

# PRELIMINARY REPORT OF 050410

last update on Sun Apr 10 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 2005-04-09 00:00:00 to 2005-04-10 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	25	47	0	4	6
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	25	47	0	4	6
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	25	47	0	4	6
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	25	47	0	4	6

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	36	52	4	12	4
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	36	52	4	12	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	36	52	4	12	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	36	52	4	12	4

## 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	20050409 064407
H	20050410 061230

### 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

<input type="checkbox"/>
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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	-3.345170	0.013367	0.001913
7	P1	-3.112364	0.008806	-0.035228
11	P1	-4.676559	0.030859	0.012875
15	P1	-5.629262	0.039787	0.032922
19	P1	-3.695364	0.003903	-0.025255
22	P1	-4.530993	0.011728	-0.045278
26	P1	-4.924493	0.018765	0.037355
30	P1	-7.191854	0.020210	-0.000473
3	P1	-15.843293	0.329786	0.104972
7	P1	-15.537186	0.075884	-0.029987
11	P1	-21.044106	0.454787	-0.237025
15	P1	-11.555058	0.052128	0.071478
19	P1	-14.313056	0.025787	-0.020768
22	P1	-15.699244	0.311864	-0.215030
26	P1	-17.629108	0.188860	-0.073488
30	P1	-17.950056	0.412455	0.046646

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.057026	0.081222	0.052317
7	P2	-22.236874	0.094820	0.079583
11	P2	-14.289321	0.109925	0.208499
15	P2	-7.047377	0.090597	-0.028072
19	P2	-9.634724	0.093328	-0.022064
22	P2	-16.891514	0.094687	0.042001
26	P2	-16.443556	0.092519	-0.021015
30	P2	-18.832468	0.084786	0.026484

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.163816	0.004697	-0.005724
7	P3	-8.163816	0.004697	-0.005724
11	P3	-8.163816	0.004697	-0.005724
15	P3	-8.163816	0.004697	-0.005724
19	P3	-8.163816	0.004697	-0.005724
22	P3	-8.163816	0.004697	-0.005724
26	P3	-8.163816	0.004697	-0.005724
30	P3	-8.163816	0.004697	-0.005724

#### 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	-2.714408	0.026276	-0.031267
7	P1	-3.017886	0.047338	0.027817
11	P1	-3.983992	0.026880	-0.007416
15	P1	-3.551629	0.034989	-0.013193
19	P1	-3.605379	0.013689	-0.020041
22	P1	-5.728514	0.037852	0.021621
26	P1	-7.295460	0.025898	-0.022748
30	P1	-6.249674	0.056389	-0.087570
3	P1	-10.707351	0.166565	-0.030066
7	P1	-10.343737	0.178155	0.018537
11	P1	-12.531987	0.136712	-0.030658
15	P1	-11.723578	0.103327	0.001428
19	P1	-15.576096	0.048691	-0.038694
22	P1	-24.669189	1.355676	-0.272050
26	P1	-15.511976	0.212172	-0.057550
30	P1	-20.186161	1.230746	0.224942

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.756071	0.039093	0.051167
7	P2	-22.318623	0.043360	0.060851
11	P2	-10.101506	0.057544	0.076115
15	P2	-4.996436	0.029783	-0.060523
19	P2	-6.837650	0.044675	-0.047062
22	P2	-7.075113	0.037675	-0.000515
26	P2	-23.851618	0.034589	-0.033998
30	P2	-21.888819	0.040623	-0.021742

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.997603	0.003371	-0.013294
7	P3	-7.997730	0.003369	-0.013194
11	P3	-7.997639	0.003375	-0.013454
15	P3	-7.997607	0.003370	-0.013127
19	P3	-7.997693	0.003378	-0.013487
22	P3	-7.997704	0.003365	-0.013208
26	P3	-7.997713	0.003372	-0.013498
30	P3	-7.997613	0.003370	-0.013629

## 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	0.000465951
	stdev	2.22043e-07
MEAN Q	mean	0.000480540
	stdev	2.34449e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128820
	stdev	0.00105177
STDEV Q	mean	0.129077
	stdev	0.00106369



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005040[890]

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"/>
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

#### Evolution Doppler error versus ANX

<input type="checkbox"/>
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### 7.4 - Unbiased Doppler Error for GM1

#### Evolution of unbiased Doppler error (Real - Expected)

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



### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

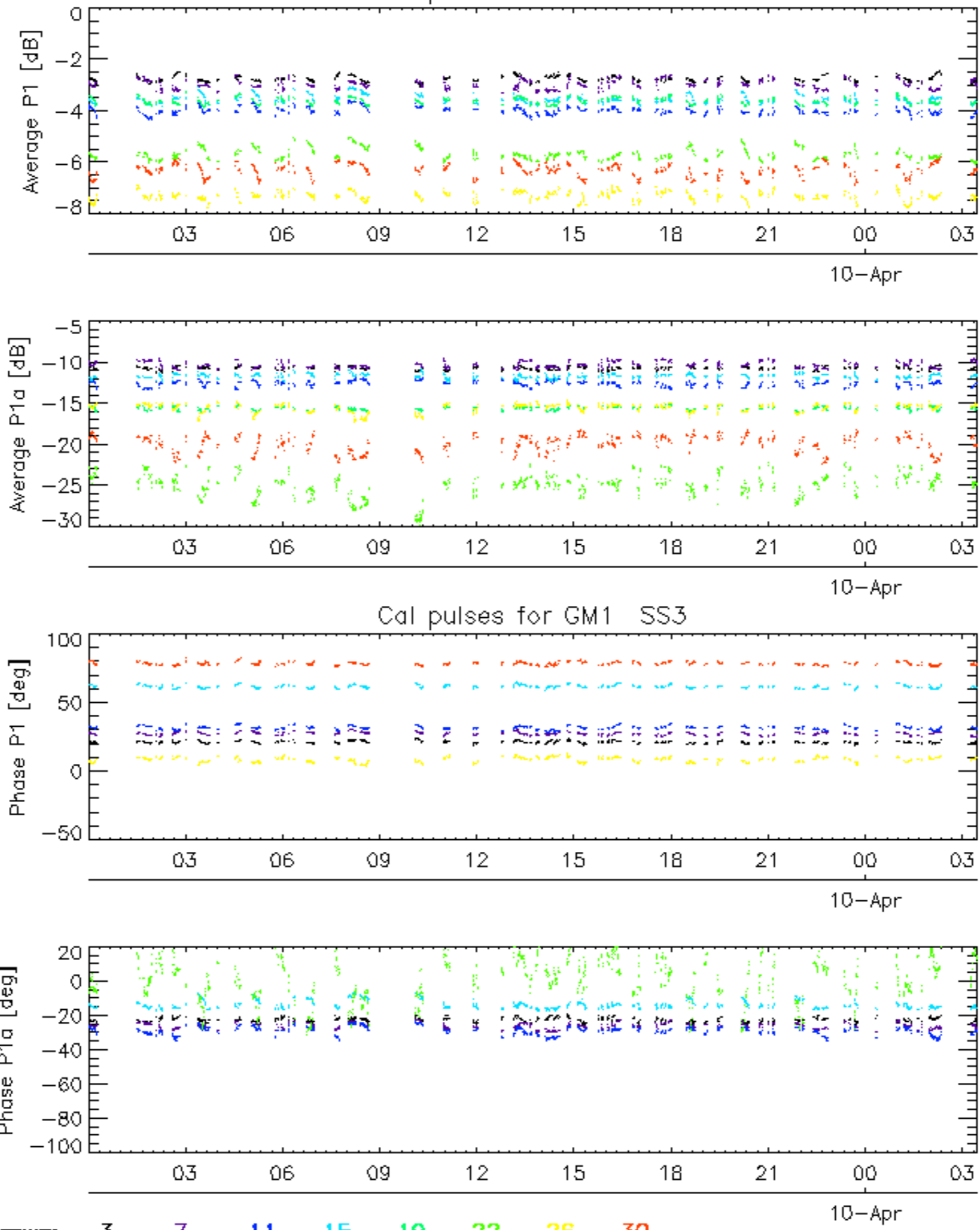
Ascending

Descending

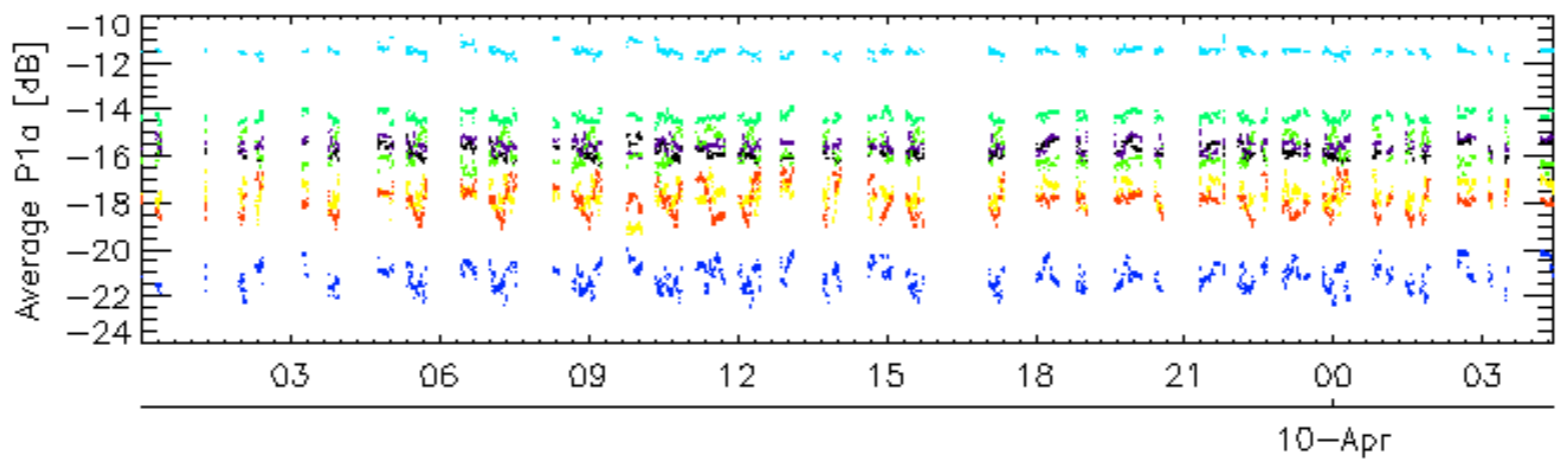
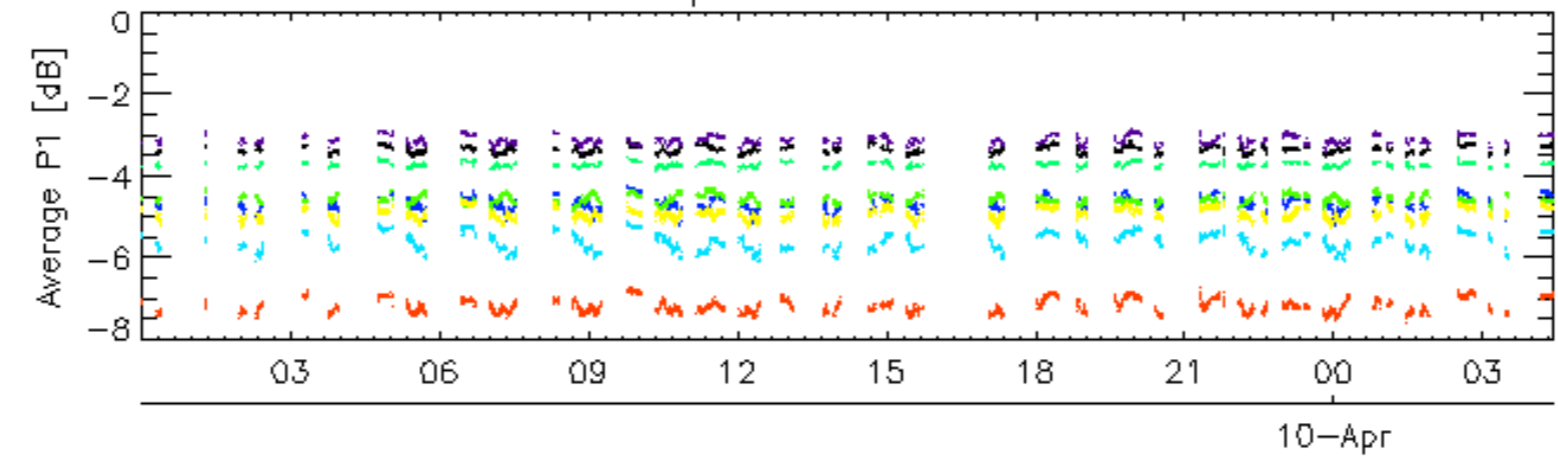
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

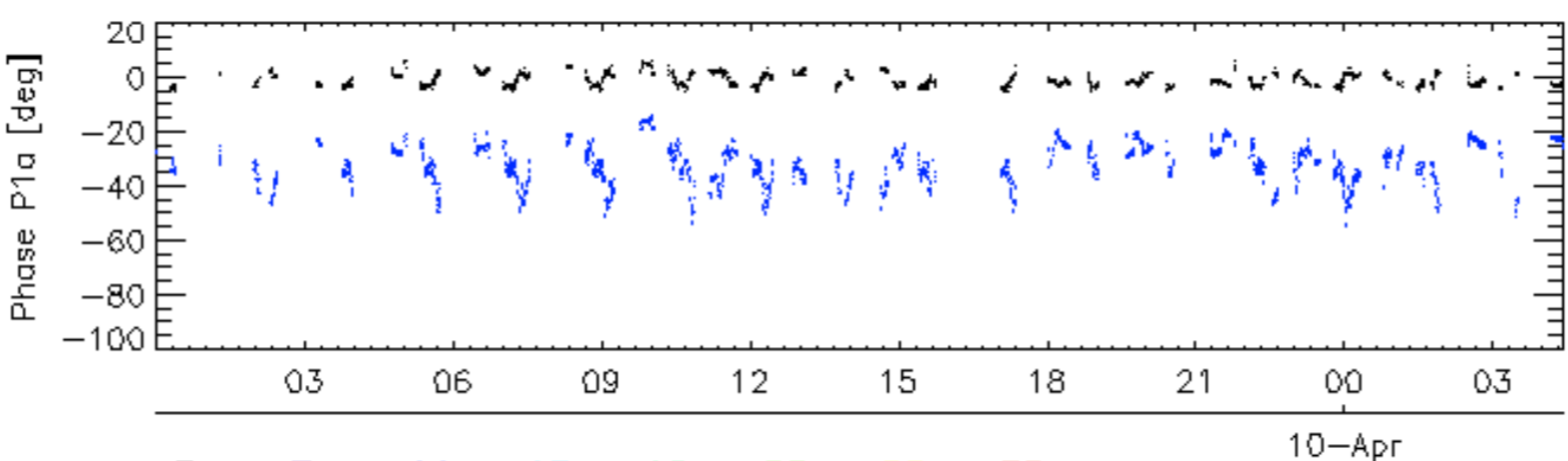
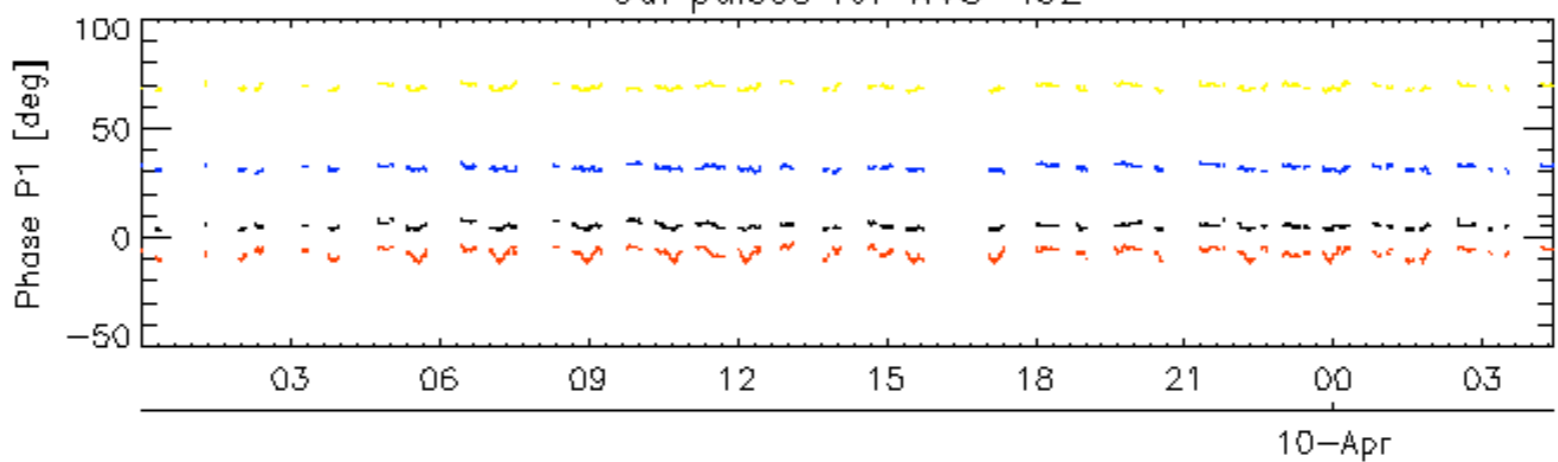
Cal pulses for GM1 SS3



Cal pulses for WVS IS2

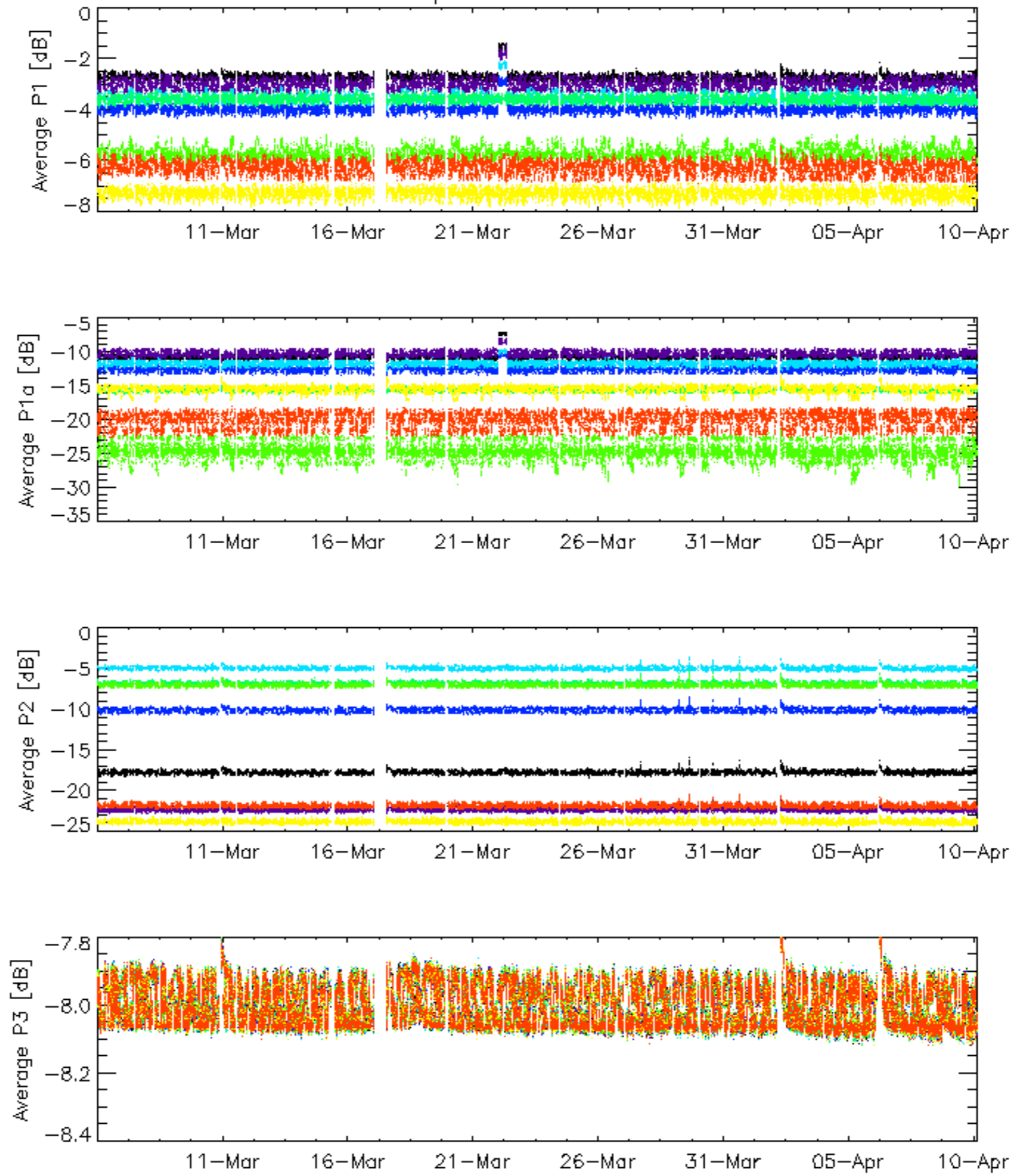


Cal pulses for WVS IS2



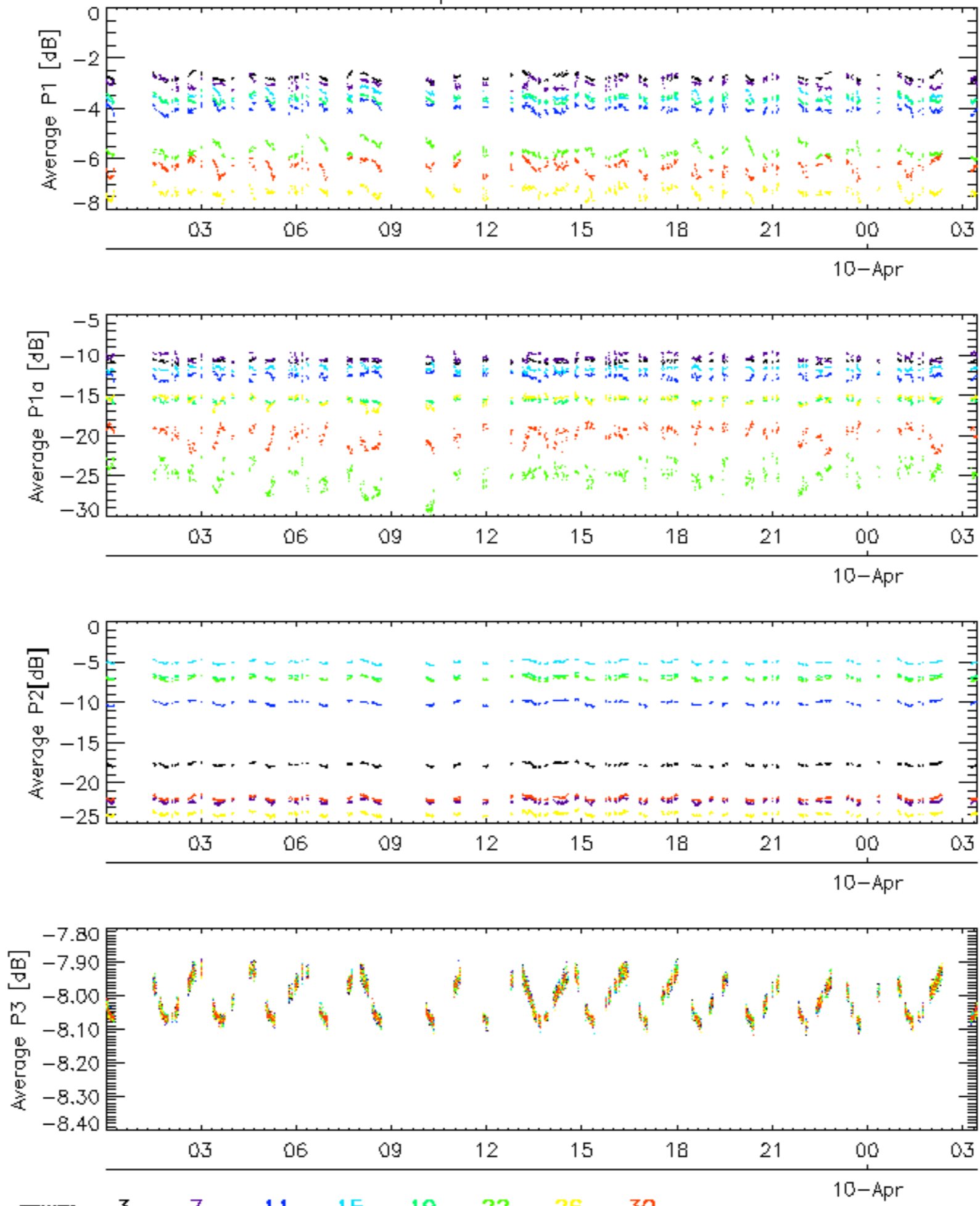
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

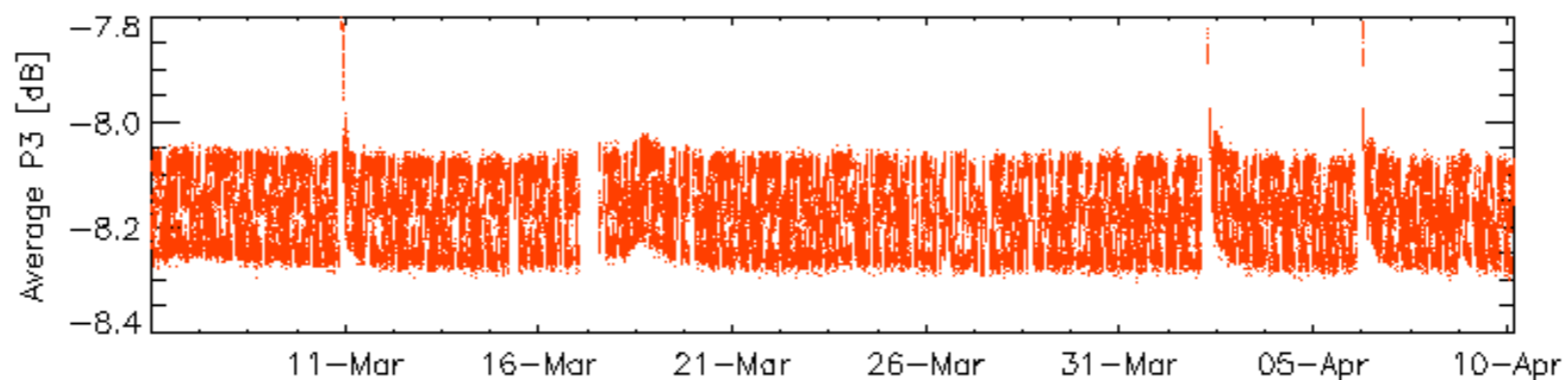
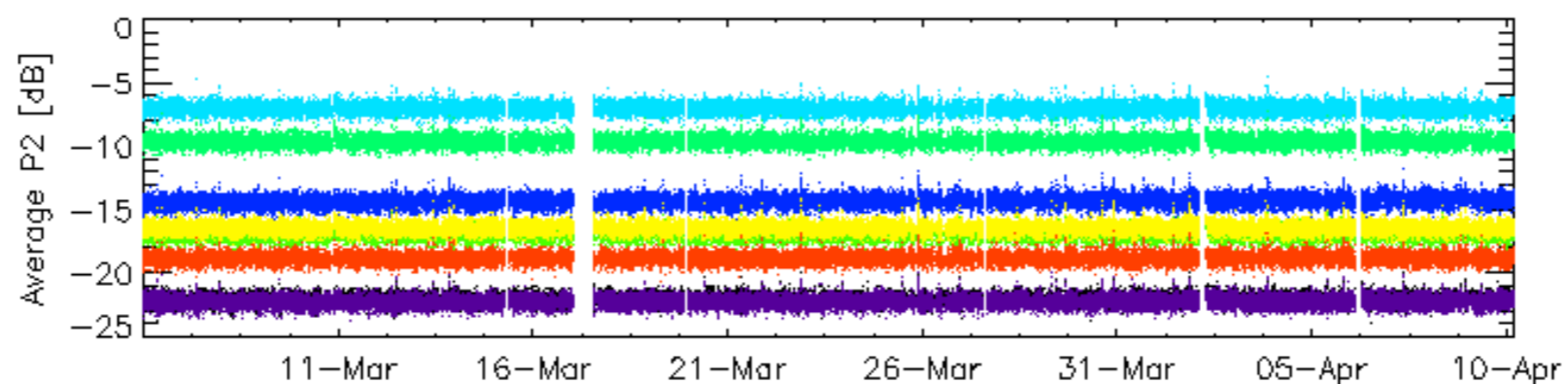
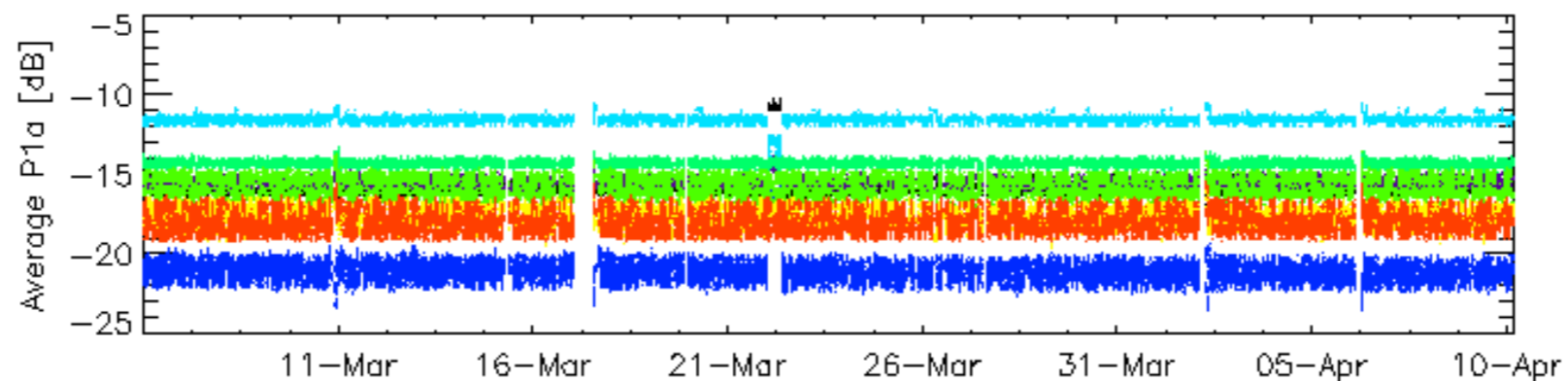
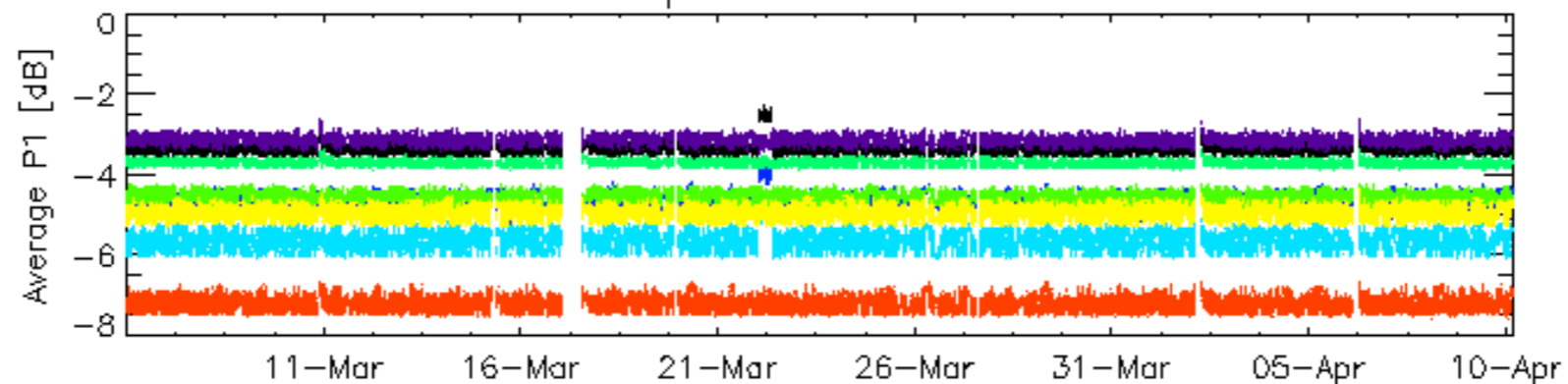


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



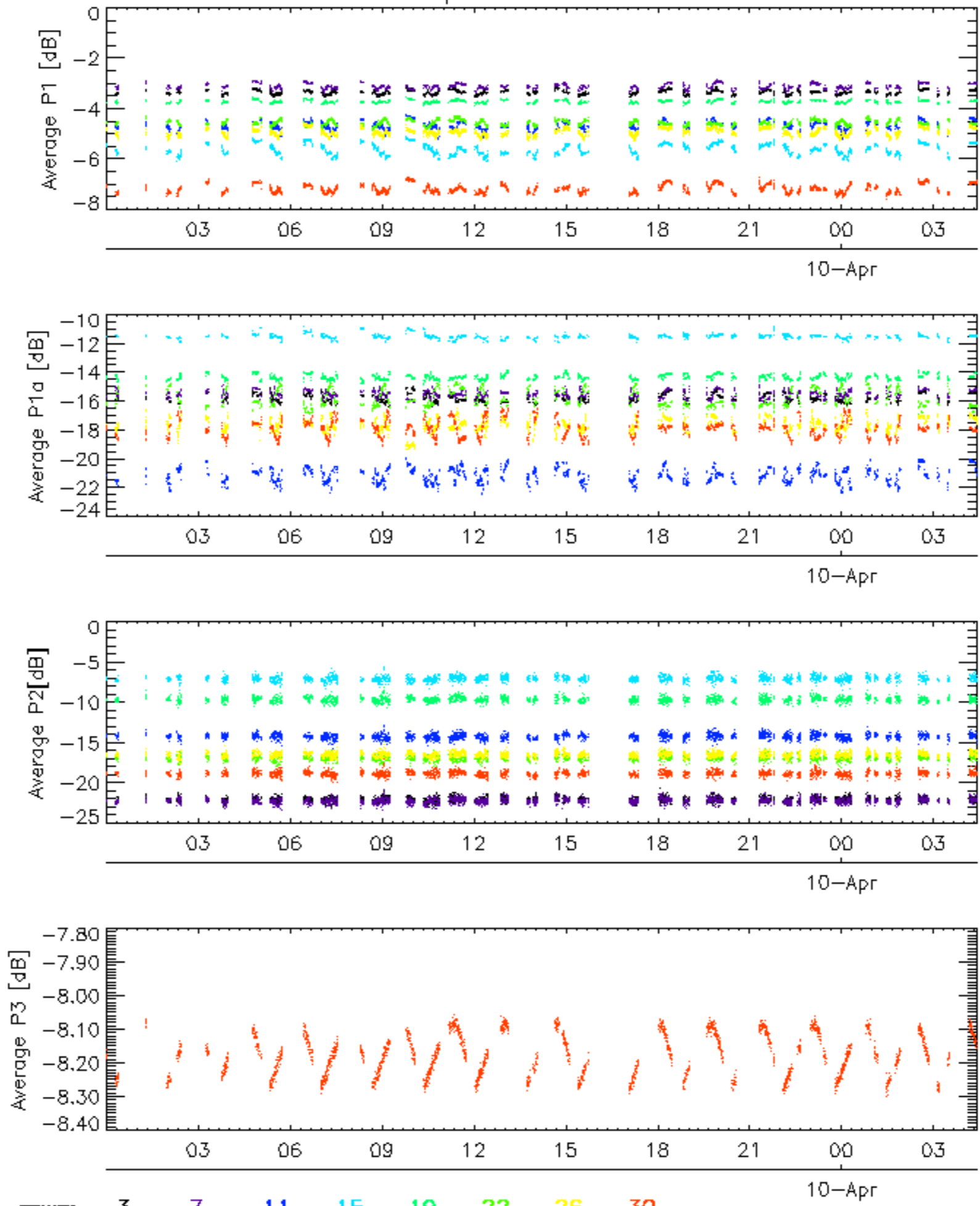
Cal pulses for WVS IS2



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

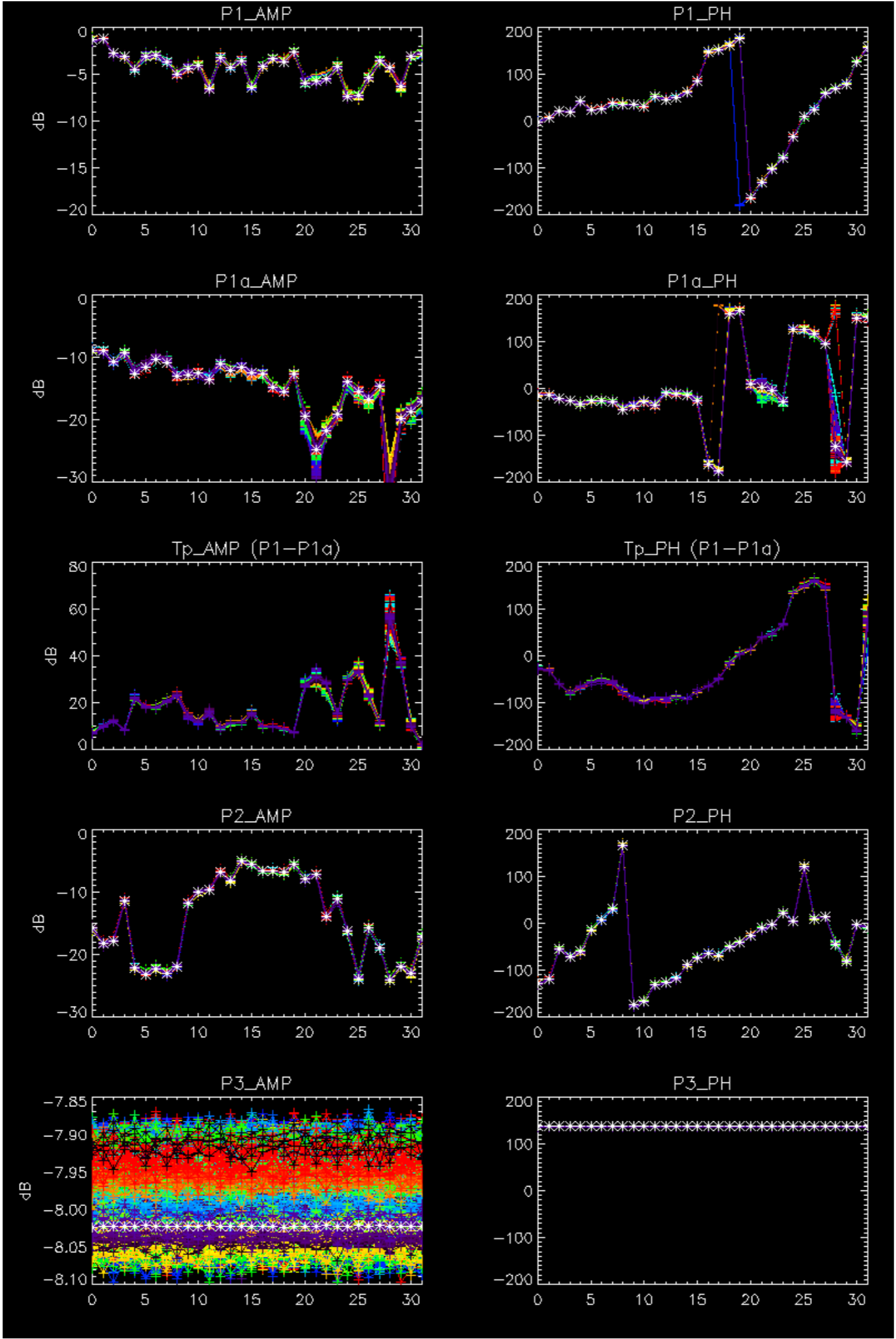


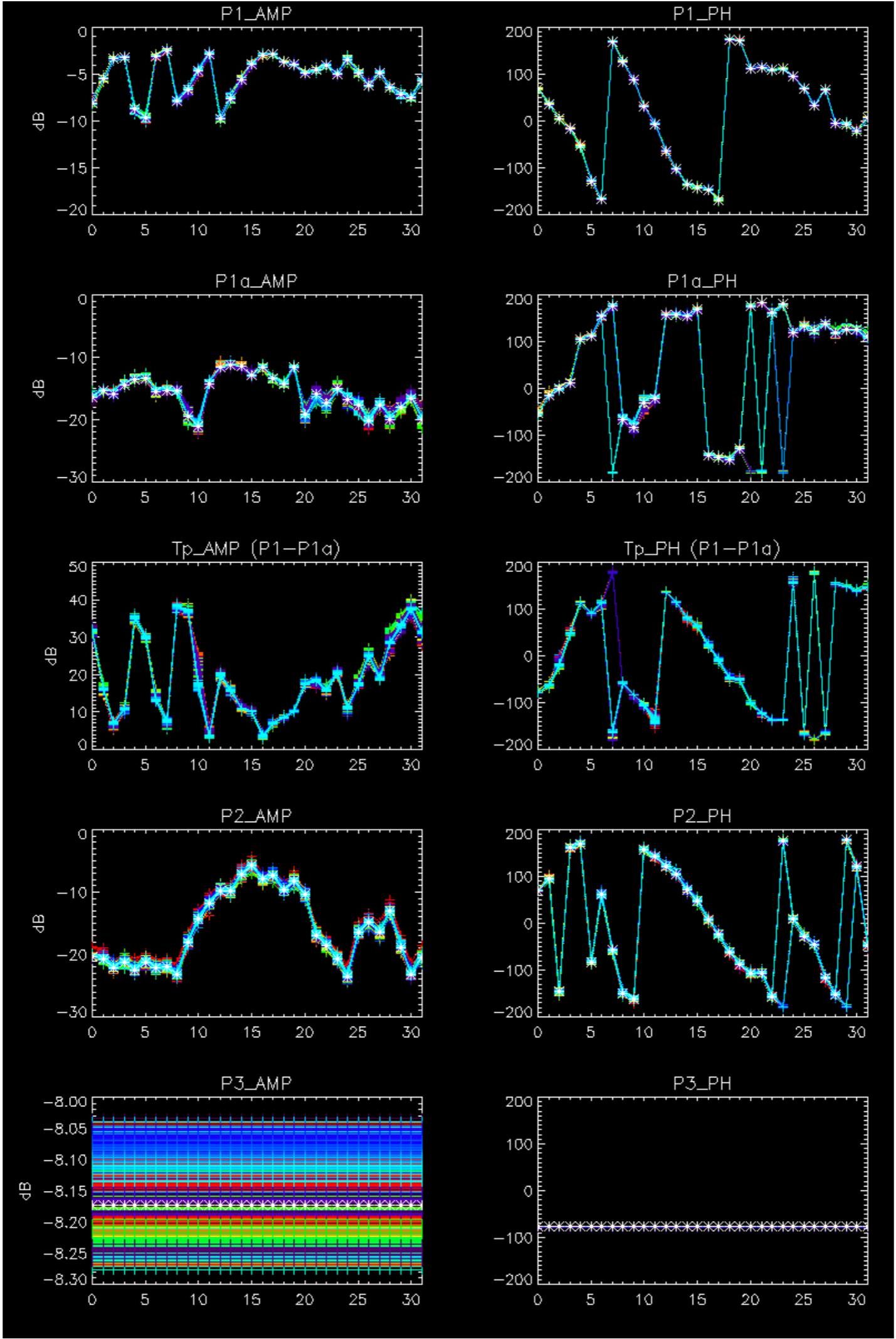
Cal pulses for WVS IS2



No anomalies observed.





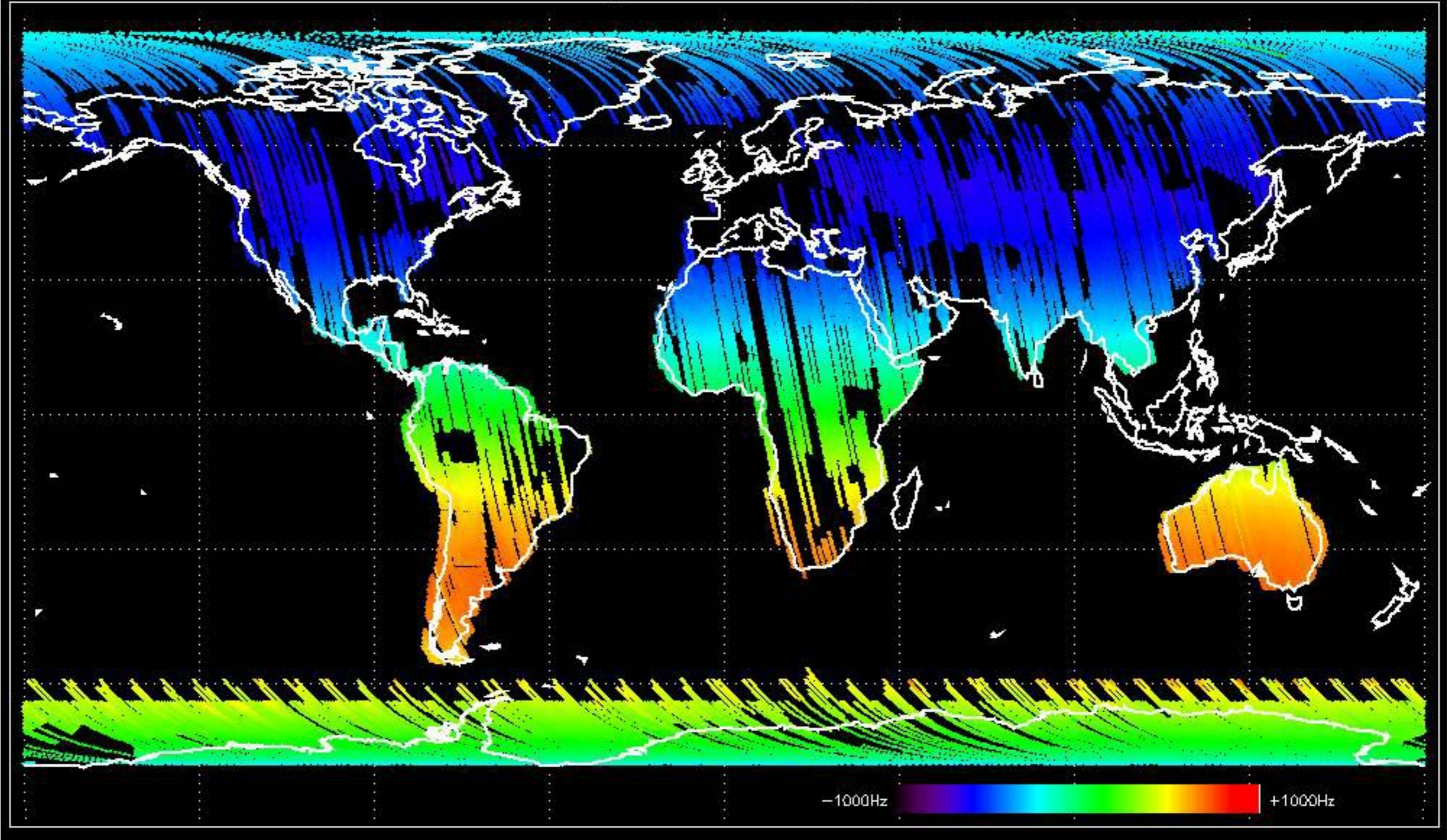


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



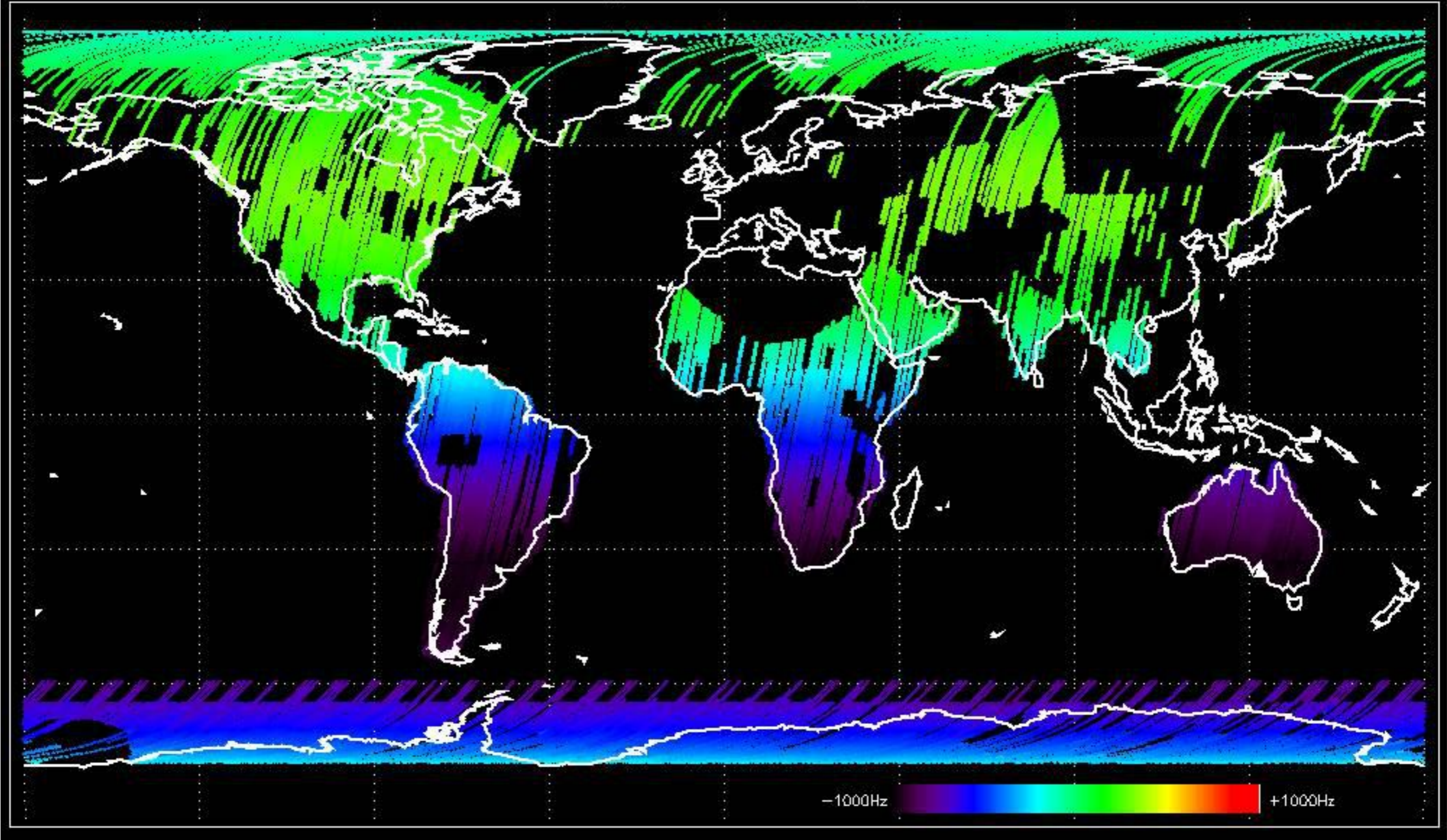


Doppler 'GM1' 'SS1' ascending



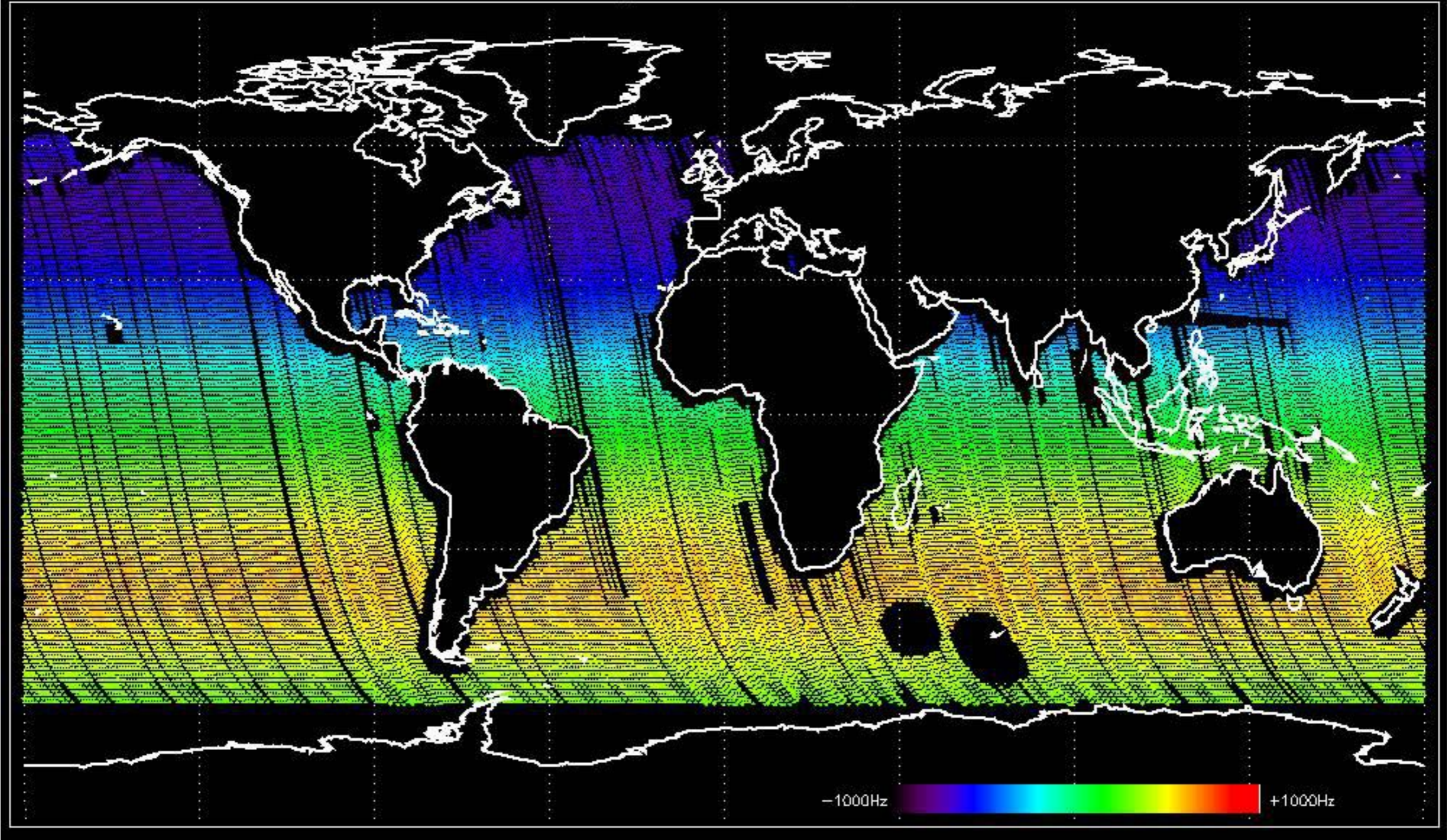


Doppler 'GM1' 'SS1' descending



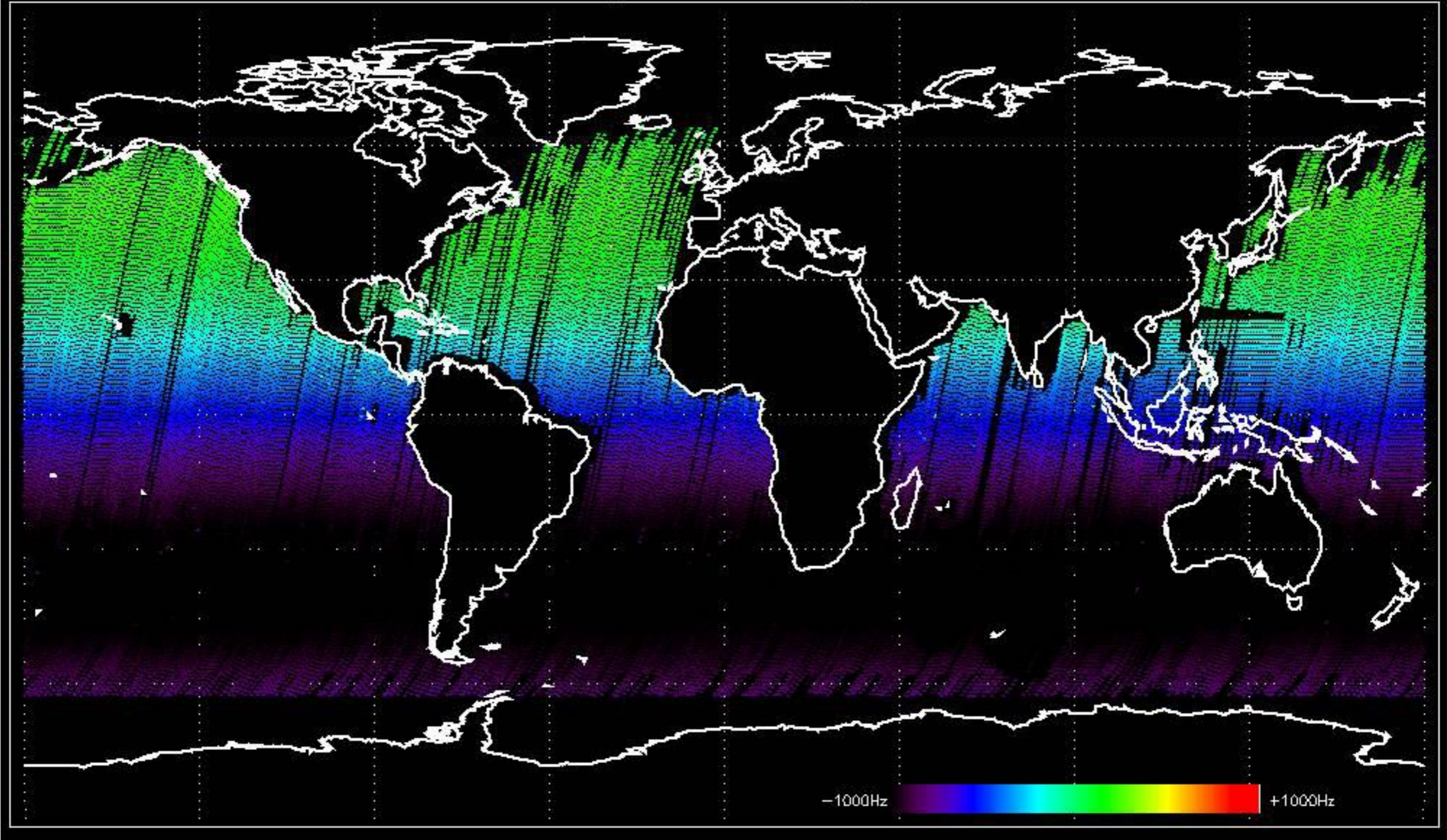


Doppler 'WVS' 'IS2' ascending



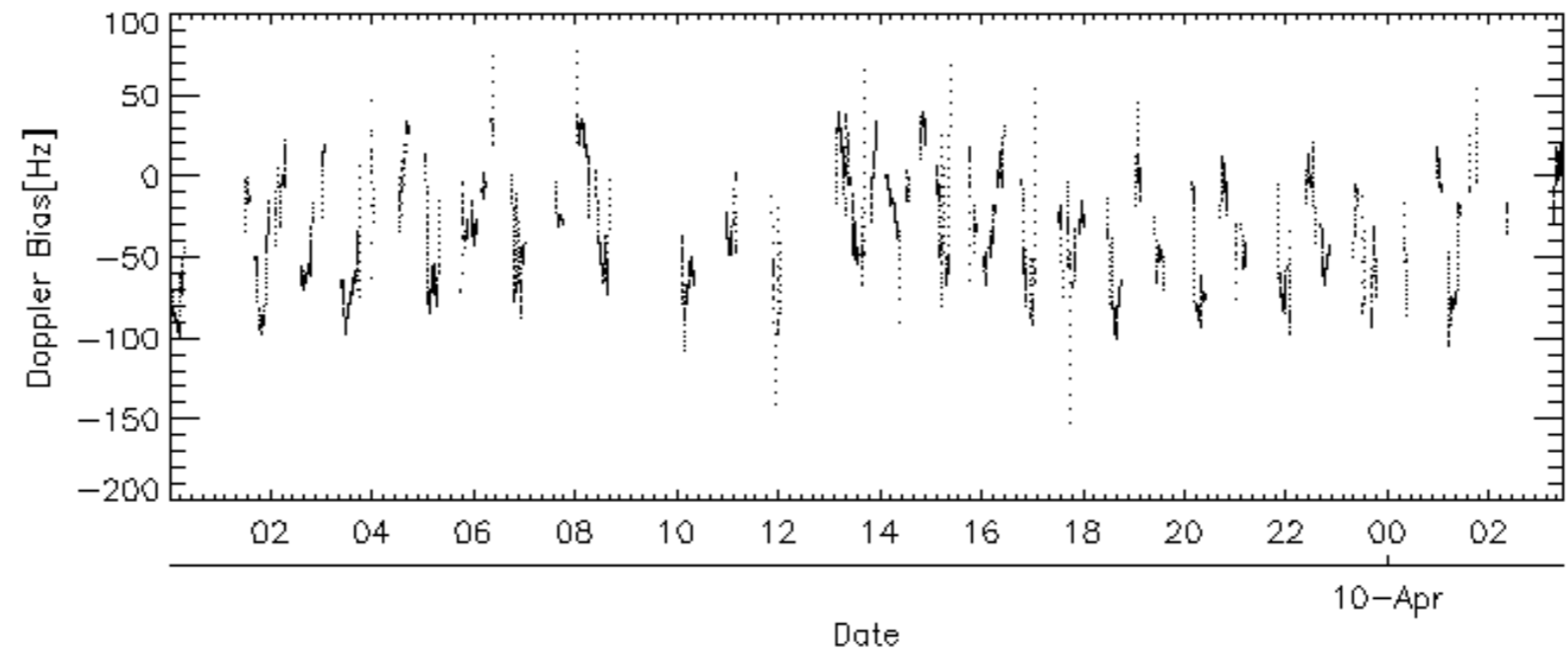
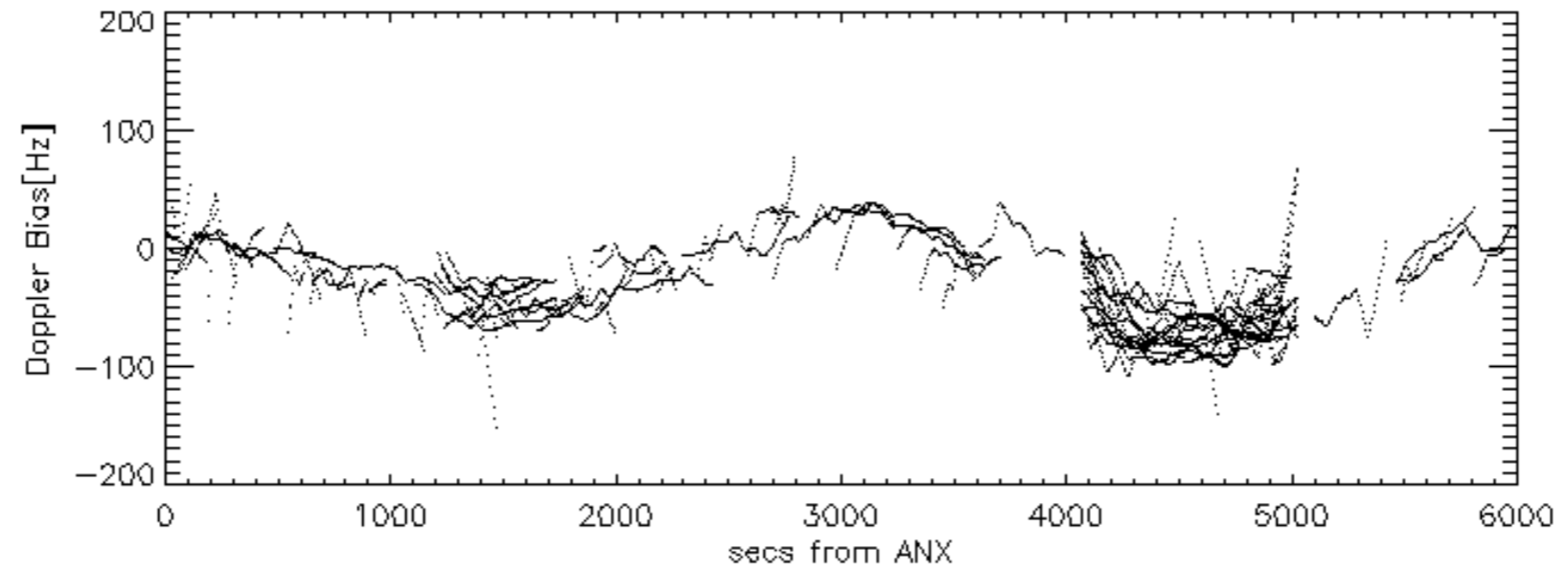
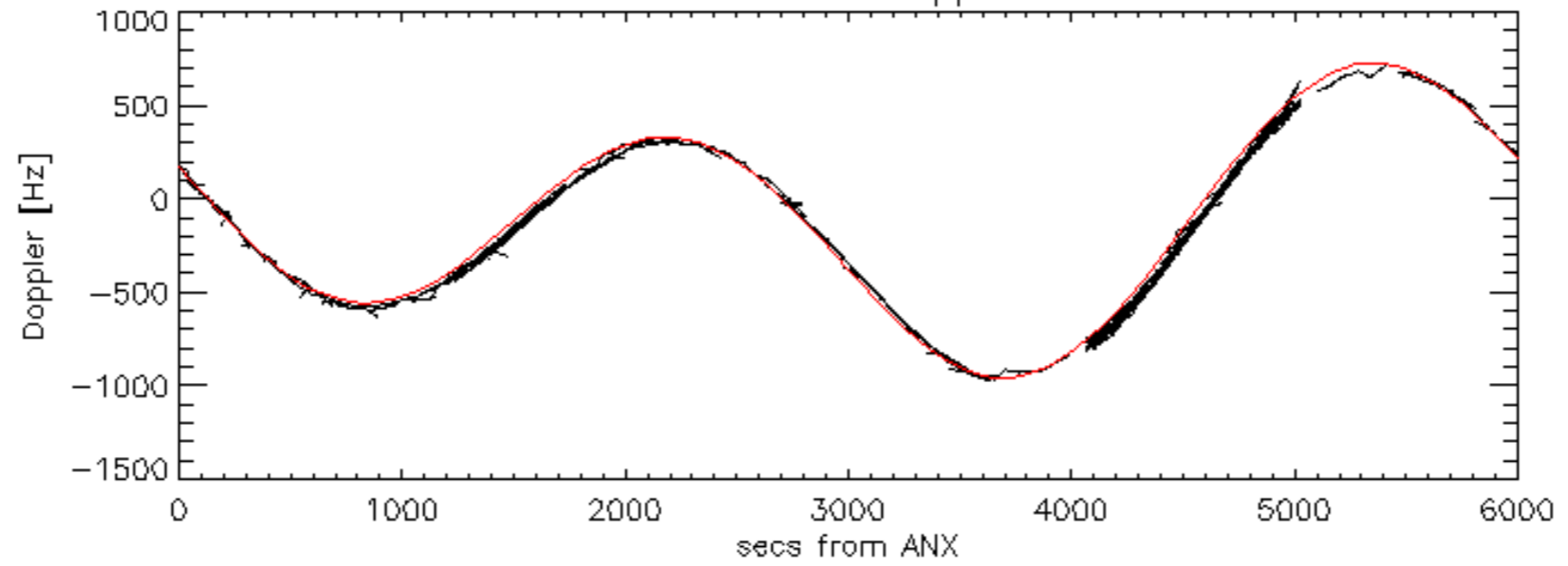


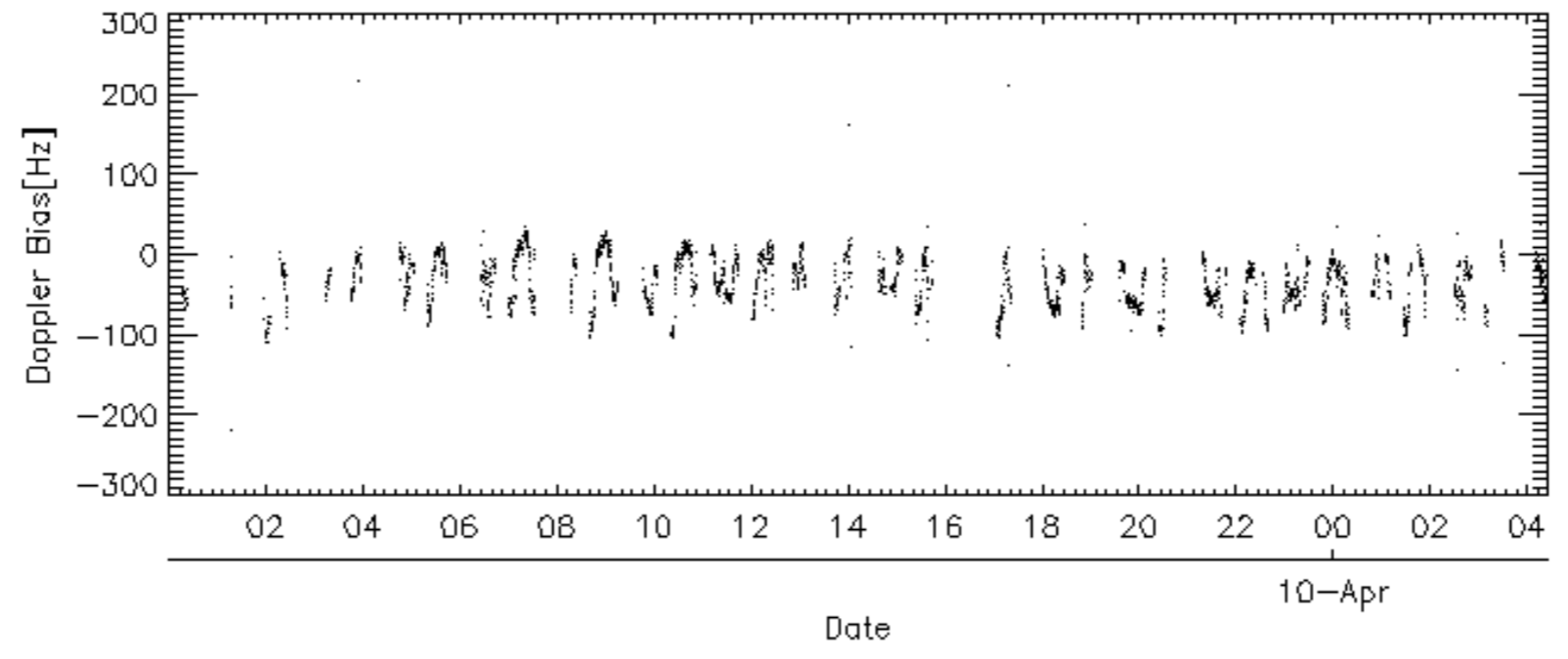
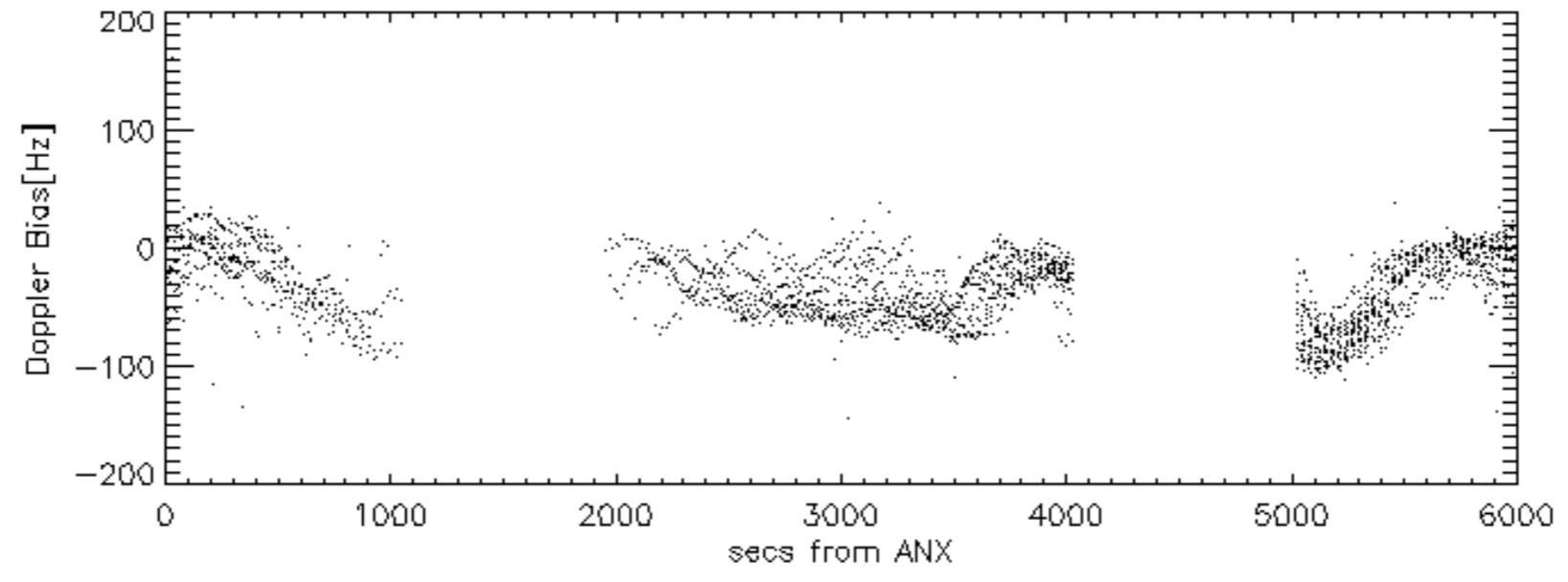
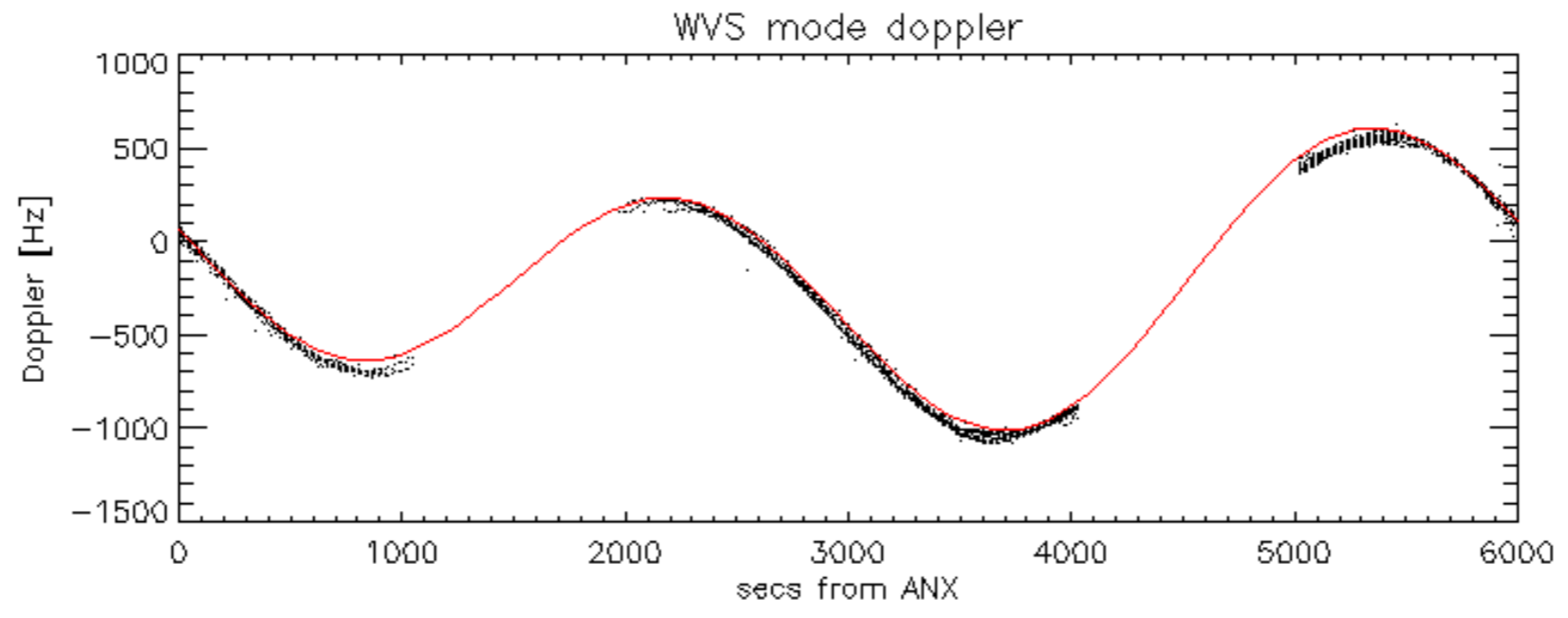
Doppler 'WVS' 'IS2' descending





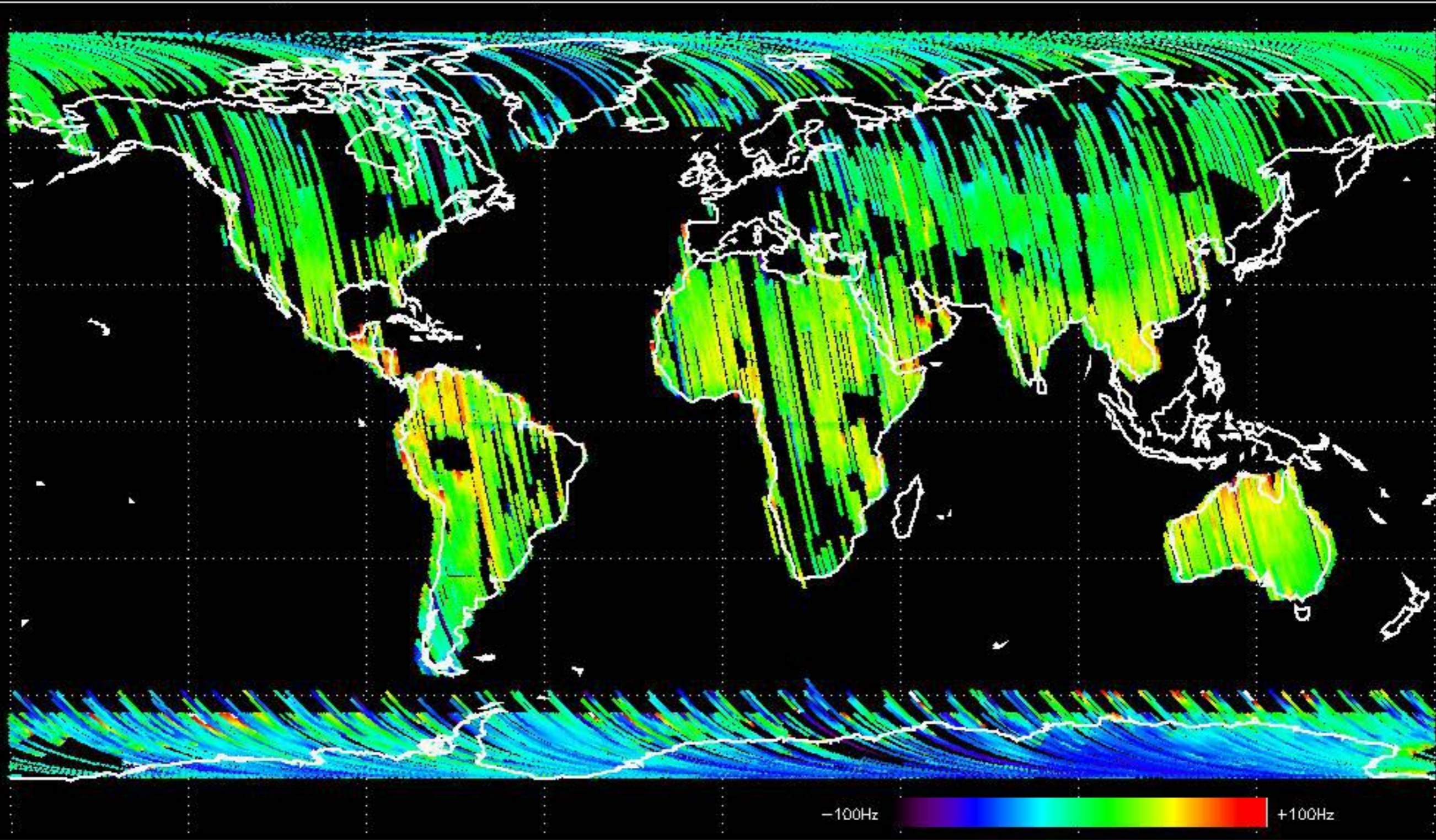
GM1 mode doppler





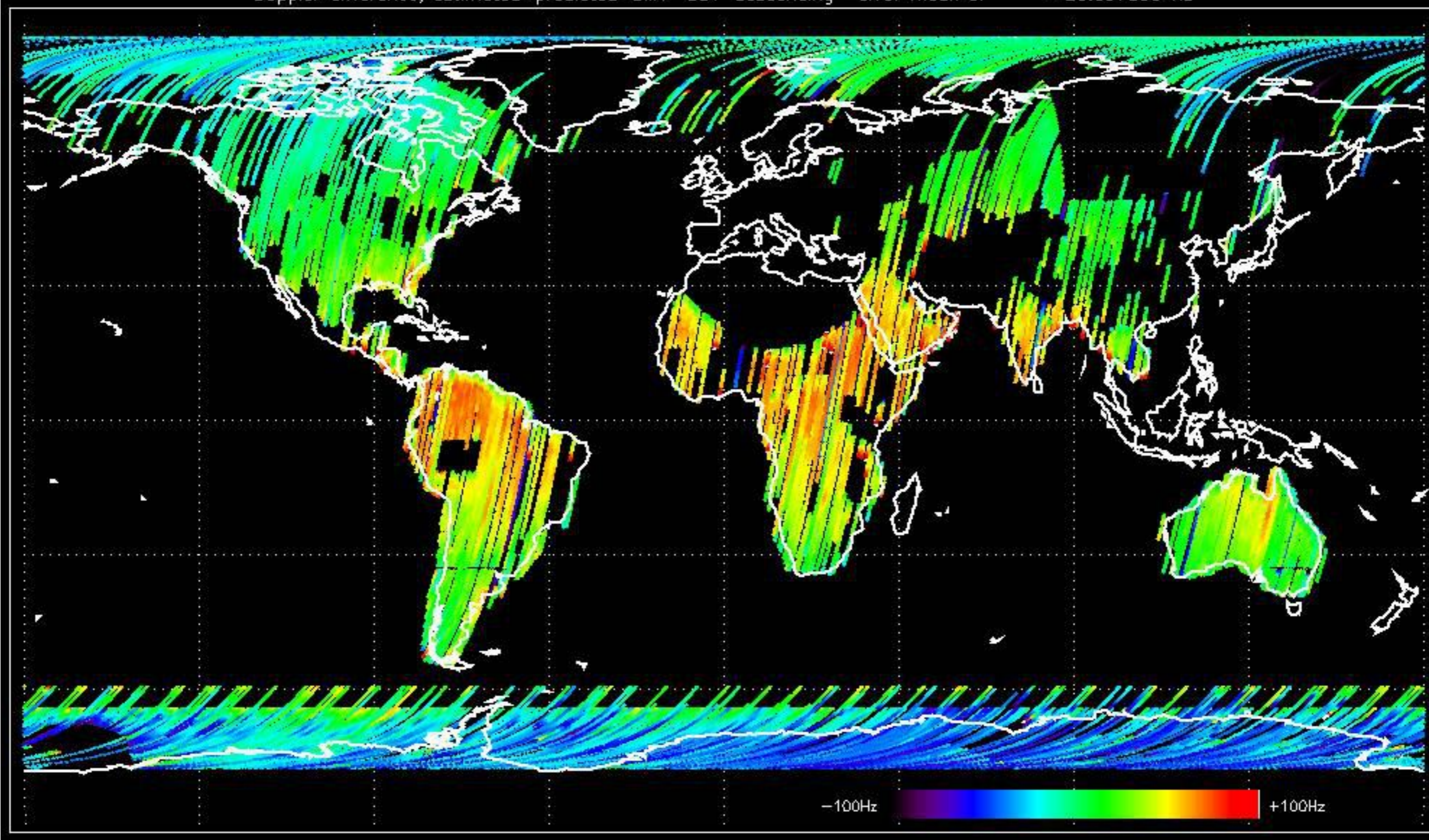


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -34.954795 Hz



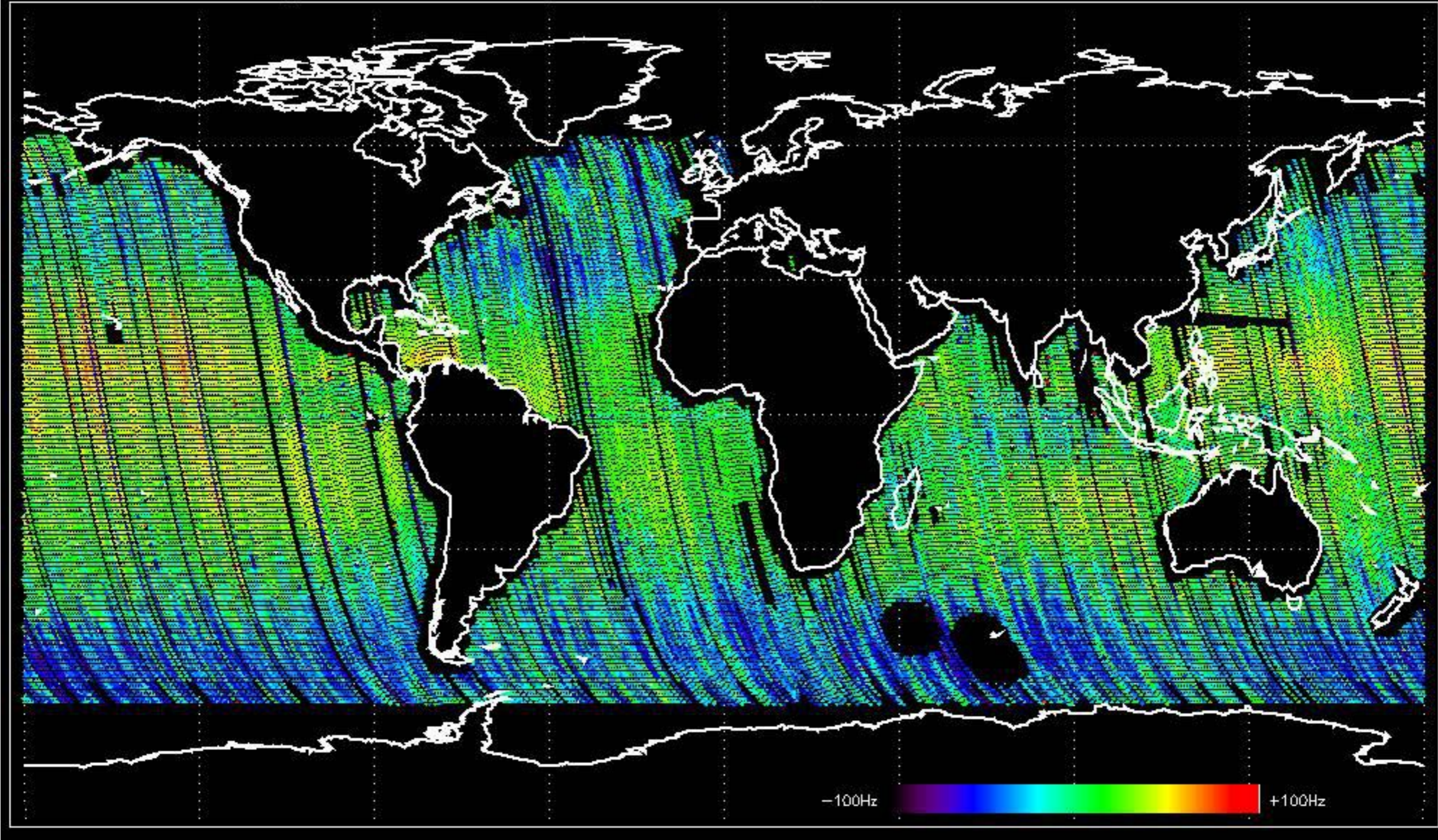


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.697590 Hz



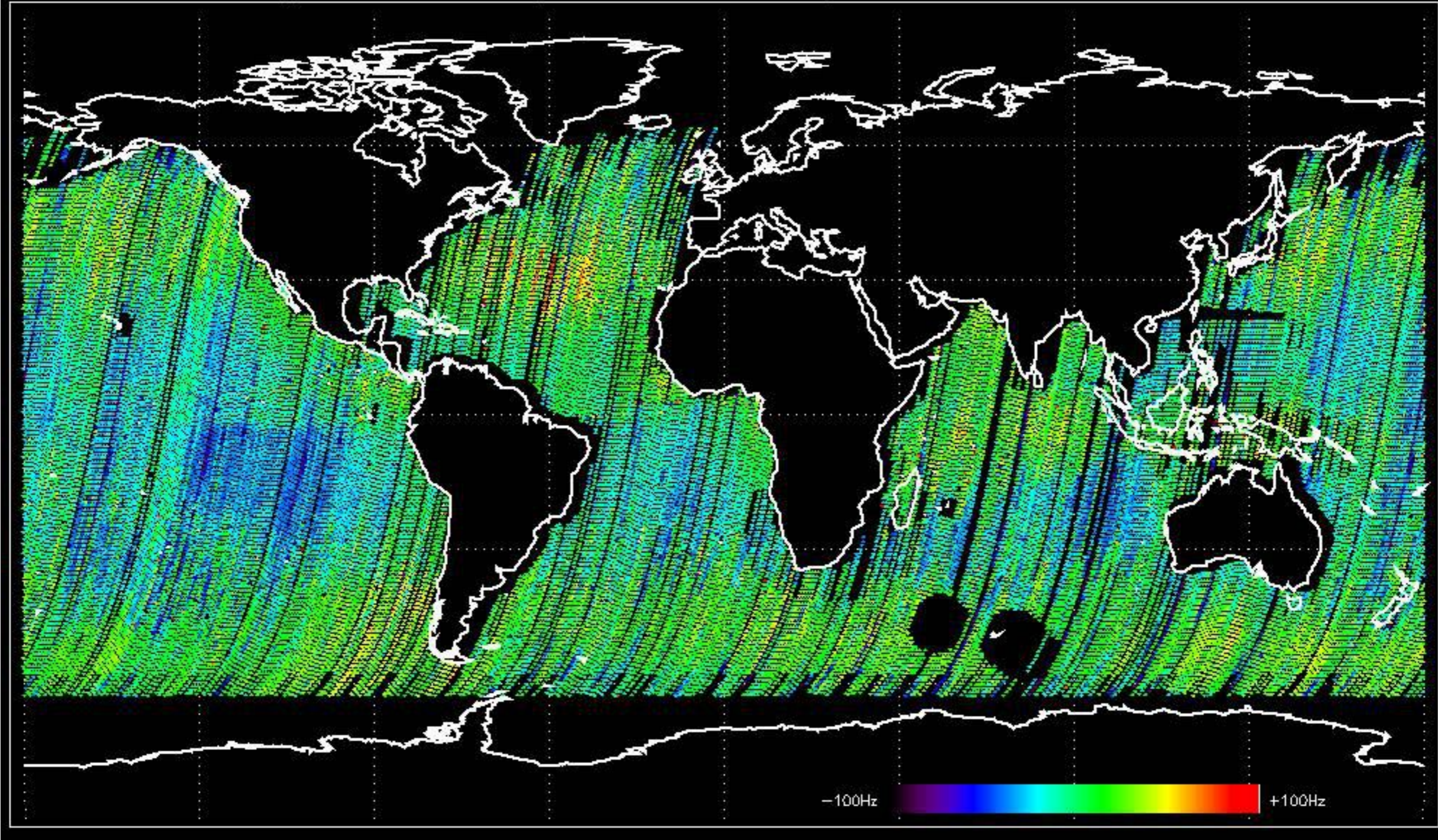


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -38.659744 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.285578 Hz





No anomalies observed on available MS products:

No anomalies observed.





















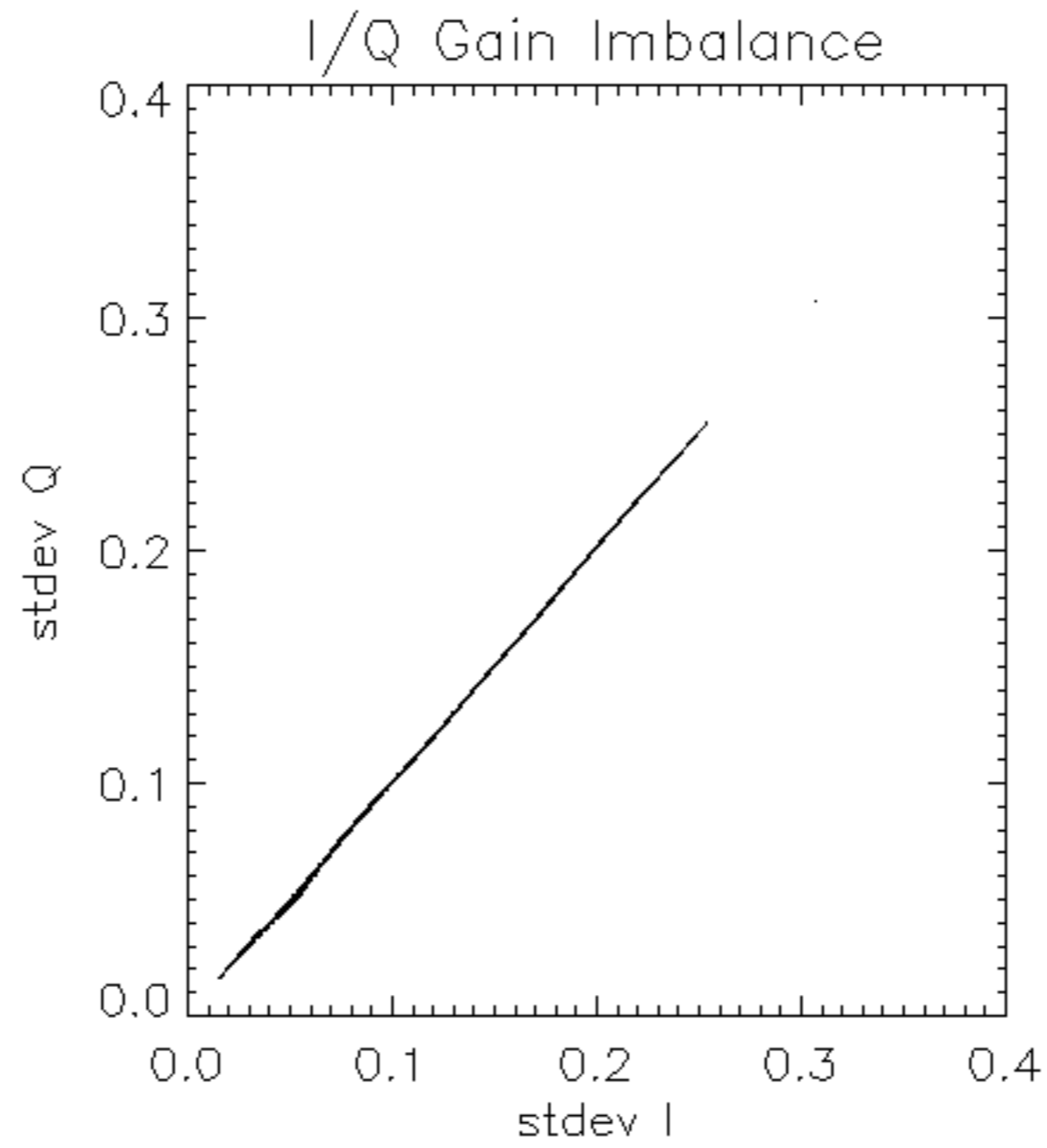


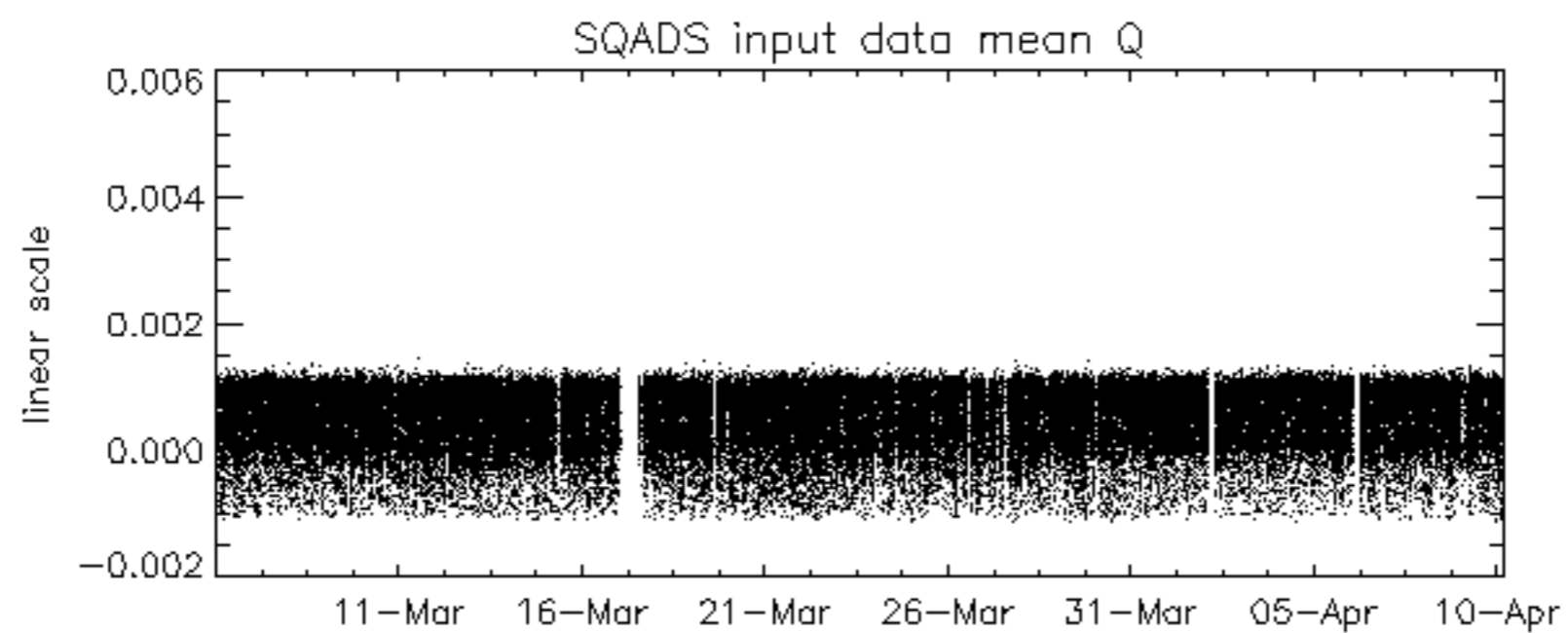
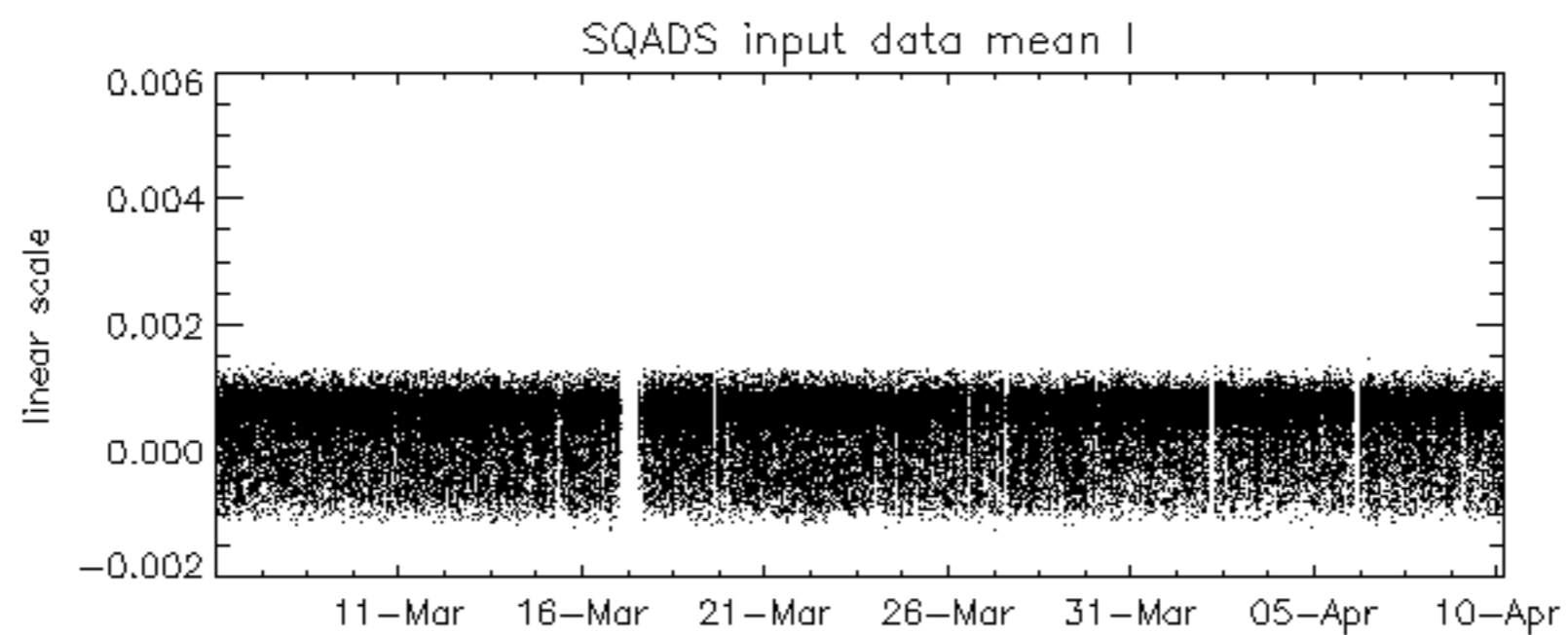
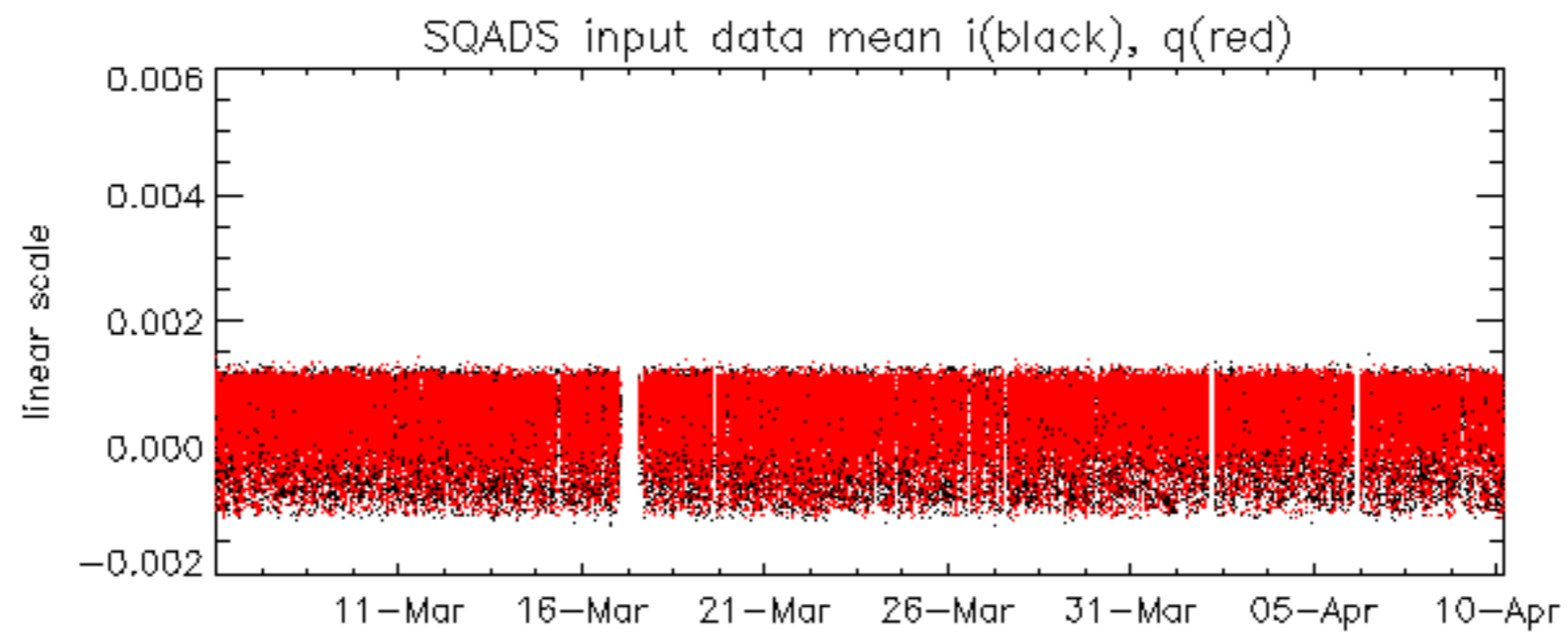




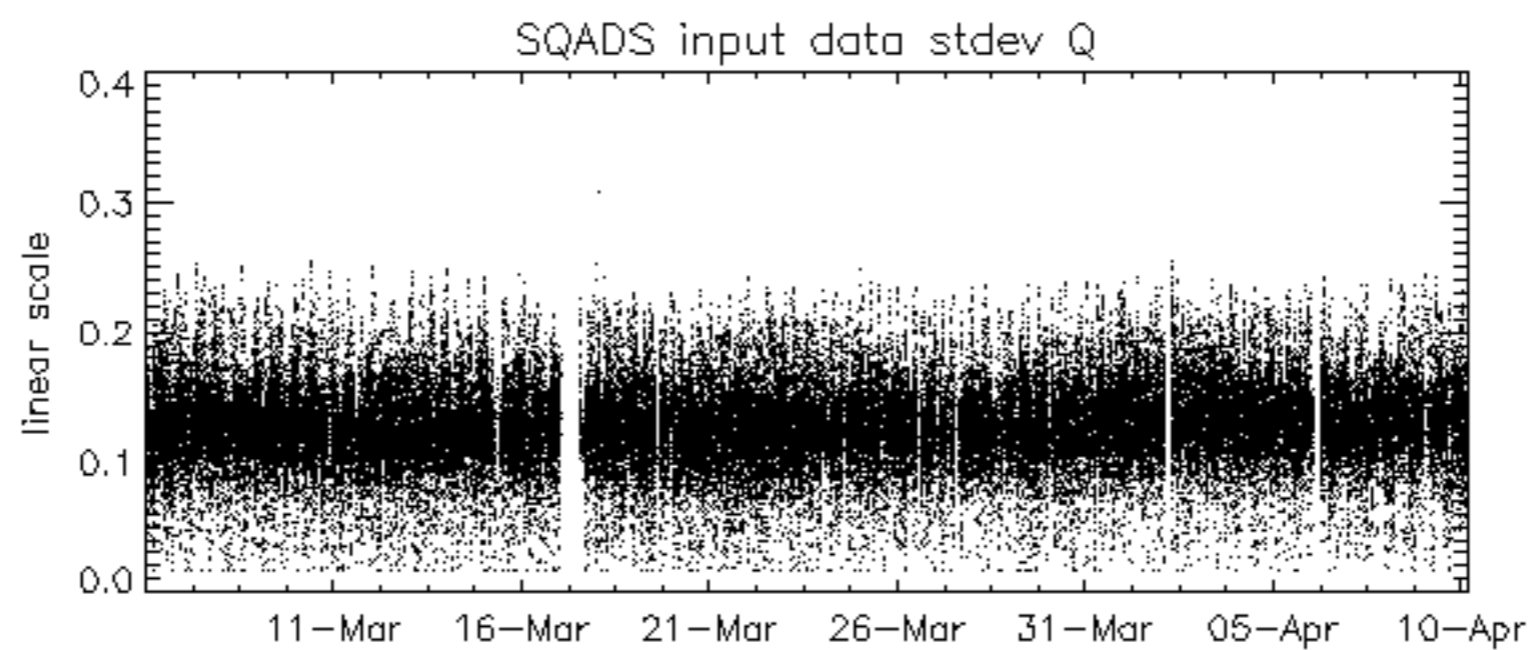
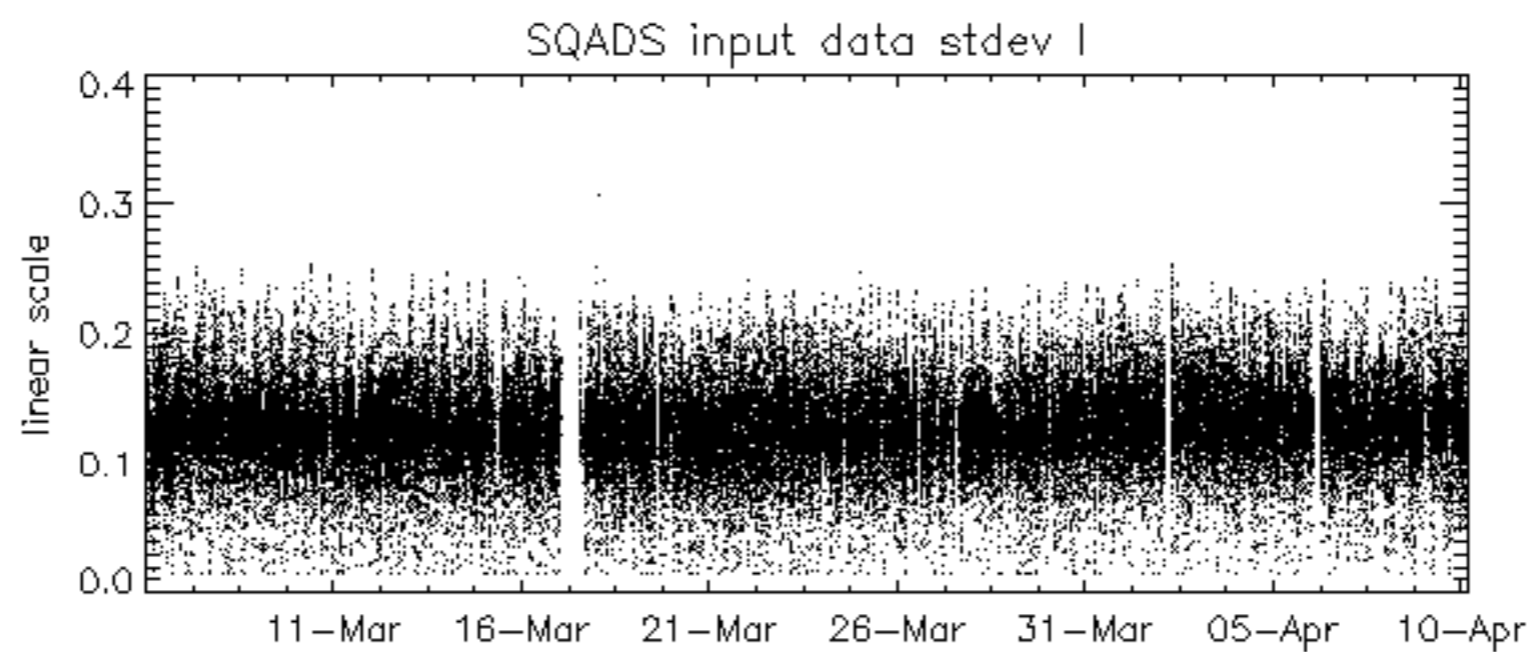
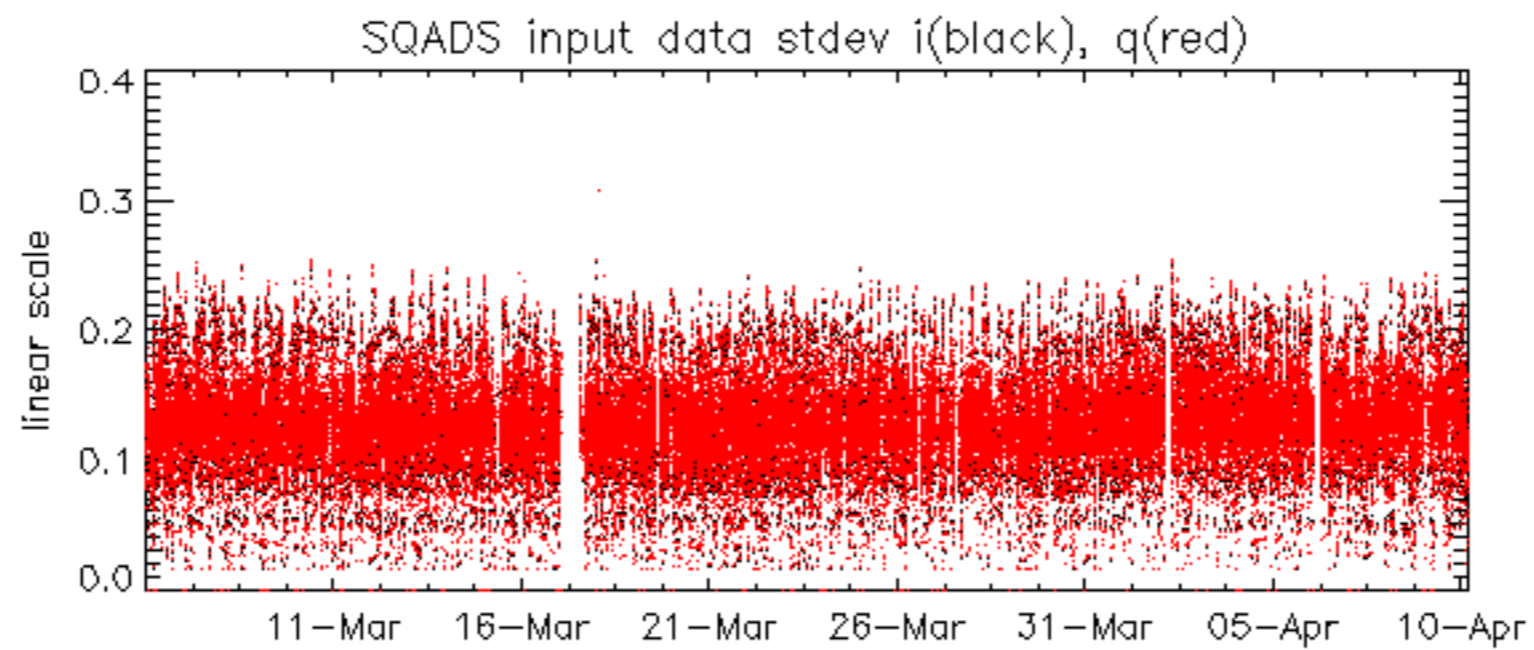


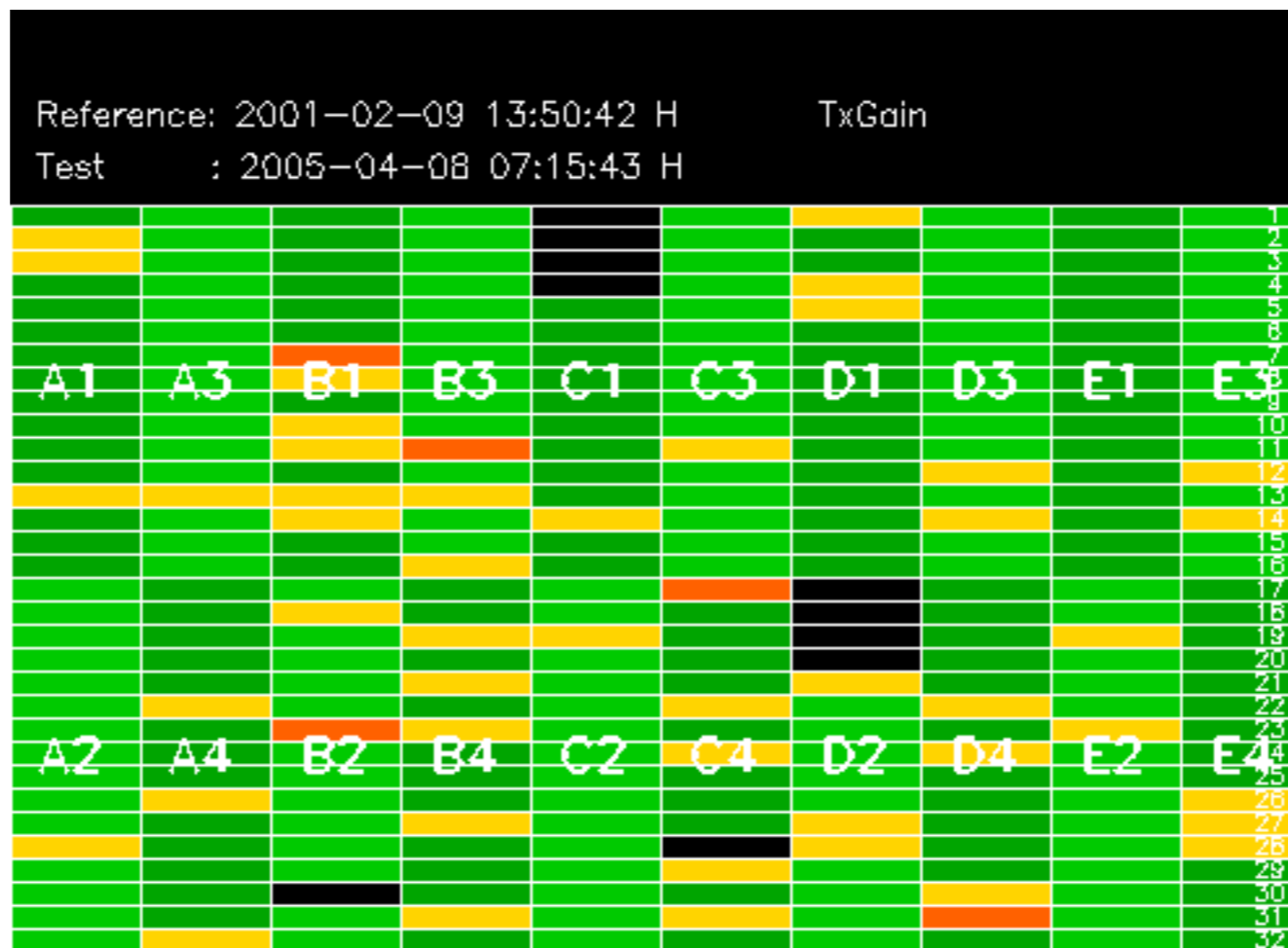






















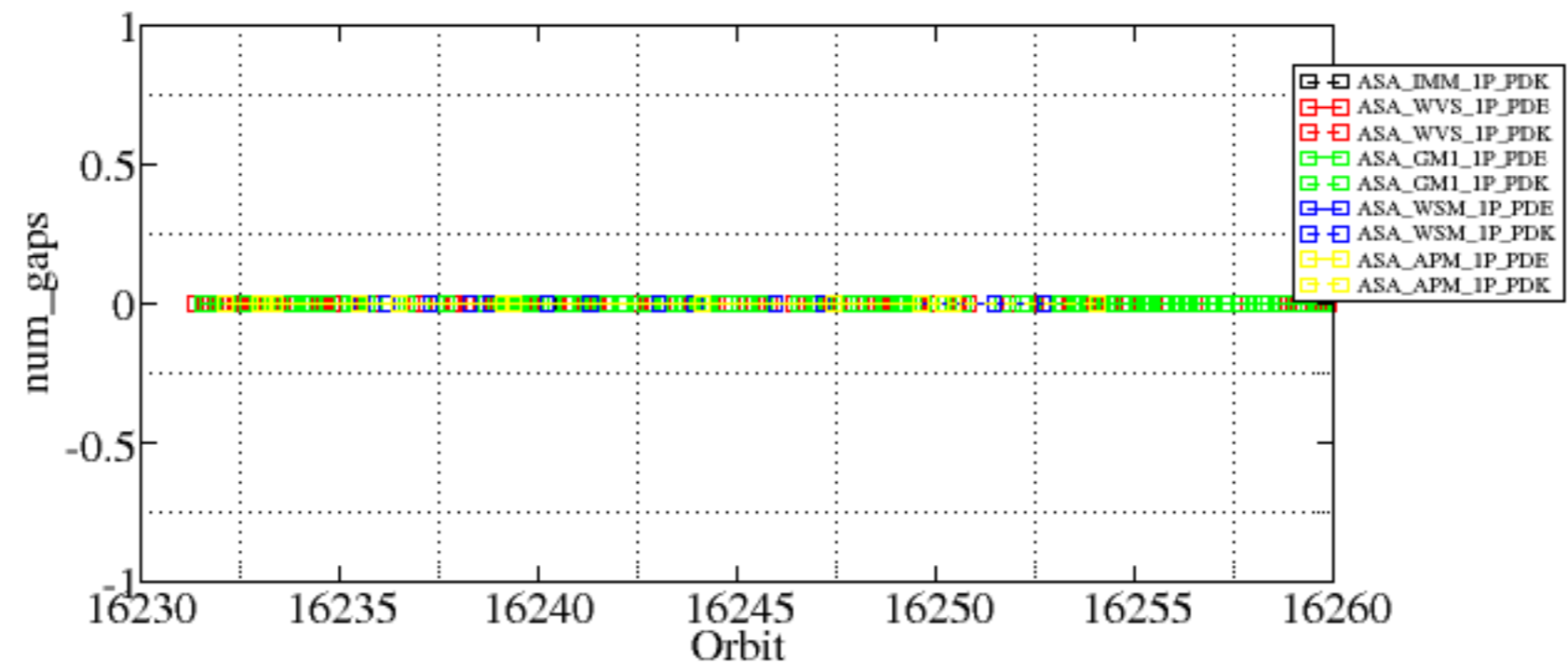




Summary of analysis for the last 3 days 2005040[890]

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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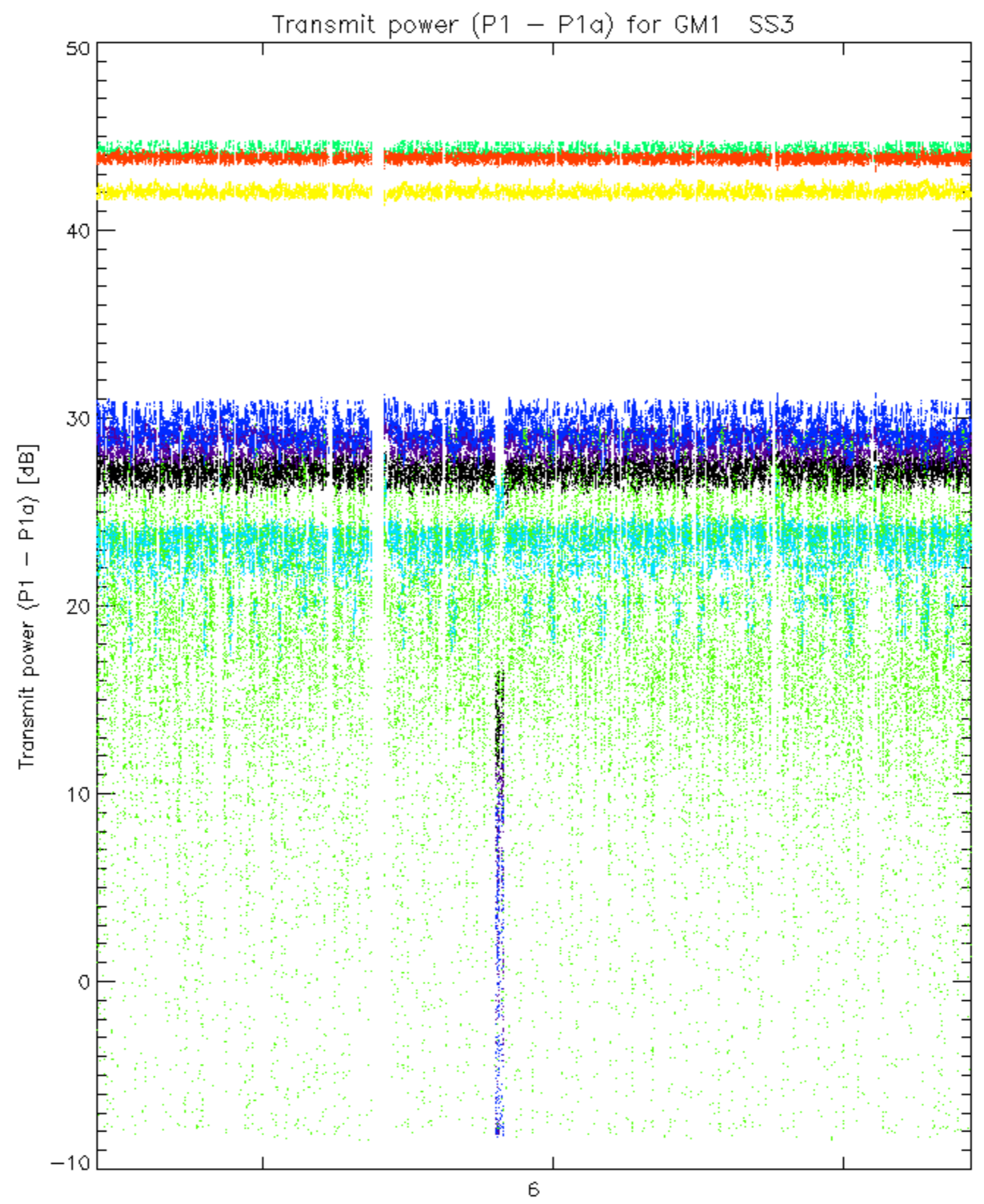






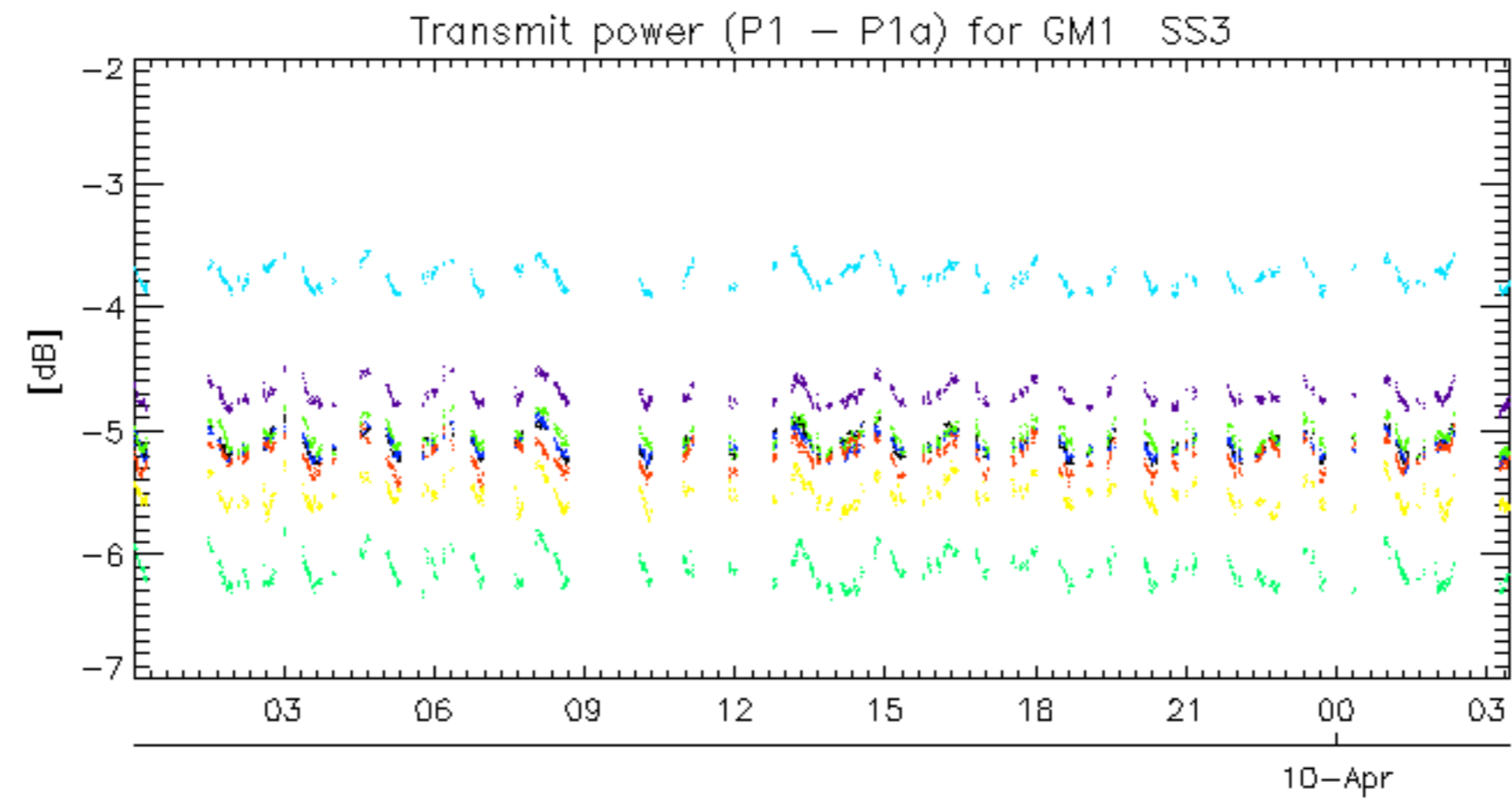




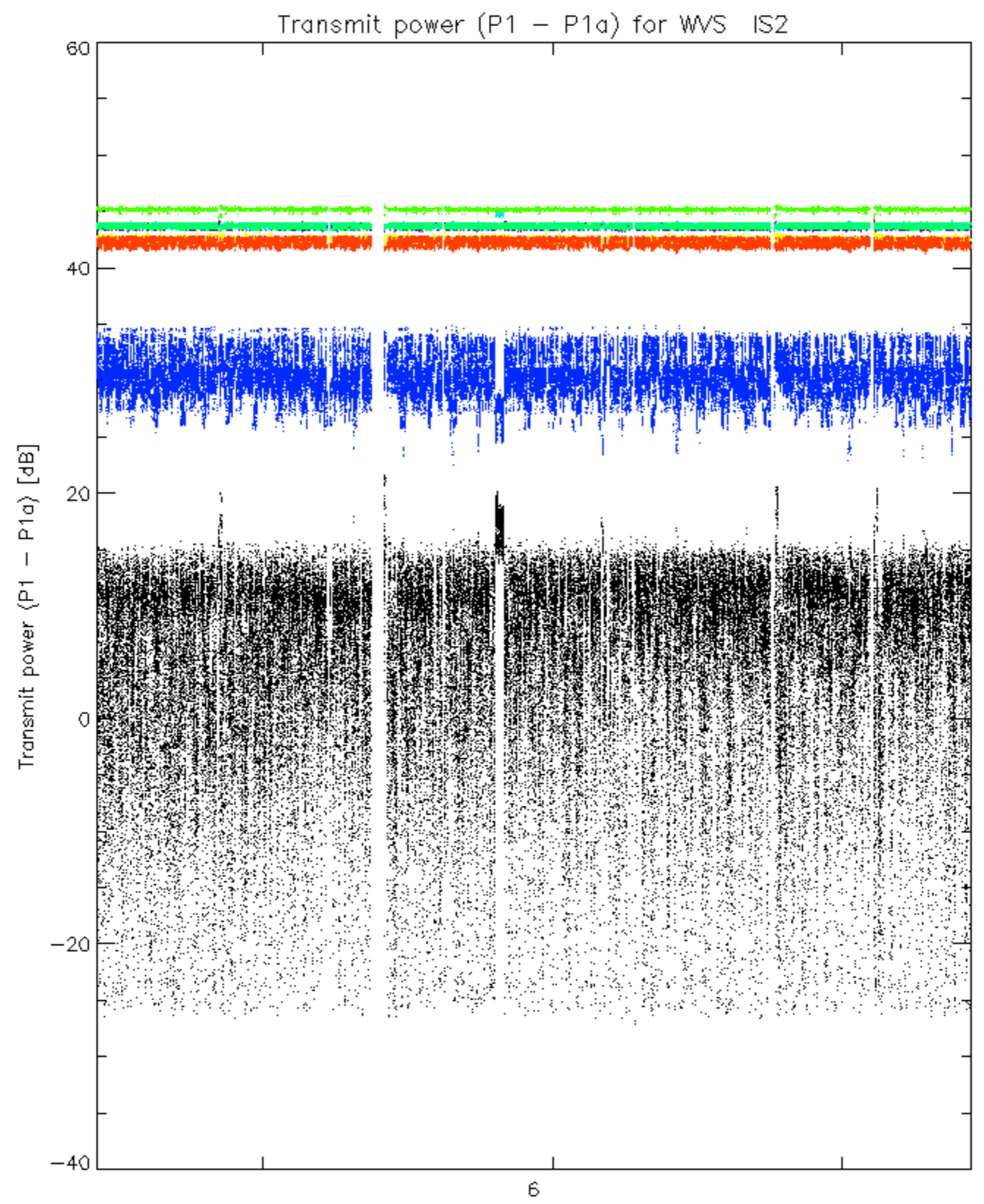


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

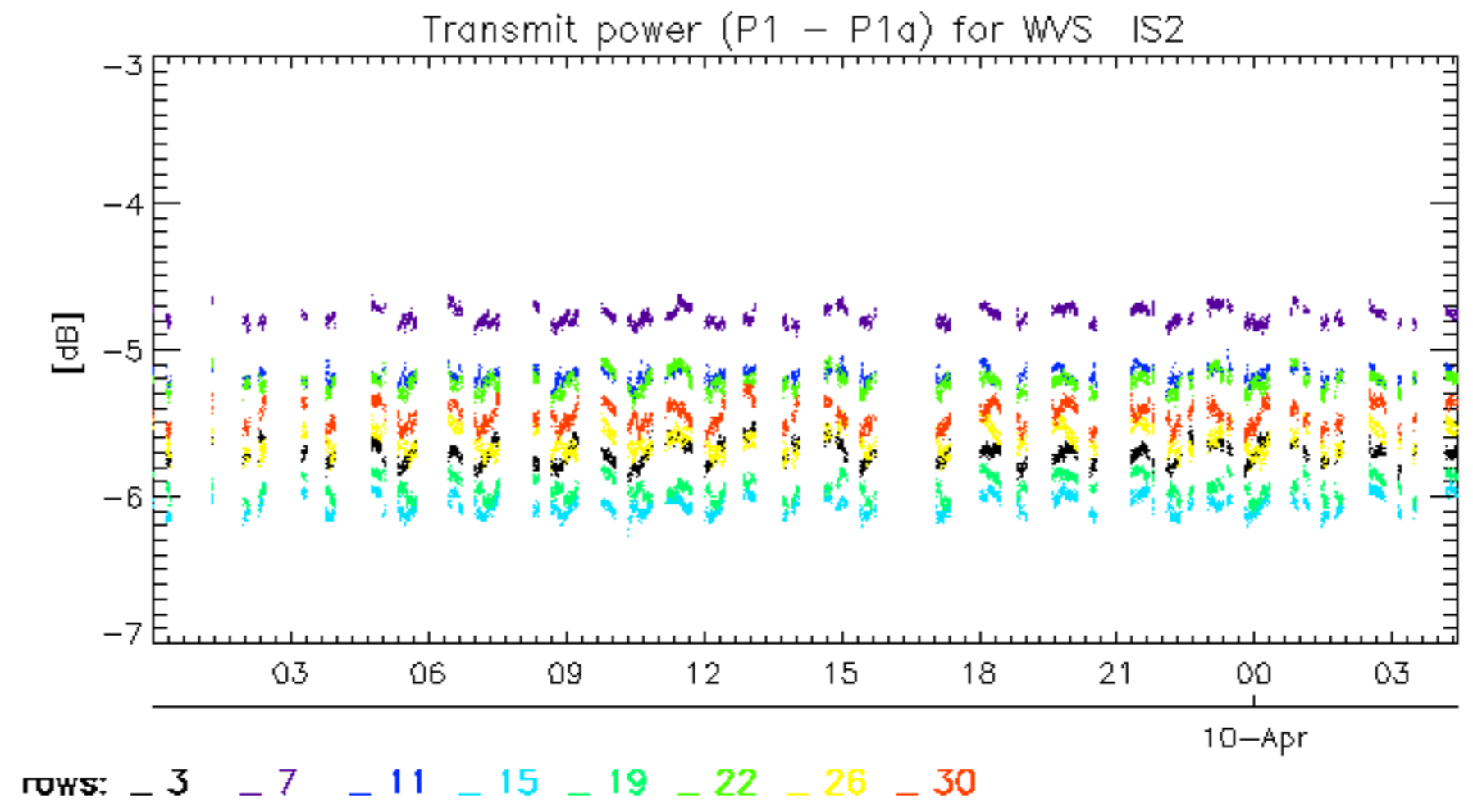




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



No unavailabilities during the reported period.