

PRELIMINARY REPORT OF 070526

last update on Sat May 26 23:10:09 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 2007-05-25 00:00:00 to 2007-05-26 23:10:09

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	50	94	11	3	51
ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000	50	94	11	3	51
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	50	94	11	3	51
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	50	94	11	3	51

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	44	65	37	9	95
ASA_XCA_AXVIEC20070517_153558_20070204_165113_20071231_000000	44	65	37	9	95
ASA_CON_AXVIEC20070410_140202_20070204_165113_20071231_000000	44	65	37	9	95
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	65	37	9	95

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	20070525 033420
H	20070526 030243

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
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-15.258793	0.122744	-0.201068
7	P1a	-17.606773	0.071145	-0.044006
11	P1a	-17.758512	0.340566	-0.091818
15	P1a	-13.174185	0.154363	-0.115327
19	P1a	-15.447084	0.069748	-0.041282
22	P1a	-16.007206	0.327530	-0.007606
26	P1a	-14.957335	0.206398	-0.118665
30	P1a	-18.040751	0.428363	-0.386007

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.785552	0.009964	-0.000841
7	P1	-3.169525	0.008293	-0.036765
11	P1	-4.187452	0.018756	0.062271
15	P1	-6.474262	0.019260	-0.057527
19	P1	-3.778838	0.011952	-0.023483
22	P1	-4.737447	0.011727	0.040502
26	P1	-3.911324	0.016978	-0.033928
30	P1	-5.960449	0.009431	0.010704

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.646744	0.093272	0.018118
7	P2	-21.495806	0.093735	0.075795
11	P2	-15.271995	0.121126	0.036862
15	P2	-7.134403	0.091011	-0.005796
19	P2	-9.122489	0.082195	-0.003572
22	P2	-18.084551	0.077796	0.006472
26	P2	-16.660023	0.084410	-0.040222
30	P2	-19.238346	0.083955	0.058203

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.243520	0.004528	0.002735
7	P3	-8.243520	0.004528	0.002735
11	P3	-8.243520	0.004528	0.002735
15	P3	-8.243520	0.004528	0.002735
19	P3	-8.243520	0.004528	0.002735
22	P3	-8.243520	0.004528	0.002735
26	P3	-8.243497	0.004534	0.002862
30	P3	-8.243497	0.004534	0.002862

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	-11.575930	0.137935	-0.829798
7	P1a	-10.009809	0.103751	0.028300
11	P1a	-10.690213	0.060041	-0.055289
15	P1a	-10.759515	0.133761	0.058473
19	P1a	-15.879617	0.097324	-0.084841
22	P1a	-21.506708	1.317777	-0.179498
26	P1a	-15.570159	0.302063	-0.108254
30	P1a	-18.262100	0.401311	0.129559

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-7.787554	0.345530	1.636847
7	P1	-2.359450	0.054106	0.050681
11	P1	-2.866465	0.016040	0.005128
15	P1	-3.787967	0.033887	0.045962
19	P1	-3.611902	0.018112	-0.036263
22	P1	-4.939617	0.023141	0.035601
26	P1	-6.065802	0.020883	-0.044341
30	P1	-5.364348	0.030790	-0.055126

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.221279	0.092345	-0.072482
7	P2	-22.066786	0.178689	-0.052385
11	P2	-10.665800	0.057527	-0.055467
15	P2	-4.968562	0.046053	-0.099398
19	P2	-6.883472	0.046019	-0.045458
22	P2	-8.103241	0.063954	-0.025858
26	P2	-24.355539	0.115932	-0.068496
30	P2	-21.700132	0.099749	-0.014633

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091589	0.005227	-0.011055
7	P3	-8.091466	0.005220	-0.010919
11	P3	-8.091531	0.005212	-0.011449
15	P3	-8.091518	0.005214	-0.011332
19	P3	-8.091536	0.005222	-0.011190
22	P3	-8.091503	0.005222	-0.011621
26	P3	-8.091558	0.005224	-0.011457
30	P3	-8.091504	0.005216	-0.011431

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	0.000551188
	stdev	1.89835e-07
MEAN Q	mean	0.000513513
	stdev	2.36040e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136120
	stdev	0.00114912
STDEV Q	mean	0.136503
	stdev	0.00116608



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007052[456]

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_GM1_1PNPDK20070526_185316_000003922058_00271_27379_4817.N1	0	13
ASA_WSM_1PNPDE20070524_180905_000001292058_00242_27350_8687.N1	0	31
ASA_WSM_1PNPDE20070525_155729_000001402058_00255_27363_9917.N1	0	2





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

✕

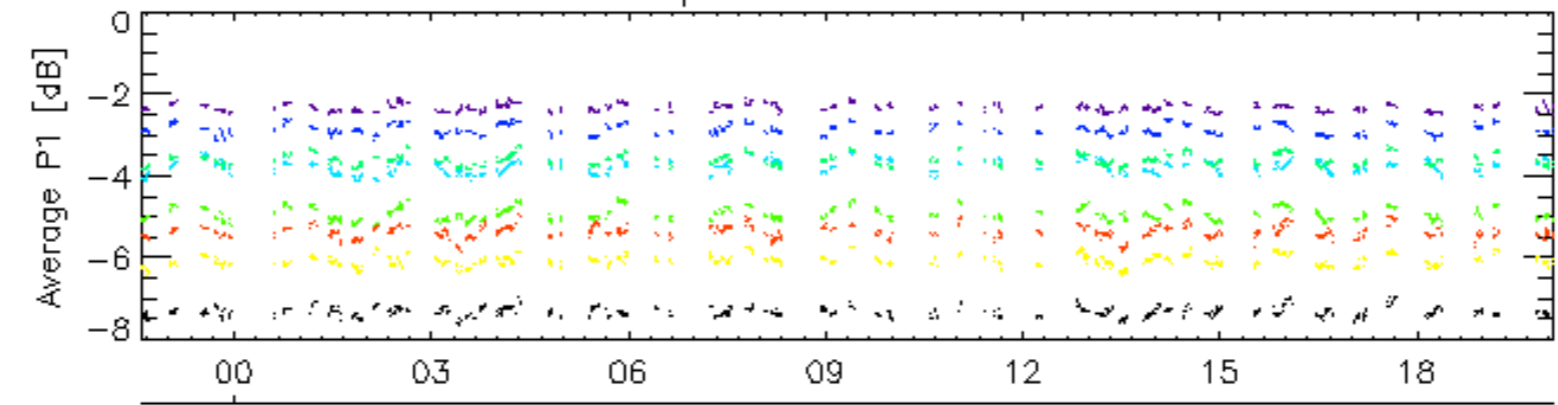
Descending

7.6 - Doppler evolution versus ANX for GM1

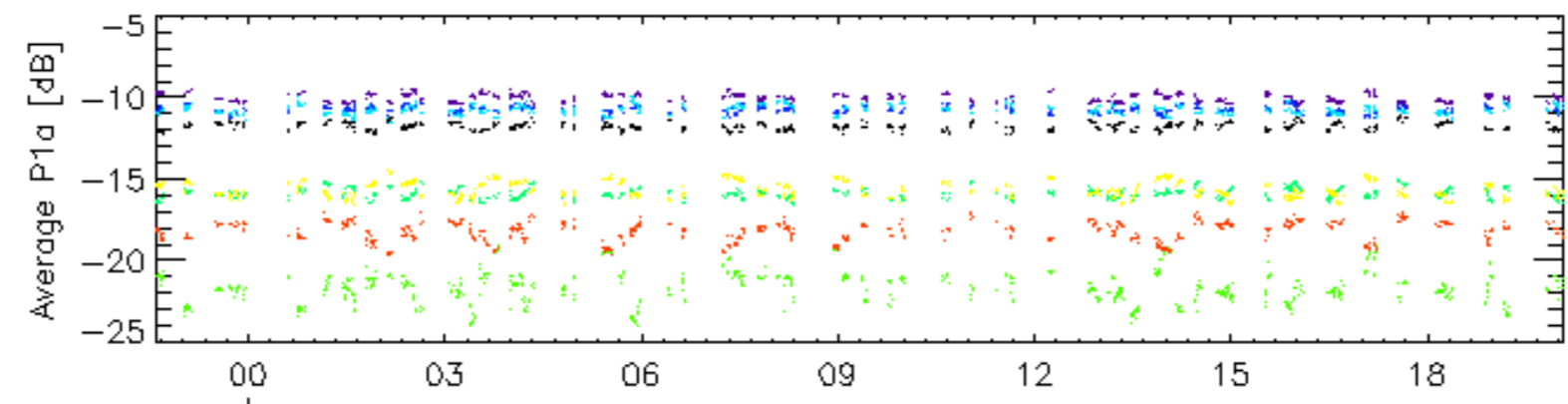
Evolution Doppler error versus ANX

✕

Cal pulses for GM1 SS3

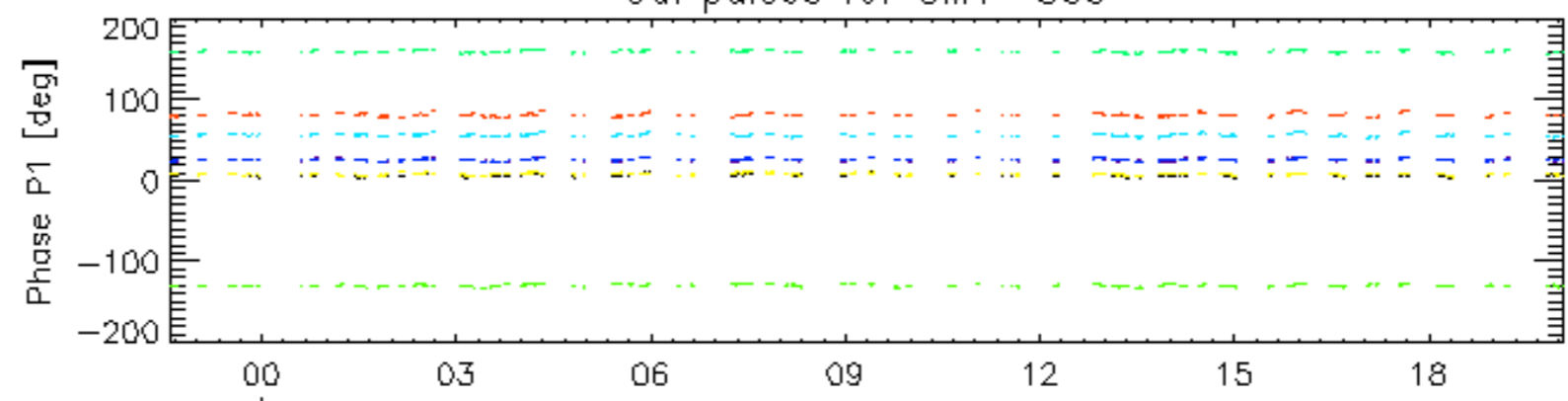


26-May

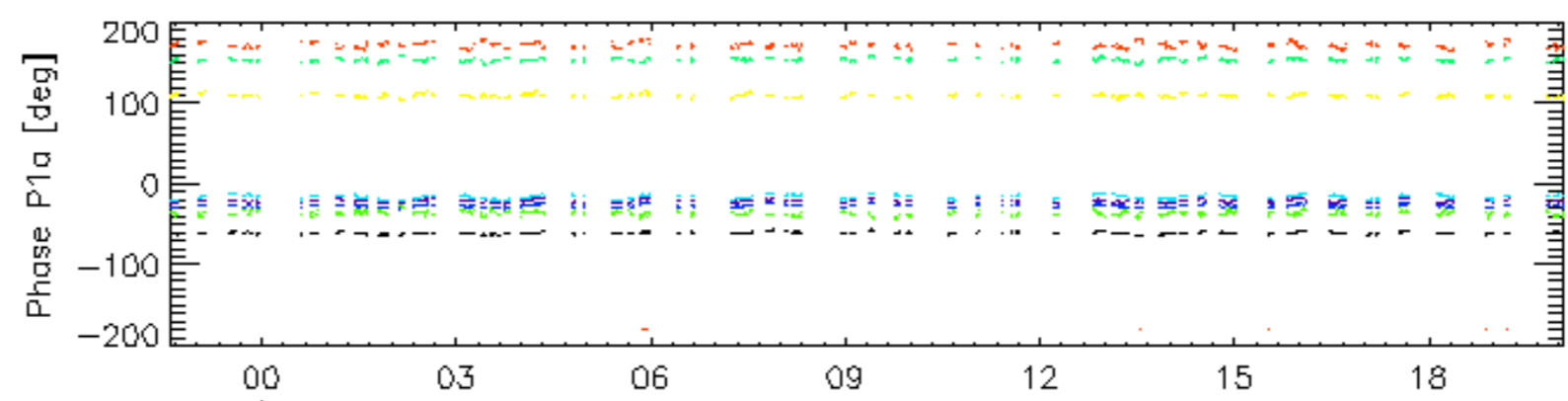


26-May

Cal pulses for GM1 SS3

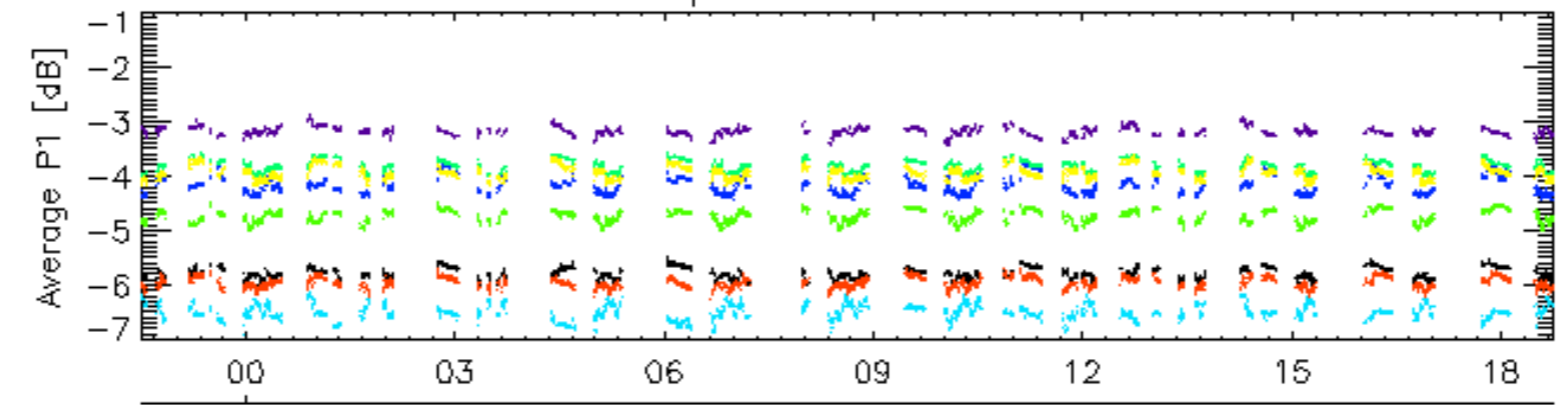


26-May

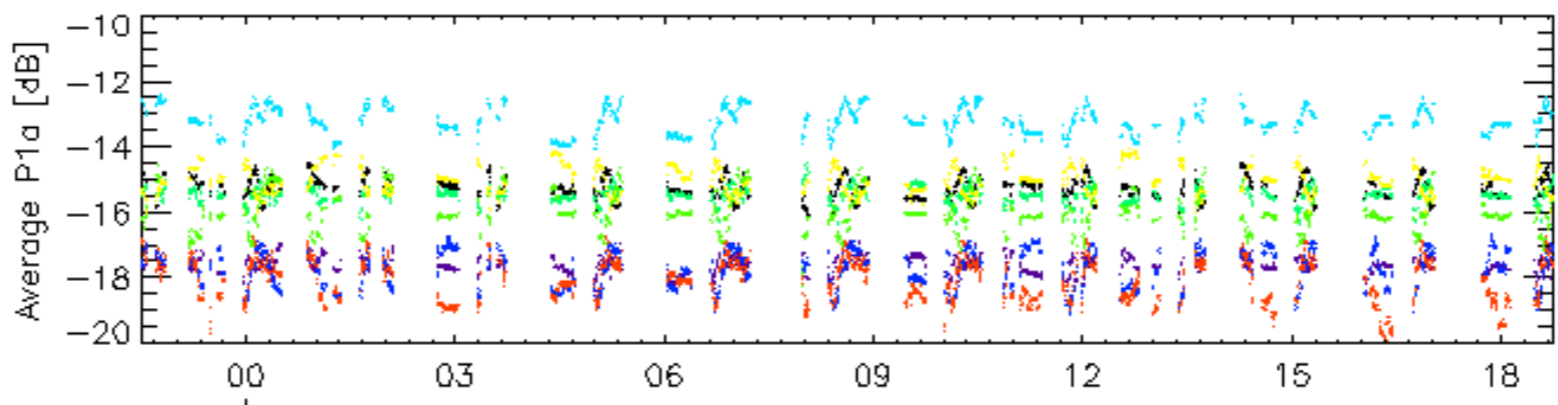


rows: _{26-May} 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

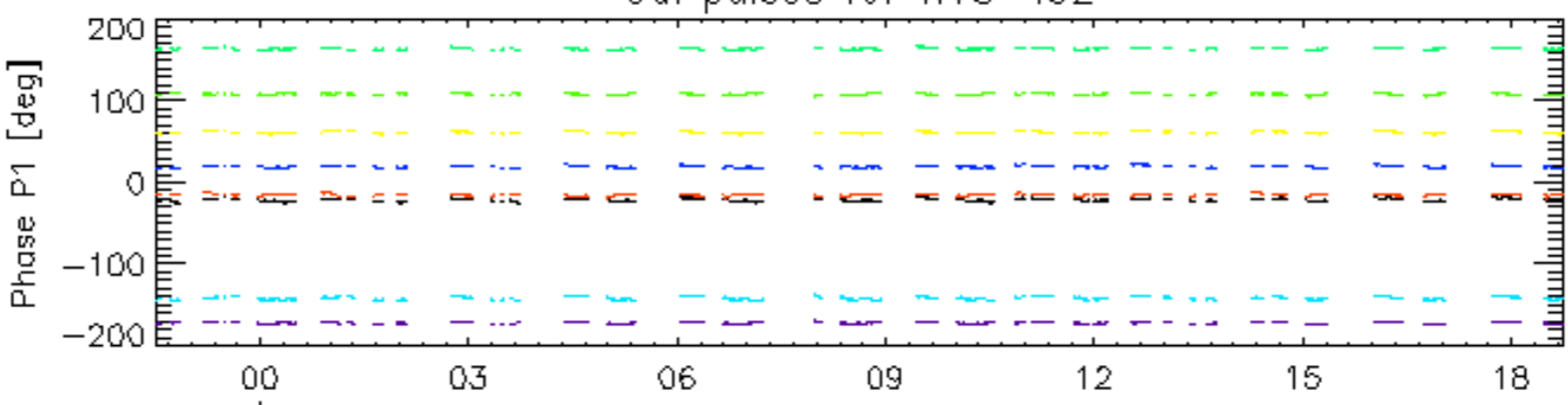


26-May

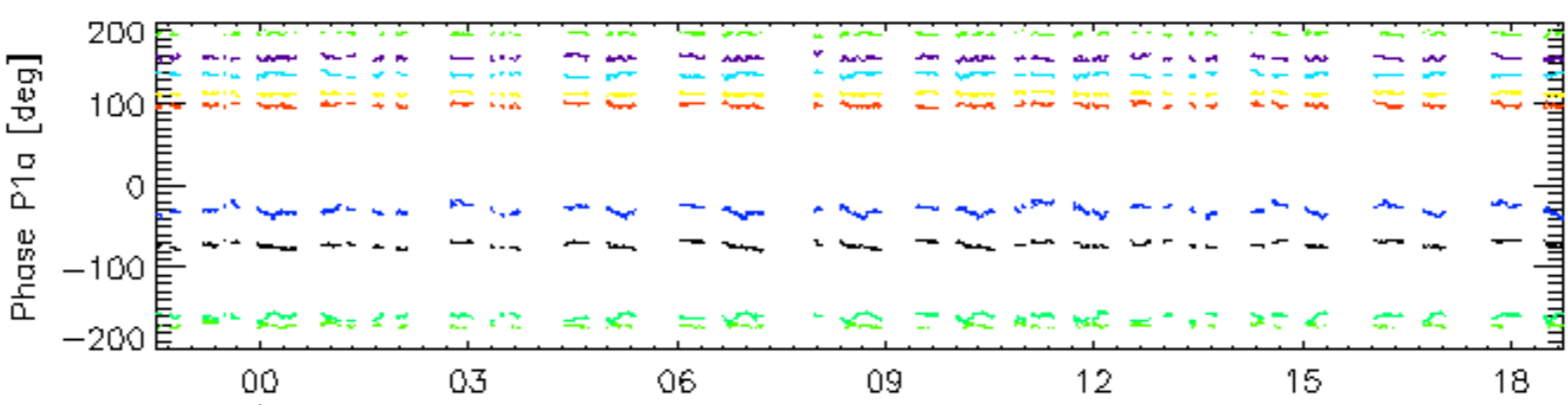


26-May

Cal pulses for WVS IS2

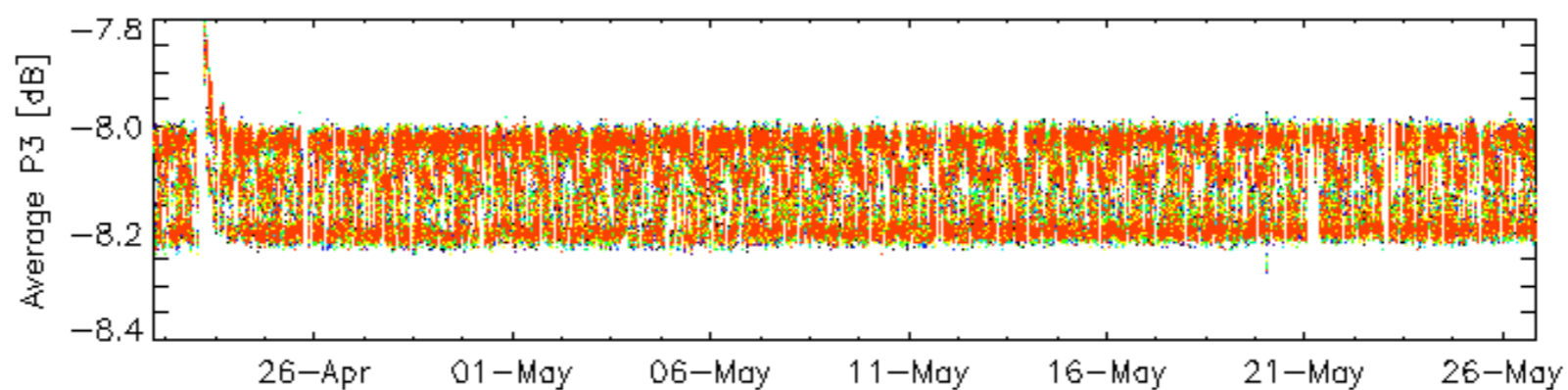
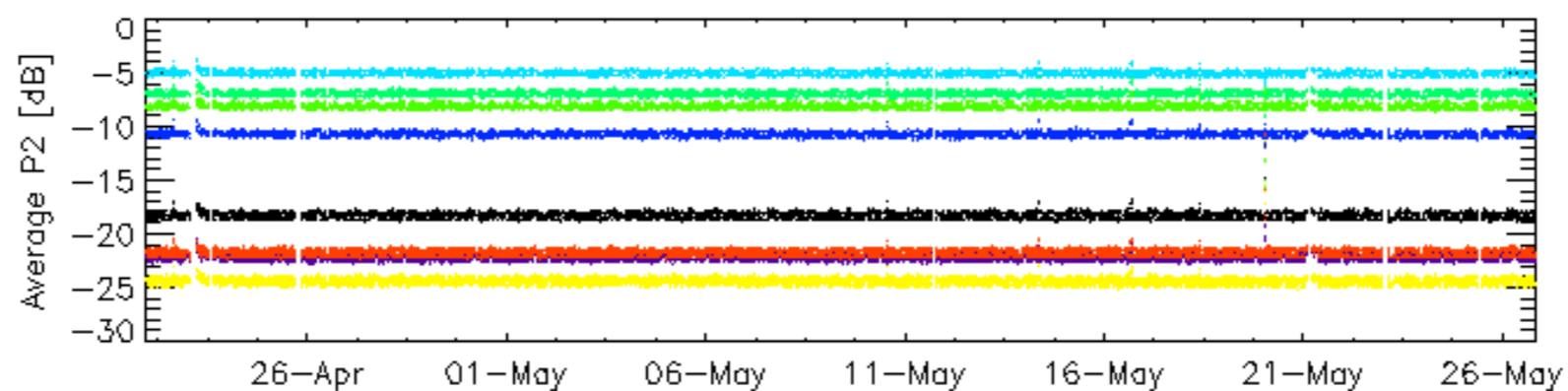
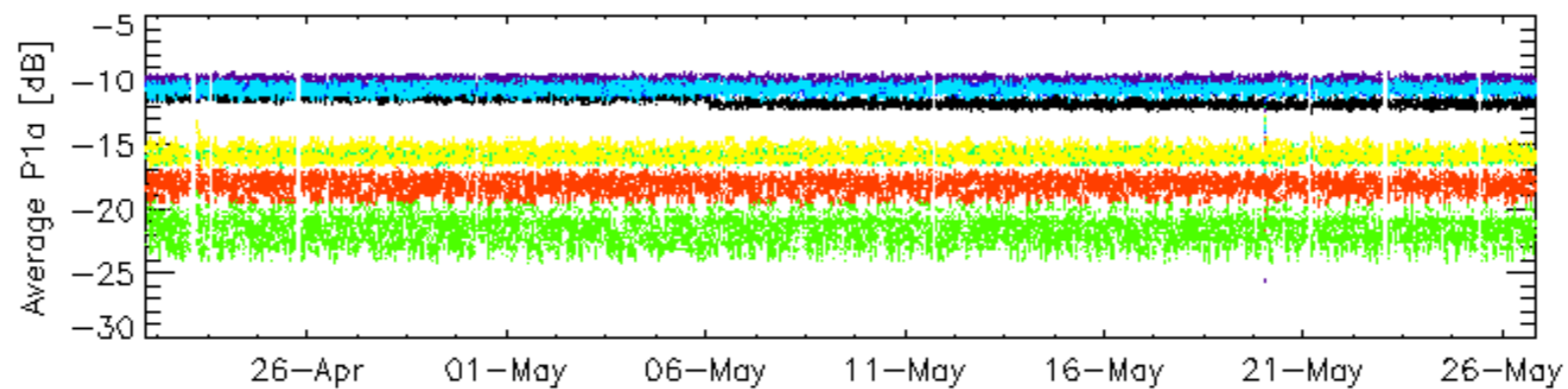
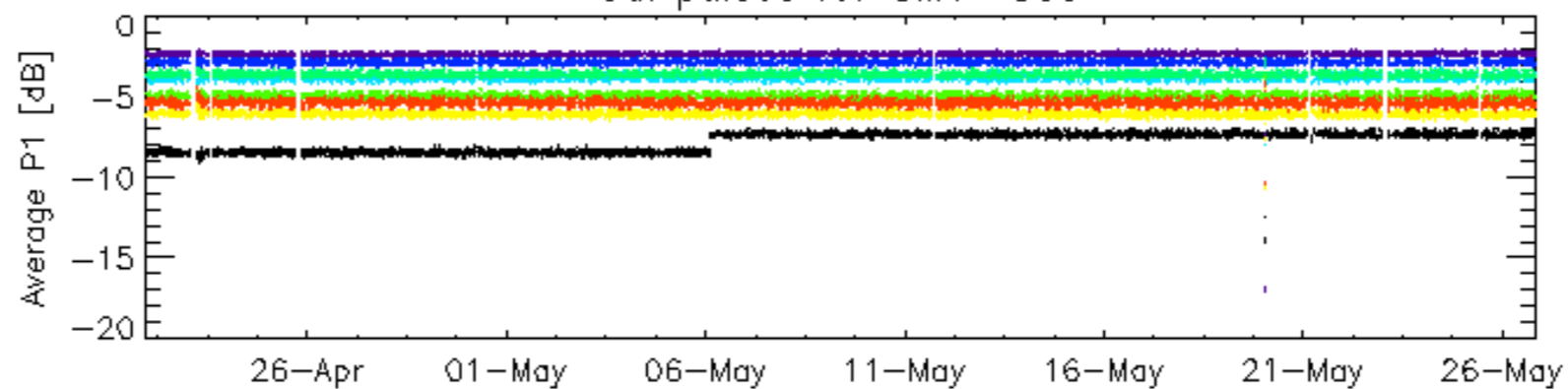


26-May



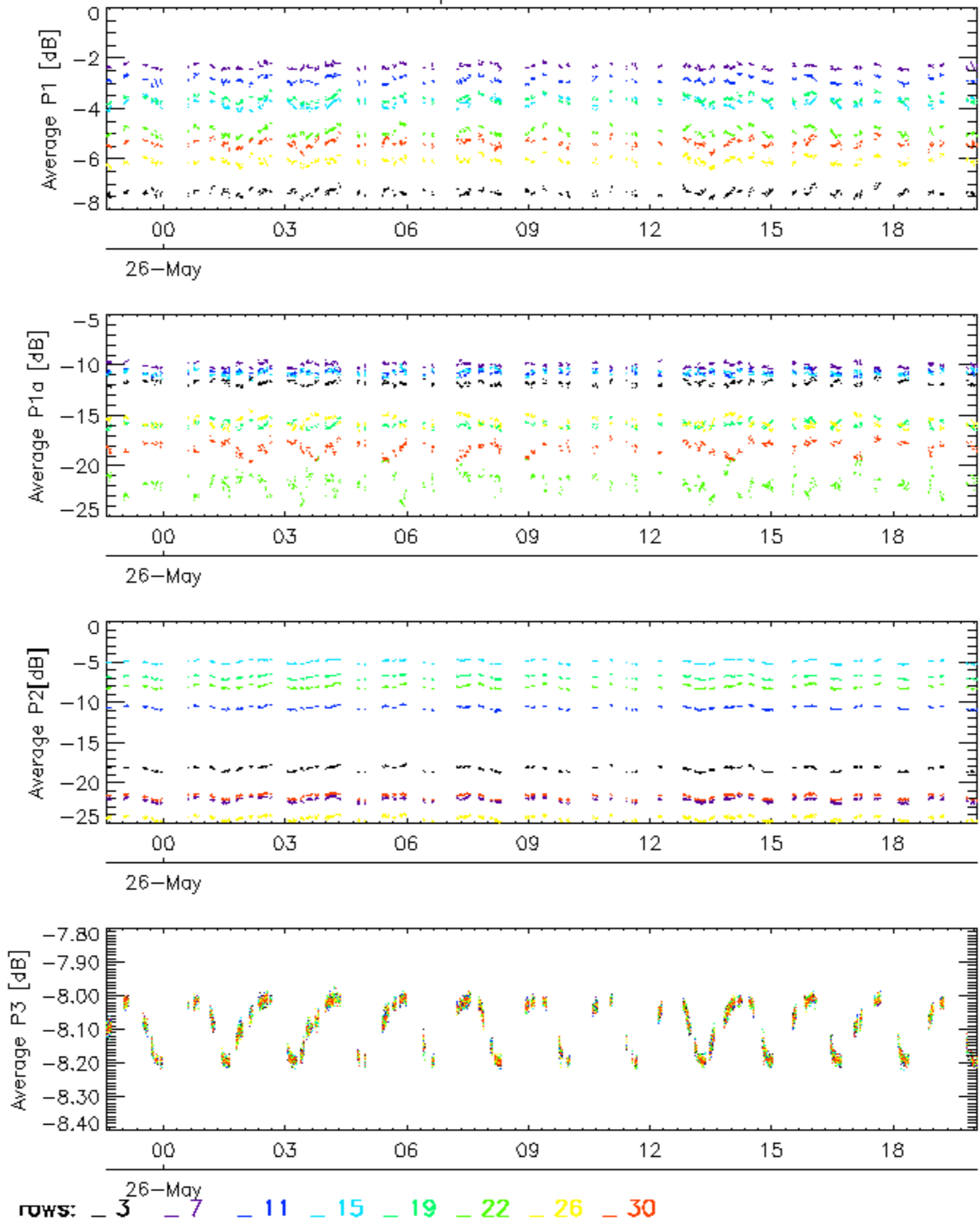
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

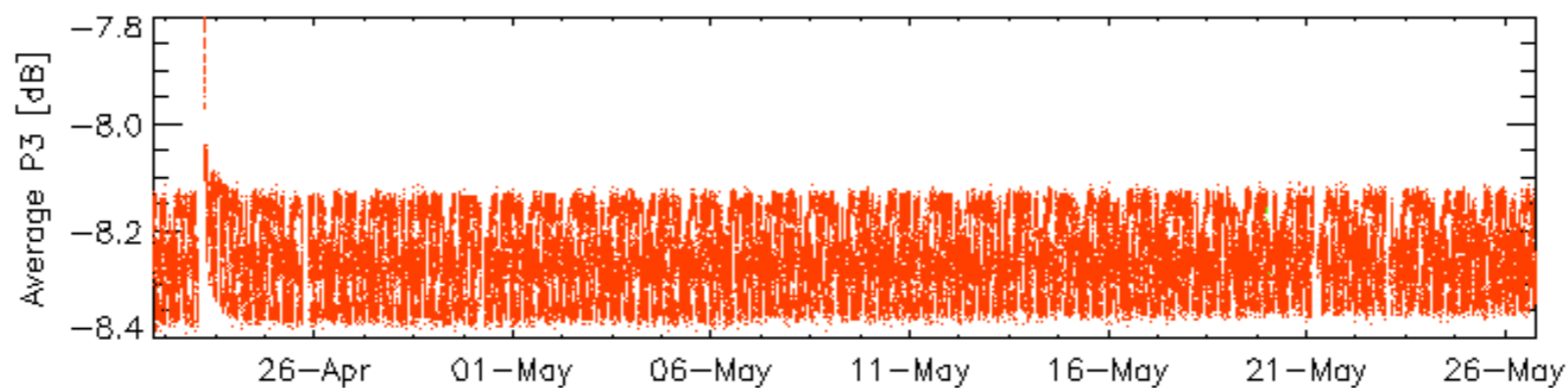
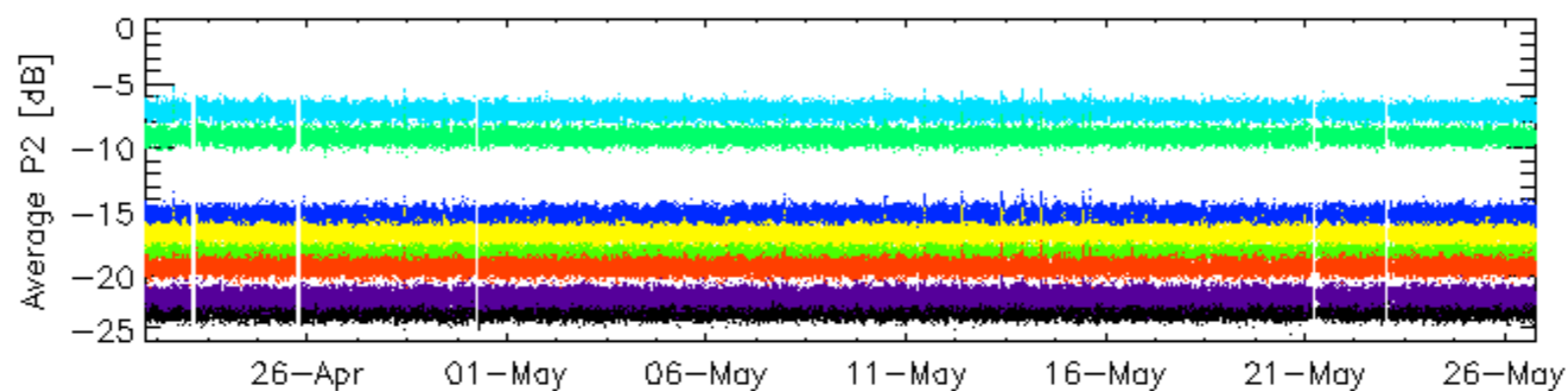
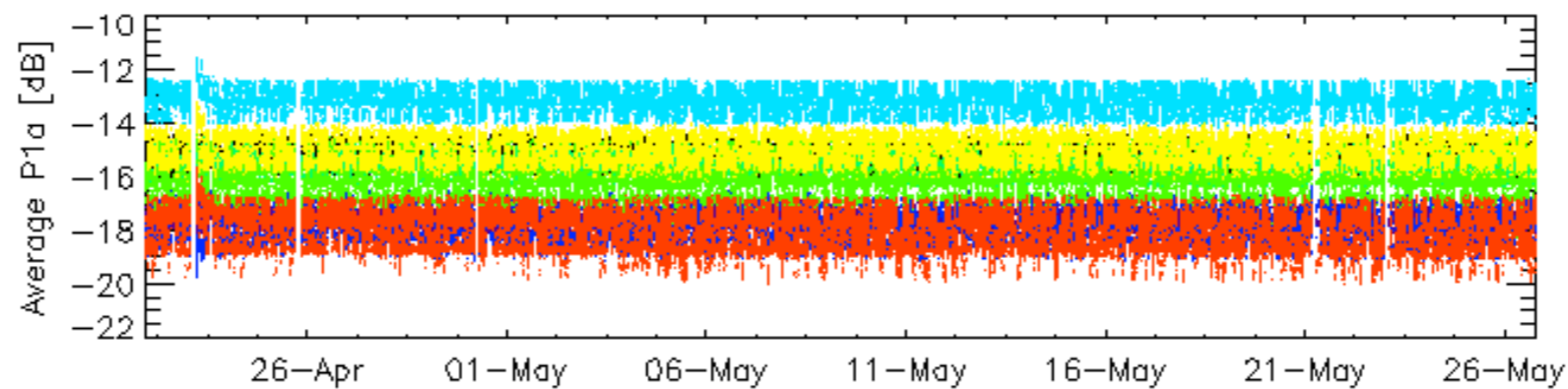
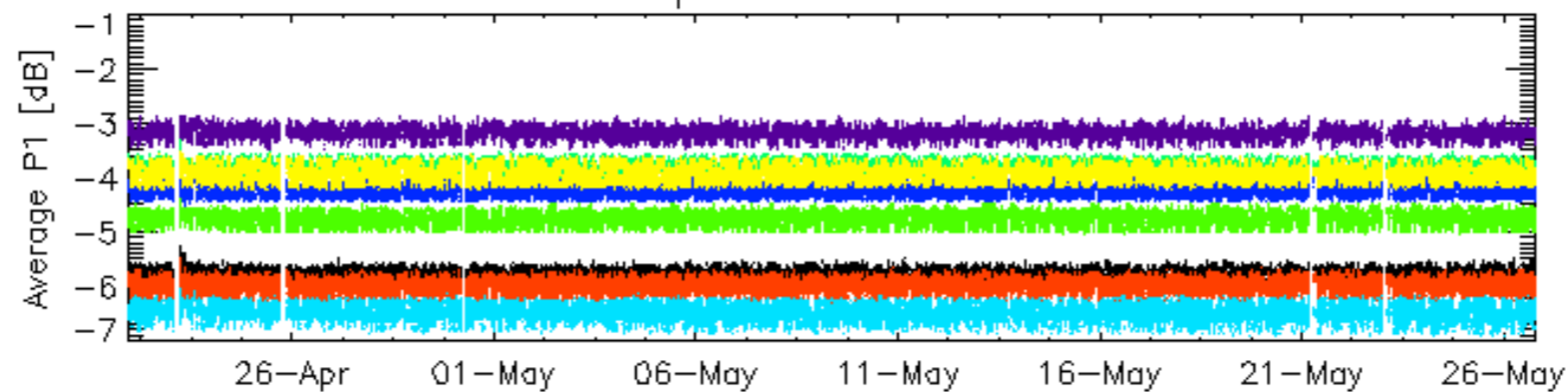


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

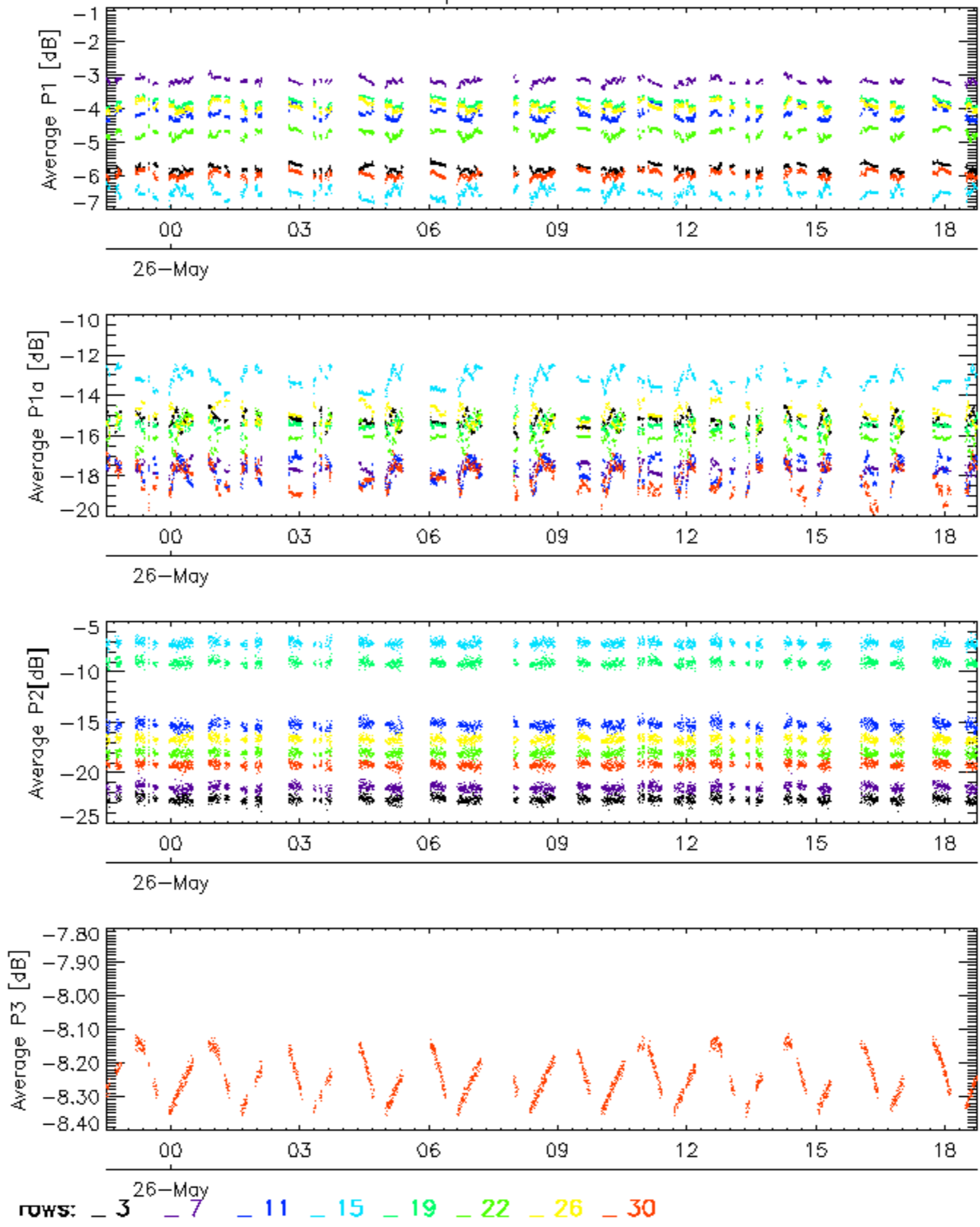


Cal pulses for WVS IS2

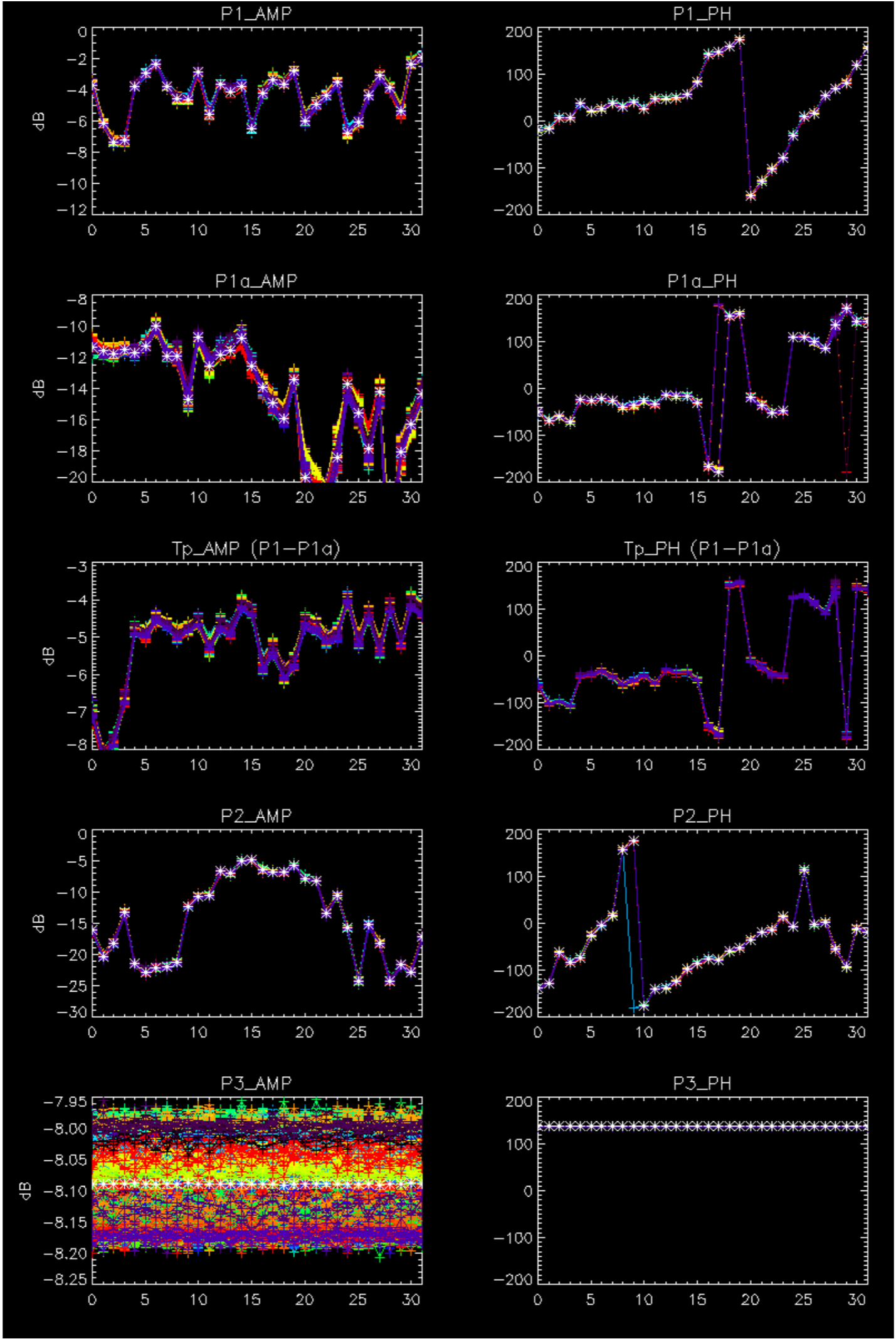


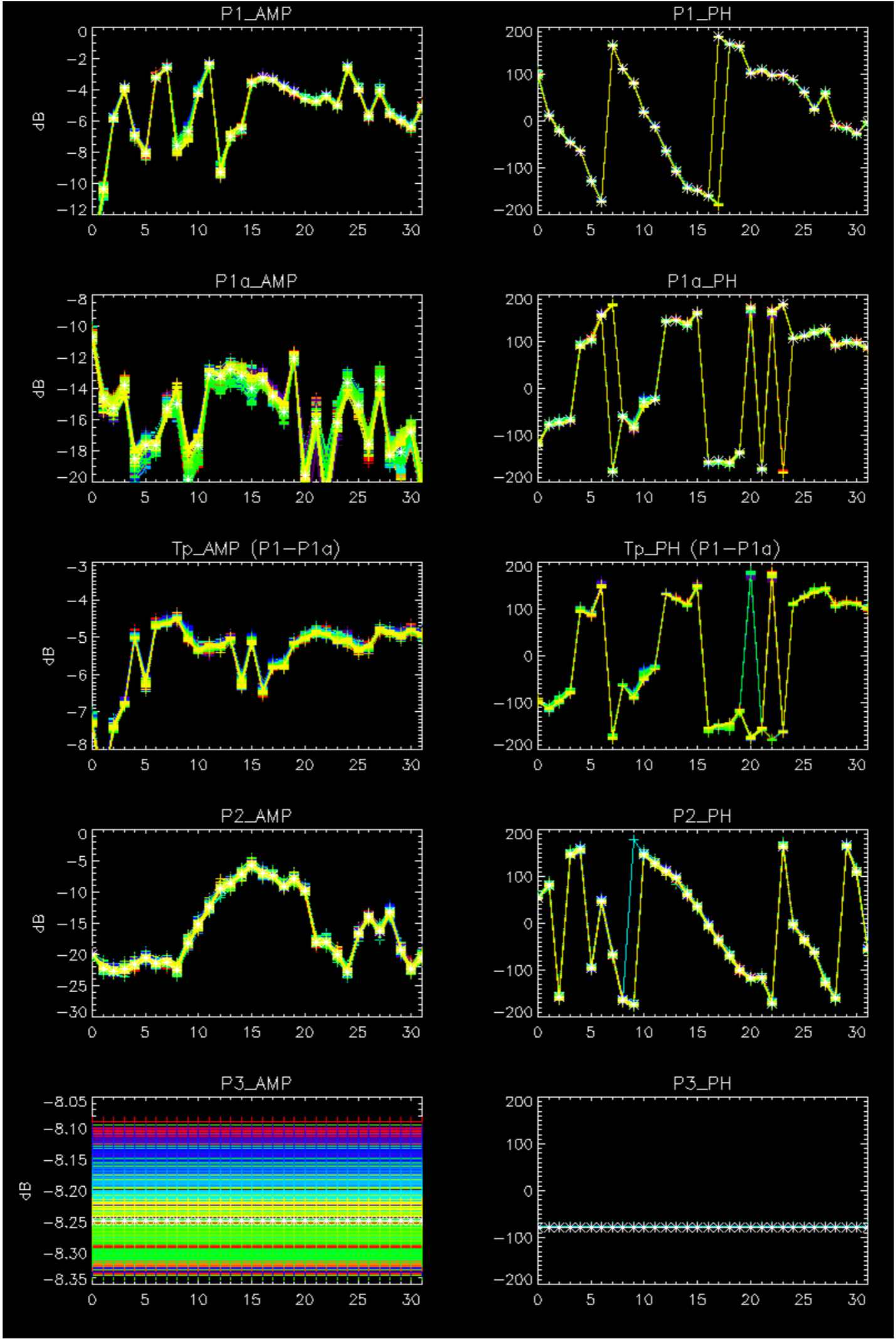
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



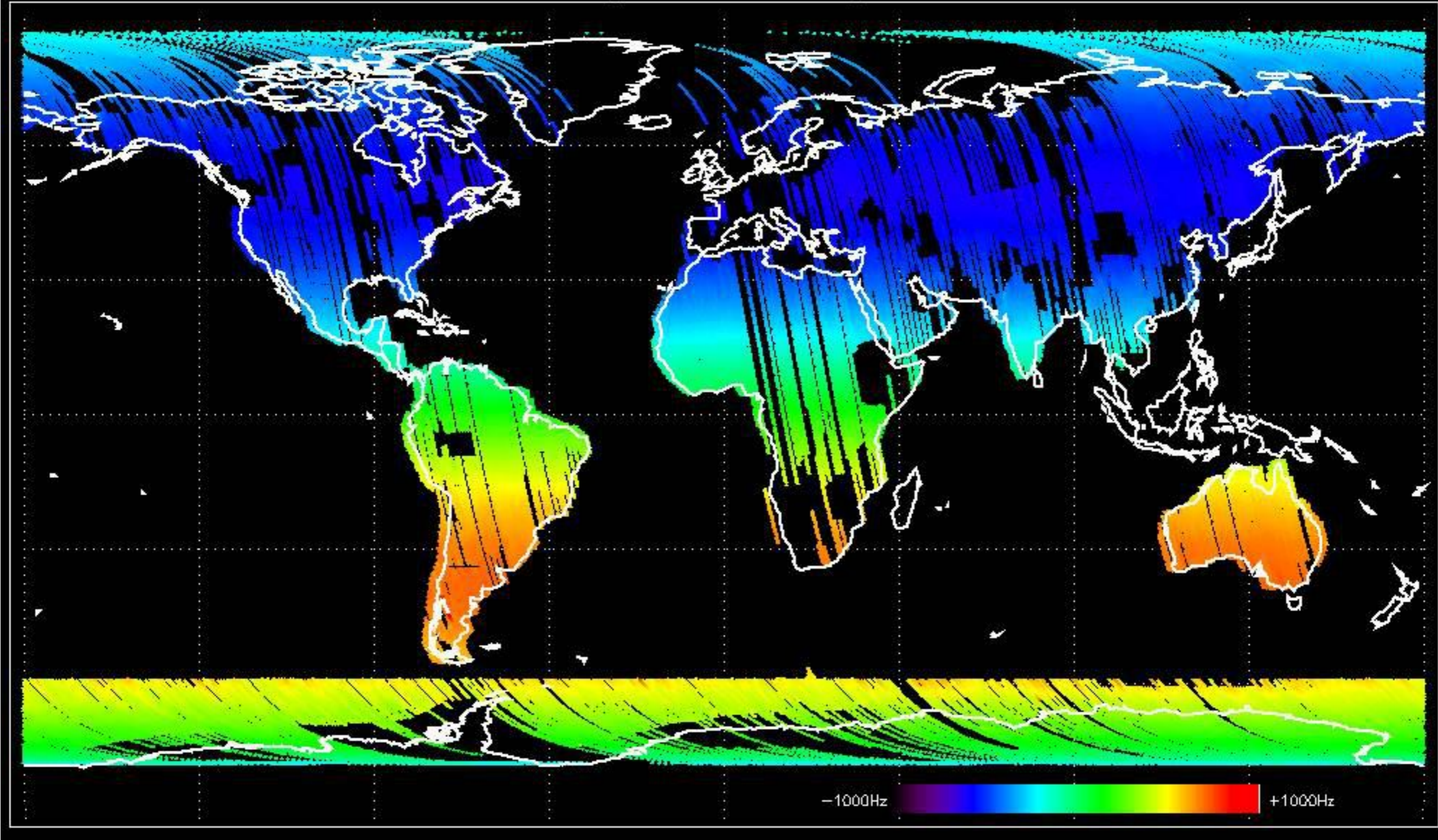
No anomalies observed.



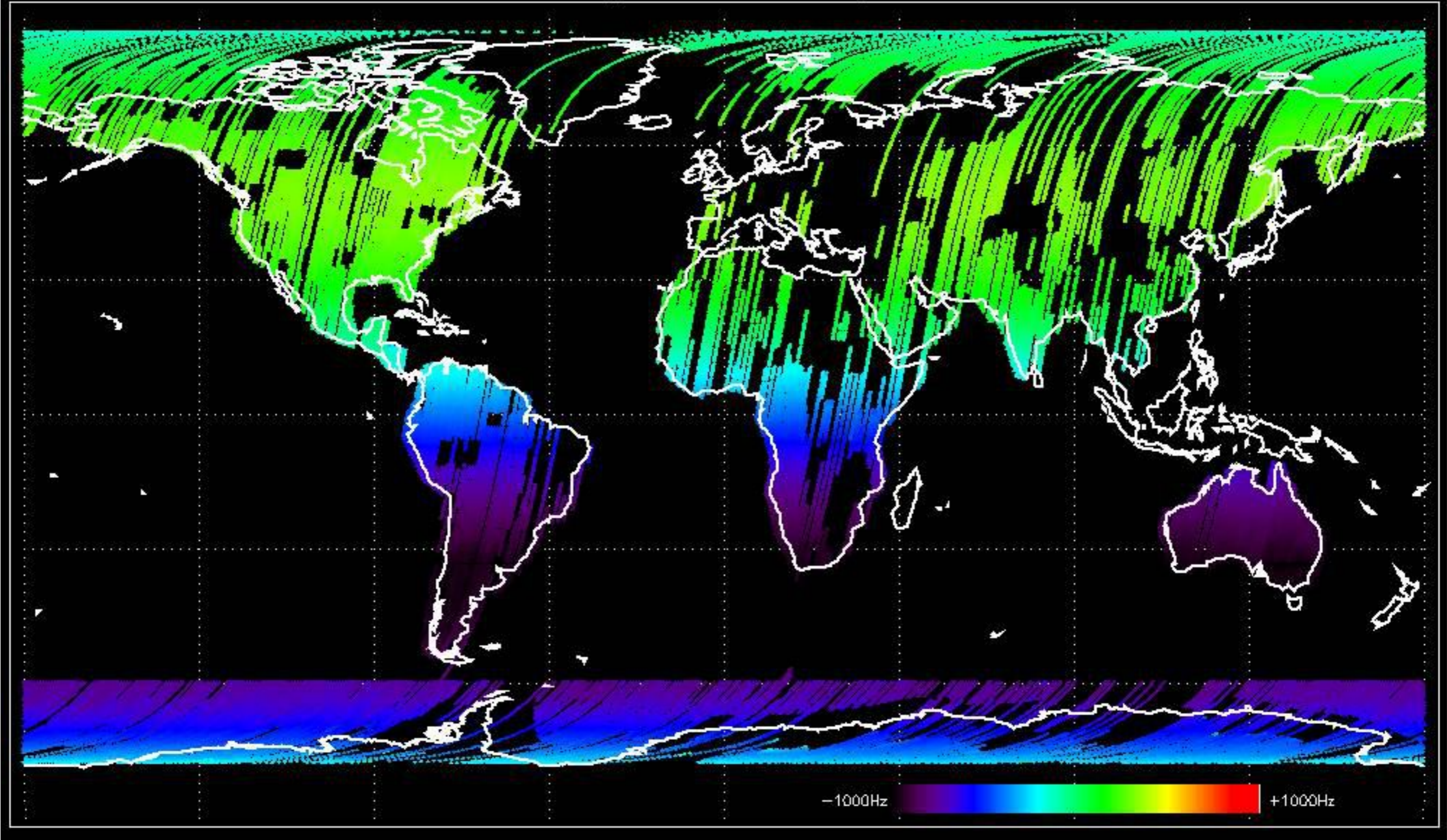


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

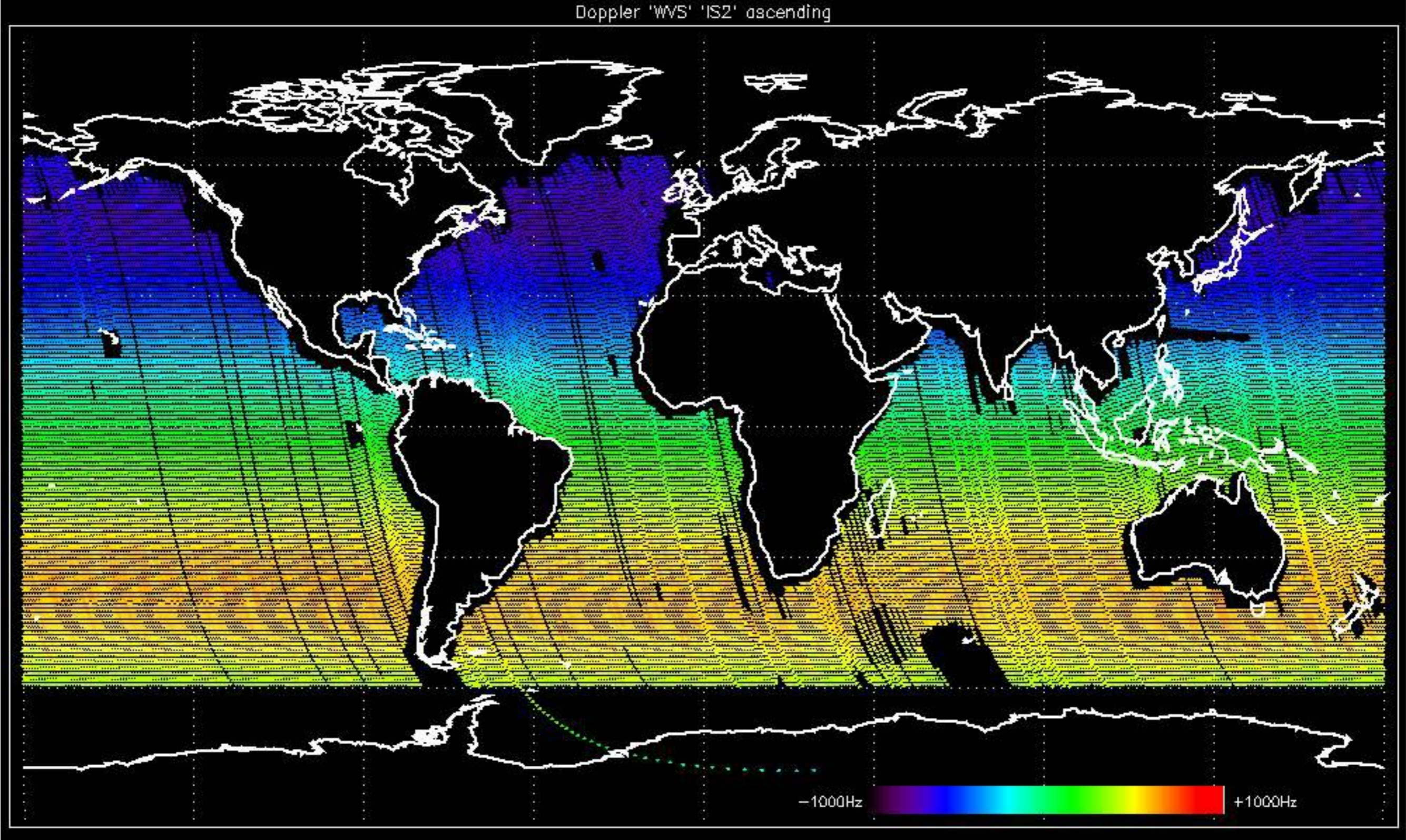
Doppler 'GM1' 'SS1' ascending



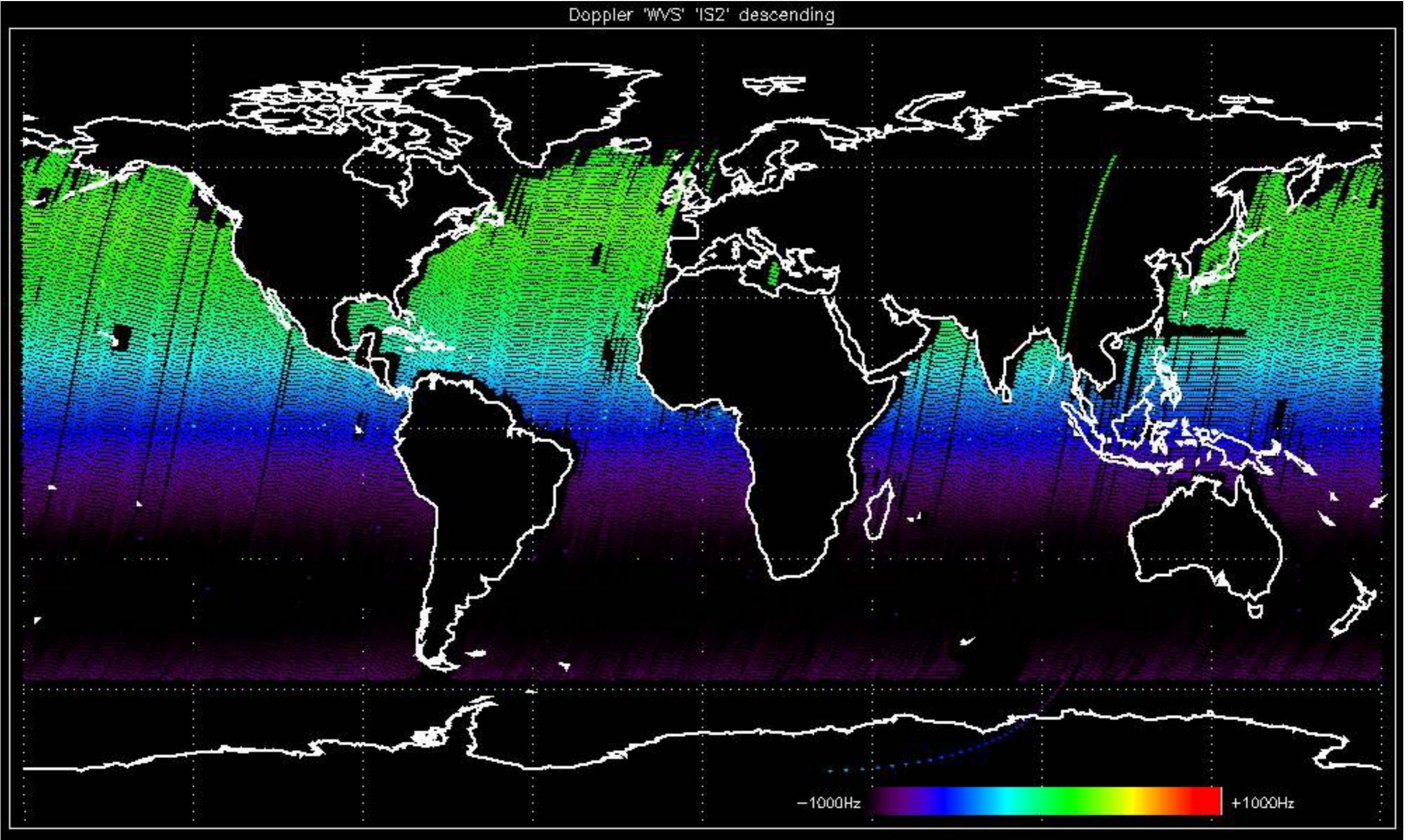
Doppler 'GM1' 'SS1' descending



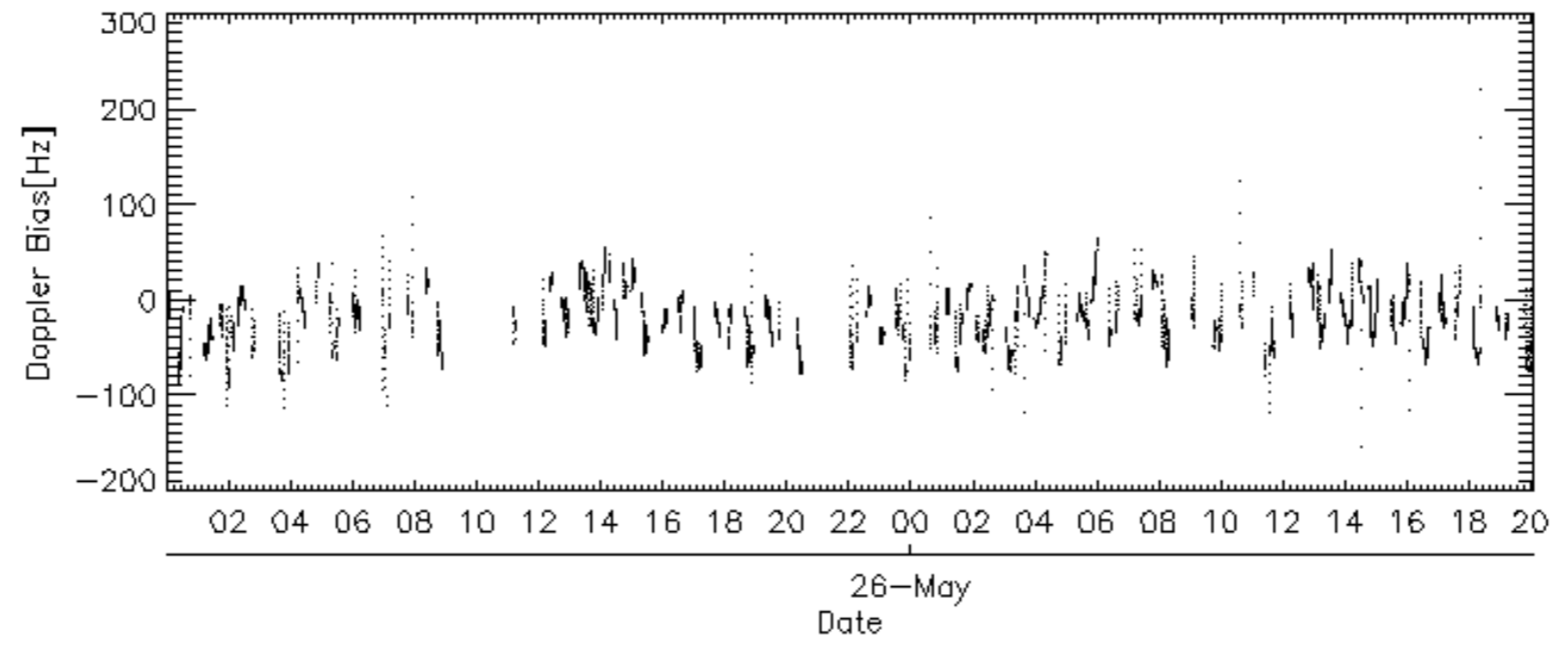
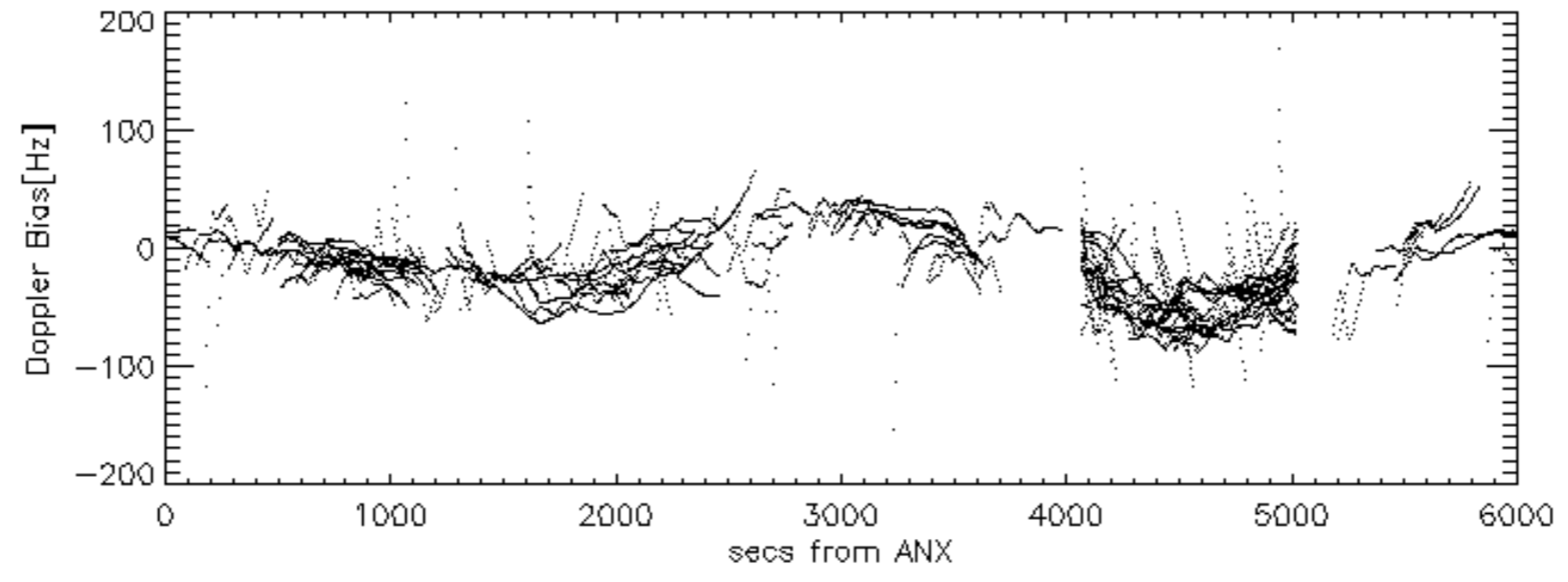
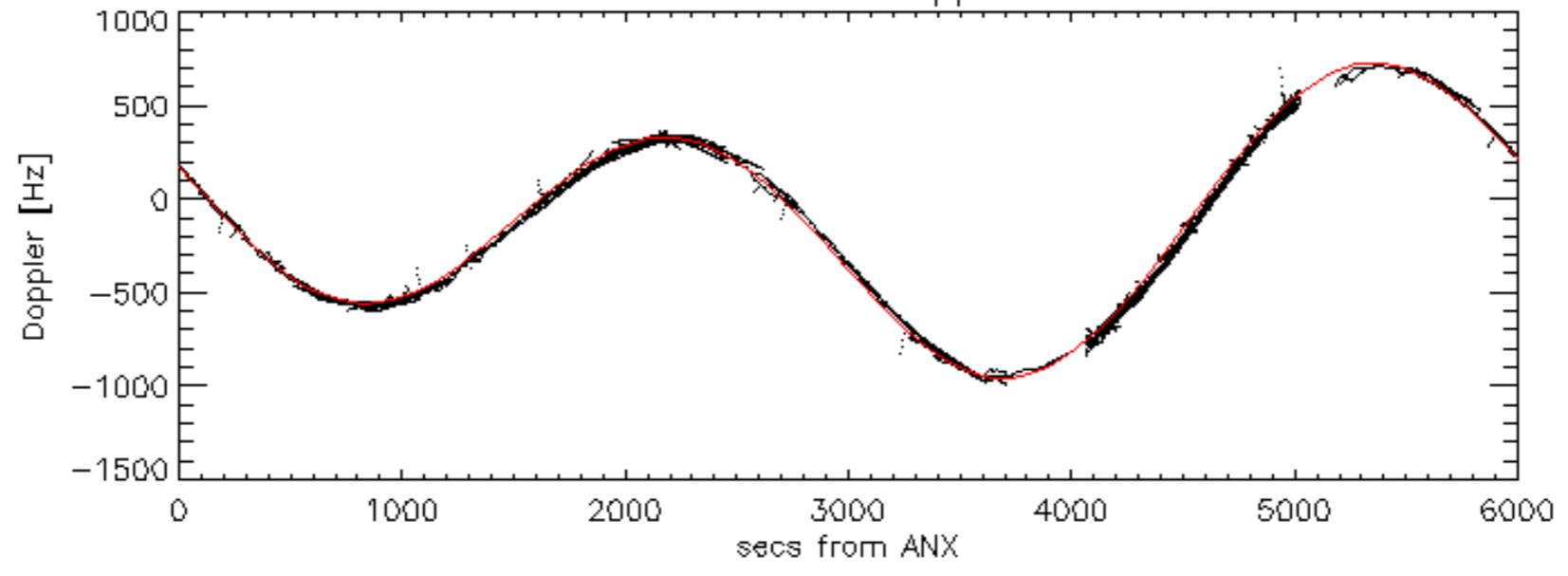
Doppler 'WVS' 'IS2' ascending

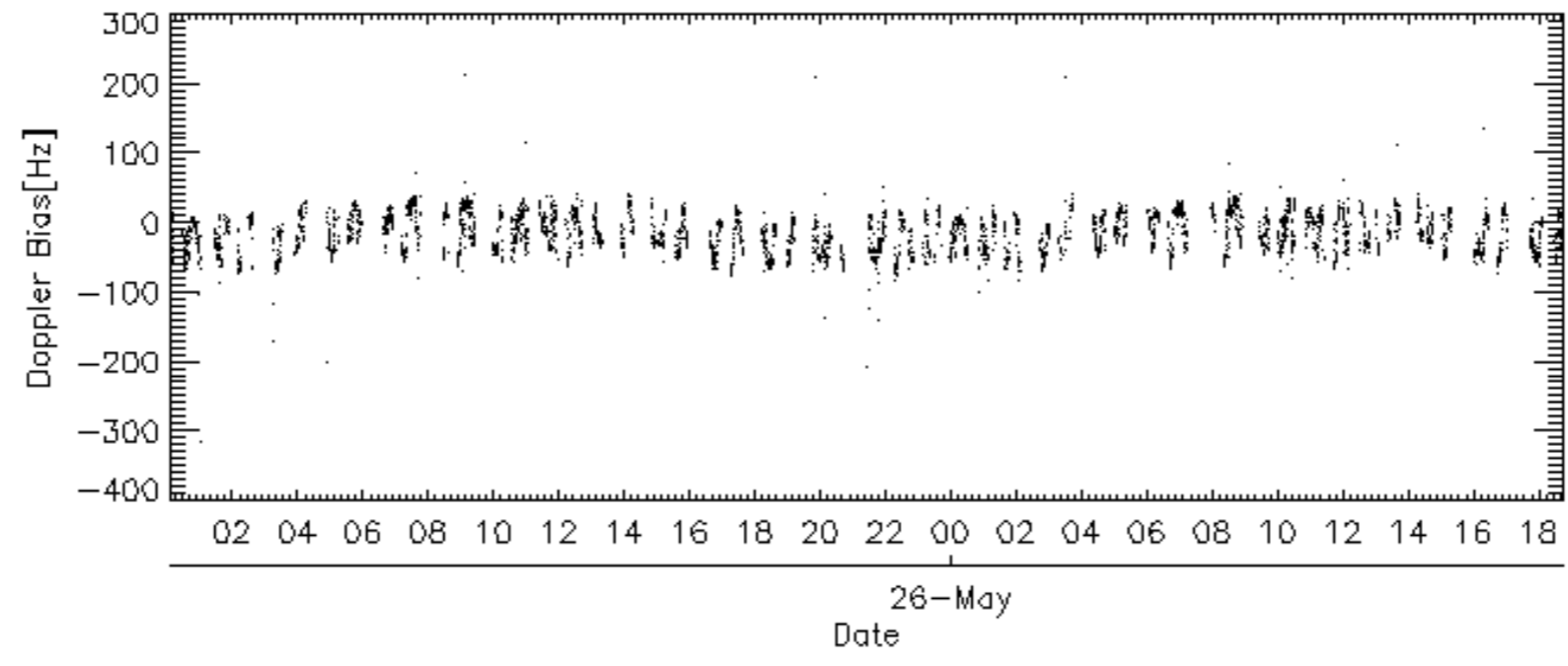
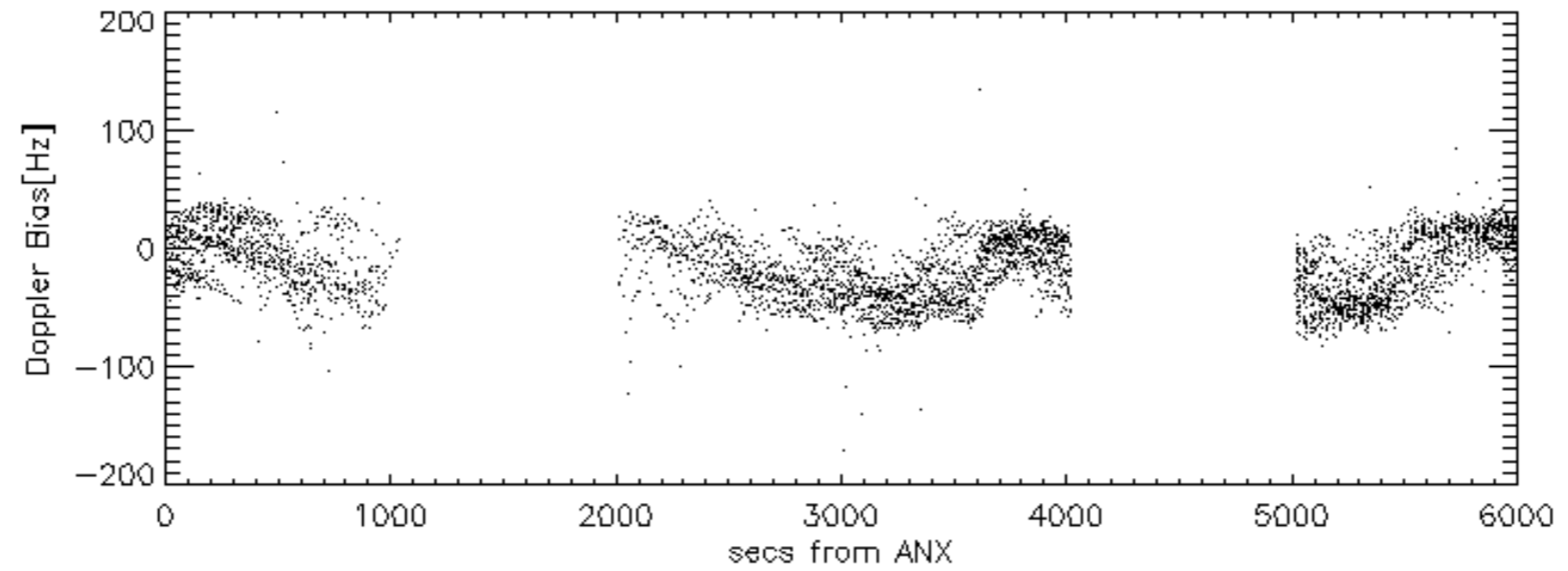
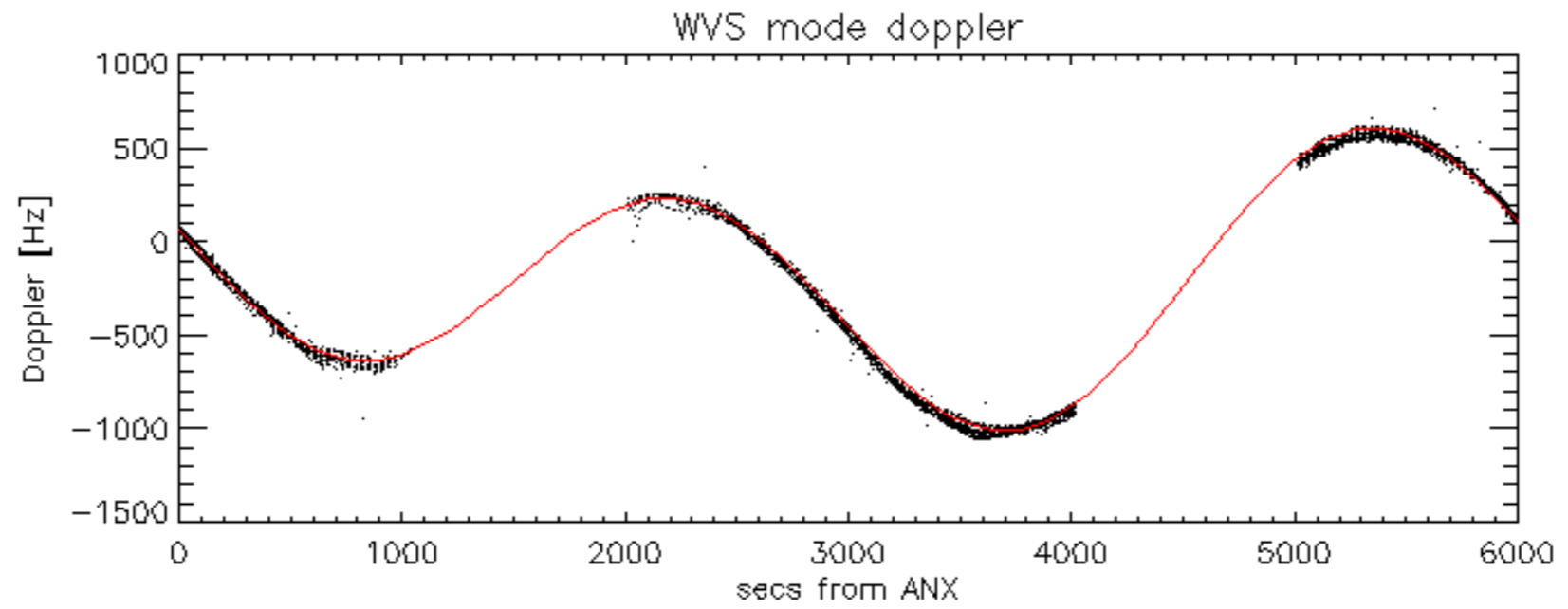


Doppler 'WVS' 'IS2' descending

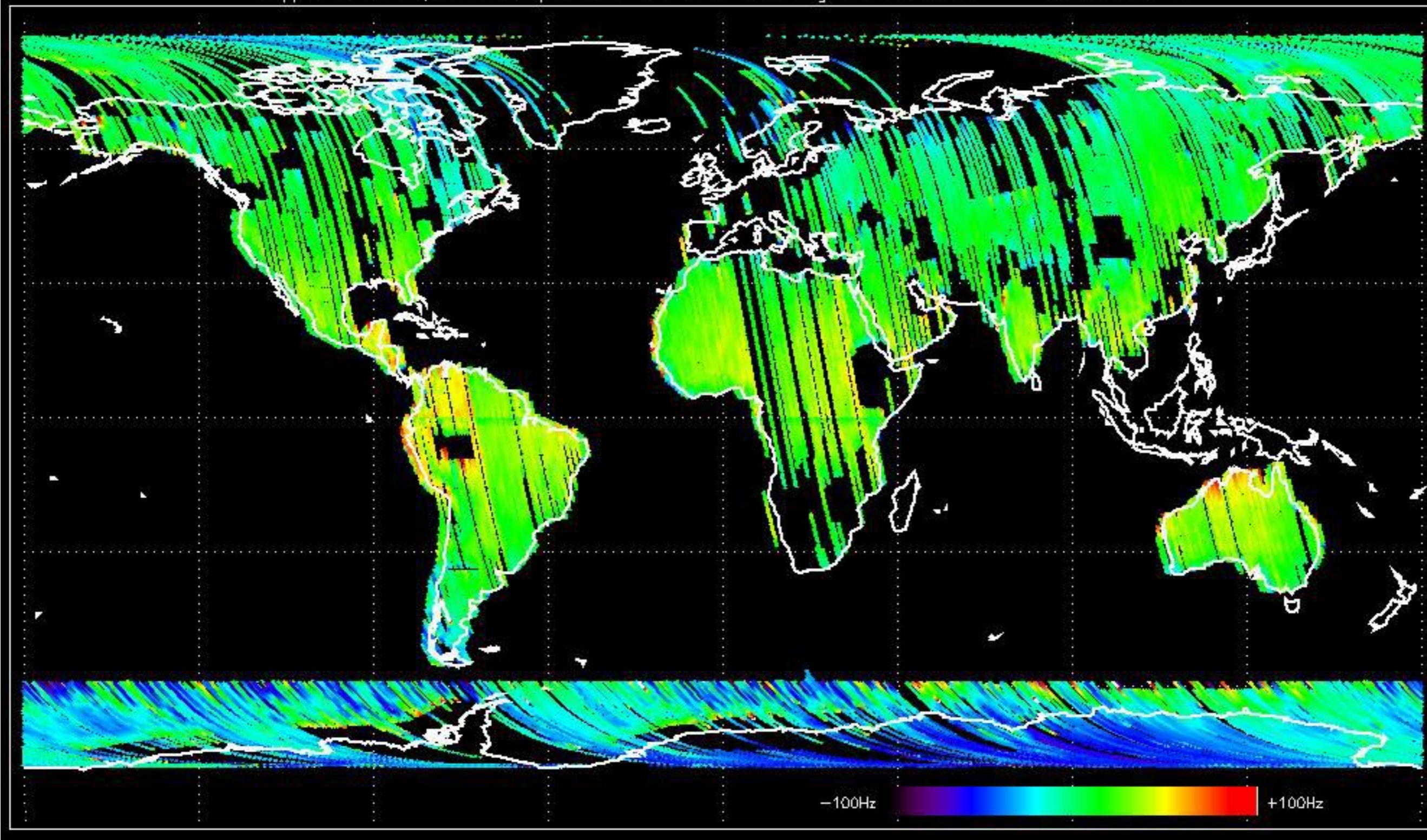


GM1 mode doppler

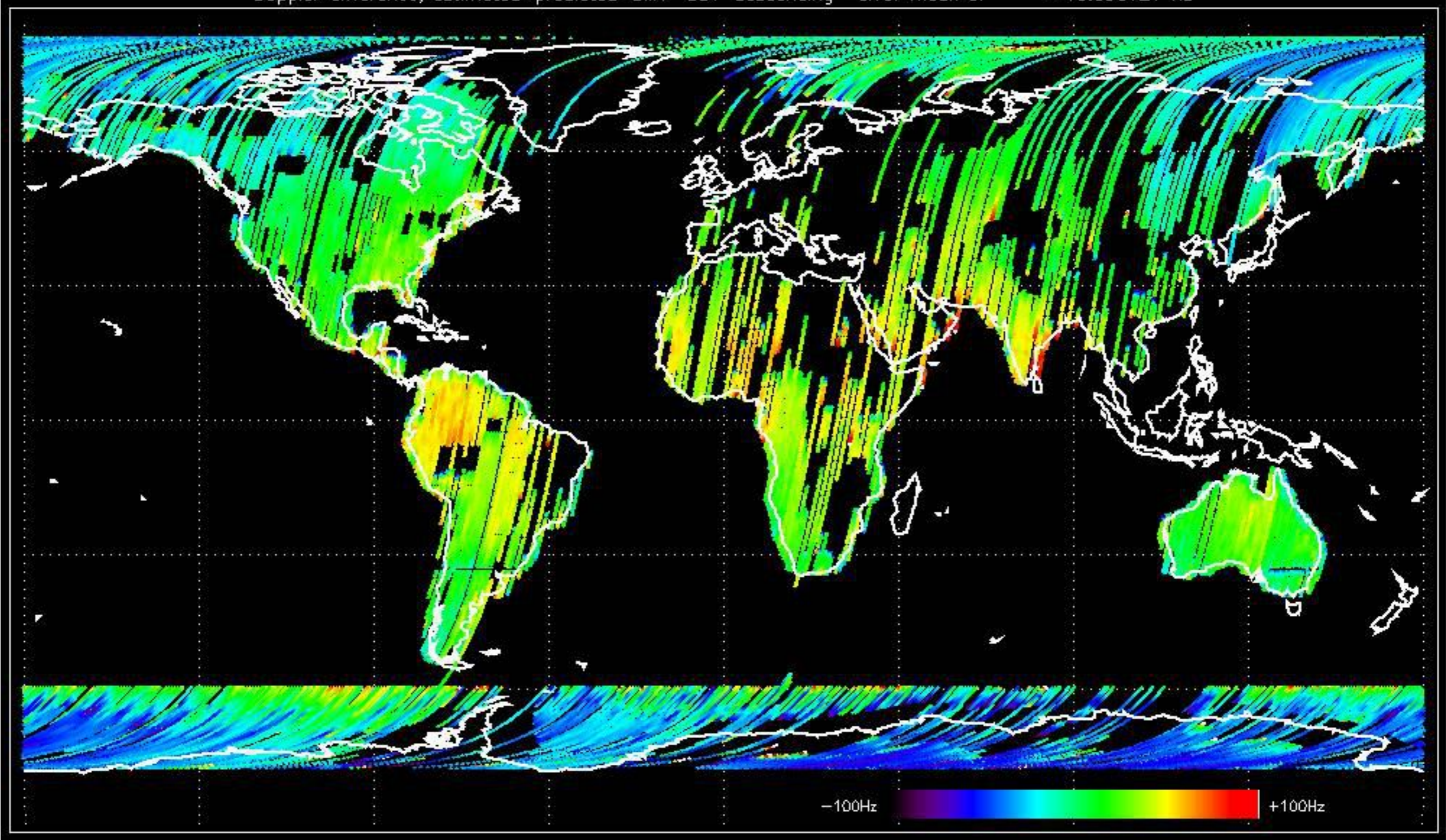




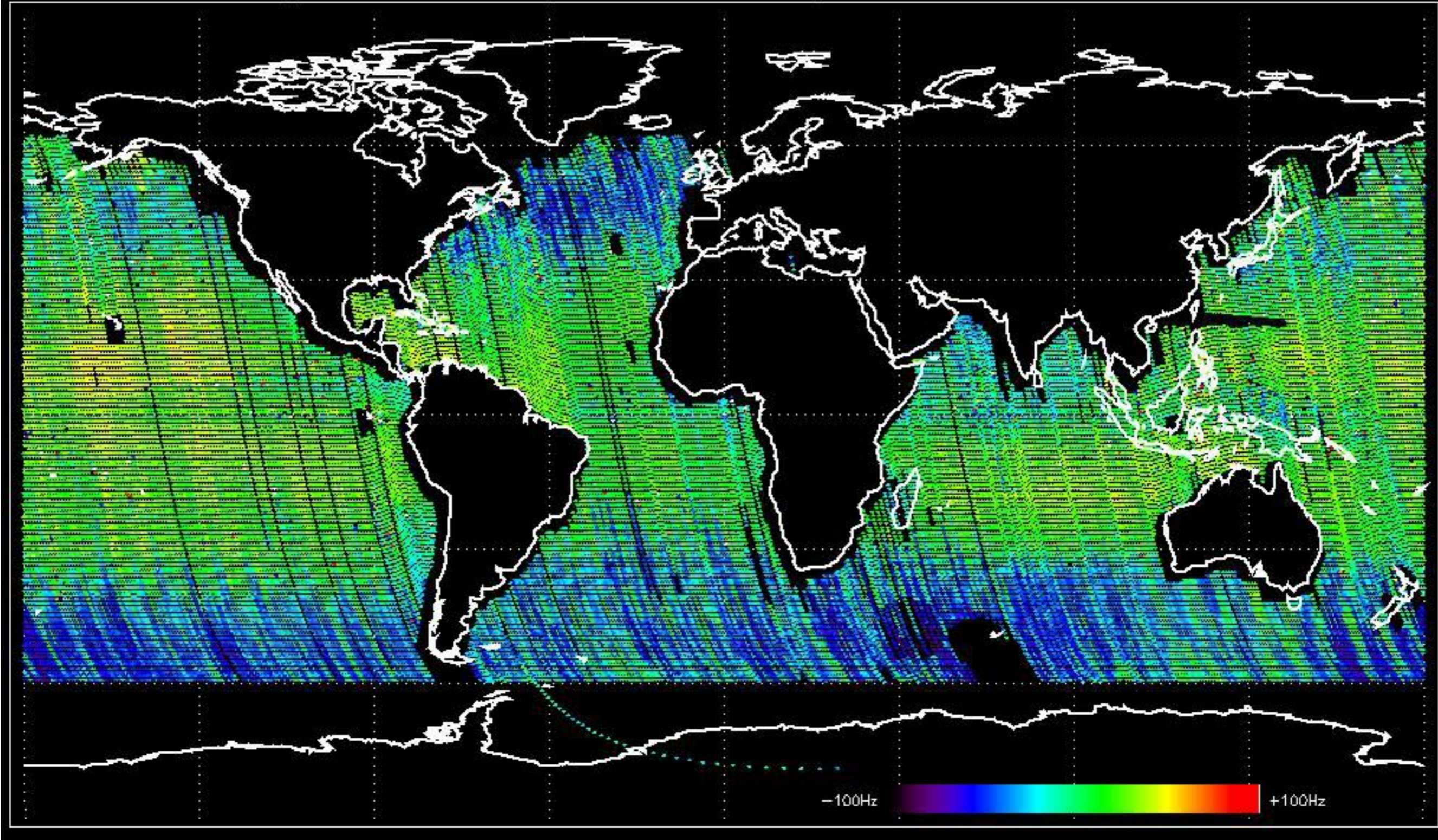
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -21.776001 Hz



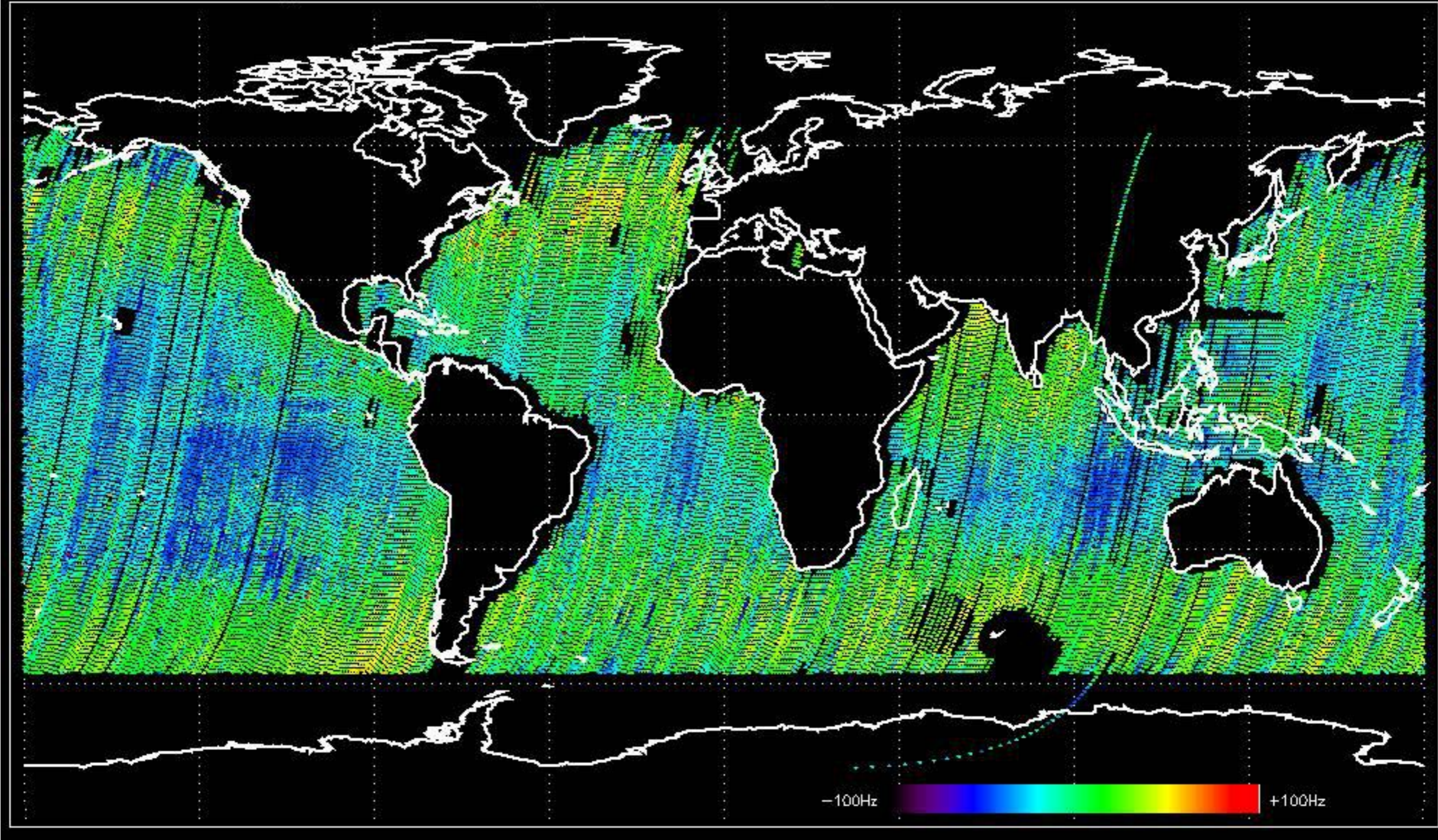
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.696121 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.260998 Hz

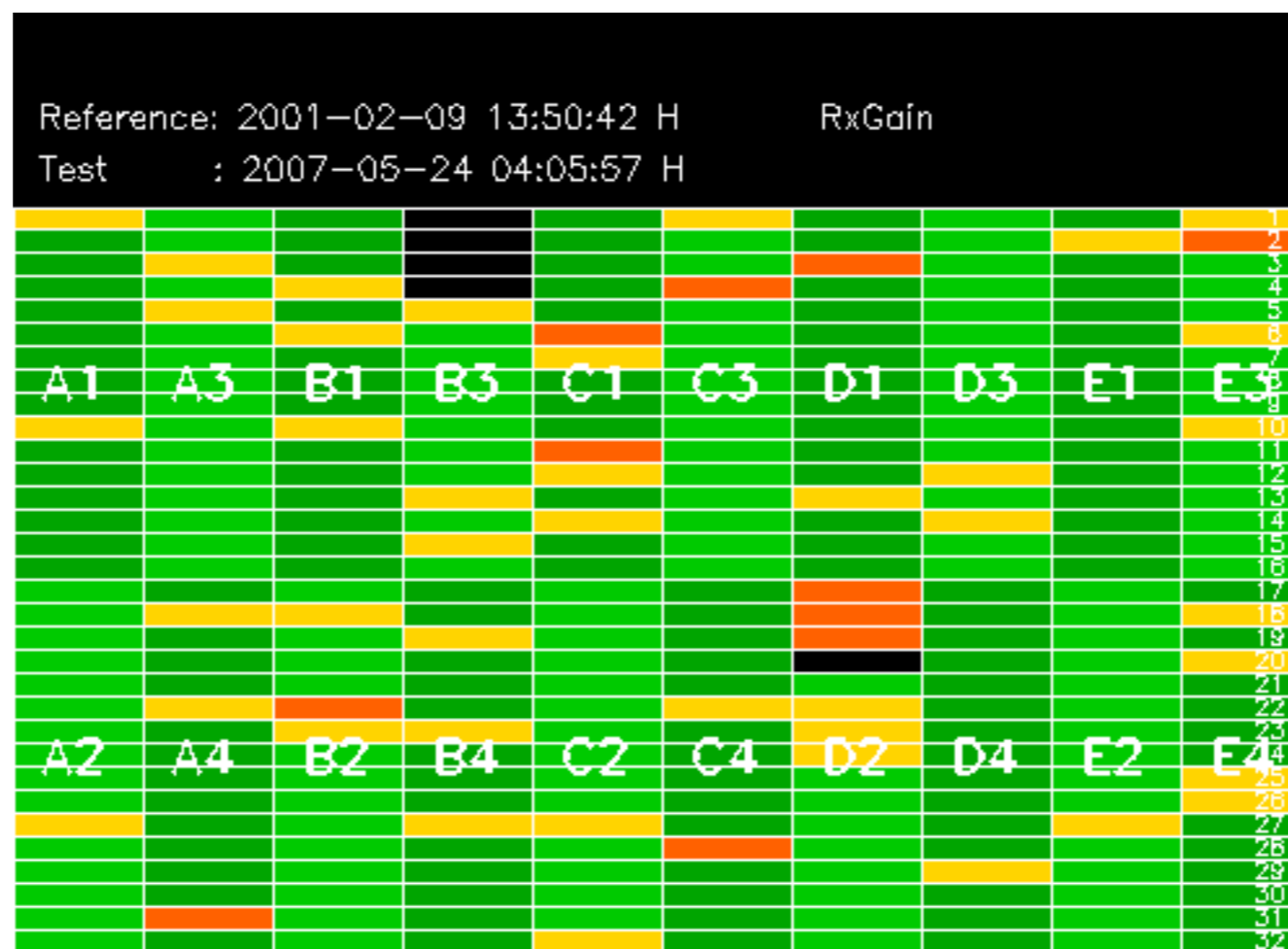


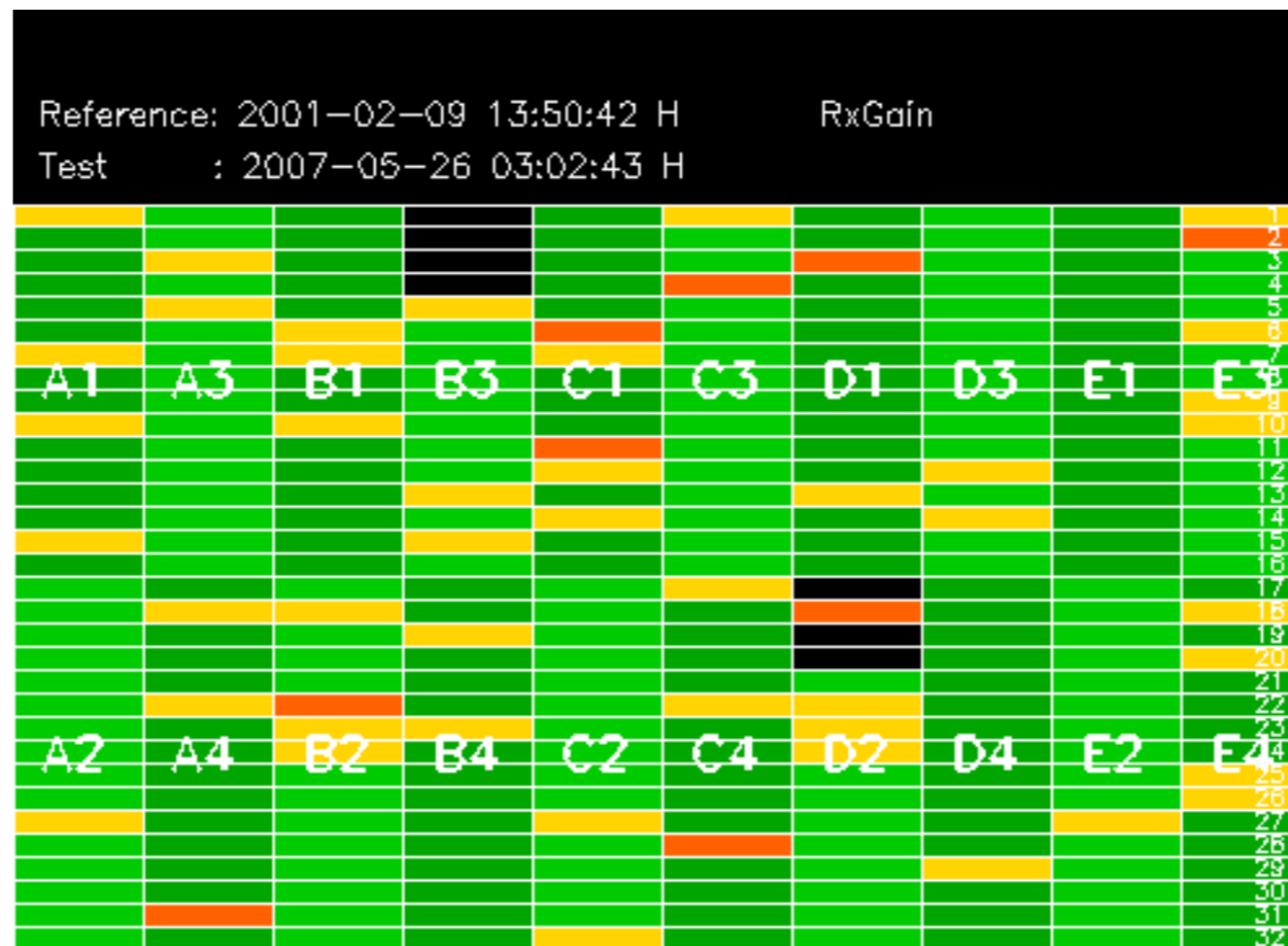
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -21.890074 Hz

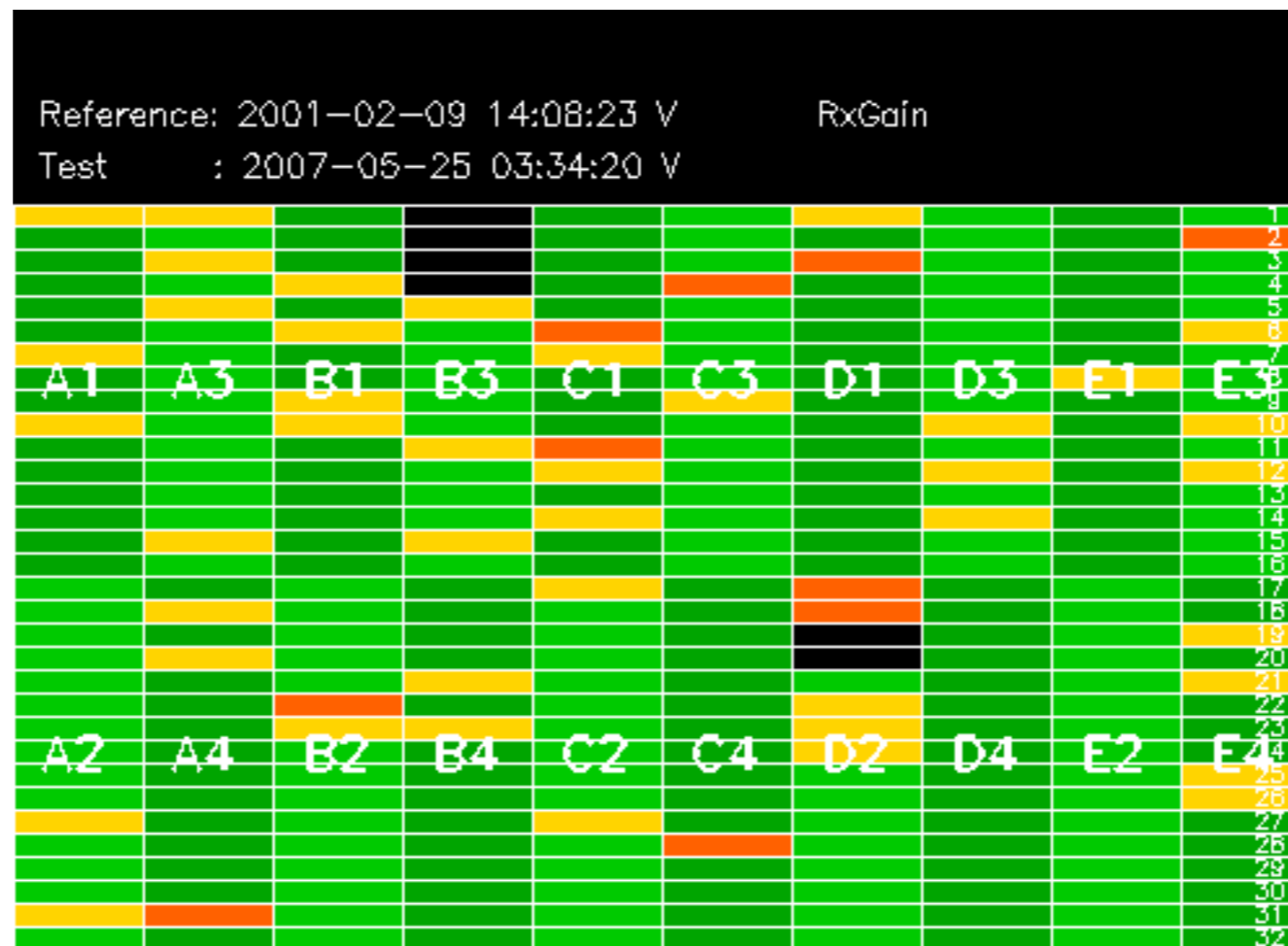


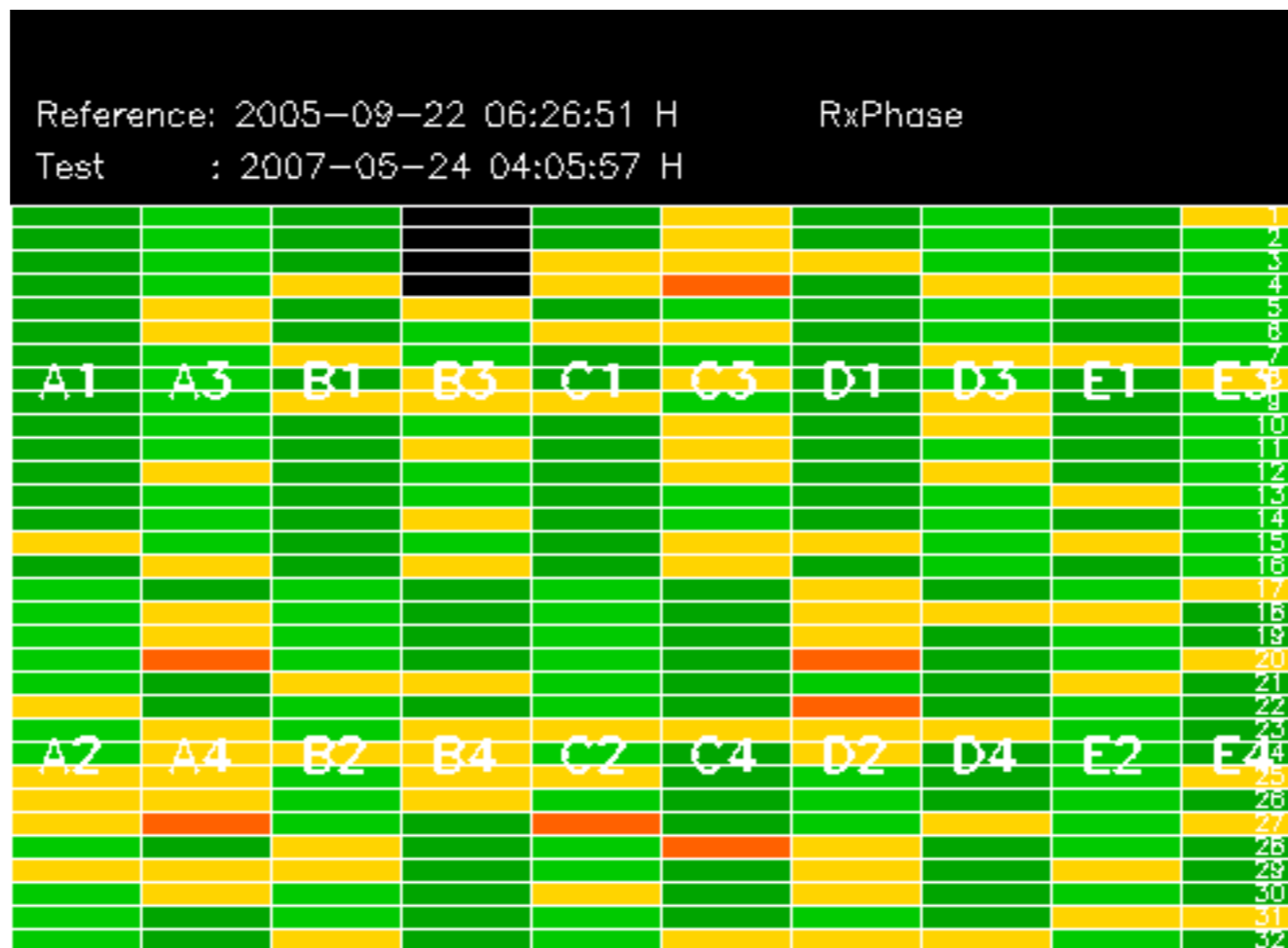
No anomalies observed on available MS products:

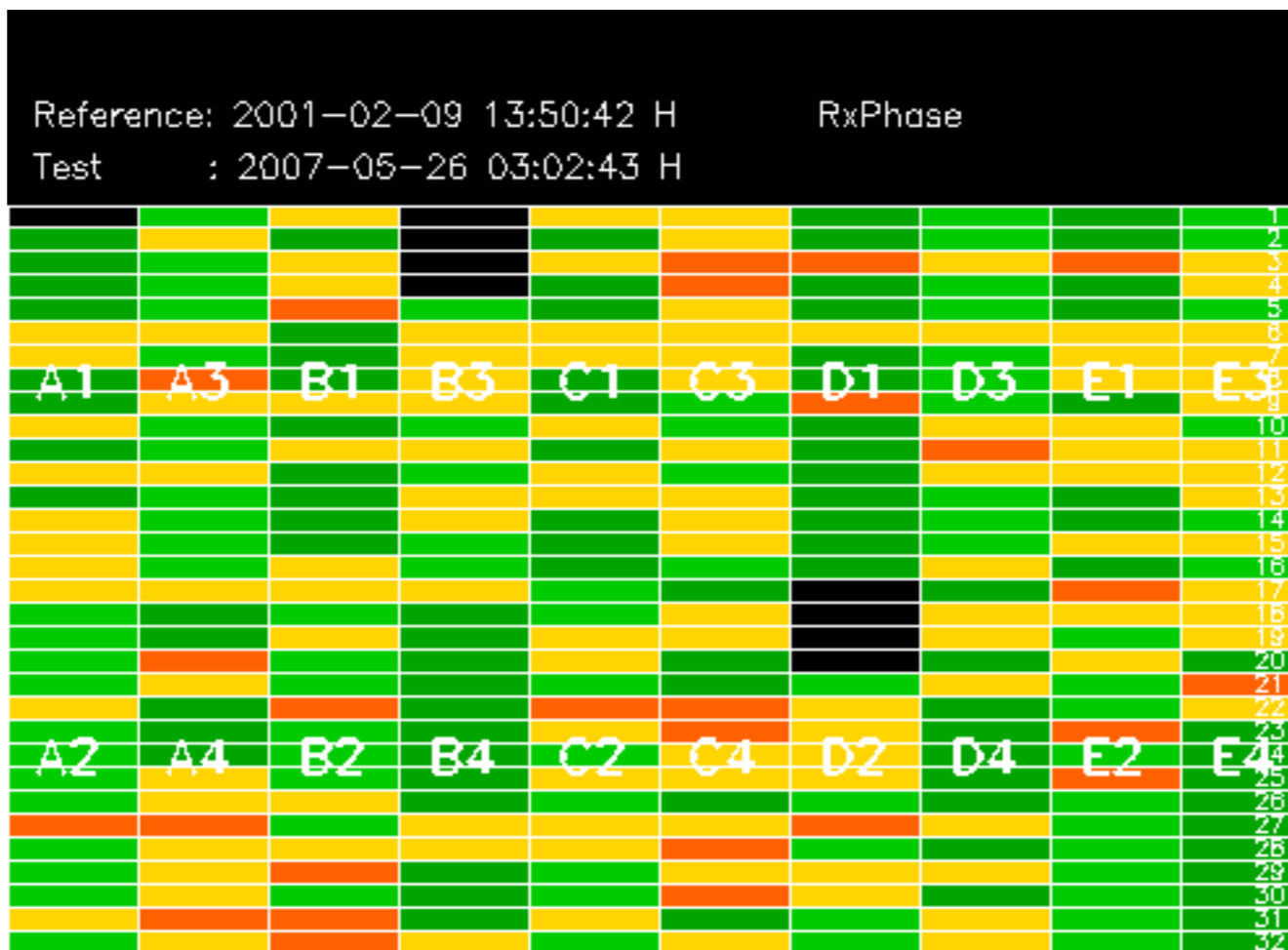
No anomalies observed.

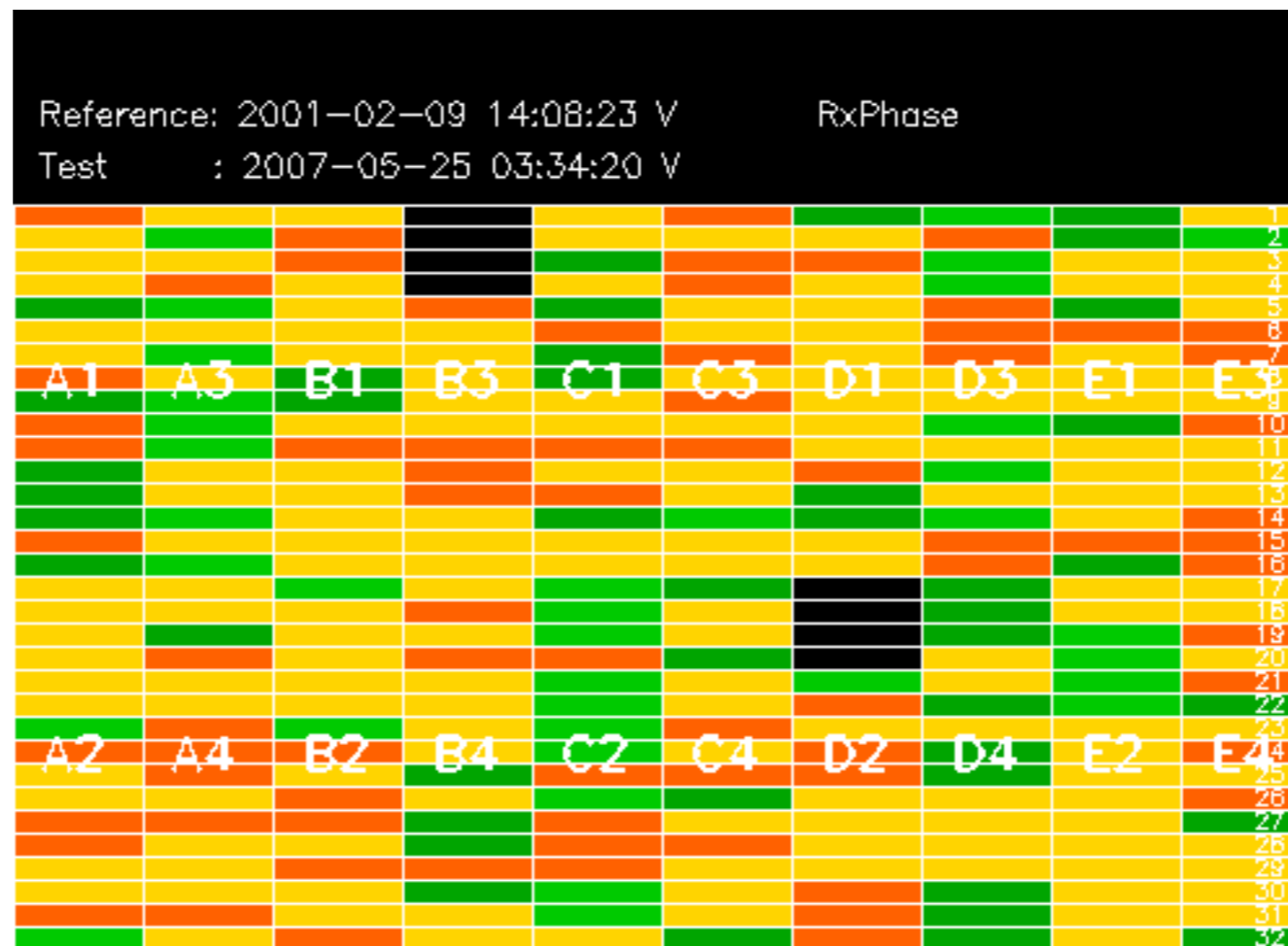


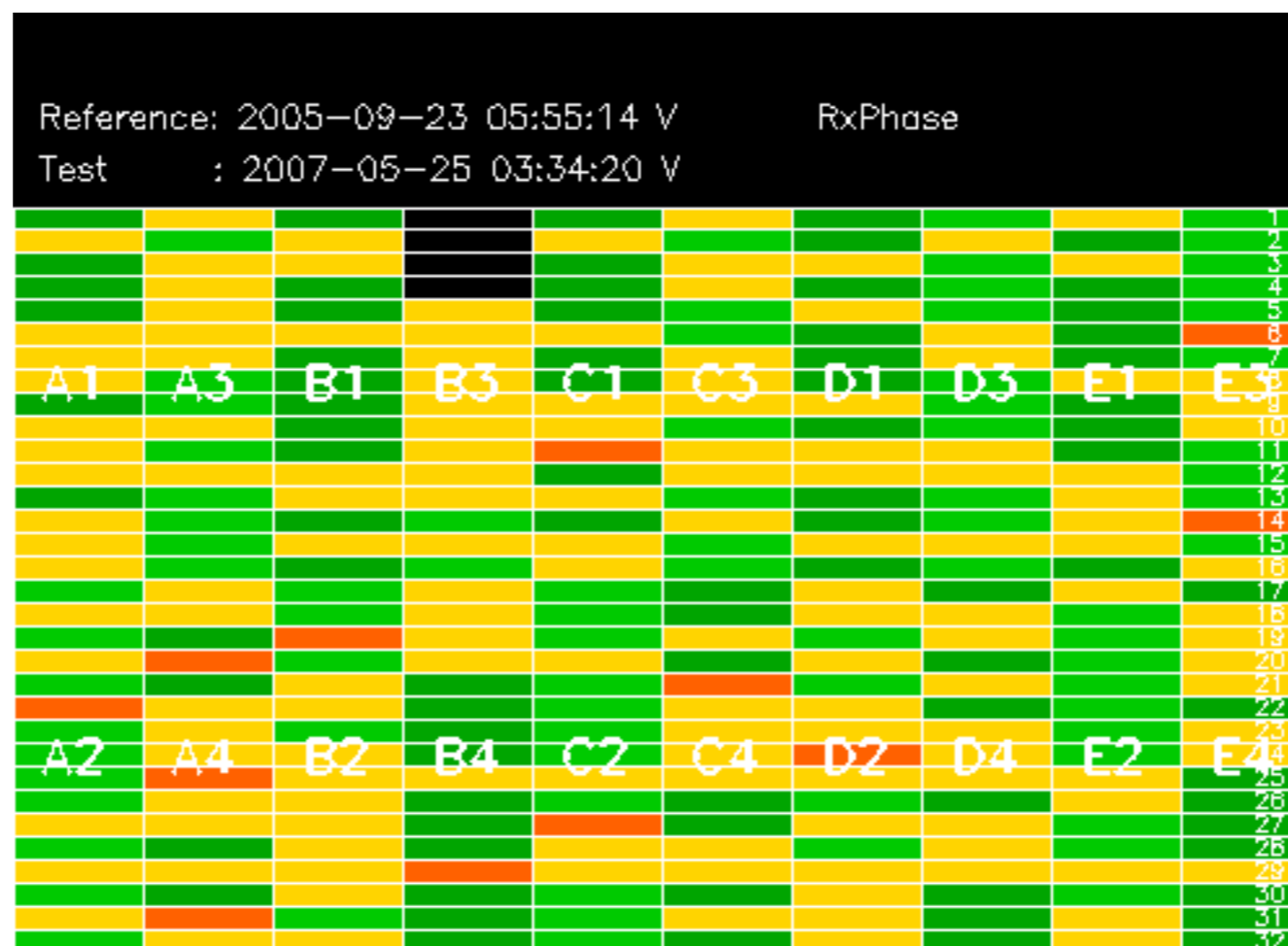


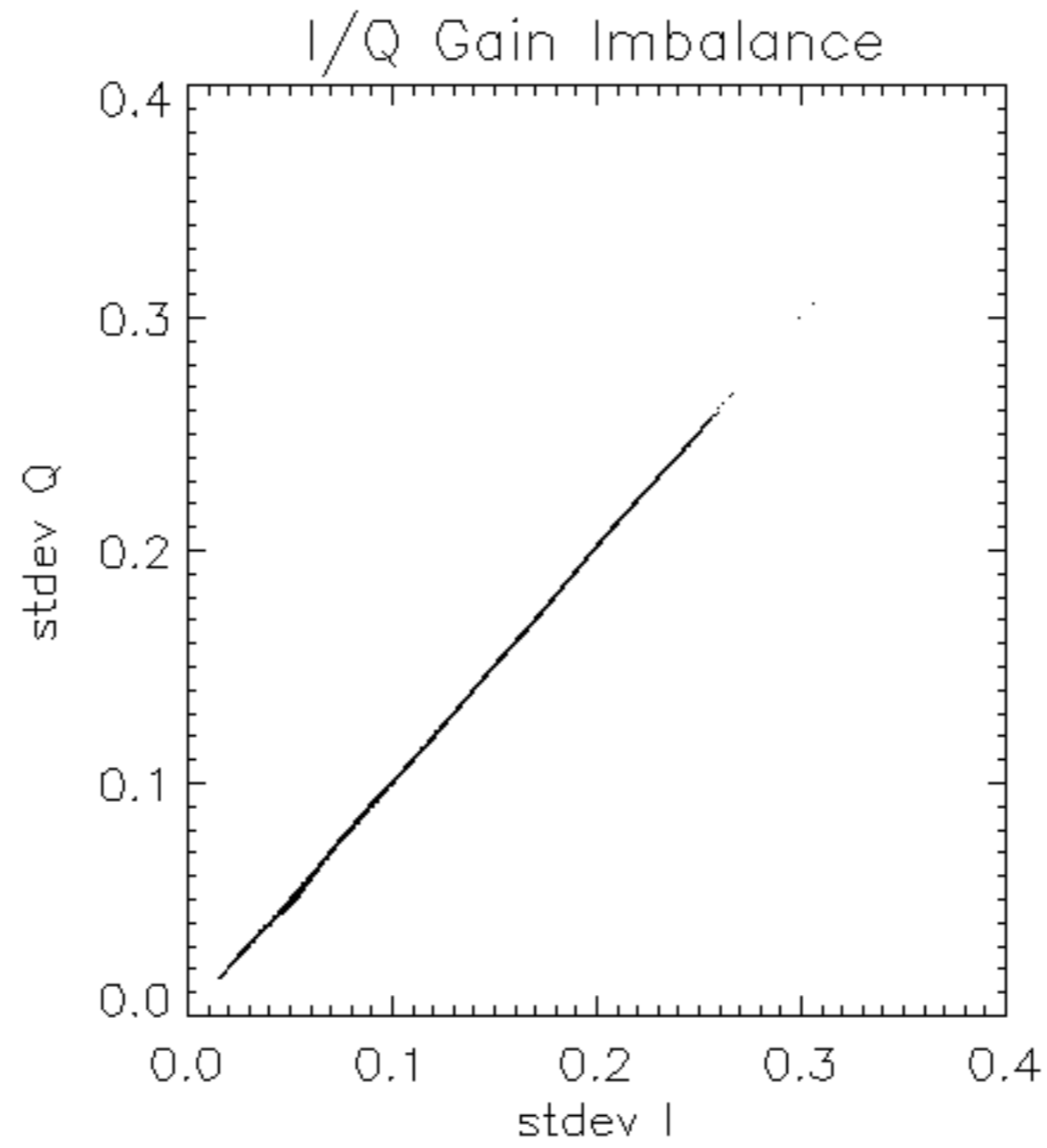


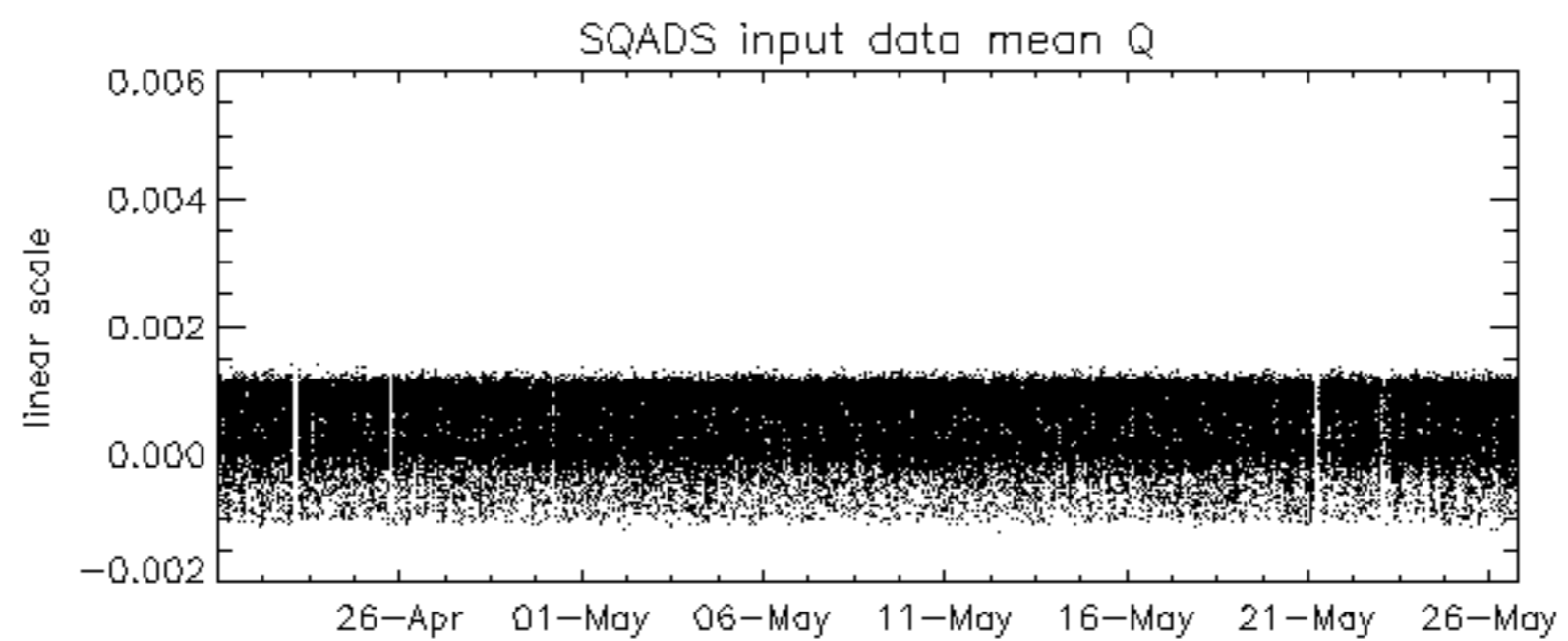
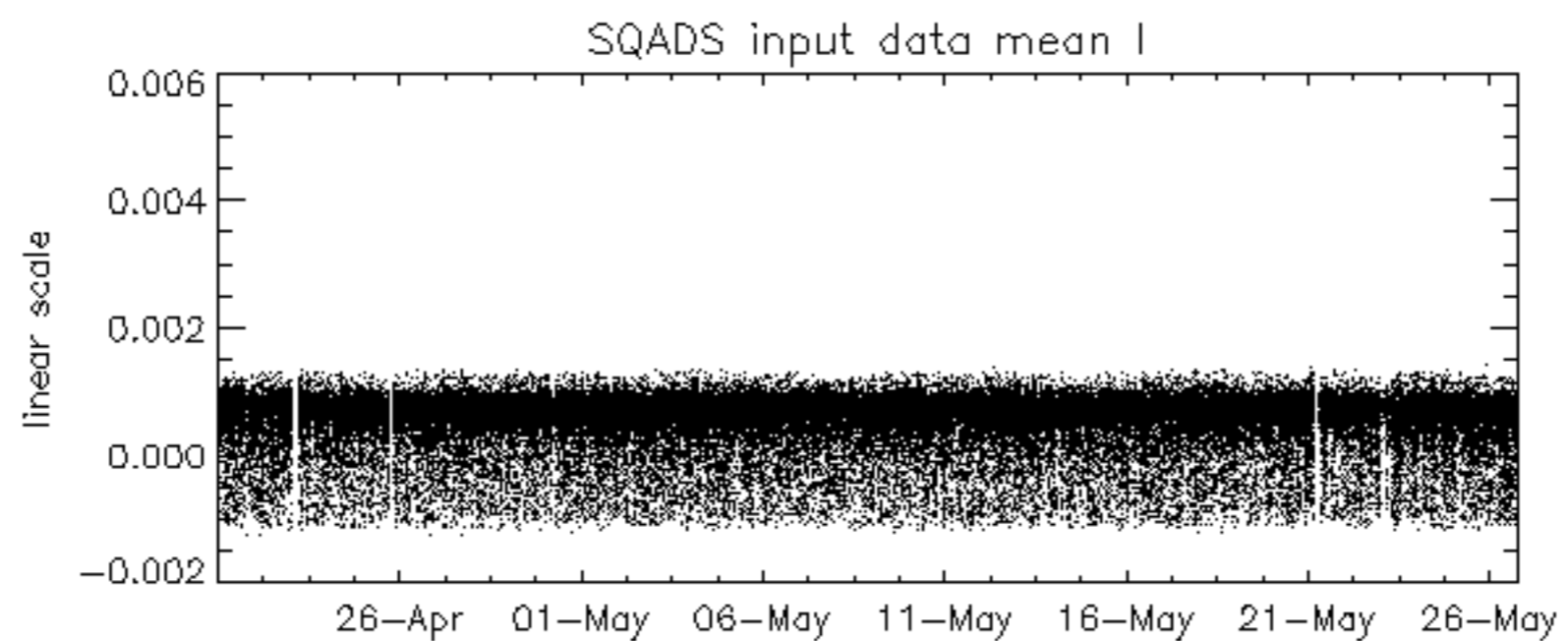
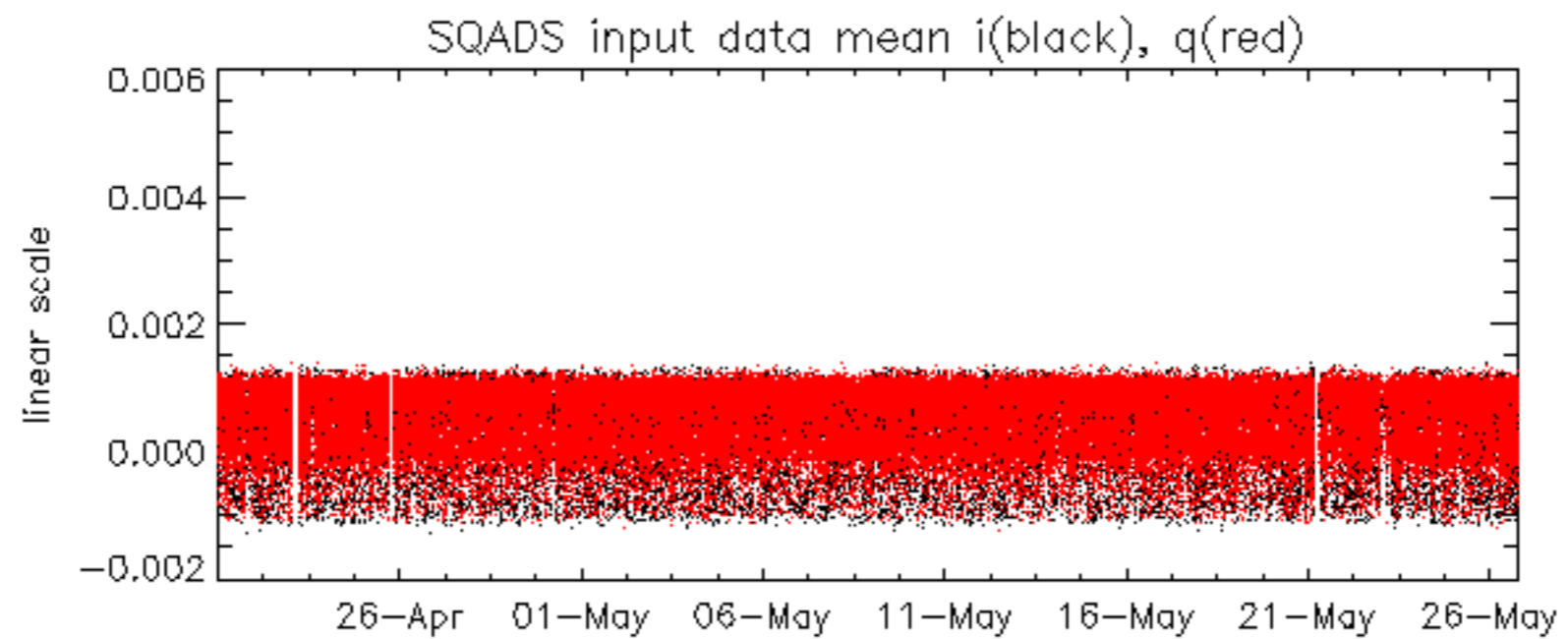


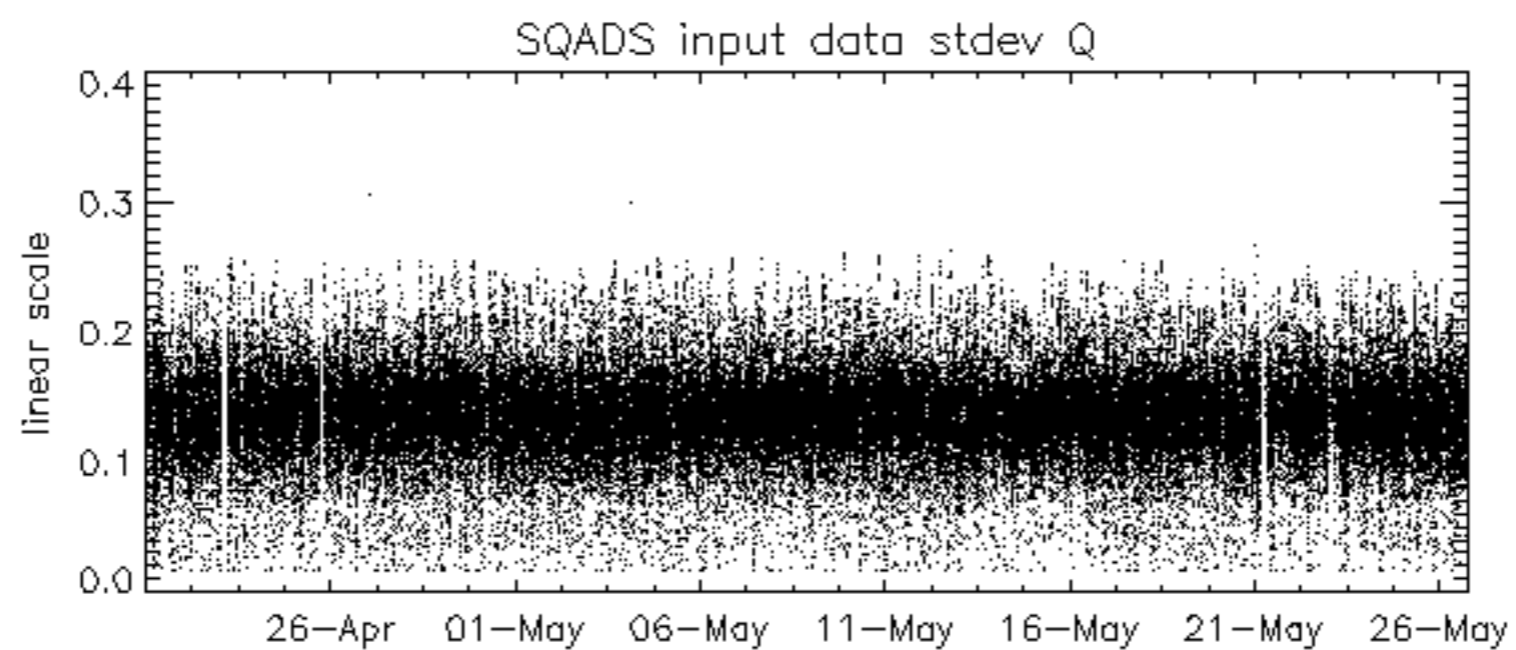
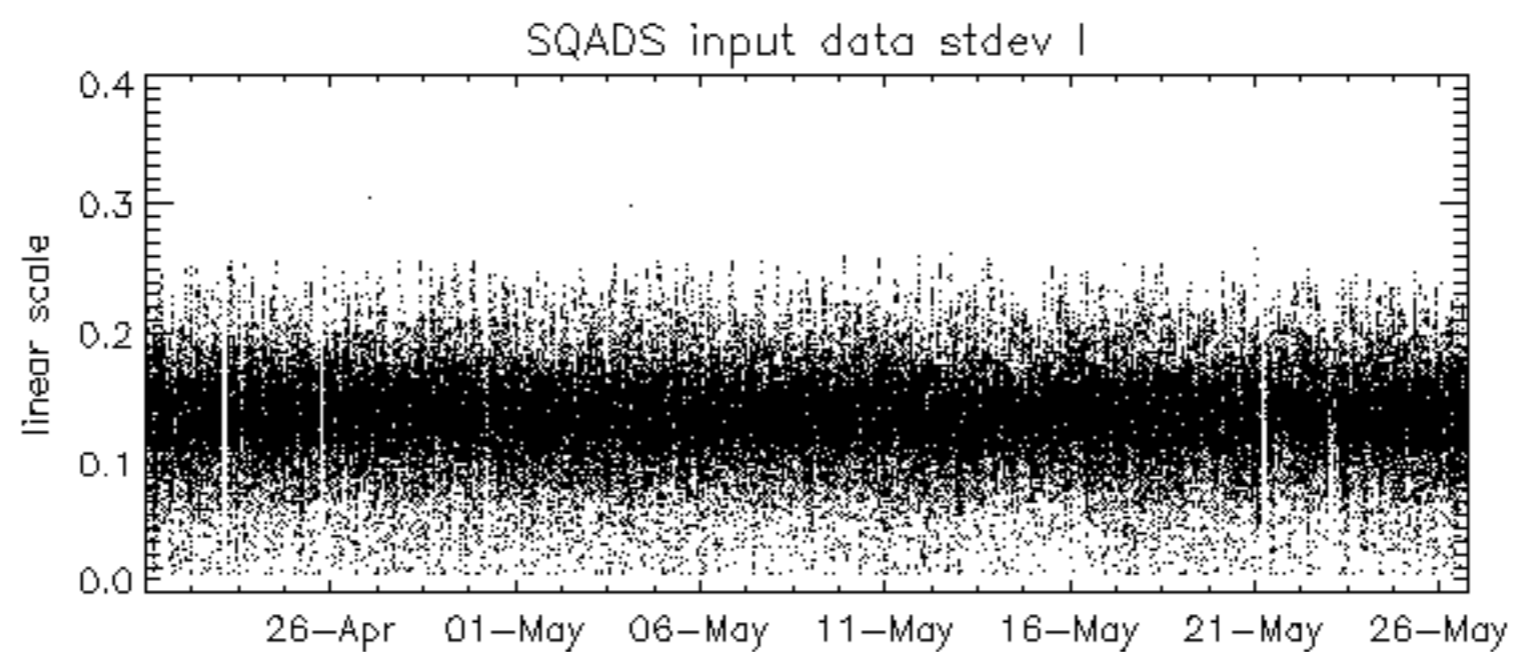
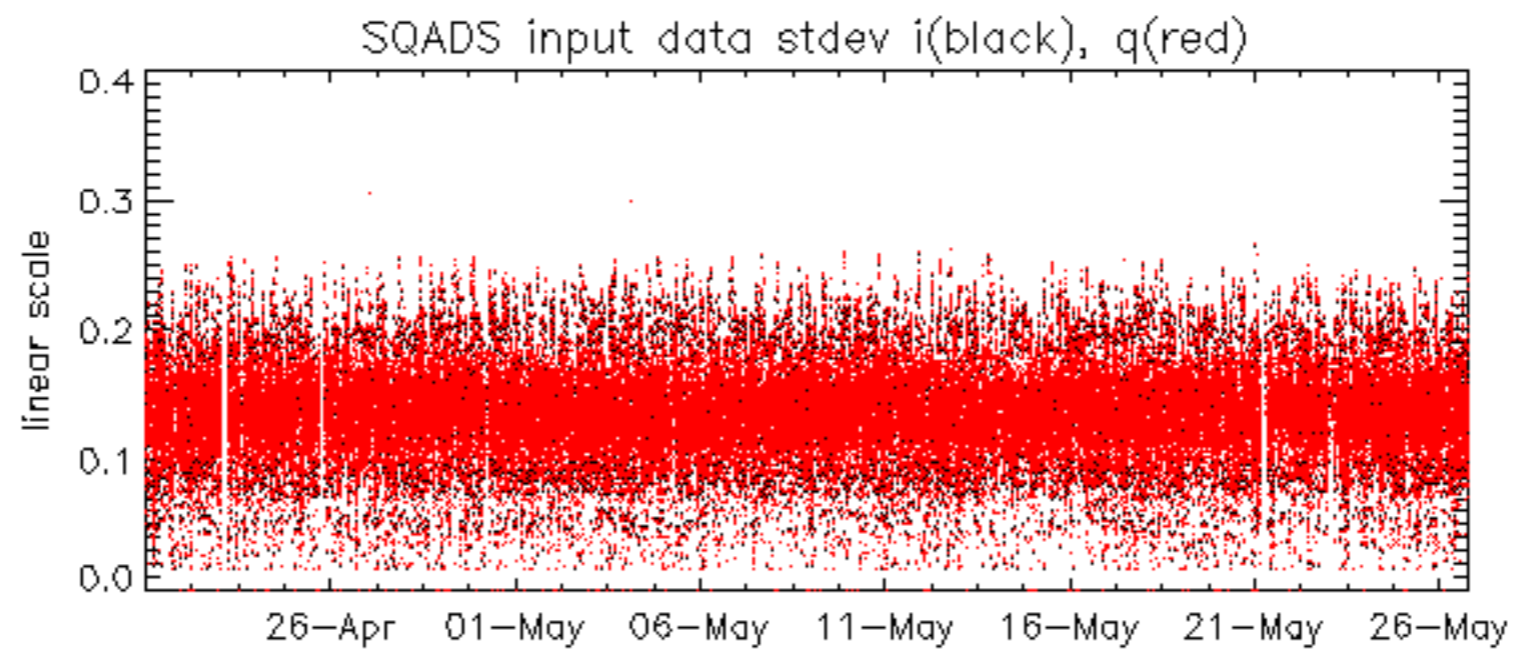




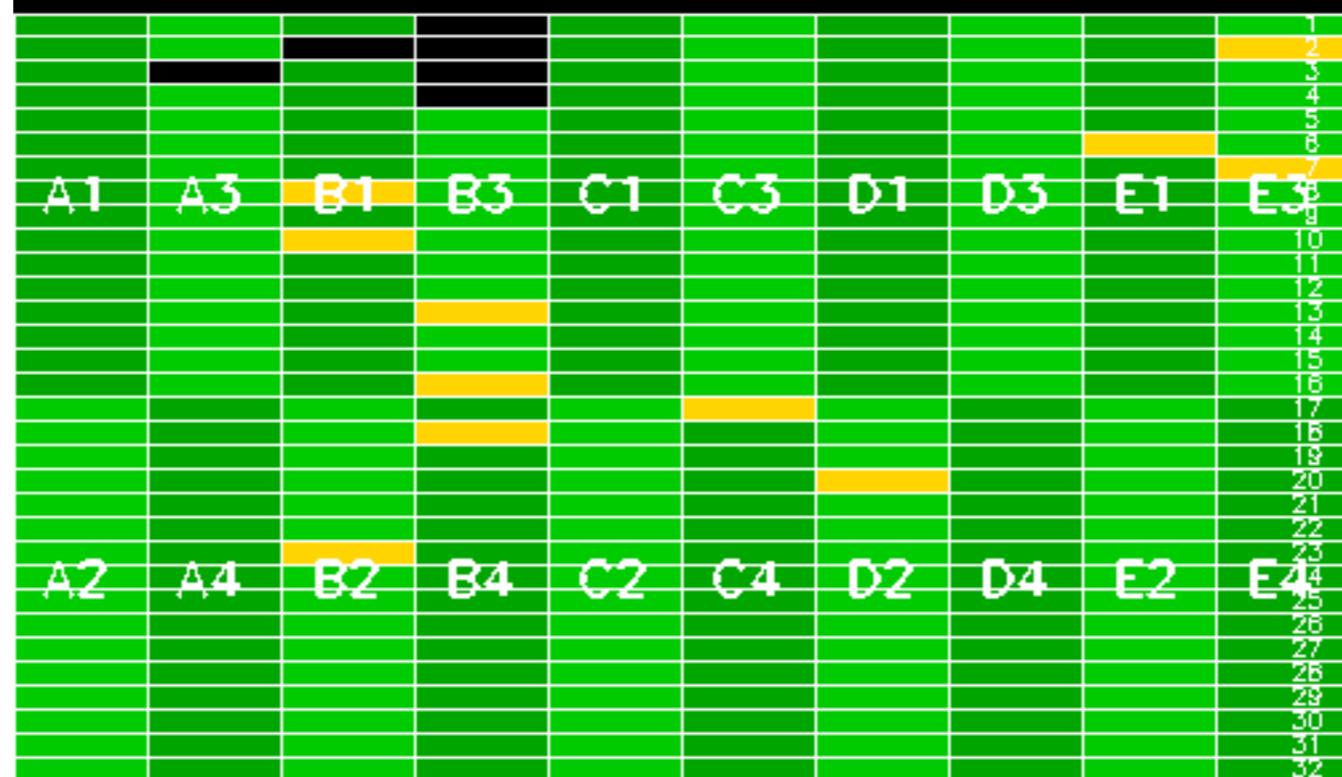








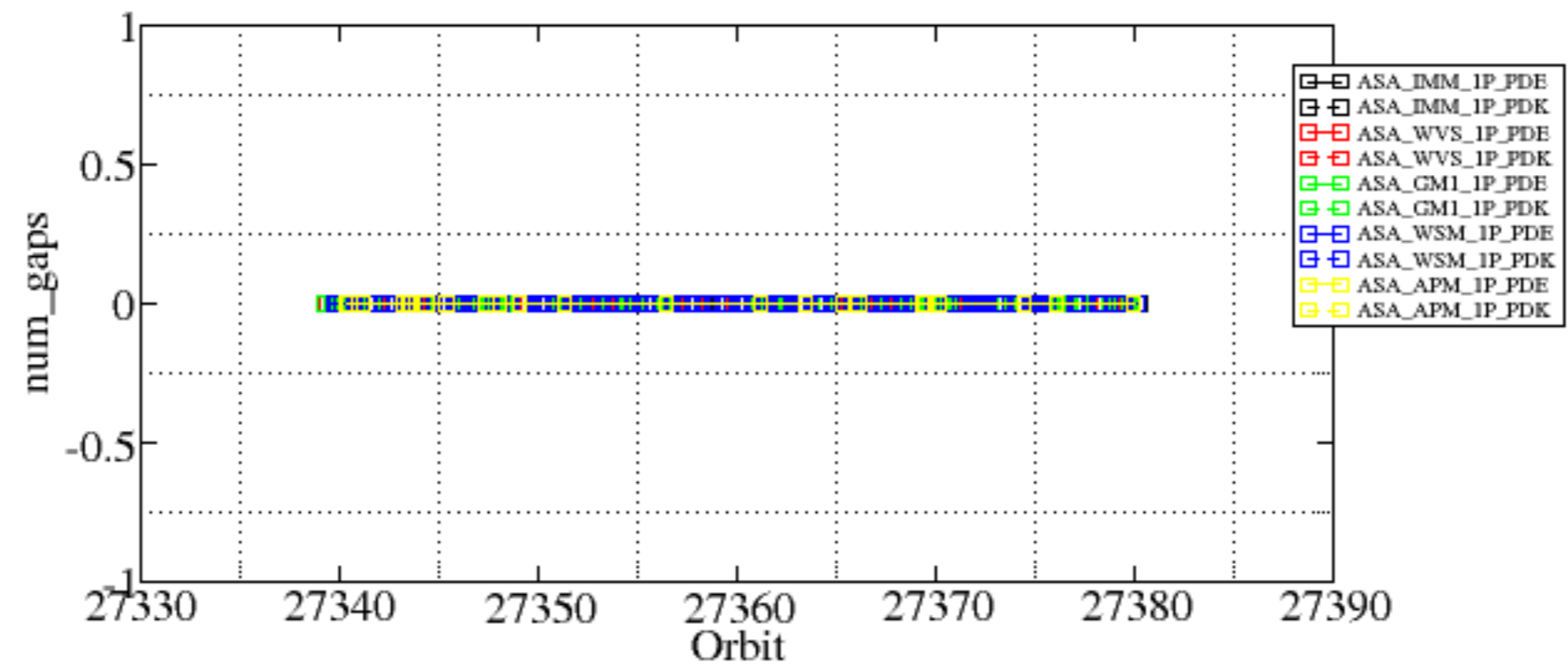
Reference: 2005-09-22 06:26:51 H TxGain
 Test : 2007-05-26 03:02:43 H

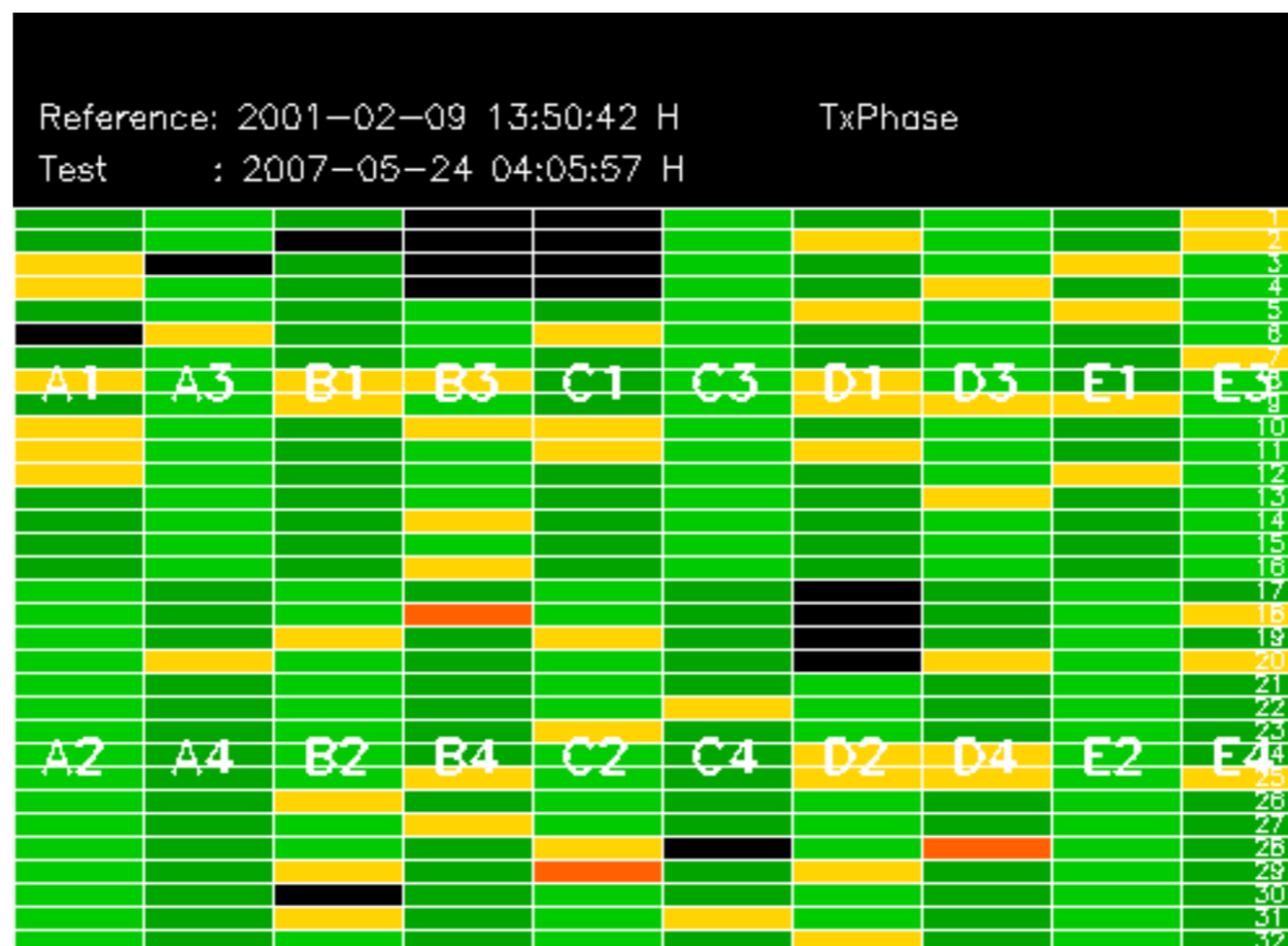


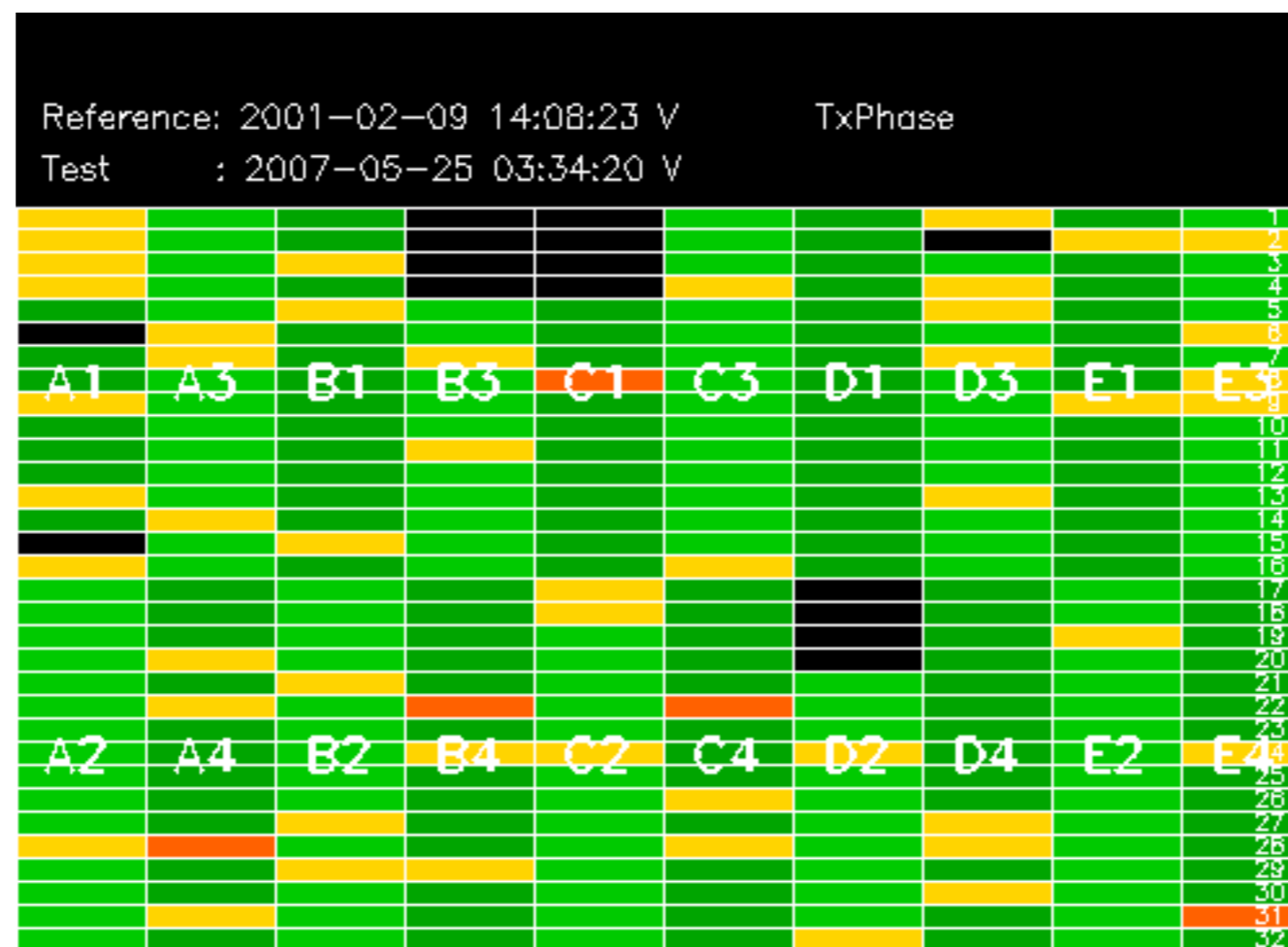
Summary of analysis for the last 3 days 2007052[456]

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

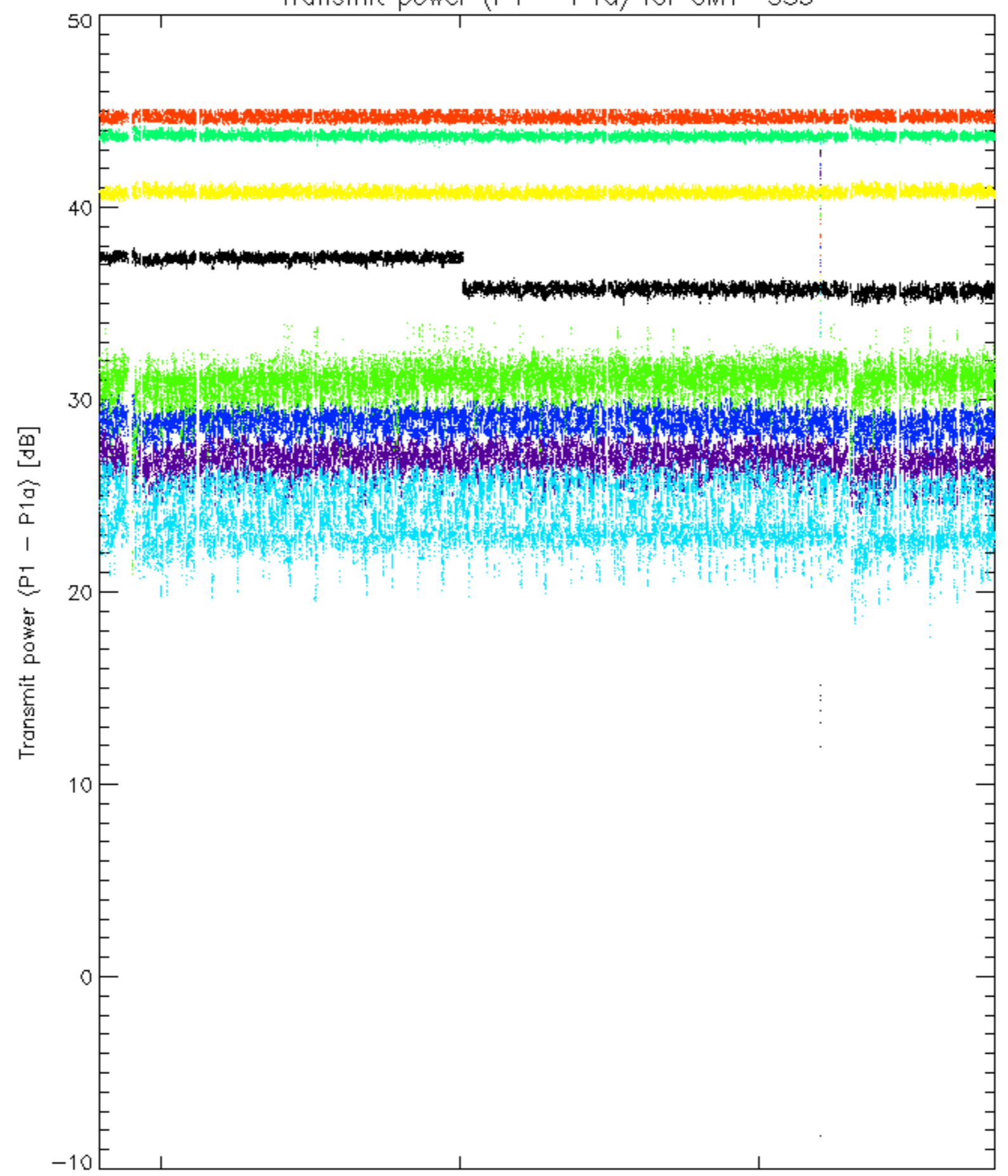
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070526_185316_000003922058_00271_27379_4817.N1	0	13
ASA_WSM_1PNPDE20070524_180905_000001292058_00242_27350_8687.N1	0	31
ASA_WSM_1PNPDE20070525_155729_000001402058_00255_27363_9917.N1	0	2



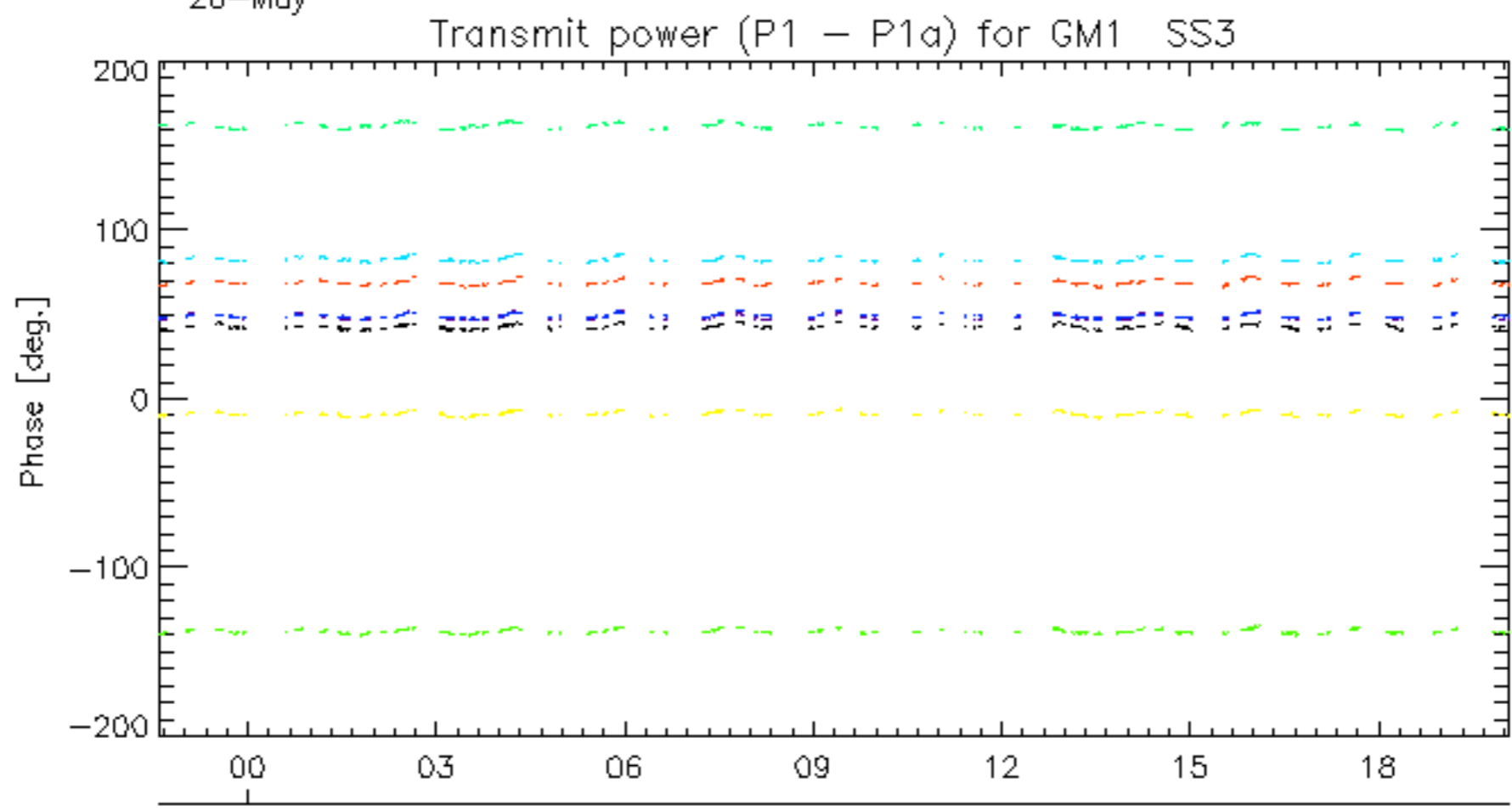
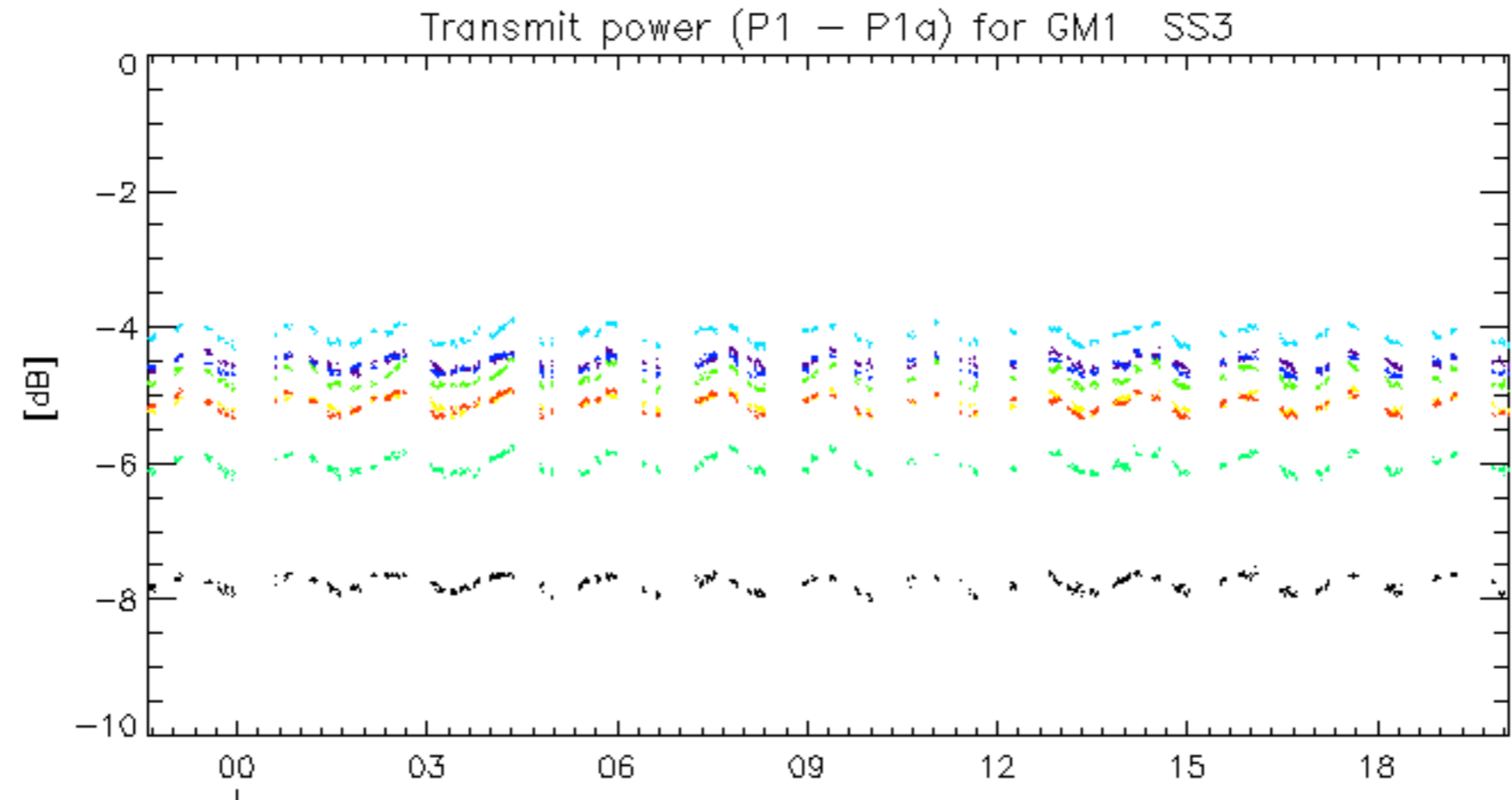




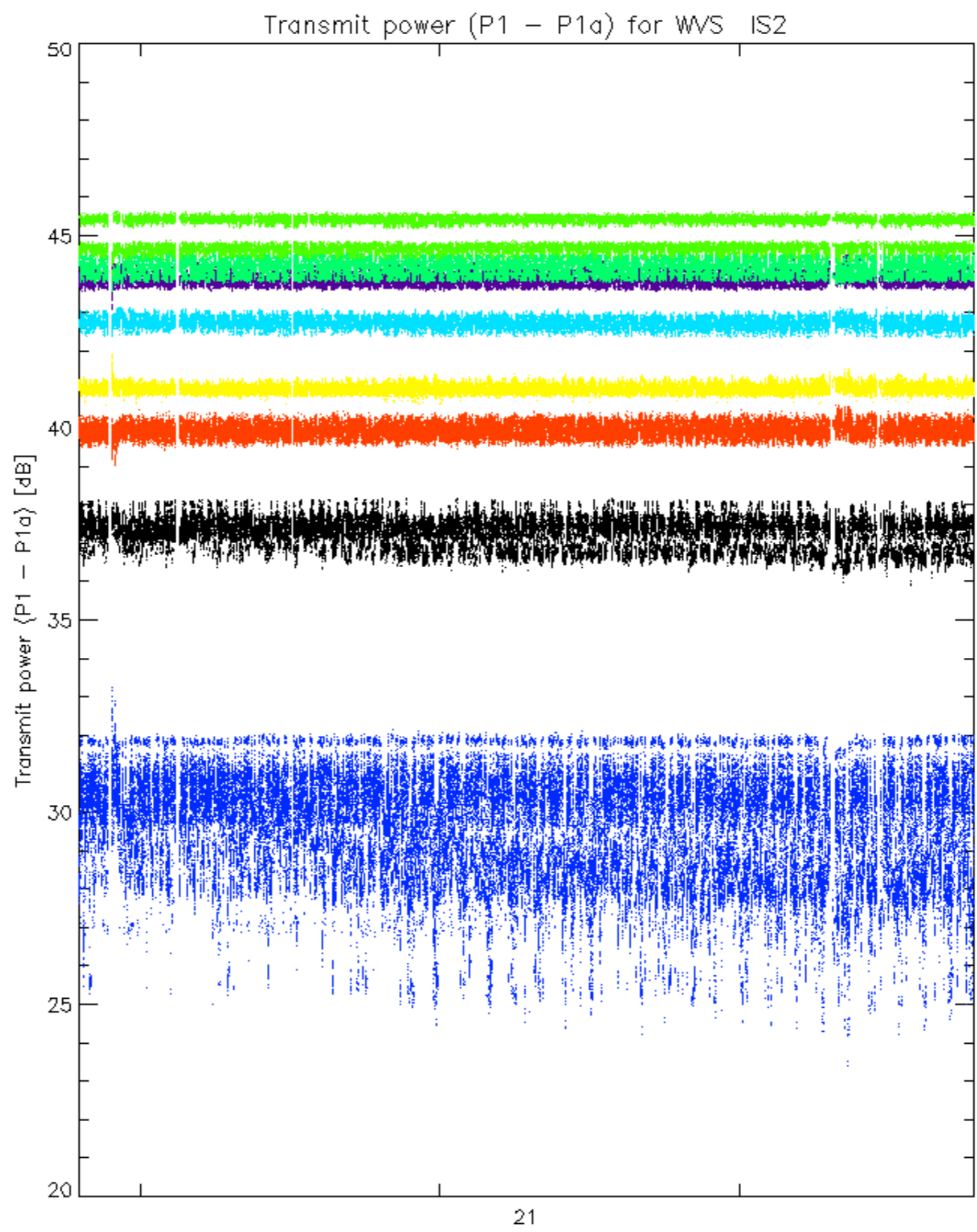
Transmit power (P1 - P1a) for GM1 SS3



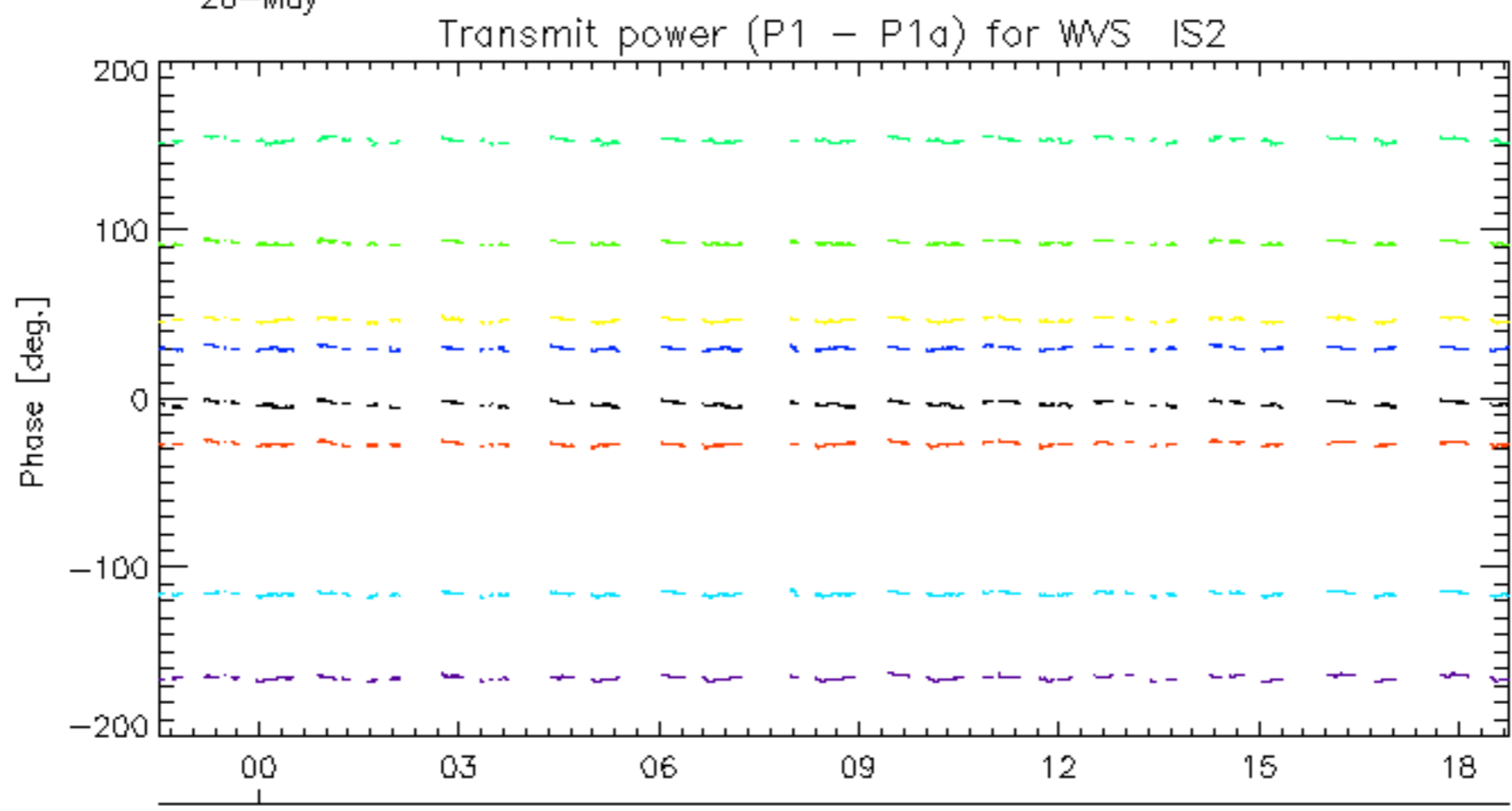
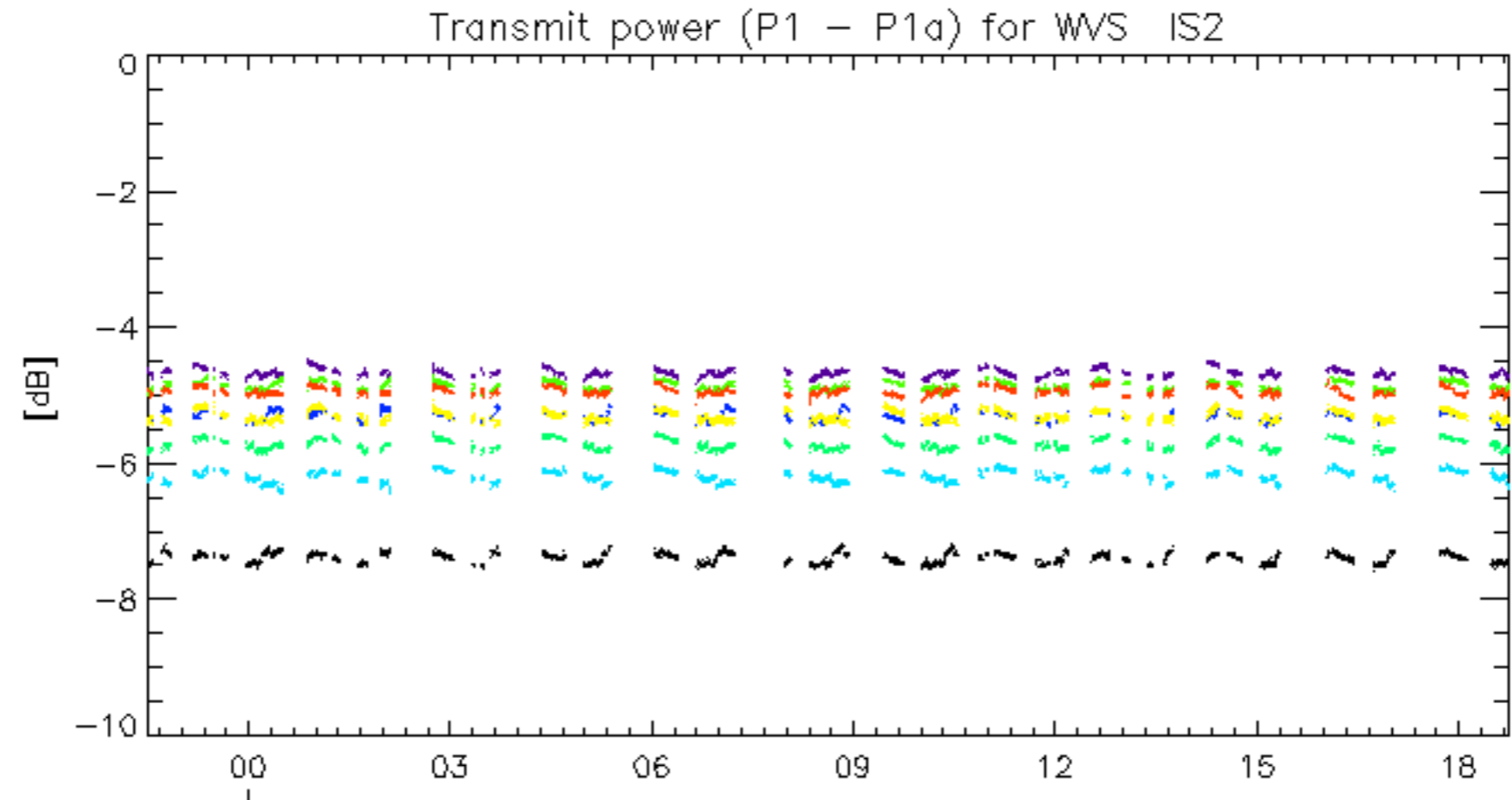
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.