

PRELIMINARY REPORT OF 070502

last update on Wed May 2 23:19:58 GMT 2007

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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 2007-05-01 00:00:00 to 2007-05-02 23:19:58

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	48	85	12	1	35
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	48	85	12	1	35
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	48	85	12	1	35
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	48	85	12	1	35

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	43	67	42	6	93
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	43	67	42	6	93
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	43	67	42	6	93
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	67	42	6	93

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	20070501 042855
H	20070502 071830

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

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
<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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.102069	0.146694	-0.202073
7	P1a	-17.556162	0.099020	-0.075255
11	P1a	-17.522987	0.356986	-0.668458
15	P1a	-13.018675	0.126981	-0.357069
19	P1a	-15.349474	0.071137	-0.309270
22	P1a	-15.925940	0.409405	-0.357879
26	P1a	-15.014160	0.217326	0.359613
30	P1a	-17.726318	0.349601	-0.609531

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.771586	0.010489	-0.053341
7	P1	-3.148006	0.008913	-0.013292
11	P1	-4.209817	0.012210	-0.014807
15	P1	-6.413932	0.019884	-0.129208
19	P1	-3.782852	0.011036	0.037363
22	P1	-4.749682	0.009444	-0.029343
26	P1	-3.916396	0.019558	0.069958
30	P1	-5.967454	0.009403	0.014432

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.660185	0.090551	-0.005463
7	P2	-21.555630	0.089073	0.108660
11	P2	-15.346008	0.117141	0.195846
15	P2	-7.128160	0.088578	-0.026205
19	P2	-9.117836	0.080274	0.008220
22	P2	-18.086422	0.077019	0.006924
26	P2	-16.621643	0.081787	-0.065544
30	P2	-19.274517	0.082368	0.049881

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.245041	0.005280	-0.006165
7	P3	-8.245041	0.005280	-0.006165
11	P3	-8.245041	0.005280	-0.006165
15	P3	-8.245041	0.005280	-0.006165
19	P3	-8.245041	0.005280	-0.006165
22	P3	-8.245041	0.005280	-0.006165
26	P3	-8.245041	0.005280	-0.006165
30	P3	-8.245041	0.005280	-0.006165

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.210086	0.123131	-0.120009
7	P1a	-10.057613	0.187558	0.051186
11	P1a	-10.685668	0.094316	0.044109
15	P1a	-10.831116	0.163568	0.110747
19	P1a	-15.810168	0.088386	-0.109263
22	P1a	-21.389748	1.458949	-0.340969
26	P1a	-15.506675	0.372416	-0.192837
30	P1a	-18.312136	0.461007	0.143379

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.454575	0.049083	-0.012871
7	P1	-2.406092	0.100198	0.059853
11	P1	-2.886393	0.024315	0.061139
15	P1	-3.817032	0.036723	0.045661
19	P1	-3.589419	0.014584	-0.028294
22	P1	-4.968820	0.023286	0.073759

26	P1	-6.038872	0.026149	-0.045074
30	P1	-5.338579	0.032620	-0.021266

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.181286	0.064878	-0.076521
7	P2	-22.040915	0.188782	-0.036688
11	P2	-10.637357	0.044376	-0.035158
15	P2	-4.923409	0.041348	-0.067080
19	P2	-6.869484	0.039966	-0.020518
22	P2	-8.108989	0.086925	0.015470
26	P2	-24.323435	0.141581	-0.027975
30	P2	-21.709970	0.106022	0.047684

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091233	0.004950	-0.002872
7	P3	-8.091226	0.004953	-0.002597
11	P3	-8.091047	0.004949	-0.002824
15	P3	-8.090966	0.004951	-0.002942
19	P3	-8.091125	0.004969	-0.002691
22	P3	-8.091042	0.004939	-0.002602
26	P3	-8.091060	0.004952	-0.002473
30	P3	-8.090990	0.004944	-0.002461

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	0.000546540
	stdev	1.98961e-07
MEAN Q	mean	0.000496366
	stdev	2.41560e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135725
	stdev	0.00122370
STDEV Q	mean	0.136115
	stdev	0.00124130



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007050[012]

The assumptions 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_1PNPDE20070502_143310_000000372057_00425_27032_5713.N1	1	0
ASA_WVS_1PNPDK20070501_115225_000002392057_00410_27017_9992.N1	0	16
ASA_GM1_1PNPDK20070501_075015_000001442057_00407_27014_9738.N1	0	99
ASA_GM1_1PNPDK20070501_075523_000006462057_00407_27014_9749.N1	0	13
ASA_GM1_1PNPDK20070501_161314_000009242057_00412_27019_0280.N1	0	60

ASA_GM1_1PNPDK20070502_100004_000001082057_00423_27030_1179.N1	0	6
ASA_WSM_1PNPDE20070501_150736_000001402057_00412_27019_4446.N1	0	36
ASA_WSM_1PNPDE20070502_162039_000002072057_00427_27034_5777.N1	0	15



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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

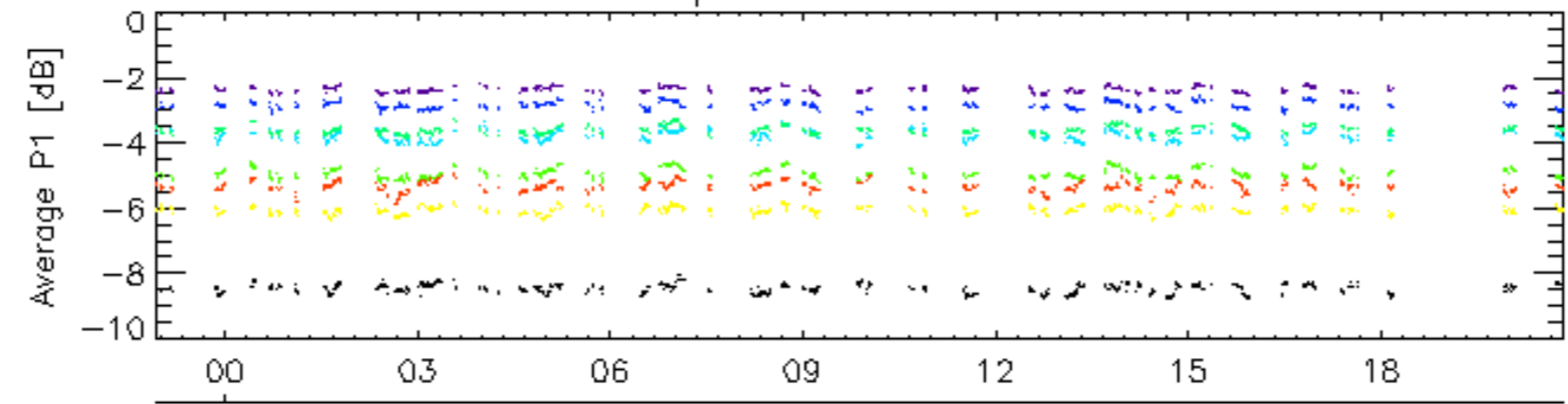
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

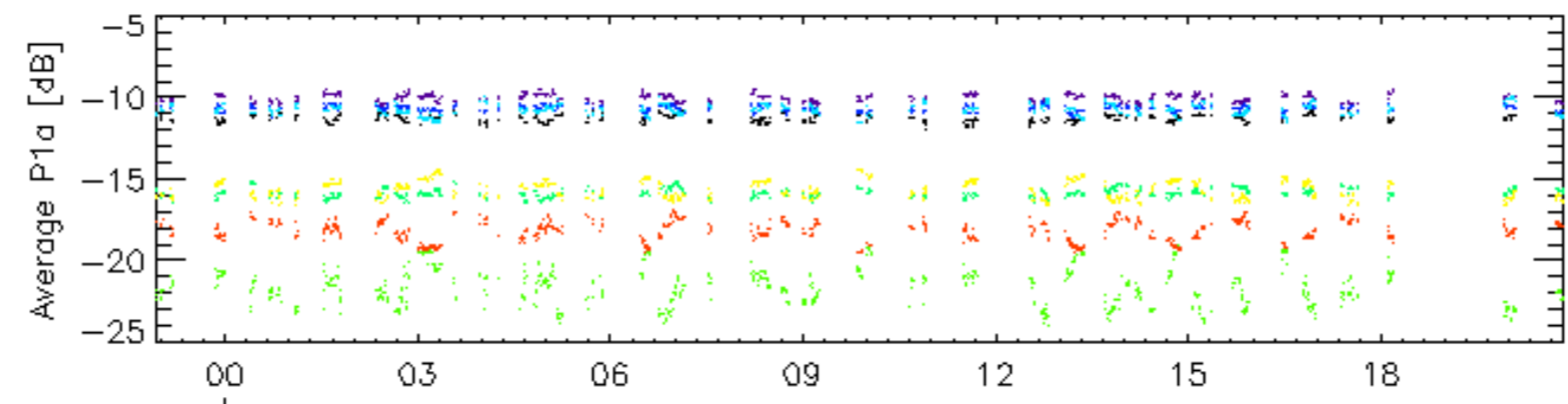
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

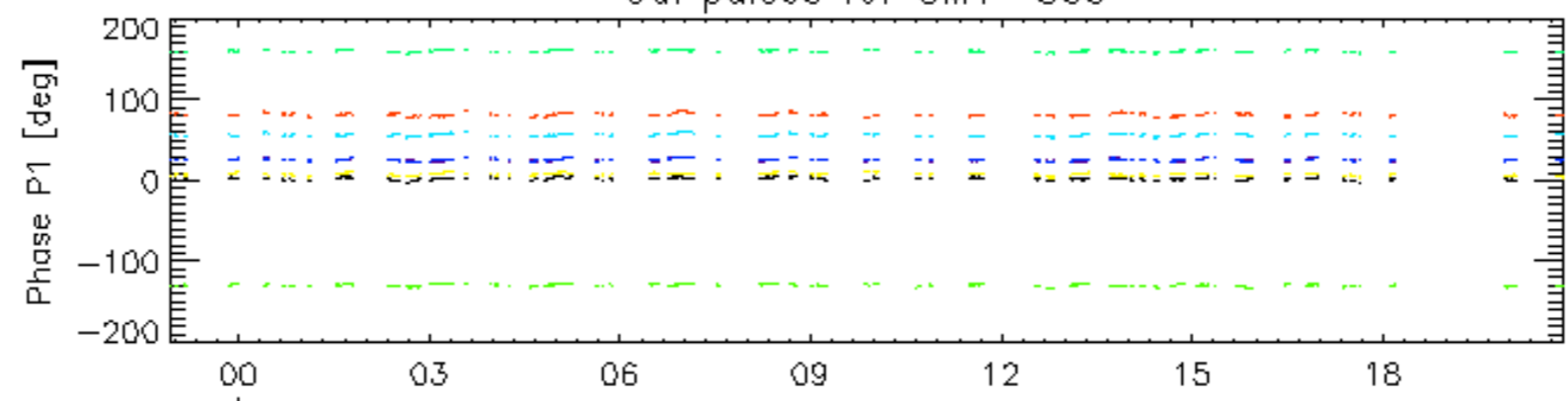


02-May

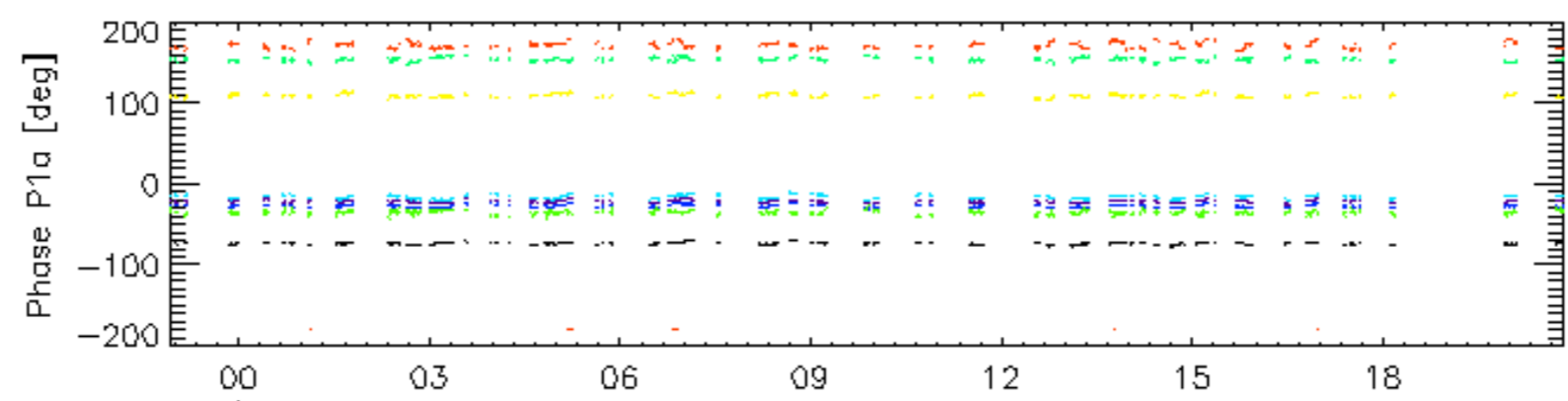


02-May

Cal pulses for GM1 SS3

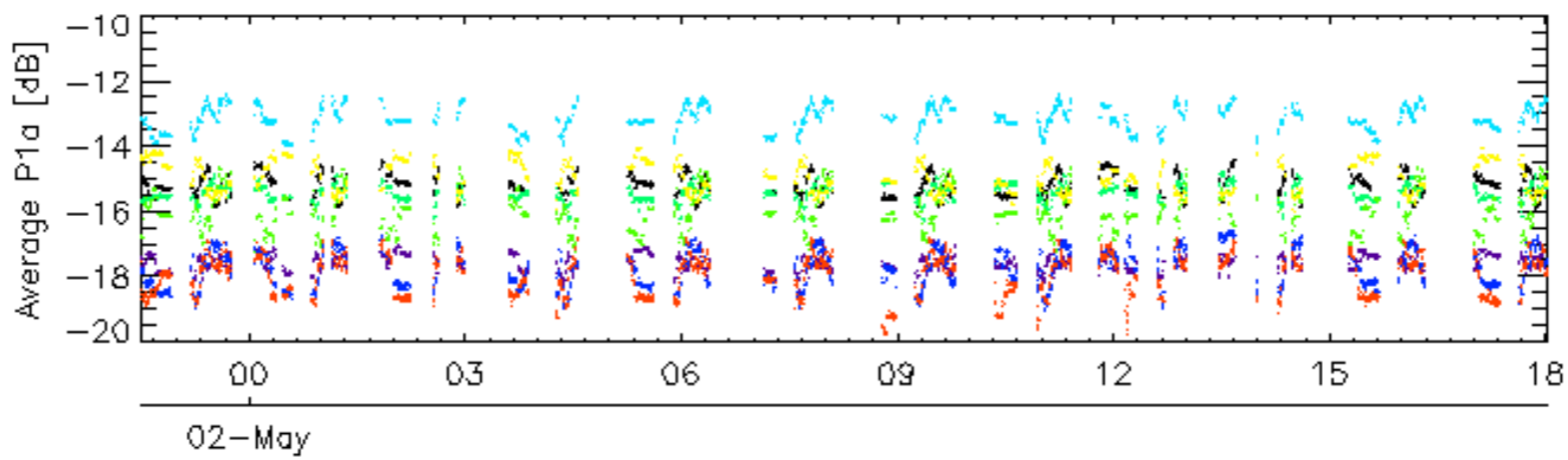
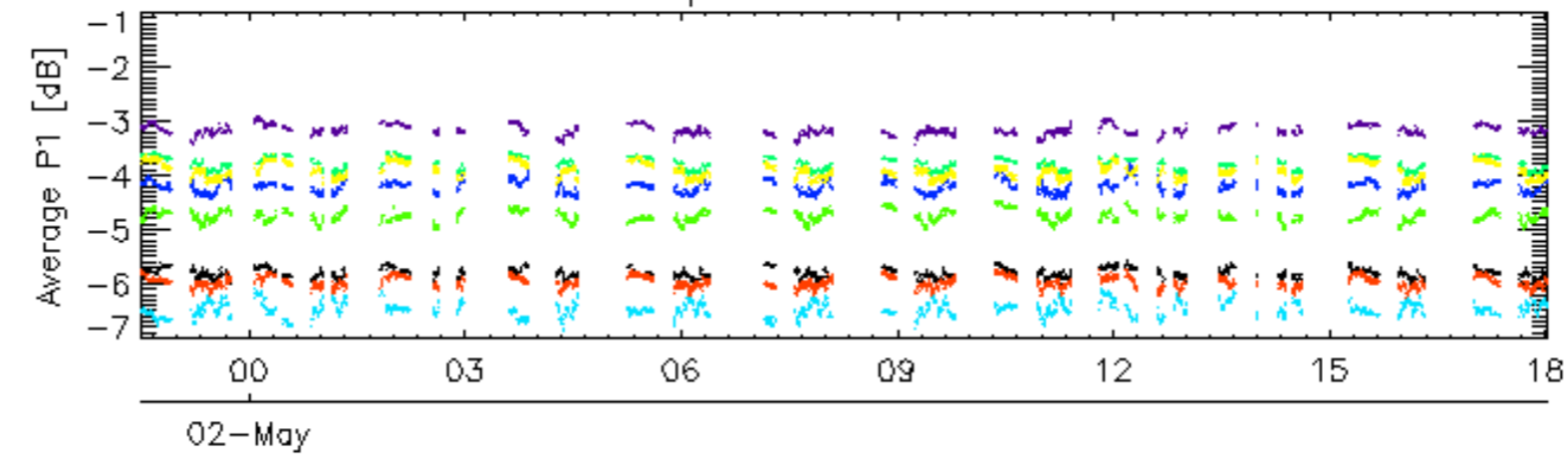


02-May

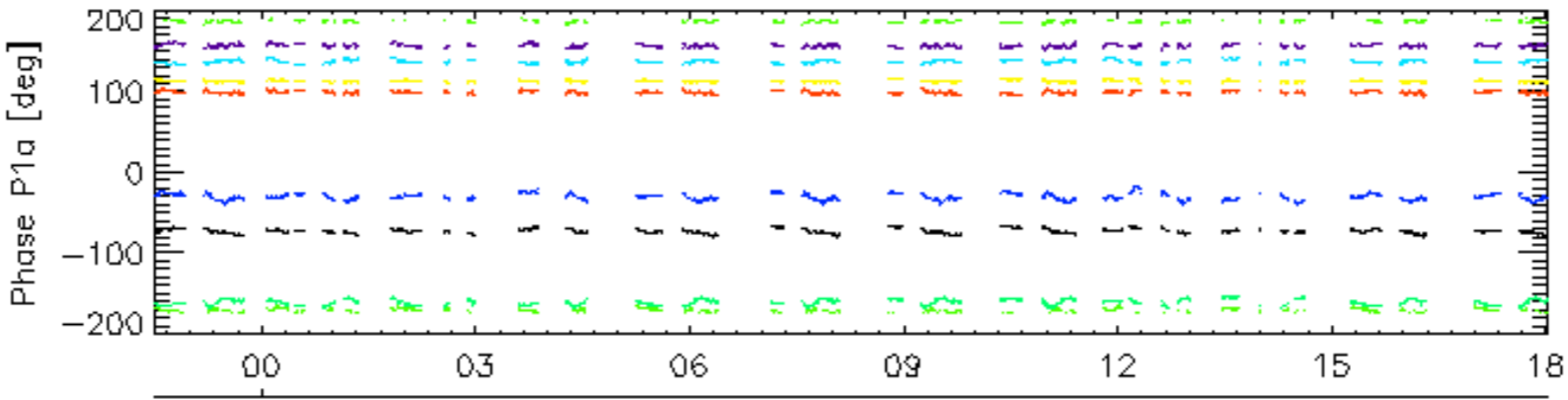
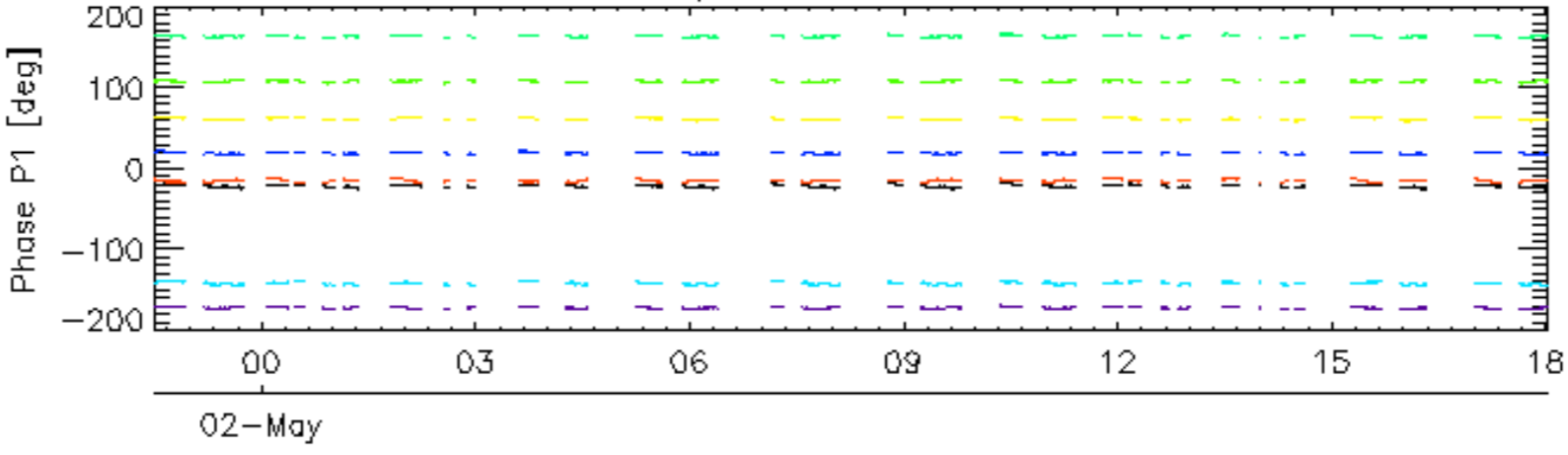


rows: 02-May
3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

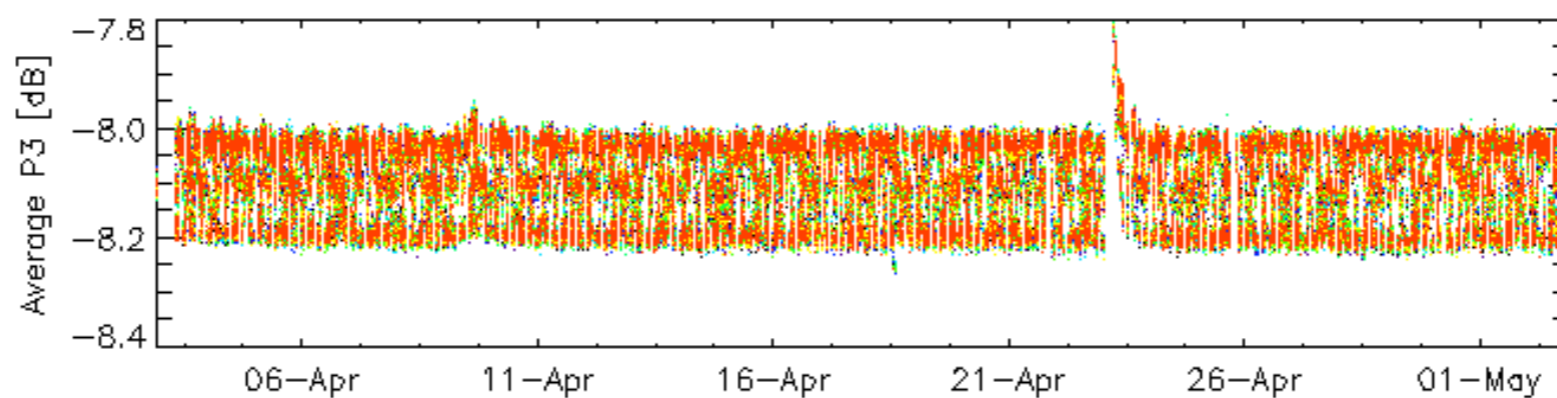
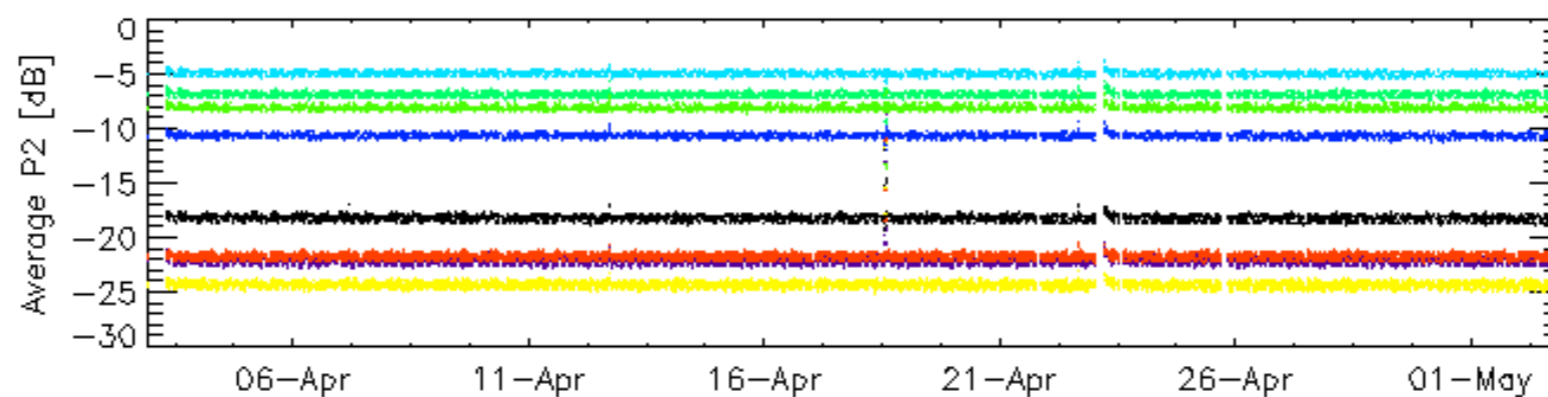
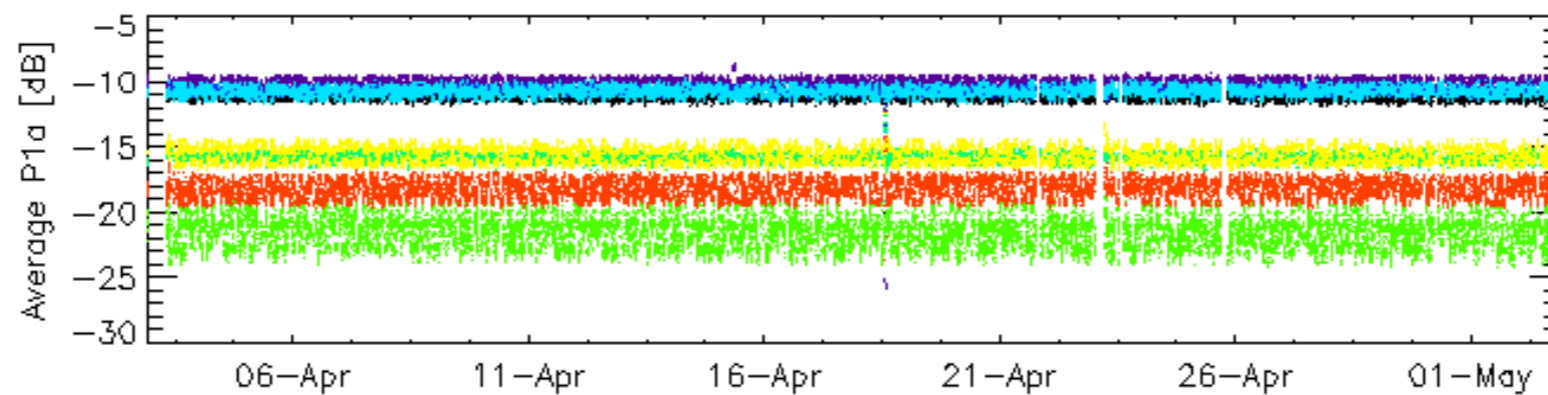
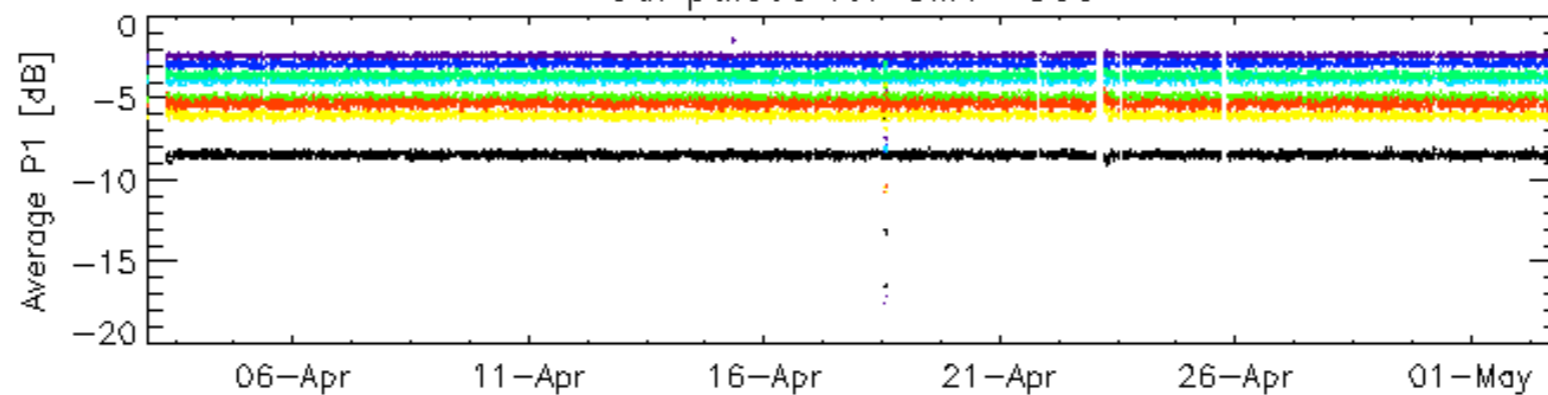


Cal pulses for WVS IS2



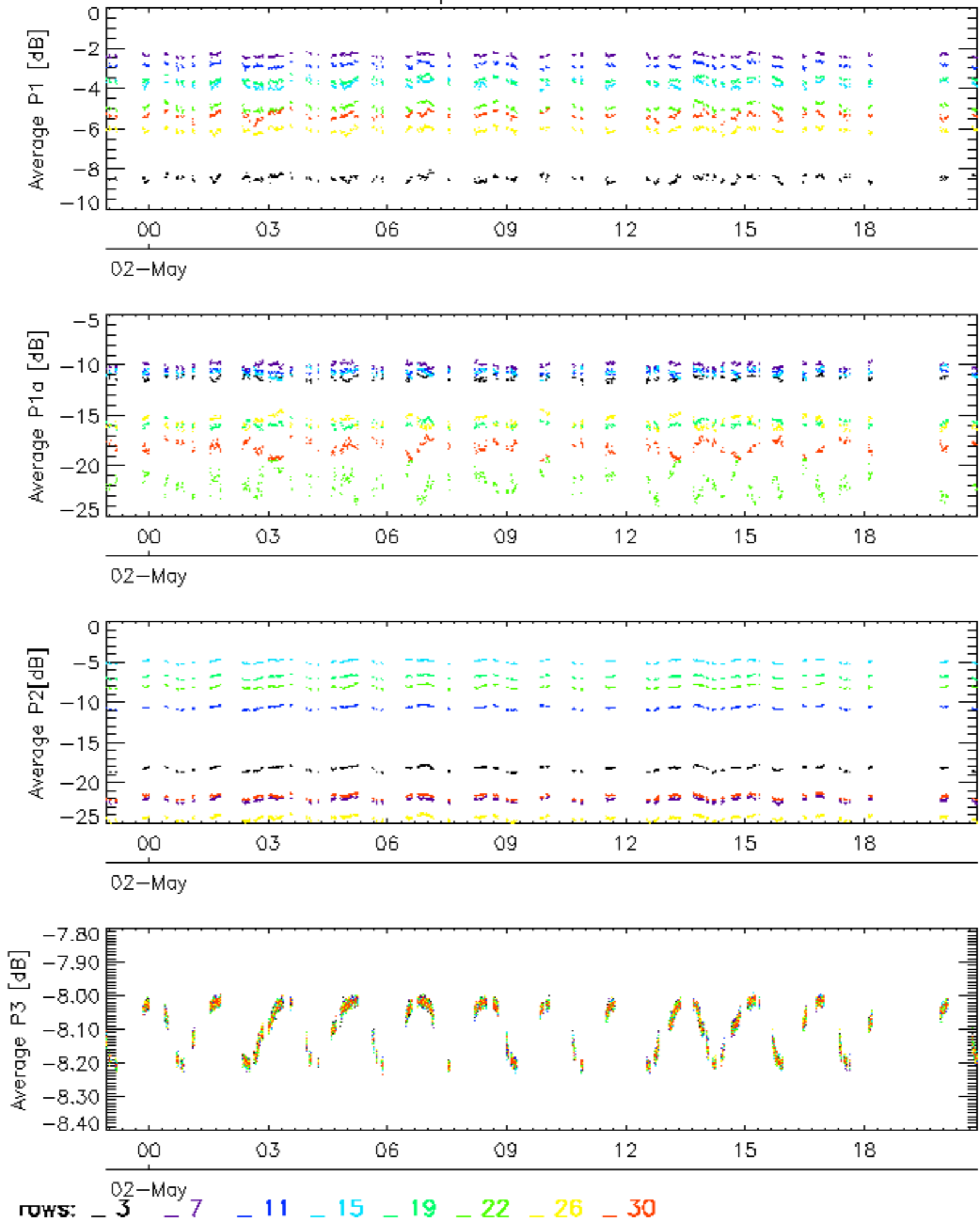
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

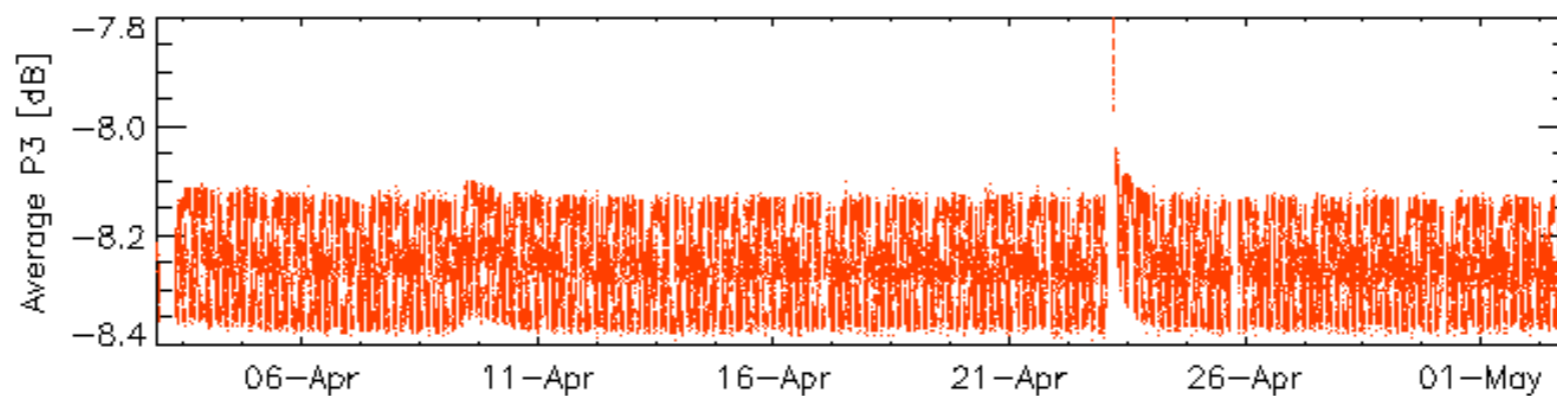
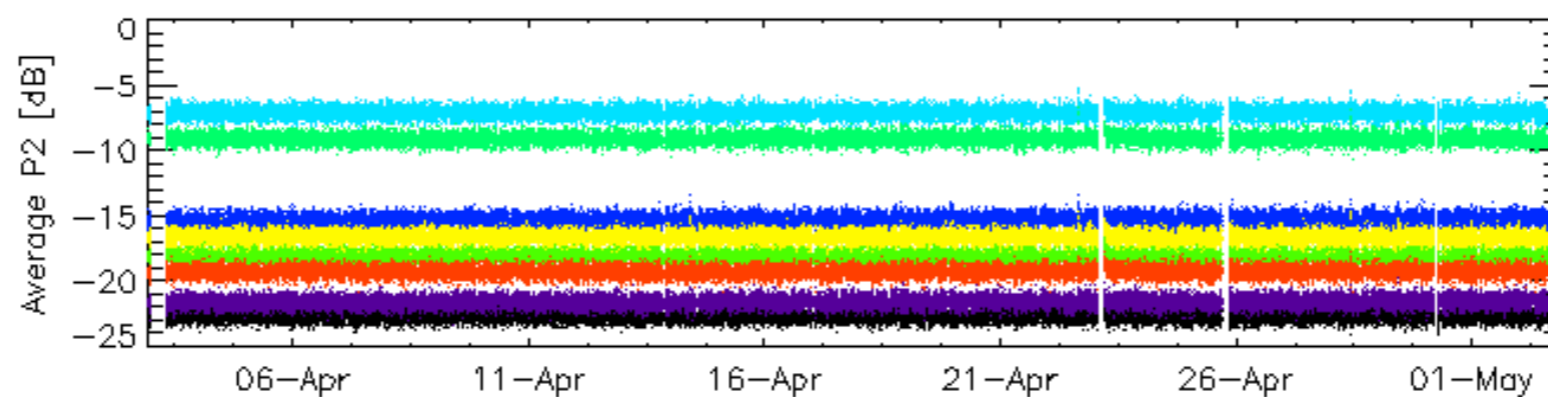
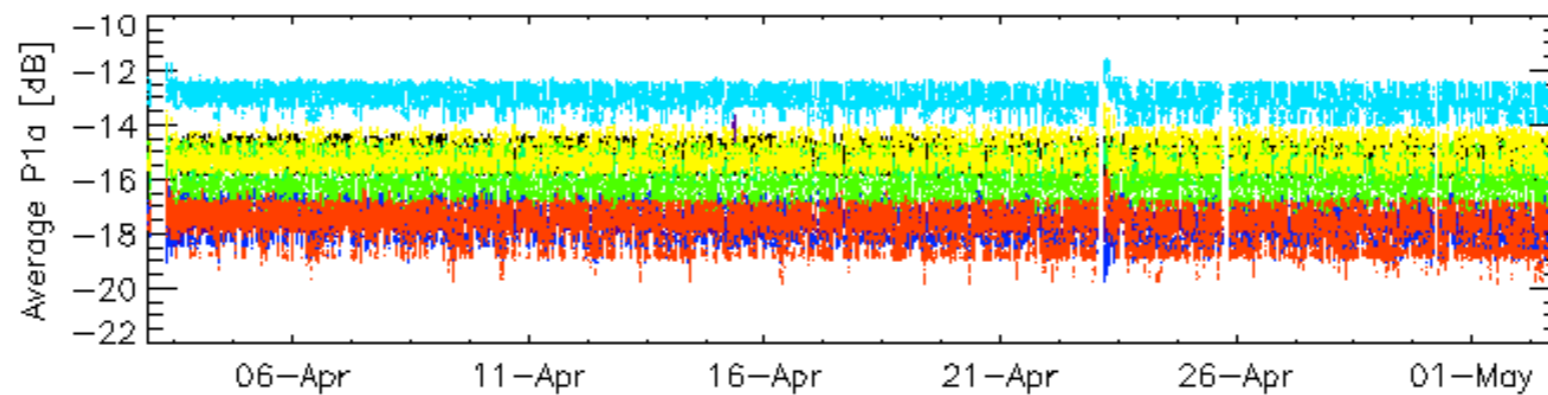
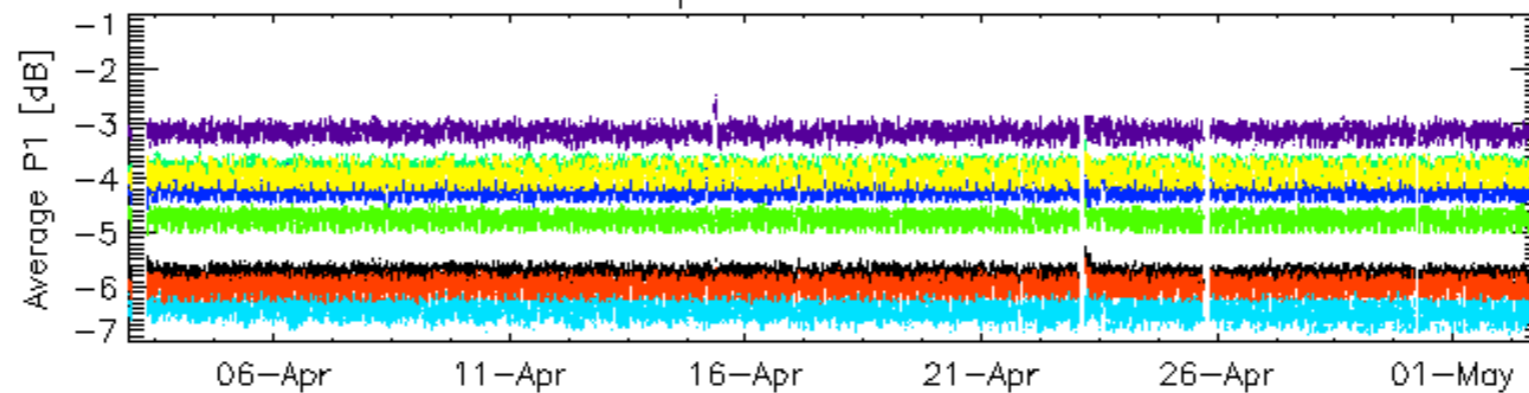


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

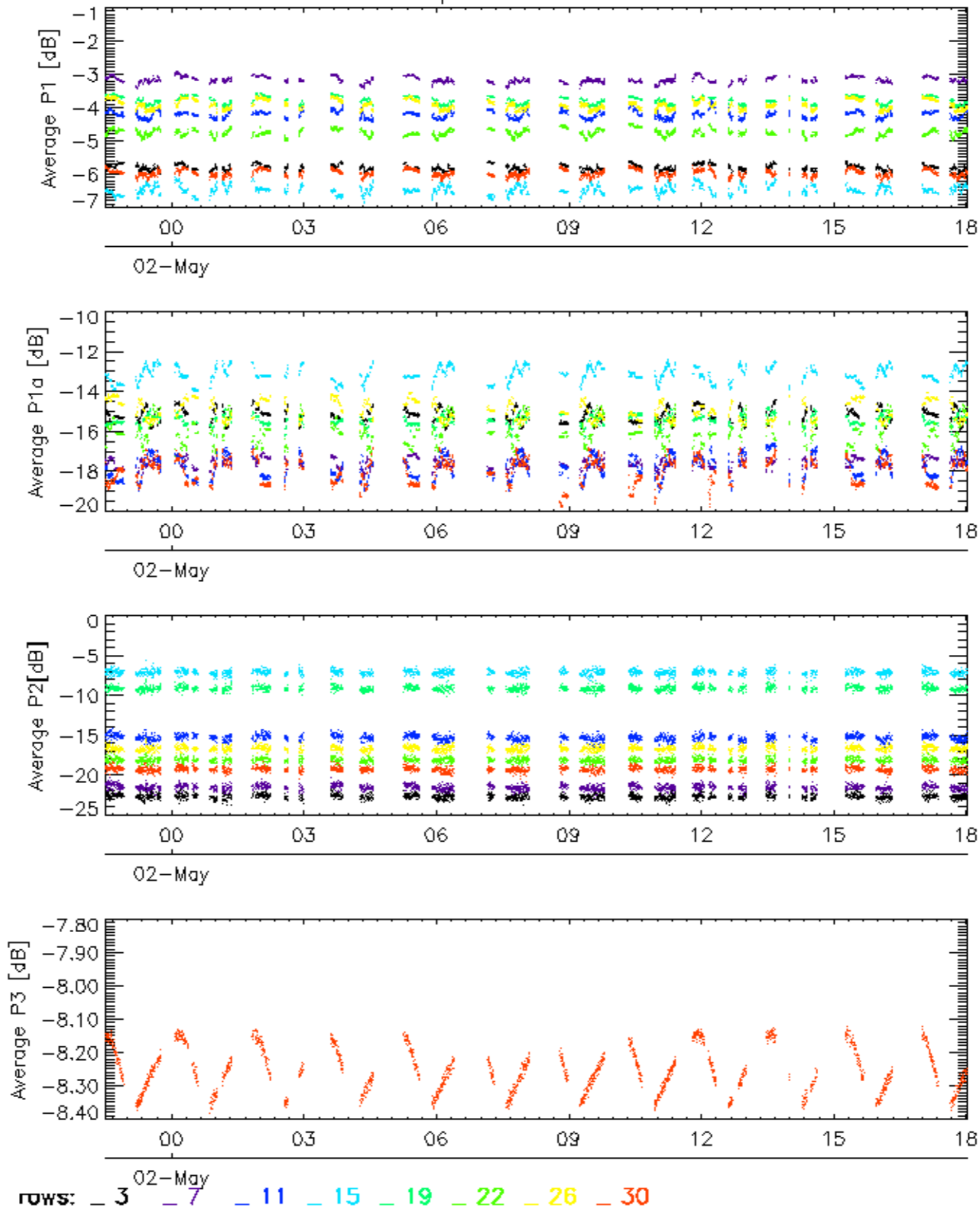


Cal pulses for WVS IS2



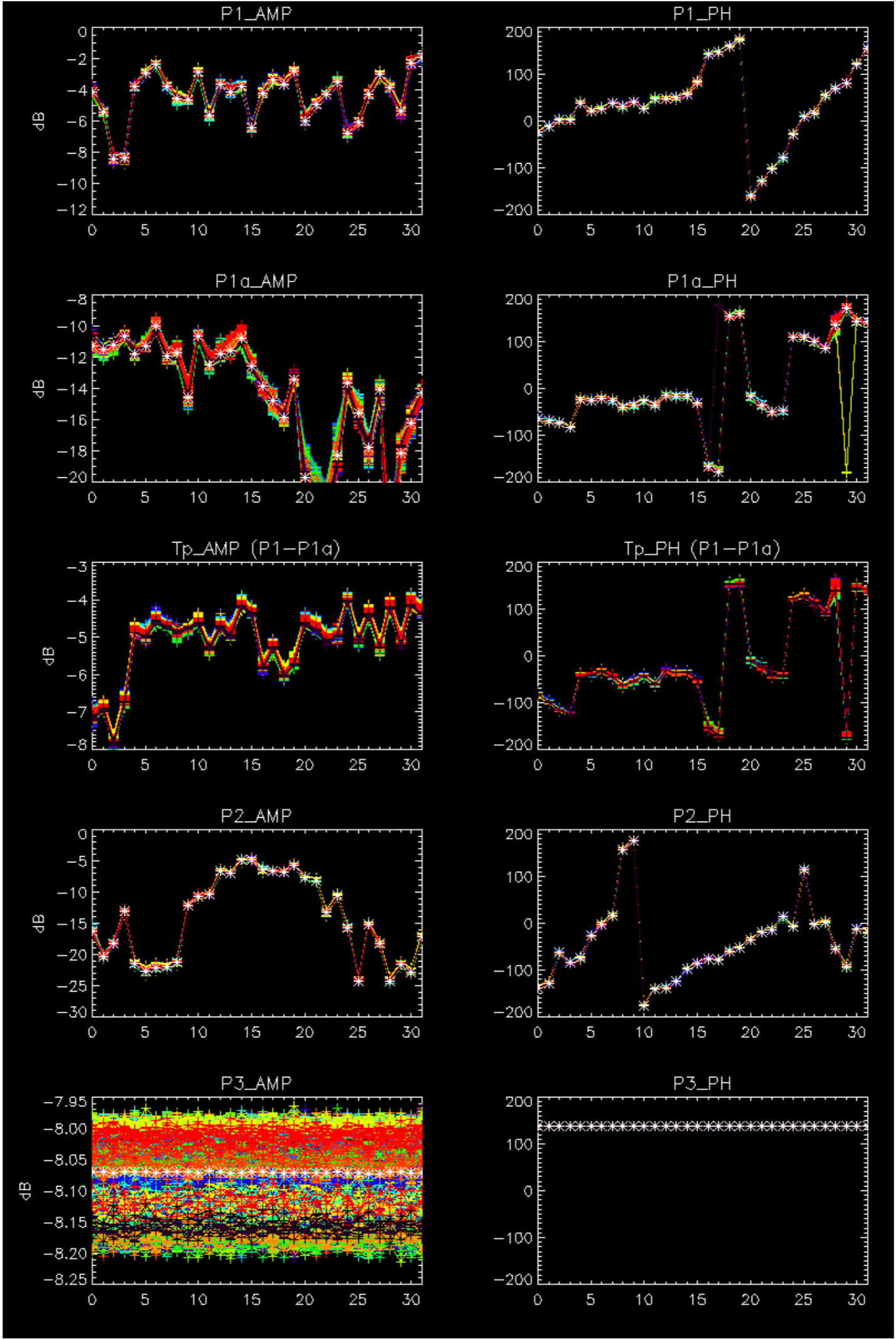
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

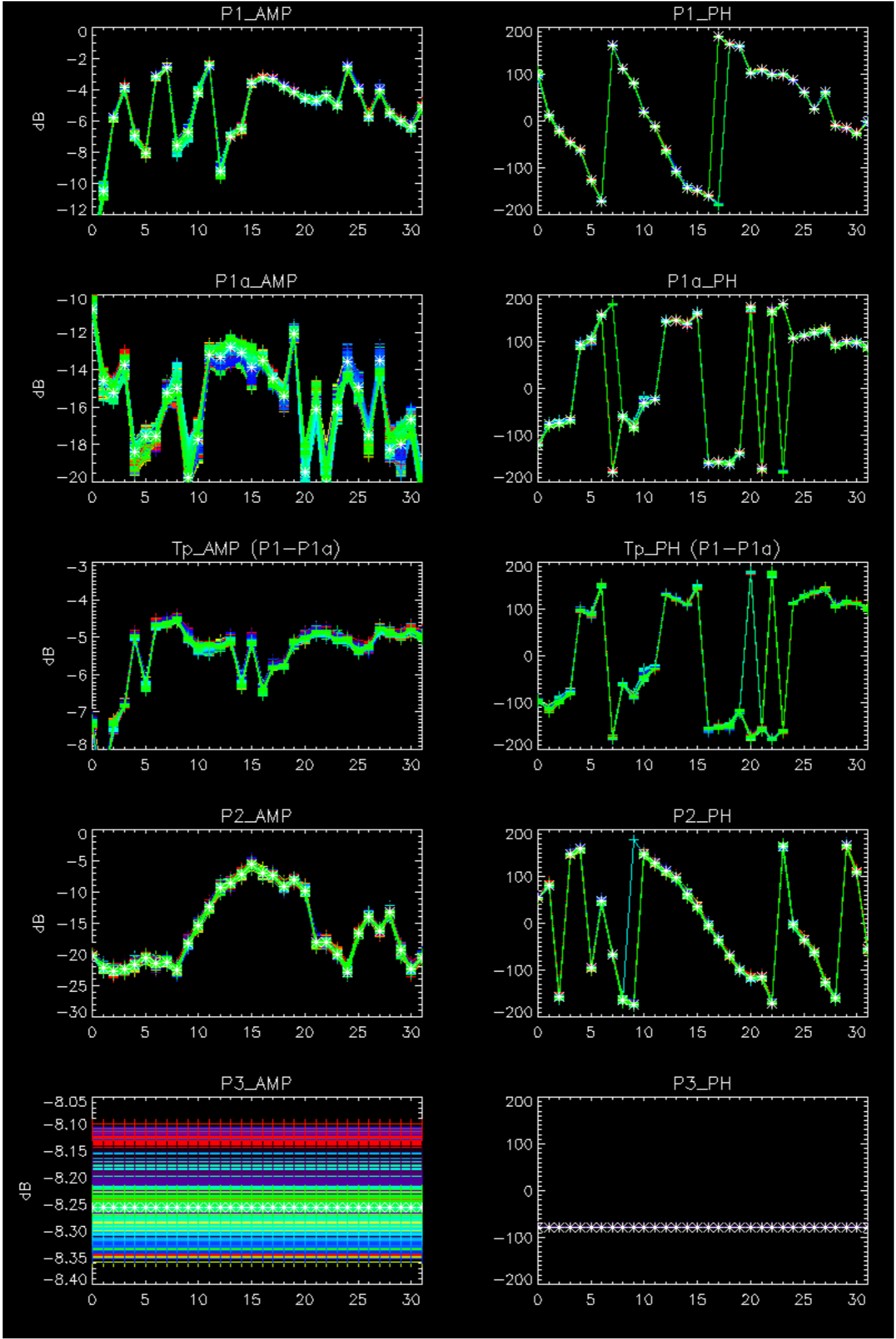
Cal pulses for WVS IS2



No anomalies observed on available browse products

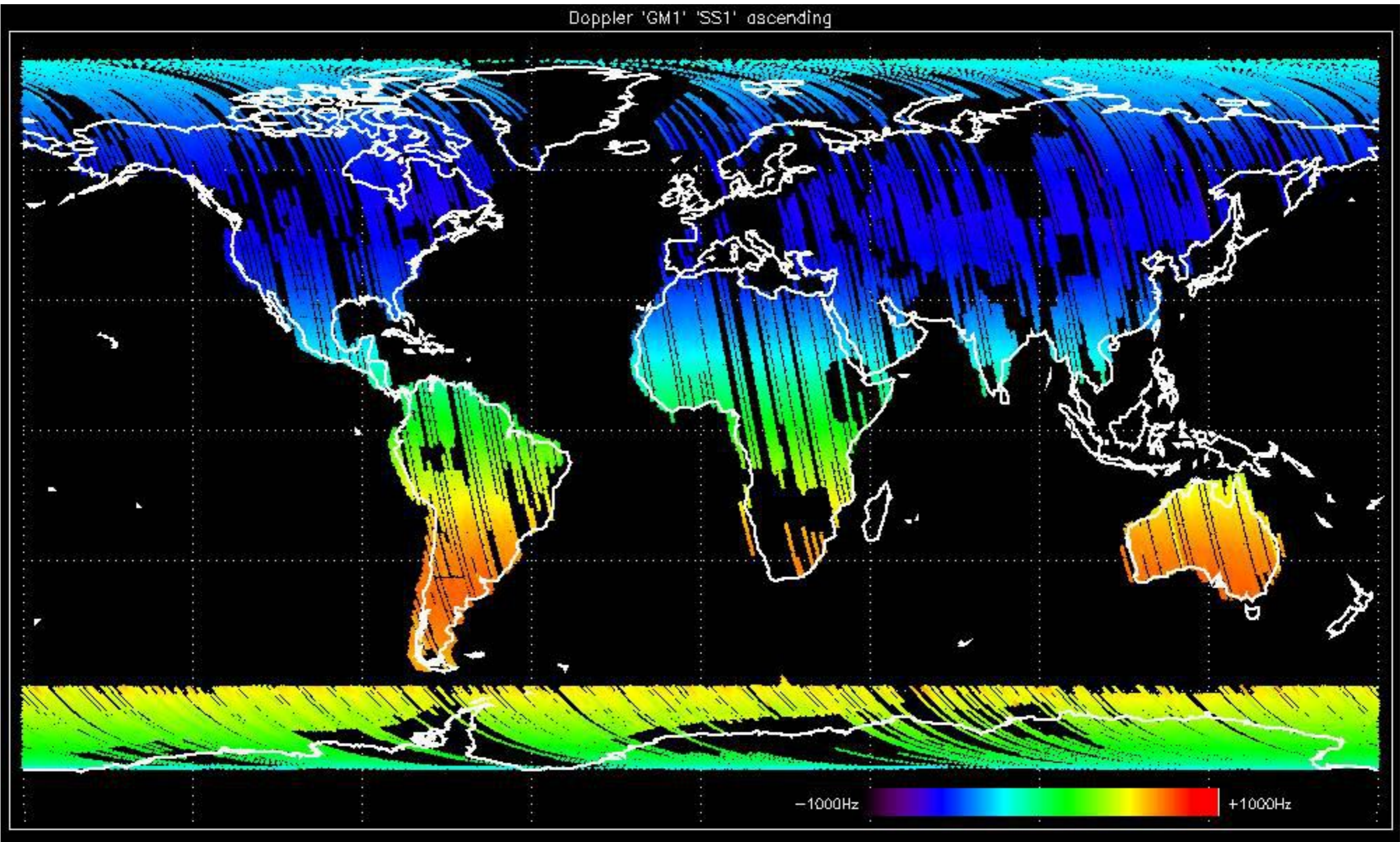
No anomalies observed.



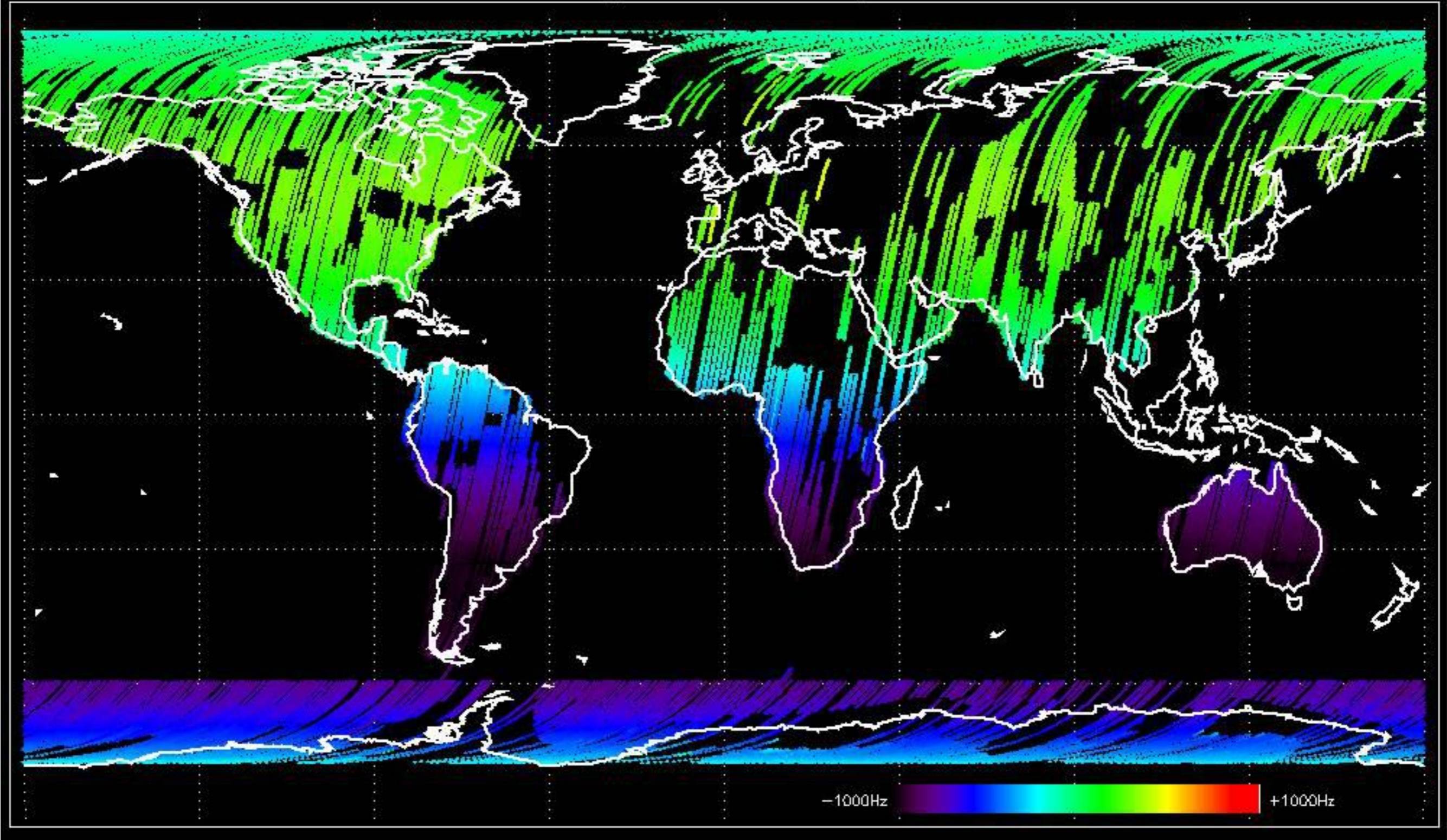


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

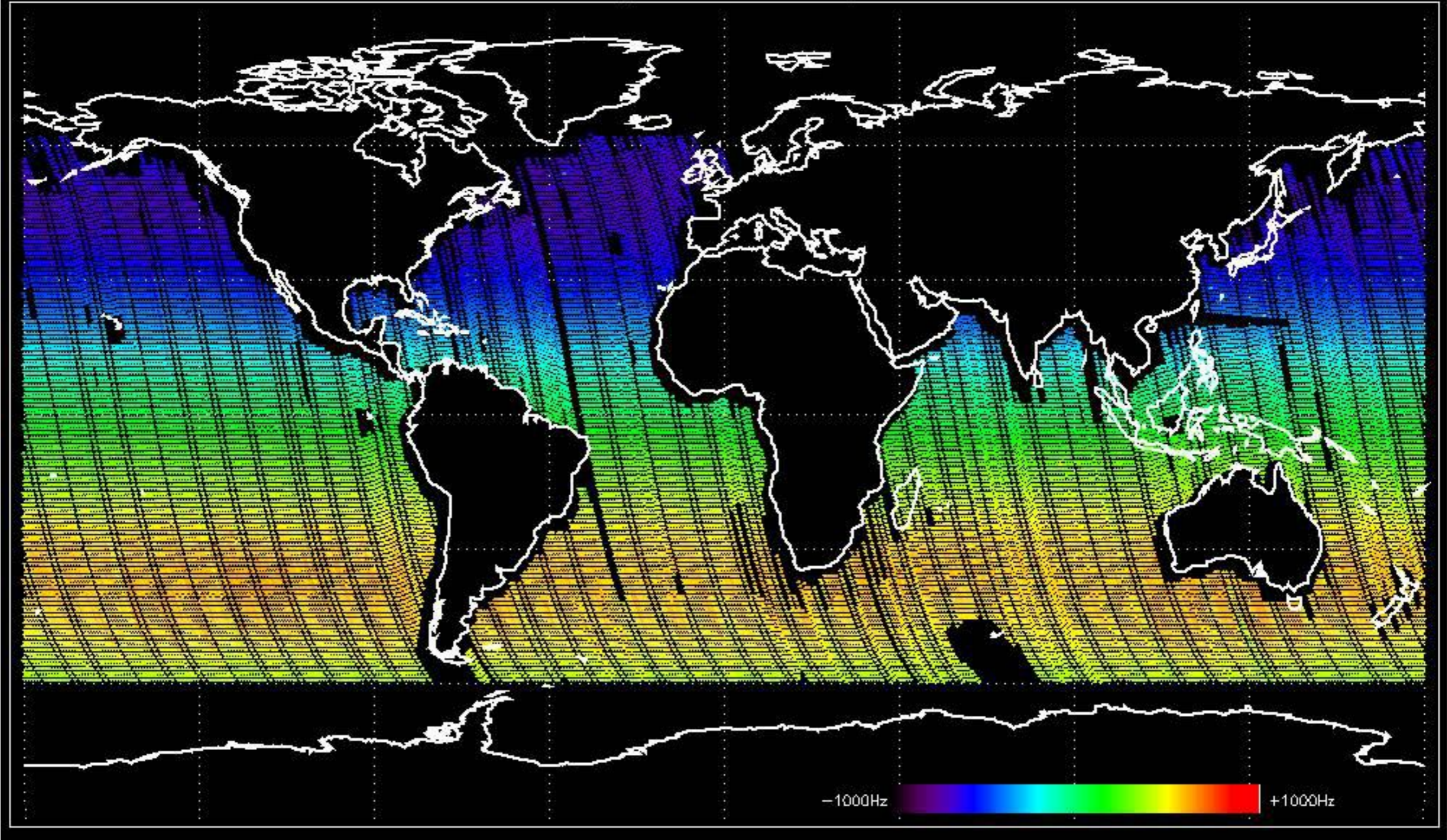
Doppler 'GM1' 'SS1' ascending



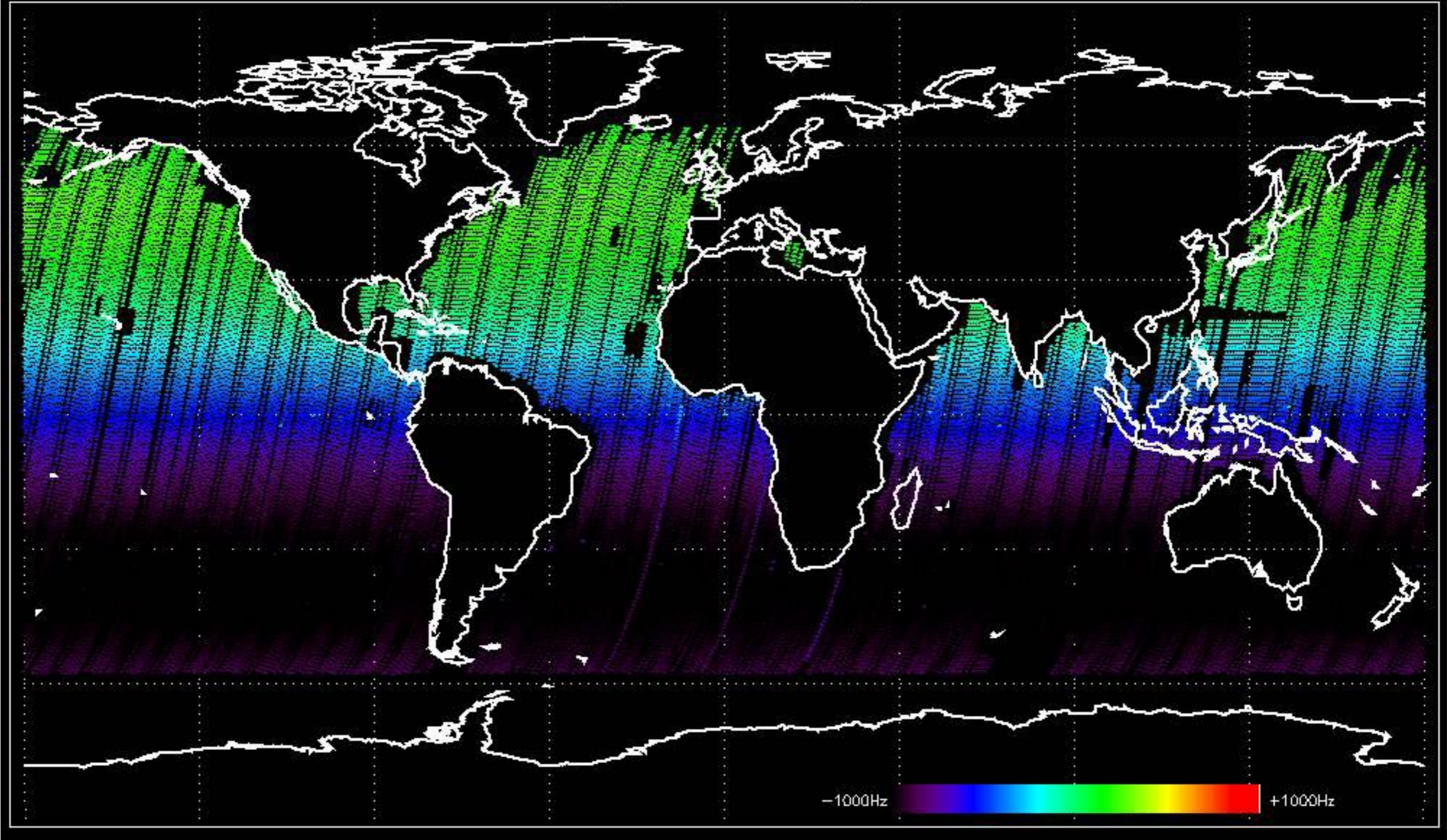
Doppler 'GM1' 'SS1' descending



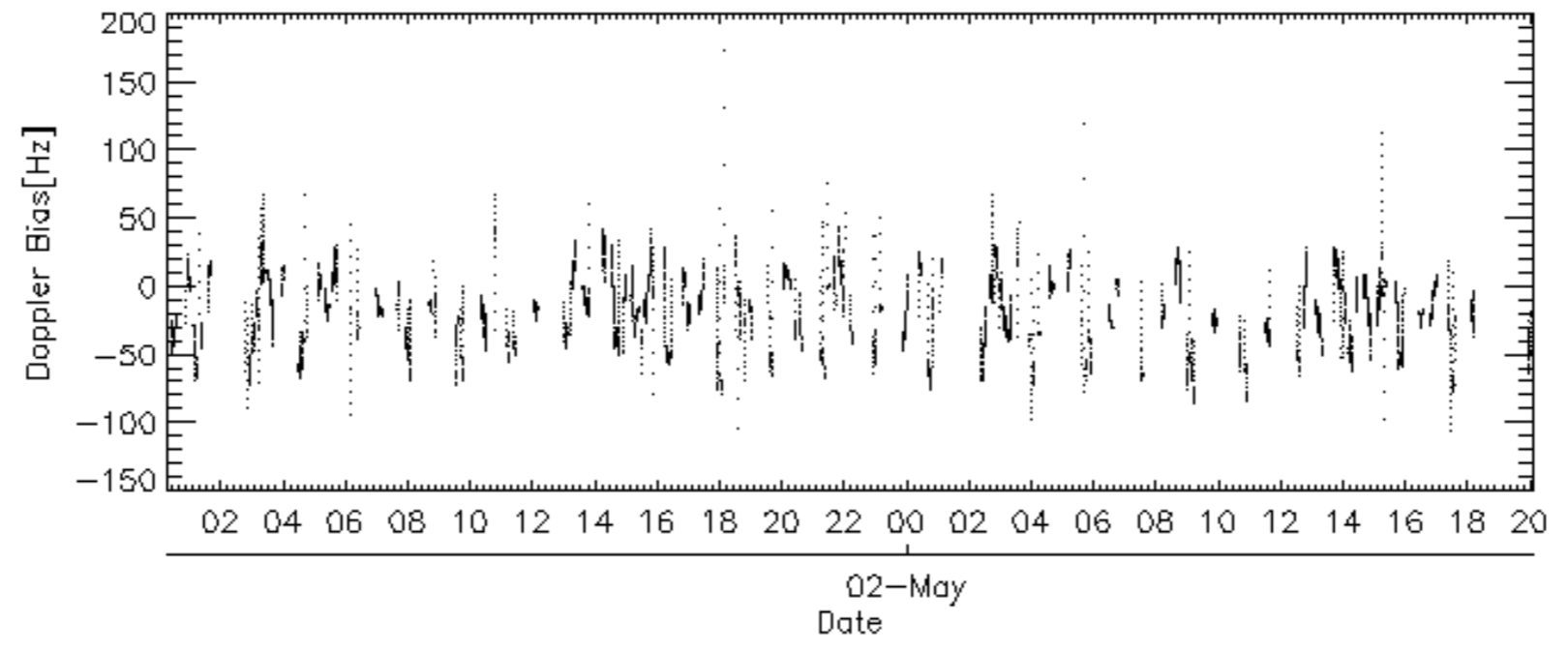
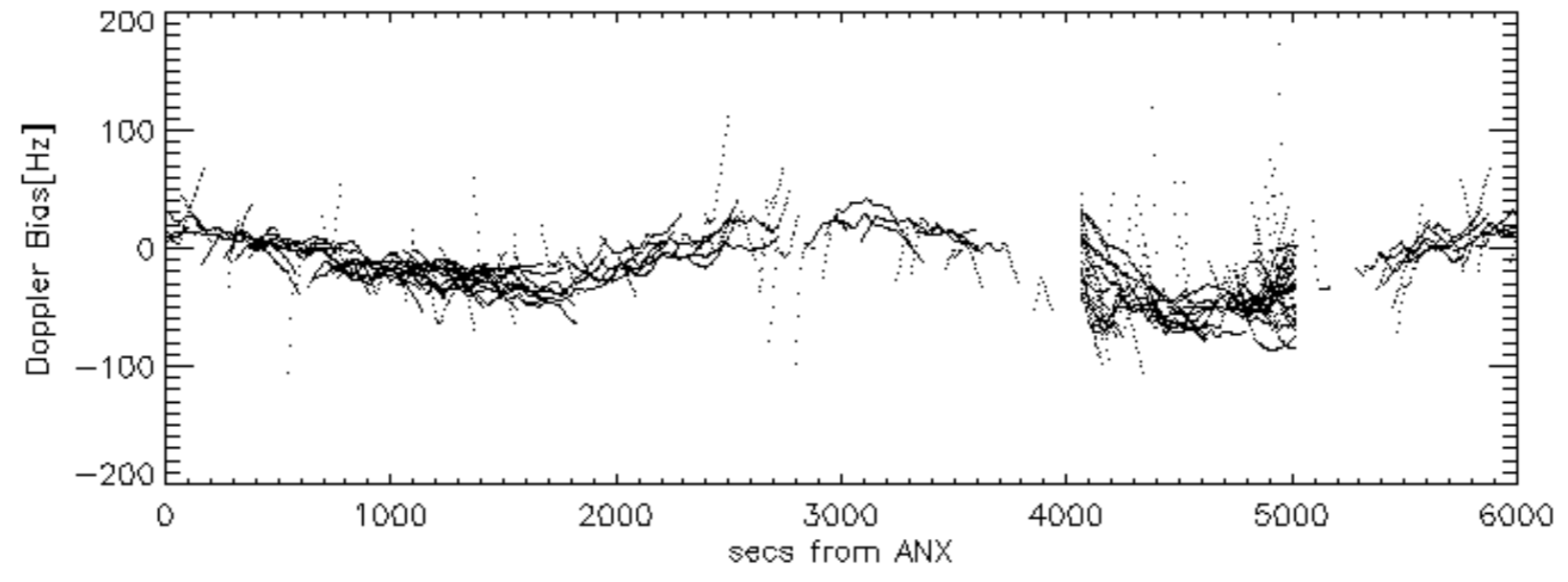
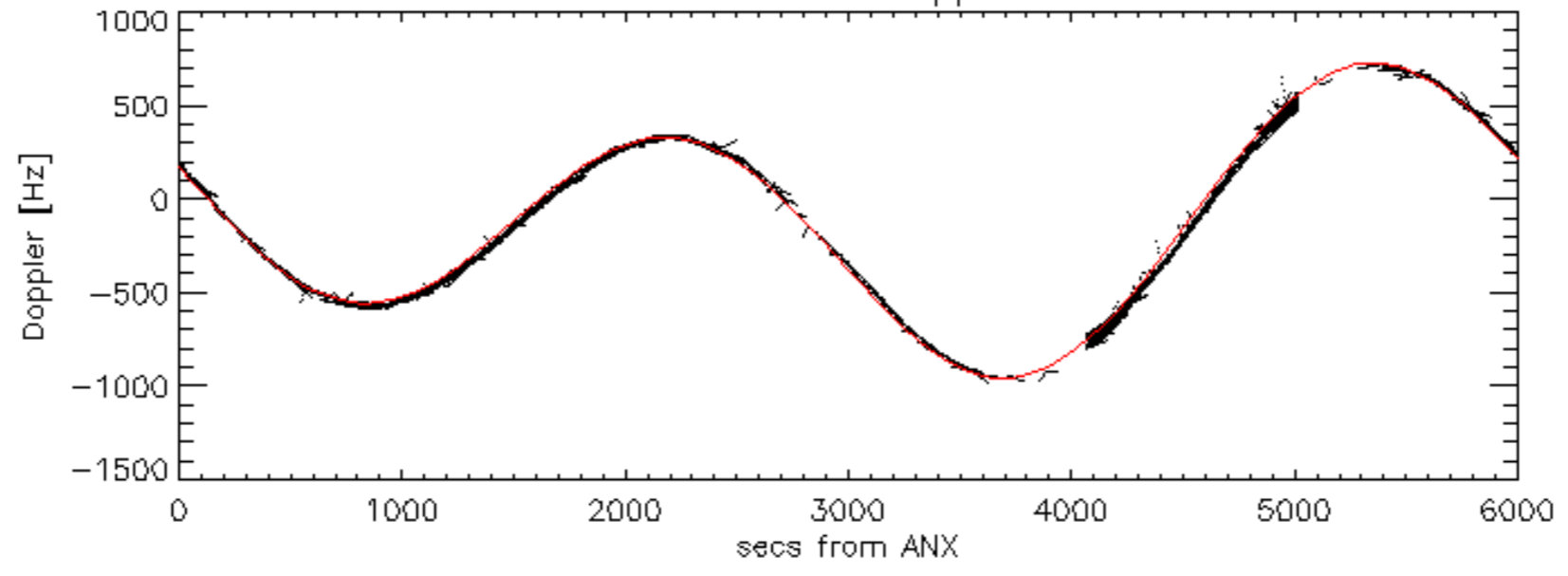
Doppler 'WVS' 'IS2' ascending

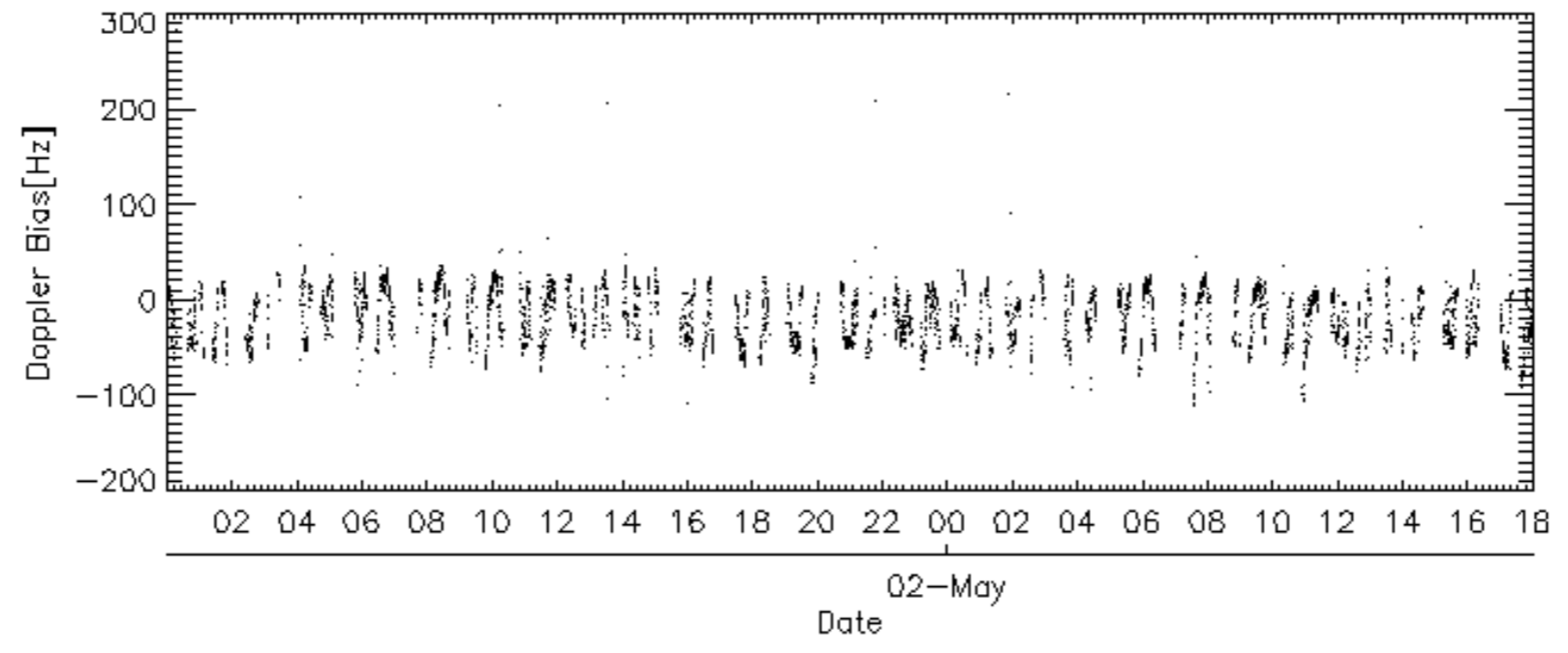
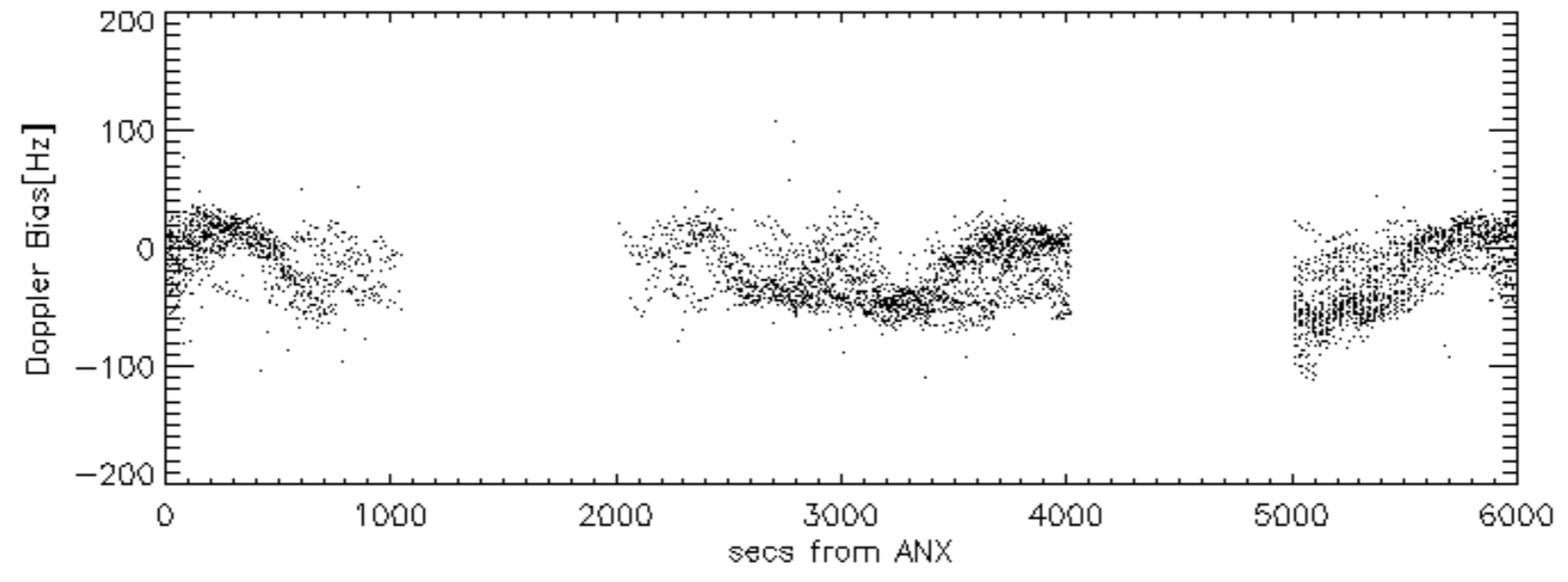
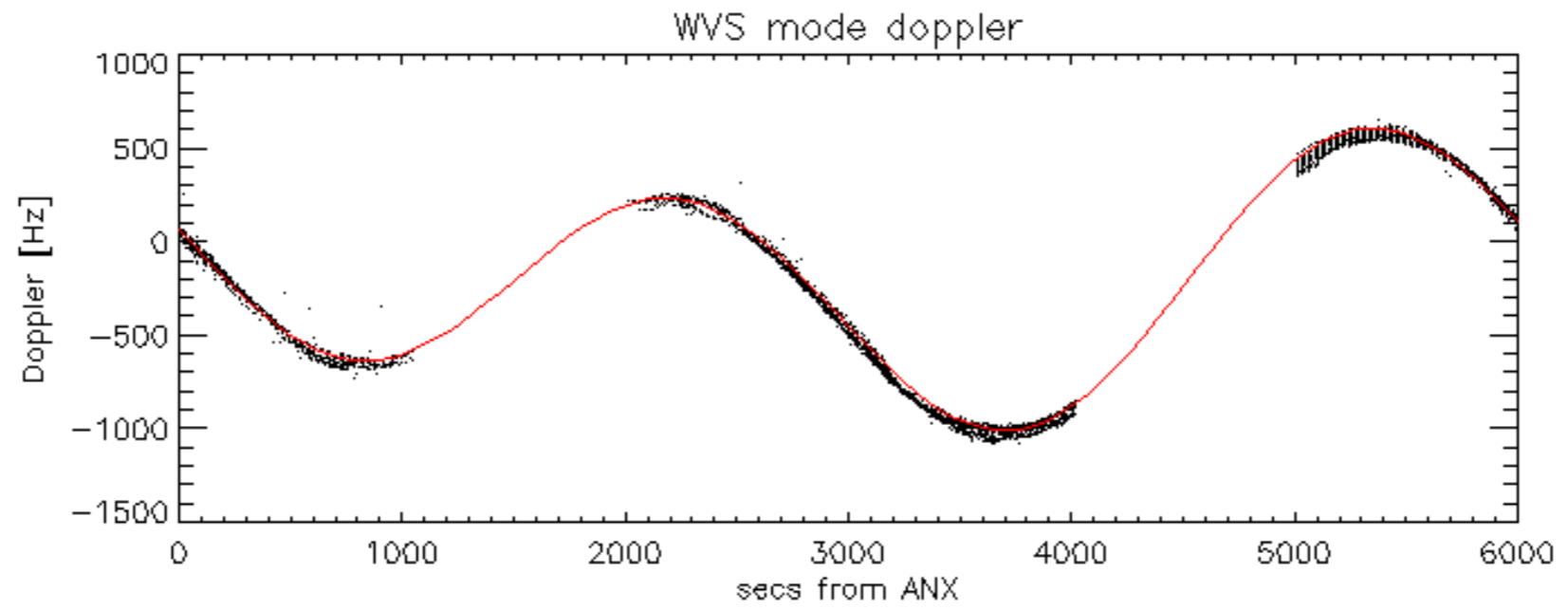


Doppler 'WVS' 'IS2' descending

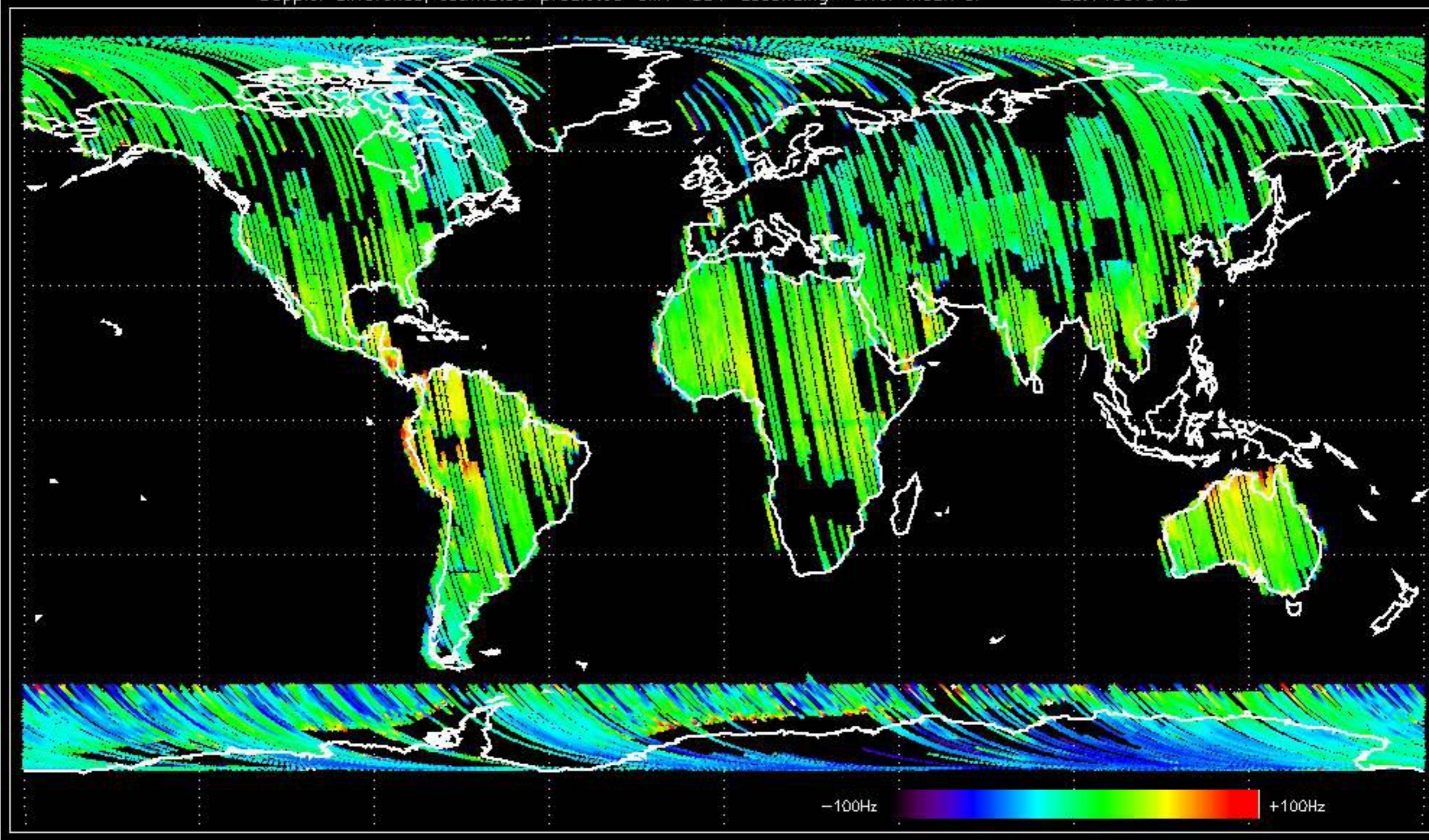


GM1 mode doppler

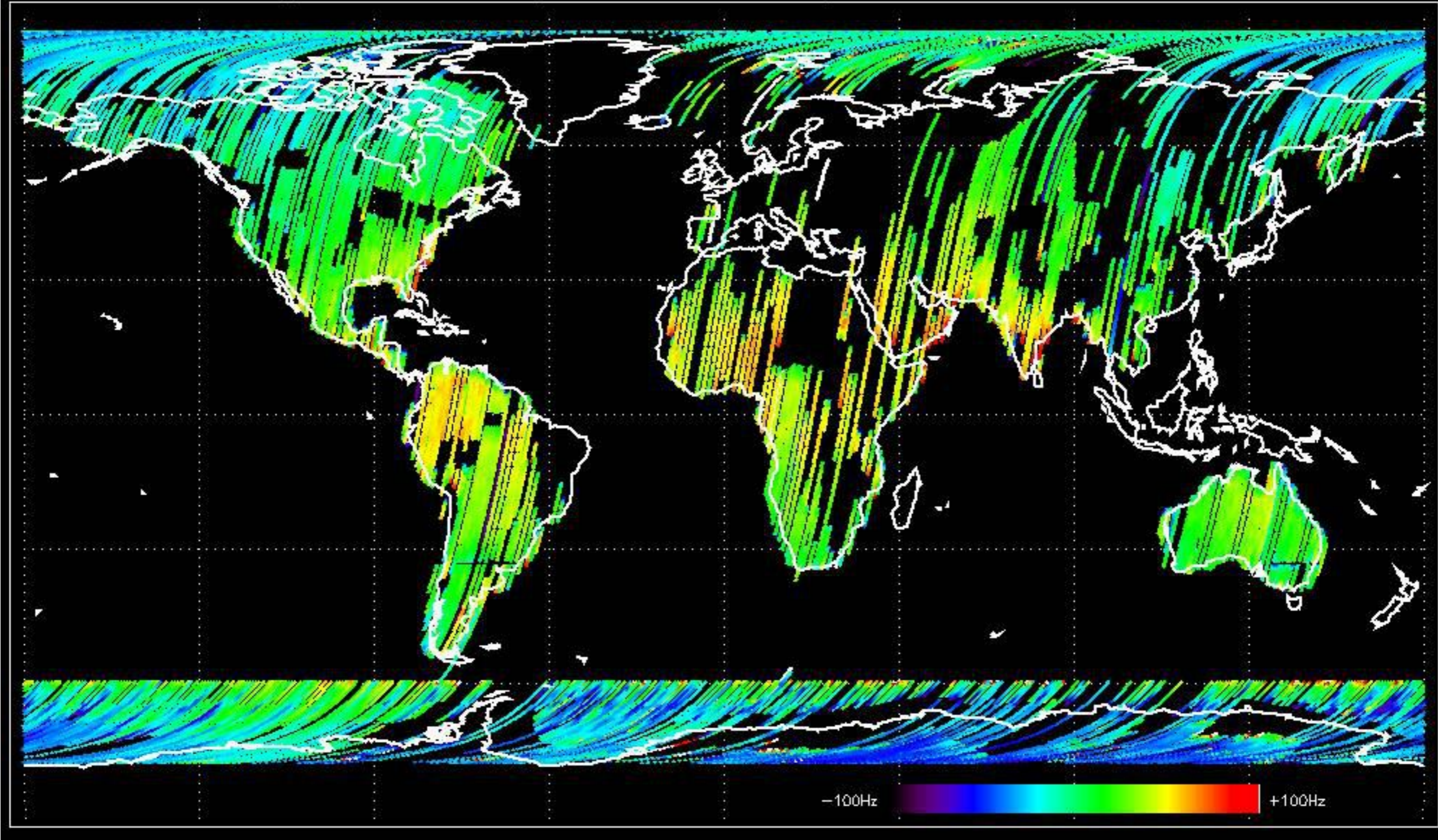




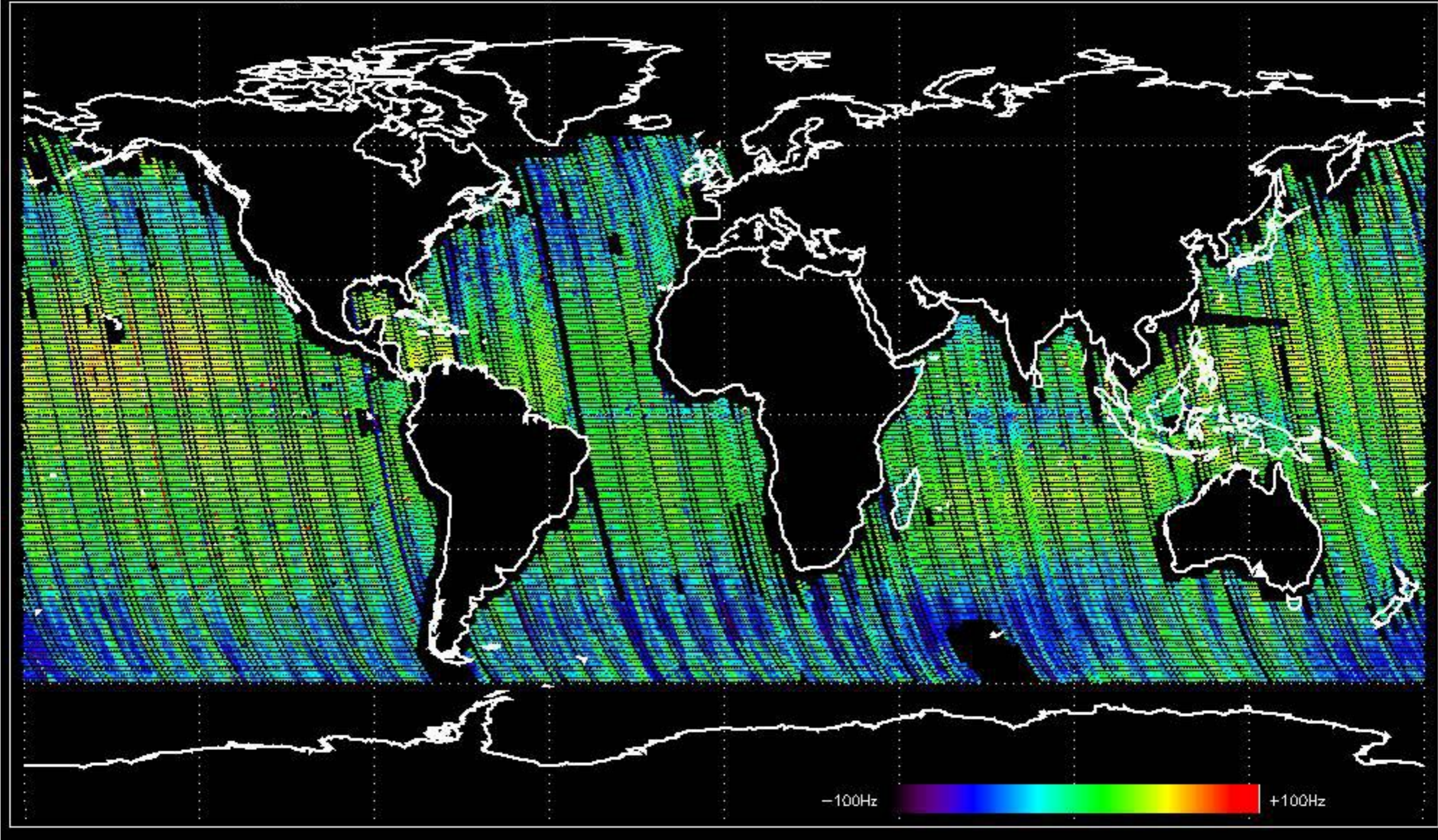
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -25.143579 Hz



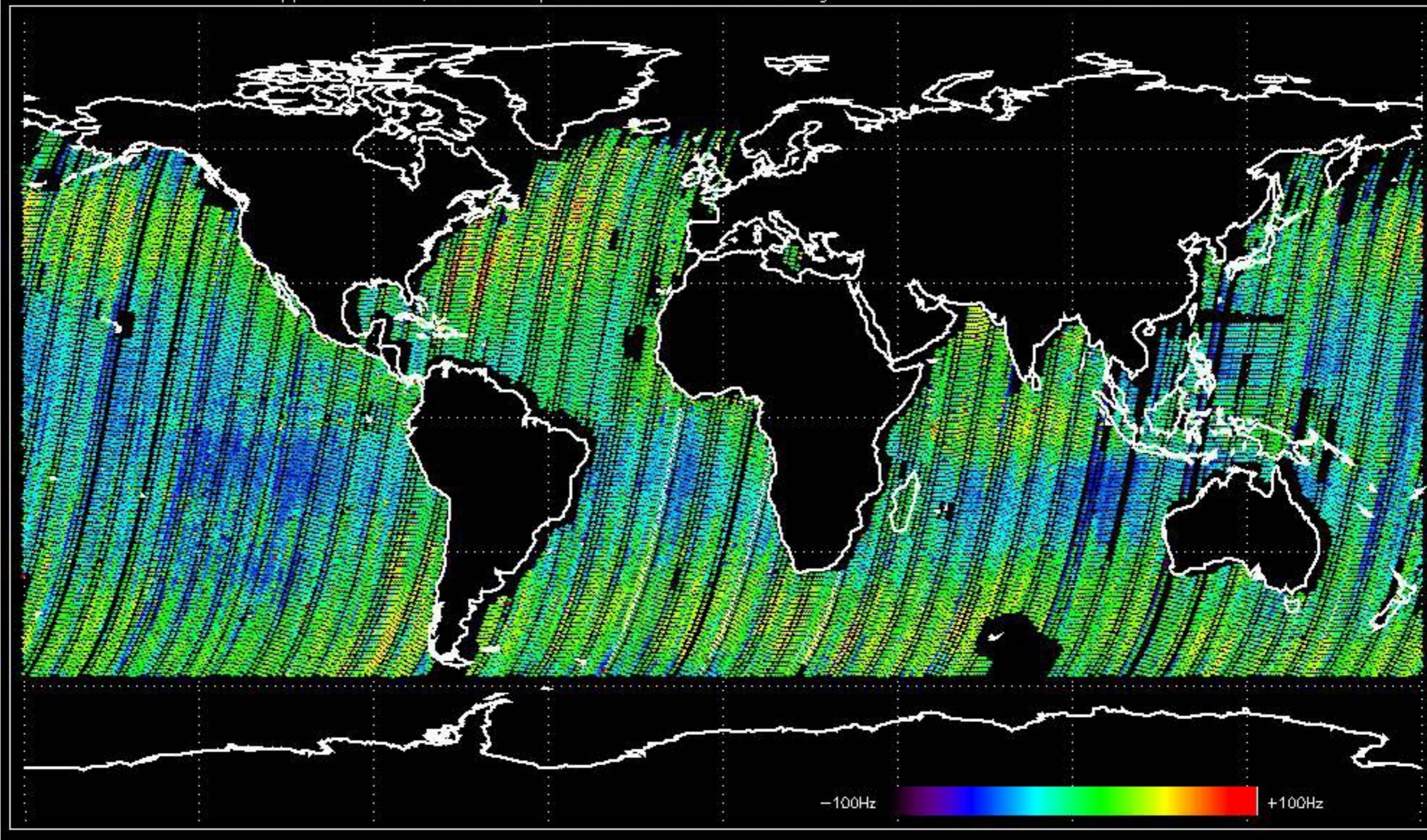
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.696086 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -19.508928 Hz

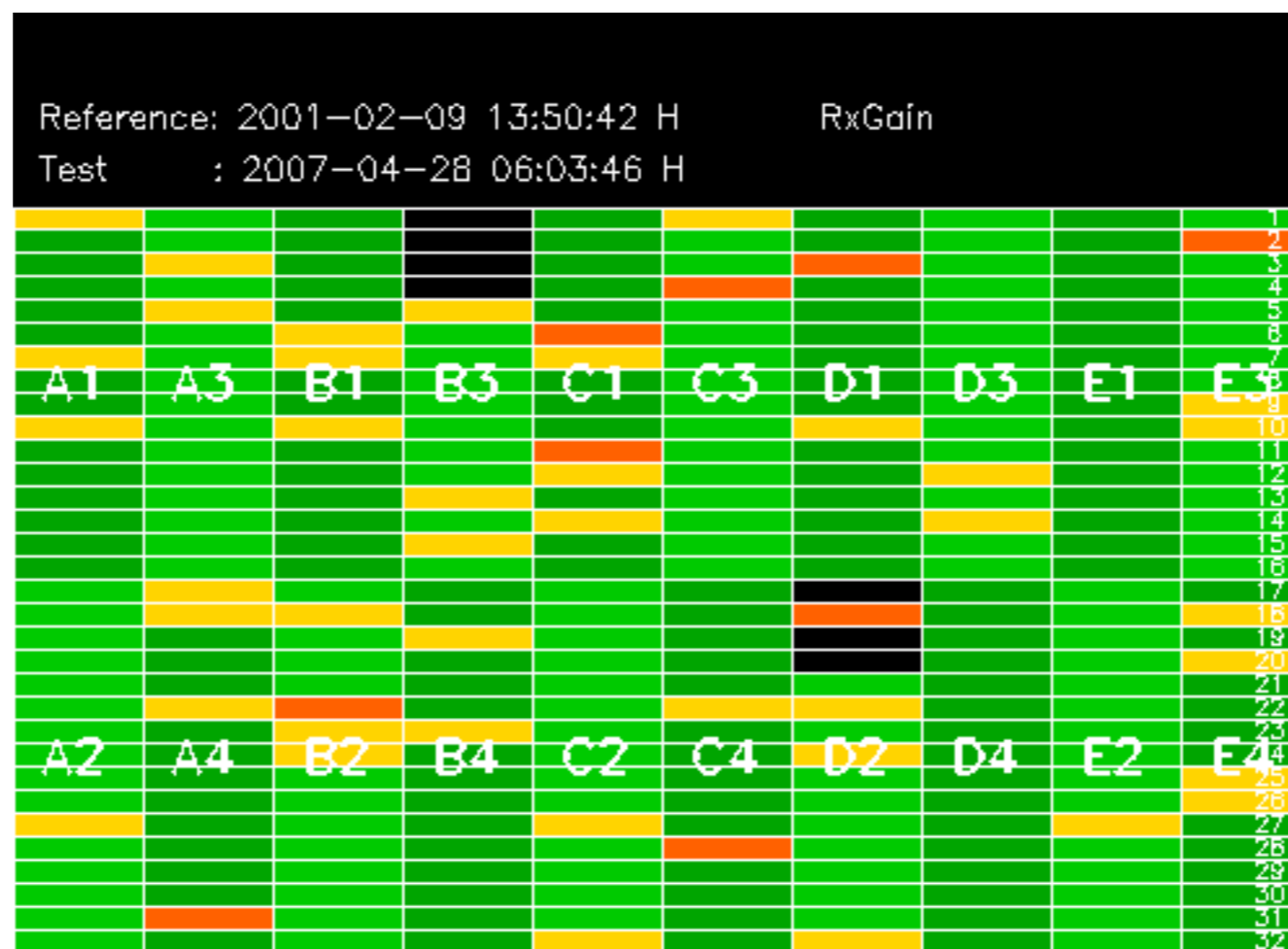


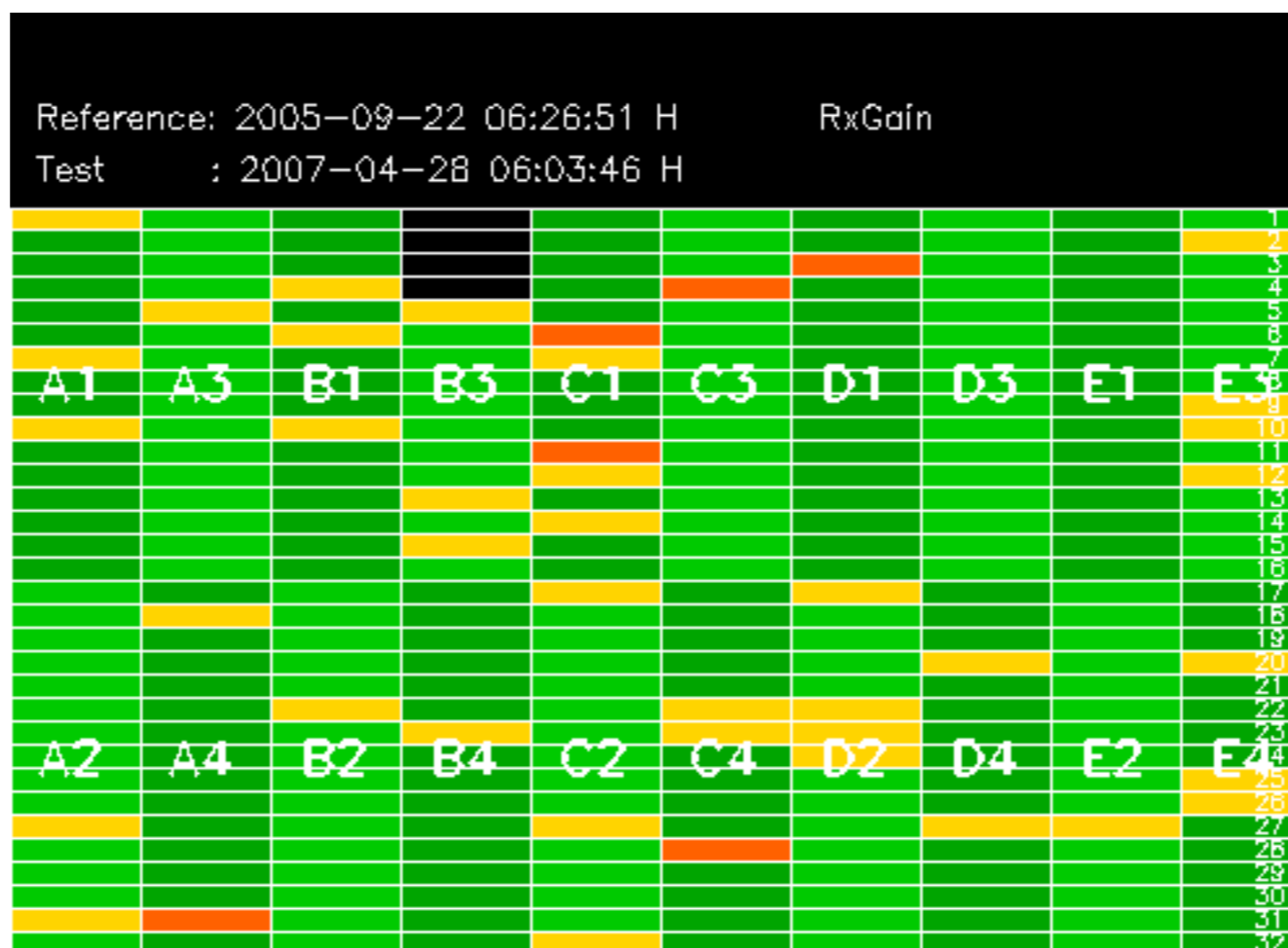
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.323320 Hz

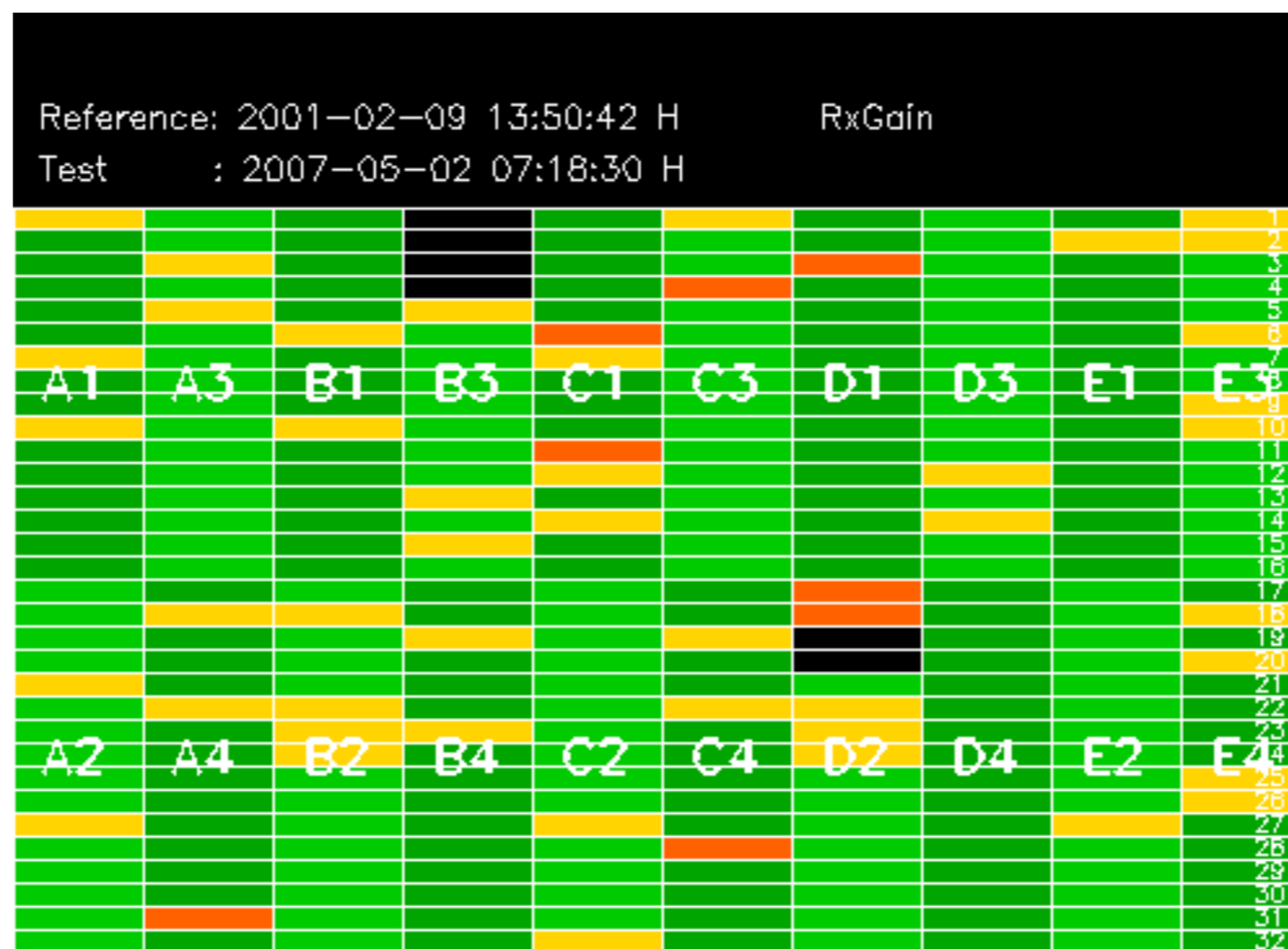


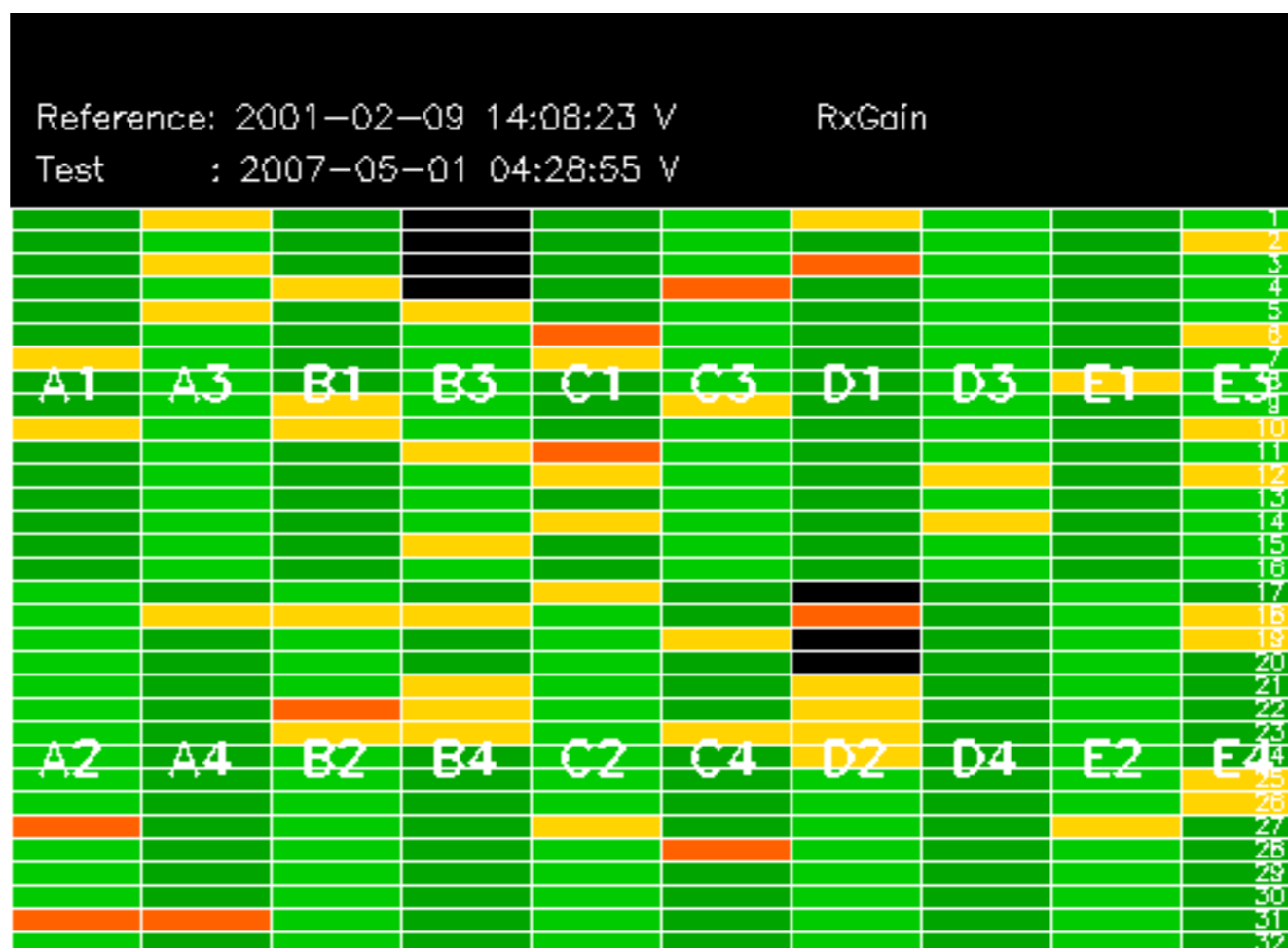
No anomalies observed on available MS products:

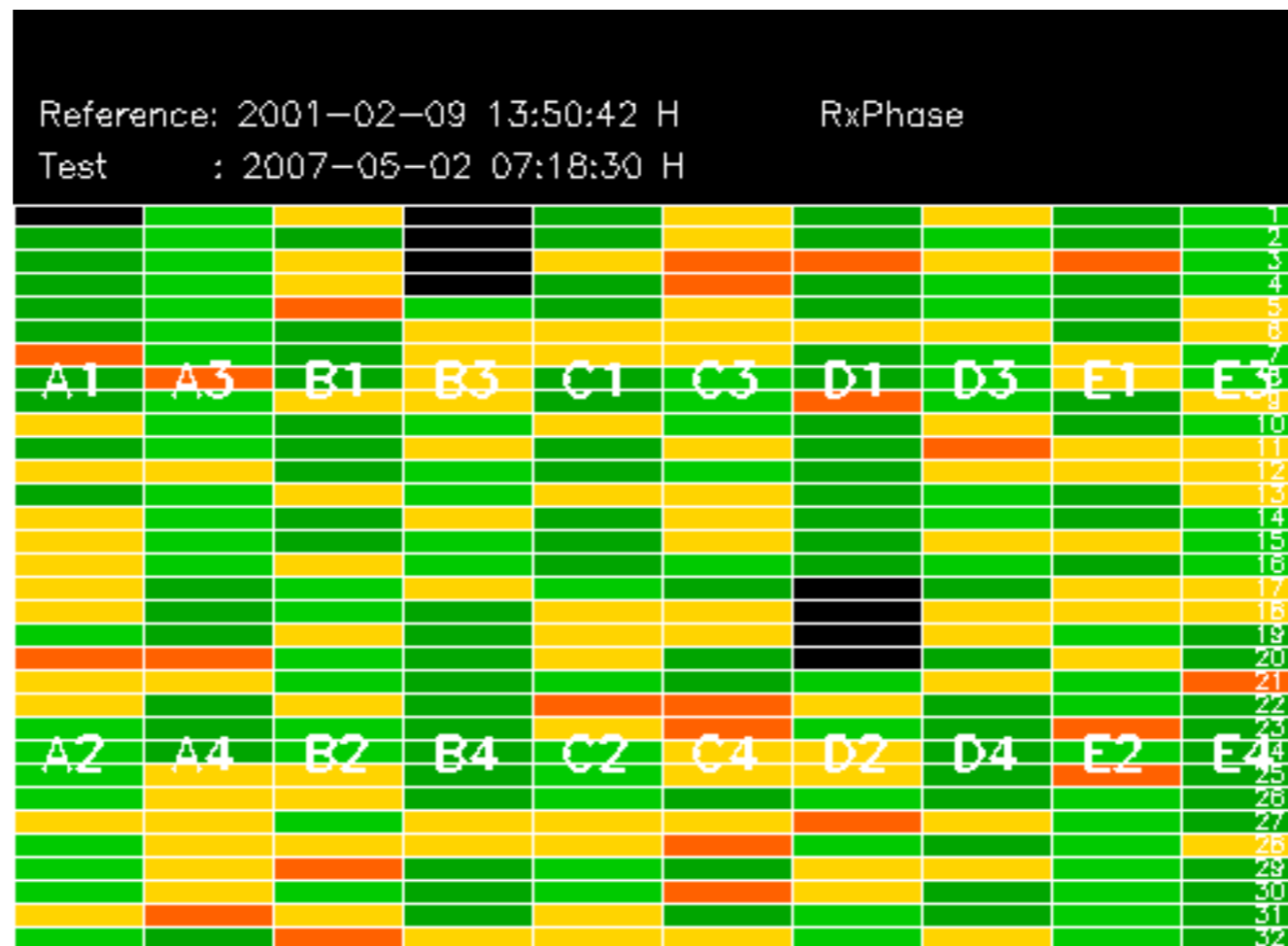
No anomalies observed.

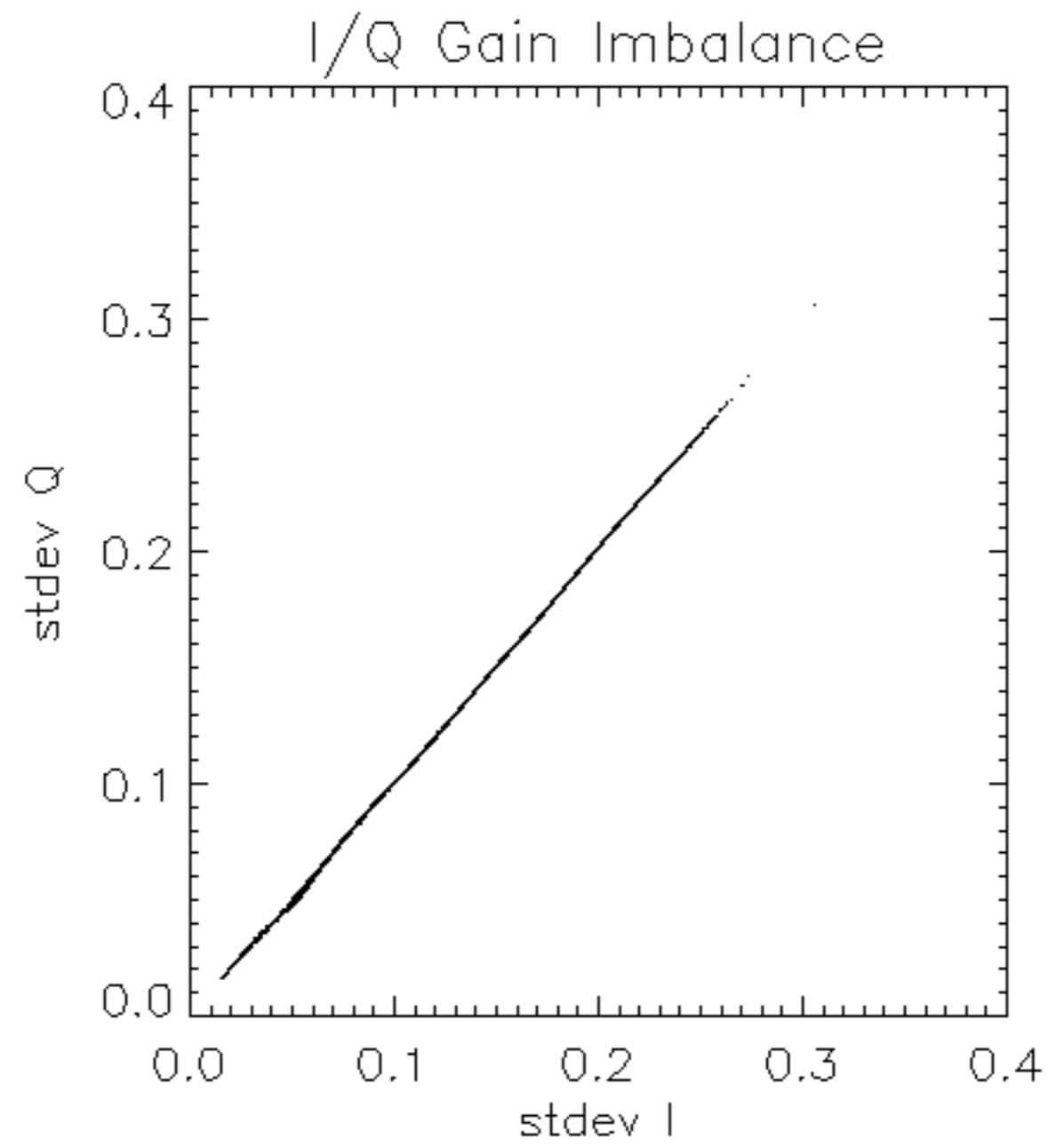


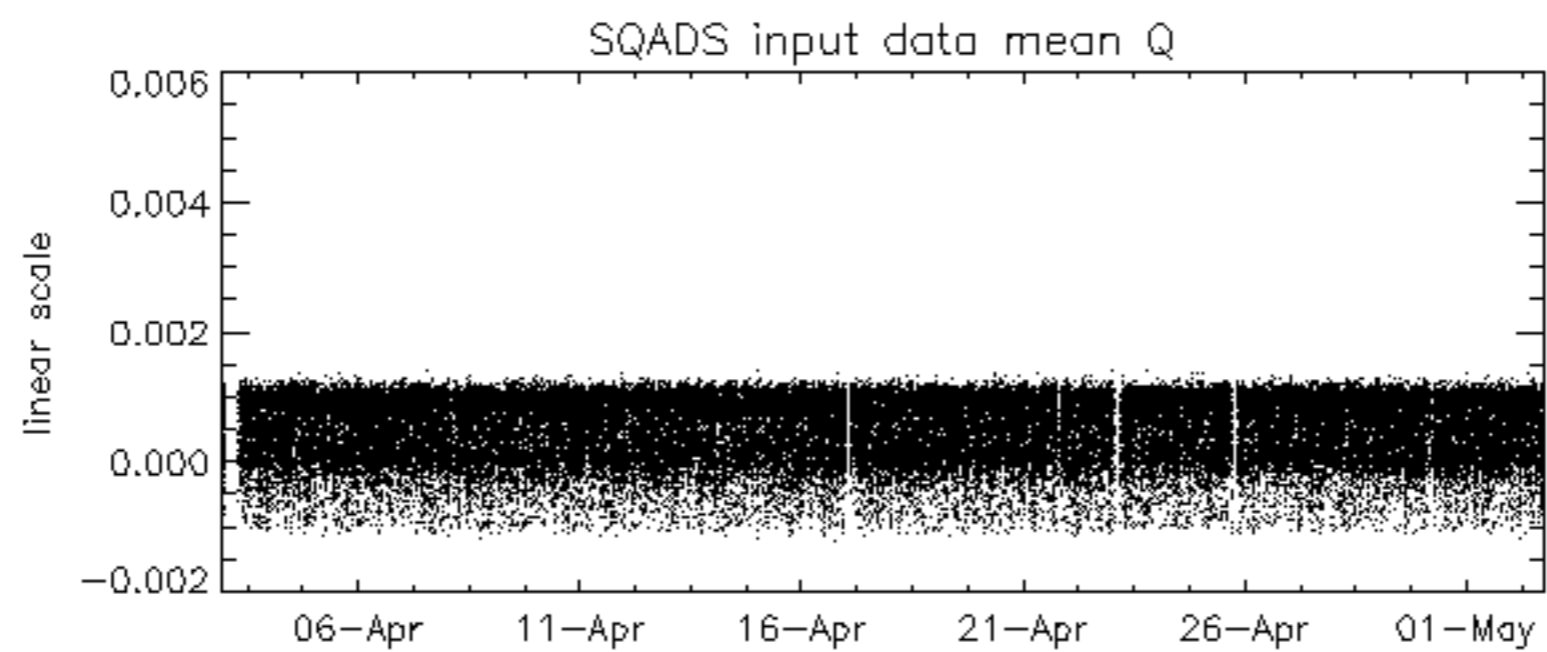
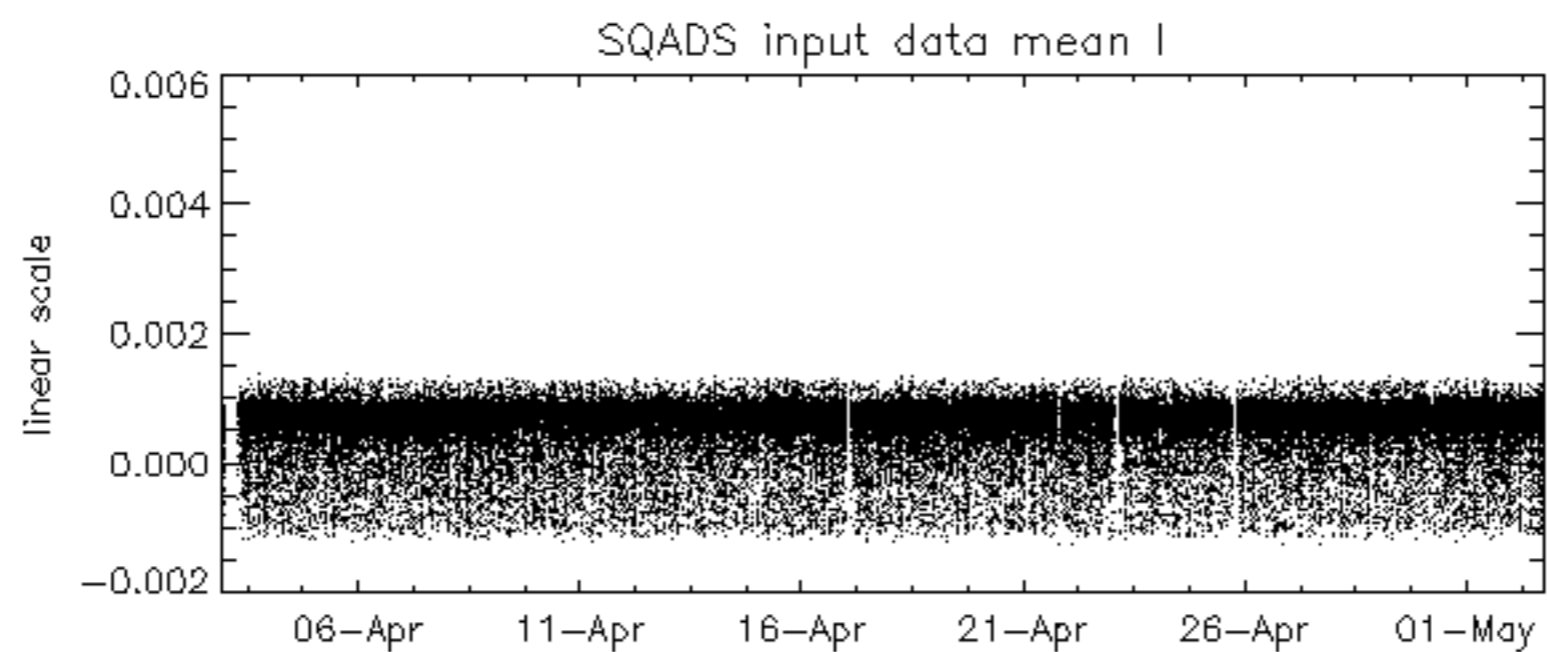
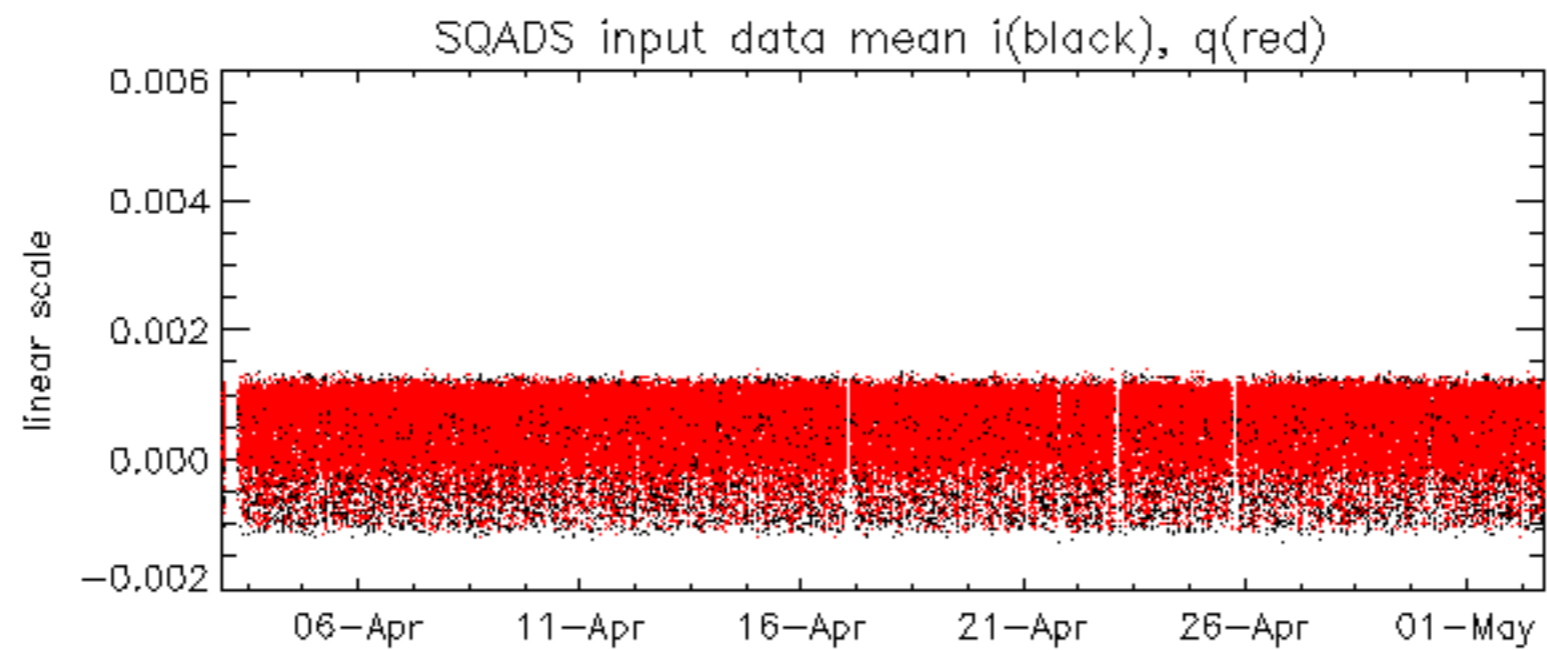


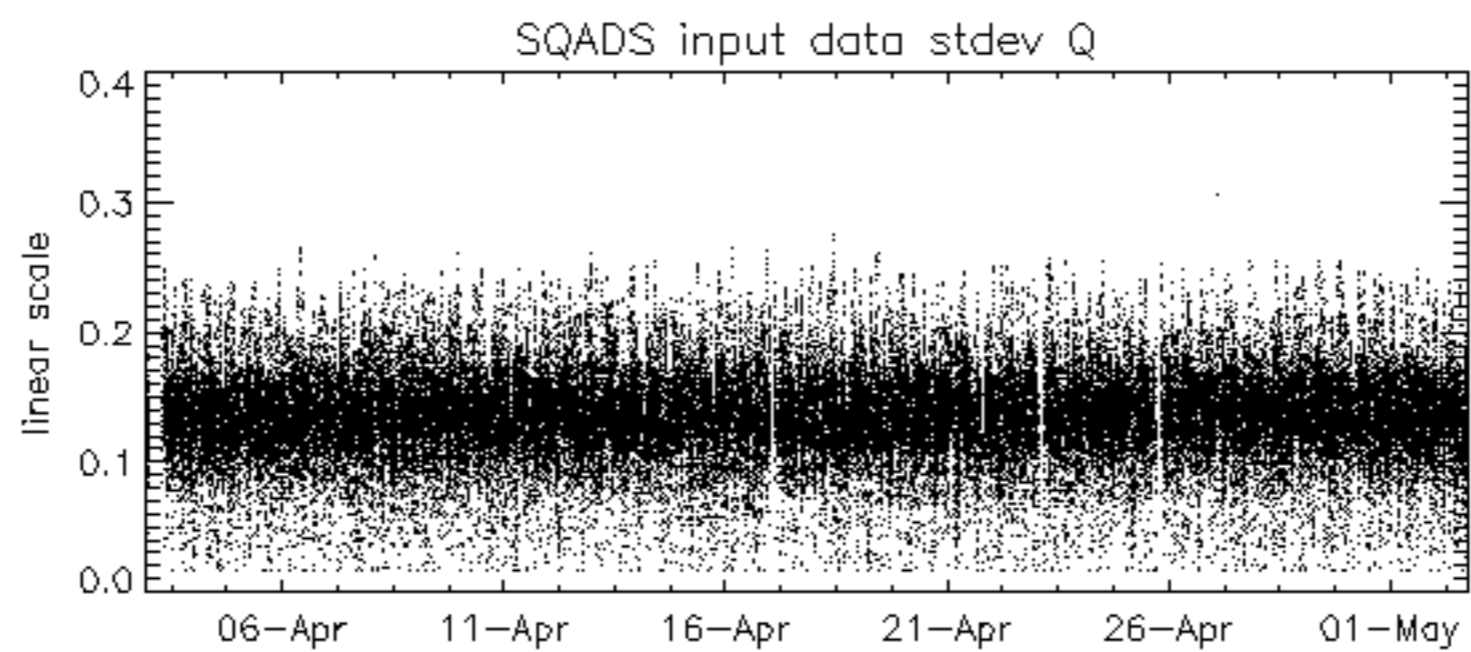
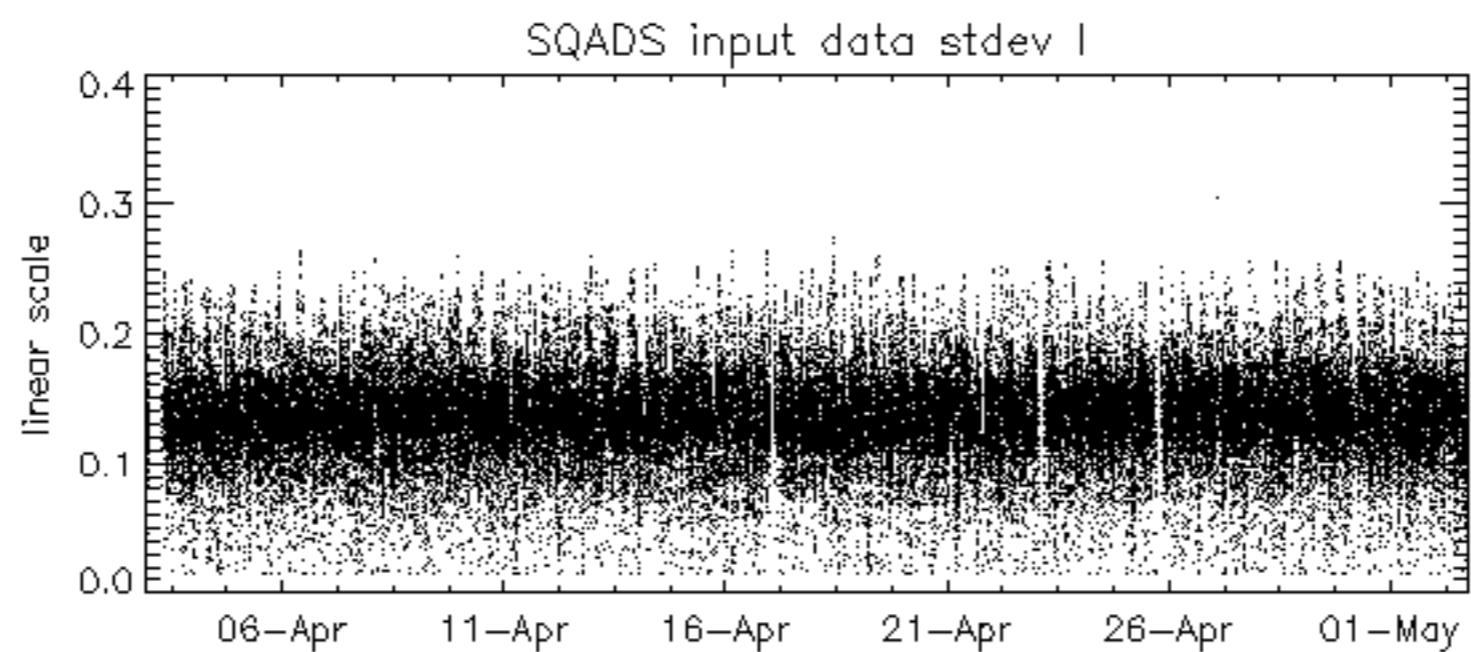
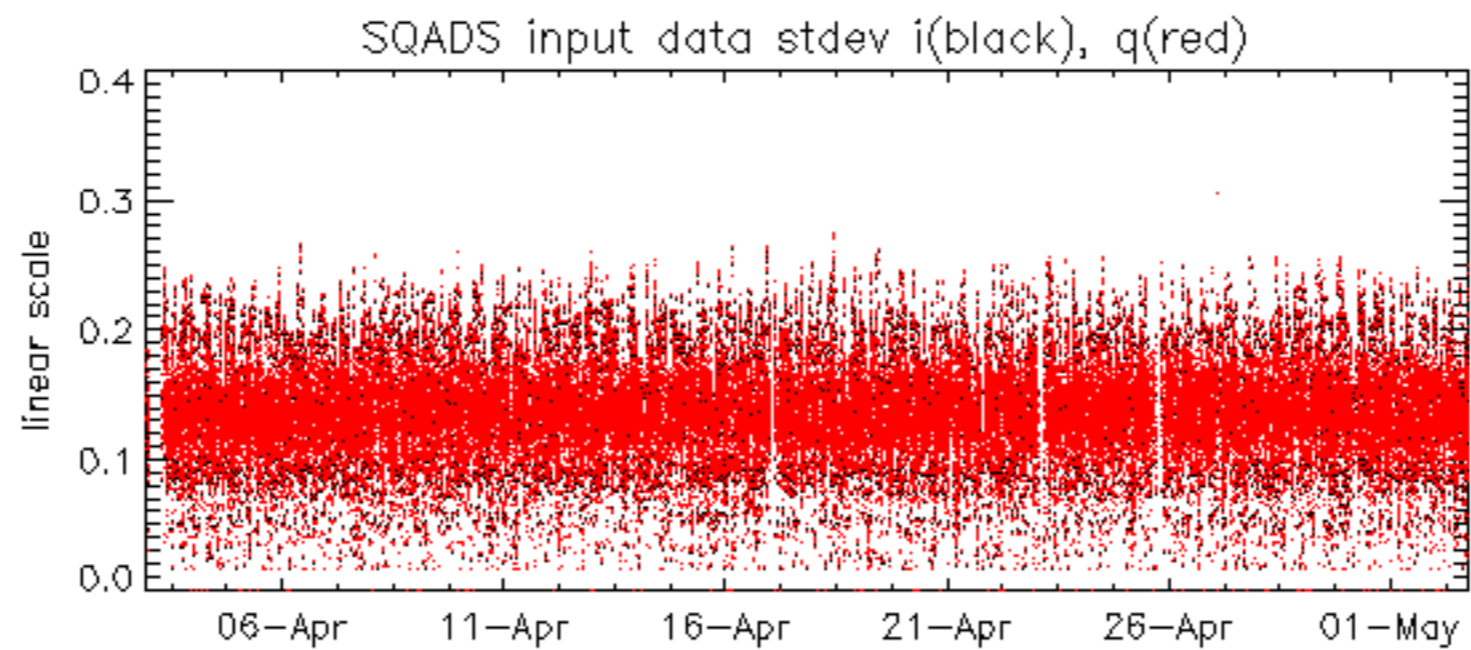








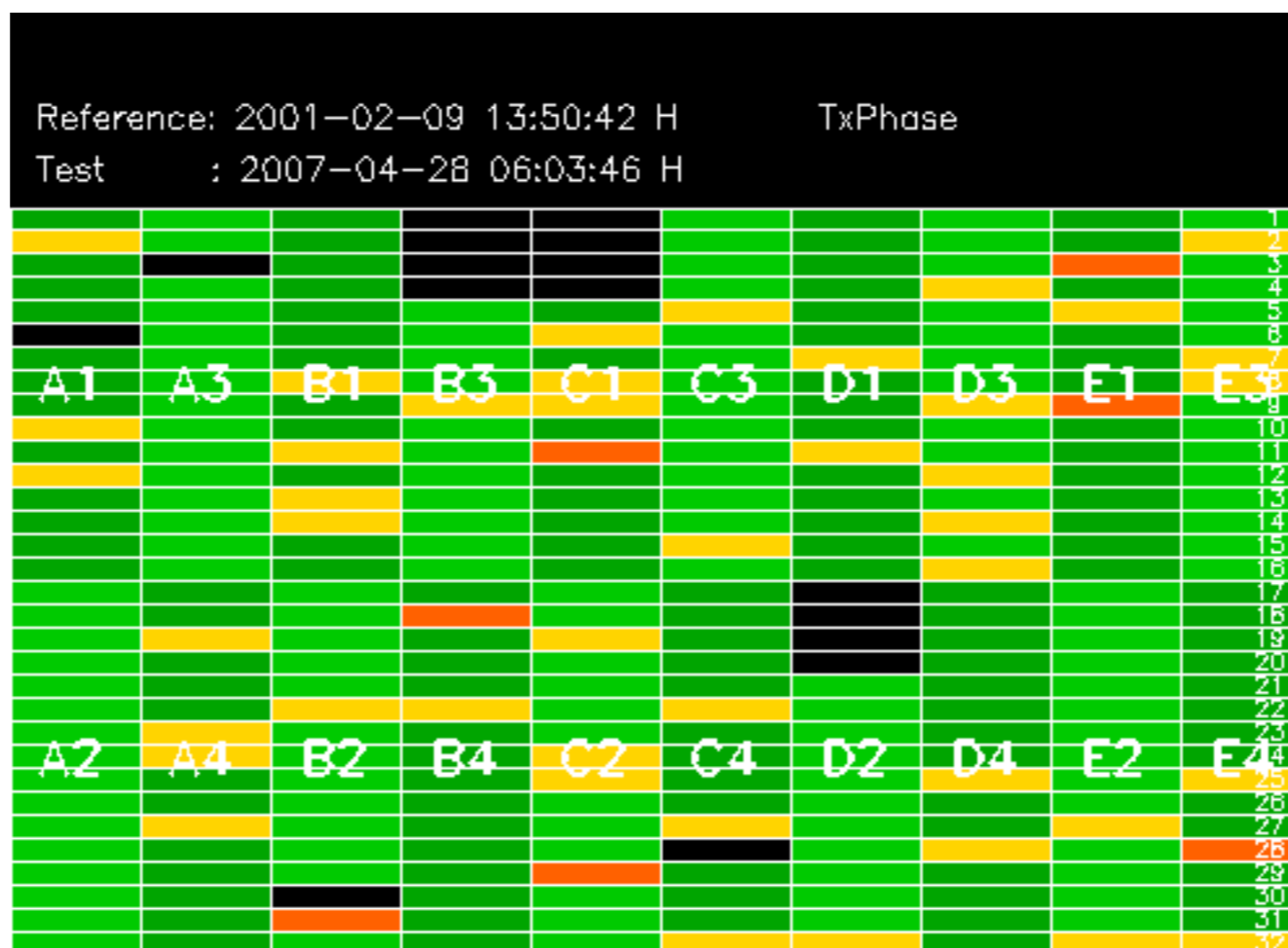


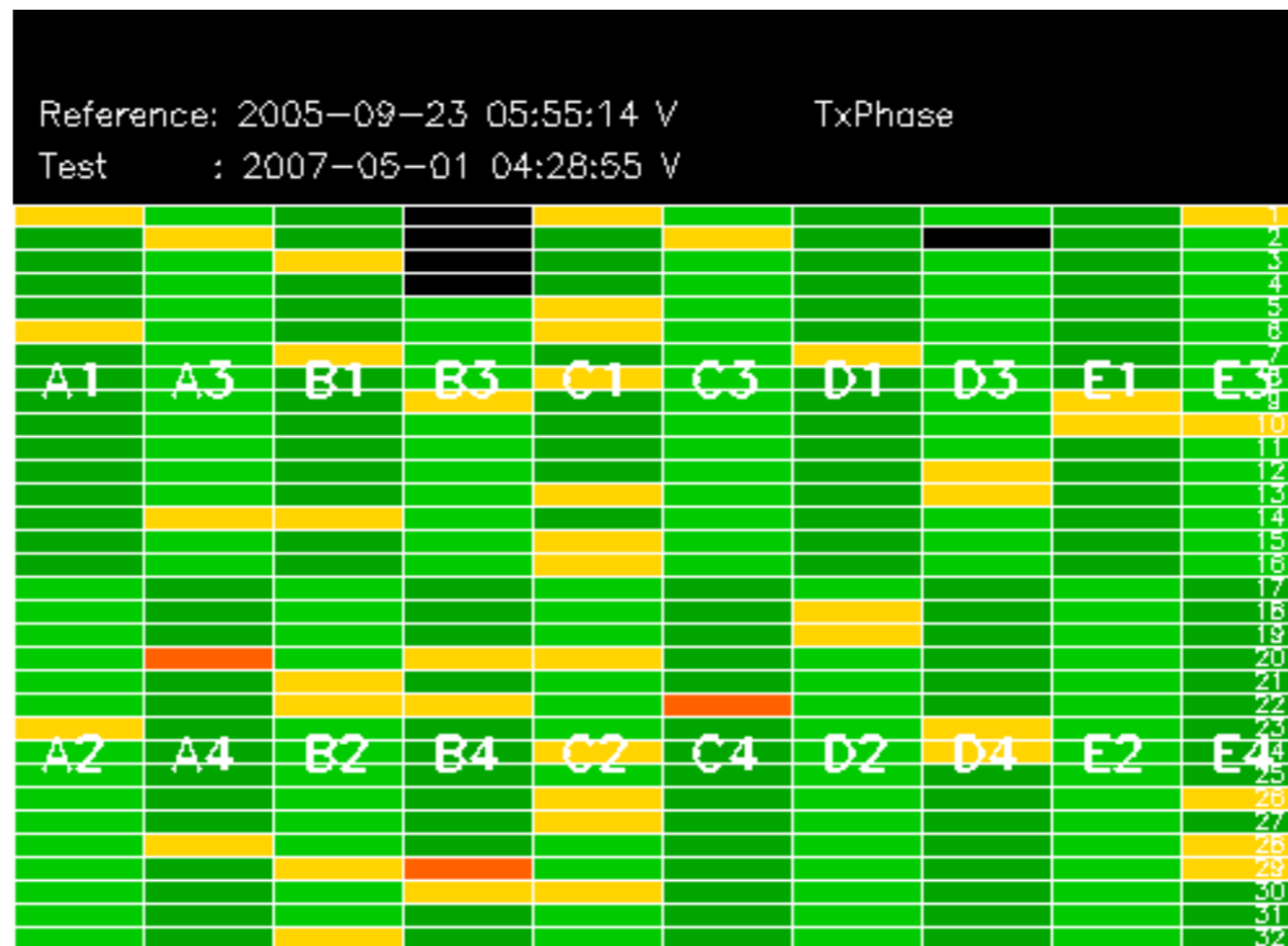


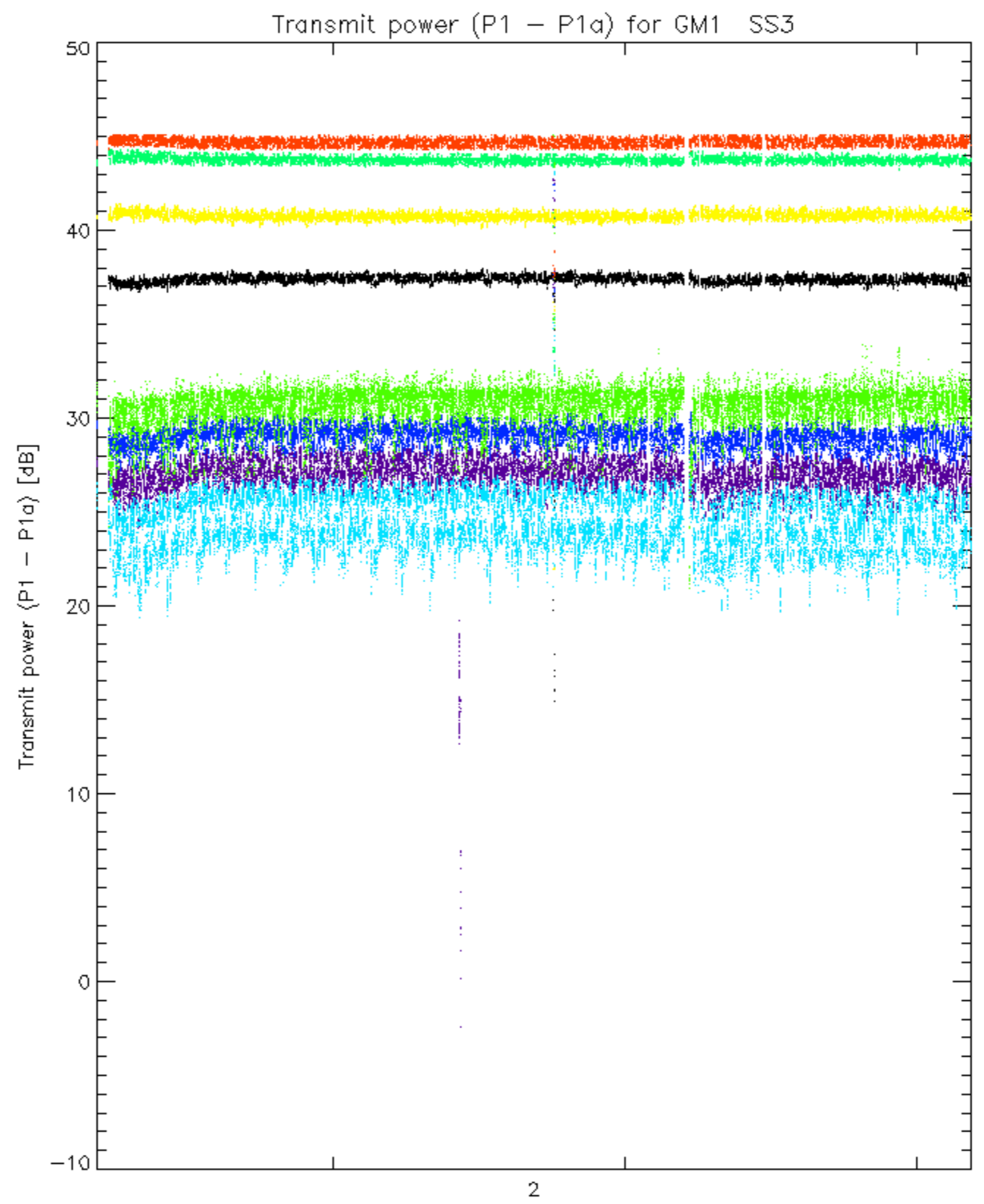
Summary of analysis for the last 3 days 2007050[012]

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

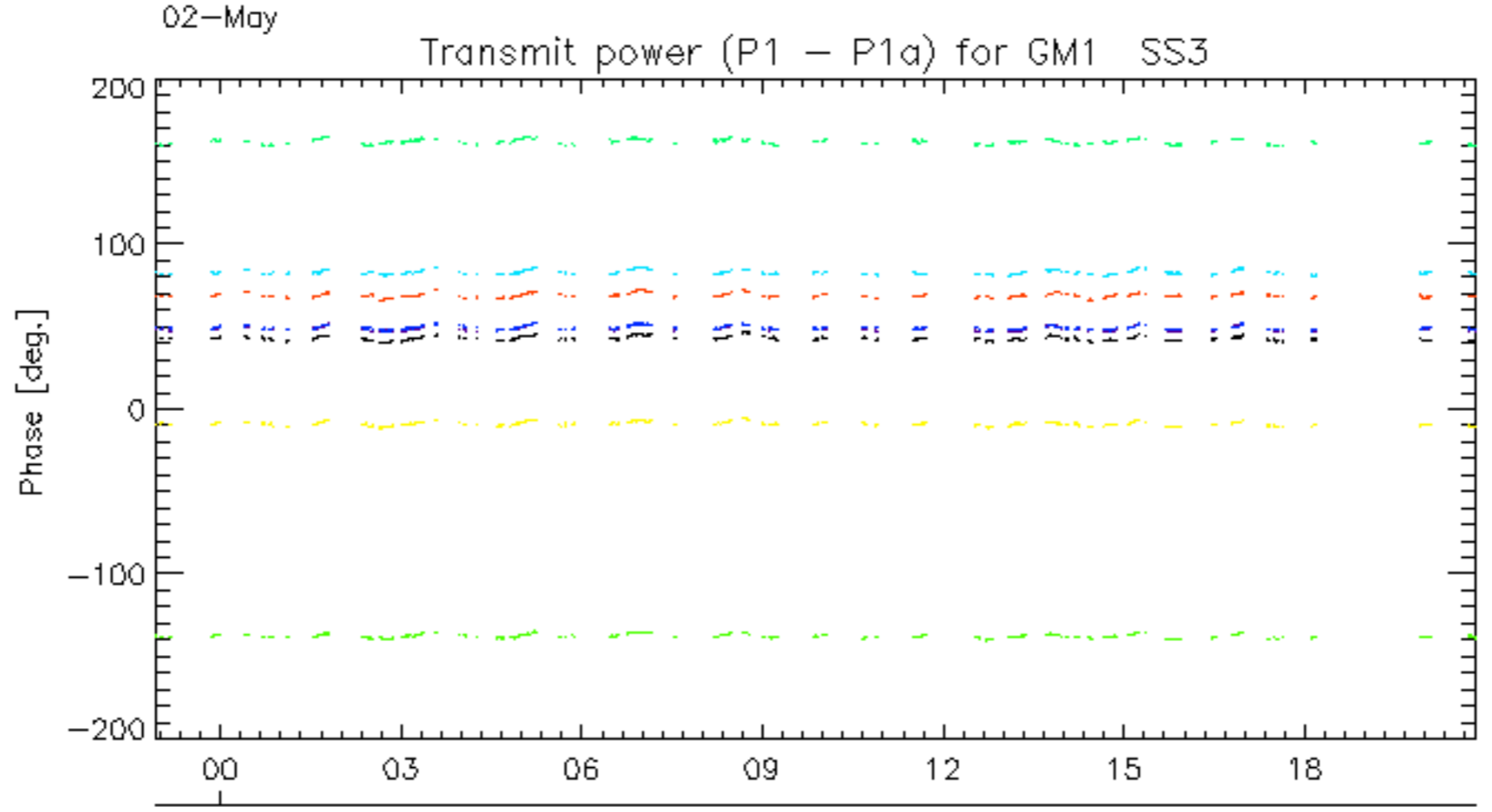
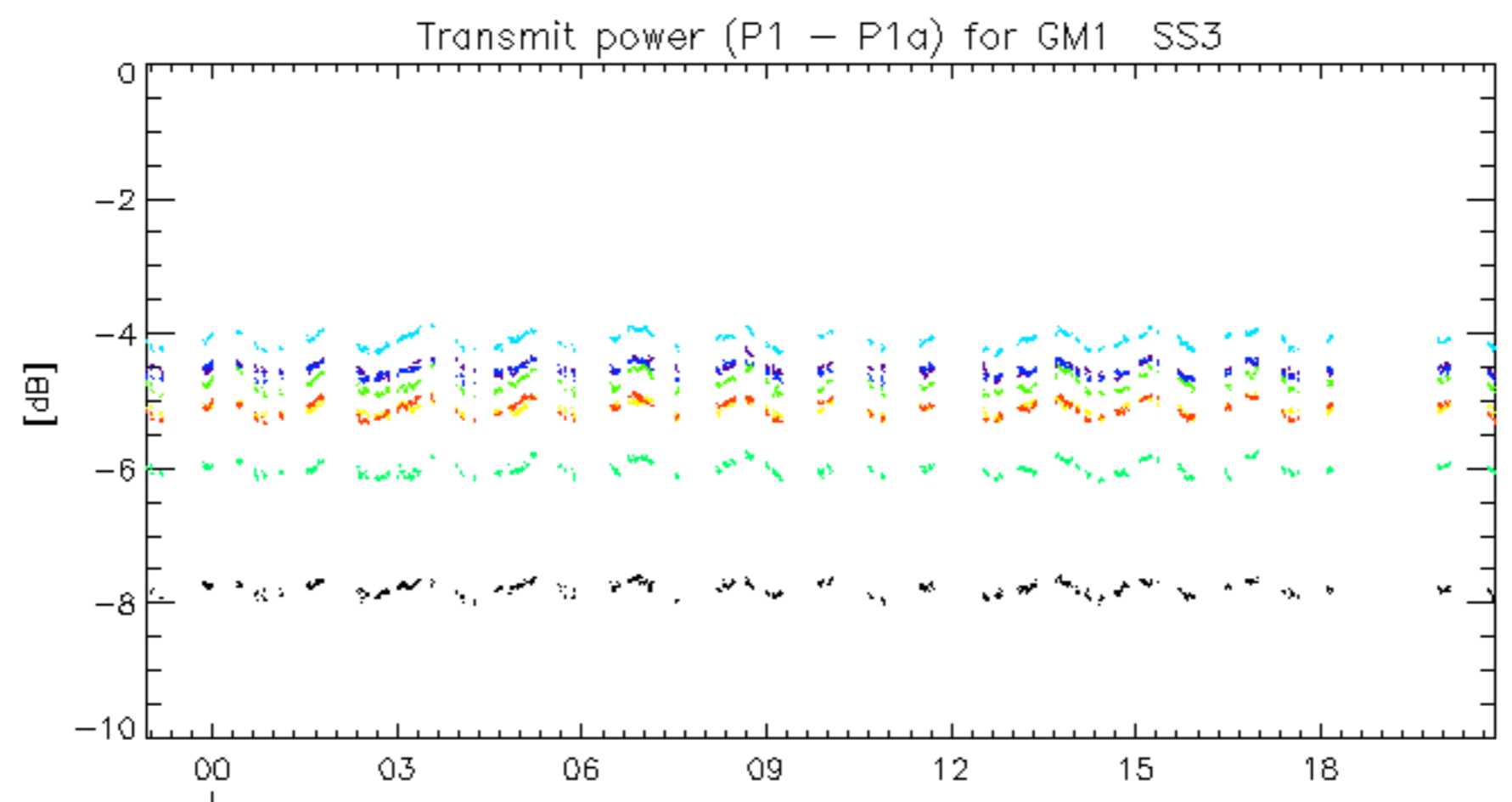
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070502_143310_000000372057_00425_27032_5713.N1	1	0
ASA_WVS_1PNPDK20070501_115225_000002392057_00410_27017_9992.N1	0	16
ASA_GM1_1PNPDK20070501_075015_000001442057_00407_27014_9738.N1	0	99
ASA_GM1_1PNPDK20070501_075523_000006462057_00407_27014_9749.N1	0	13
ASA_GM1_1PNPDK20070501_161314_000009242057_00412_27019_0280.N1	0	60
ASA_GM1_1PNPDK20070502_100004_000001082057_00423_27030_1179.N1	0	6
ASA_WSM_1PNPDE20070501_150736_000001402057_00412_27019_4446.N1	0	36
ASA_WSM_1PNPDE20070502_162039_000002072057_00427_27034_5777.N1	0	15



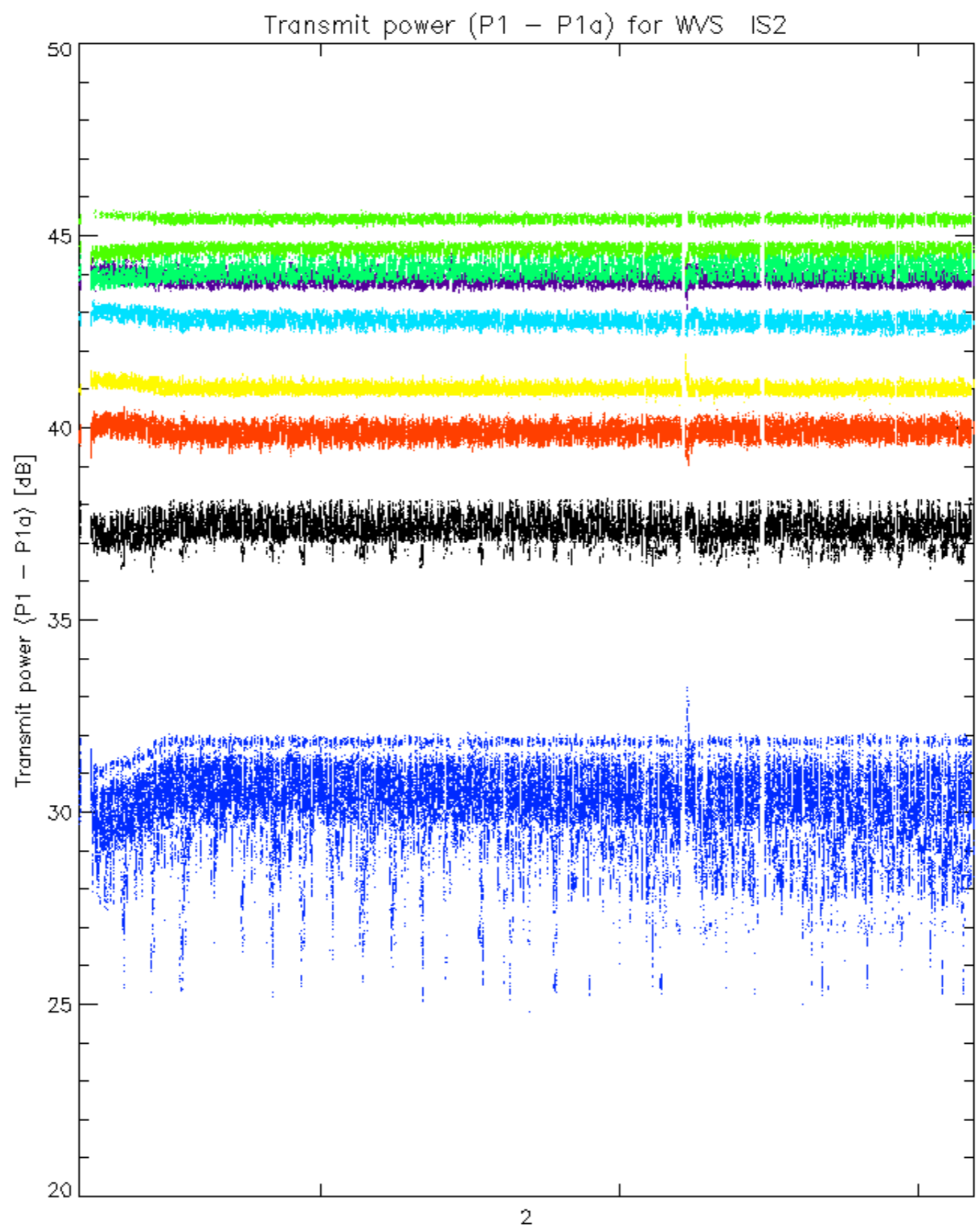




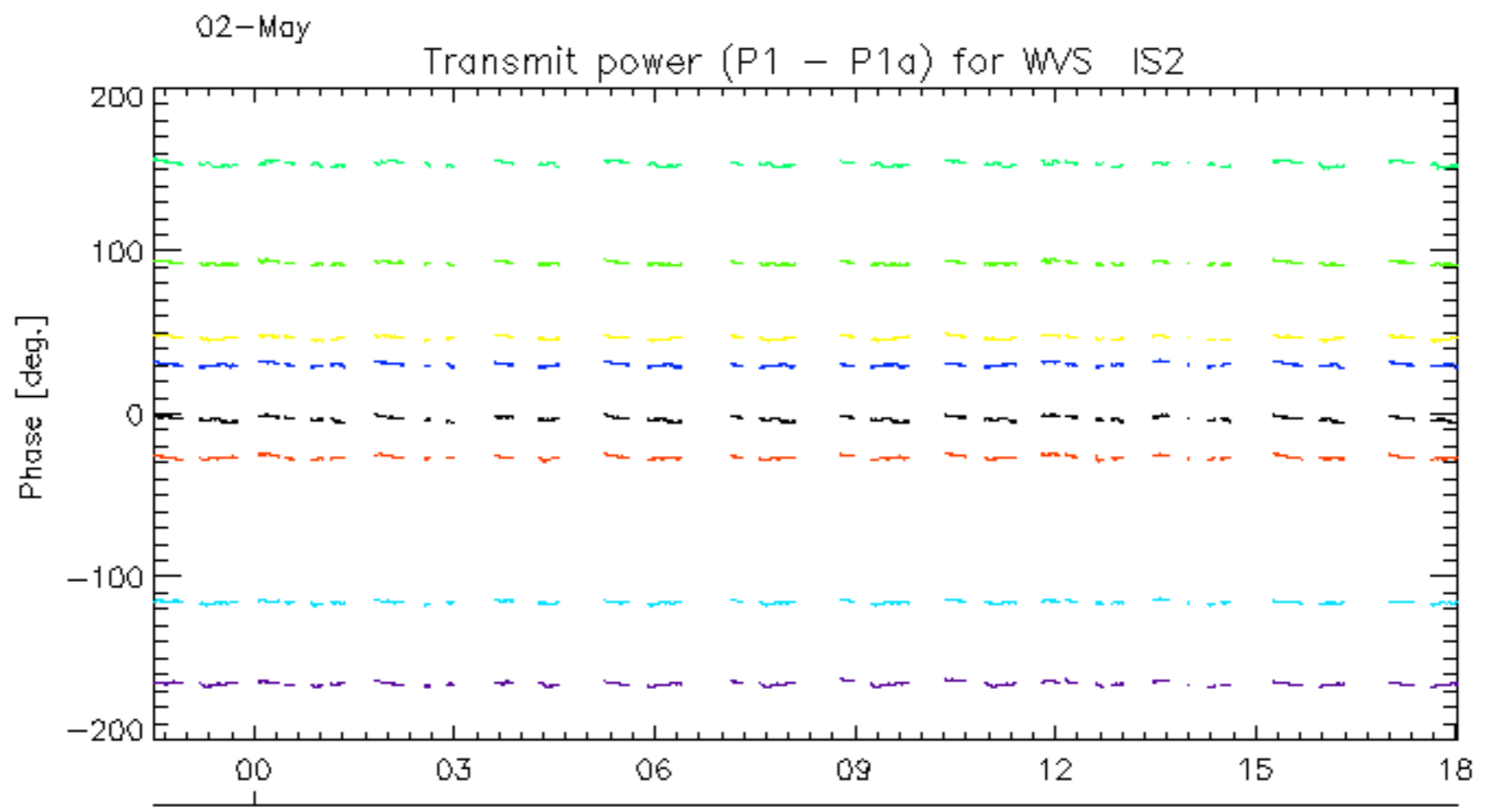
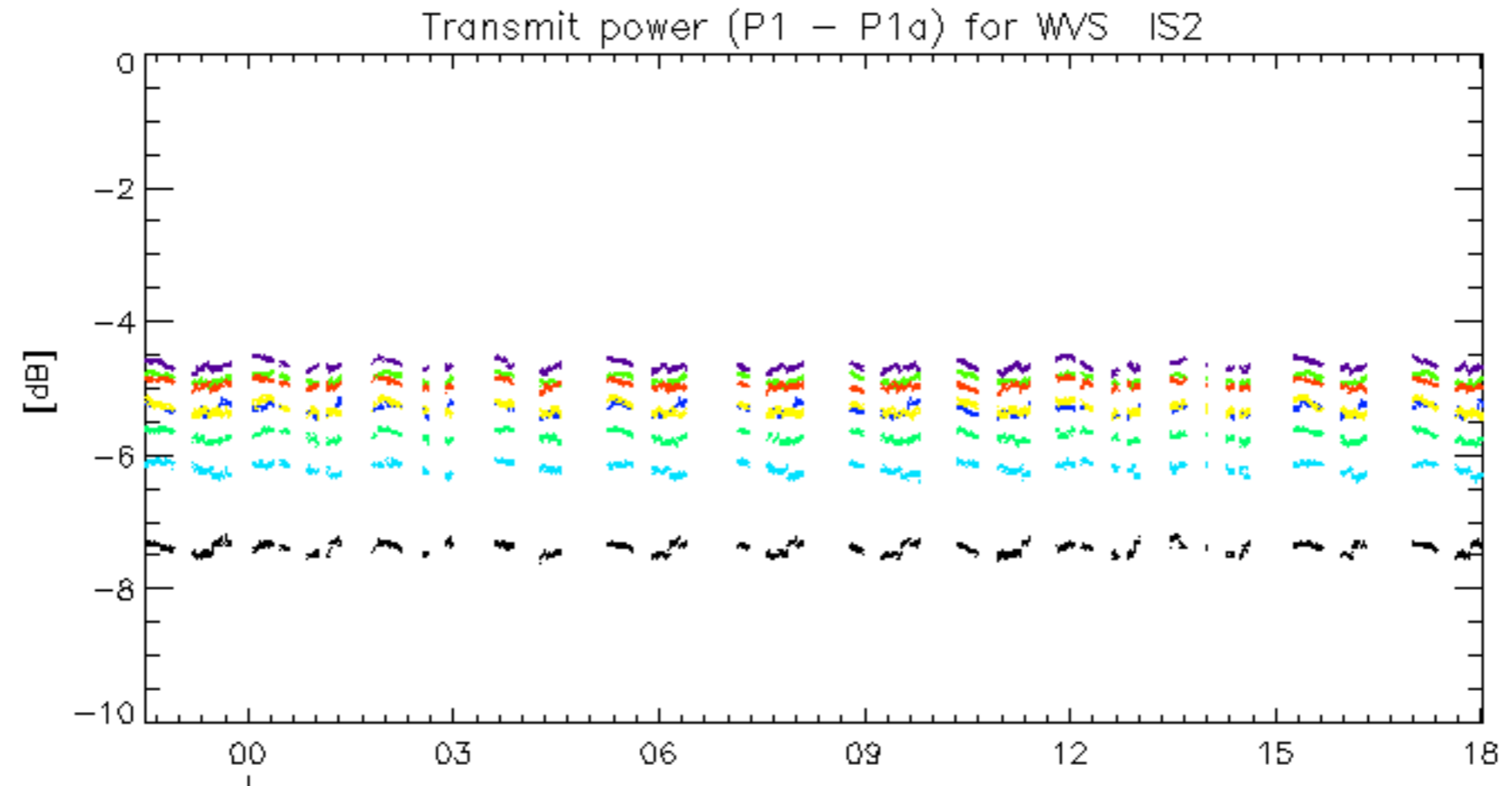
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: 3 7 11 15 19 22 26 30



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



rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.