

PRELIMINARY REPORT OF 070305

last update on Mon Mar 5 18:01:02 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 2007-03-04 00:00:00 to 2007-03-05 18:01:02

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	31	51	7	3	33
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	31	51	7	3	33
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	31	51	7	3	33
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	31	51	7	3	33

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	39	55	32	13	50
ASA_INS_AXVIEC20070227_105626_20070228_060000_20071231_000000	39	55	32	13	50
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	39	55	32	13	50
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	55	32	13	50

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	20070304 095342
H	20070305 092205

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
⊗
⊗

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
⊗
⊗

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	-10.946208	0.332596	0.021047
7	P1a	-10.119158	0.237464	0.304492
11	P1a	-10.775262	0.127005	0.175515
15	P1a	-11.737694	1.549725	1.947741
19	P1a	-15.052770	1.089204	-1.650023
22	P1a	-19.466934	7.462565	-3.869240
26	P1a	-15.542052	0.504832	0.583193
30	P1a	-20.170033	6.985517	3.988108

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-7.364801	2.822249	-3.169152
7	P1	-2.587694	0.054118	0.162751
11	P1	-3.253749	0.145680	0.531559
15	P1	-4.644080	1.325612	1.794968
19	P1	-3.419725	0.096171	-0.476573
22	P1	-5.357351	0.146954	0.583204
26	P1	-5.385831	0.710332	-1.351589
30	P1	-5.444899	0.067333	0.290438

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.575331	0.704621	-1.343950
7	P2	-21.878321	0.131316	-0.243615
11	P2	-10.802333	0.137063	-0.407228
15	P2	-5.098425	0.085416	-0.060969
19	P2	-7.230721	0.082103	-0.033794
22	P2	-8.356990	0.082399	0.121332

26	P2	-24.160194	0.132255	-0.402423
30	P2	-21.665369	0.069142	0.069290

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.221139	0.008083	-0.017826
7	P3	-8.221139	0.008083	-0.017826
11	P3	-8.221139	0.008083	-0.017826
15	P3	-8.221139	0.008083	-0.017826
19	P3	-8.221139	0.008083	-0.017826
22	P3	-8.221139	0.008083	-0.017826
26	P3	-8.221139	0.008083	-0.017826
30	P3	-8.221139	0.008083	-0.017826

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	-11.127485	0.082359	0.370570
7	P1a	-10.046698	0.134145	-0.029217
11	P1a	-10.631072	0.067632	-0.104478
15	P1a	-10.894957	0.133893	-0.142893
19	P1a	-15.722393	0.067298	0.104997
22	P1a	-20.833147	1.175804	-0.165484
26	P1a	-15.350347	0.265463	0.238736
30	P1a	-18.373430	0.348502	-0.082627

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.044728	1.116053	-2.138392
7	P1	-2.429582	0.022372	0.036662

11	P1	-2.904545	0.019914	-0.056425
15	P1	-3.823296	0.040067	-0.057366
19	P1	-3.551363	0.011746	0.004852
22	P1	-5.034302	0.023144	-0.035132
26	P1	-5.976222	0.025158	0.061024
30	P1	-5.279077	0.021750	0.026502

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.929205	0.300191	-1.037491
7	P2	-21.969770	0.054713	0.097406
11	P2	-10.656801	0.030969	0.056165
15	P2	-4.818012	0.027058	0.014112
19	P2	-6.812760	0.028817	0.036076
22	P2	-8.108628	0.034397	0.091154
26	P2	-24.260771	0.034905	-0.056911
30	P2	-21.753860	0.037203	0.078485

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.045154	0.003519	-0.007606
7	P3	-8.045206	0.003531	-0.007364
11	P3	-8.045227	0.003523	-0.008169
15	P3	-8.045197	0.003536	-0.007935
19	P3	-8.045286	0.003524	-0.008107
22	P3	-8.045282	0.003520	-0.007770
26	P3	-8.045144	0.003523	-0.007909
30	P3	-8.045197	0.003533	-0.007939

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	0.000626467
	stdev	2.34412e-07
MEAN Q	mean	0.000392189
	stdev	2.55186e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.109768
	stdev	0.00250894
STDEV Q	mean	0.109811
	stdev	0.00256309



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007030[345]

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_GM1_1PNPDK20070303_153003_000002712056_00068_26174_5060.N1	0	51
ASA_GM1_1PNPDK20070305_083800_000004282056_00093_26199_6587.N1	0	7



ASA_WSM_1PNPDE20070303_142340_000000852056_00068_26174_9241.N1	0	16
ASA_WSM_1PNPDE20070305_003950_000002632056_00088_26194_1182.N1	0	32





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)	
	
	Ascending
	
	Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler	
	
	Ascending
	
	Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX	
	

7.4 - Unbiased Doppler Error for GM1

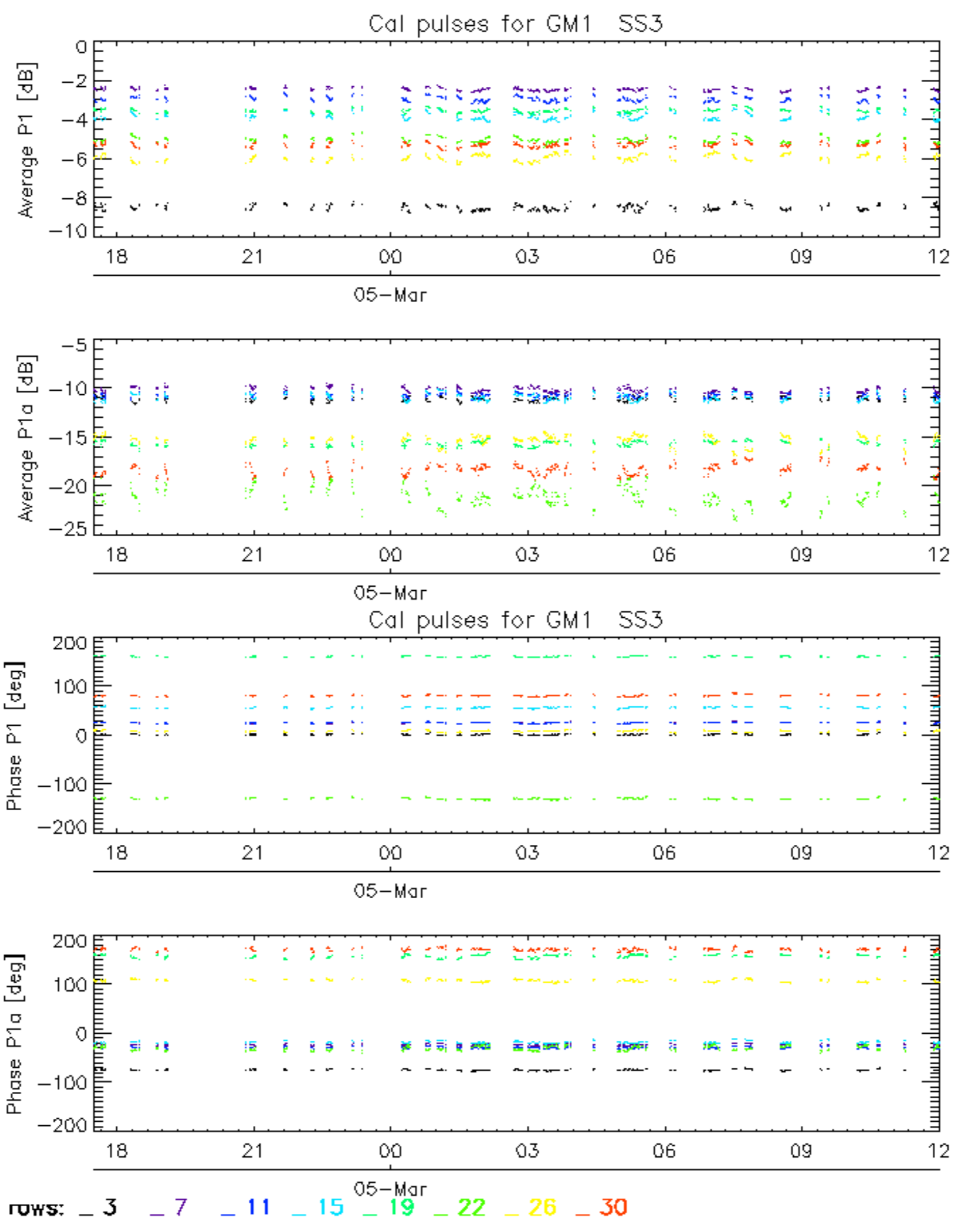
Evolution of unbiased Doppler error (Real - Expected)
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Ascending
<input type="checkbox"/>
Descending

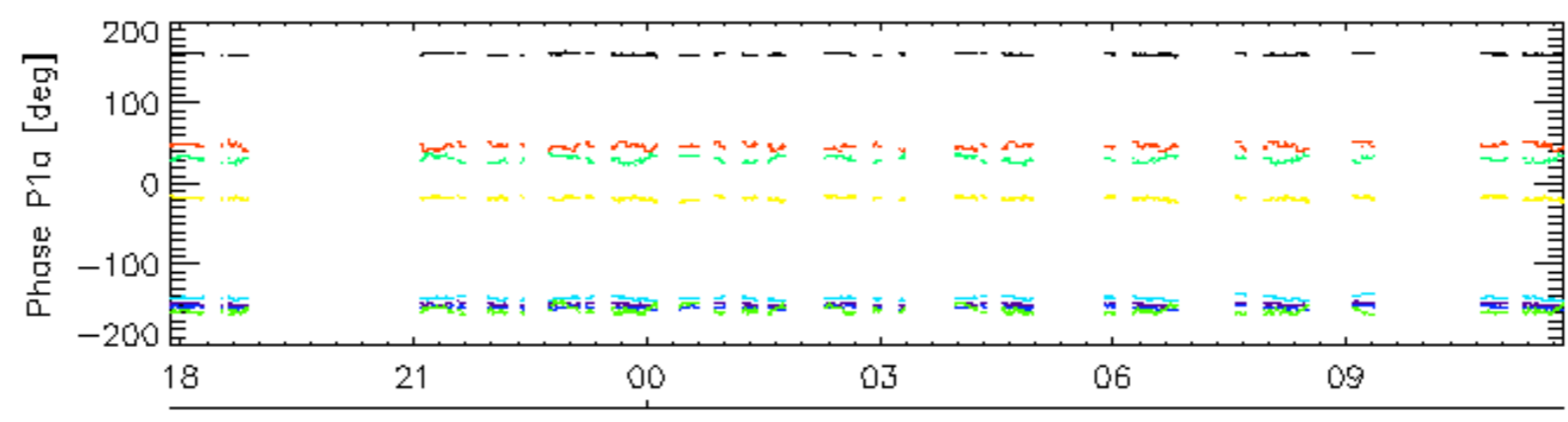
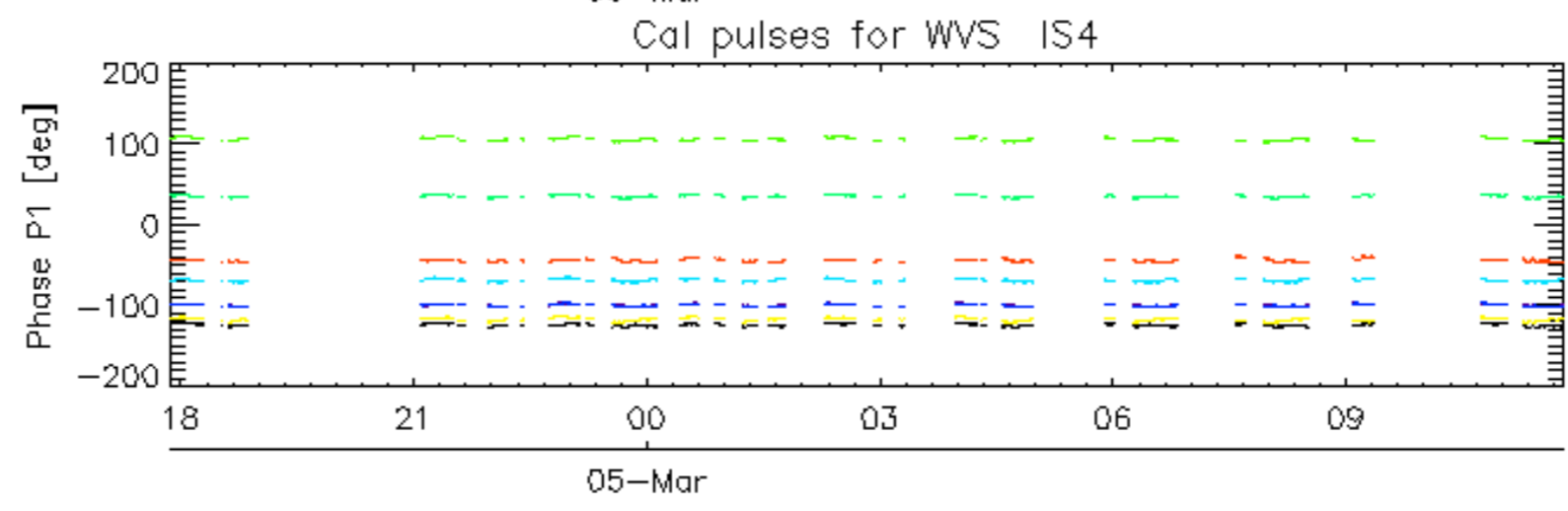
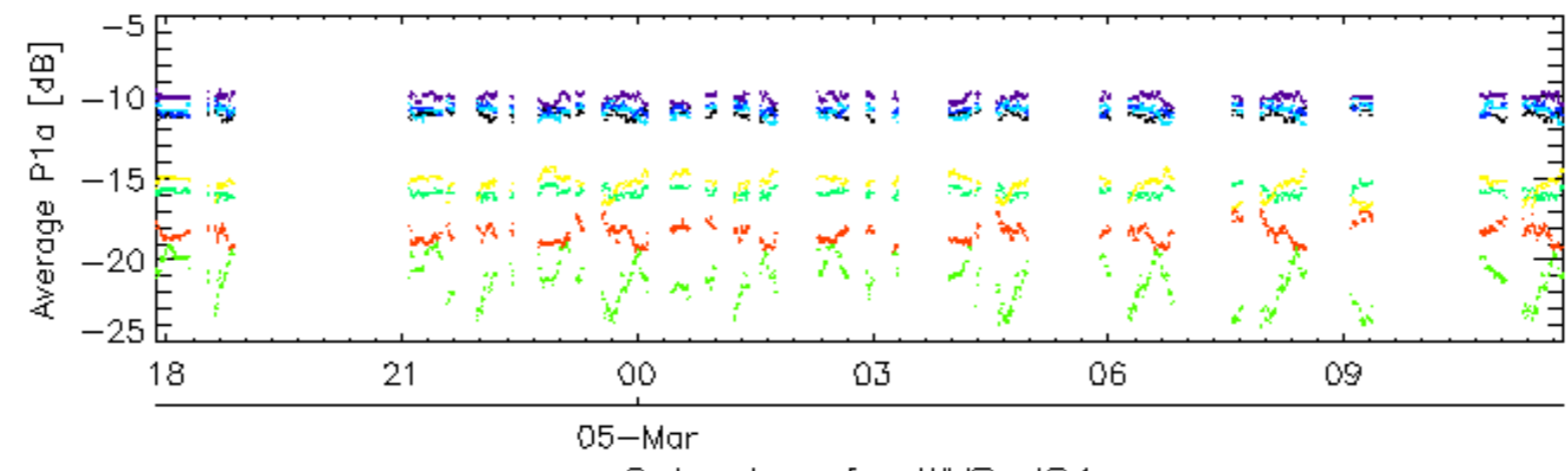
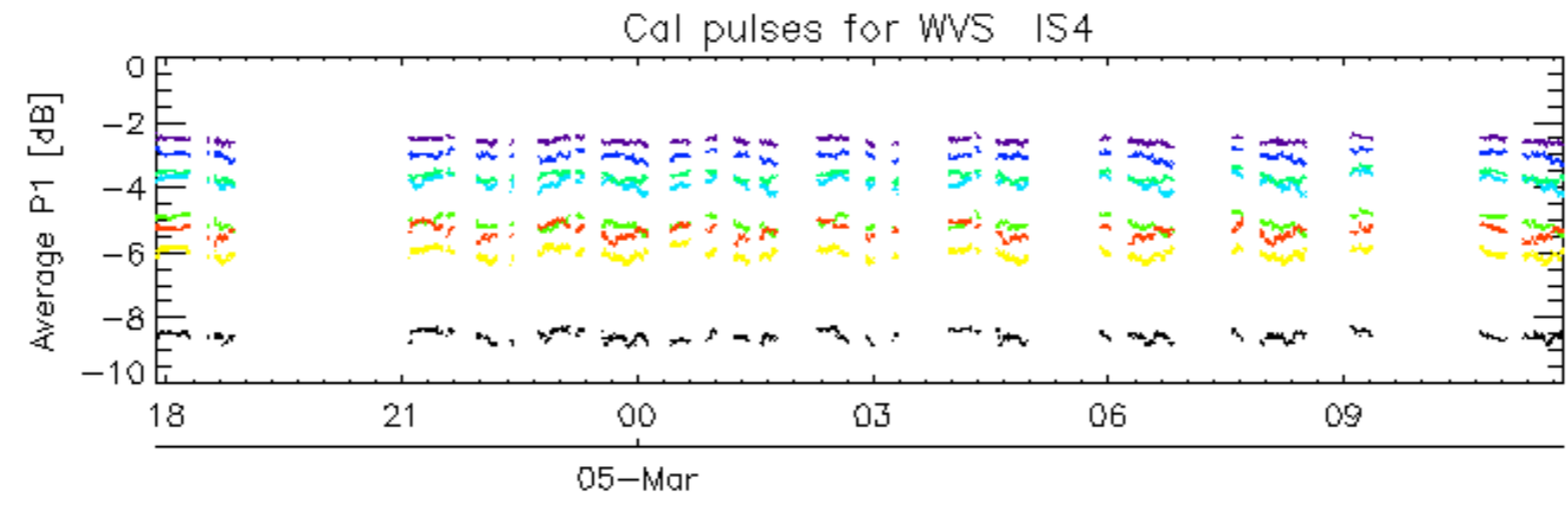
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
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Ascending
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Descending

7.6 - Doppler evolution versus ANX for GM1

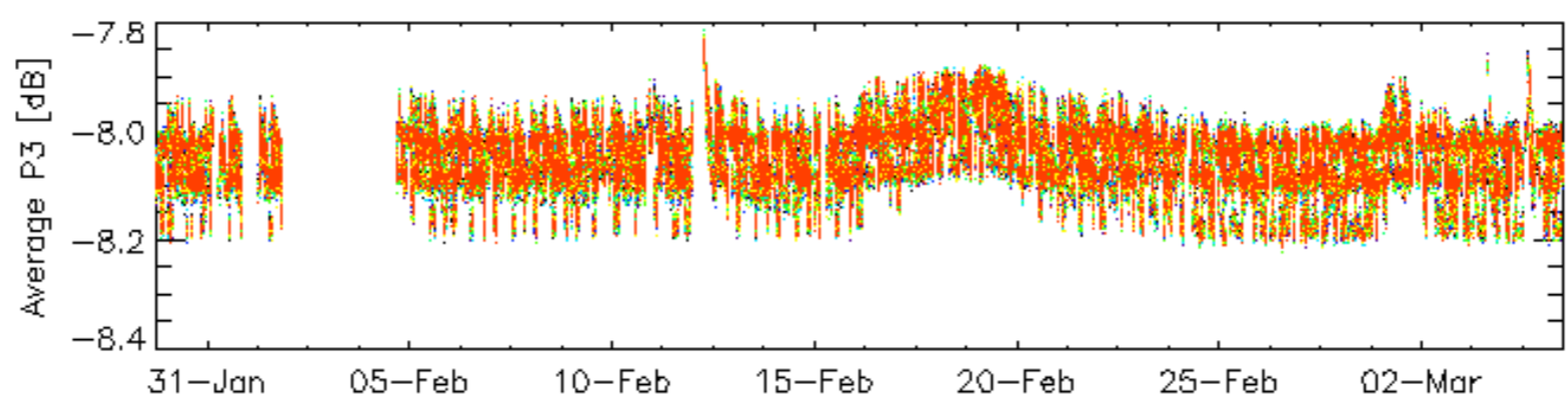
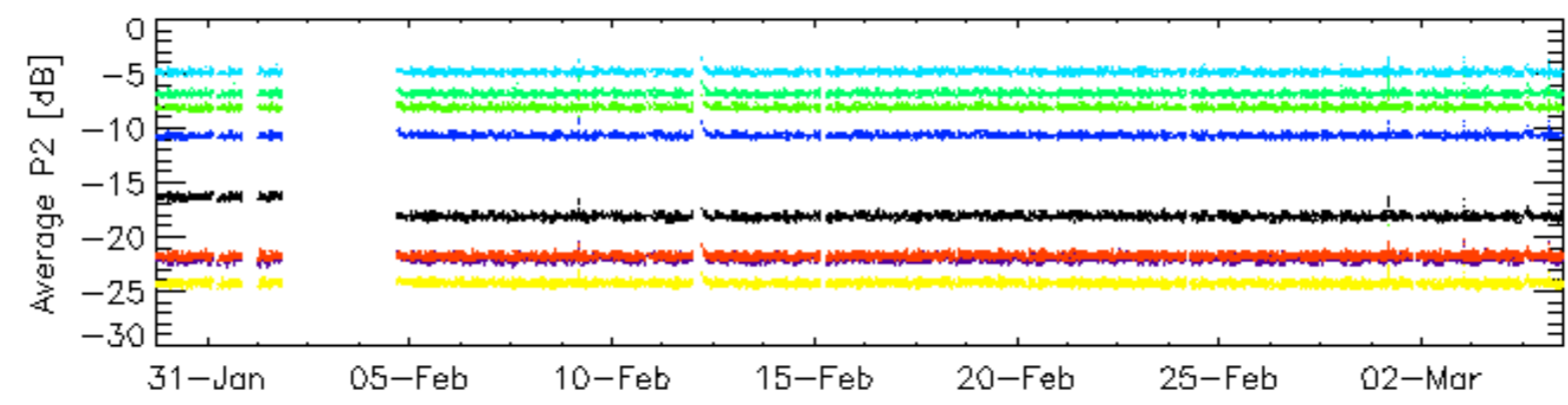
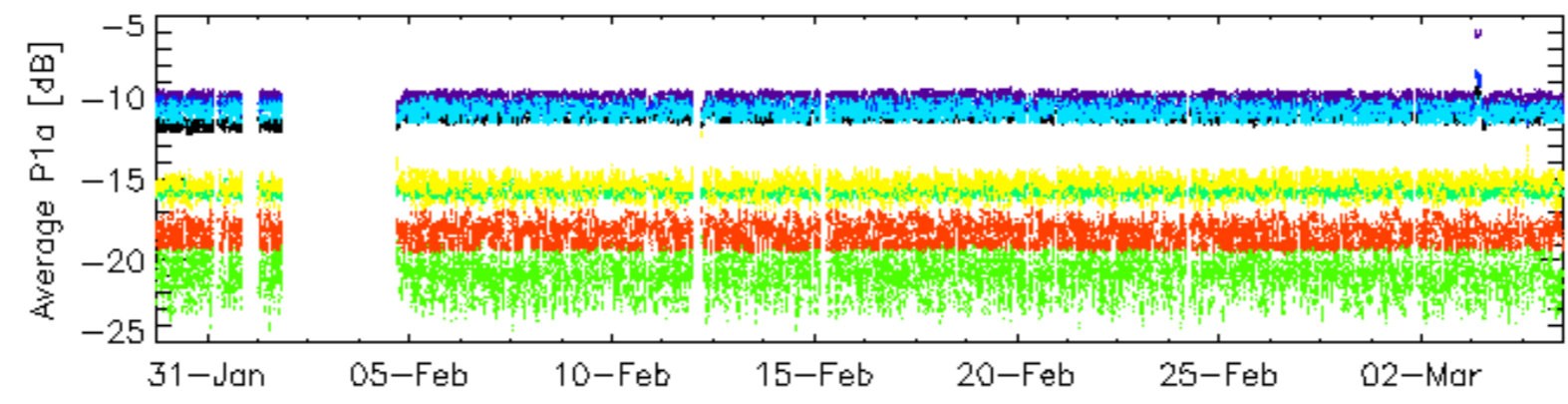
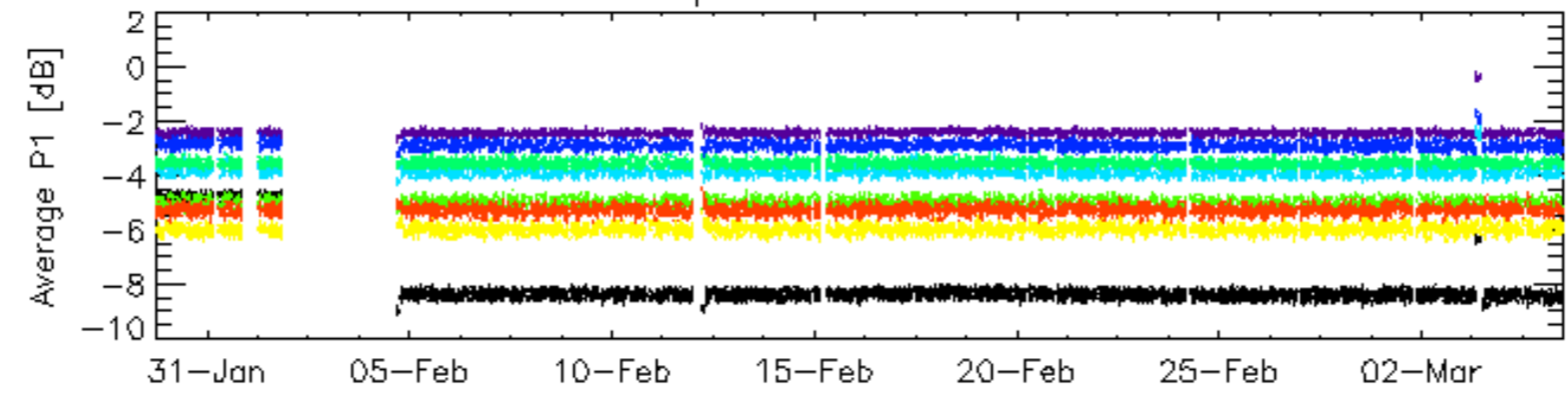
Evolution Doppler error versus ANX
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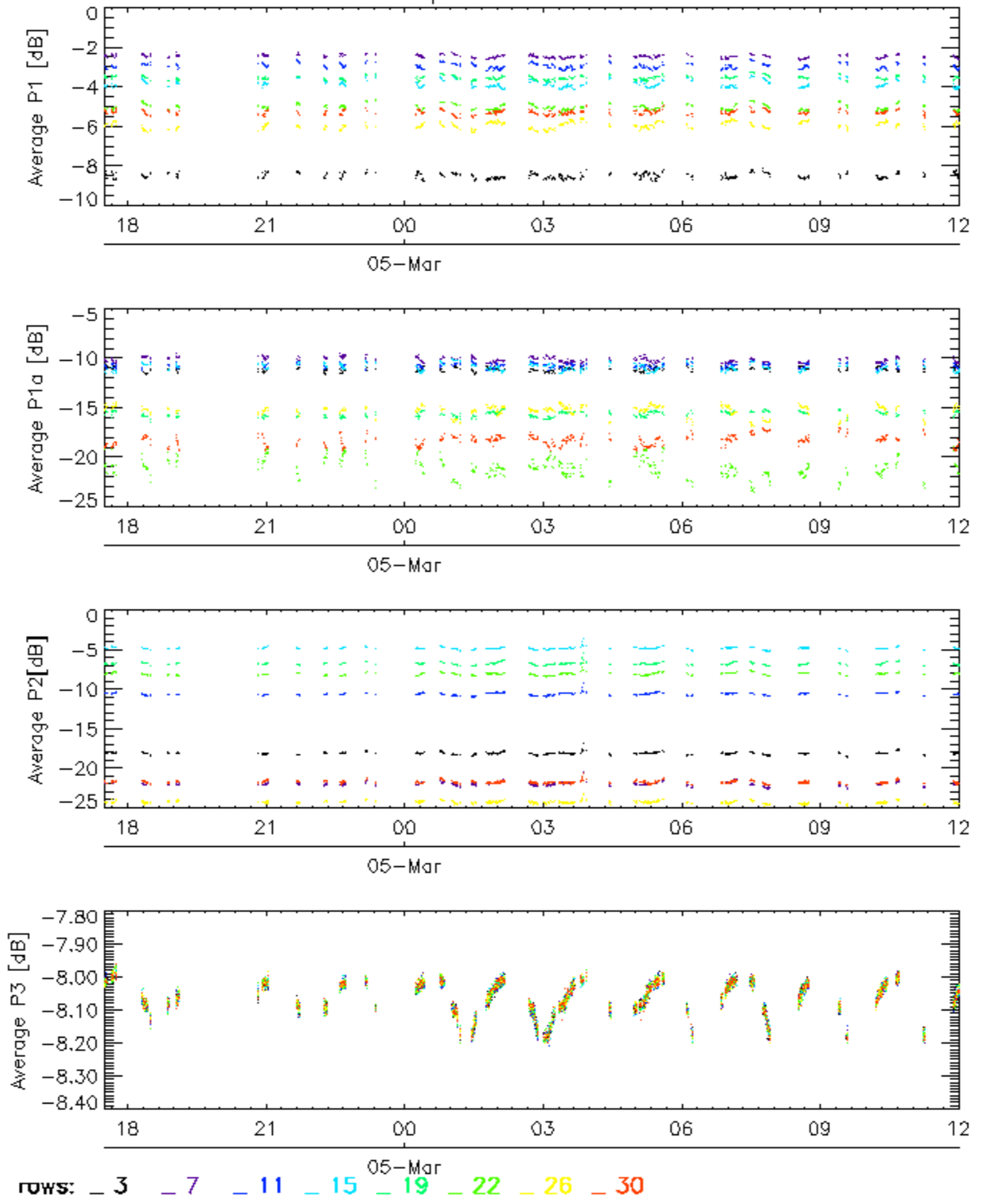
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

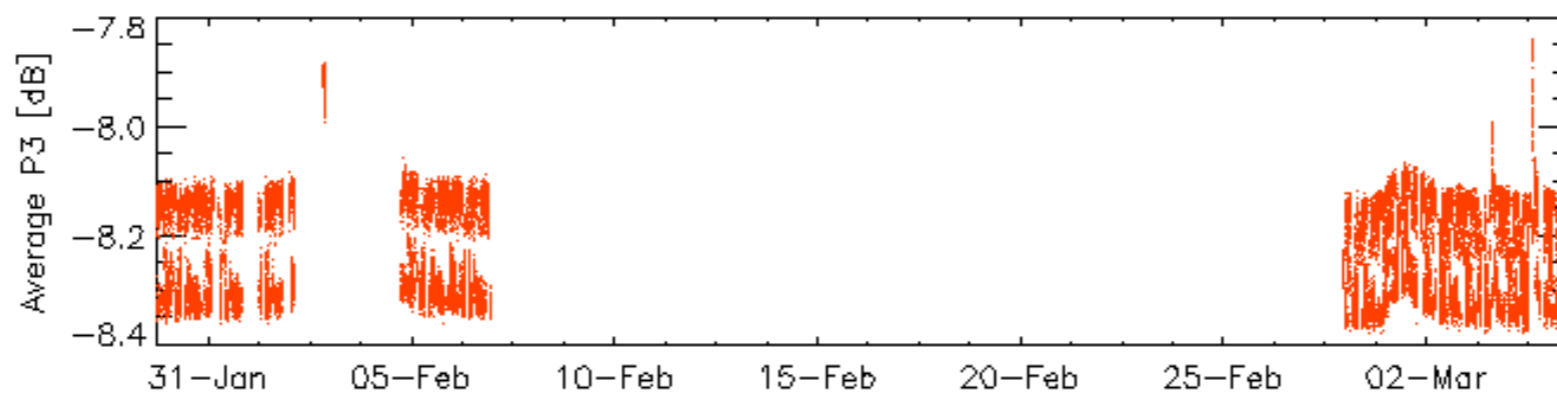
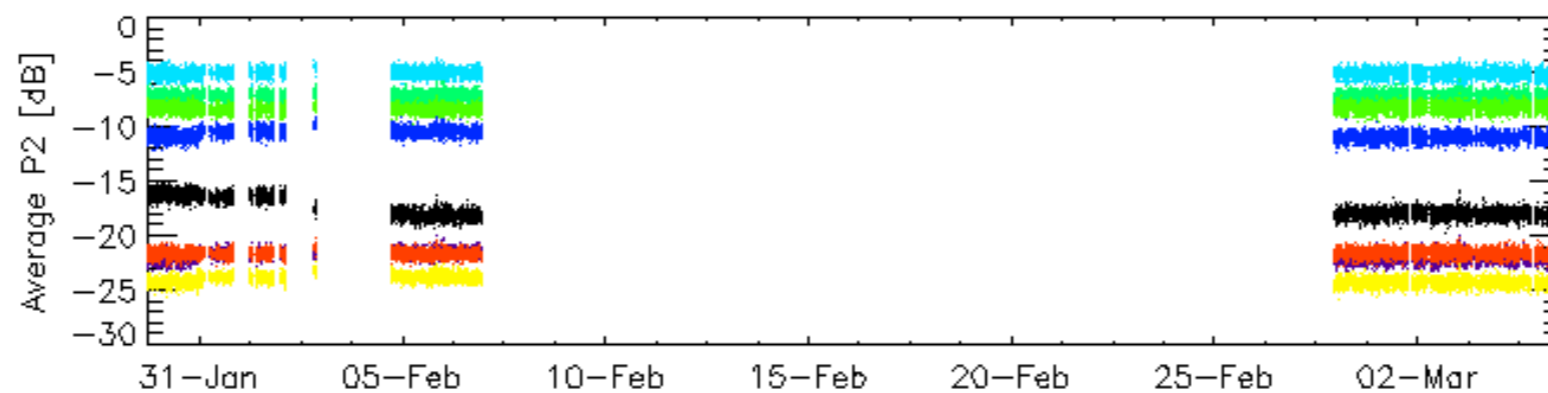
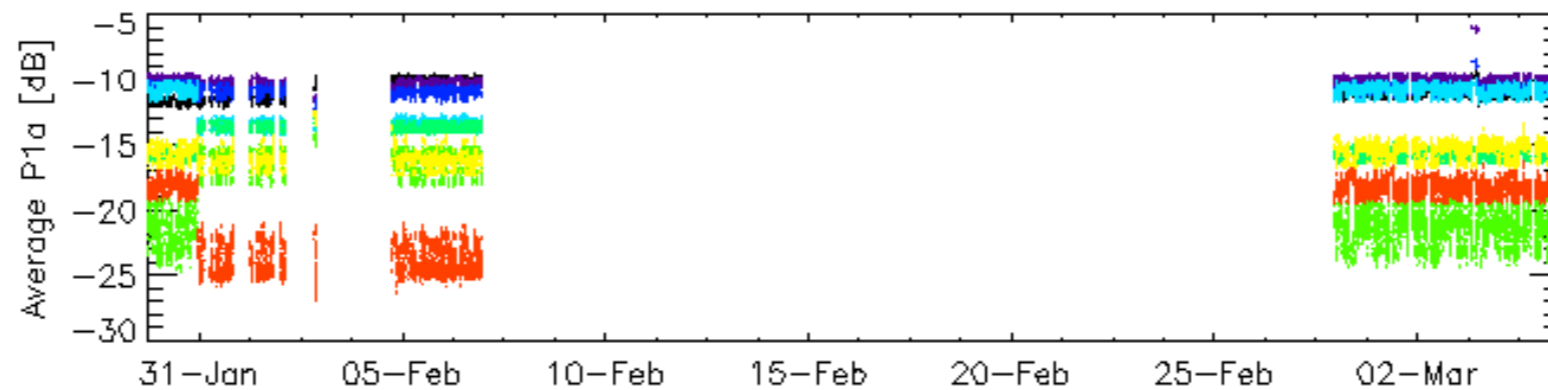
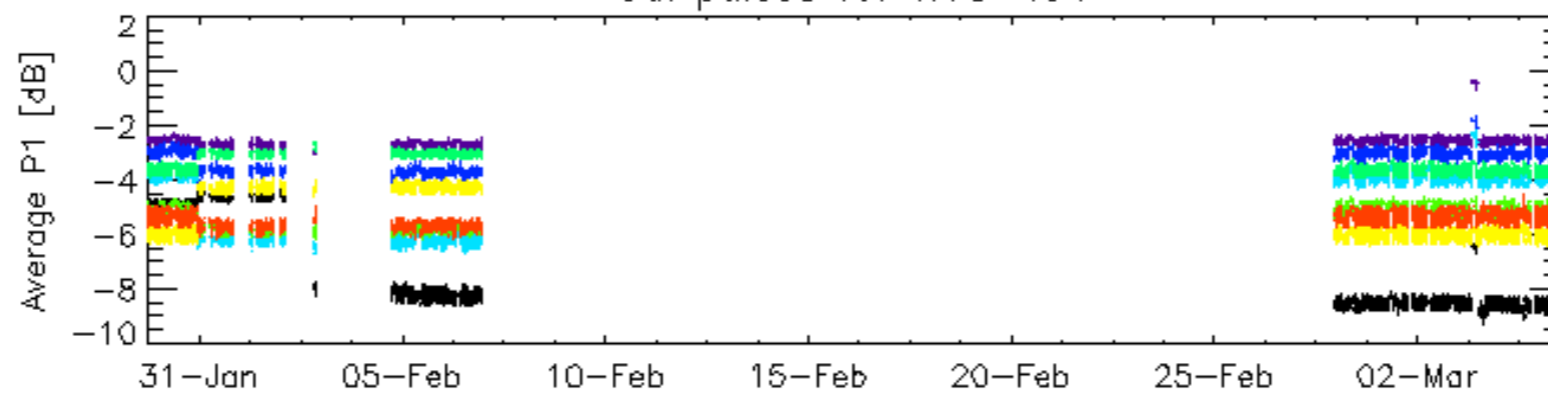


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

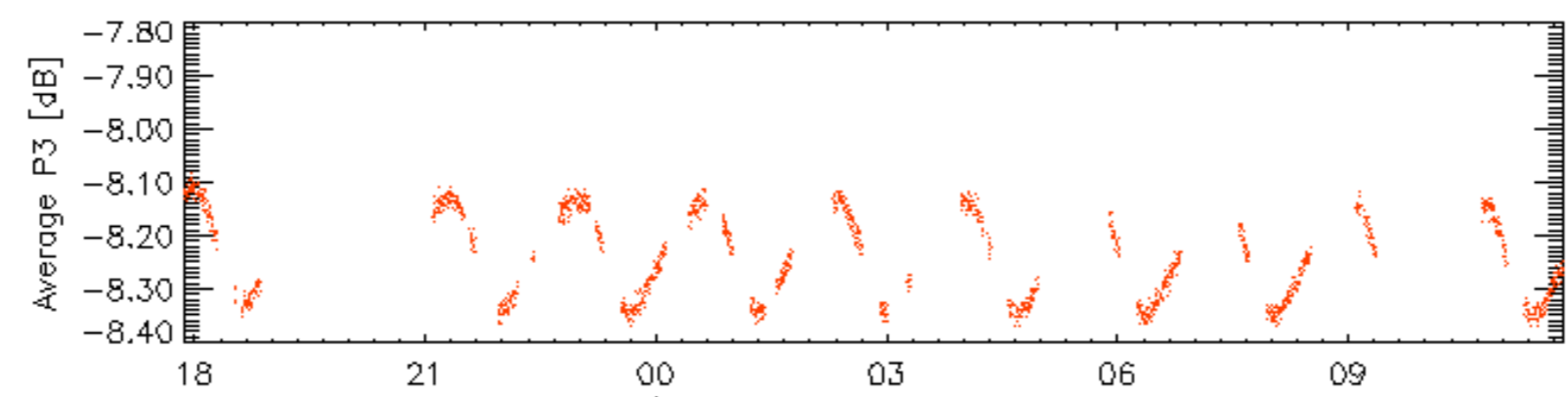
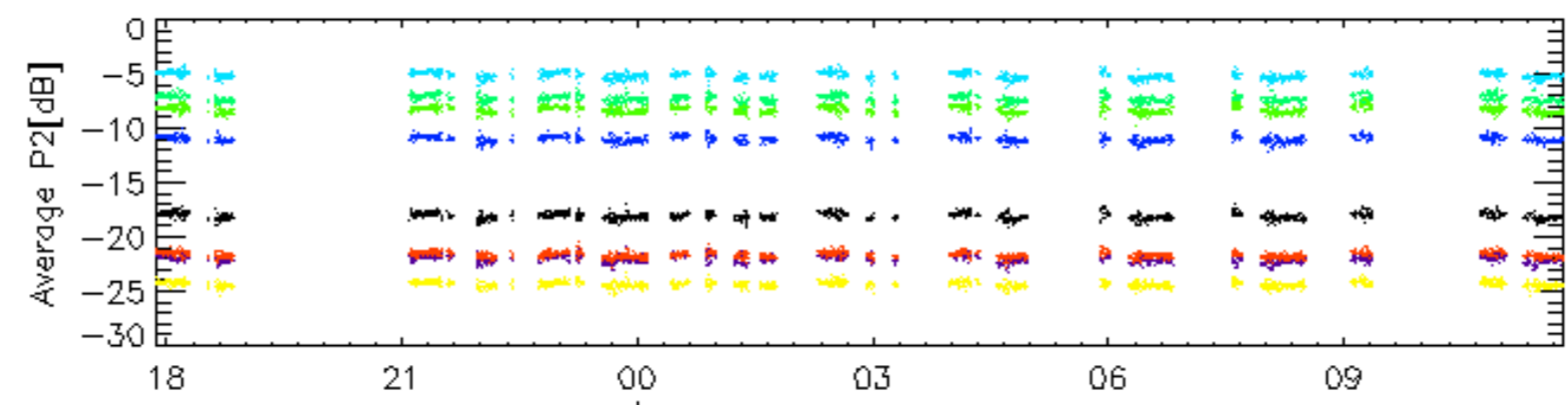
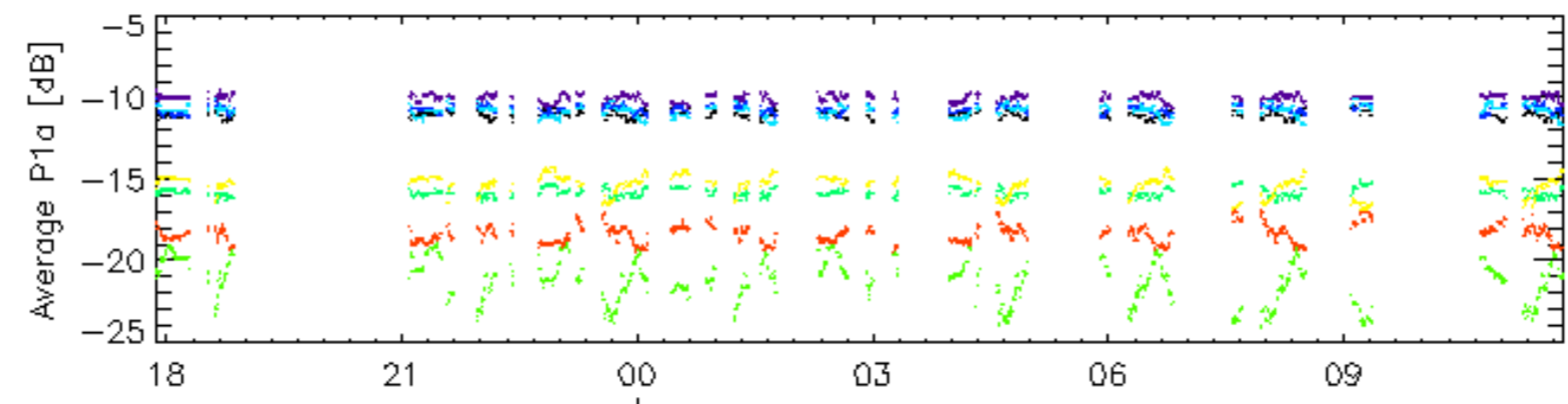
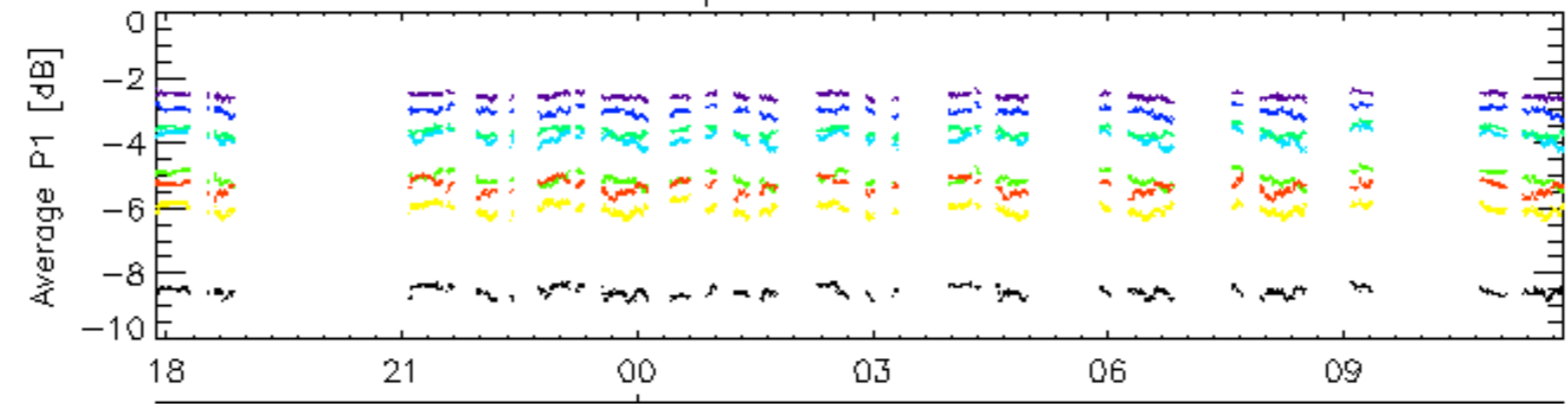


Cal pulses for WVS IS4



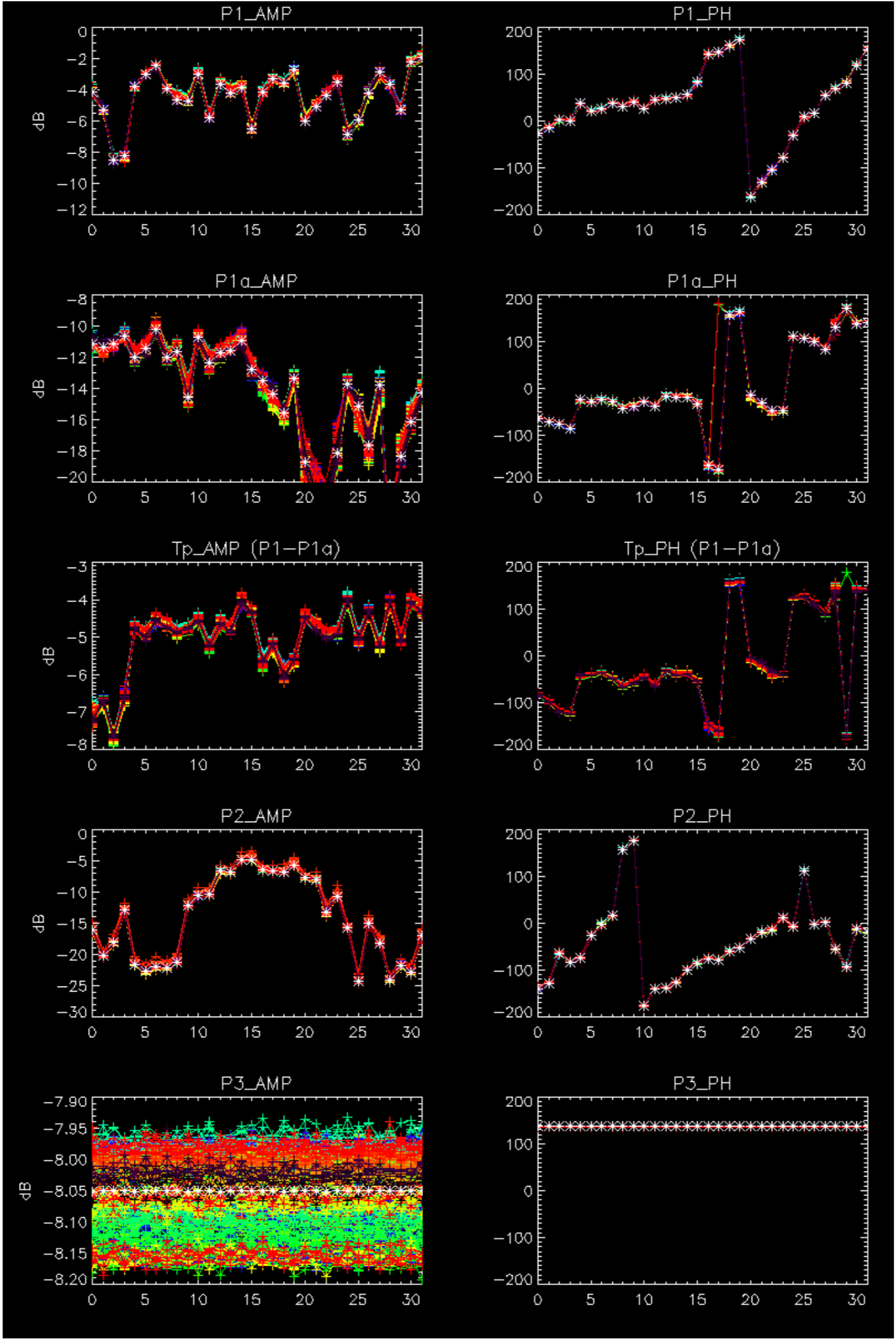
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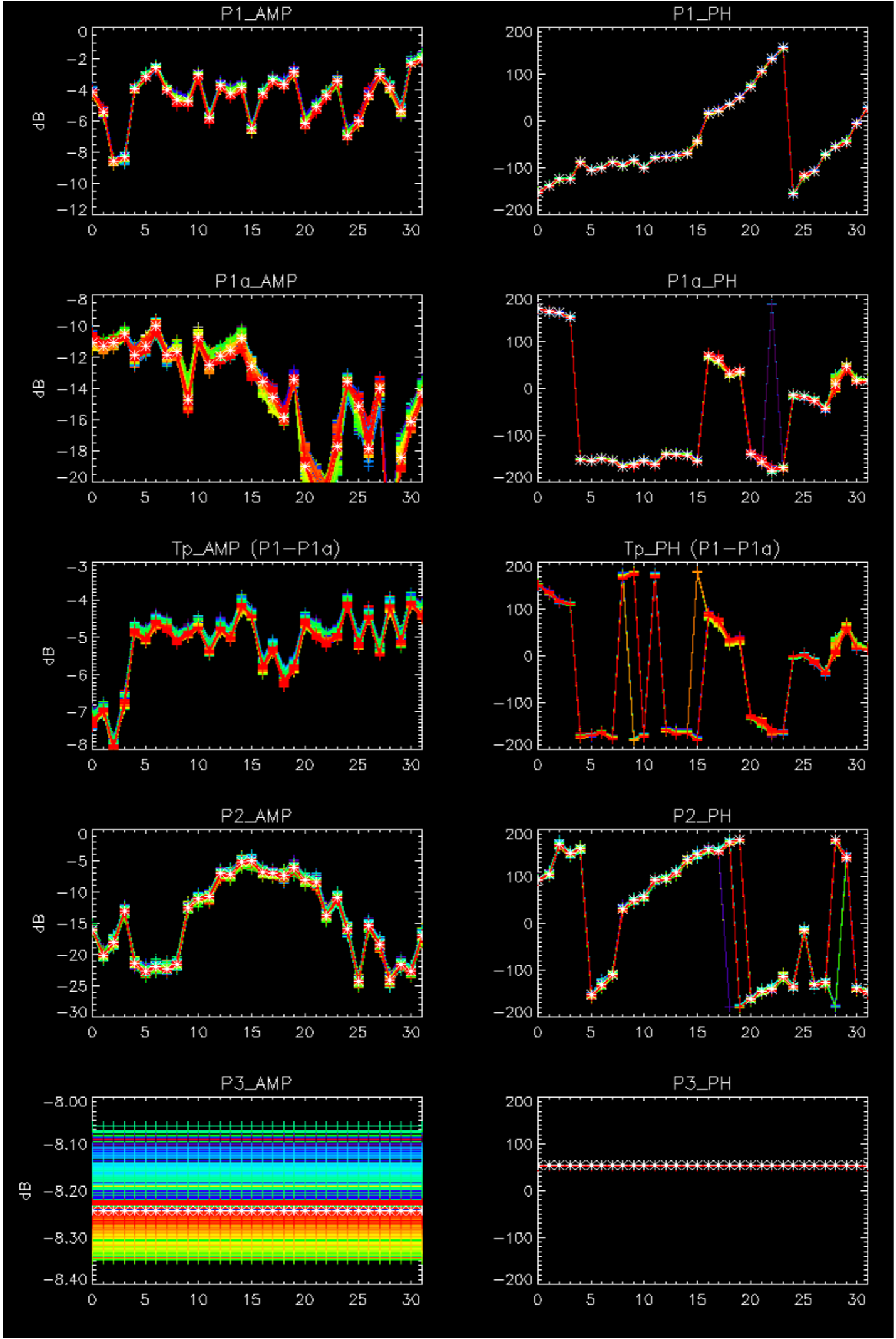
Cal pulses for WVS IS4



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

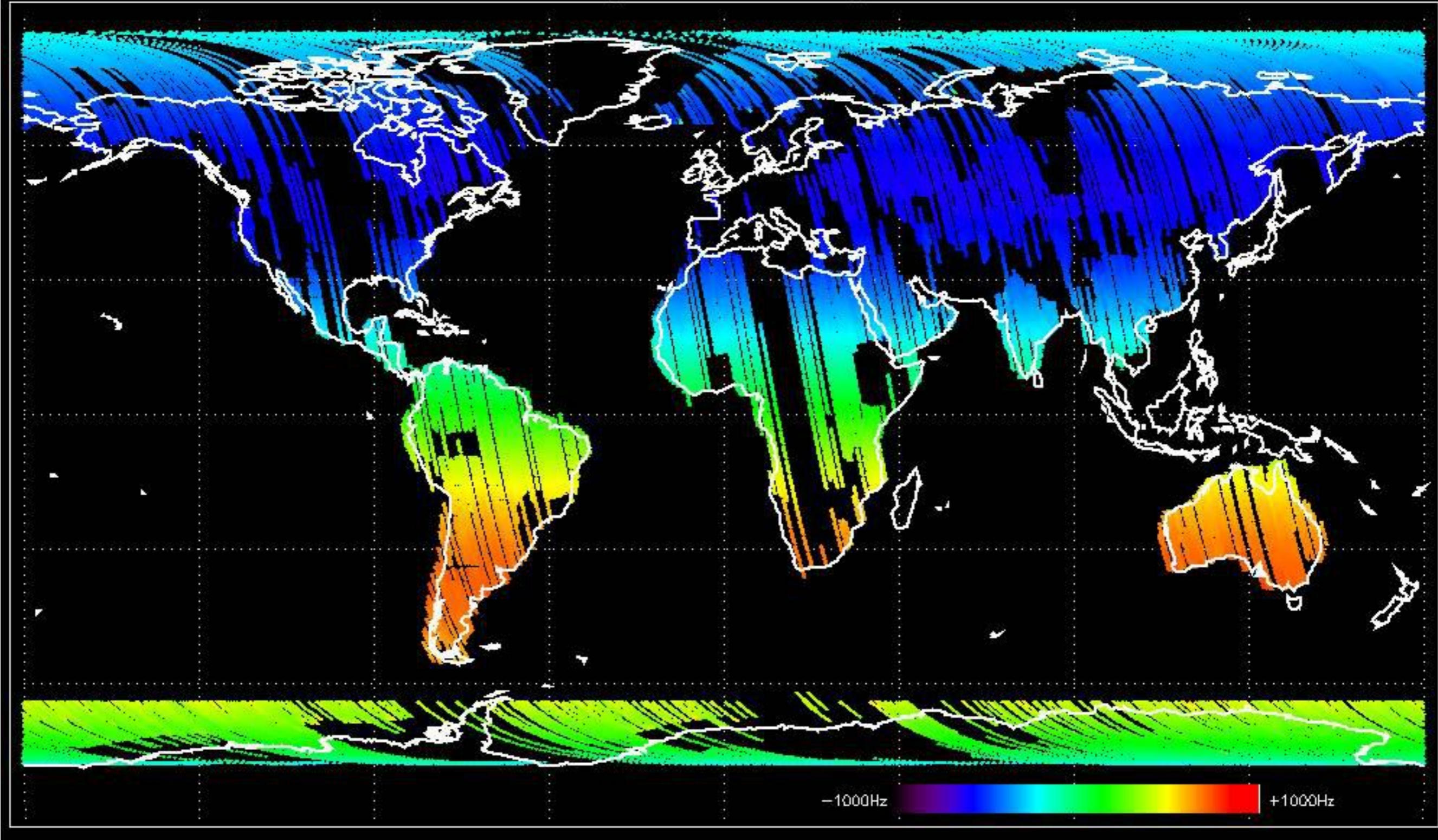
No anomalies observed.



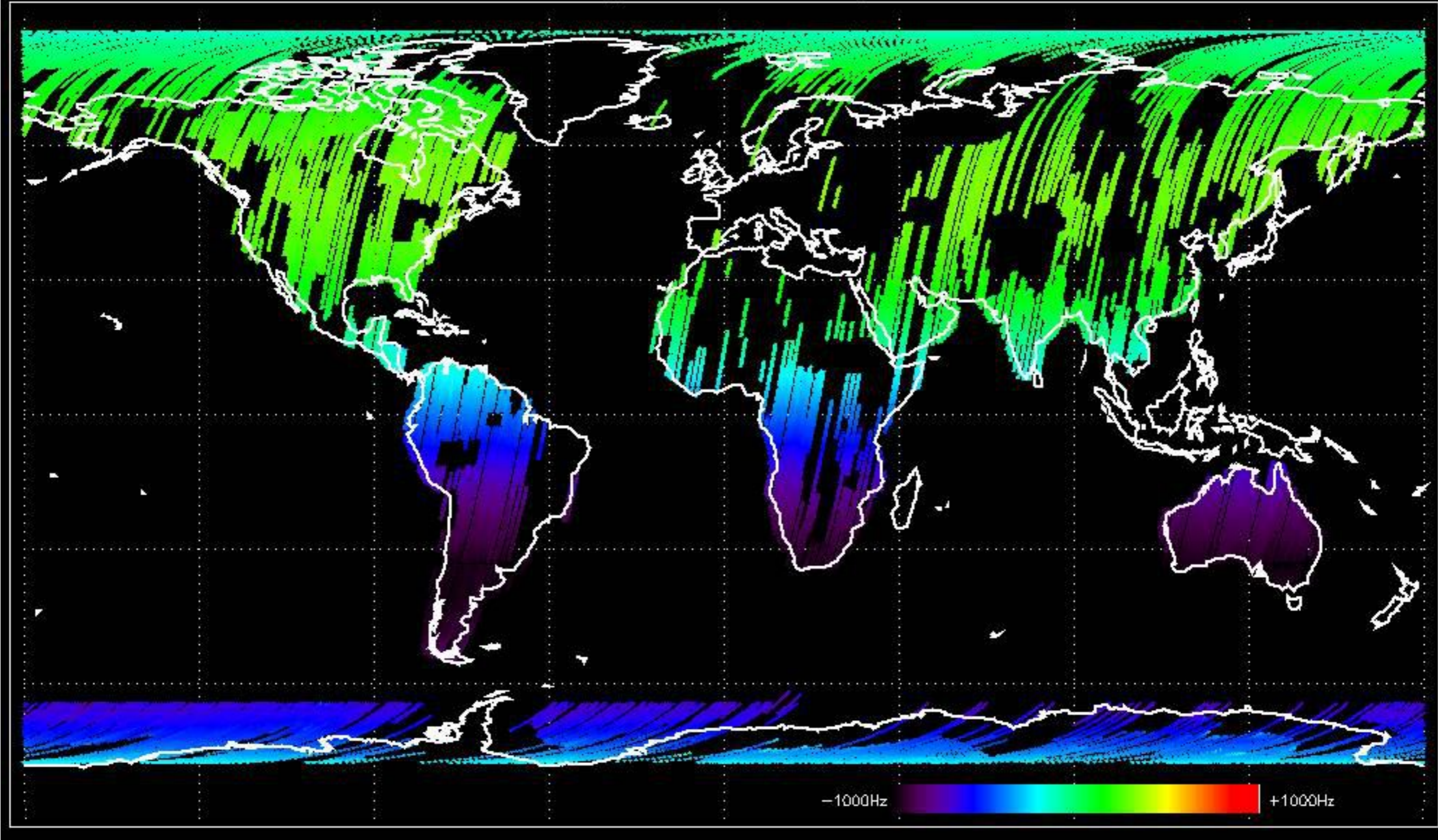


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

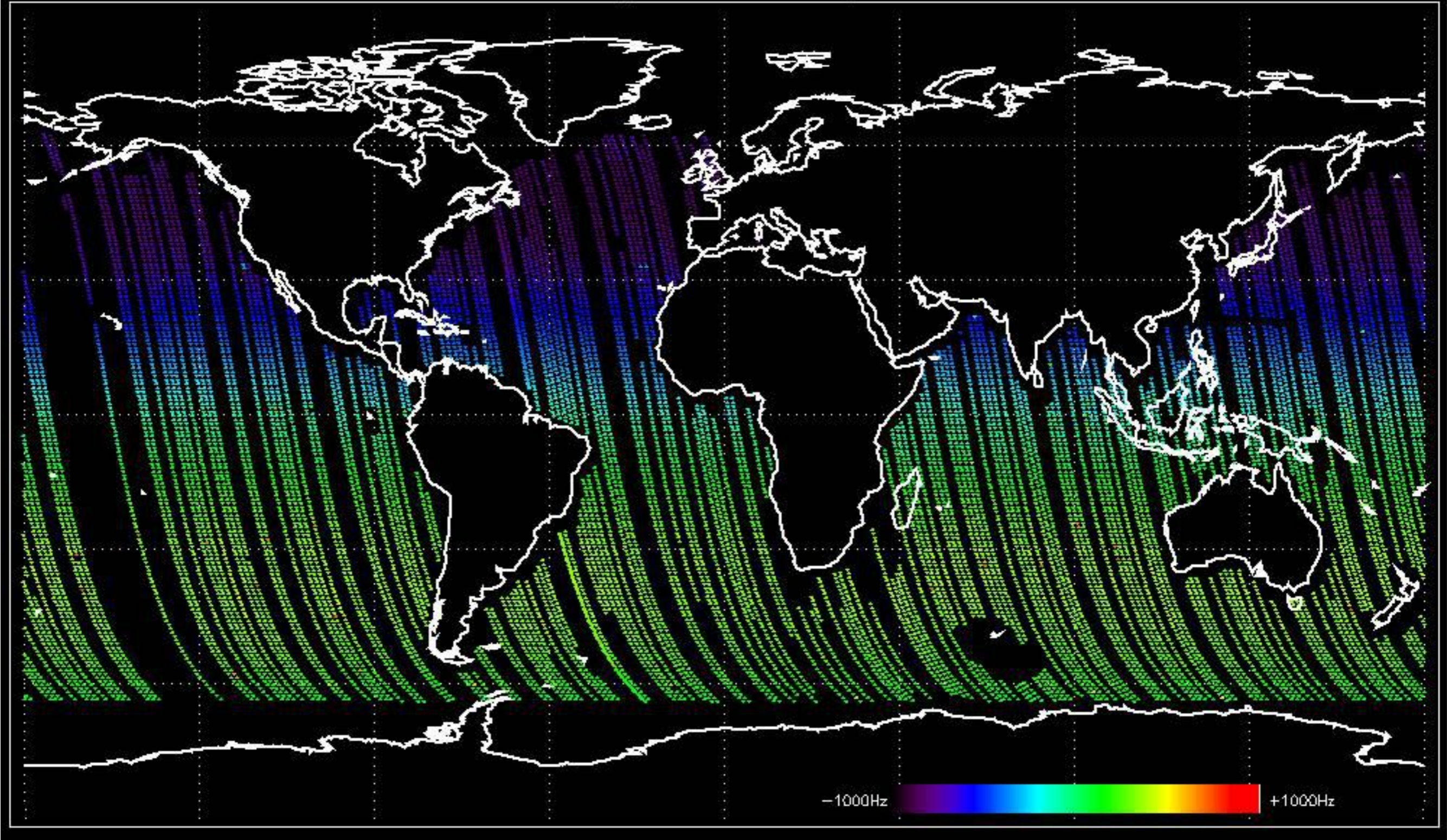
Doppler 'GM1' 'SS1' ascending



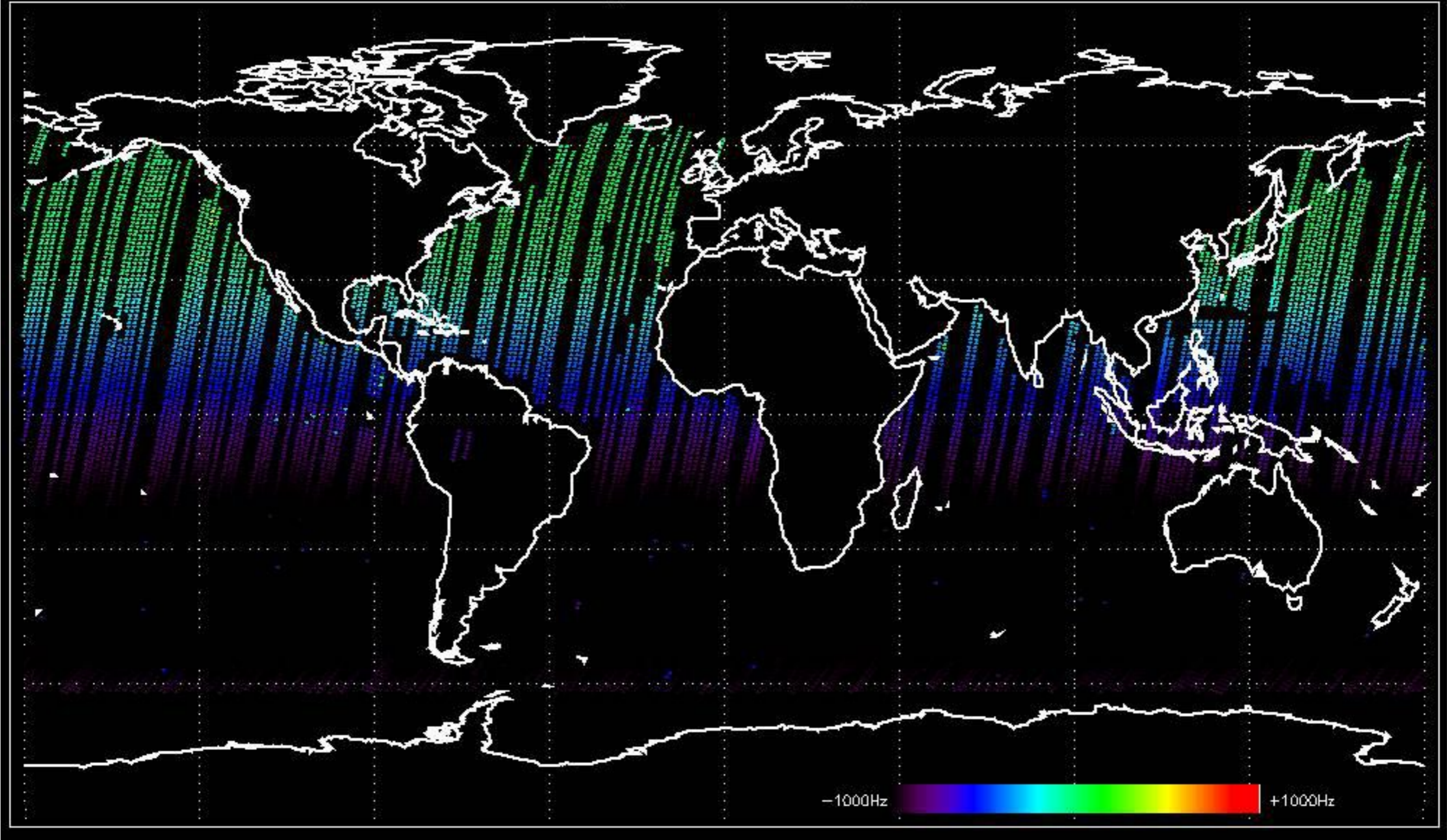
Doppler 'GM1' 'SS1' descending



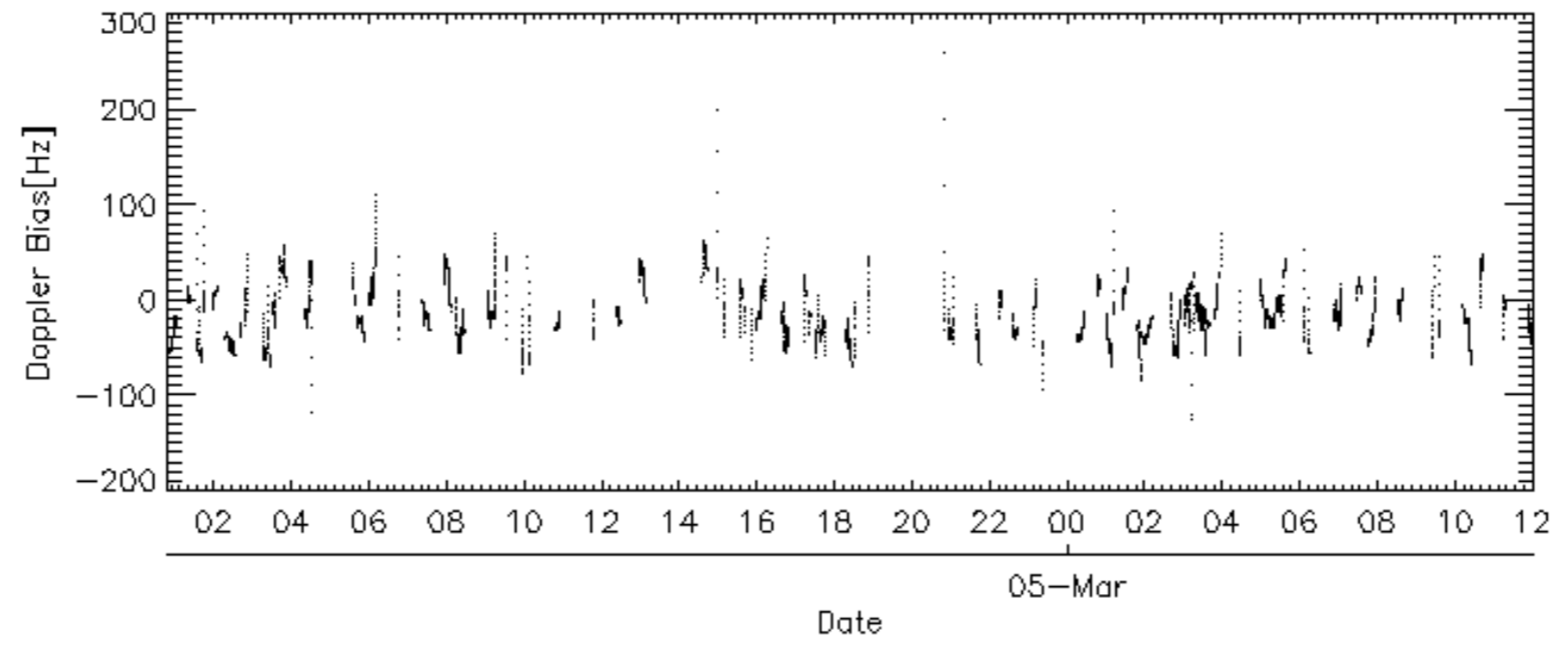
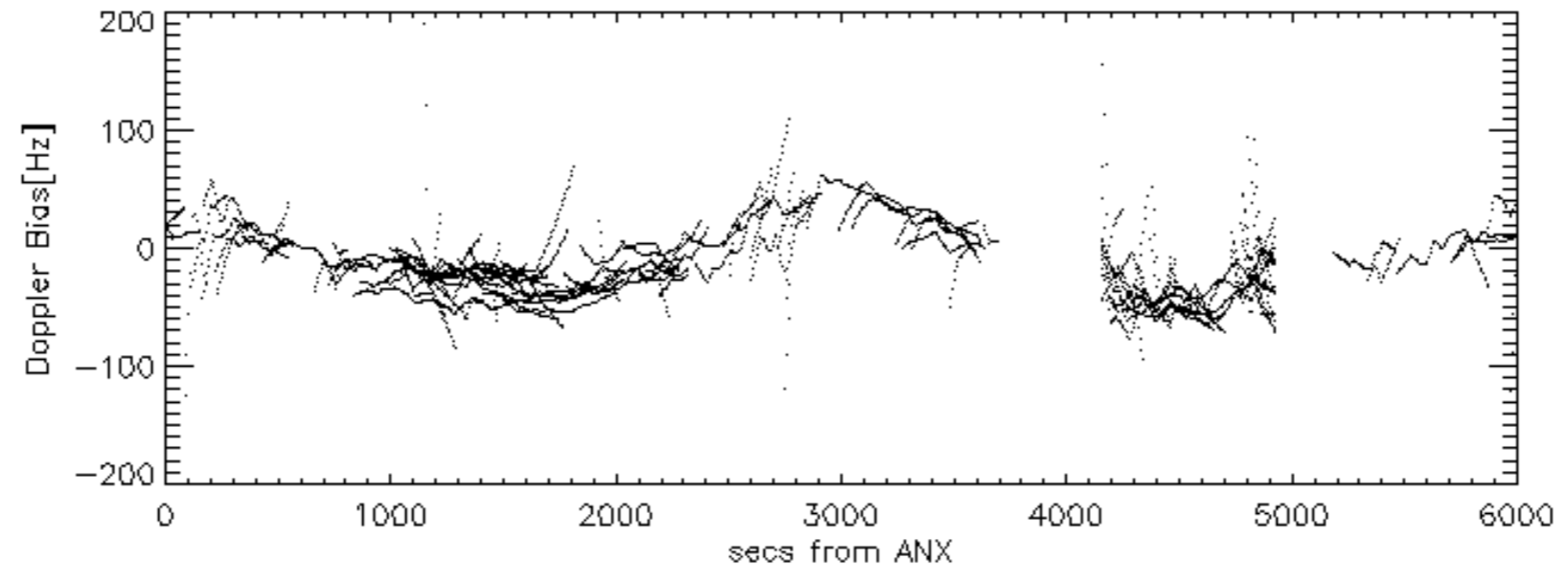
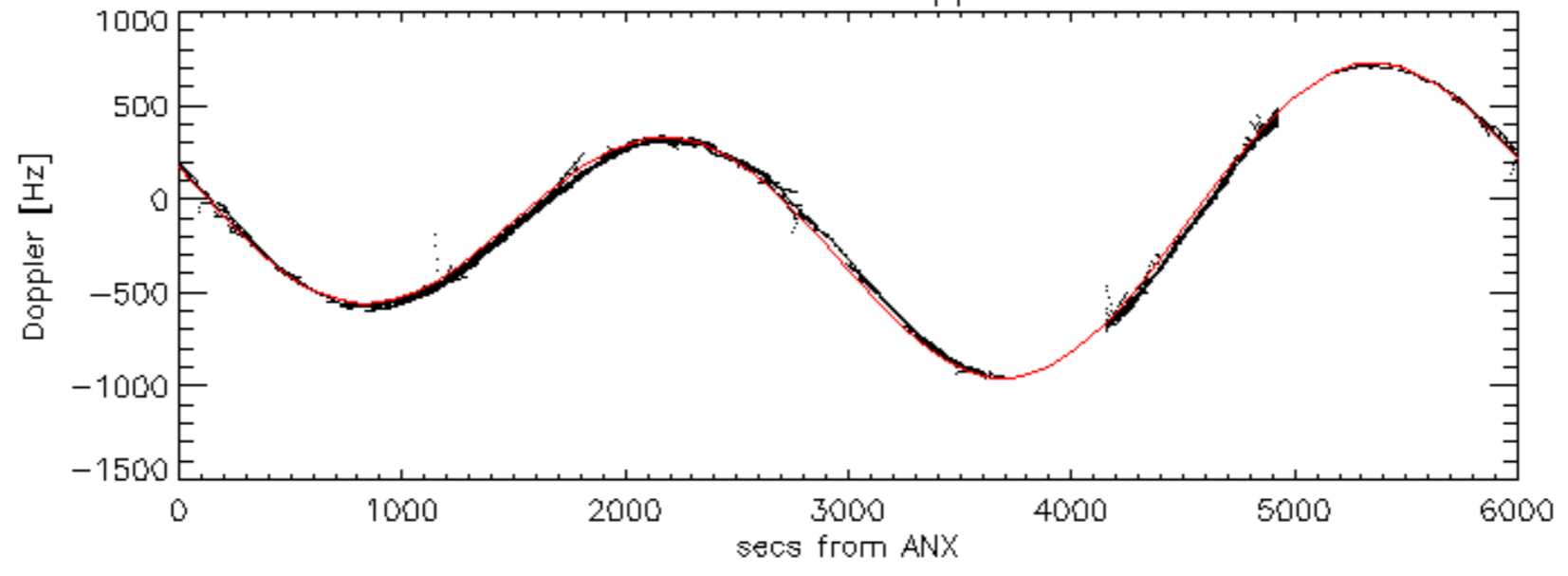
Doppler 'WVS' 'IS4' ascending

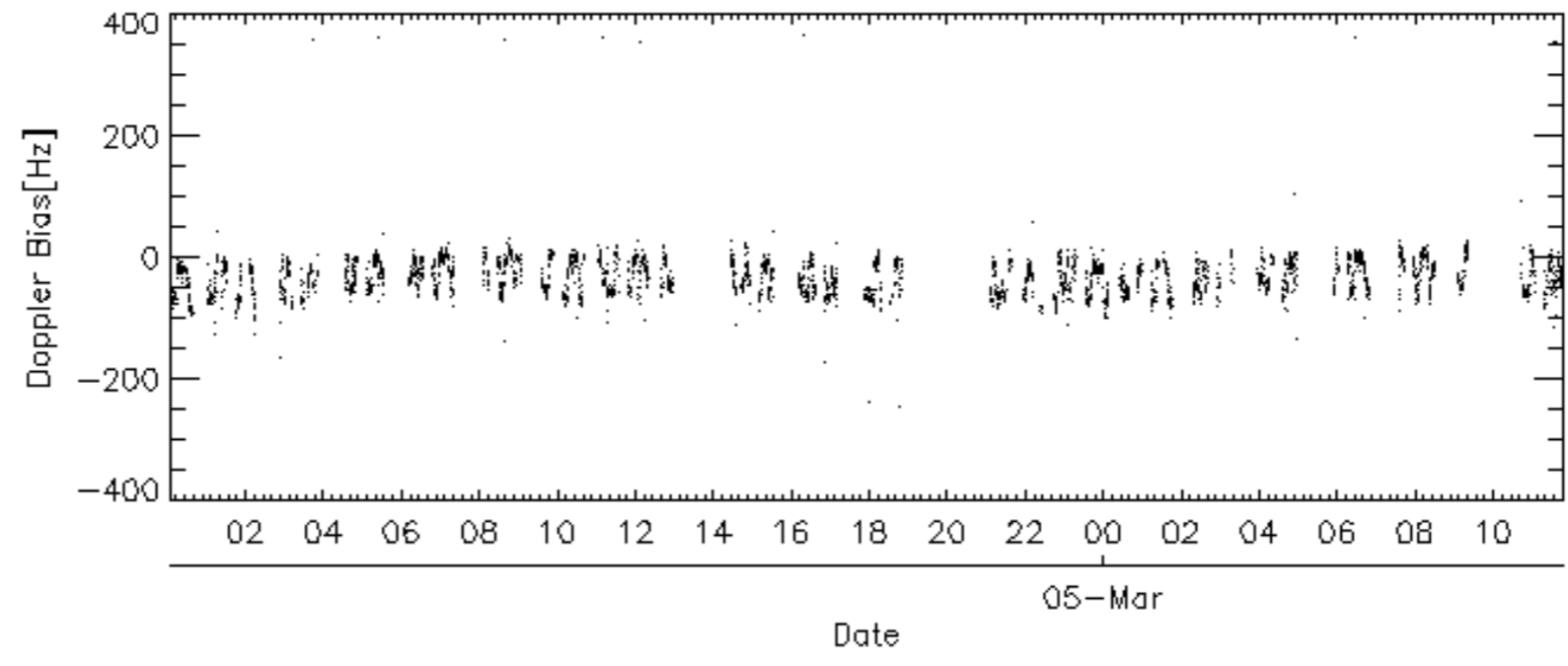
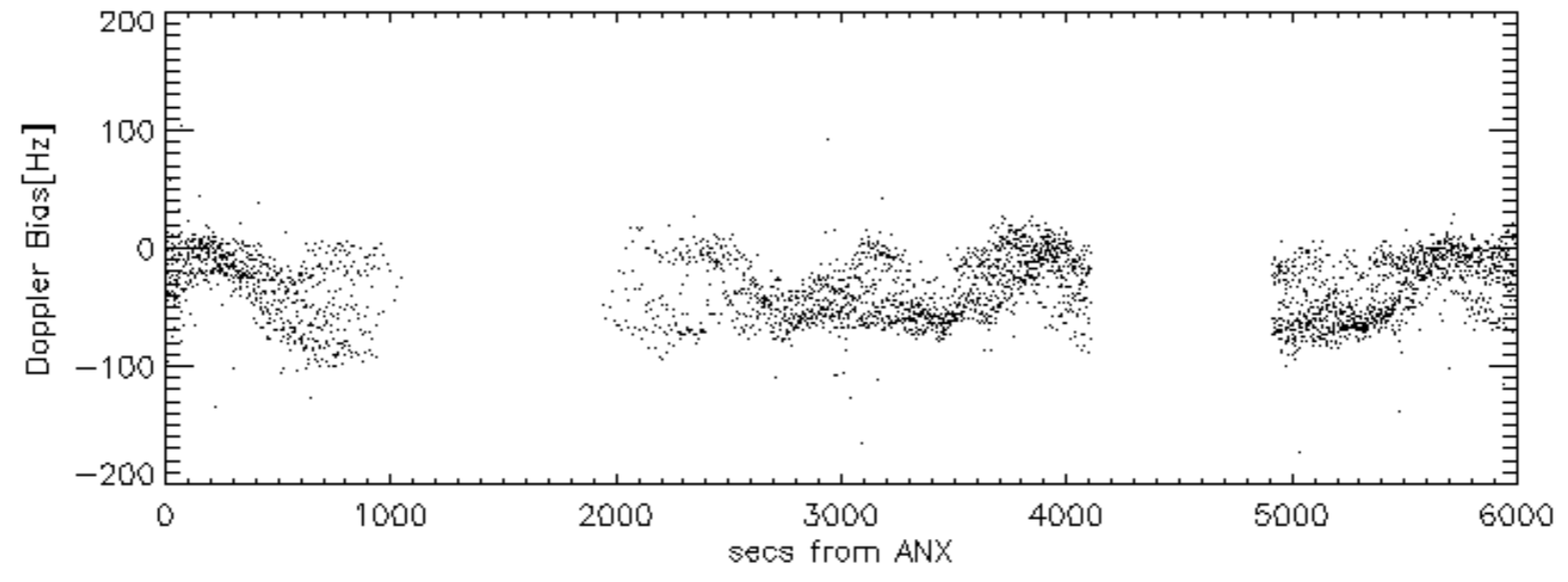
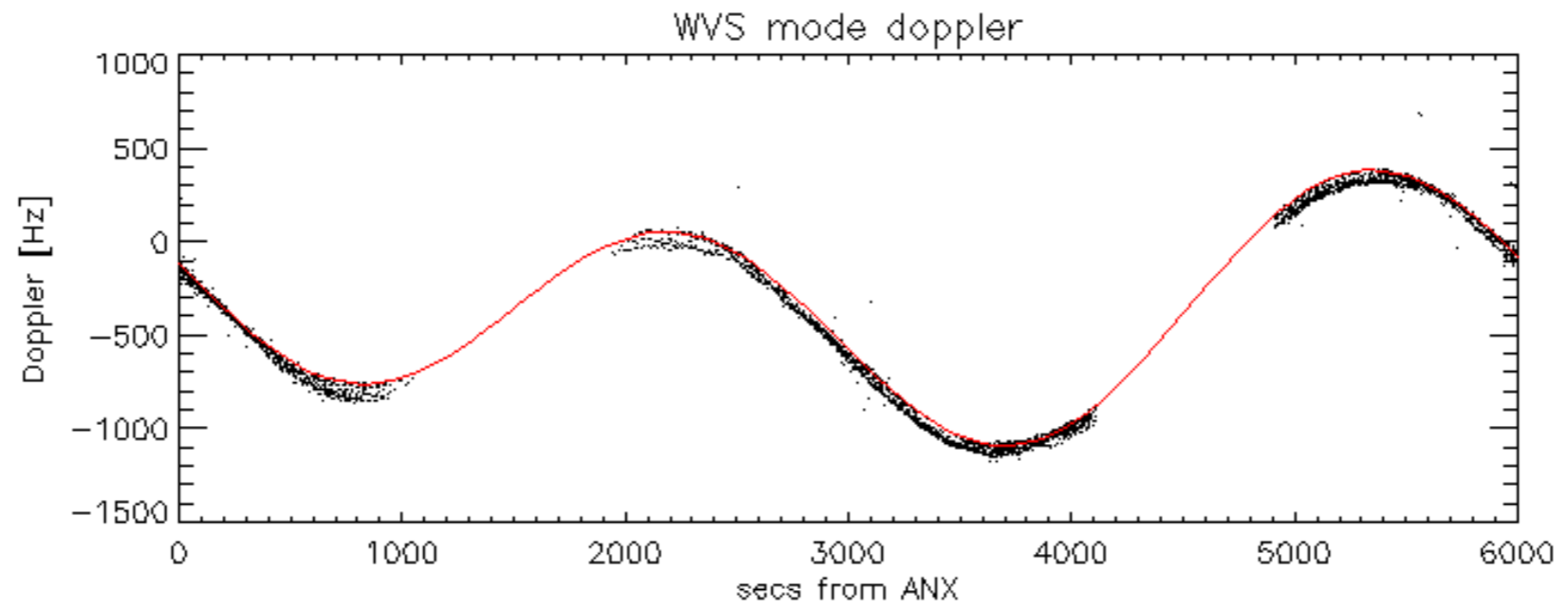


Doppler 'WVS' 'IS4' descending

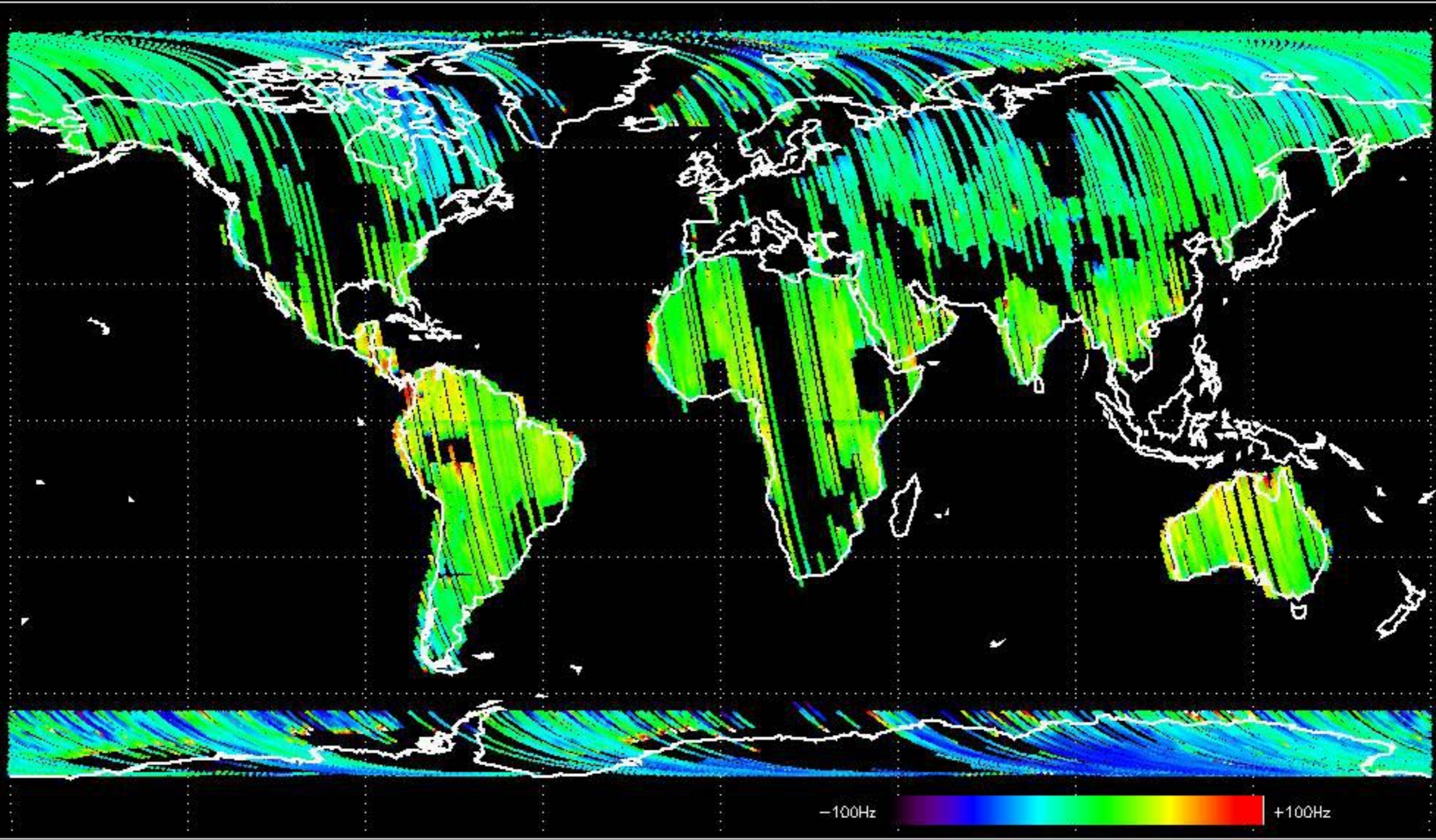


GM1 mode doppler

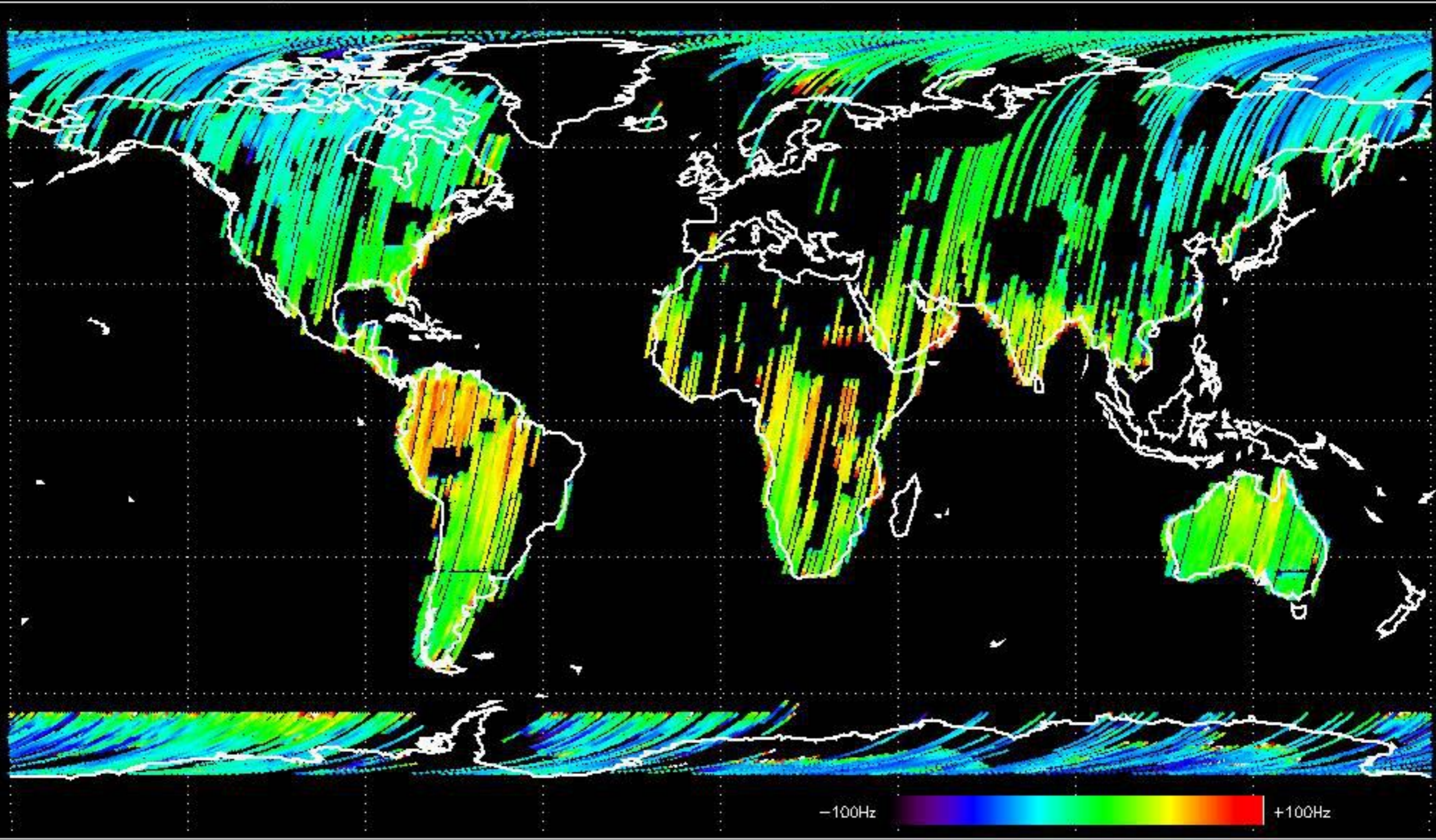




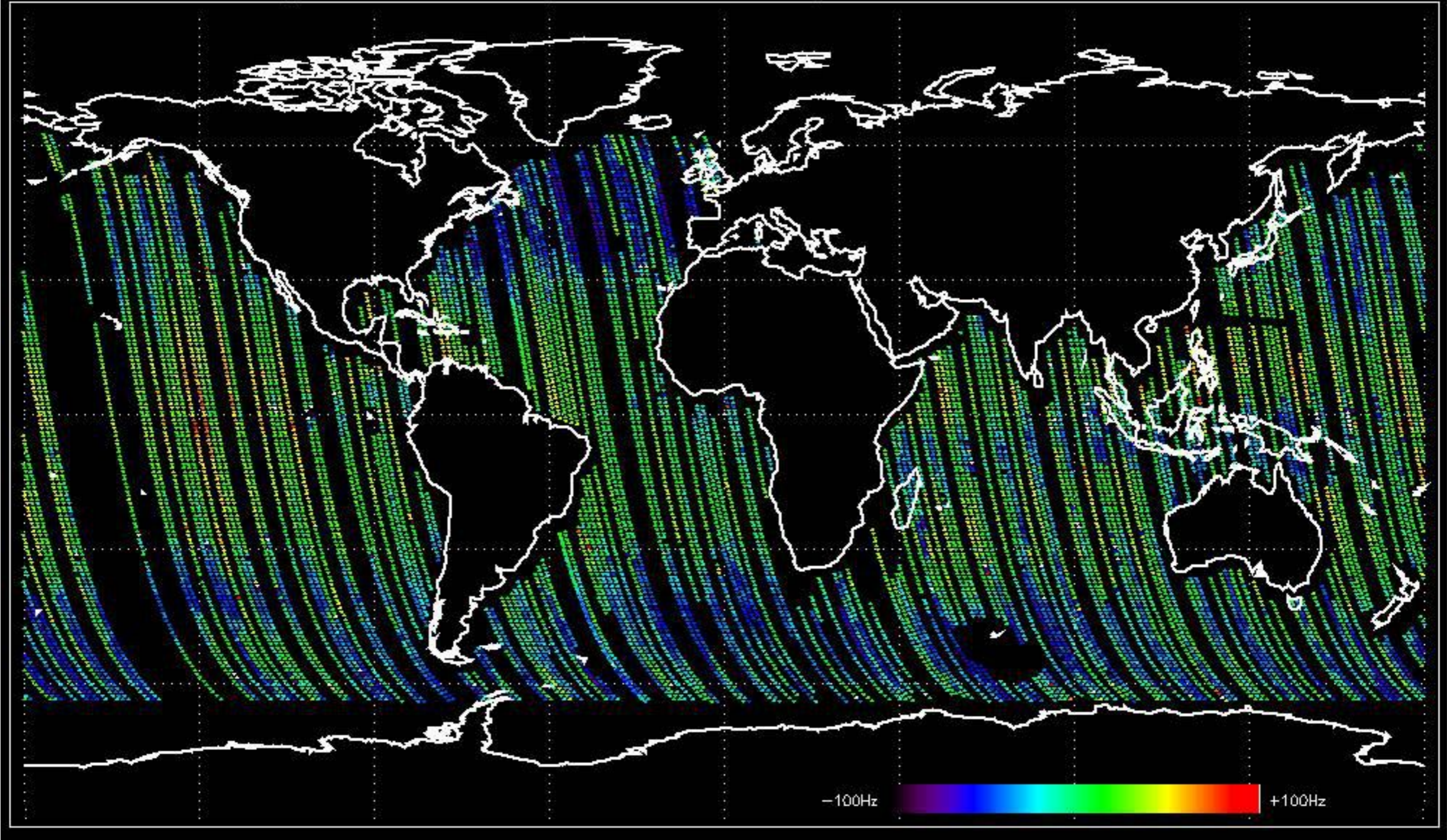
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.050502 Hz



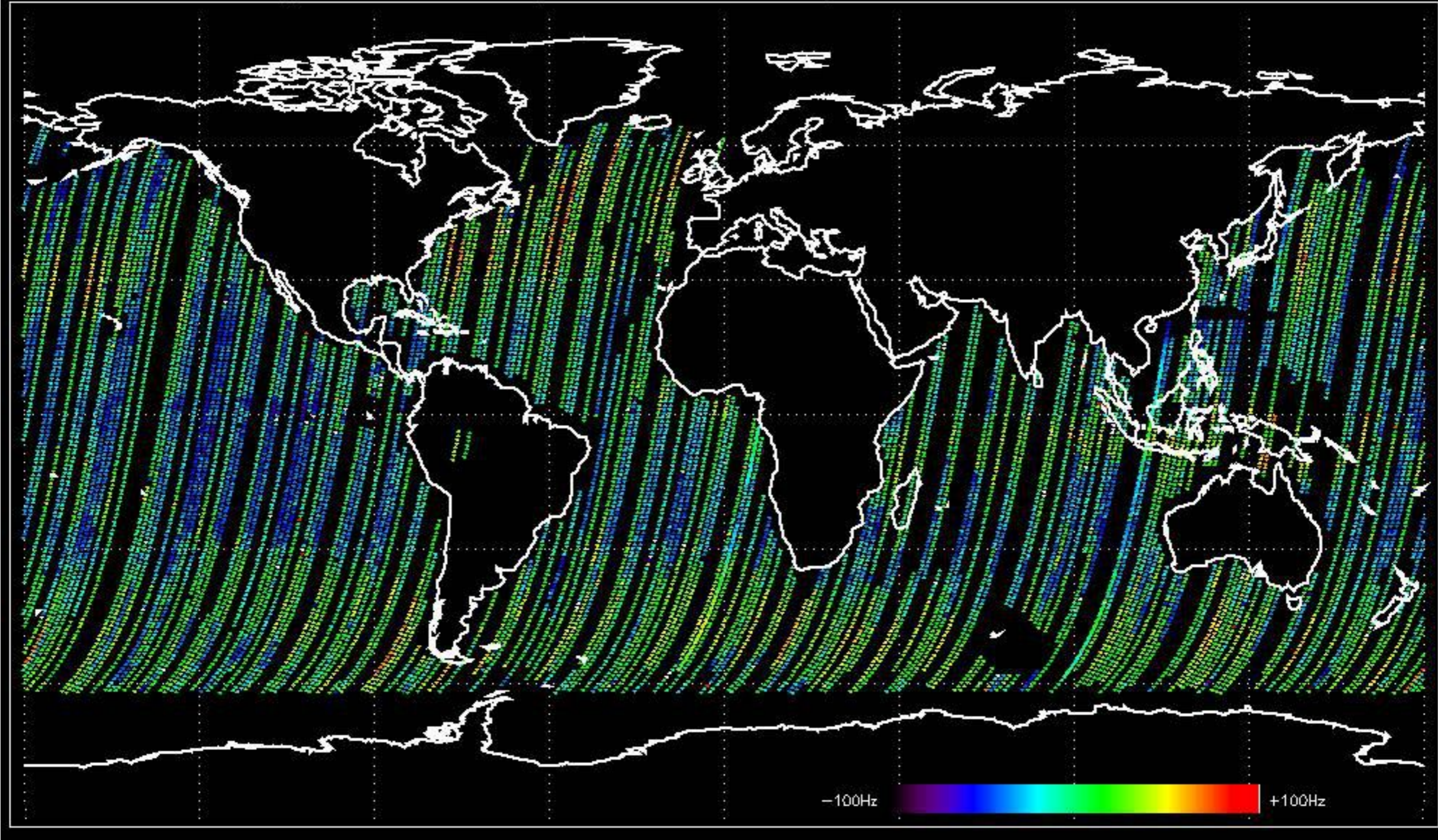
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.479109 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -24.394358 Hz

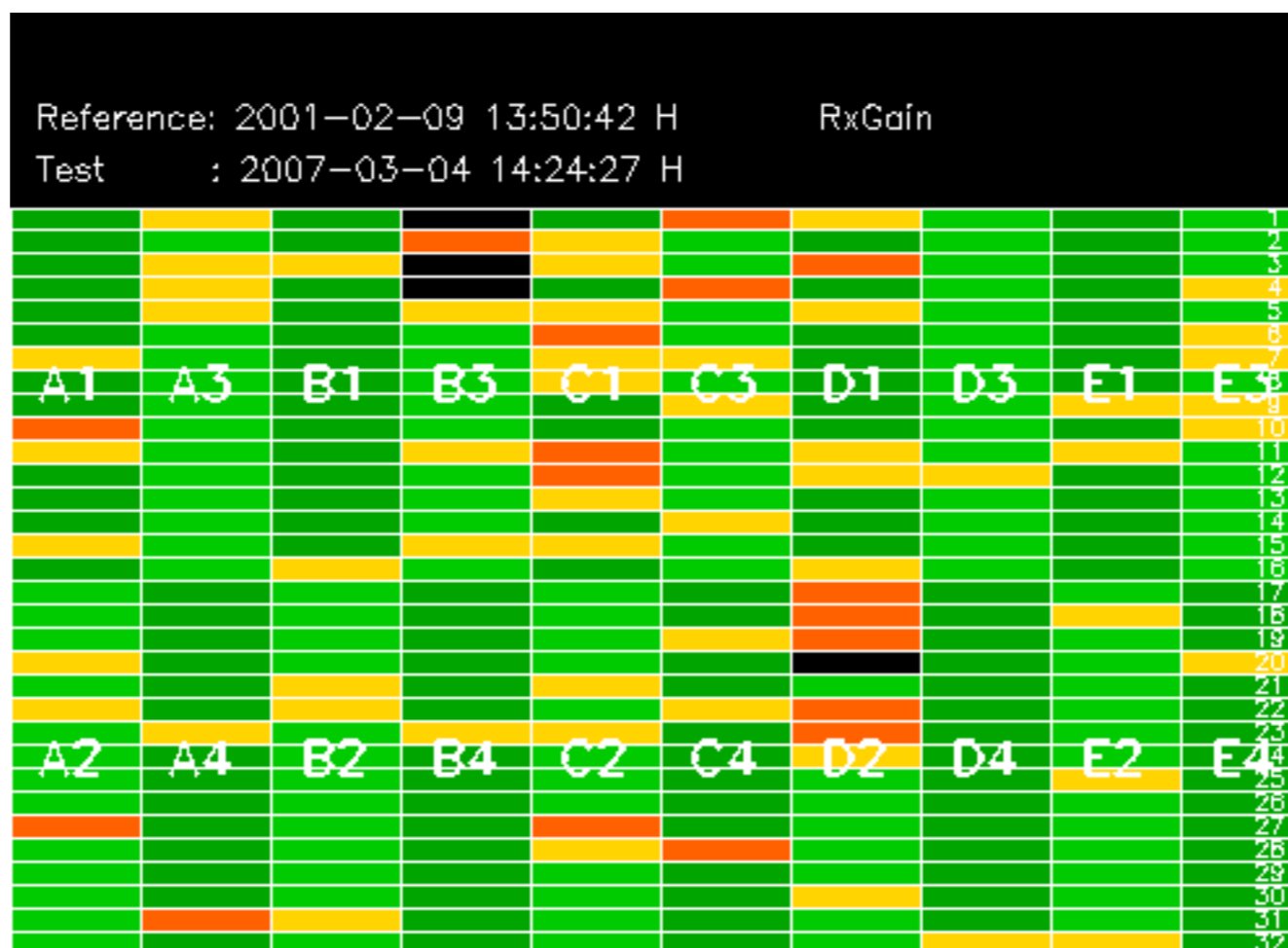


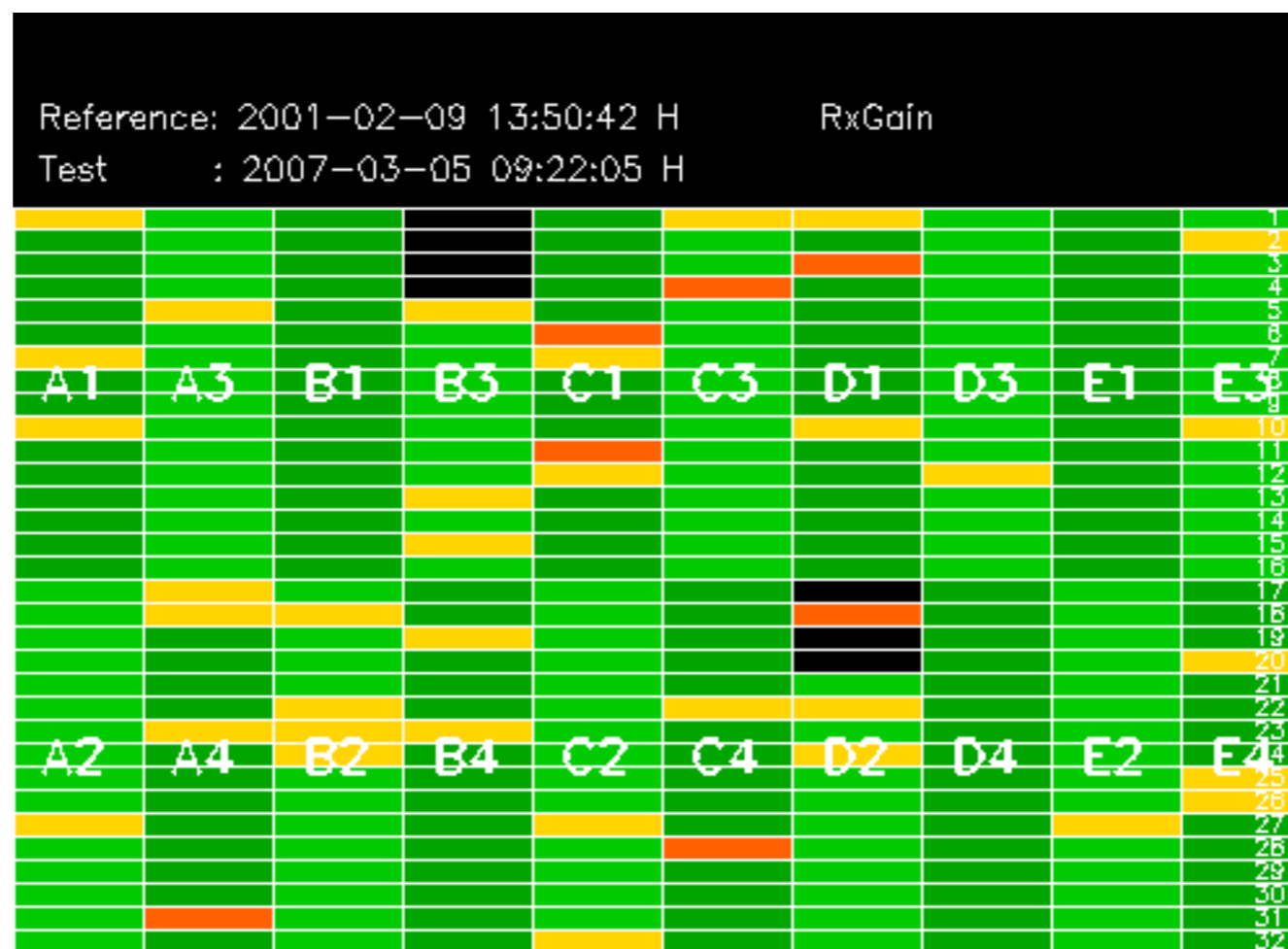
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -29.043301 Hz

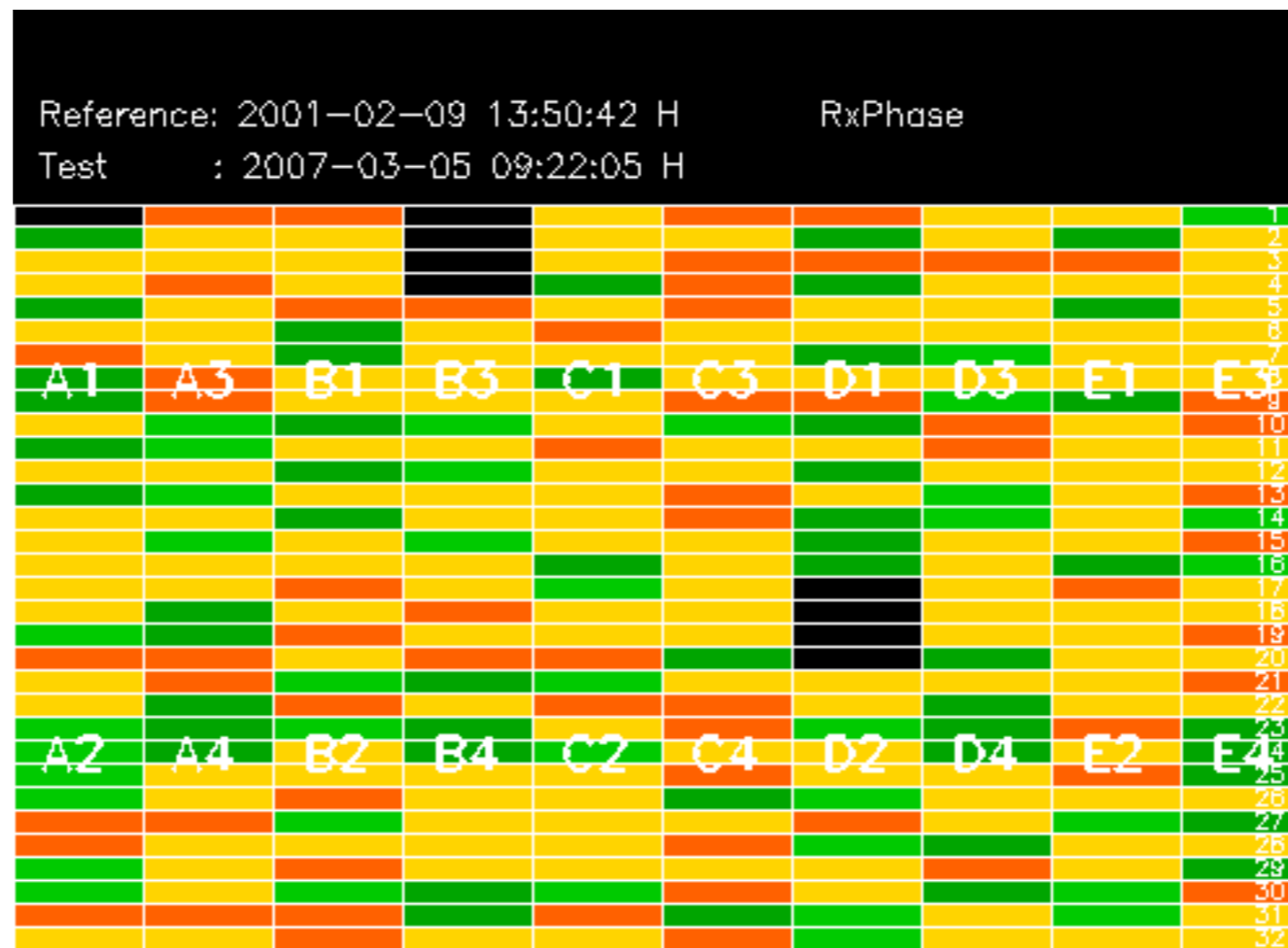


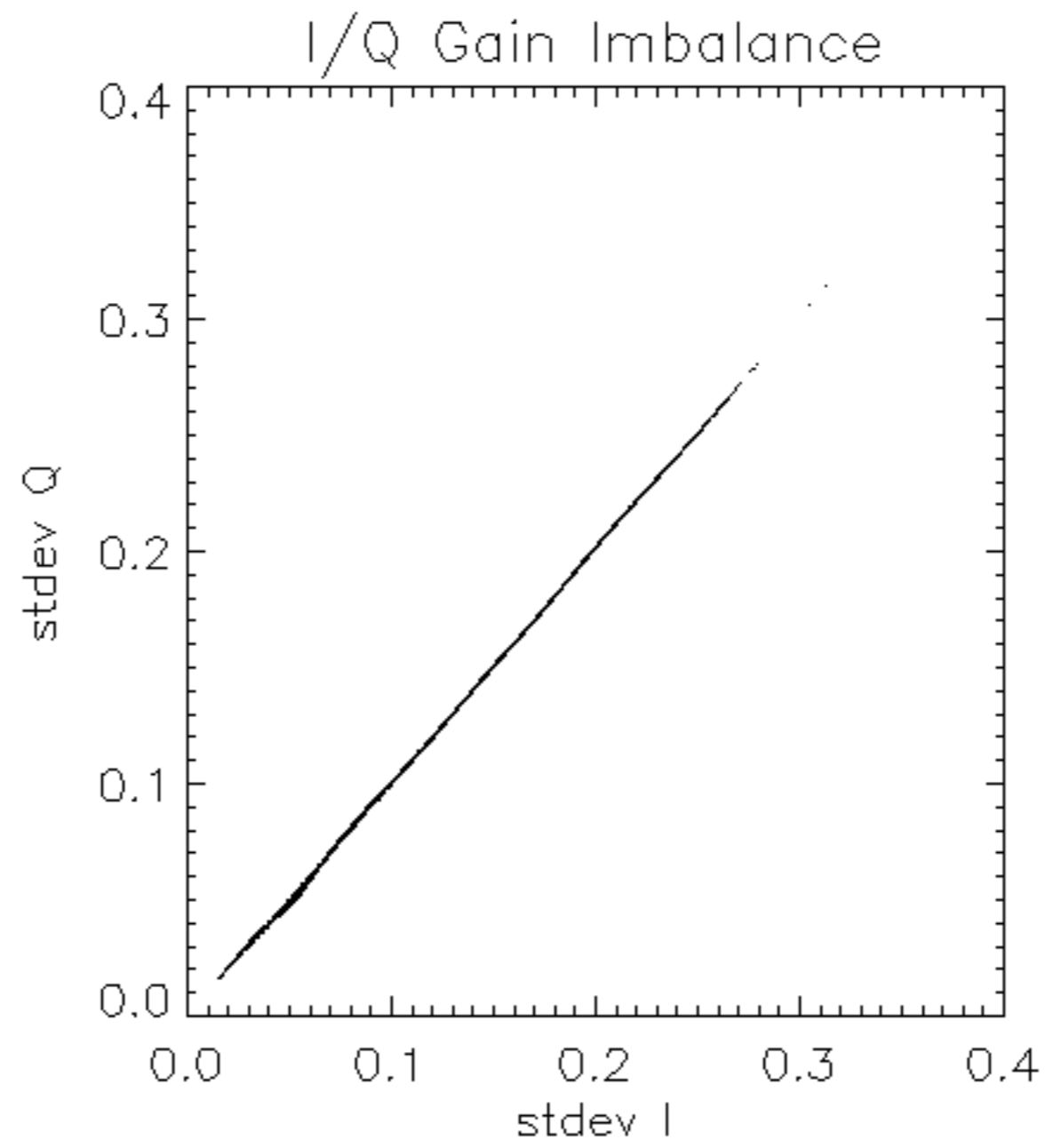
No anomalies observed on available MS products:

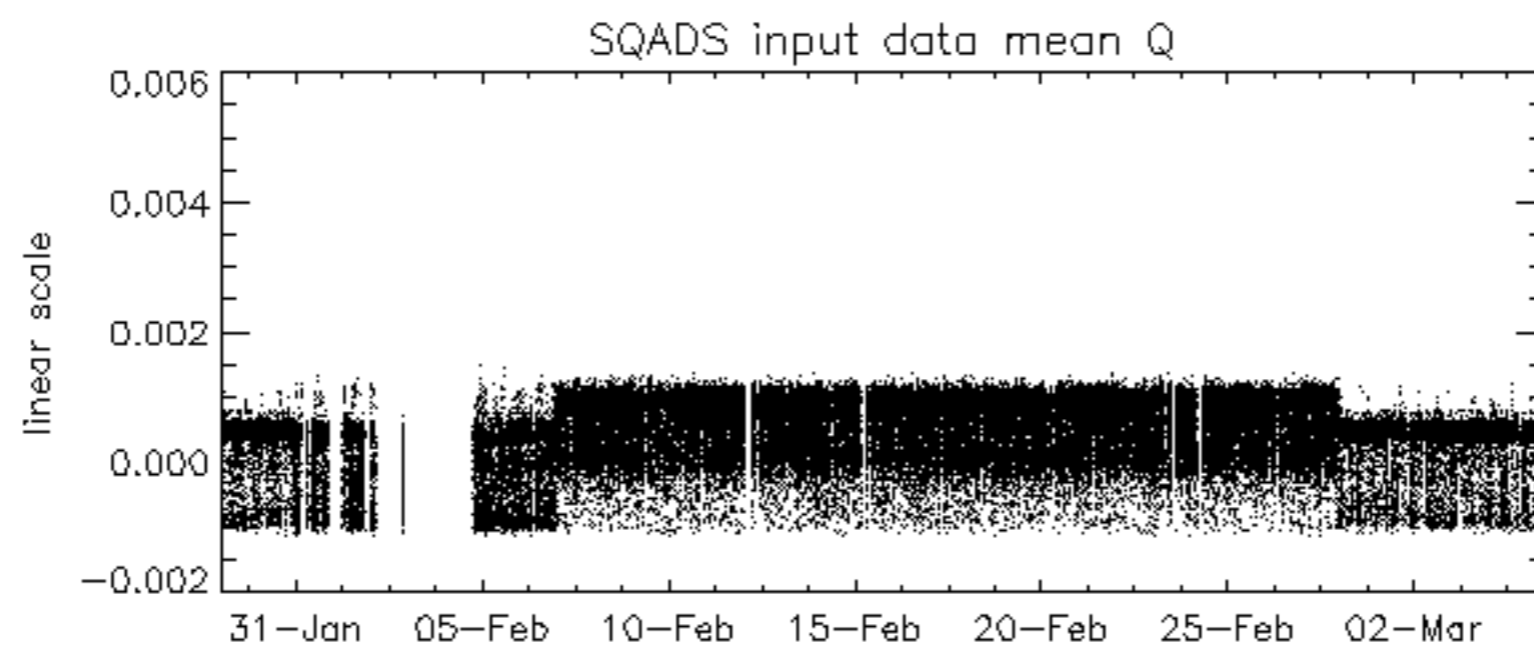
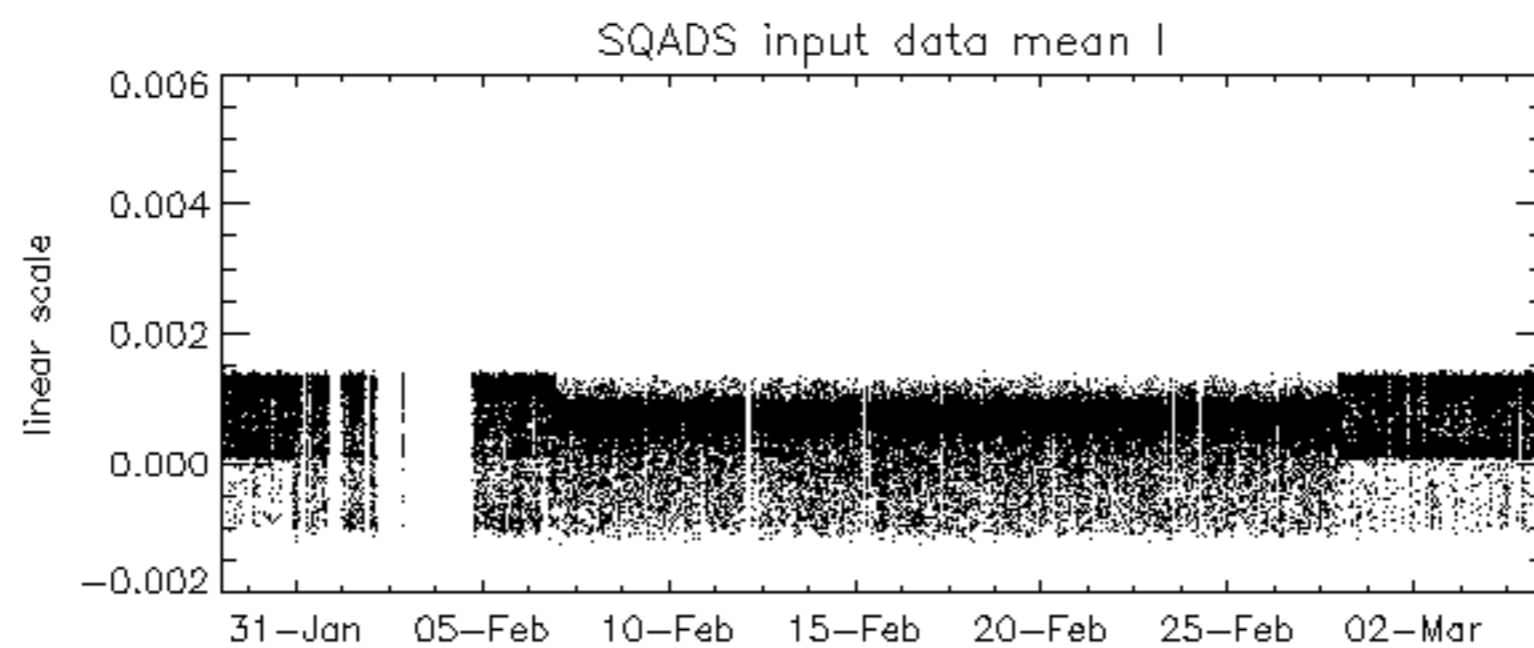
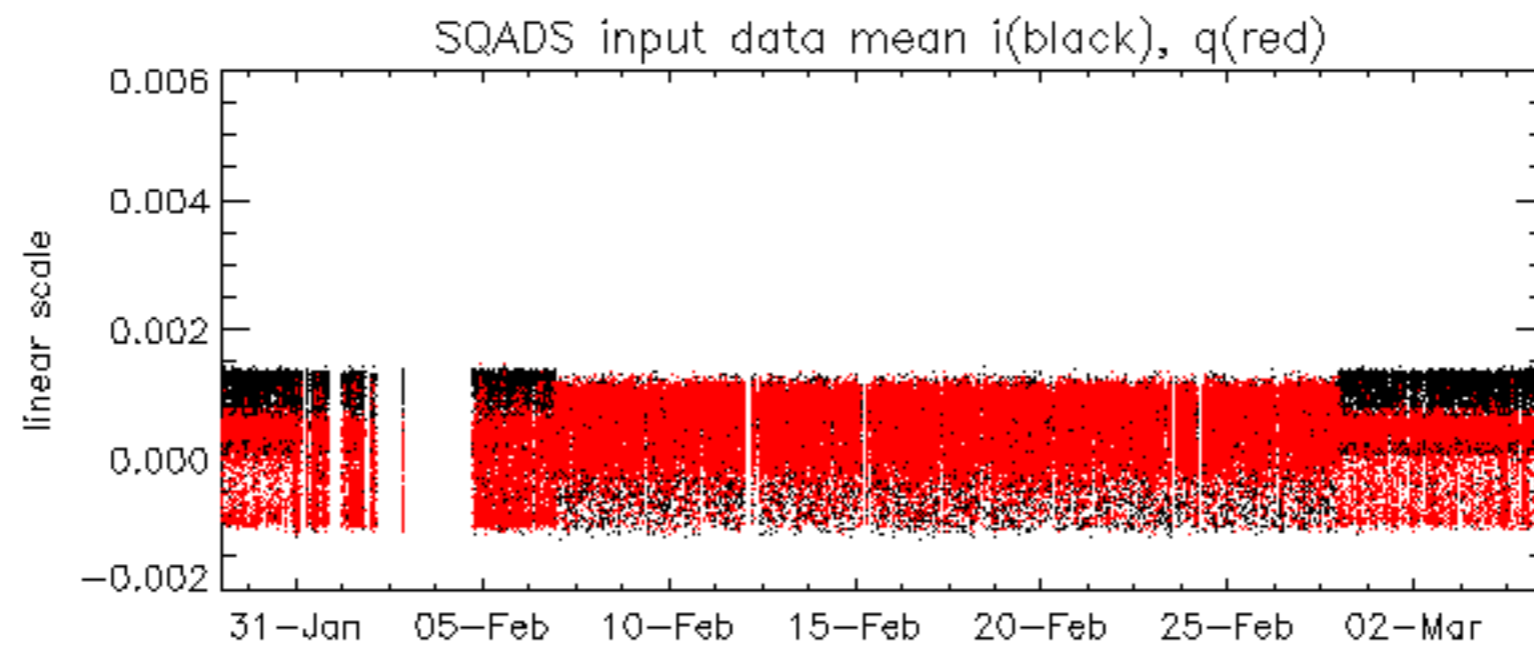
No anomalies observed.

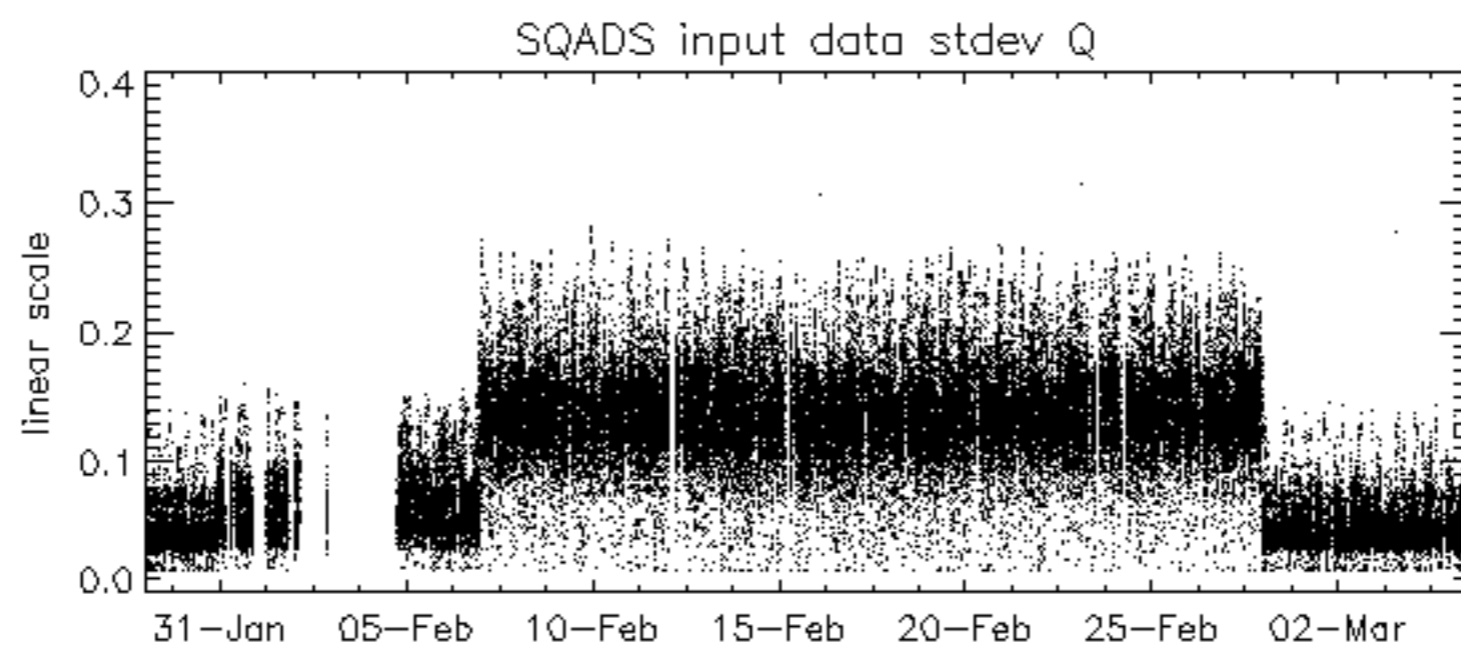
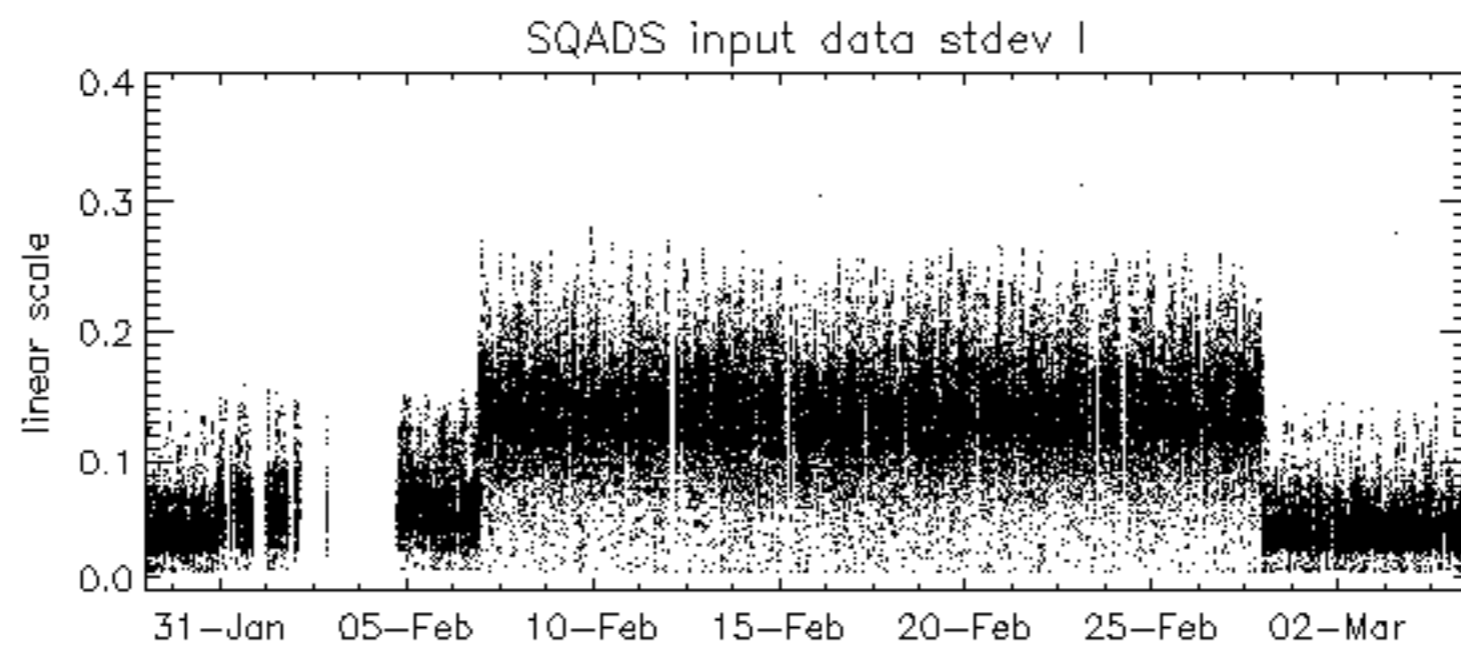
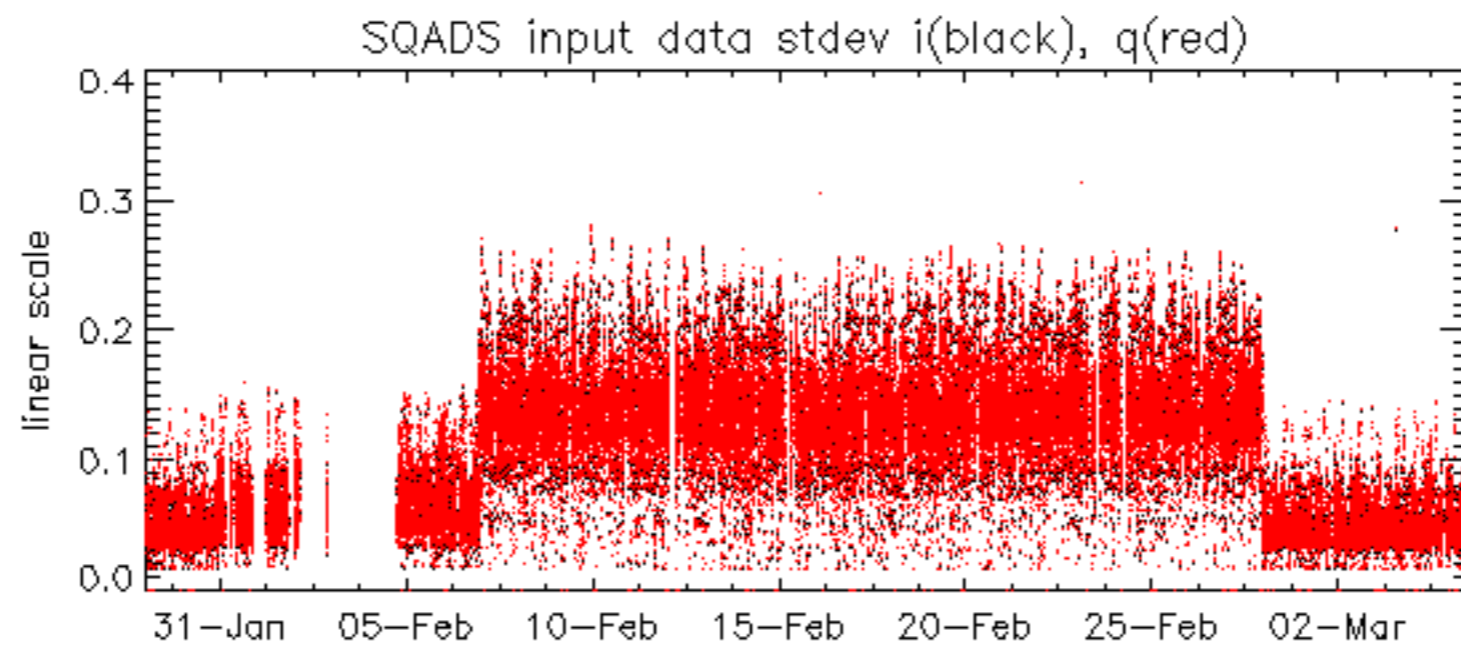


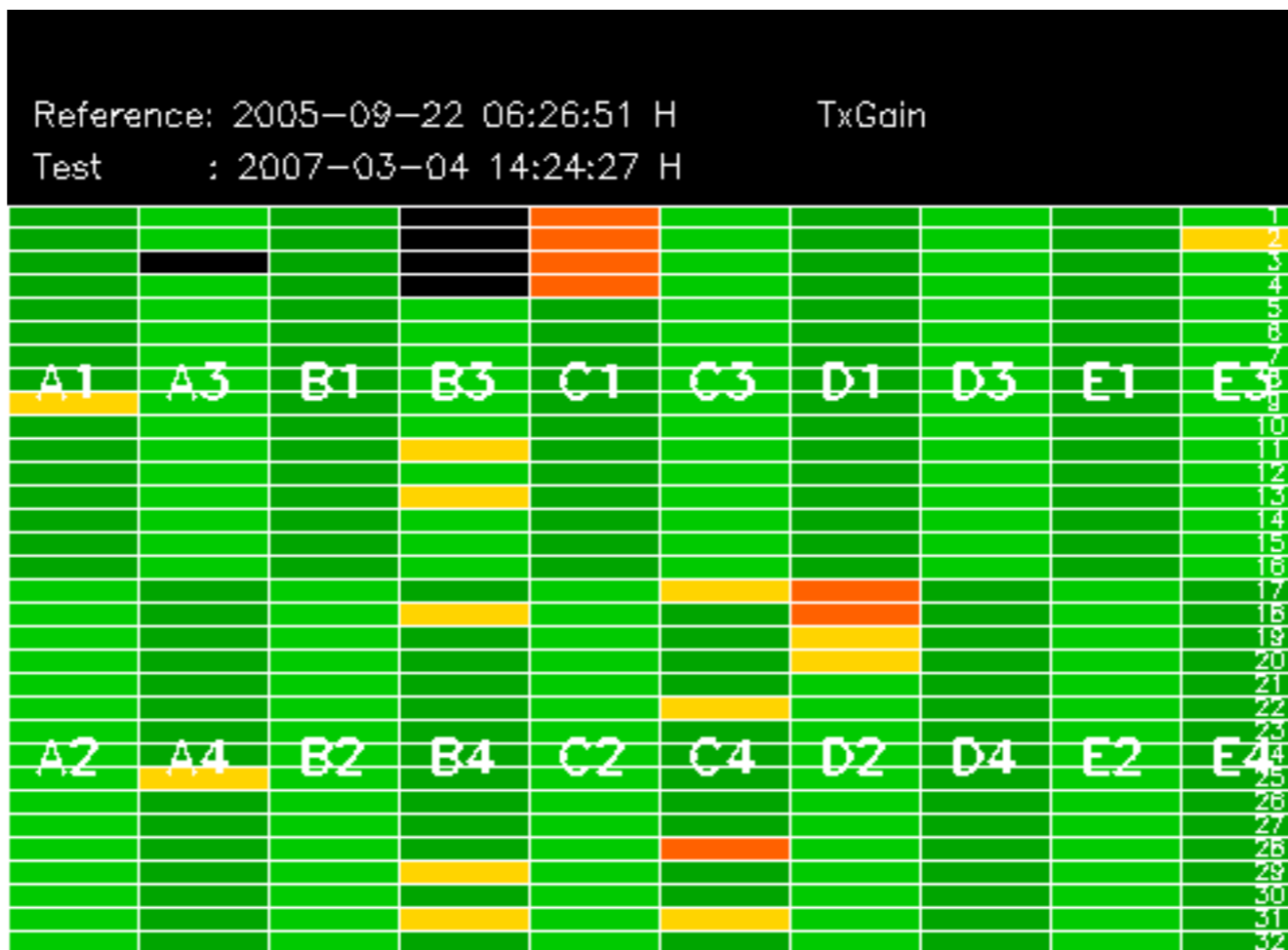








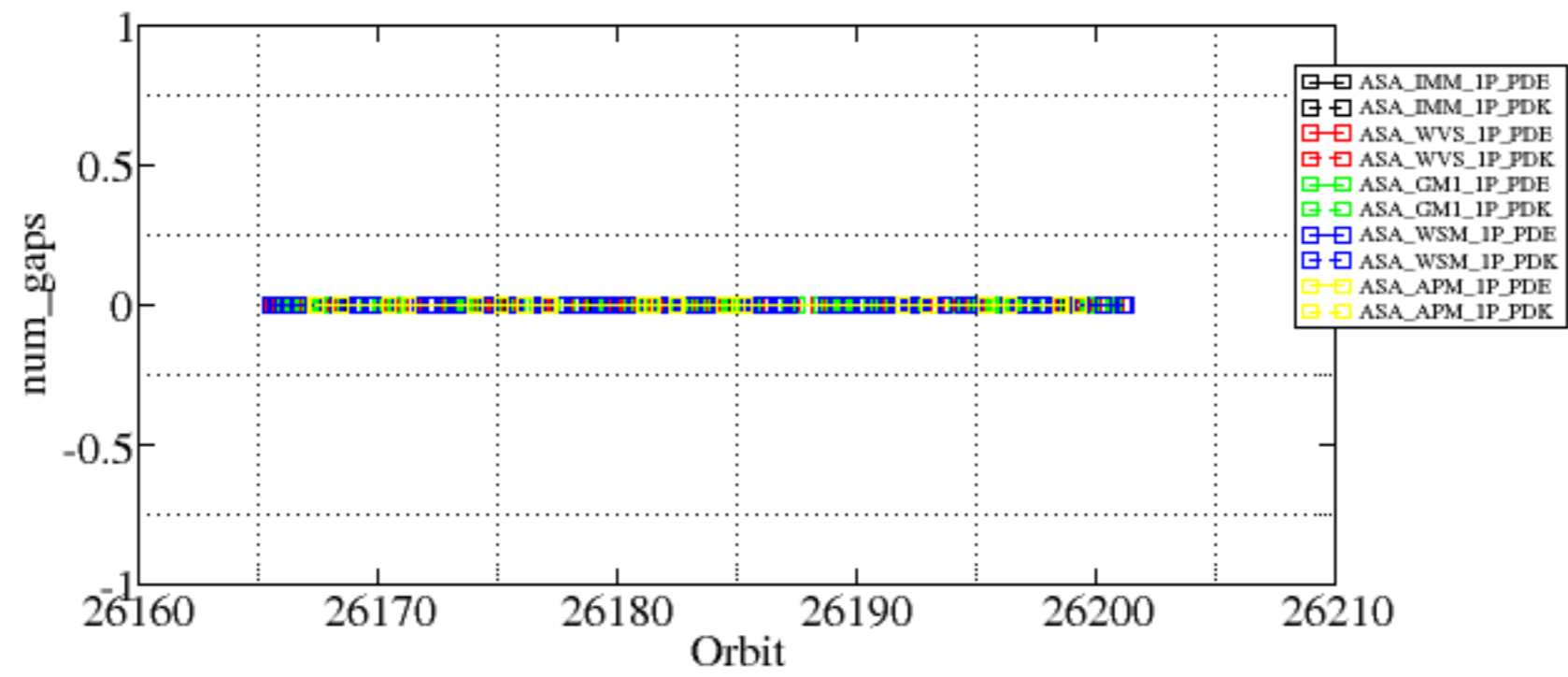


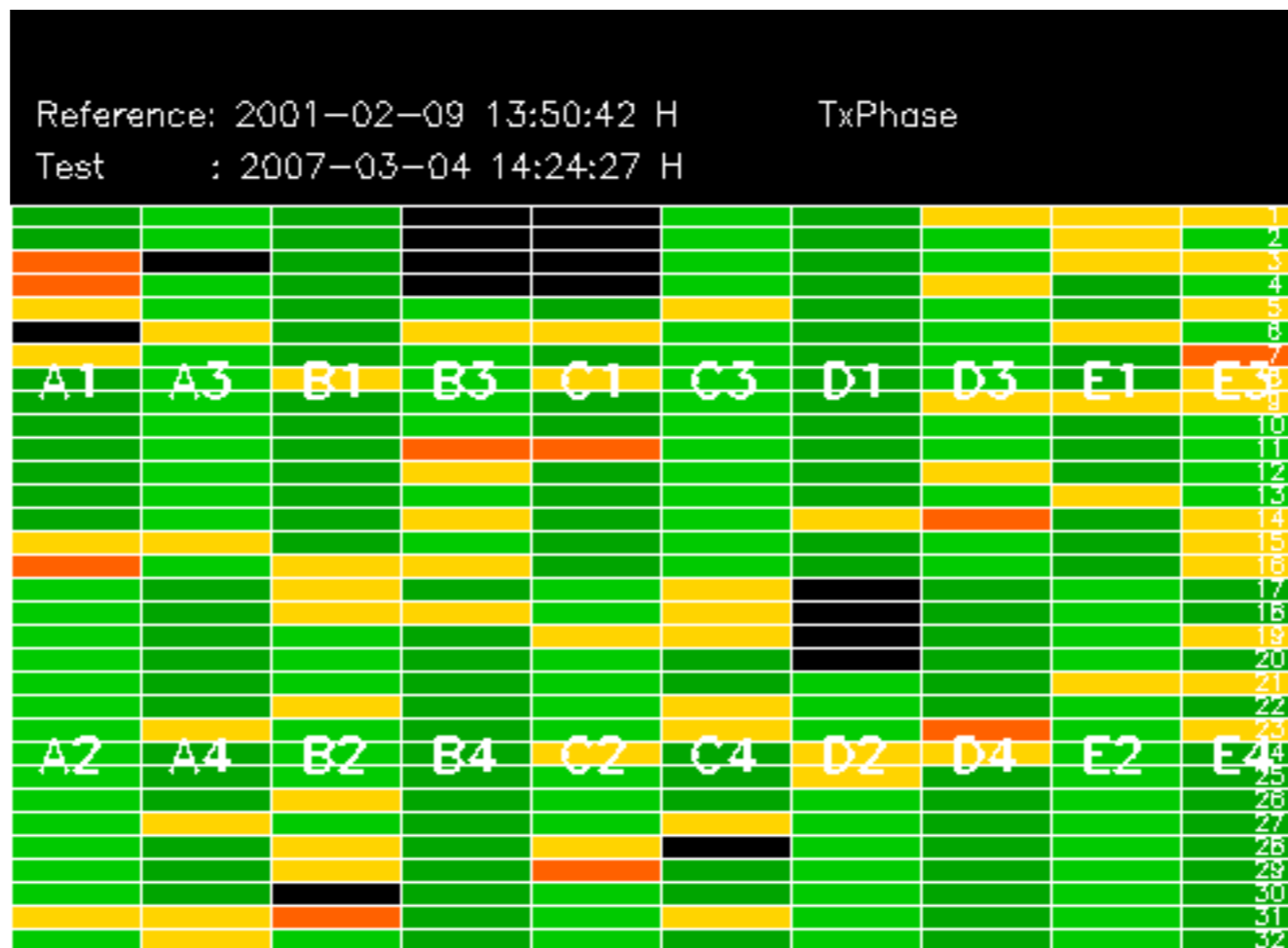


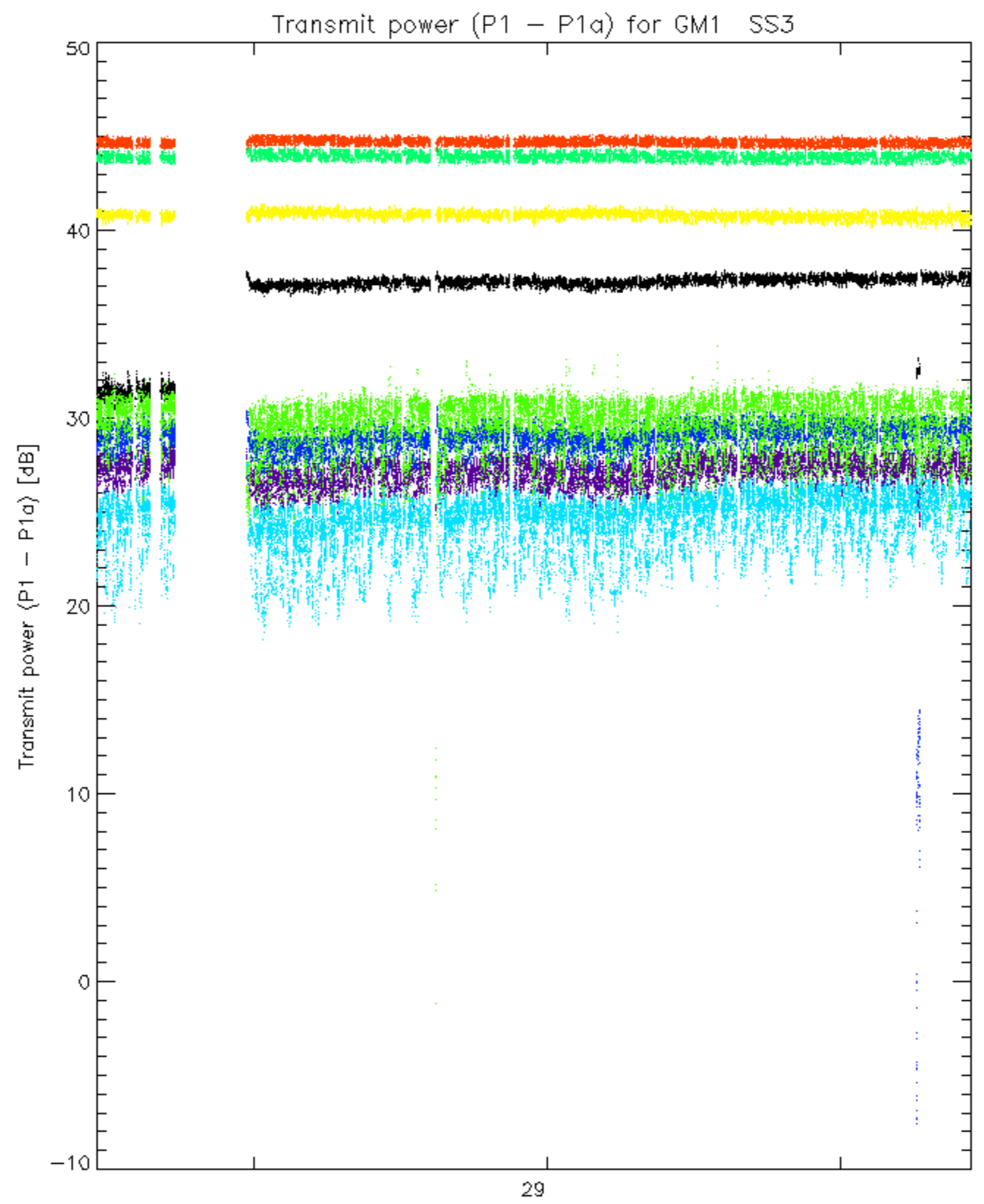
Summary of analysis for the last 3 days 2007030[345]

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

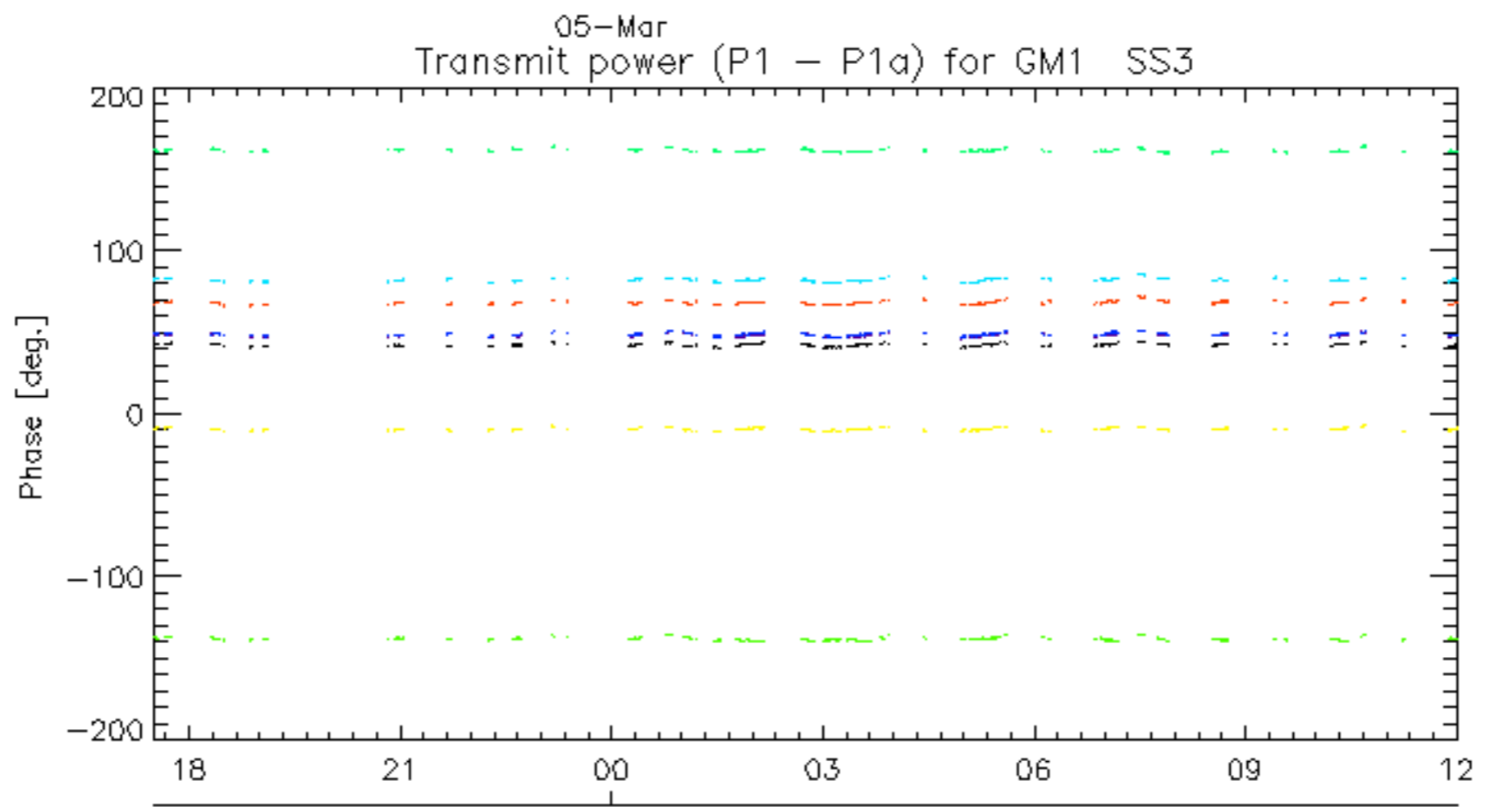
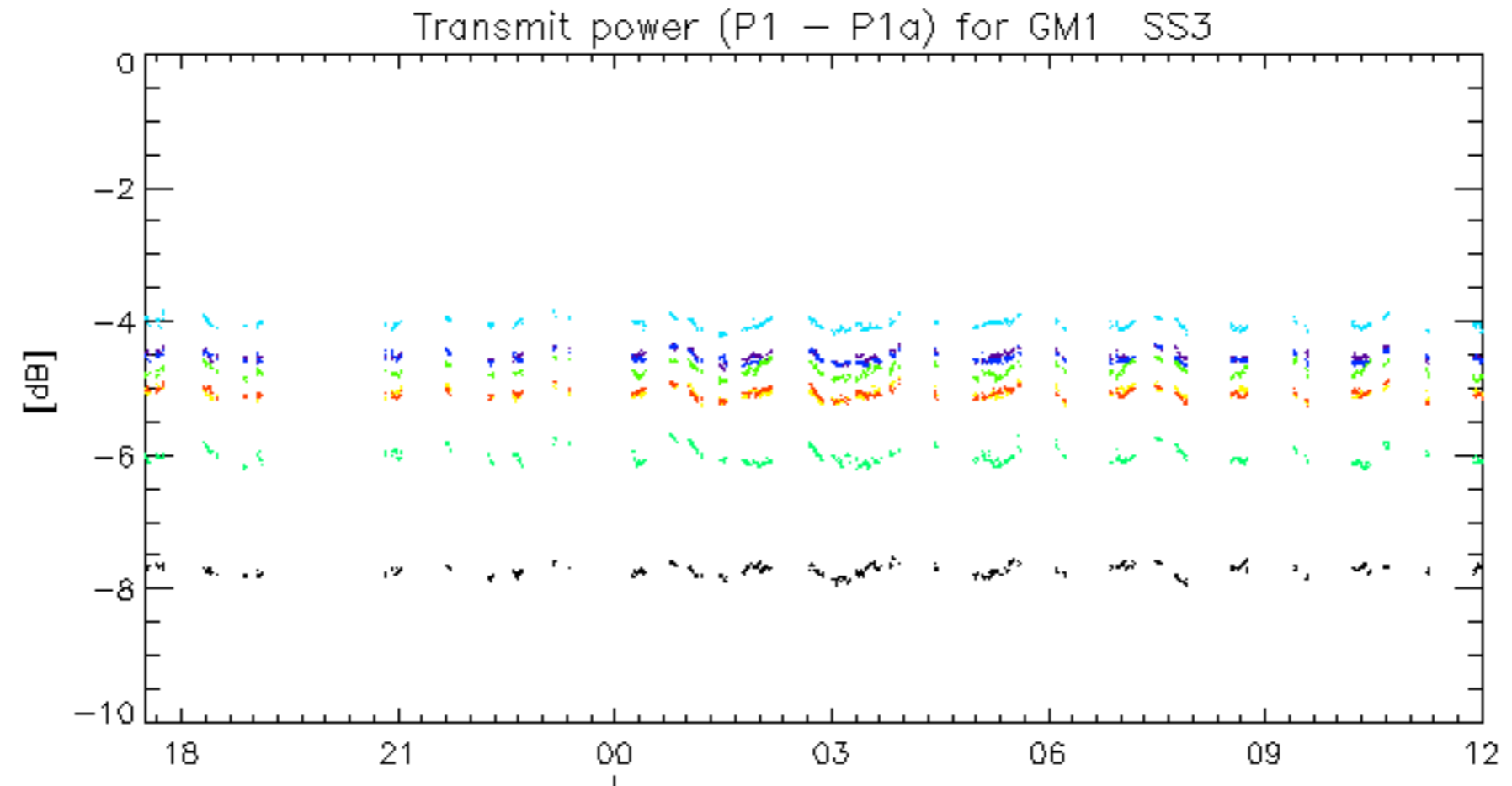
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070303_153003_000002712056_00068_26174_5060.N1	0	51
ASA_GM1_1PNPDK20070305_083800_000004282056_00093_26199_6587.N1	0	7
ASA_WSM_1PNPDE20070303_142340_000000852056_00068_26174_9241.N1	0	16
ASA_WSM_1PNPDE20070305_003950_000002632056_00088_26194_1182.N1	0	32



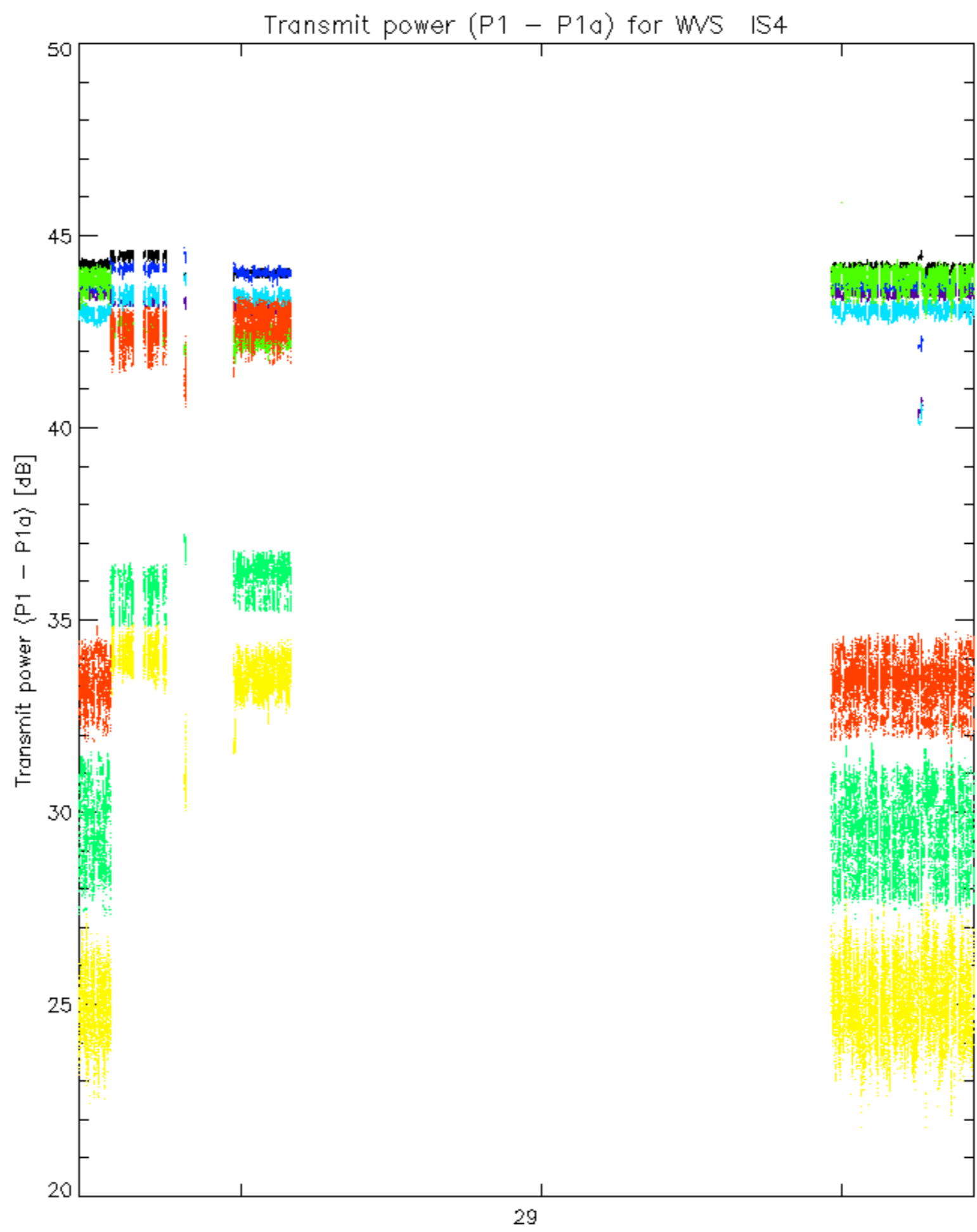




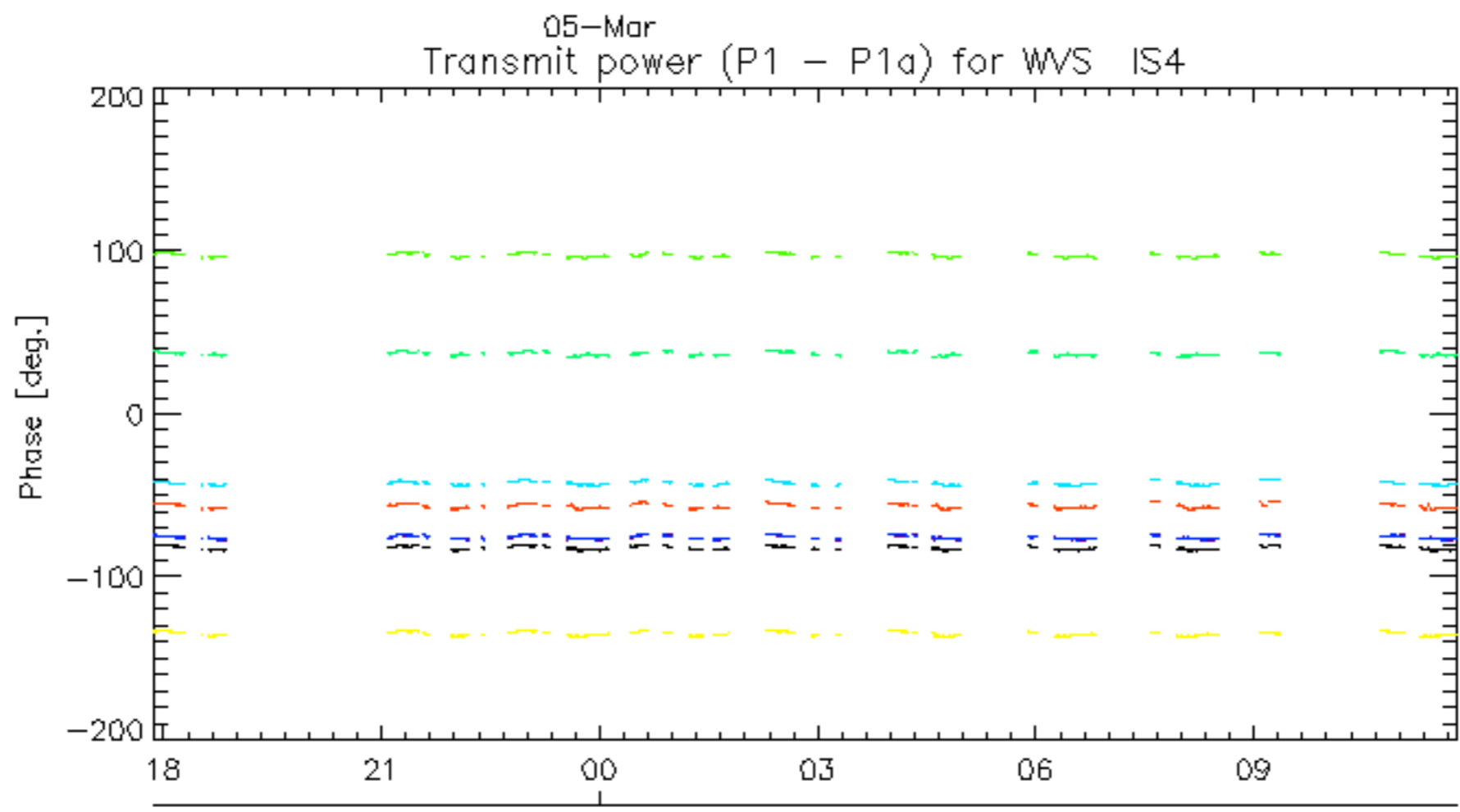
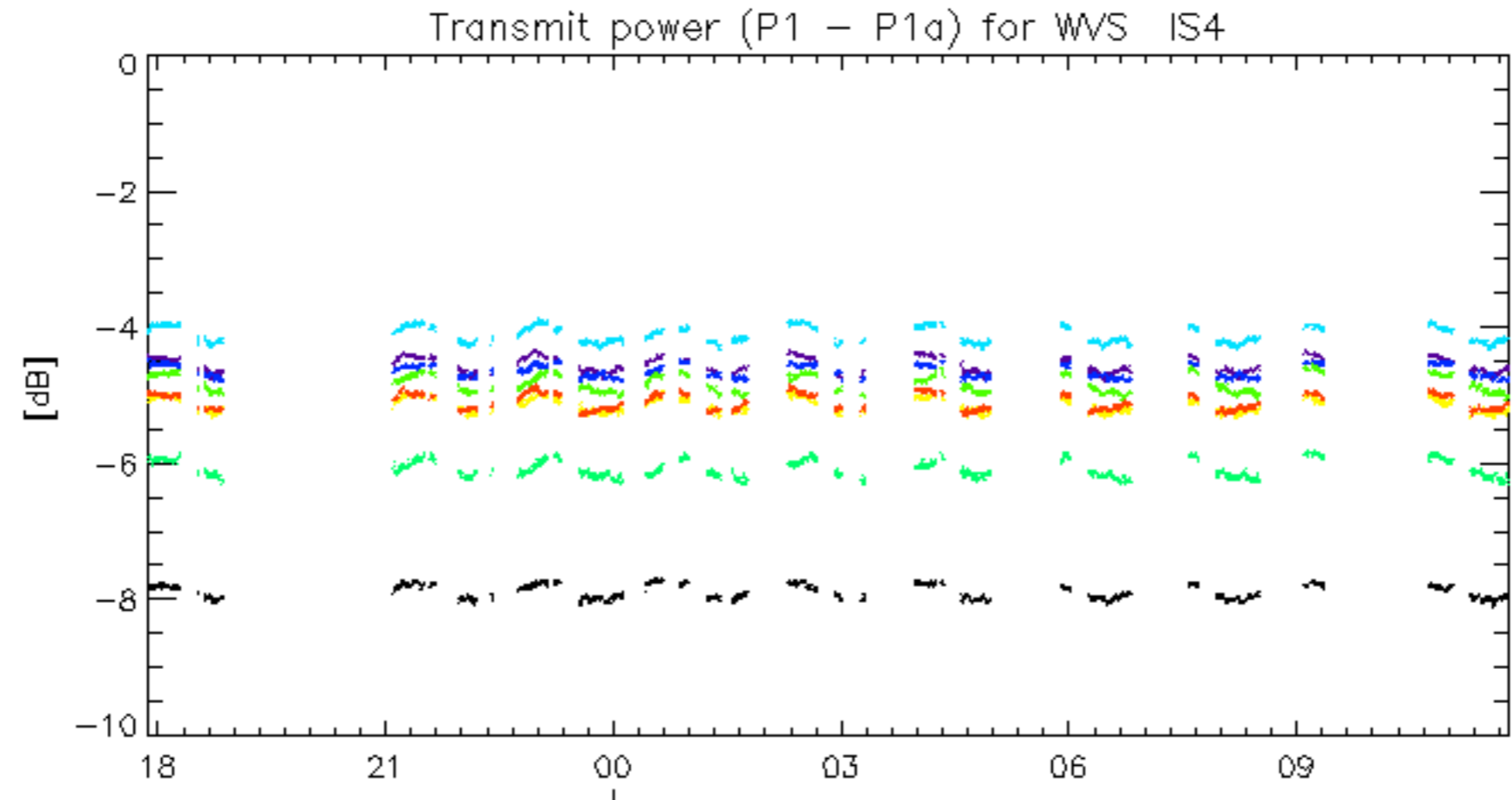
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.