

# PRELIMINARY REPORT OF 050408

last update on Fri Apr 8 10:50:01 GMT 2005

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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 2005-04-07 00:00:00 to 2005-04-08 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	28	45	4	3	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	28	45	4	3	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	28	45	4	3	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	28	45	4	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	34	44	0	14	6
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	34	44	0	14	6
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	34	44	0	14	6
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	34	44	0	14	6

## 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	20050407 074720
H	20050408 071543

### 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)
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**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.345740	0.013428	0.011582
7	P1	-3.111042	0.008640	-0.033443
11	P1	-4.678372	0.030310	0.018066
15	P1	-5.632116	0.038941	0.031747
19	P1	-3.693588	0.003899	-0.020546
22	P1	-4.529173	0.011816	-0.038519
26	P1	-4.926111	0.018521	0.041327
30	P1	-7.193262	0.019480	-0.004399
3	P1	-15.853274	0.329891	0.121006
7	P1	-15.535770	0.074596	-0.025121
11	P1	-21.034973	0.455872	-0.217393
15	P1	-11.558919	0.051428	0.058181
19	P1	-14.310601	0.025547	-0.013726
22	P1	-15.690897	0.310011	-0.182762
26	P1	-17.626711	0.189941	-0.072496
30	P1	-17.952581	0.421438	0.035993

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.059244	0.081459	0.058783
7	P2	-22.240002	0.095238	0.090929
11	P2	-14.301042	0.109842	0.223717
15	P2	-7.045691	0.090219	-0.018483
19	P2	-9.633930	0.093281	-0.010214
22	P2	-16.893341	0.094546	0.049450
26	P2	-16.441484	0.092427	-0.008303
30	P2	-18.834393	0.084340	0.041570

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.163733	0.004760	0.000080
7	P3	-8.163733	0.004760	0.000080
11	P3	-8.163733	0.004760	0.000080
15	P3	-8.163733	0.004760	0.000080
19	P3	-8.163733	0.004760	0.000080
22	P3	-8.163733	0.004760	0.000080
26	P3	-8.163733	0.004760	0.000080
30	P3	-8.163733	0.004760	0.000080

#### 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	-2.712237	0.026304	-0.011155
7	P1	-3.021108	0.047842	0.023452
11	P1	-3.985449	0.026552	-0.003729
15	P1	-3.553624	0.034512	-0.007708
19	P1	-3.604712	0.013659	-0.012422
22	P1	-5.733627	0.036651	0.013997
26	P1	-7.293743	0.025216	-0.011224
30	P1	-6.243636	0.055106	-0.075693
3	P1	-10.708519	0.168888	-0.009228
7	P1	-10.344551	0.178725	0.019492
11	P1	-12.531956	0.135946	-0.017685
15	P1	-11.727866	0.103575	-0.000205
19	P1	-15.573540	0.048068	-0.008998
22	P1	-24.634020	1.276405	-0.185864
26	P1	-15.500606	0.202004	-0.020822
30	P1	-20.198647	1.224071	0.193263

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.756840	0.038899	0.063803
7	P2	-22.323122	0.042896	0.072272
11	P2	-10.104751	0.056792	0.097350
15	P2	-4.991282	0.028576	-0.038293
19	P2	-6.832751	0.043145	-0.031979
22	P2	-7.073921	0.037305	0.023111
26	P2	-23.848284	0.033610	-0.023757
30	P2	-21.885866	0.039969	-0.004543

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.996581	0.003336	-0.006791
7	P3	-7.996671	0.003337	-0.007218
11	P3	-7.996614	0.003339	-0.007201
15	P3	-7.996614	0.003340	-0.007017
19	P3	-7.996638	0.003347	-0.007133
22	P3	-7.996737	0.003334	-0.007010
26	P3	-7.996679	0.003337	-0.007421
30	P3	-7.996597	0.003337	-0.007413

## 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	0.000463366
	stdev	2.23157e-07
MEAN Q	mean	0.000478574
	stdev	2.34507e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128667
	stdev	0.00105116
STDEV Q	mean	0.128924
	stdev	0.00106293



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005040[678]

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)	
<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

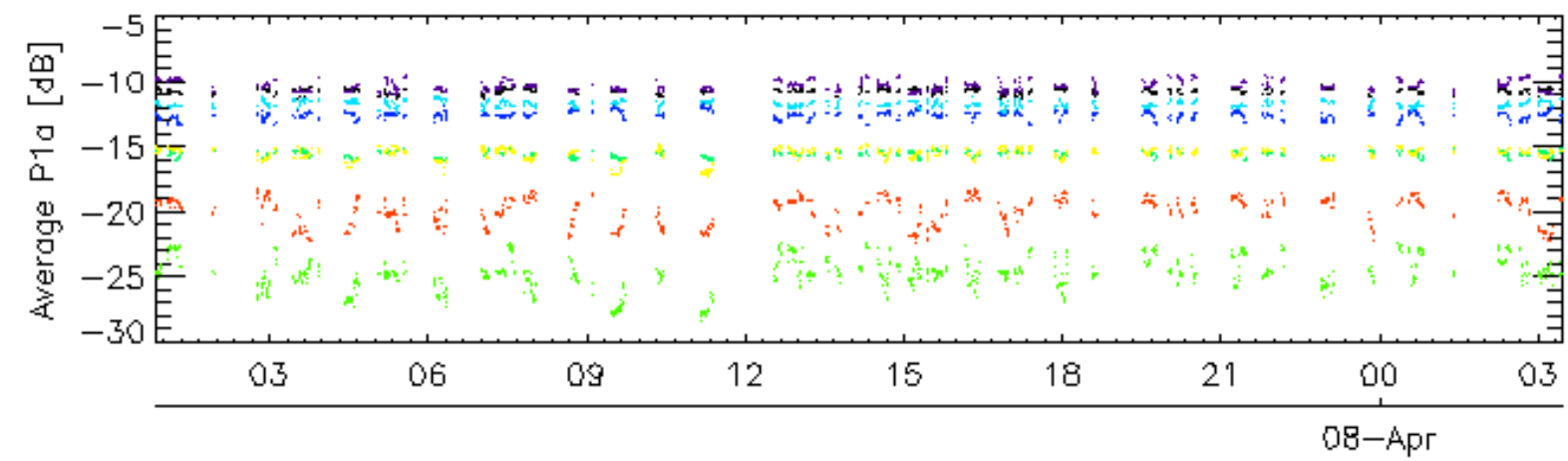
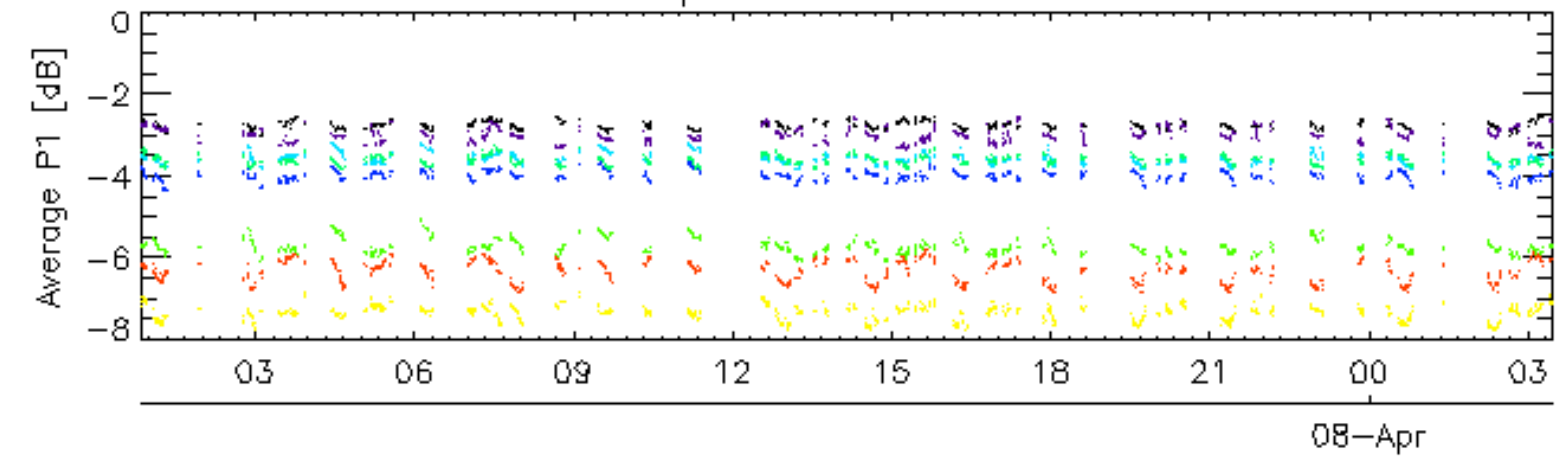
Ascending

Descending

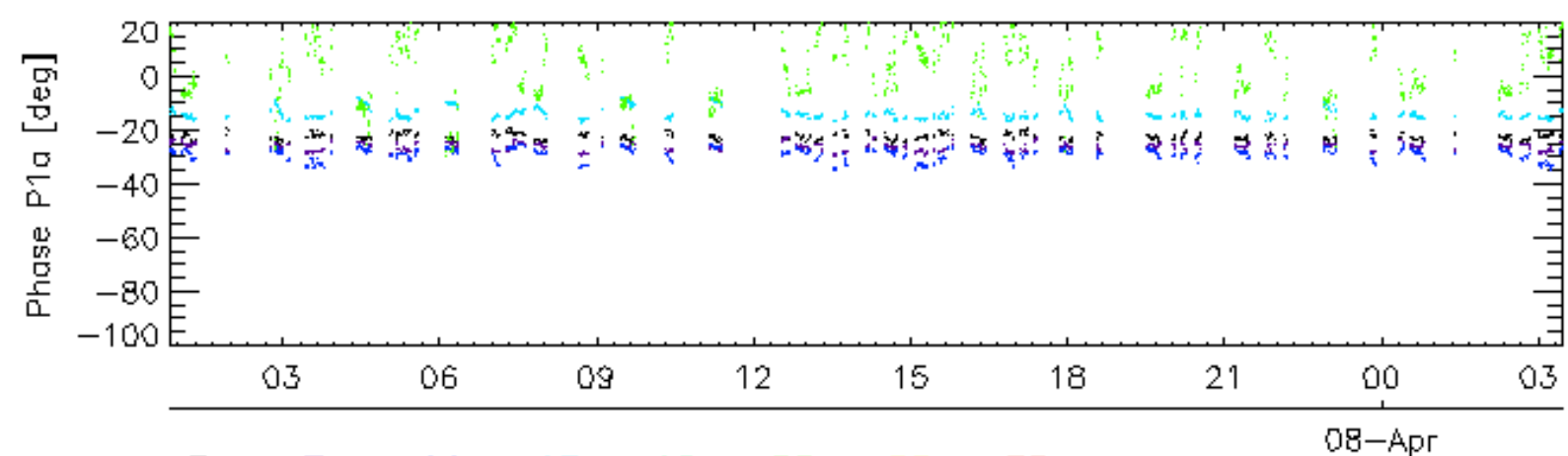
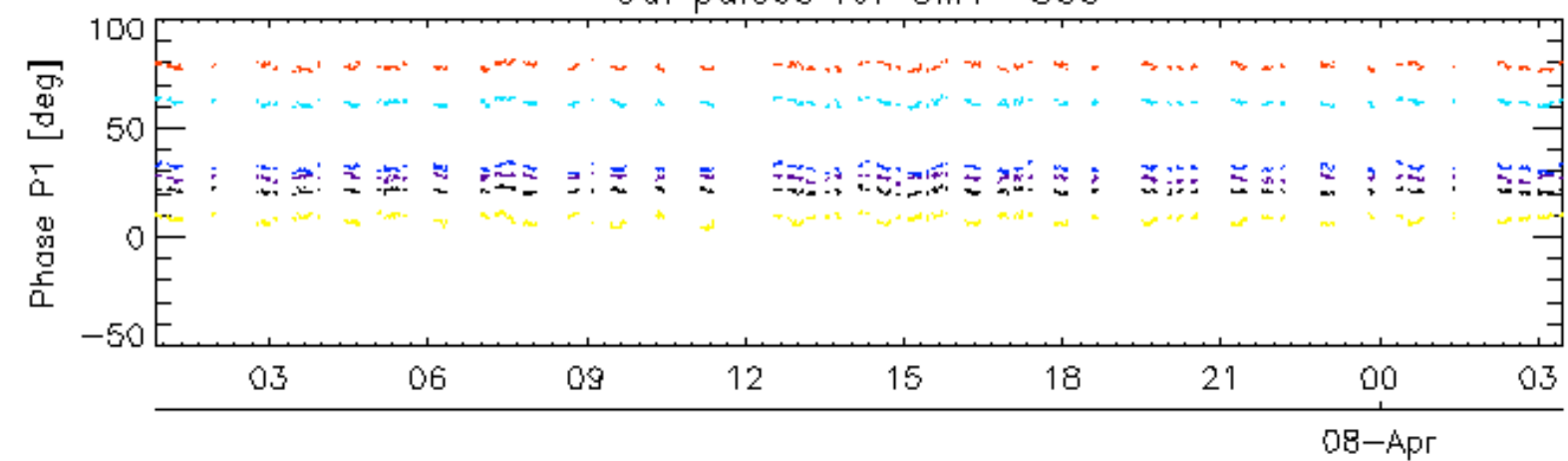
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

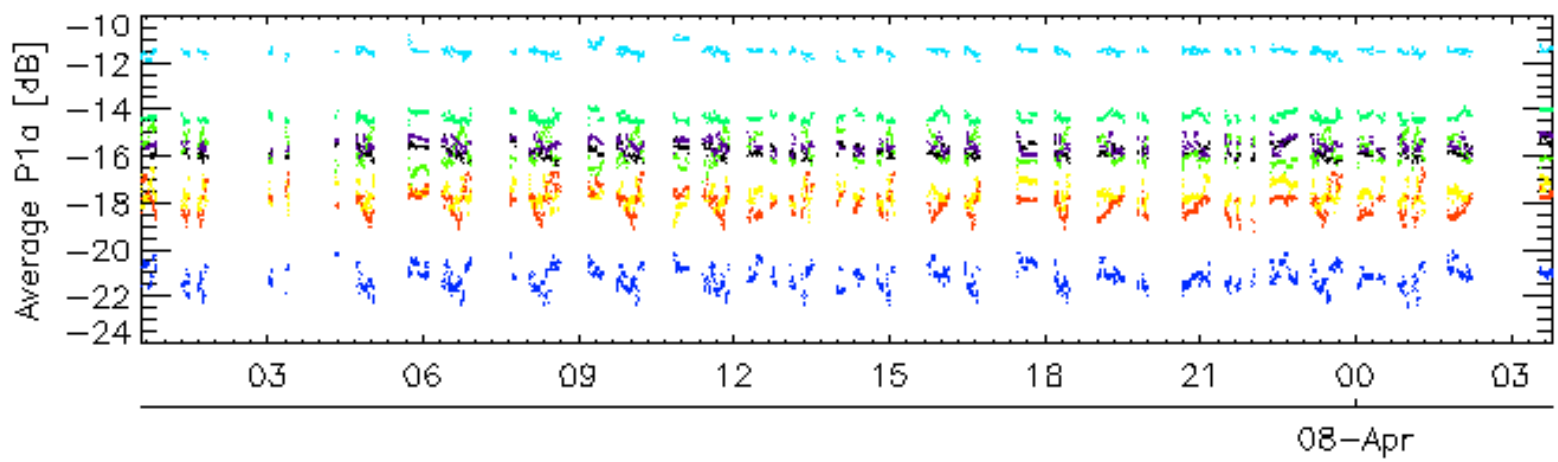
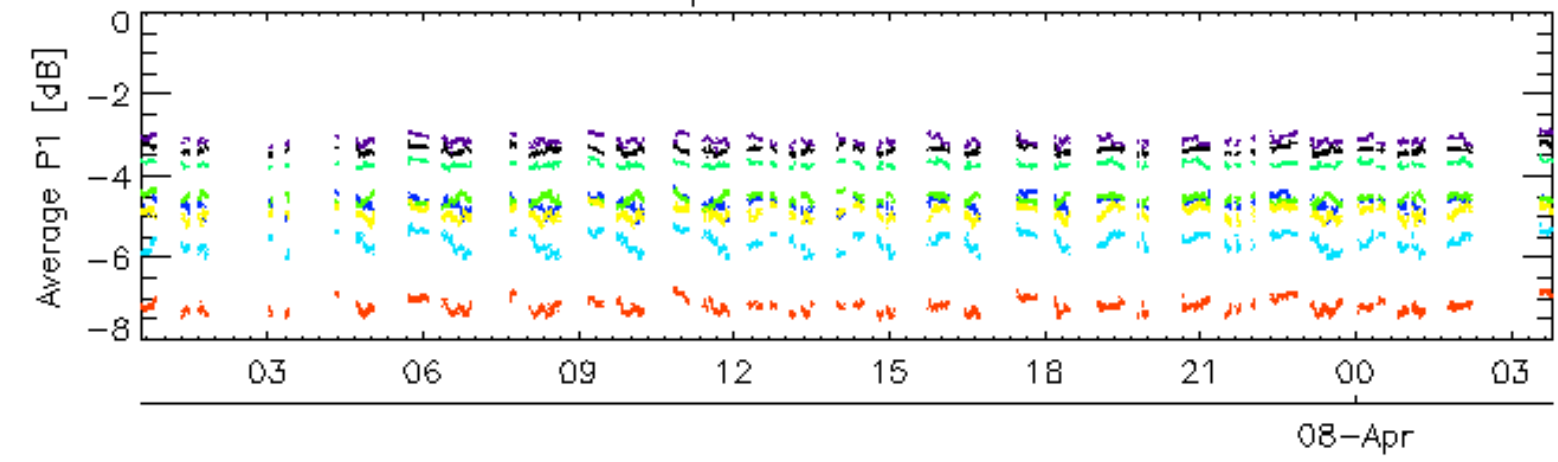


Cal pulses for GM1 SS3

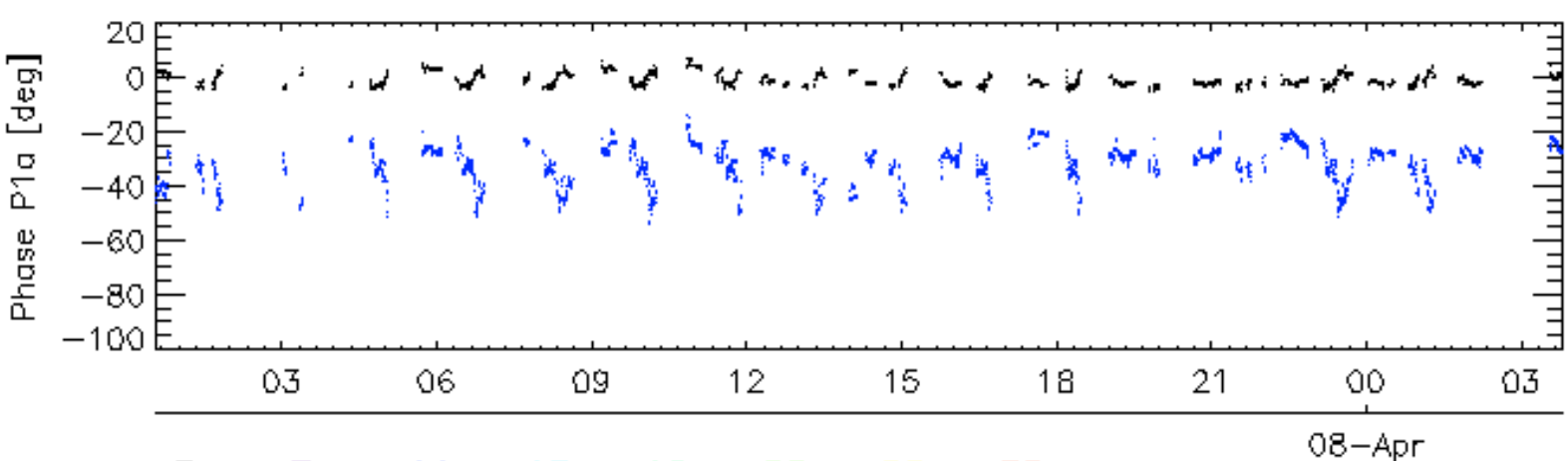
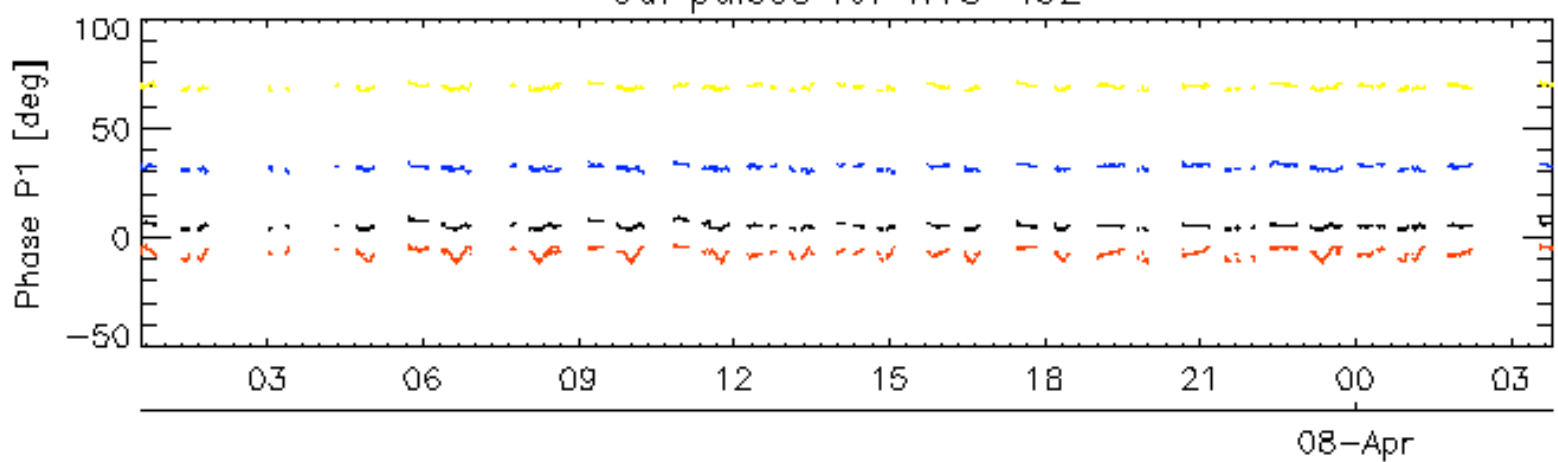


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

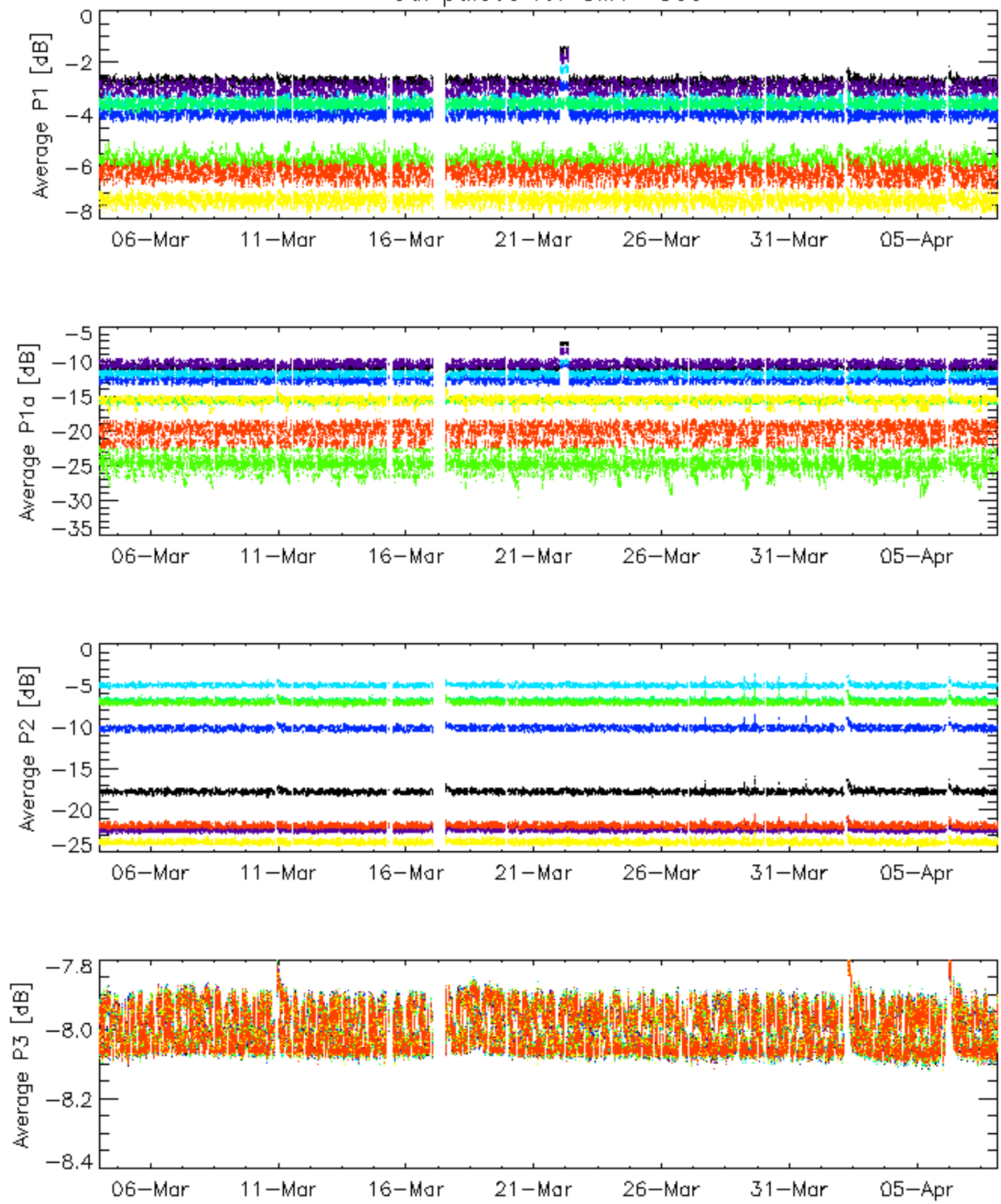


Cal pulses for WVS IS2

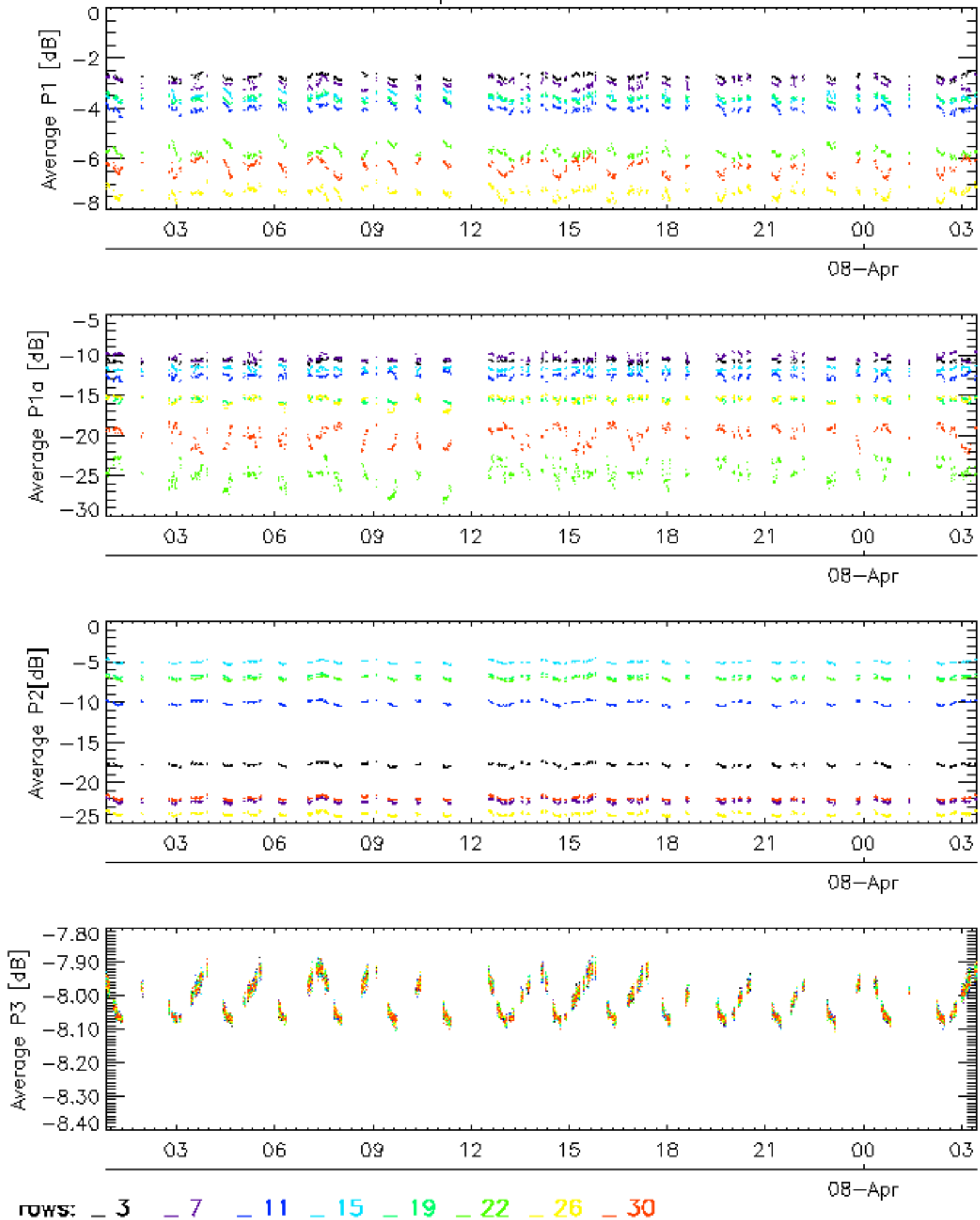


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

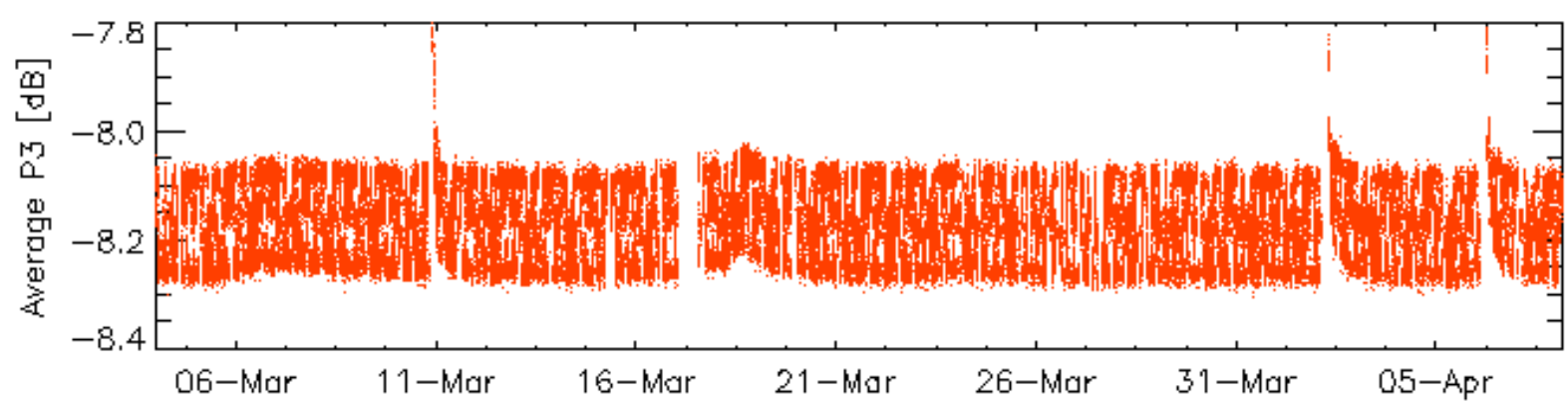
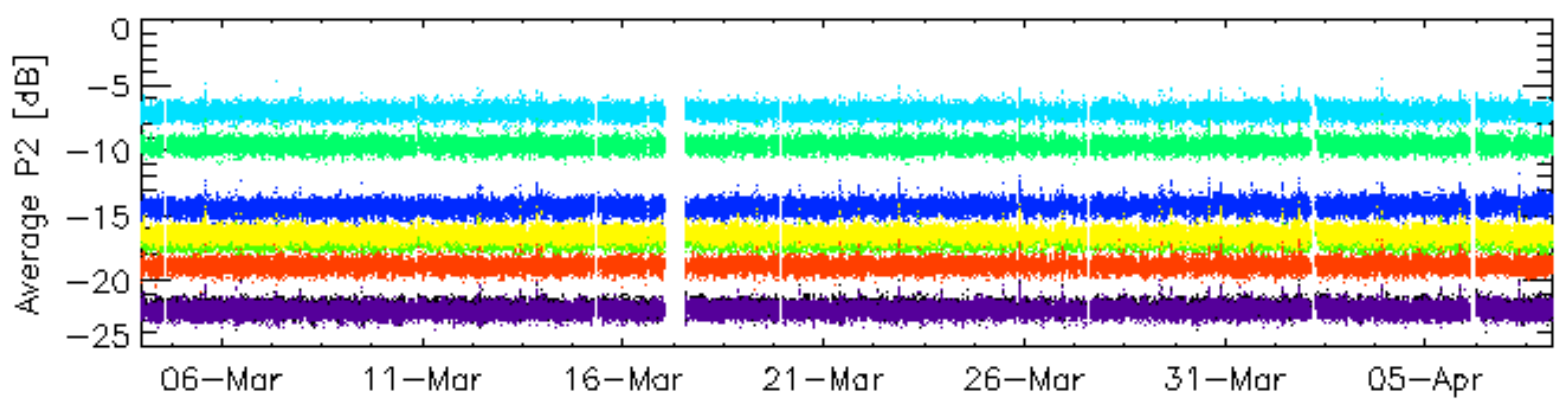
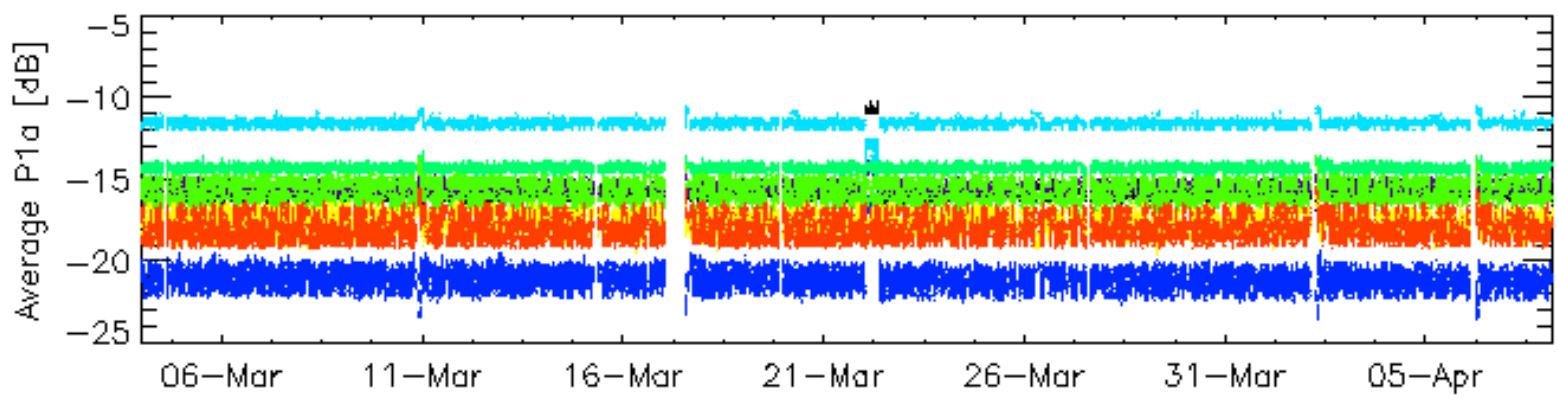
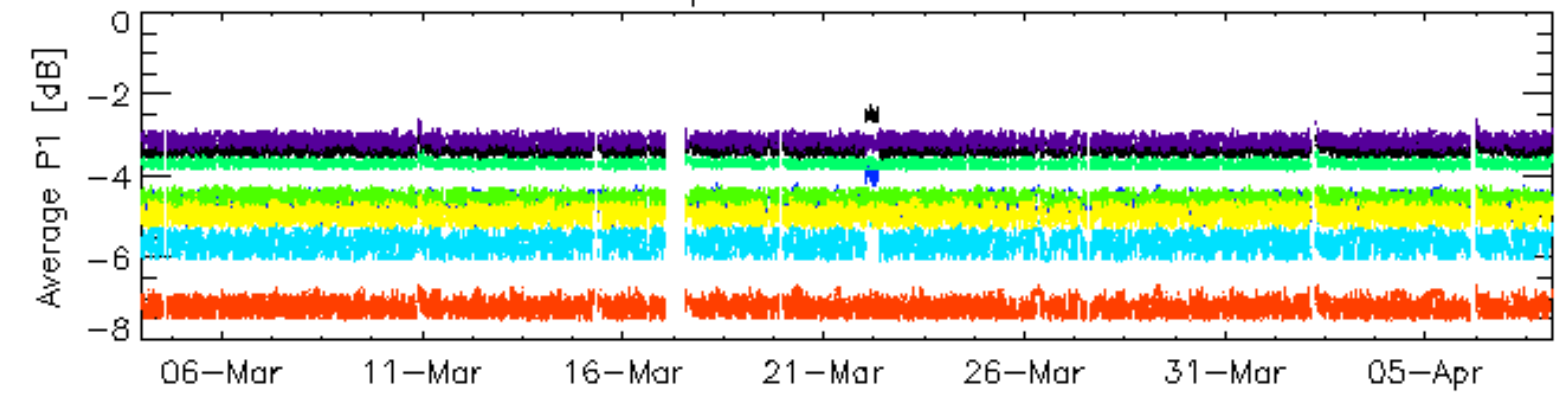
Cal pulses for GM1 SS3



Cal pulses for GM1 SS3



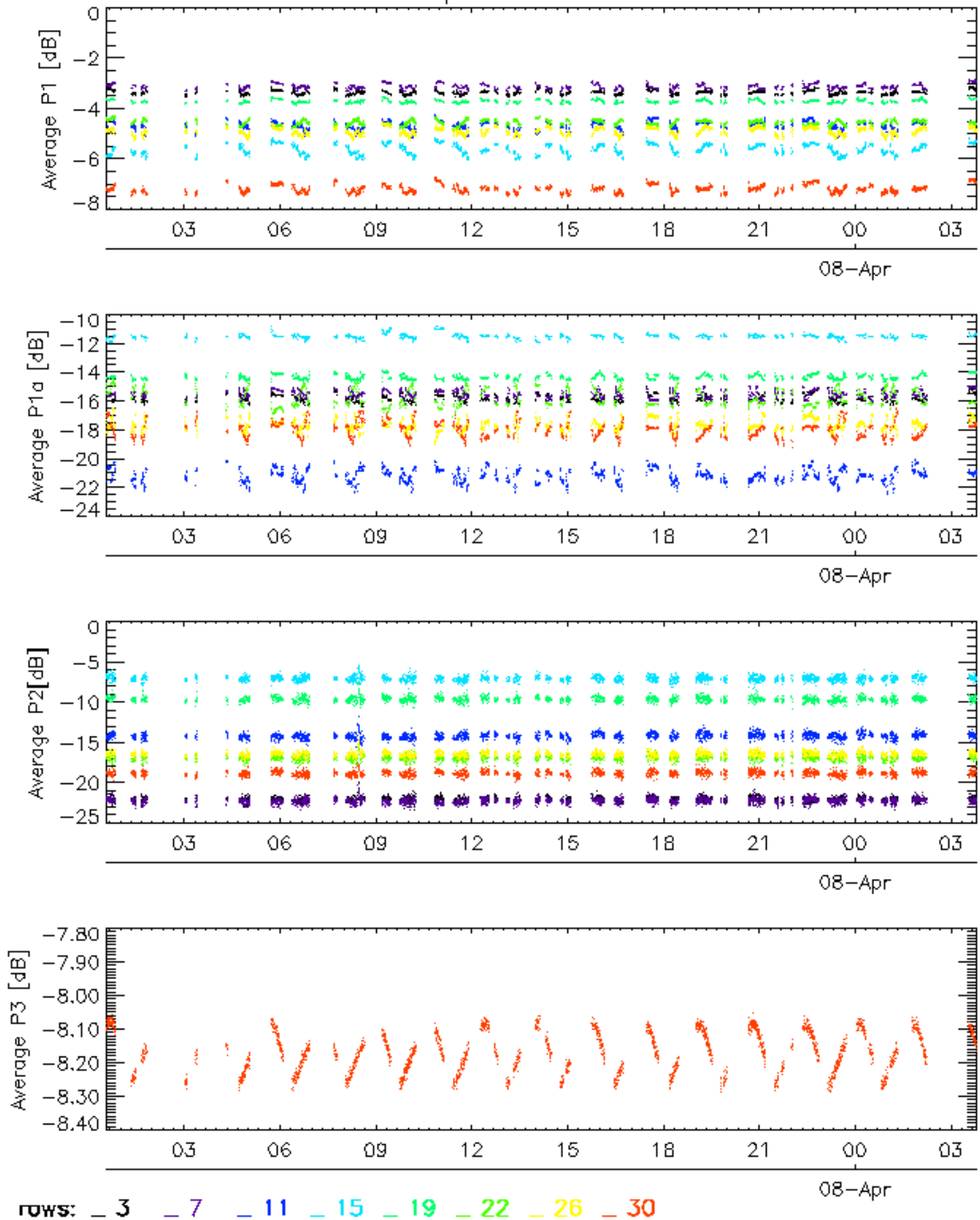
Cal pulses for WVS IS2



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

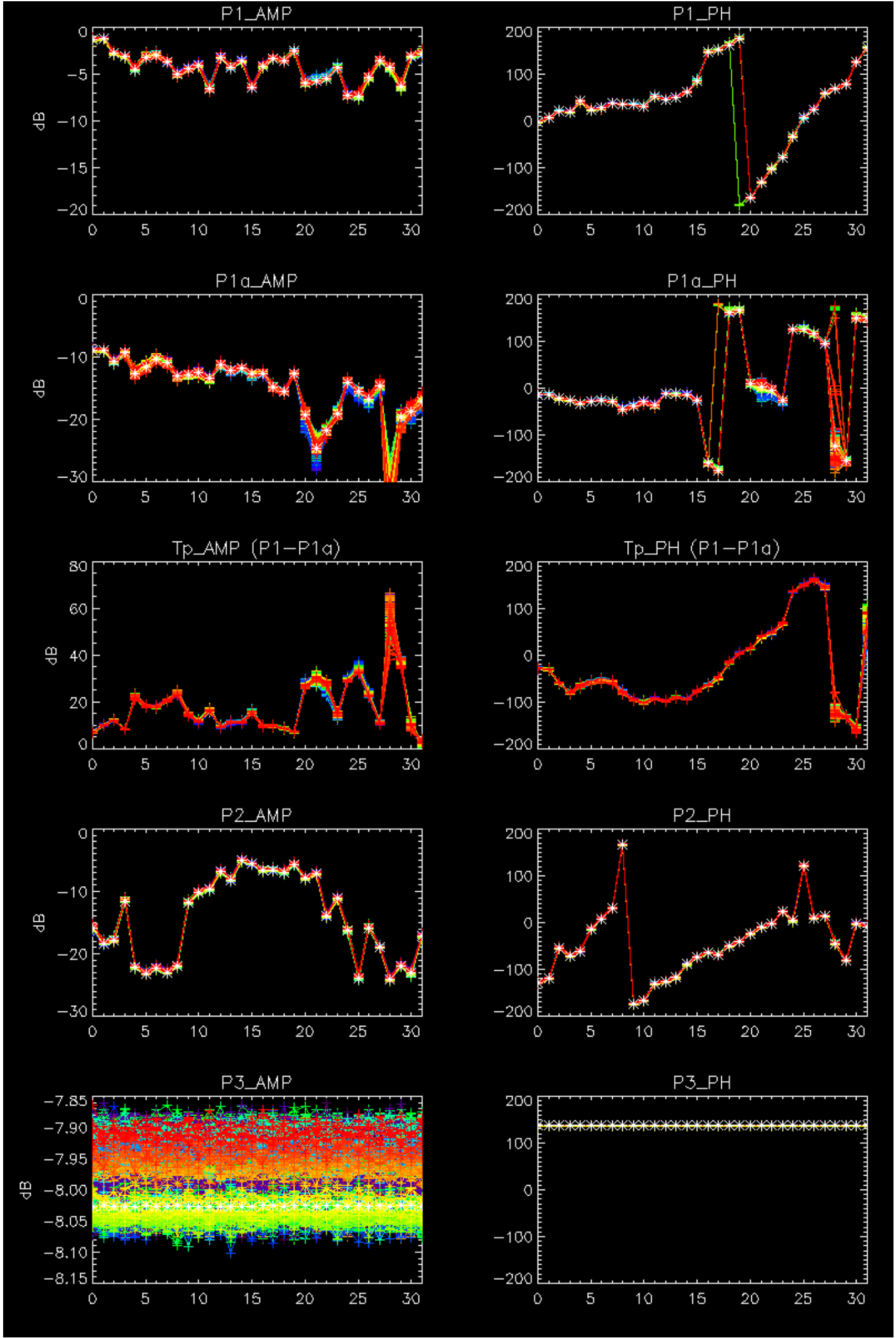


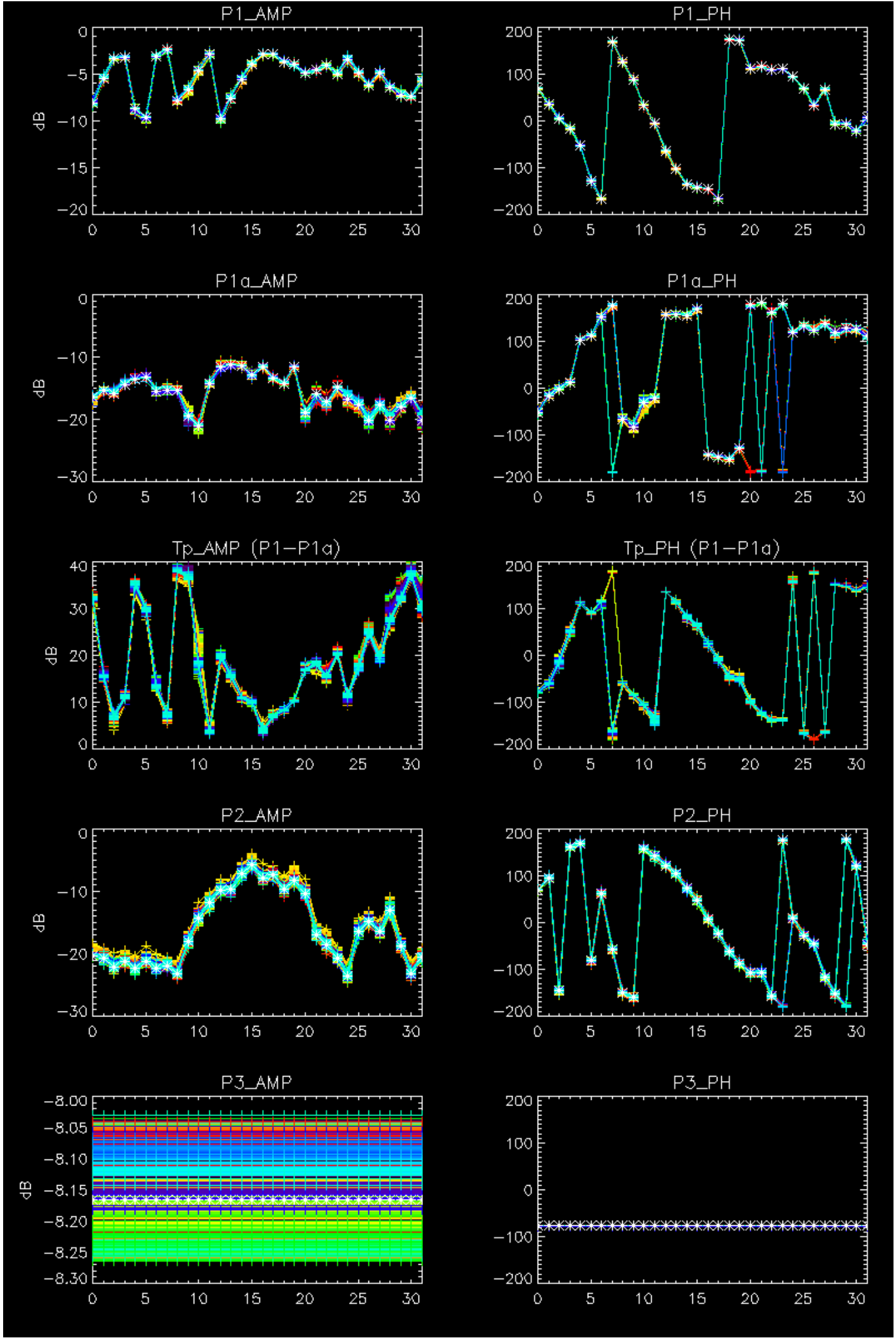
### Cal pulses for WVS IS2



No anomalies observed.





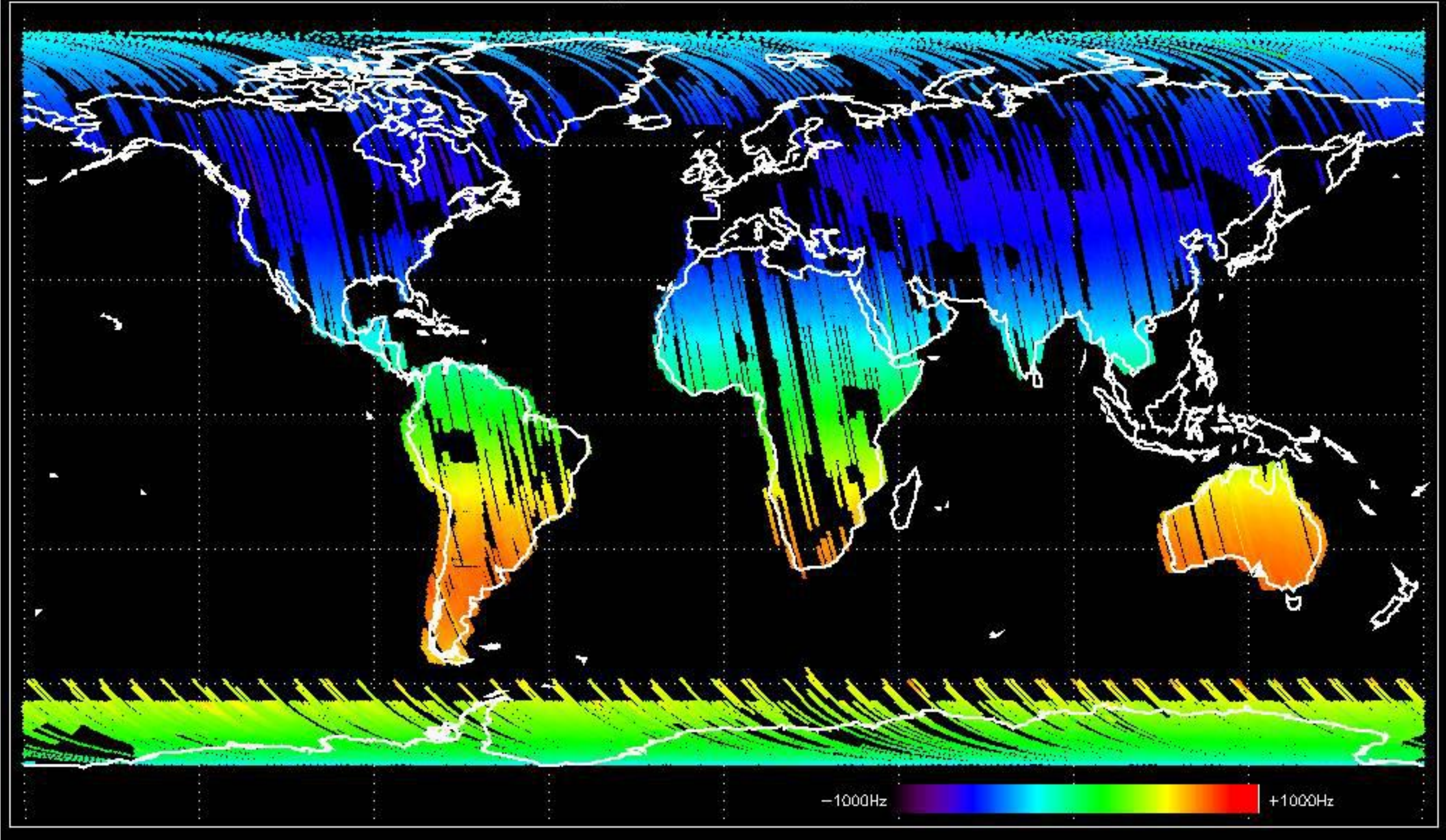


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



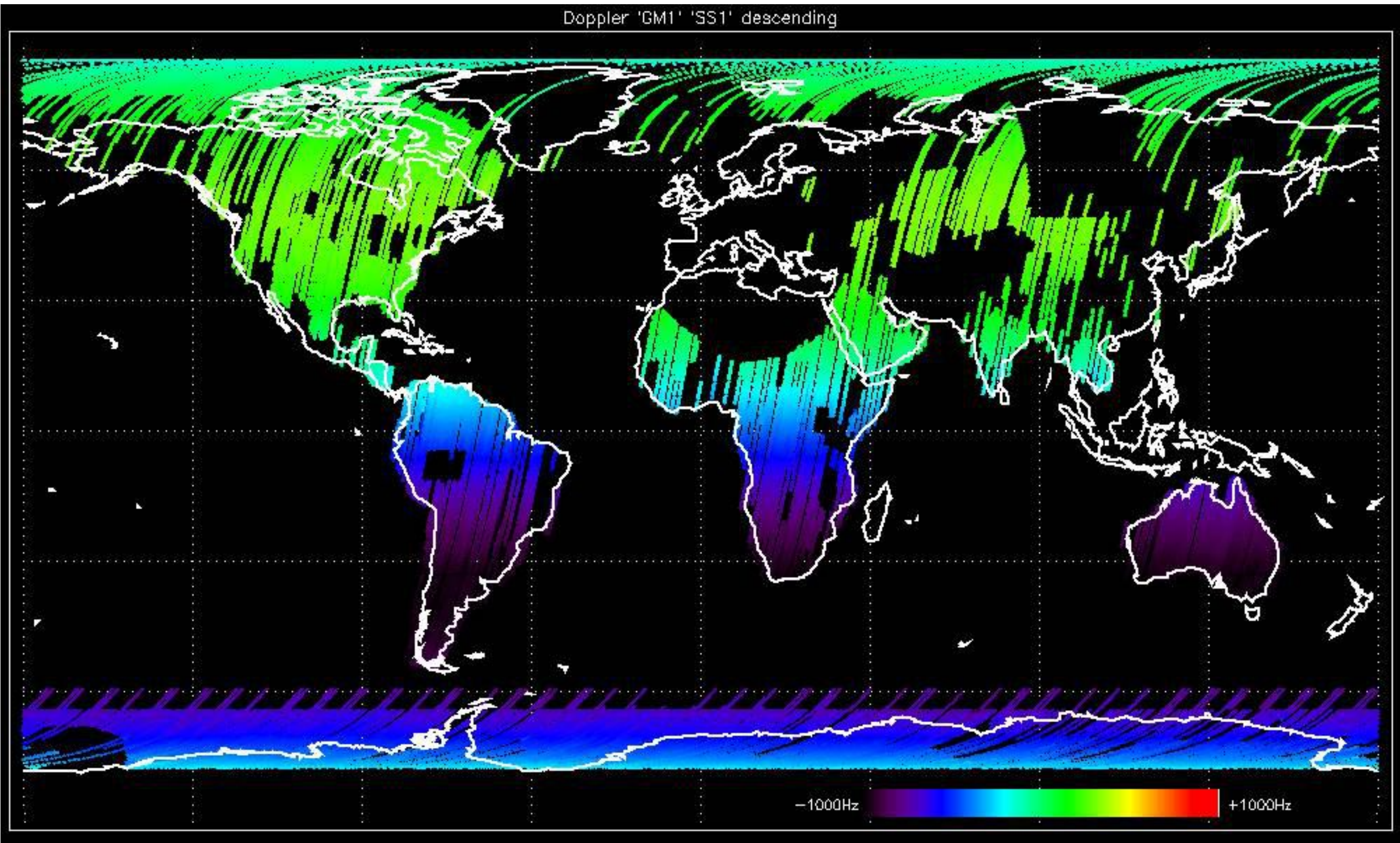


Doppler 'GM1' 'SS1' ascending



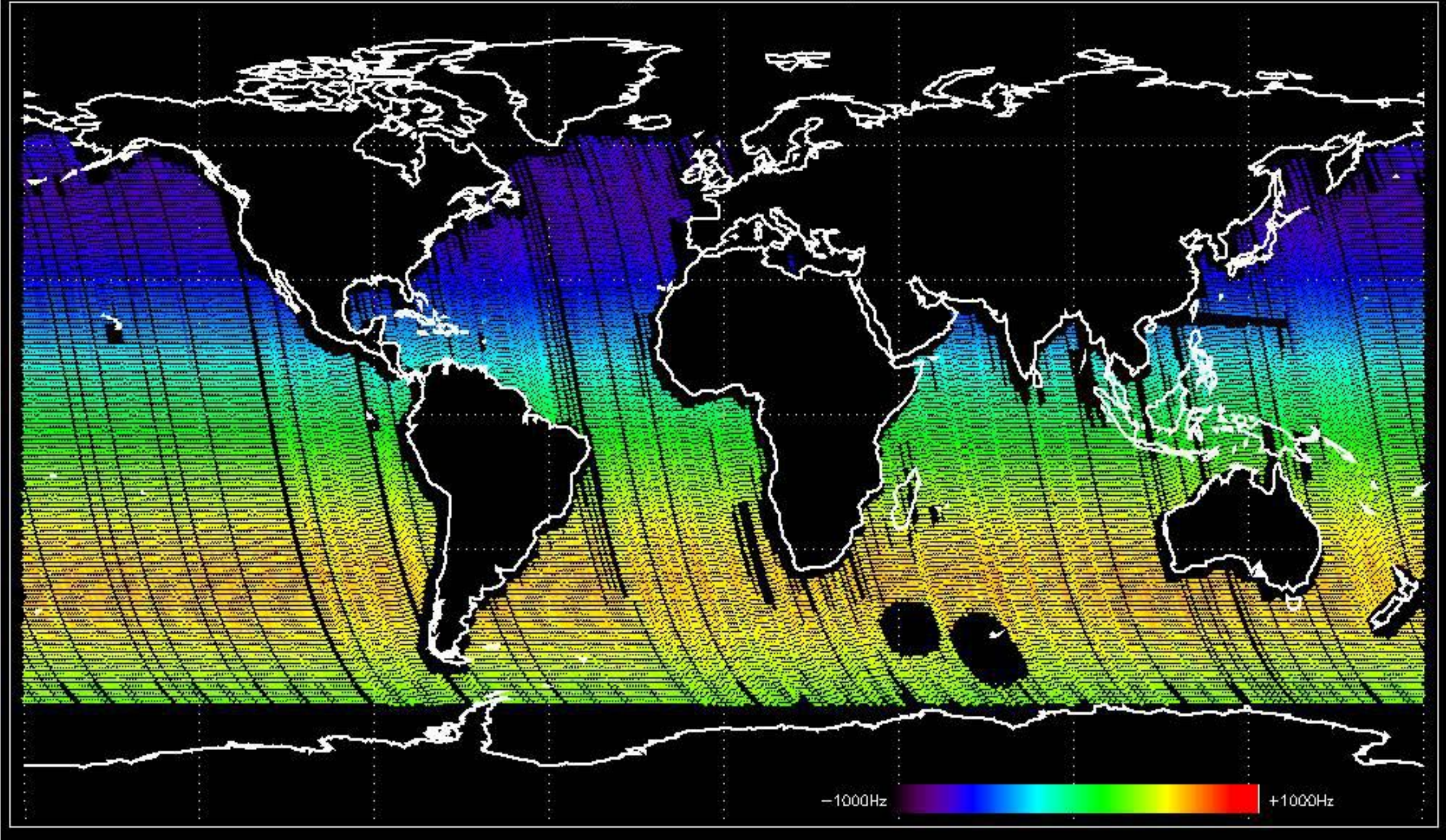


Doppler 'GM1' 'SS1' descending



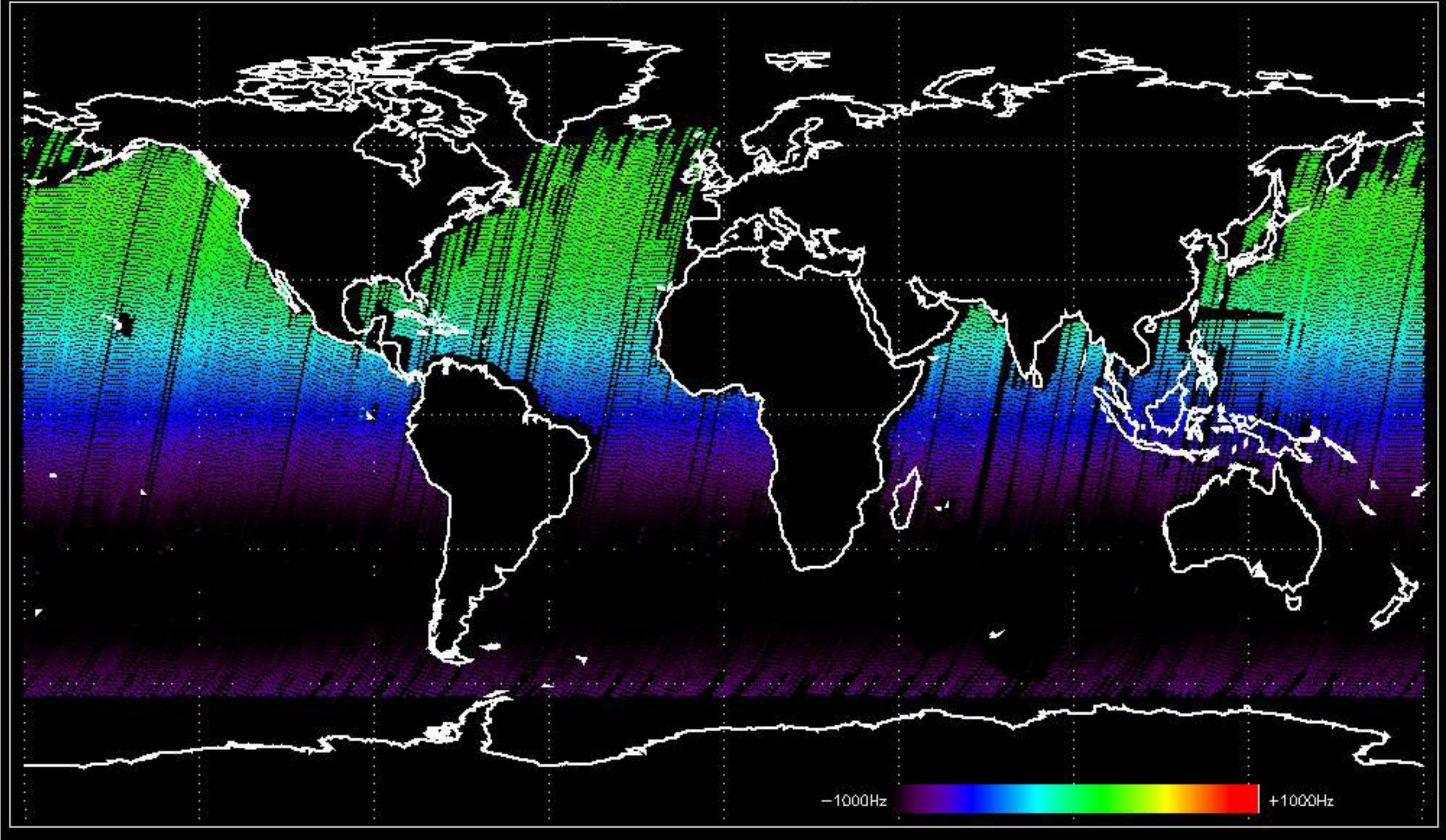


Doppler 'WVS' 'IS2' ascending



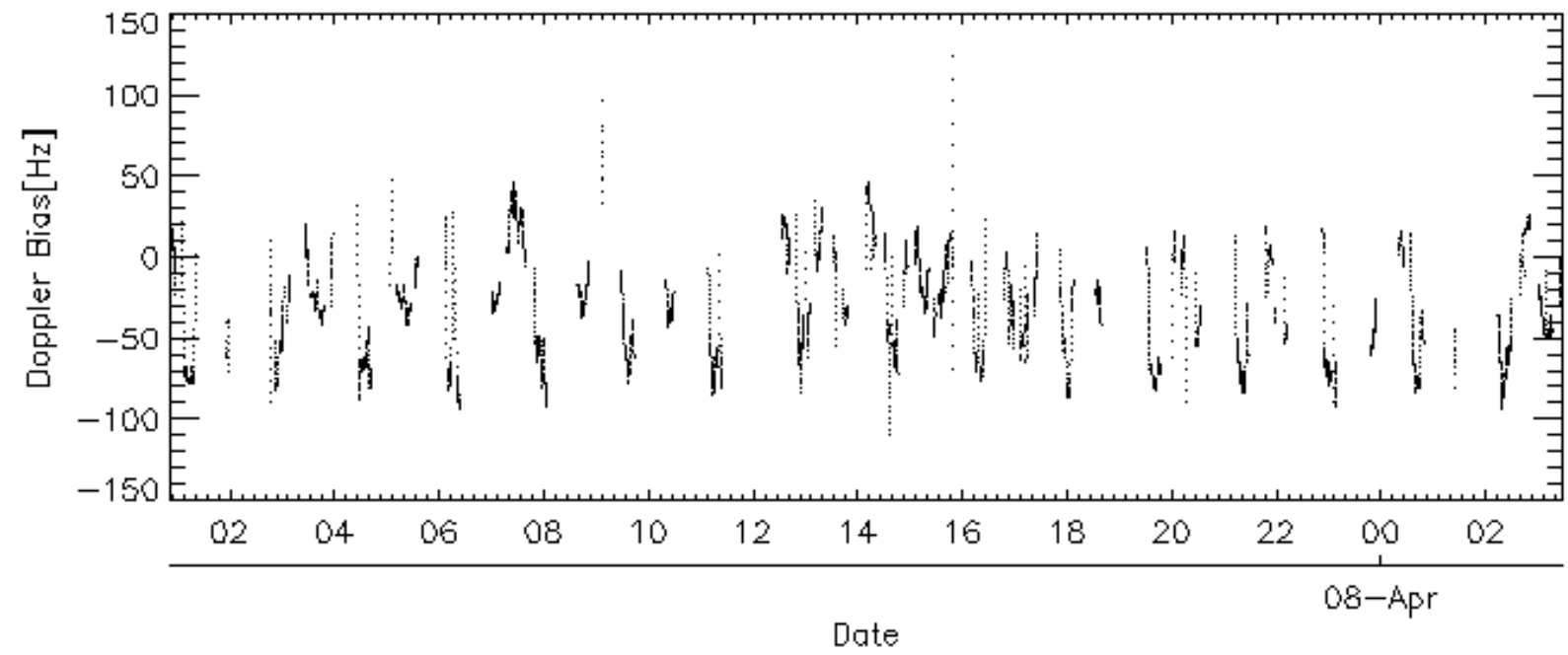
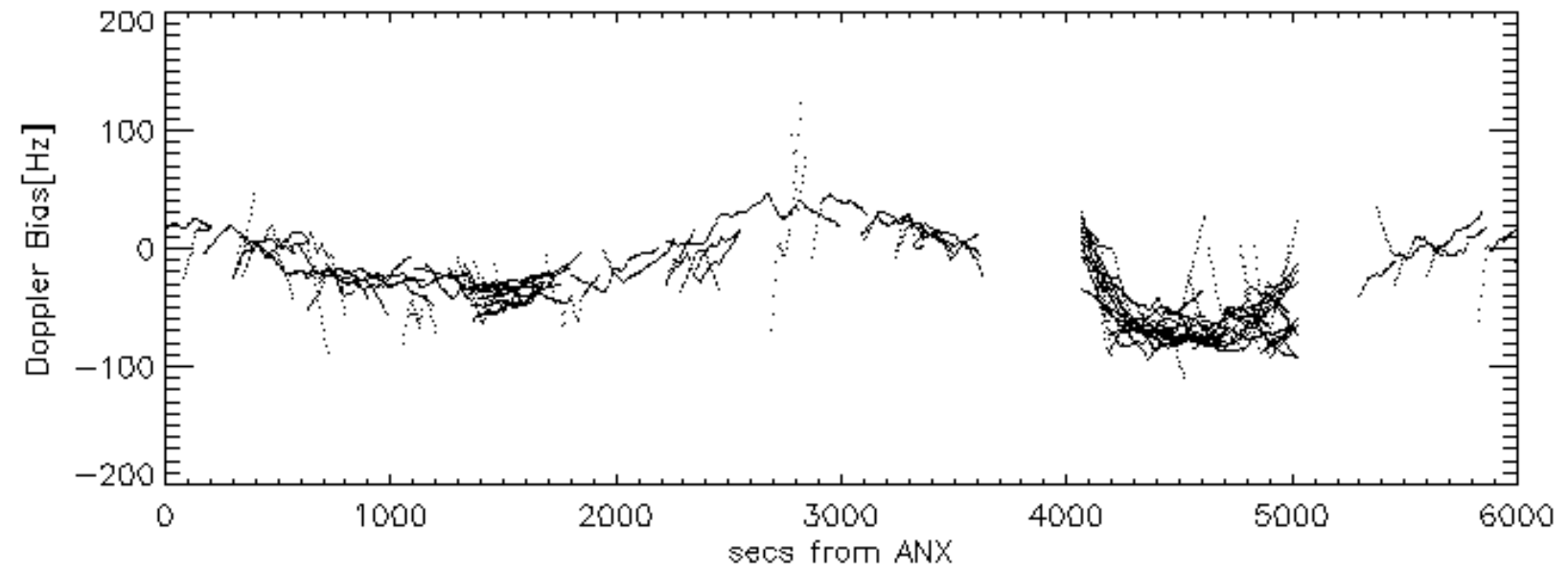
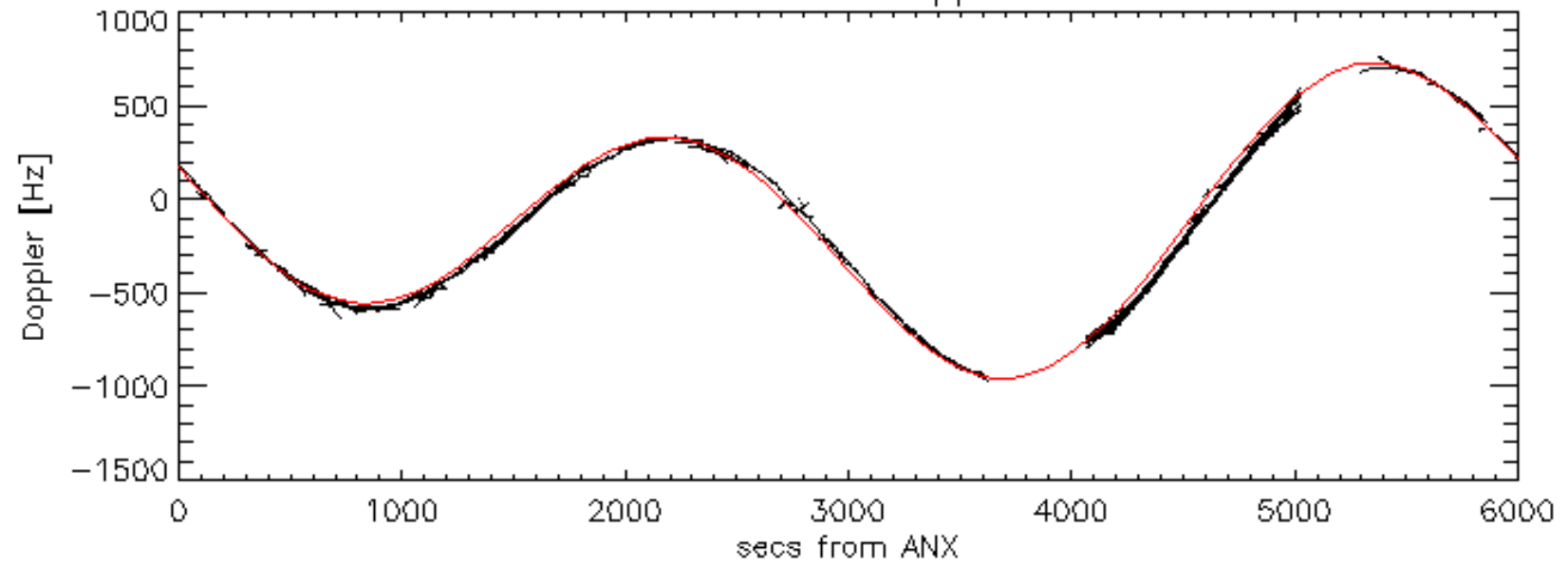


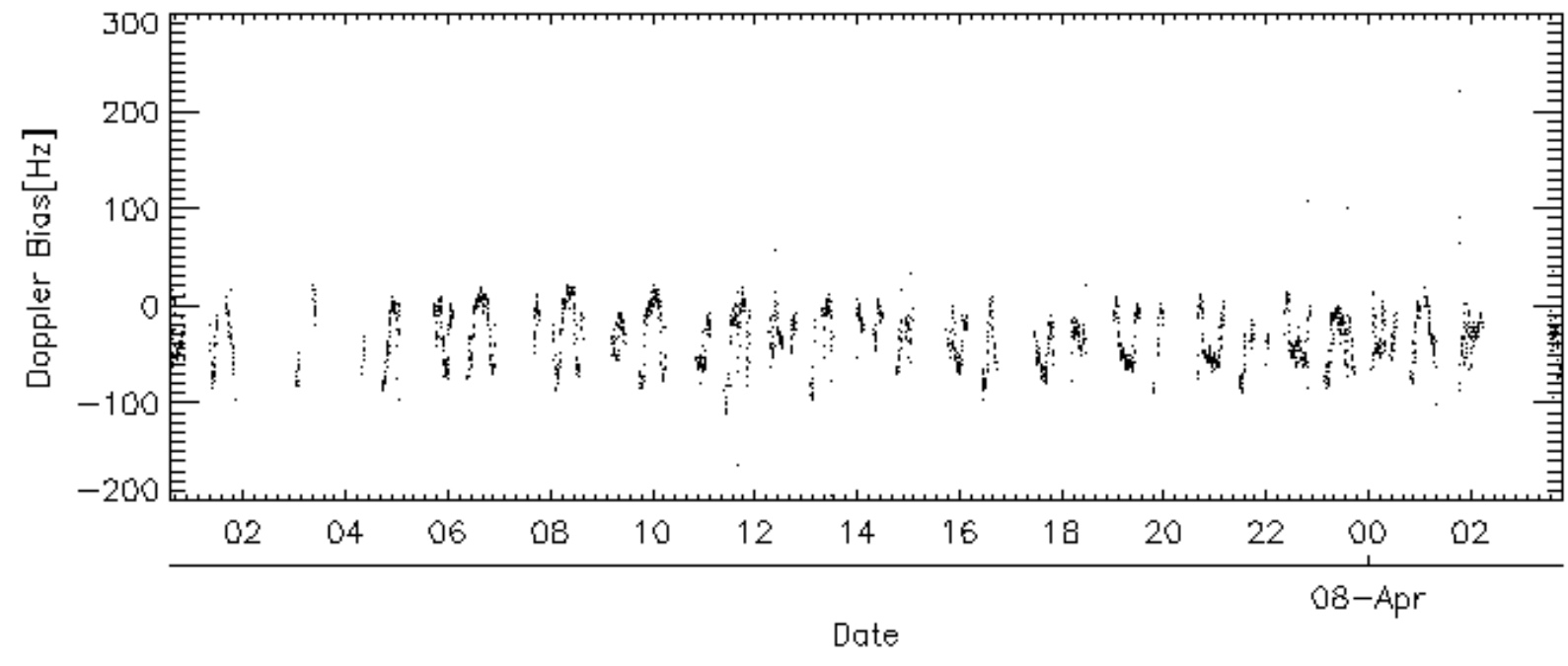
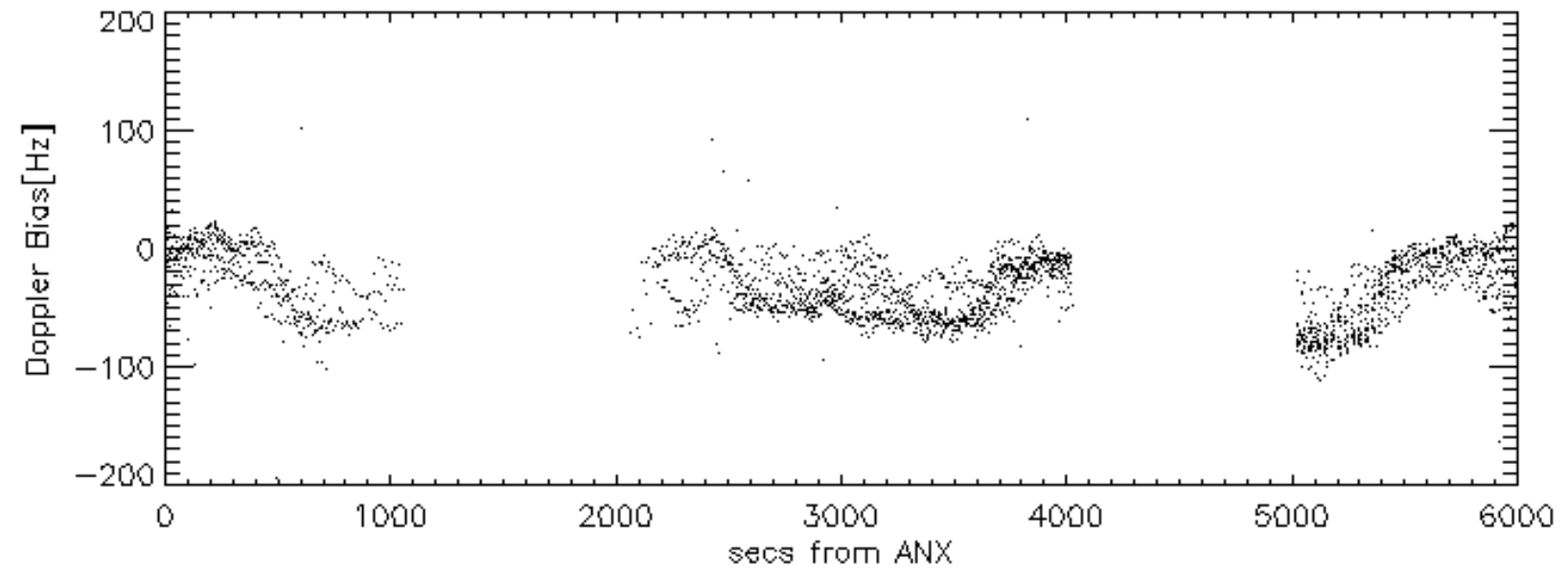
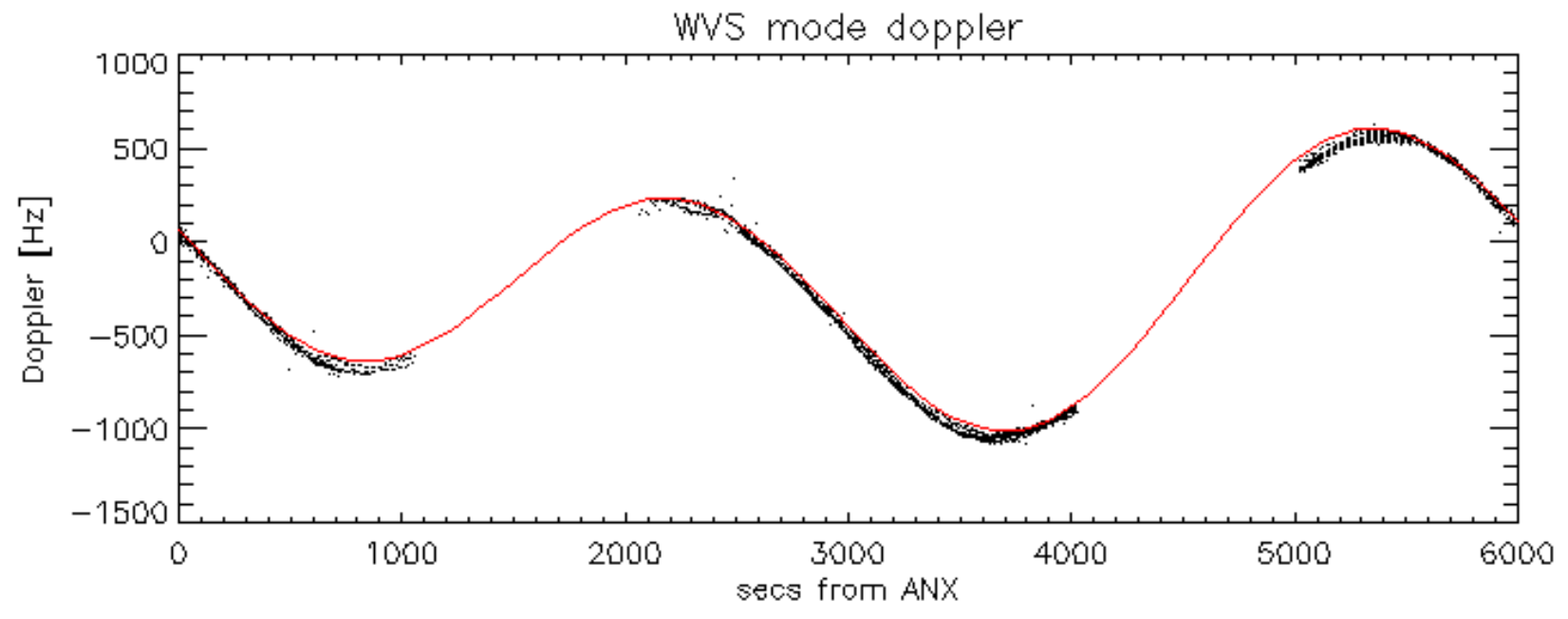
Doppler 'WVS' 'IS2' descending





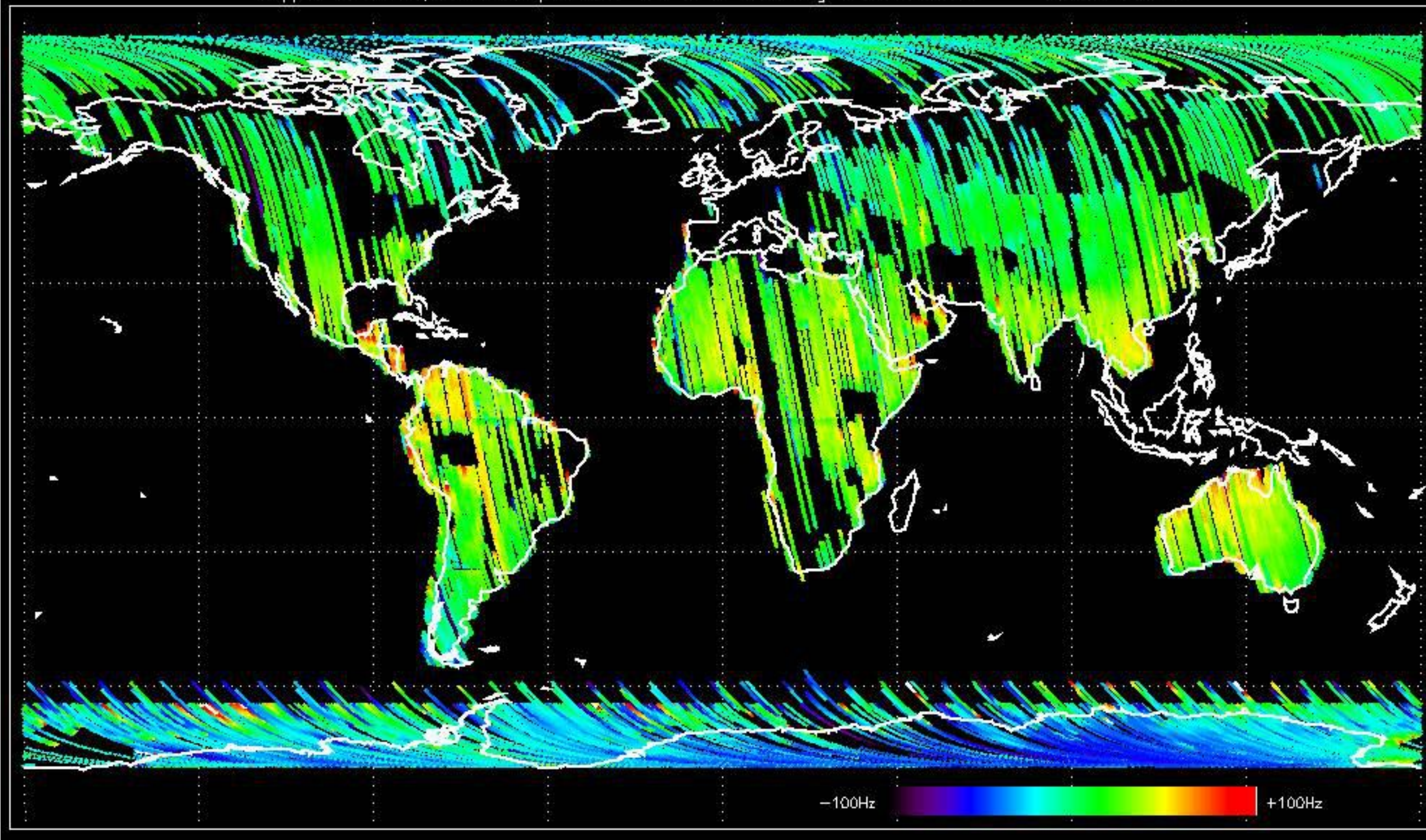
GM1 mode doppler





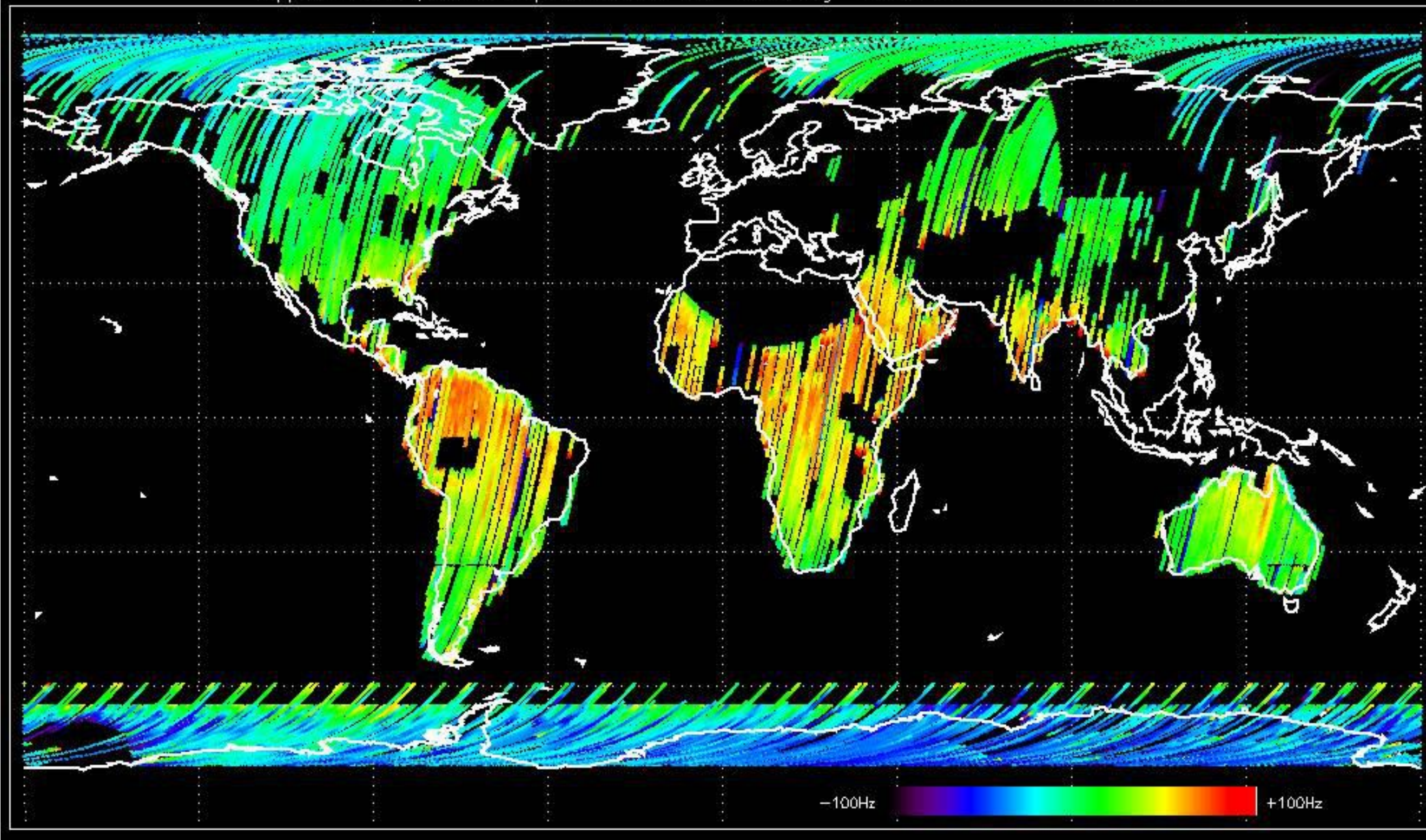


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -34.198259 Hz



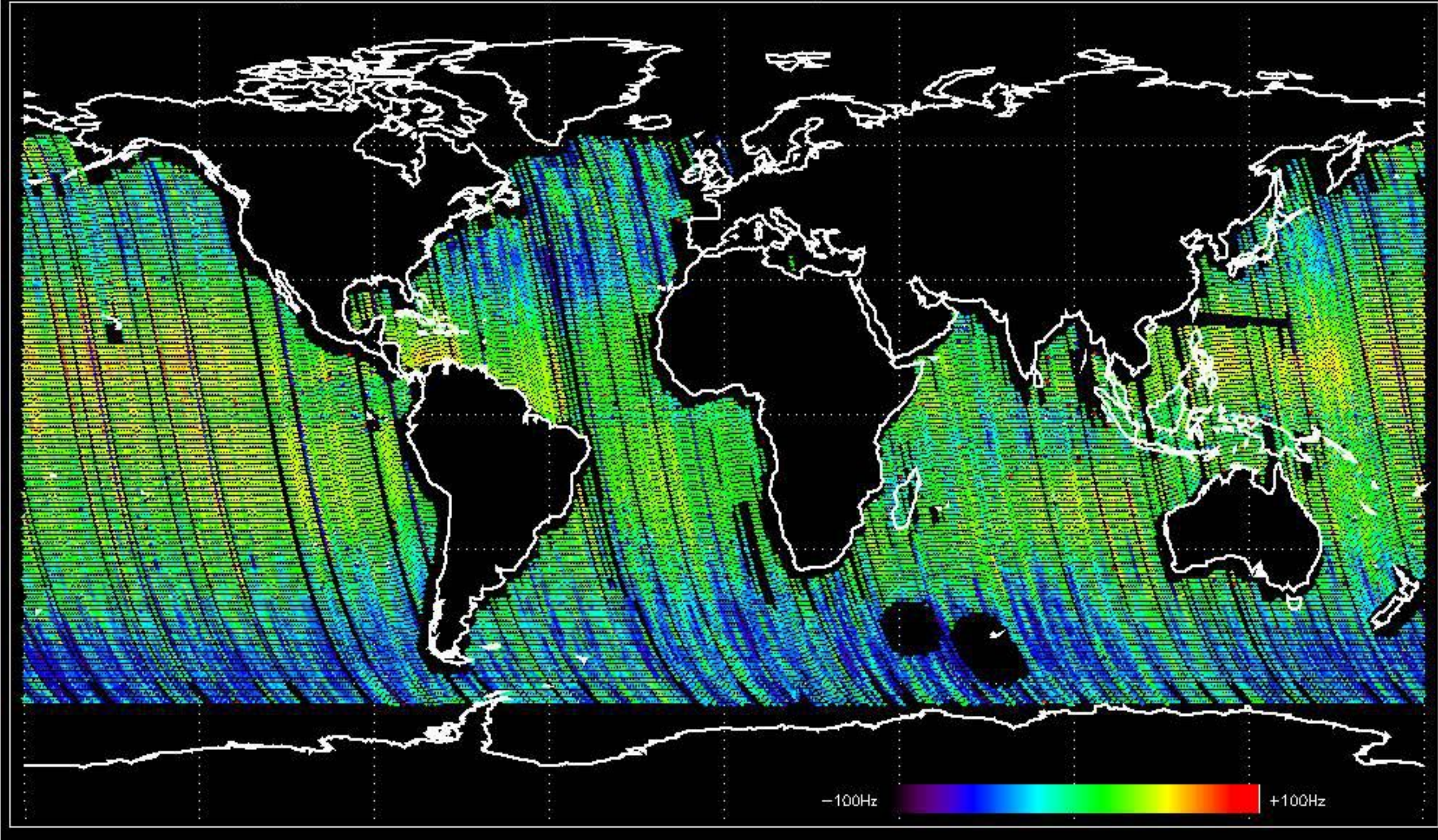


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.389333 Hz



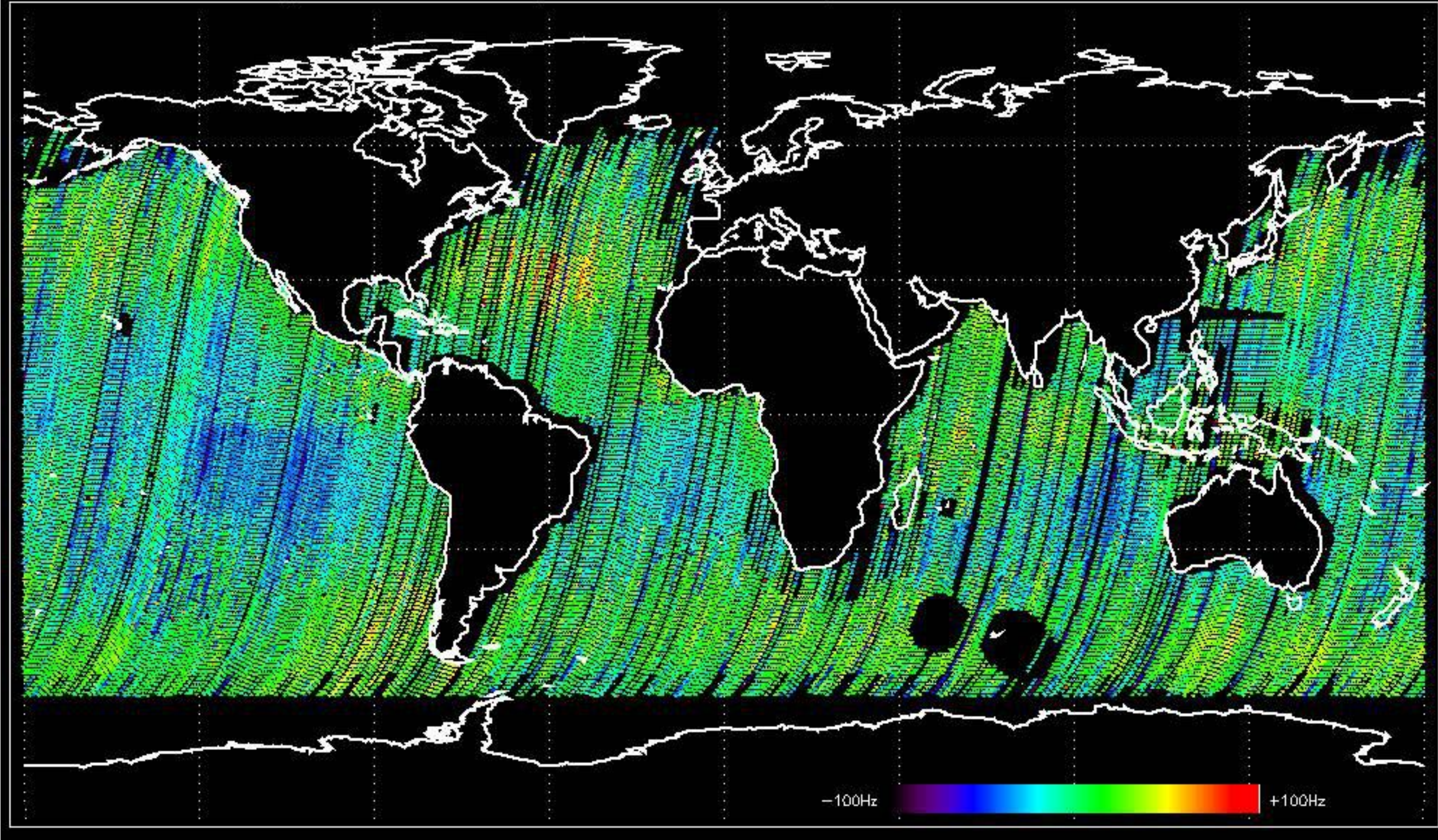


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -38.745035 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.122961 Hz





No anomalies observed on available MS products:

No anomalies observed.



















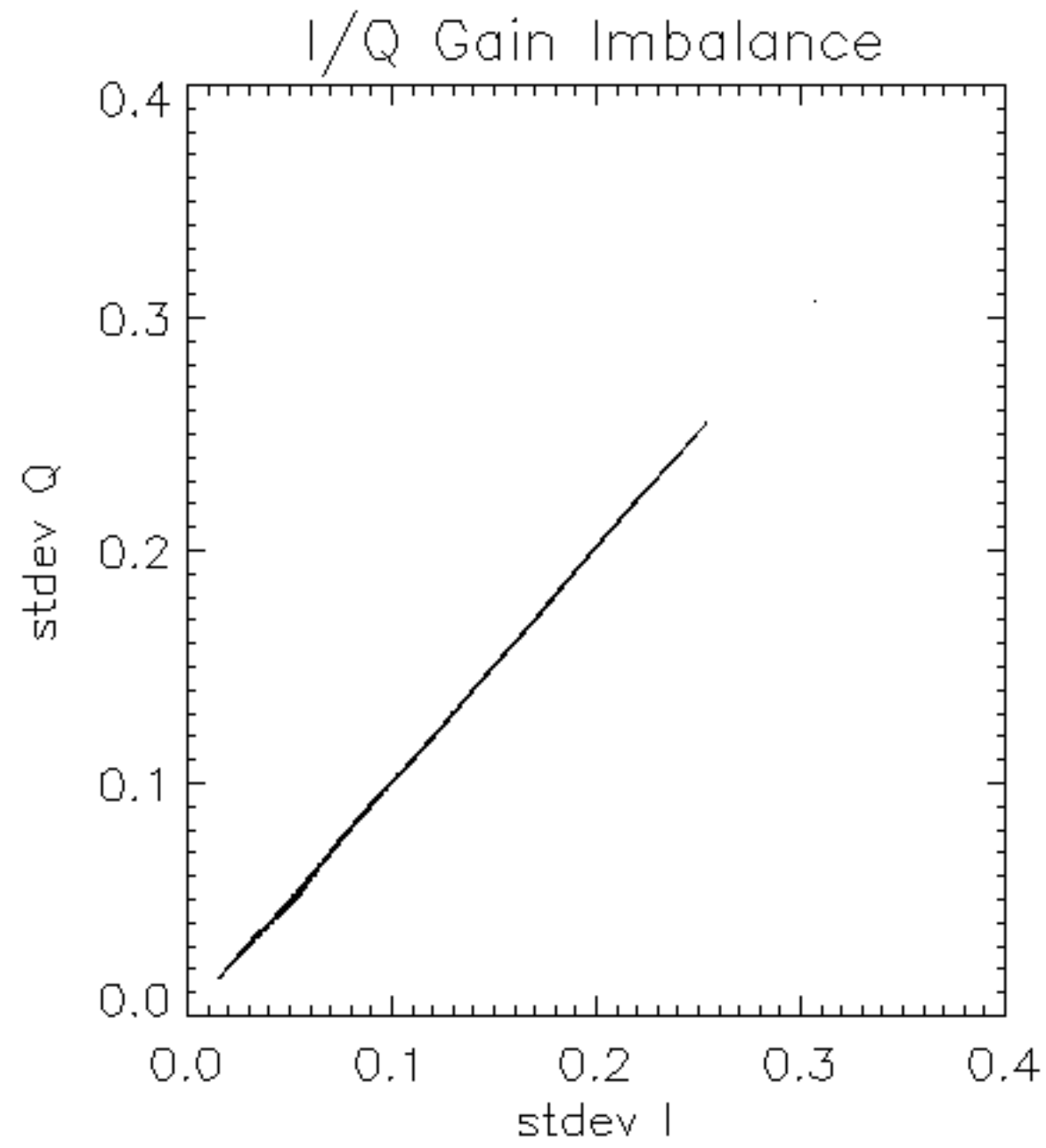


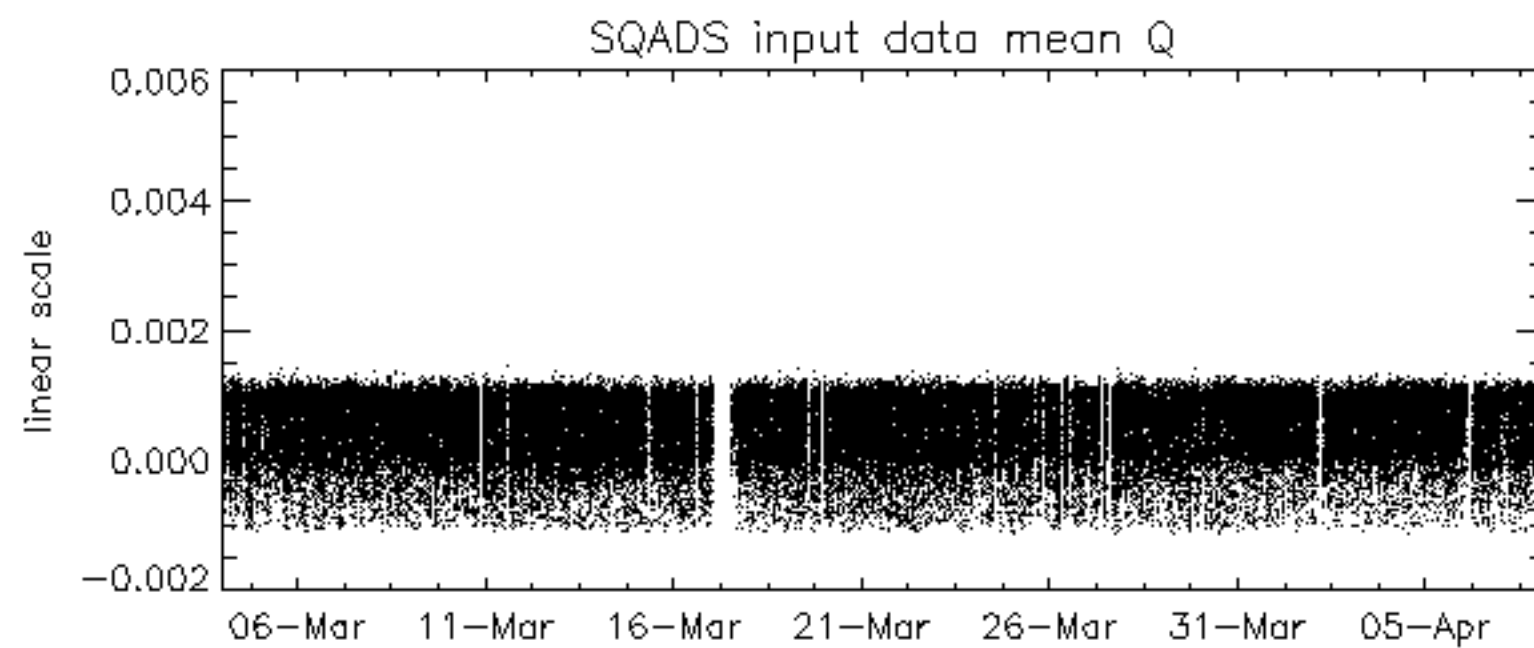
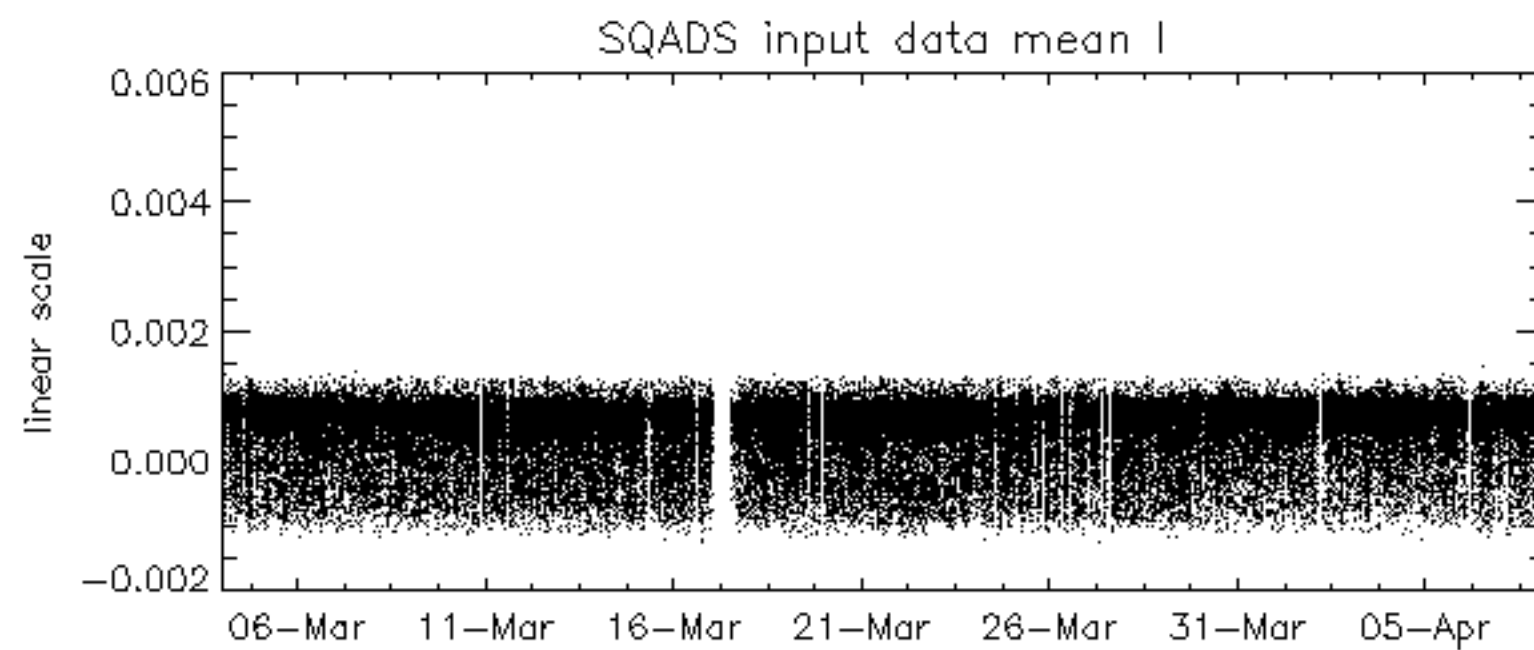
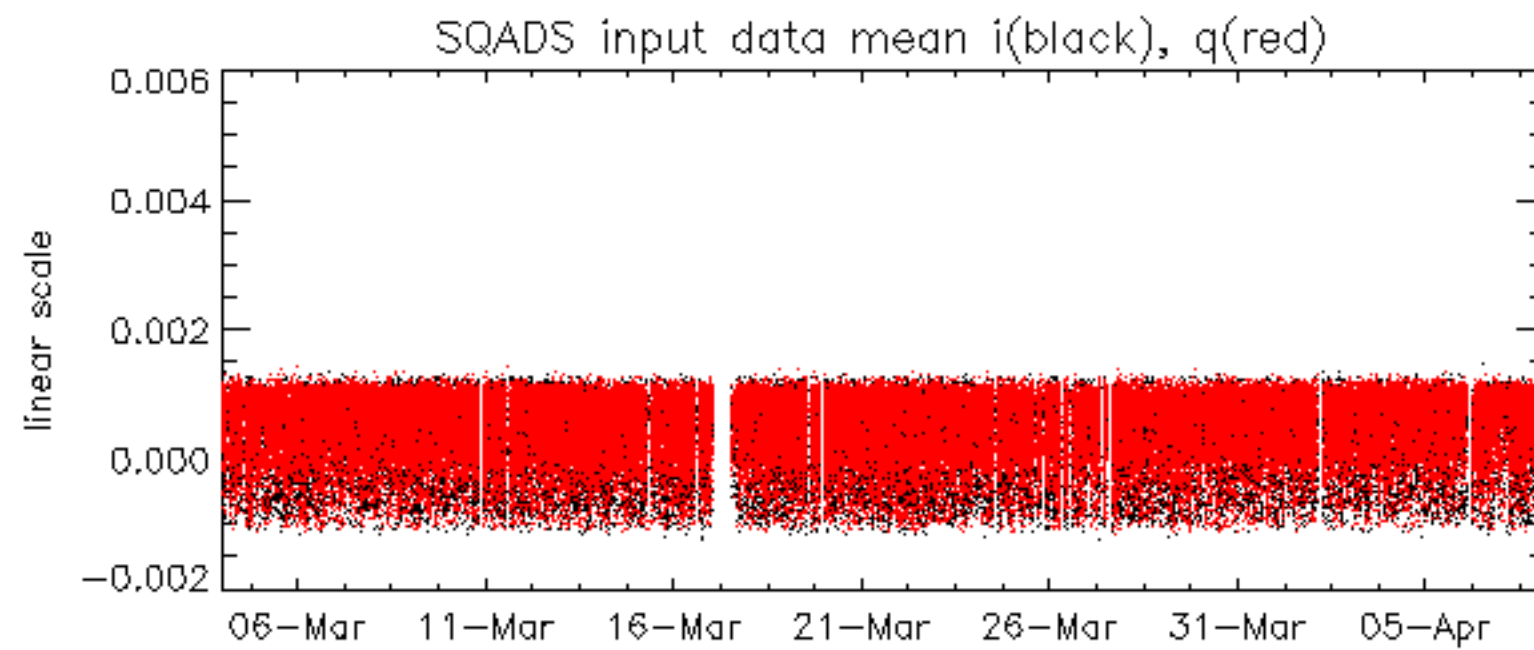


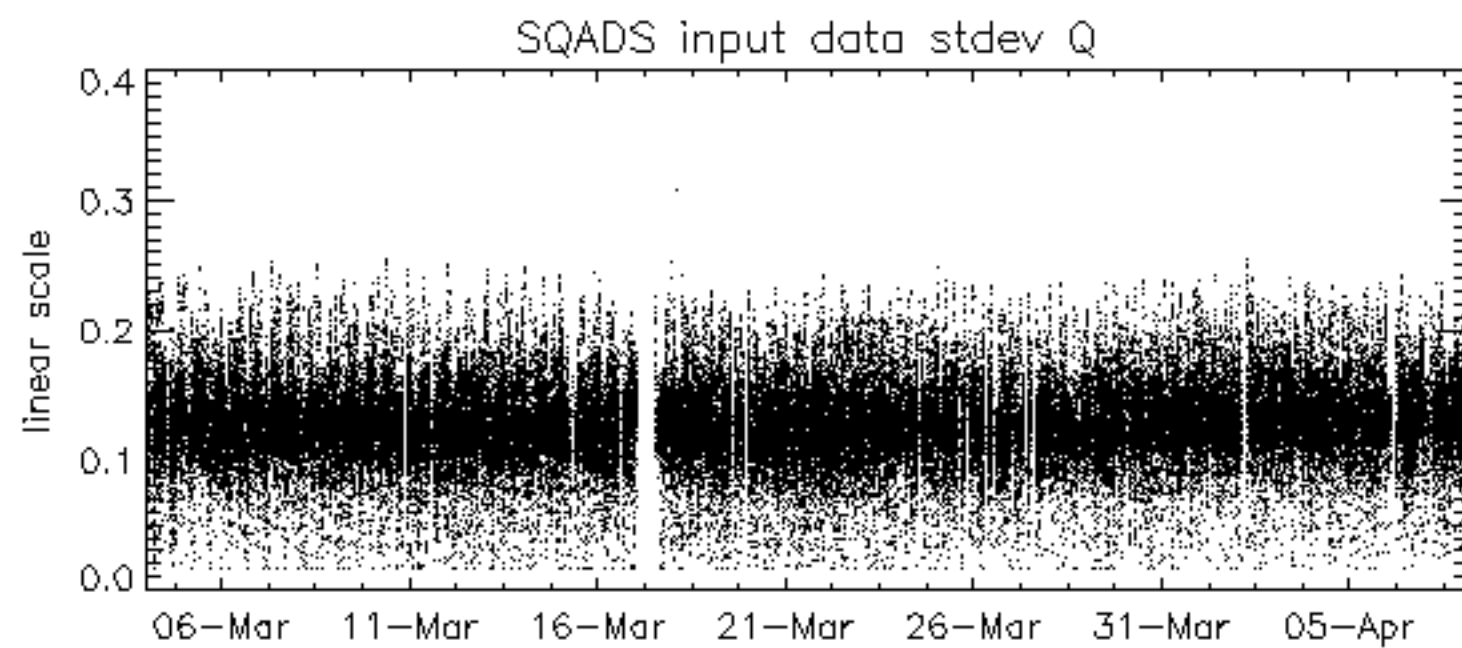
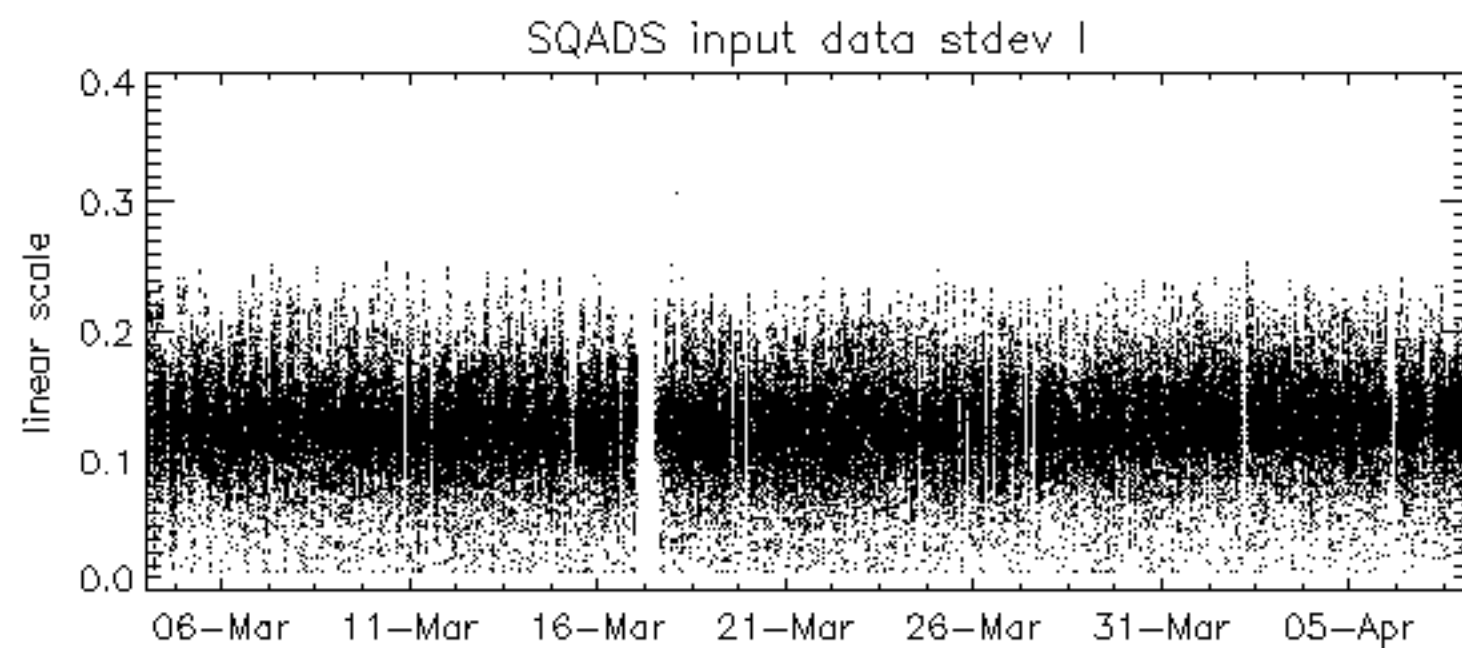
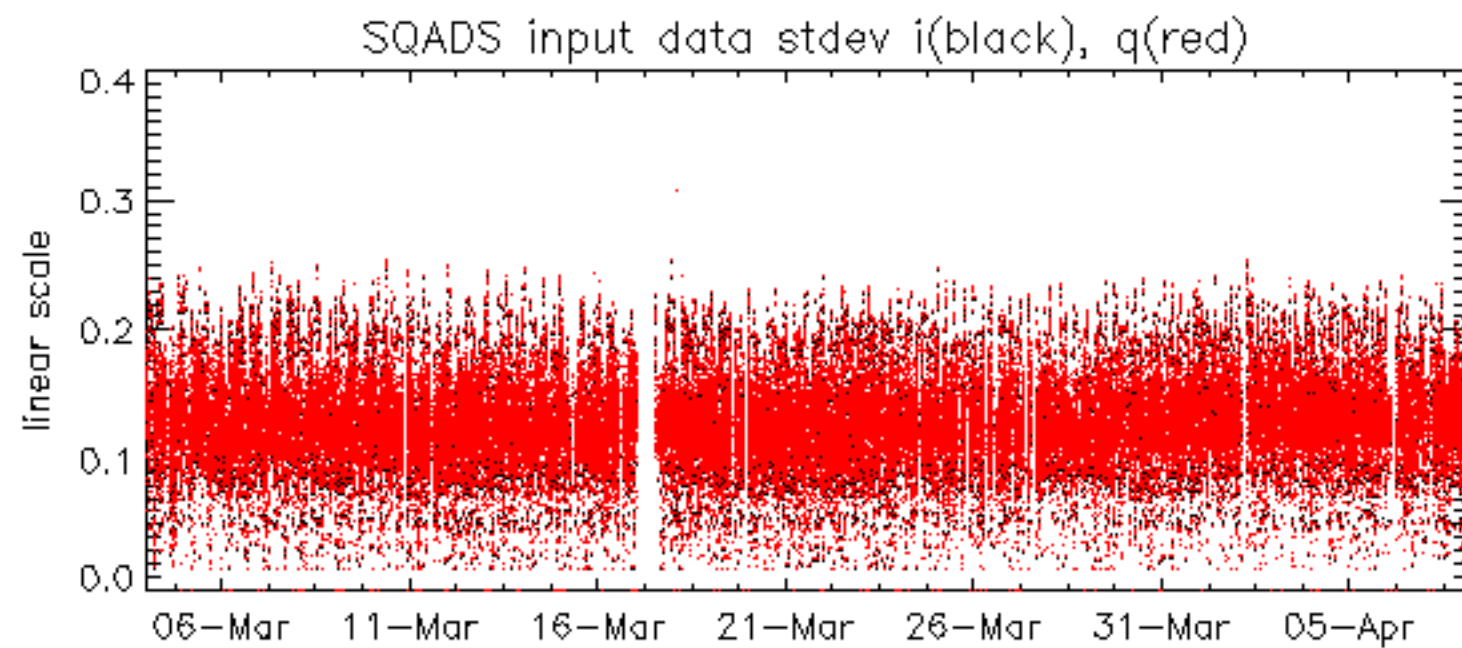












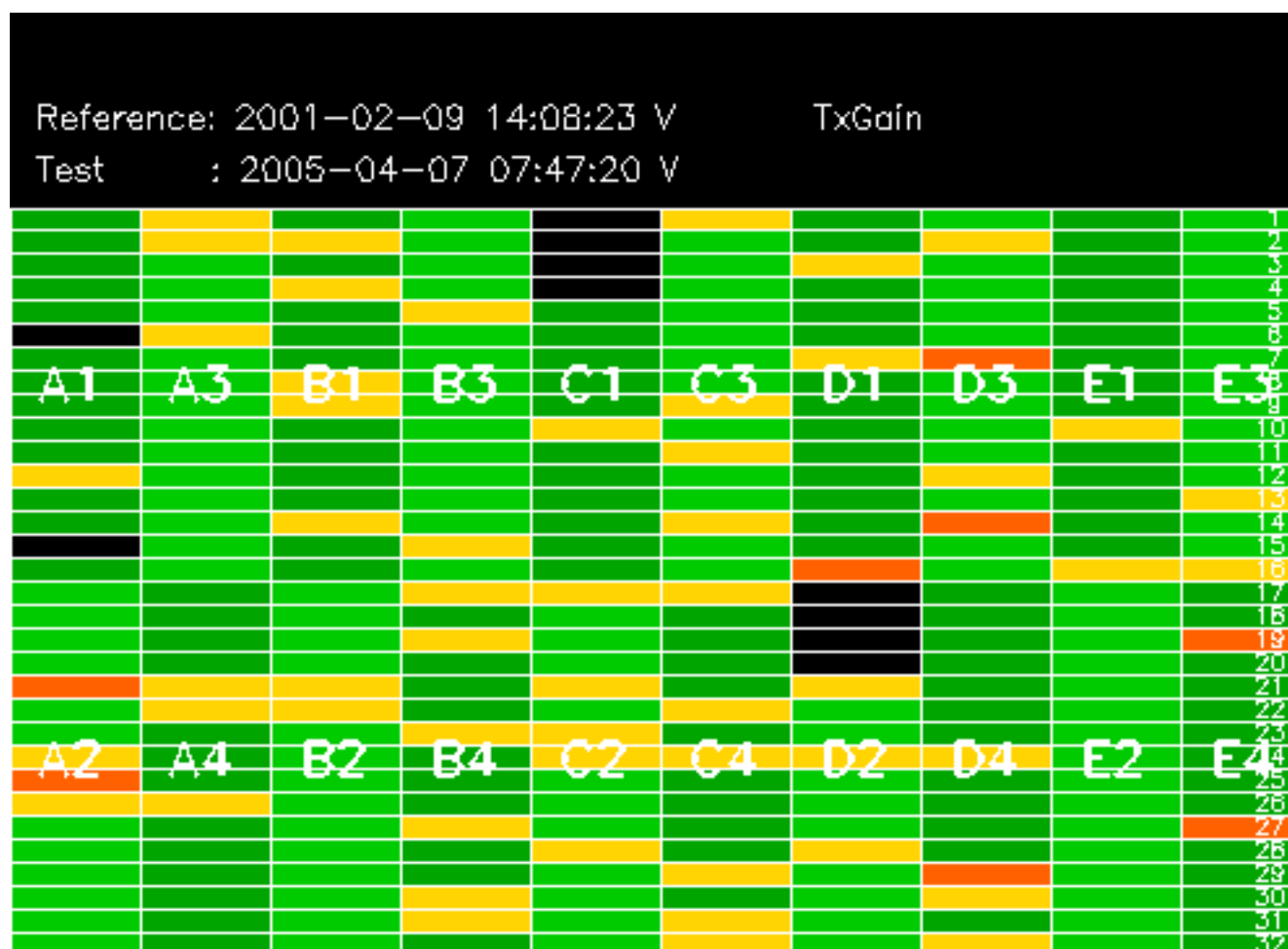










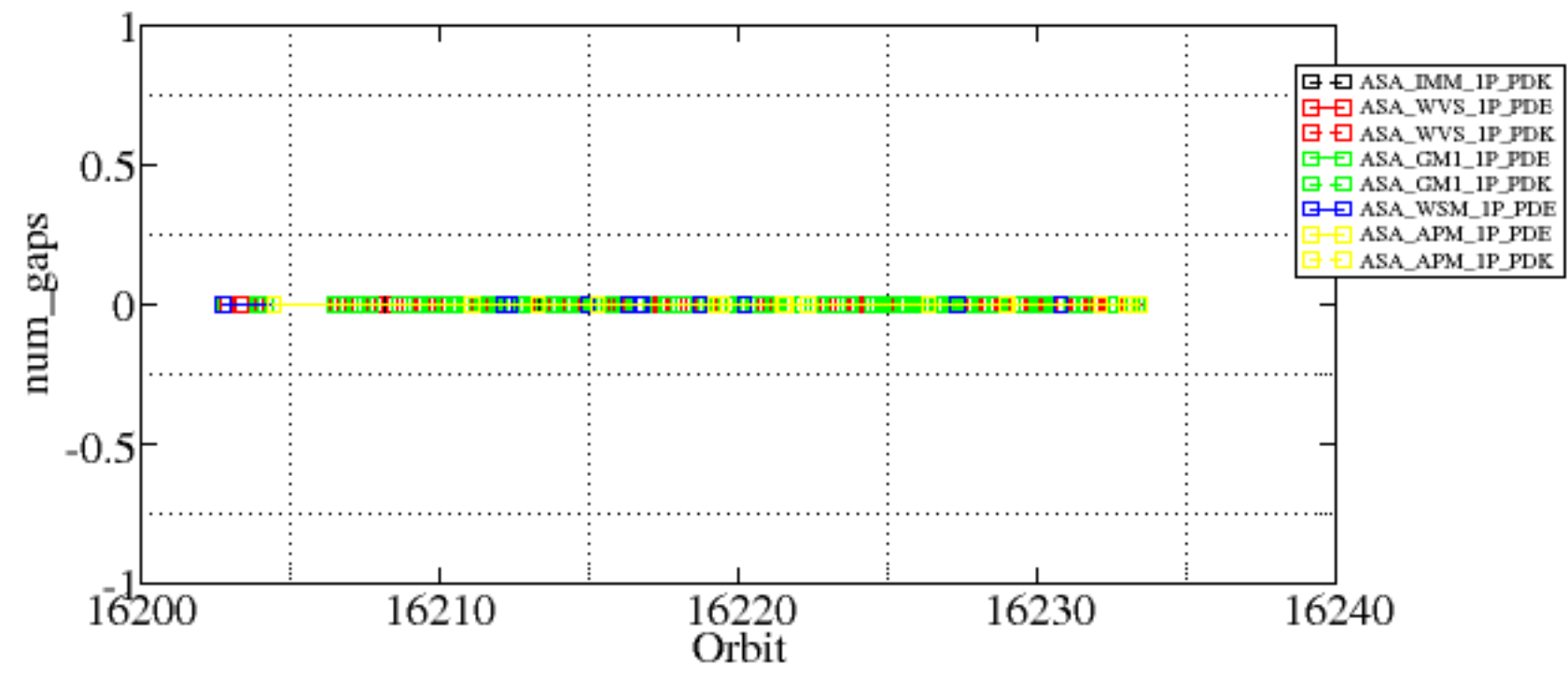




Summary of analysis for the last 3 days 2005040[678]

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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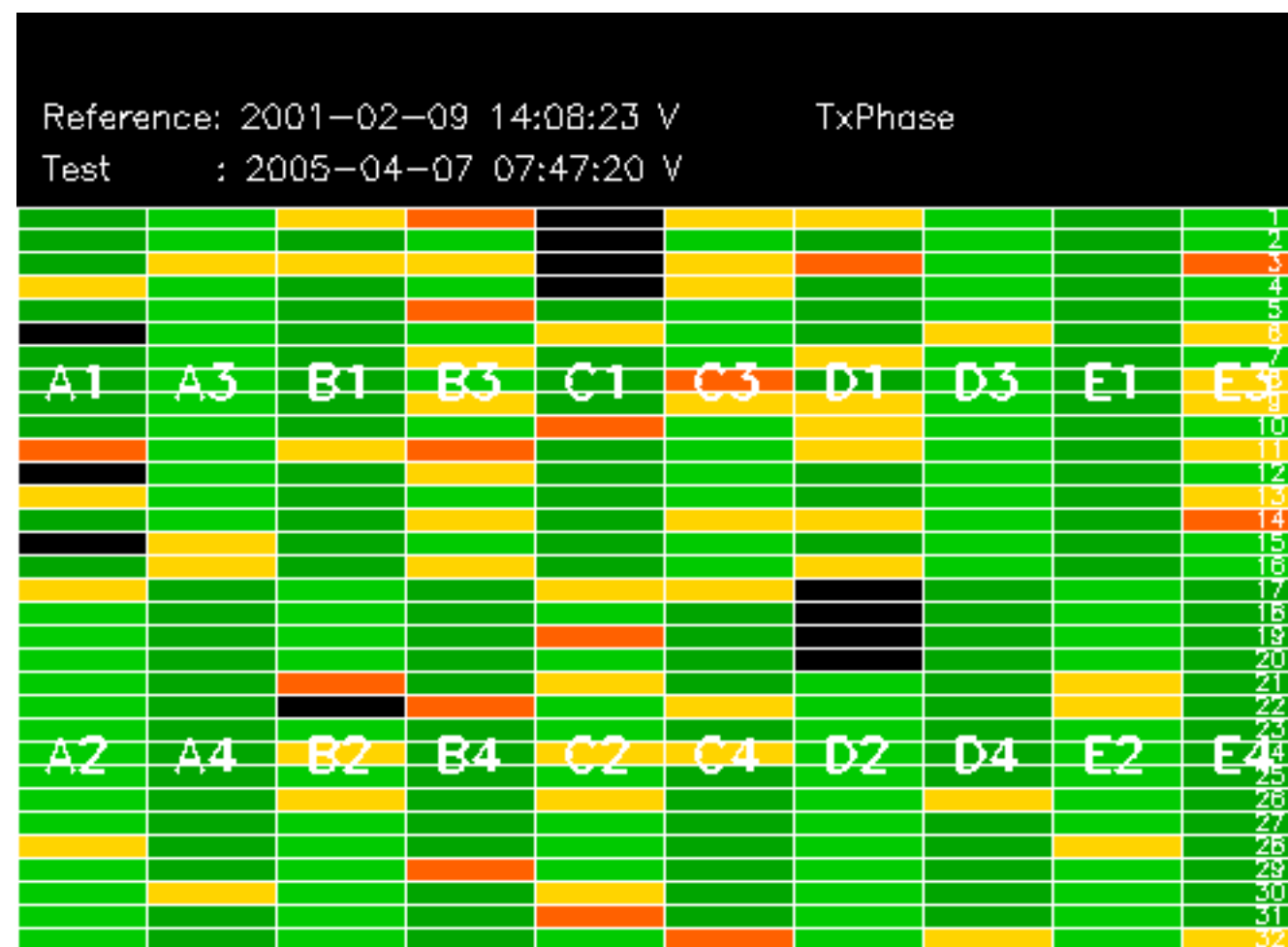






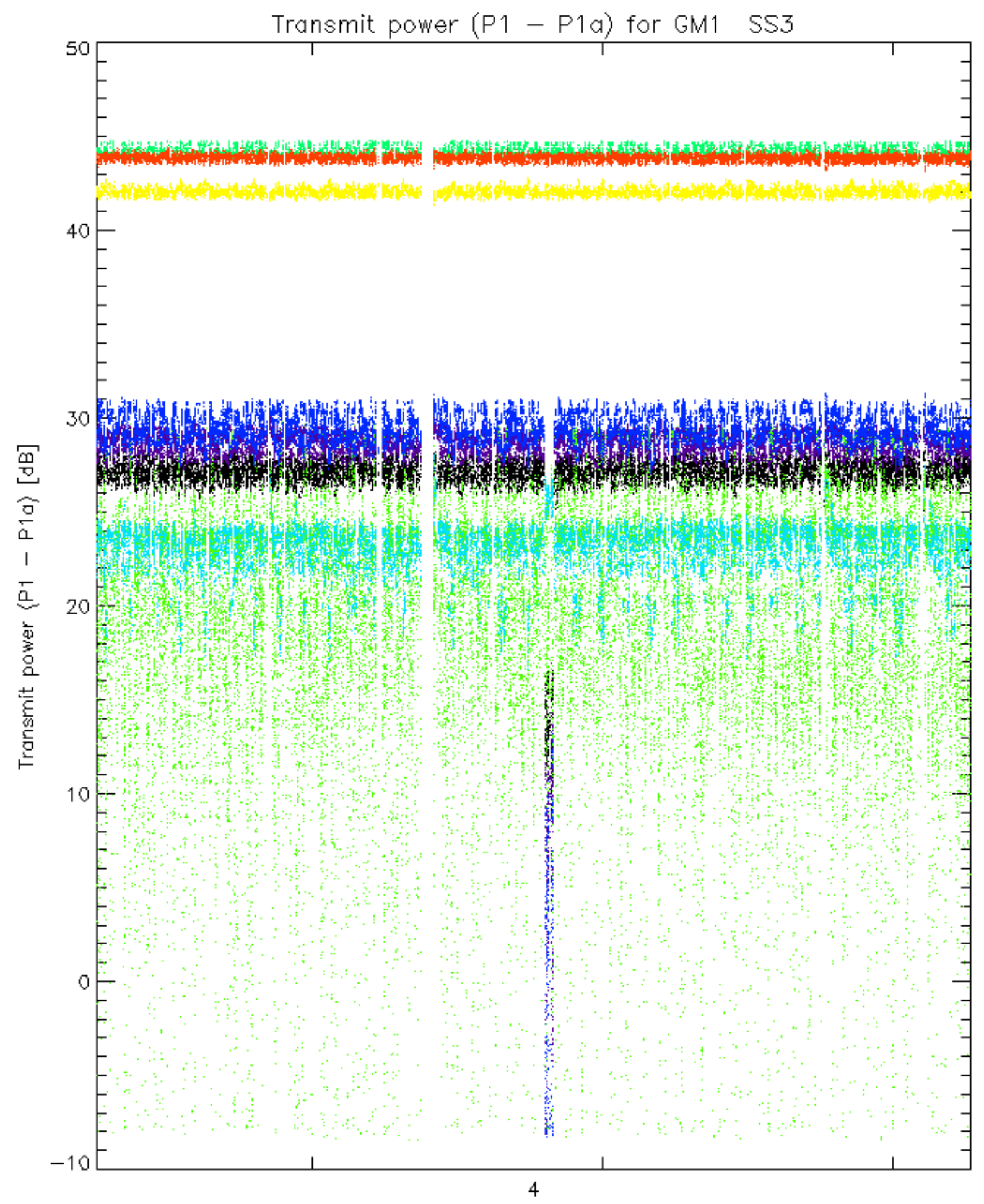




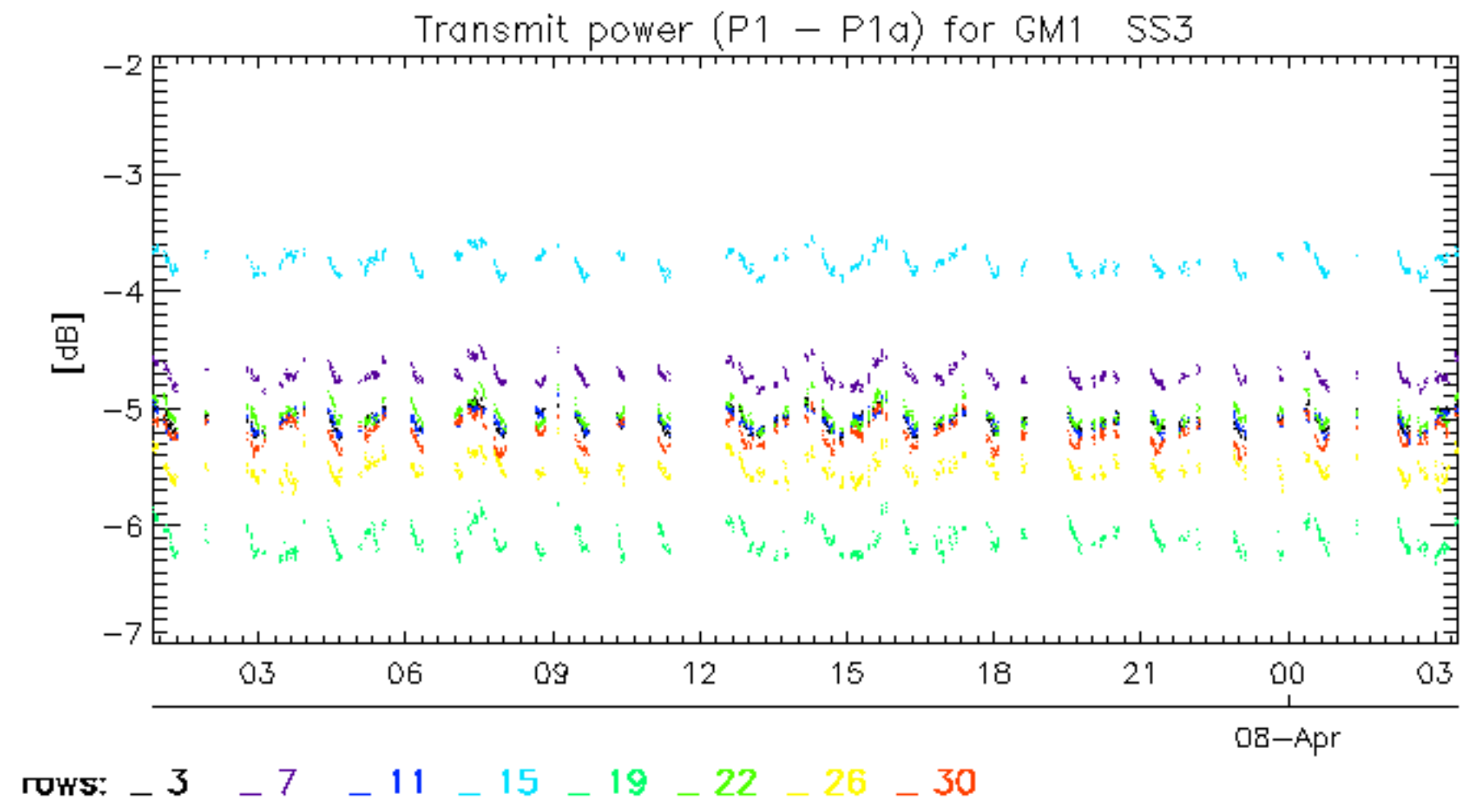


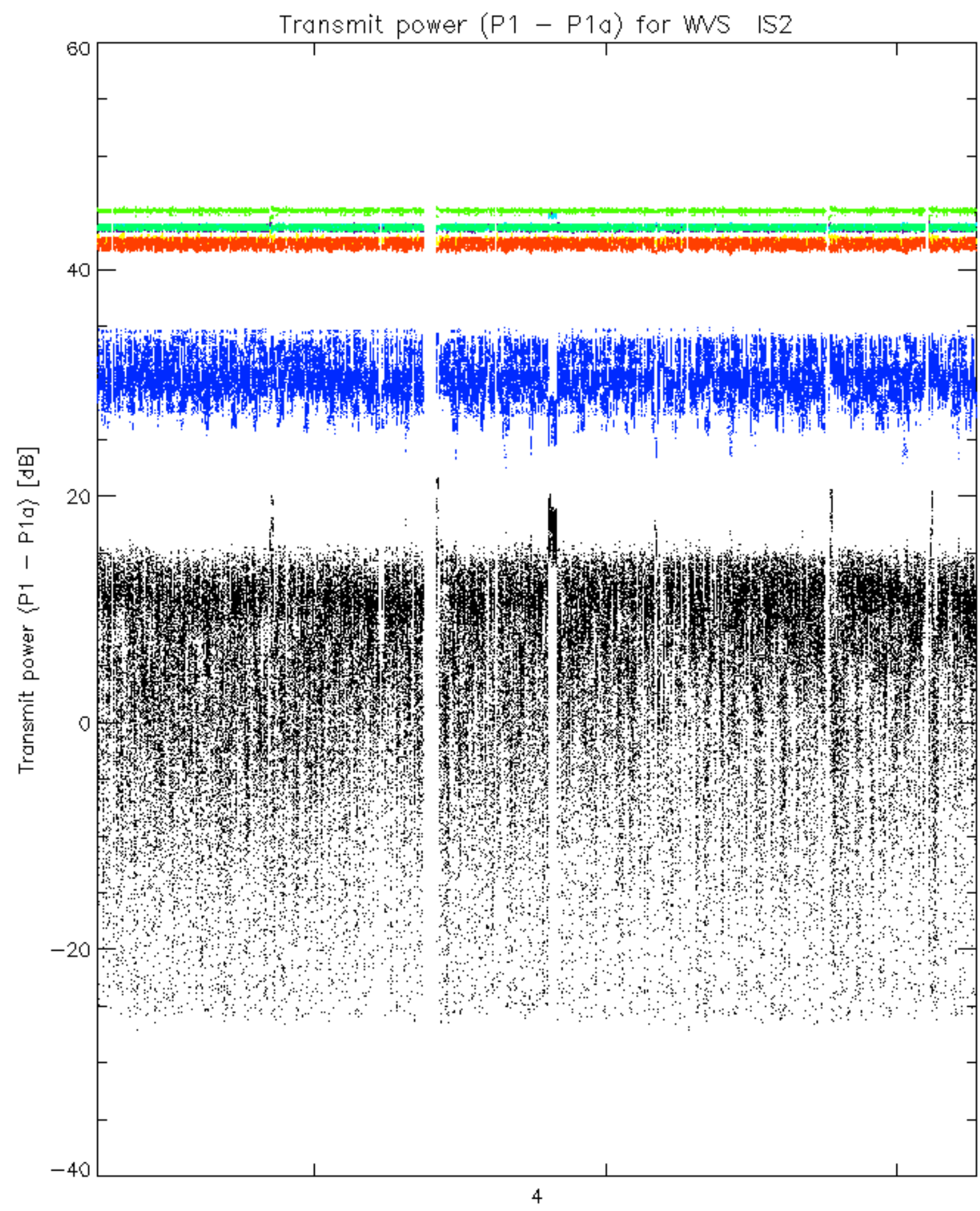




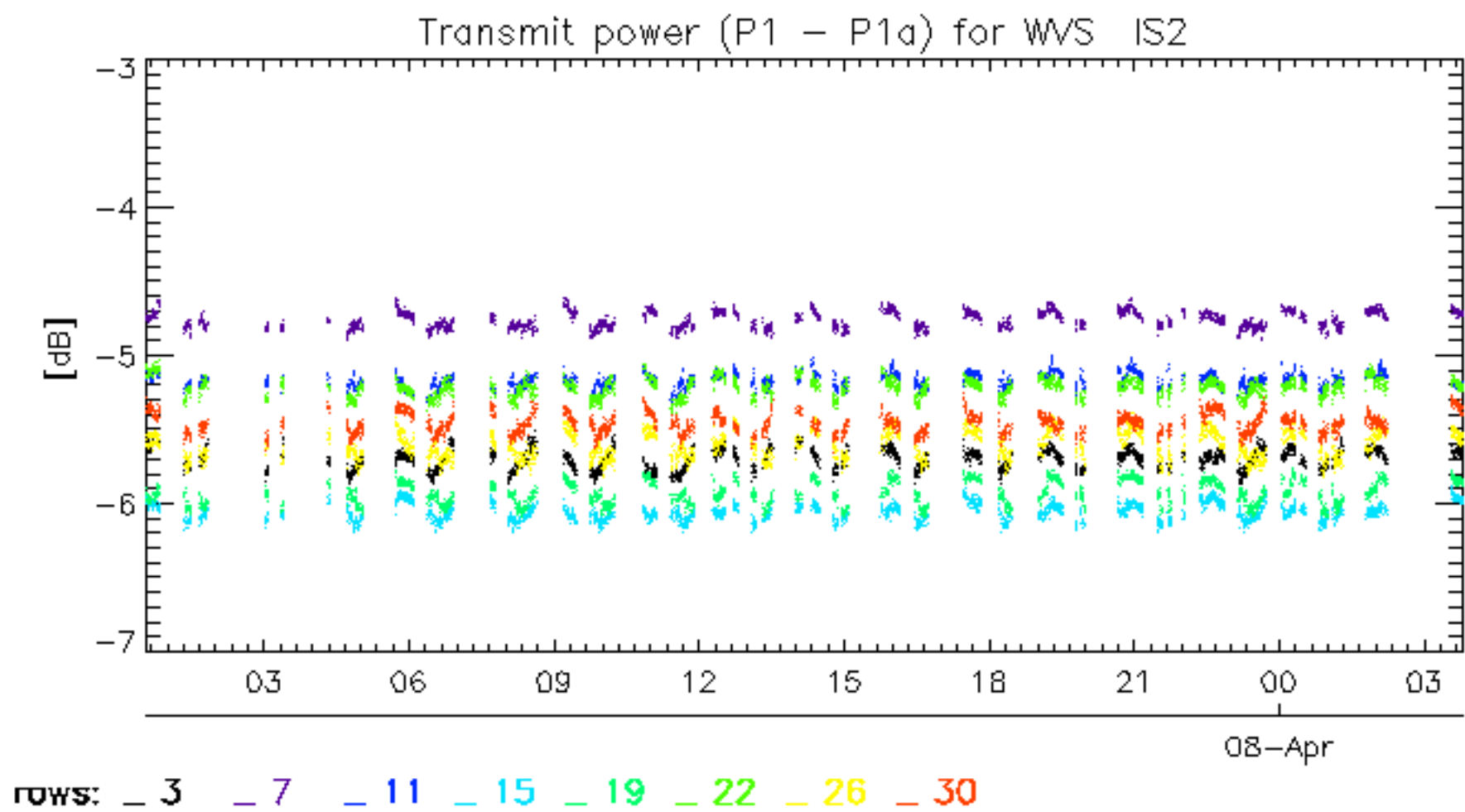


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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





No unavailabilities during the reported period.