

PRELIMINARY REPORT OF 060509

last update on Tue May 9 16:33:17 GMT 2006

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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 2006-05-08 00:00:00 to 2006-05-09 16:33:17

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	36	58	11	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	36	58	11	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	58	11	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	58	11	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	0	0	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	46	0	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	0	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	0	0	0	0

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	20060508 084152
H	20060509 081015

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
<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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.972843	0.011724	0.007322
7	P1	-3.056120	0.011833	-0.081853
11	P1	-4.089466	0.015965	-0.062283
15	P1	-6.102582	0.012576	-0.080538
19	P1	-3.308257	0.007718	0.007654
22	P1	-4.520034	0.011185	-0.045681
26	P1	-4.037883	0.020296	0.119020
30	P1	-5.736513	0.021957	-0.029052
3	P1	-16.686039	0.303075	0.149616
7	P1	-16.972418	0.150678	-0.265071
11	P1	-16.744530	0.326292	-0.512175
15	P1	-13.107299	0.137128	-0.299801
19	P1	-14.148587	0.048907	-0.271483
22	P1	-16.050381	0.475827	-0.394382
26	P1	-15.437587	0.271225	0.508633
30	P1	-16.789942	0.315868	-0.575843

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.287405	0.086759	0.081990
7	P2	-22.189367	0.101148	0.108318
11	P2	-16.030397	0.112656	0.171700
15	P2	-7.162034	0.097466	-0.034463
19	P2	-9.150486	0.090658	-0.047812
22	P2	-18.054213	0.089465	-0.143447
26	P2	-16.308628	0.095062	-0.123538
30	P2	-19.604408	0.088375	-0.006899

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.189095	0.004453	-0.016904
7	P3	-8.189095	0.004453	-0.016904
11	P3	-8.189095	0.004453	-0.016904
15	P3	-8.189095	0.004453	-0.016904
19	P3	-8.189095	0.004453	-0.016904
22	P3	-8.189095	0.004453	-0.016904
26	P3	-8.189110	0.004454	-0.016895
30	P3	-8.189110	0.004454	-0.016895

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	-3.749759	0.029136	0.004054
7	P1	-2.666118	0.118731	0.101605
11	P1	-2.885535	0.035014	0.069579
15	P1	-3.517258	0.032058	0.054715
19	P1	-3.382934	0.013628	-0.014671
22	P1	-5.123179	0.023013	0.069390
26	P1	-5.815183	0.024598	-0.045216
30	P1	-5.179167	0.048748	0.012611
3	P1	-11.596255	0.114175	-0.022851
7	P1	-9.978028	0.177685	0.037180
11	P1	-10.230592	0.088435	0.086604
15	P1	-10.694773	0.136888	0.141641
19	P1	-15.449461	0.091225	-0.079805
22	P1	-20.675865	1.271946	-0.470405

26	P1	-16.381050	0.416363	-0.225808
30	P1	-18.253159	0.498335	0.432475

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.957317	0.071834	0.073883
7	P2	-22.510237	0.191051	-0.099813
11	P2	-11.193135	0.052460	-0.012365
15	P2	-4.868066	0.043155	-0.074085
19	P2	-6.861047	0.042765	-0.049470
22	P2	-8.155553	0.057002	-0.080613
26	P2	-24.050936	0.138776	-0.109925
30	P2	-22.051281	0.093528	-0.014920

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024909	0.003779	-0.006871
7	P3	-8.024782	0.003795	-0.006894
11	P3	-8.024979	0.003768	-0.006249
15	P3	-8.024777	0.003792	-0.006323
19	P3	-8.025018	0.003783	-0.006774
22	P3	-8.024898	0.003789	-0.006630
26	P3	-8.024776	0.003776	-0.006106
30	P3	-8.024838	0.003785	-0.006458

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	0.000549070
	stdev	1.82264e-07
MEAN Q	mean	0.000518251
	stdev	2.24258e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136425
	stdev	0.00117053
STDEV Q	mean	0.136782
	stdev	0.00118806



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006050[789]

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
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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

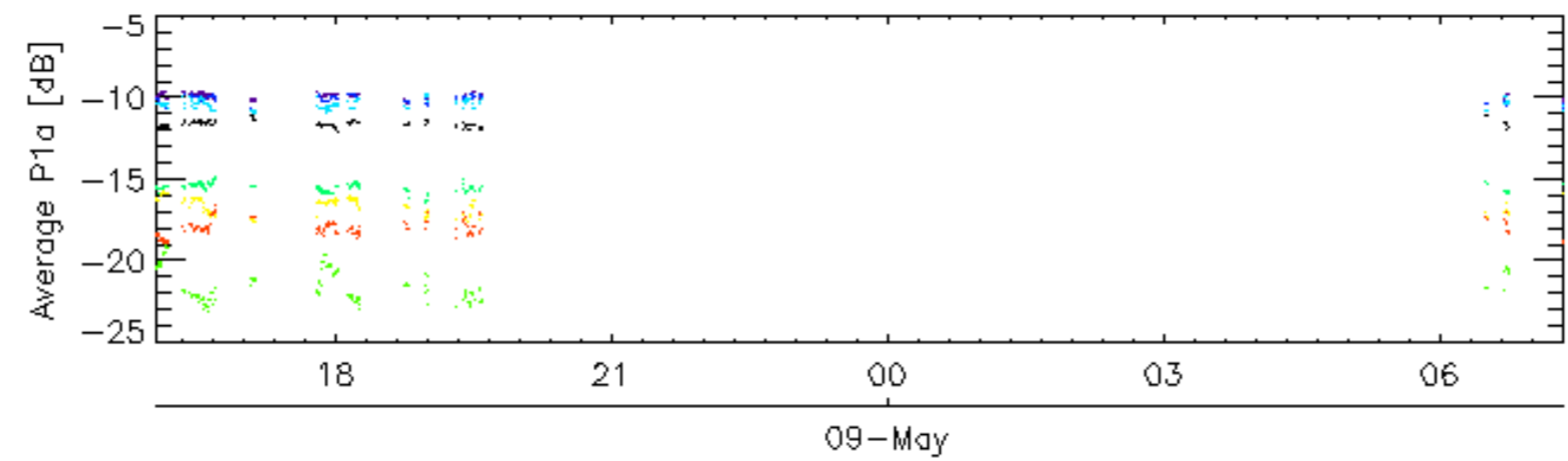
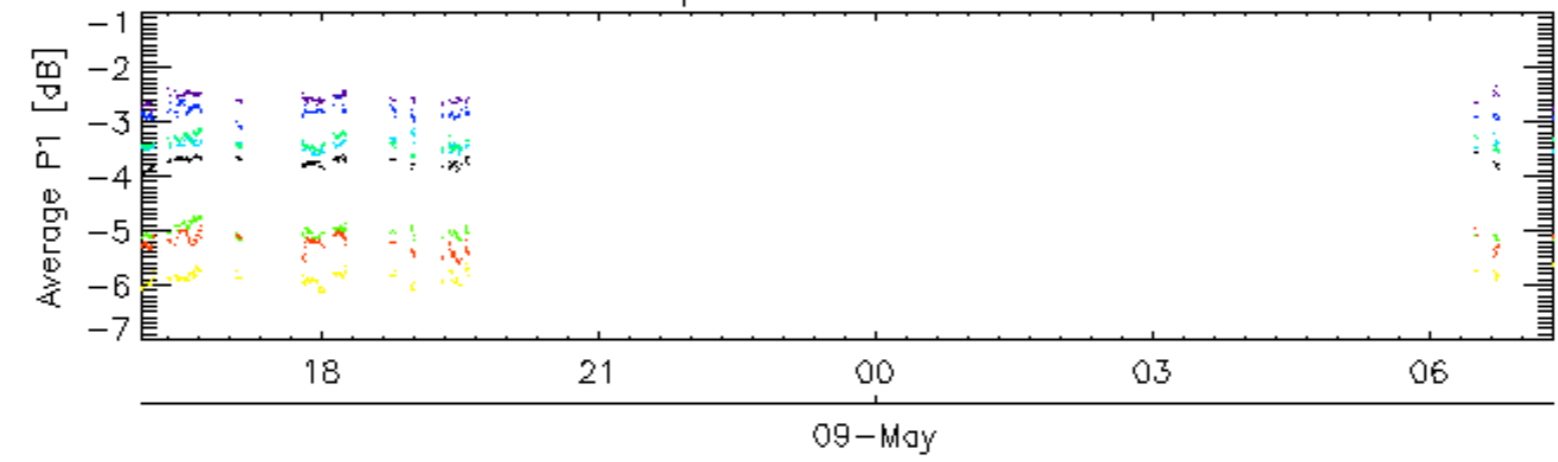
Ascending

Descending

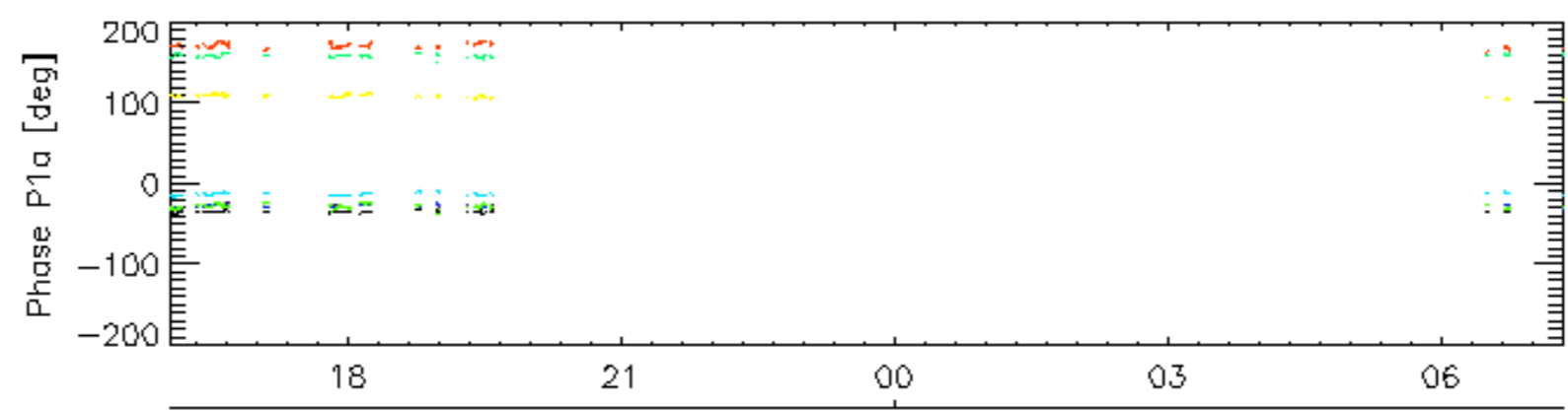
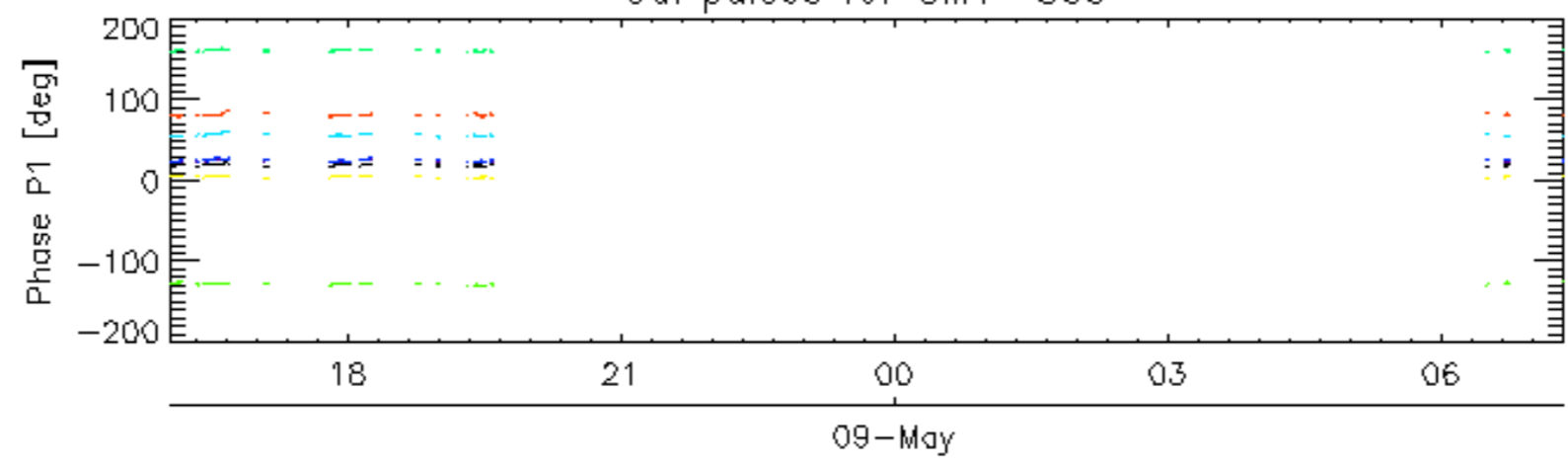
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

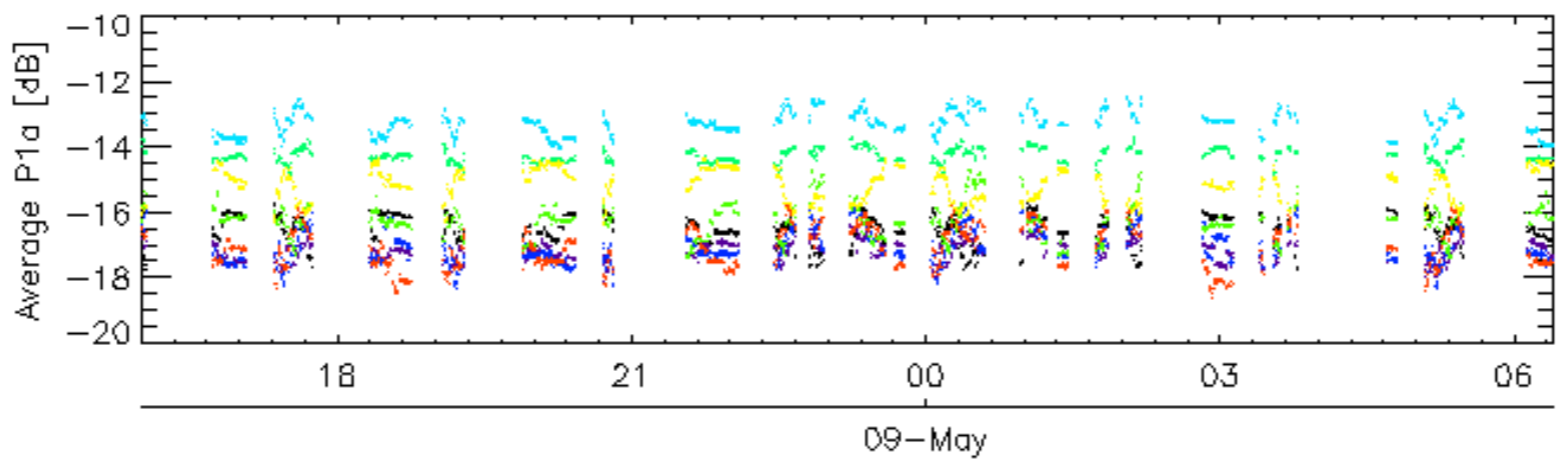
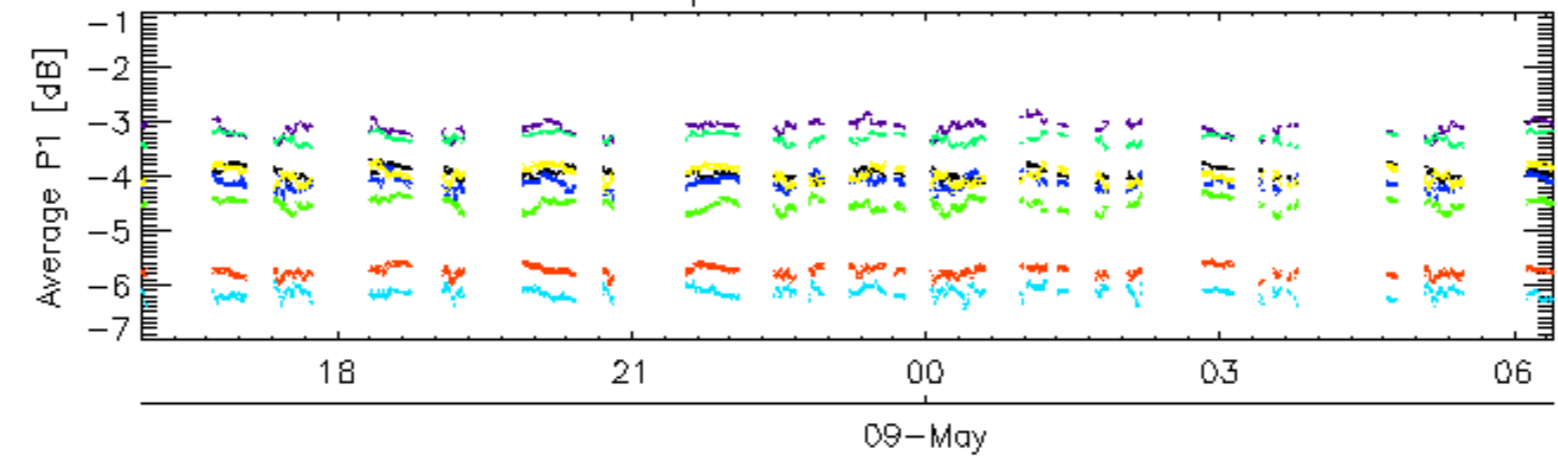


Cal pulses for GM1 SS3

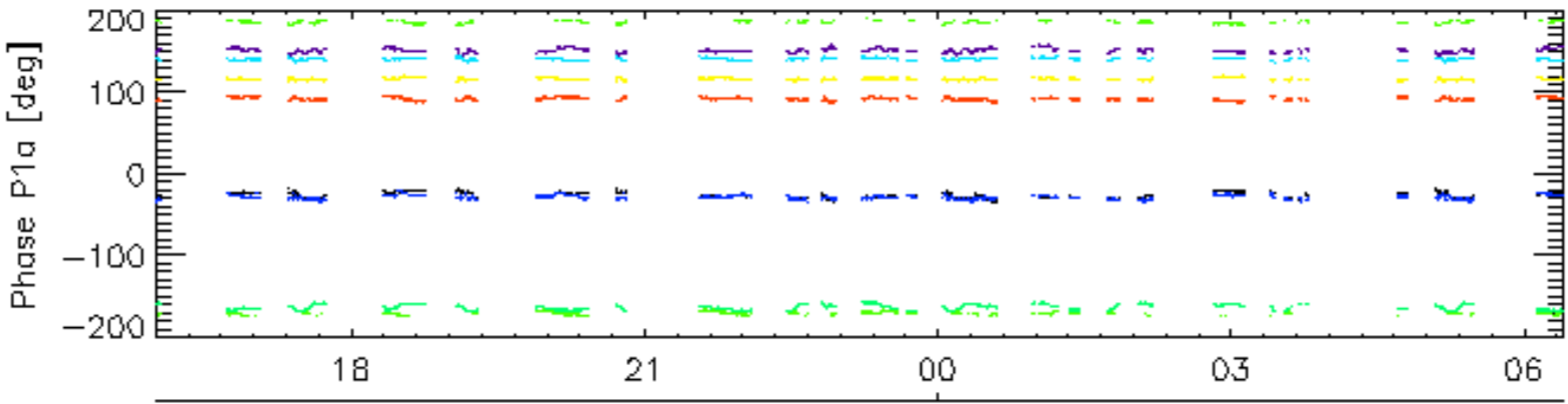
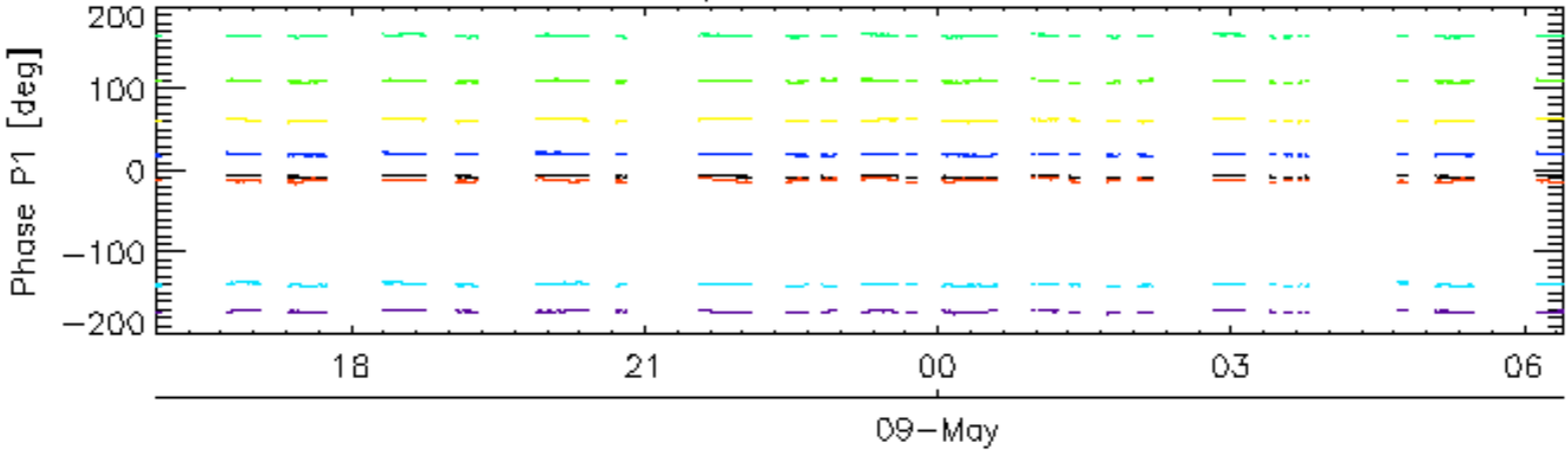


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

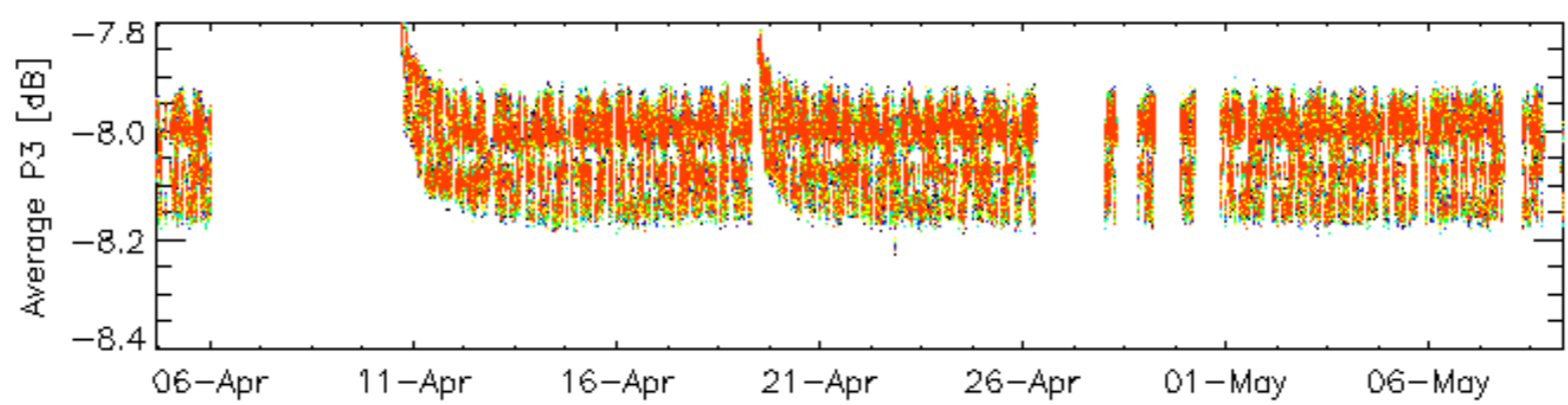
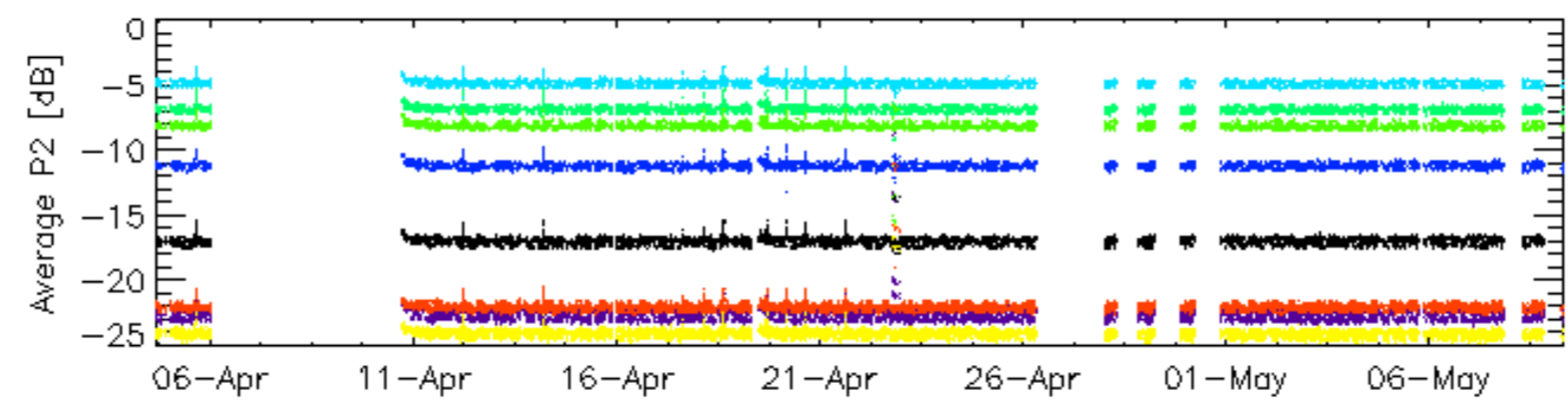
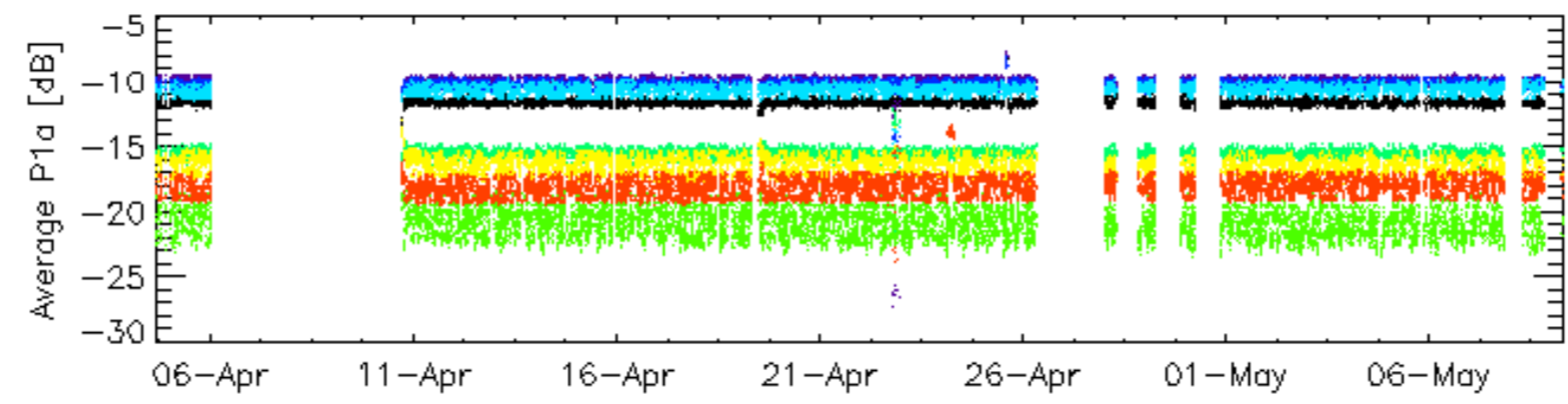
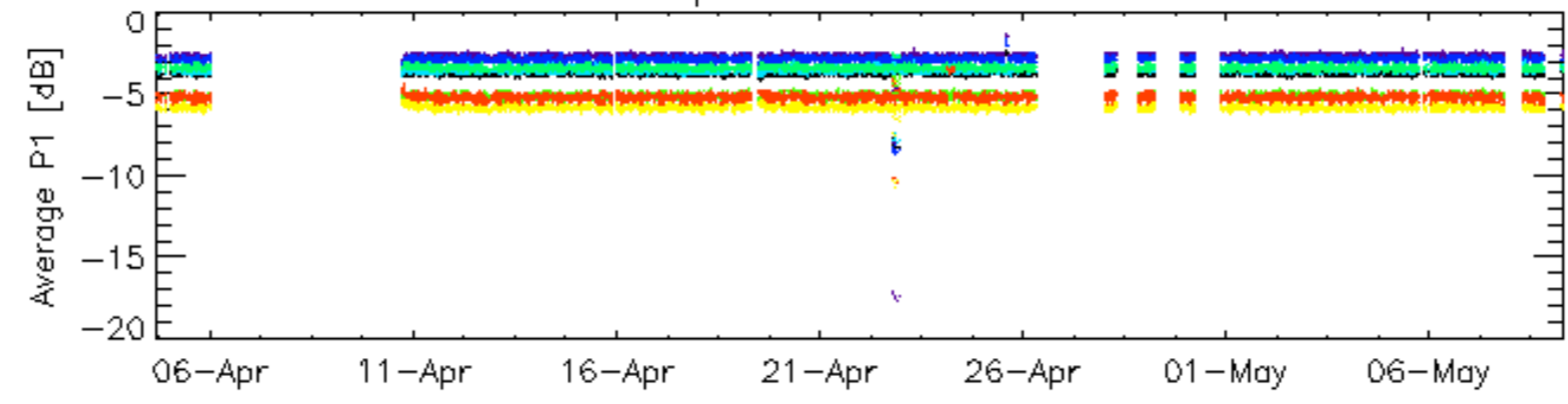


Cal pulses for WVS IS2



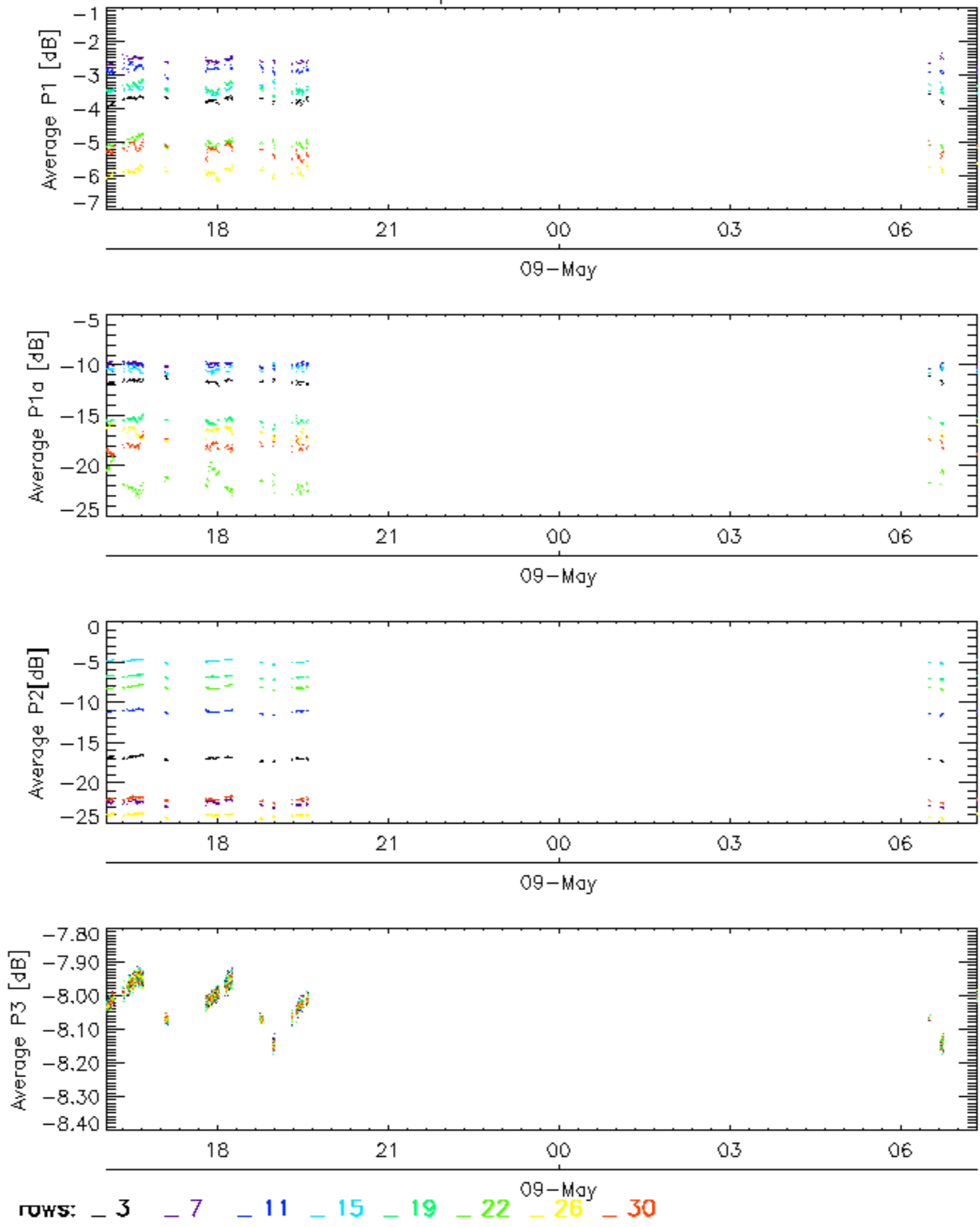
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

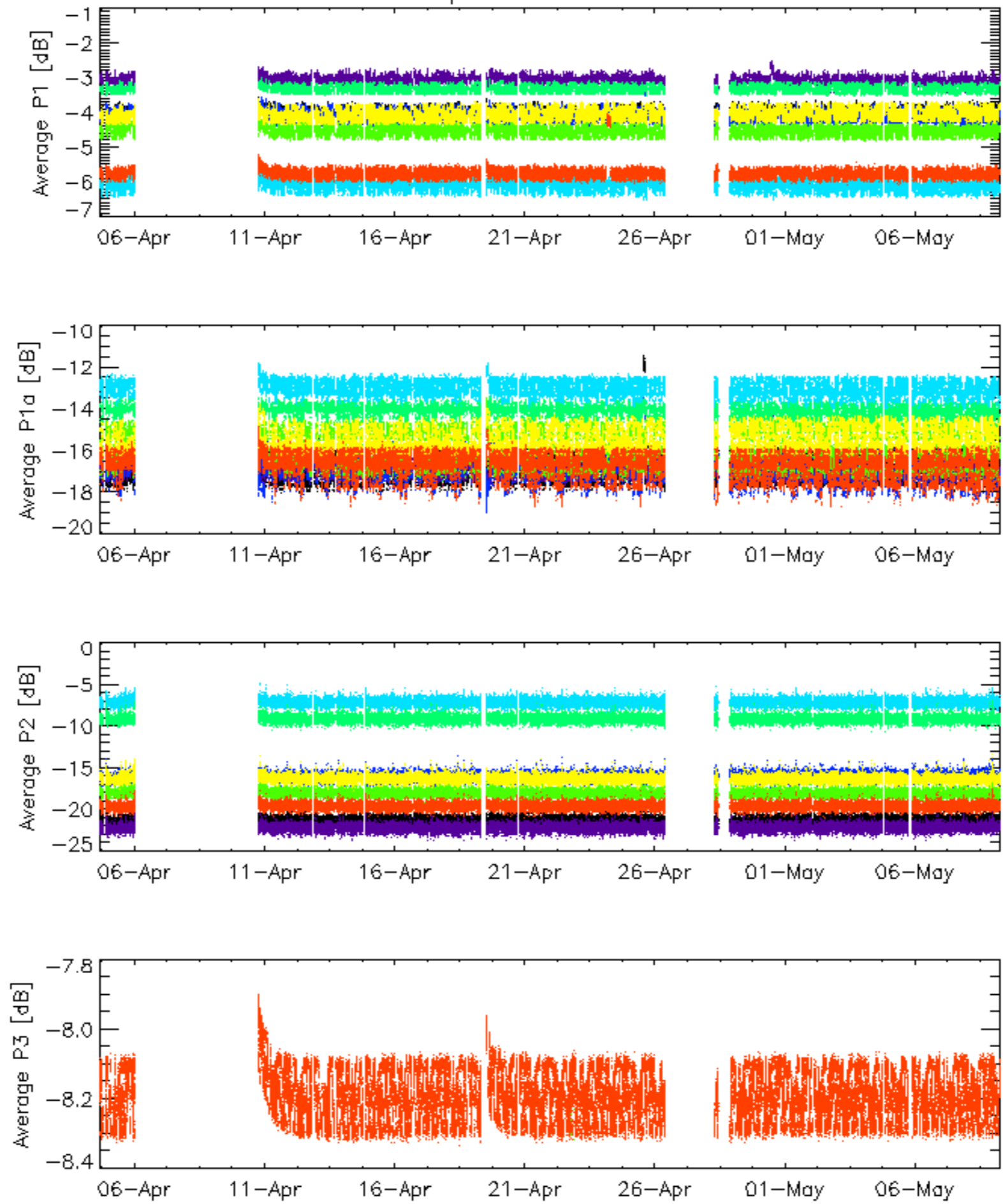


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

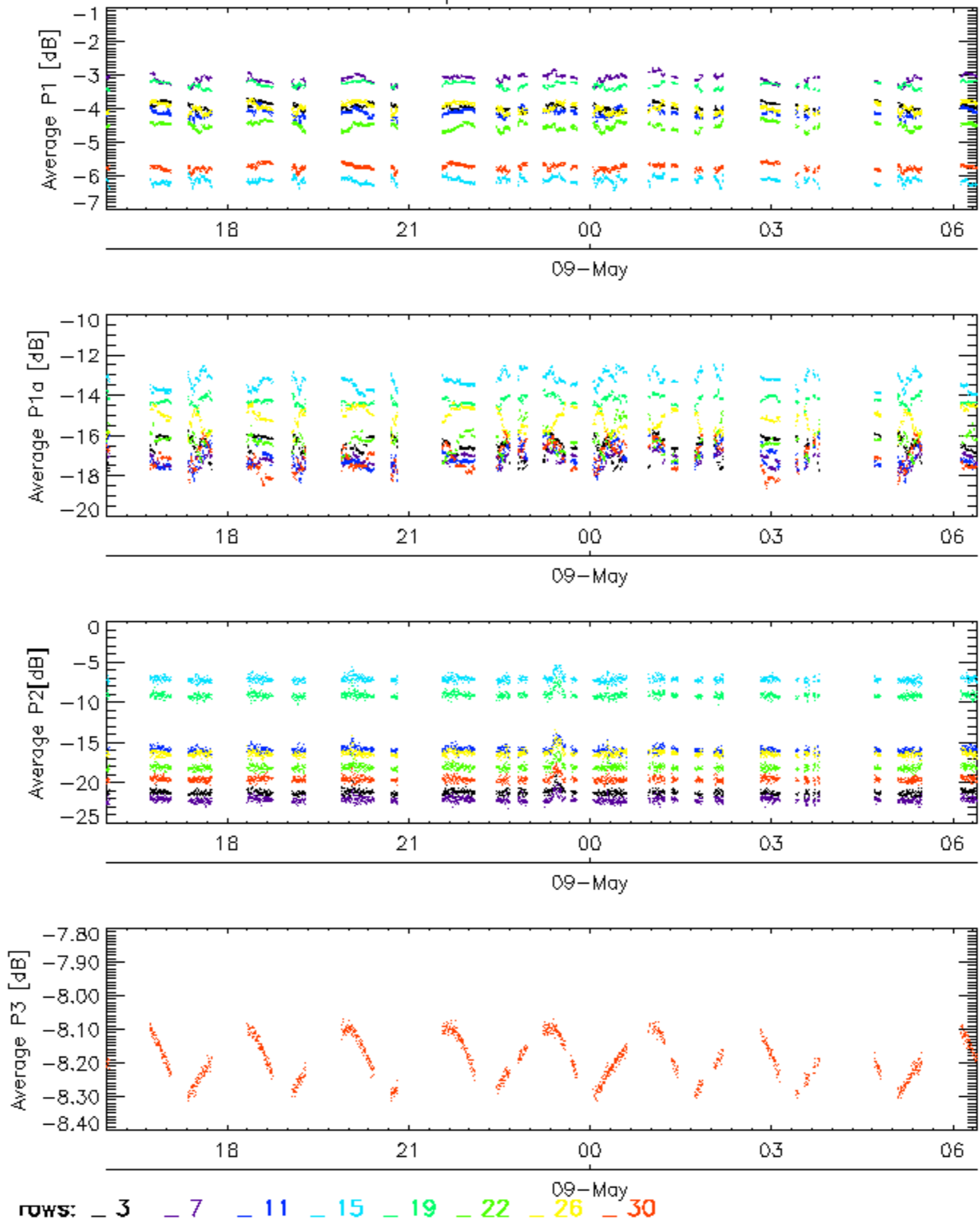


Cal pulses for WVS IS2



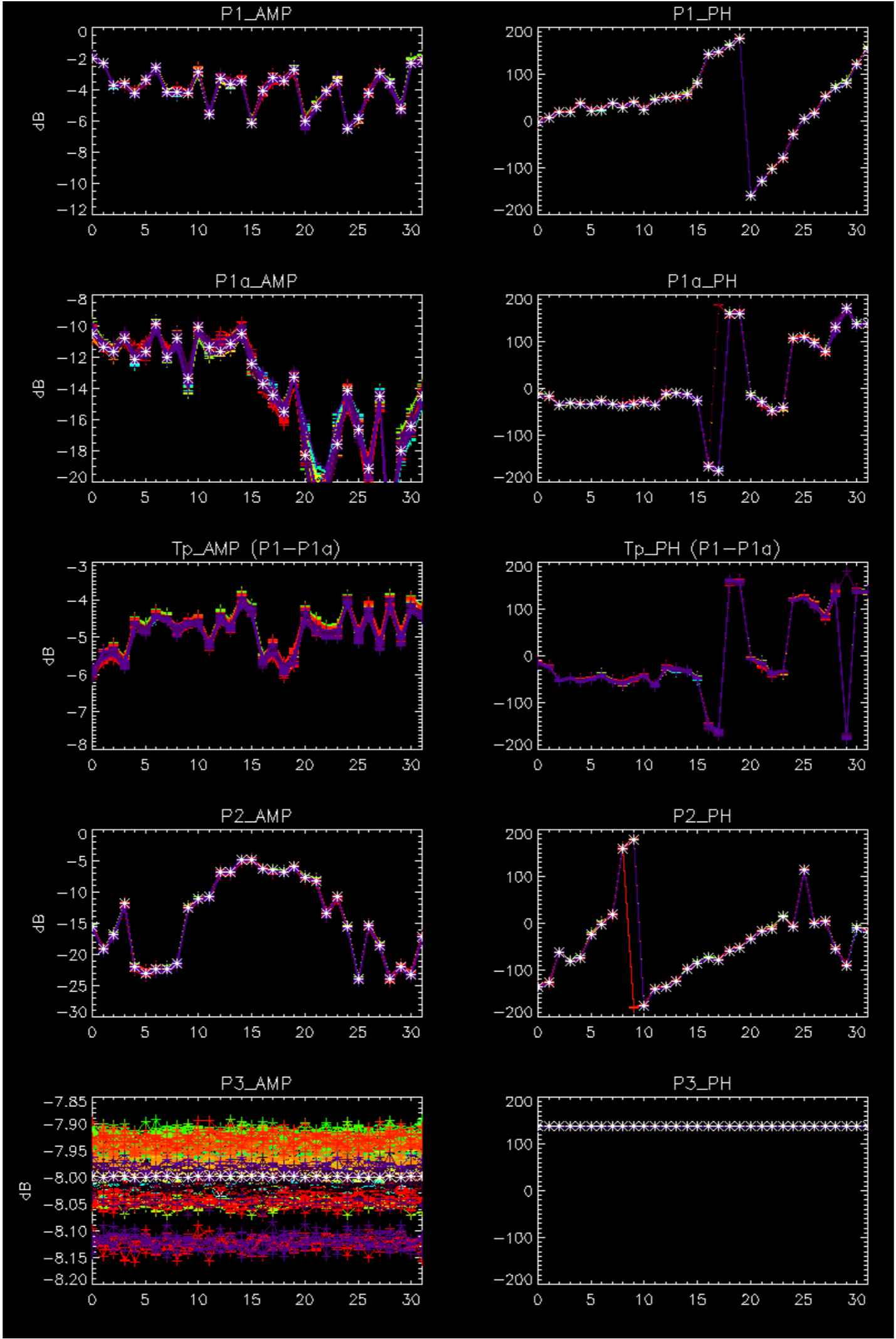
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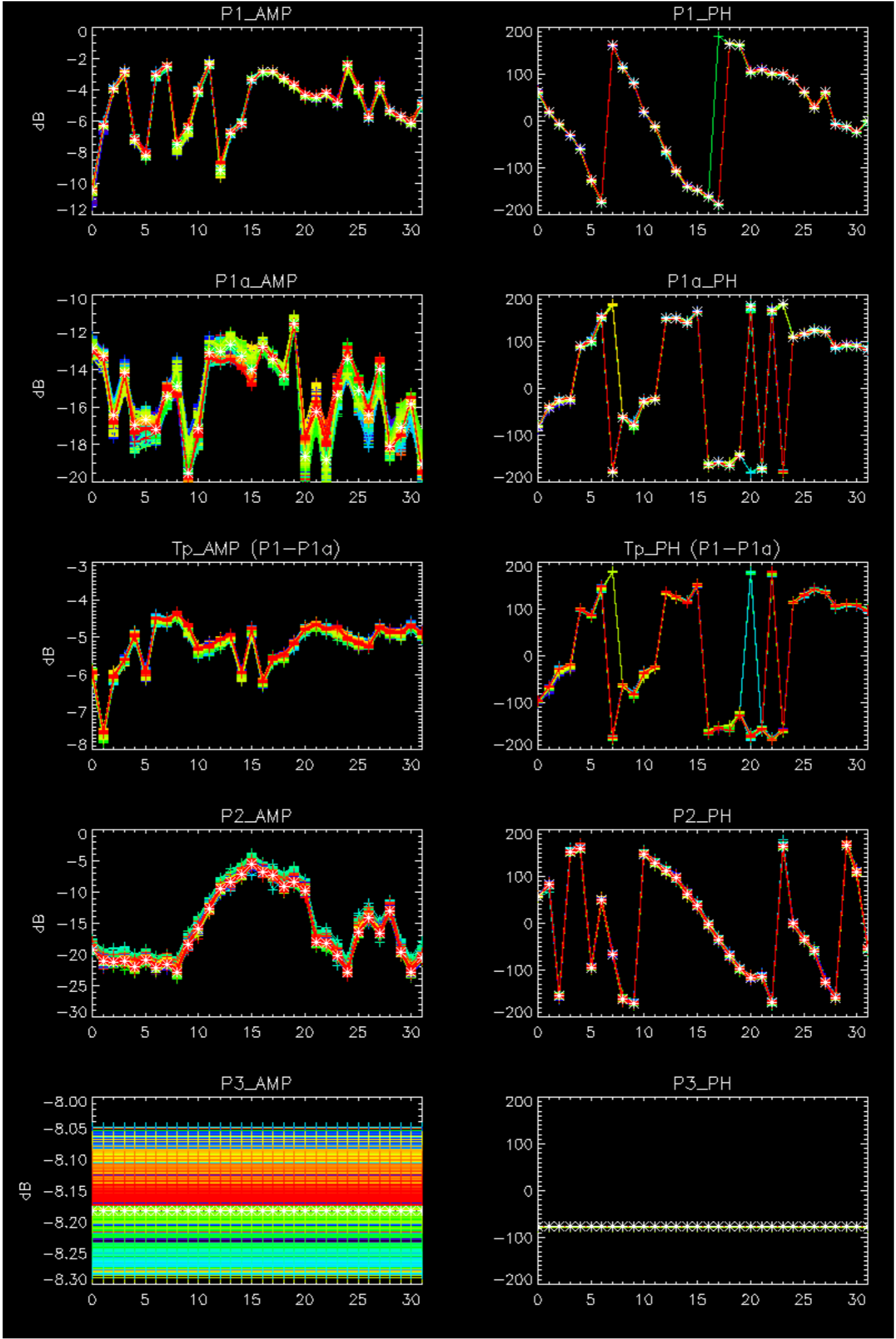
Cal pulses for WVS IS2



No anomalies observed on available browse products

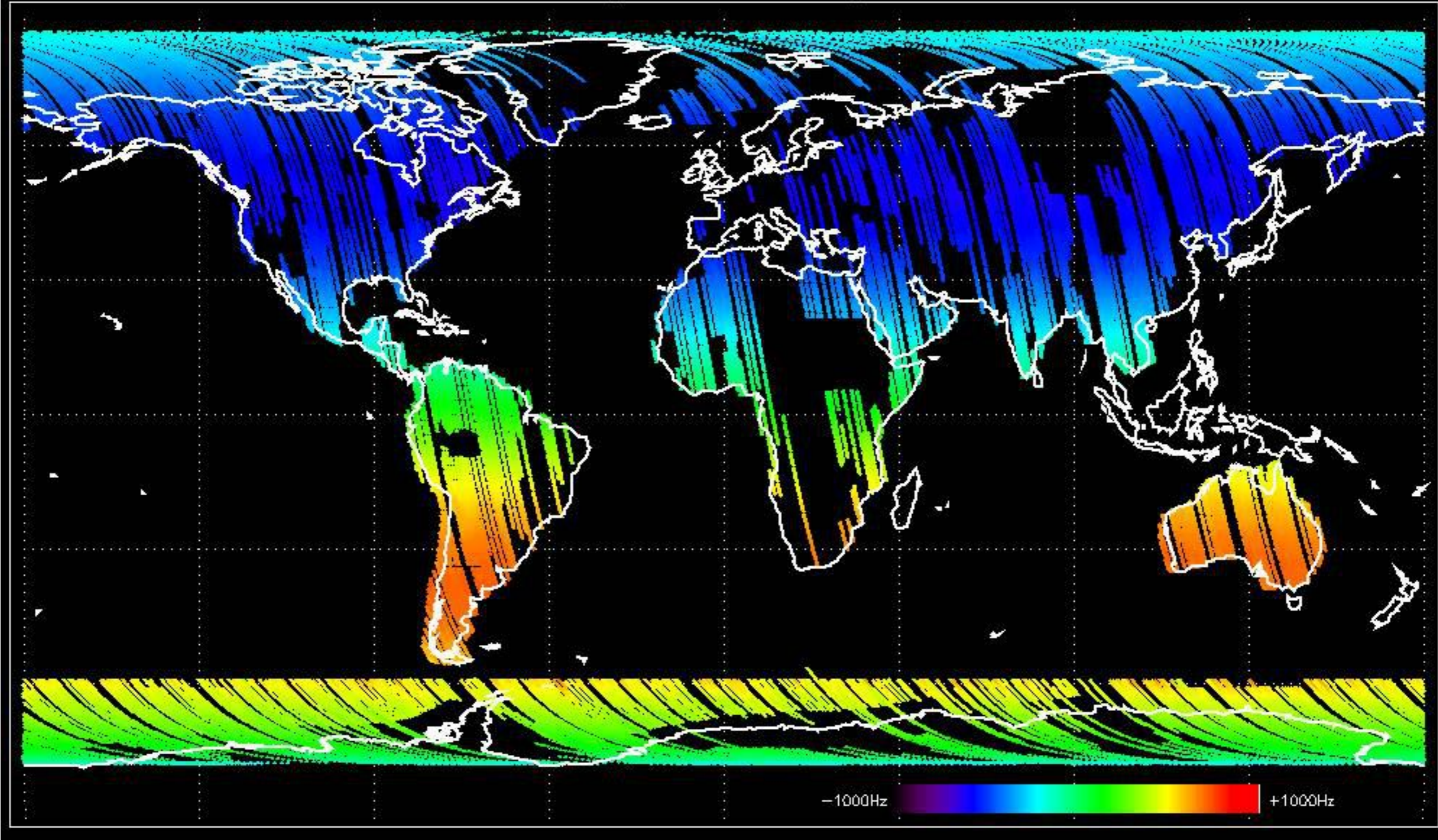
No anomalies observed.



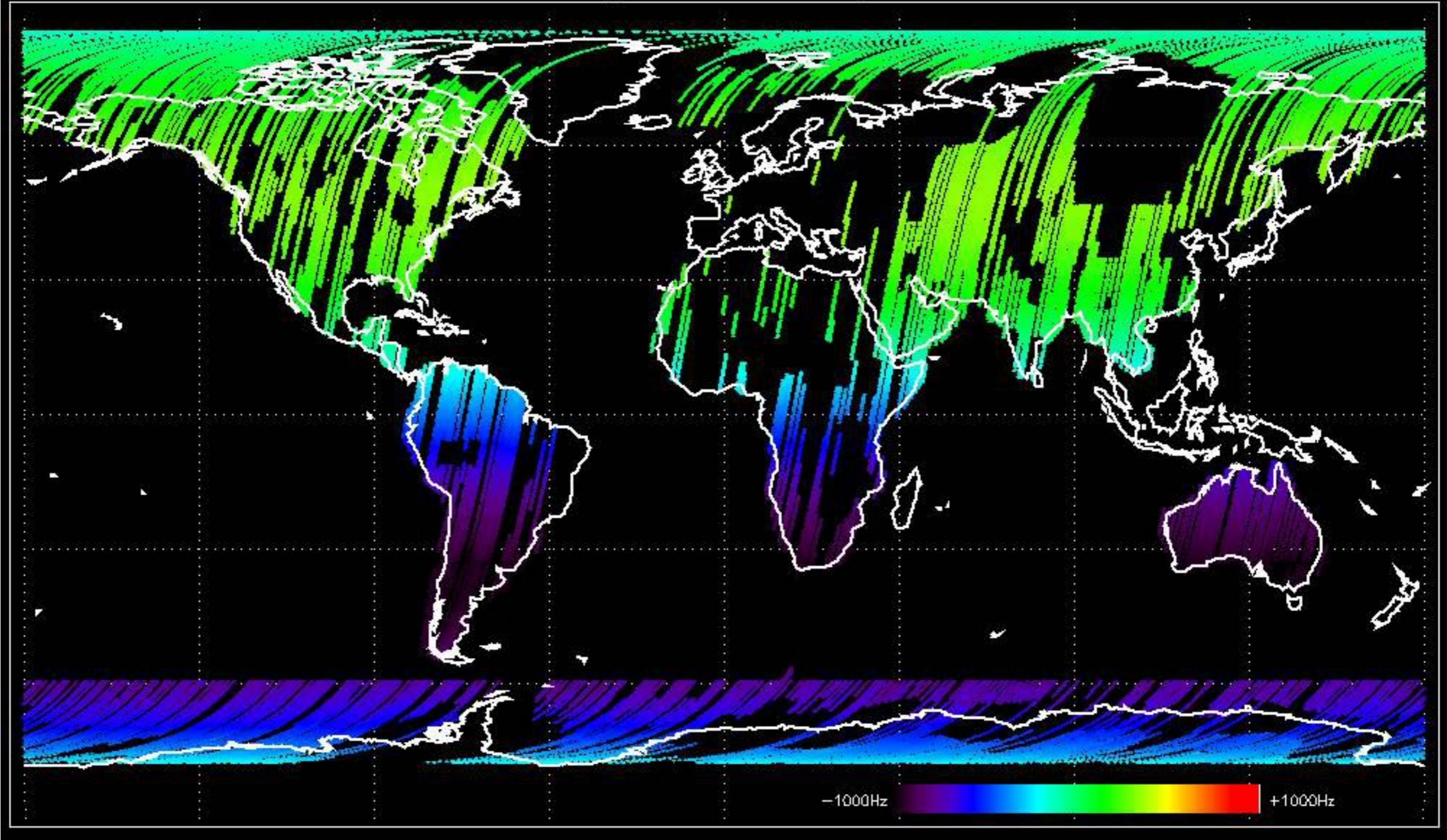


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

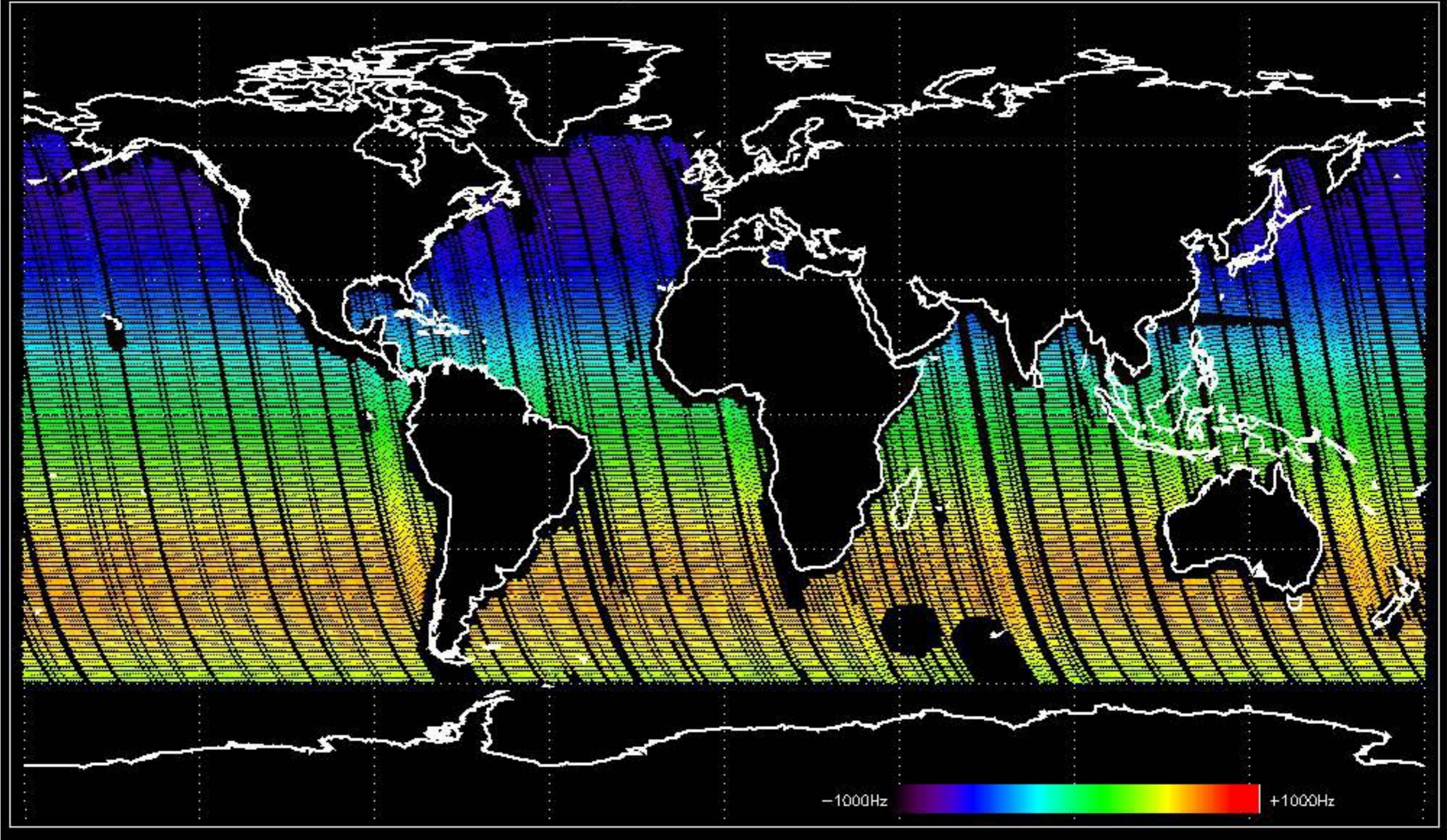
Doppler 'GM1' 'SS1' ascending



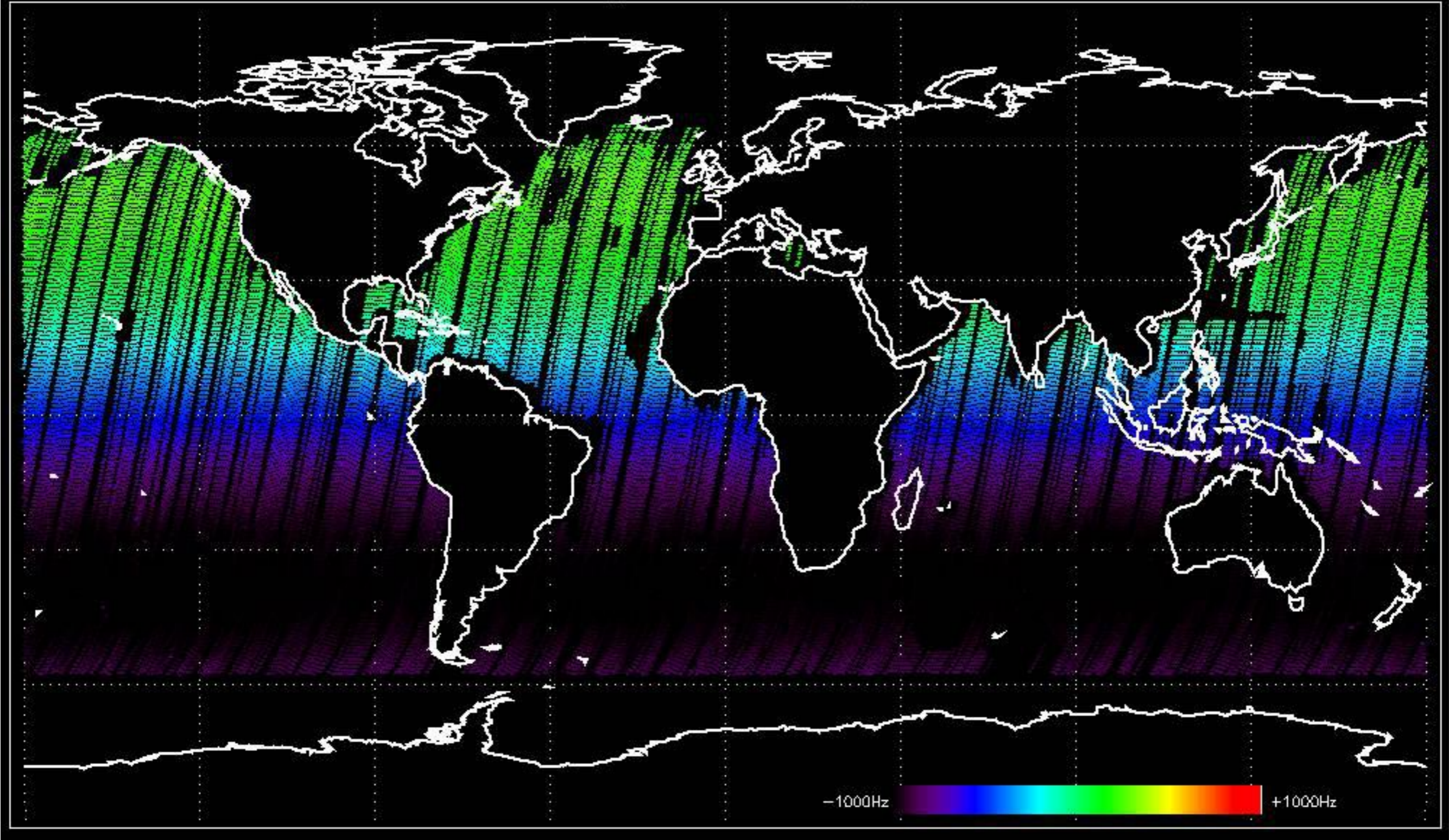
Doppler 'GM1' 'SS1' descending



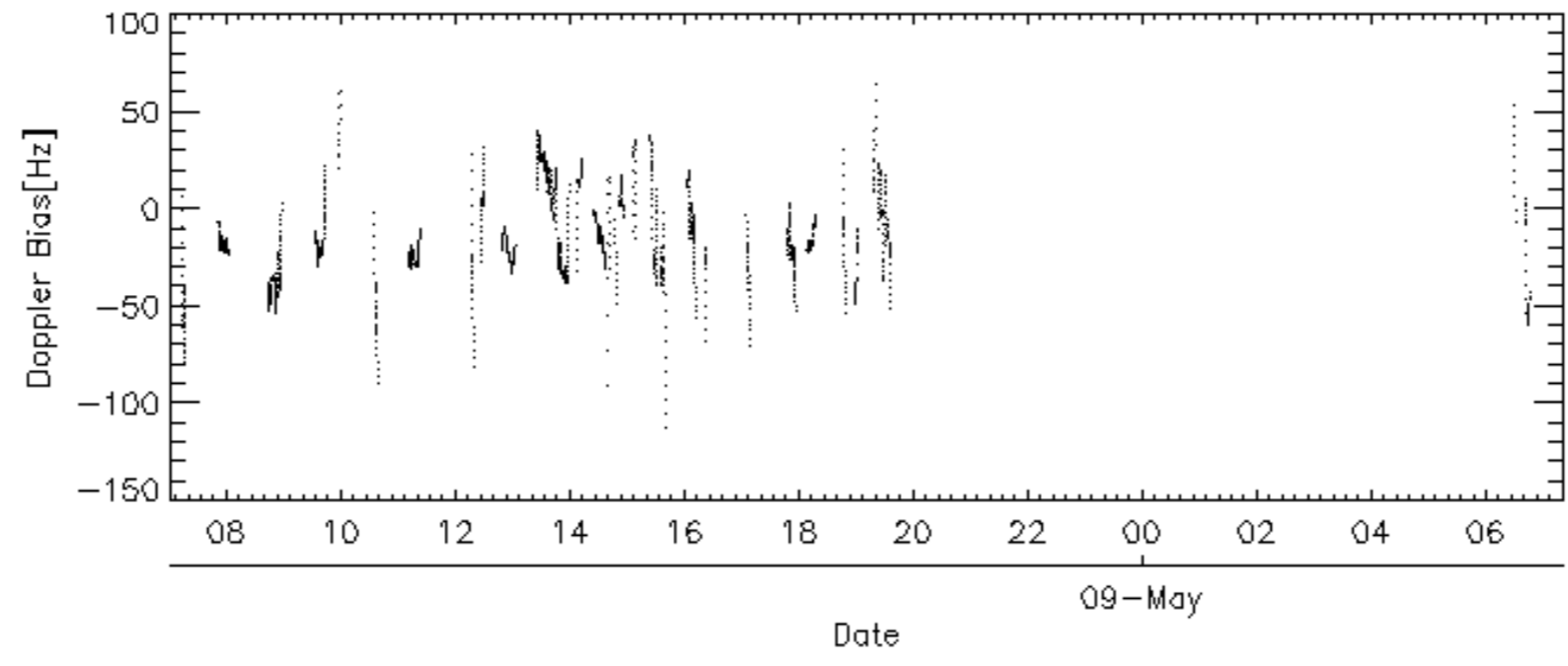
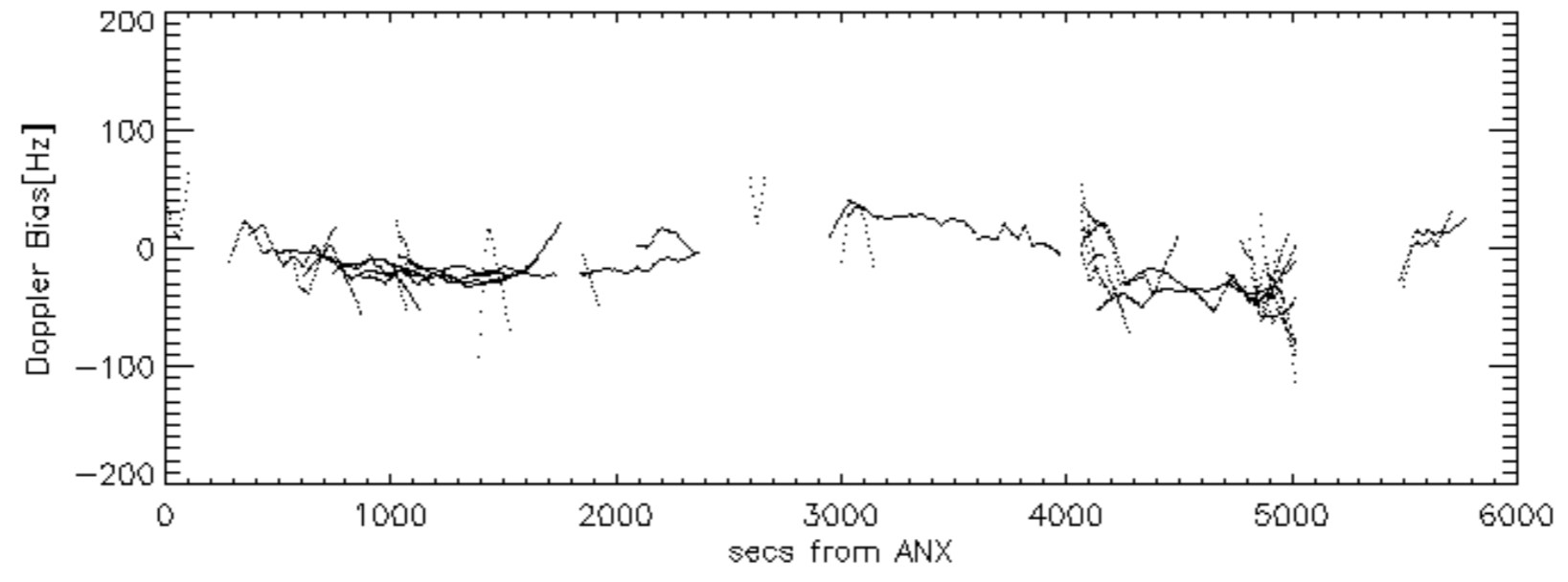
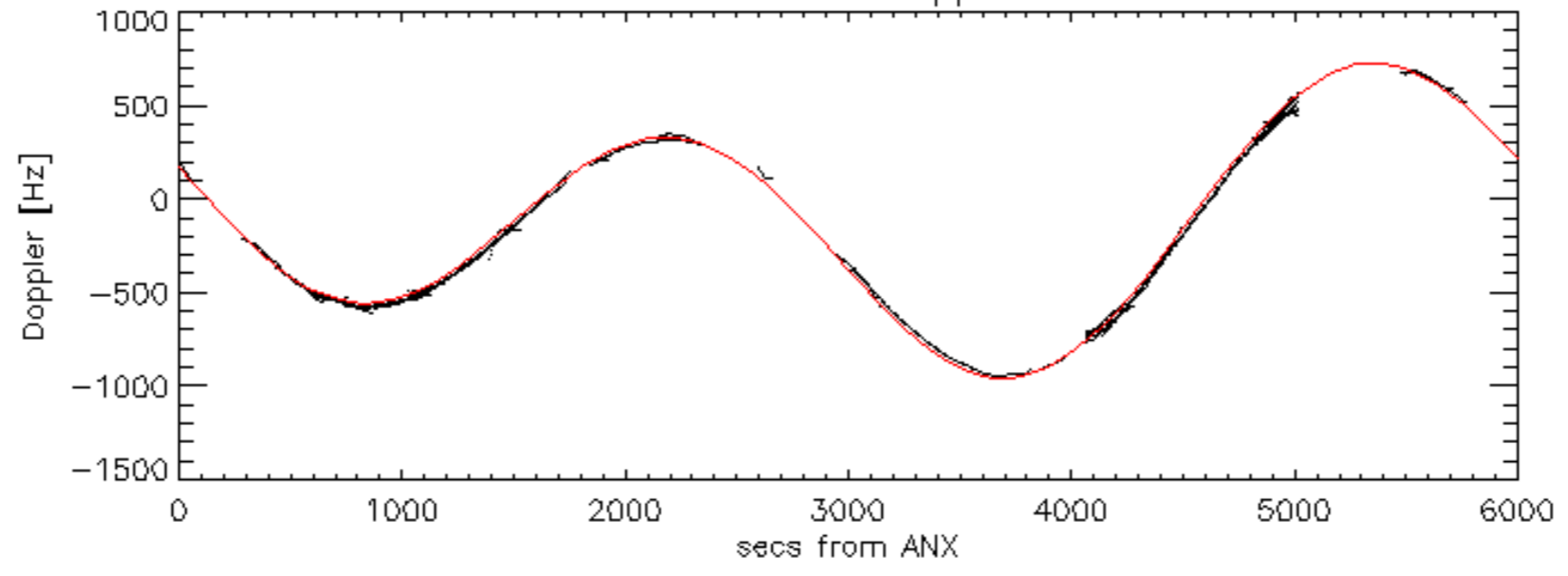
Doppler 'WVS' 'IS2' ascending

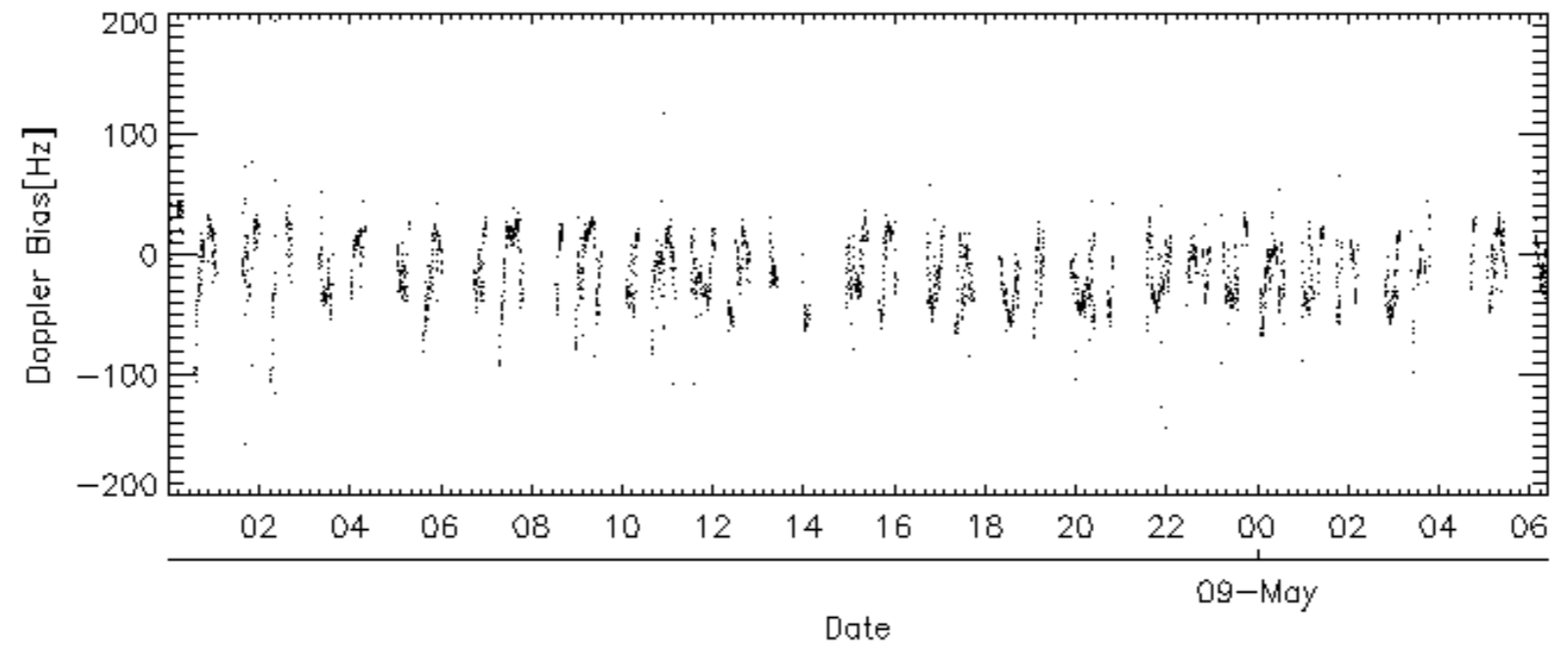
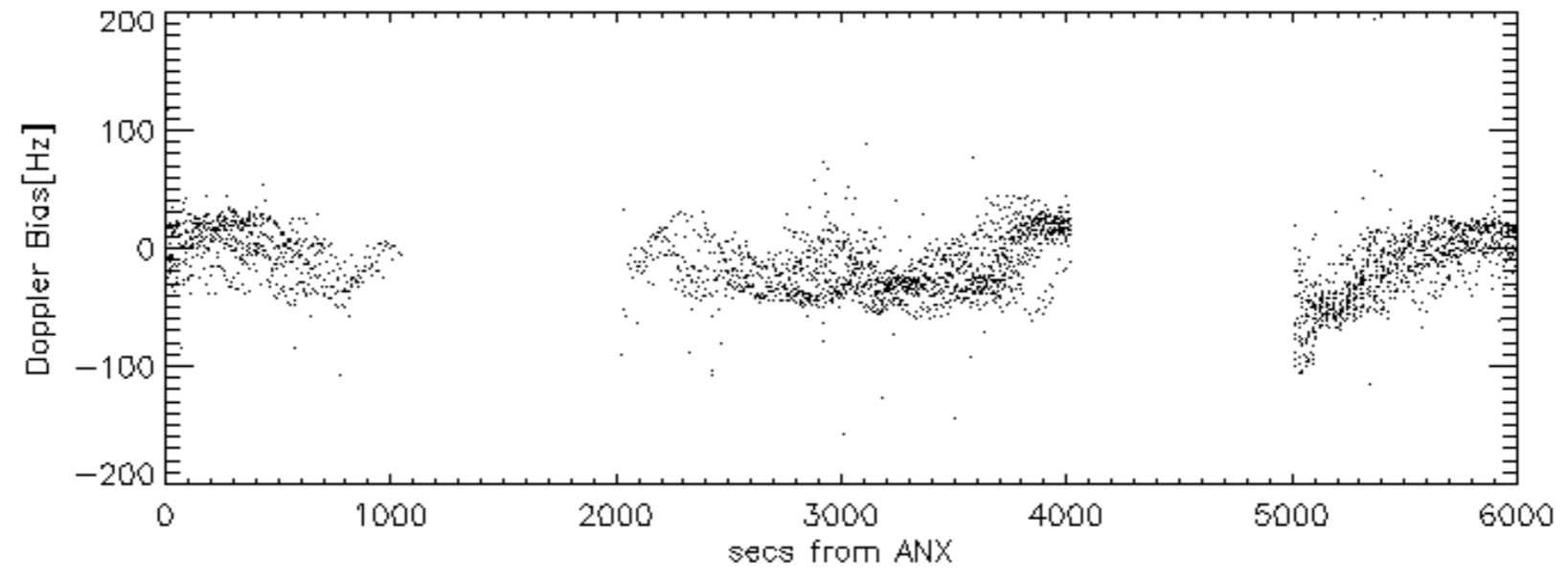
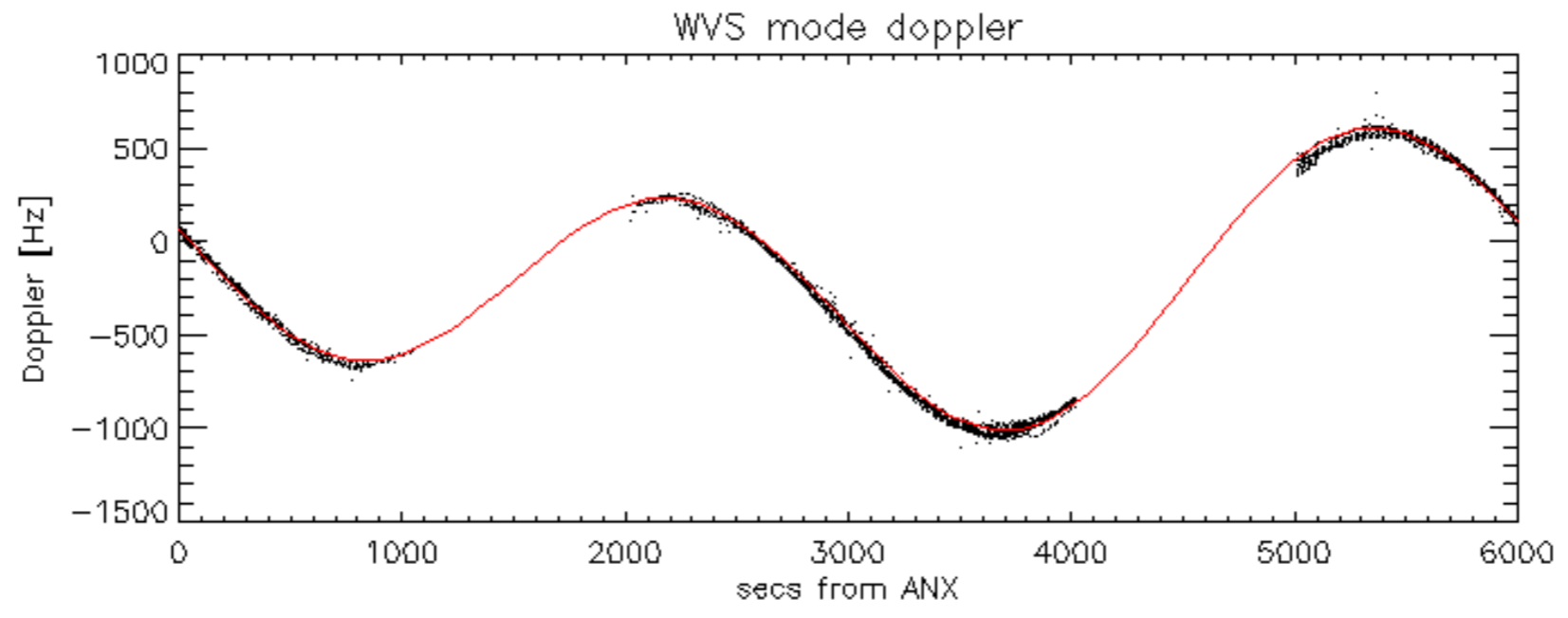


Doppler 'WVS' 'IS2' descending

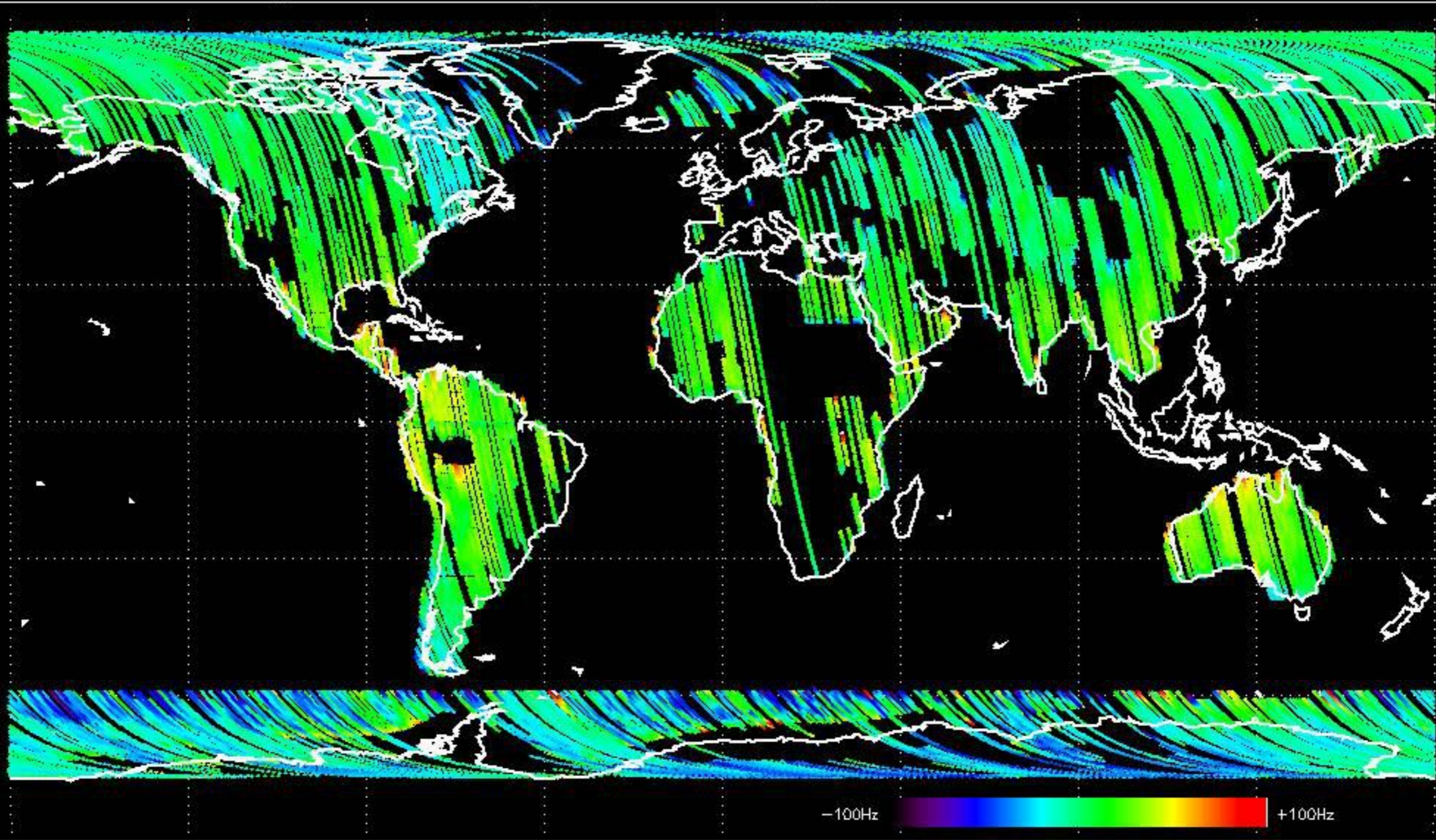


GM1 mode doppler

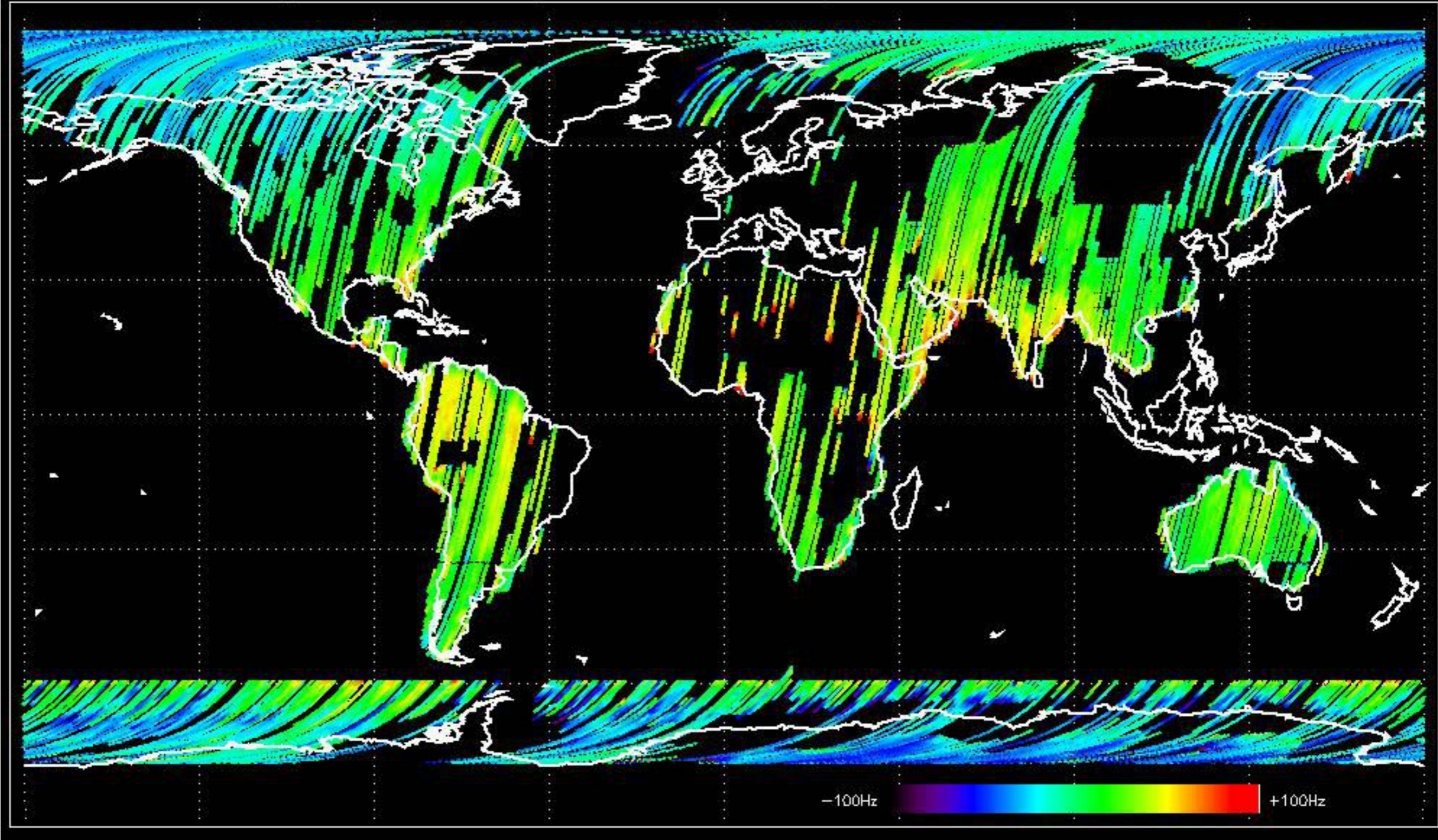




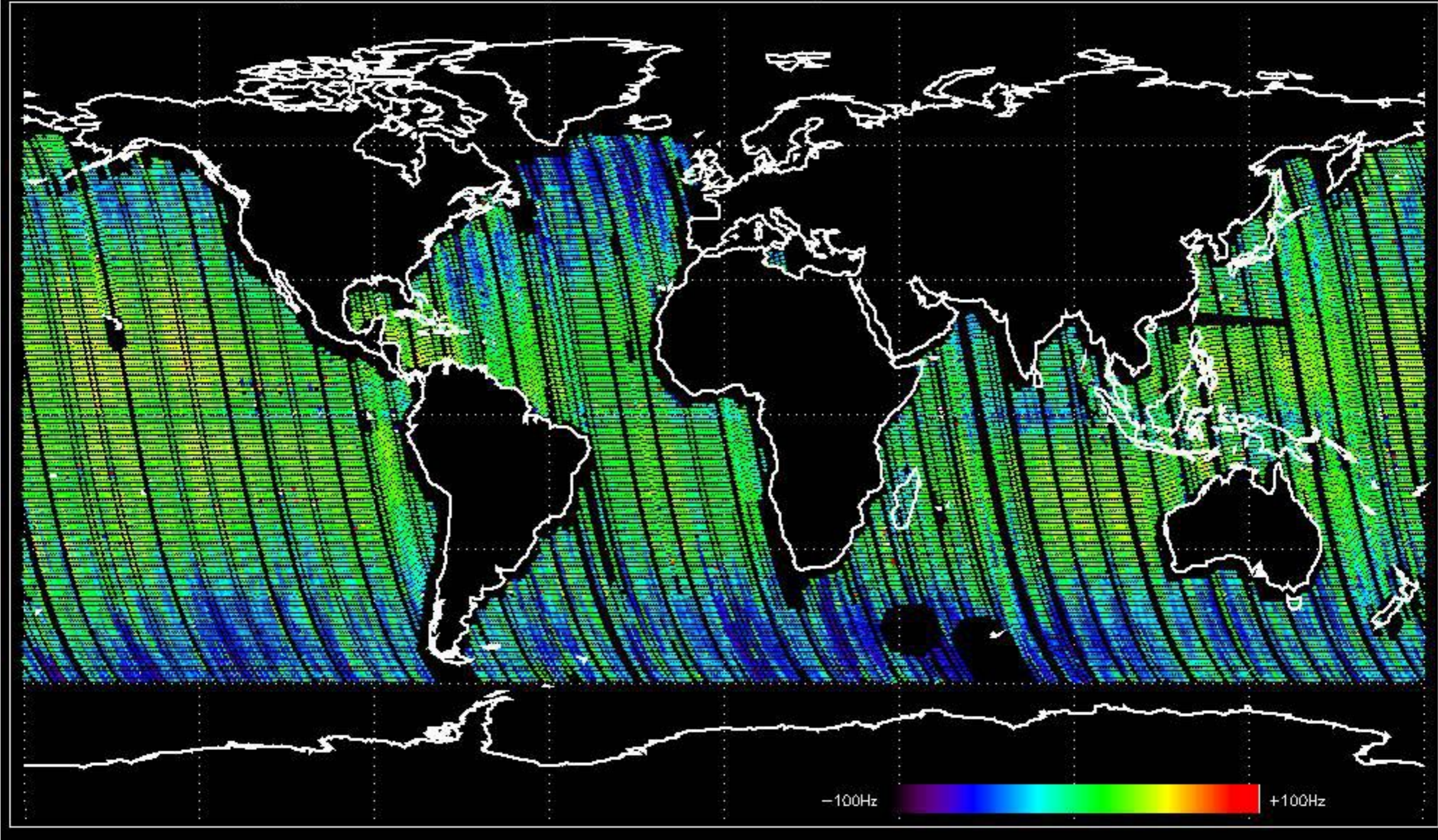
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.062366 Hz



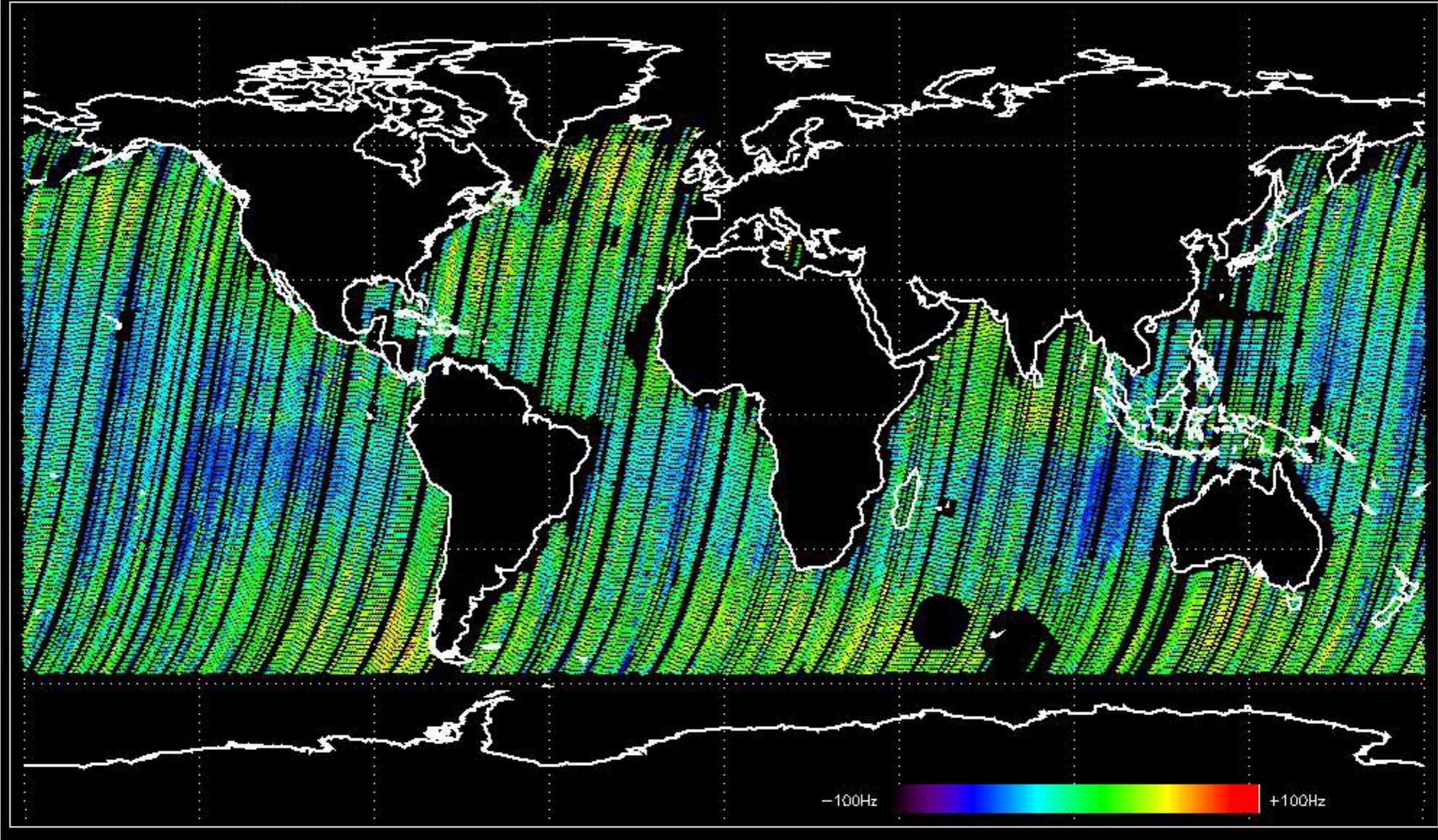
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.0723407 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.1956715 Hz



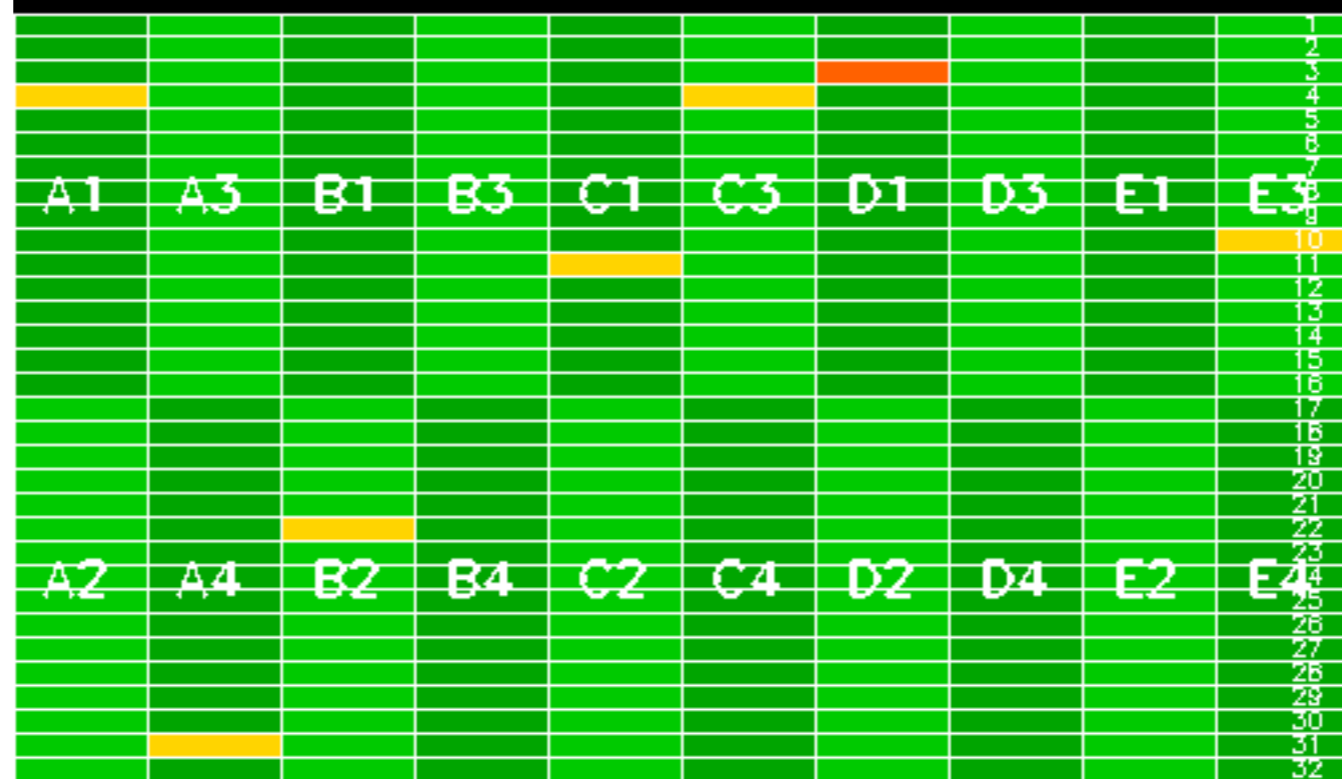
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.482126 Hz

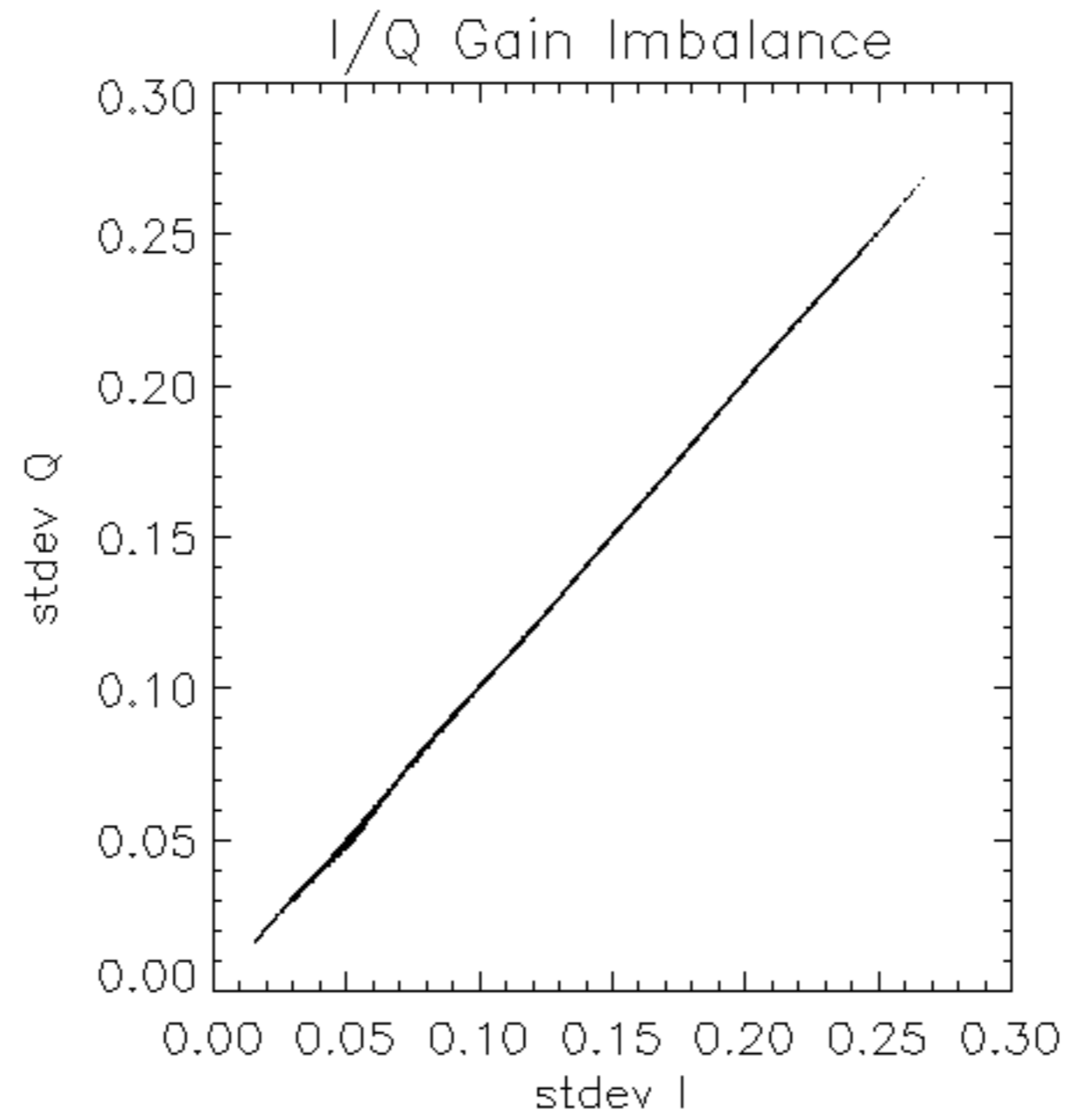


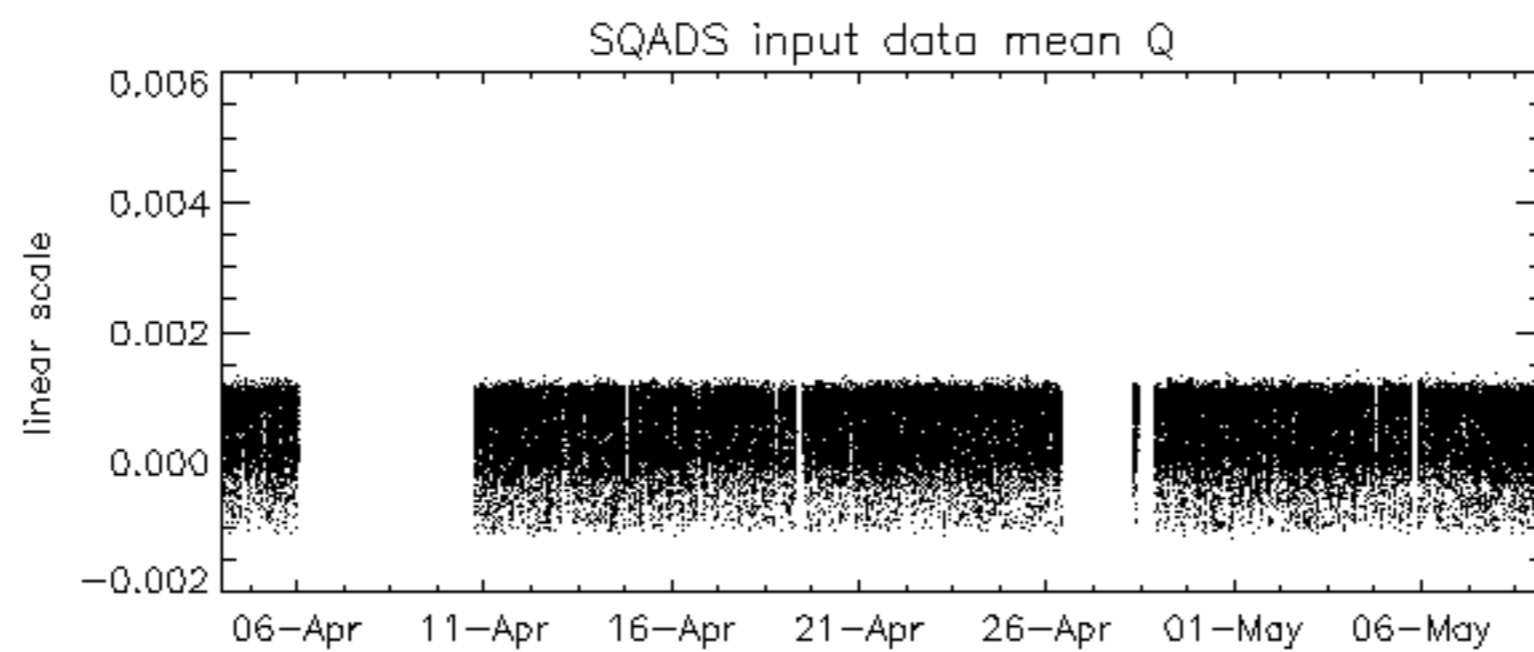
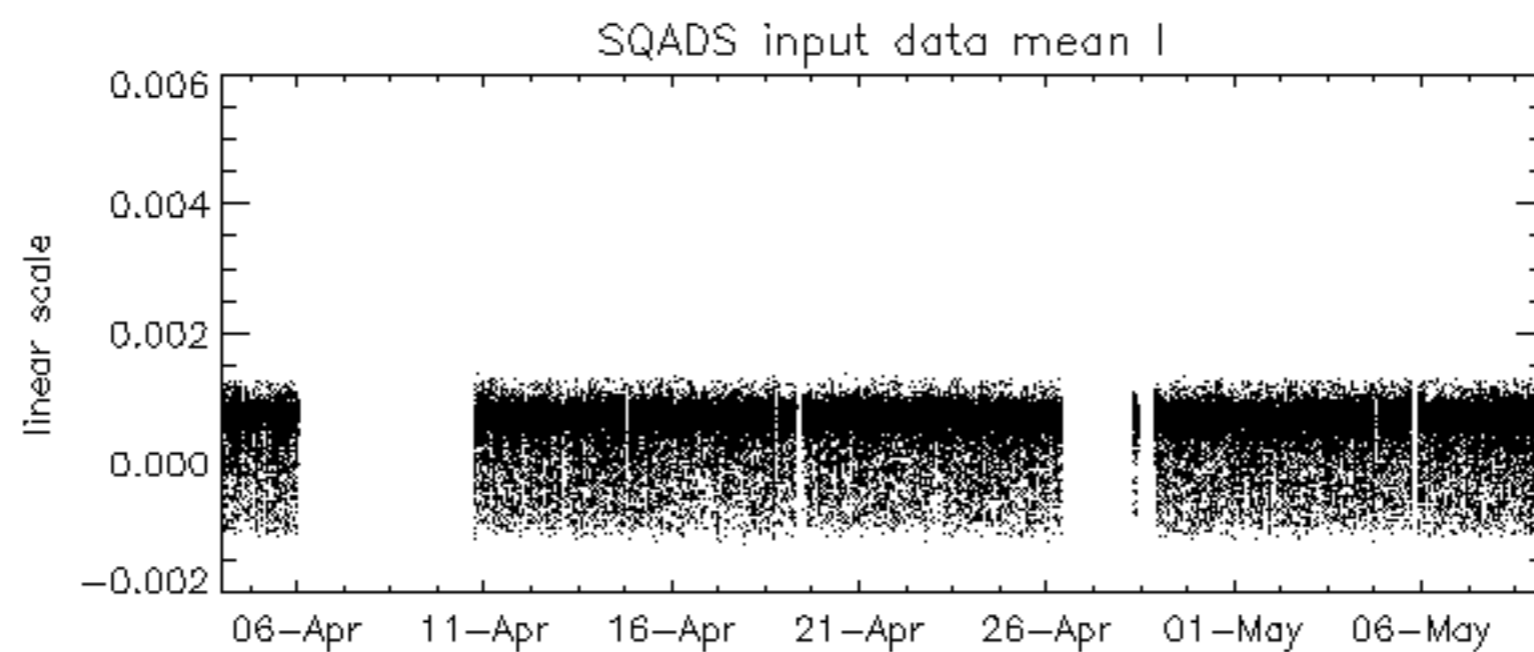
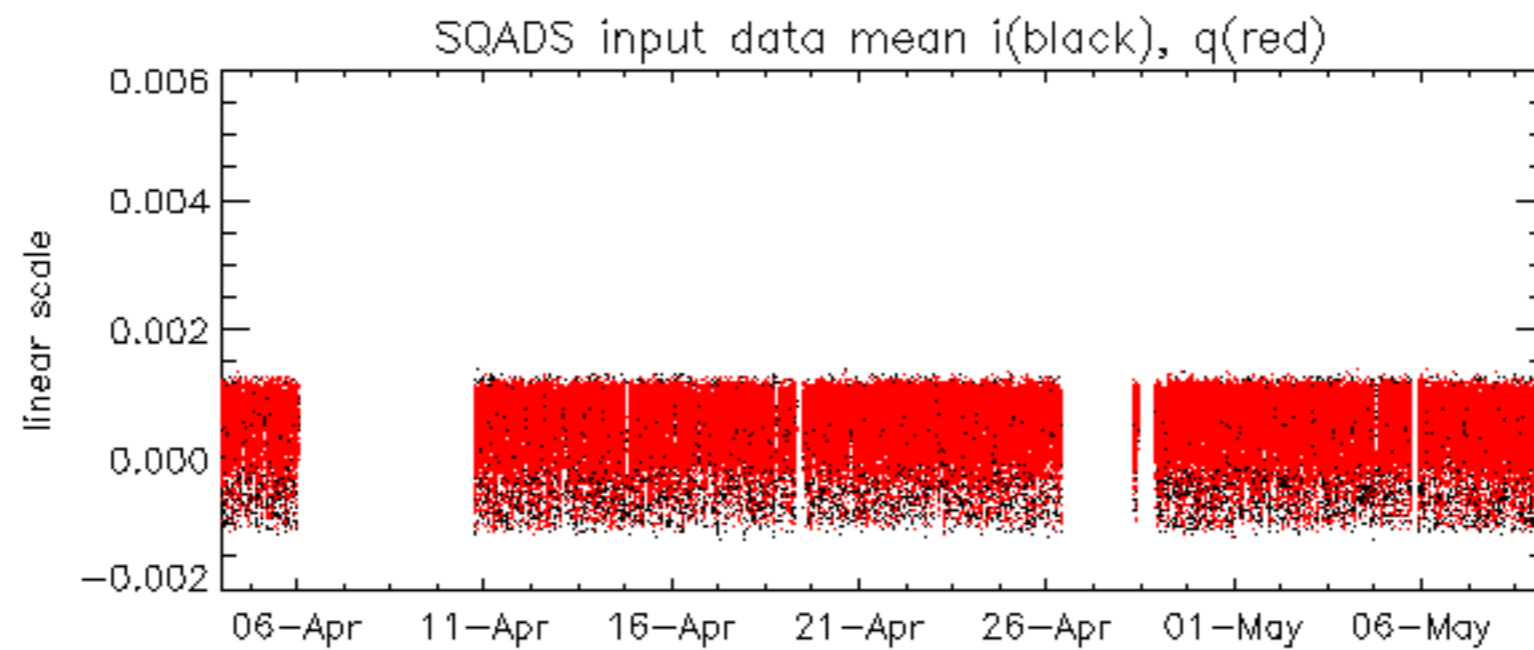
No anomalies observed on available MS products:

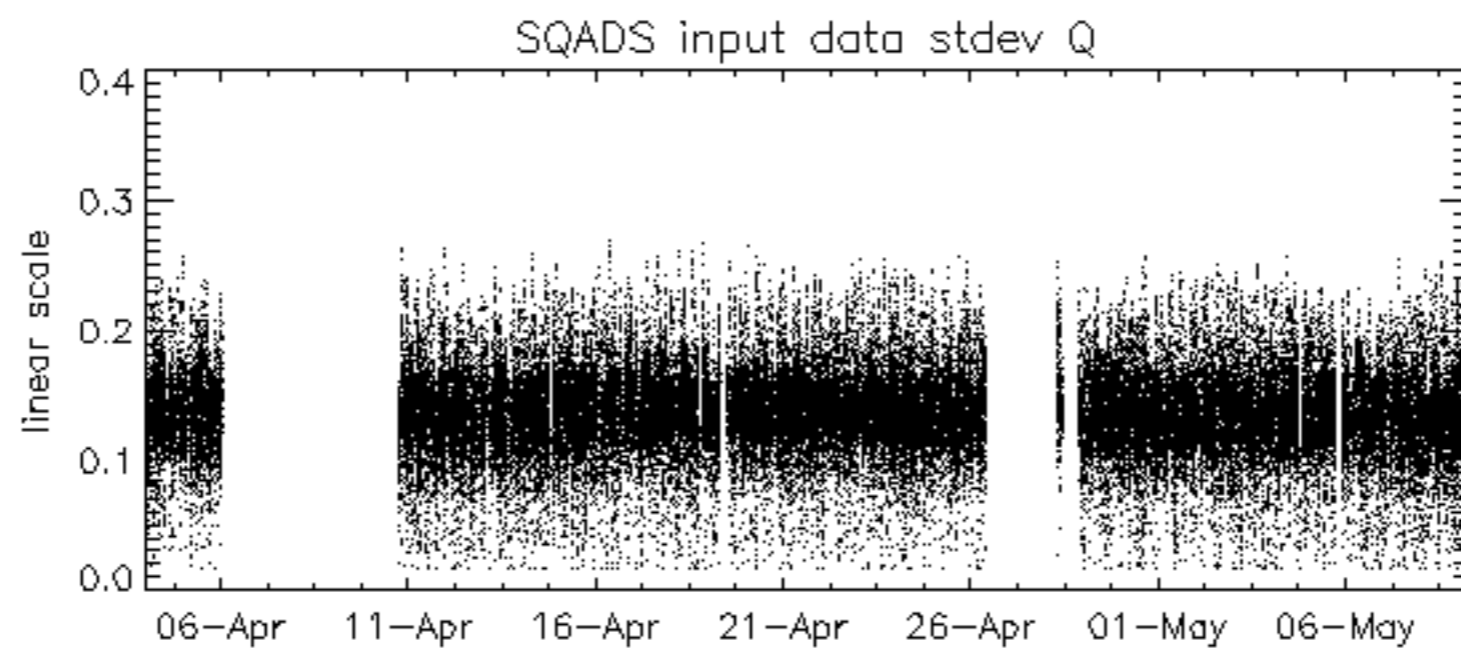
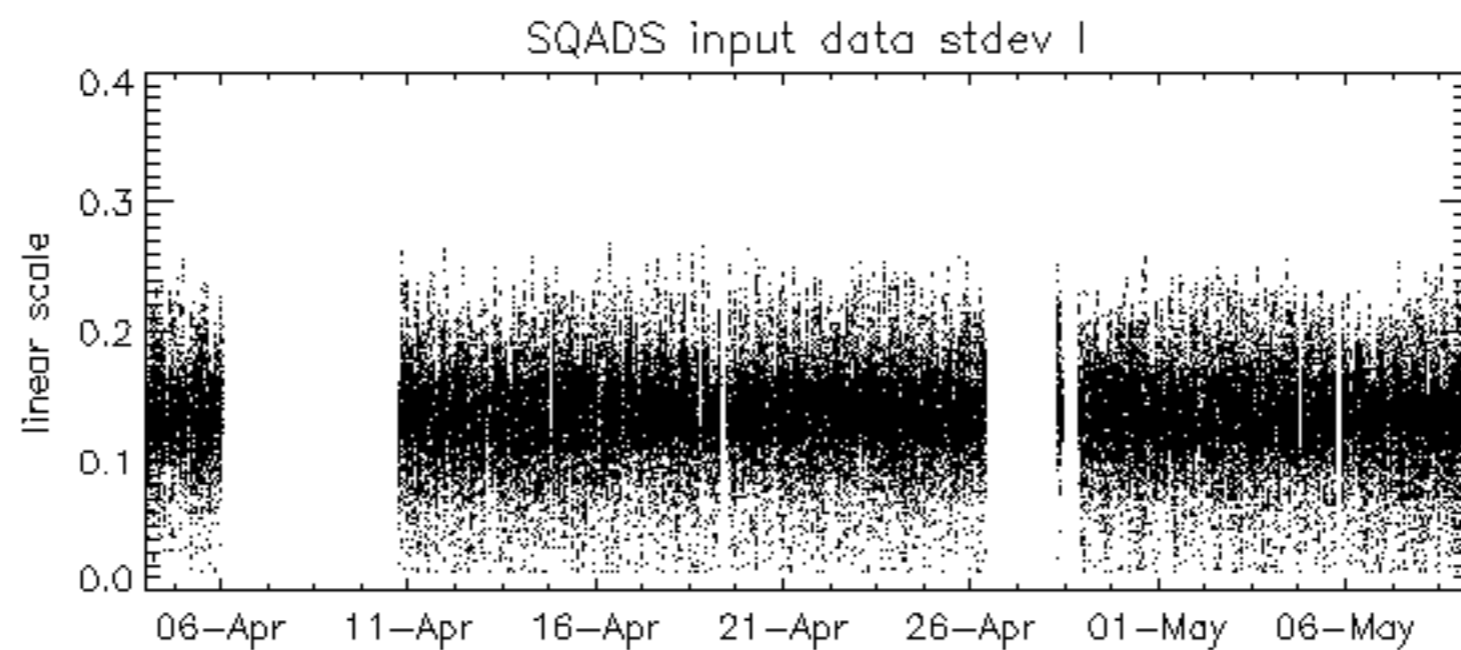
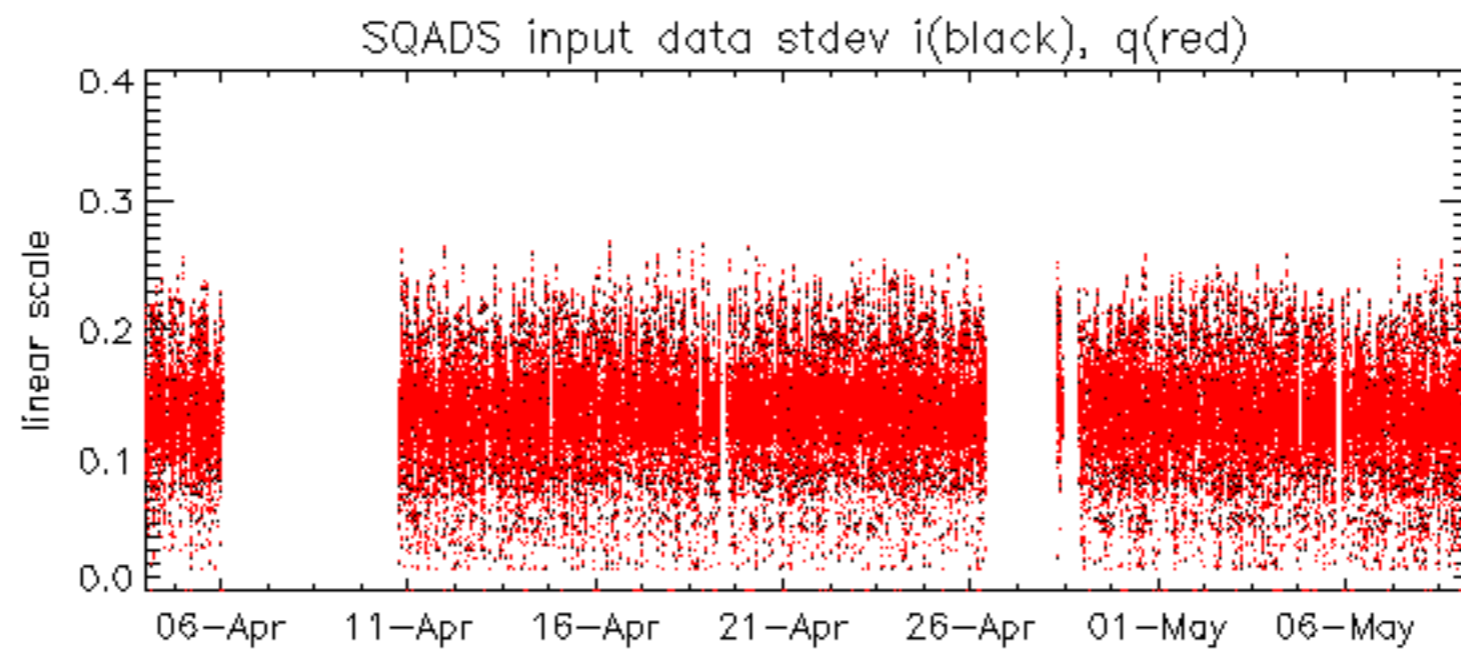
No anomalies observed.

Reference: 2005-09-29 07:47:20 V RxGain
 Test : 2006-05-08 08:41:52 V





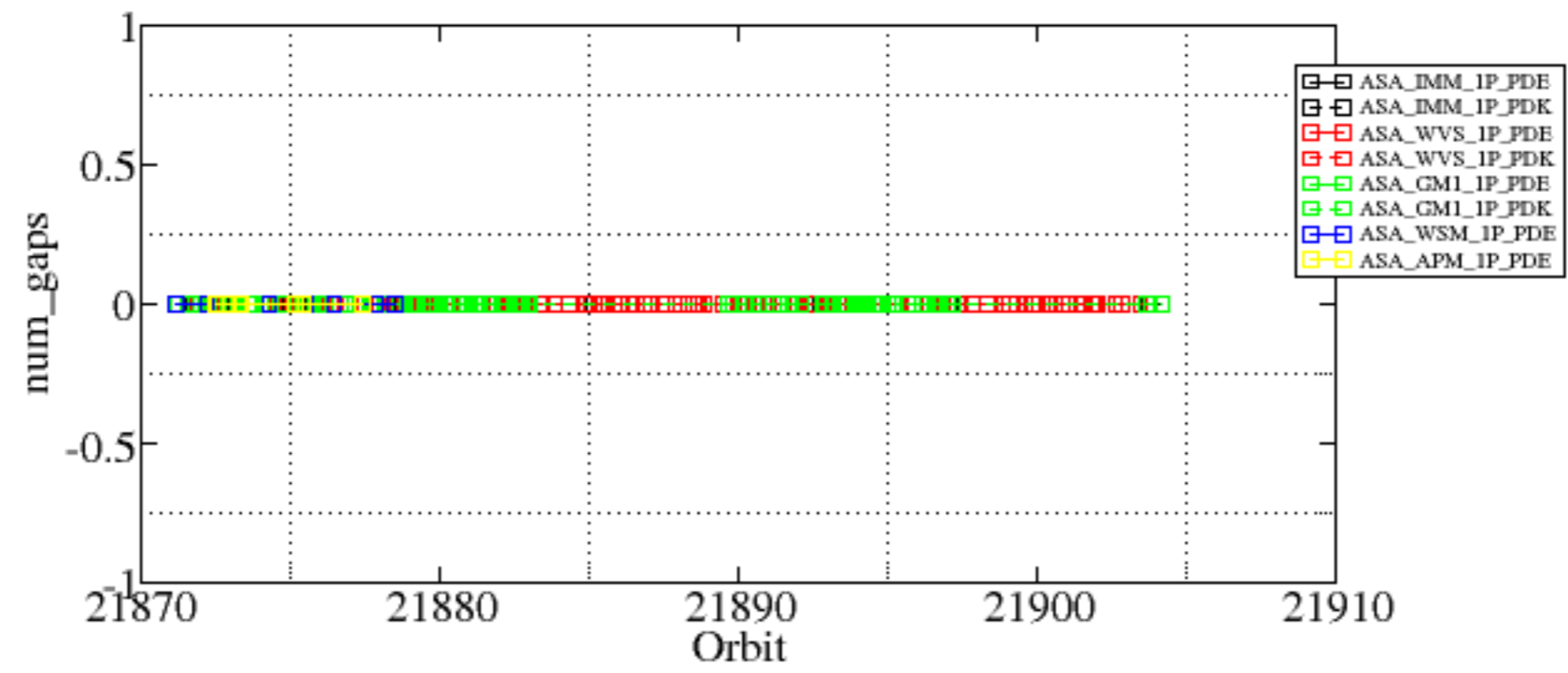


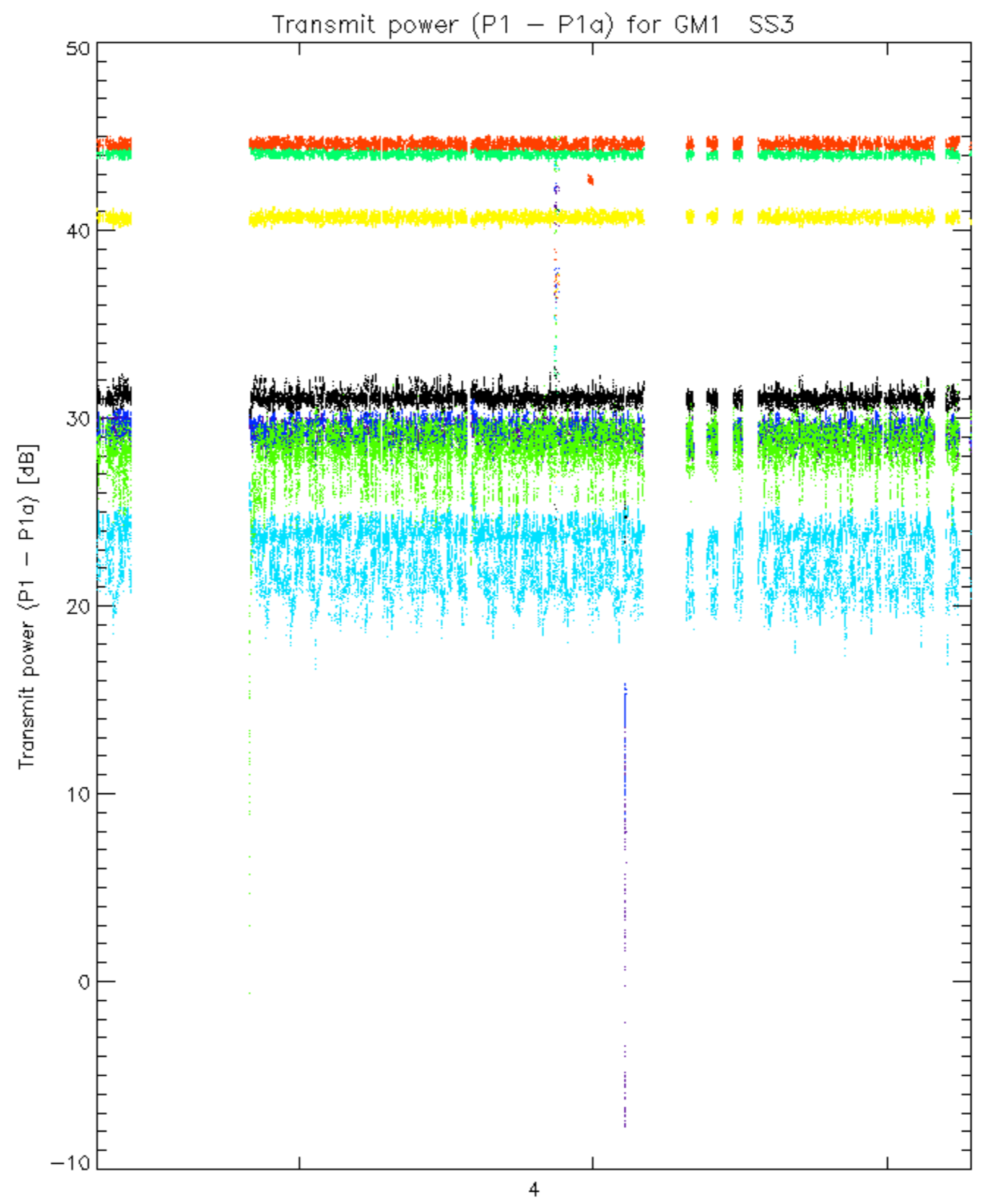


Summary of analysis for the last 3 days 2006050[789]

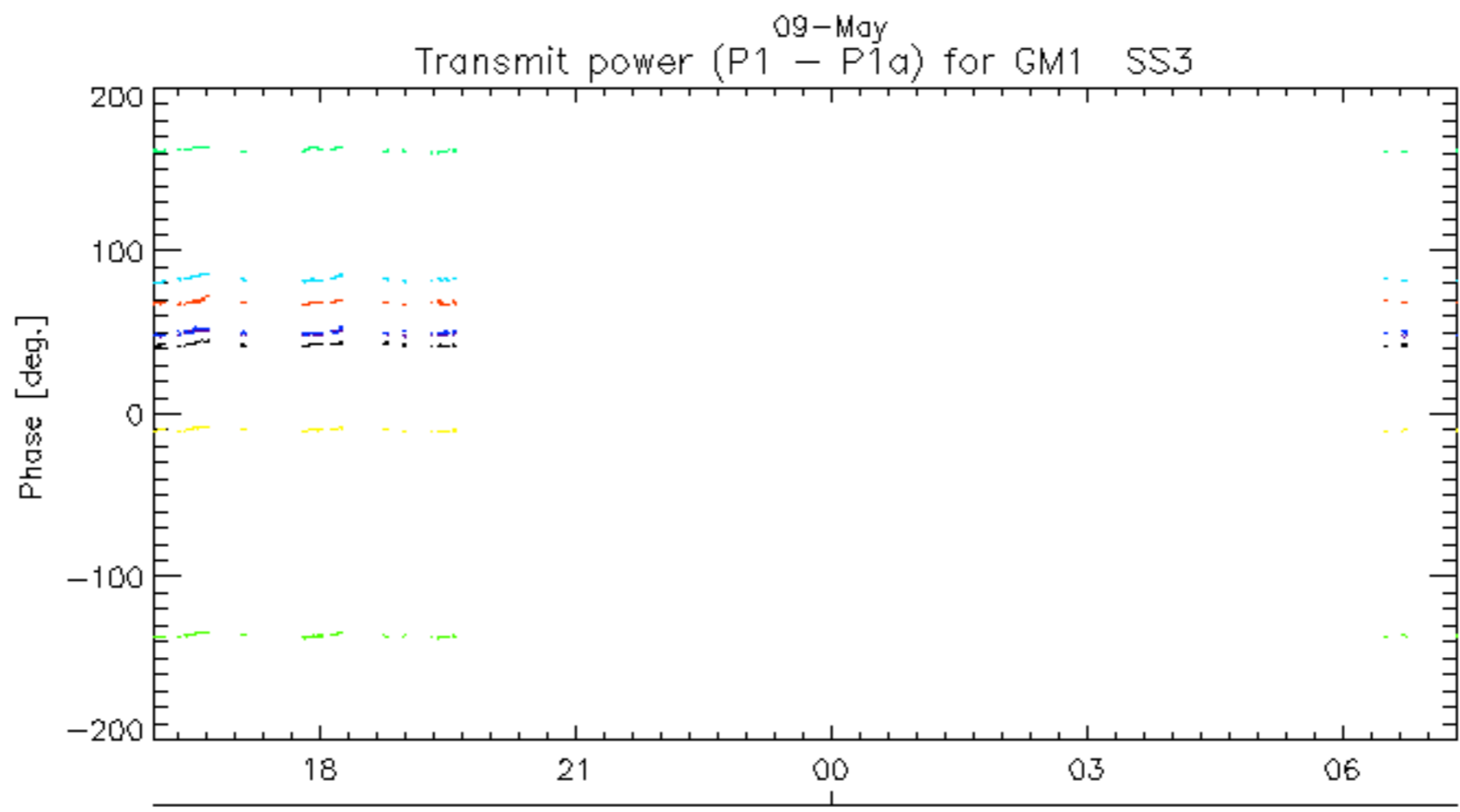
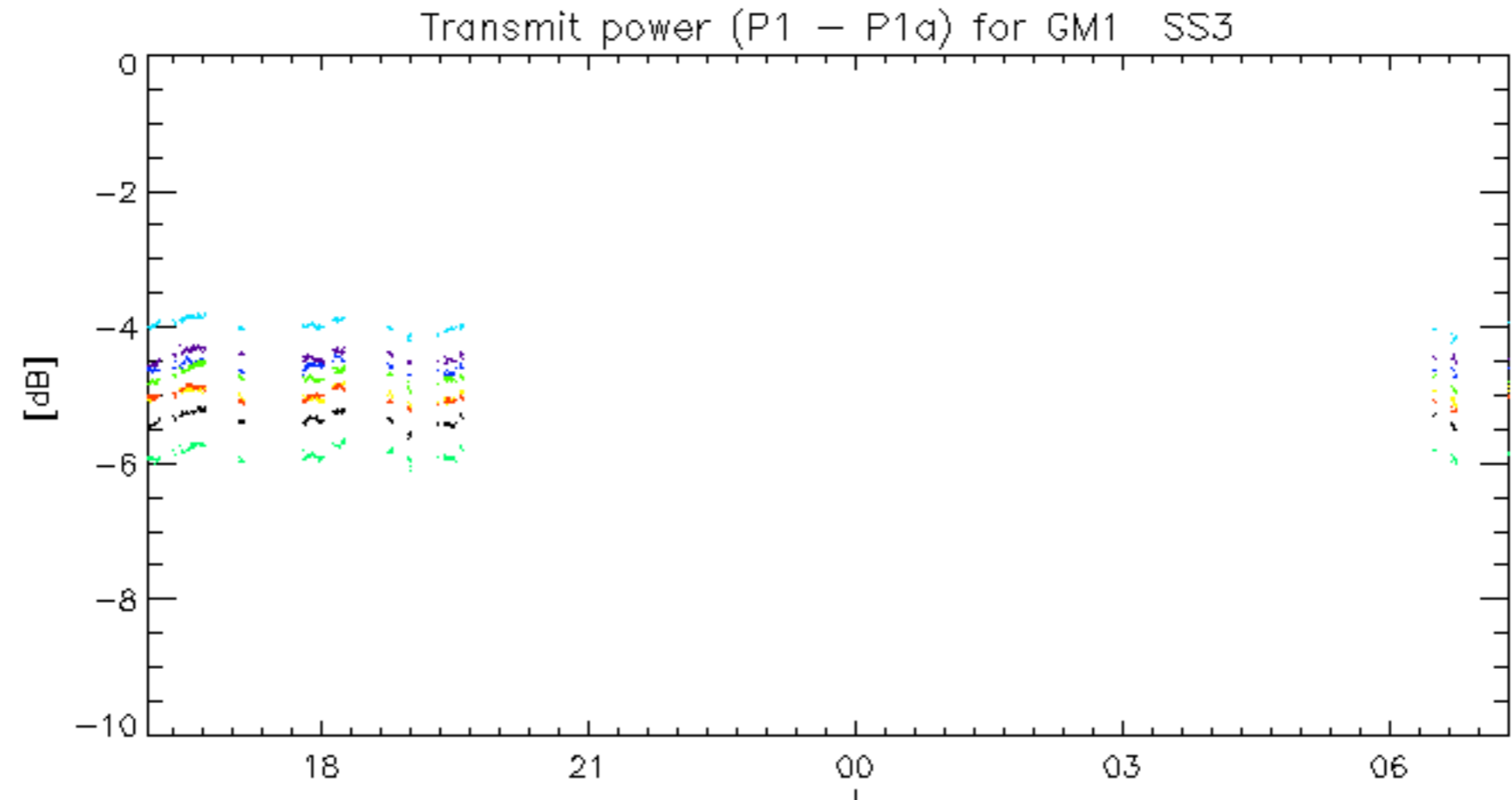
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

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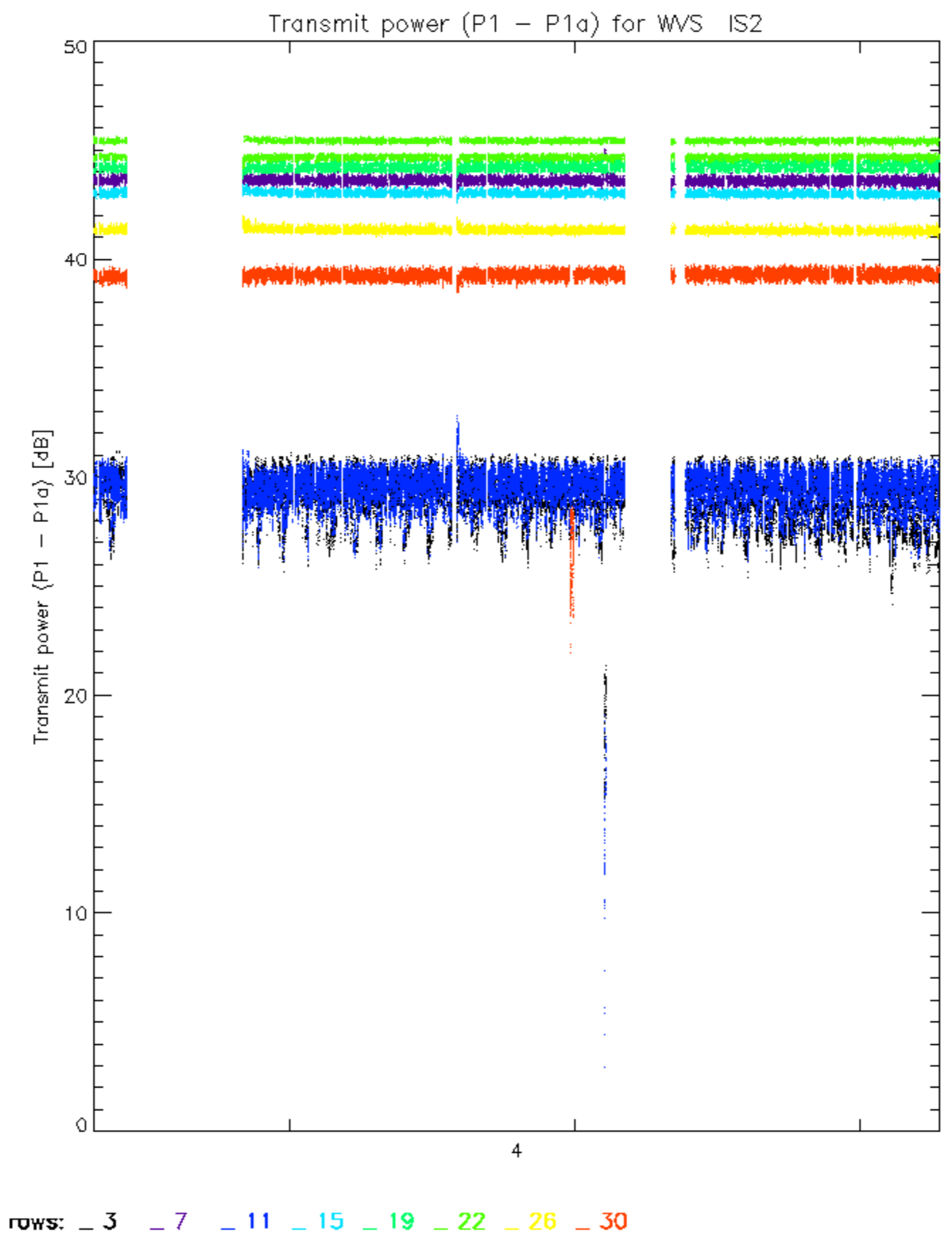


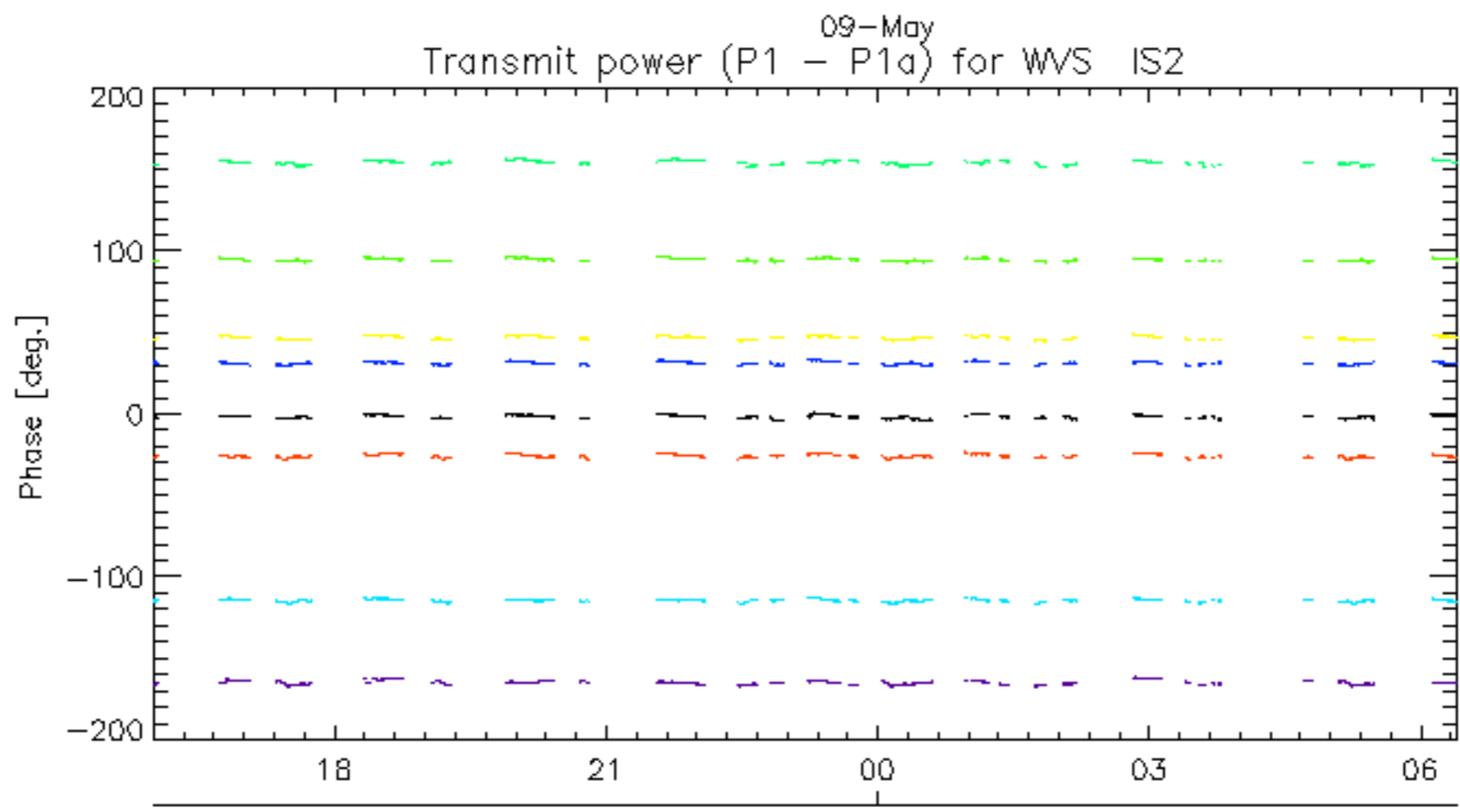
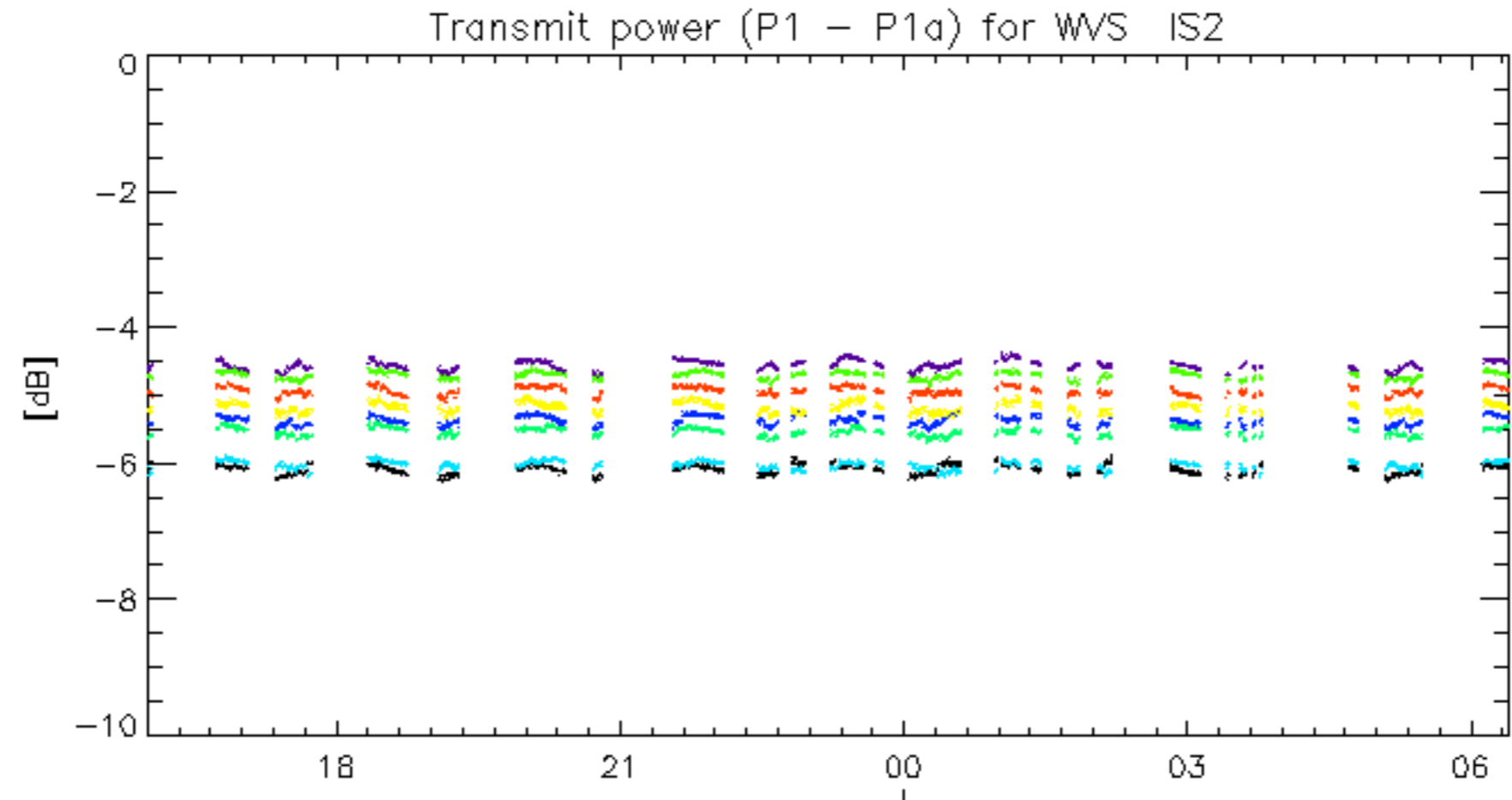


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.