

PRELIMINARY REPORT OF 070301

last update on Thu Mar 1 16:27:23 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-02-28 00:00:00 to 2007-03-01 16:27:23

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	41	70	9	1	26
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	41	70	9	1	26
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	41	70	9	1	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	70	9	1	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	45	53	37	8	61
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	28	33	29	7	50
ASA_INS_AXVIEC20070223_140724_20070226_000000_20071231_000000	17	20	8	1	11
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	45	53	37	8	61
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	53	37	8	61

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	20070228 170158
H	20070301 062645

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
<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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.210558	0.448363	0.944116
7	P1a	-10.127669	0.088420	-0.072883
11	P1a	-10.704550	0.109137	-0.227177
15	P1a	-11.682029	1.569671	-0.164073
19	P1a	-15.076582	1.073436	0.116805
22	P1a	-19.604206	7.790067	0.466114
26	P1a	-15.649143	0.470077	0.202648
30	P1a	-20.033728	7.171382	-0.451990

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.775634	3.310510	-5.020367
7	P1	-2.599679	0.013787	-0.027579
11	P1	-3.224943	0.142695	-0.119536
15	P1	-4.592157	1.330032	-0.224562
19	P1	-3.419652	0.090921	0.019743
22	P1	-5.348174	0.141421	-0.029286
26	P1	-5.401605	0.693960	0.077548
30	P1	-5.441946	0.067232	-0.033923

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.872921	0.846184	-2.256270
7	P2	-21.928772	0.153697	0.119107
11	P2	-10.810380	0.137446	0.010939
15	P2	-5.108491	0.091055	0.013582

19	P2	-7.243051	0.080434	0.025575
22	P2	-8.373784	0.076016	0.020411
26	P2	-24.165873	0.131136	0.019111
30	P2	-21.689335	0.070232	0.054915

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.221310	0.007904	-0.010984
7	P3	-8.221310	0.007904	-0.010984
11	P3	-8.221310	0.007904	-0.010984
15	P3	-8.221310	0.007904	-0.010984
19	P3	-8.221310	0.007904	-0.010984
22	P3	-8.221310	0.007904	-0.010984
26	P3	-8.221310	0.007904	-0.010984
30	P3	-8.221310	0.007904	-0.010984

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.213552	0.111218	0.695760
7	P1a	-10.044416	0.067481	-0.096307
11	P1a	-10.609962	0.056830	-0.208082
15	P1a	-10.877290	0.134265	-0.135714
19	P1a	-15.737003	0.065349	0.056945
22	P1a	-20.839405	1.220559	0.166037
26	P1a	-15.389659	0.265677	0.286057
30	P1a	-18.363157	0.355144	-0.164153

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P1	-7.510221	2.701777	-4.392365
7	P1	-2.435552	0.005776	-0.001660
11	P1	-2.896306	0.015865	-0.093889
15	P1	-3.815081	0.033118	-0.099897
19	P1	-3.553015	0.012097	-0.002567
22	P1	-5.029855	0.022986	-0.037048
26	P1	-5.986153	0.023812	0.058388
30	P1	-5.283686	0.022264	0.031593

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.698240	0.583931	-1.956331
7	P2	-21.986429	0.053273	0.128491
11	P2	-10.667251	0.030191	0.073478
15	P2	-4.824159	0.027019	0.052961
19	P2	-6.820384	0.027452	0.056941
22	P2	-8.122163	0.033494	0.091779
26	P2	-24.258293	0.033264	-0.011735
30	P2	-21.763979	0.036546	0.098536

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.046041	0.003378	0.012205
7	P3	-8.046078	0.003393	0.012260
11	P3	-8.046066	0.003385	0.011799
15	P3	-8.046065	0.003401	0.011881
19	P3	-8.046087	0.003379	0.011768
22	P3	-8.046132	0.003384	0.011944
26	P3	-8.046043	0.003385	0.011976
30	P3	-8.046088	0.003395	0.011827

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	0.000617557
	stdev	2.31206e-07
MEAN Q	mean	0.000399230
	stdev	2.50045e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.109153
	stdev	0.00255698
STDEV Q	mean	0.109217
	stdev	0.00260786



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007022[781]

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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ASA_IMM_1PNPDE20070221_143309_000000372055_00425_26030_6740.N1	1	0
ASA_IMM_1PNPDE20070221_165622_000001272055_00427_26032_6826.N1	4	86
ASA_IMM_1PNPDK20070228_130017_000003962056_00024_26130_1566.N1	0	1
ASA_WVS_1PNPDK20070228_065153_00000002056_00020_26126_1087.N1	1	0
ASA_WSM_1PNPDE20070221_164157_000000982055_00427_26032_6808.N1	5	1764
ASA_WSM_1PNPDE20070221_172658_000000672055_00427_26032_6800.N1	21	6572
ASA_WSM_1PNPDE20070227_002822_000002612056_00002_26108_3509.N1	0	27
ASA_WSM_1PNPDE20070228_113744_000001092056_00023_26129_5446.N1	0	13
ASA_WSM_1PNPDE20070228_141755_000000852056_00025_26131_5502.N1	0	16
ASA_WSM_1PNPDK20070227_095010_000000852056_00008_26114_0131.N1	0	41





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

<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

<input type="checkbox"/>

Acsending

<input type="checkbox"/>

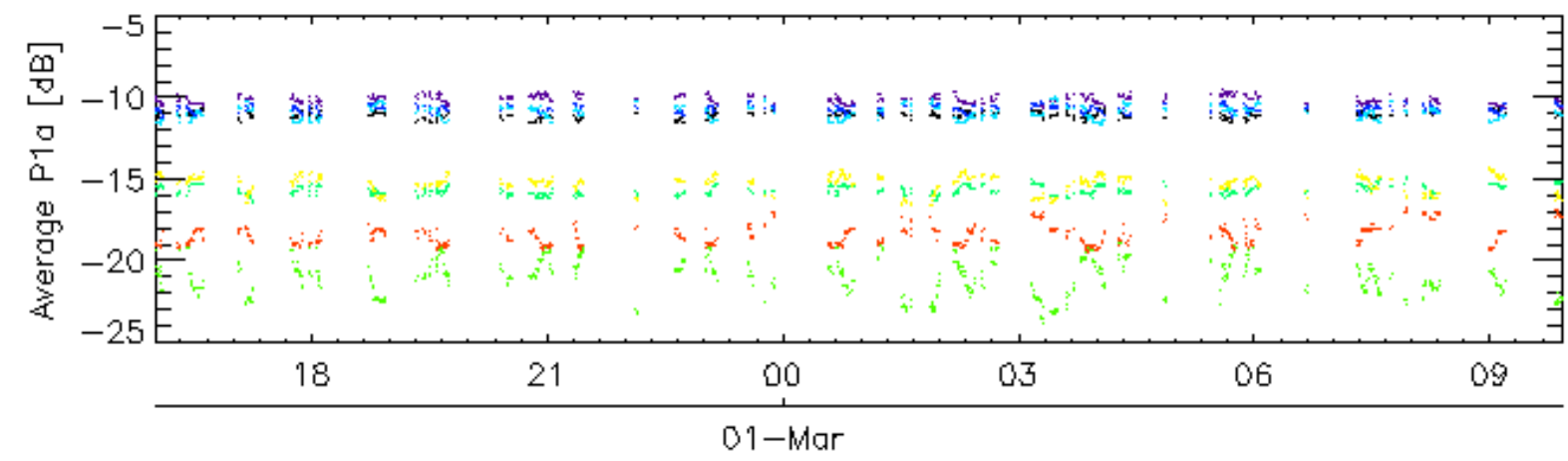
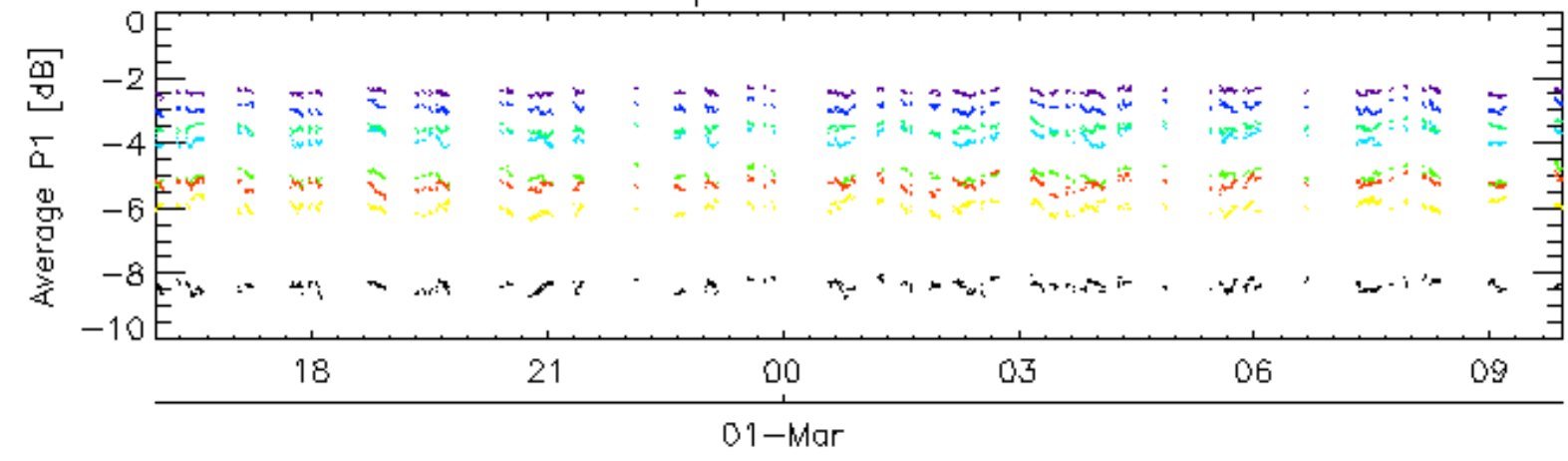
Descending

7.6 - Doppler evolution versus ANX for GM1

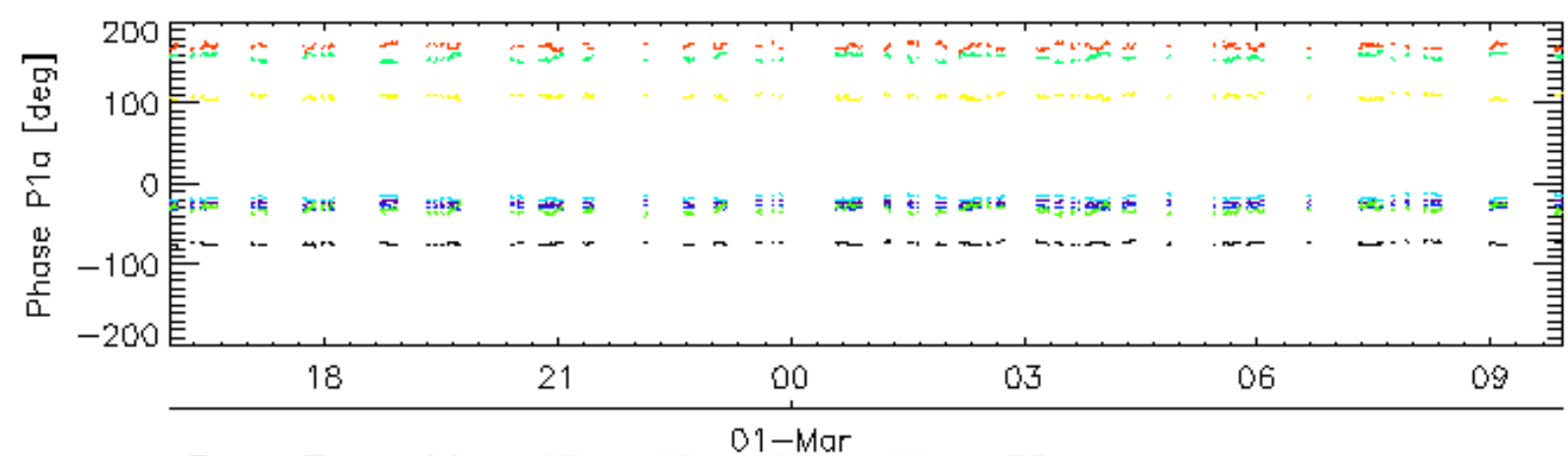
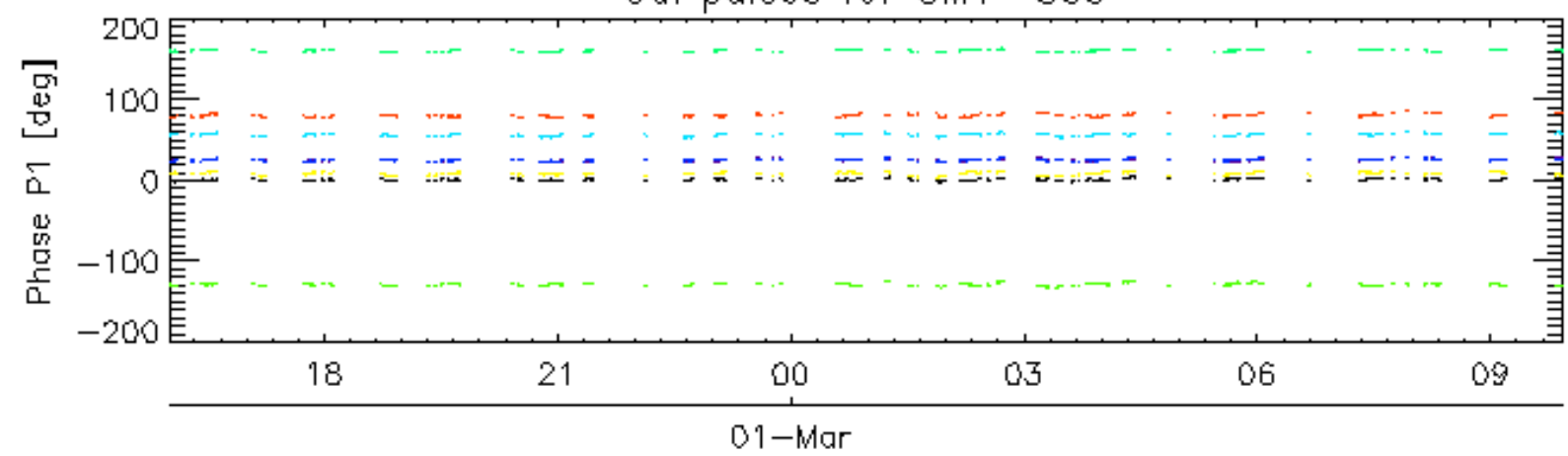
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

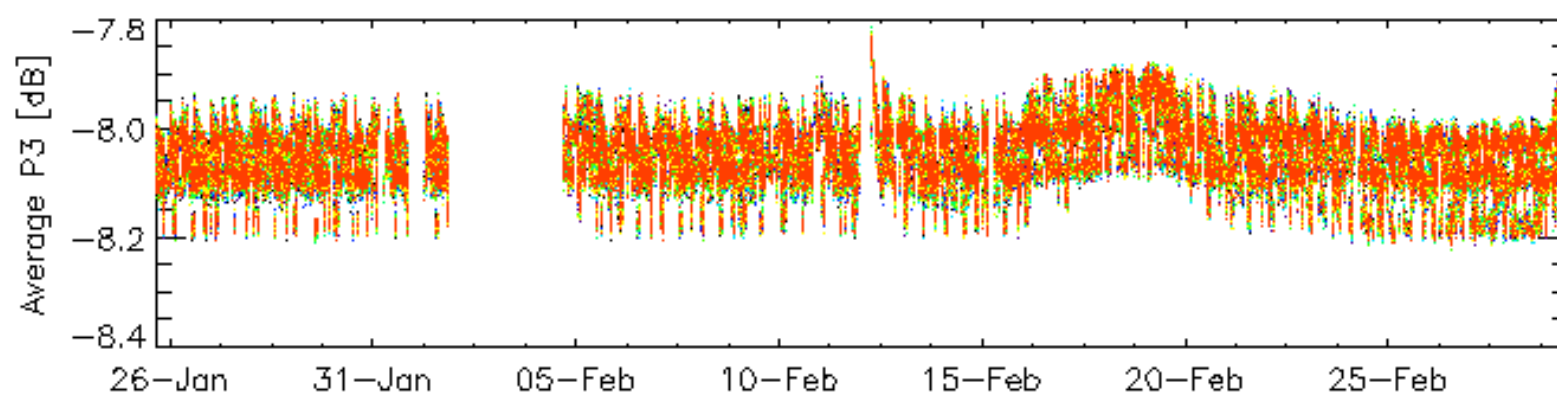
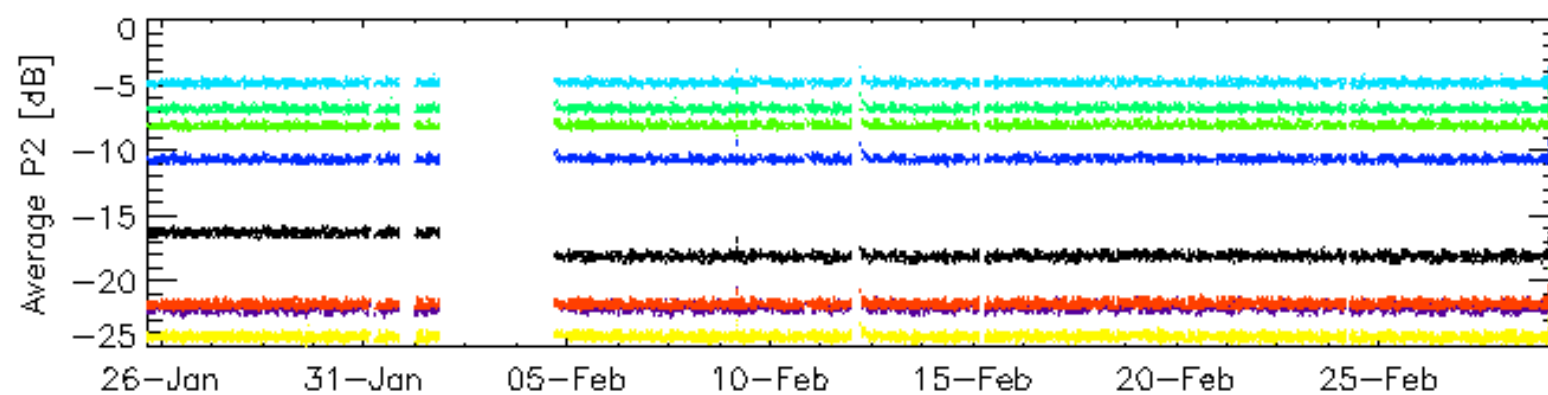
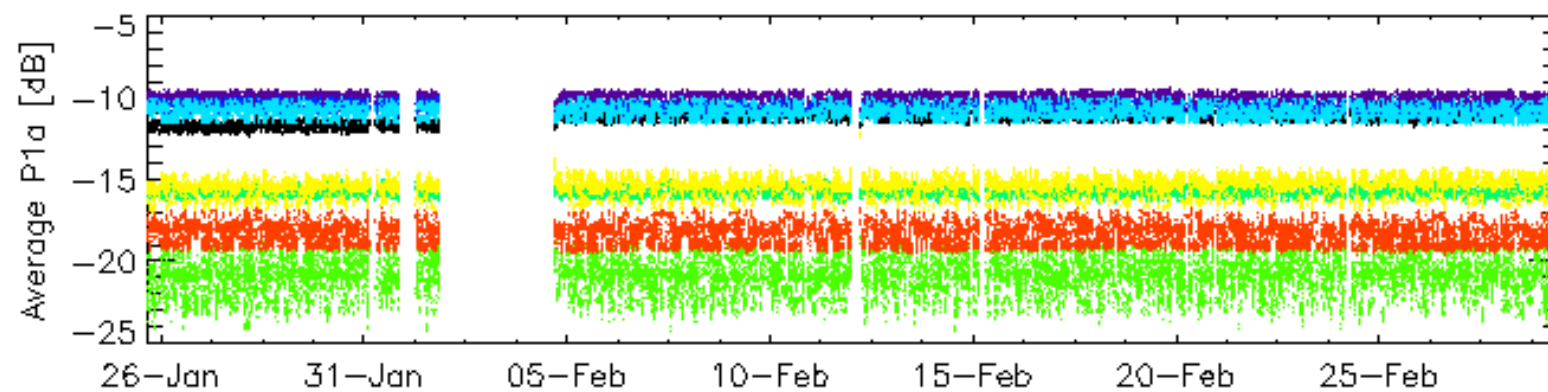
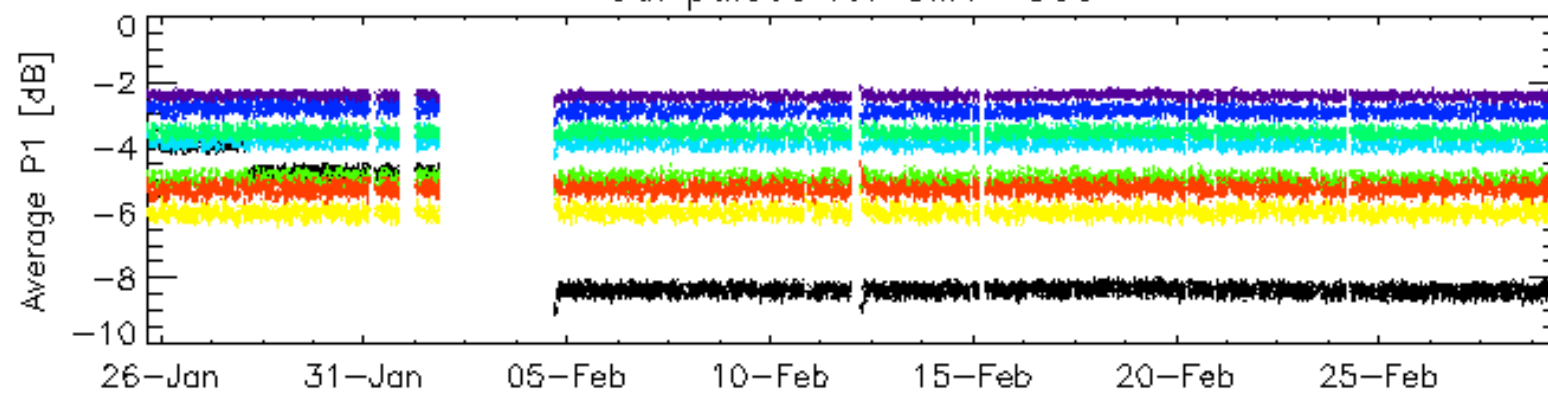


Cal pulses for GM1 SS3



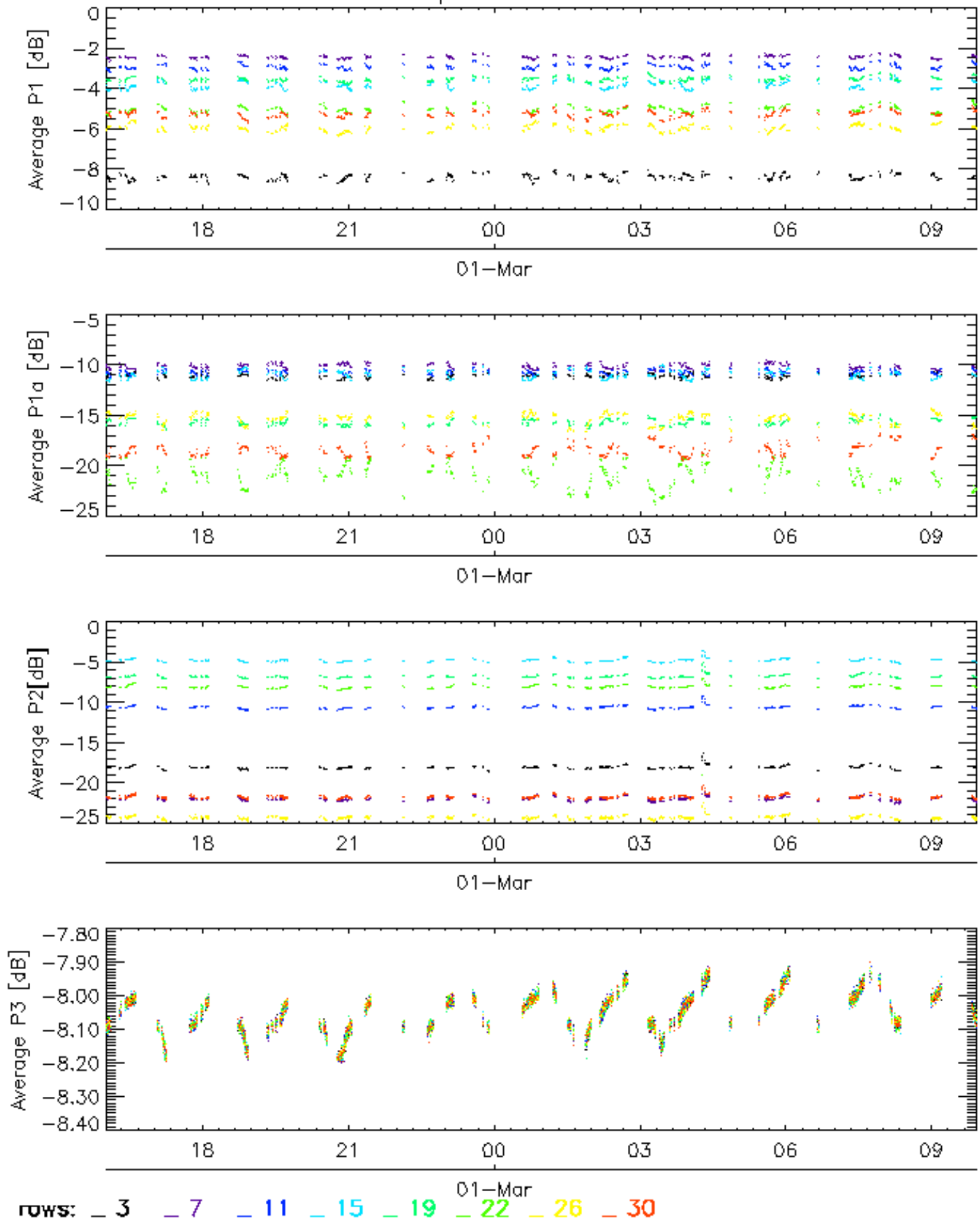
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Cal pulses for GM1 SS3

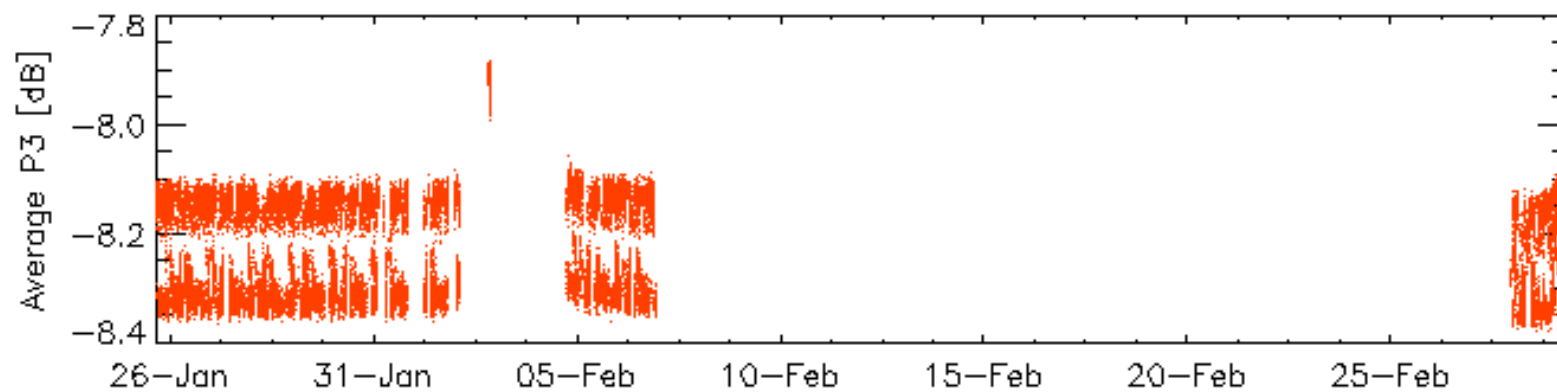
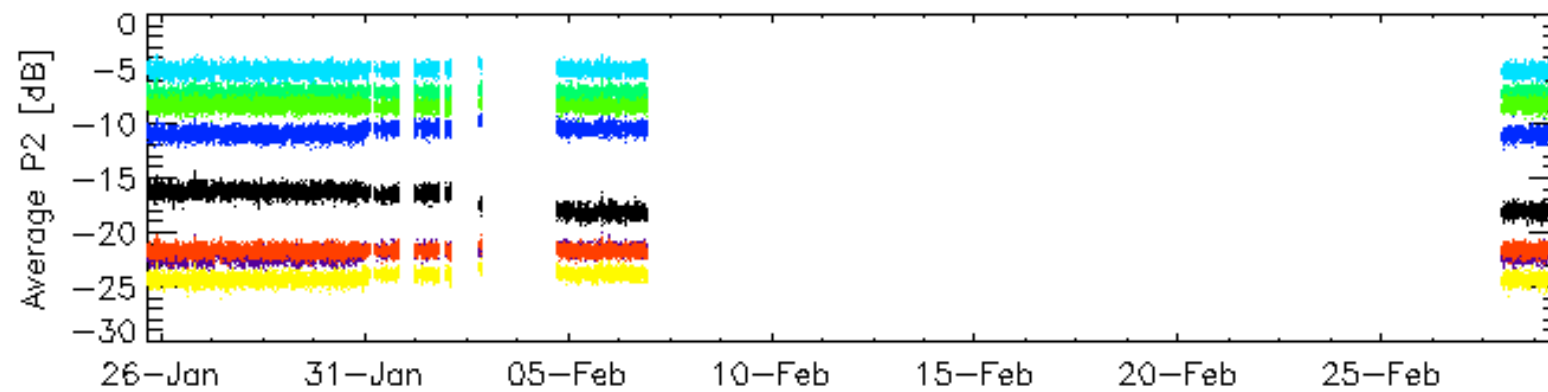
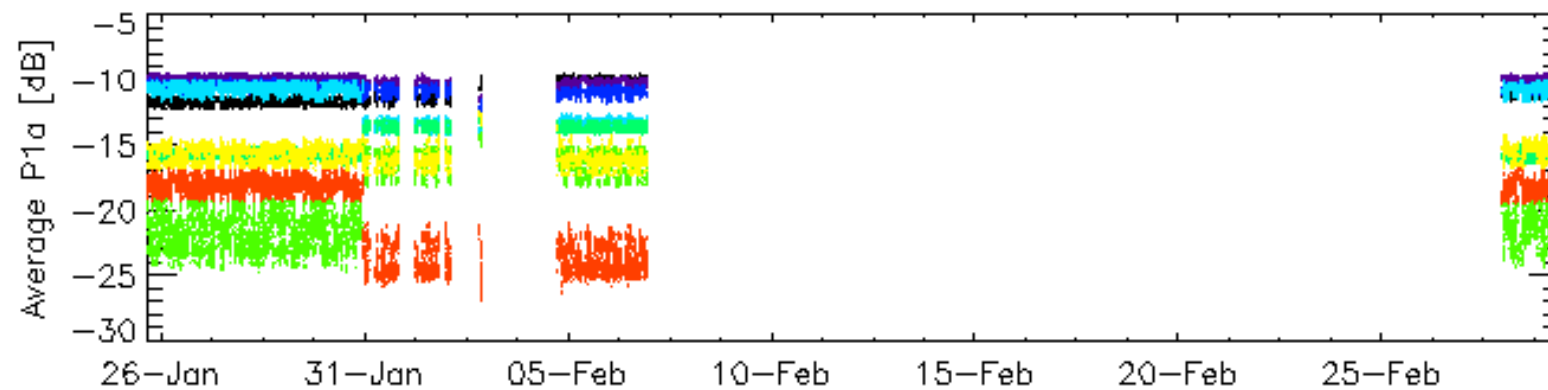
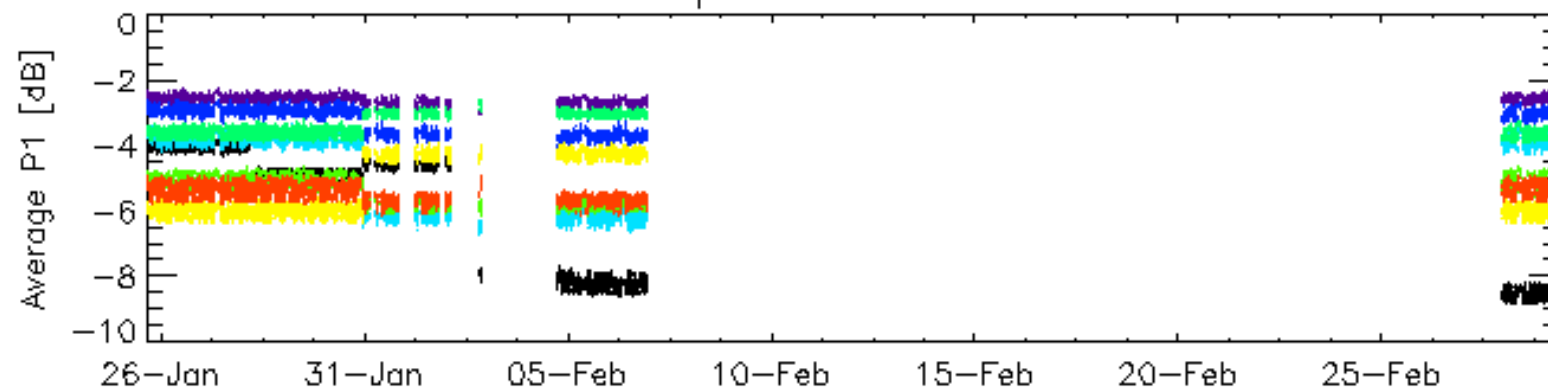


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

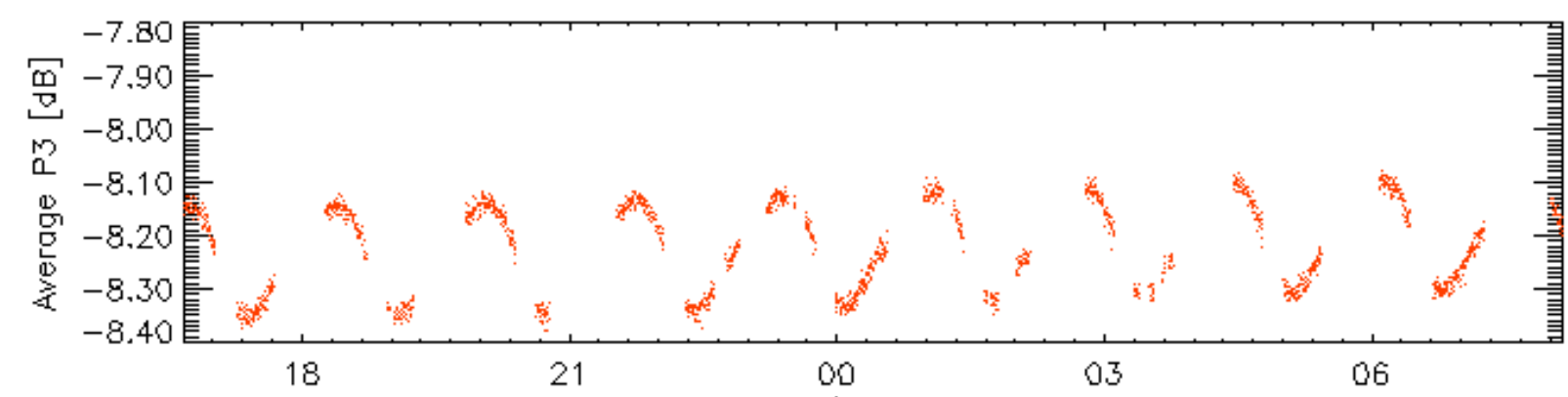
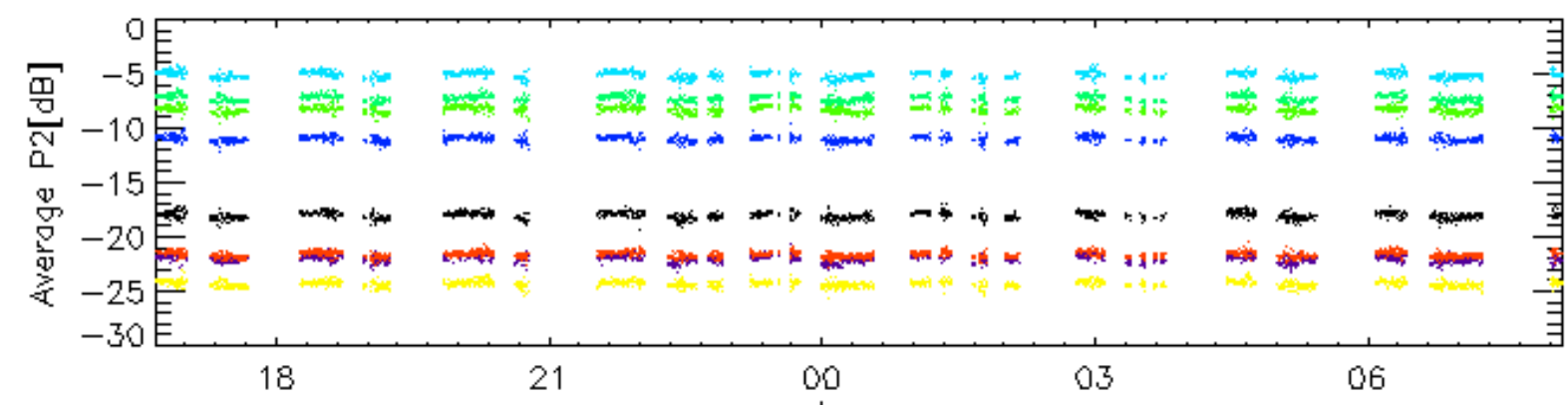
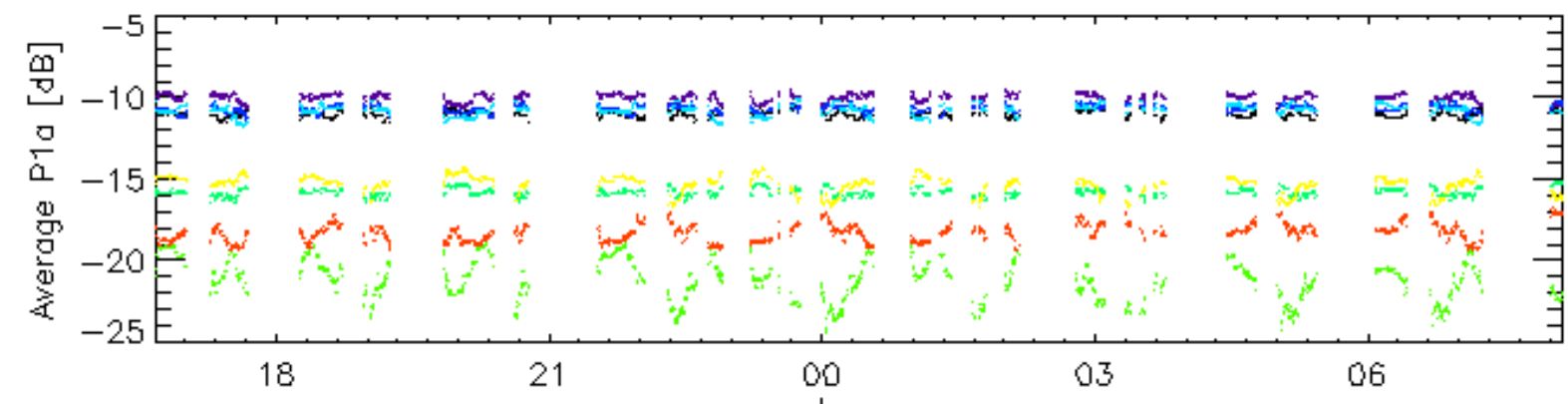
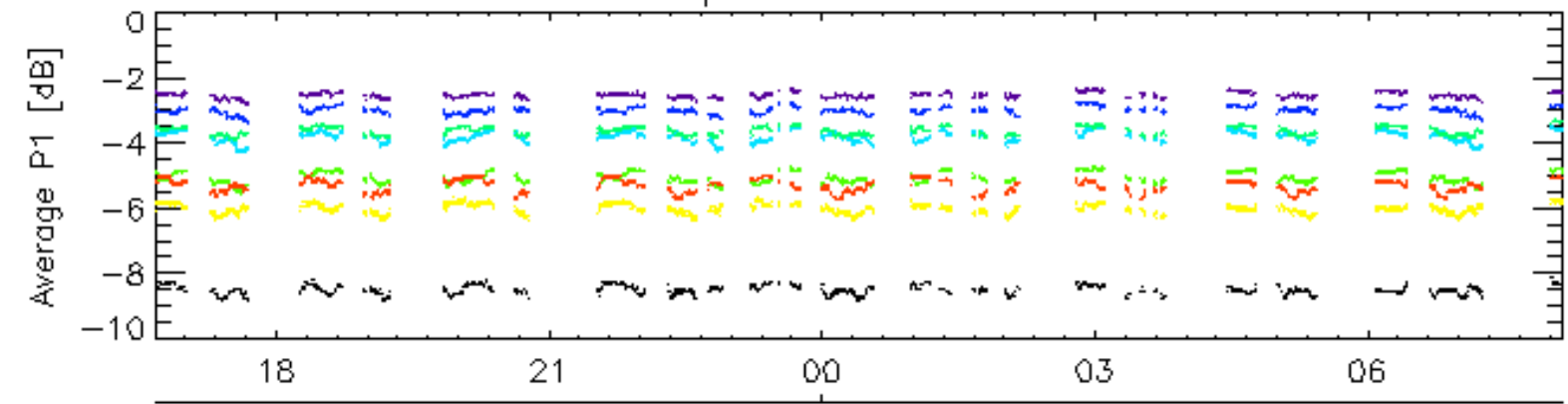


Cal pulses for WVS IS4



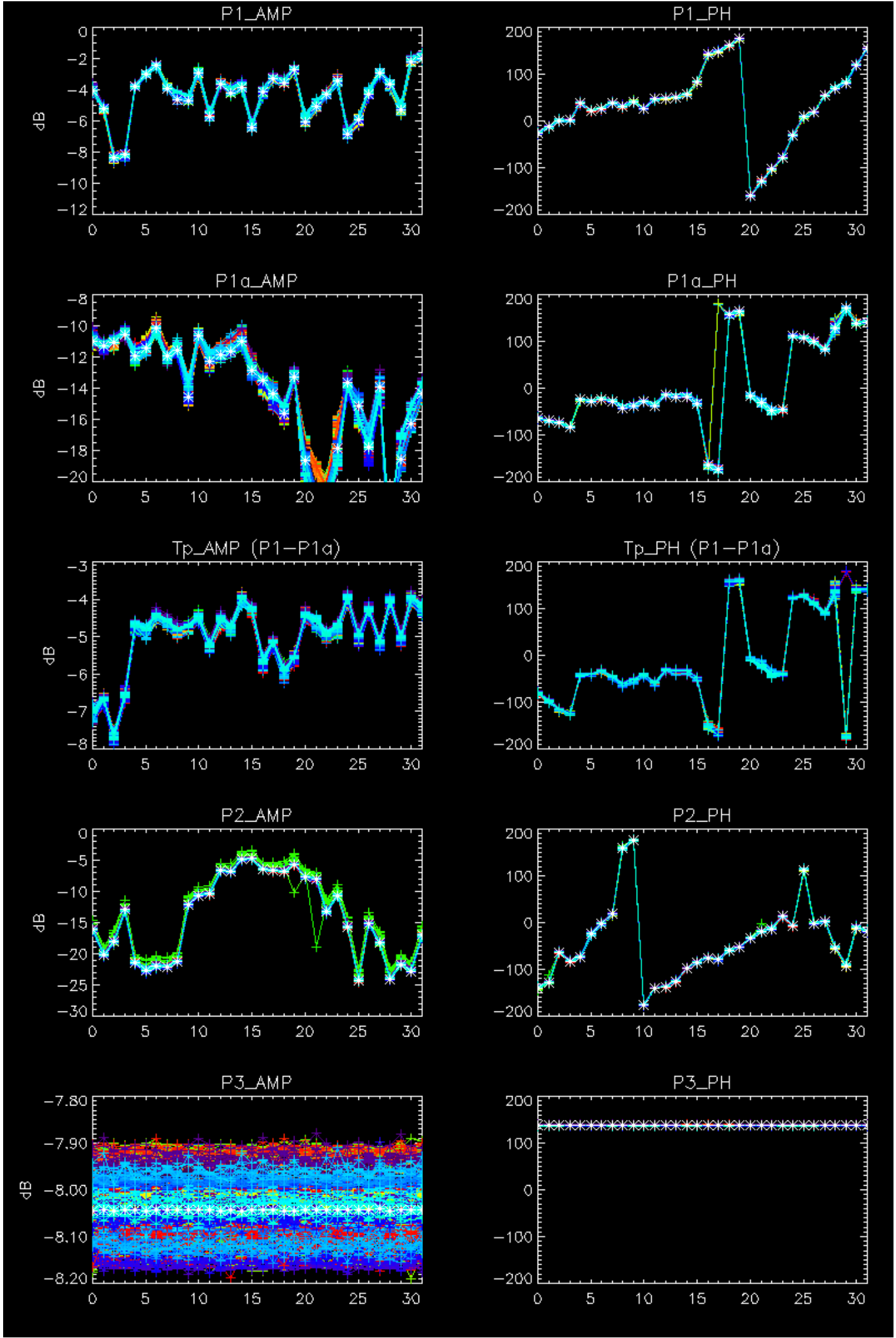
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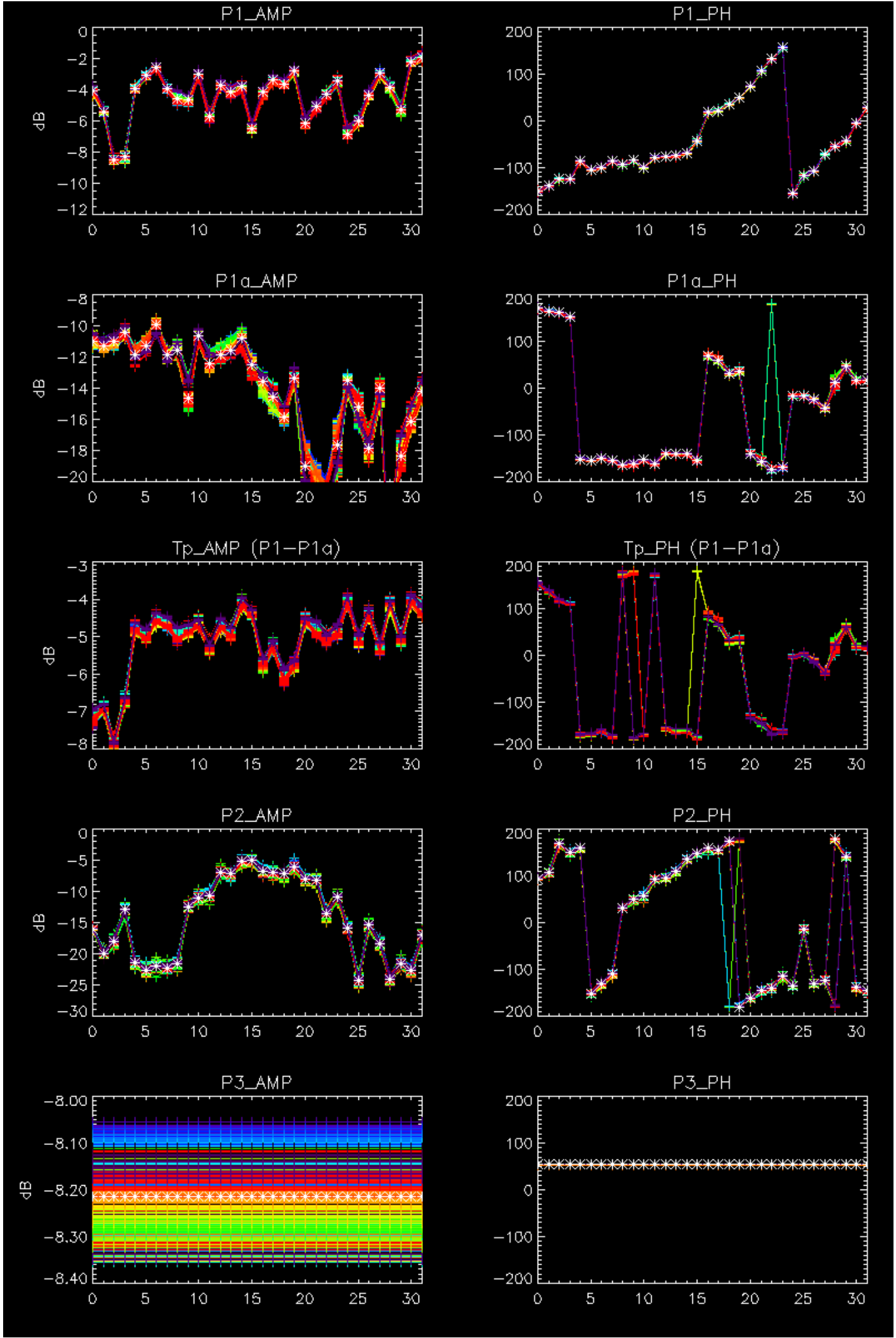
Cal pulses for WVS IS4



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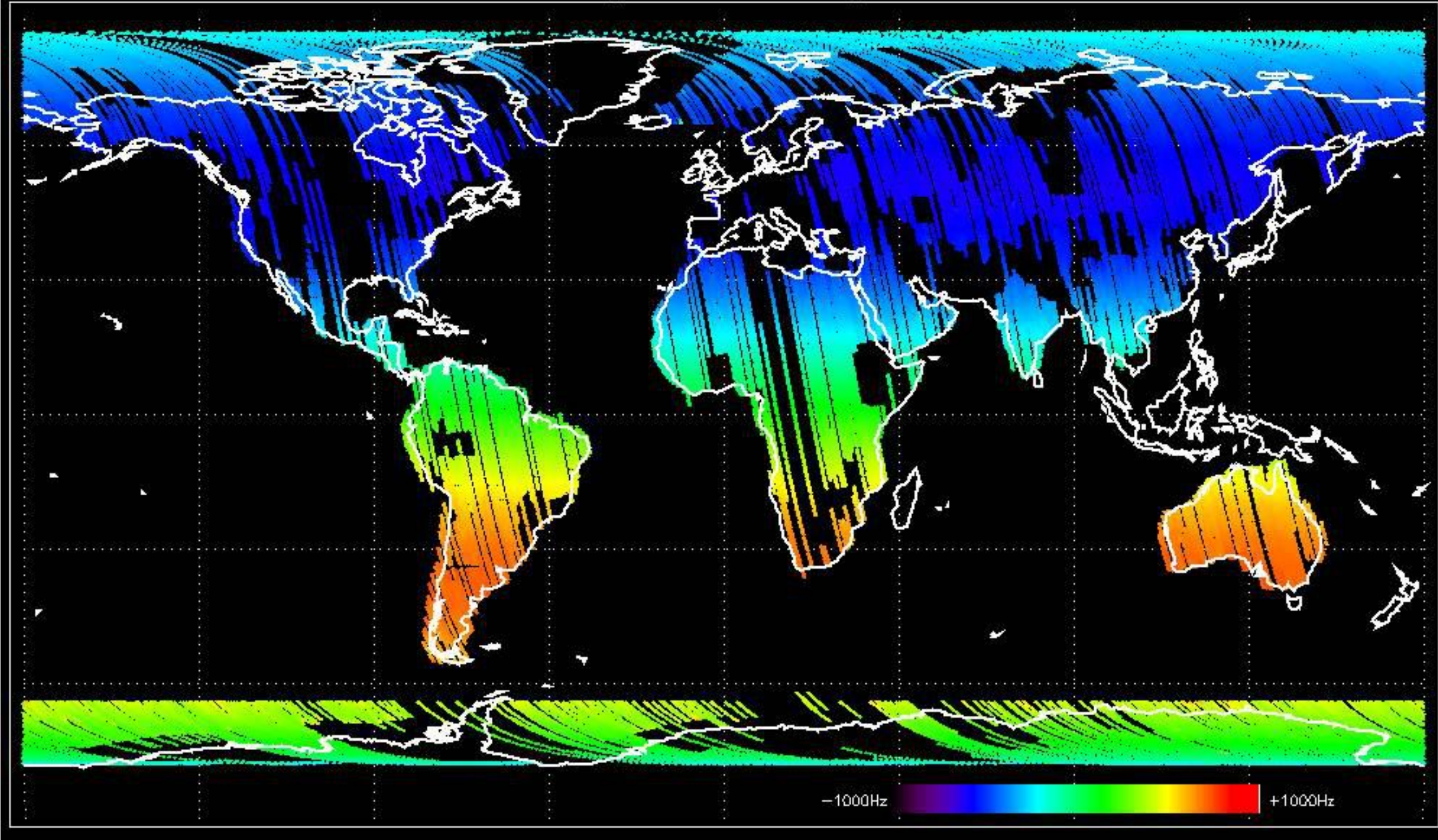
No anomalies observed.



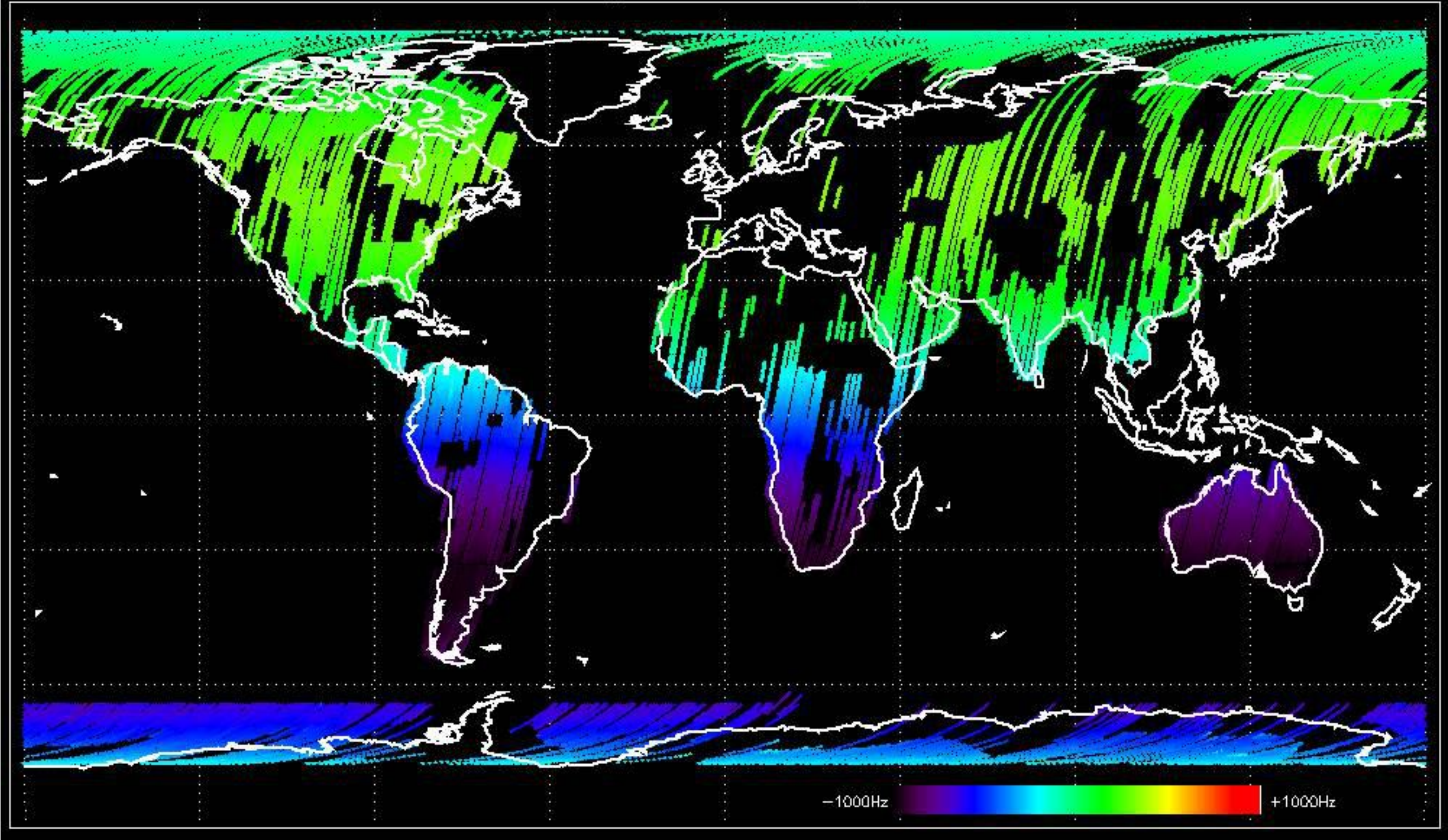


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

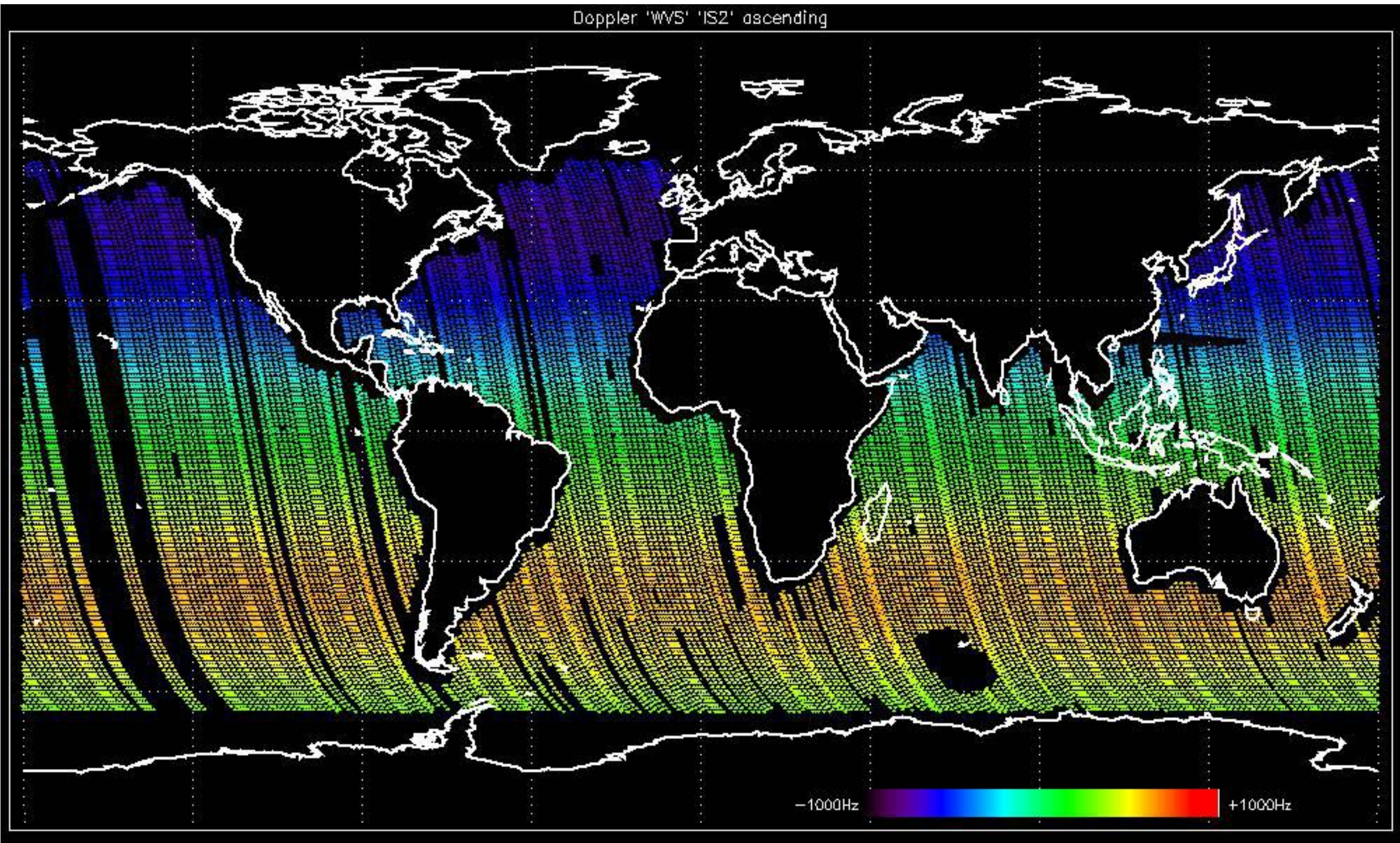
Doppler 'GM1' 'SS1' ascending



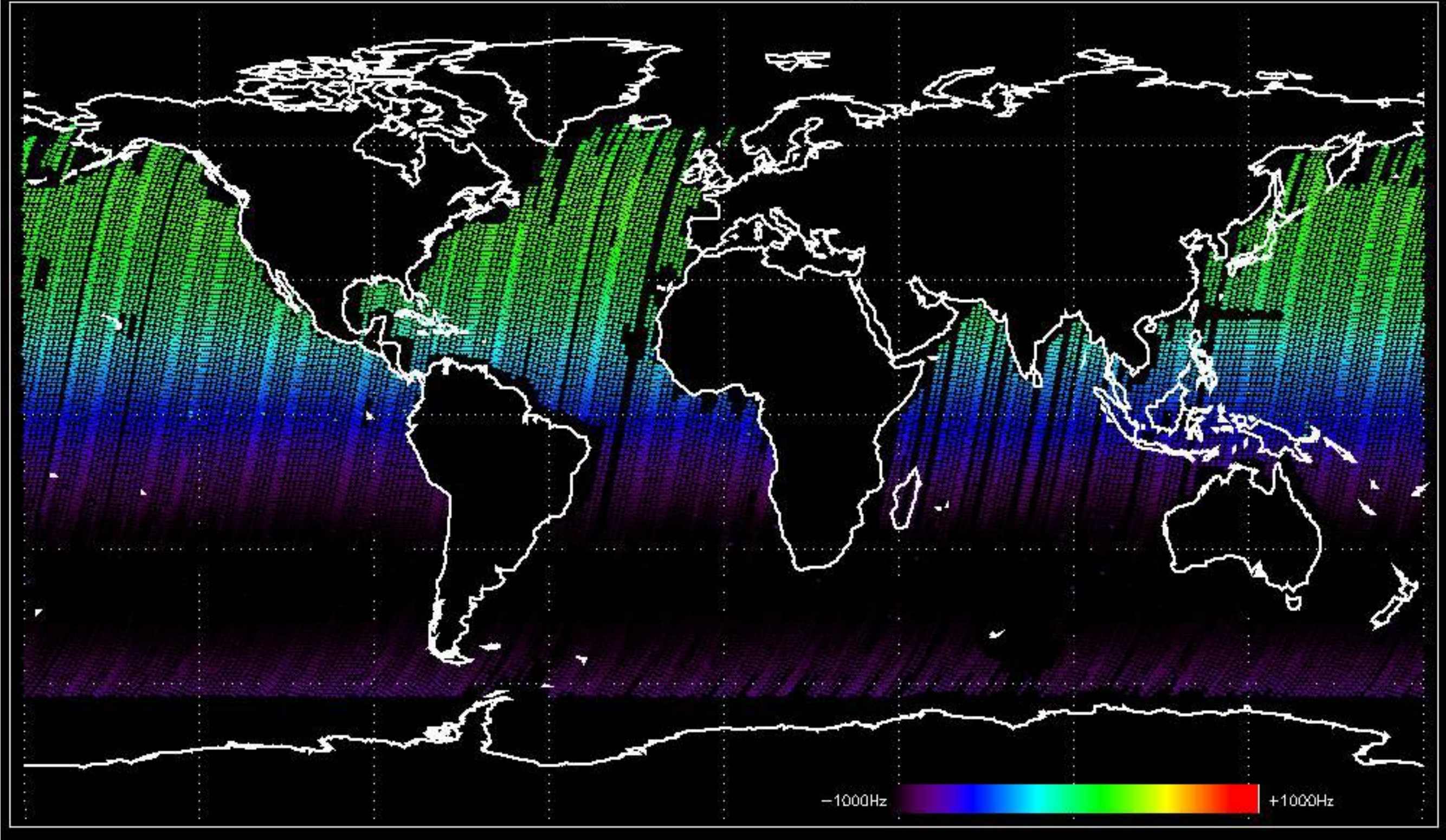
Doppler 'GM1' 'SS1' descending



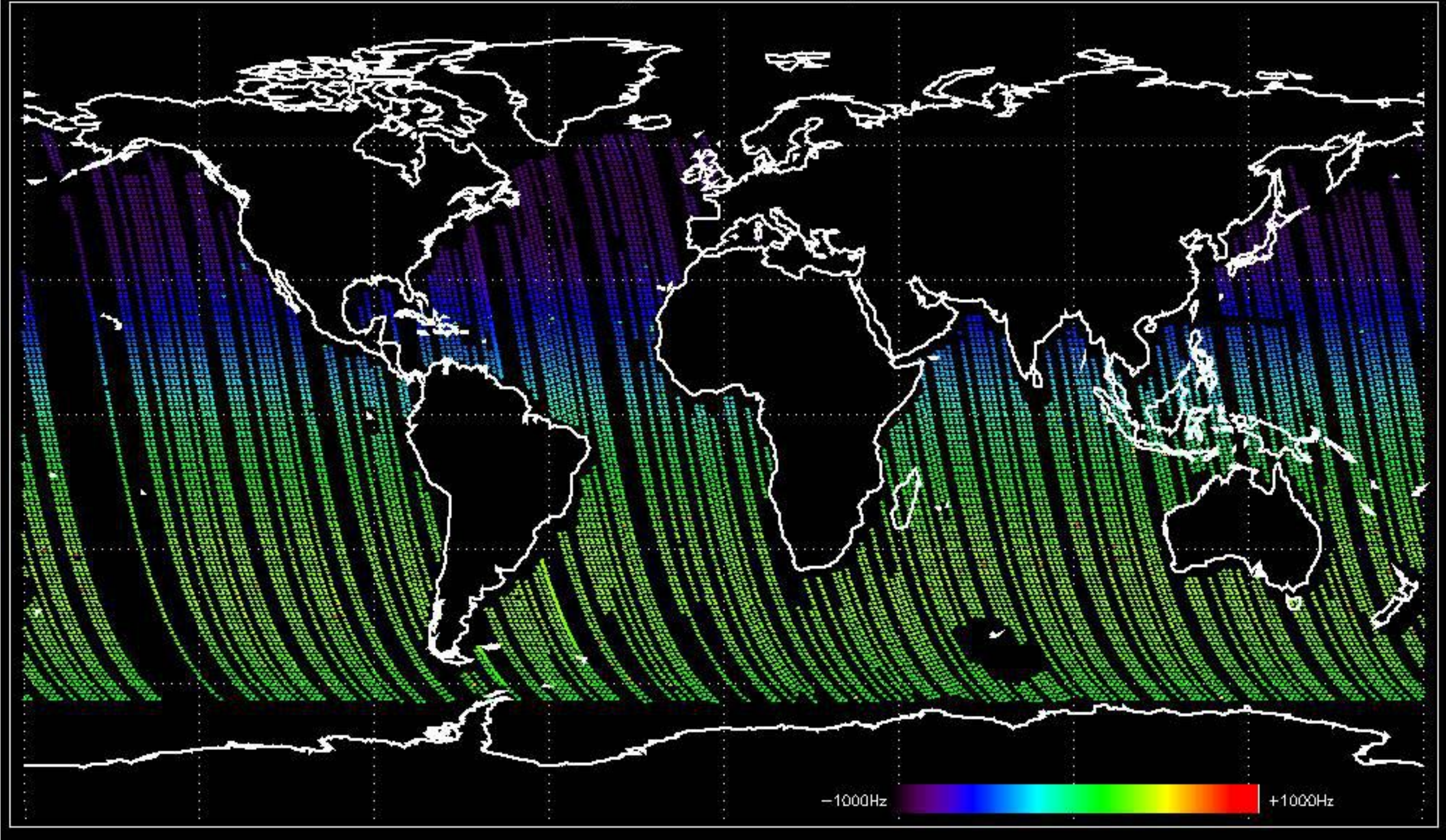
Doppler 'WVS' 'IS2' ascending



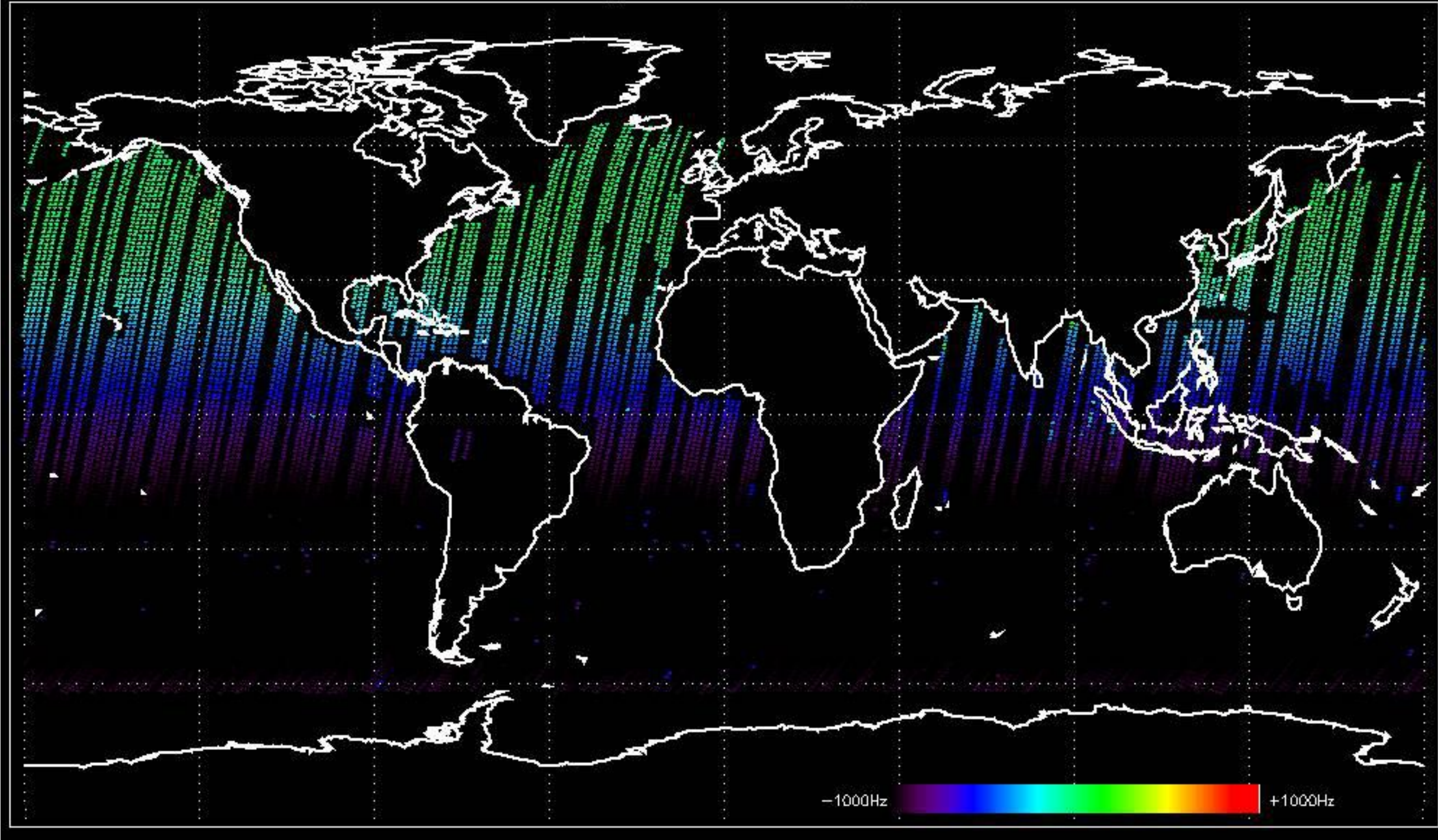
Doppler 'WVS' 'IS2' descending



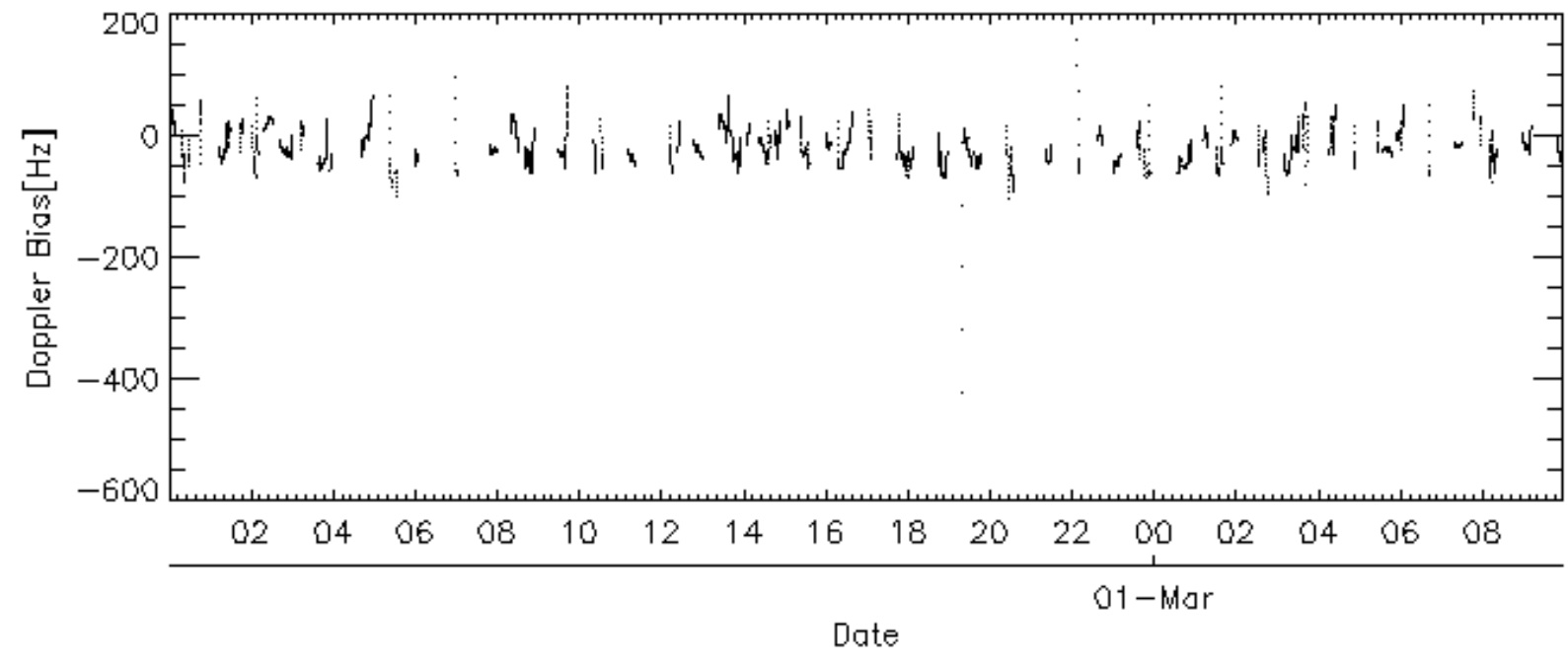
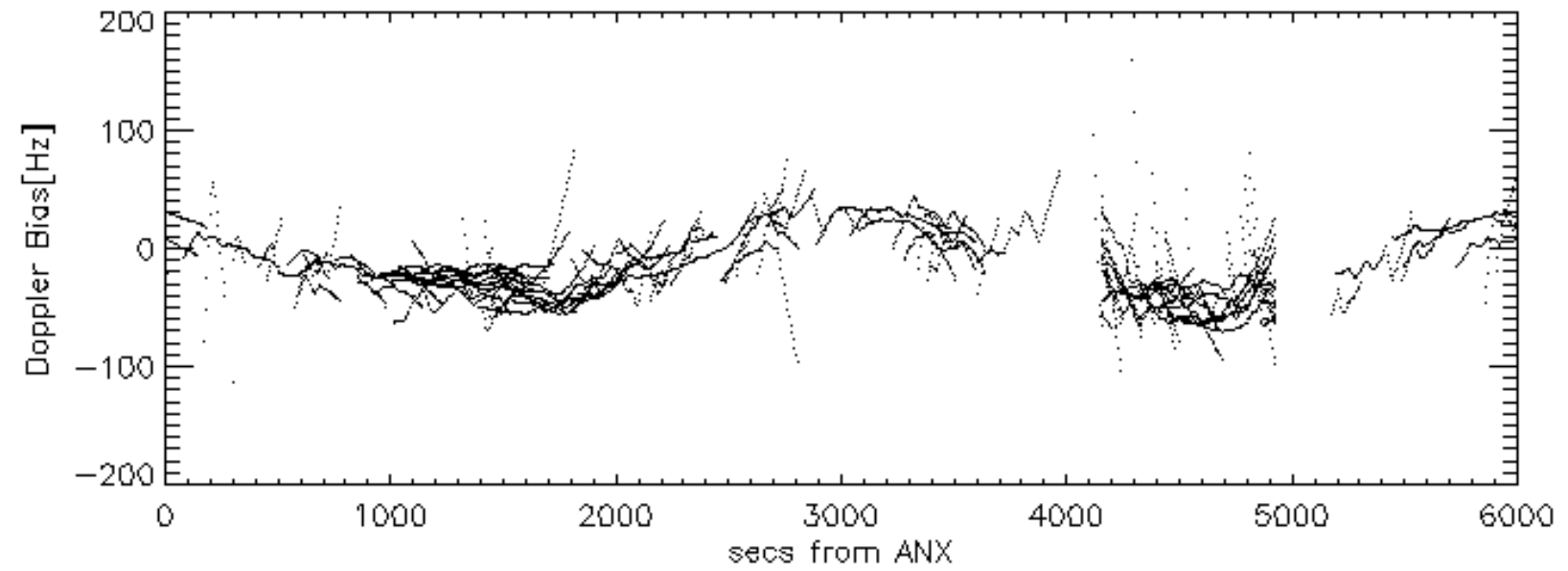
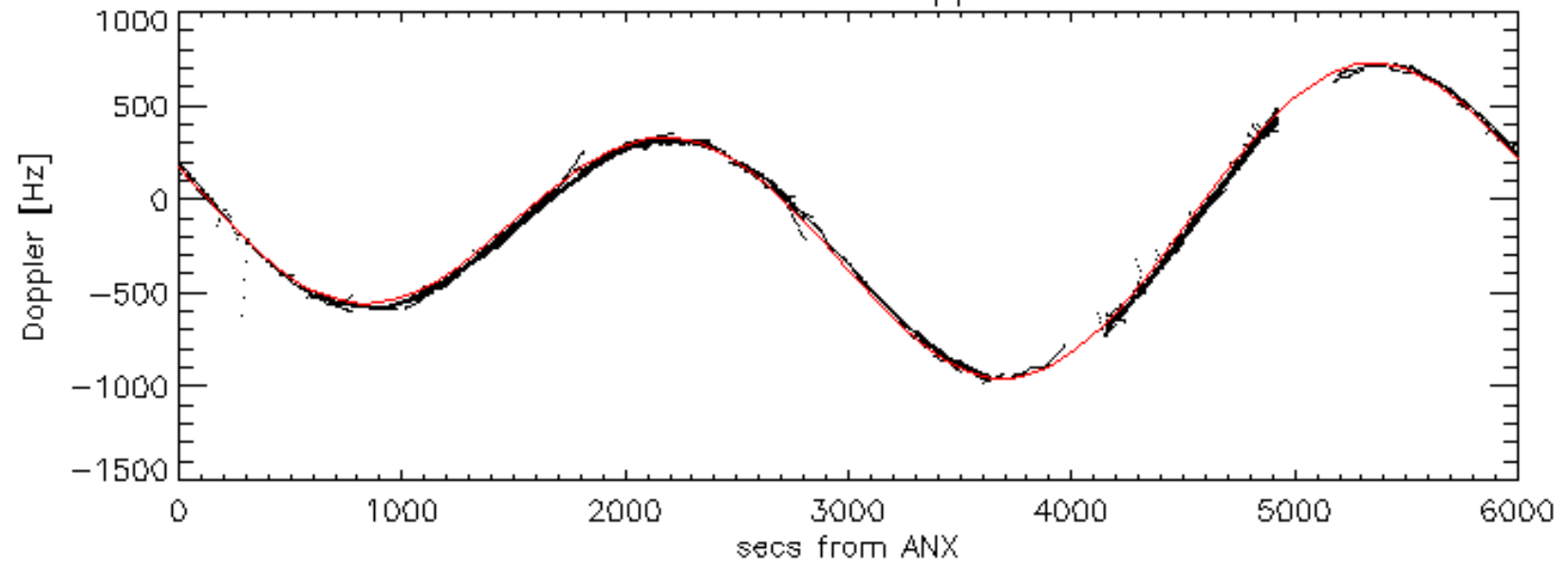
Doppler 'WVS' 'IS4' ascending

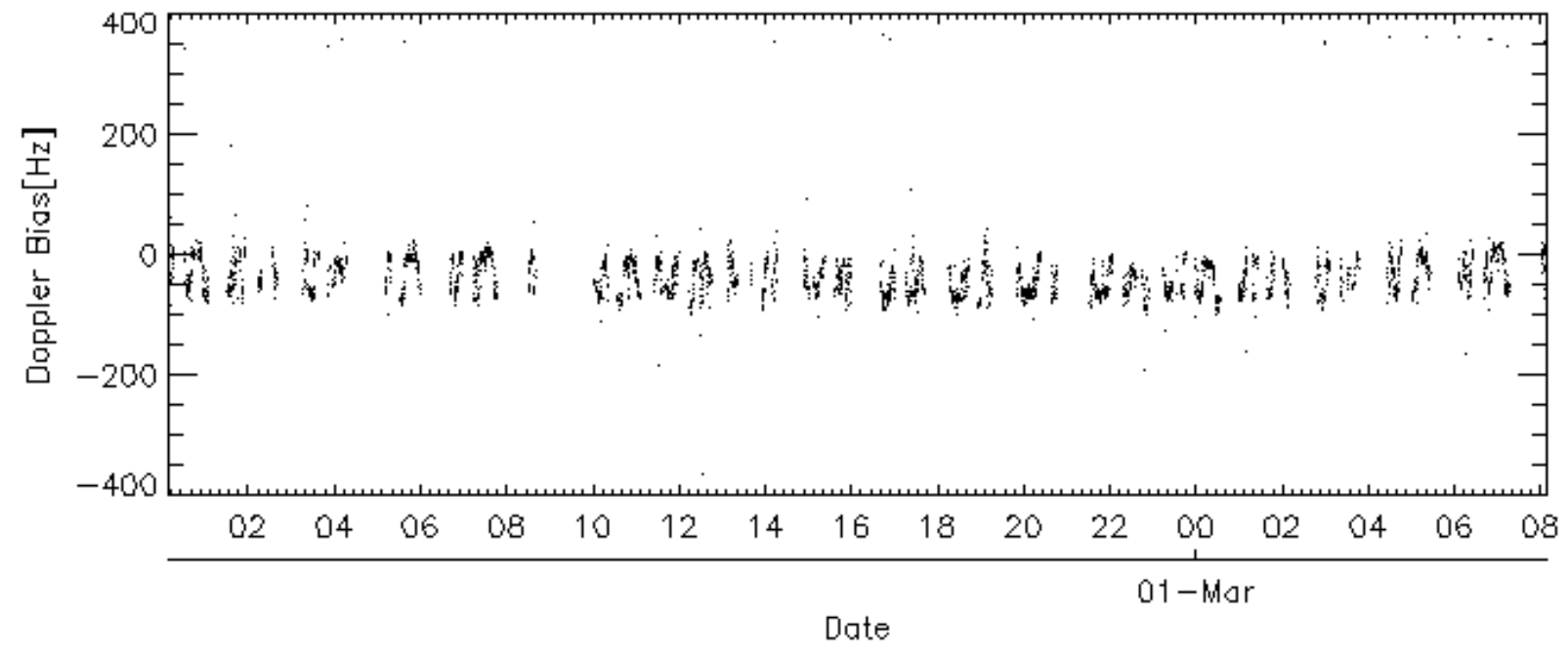
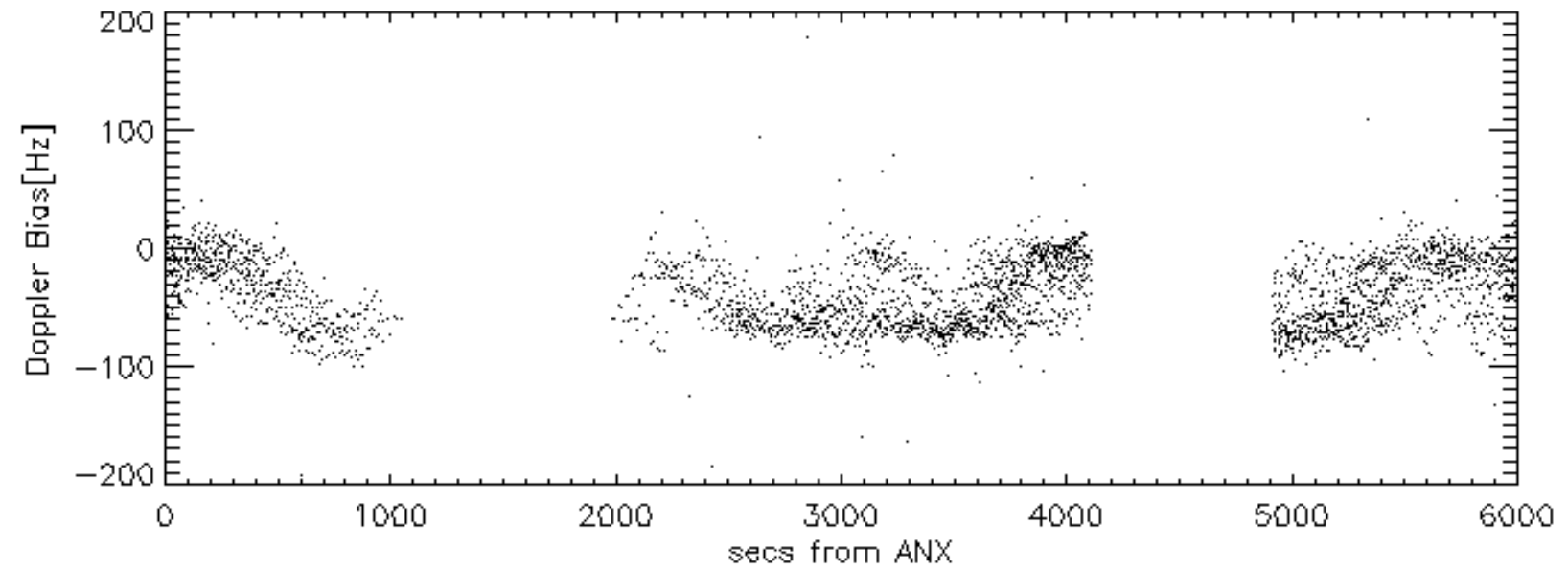
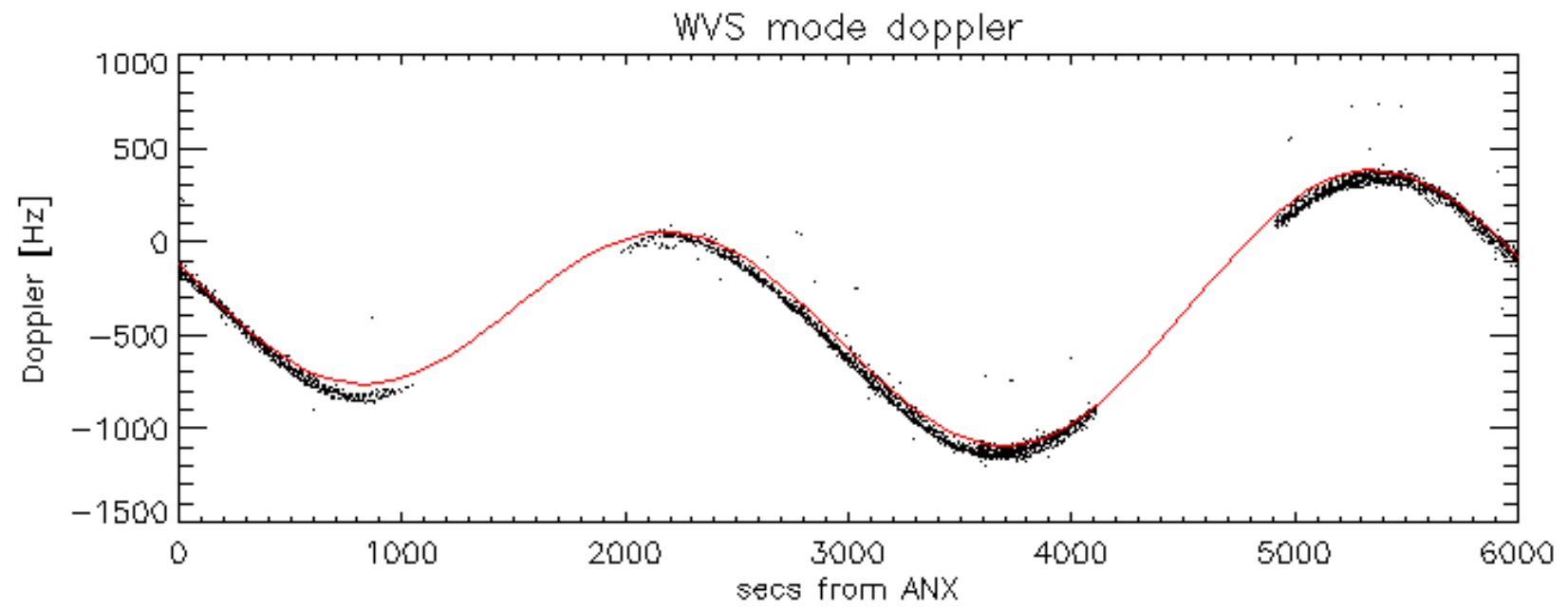


Doppler 'WVS' 'IS4' descending

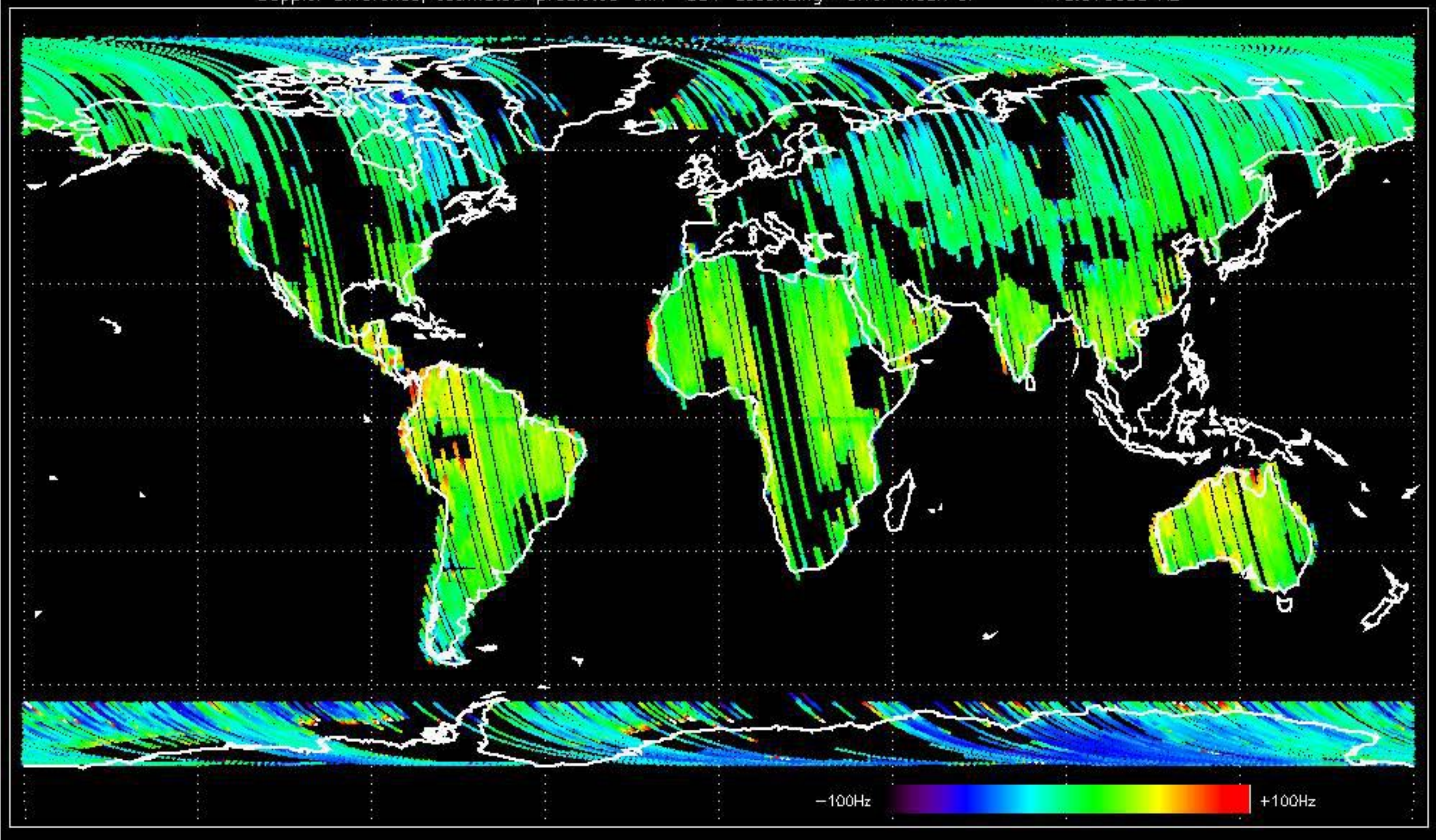


GM1 mode doppler

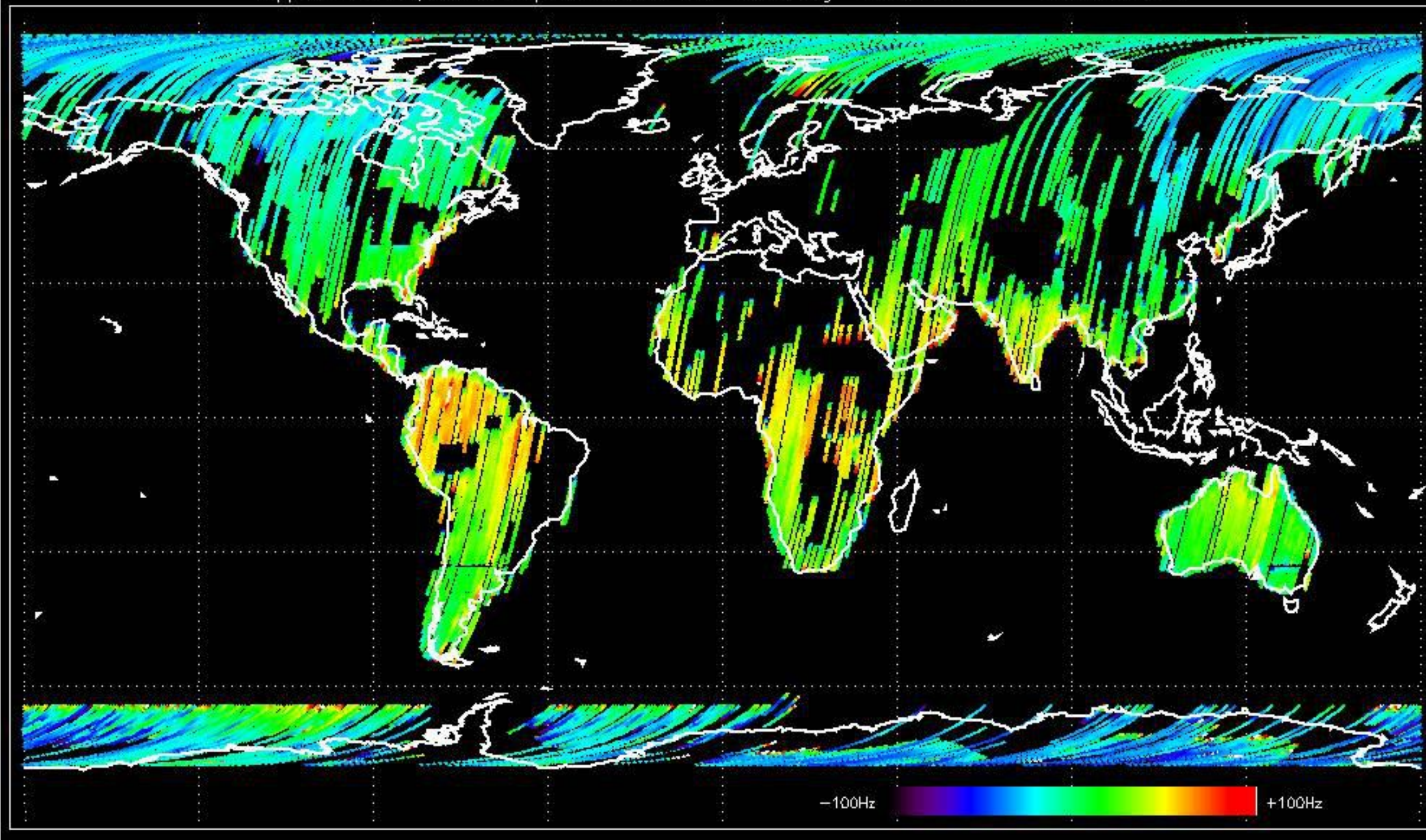




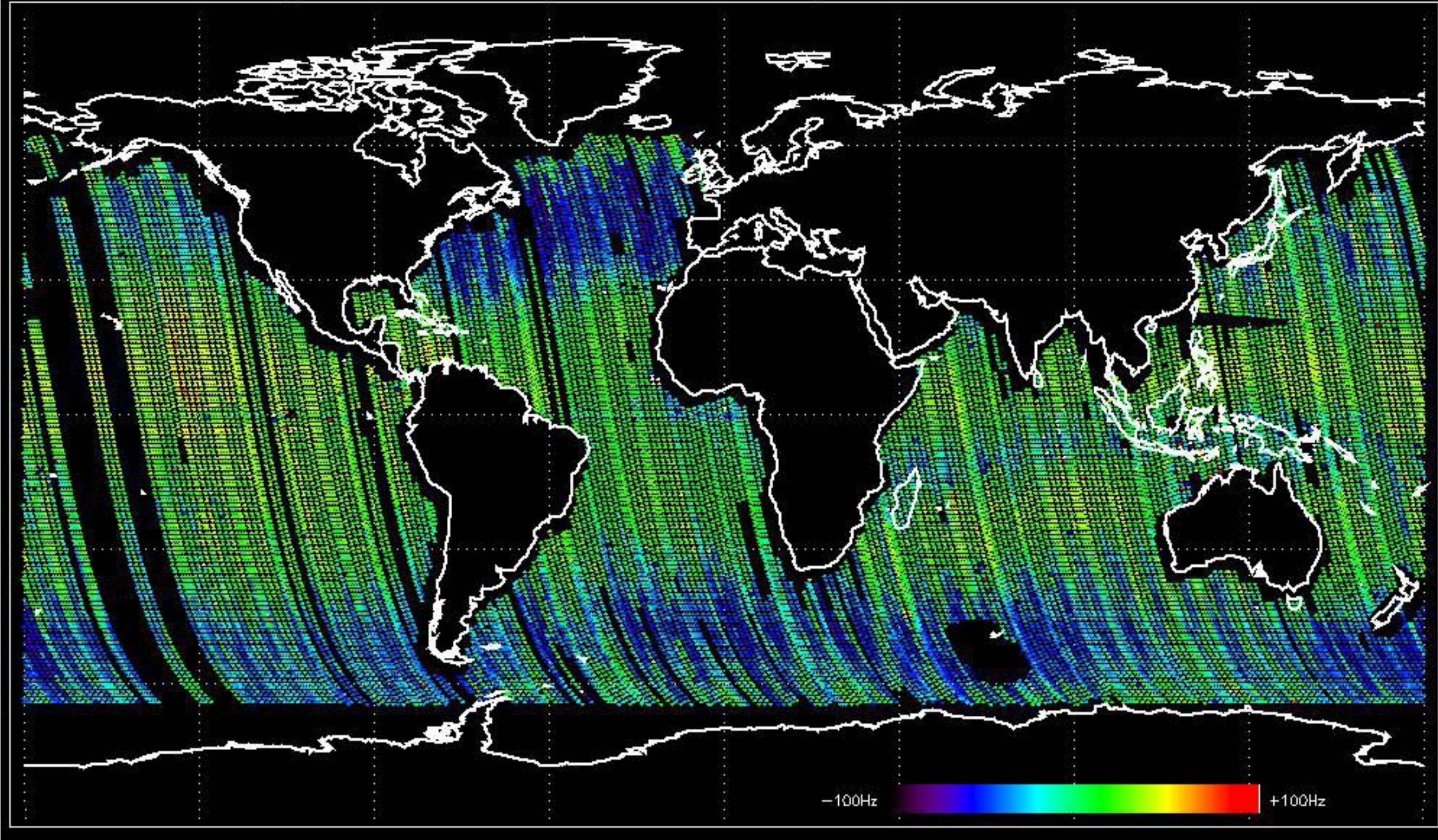
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.370888 Hz



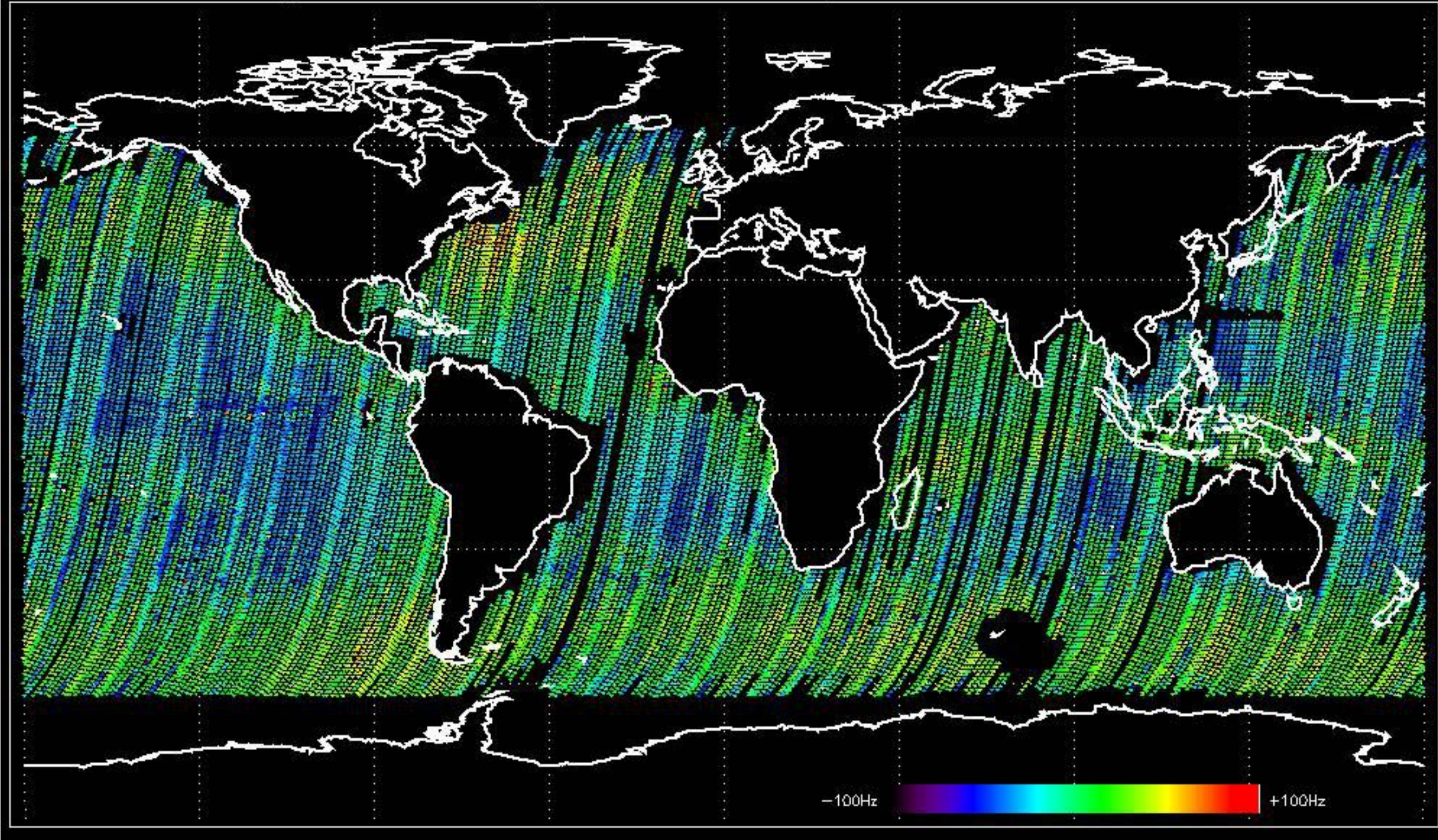
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.545785 Hz



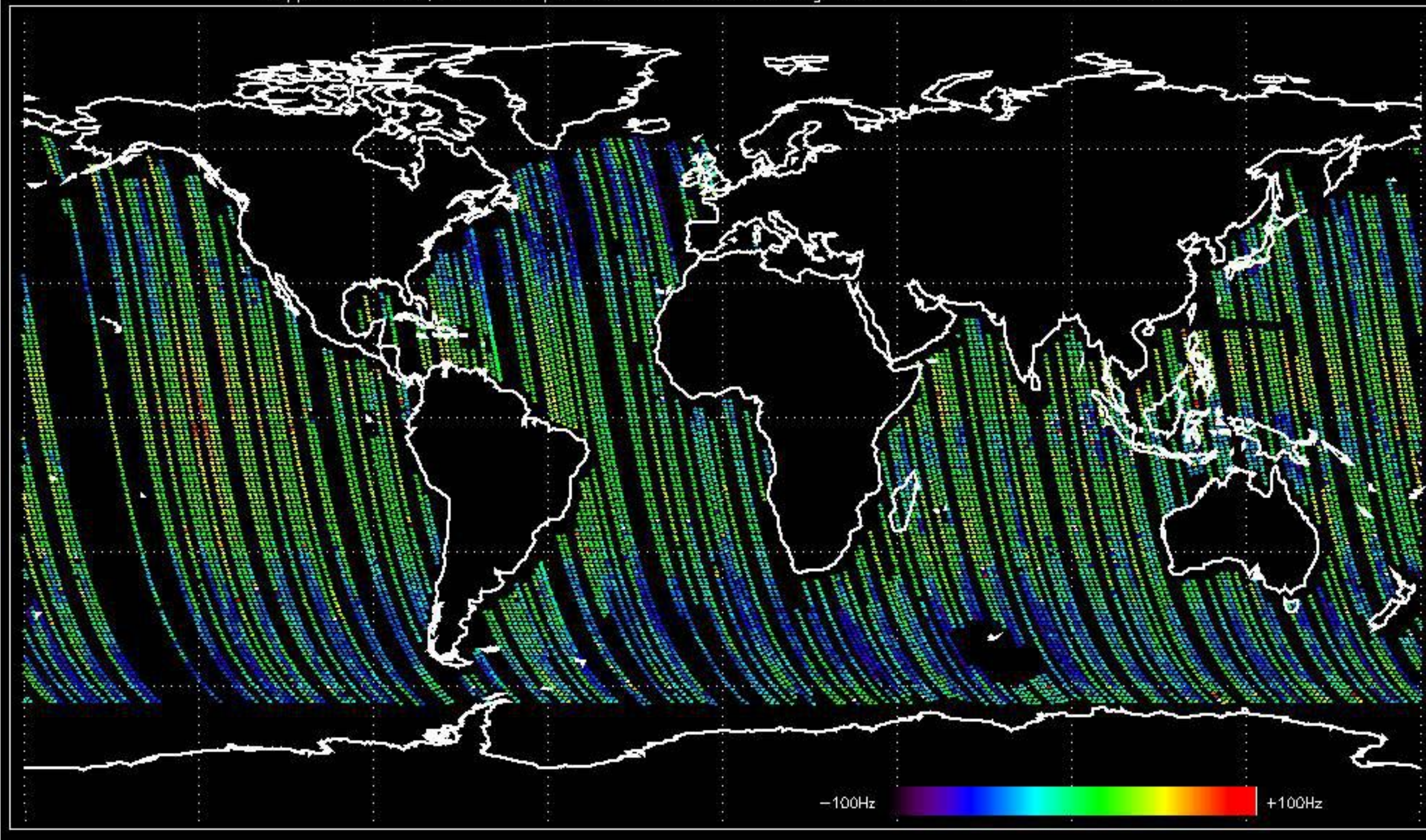
Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.854886 Hz



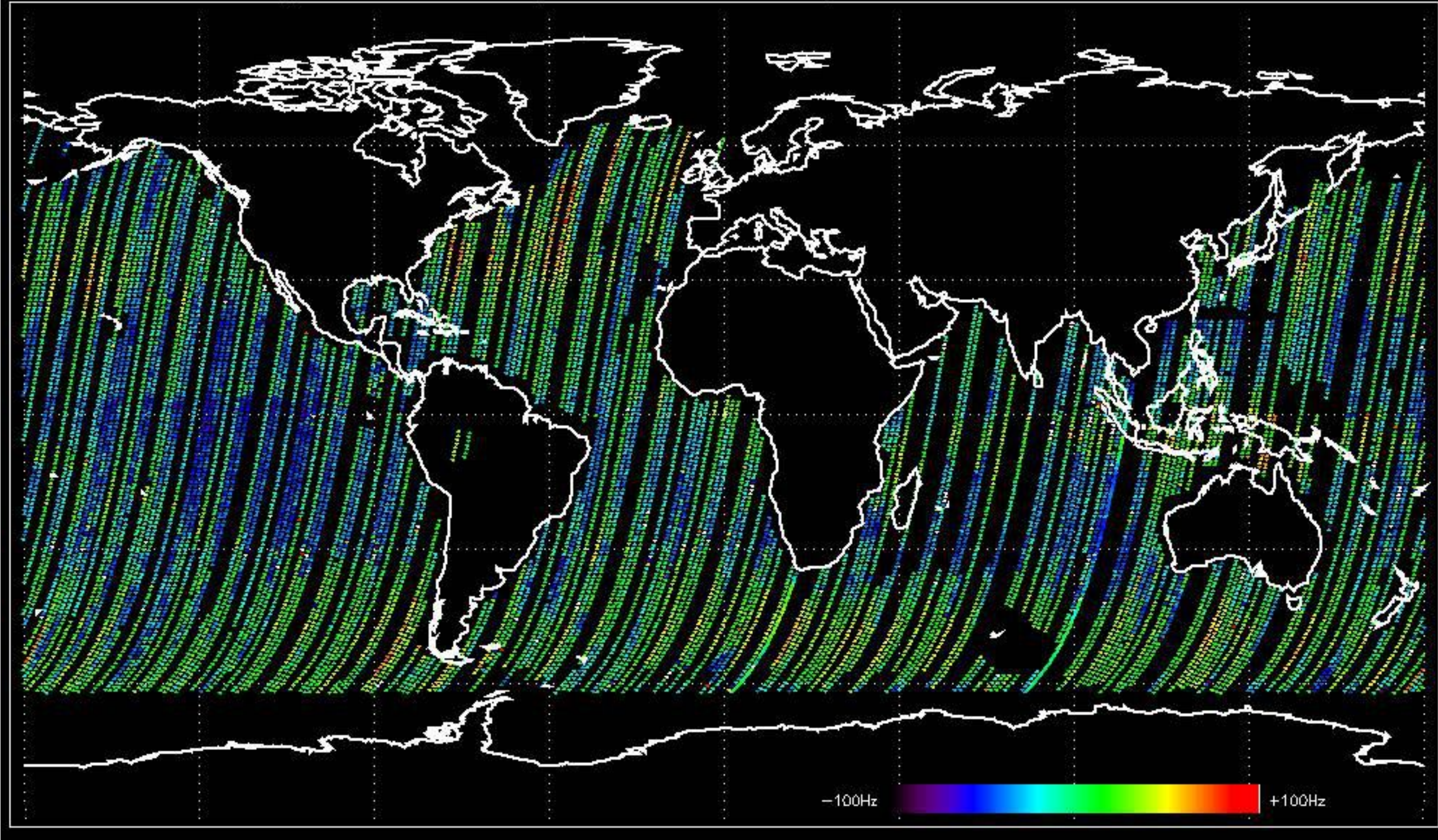
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.258357 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -22.320934 Hz

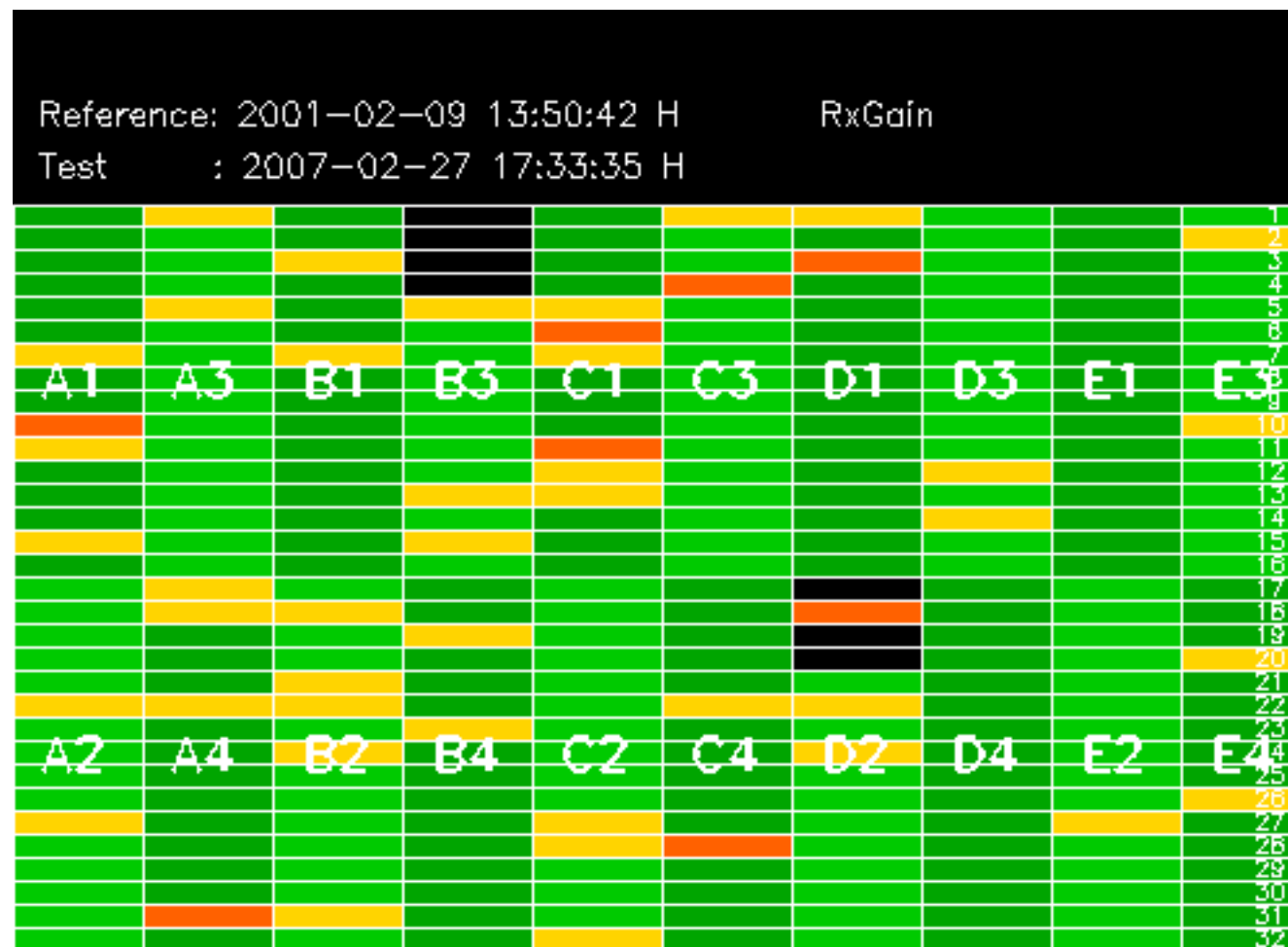


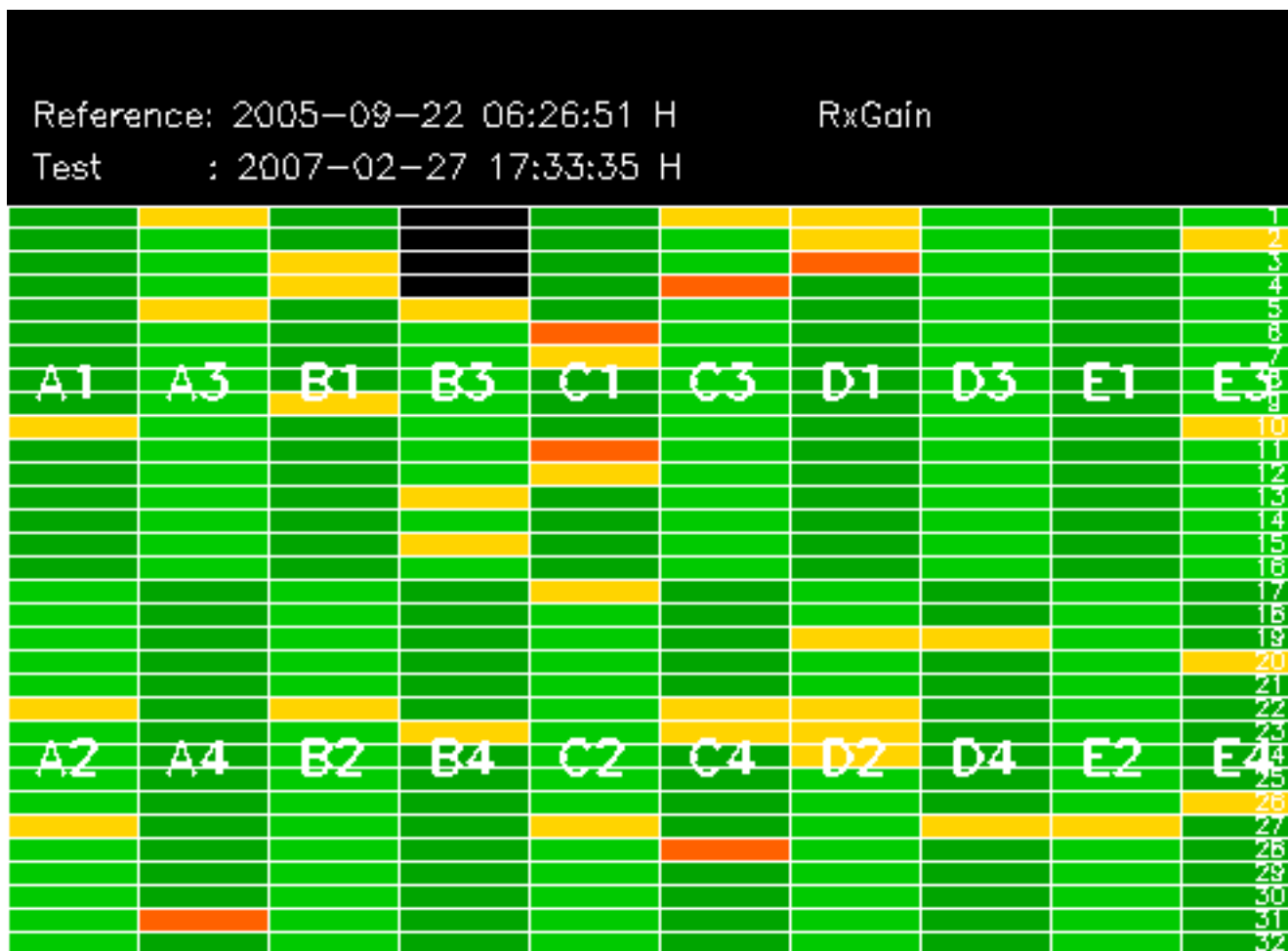
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -28.913672 Hz

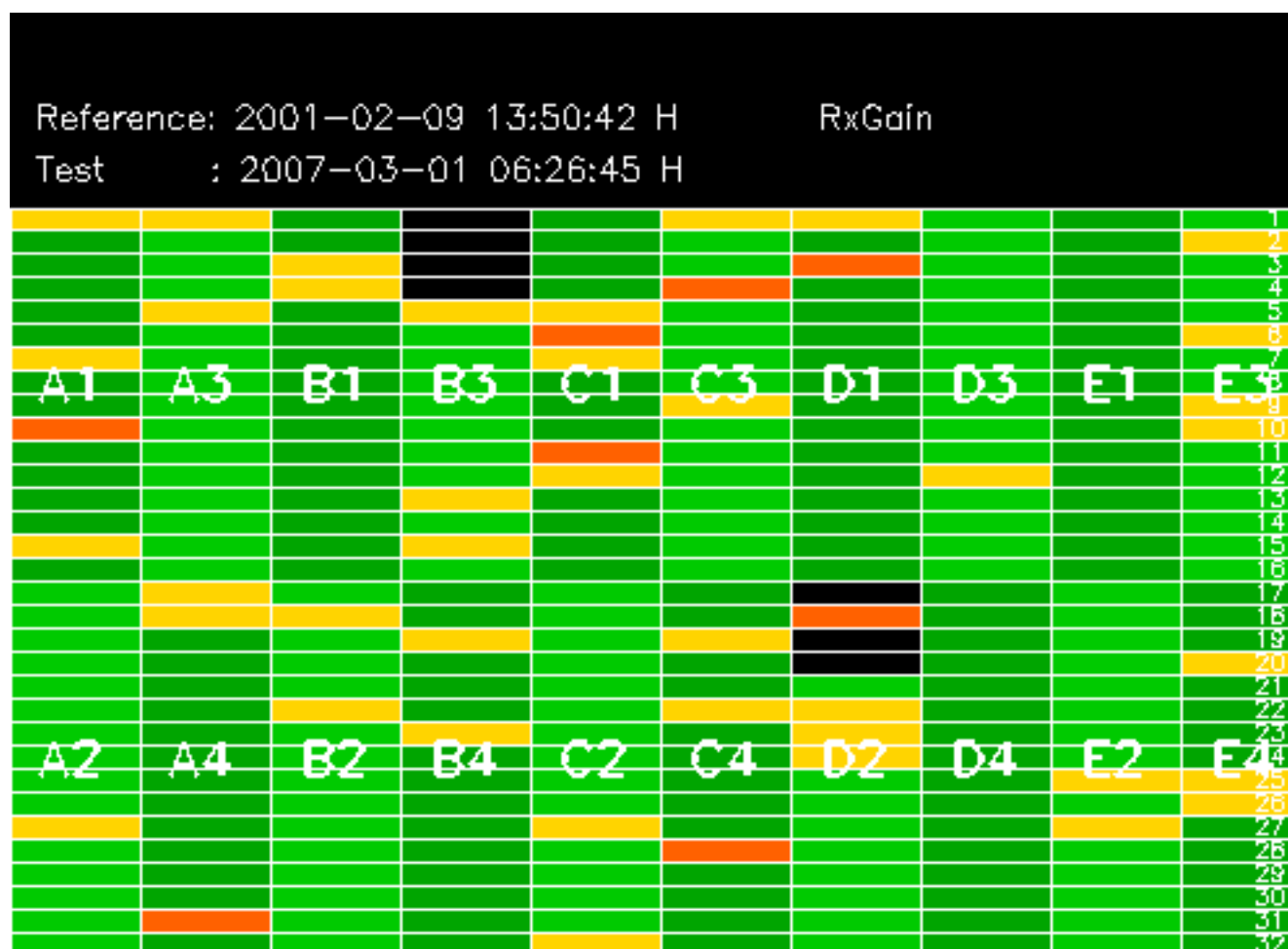


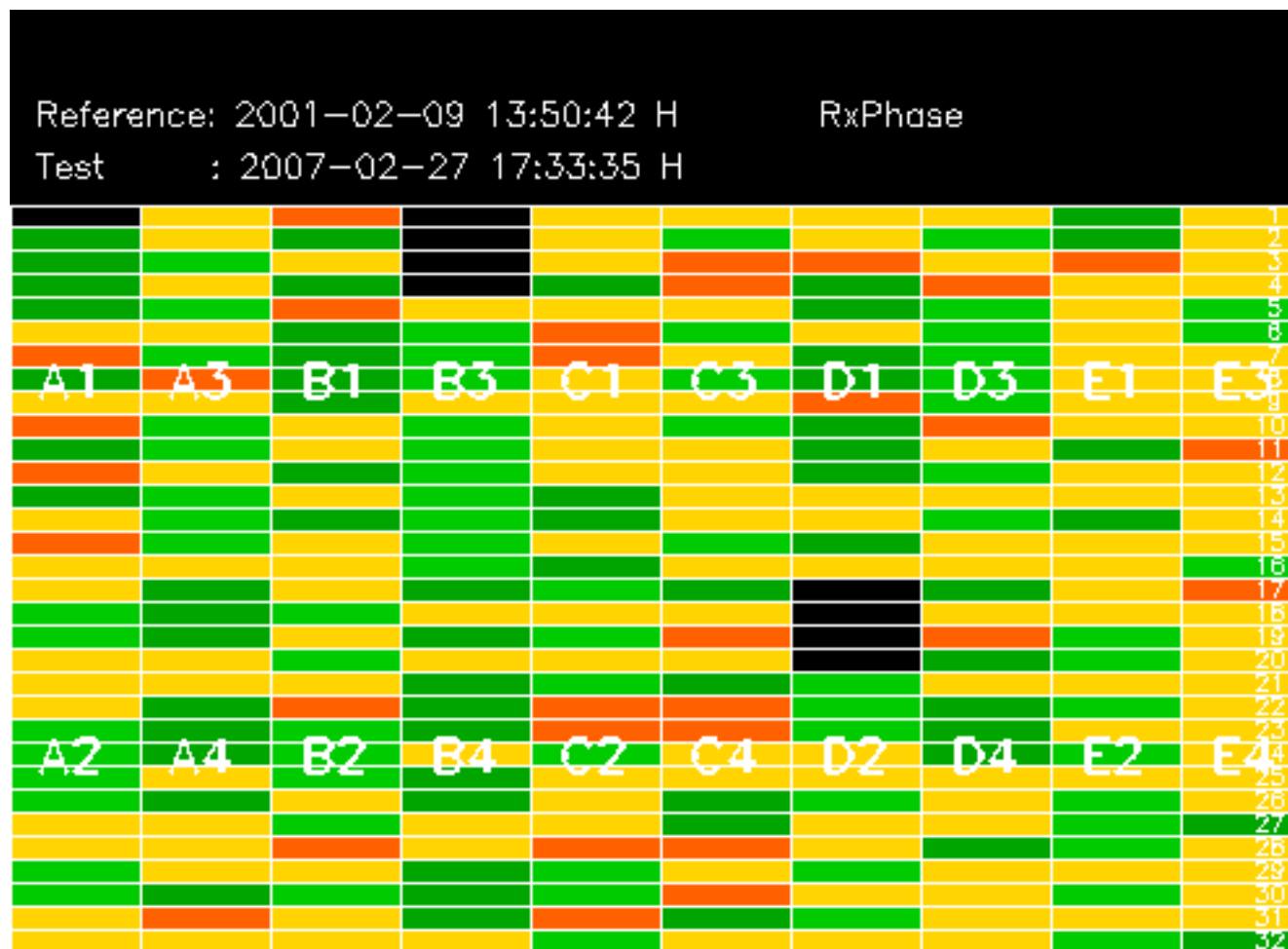
No anomalies observed on available MS products:

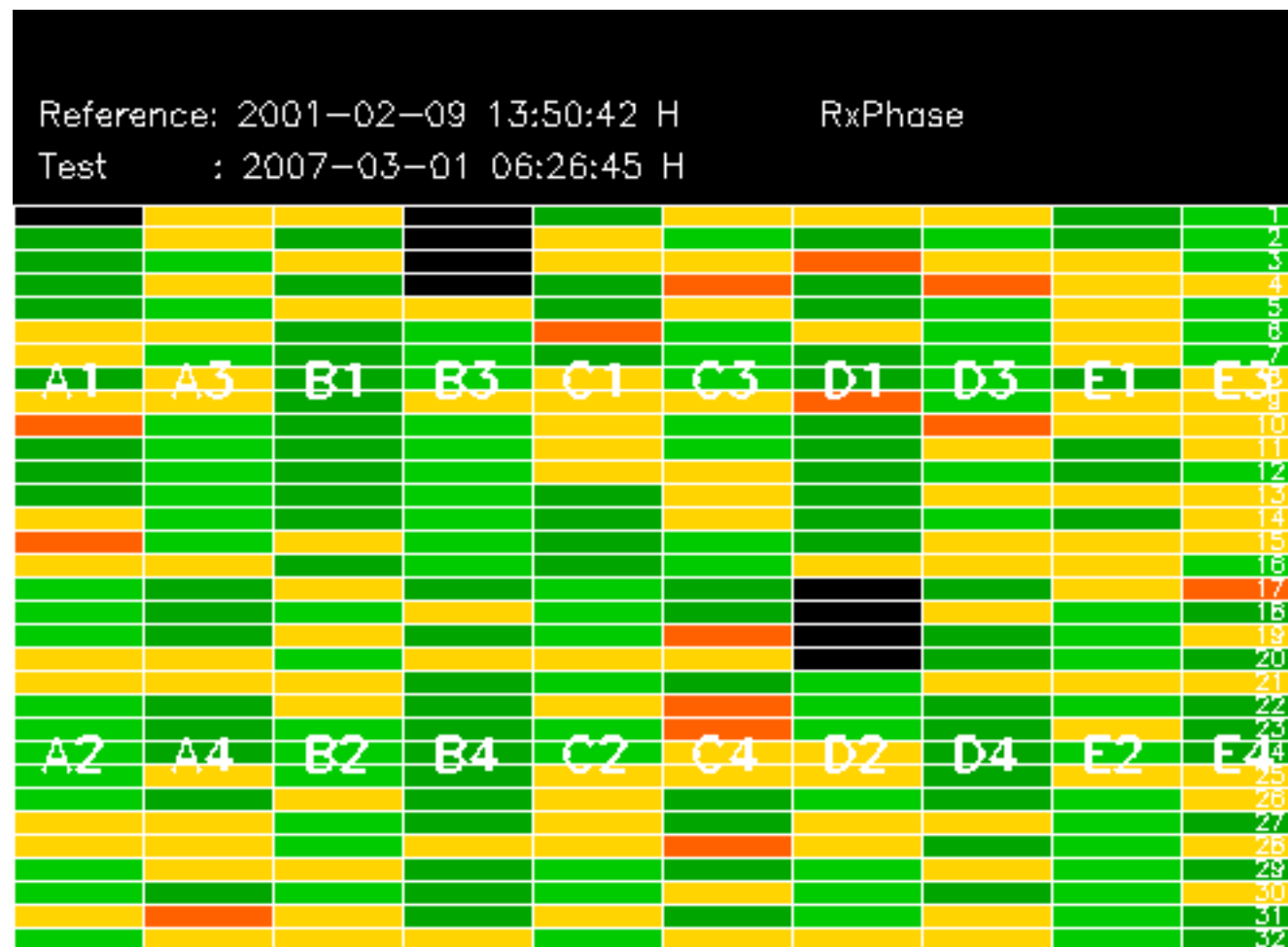
No anomalies observed.

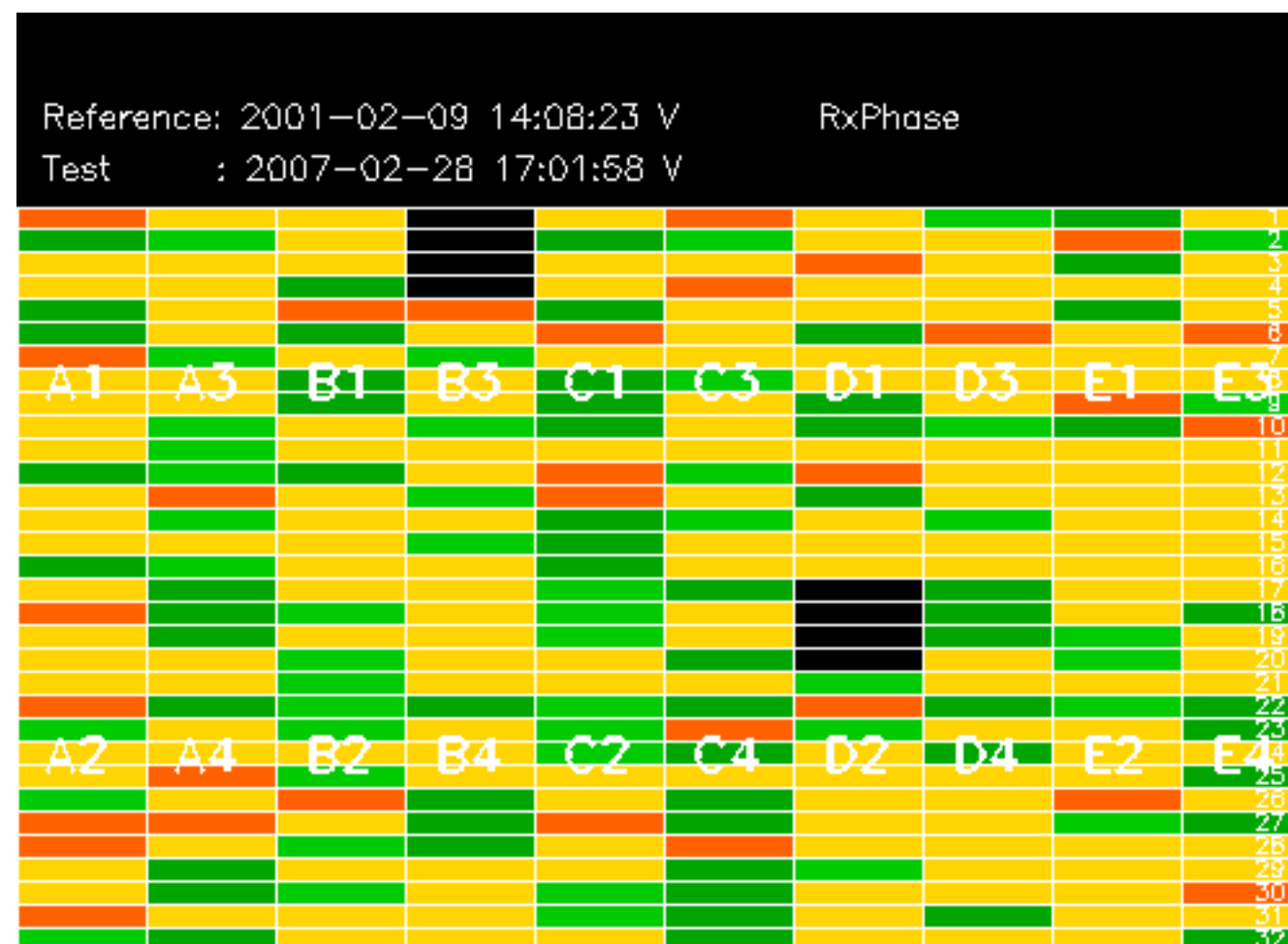


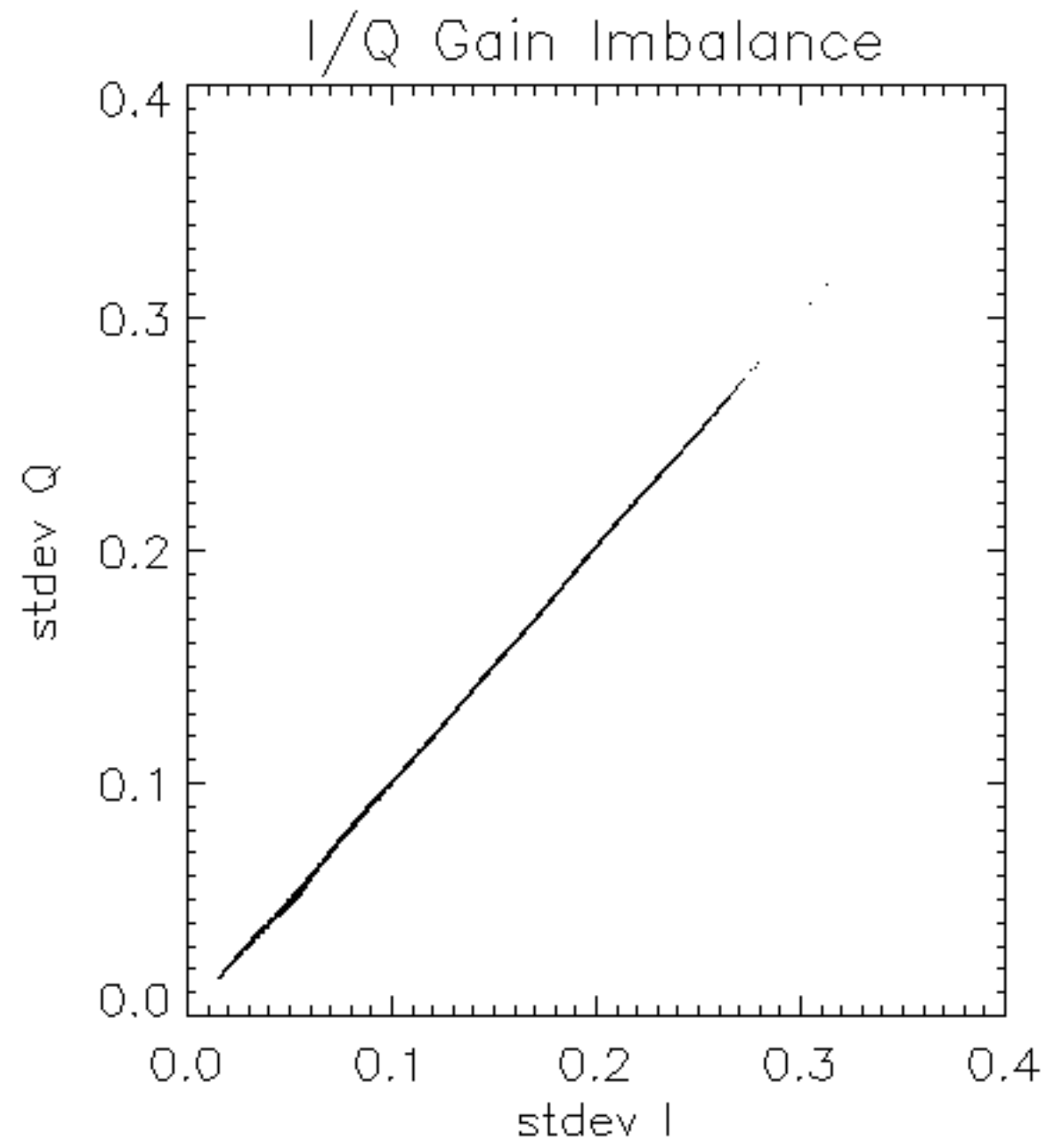


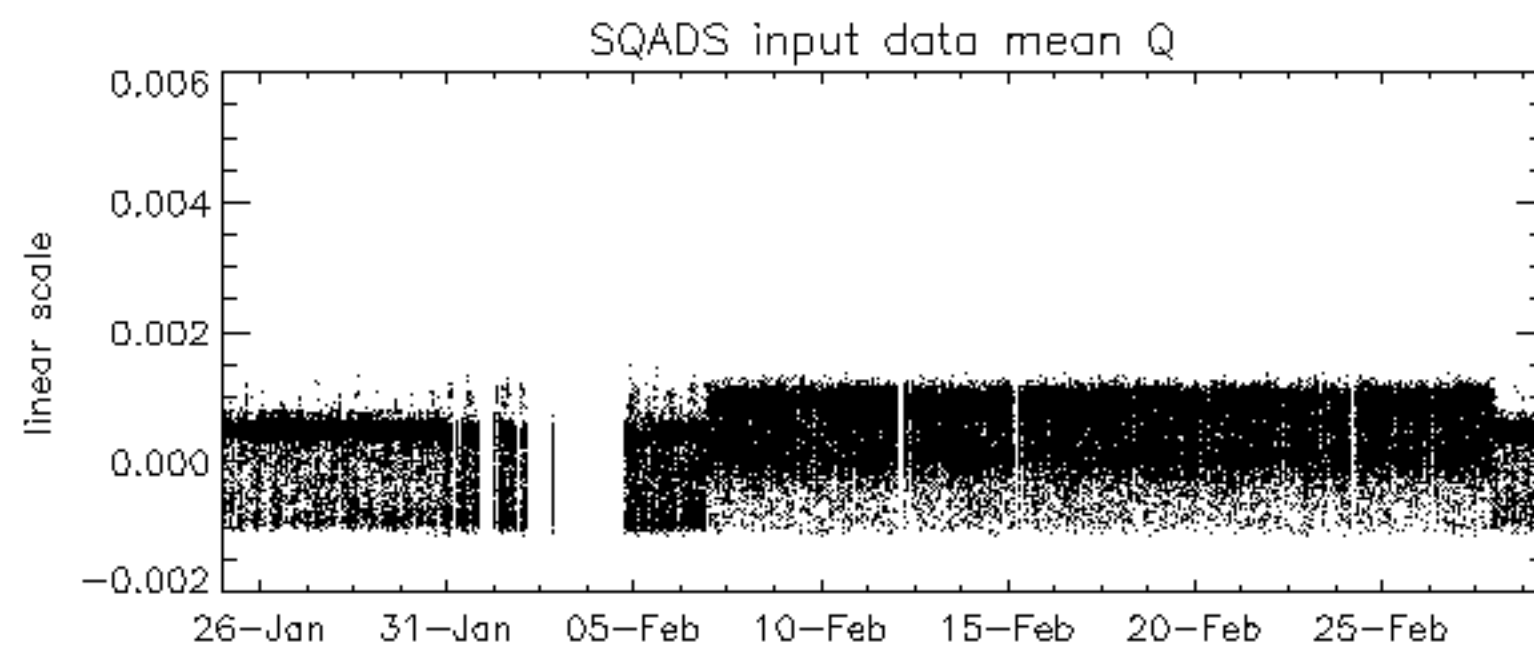
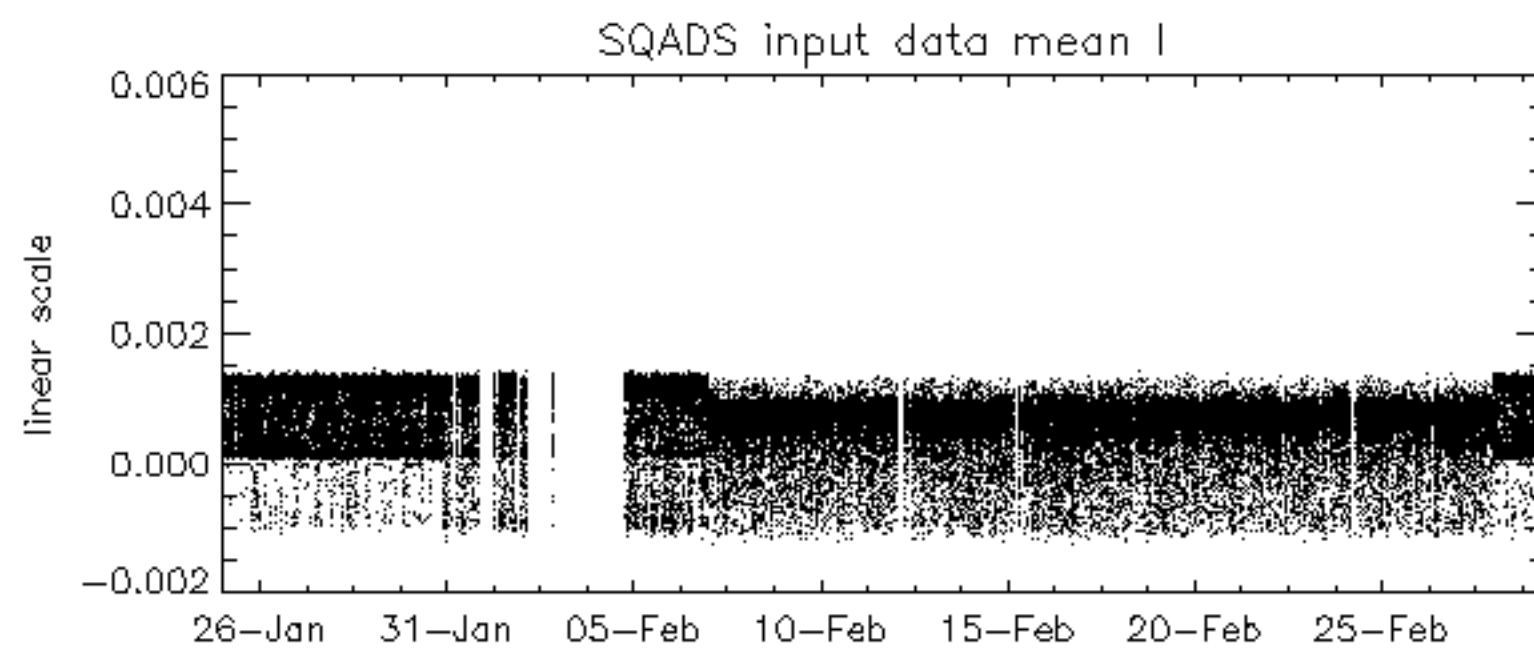
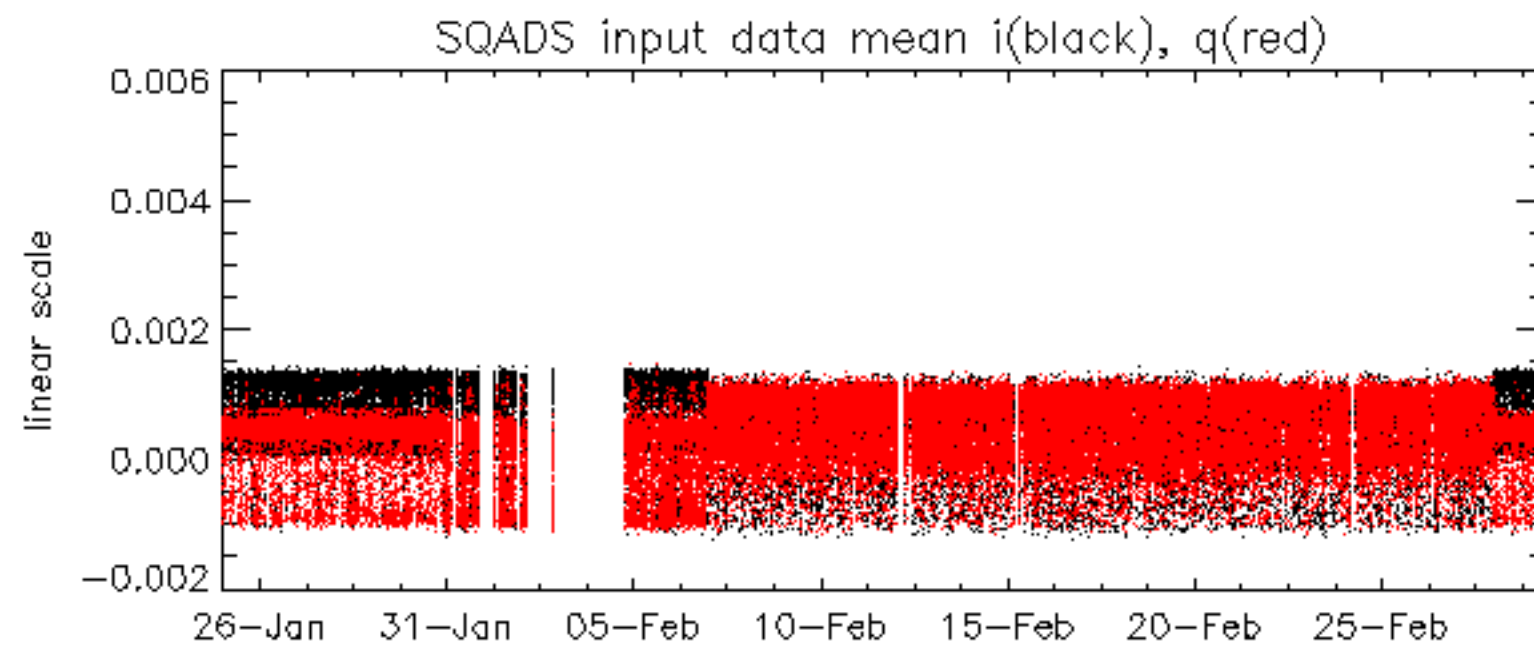


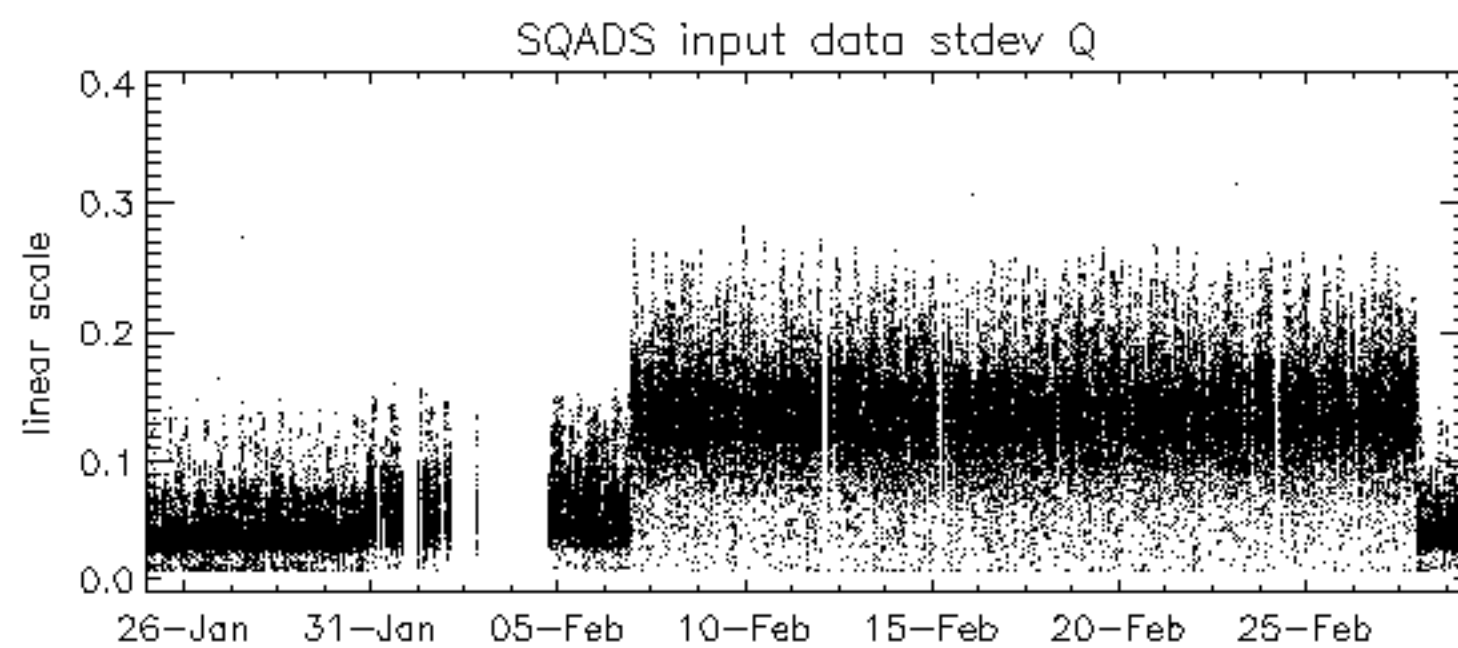
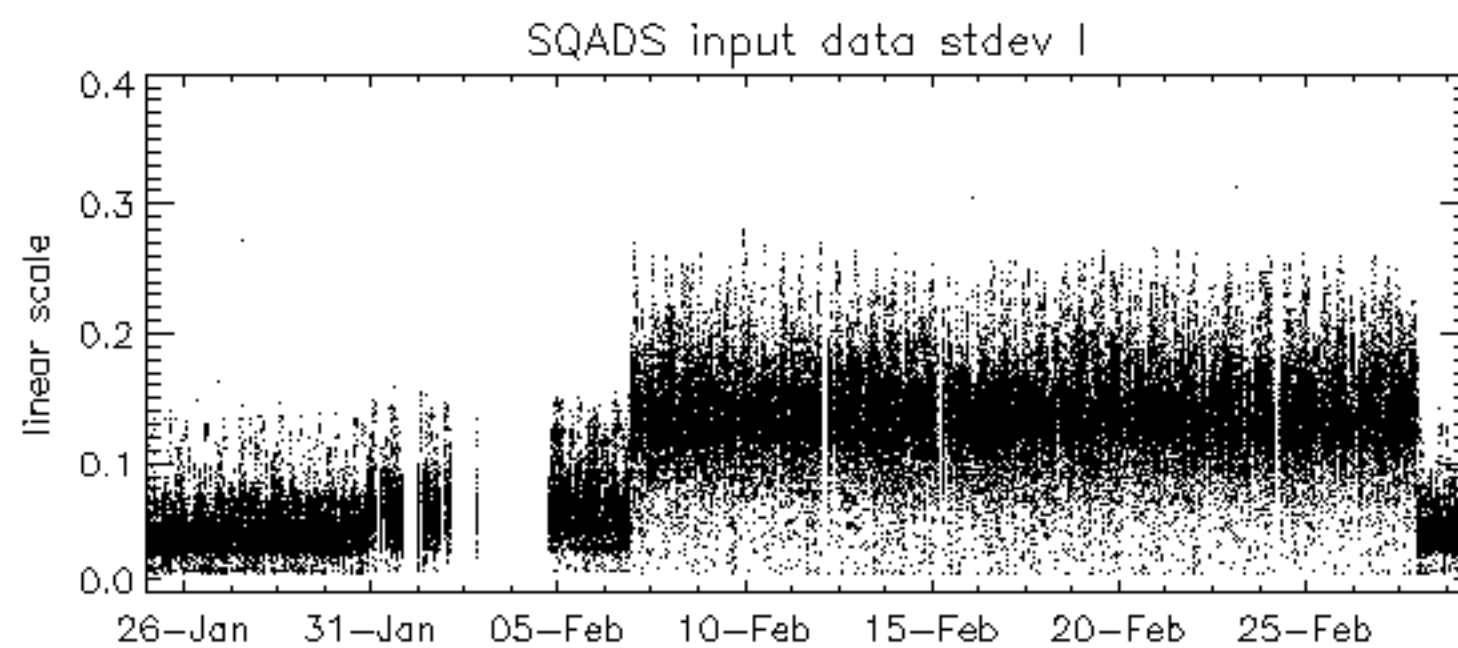
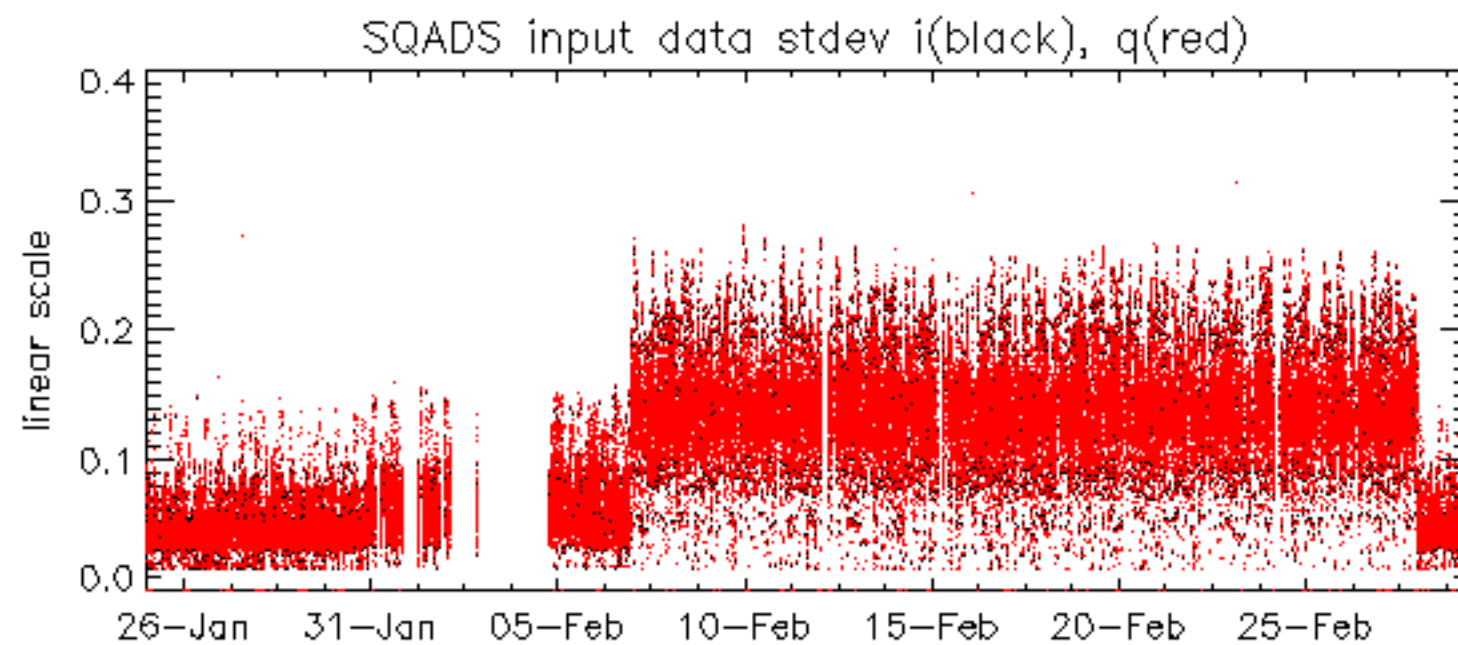








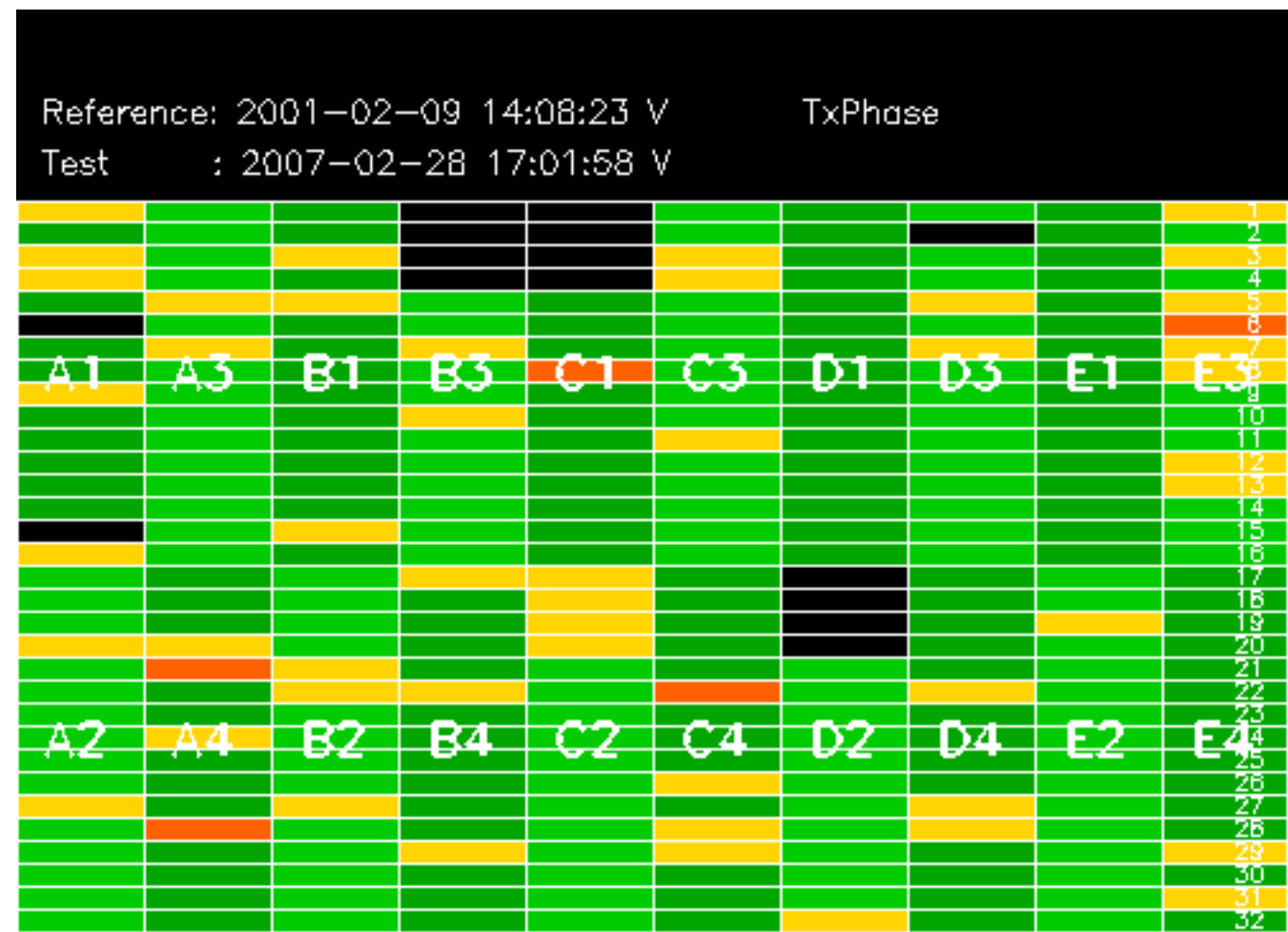


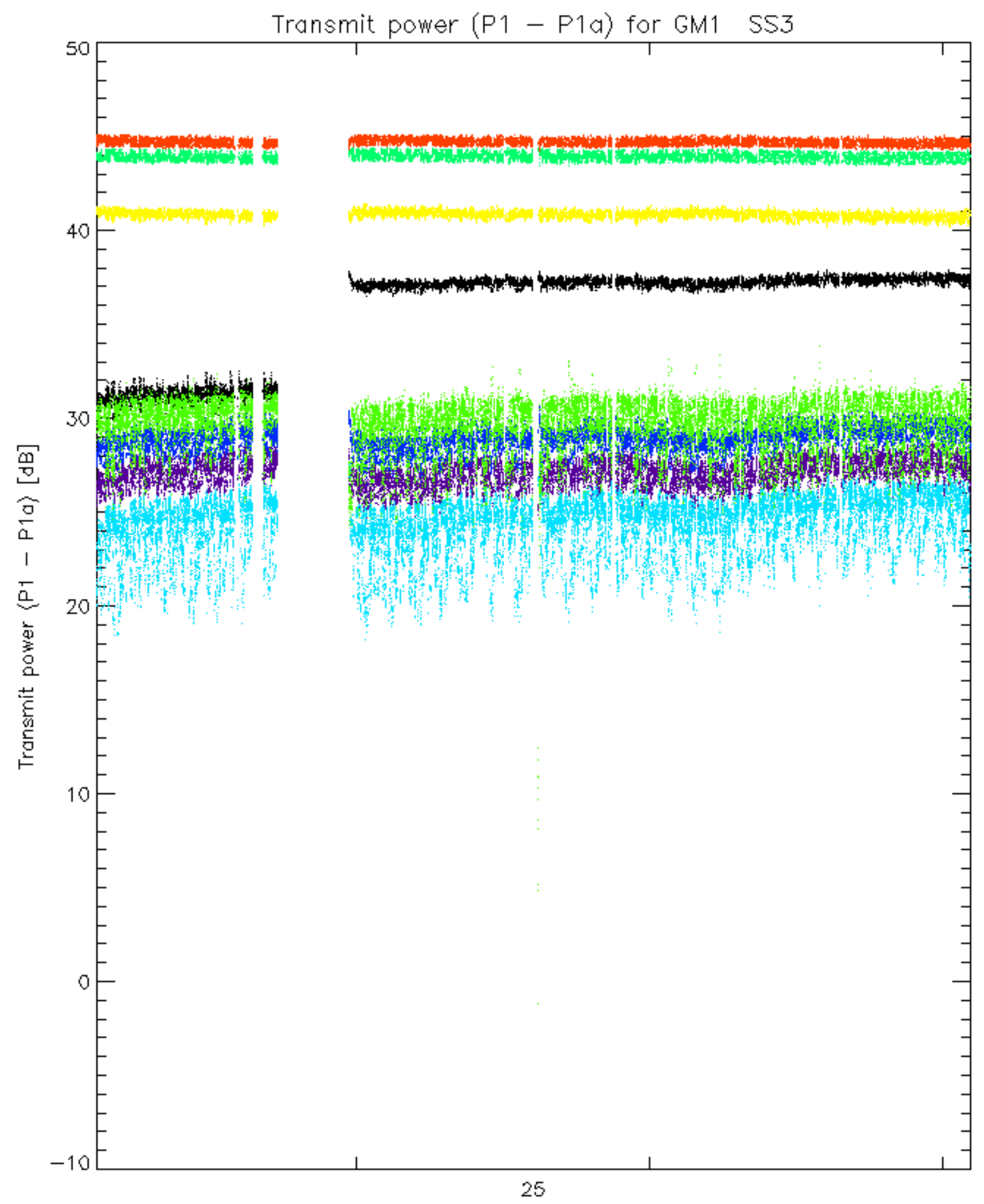


Summary of analysis for the last 3 days 2007022[781]

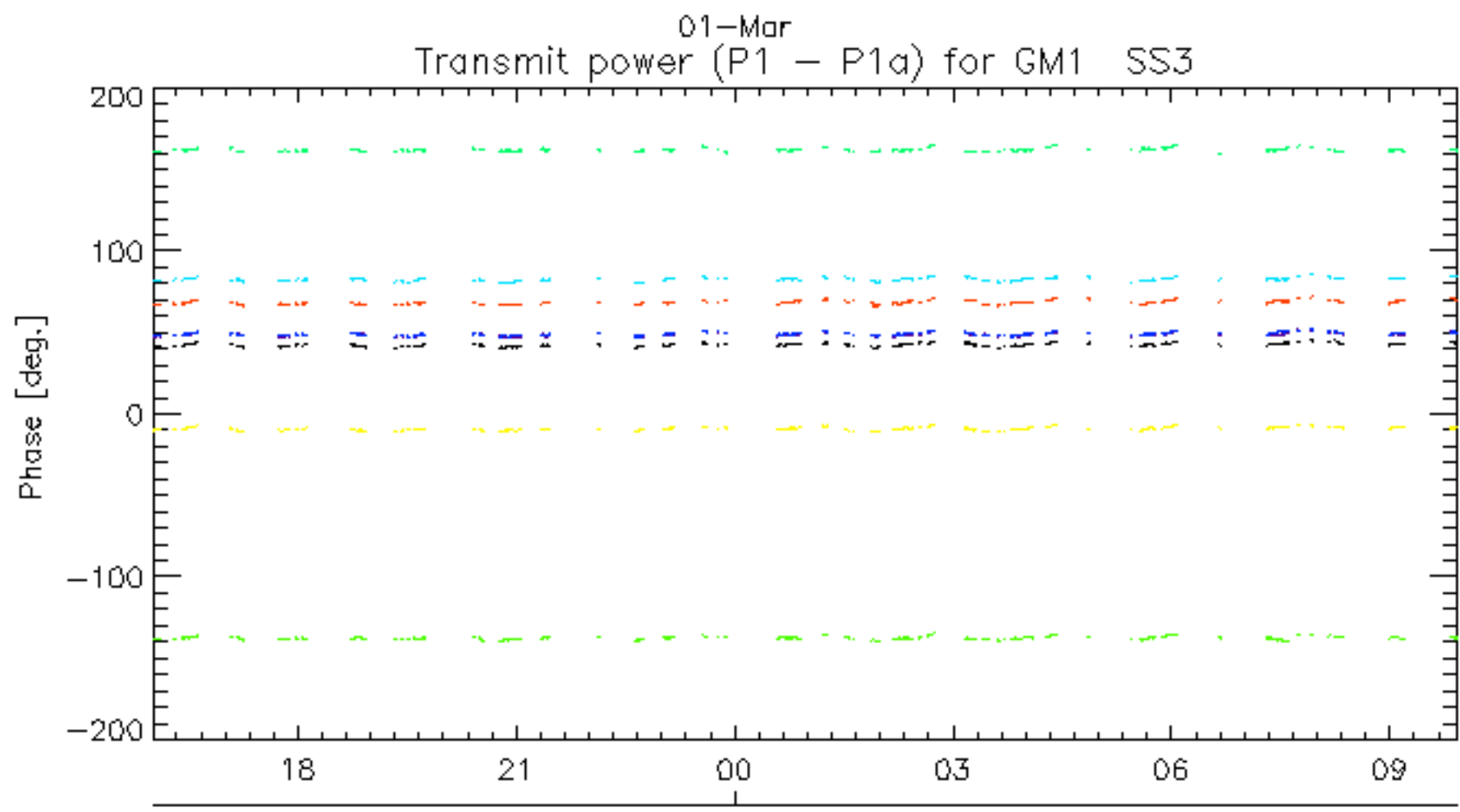
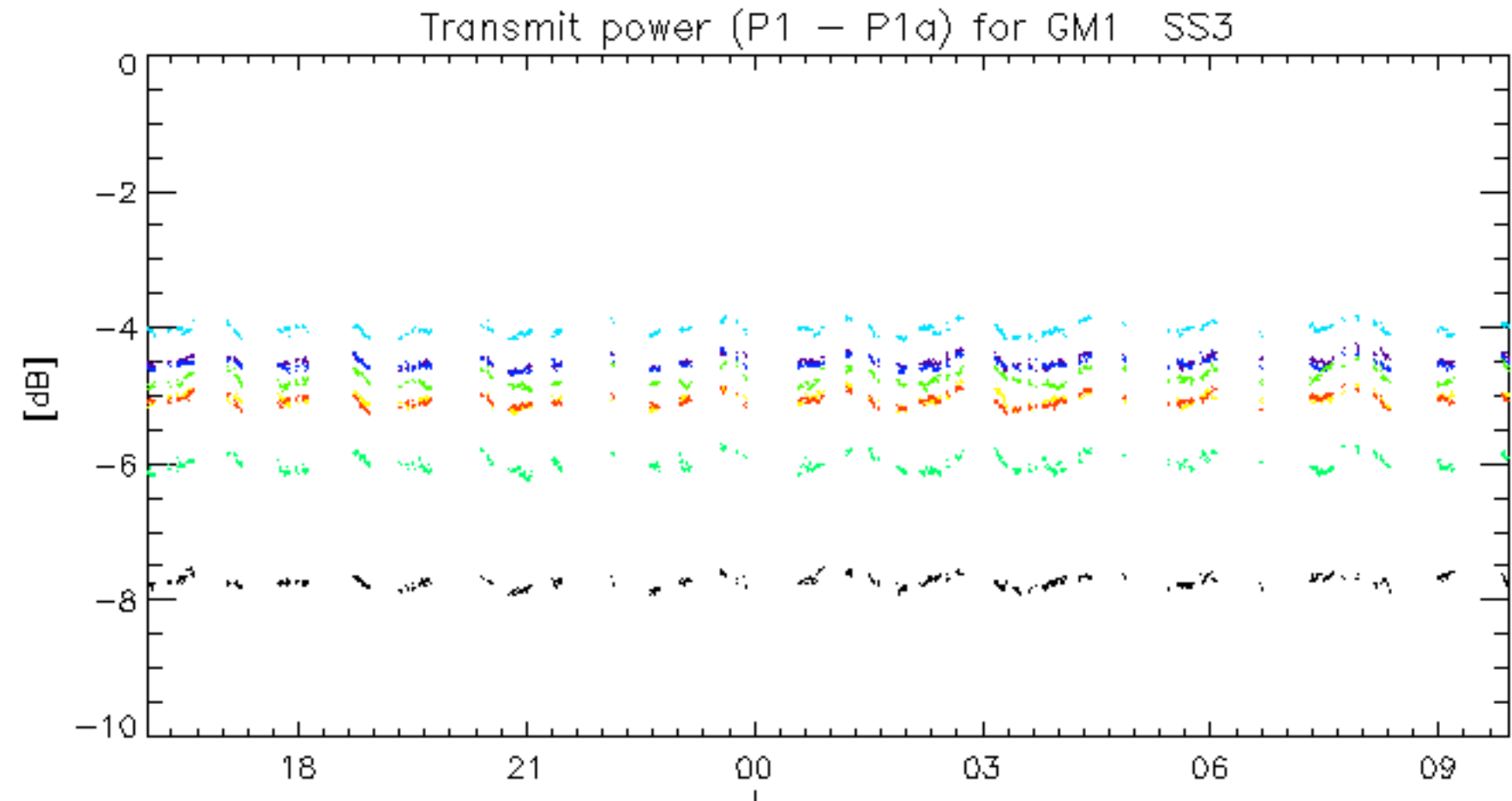
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070221_143309_00000372055_00425_26030_6740.N1	1	0
ASA_IMM_1PNPDE20070221_165622_000001272055_00427_26032_6826.N1	4	86
ASA_IMM_1PNPDK20070228_130017_000003962056_00024_26130_1566.N1	0	1
ASA_WVS_1PNPDK20070228_065153_00000002056_00020_26126_1087.N1	1	0
ASA_WSM_1PNPDE20070221_164157_000000982055_00427_26032_6808.N1	5	1764
ASA_WSM_1PNPDE20070221_172658_000000672055_00427_26032_6800.N1	21	6572
ASA_WSM_1PNPDE20070227_002822_000002612056_00002_26108_3509.N1	0	27
ASA_WSM_1PNPDE20070228_113744_000001092056_00023_26129_5446.N1	0	13
ASA_WSM_1PNPDE20070228_141755_000000852056_00025_26131_5502.N1	0	16
ASA_WSM_1PNPDK20070227_095010_000000852056_00008_26114_0131.N1	0	41

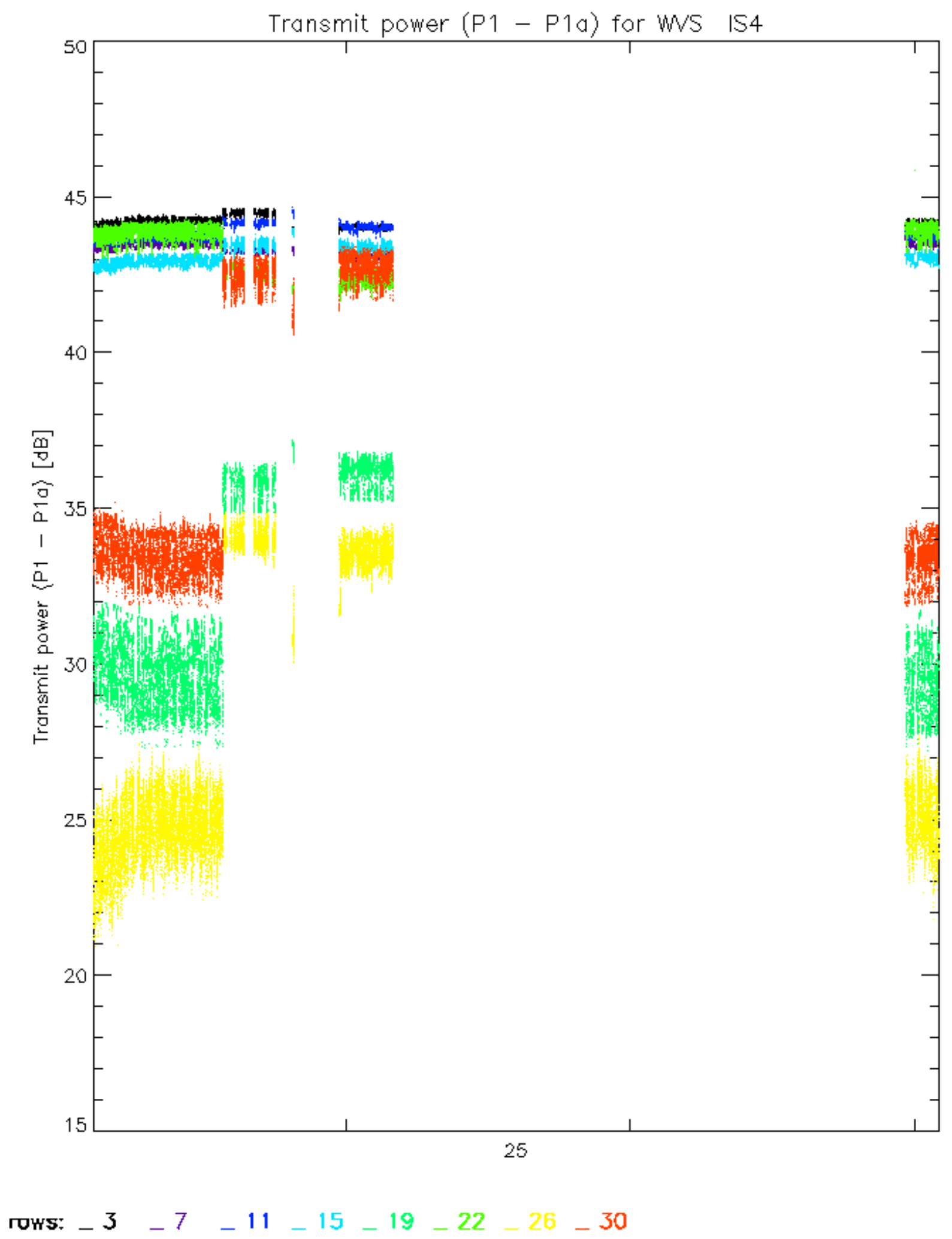


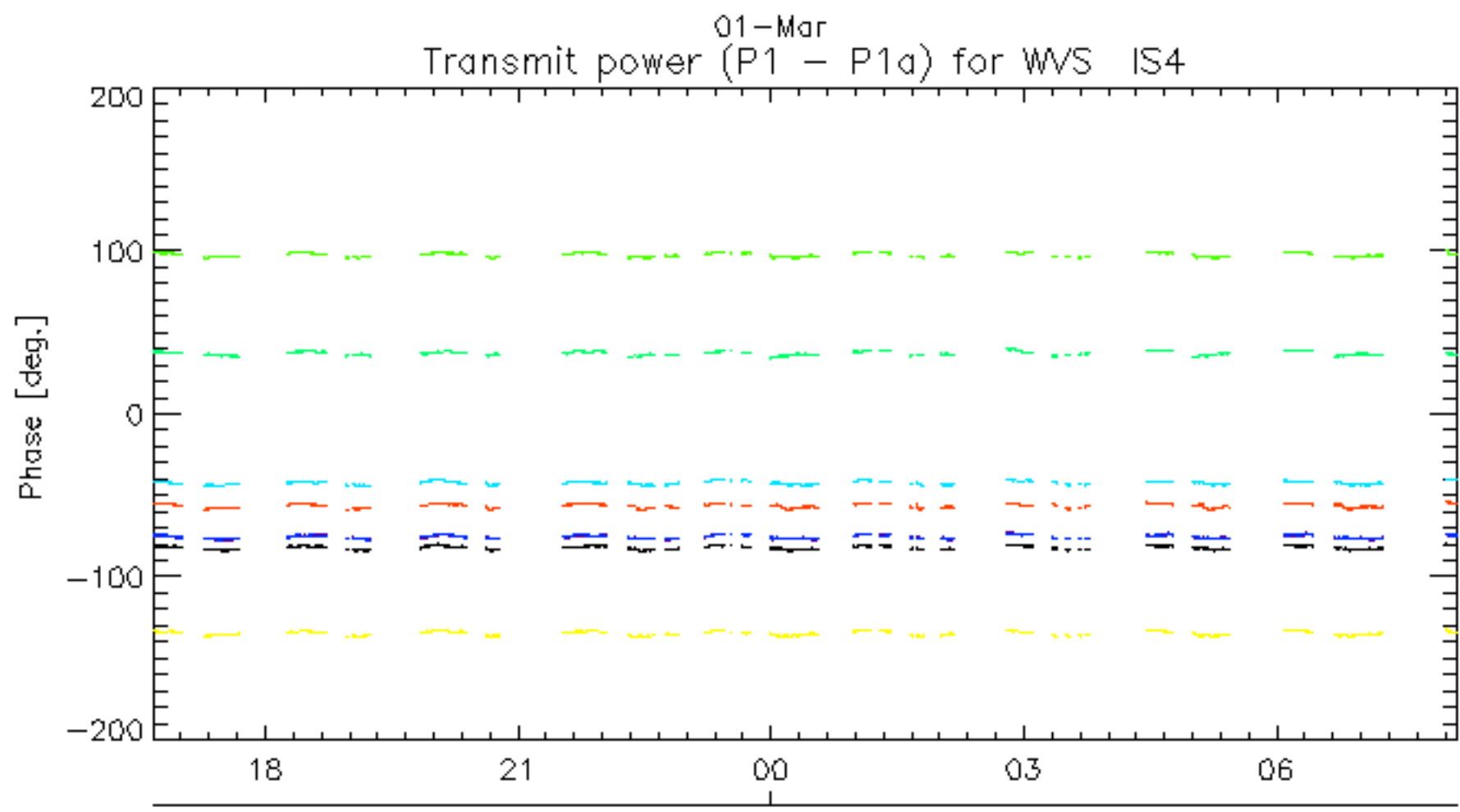
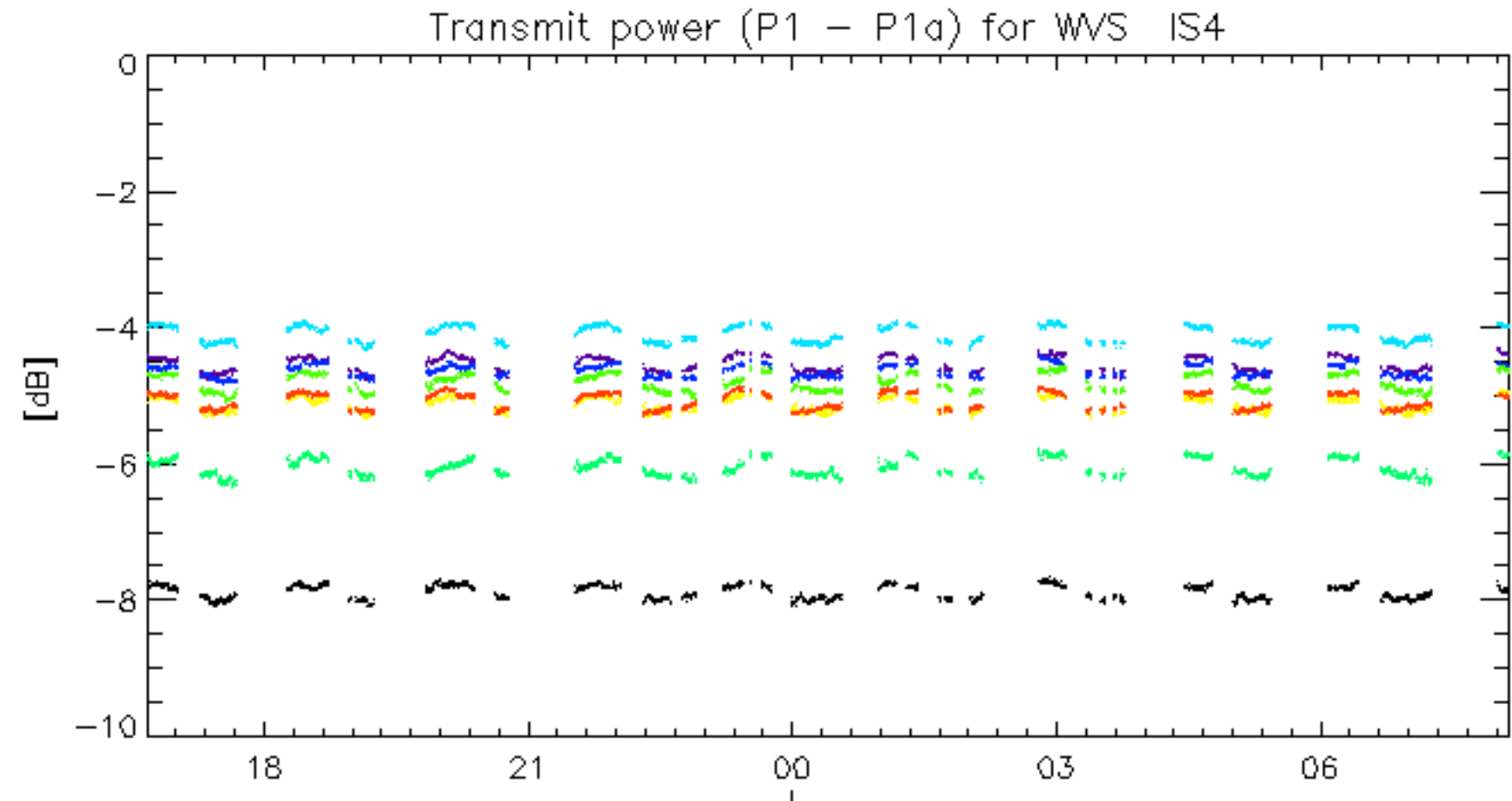


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: 3 7 11 15 19 22 26 30





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

No unavailabilities during the reported period.