

# PRELIMINARY REPORT OF 061223

last update on Sat Dec 23 16:24:55 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 2006-12-22 00:00:00 to 2006-12-23 16:24:55

PDHS-K
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AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	41	52	43	14	52
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	41	52	43	14	52
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	52	43	14	52
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	41	52	43	14	52

## 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	20061220 170201
H	20061221 062648

### 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"/>

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## 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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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	-3.965834	0.007989	0.000965
7	P1	-3.147542	0.024562	0.030724
11	P1	-4.121393	0.026752	0.020073
15	P1	-6.323987	0.015972	-0.042326
19	P1	-3.647475	0.005965	-0.060059
22	P1	-4.655215	0.014024	-0.013481
26	P1	-3.957751	0.009452	-0.025069
30	P1	-5.890372	0.009424	-0.030731
3	P1	-16.551662	0.252736	-0.060299
7	P1	-17.293245	0.188449	0.013120
11	P1	-17.190239	0.474508	0.044492
15	P1	-13.062890	0.138093	0.053632
19	P1	-14.983327	0.094019	-0.092421
22	P1	-15.812295	0.557389	0.021736
26	P1	-15.075613	0.184490	-0.055395
30	P1	-17.507563	0.476037	-0.023505

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.811438	0.095789	0.056533
7	P2	-21.728979	0.095717	0.050104
11	P2	-15.599837	0.105652	0.120686
15	P2	-7.118777	0.110183	0.033728
19	P2	-9.192719	0.107230	-0.005564
22	P2	-18.236483	0.100030	0.031420
26	P2	-16.583906	0.114625	-0.055240
30	P2	-19.464634	0.090446	0.023455

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.244722	0.008955	0.020845
7	P3	-8.244722	0.008955	0.020845
11	P3	-8.244722	0.008955	0.020845

15	P3	-8.244722	0.008955	0.020845
19	P3	-8.244722	0.008955	0.020845
22	P3	-8.244722	0.008955	0.020845
26	P3	-8.244727	0.008955	0.020816
30	P3	-8.244727	0.008955	0.020816

#### 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	-3.918288	0.012851	-0.020737
7	P1	-2.480104	0.014712	0.018426
11	P1	-2.852187	0.017856	-0.022682
15	P1	-3.687906	0.031795	-0.036251
19	P1	-3.544002	0.017521	-0.022506
22	P1	-5.026933	0.023533	-0.021322
26	P1	-6.027099	0.027593	-0.019923
30	P1	-5.345750	0.038308	-0.000798
3	P1	-11.745560	0.082212	-0.011117
7	P1	-10.059624	0.093253	-0.070635
11	P1	-10.334006	0.135364	-0.100123
15	P1	-10.709141	0.116201	-0.066821
19	P1	-15.729772	0.119696	0.002201
22	P1	-21.594366	1.444418	0.154570
26	P1	-16.072620	0.336860	0.105160
30	P1	-17.879818	0.368151	-0.091771

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.469990	0.126893	0.006055
7	P2	-22.233532	0.256568	0.072078
11	P2	-10.901800	0.149681	0.145643
15	P2	-4.990980	0.278116	0.027563
19	P2	-6.967905	0.284388	-0.014422
22	P2	-8.256869	0.145964	0.010075
26	P2	-24.323729	0.194356	0.022635
30	P2	-21.948618	0.172308	-0.005630

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.093396	0.004777	0.022170
7	P3	-8.093395	0.004758	0.022094
11	P3	-8.093375	0.004773	0.021877
15	P3	-8.093204	0.004767	0.022416
19	P3	-8.093288	0.004775	0.021929
22	P3	-8.093269	0.004762	0.022411
26	P3	-8.093414	0.004774	0.022003
30	P3	-8.093297	0.004757	0.021806

## 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	0.000560222
	stdev	1.68578e-07
MEAN Q	mean	0.000510360
	stdev	2.16010e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139150
	stdev	0.00119023
STDEV Q	mean	0.139542
	stdev	0.00121019



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006122[123]

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_1PNPDE20061221_152555_000001832054_00040_25144_8164.N1	0	28
ASA_WSM_1PNPDE20061223_035151_000004282054_00061_25165_0858.N1	0	2



## 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

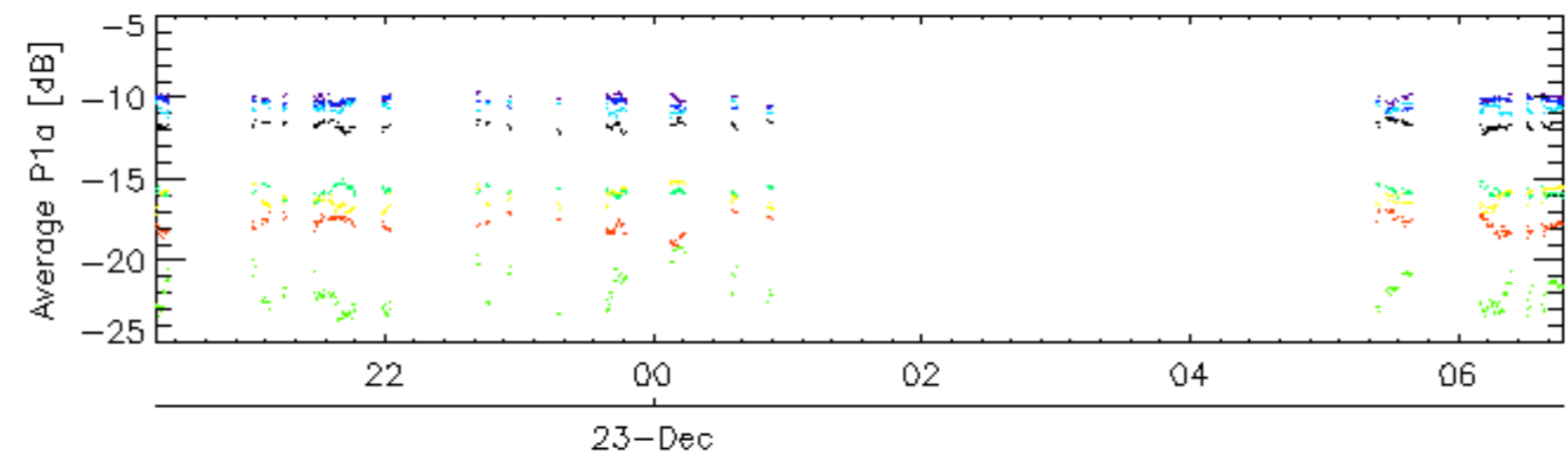
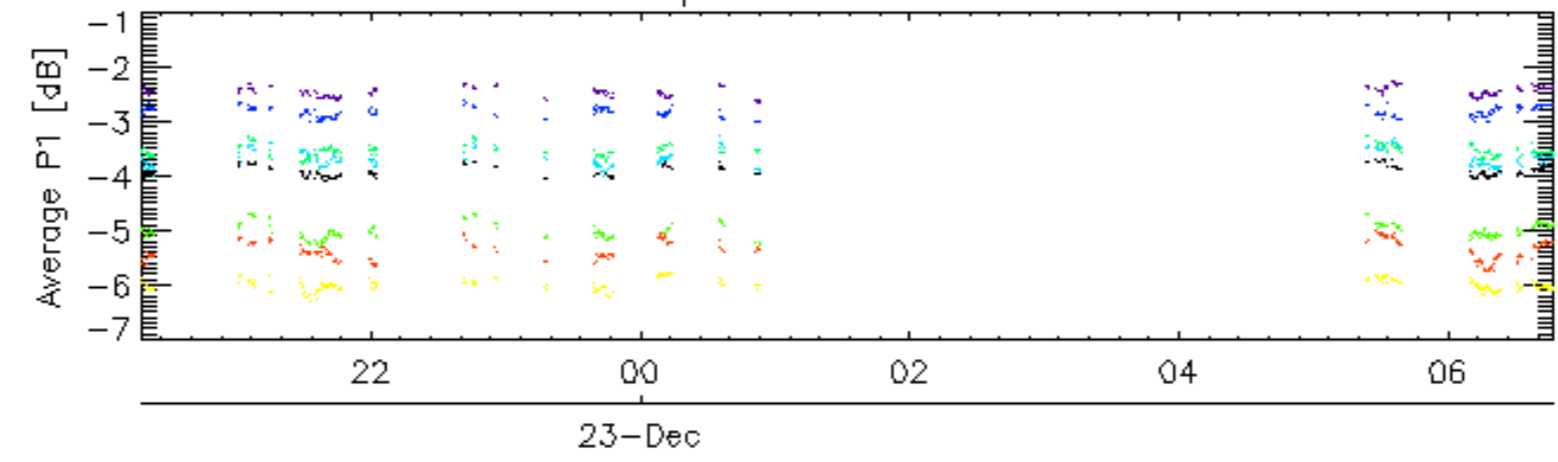
Ascending

Descending

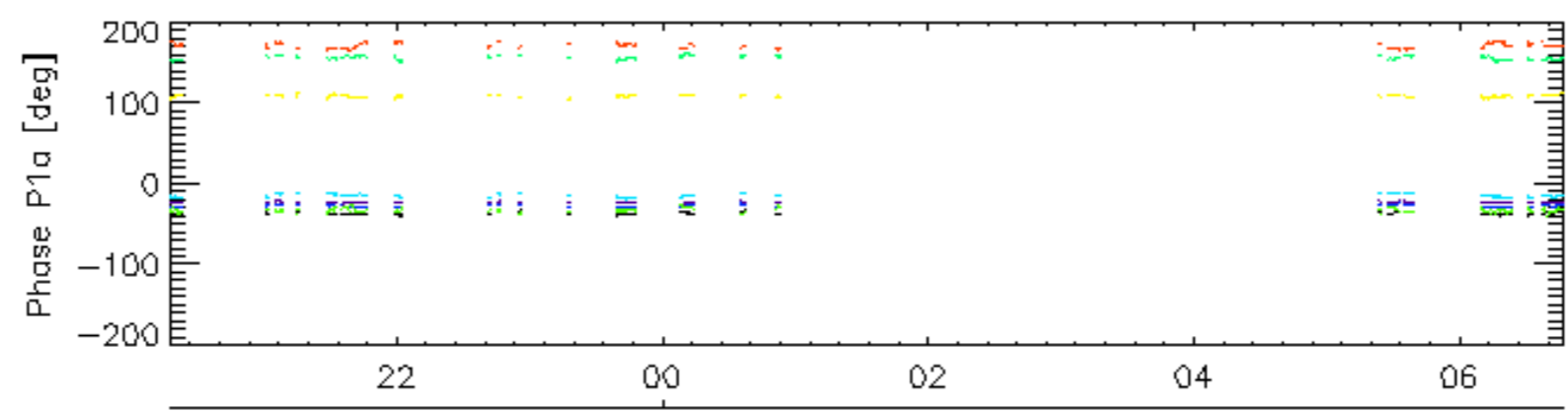
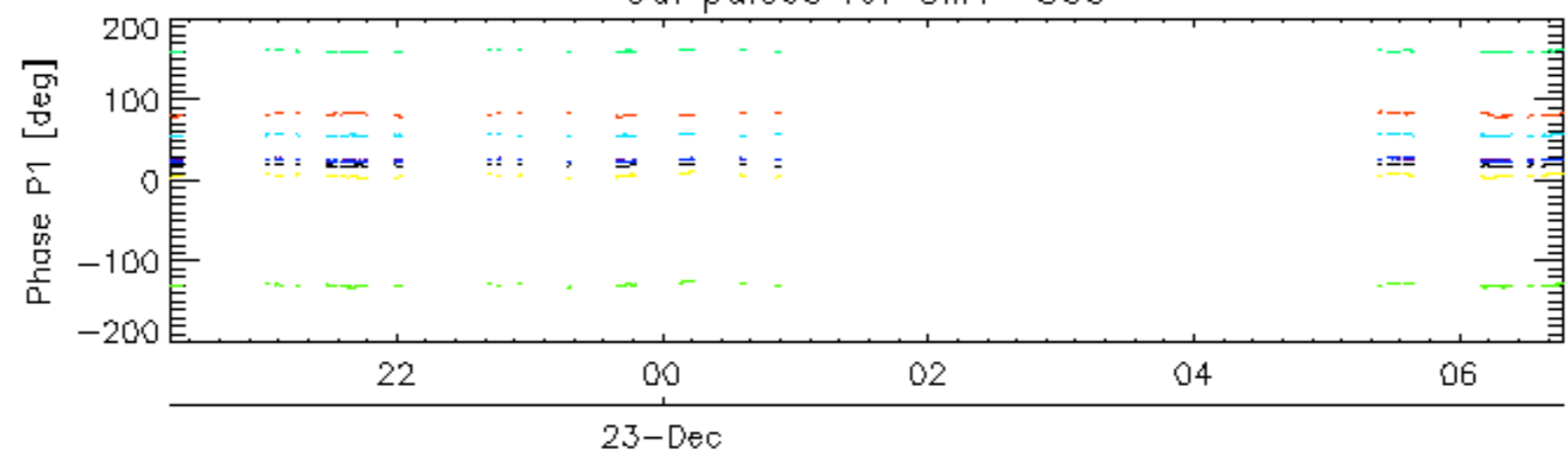
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

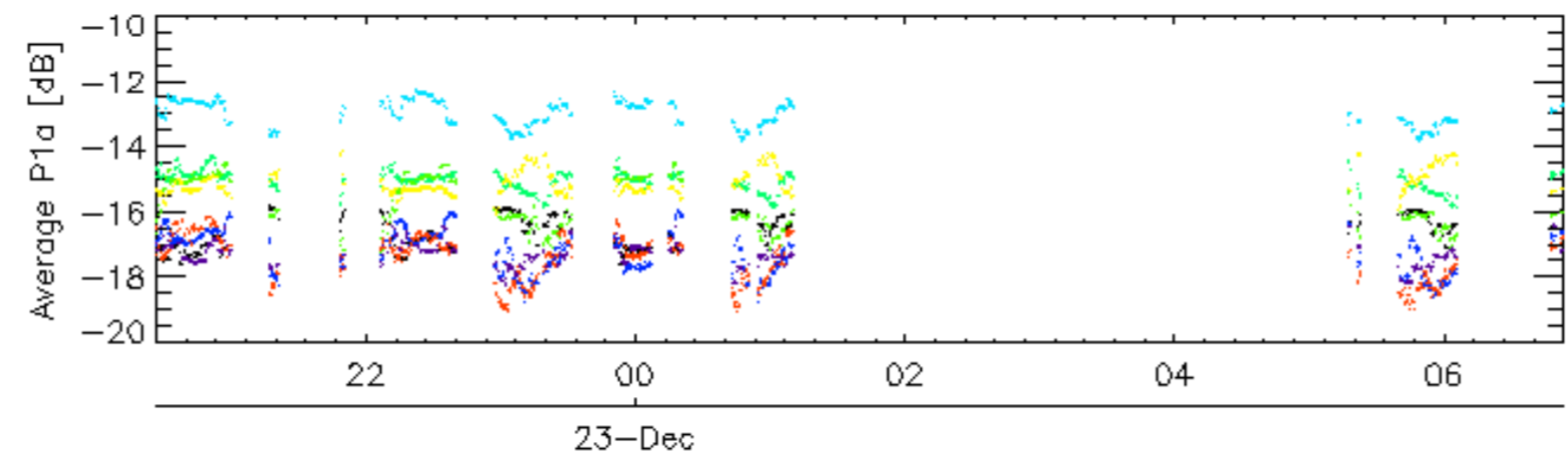
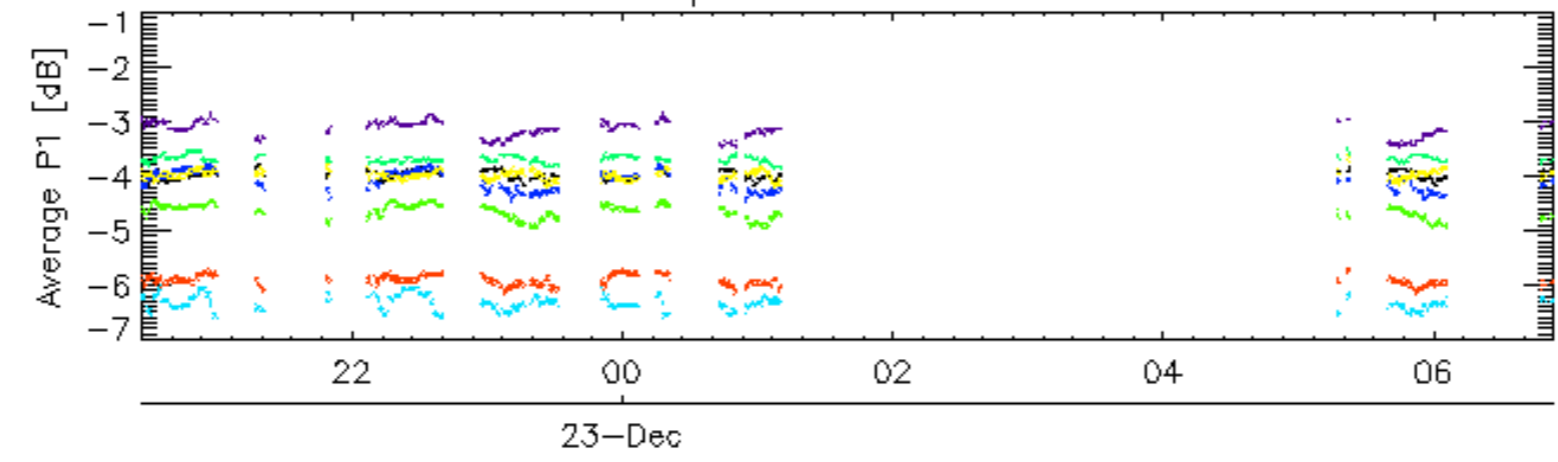


Cal pulses for GM1 SS3

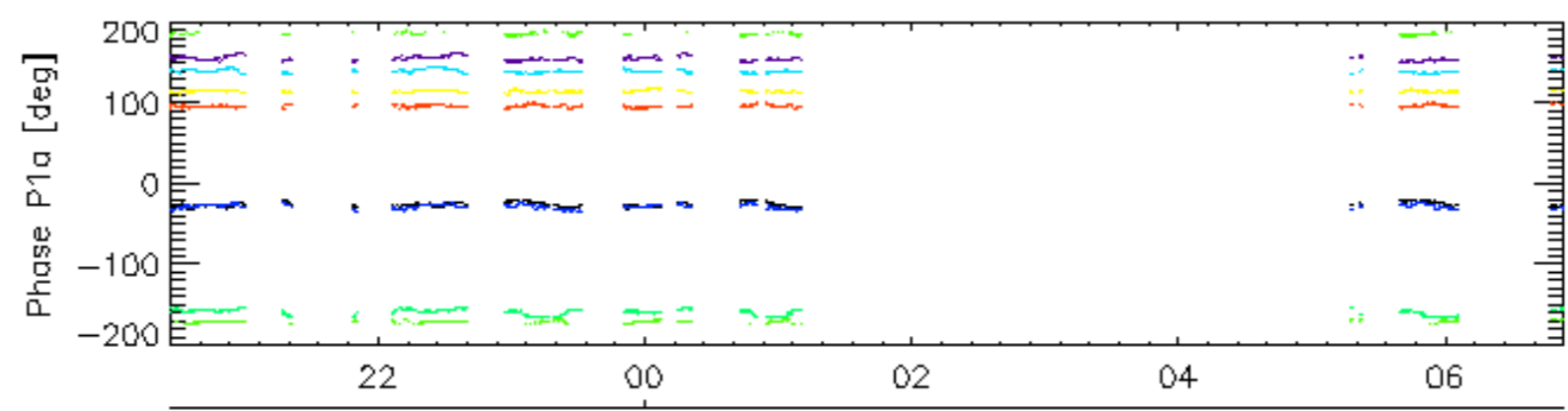
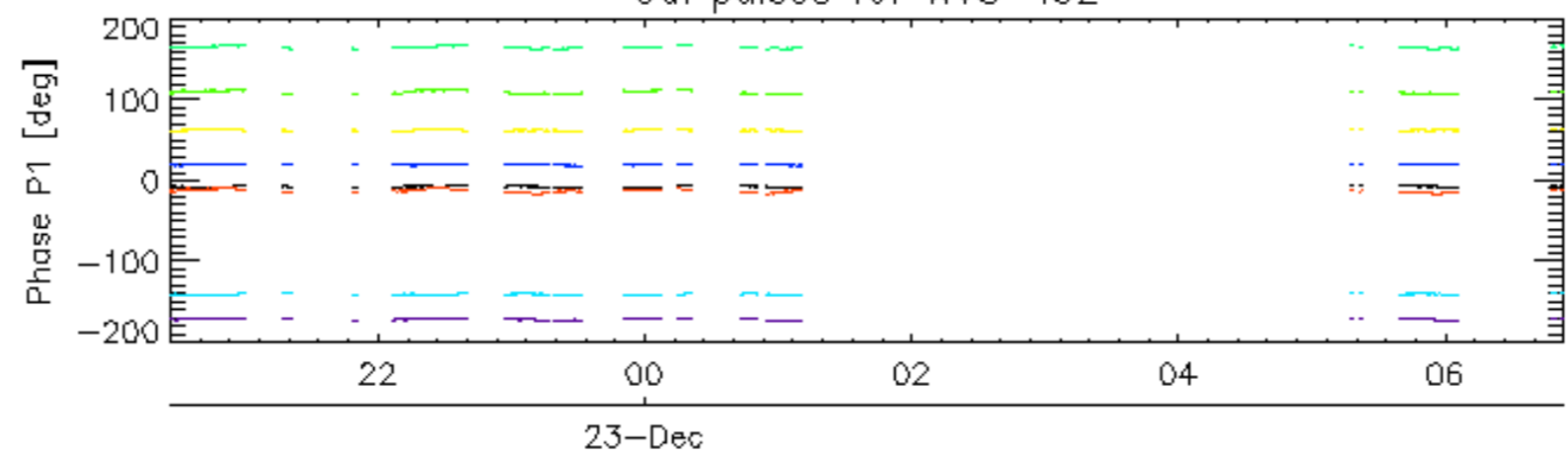


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

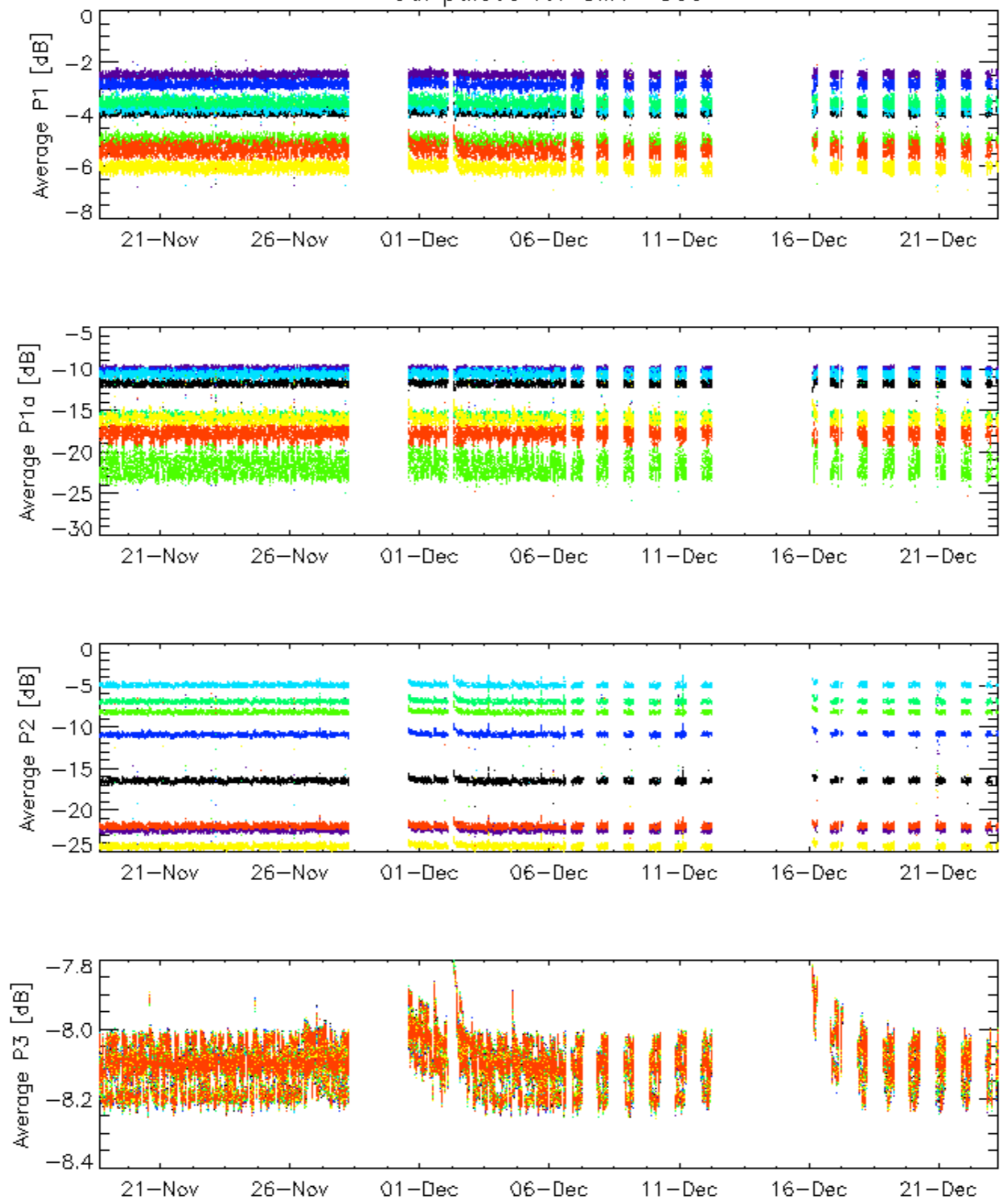


Cal pulses for WVS IS2



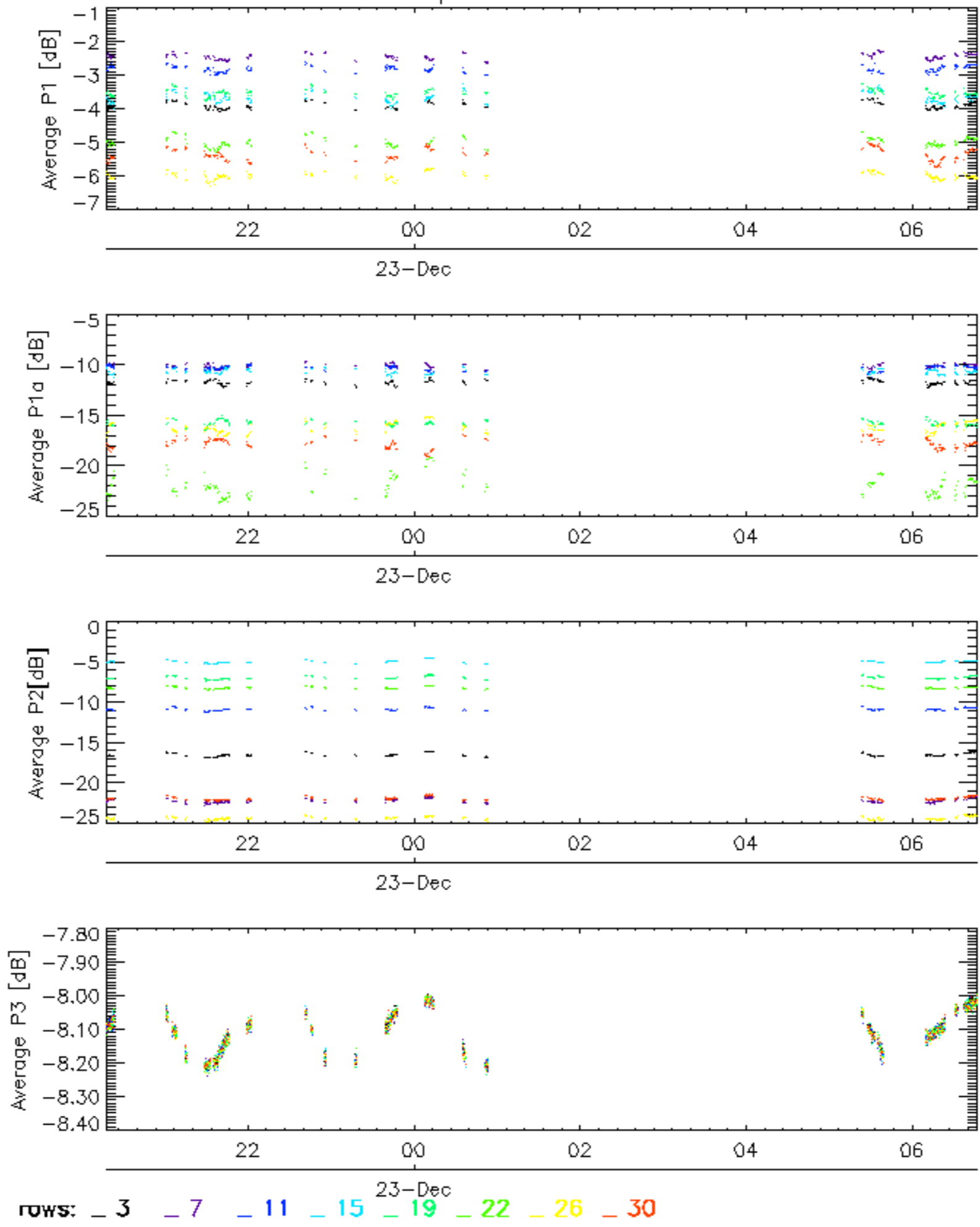
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

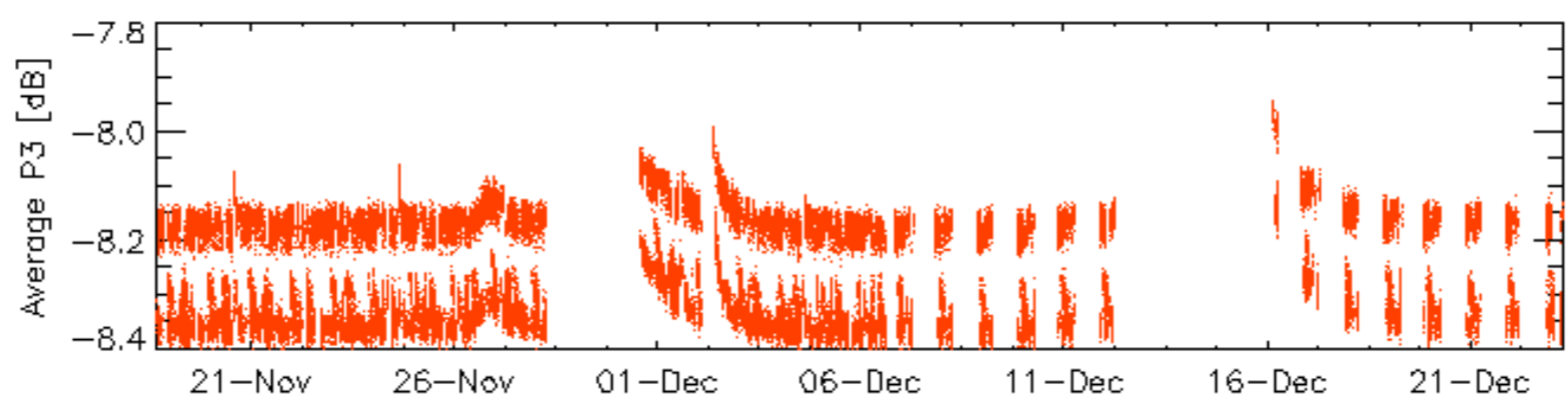
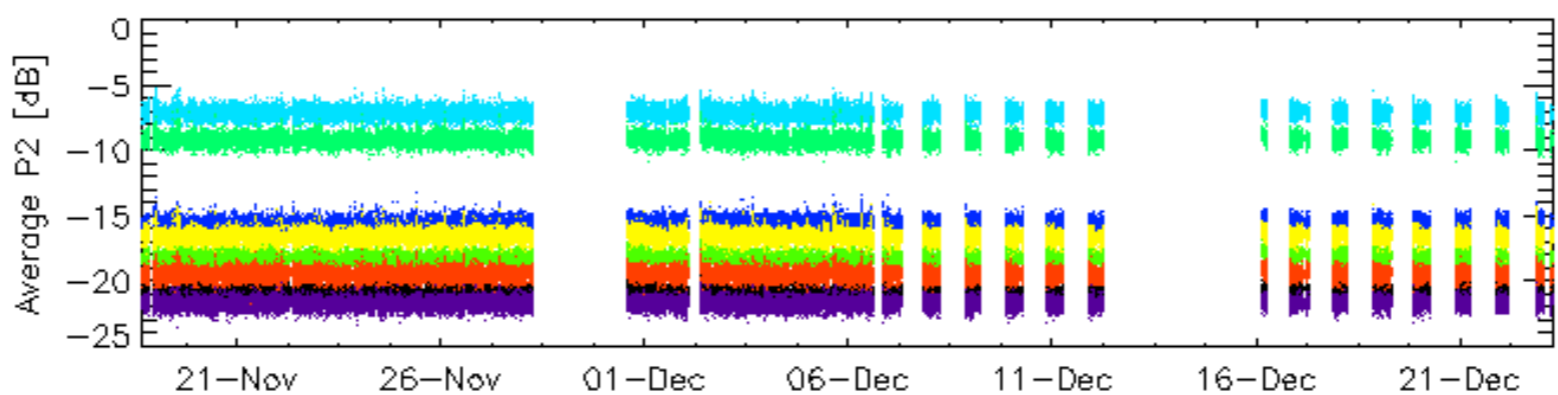
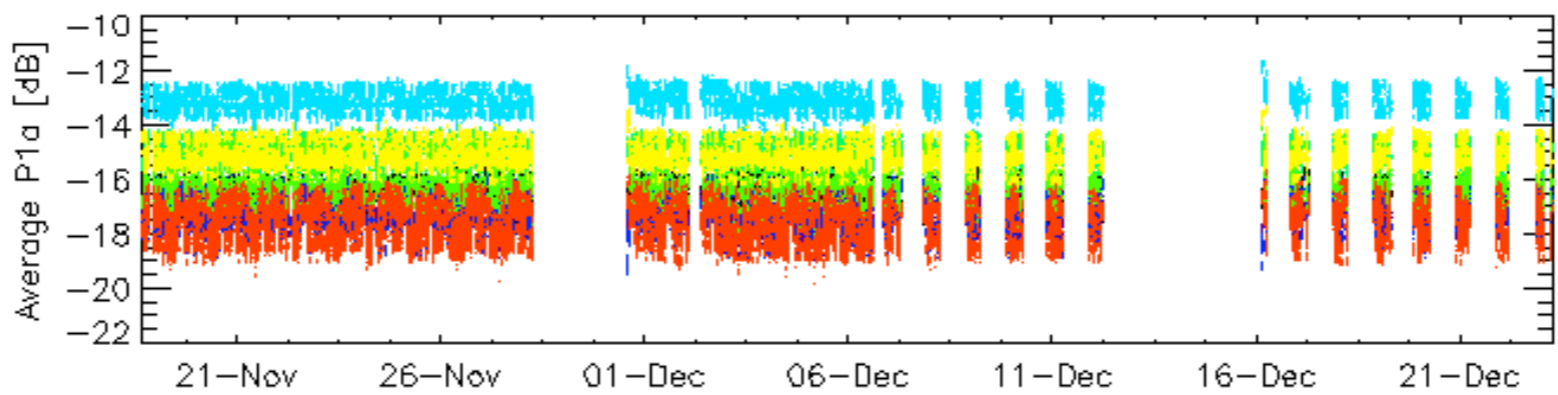
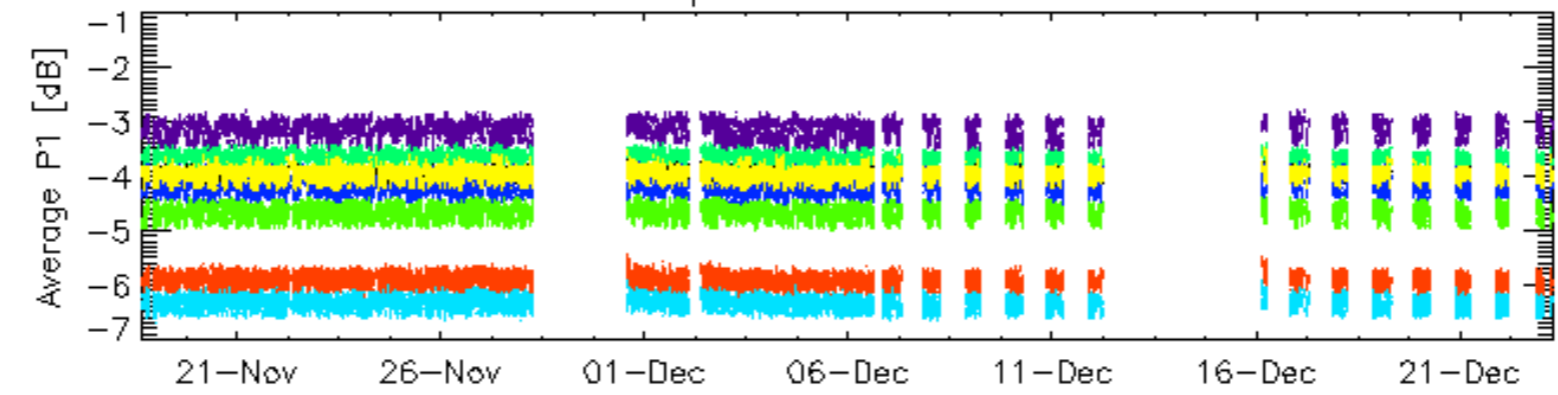


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

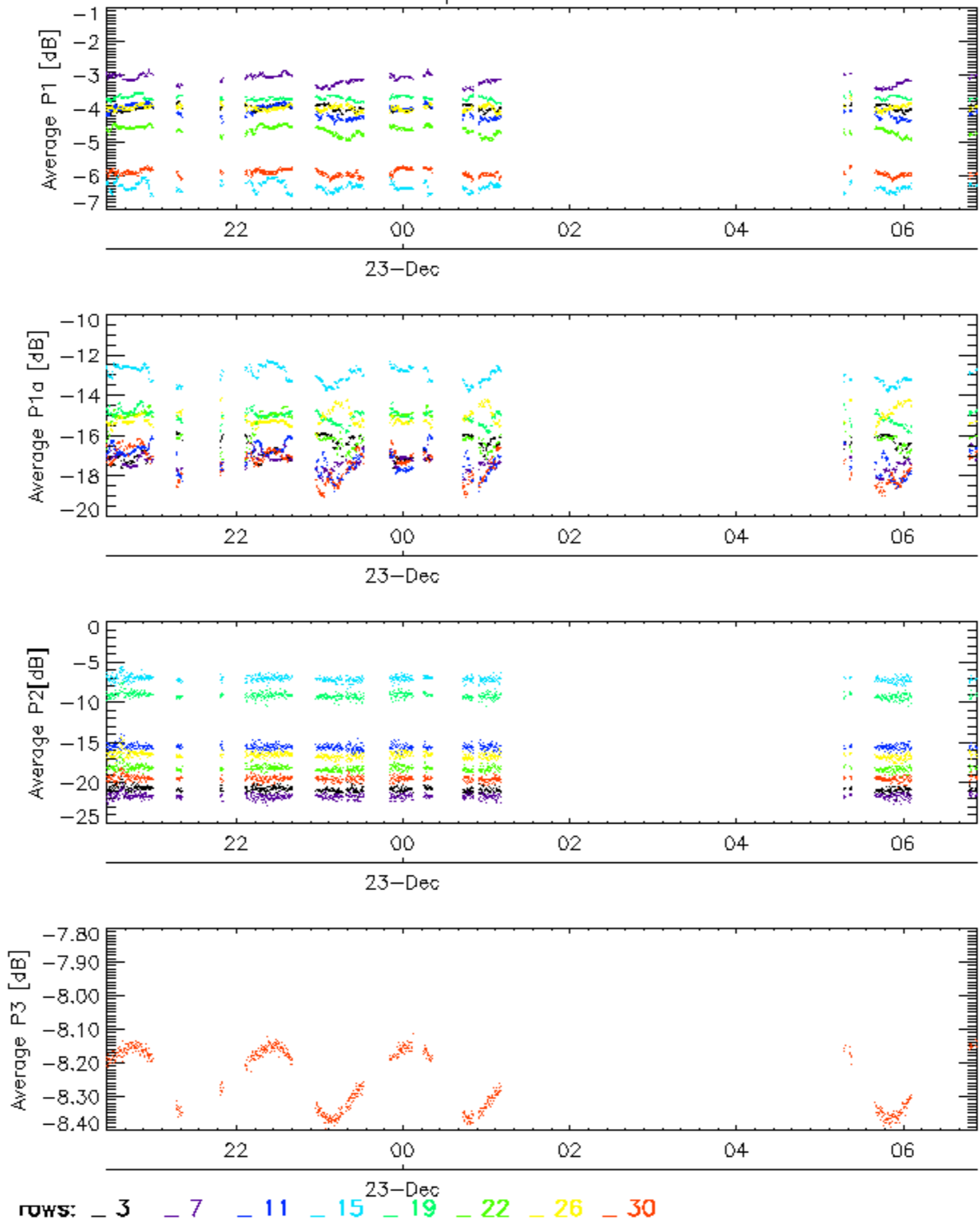


Cal pulses for WVS IS2



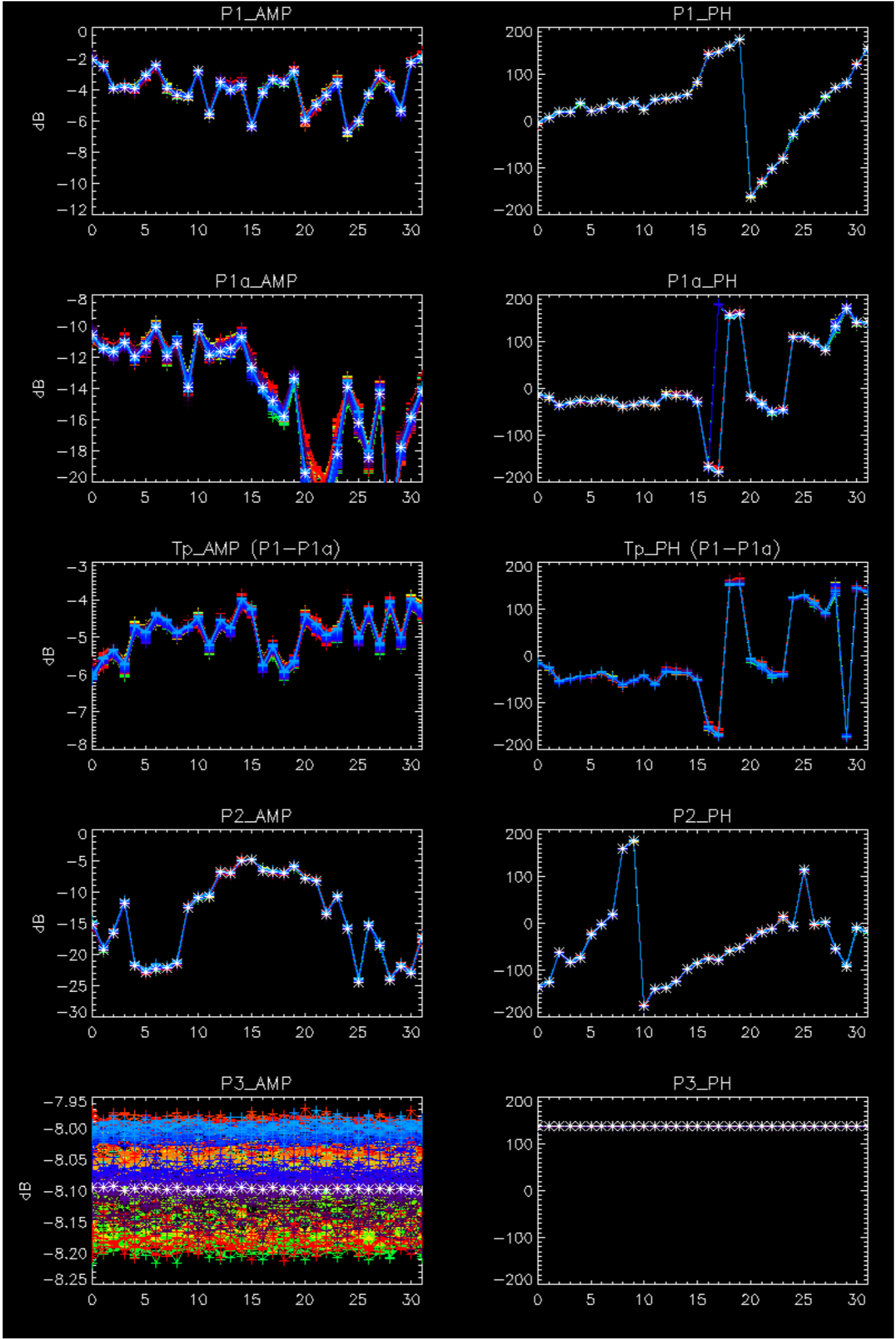
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

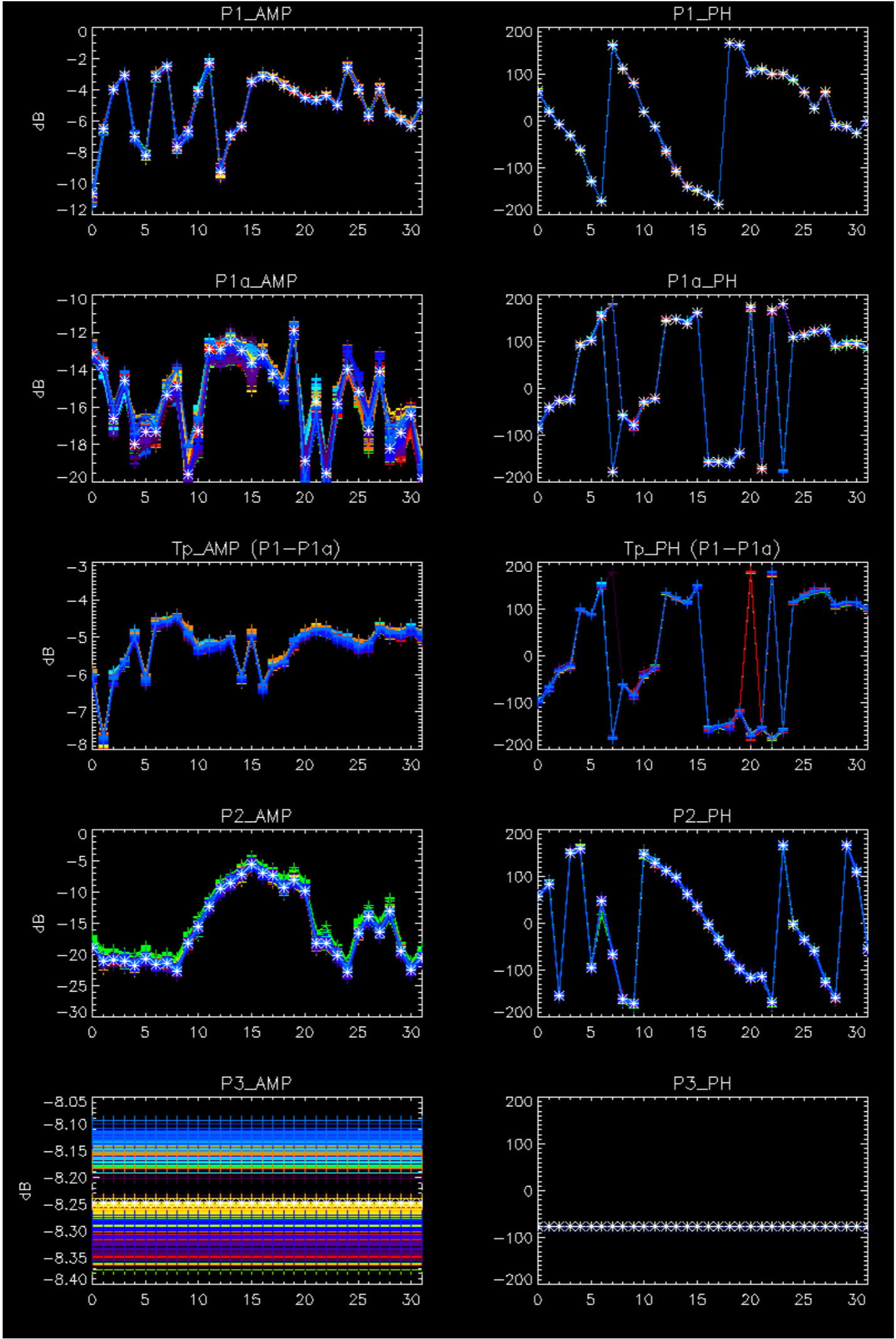
Cal pulses for WVS IS2



No anomalies observed.



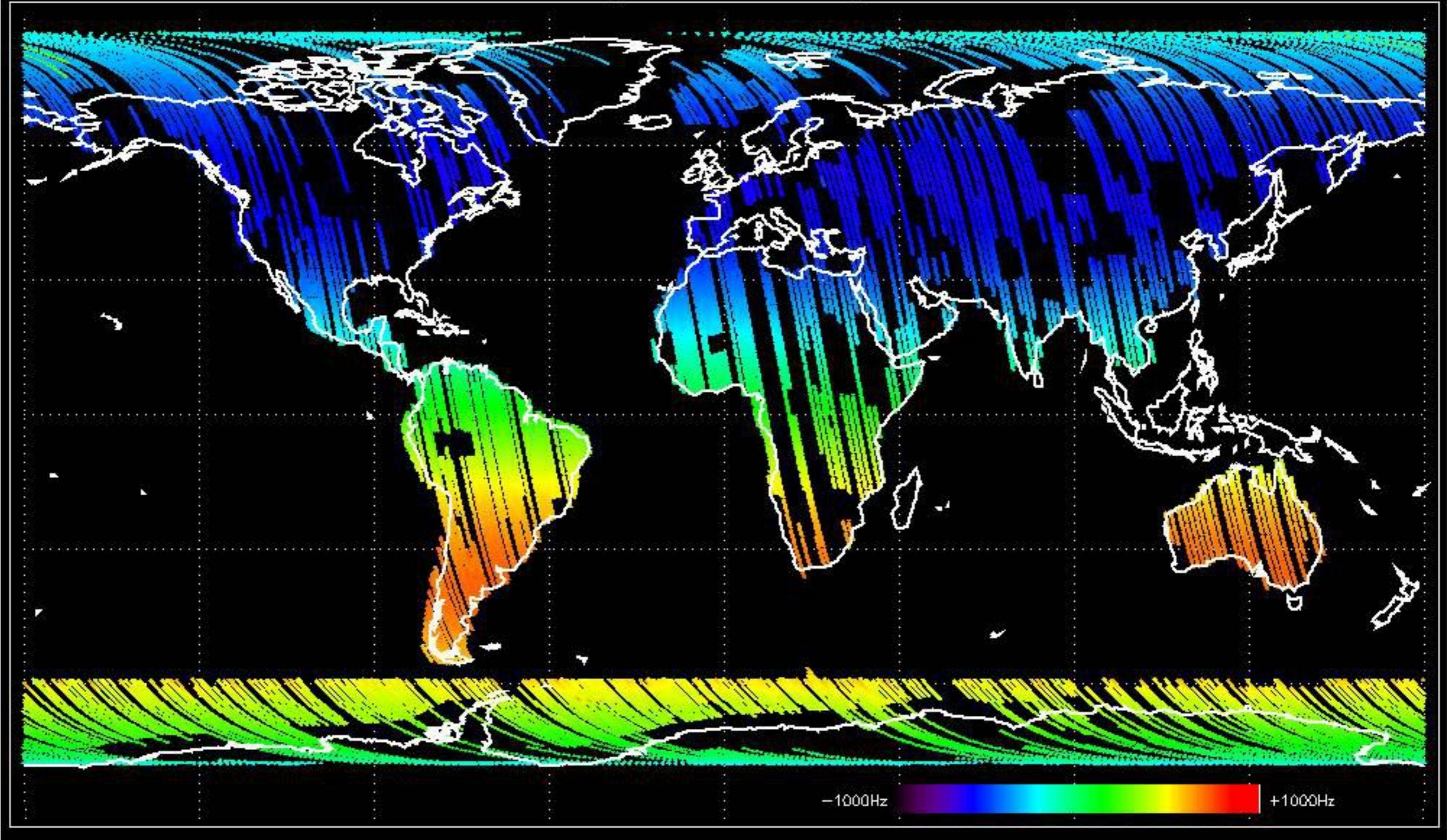




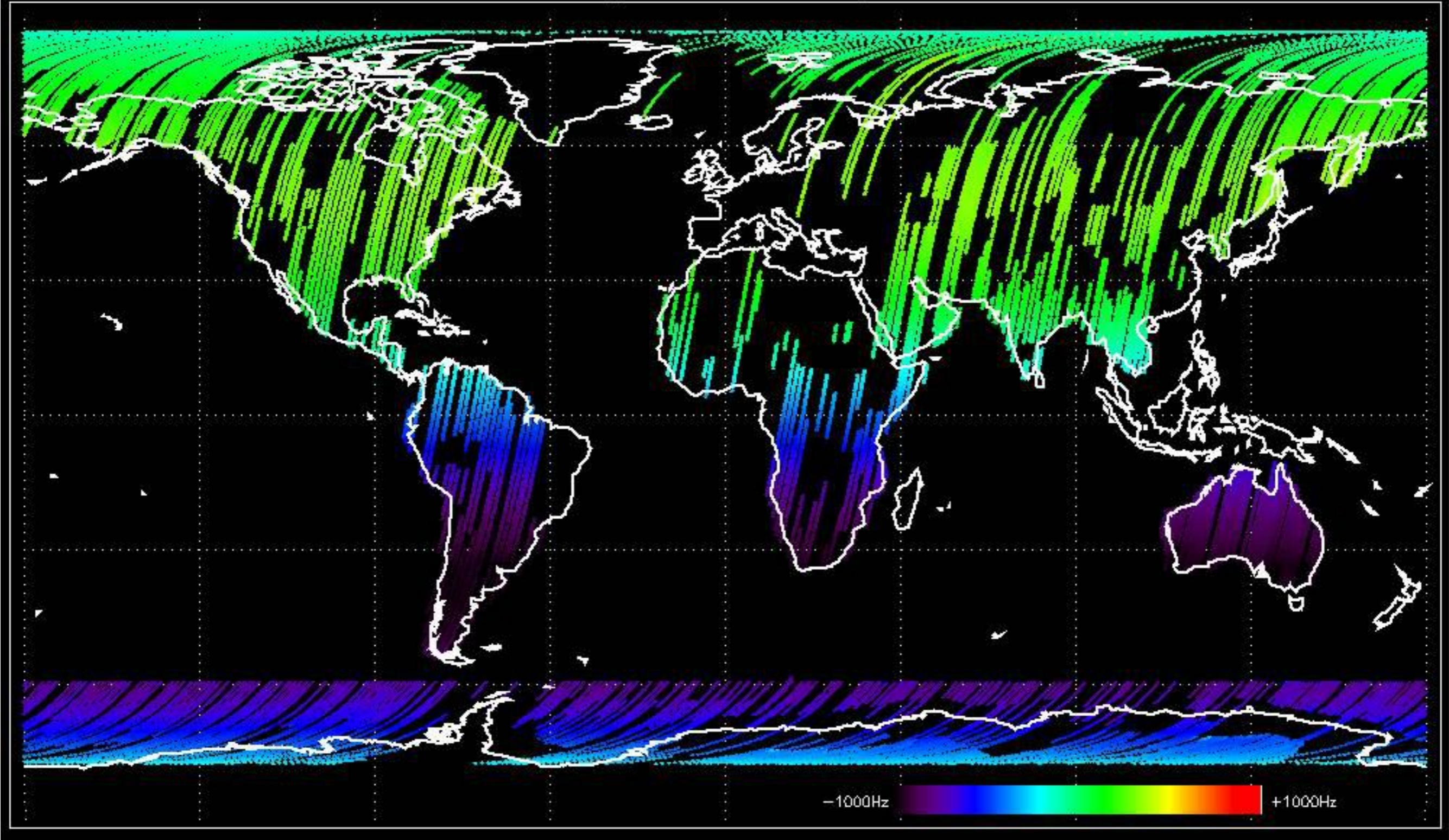
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



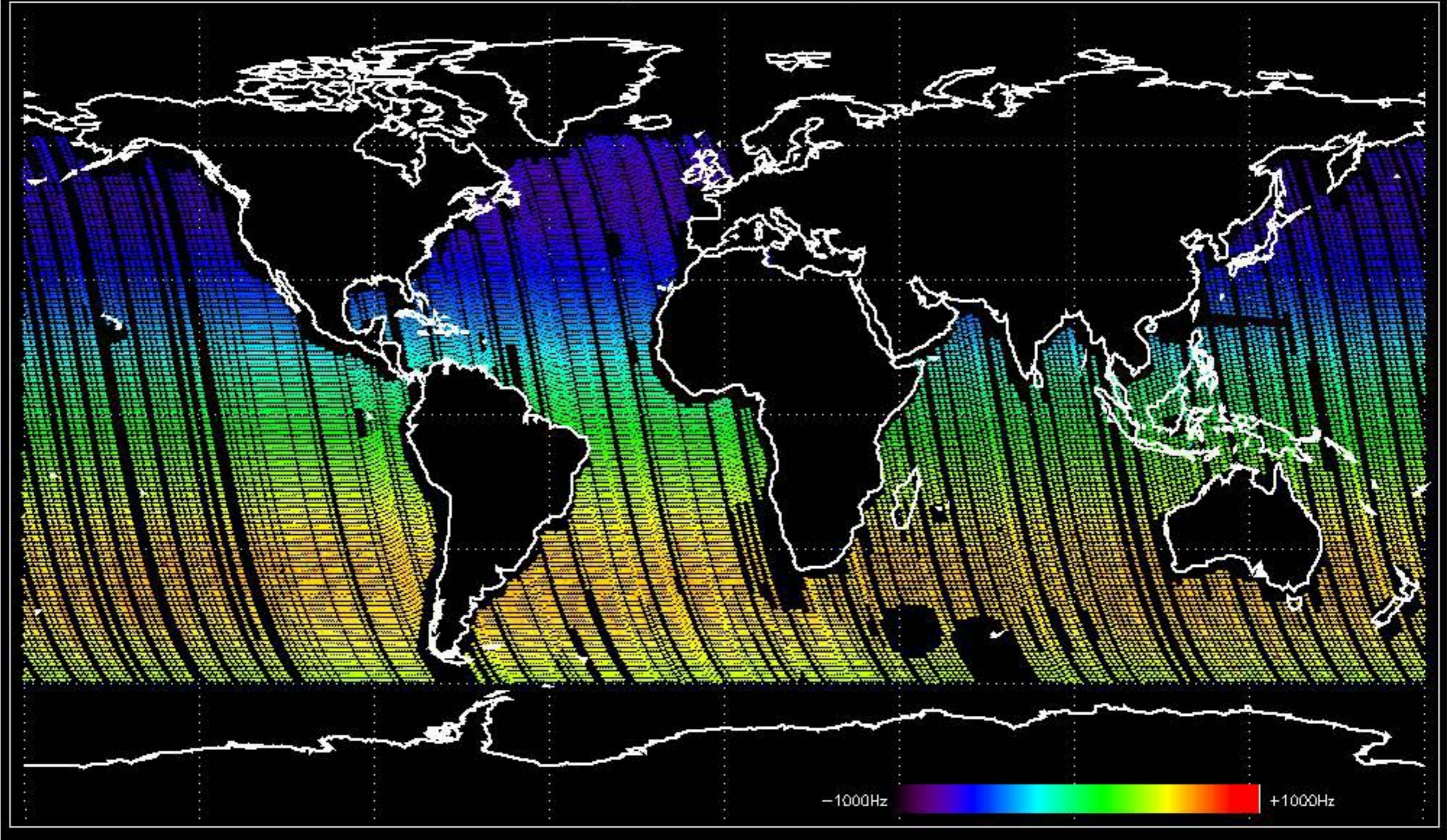
Doppler 'GM1' 'SS1' ascending



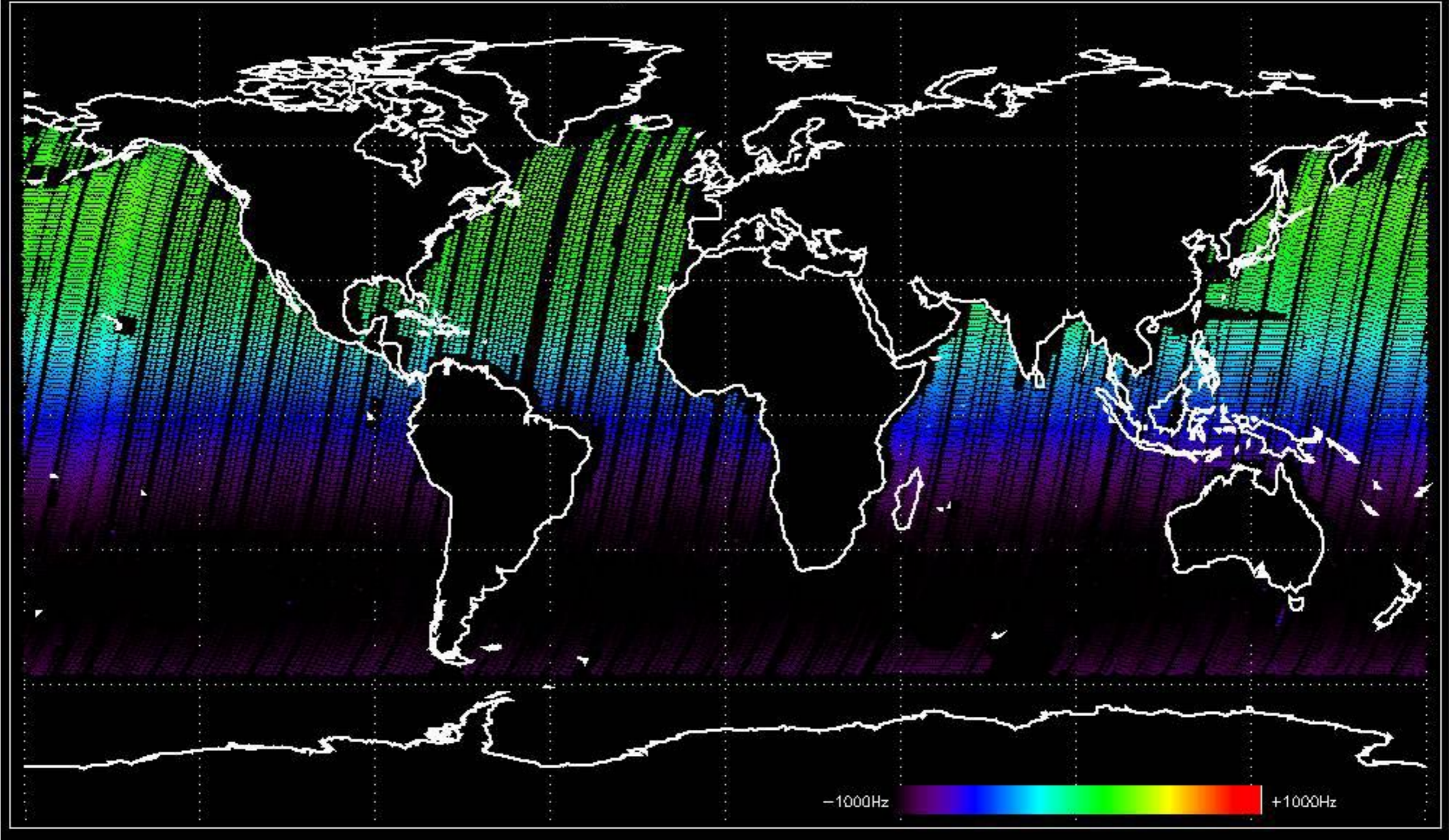
Doppler 'GM1' 'SS1' descending



Doppler 'WVS' 'IS2' ascending

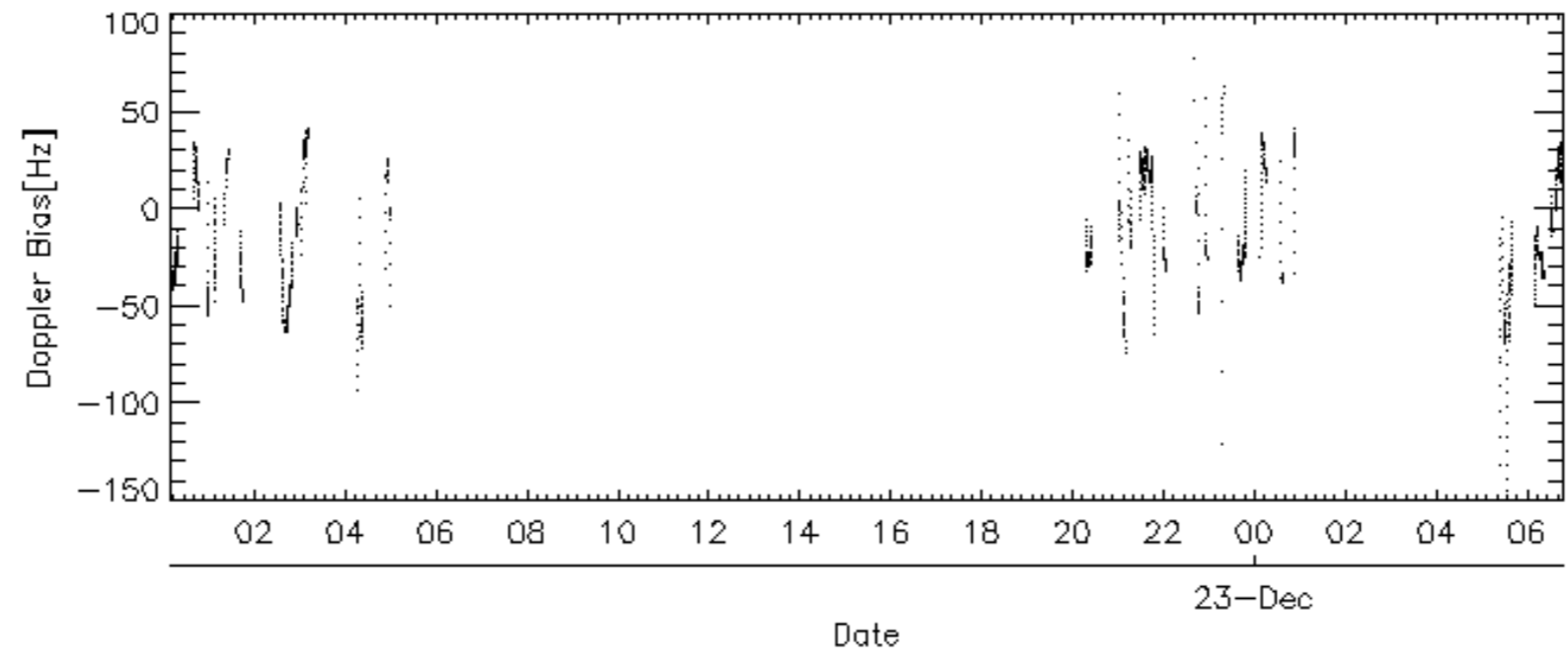
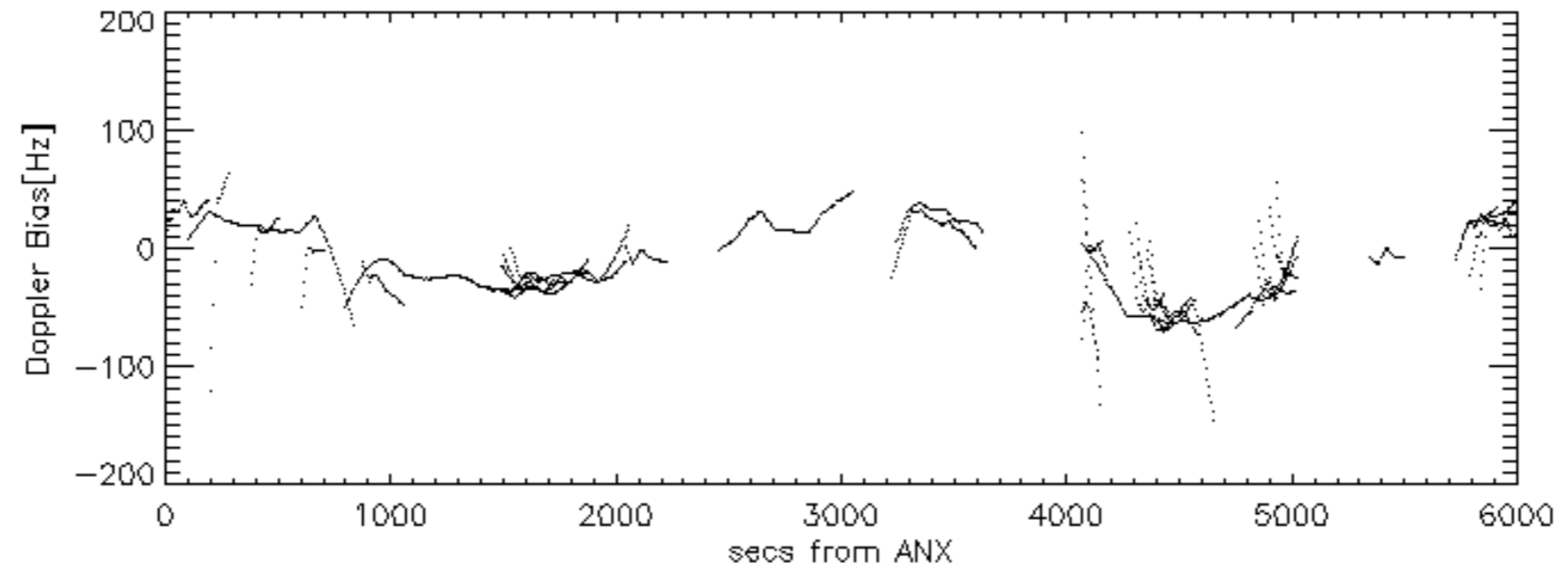
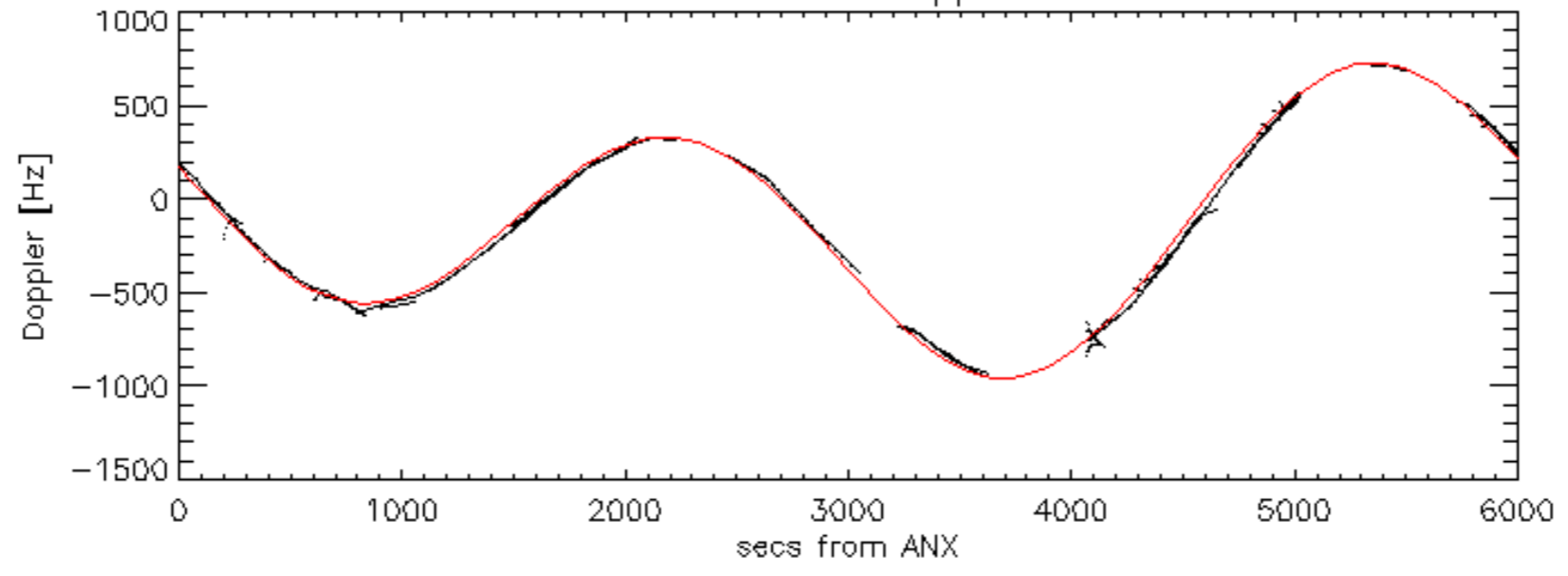


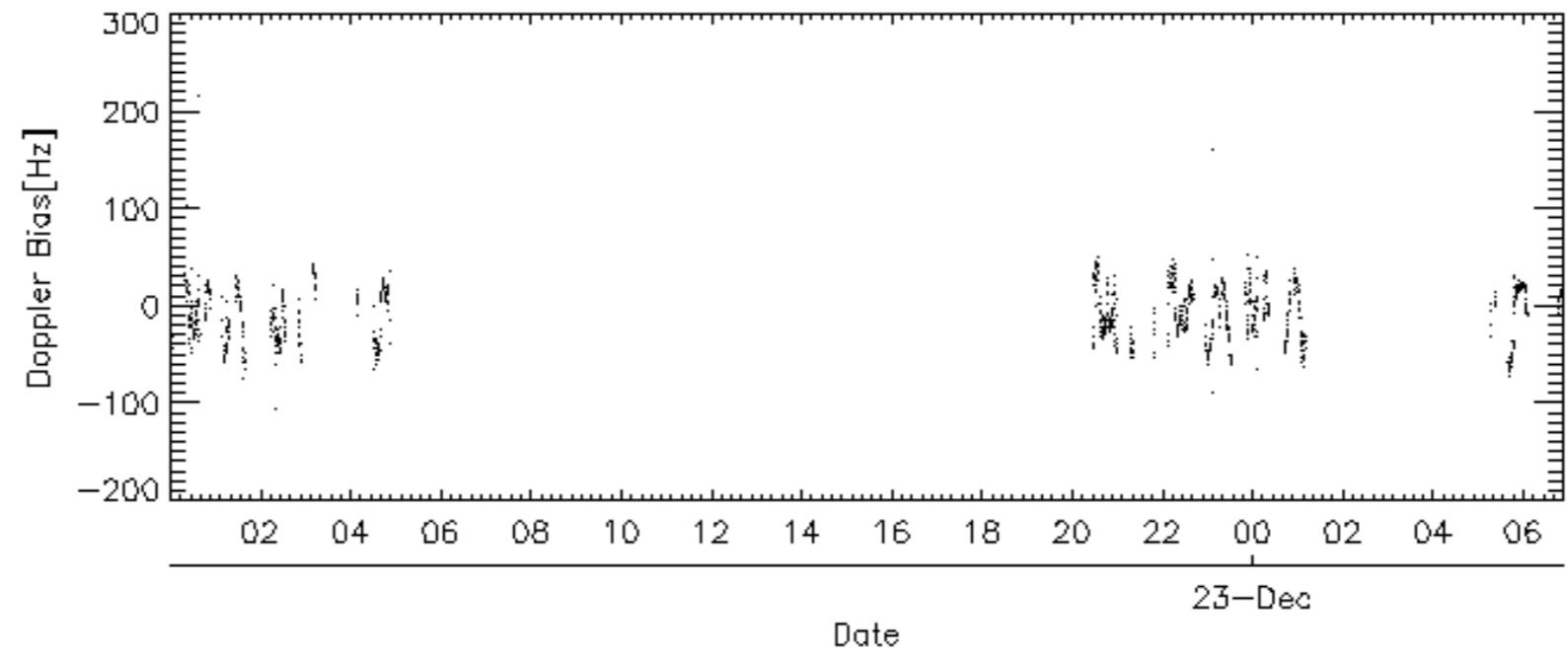
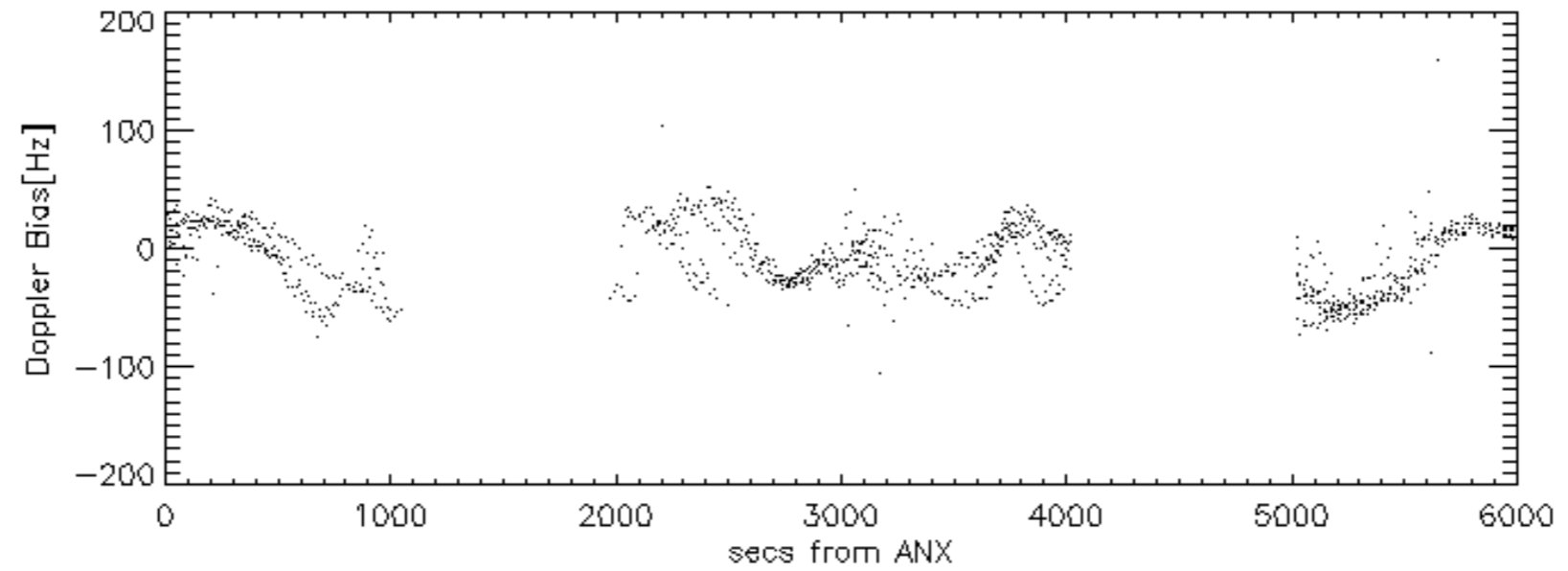
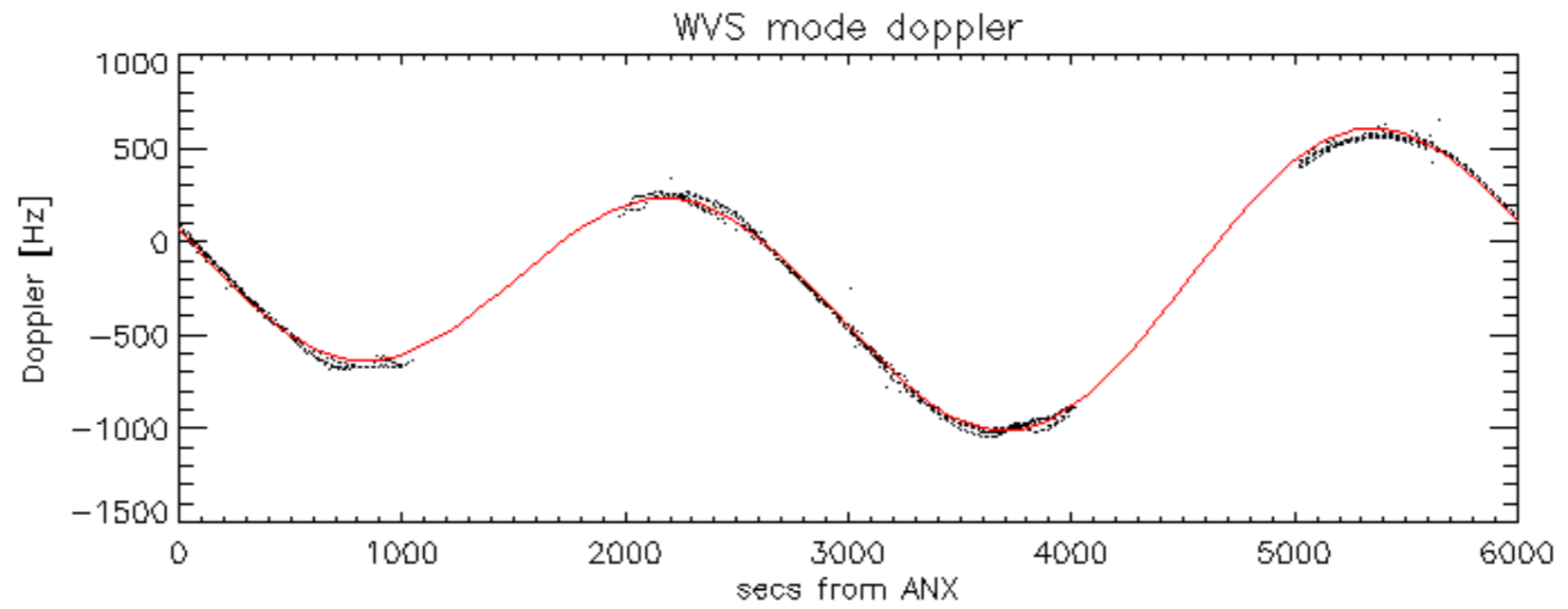
Doppler 'WVS' 'IS2' descending



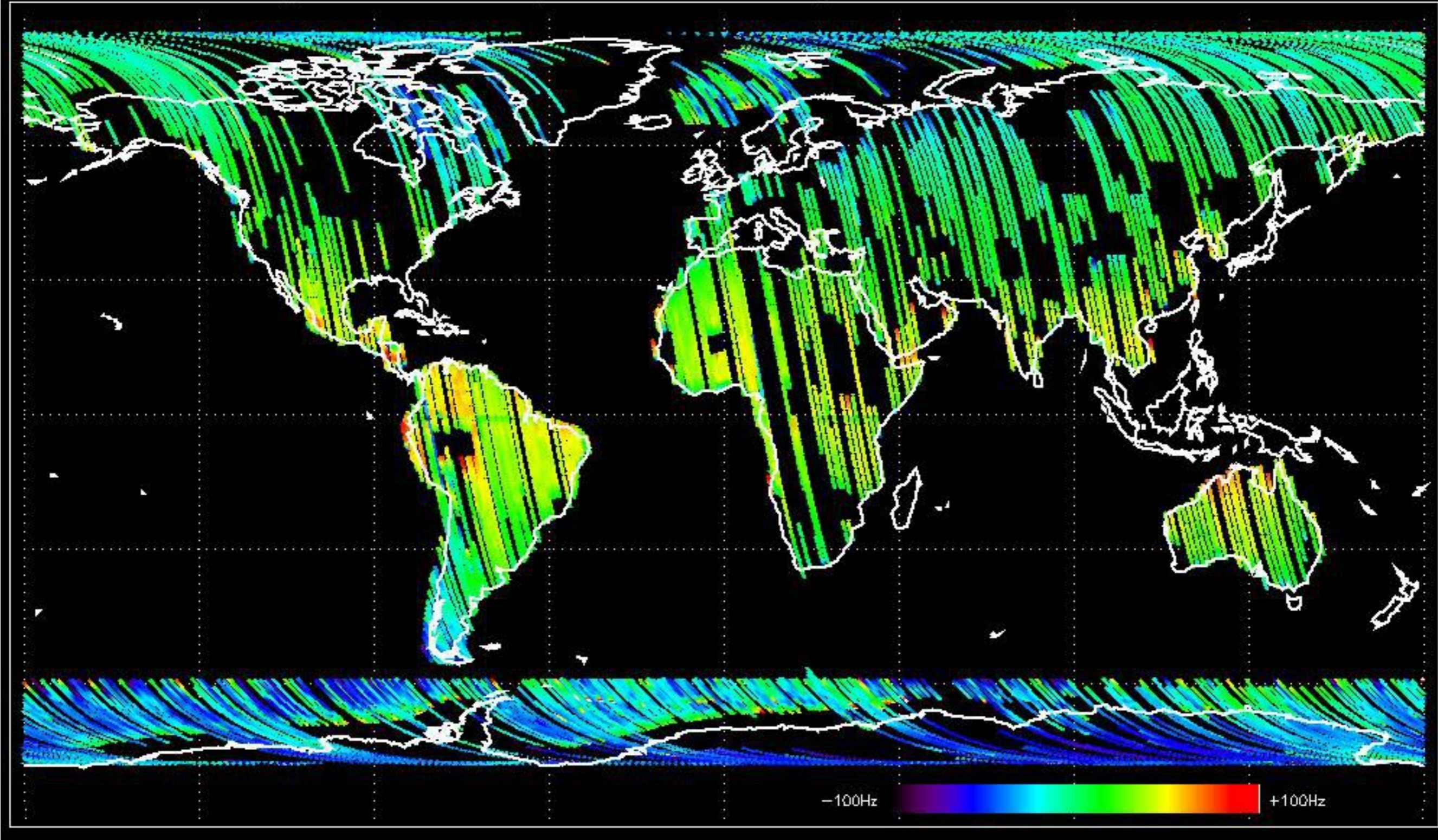


GM1 mode doppler

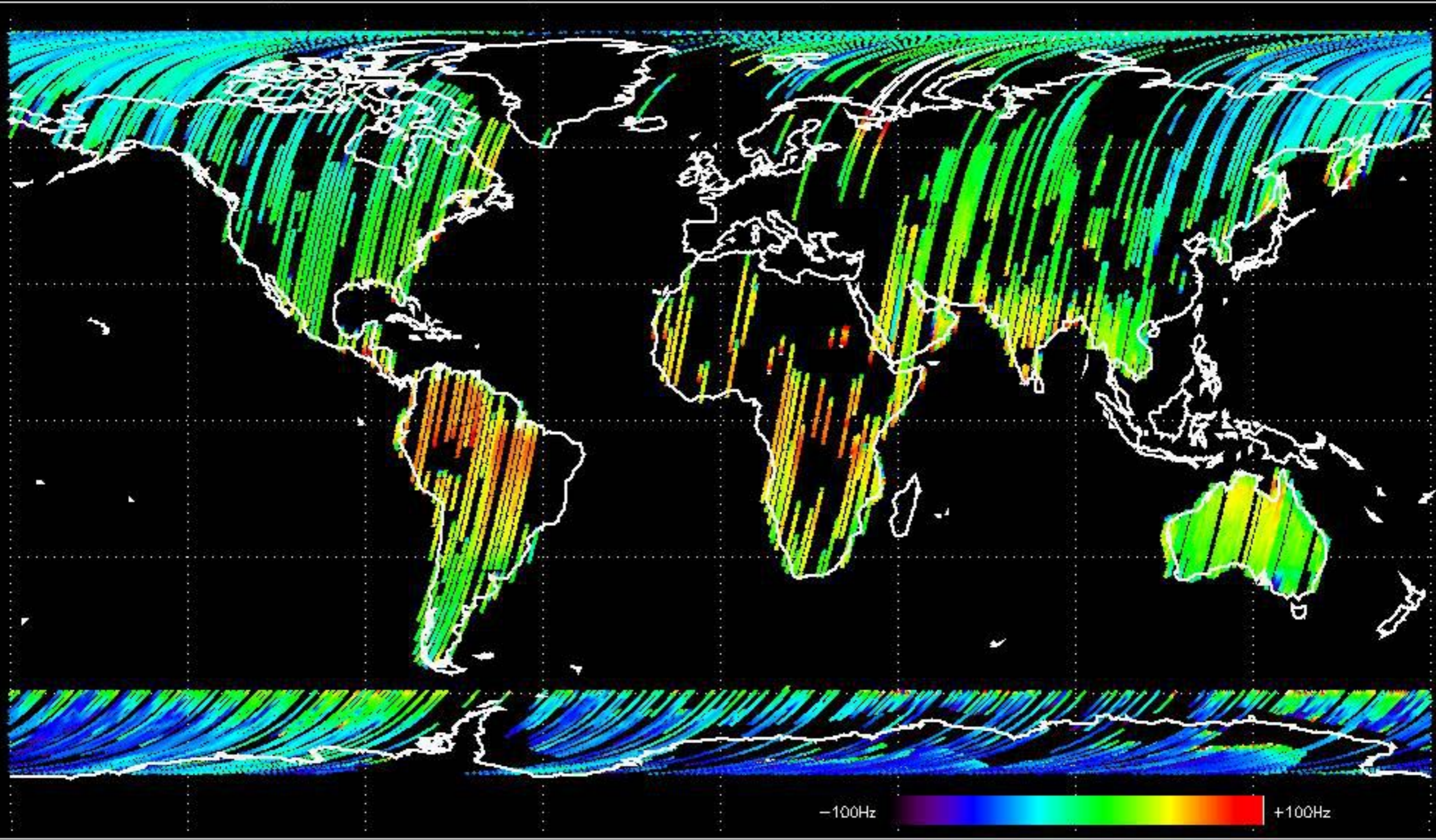




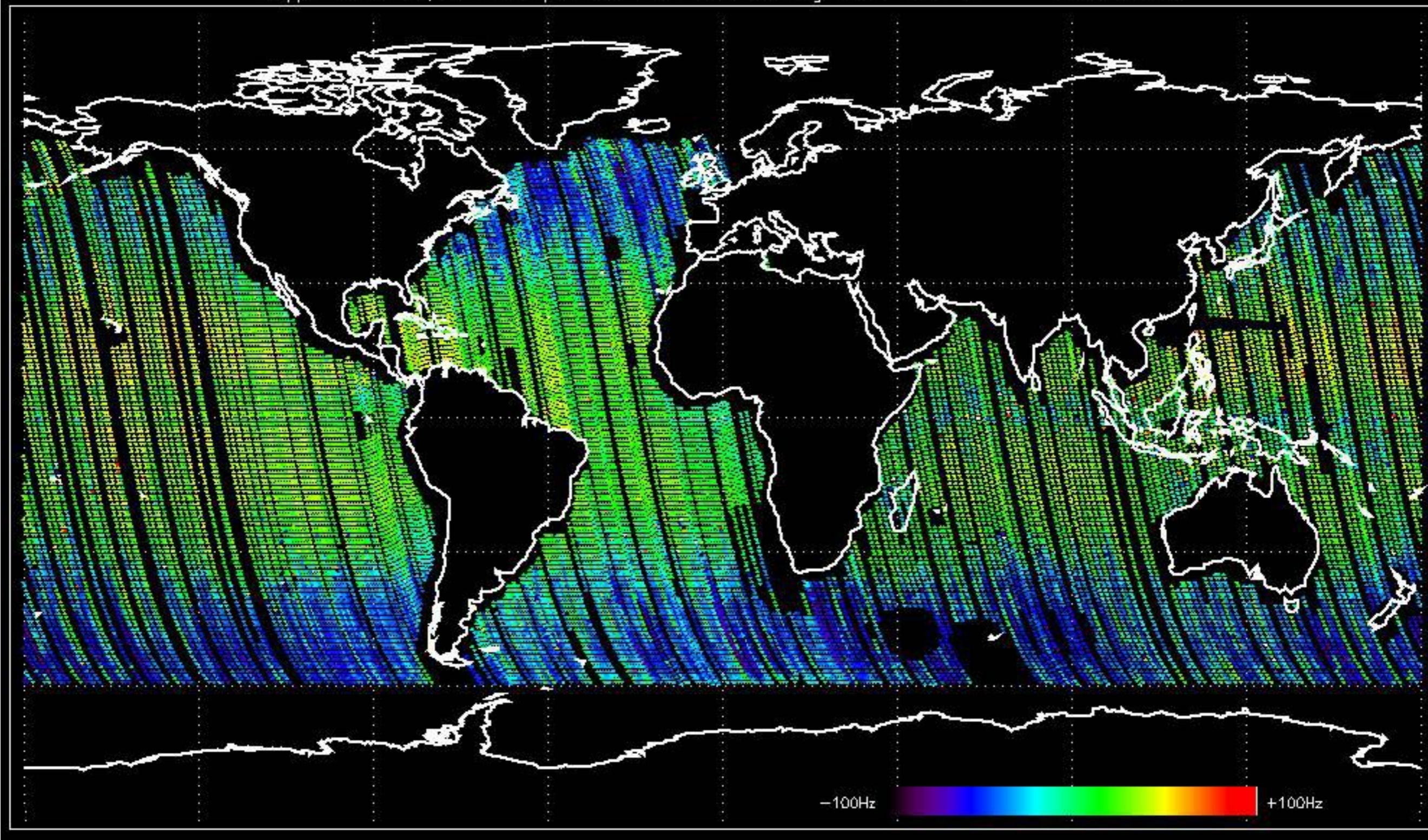
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.952399 Hz



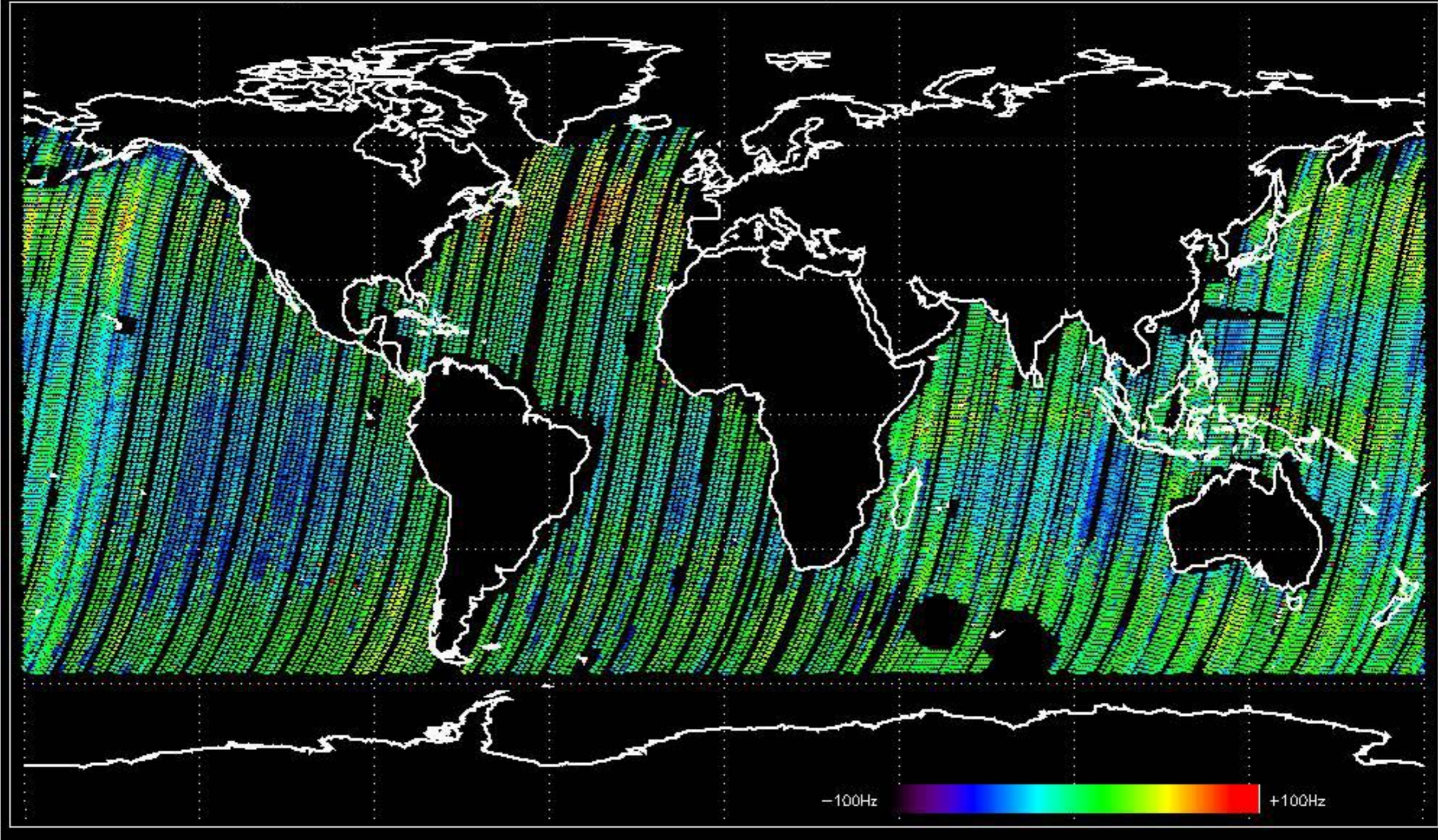
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.113562 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.010316 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.6492745 Hz



No anomalies observed on available MS products:

No anomalies observed.





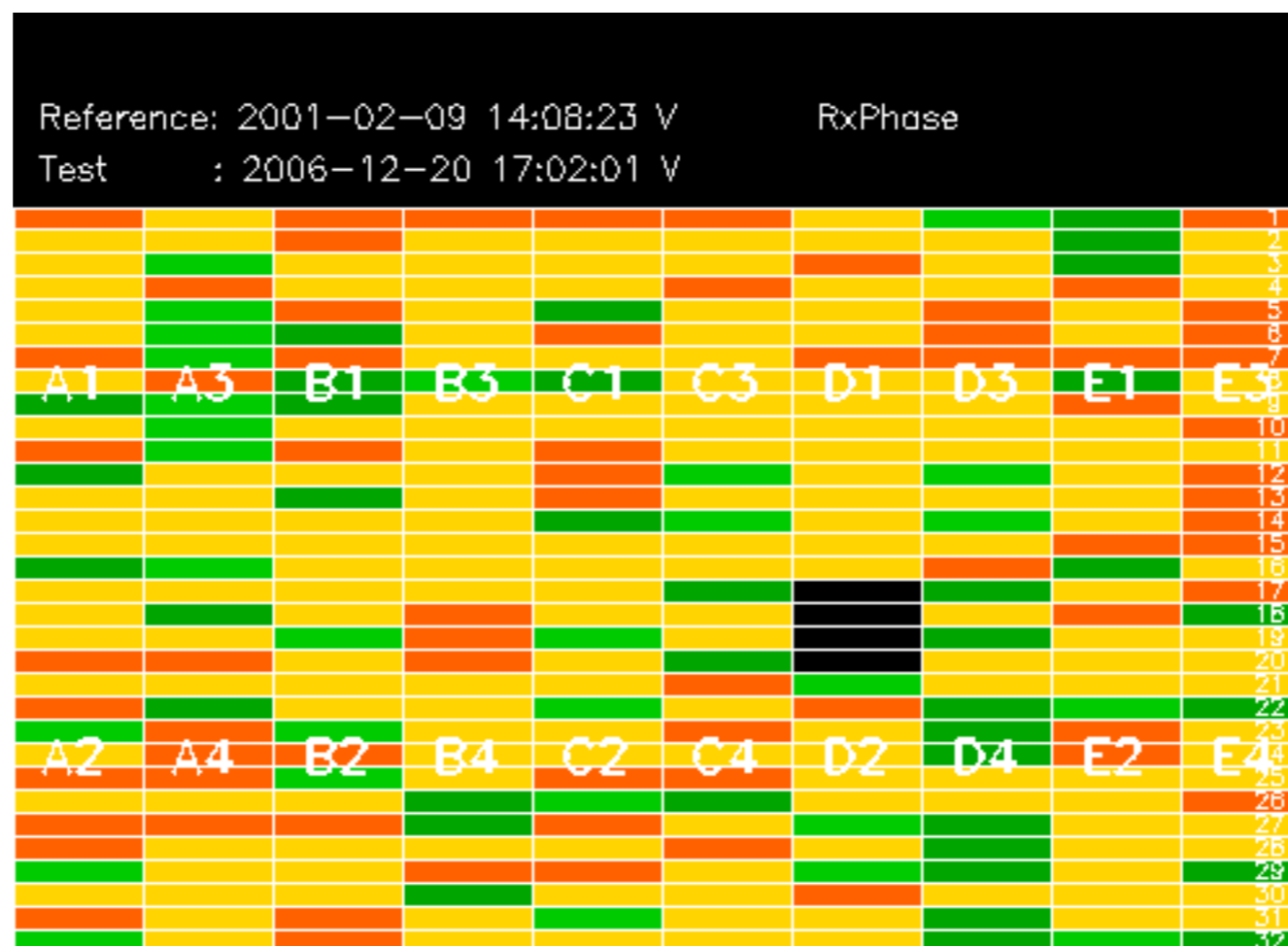






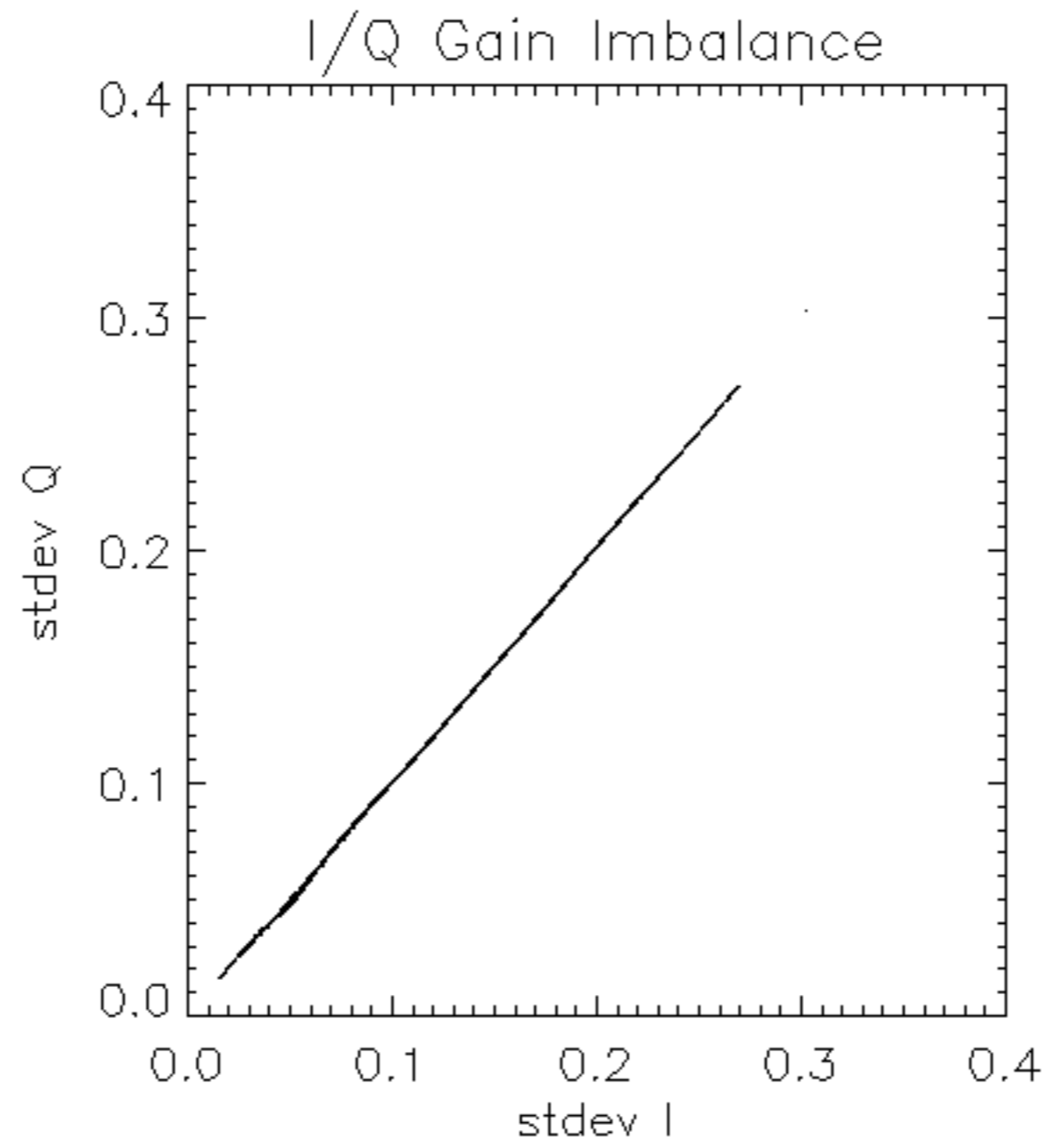


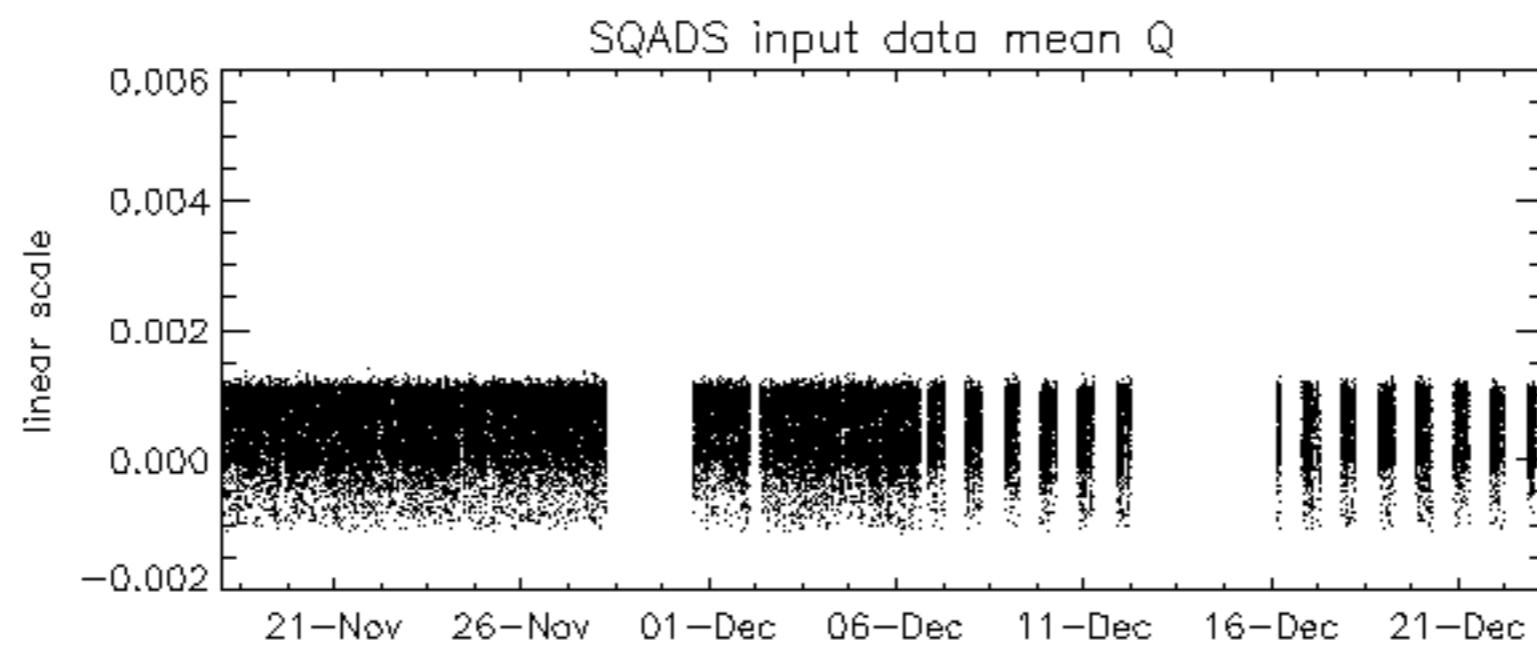
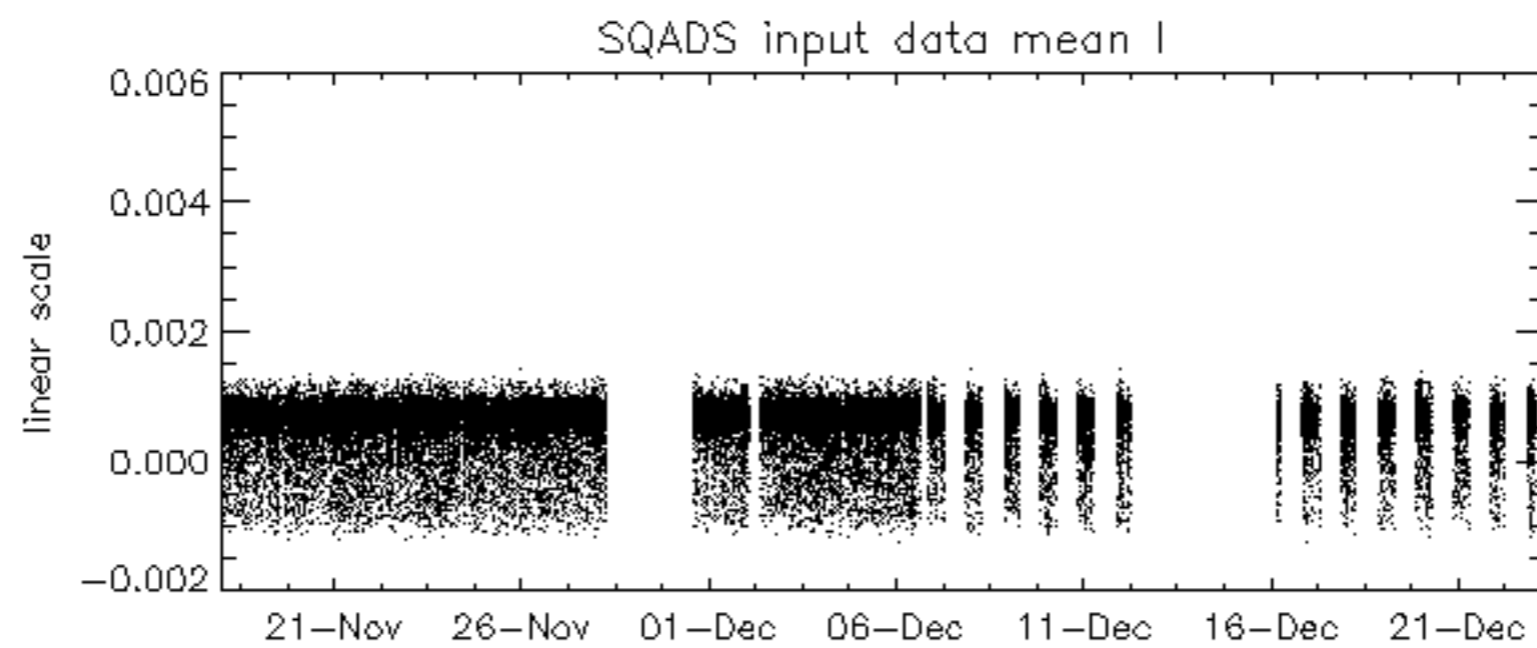
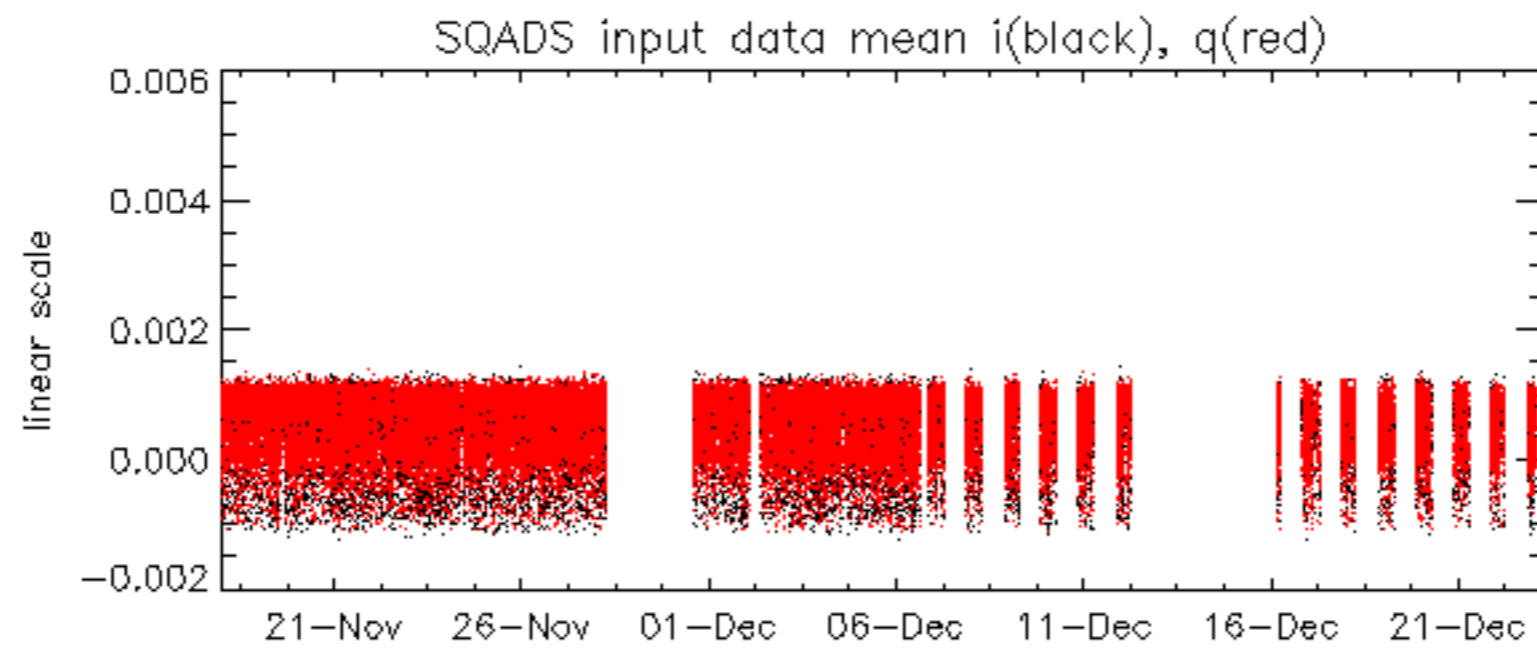


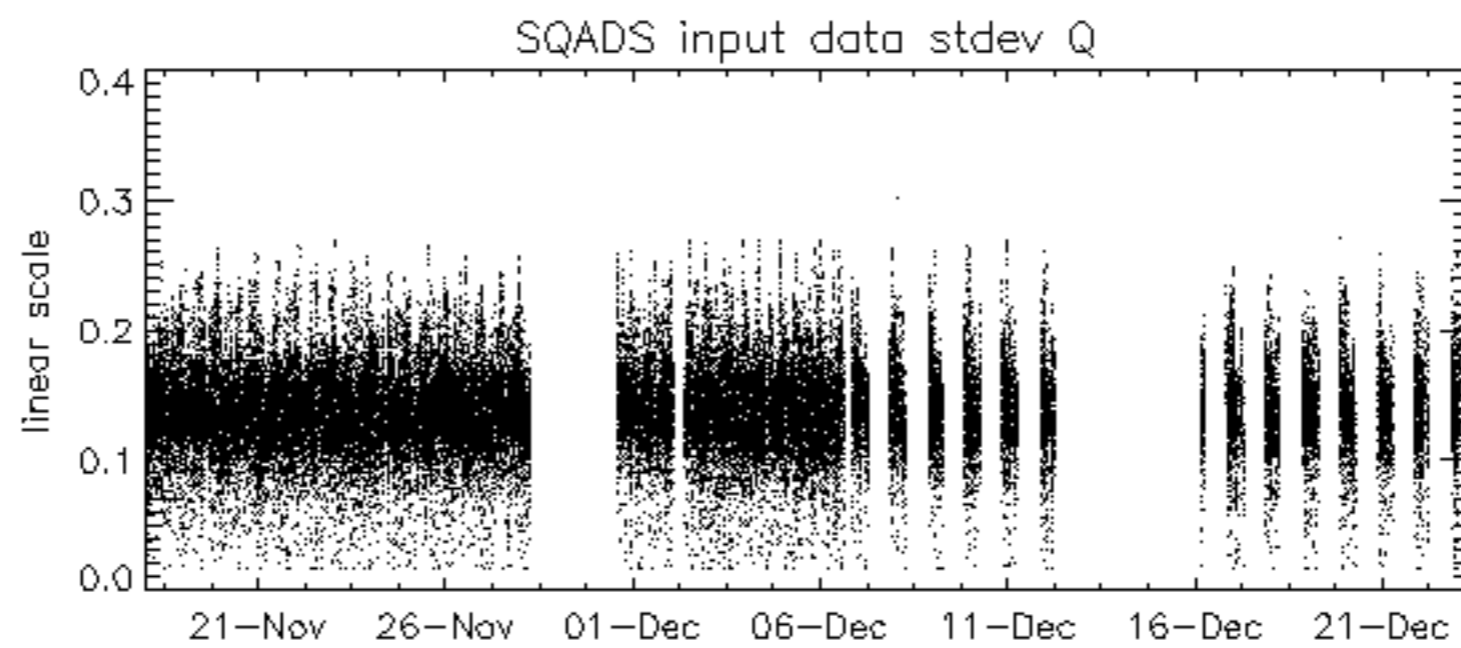
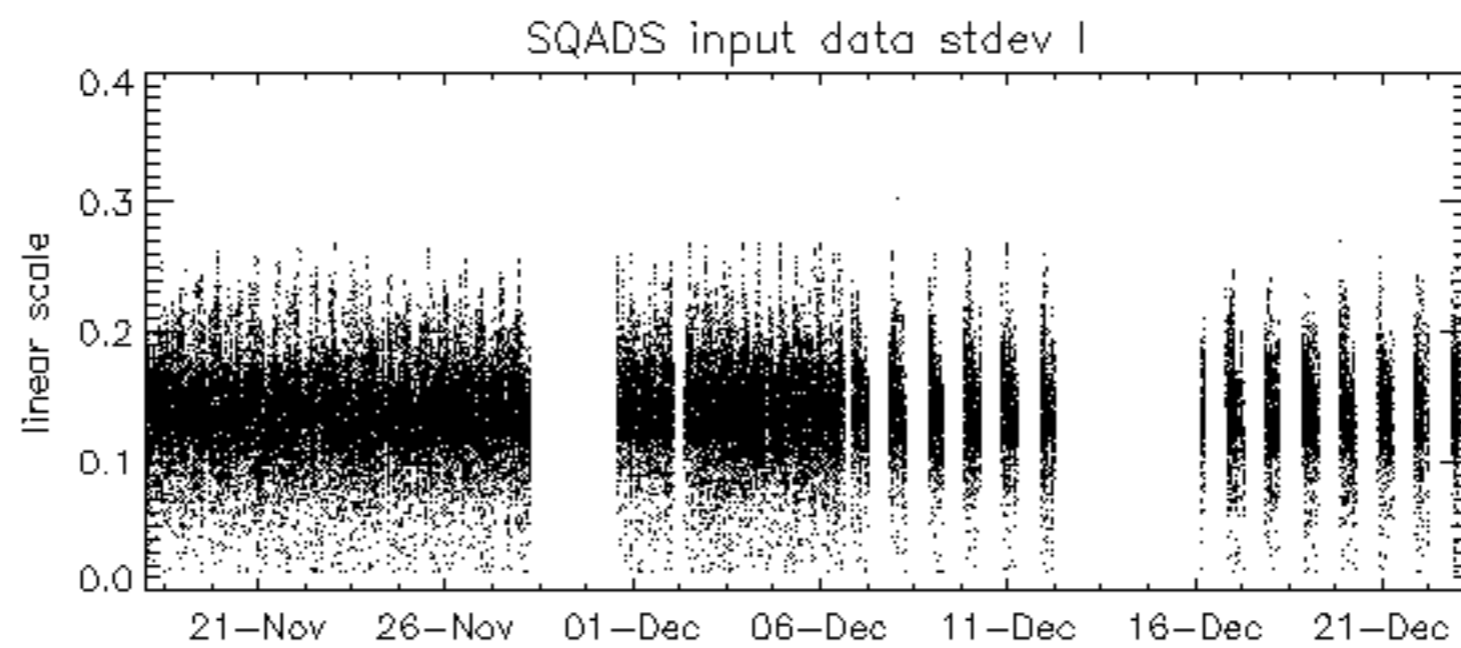
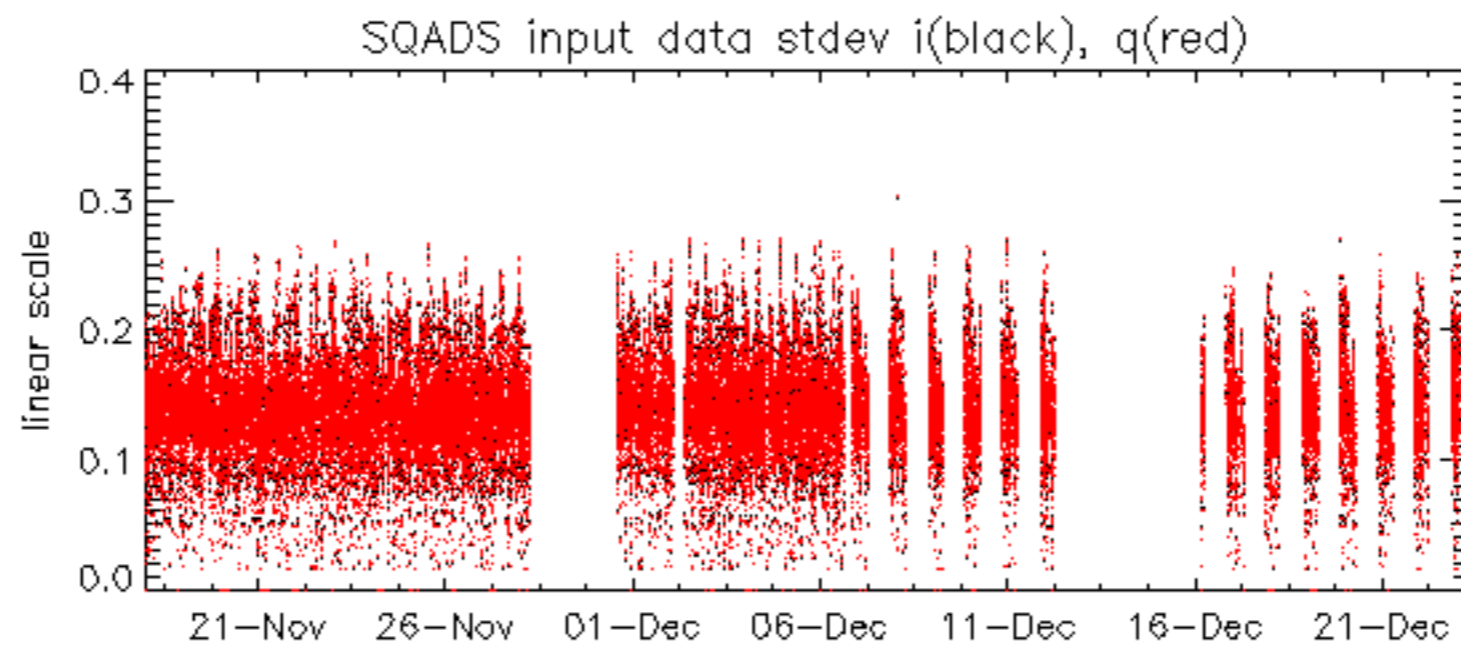


















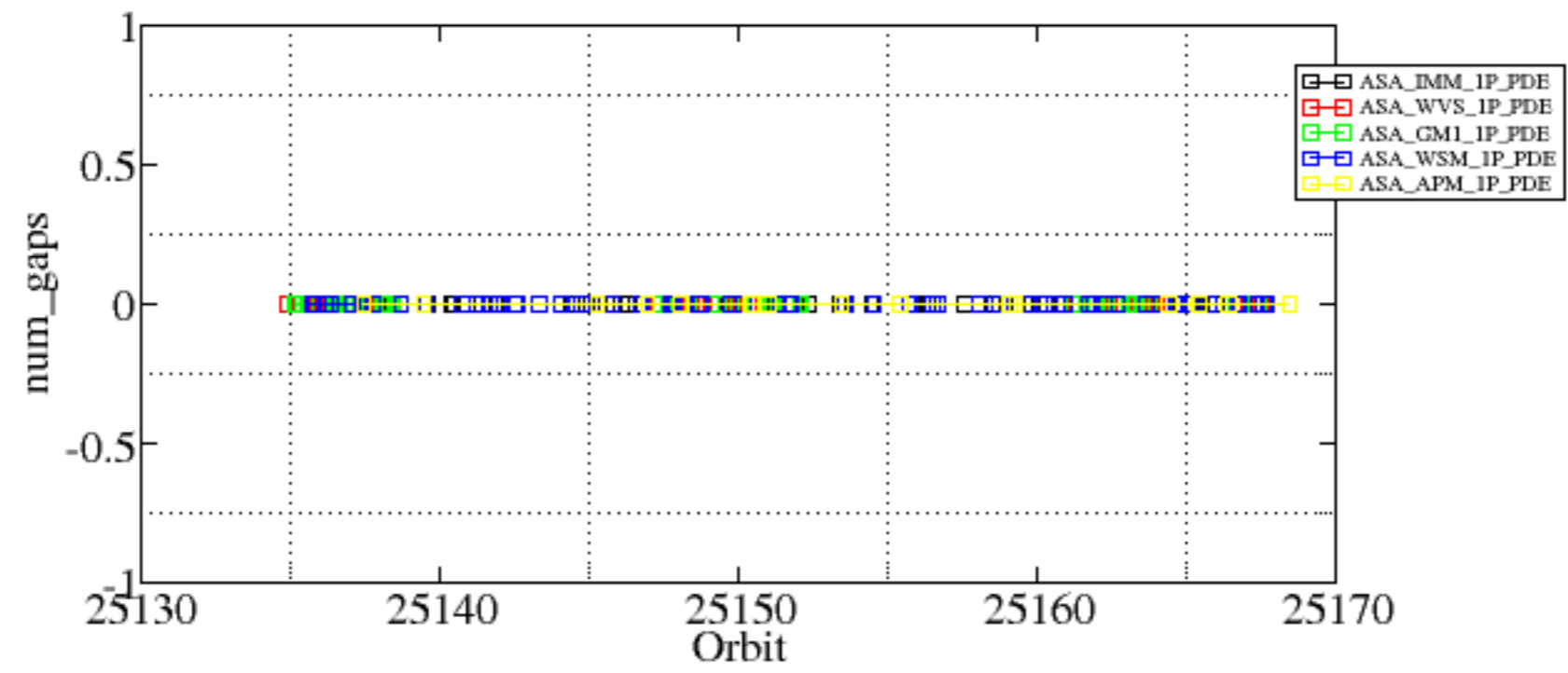


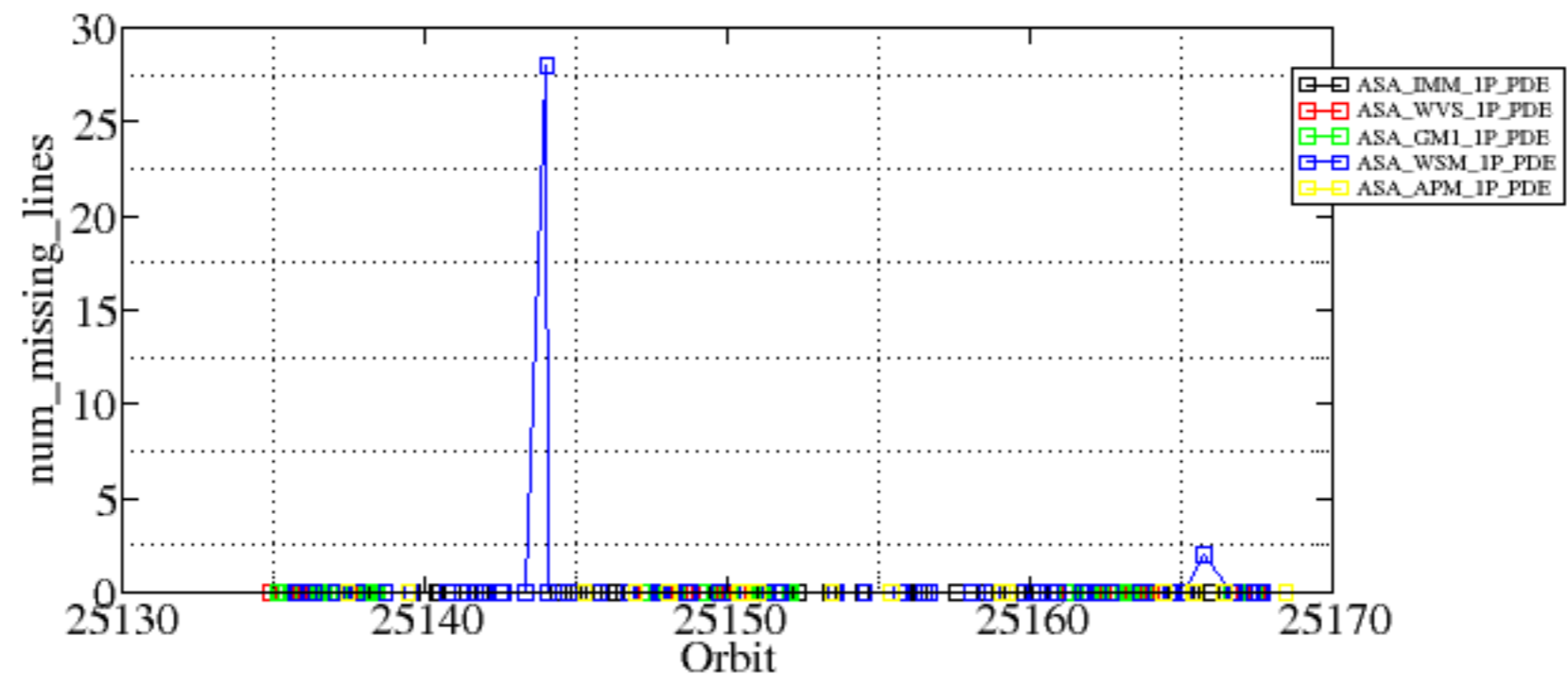
Summary of analysis for the last 3 days 2006122[123]

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_1PNPDE20061221_152555_000001832054_00040_25144_8164.N1	0	28
ASA_WSM_1PNPDE20061223_035151_000004282054_00061_25165_0858.N1	0	2

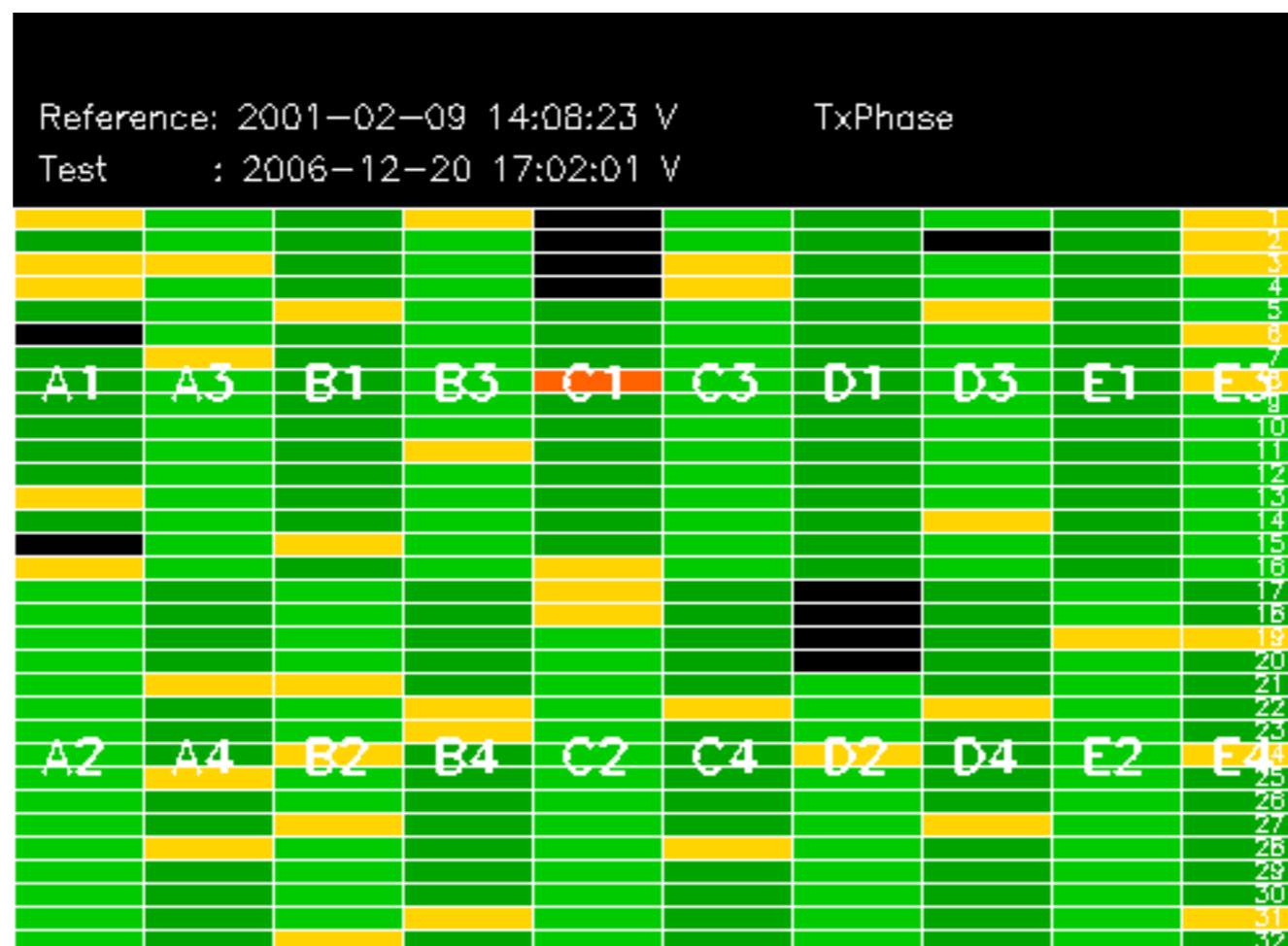






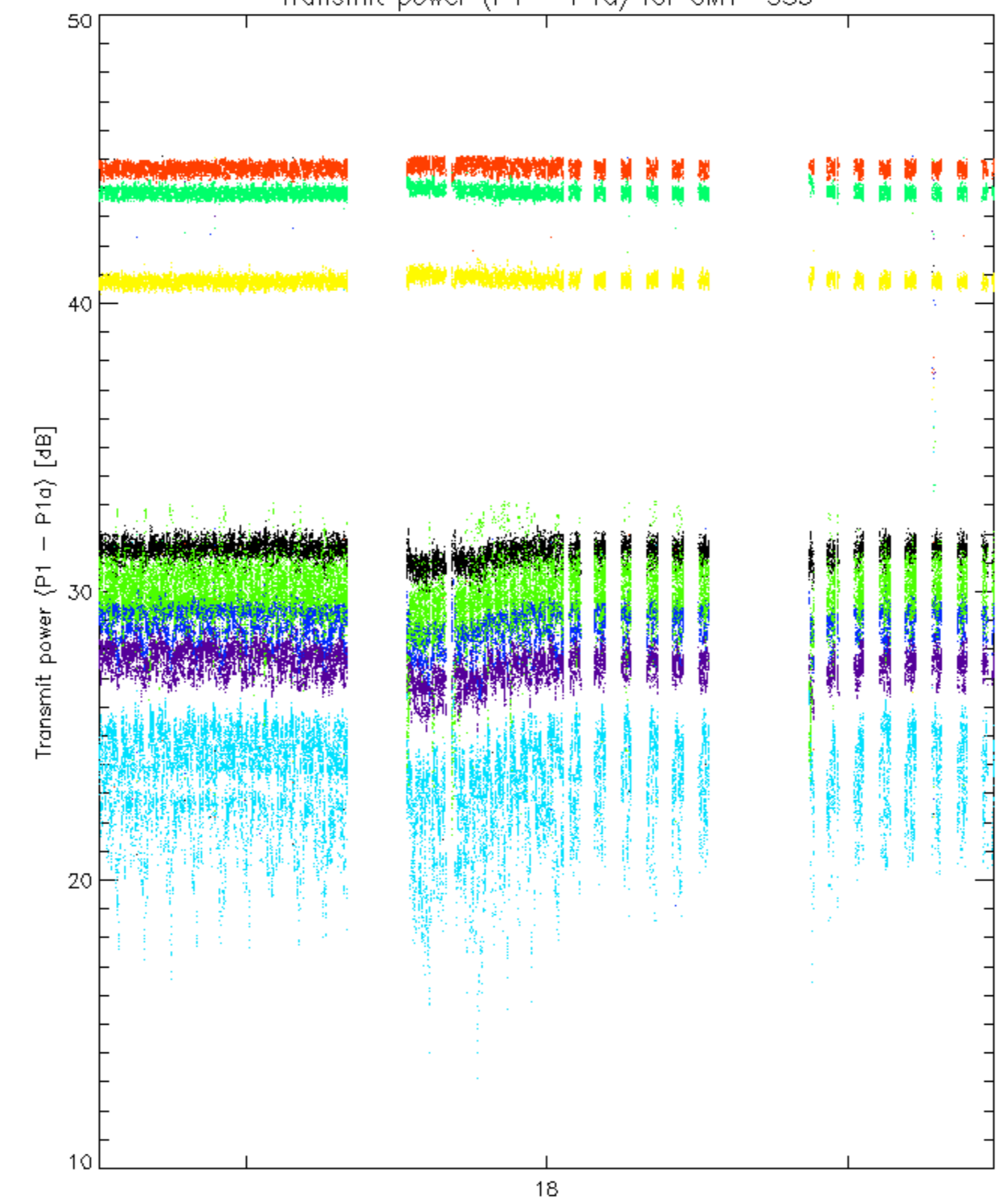




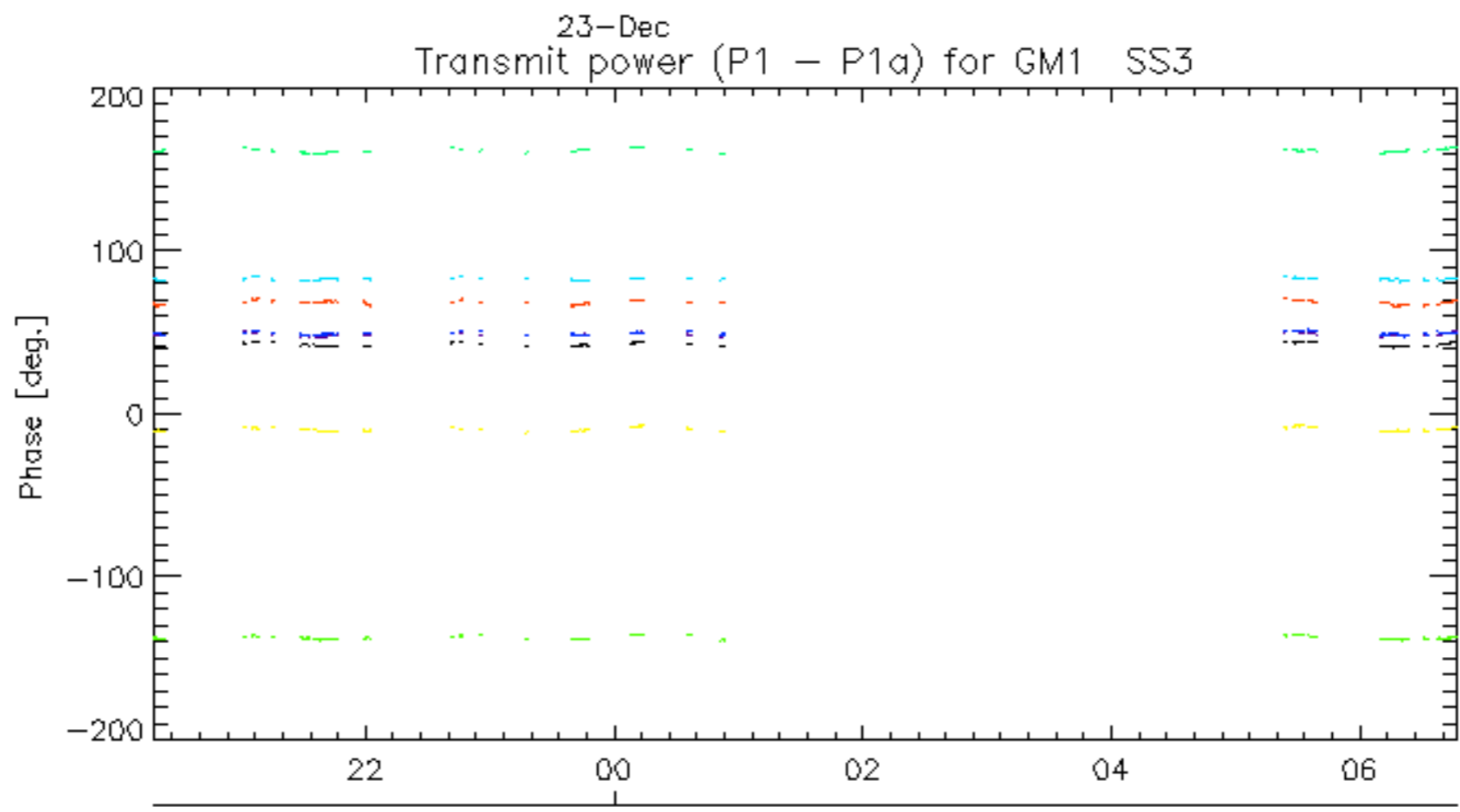
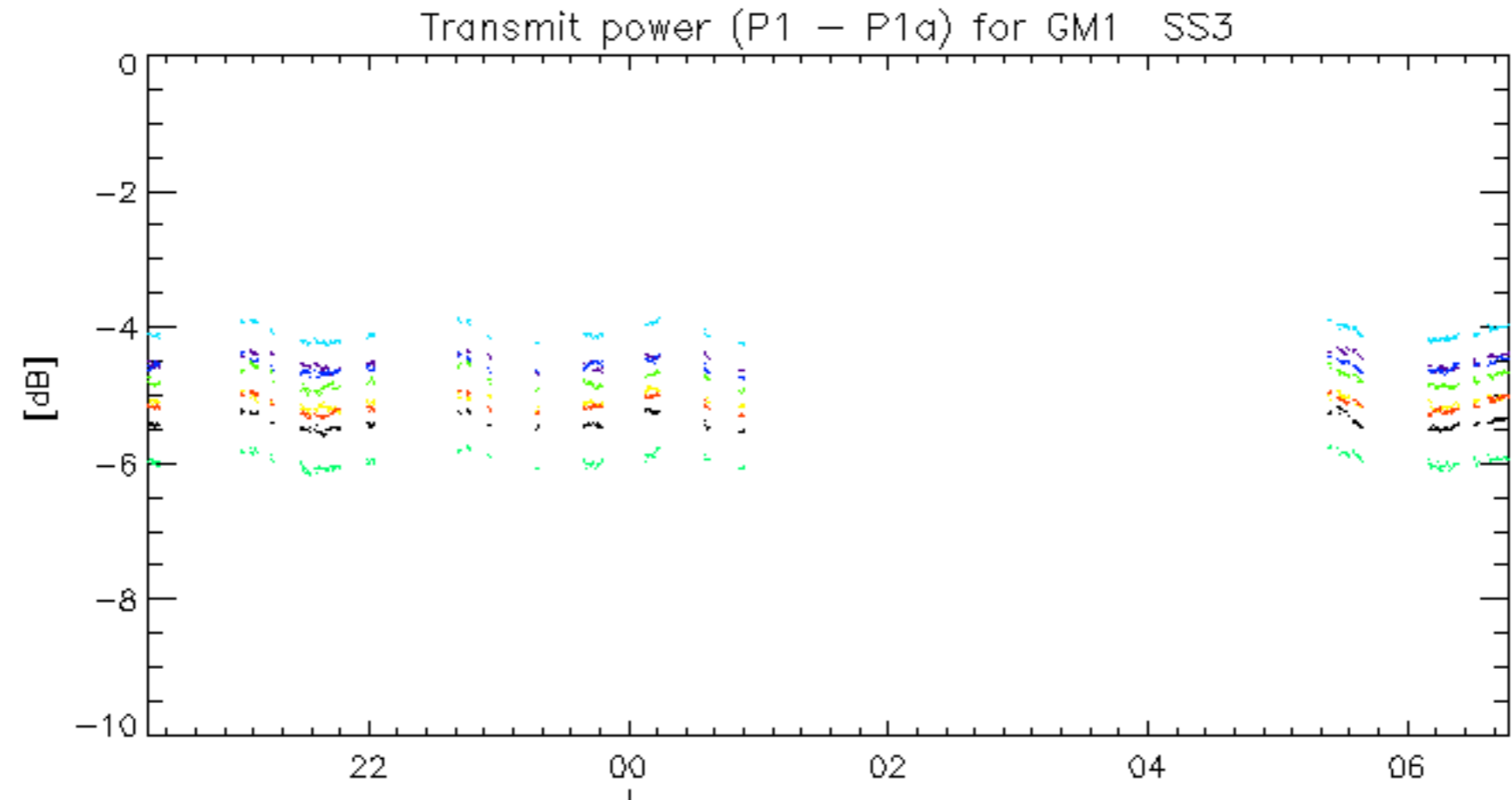




Transmit power (P1 - P1a) for GM1 SS3

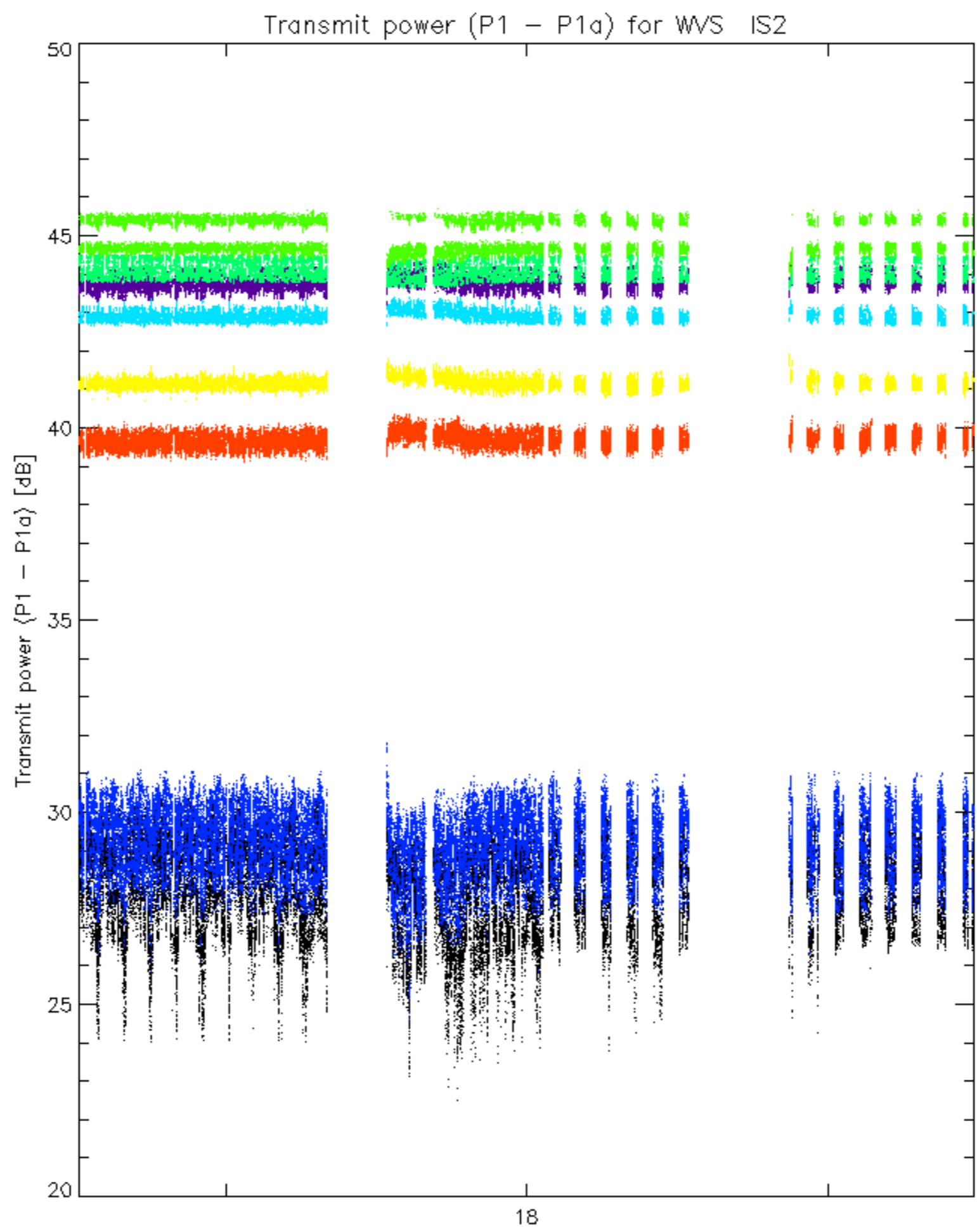


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

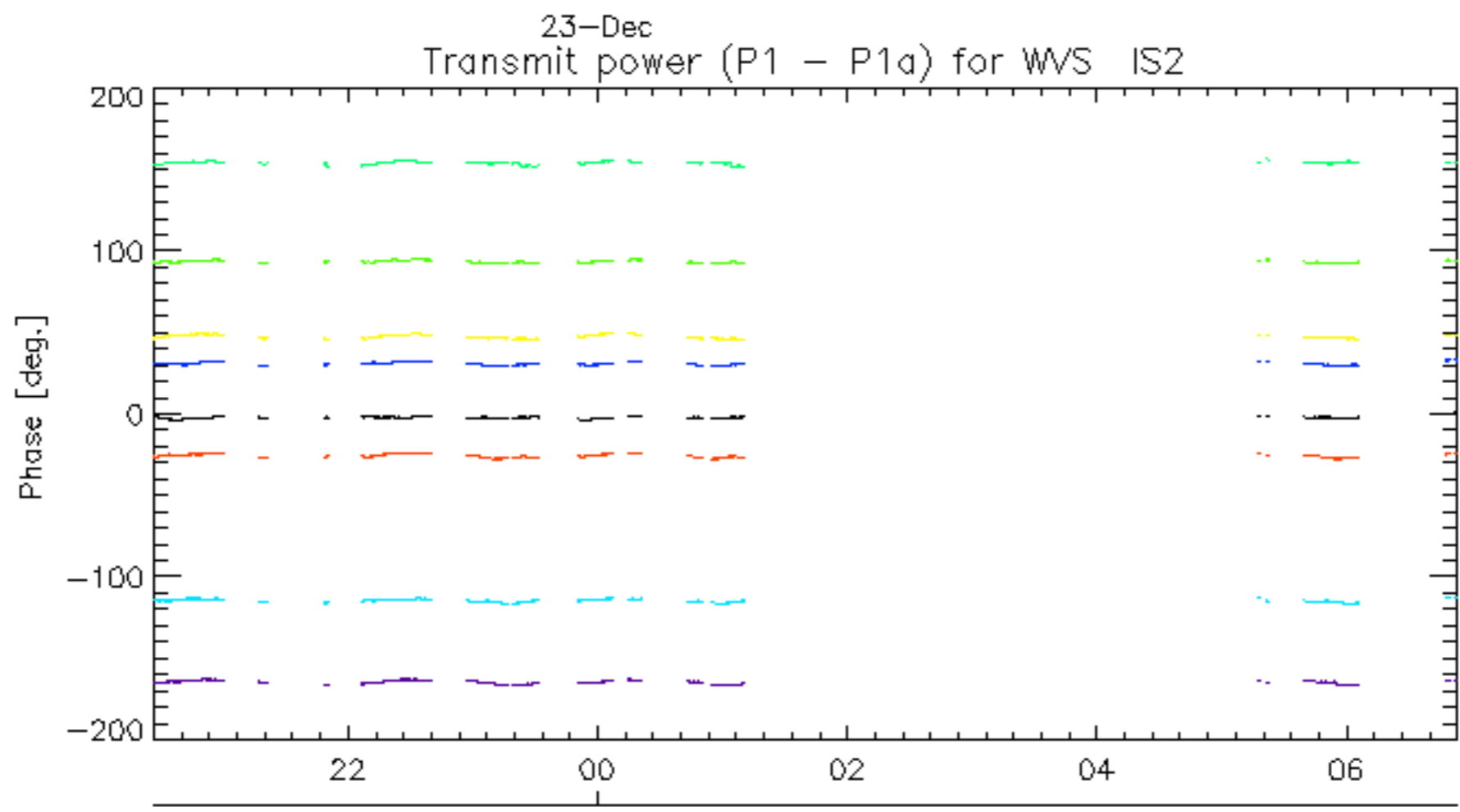
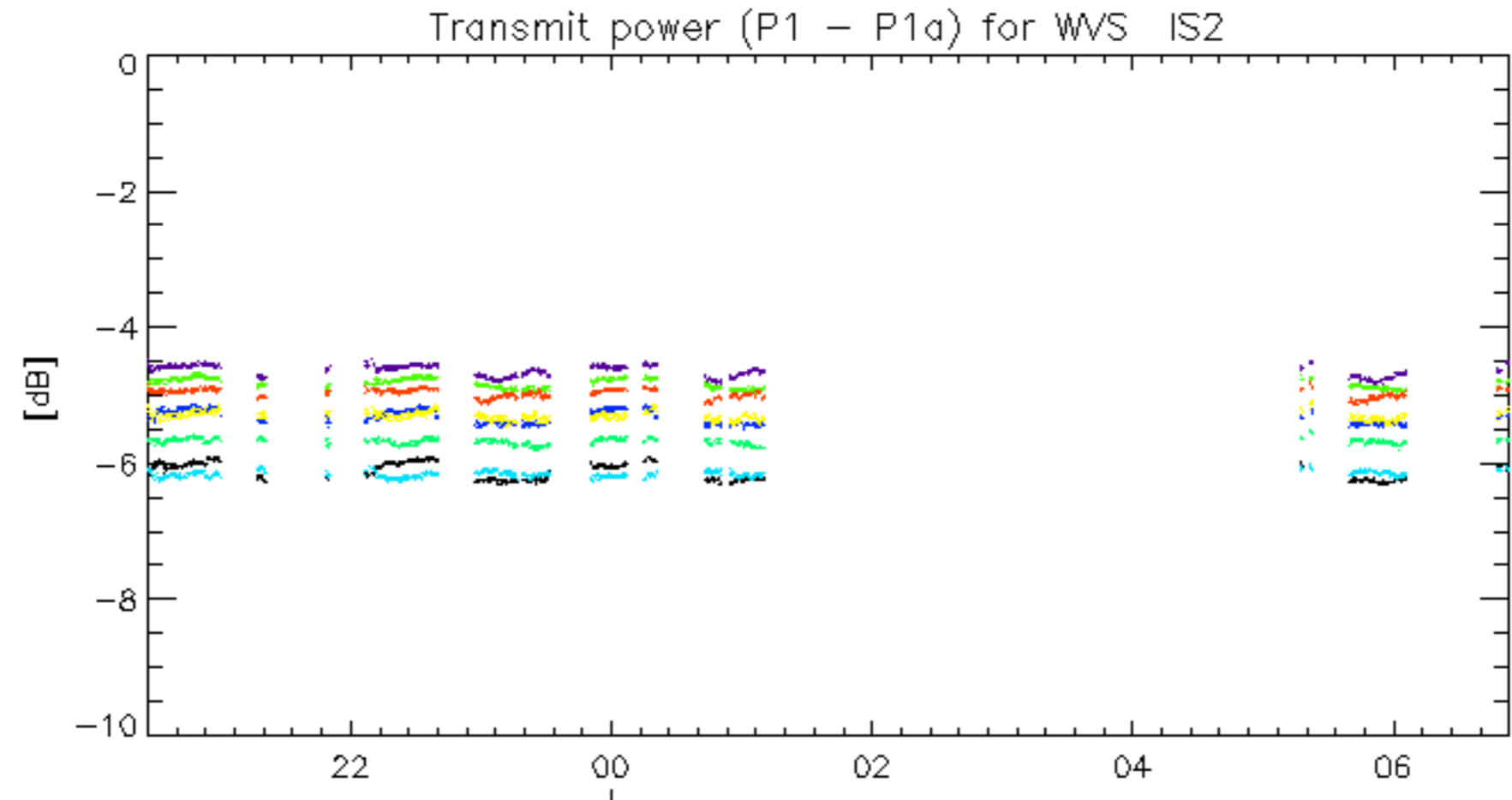


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





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



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

No unavailabilities during the reported period.