

# PRELIMINARY REPORT OF 060529

last update on Mon May 29 16:45:44 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 2006-05-28 00:00:00 to 2006-05-29 16:45:44

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	47	74	14	1	28
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	47	74	14	1	28
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	47	74	14	1	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	47	74	14	1	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	56	23	24	72
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	56	23	24	72
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	56	23	24	72
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	56	23	24	72

### 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	20060528 095343
H	20060529 092206

### 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
☒	☒
☒	☒
☒	☒
☒	☒

**4 - Internal calibration Results**

No anomalies observed.

**4.1 - Daily statistics**

**4.1.1 - Evolution for WVS**

Evolution of cal pulses for WVS
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☒

**4.1.2 - Evolution for GM1**

Evolution of cal pulses for GM1
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☒

**4.2 - Cyclic statistics**

**4.2.1 - Evolution for WVS**

Evolution of cal pulses for WVS
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**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	-3.959948	0.017590	0.038496
7	P1	-3.100278	0.017183	-0.072771
11	P1	-4.106683	0.018487	-0.009465
15	P1	-6.130730	0.020076	-0.004423
19	P1	-3.317724	0.008364	-0.027387
22	P1	-4.519894	0.011216	0.036971
26	P1	-3.991064	0.019049	0.059917
30	P1	-5.749108	0.008033	0.017014
3	P1	-16.580658	0.292334	0.186228
7	P1	-17.109859	0.189277	-0.251460
11	P1	-16.904997	0.326415	-0.122369
15	P1	-13.212634	0.209768	-0.105623
19	P1	-14.252002	0.047170	-0.103791
22	P1	-16.154898	0.388259	-0.060011
26	P1	-15.283111	0.251119	0.088262
30	P1	-17.001158	0.357640	-0.251370

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.221188	0.082179	0.149519
7	P2	-22.106663	0.099555	0.179300
11	P2	-15.948552	0.111974	0.155037
15	P2	-7.163828	0.093272	0.030793
19	P2	-9.163613	0.085594	0.002155
22	P2	-18.115105	0.083171	-0.071729
26	P2	-16.360950	0.088434	-0.060576
30	P2	-19.585796	0.085708	0.087936

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.187590	0.003896	0.028490
7	P3	-8.187590	0.003896	0.028490
11	P3	-8.187590	0.003896	0.028490
15	P3	-8.187590	0.003896	0.028490
19	P3	-8.187590	0.003896	0.028490
22	P3	-8.187590	0.003896	0.028490
26	P3	-8.187590	0.003896	0.028490
30	P3	-8.187590	0.003896	0.028490

**4.2.2 - Evolution for GM1**

Evolution of cal pulses for GM1

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**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	-3.768548	0.074277	-0.119855
7	P1	-2.606276	0.038695	0.033767
11	P1	-2.860903	0.028341	-0.025078
15	P1	-3.494330	0.049465	0.001890
19	P1	-3.394300	0.013644	-0.018874
22	P1	-5.088065	0.019960	0.042087
26	P1	-5.838361	0.014935	-0.020698
30	P1	-5.189128	0.025957	0.008622
3	P1	-11.602086	0.123113	-0.098596
7	P1	-9.952520	0.068289	0.011282
11	P1	-10.188793	0.097596	-0.014646
15	P1	-10.617505	0.145790	0.005830
19	P1	-15.504062	0.073903	-0.077129
22	P1	-20.877016	1.239845	-0.089593

26	P1	-16.482796	0.353345	-0.031183
30	P1	-18.040031	0.387529	0.293265

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.904612	0.061718	0.110609
7	P2	-22.524136	0.119763	0.065139
11	P2	-11.186293	0.041420	0.056486
15	P2	-4.901623	0.042854	-0.021984
19	P2	-6.875368	0.040717	0.003420
22	P2	-8.190833	0.038318	-0.034069
26	P2	-24.099247	0.060663	-0.033570
30	P2	-22.062271	0.049417	0.000950

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.019941	0.004287	0.028539
7	P3	-8.020014	0.004288	0.028093
11	P3	-8.020034	0.004265	0.028134
15	P3	-8.019835	0.004282	0.028002
19	P3	-8.020050	0.004284	0.028239
22	P3	-8.020036	0.004264	0.028128
26	P3	-8.019921	0.004266	0.027628
30	P3	-8.019962	0.004279	0.027832

## 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	0.000530839
	stdev	1.89780e-07
MEAN Q	mean	0.000513148
	stdev	2.27966e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134511
	stdev	0.00116412
STDEV Q	mean	0.134852
	stdev	0.00118091



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006052[789]

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_1PNPDE20060527_005025_000001722048_00059_22157_6265.N1	1	0
ASA_IMM_1PNPDE20060529_002857_000000512048_00088_22186_6360.N1	1	0
ASA_WSM_1PNPDE20060527_000327_000003292048_00059_22157_1091.N1	0	34
ASA_WSM_1PNPDE20060527_160556_000001402048_00069_22167_1206.N1	0	34
ASA_WSM_1PNPDE20060527_233149_000000672048_00073_22171_1272.N1	0	34



## 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"/>
Acsending
<input type="checkbox"/>
Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

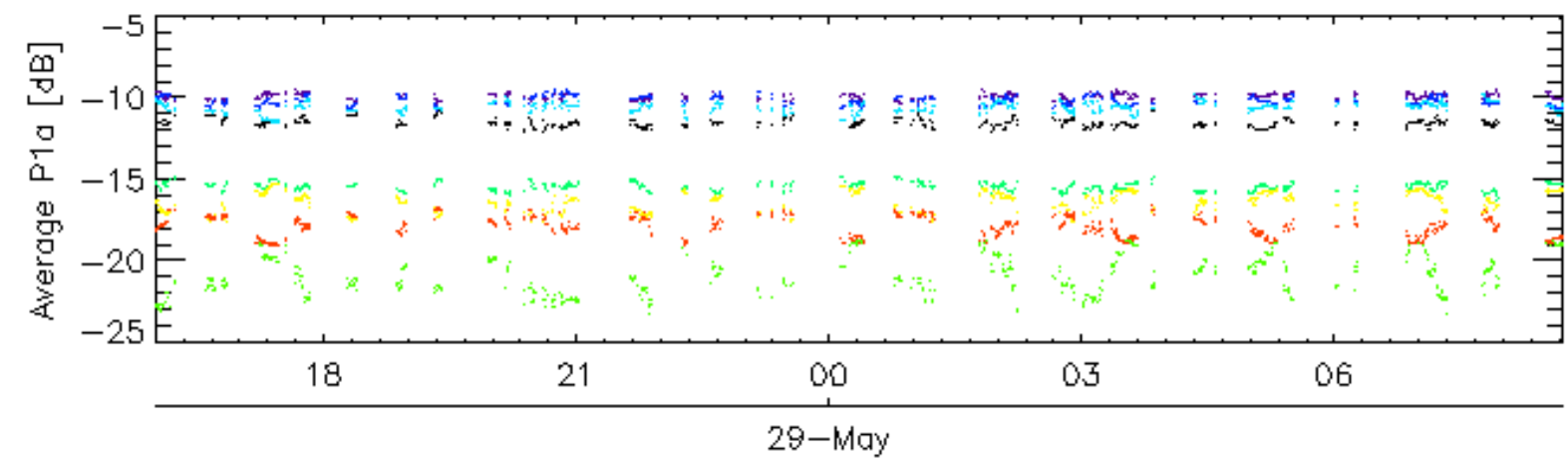
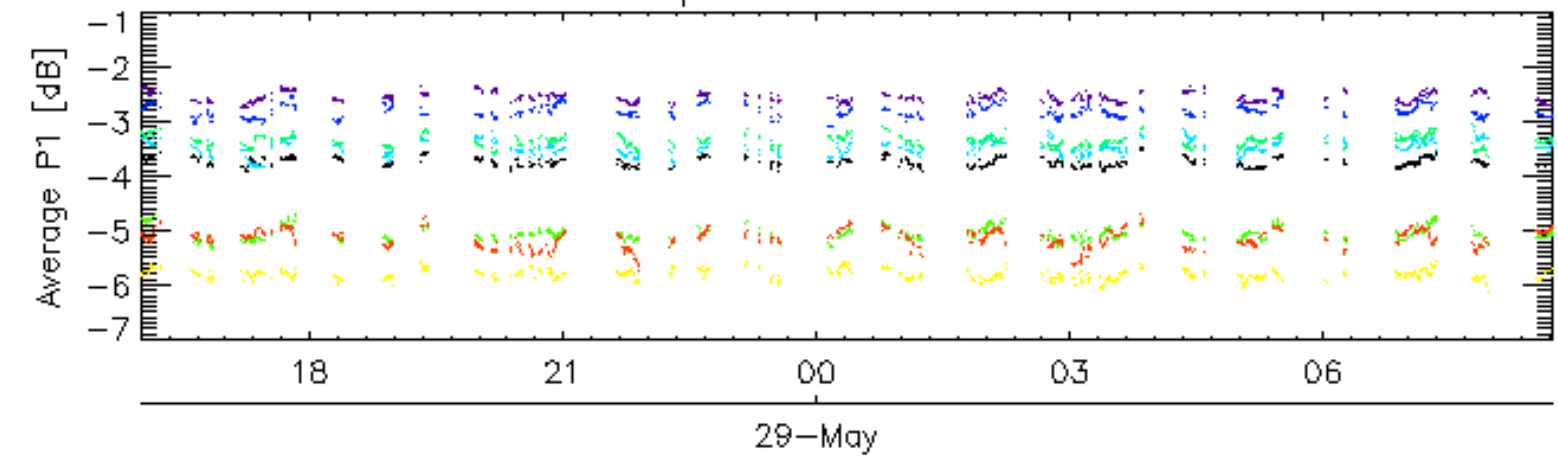
<input type="checkbox"/>
Acsending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

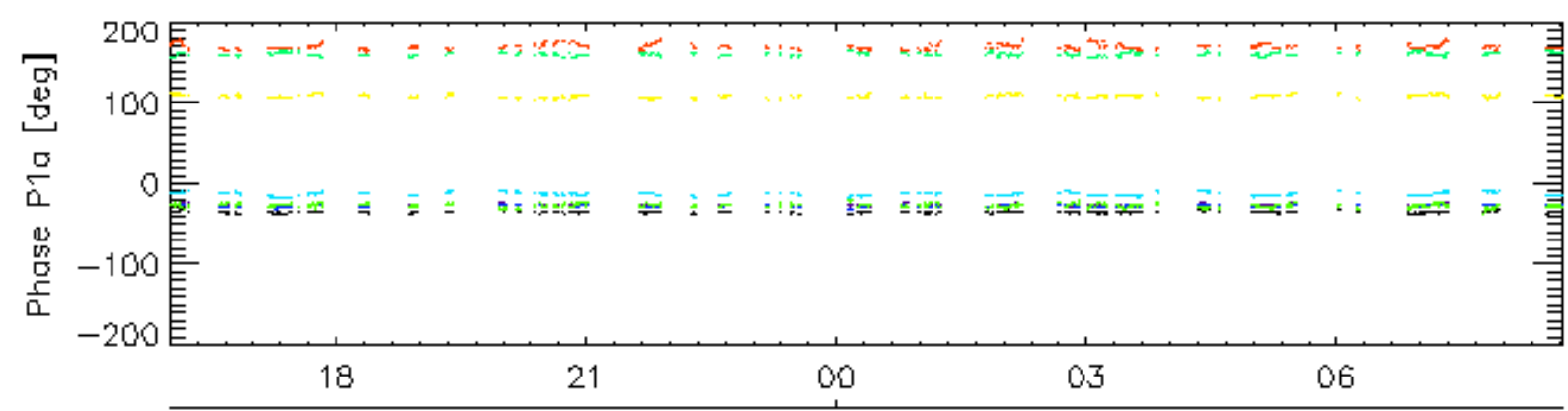
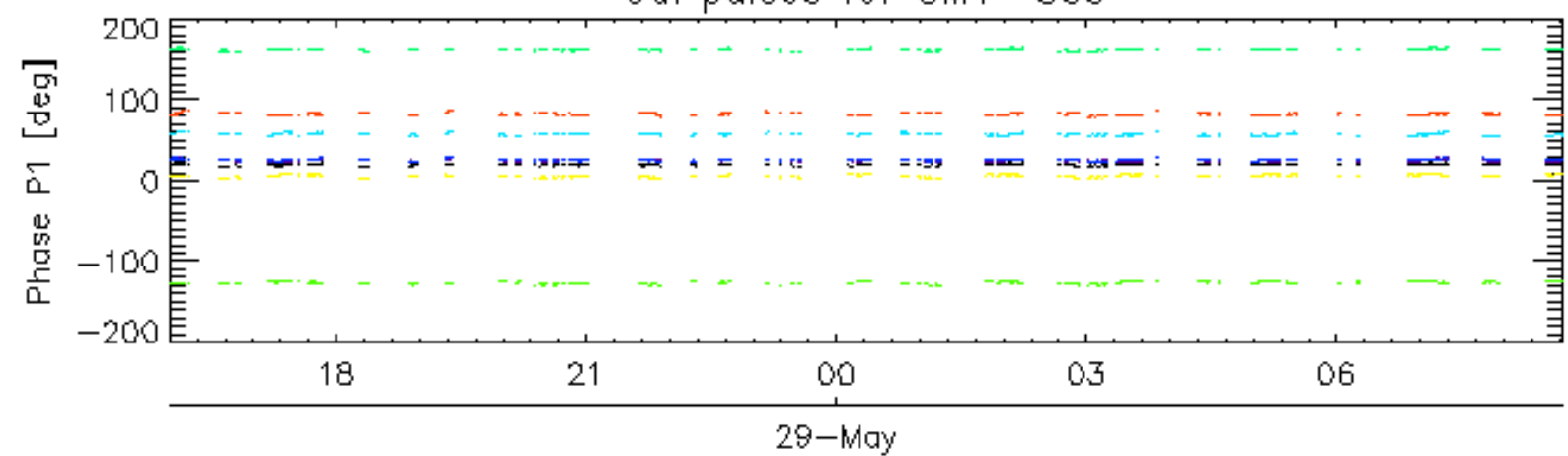
Evolution Doppler error versus ANX

<input type="checkbox"/>
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Cal pulses for GM1 SS3

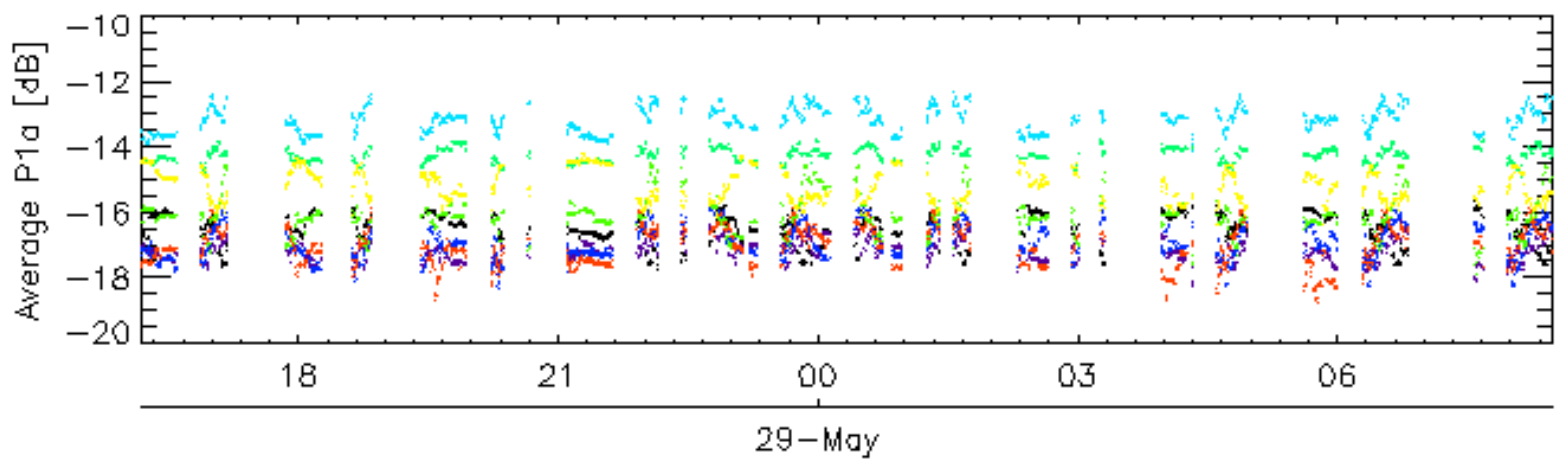
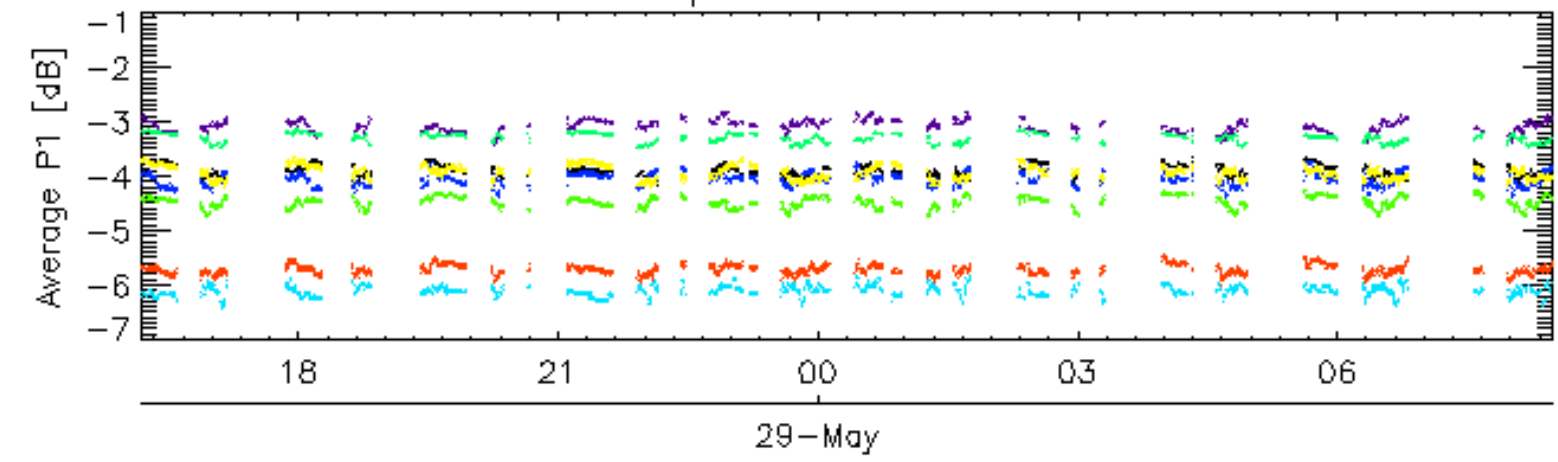


Cal pulses for GM1 SS3

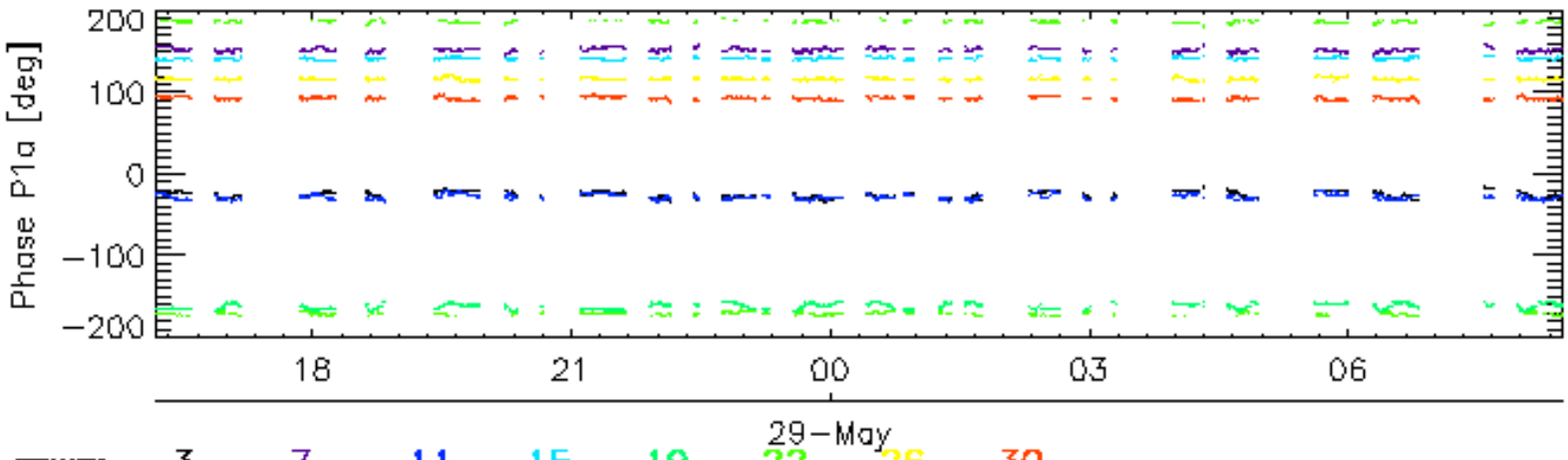
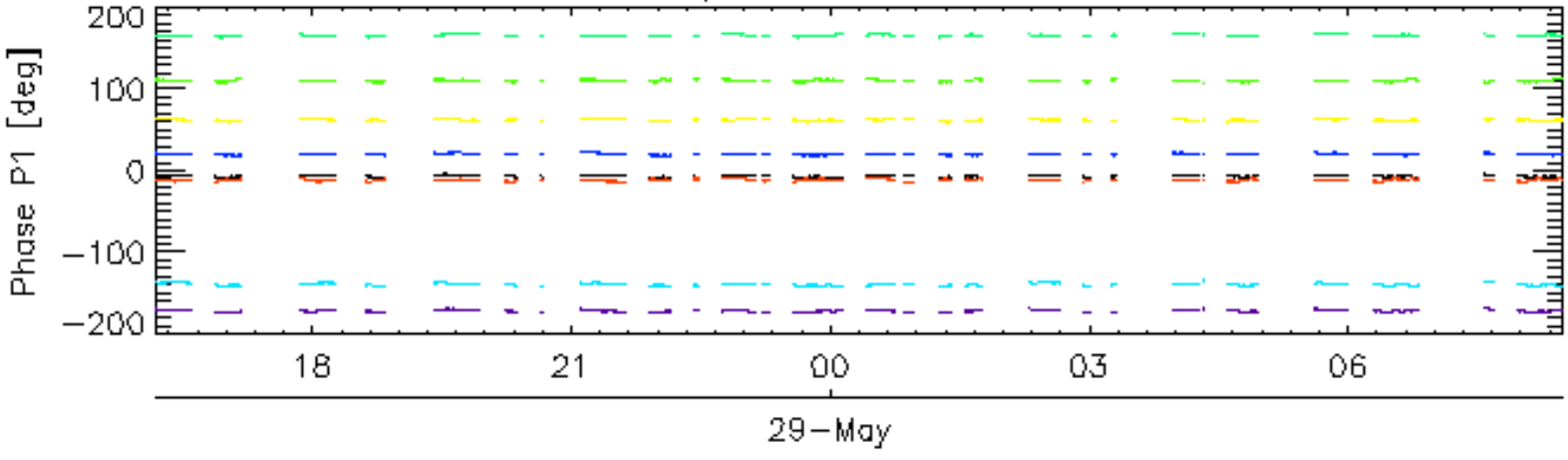


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

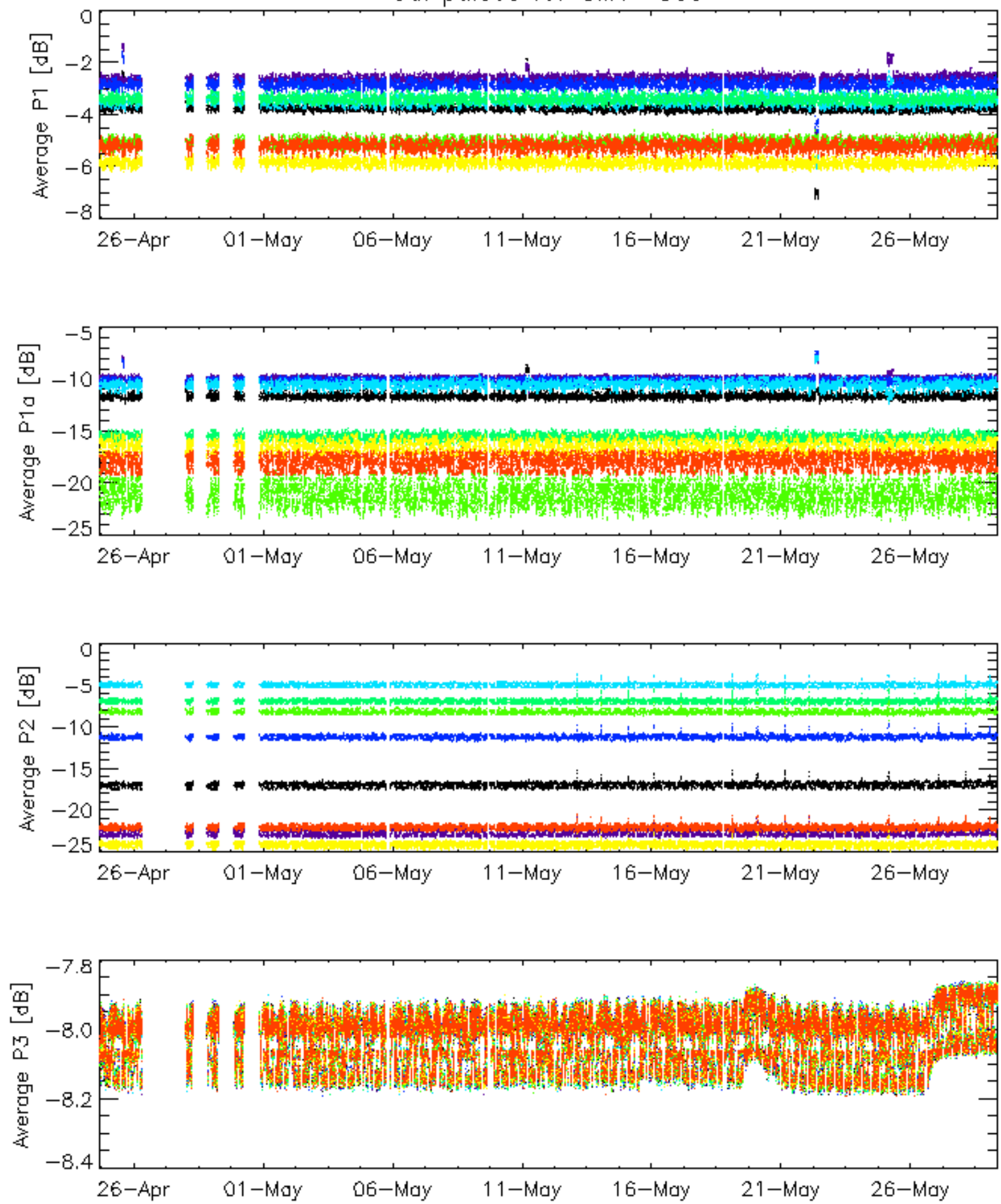


Cal pulses for WVS IS2



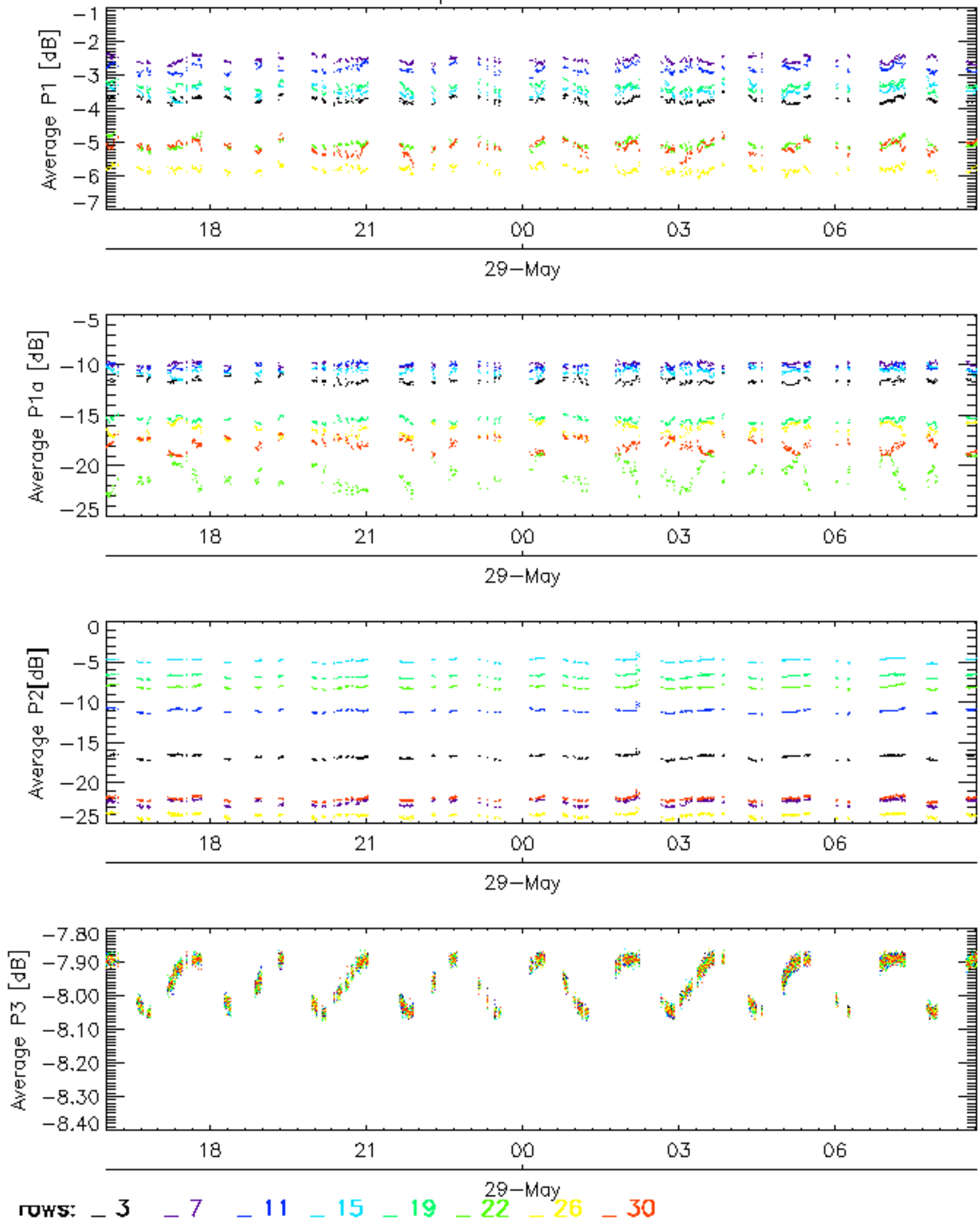
rows: 3 7 11 15 19 22 26 30

### Cal pulses for GM1 SS3

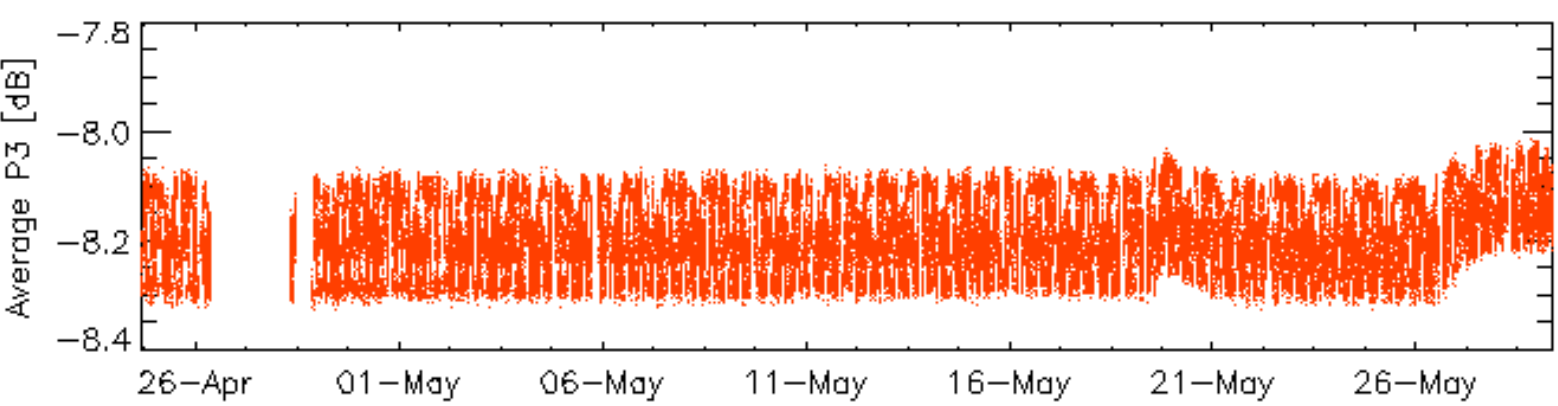
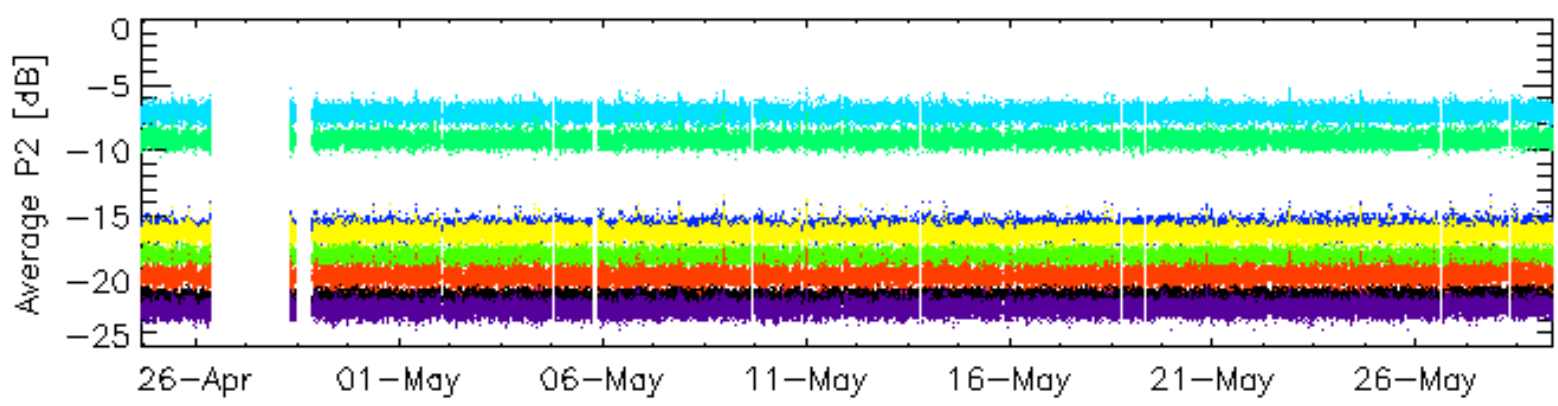
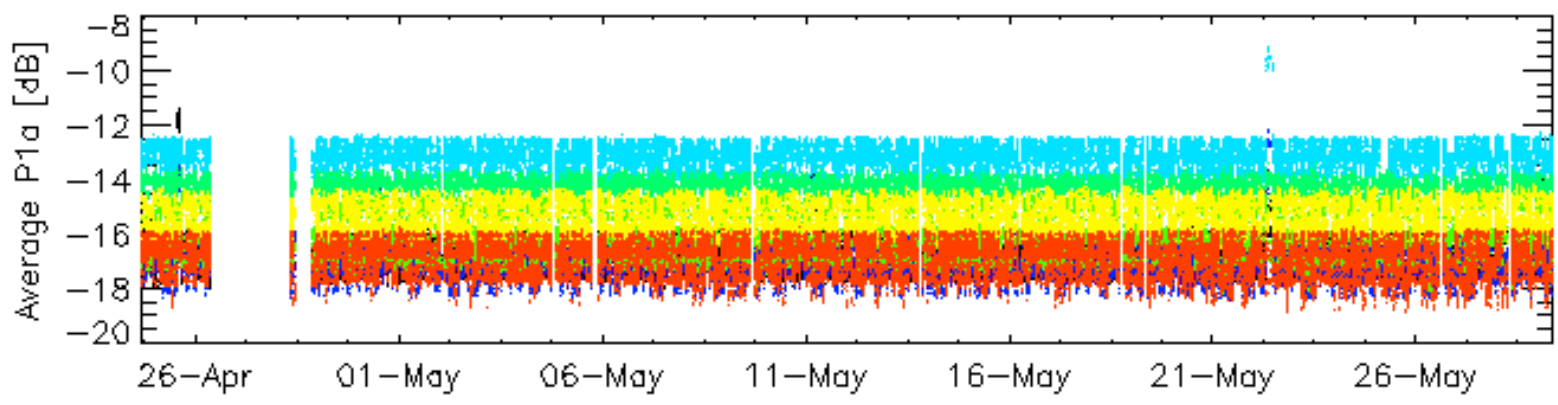
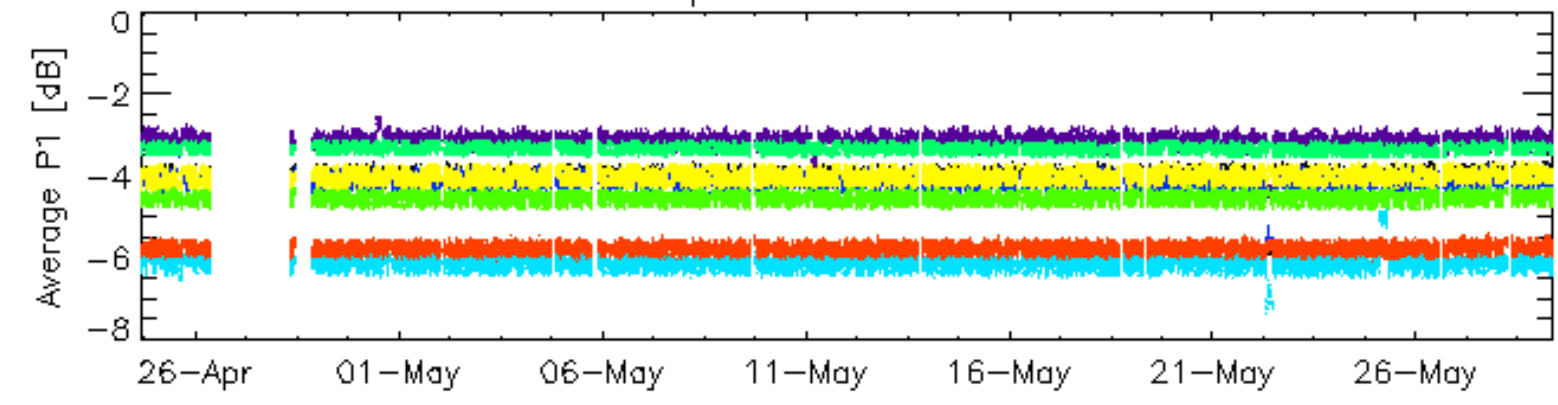


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



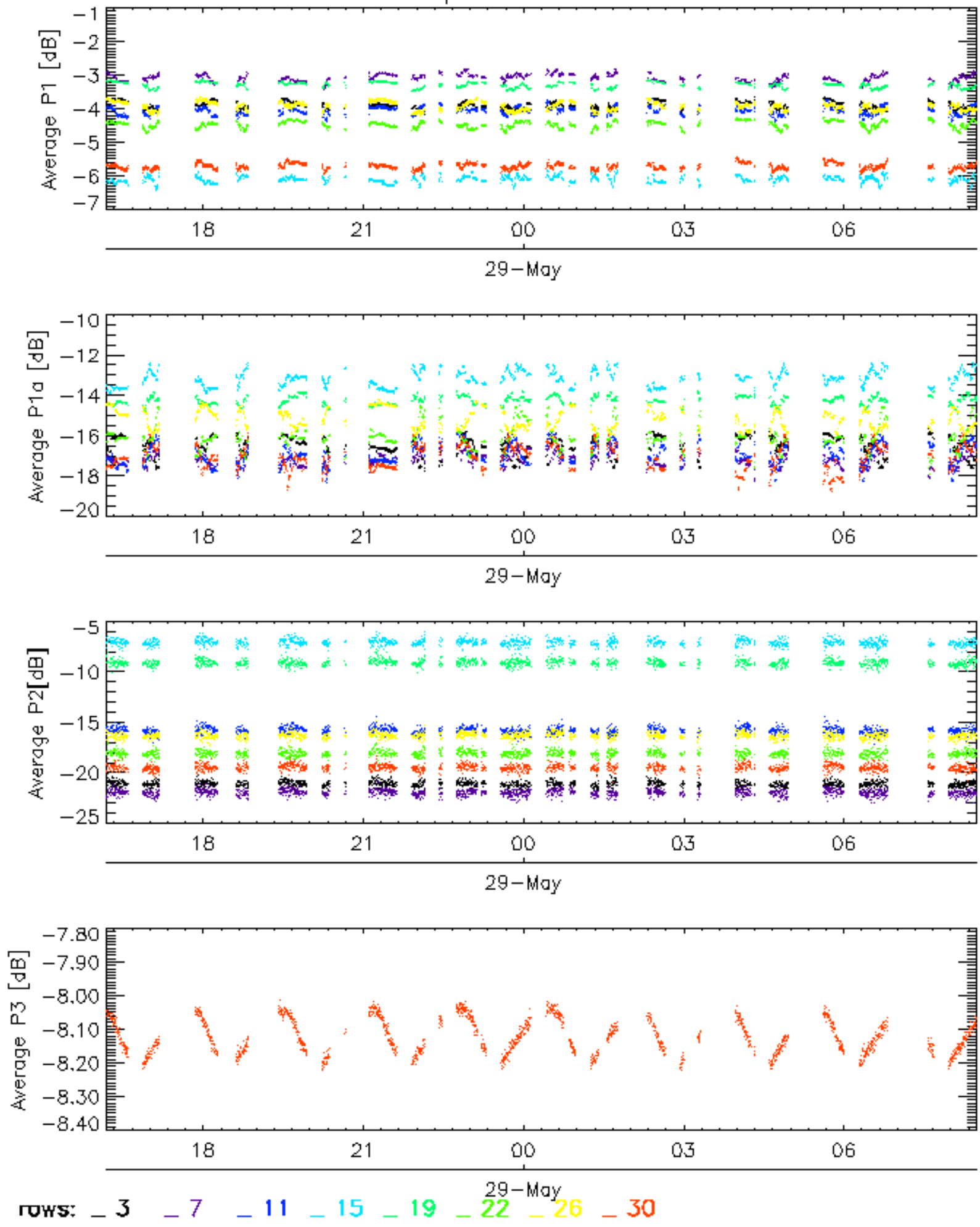
Cal pulses for WVS IS2



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



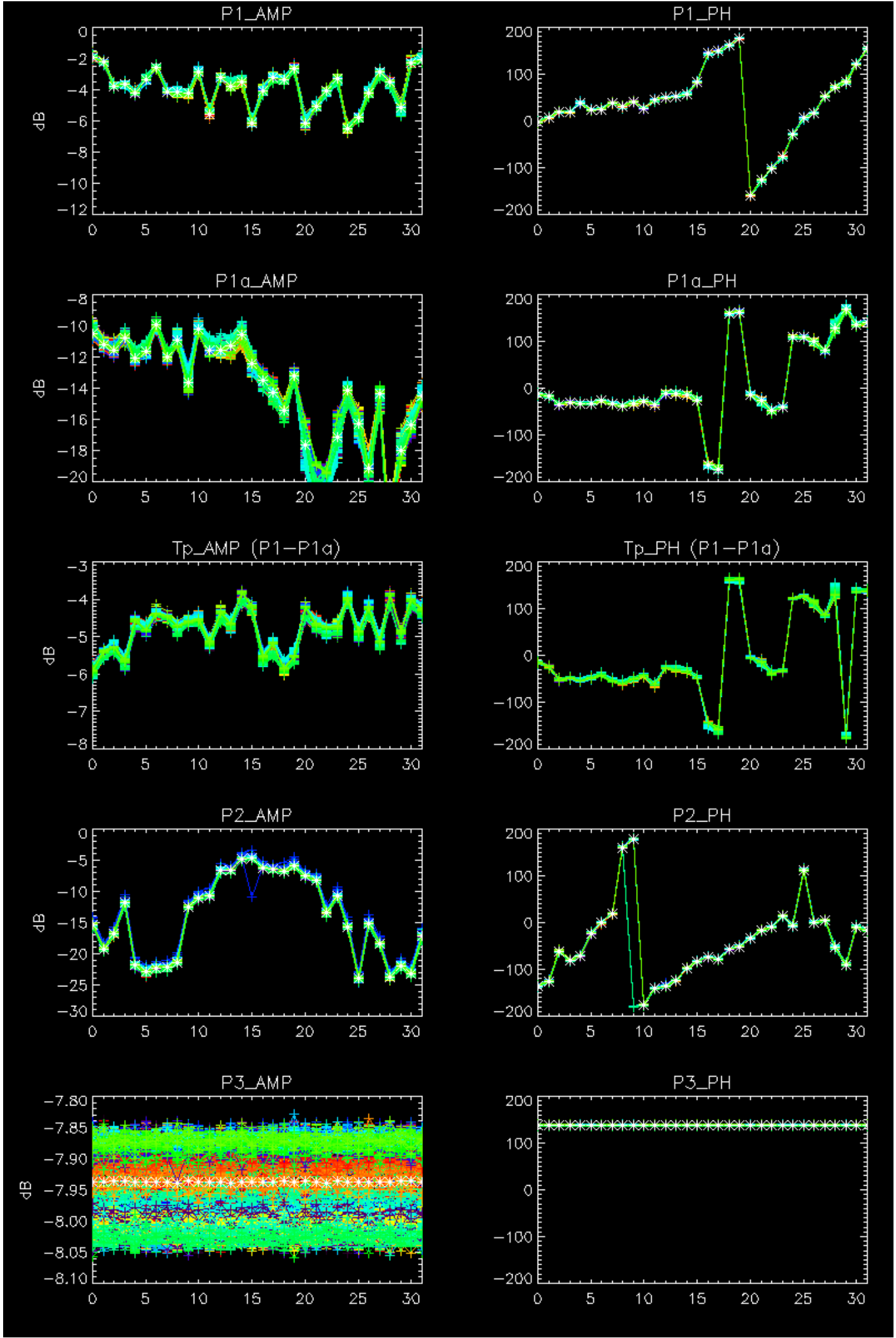
Cal pulses for WVS IS2

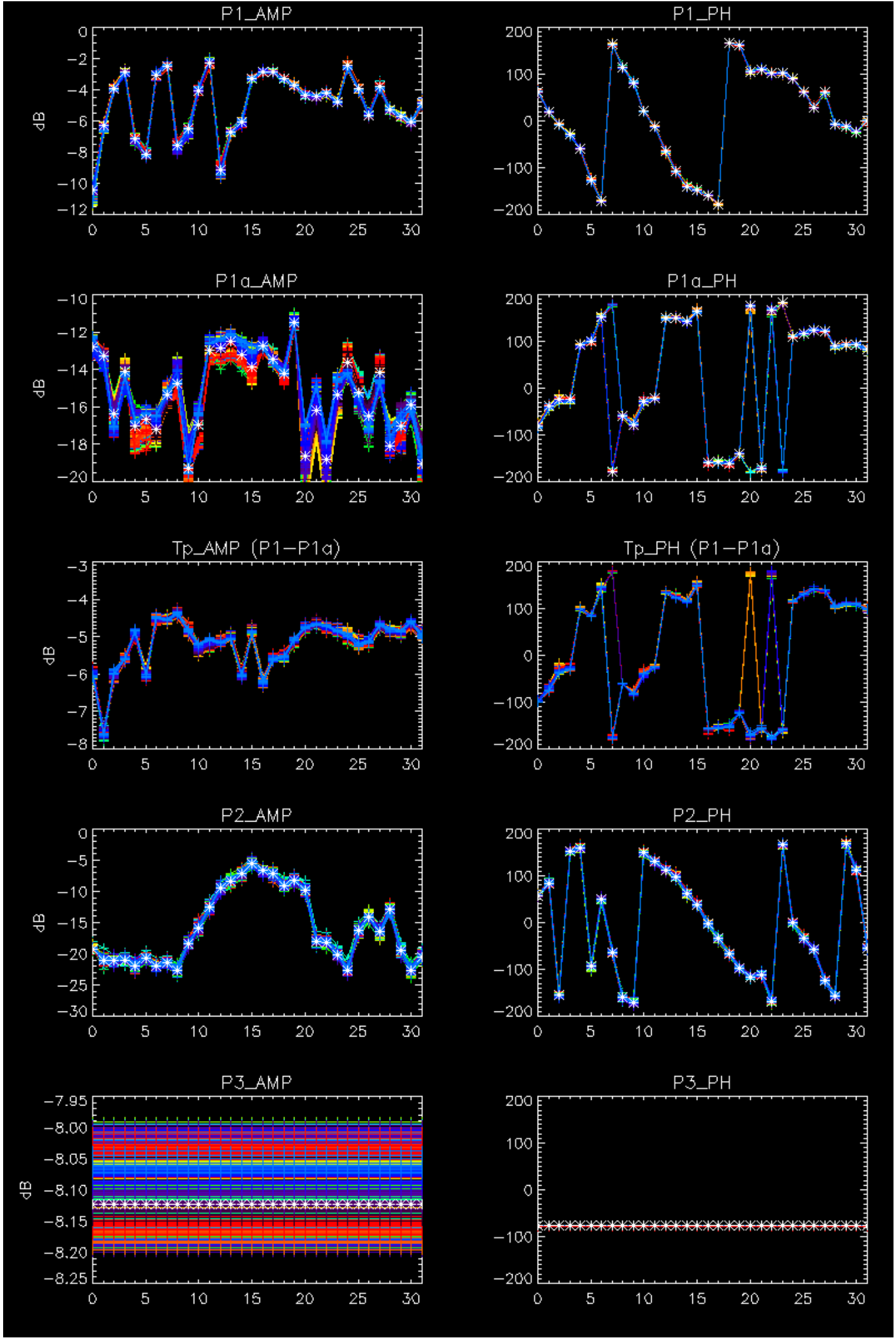


No anomalies observed on available browse products



No anomalies observed.



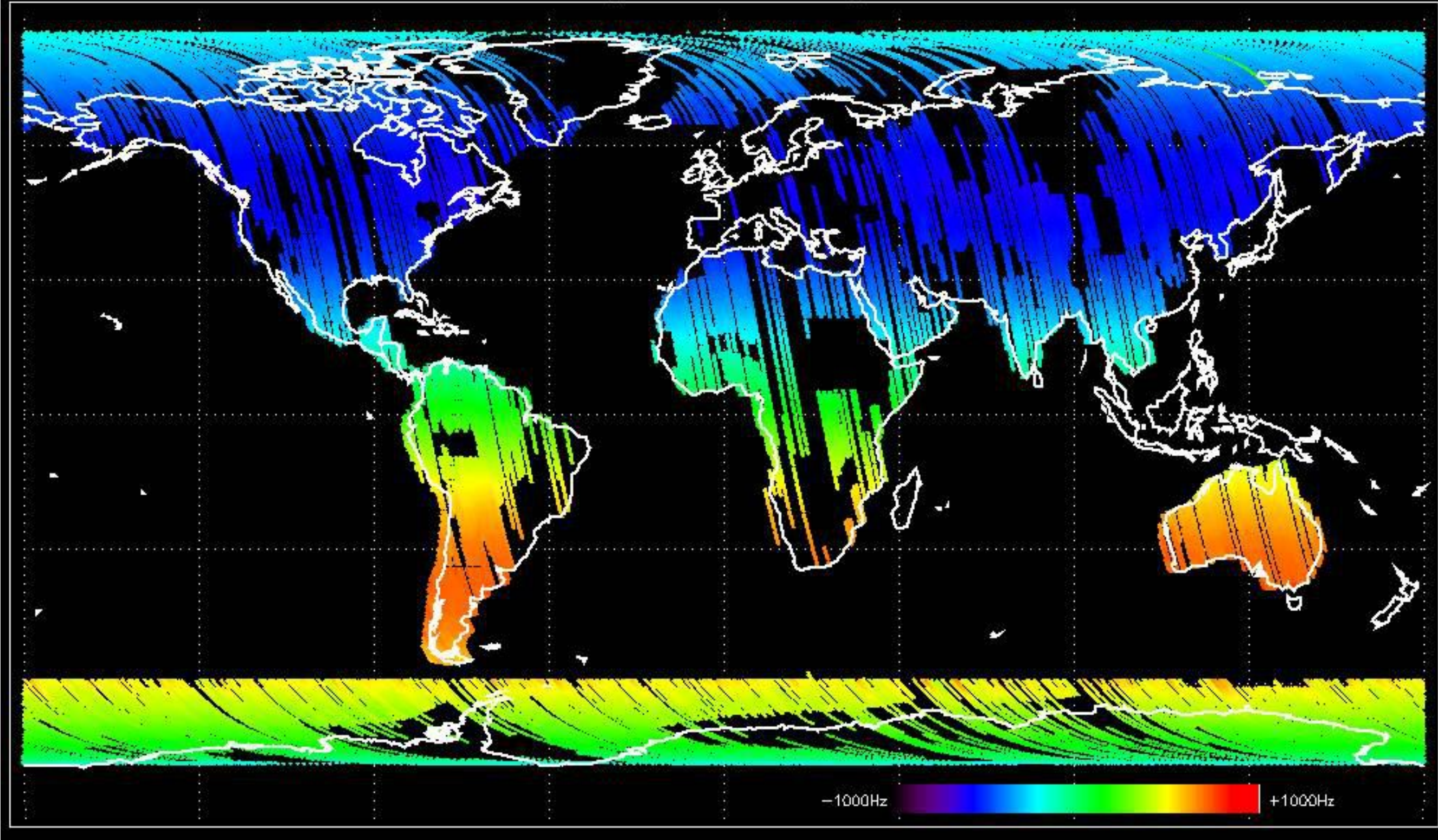


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



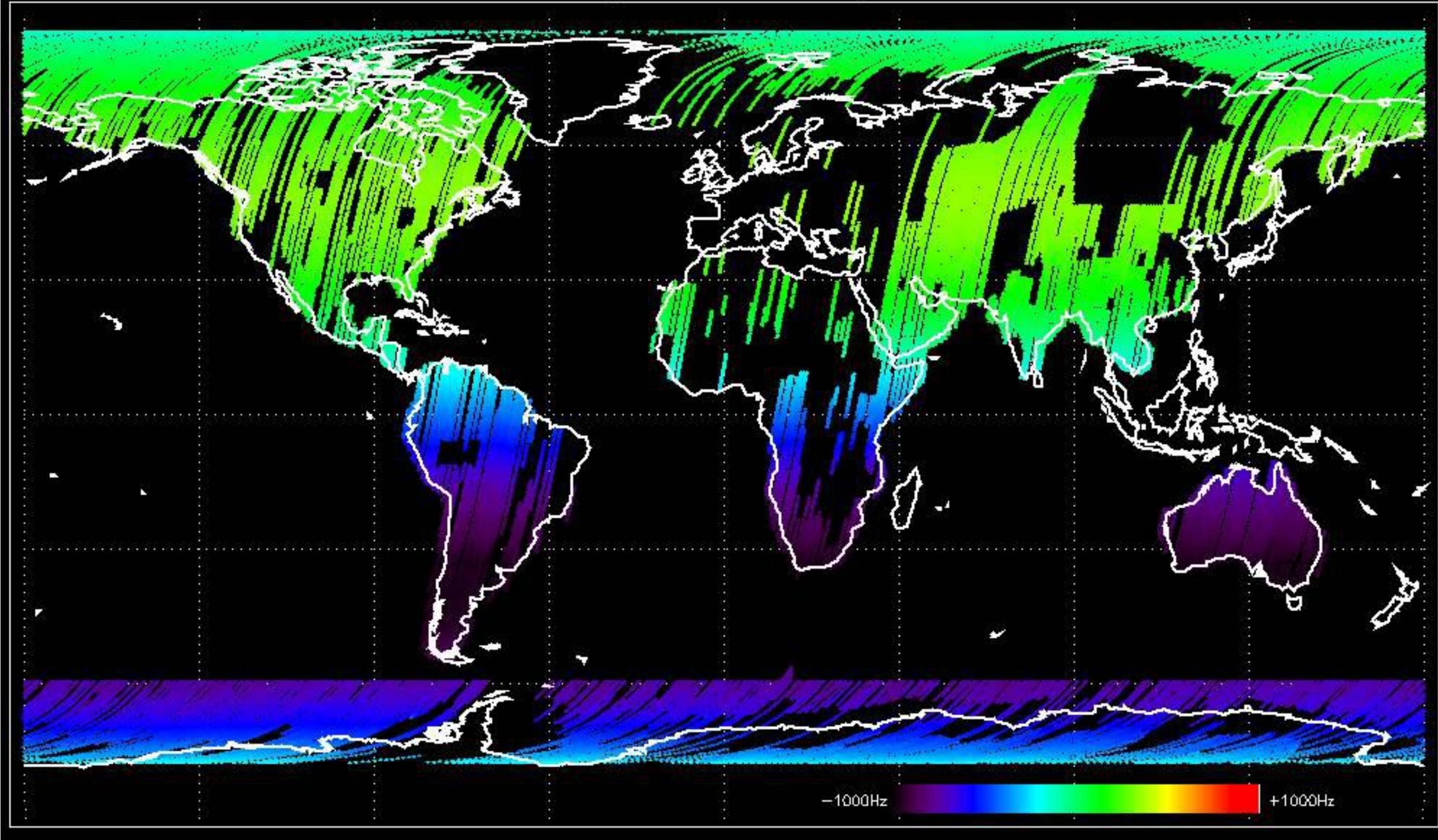


Doppler 'GM1' 'SS1' ascending



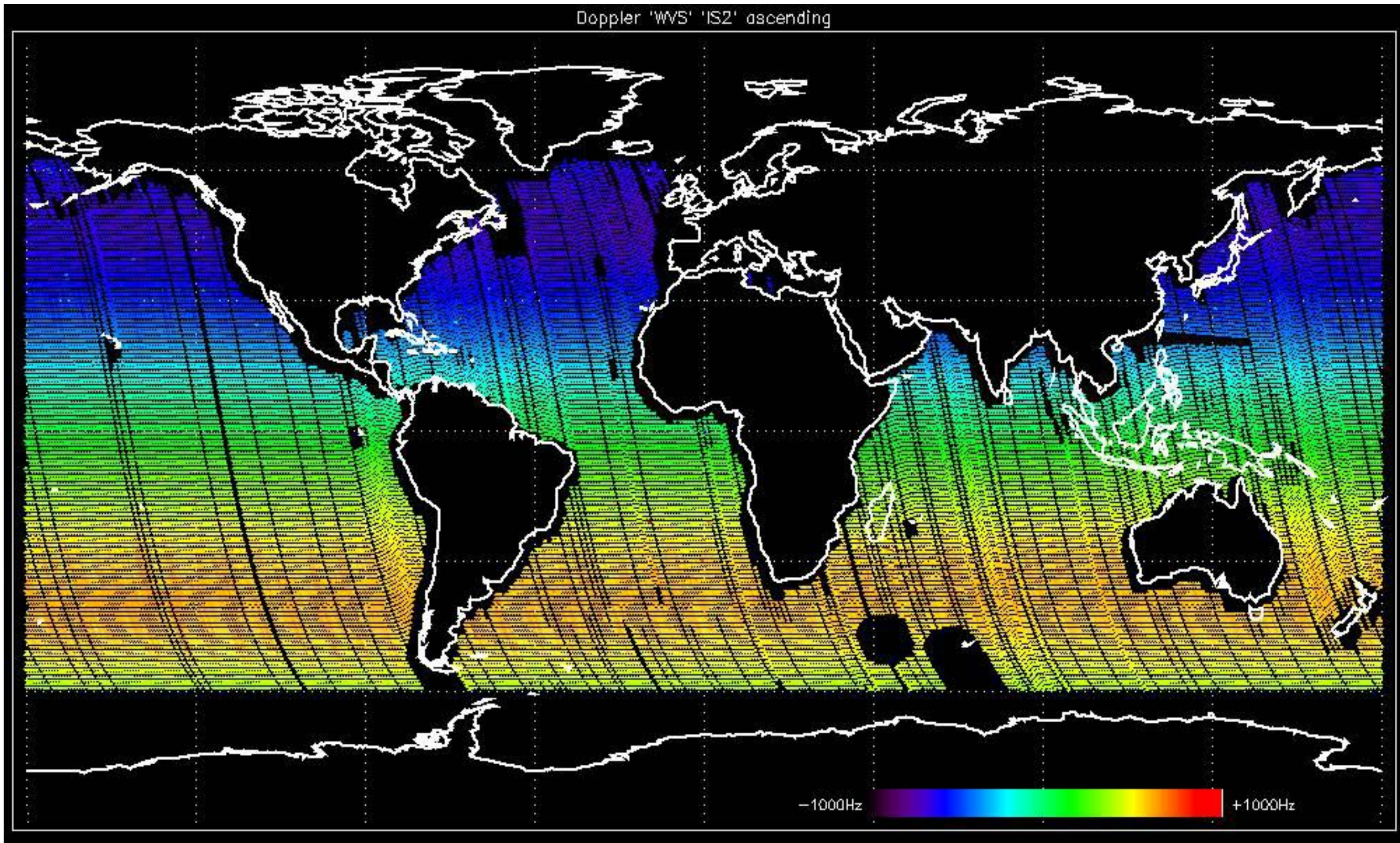


Doppler 'GM1' 'SS1' descending



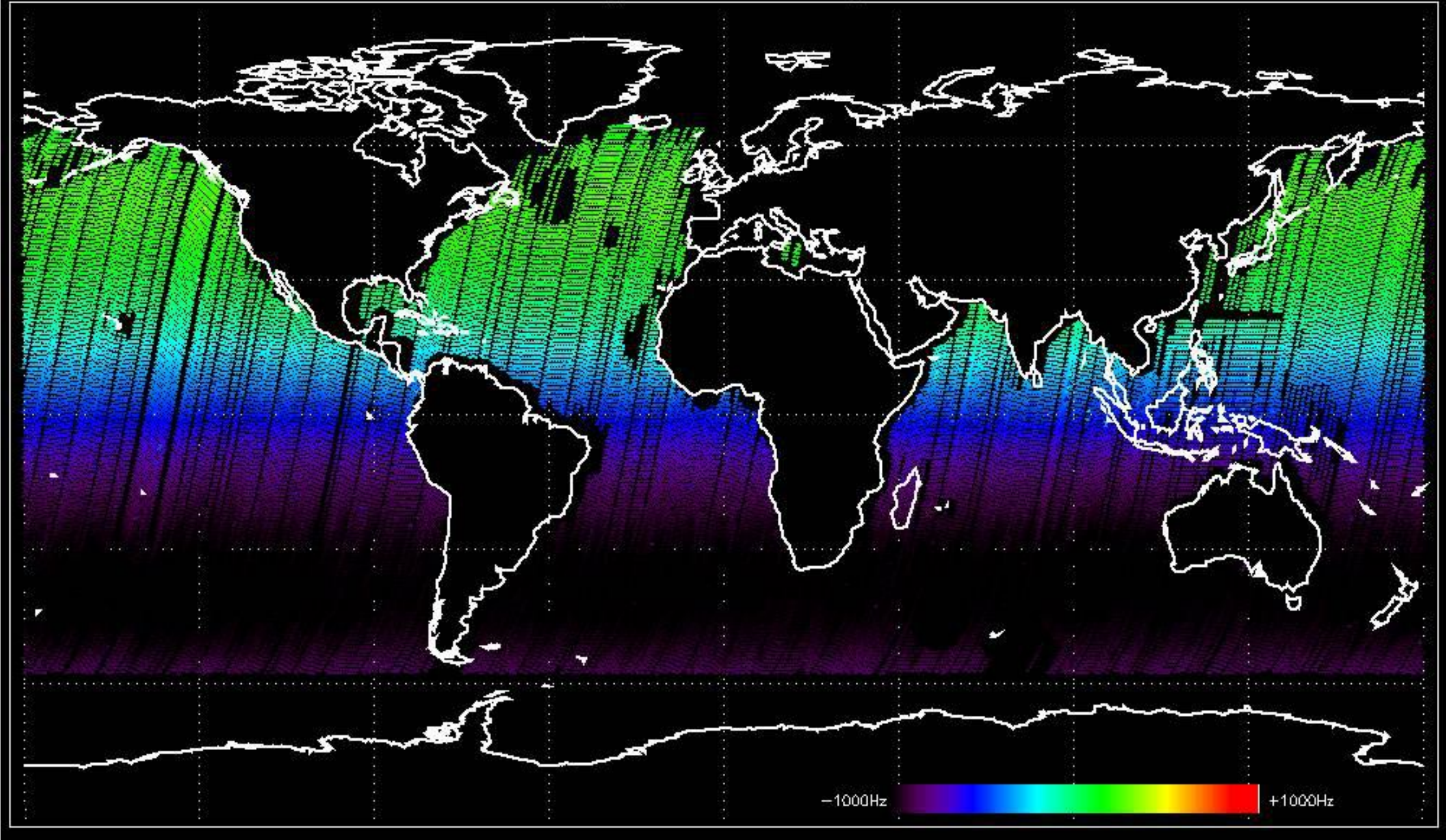


Doppler 'WVS' 'IS2' ascending

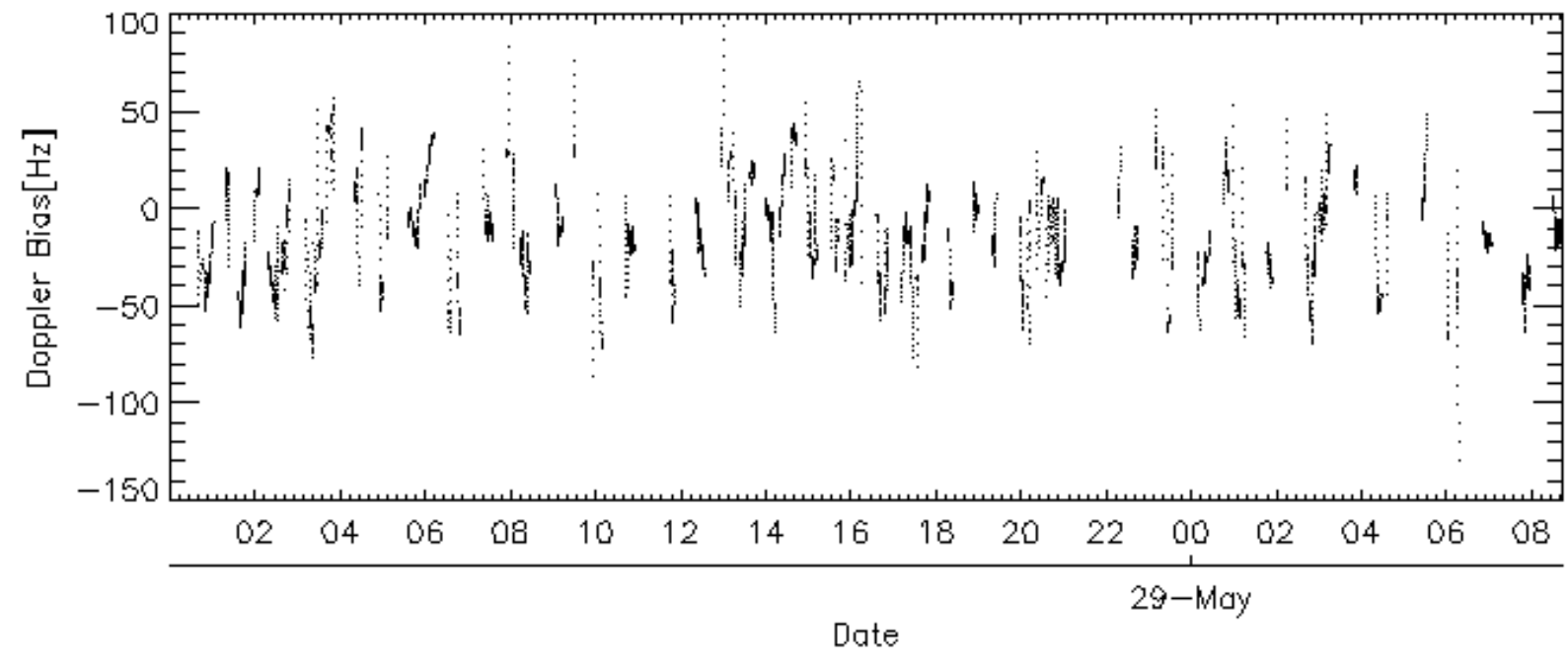
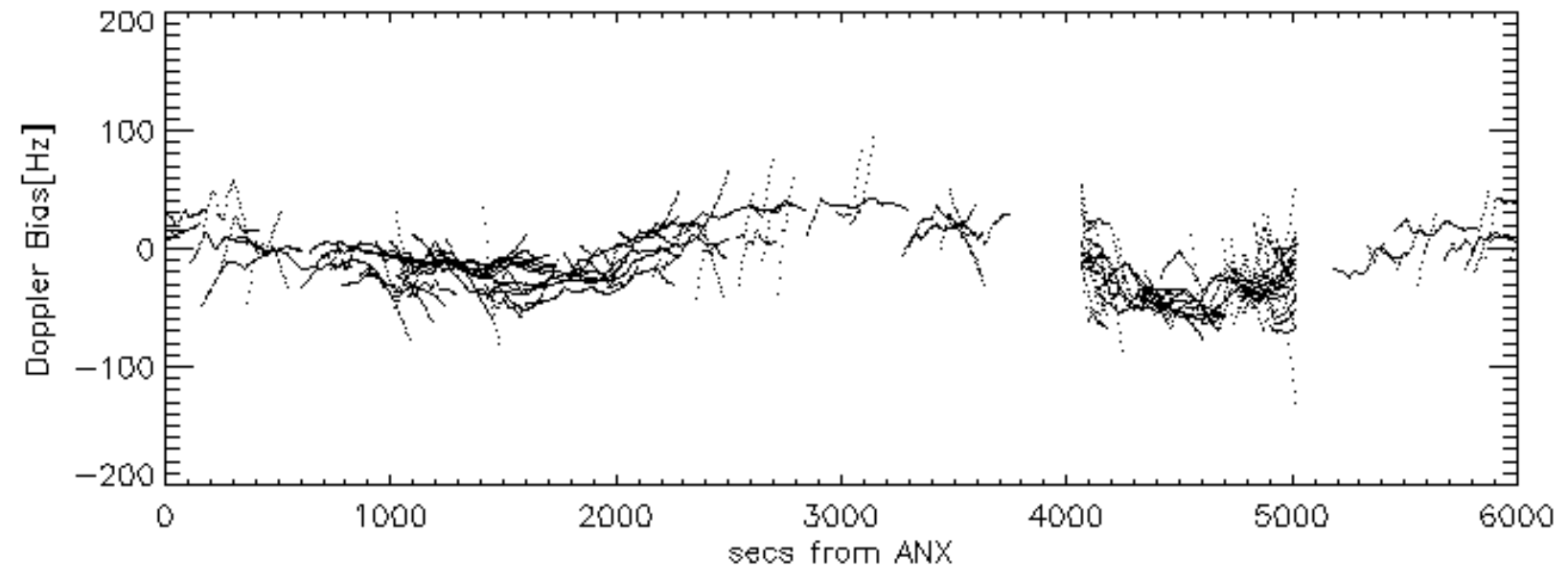
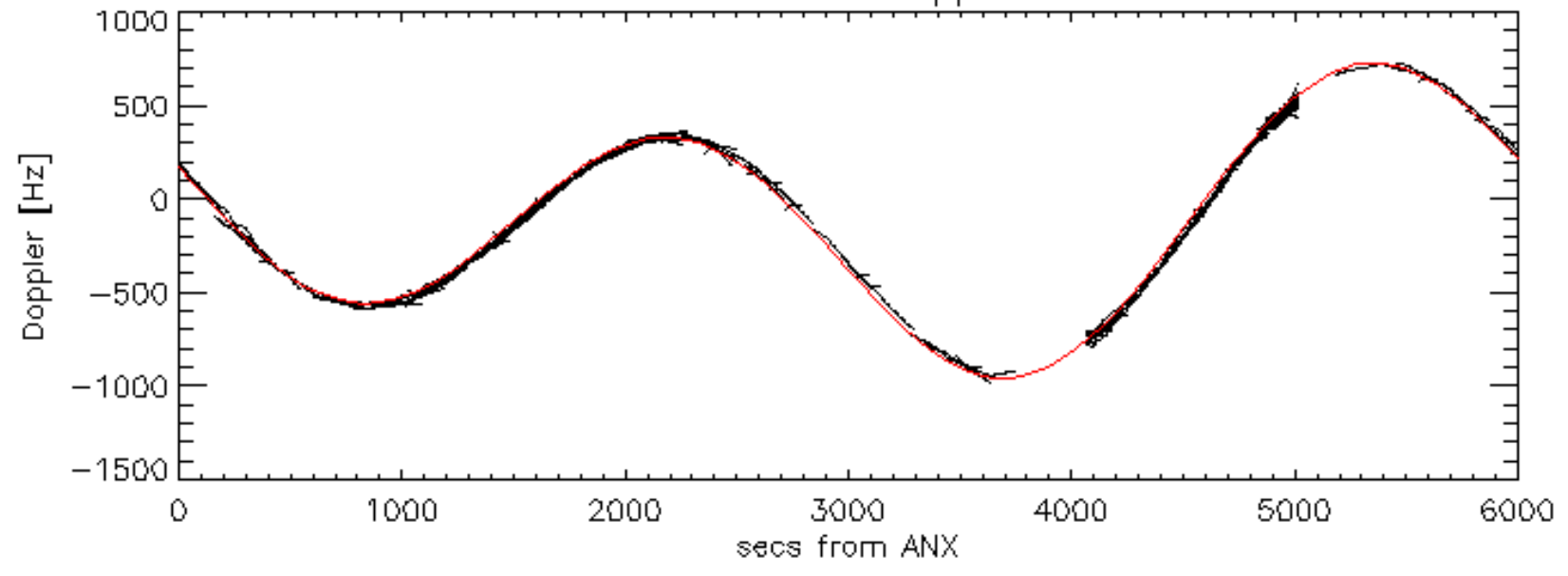




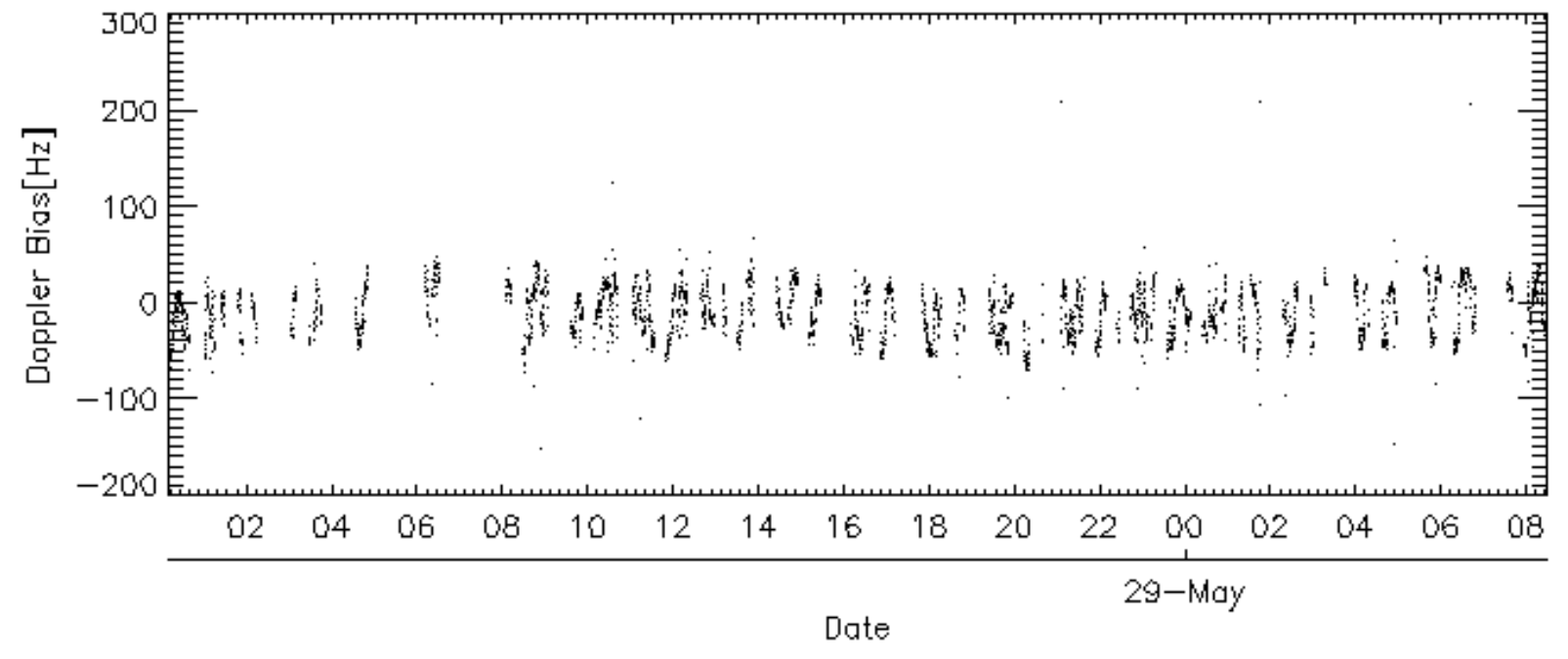
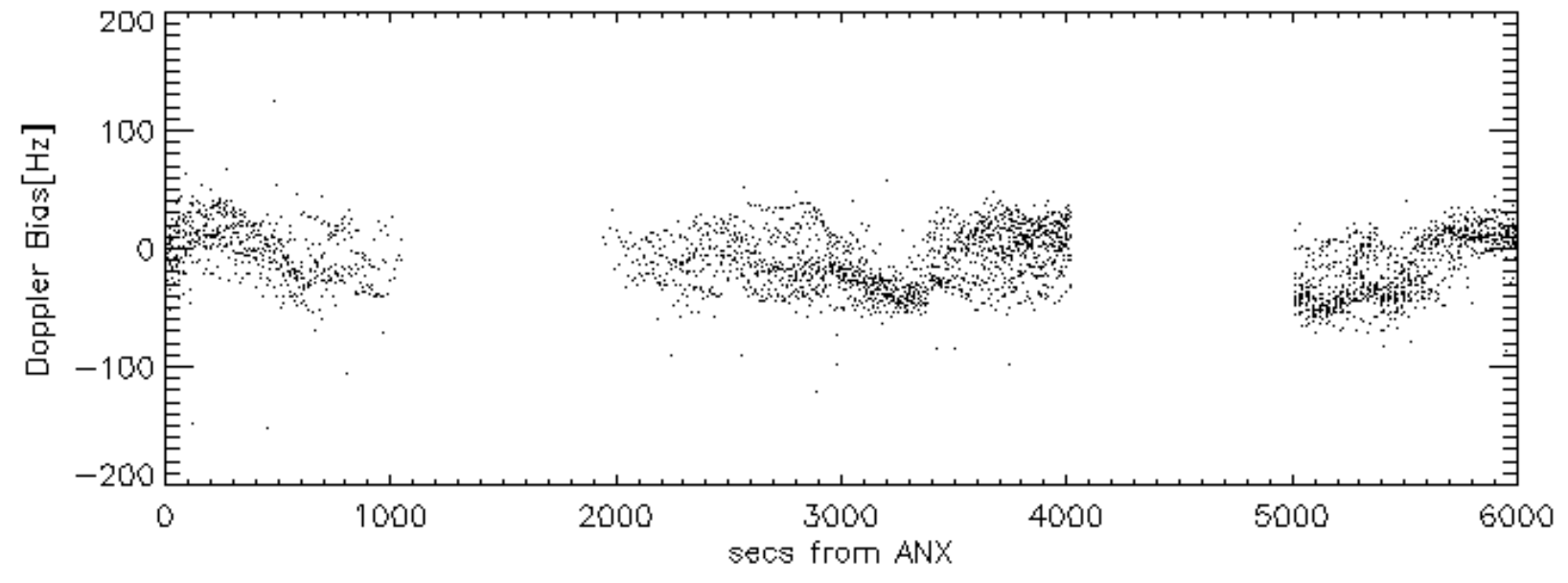
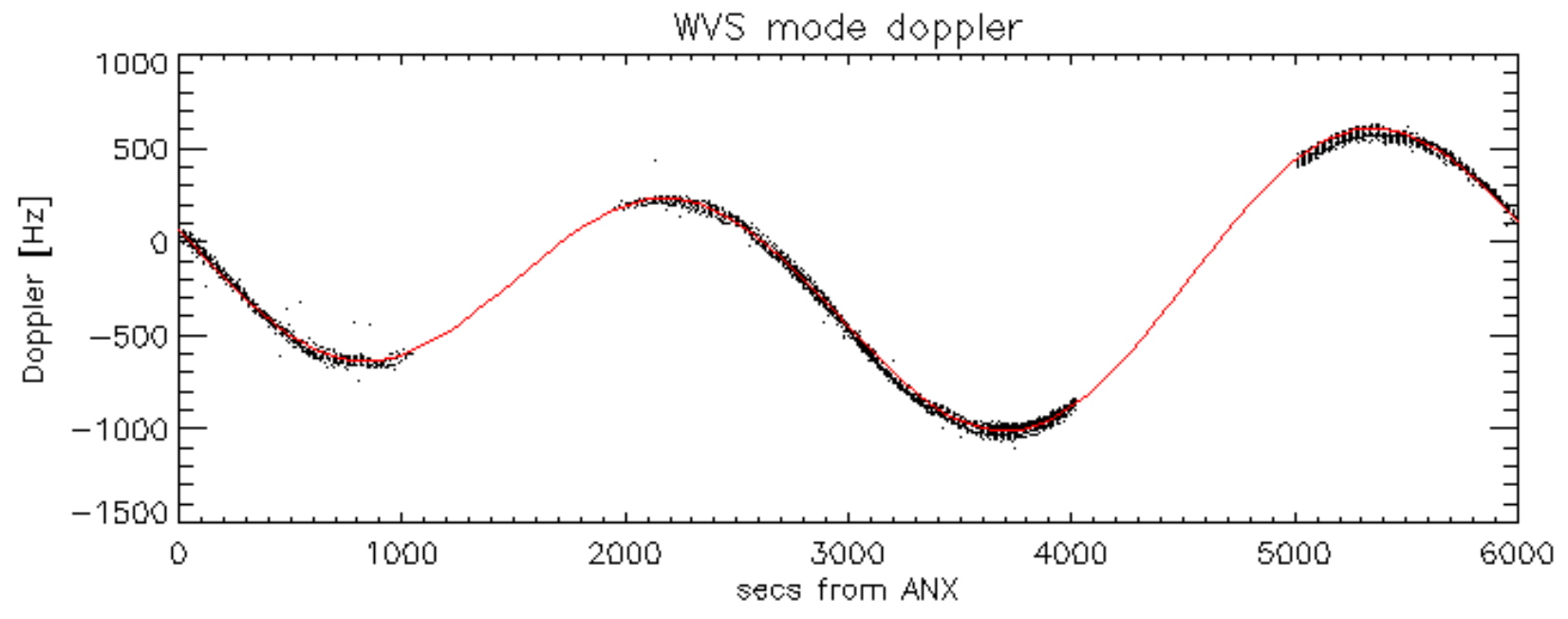
Doppler 'WVS' 'IS2' descending



GM1 mode doppler

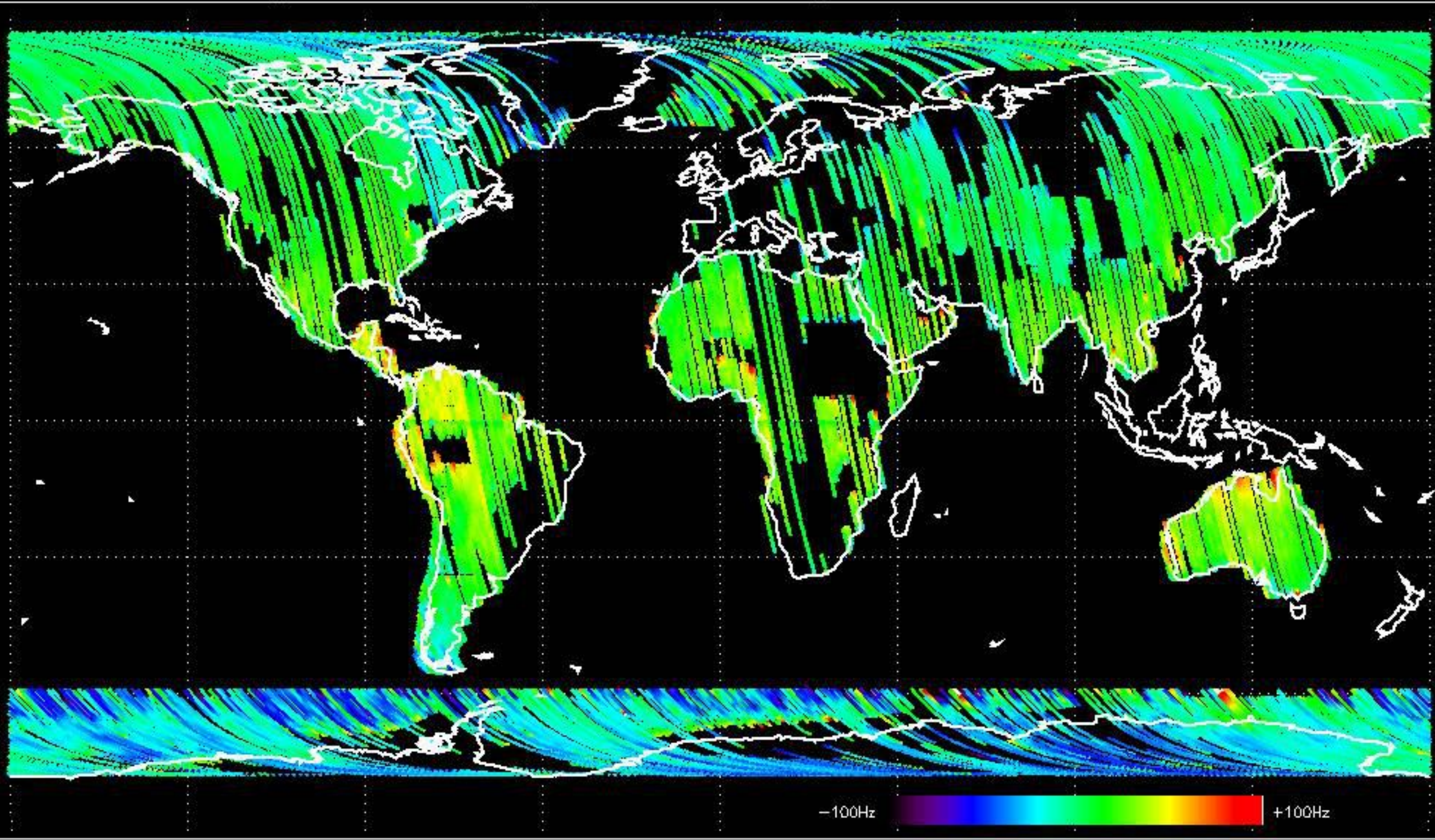






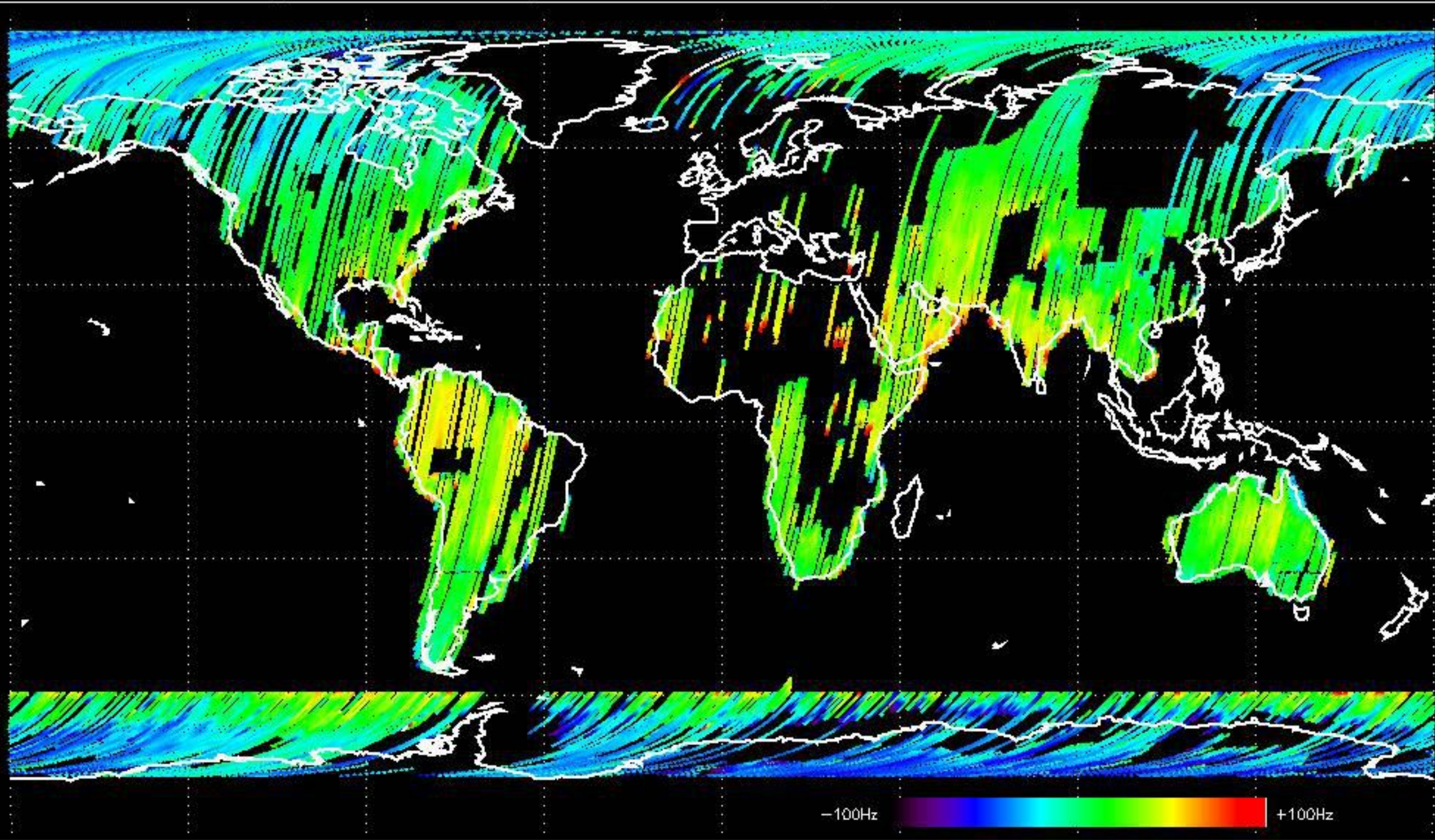


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.611451 Hz



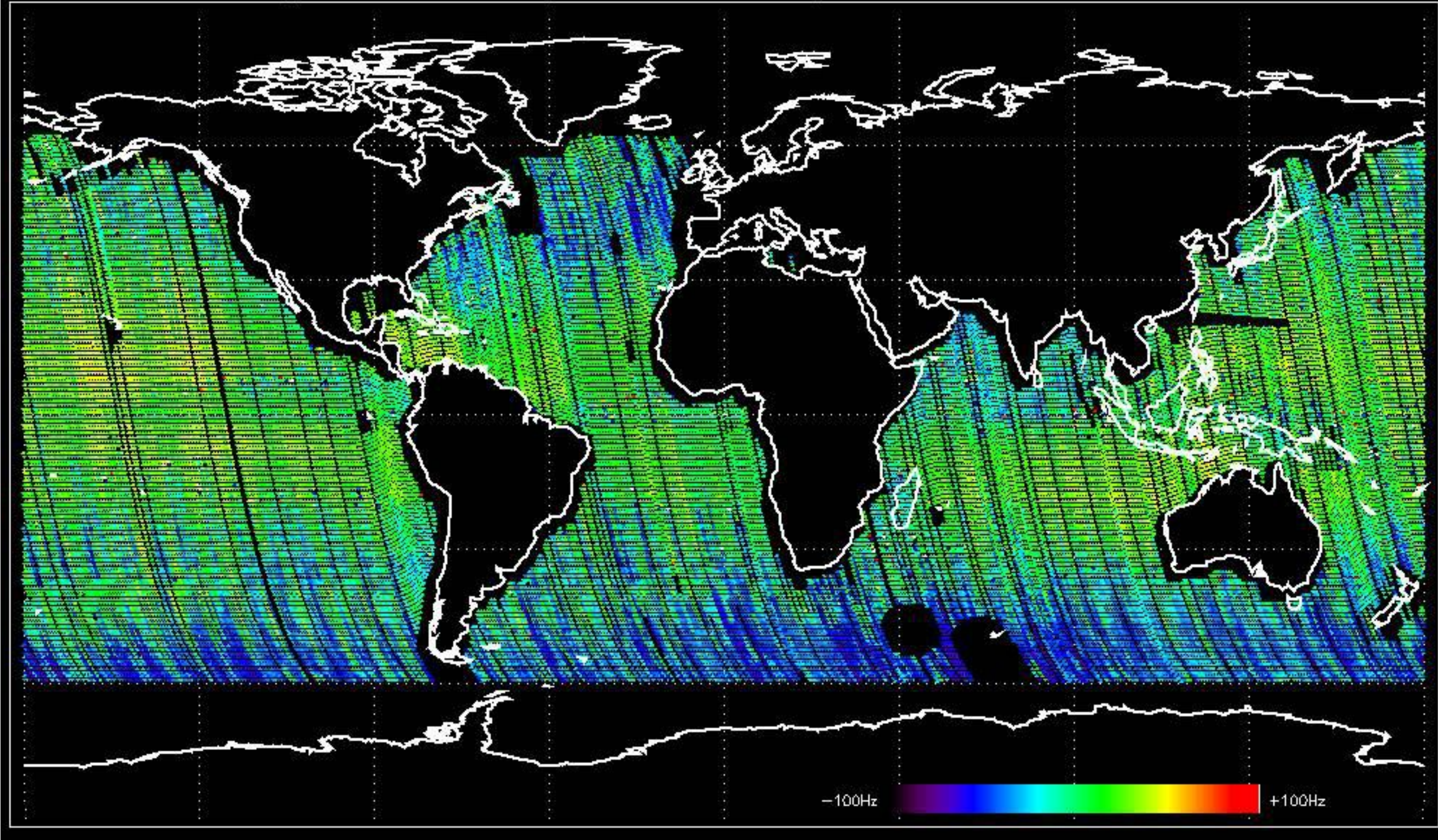


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.4347652 Hz



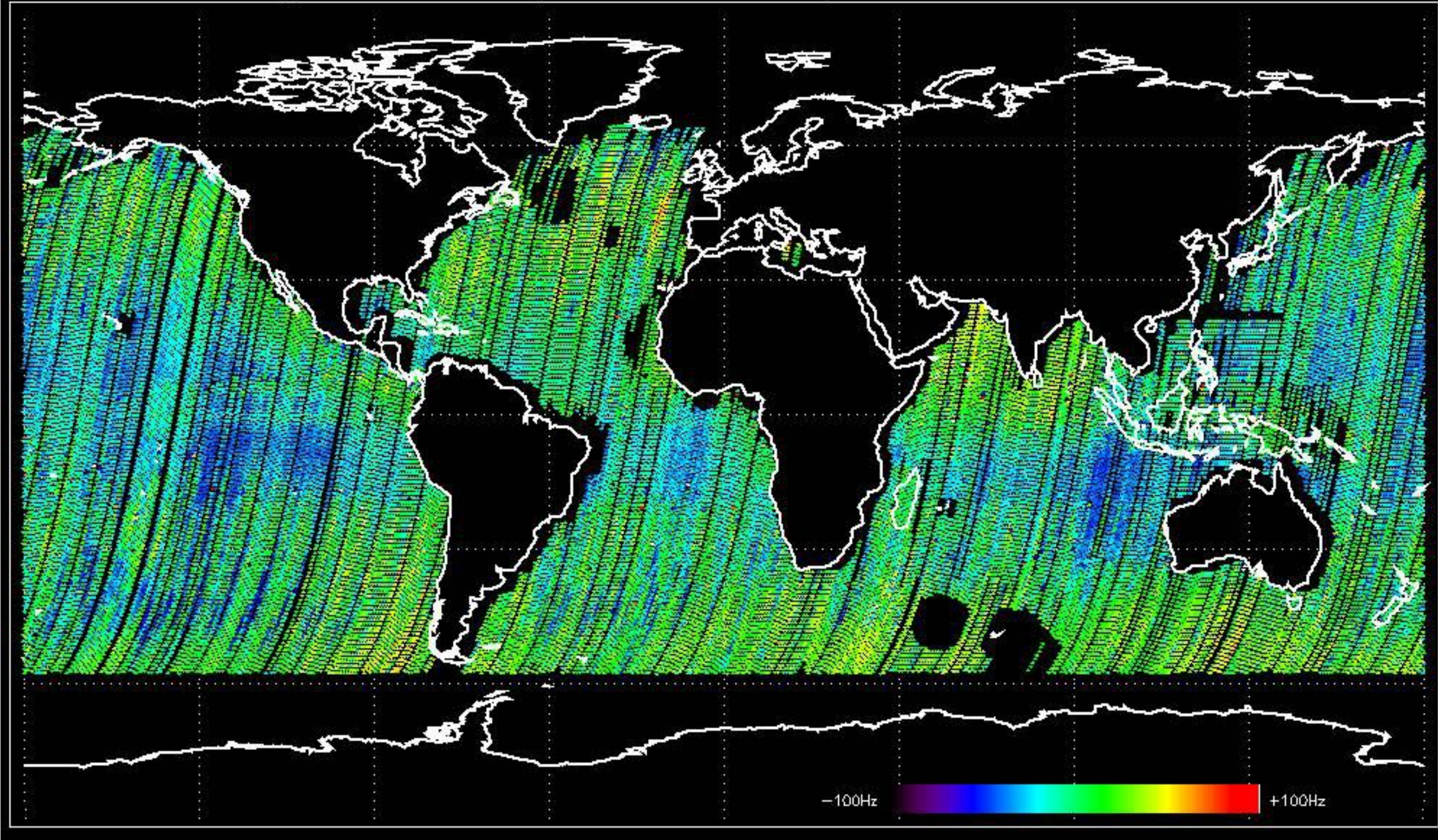


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.8569590 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.631665 Hz





No anomalies observed on available MS products:



No anomalies observed.

















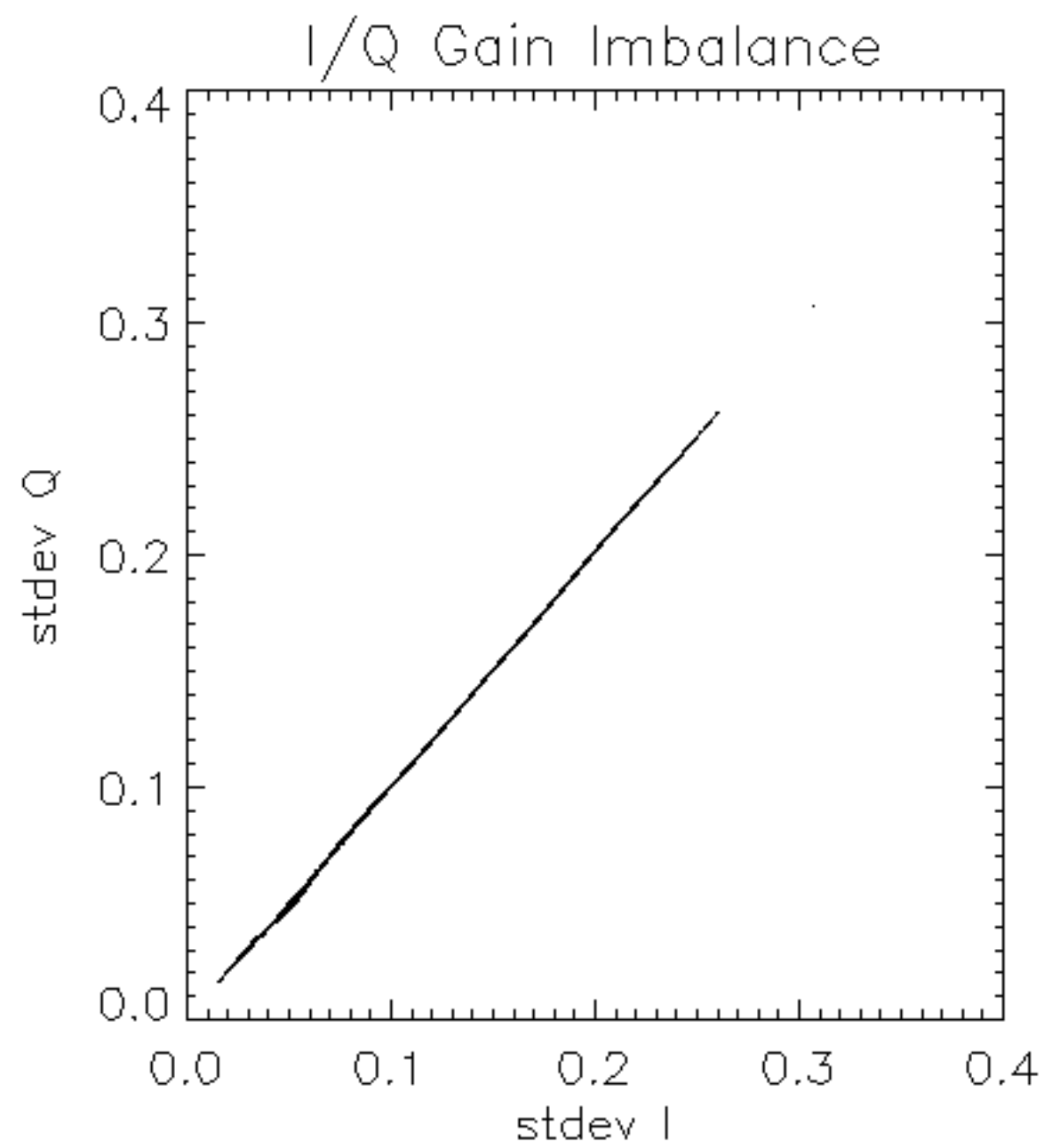


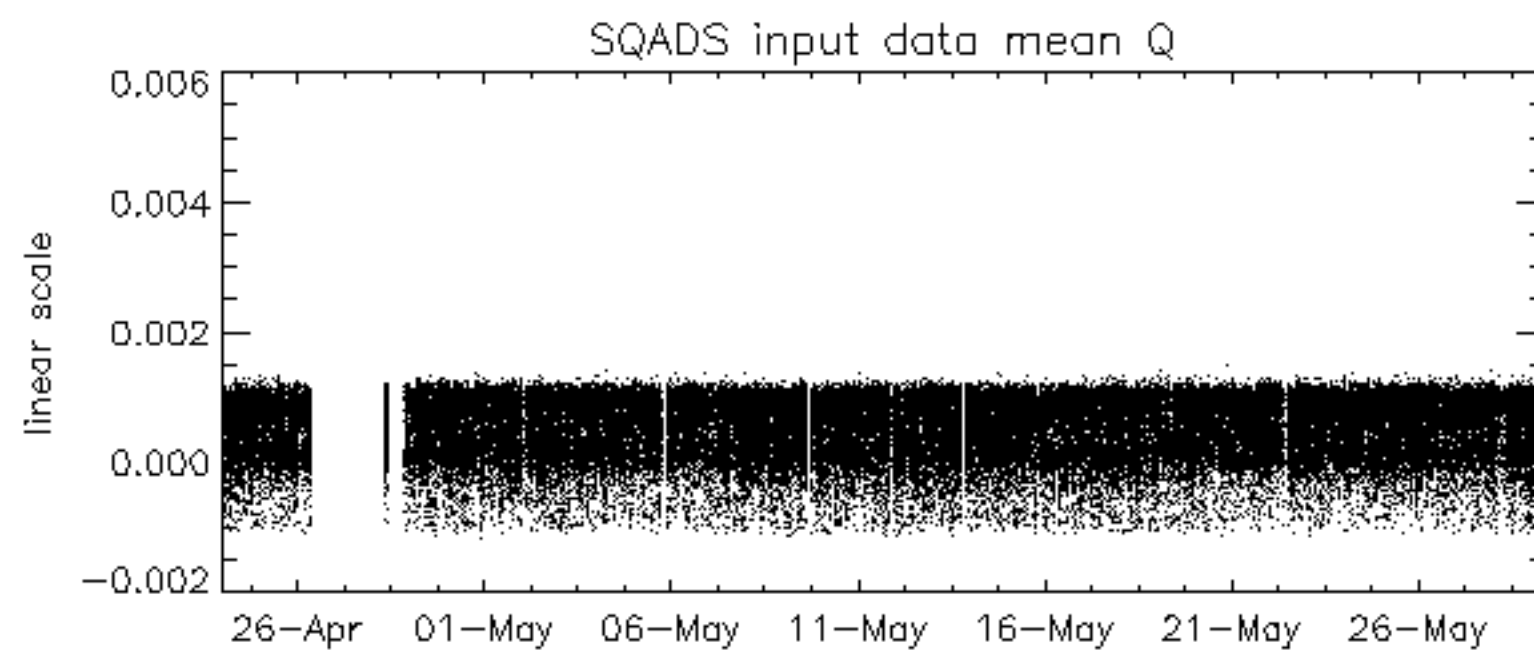
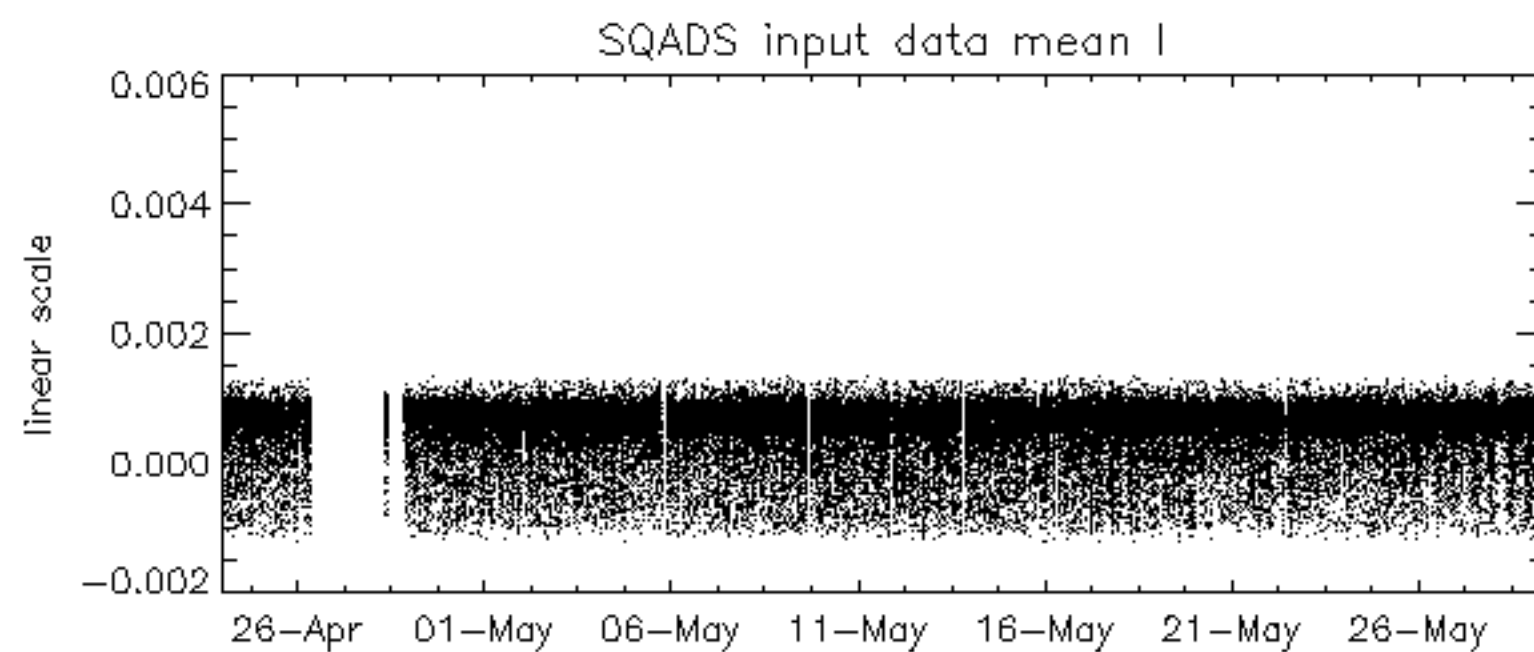
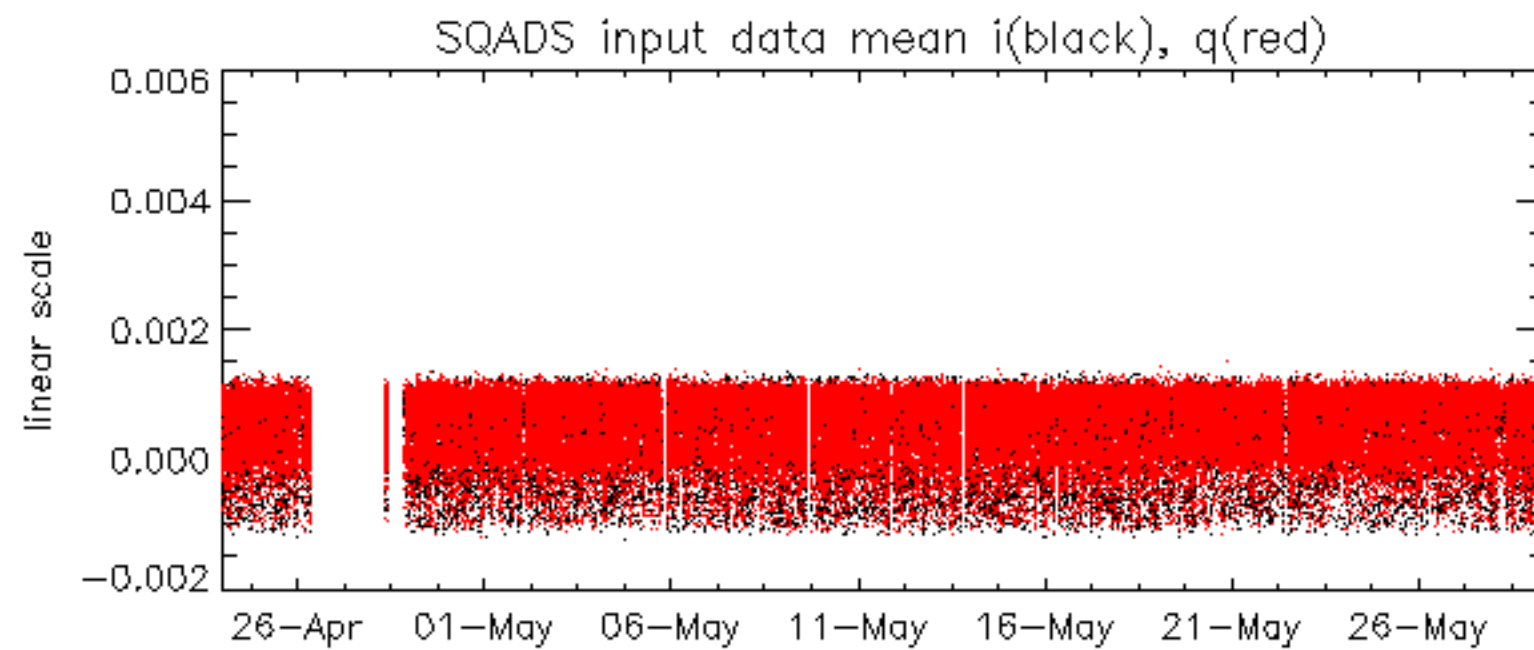


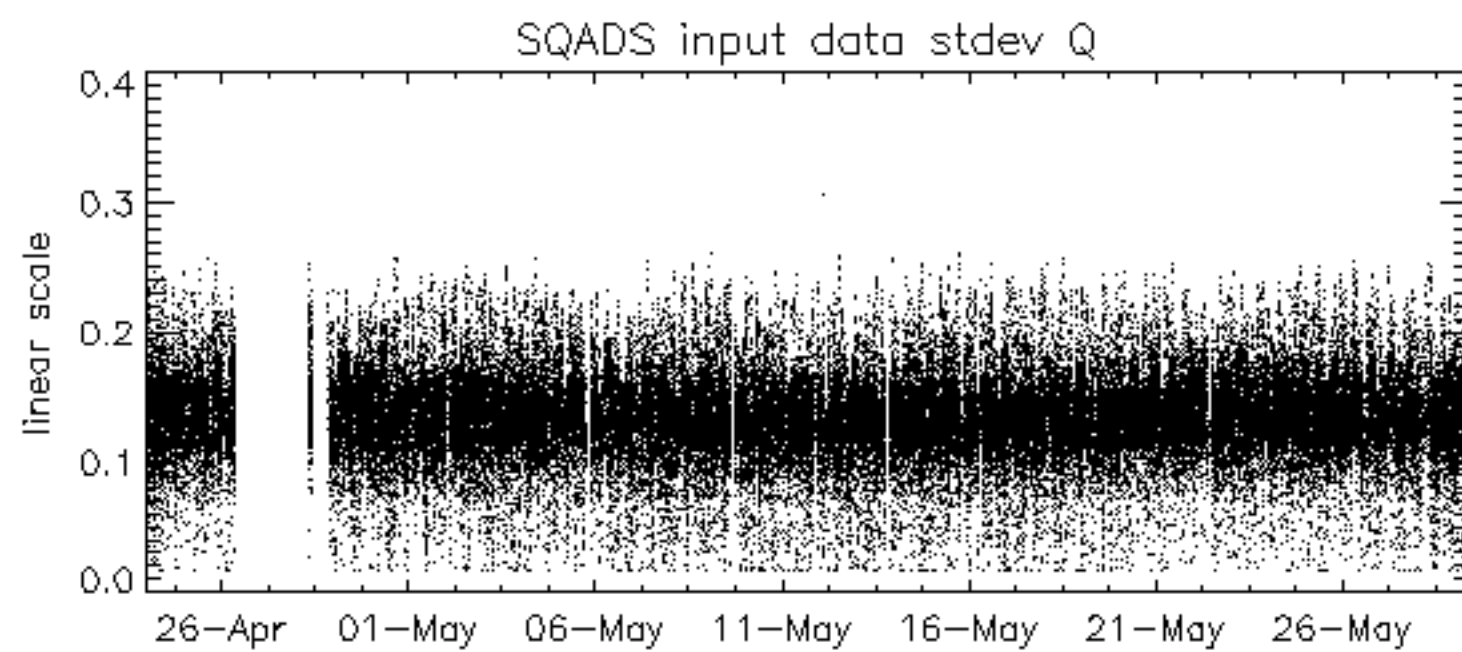
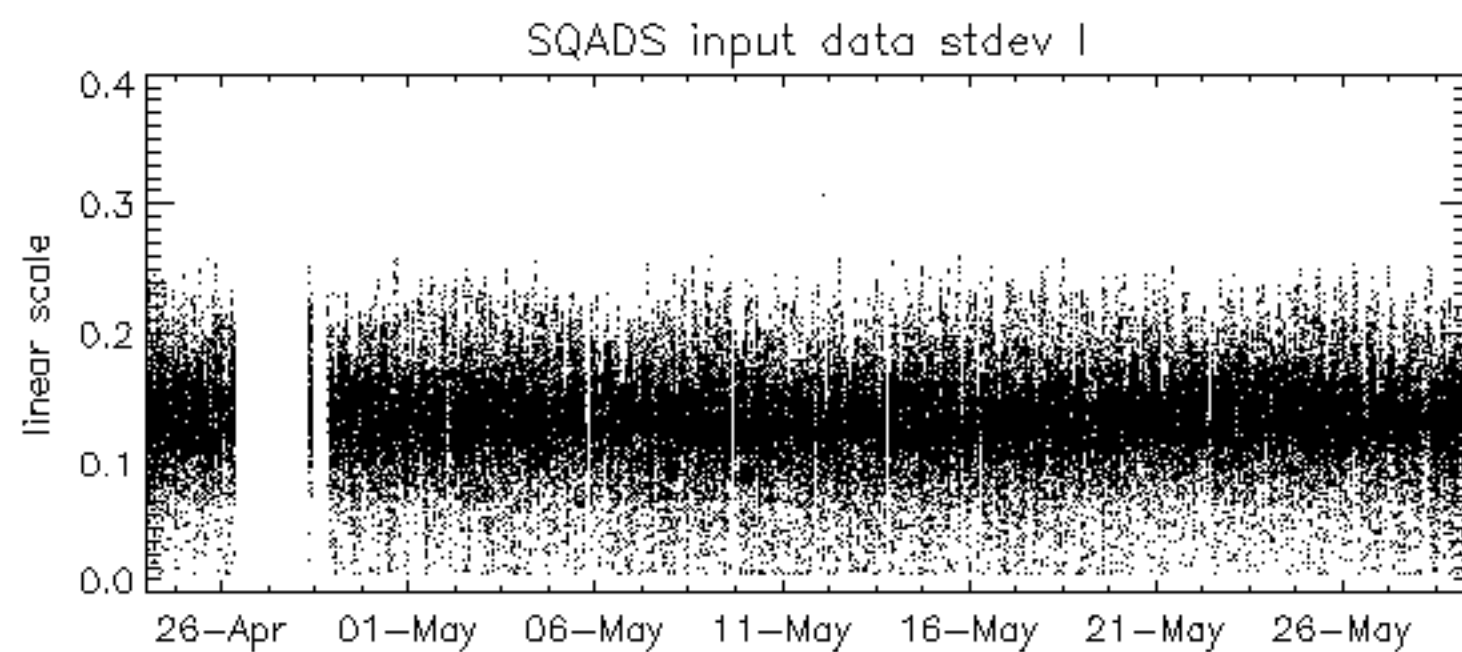
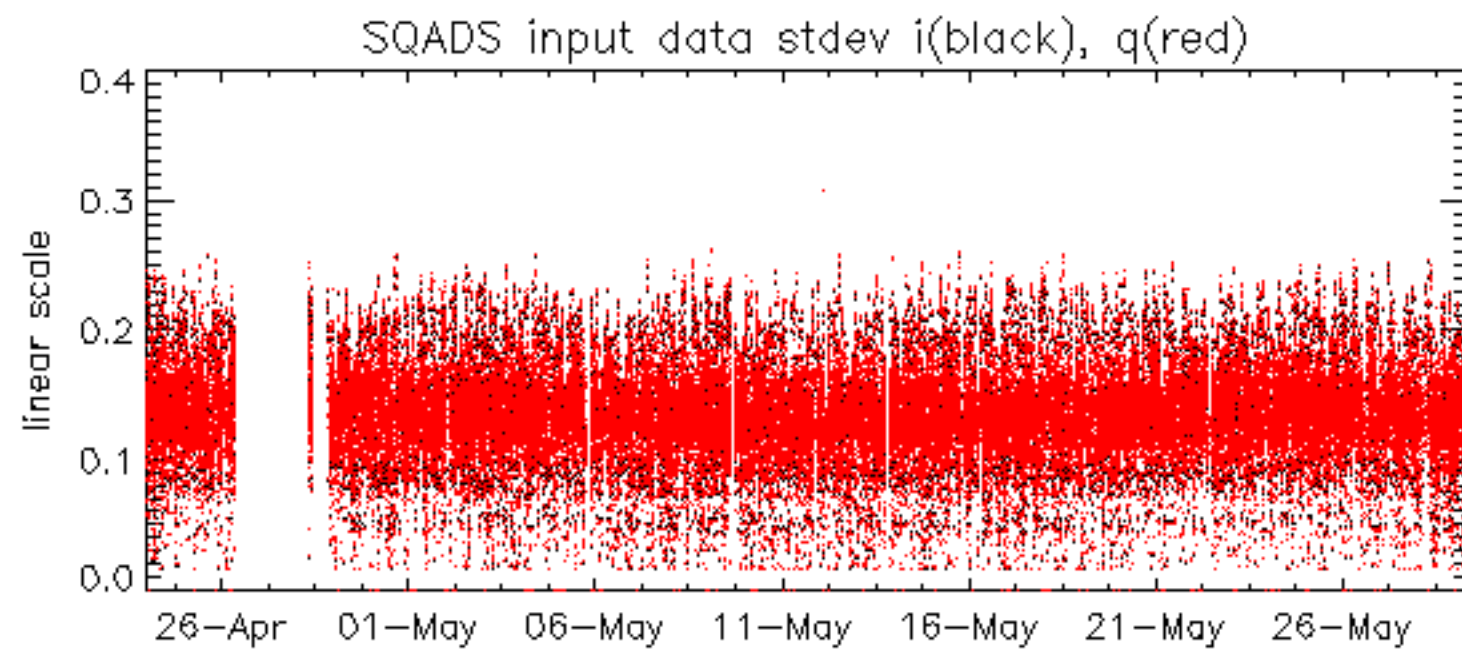


























Summary of analysis for the last 3 days 2006052[789]

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
ASA_IMM_1PNPDE20060527_005025_000001722048_00059_22157_6265.N1	1	0
ASA_IMM_1PNPDE20060529_002857_000000512048_00088_22186_6360.N1	1	0
ASA_WSM_1PNPDE20060527_000327_000003292048_00059_22157_1091.N1	0	34
ASA_WSM_1PNPDE20060527_160556_000001402048_00069_22167_1206.N1	0	34
ASA_WSM_1PNPDE20060527_233149_000000672048_00073_22171_1272.N1	0	34













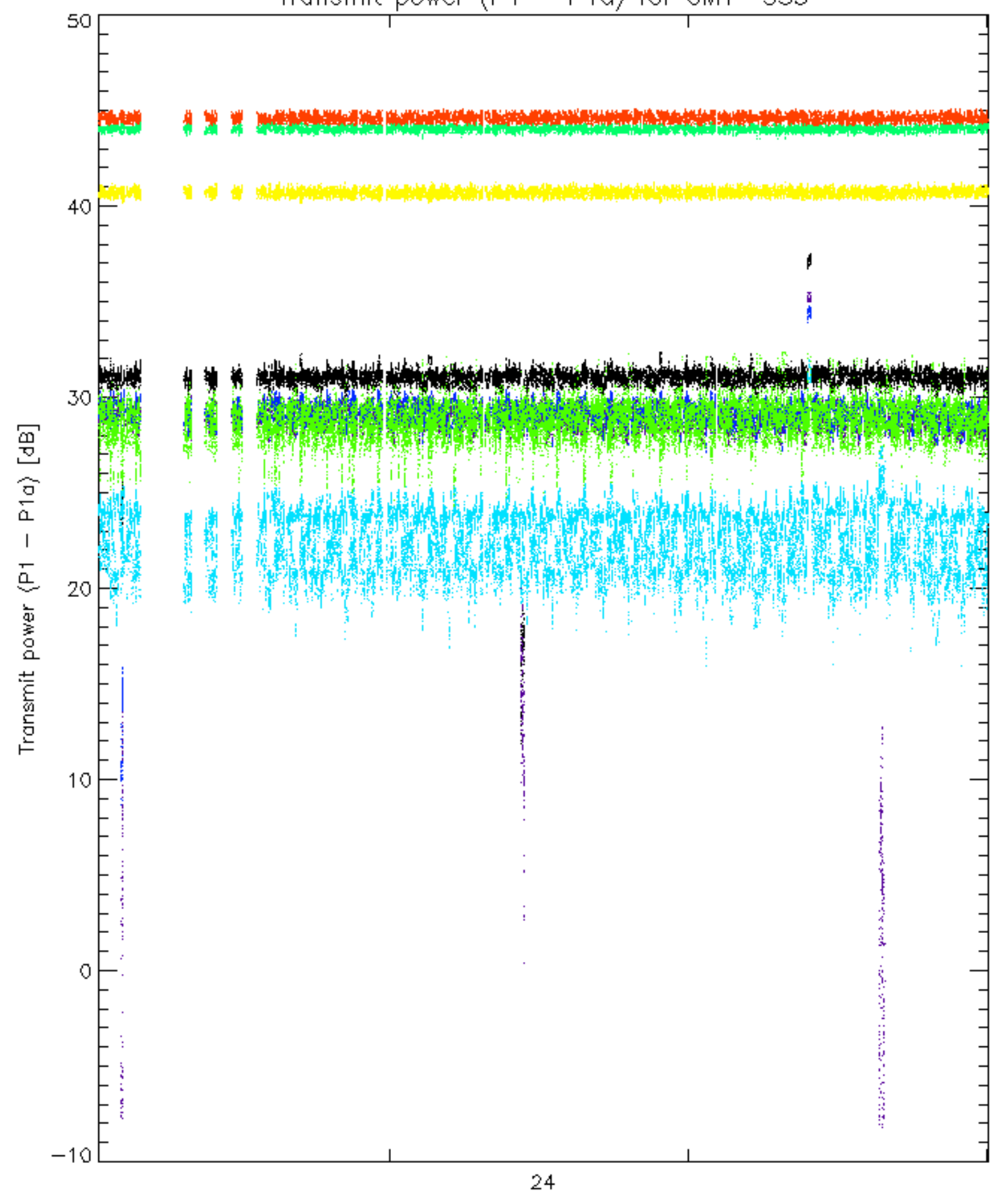




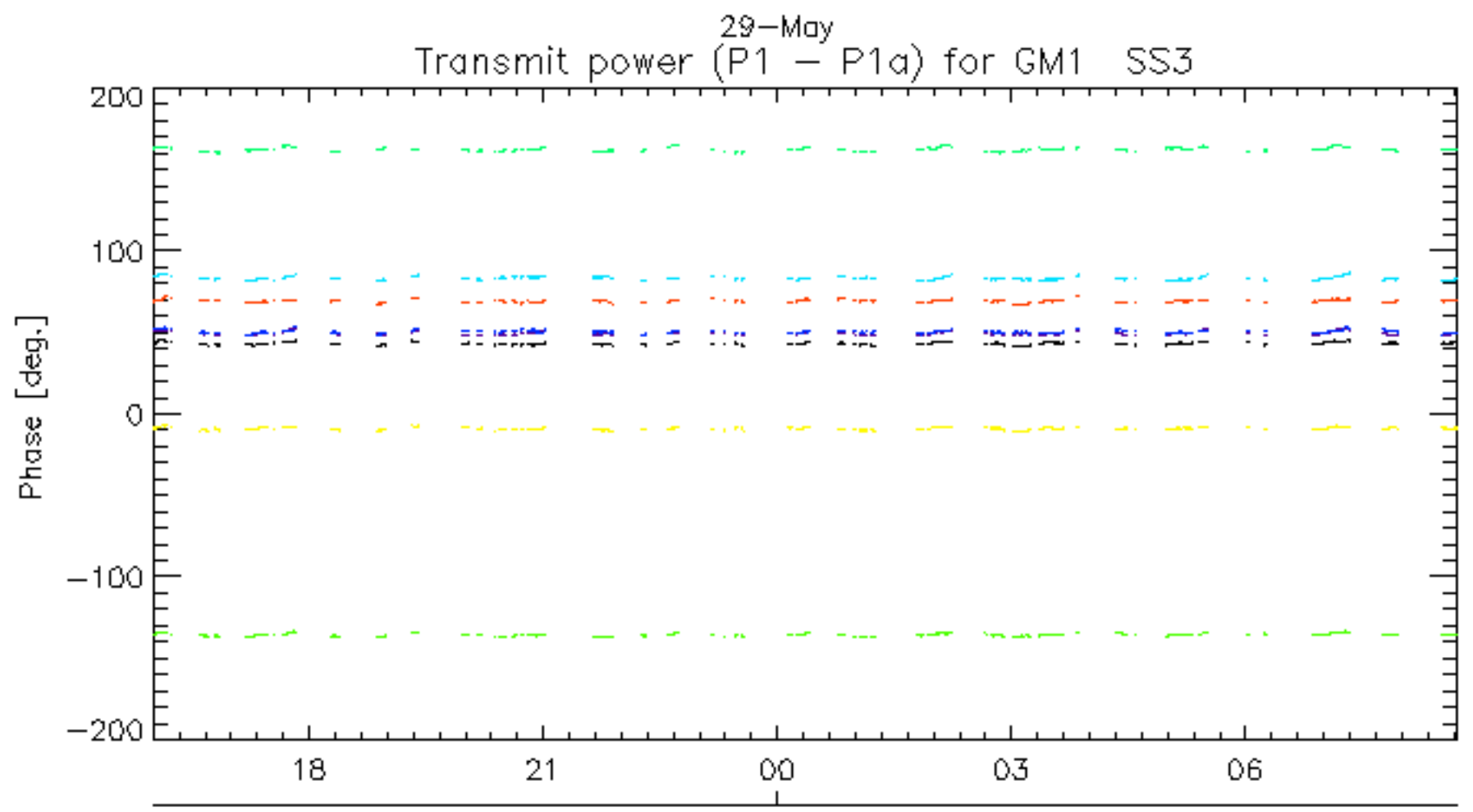
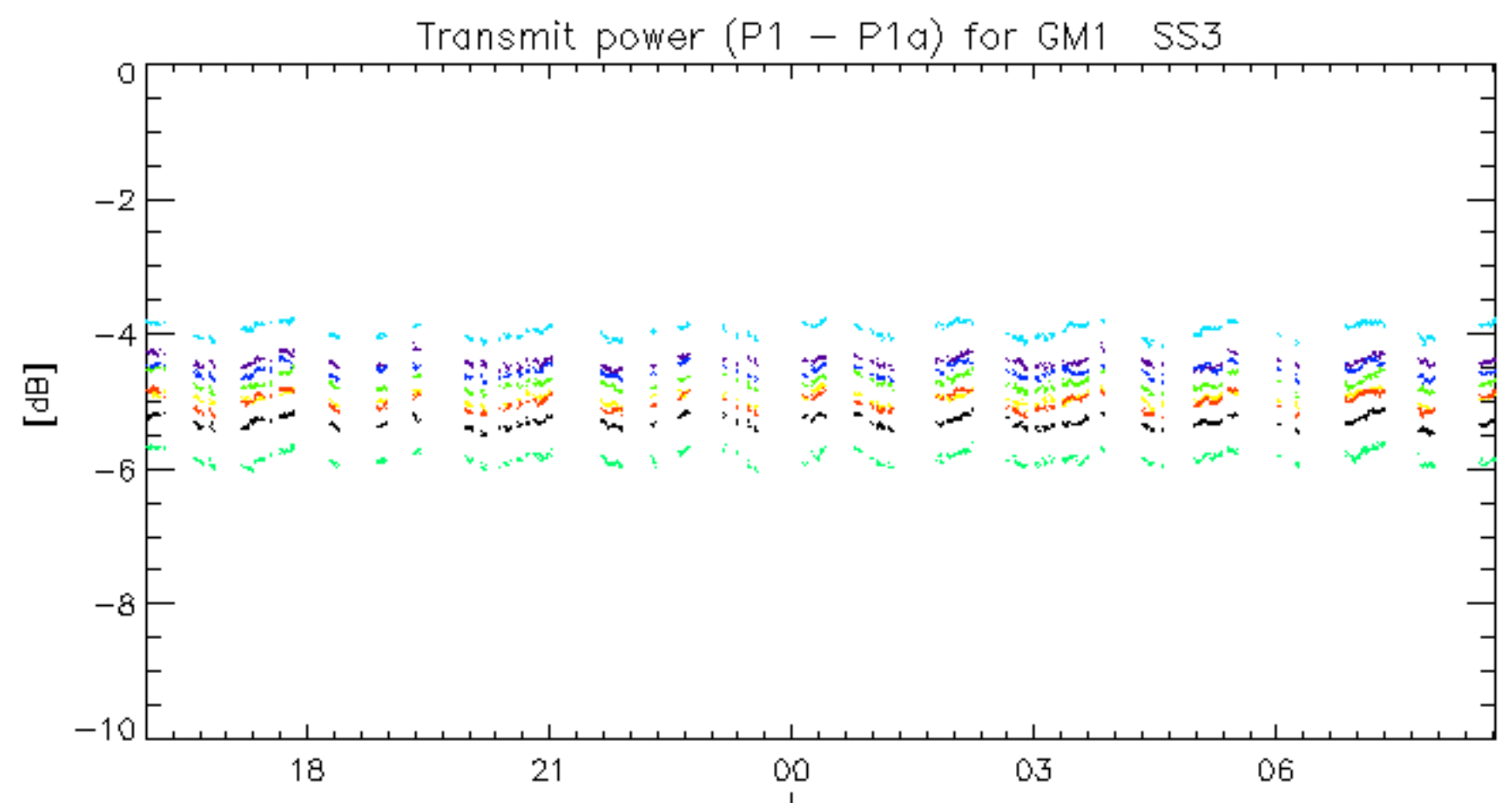




Transmit power (P1 - P1a) for GM1 SS3

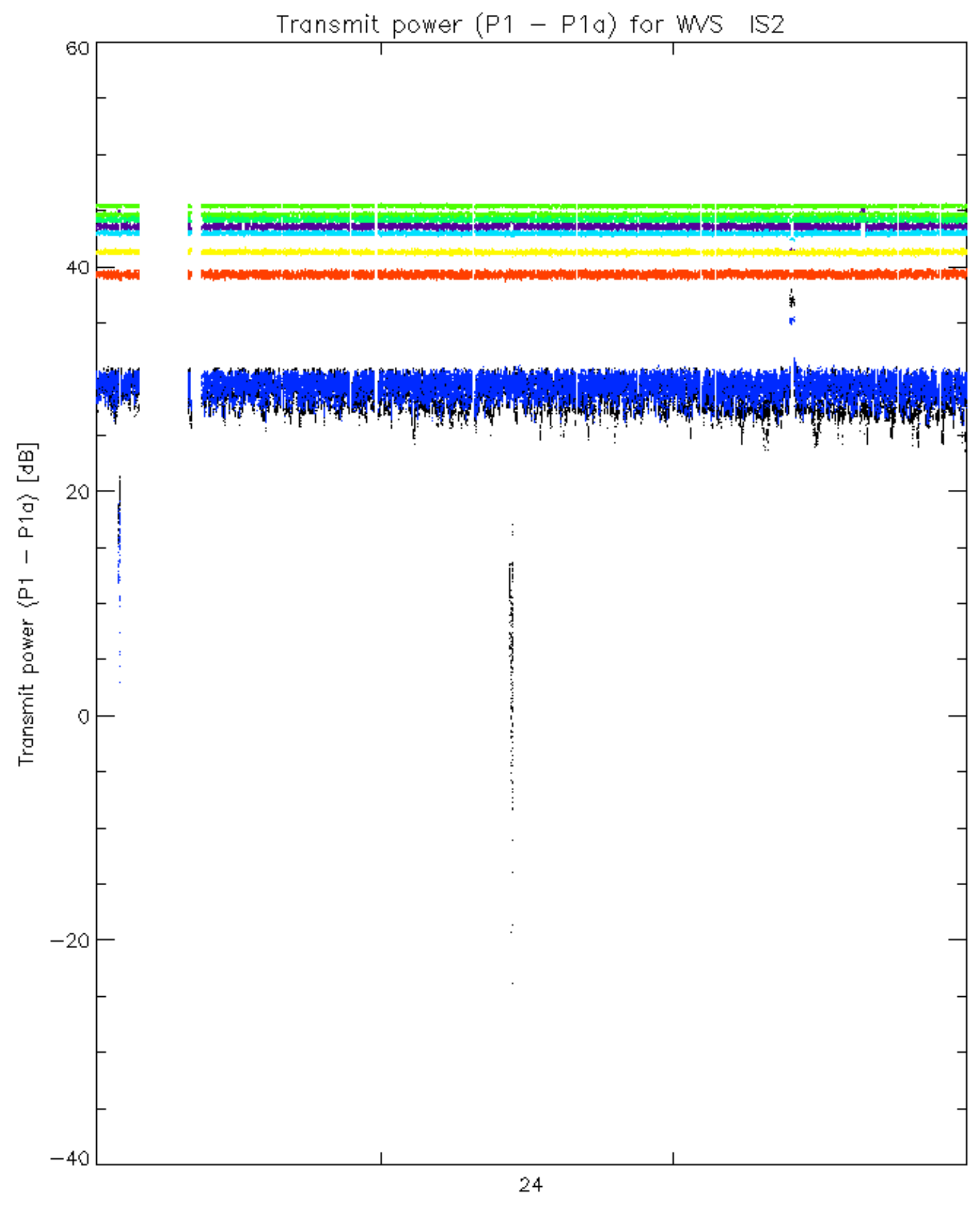


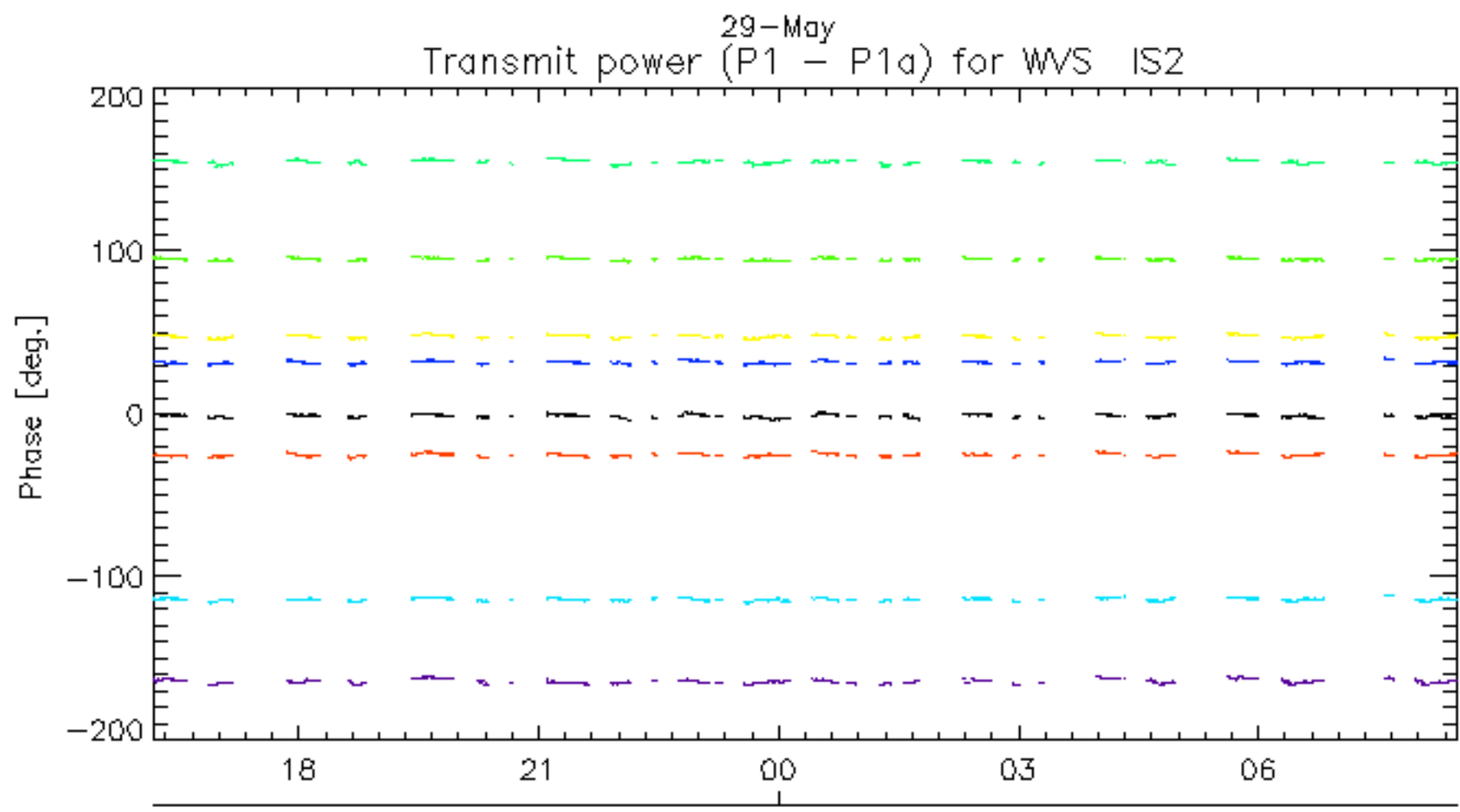
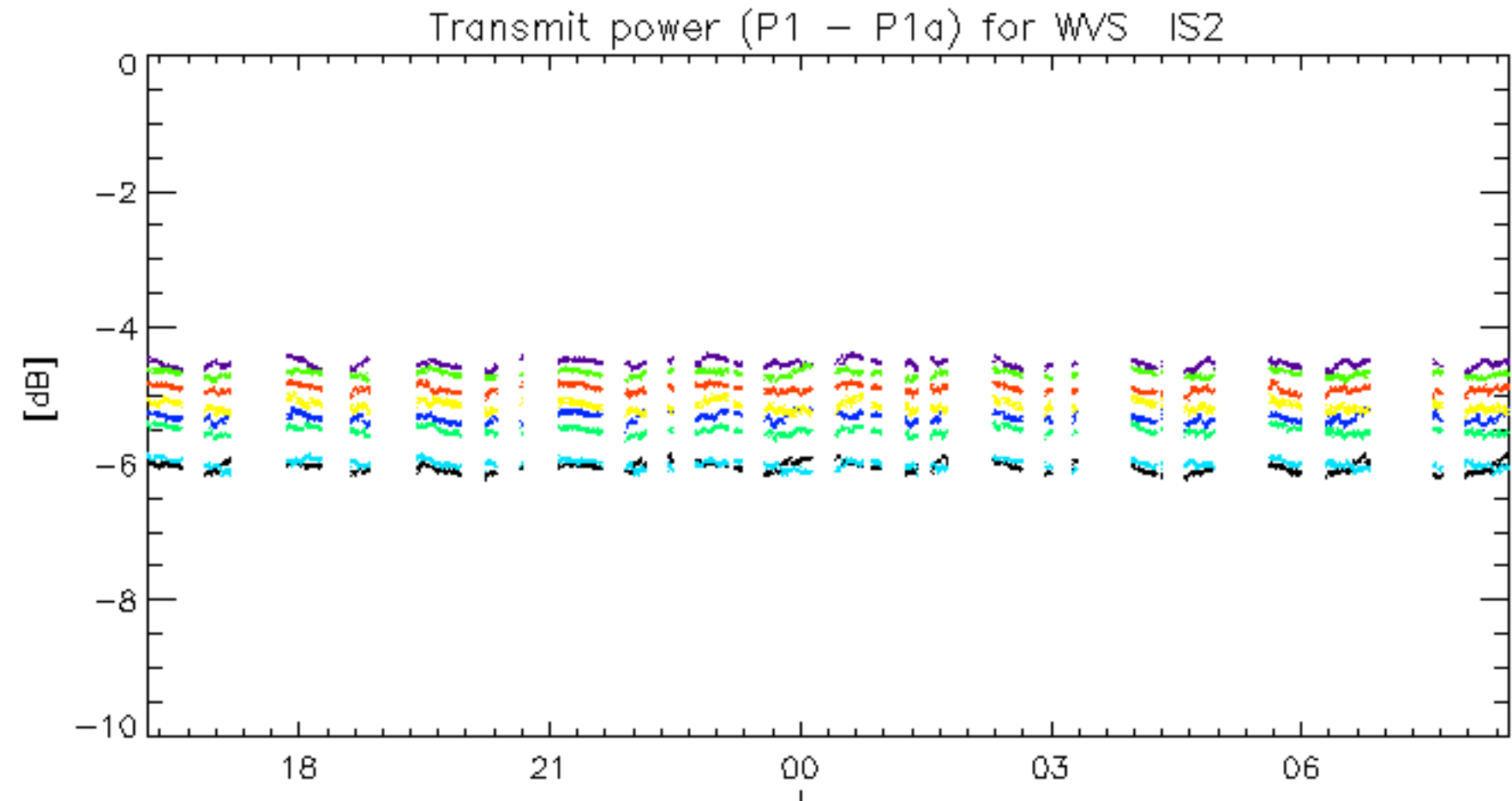
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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







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

No unavailabilities during the reported period.