

PRELIMINARY REPORT OF 050212

last update on Sat Feb 12 12:21:09 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 2005-02-11 00:00:00 to 2005-02-12 12:21:09

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	35	44	3	4	2
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	35	44	3	4	2
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	35	44	3	4	2
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	35	44	3	4	2

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	30	30	4	12	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	30	30	4	12	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	30	30	4	12	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	30	30	4	12	4

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	20050211 063526
H	20050212 060349

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.396866	0.008519	0.053655
7	P1	-3.079029	0.007889	-0.001257
11	P1	-4.662355	0.019585	-0.047942
15	P1	-5.643982	0.034098	-0.028040
19	P1	-3.663670	0.004327	0.008205
22	P1	-4.552660	0.014482	0.040150
26	P1	-4.940712	0.012978	0.001252
30	P1	-7.148837	0.016764	-0.027922
3	P1	-15.907910	0.098282	-0.025915
7	P1	-15.510655	0.067514	-0.052570
11	P1	-20.870642	0.247005	-0.172898
15	P1	-11.602407	0.058672	0.110790
19	P1	-14.183362	0.024458	-0.028103
22	P1	-15.875480	0.379297	0.278151
26	P1	-17.605806	0.216713	0.082976
30	P1	-17.928951	0.357006	0.023661

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.213285	0.086050	0.178932
7	P2	-22.401768	0.109195	0.165735
11	P2	-14.626913	0.102506	0.176249
15	P2	-7.095832	0.096990	0.073847
19	P2	-9.683547	0.096109	0.068423
22	P2	-17.020609	0.094642	0.145089
26	P2	-16.481503	0.093885	0.068185
30	P2	-18.904402	0.080509	0.038312

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.181711	0.006015	0.040180
7	P3	-8.181711	0.006015	0.040180
11	P3	-8.181711	0.006015	0.040180
15	P3	-8.181711	0.006015	0.040180
19	P3	-8.181711	0.006015	0.040180
22	P3	-8.181711	0.006015	0.040180
26	P3	-8.181662	0.006018	0.040123
30	P3	-8.181662	0.006018	0.040123

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	-2.788087	0.019502	0.078521
7	P1	-2.965345	0.077600	-0.056584
11	P1	-3.958947	0.029543	-0.037737
15	P1	-3.531166	0.027545	-0.034179
19	P1	-3.597112	0.013791	0.016338
22	P1	-5.690676	0.060200	-0.064241
26	P1	-7.093335	0.157469	-0.940399
30	P1	-6.277566	0.043017	0.089143
3	P1	-10.758202	0.091417	0.031333
7	P1	-10.161806	0.191803	-0.116821
11	P1	-12.551950	0.128383	-0.034783
15	P1	-11.763316	0.079650	0.023600
19	P1	-15.586892	0.054017	0.053535
22	P1	-24.089710	1.555872	-0.203706
26	P1	-15.367238	0.404128	-0.882523
30	P1	-20.009869	0.847126	-0.203586

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.919905	0.048172	0.151121
7	P2	-22.455807	0.130882	0.150390
11	P2	-10.425697	0.053357	0.245379
15	P2	-5.009538	0.021422	0.063281
19	P2	-6.886049	0.032764	0.106284
22	P2	-7.196635	0.050737	0.132753
26	P2	-23.892378	0.097776	0.086336
30	P2	-21.949652	0.058114	0.052861

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.015987	0.002565	0.045137
7	P3	-8.016053	0.002571	0.044978
11	P3	-8.016056	0.002572	0.045440
15	P3	-8.016019	0.002565	0.045284
19	P3	-8.016077	0.002585	0.045338
22	P3	-8.016068	0.002564	0.045160
26	P3	-8.015961	0.002575	0.045263
30	P3	-8.016069	0.002568	0.044972

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	0.000471283
	stdev	2.15809e-07
MEAN Q	mean	0.000543470
	stdev	2.29412e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128999
	stdev	0.000970956
STDEV Q	mean	0.129236
	stdev	0.000982200



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005021[012]

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
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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

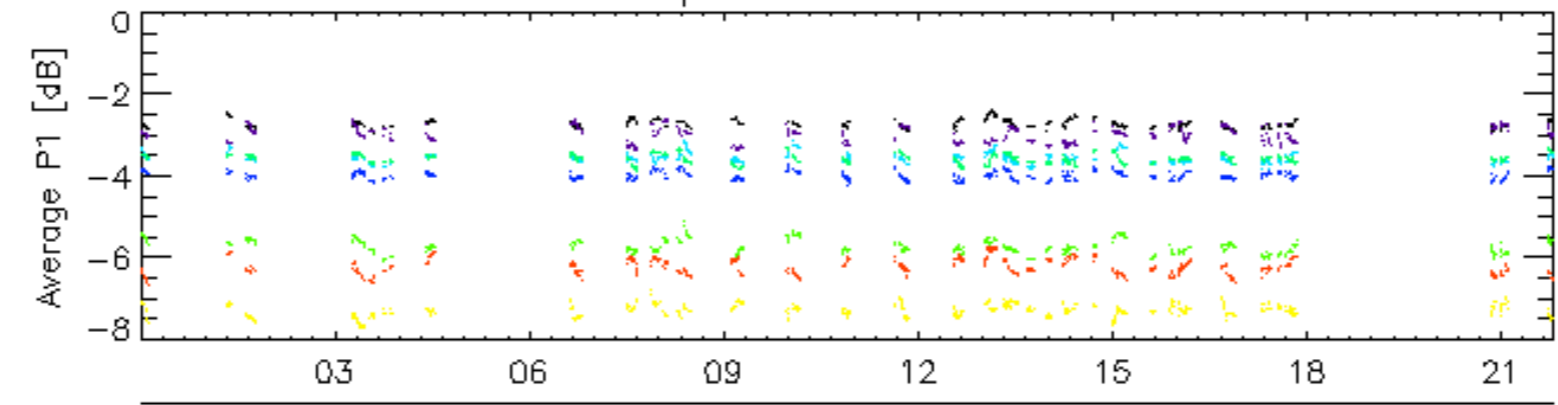
Ascending

Descending

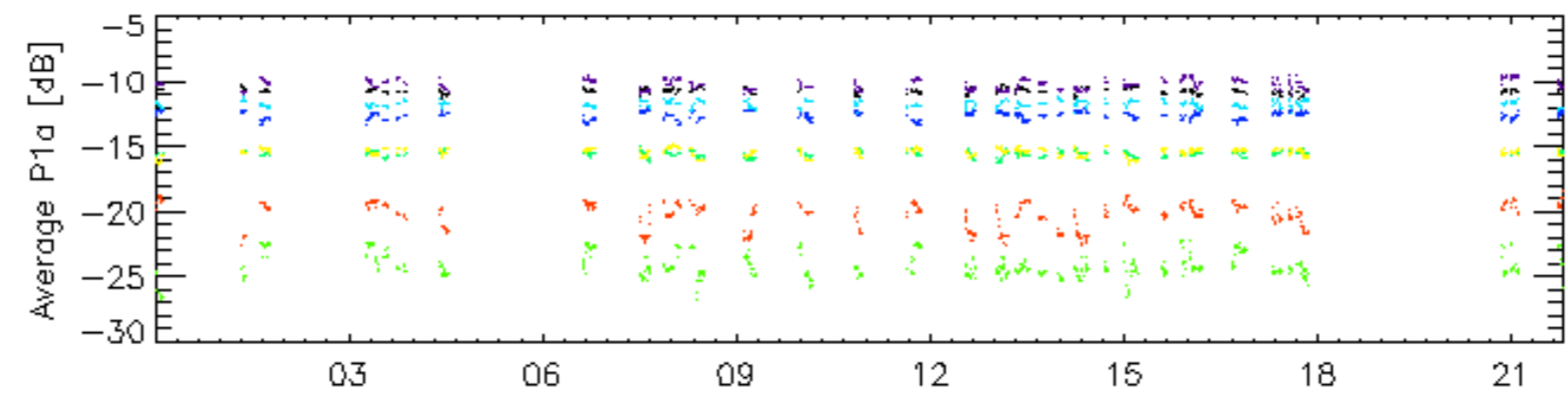
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

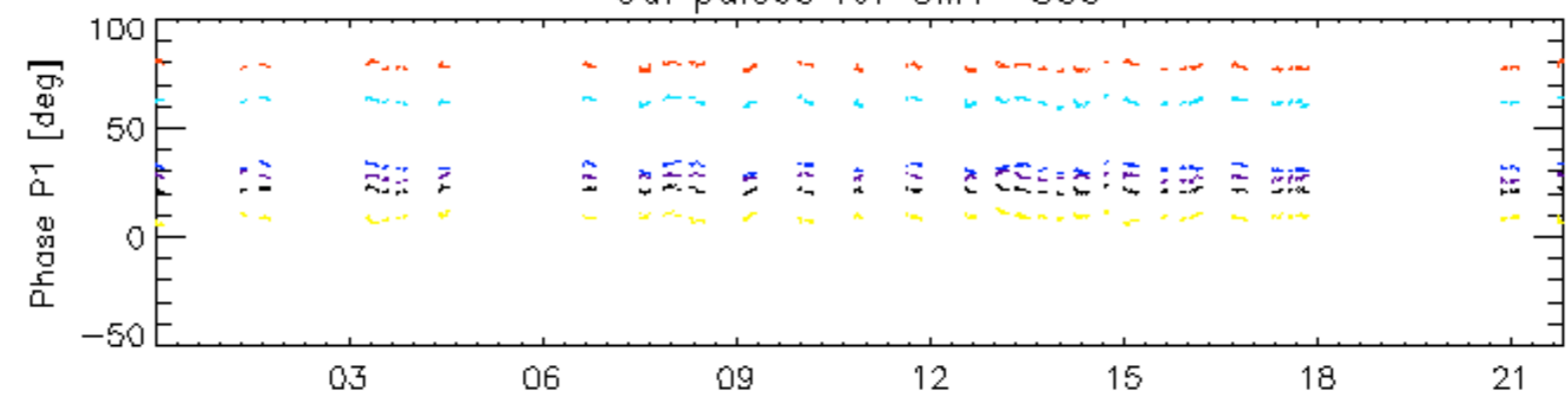


11-Feb

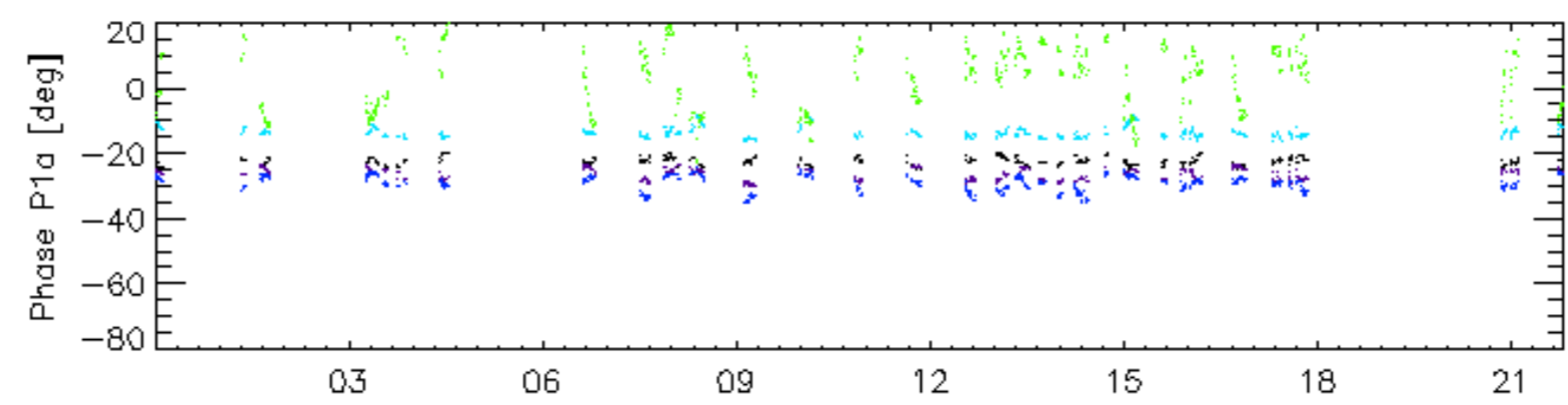


11-Feb

Cal pulses for GM1 SS3

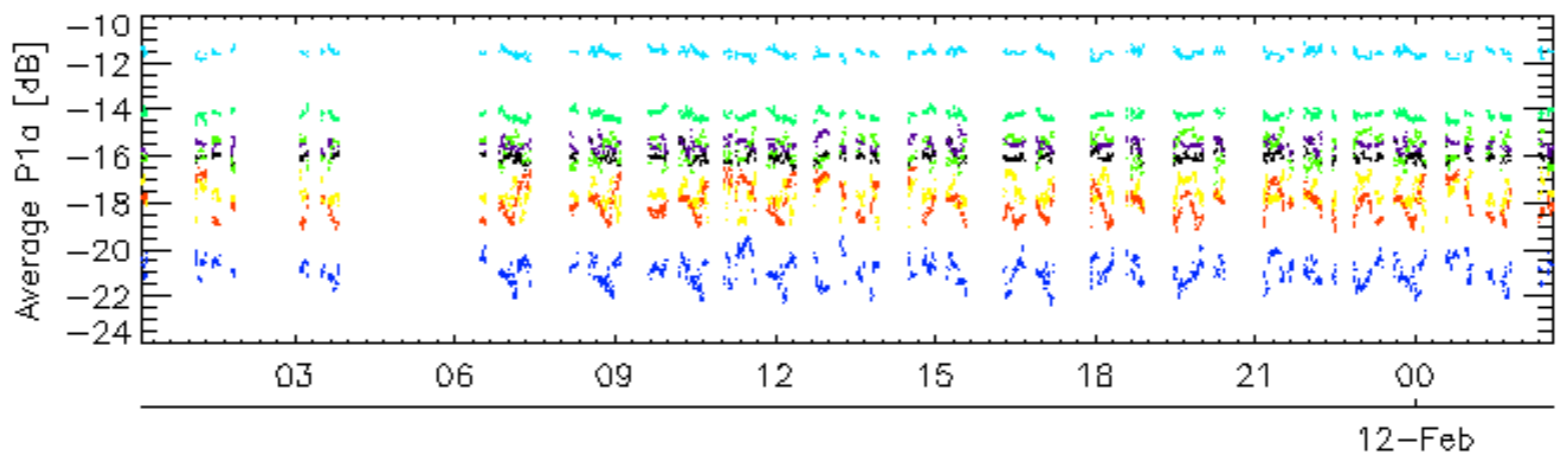
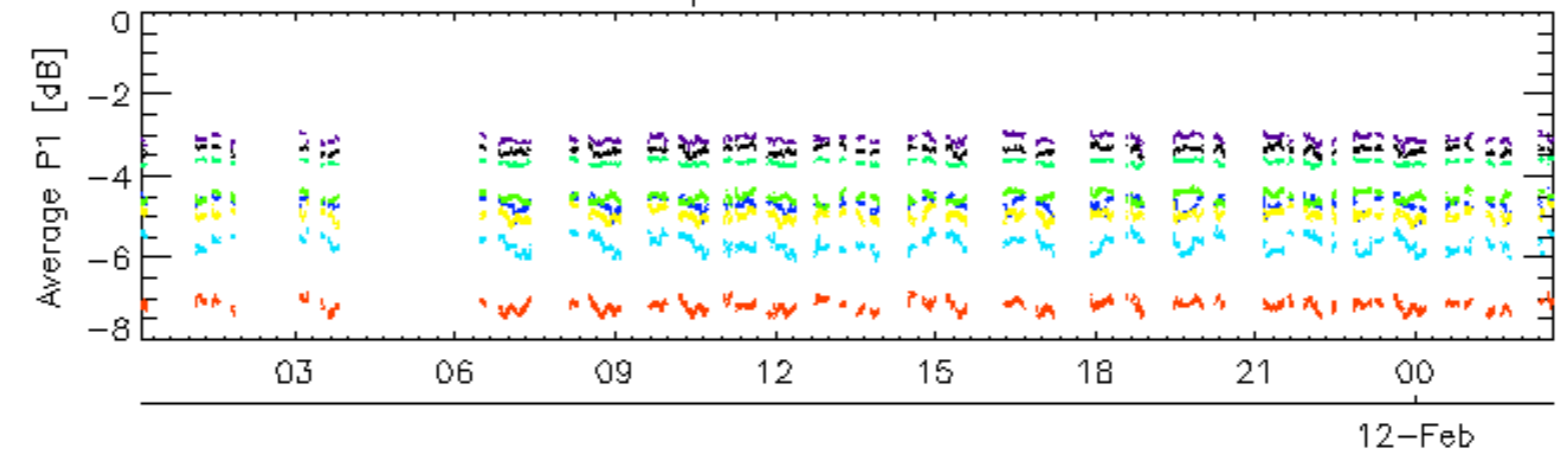


11-Feb

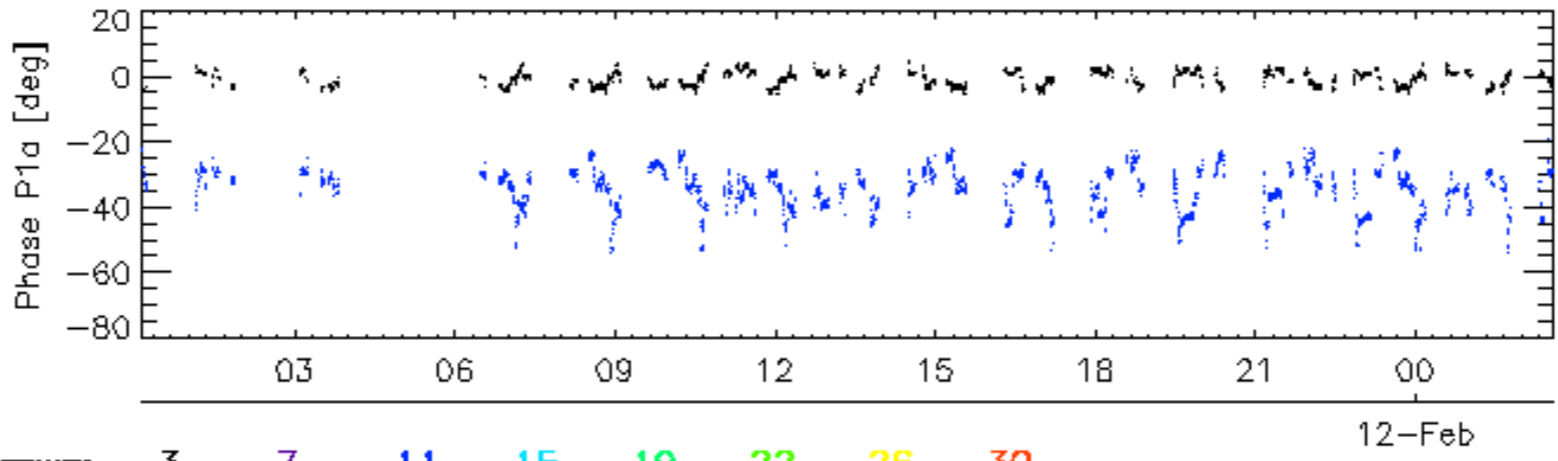
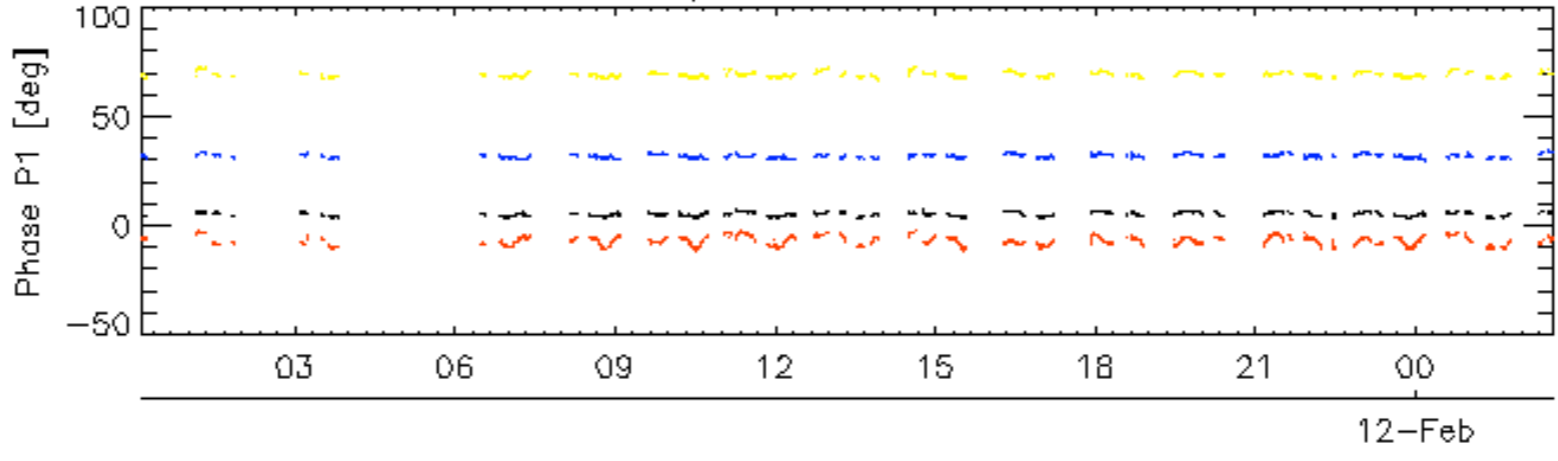


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

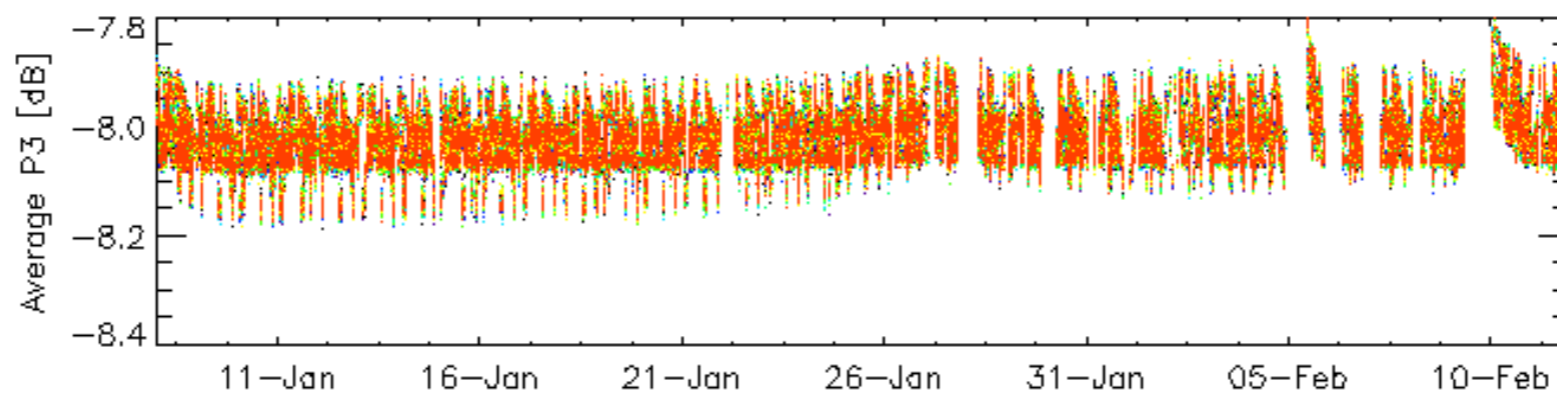
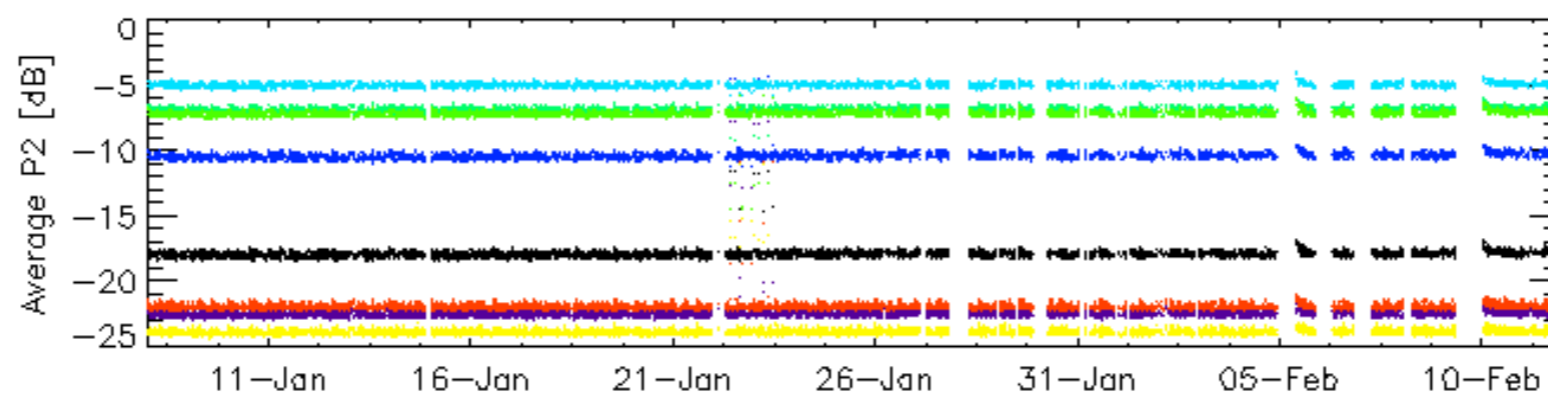
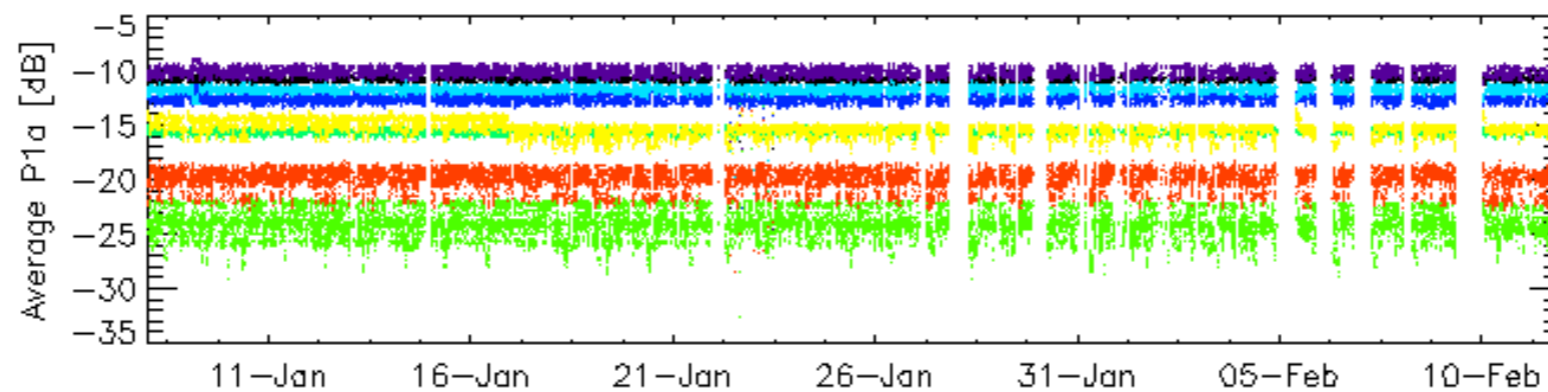
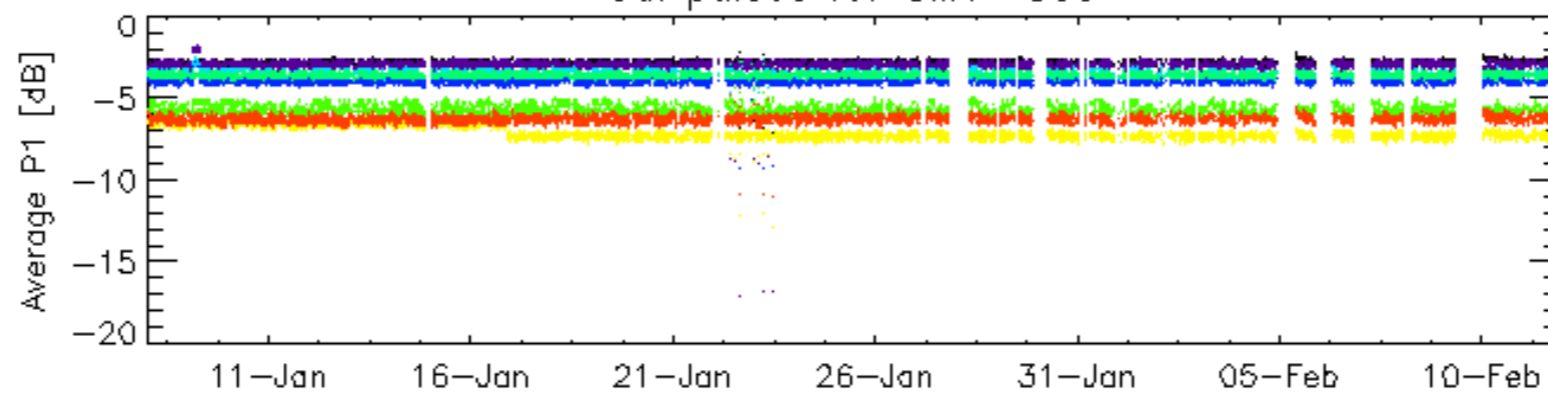


Cal pulses for WVS IS2



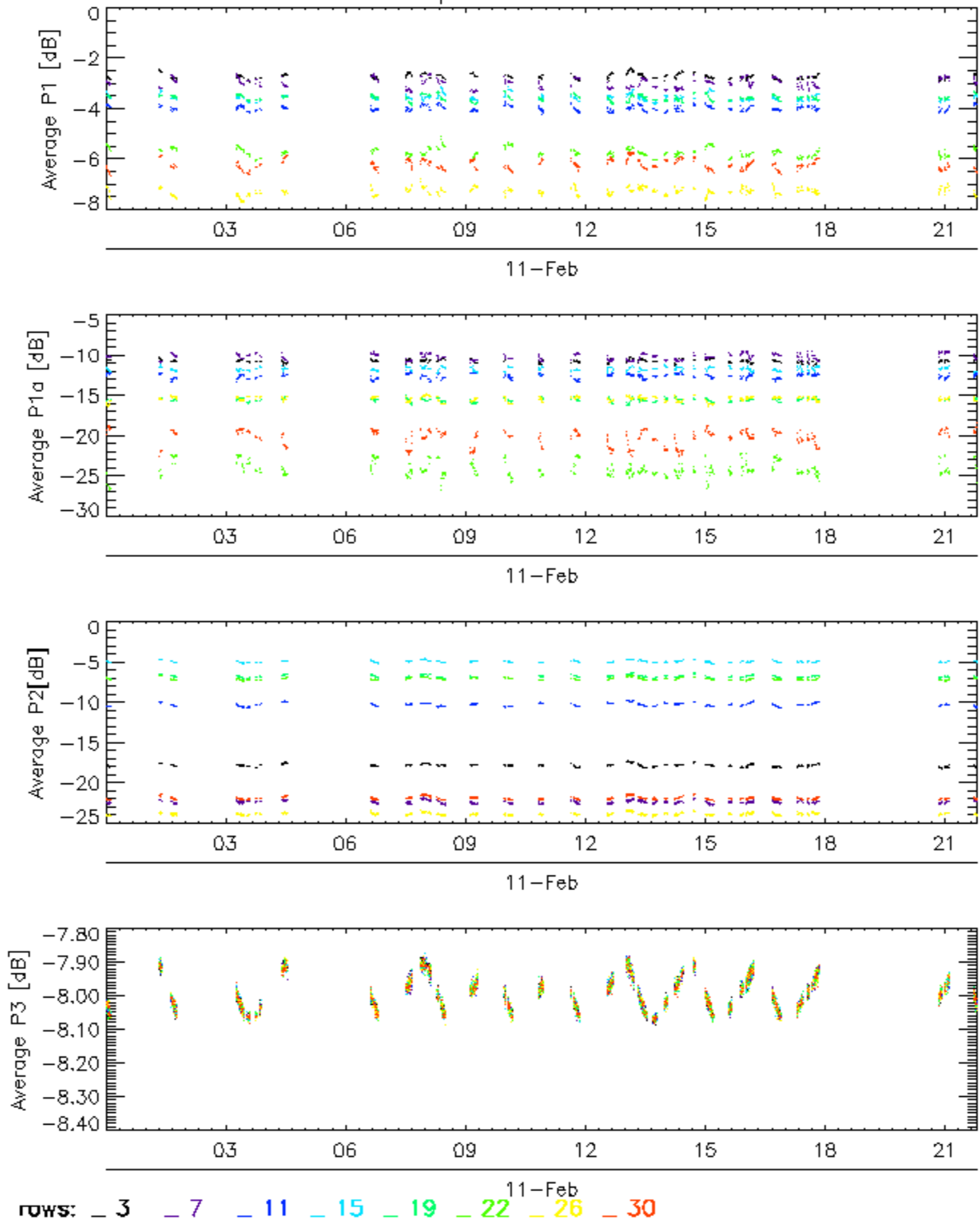
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

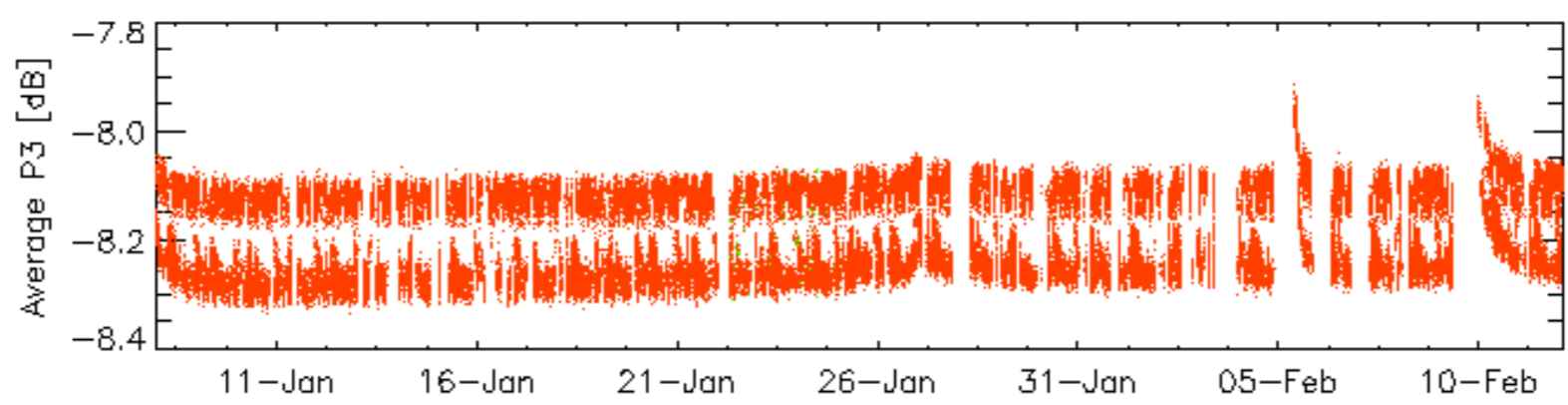
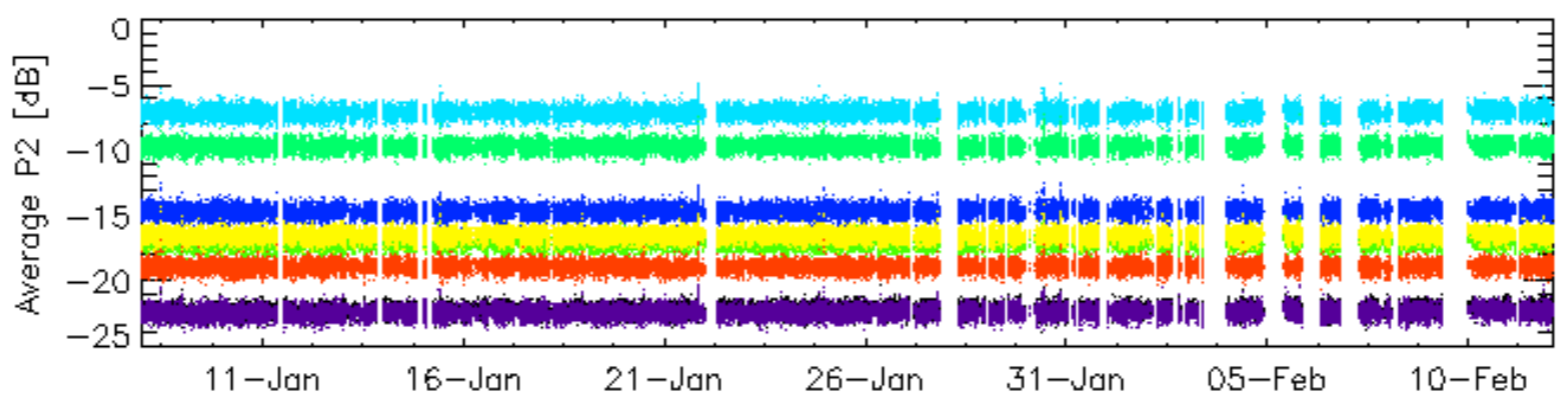
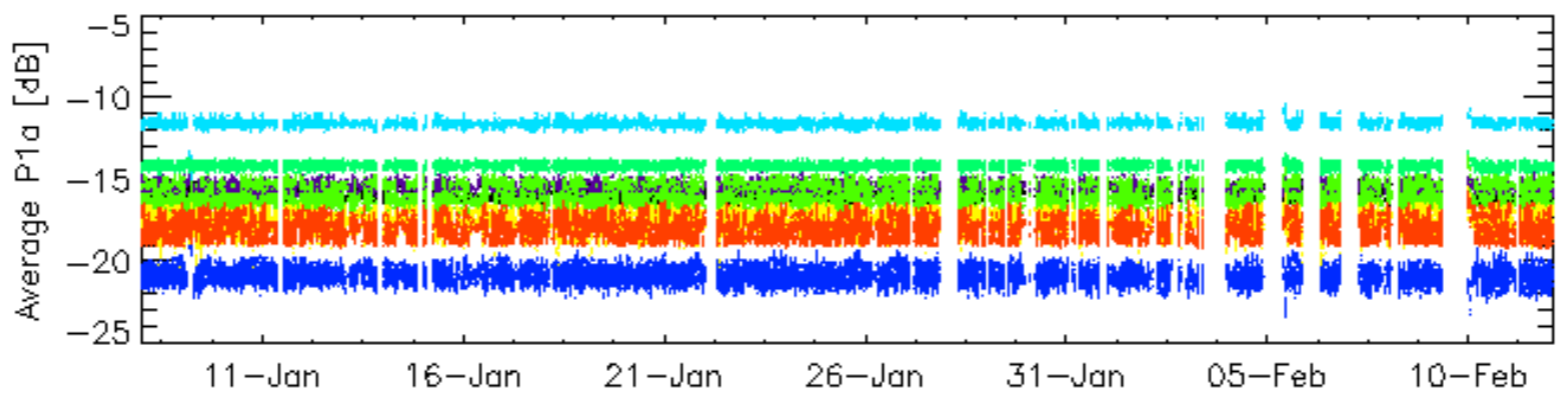
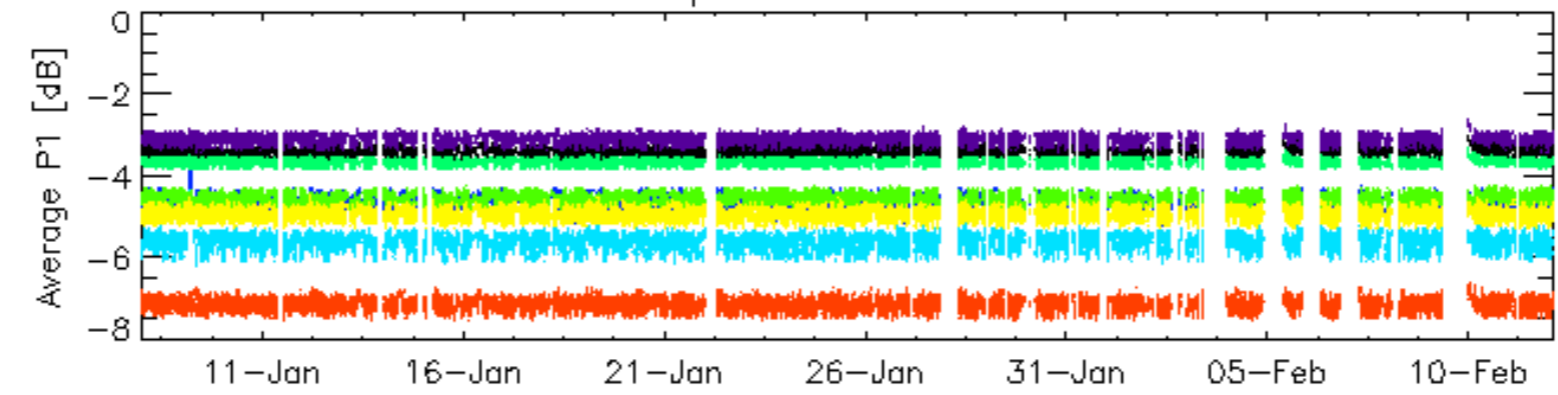


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

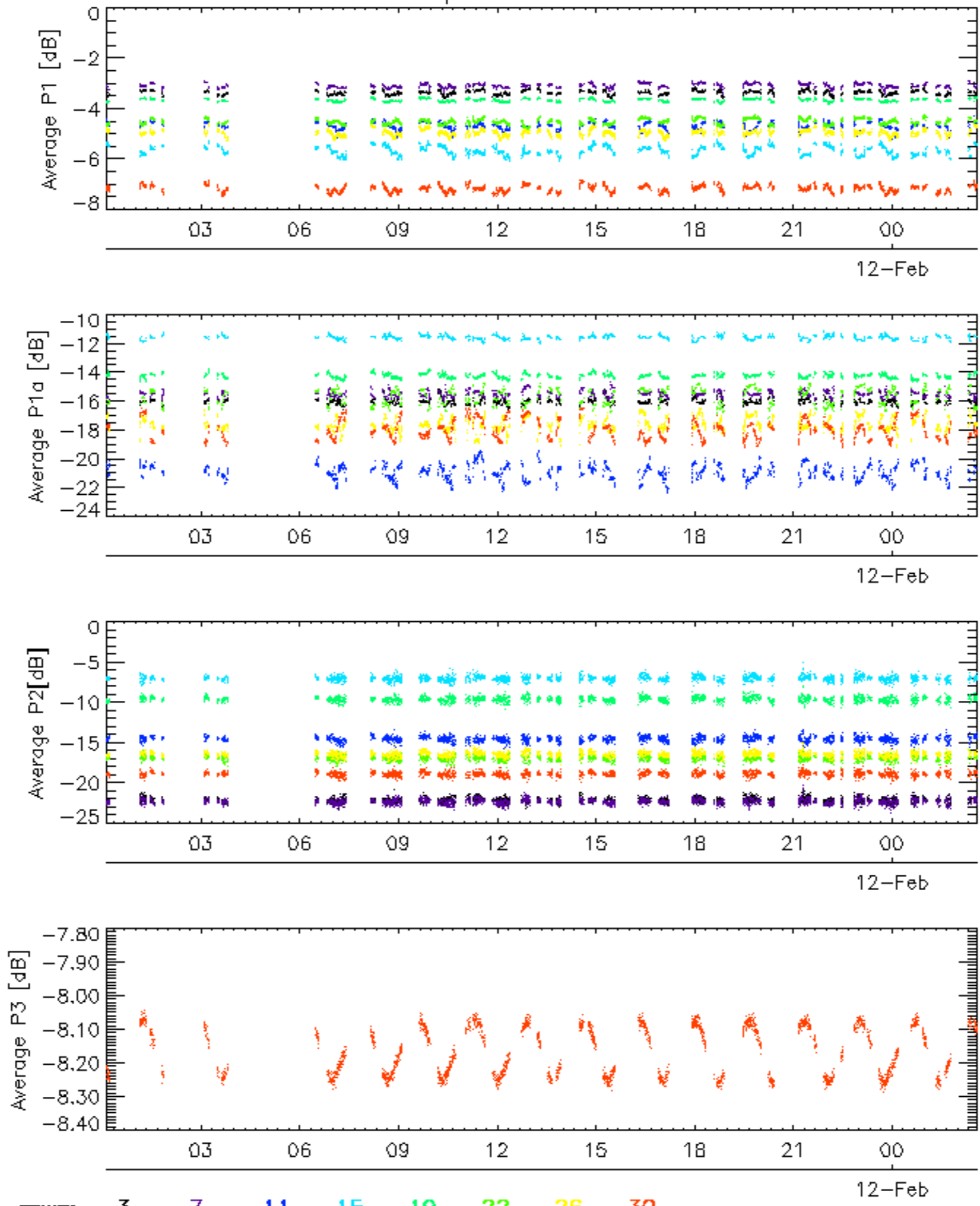


Cal pulses for WVS IS2

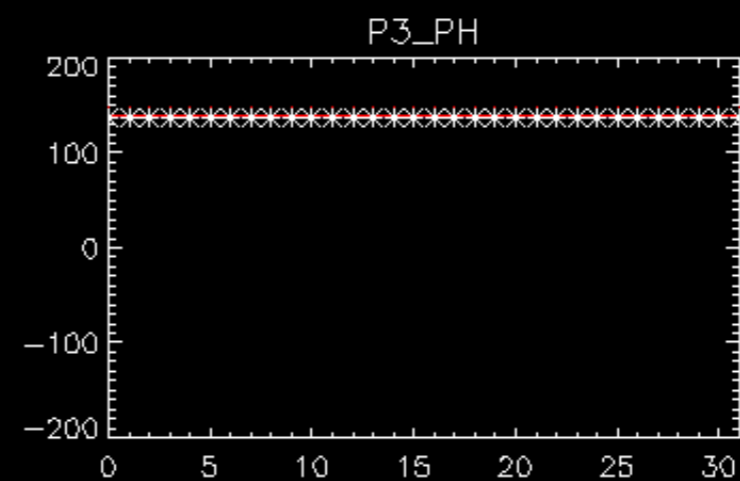
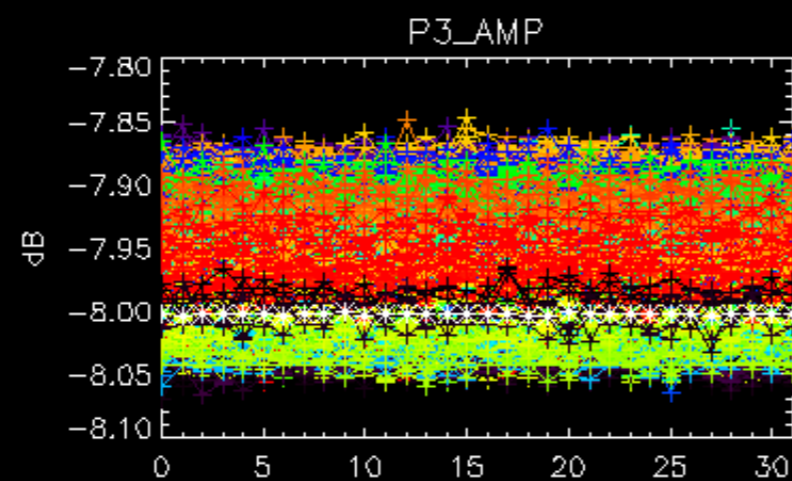
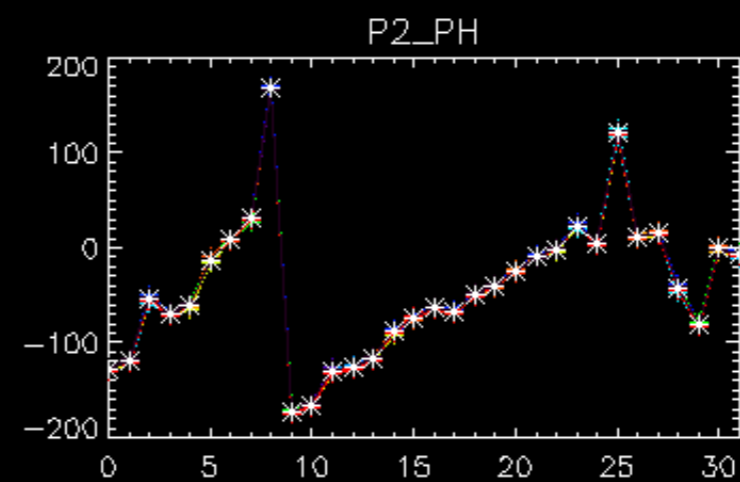
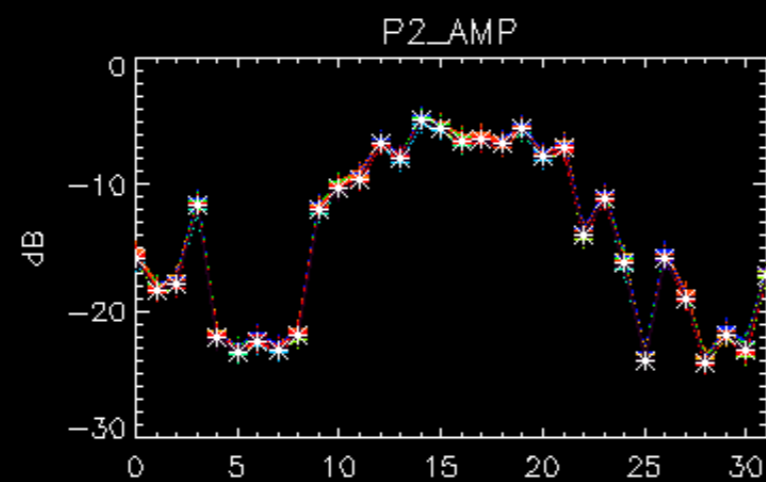
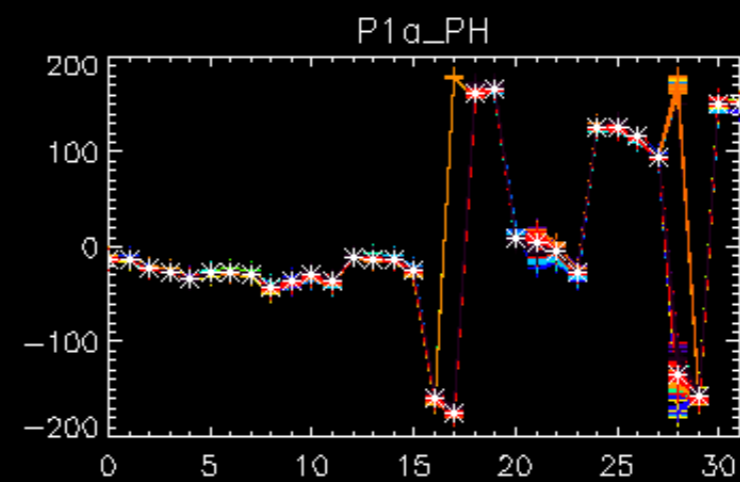
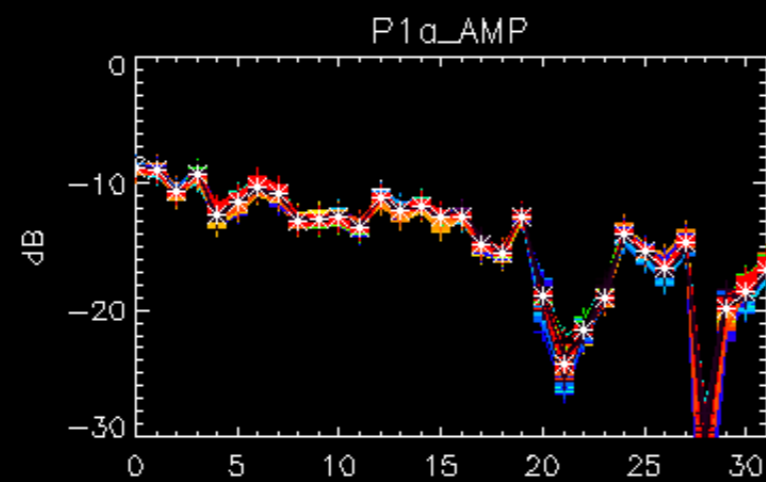
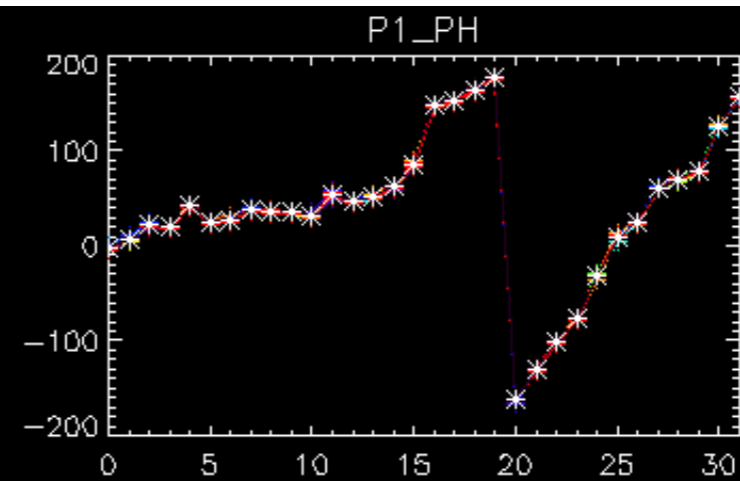
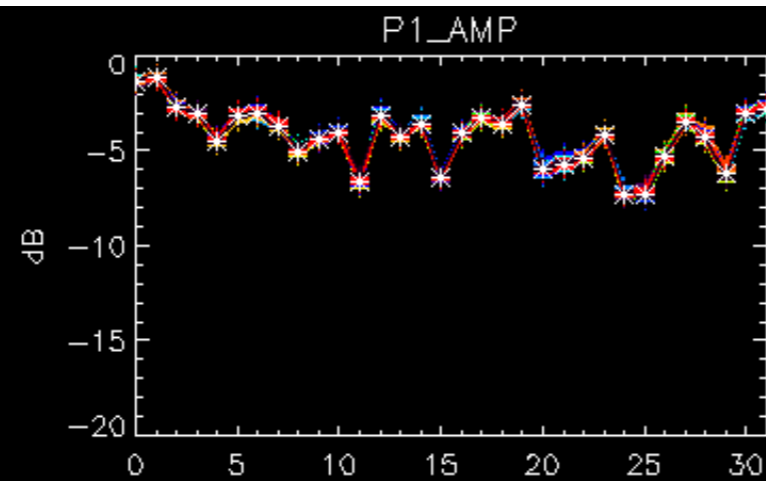


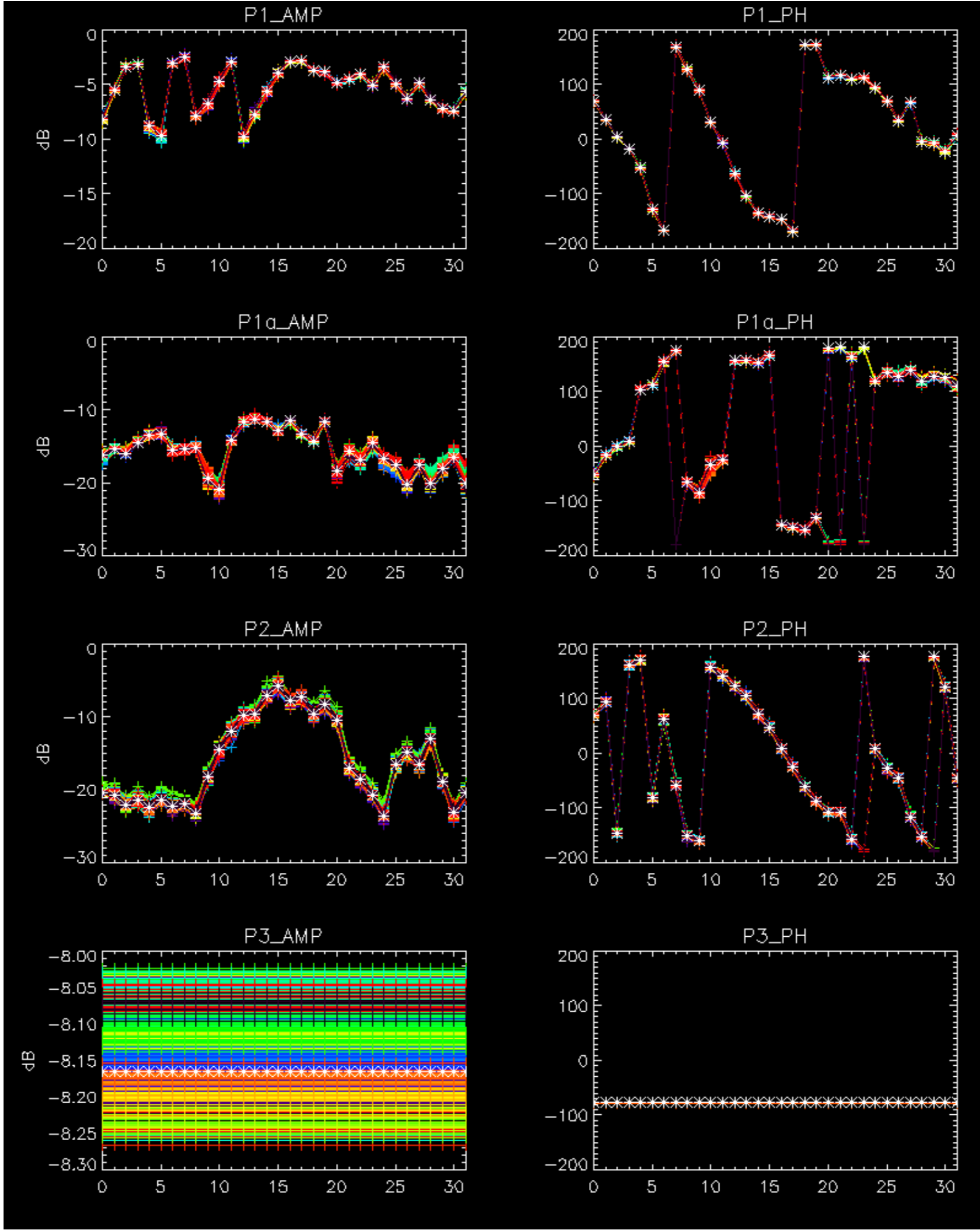
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



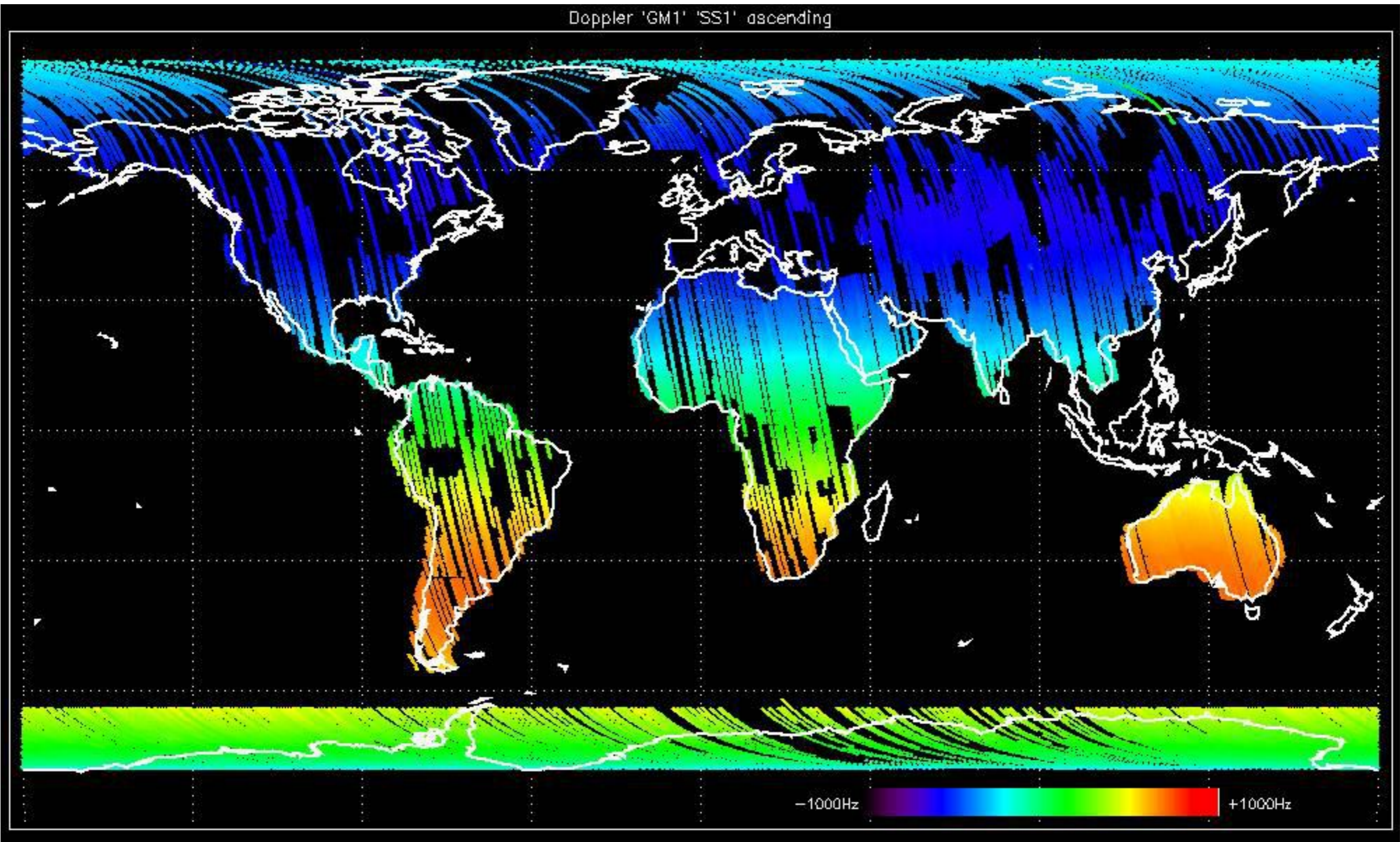
No anomalies observed.



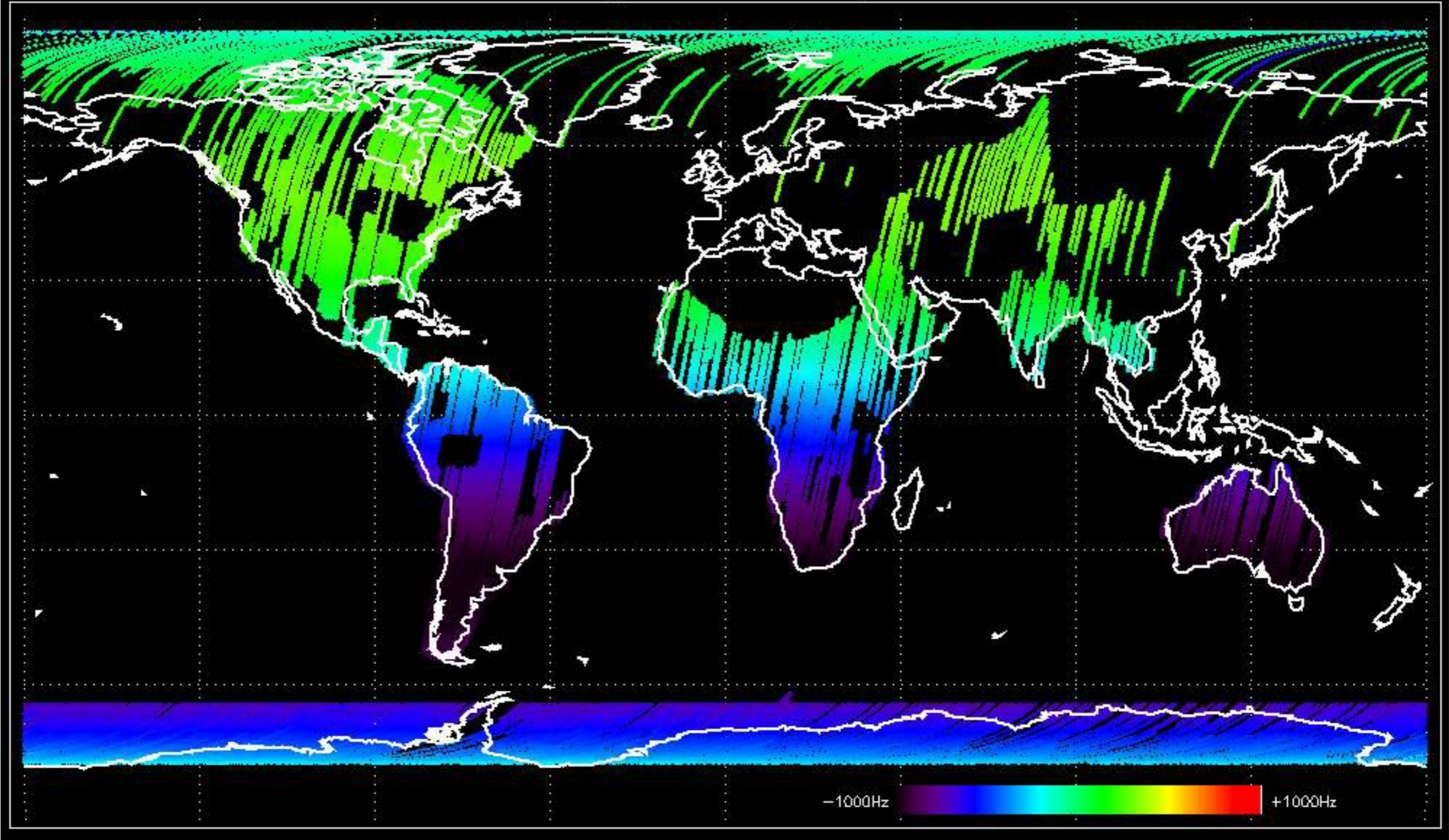


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

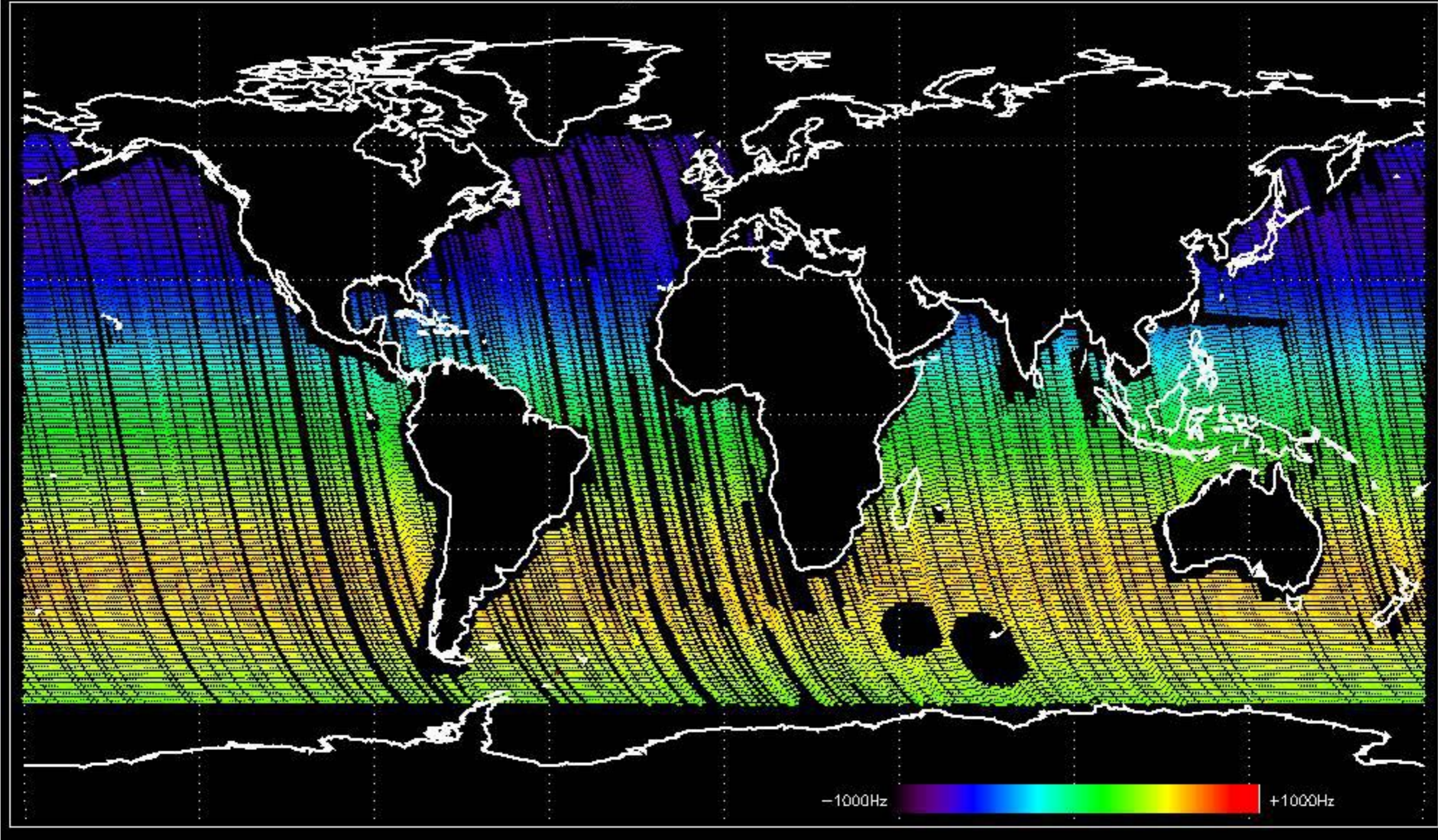
Doppler 'GM1' 'SS1' ascending



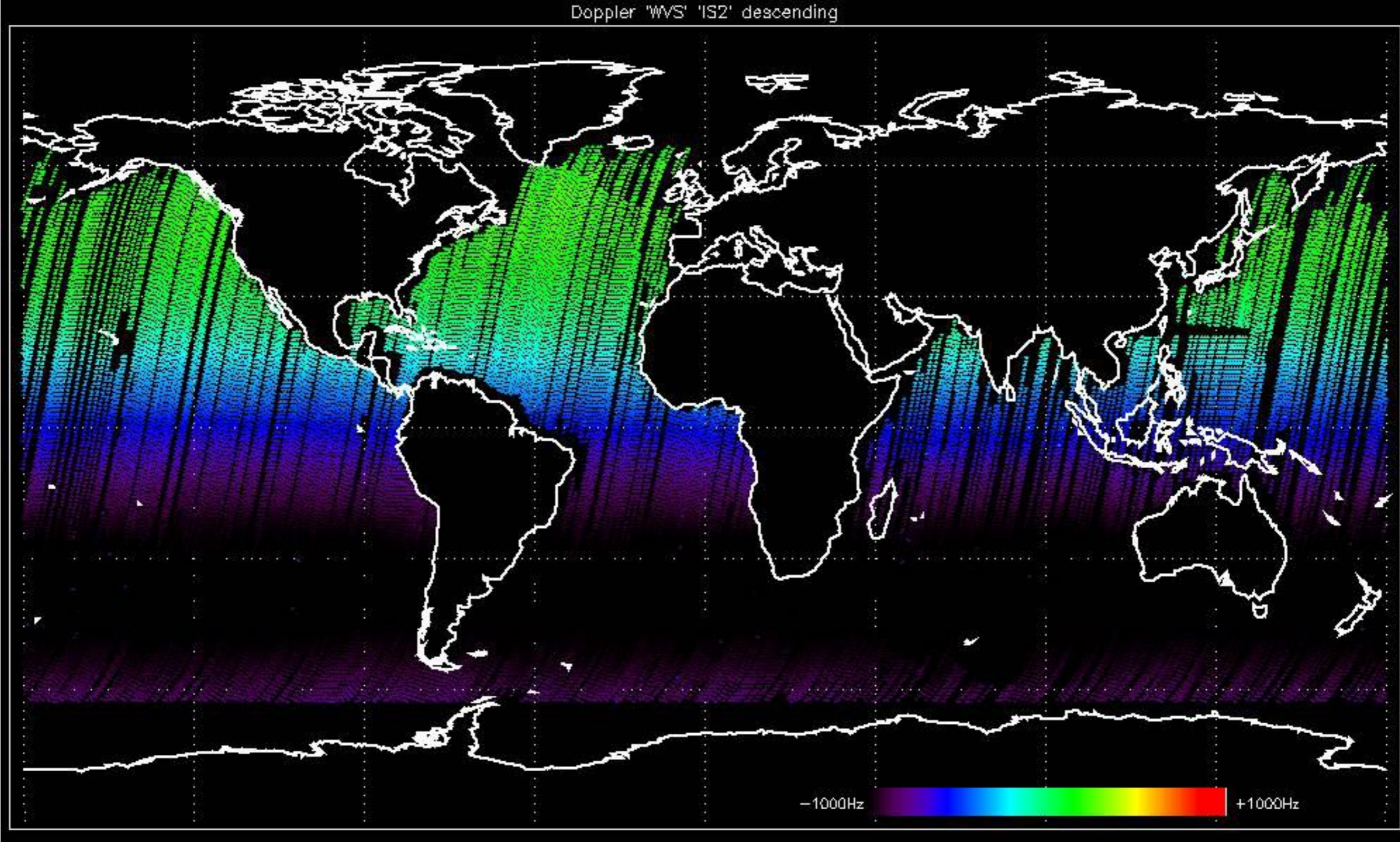
Doppler 'GM1' 'SS1' descending



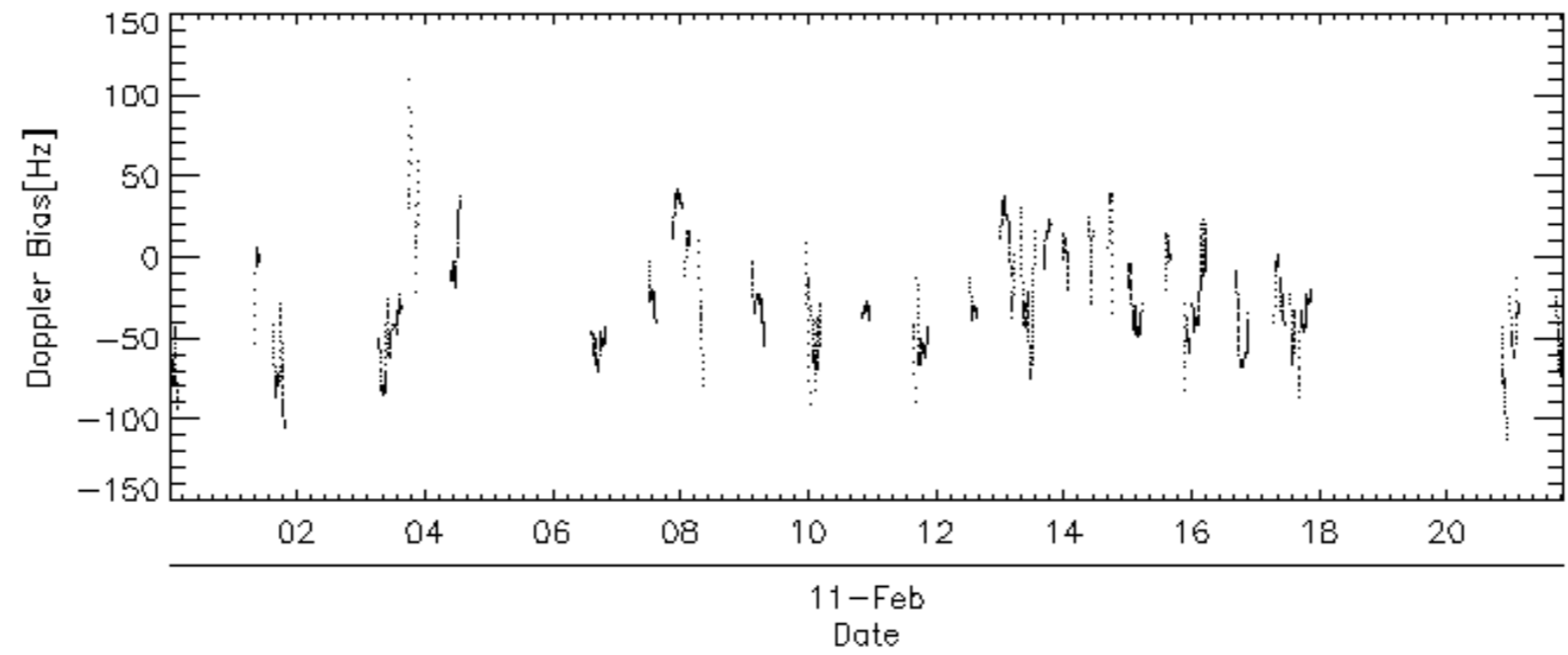
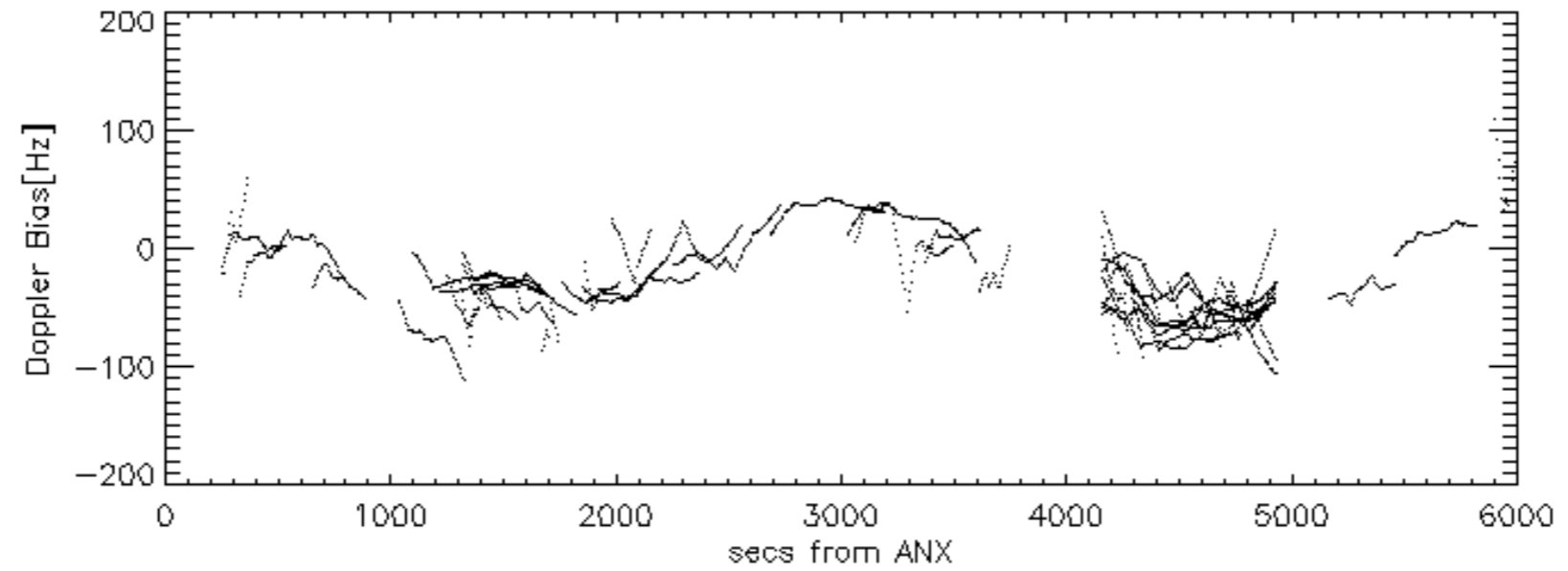
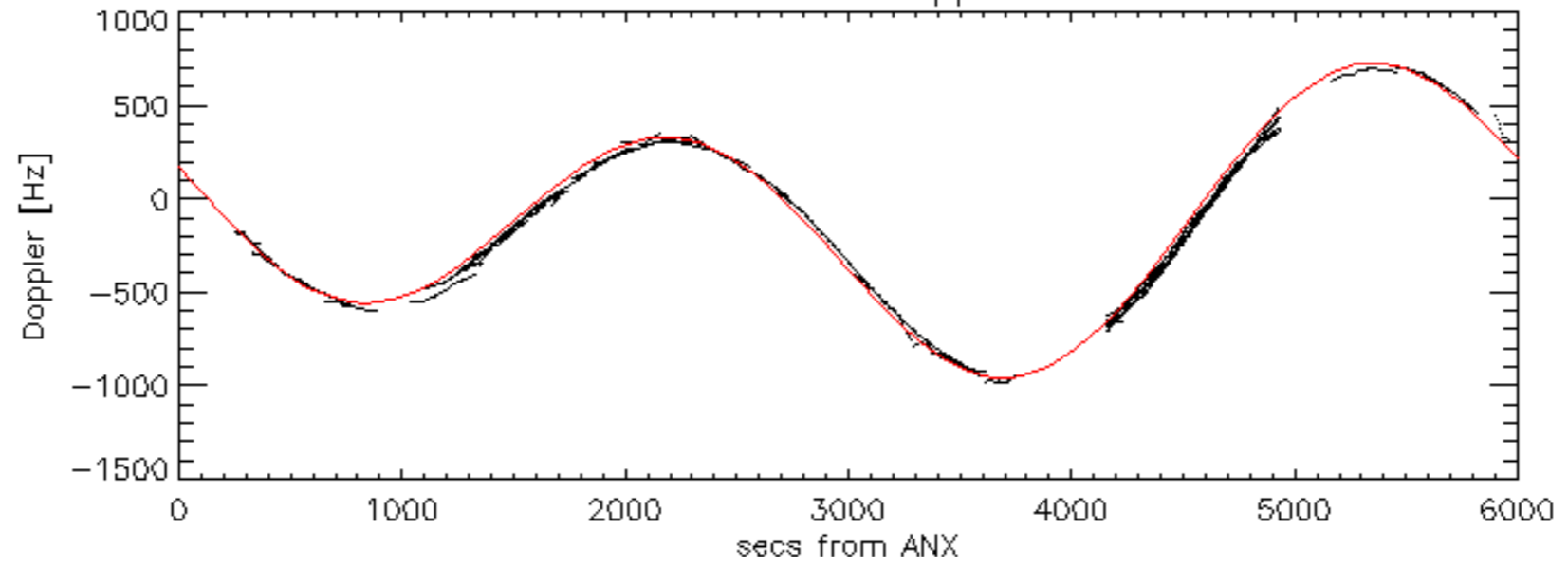
Doppler 'WVS' 'IS2' ascending

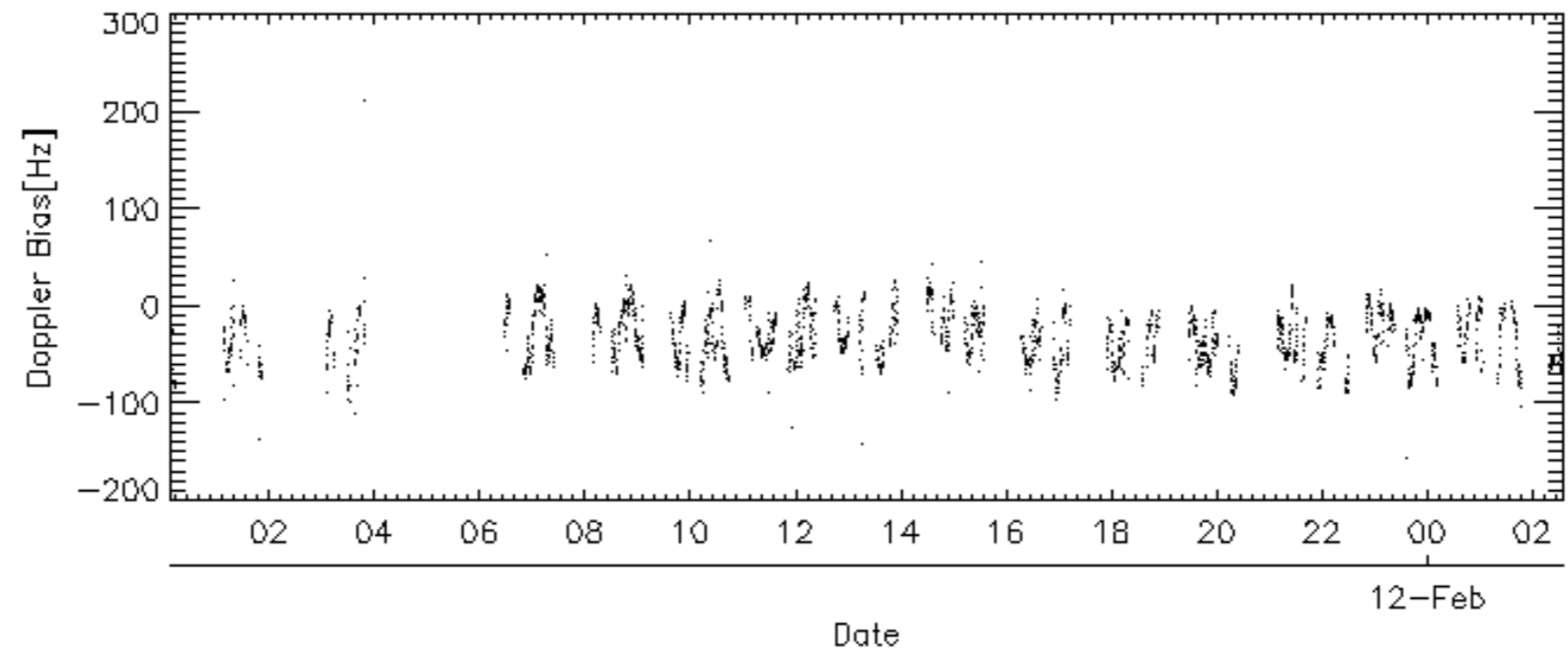
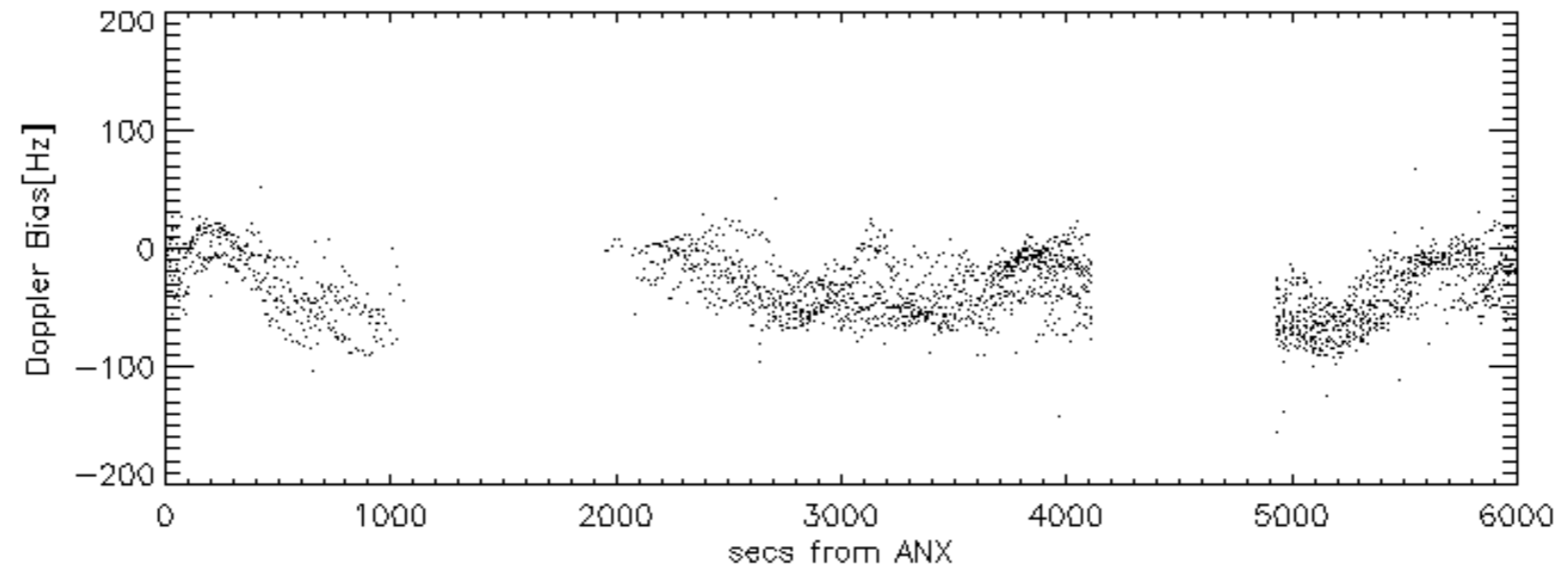
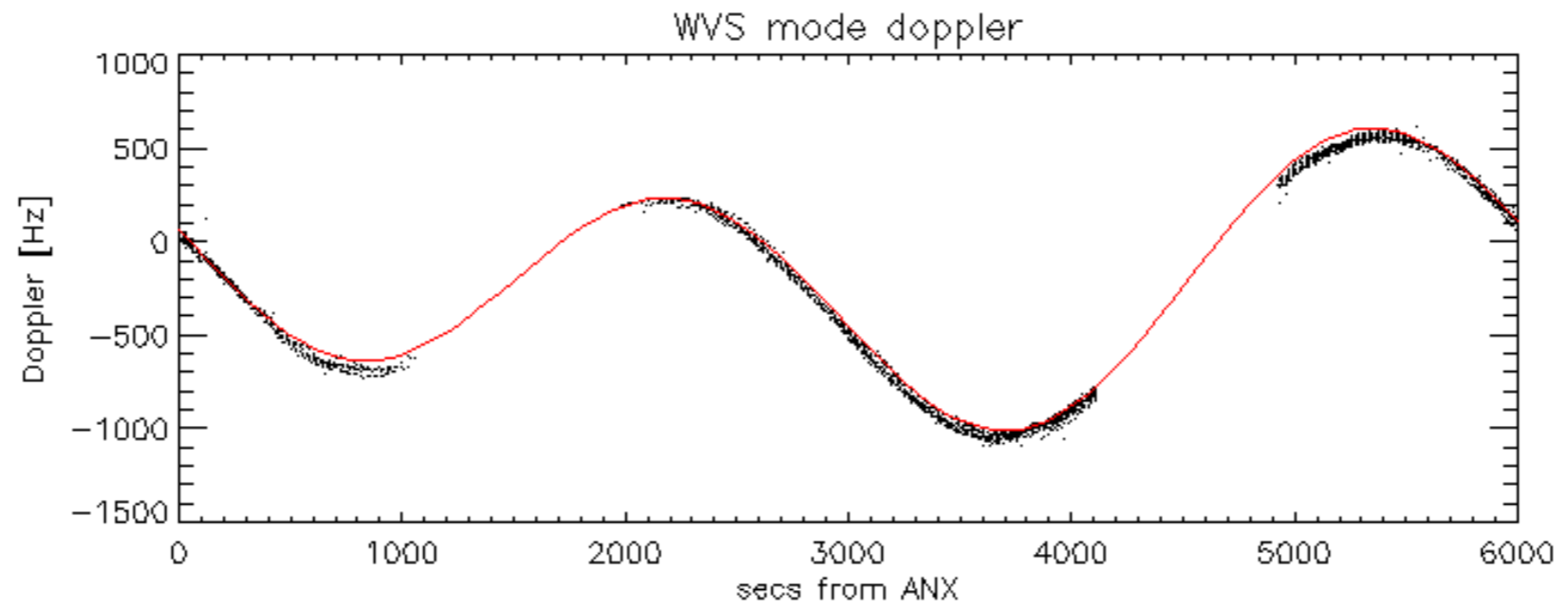


Doppler 'WVS' 'IS2' descending

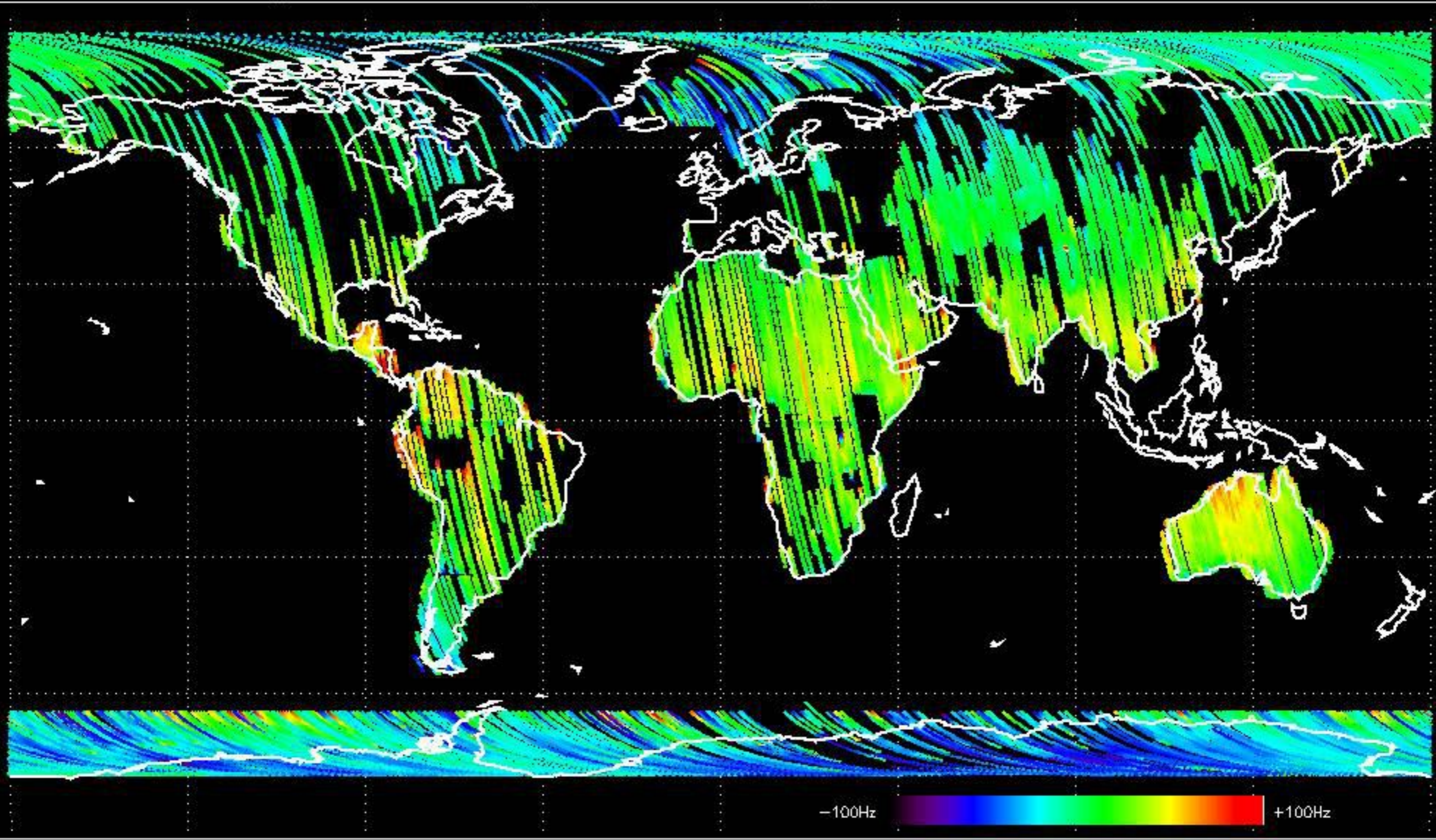


GM1 mode doppler

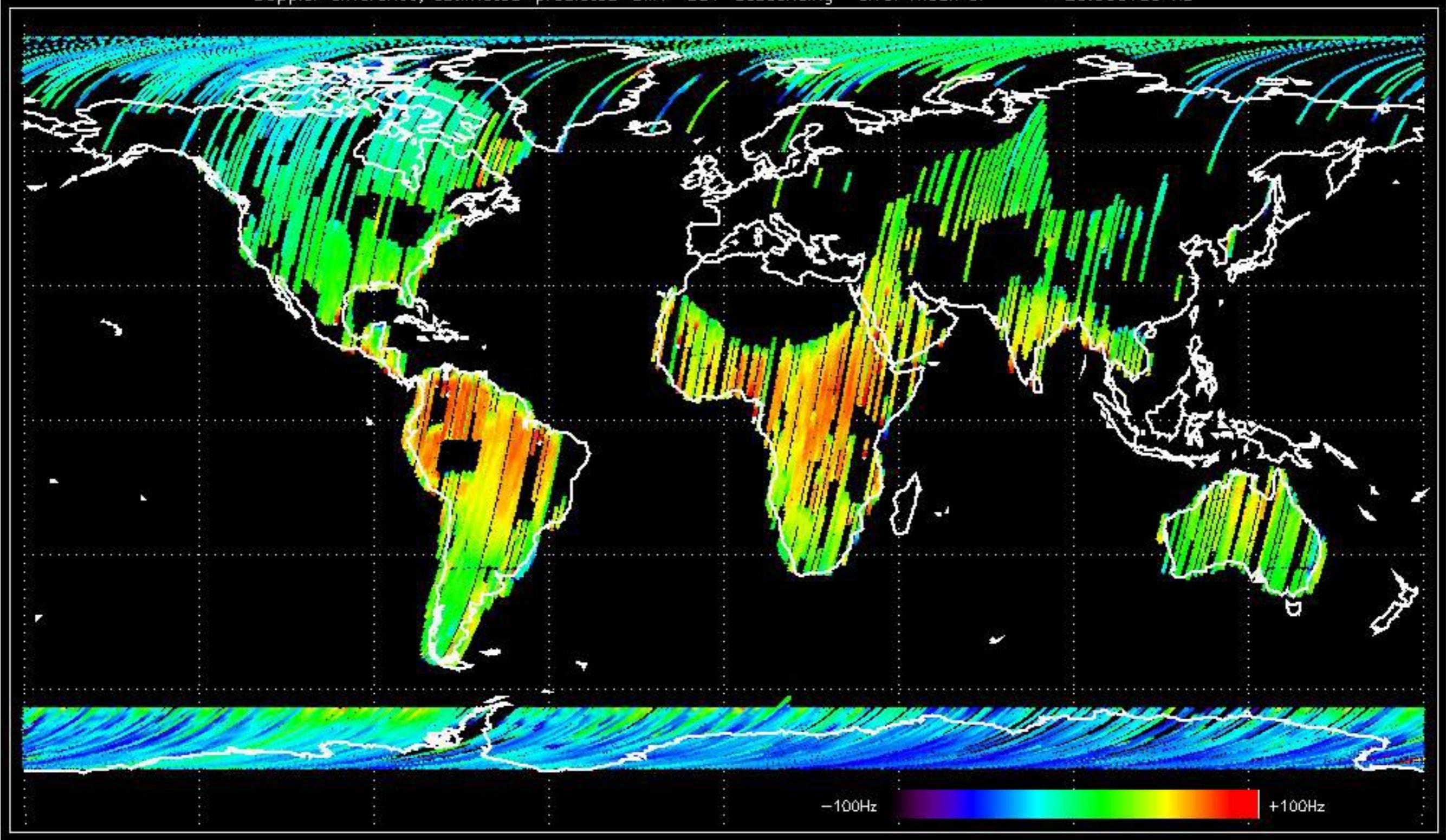




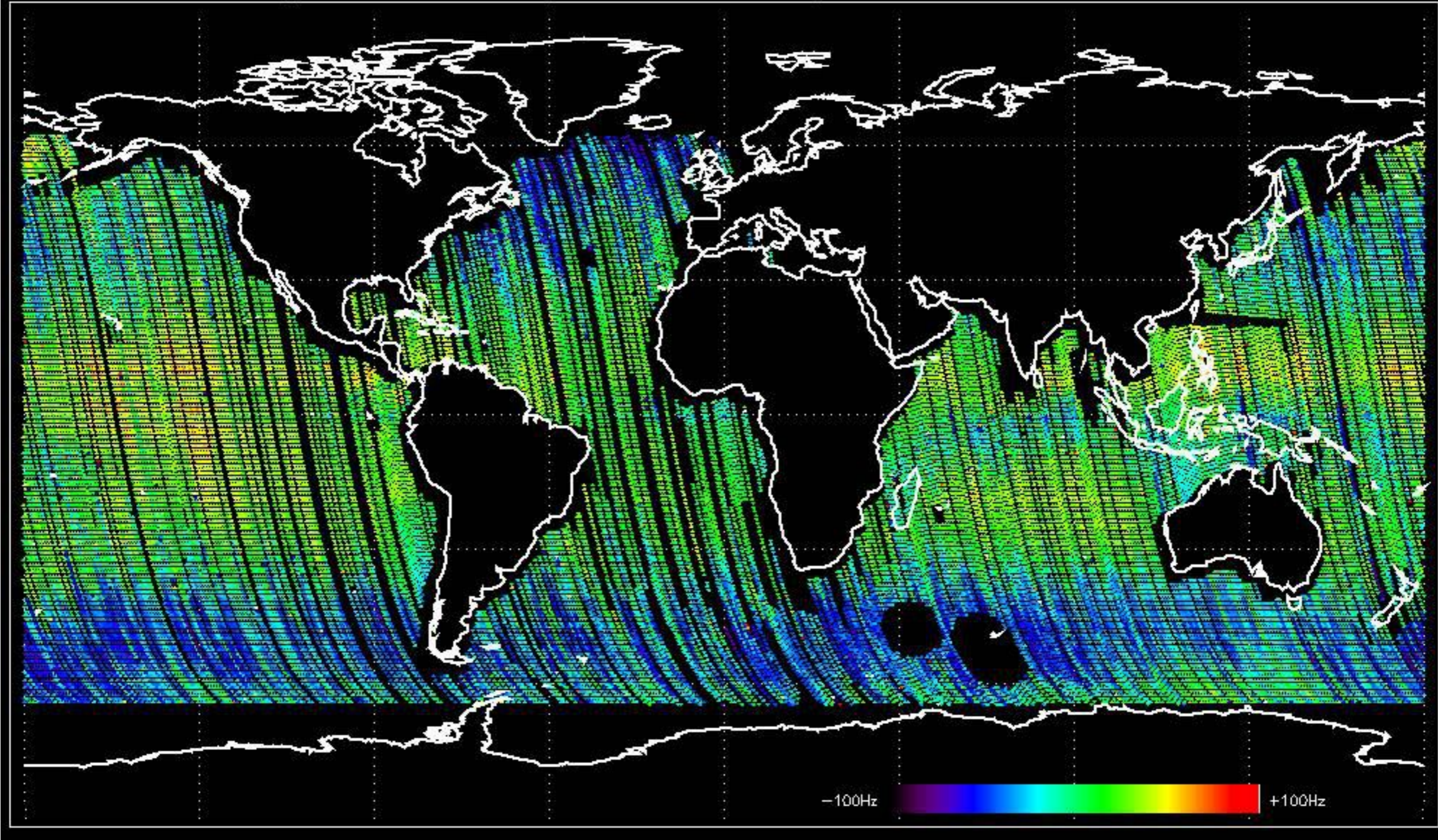
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.988625 Hz



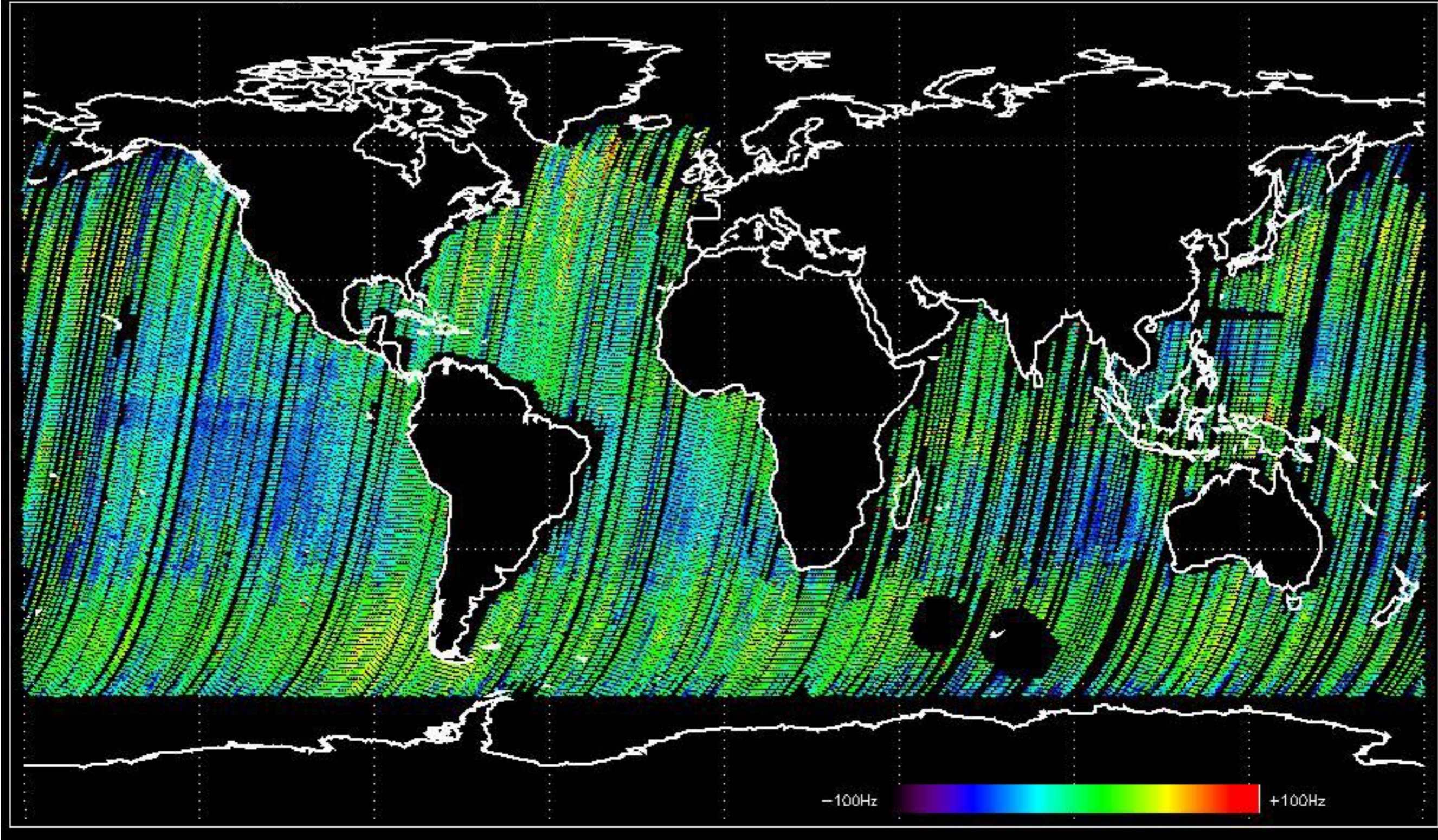
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.660150 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -34.852736 Hz

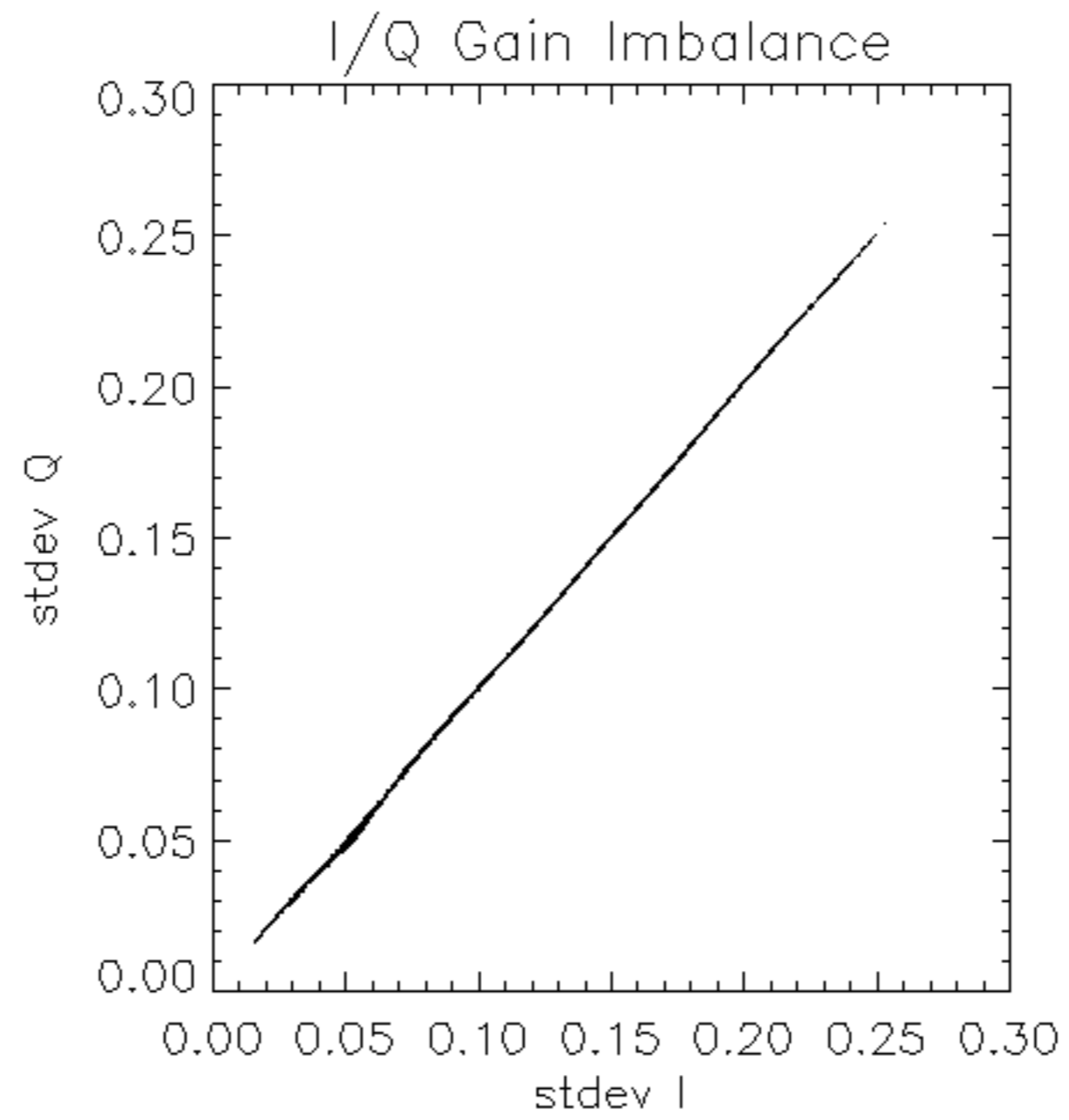


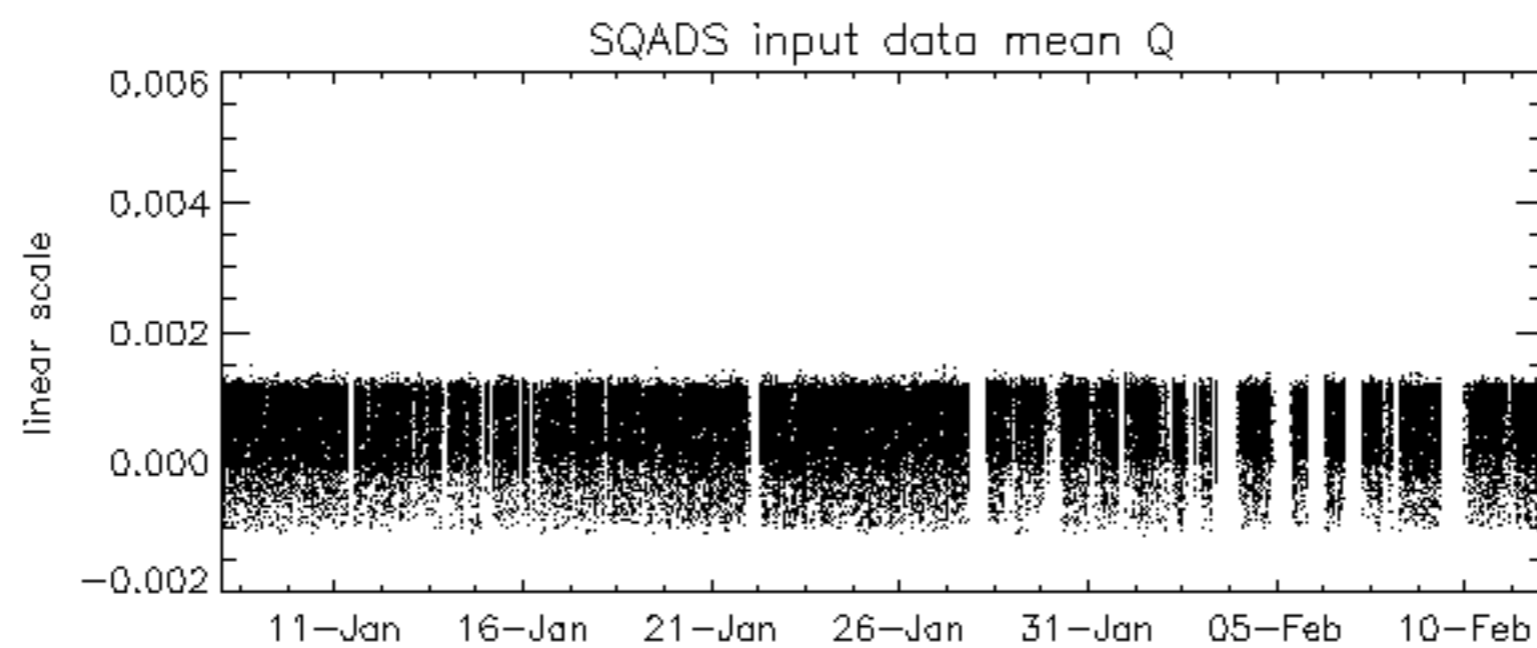
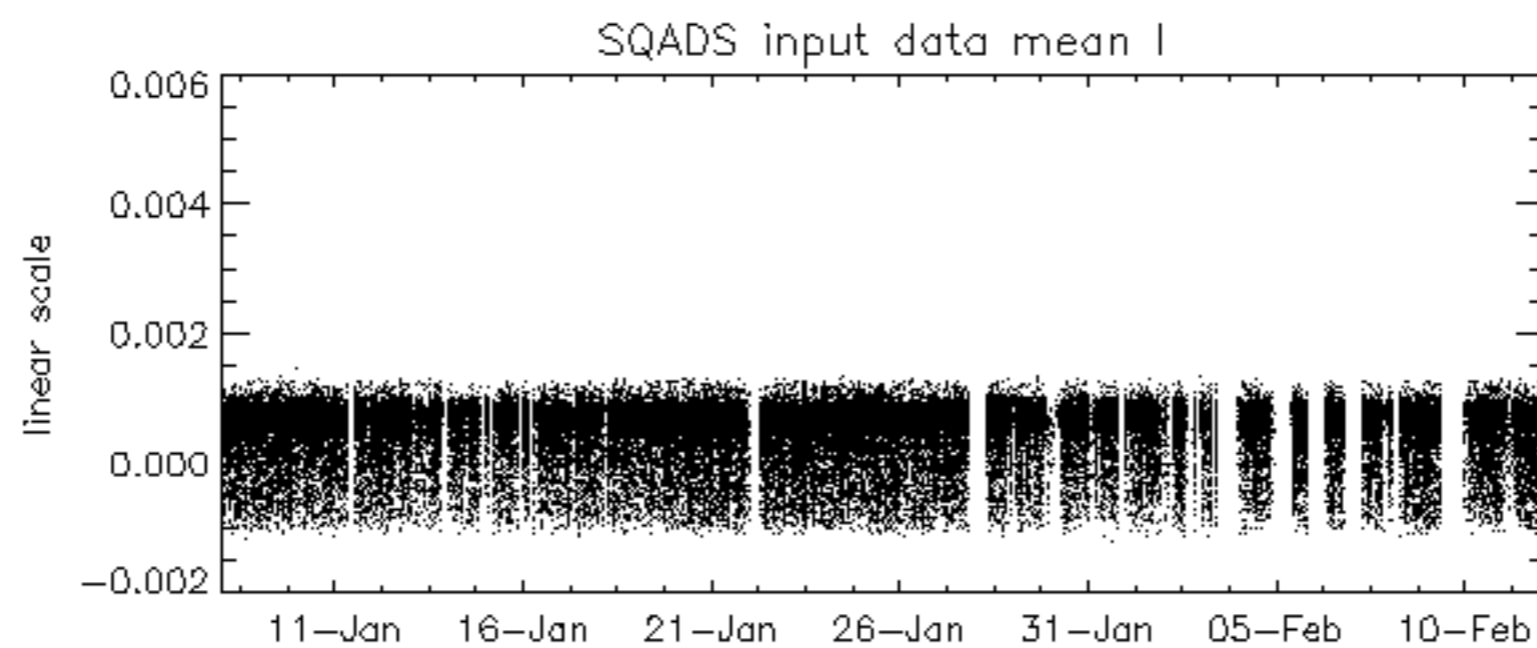
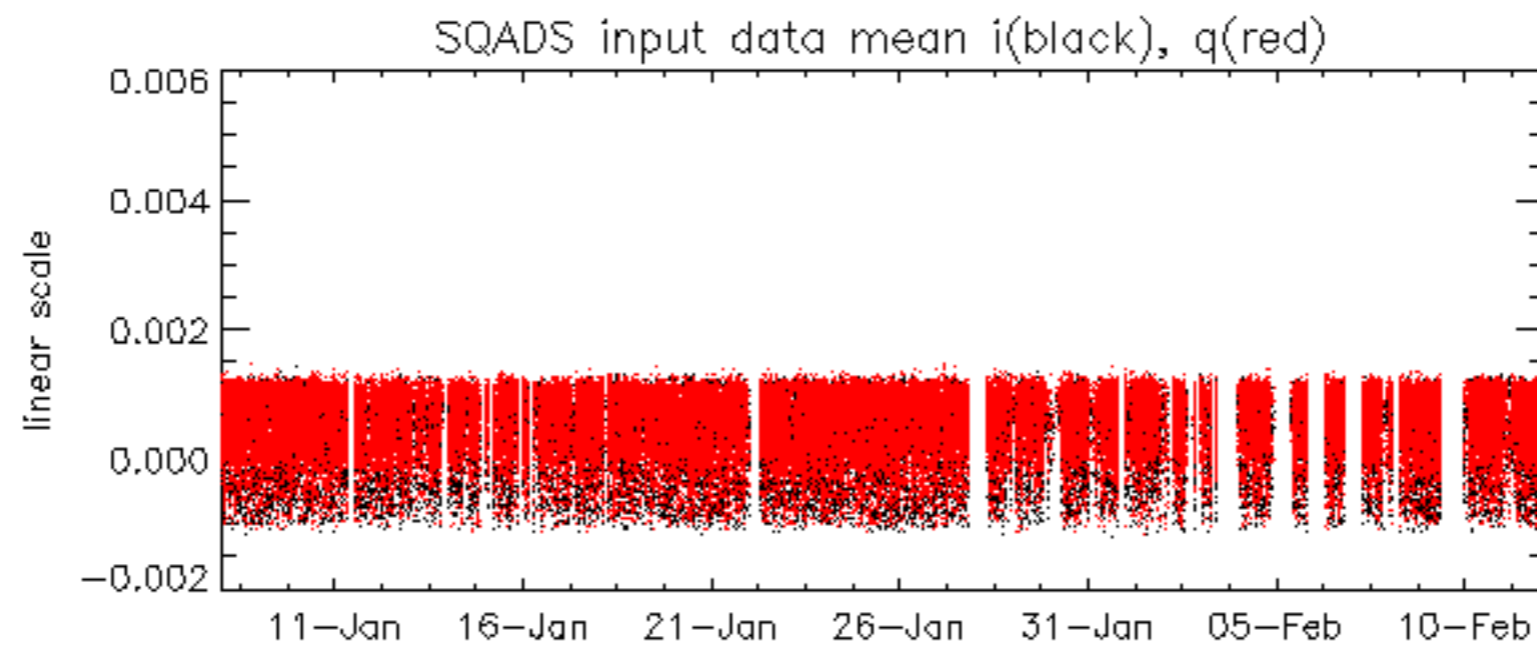
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -35.849317 Hz

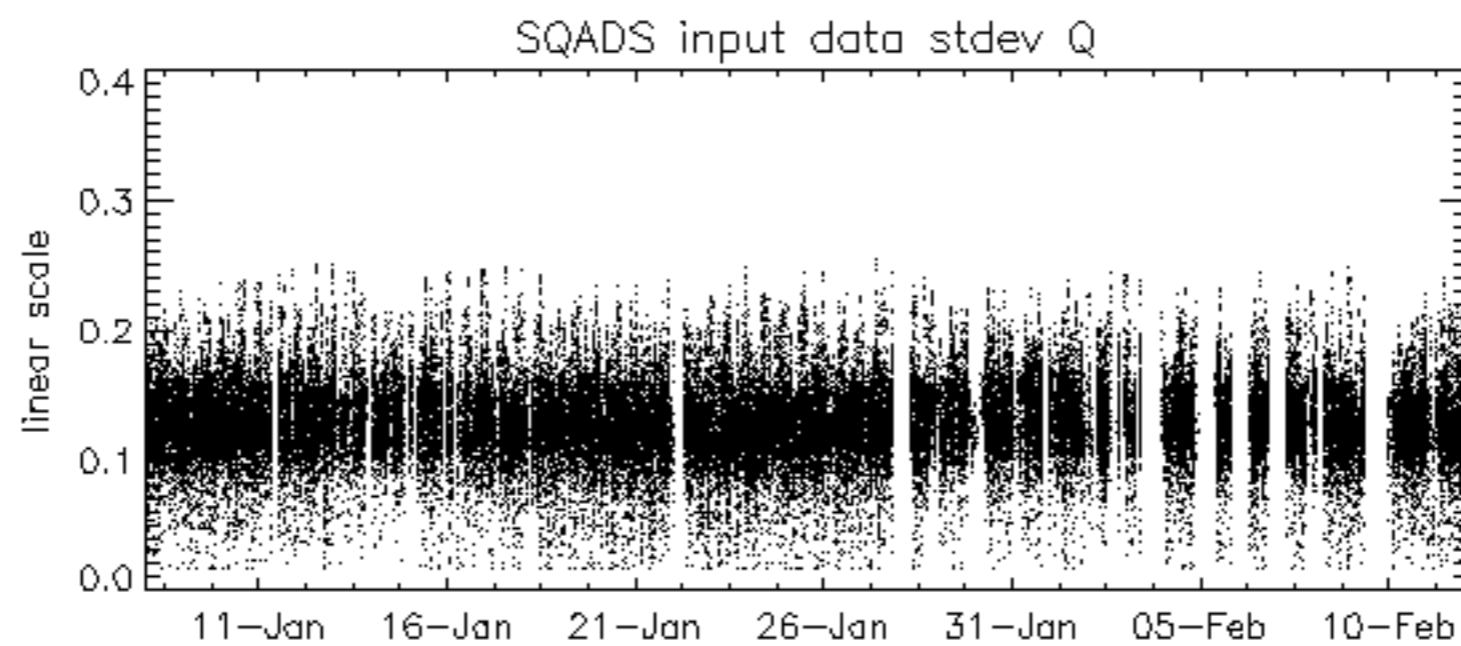
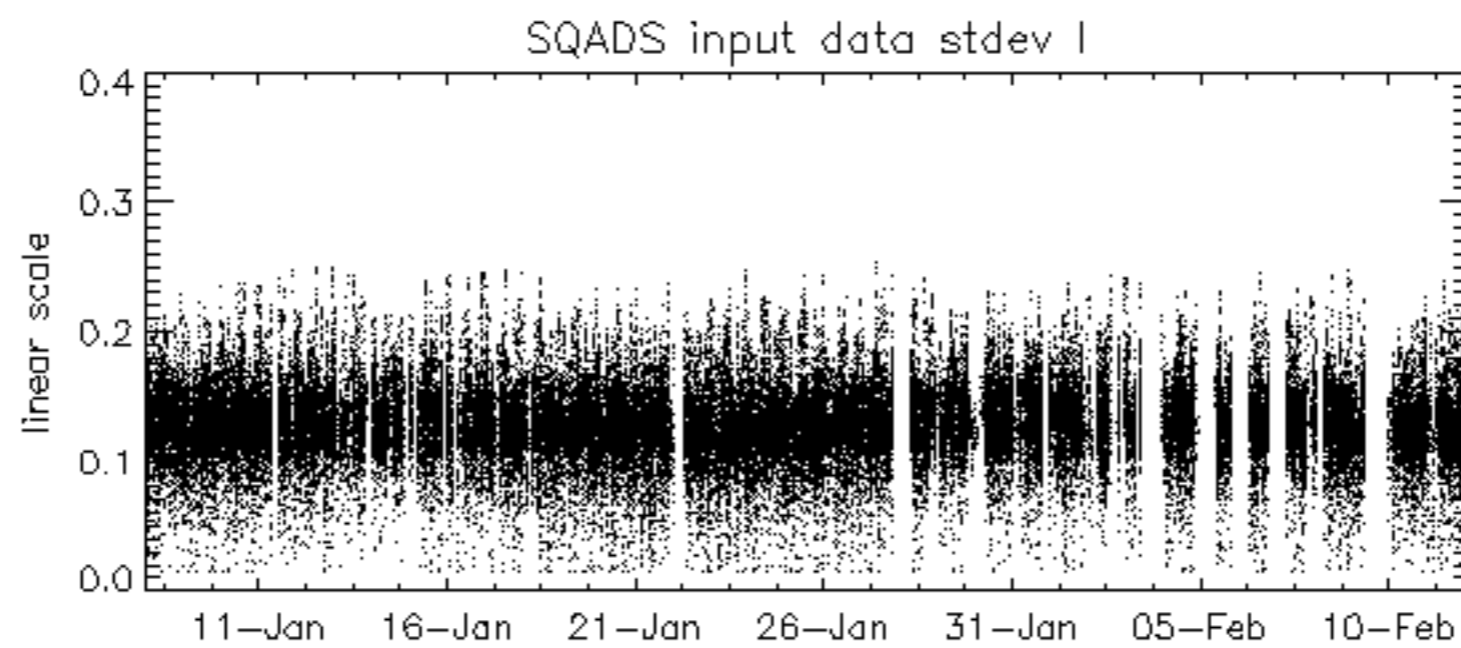
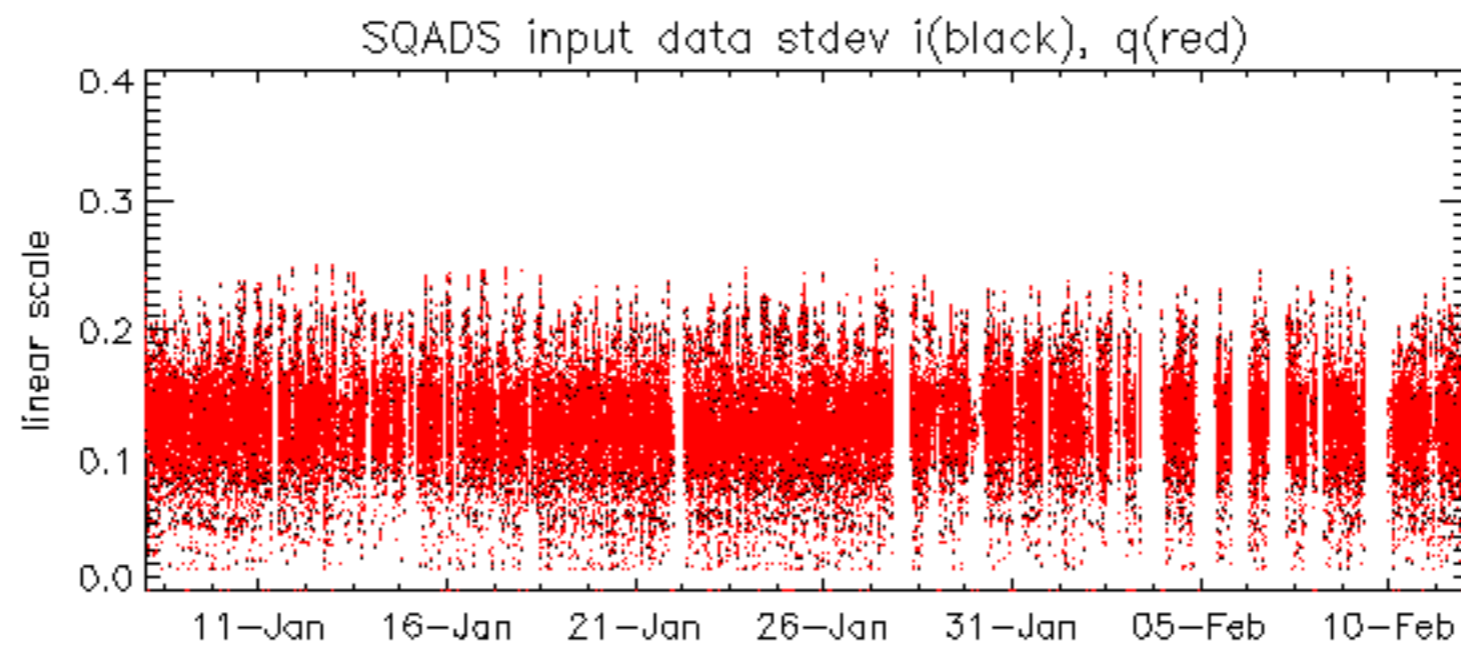


No anomalies observed on available MS products:

No anomalies observed.



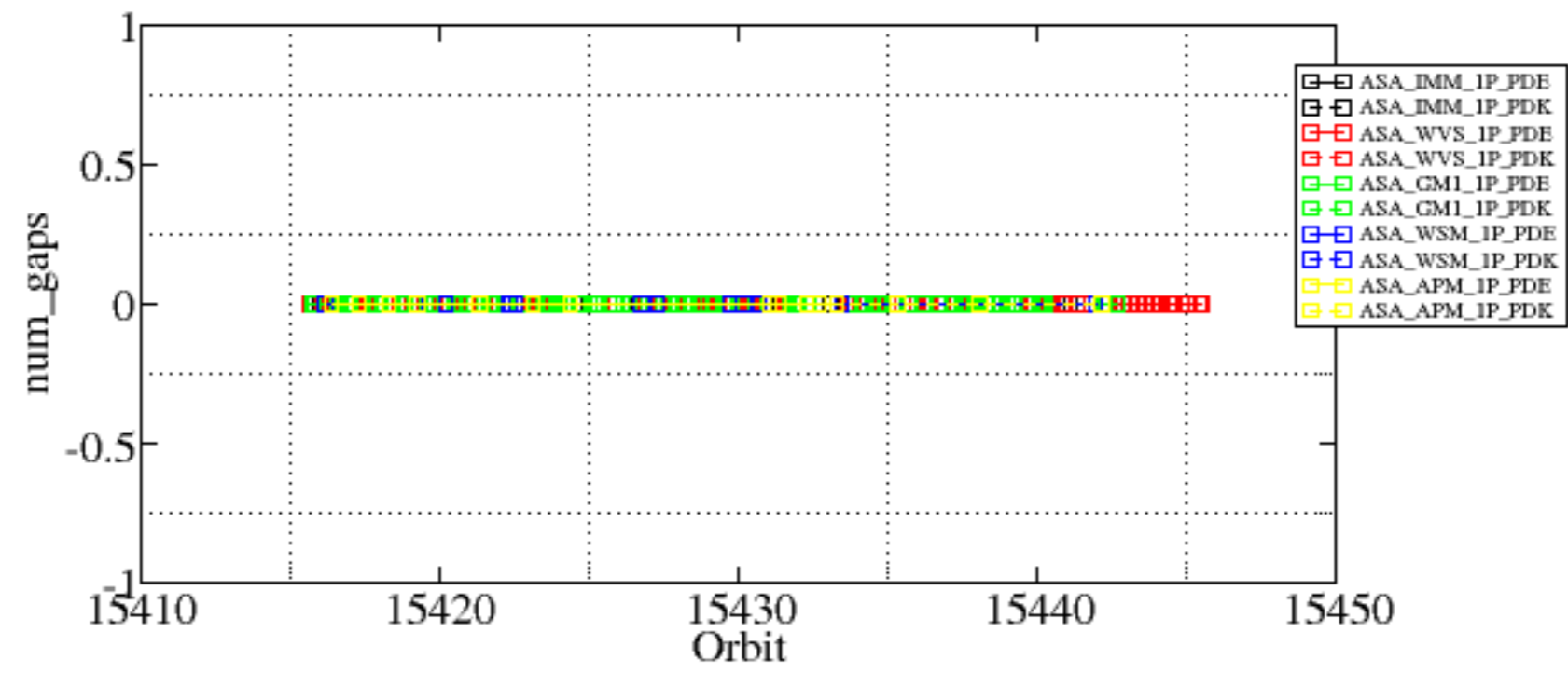


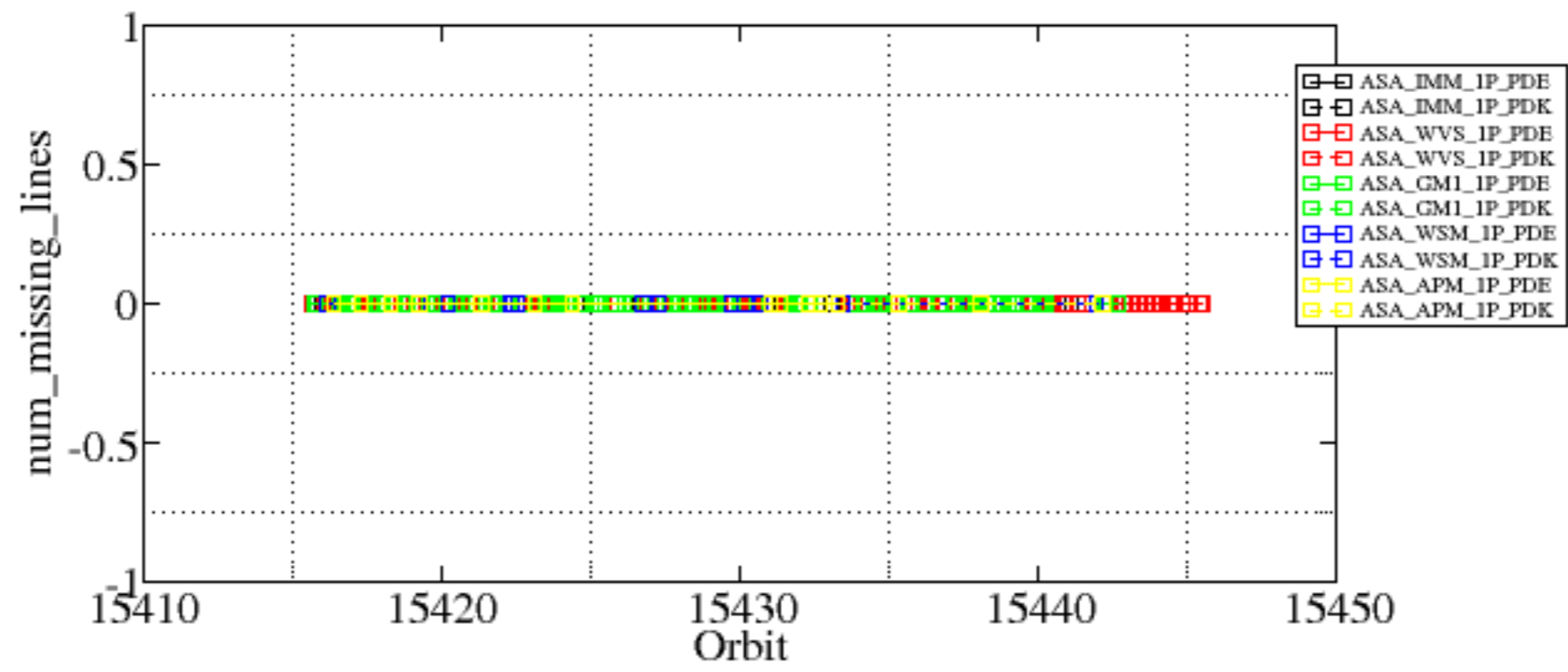


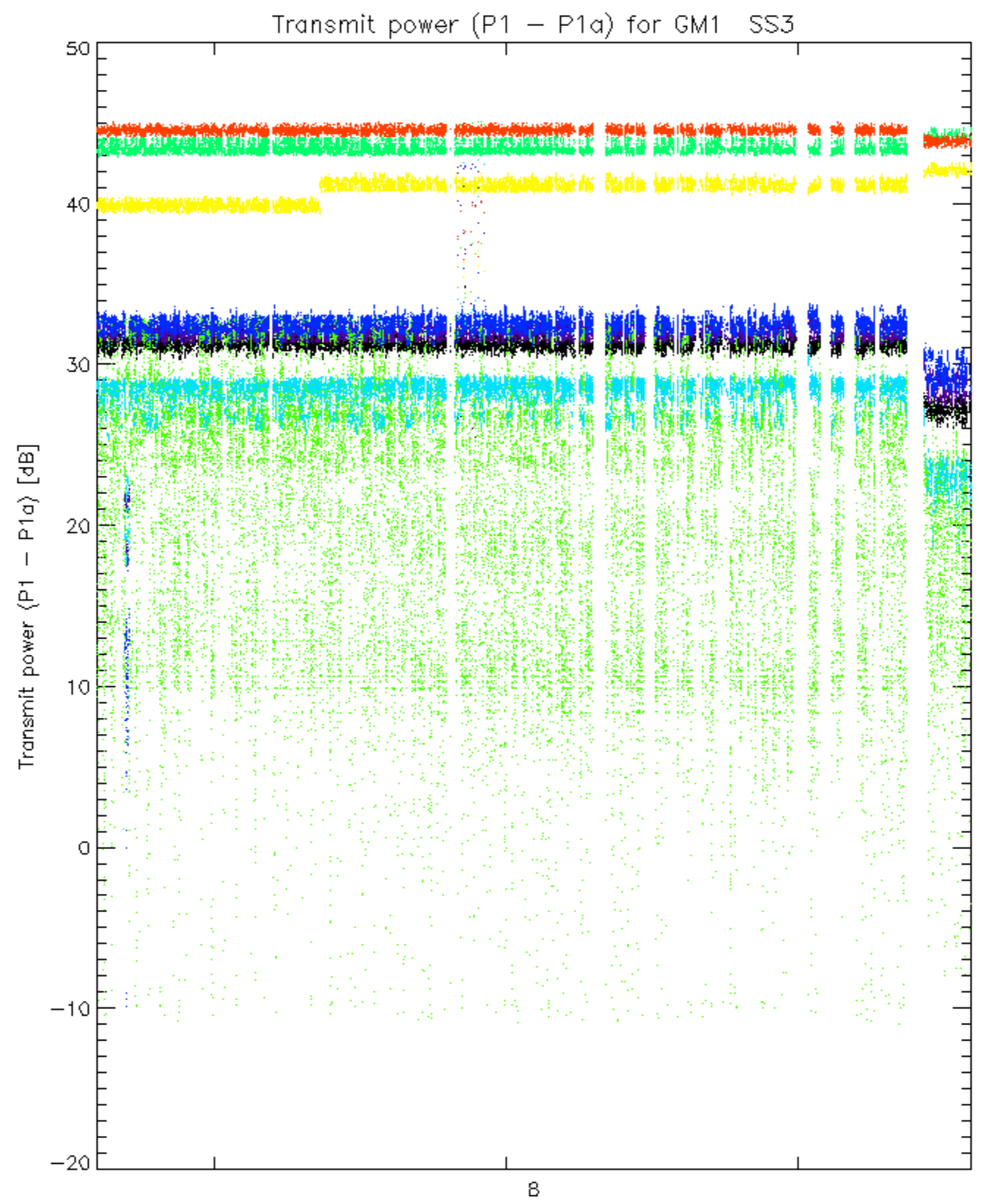
Summary of analysis for the last 3 days 2005021[012]

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

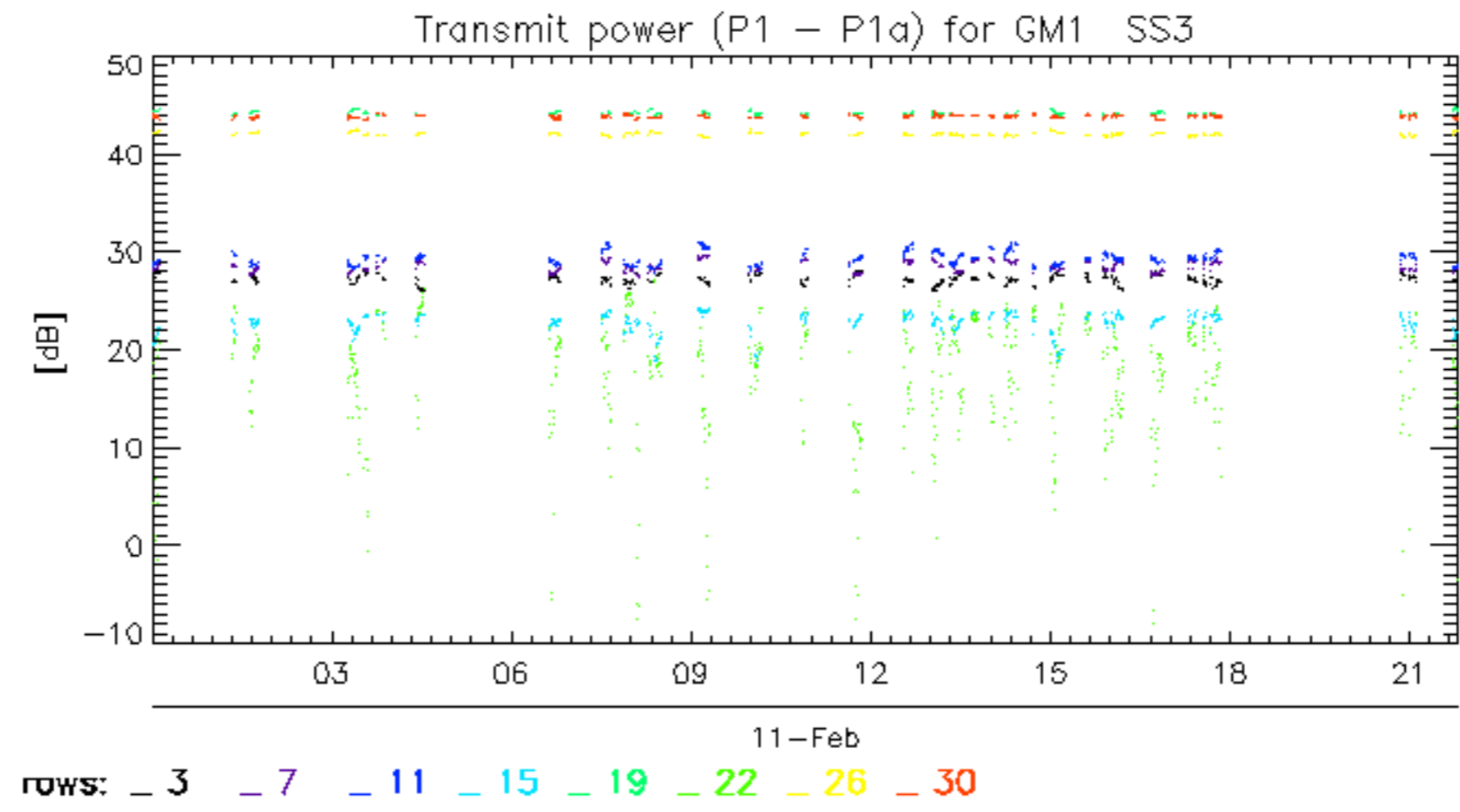
Filename	num_gaps	num_missing_lines

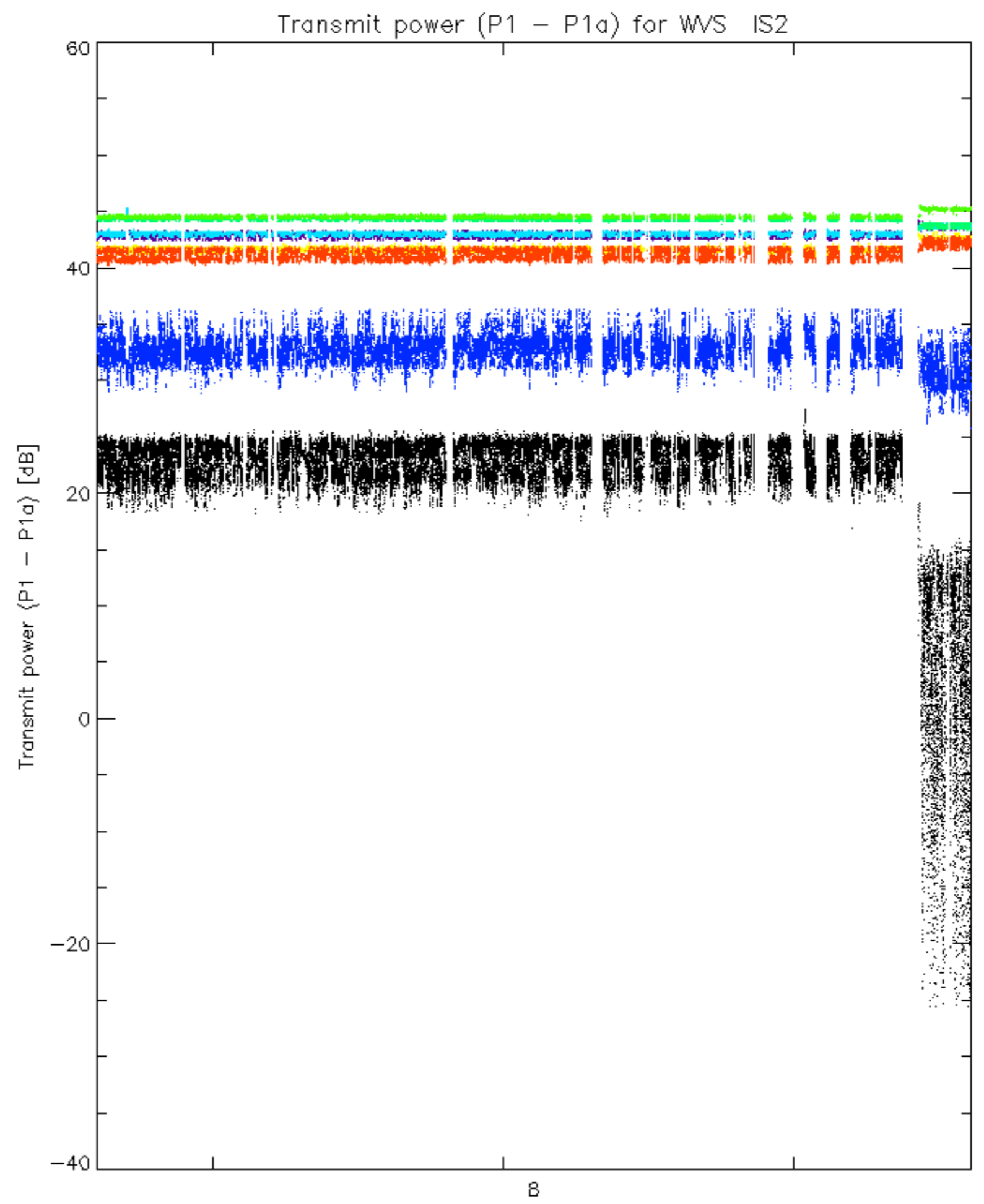




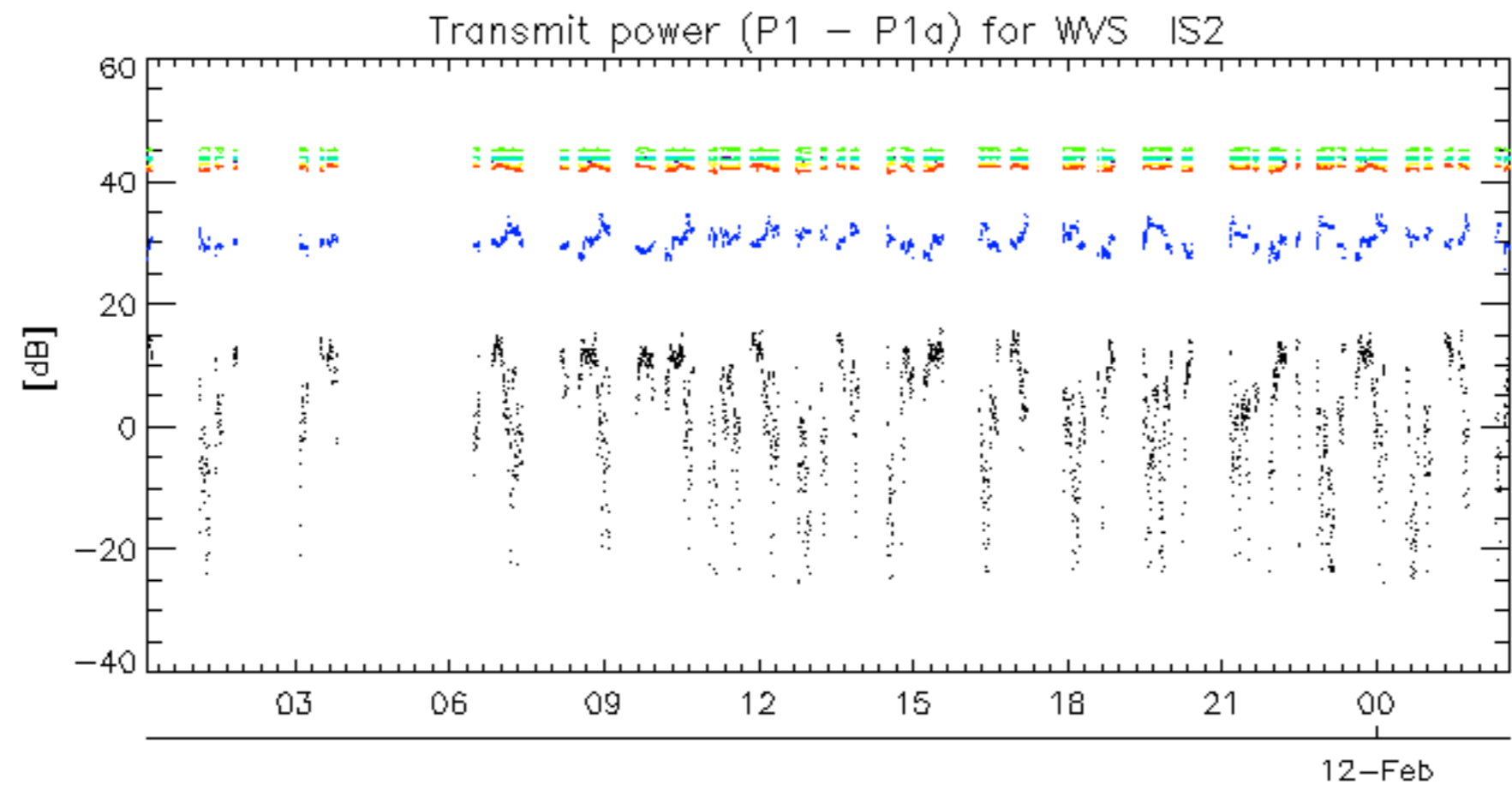


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.