

PRELIMINARY REPORT OF 050210

last update on Thu Feb 10 11:22:10 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

ASAR unavailable from 9 Feb 2005 08:38:15.000 until 10 Feb 2005 00:17:26.000 to load new antenna beam shaping data.

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-02-09 00:00:00 to 2005-02-10 11:22:11

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	4	5	1	2	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	4	5	1	2	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	4	5	1	2	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	4	5	1	2	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	35	40	3	8	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	35	40	3	8	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	35	40	3	8	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	35	40	3	8	1

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20050209 073840
H	20050210 070703

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
☒	☒
☒	☒
☒	☒
☒	☒

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
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☒

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	-3.400621	0.008348	0.041010
7	P1	-3.079370	0.007982	-0.001625
11	P1	-4.659400	0.019218	-0.046532
15	P1	-5.642425	0.034190	-0.027627
19	P1	-3.663865	0.004431	-0.000395
22	P1	-4.557321	0.014478	0.026850
26	P1	-4.939332	0.012827	0.003186
30	P1	-7.145673	0.016689	-0.038943
3	P1	-15.902820	0.101330	0.026804
7	P1	-15.511104	0.069665	-0.061696
11	P1	-20.863117	0.241181	-0.194707
15	P1	-11.602460	0.061430	0.090084
19	P1	-14.178627	0.024708	-0.008746
22	P1	-15.898948	0.382259	0.238129
26	P1	-17.613977	0.215926	0.112598
30	P1	-17.919704	0.348364	-0.033869

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.223103	0.086104	0.162569
7	P2	-22.413193	0.110692	0.150553
11	P2	-14.639748	0.103223	0.195231
15	P2	-7.101997	0.097241	0.055913
19	P2	-9.688023	0.096634	0.059829
22	P2	-17.029446	0.094818	0.137604
26	P2	-16.485424	0.094378	0.061651
30	P2	-18.907536	0.080610	0.040157

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.184222	0.006089	0.032683
7	P3	-8.184222	0.006089	0.032683
11	P3	-8.184222	0.006089	0.032683
15	P3	-8.184222	0.006089	0.032683
19	P3	-8.184222	0.006089	0.032683
22	P3	-8.184222	0.006089	0.032683
26	P3	-8.184196	0.006092	0.032674
30	P3	-8.184196	0.006092	0.032674

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	-2.793882	0.019352	0.063643
7	P1	-2.963717	0.077207	-0.048794
11	P1	-3.957135	0.030243	-0.031442
15	P1	-3.530253	0.028168	-0.030778
19	P1	-3.599088	0.013641	0.009001
22	P1	-5.688177	0.061721	-0.057858
26	P1	-7.059260	0.169742	-1.080985
30	P1	-6.281332	0.043070	0.065069
3	P1	-10.763919	0.092119	0.037575
7	P1	-10.155412	0.191349	-0.090258
11	P1	-12.547274	0.128732	-0.030994
15	P1	-11.762568	0.079703	0.013737
19	P1	-15.589233	0.053710	0.056492
22	P1	-24.091364	1.594414	-0.224184

26	P1	-15.336975	0.432816	-1.072695
30	P1	-19.998381	0.832566	-0.098418

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.928175	0.047947	0.131118
7	P2	-22.463190	0.131492	0.137287
11	P2	-10.438148	0.051829	0.219953
15	P2	-5.014062	0.021641	0.042940
19	P2	-6.892540	0.032669	0.079893
22	P2	-7.204436	0.050598	0.108737
26	P2	-23.896708	0.098054	0.078925
30	P2	-21.953316	0.057953	0.034694

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018492	0.002494	0.036584
7	P3	-8.018551	0.002503	0.036546
11	P3	-8.018537	0.002504	0.036796
15	P3	-8.018497	0.002495	0.036799
19	P3	-8.018556	0.002514	0.036839
22	P3	-8.018538	0.002493	0.036508
26	P3	-8.018456	0.002506	0.036683
30	P3	-8.018596	0.002501	0.036527

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	0.000471695
	stdev	2.16488e-07
MEAN Q	mean	0.000545198
	stdev	2.29452e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129037
	stdev	0.000969573
STDEV Q	mean	0.129274
	stdev	0.000980784



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005020[890]

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_1PNPDE20050208_010910_000002382034_00303_15387_3874.N1	0	16







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)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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

<input type="checkbox"/>
Descending

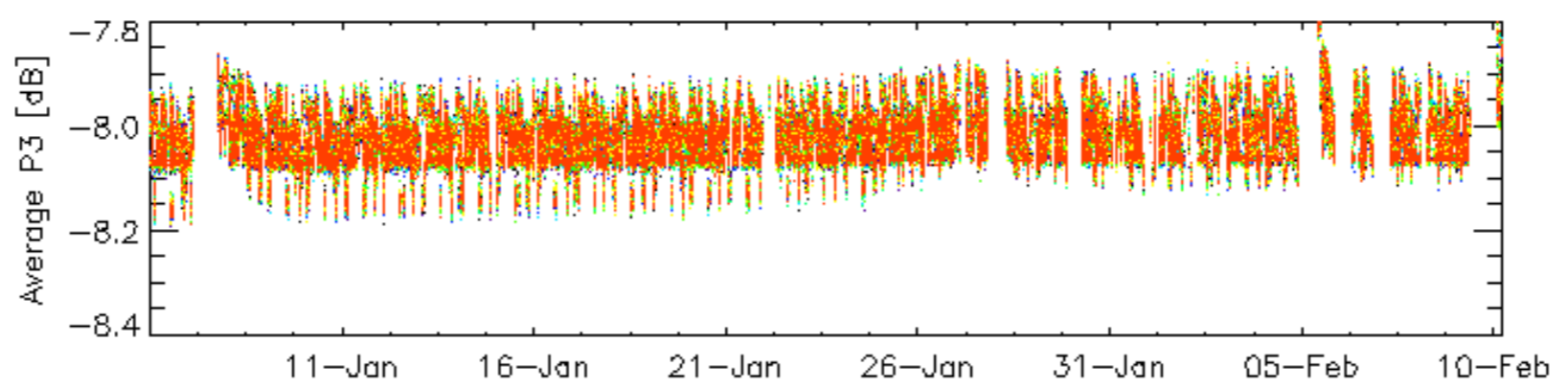
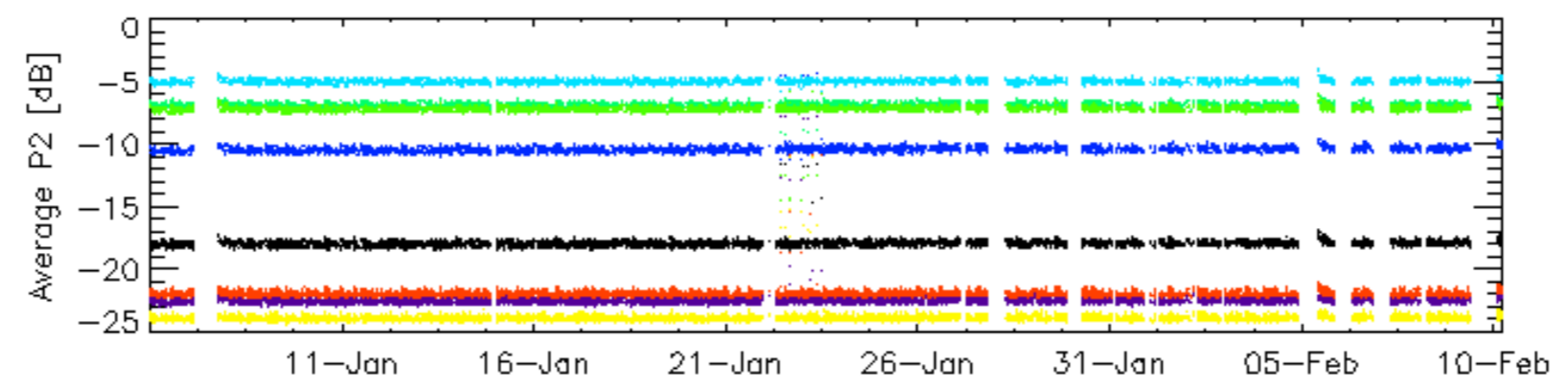
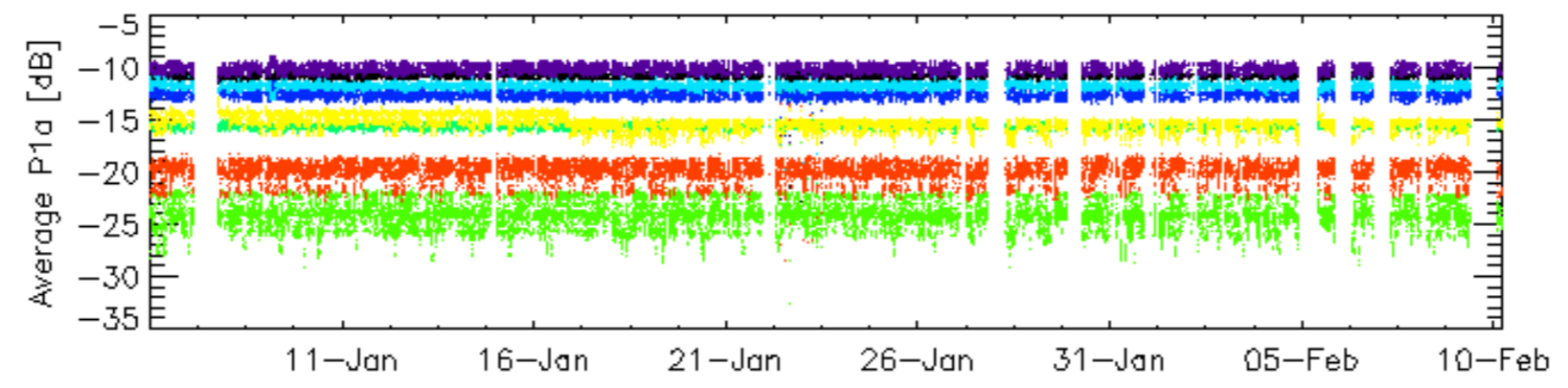
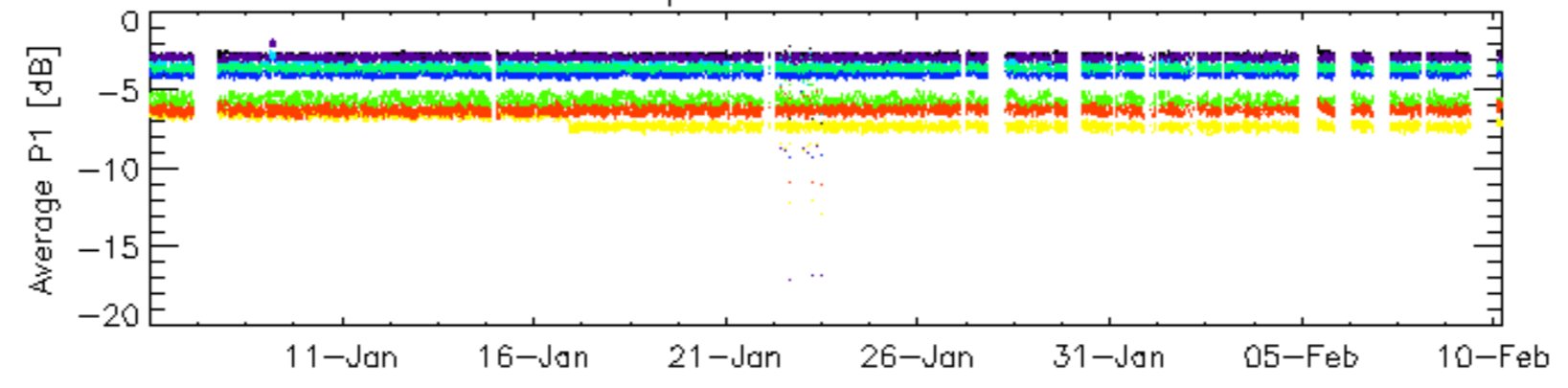
7.5 - Absolute Doppler for GM1

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

7.6 - Doppler evolution versus ANX for GM1

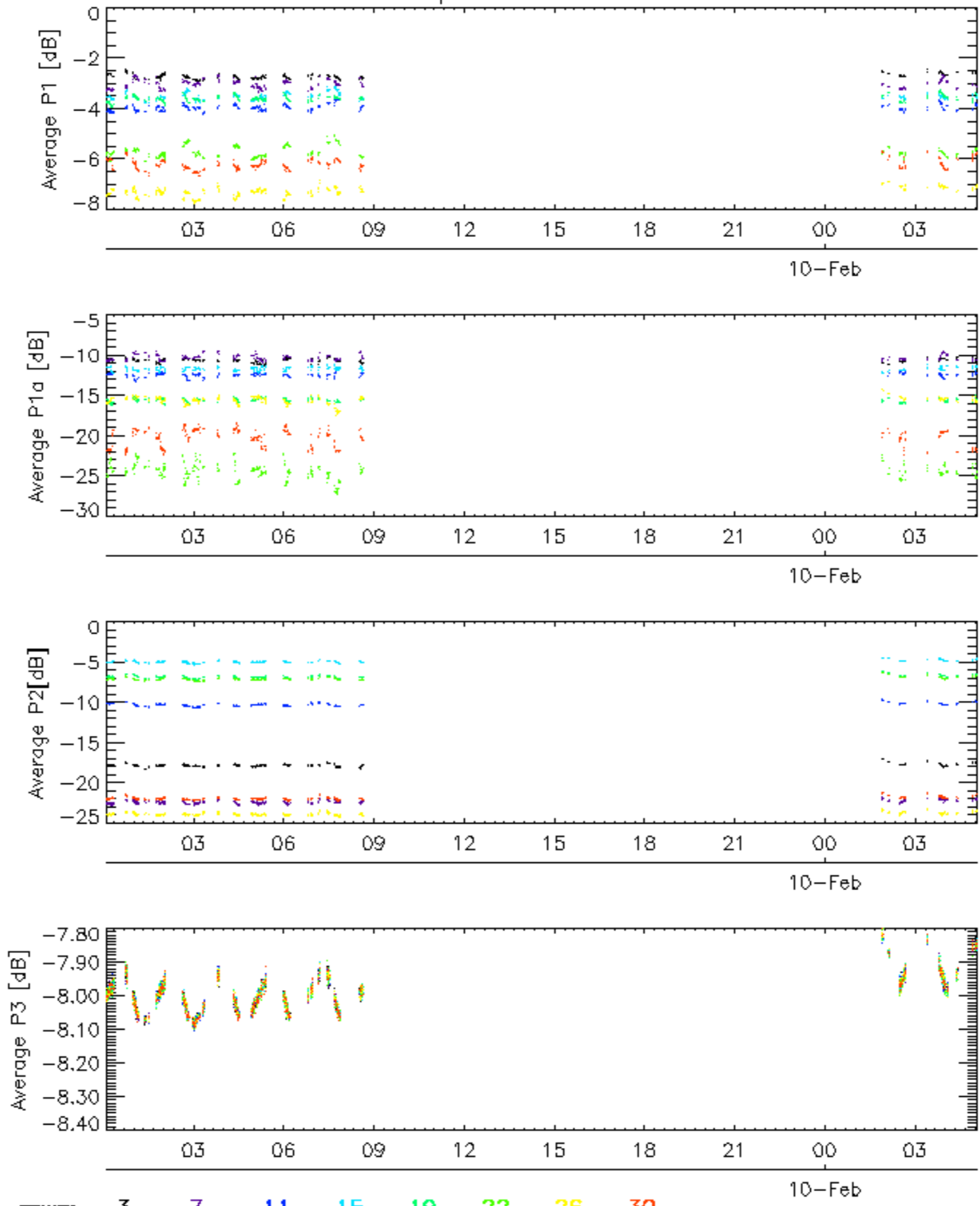
Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

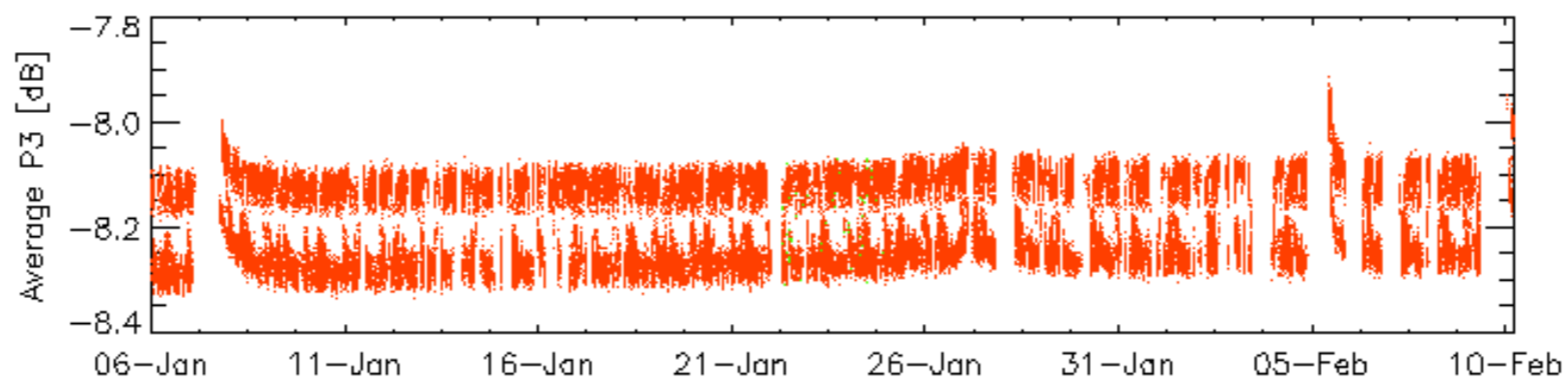
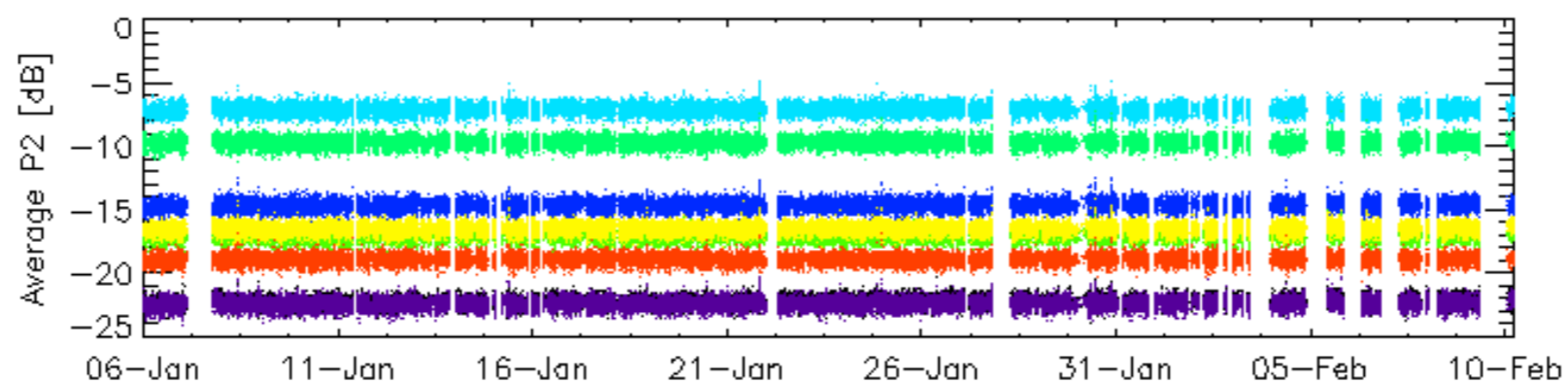
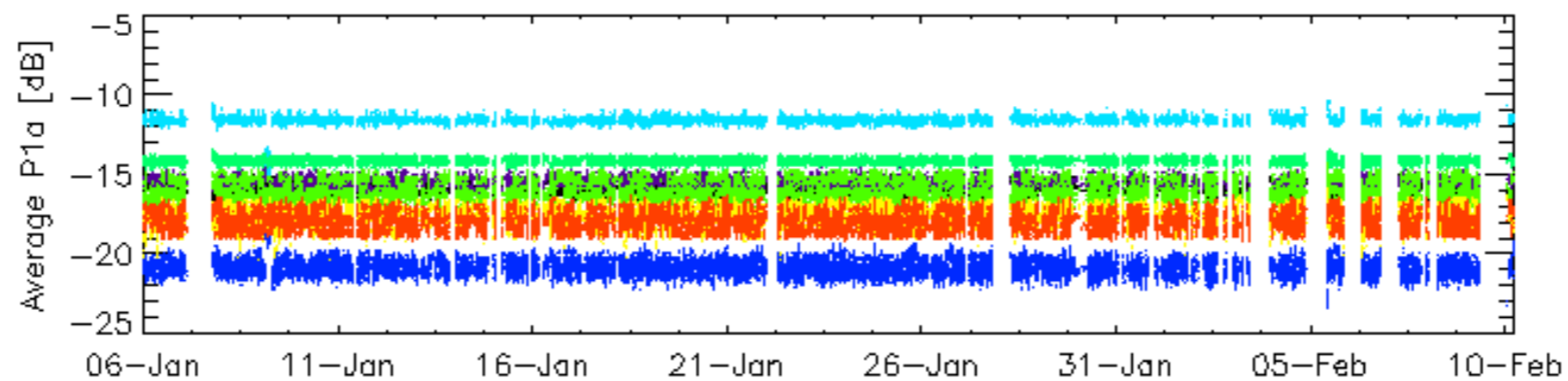
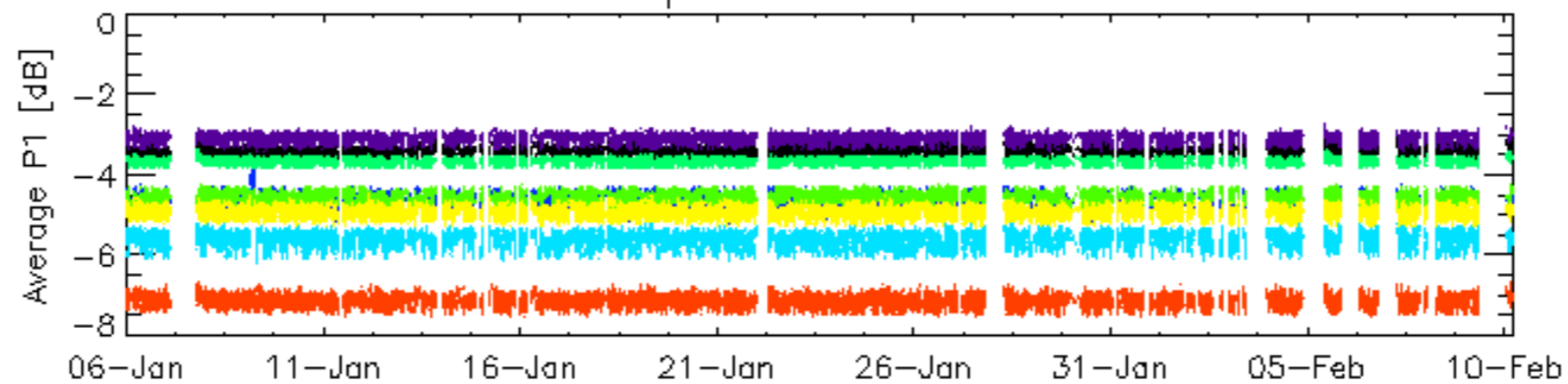


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

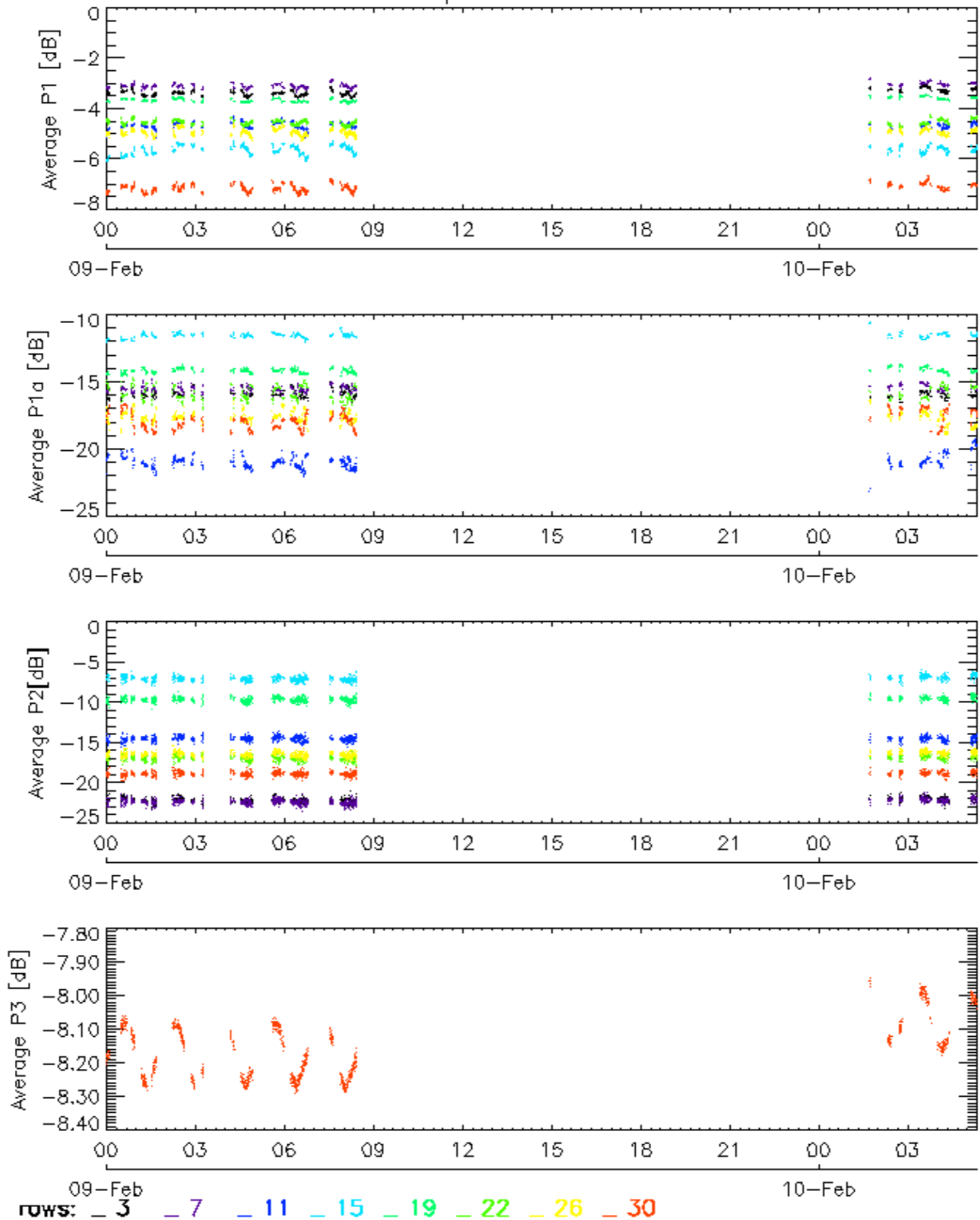


Cal pulses for WVS IS2



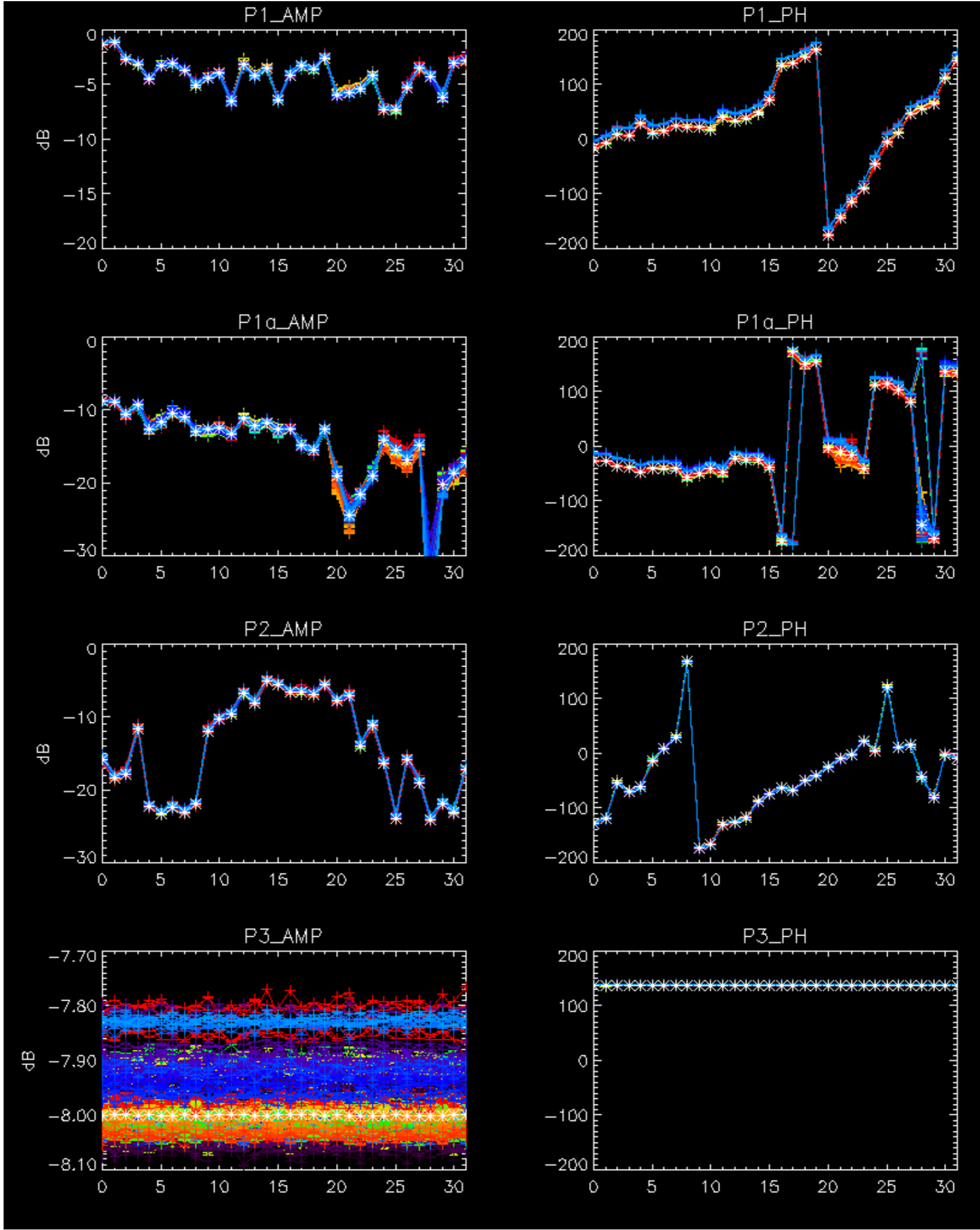
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

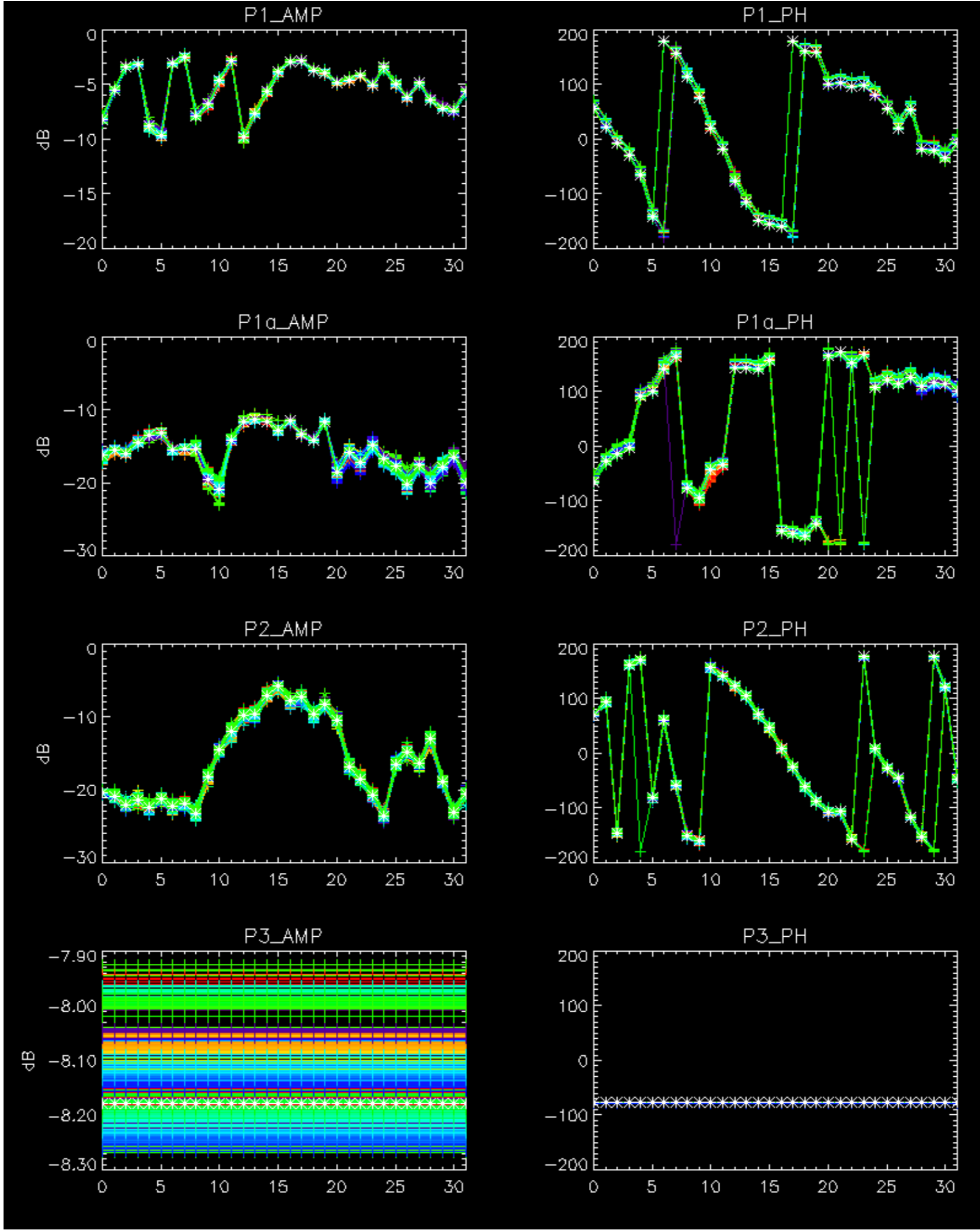
Cal pulses for WVS IS2



No anomalies observed on available browse products

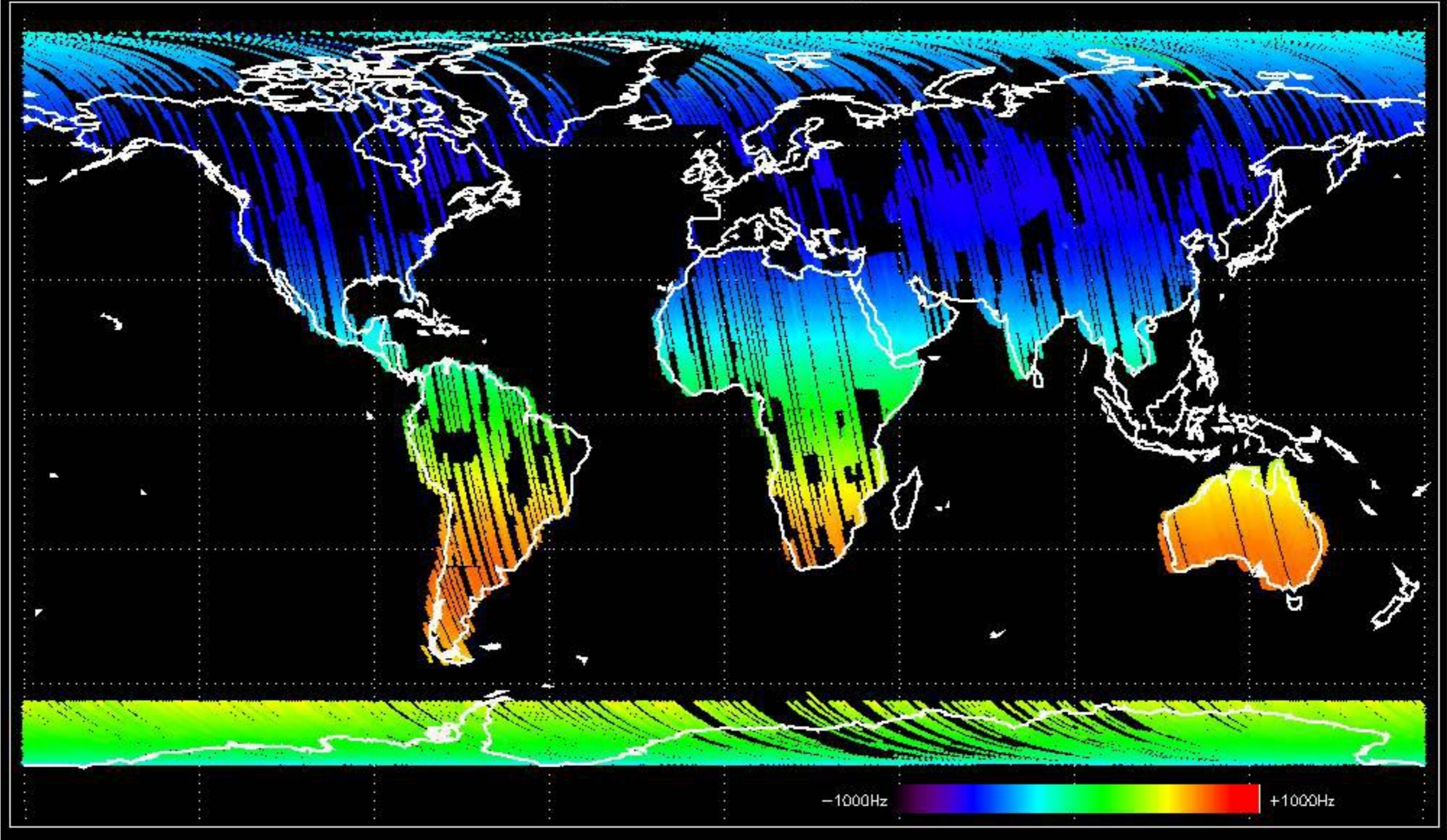
No anomalies observed.



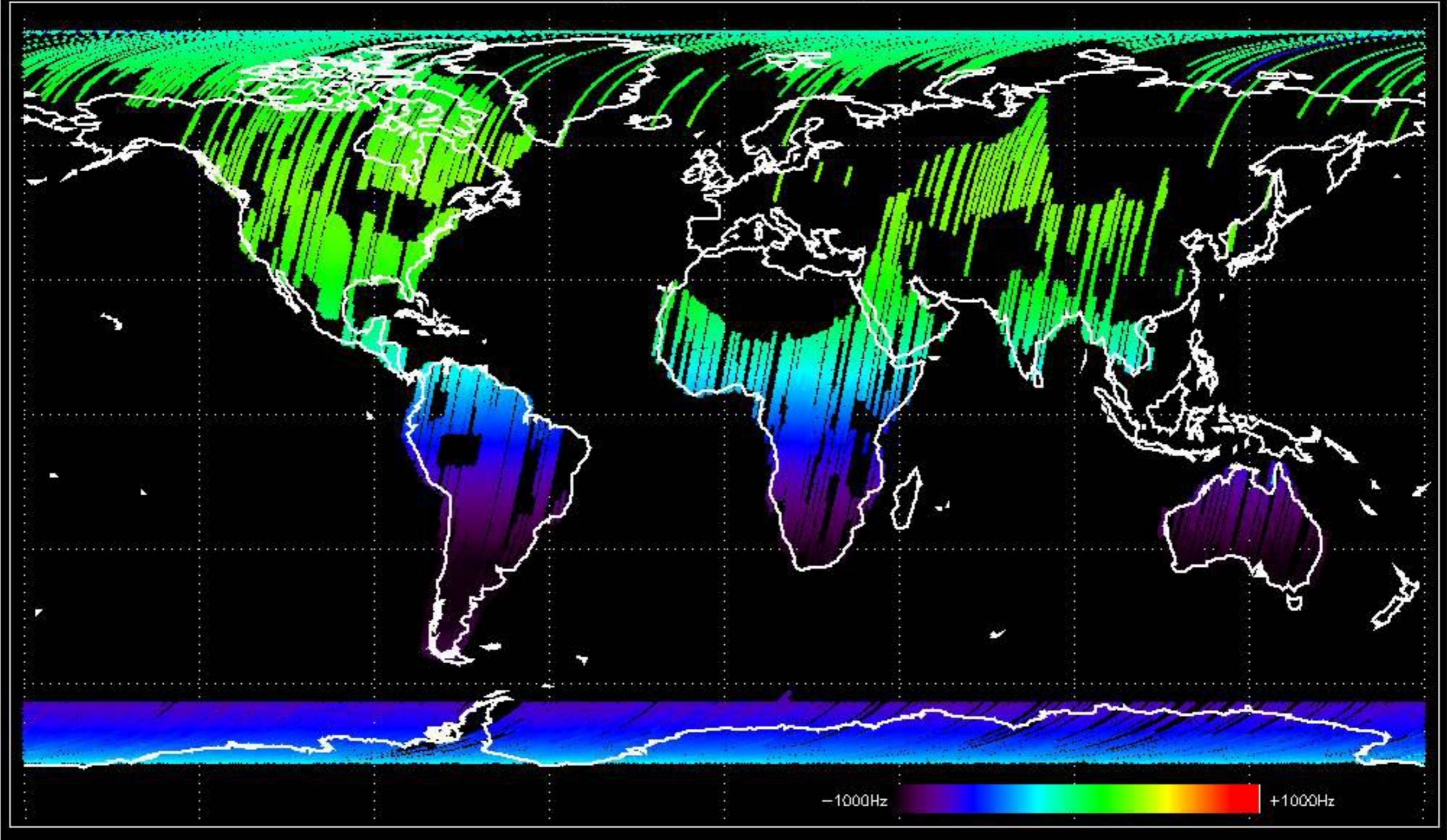


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

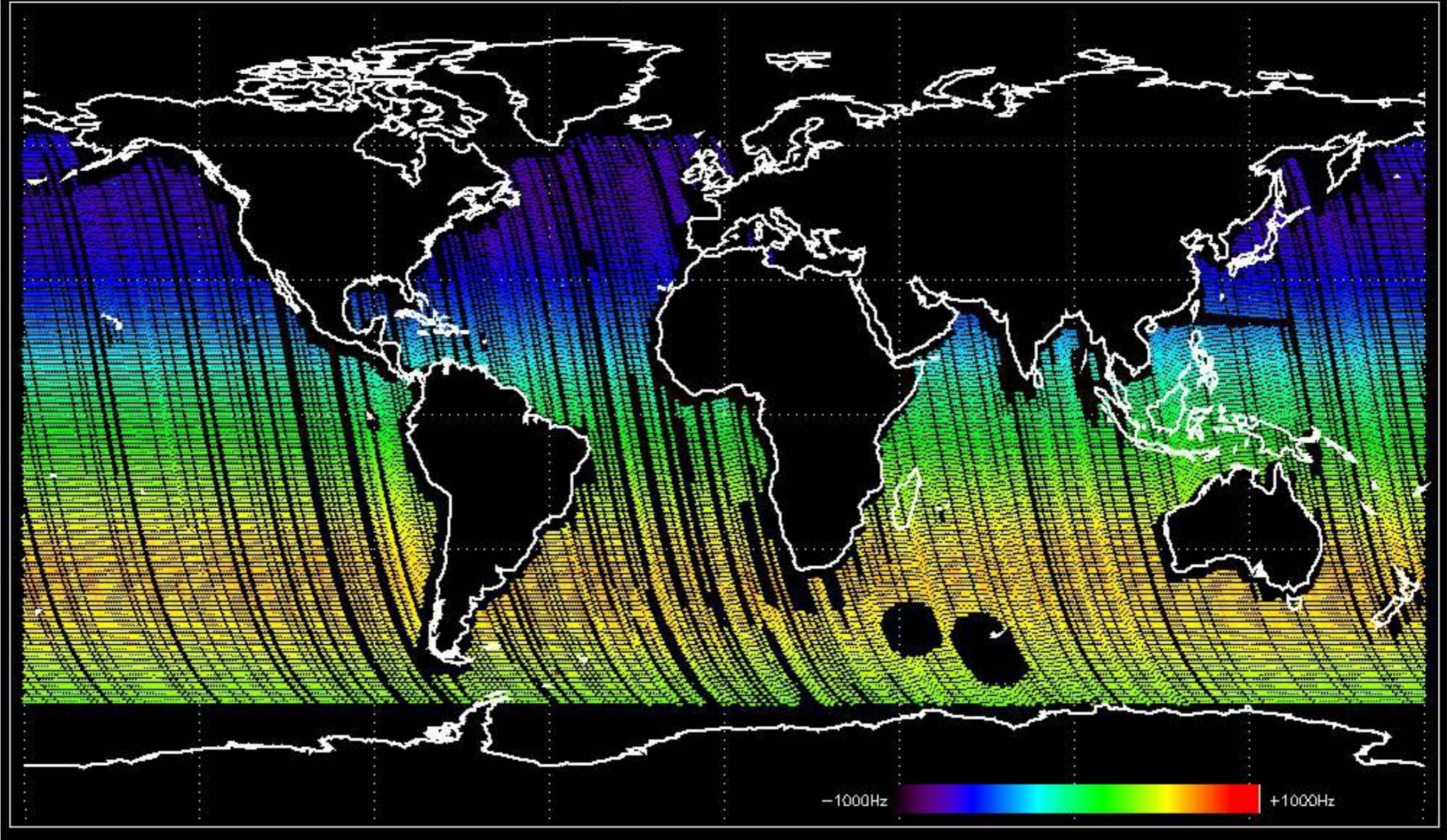
Doppler 'GM1' 'SS1' ascending



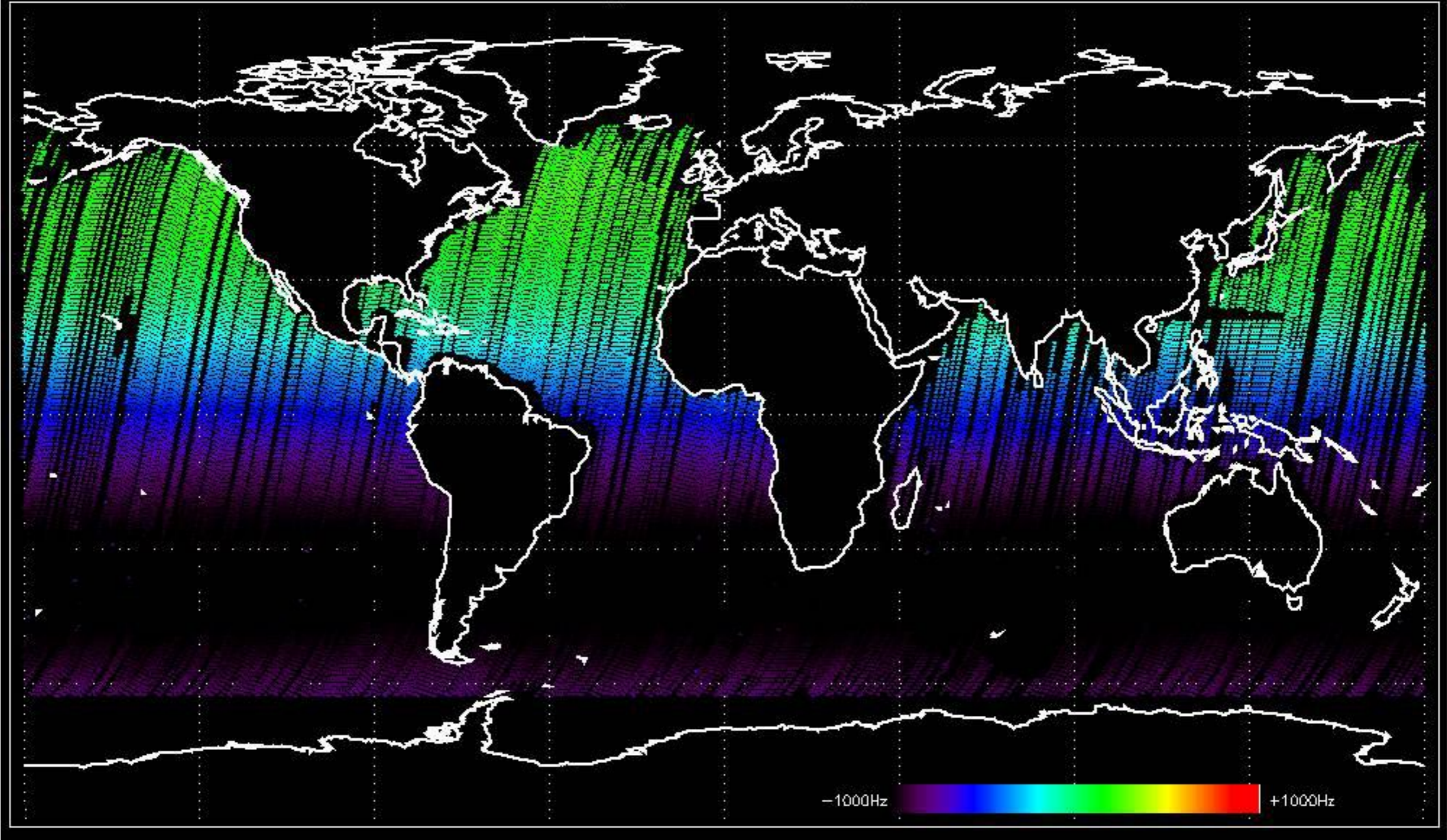
Doppler 'GM1' 'SS1' descending



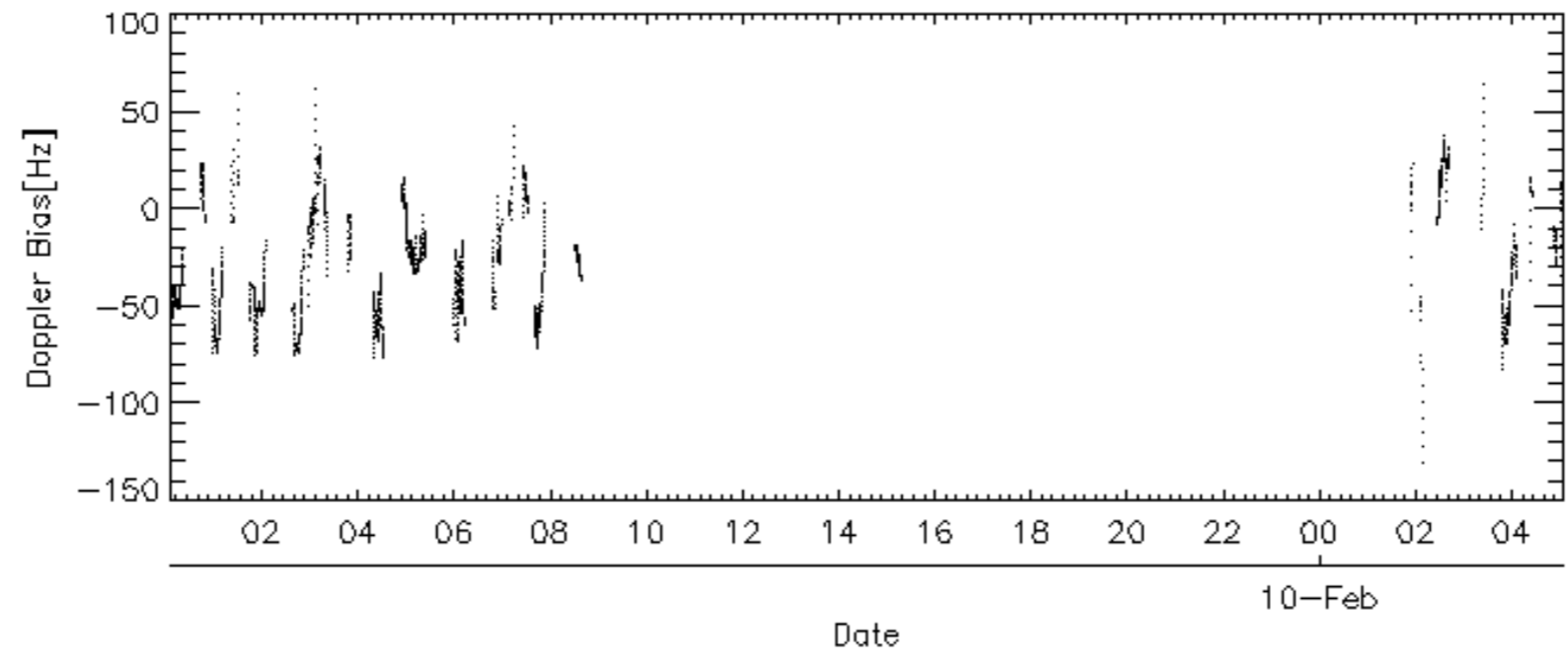
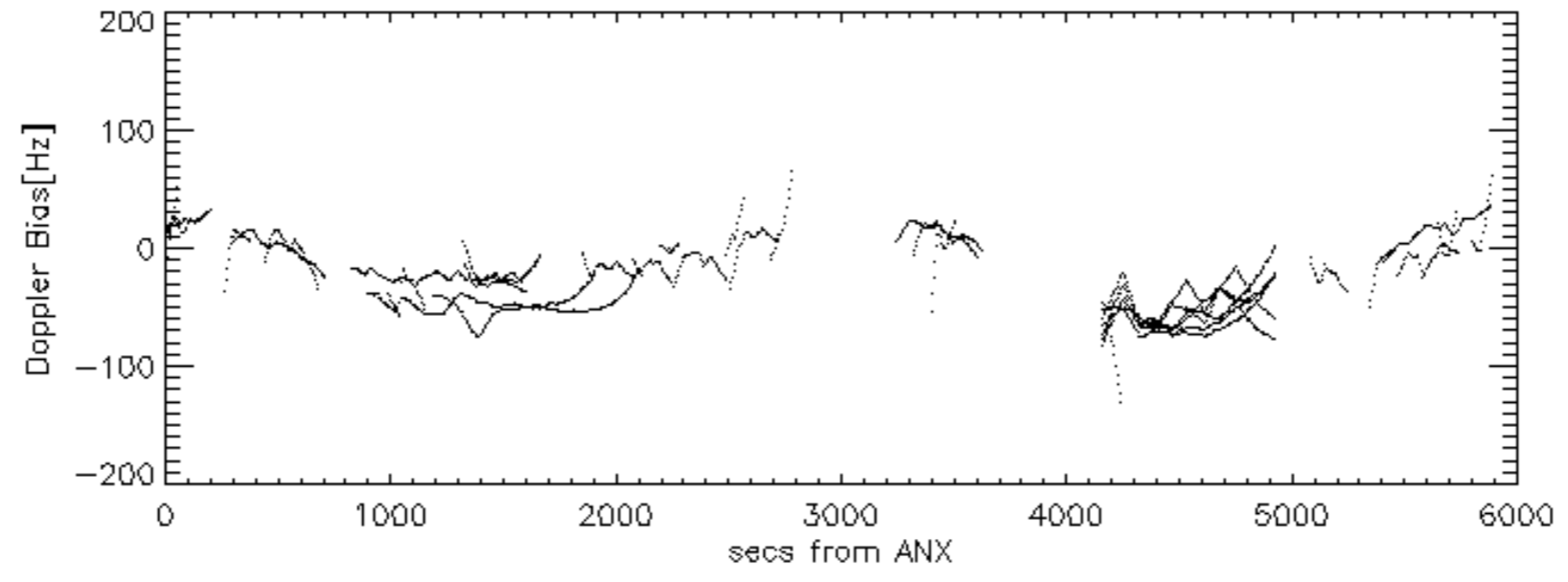
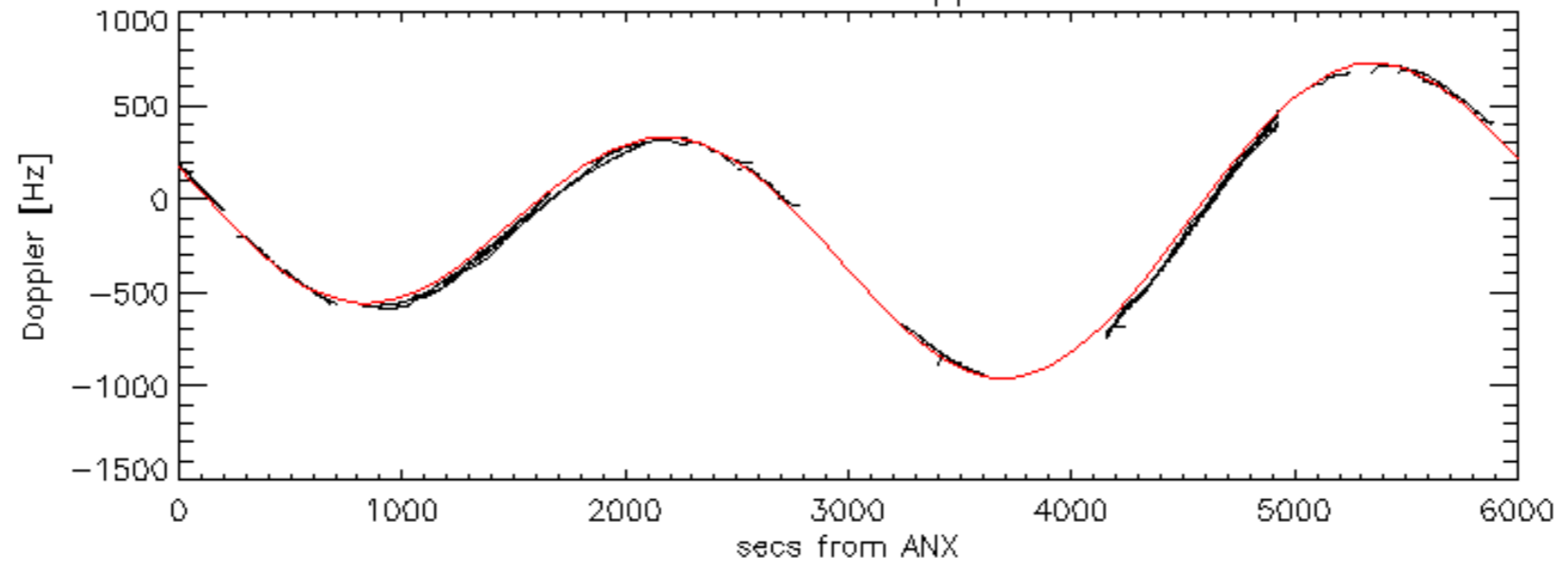
Doppler 'WVS' 'IS2' ascending



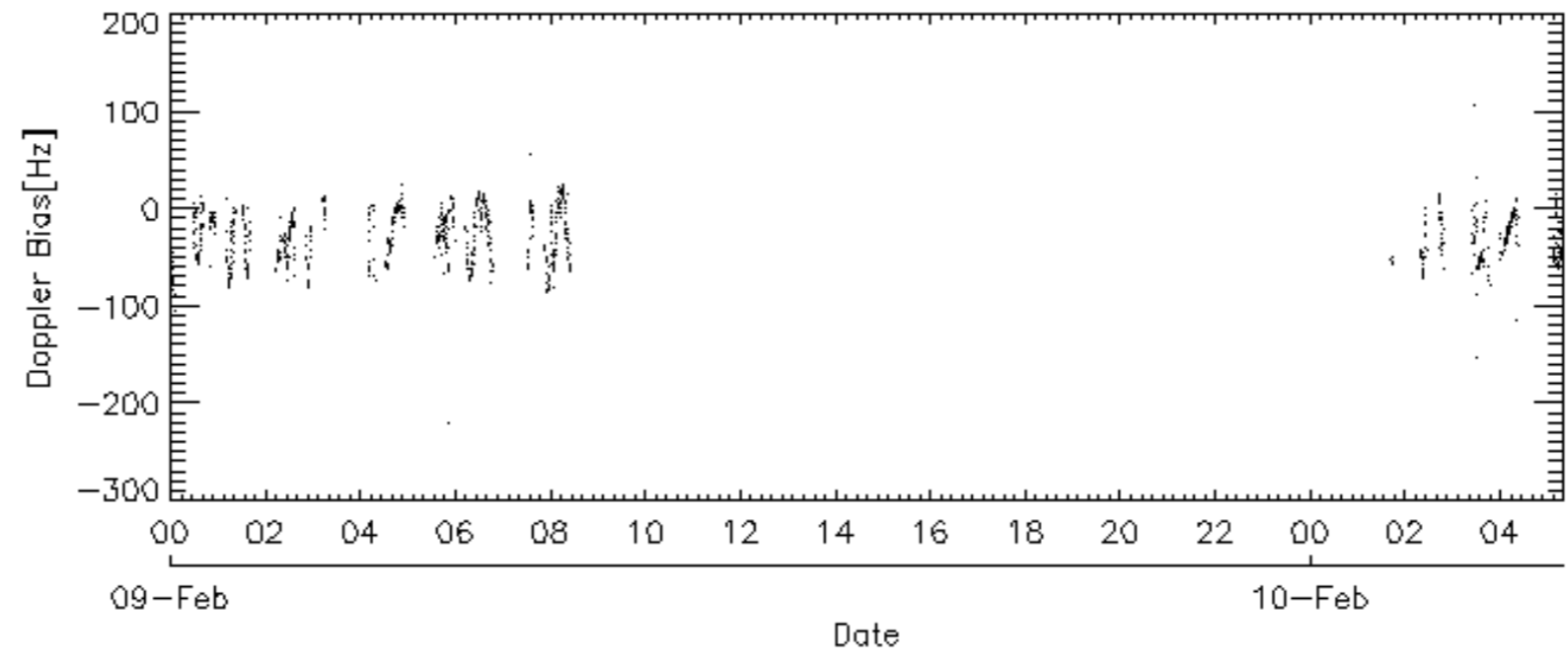
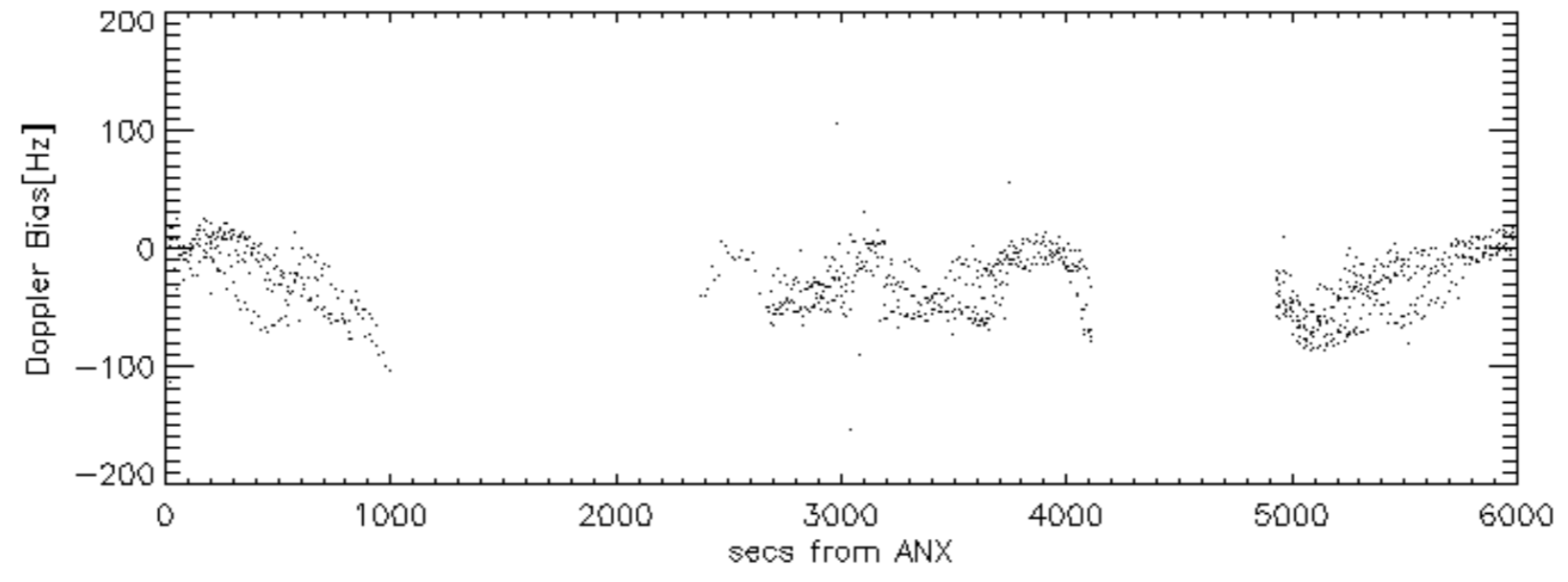
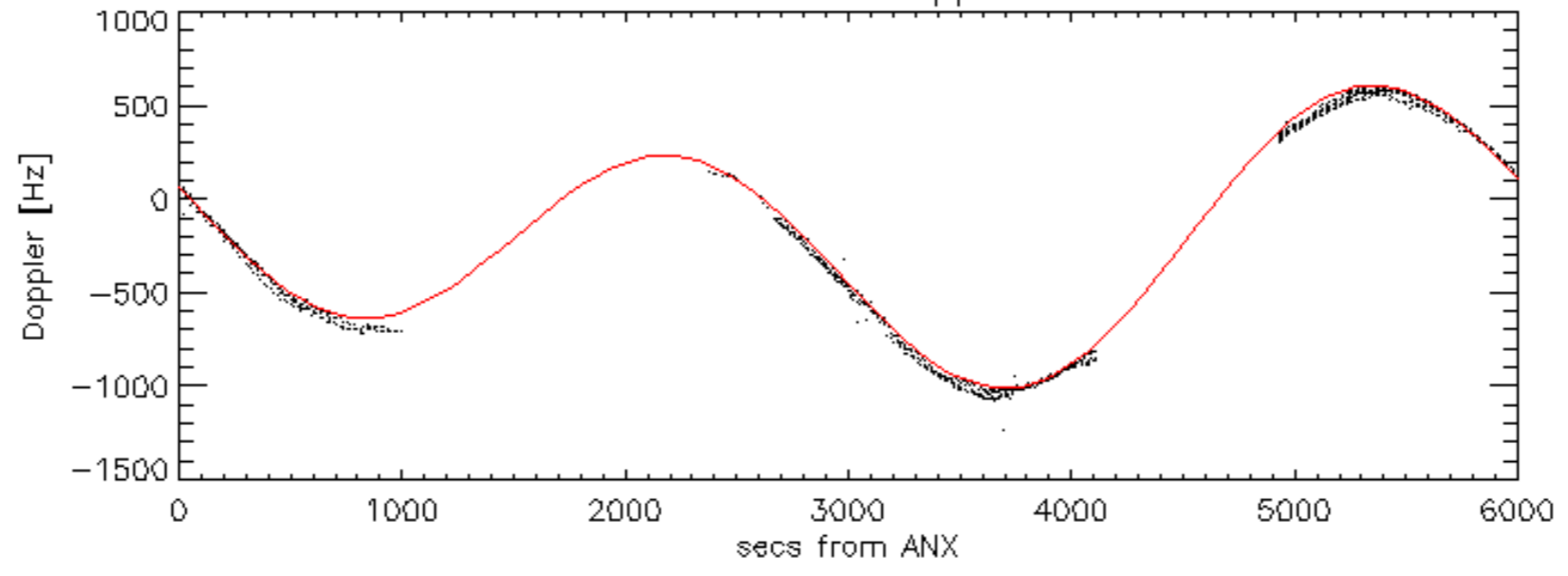
Doppler 'WVS' 'IS2' descending



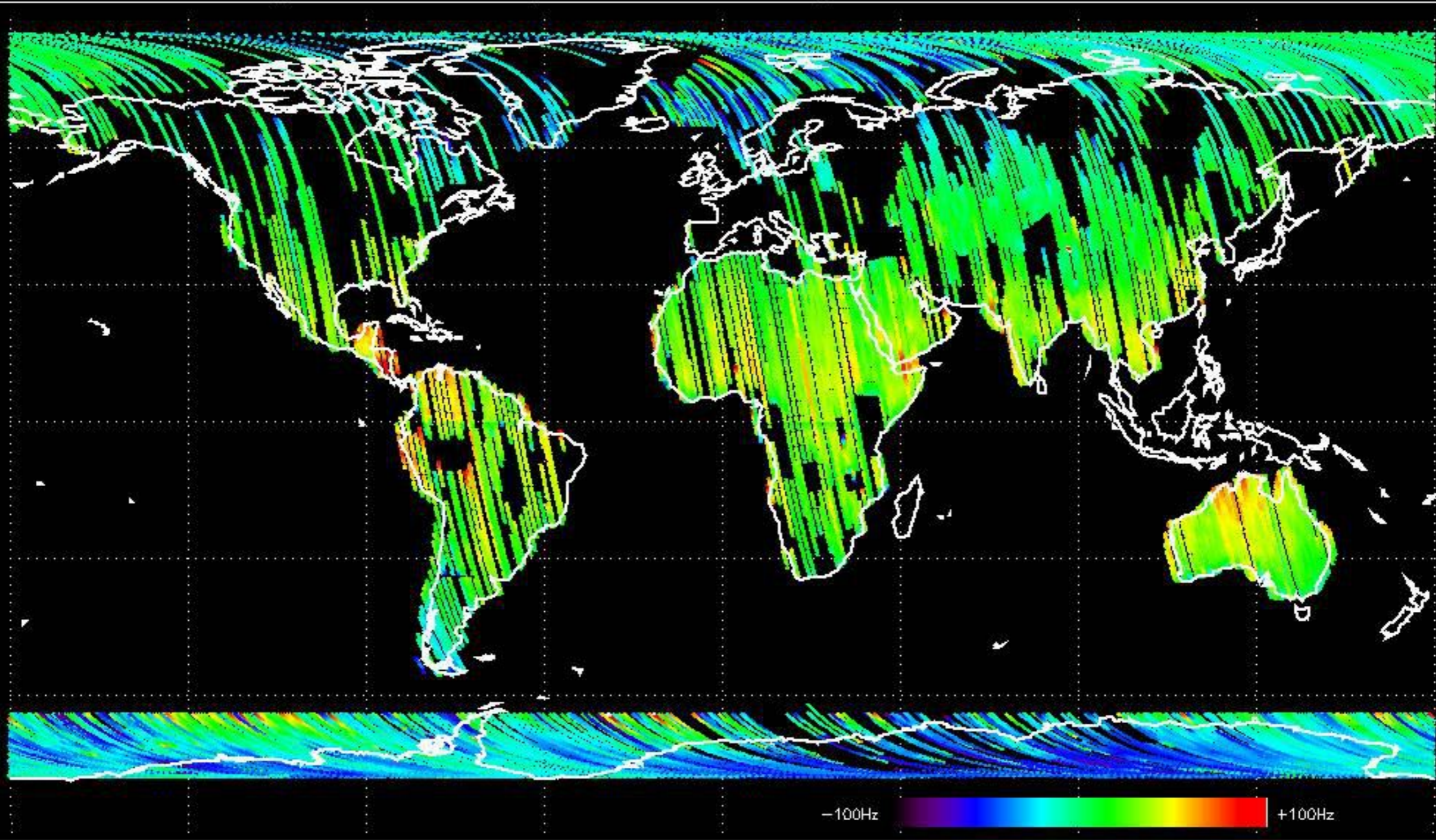
GM1 mode doppler



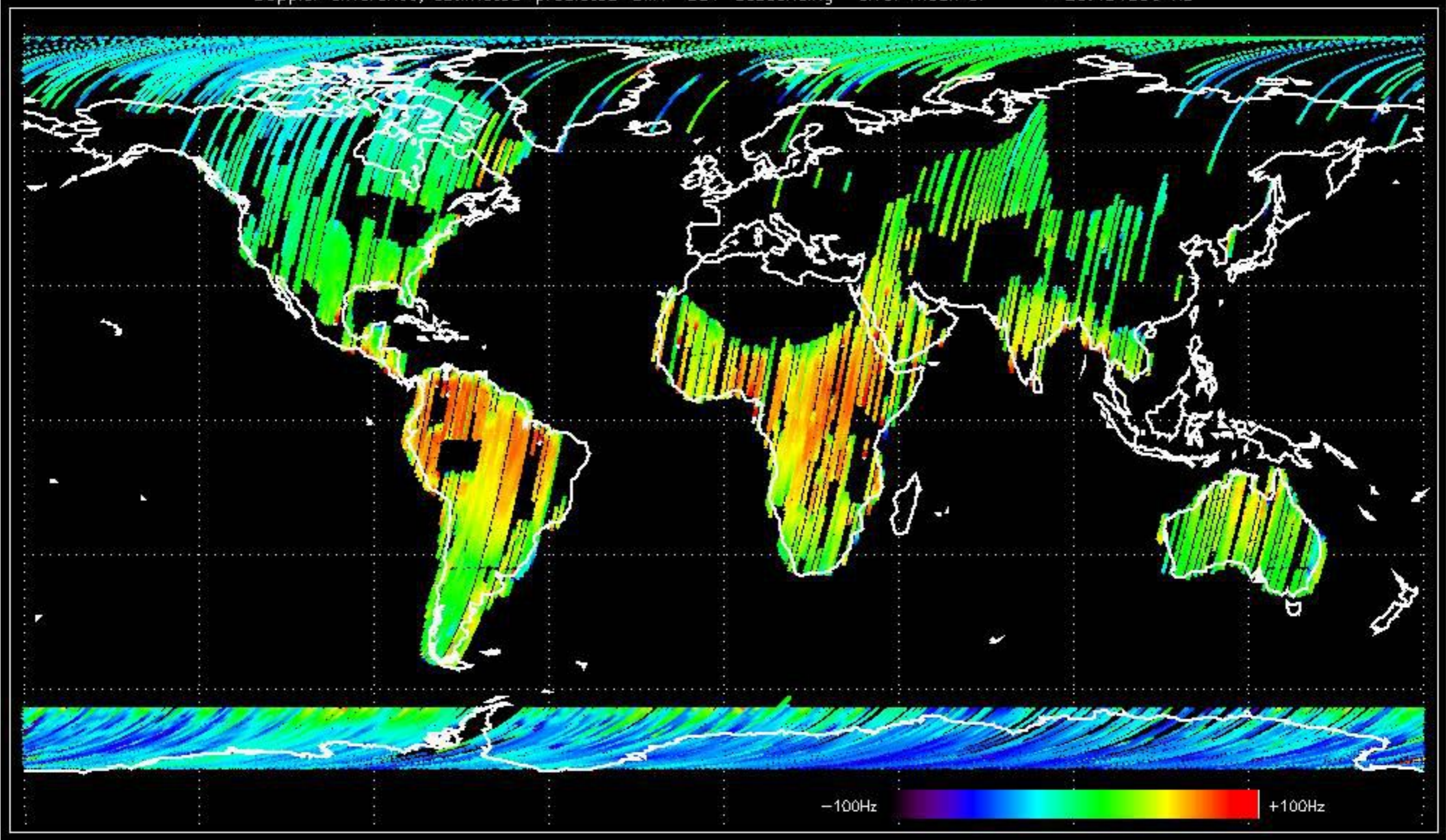
WVS mode doppler



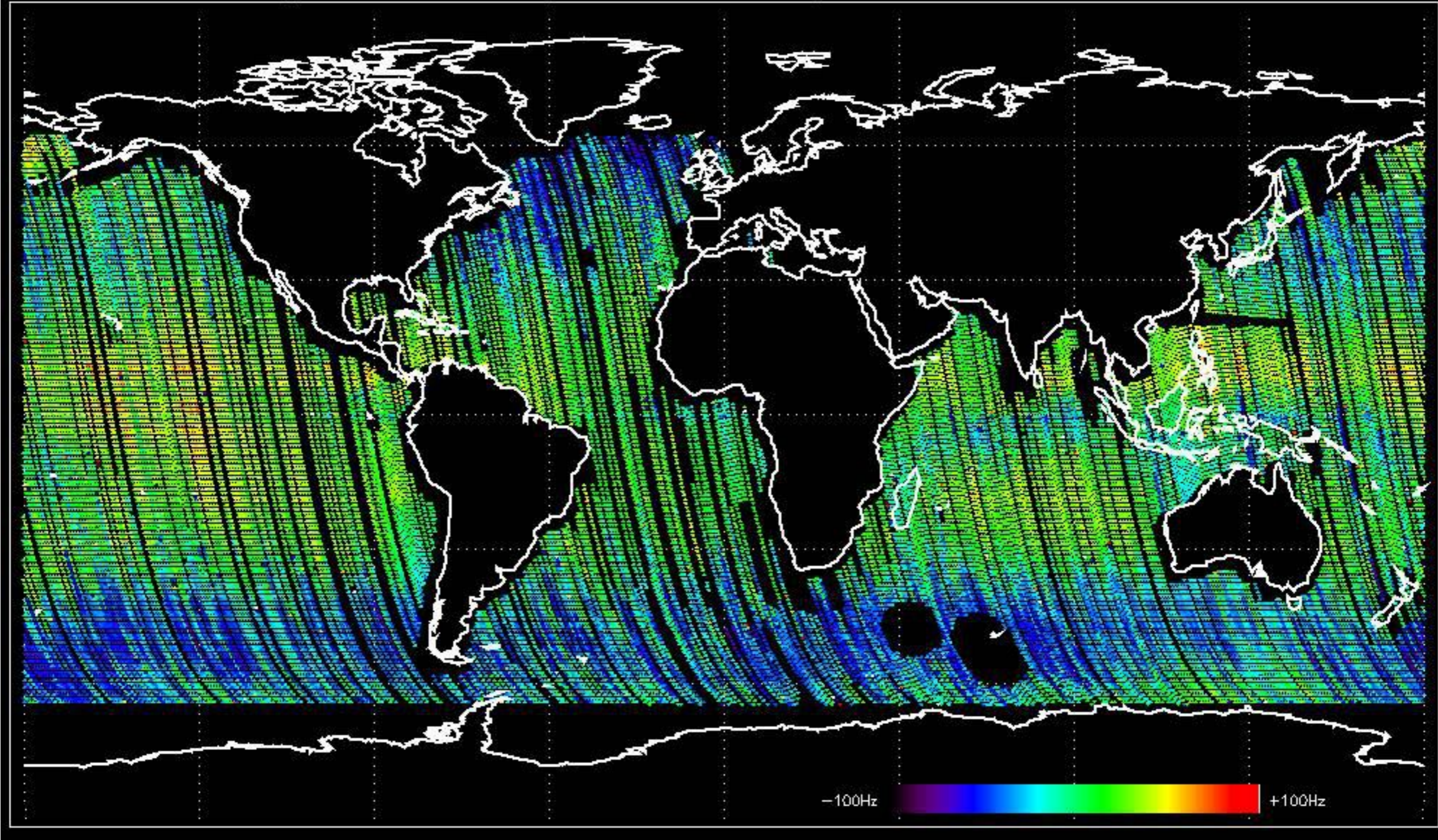
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.680050 Hz



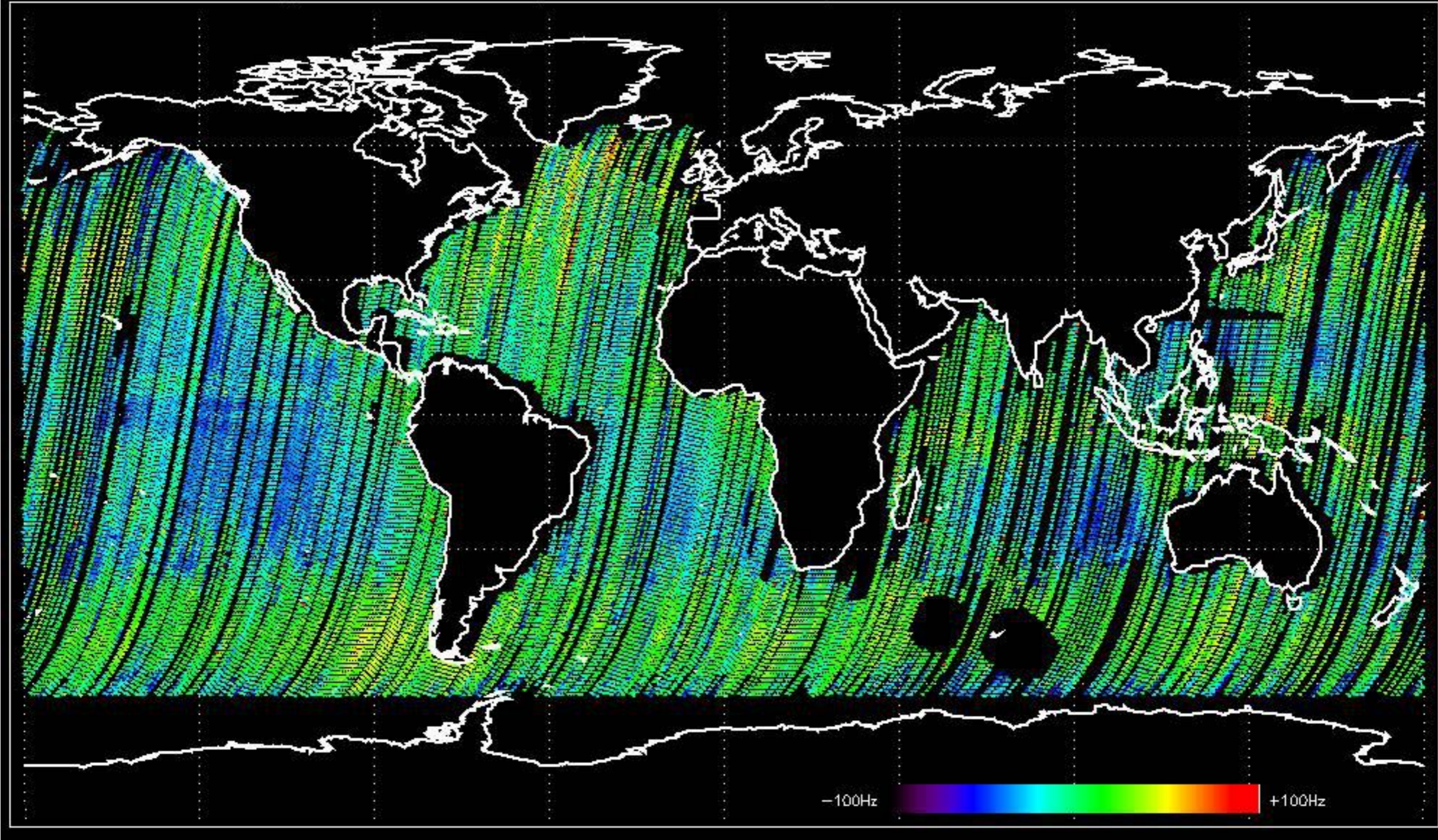
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.451396 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -35.150458 Hz

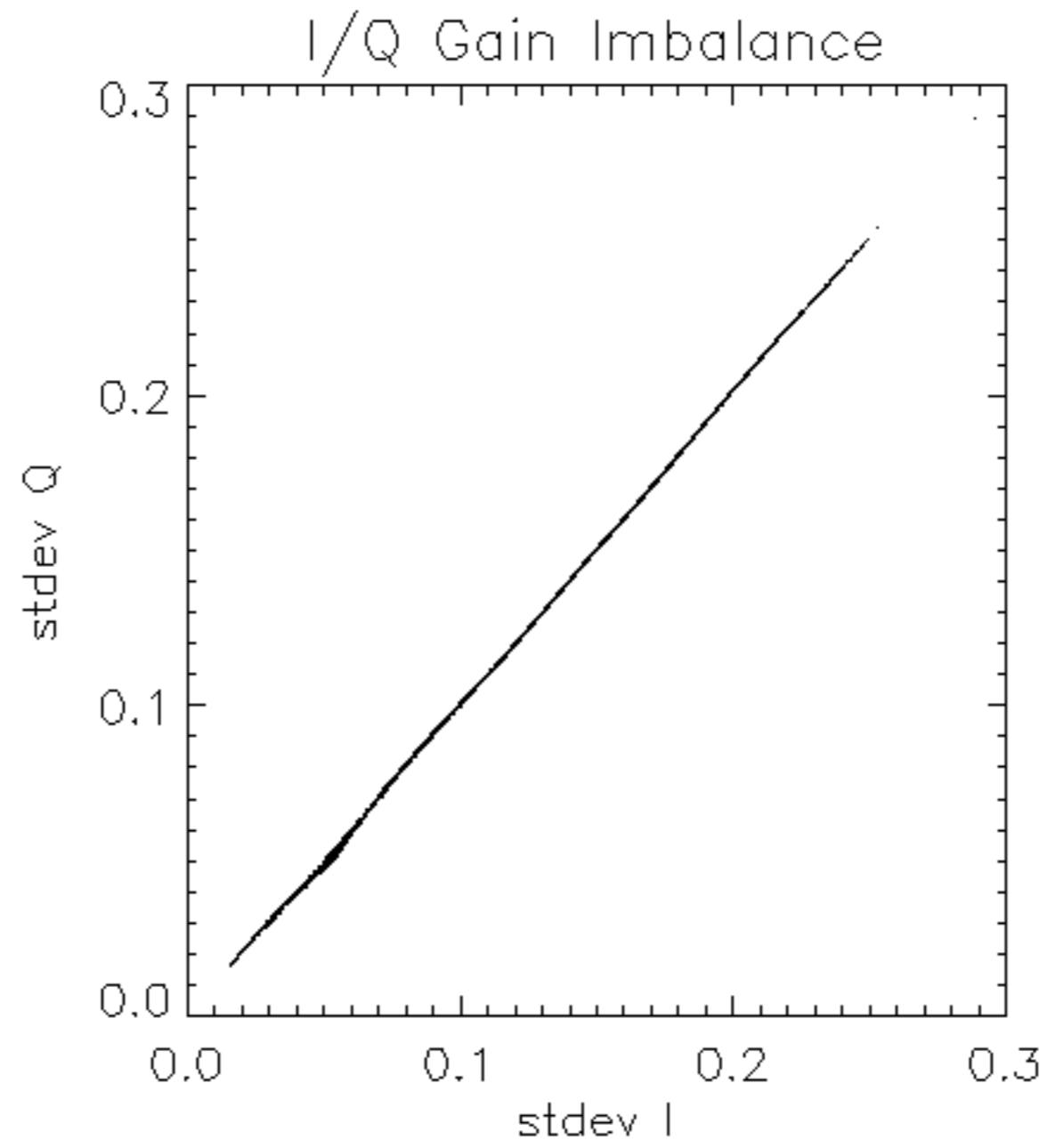


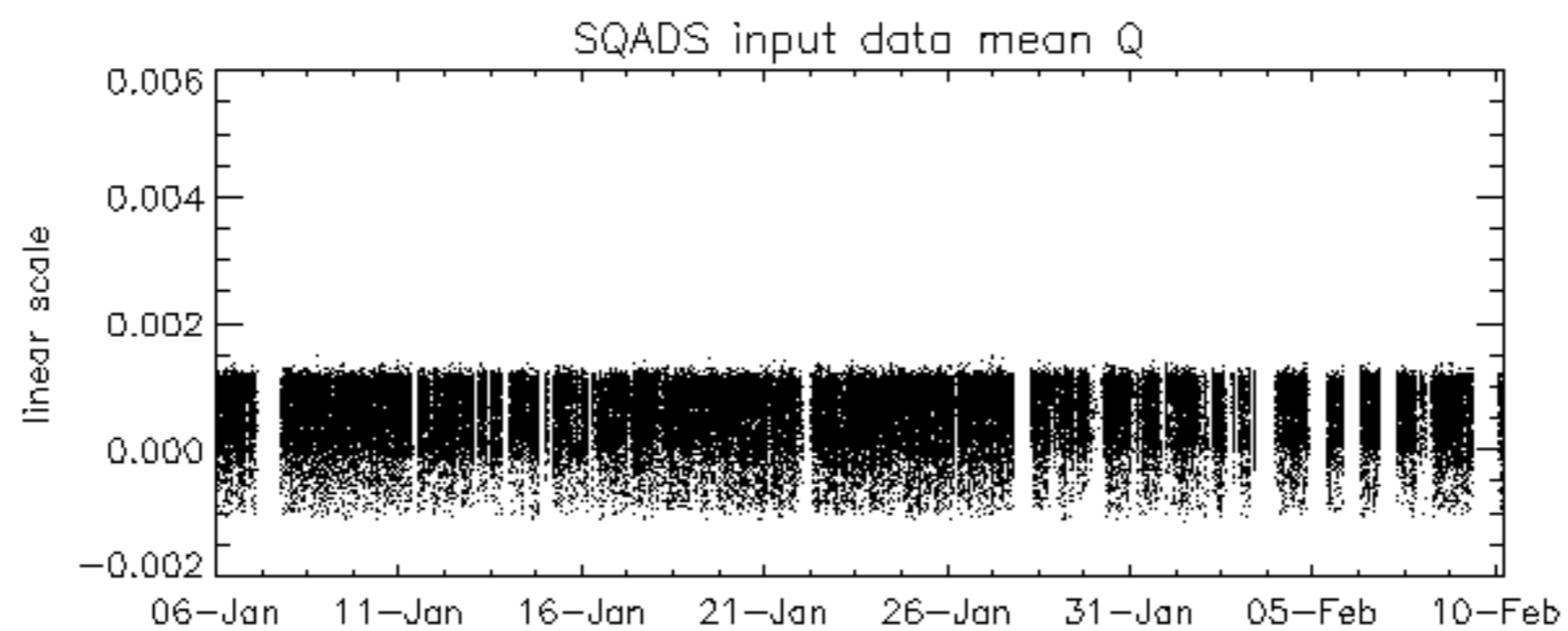
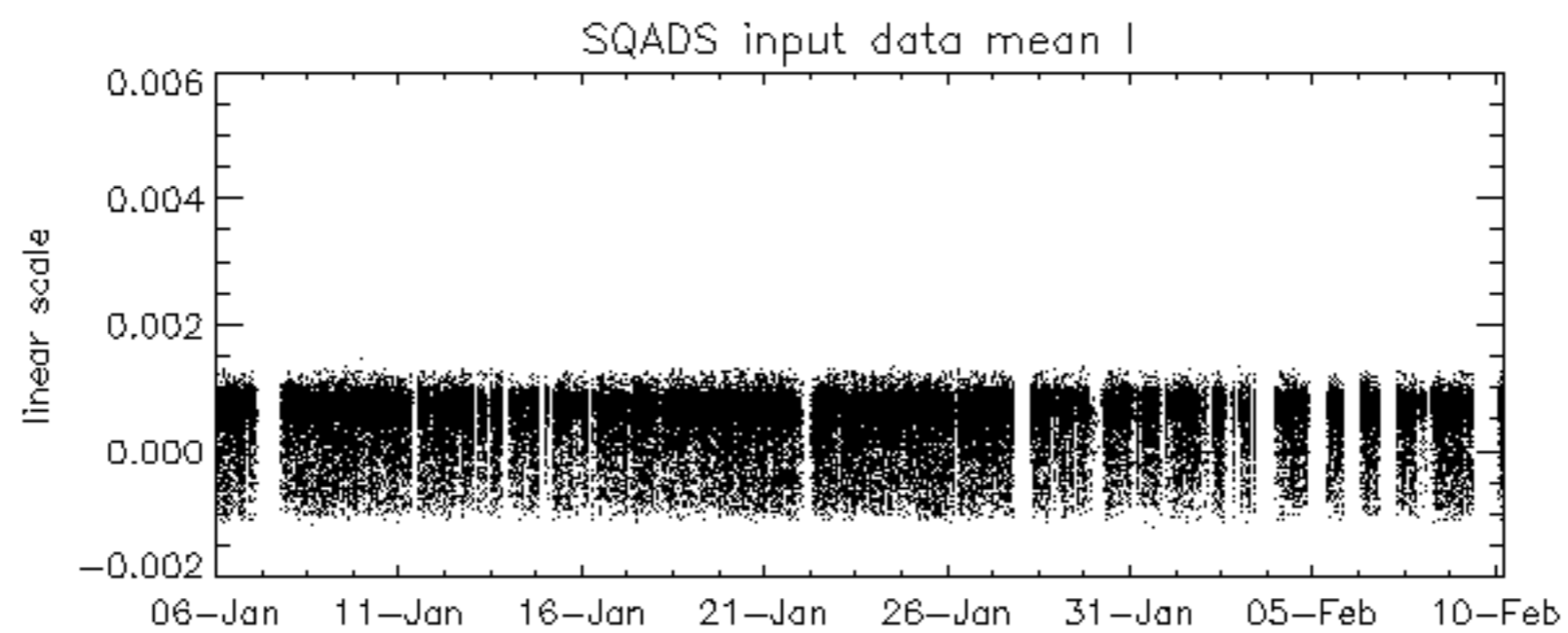
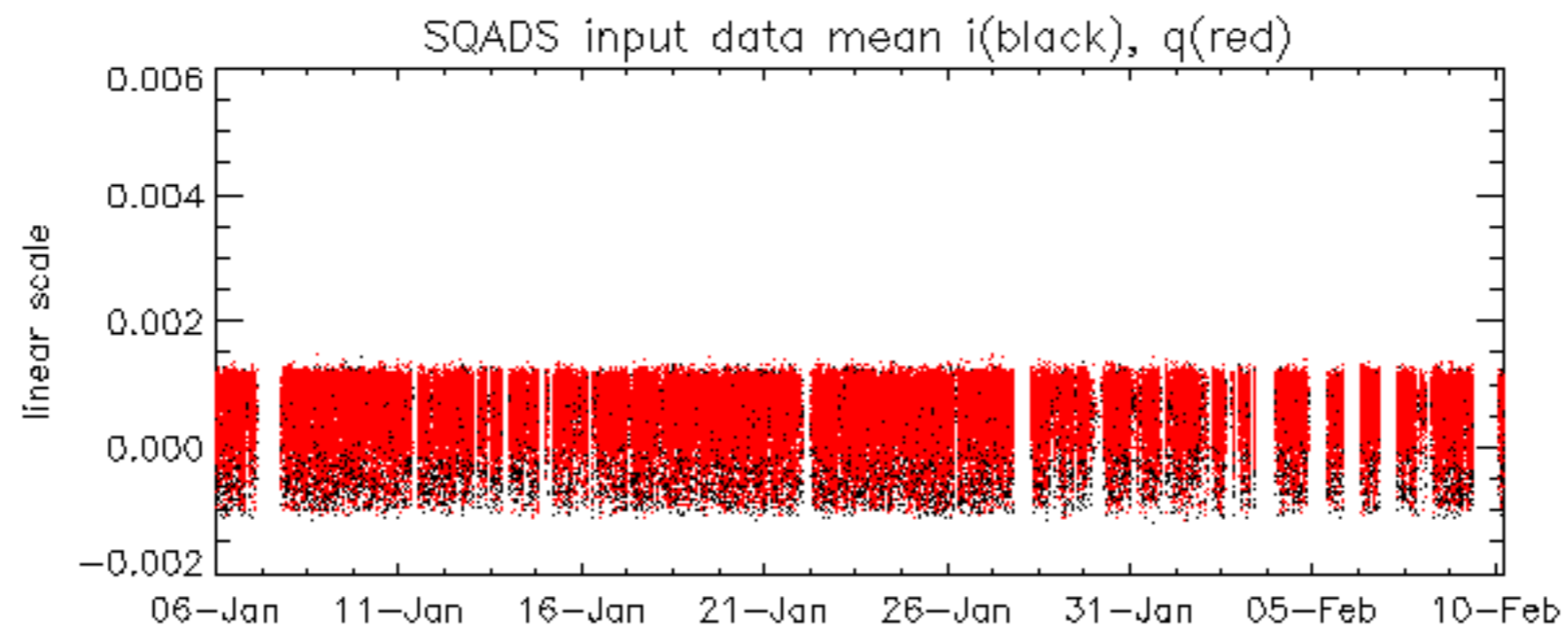
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.512476 Hz

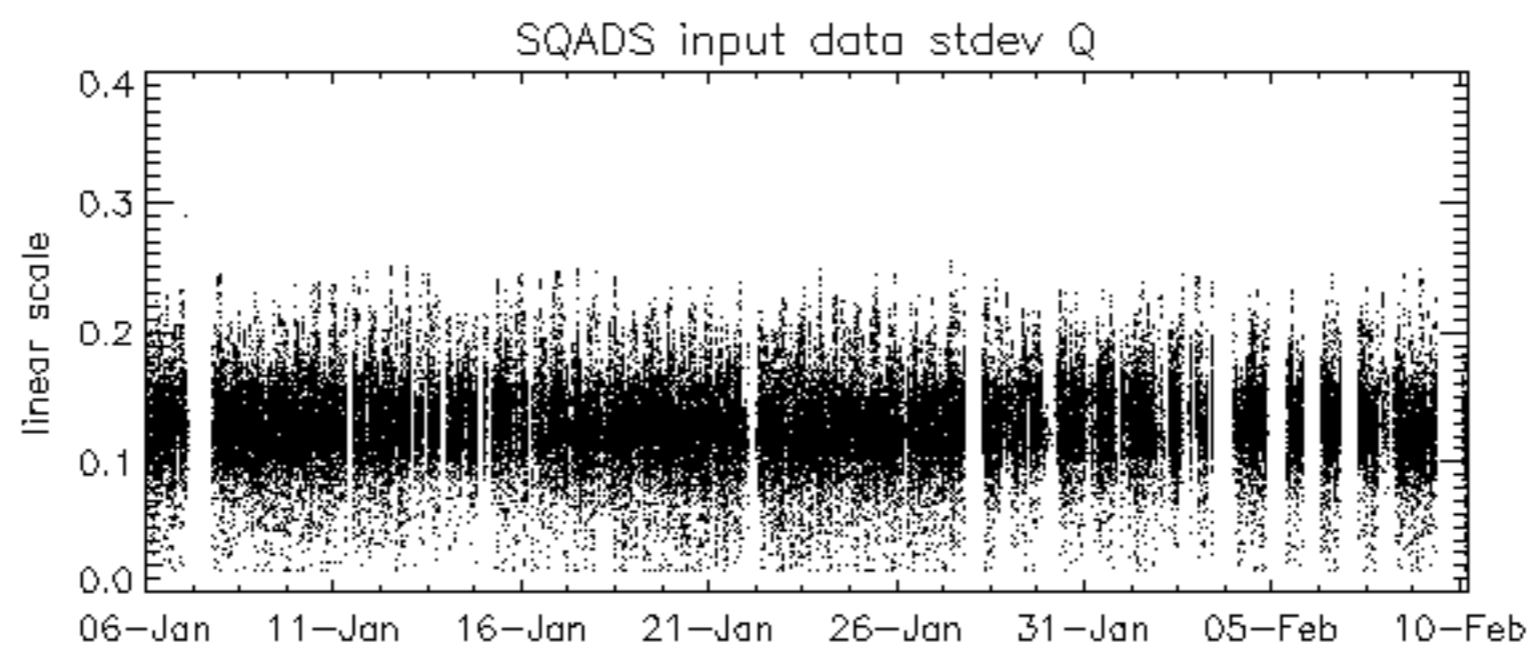
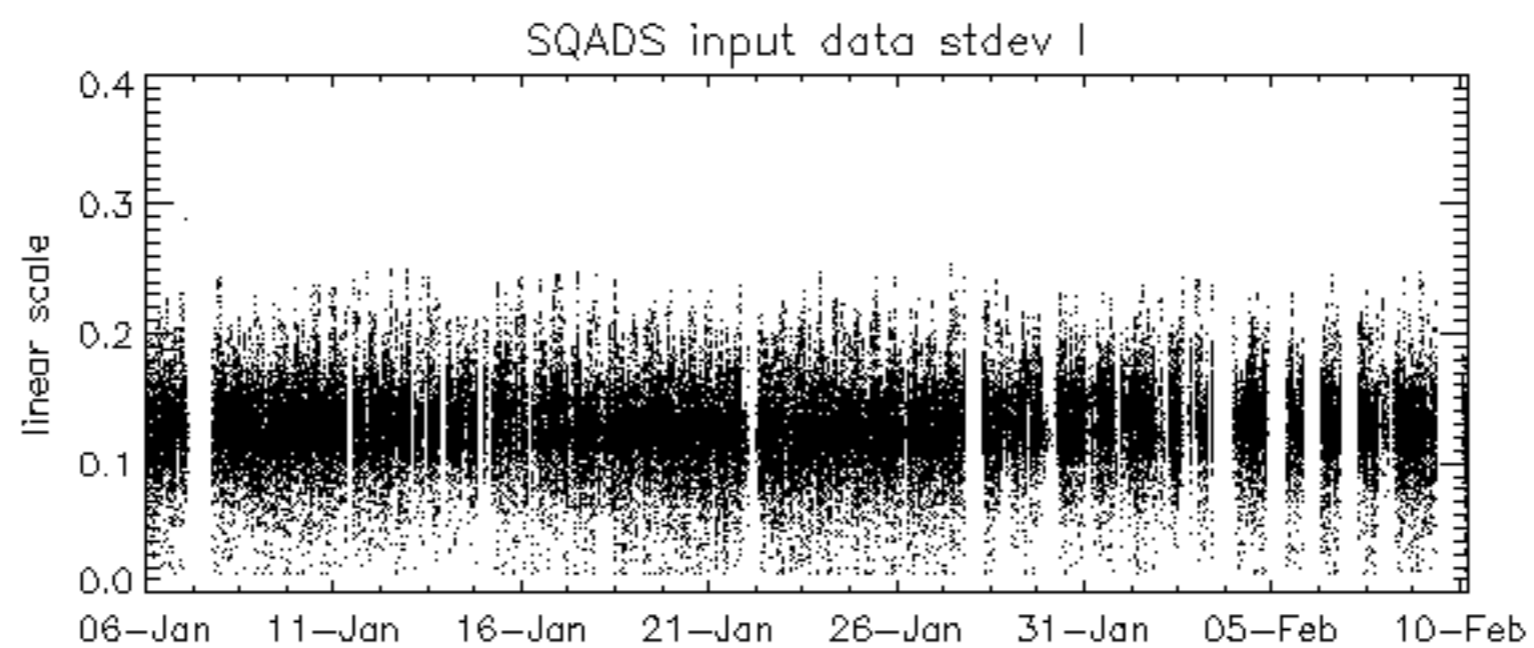
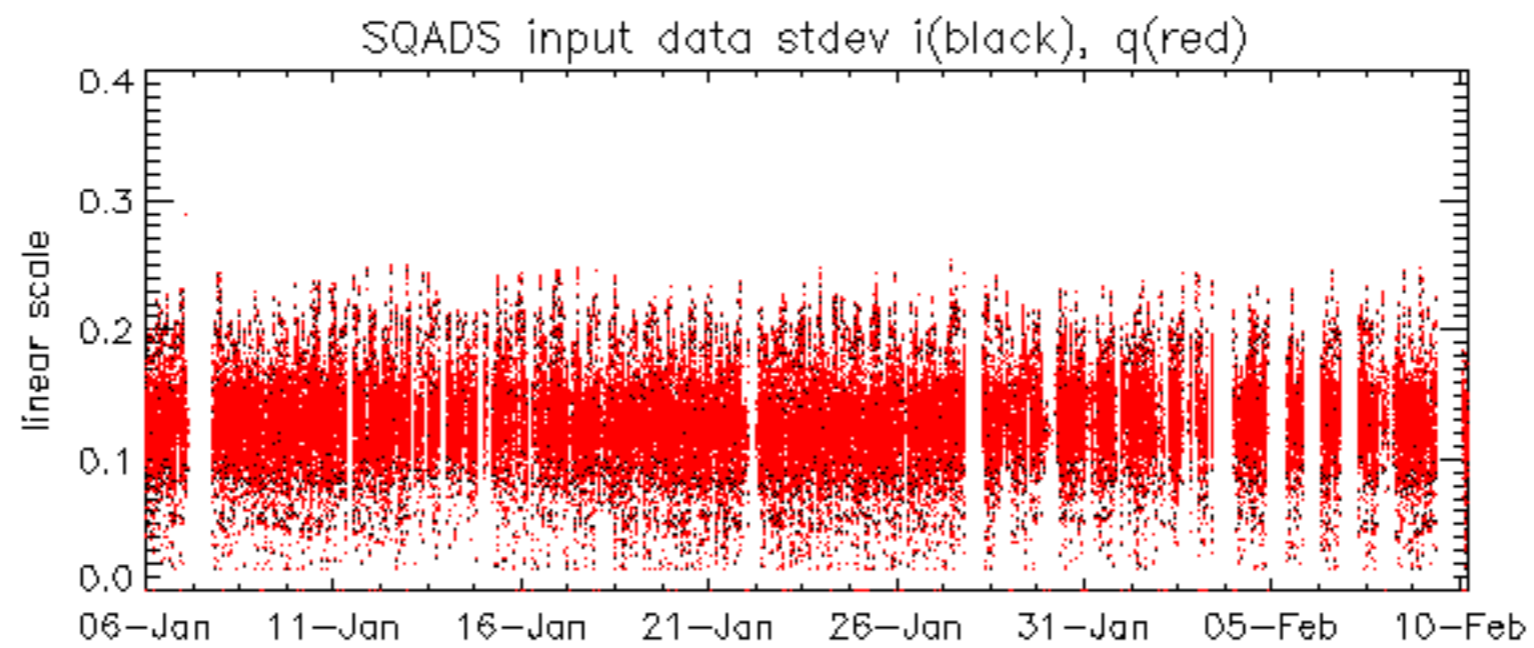


No anomalies observed on available MS products:

No anomalies observed.



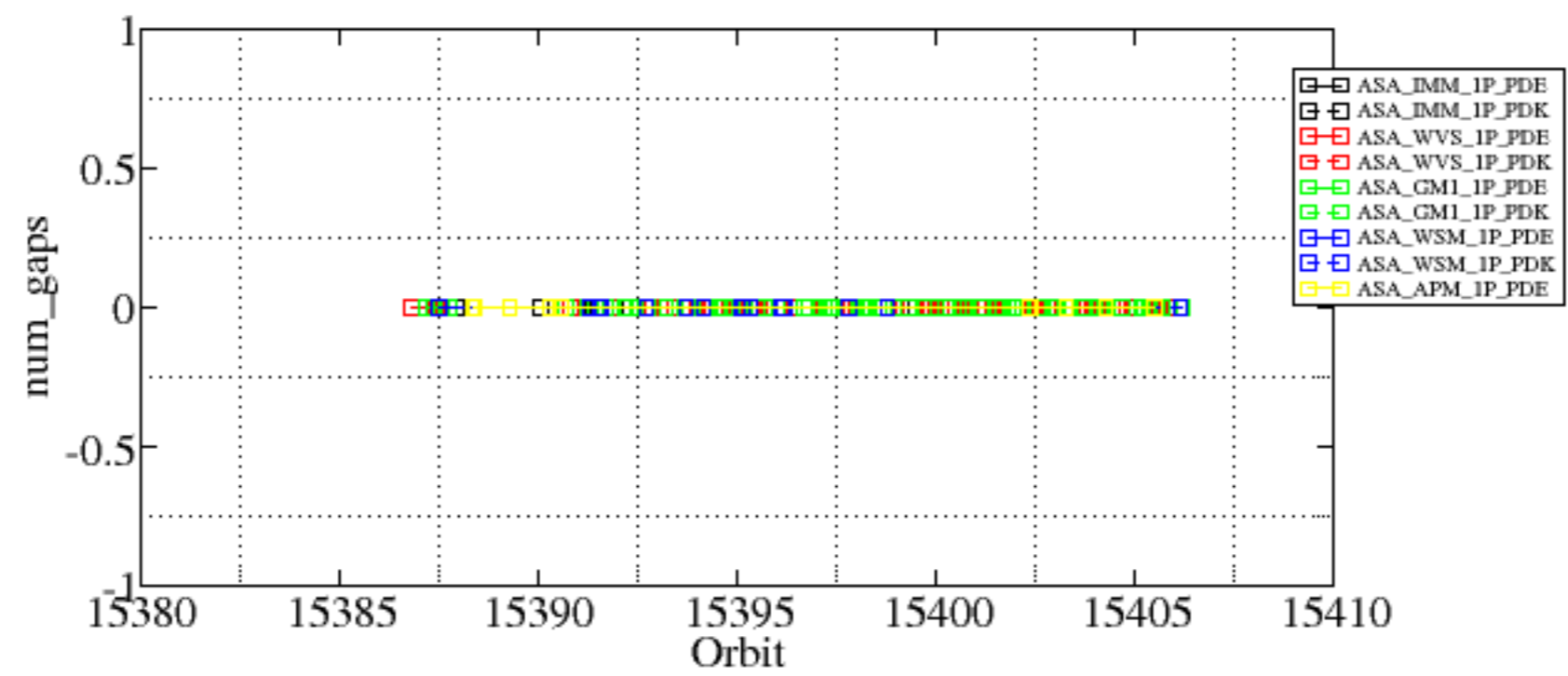


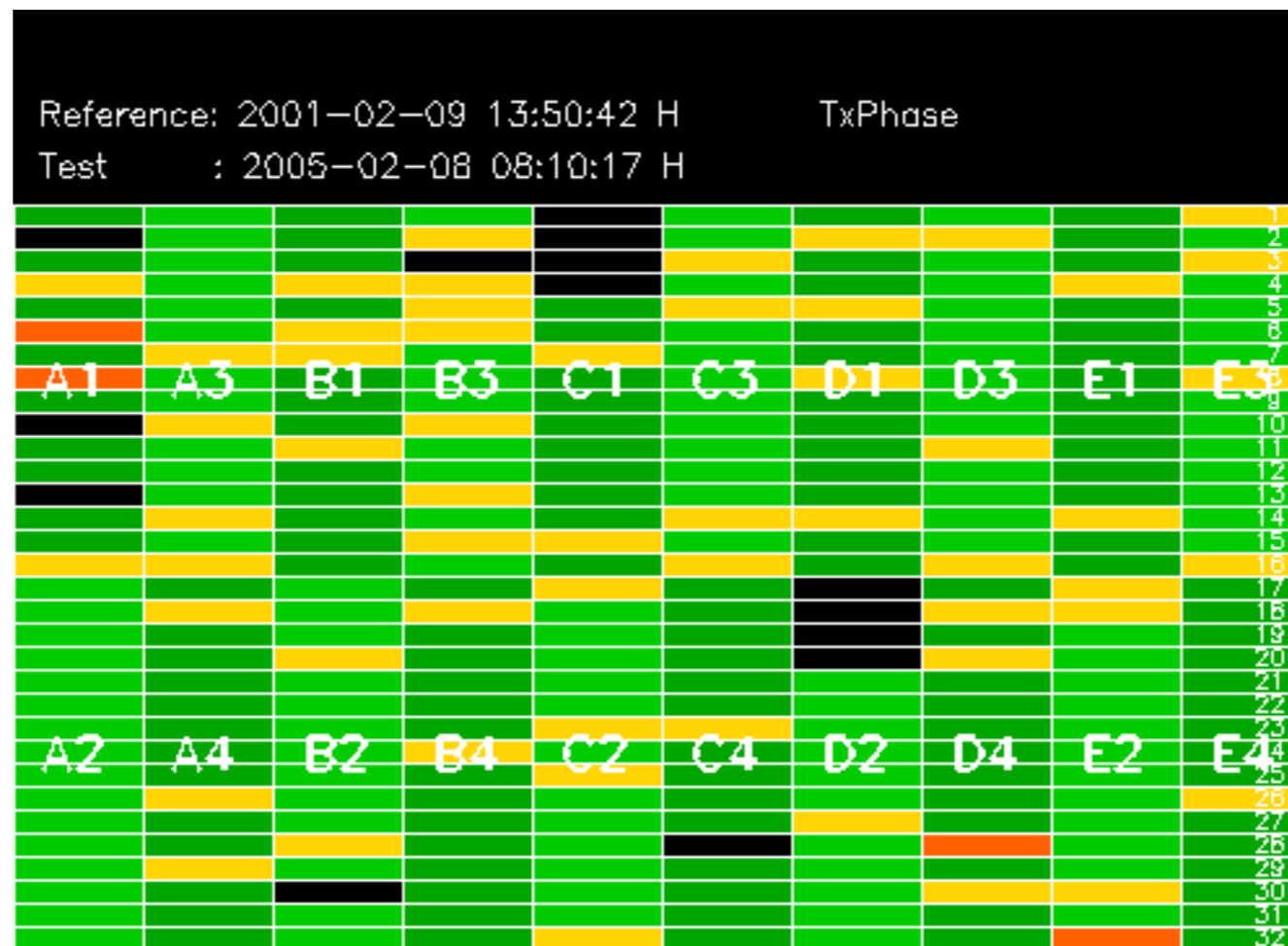


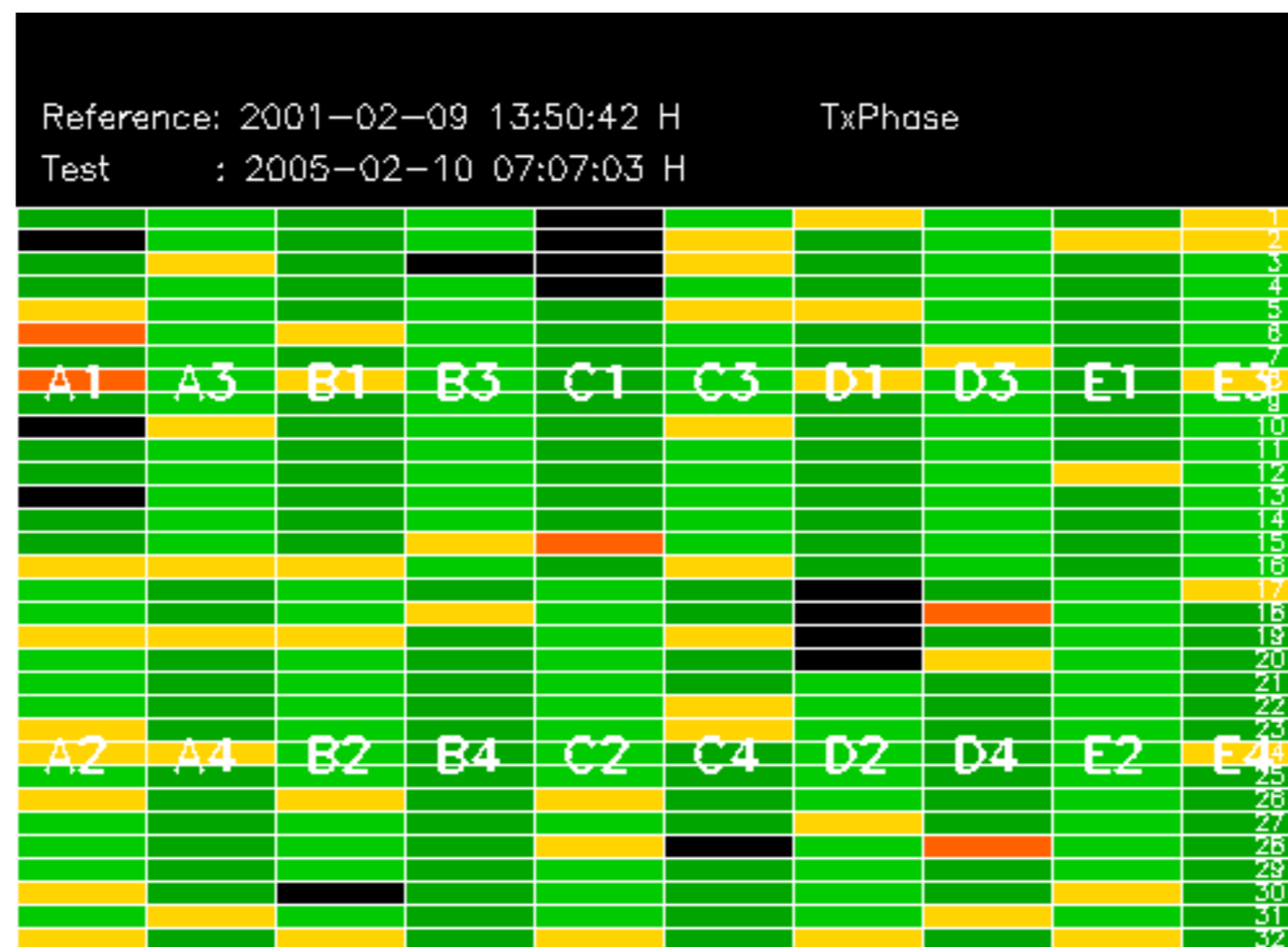
Summary of analysis for the last 3 days 2005020[890]

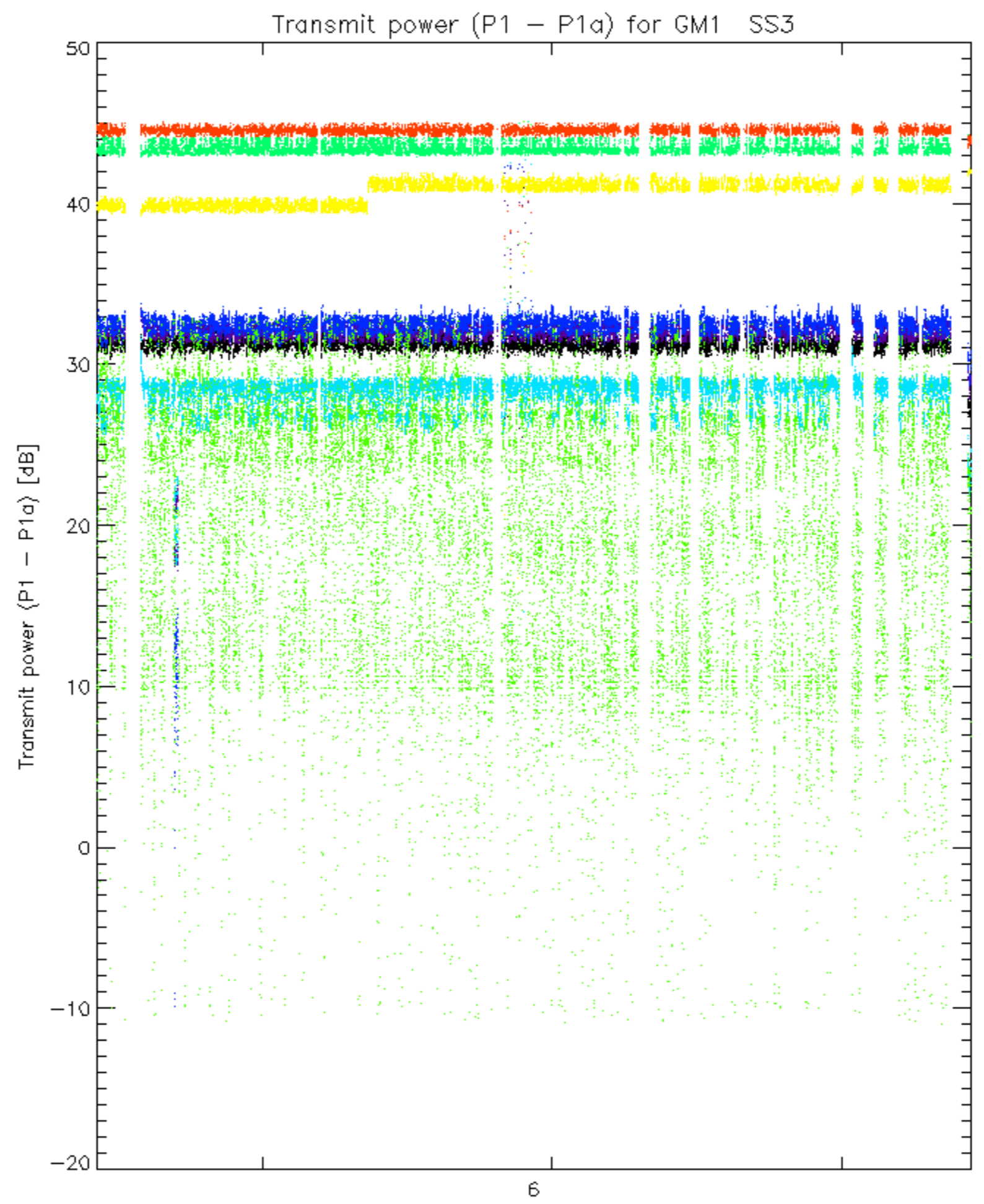
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

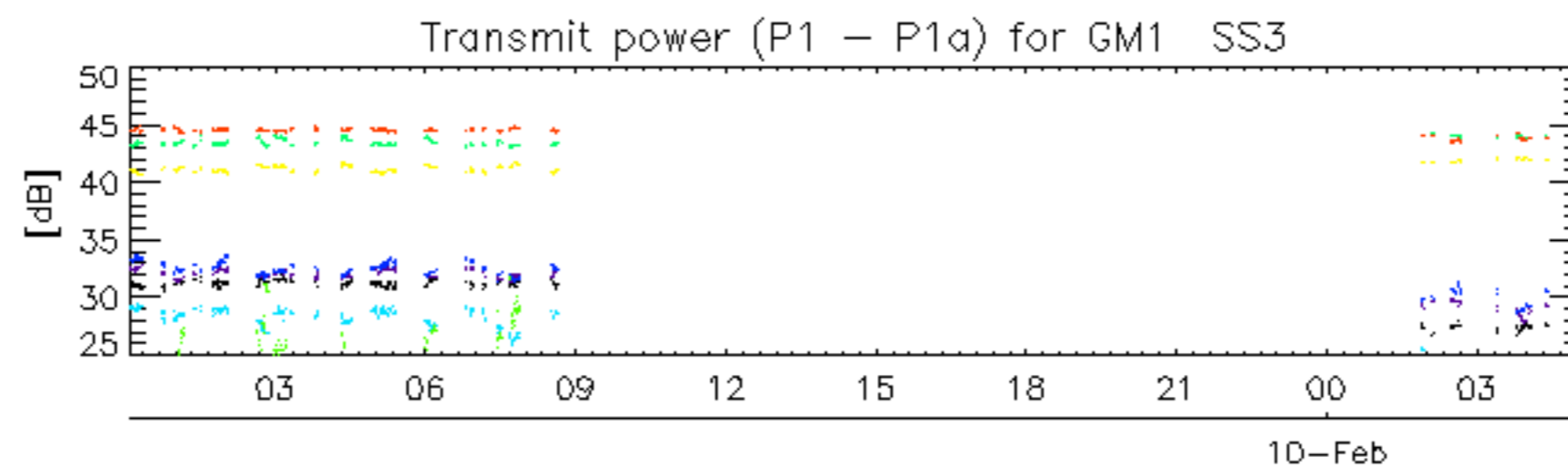
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20050208_010910_000002382034_00303_15387_3874.N1	0	16



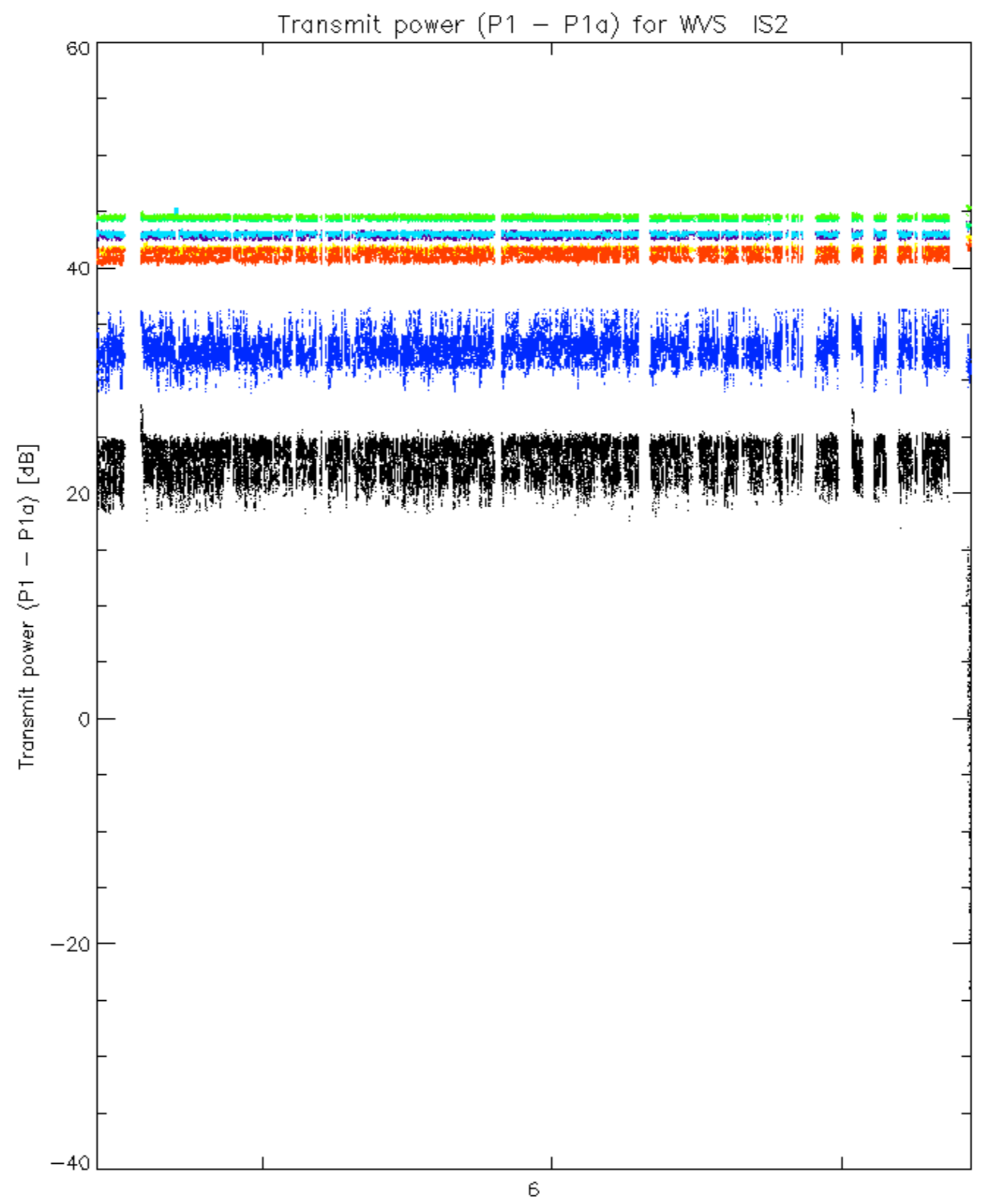




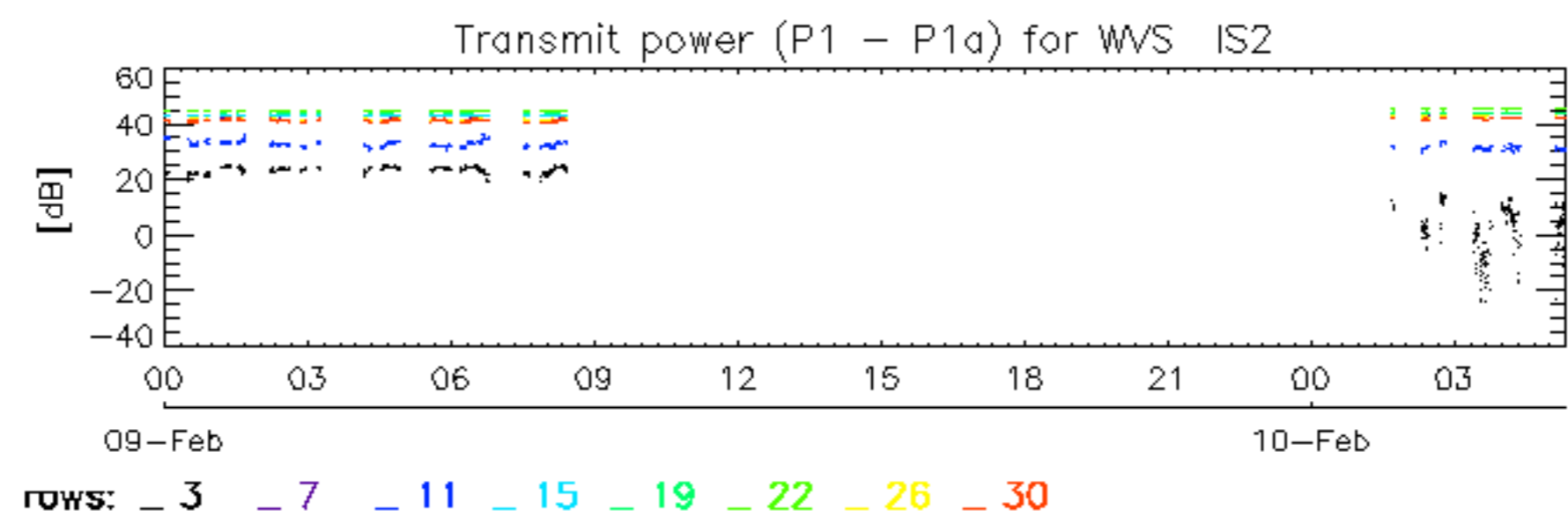




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



ASAR unavailable from 9 Feb 2005 08:38:15.000 until 10 Feb 2005 00:17:26.000 to load new antenna beam shaping data.

