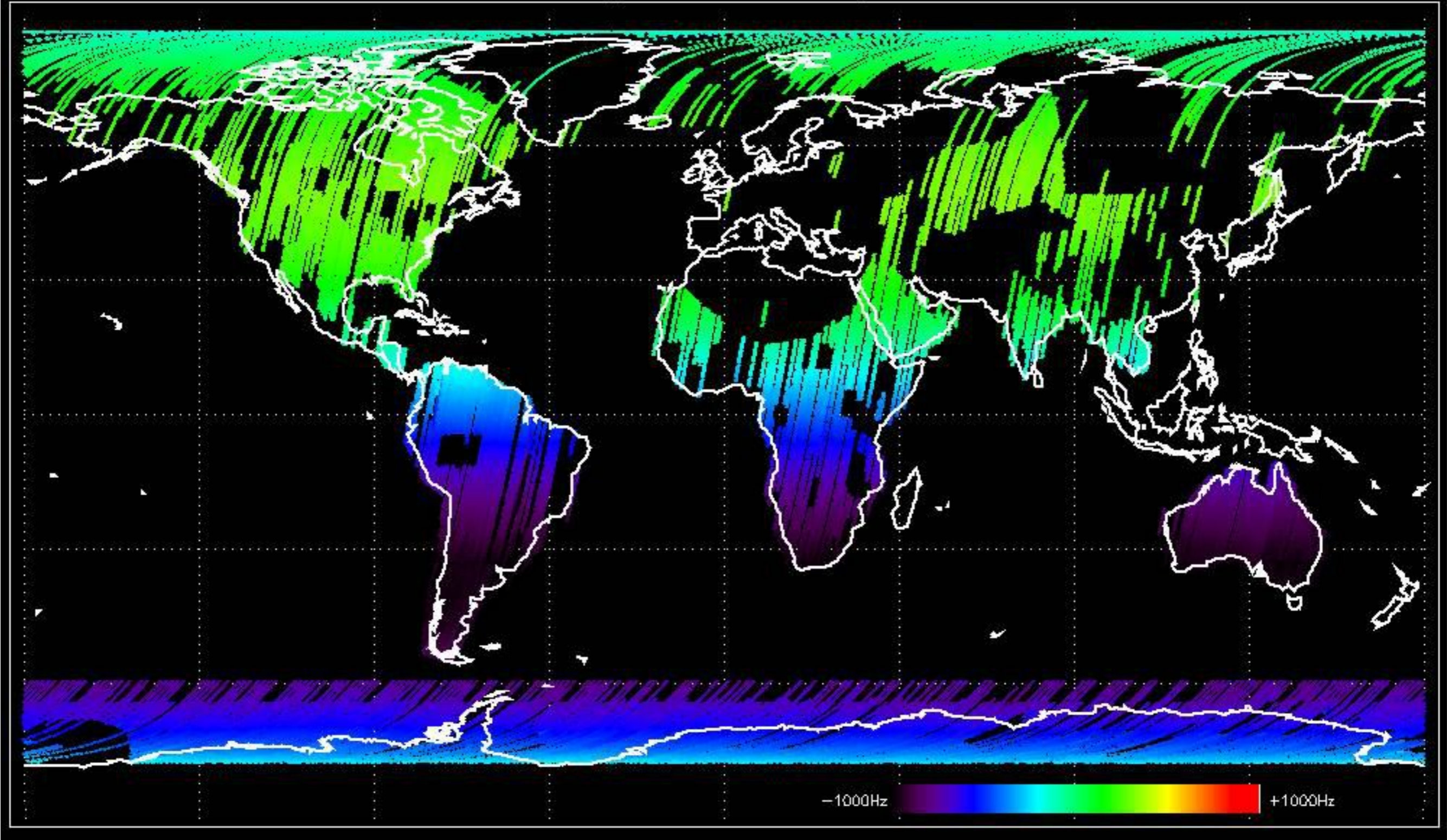


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

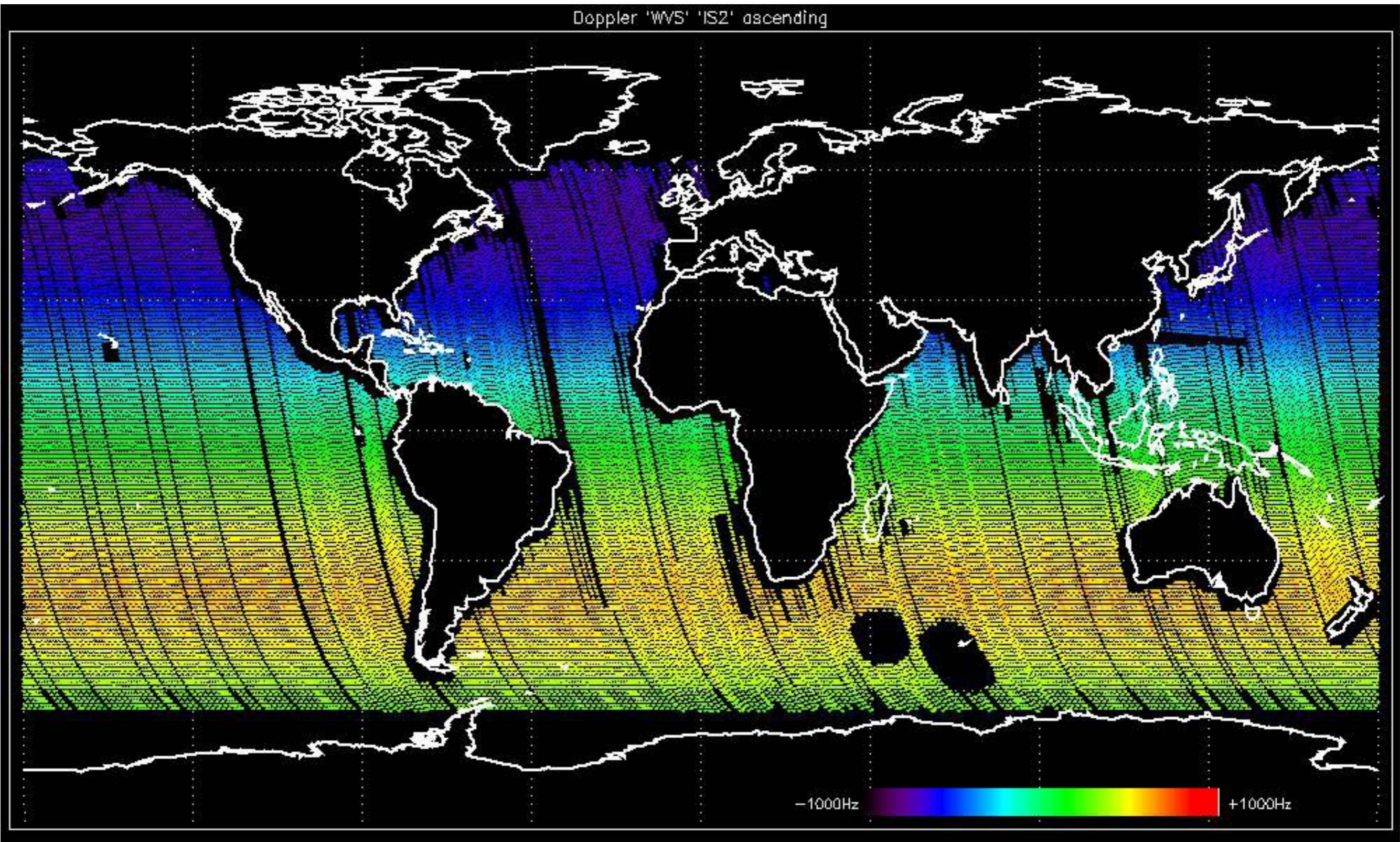
Doppler 'GM1' 'SS1' ascending



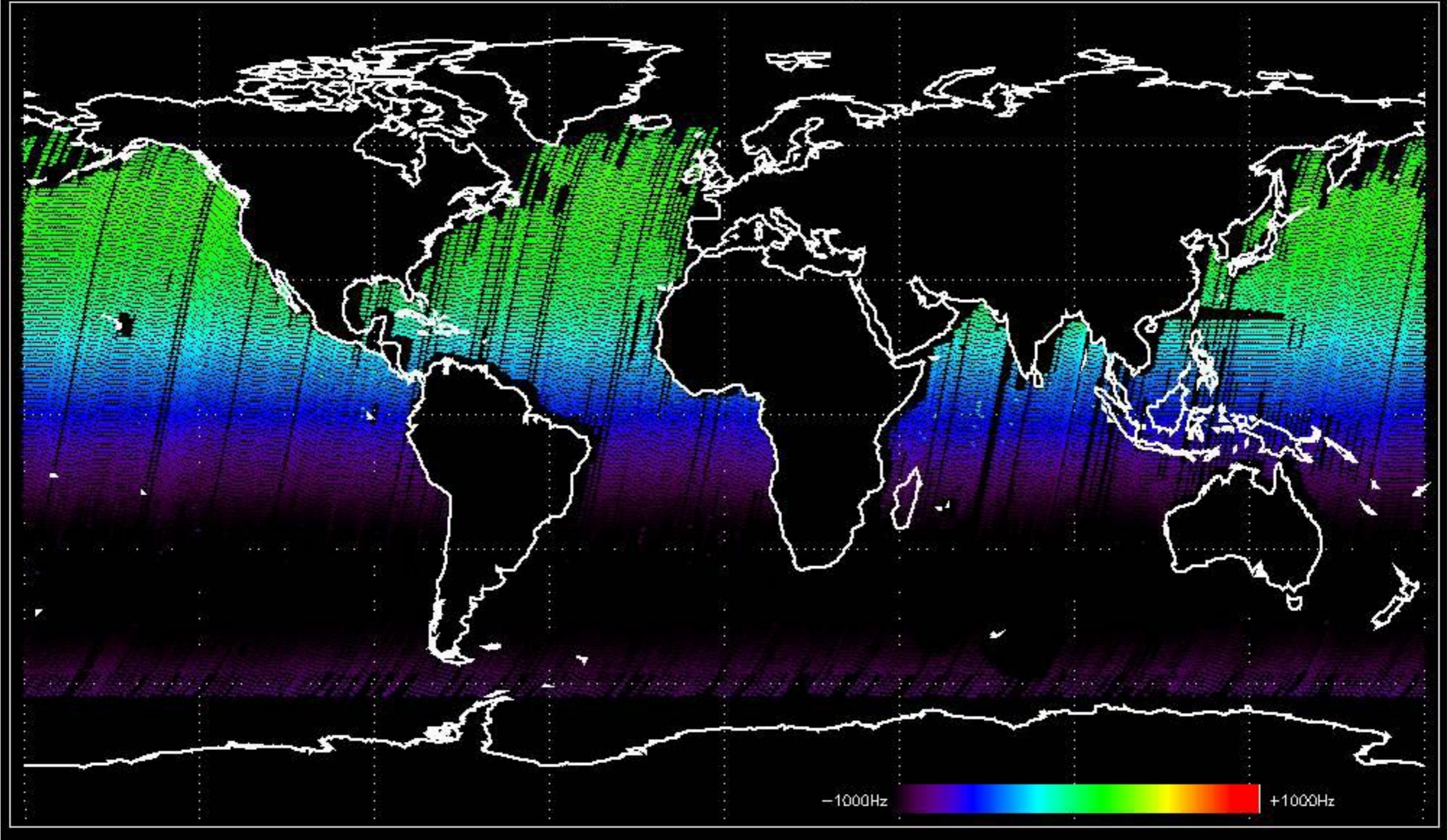
Doppler 'GM1' 'SS1' descending



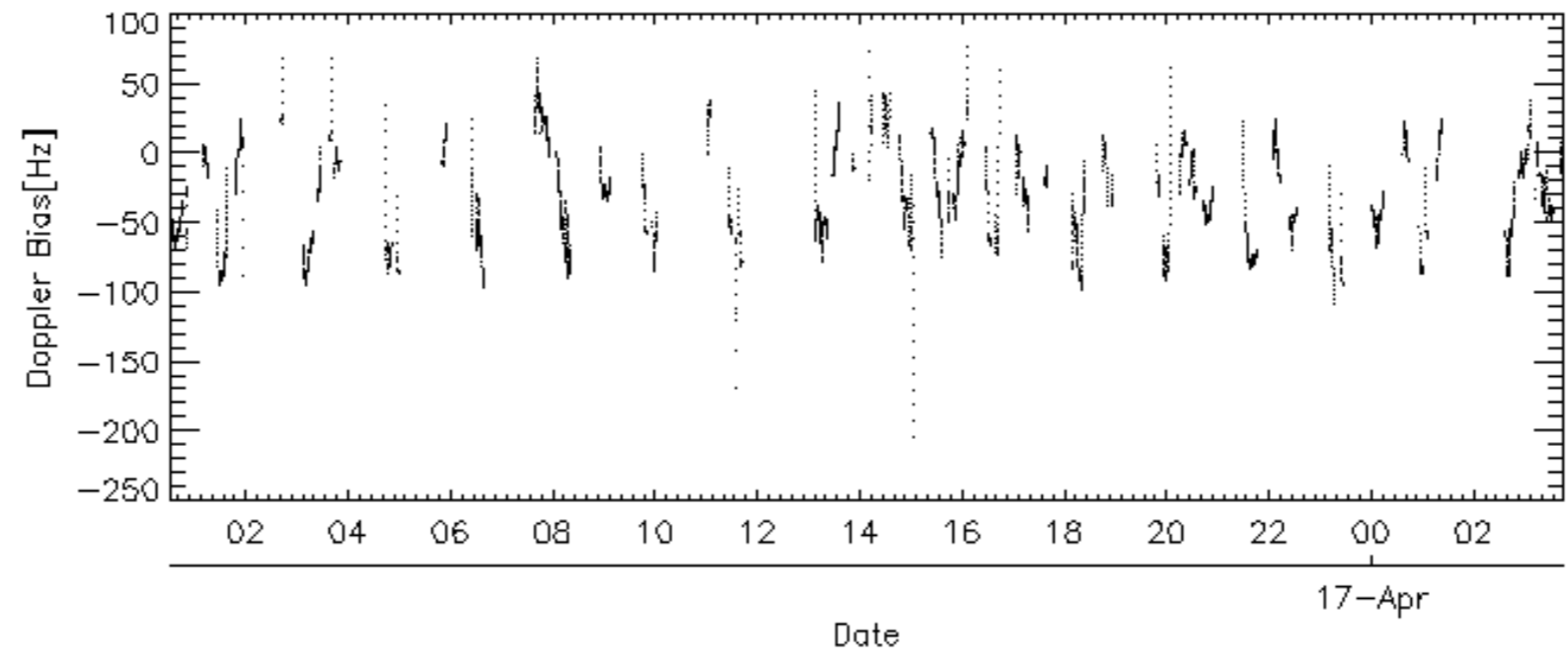
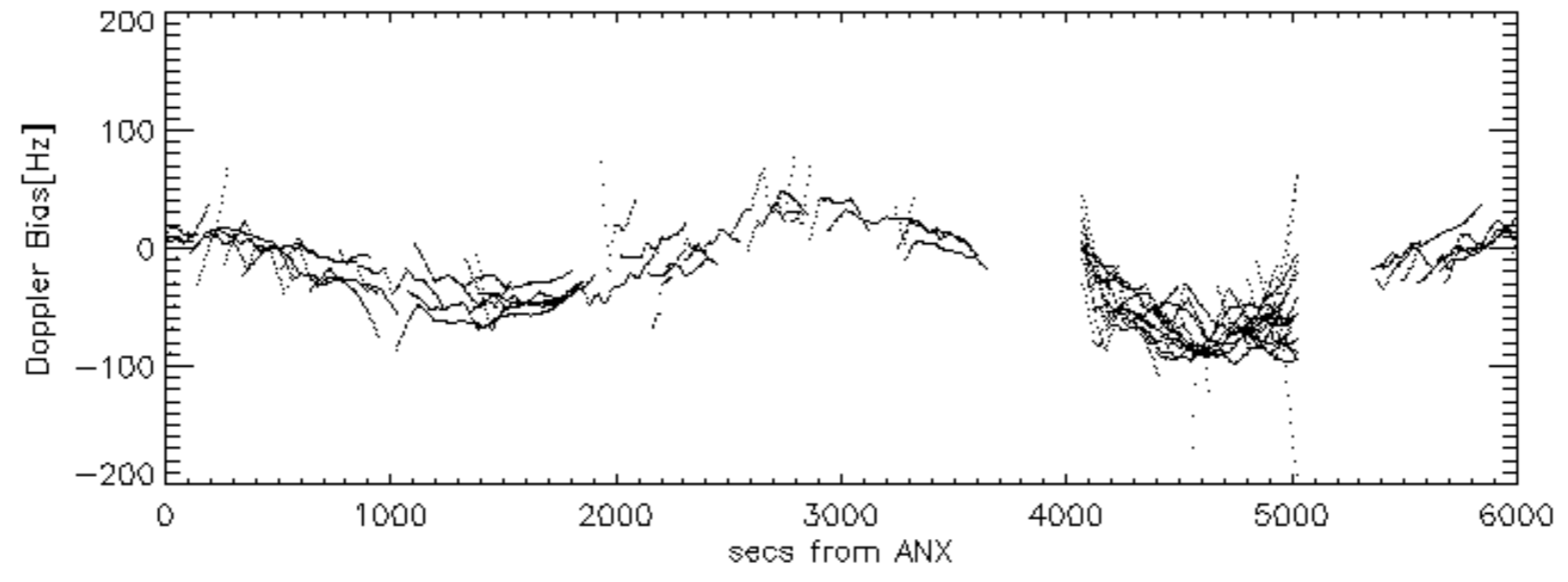
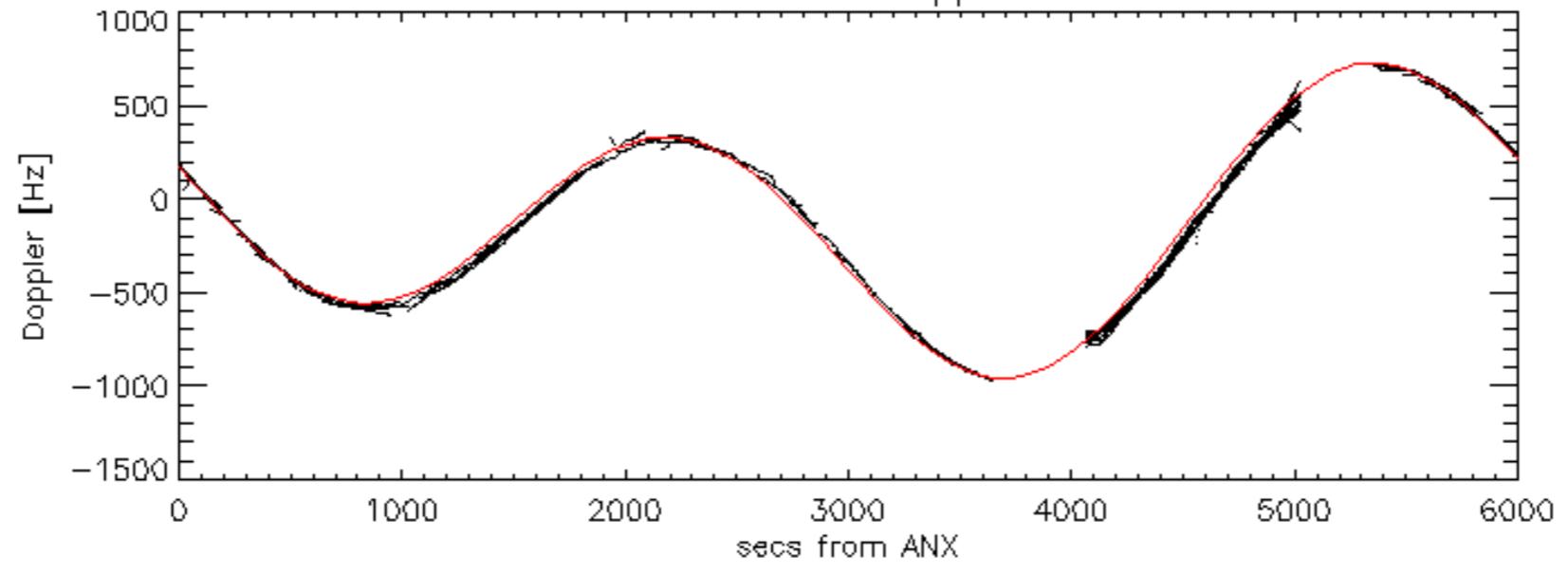
Doppler 'WVS' 'IS2' ascending

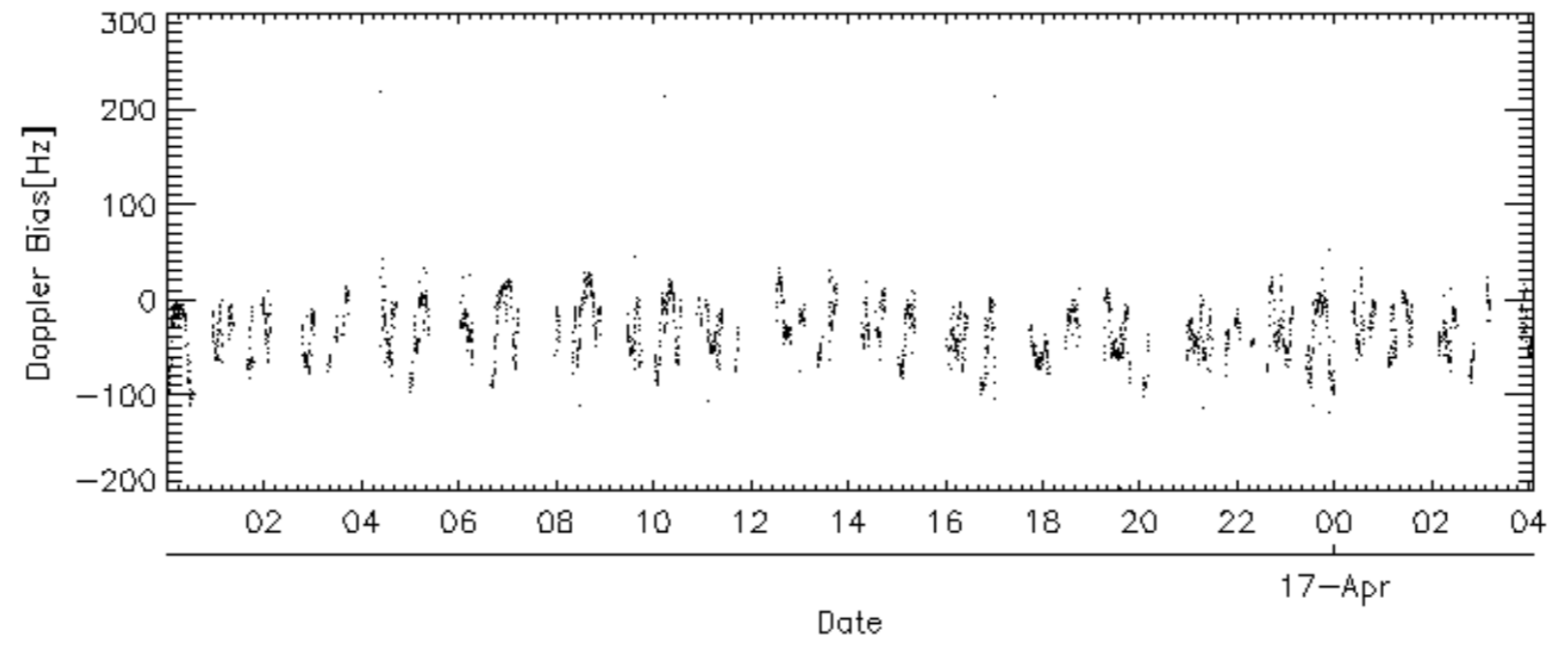
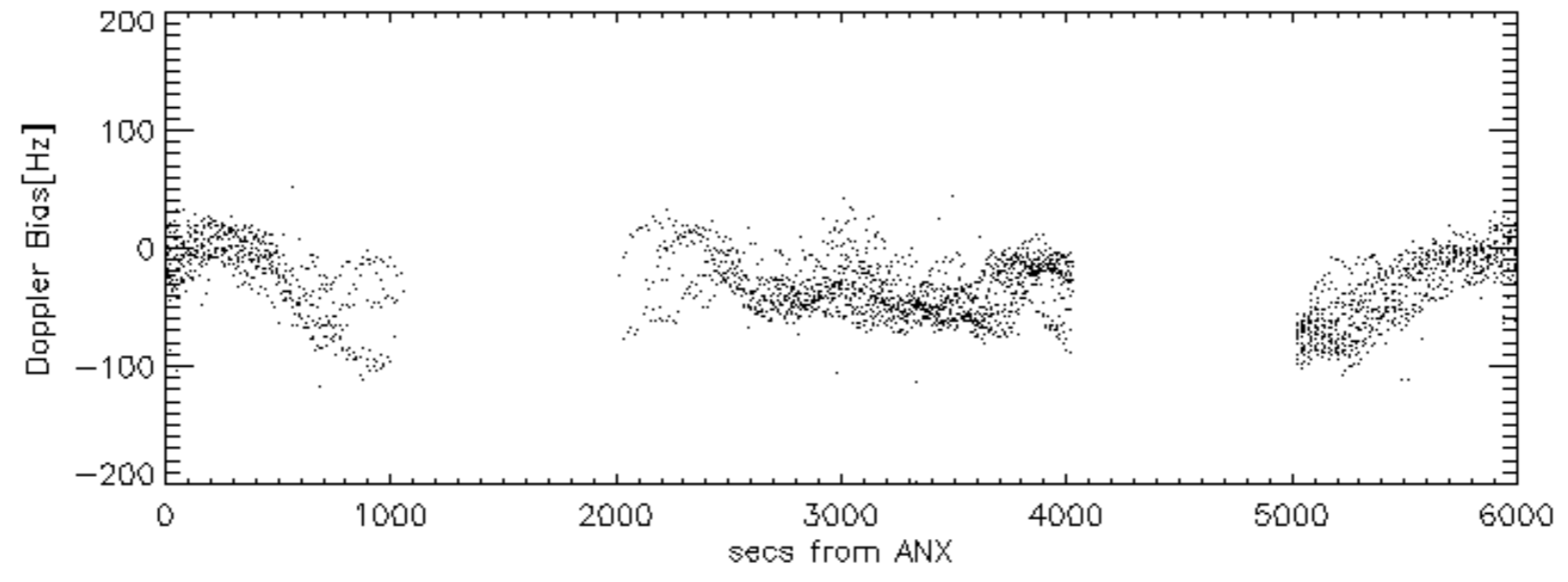
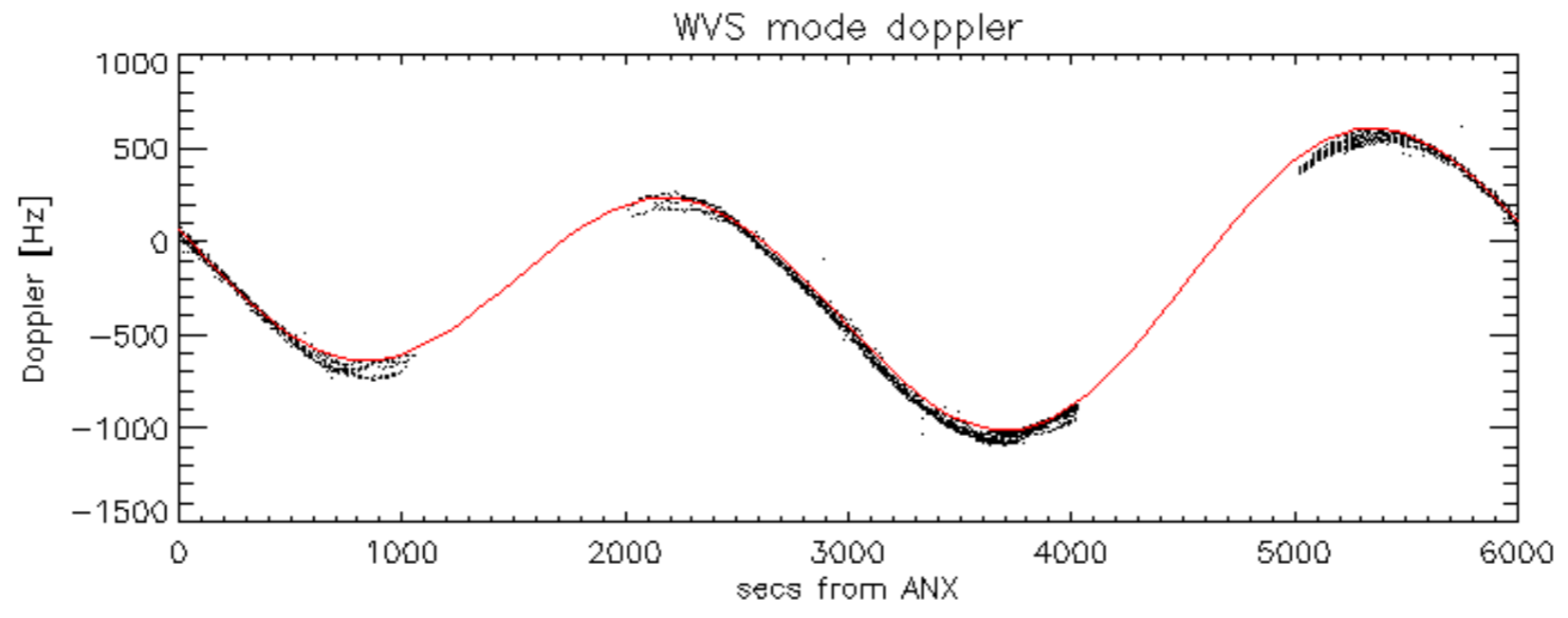


Doppler 'WVS' 'IS2' descending

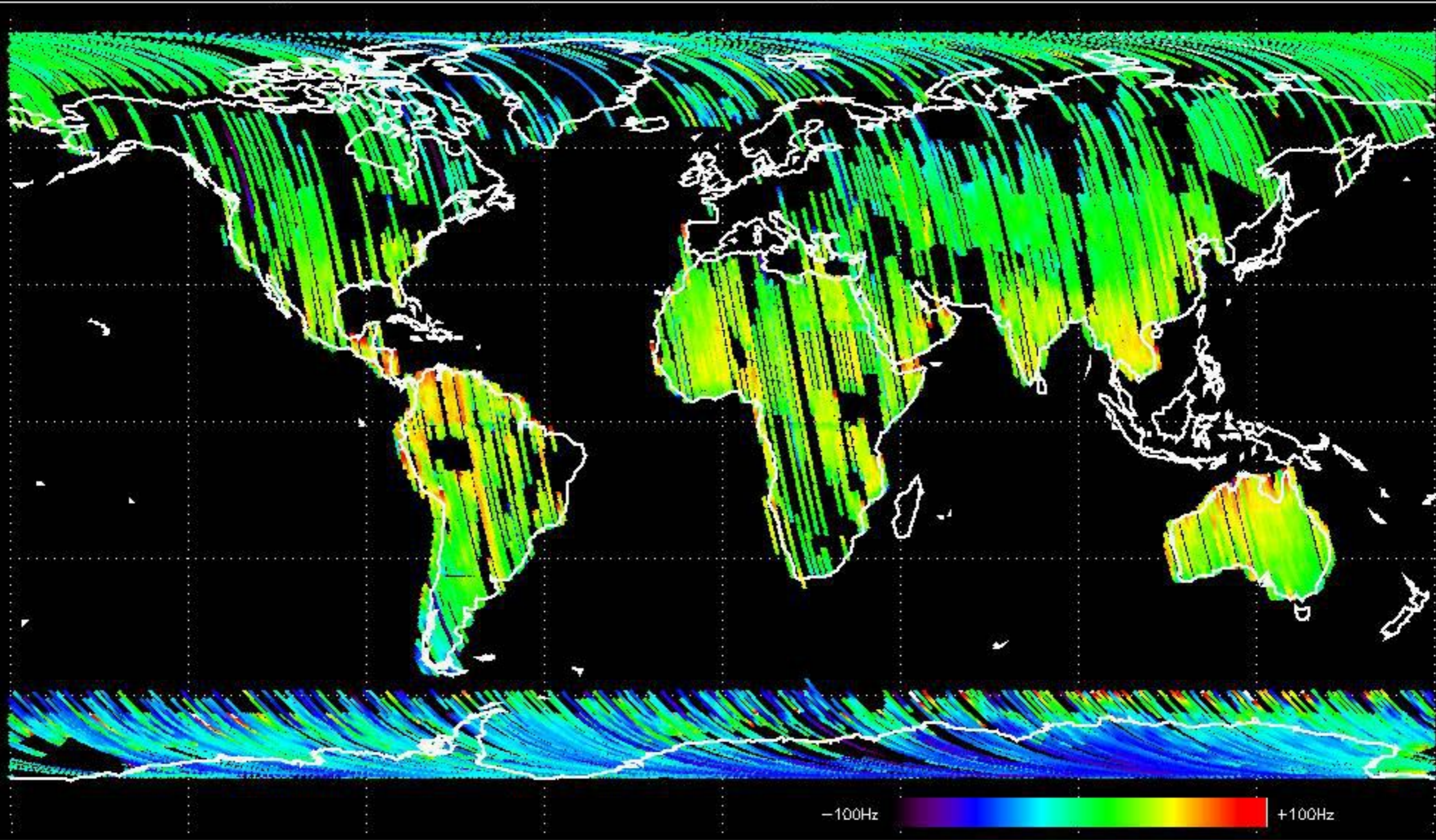


GM1 mode doppler

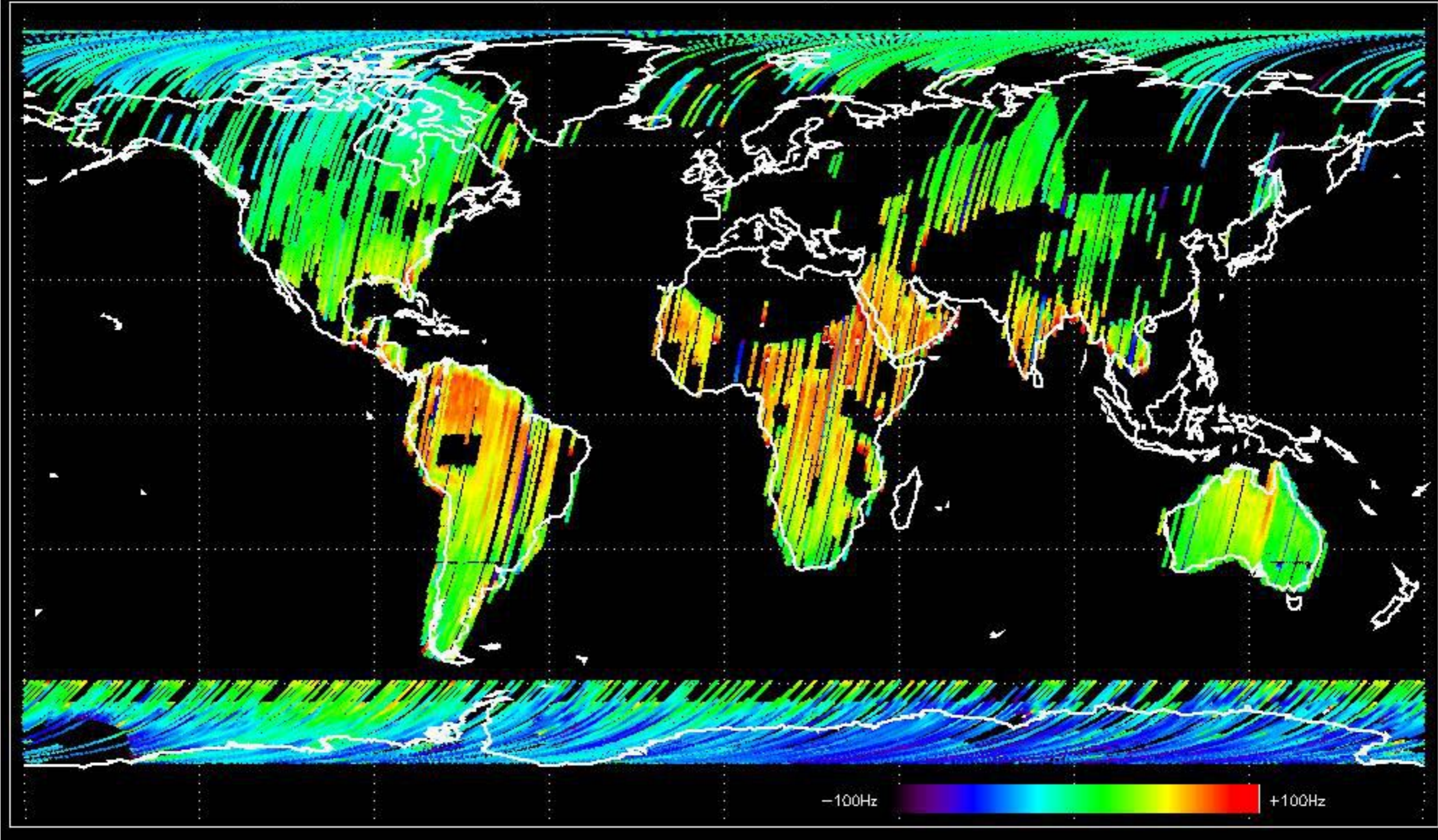




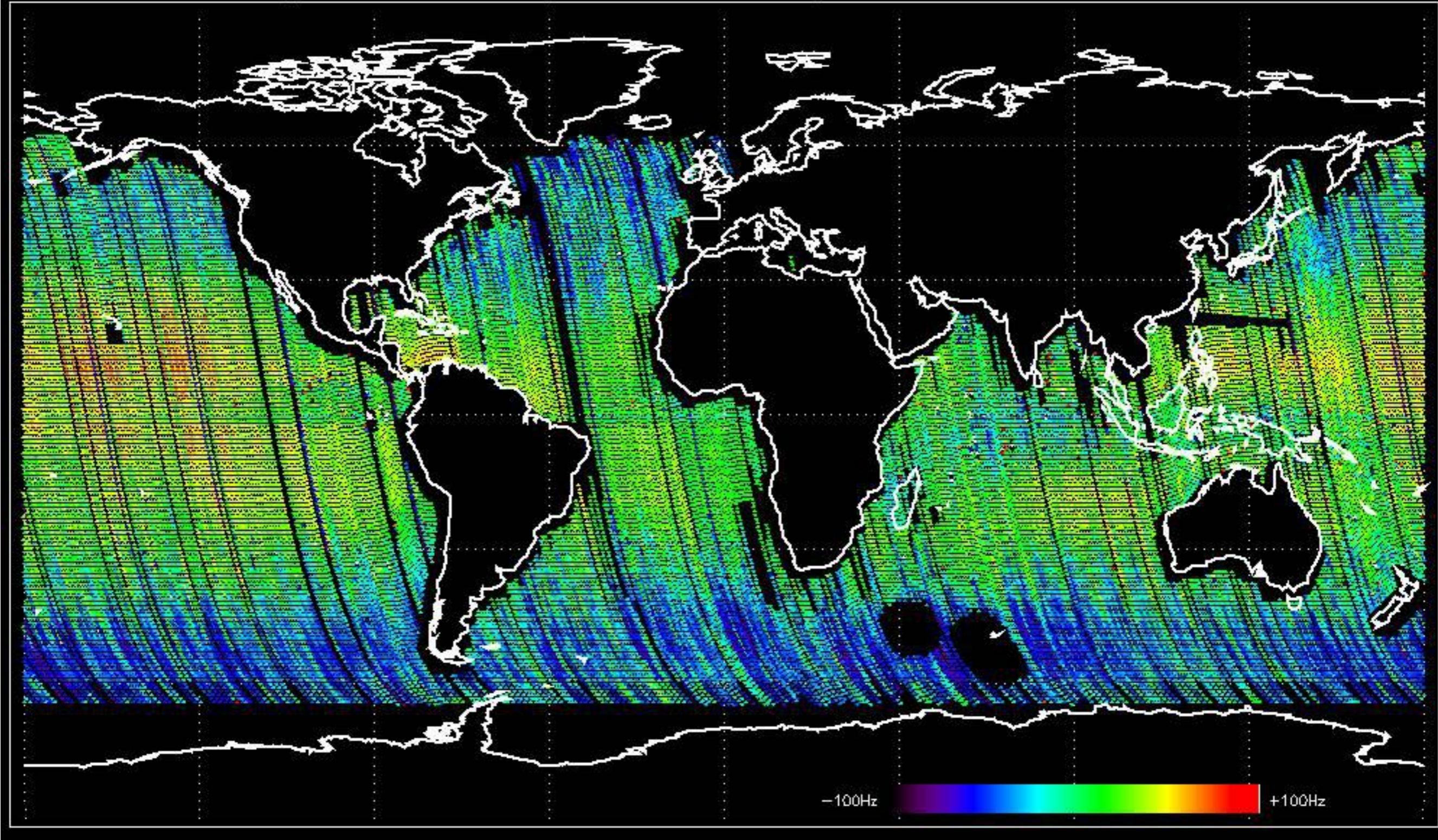
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -36.913243 Hz



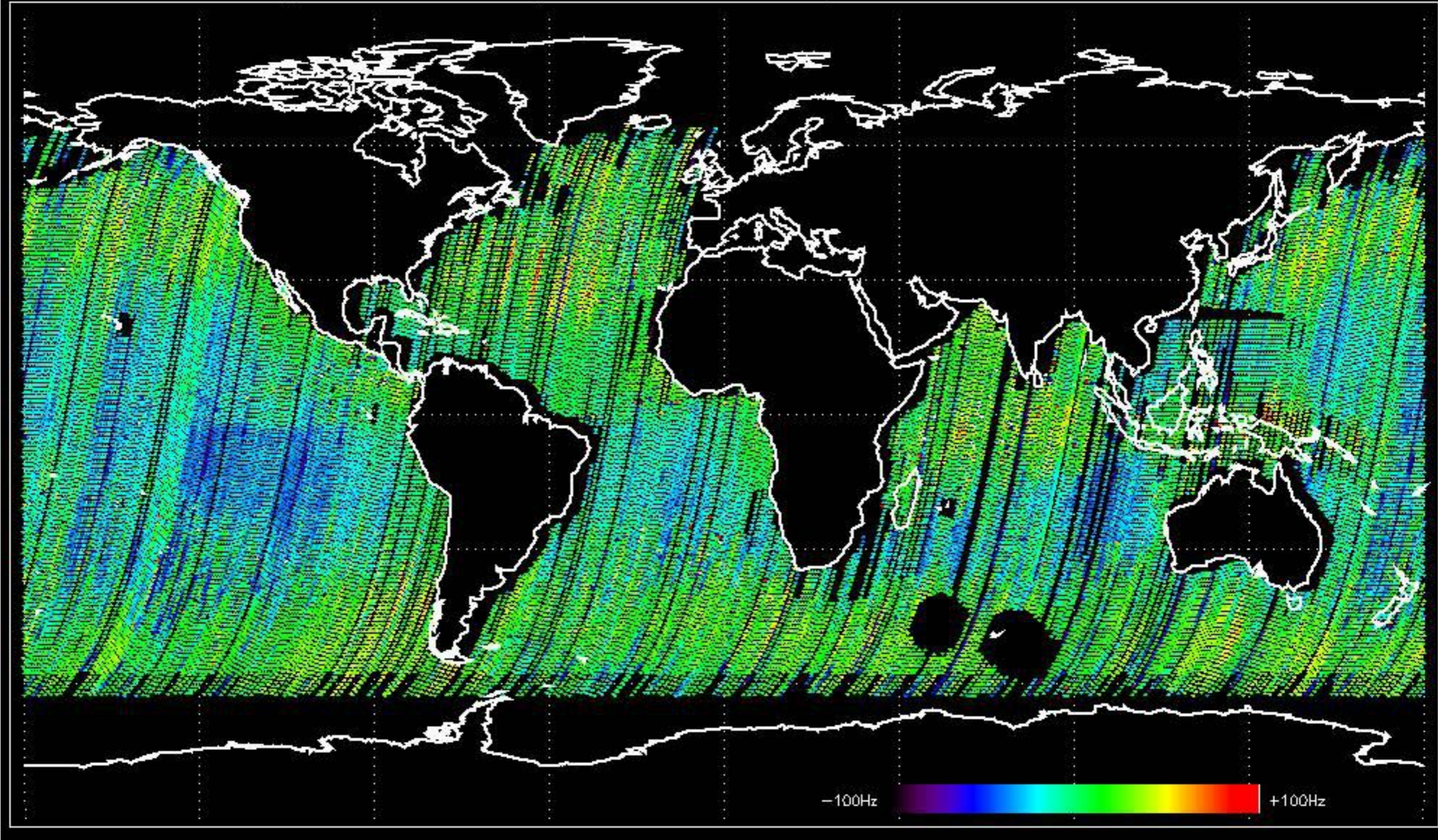
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.985961 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -38.017514 Hz

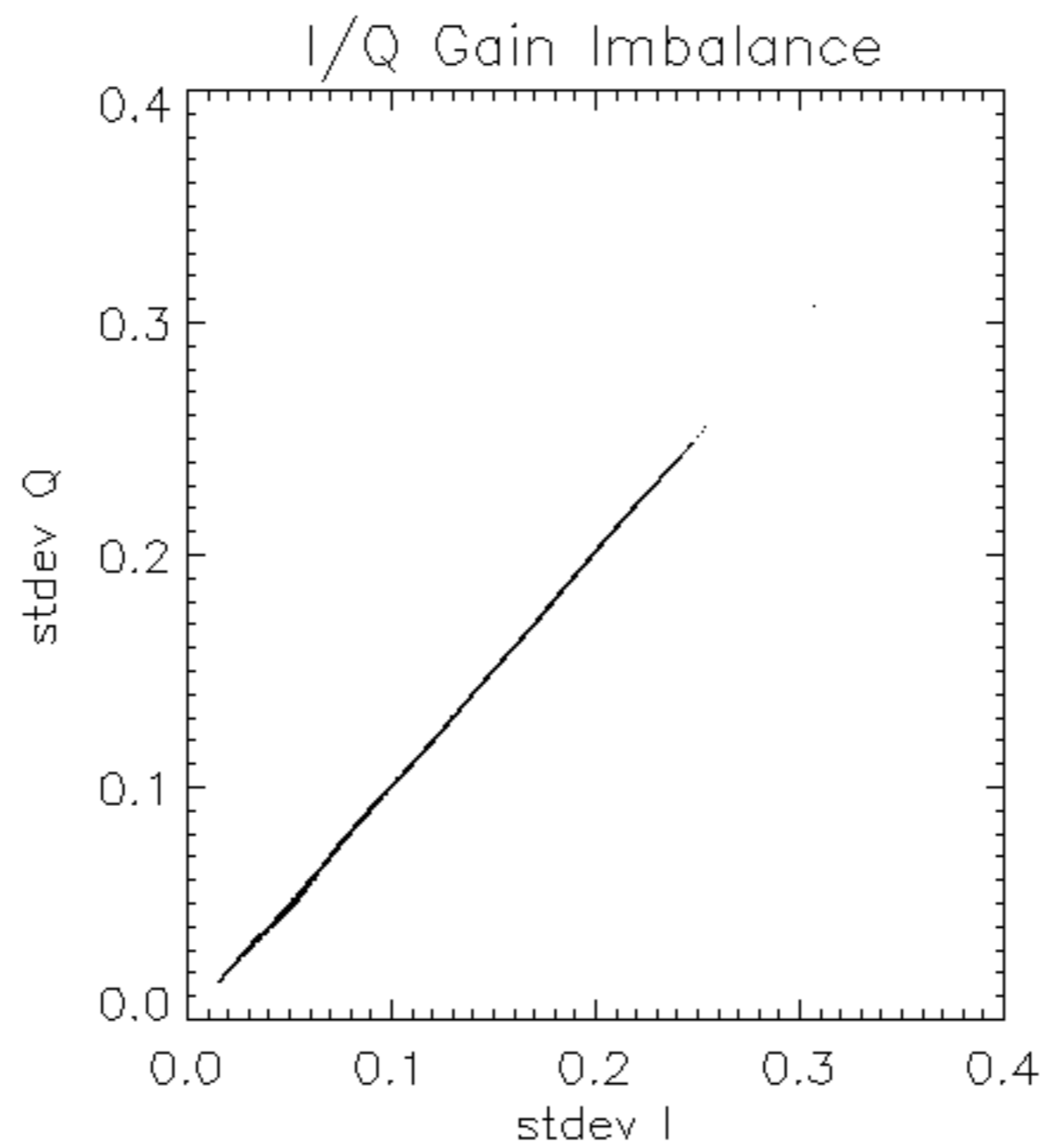


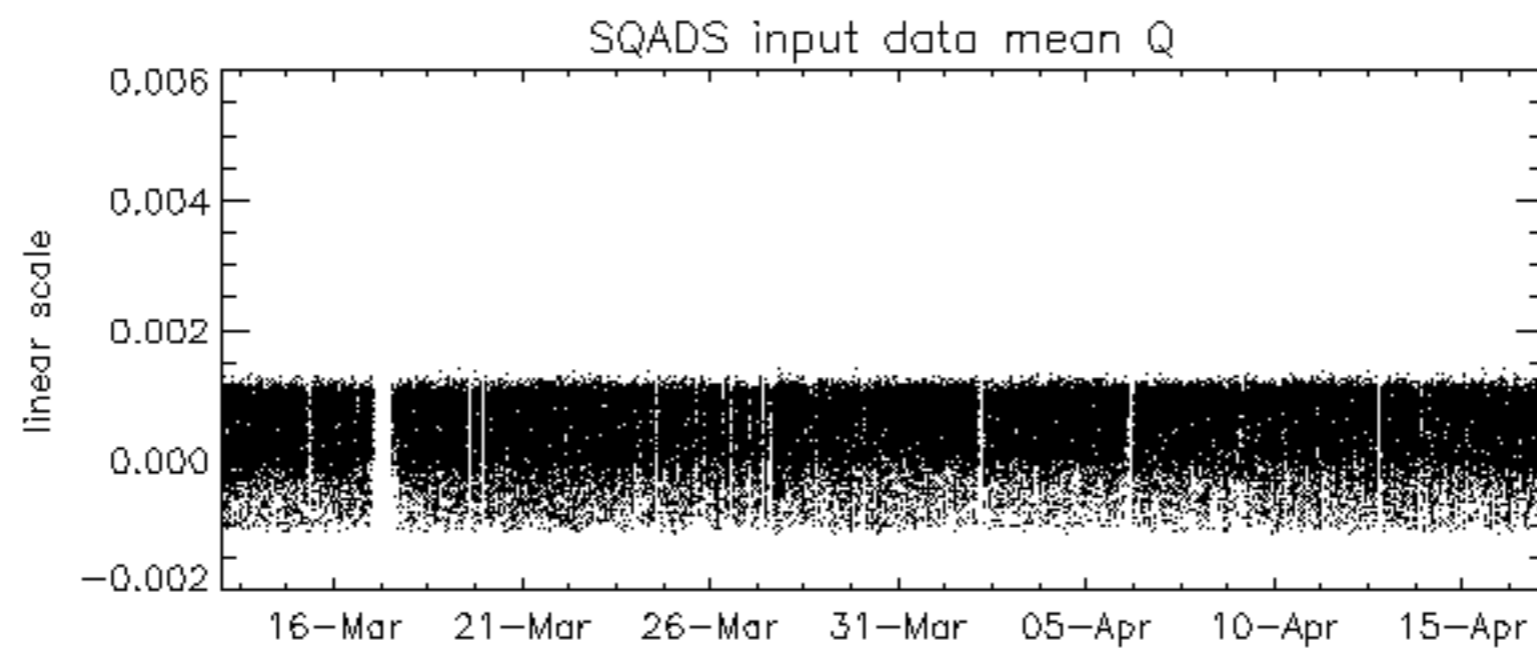
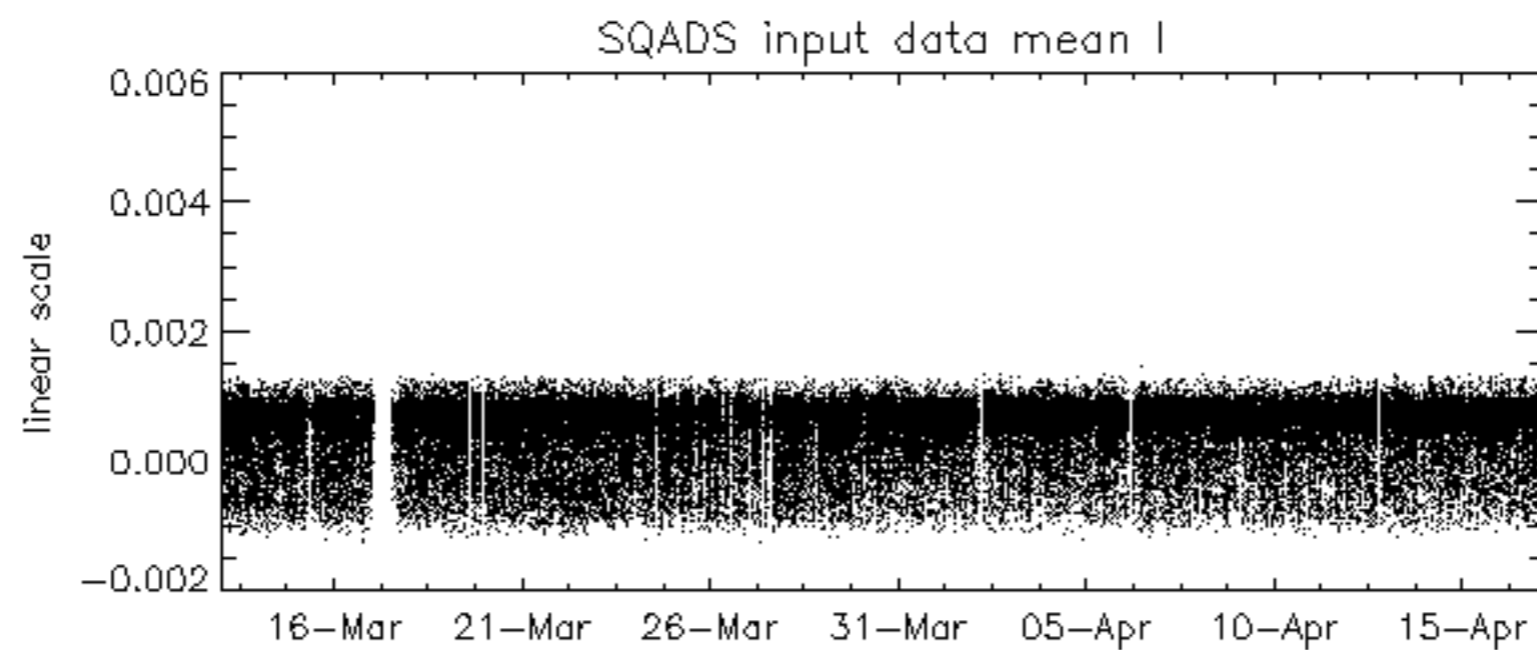
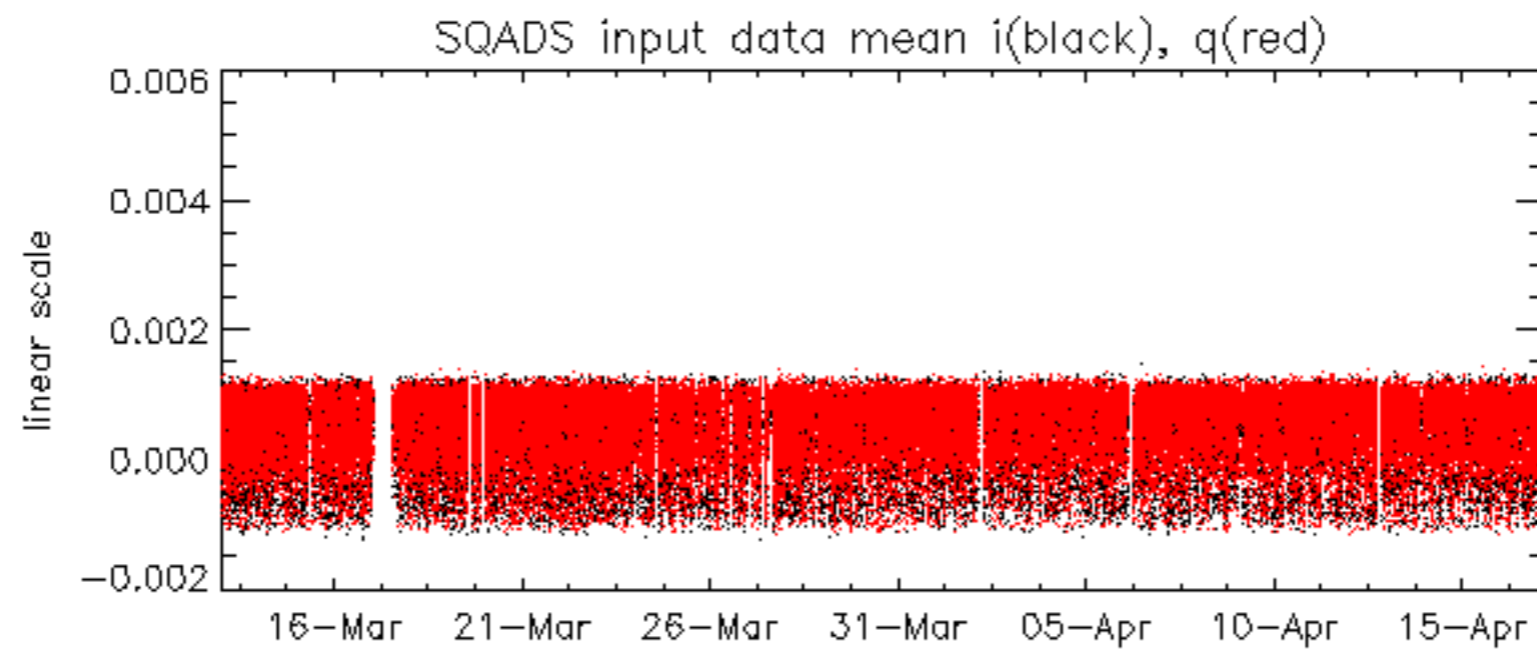
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -38.521713 Hz

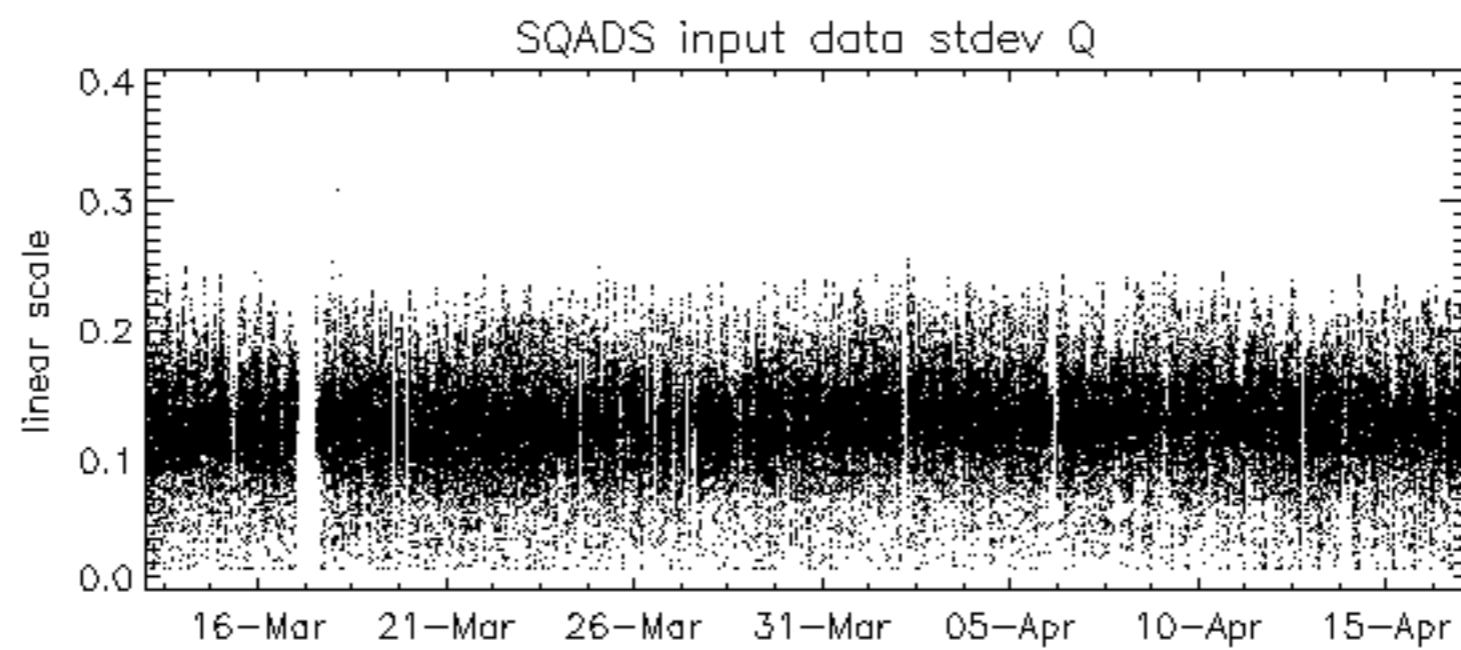
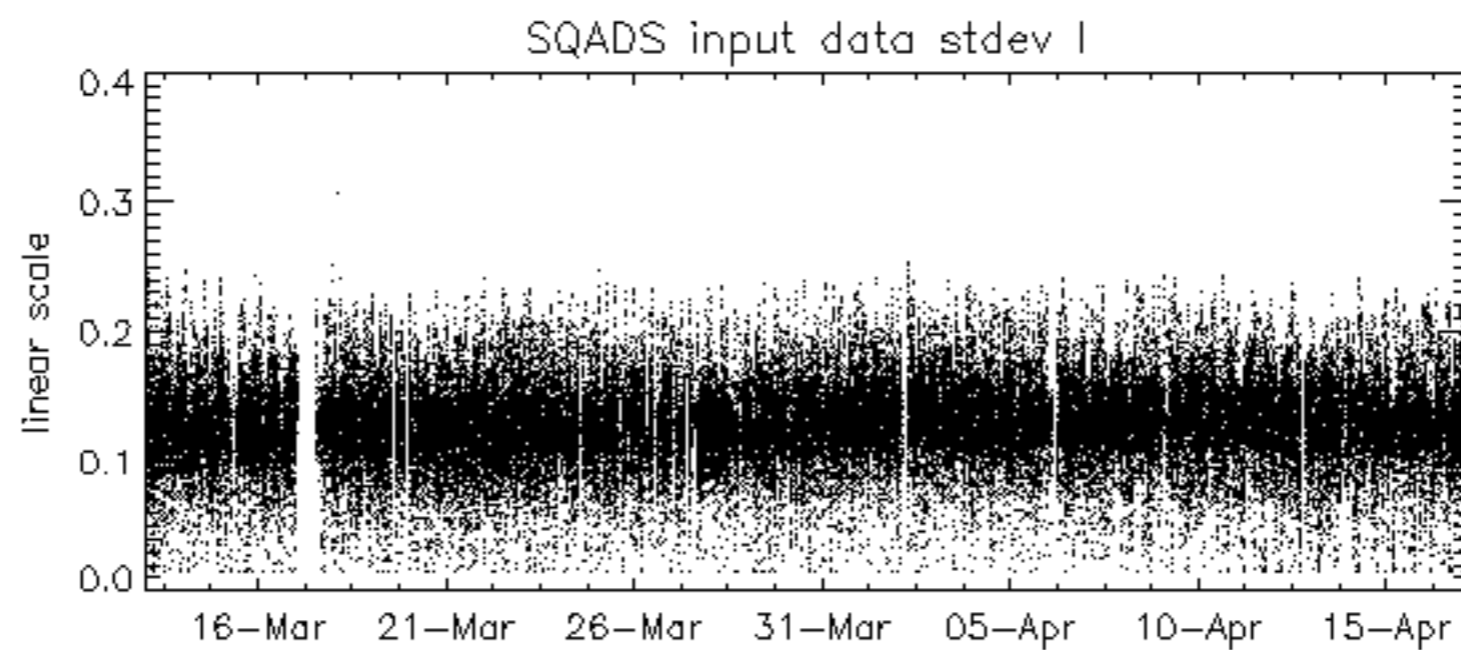
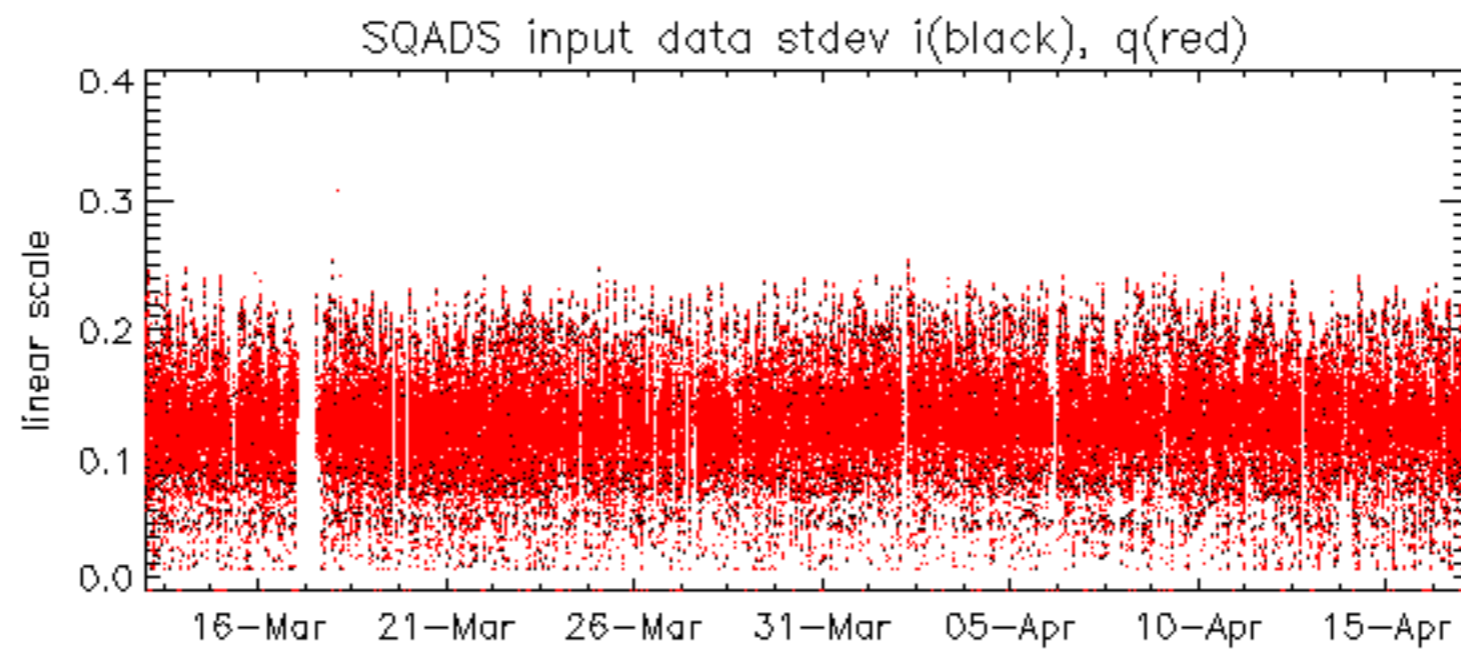


No anomalies observed on available MS products:

No anomalies observed.



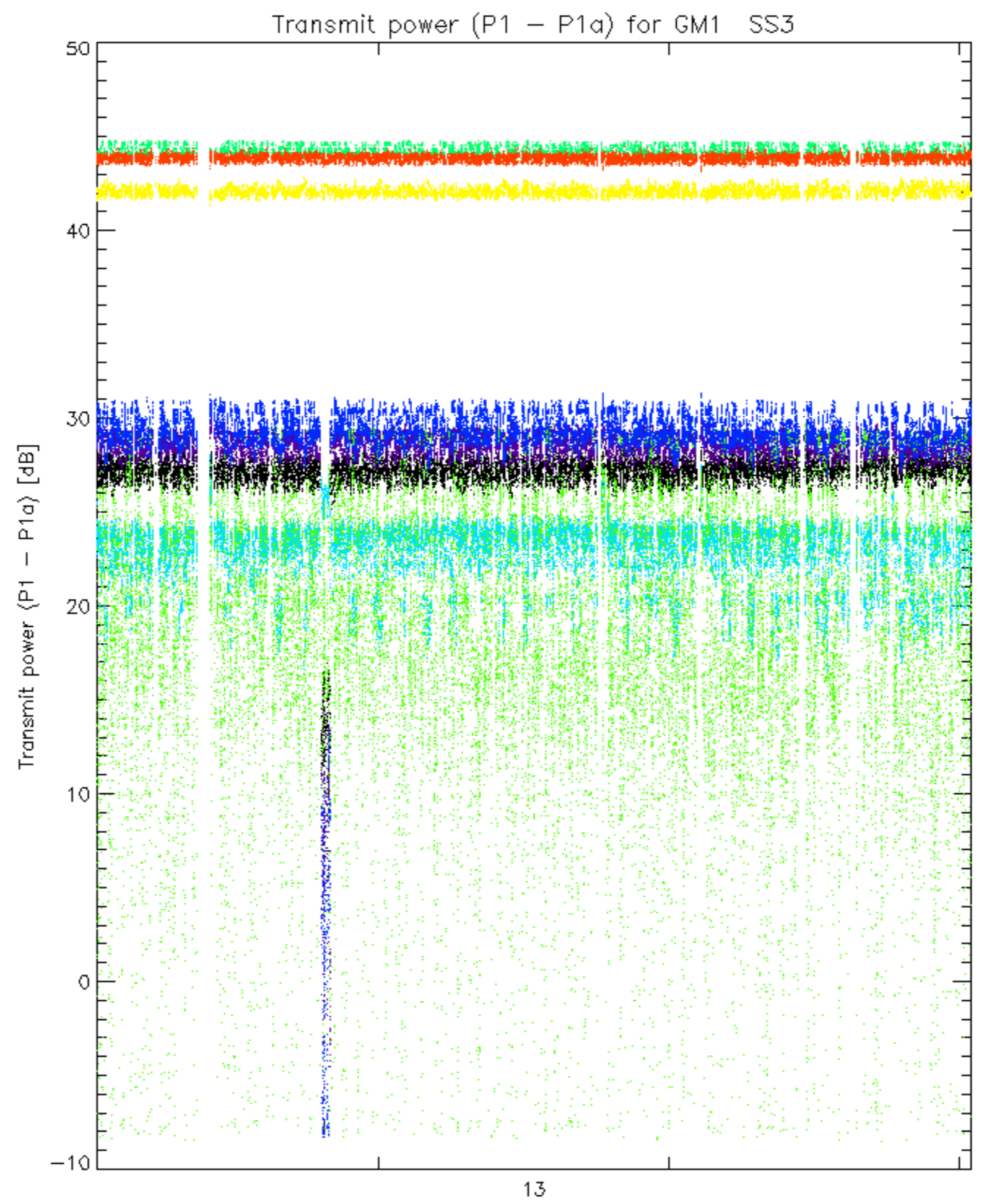




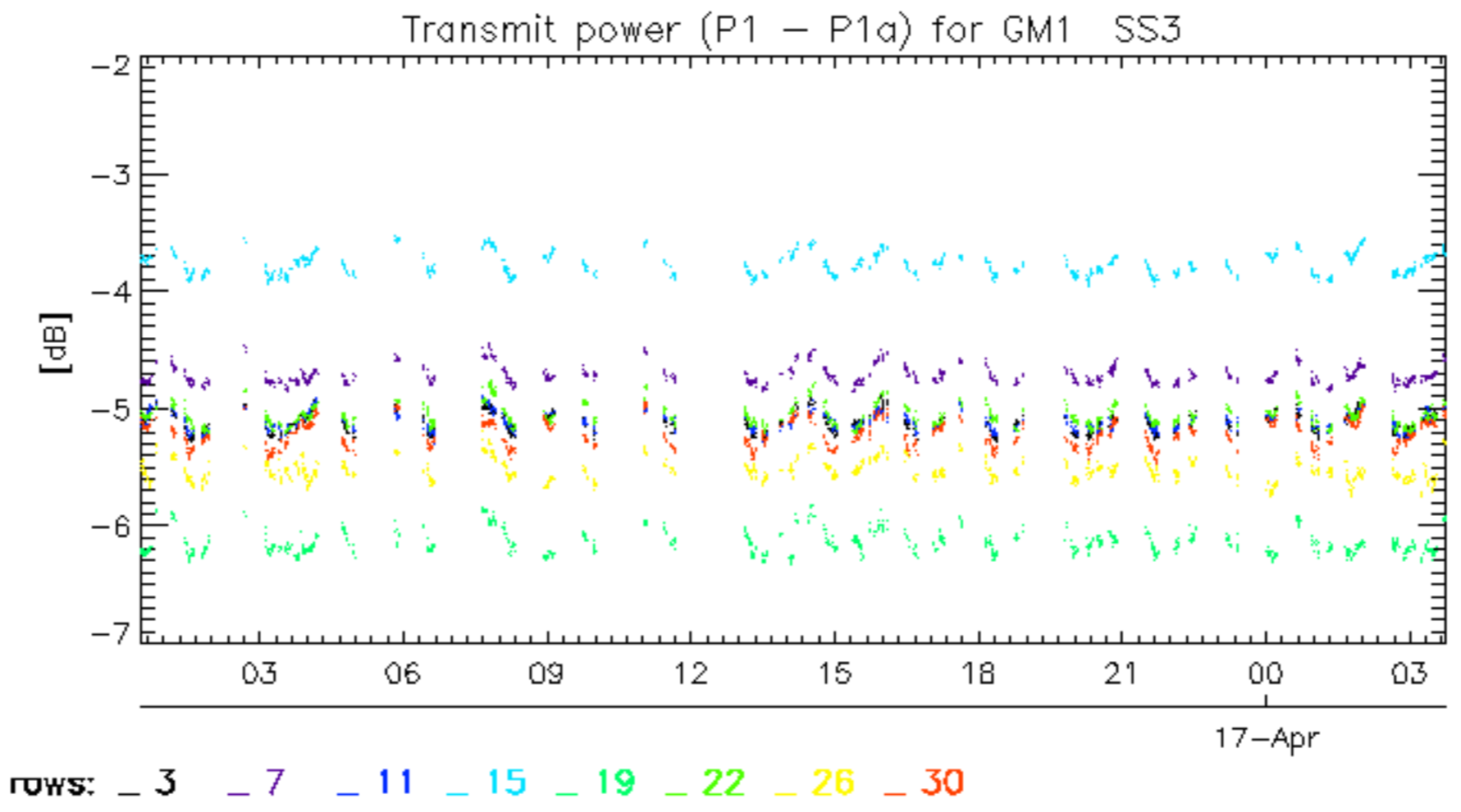
Summary of analysis for the last 3 days 2005041[567]

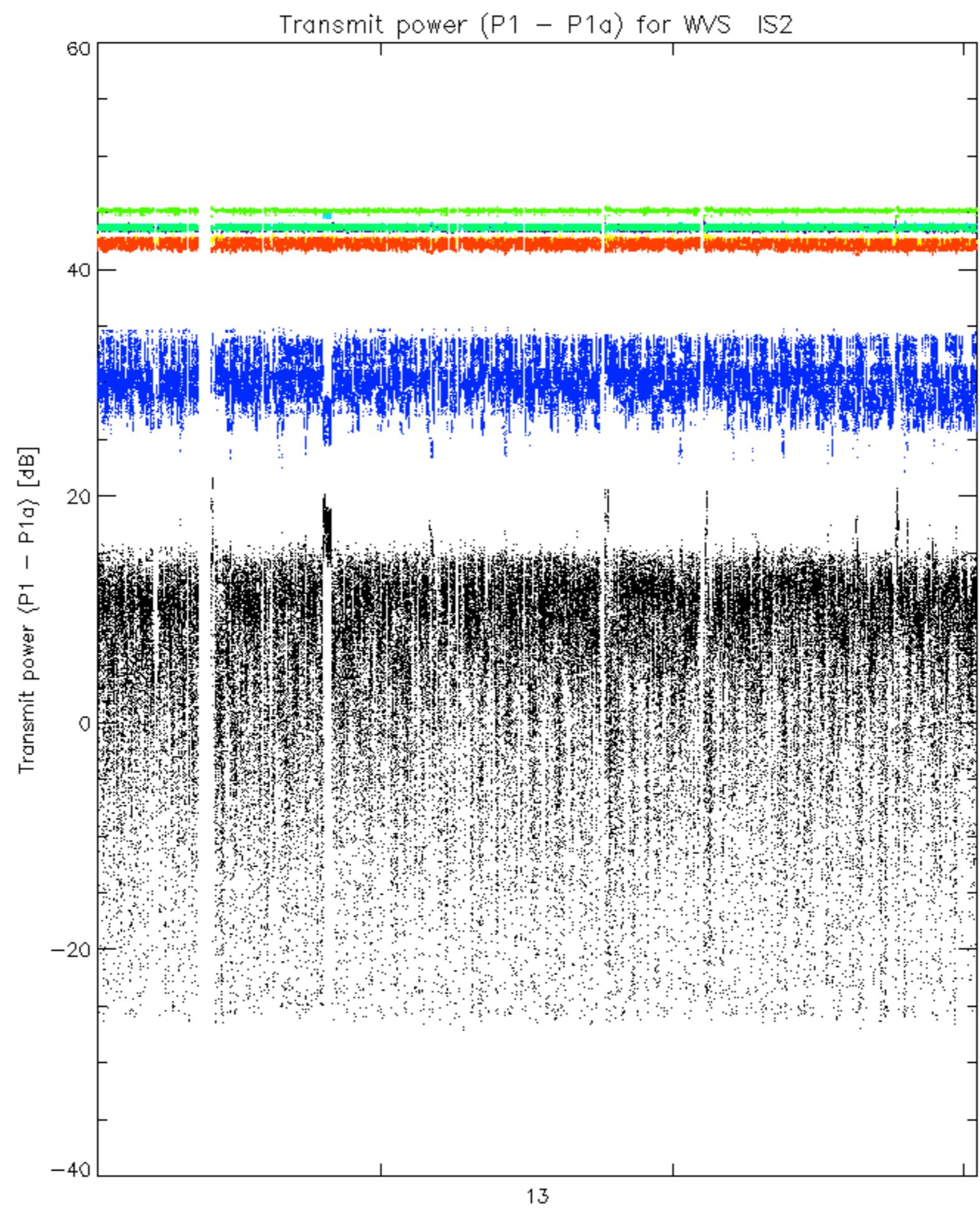
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050415_124323_000000532036_00253_16339_2504.N1	1	0
ASA_WVS_1PNPDE20050415_222023_00000002036_00258_16344_8313.N1	1	0
ASA_WSM_1PNPDE20050415_141605_000000672036_00254_16340_7052.N1	0	30

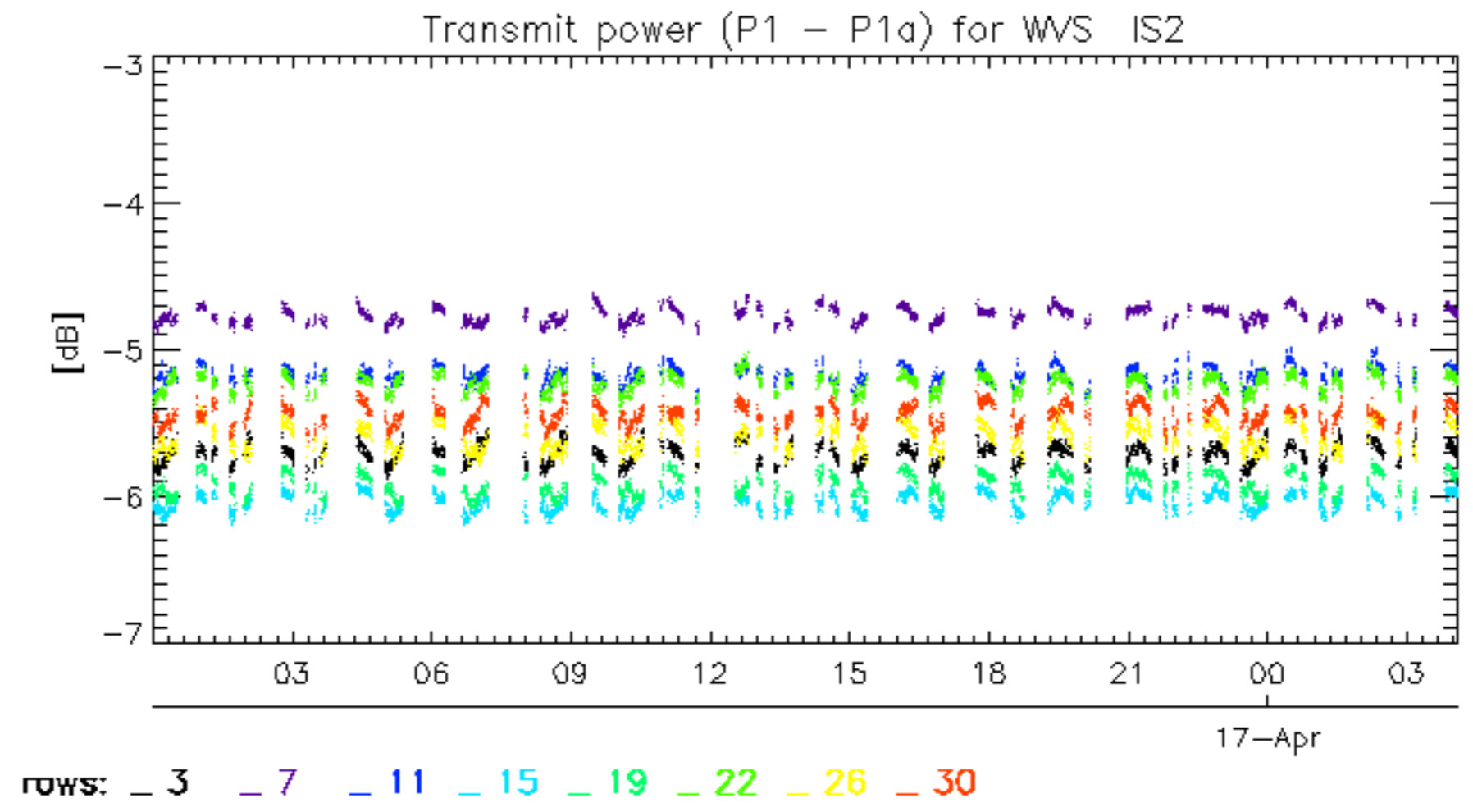


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.