

PRELIMINARY REPORT OF 070402

last update on Mon Apr 2 18:03:30 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 2007-04-01 00:00:00 to 2007-04-02 18:03:30

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	44	88	0	2	27
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	44	88	0	2	27
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	44	88	0	2	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	88	0	2	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	40	56	40	15	43
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	40	56	40	15	43
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	40	56	40	15	43
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	56	40	15	43

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	20070331 204859
H	20070401 183646

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
☒	☒
☒	☒
☒	☒
☒	☒

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)
3	P1a	-15.095099	0.131504	0.097246
7	P1a	-17.499657	0.100018	-0.146215
11	P1a	-17.276075	0.349085	-0.047940
15	P1a	-12.890539	0.091634	-0.018726
19	P1a	-15.178062	0.078405	-0.096867
22	P1a	-15.565934	0.546861	-0.556124
26	P1a	-15.090912	0.388583	-0.120304
30	P1a	-17.433836	0.295282	-0.266197

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.746671	0.010903	-0.024068
7	P1	-3.137179	0.008599	-0.014630
11	P1	-4.176927	0.014661	-0.059186
15	P1	-6.374024	0.016903	0.012648
19	P1	-3.775951	0.007797	-0.013144
22	P1	-4.693076	0.038457	-0.120555
26	P1	-3.927671	0.034168	-0.021422
30	P1	-5.930948	0.057018	-0.114205

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.644775	0.093067	0.017903
7	P2	-21.597498	0.083750	0.050373
11	P2	-15.479033	0.103610	0.186956
15	P2	-7.085054	0.094333	-0.048370
19	P2	-9.106954	0.084024	-0.001373
22	P2	-18.088831	0.079820	0.039082
26	P2	-16.563391	0.086315	-0.048894
30	P2	-19.310137	0.082786	0.101186

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.232758	0.006601	0.009303
7	P3	-8.232758	0.006601	0.009303
11	P3	-8.232758	0.006601	0.009303
15	P3	-8.232758	0.006601	0.009303
19	P3	-8.232758	0.006601	0.009303
22	P3	-8.232758	0.006601	0.009303
26	P3	-8.232700	0.006603	0.009414
30	P3	-8.232700	0.006603	0.009414

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	-11.103252	0.051672	-0.081630
7	P1a	-10.070869	0.123637	-0.005646
11	P1a	-10.680778	0.060778	-0.015709
15	P1a	-10.922674	0.145750	0.136781
19	P1a	-15.726330	0.071839	-0.129615
22	P1a	-20.959957	1.493267	-0.352272
26	P1a	-15.281906	0.333516	-0.180538
30	P1a	-18.370600	0.658307	0.046403

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.417068	0.037432	-0.050328
7	P1	-2.424196	0.020136	0.006103
11	P1	-2.918320	0.018487	0.021423
15	P1	-3.845623	0.038305	0.009437
19	P1	-3.565541	0.011245	-0.033987
22	P1	-5.025229	0.031005	0.053367
26	P1	-5.966697	0.048870	-0.084201
30	P1	-5.280684	0.030806	-0.043217

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.110252	0.038682	-0.041860
7	P2	-21.963163	0.064668	-0.049481
11	P2	-10.631835	0.034417	0.034469
15	P2	-4.840101	0.033362	-0.059533
19	P2	-6.817168	0.034776	-0.026513
22	P2	-8.079897	0.034474	-0.008314
26	P2	-24.289124	0.043385	0.015021
30	P2	-21.717934	0.046533	0.028208

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.063811	0.004234	-0.015941
7	P3	-8.063745	0.004229	-0.016064
11	P3	-8.063848	0.004226	-0.016142
15	P3	-8.063890	0.004231	-0.015749
19	P3	-8.063848	0.004240	-0.015749
22	P3	-8.063910	0.004228	-0.016224
26	P3	-8.063696	0.004221	-0.016070
30	P3	-8.063819	0.004221	-0.016152

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	0.000633245
	stdev	2.55532e-07
MEAN Q	mean	0.000365768
	stdev	2.74598e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.106890
	stdev	0.00238158
STDEV Q	mean	0.106900
	stdev	0.00243689



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007040[112]

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_1PNPDK20070401_124009_000008632056_00482_26588_2418.N1	0	13
ASA_GM1_1PNPDK20070401_160040_000000962056_00484_26590_2686.N1	0	15
ASA_WSM_1PNPDE20070401_023000_000001462056_00476_26582_5190.N1	0	71
ASA_WSM_1PNPDE20070401_141207_000000852056_00483_26589_5694.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)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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)


Acsending

<input type="checkbox"/>
Descending

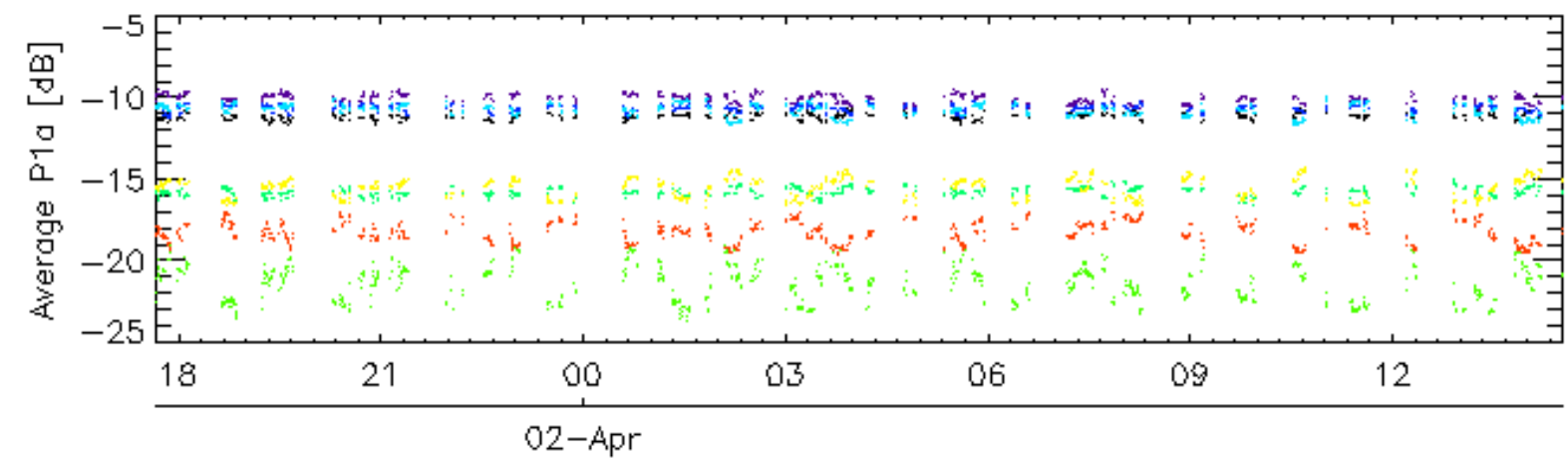
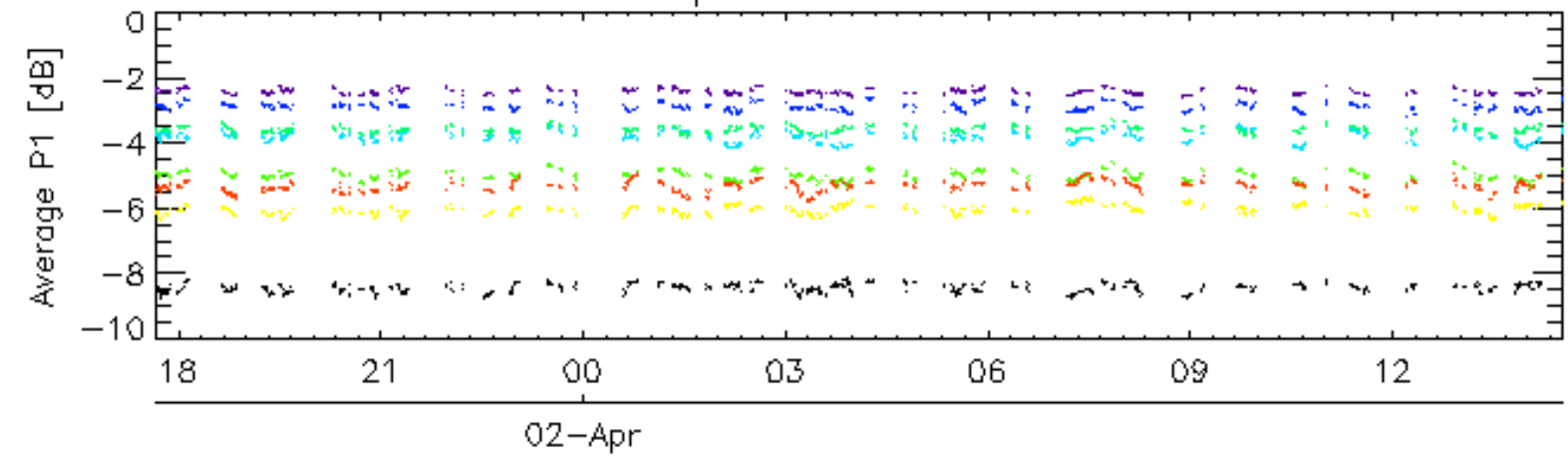
7.5 - Absolute Doppler for GM1

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

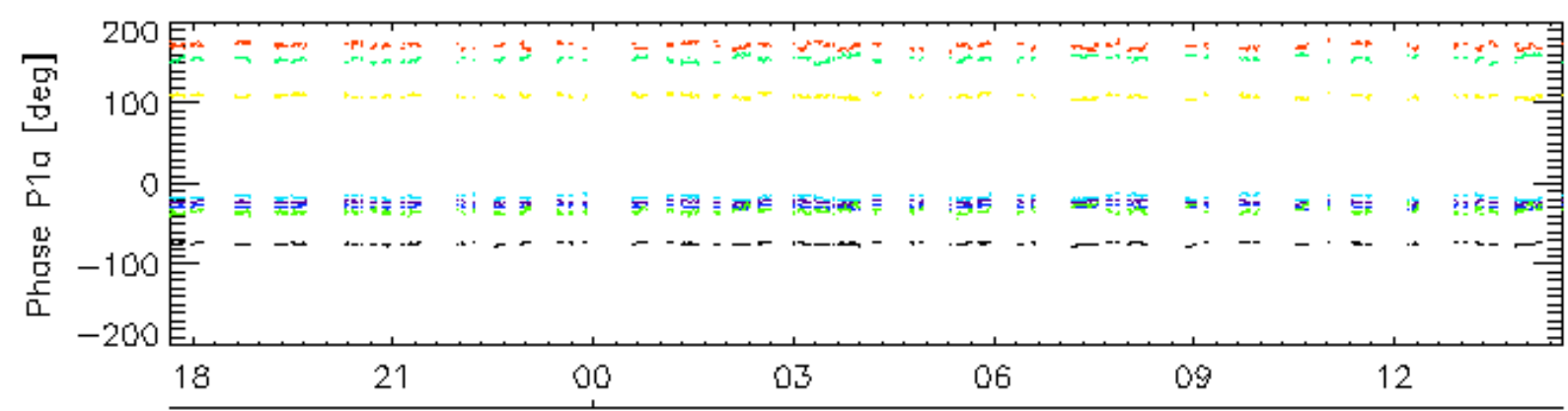
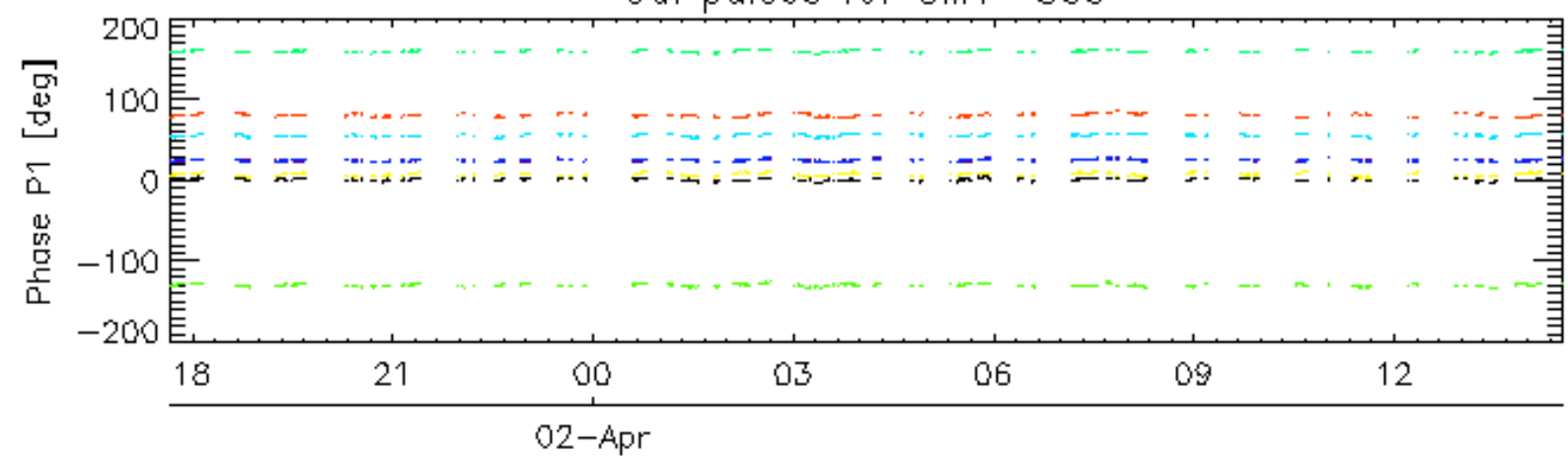
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

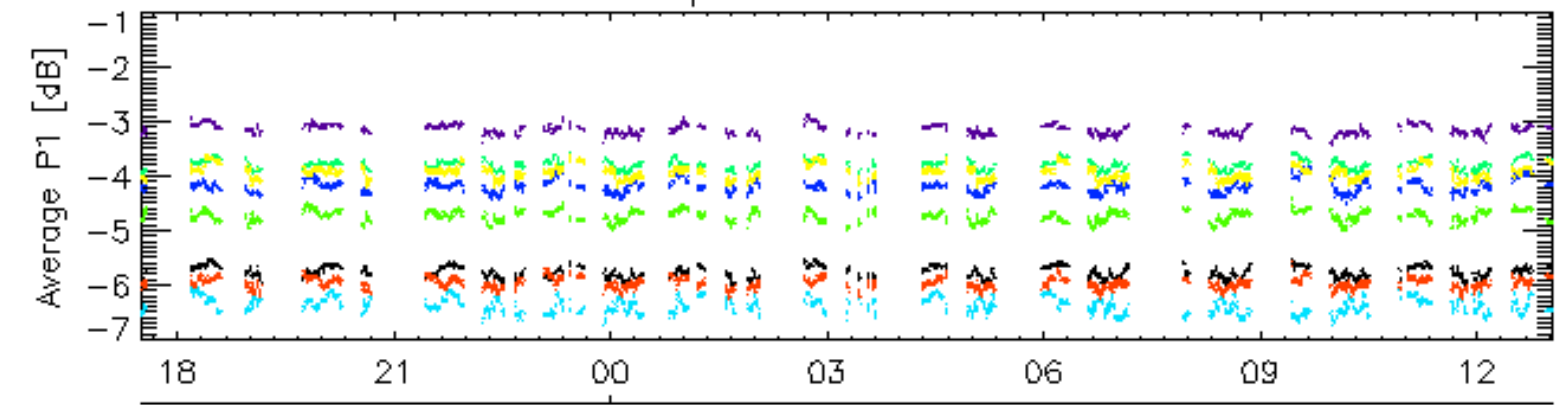


Cal pulses for GM1 SS3

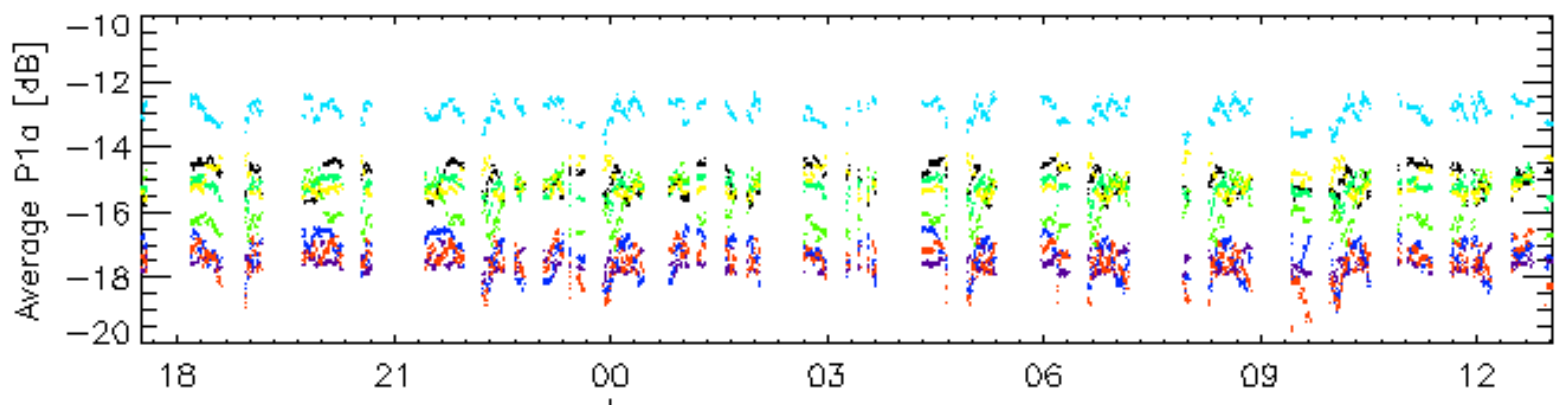


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

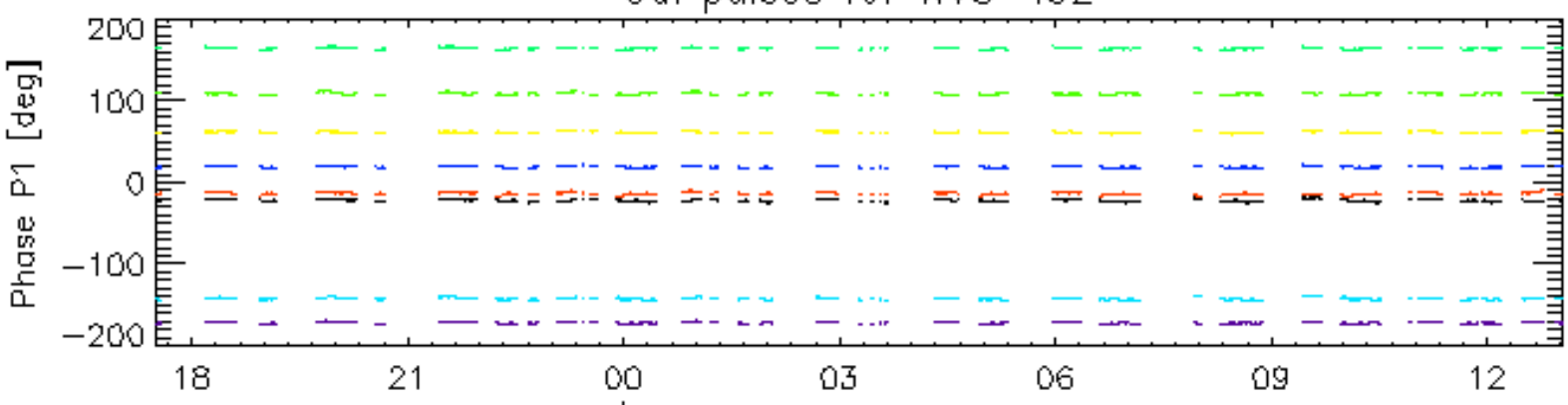


02-Apr

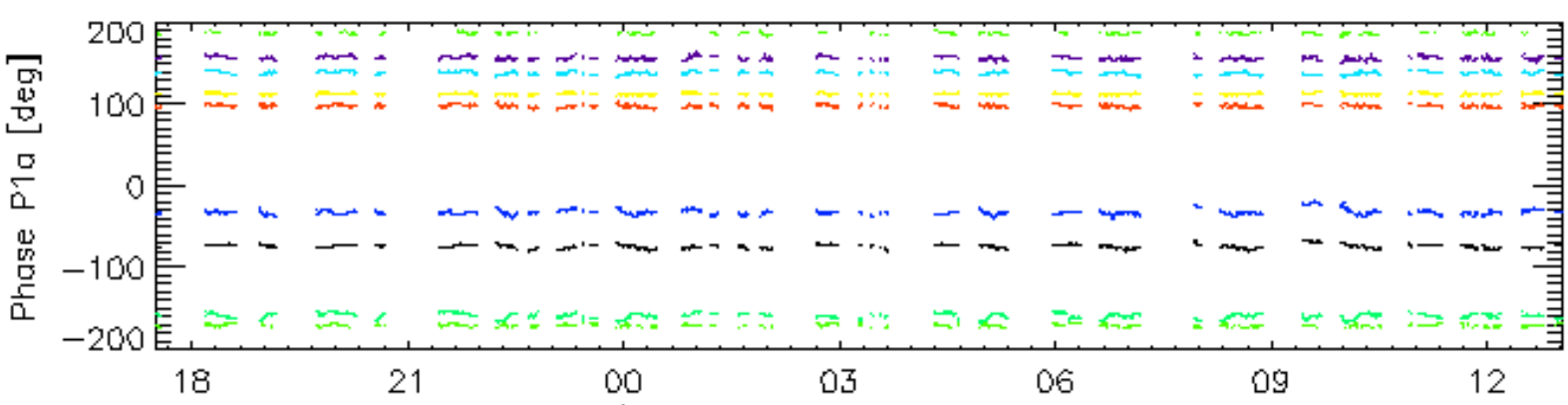


02-Apr

Cal pulses for WVS IS2



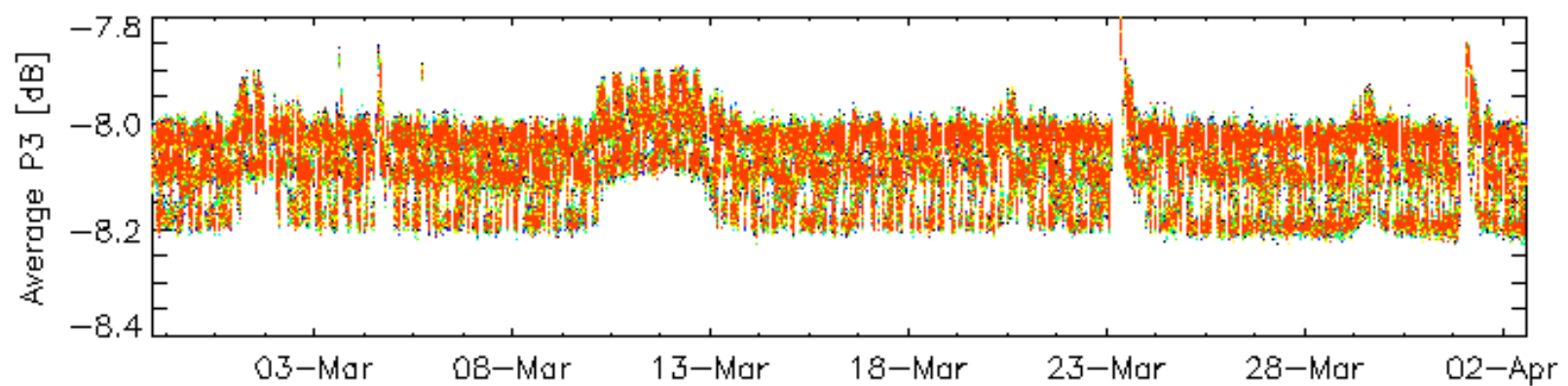
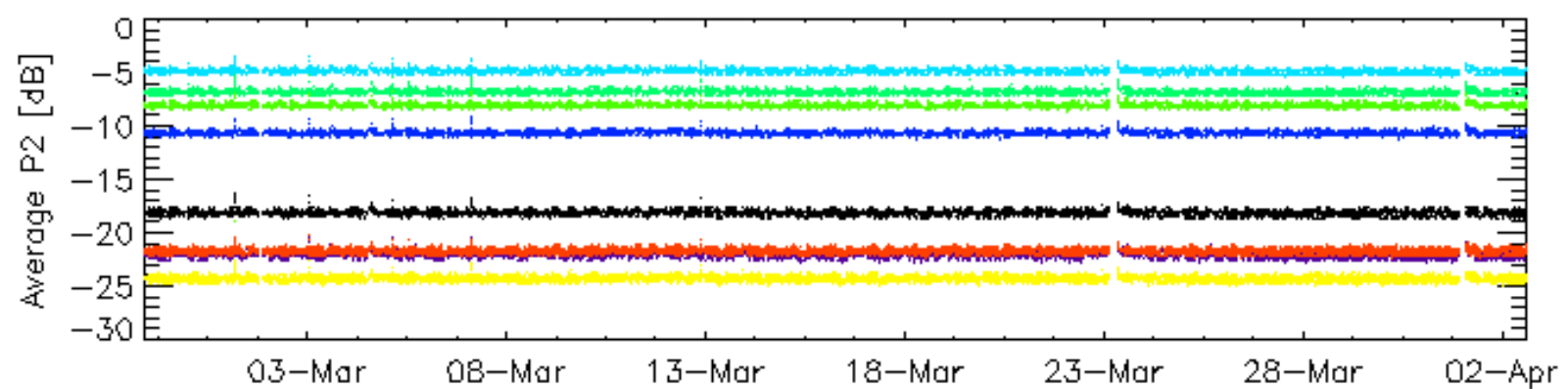
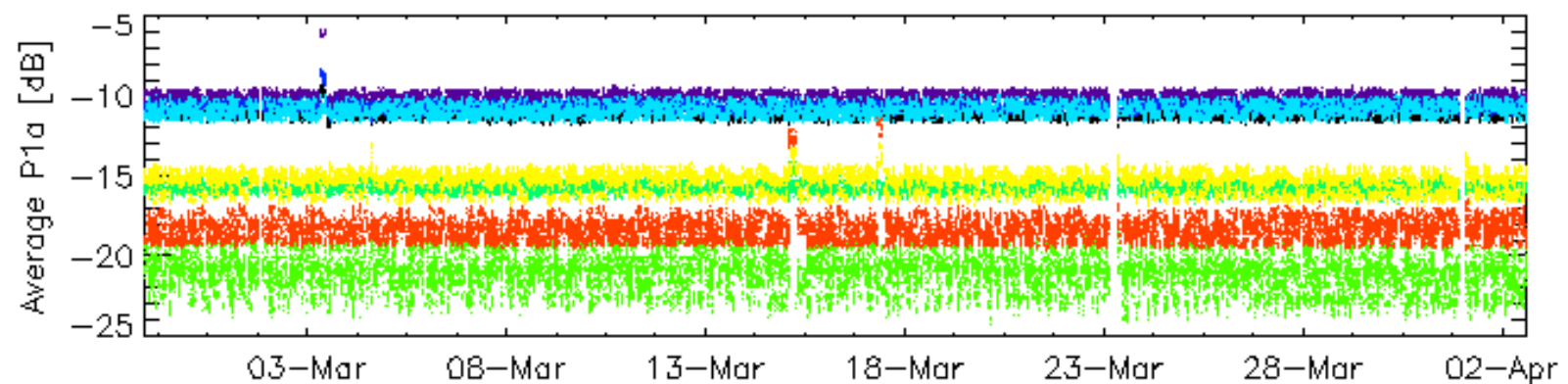
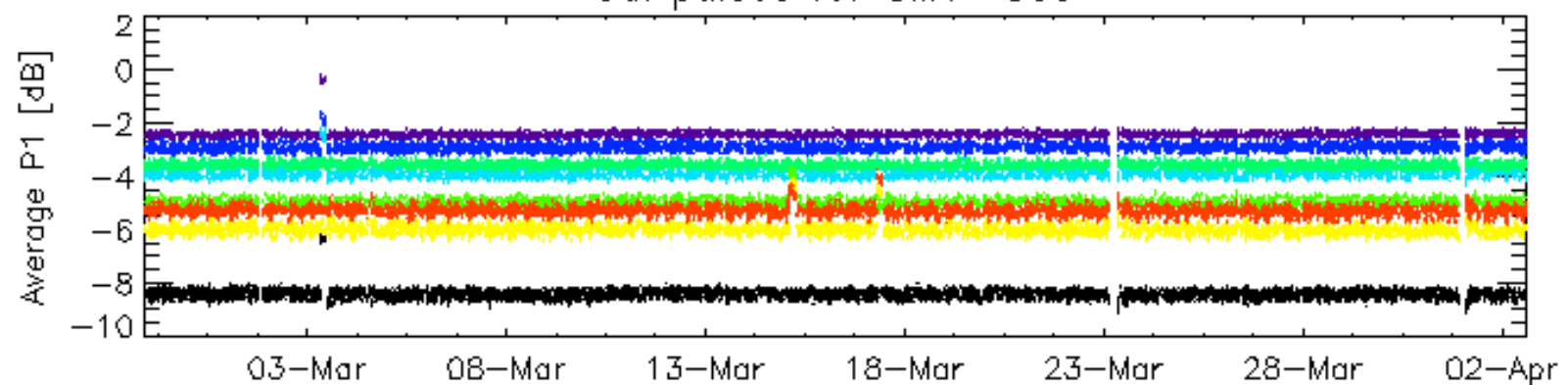
02-Apr



02-Apr

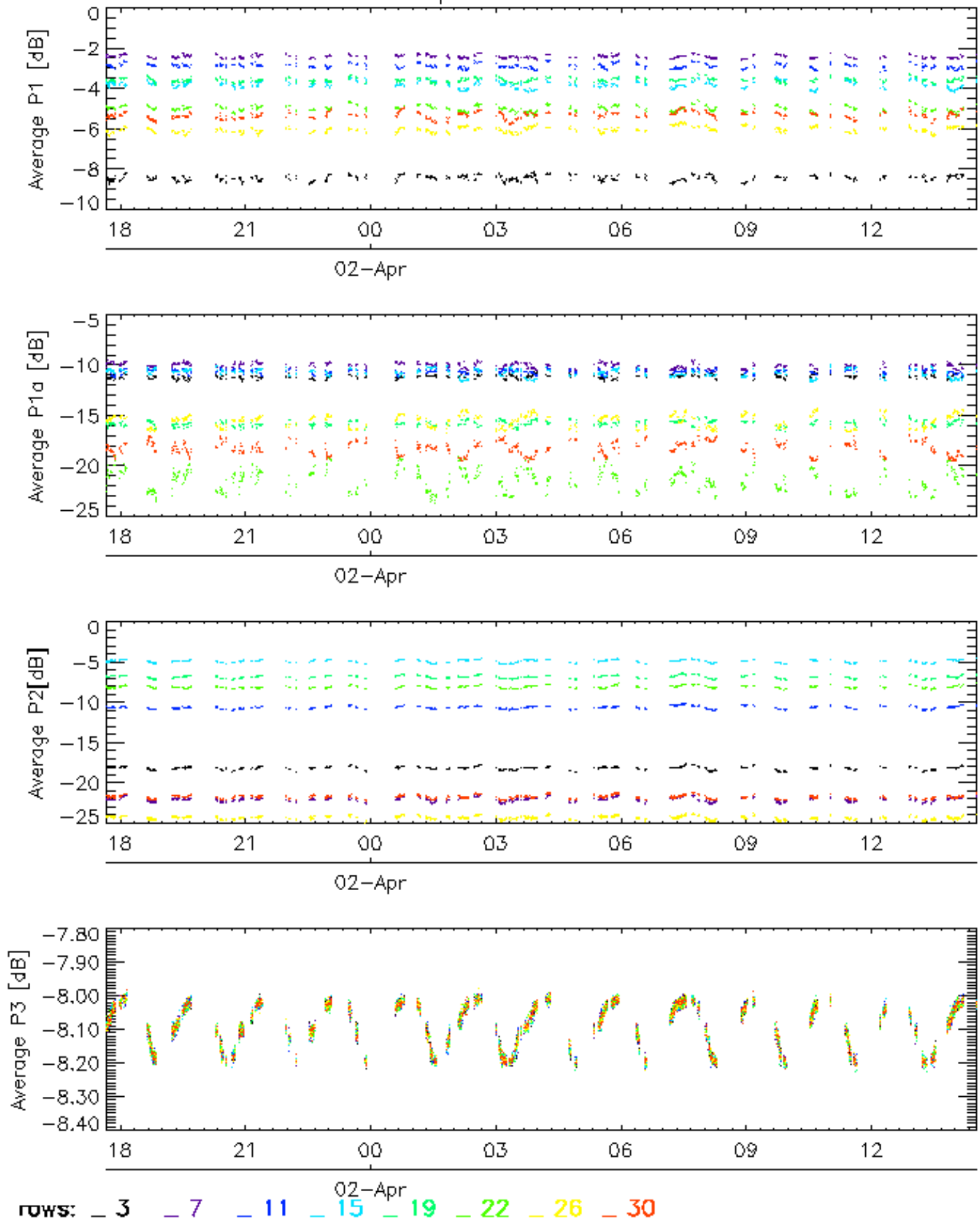
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

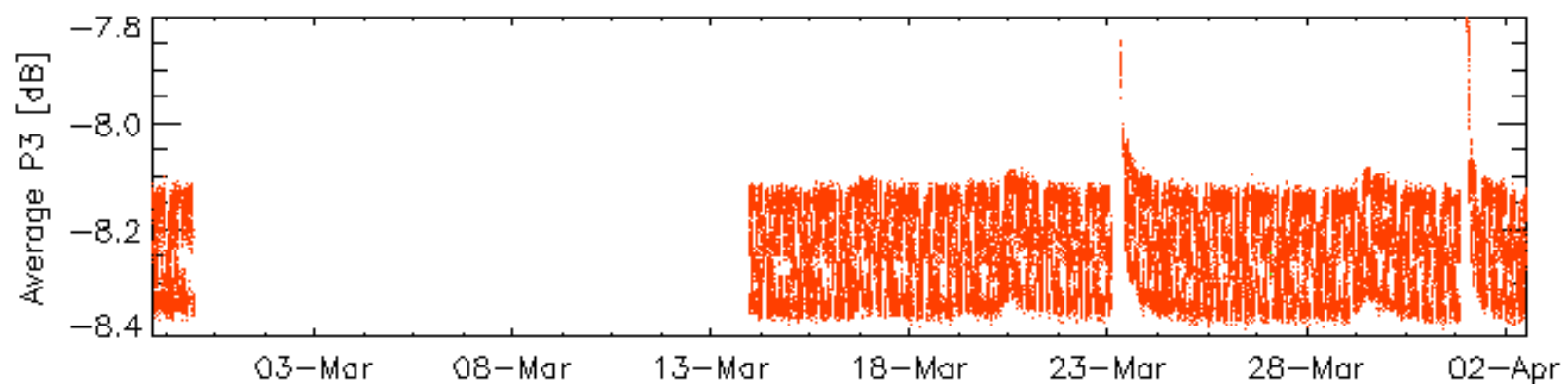
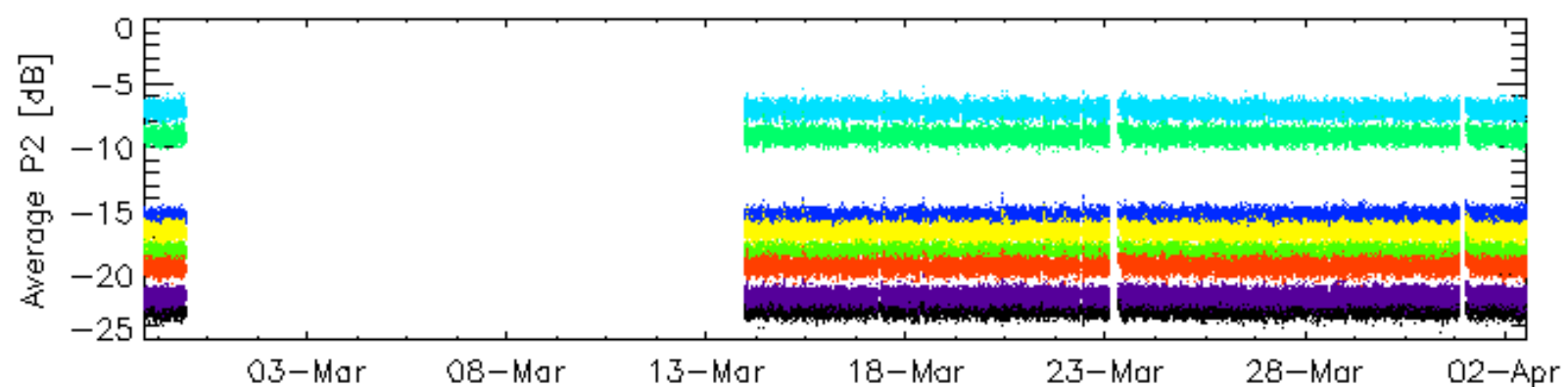
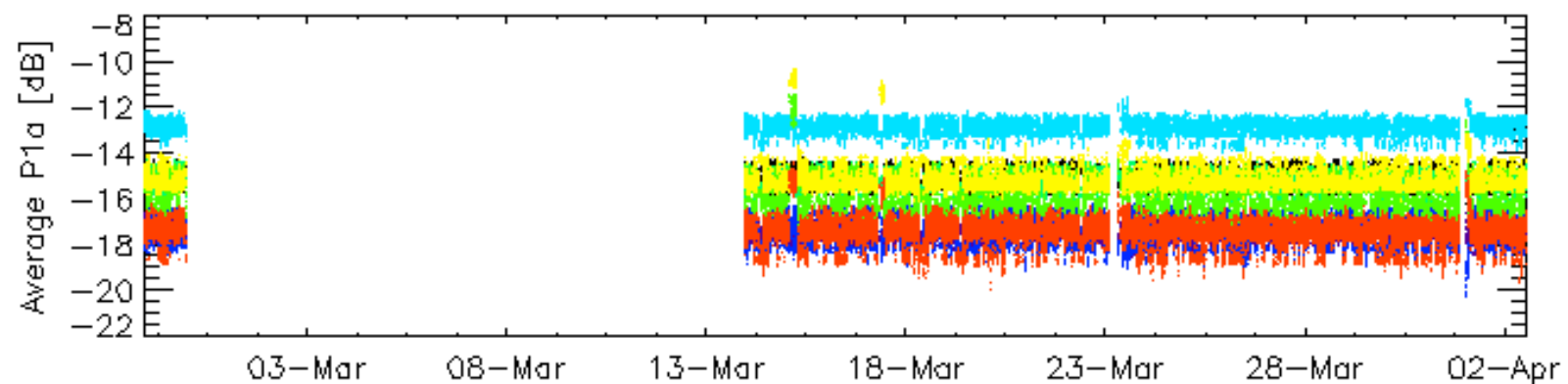
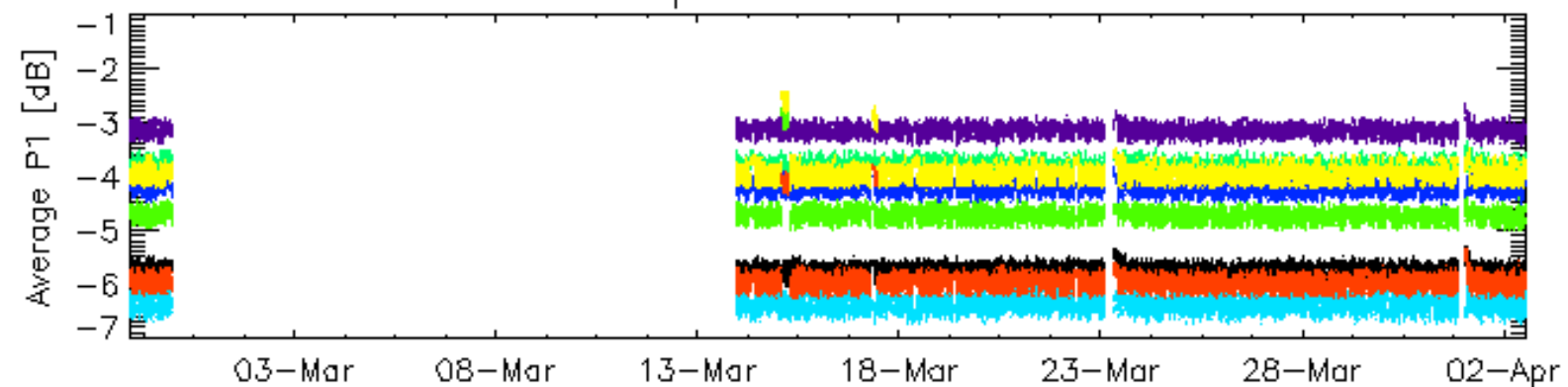


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

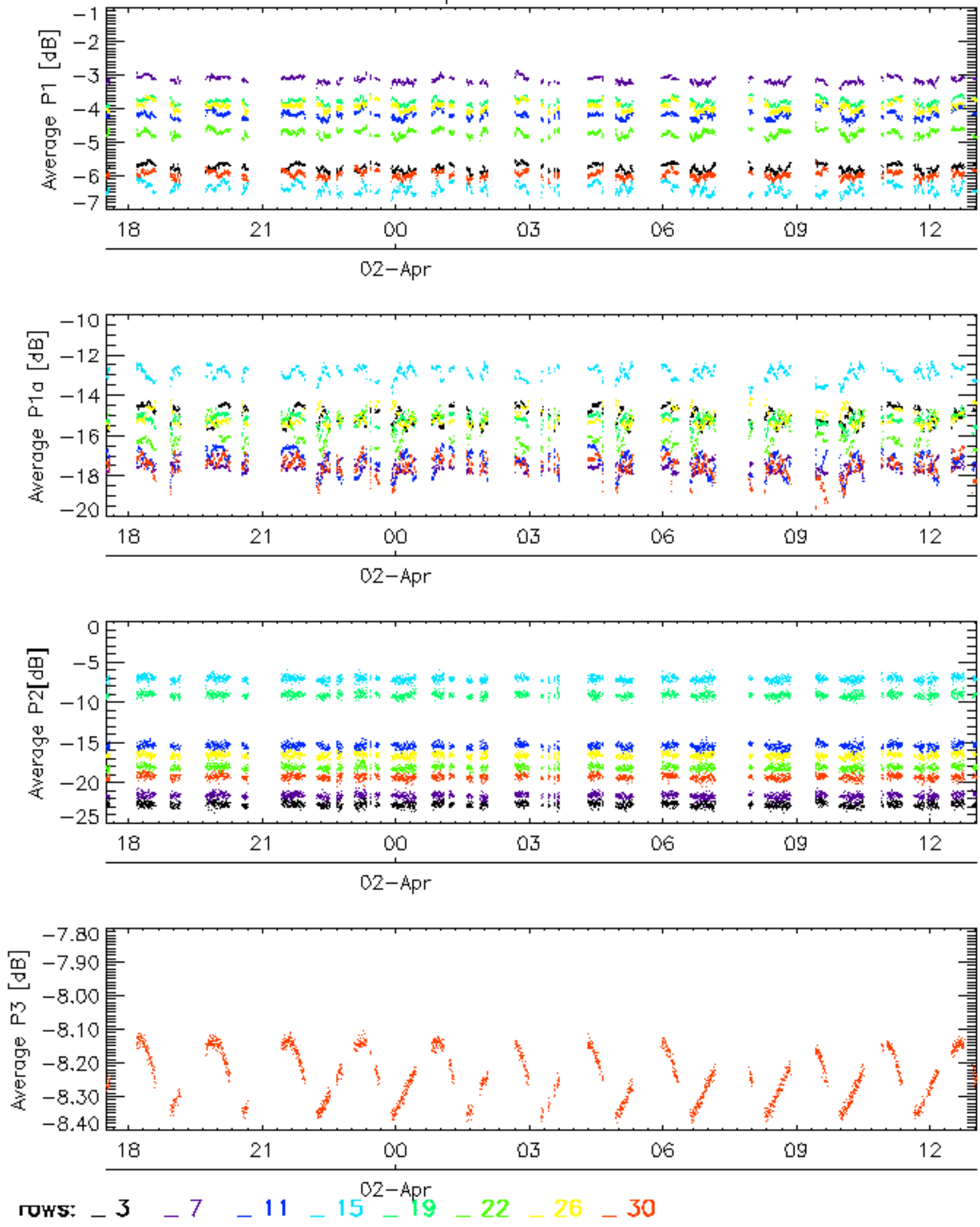


Cal pulses for WVS IS2

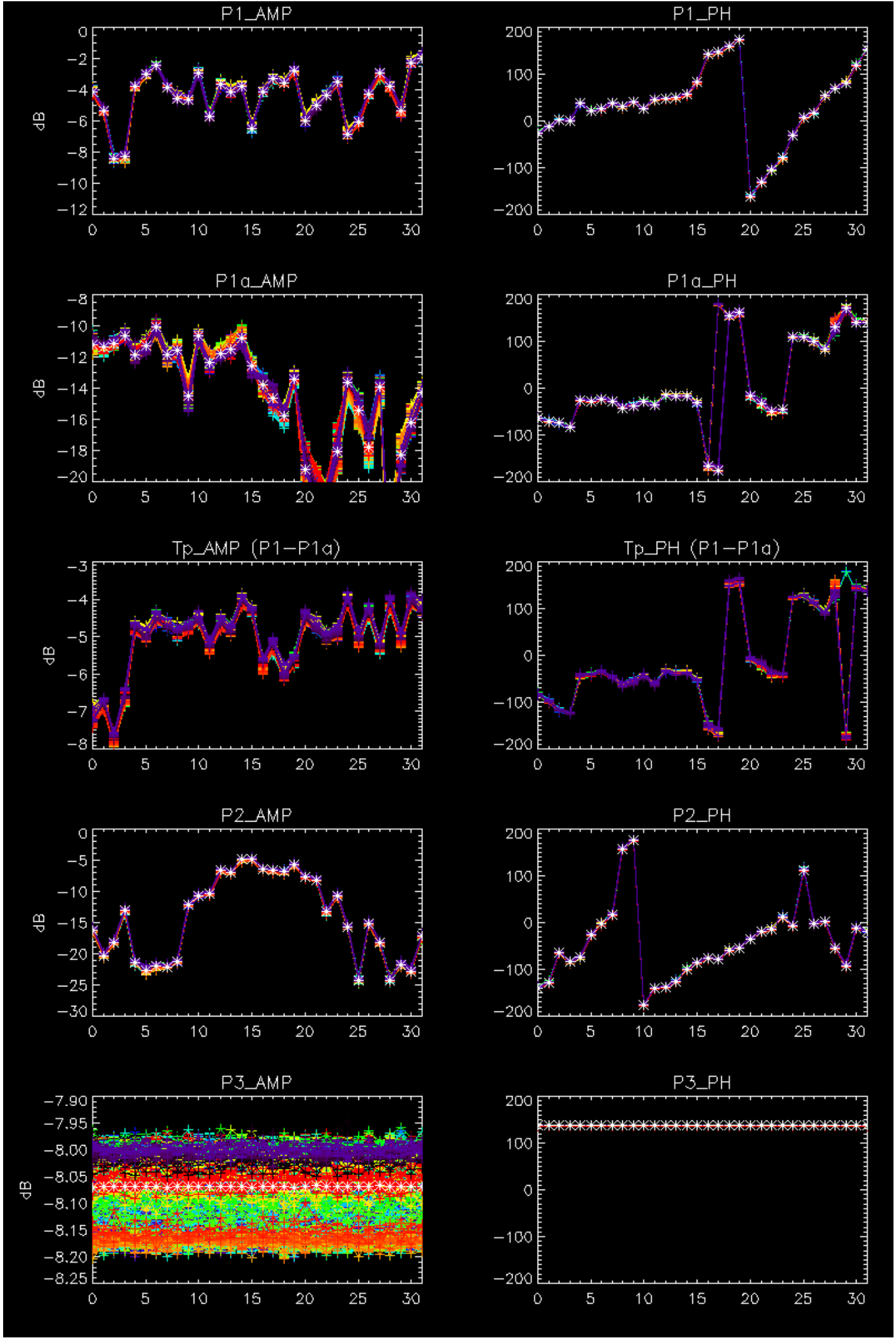


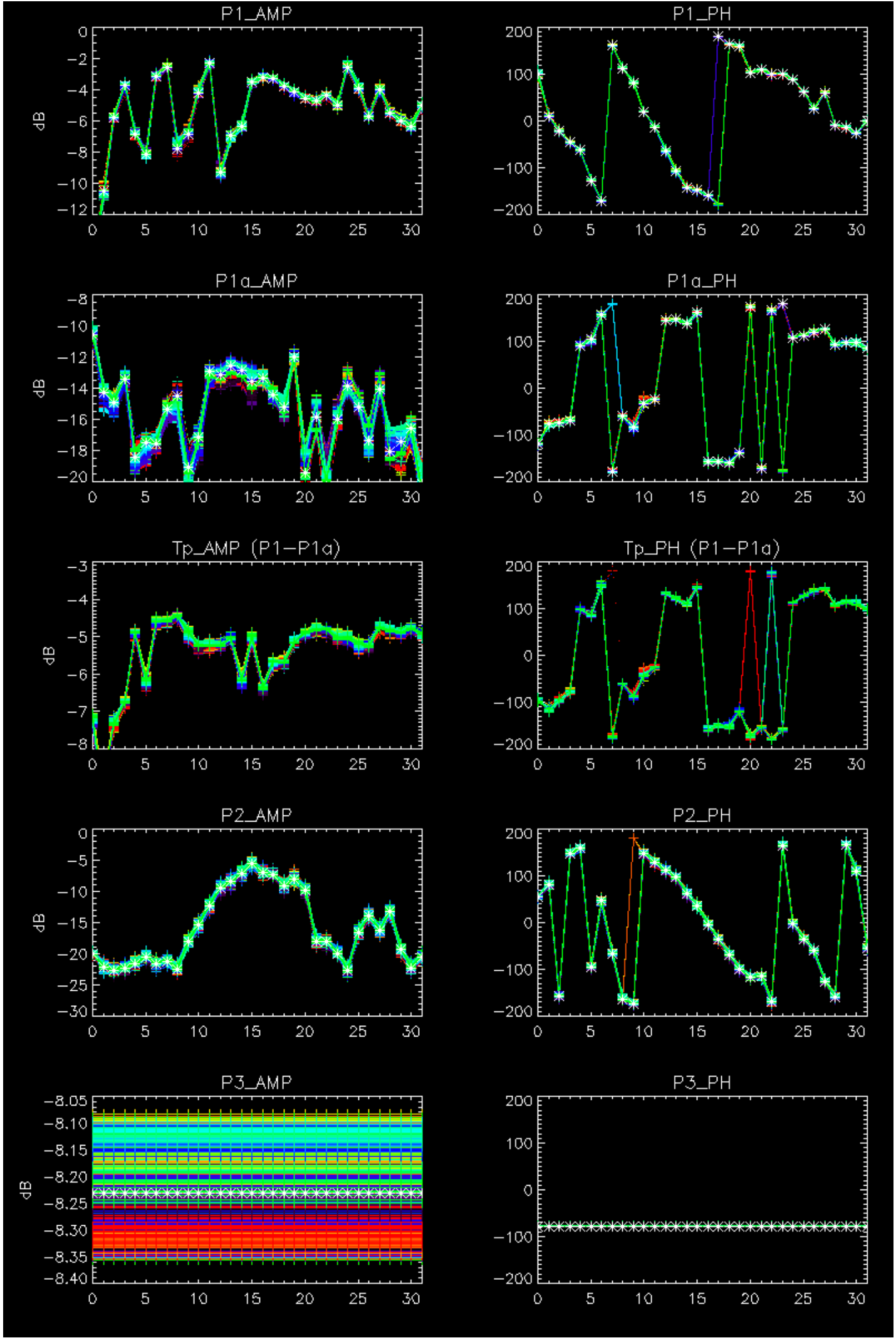
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



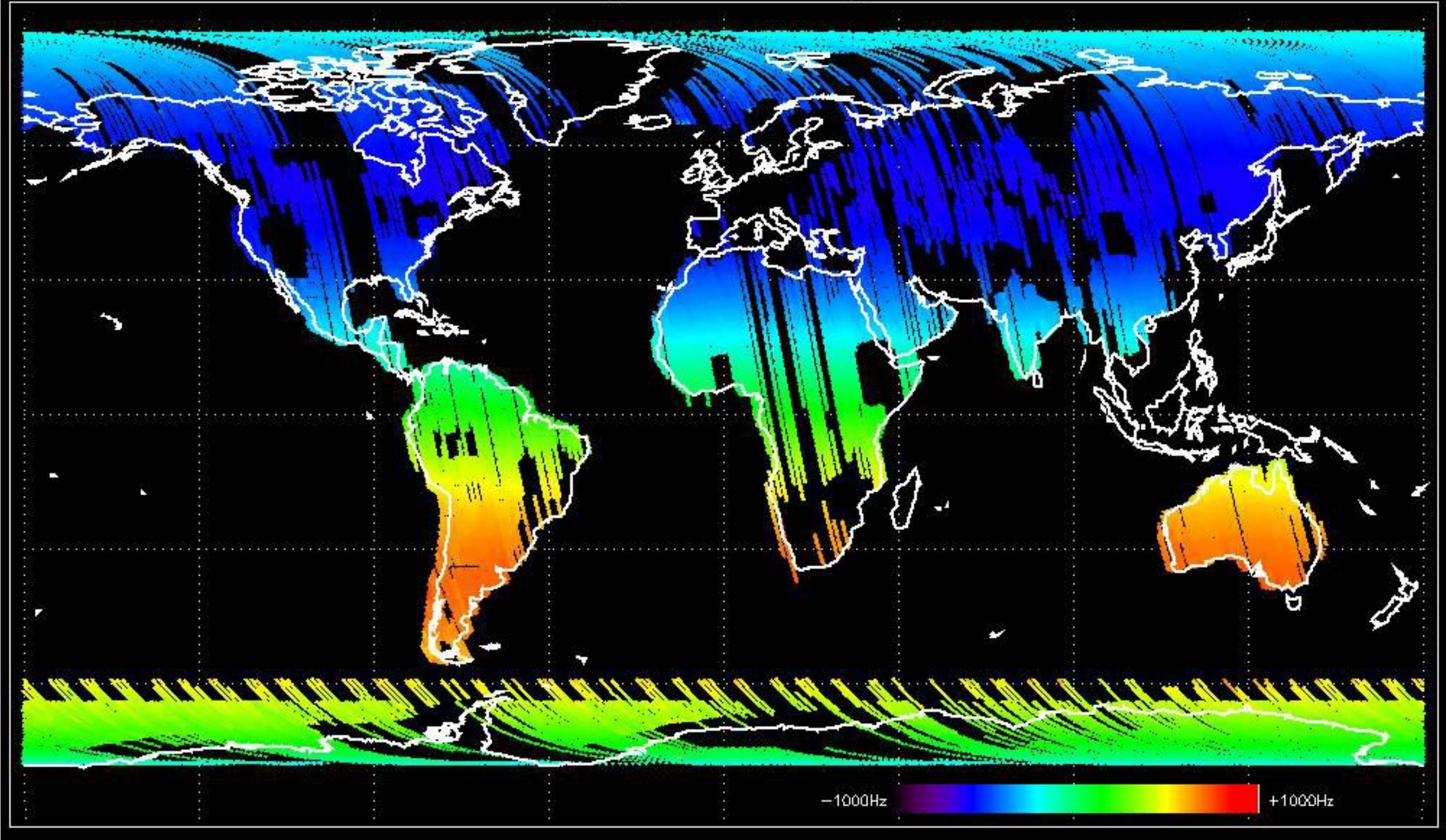
No anomalies observed.



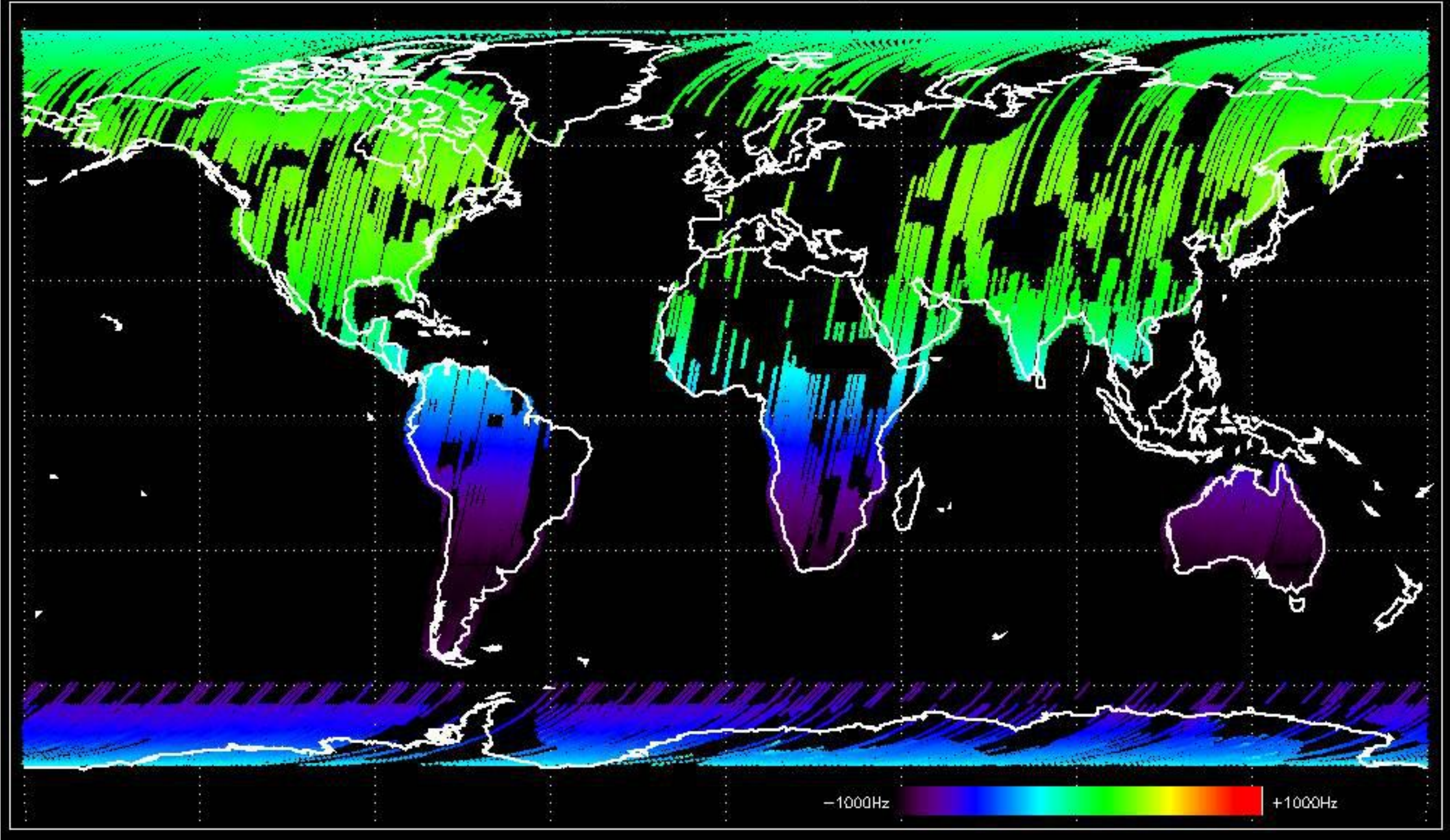


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

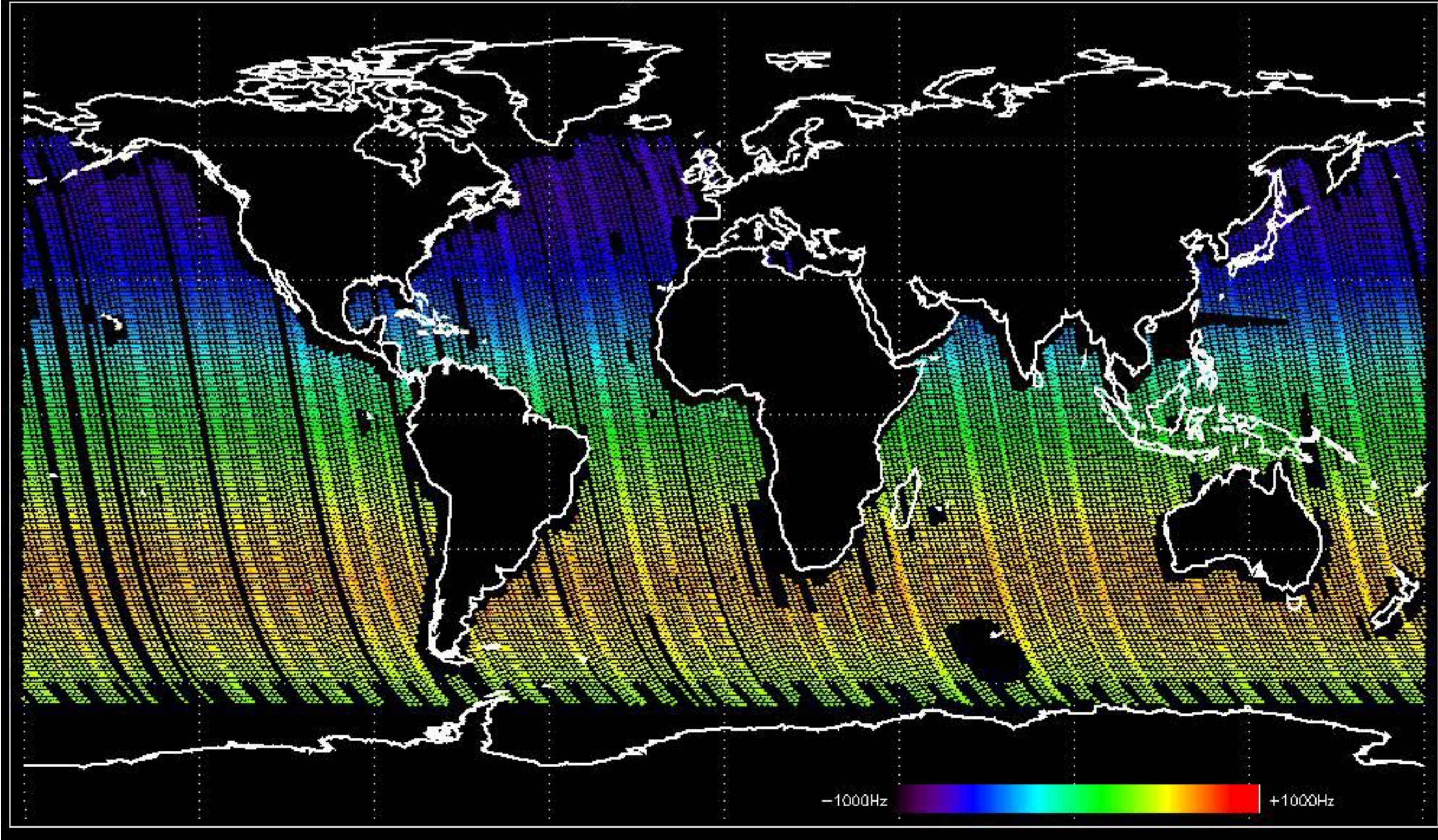
Doppler 'GM1' 'SS1' ascending



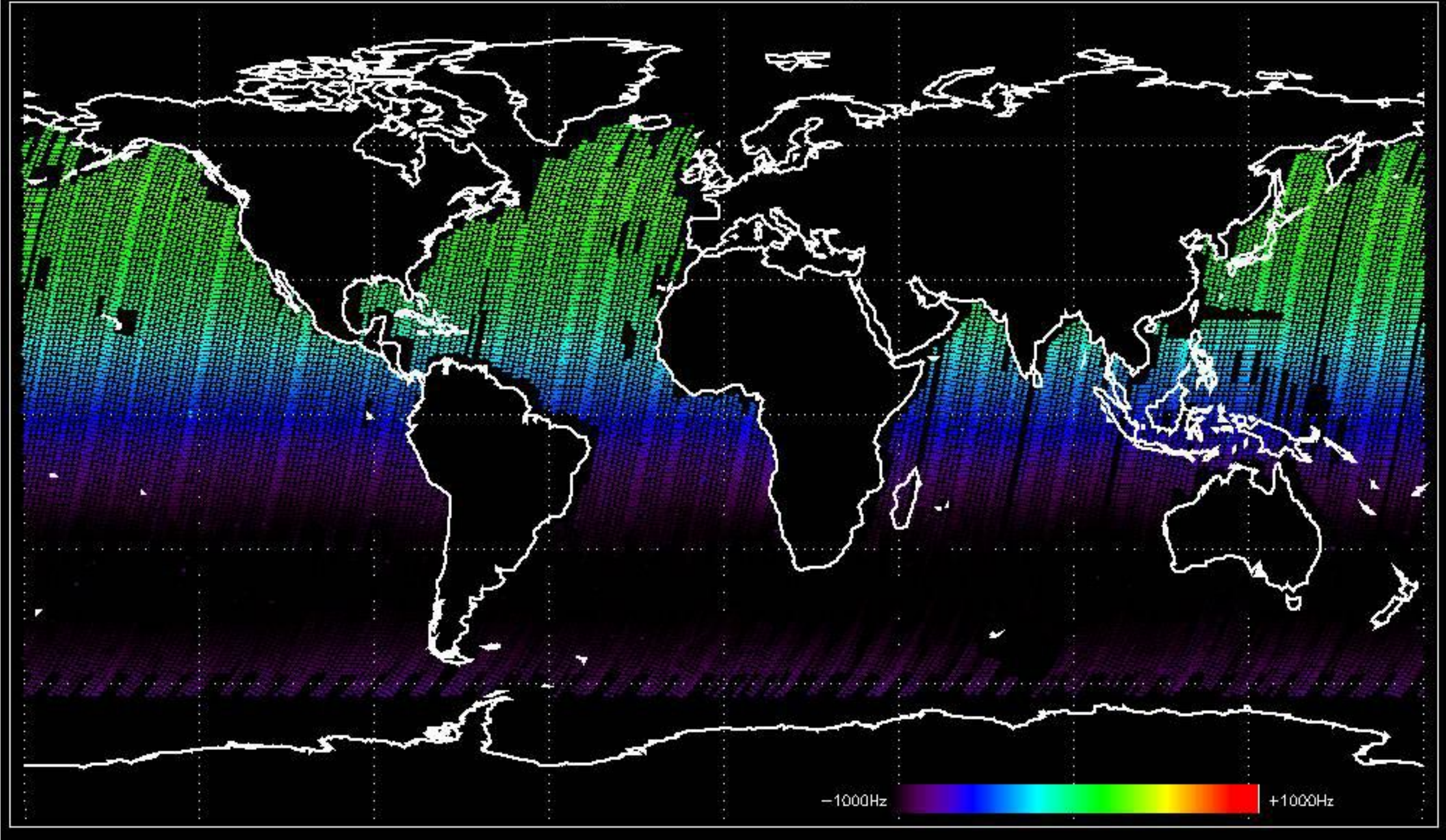
Doppler 'GM1' 'SS1' descending



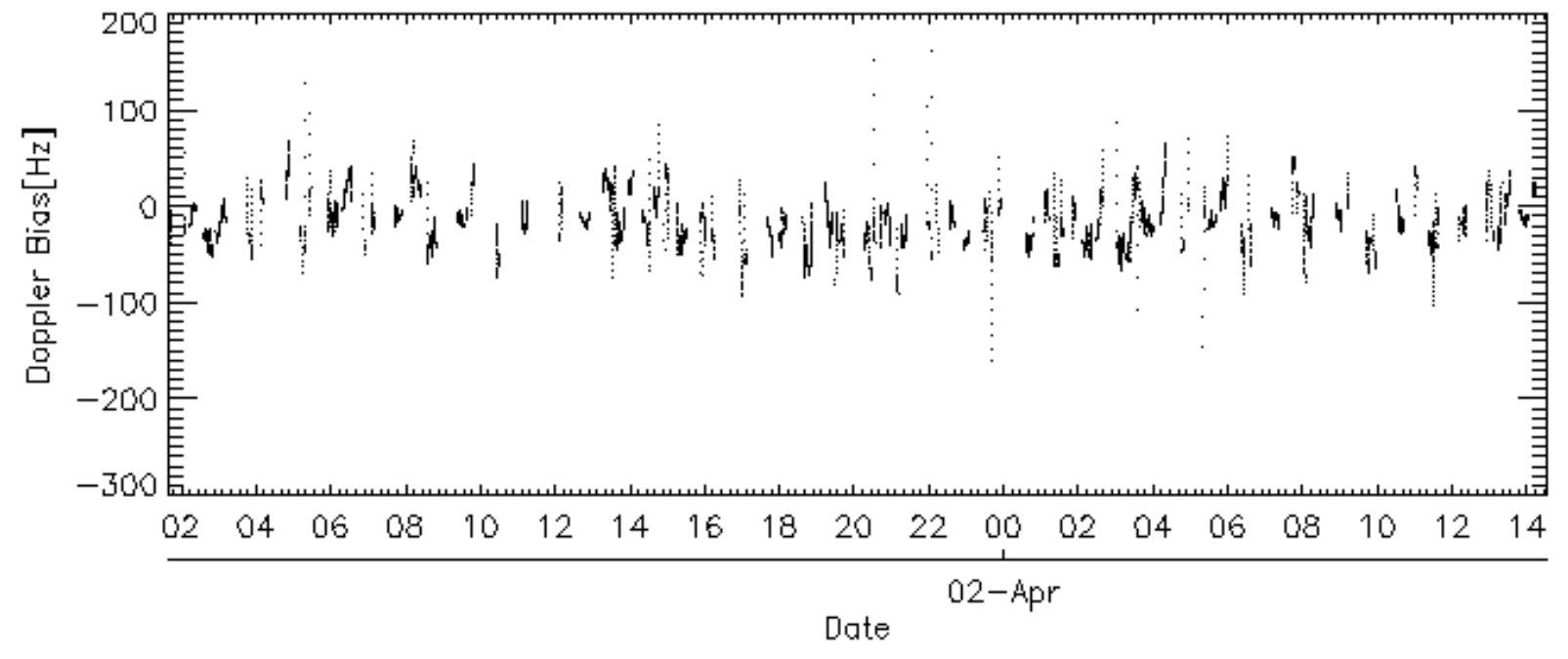
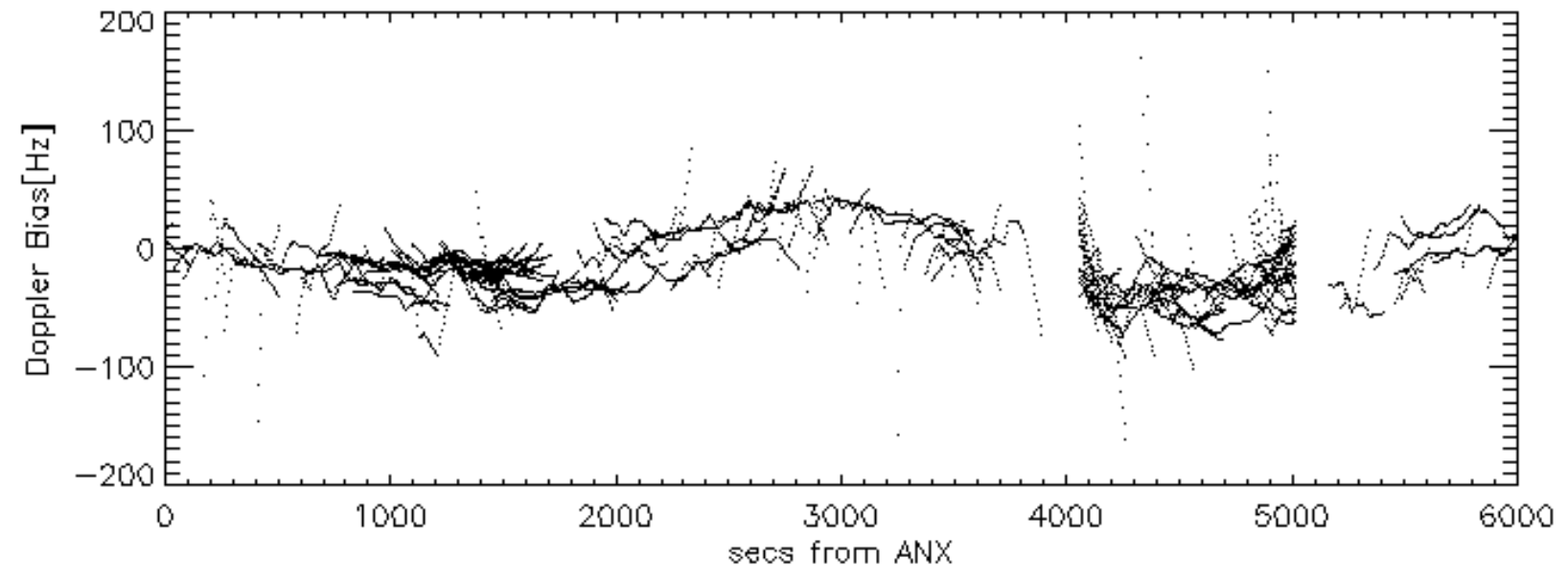
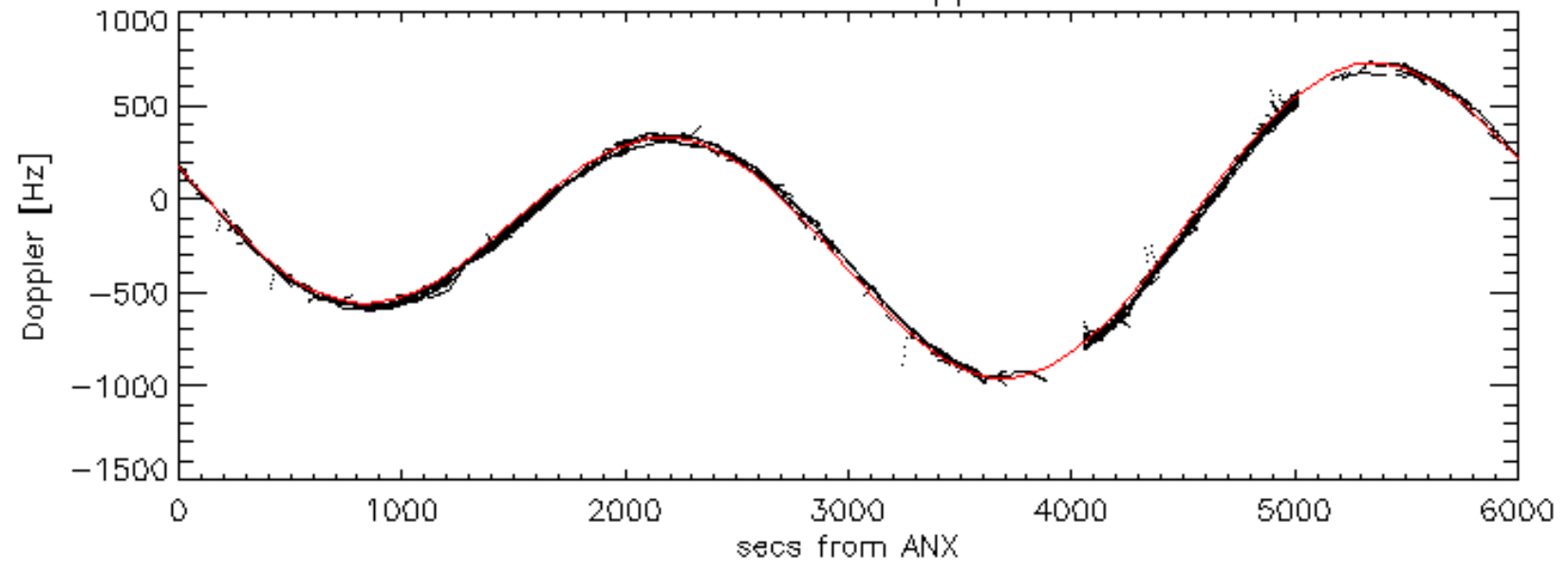
Doppler 'WVS' 'IS2' ascending

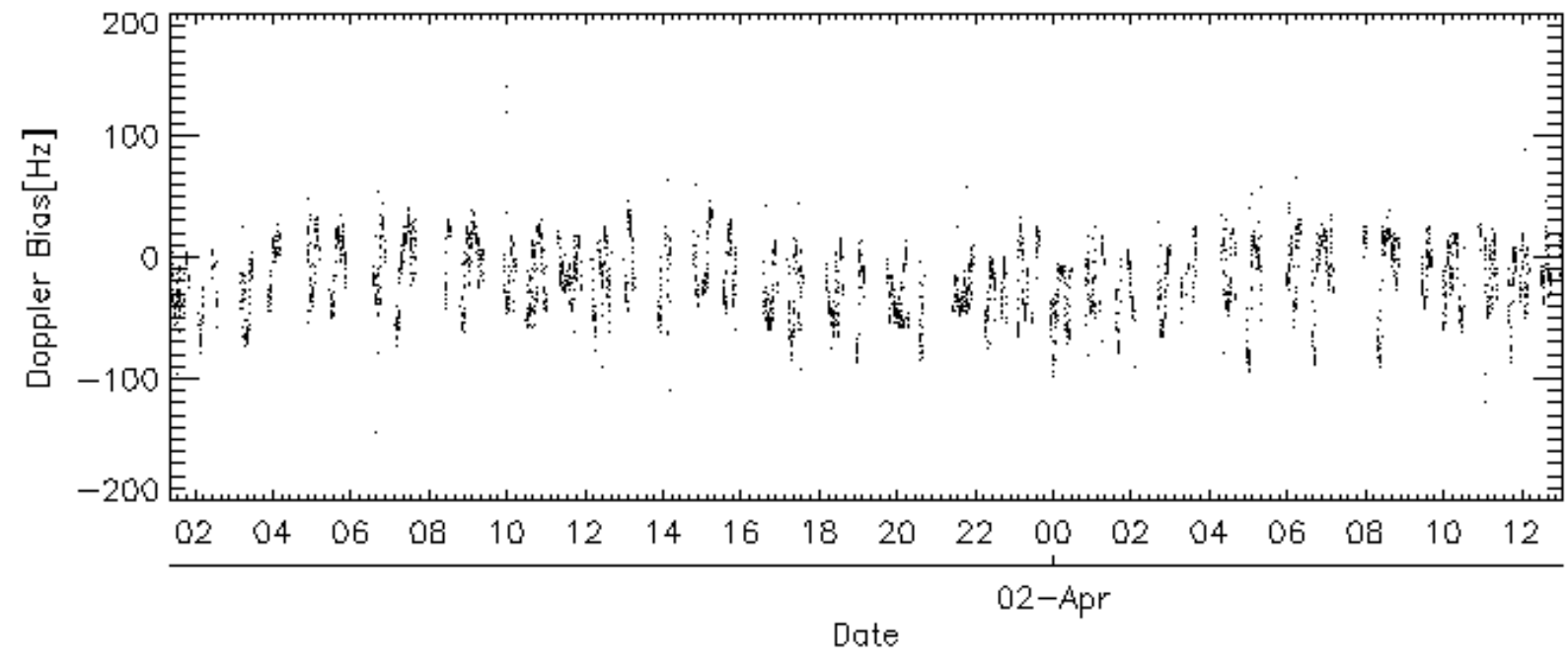
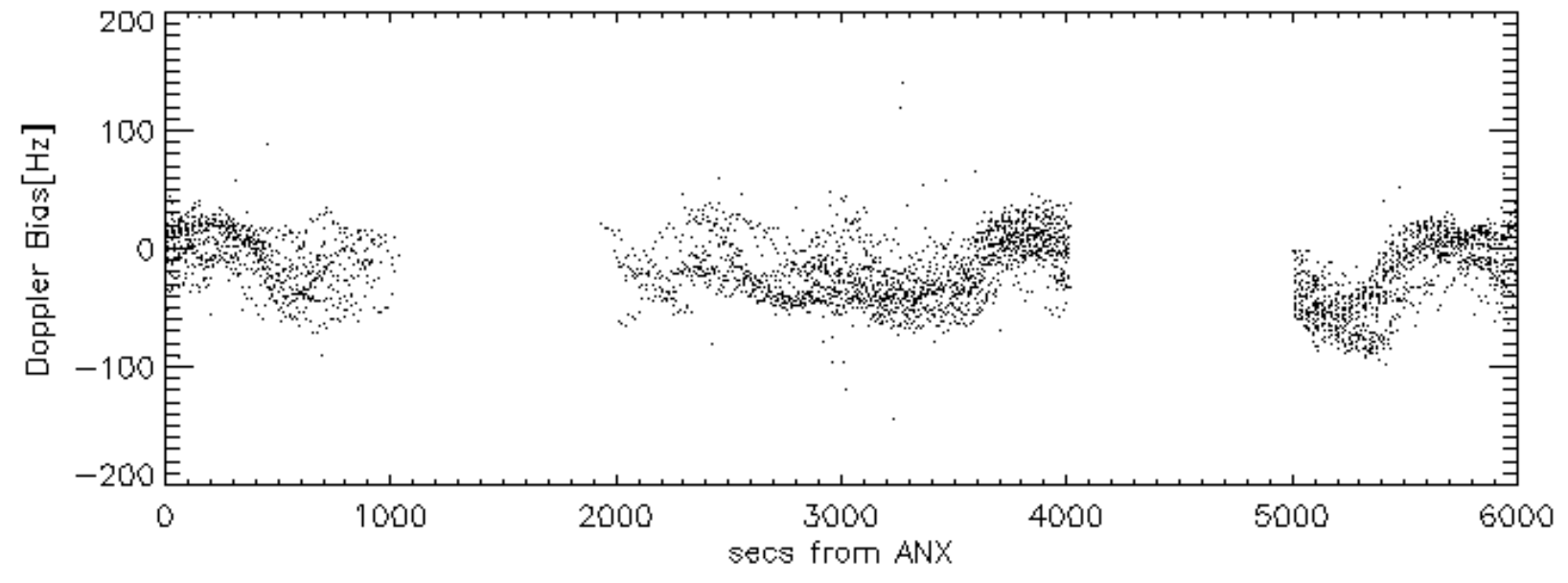
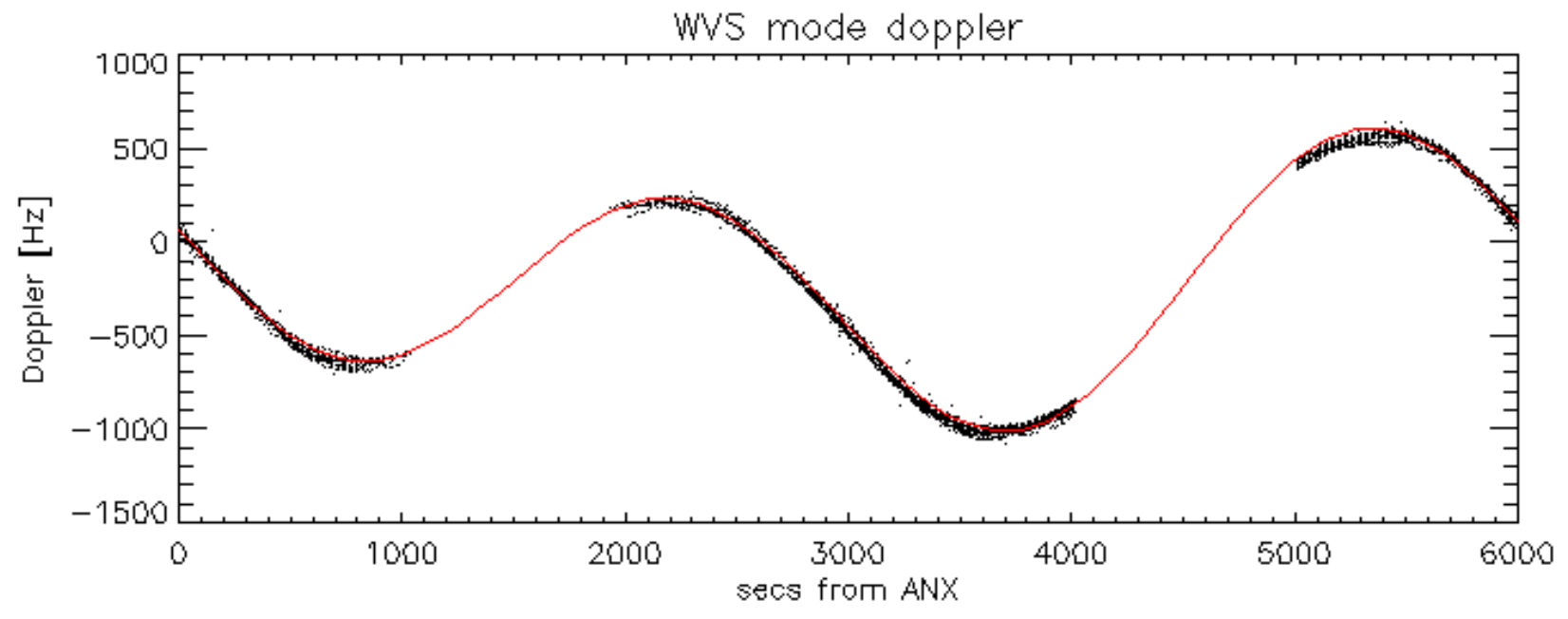


Doppler 'WVS' 'IS2' descending

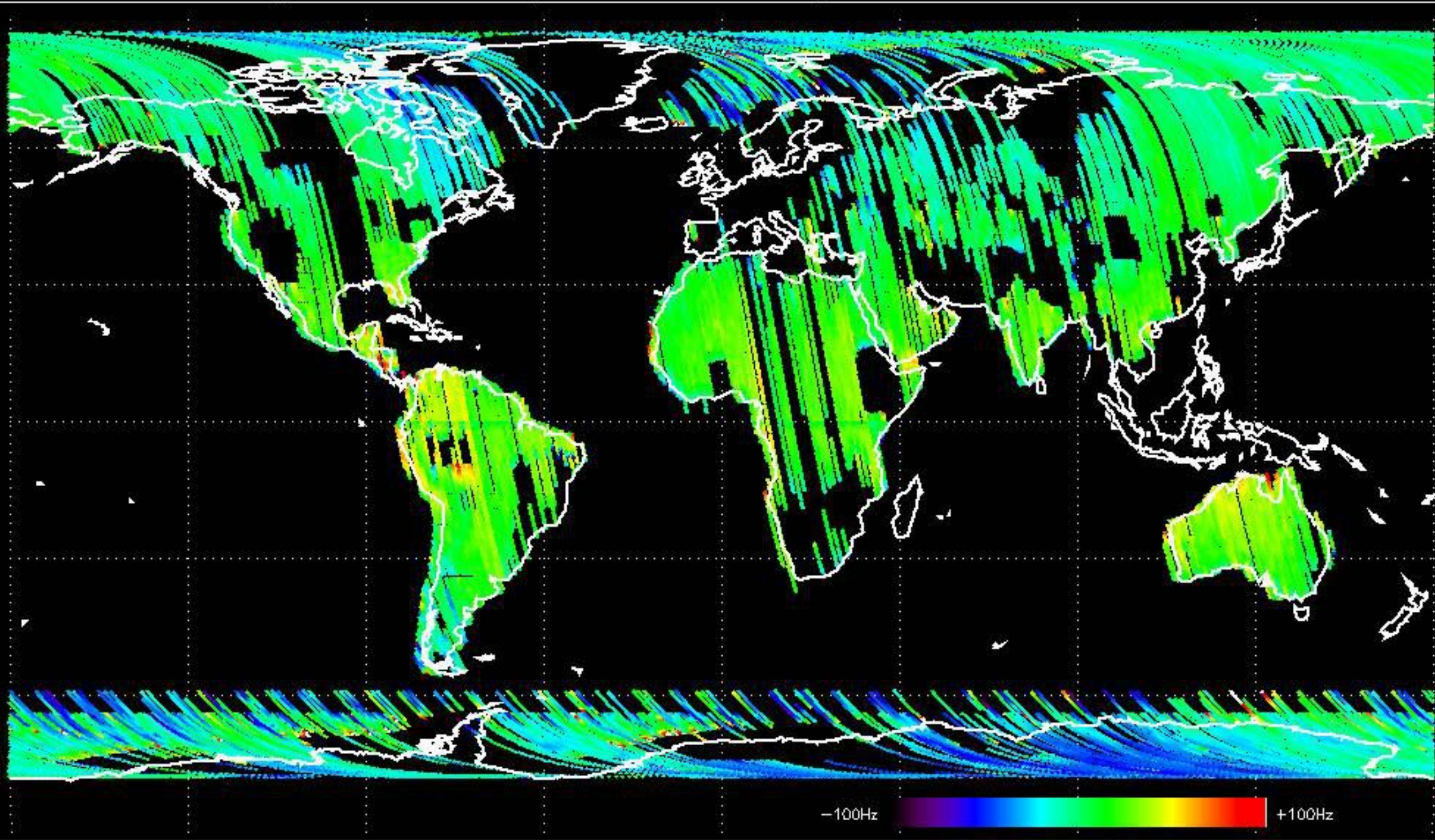


GM1 mode doppler

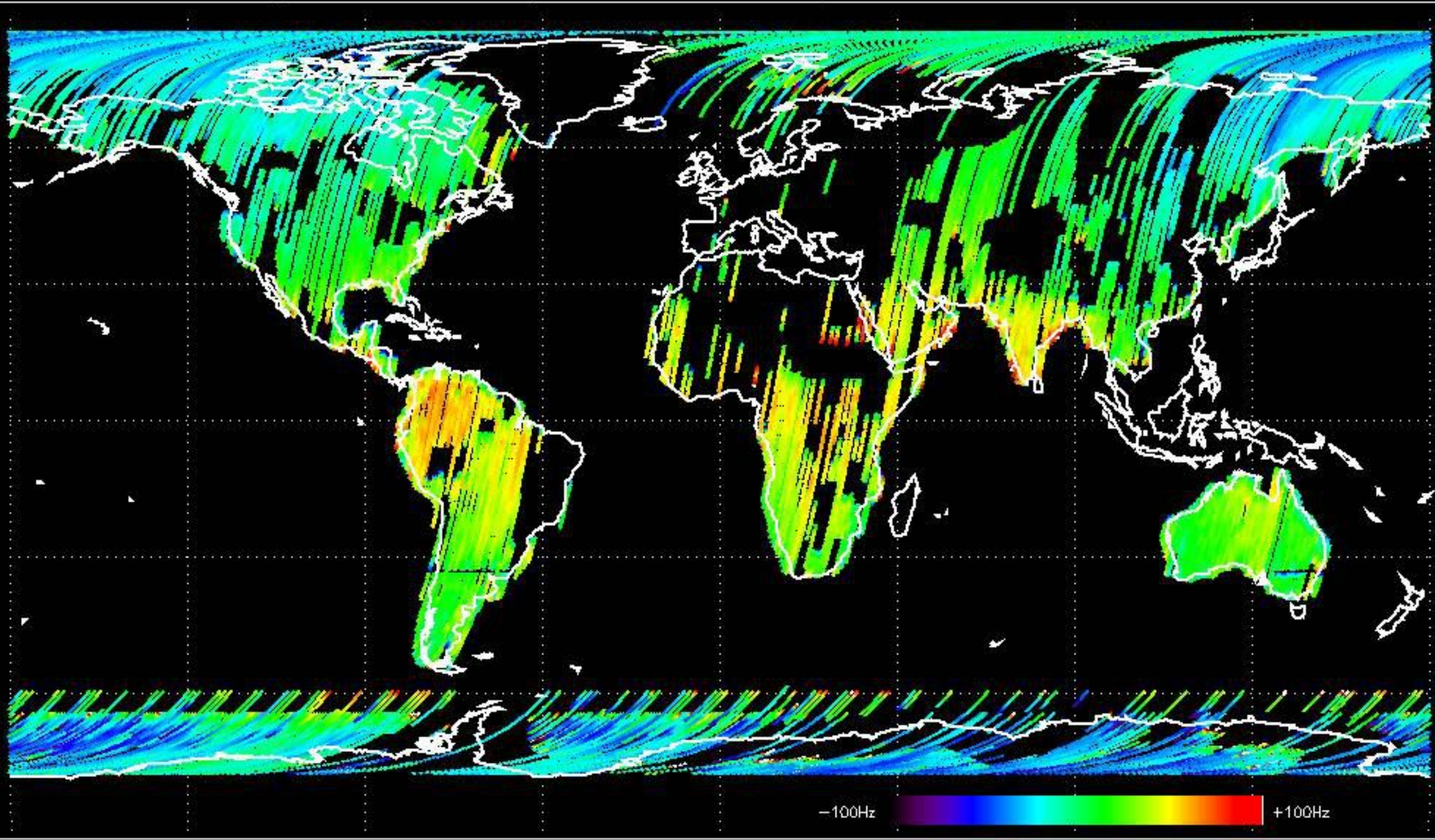




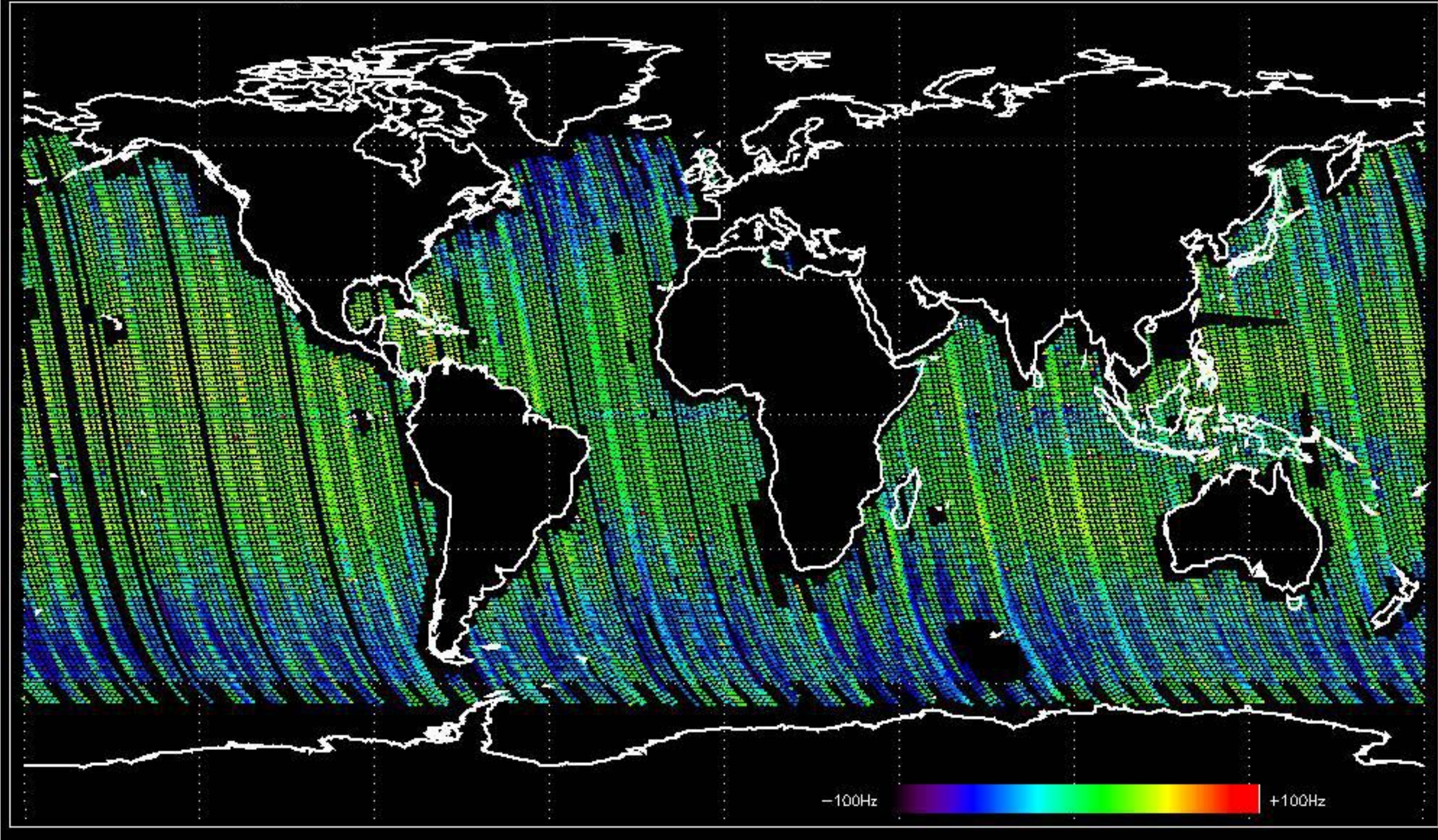
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.951354 Hz



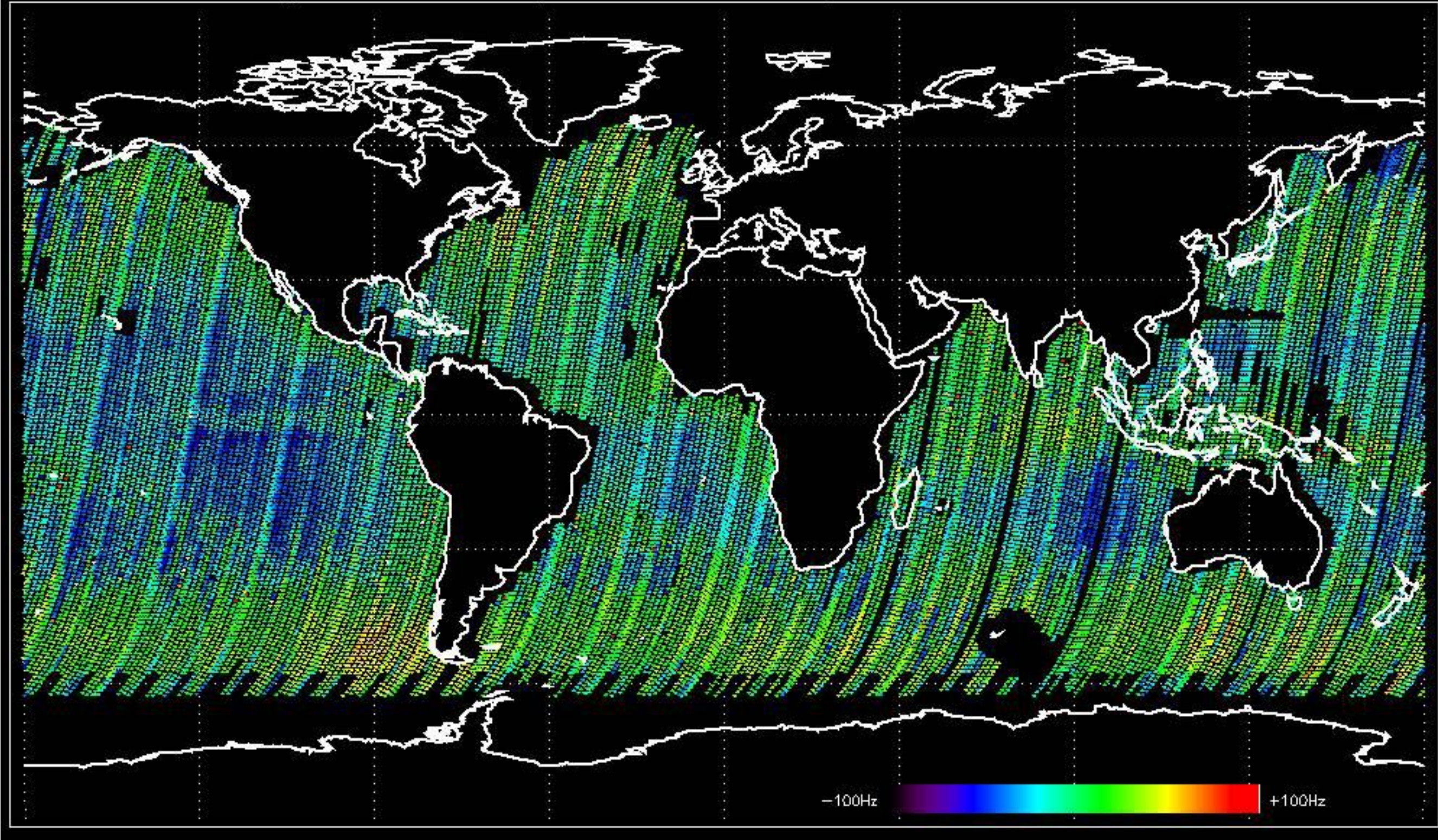
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.612117 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -16.474744 Hz

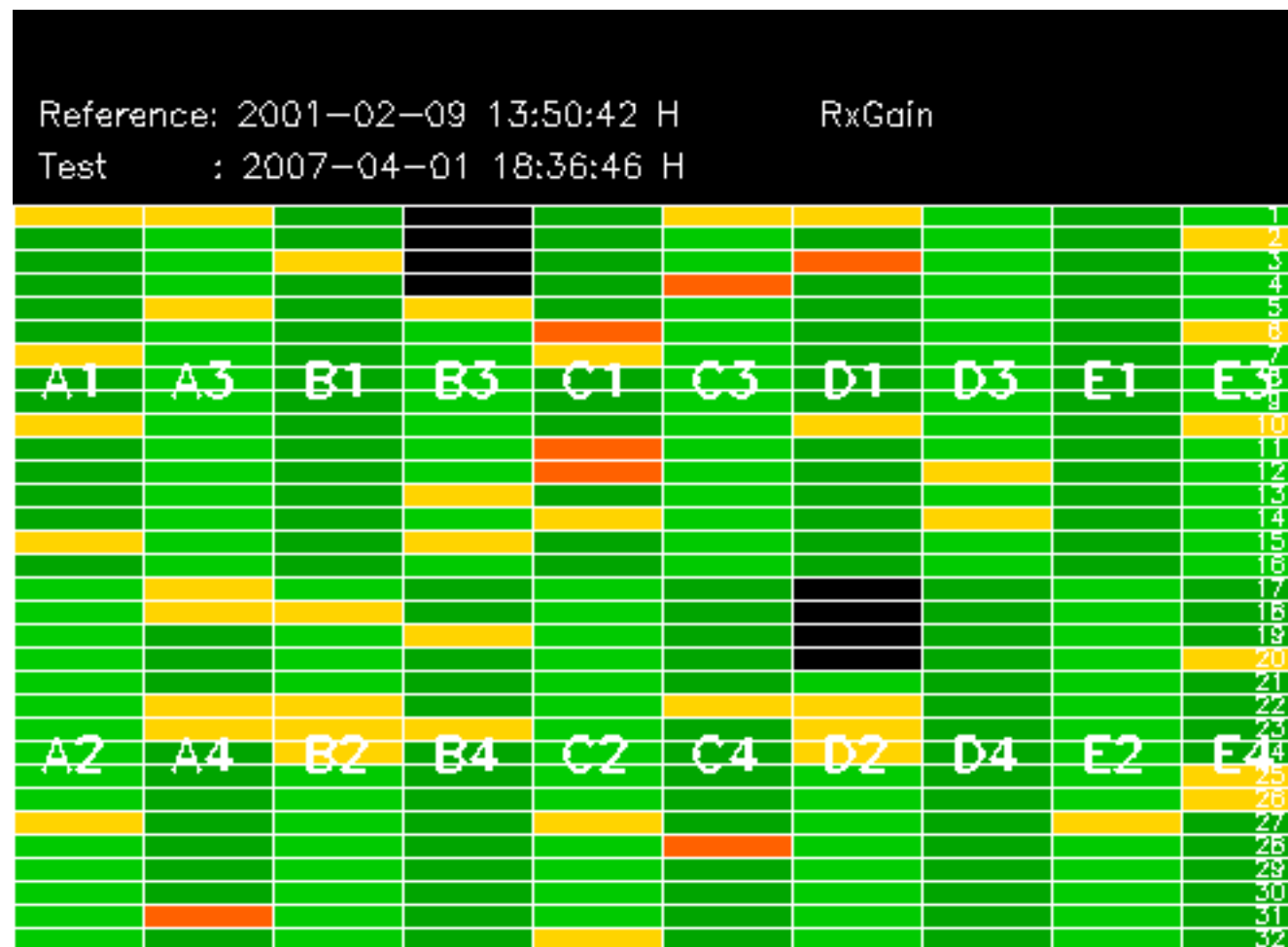


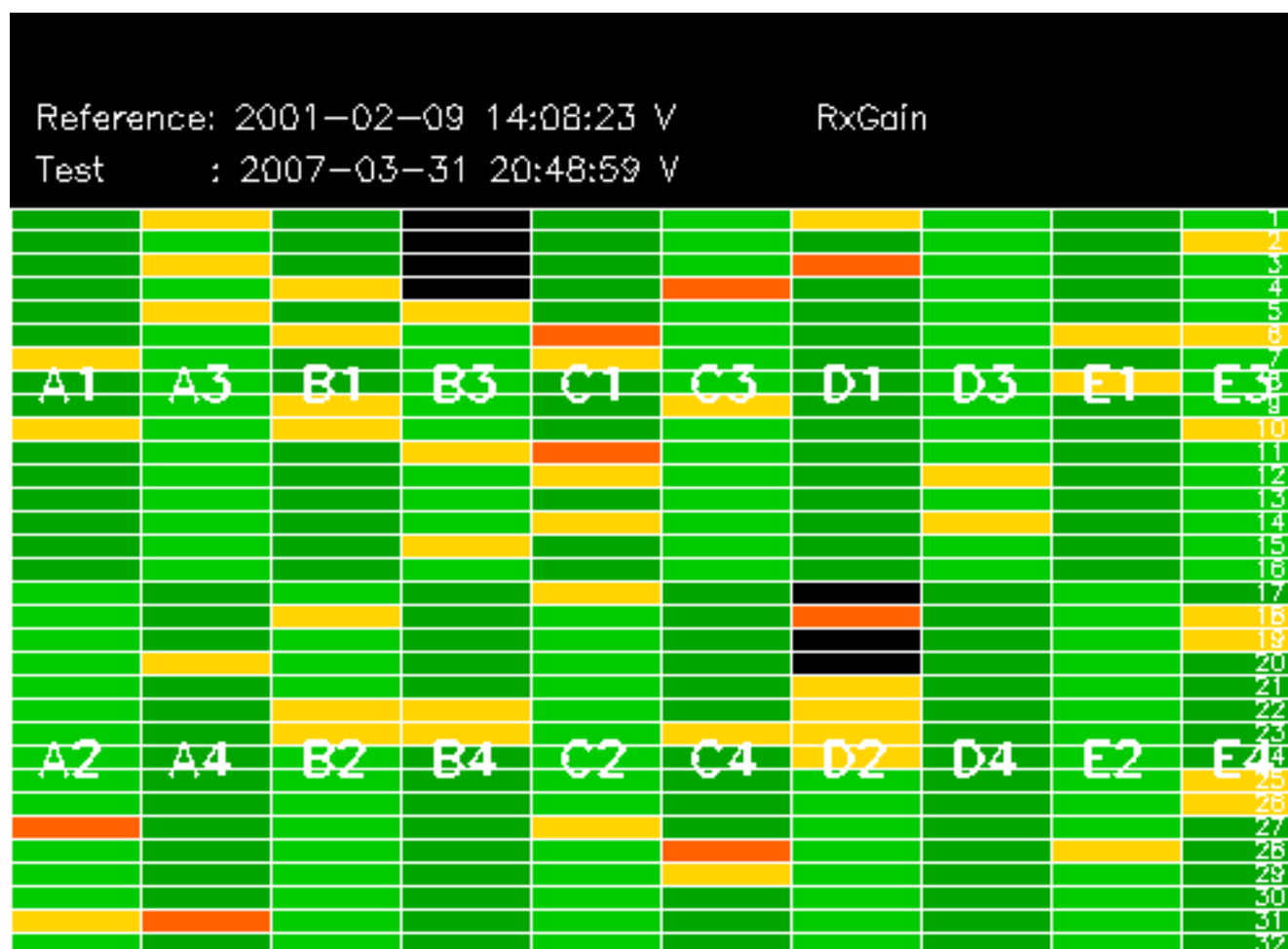
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.199084 Hz

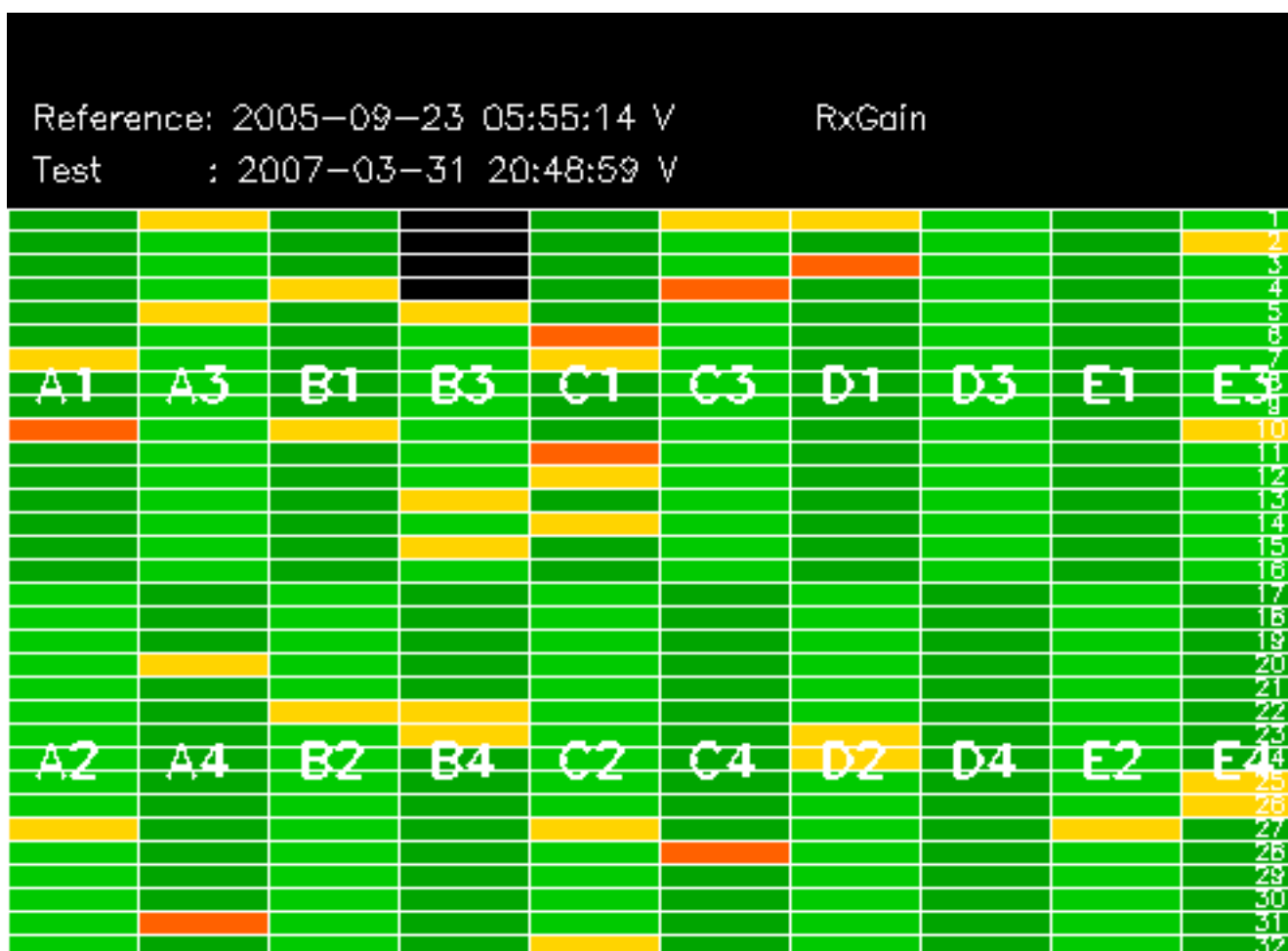


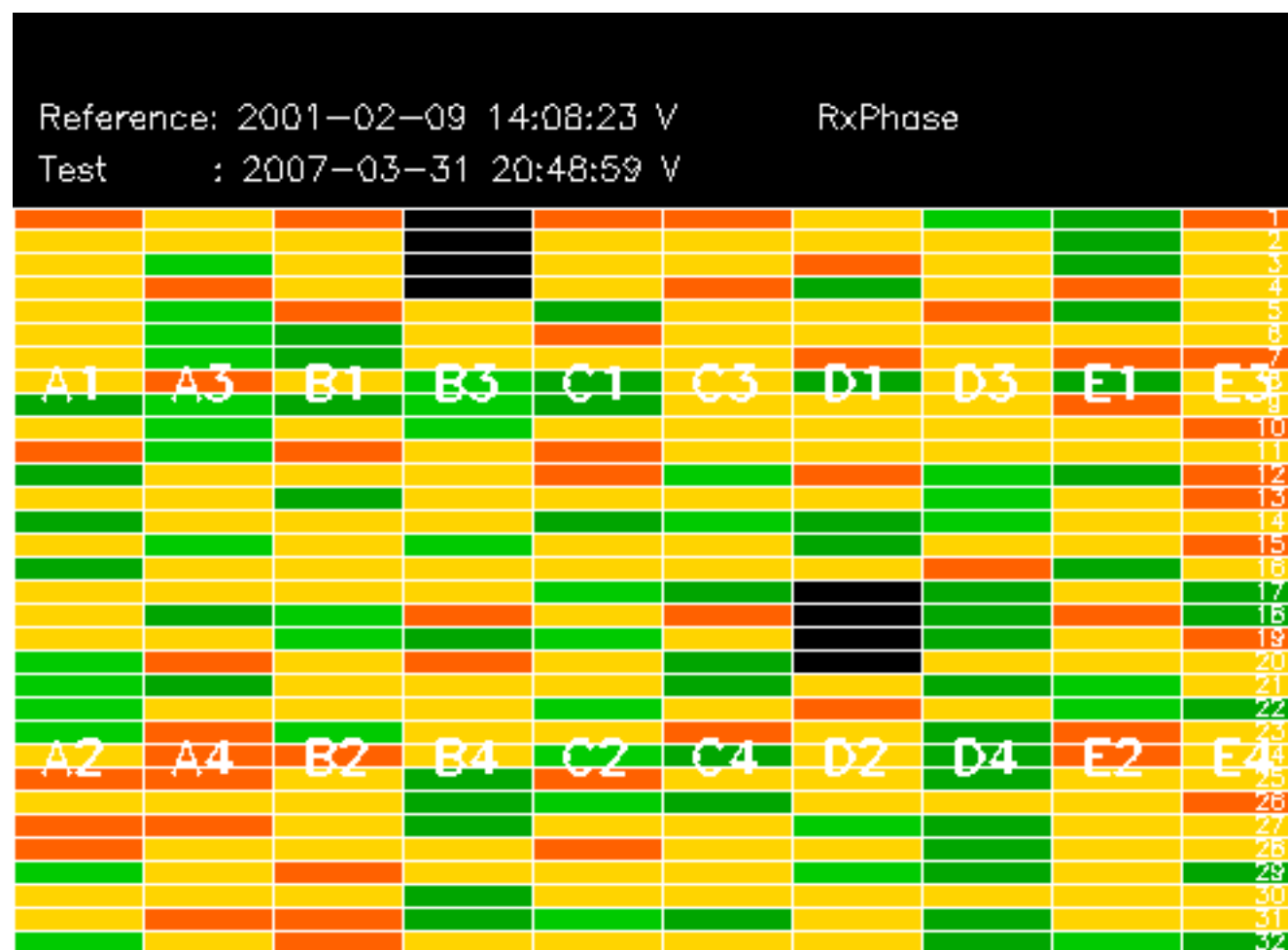
No anomalies observed on available MS products:

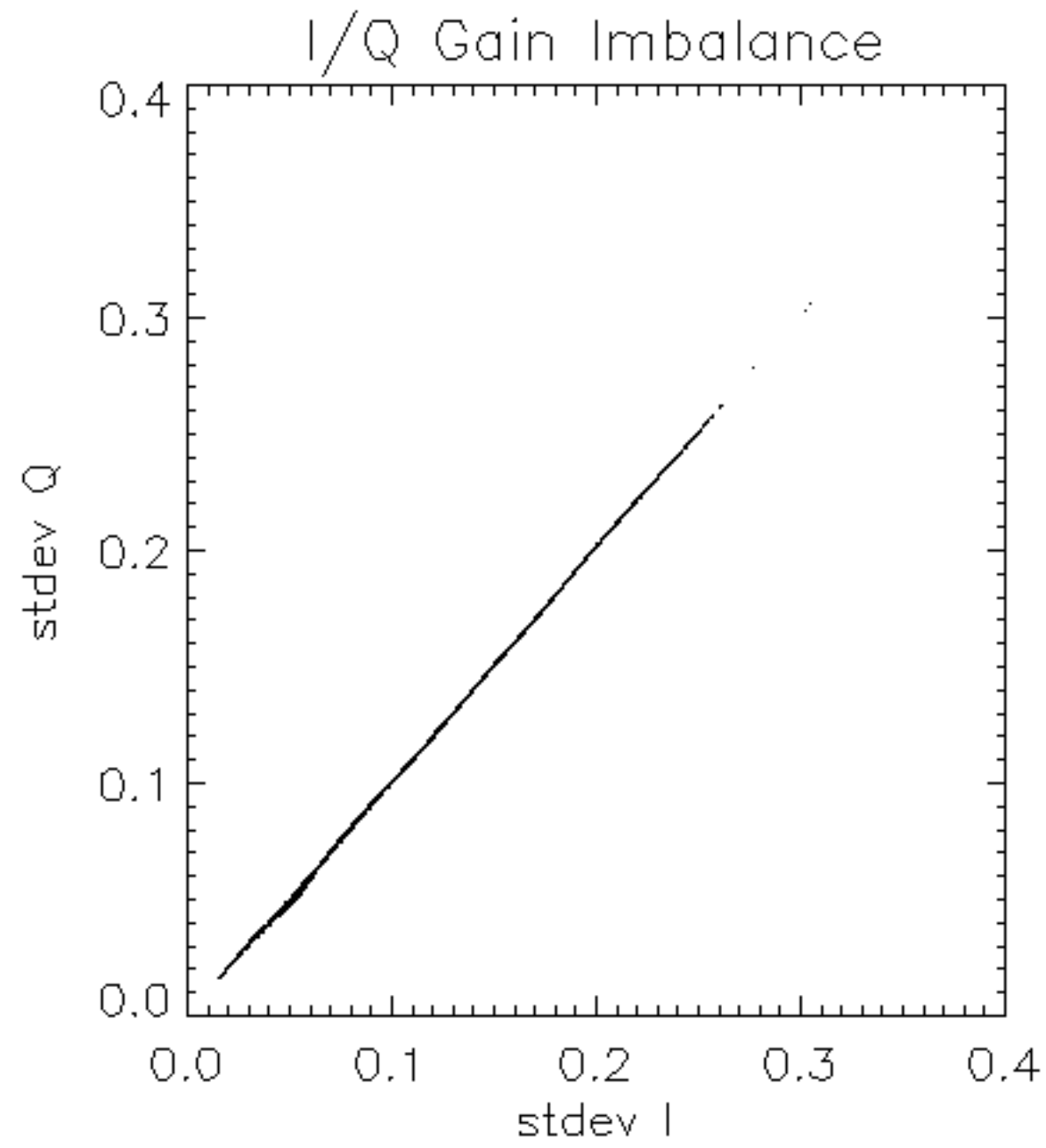
No anomalies observed.

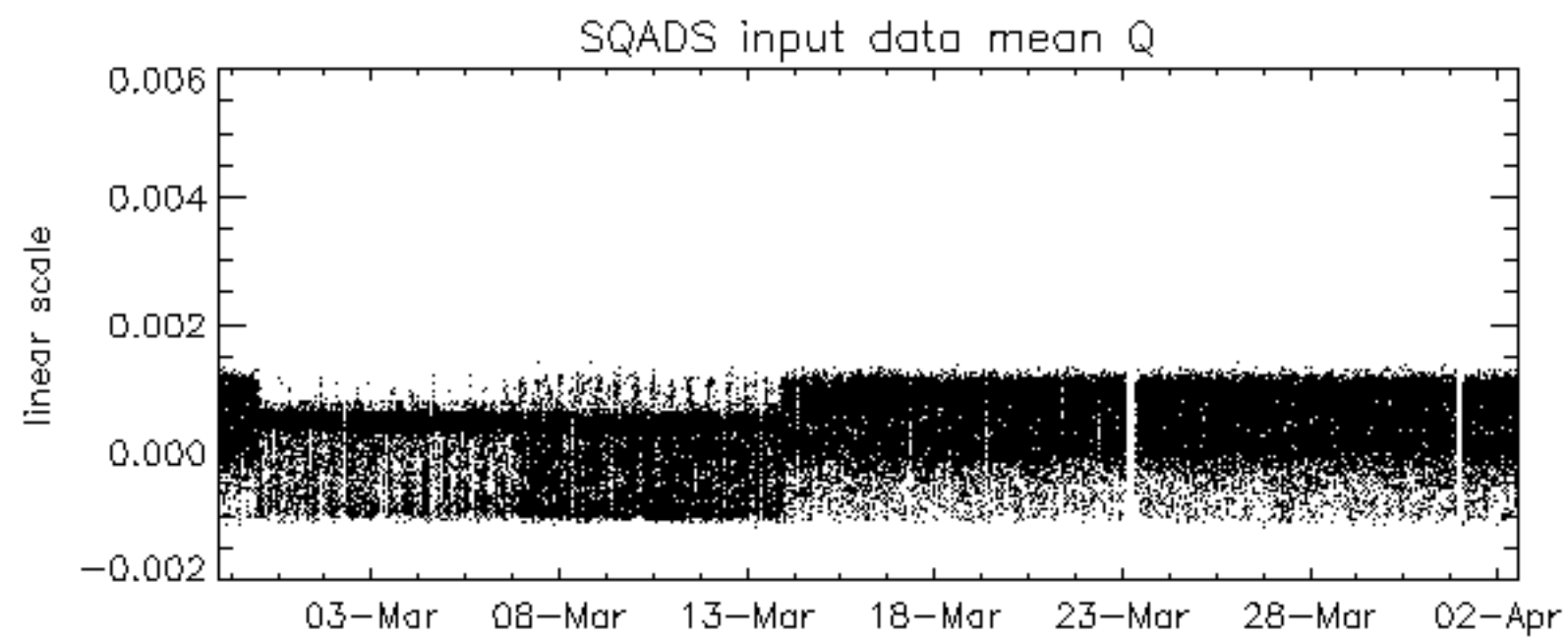
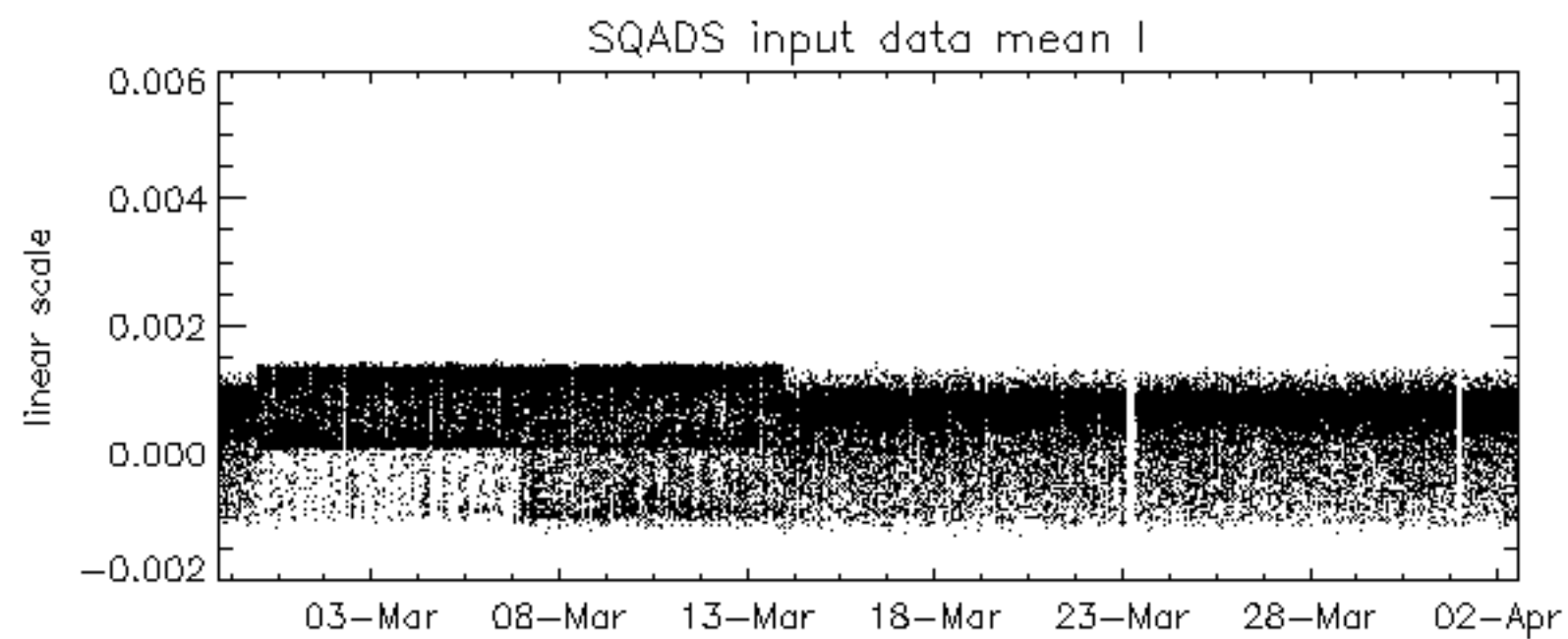
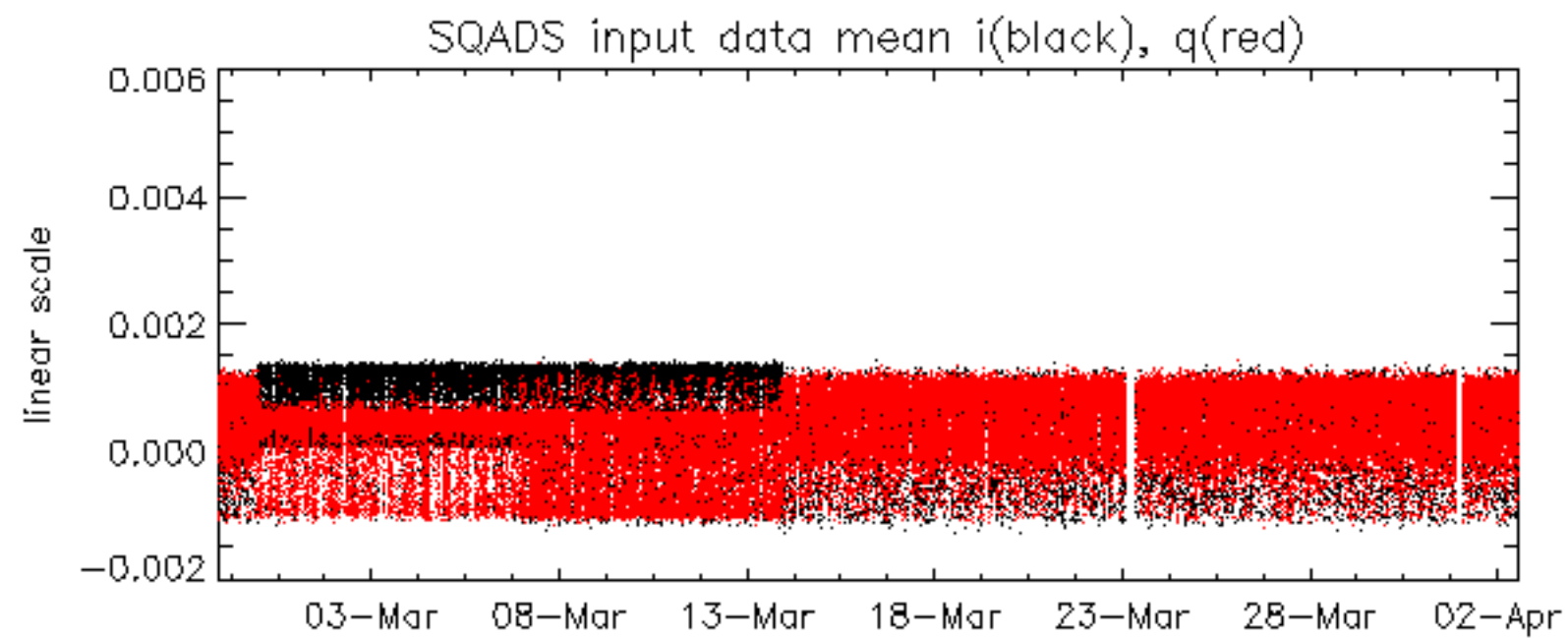


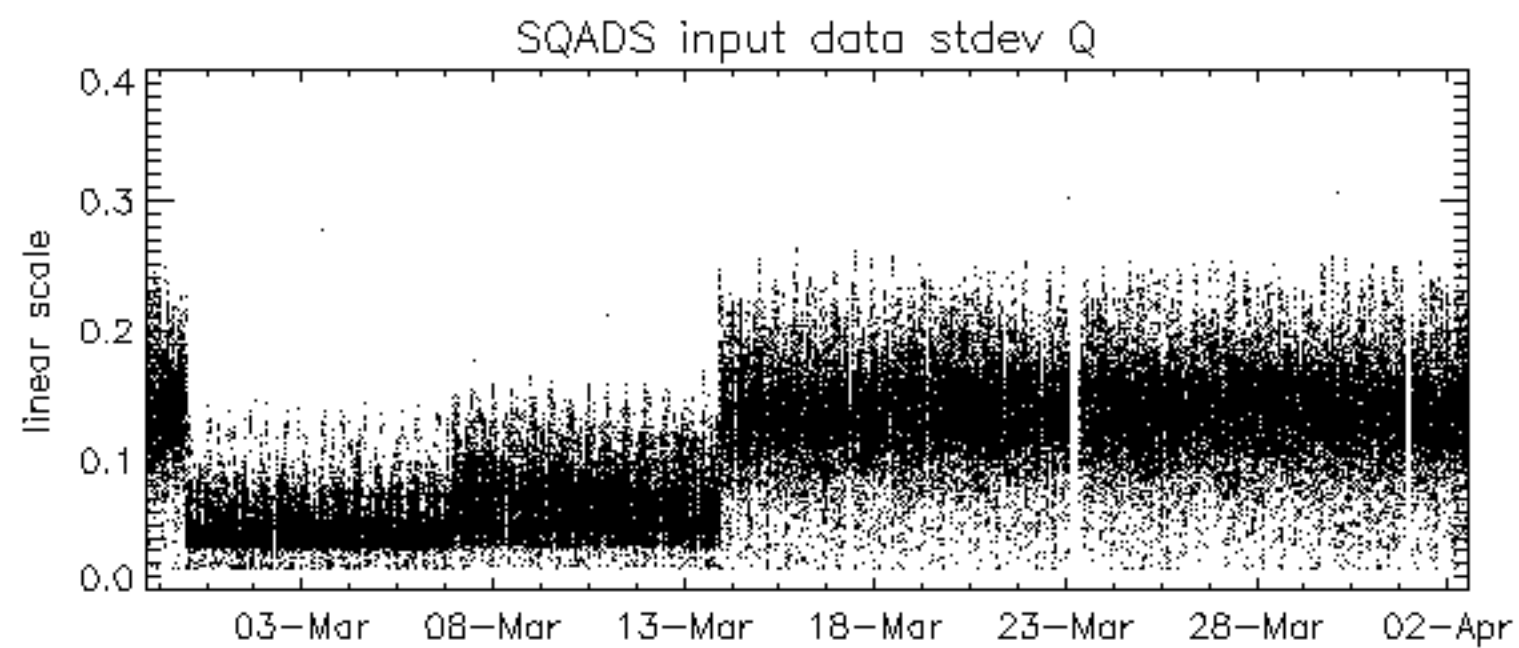
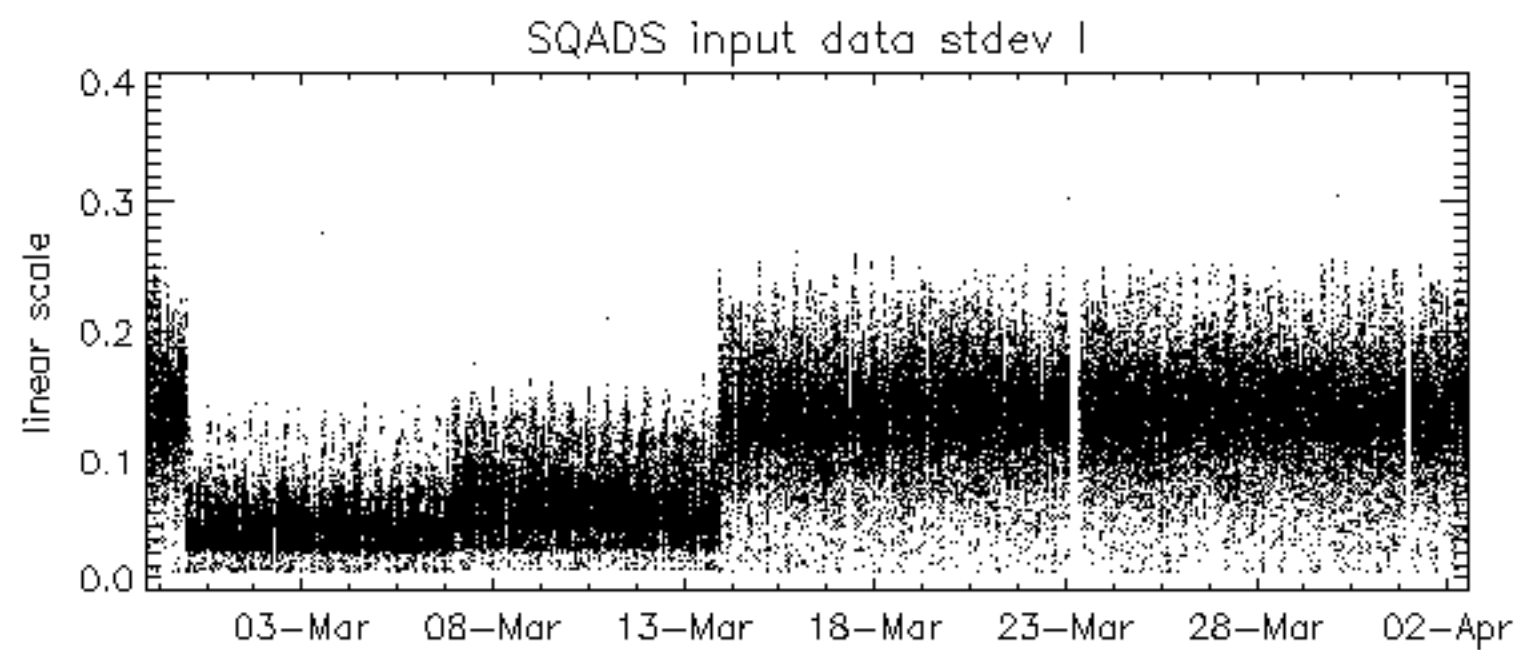
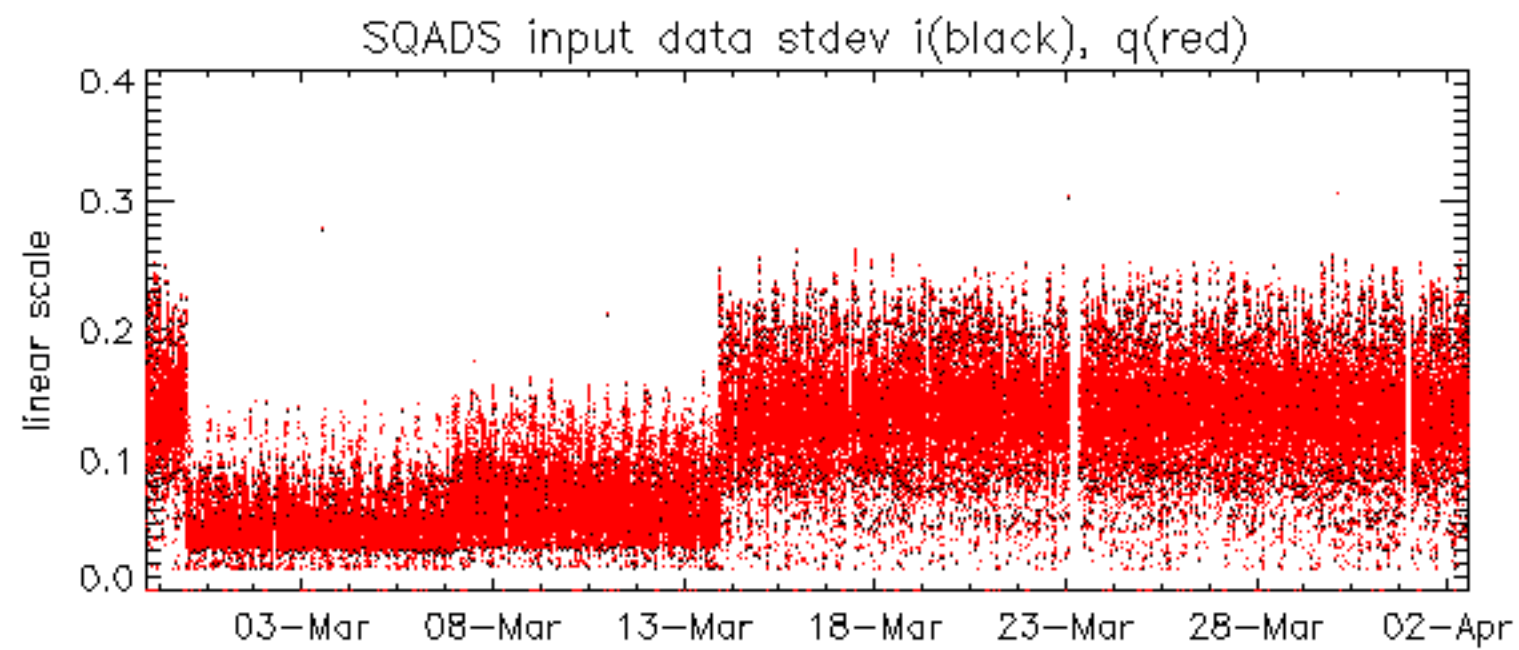








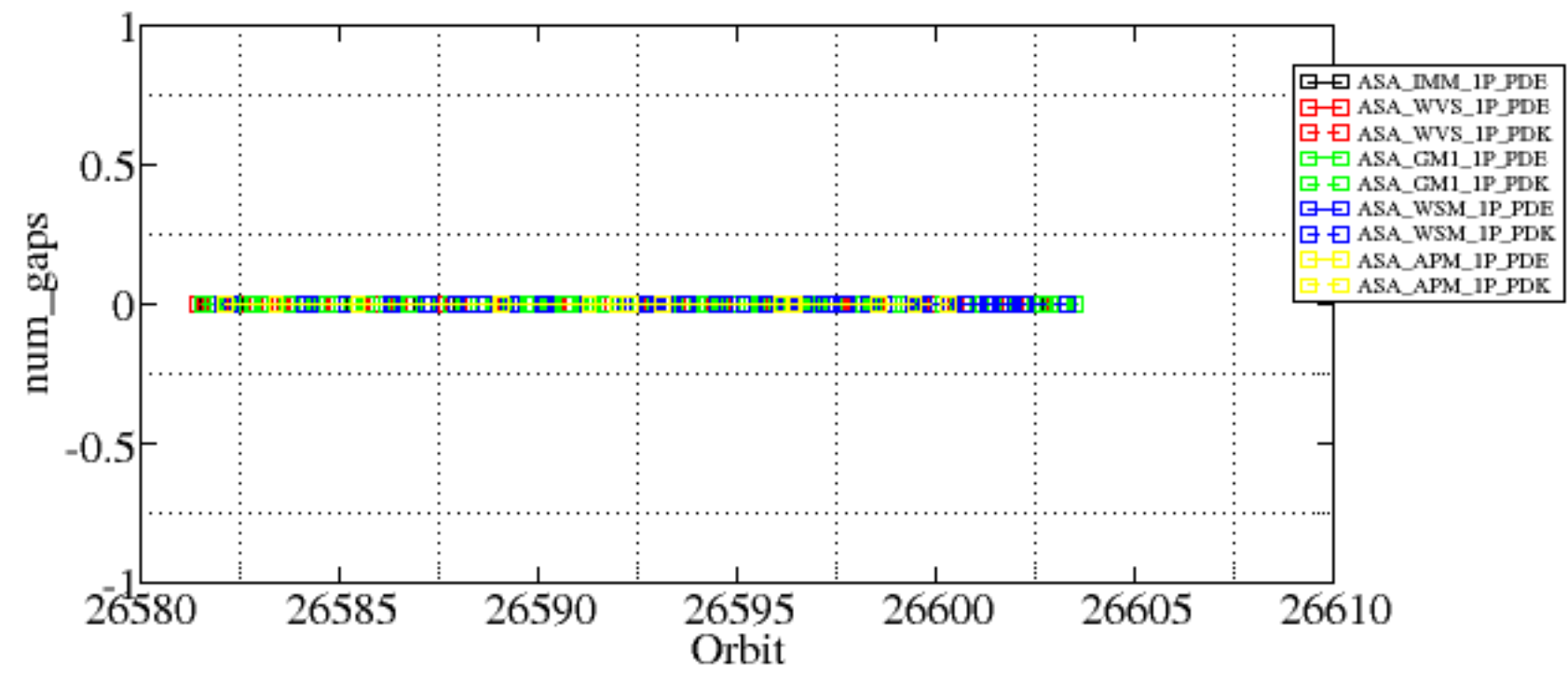


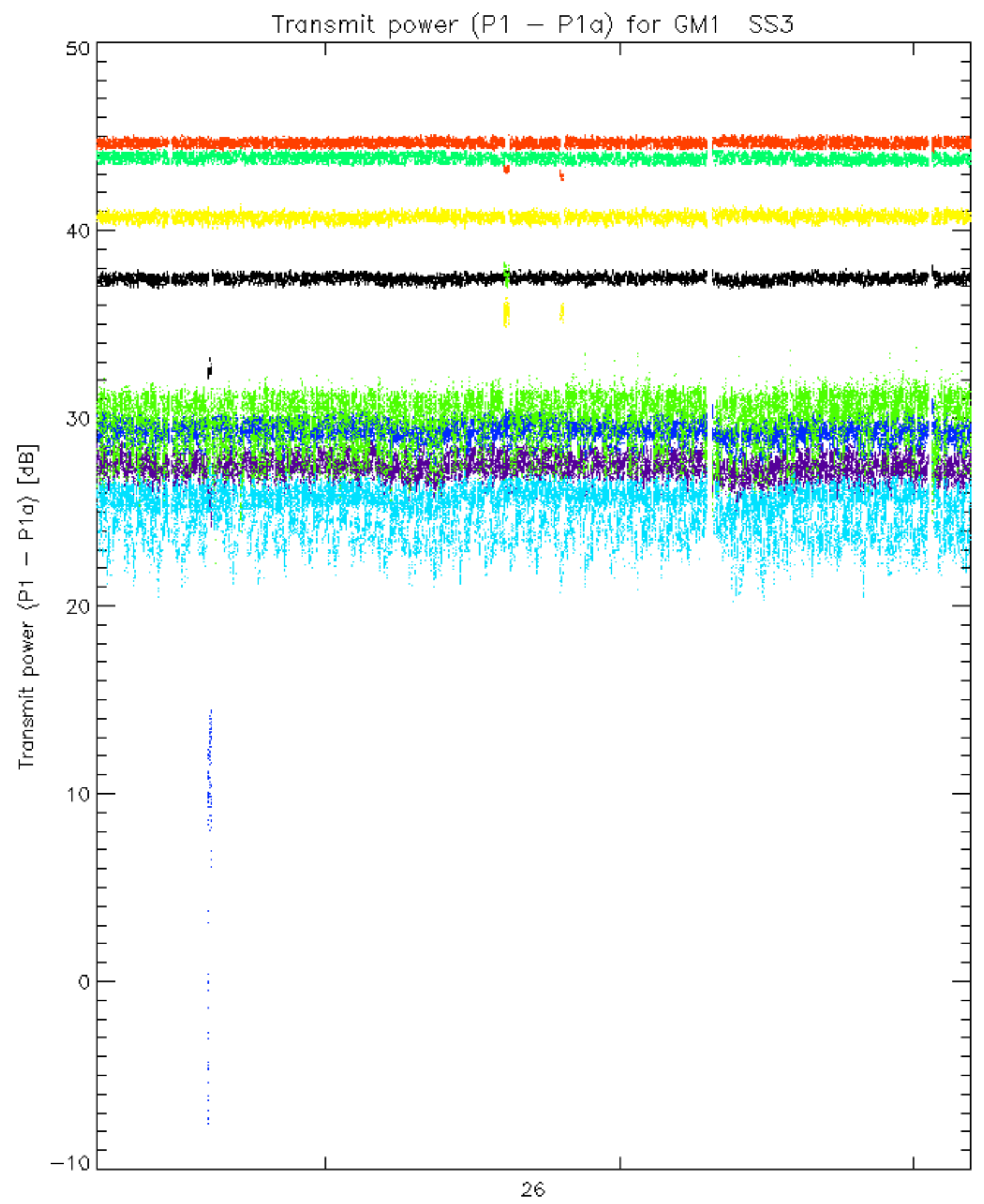


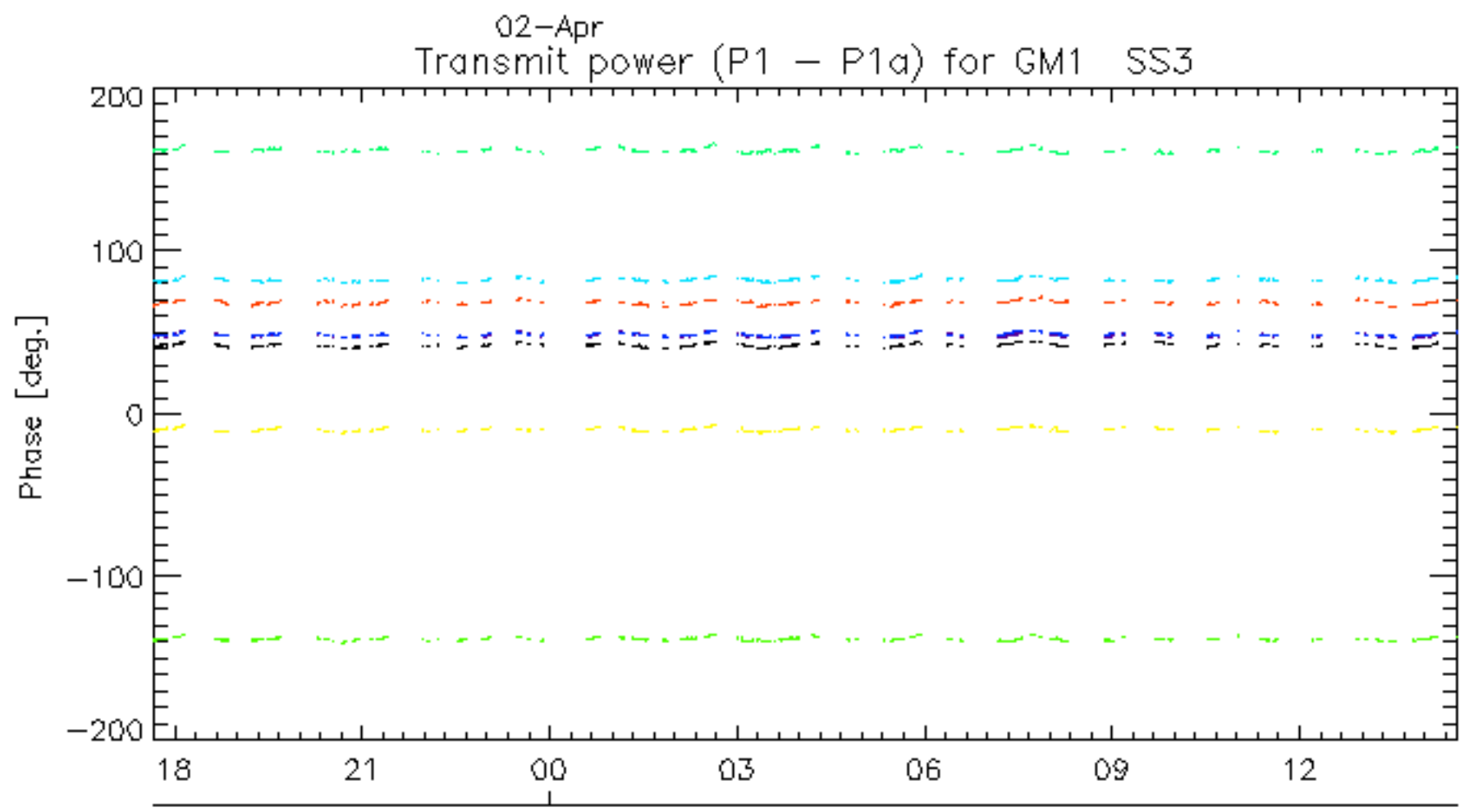
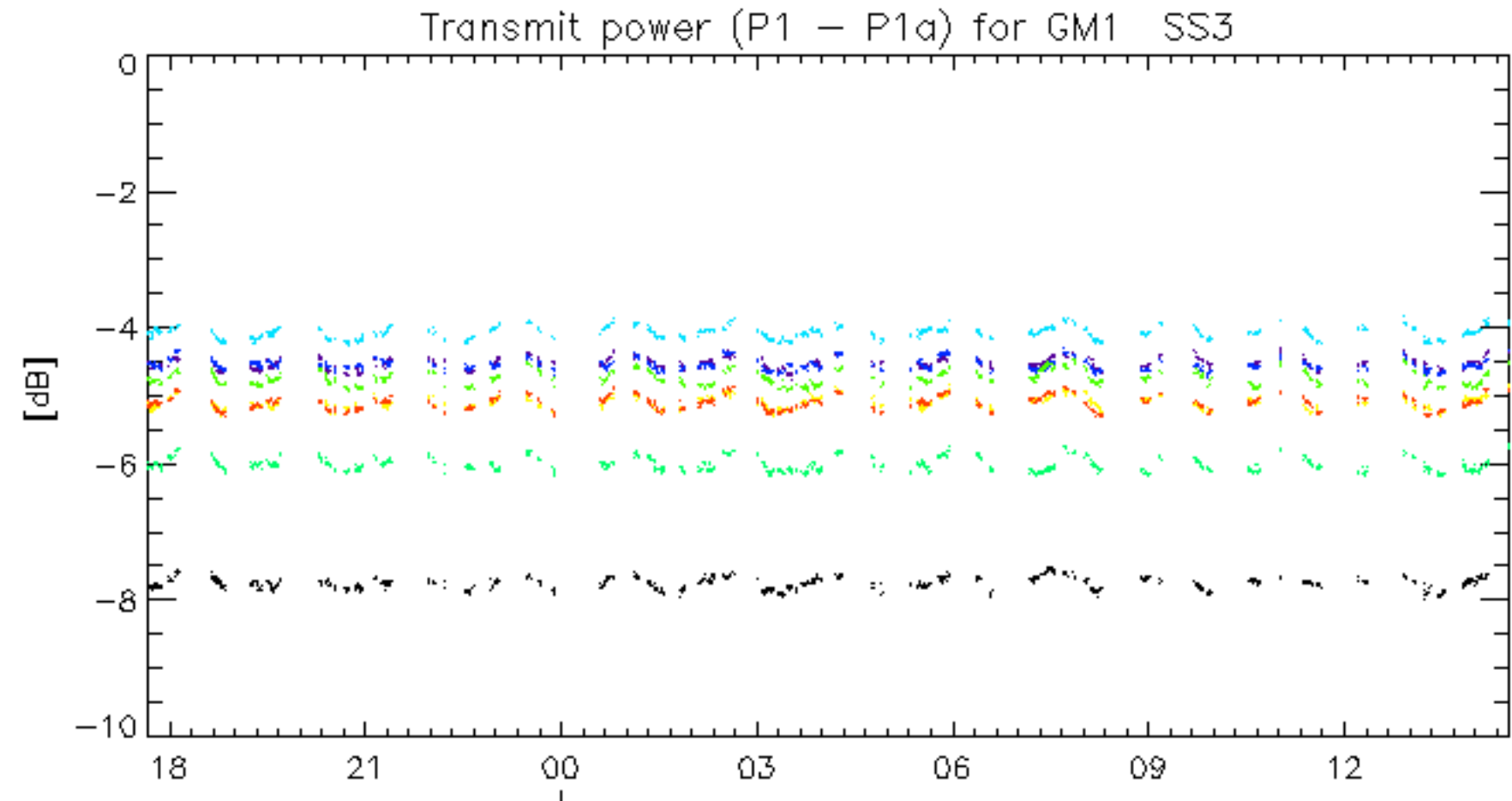
Summary of analysis for the last 3 days 2007040[112]

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_1PNPDK20070401_124009_000008632056_00482_26588_2418.N1	0	13
ASA_GM1_1PNPDK20070401_160040_00000962056_00484_26590_2686.N1	0	15
ASA_WSM_1PNPDE20070401_023000_000001462056_00476_26582_5190.N1	0	71
ASA_WSM_1PNPDE20070401_141207_00000852056_00483_26589_5694.N1	0	15

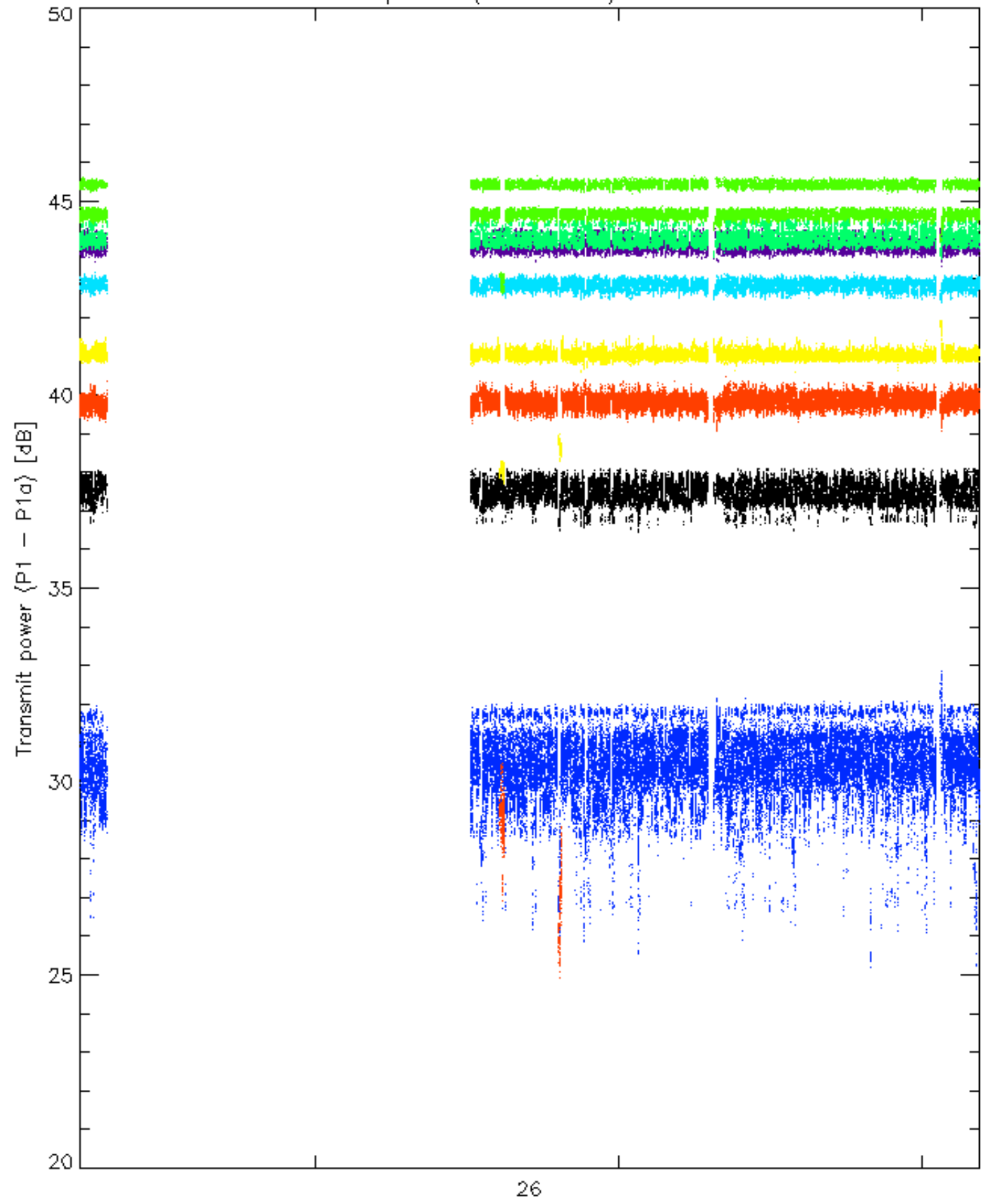




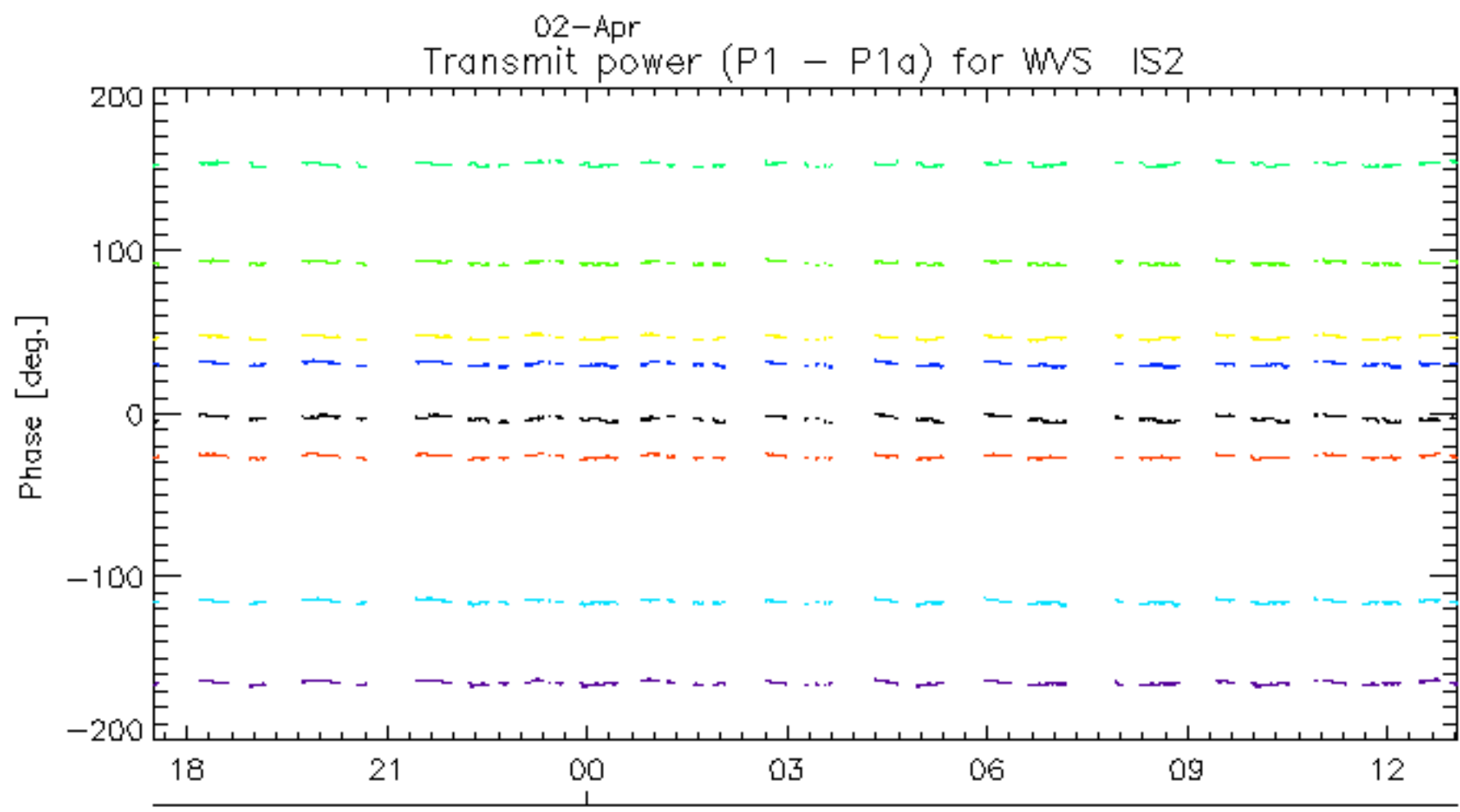
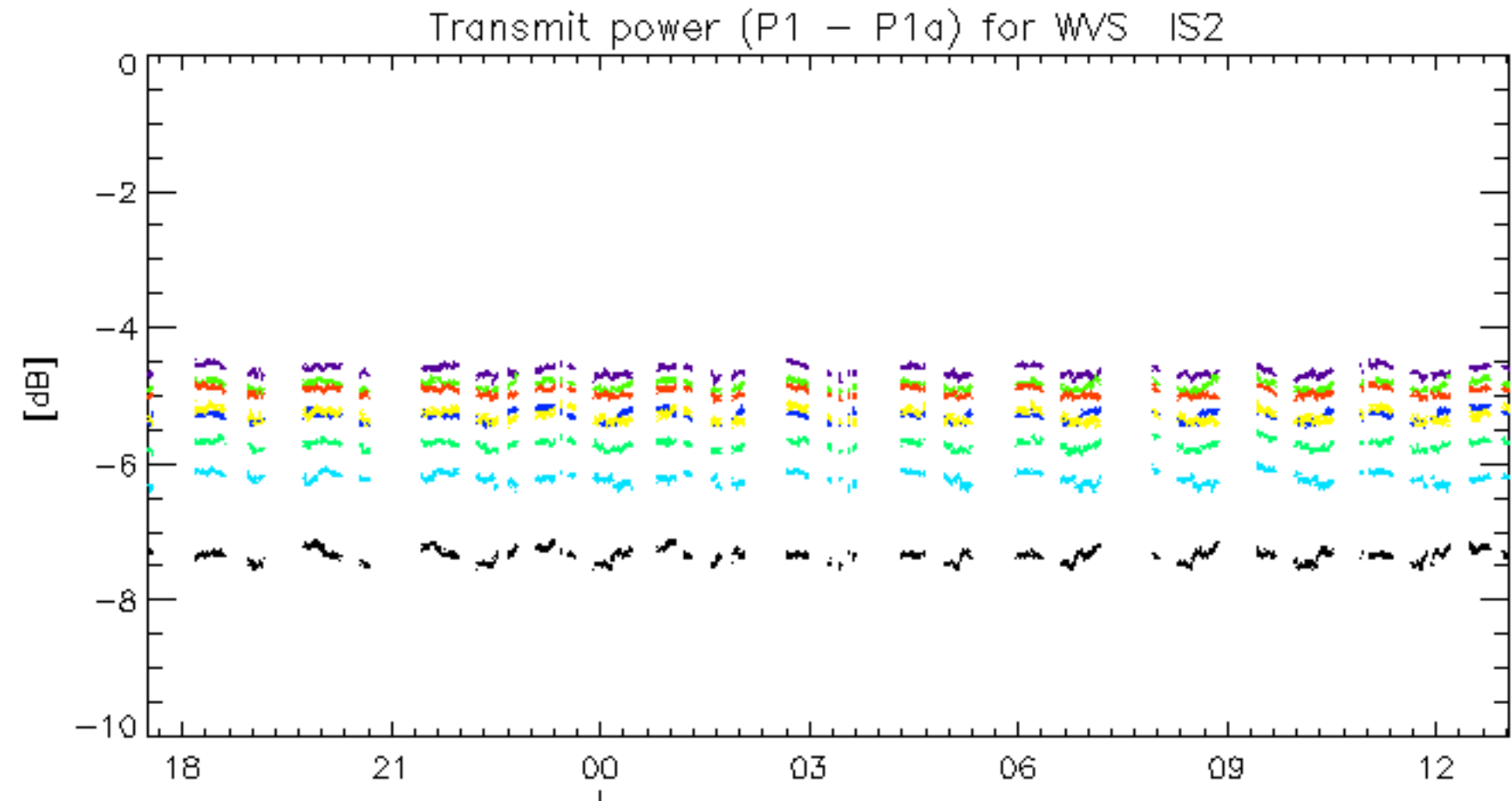


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.