

# PRELIMINARY REPORT OF 051013

last update on Thu Oct 13 16:40:41 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 2005-10-12 00:00:00 to 2005-10-13 16:40:41

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	38	71	15	3	17
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	38	71	15	3	17
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	38	71	15	3	17
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	38	71	15	3	17

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	33	63	28	17	46
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	33	63	28	17	46
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	33	63	28	17	46
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	33	63	28	17	46

### 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	20051012 073844
H	20051013 070707

### 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

**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	-3.549426	0.061399	-0.017064
7	P1	-2.969641	0.034435	0.353377
11	P1	-4.236621	0.129075	0.799203
15	P1	-5.952753	0.038650	-0.337416
19	P1	-3.201387	0.145889	0.346669
22	P1	-4.487781	0.022404	0.214622
26	P1	-4.434951	0.098338	0.703037
30	P1	-5.944738	0.398543	1.254449
3	P1	-15.799743	1.777207	1.342483
7	P1	-16.696995	4.501268	1.363083
11	P1	-17.960705	12.308496	7.628505
15	P1	-13.727128	8.648315	0.884949
19	P1	-13.710576	0.212348	0.608080
22	P1	-17.203150	22.100958	3.768135
26	P1	-17.610807	20.914562	5.336850
30	P1	-17.445307	8.753521	4.127532

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.836035	0.102311	-0.141745
7	P2	-22.586123	0.229014	-0.626705
11	P2	-16.228399	1.867774	-2.722099
15	P2	-7.210492	0.116273	-0.055264
19	P2	-9.168837	0.182852	0.107362
22	P2	-17.500042	0.227781	-0.972359
26	P2	-16.180731	0.129201	0.442165
30	P2	-19.502872	0.197188	-0.620274

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.178547	0.004982	-0.033686
7	P3	-8.178547	0.004982	-0.033686
11	P3	-8.178547	0.004982	-0.033686
15	P3	-8.178547	0.004982	-0.033686
19	P3	-8.178547	0.004982	-0.033686
22	P3	-8.178547	0.004982	-0.033686
26	P3	-8.178547	0.004982	-0.033686
30	P3	-8.178547	0.004982	-0.033686

**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	-3.401620	0.252121	-1.148142
7	P1	-2.925752	0.064664	0.357114
11	P1	-3.116172	0.250910	1.236403
15	P1	-3.448520	0.030263	0.277869
19	P1	-3.338408	0.057454	0.021542
22	P1	-5.157389	0.146964	0.145676
26	P1	-5.899472	0.547525	0.775008
30	P1	-5.275734	0.321143	0.467202
3	P1	-11.502814	0.408444	0.290314
7	P1	-11.289021	19.305840	5.246330
11	P1	-12.213695	38.017059	8.824144
15	P1	-12.408766	32.818188	7.079206
19	P1	-15.336984	0.212180	-0.431317
22	P1	-21.398373	4.863271	4.707613

26	P1	-17.321392	4.781150	0.523975
30	P1	-19.353226	1.786074	2.282861

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.646521	0.055276	-0.300042
7	P2	-22.890644	0.242053	-0.793216
11	P2	-11.386189	0.743129	-1.843471
15	P2	-4.927790	0.045146	0.190790
19	P2	-6.802418	0.107308	-0.365102
22	P2	-7.865073	0.206385	-1.103836
26	P2	-23.877447	0.042418	0.108064
30	P2	-22.080338	0.055592	0.063286

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.021570	0.002887	-0.037672
7	P3	-8.021638	0.002892	-0.038228
11	P3	-8.021433	0.002896	-0.038425
15	P3	-8.021523	0.002888	-0.038093
19	P3	-8.021687	0.002895	-0.037784
22	P3	-8.021483	0.002896	-0.038219
26	P3	-8.021770	0.002888	-0.038100
30	P3	-8.021523	0.002900	-0.037846

## 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	0.000536420
	stdev	1.82448e-07
MEAN Q	mean	0.000527343
	stdev	2.18762e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135620
	stdev	0.00110435
STDEV Q	mean	0.135944
	stdev	0.00111994



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[123]

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_WSM_1PNPDE20051011_010913_000003062041_00303_18894_3388.N1	0	19
ASA_WSM_1PNPDE20051011_170741_000002392041_00313_18904_3469.N1	0	25
ASA_WSM_1PNPDE20051011_191644_000000672041_00314_18905_3478.N1	0	101
ASA_WSM_1PNPDE20051011_191644_000000672041_00314_18905_3489.N1	0	101
ASA_WSM_1PNPDK20051011_134721_000000922041_00311_18902_6753.N1	0	73



## 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"/>
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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

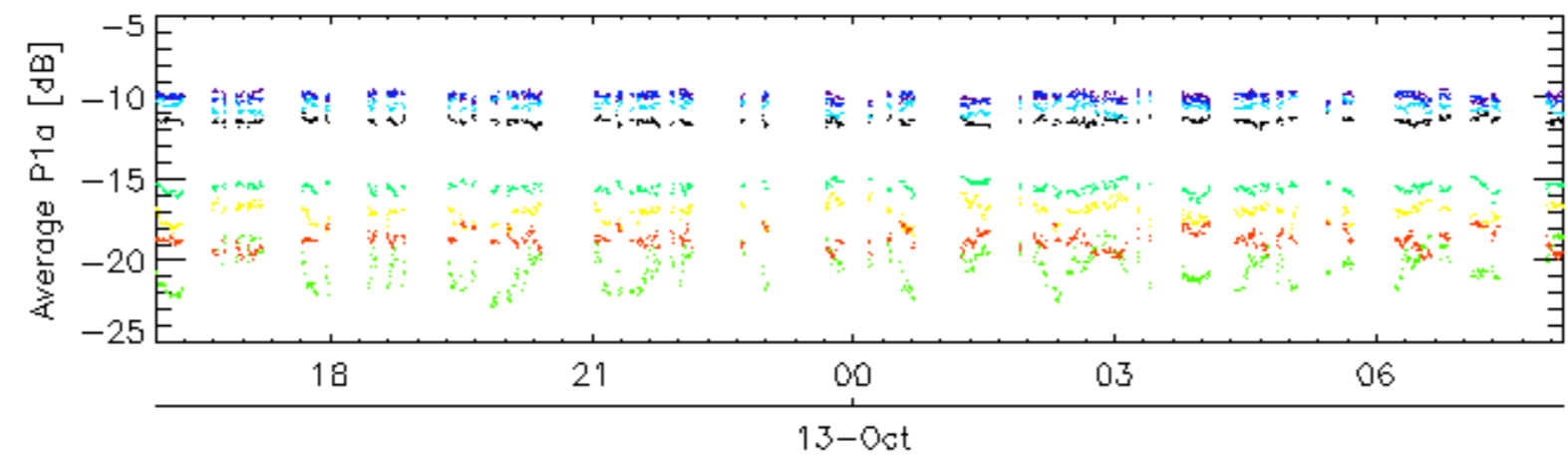
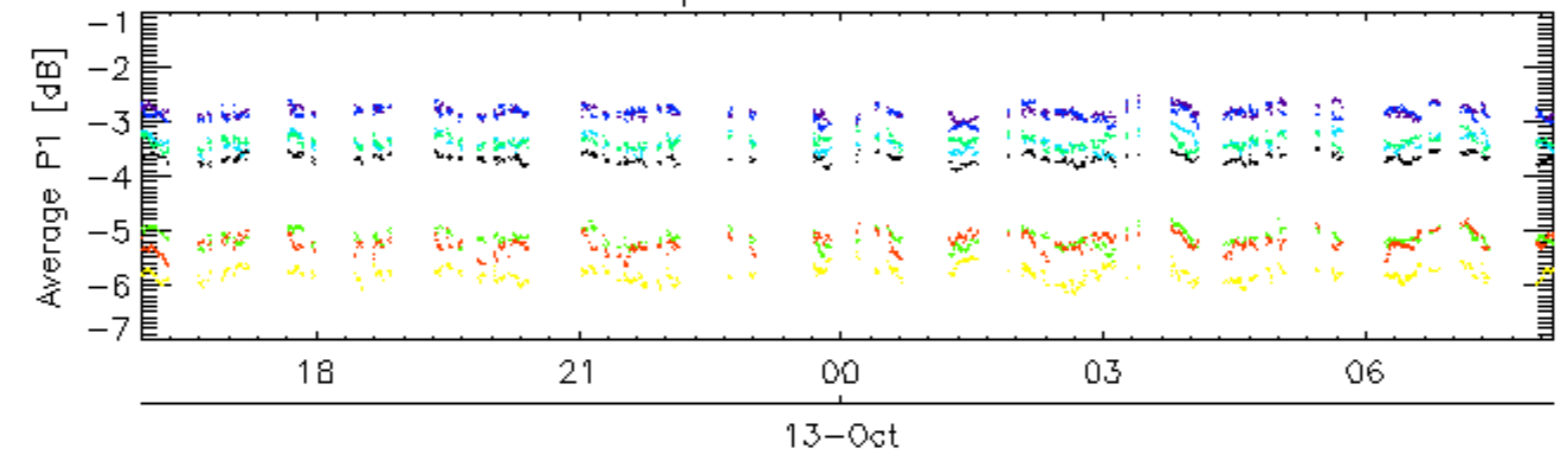
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

### 7.6 - Doppler evolution versus ANX for GM1

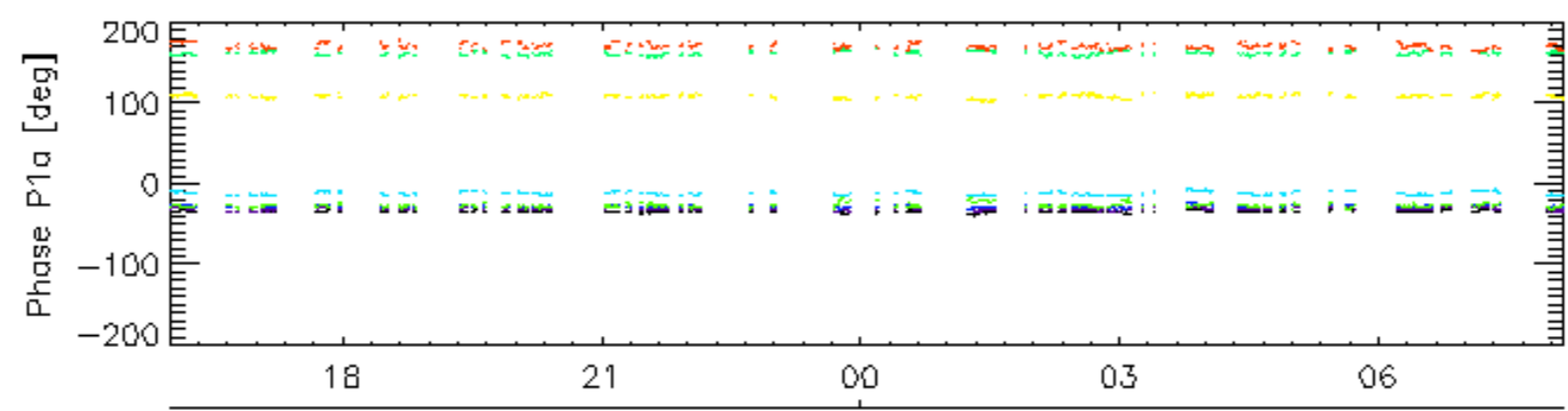
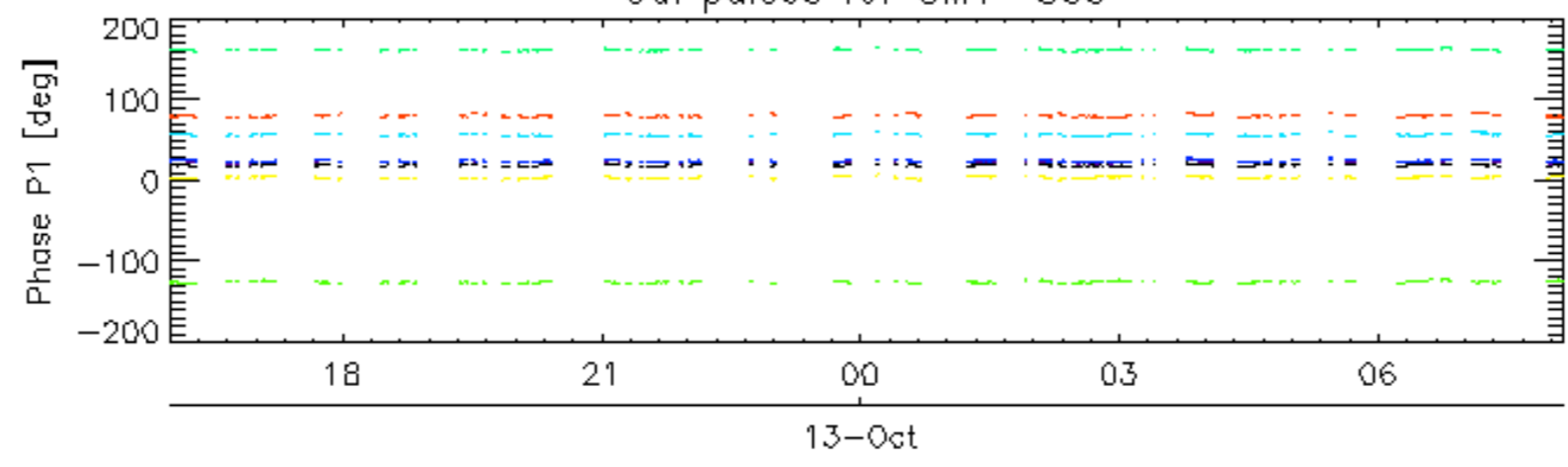
Evolution Doppler error versus ANX

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

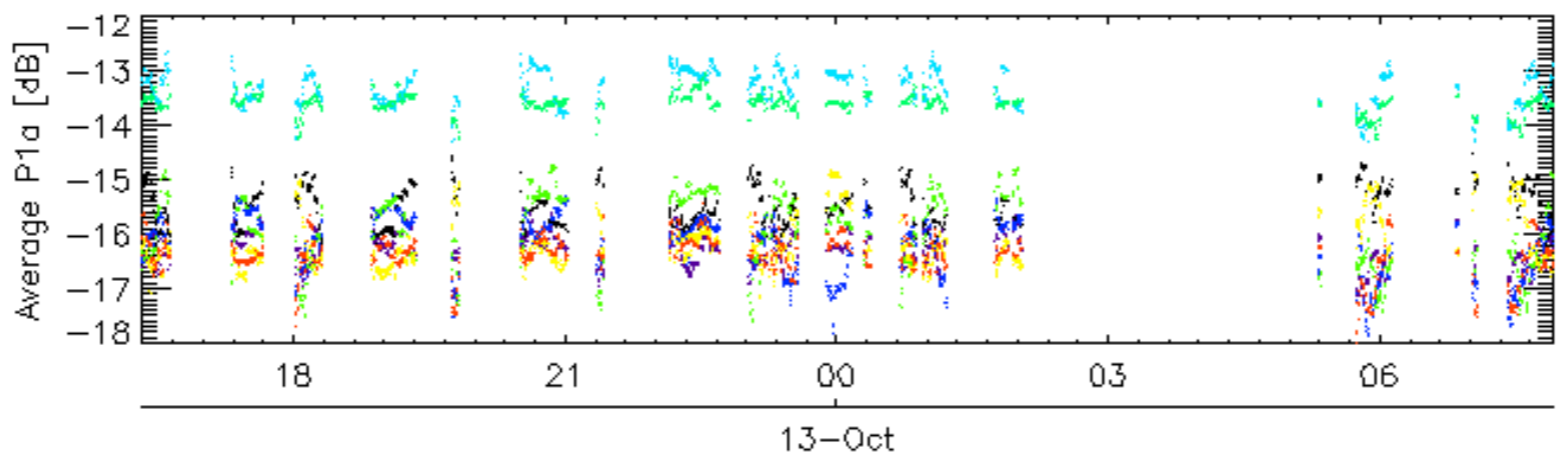
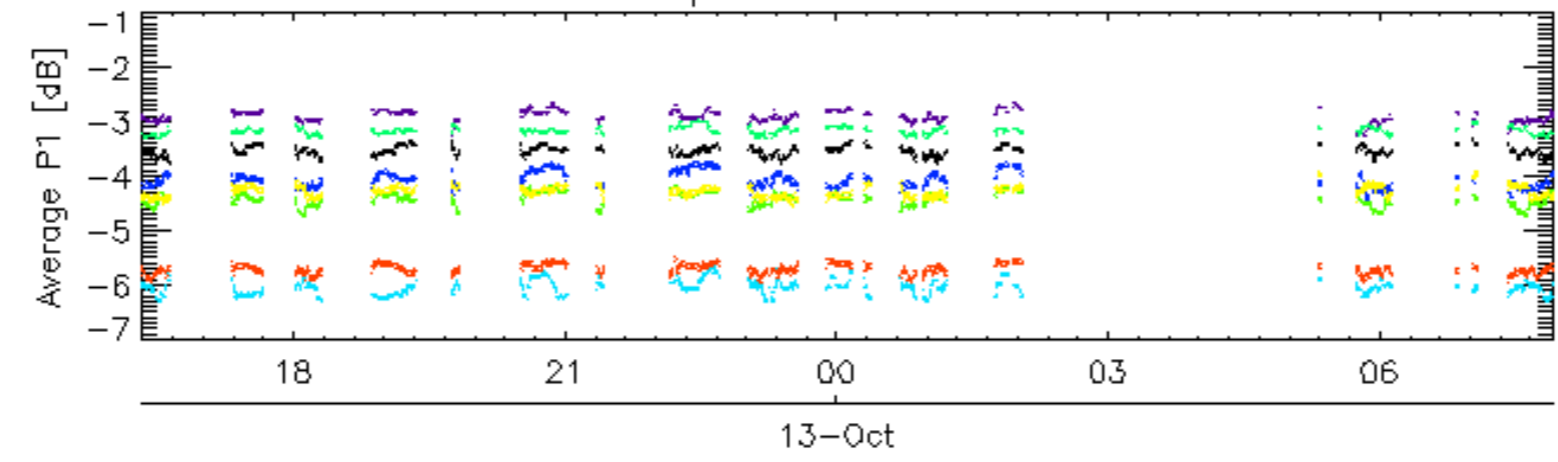


Cal pulses for GM1 SS3

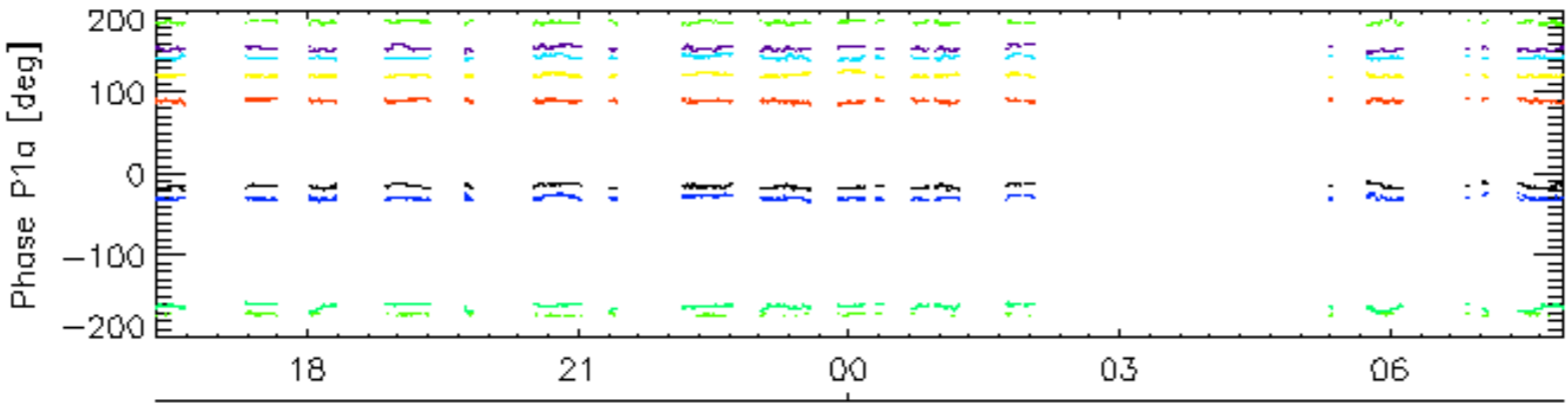
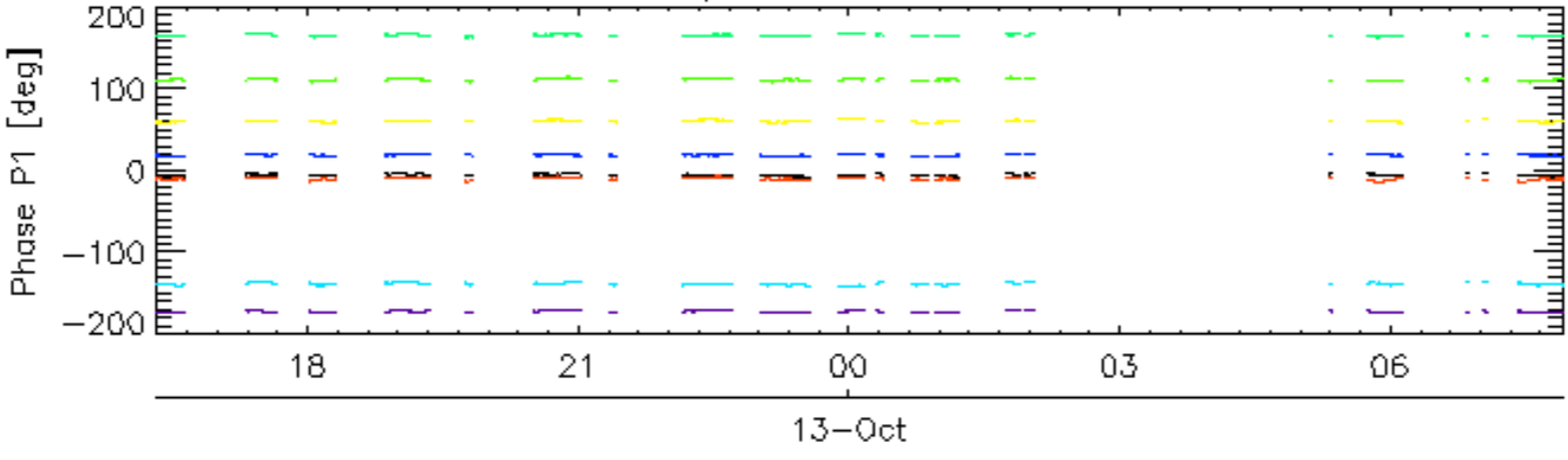


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for WVS IS2

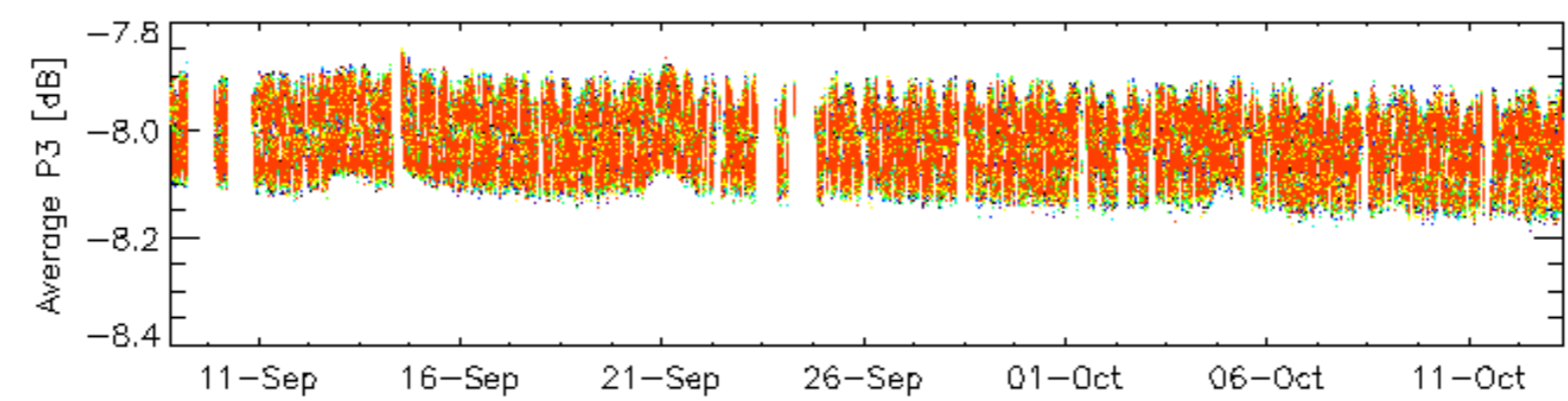
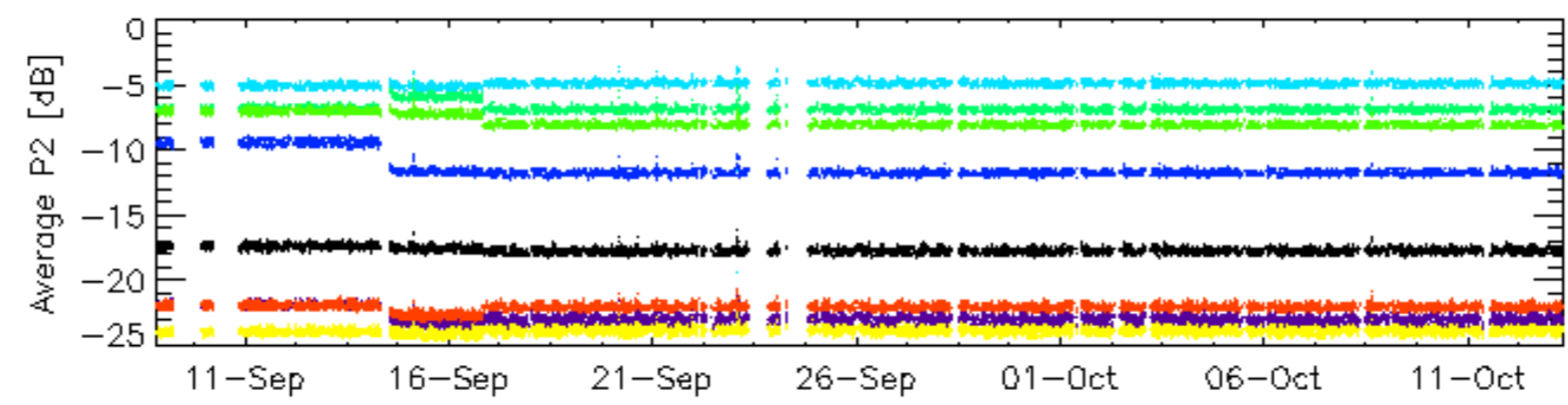
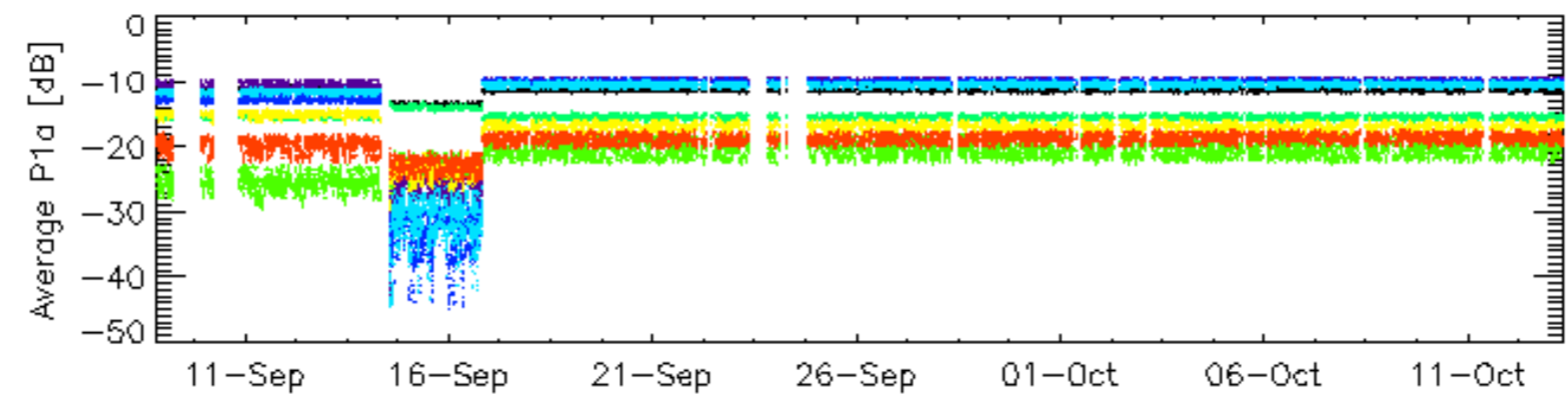
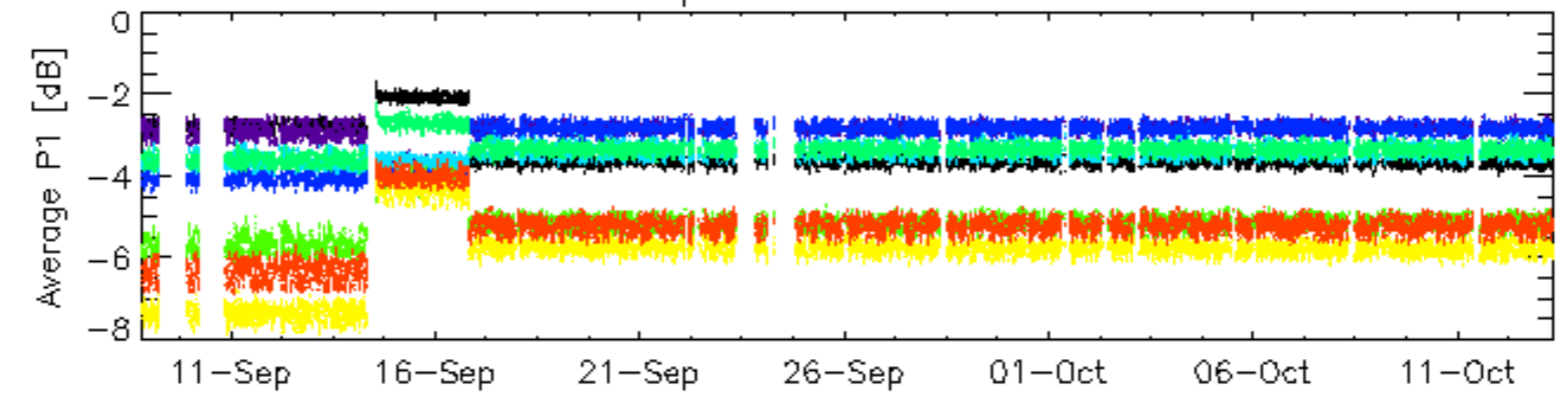


Cal pulses for WVS IS2



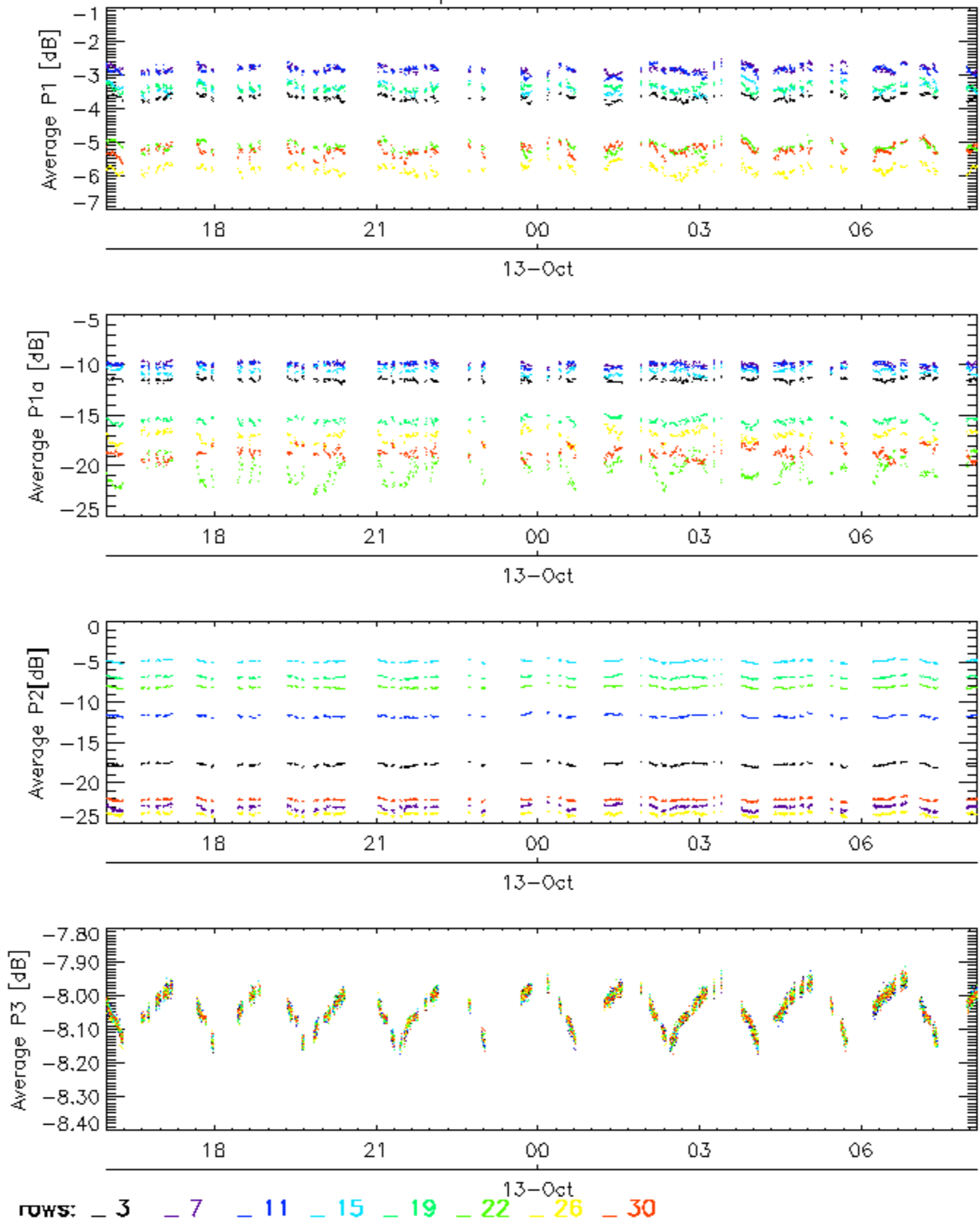
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

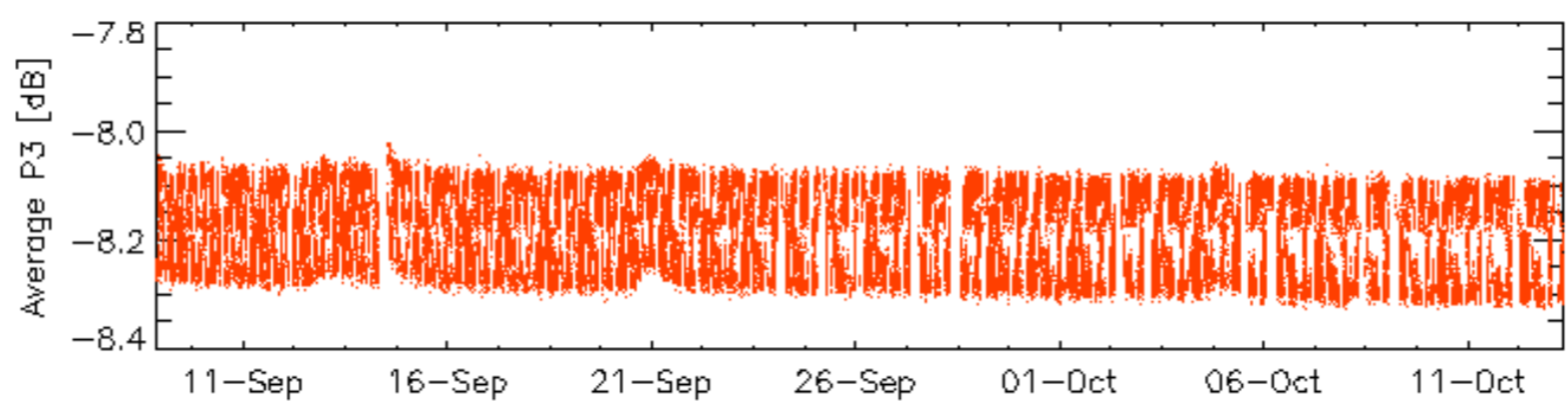
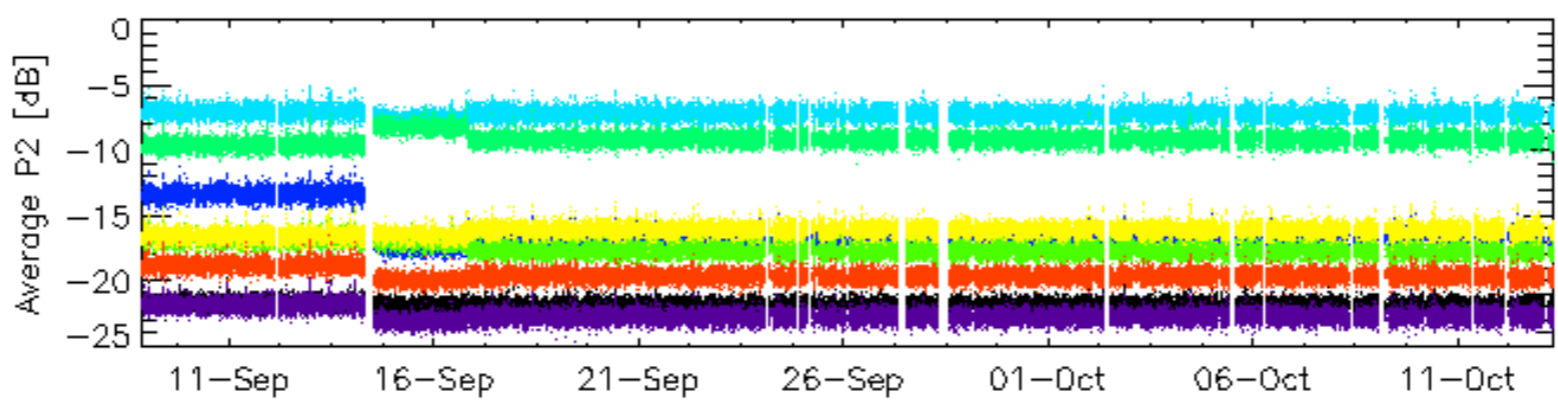
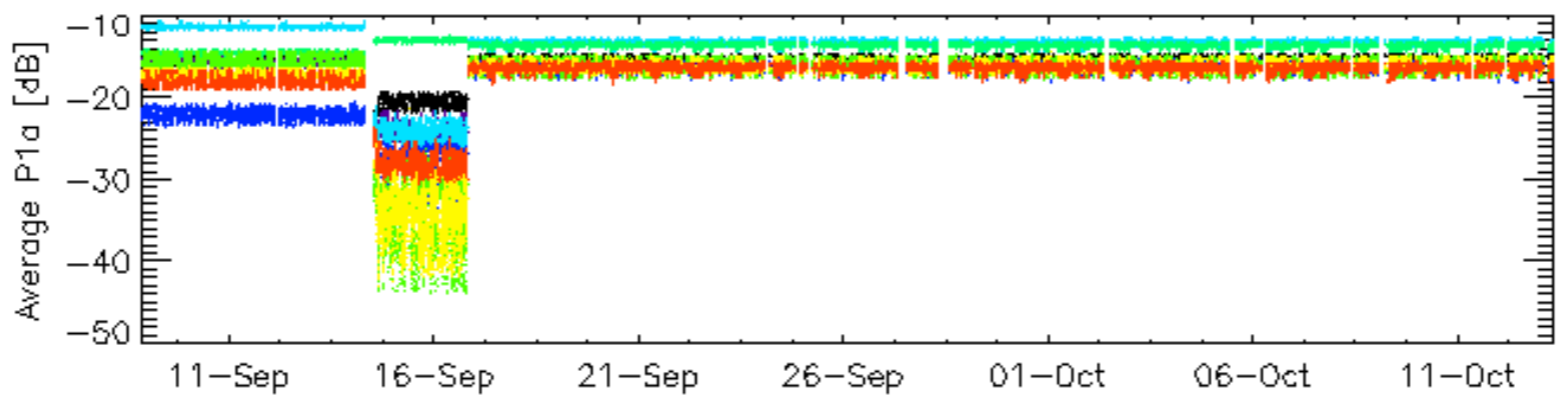
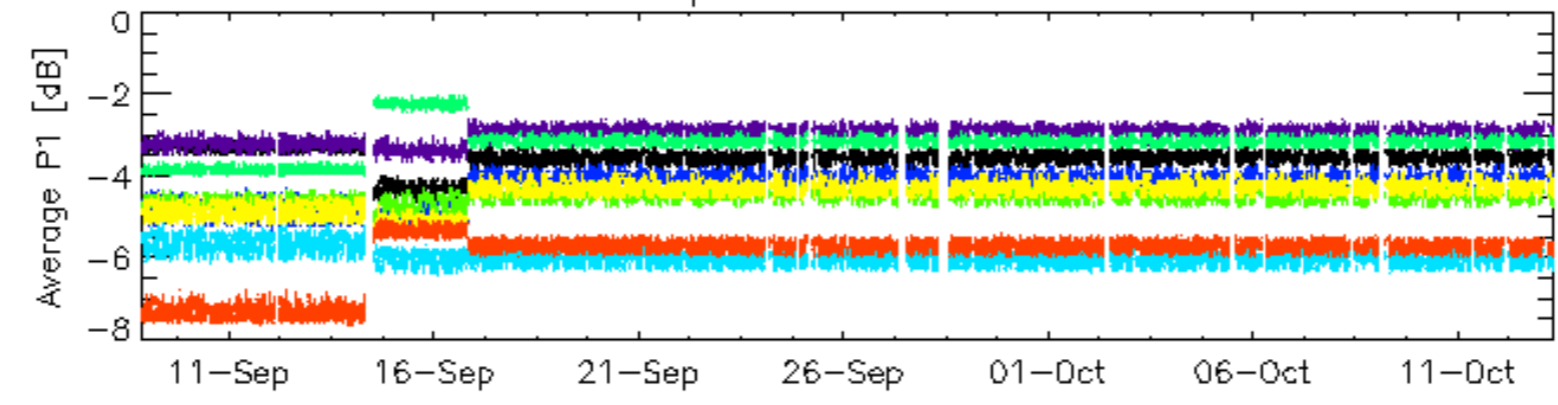


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

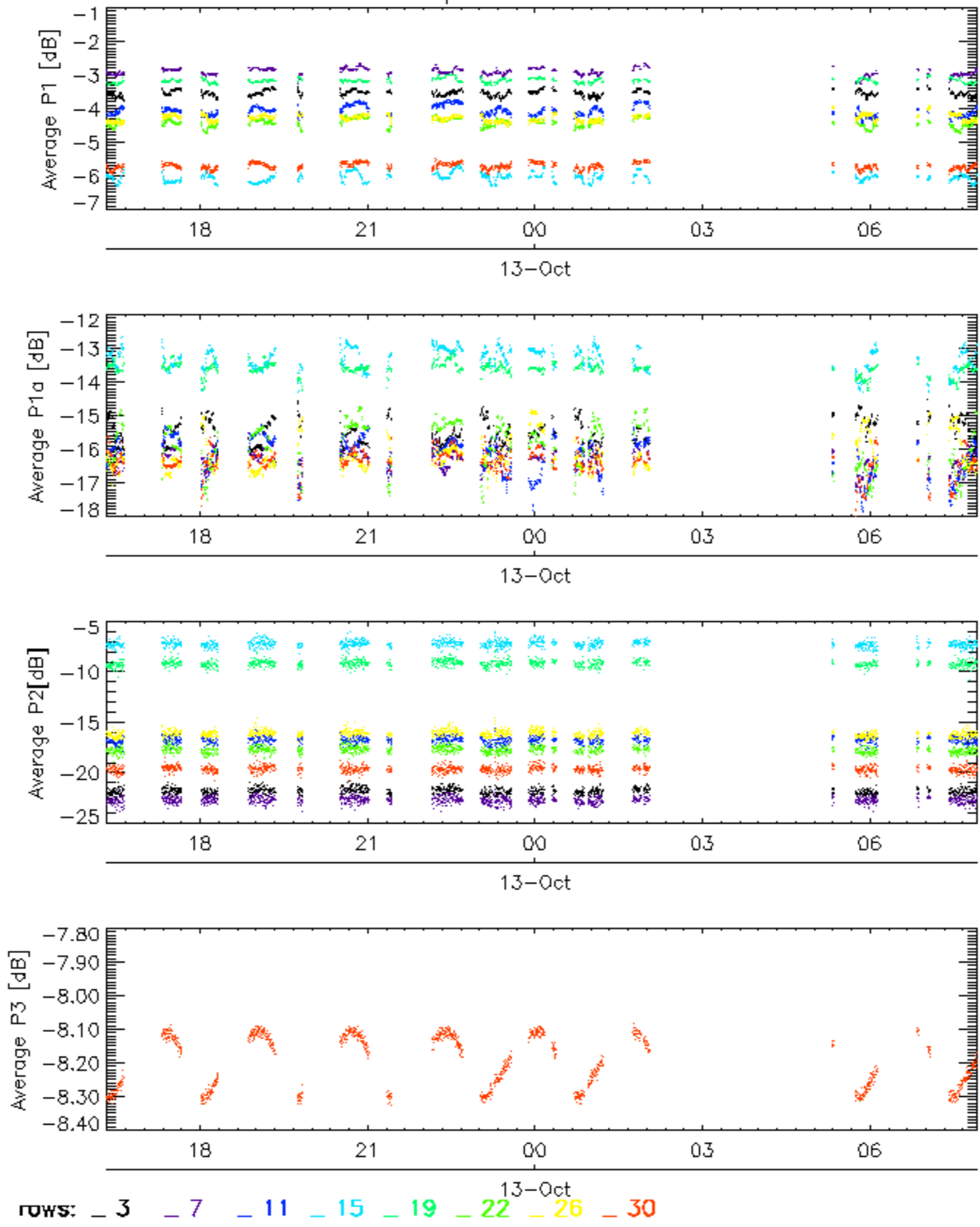


Cal pulses for WVS IS2



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

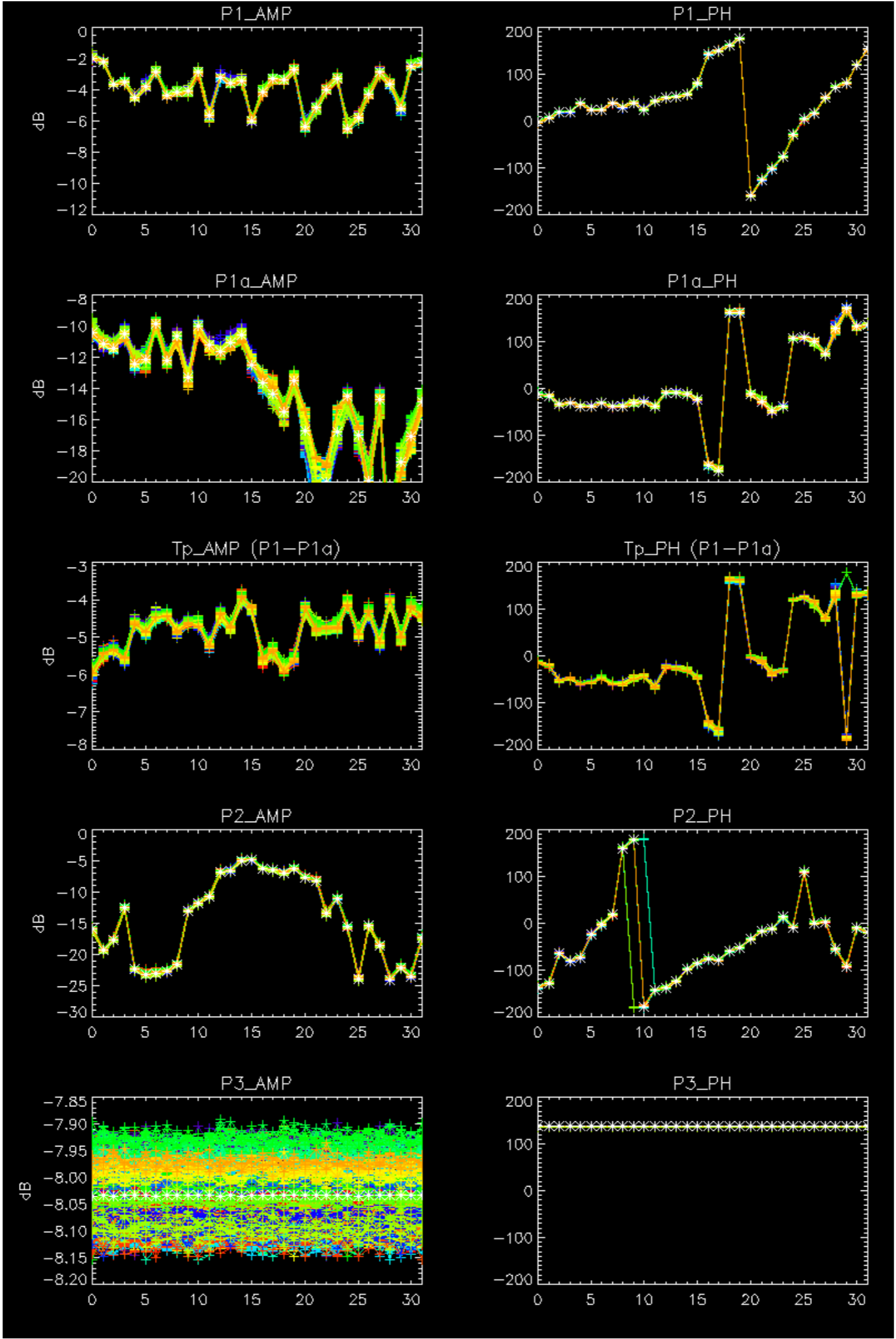
Cal pulses for WVS IS2

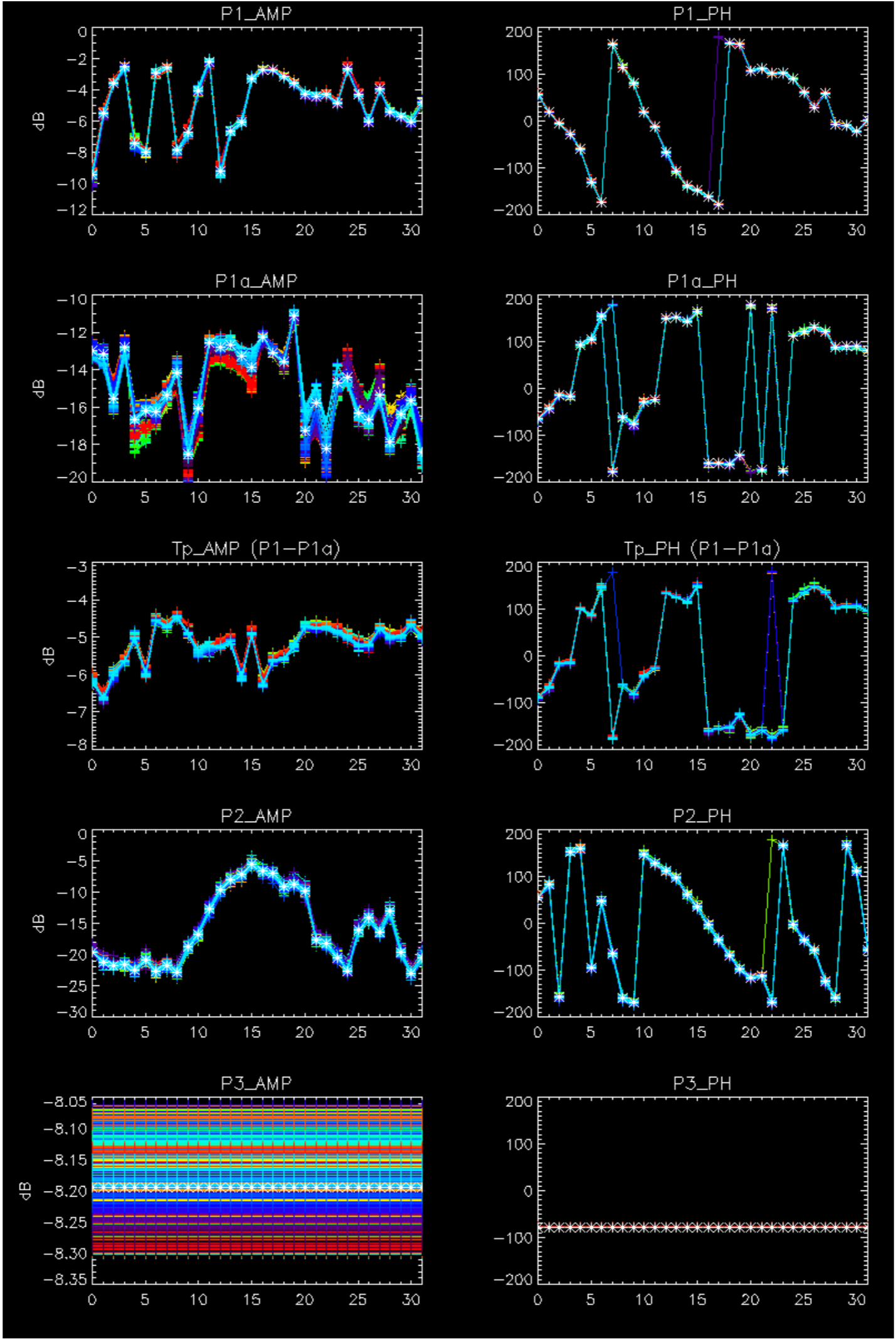


No anomalies observed on available browse products



No anomalies observed.

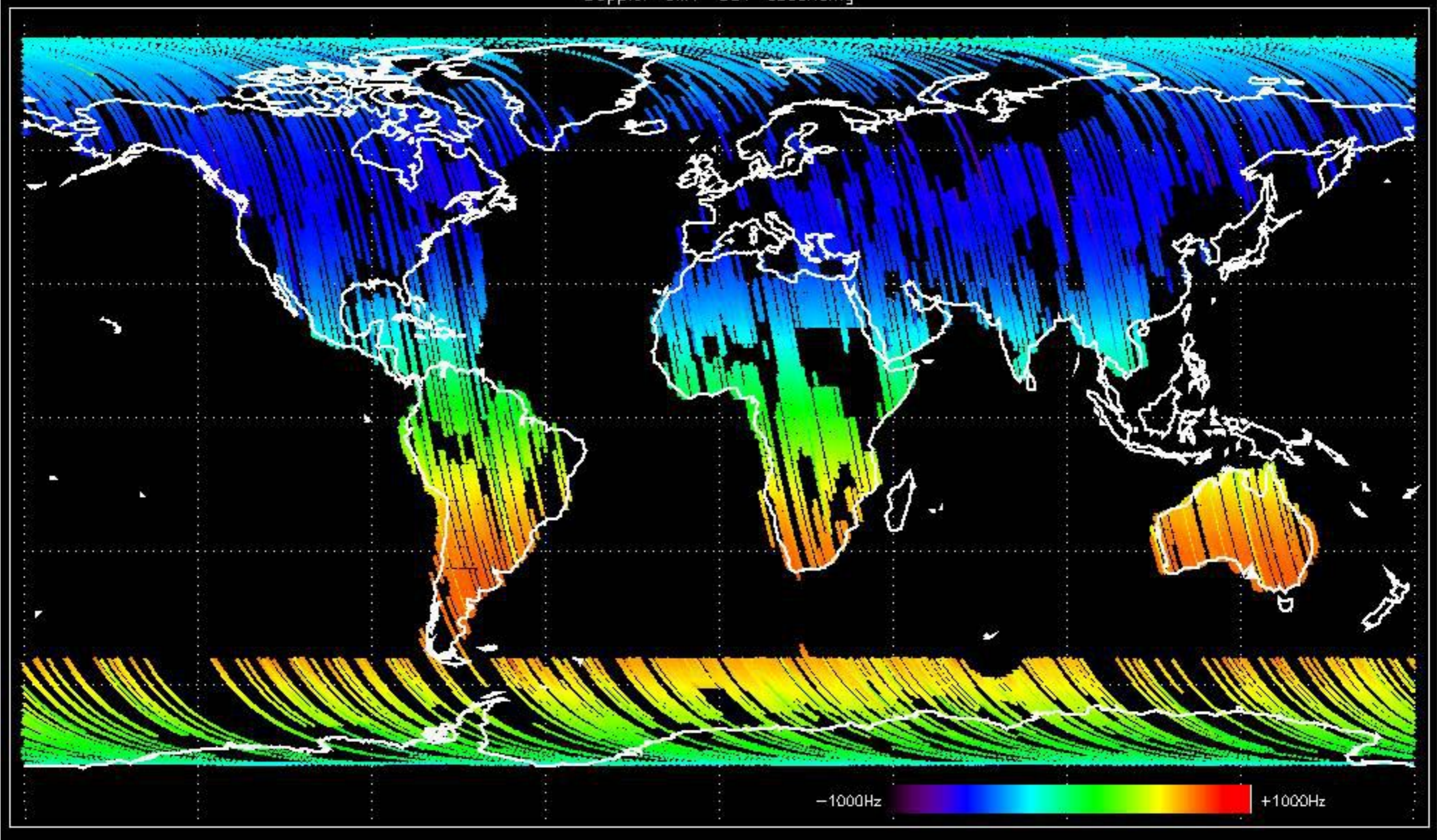




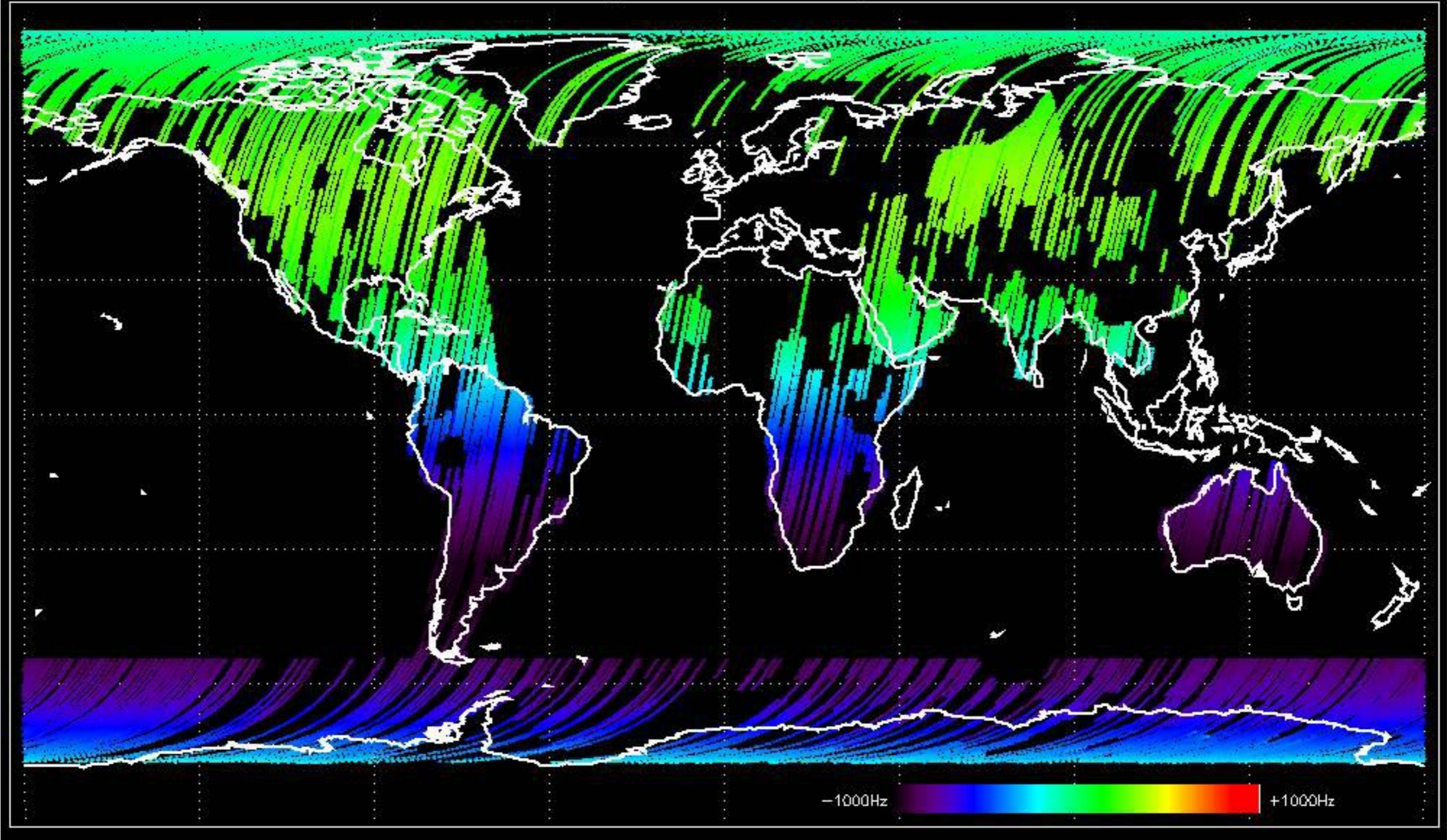
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



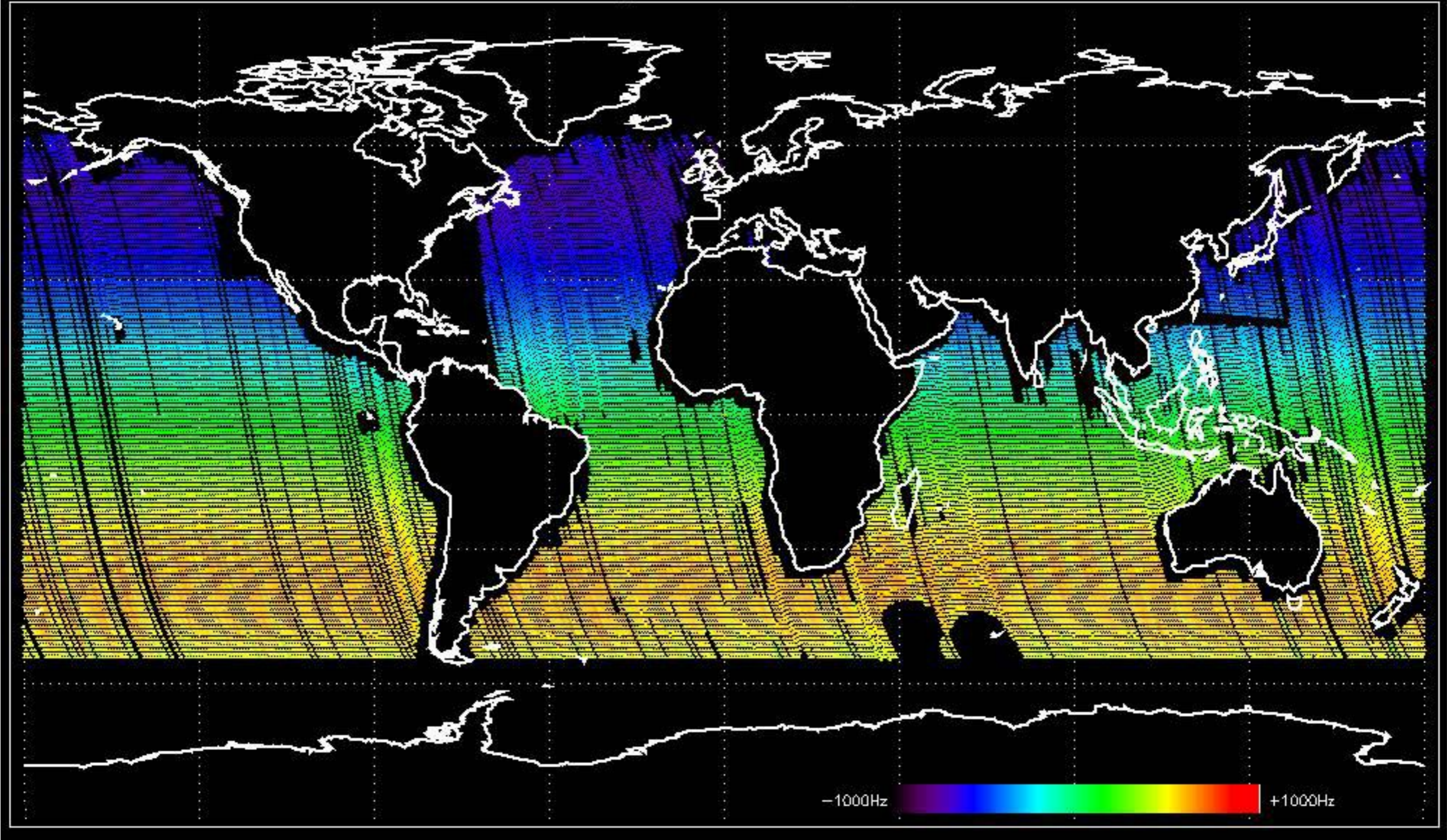
Doppler 'GM1' 'SS1' ascending



Doppler 'GM1' 'SS1' descending

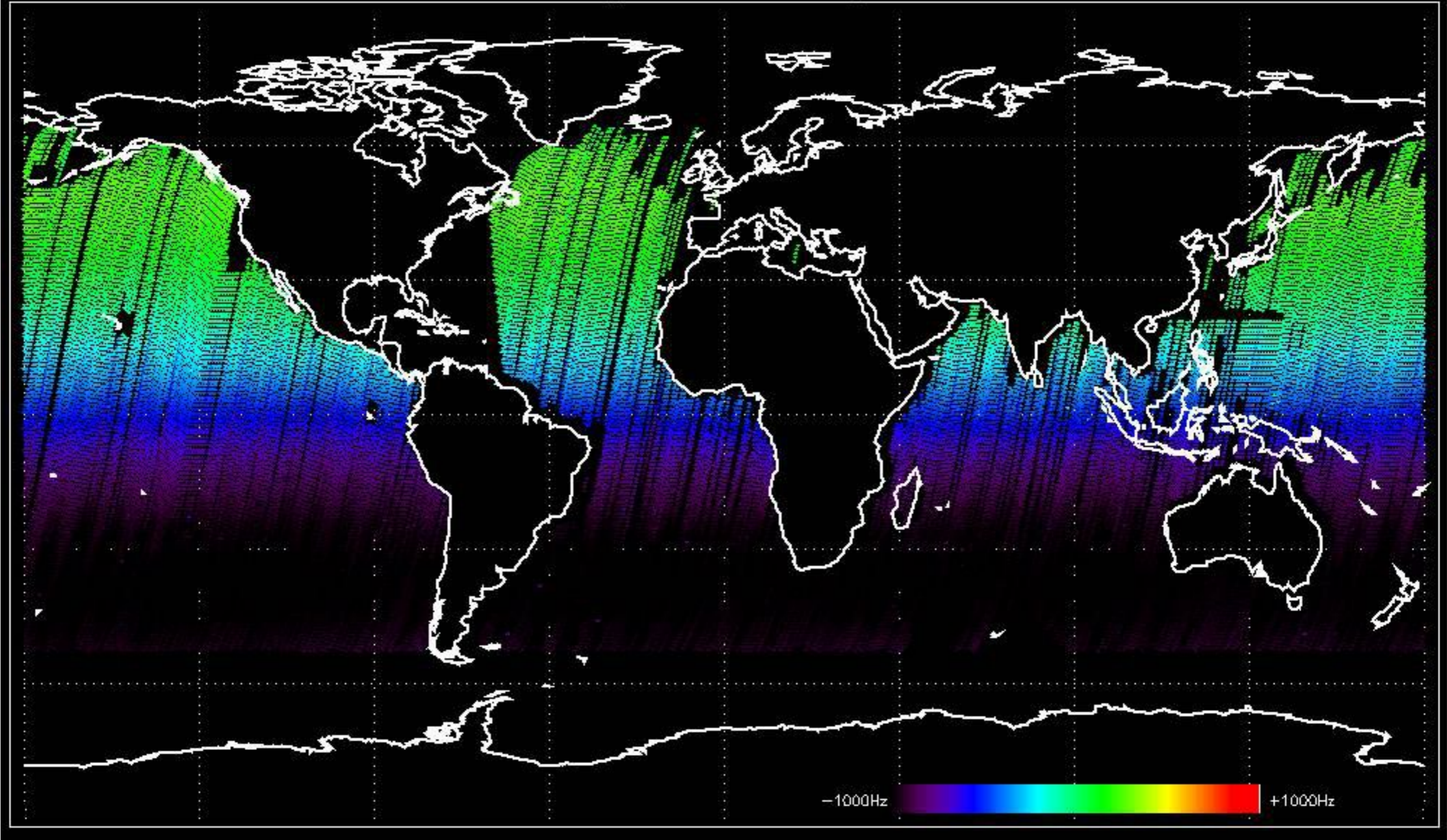


Doppler 'WVS' 'IS2' ascending

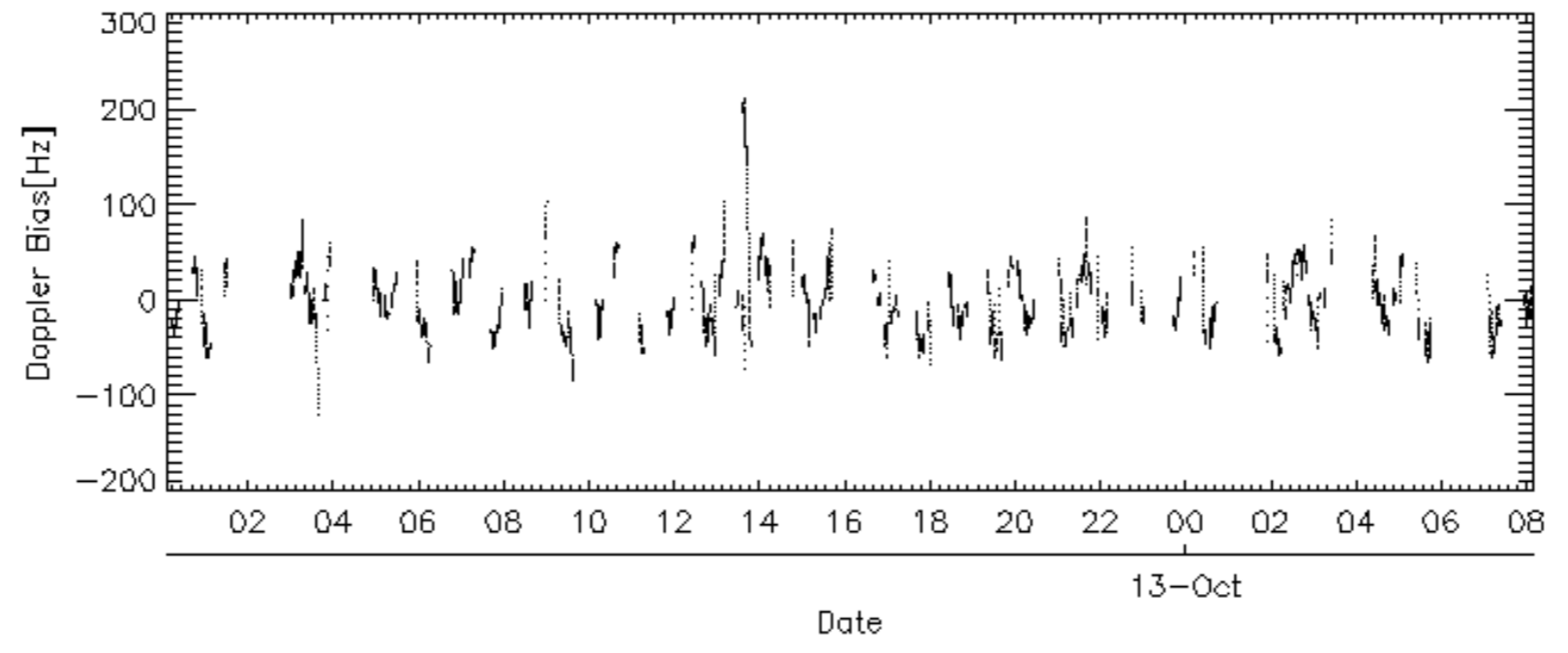
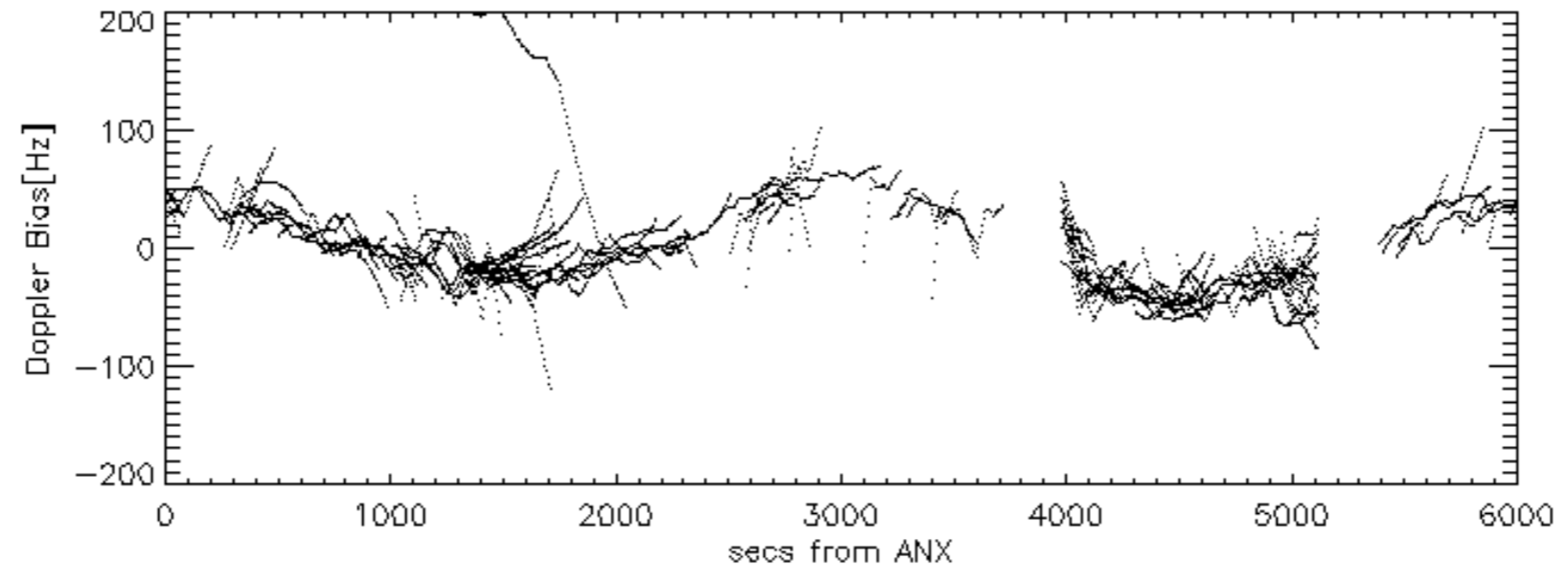
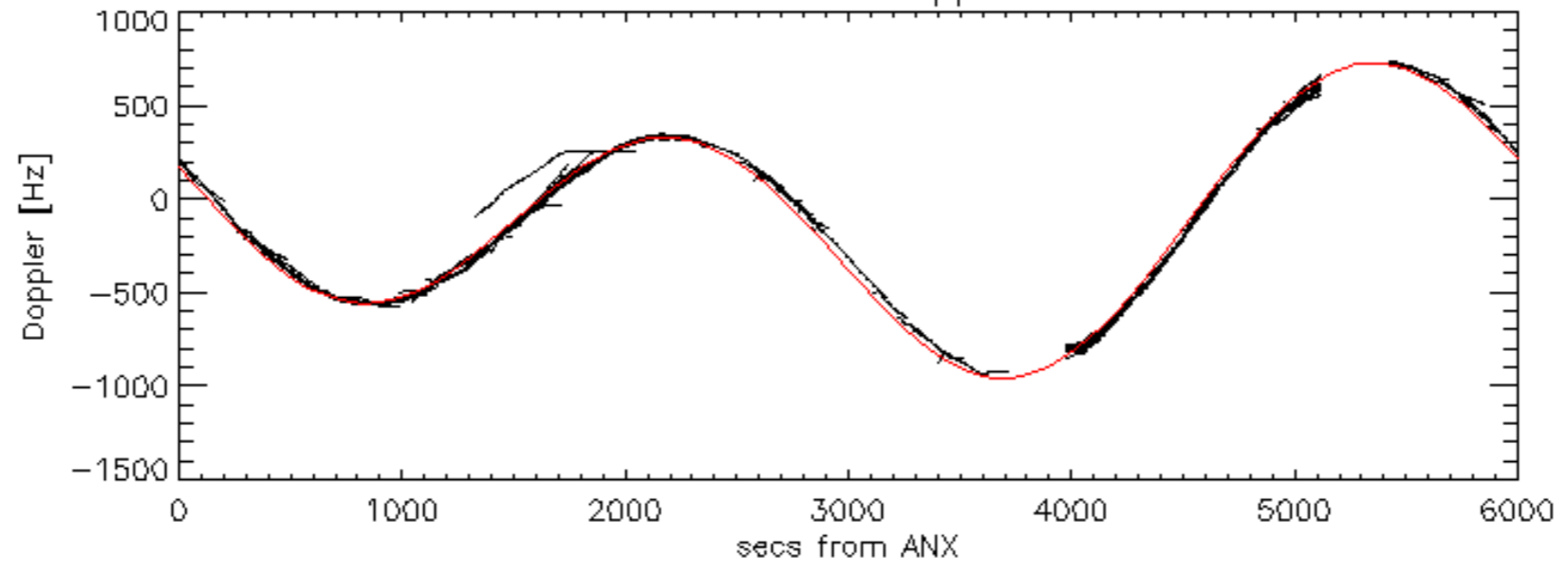


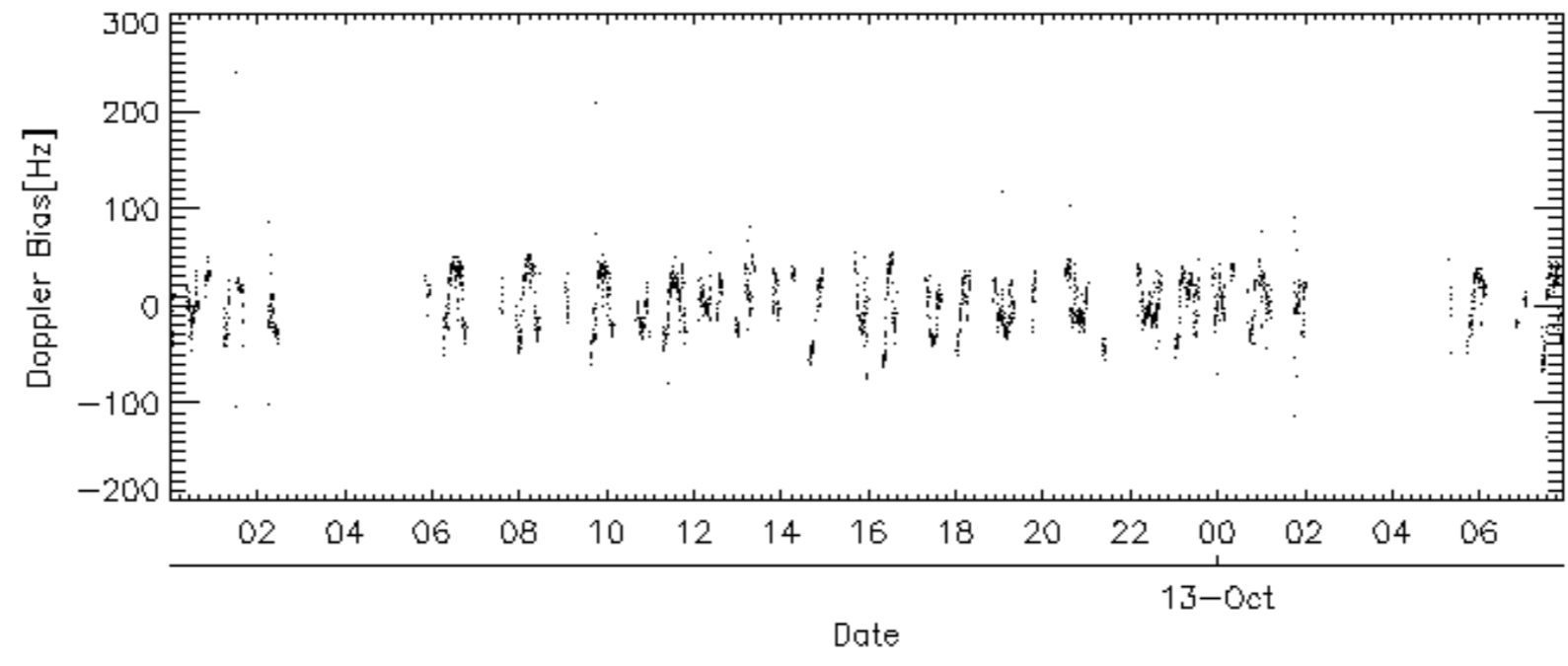
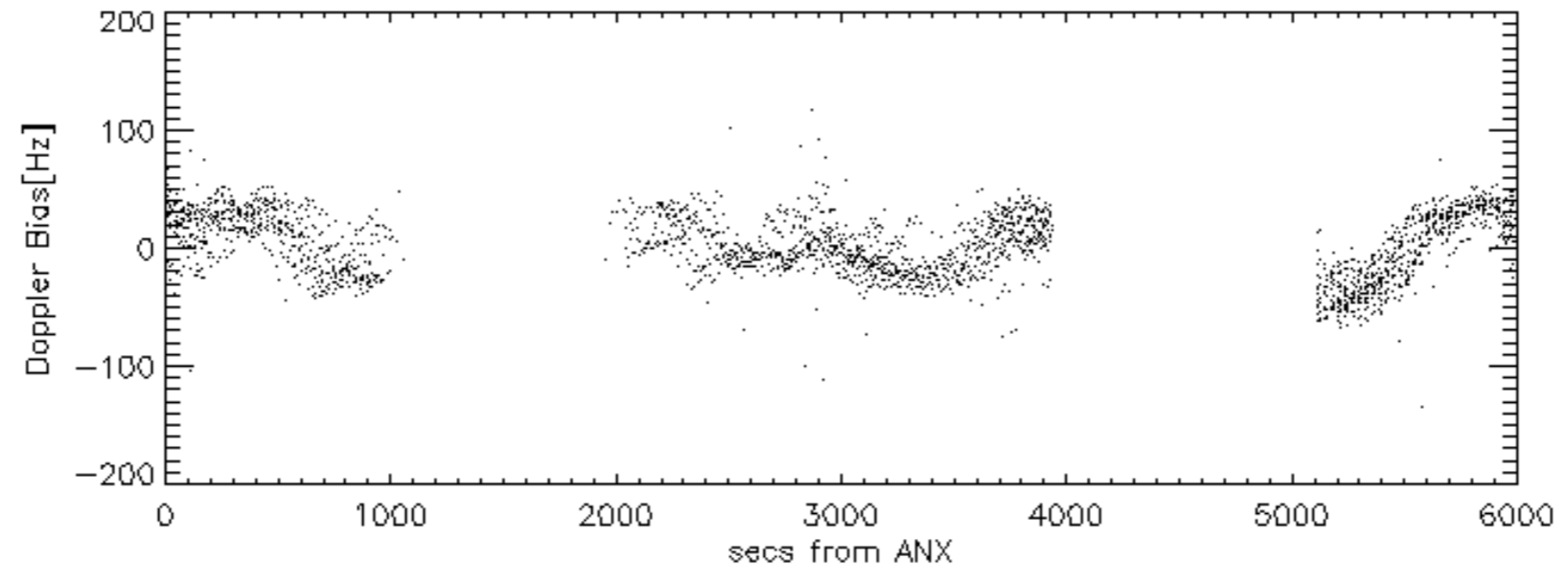
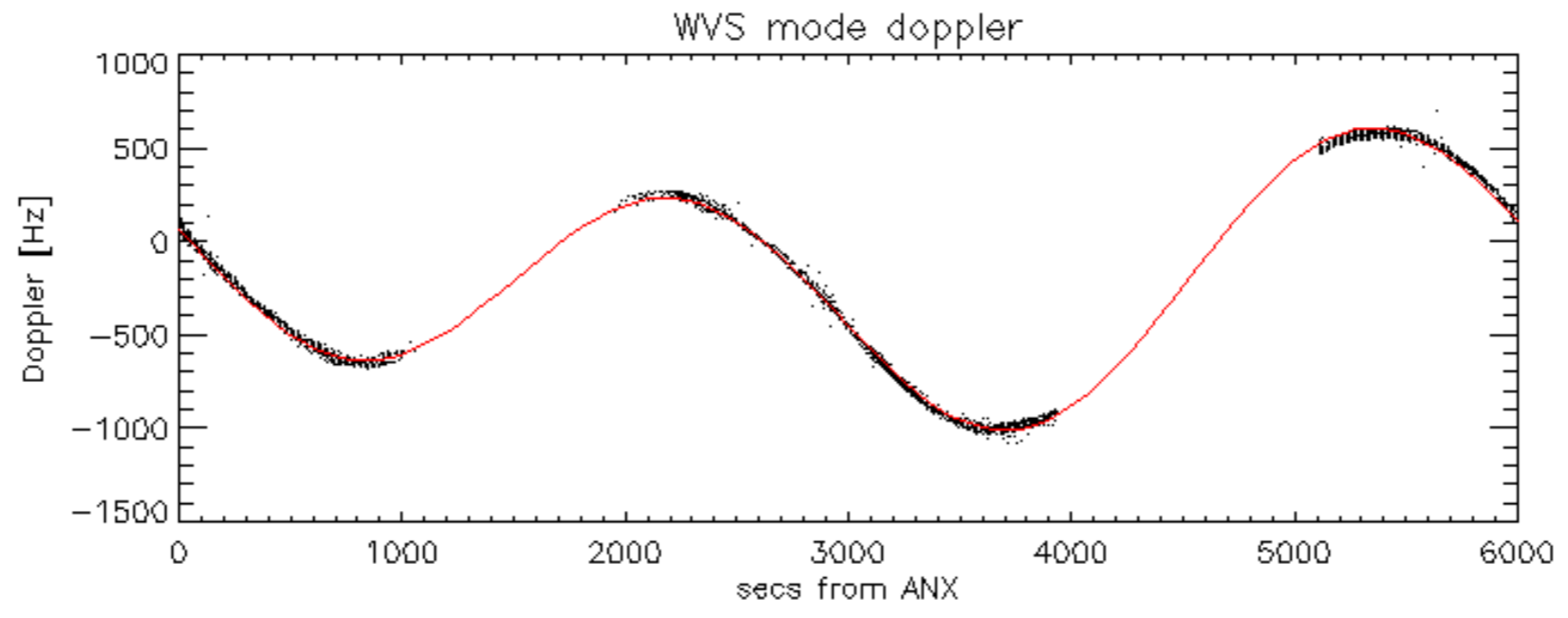


Doppler 'WVS' 'IS2' descending

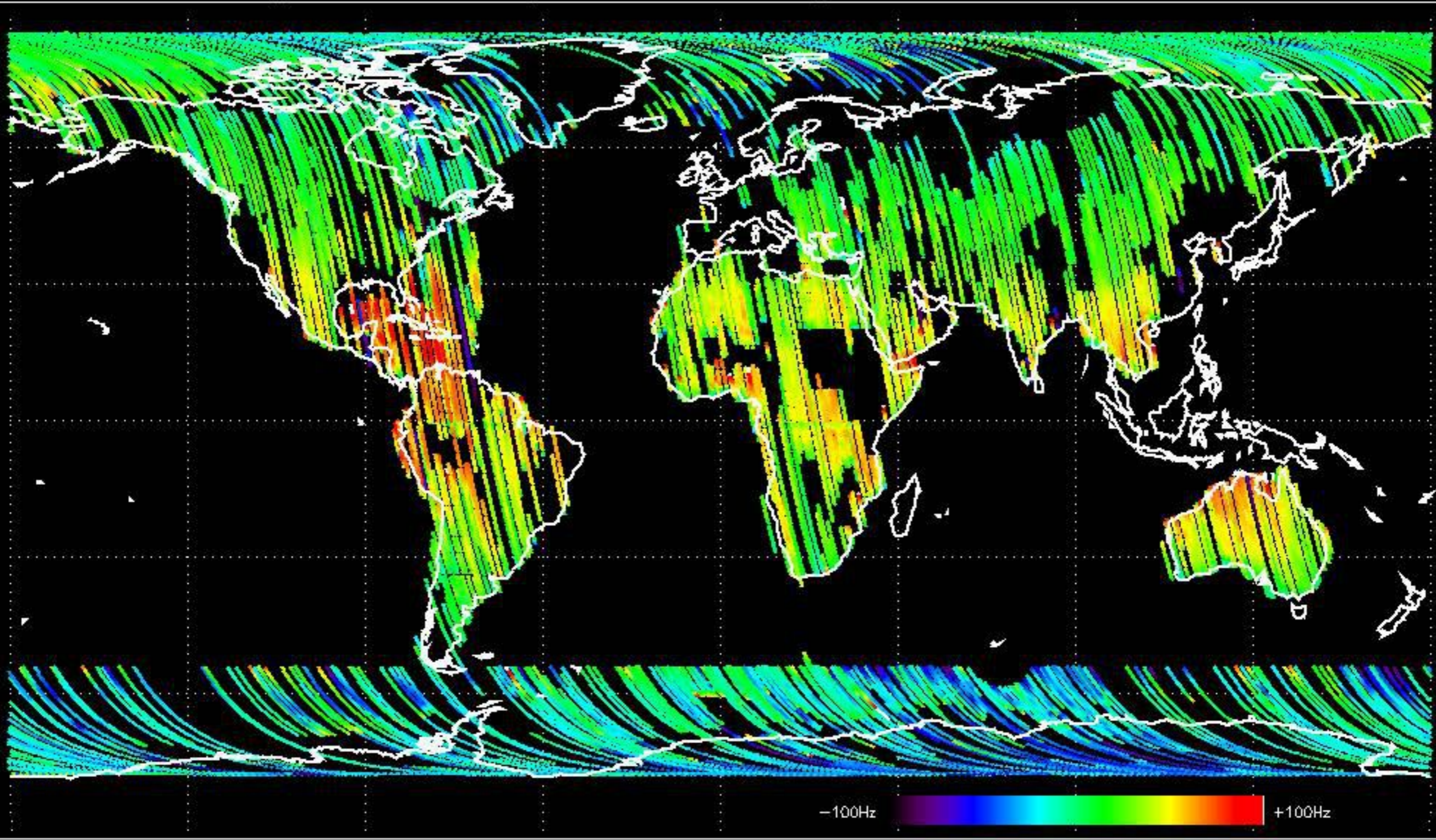


GM1 mode doppler

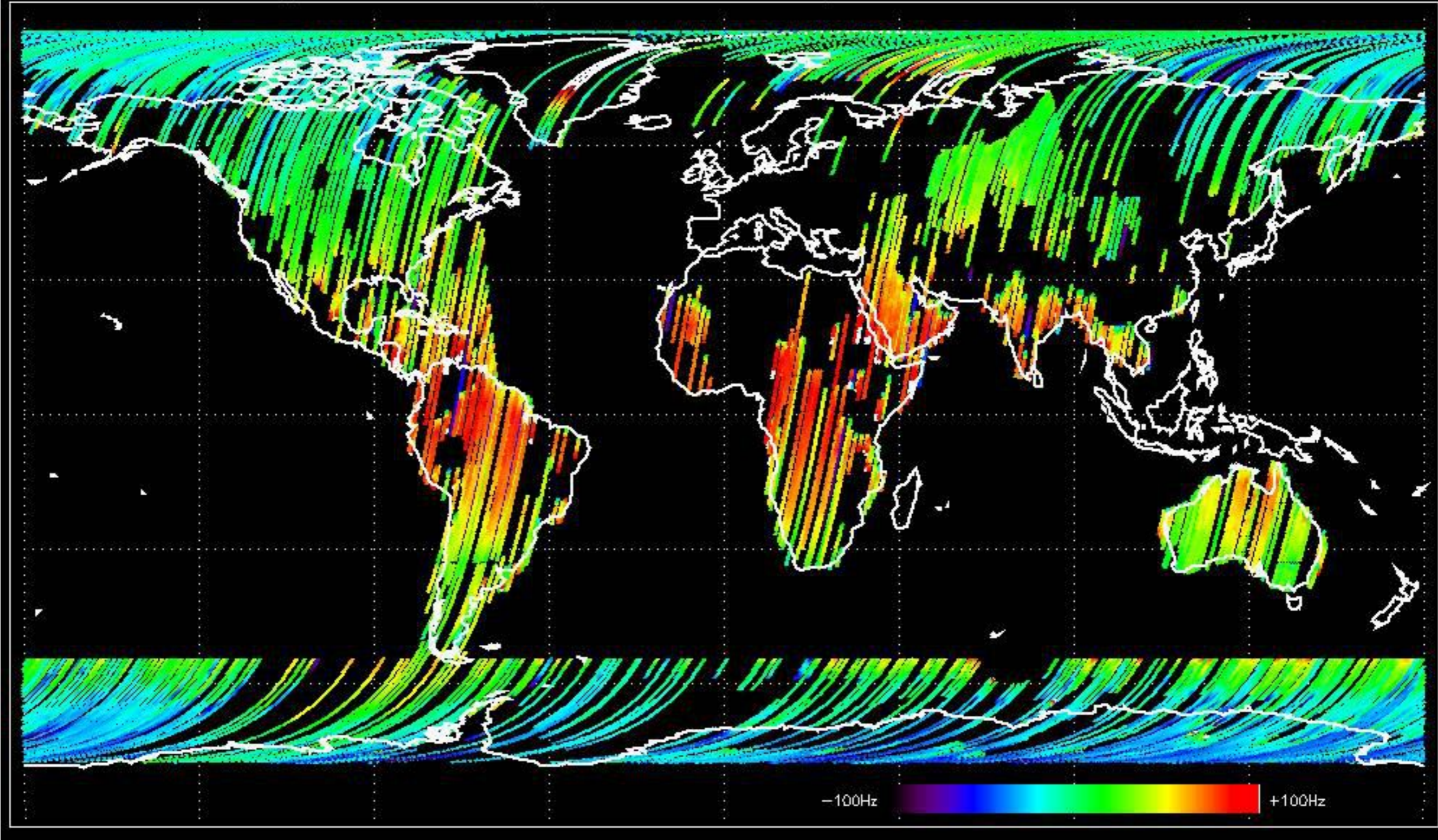




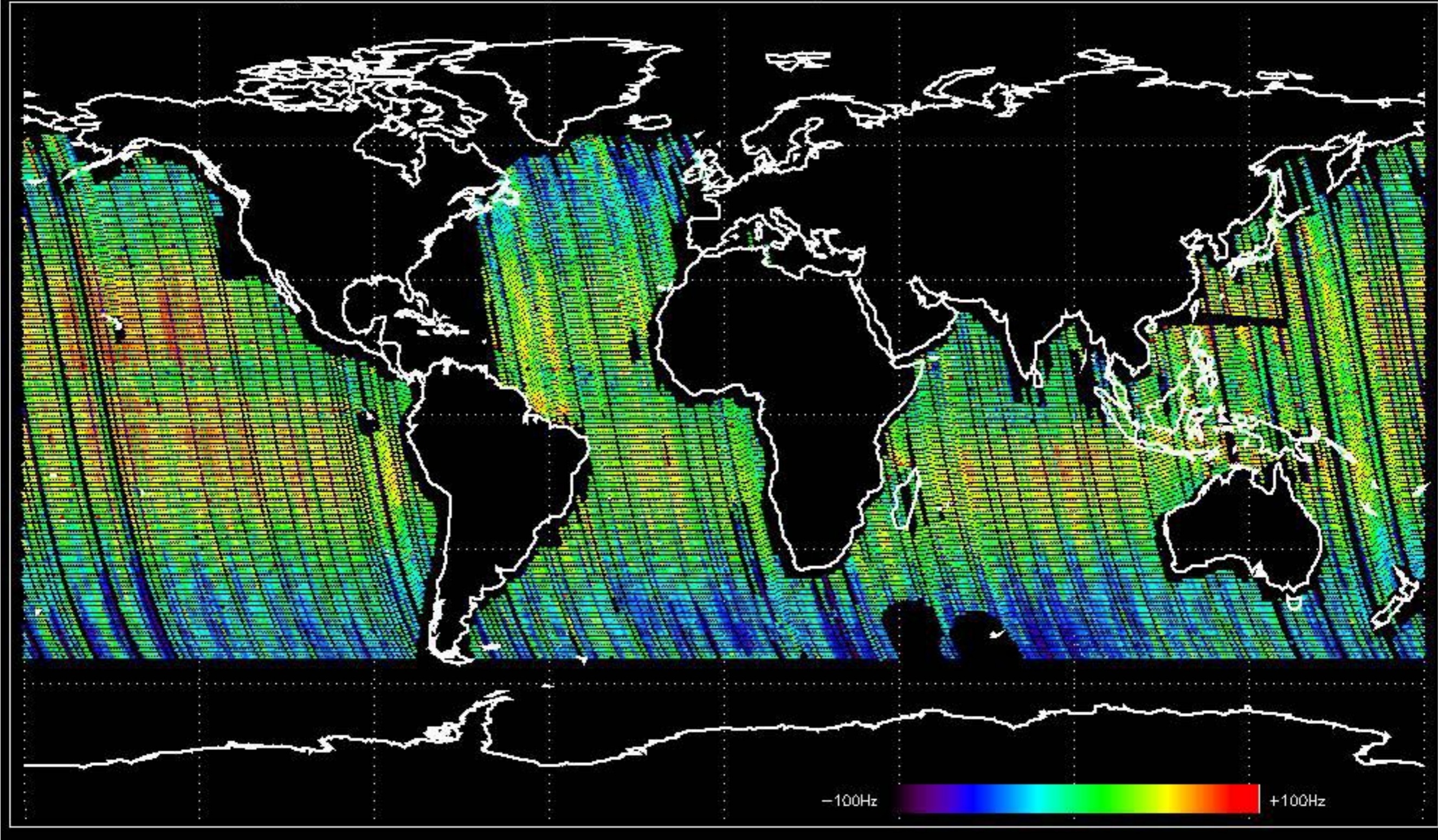
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.377118 Hz



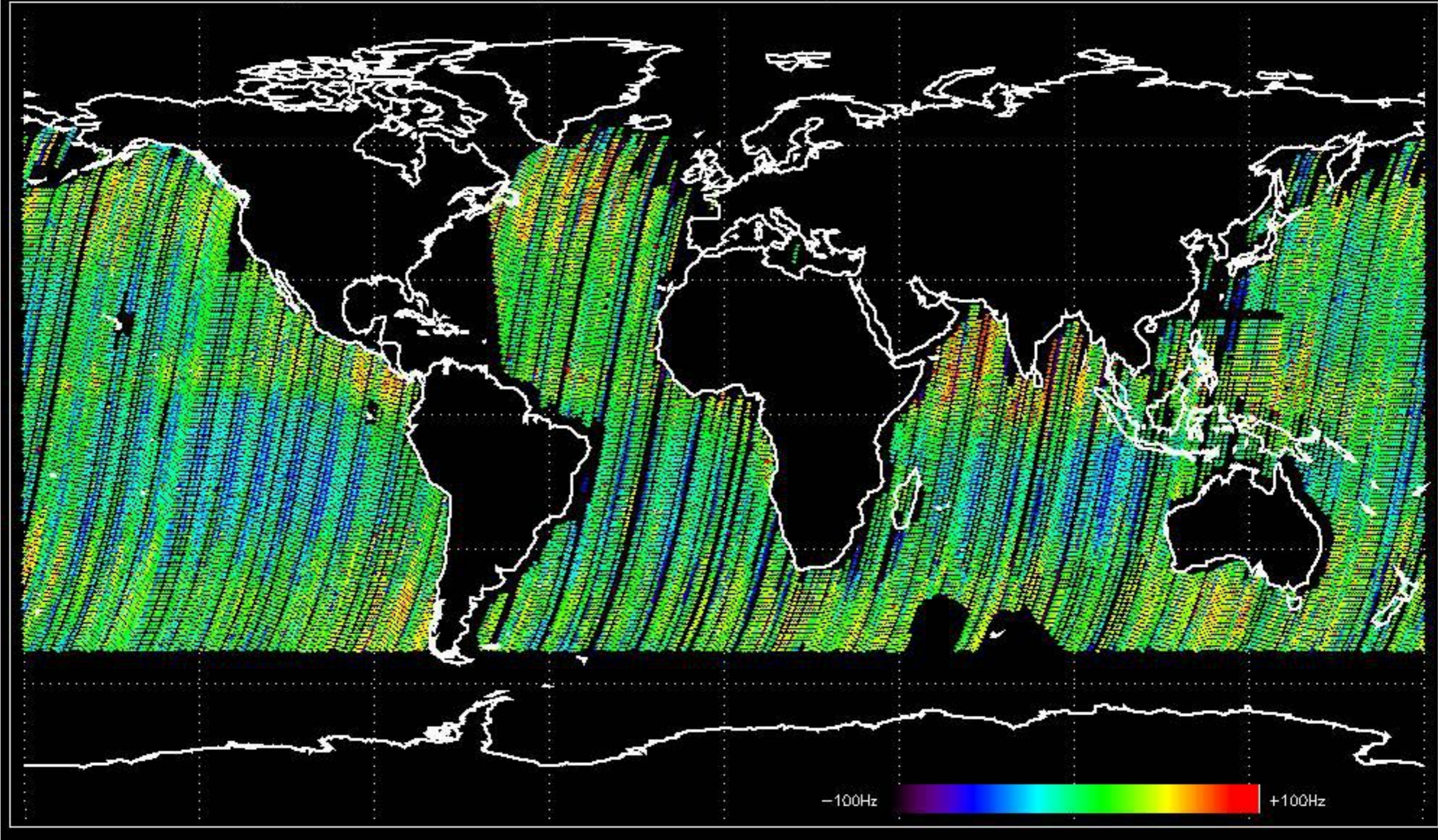
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.548599 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.747135 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -19.387666 Hz

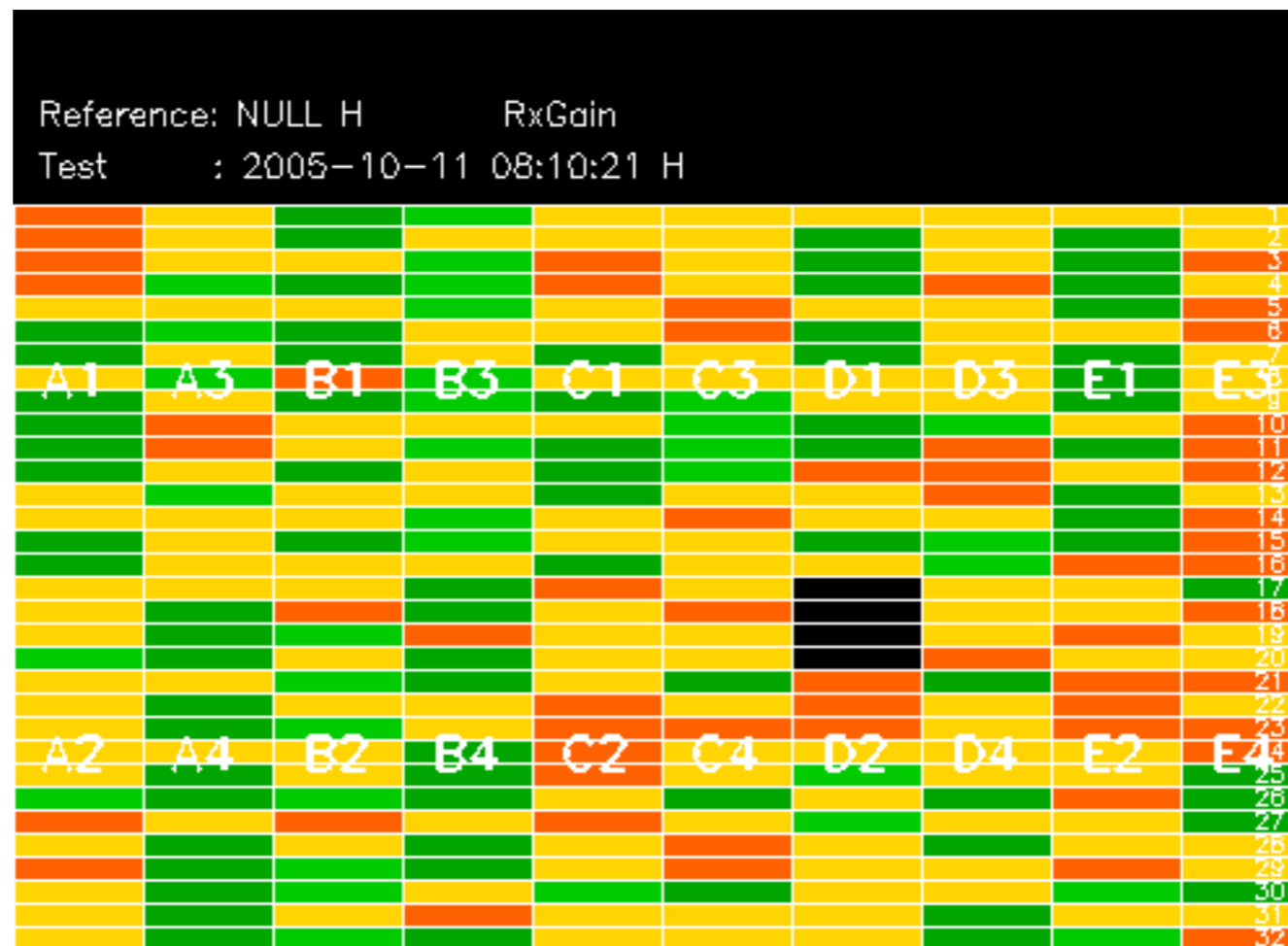


No anomalies observed on available MS products:

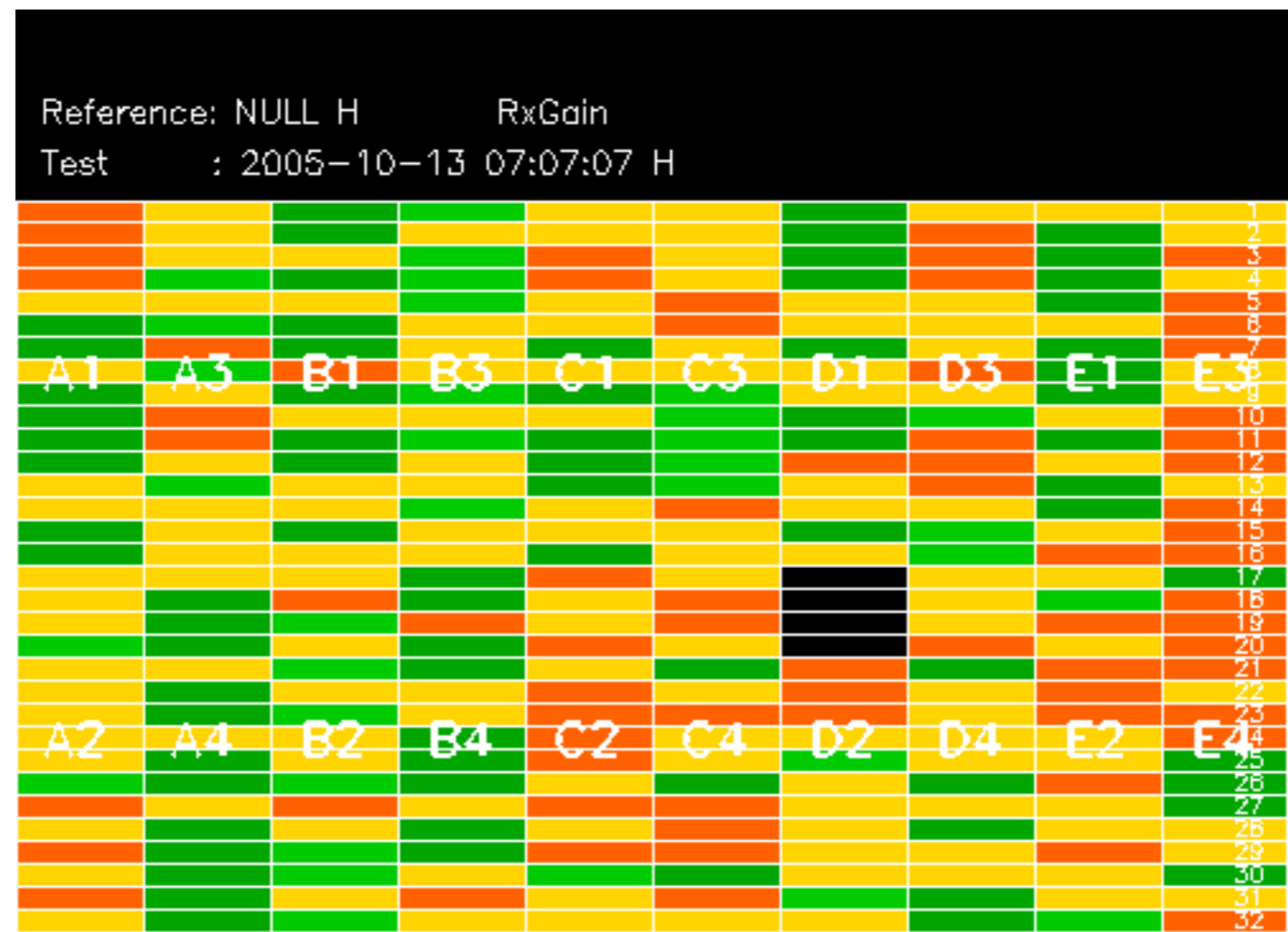


No anomalies observed.

















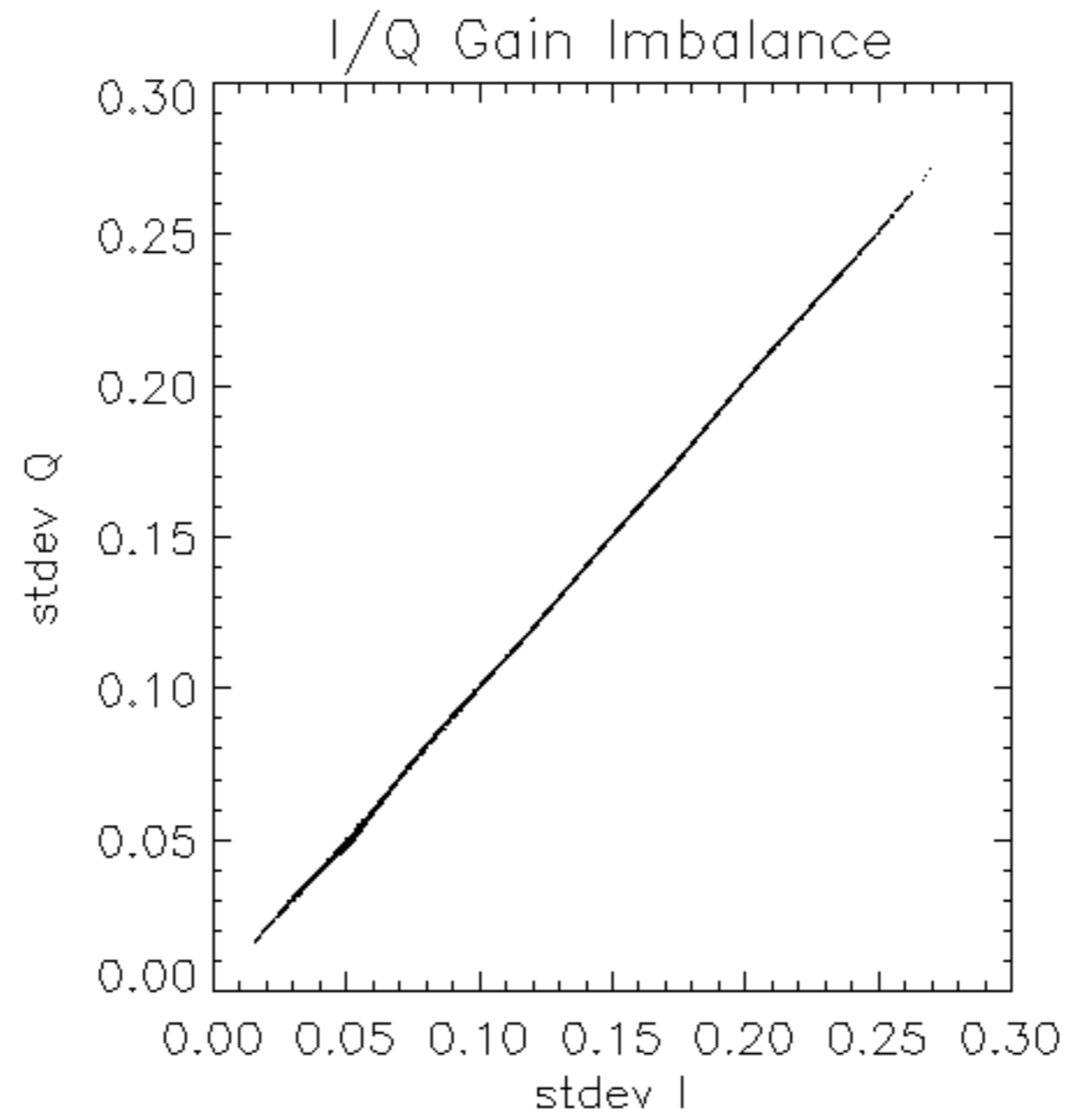


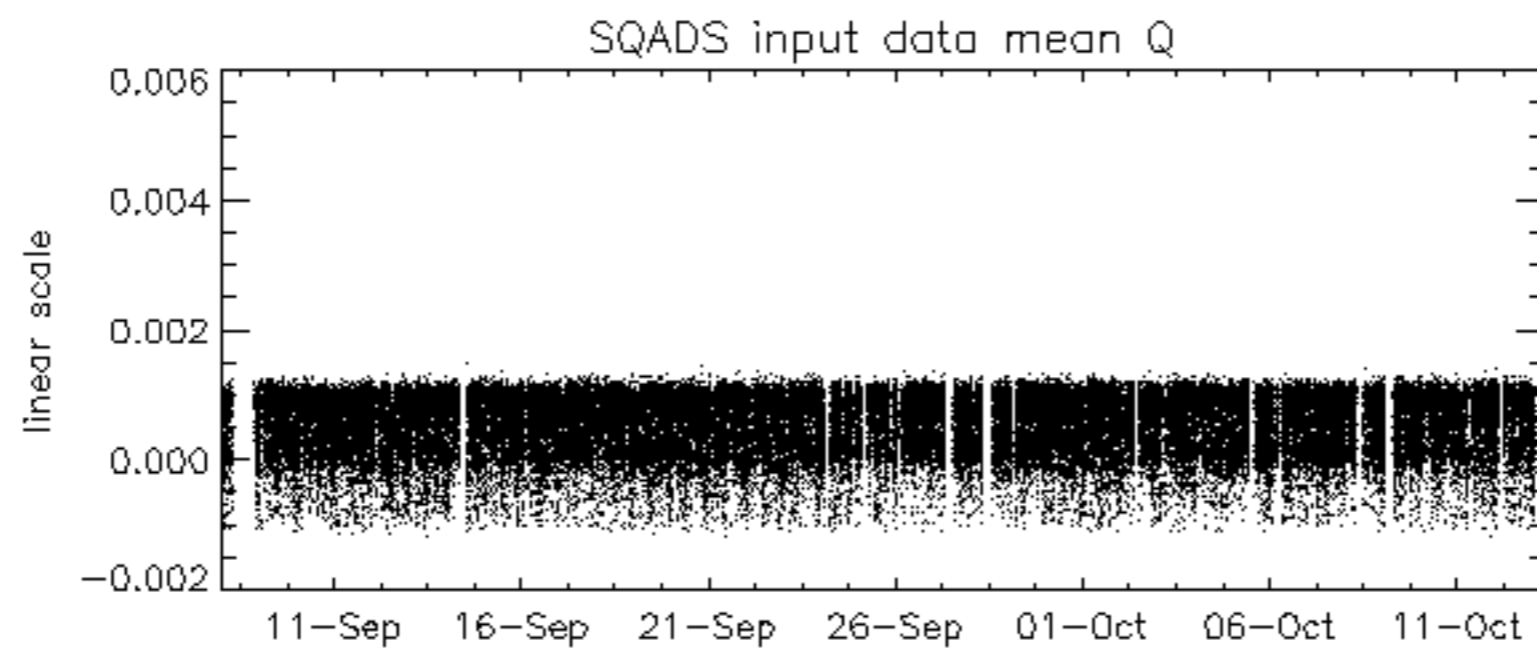
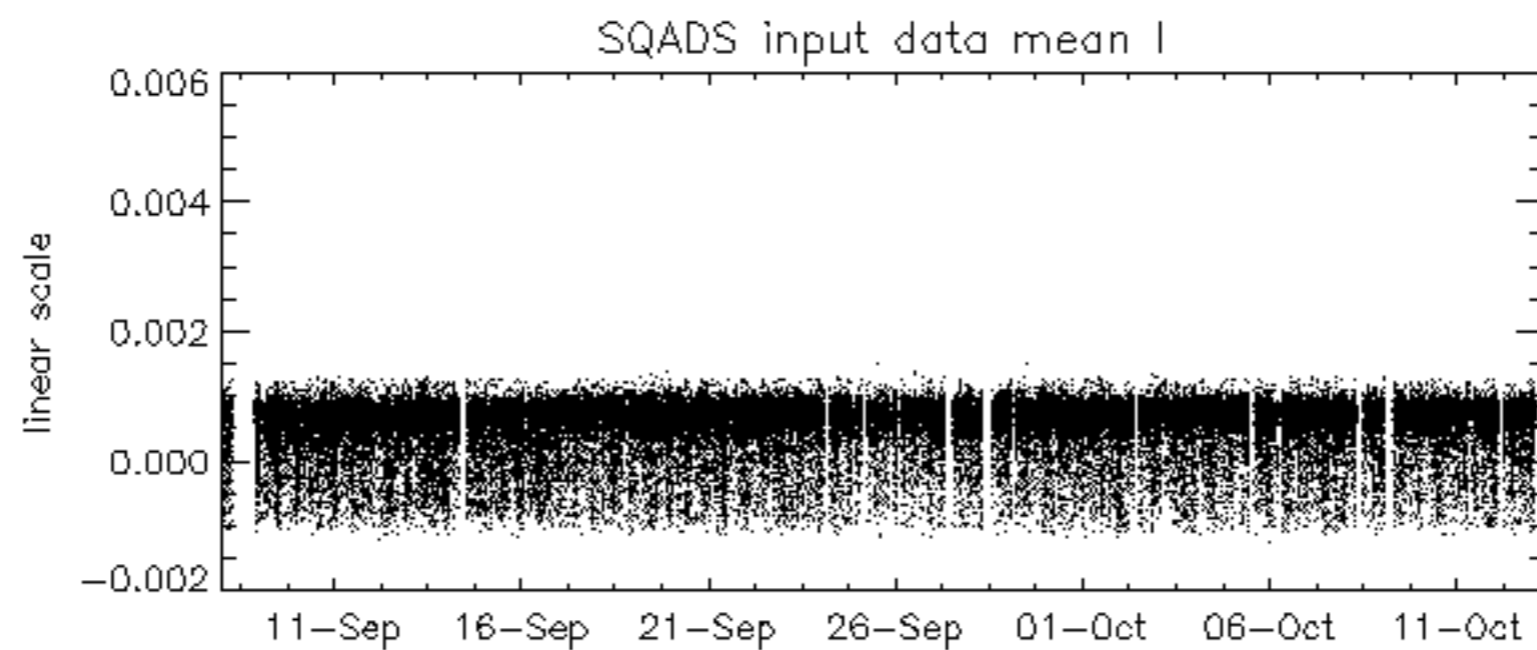
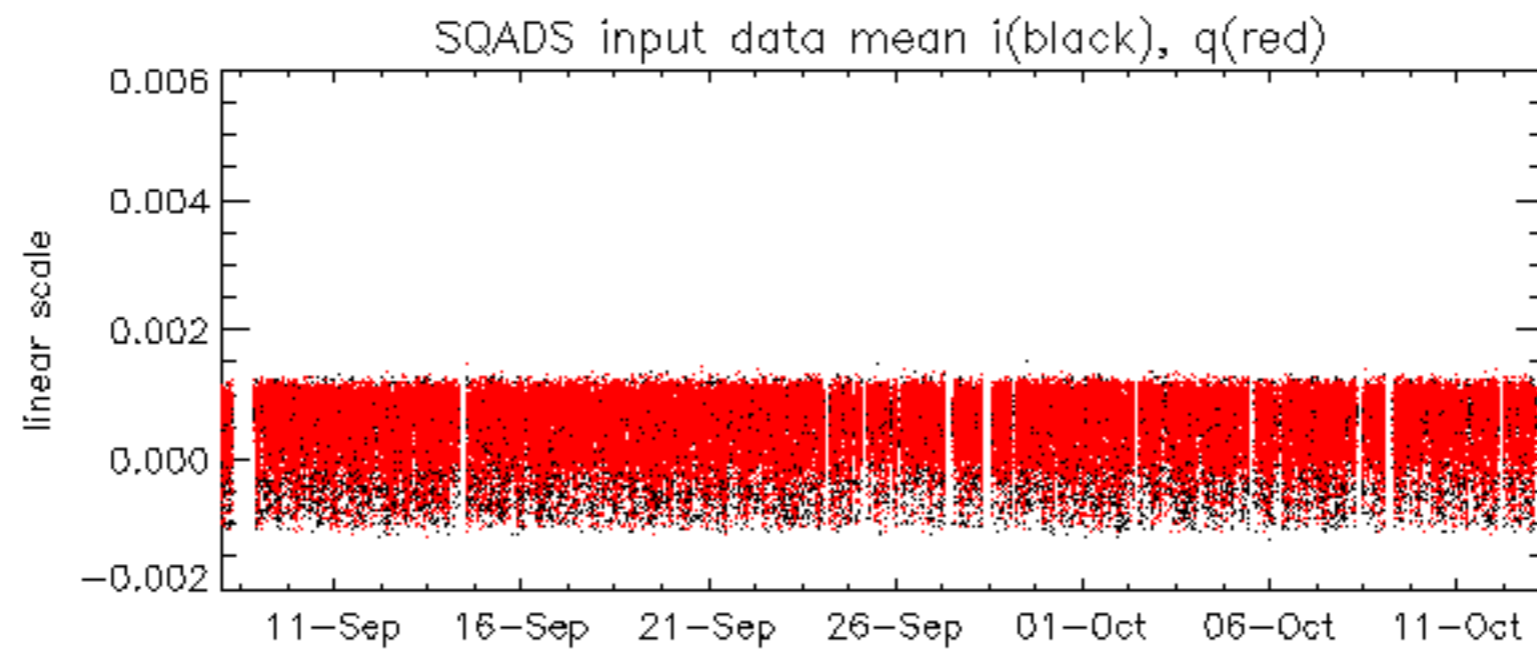


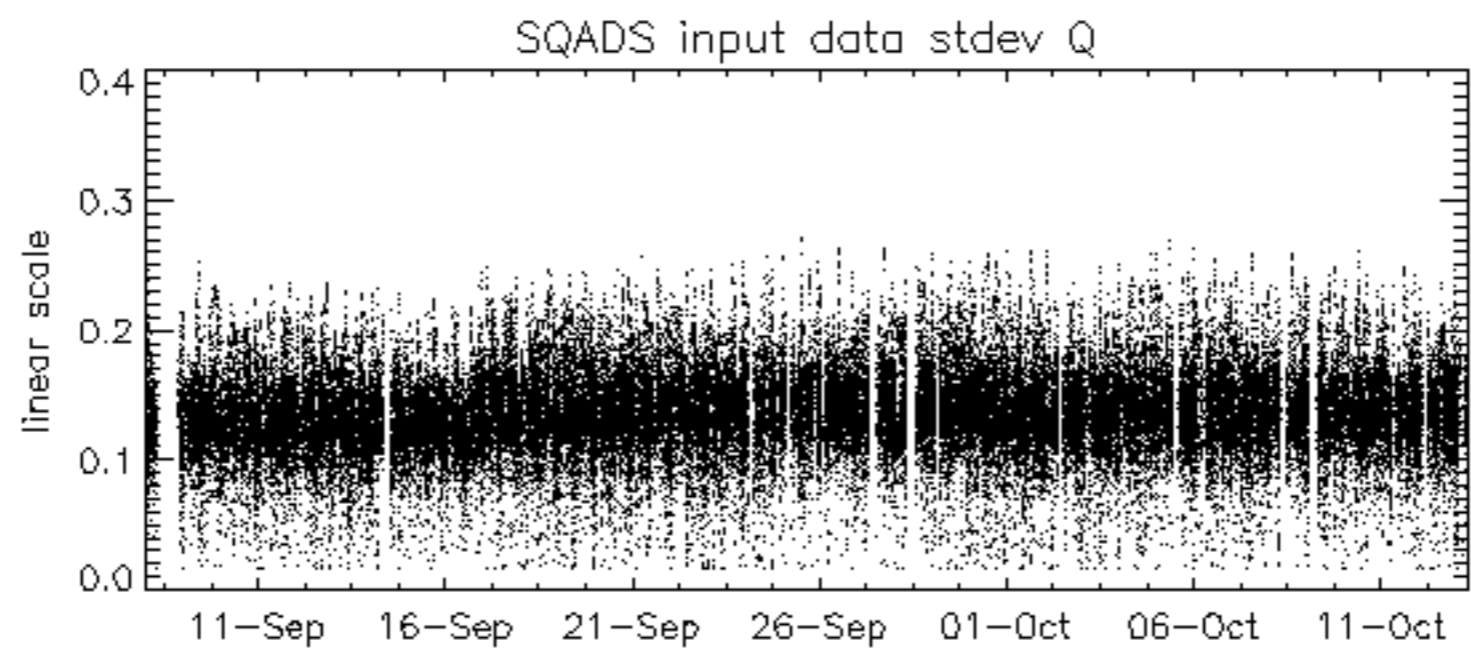
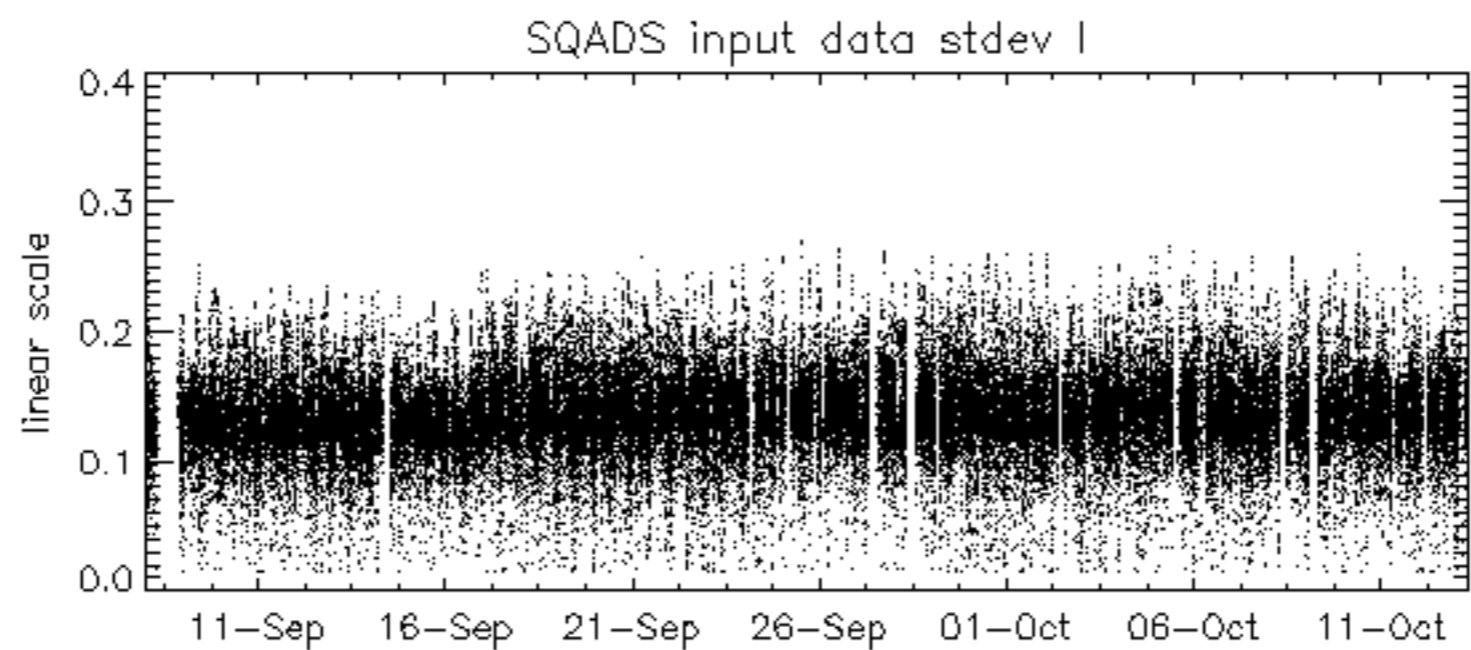
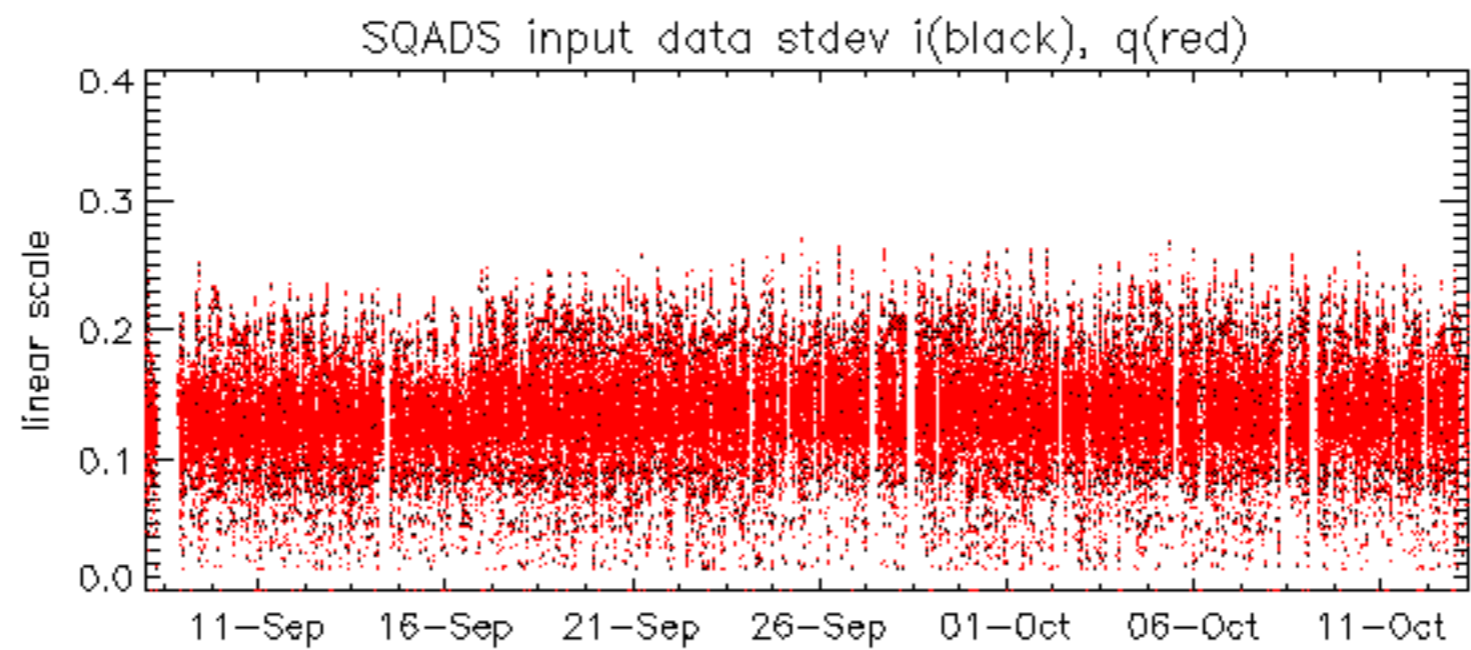






















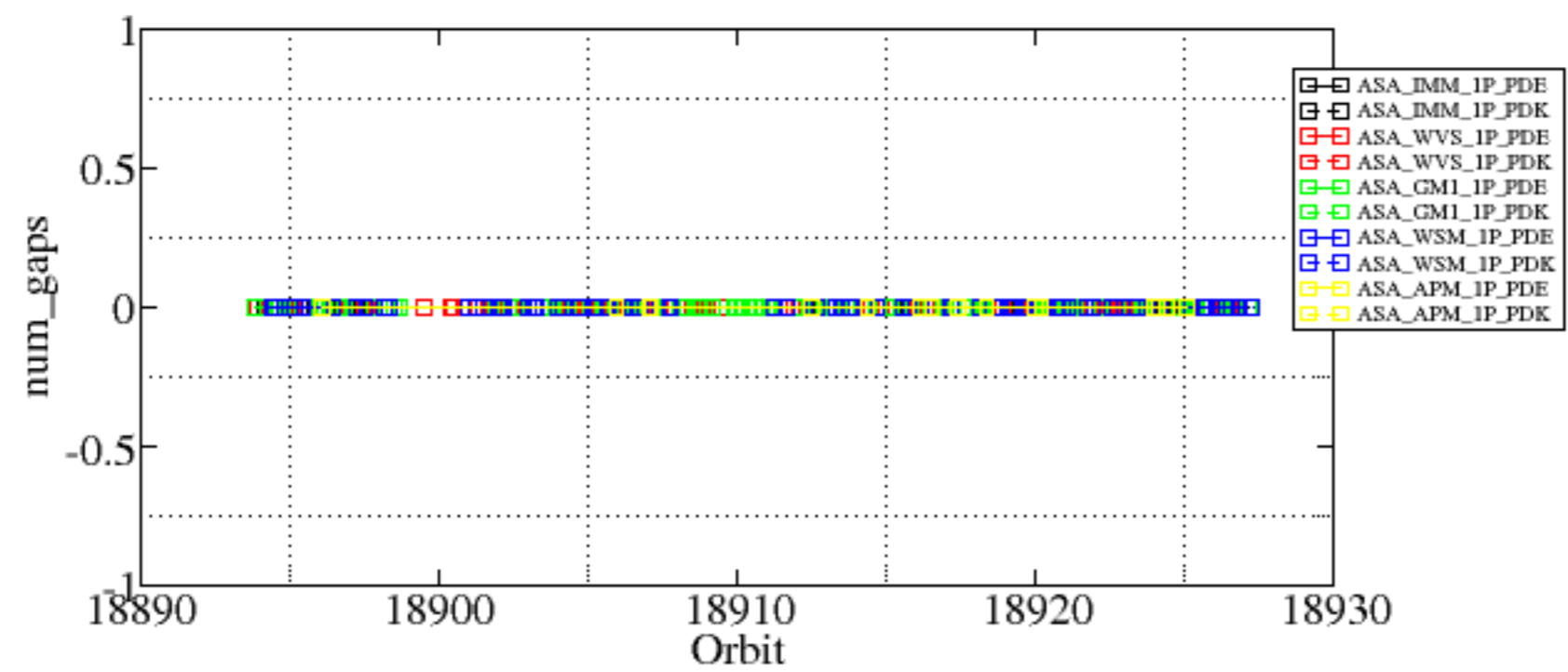




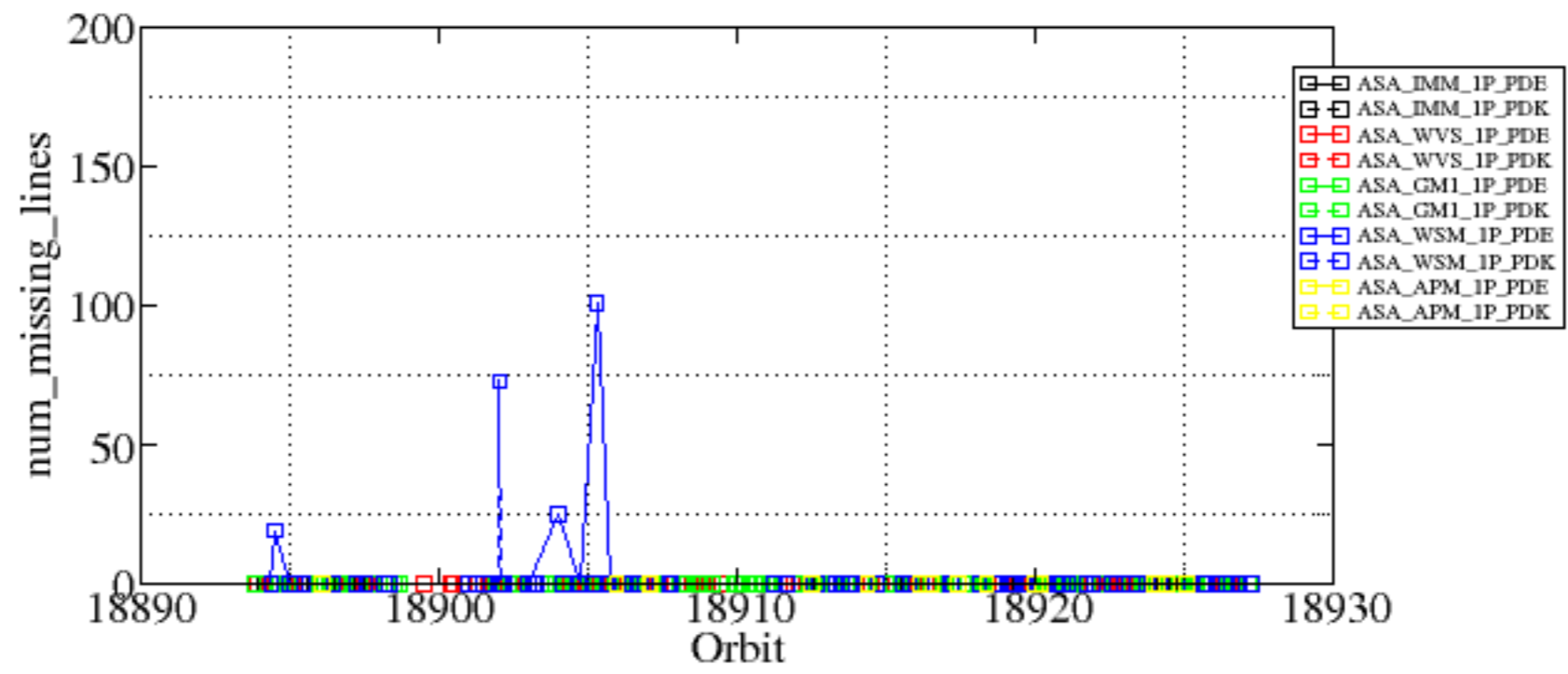
Summary of analysis for the last 3 days 2005101[123]

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_WSM_1PNPDE20051011_010913_000003062041_00303_18894_3388.N1	0	19
ASA_WSM_1PNPDE20051011_170741_000002392041_00313_18904_3469.N1	0	25
ASA_WSM_1PNPDE20051011_191644_000000672041_00314_18905_3478.N1	0	101
ASA_WSM_1PNPDE20051011_191644_000000672041_00314_18905_3489.N1	0	101
ASA_WSM_1PNPDK20051011_134721_000000922041_00311_18902_6753.N1	0	73

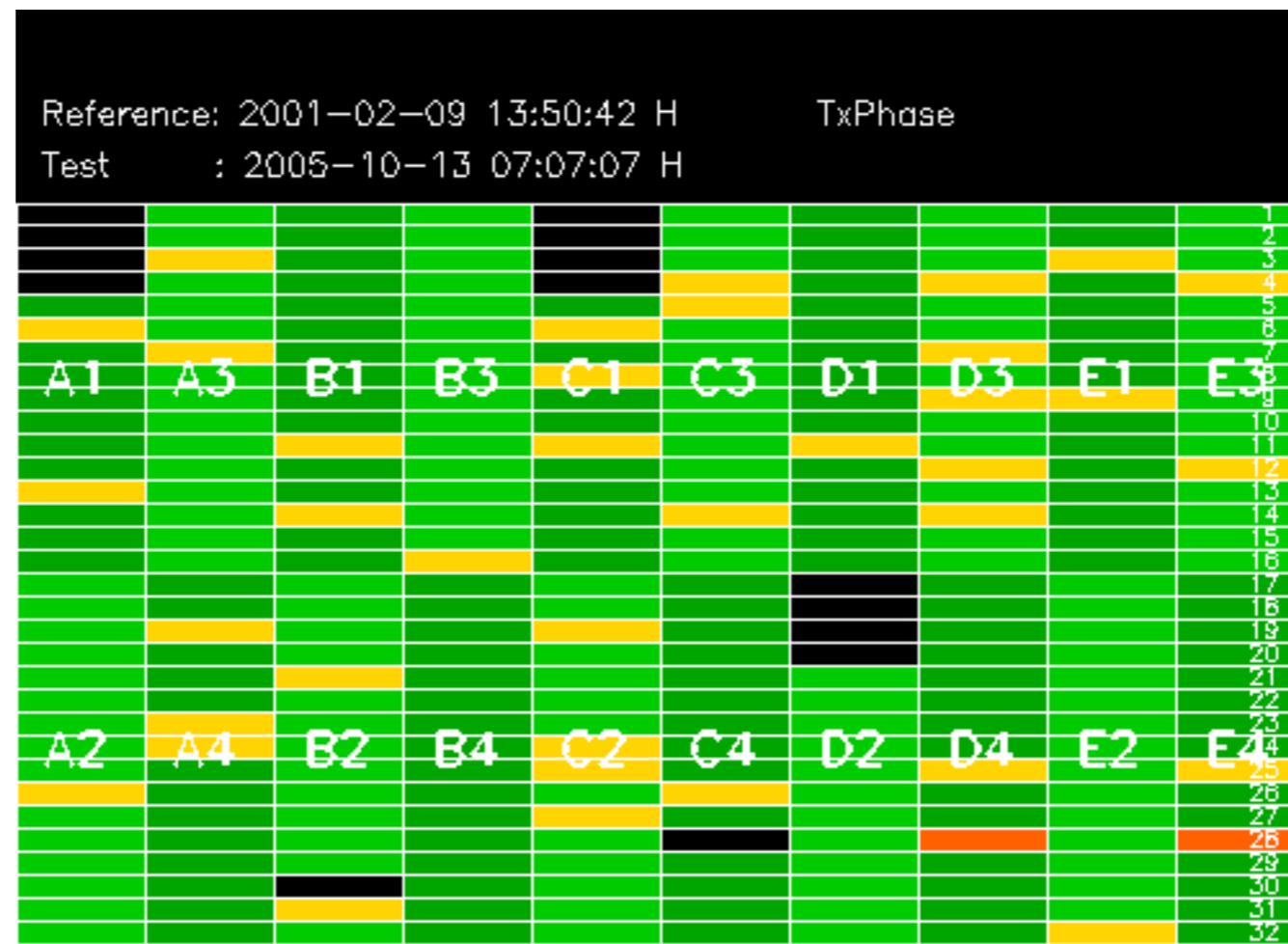




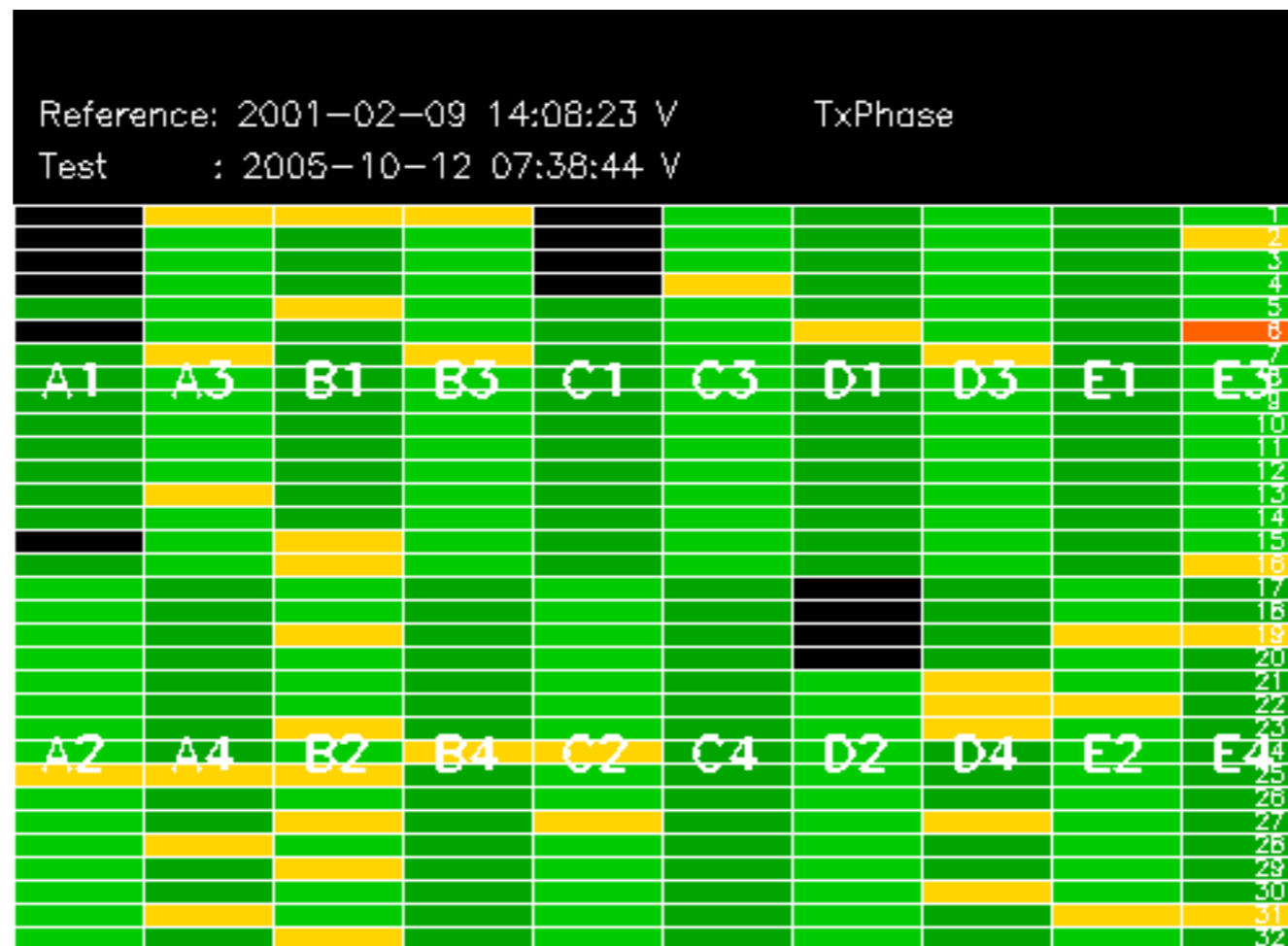




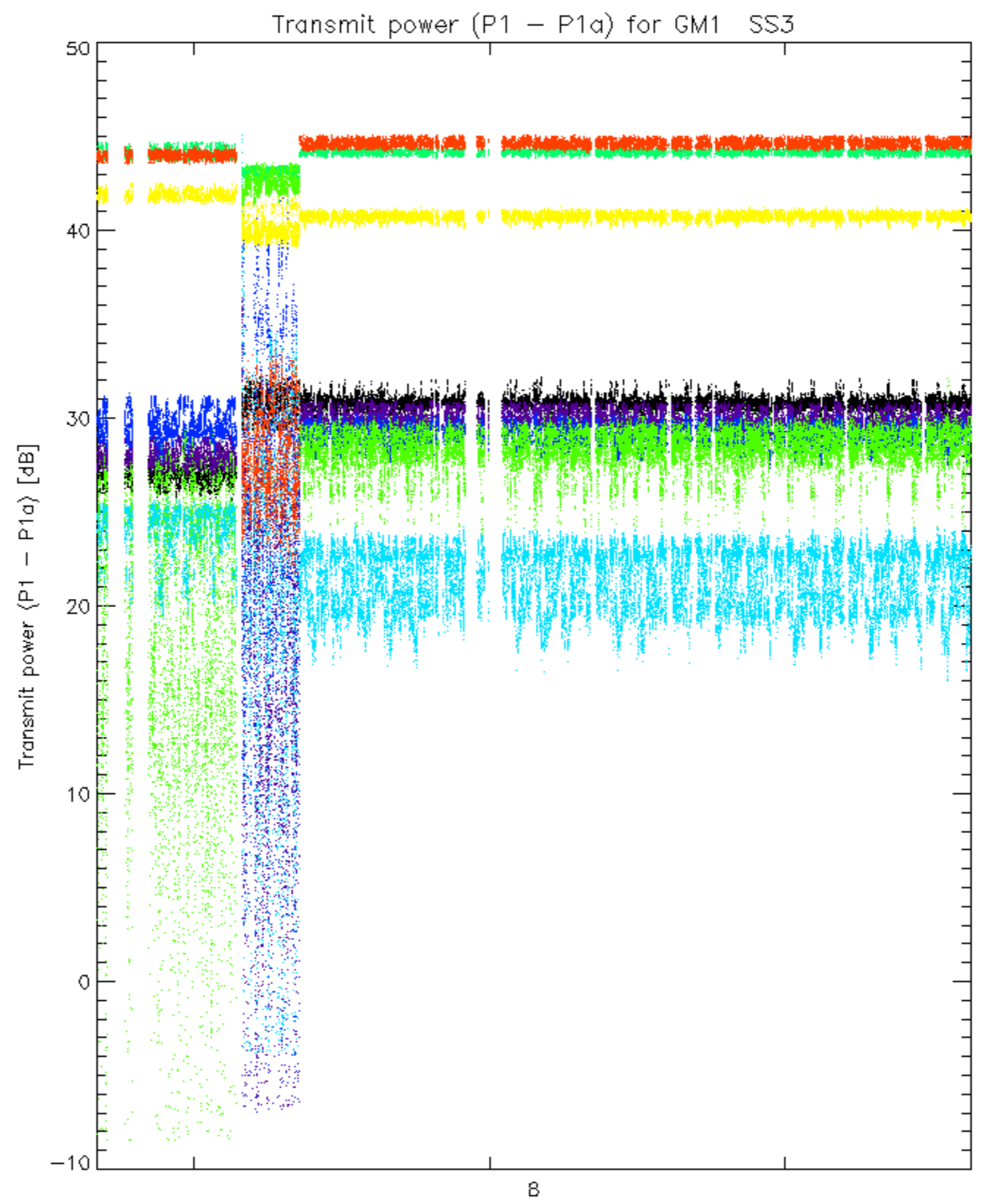






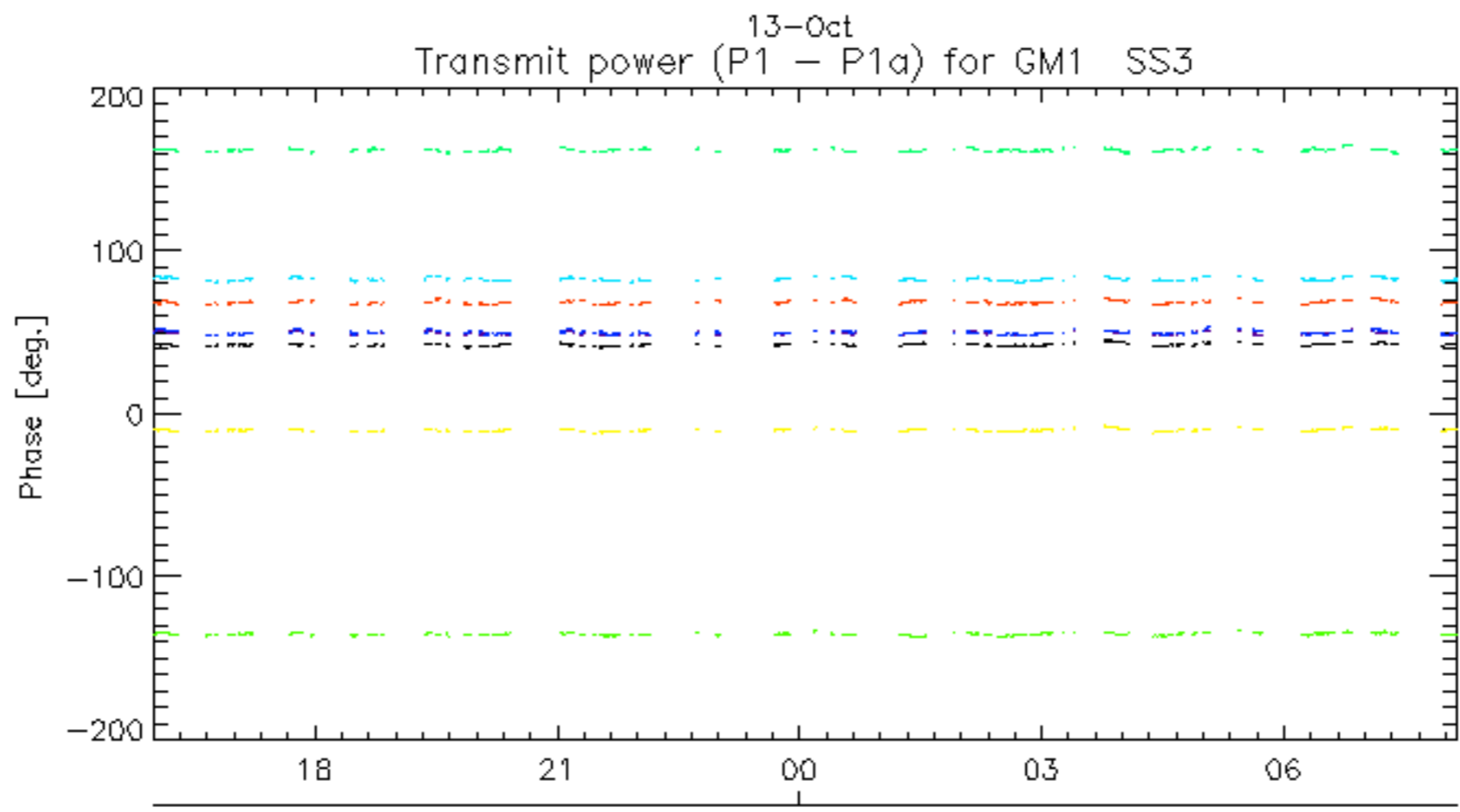
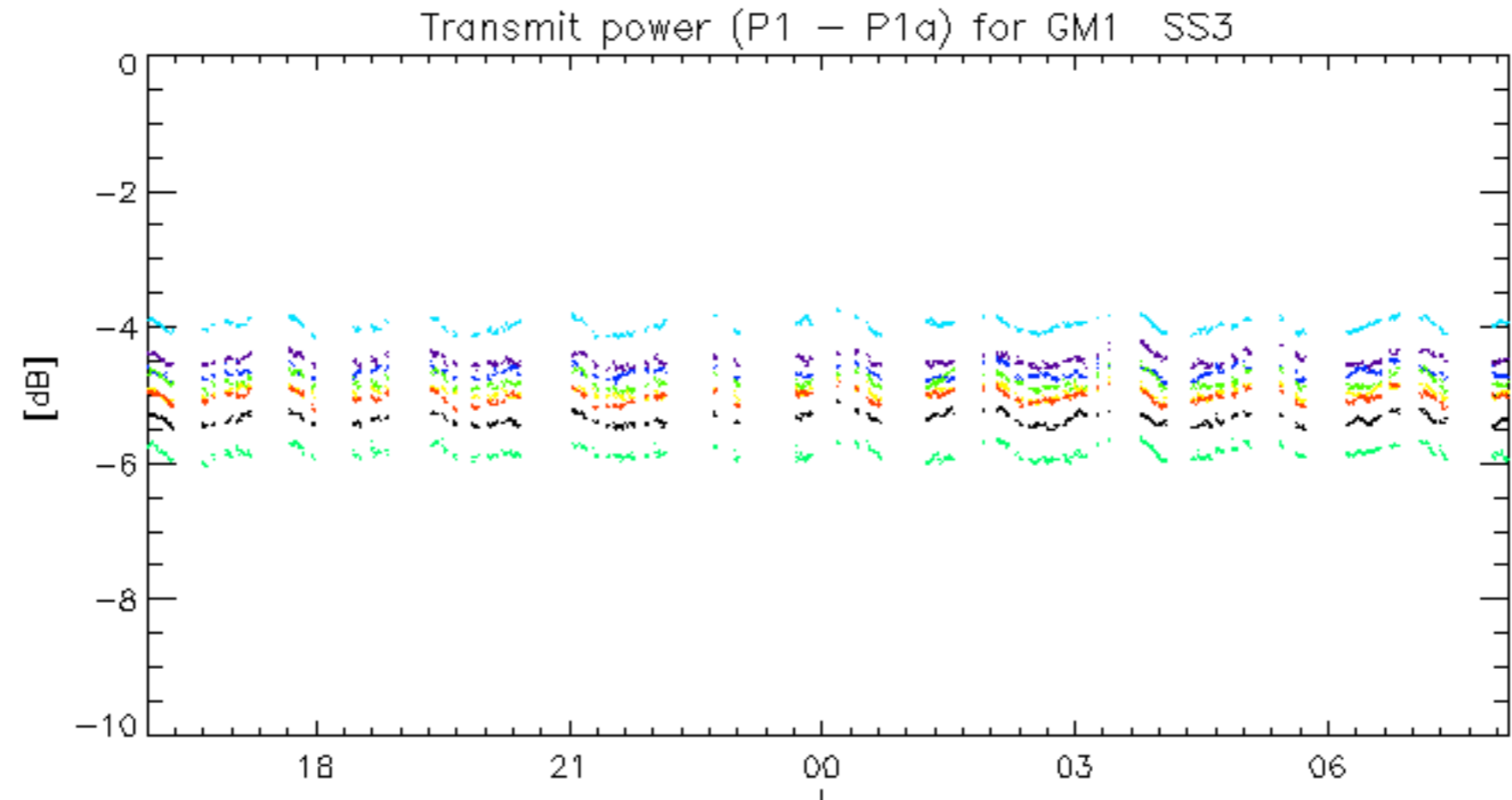




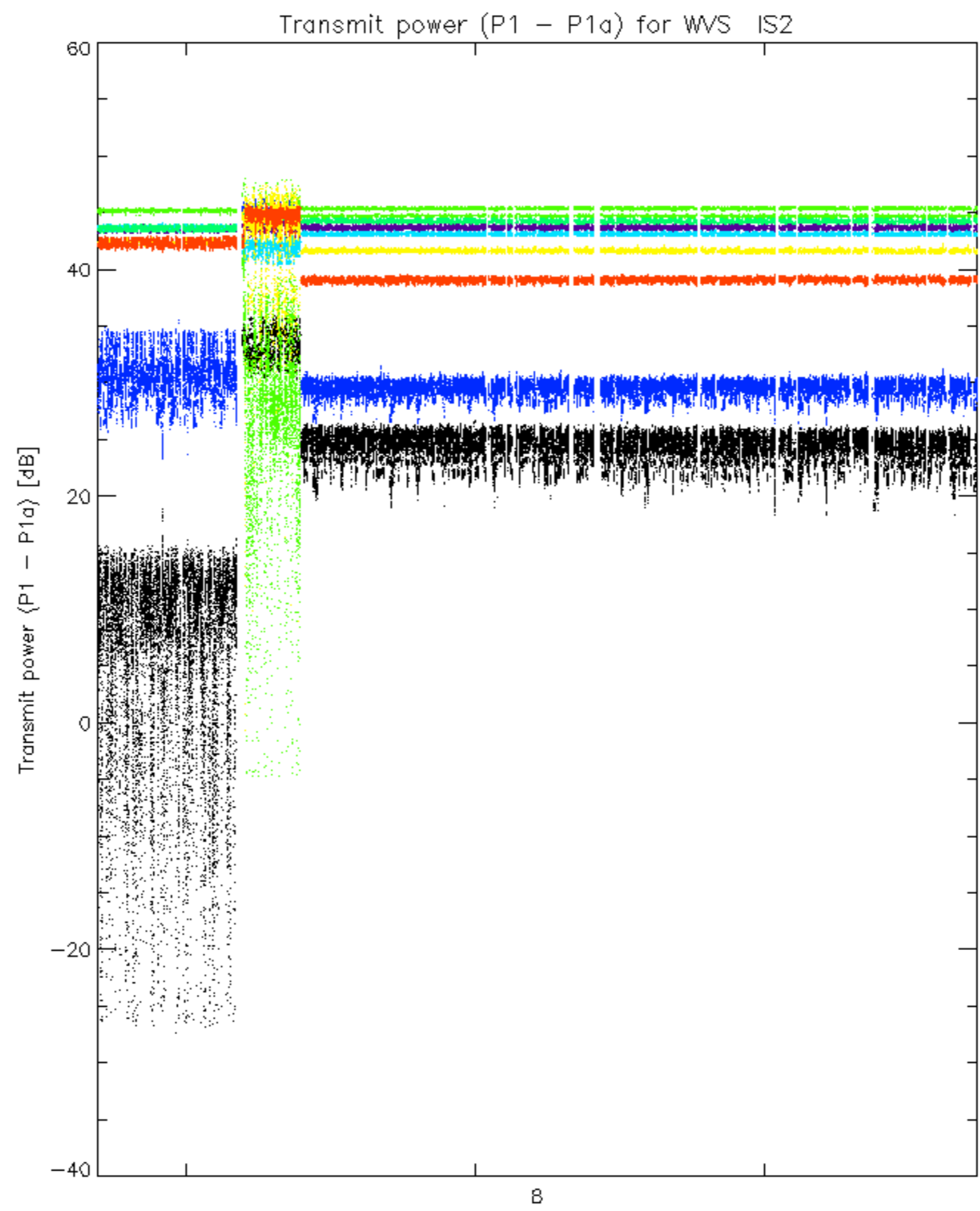


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

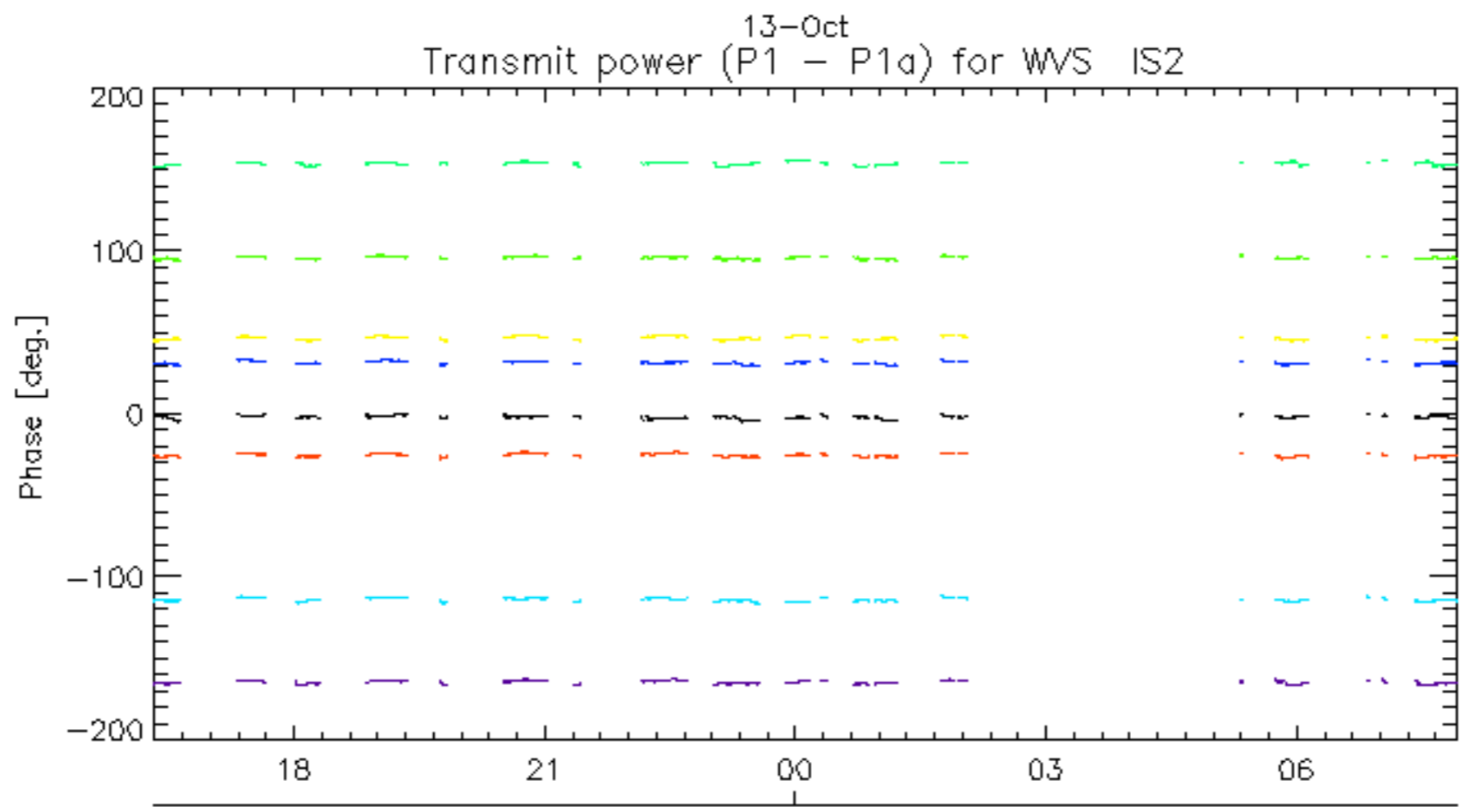
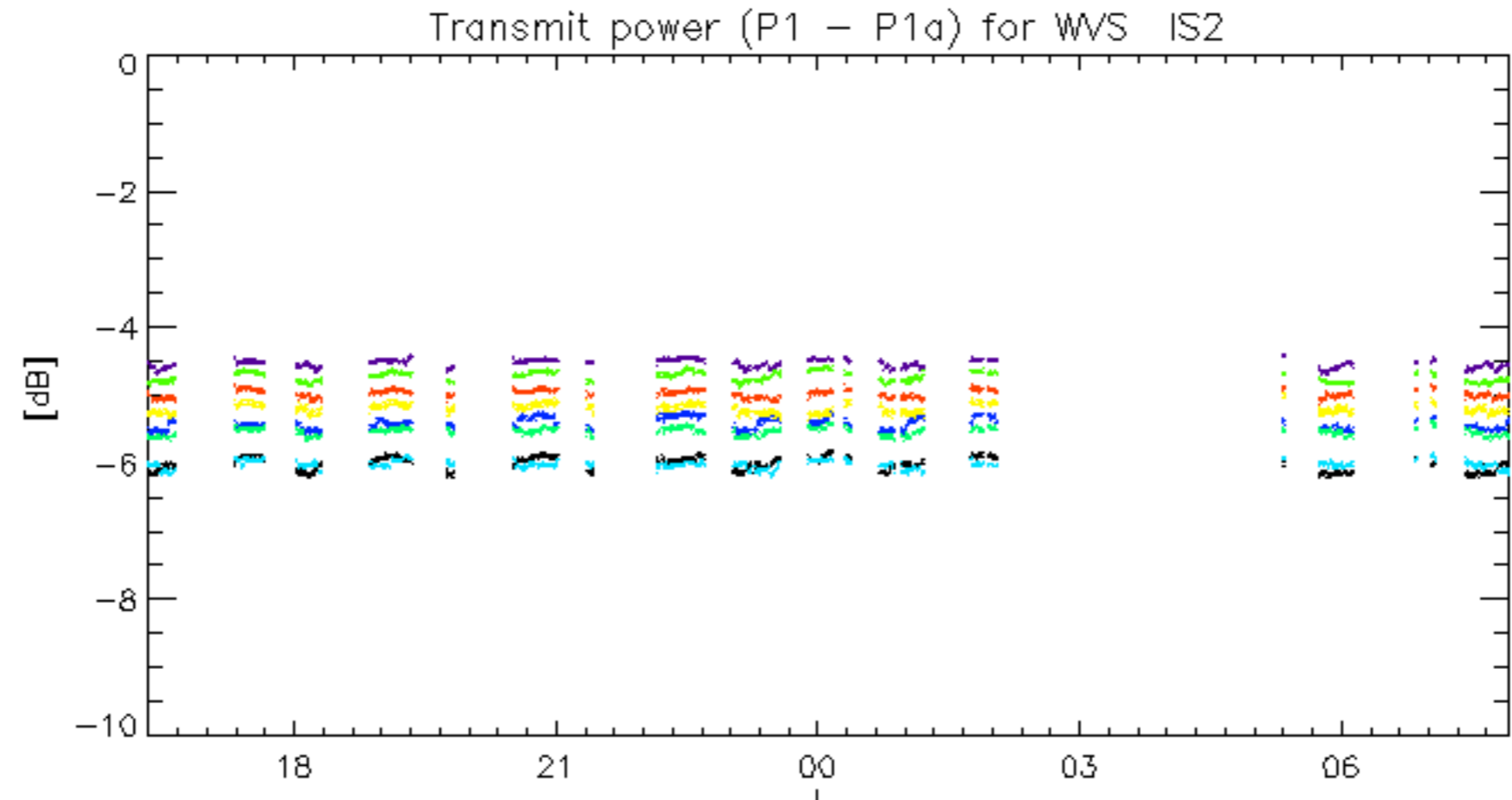




13-Oct  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



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



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

No unavailabilities during the reported period.