

PRELIMINARY REPORT OF 070324

last update on Sat Mar 24 13:58:10 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-03-23 00:00:00 to 2007-03-24 13:58:10

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	37	56	11	3	27
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	37	56	11	3	27
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	37	56	11	3	27
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	56	11	3	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	31	32	41	11	33
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	31	32	41	11	33
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	31	32	41	11	33
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	31	32	41	11	33

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	20070321 073835
H	20070324 060344

MSM in V/V polarisation

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

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	-15.118348	0.118174	-0.000533
7	P1a	-17.472940	0.105532	-0.077285
11	P1a	-17.262621	0.351983	0.048819
15	P1a	-12.881512	0.088650	0.051431
19	P1a	-15.157610	0.076154	-0.023934
22	P1a	-15.453869	0.597320	-0.244846
26	P1a	-15.065984	0.546853	-0.119845
30	P1a	-17.376566	0.317208	-0.110637

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.740578	0.010400	-0.004759
7	P1	-3.132363	0.008612	0.010152
11	P1	-4.164323	0.015335	-0.022725
15	P1	-6.374314	0.016425	0.033675
19	P1	-3.773720	0.007634	-0.018253
22	P1	-4.669681	0.059021	-0.067707
26	P1	-3.920400	0.048604	0.001161
30	P1	-5.907512	0.091442	-0.068007

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.640242	0.092987	0.091279
7	P2	-21.605345	0.081791	0.041225
11	P2	-15.513830	0.099195	0.107349
15	P2	-7.073404	0.093751	-0.006985
19	P2	-9.102959	0.083175	0.020410
22	P2	-18.089157	0.077229	0.078897

26	P2	-16.553015	0.085867	-0.027863
30	P2	-19.323277	0.079982	0.109673

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.231791	0.006671	0.025724
7	P3	-8.231791	0.006671	0.025724
11	P3	-8.231791	0.006671	0.025724
15	P3	-8.231791	0.006671	0.025724
19	P3	-8.231791	0.006671	0.025724
22	P3	-8.231791	0.006671	0.025724
26	P3	-8.231770	0.006671	0.025776
30	P3	-8.231770	0.006671	0.025776

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.093727	0.053984	-0.102535
7	P1a	-10.070063	0.145784	-0.006213
11	P1a	-10.680094	0.066510	-0.035862
15	P1a	-10.941010	0.141631	0.127463
19	P1a	-15.707858	0.071778	-0.132512
22	P1a	-20.877741	1.545268	0.082809
26	P1a	-15.239684	0.311500	0.022441
30	P1a	-18.362411	0.756781	0.172237

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.412358	0.043755	-0.073862
7	P1	-2.425601	0.025847	-0.004181

11	P1	-2.921691	0.020223	0.014968
15	P1	-3.848684	0.040888	-0.015515
19	P1	-3.560077	0.011034	-0.030932
22	P1	-5.030109	0.033809	0.074897
26	P1	-5.947492	0.056683	-0.002121
30	P1	-5.271781	0.031962	-0.012672

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.100847	0.036562	-0.004596
7	P2	-21.951748	0.059877	0.000796
11	P2	-10.636473	0.033585	0.031711
15	P2	-4.827310	0.030486	-0.008798
19	P2	-6.809072	0.033656	0.016485
22	P2	-8.076609	0.034882	0.010551
26	P2	-24.286245	0.041317	0.064089
30	P2	-21.717386	0.042635	0.077407

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.059429	0.003970	0.005514
7	P3	-8.059334	0.003969	0.005378
11	P3	-8.059419	0.003969	0.005116
15	P3	-8.059562	0.003970	0.005155
19	P3	-8.059436	0.003982	0.006166
22	P3	-8.059447	0.003974	0.005234
26	P3	-8.059255	0.003947	0.005605
30	P3	-8.059438	0.003967	0.004699

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	
	stdev	
MEAN Q	mean	
	stdev	



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	
	stdev	
STDEV Q	mean	
	stdev	



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[234]

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_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDE20070322_142631_000000852056_00340_26446_2539.N1	0	16

ASA_WSM_1PNPDE20070322_192709_000000922056_00343_26449_2782.N1	9	431
ASA_WSM_1PNPDE20070322_233442_000002632056_00345_26451_3189.N1	0	32
ASA_WSM_1PNPDK20070323_120612_000003232056_00352_26458_0909.N1	0	1
ASA_WSM_1PNPDK20070323_135453_000000862056_00354_26460_1049.N1	0	17
ASA_WSM_1PNPDK20070324_103147_000002192056_00366_26472_1616.N1	0	3

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

7.2 - Absolute Doppler for WVS

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

7.3 - Doppler evolution versus ANX for WVS

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)	
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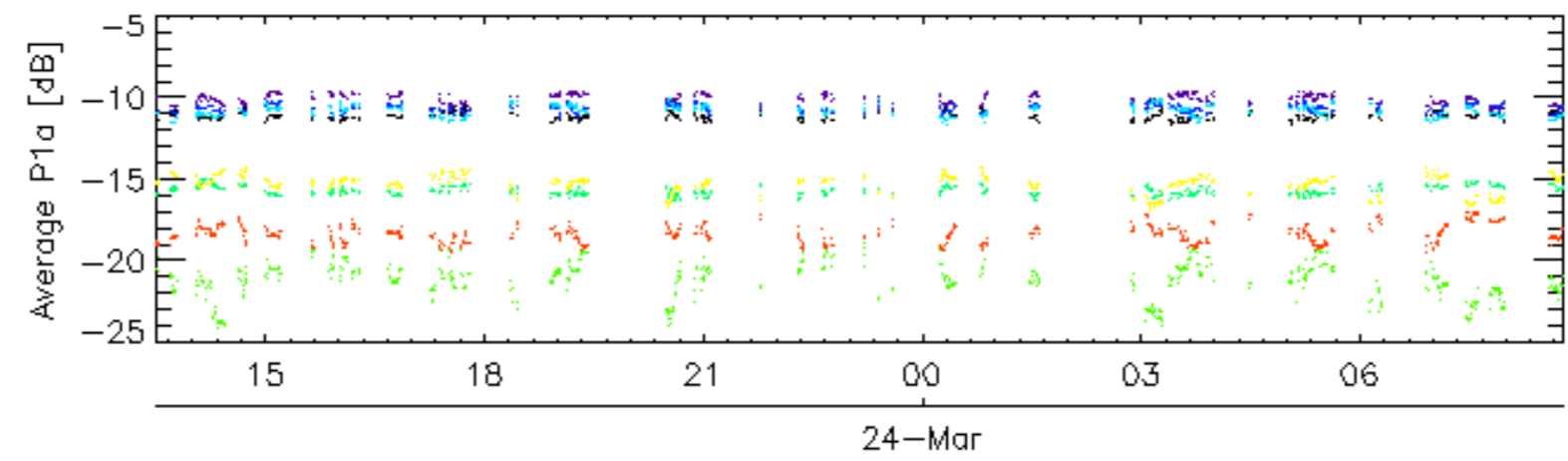
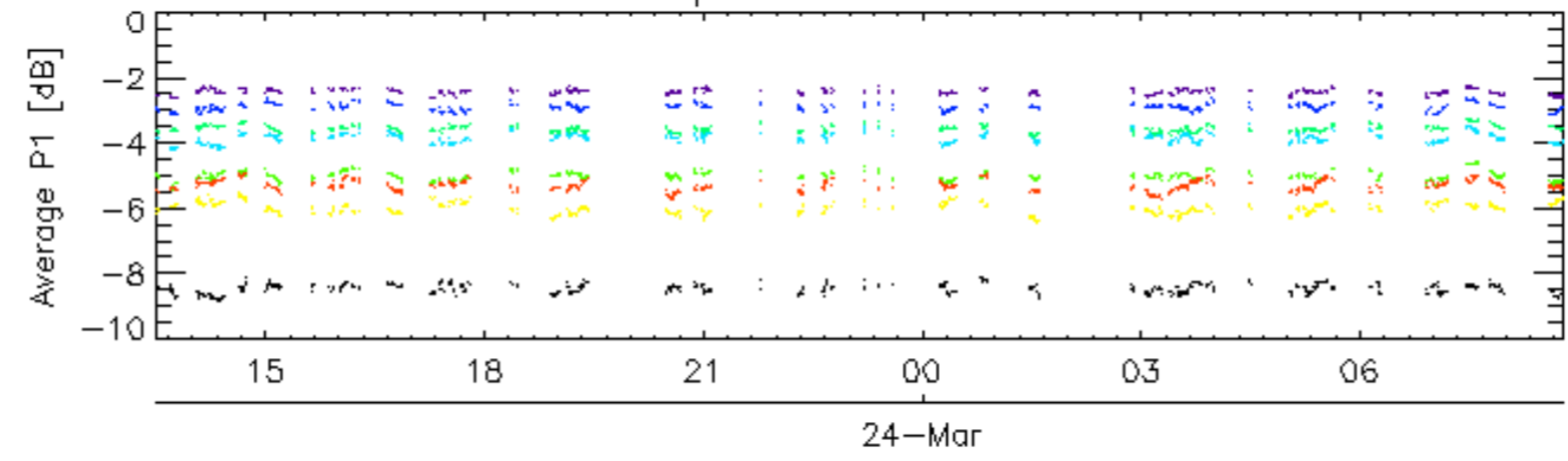
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Ascending
<input type="checkbox"/>
Descending

7.5 - Absolute Doppler for GM1

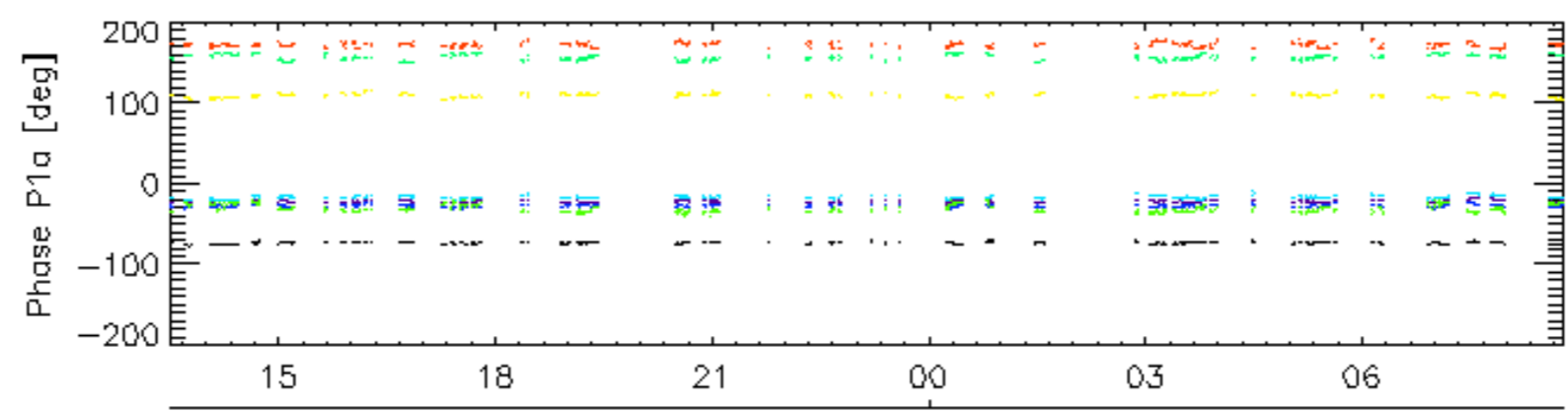
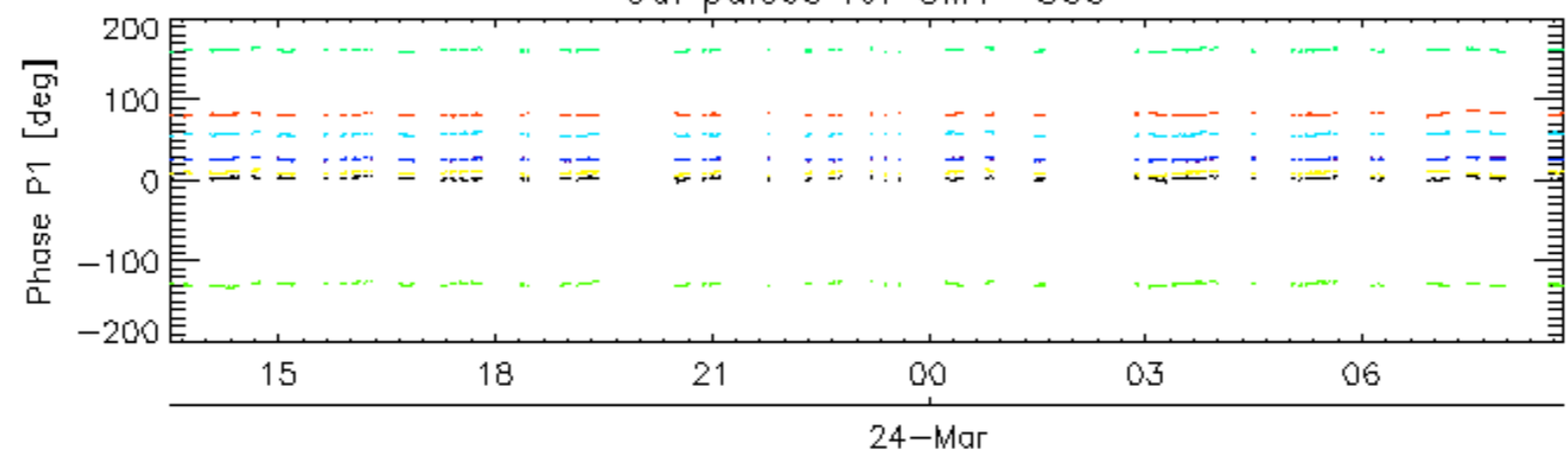
Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

Cal pulses for GM1 SS3

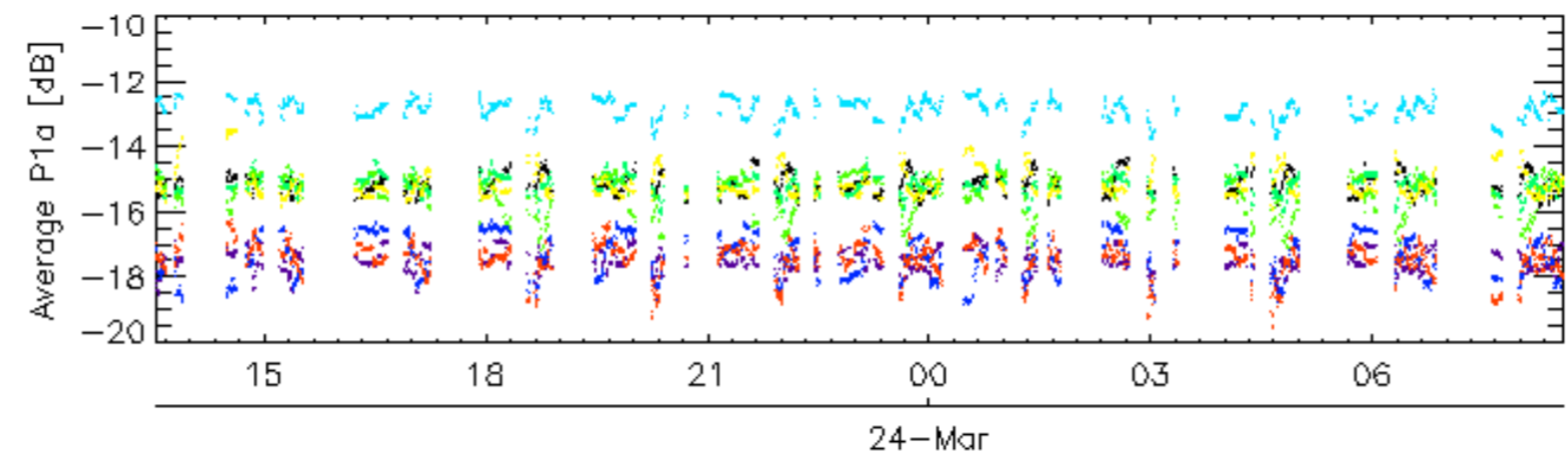
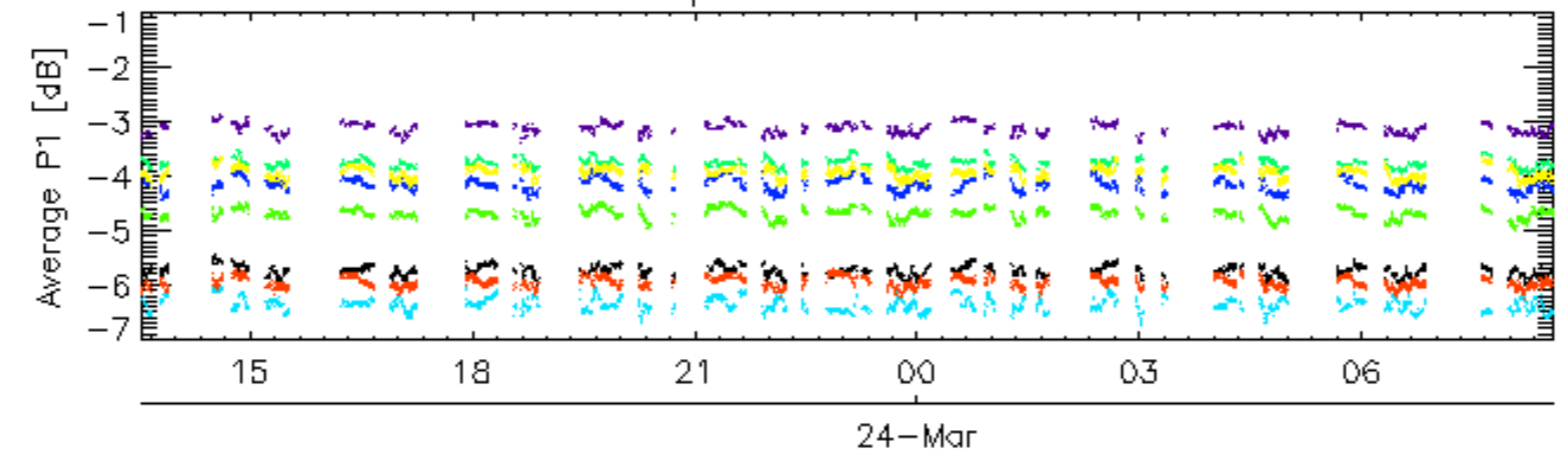


Cal pulses for GM1 SS3

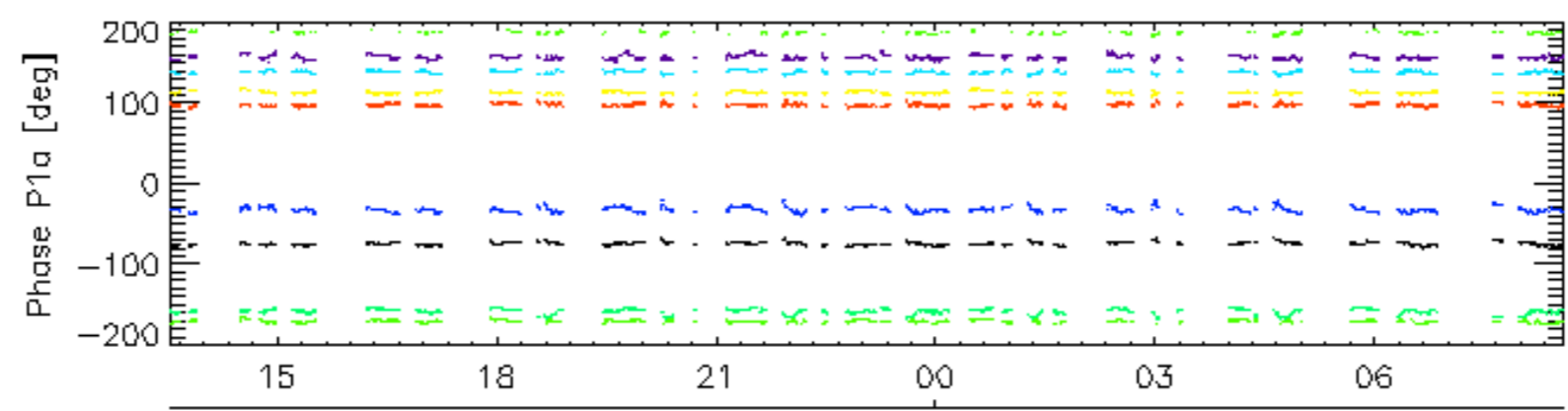
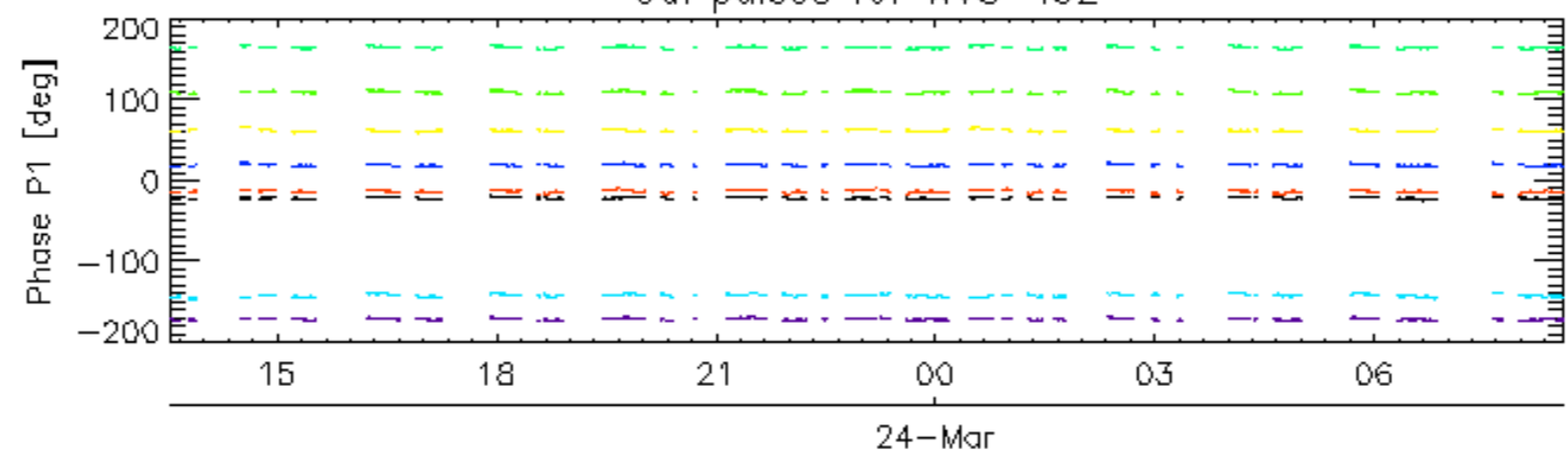


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

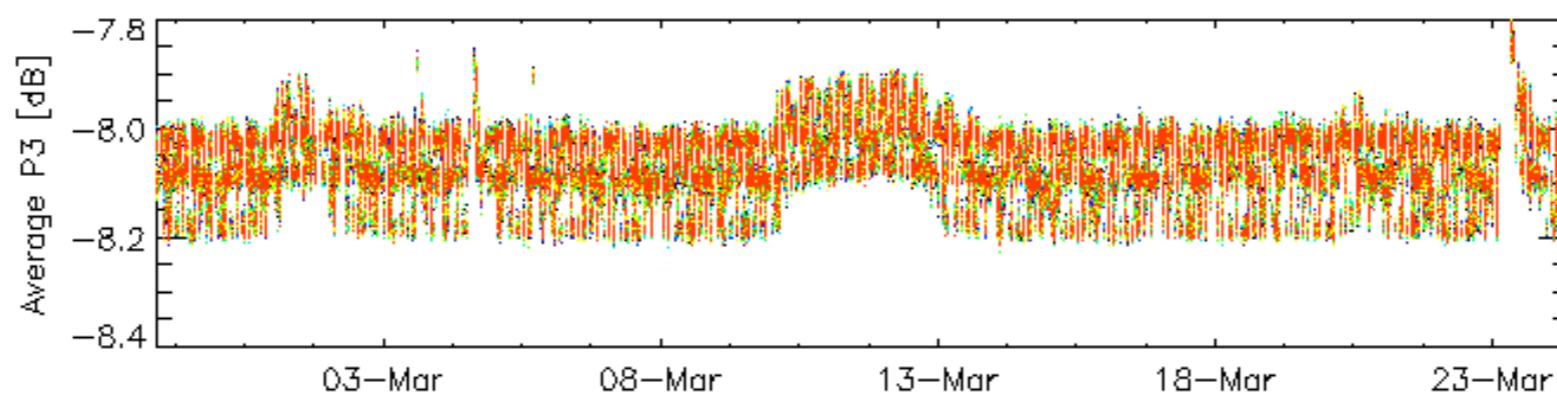
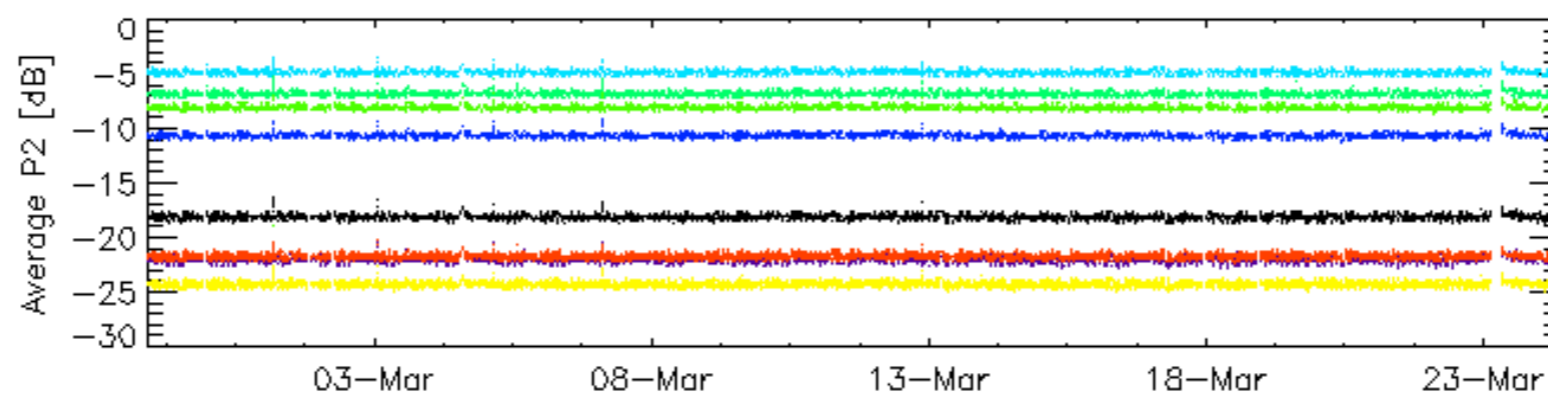
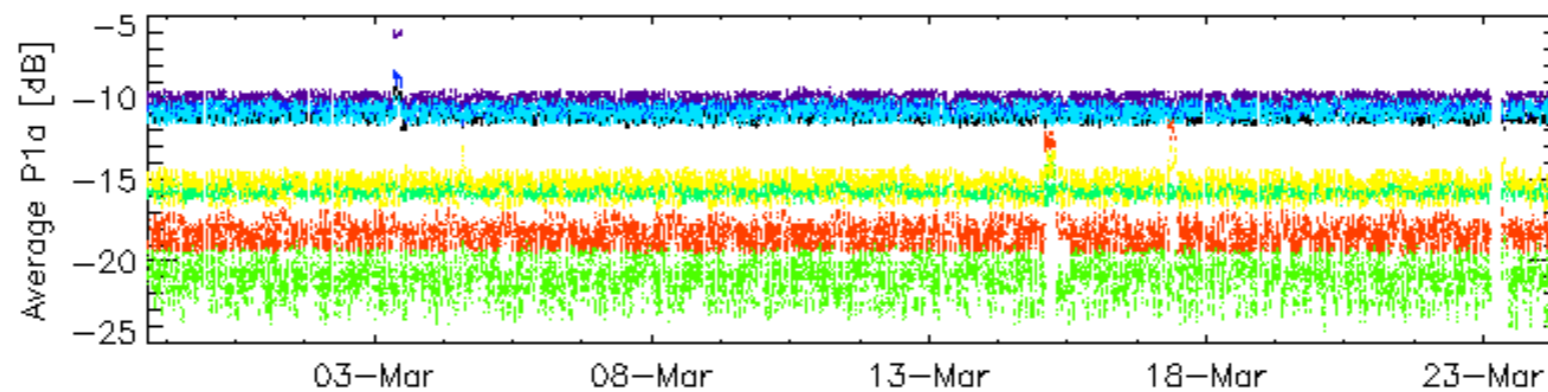
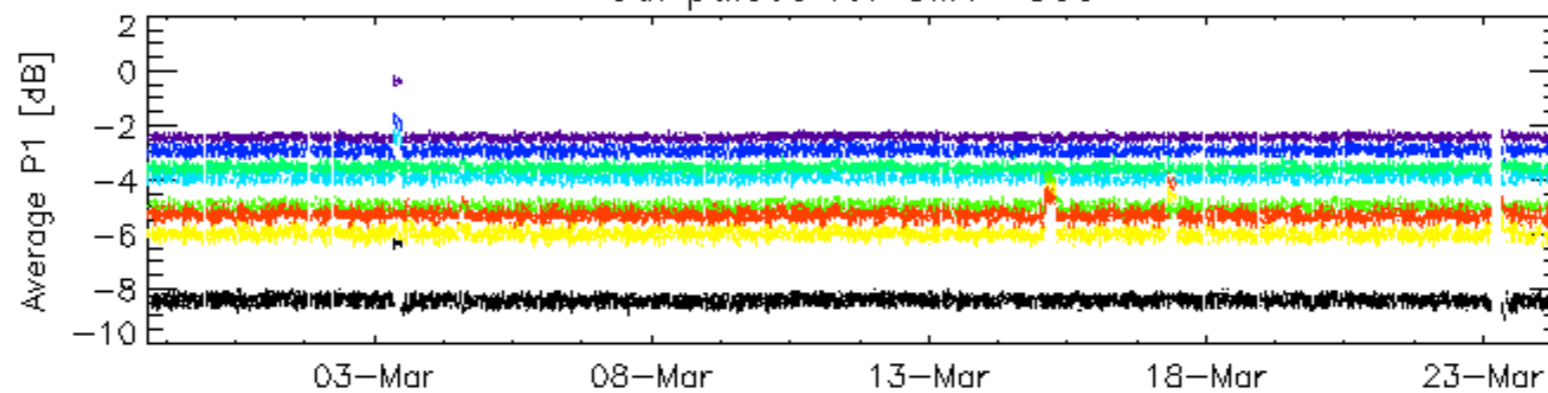


Cal pulses for WVS IS2



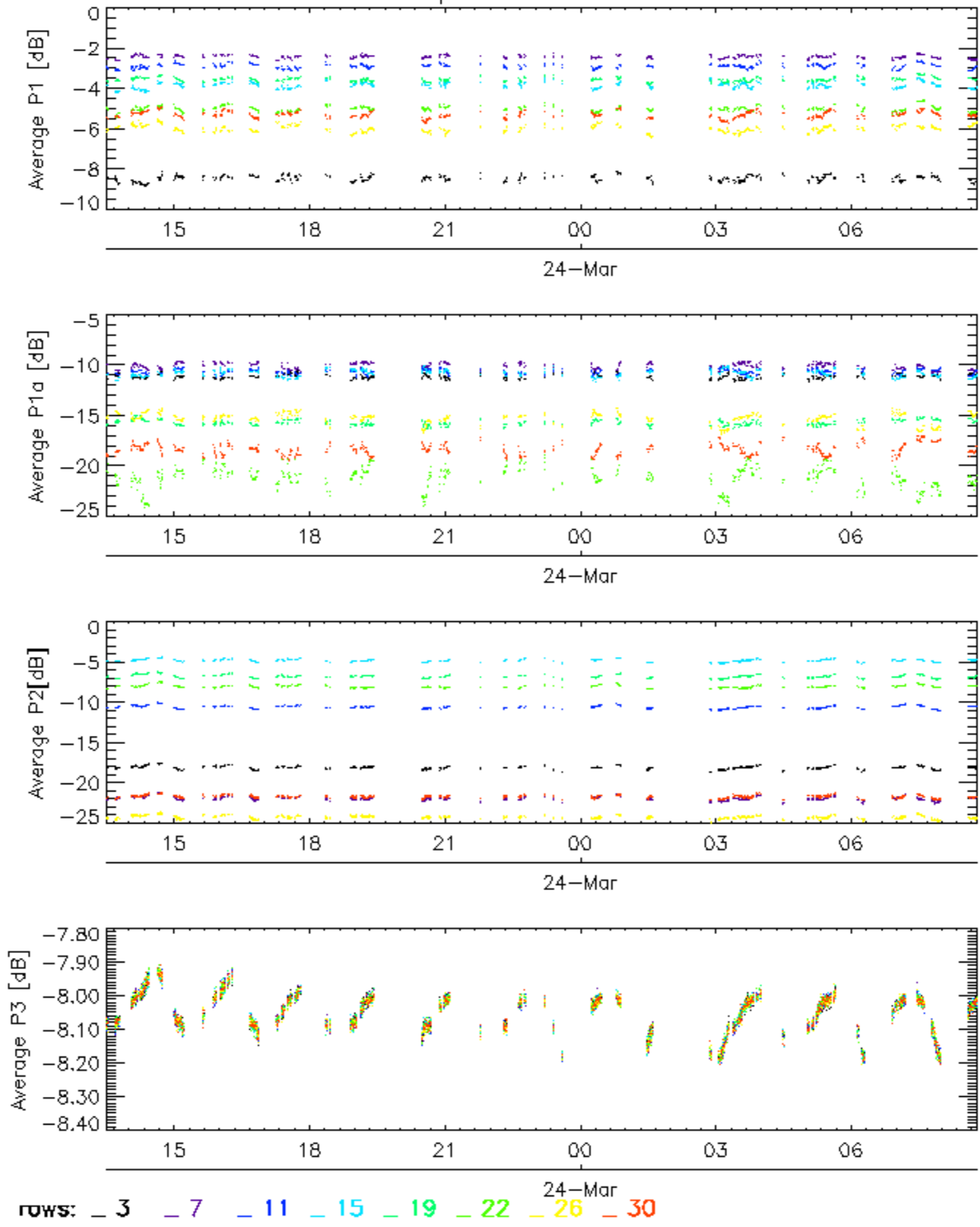
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

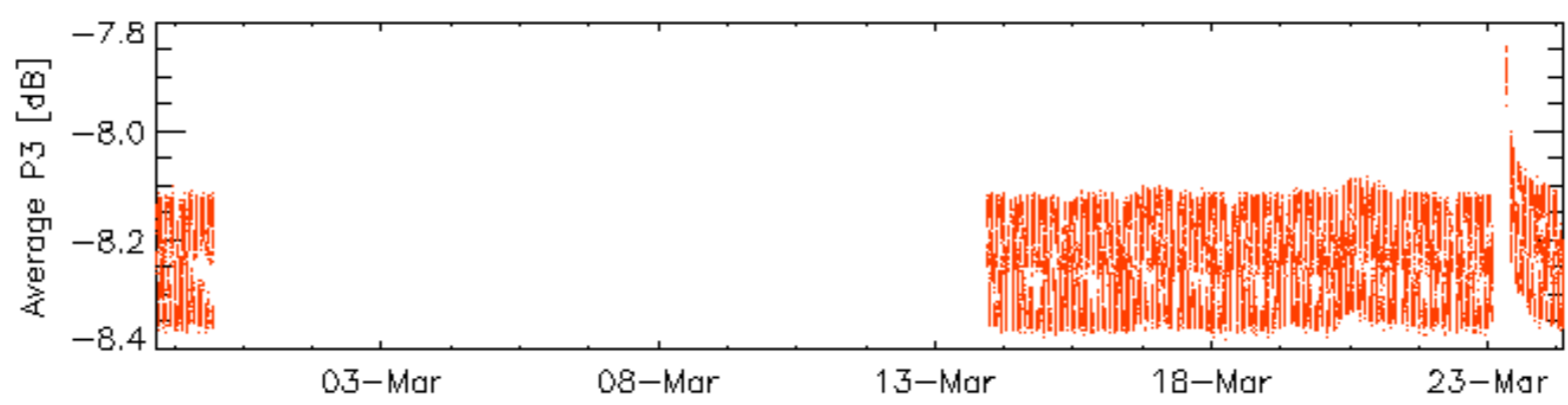
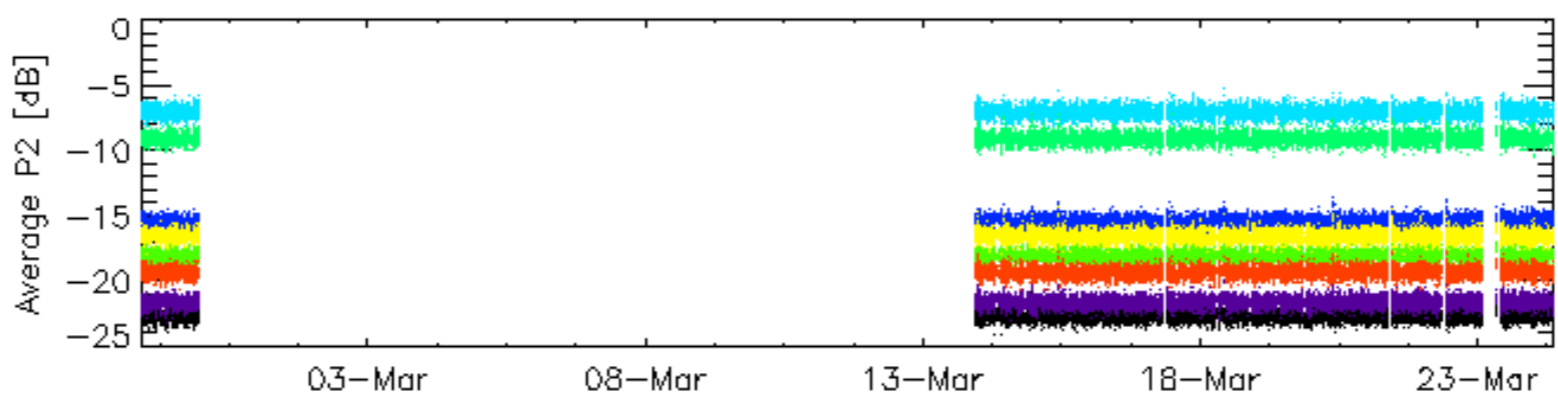
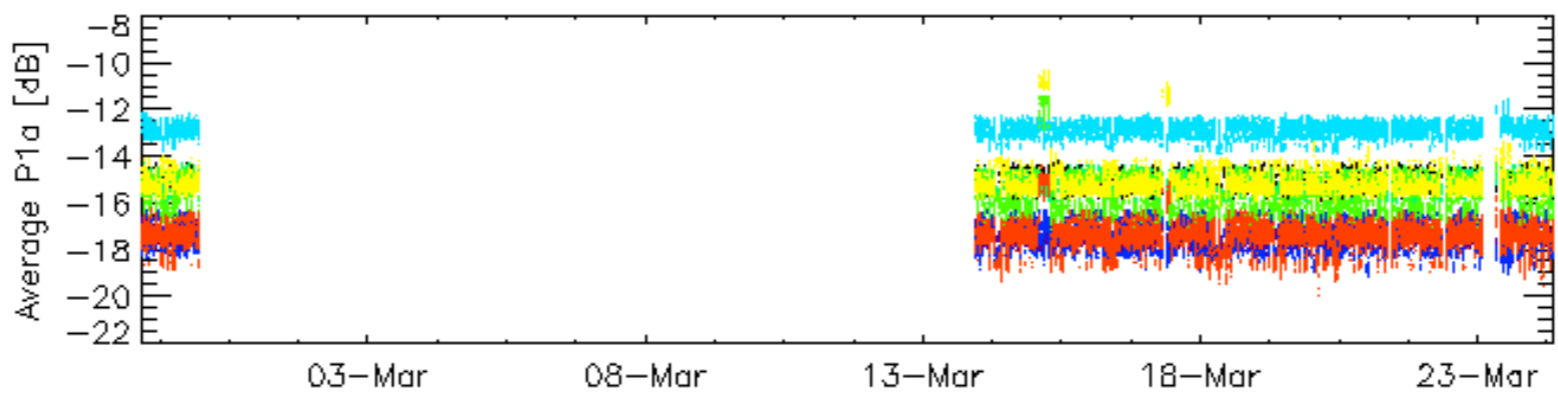
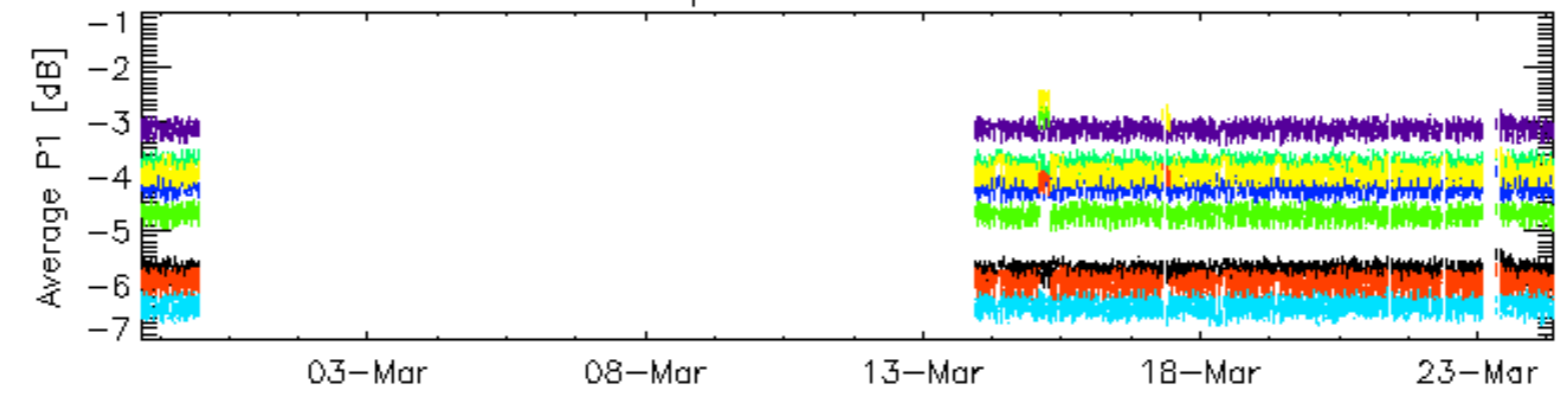


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

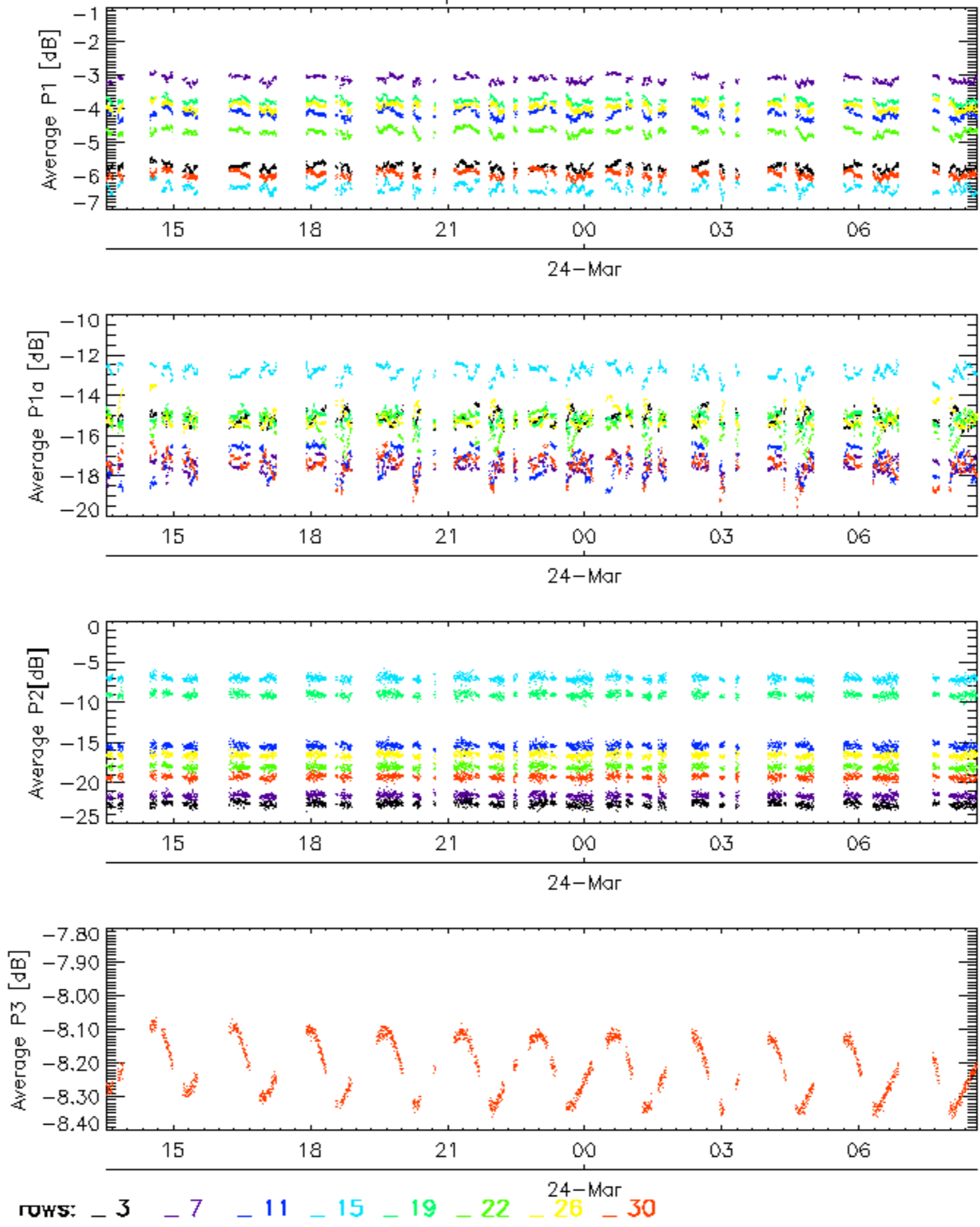


Cal pulses for WVS IS2

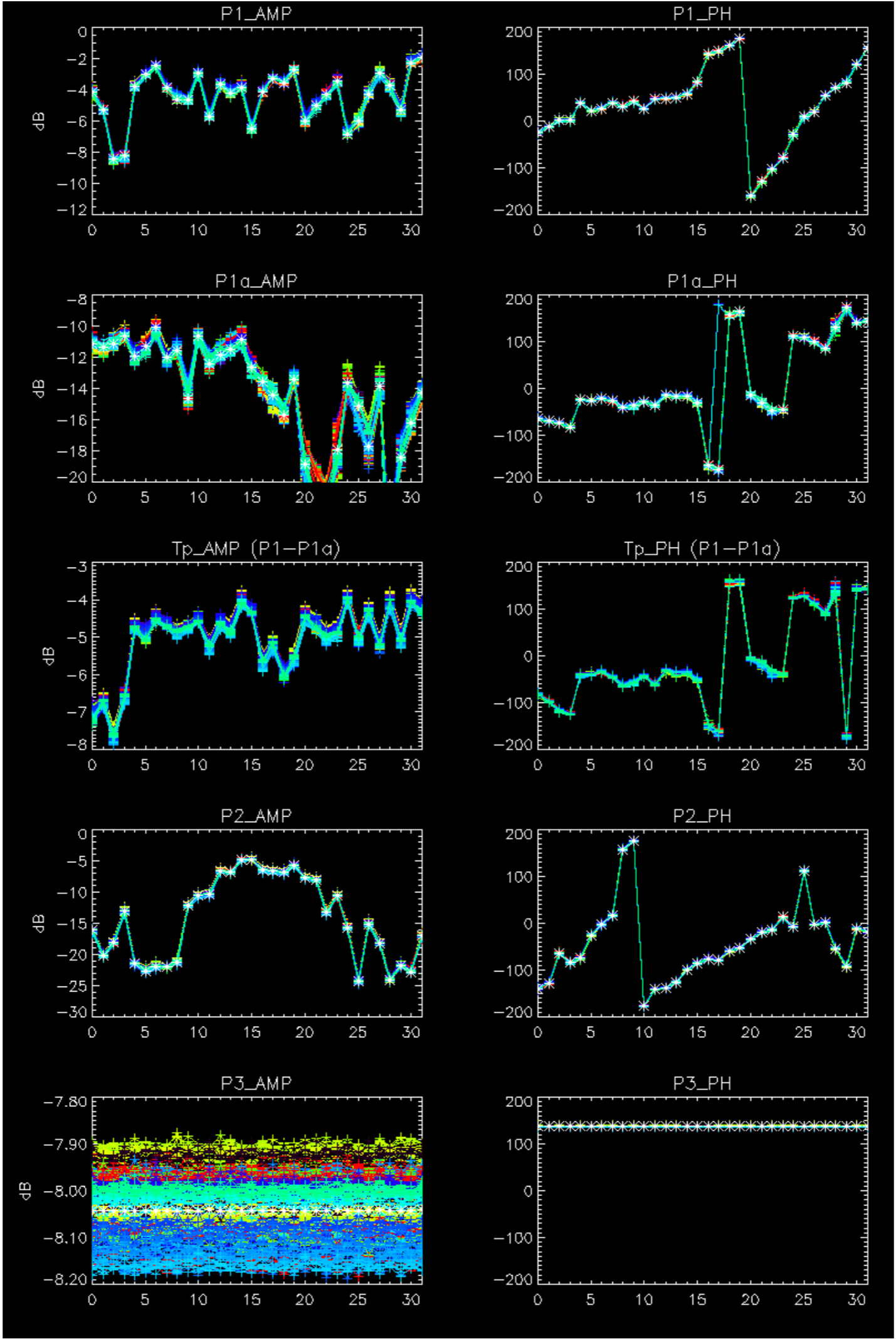


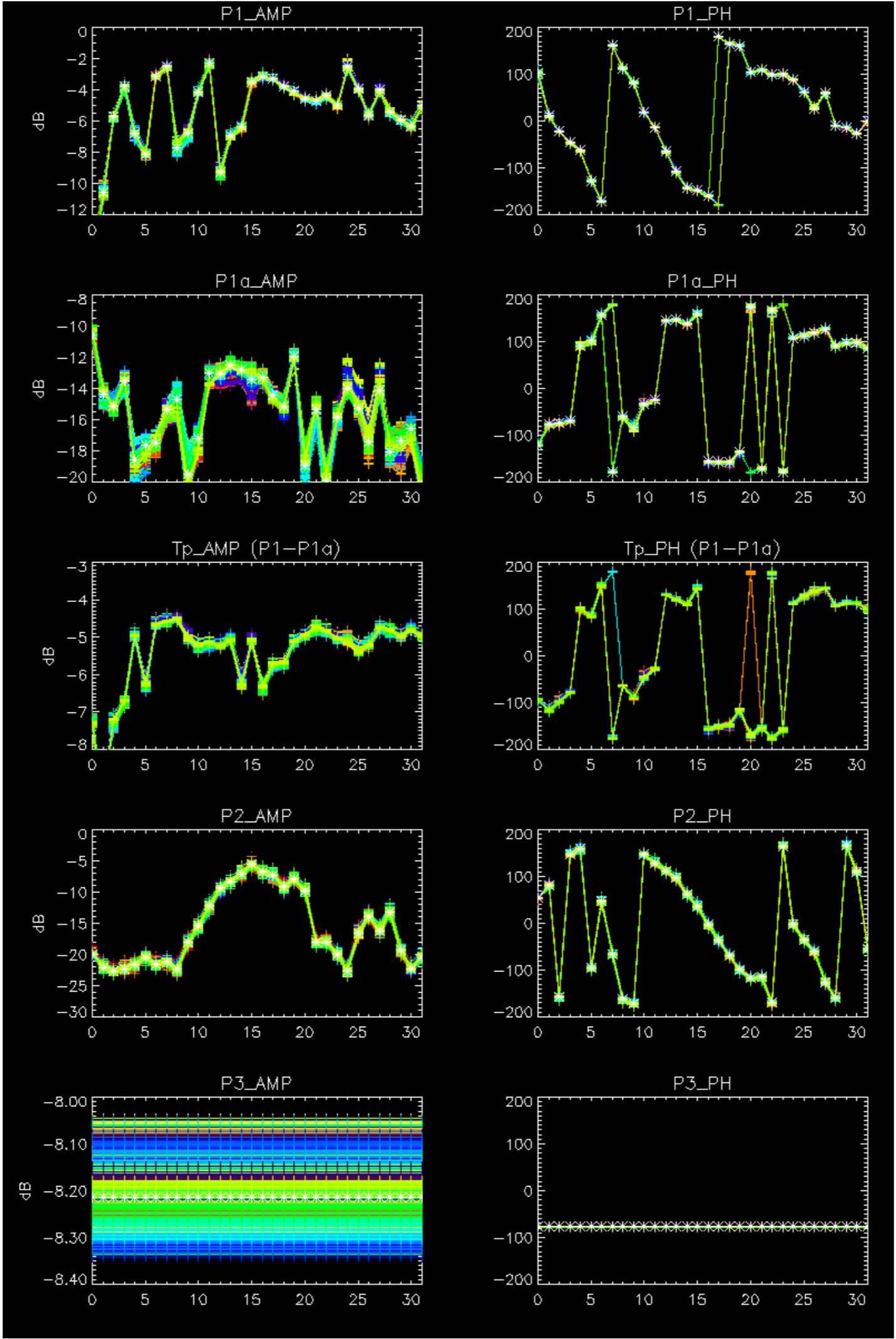
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



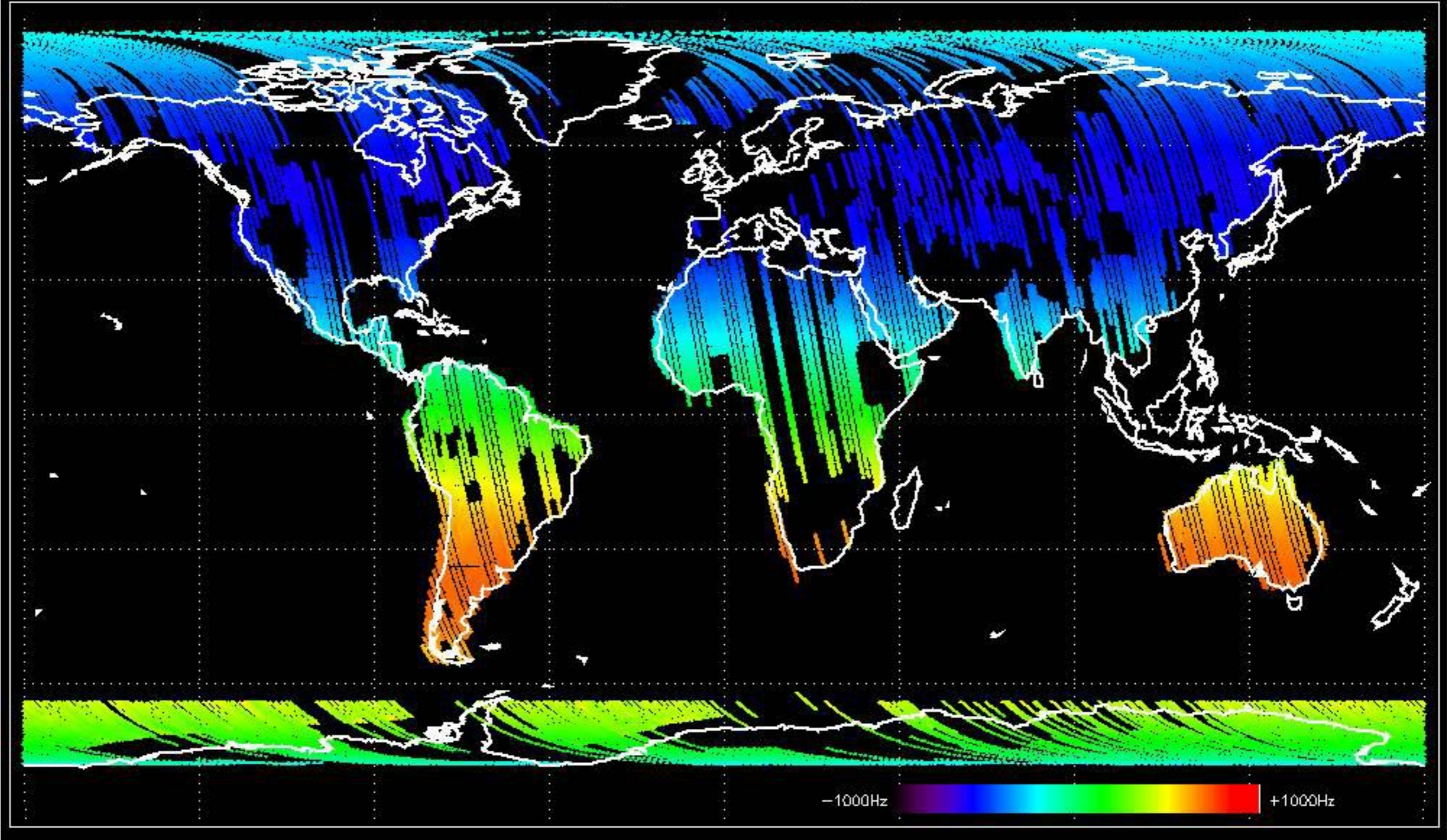
No anomalies observed.



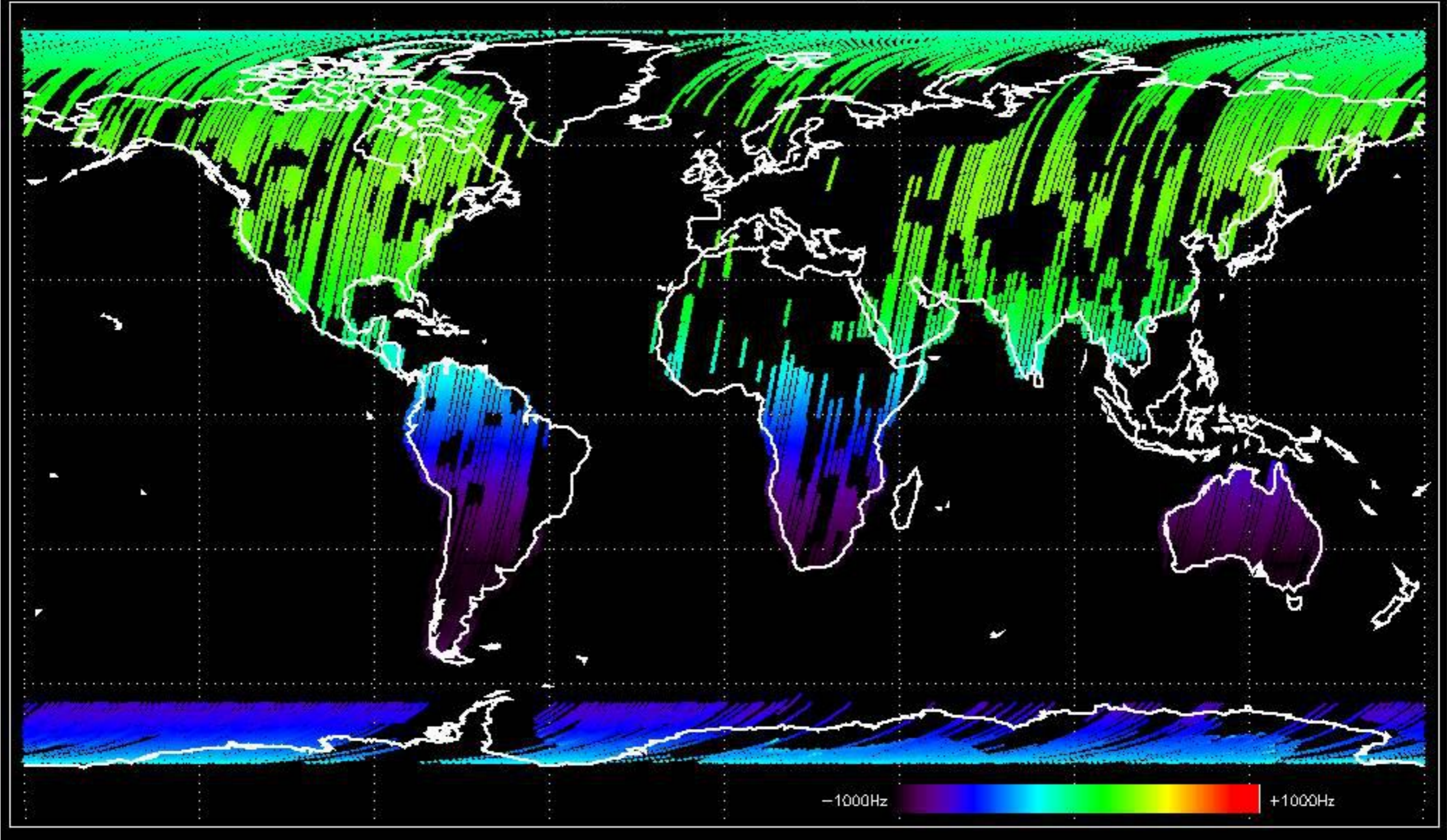


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

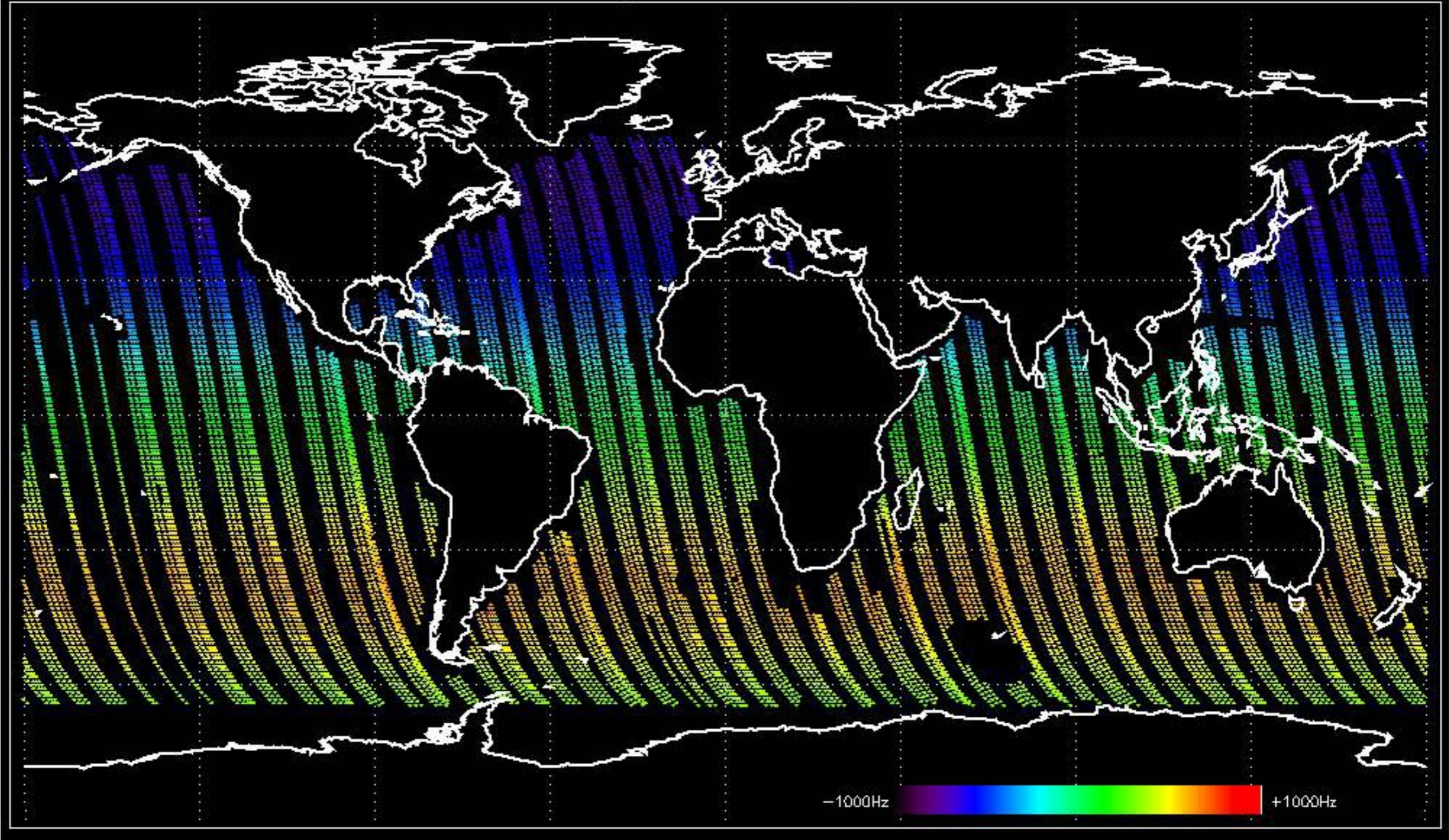
Doppler 'GM1' 'SS1' ascending



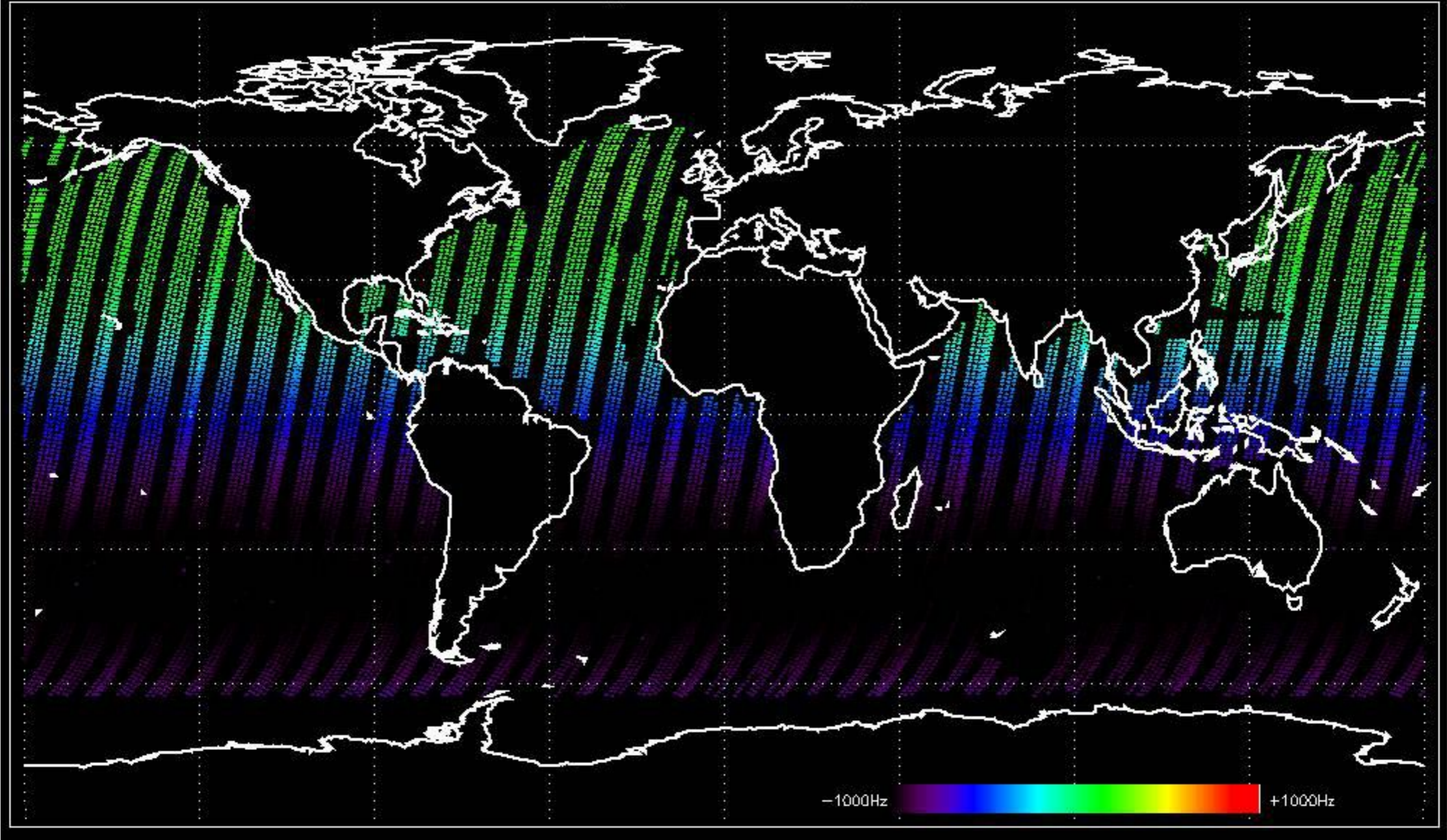
Doppler 'GM1' 'SS1' descending



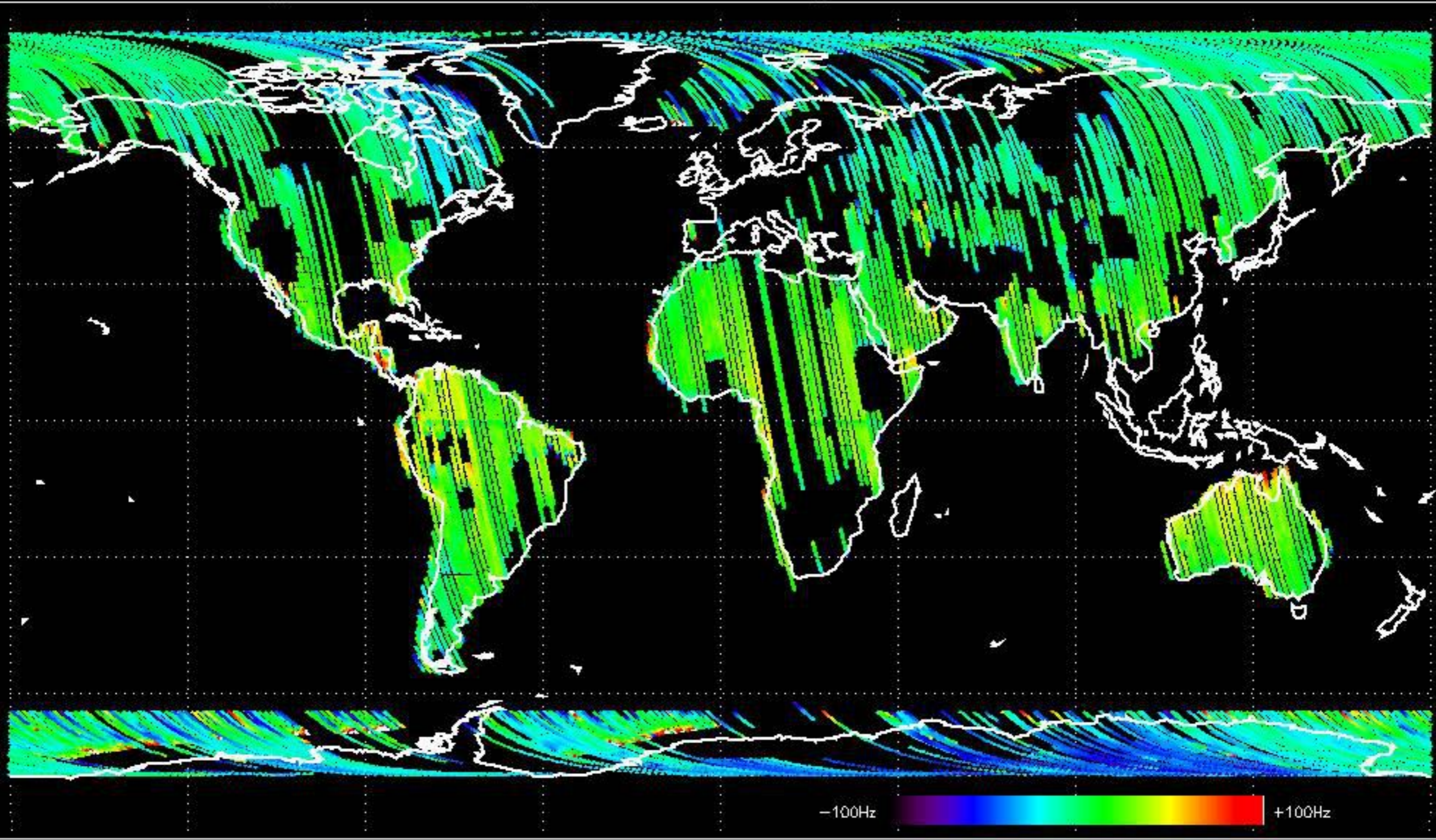
Doppler 'WVS' 'IS2' ascending



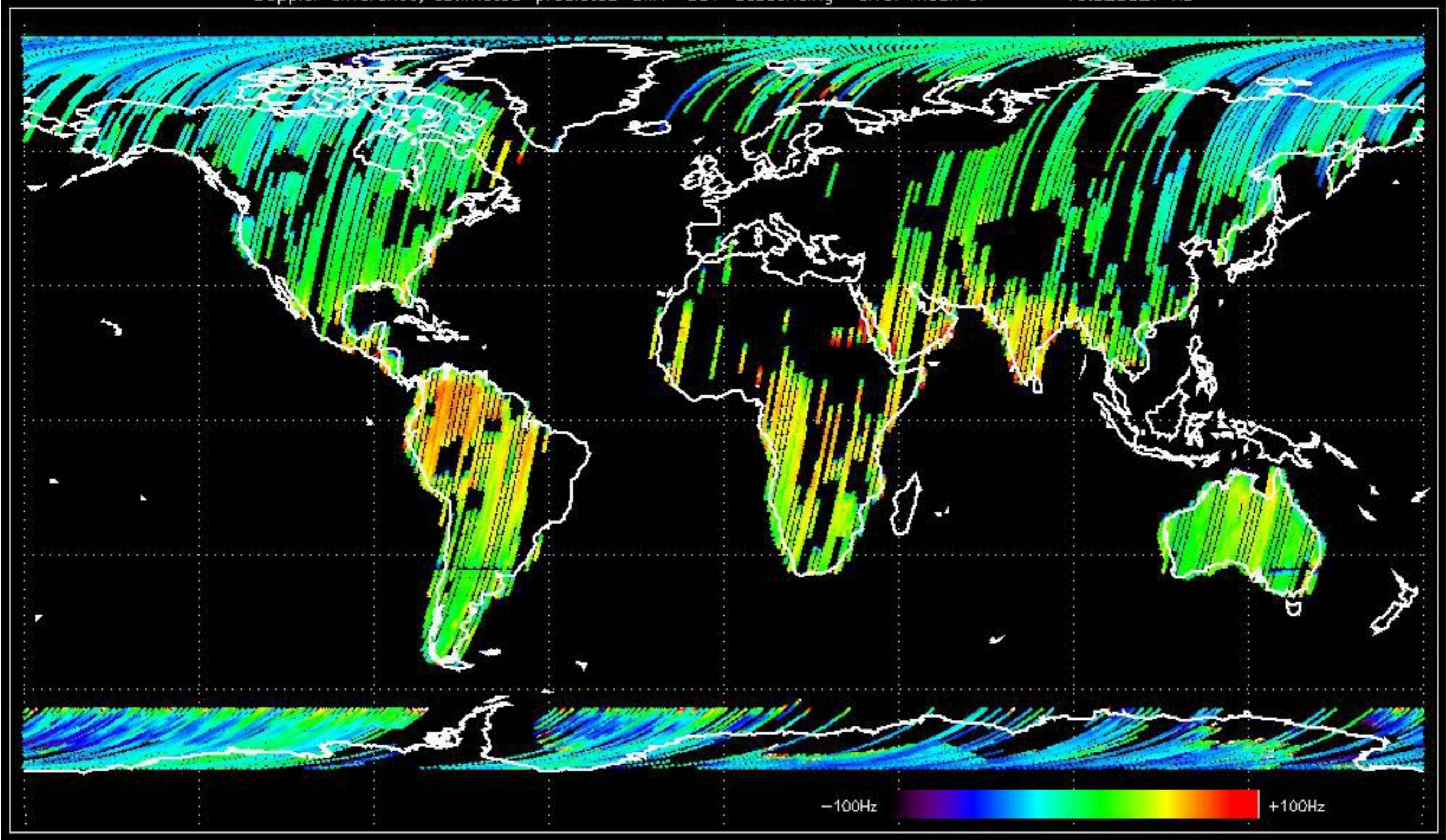
Doppler 'WVS' 'IS2' descending



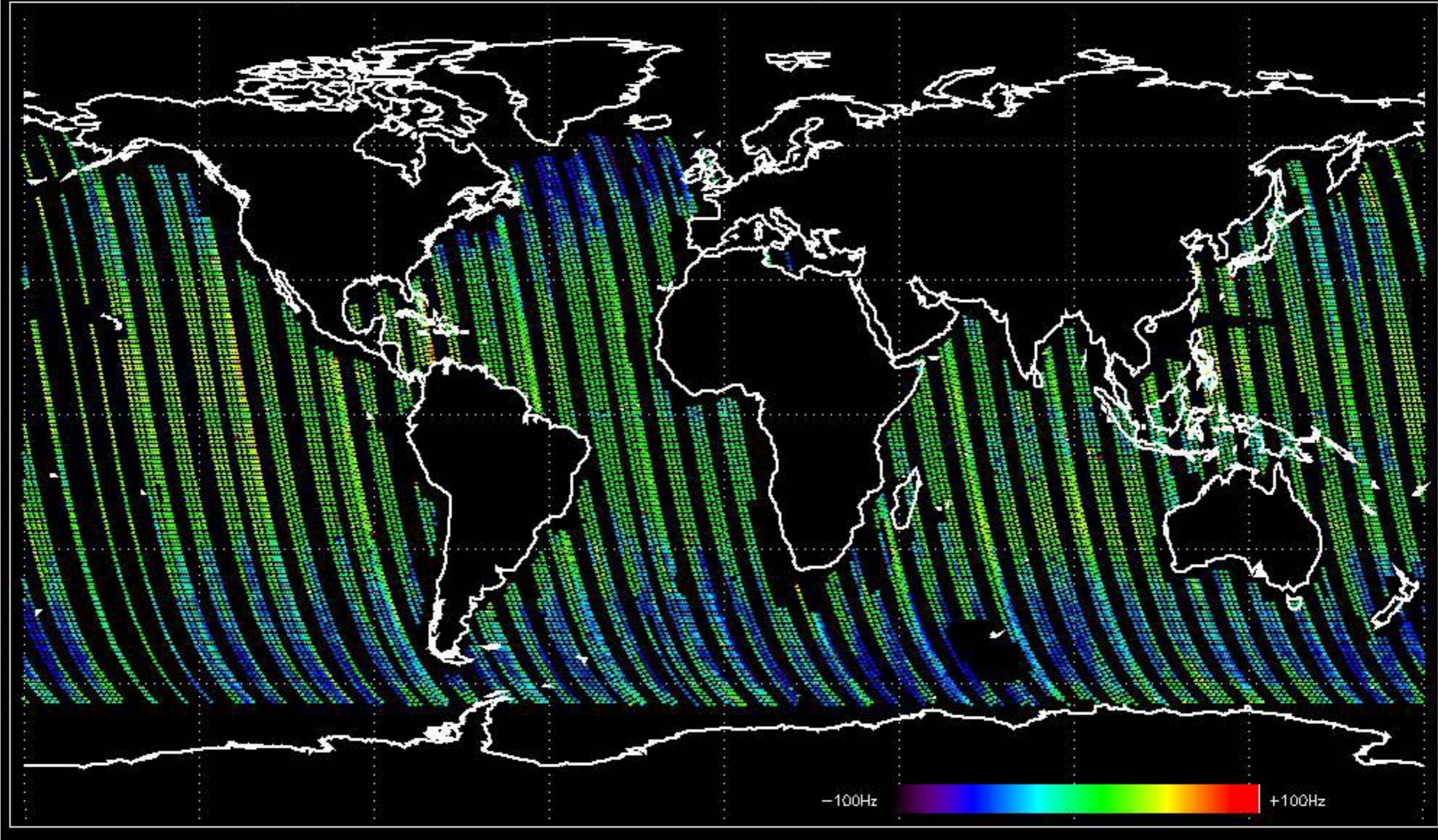
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.345701 Hz



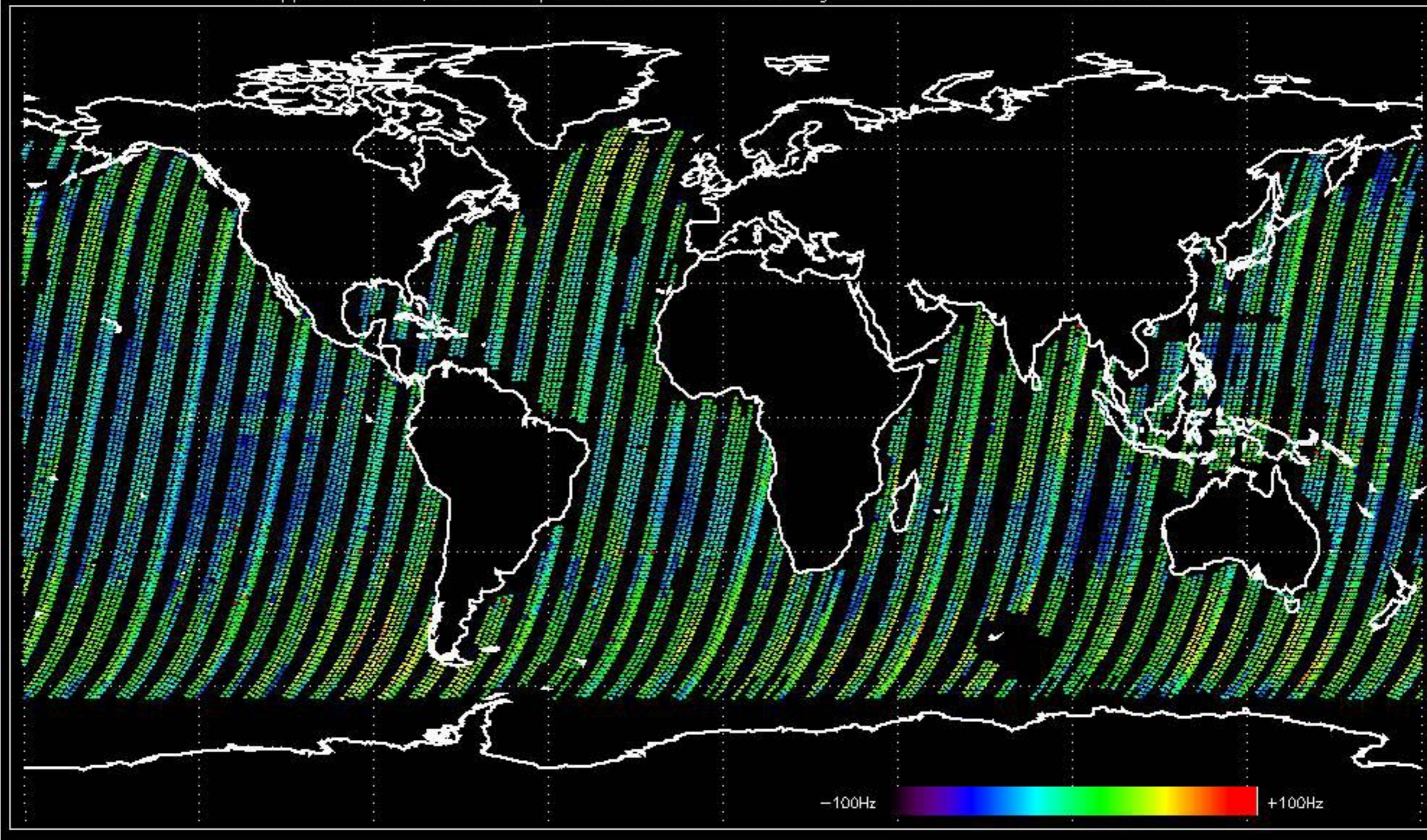
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.825327 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -16.139050 Hz

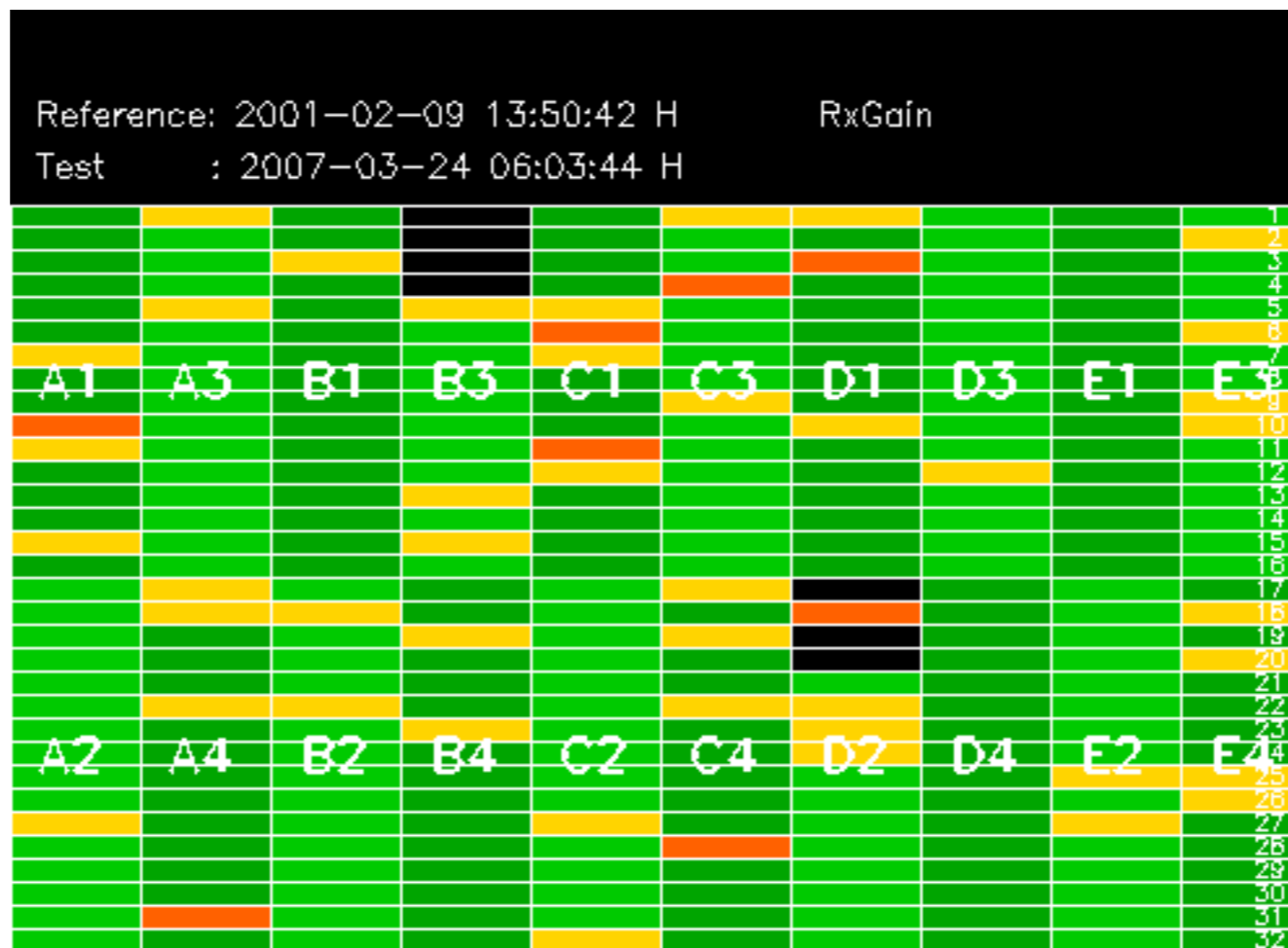


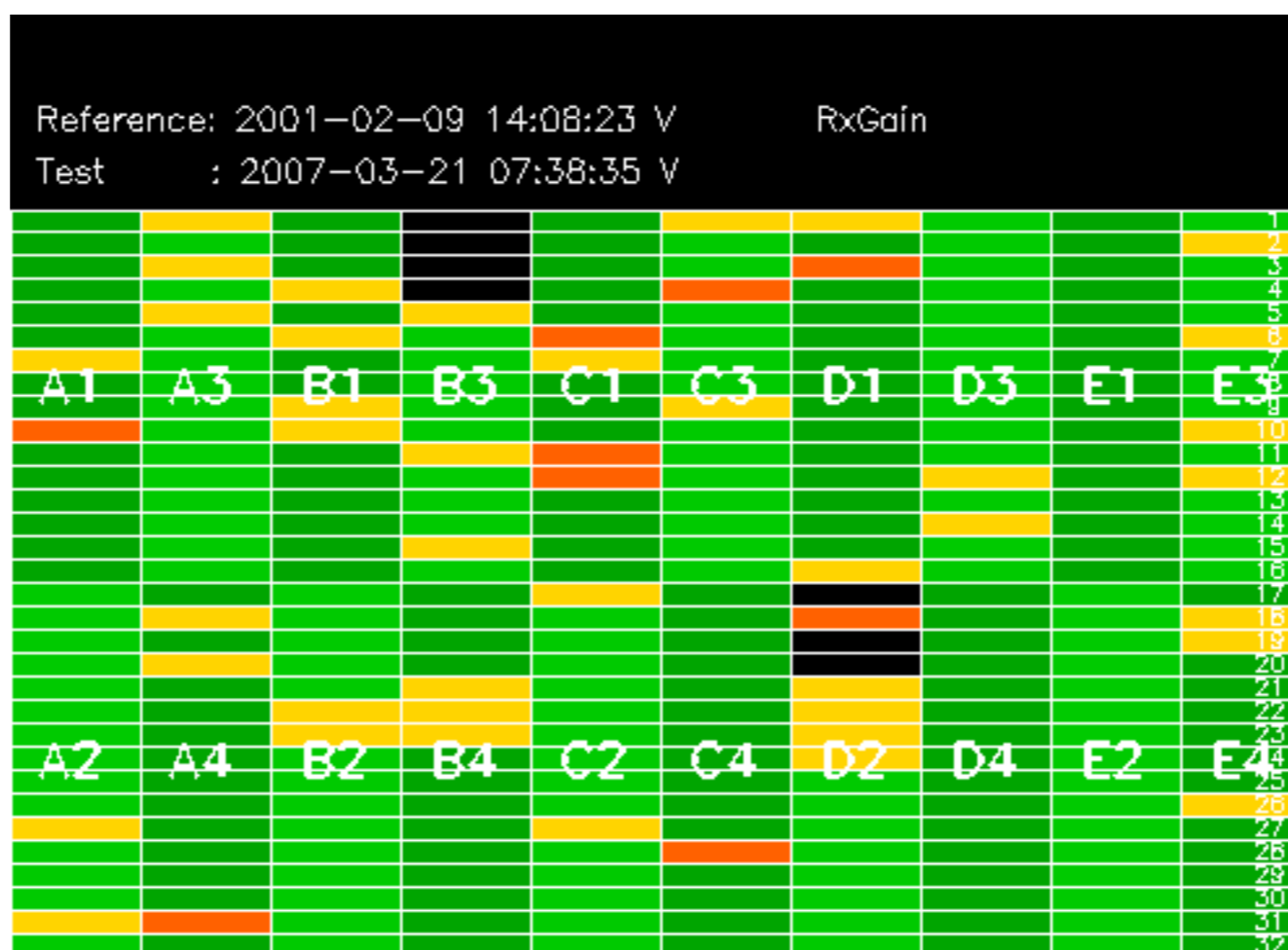
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.584587 Hz

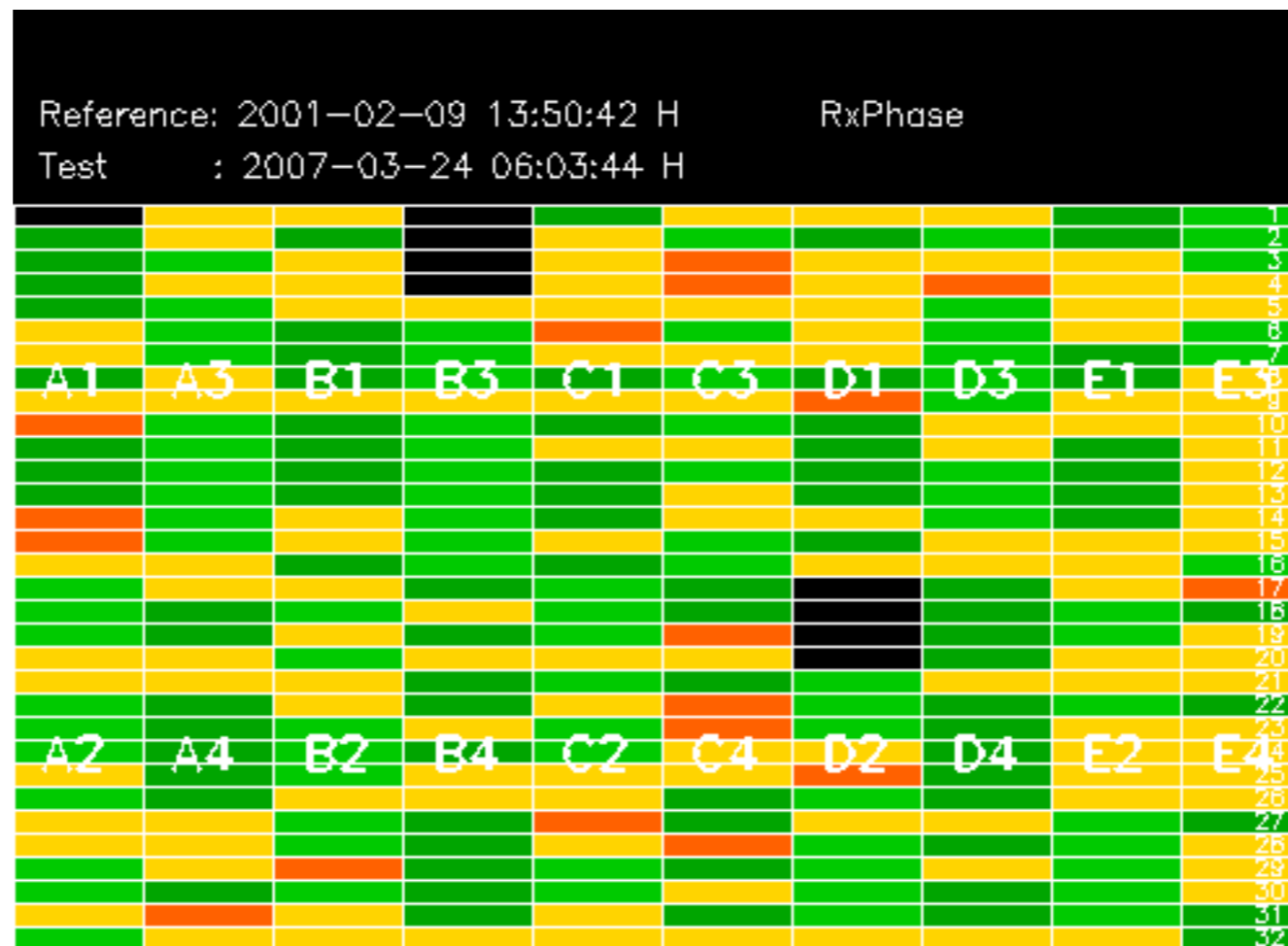


No anomalies observed on available MS products:

No anomalies observed.



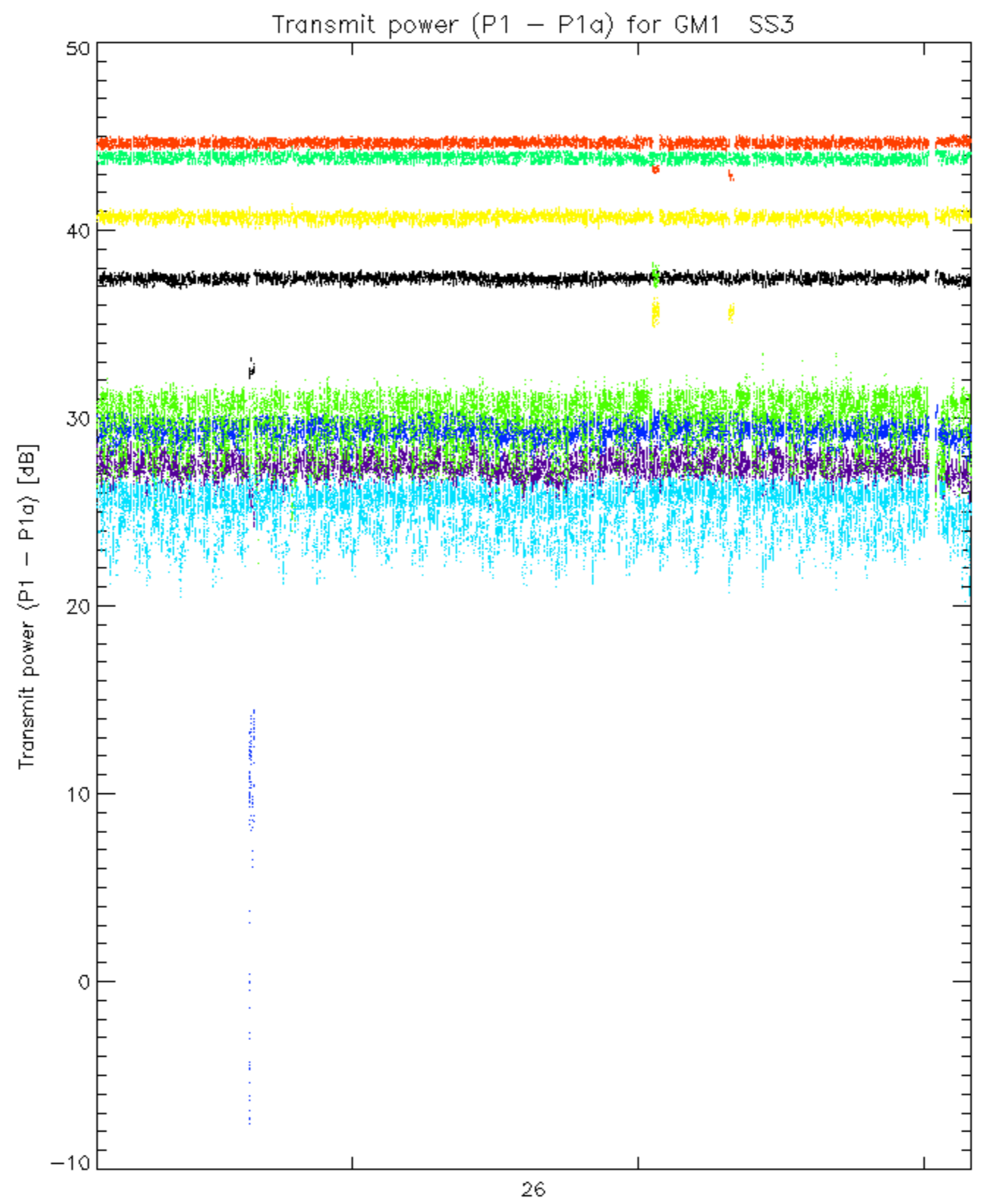




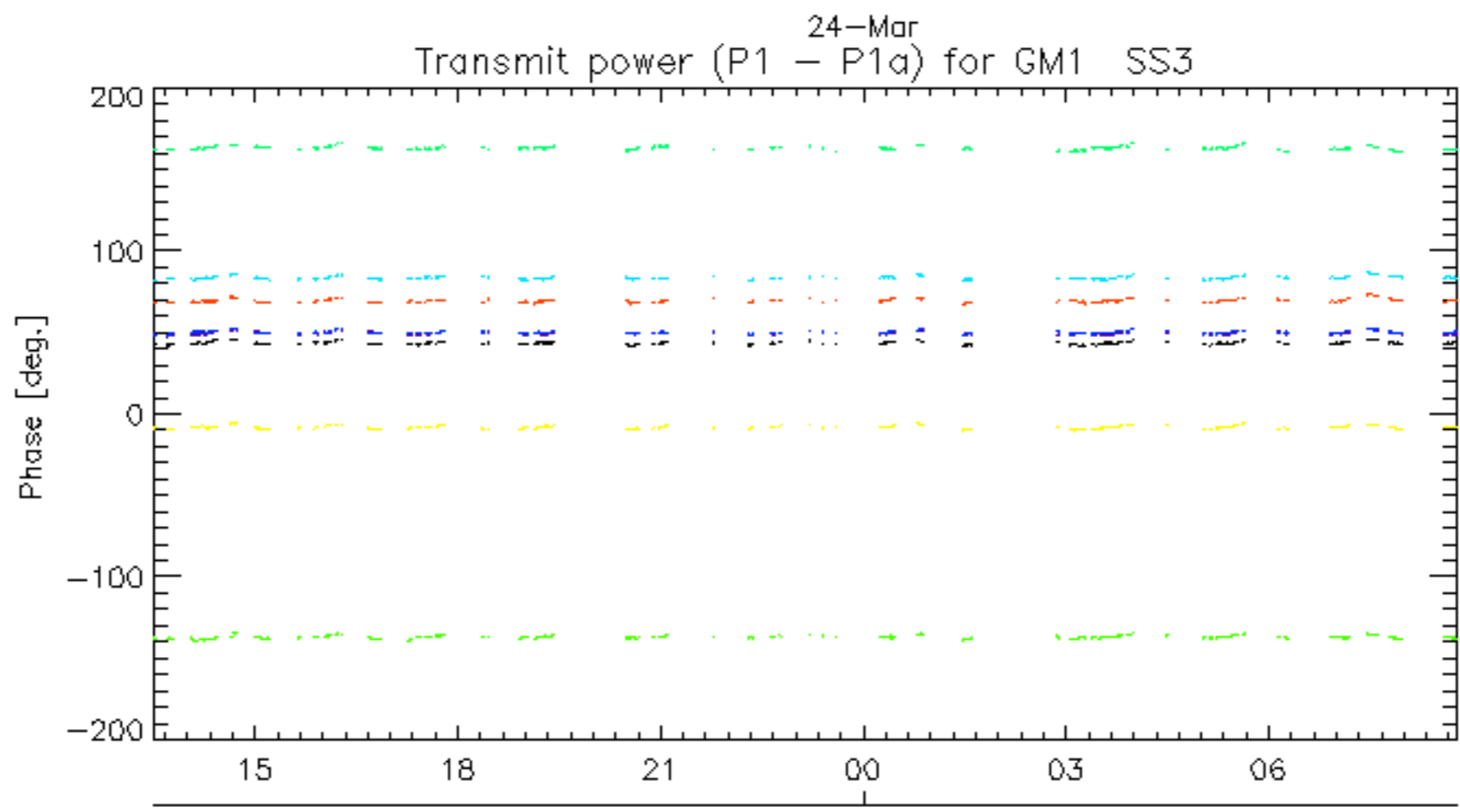
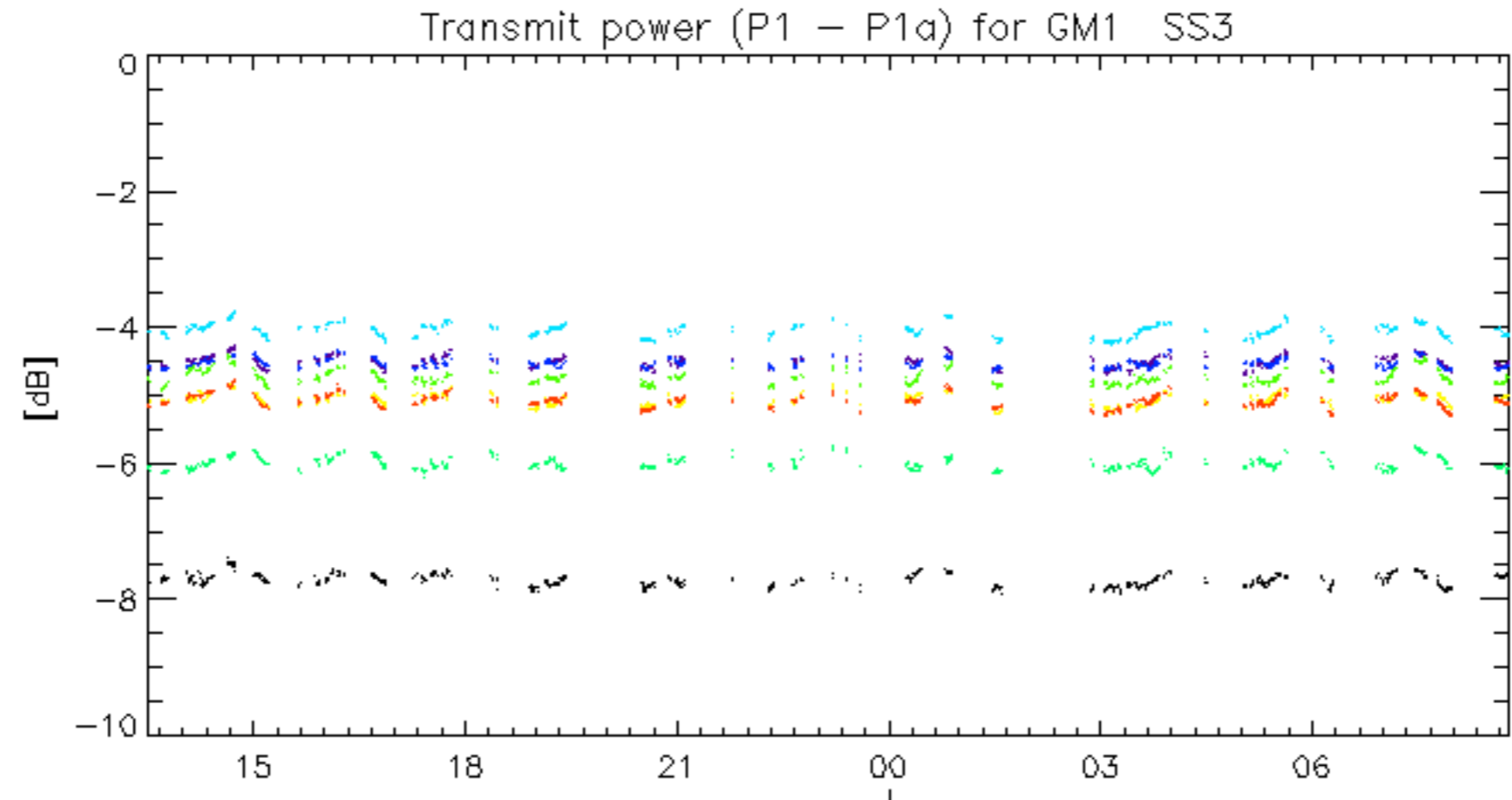
Summary of analysis for the last 3 days 2007032[234]

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

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDE20070322_142631_000000852056_00340_26446_2539.N1	0	16
ASA_WSM_1PNPDE20070322_192709_000000922056_00343_26449_2782.N1	9	431
ASA_WSM_1PNPDE20070322_233442_000002632056_00345_26451_3189.N1	0	32
ASA_WSM_1PNPDK20070323_120612_000003232056_00352_26458_0909.N1	0	1
ASA_WSM_1PNPDK20070323_135453_000000862056_00354_26460_1049.N1	0	17
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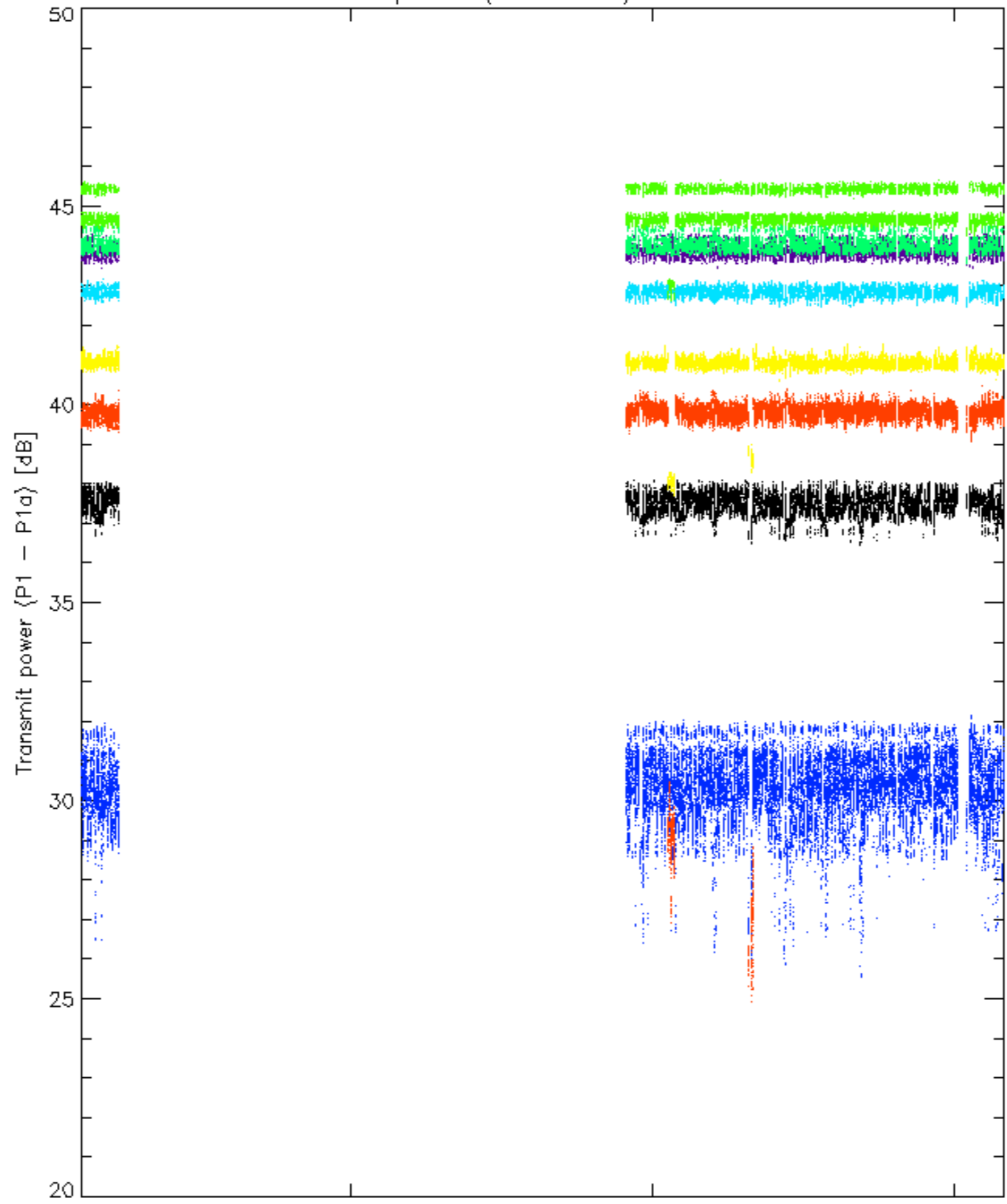


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

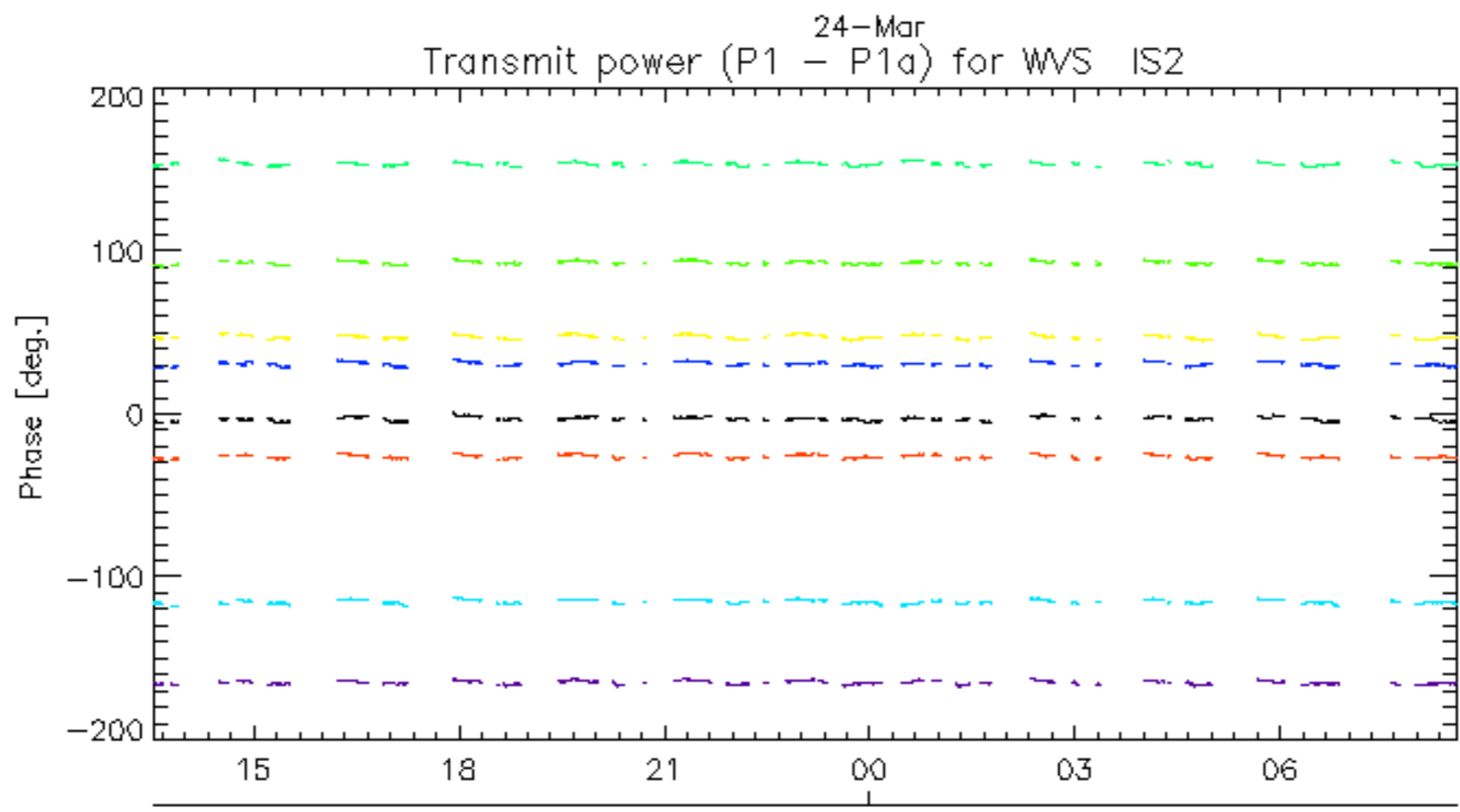
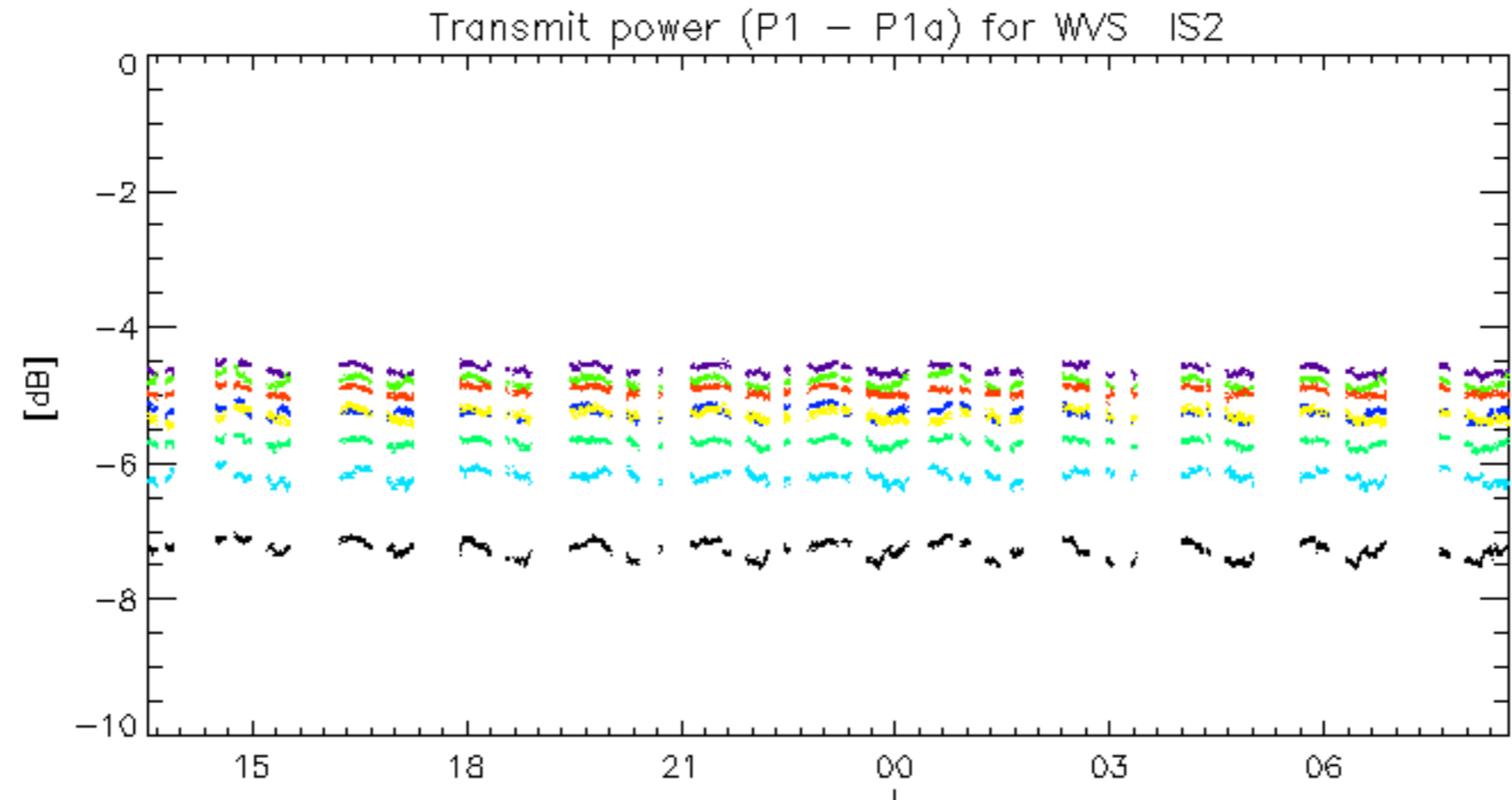


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.