

PRELIMINARY REPORT OF 050204

last update on Fri Feb 4 11:01:10 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 2005-02-03 00:00:00 to 2005-02-04 11:01:10

PDHS-K

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	14	16	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	14	16	0	0	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	14	16	0	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	14	16	0	0	0

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

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

Polarisation	Start Time
V	20050129 064404
H	20050130 061227

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	-3.408491	0.008019	0.043402
7	P1	-3.081550	0.008079	0.013489
11	P1	-4.653478	0.018793	-0.047188
15	P1	-5.642542	0.033266	-0.023624
19	P1	-3.665289	0.004329	-0.000020
22	P1	-4.562500	0.014783	0.035860
26	P1	-4.938015	0.012611	-0.009213
30	P1	-7.141943	0.016033	-0.046254
3	P1	-15.905310	0.102839	0.036968
7	P1	-15.509084	0.071065	-0.013923
11	P1	-20.845137	0.225856	-0.139512
15	P1	-11.608604	0.059639	0.035281
19	P1	-14.176786	0.024312	-0.006723
22	P1	-15.940337	0.390950	0.271047
26	P1	-17.632626	0.215564	0.140804
30	P1	-17.910851	0.334895	-0.150269

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.249399	0.086277	0.159941
7	P2	-22.440767	0.114603	0.169937
11	P2	-14.674930	0.106992	0.236391
15	P2	-7.113280	0.098930	0.074983
19	P2	-9.699215	0.097981	0.053419
22	P2	-17.052809	0.095821	0.146470
26	P2	-16.495878	0.095031	0.055800
30	P2	-18.917919	0.081449	0.057610

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P3	-8.190532	0.006170	0.032751
7	P3	-8.190532	0.006170	0.032751
11	P3	-8.190532	0.006170	0.032751
15	P3	-8.190532	0.006170	0.032751
19	P3	-8.190532	0.006170	0.032751
22	P3	-8.190532	0.006170	0.032751
26	P3	-8.190536	0.006174	0.032859
30	P3	-8.190536	0.006174	0.032859

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	-2.803507	0.019029	0.062100
7	P1	-2.961081	0.072509	-0.033650
11	P1	-3.951838	0.030810	-0.022204
15	P1	-3.521913	0.030240	-0.042382
19	P1	-3.600819	0.013456	0.027435
22	P1	-5.670340	0.066481	-0.087704
26	P1	-6.917281	0.183436	-1.211097
30	P1	-6.286642	0.044204	0.041526
3	P1	-10.768270	0.089778	0.051698
7	P1	-10.153646	0.187476	-0.037859
11	P1	-12.538589	0.130153	-0.059889
15	P1	-11.758781	0.078328	-0.017592
19	P1	-15.603922	0.053927	0.103137
22	P1	-24.088488	1.712216	-0.078946
26	P1	-15.219728	0.459858	-1.166755
30	P1	-20.016752	0.846508	0.079180

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.948626	0.047462	0.125271
7	P2	-22.487265	0.125830	0.164965
11	P2	-10.479007	0.050701	0.242203
15	P2	-5.023105	0.021922	0.064123
19	P2	-6.906959	0.033014	0.085976
22	P2	-7.221609	0.049007	0.107251
26	P2	-23.911762	0.092718	0.096174
30	P2	-21.962763	0.055620	0.054255

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024759	0.002402	0.034142
7	P3	-8.024835	0.002407	0.034025
11	P3	-8.024897	0.002399	0.034121
15	P3	-8.024857	0.002401	0.034272
19	P3	-8.024917	0.002417	0.034201
22	P3	-8.024850	0.002399	0.034240
26	P3	-8.024780	0.002411	0.034048
30	P3	-8.024891	0.002407	0.034262

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	0.000472188
	stdev	2.14989e-07
MEAN Q	mean	0.000546152
	stdev	2.29391e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129189
	stdev	0.000959434
STDEV Q	mean	0.129427
	stdev	0.000970623



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005020[234]

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_WVS_1PNPDE20050202_004321_000001502034_00217_15301_6285.N1	0	56
ASA_WVS_1PNPDE20050202_005019_000000592034_00217_15301_6286.N1	0	96
ASA_WVS_1PNPDE20050202_005346_000002692034_00217_15301_6284.N1	0	104
ASA_WVS_1PNPDE20050202_010933_000004352034_00217_15301_6282.N1	0	72
ASA_WVS_1PNPDE20050202_013114_000000302034_00217_15301_6283.N1	0	32
ASA_WVS_1PNPDE20050202_013414_000000142034_00217_15301_6287.N1	0	96
ASA_WVS_1PNPDE20050202_015126_000000592034_00218_15302_6288.N1	0	144
ASA_WVS_1PNPDE20050202_024738_000001042034_00218_15302_6291.N1	0	56
ASA_WVS_1PNPDE20050202_031150_000000452034_00218_15302_6293.N1	0	16

ASA_WVS_1PNPDE20050202_032326_000000592034_00218_15302_6294.N1	0	64
ASA_GM1_1PNPDE20050202_004109_000001142034_00217_15301_8354.N1	0	591
ASA_GM1_1PNPDE20050202_010331_000001022034_00217_15301_8356.N1	0	498
ASA_GM1_1PNPDE20050202_012243_000001382034_00217_15301_8359.N1	0	744
ASA_GM1_1PNPDE20050202_020406_000009242034_00218_15302_8362.N1	0	572
ASA_GM1_1PNPDE20050202_041234_000001932034_00219_15303_8372.N1	0	74



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"/>	Ascending
<input type="checkbox"/>	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**7.4 - Unbiased Doppler Error for GM1****Evolution of unbiased Doppler error (Real - Expected)**

Acsending

Descending

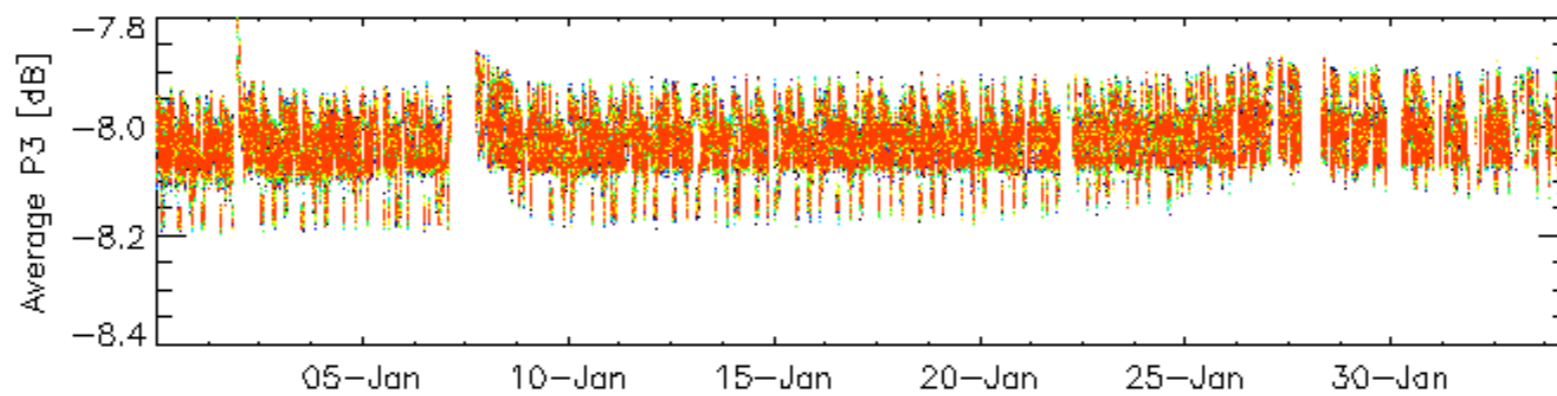
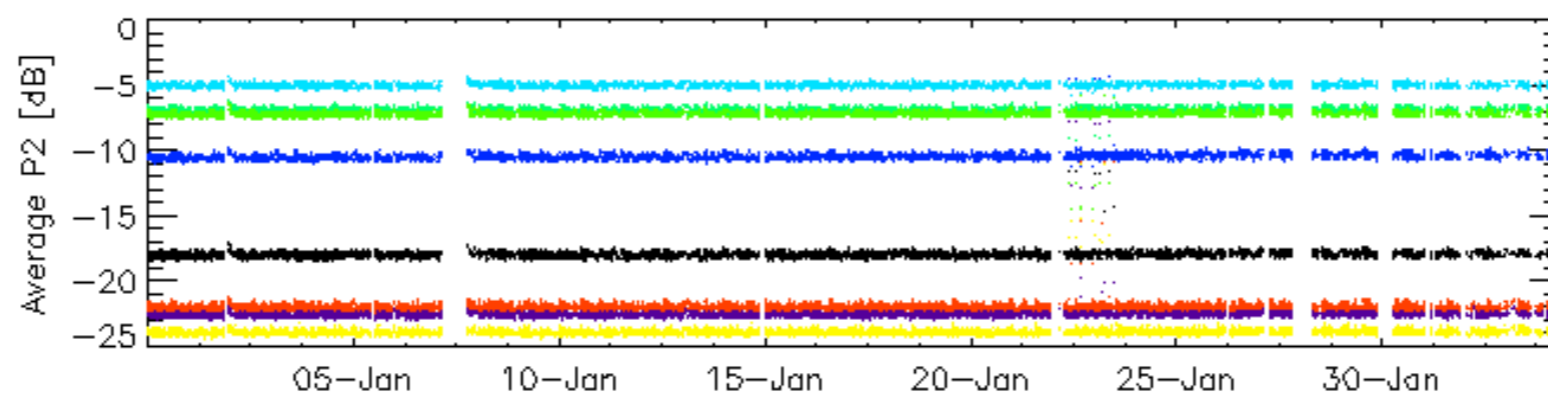
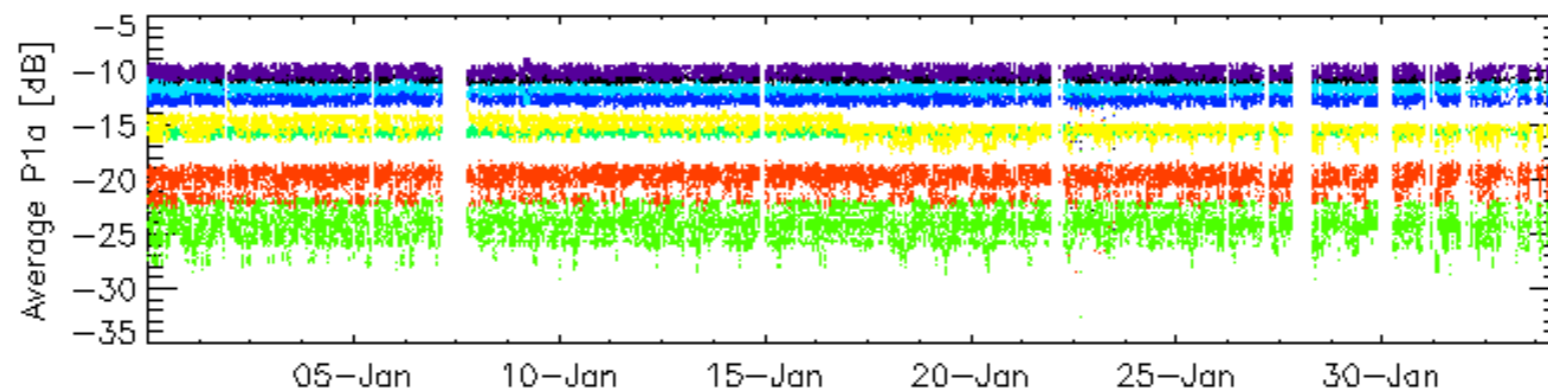
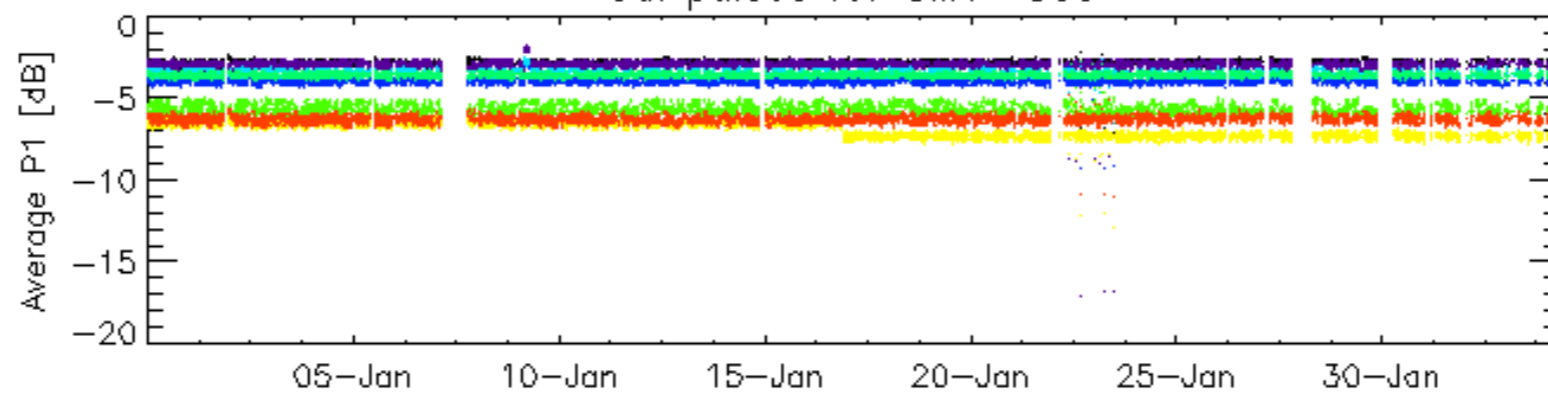
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

Acsending

Descending

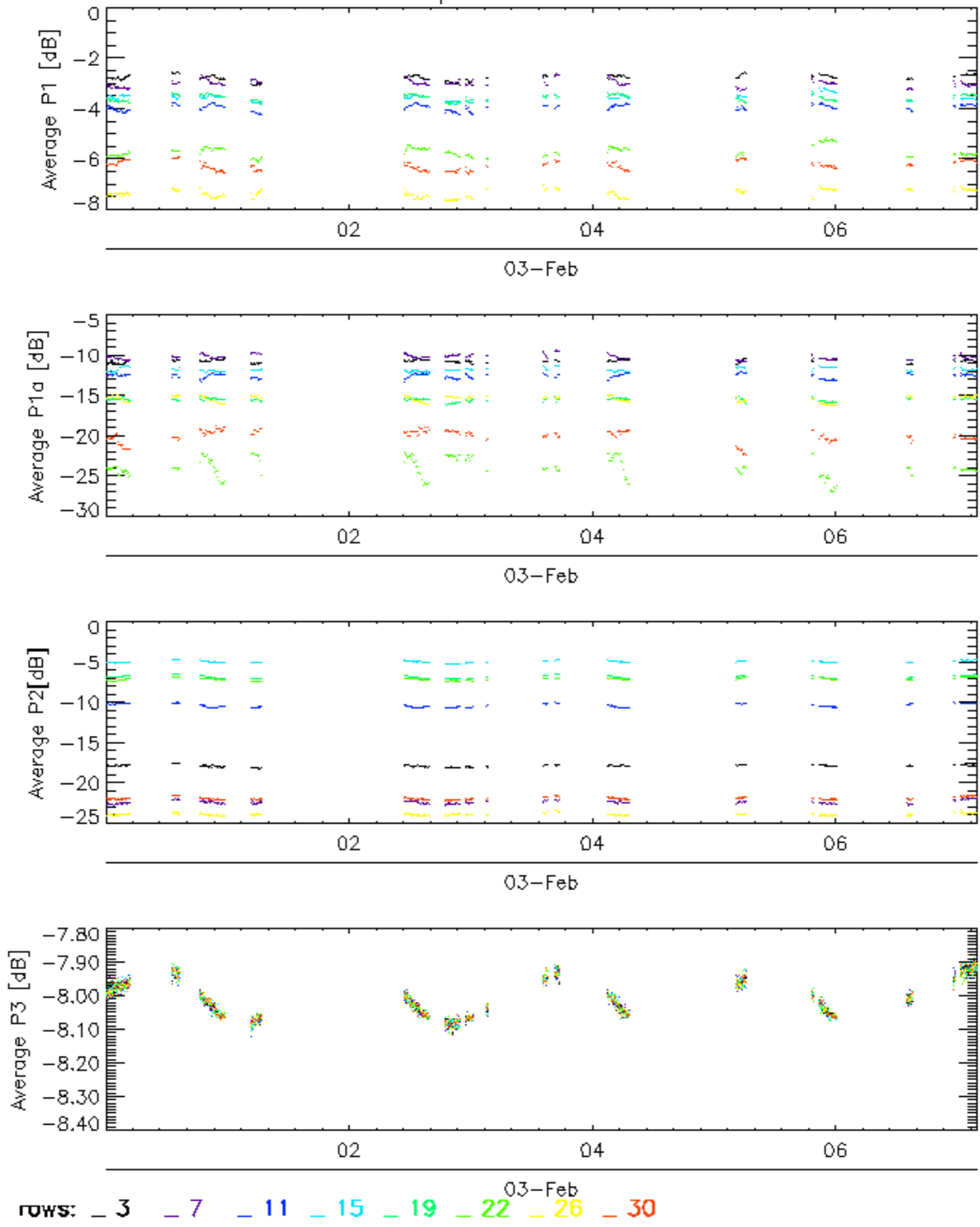
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

Cal pulses for GM1 SS3

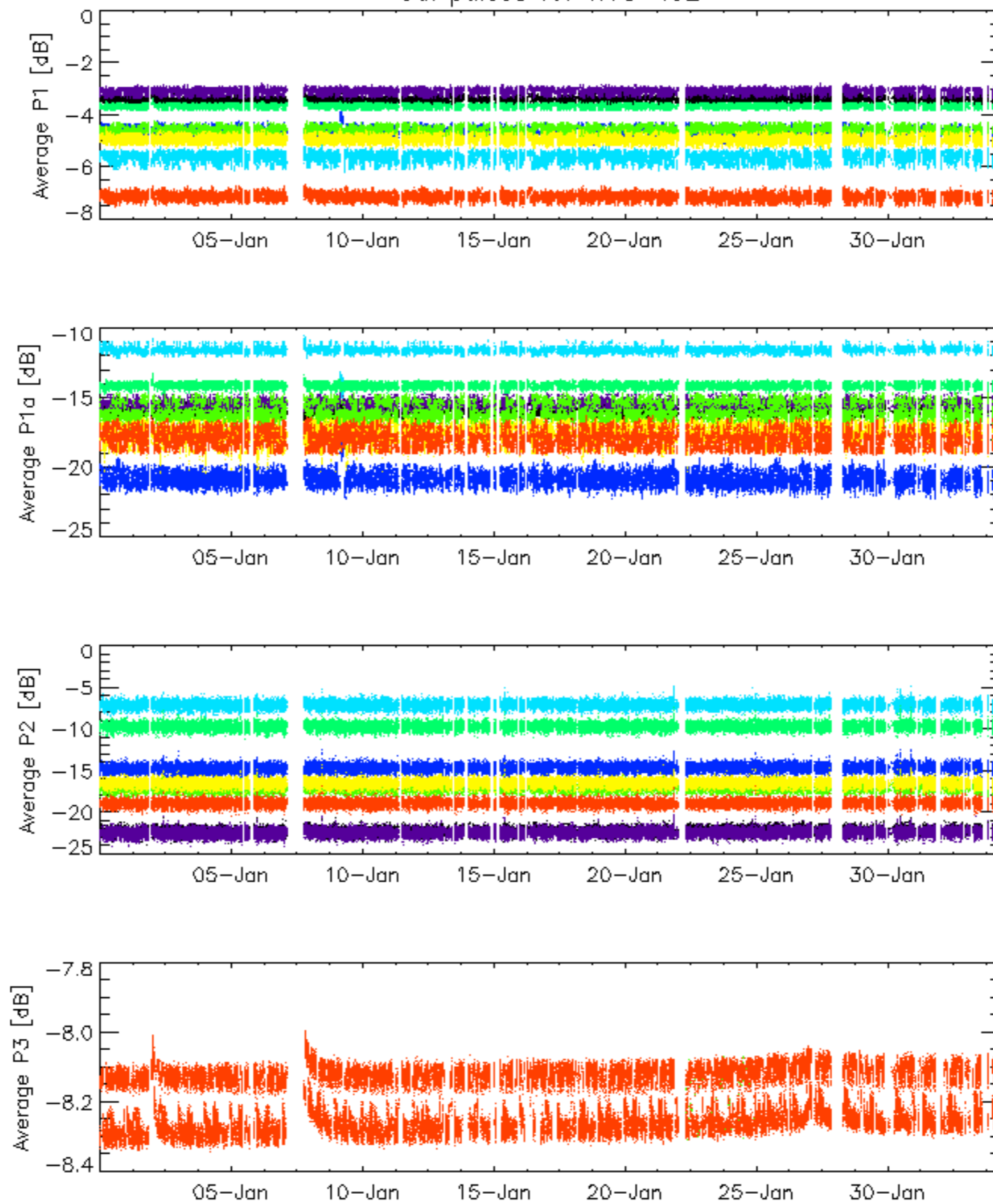


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

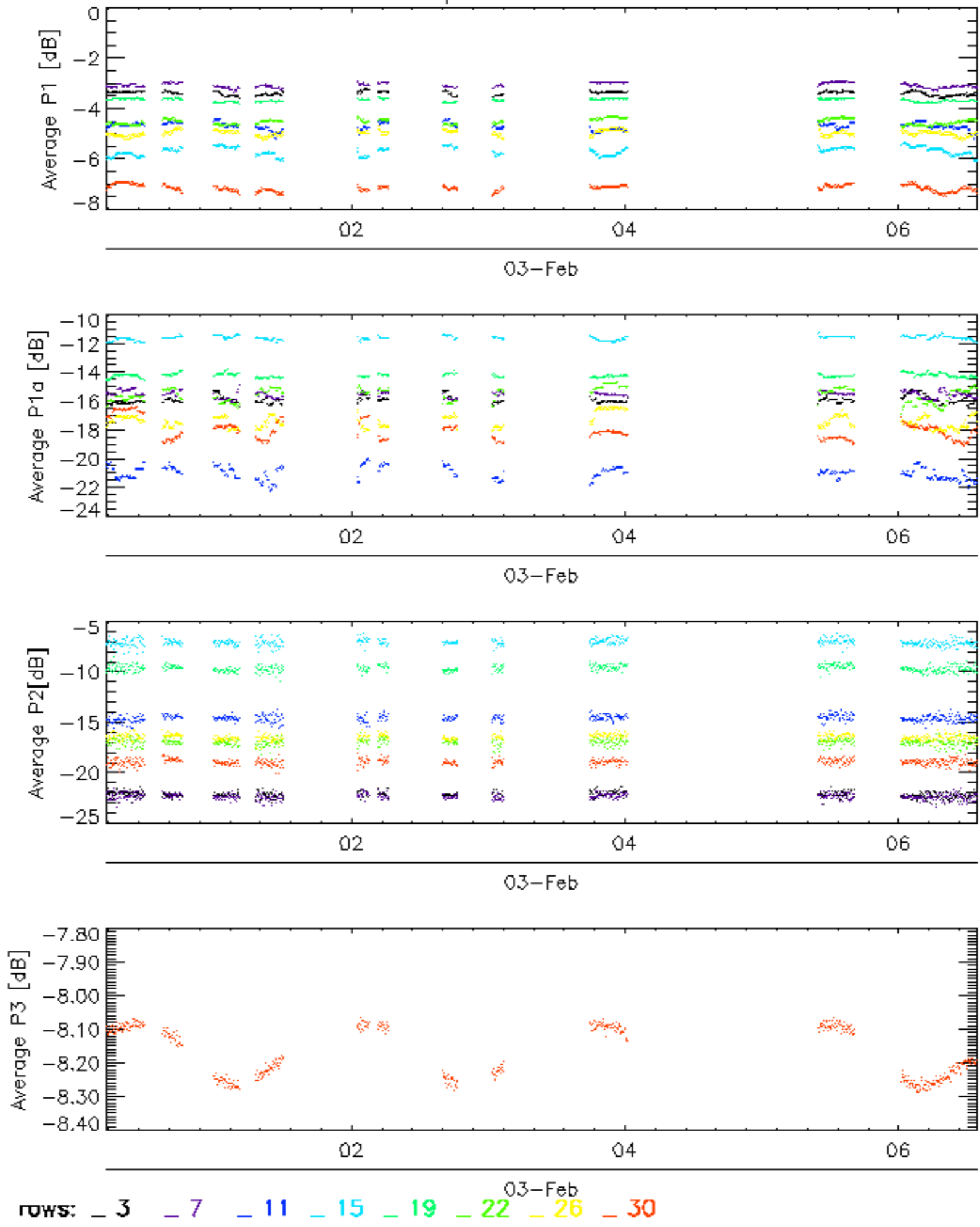


Cal pulses for WVS IS2

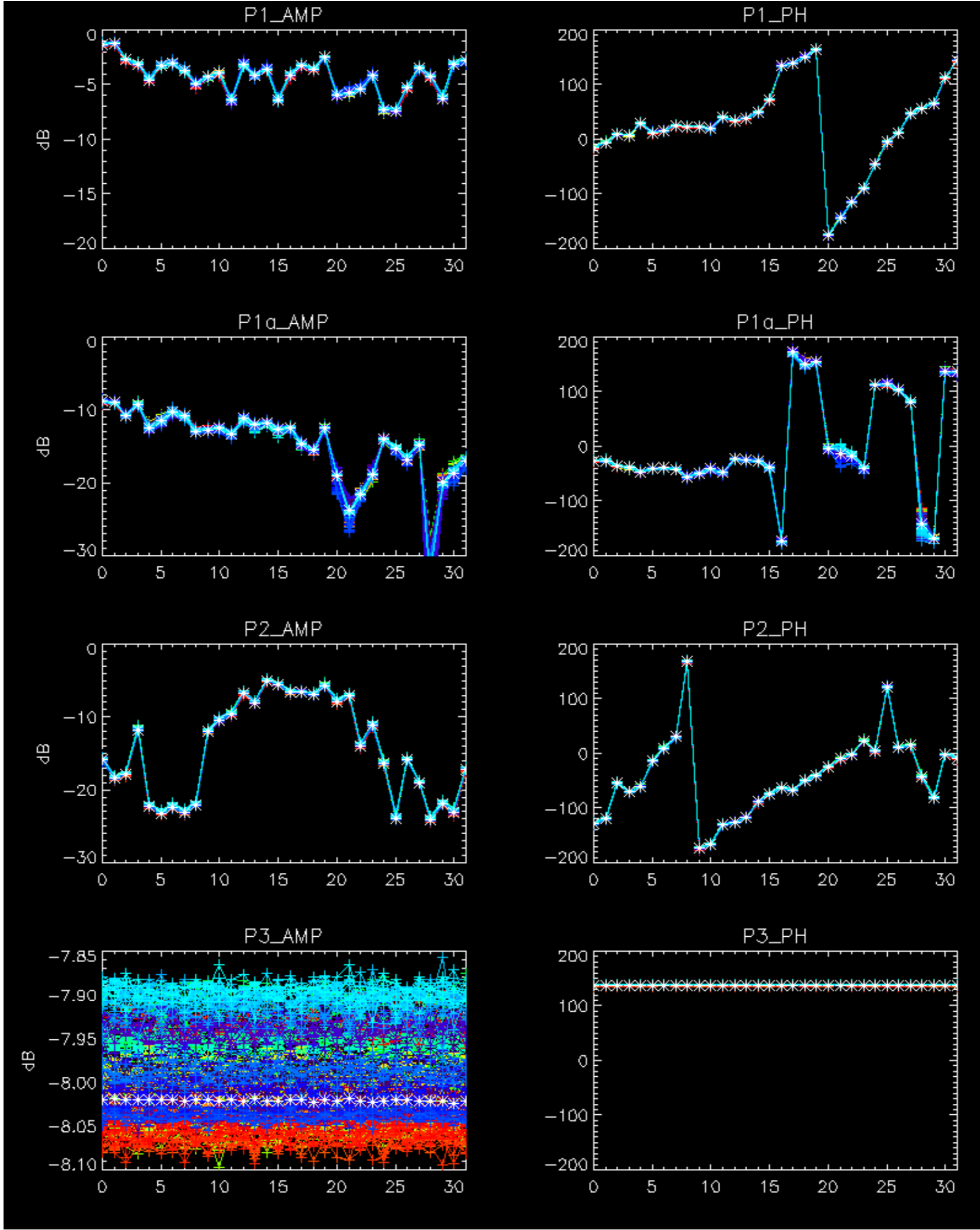


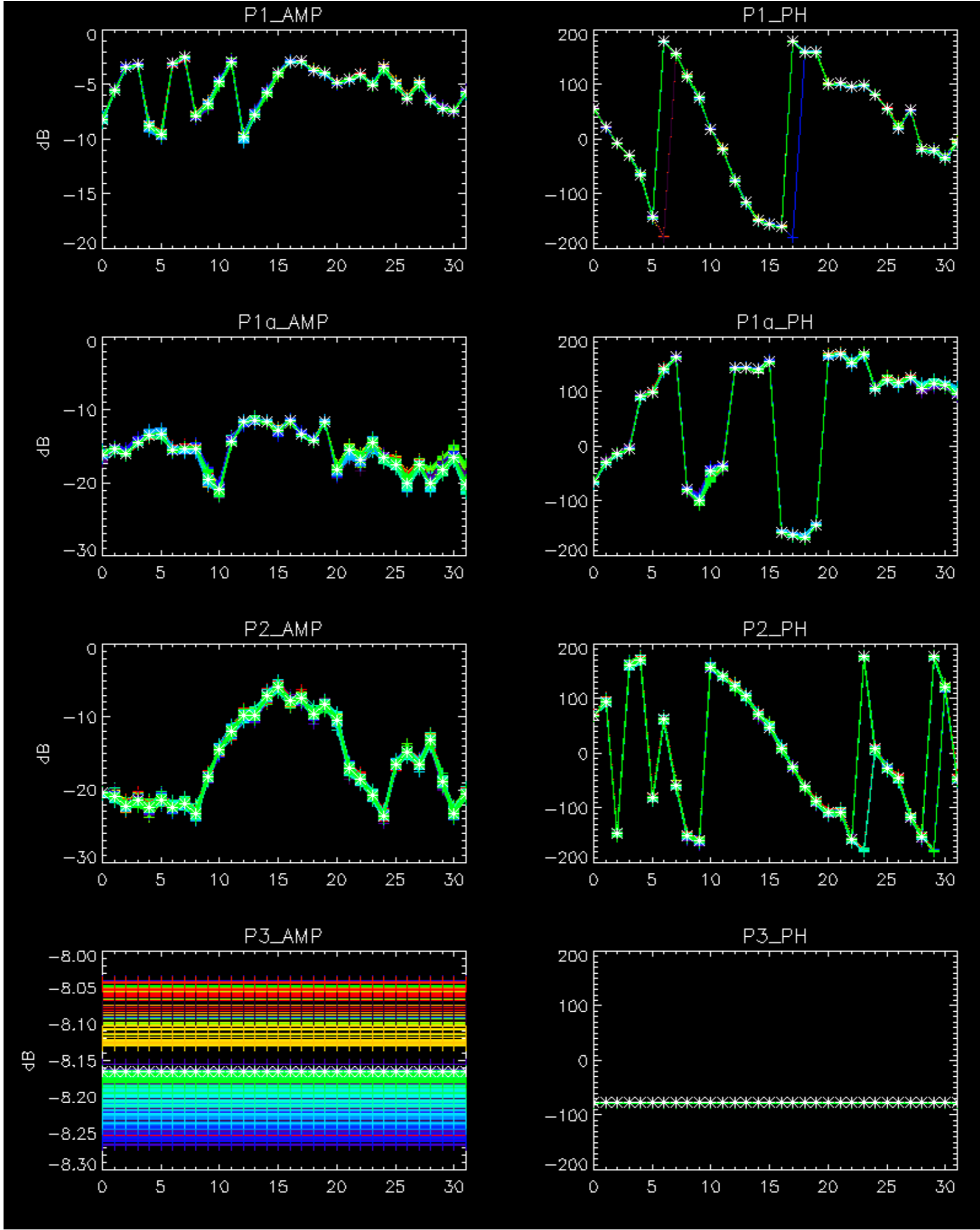
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



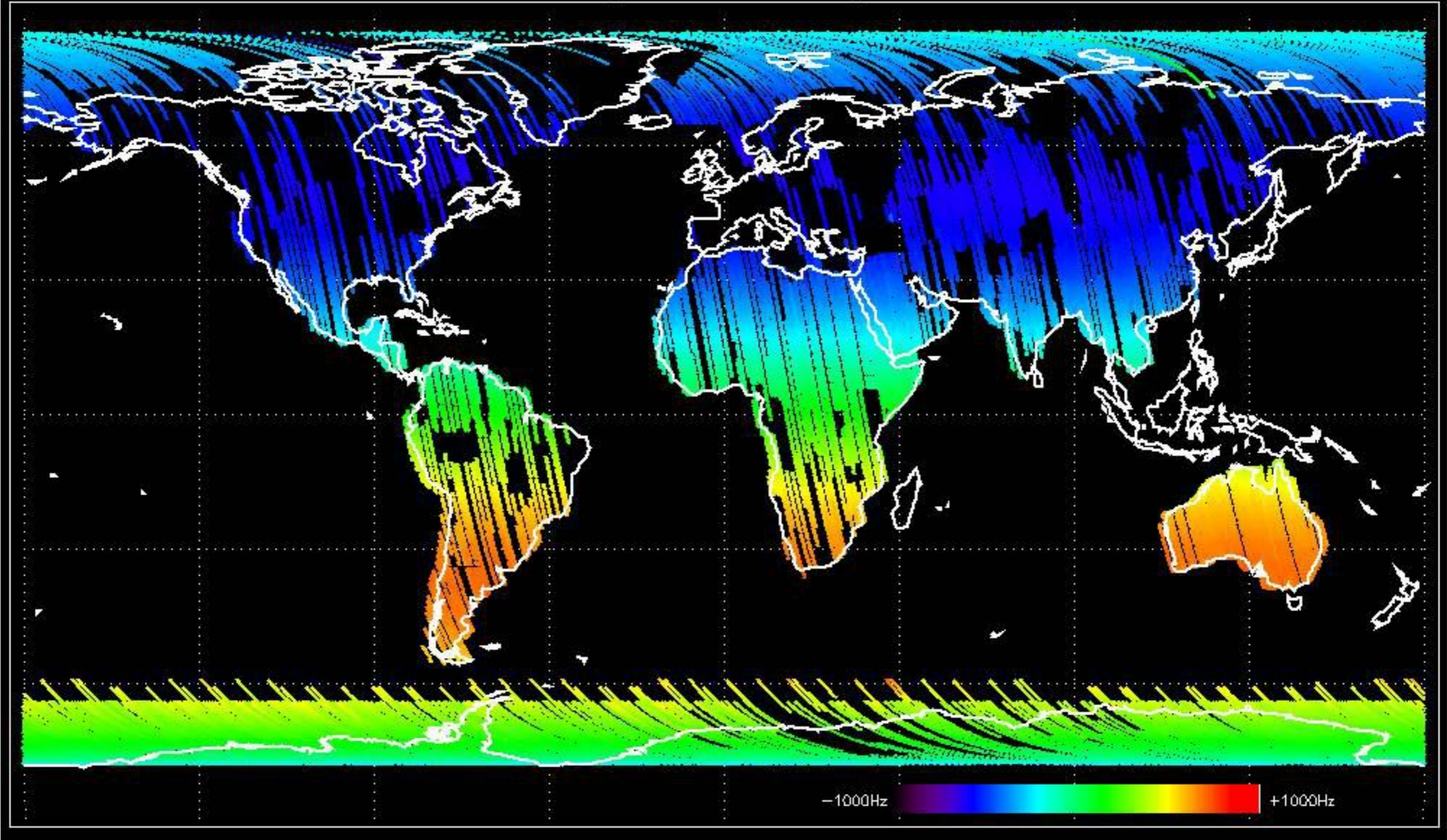
No anomalies observed.



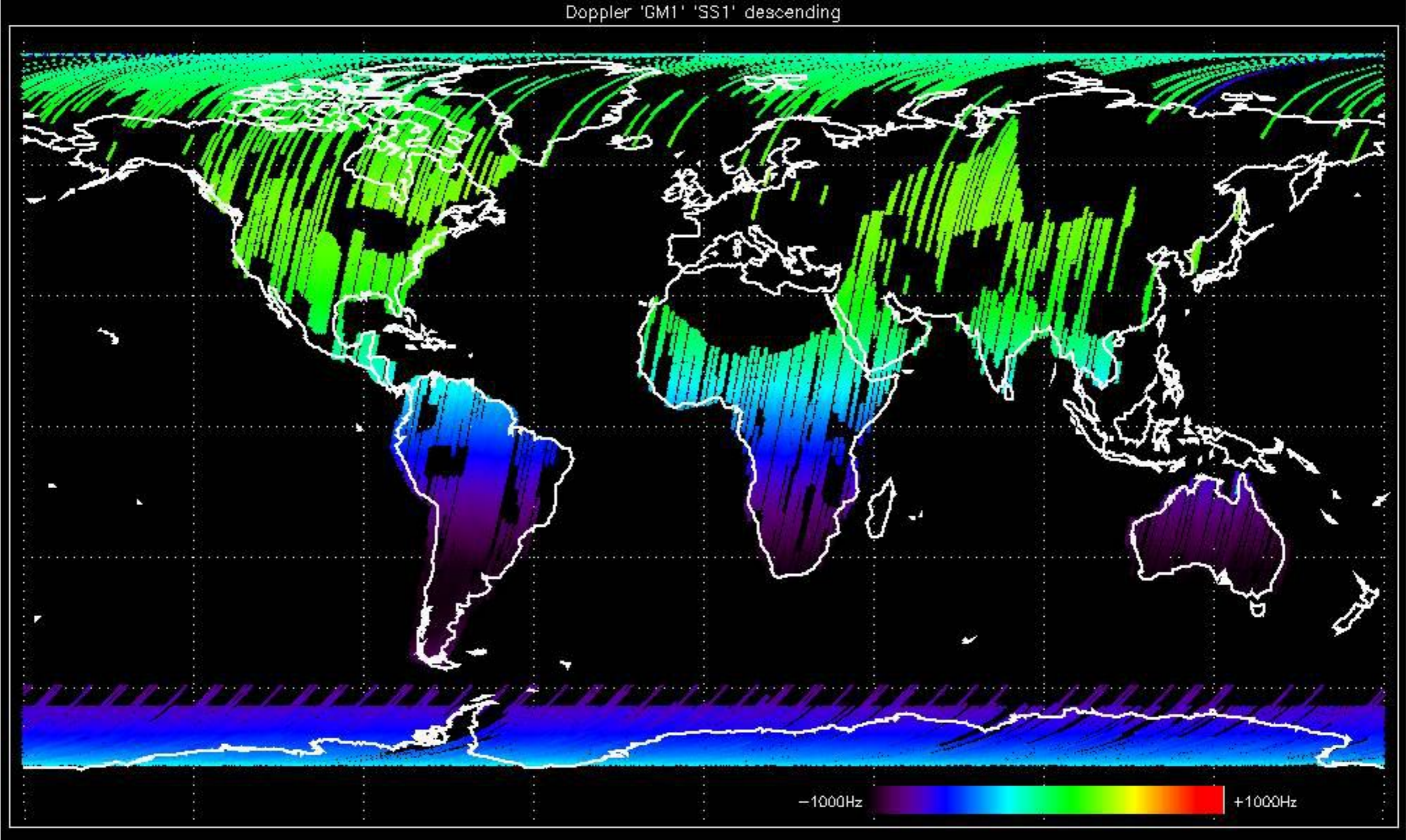


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

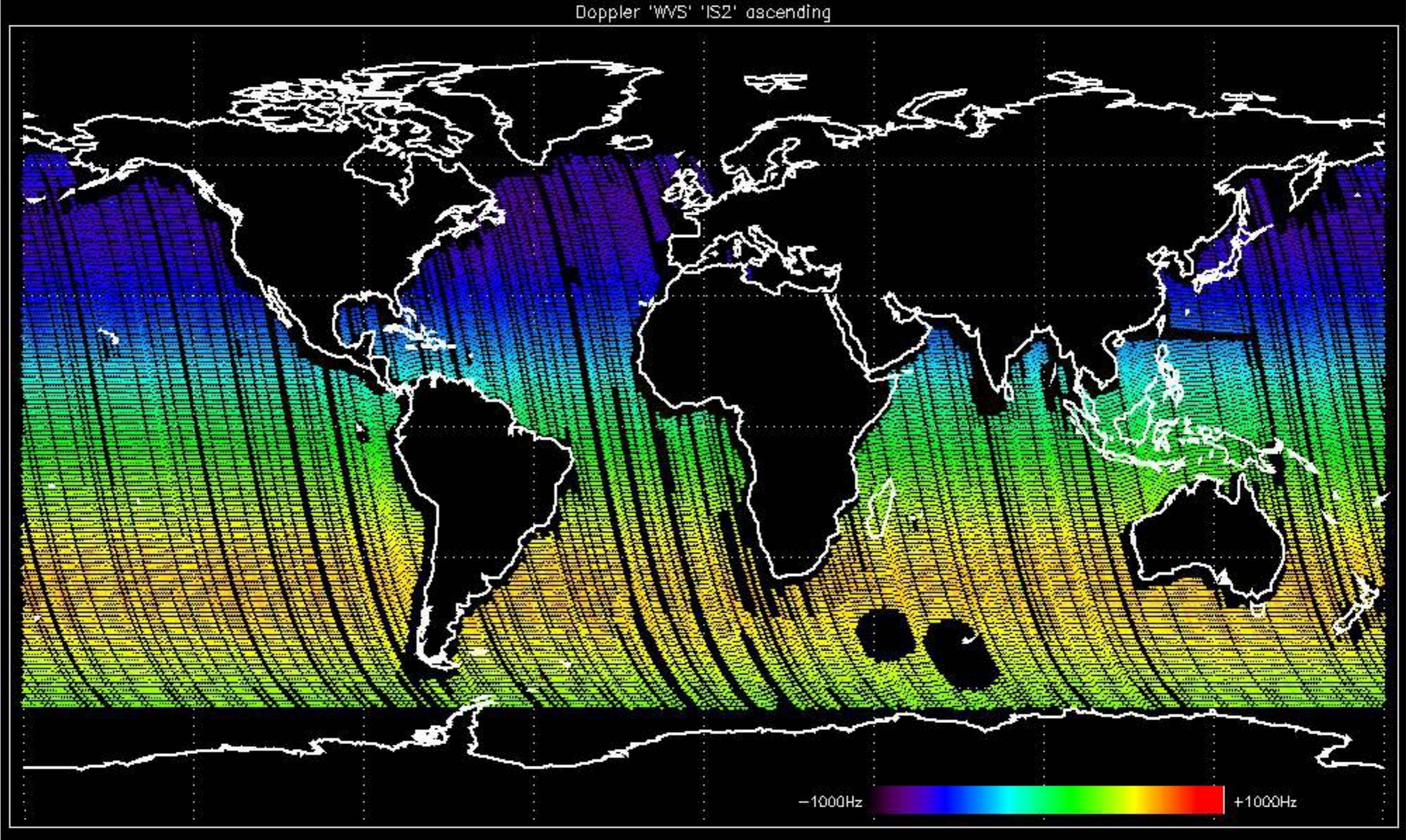
Doppler 'GM1' 'SS1' ascending



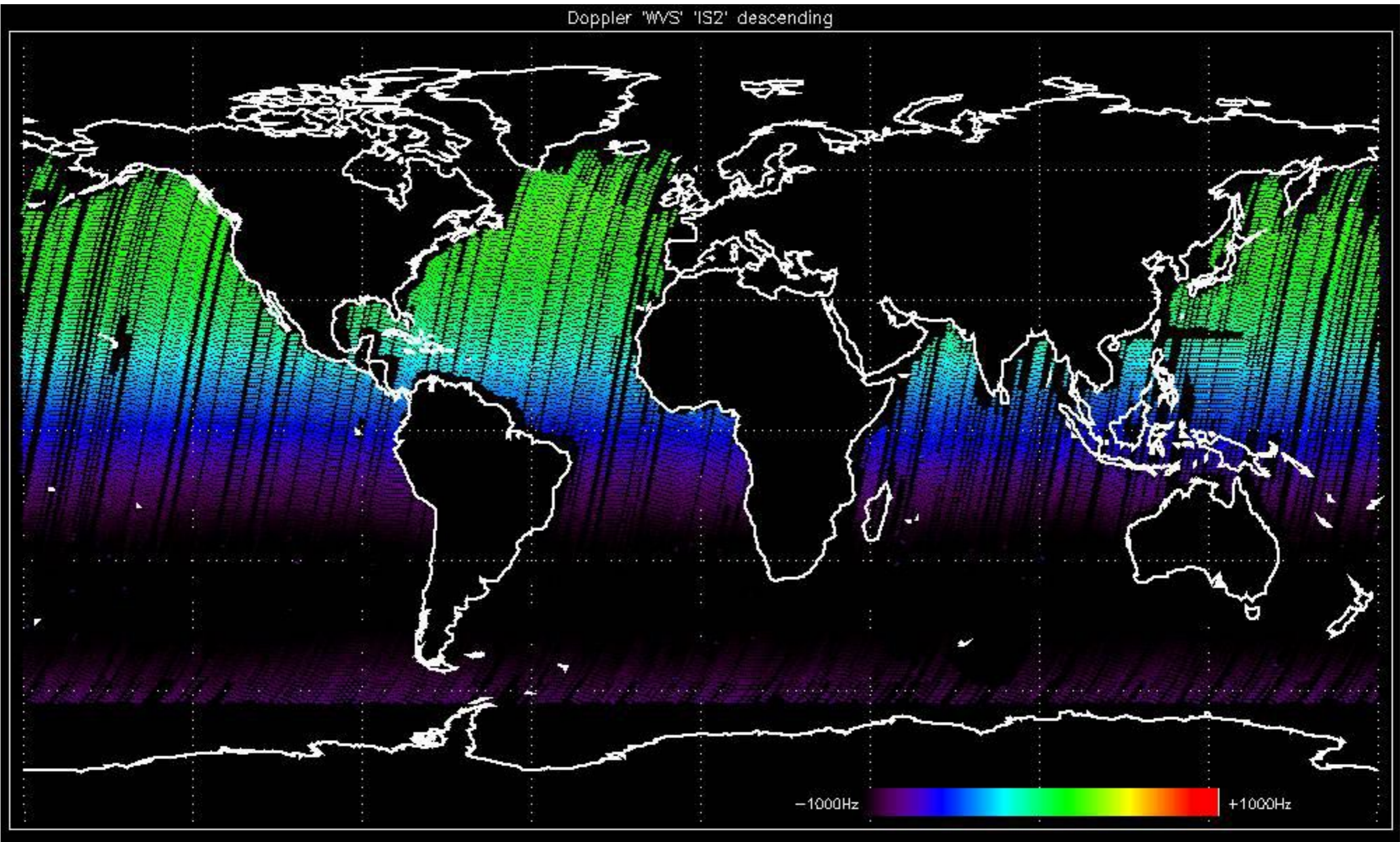
Doppler 'GM1' 'SS1' descending



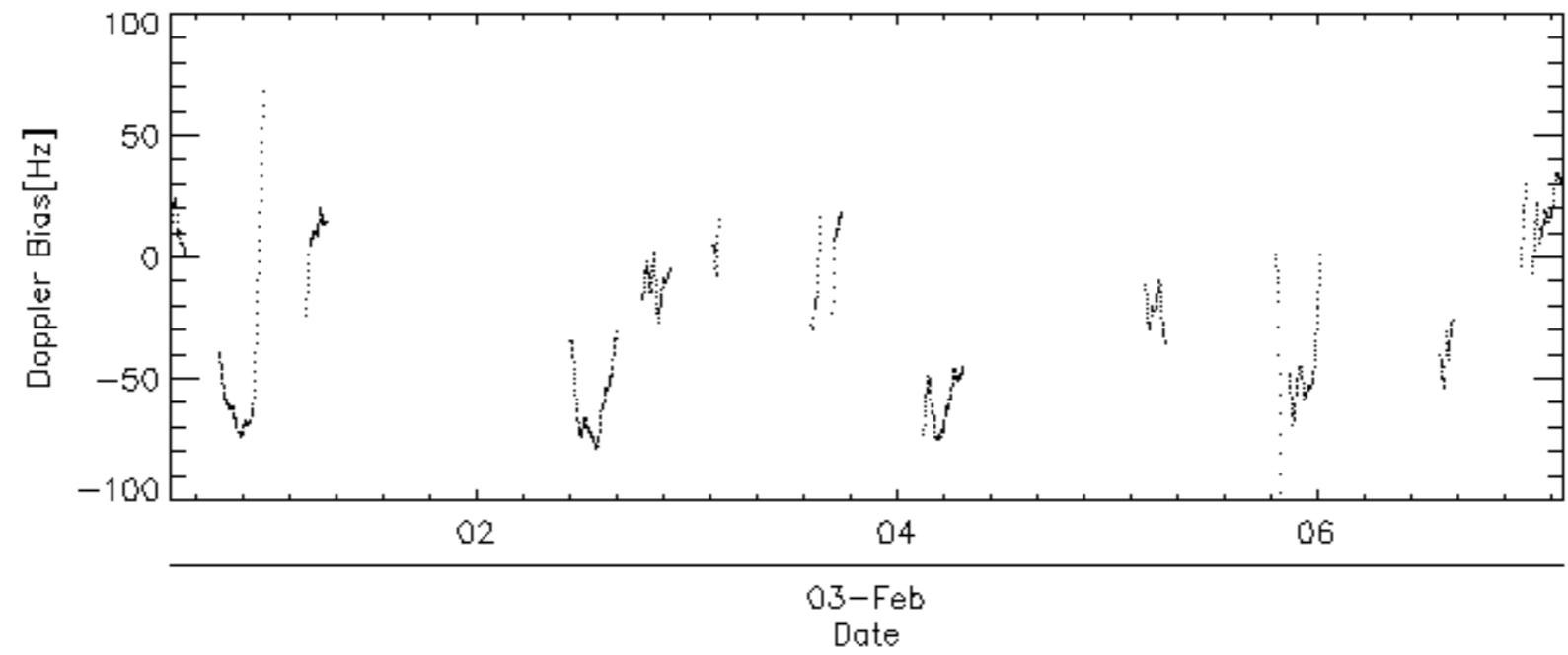
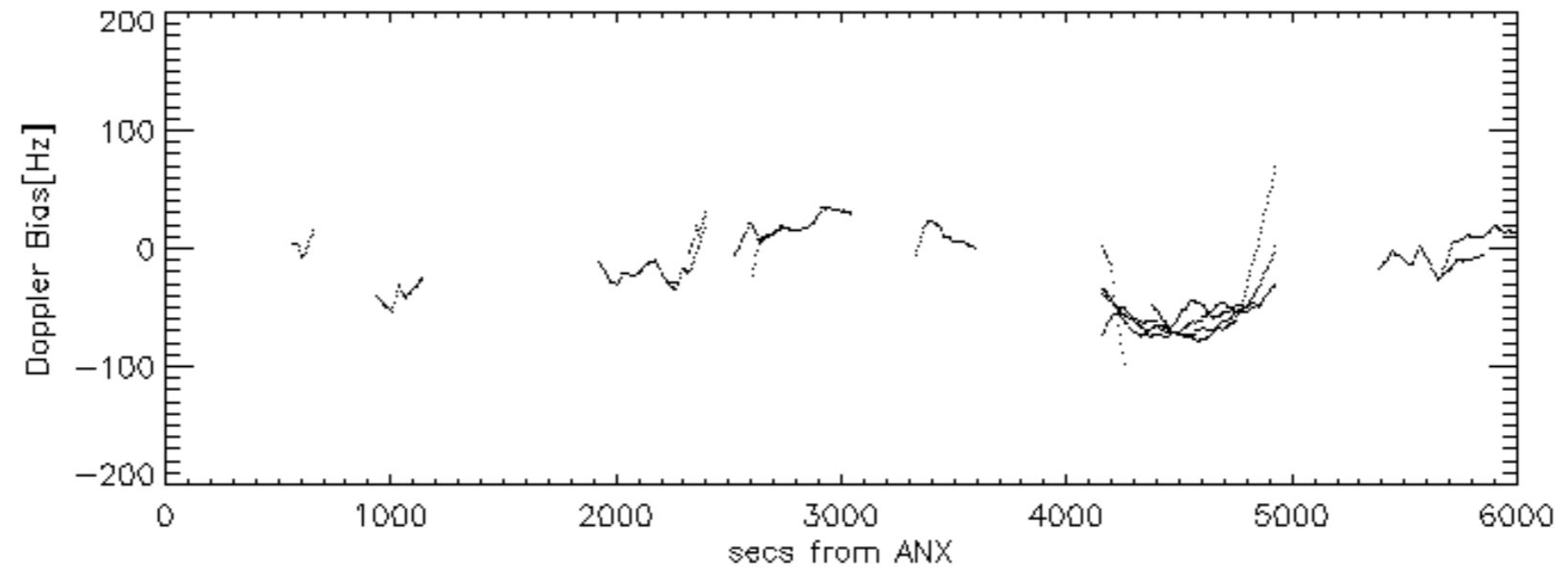
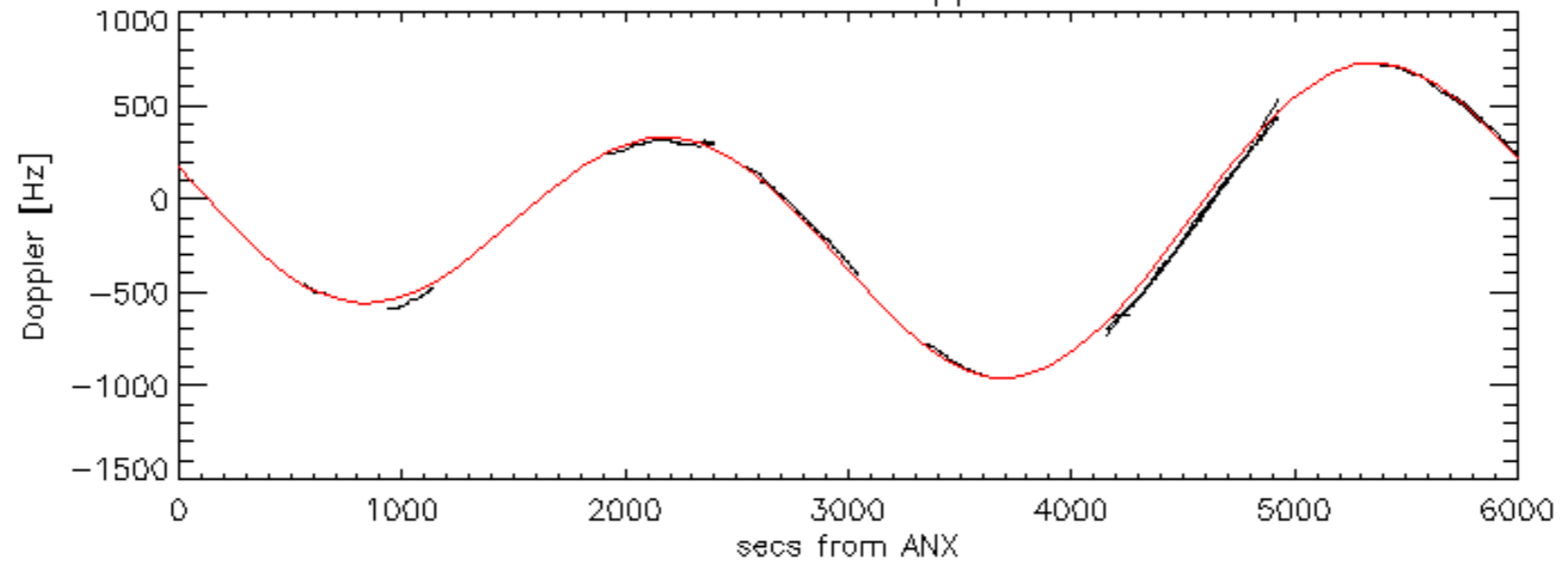
Doppler 'WVS' 'IS2' ascending

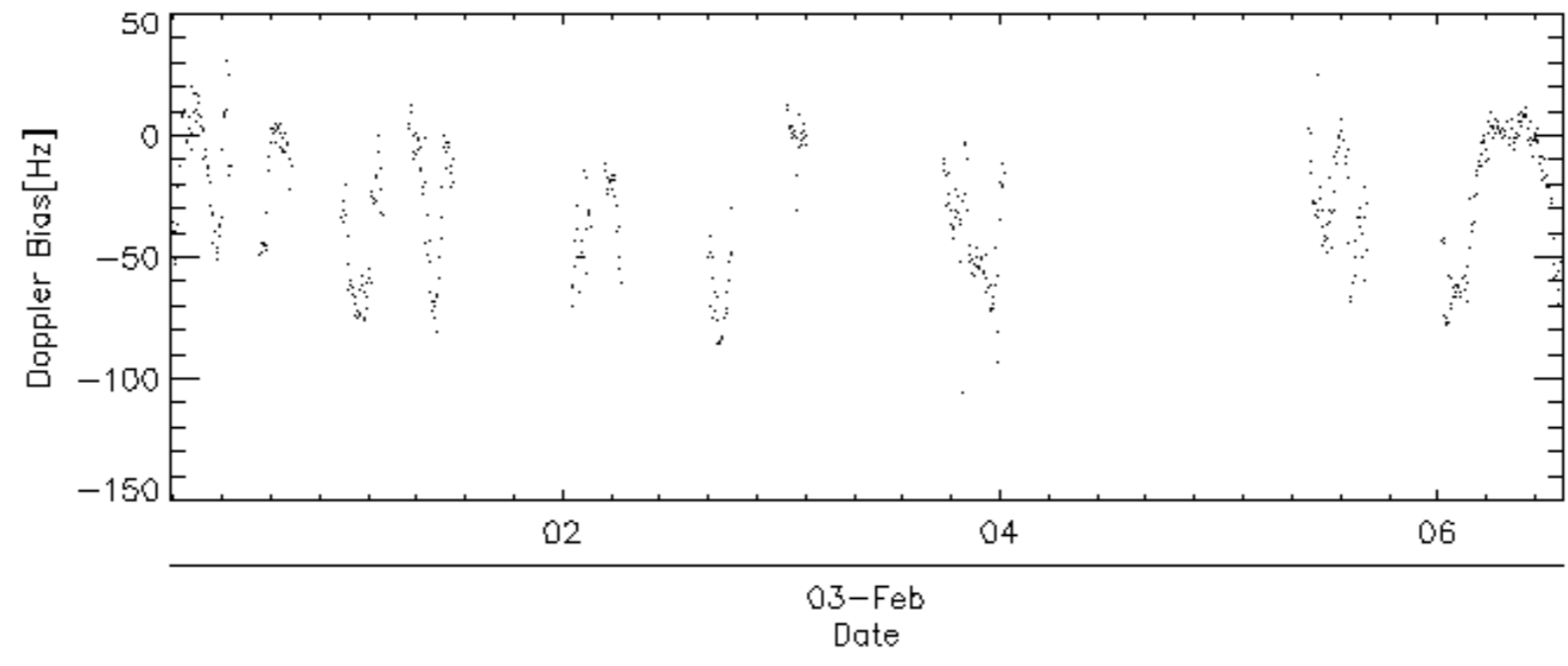
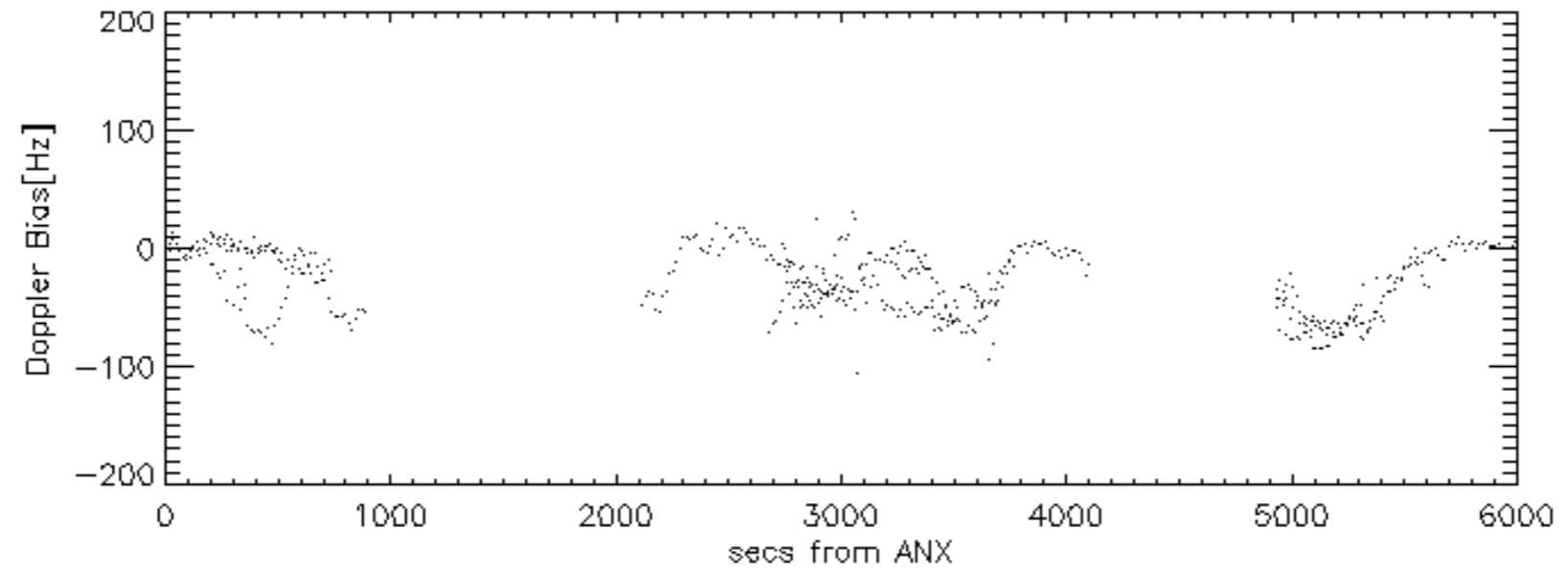
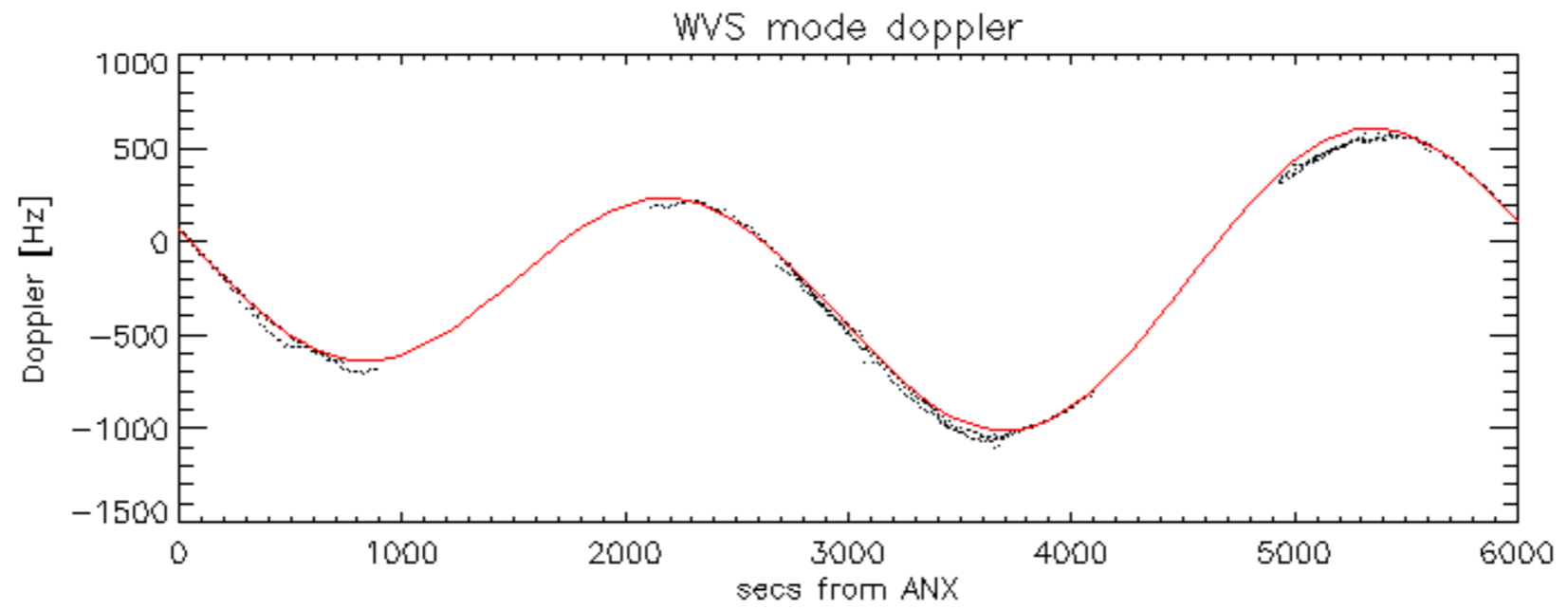


Doppler 'WVS' 'IS2' descending

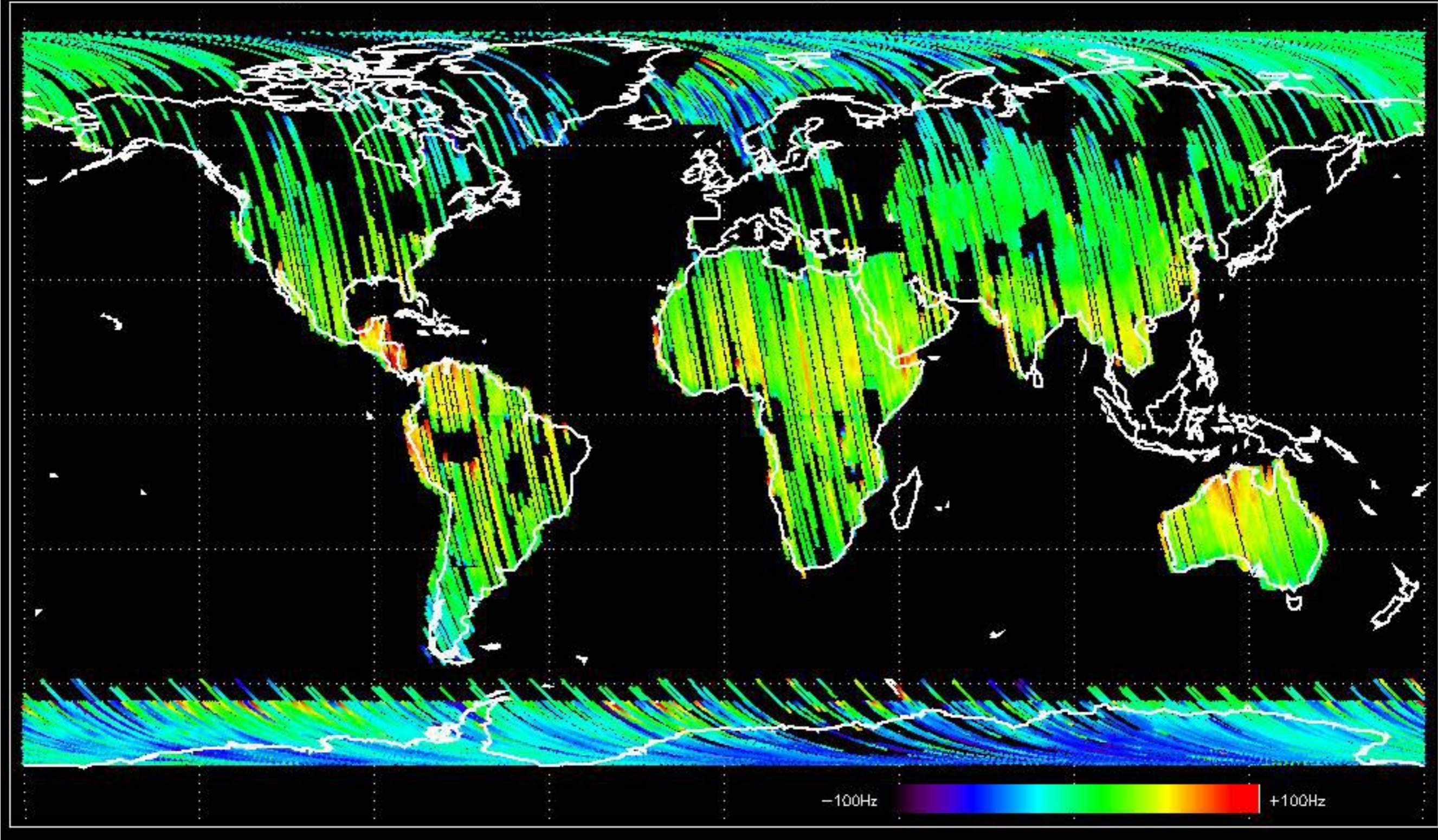


GM1 mode doppler

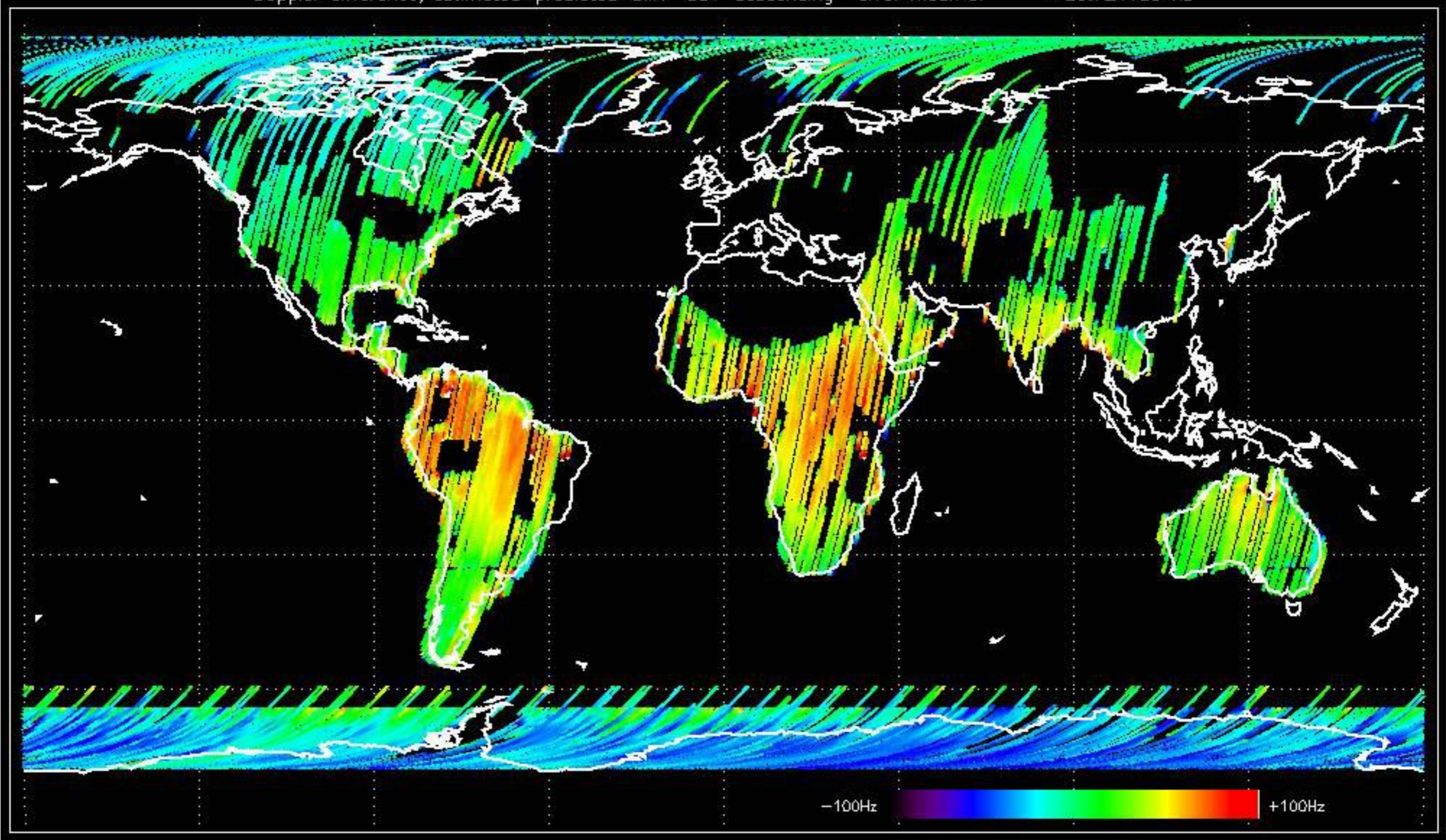




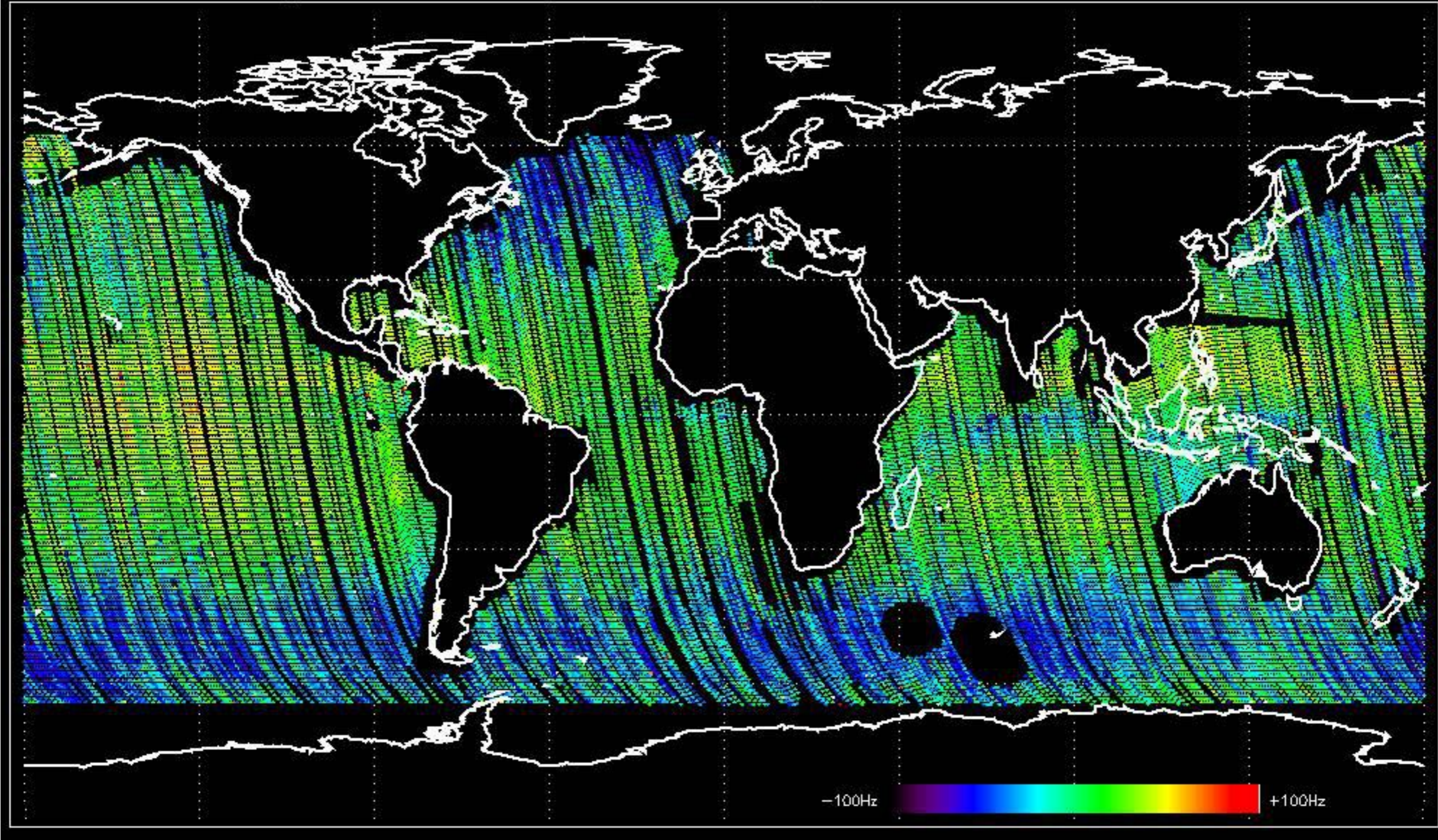
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.560032 Hz



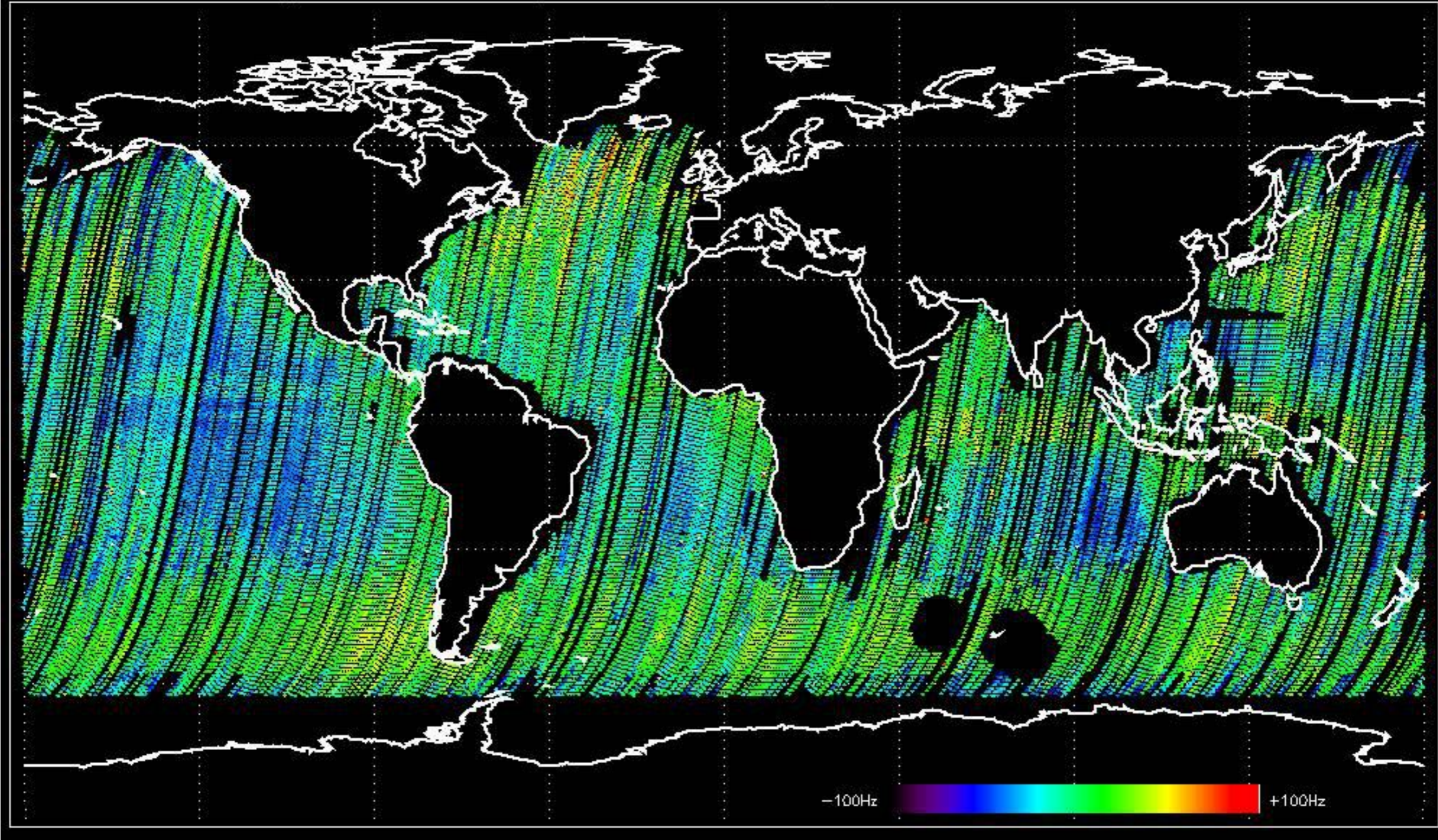
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.724130 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -35.024304 Hz

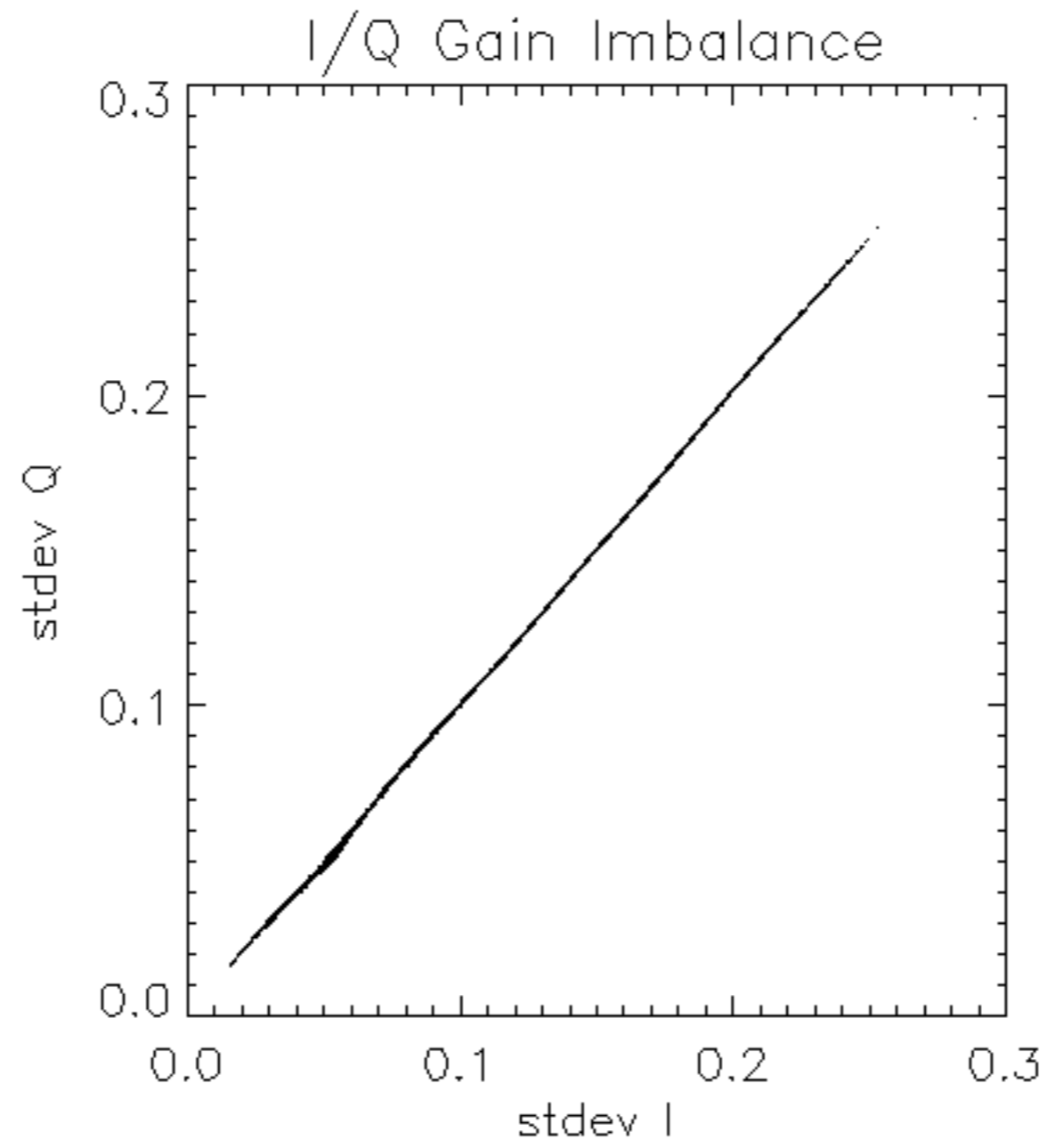


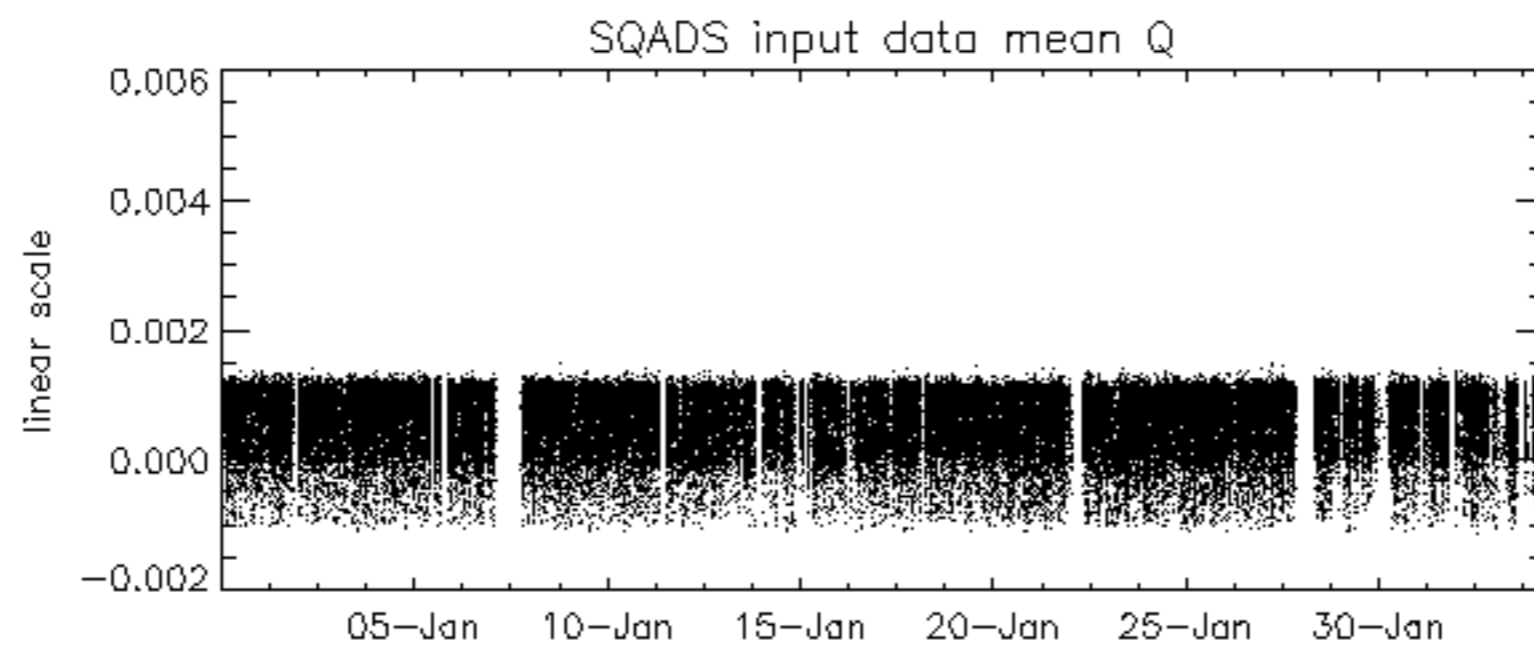
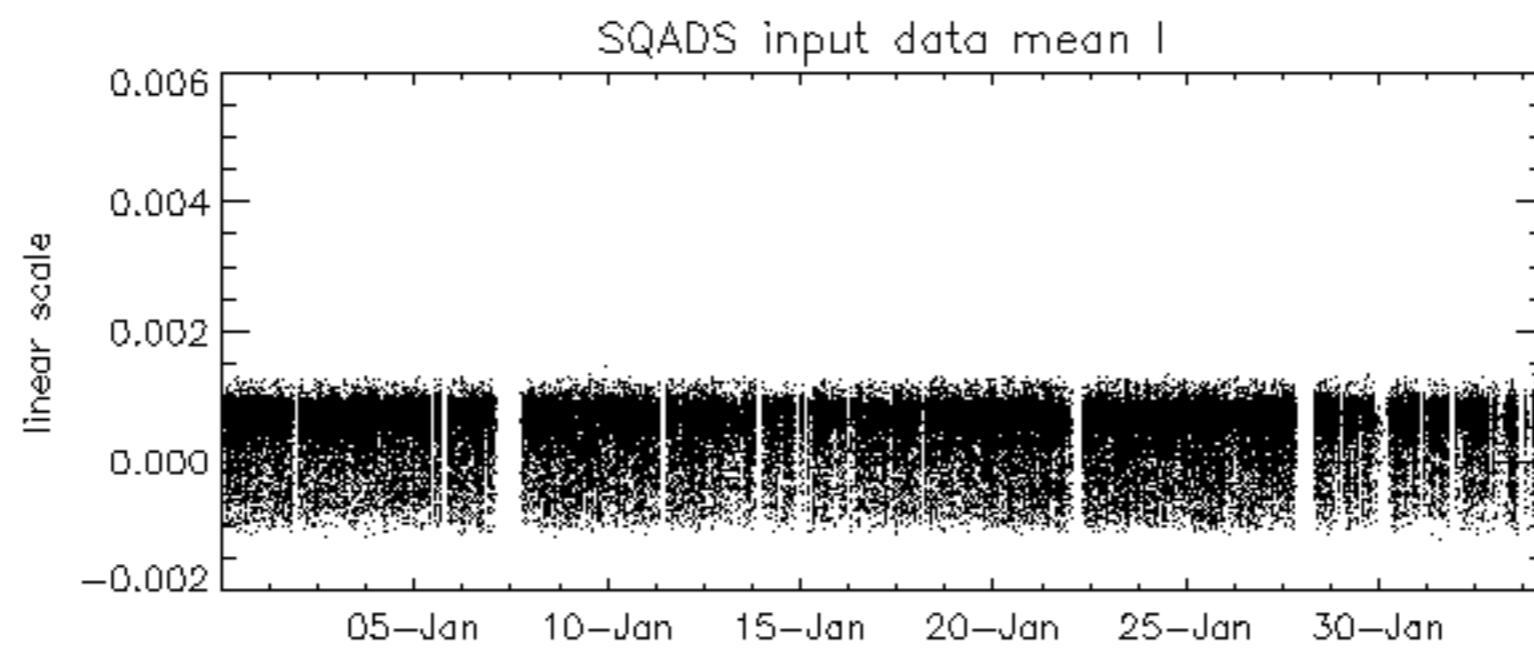
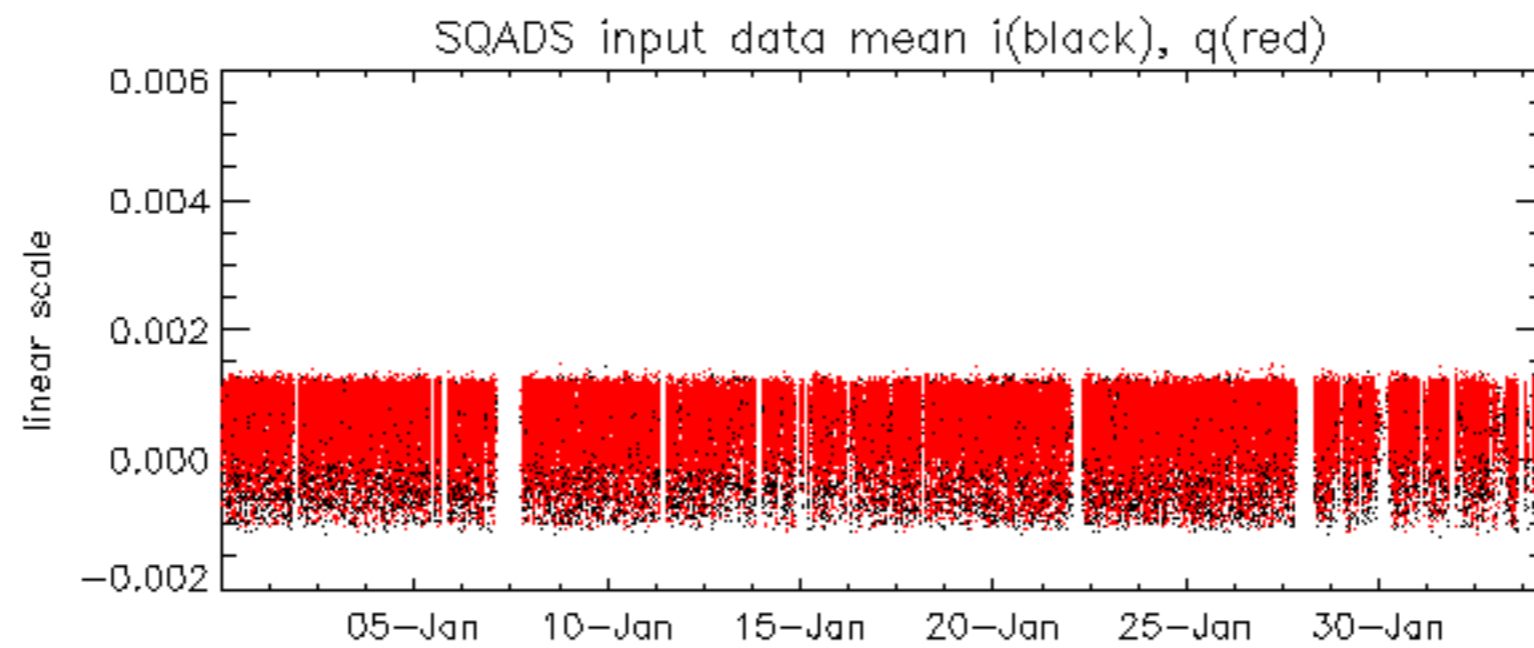
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.781051 Hz

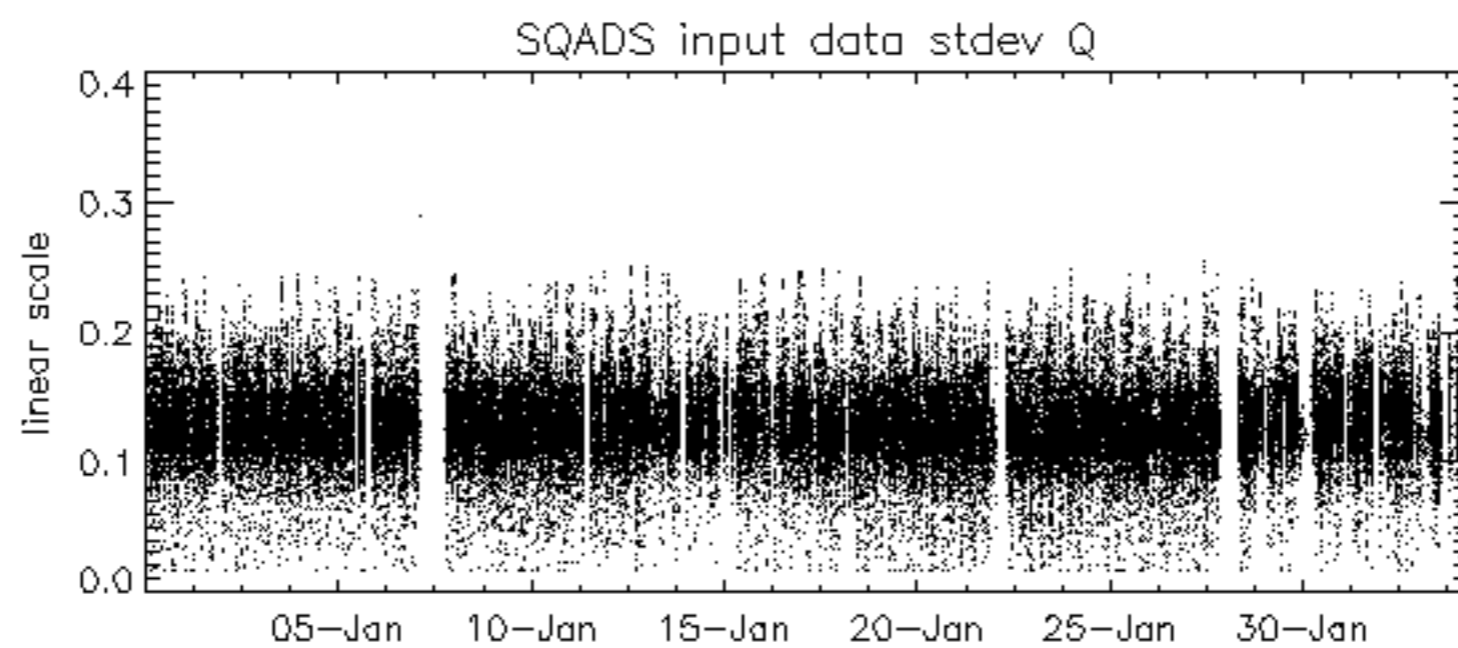
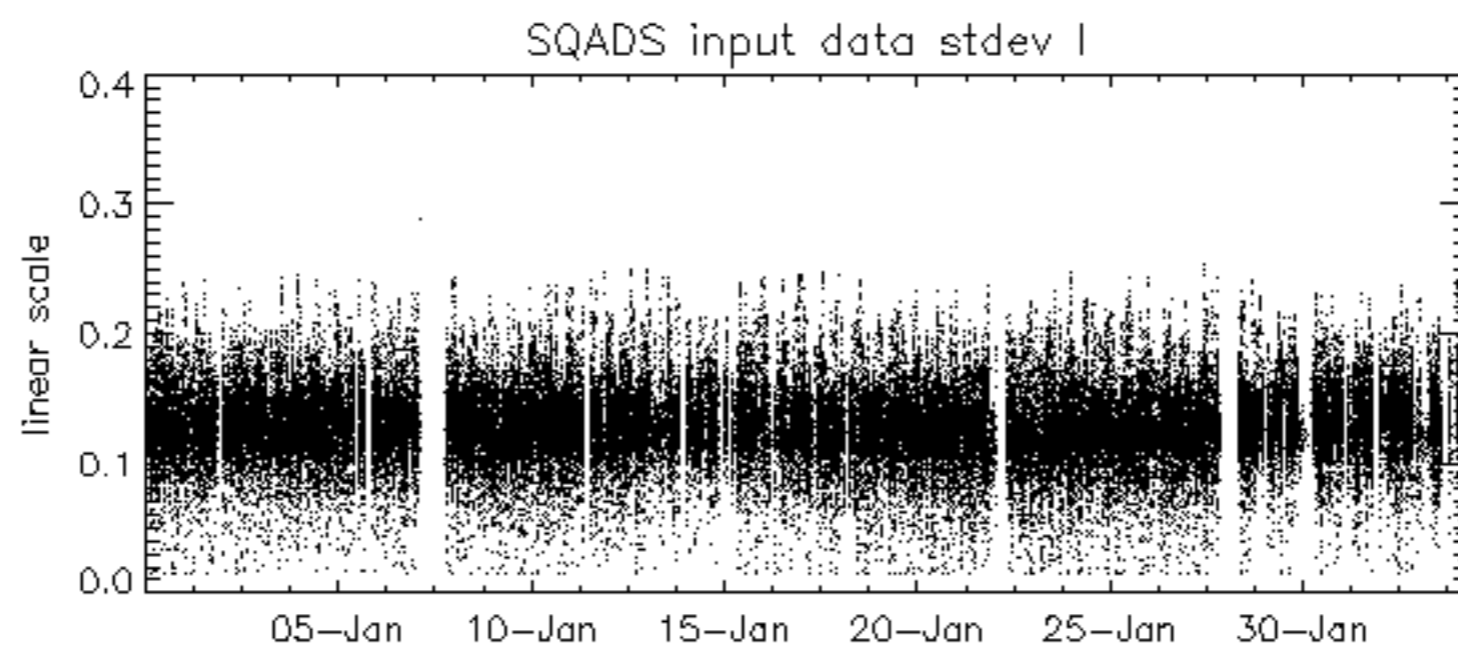
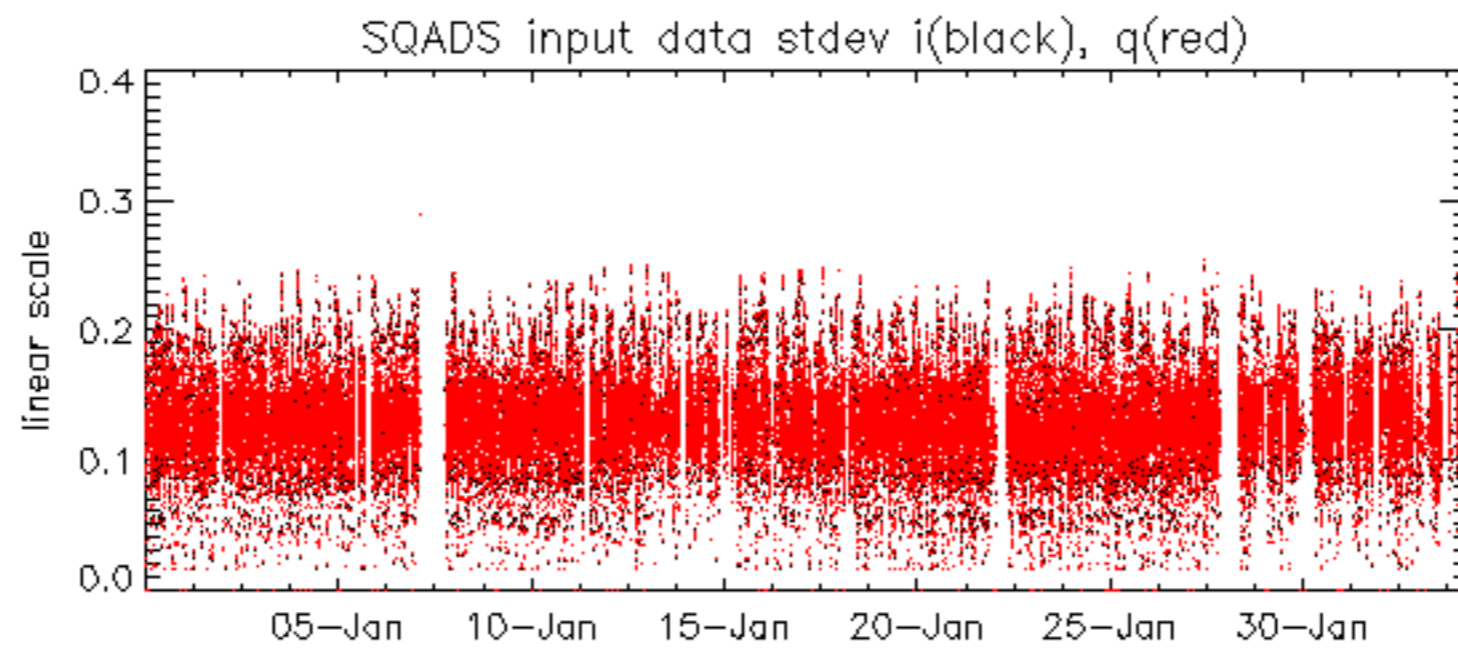


The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.



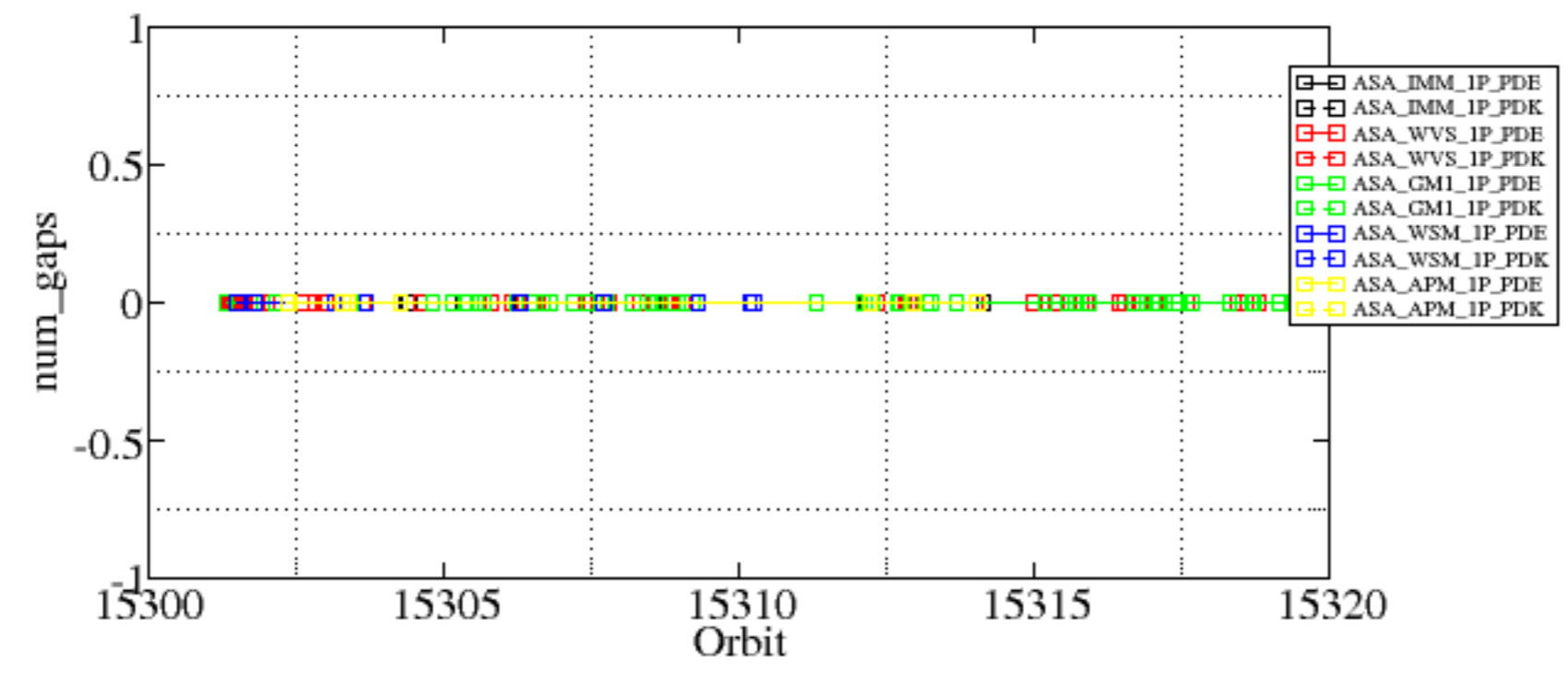


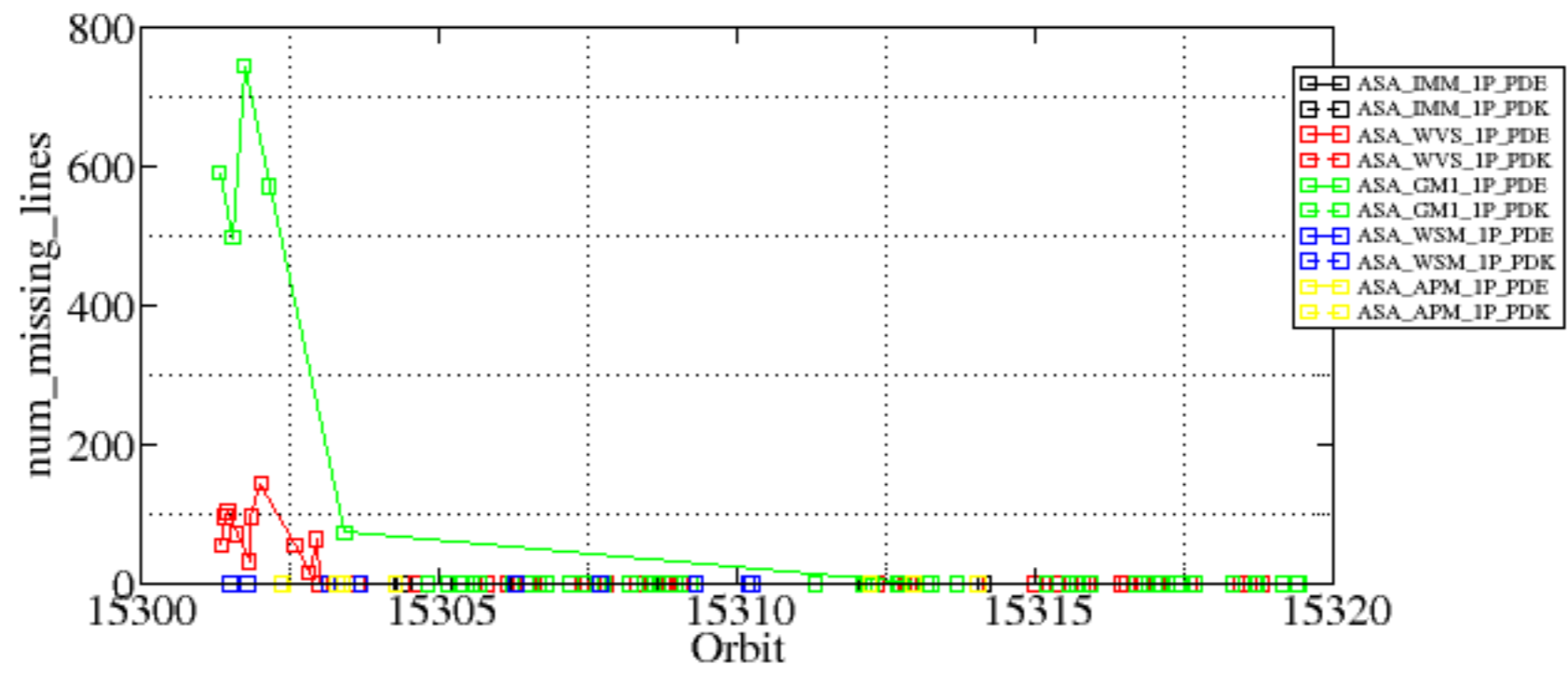


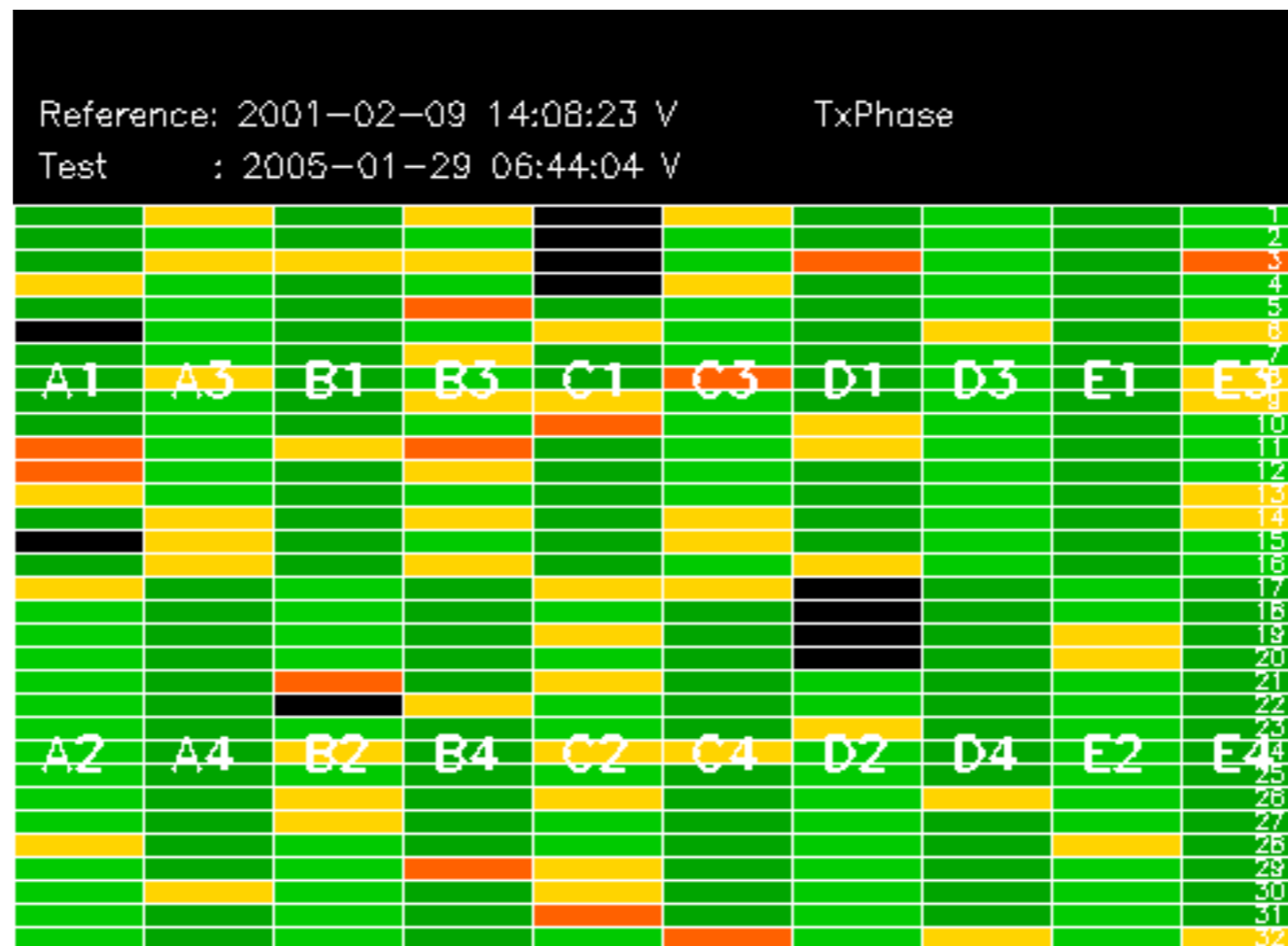
Summary of analysis for the last 3 days 2005020[234]

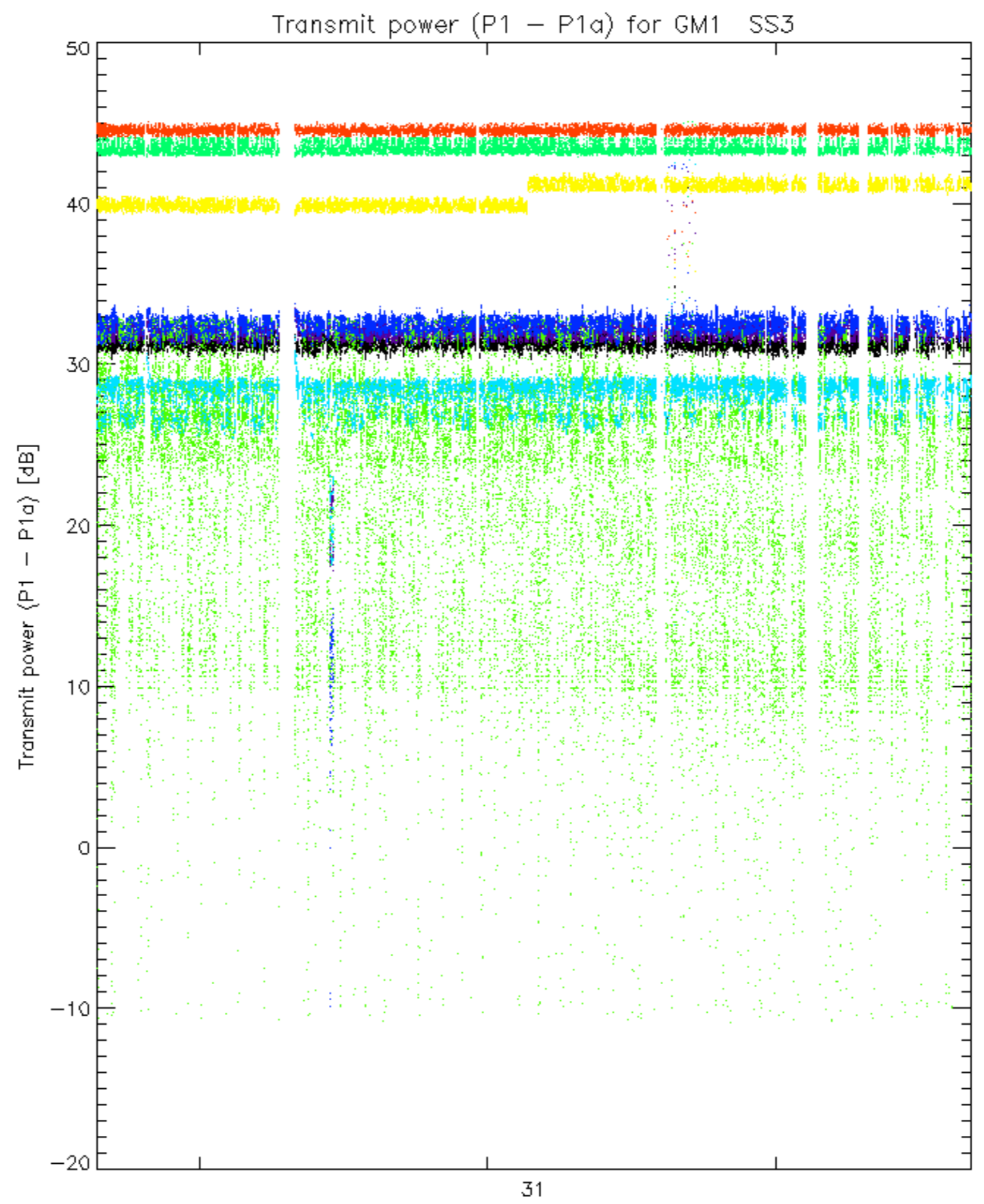
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WVS_1PNPDE20050202_004321_000001502034_00217_15301_6285.N1	0	56
ASA_WVS_1PNPDE20050202_005019_000000592034_00217_15301_6286.N1	0	96
ASA_WVS_1PNPDE20050202_005346_000002692034_00217_15301_6284.N1	0	104
ASA_WVS_1PNPDE20050202_010933_000004352034_00217_15301_6282.N1	0	72
ASA_WVS_1PNPDE20050202_013114_000000302034_00217_15301_6283.N1	0	32
ASA_WVS_1PNPDE20050202_013414_000000142034_00217_15301_6287.N1	0	96
ASA_WVS_1PNPDE20050202_015126_000000592034_00218_15302_6288.N1	0	144
ASA_WVS_1PNPDE20050202_024738_000001042034_00218_15302_6291.N1	0	56
ASA_WVS_1PNPDE20050202_031150_000000452034_00218_15302_6293.N1	0	16
ASA_WVS_1PNPDE20050202_032326_000000592034_00218_15302_6294.N1	0	64
ASA_GM1_1PNPDE20050202_004109_000001142034_00217_15301_8354.N1	0	591
ASA_GM1_1PNPDE20050202_010331_000001022034_00217_15301_8356.N1	0	498
ASA_GM1_1PNPDE20050202_012243_000001382034_00217_15301_8359.N1	0	744
ASA_GM1_1PNPDE20050202_020406_000009242034_00218_15302_8362.N1	0	572
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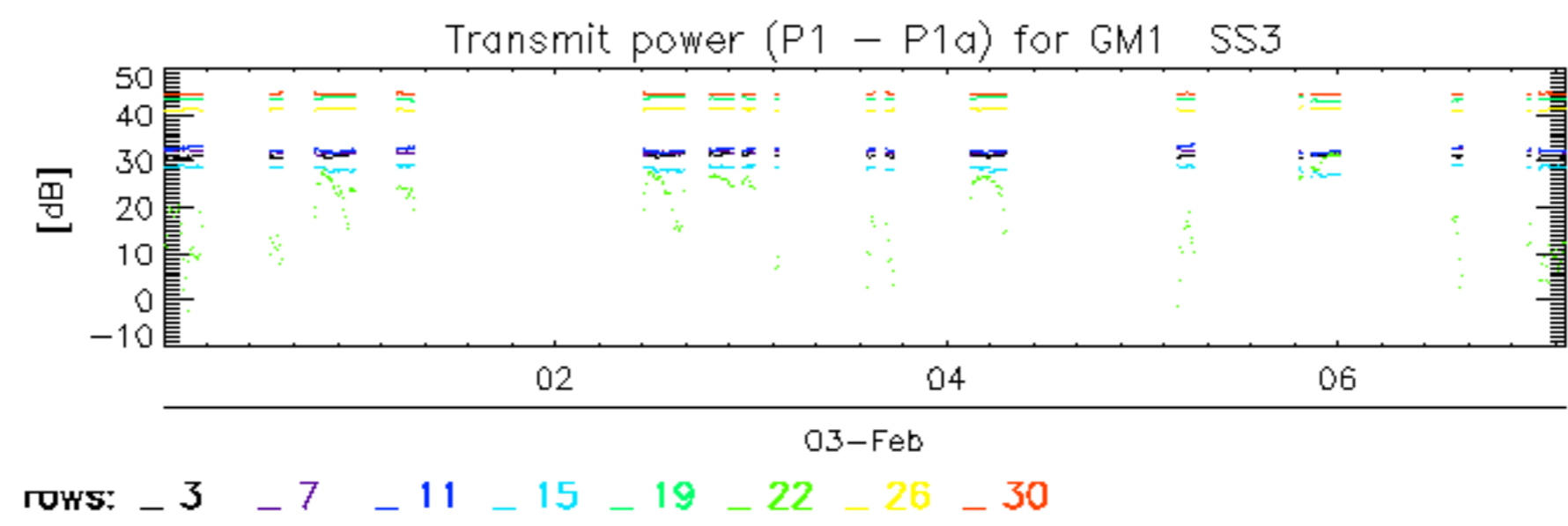


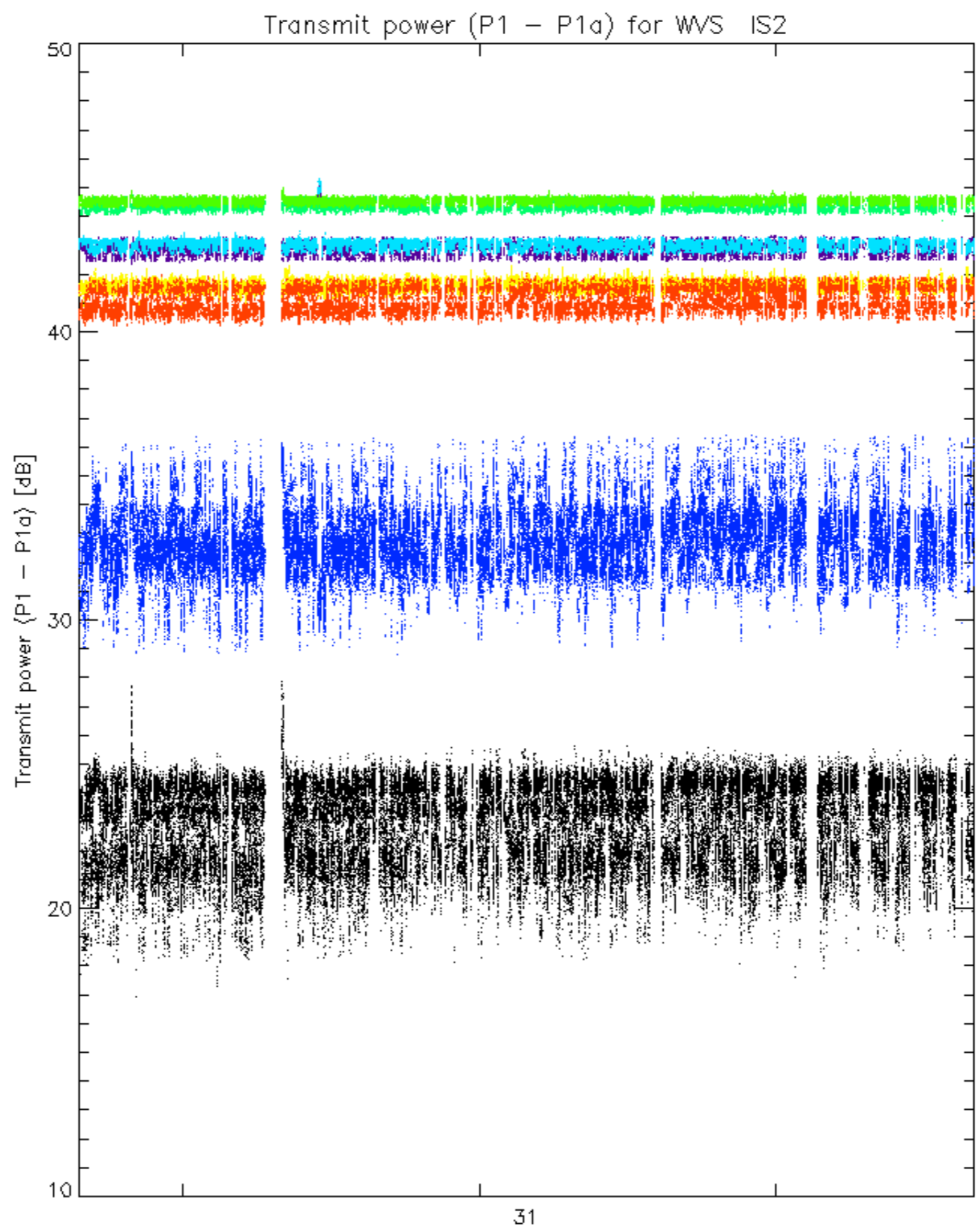




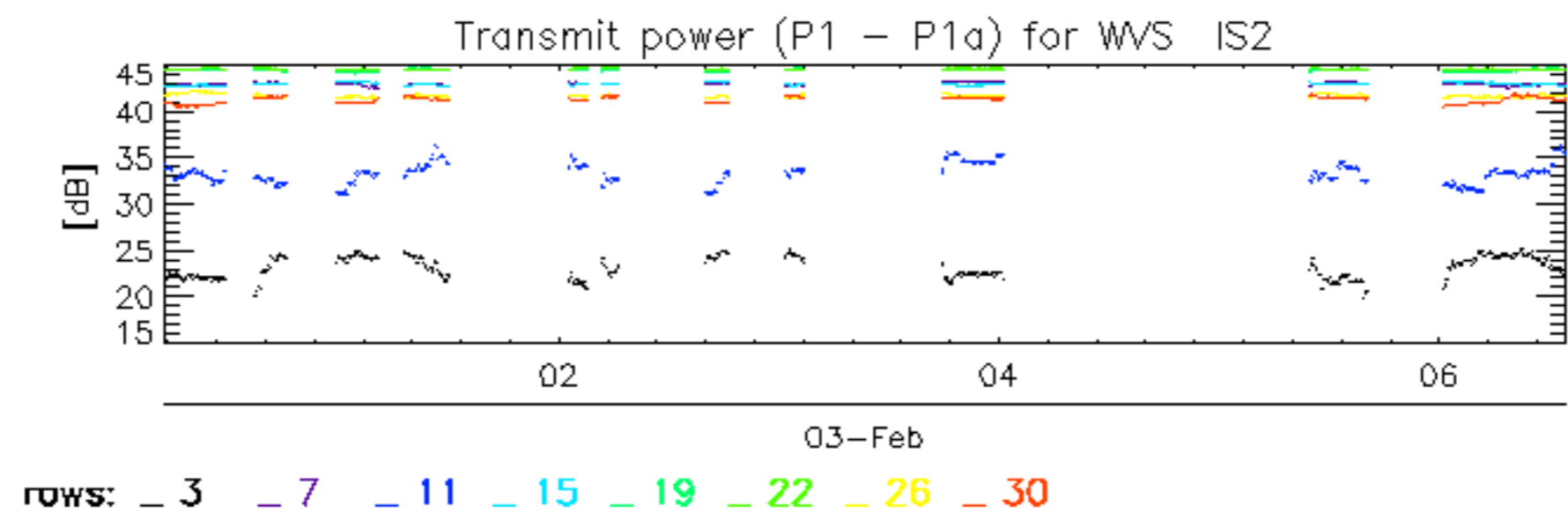


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.