

PRELIMINARY REPORT OF 050226

last update on Sat Feb 26 10:50:01 GMT 2005

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2005-02-25 00:00:00 to 2005-02-26 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	27	0	3	1	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	27	0	3	1	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	27	0	3	1	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	27	0	3	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	43	41	4	15	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	43	41	4	15	5
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	43	41	4	15	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	43	41	4	15	5

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	20050223 170201
H	20050224 062648

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
<input type="checkbox"/>

P1a Cyclic statistics

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

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.378284	0.008384	0.034772
7	P1	-3.082926	0.007791	-0.012661
11	P1	-4.682878	0.020363	-0.040204
15	P1	-5.654812	0.030607	-0.009782
19	P1	-3.667819	0.004110	-0.014346
22	P1	-4.532374	0.013397	0.044434
26	P1	-4.945024	0.014577	-0.023200
30	P1	-7.169426	0.017797	-0.039235
3	P1	-15.947114	0.080348	-0.136159
7	P1	-15.518311	0.056733	0.012157
11	P1	-20.920101	0.259757	-0.087847
15	P1	-11.583230	0.027805	0.011843
19	P1	-14.224946	0.025771	-0.135772
22	P1	-15.756579	0.338082	0.241928
26	P1	-17.594372	0.227805	-0.009018
30	P1	-17.947346	0.421943	-0.041858

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.145498	0.085121	0.119027
7	P2	-22.339216	0.102260	0.126791
11	P2	-14.540236	0.102605	0.196049
15	P2	-7.068141	0.094670	0.053728
19	P2	-9.659128	0.093638	0.057896
22	P2	-16.967232	0.094459	0.101644
26	P2	-16.460135	0.091542	0.035916
30	P2	-18.891500	0.080343	0.029807

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.170533	0.005586	0.018428
7	P3	-8.170533	0.005586	0.018428
11	P3	-8.170533	0.005586	0.018428
15	P3	-8.170533	0.005586	0.018428
19	P3	-8.170533	0.005586	0.018428
22	P3	-8.170533	0.005586	0.018428
26	P3	-8.170400	0.005583	0.017957
30	P3	-8.170400	0.005583	0.017957

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

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

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-2.758872	0.020269	0.074984
7	P1	-2.992517	0.084378	-0.027221
11	P1	-3.973761	0.023171	-0.043327
15	P1	-3.549976	0.022066	-0.057691
19	P1	-3.589737	0.014439	0.009583
22	P1	-5.720791	0.049873	-0.079507
26	P1	-7.306139	0.032426	0.059083
30	P1	-6.243380	0.041805	0.050993
3	P1	-10.760755	0.098248	0.020369
7	P1	-10.227796	0.200061	-0.133715
11	P1	-12.568045	0.129924	-0.036767
15	P1	-11.761856	0.086583	0.012630
19	P1	-15.570849	0.055981	0.002337
22	P1	-24.253576	1.339379	-0.395867
26	P1	-15.543907	0.214341	0.182181
30	P1	-20.117046	0.955425	-0.244818

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.859512	0.047664	0.103662
7	P2	-22.407820	0.139341	0.021303
11	P2	-10.316522	0.056939	0.227496
15	P2	-4.989321	0.020758	0.025624
19	P2	-6.848966	0.030933	0.062313
22	P2	-7.151669	0.053833	0.096451
26	P2	-23.861052	0.106546	0.003834
30	P2	-21.927036	0.063693	0.028258

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.003639	0.002598	0.015806
7	P3	-8.003703	0.002618	0.016185
11	P3	-8.003688	0.002622	0.016211
15	P3	-8.003686	0.002611	0.015854
19	P3	-8.003705	0.002626	0.016259
22	P3	-8.003665	0.002618	0.016254
26	P3	-8.003563	0.002614	0.015860
30	P3	-8.003701	0.002616	0.015546

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	0.000467159
	stdev	2.18452e-07
MEAN Q	mean	0.000535057
	stdev	2.30899e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128850
	stdev	0.000971724
STDEV Q	mean	0.129093
	stdev	0.000982082



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005022[456]

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
----------	----------	-------------------



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

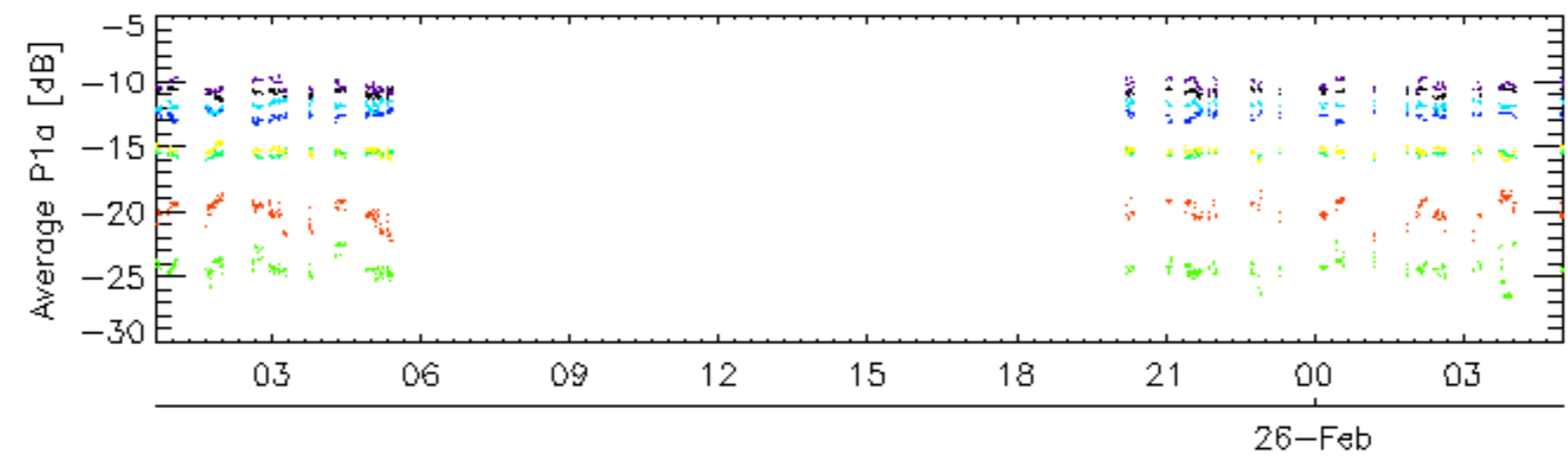
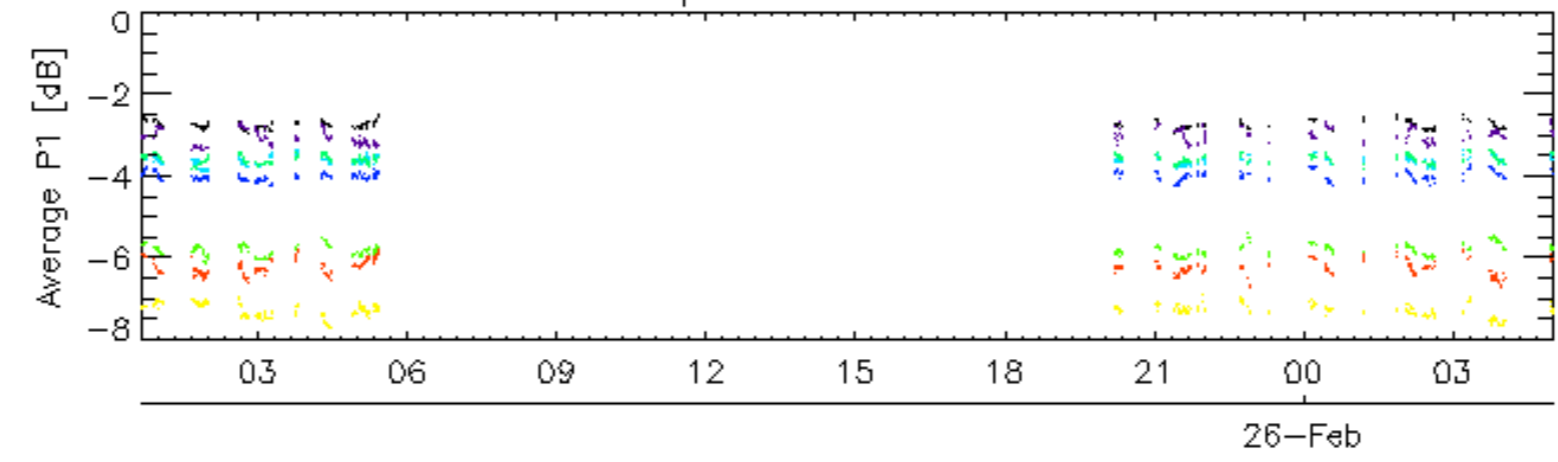
Ascending

Descending

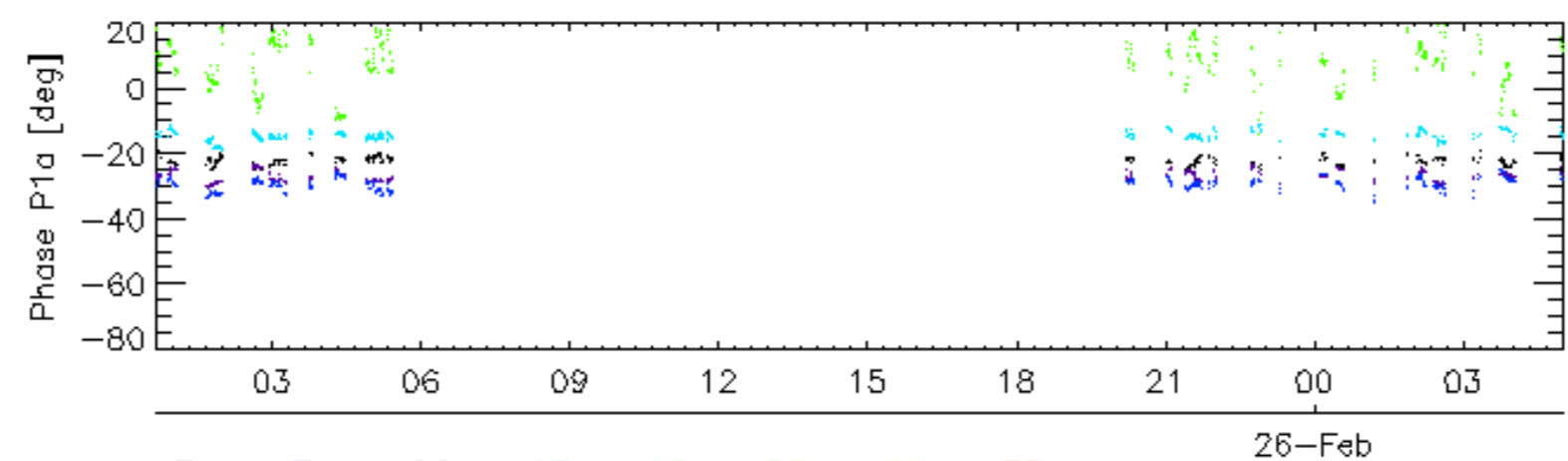
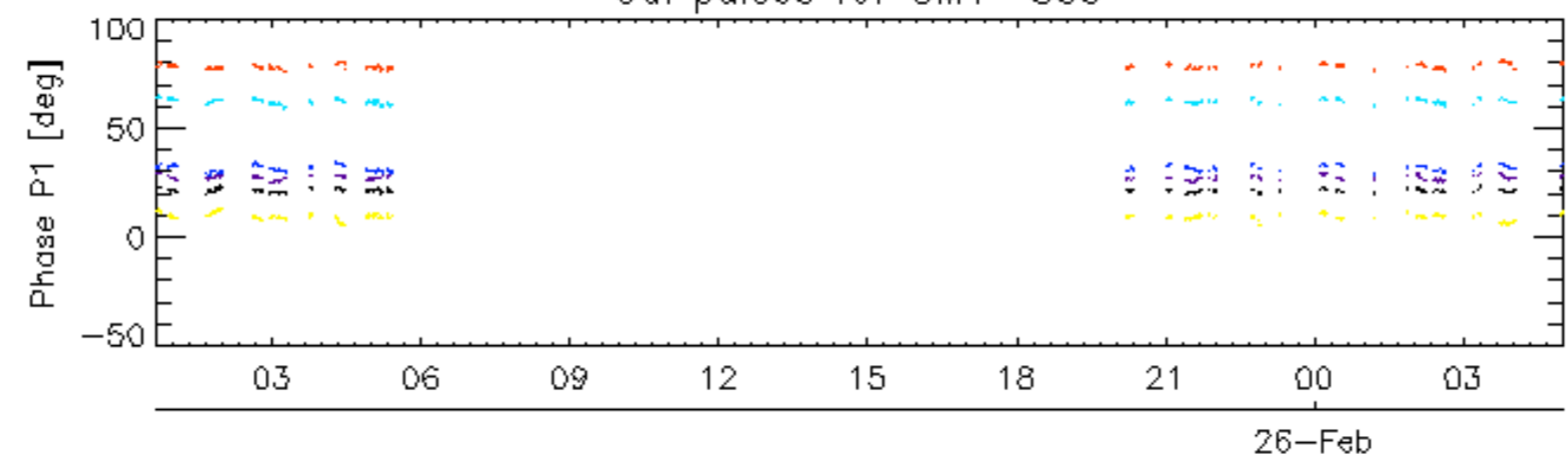
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

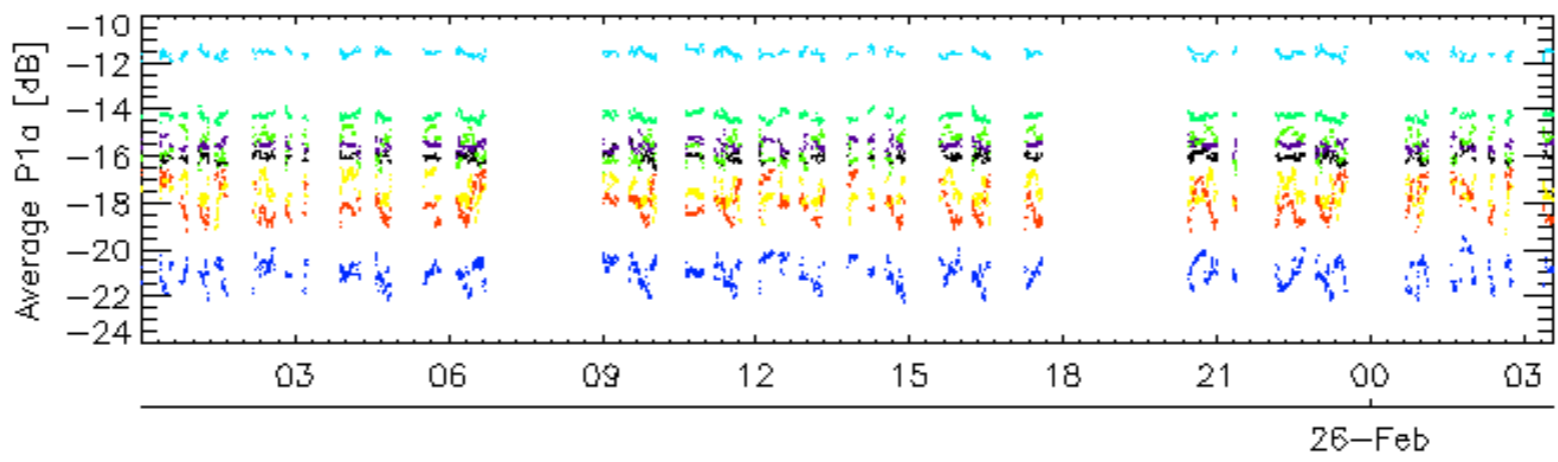
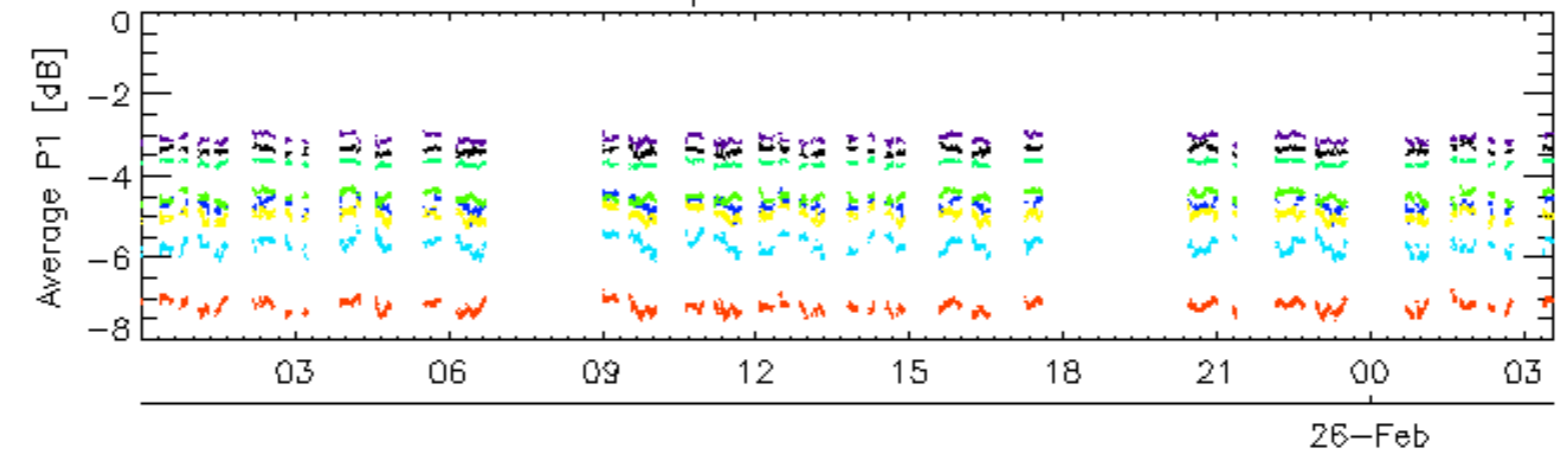


Cal pulses for GM1 SS3

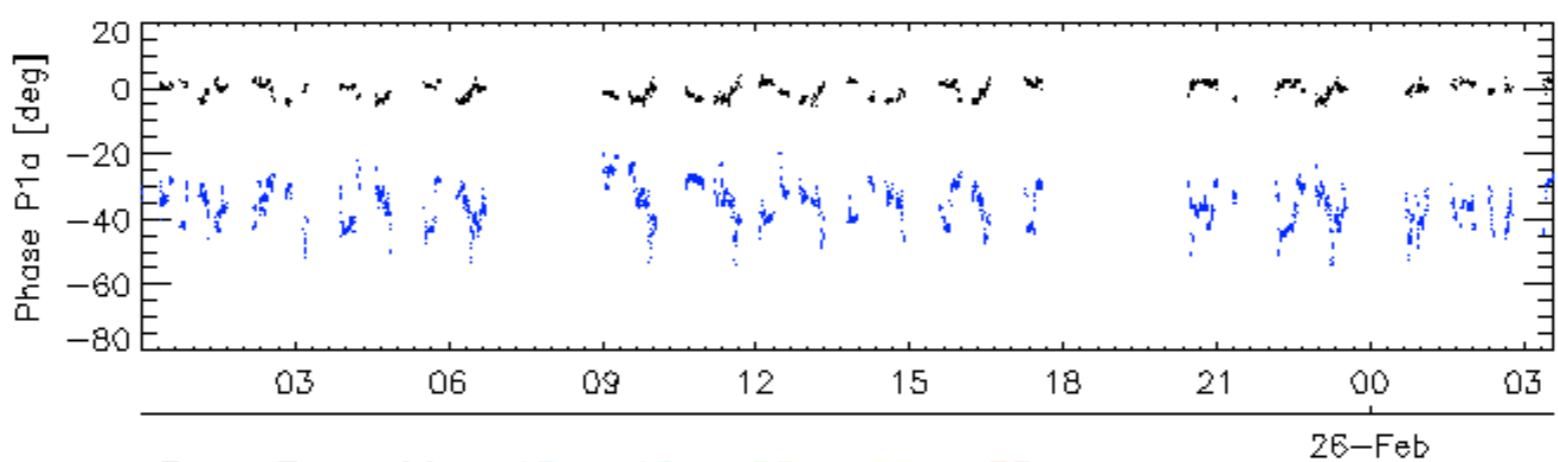
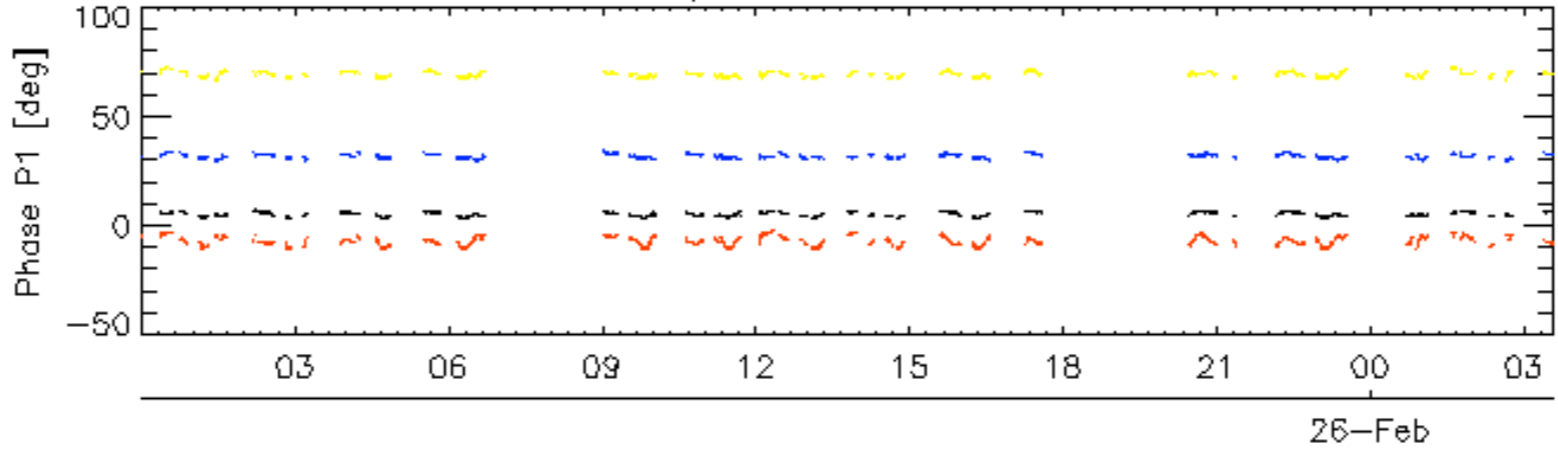


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

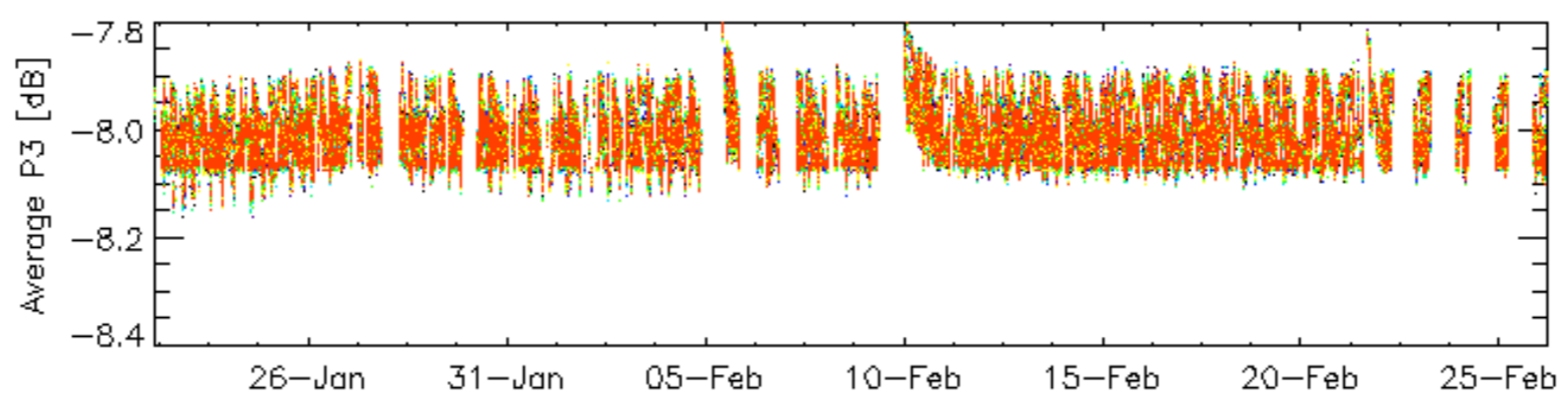
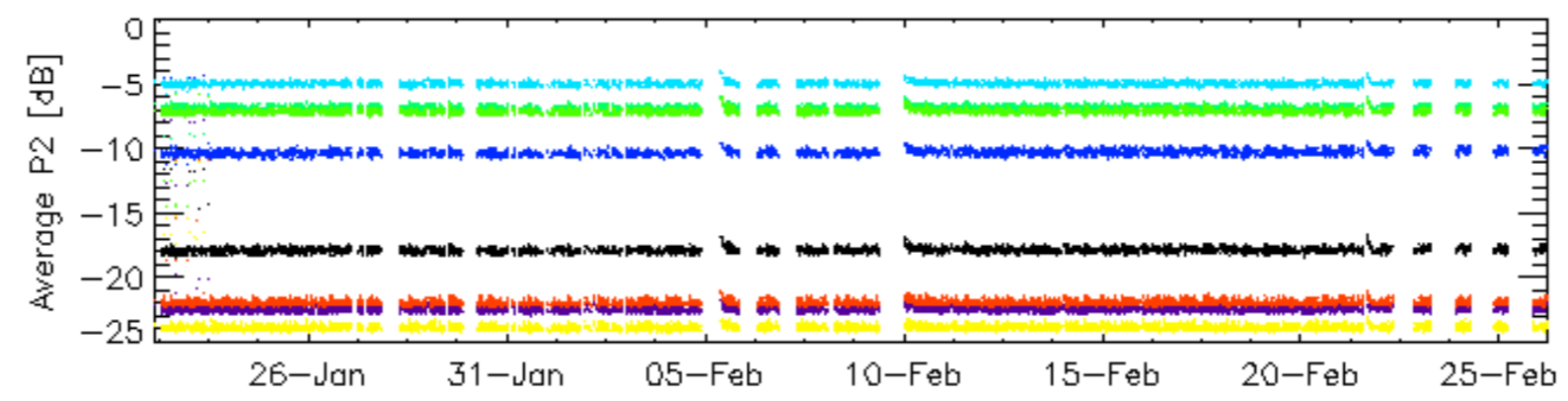
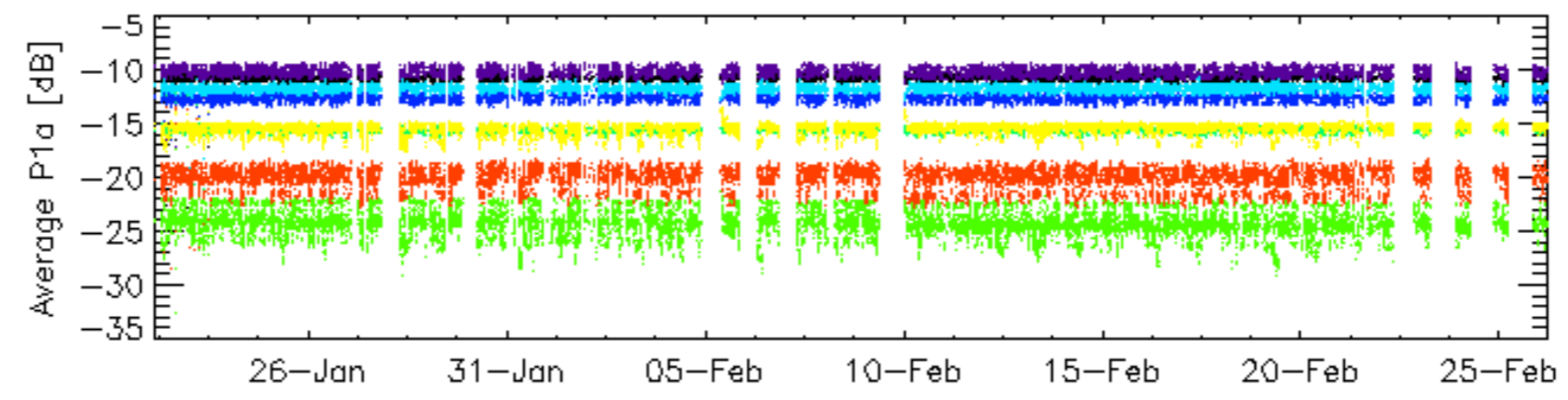
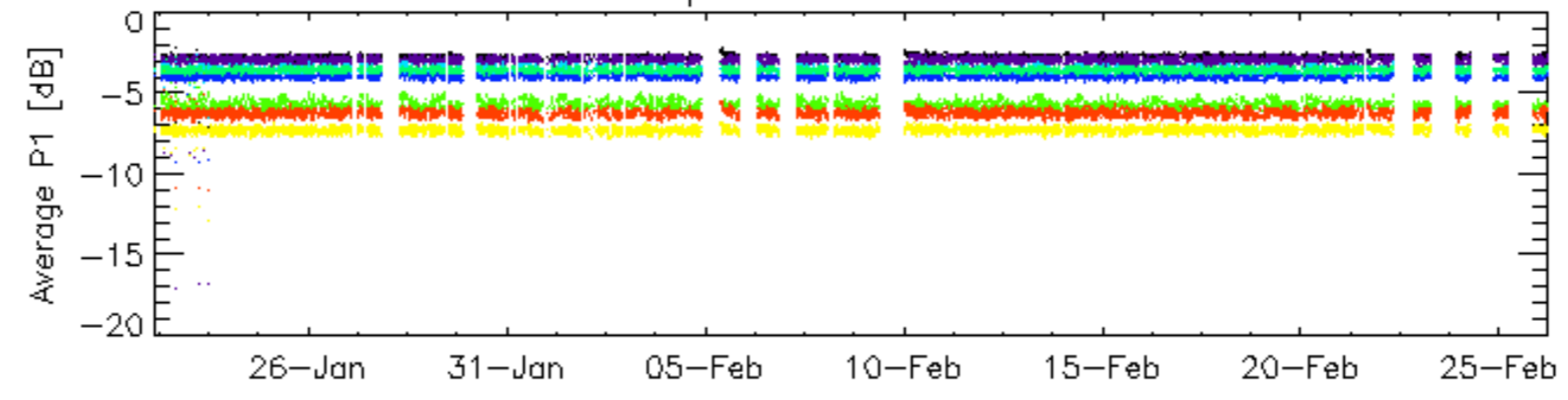


Cal pulses for WVS IS2



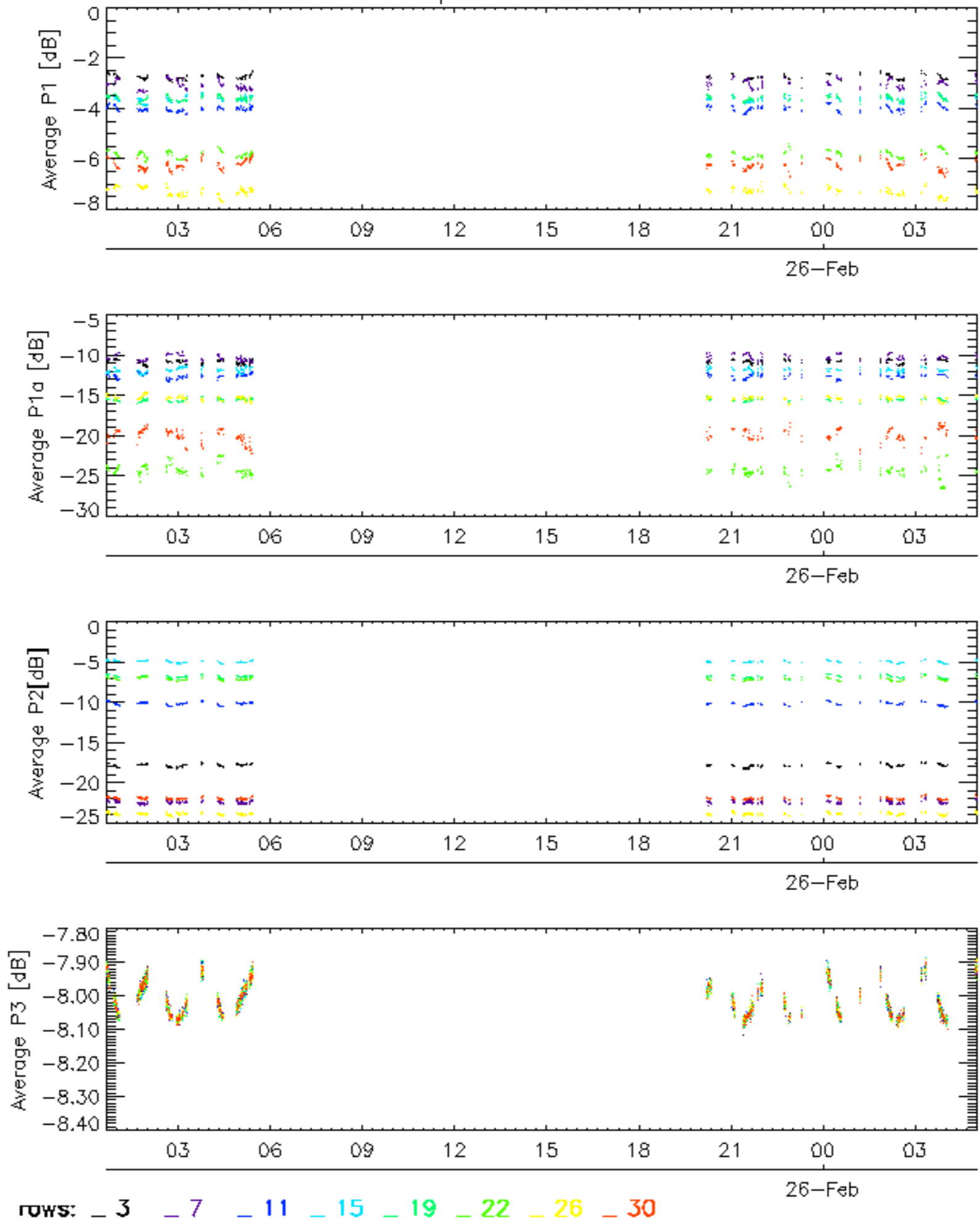
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

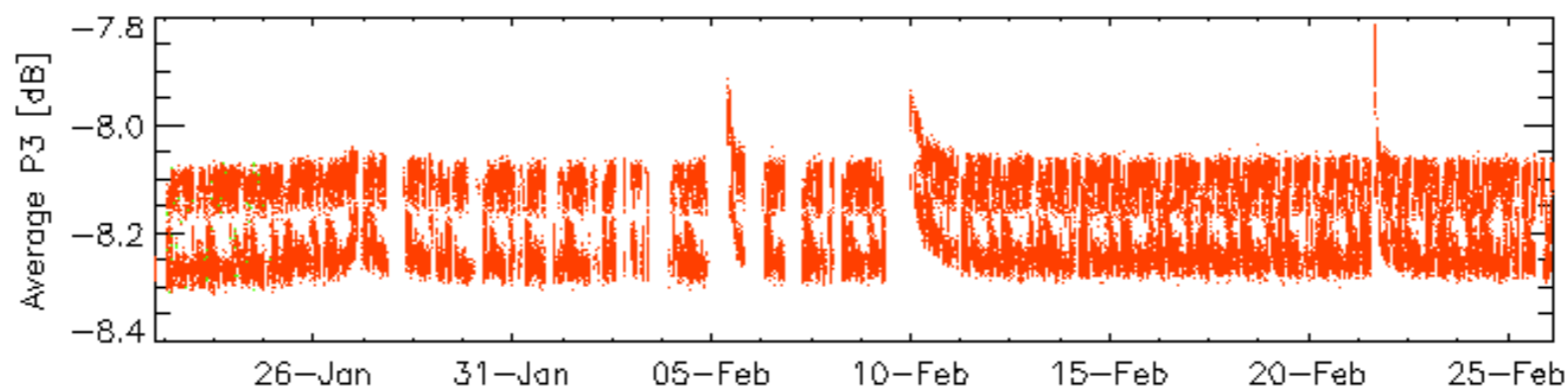
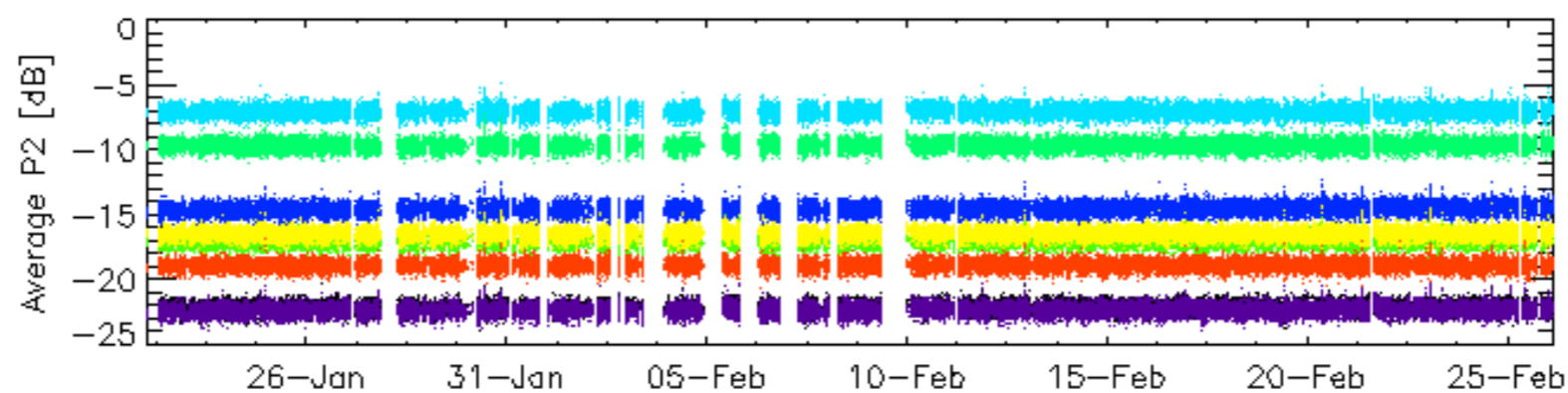
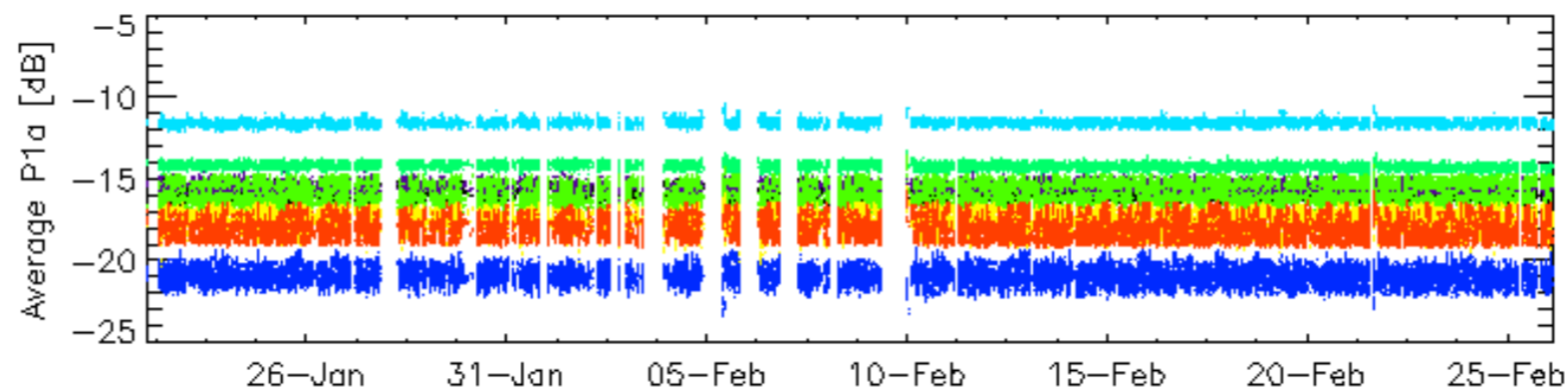
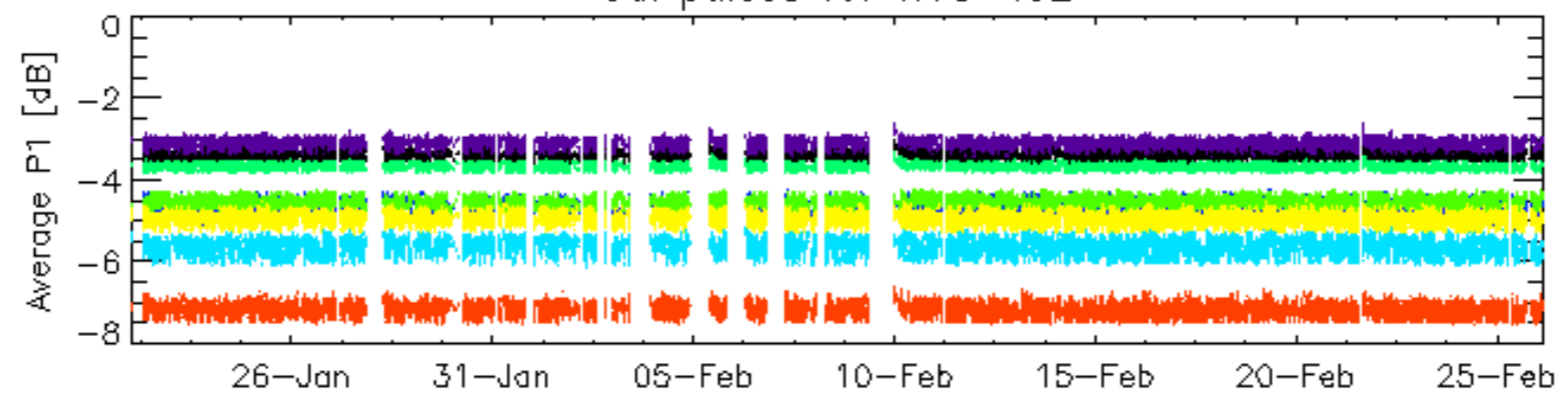


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

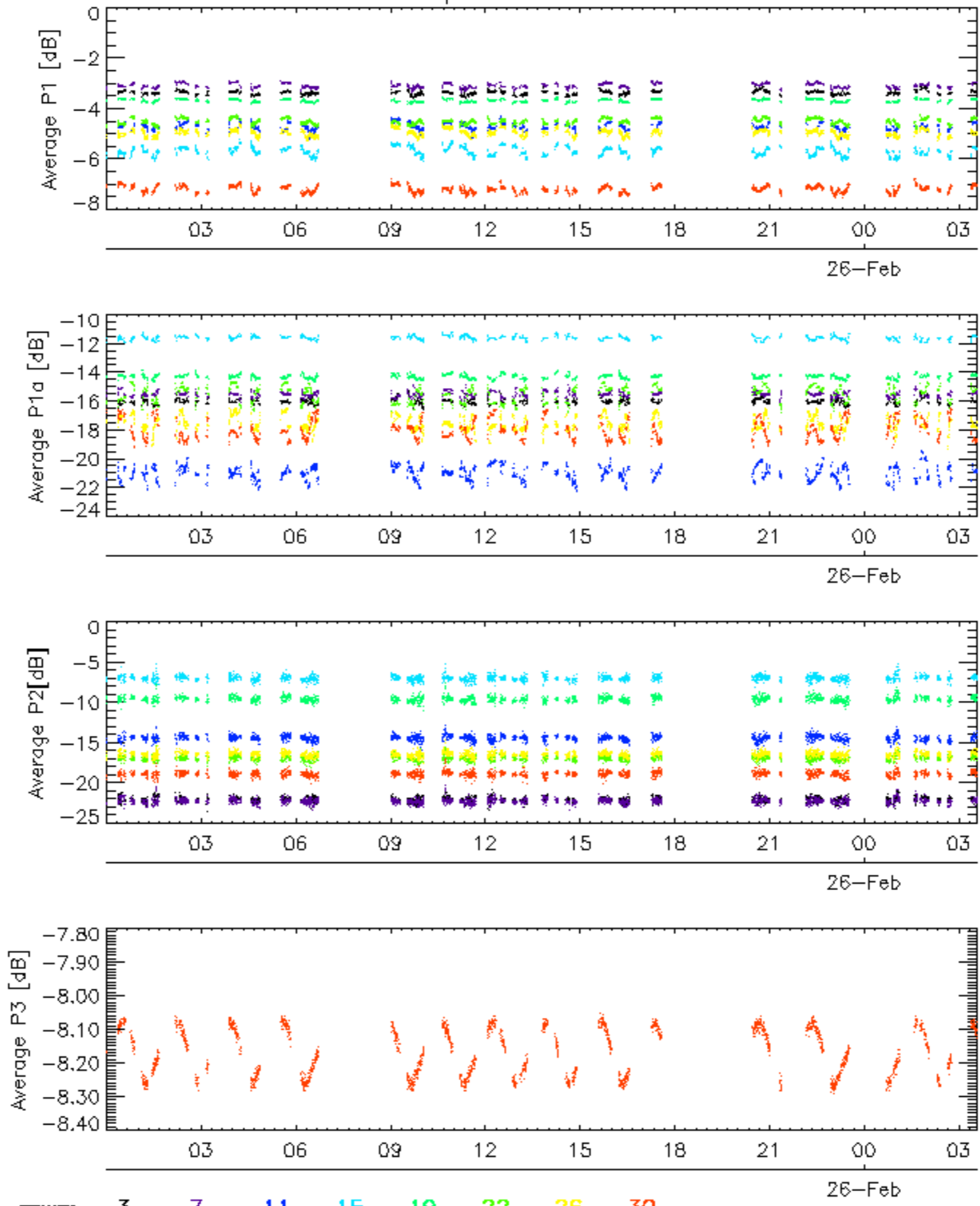


Cal pulses for WVS IS2



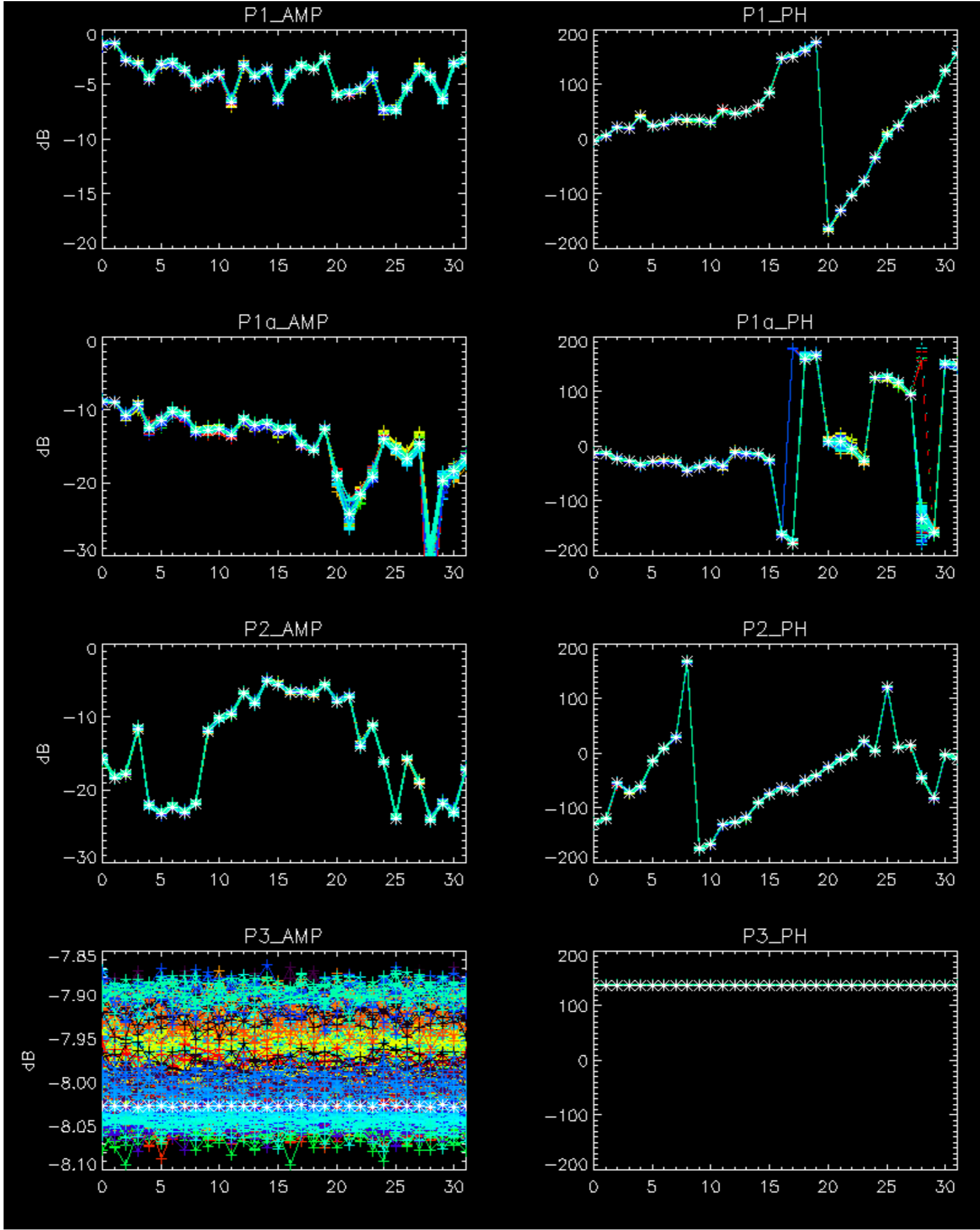
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

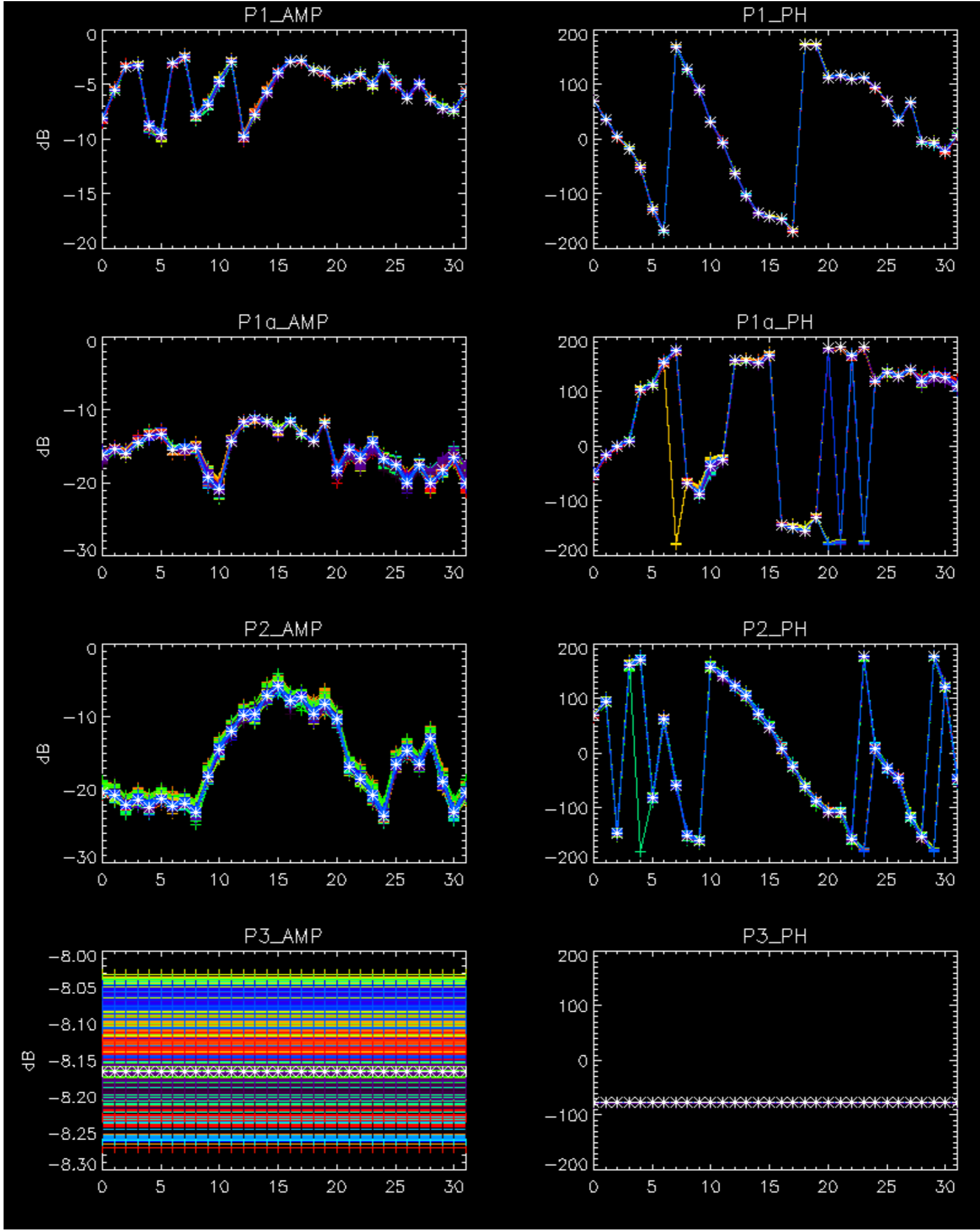
Cal pulses for WVS IS2



rows: 3 7 11 15 19 22 26 30

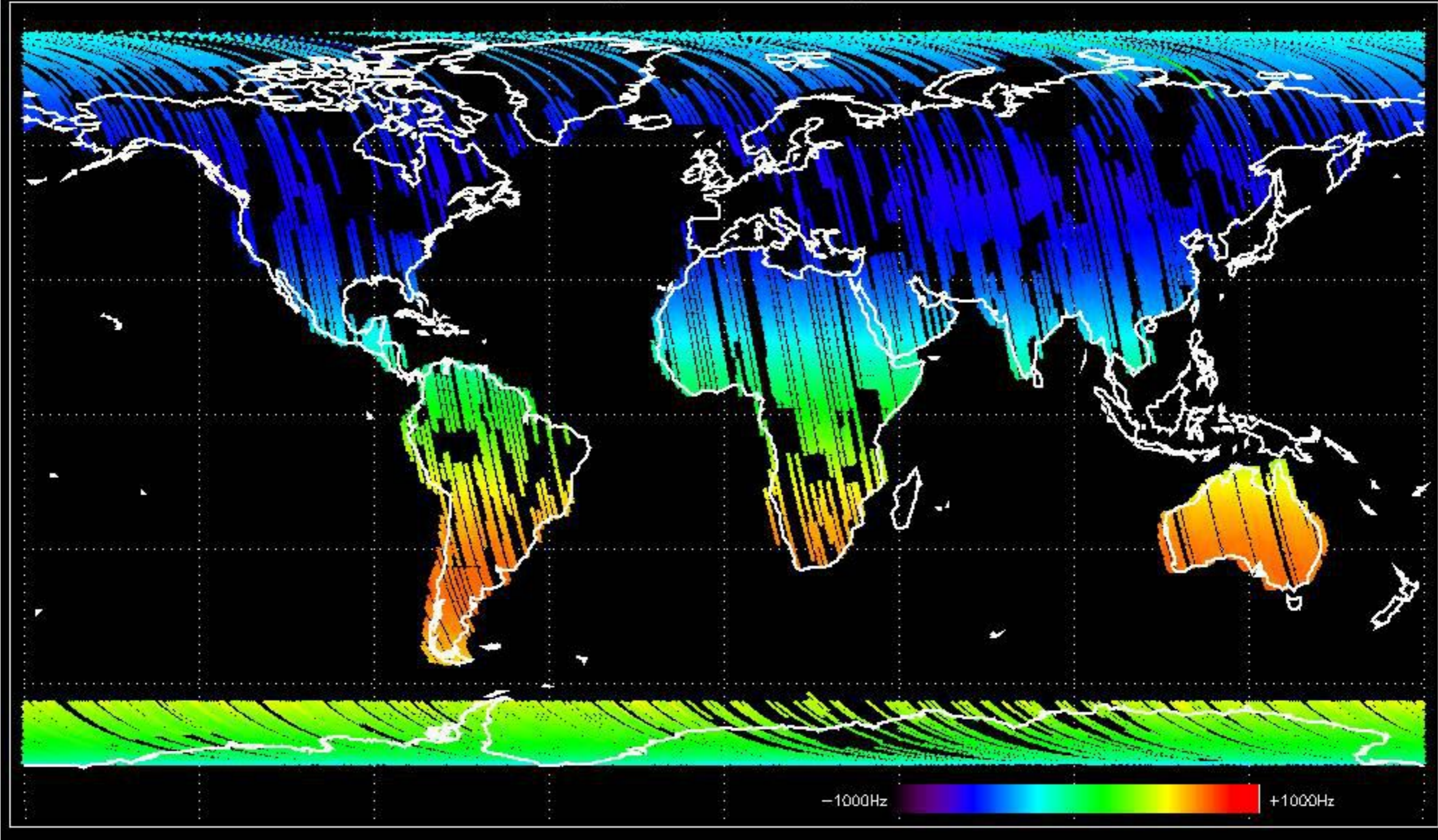
No anomalies observed.



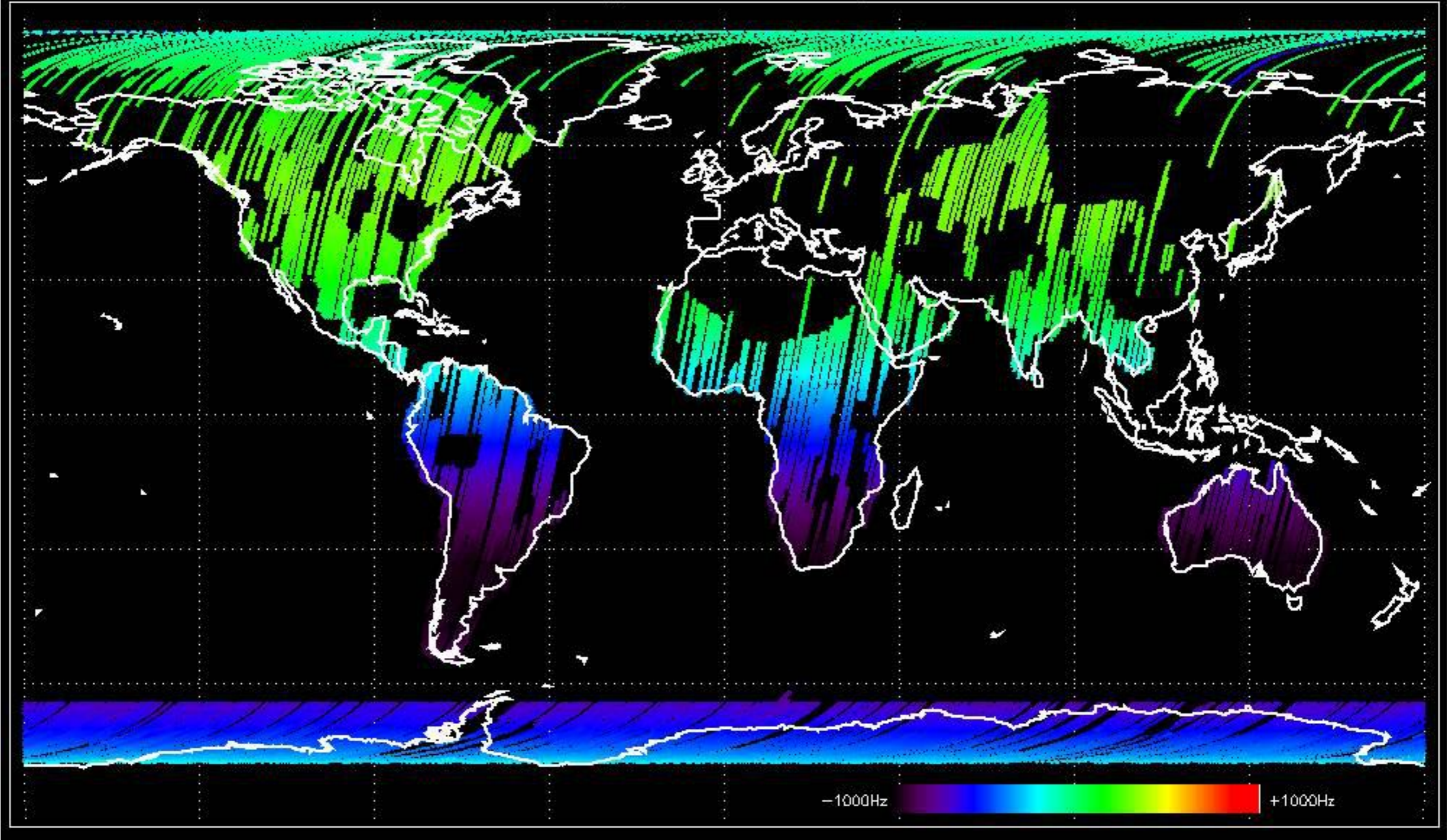


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

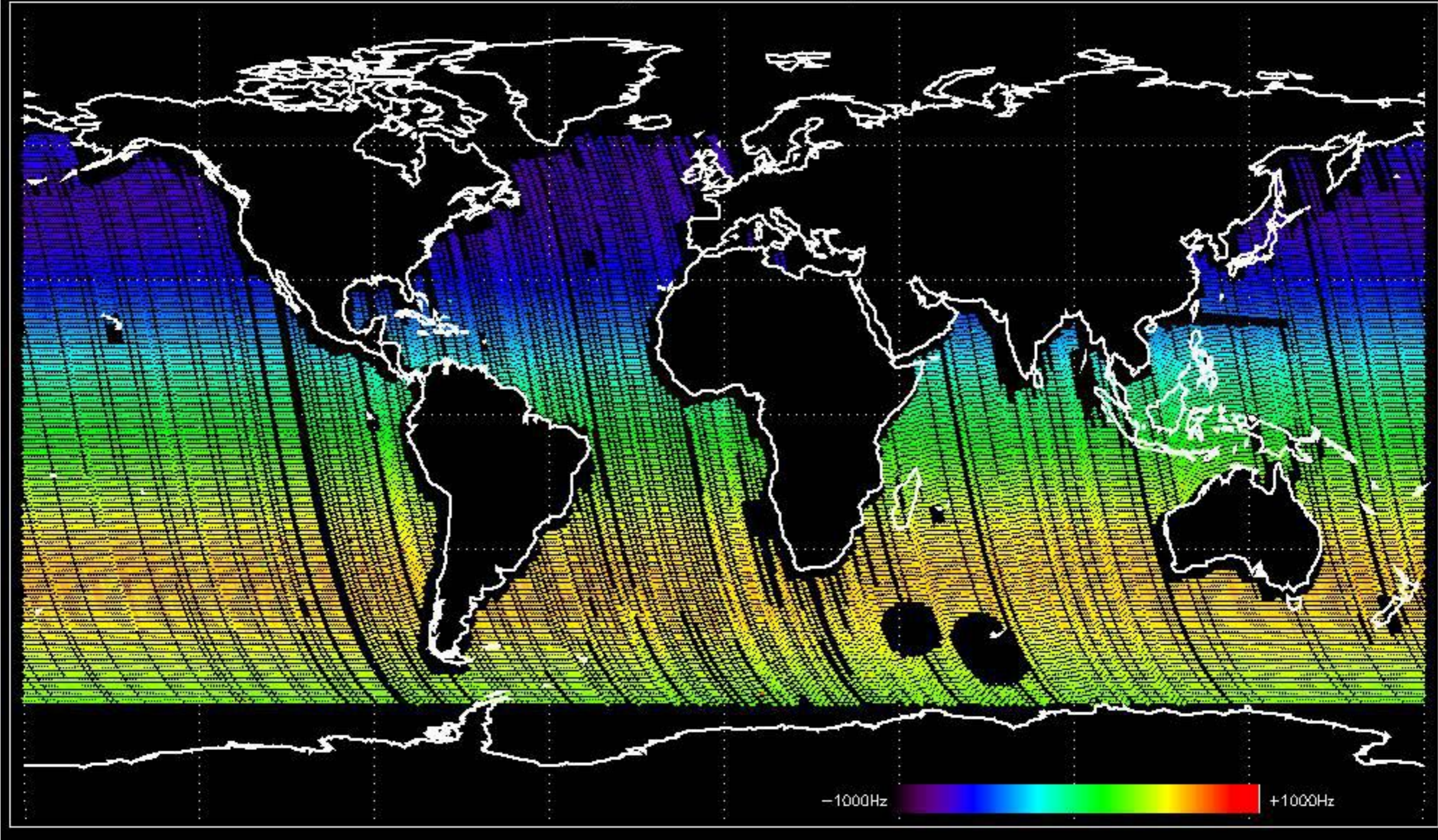
Doppler 'GM1' 'SS1' ascending



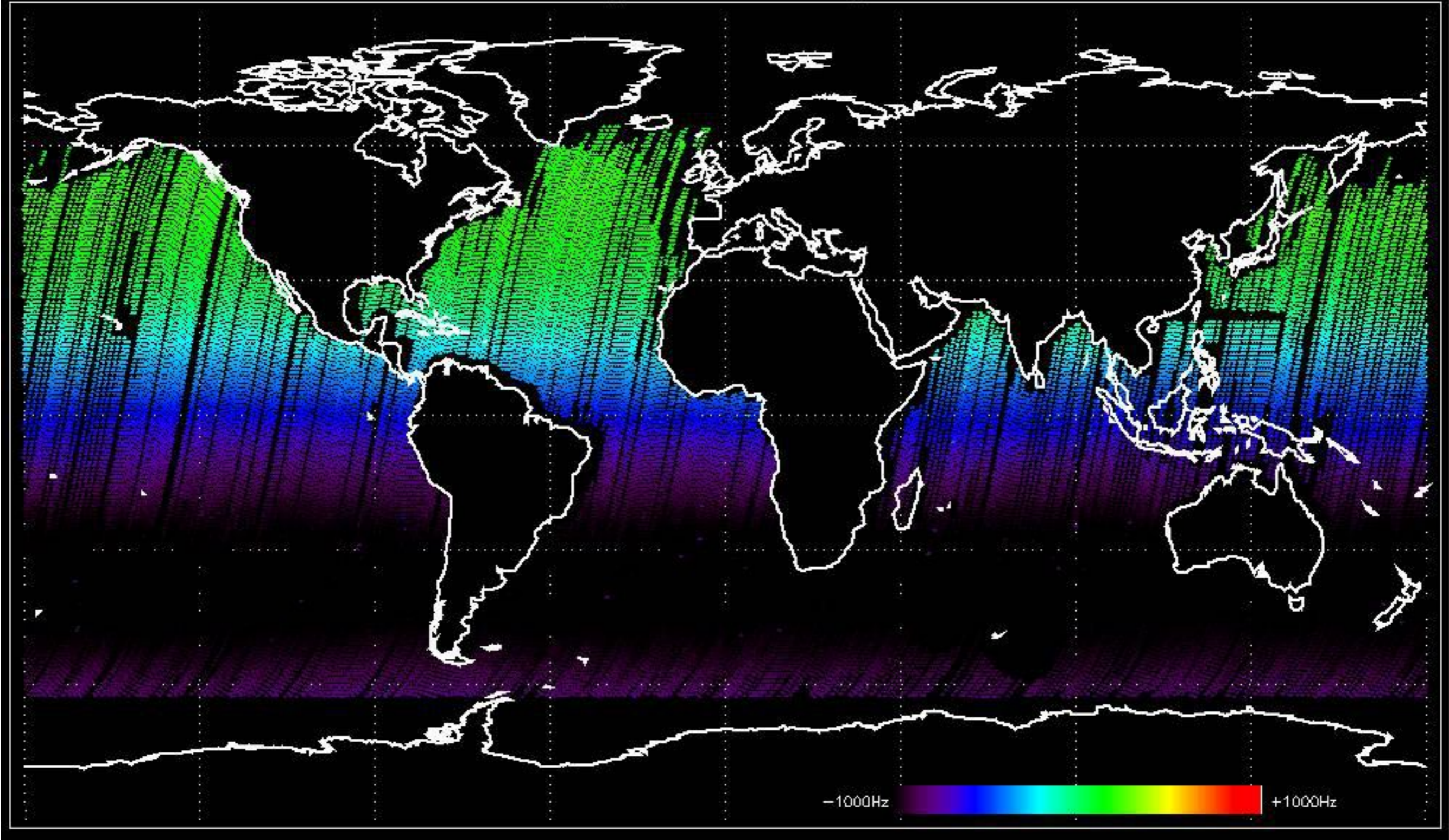
Doppler 'GM1' 'SS1' descending



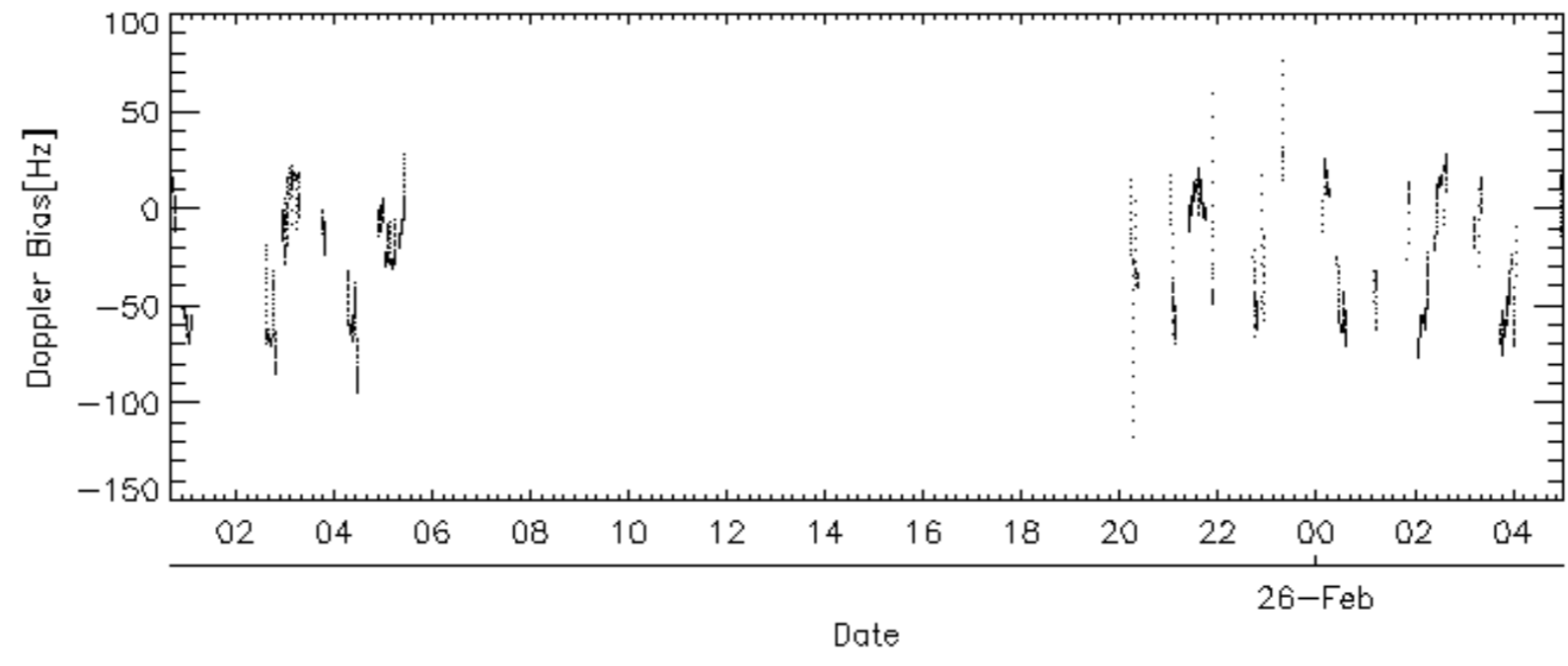
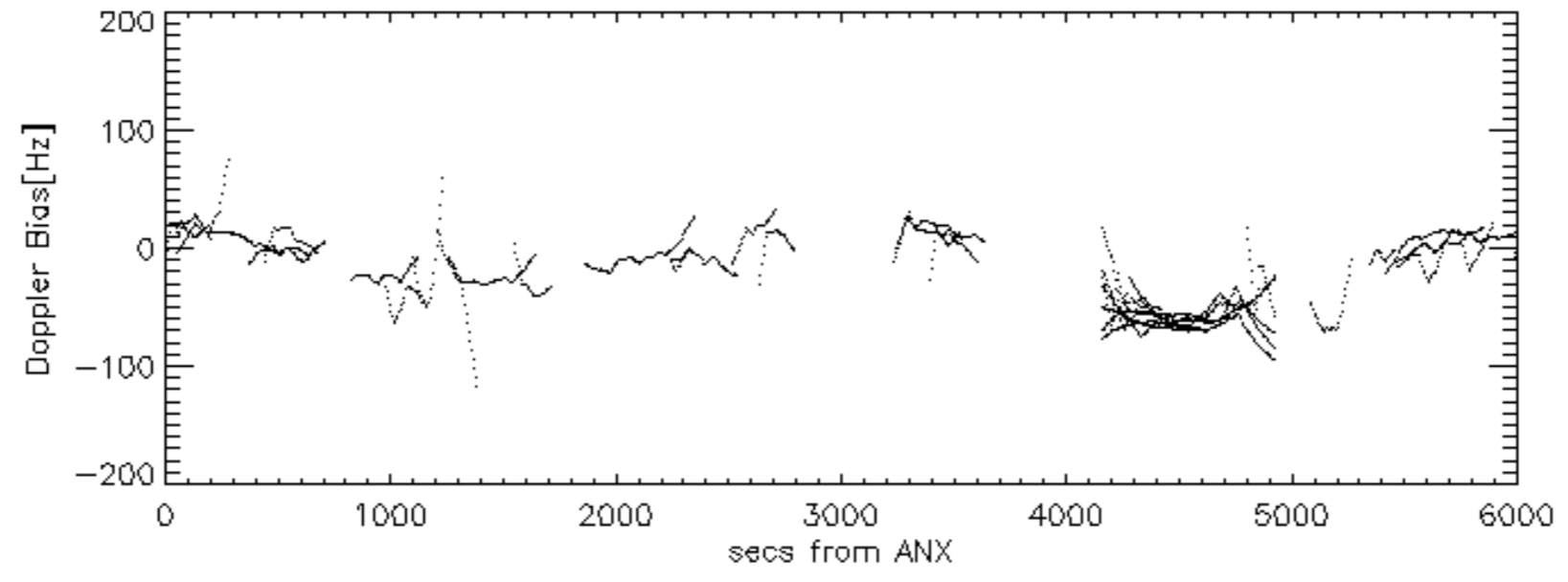
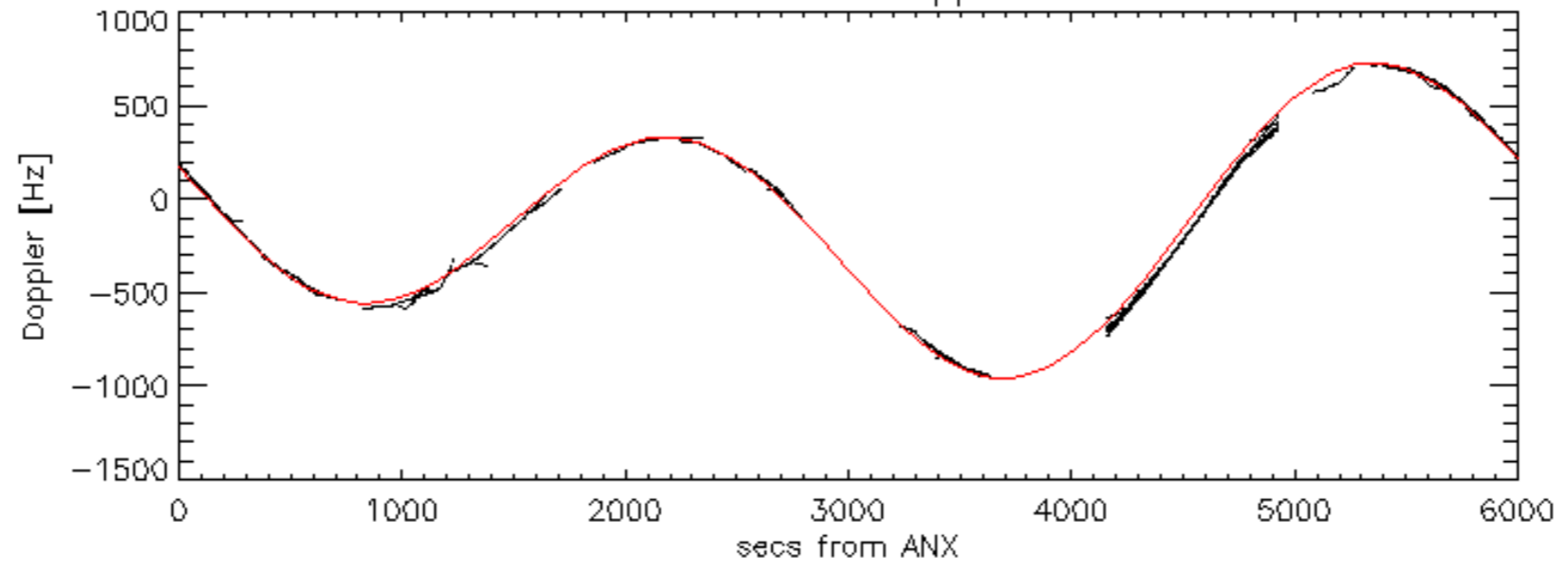
Doppler 'WVS' 'IS2' ascending

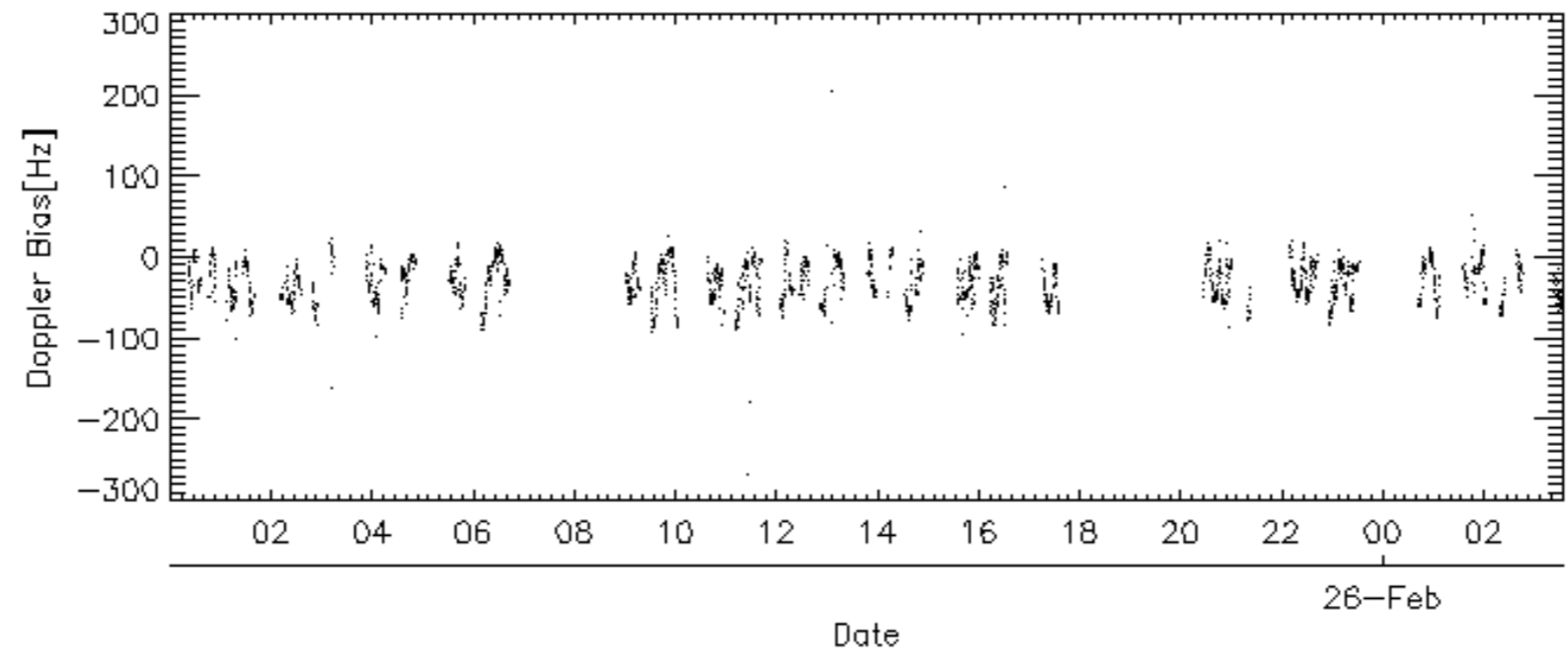
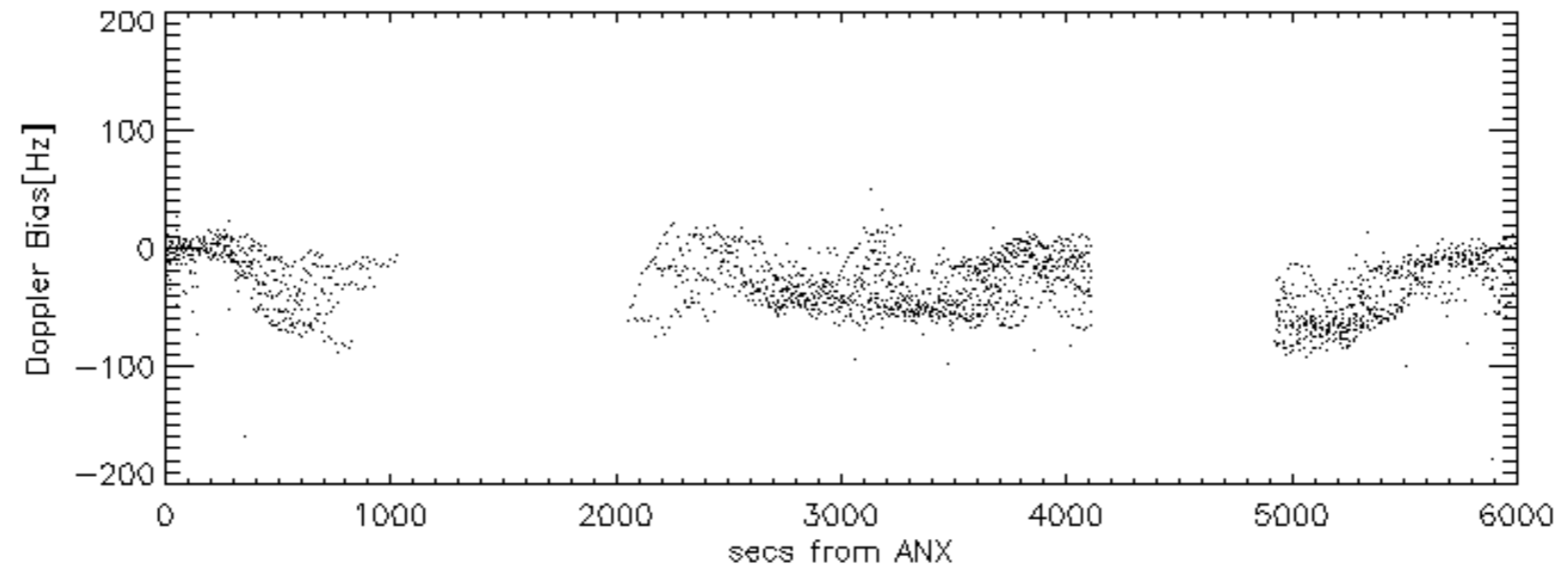
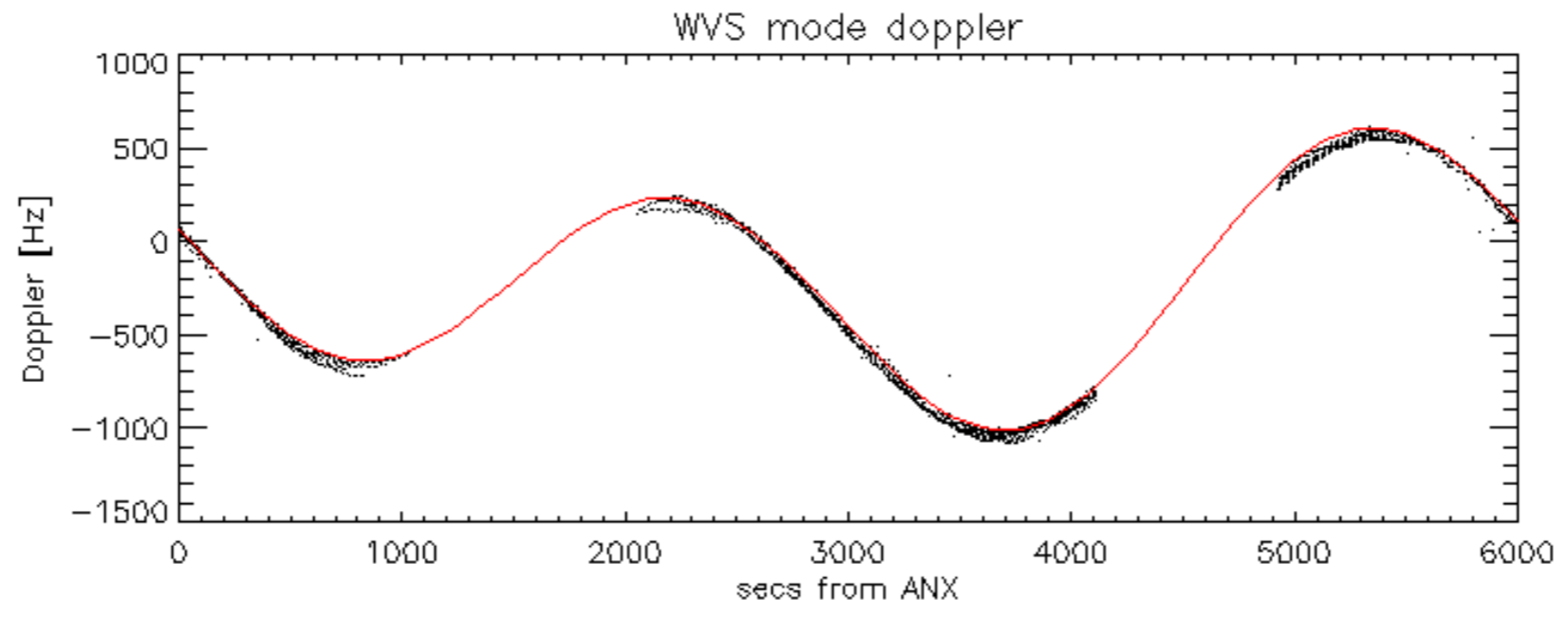


Doppler 'WVS' 'IS2' descending

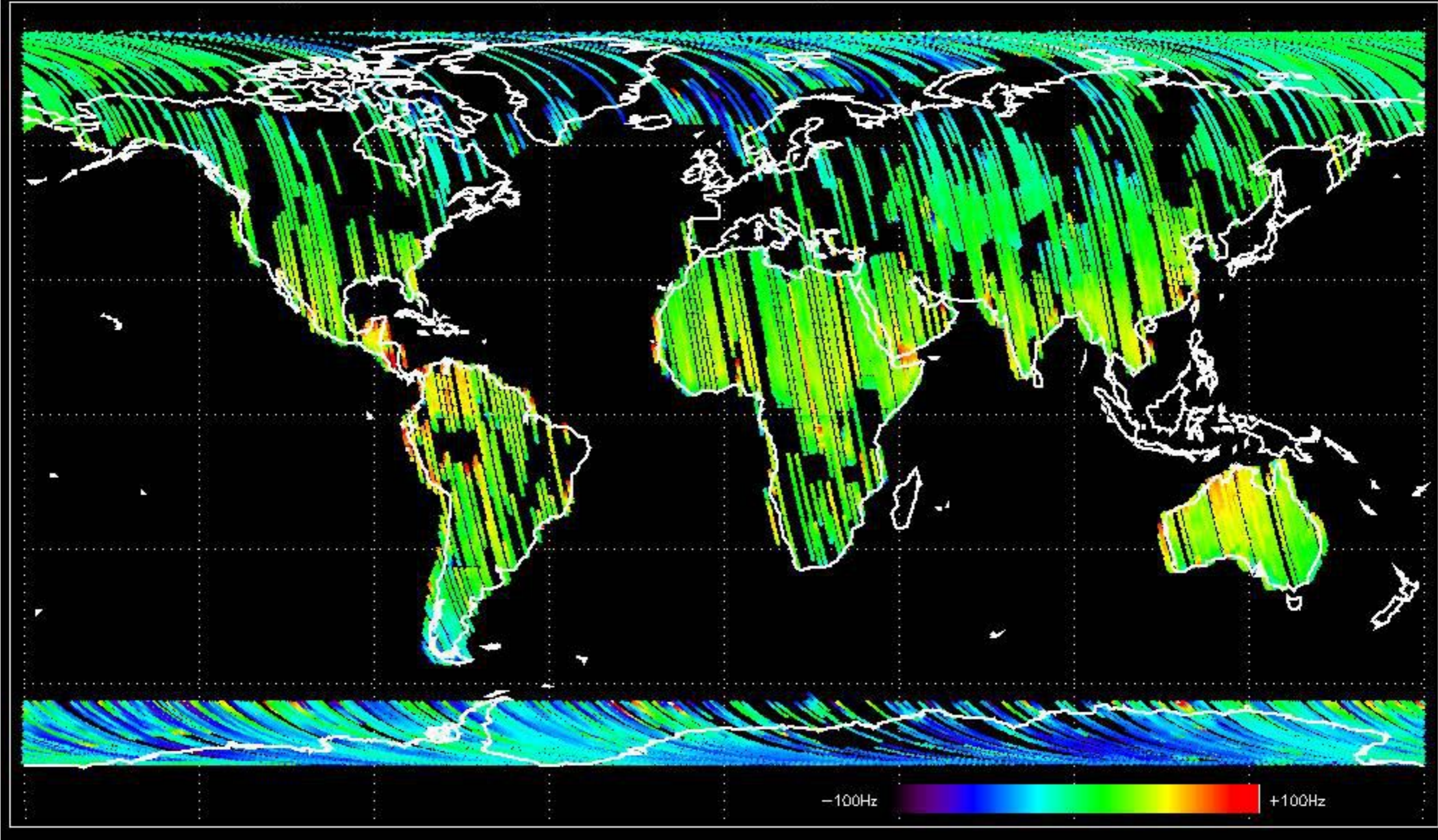


GM1 mode doppler

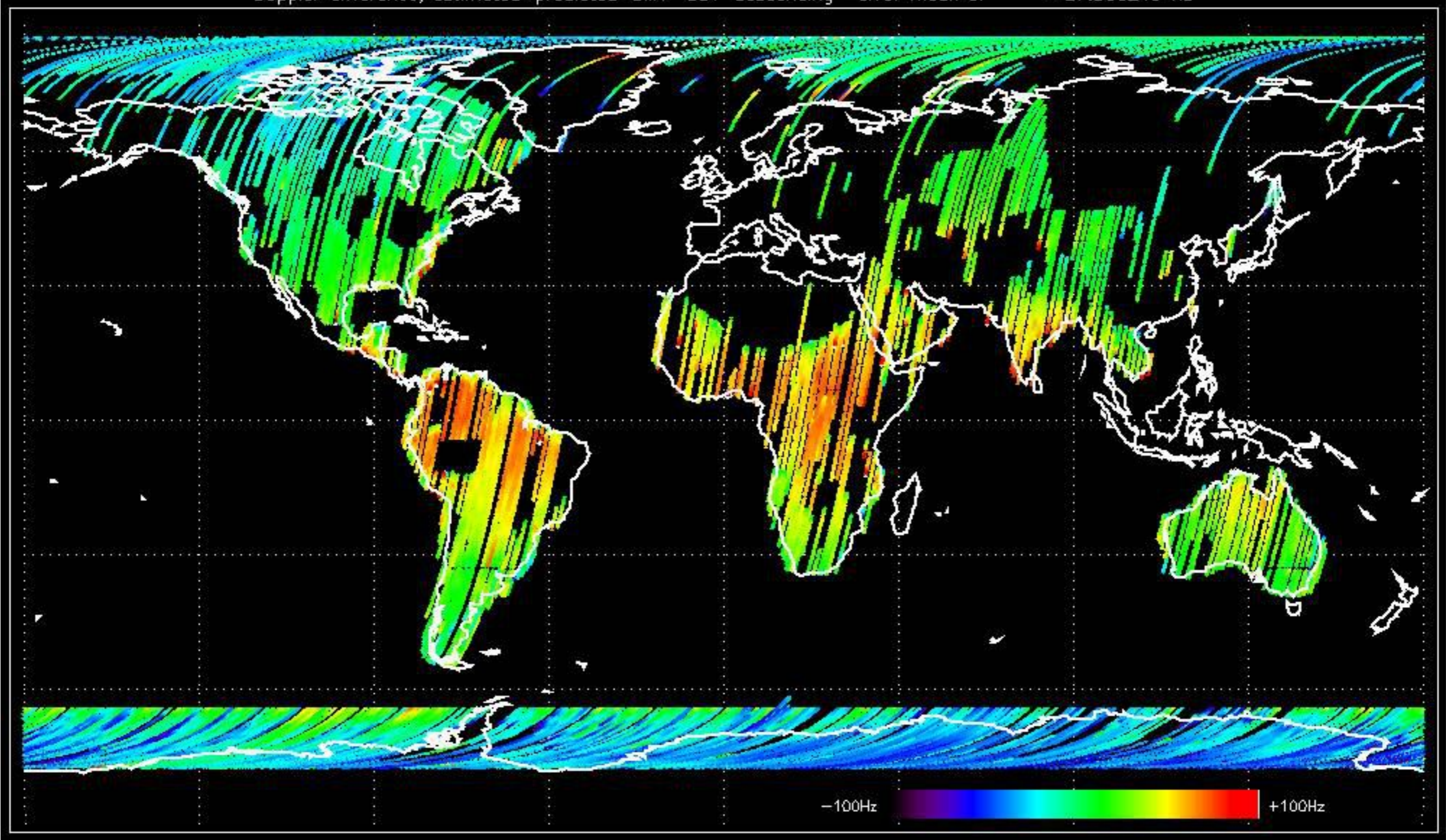




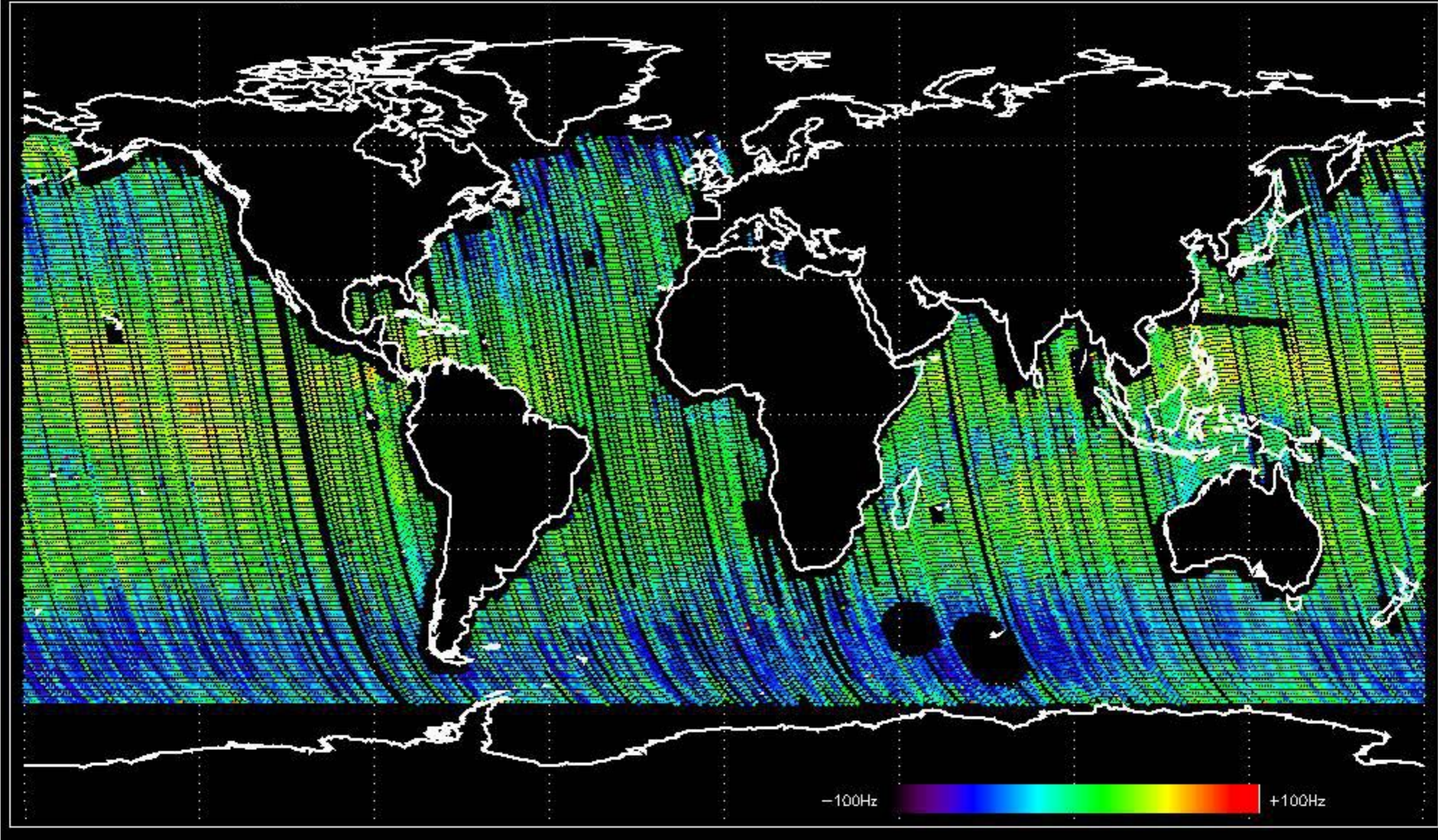
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.116849 Hz



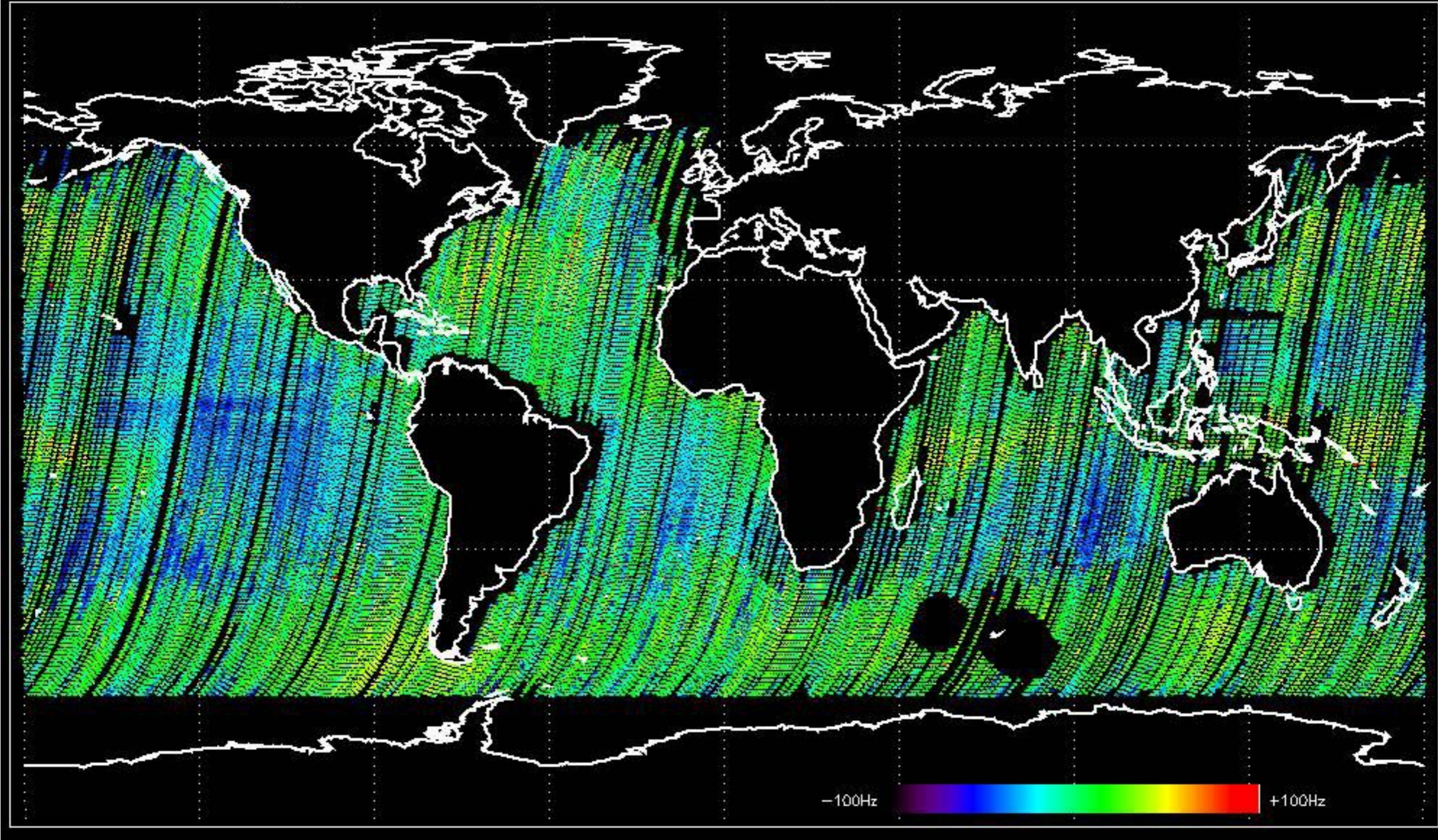
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -27.900243 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.037256 Hz

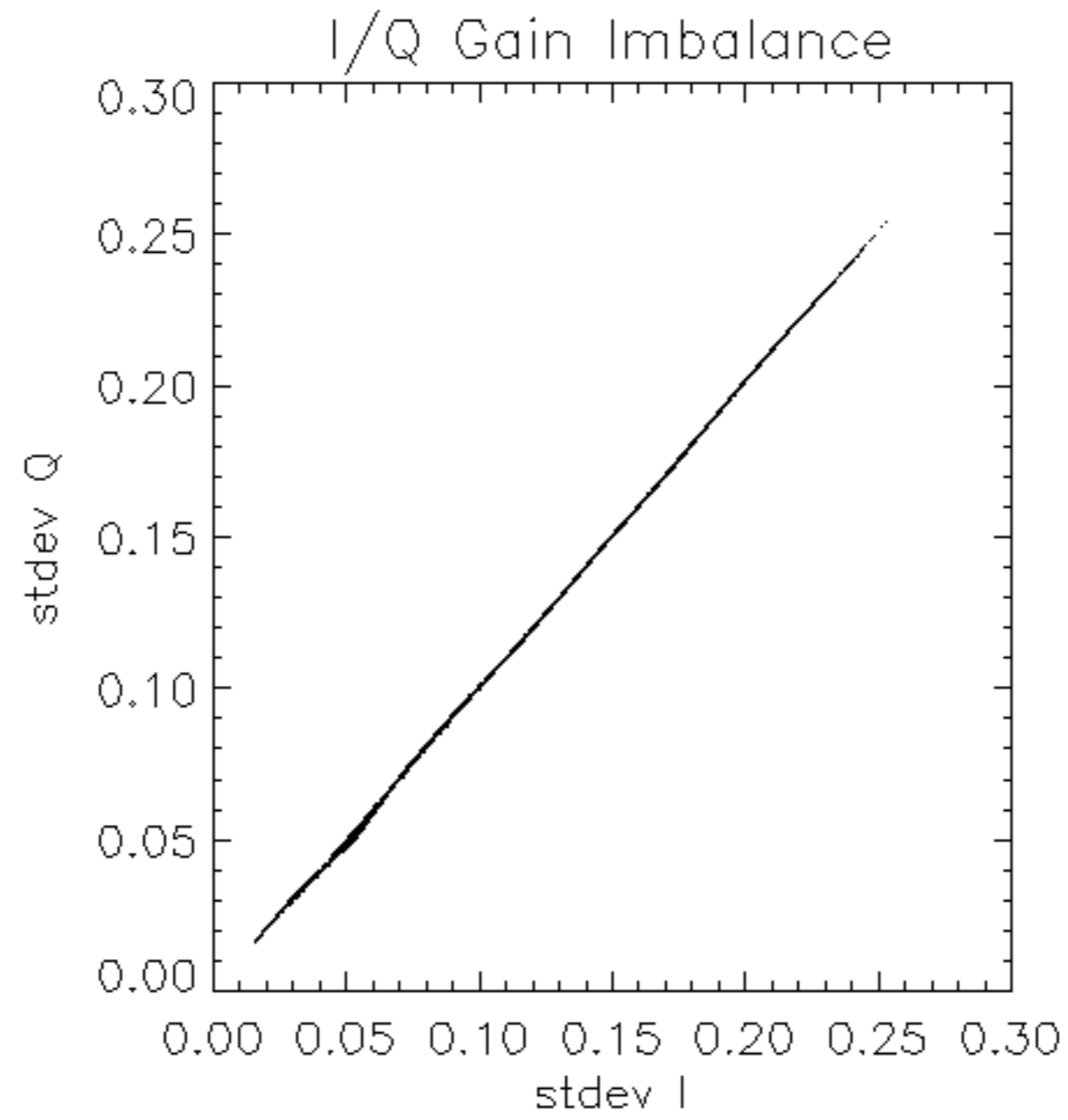


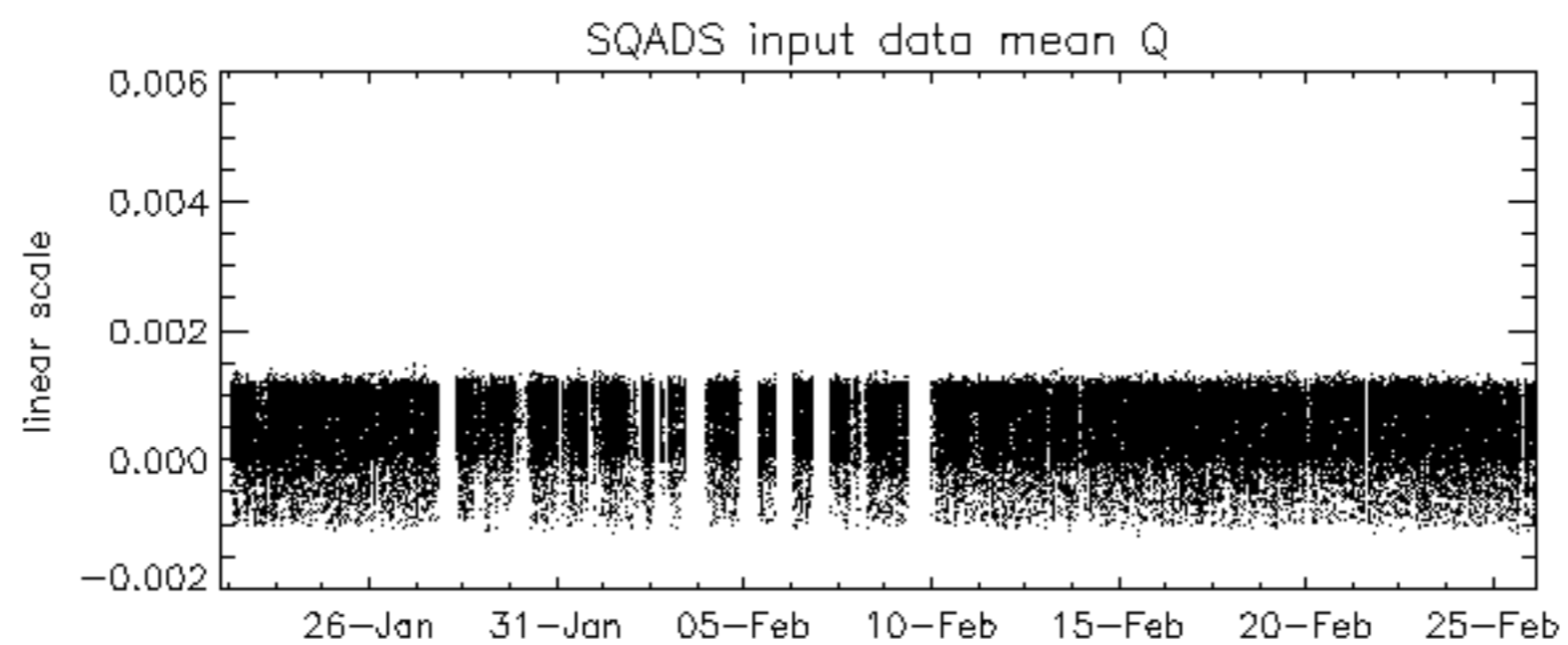
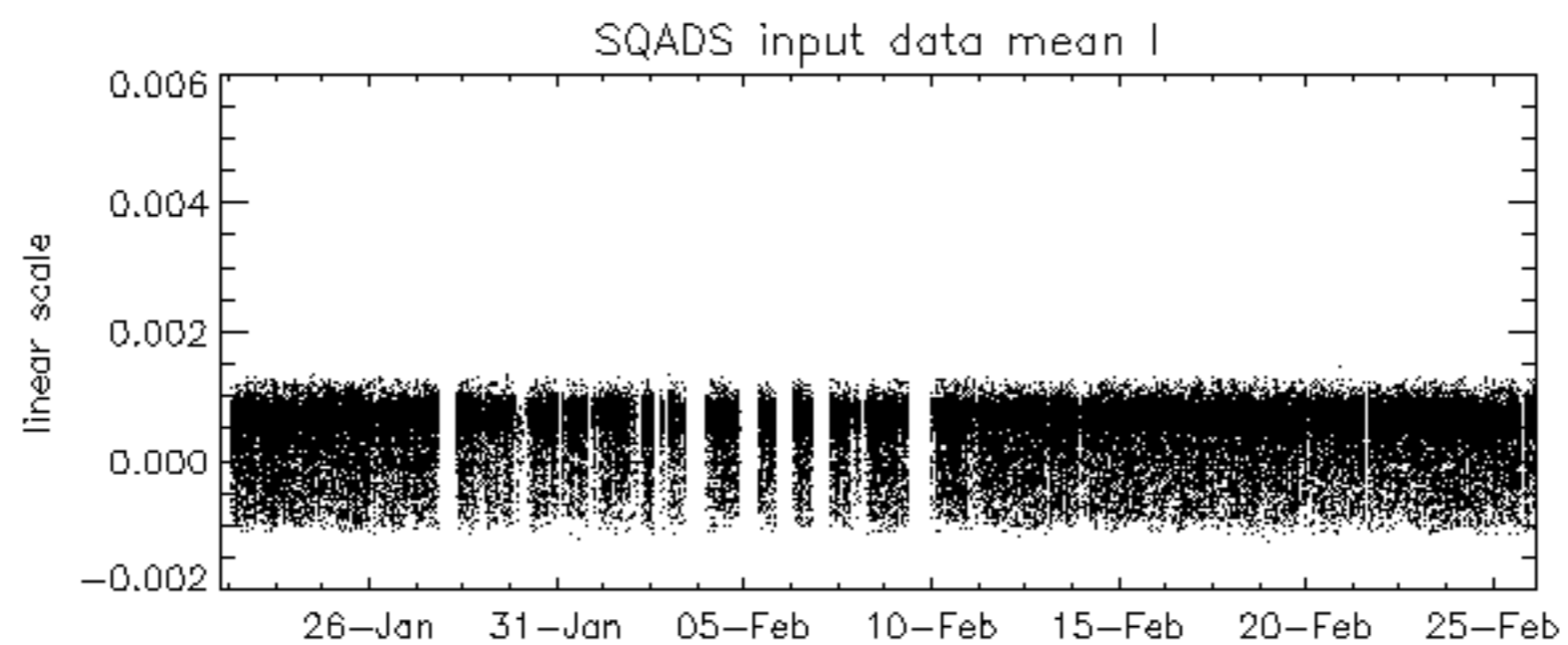
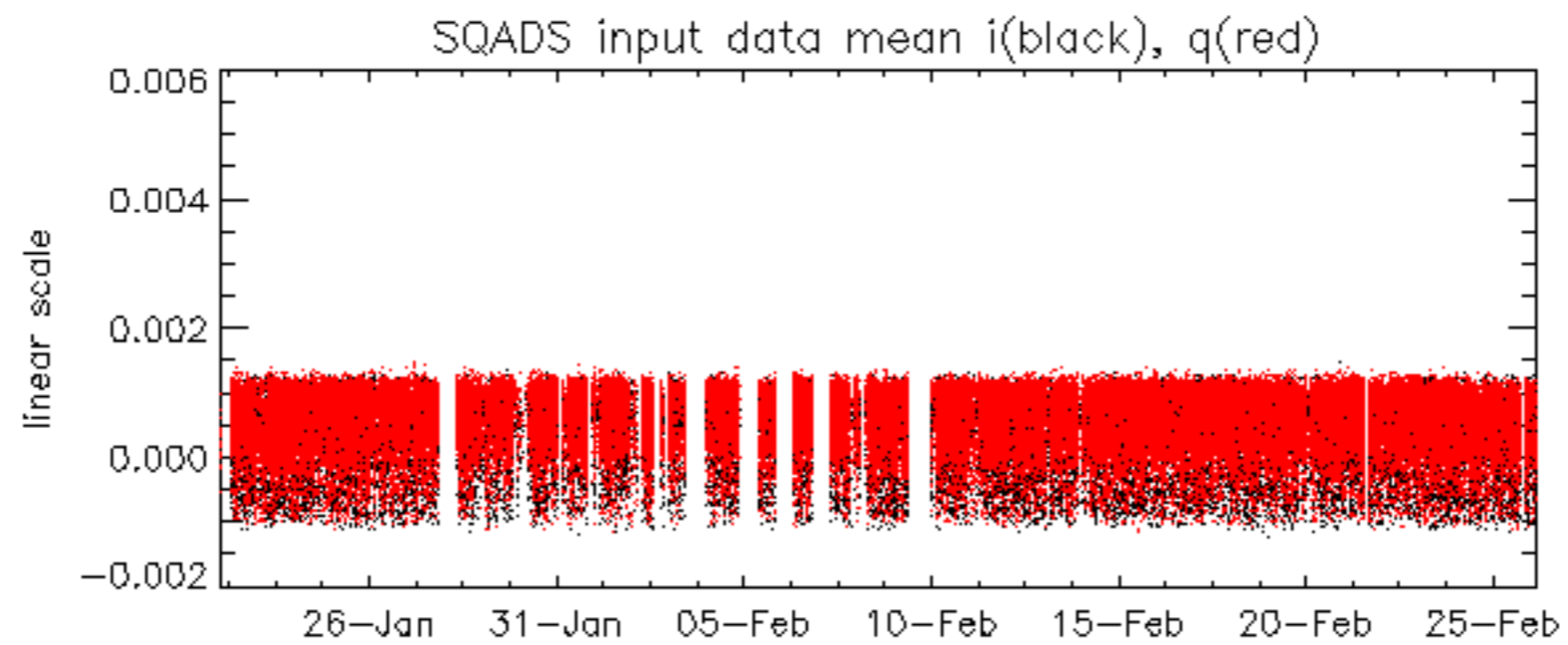
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -33.412686 Hz

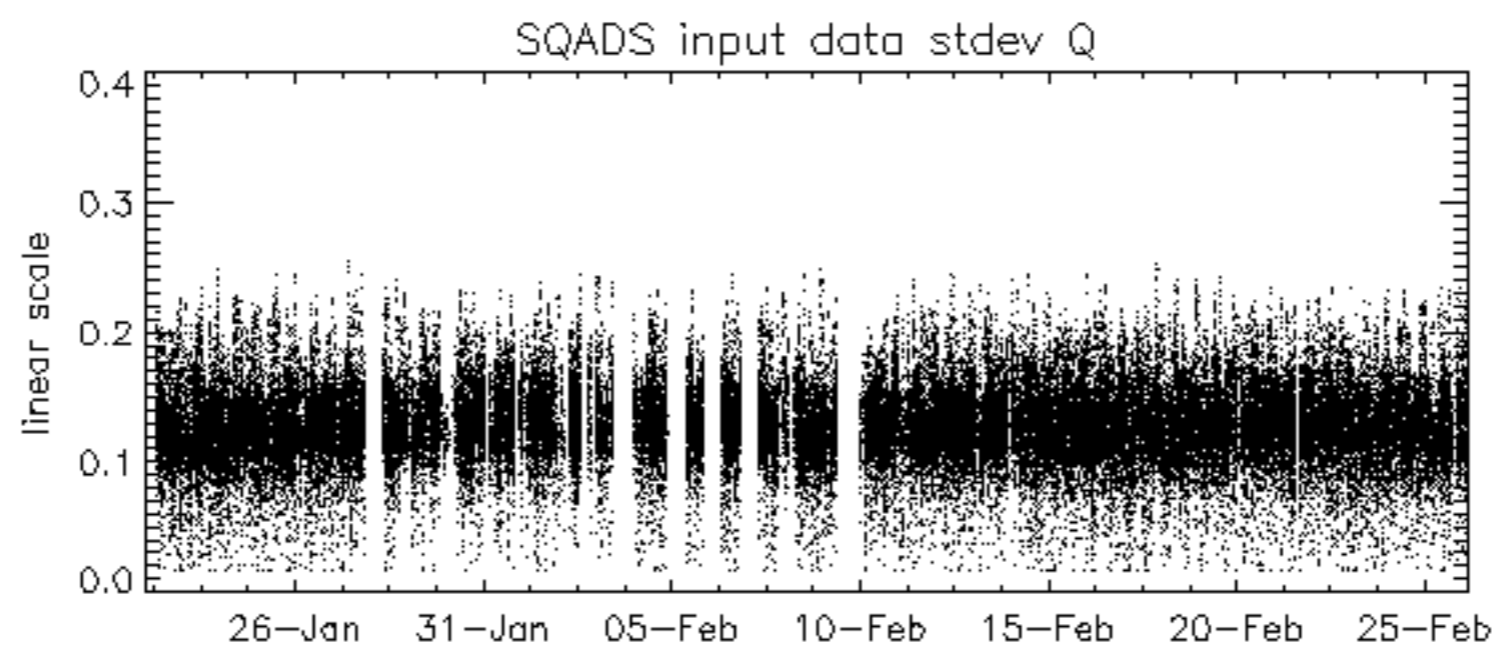
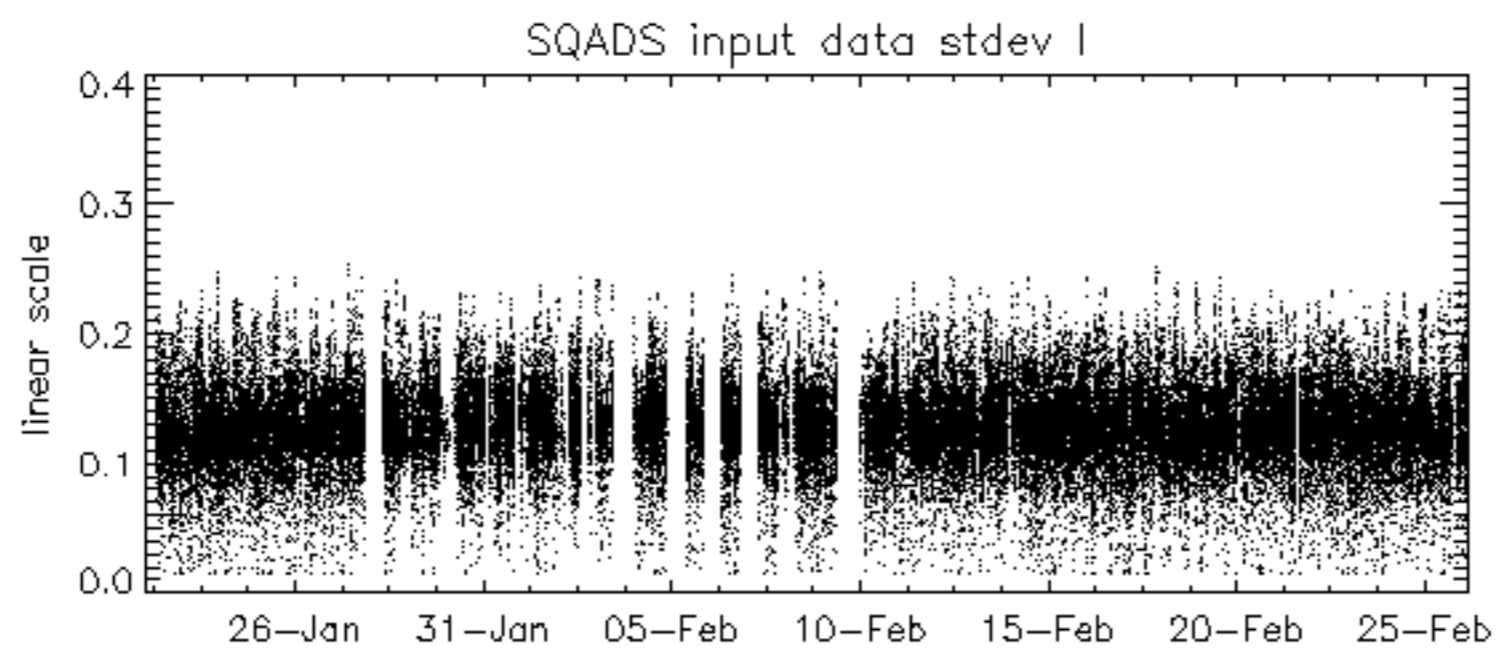
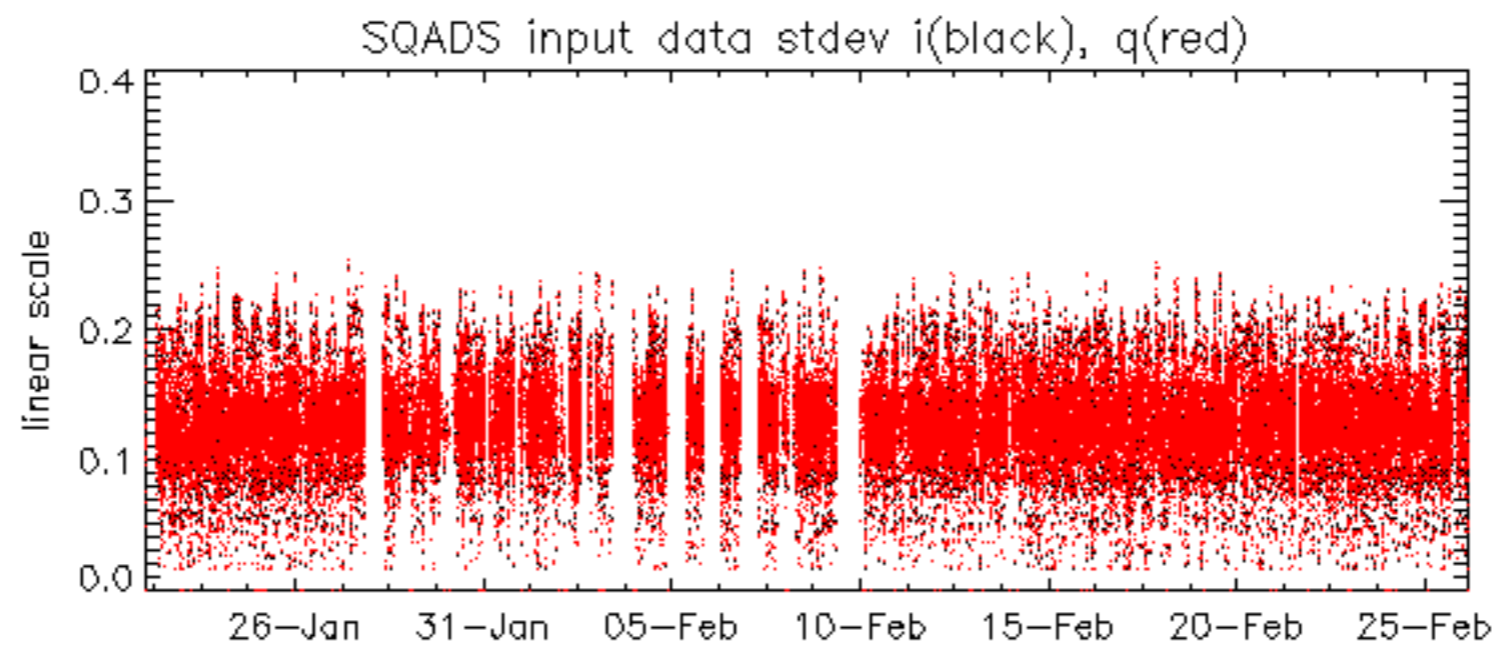


No anomalies observed on available MS products:

No anomalies observed.



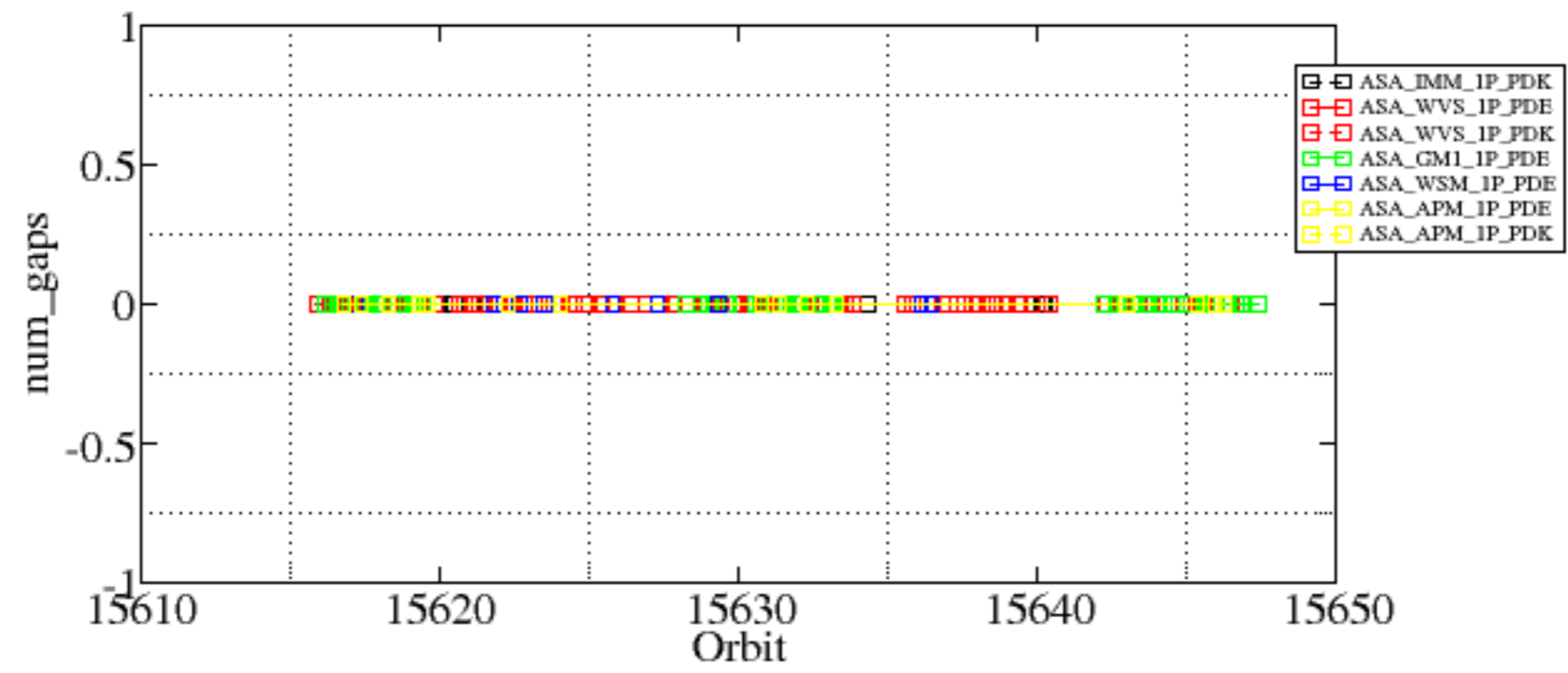


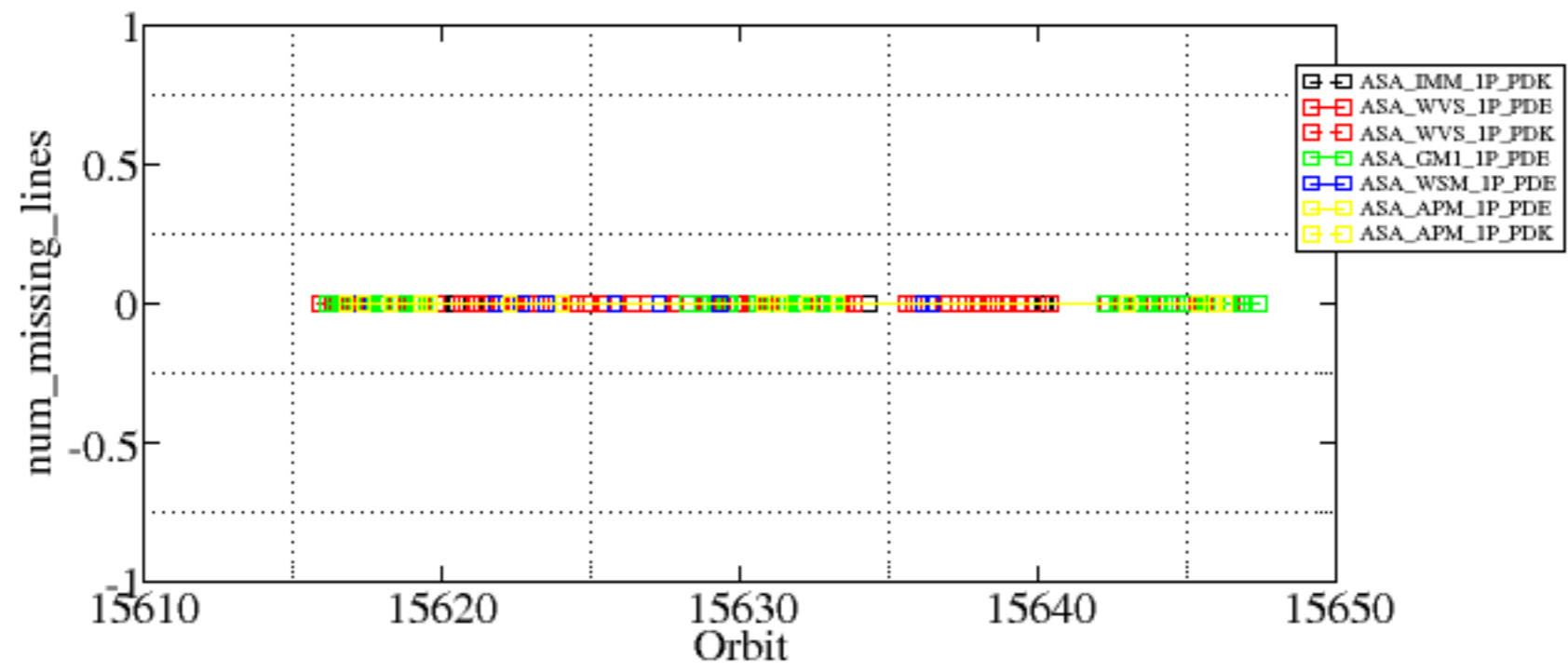


Summary of analysis for the last 3 days 2005022[456]

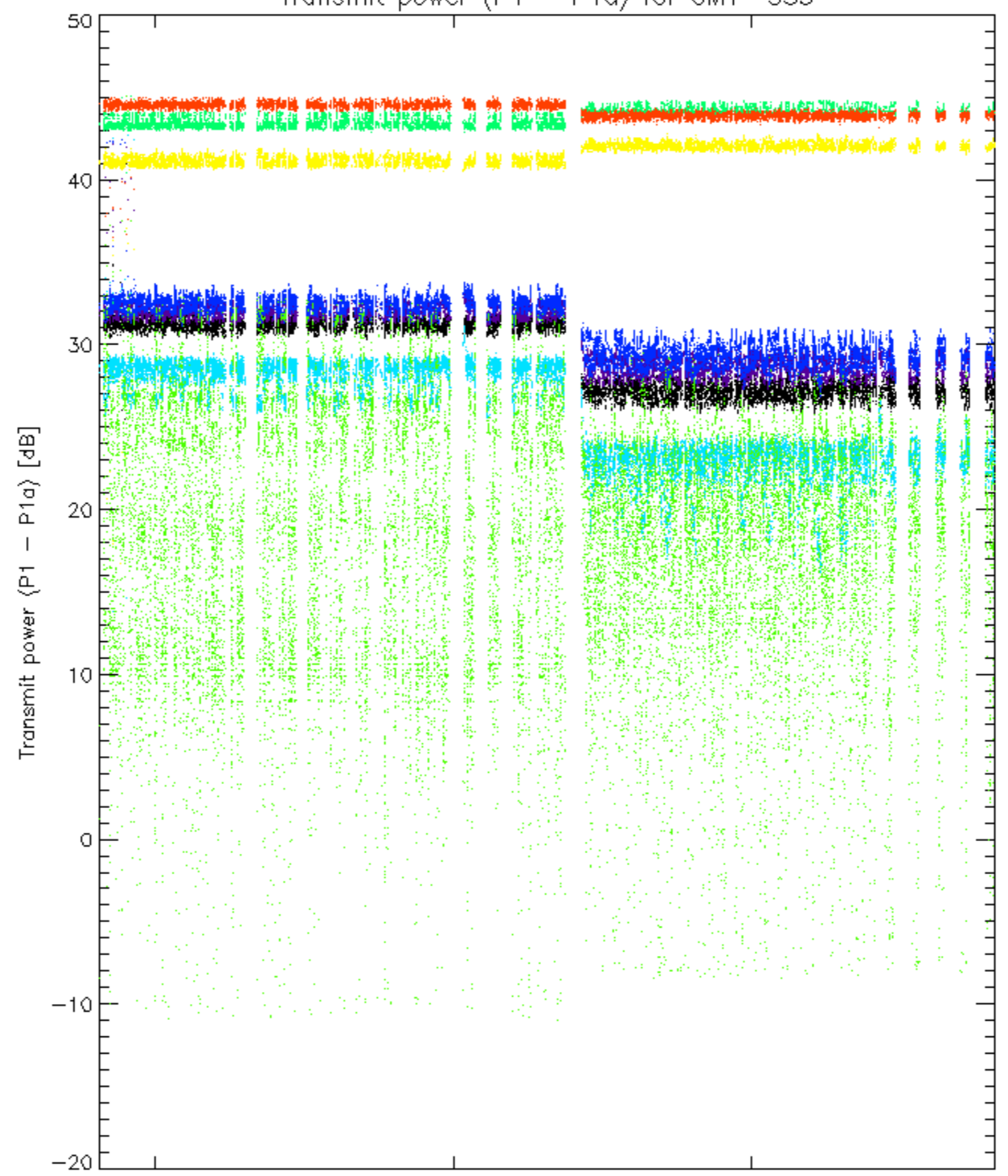
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines



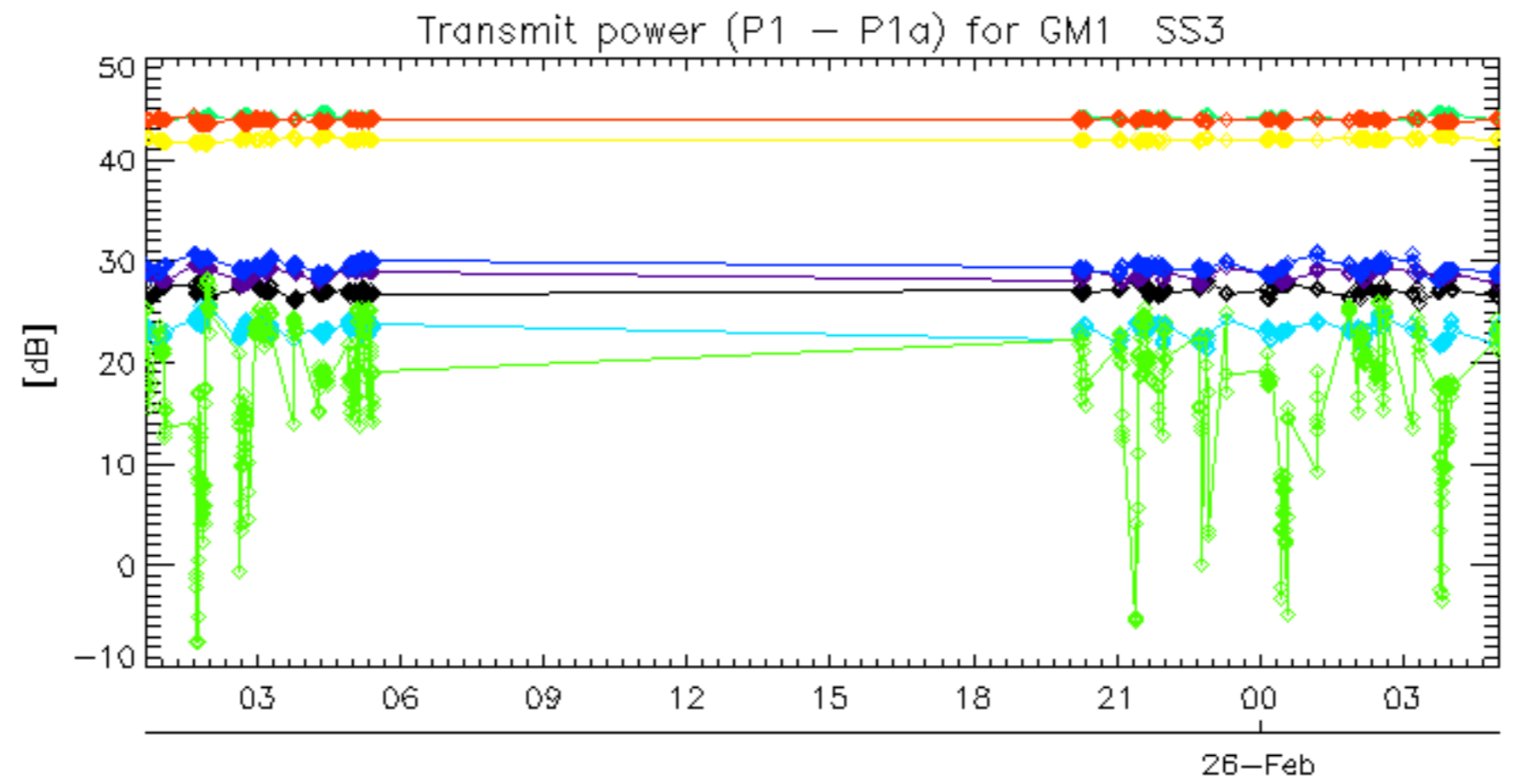


Transmit power (P1 - P1a) for GM1 SS3

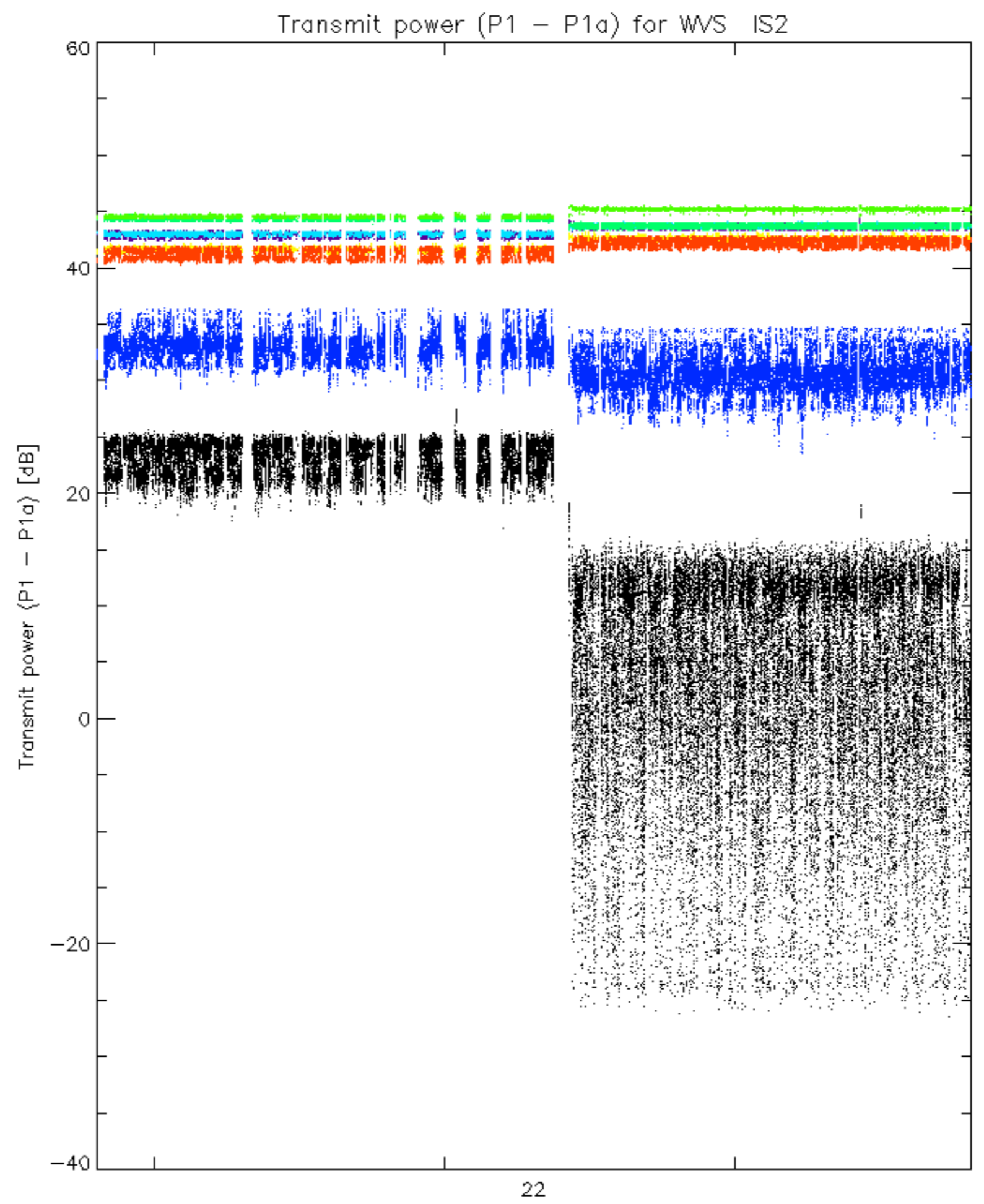


22

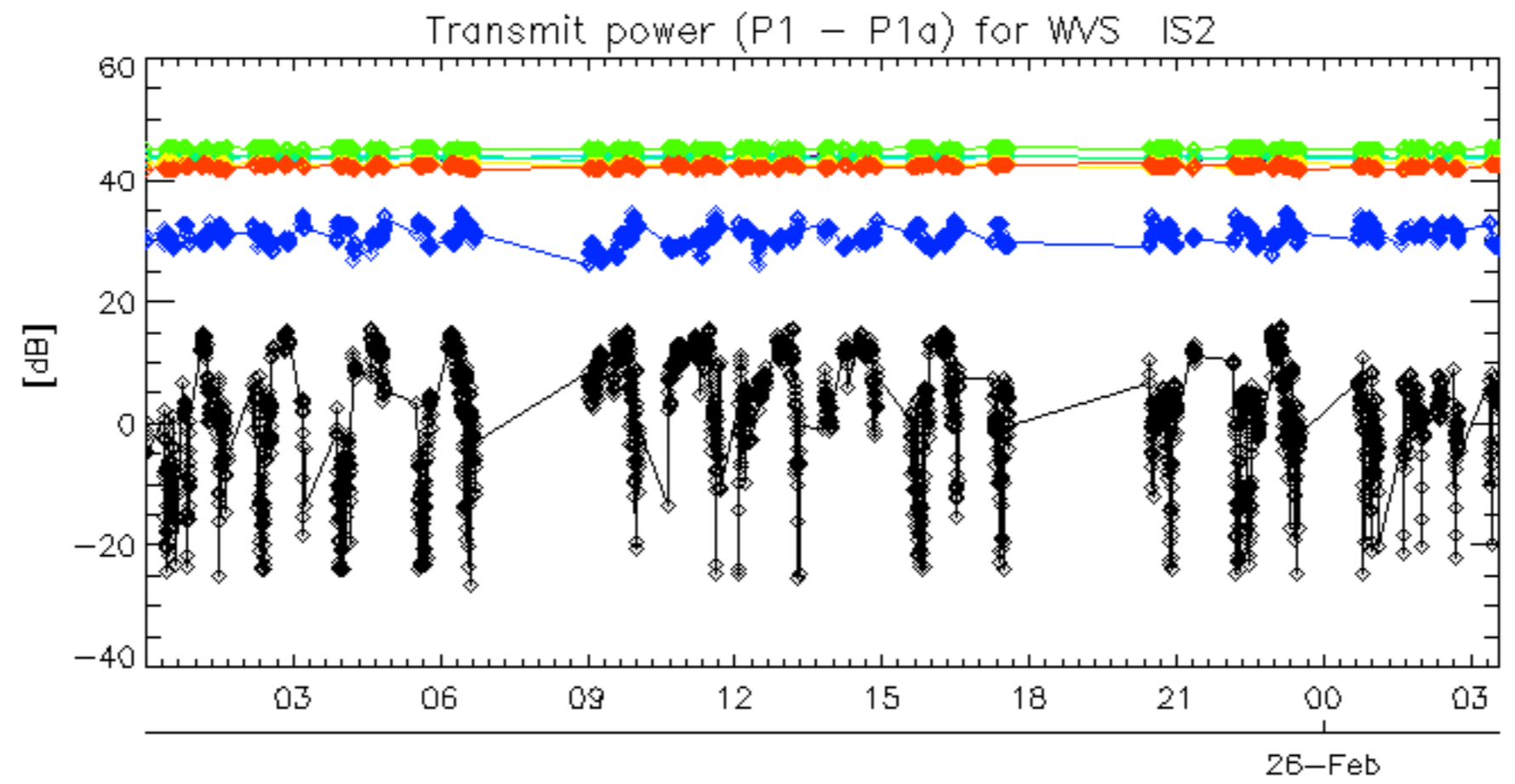
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.