

PRELIMINARY REPORT OF 070312

last update on Mon Mar 12 23:57:27 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 2007-03-11 00:00:00 to 2007-03-12 23:57:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	48	95	5	3	47
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	48	95	5	3	47
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	48	95	5	3	47
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	48	95	5	3	47

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	51	58	54	12	68
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	51	58	54	12	68
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	51	58	54	12	68
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	51	58	54	12	68

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	20070312 054045
H	20070311 061222

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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⊗	
⊗	
⊗	

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

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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)
3	P1a	-10.555253	0.278471	0.241085
7	P1a	-10.183148	0.200886	-0.128595
11	P1a	-10.844859	0.109722	-0.075246
15	P1a	-12.148061	1.697335	-0.756296
19	P1a	-14.703698	1.239125	0.681608
22	P1a	-18.492378	8.196556	1.890836
26	P1a	-15.675851	0.479637	-0.264588
30	P1a	-21.096962	7.894486	-1.693019

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.368407	0.080542	0.041007
7	P1	-2.638912	0.050222	-0.099965
11	P1	-3.381503	0.151705	-0.210871
15	P1	-5.069111	1.524733	-0.778851
19	P1	-3.332972	0.101103	0.172344
22	P1	-5.475420	0.161842	-0.228336
26	P1	-5.101477	0.796450	0.544348
30	P1	-5.495071	0.062792	-0.061172

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.090534	0.083807	-0.002602
7	P2	-21.776897	0.129725	0.191096
11	P2	-10.718633	0.137101	0.200164
15	P2	-5.088079	0.076541	0.035006
19	P2	-7.208987	0.076431	0.063982
22	P2	-8.365320	0.075223	0.009675

26	P2	-24.103123	0.120100	0.102880
30	P2	-21.639648	0.063675	0.087929

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.223466	0.007615	0.018714
7	P3	-8.223466	0.007615	0.018714
11	P3	-8.223466	0.007615	0.018714
15	P3	-8.223466	0.007615	0.018714
19	P3	-8.223466	0.007615	0.018714
22	P3	-8.223466	0.007615	0.018714
26	P3	-8.223466	0.007615	0.018714
30	P3	-8.223466	0.007615	0.018714

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	-11.074246	0.049429	-0.005315
7	P1a	-10.061506	0.130415	-0.037120
11	P1a	-10.654383	0.063327	-0.055896
15	P1a	-10.915135	0.136696	-0.129000
19	P1a	-15.709879	0.069513	0.084960
22	P1a	-20.864103	1.174510	-0.156224
26	P1a	-15.314239	0.272703	0.232244
30	P1a	-18.388184	0.343155	-0.137118

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.384089	0.038076	-0.056830
7	P1	-2.428870	0.020748	0.015531

11	P1	-2.915073	0.018858	-0.020490
15	P1	-3.834127	0.039183	-0.039892
19	P1	-3.551689	0.011372	-0.000397
22	P1	-5.037278	0.023523	-0.027961
26	P1	-5.967754	0.025911	0.050771
30	P1	-5.278093	0.021891	0.016901

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.094603	0.033093	0.013745
7	P2	-21.953533	0.056217	0.067746
11	P2	-10.644947	0.031178	0.047414
15	P2	-4.815403	0.027598	0.003785
19	P2	-6.806487	0.029905	0.018735
22	P2	-8.092649	0.033512	0.083227
26	P2	-24.266878	0.036549	-0.059480
30	P2	-21.741556	0.038293	0.073659

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045302	0.003776	-0.016449
7	P3	-8.045342	0.003779	-0.016161
11	P3	-8.045445	0.003780	-0.016346
15	P3	-8.045376	0.003795	-0.016627
19	P3	-8.045411	0.003775	-0.016426
22	P3	-8.045412	0.003776	-0.016425
26	P3	-8.045251	0.003778	-0.016373
30	P3	-8.045358	0.003790	-0.016286

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	0.000636485
	stdev	2.61371e-07
MEAN Q	mean	0.000348924
	stdev	2.77043e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.106279
	stdev	0.00243920
STDEV Q	mean	0.106270
	stdev	0.00249633



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007031[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
ASA_IMM_1PNPDE20070311_004054_000000622056_00174_26280_8589.N1	1	0
ASA_WSM_1PNPDE20070310_172247_000001772056_00170_26276_8196.N1	0	2

ASA_WSM_1PNPDE20070311_151024_000002872056_00183_26289_9475.N1	0	52
ASA_WSM_1PNPDE20070312_033052_000001472056_00190_26296_0216.N1	0	1
ASA_WSM_1PNPDK20070310_140332_000000862056_00168_26274_2612.N1	0	15
ASA_WSM_1PNPDK20070311_220425_000001762056_00187_26293_4171.N1	0	10
ASA_WSM_1PNPDK20070311_235015_000001842056_00188_26294_4185.N1	0	4
ASA_APM_1PNPDE20070311_032625_000000402056_00176_26282_8971.N1	13	0



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

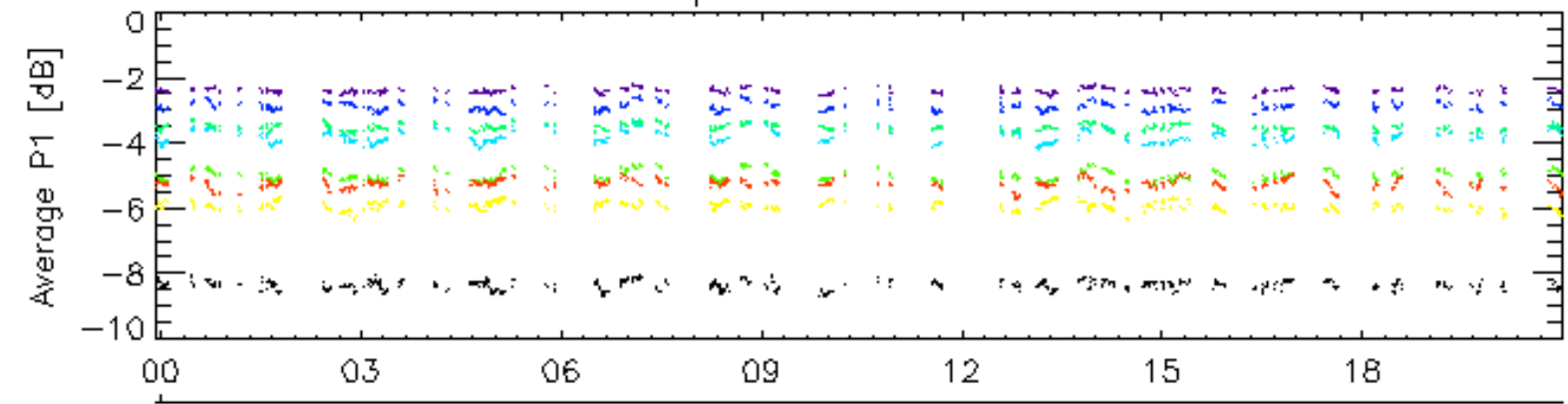
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

Acsending

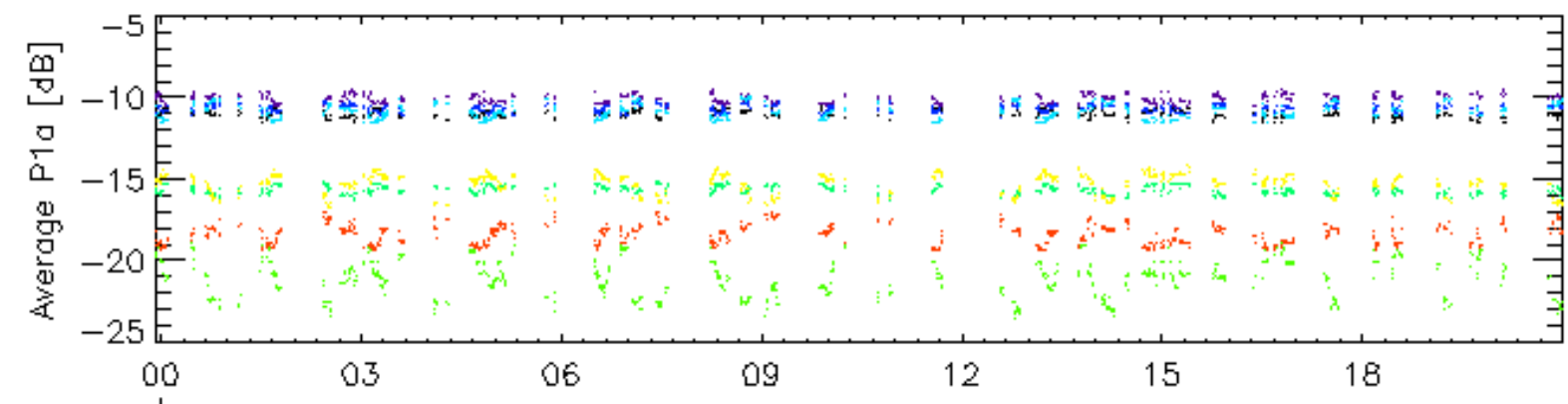
Descending

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

Cal pulses for GM1 SS3

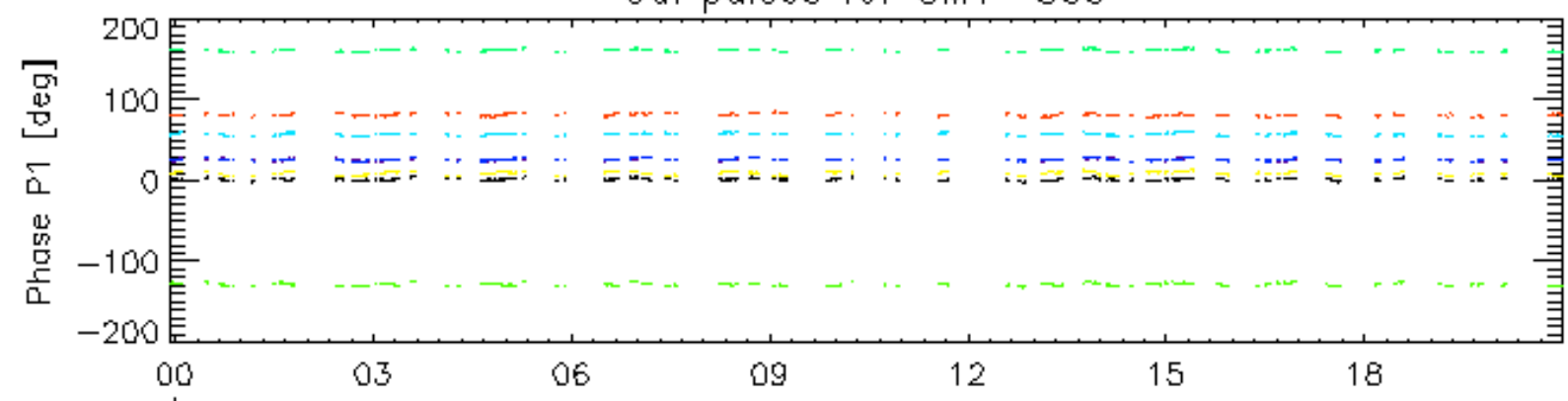


12-Mar

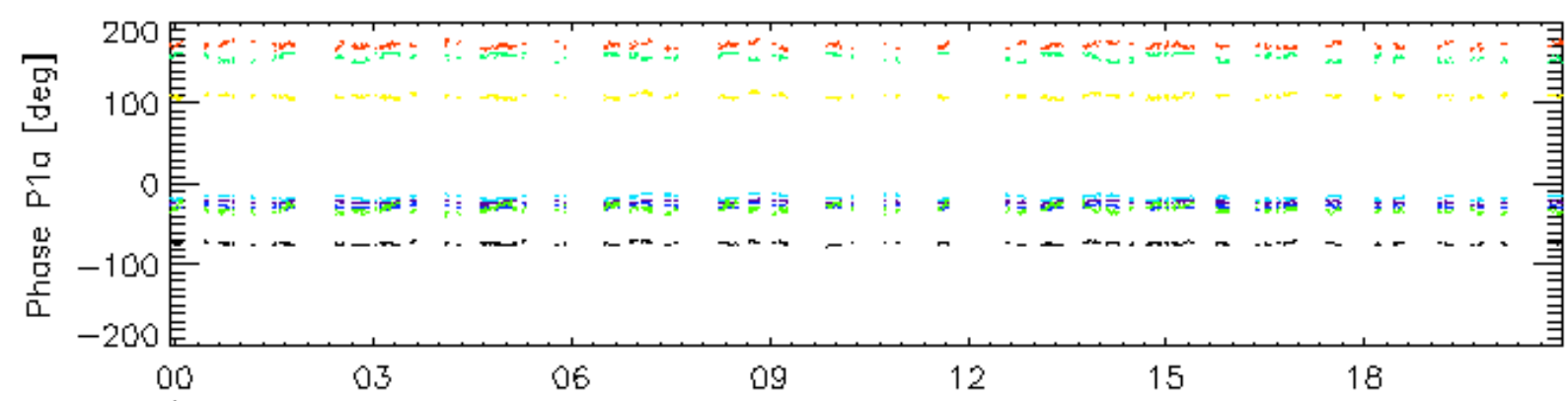


12-Mar

Cal pulses for GM1 SS3



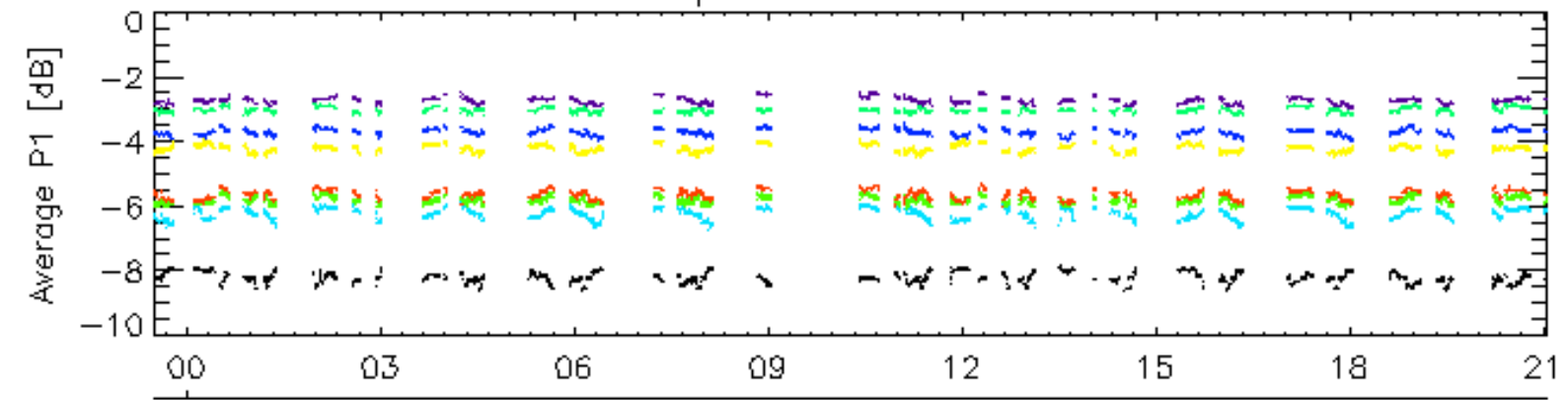
12-Mar



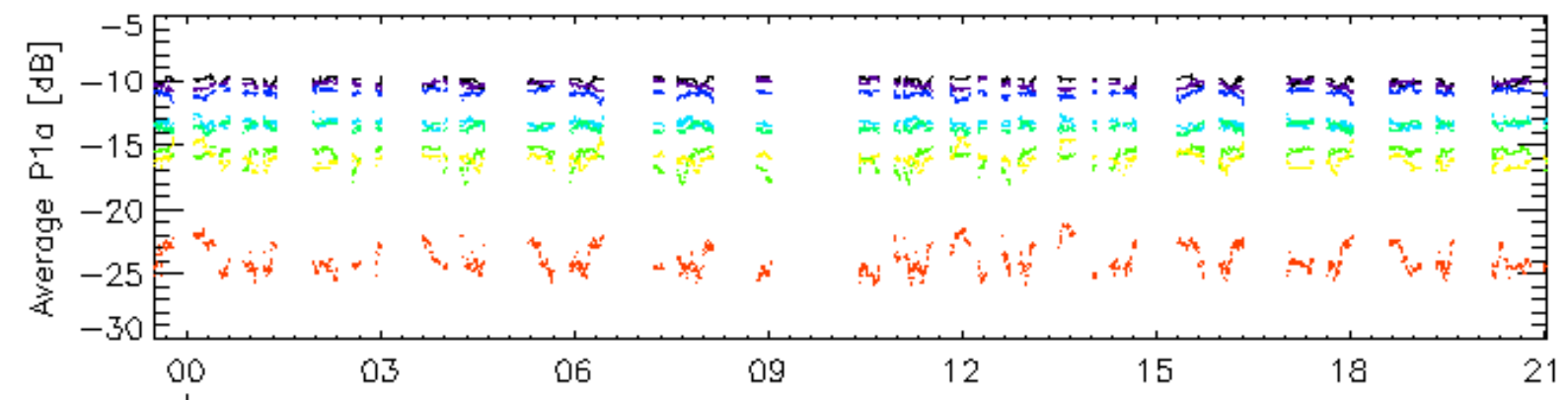
12-Mar

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

Cal pulses for WVS IS4

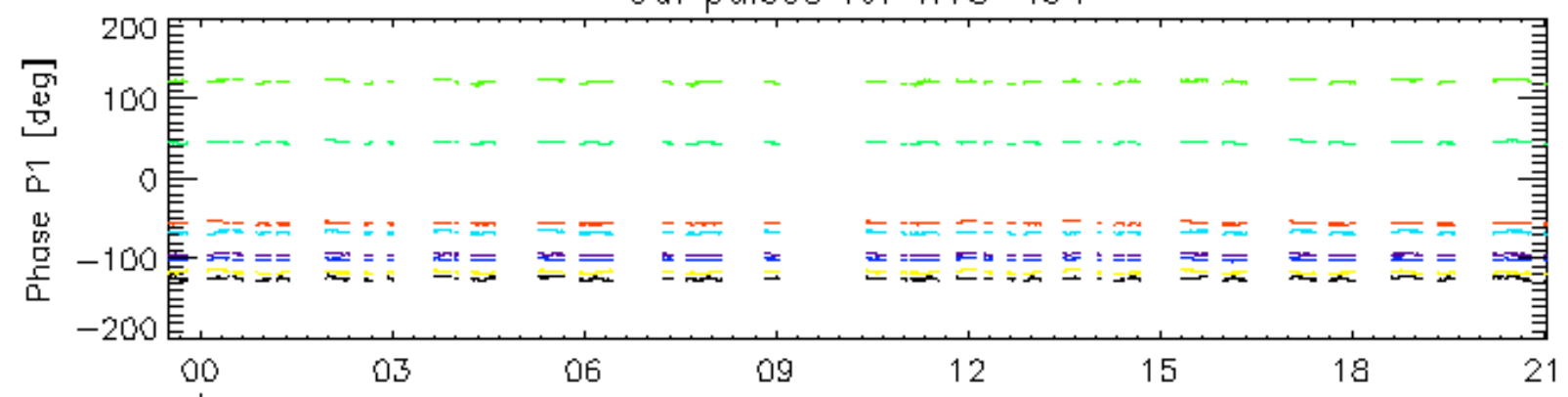


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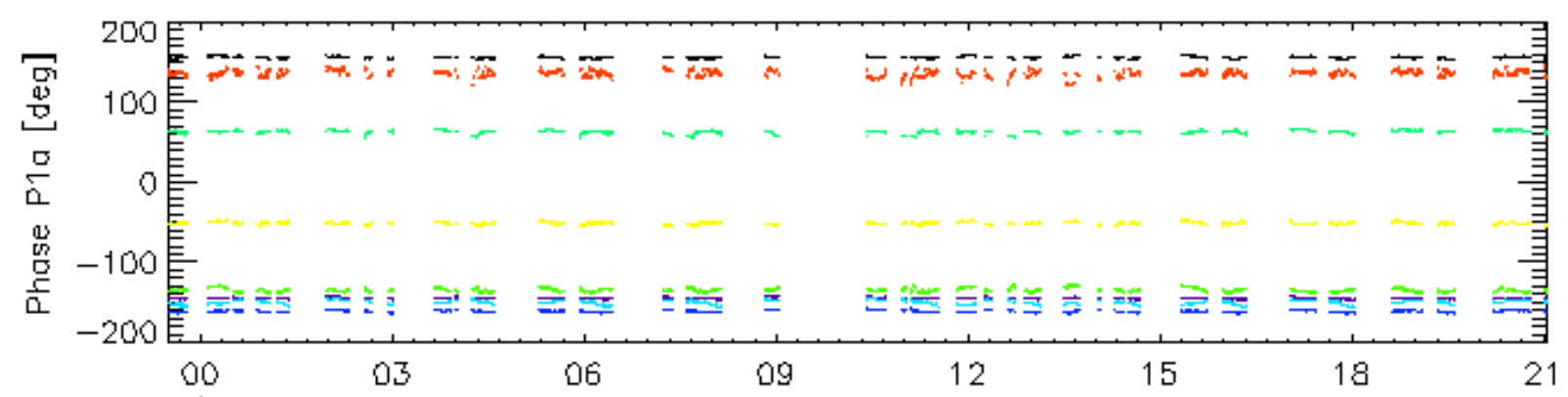


12-Mar

Cal pulses for WVS IS4



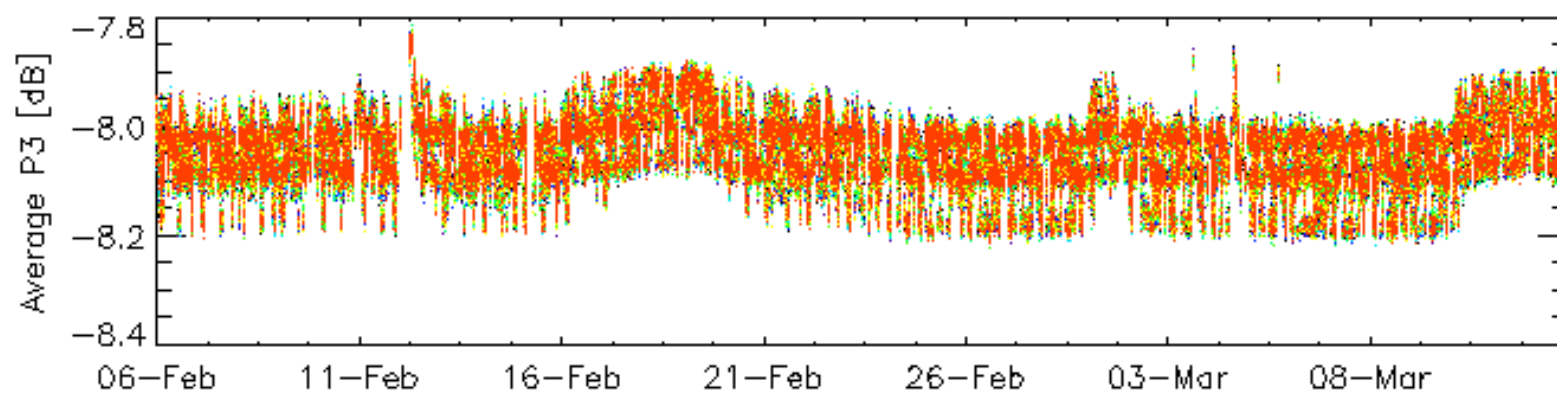
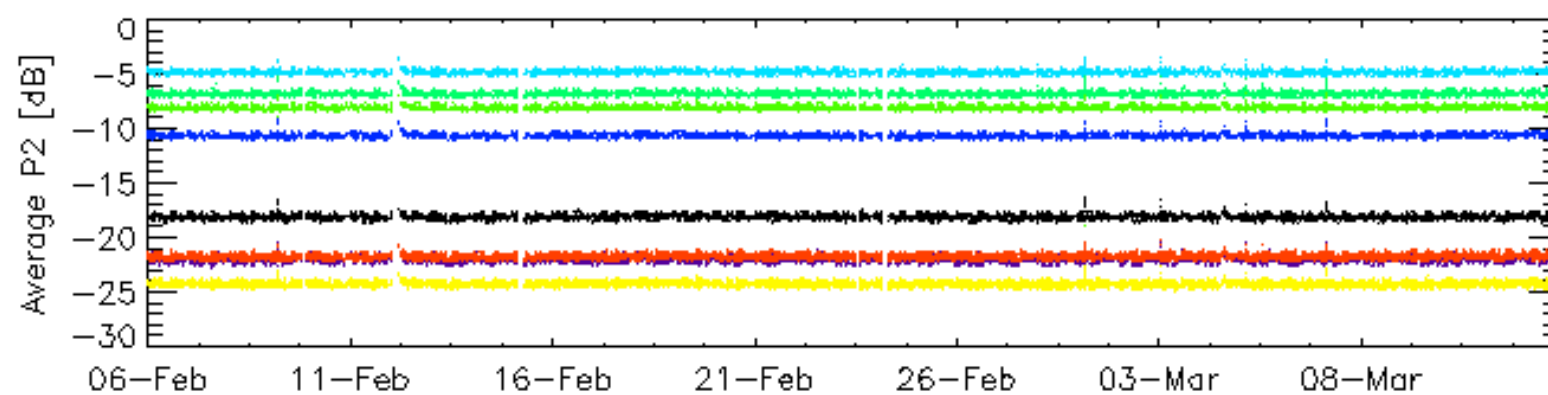
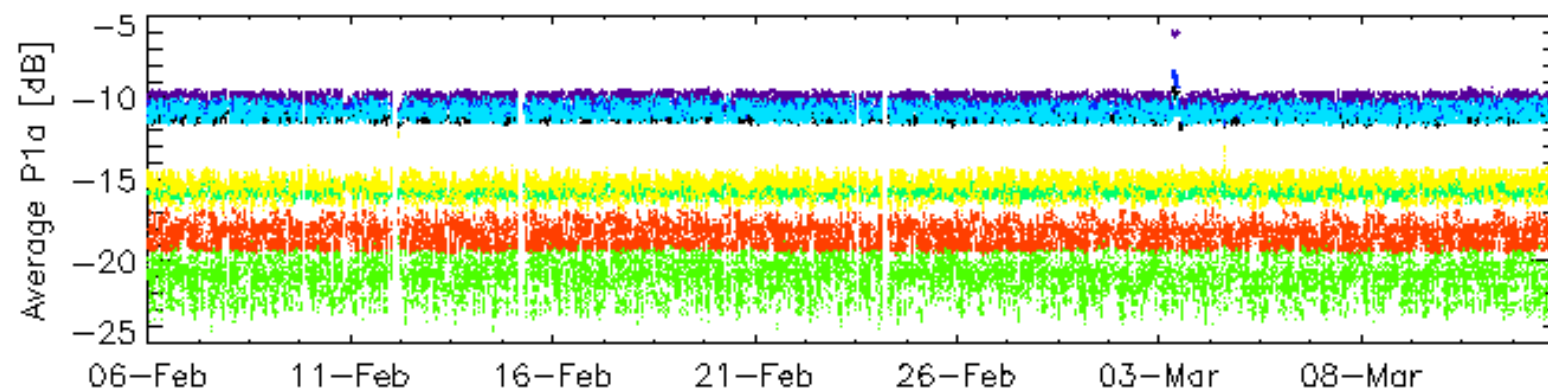
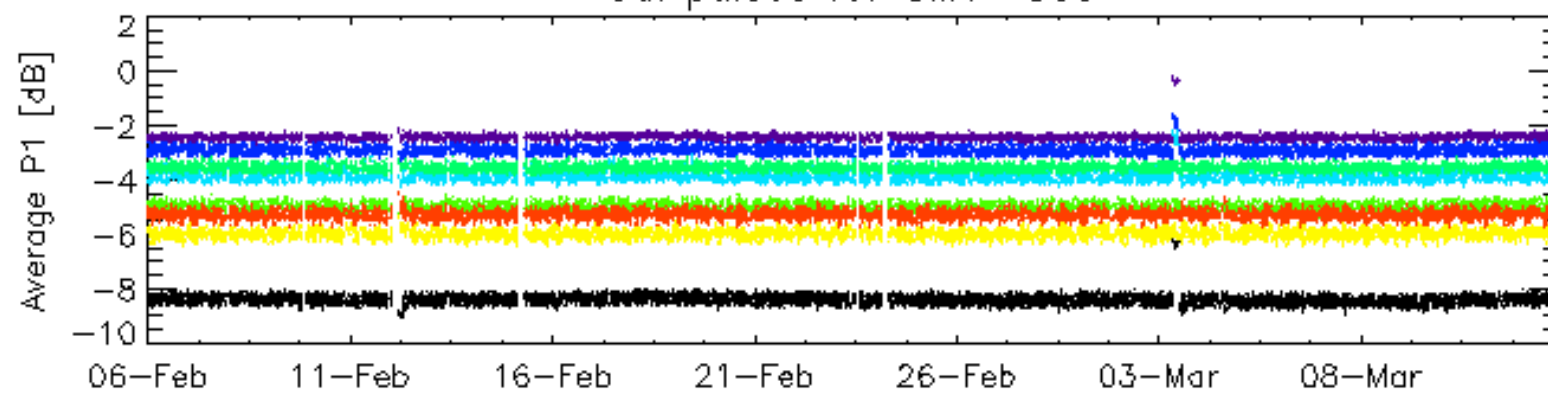
12-Mar



12-Mar

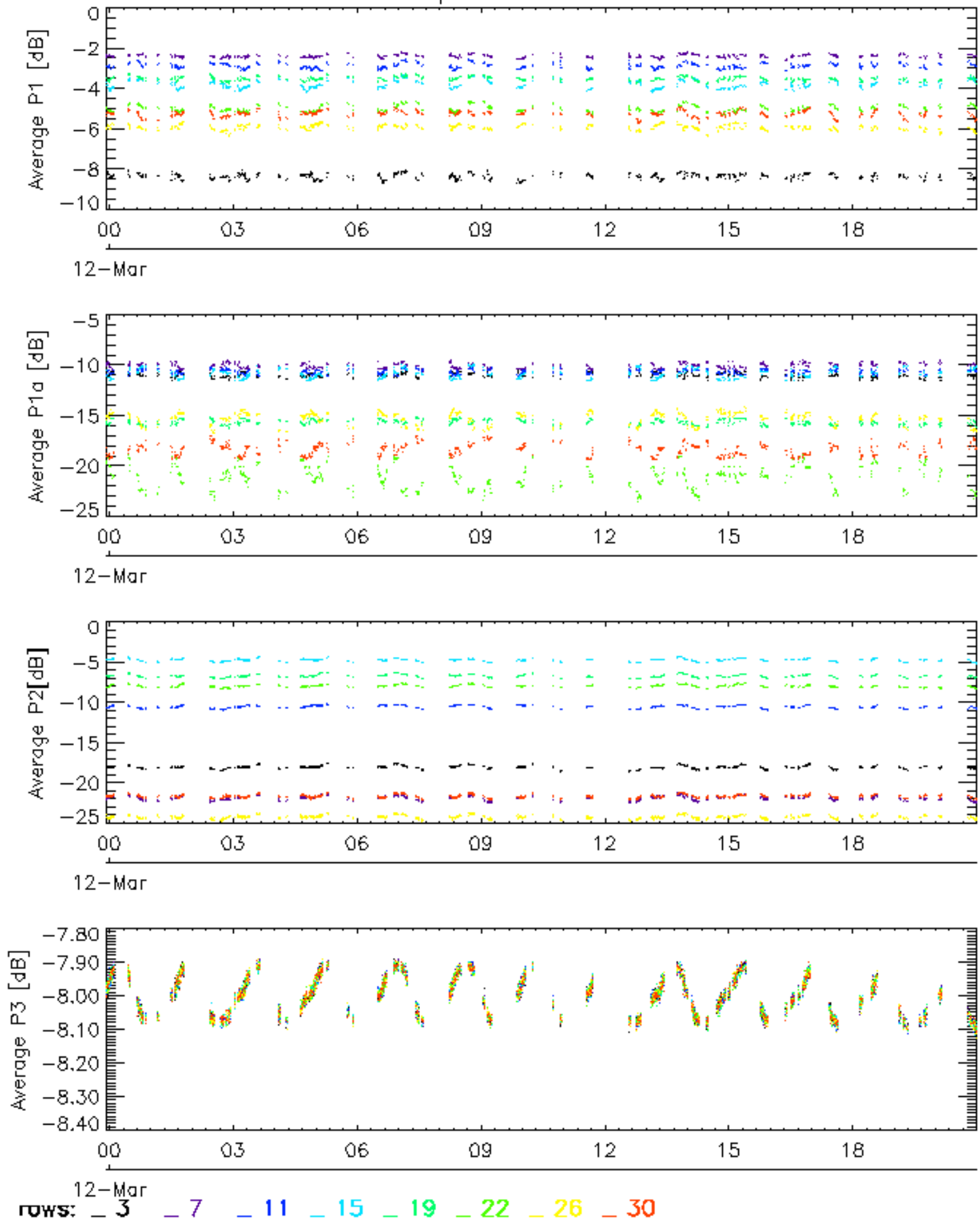
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

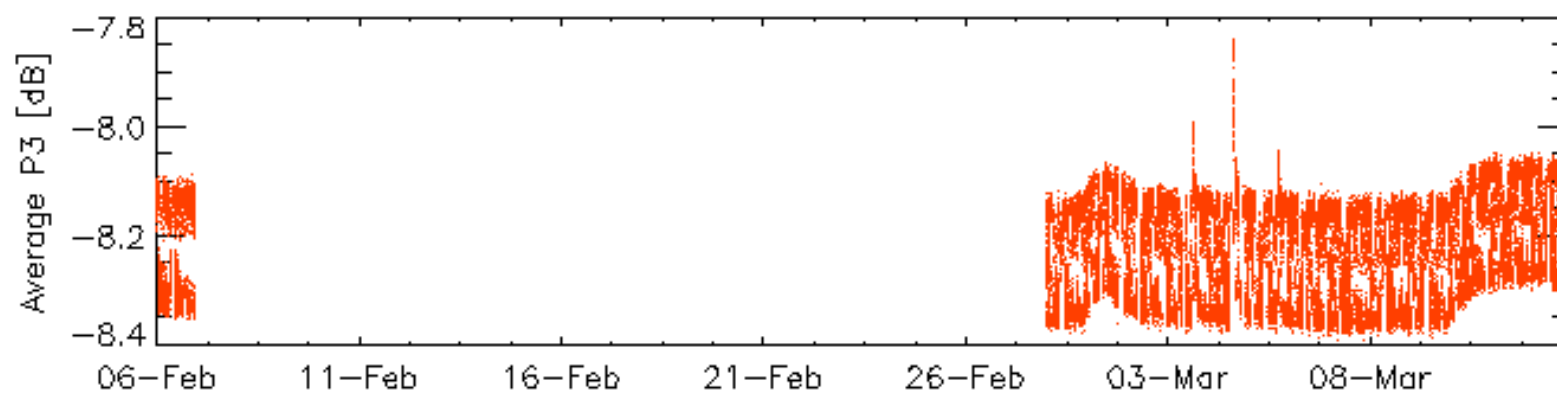
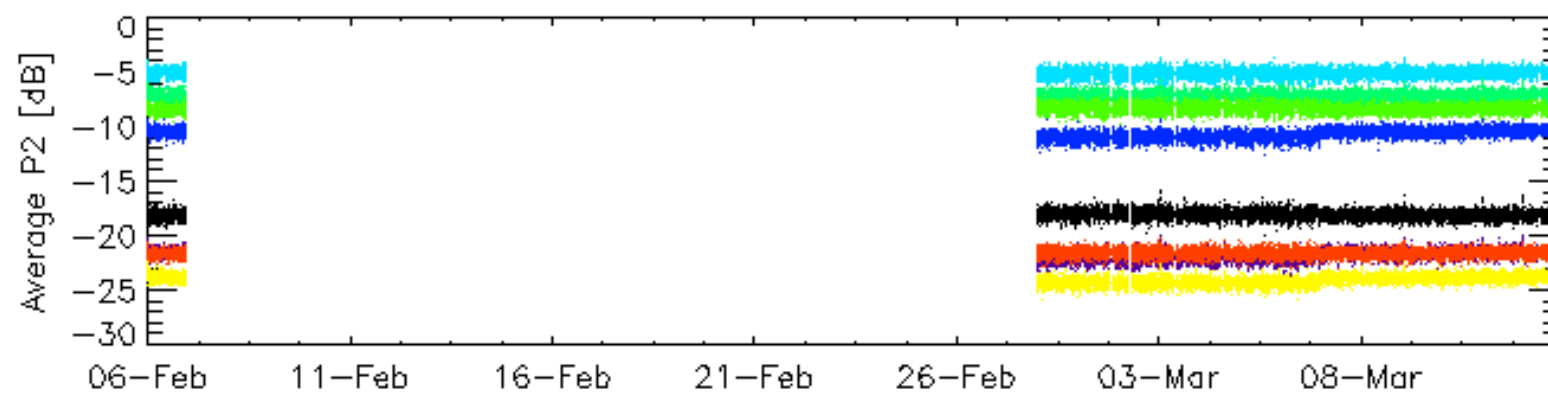
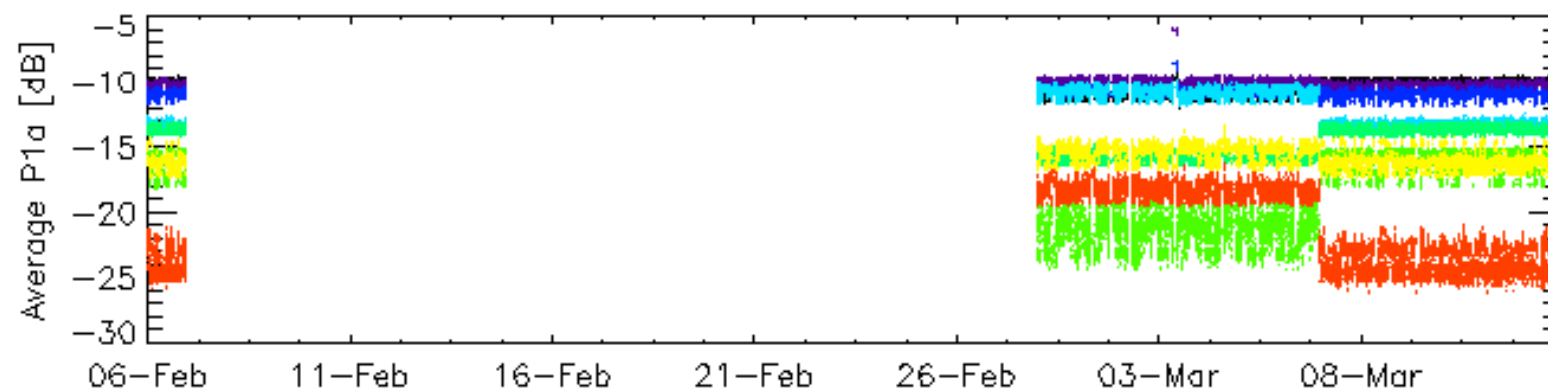
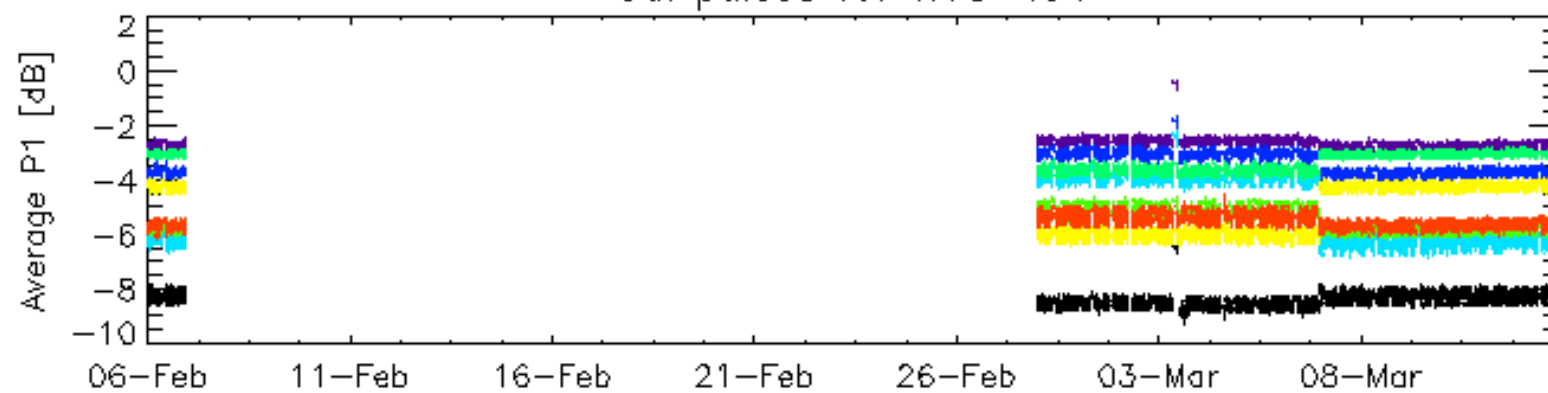


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

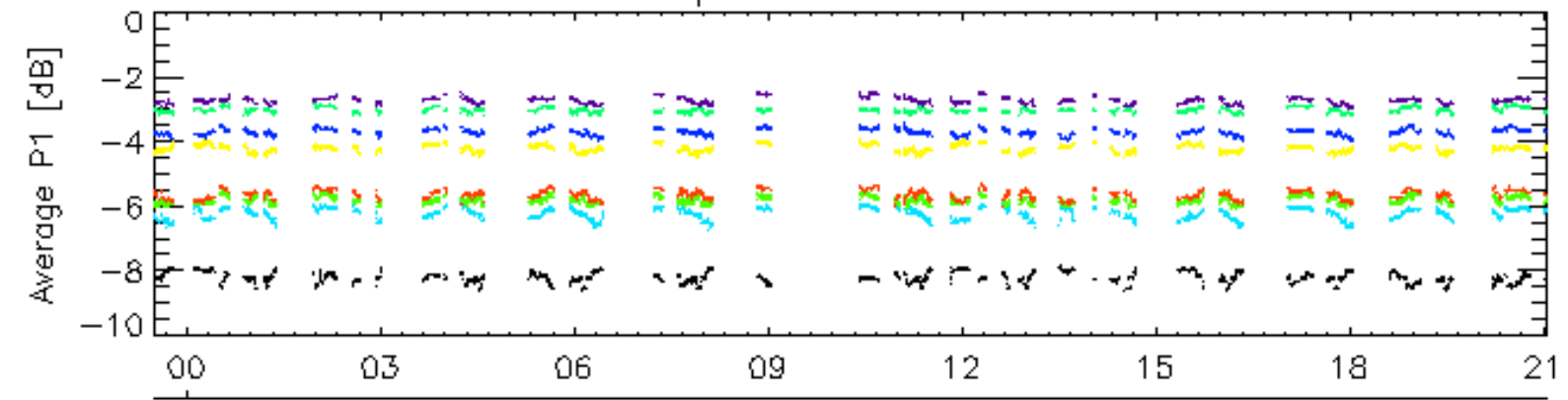


Cal pulses for WVS IS4

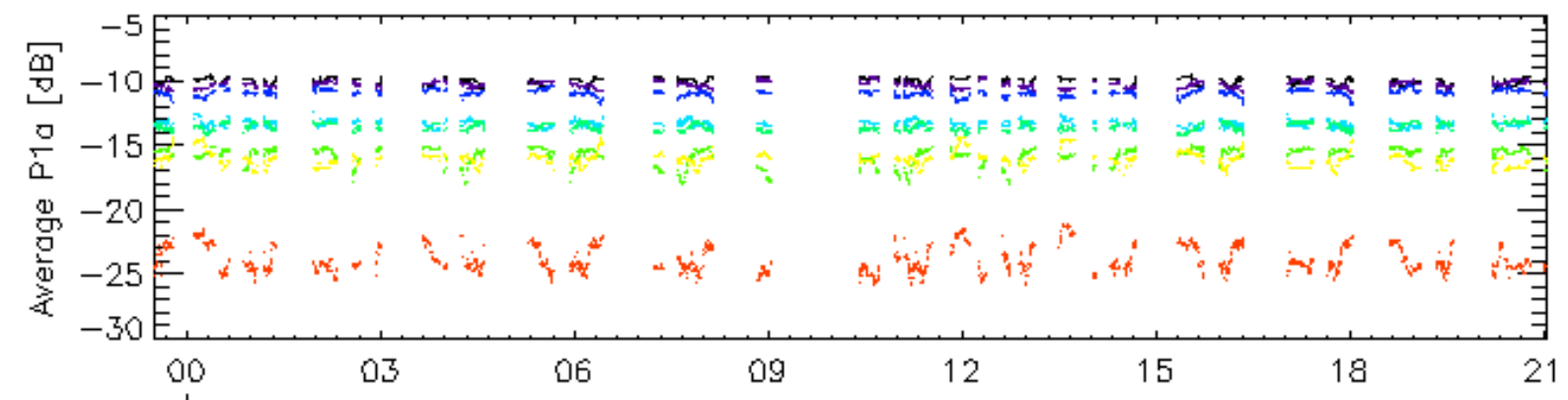


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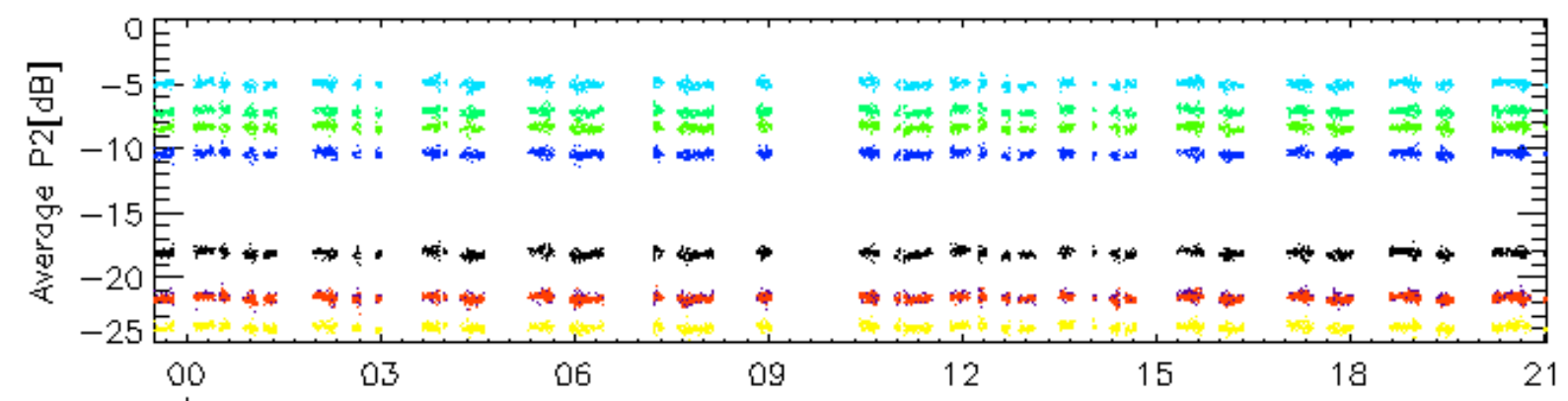
Cal pulses for WVS IS4



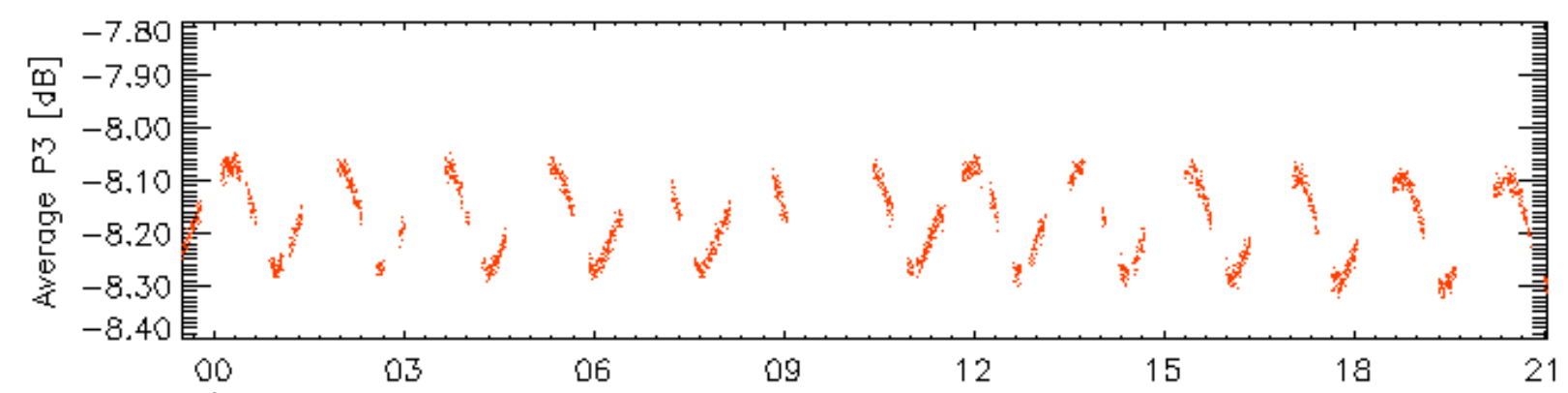
12-Mar



12-Mar



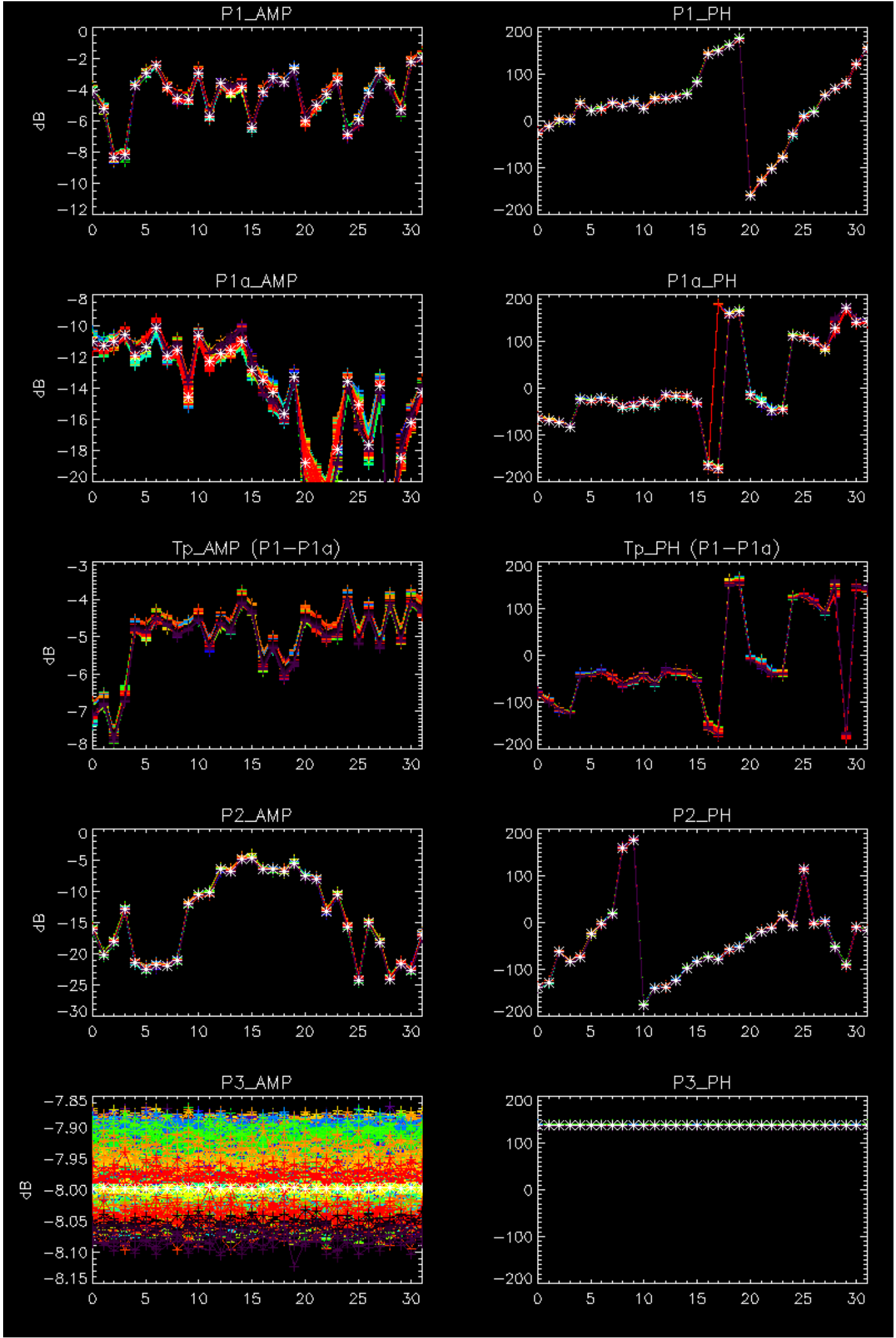
12-Mar

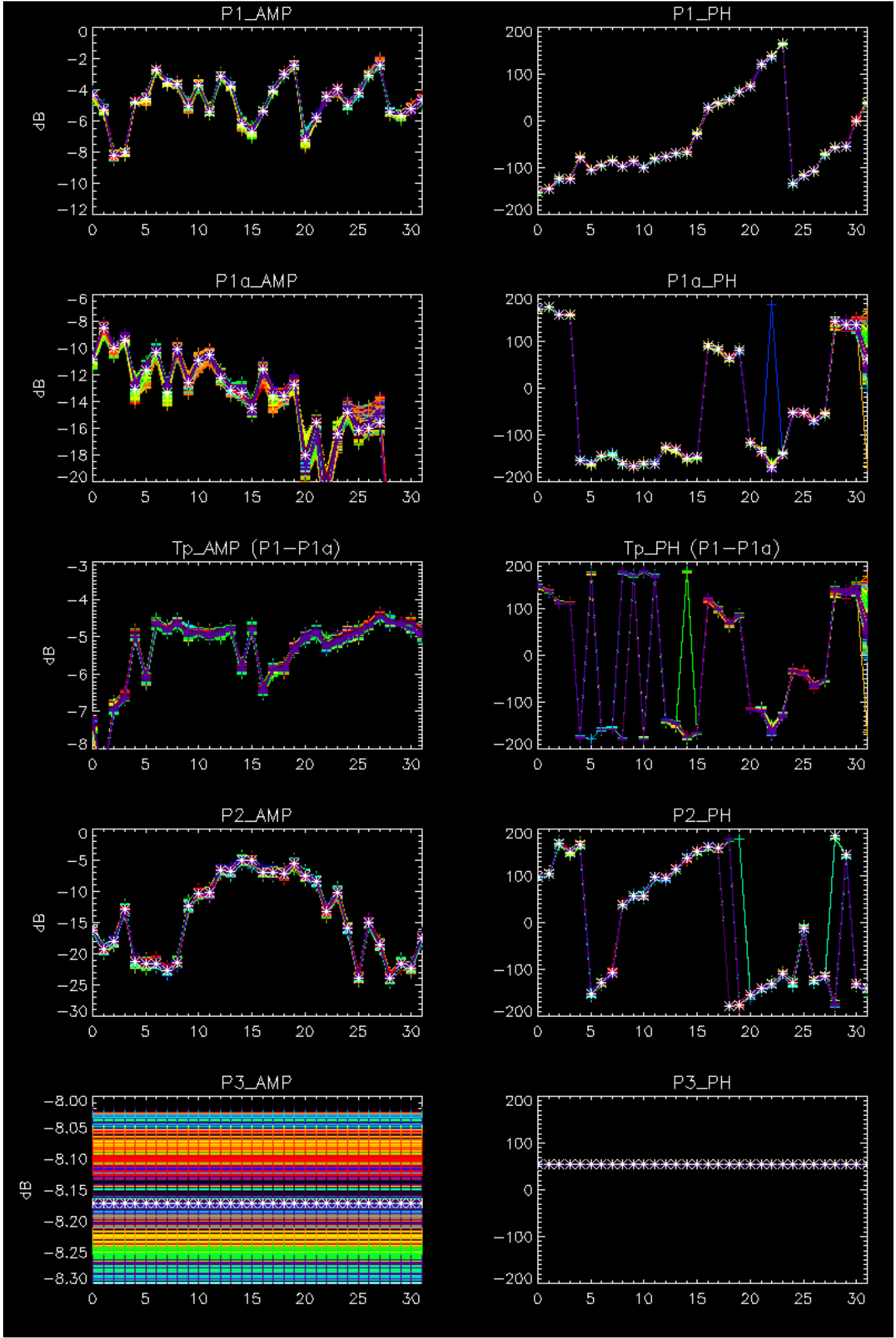


12-Mar

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

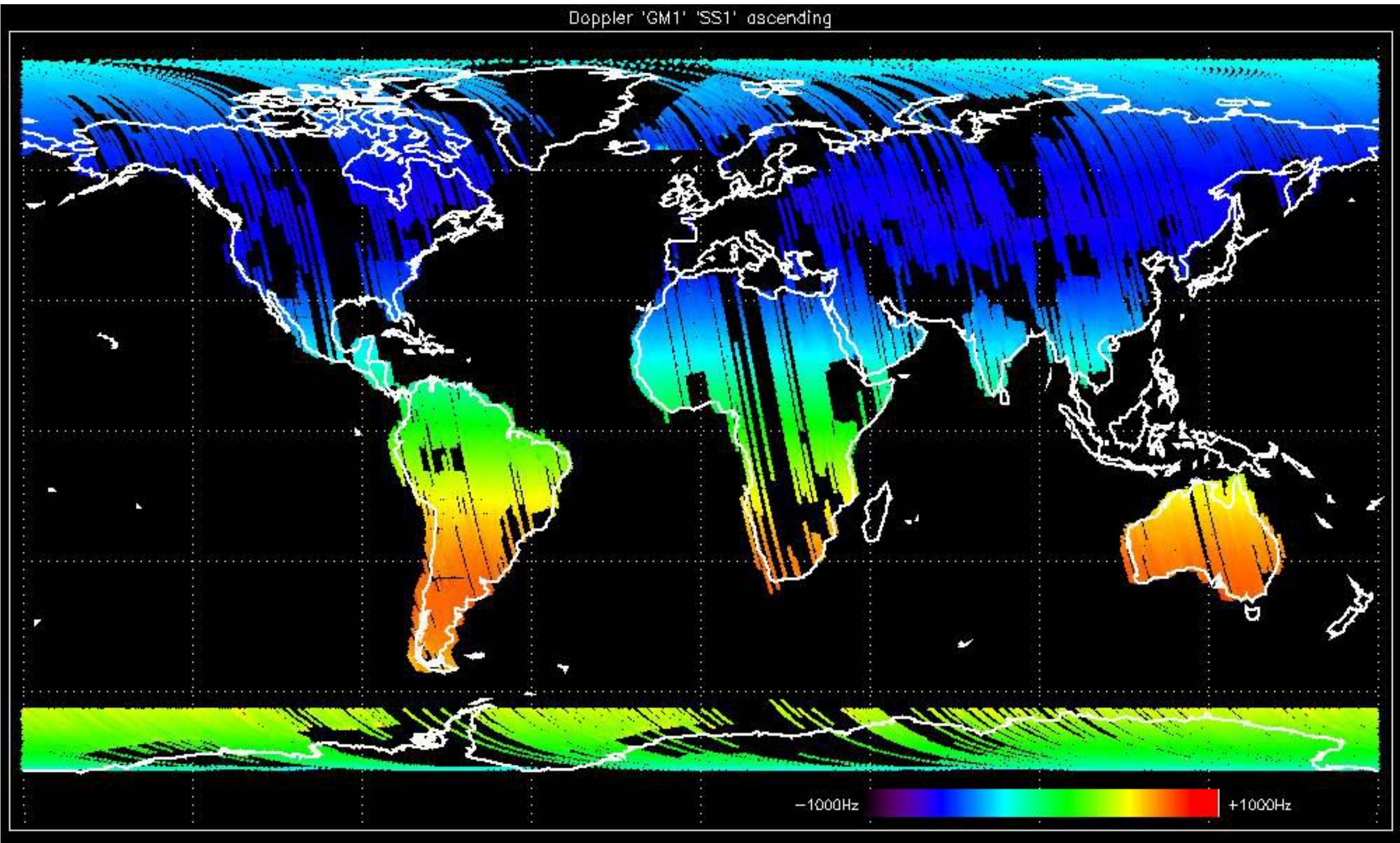
No anomalies observed.



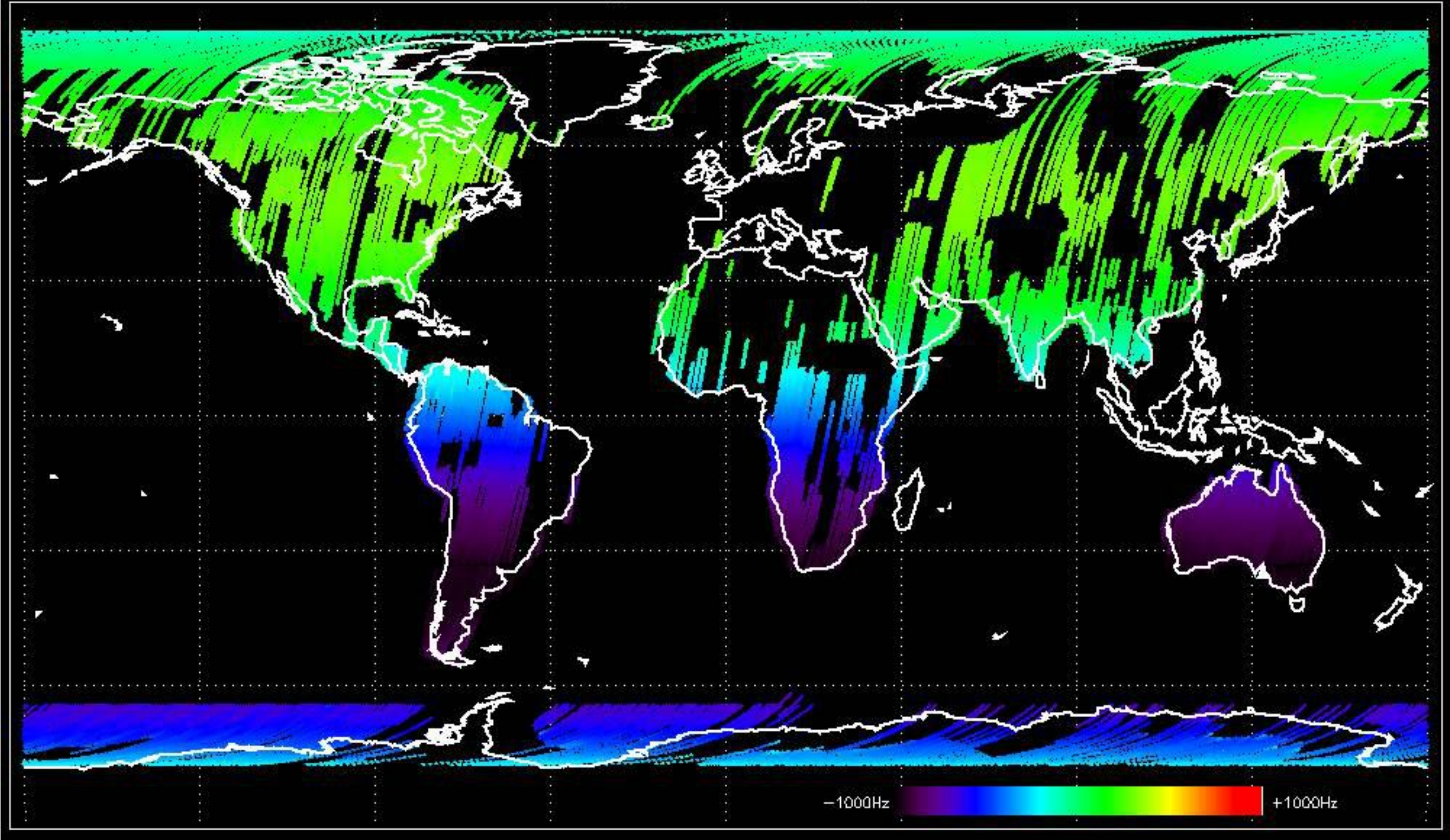


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

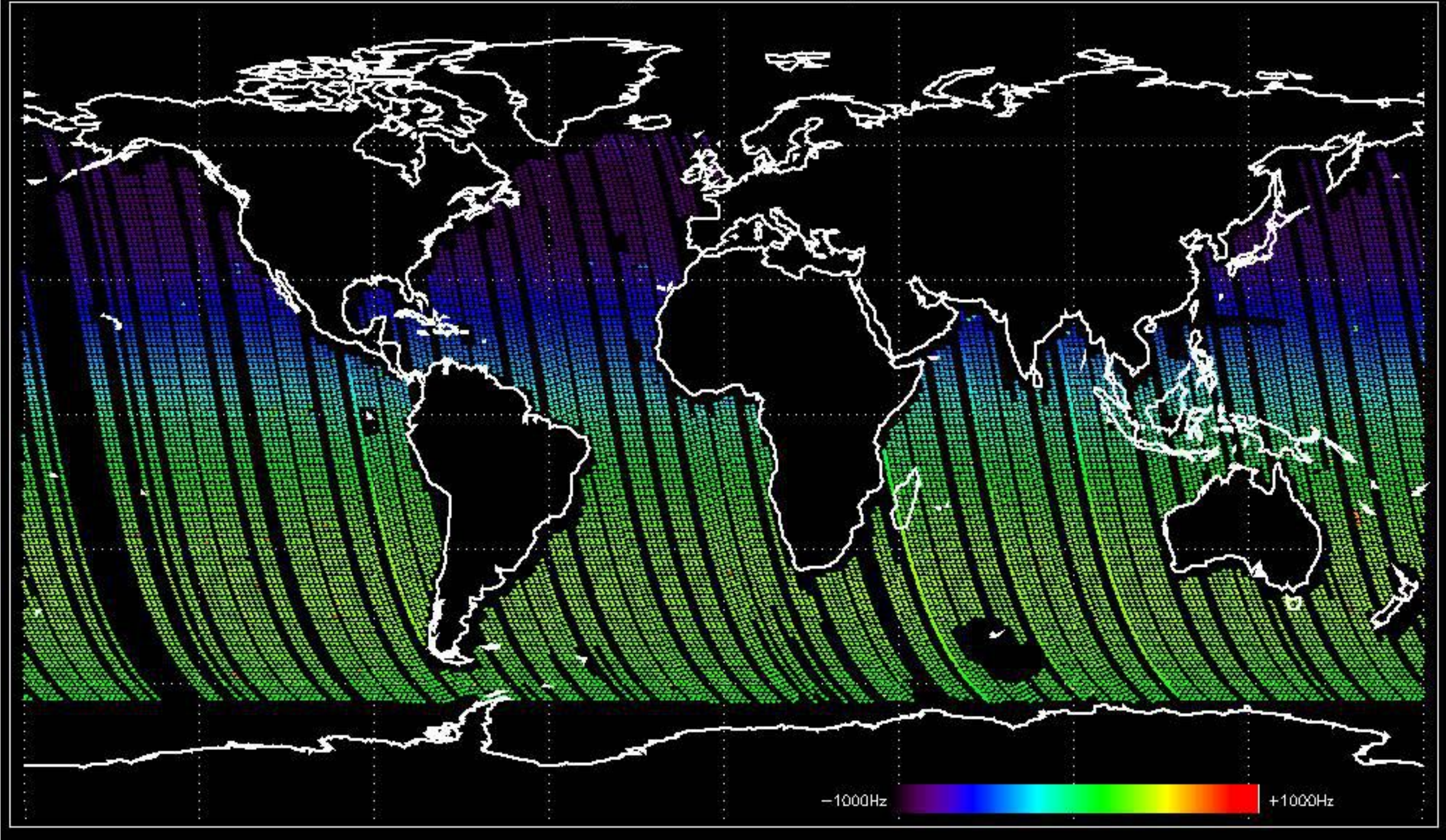
Doppler 'GM1' 'SS1' ascending



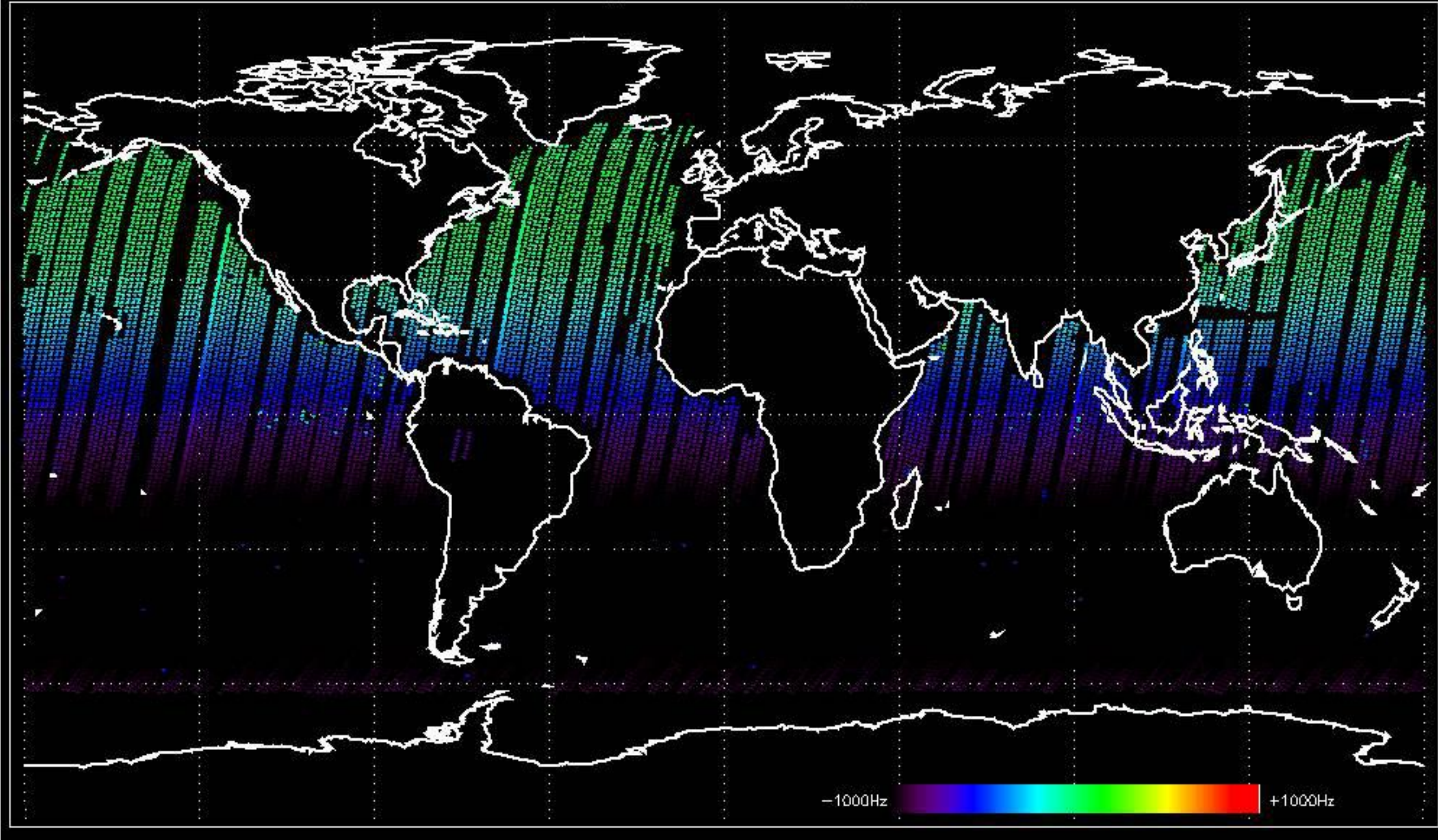
Doppler 'GM1' 'SS1' descending

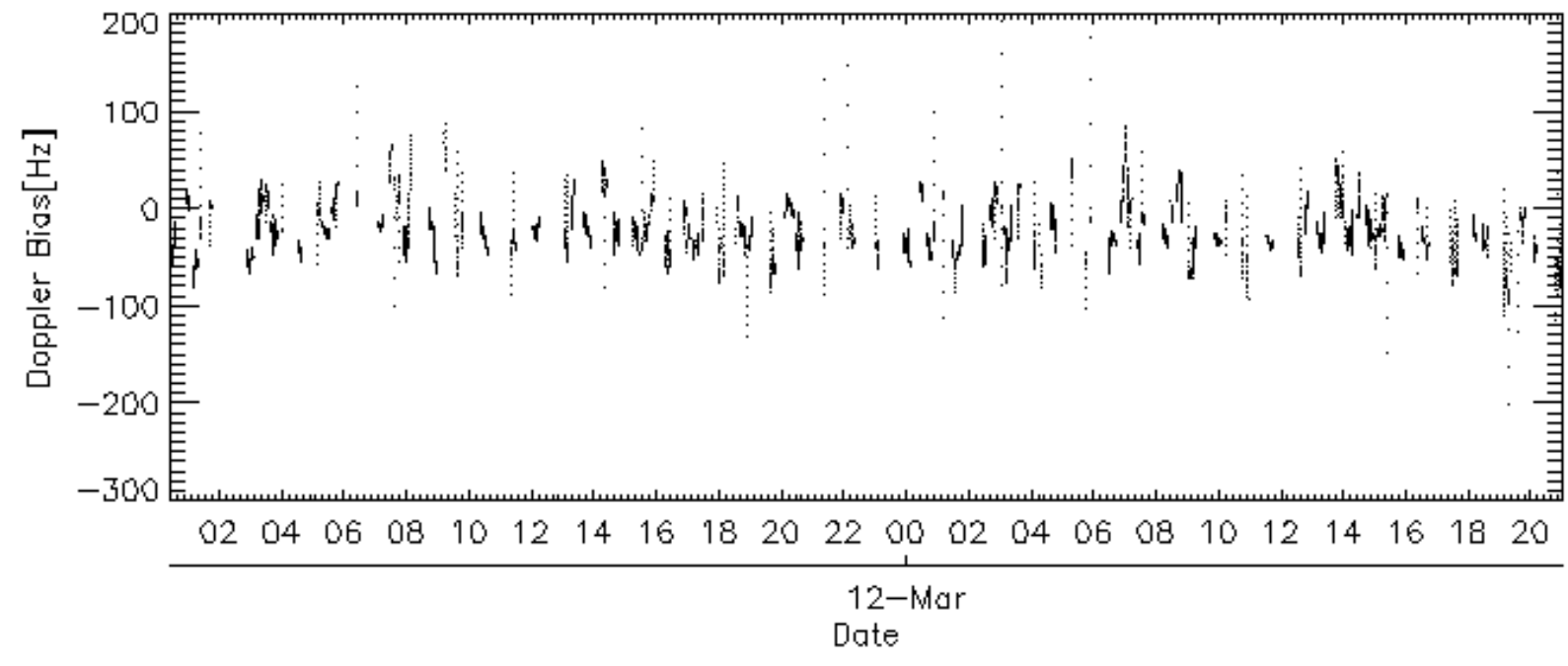
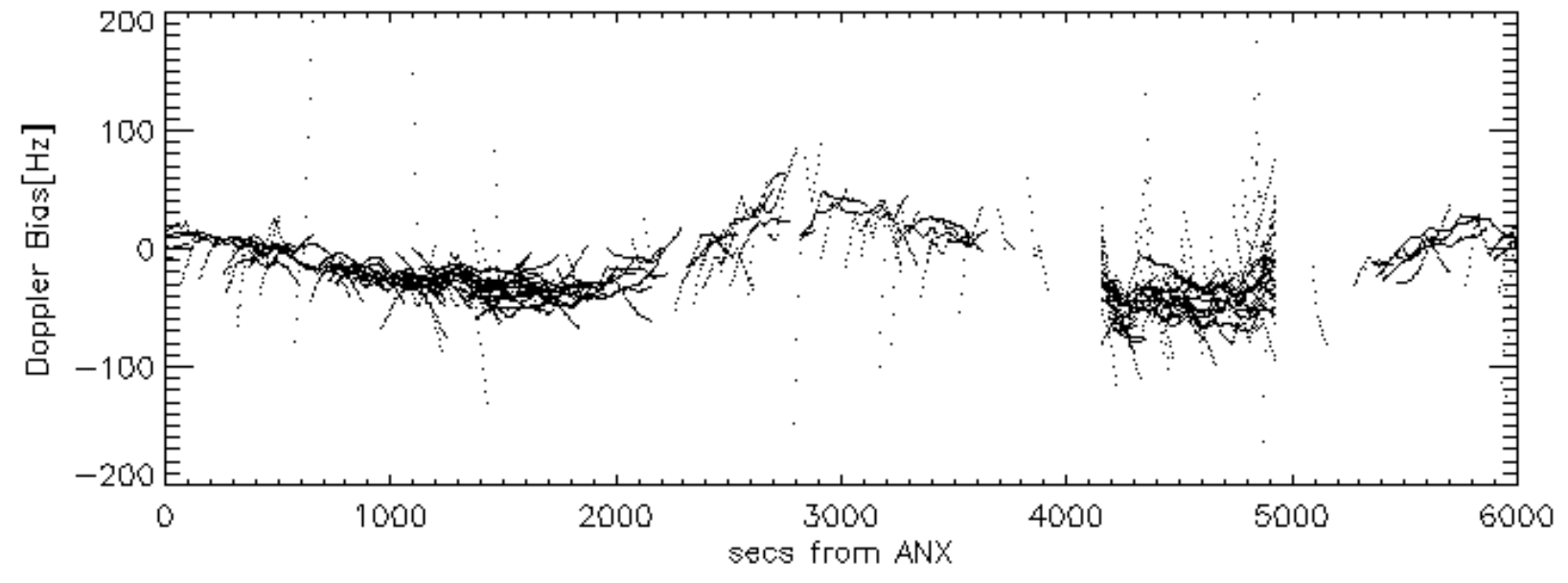
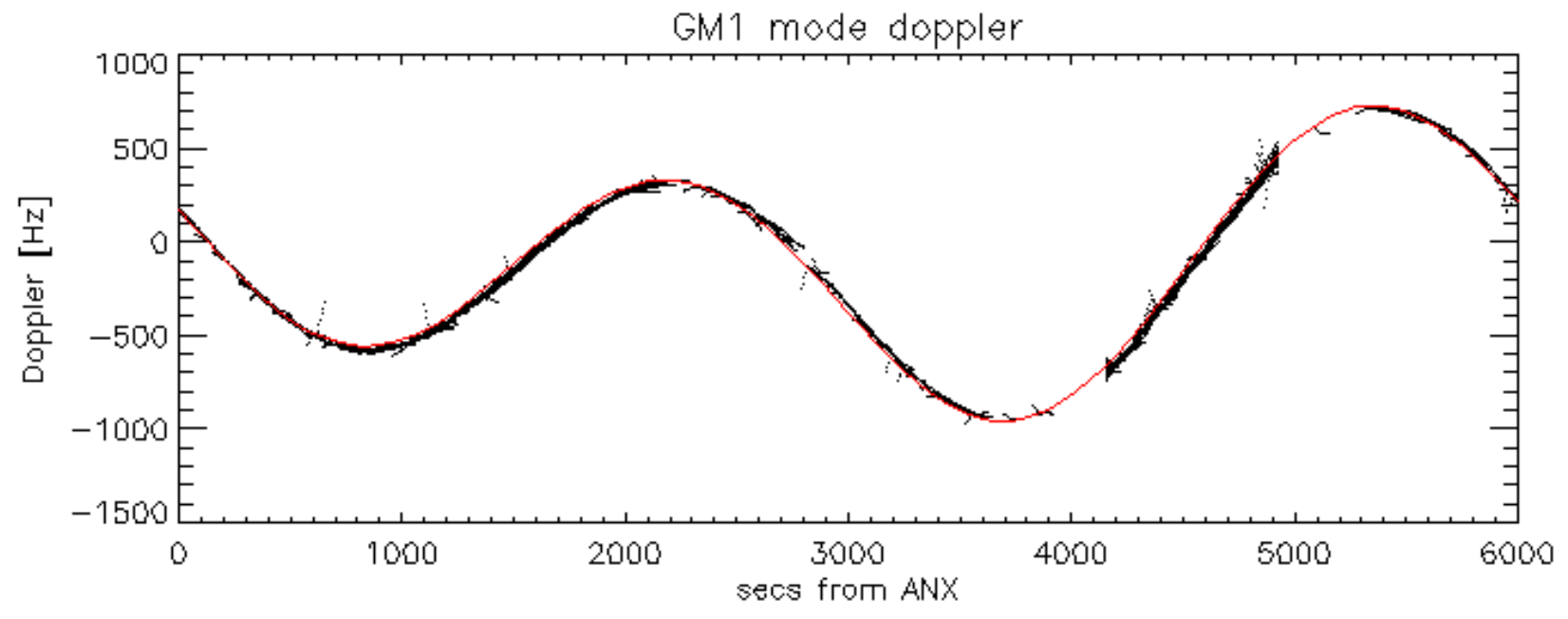


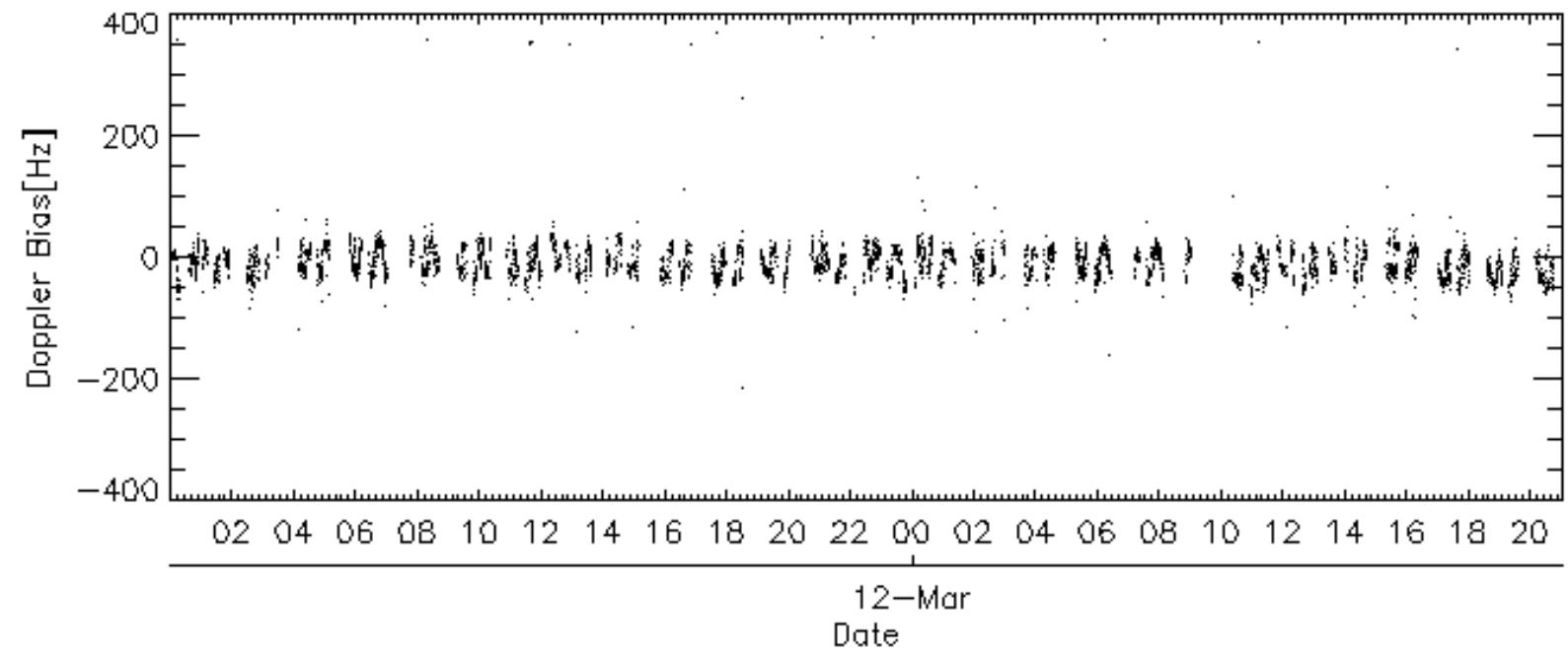
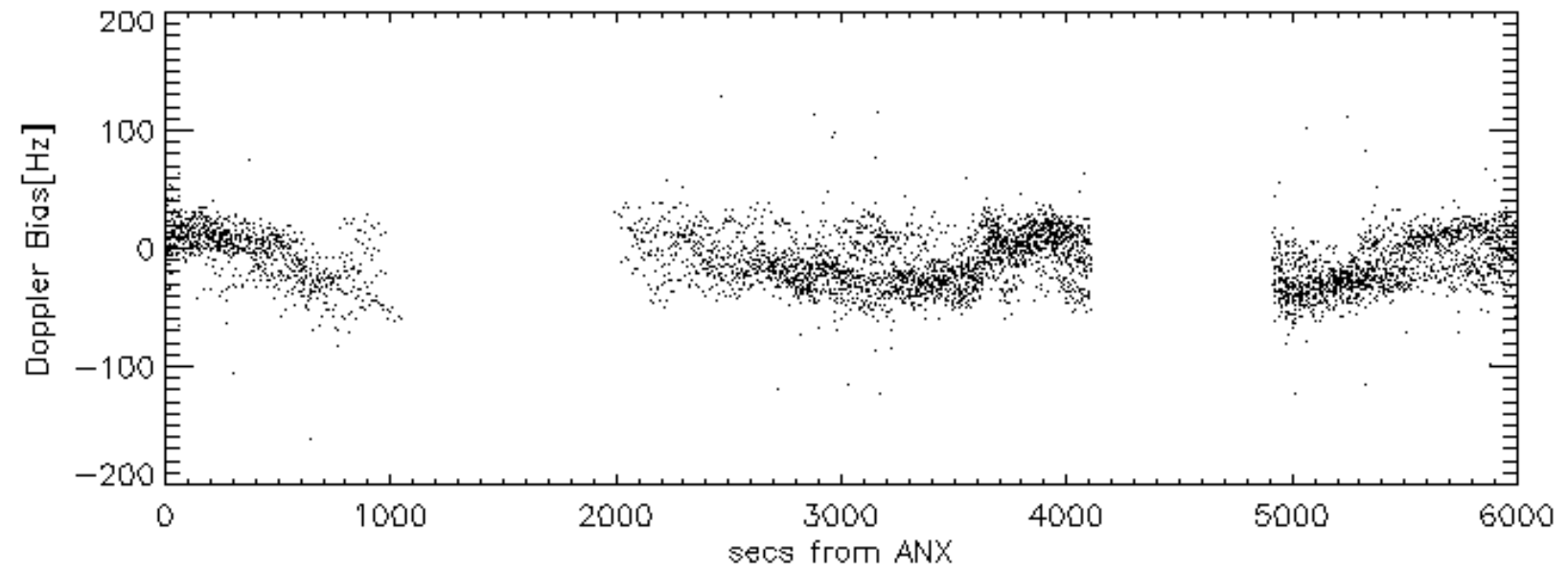
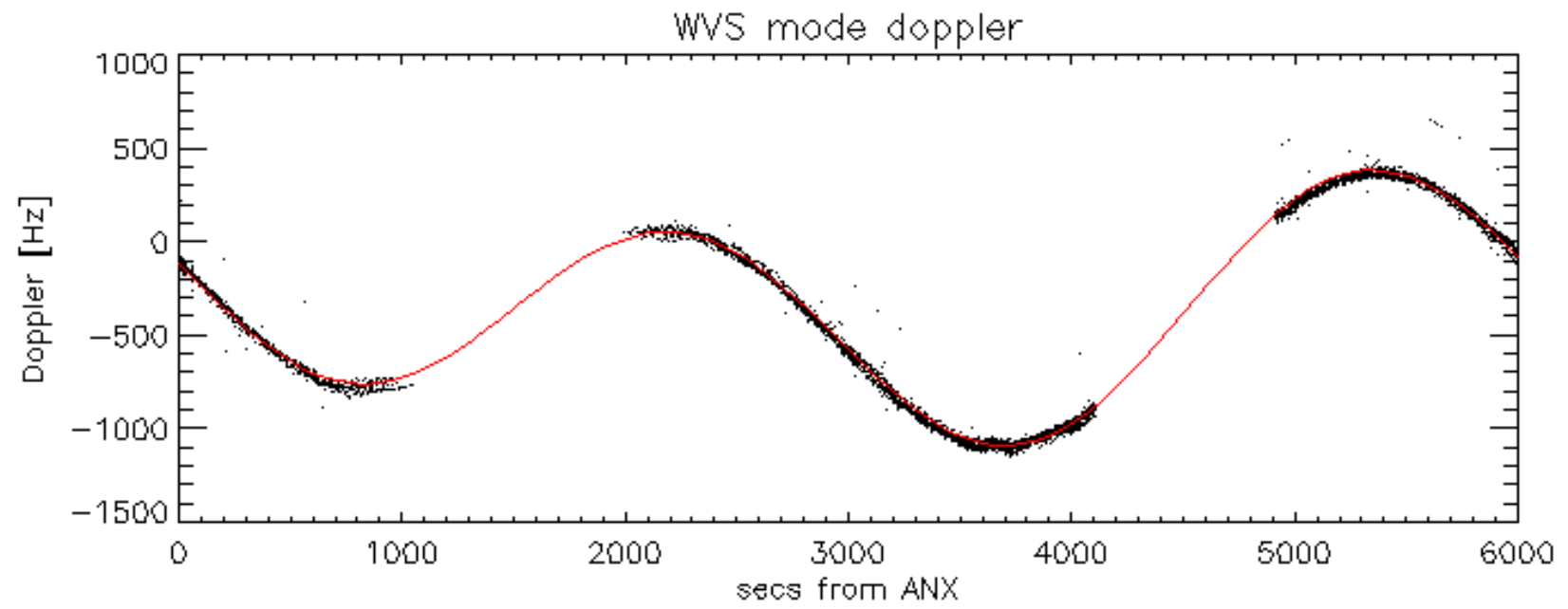
Doppler 'WVS' 'IS4' ascending



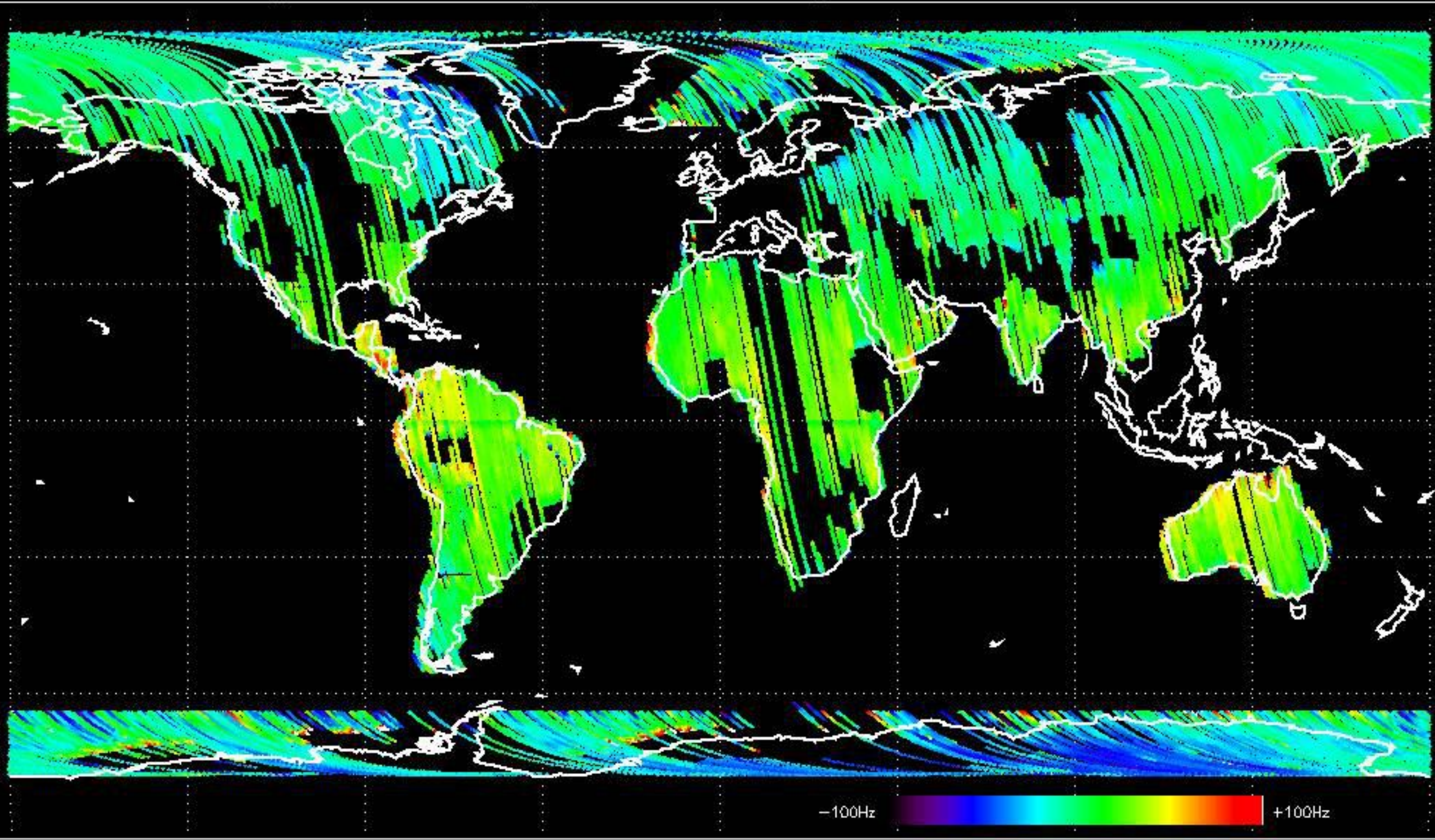
Doppler 'WVS' 'IS4' descending



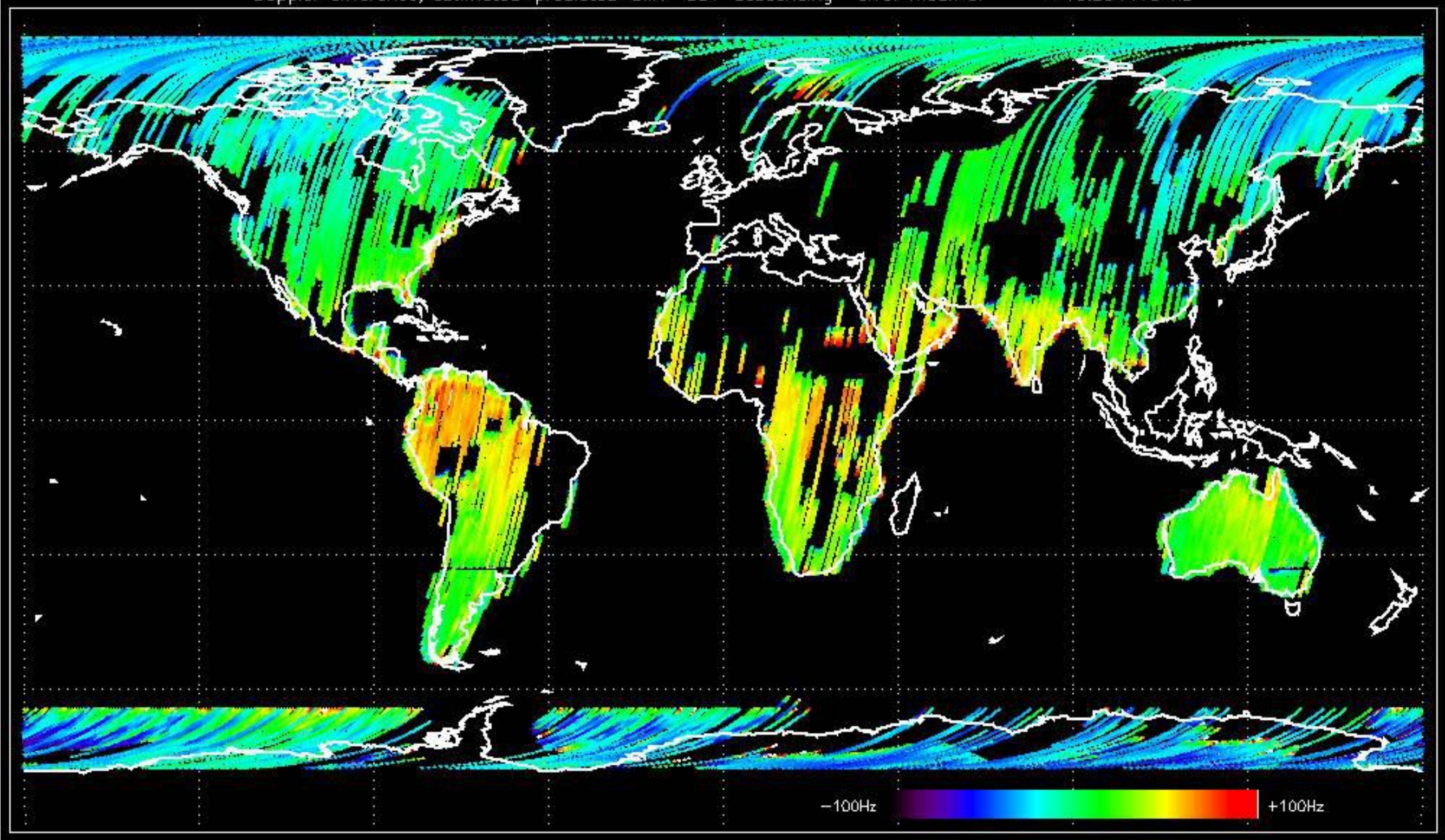




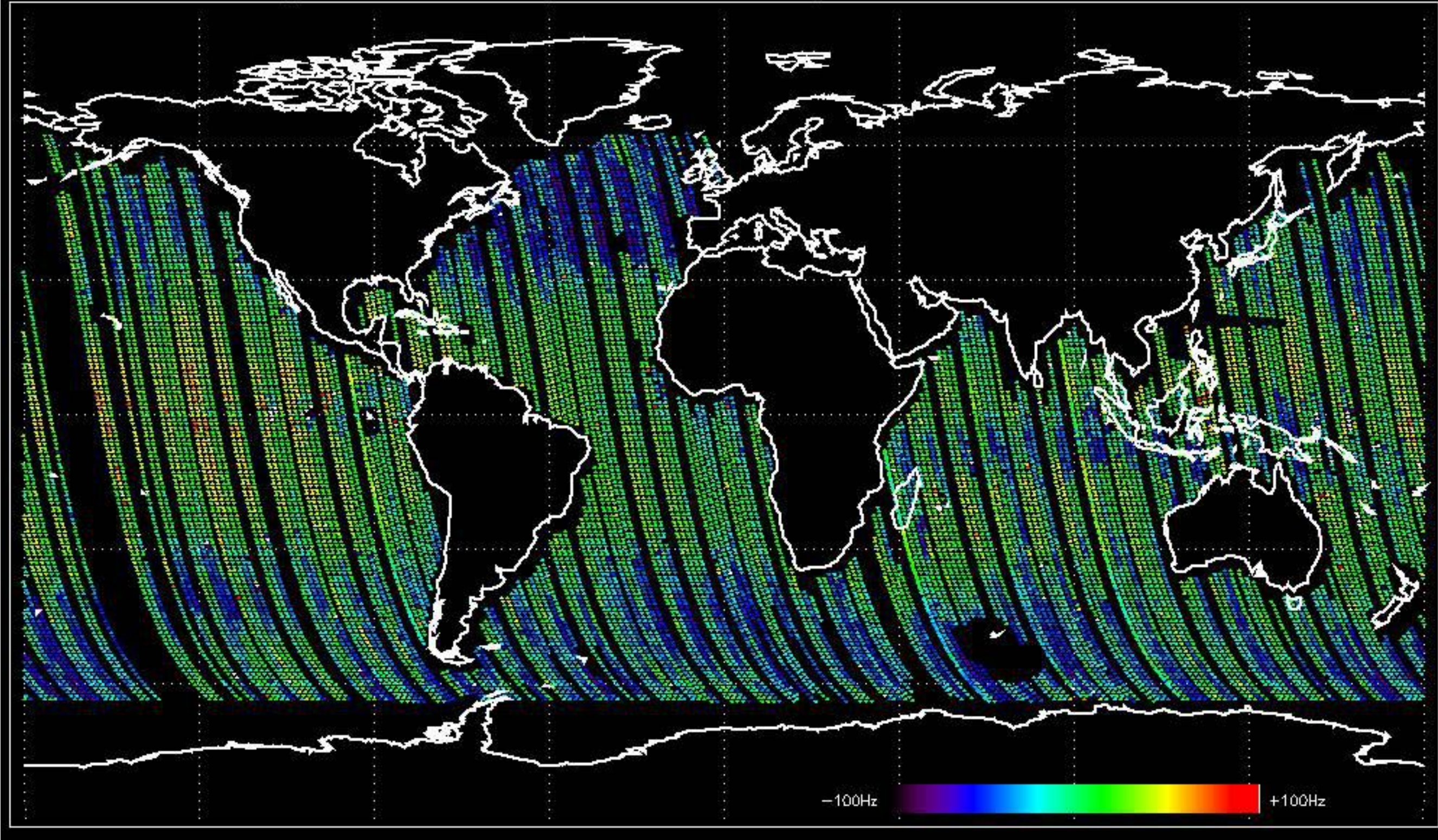
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.759202 Hz



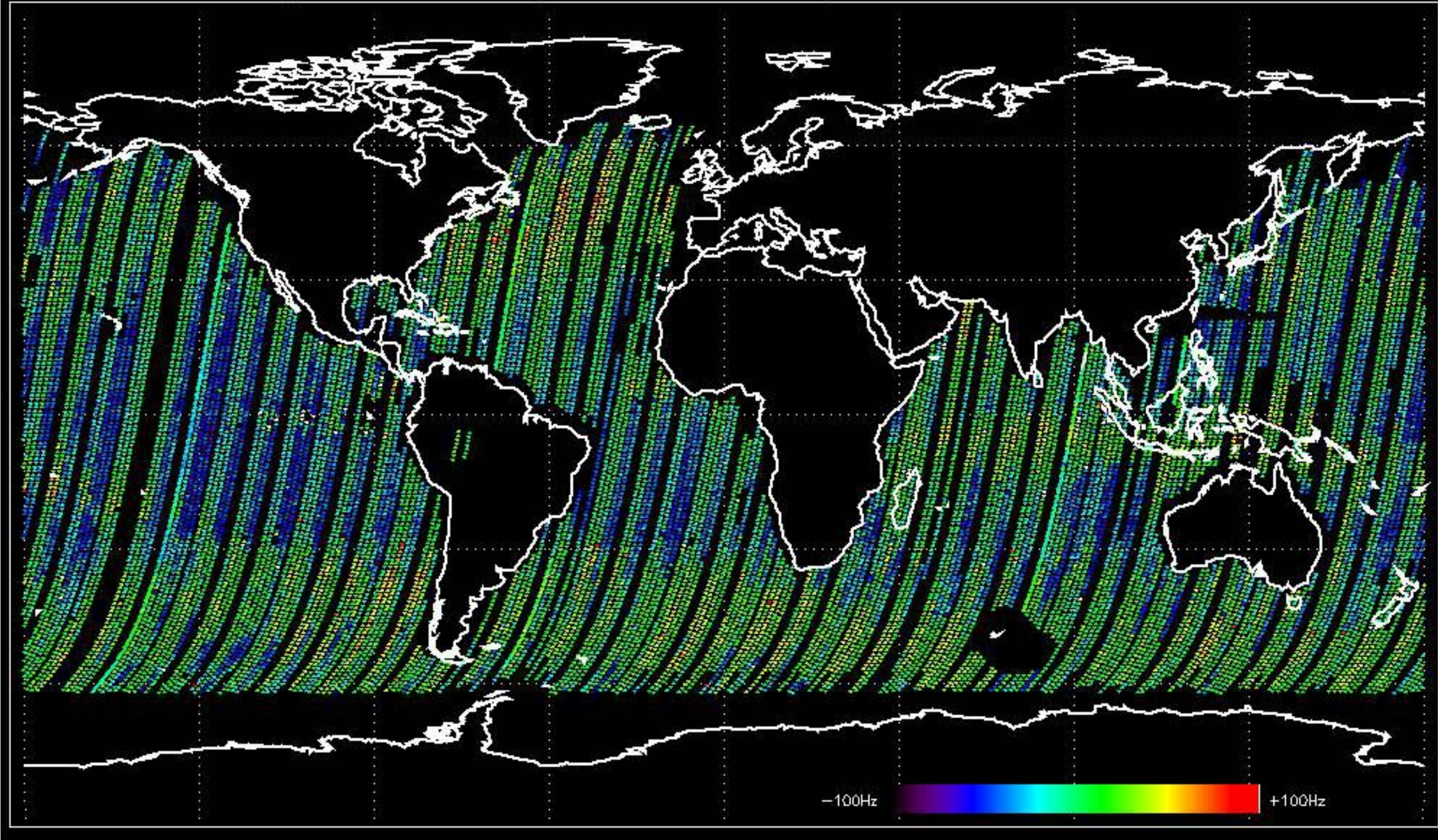
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.994419 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -20.240559 Hz

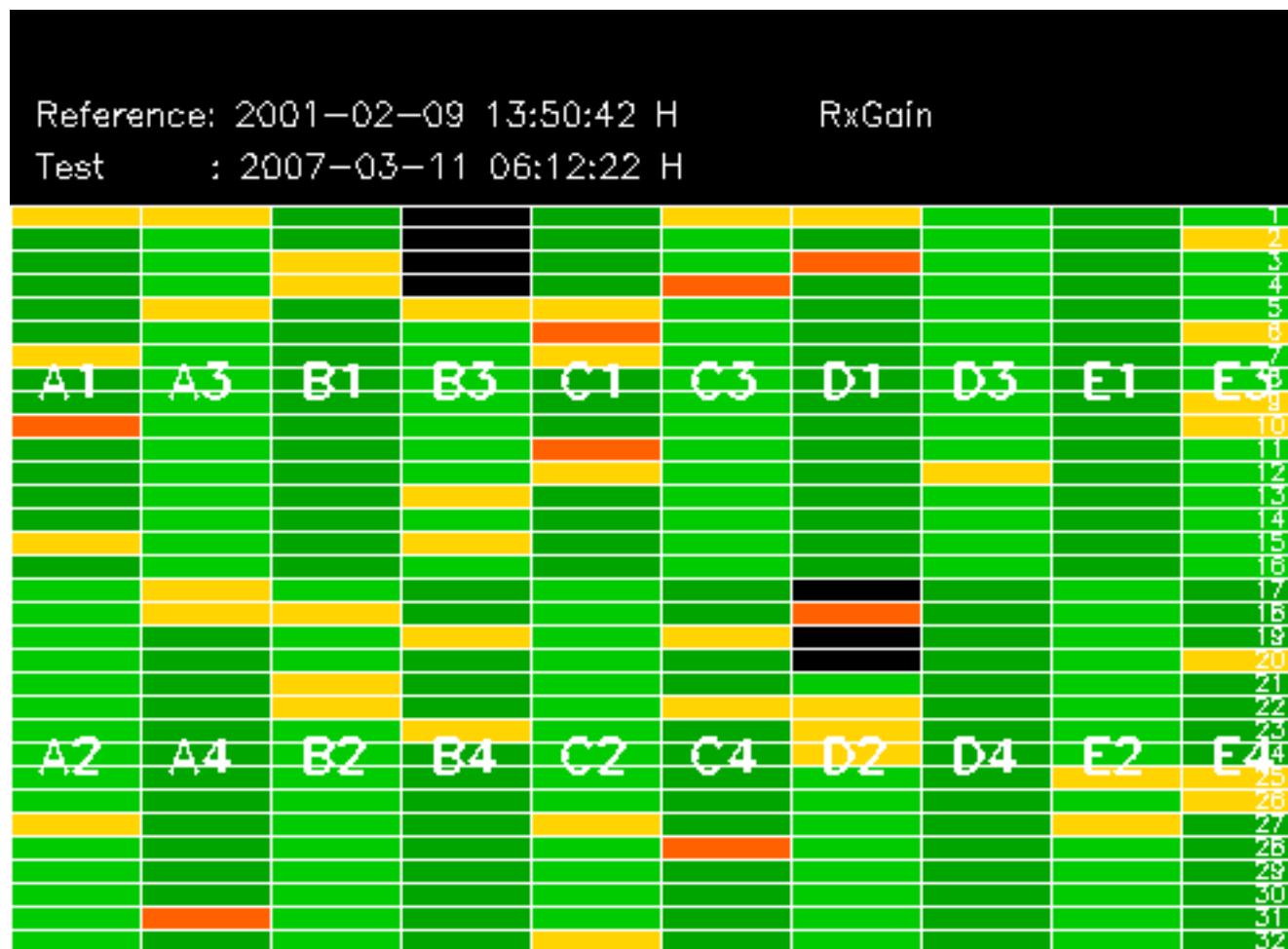


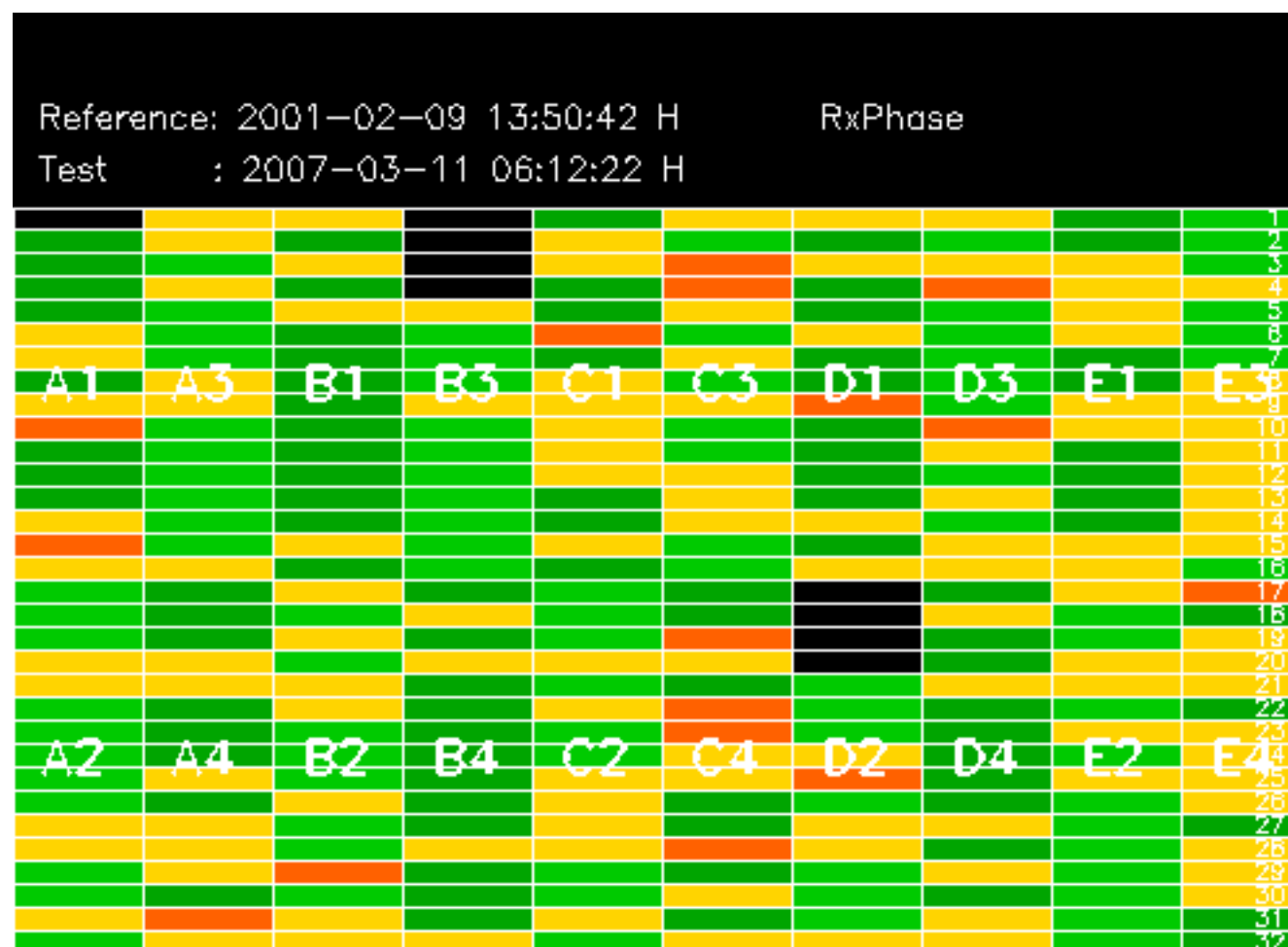
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -21.755300 Hz

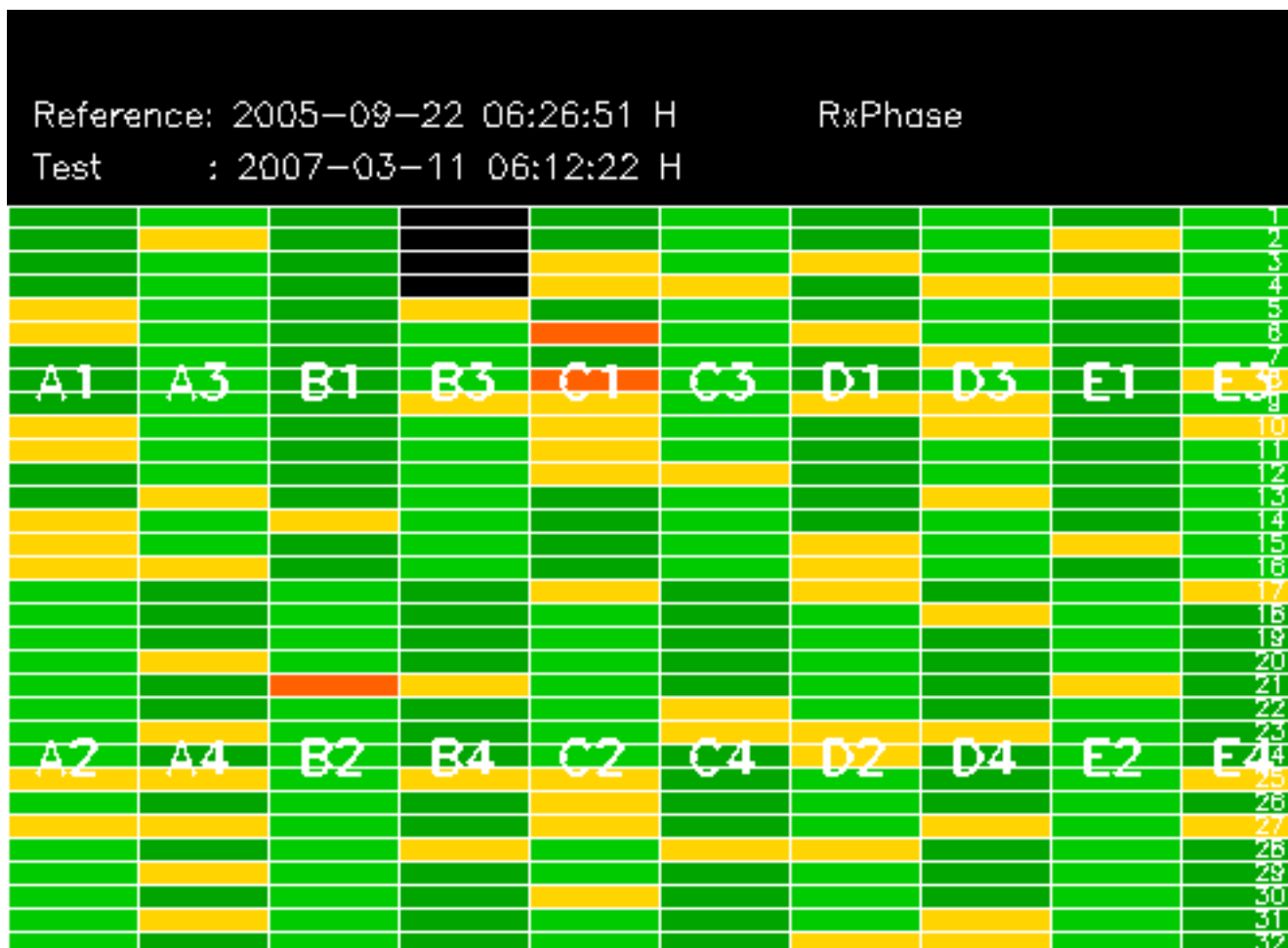


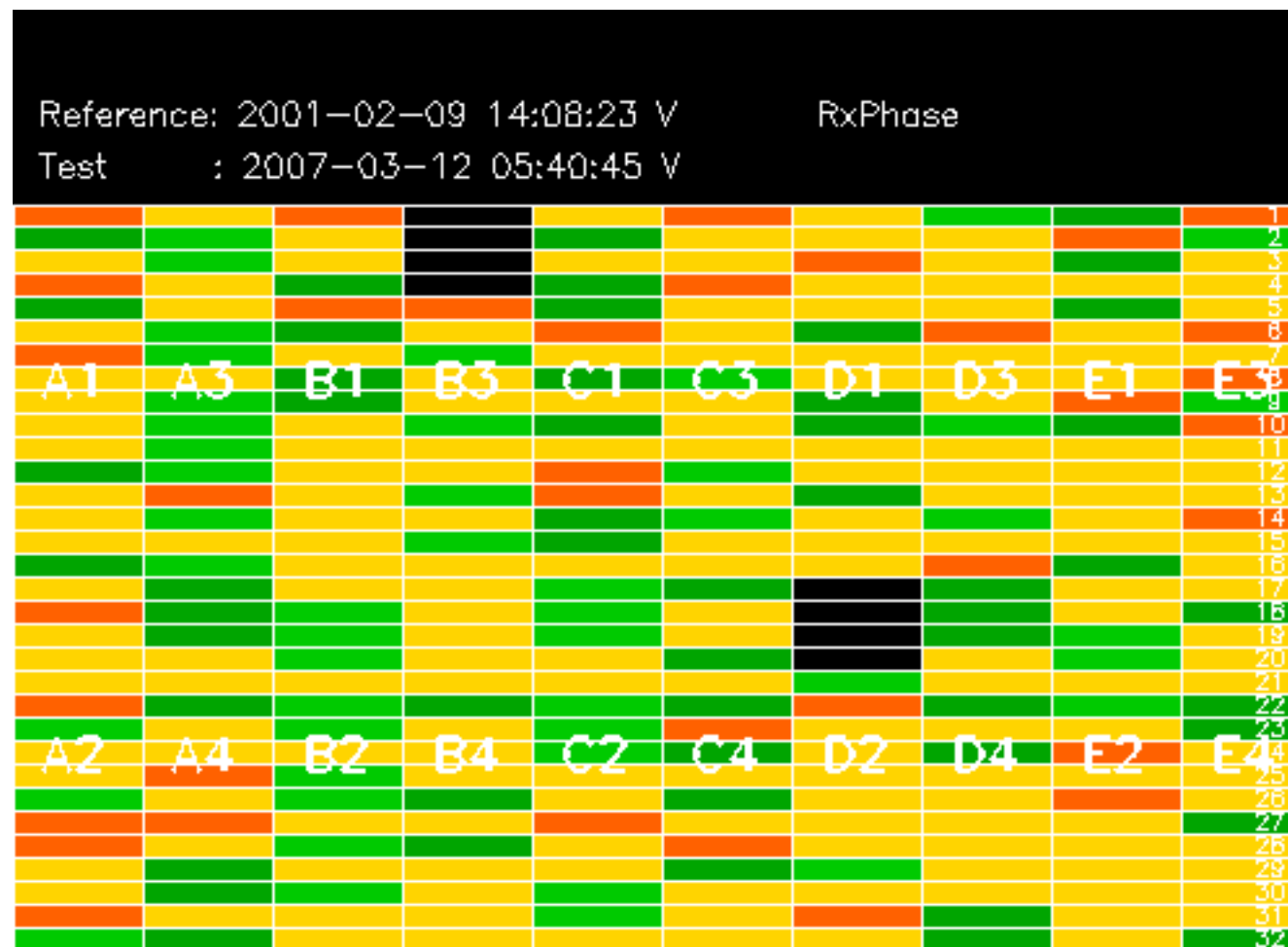
No anomalies observed on available MS products:

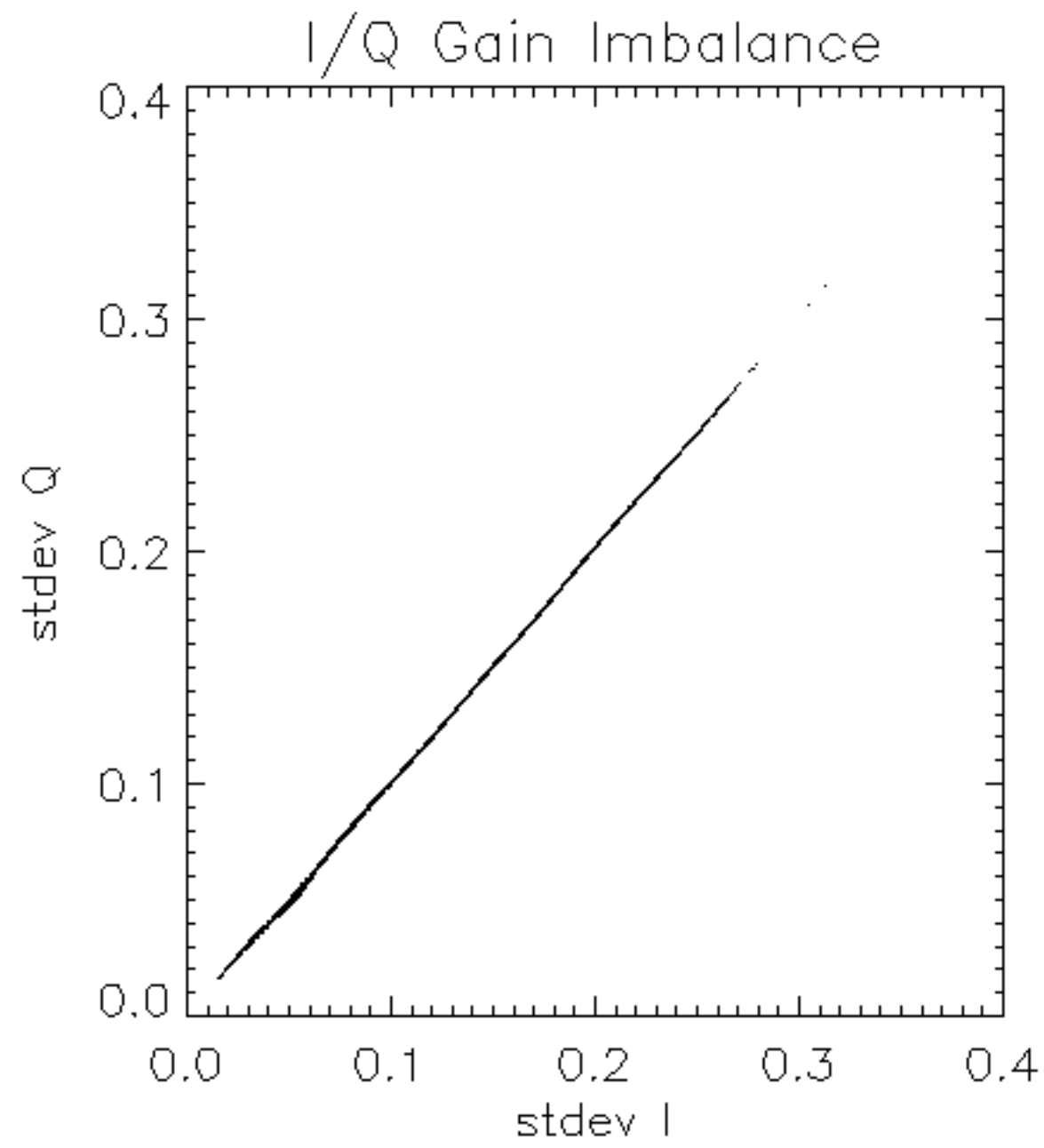
No anomalies observed.

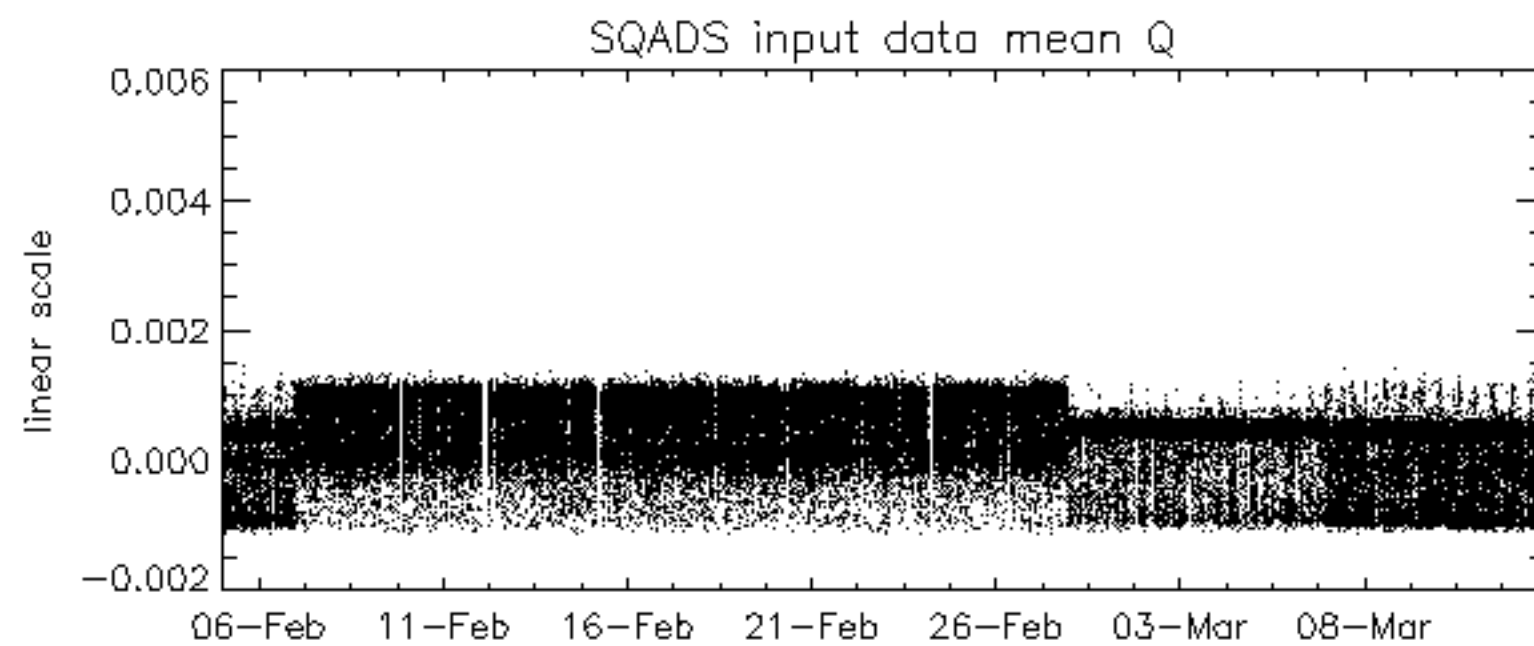
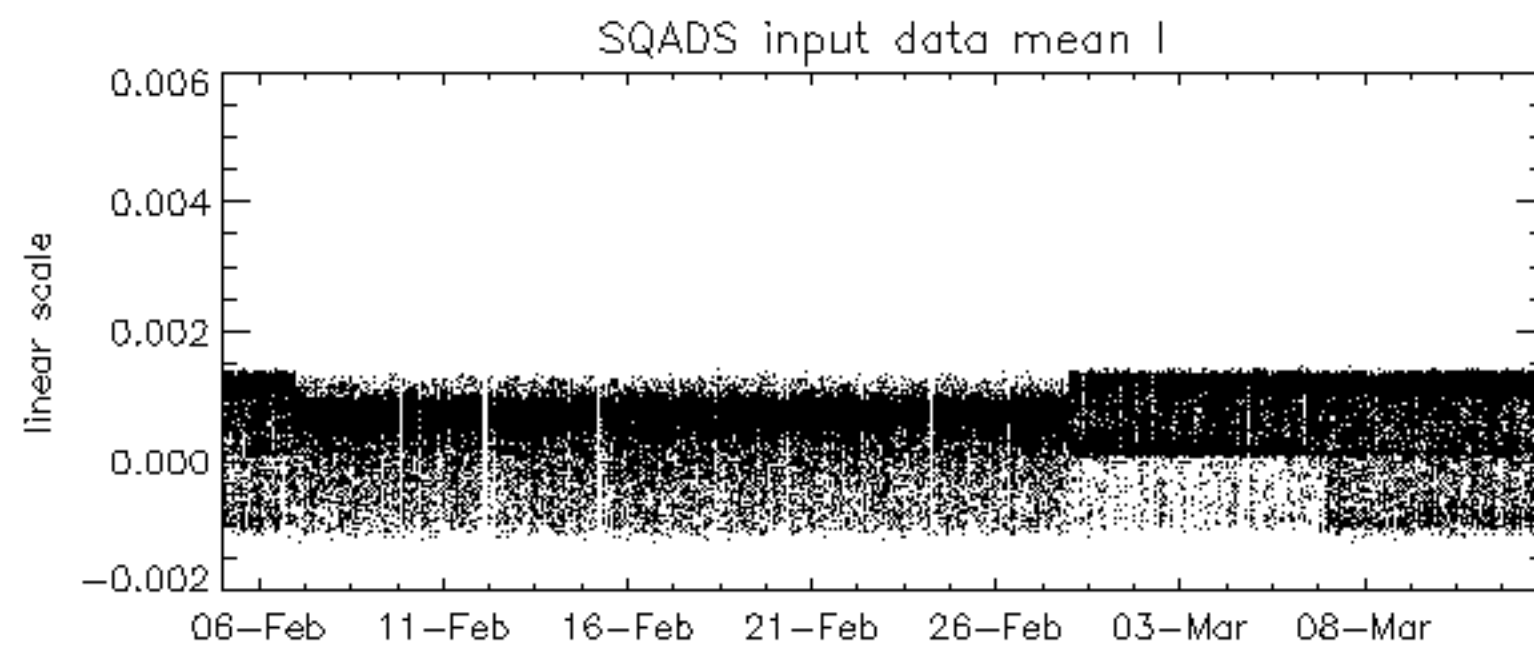
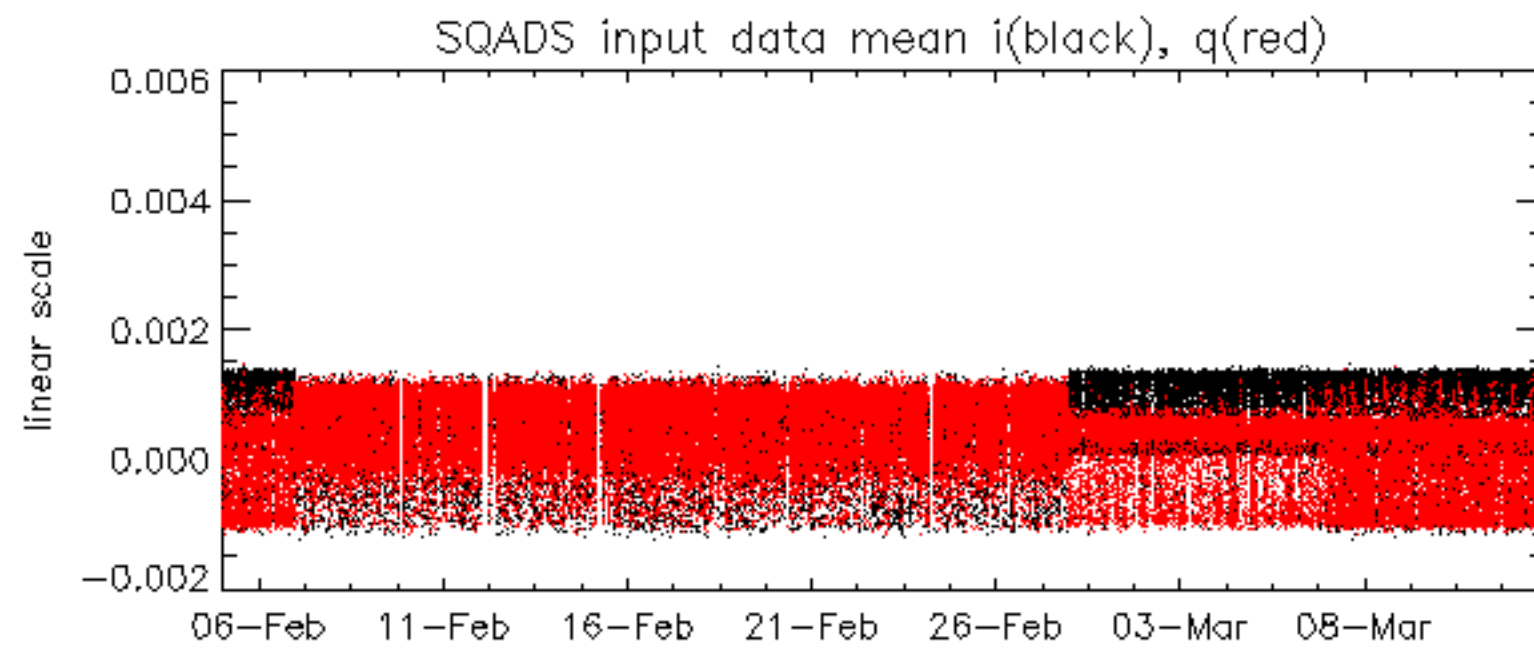


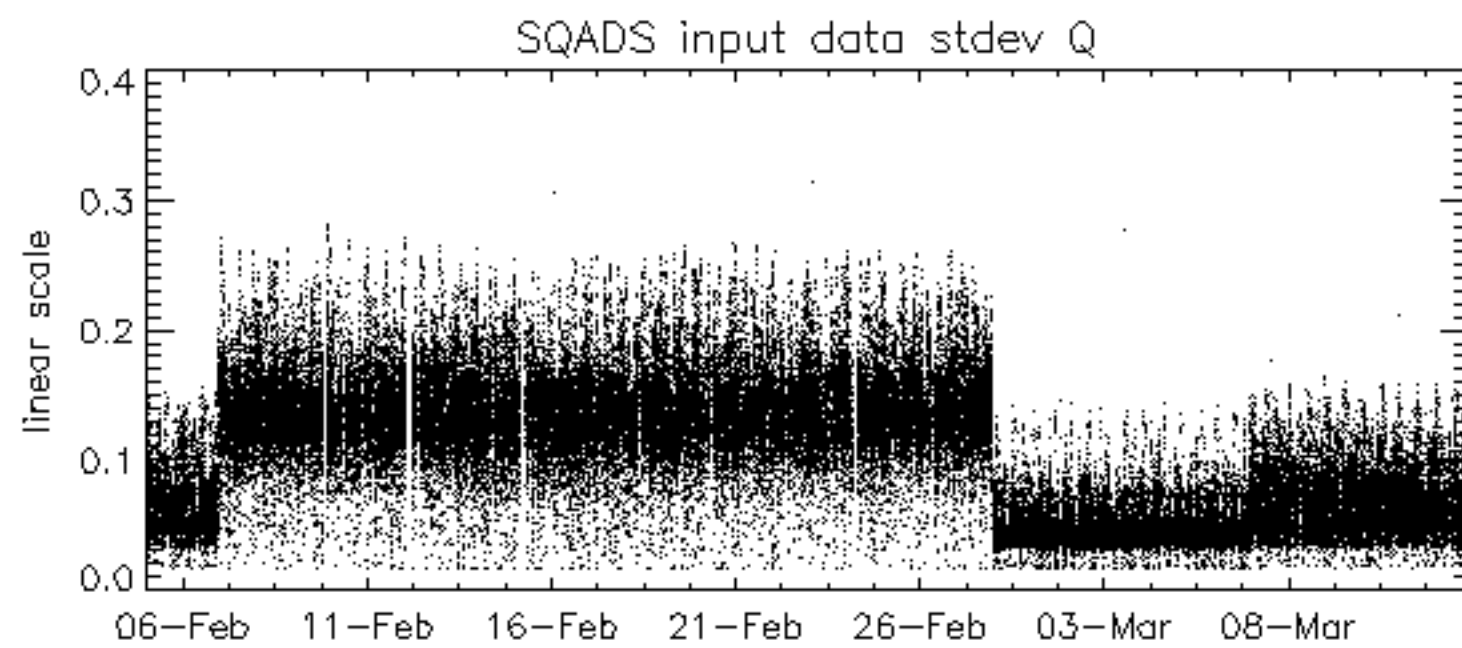
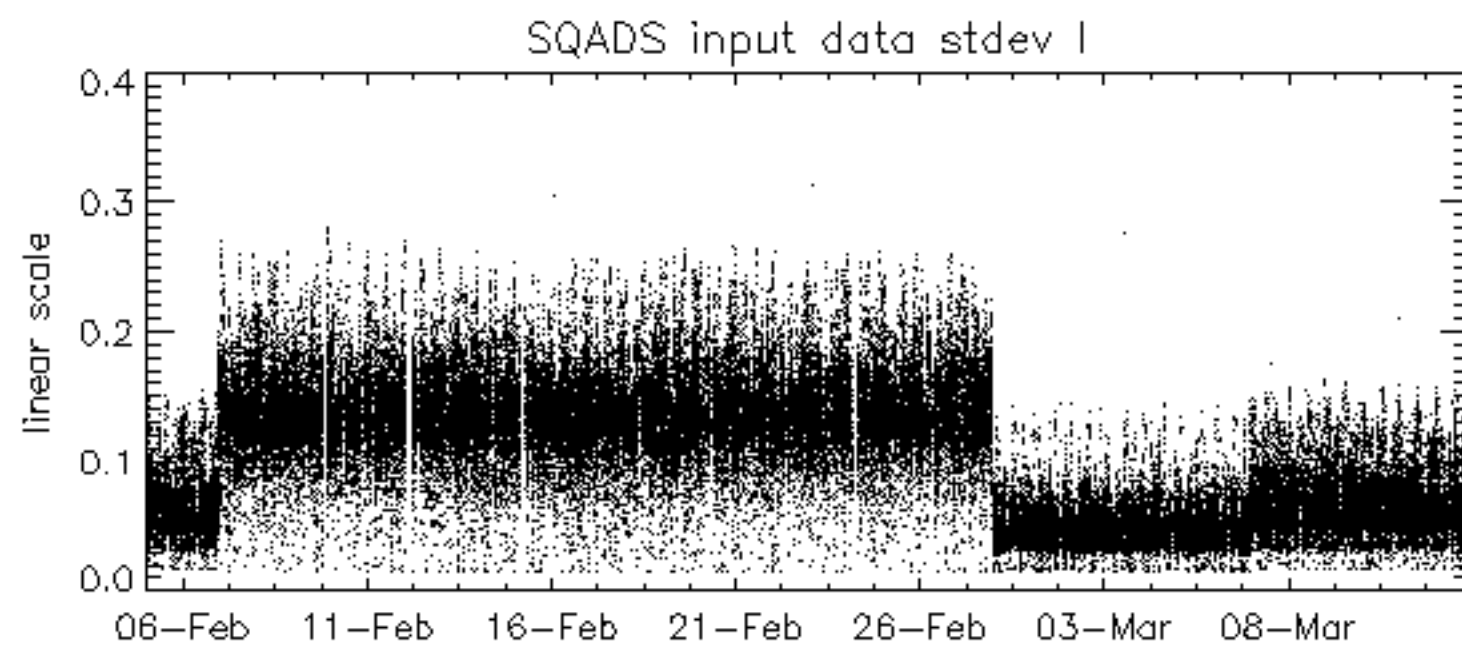
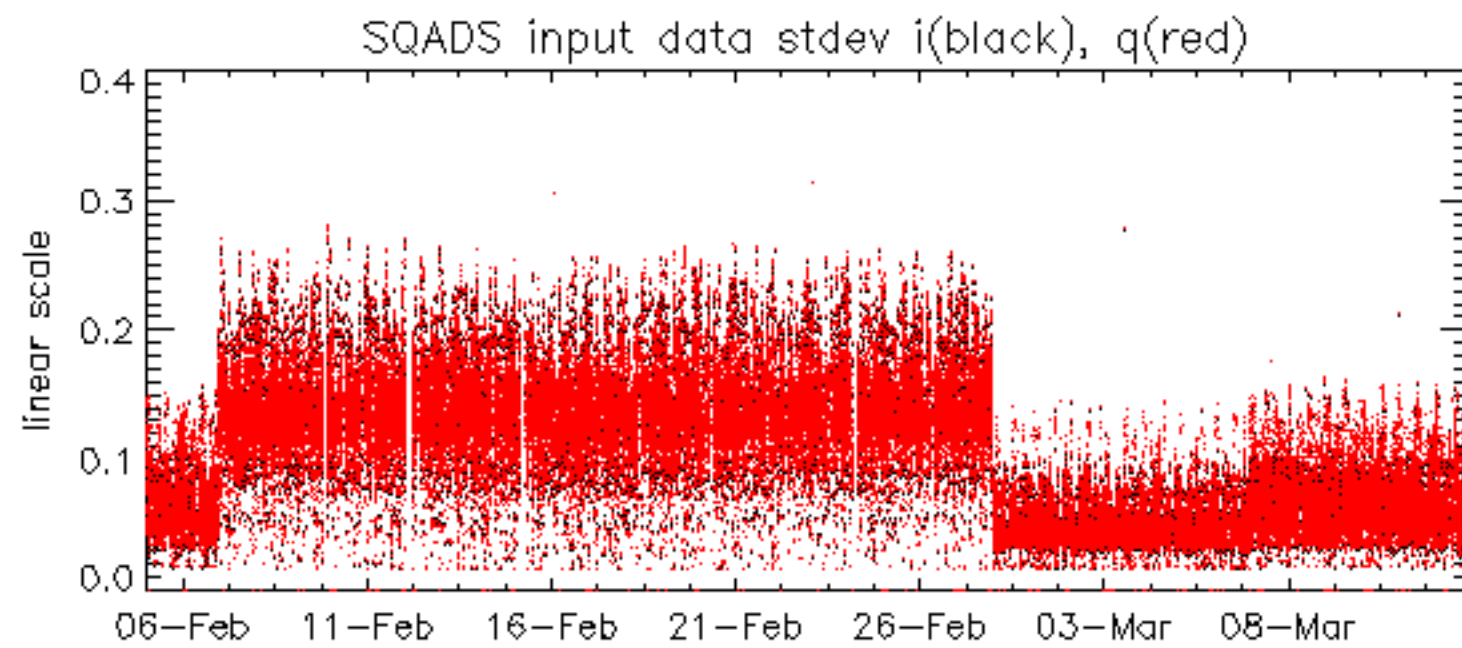








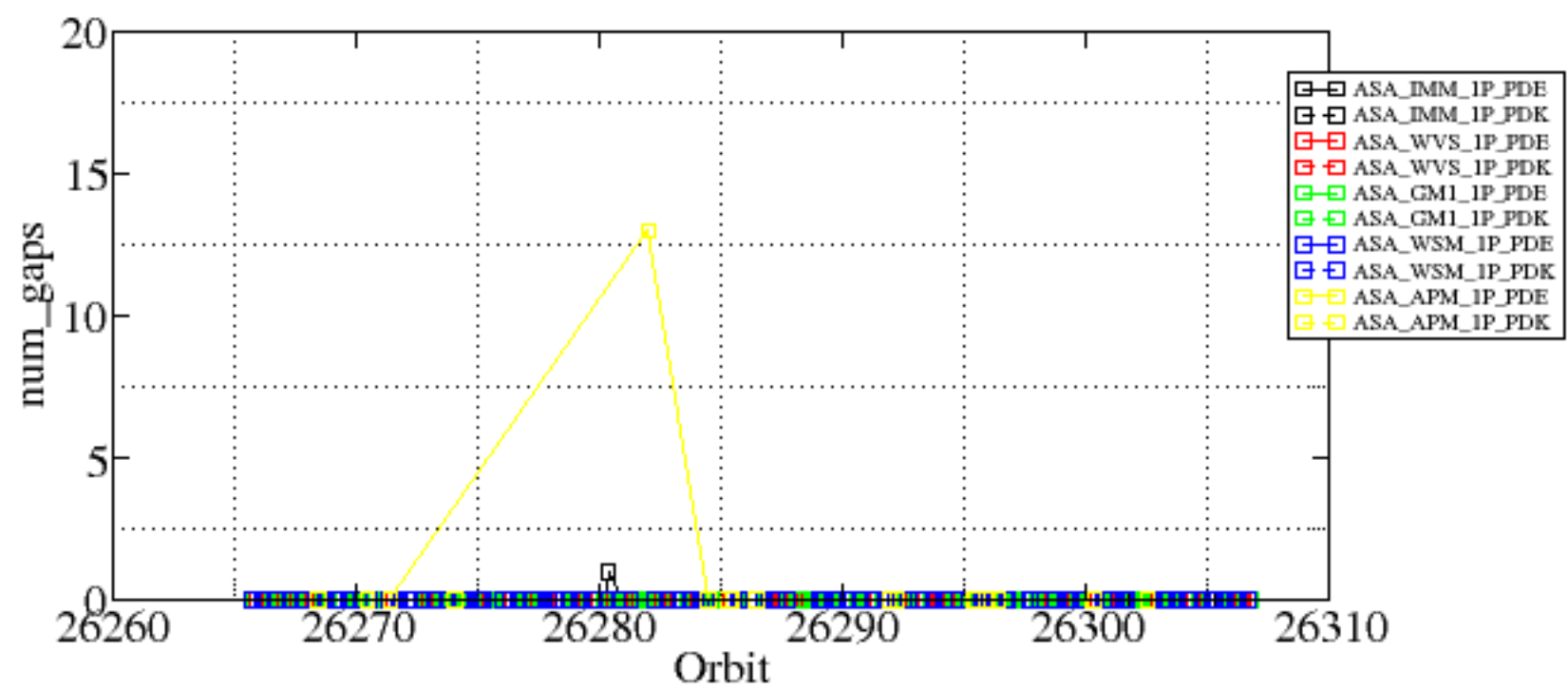


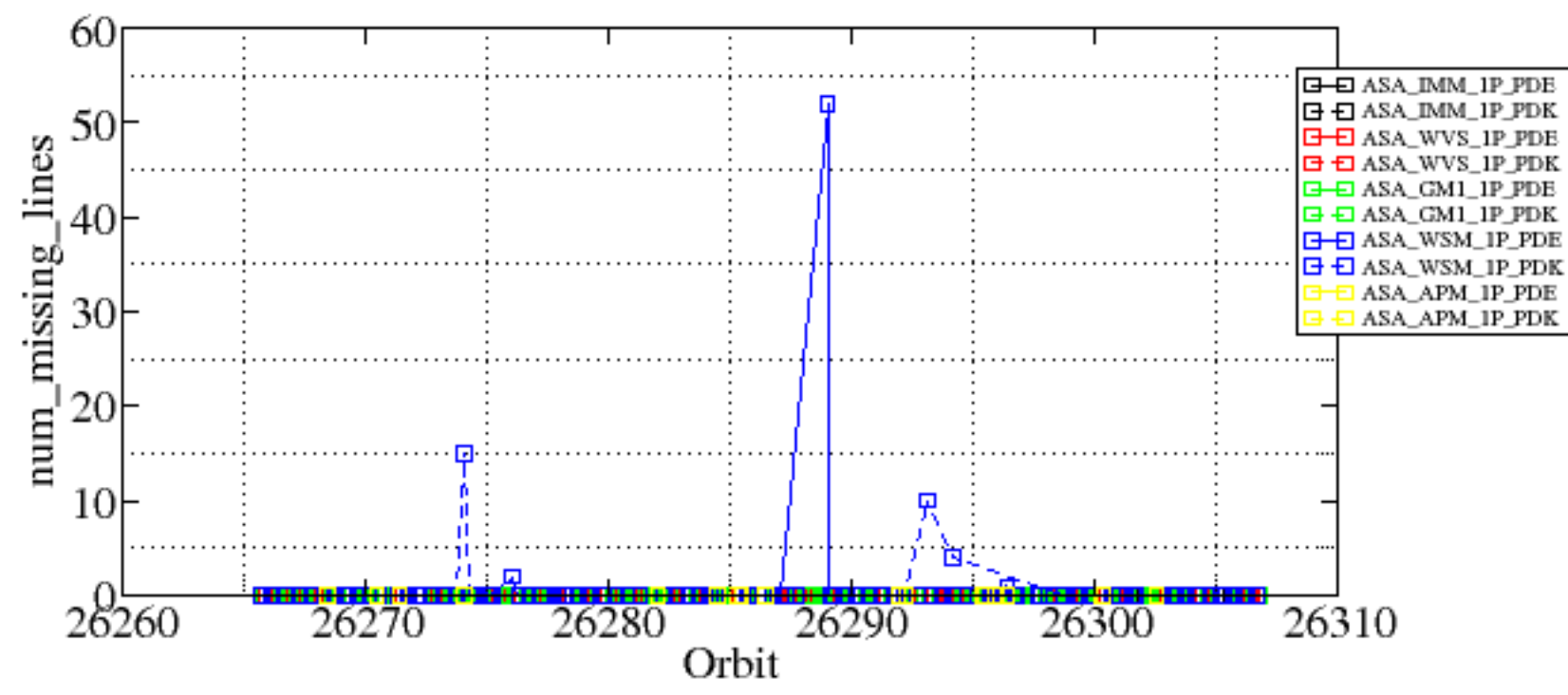


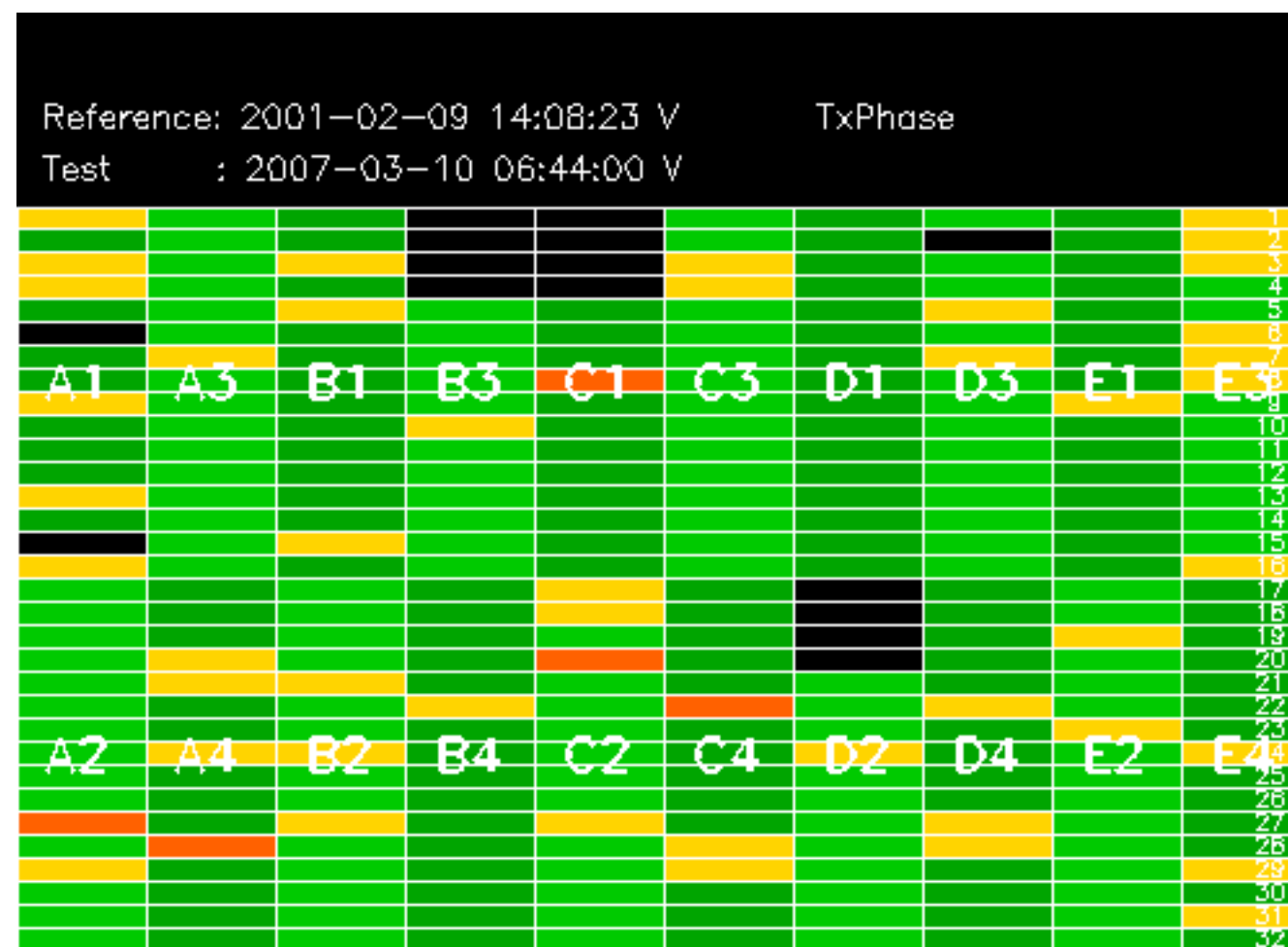
Summary of analysis for the last 3 days 2007031[012]

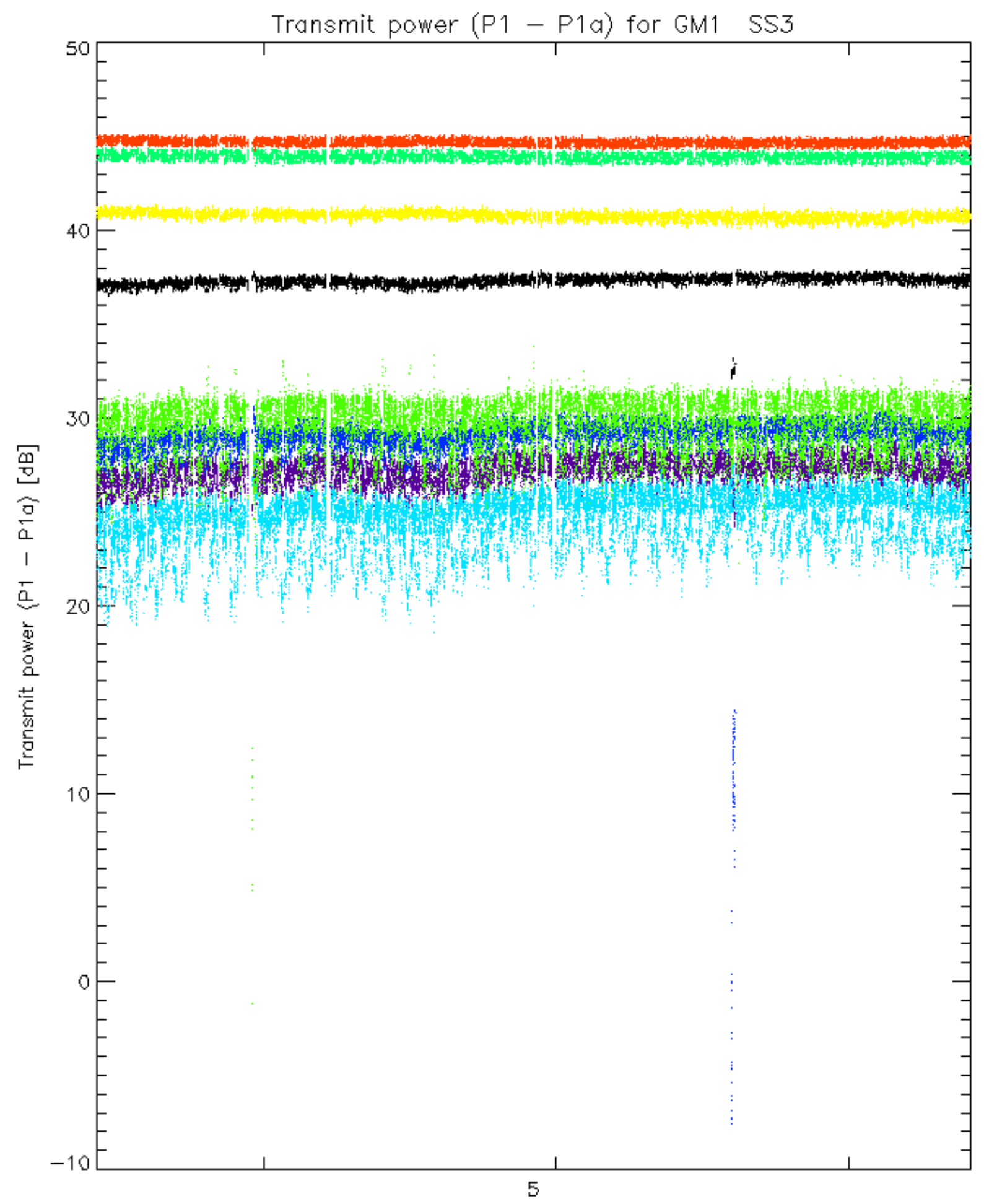
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070311_004054_000000622056_00174_26280_8589.N1	1	0
ASA_WSM_1PNPDE20070310_172247_000001772056_00170_26276_8196.N1	0	2
ASA_WSM_1PNPDE20070311_151024_000002872056_00183_26289_9475.N1	0	52
ASA_WSM_1PNPDE20070312_033052_000001472056_00190_26296_0216.N1	0	1
ASA_WSM_1PNPDK20070310_140332_000000862056_00168_26274_2612.N1	0	15
ASA_WSM_1PNPDK20070311_220425_000001762056_00187_26293_4171.N1	0	10
ASA_WSM_1PNPDK20070311_235015_000001842056_00188_26294_4185.N1	0	4
ASA_APM_1PNPDE20070311_032625_000000402056_00176_26282_8971.N1	13	0

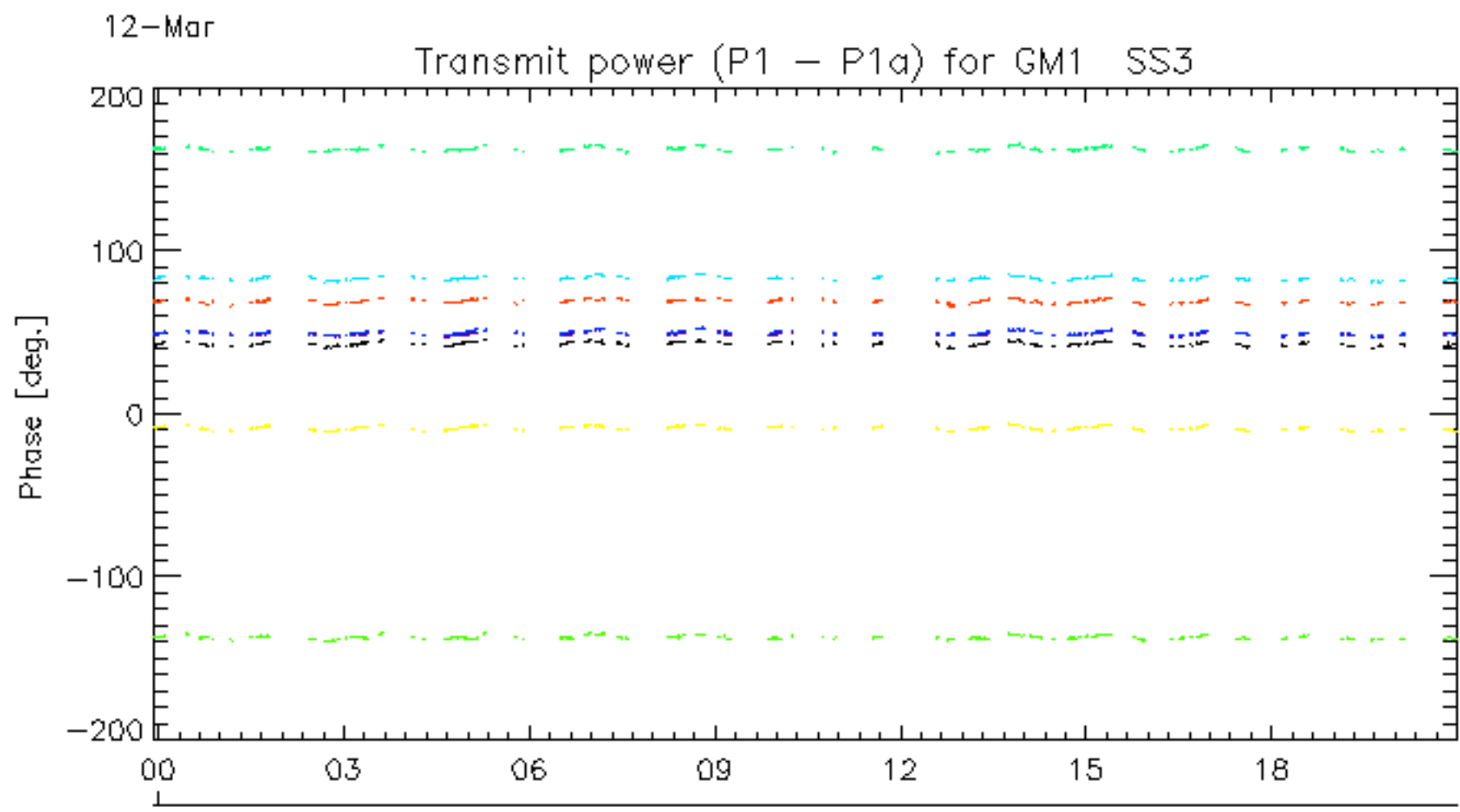
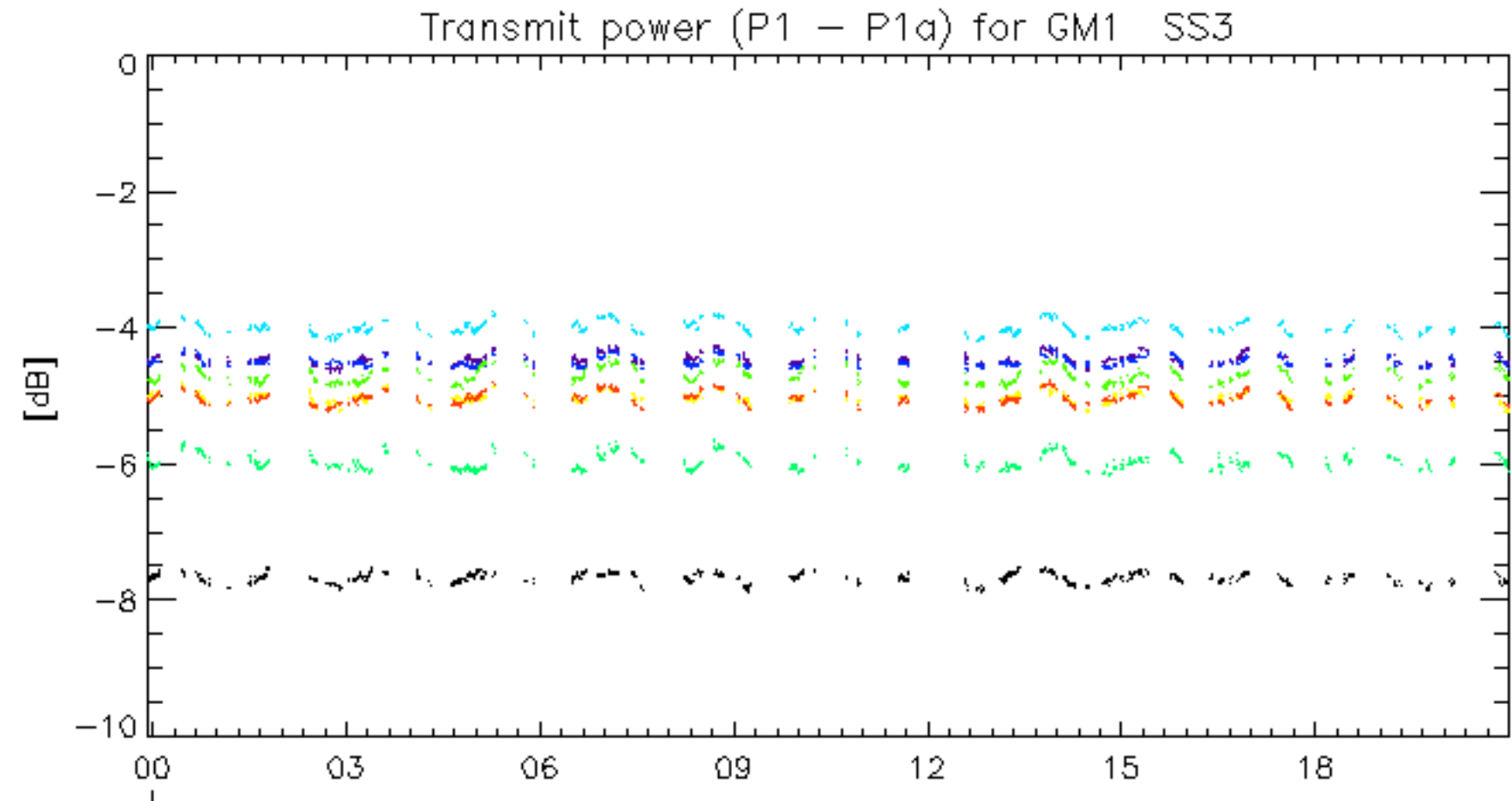






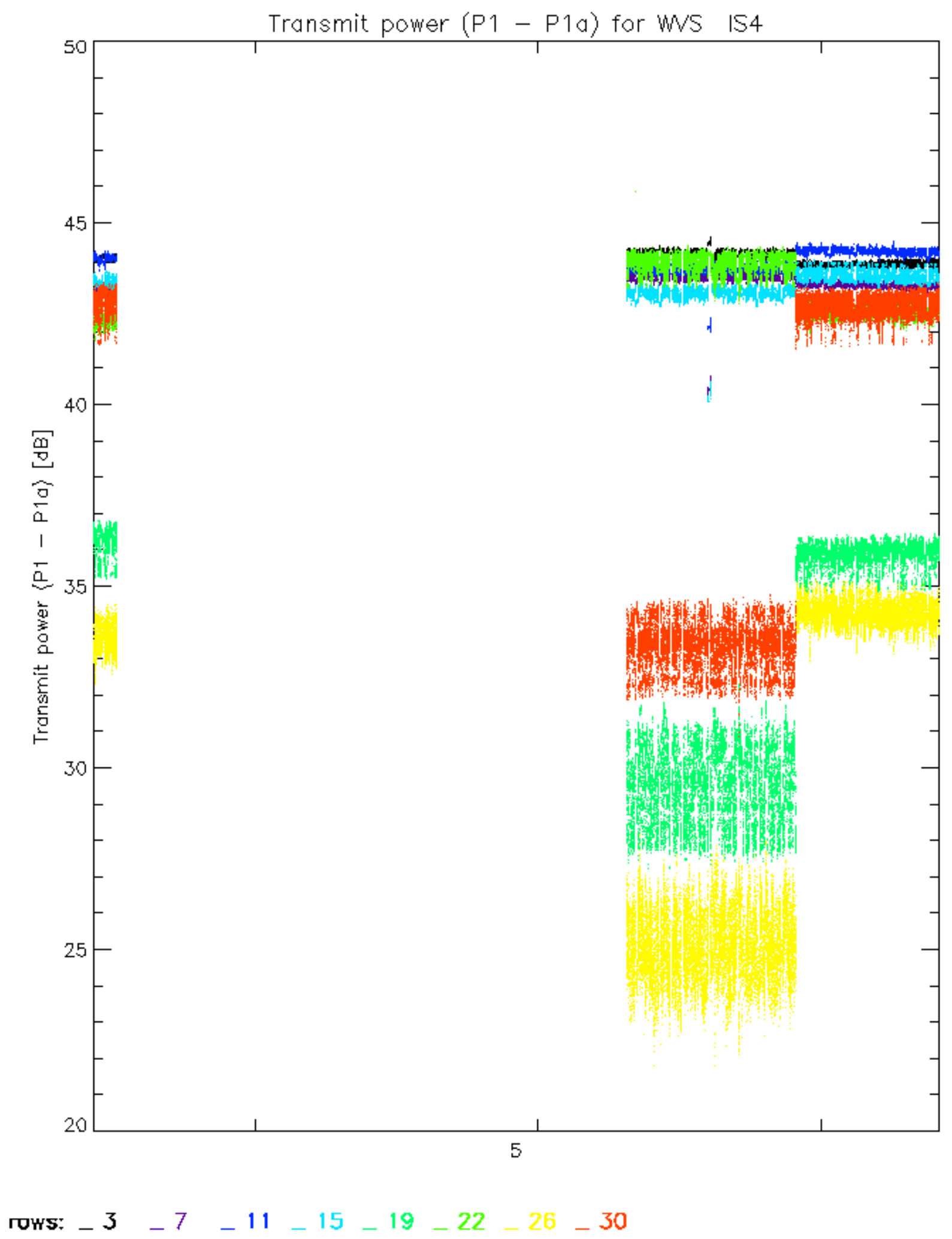


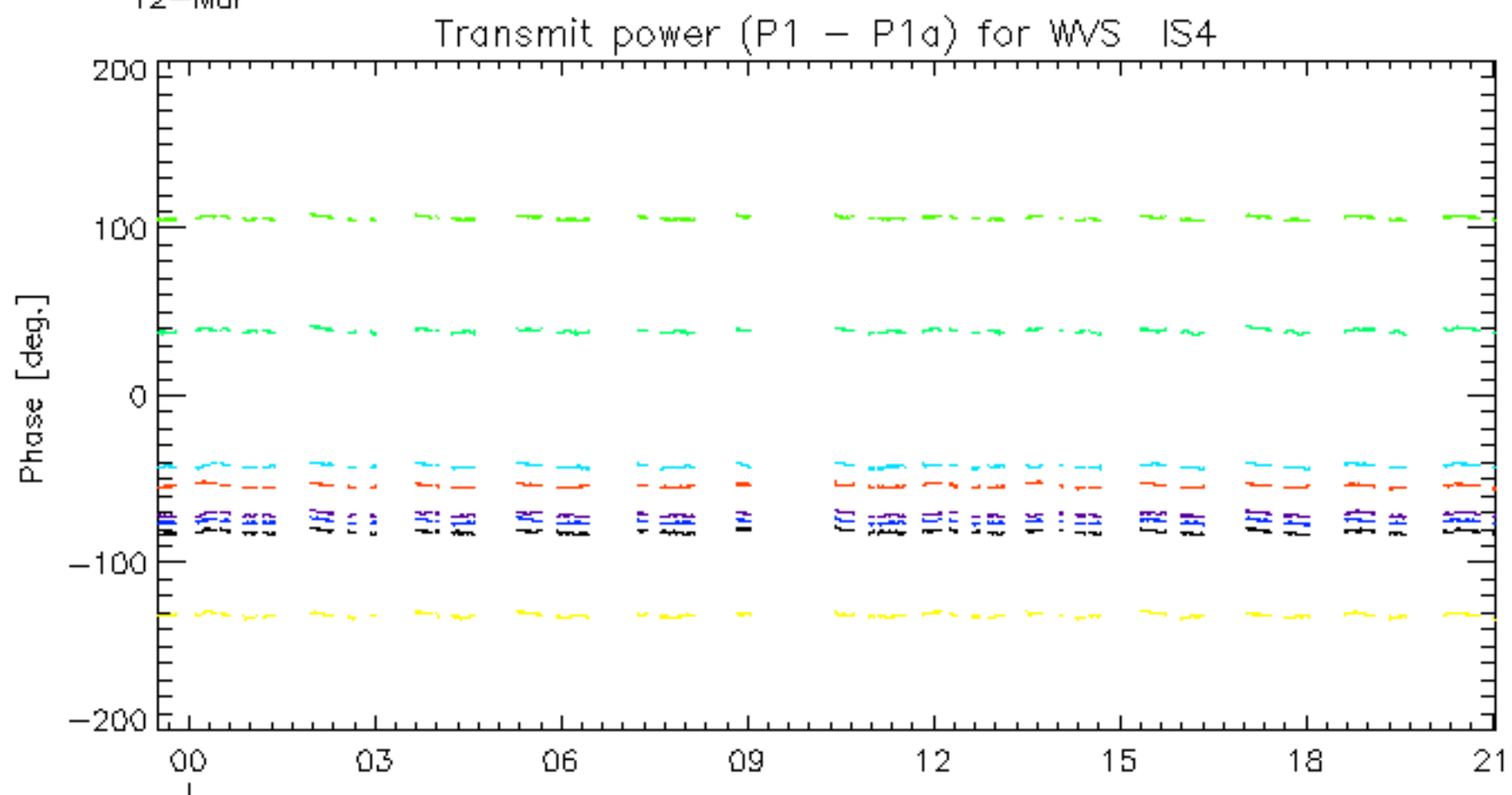
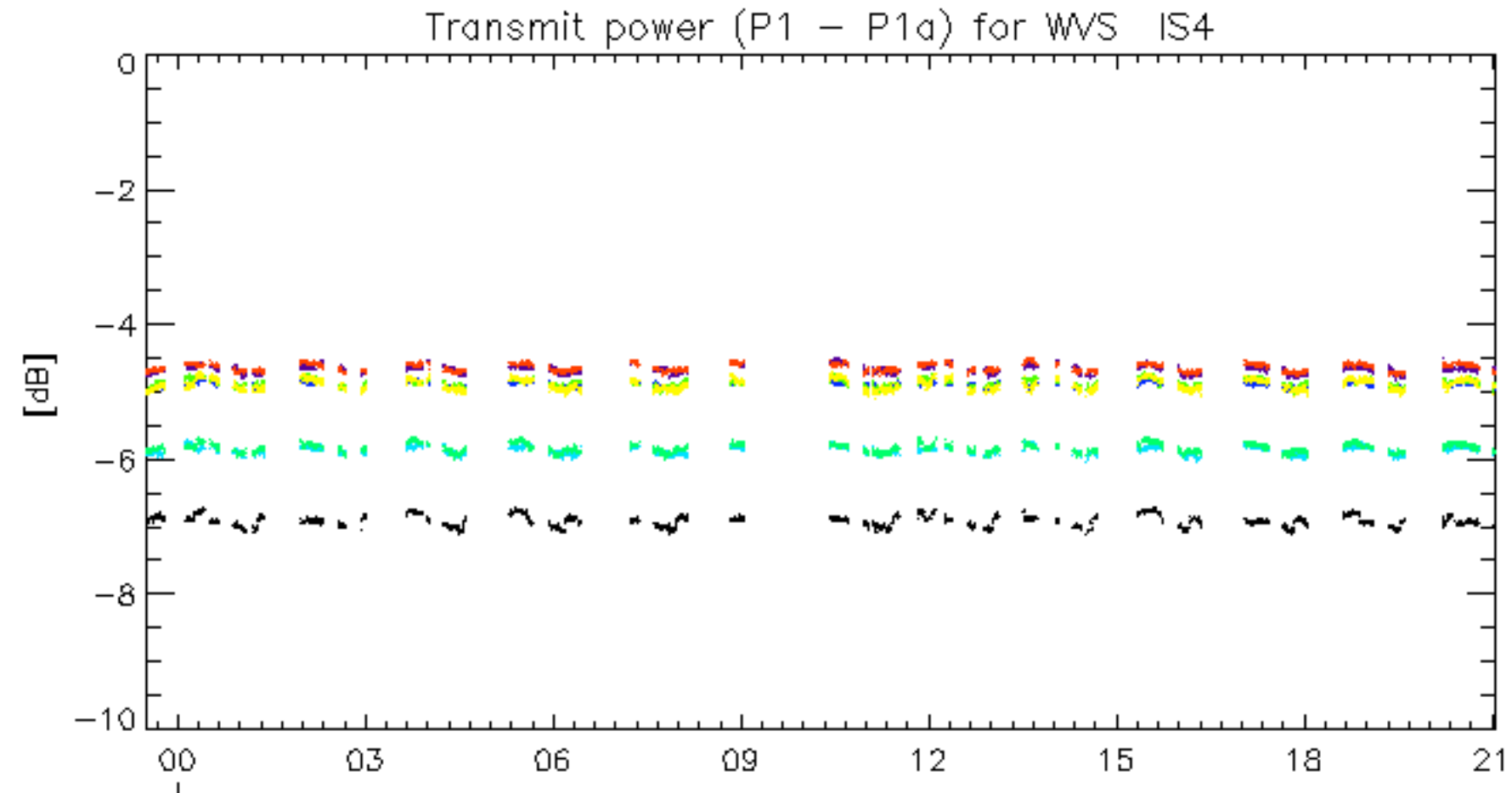
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



12-Mar

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





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

No unavailabilities during the reported period.