

# PRELIMINARY REPORT OF 060909

last update on Sat Sep 9 16:35:52 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 2006-09-08 00:00:00 to 2006-09-09 16:35:52

PDHS-K
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AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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<b>PDHS-E</b>
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<b>AUXILIARY FILE</b>	<b>WVS</b>	<b>GM1</b>	<b>IMM</b>	<b>APM</b>	<b>WSM</b>
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### 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:

<b>Polarisation</b>	<b>Start Time</b>
V	20060906 170159
H	20060907 062647

#### MSM in V/V polarisation

<b>Pre-launch Reference</b>	<b>DDS-B (2003-06-12) reference</b>
☒	☒
☒	☒
☒	☒
☒	☒

#### MSM in H/H polarisation

<b>Pre-launch Reference</b>	<b>DDS-B (2003-06-12) reference</b>
☒	☒
☒	☒
☒	☒
☒	☒

## 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



#### 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	-3.942024	0.009688	0.001606

7	P1	-3.066677	0.039615	0.062695
11	P1	-4.079515	0.067784	0.123155
15	P1	-6.205507	0.098788	0.118543
19	P1	-3.498392	0.046646	-0.142777
22	P1	-4.565541	0.025193	0.004766
26	P1	-3.934427	0.020364	-0.043079
30	P1	-5.784180	0.135968	-0.109237
3	P1	-16.563812	0.263550	-0.128880
7	P1	-16.833466	0.653122	-0.209004
11	P1	-16.811737	0.317055	0.101927
15	P1	-12.937942	0.143422	0.043204
19	P1	-14.585429	0.413037	-0.282258
22	P1	-15.777475	0.557252	0.377699
26	P1	-15.191536	0.205867	-0.127015
30	P1	-16.968302	0.401954	0.198187

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.847809	0.083165	0.091680
7	P2	-21.861700	0.098148	-0.017110
11	P2	-15.748502	0.110568	-0.006833
15	P2	-7.097445	0.097602	0.013004
19	P2	-9.114098	0.090746	-0.008012
22	P2	-18.128305	0.084967	0.023036
26	P2	-16.400644	0.091734	-0.015667
30	P2	-19.473738	0.089818	0.009280

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.175584	0.004071	-0.013475
7	P3	-8.175584	0.004071	-0.013475
11	P3	-8.175584	0.004071	-0.013475
15	P3	-8.175584	0.004071	-0.013475
19	P3	-8.175584	0.004071	-0.013475
22	P3	-8.175584	0.004071	-0.013475
26	P3	-8.175636	0.004070	-0.013309
30	P3	-8.175636	0.004070	-0.013309

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
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<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	-3.838958	0.021904	-0.017628
7	P1	-2.486271	0.267278	0.087501
11	P1	-2.907395	0.146071	0.164169
15	P1	-3.673064	0.149092	0.118942
19	P1	-3.452031	0.076002	-0.109618
22	P1	-5.090685	0.035458	-0.039756
26	P1	-5.869052	0.028794	0.020931
30	P1	-5.196836	0.080644	-0.054228
3	P1	-11.630521	0.068510	-0.006991
7	P1	-9.923294	0.194364	-0.021957
11	P1	-10.323262	0.085176	-0.029473
15	P1	-10.853145	0.179986	-0.097925
19	P1	-15.659121	3.345478	-0.617848
22	P1	-20.849232	1.714878	0.222475
26	P1	-16.023788	0.413613	0.304765
30	P1	-18.011520	0.798690	-0.117174

#### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.438162	0.076127	0.080961
7	P2	-22.223881	0.194362	0.083546
11	P2	-10.917931	0.056334	0.063924
15	P2	-4.869946	0.040632	0.036642
19	P2	-6.851676	0.040609	0.008380
22	P2	-8.170550	0.062562	0.052689

26	P2	-24.164368	0.128629	-0.021995
30	P2	-21.962404	0.078141	0.008657

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018166	0.003617	-0.014915
7	P3	-8.017987	0.003617	-0.014604
11	P3	-8.017963	0.003628	-0.014301
15	P3	-8.018017	0.003634	-0.014327
19	P3	-8.018083	0.003643	-0.014595
22	P3	-8.018198	0.003609	-0.014696
26	P3	-8.018044	0.003627	-0.015304
30	P3	-8.017989	0.003621	-0.014901

## 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	0.000548719
	stdev	1.78081e-07
MEAN Q	mean	0.000529086
	stdev	2.16501e-07



## 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135971
	stdev	0.00108749
STDEV Q	mean	0.136314
	stdev	0.00110361



## 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006090[789]

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_1PNPDE20060907_010442_000002632051_00031_23632_1387.N1	0	36



## 7 - Doppler Analysis

Preliminary report. The data is not yet controled

### 7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)
<input type="checkbox"/>
Acsending
<input type="checkbox"/>

Descending
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## 7.2 - Absolute Doppler for WVS

<b>Evolution of Absolute Doppler</b>
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<input type="checkbox"/>
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Ascending
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<input type="checkbox"/>
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Descending
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## 7.3 - Doppler evolution versus ANX for WVS

## 7.4 - Unbiased Doppler Error for GM1

<b>Evolution of unbiased Doppler error (Real - Expected)</b>
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<input type="checkbox"/>
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Ascending
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<input type="checkbox"/>
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Descending
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## 7.5 - Absolute Doppler for GM1

<b>Evolution of Absolute Doppler</b>
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<input type="checkbox"/>
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Ascending
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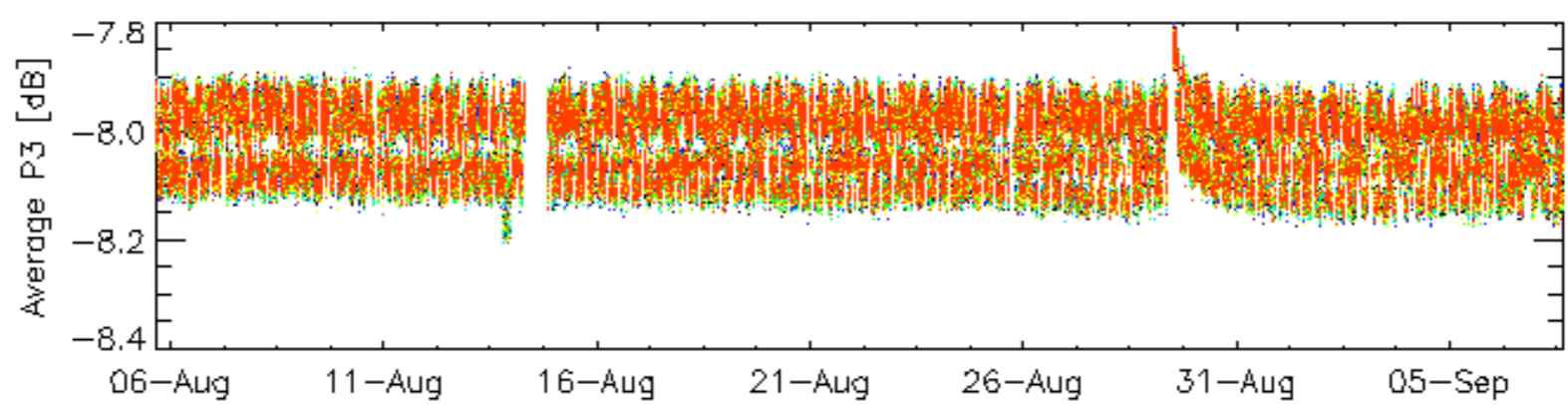
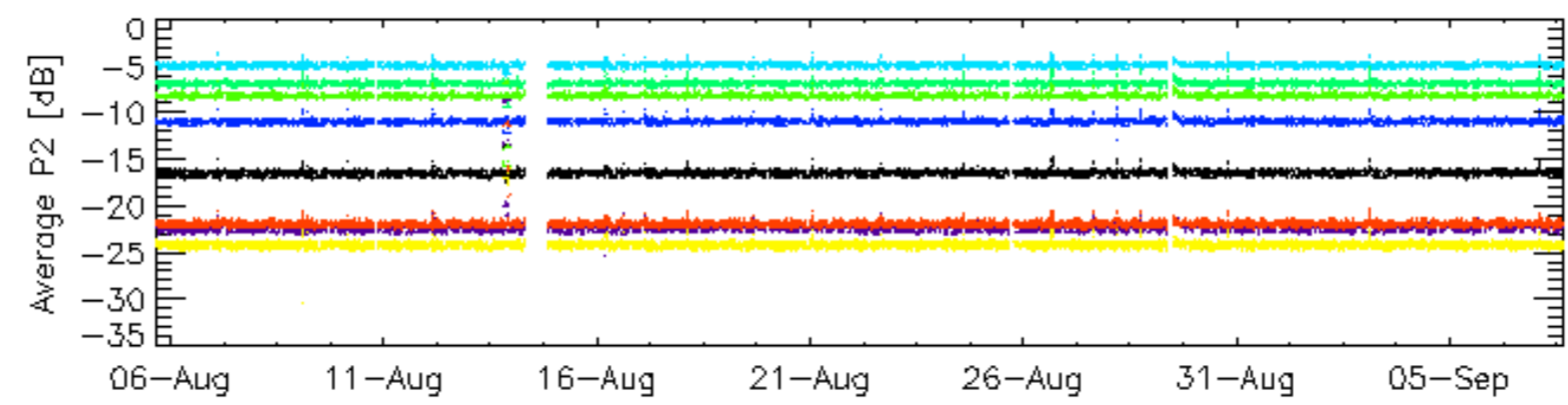
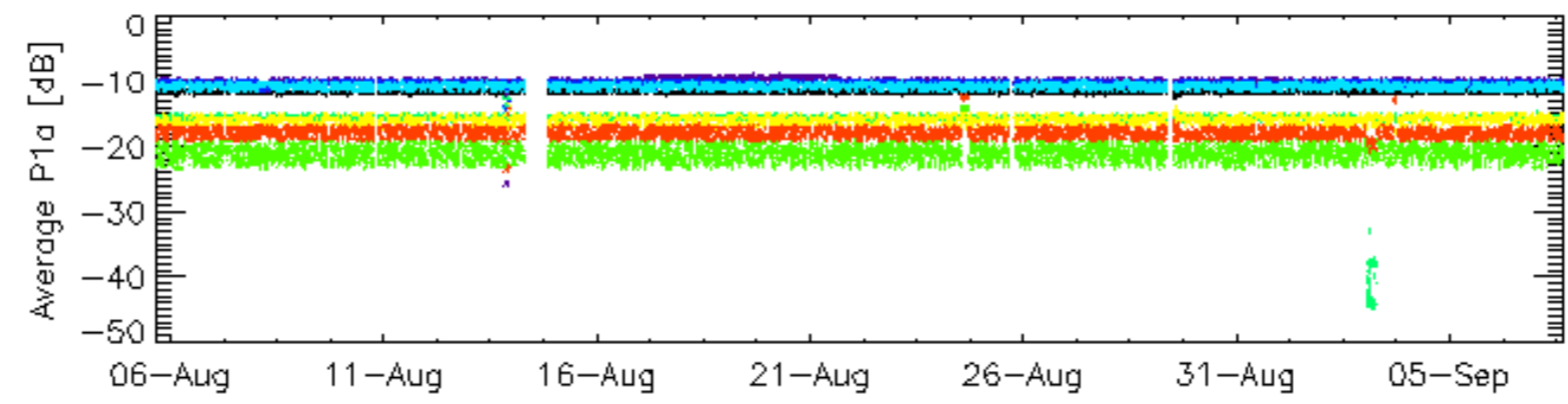
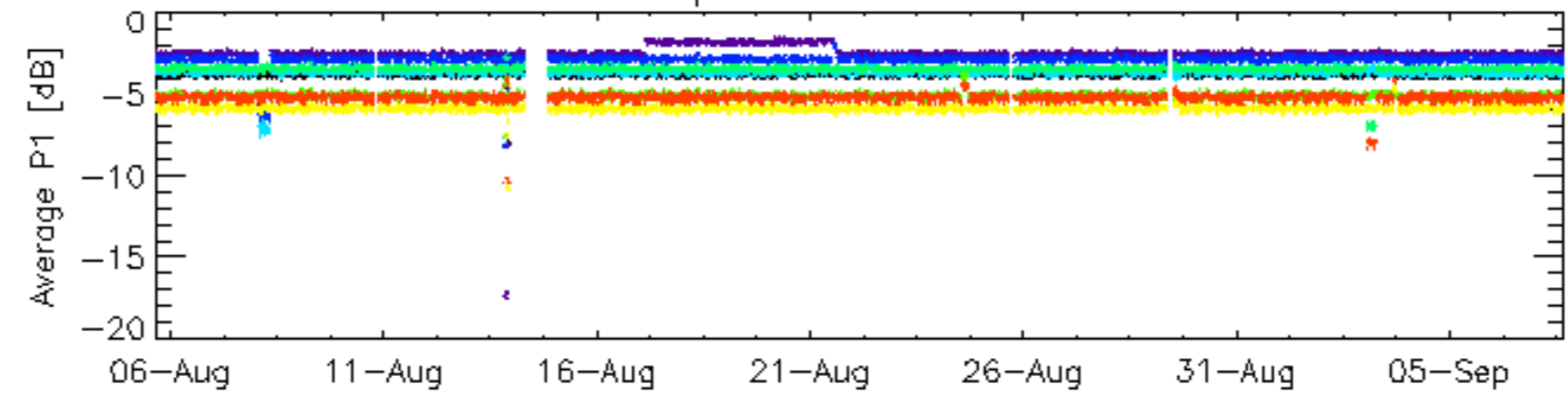
<input type="checkbox"/>
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Descending
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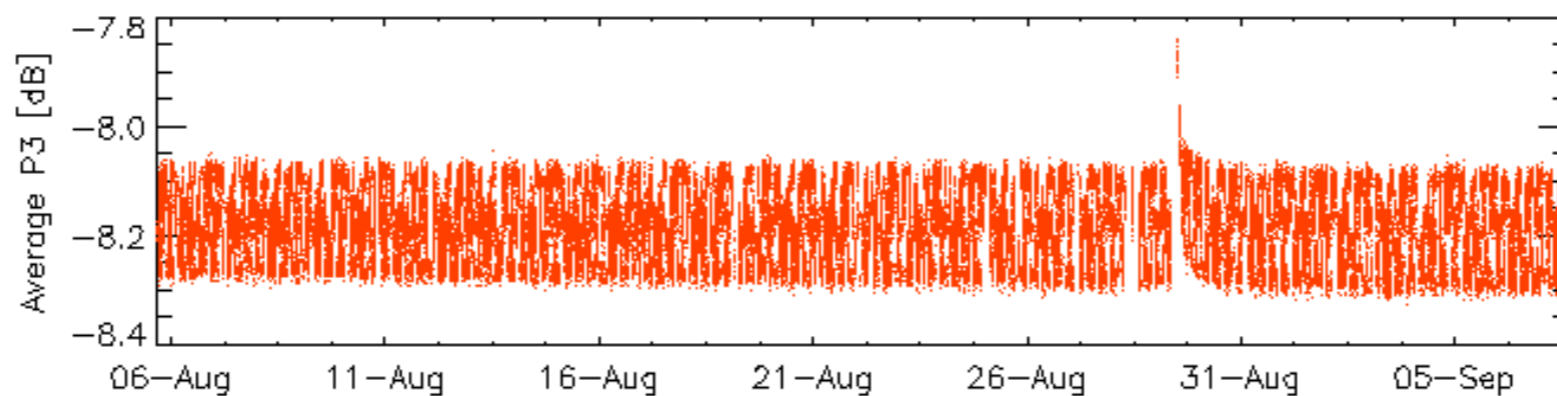
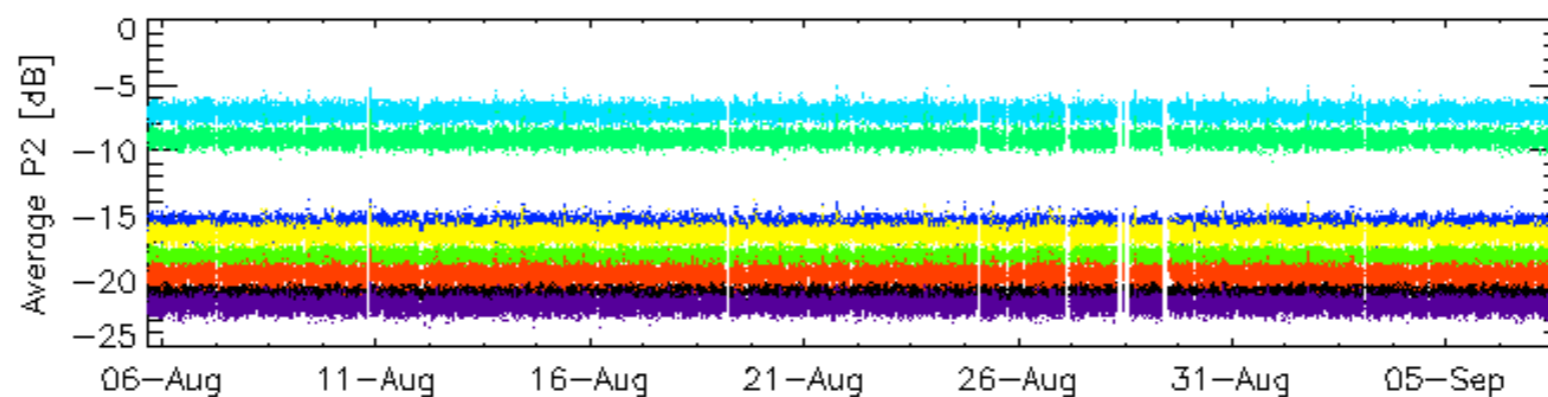
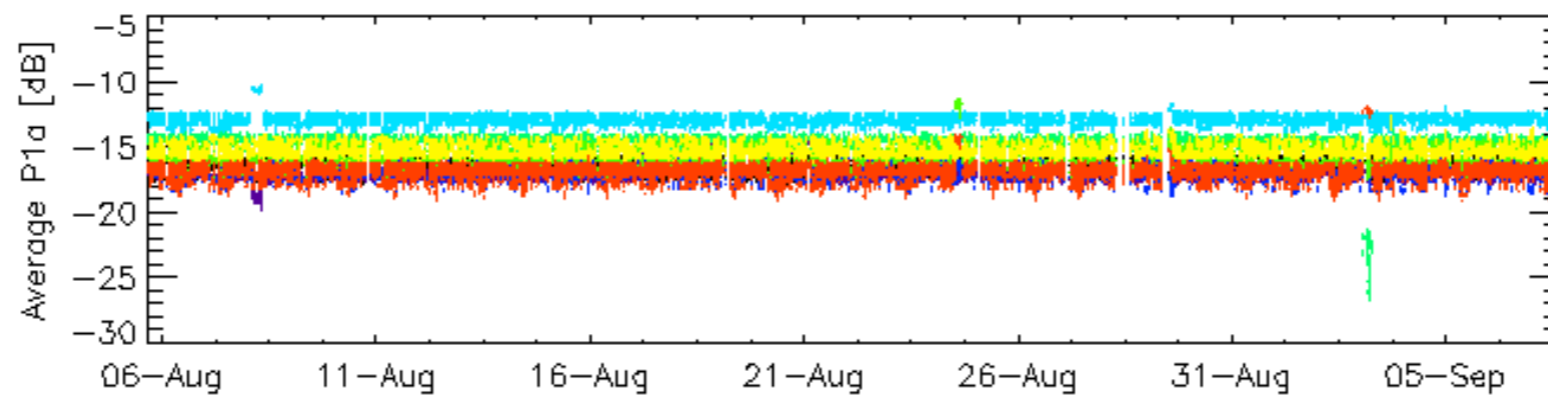
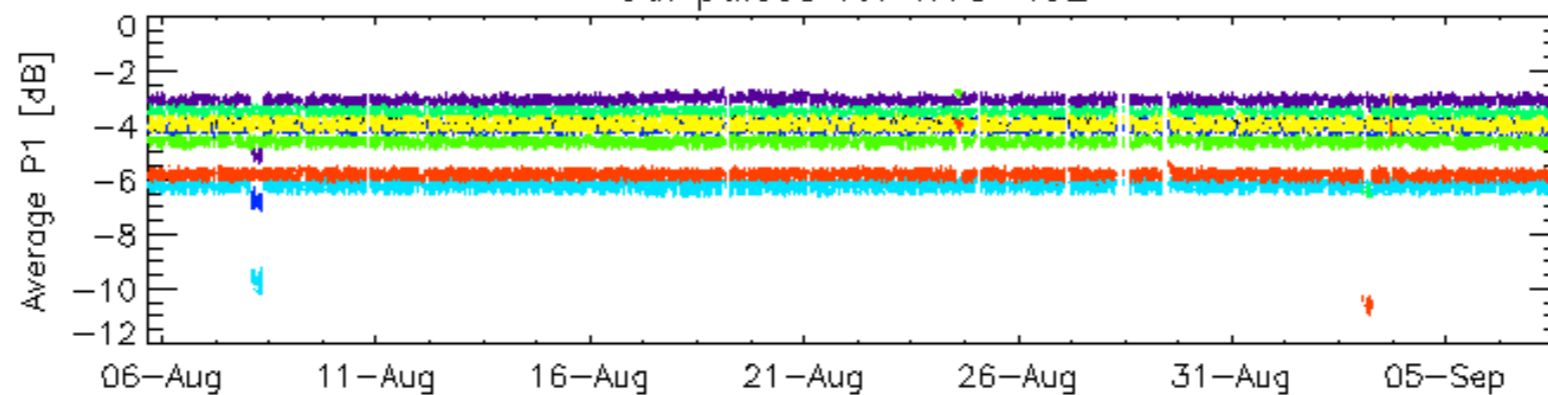
## 7.6 - Doppler evolution versus ANX for GM1

### 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

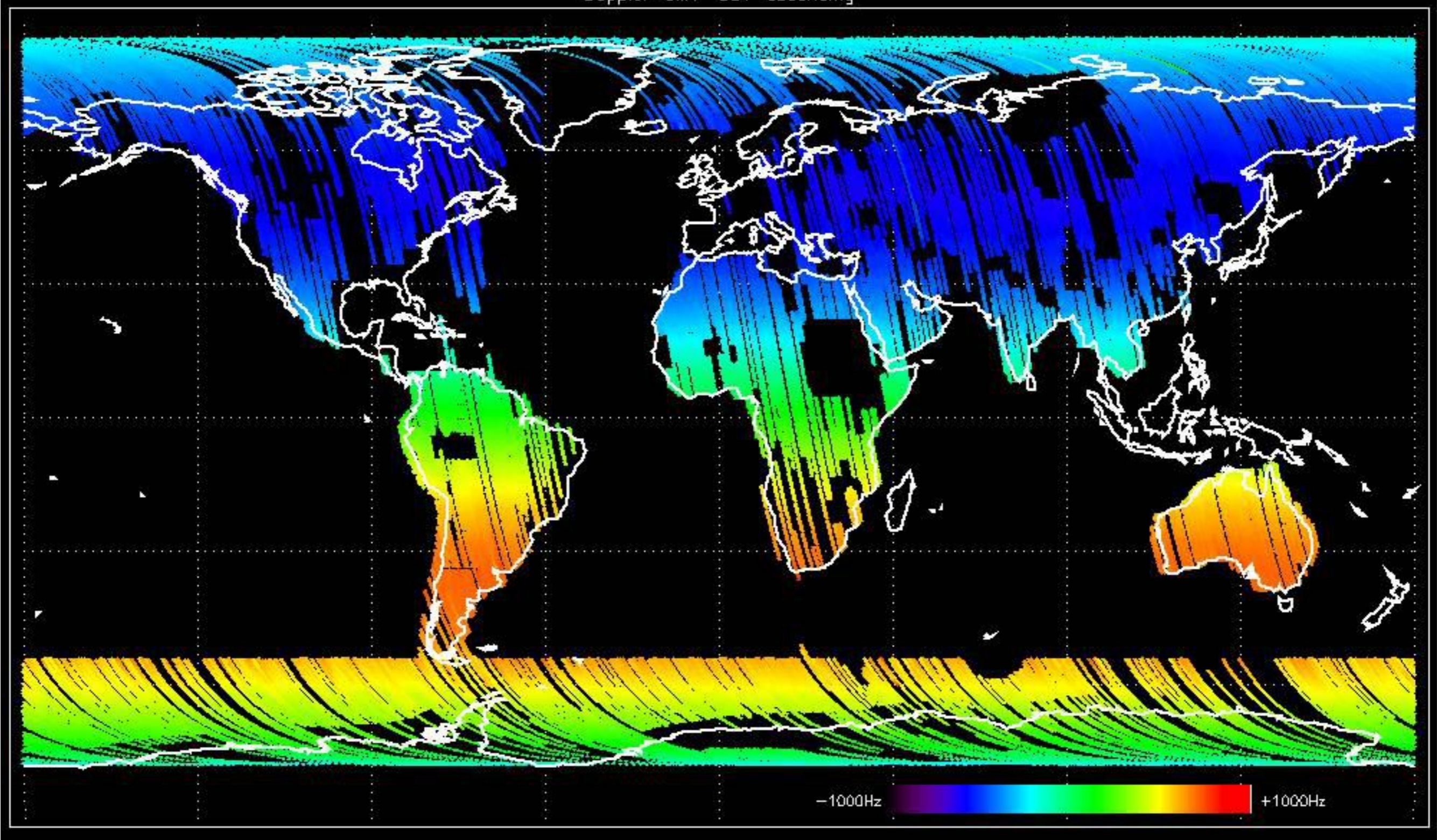
No anomalies observed.

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



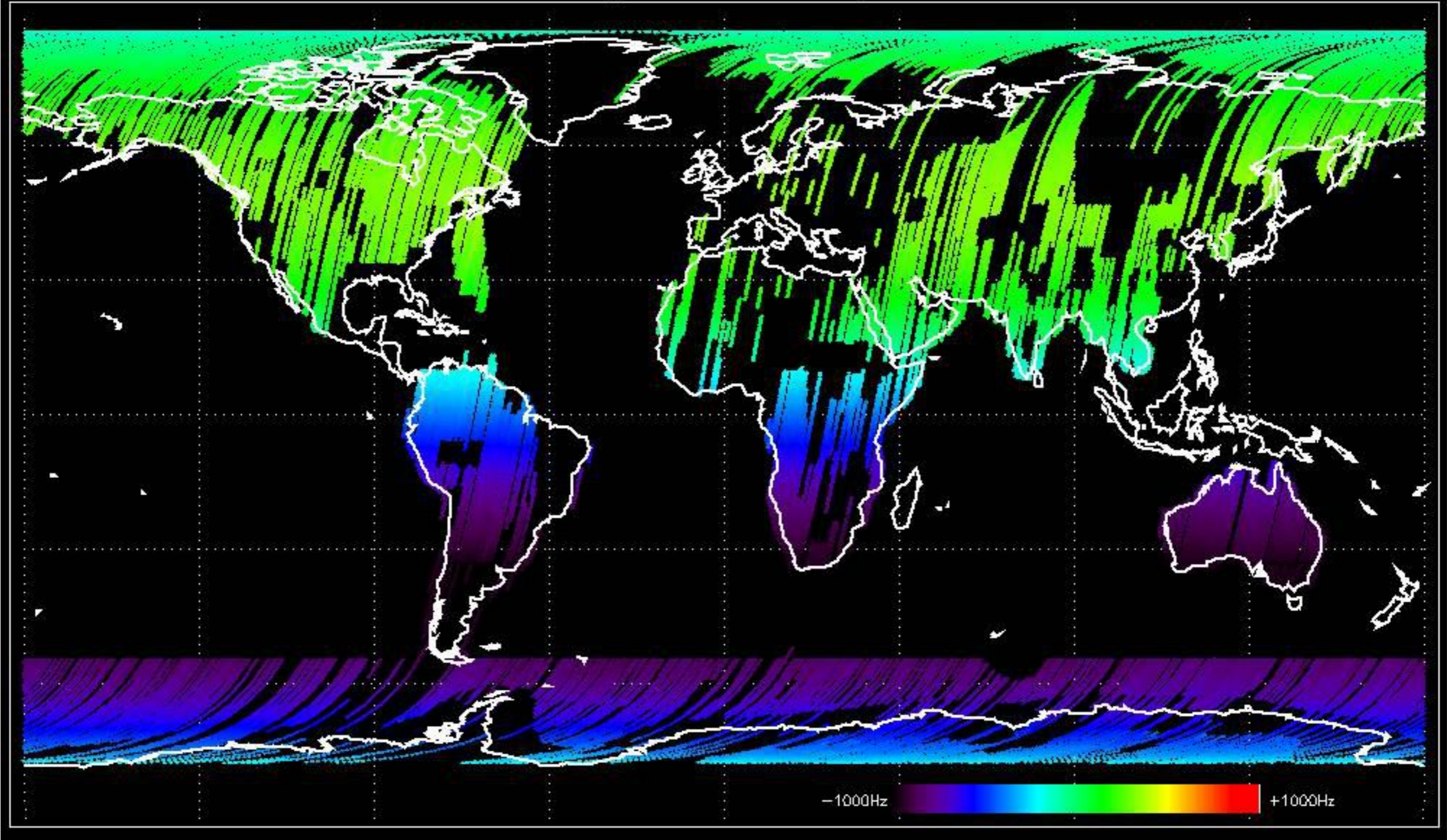


Doppler 'GM1' 'SS1' ascending



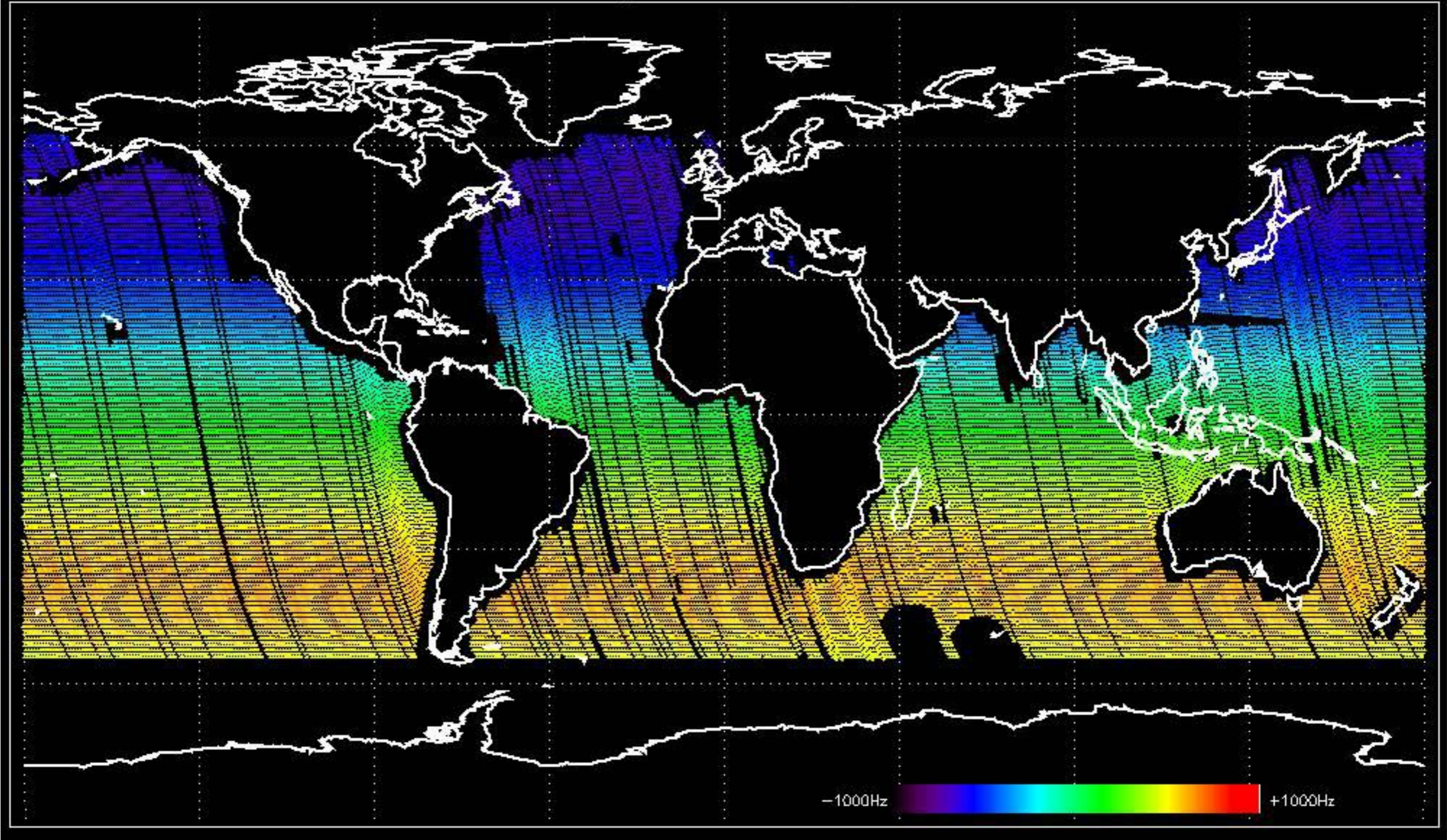


Doppler 'GM1' 'SS1' descending



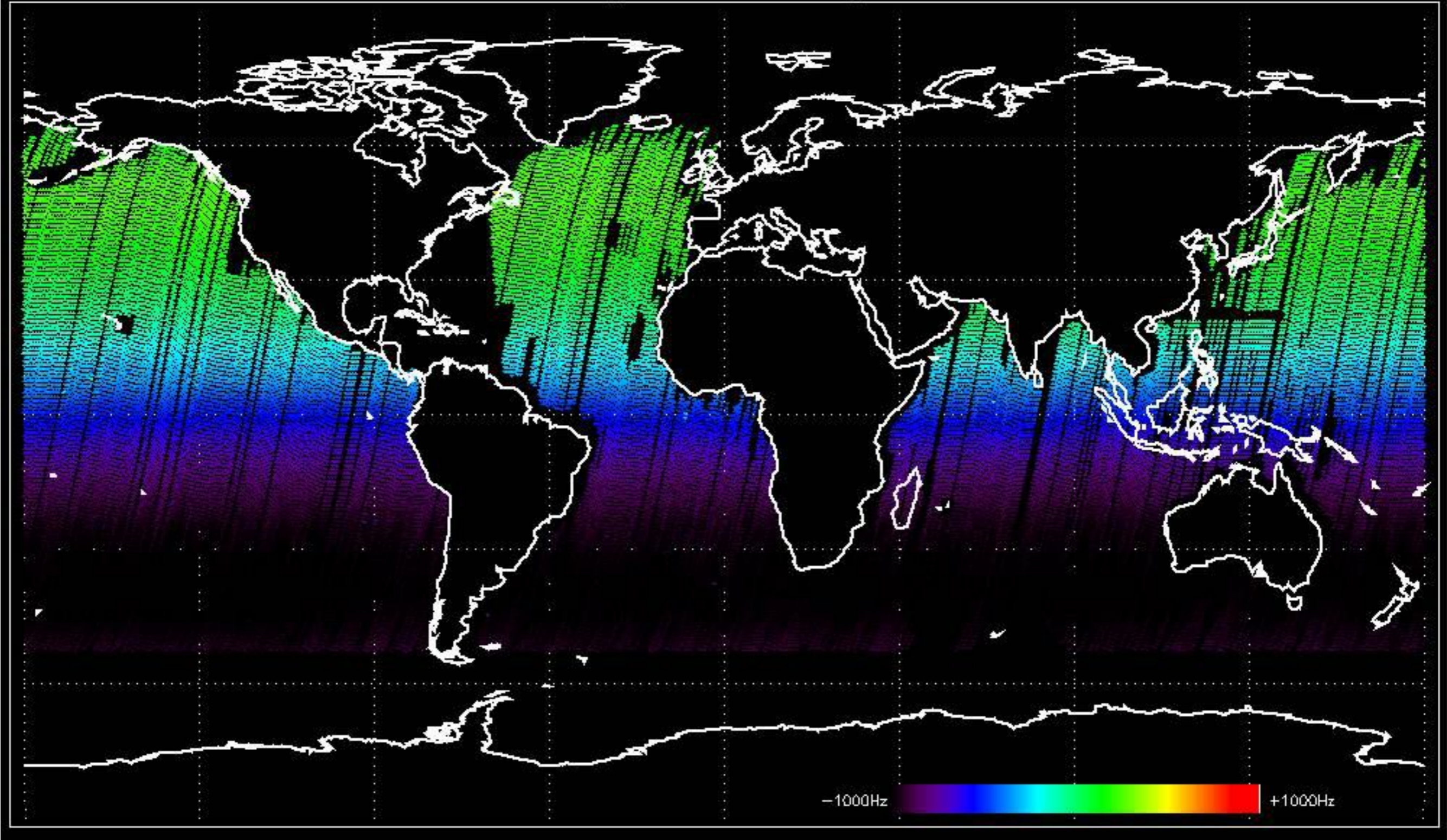


Doppler 'WVS' 'IS2' ascending



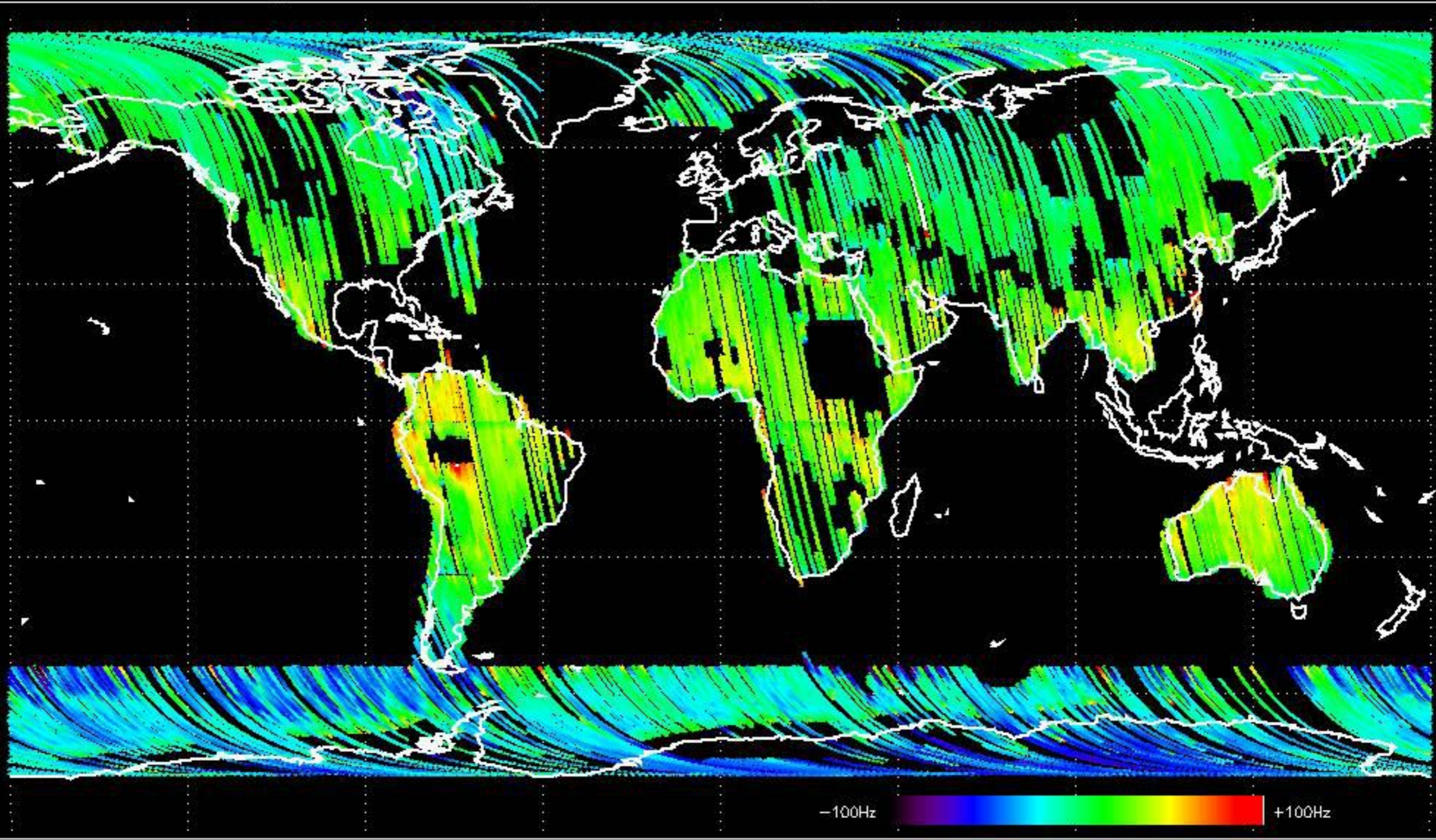


Doppler 'WVS' 'IS2' descending



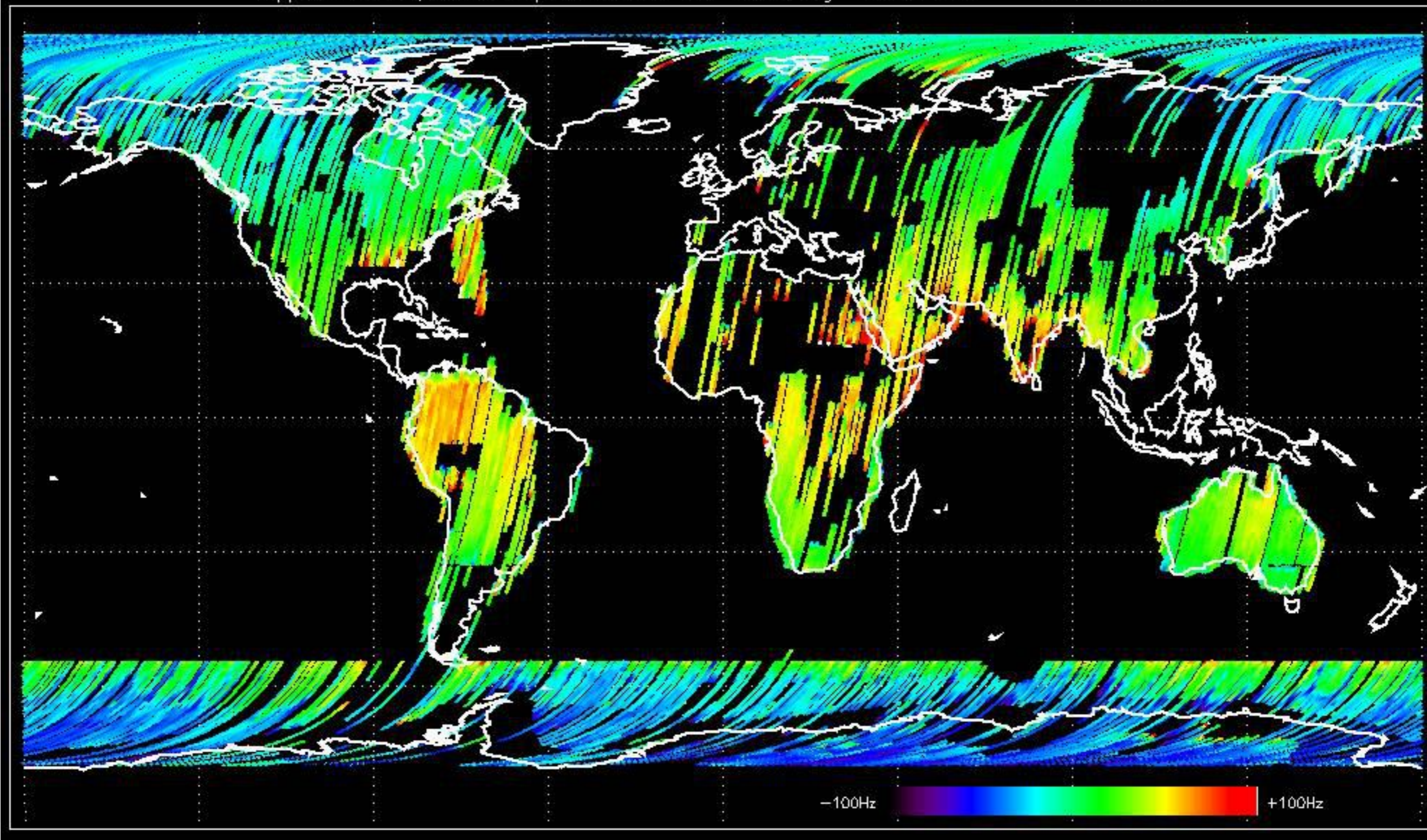


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.859203 Hz



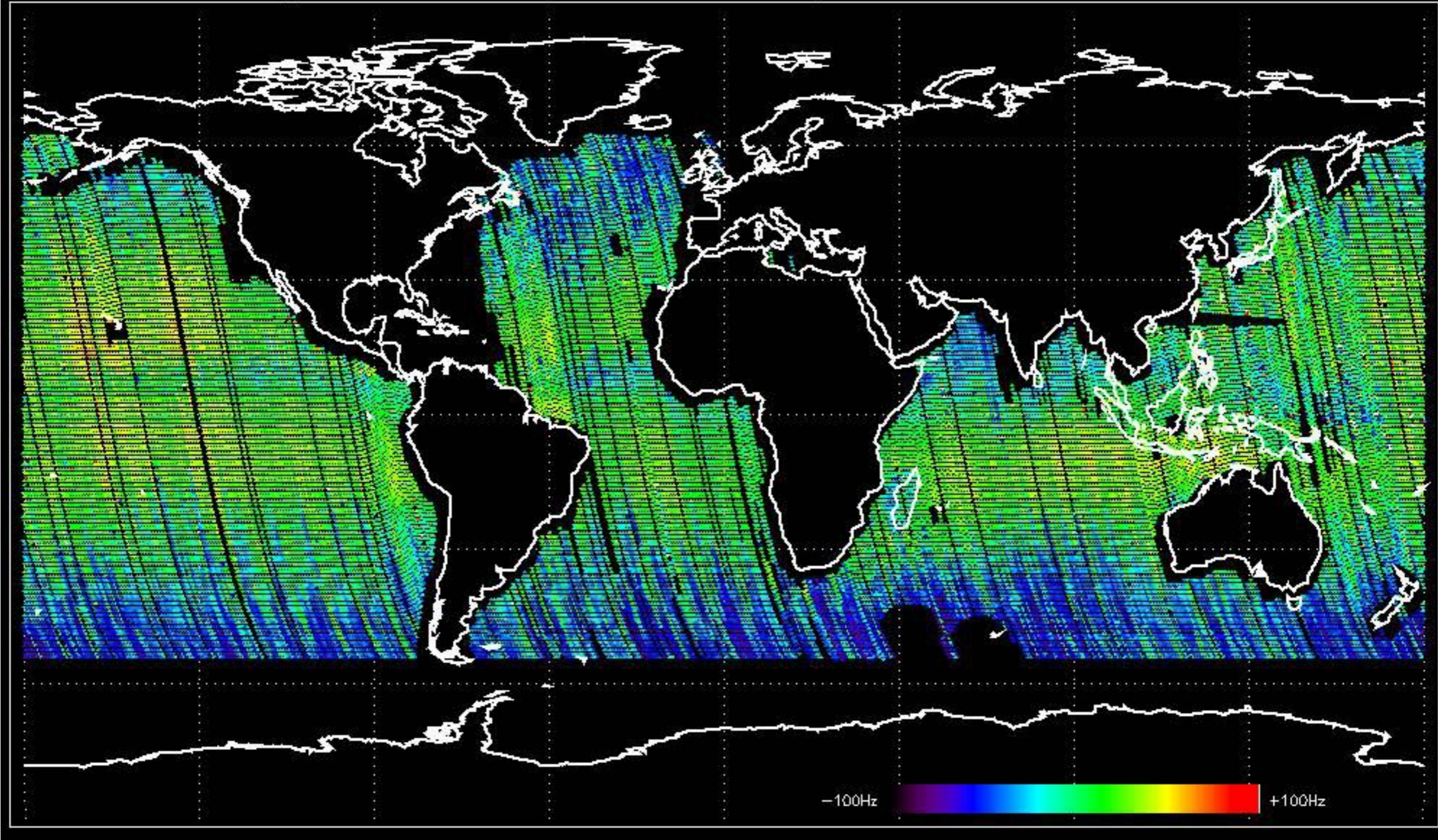


Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.9795848 Hz



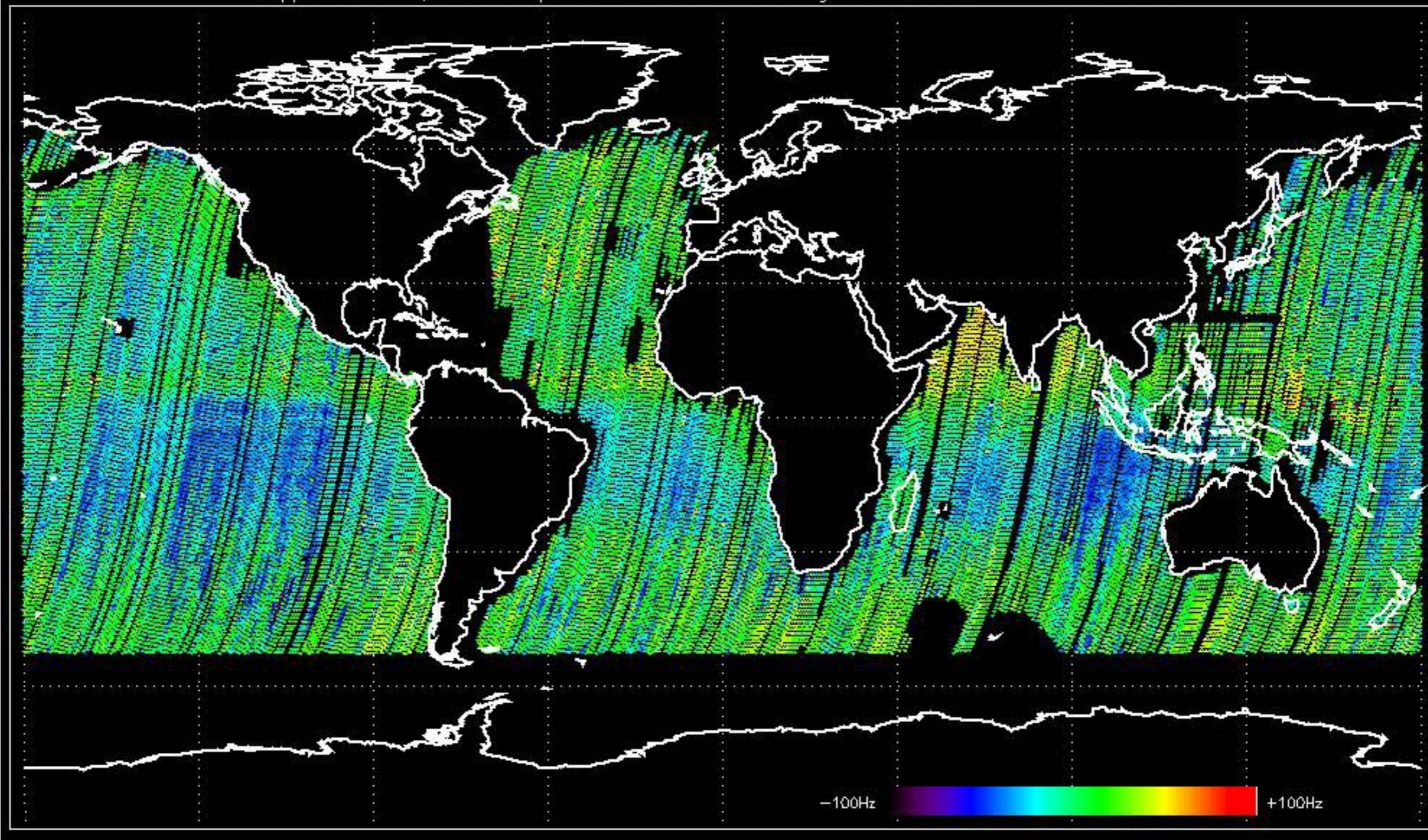


Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.0237148 Hz





Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.8244371 Hz





No anomalies observed on available MS products:

No anomalies observed.











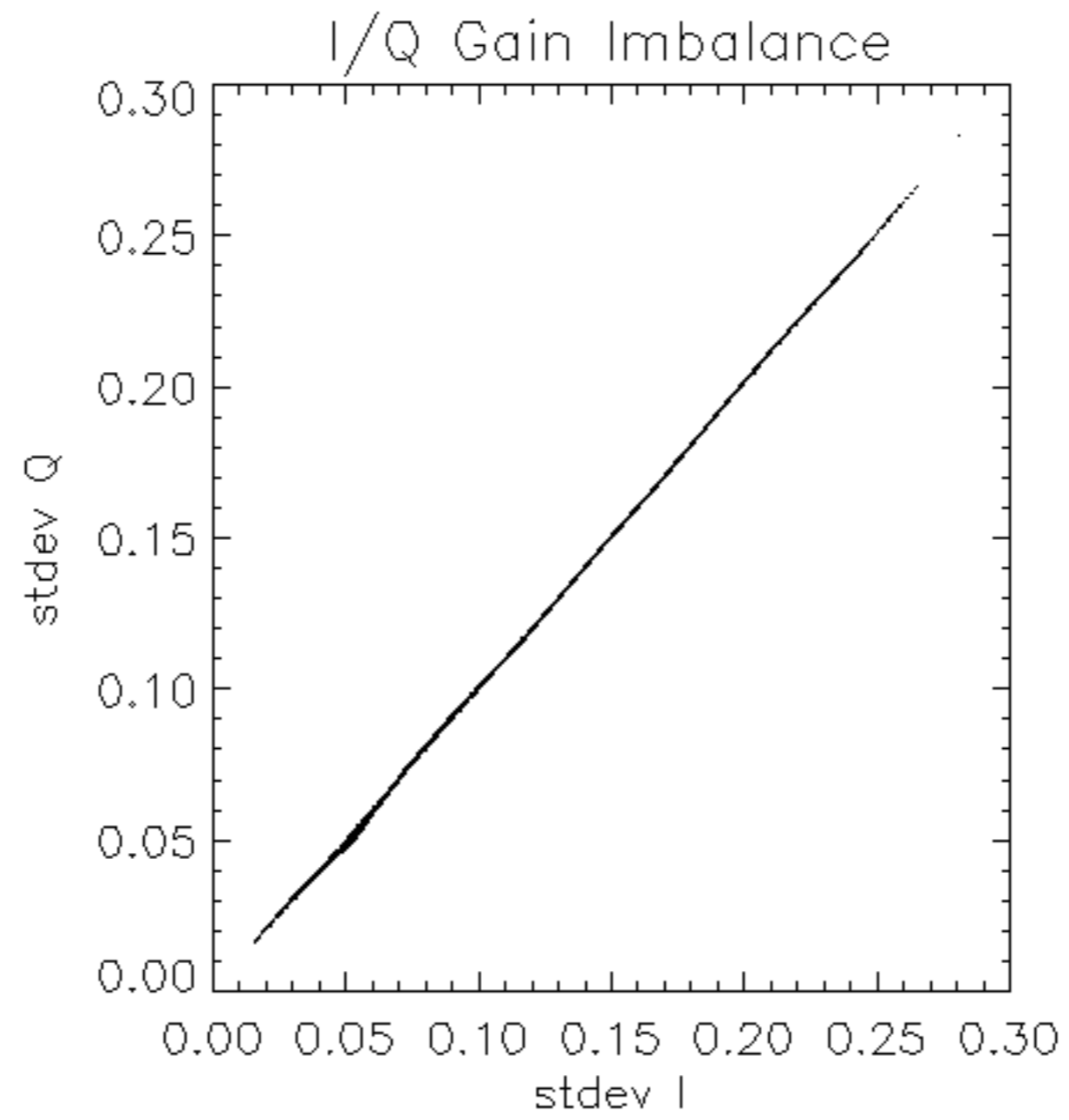


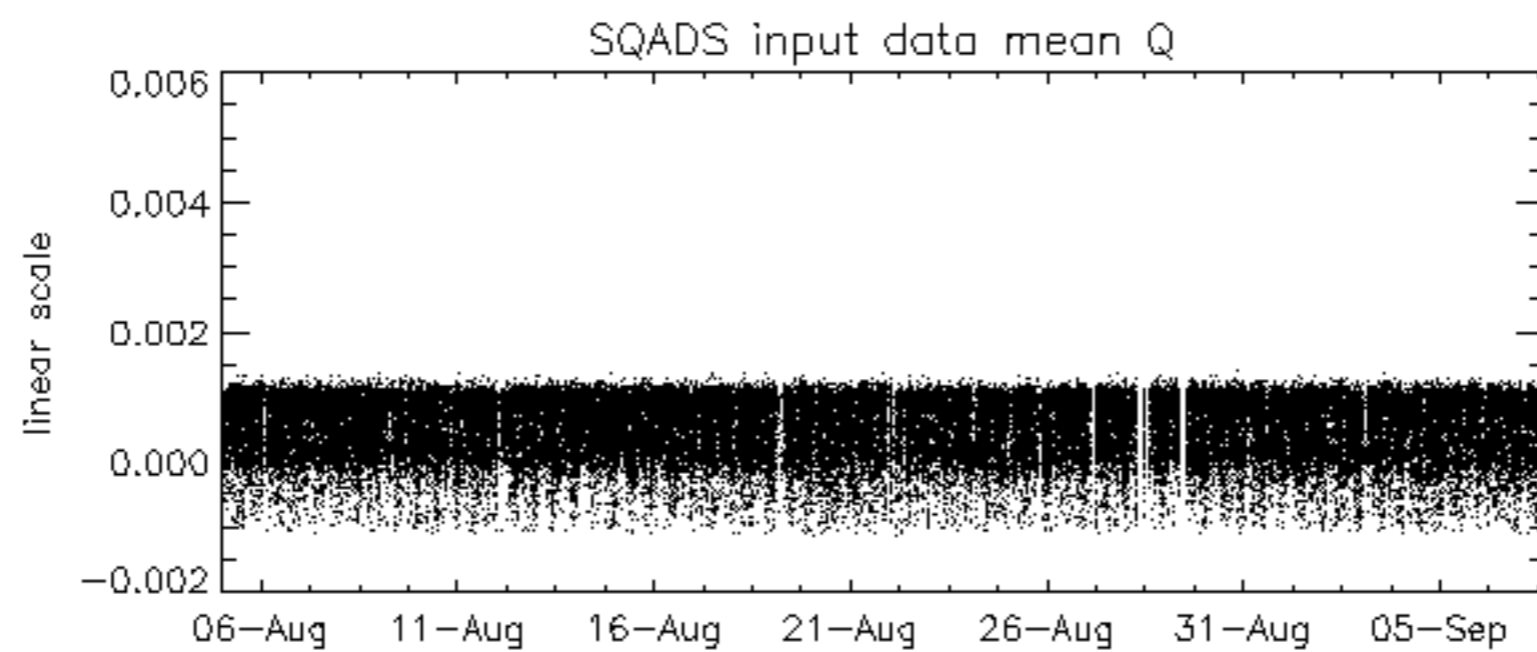
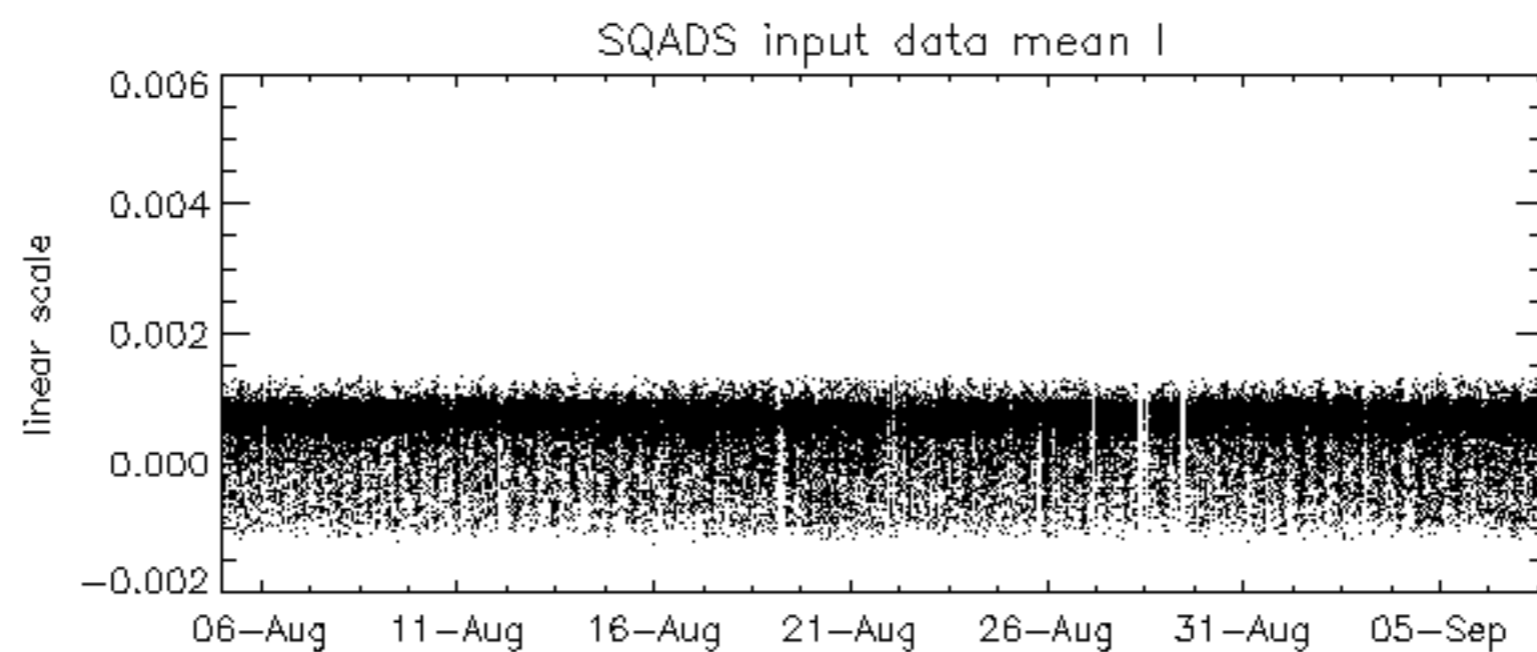
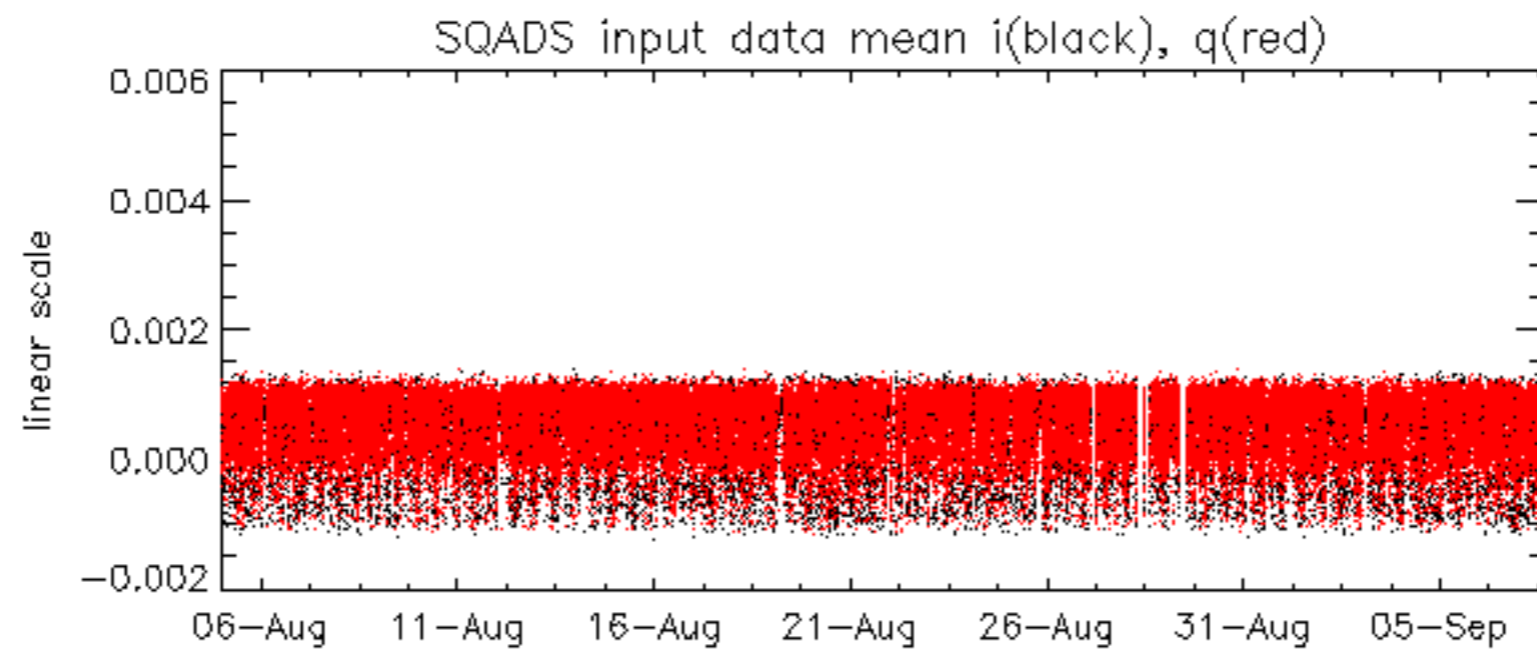


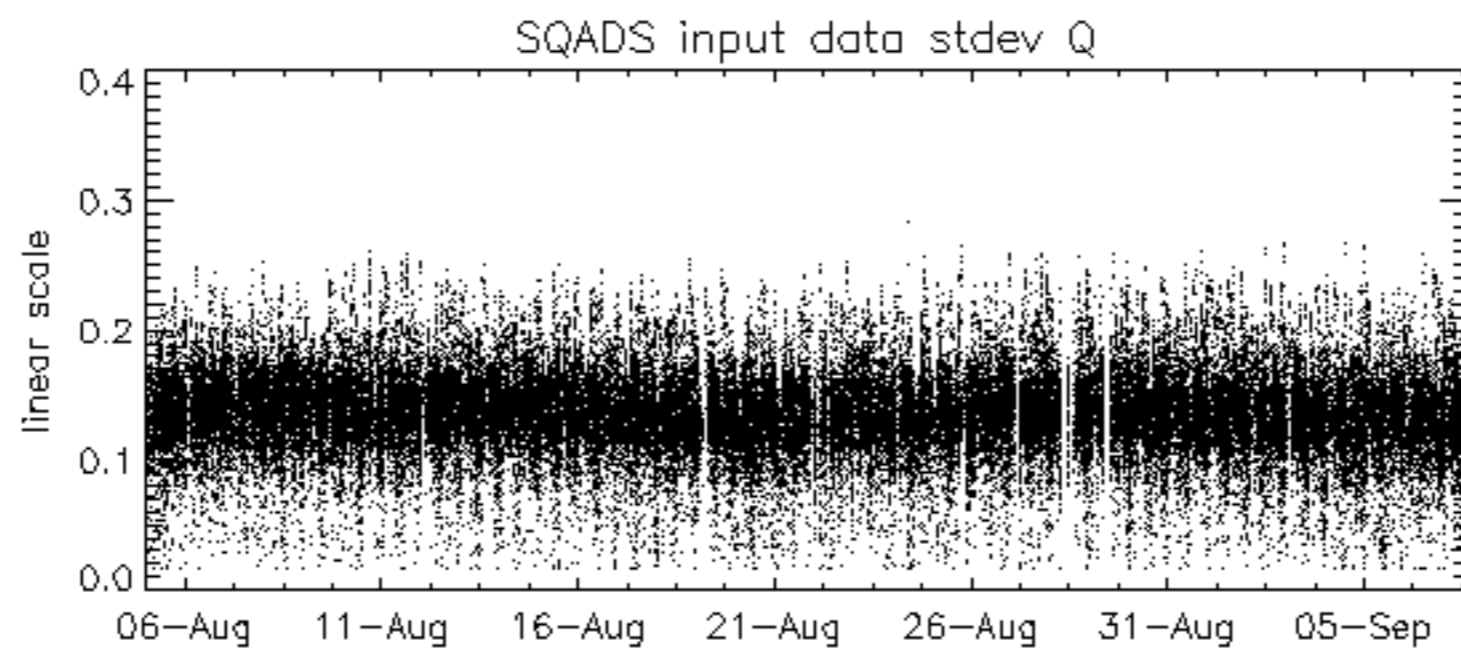
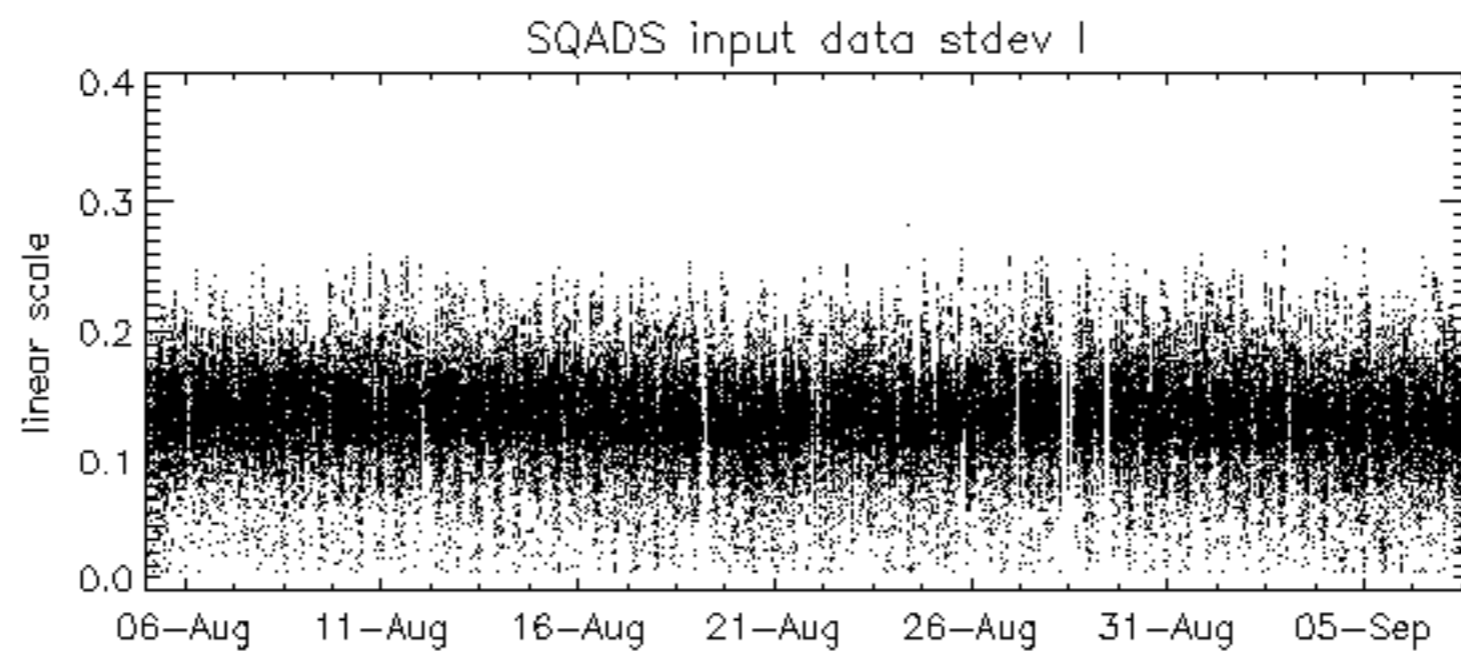
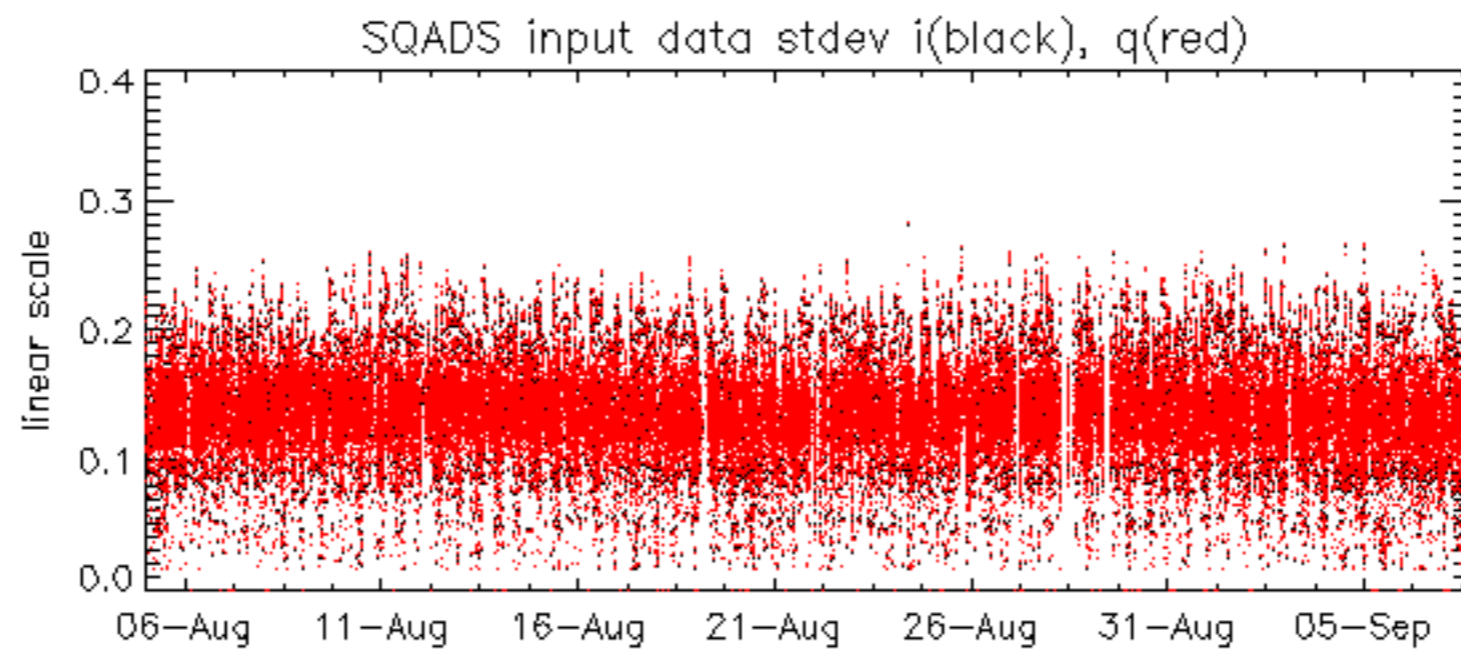


















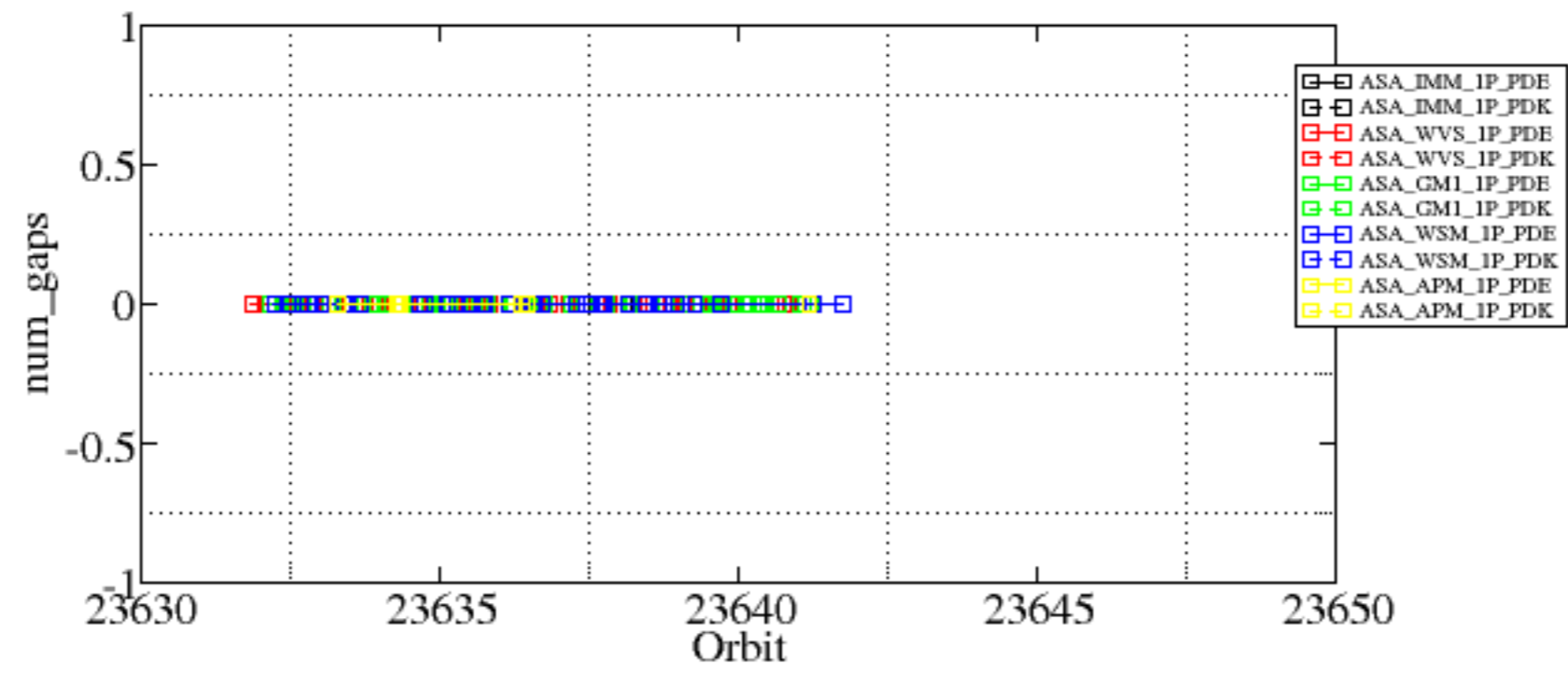


Summary of analysis for the last 3 days 2006090[789]

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_WSM_1PNPDE20060907_010442_000002632051_00031_23632_1387.N1	0	36





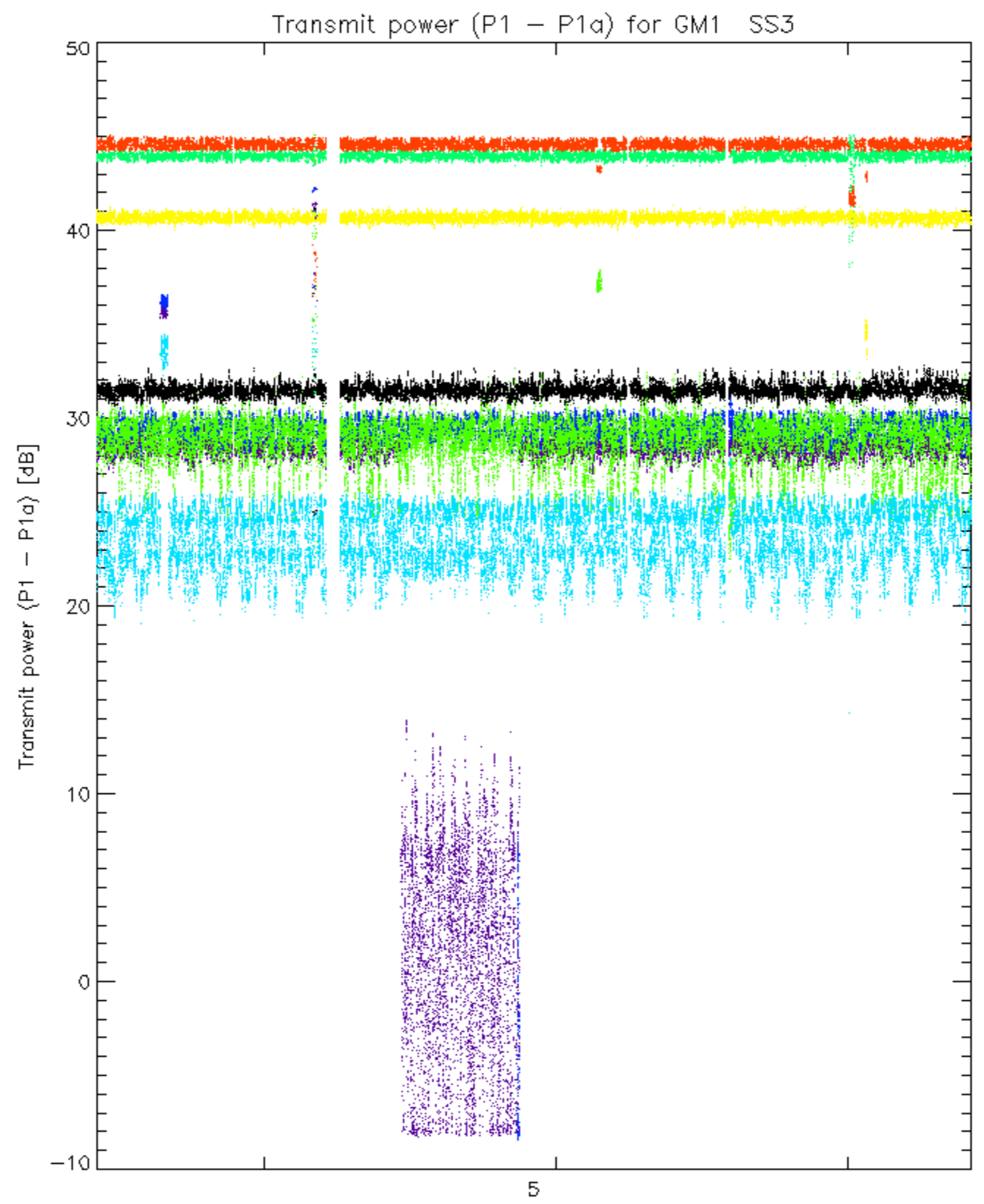




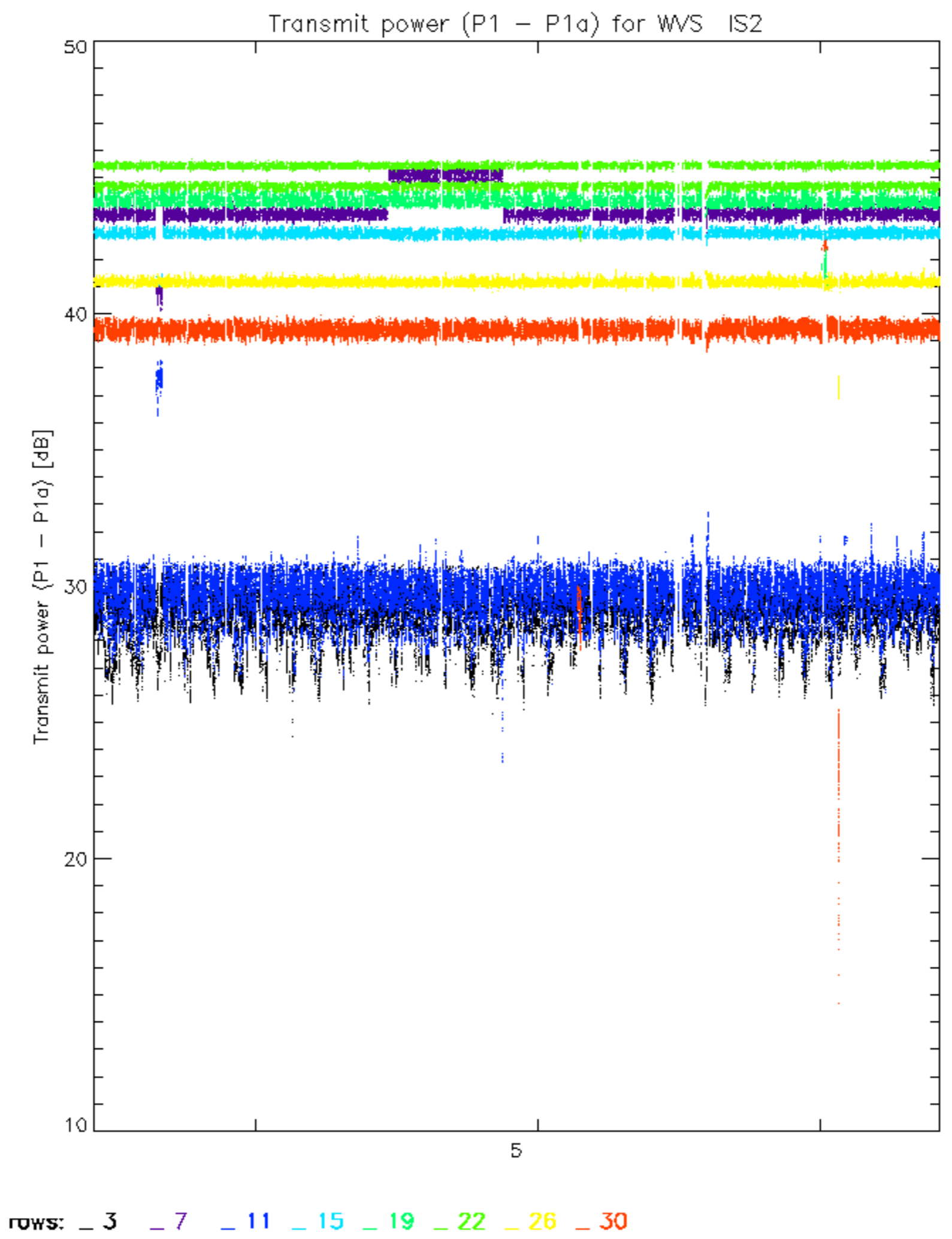








rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30





No unavailabilities during the reported period.