

PRELIMINARY REPORT OF 070228

last update on Wed Feb 28 21:42:05 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 2007-02-27 00:00:00 to 2007-02-28 21:42:05

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	44	43	5	1	20
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	21	0	0	1	0
ASA_INS_AXVIEC20070223_140724_20070226_000000_20071231_000000	23	43	5	0	20
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	44	43	5	1	20
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	43	5	1	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	20	31	23	12	34
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	0	0	0	1	0
ASA_INS_AXVIEC20070223_140724_20070226_000000_20071231_000000	20	31	23	11	34
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	20	31	23	12	34
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	20	31	23	12	34

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	20070226 180512
H	20070225 183649
H	20070227 173335

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"/>
<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

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	-11.291022	0.470428	5.148770
7	P1a	-10.126208	0.086289	-1.261625
11	P1a	-10.683287	0.115027	-1.781256
15	P1a	-11.686268	1.595081	-9.134026
19	P1a	-15.065362	1.078807	7.459737
22	P1a	-19.623375	8.044959	19.347336
26	P1a	-15.684605	0.467194	-1.293905
30	P1a	-20.037786	7.300608	-19.231528

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.239796	2.458080	-12.463224
7	P1	-2.599413	0.013700	-0.622568
11	P1	-3.221897	0.146380	-2.770362
15	P1	-4.593252	1.355787	-8.696403
19	P1	-3.414587	0.090192	2.079741
22	P1	-5.353262	0.139822	-2.608050
26	P1	-5.389434	0.693708	6.130369
30	P1	-5.445650	0.067721	-1.329082

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.654470	0.685817	-5.979128
7	P2	-21.938425	0.160912	1.753756

11	P2	-10.806242	0.137715	1.863363
15	P2	-5.111569	0.092400	0.436908
19	P2	-7.246553	0.079429	0.333915
22	P2	-8.377000	0.074801	-0.336922
26	P2	-24.162277	0.130315	1.854705
30	P2	-21.698410	0.069553	0.024306

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.220206	0.007962	0.059369
7	P3	-8.220206	0.007962	0.059369
11	P3	-8.220206	0.007962	0.059369
15	P3	-8.220206	0.007962	0.059369
19	P3	-8.220206	0.007962	0.059369
22	P3	-8.220206	0.007962	0.059369
26	P3	-8.220206	0.007962	0.059369
30	P3	-8.220206	0.007962	0.059369

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	-11.243771	0.122691	0.794386
7	P1a	-10.040445	0.066162	-0.079935
11	P1a	-10.600142	0.057594	-0.221570
15	P1a	-10.870648	0.133820	-0.126823
19	P1a	-15.738909	0.064866	0.037119
22	P1a	-20.842785	1.230735	0.232217
26	P1a	-15.401388	0.266226	0.290478
30	P1a	-18.358994	0.356466	-0.144007

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-7.309466	3.198126	-5.047900
7	P1	-2.435091	0.005791	0.005024
11	P1	-2.892180	0.015898	-0.098294
15	P1	-3.811075	0.033093	-0.101443
19	P1	-3.552517	0.012194	-0.008512
22	P1	-5.028825	0.022946	-0.031952
26	P1	-5.987969	0.023427	0.052929
30	P1	-5.284691	0.022351	0.031771

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.617695	0.658539	-2.200485
7	P2	-21.989779	0.052692	0.139314
11	P2	-10.670184	0.030015	0.085110
15	P2	-4.824748	0.026744	0.057709
19	P2	-6.822220	0.027118	0.066560
22	P2	-8.124706	0.029535	0.090600
26	P2	-24.256922	0.032436	0.007508
30	P2	-21.767223	0.036103	0.102635

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045487	0.003324	0.019501
7	P3	-8.045543	0.003335	0.019157
11	P3	-8.045546	0.003328	0.018856
15	P3	-8.045539	0.003341	0.019166
19	P3	-8.045518	0.003320	0.018958
22	P3	-8.045613	0.003332	0.019040
26	P3	-8.045512	0.003330	0.019077
30	P3	-8.045499	0.003336	0.018830

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	0.000613686
	stdev	2.30724e-07
MEAN Q	mean	0.000402136
	stdev	2.49425e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.109529
	stdev	0.00255501
STDEV Q	mean	0.109607
	stdev	0.00260462



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007022[678]

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_1PNPDE20070226_153355_000000672055_00498_26103_2948.N1	0	57
ASA_WSM_1PNPDE20070226_165904_000002192055_00499_26104_3039.N1	0	74
ASA_WSM_1PNPDE20070226_165904_000002192055_00499_26104_3045.N1	0	74
ASA_WSM_1PNPDE20070227_002822_000002612056_00002_26108_3509.N1	0	27
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)
<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

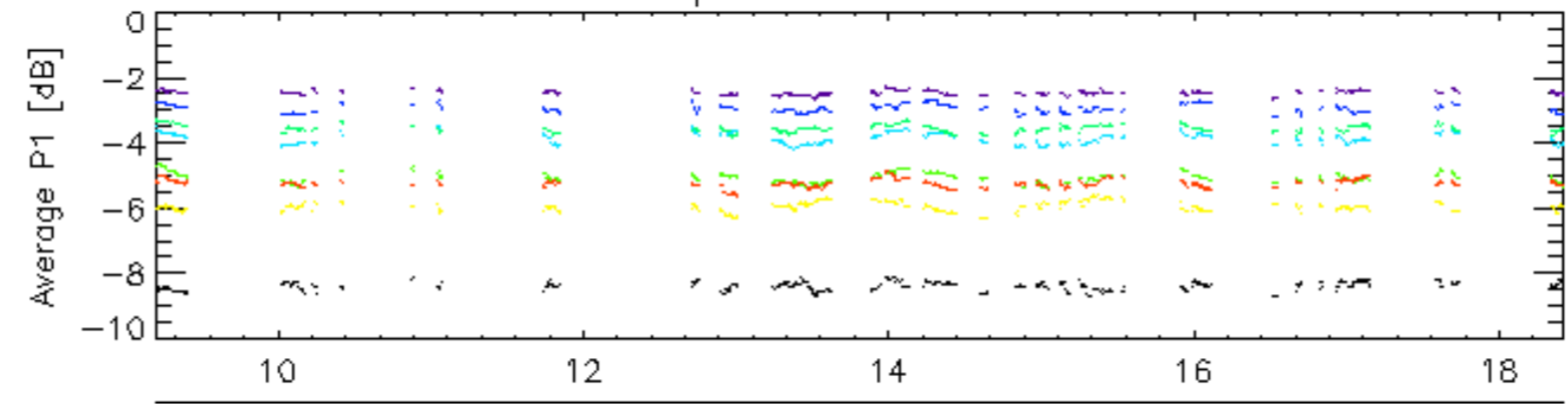
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

Acsending

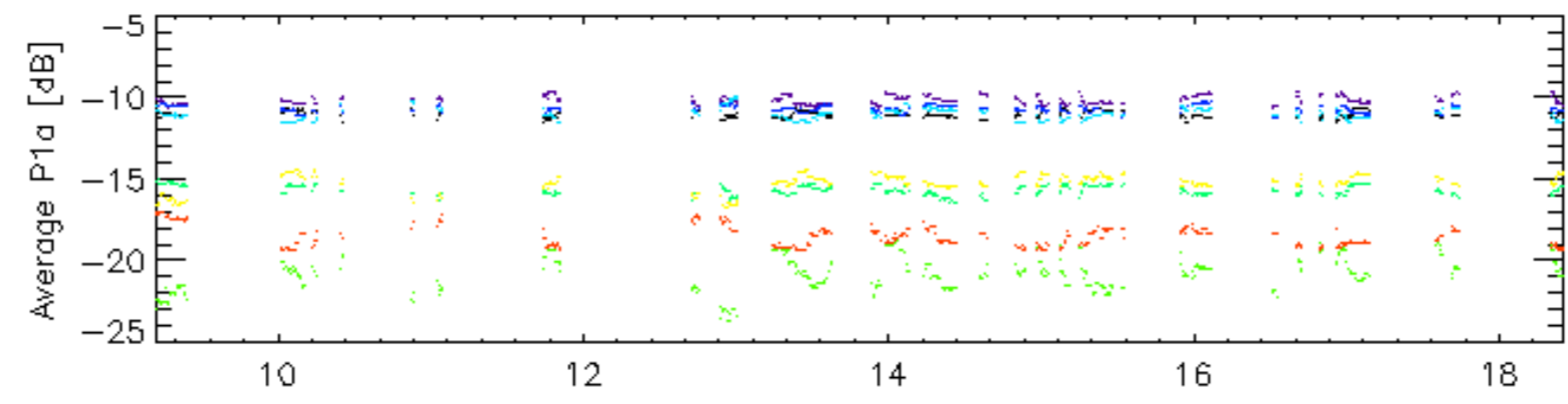
Descending

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

Cal pulses for GM1 SS3

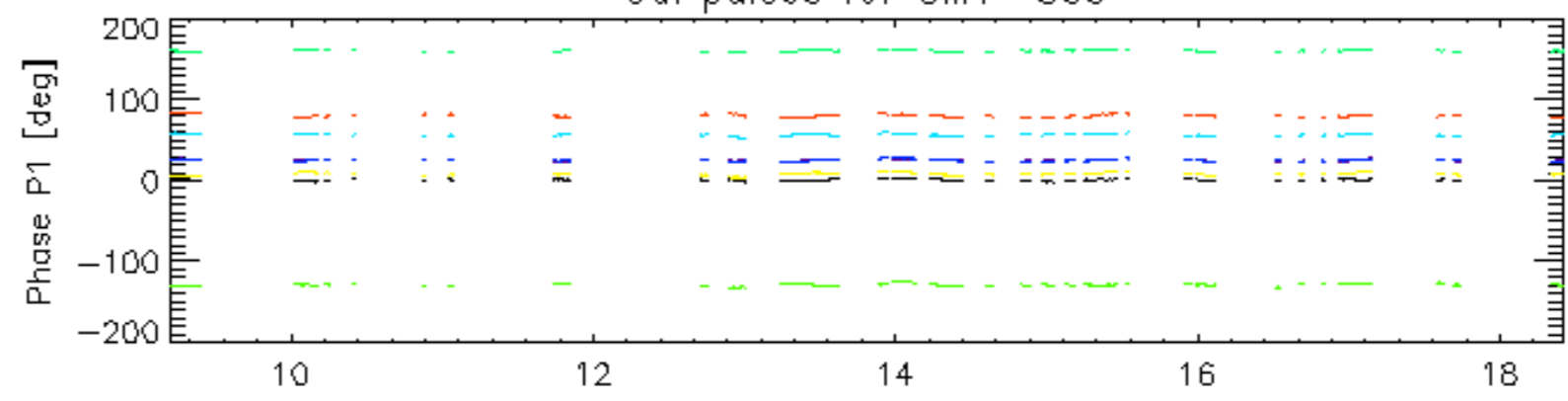


27-Feb

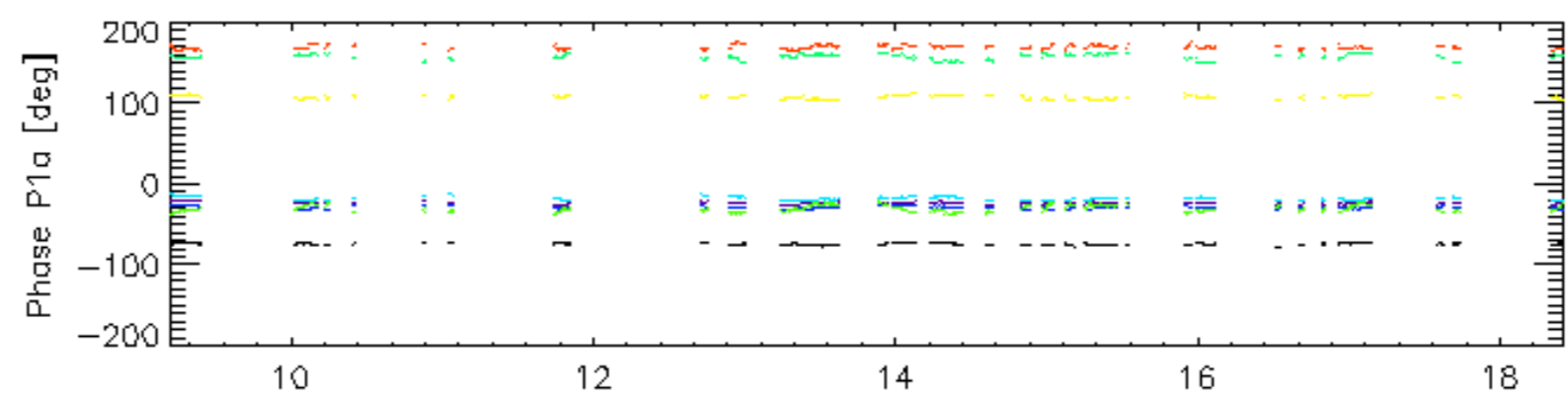


27-Feb

Cal pulses for GM1 SS3

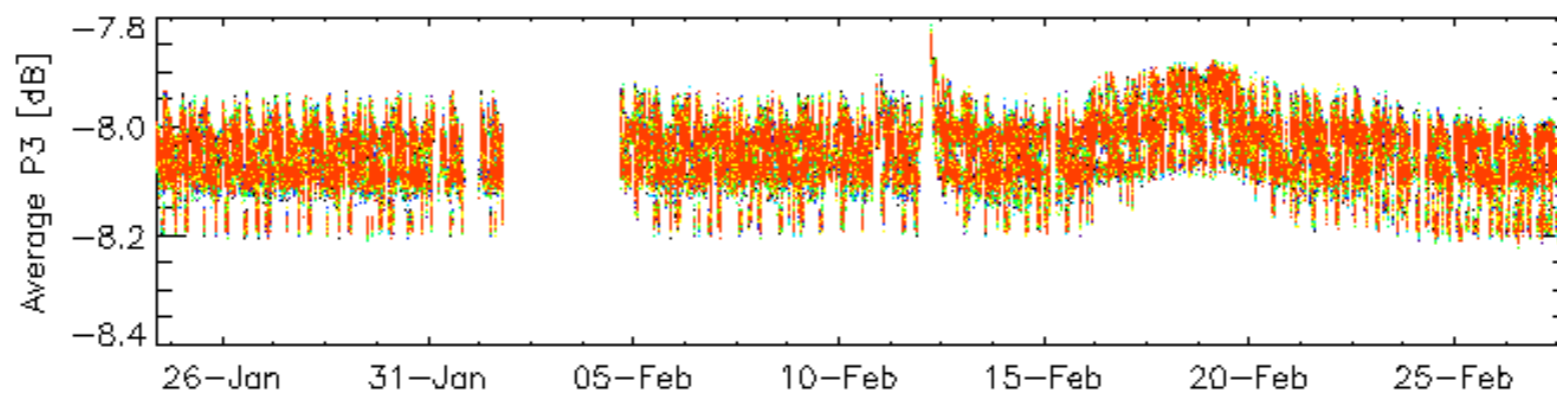
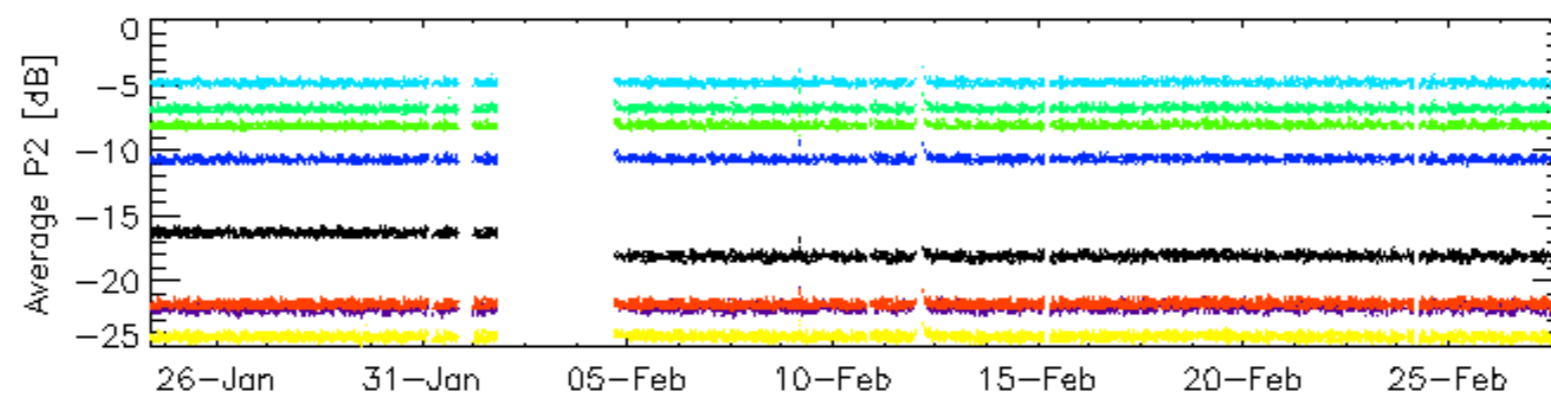
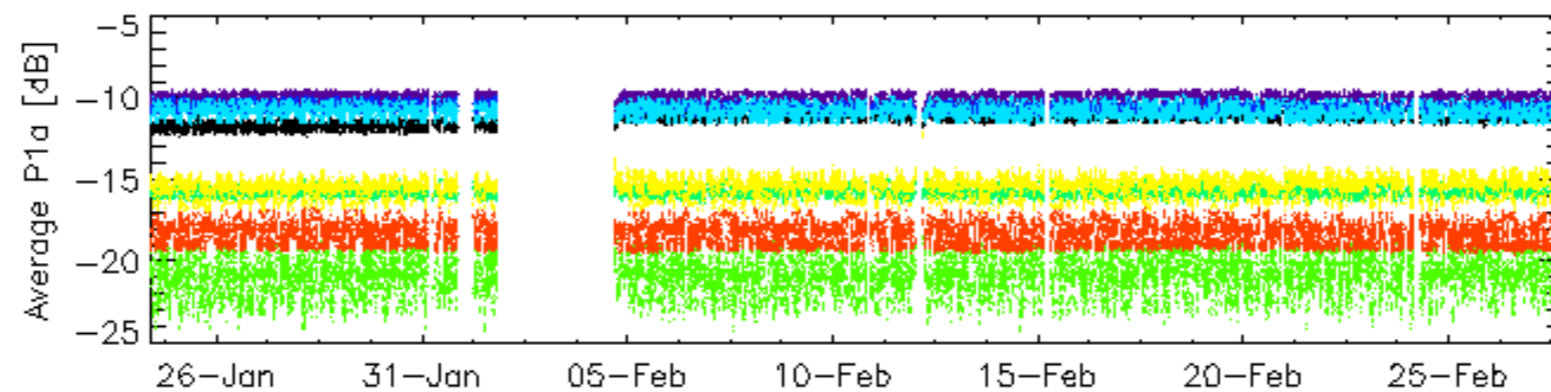
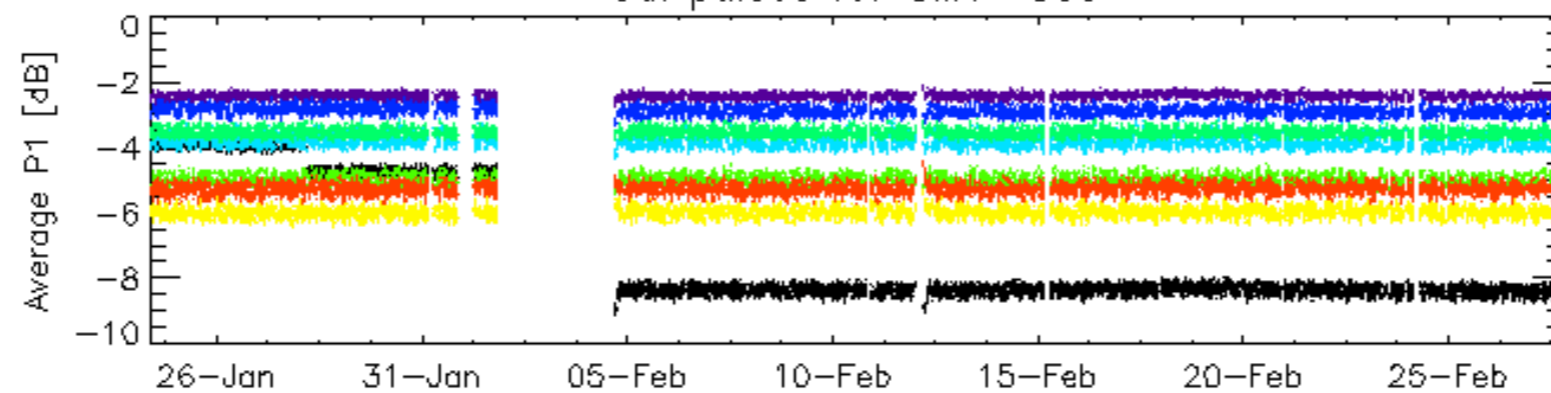


27-Feb



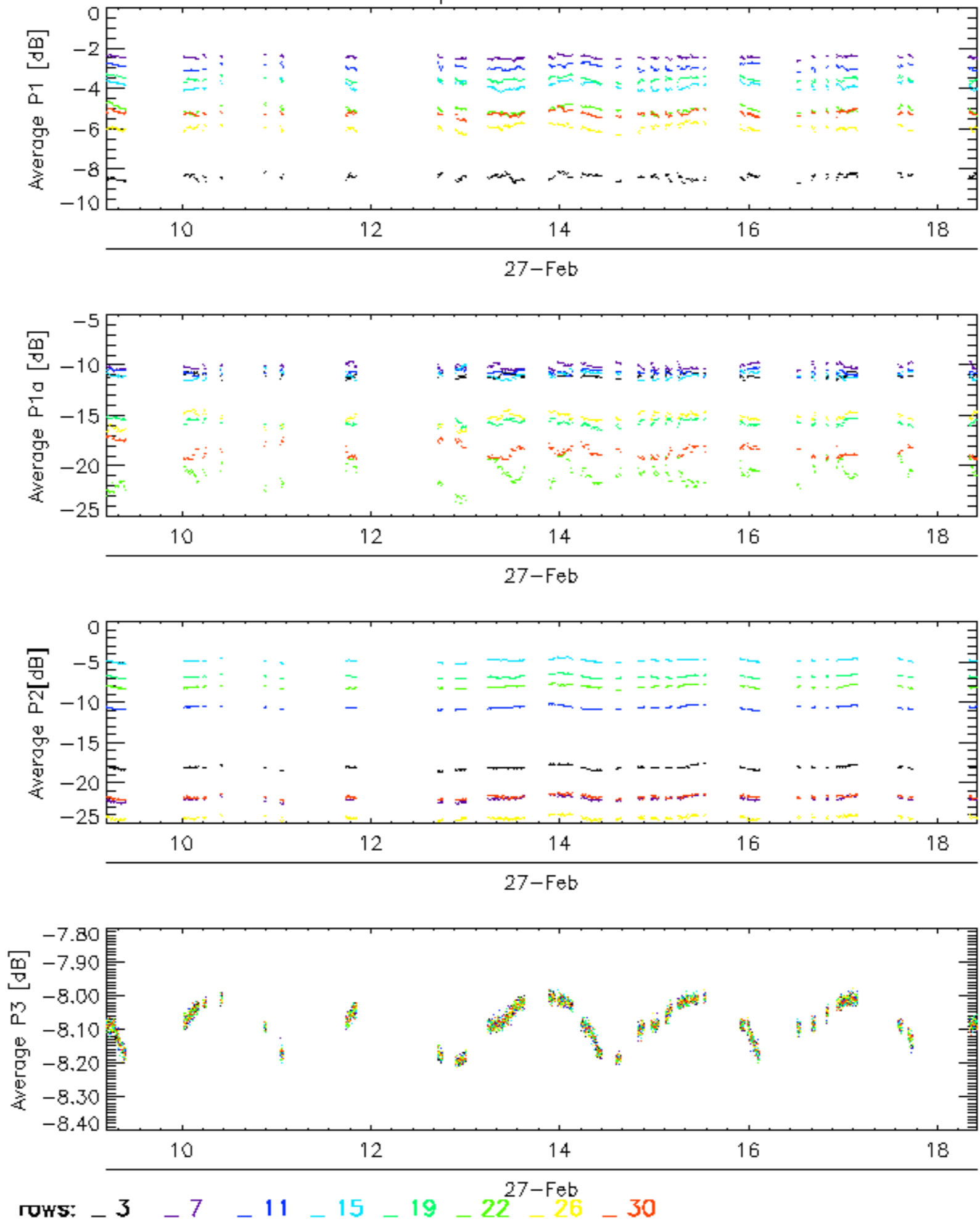
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

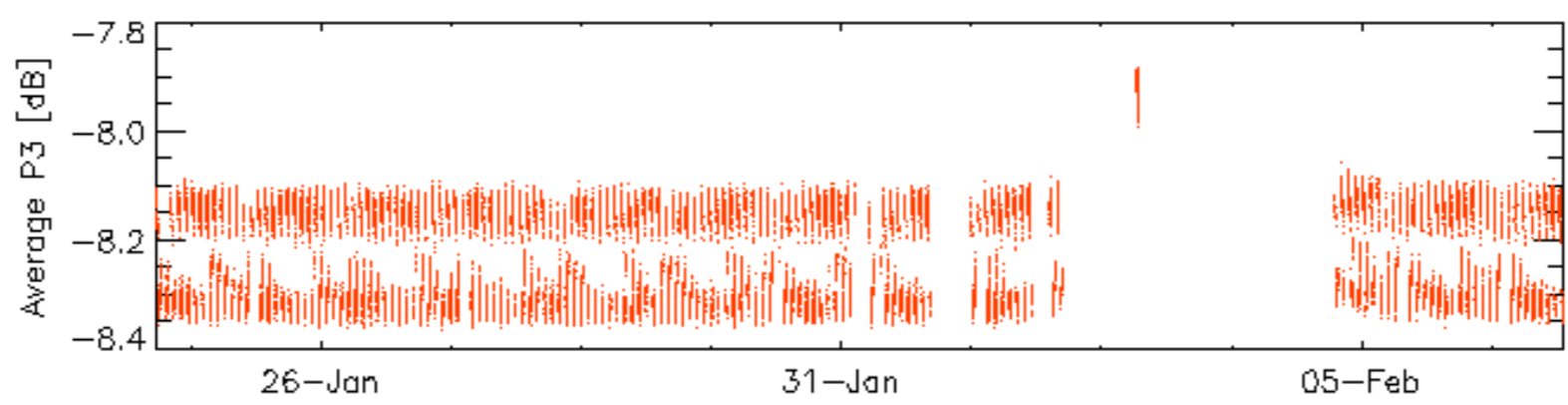
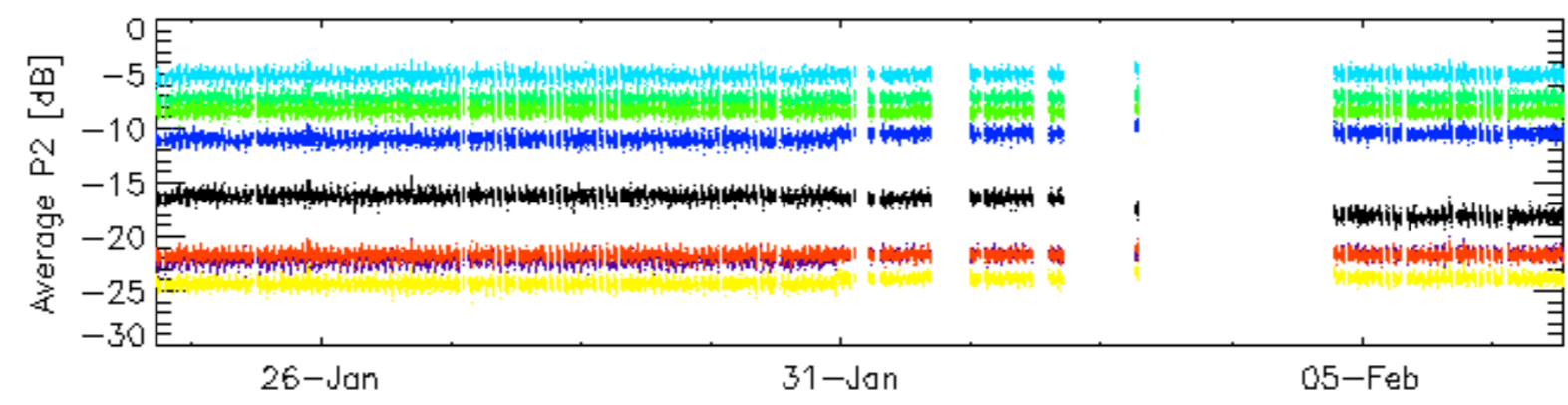
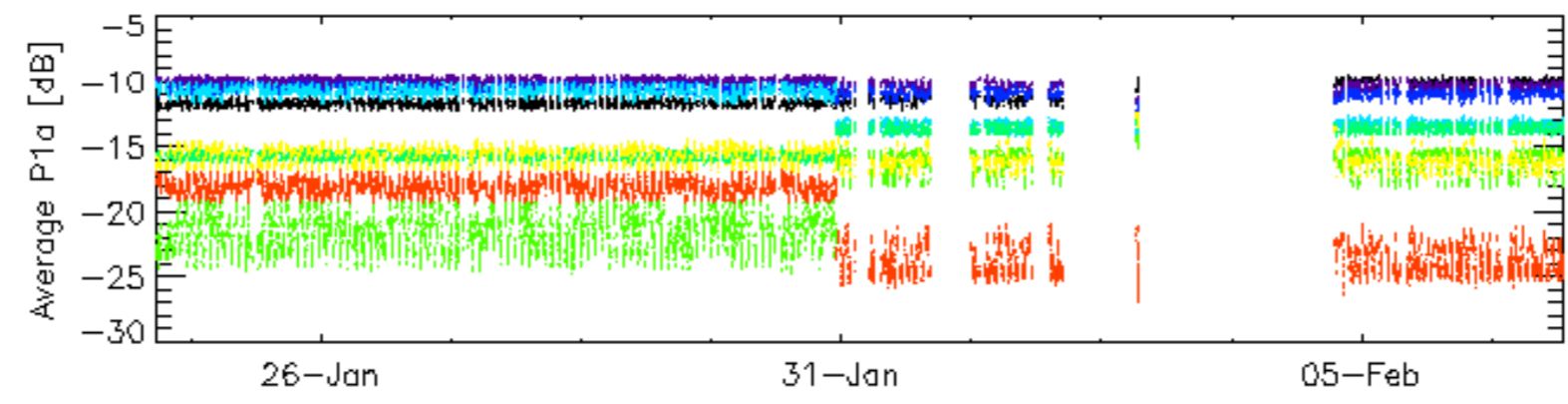
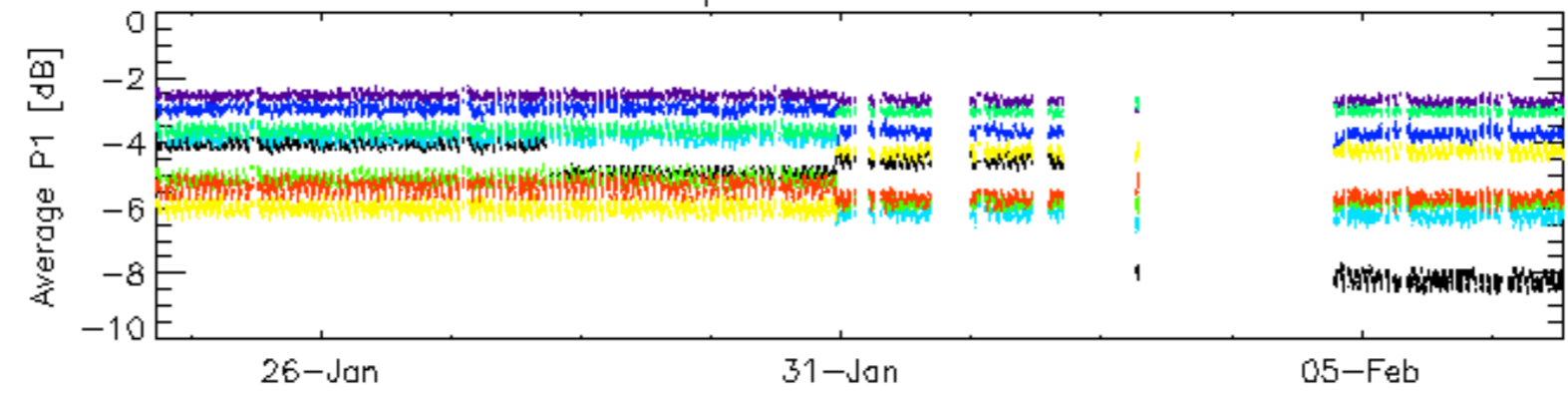


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

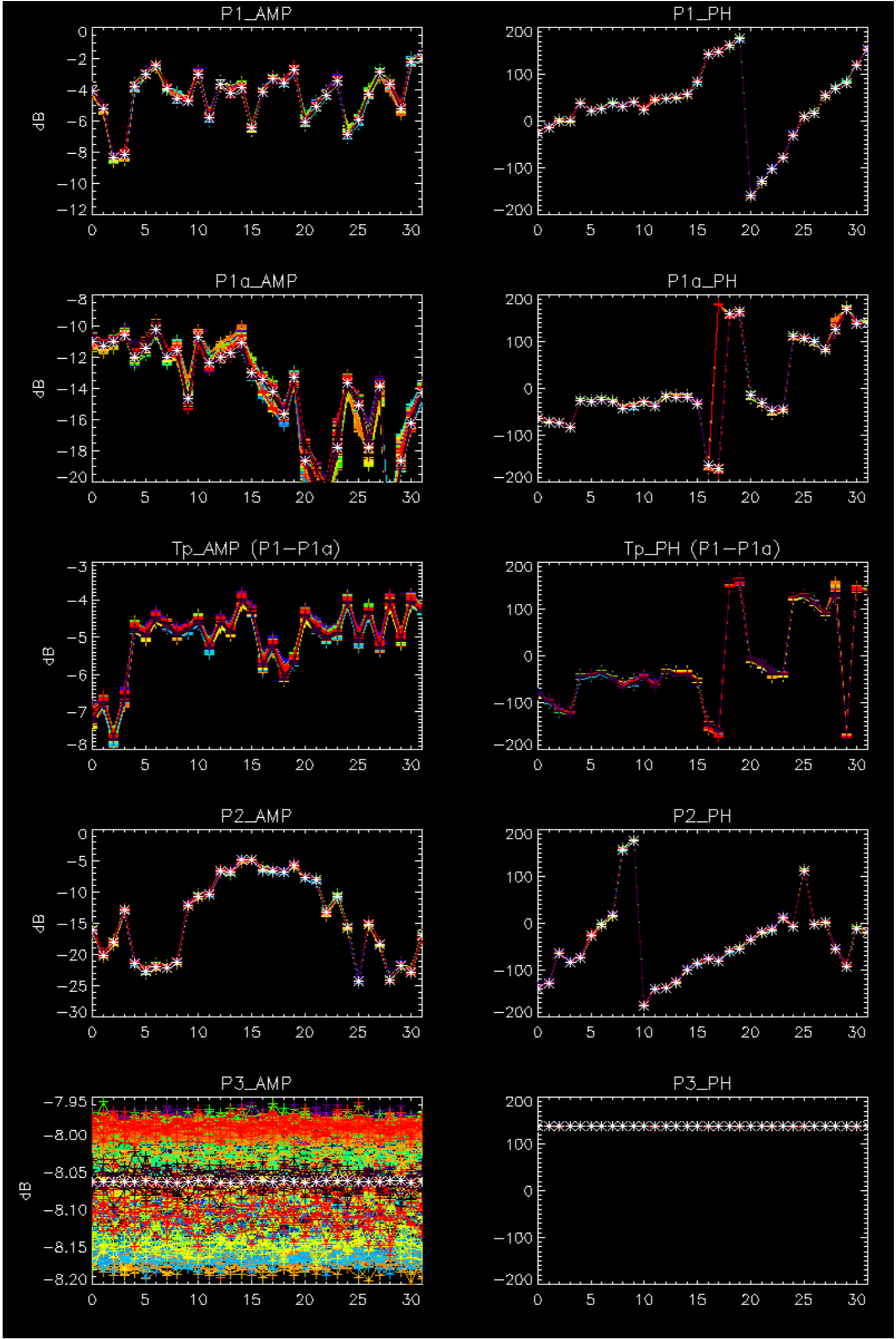


Cal pulses for WVS IS4



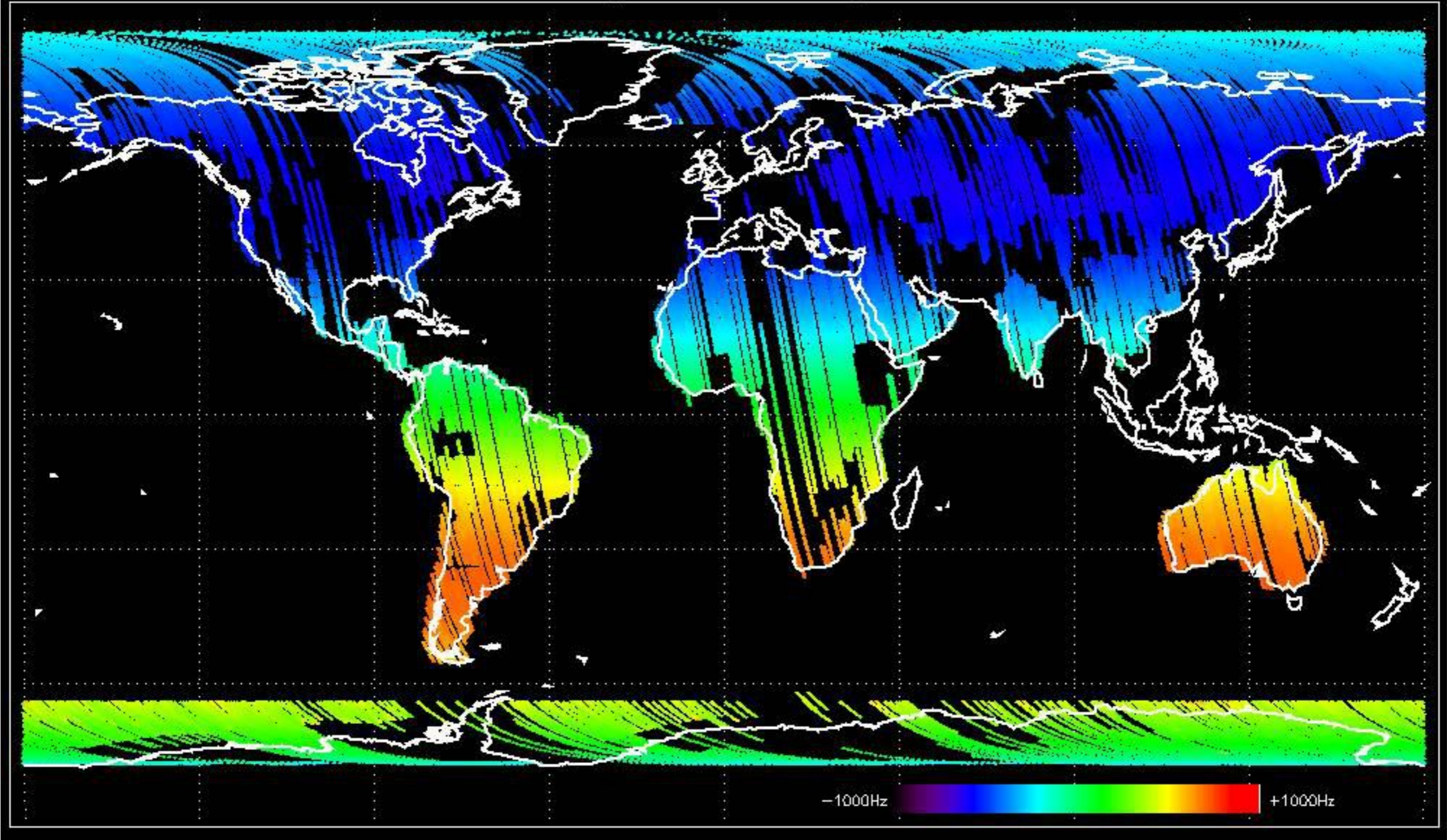
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed.

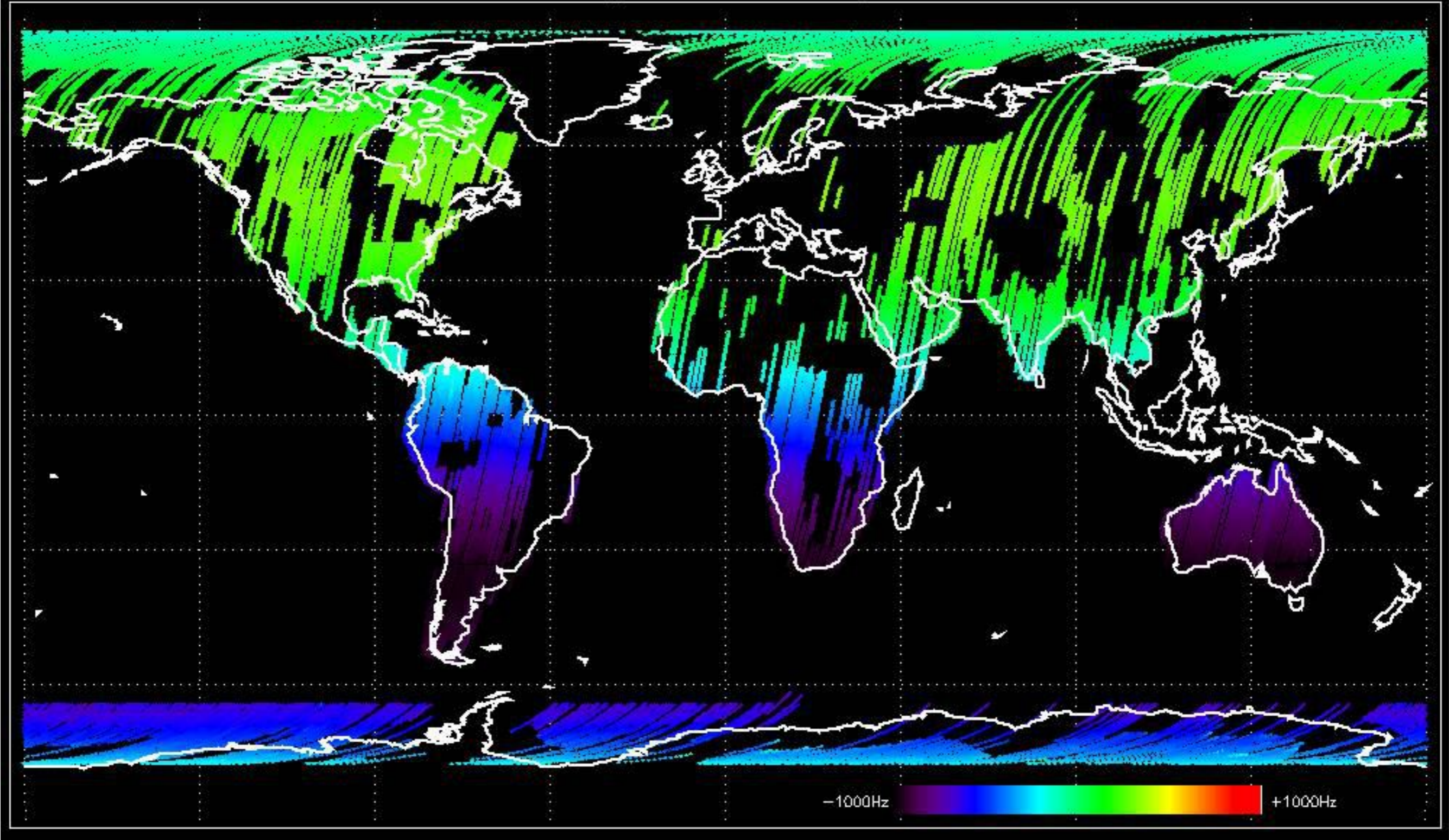


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

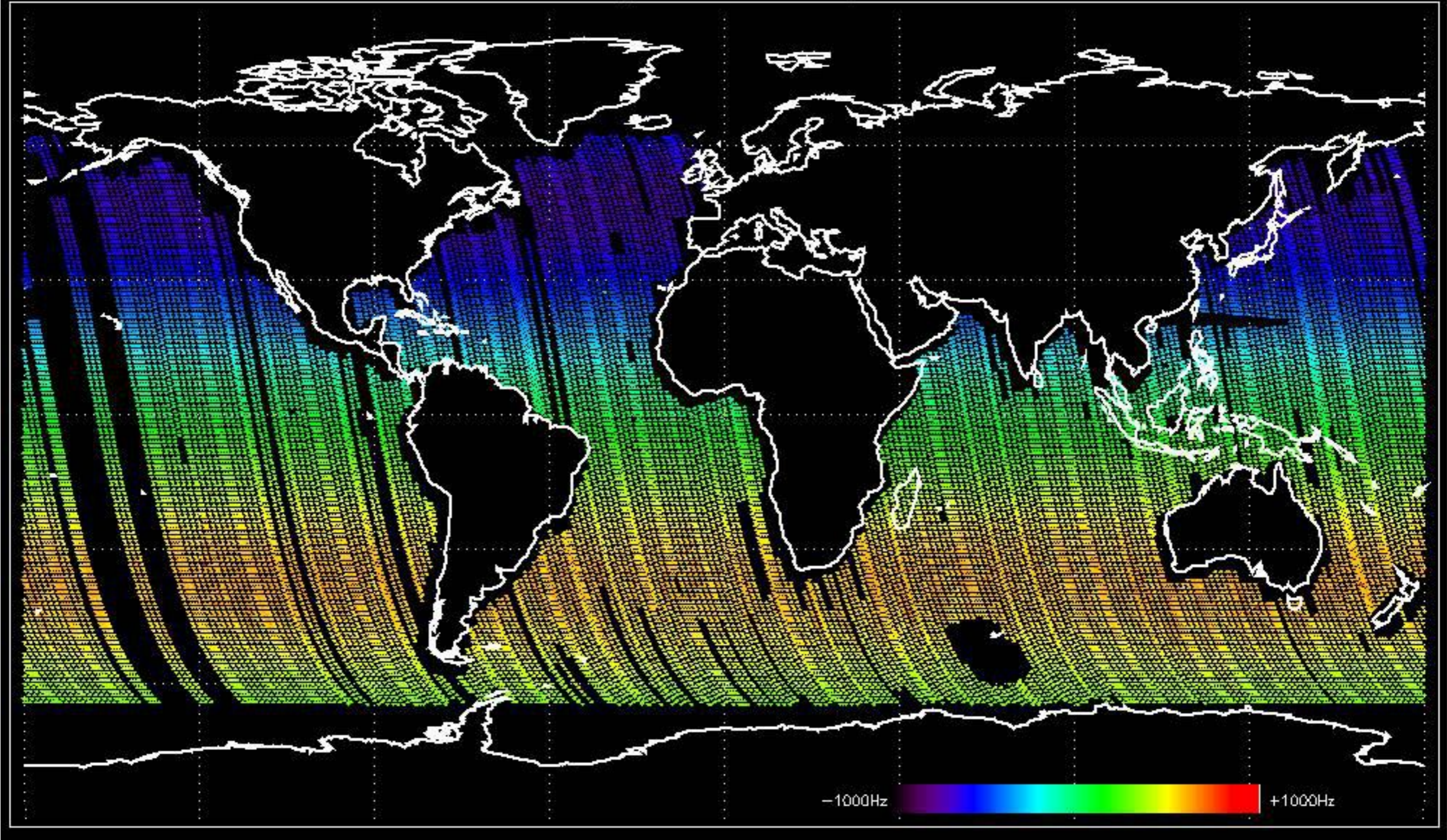
Doppler 'GM1' 'SS1' ascending



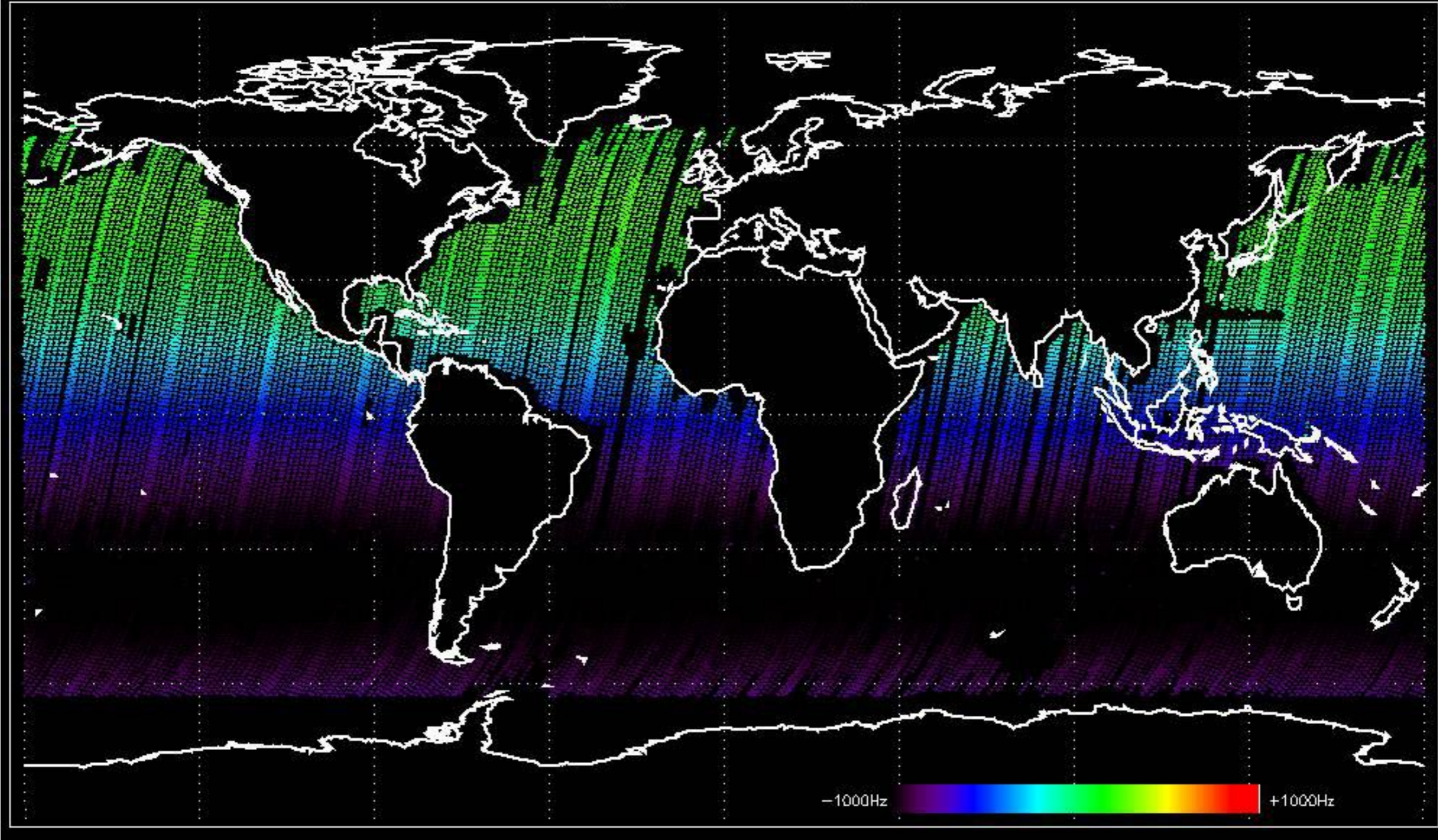
Doppler 'GM1' 'SS1' descending



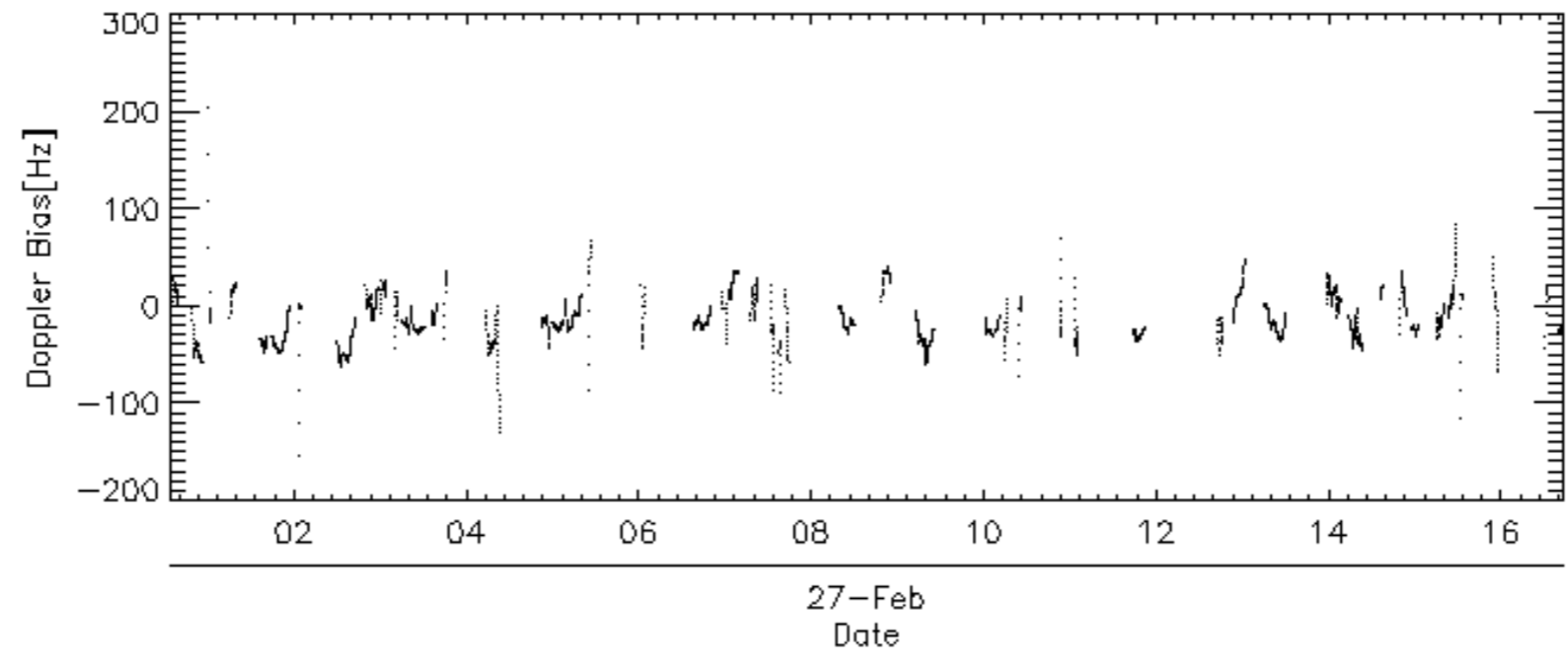
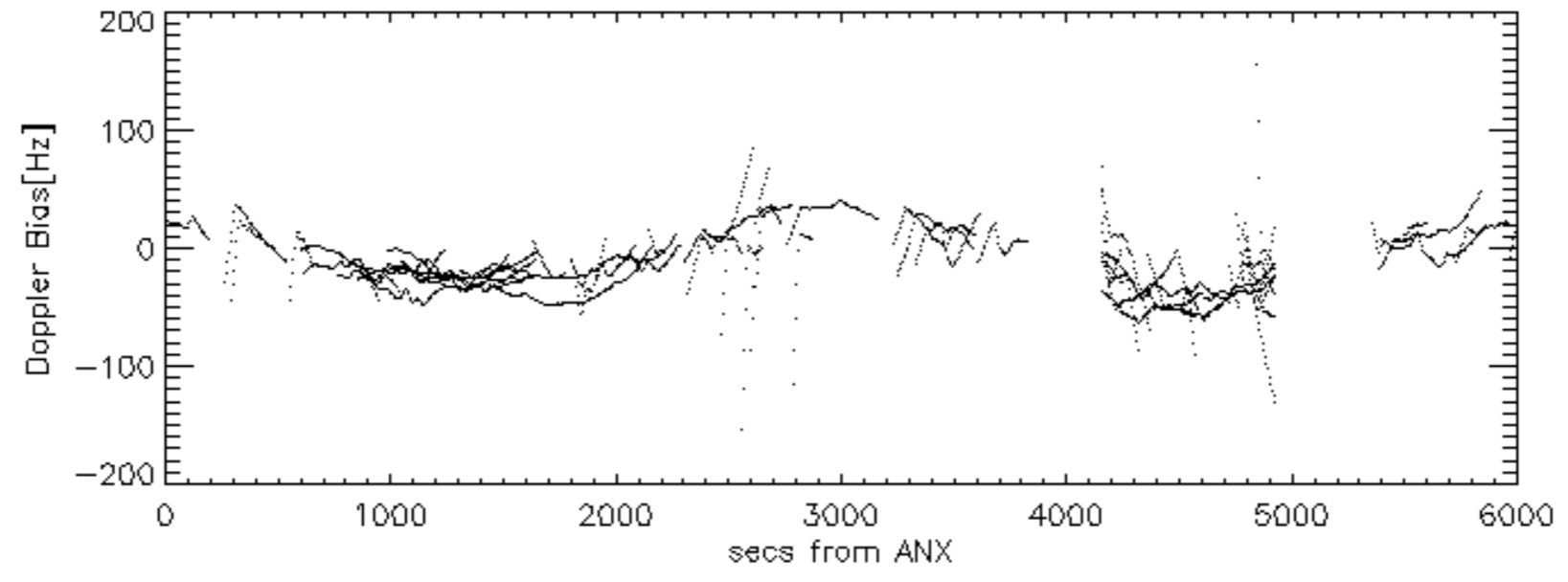
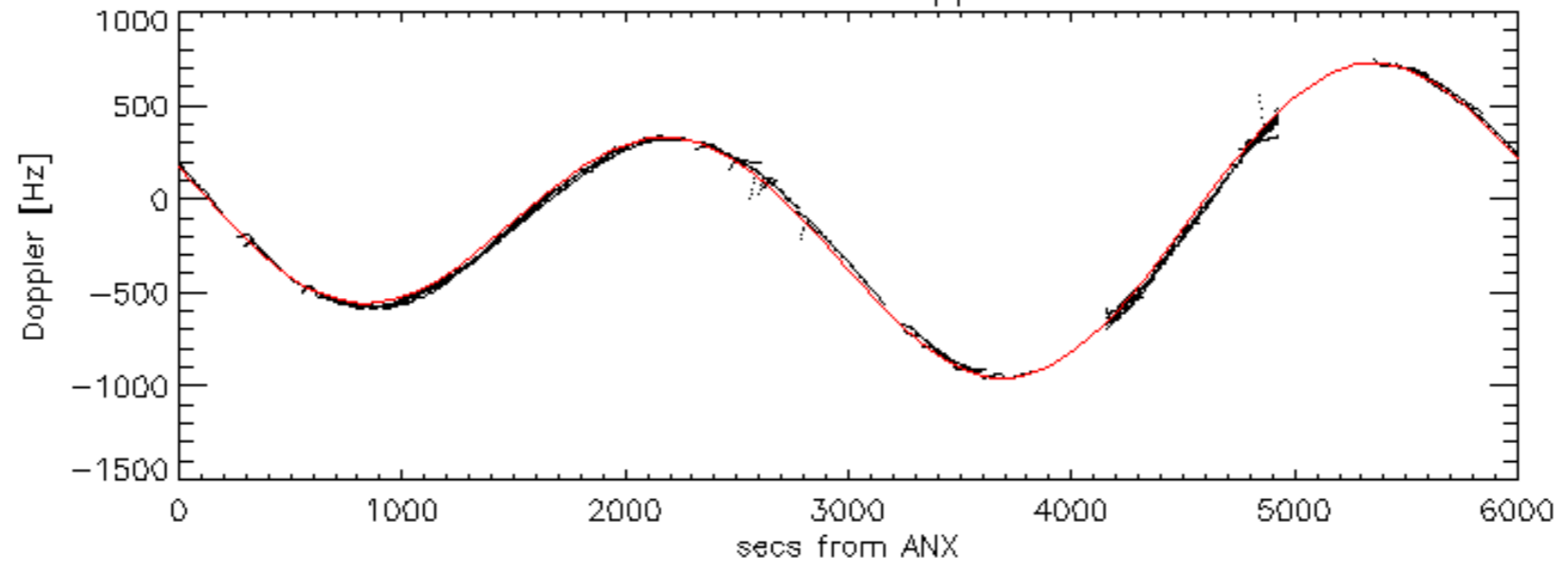
Doppler 'WVS' 'IS2' ascending

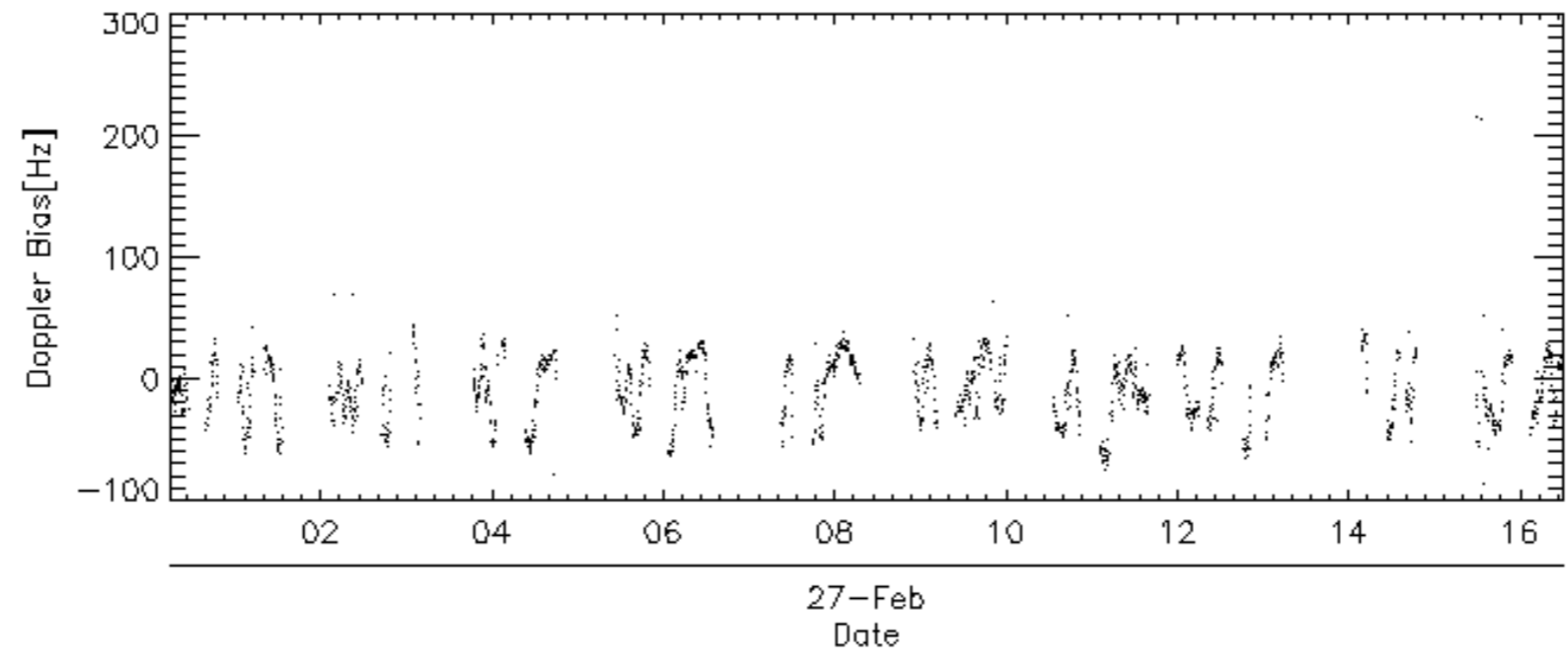
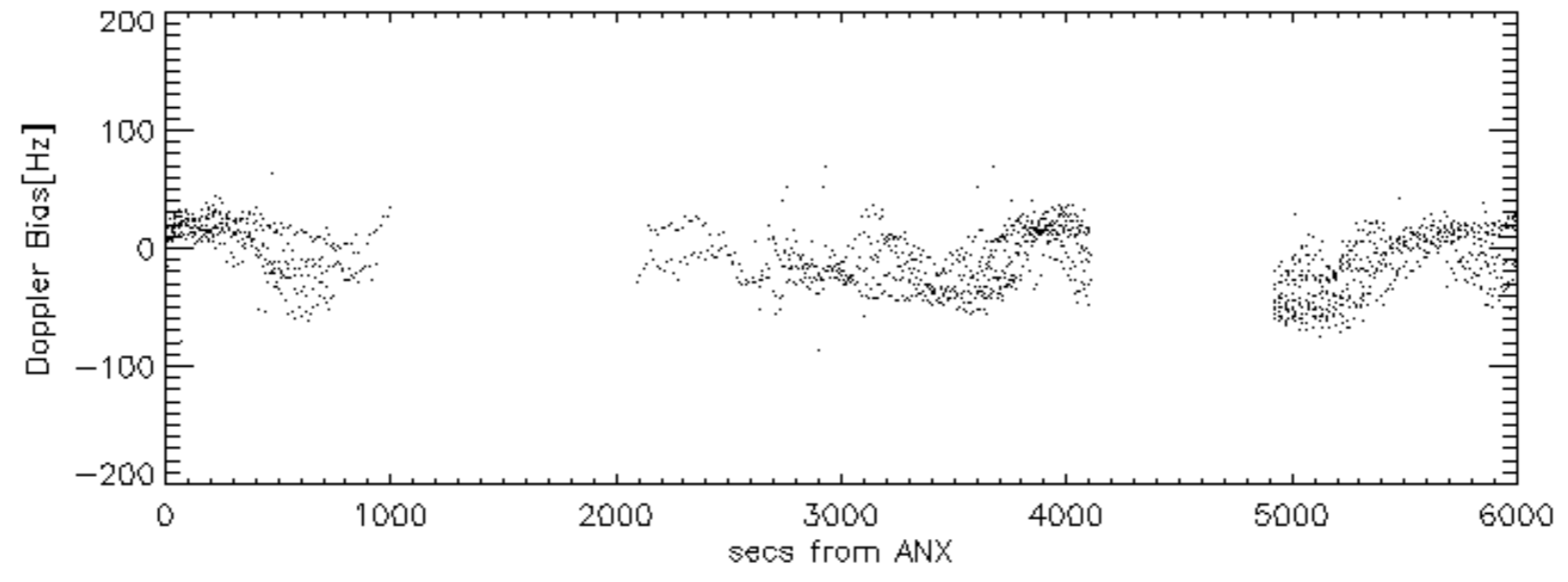
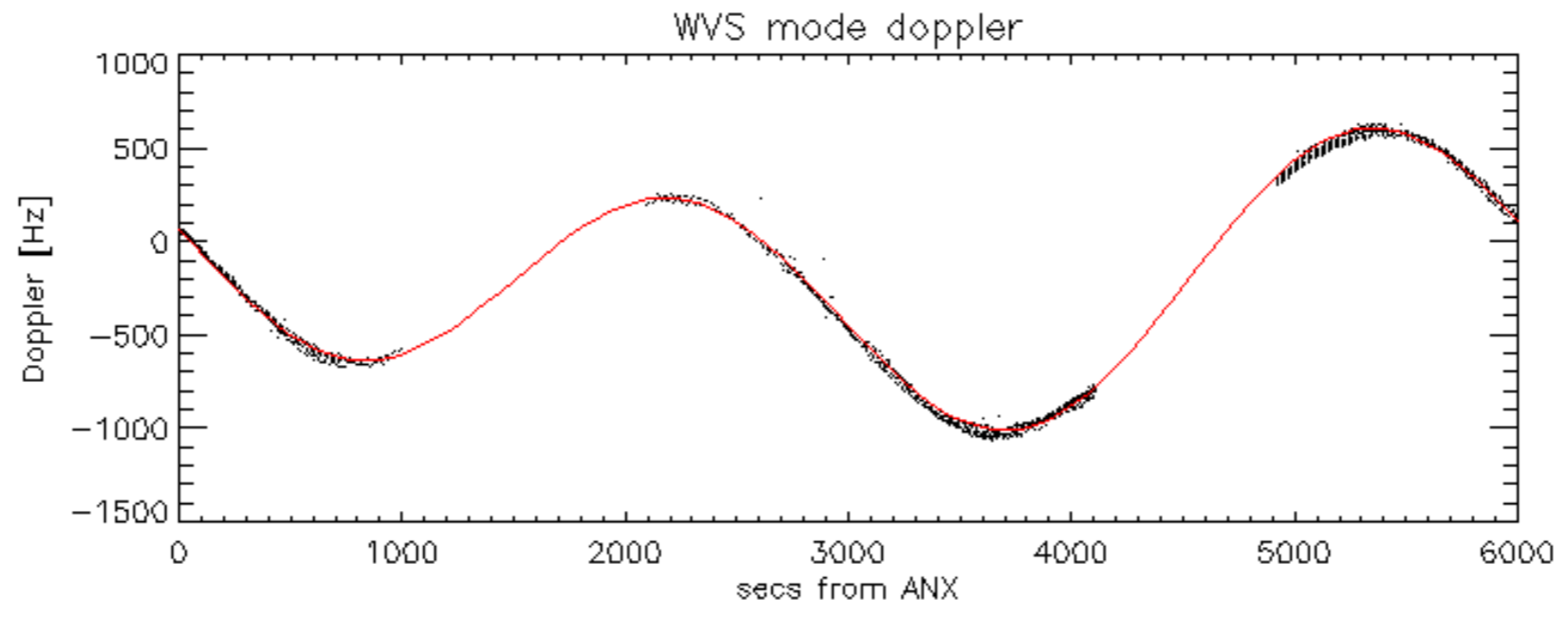


Doppler 'WVS' 'IS2' descending

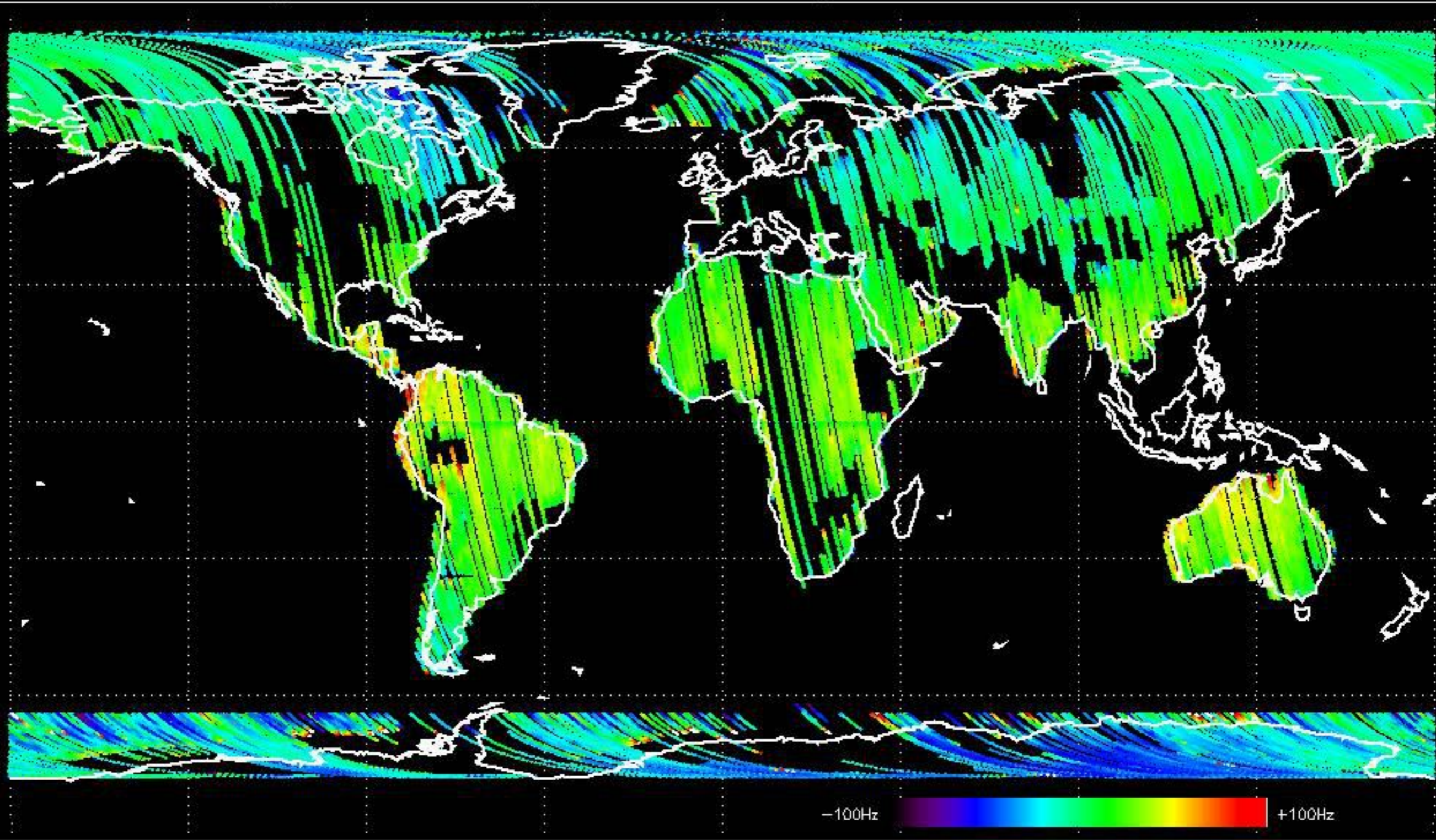


GM1 mode doppler

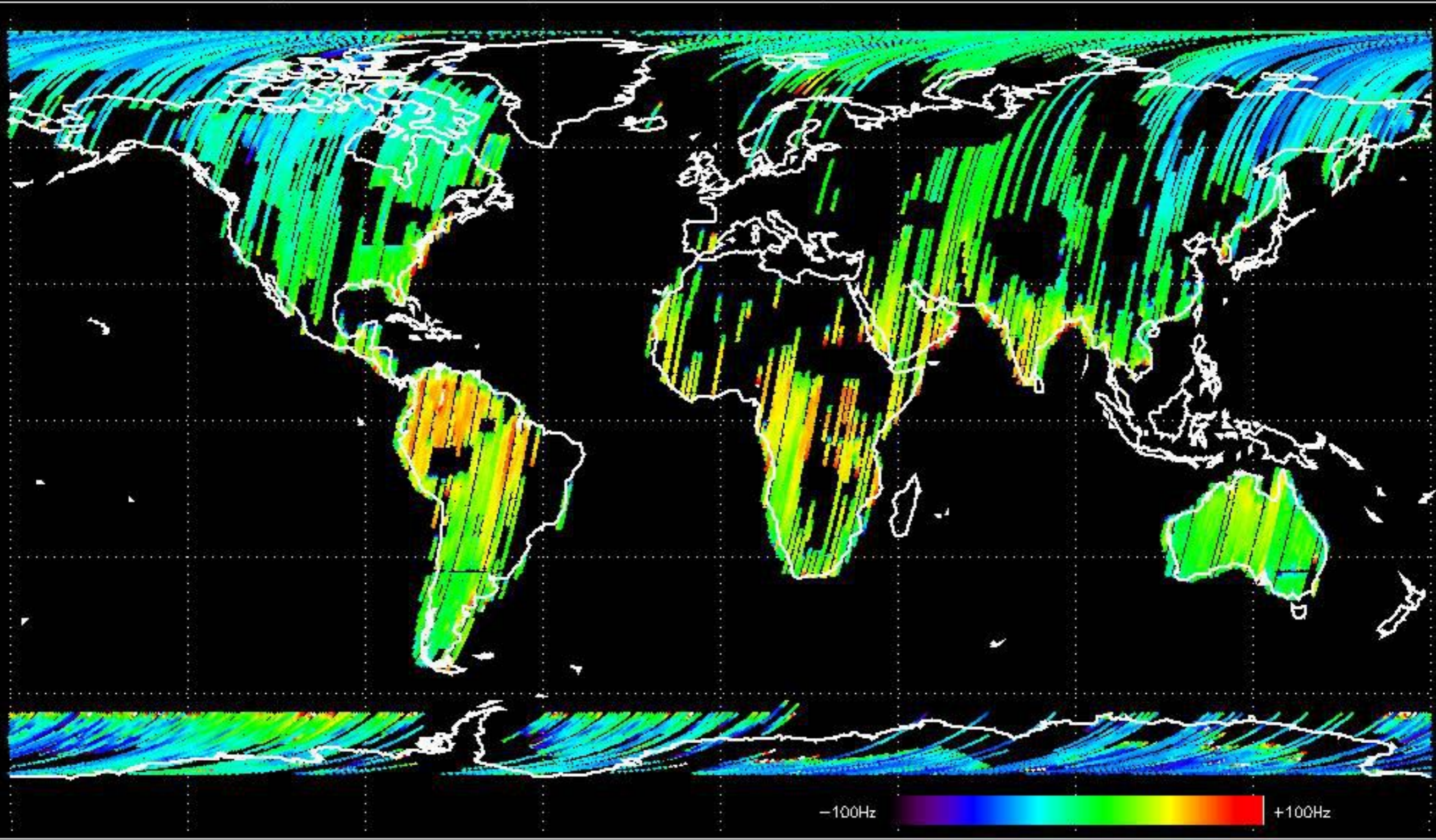




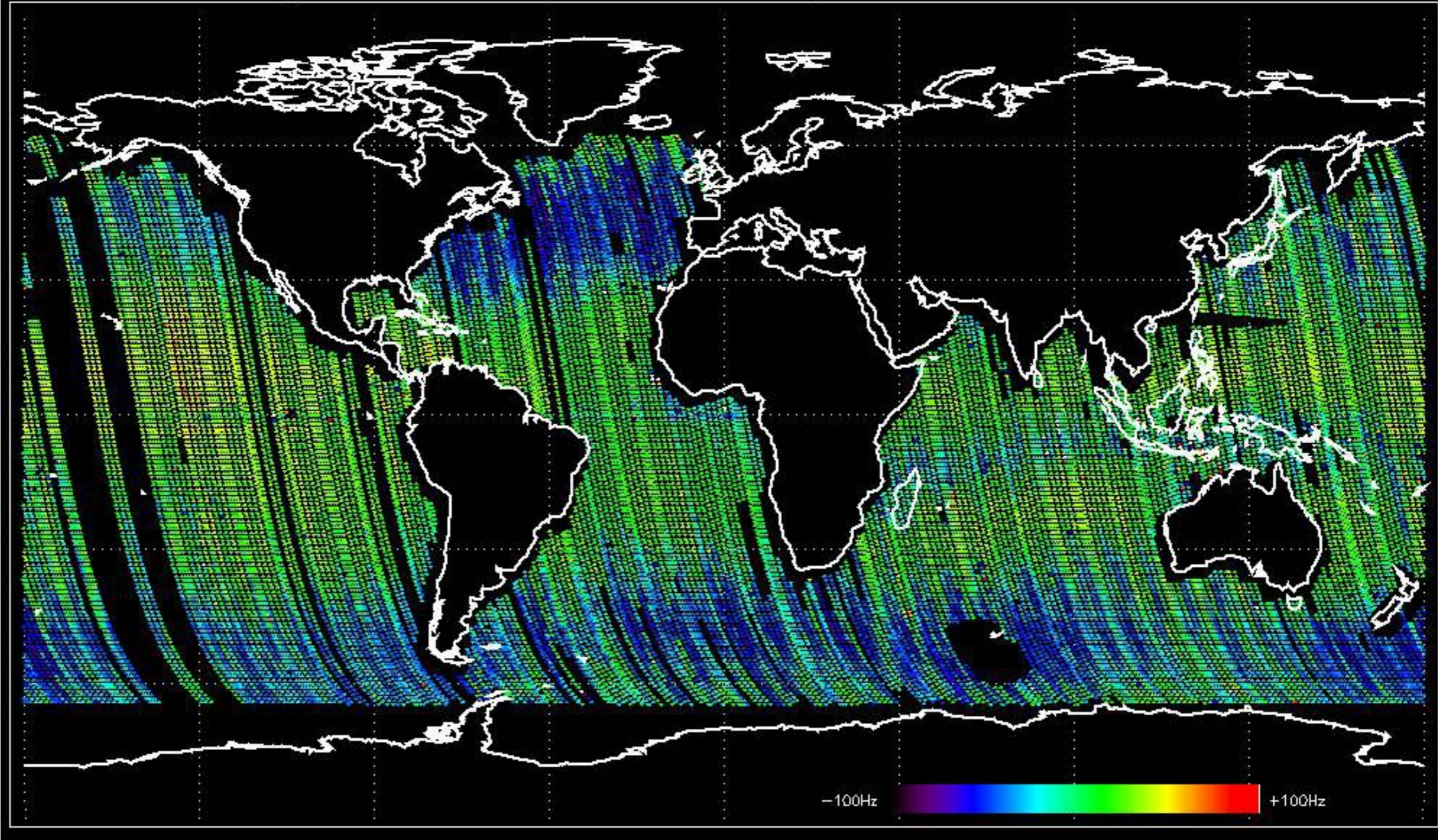
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.417642 Hz



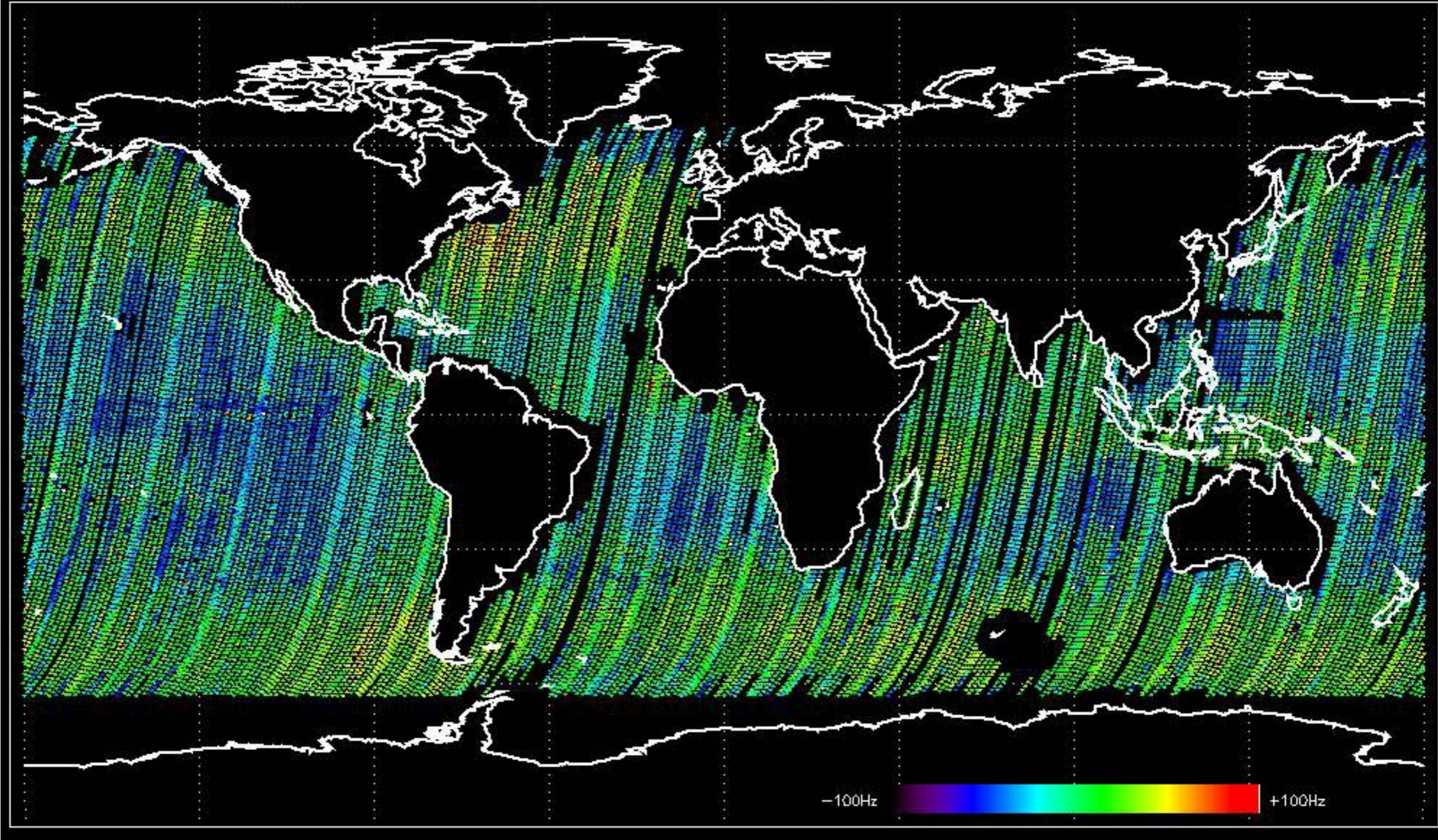
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.004953 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.914690 Hz

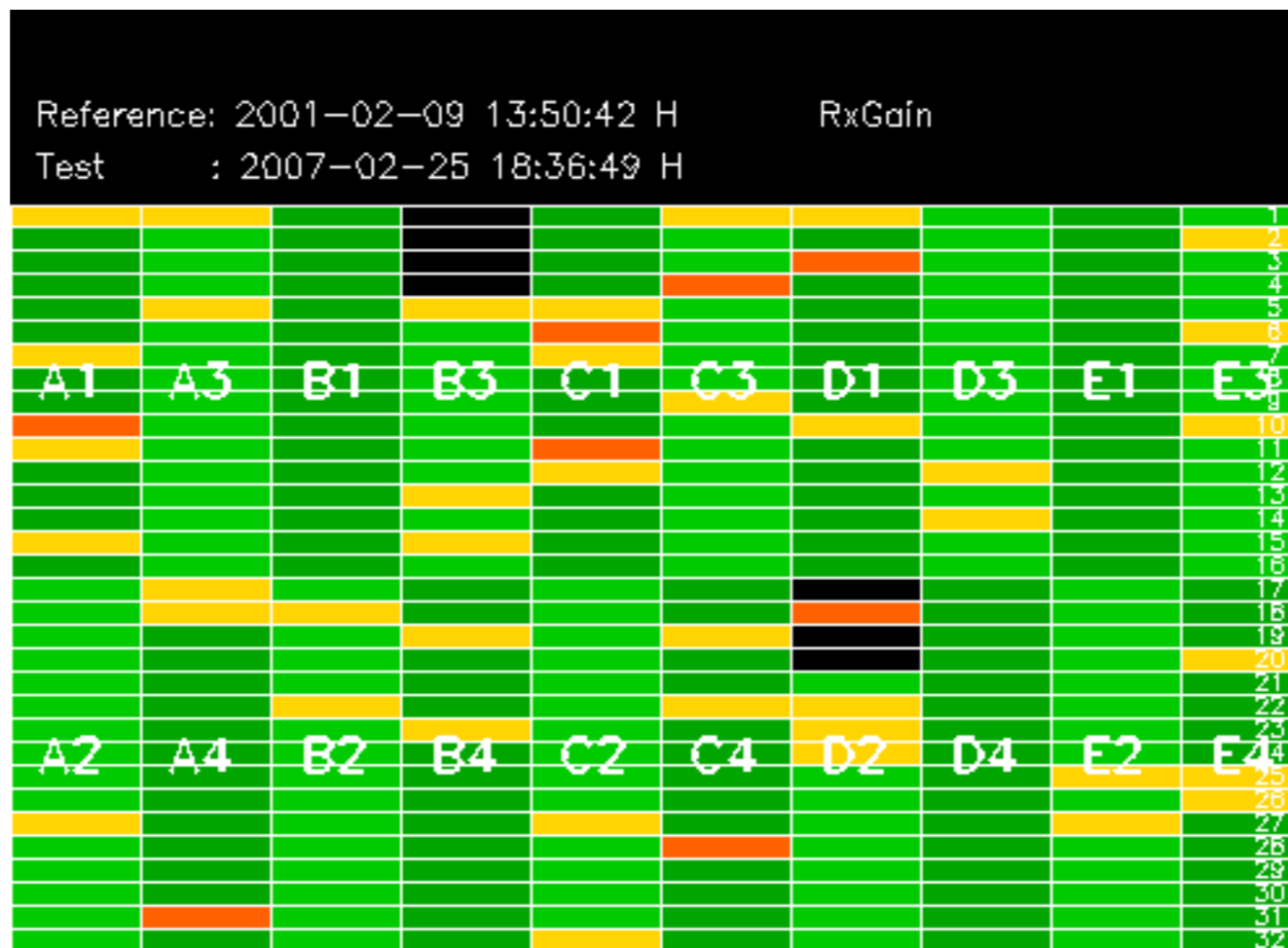


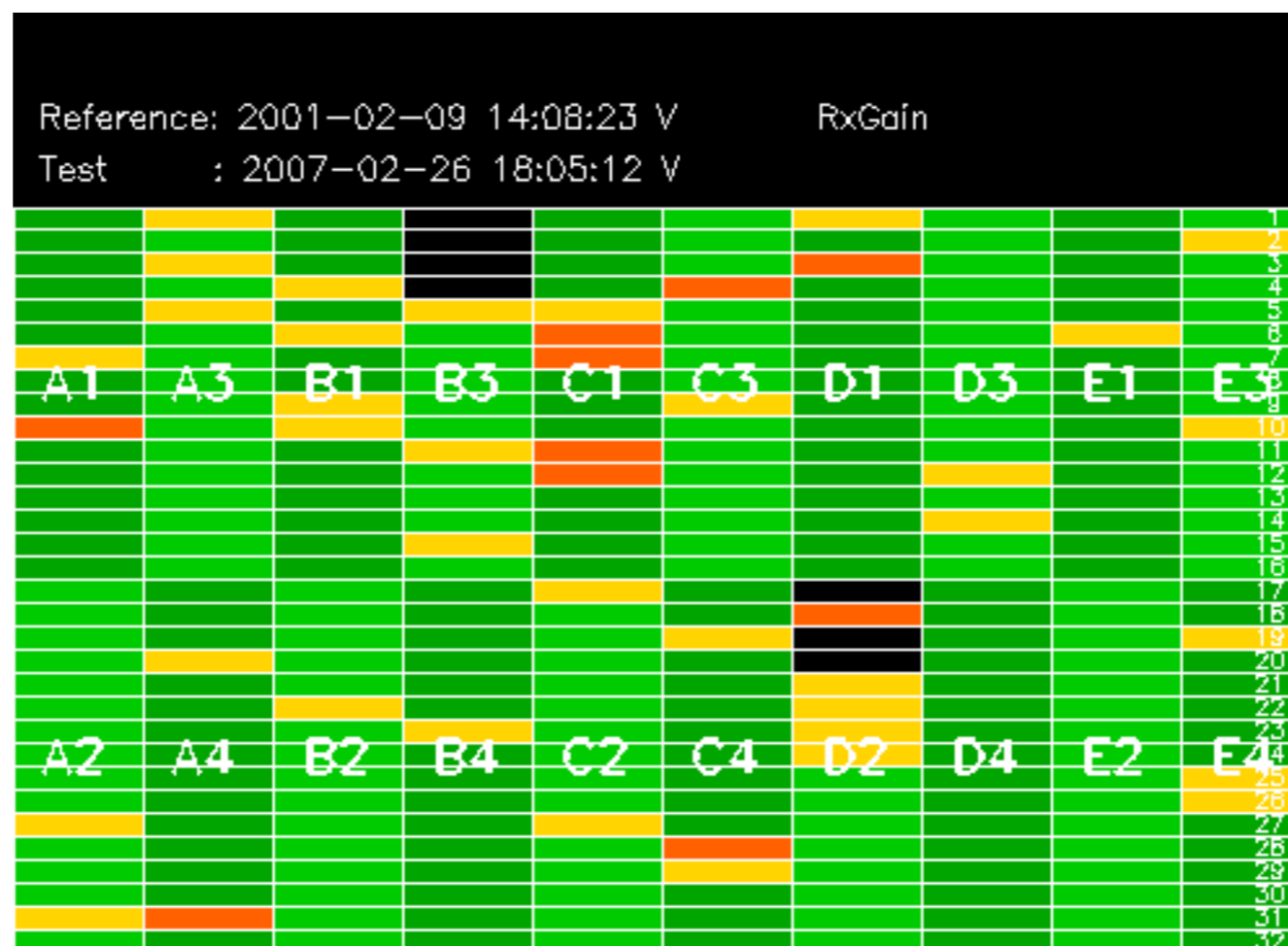
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.276561 Hz

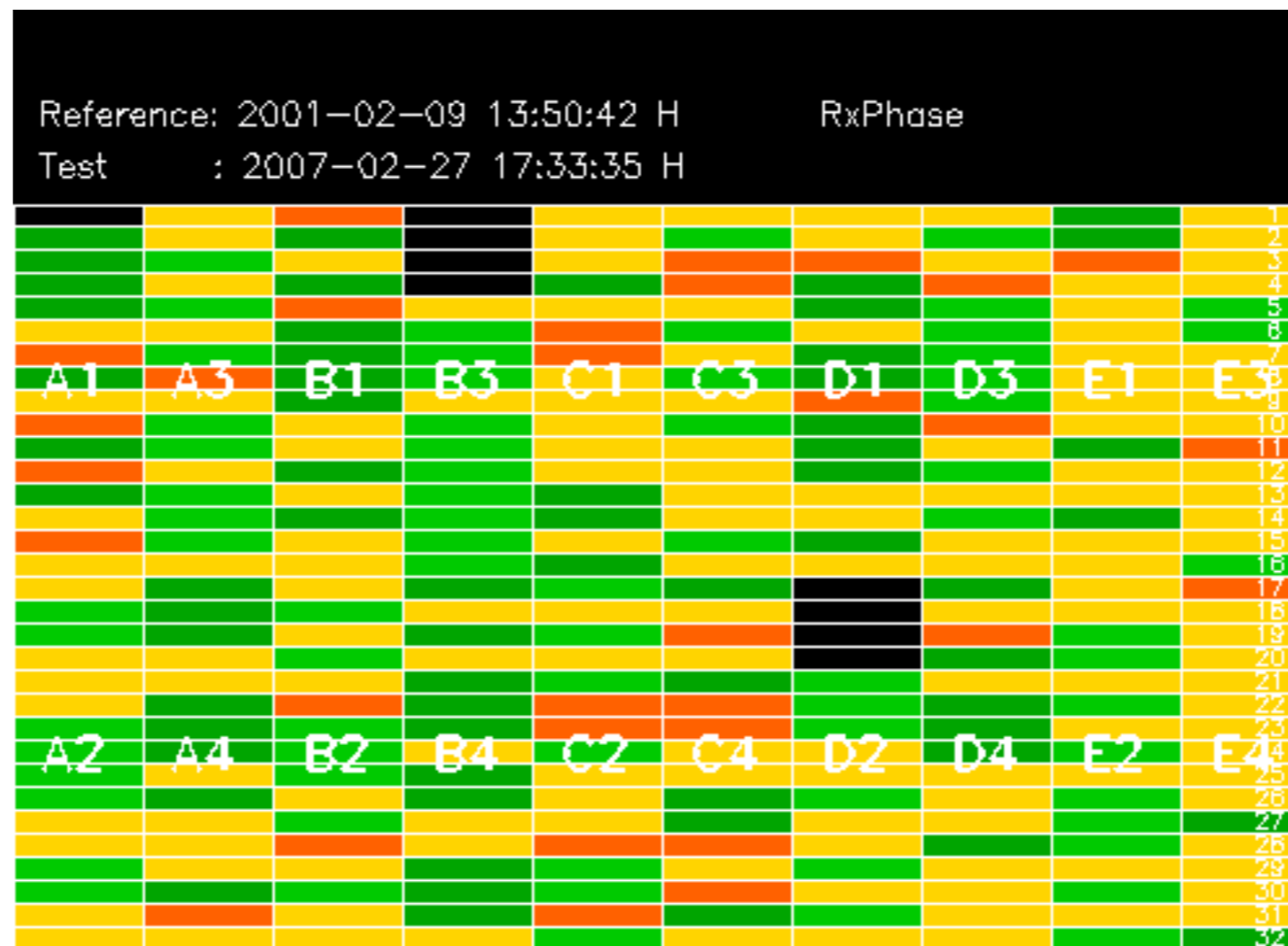


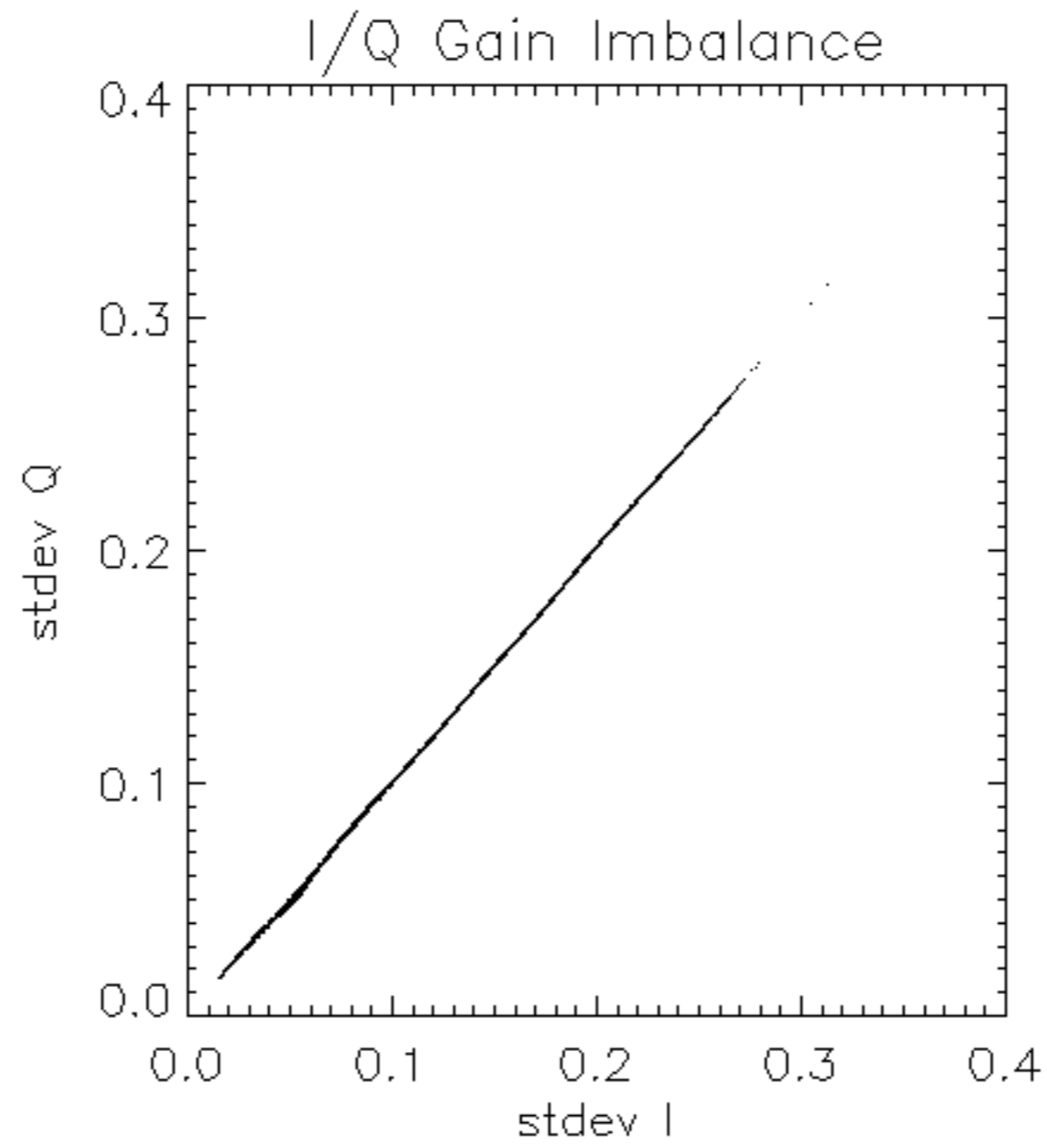
No anomalies observed on available MS products:

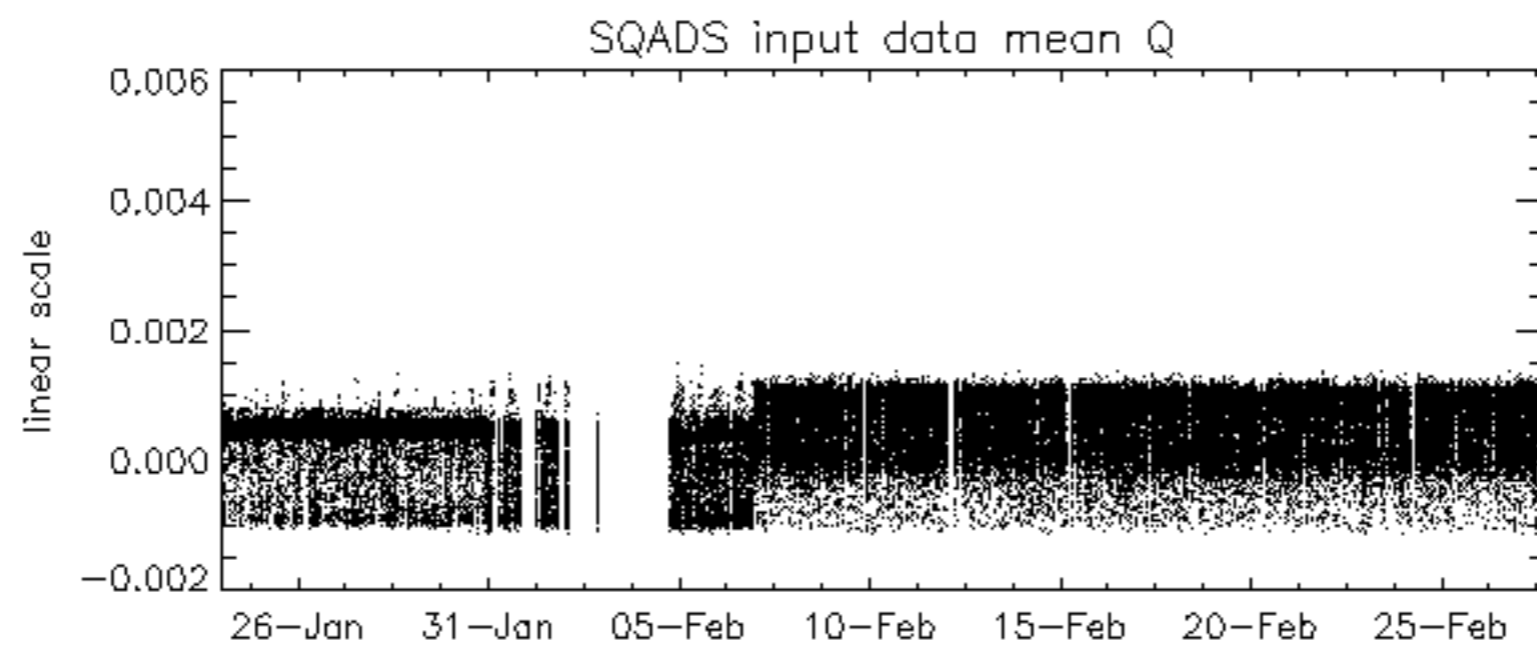
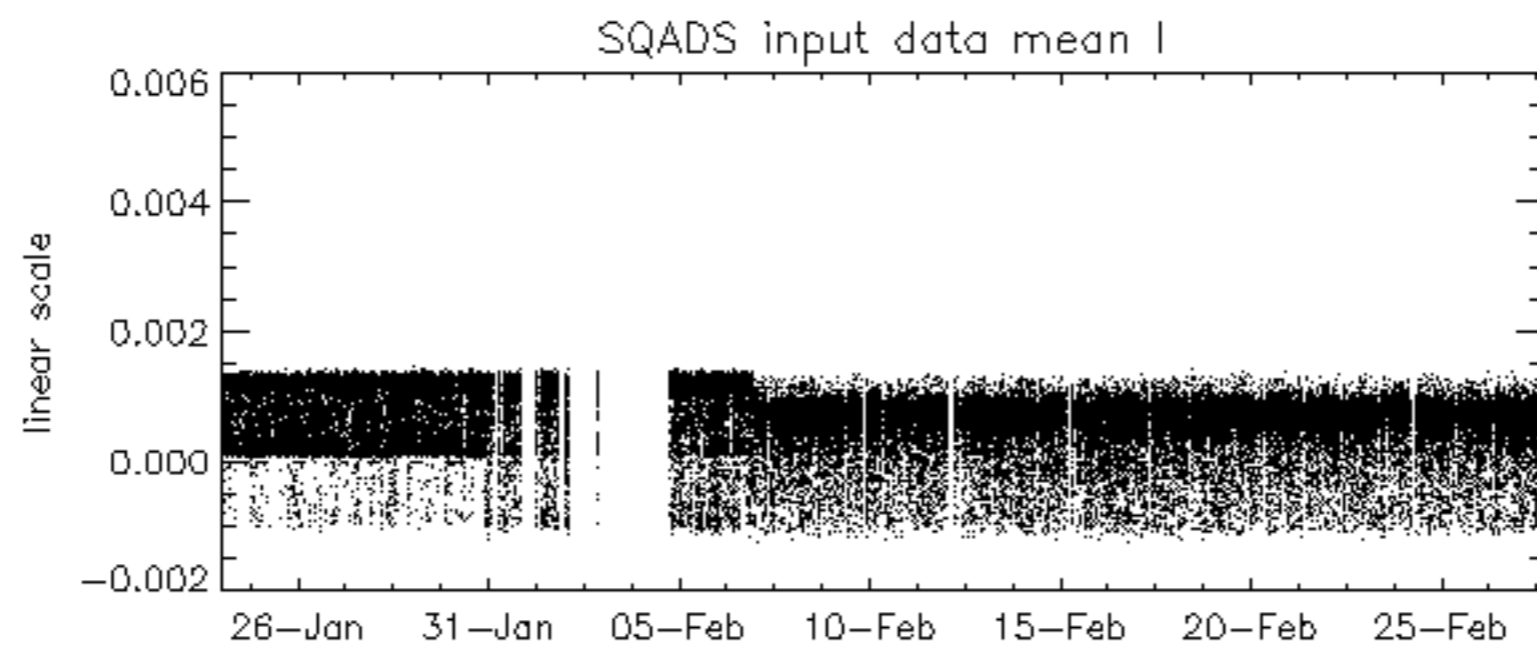
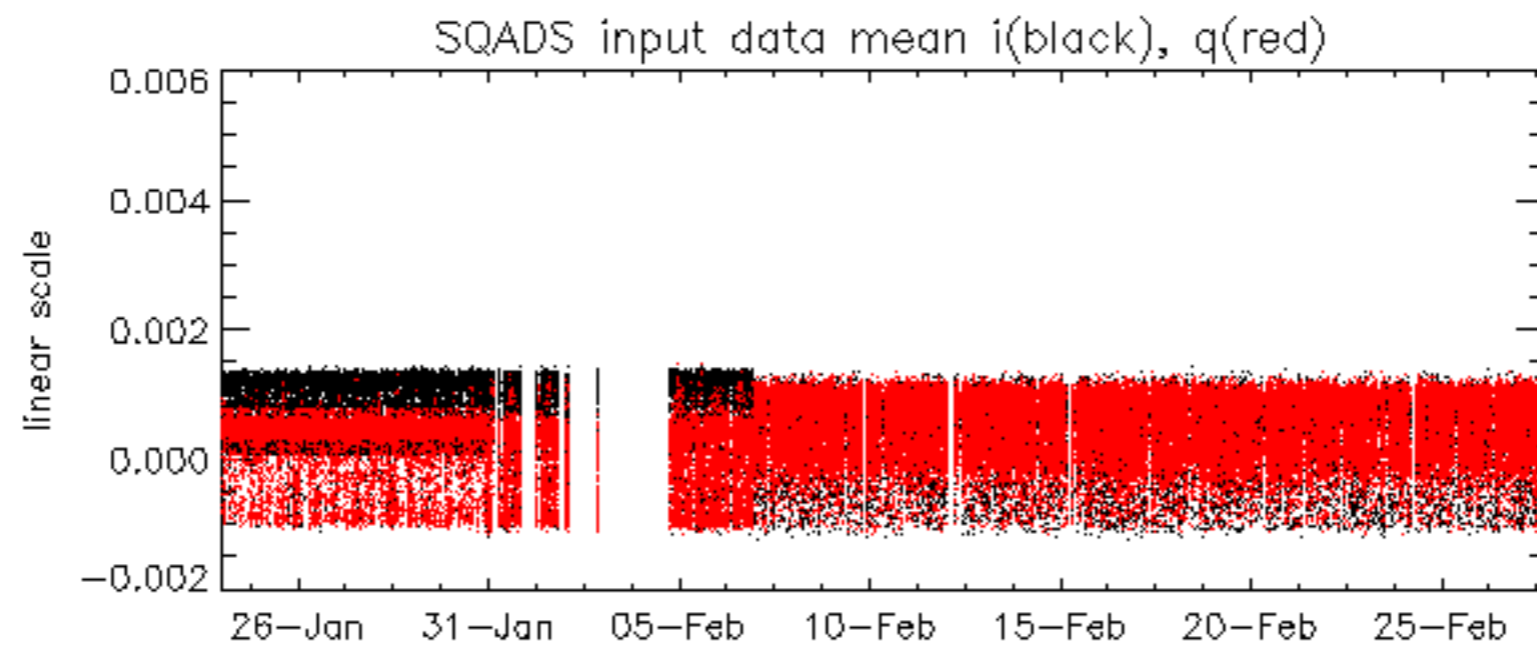
No anomalies observed.

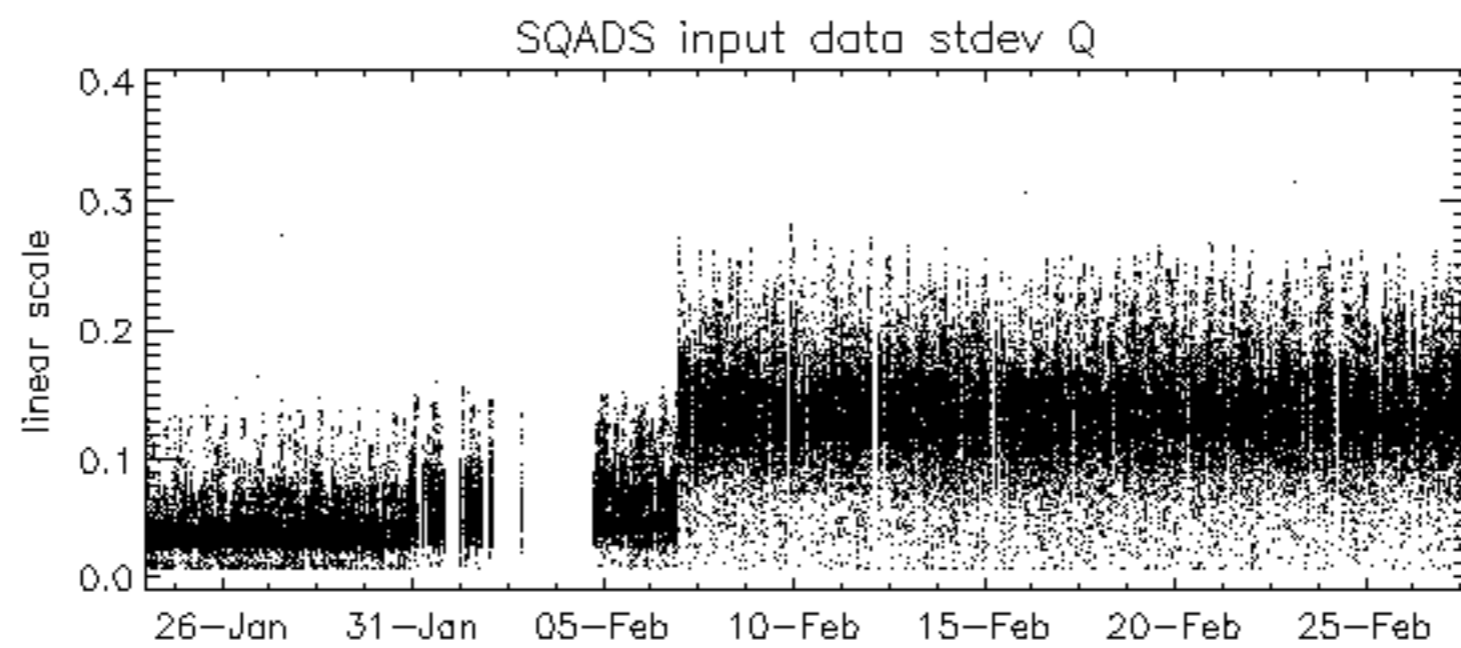
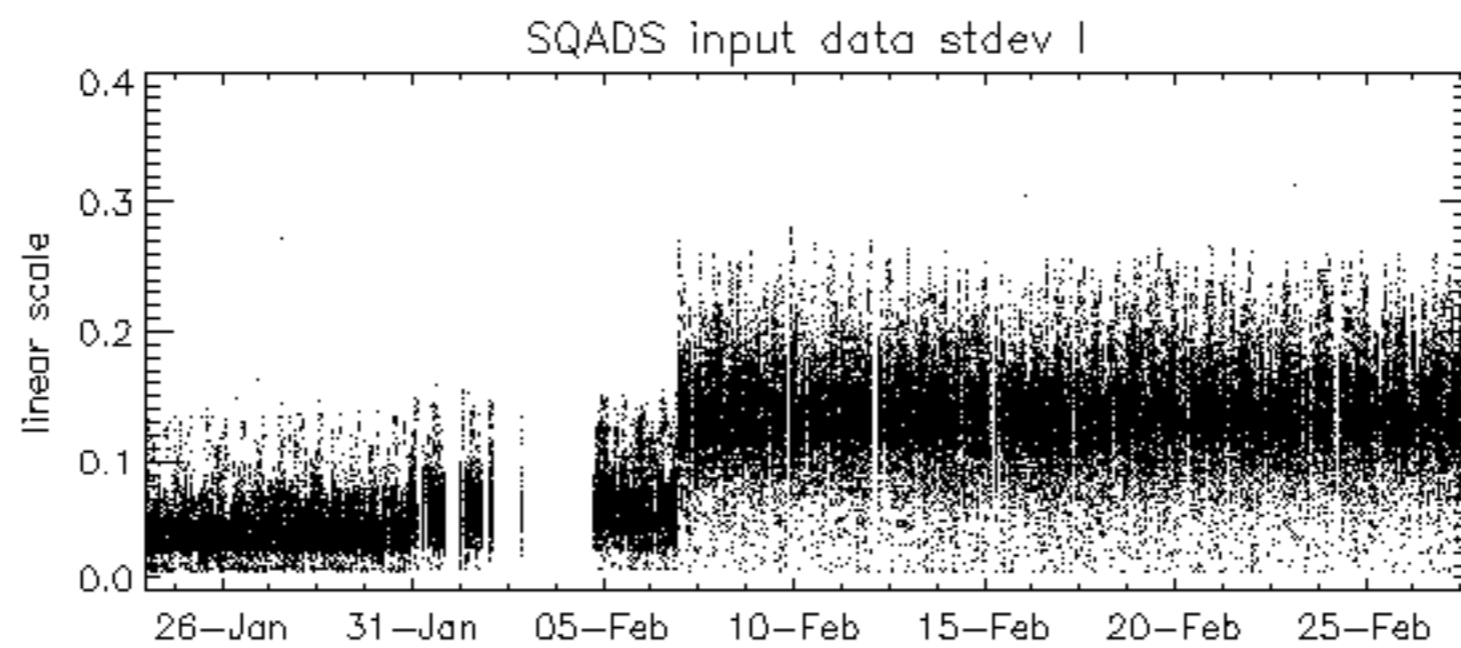
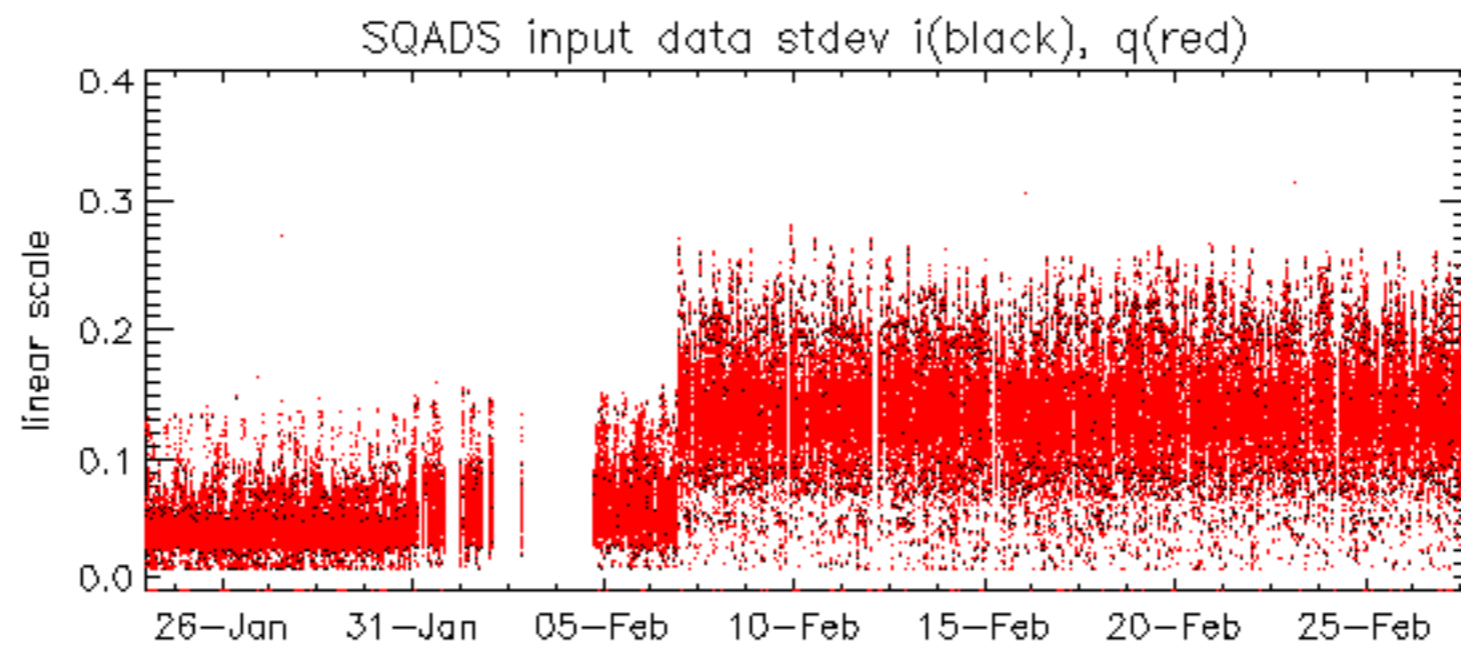








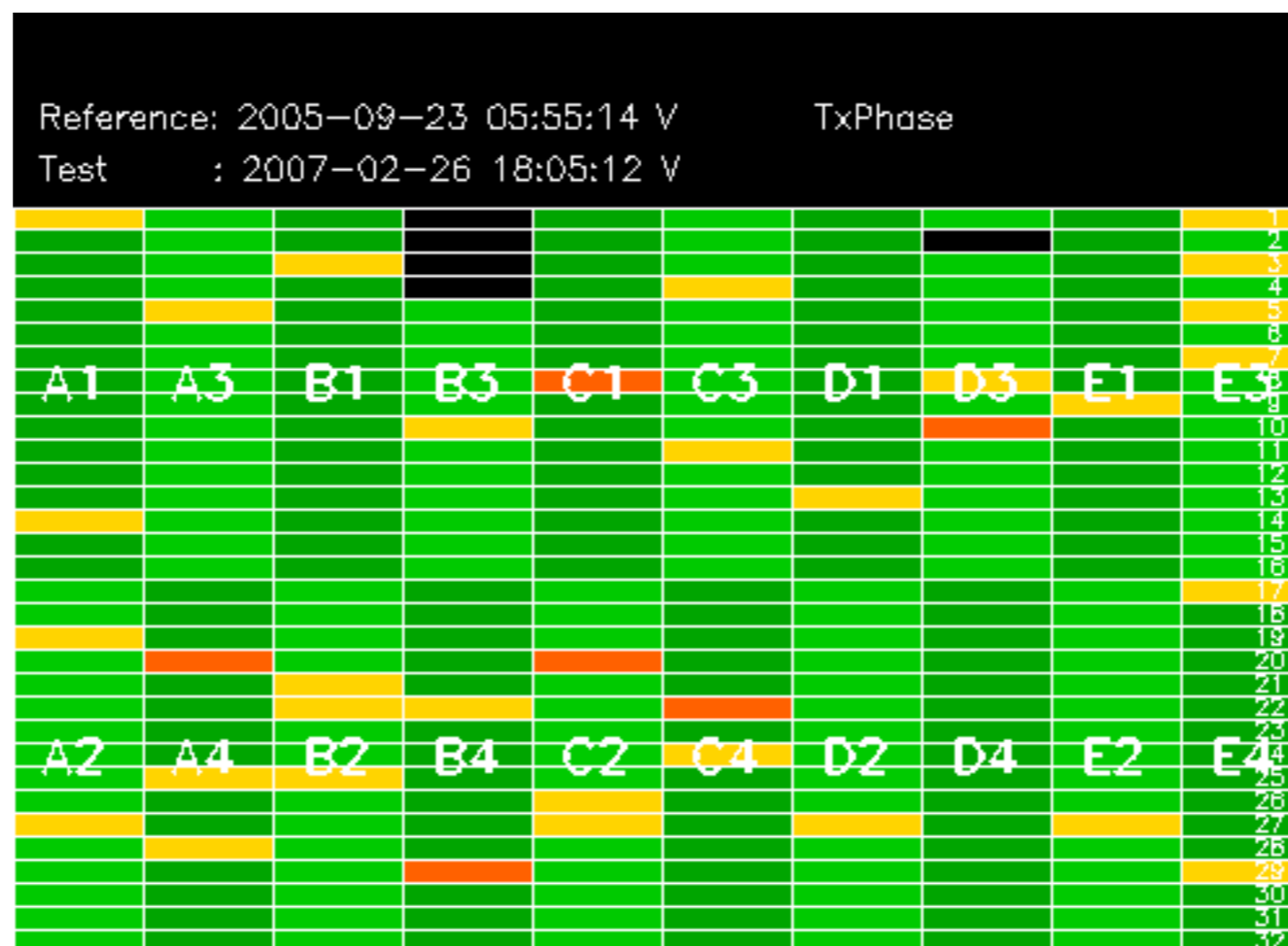




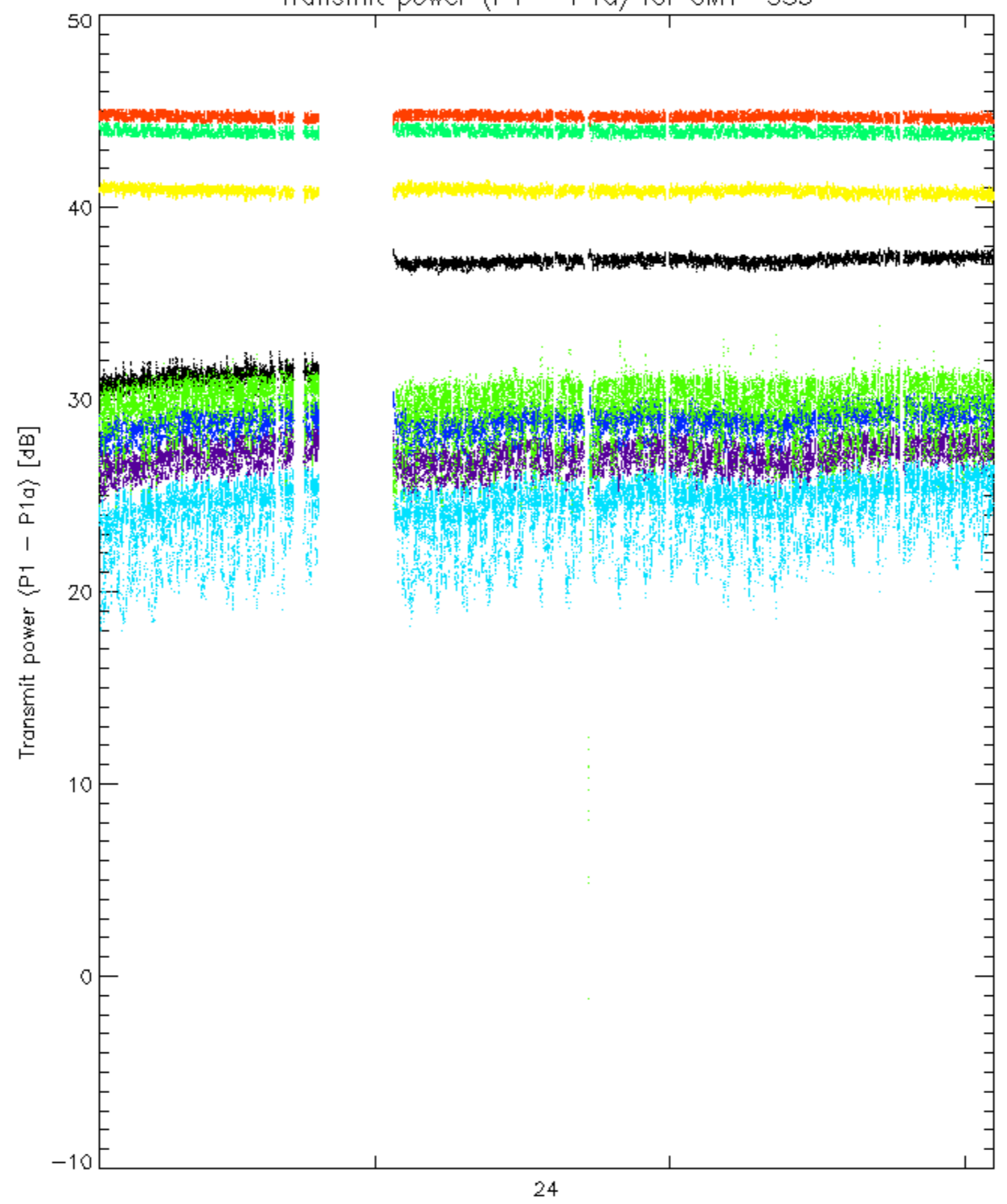
Summary of analysis for the last 3 days 2007022[678]

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

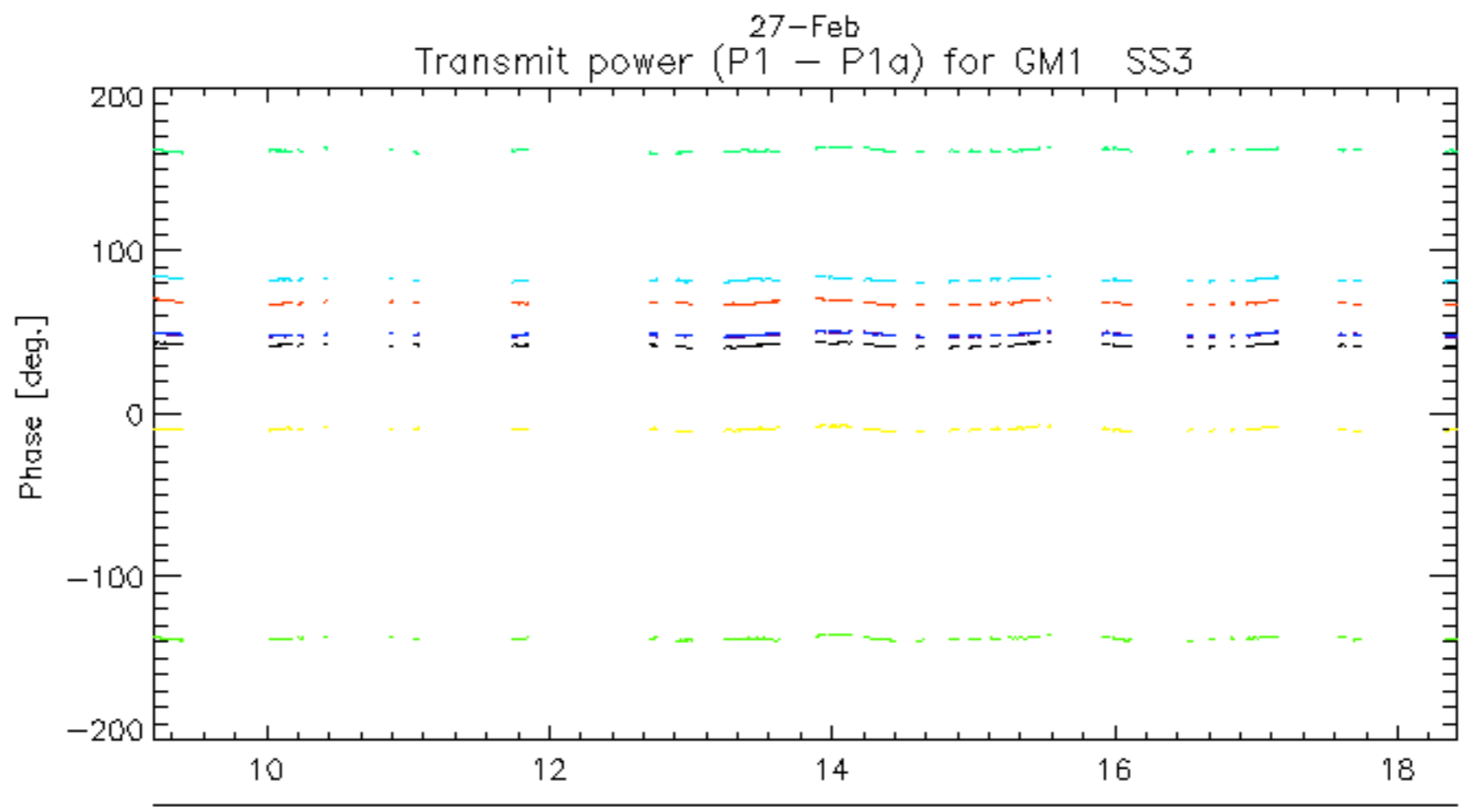
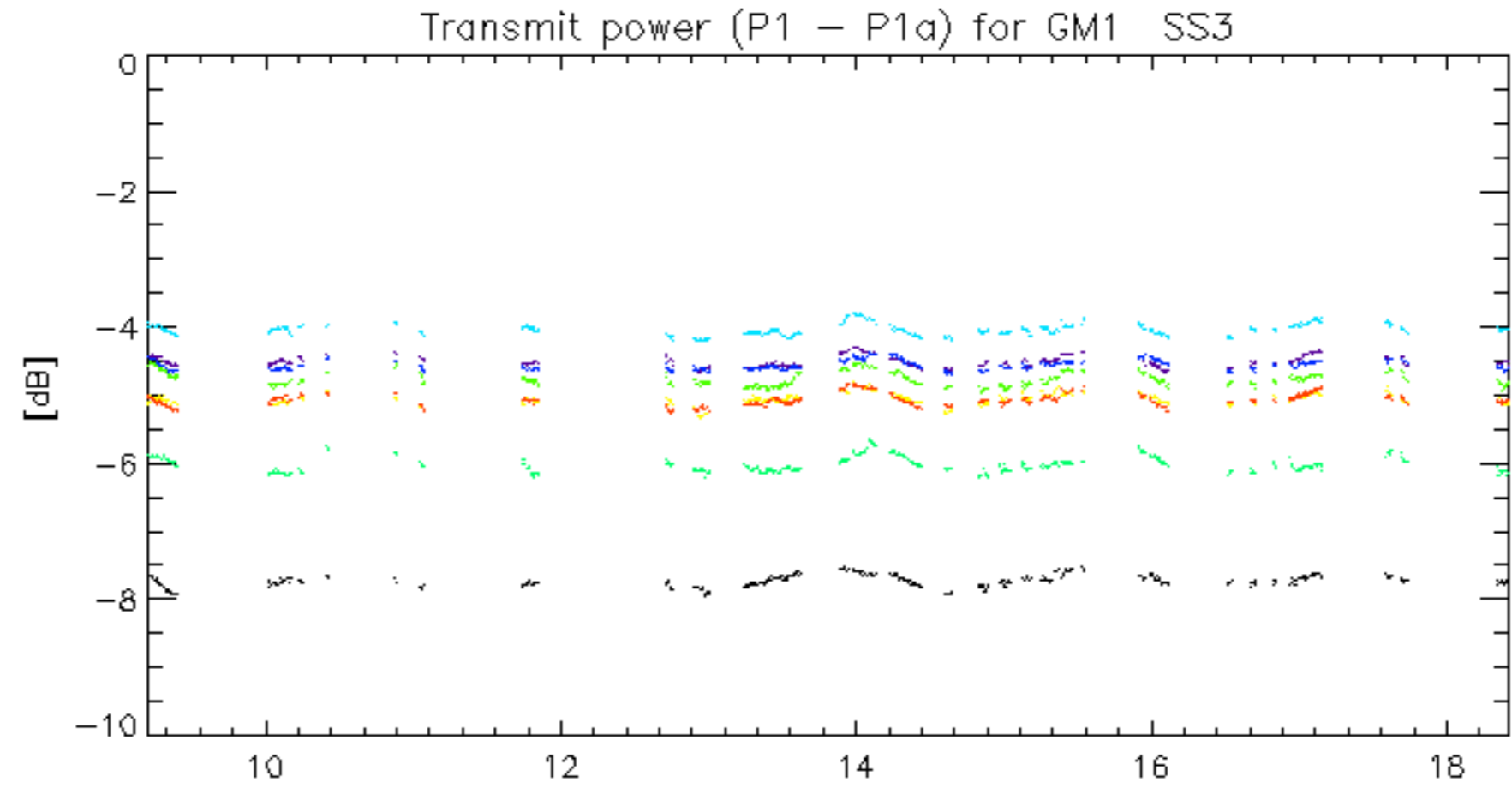
Filename	num_gaps	num_missing_lines
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ASA_WSM_1PNPDE20070226_165904_000002192055_00499_26104_3039.N1	0	74
ASA_WSM_1PNPDE20070226_165904_000002192055_00499_26104_3045.N1	0	74
ASA_WSM_1PNPDE20070227_002822_000002612056_00002_26108_3509.N1	0	27
ASA_WSM_1PNPDK20070227_095010_00000852056_00008_26114_0131.N1	0	41



Transmit power (P1 - P1a) for GM1 SS3

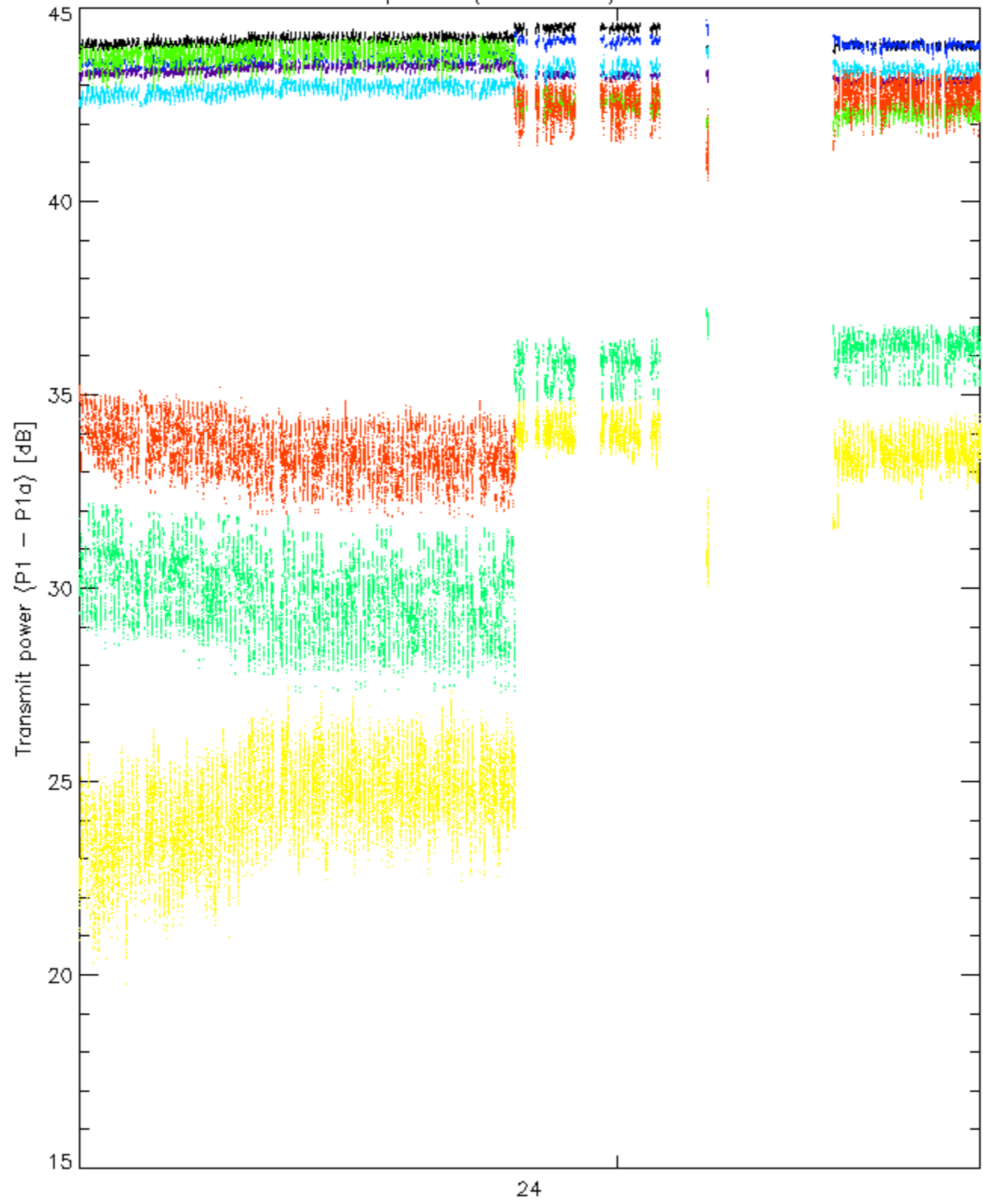


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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

Transmit power (P1 - P1a) for WVS IS4



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

No unavailabilities during the reported period.