

# PRELIMINARY REPORT OF 070119

last update on Fri Jan 19 14:28:47 GMT 2007

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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 2007-01-18 00:00:00 to 2007-01-19 14:28:47

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	26	47	9	3	22
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	26	47	9	3	22
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	26	47	9	3	22
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	26	47	9	3	22

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	41	41	38	4	52
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	41	41	38	4	52
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	41	38	4	52
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	41	41	38	4	52

### 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	20070118 100802
H	20070117 071828

### 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
☒
☒

#### 4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

### 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)
-----	-------	-----------	------------	-----------------

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

**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)
-----	-------	-----------	------------	-----------------

**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

### 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	0.000572856
	stdev	1.61982e-07
MEAN Q	mean	0.000510511
	stdev	2.10949e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140536
	stdev	0.00116301
STDEV Q	mean	0.140935
	stdev	0.00118276



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2007011[789]

The assumption is taken that the SQUADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems



Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070117_094938_000006882054_00423_25527_0743.N1	0	7
ASA_WSM_1PNPDE20070117_134134_000000862054_00425_25529_0974.N1	0	45
ASA_WSM_1PNPDE20070117_154858_000000612054_00426_25530_0950.N1	50	13468
ASA_WSM_1PNPDE20070117_162036_000002082054_00427_25531_0996.N1	0	19
ASA_WSM_1PNPDE20070118_112601_000001642054_00438_25542_2222.N1	0	72
ASA_WSM_1PNPDE20070118_190517_000001102054_00443_25547_2397.N1	0	63
ASA_WSM_1PNPDE20070119_023247_000000852054_00447_25551_2914.N1	0	31



## 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)

Ascending

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

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

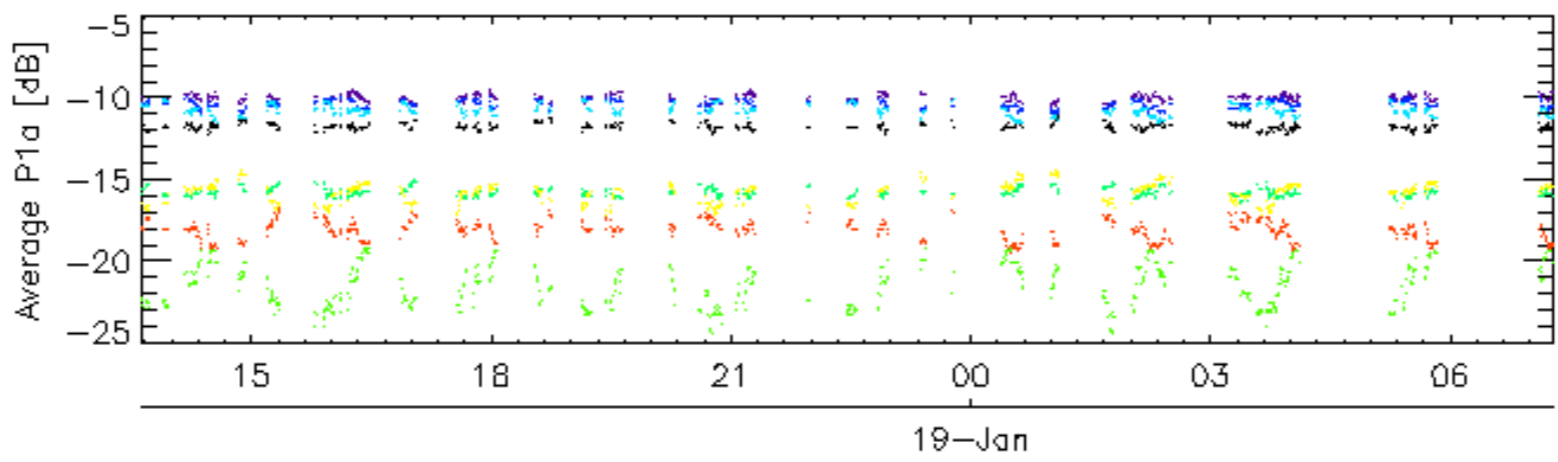
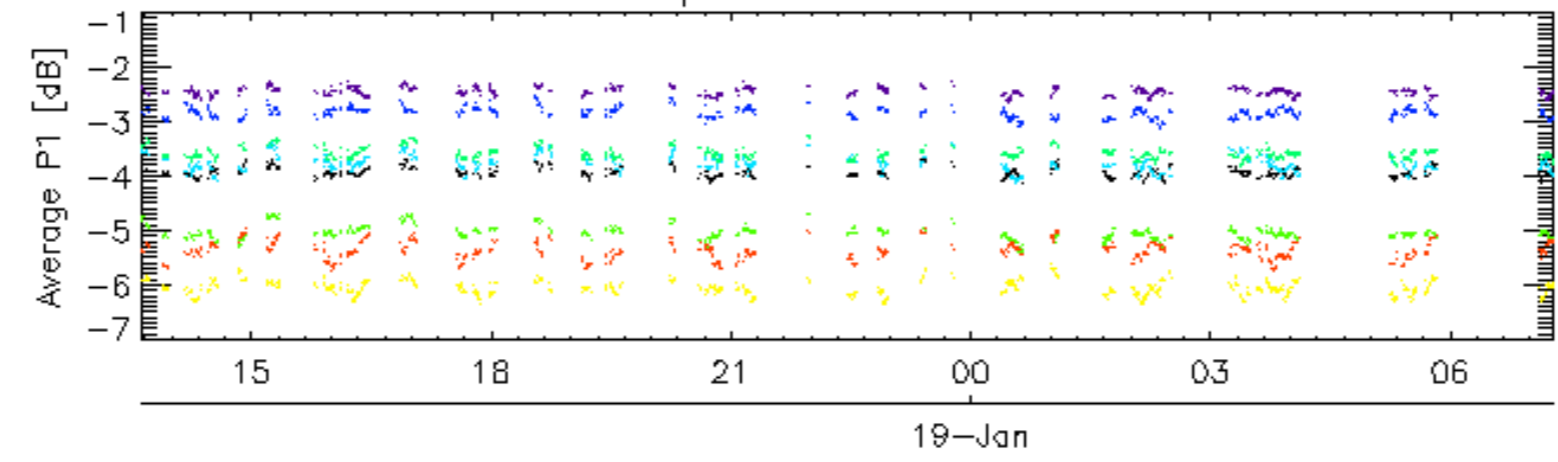
## 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

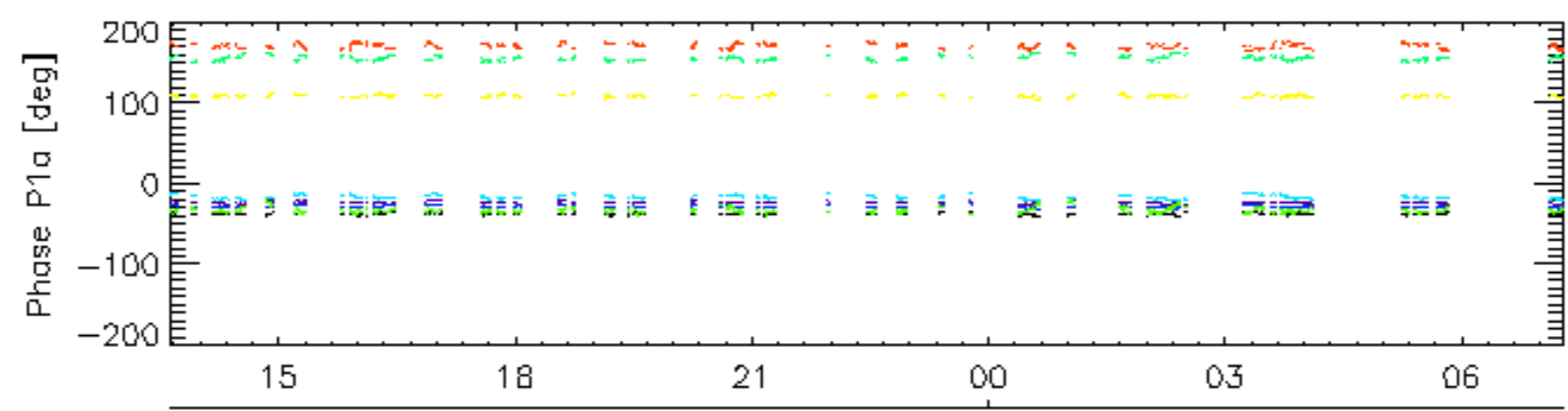
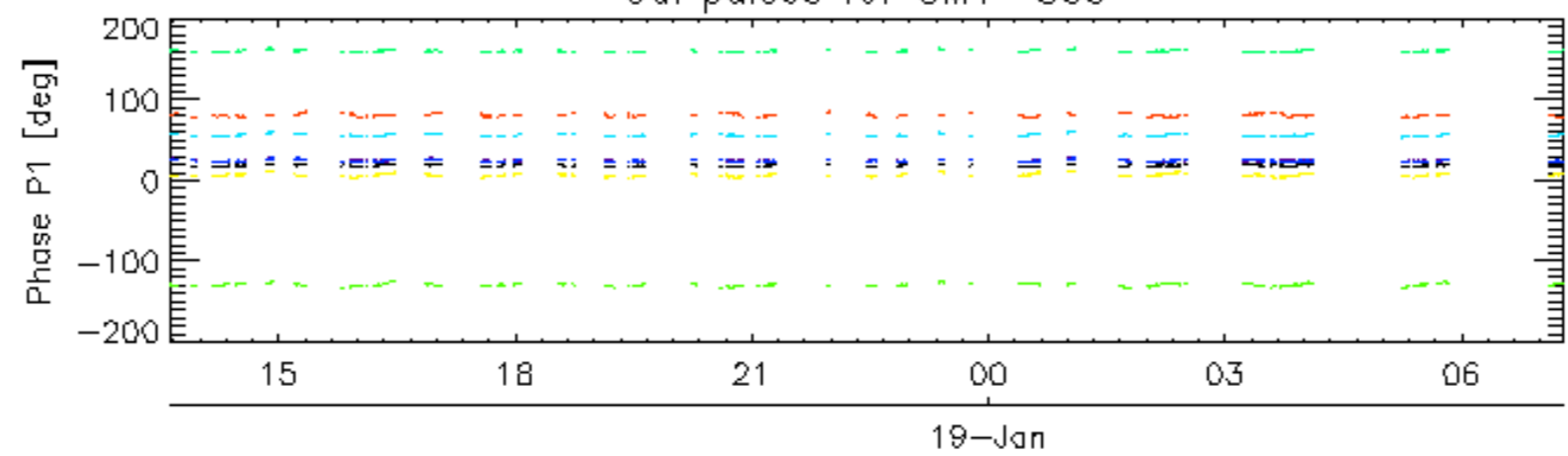




Cal pulses for GM1 SS3

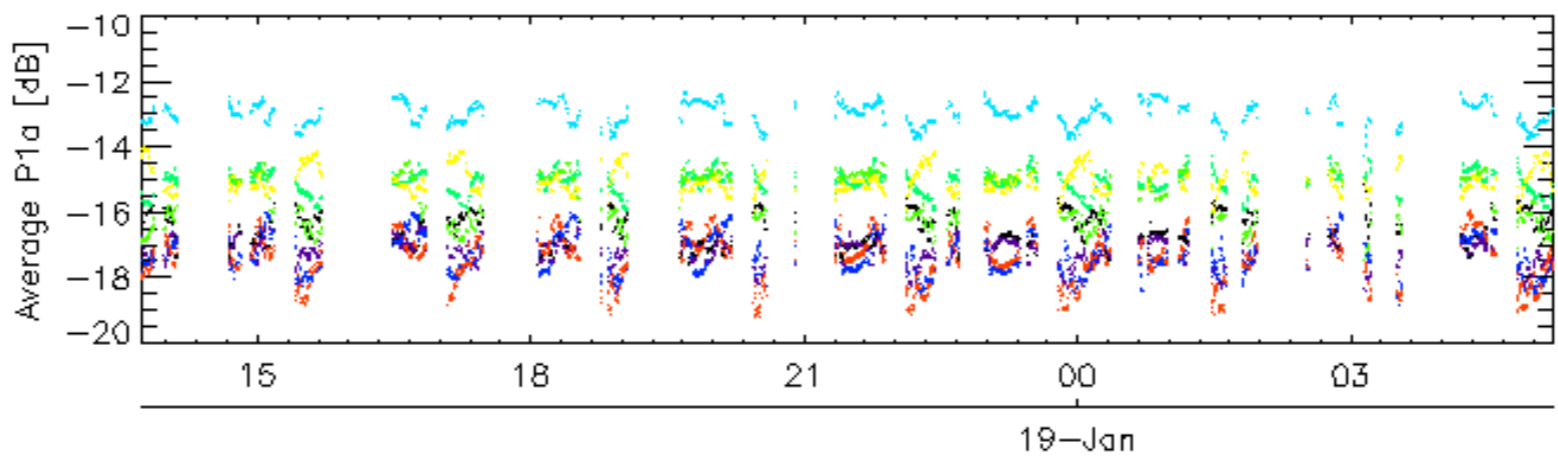
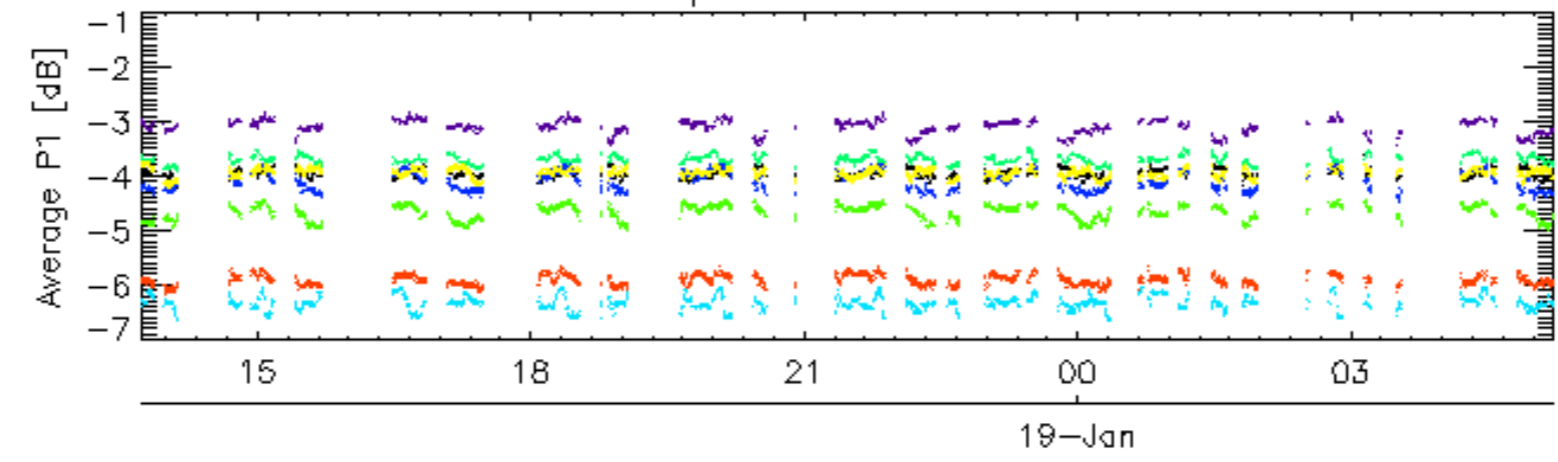


Cal pulses for GM1 SS3

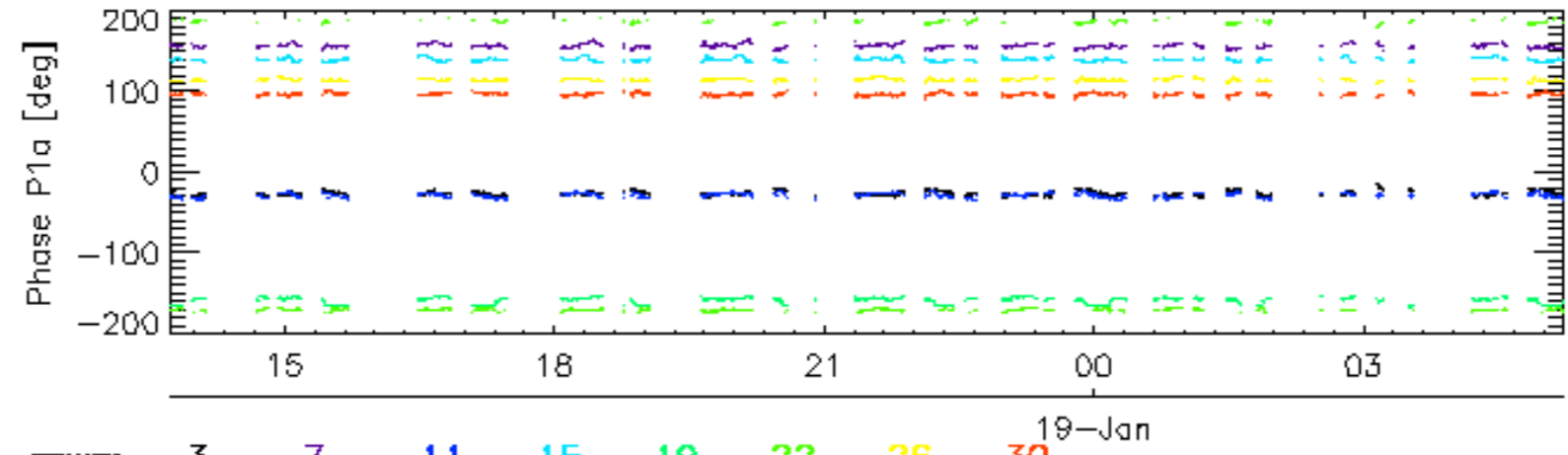
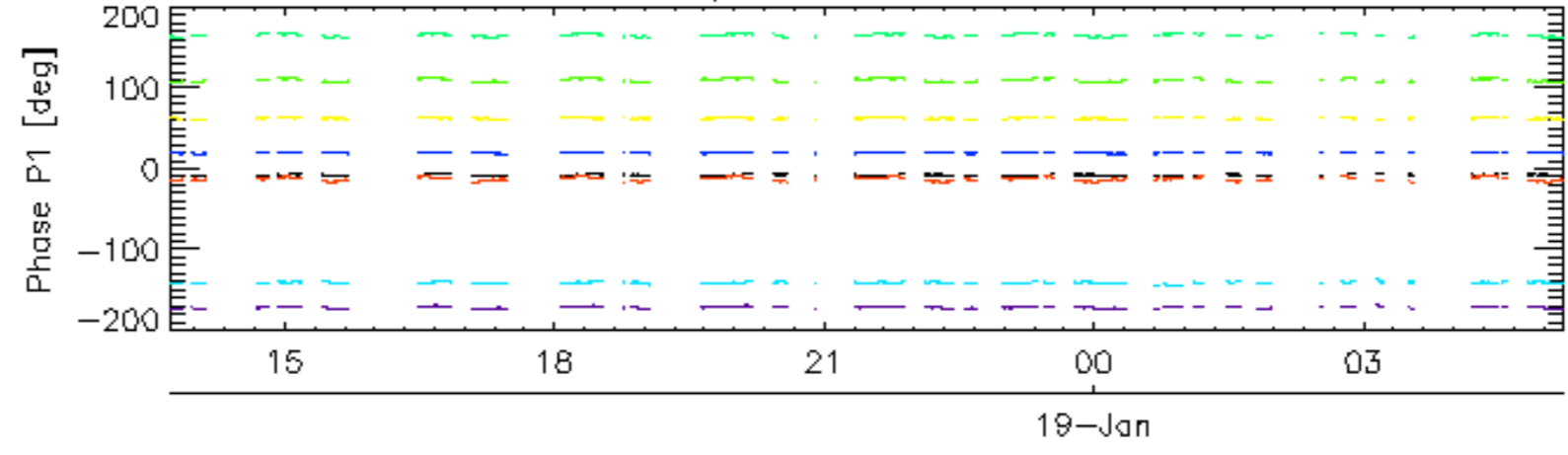


rows: **3** **7** **11** **15** **19** **22** **26** **30** 19-Jan

Cal pulses for WVS IS2

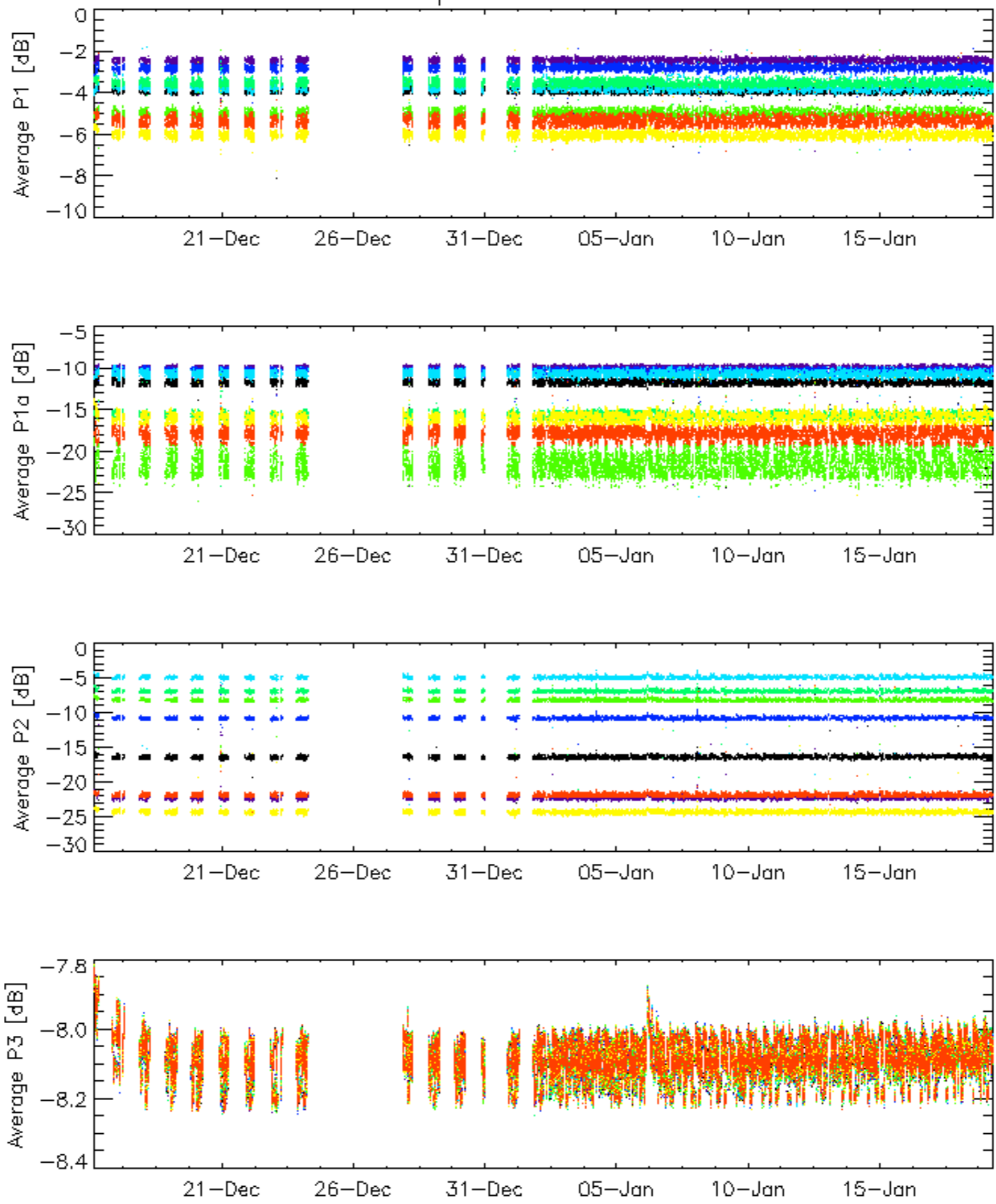


Cal pulses for WVS IS2



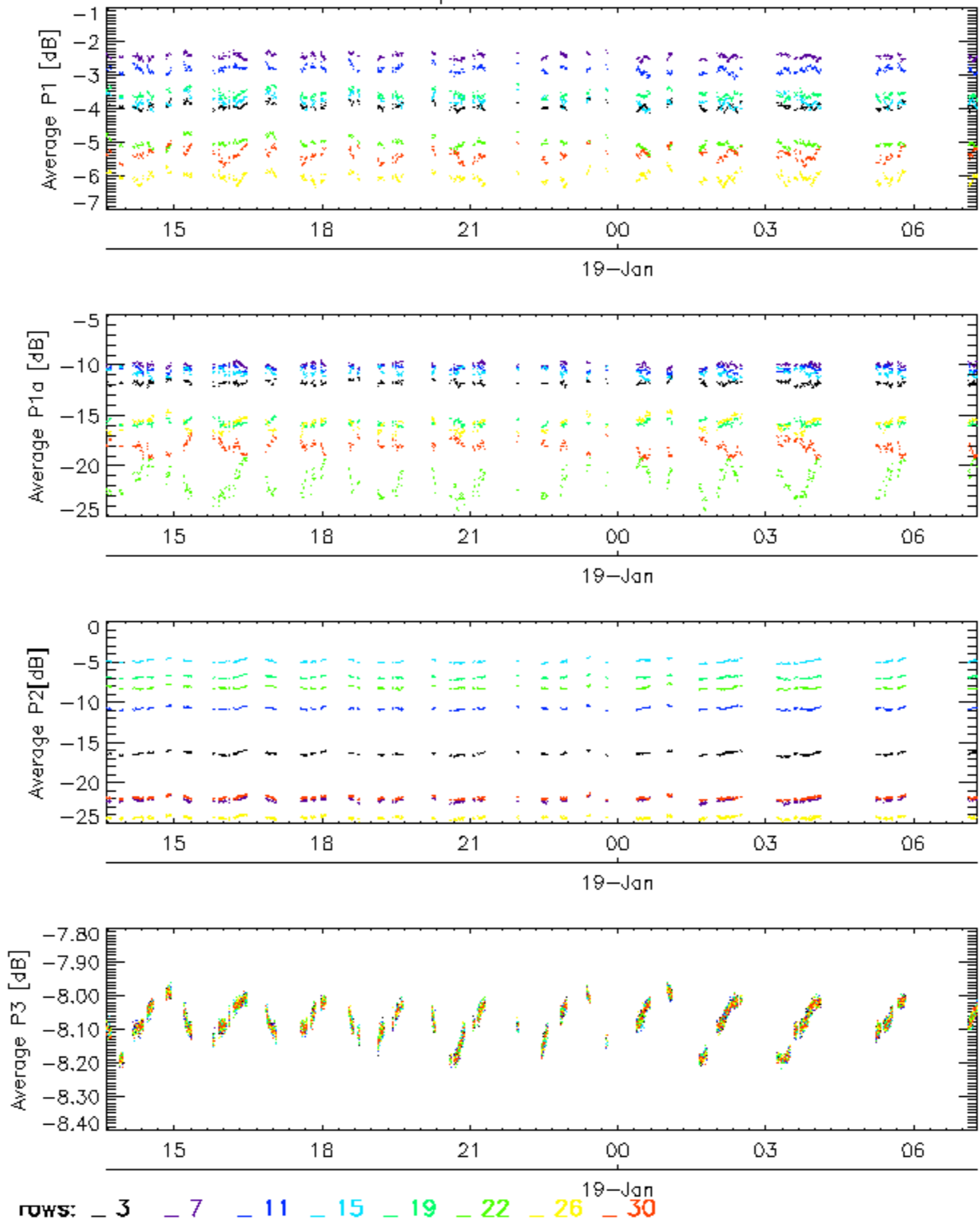
rows: **3** **7** **11** **15** **19** **22** **26** **30** 19-Jan

Cal pulses for GM1 SS3



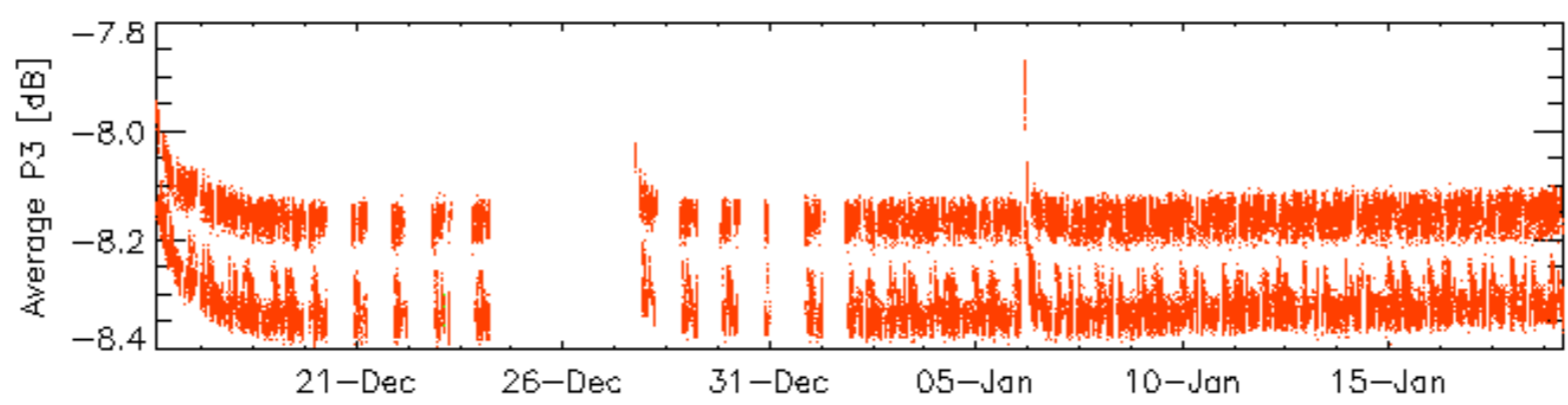
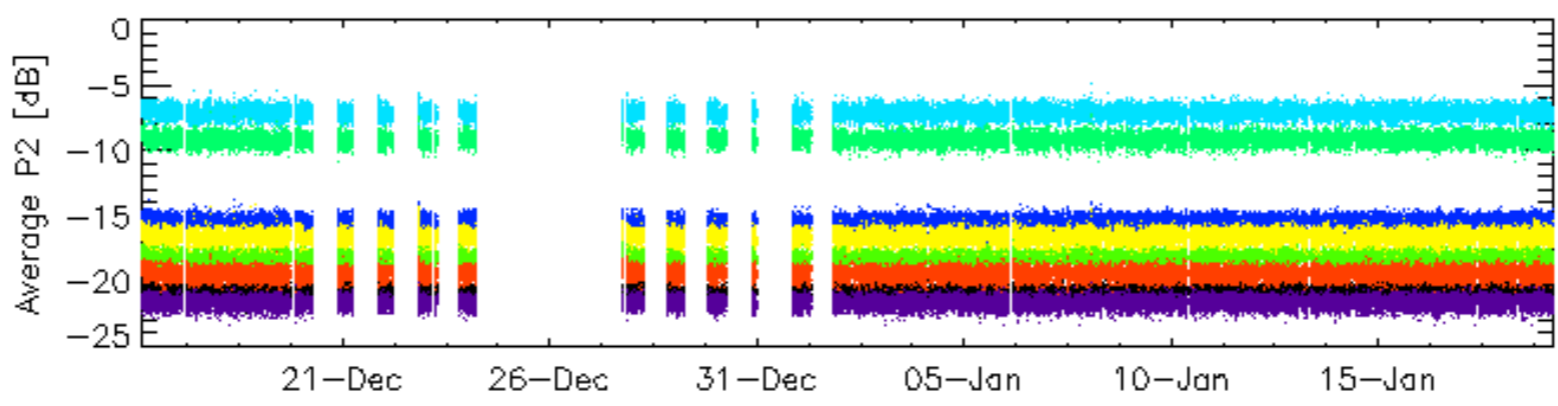
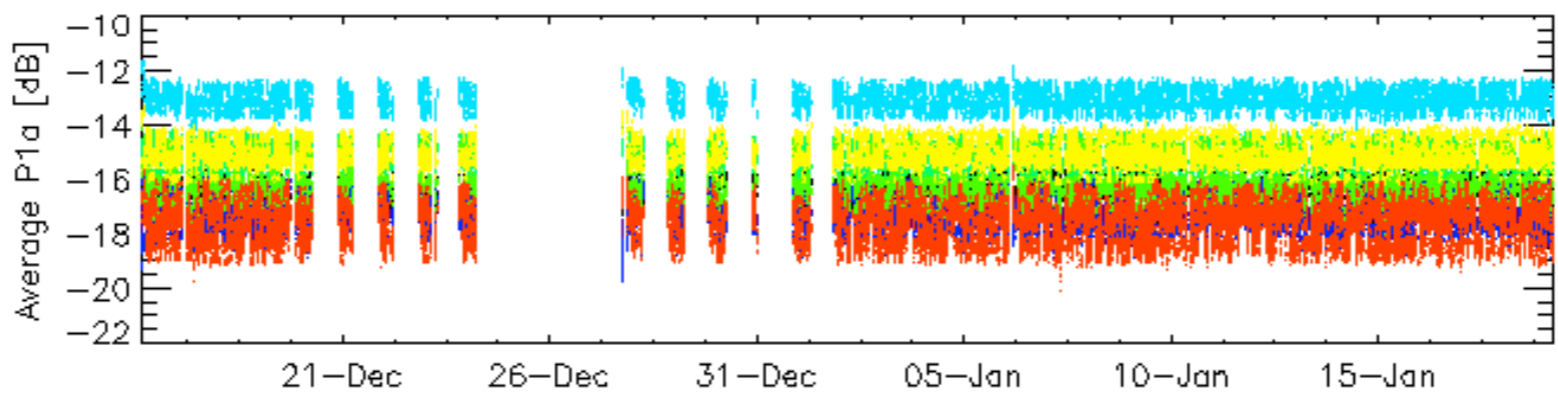
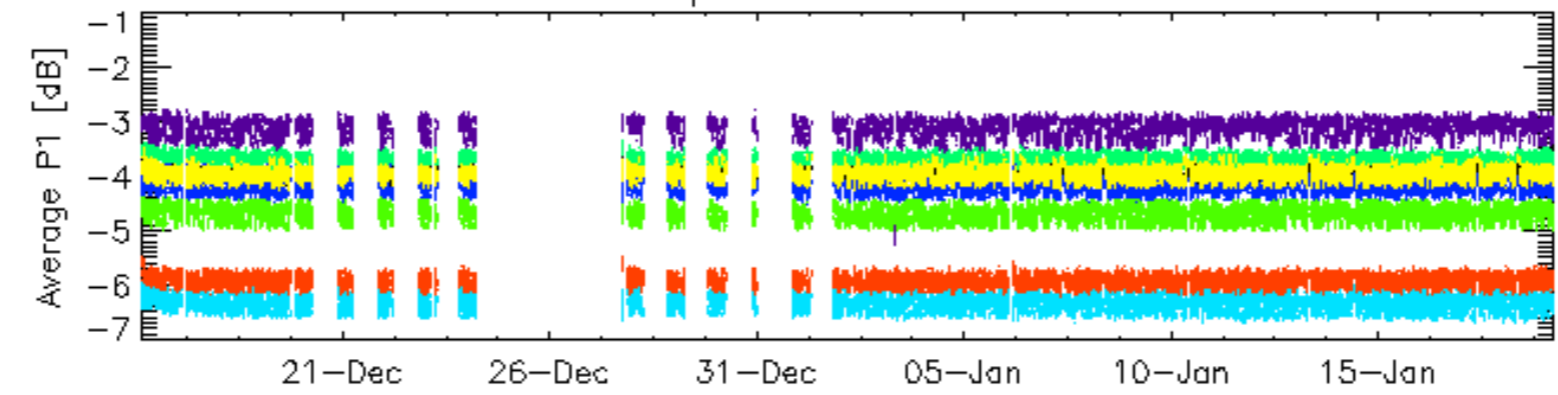
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3



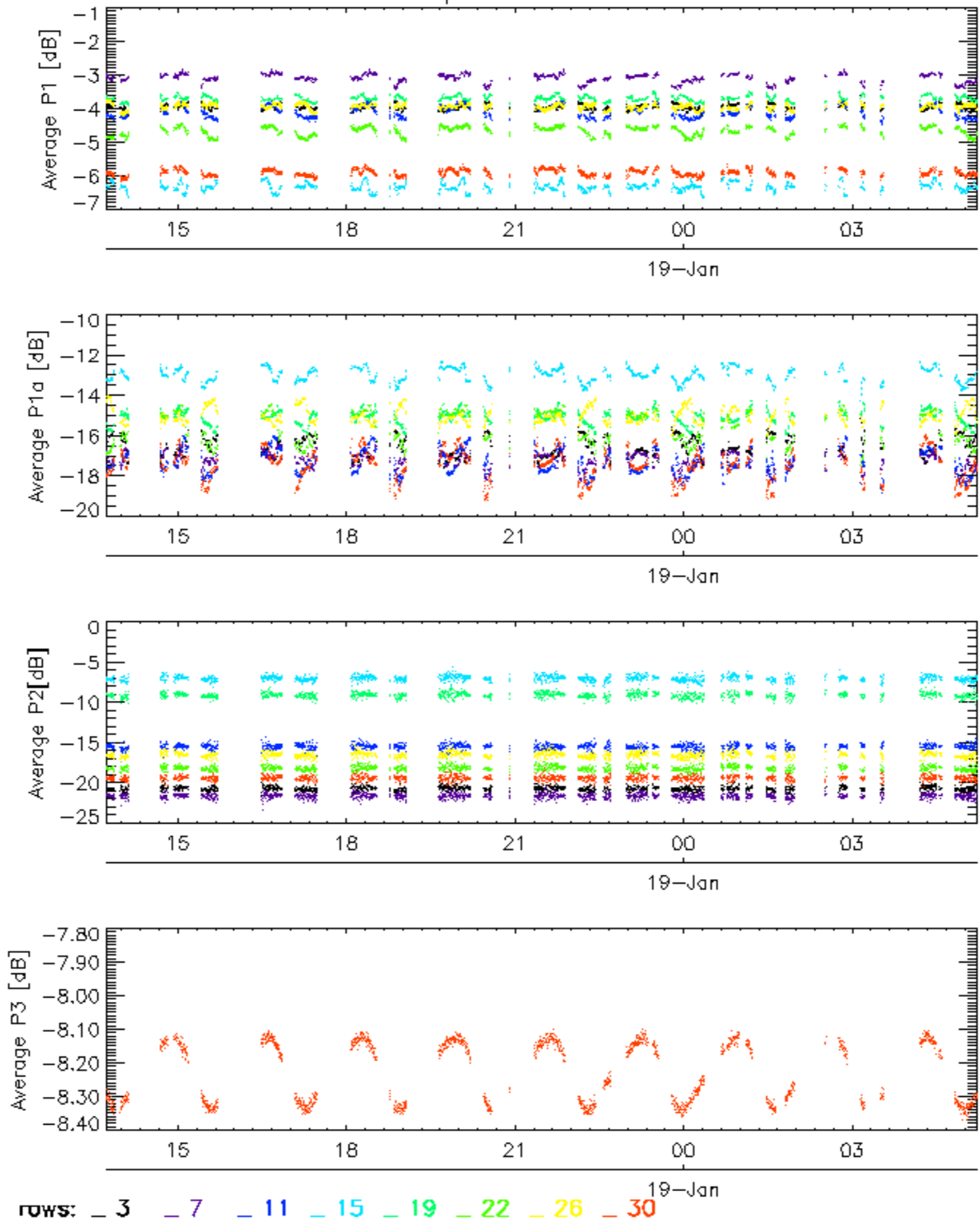
rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2



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

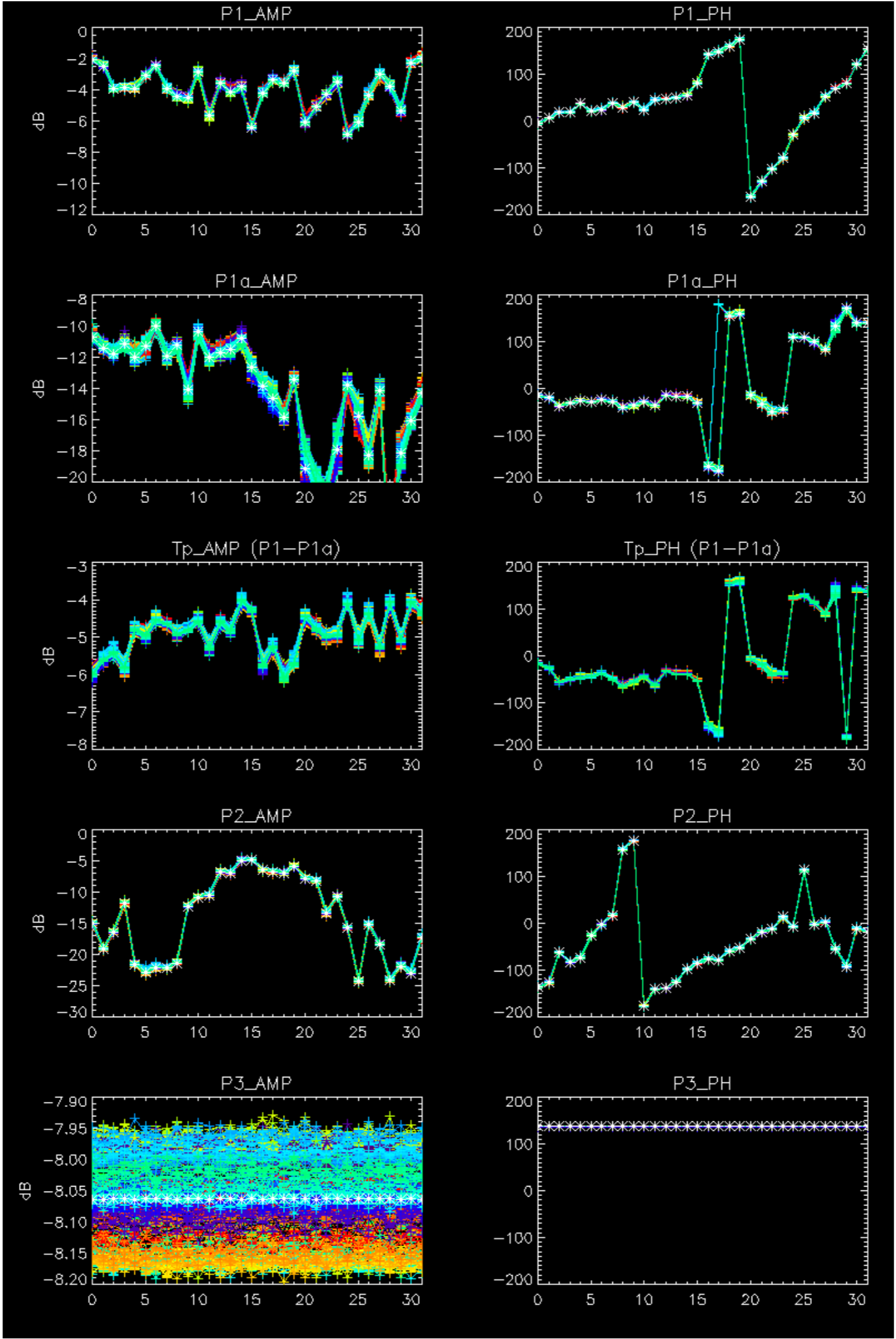
### Cal pulses for WVS IS2

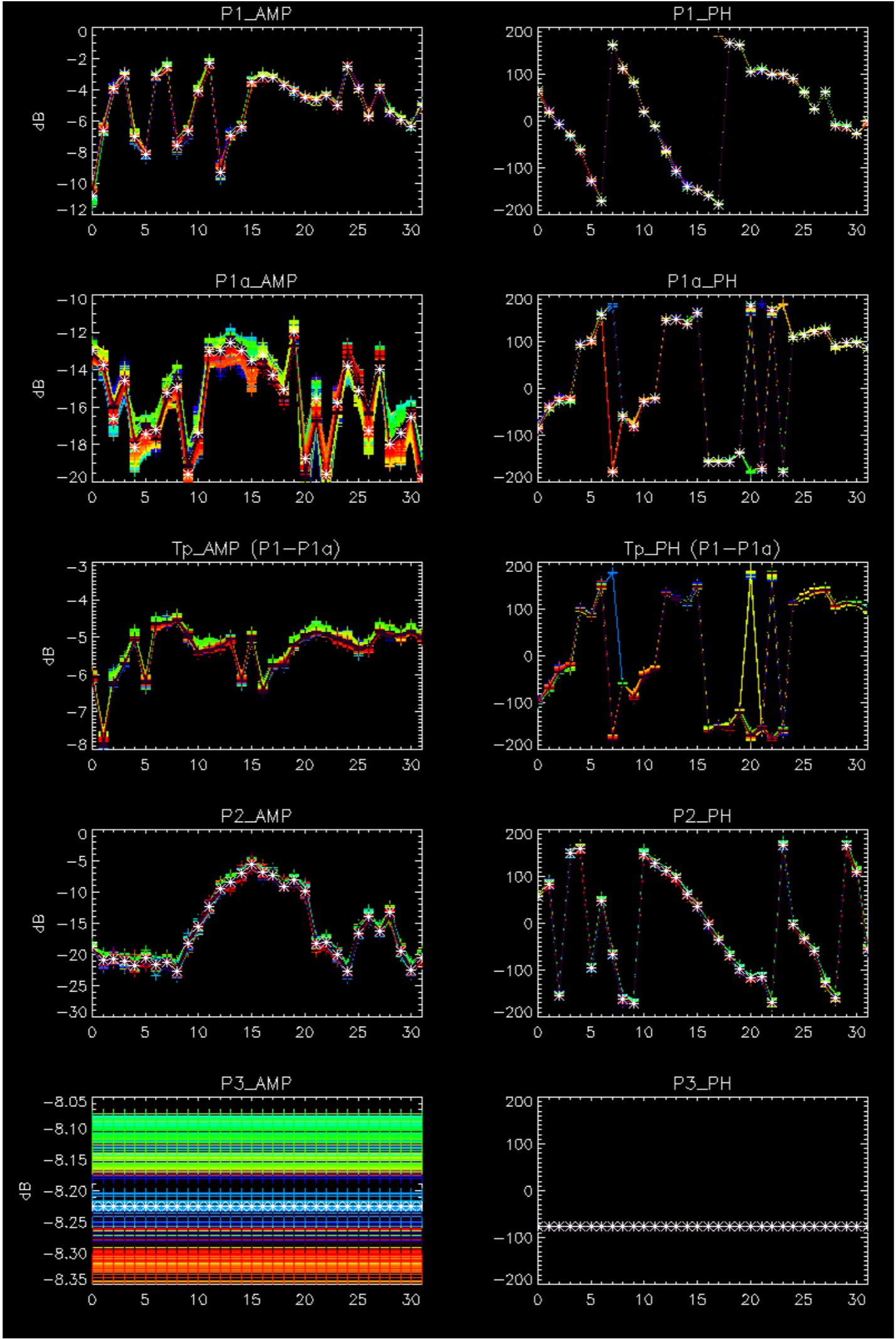


No anomalies observed on available browse products

No anomalies observed.



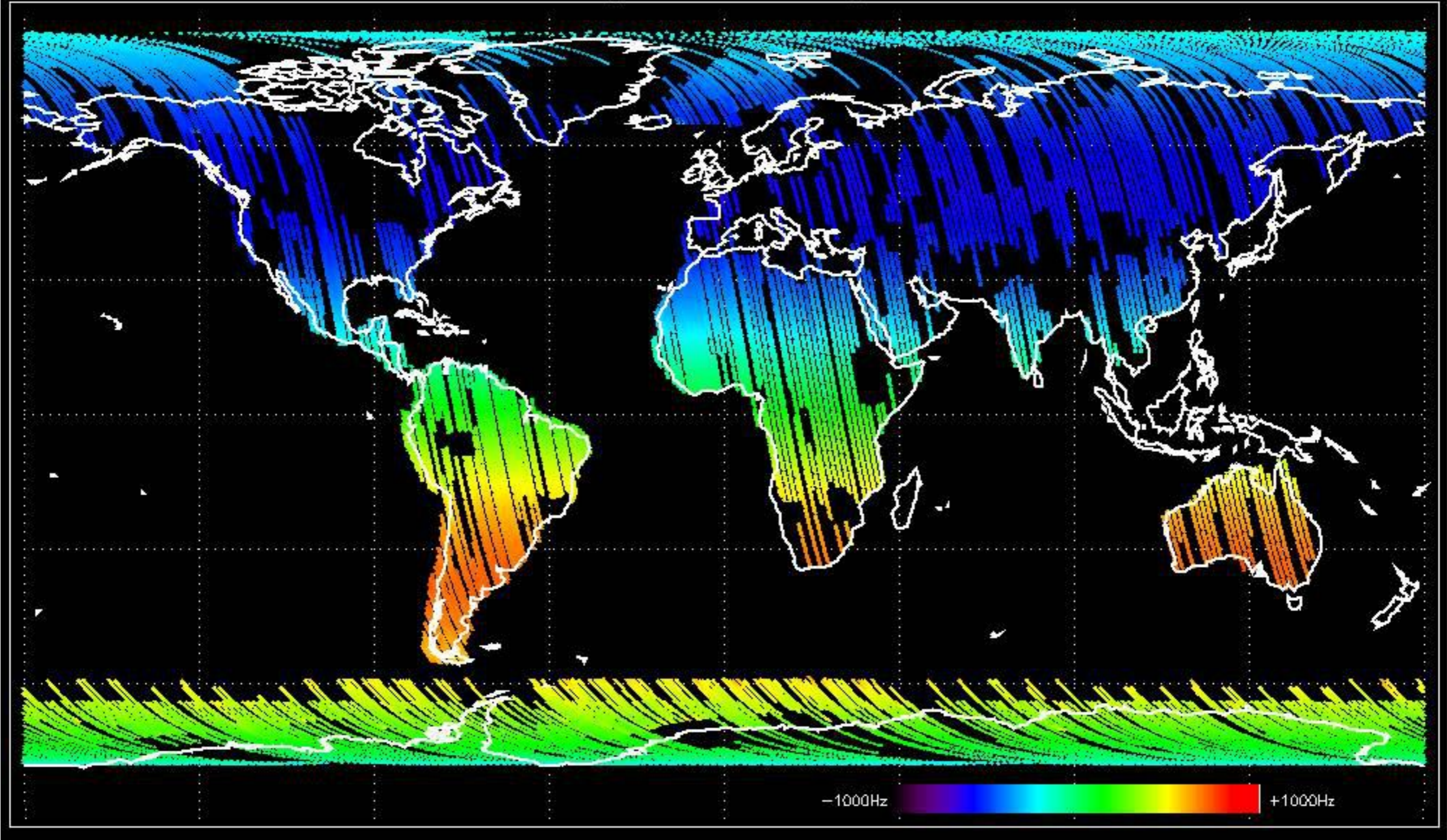




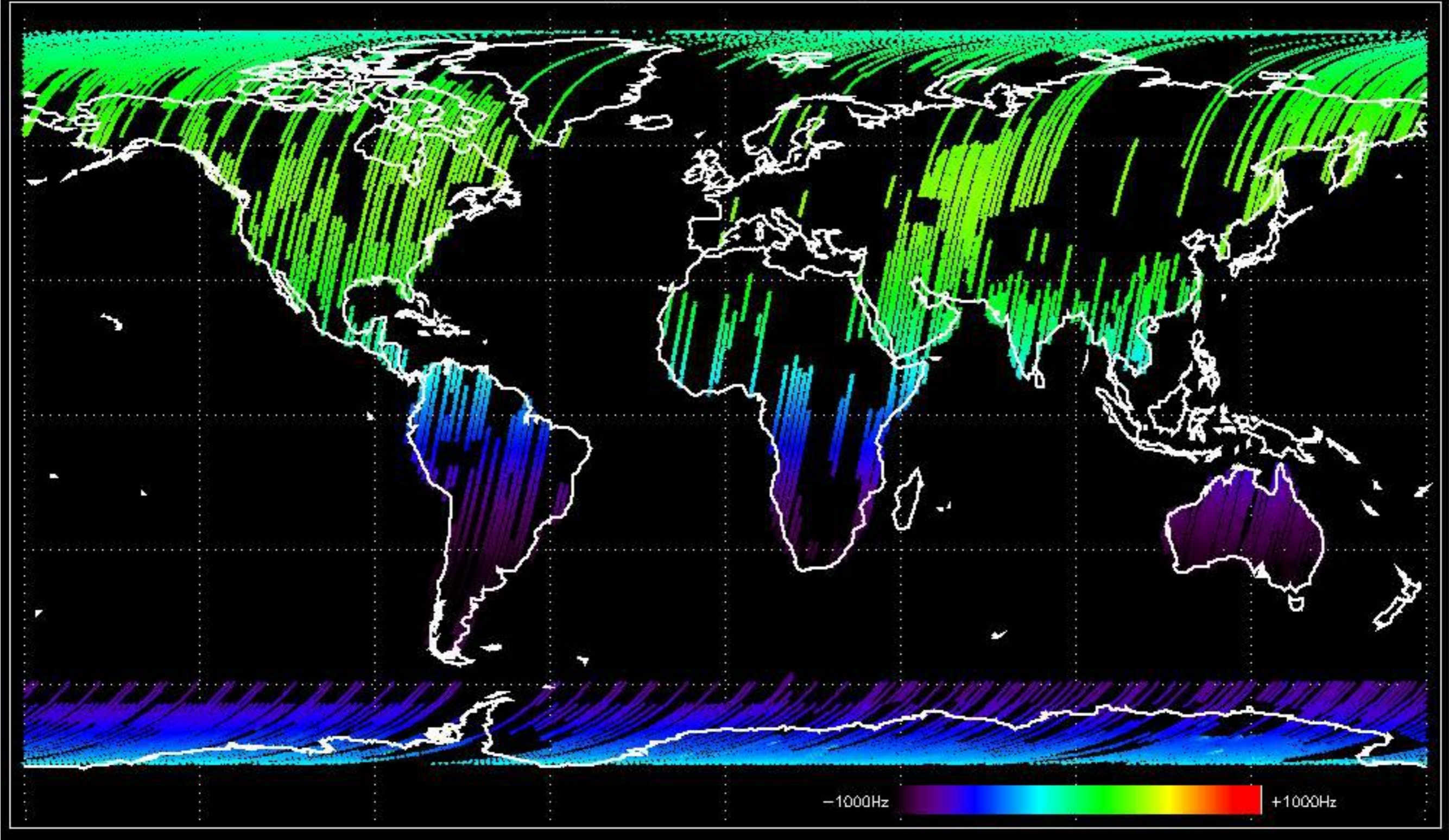
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



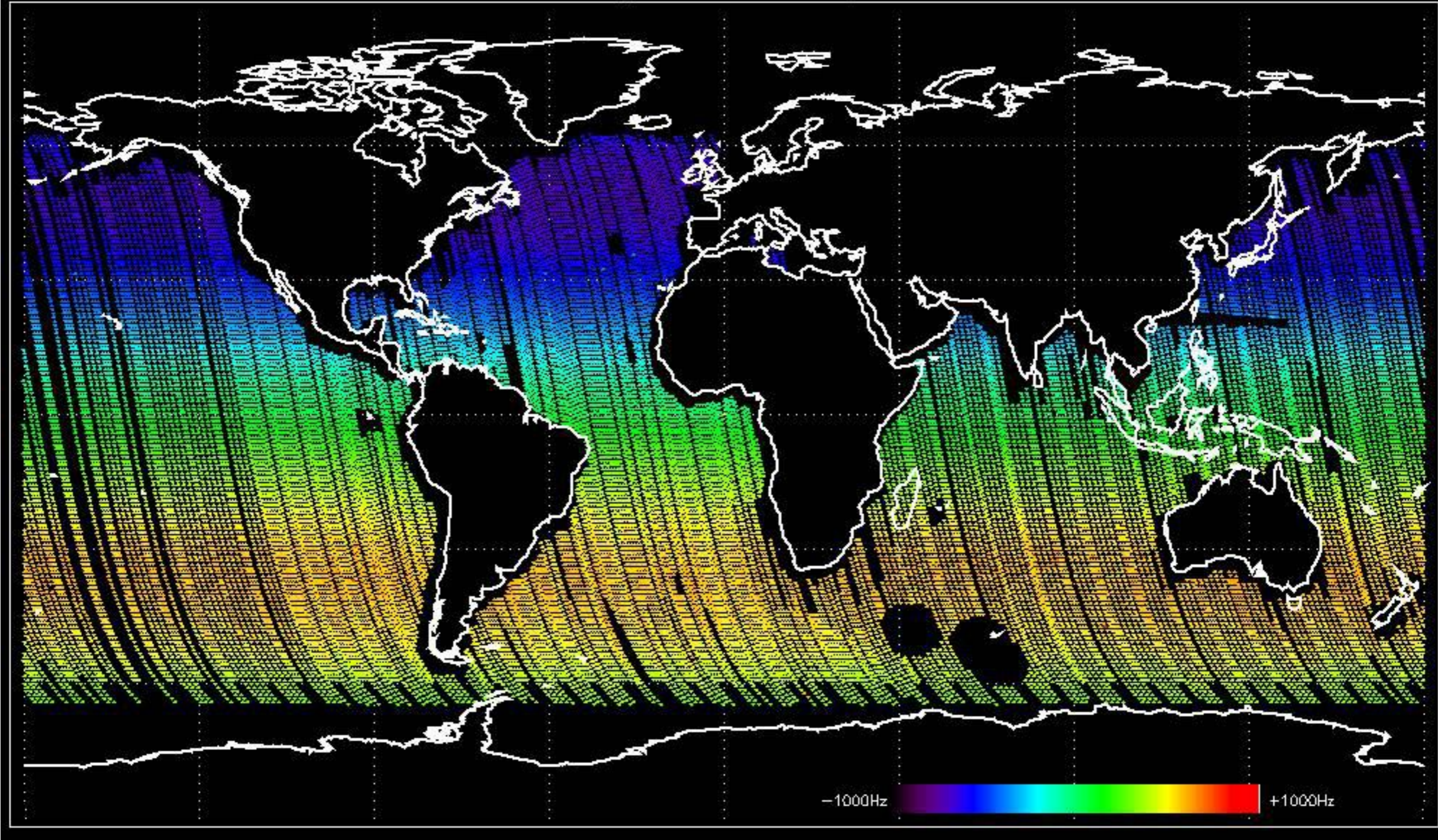
Doppler 'GM1' 'SS1' ascending



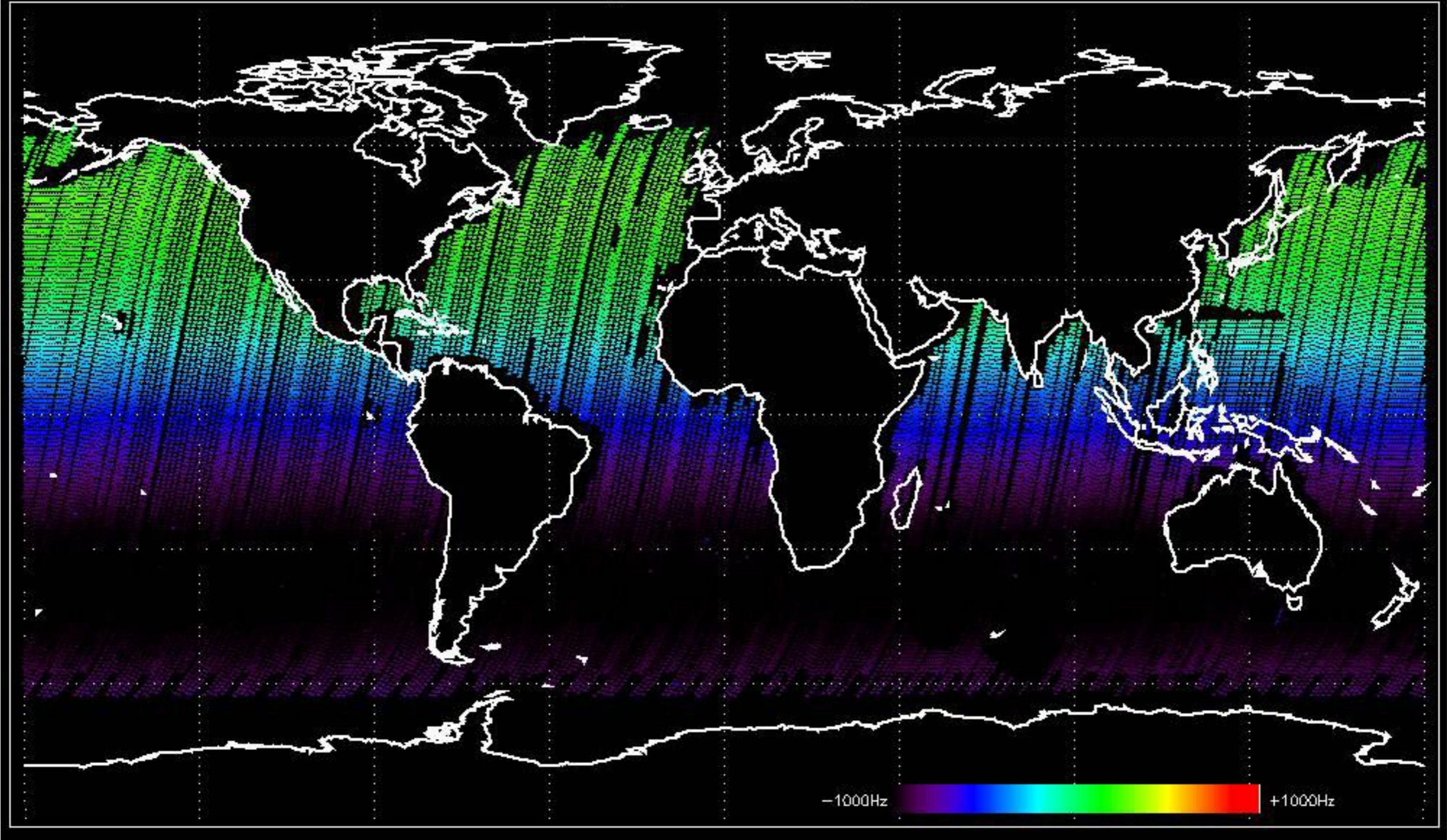
Doppler 'GM1' 'SS1' descending



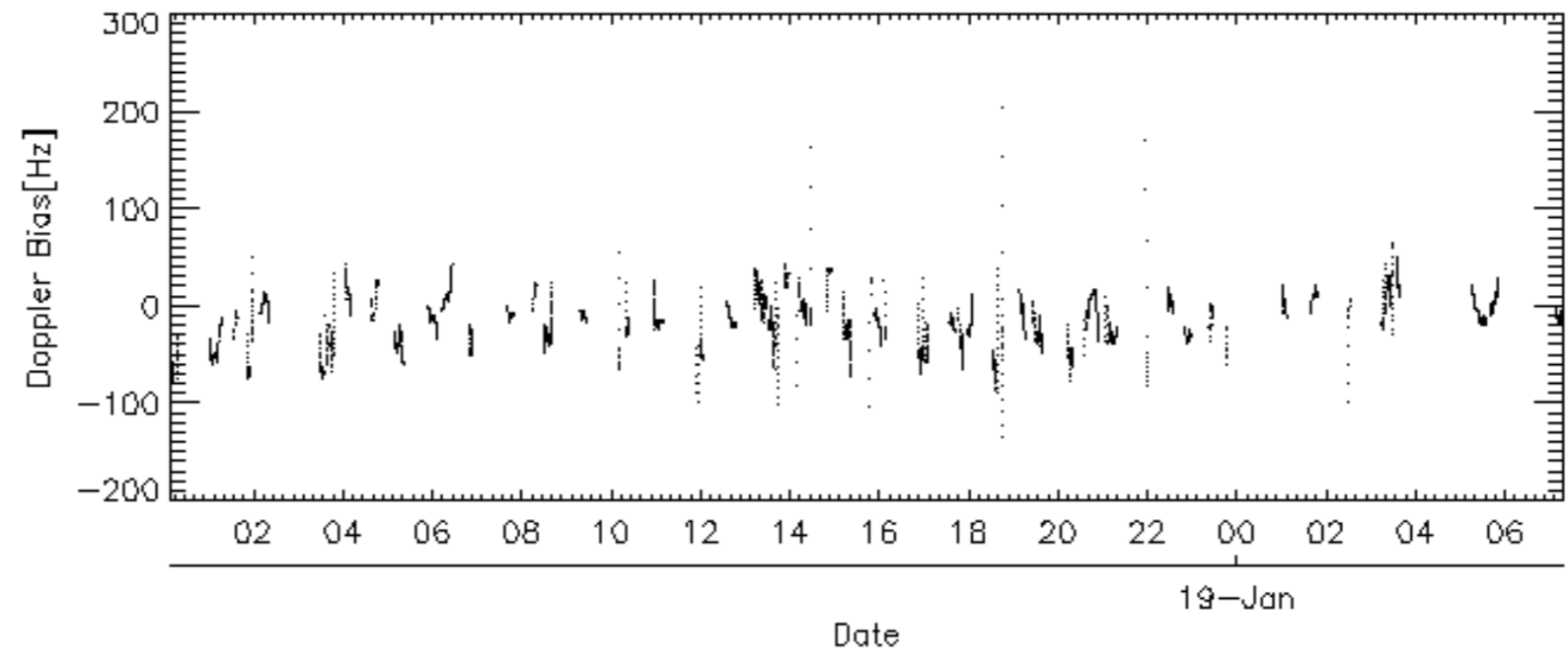
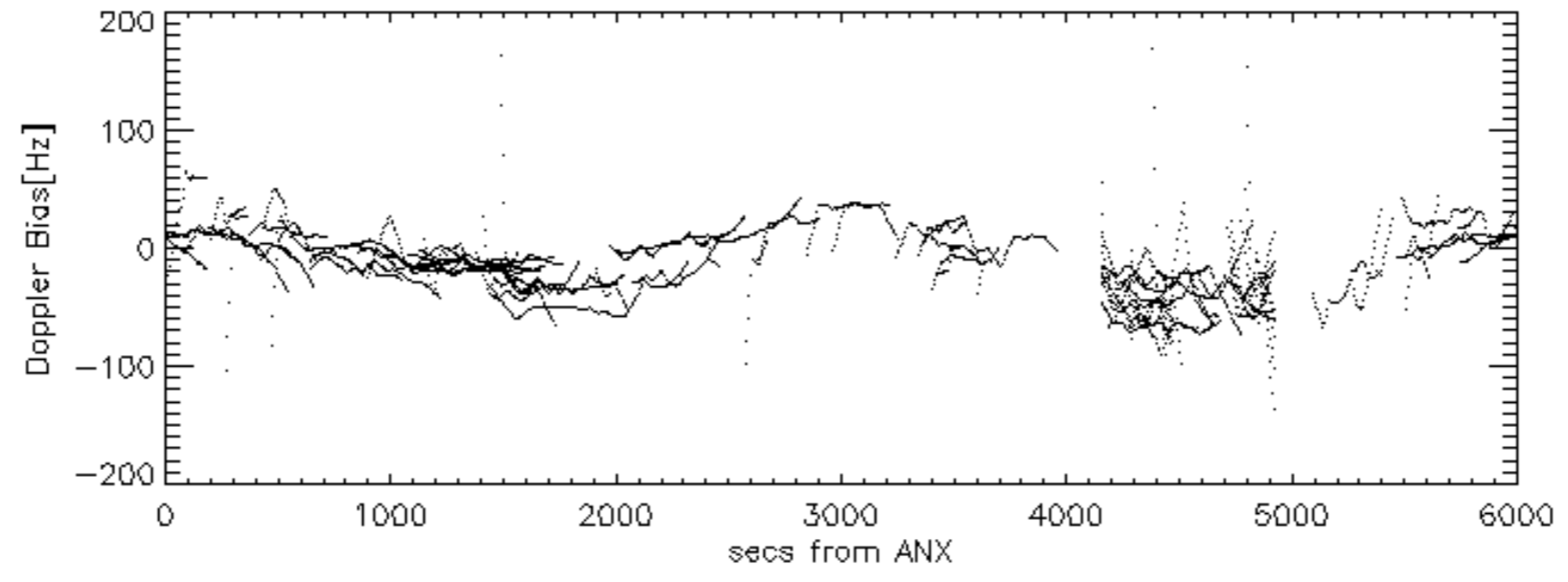
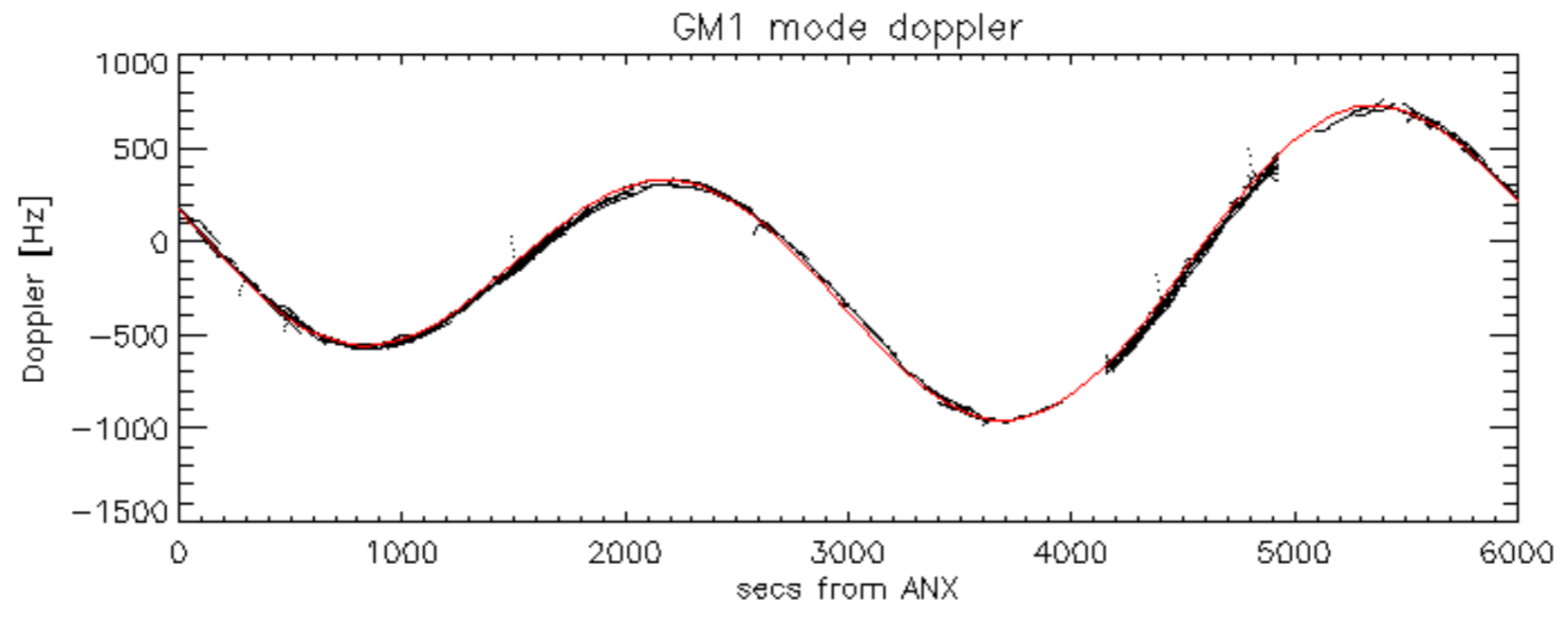
Doppler 'WVS' 'IS2' ascending

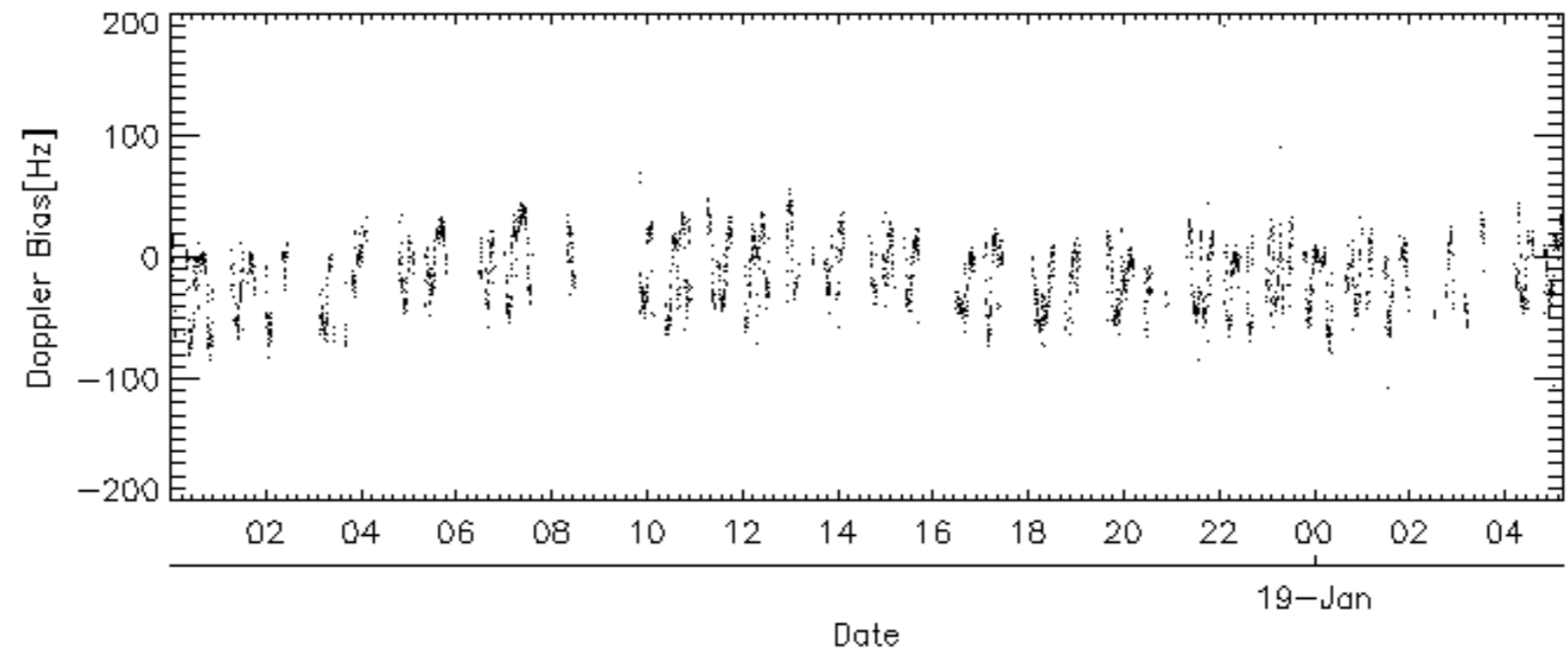
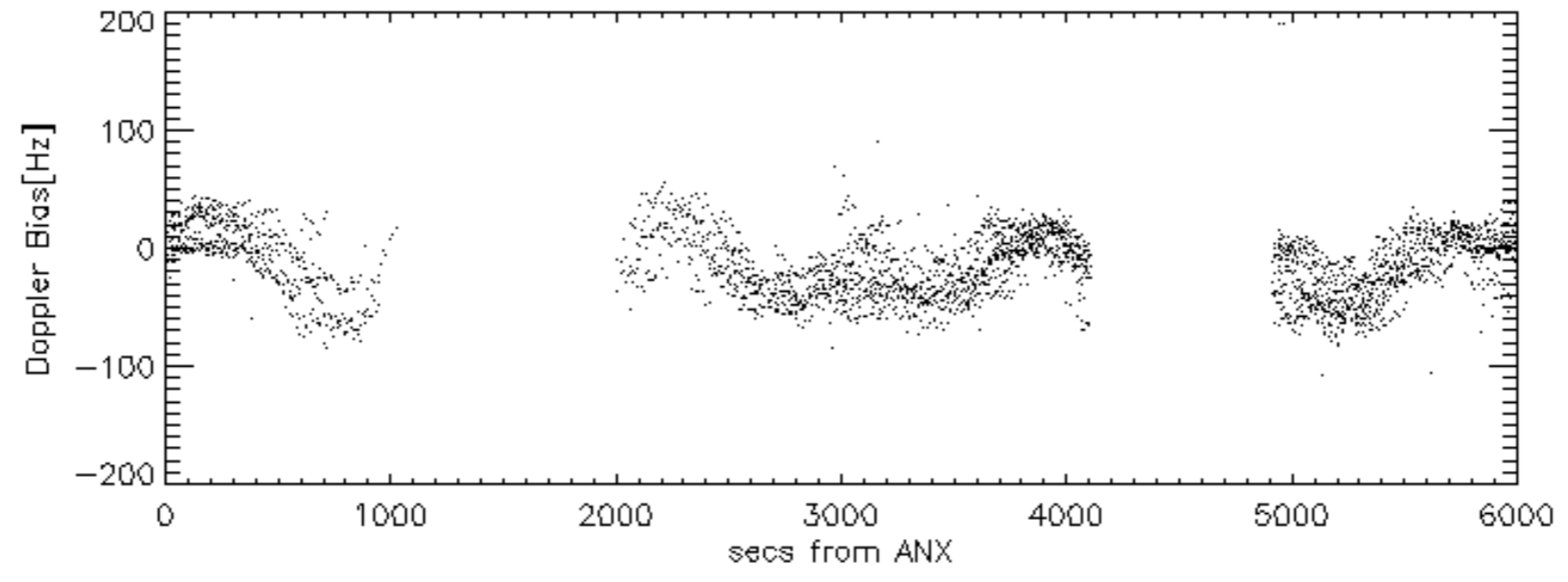
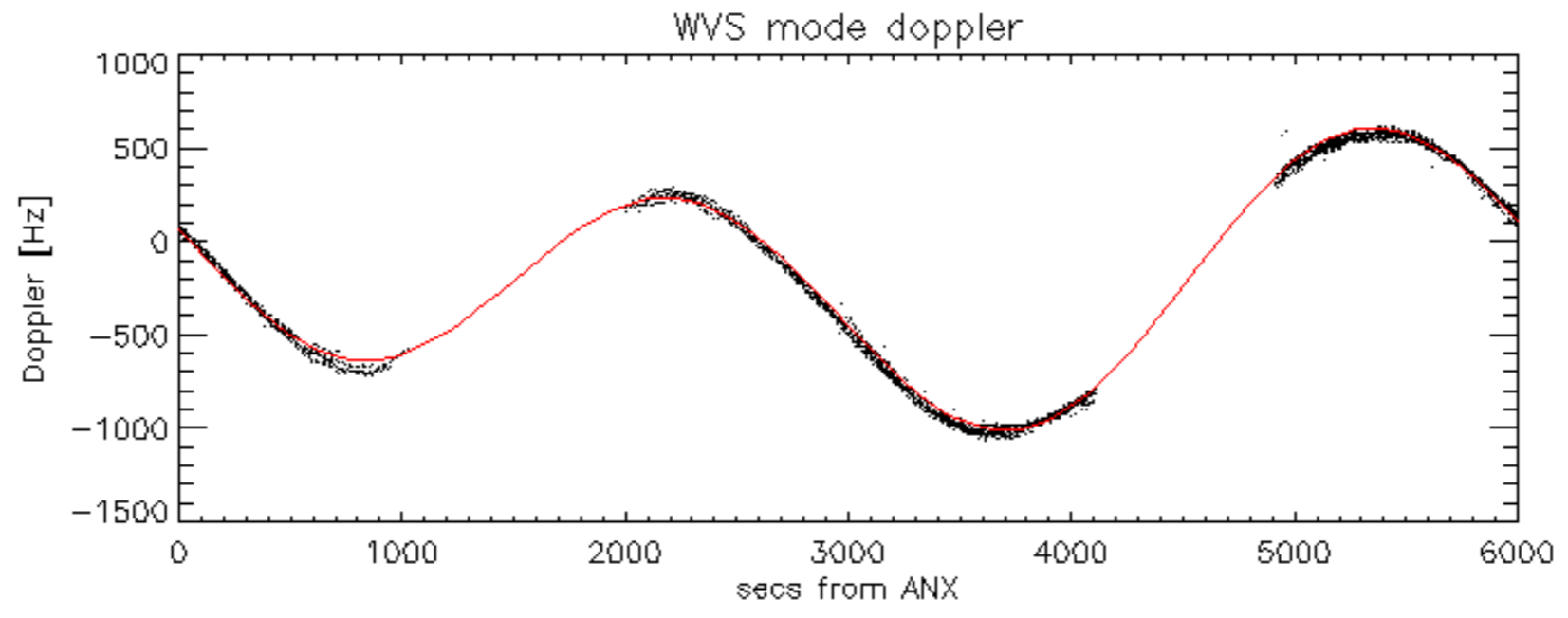


Doppler 'WVS' 'IS2' descending

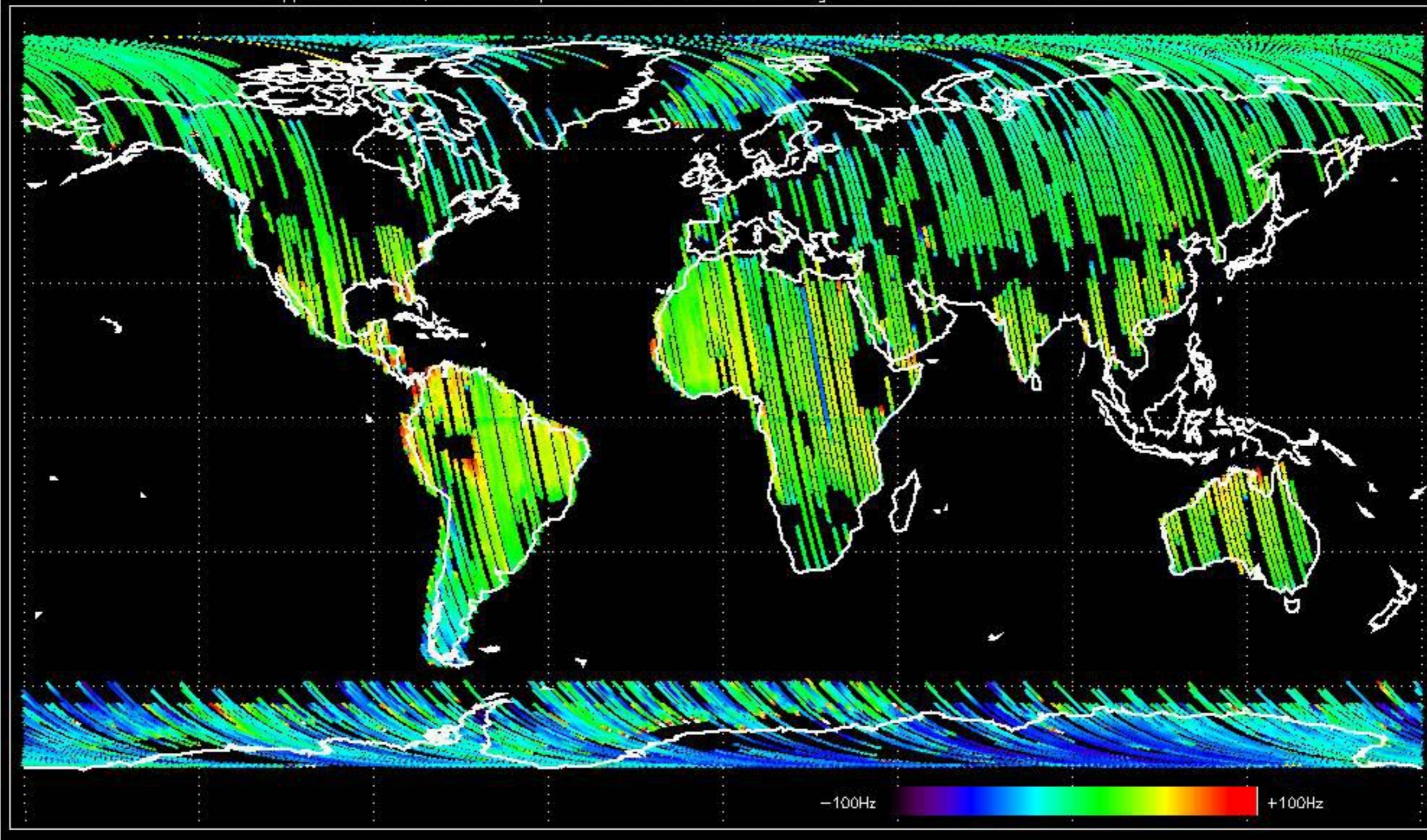




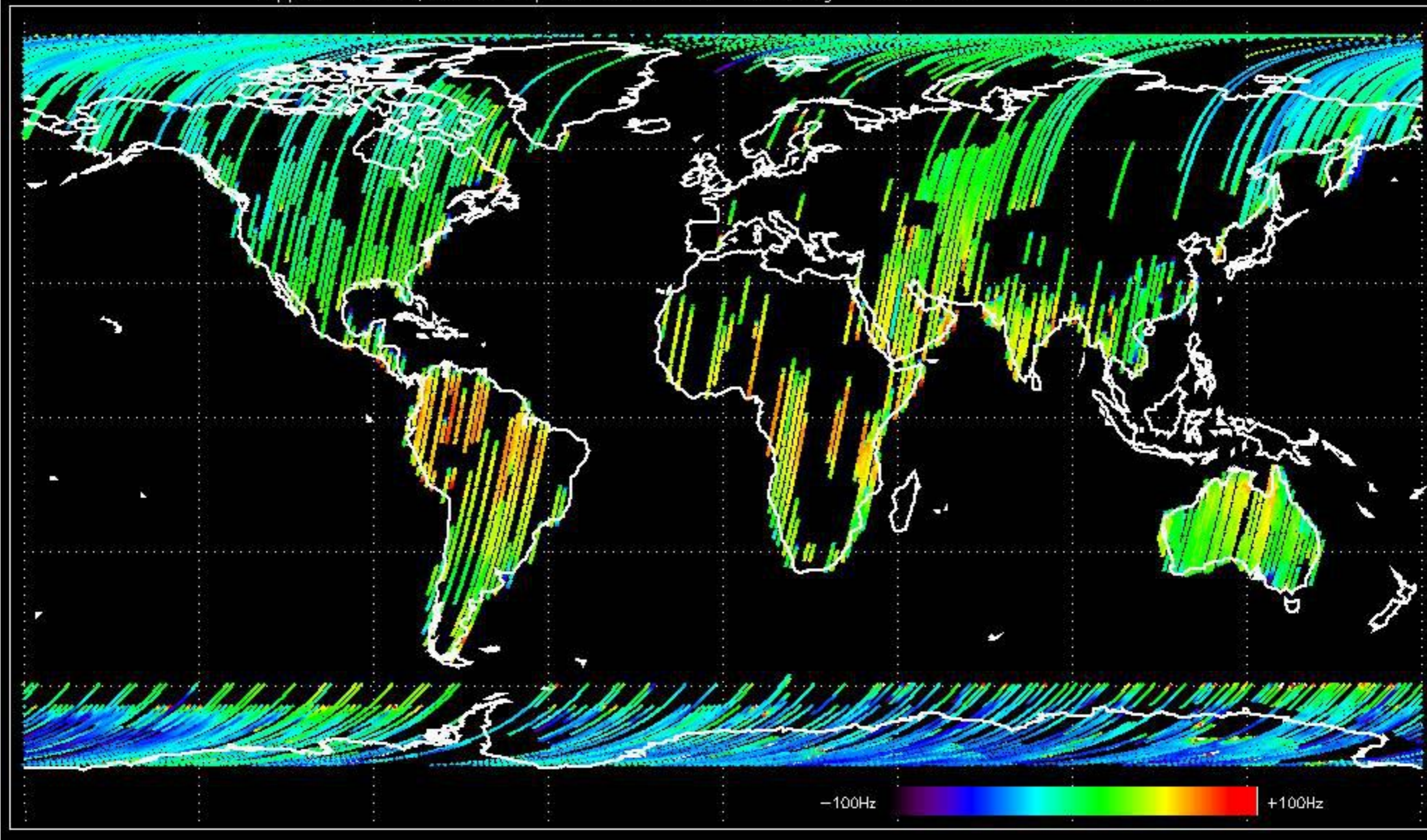




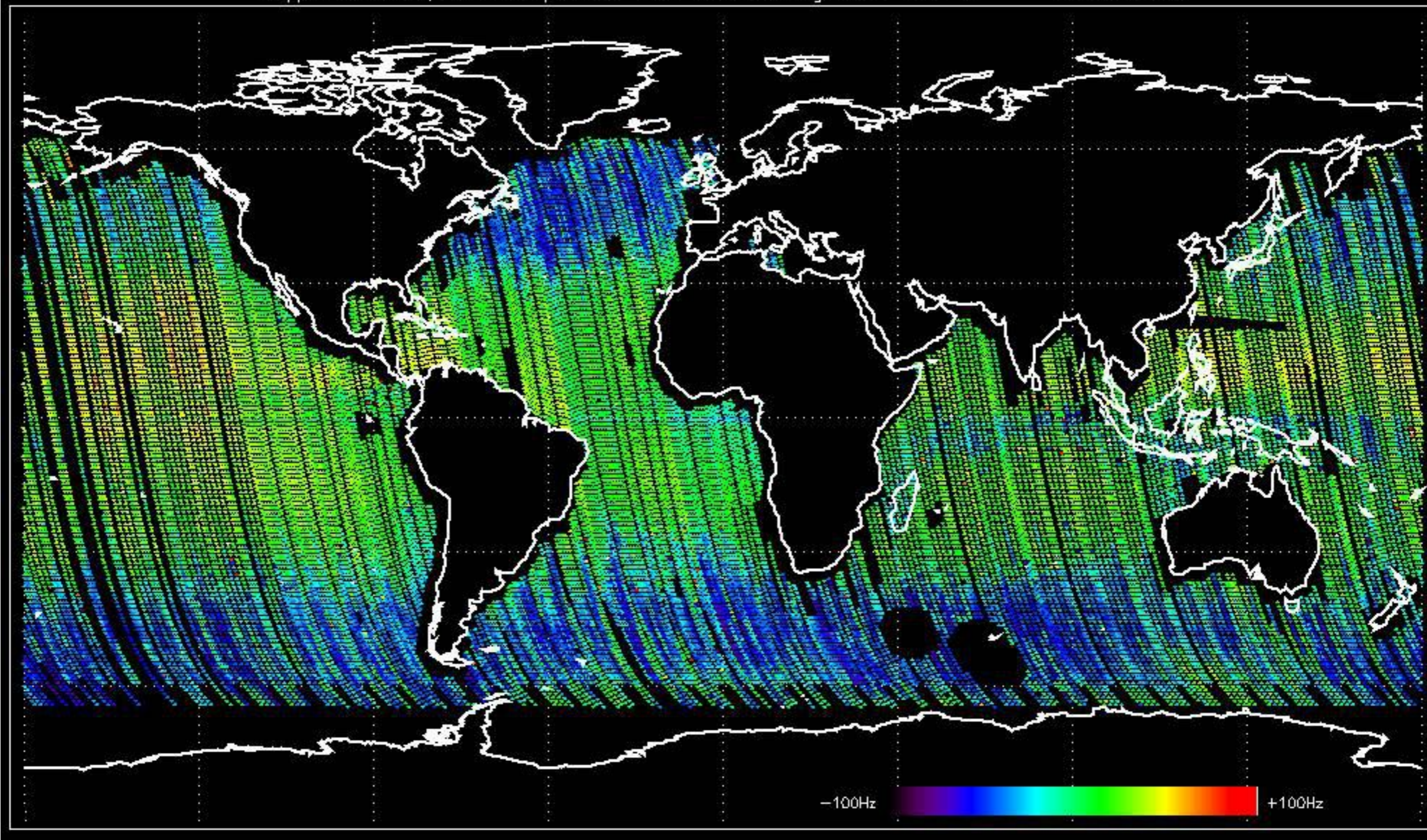
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.343600 Hz



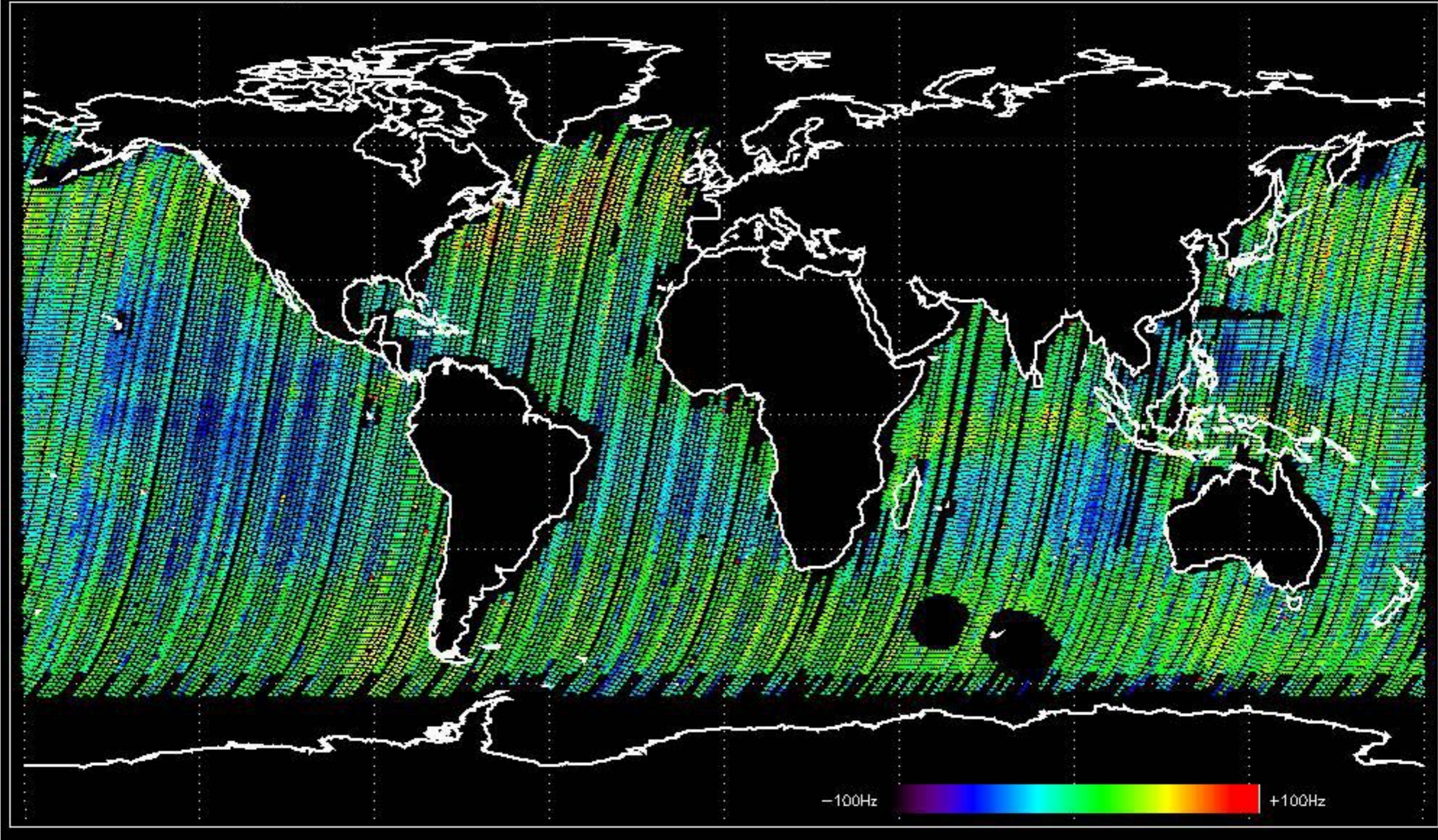
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.643818 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.790744 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.239189 Hz



No anomalies observed on available MS products:

No anomalies observed.











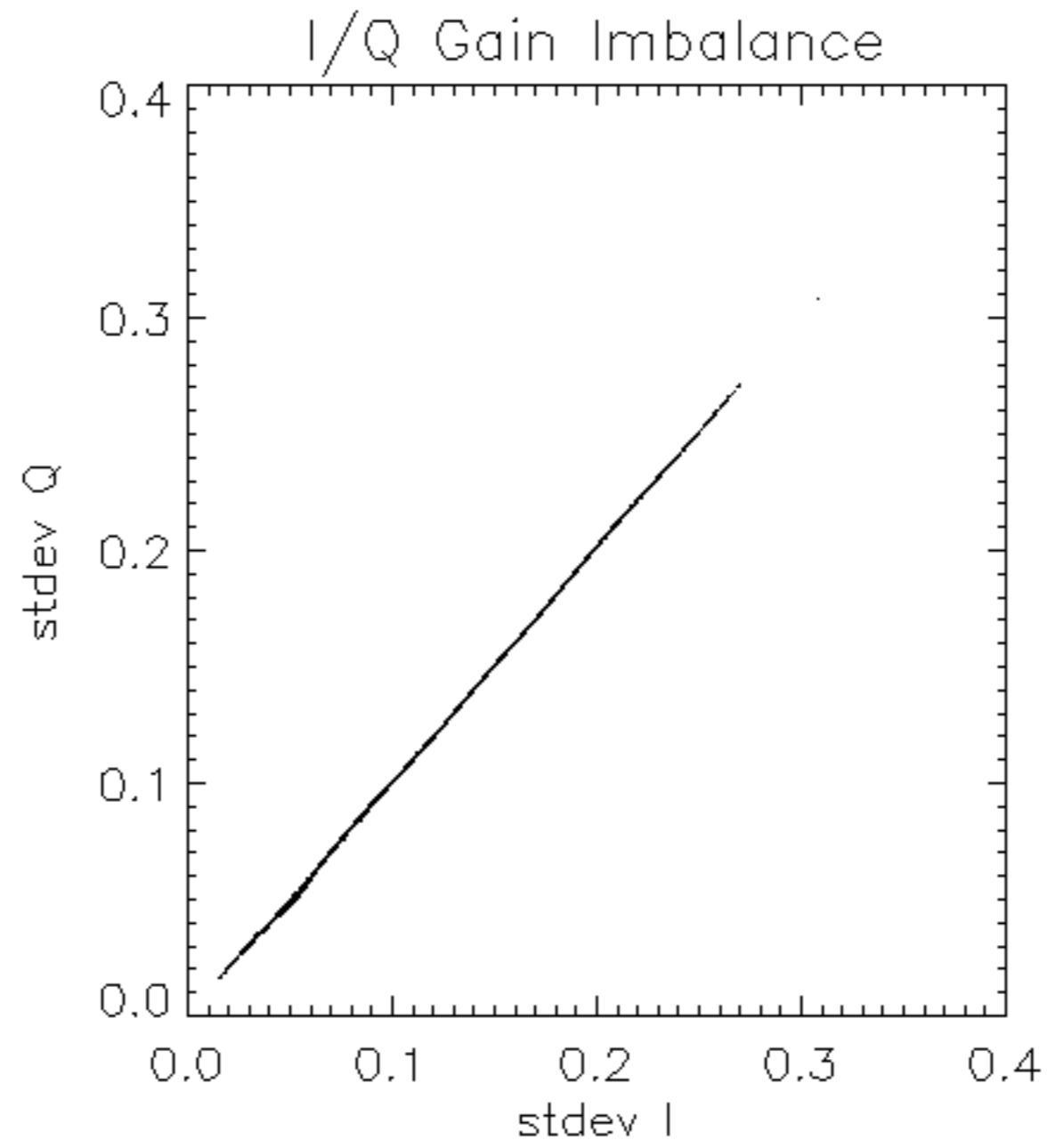


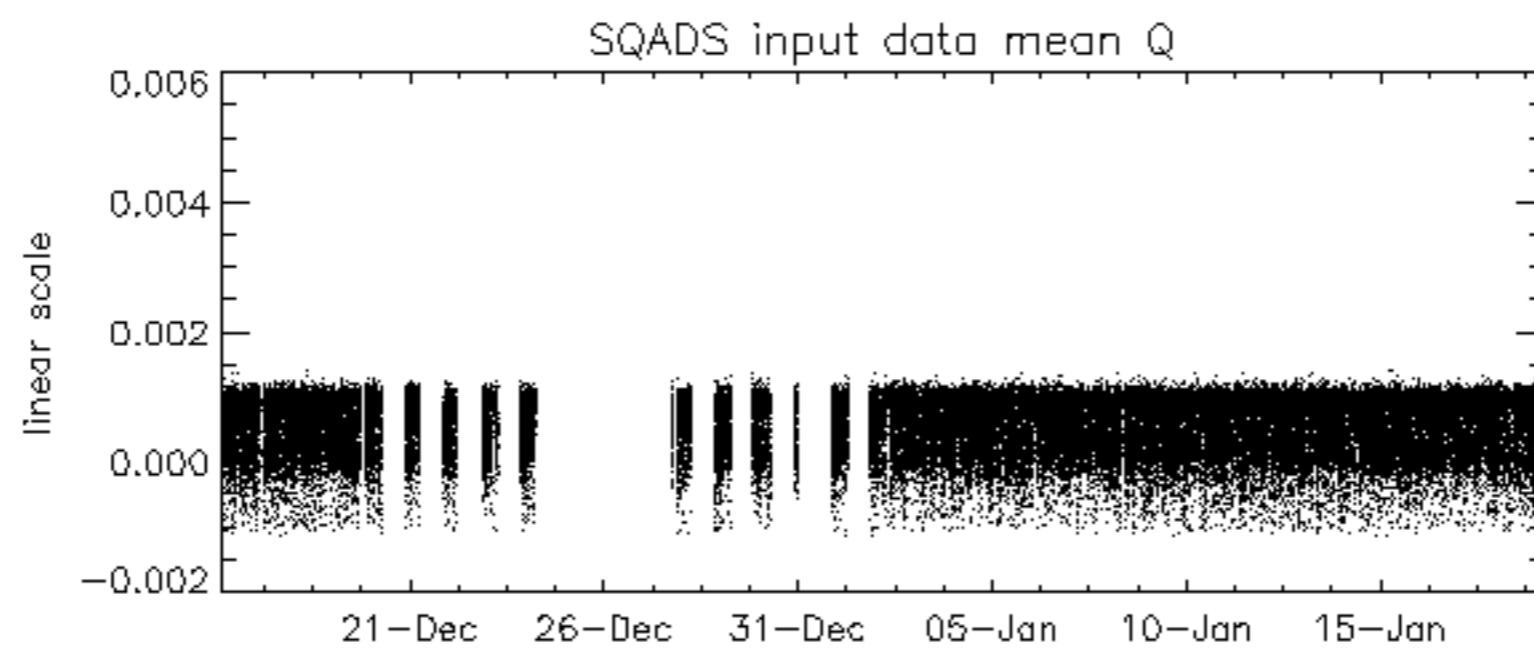
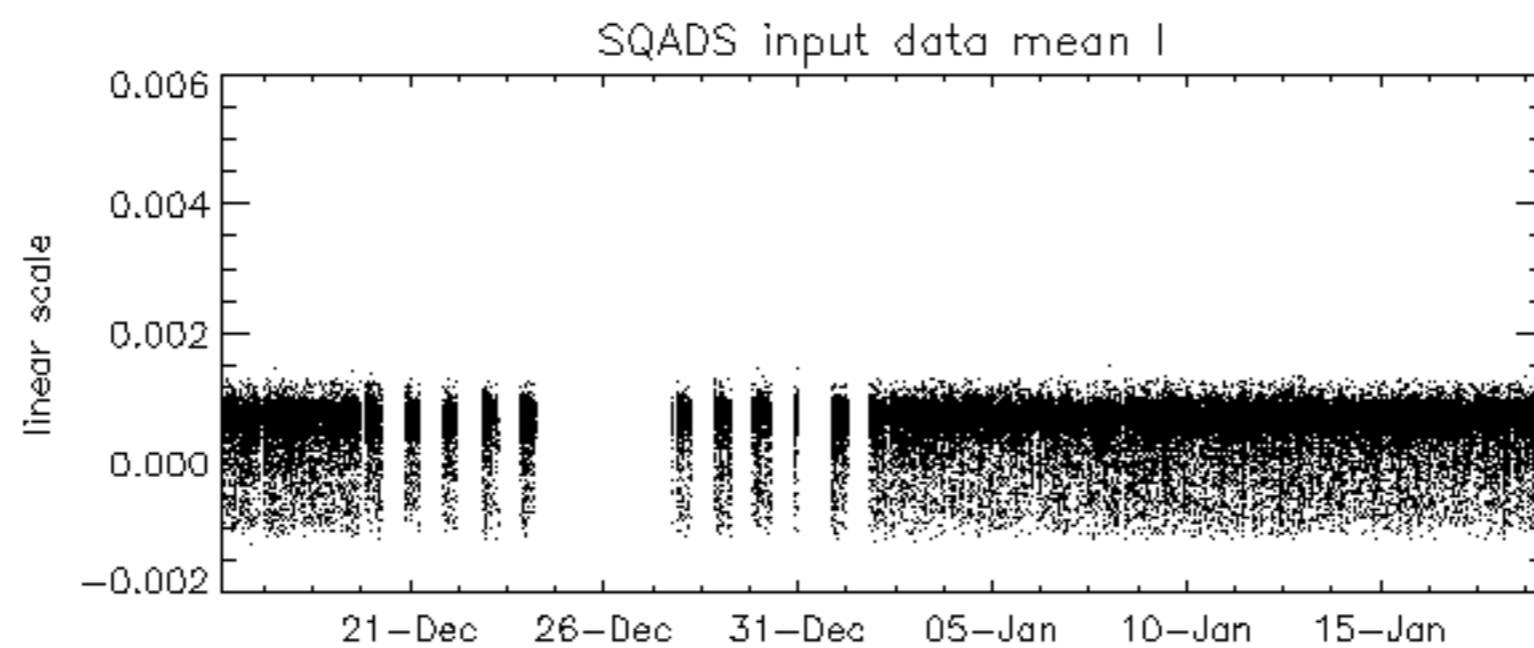
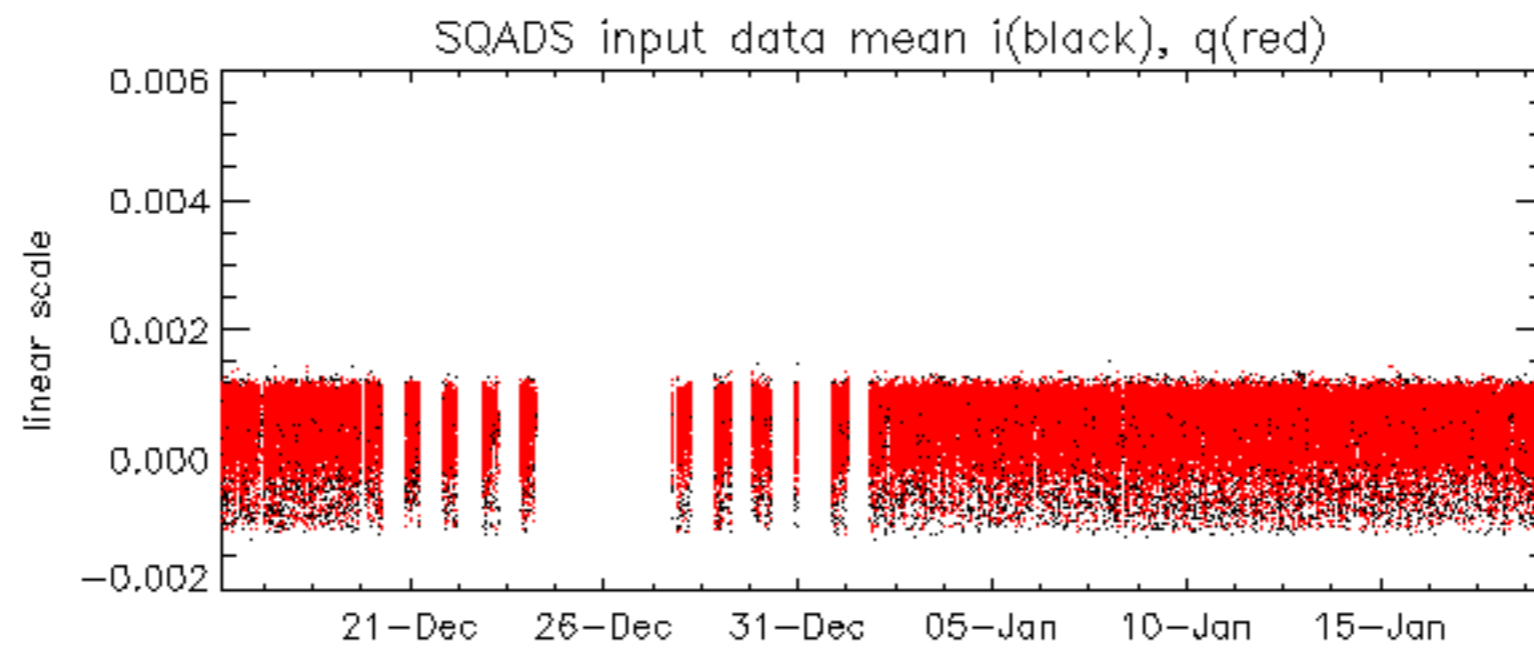


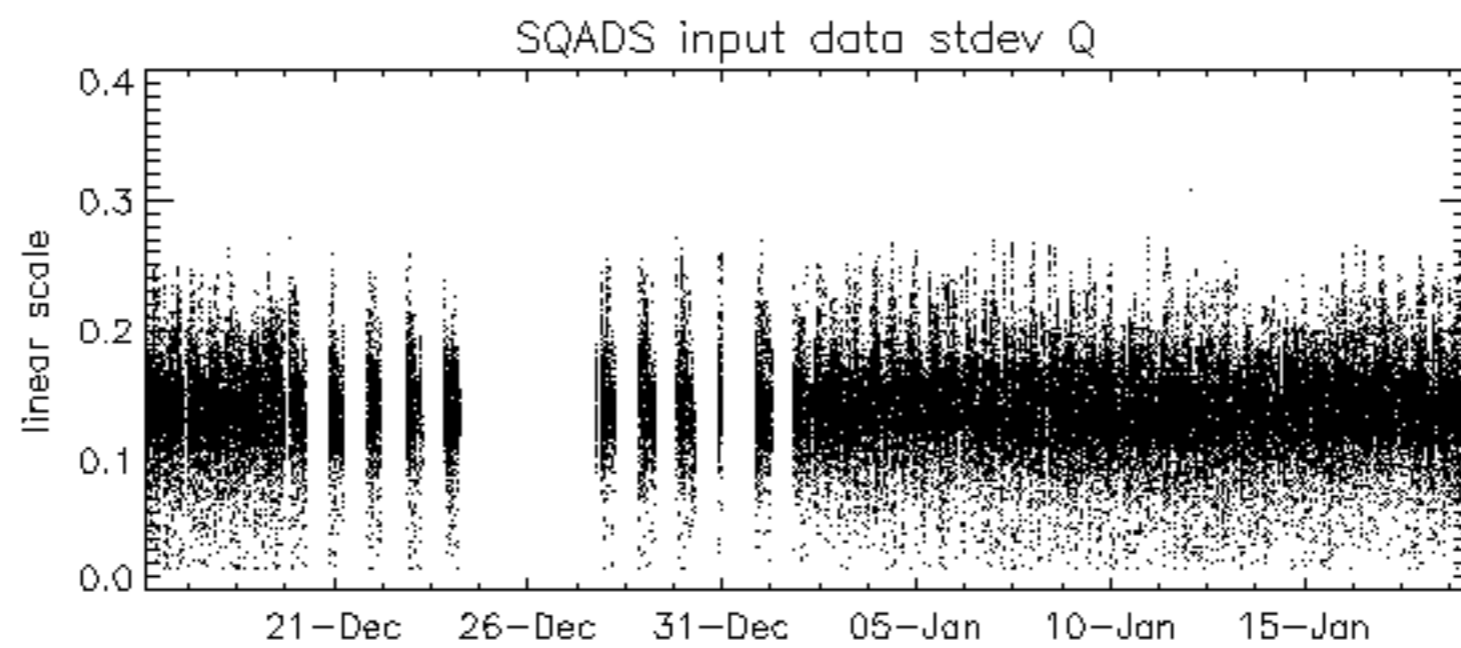
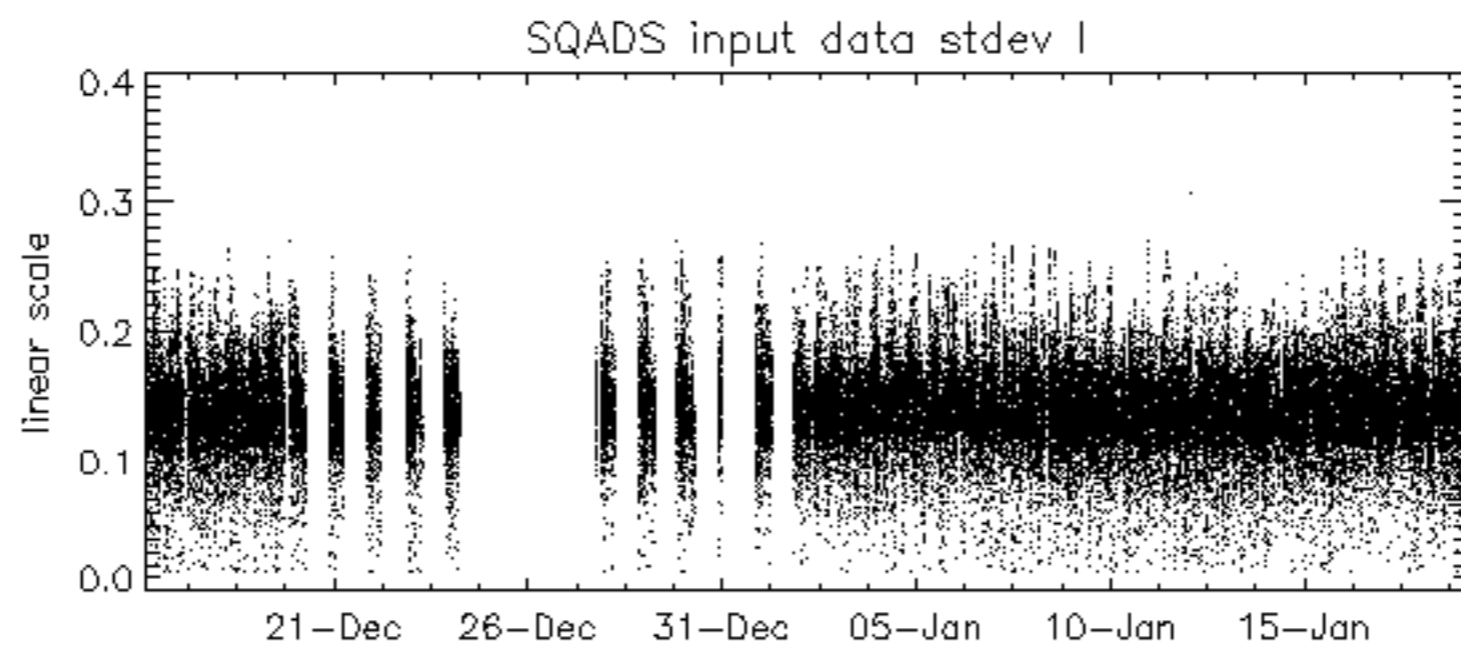
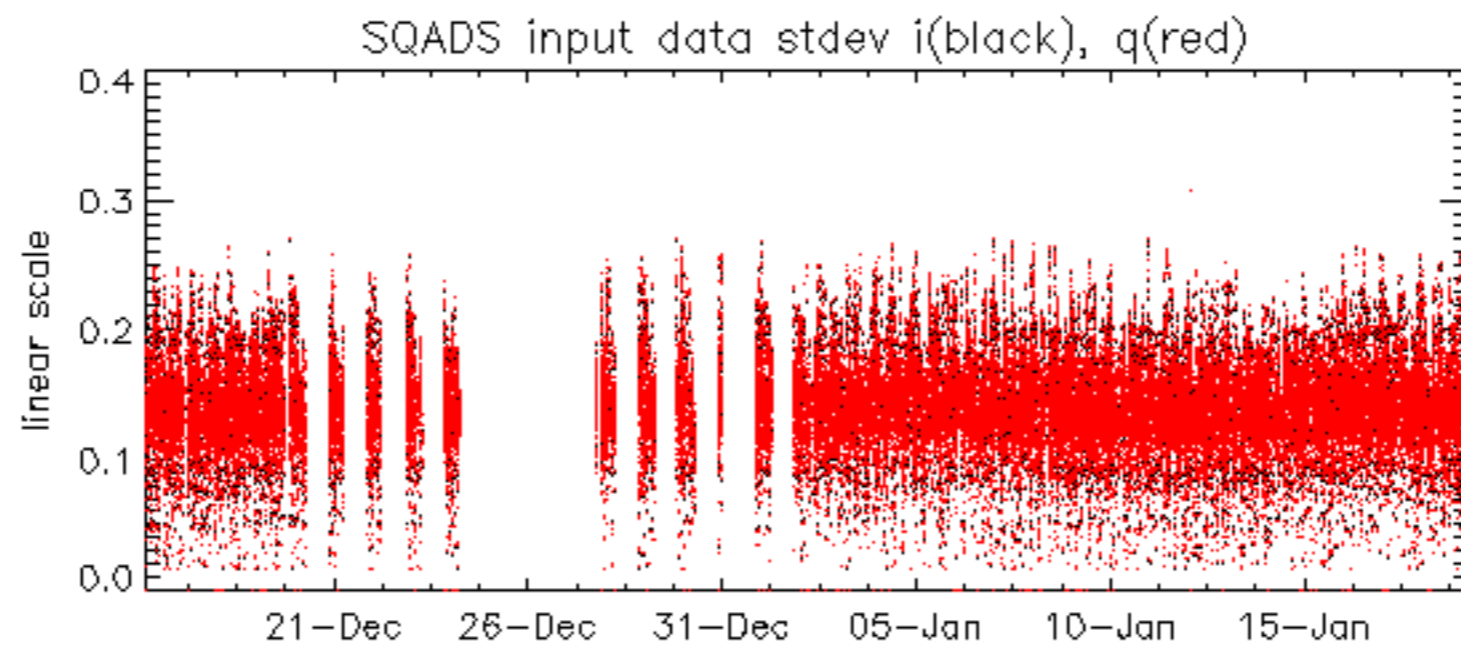




















Summary of analysis for the last 3 days 2007011[789]

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_GM1_1PNPDK20070117_094938_000006882054_00423_25527_0743.N1	0	7
ASA_WSM_1PNPDE20070117_134134_000000862054_00425_25529_0974.N1	0	45
ASA_WSM_1PNPDE20070117_154858_000000612054_00426_25530_0950.N1	50	13468
ASA_WSM_1PNPDE20070117_162036_000002082054_00427_25531_0996.N1	0	19
ASA_WSM_1PNPDE20070118_112601_000001642054_00438_25542_2222.N1	0	72
ASA_WSM_1PNPDE20070118_190517_000001102054_00443_25547_2397.N1	0	63
ASA_WSM_1PNPDE20070119_023247_000000852054_00447_25551_2914.N1	0	31







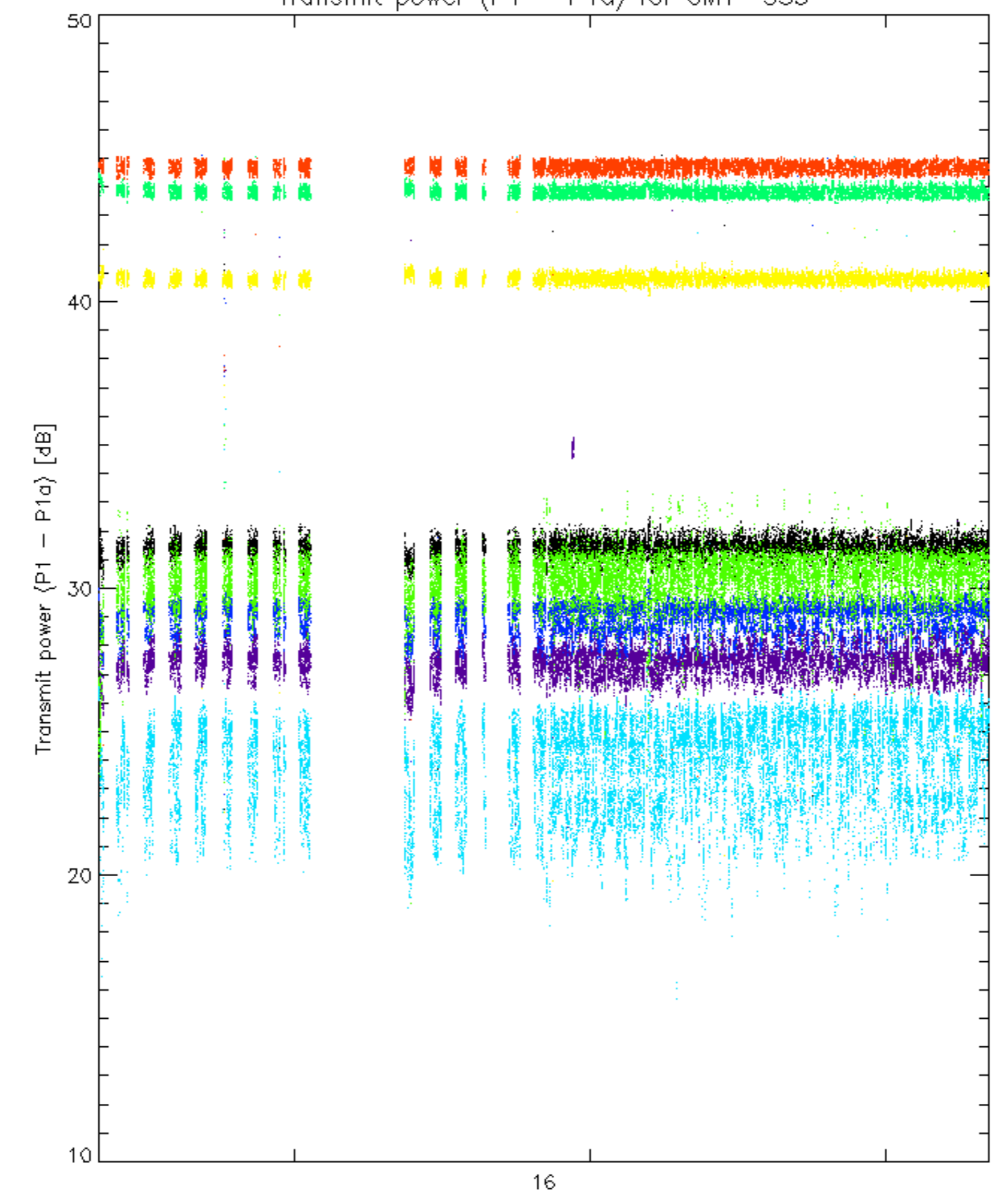


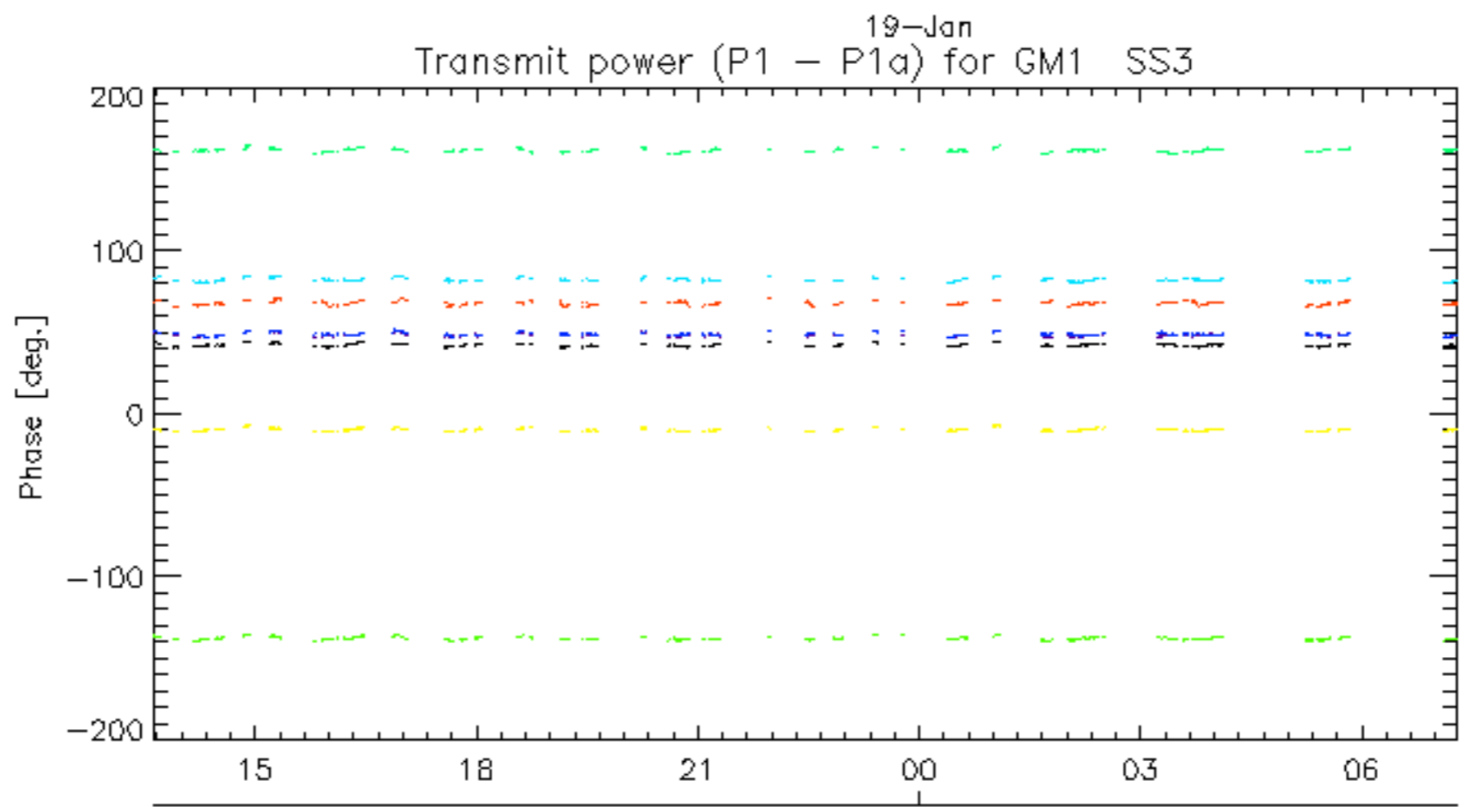
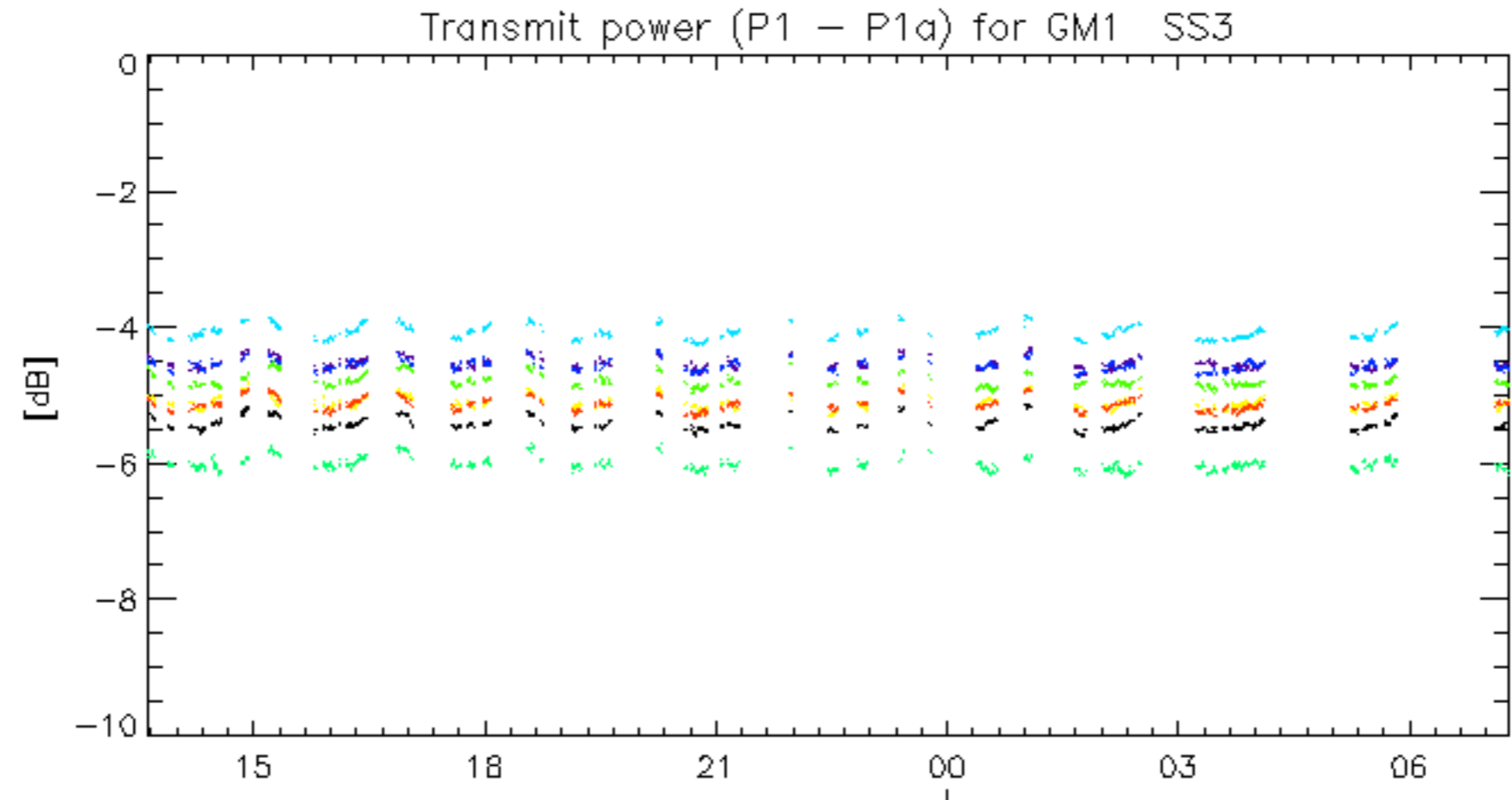






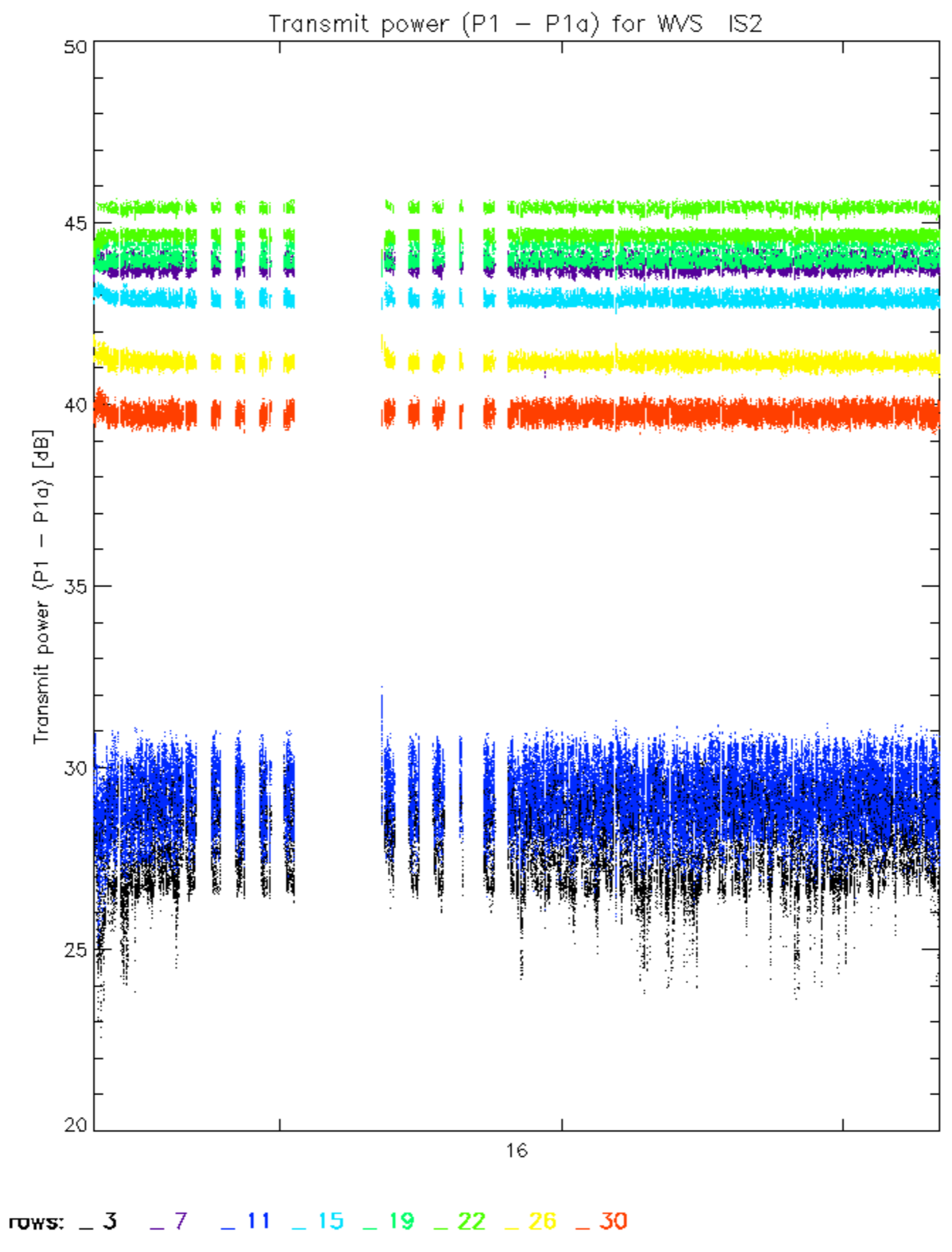
Transmit power (P1 - P1a) for GM1 SS3

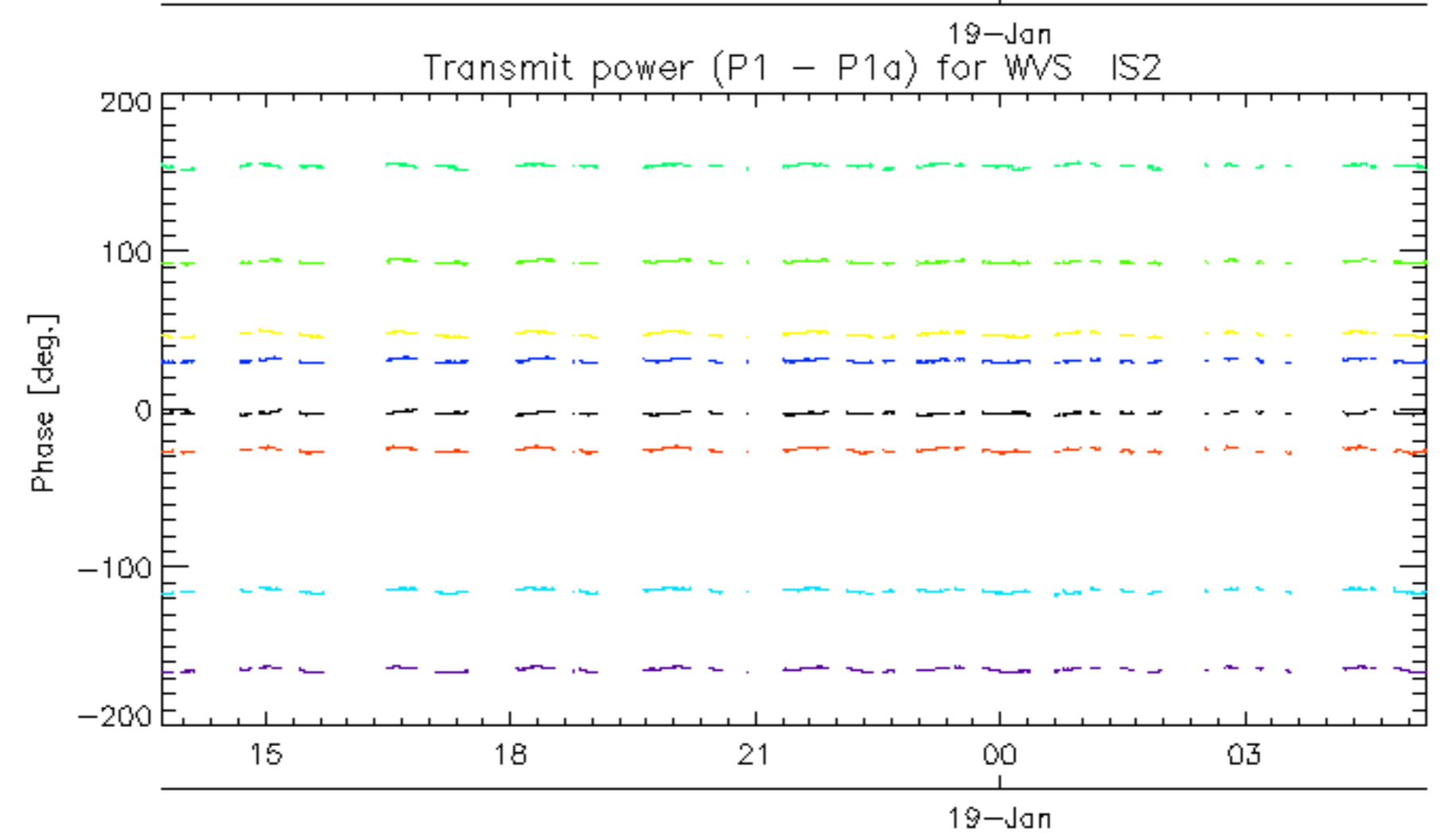
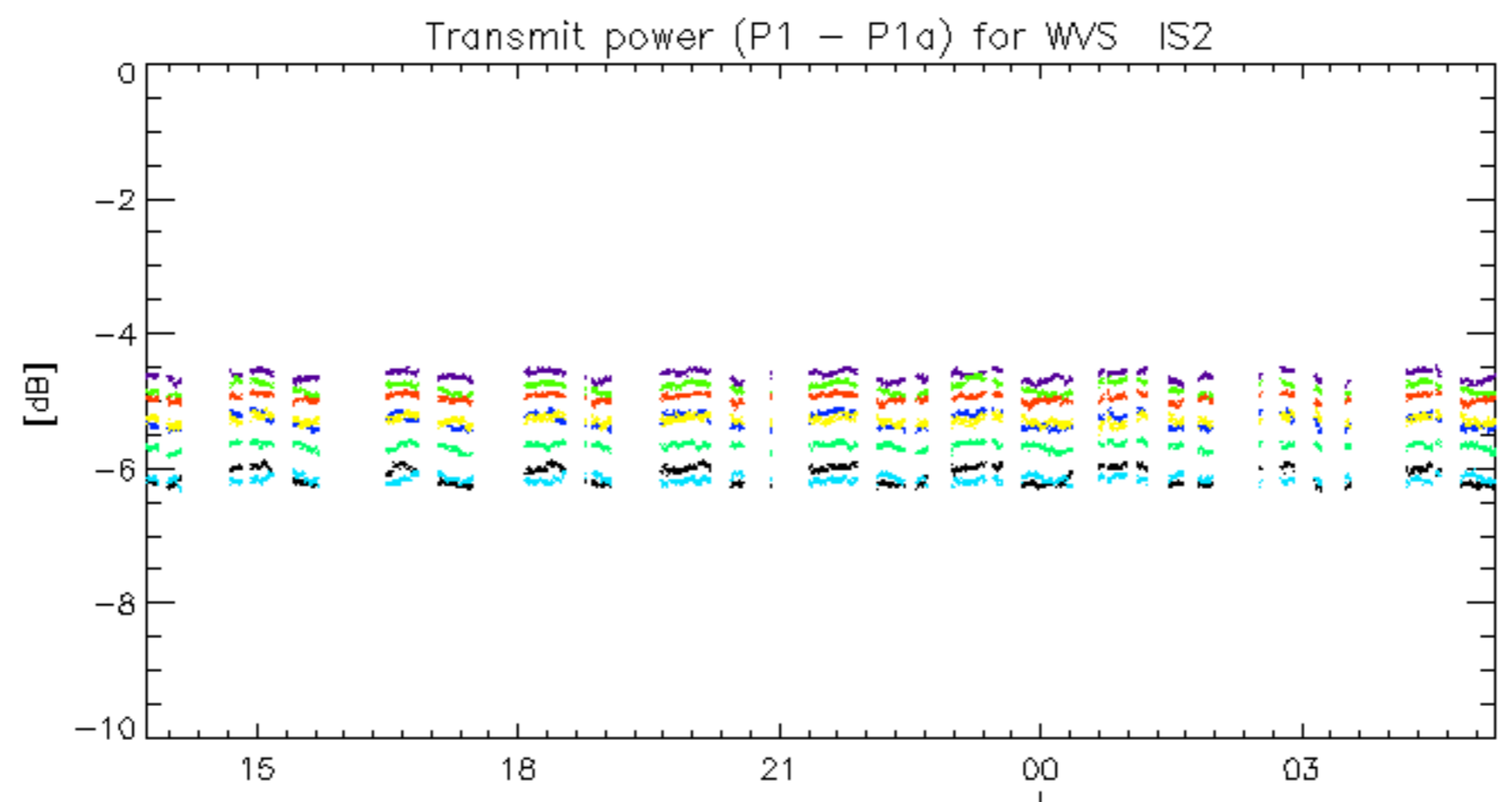




rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30







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

No unavailabilities during the reported period.