

# PRELIMINARY REPORT OF 051226

last update on Mon Dec 26 16:36:02 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 2005-12-25 00:00:00 to 2005-12-26 16:36:02

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_AXVIEC20051013_151540_20050916_195733_20061231_000000	0	10	11	4	32
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	0	10	11	4	32
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	0	10	11	4	32
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	0	10	11	4	32

### 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	20051223 063522
H	20051222 070659

#### 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

#### 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)
3	P1	-3.698193	0.261212	-0.449141
7	P1	-2.741071	0.133373	-0.321292
11	P1	-4.144944	0.033854	0.036974
15	P1	-5.046342	1.779713	-1.245711
19	P1	-3.032767	0.067756	-0.260654
22	P1	-4.433193	0.022845	-0.076045
26	P1	-4.406175	0.062570	0.221716
30	P1	-5.650199	0.035889	-0.148523
3	P1	-15.718544	2.875793	-1.543655
7	P1	-15.252613	2.785646	-1.610152
11	P1	-16.301735	0.480515	-0.361673
15	P1	-12.696362	0.947899	-0.652597
19	P1	-13.409222	0.376011	-0.599607
22	P1	-15.954041	0.642555	-0.024554
26	P1	-15.050197	1.101105	-0.816163
30	P1	-15.512756	2.554175	-1.399795

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.823790	0.113444	0.235659
7	P2	-22.545042	0.106462	0.036294
11	P2	-16.531591	0.131226	0.306598
15	P2	-7.280173	0.104685	0.042385
19	P2	-9.217459	0.103555	0.009908
22	P2	-17.875940	0.113272	-0.117304
26	P2	-16.385012	0.132032	0.144117
30	P2	-19.796453	0.119968	0.136912

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.236202	0.007590	0.005056
7	P3	-8.236202	0.007590	0.005056
11	P3	-8.236202	0.007590	0.005056
15	P3	-8.236202	0.007590	0.005056
19	P3	-8.236202	0.007590	0.005056
22	P3	-8.236202	0.007590	0.005056

26	P3	-8.236202	0.007590	0.005056
30	P3	-8.236202	0.007590	0.005056

#### 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	-3.707373	0.008312	-0.005048
7	P1	-2.777118	0.007760	0.050054
11	P1	-2.881421	0.009561	0.036968
15	P1	-3.421039	0.016663	0.025618
19	P1	-3.393638	0.014024	-0.013184
22	P1	-5.128940	0.018570	0.036872
26	P1	-5.848726	0.016469	-0.022713
30	P1	-5.285624	0.033115	-0.006374
3	P1	-11.485910	0.041151	0.000020
7	P1	-9.970410	0.045507	0.018660
11	P1	-10.052318	0.057814	0.023603
15	P1	-10.563946	0.073475	0.073194
19	P1	-15.521074	0.074930	-0.061062
22	P1	-20.958139	0.959244	-0.040057
26	P1	-17.158276	0.295921	0.006065
30	P1	-18.257444	0.302317	0.367427

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.610334	0.029907	0.080198
7	P2	-23.050861	0.056724	-0.006224

11	P2	-11.606266	0.020131	0.145093
15	P2	-4.992702	0.021368	-0.019136
19	P2	-6.975921	0.021540	-0.022981
22	P2	-8.209099	0.022718	-0.029982
26	P2	-24.054983	0.030584	-0.005446
30	P2	-22.133194	0.017804	-0.034371

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.078424	0.002476	-0.006399
7	P3	-8.078548	0.002479	-0.006393
11	P3	-8.078502	0.002460	-0.006749
15	P3	-8.078487	0.002463	-0.006649
19	P3	-8.078526	0.002475	-0.006530
22	P3	-8.078547	0.002478	-0.006273
26	P3	-8.078547	0.002446	-0.006063
30	P3	-8.078254	0.002467	-0.006610

## 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	0.000457002
	stdev	2.18998e-07
MEAN Q	mean	0.000472467
	stdev	2.36075e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128883
	stdev	0.00110725
STDEV Q	mean	0.129166
	stdev	0.00111966



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[456]

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_IMM_1PNPDE20051224_182644_000000352043_00371_19964_4704.N1	0	18
ASA_IMM_1PNPDE20051225_025346_000000362043_00376_19969_4740.N1	1	0
ASA_WSM_1PNPDE20051224_022313_000000672043_00361_19954_5517.N1	0	49



## 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

### 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

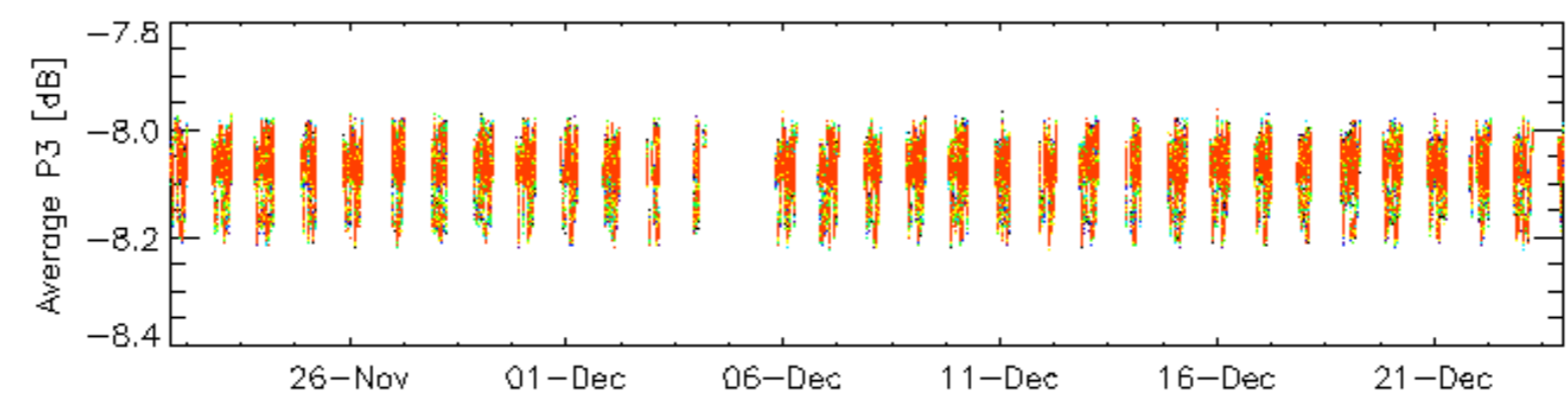
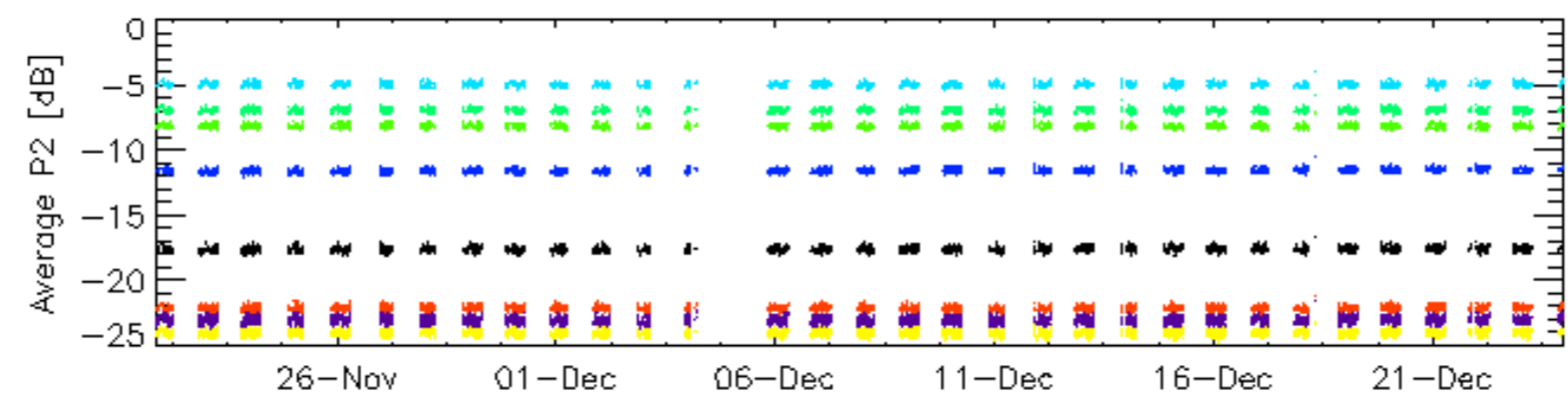
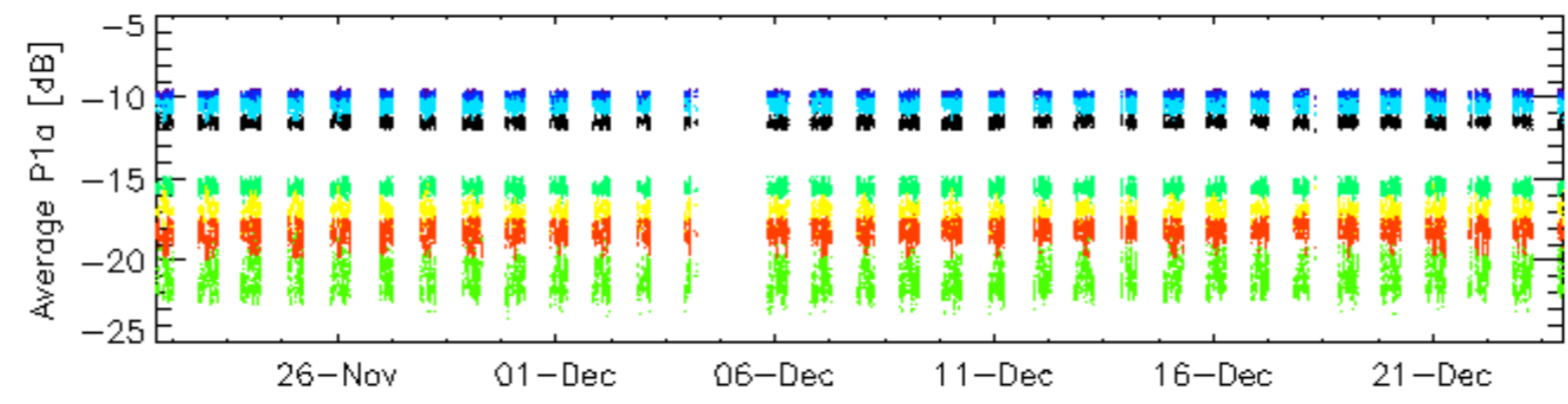
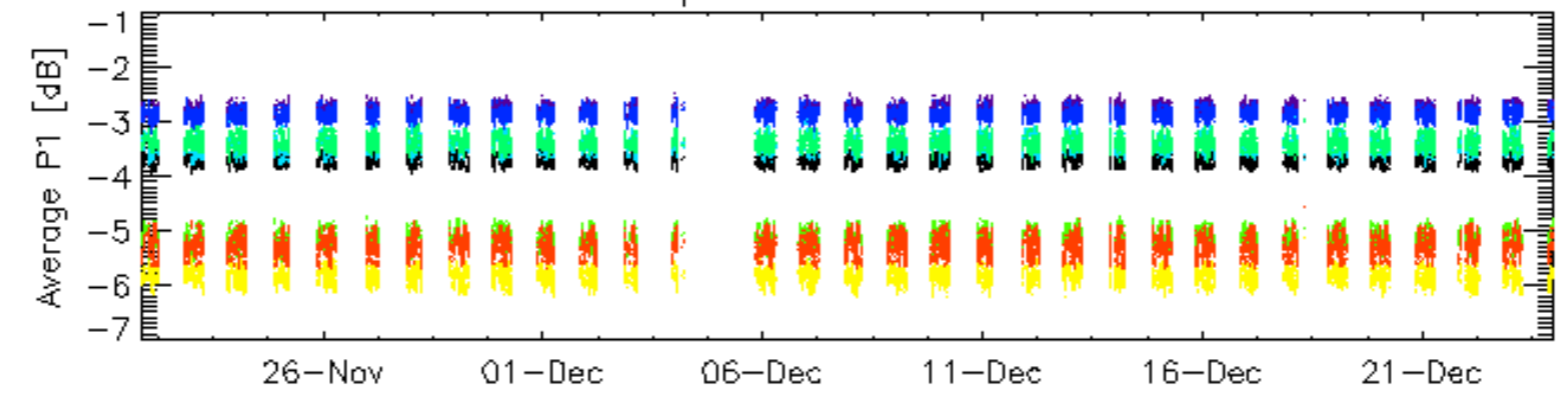
Evolution of Absolute Doppler	
<input type="checkbox"/>	



Ascending
<input type="checkbox"/>
Descending

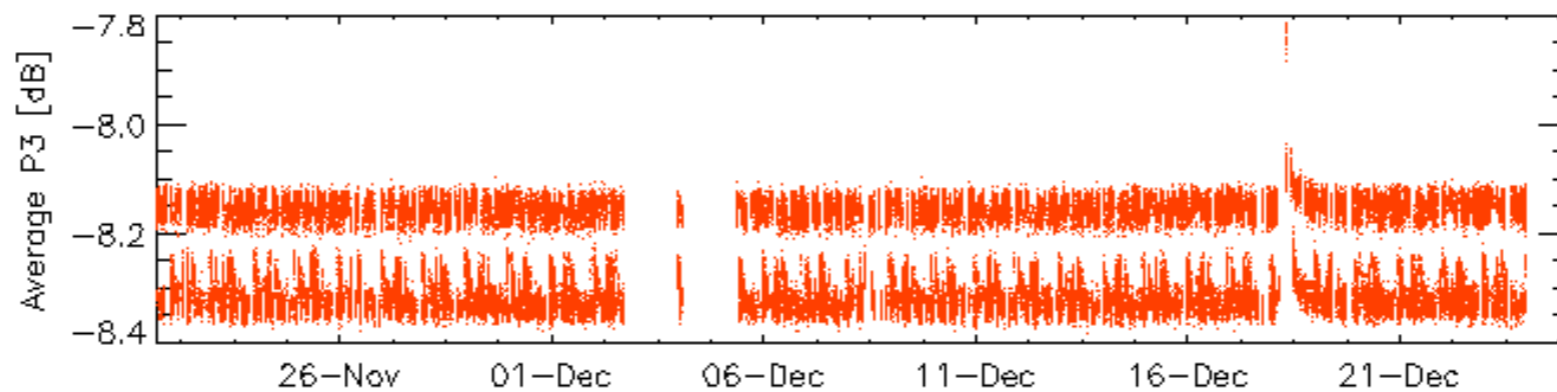
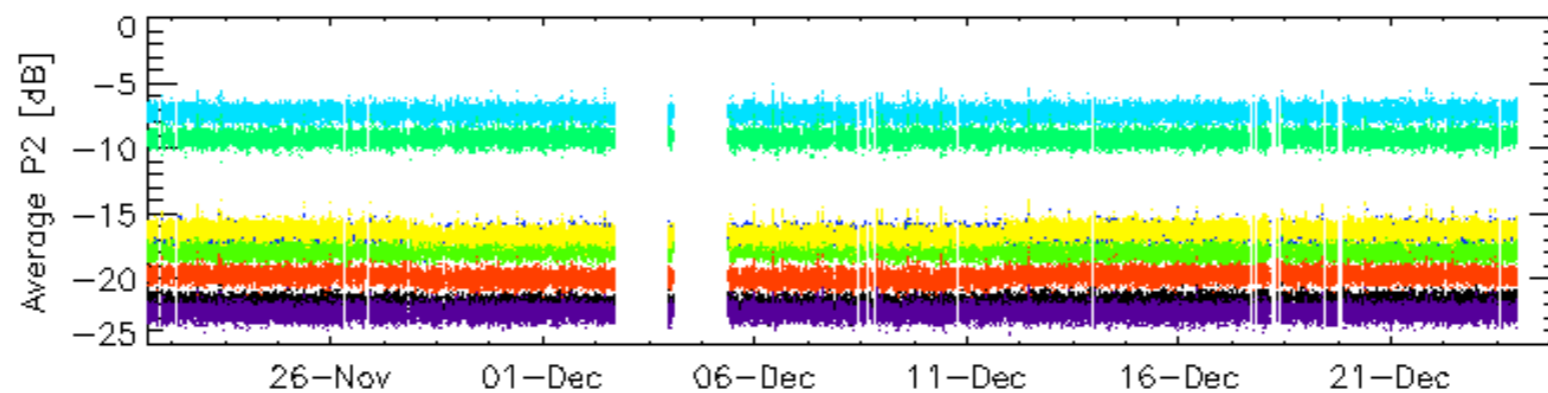
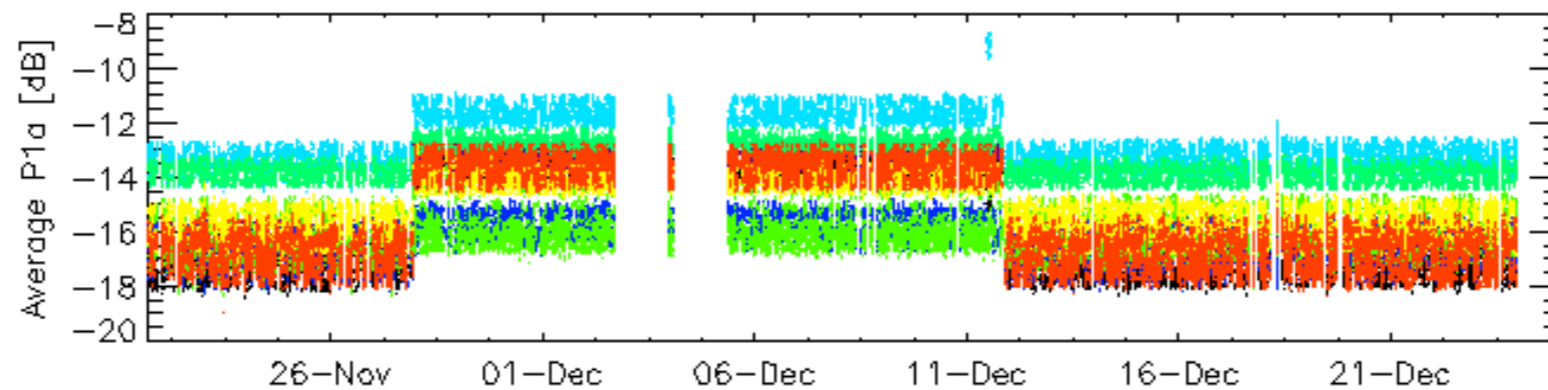
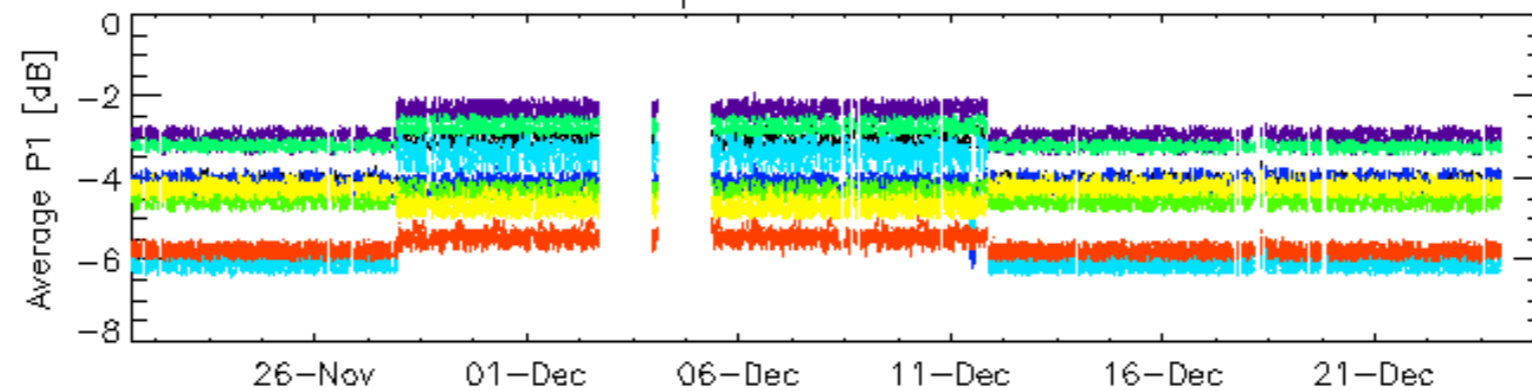
## 7.6 - Doppler evolution versus ANX for GM1

### Cal pulses for GM1 SS3



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

Cal pulses for WVS IS2



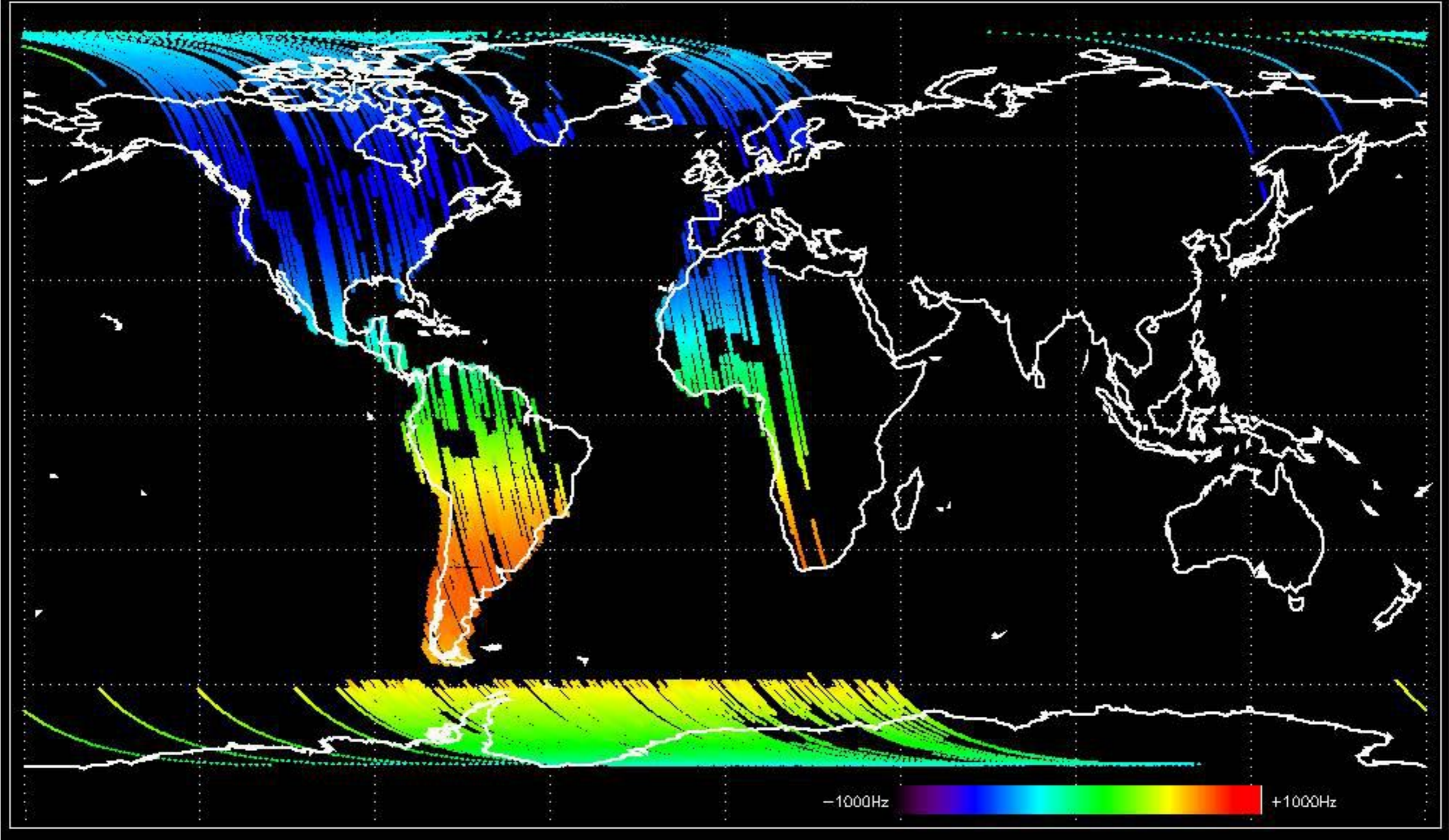
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No anomalies observed.

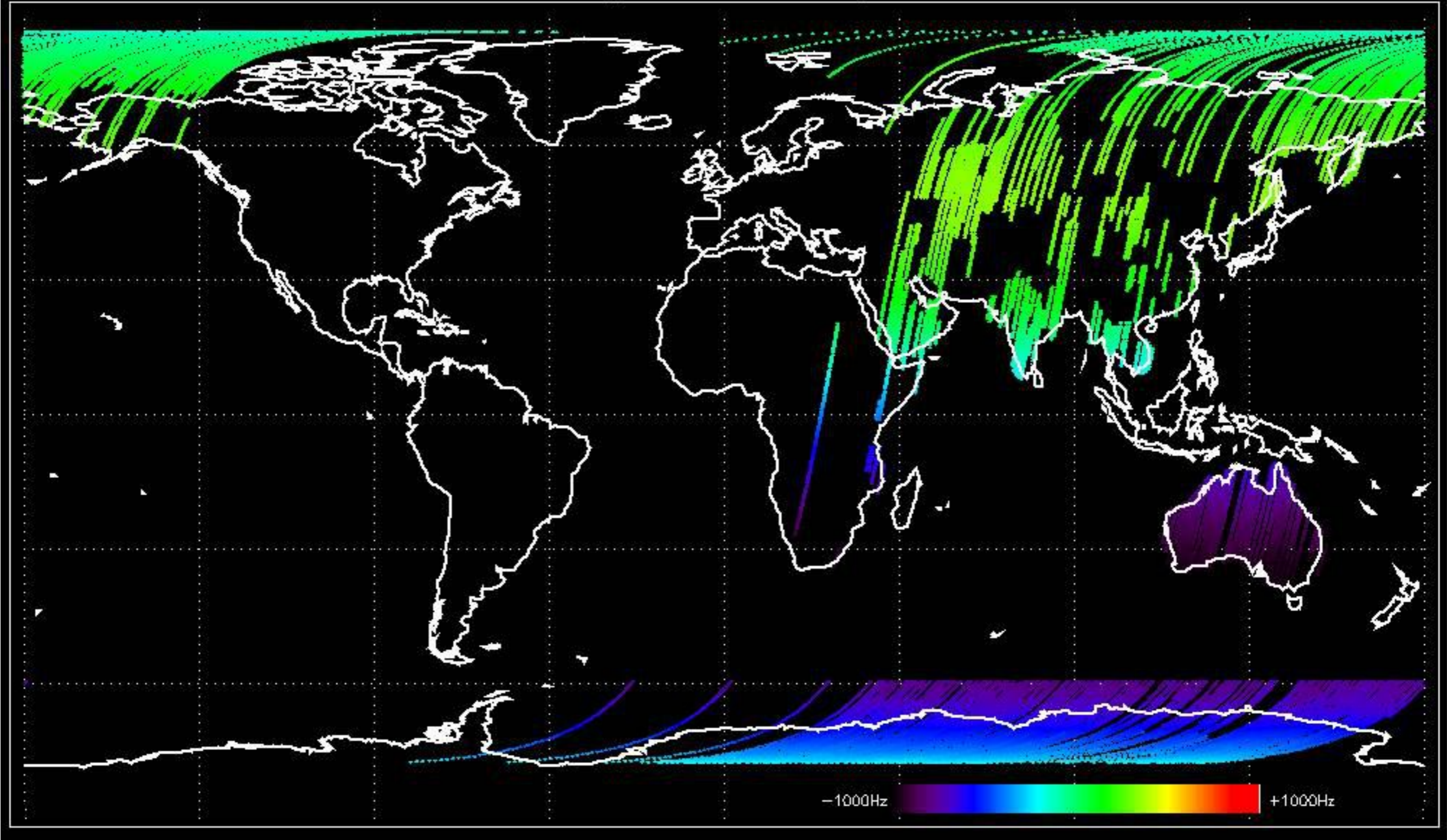
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



Doppler 'GM1' 'SS1' ascending

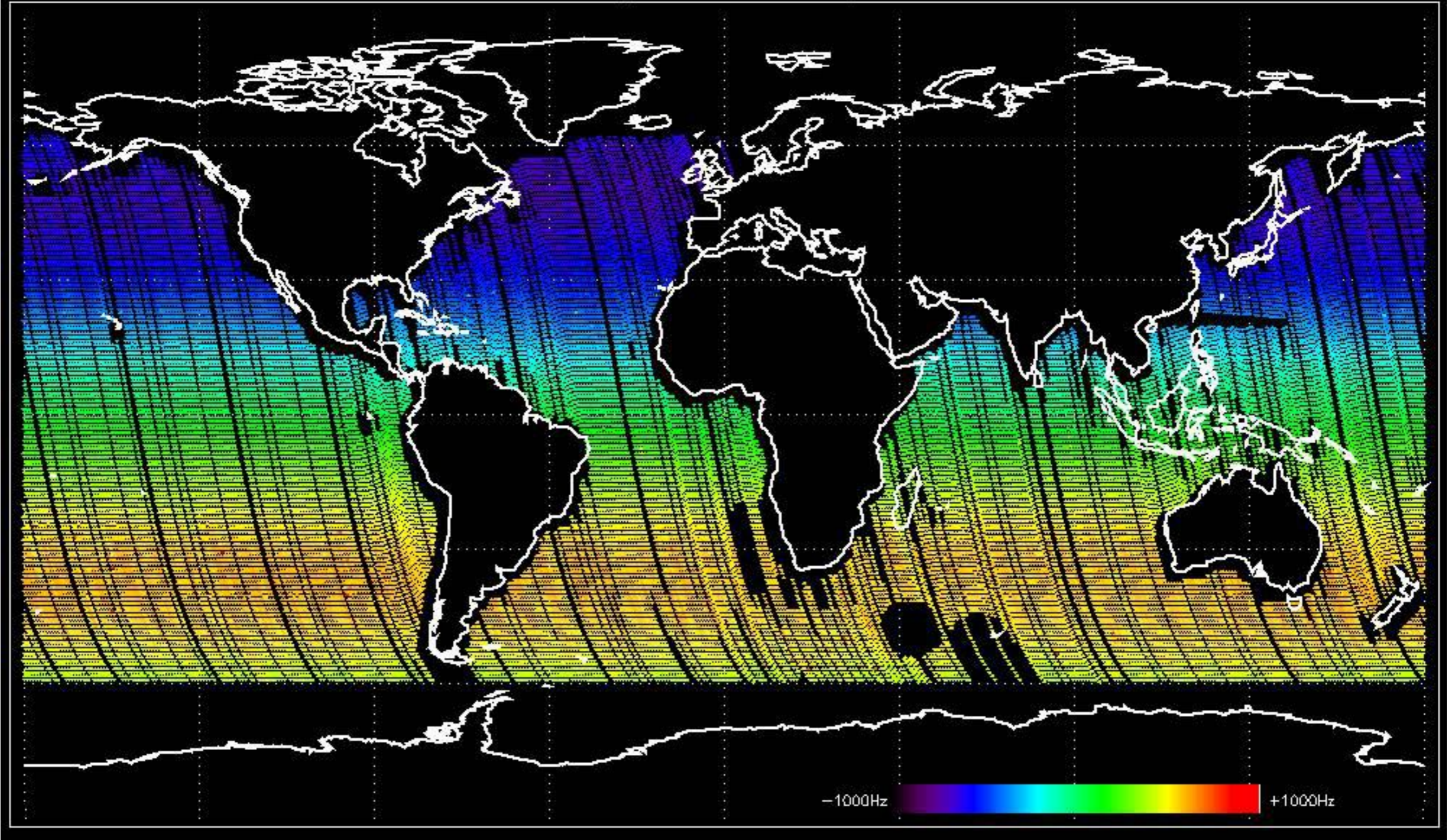


Doppler 'GM1' 'SS1' descending

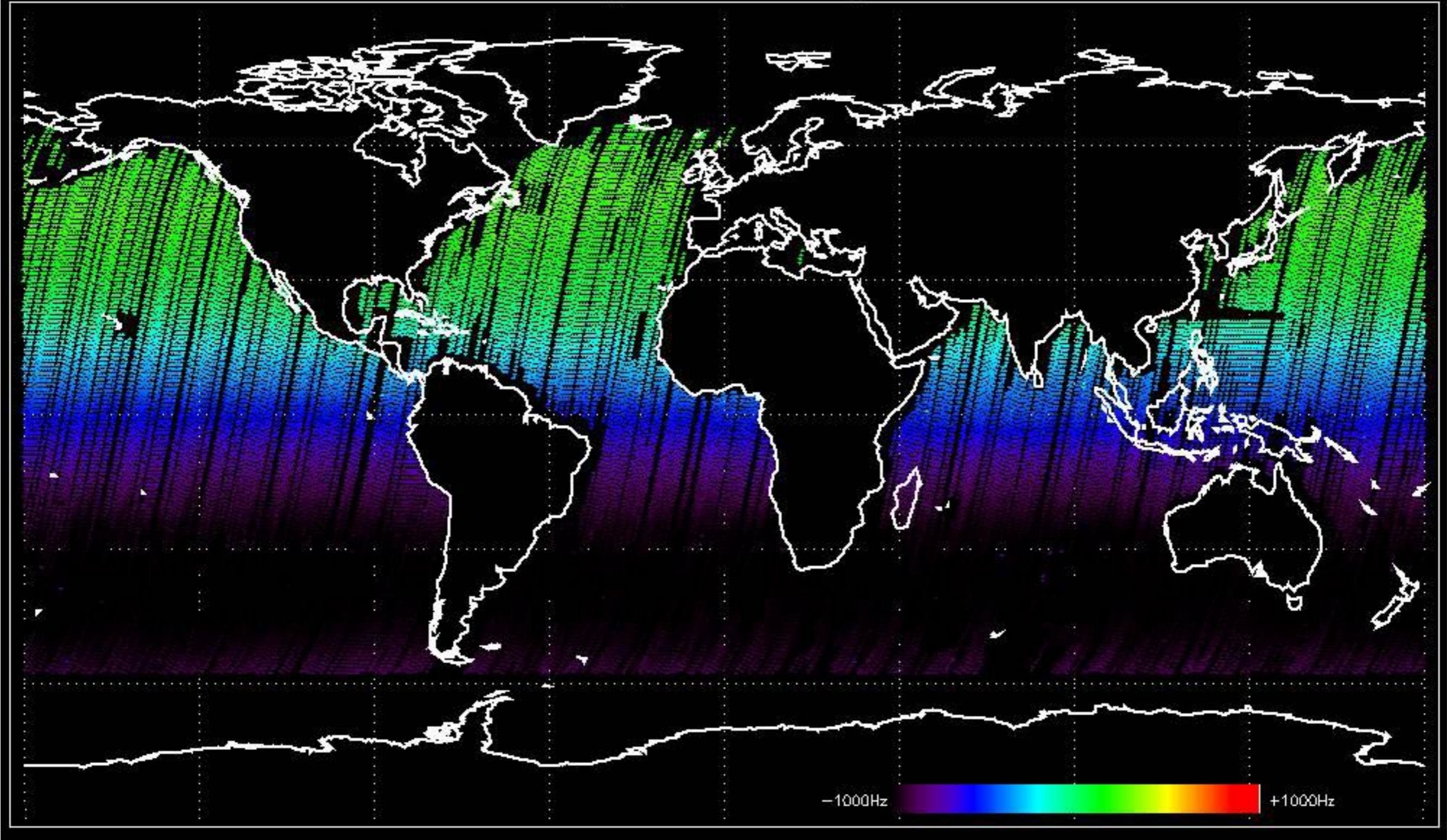




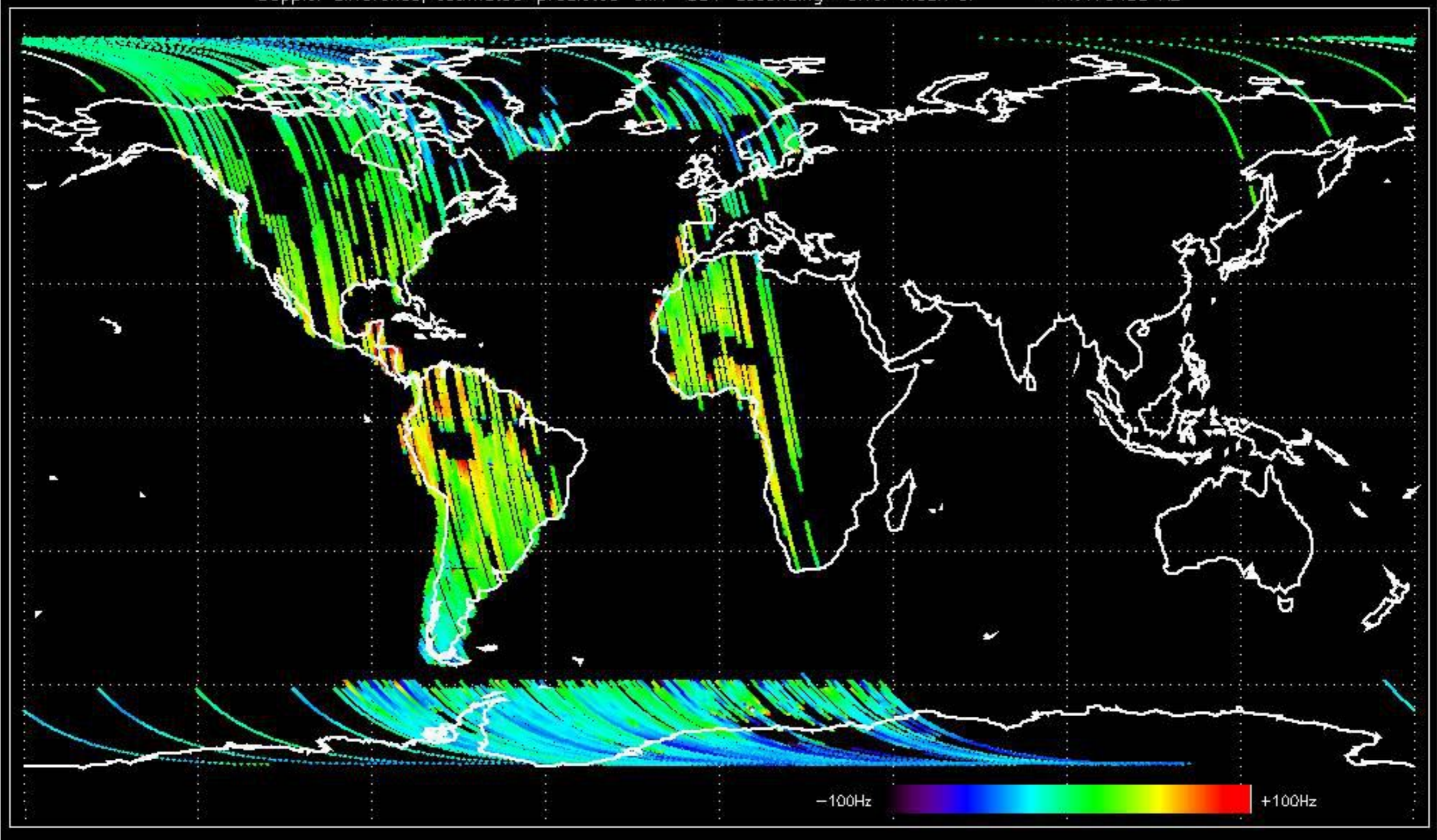
Doppler 'WVS' 'IS2' ascending



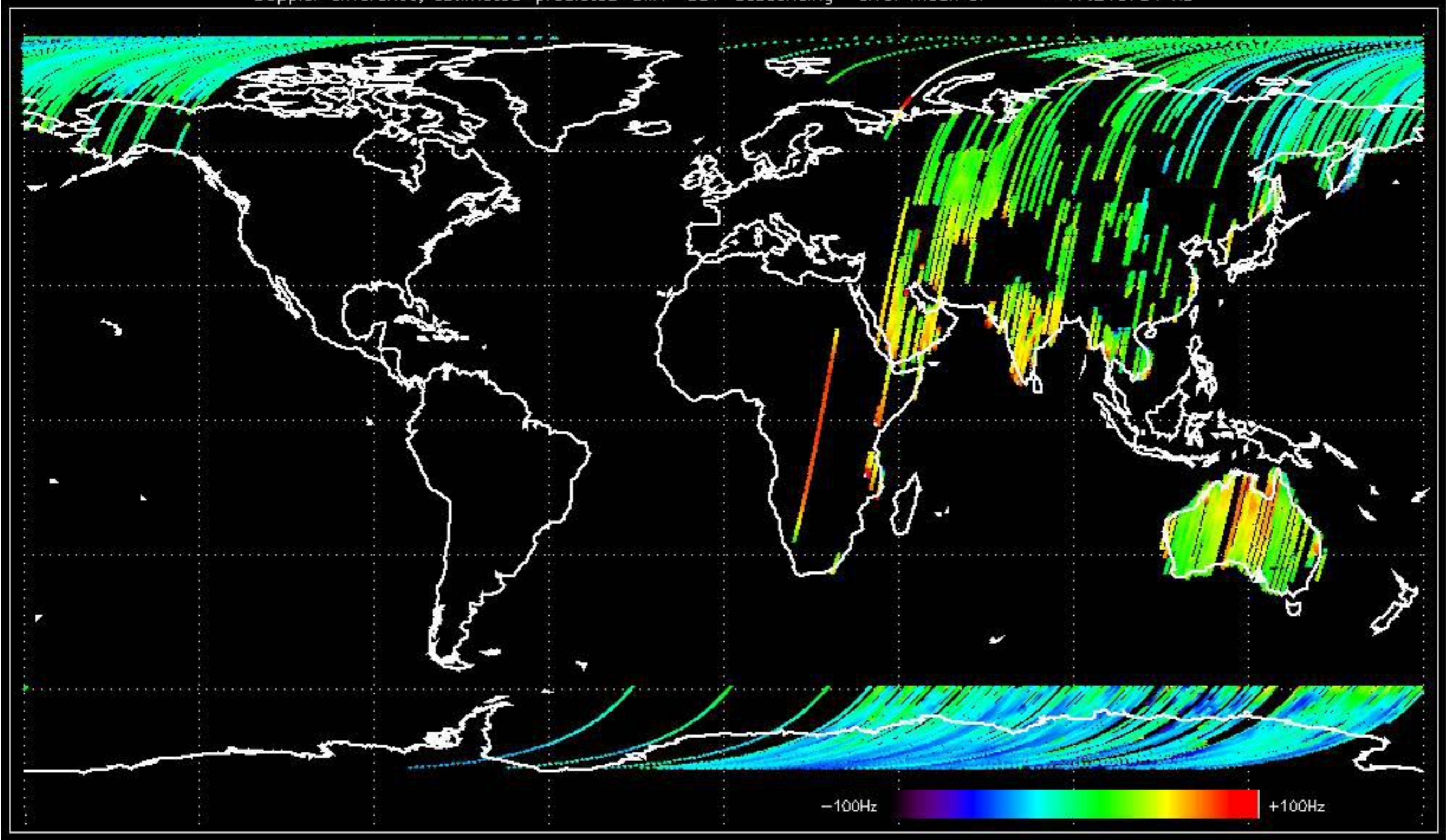
Doppler 'WVS' 'IS2' descending



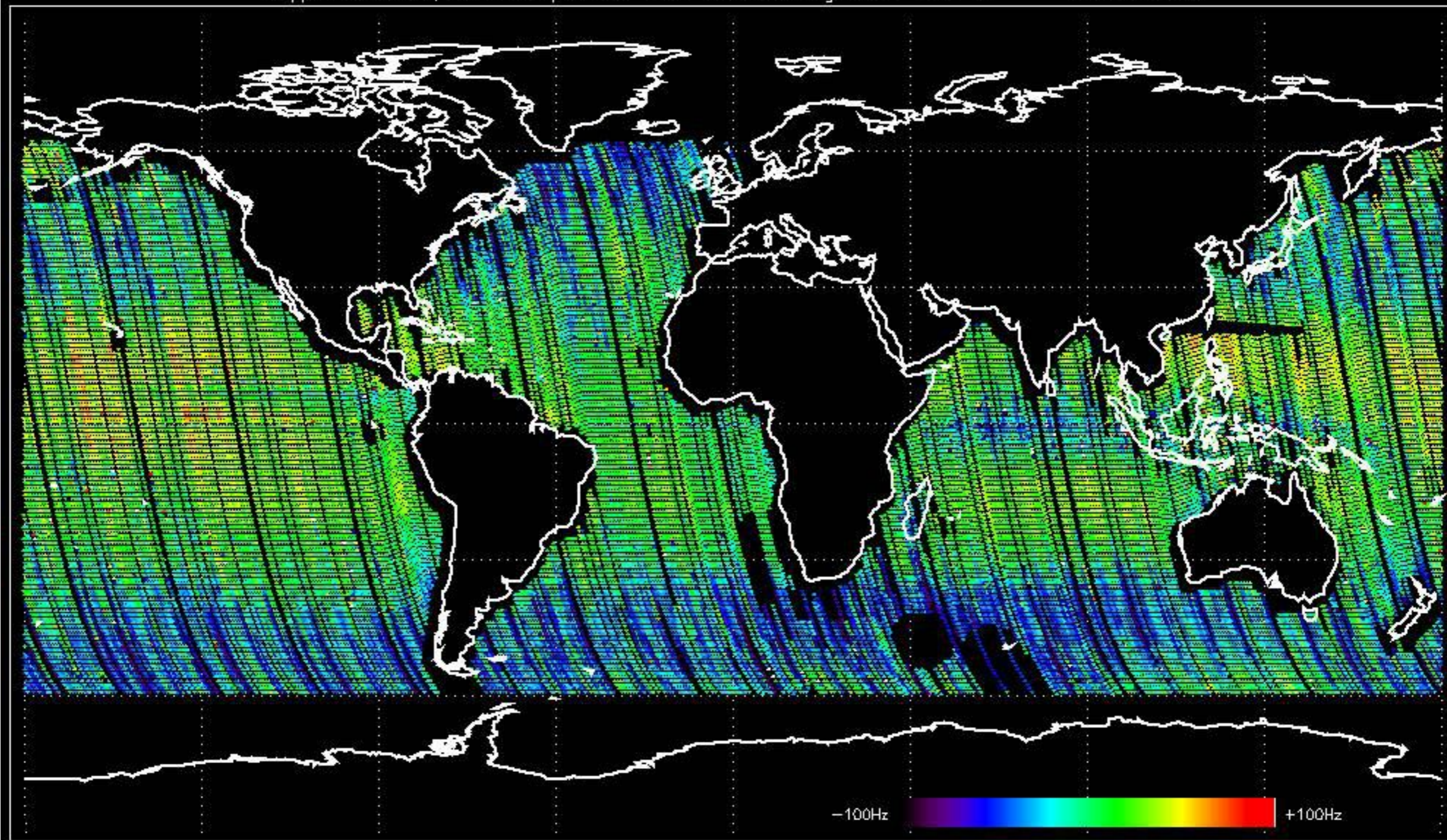
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.473455 Hz



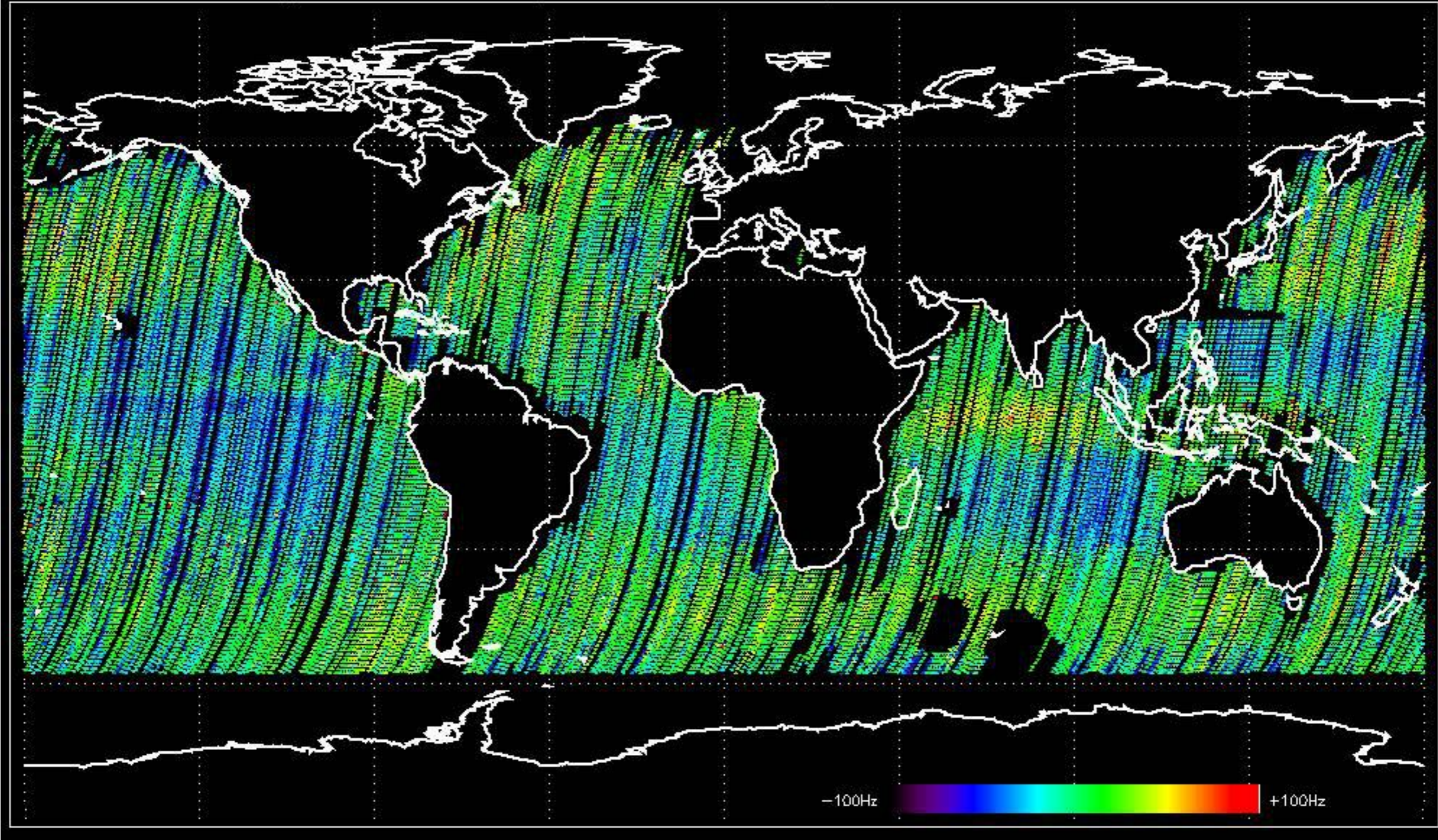
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.246754 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.519914 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.406985 Hz



No anomalies observed on available MS products:

No anomalies observed.





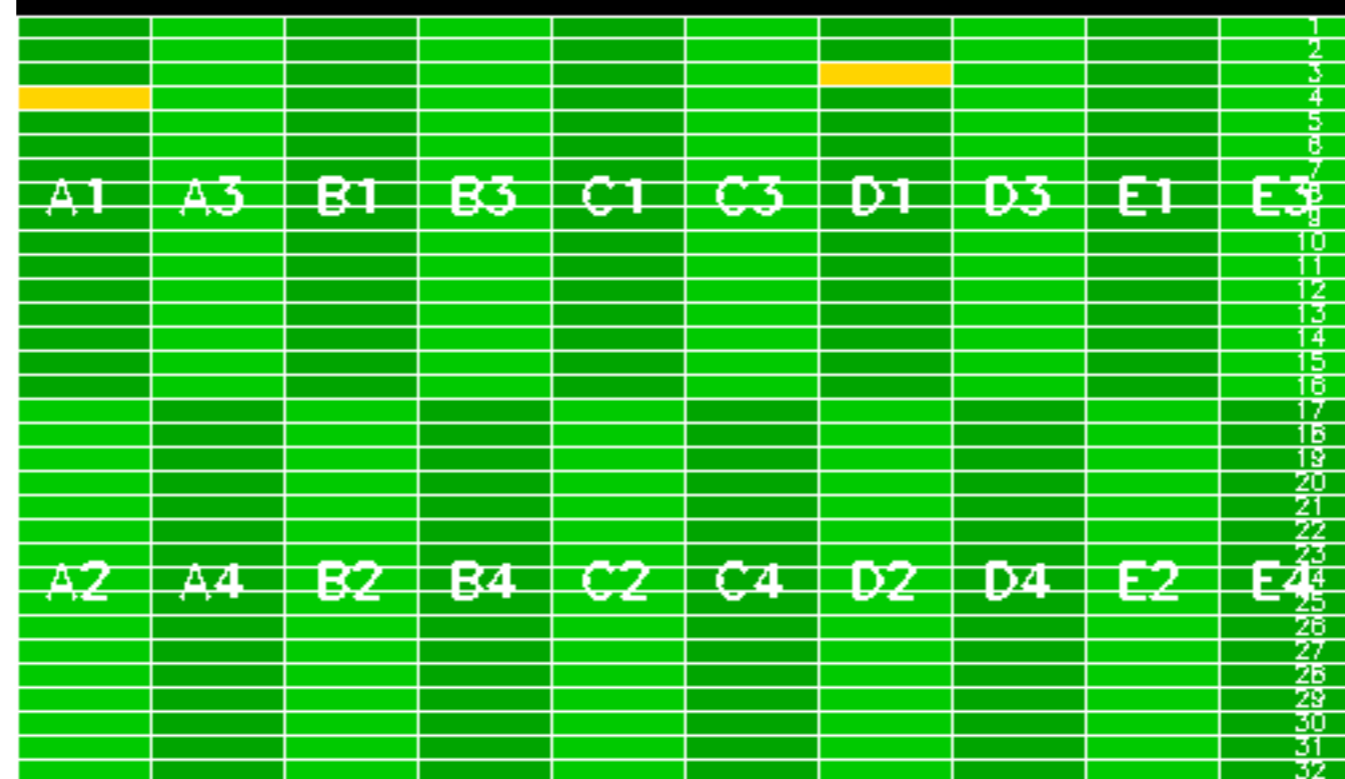




Reference: 2005-09-29 07:47:20 V

RxGain

Test : 2005-12-23 06:35:22 V



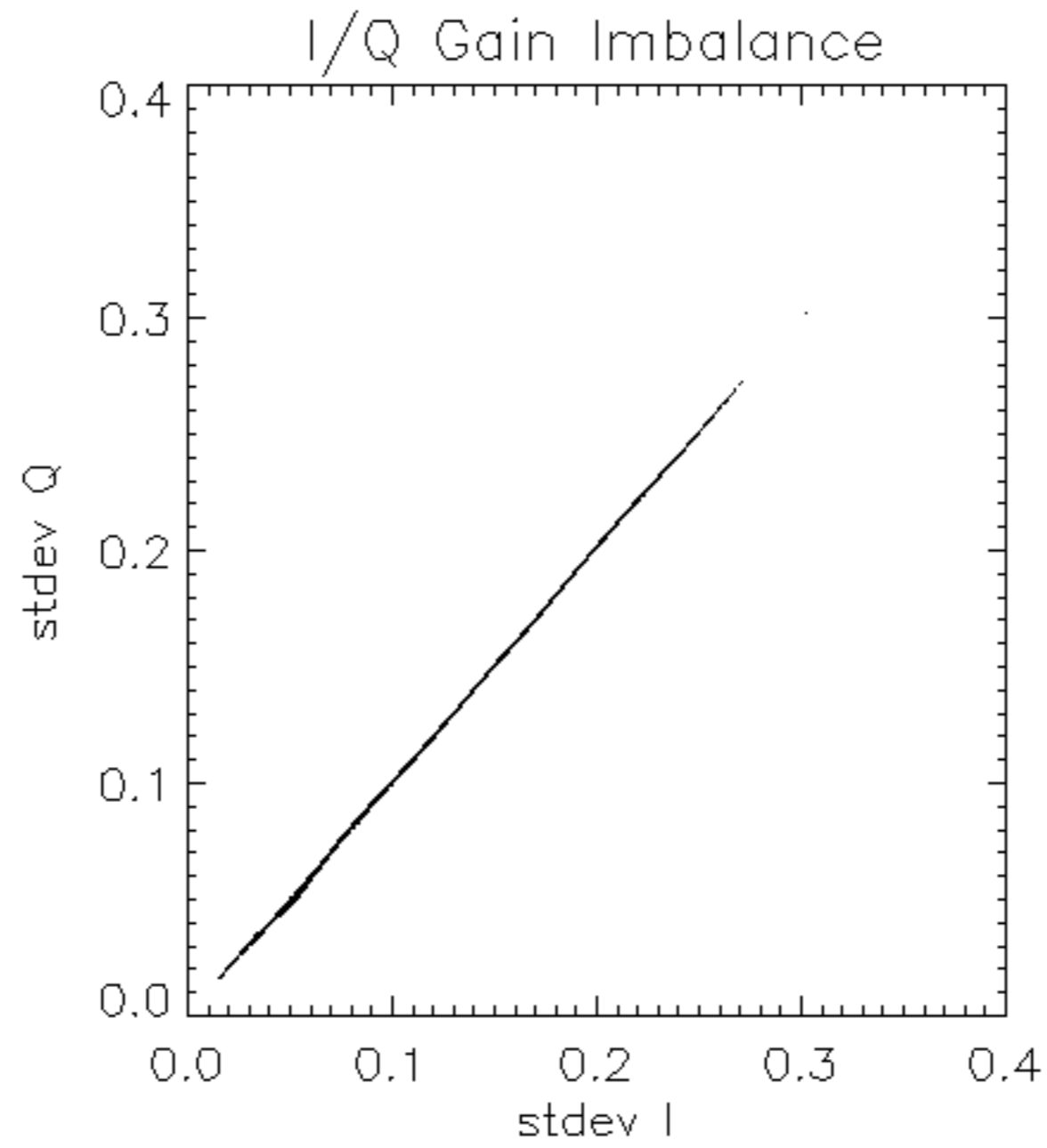


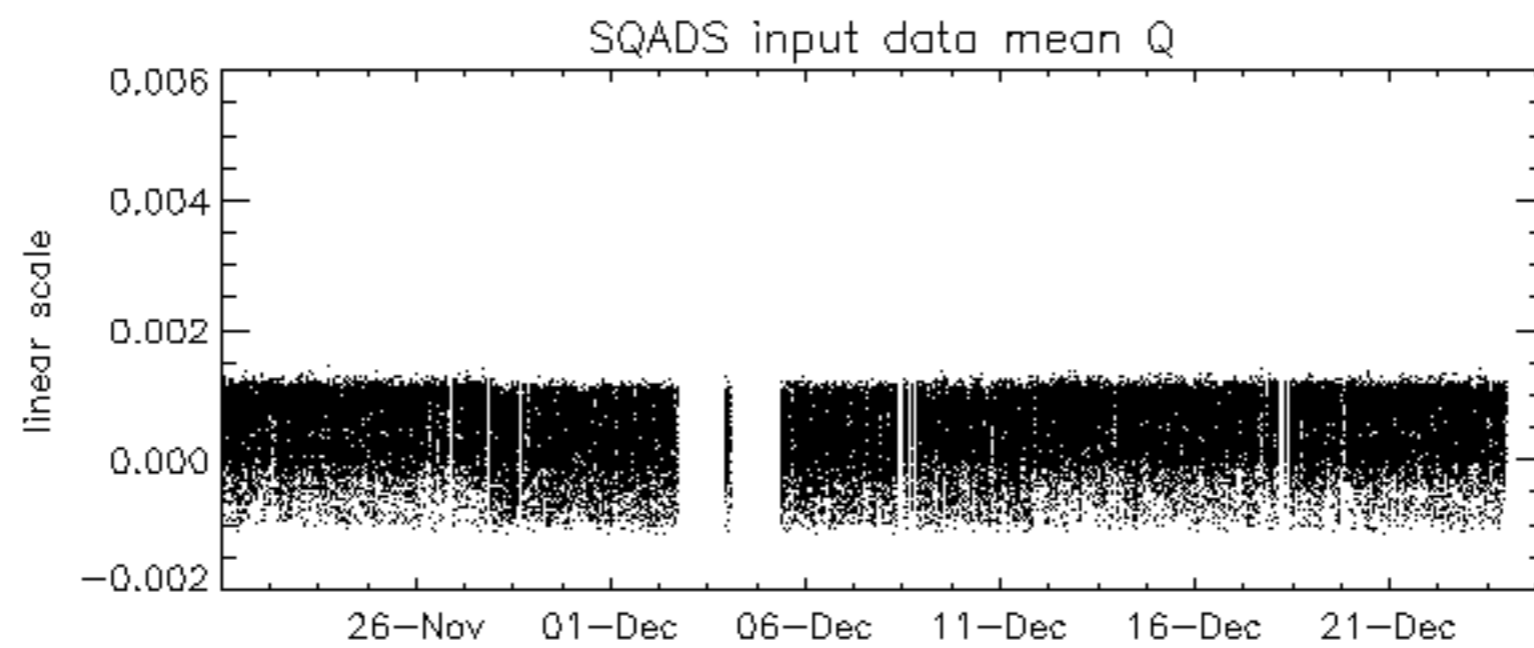
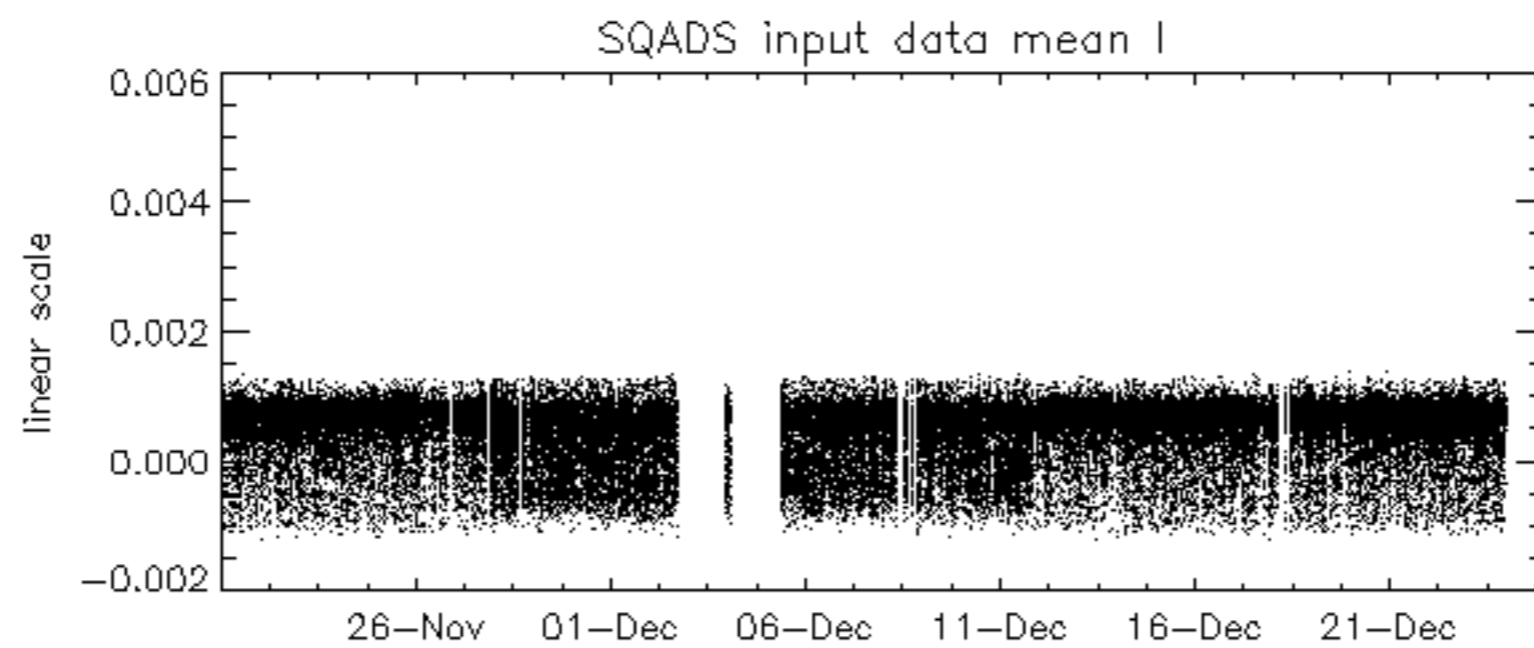
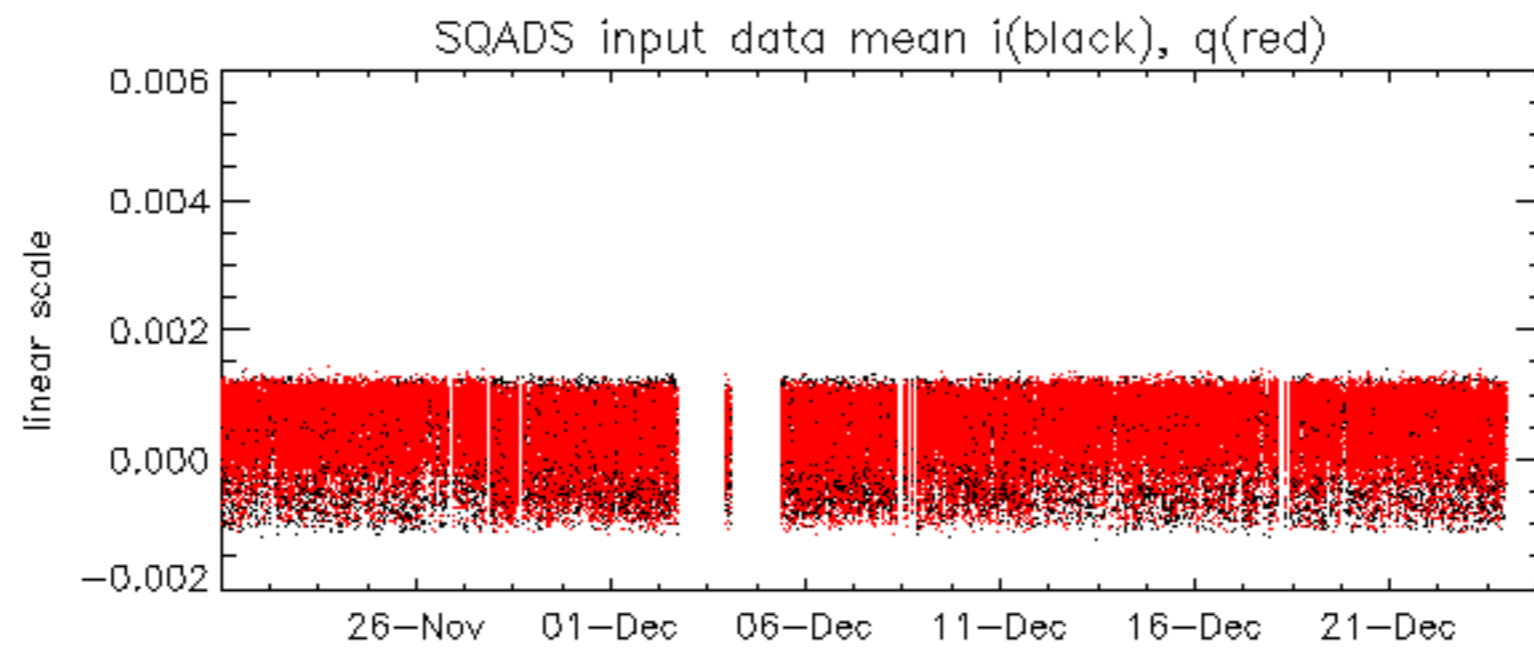


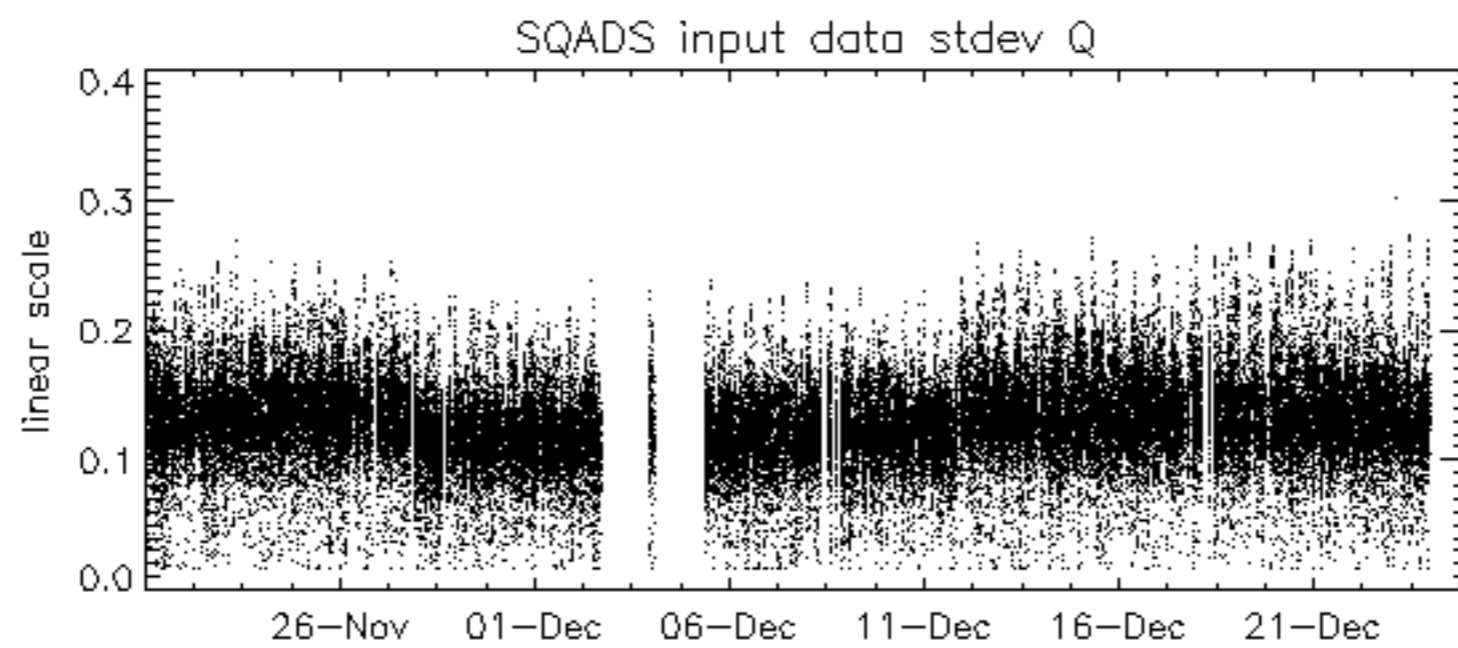
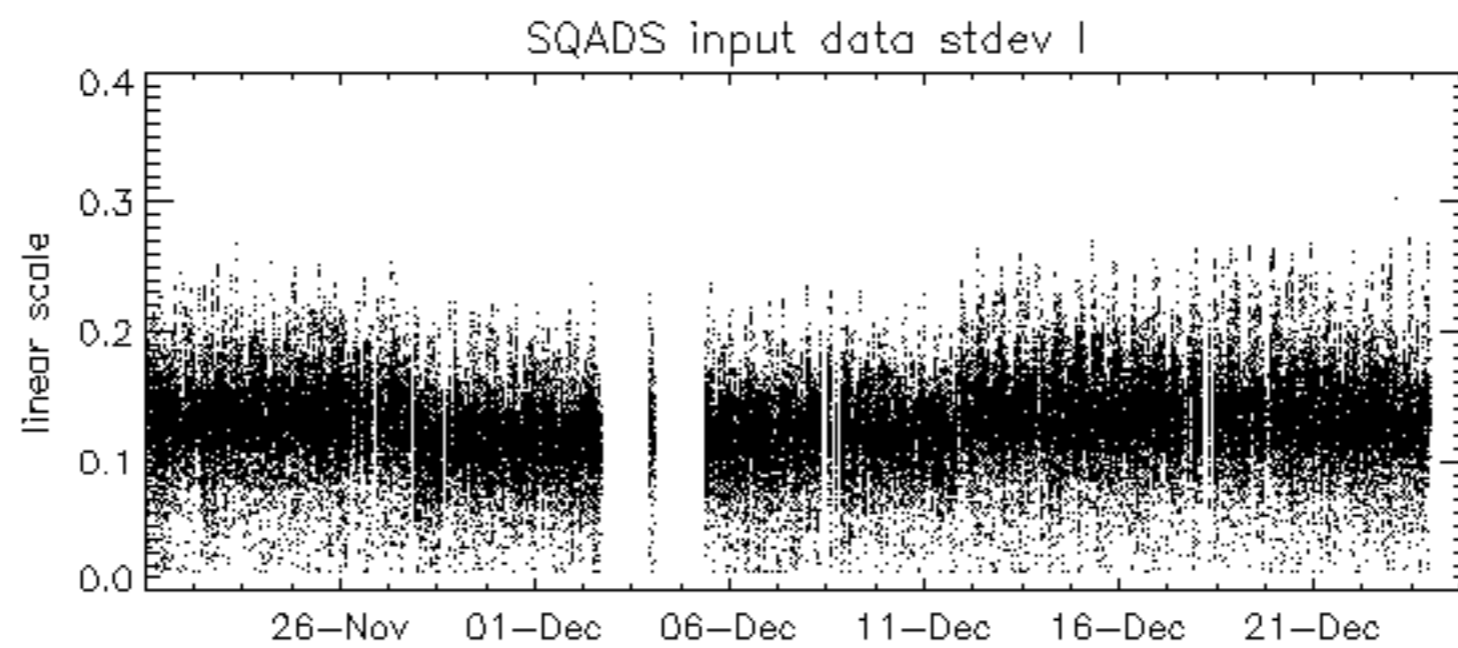
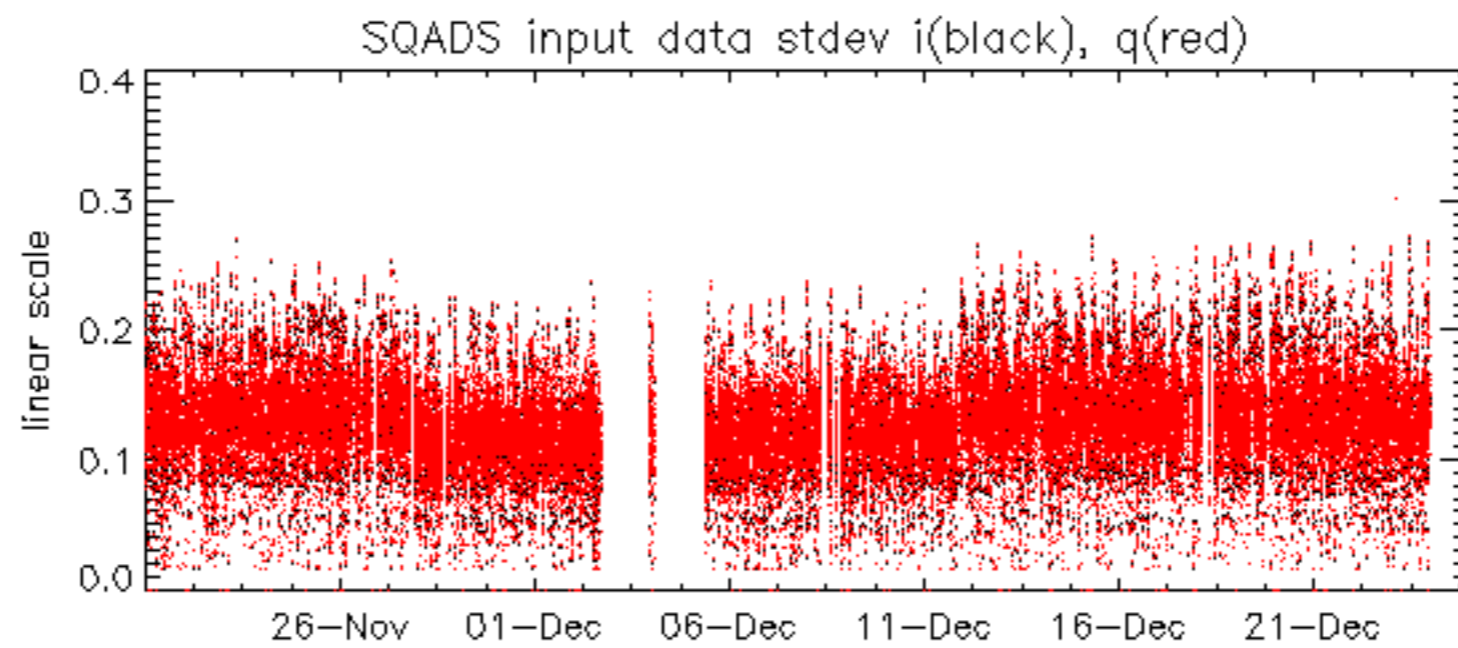


















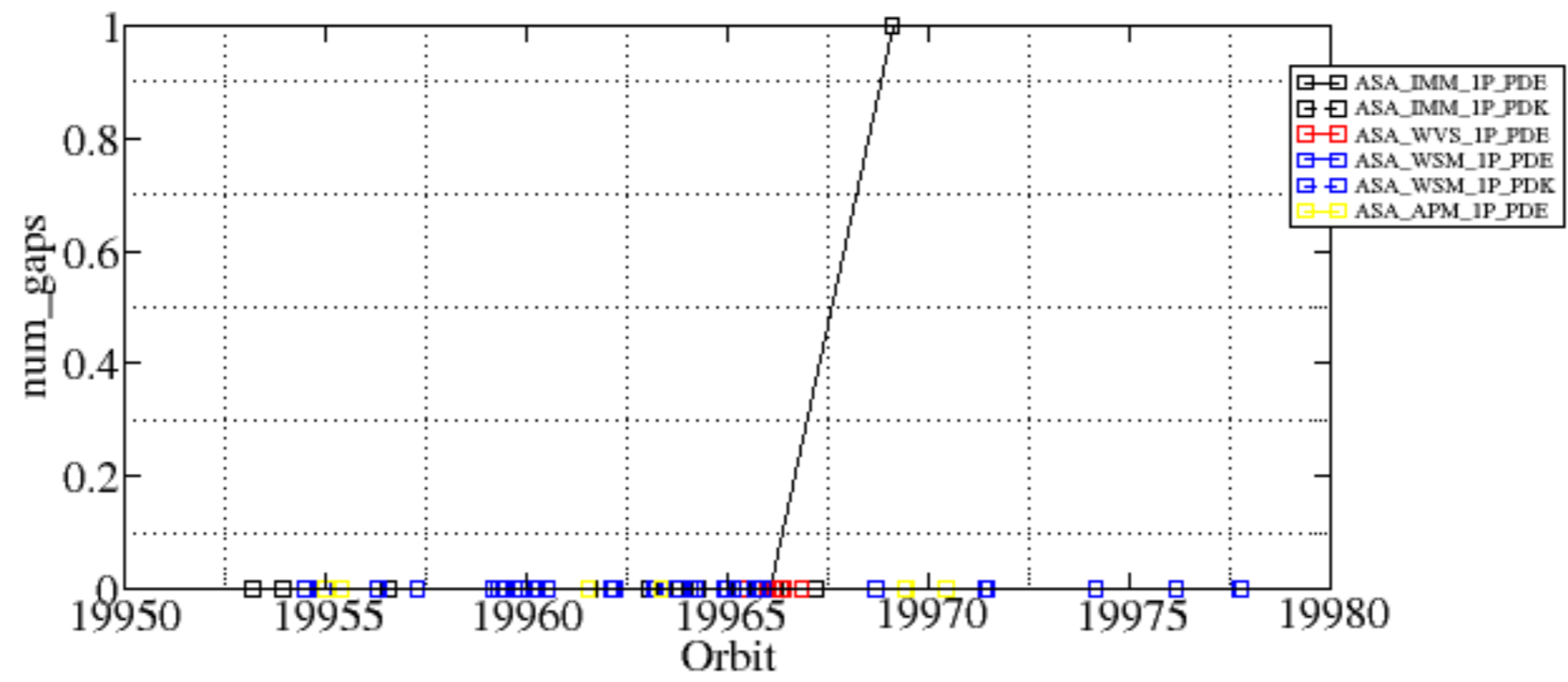


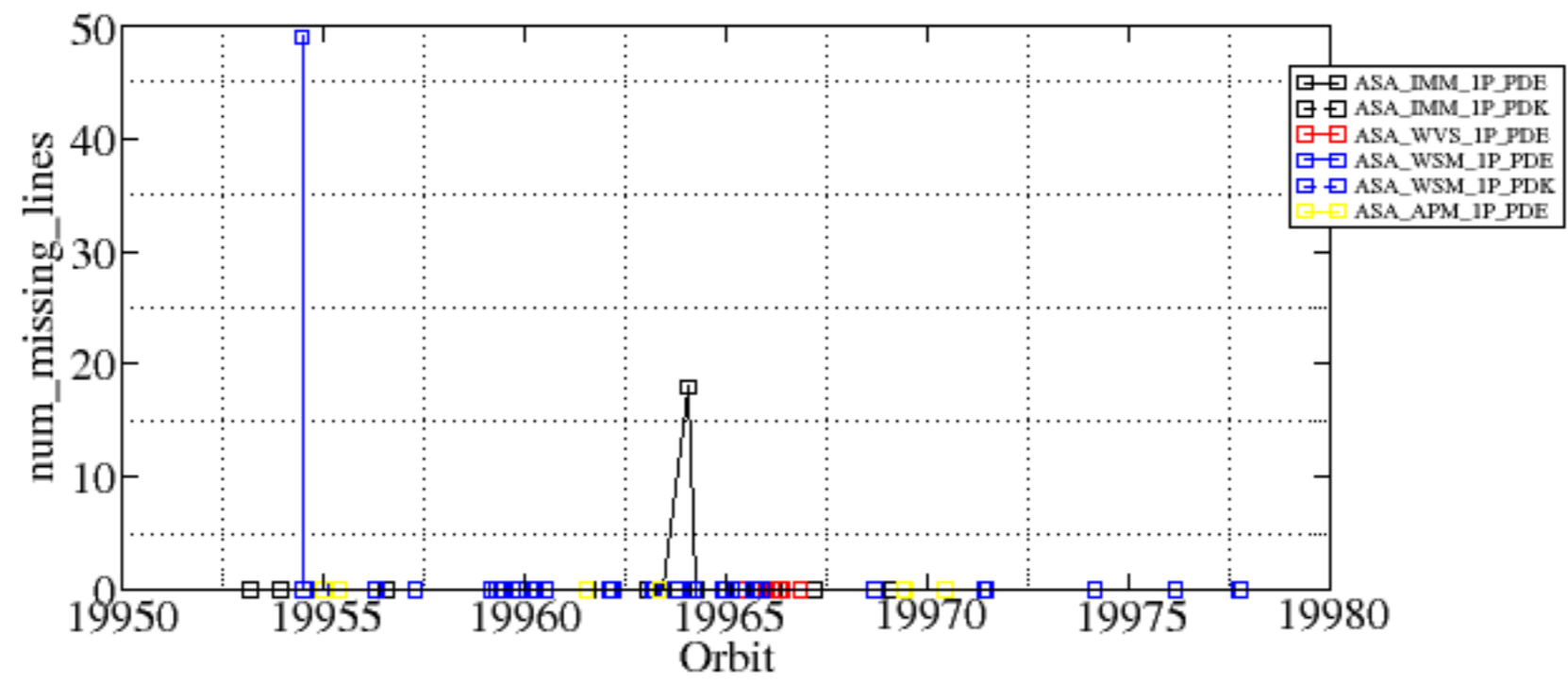
Summary of analysis for the last 3 days 2005122[456]

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

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ASA_IMM_1PNPDE20051225_025346_000000362043_00376_19969_4740.N1	1	0
ASA_WSM_1PNPDE20051224_022313_000000672043_00361_19954_5517.N1	0	49







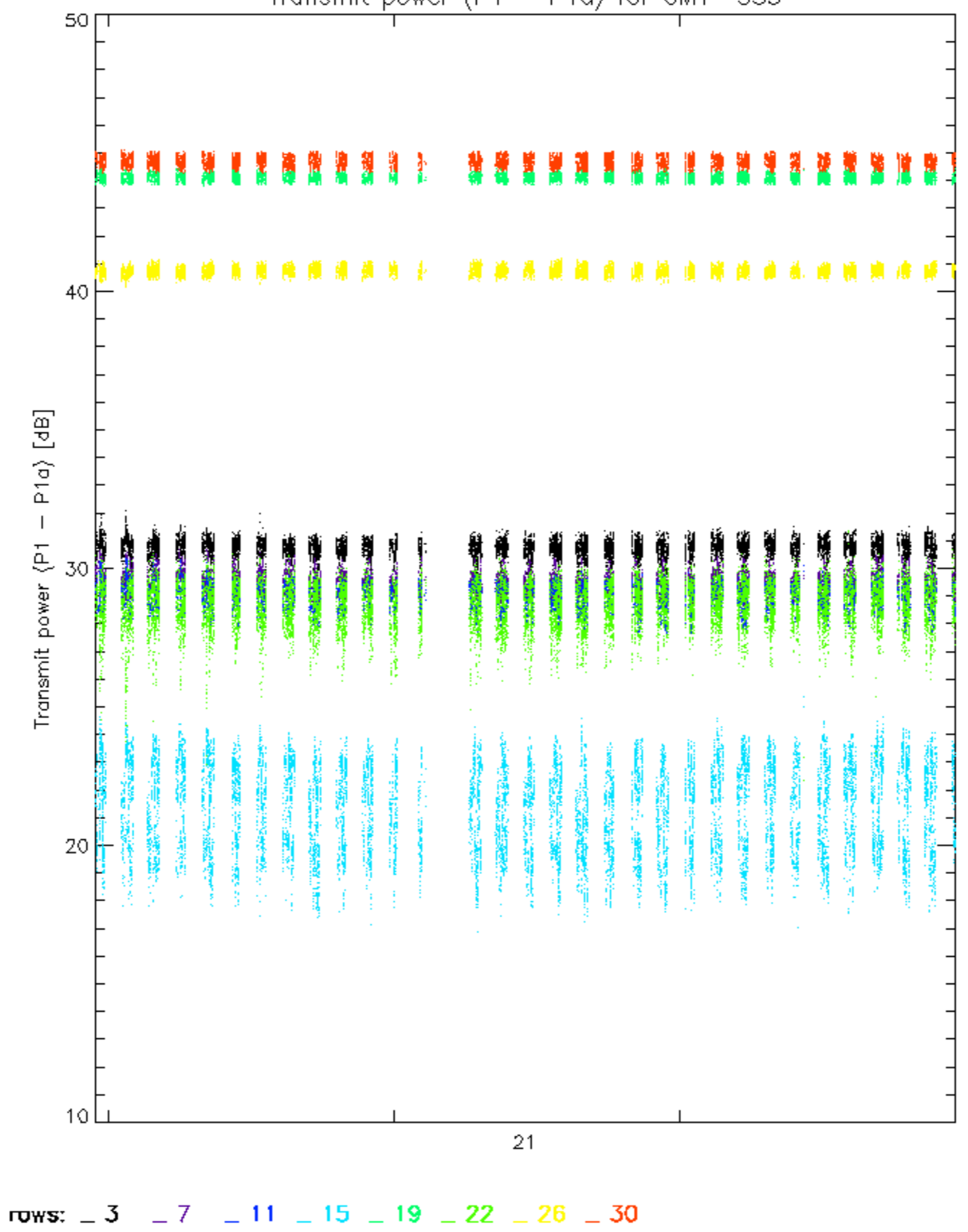


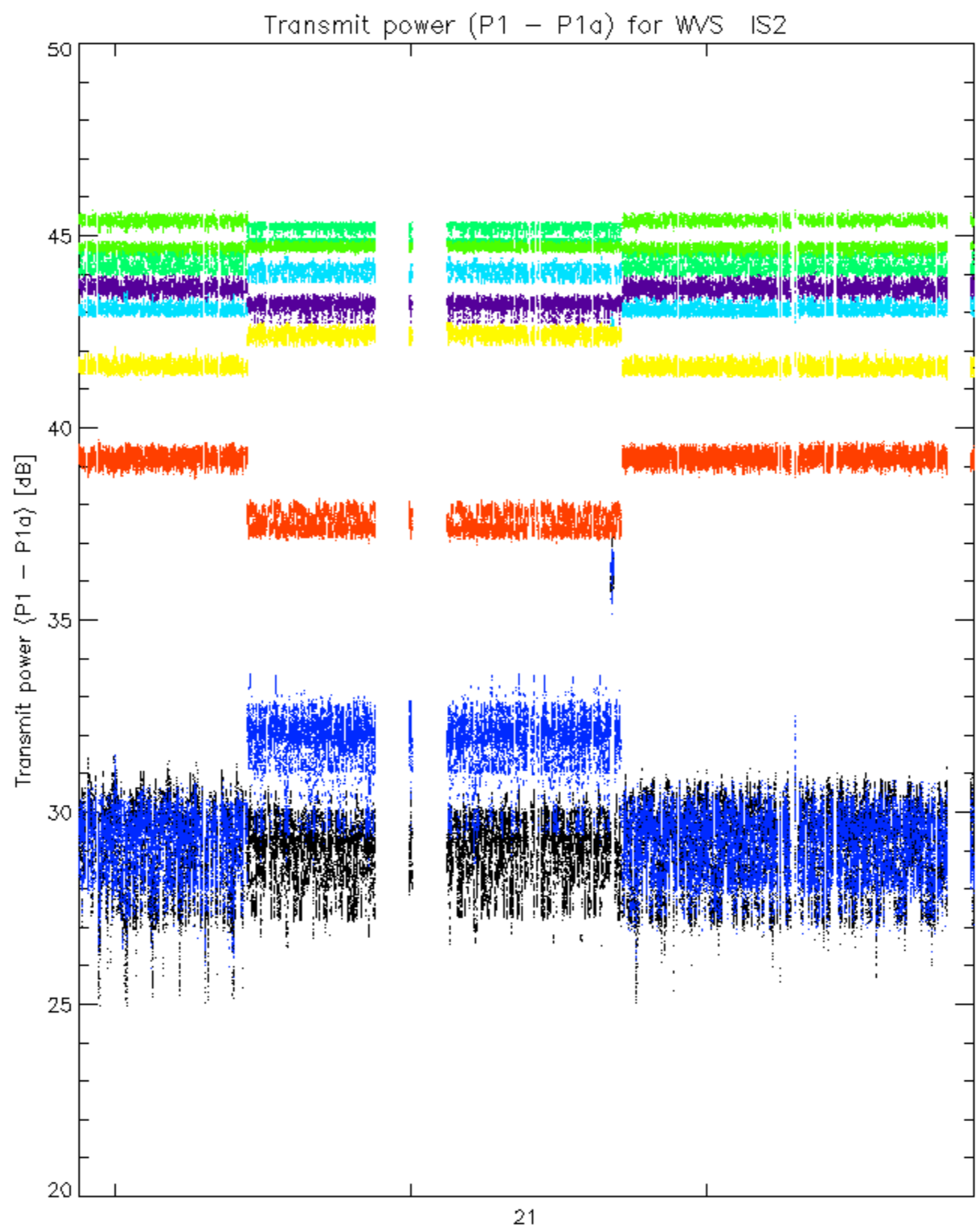






Transmit power (P1 - P1a) for GM1 SS3





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



No unavailabilities during the reported period.