

PRELIMINARY REPORT OF 070320

last update on Tue Mar 20 23:51:45 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 2007-03-19 00:00:00 to 2007-03-20 23:51:45

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	49	84	18	4	44
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	49	84	18	4	44
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	49	84	18	4	44
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	84	18	4	44

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	51	58	69	7	38
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	51	58	69	7	38
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	51	58	69	7	38
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	51	58	69	7	38

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	20070319 084149
H	20070320 081012

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	-15.124187	0.121352	-0.035866
7	P1a	-17.480129	0.103789	-0.157740
11	P1a	-17.258572	0.335889	0.124661
15	P1a	-12.905081	0.087116	-0.092498
19	P1a	-15.159147	0.077383	-0.038608
22	P1a	-15.433340	0.683045	-0.215159
26	P1a	-15.036484	0.676084	0.008726
30	P1a	-17.370897	0.361111	-0.113681

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.744331	0.009950	-0.034766
7	P1	-3.135941	0.008262	-0.011580
11	P1	-4.163572	0.015430	-0.029318
15	P1	-6.381354	0.015840	-0.001384
19	P1	-3.773207	0.007949	-0.025939
22	P1	-4.657856	0.077743	-0.017602
26	P1	-3.911575	0.061778	0.057462
30	P1	-5.891106	0.121883	0.013535

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.649069	0.092082	0.067591
7	P2	-21.607582	0.080760	0.041245
11	P2	-15.519916	0.098219	0.096623
15	P2	-7.077904	0.092762	-0.046278
19	P2	-9.107762	0.081728	-0.007249
22	P2	-18.099758	0.074419	0.031173

26	P2	-16.557262	0.085299	-0.070343
30	P2	-19.335094	0.078123	0.070379

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235755	0.006411	0.006663
7	P3	-8.235755	0.006411	0.006663
11	P3	-8.235755	0.006411	0.006663
15	P3	-8.235755	0.006411	0.006663
19	P3	-8.235755	0.006411	0.006663
22	P3	-8.235755	0.006411	0.006663
26	P3	-8.235727	0.006410	0.006785
30	P3	-8.235727	0.006410	0.006785

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)
3	P1a	-11.088347	0.055030	-0.092720
7	P1a	-10.069341	0.157063	-0.000150
11	P1a	-10.679556	0.069052	-0.048740
15	P1a	-10.948167	0.143726	0.111265
19	P1a	-15.706121	0.071723	-0.182073
22	P1a	-20.852612	1.585292	0.401951
26	P1a	-15.237096	0.310493	0.058380
30	P1a	-18.357567	0.821377	0.308733

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-8.406518	0.046674	-0.044744
7	P1	-2.425965	0.028812	-0.010519

11	P1	-2.922459	0.021154	0.013171
15	P1	-3.848783	0.042962	-0.023307
19	P1	-3.560135	0.011061	-0.048475
22	P1	-5.032468	0.035776	0.086666
26	P1	-5.943448	0.060103	0.040420
30	P1	-5.270050	0.032652	-0.000745

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.103336	0.035671	-0.035076
7	P2	-21.954622	0.058418	-0.035014
11	P2	-10.641868	0.031966	-0.013390
15	P2	-4.826719	0.029954	-0.009765
19	P2	-6.813036	0.031922	-0.020563
22	P2	-8.078243	0.034473	-0.004788
26	P2	-24.290918	0.040236	0.042626
30	P2	-21.720617	0.042268	0.079245

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.060040	0.003764	0.000023
7	P3	-8.059911	0.003753	0.000220
11	P3	-8.059974	0.003752	0.000016
15	P3	-8.060076	0.003762	0.000483
19	P3	-8.059976	0.003766	0.001552
22	P3	-8.059982	0.003758	0.000228
26	P3	-8.059780	0.003742	0.000854
30	P3	-8.059939	0.003759	-0.000386

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	0.000670110
	stdev	2.91127e-07
MEAN Q	mean	0.000288141
	stdev	2.81375e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0901615
	stdev	0.00223924
STDEV Q	mean	0.0899674
	stdev	0.00229487



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007031[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_IMM_1PNPDE20070318_210136_000000982056_00286_26392_7093.N1	1	42
ASA_IMM_1PNPDE20070318_210638_000003002056_00286_26392_7140.N1	2	81

ASA_IMM_1PNPDE20070319_132450_000000502056_00296_26402_8122.N1	6	89
ASA_IMM_1PNPDE20070319_153347_000001132056_00297_26403_8144.N1	15	2759
ASA_IMM_1PNPDE20070319_171525_000002082056_00298_26404_8200.N1	15	6315
ASA_IMM_1PNPDE20070319_171858_000000062056_00298_26404_8182.N1	10	199
ASA_IMM_1PNPDE20070319_174754_000001772056_00299_26405_8212.N1	4	28
ASA_IMM_1PNPDE20070319_235158_000003012056_00302_26408_9394.N1	15	3403
ASA_IMM_1PNPDE20070319_235800_000000952056_00302_26408_9395.N1	15	670
ASA_WVS_1PNPDK20070318_191755_000000002056_00285_26391_5999.N1	1	0
ASA_GM1_1PNPDK20070318_150057_000001202056_00283_26389_5642.N1	0	8
ASA_GM1_1PNPDK20070318_191841_000000722056_00285_26391_6049.N1	0	13
ASA_GM1_1PNPDK20070319_112407_000001502056_00295_26401_6492.N1	0	22
ASA_GM1_1PNPDK20070319_112634_000000842056_00295_26401_6497.N1	0	55
ASA_WSM_1PNPDE20070310_172247_000001772056_00170_26276_8196.N1	0	2
ASA_WSM_1PNPDE20070318_145119_000000852056_00283_26389_6914.N1	0	36
ASA_WSM_1PNPDE20070319_031314_000000852056_00290_26396_7687.N1	24	2180
ASA_WSM_1PNPDE20070319_142046_000000852056_00297_26403_8158.N1	0	16
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_8162.N1	17	704
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_8176.N1	17	704
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_9562.N1	17	704
ASA_WSM_1PNPDK20070310_140332_000000862056_00168_26274_2612.N1	0	15
ASA_WSM_1PNPDK20070319_075204_000001592056_00293_26399_6245.N1	0	1
ASA_WSM_1PNPDK20070319_122504_000001292056_00295_26401_6620.N1	0	1
ASA_WSM_1PNPDK20070319_122504_000002632056_00295_26401_6729.N1	0	1
ASA_WSM_1PNPDK20070319_144155_000003242056_00297_26403_6748.N1	0	14

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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

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)

Ascending

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

Ascending

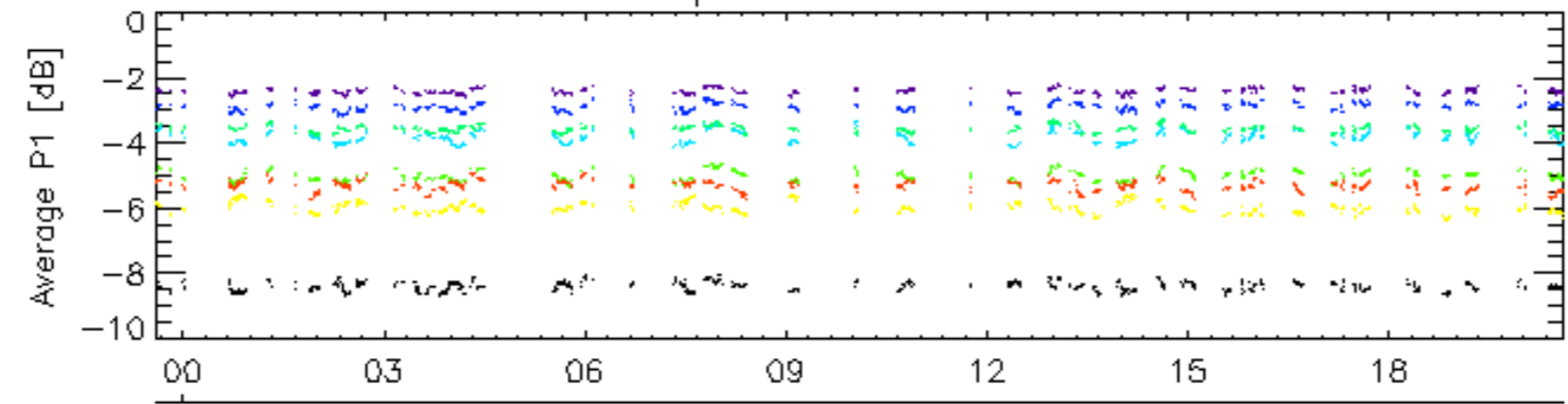
Descending

7.6 - Doppler evolution versus ANX for GM1

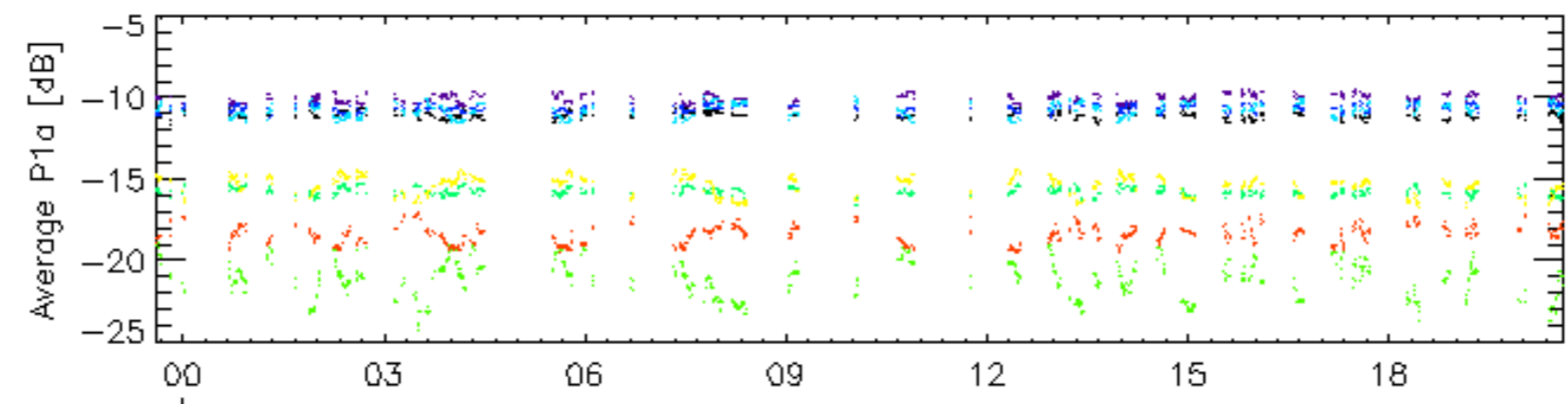
Evolution Doppler error versus ANX



Cal pulses for GM1 SS3

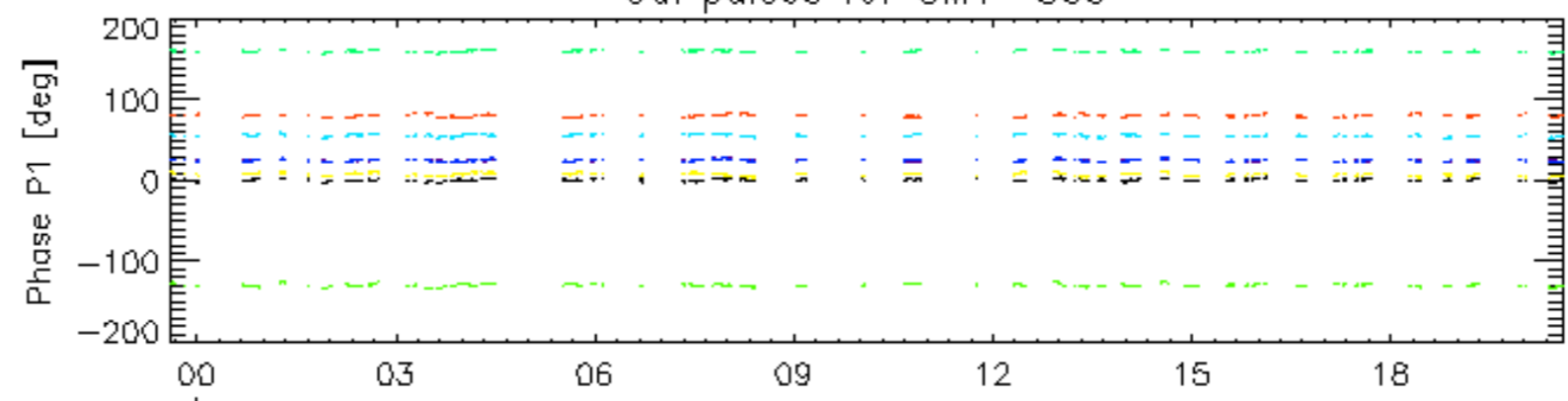


20-Mar

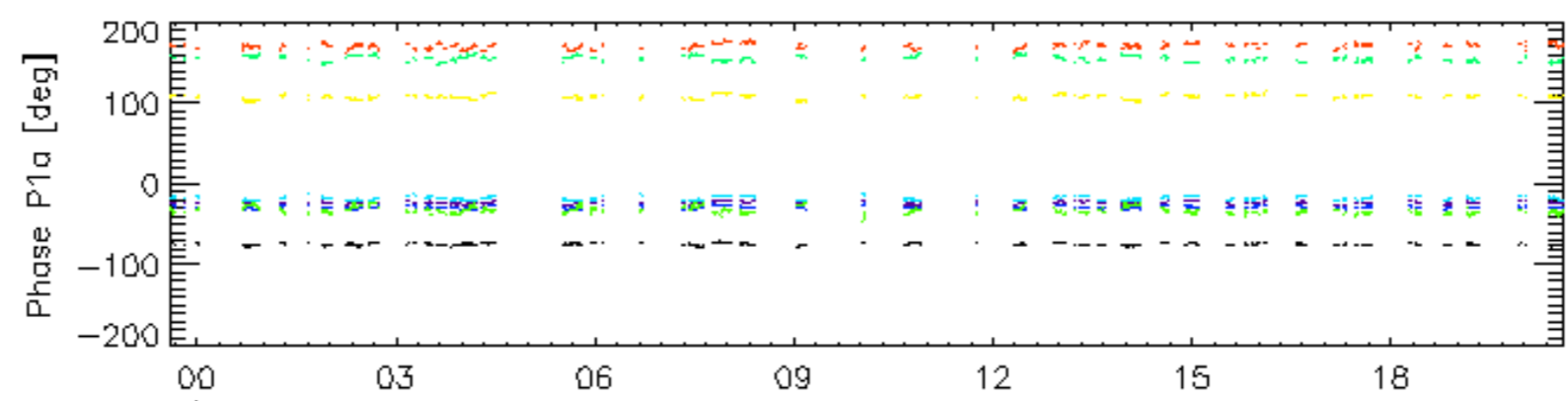


20-Mar

Cal pulses for GM1 SS3



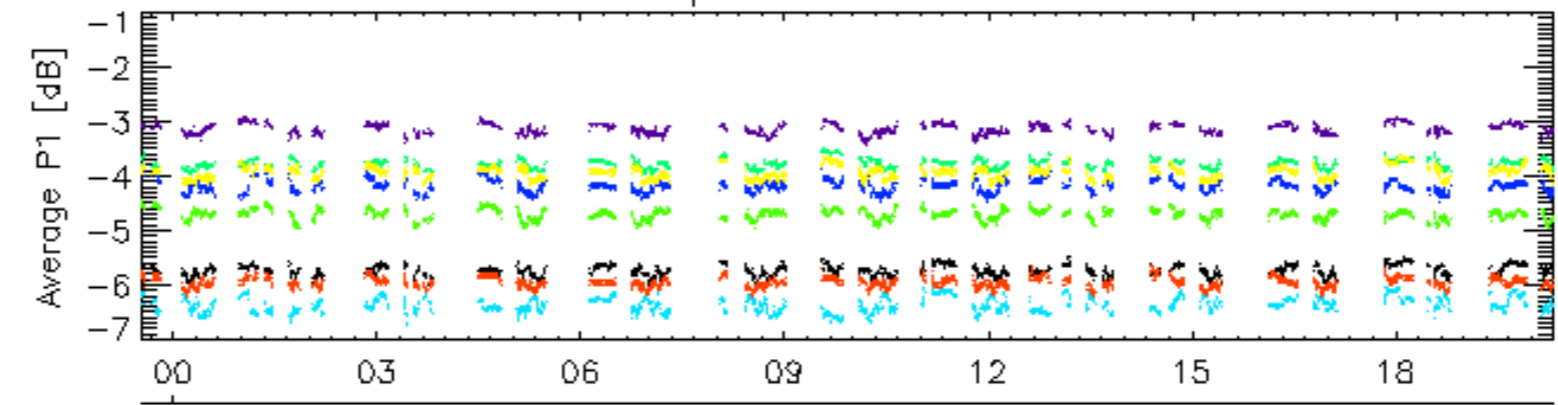
20-Mar



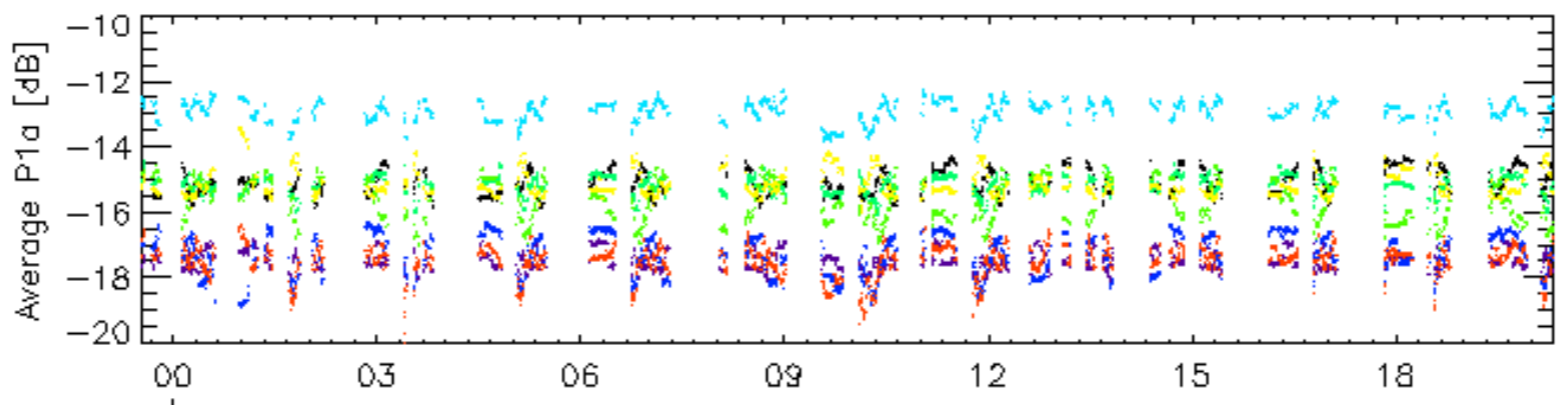
20-Mar

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

Cal pulses for WVS IS2

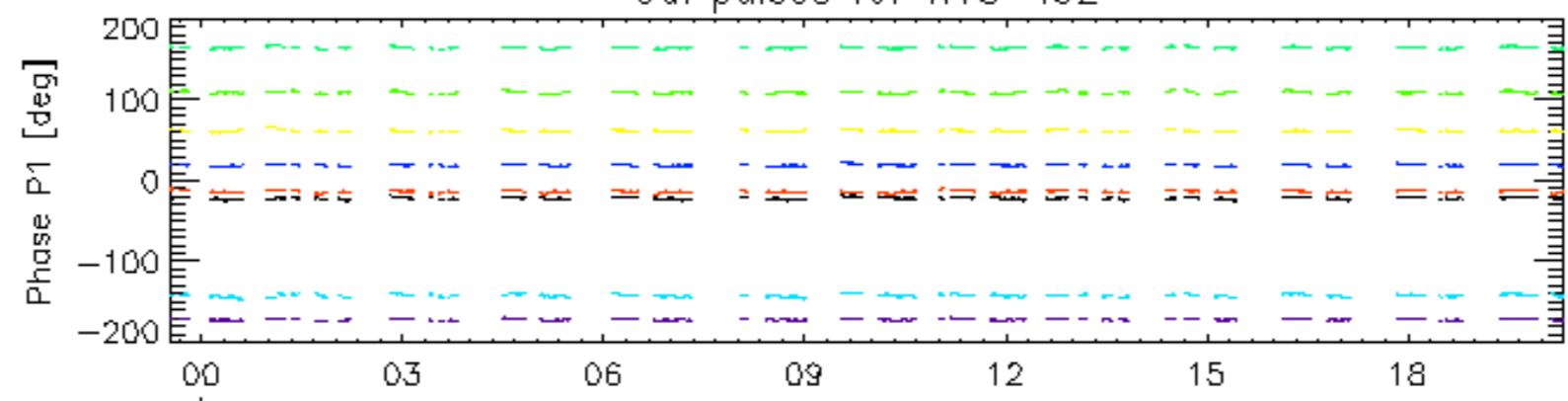


20-Mar

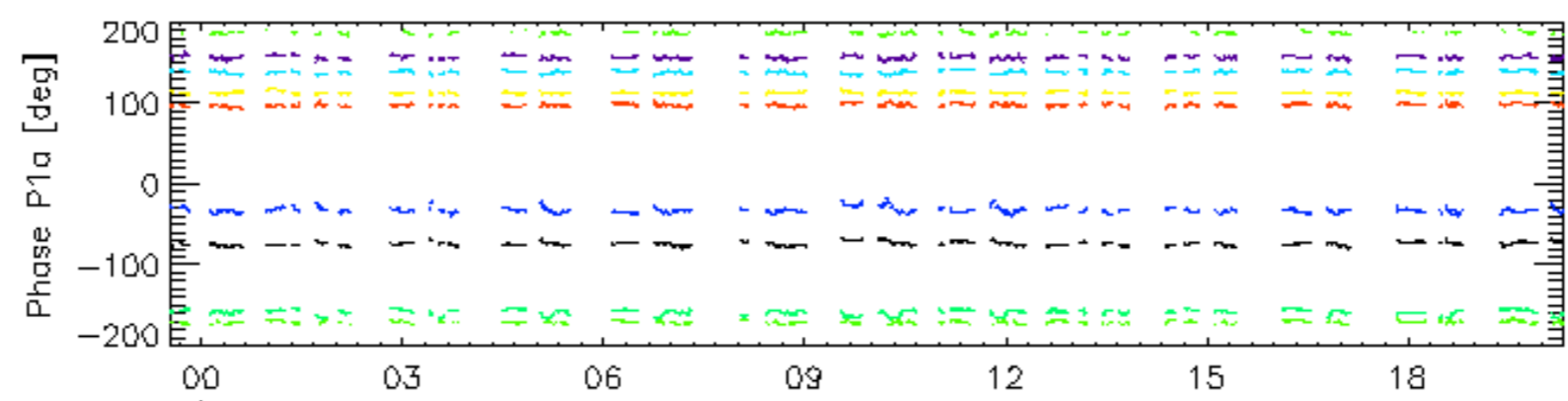


20-Mar

Cal pulses for WVS IS2



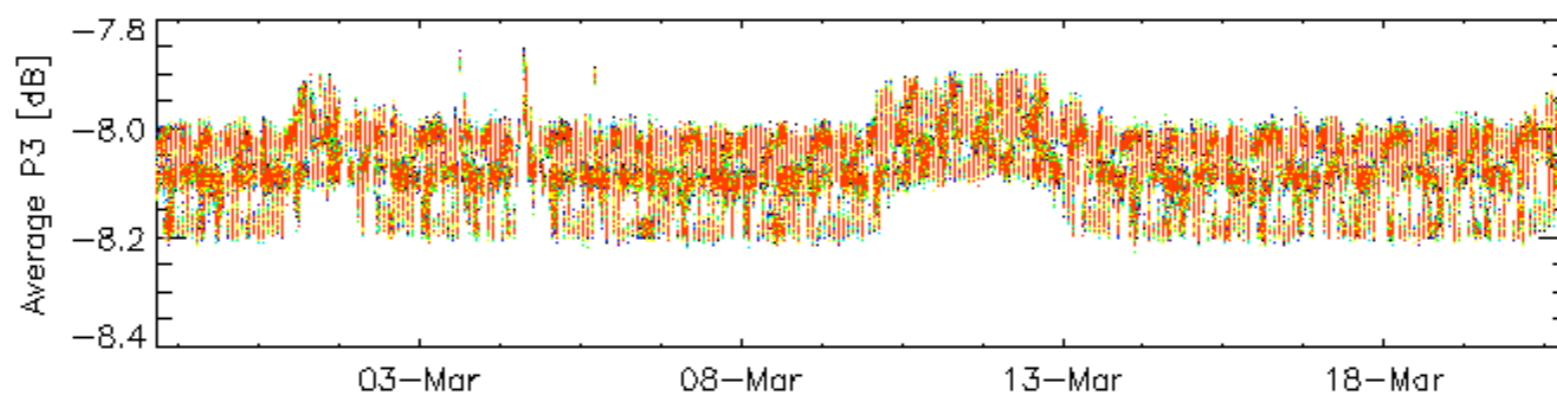
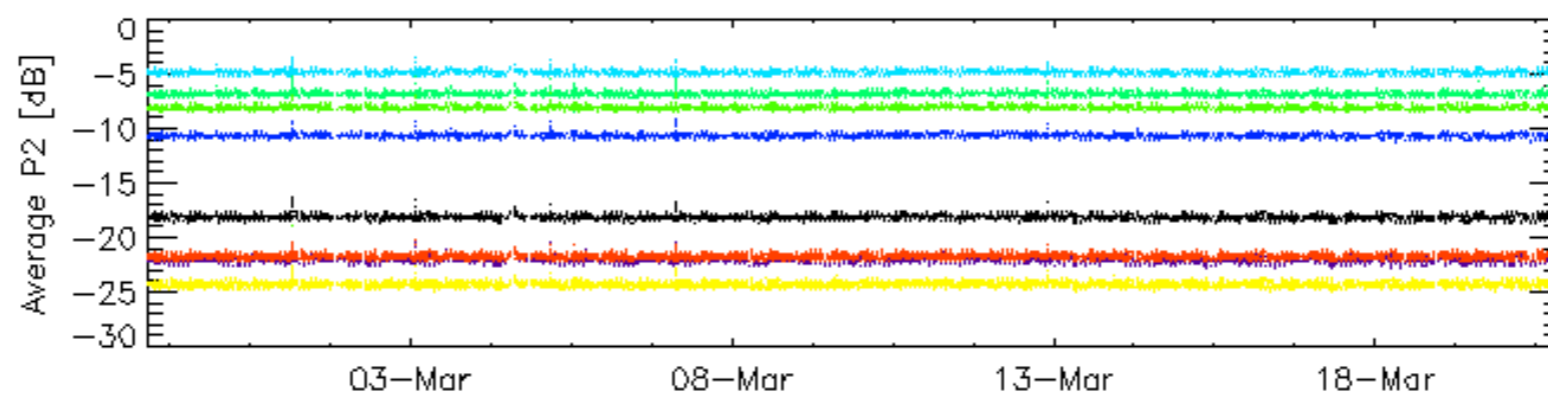
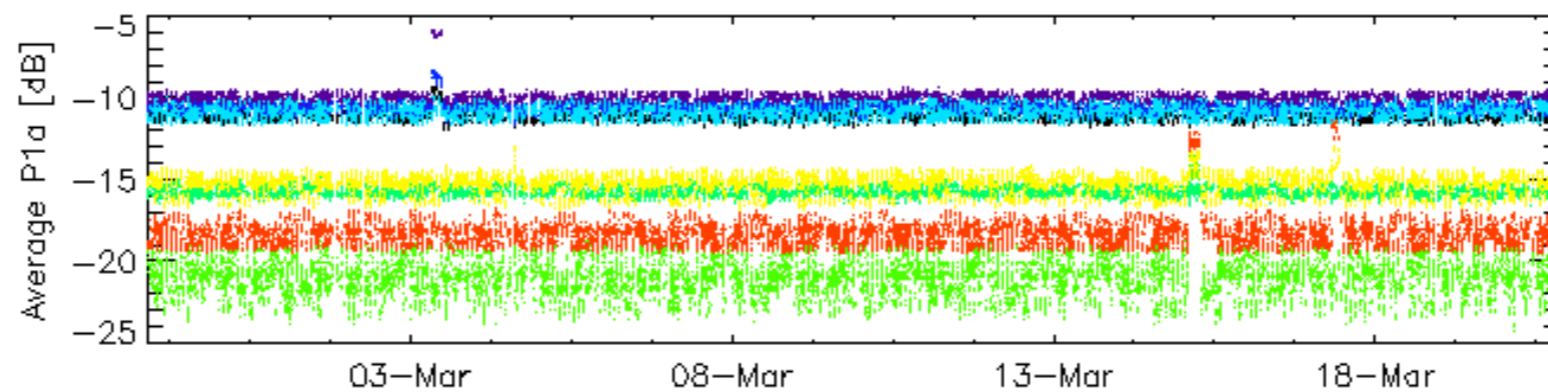
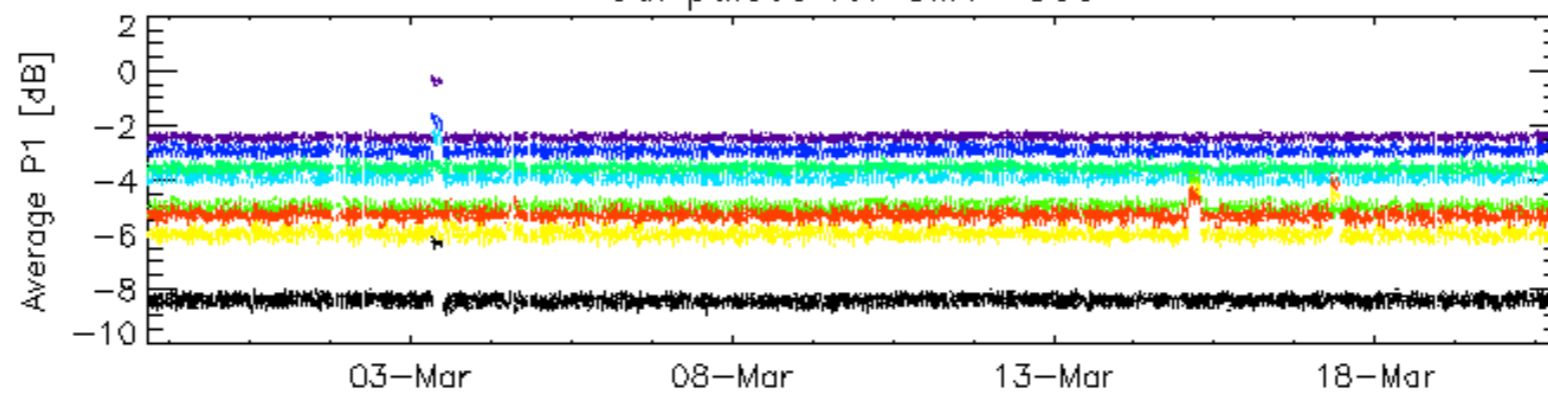
20-Mar



20-Mar

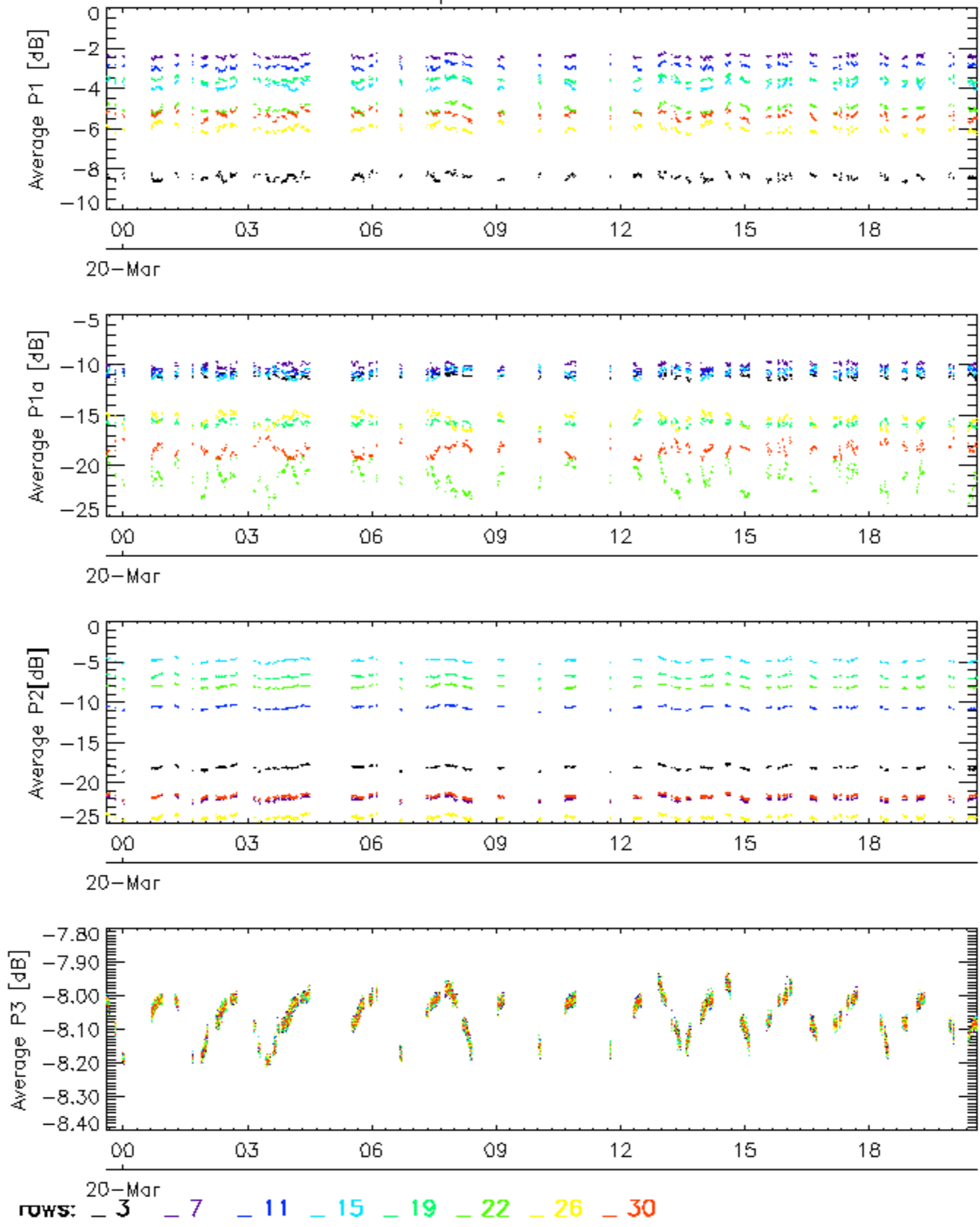
rows: - 3 - 7 - 11 - 15 - 19 - 22 - 26 - 30

Cal pulses for GM1 SS3

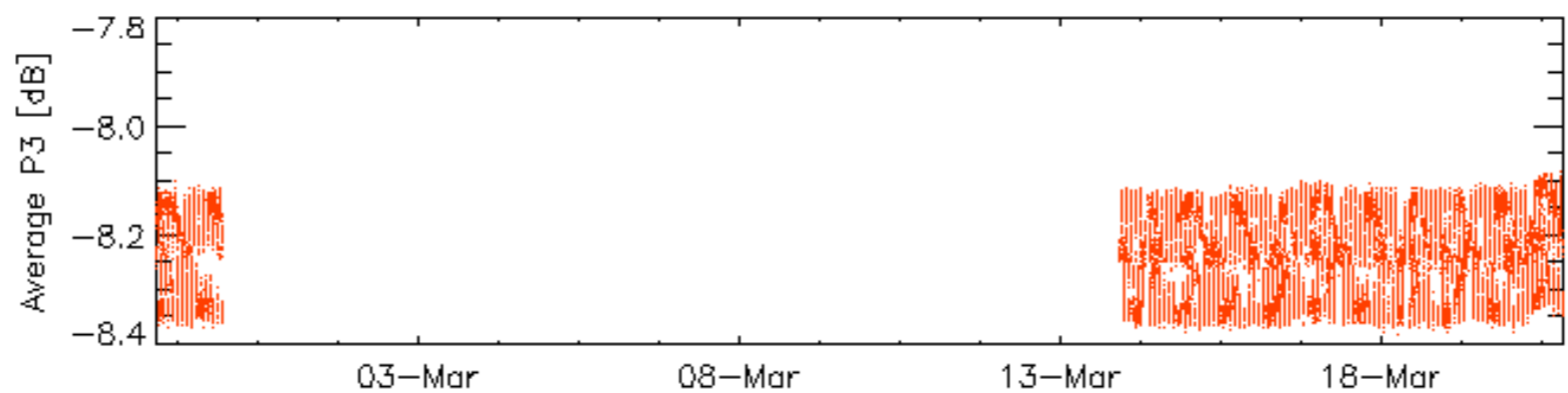
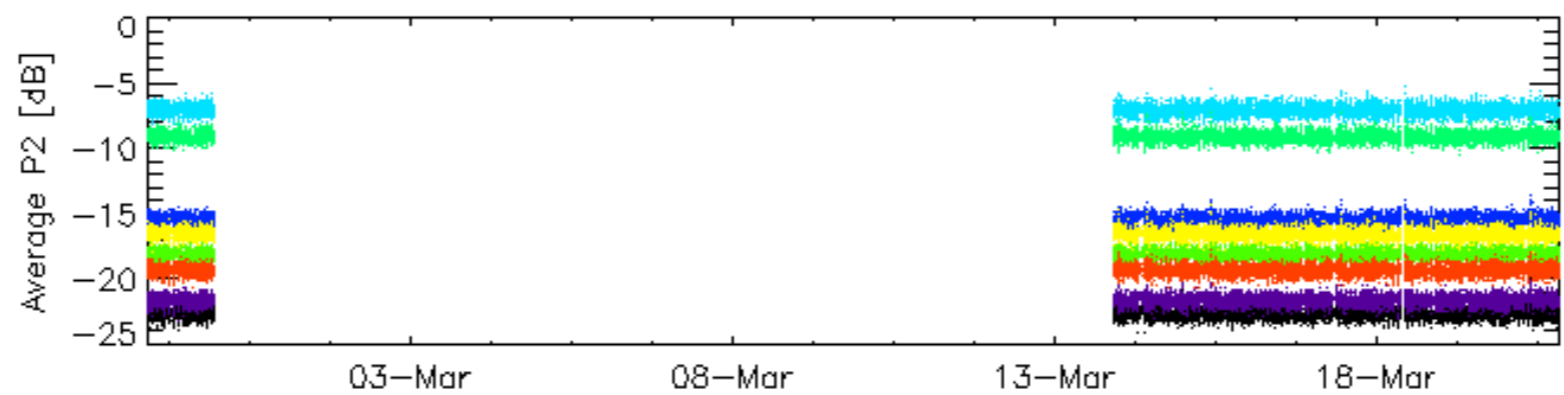
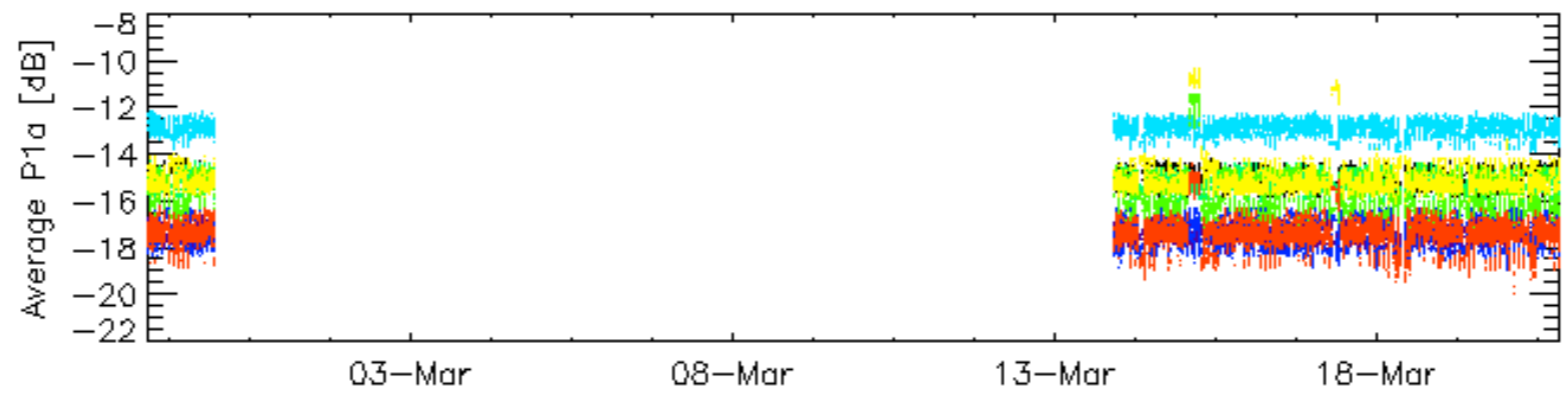
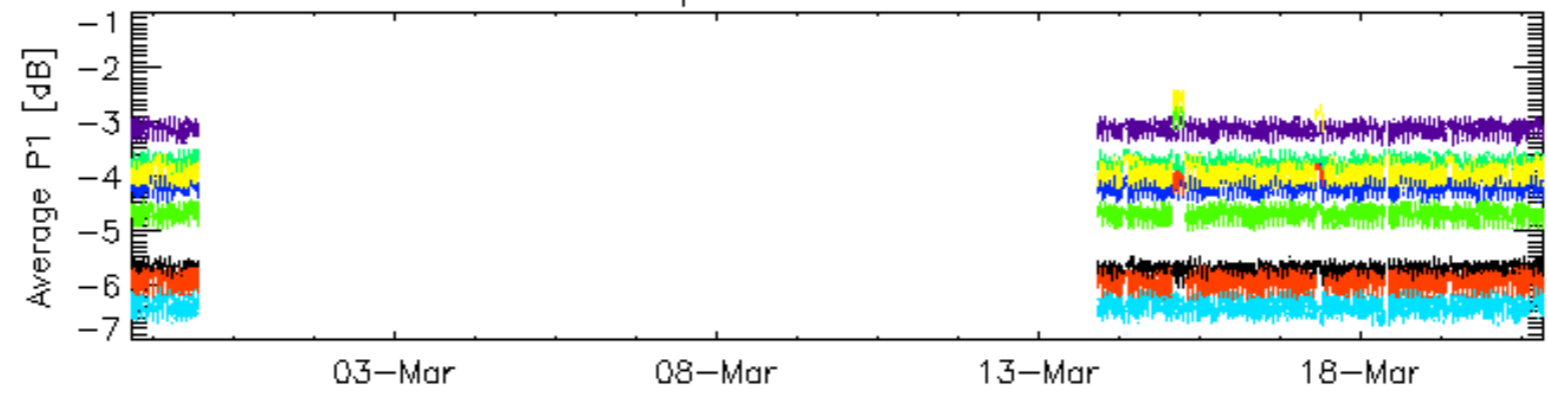


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

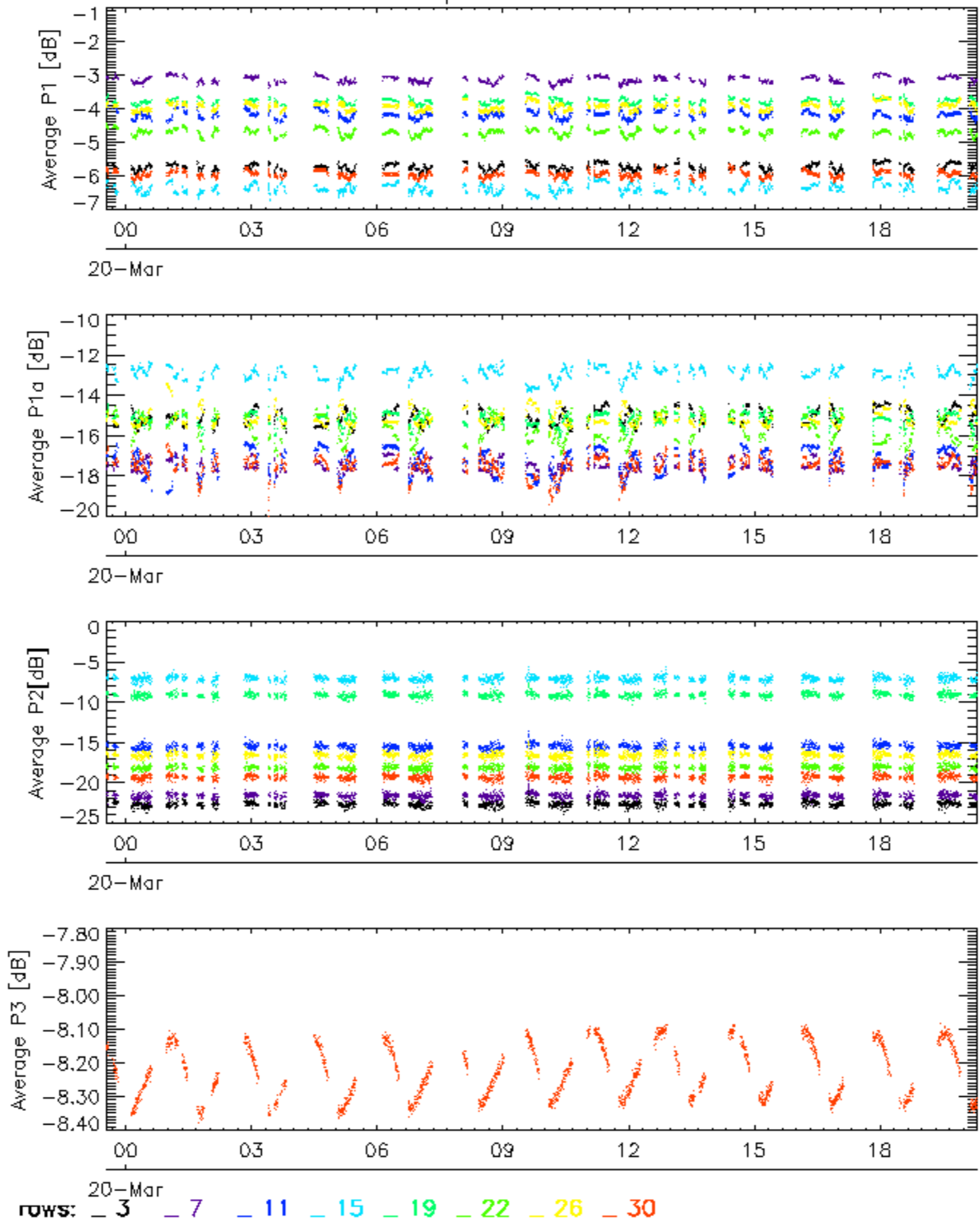


Cal pulses for WVS IS2

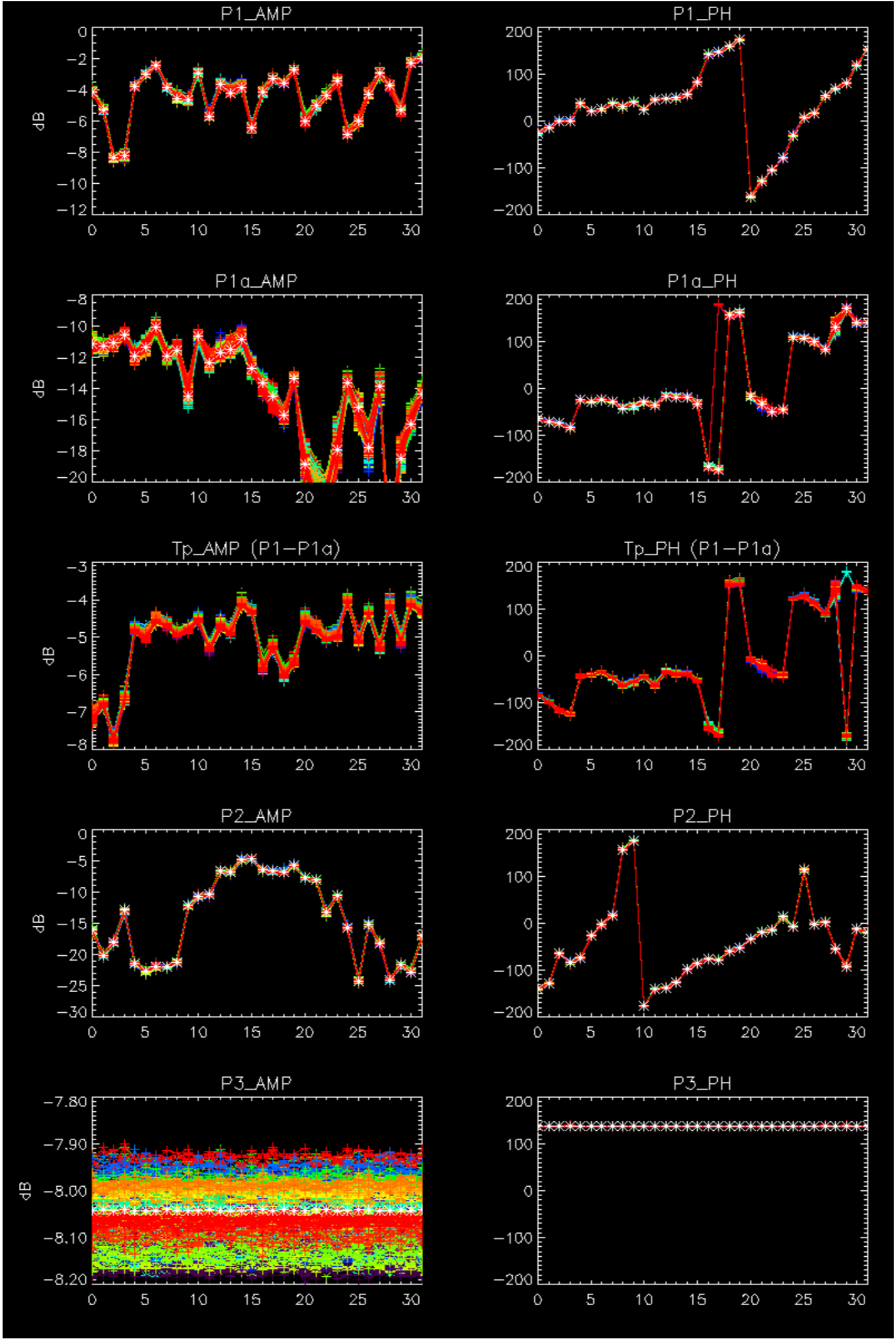


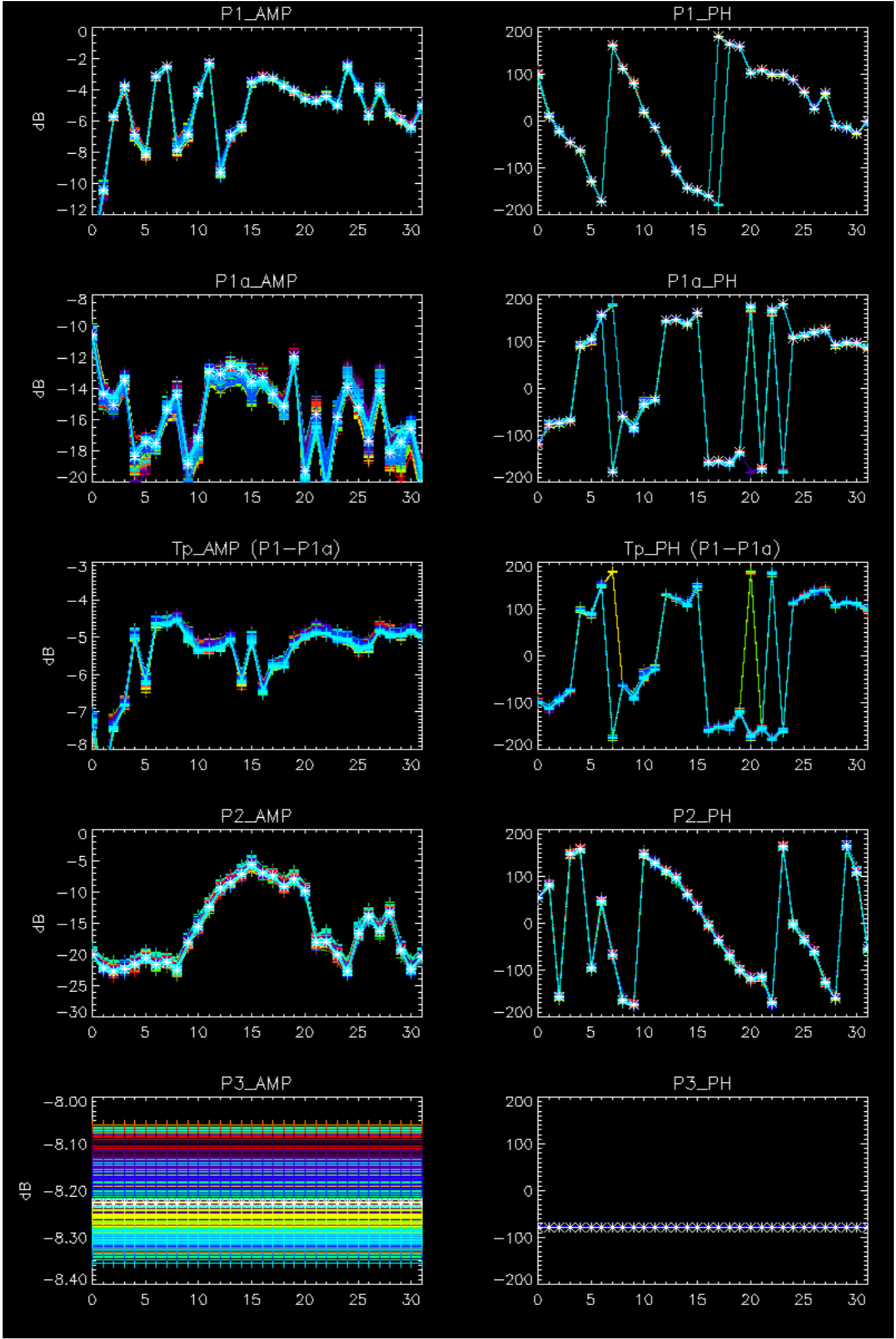
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



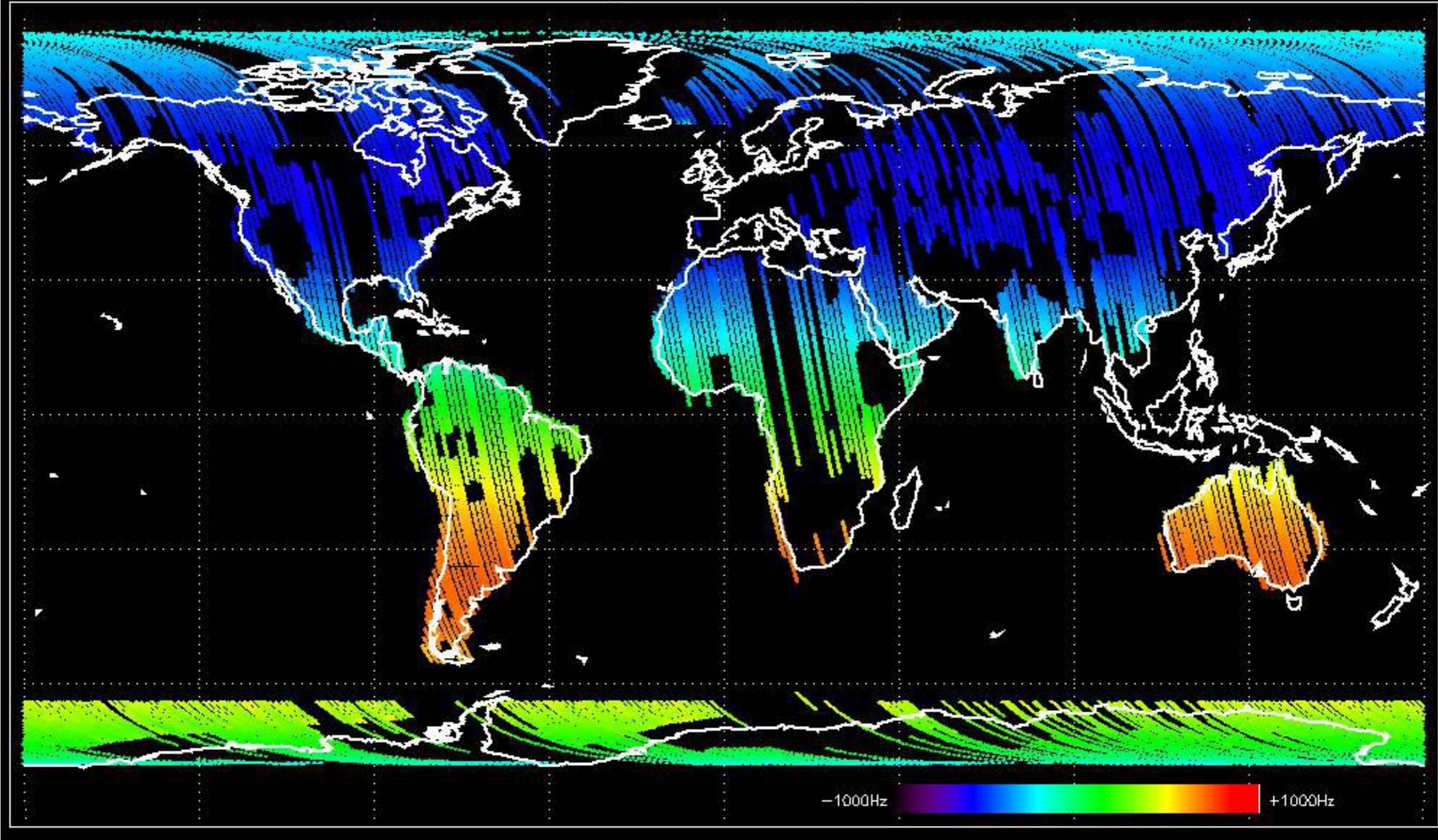
No anomalies observed.



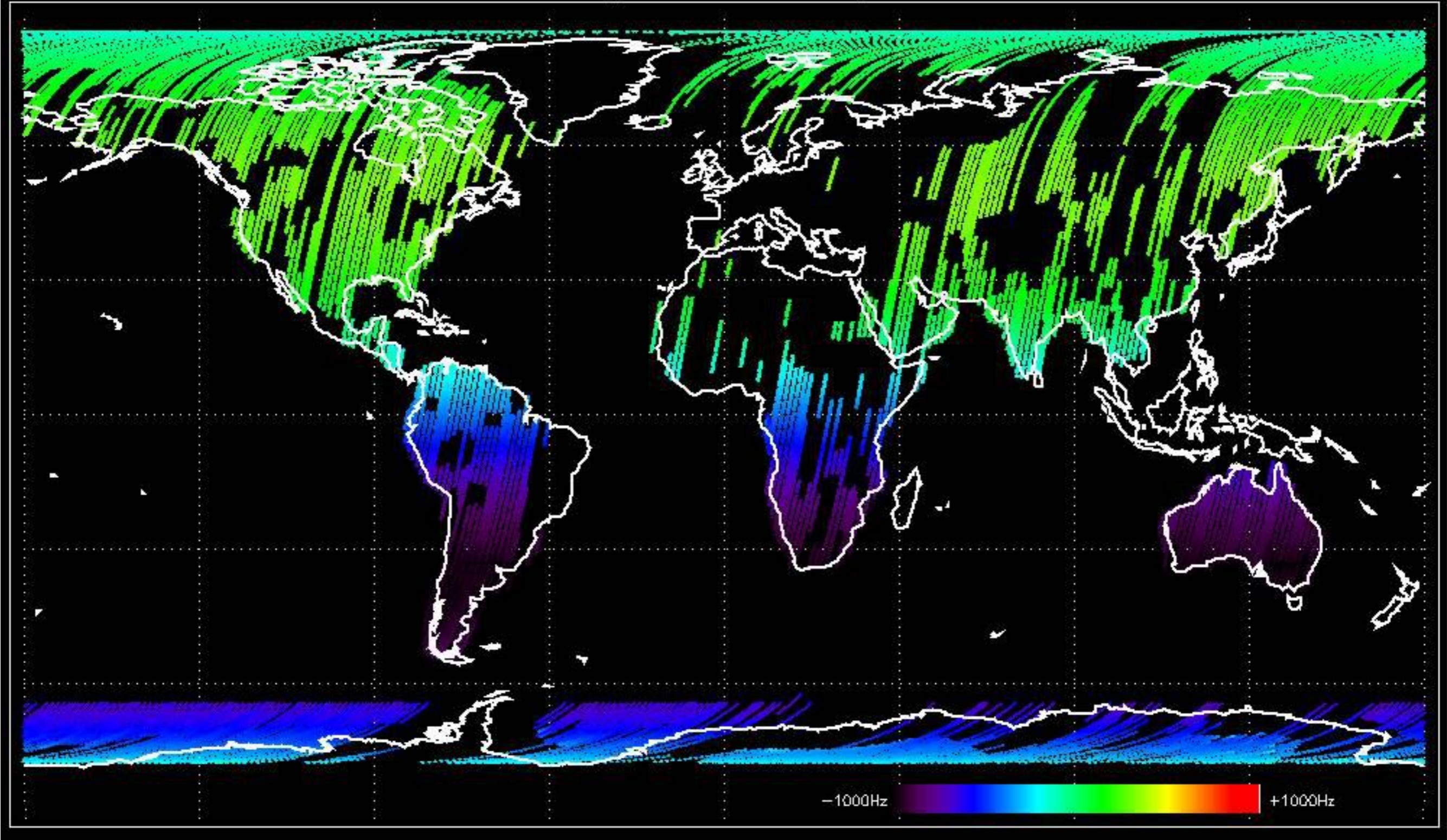


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

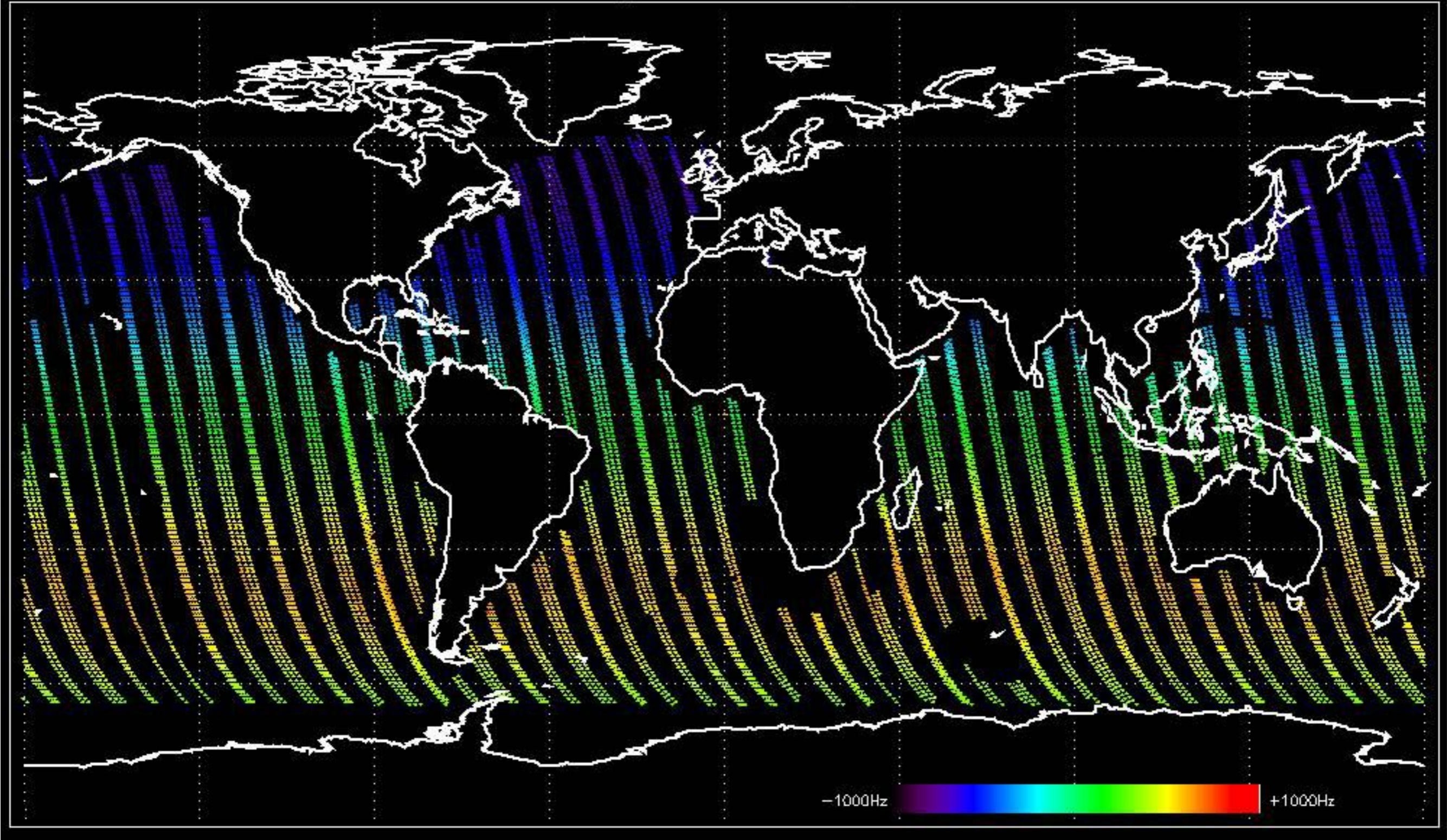
Doppler 'GM1' 'SS1' ascending



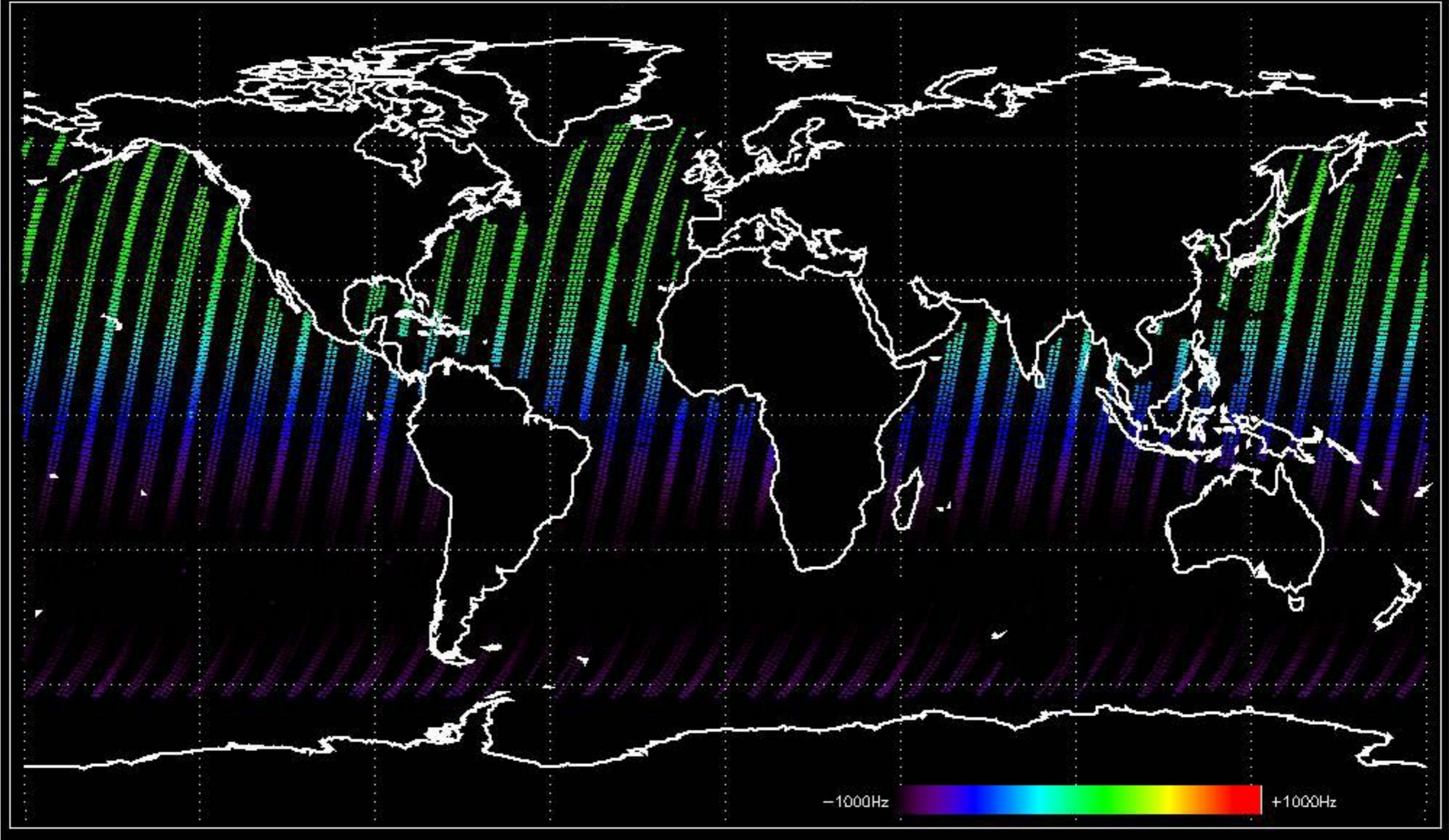
Doppler 'GM1' 'SS1' descending

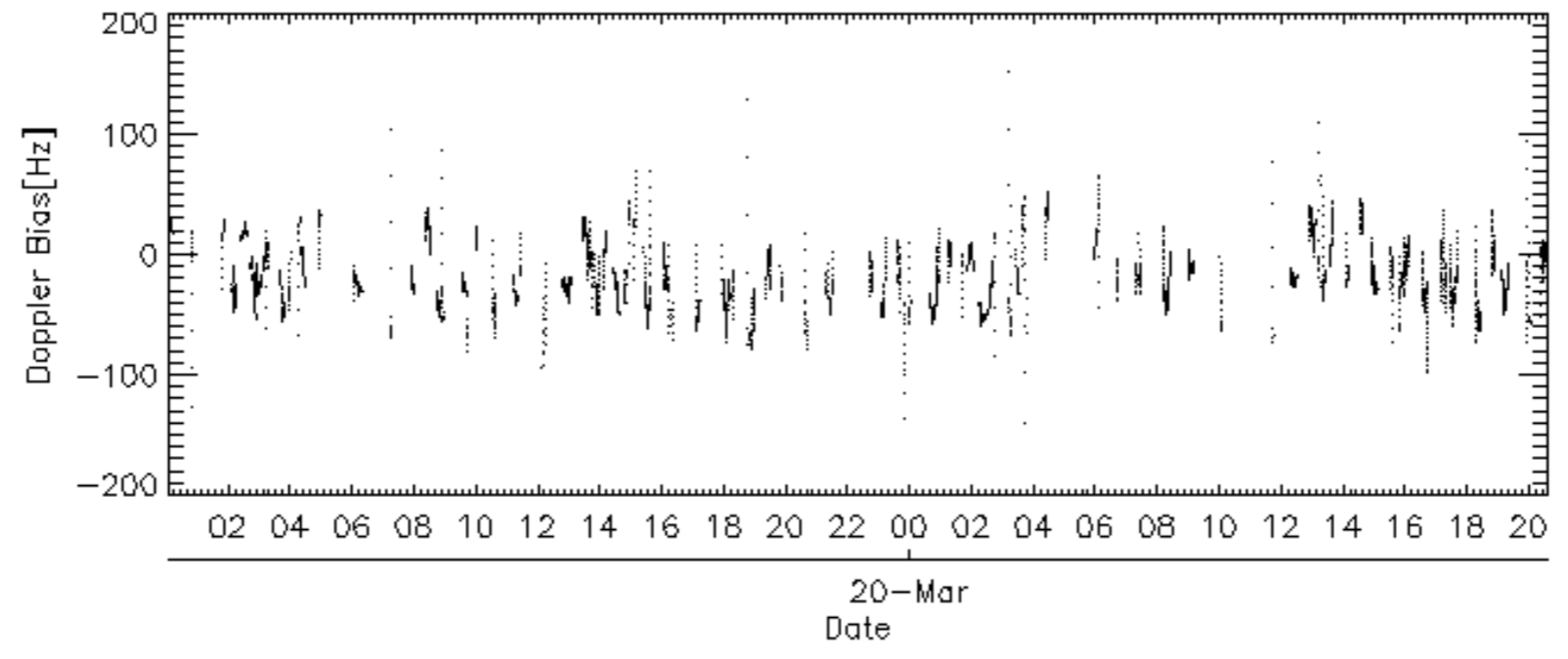
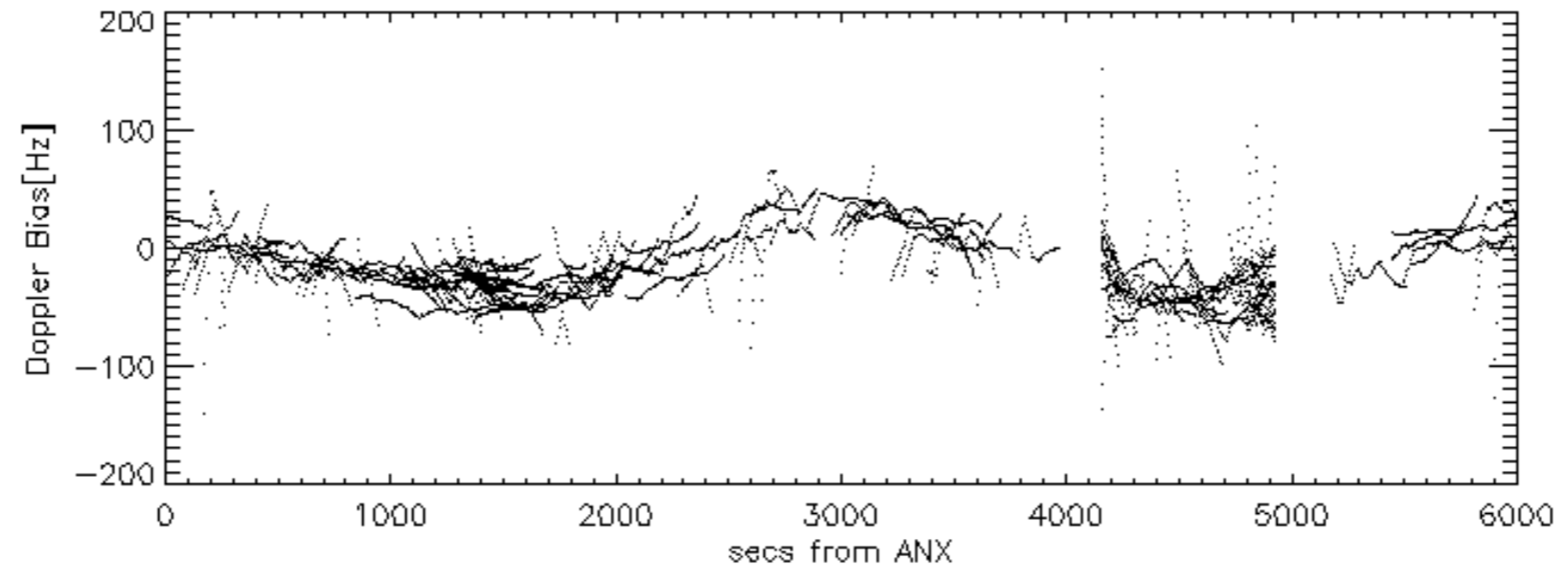
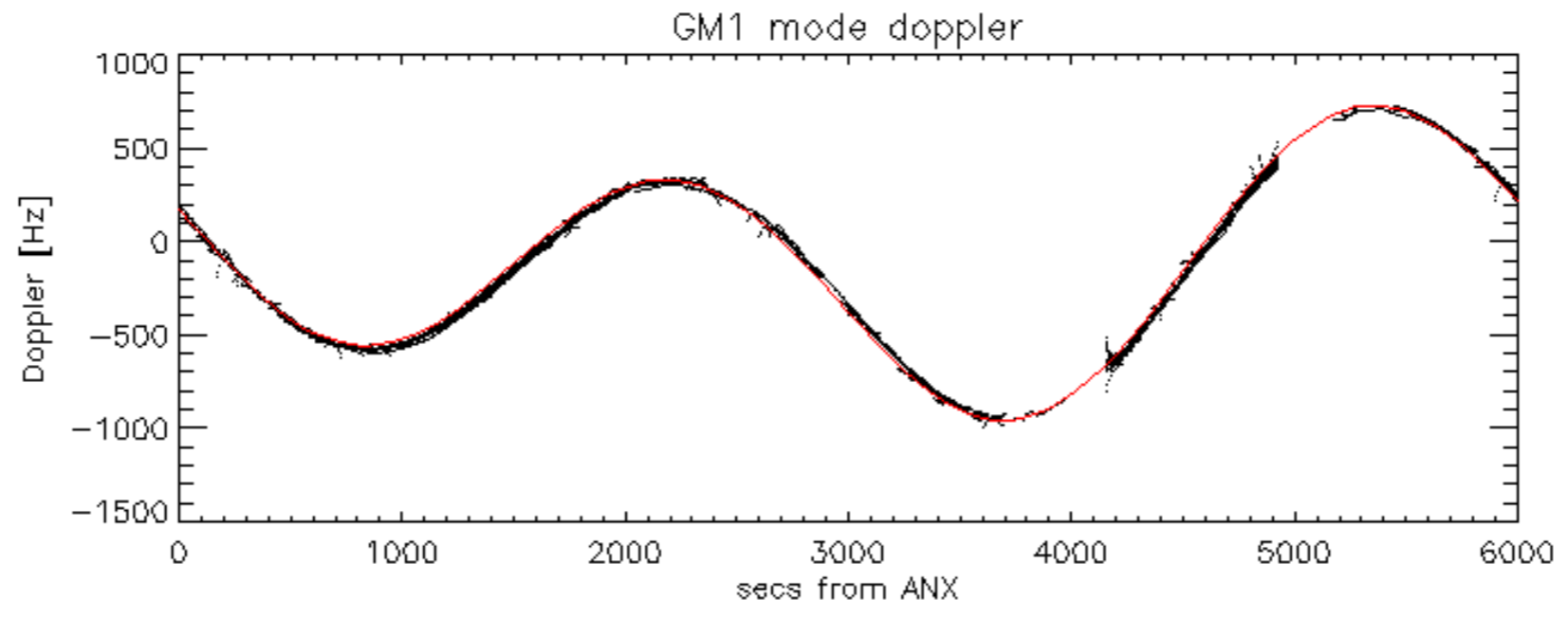


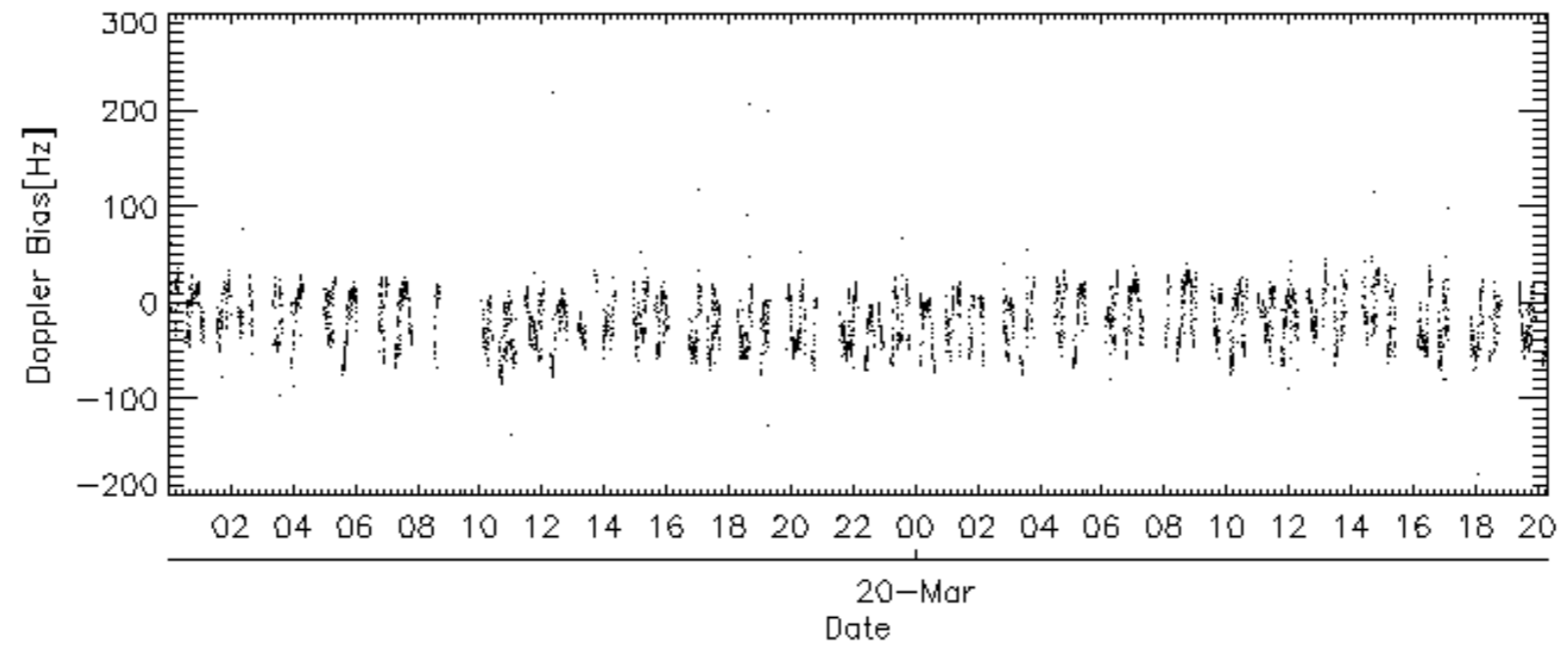
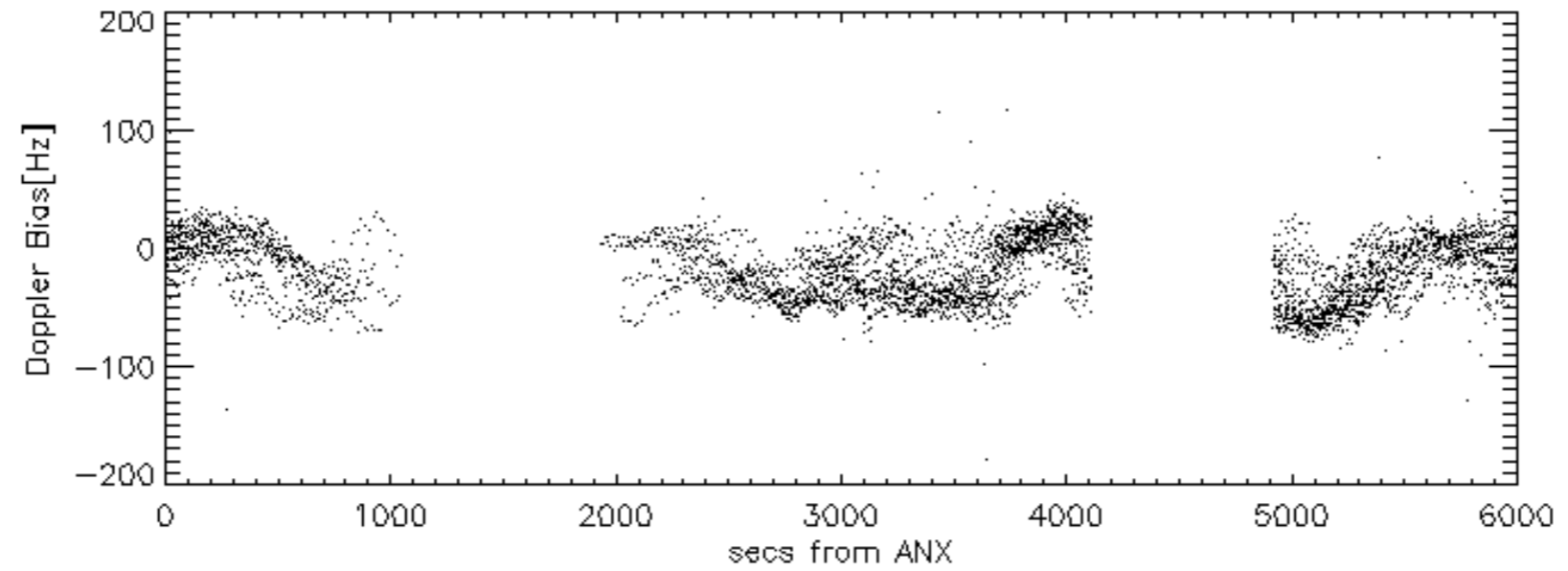
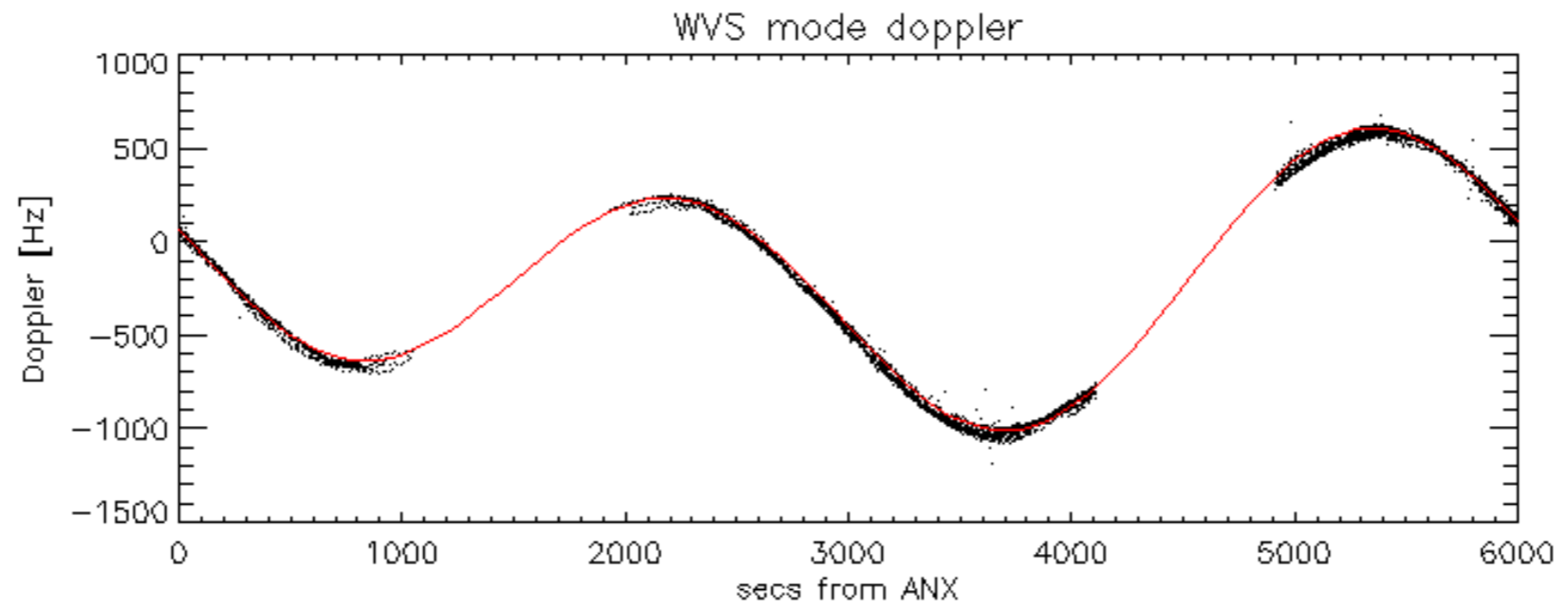
Doppler 'WVS' 'IS2' ascending



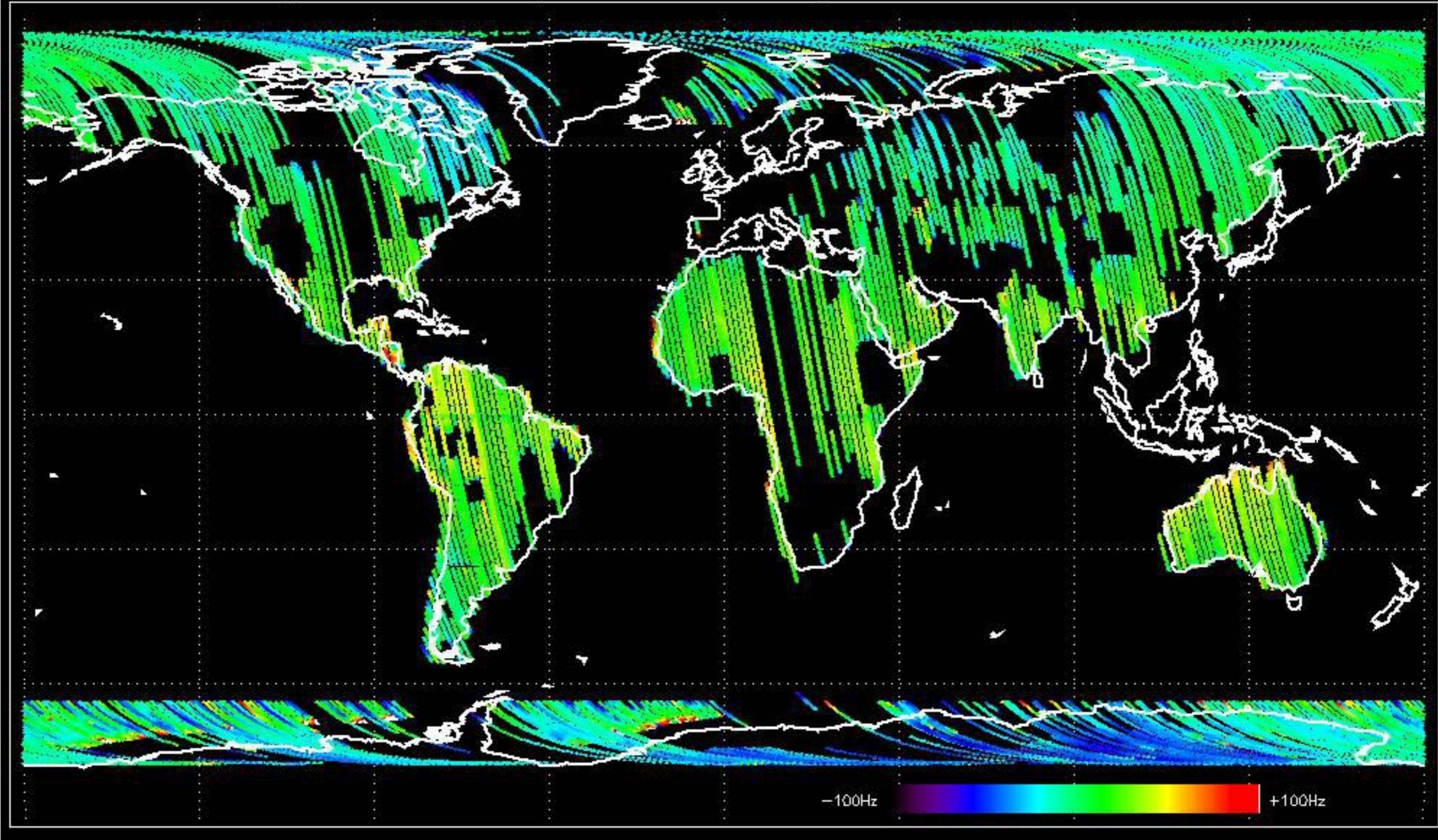
Doppler 'WVS' 'IS2' descending



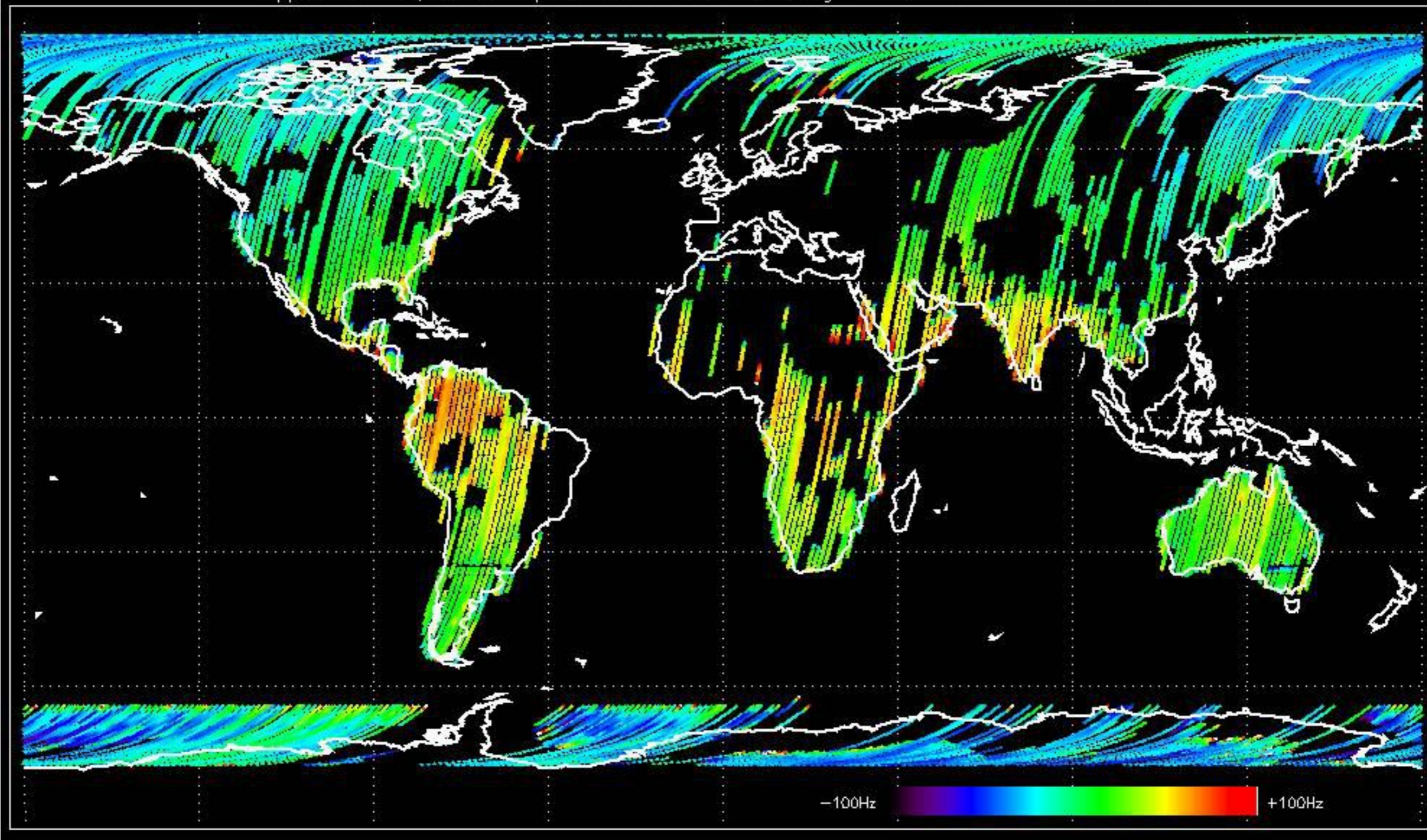




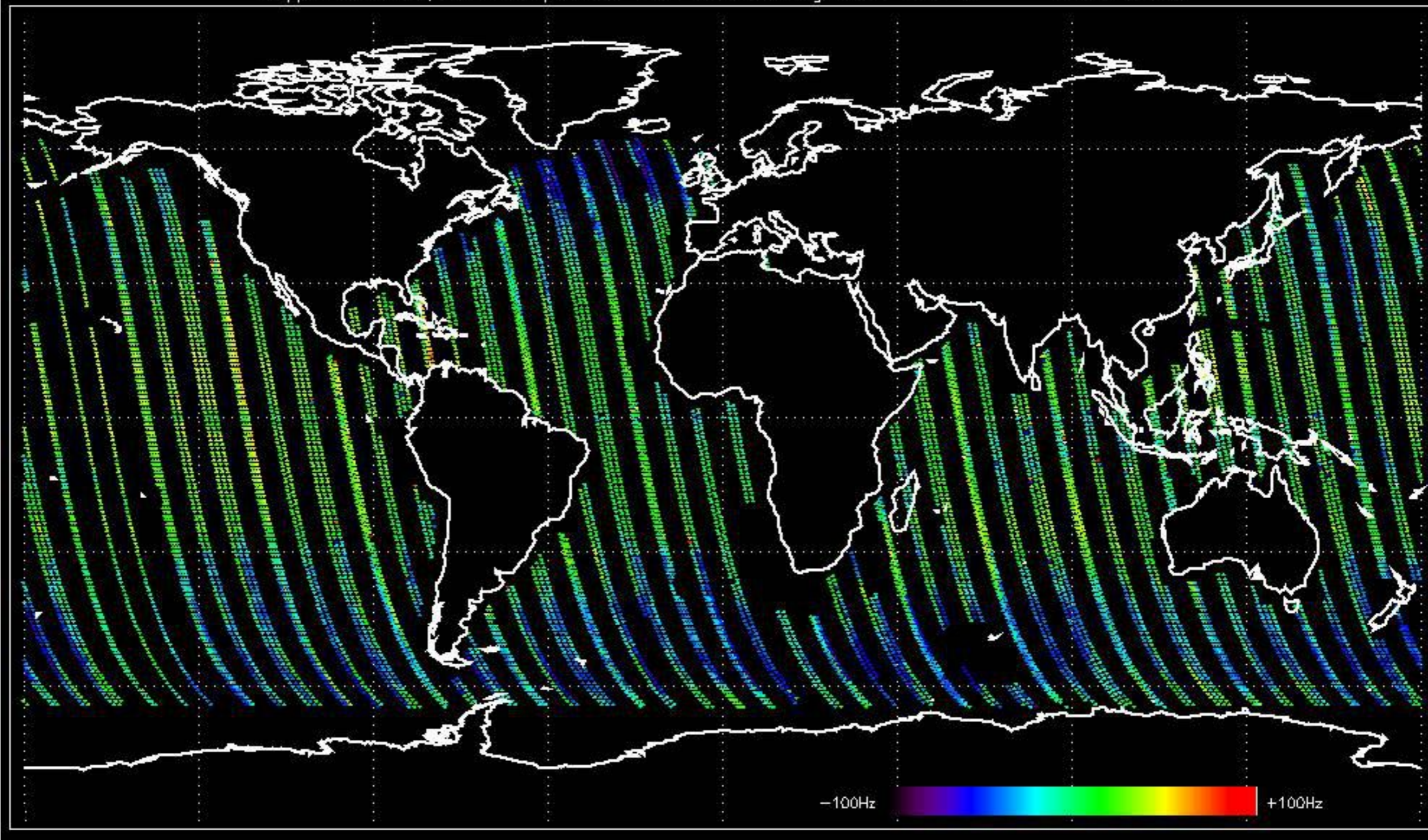
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.393285 Hz



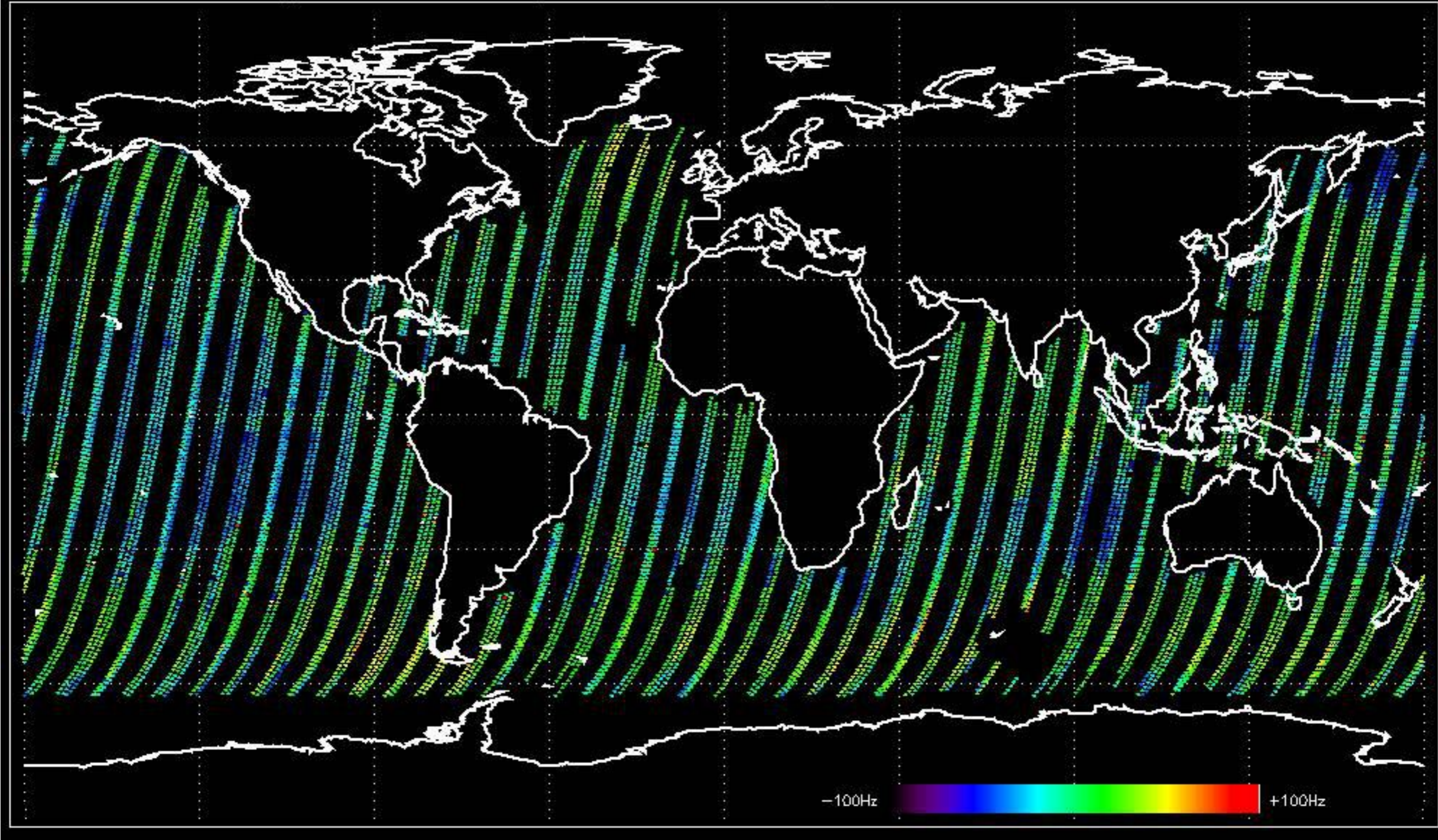
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.999501 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.801544 Hz

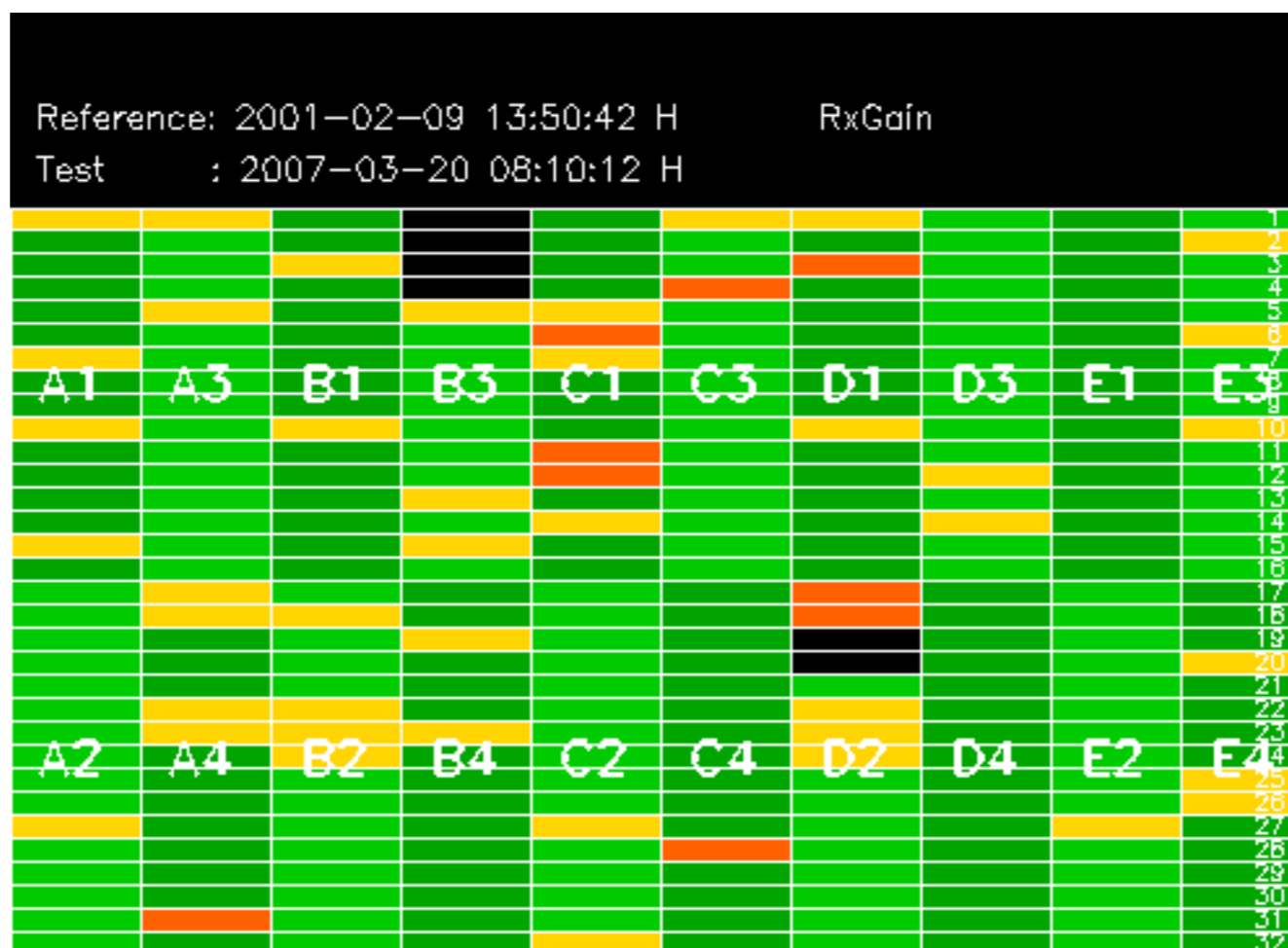


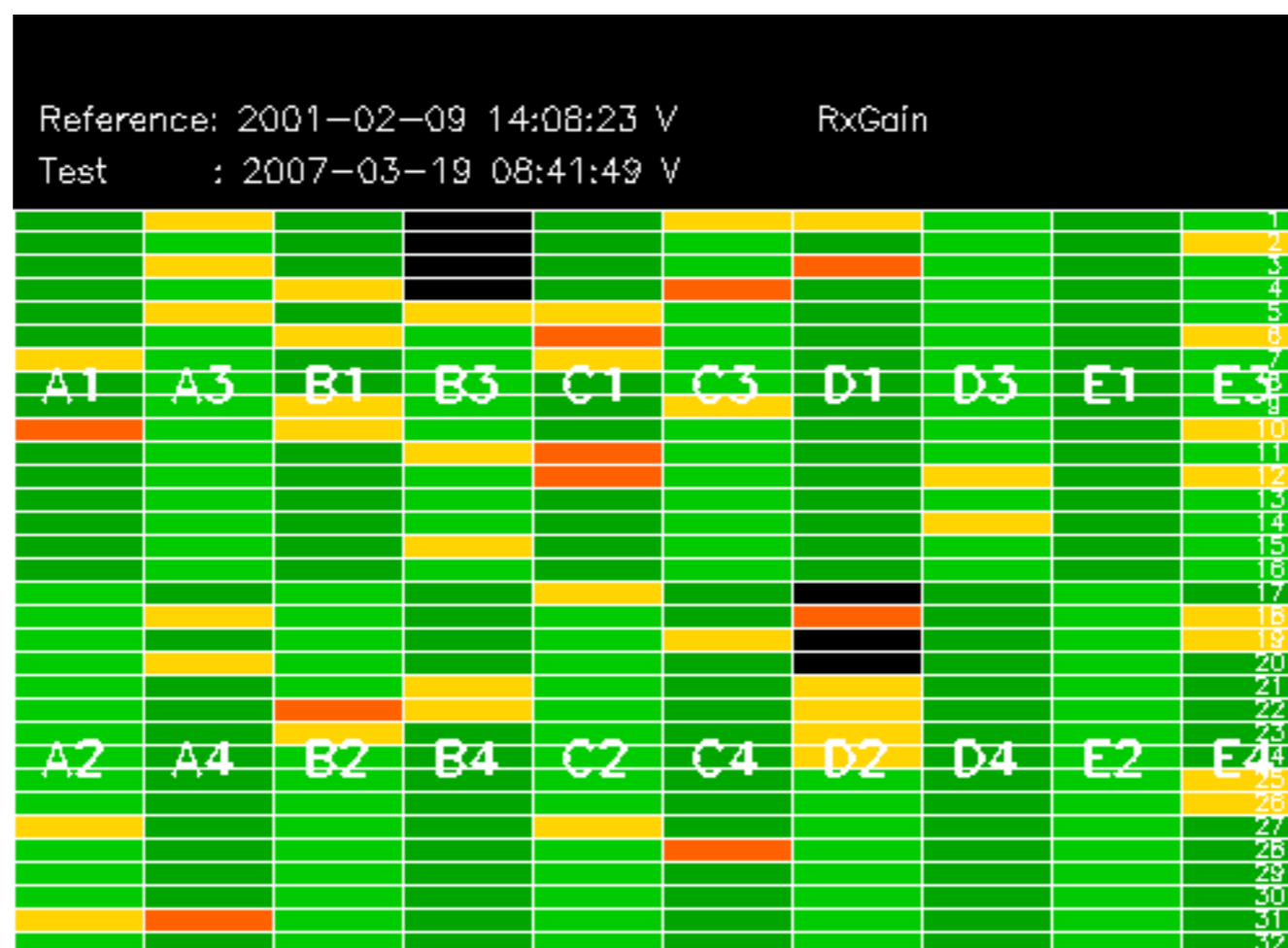
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.586575 Hz

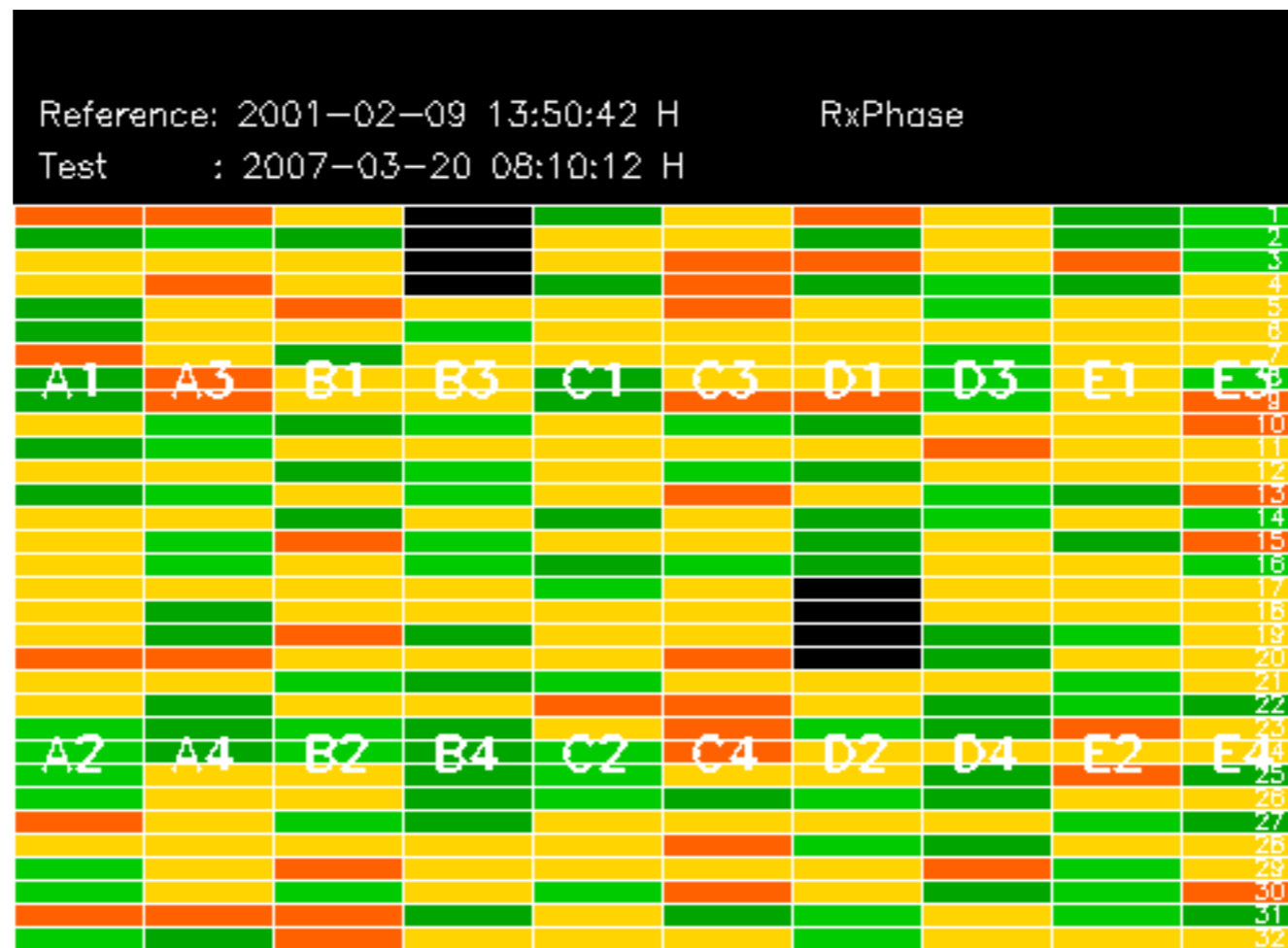


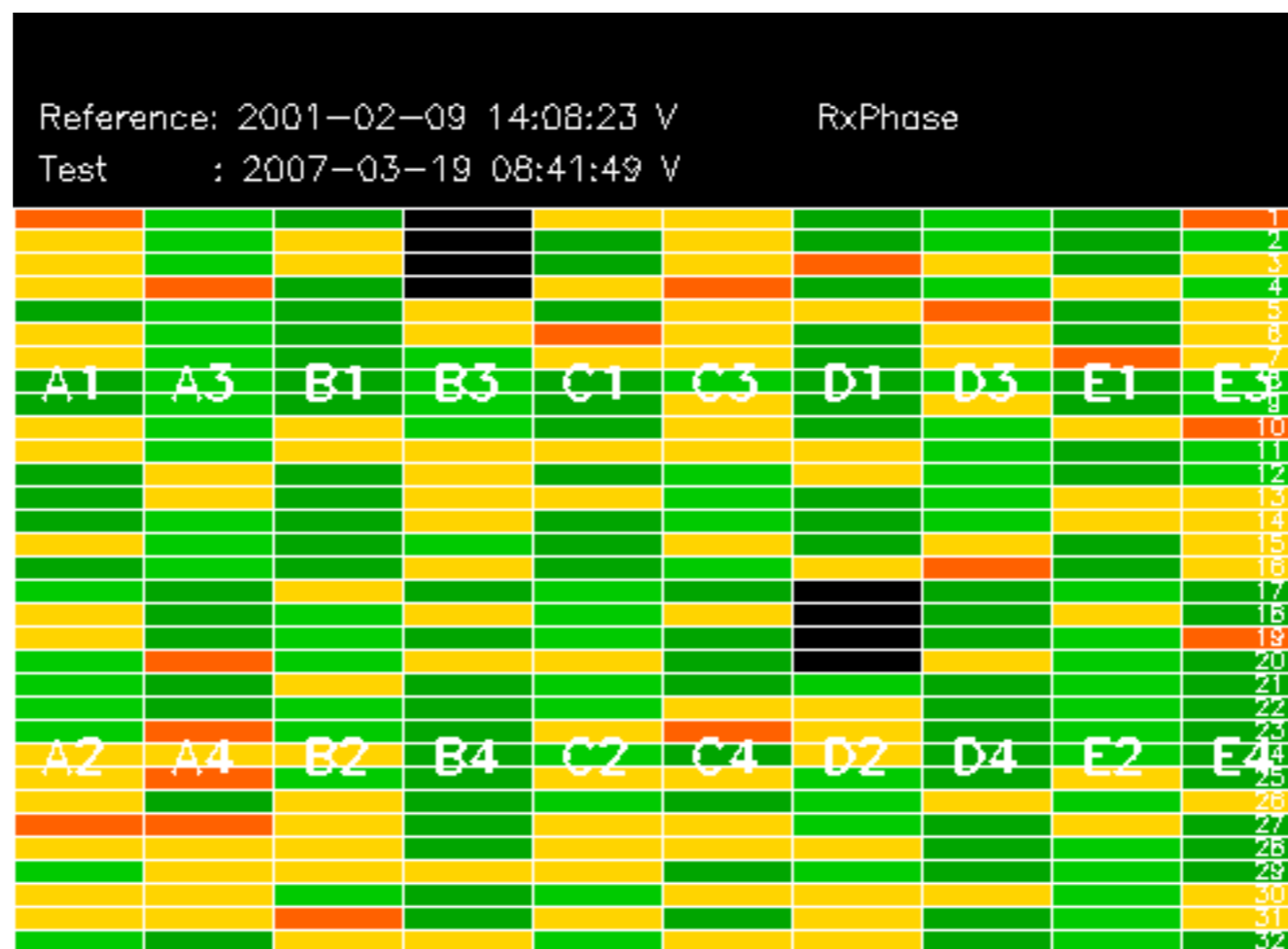
No anomalies observed on available MS products:

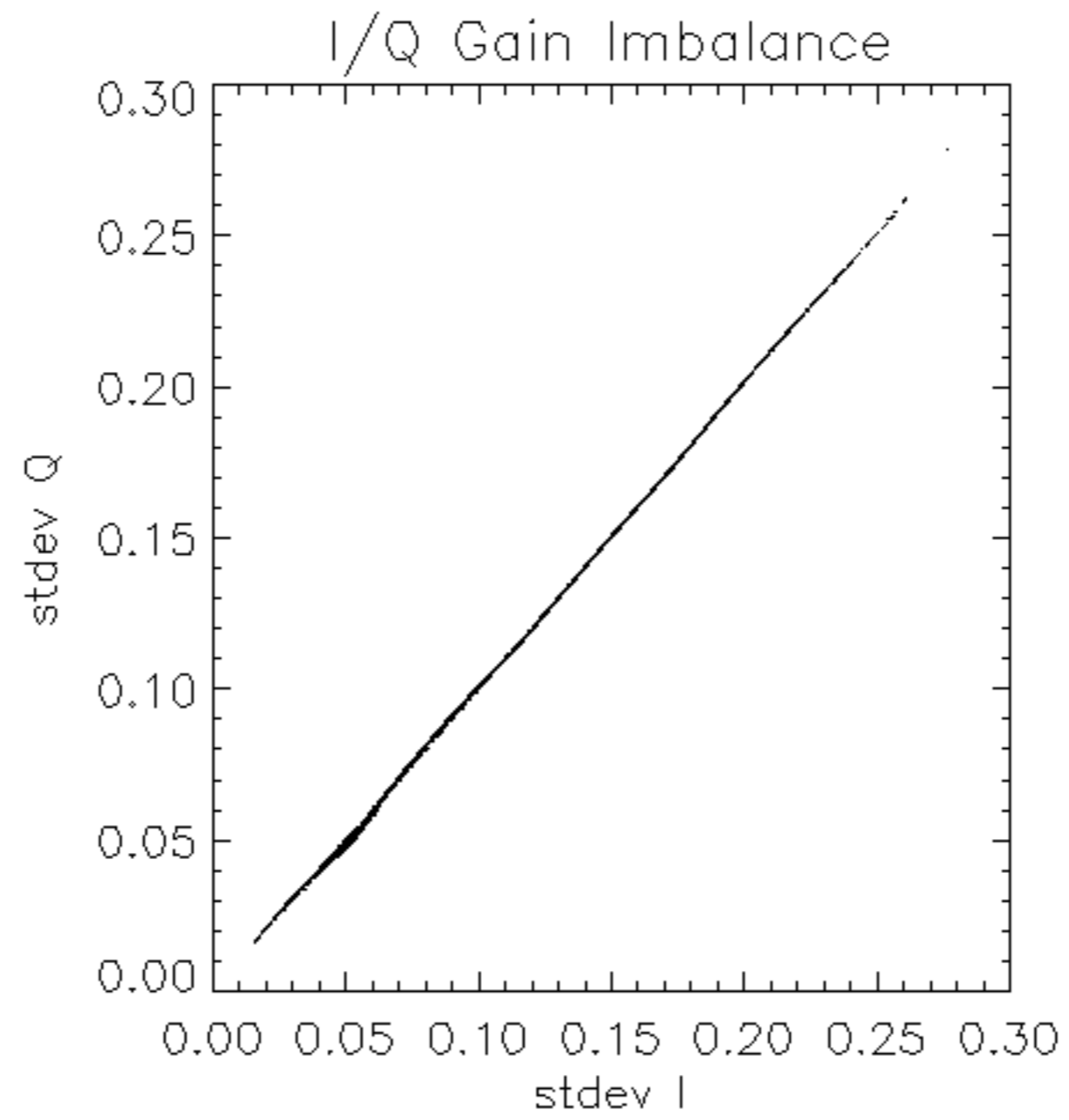
No anomalies observed.

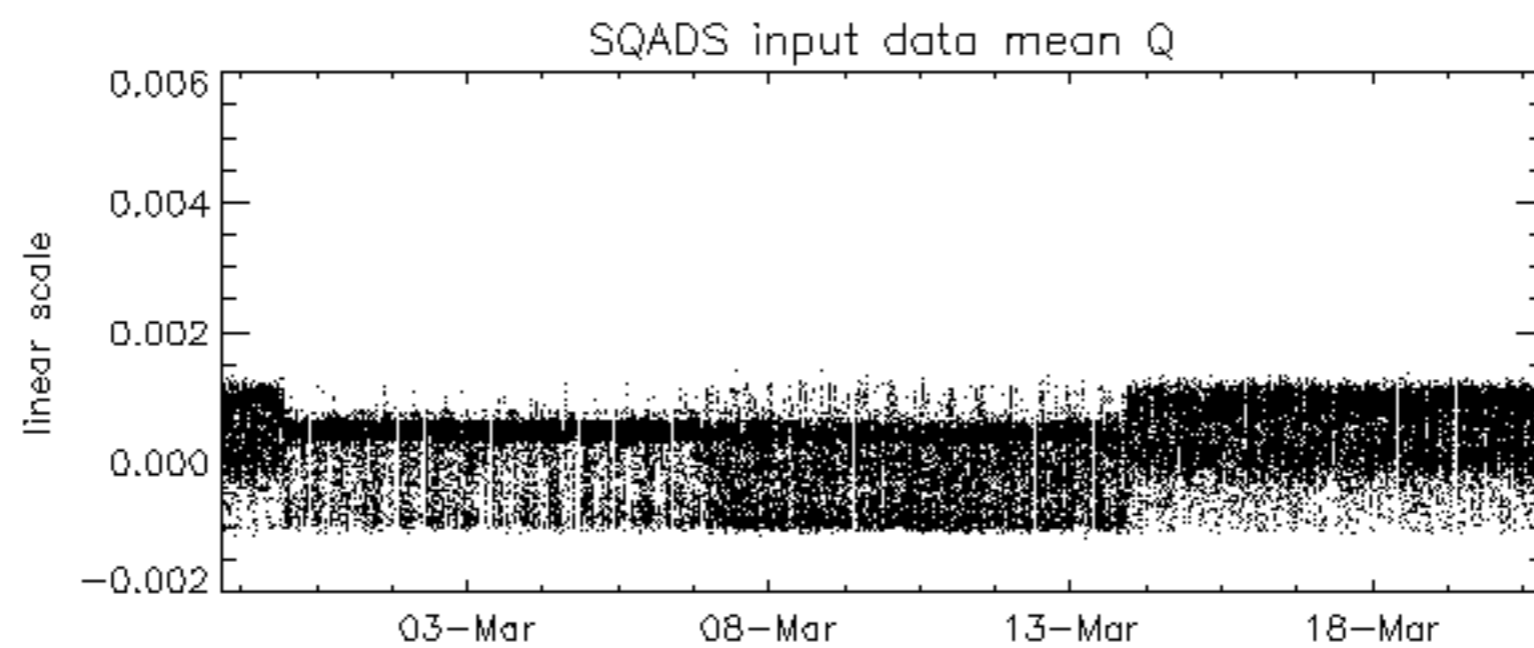
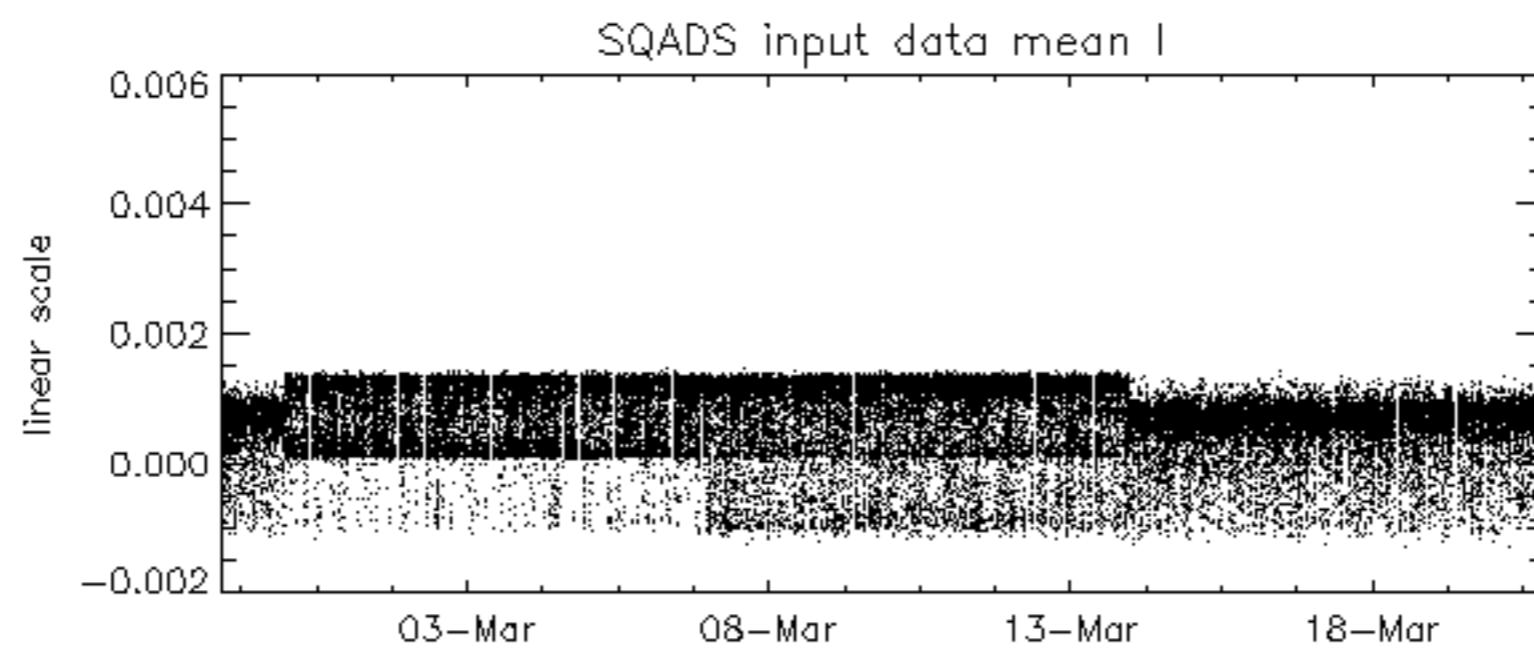
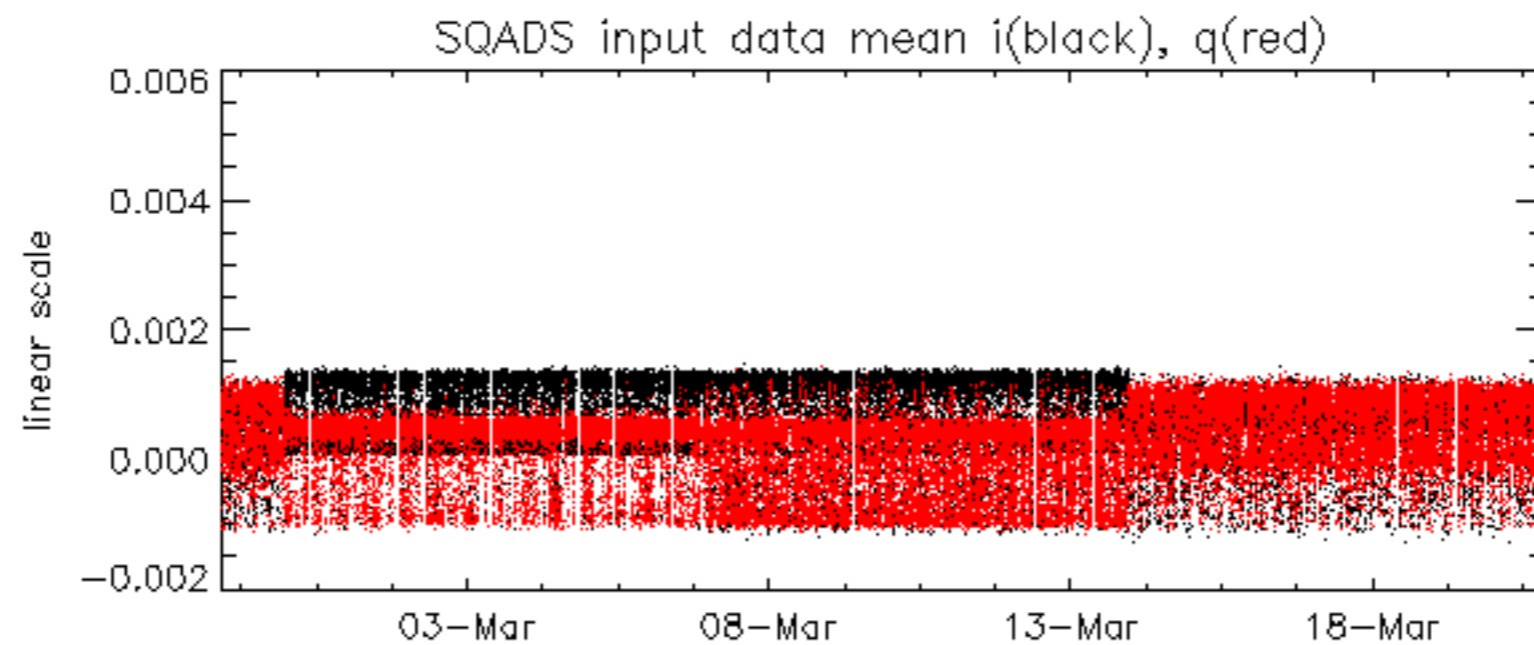


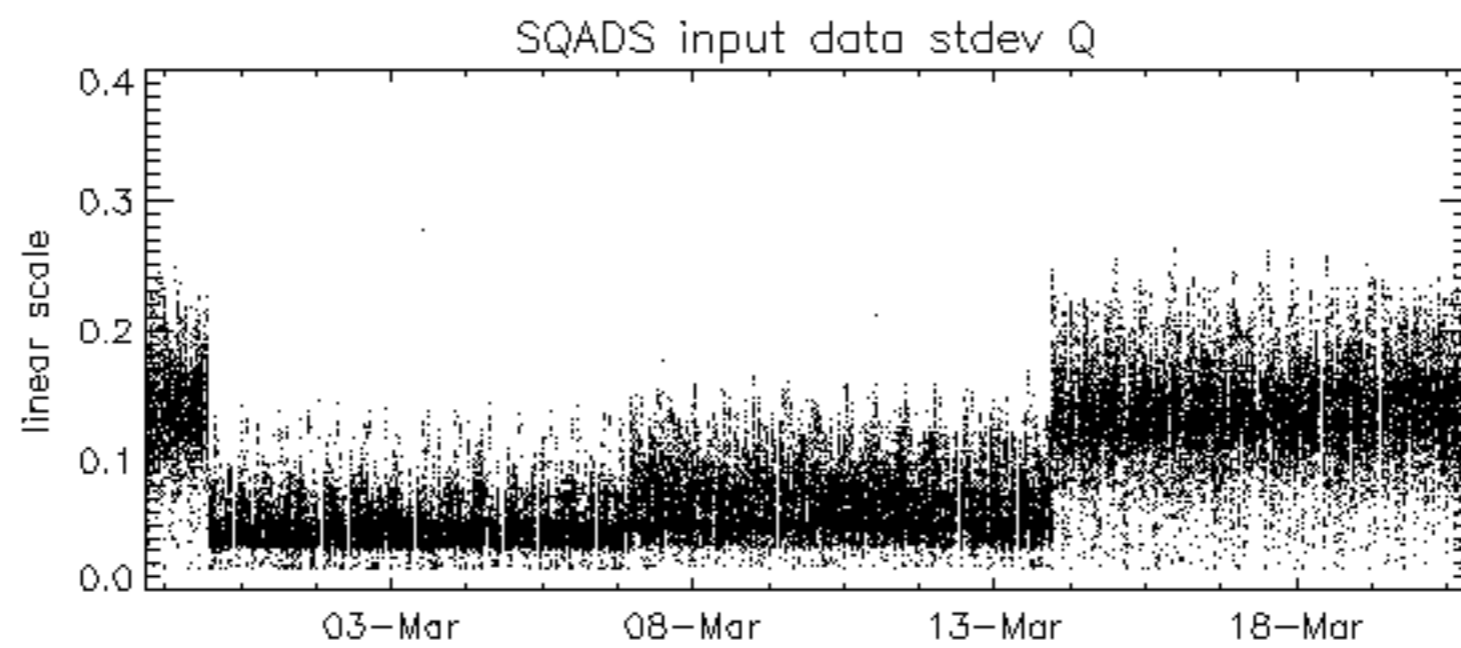
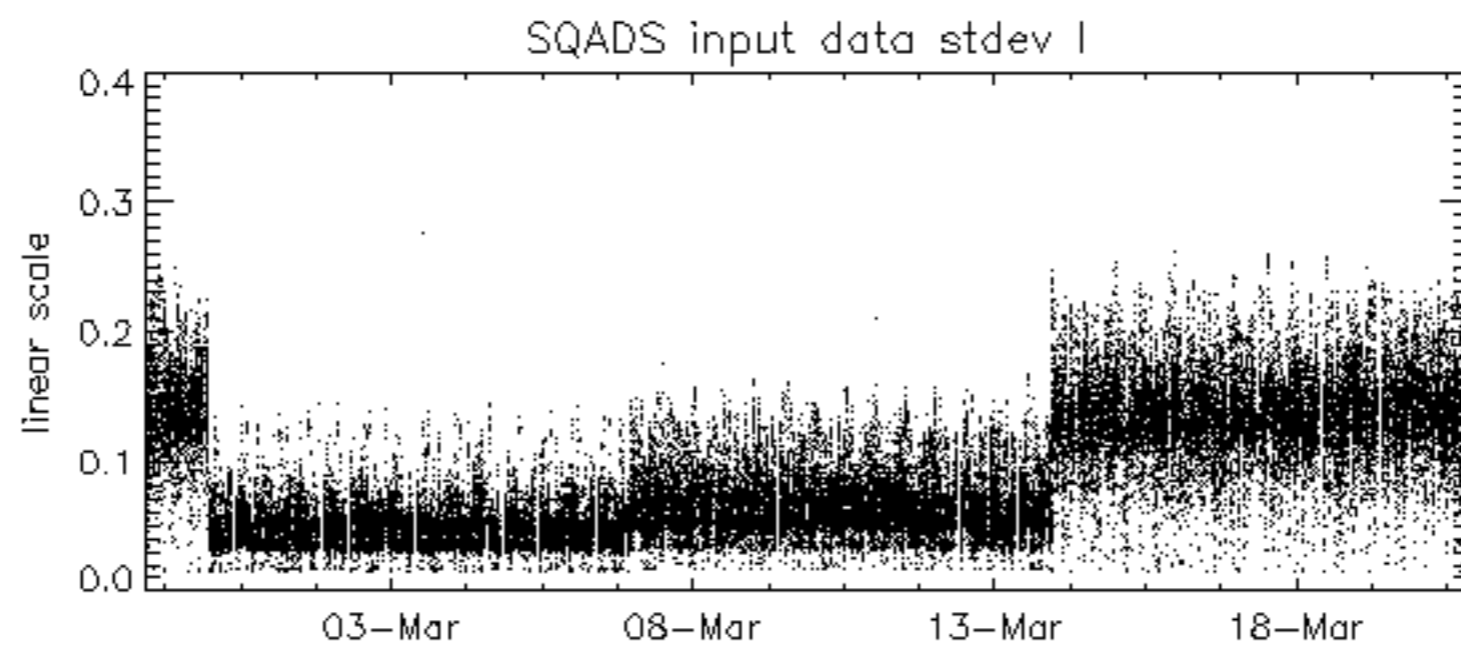
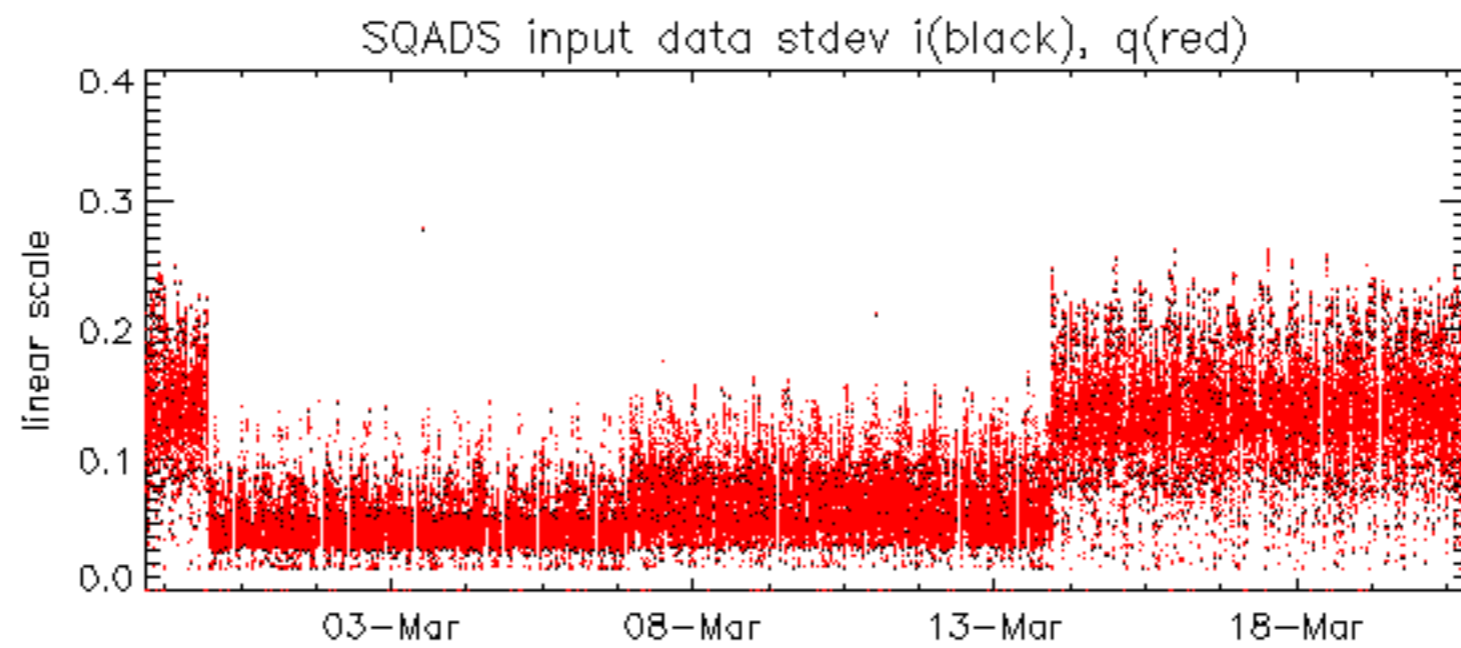










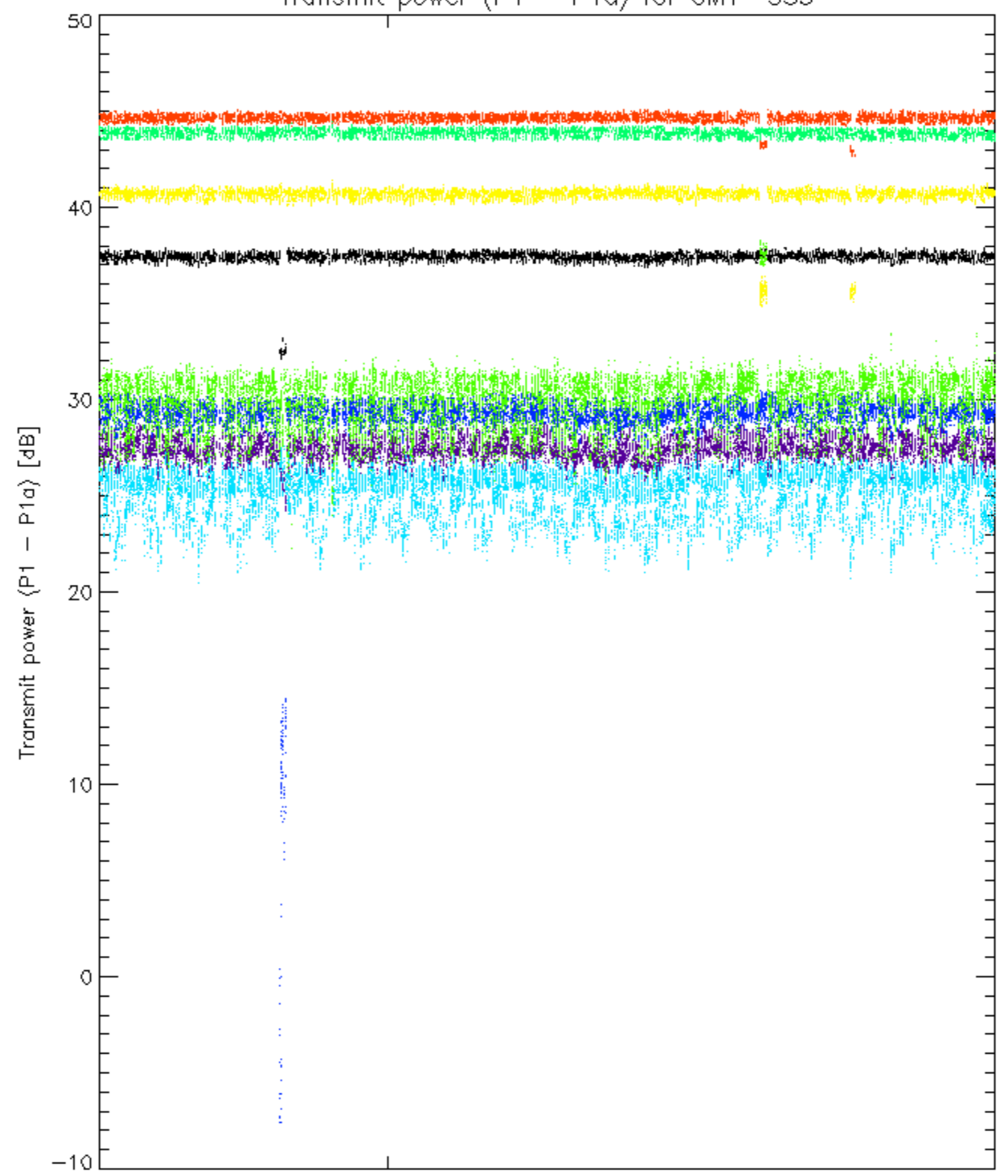


Summary of analysis for the last 3 days 2007031[890]

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

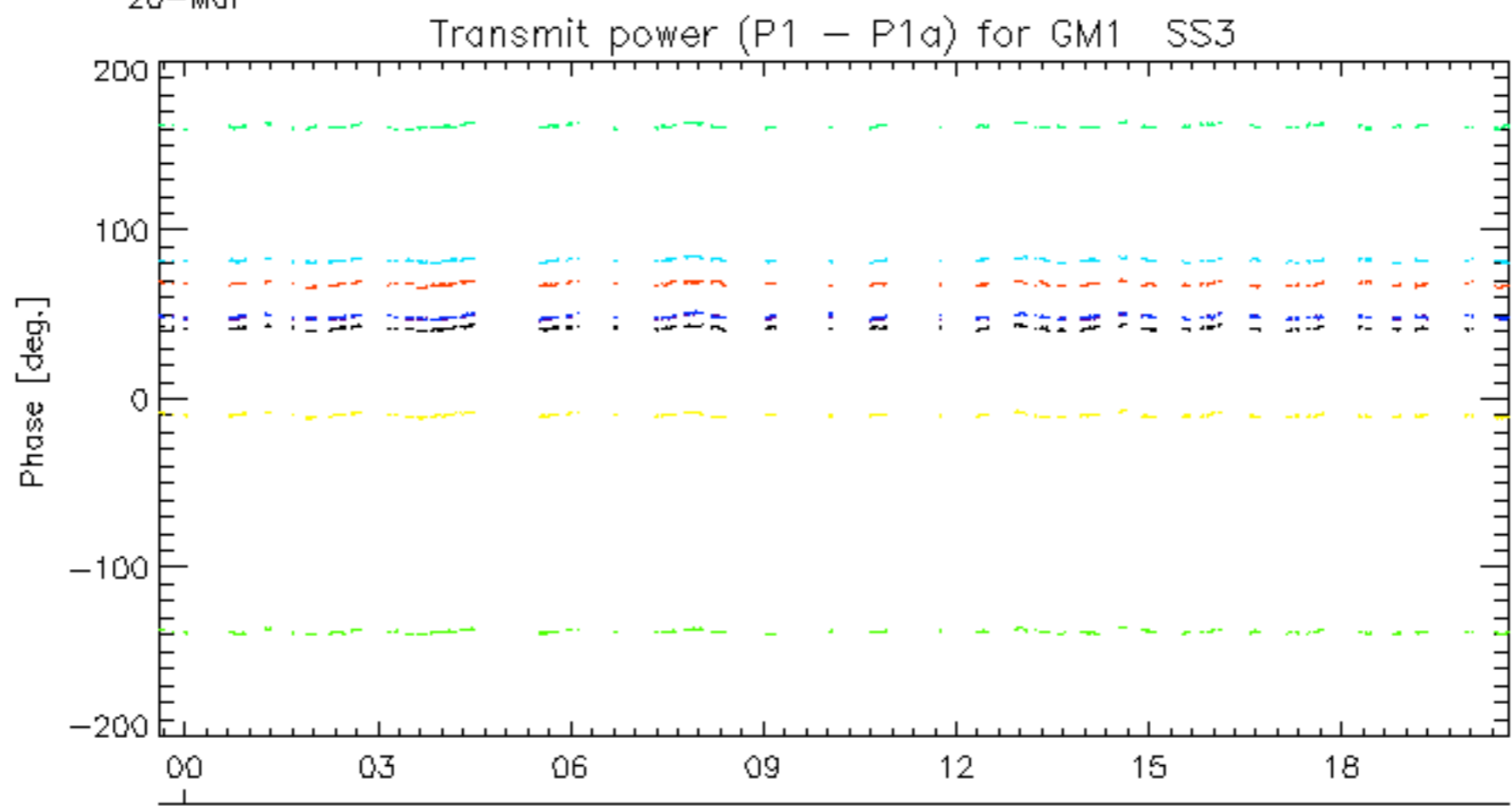
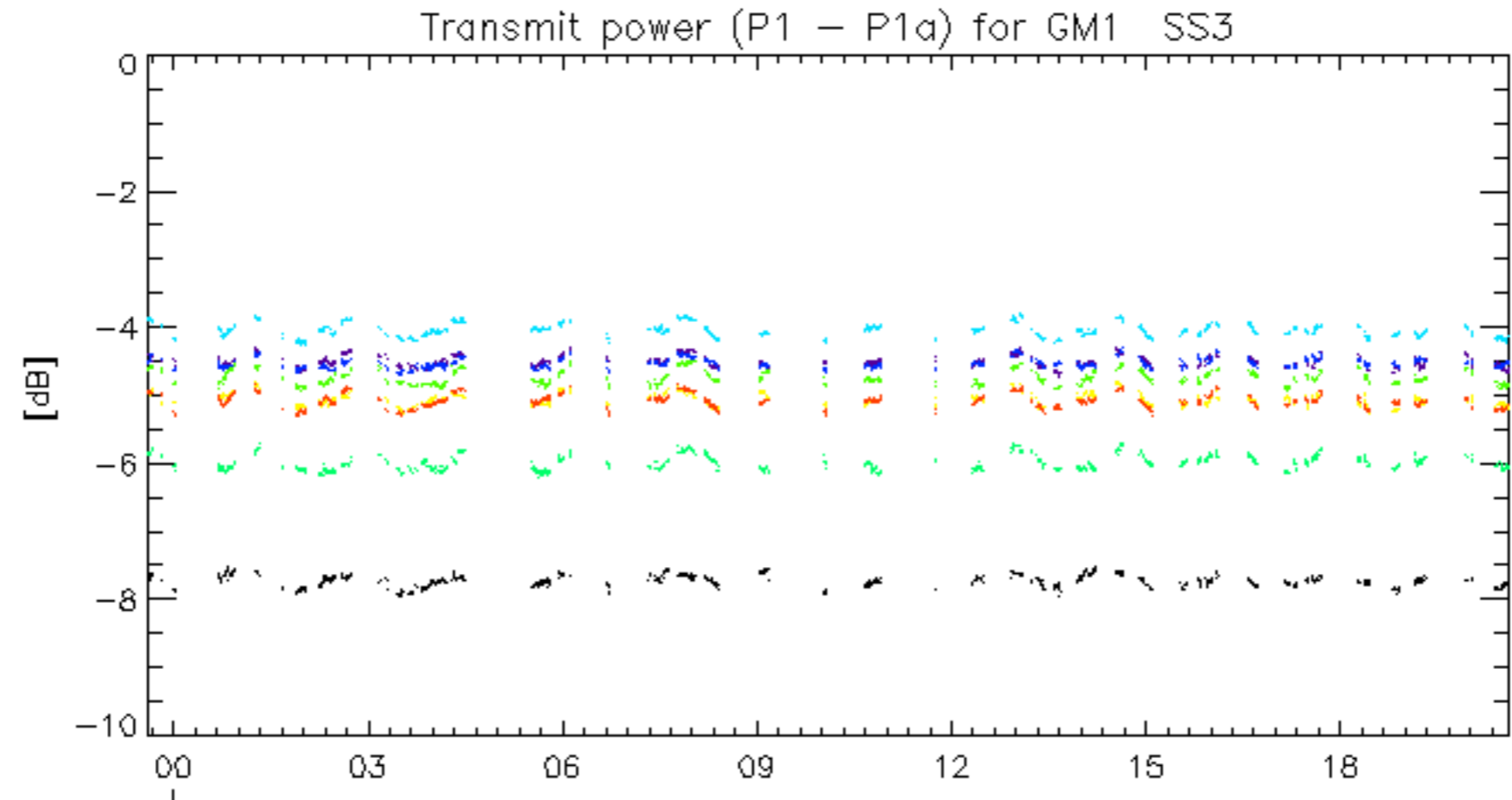
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070318_210136_000000982056_00286_26392_7093.N1	1	42
ASA_IMM_1PNPDE20070318_210638_000003002056_00286_26392_7140.N1	2	81
ASA_IMM_1PNPDE20070319_132450_000000502056_00296_26402_8122.N1	6	89
ASA_IMM_1PNPDE20070319_153347_000001132056_00297_26403_8144.N1	15	2759
ASA_IMM_1PNPDE20070319_171525_000002082056_00298_26404_8200.N1	15	6315
ASA_IMM_1PNPDE20070319_171858_000000062056_00298_26404_8182.N1	10	199
ASA_IMM_1PNPDE20070319_174754_000001772056_00299_26405_8212.N1	4	28
ASA_IMM_1PNPDE20070319_235158_000003012056_00302_26408_9394.N1	15	3403
ASA_IMM_1PNPDE20070319_235800_000000952056_00302_26408_9395.N1	15	670
ASA_WVS_1PNPDK20070318_191755_000000002056_00285_26391_5999.N1	1	0
ASA_GM1_1PNPDK20070318_150057_000001202056_00283_26389_5642.N1	0	8
ASA_GM1_1PNPDK20070318_191841_000000722056_00285_26391_6049.N1	0	13
ASA_GM1_1PNPDK20070319_112407_000001502056_00295_26401_6492.N1	0	22
ASA_GM1_1PNPDK20070319_112634_000000842056_00295_26401_6497.N1	0	55
ASA_WSM_1PNPDE20070310_172247_000001772056_00170_26276_8196.N1	0	2
ASA_WSM_1PNPDE20070318_145119_000000852056_00283_26389_6914.N1	0	36
ASA_WSM_1PNPDE20070319_031314_000000852056_00290_26396_7687.N1	24	2180
ASA_WSM_1PNPDE20070319_142046_000000852056_00297_26403_8158.N1	0	16
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_8162.N1	17	704
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_8176.N1	17	704
ASA_WSM_1PNPDE20070319_161419_000000362056_00298_26404_9562.N1	17	704
ASA_WSM_1PNPDK20070310_140332_000000862056_00168_26274_2612.N1	0	15
ASA_WSM_1PNPDK20070319_075204_000001592056_00293_26399_6245.N1	0	1
ASA_WSM_1PNPDK20070319_122504_000001292056_00295_26401_6620.N1	0	1
ASA_WSM_1PNPDK20070319_122504_000002632056_00295_26401_6729.N1	0	1
ASA_WSM_1PNPDK20070319_144155_000003242056_00297_26403_6748.N1	0	14

Transmit power (P1 - P1a) for GM1 SS3



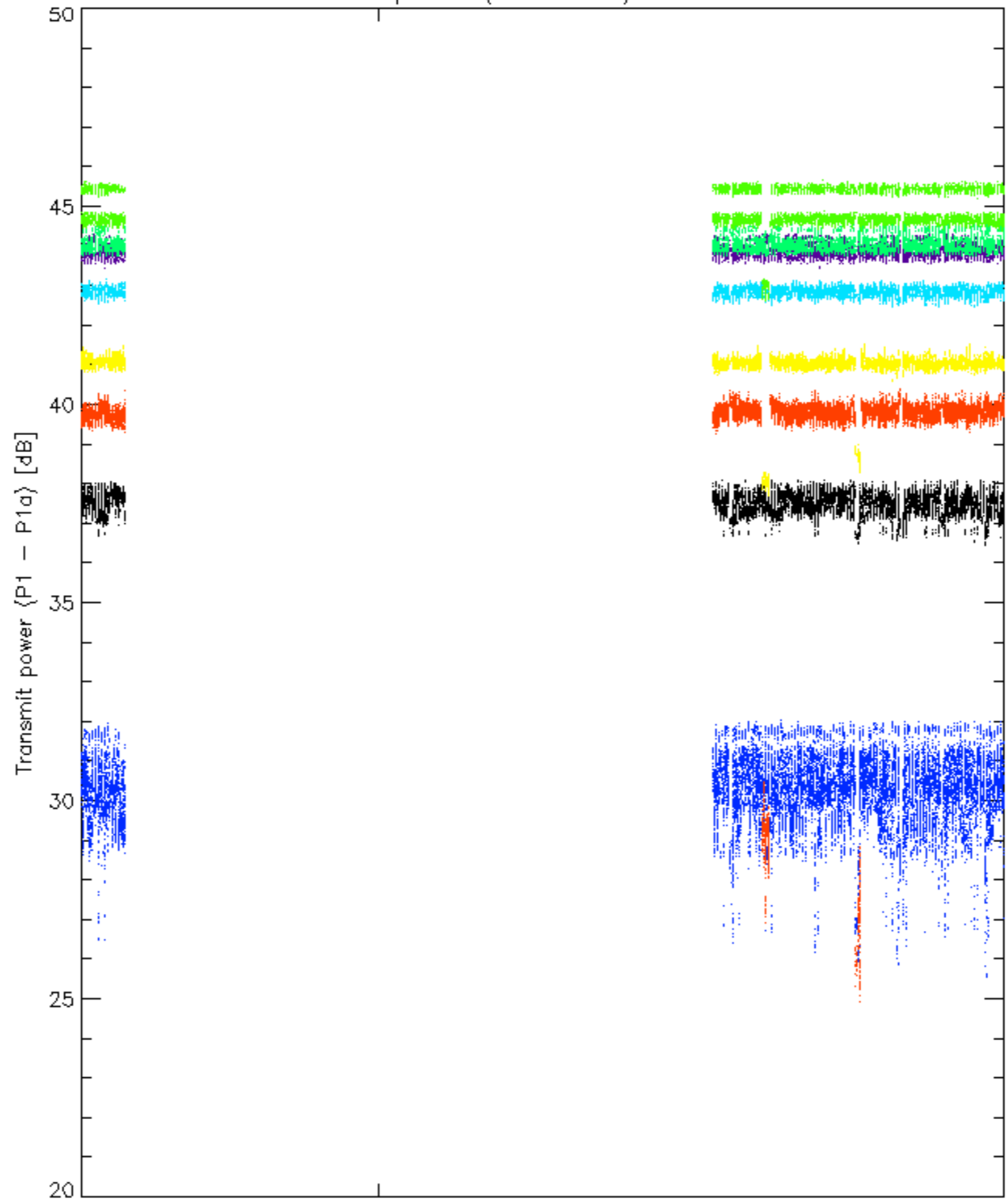
26

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

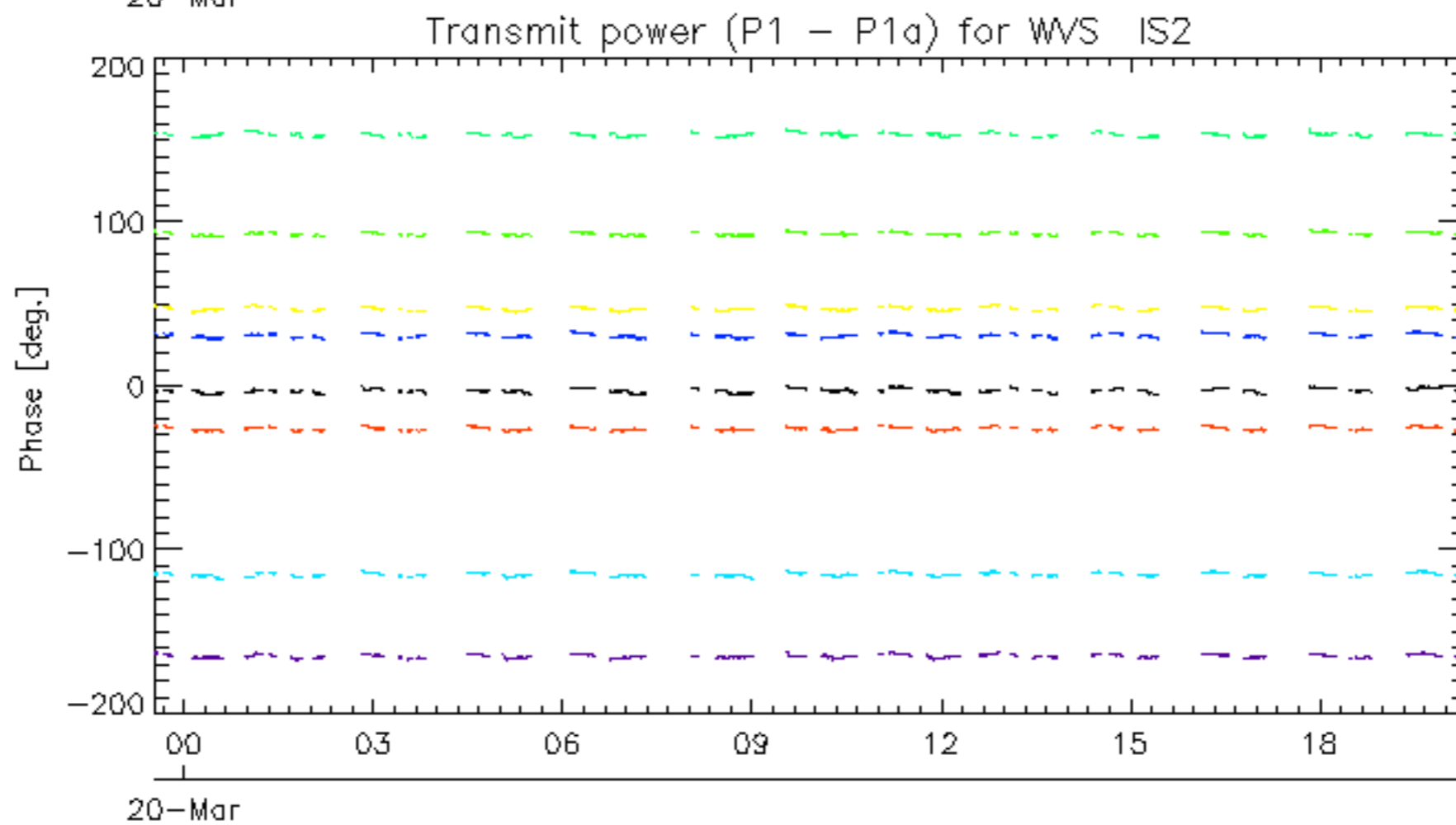
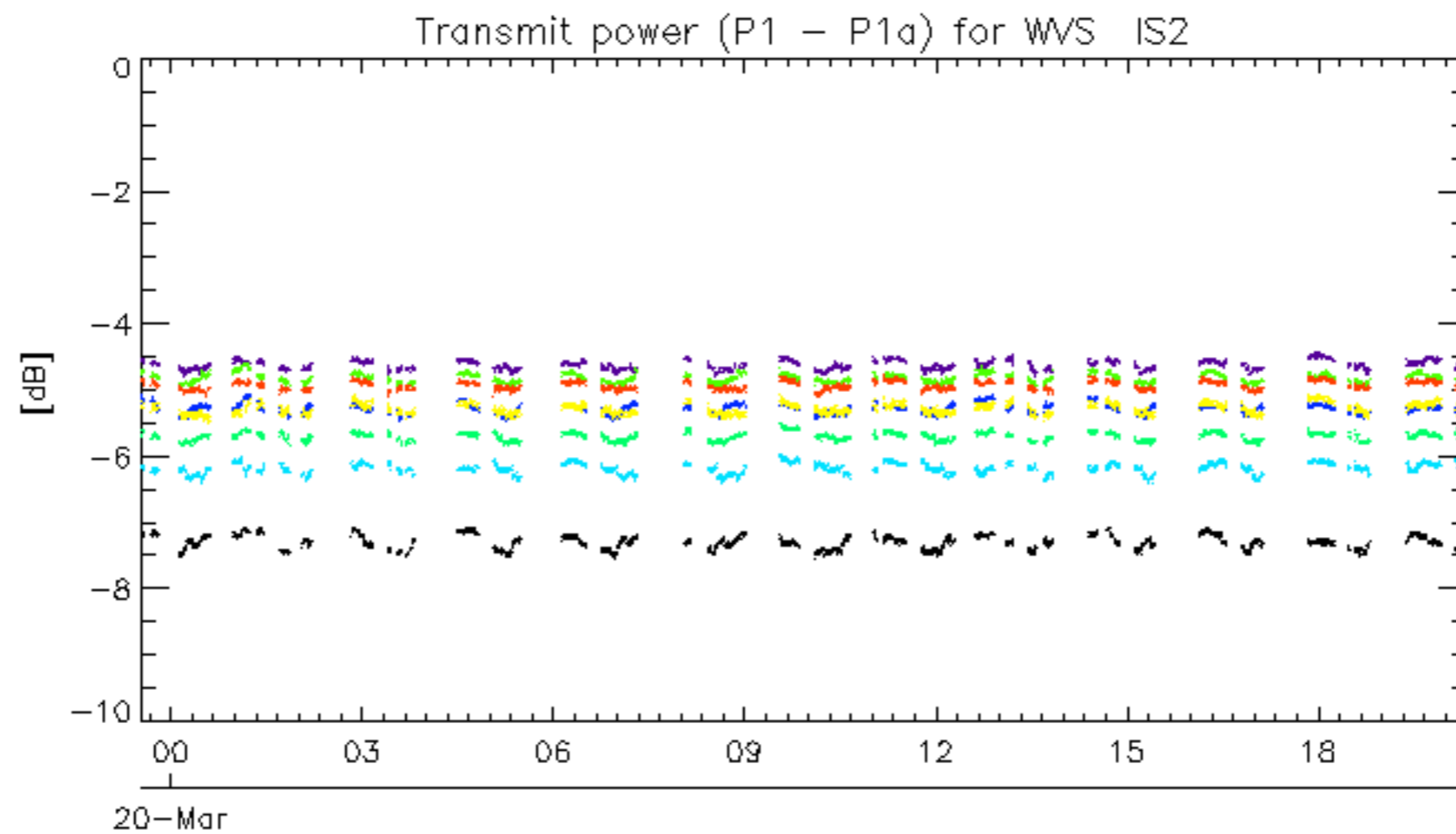


rows: 3 7 11 15 19 22 26 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.