

PRELIMINARY REPORT OF 070322

last update on Thu Mar 22 17:53:38 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 2007-03-21 00:00:00 to 2007-03-22 17:53:38

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	43	75	12	3	29
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	43	75	12	3	29
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	43	75	12	3	29
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	75	12	3	29

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20070222_190441_20070204_165113_20071231_000000	34	47	32	15	55
ASA_INS_AXVIEC20070306_164819_20070307_060000_20071231_000000	47	62	38	17	65
ASA_XCA_AXVIEC20070222_185842_20070204_165113_20071231_000000	47	62	38	17	65
ASA_CON_AXVIEC20070320_170948_20070321_003000_20070321_050000	13	15	6	2	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	47	62	38	17	65

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	20070321 073835
H	20070322 070658

MSM in V/V polarisation

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

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	-15.115714	0.123021	0.015608
7	P1a	-17.478285	0.102800	-0.124444
11	P1a	-17.252970	0.339699	0.128389
15	P1a	-12.894904	0.084589	-0.026498
19	P1a	-15.158633	0.076454	-0.031578
22	P1a	-15.457121	0.640615	-0.304529
26	P1a	-15.061442	0.592275	-0.115817
30	P1a	-17.376587	0.330654	-0.126995

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.743588	0.010071	-0.025486
7	P1	-3.135306	0.008156	-0.007207
11	P1	-4.165960	0.015176	-0.037343
15	P1	-6.377541	0.016080	0.018120
19	P1	-3.774894	0.007793	-0.030180
22	P1	-4.666605	0.066660	-0.059547
26	P1	-3.918440	0.053807	0.013641
30	P1	-5.901573	0.103605	-0.041386

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.645926	0.092042	0.071423
7	P2	-21.606909	0.081878	0.037509
11	P2	-15.521388	0.098789	0.074095
15	P2	-7.079053	0.092900	-0.045368

19	P2	-9.107589	0.082515	-0.005876
22	P2	-18.097672	0.075293	0.036748
26	P2	-16.556938	0.085666	-0.057564
30	P2	-19.330084	0.078723	0.083812

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235298	0.006358	0.007268
7	P3	-8.235298	0.006358	0.007268
11	P3	-8.235298	0.006358	0.007268
15	P3	-8.235298	0.006358	0.007268
19	P3	-8.235298	0.006358	0.007268
22	P3	-8.235298	0.006358	0.007268
26	P3	-8.235275	0.006358	0.007347
30	P3	-8.235275	0.006358	0.007347

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	-11.089516	0.054135	-0.083789
7	P1a	-10.069700	0.150608	-0.003074
11	P1a	-10.679960	0.067172	-0.042569
15	P1a	-10.945525	0.143508	0.110830
19	P1a	-15.706667	0.071184	-0.150061
22	P1a	-20.867891	1.561317	0.197033
26	P1a	-15.242560	0.313052	0.001816
30	P1a	-18.360060	0.786991	0.227451

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P1	-8.408203	0.044600	-0.049620
7	P1	-2.425953	0.027110	-0.008300
11	P1	-2.922447	0.020626	0.010742
15	P1	-3.847773	0.041951	-0.010343
19	P1	-3.560460	0.011026	-0.041388
22	P1	-5.031400	0.034864	0.078268
26	P1	-5.946098	0.057972	0.010679
30	P1	-5.270941	0.031871	-0.007573

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.102062	0.035654	-0.017191
7	P2	-21.955542	0.058876	-0.035550
11	P2	-10.639816	0.031915	0.006268
15	P2	-4.828863	0.030014	-0.025288
19	P2	-6.811934	0.032006	-0.007159
22	P2	-8.078743	0.034087	-0.007837
26	P2	-24.289766	0.040481	0.044199
30	P2	-21.720320	0.042613	0.065854

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.060519	0.003737	-0.003904
7	P3	-8.060407	0.003727	-0.003923
11	P3	-8.060484	0.003725	-0.004218
15	P3	-8.060642	0.003738	-0.004279
19	P3	-8.060509	0.003740	-0.003022
22	P3	-8.060538	0.003734	-0.004292
26	P3	-8.060305	0.003713	-0.003553
30	P3	-8.060493	0.003735	-0.004707

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	0.000660734
	stdev	2.84979e-07
MEAN Q	mean	0.000306928
	stdev	2.80868e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0937810
	stdev	0.00230305
STDEV Q	mean	0.0936307
	stdev	0.00235943



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007032[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
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ASA_IMM_1PNPDE20070320_114001_000002562056_00309_26415_9412.N1	1	52
ASA_IMM_1PNPDK20070320_131732_000000812056_00310_26416_7792.N1	0	5
ASA_IMM_1PNPDK20070320_135505_000000602056_00311_26417_7788.N1	0	24
ASA_IMM_1PNPDK20070320_135505_000000792056_00311_26417_7798.N1	0	24
ASA_IMM_1PNPDK20070321_134012_000003212056_00325_26431_9071.N1	0	1
ASA_IMM_1PNPDK20070321_134114_000002592056_00325_26431_8917.N1	0	1
ASA_WSM_1PNPDE20070320_010734_000000852056_00303_26409_8706.N1	0	32
ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDE20070321_163800_000000972056_00327_26433_1254.N1	0	10
ASA_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDK20070320_123133_000003062056_00310_26416_7660.N1	0	17
ASA_WSM_1PNPDK20070320_135308_000000852056_00311_26417_7800.N1	0	21
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_WSM_1PNPDK20070321_214927_000002322056_00330_26436_9457.N1	0	3
ASA_APM_1PNPDE20070320_021347_000000402056_00304_26410_8728.N1	14	0
ASA_APM_1PNPDK20070320_084923_000000402056_00308_26414_7265.N1	15	257

⊗

⊗

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

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
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"/>
Ascending
<input type="checkbox"/>
Descending

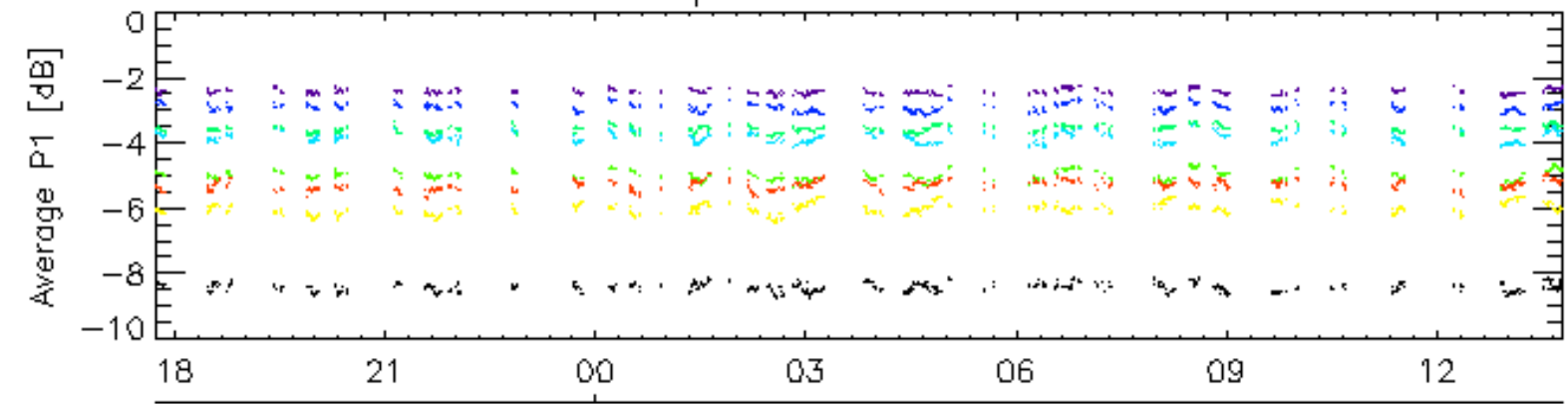
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

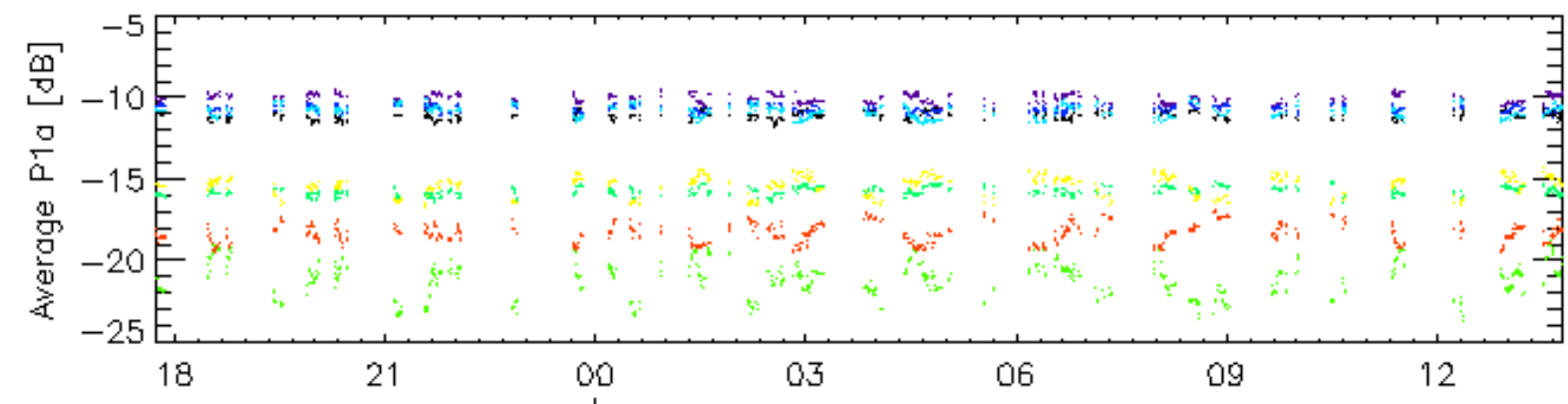
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

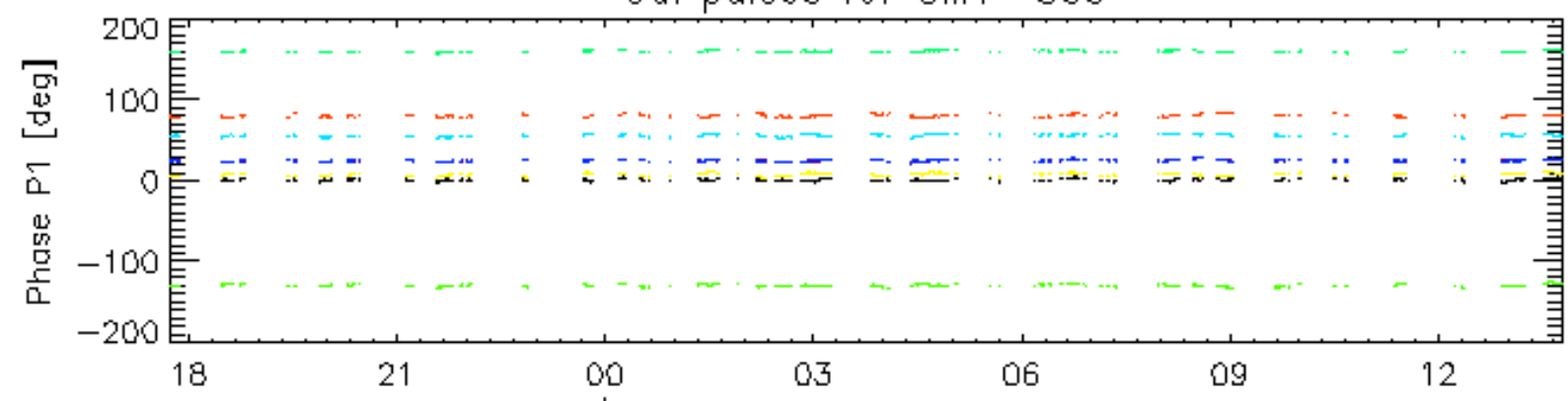


22-Mar

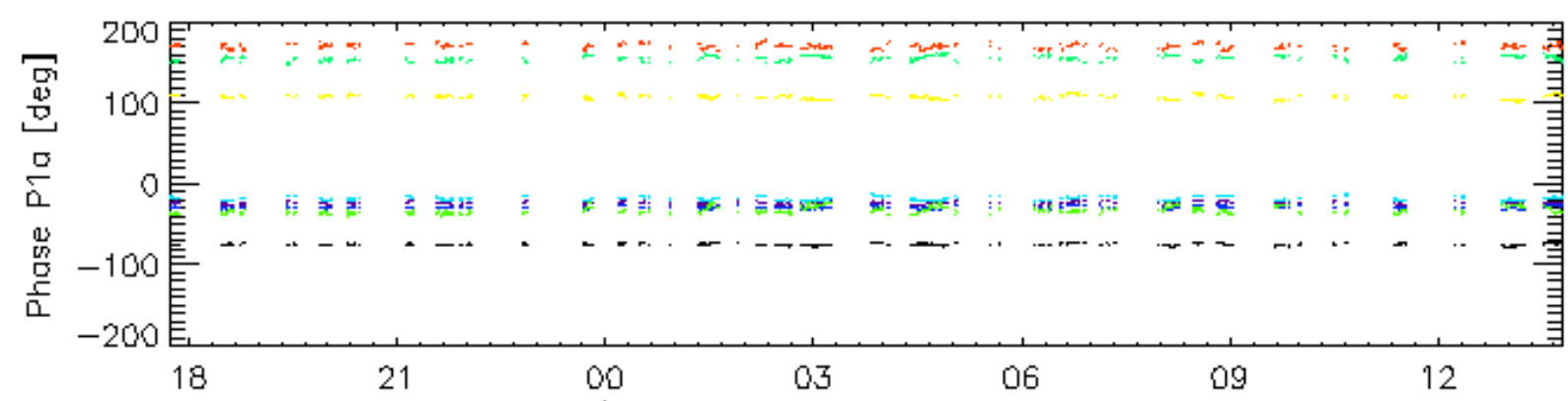


22-Mar

Cal pulses for GM1 SS3

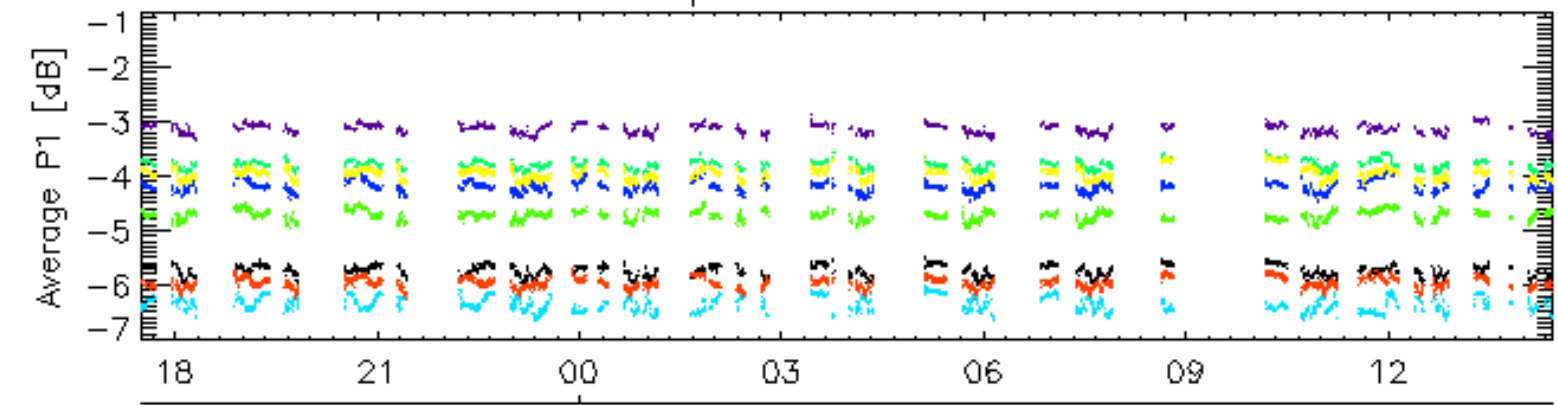


22-Mar

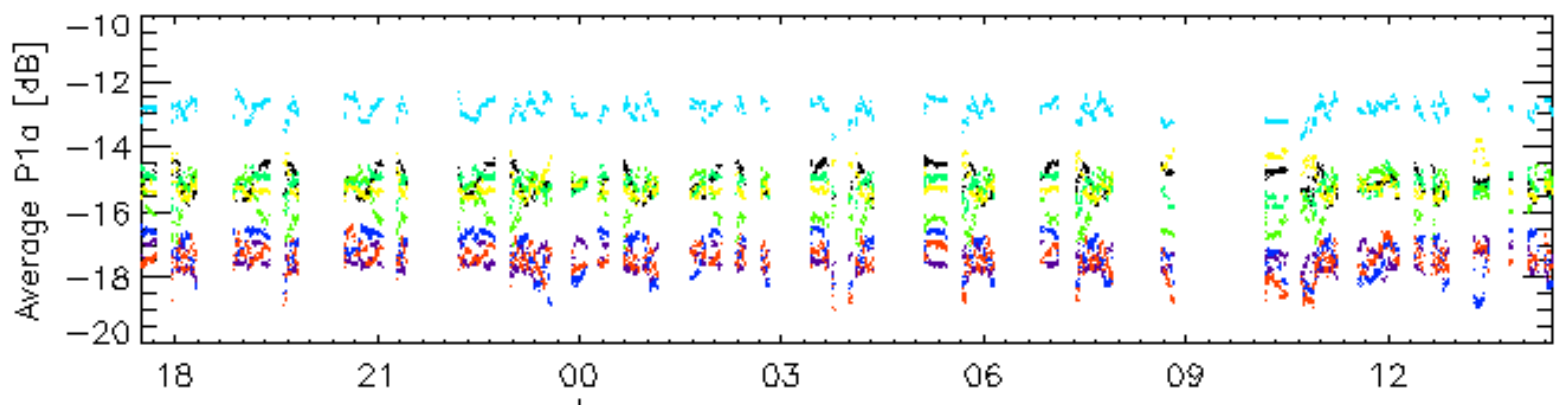


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

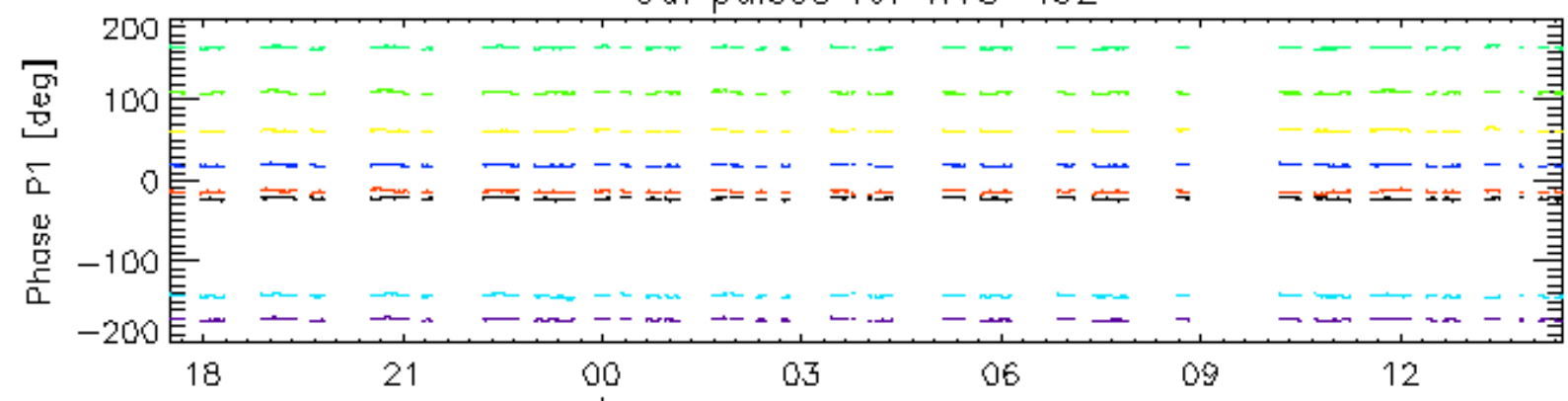


22-Mar

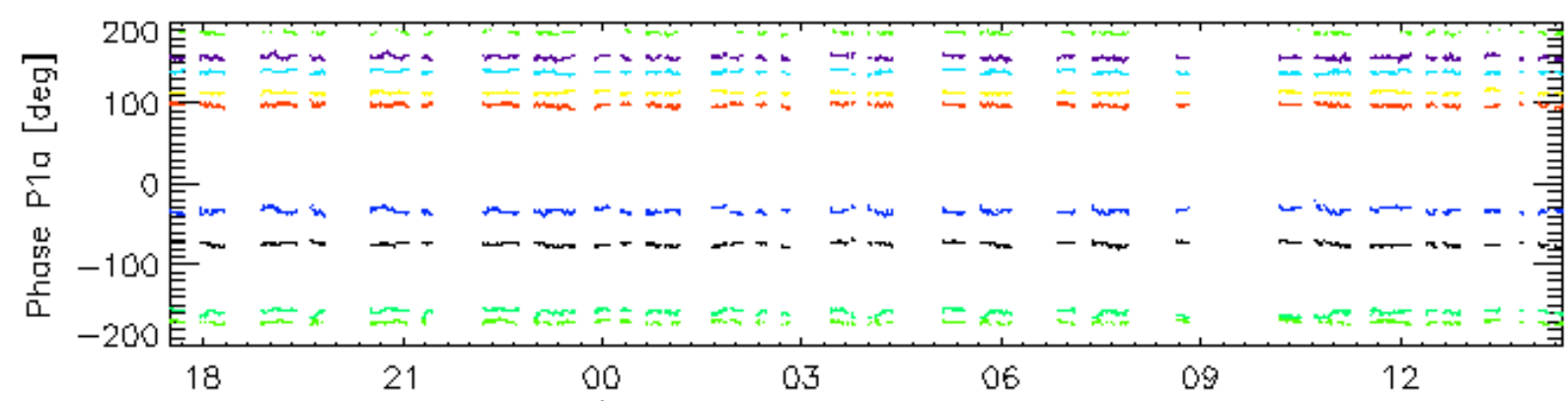


22-Mar

Cal pulses for WVS IS2

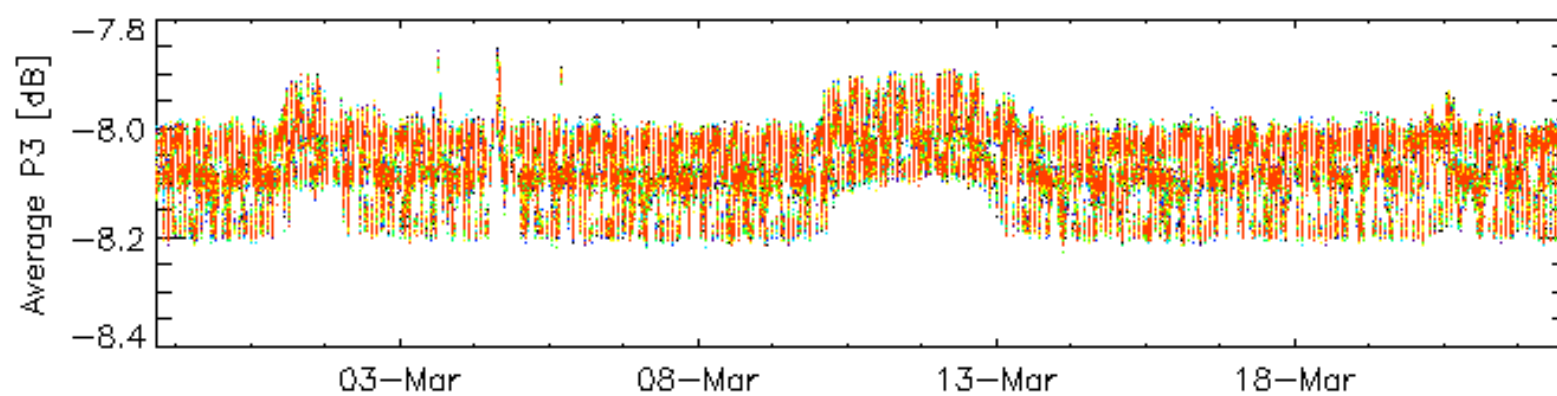
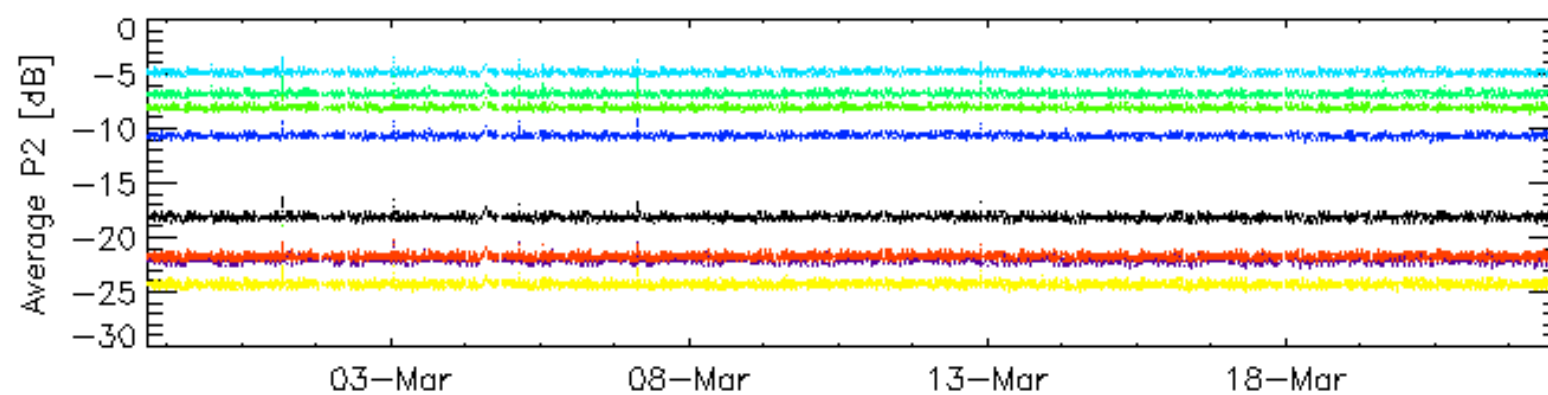
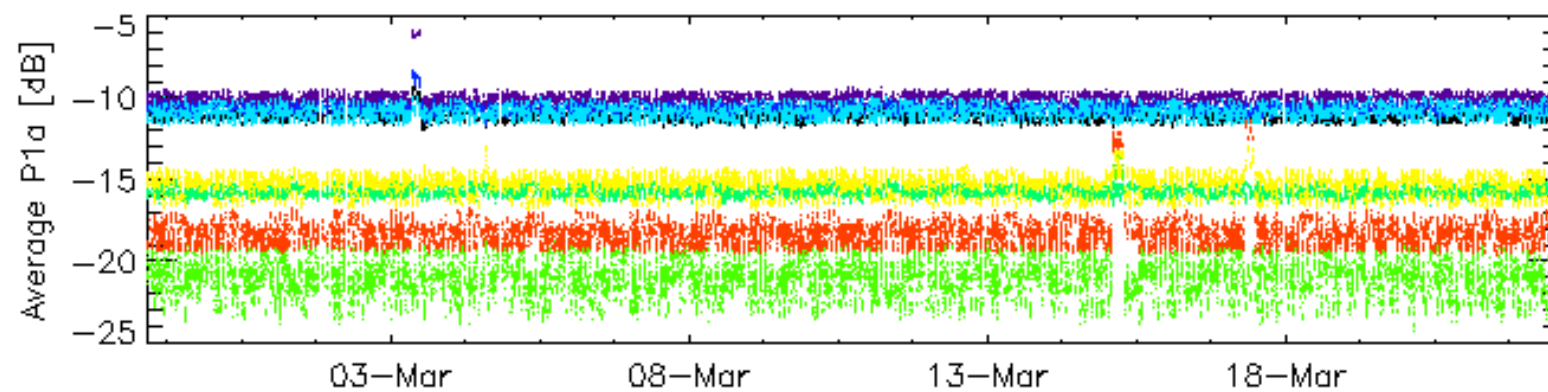
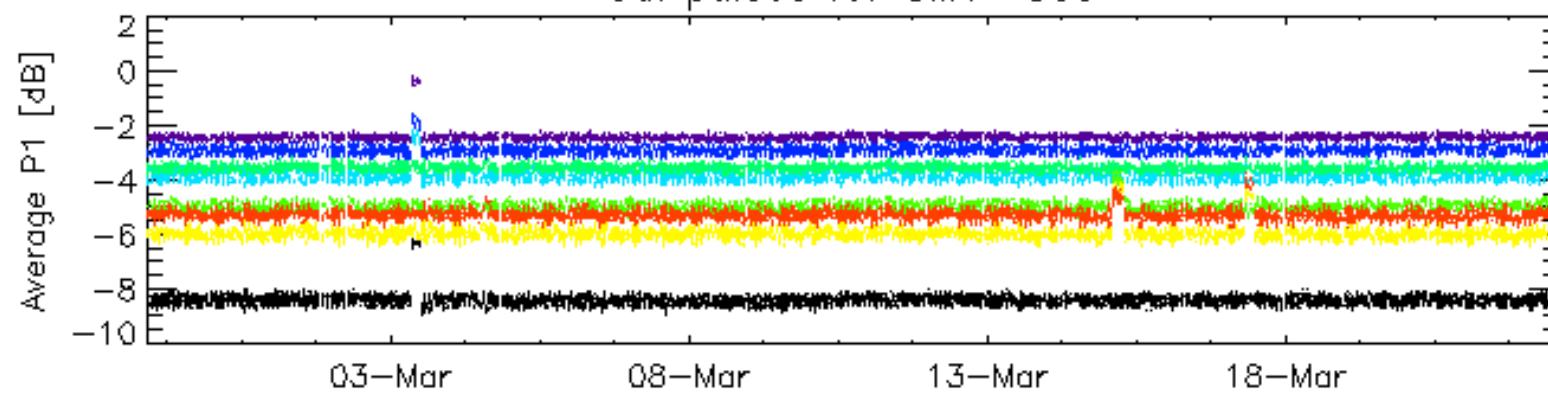


22-Mar



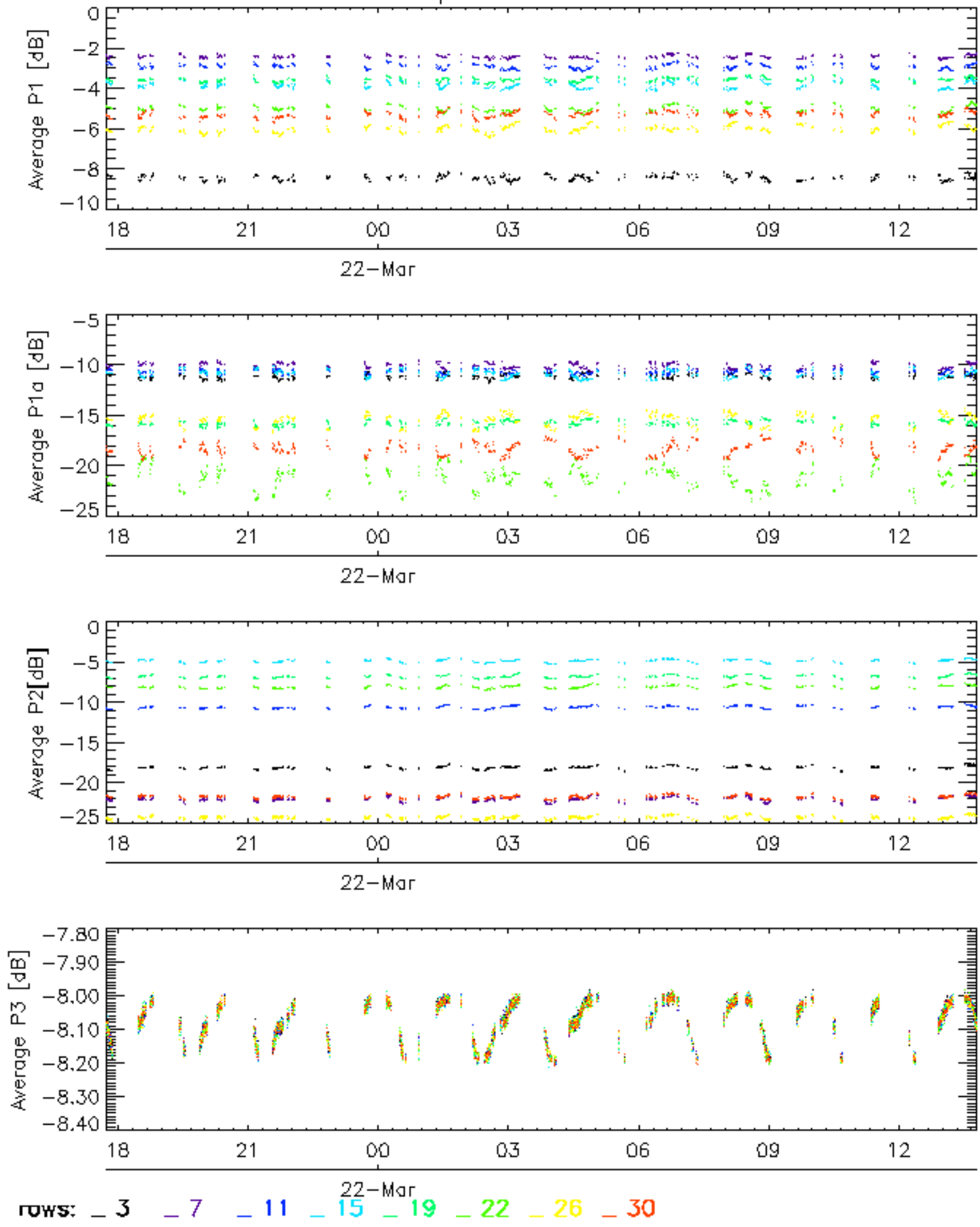
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

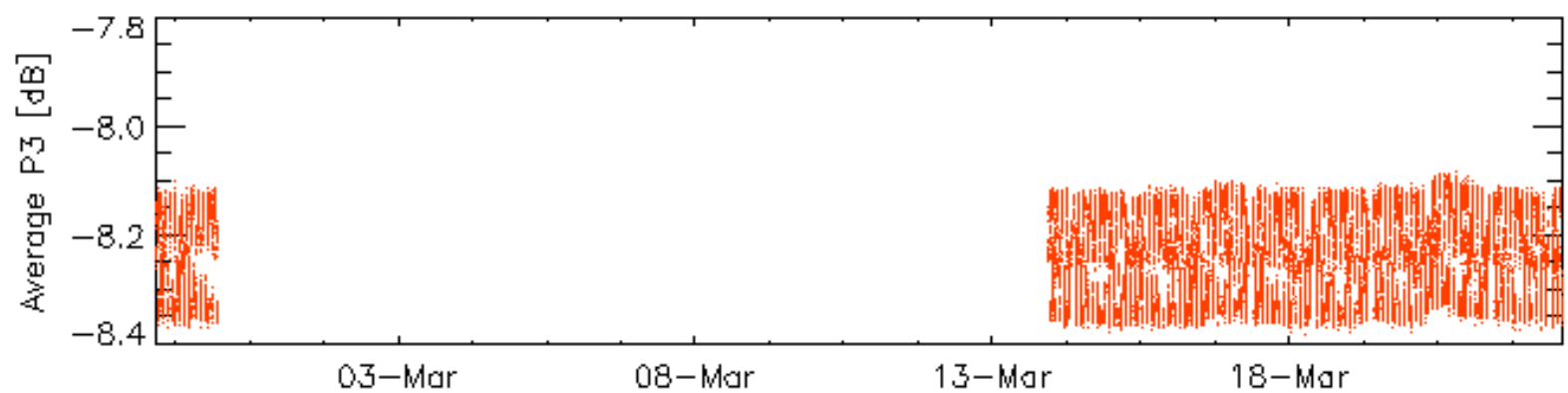
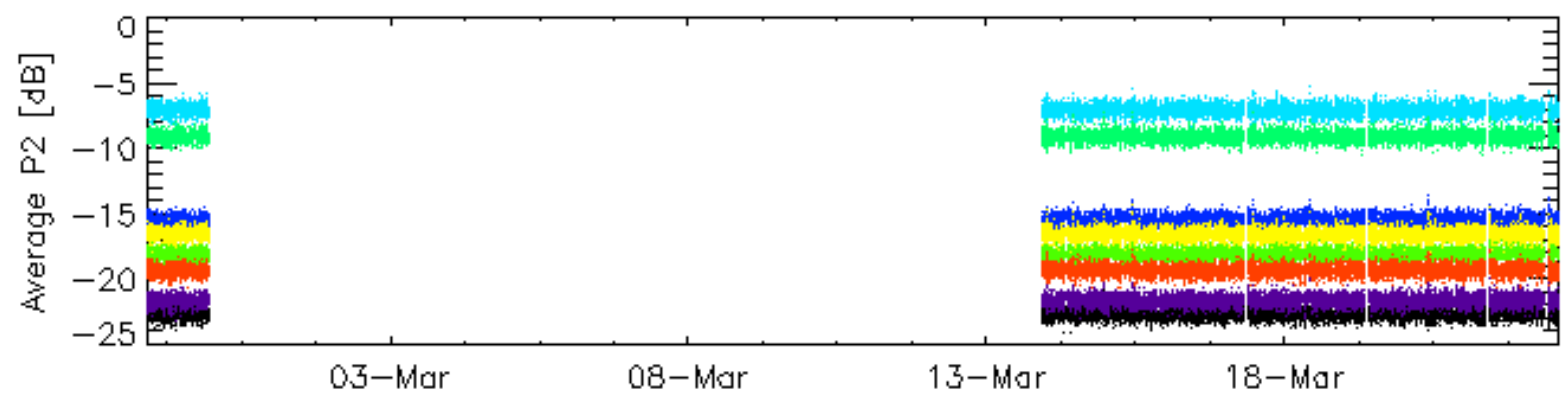
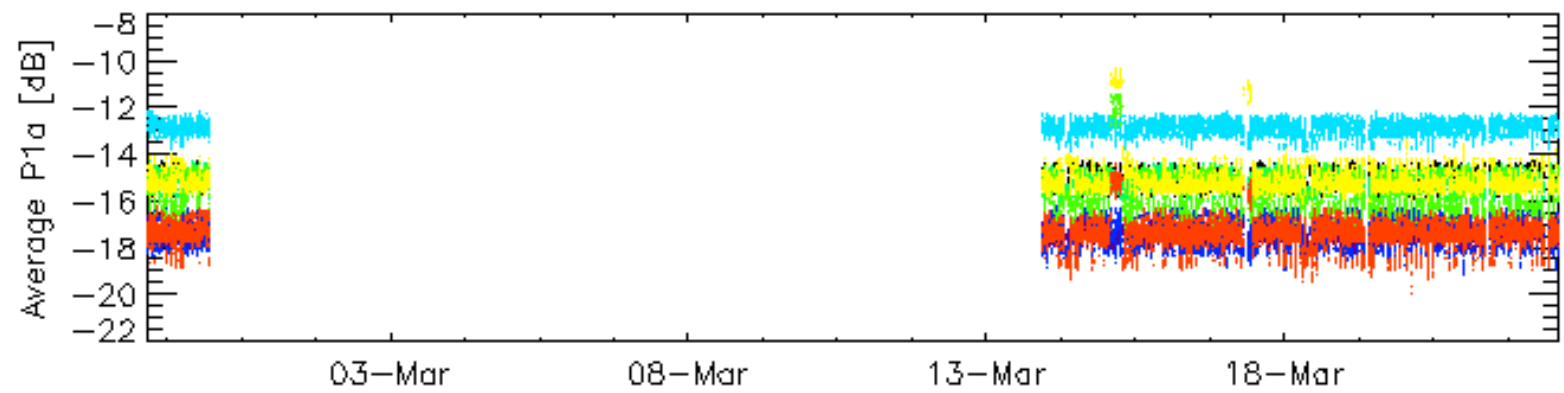
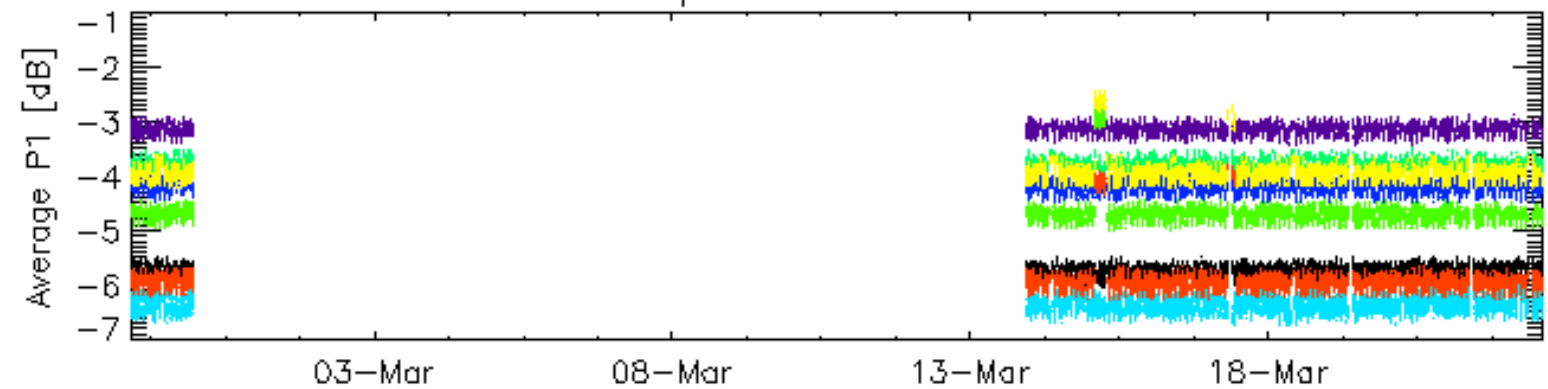


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

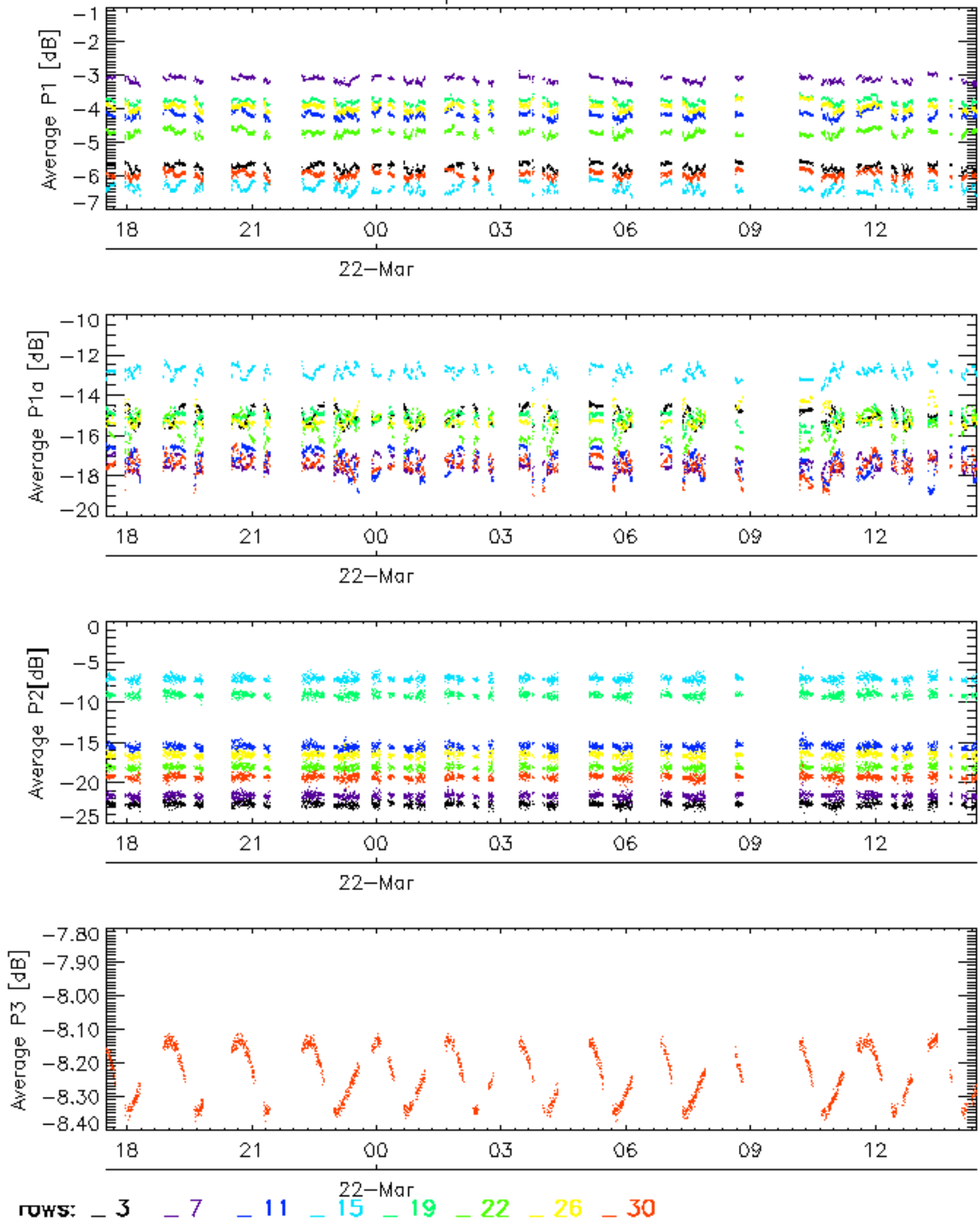


Cal pulses for WVS IS2

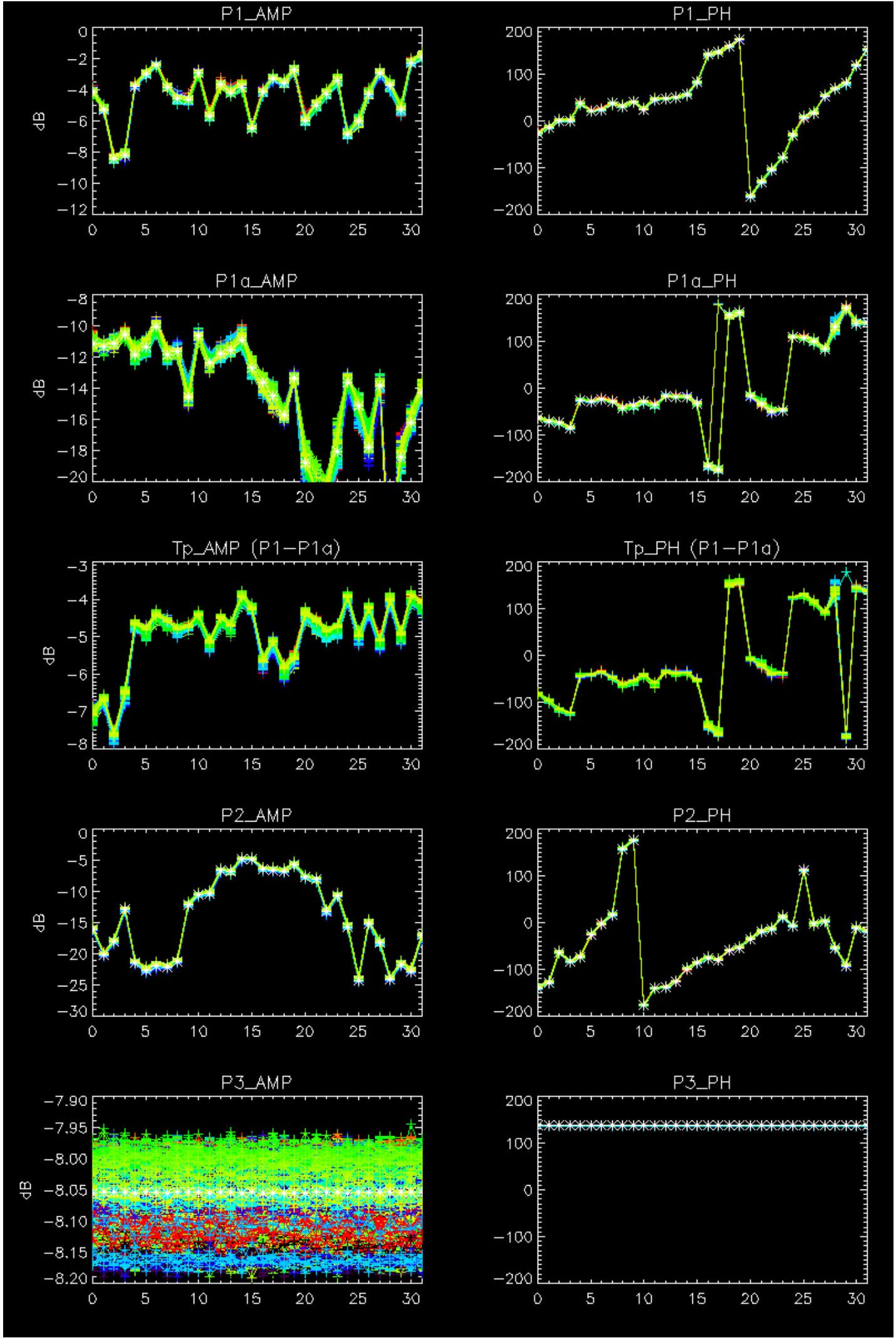


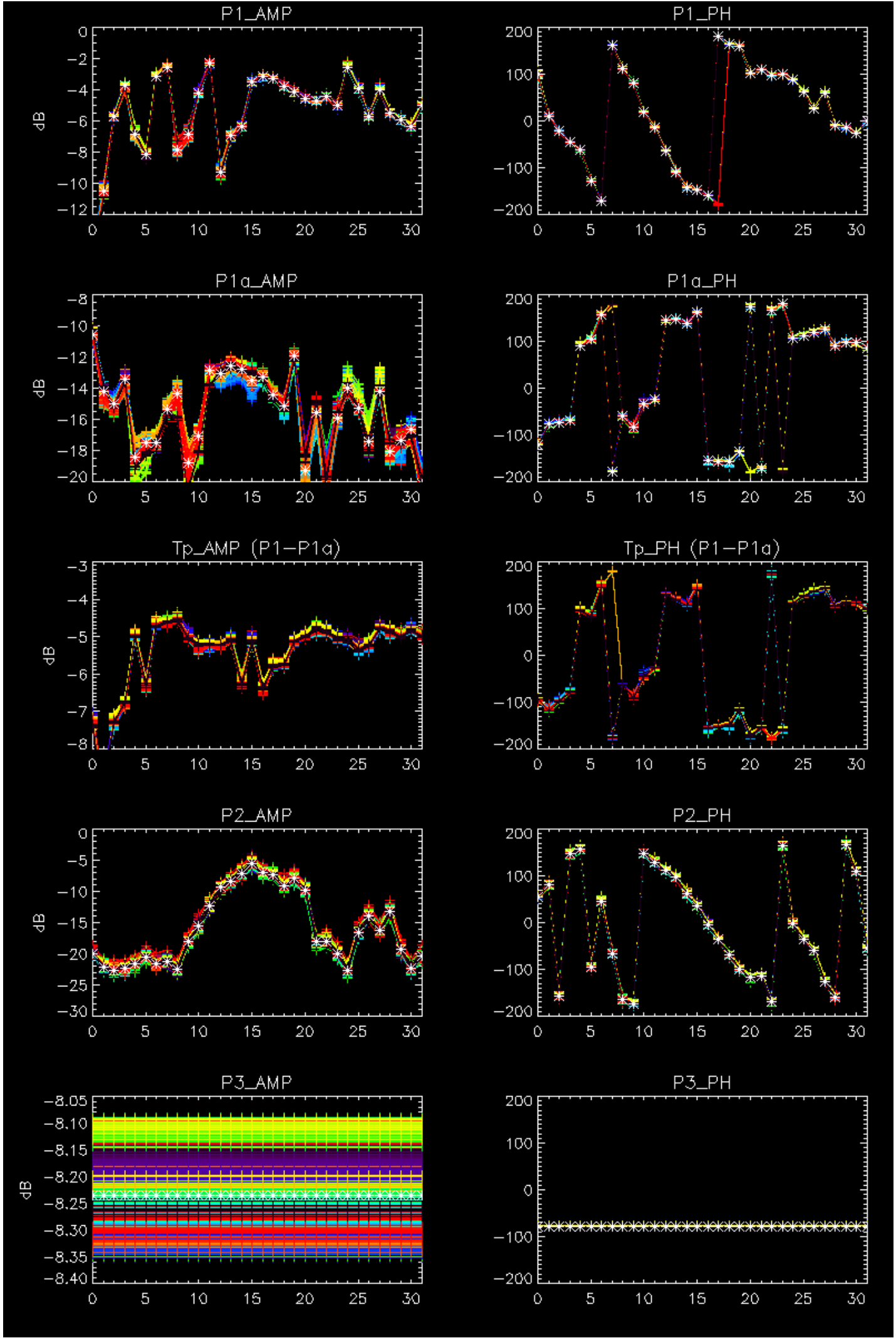
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



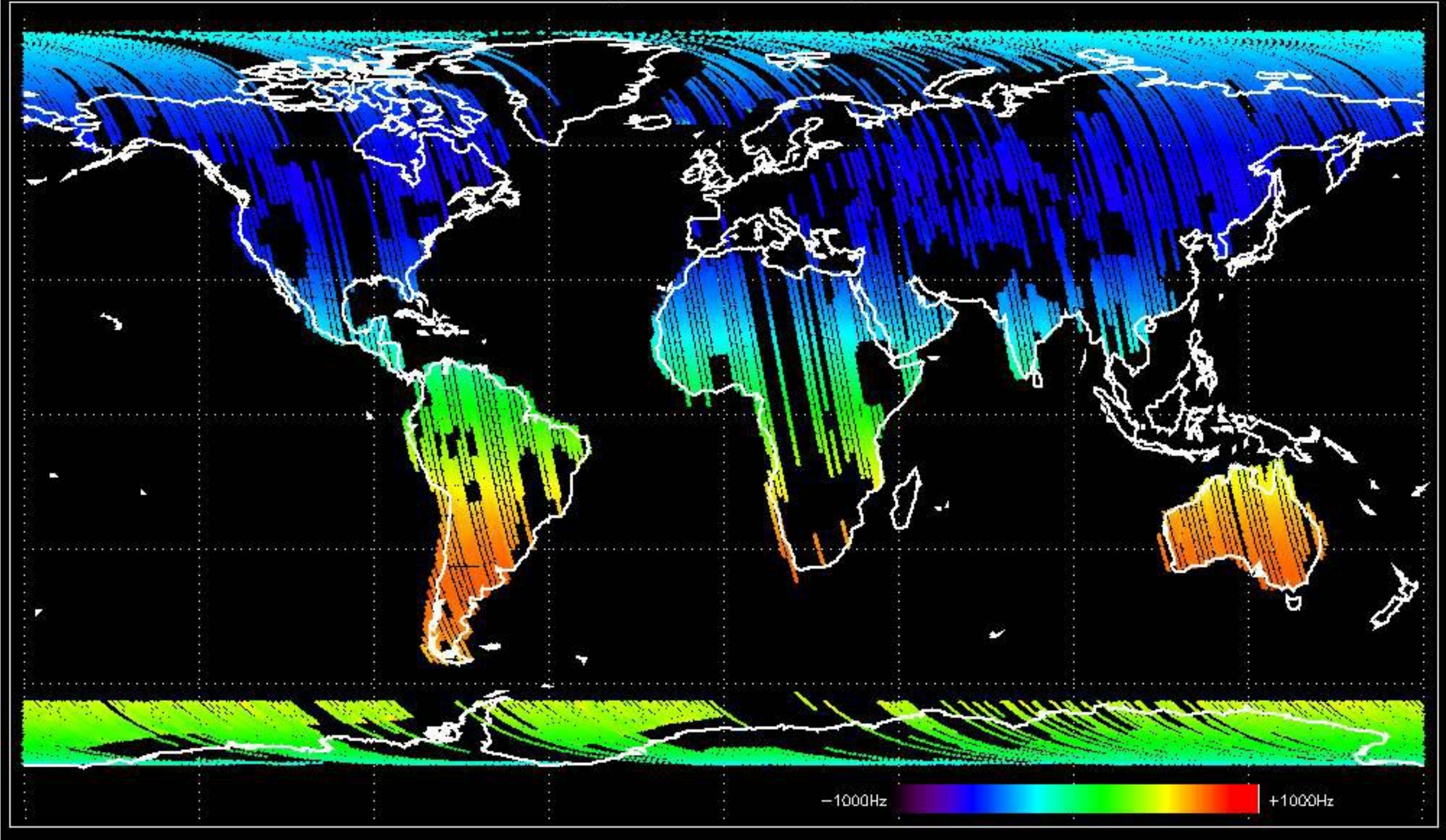
No anomalies observed.



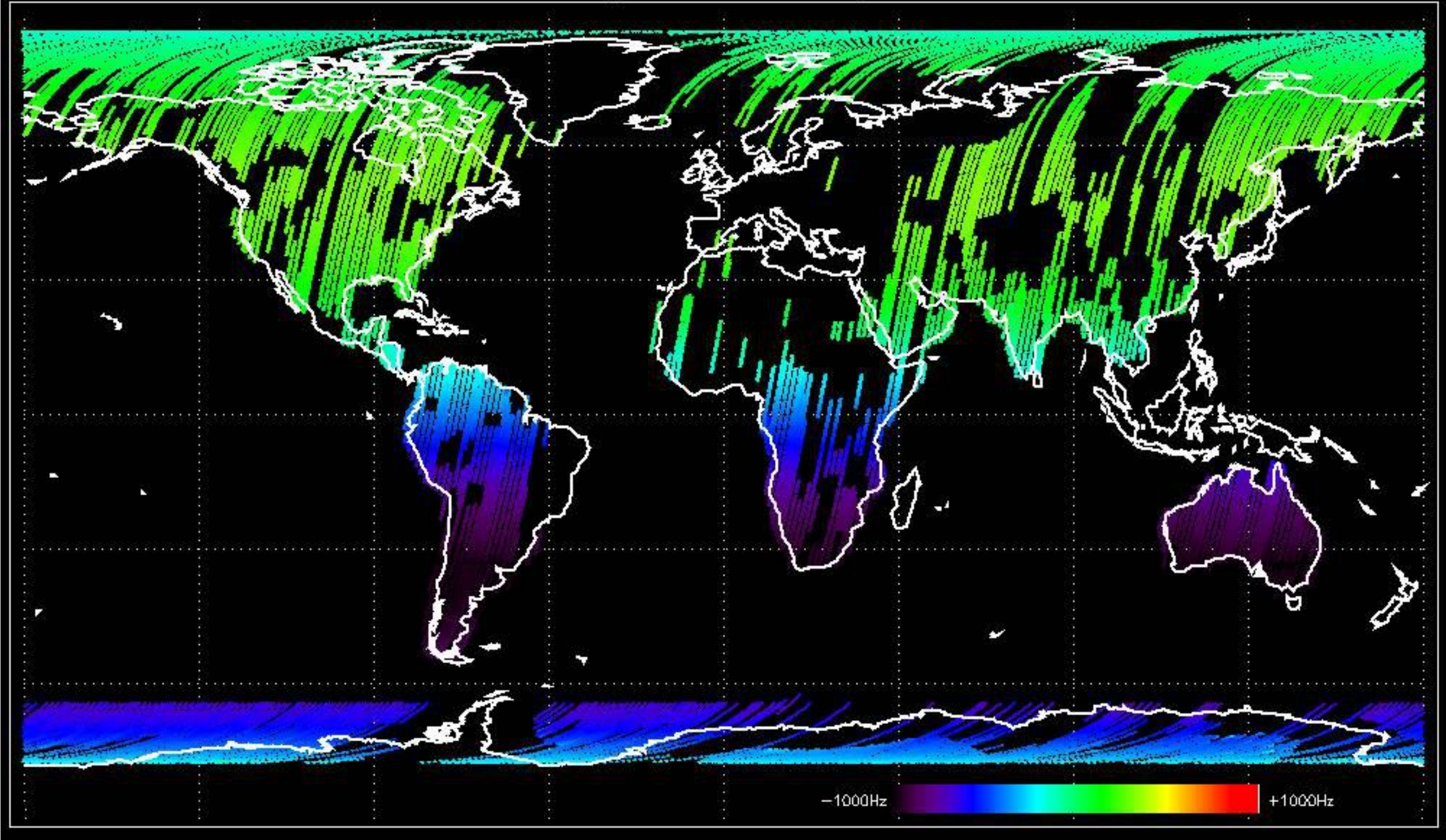


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

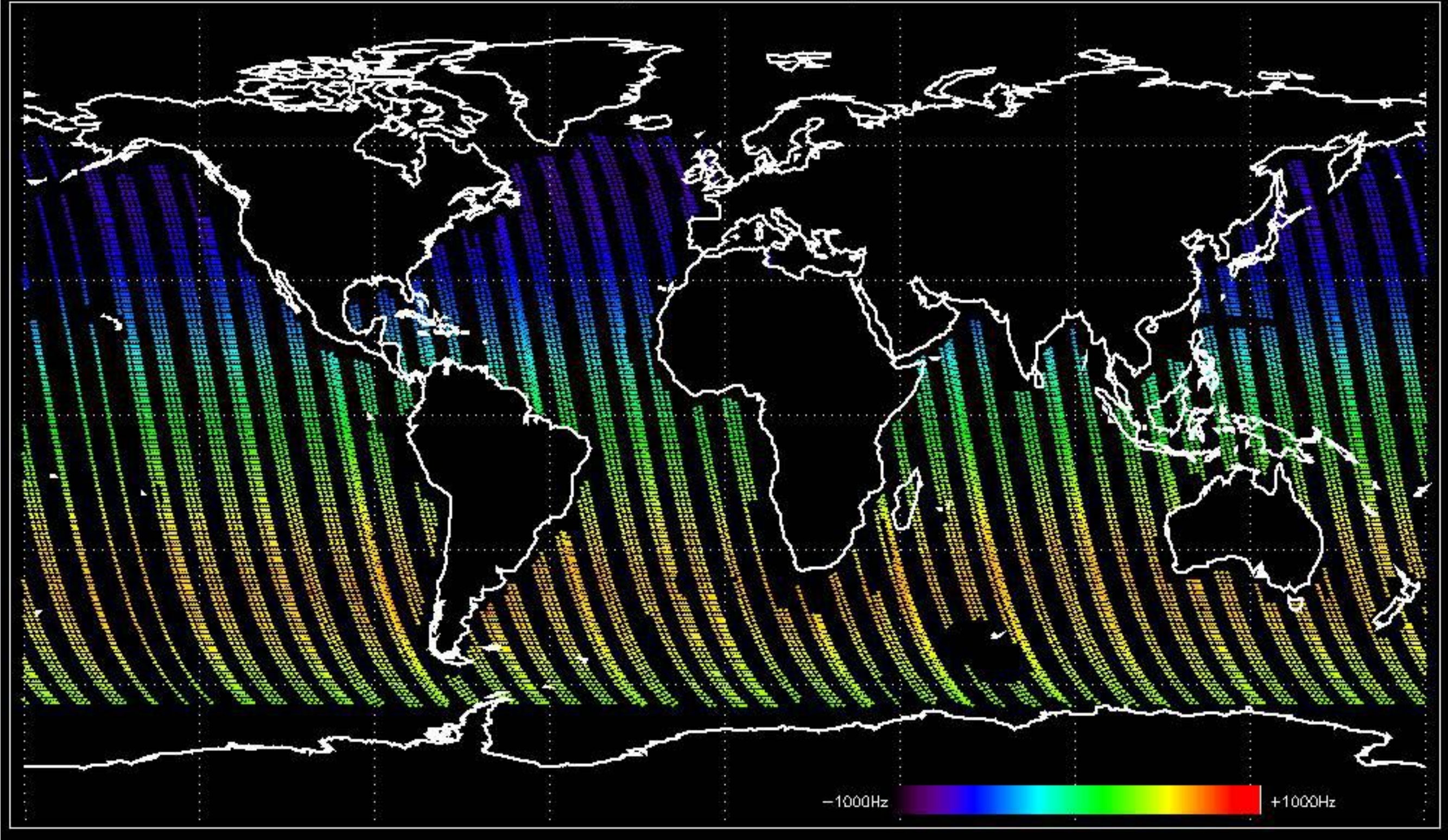
Doppler 'GM1' 'SS1' ascending



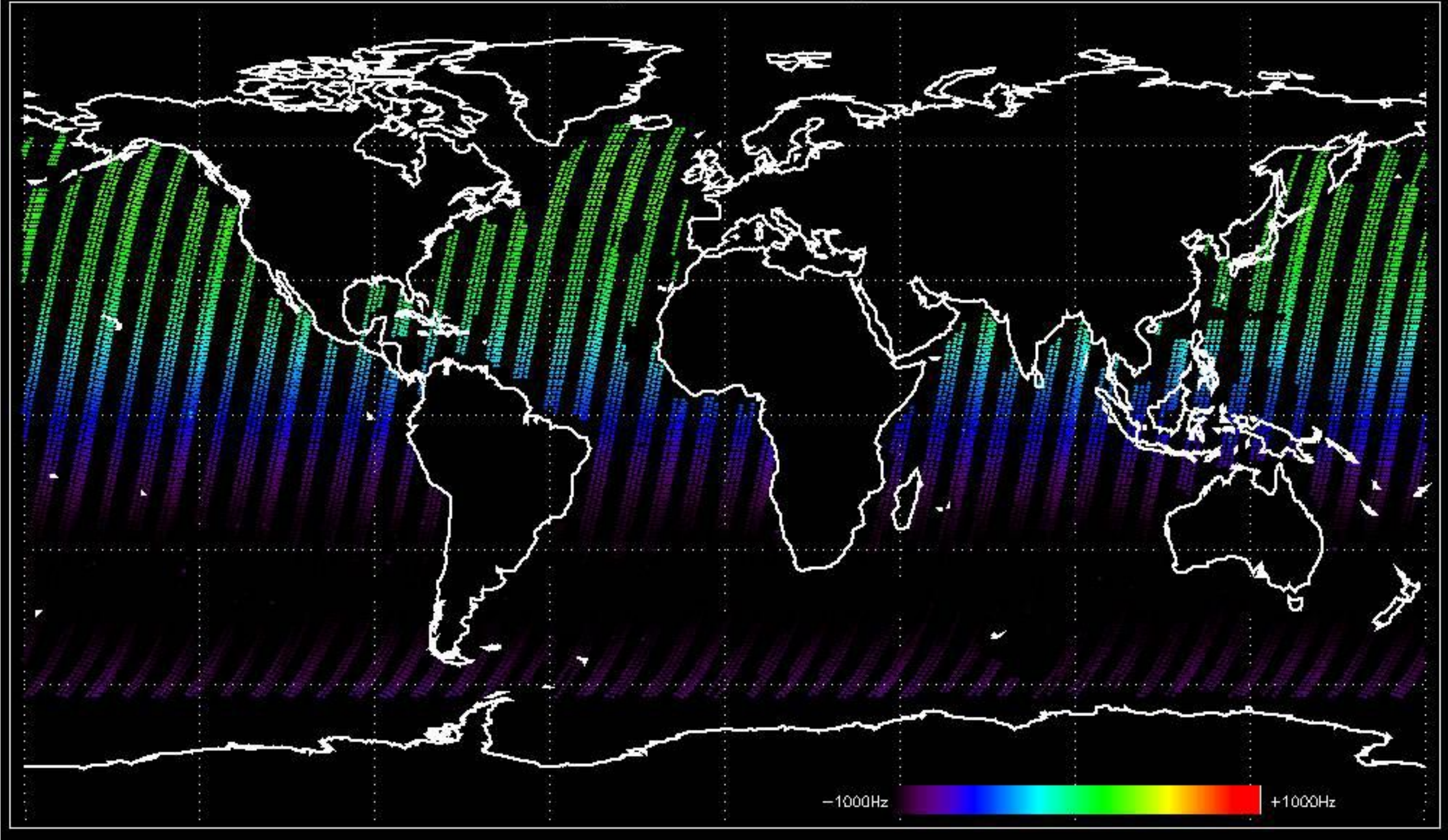
Doppler 'GM1' 'SS1' descending



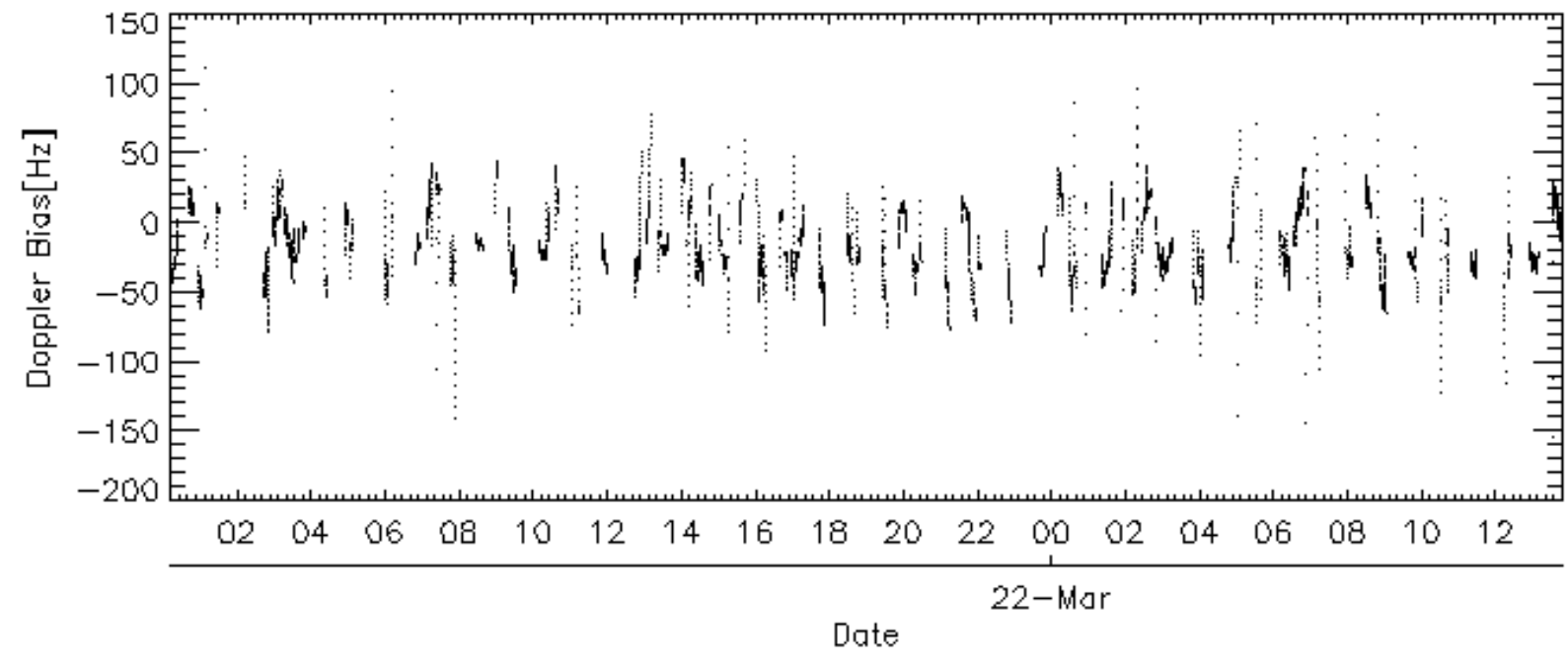
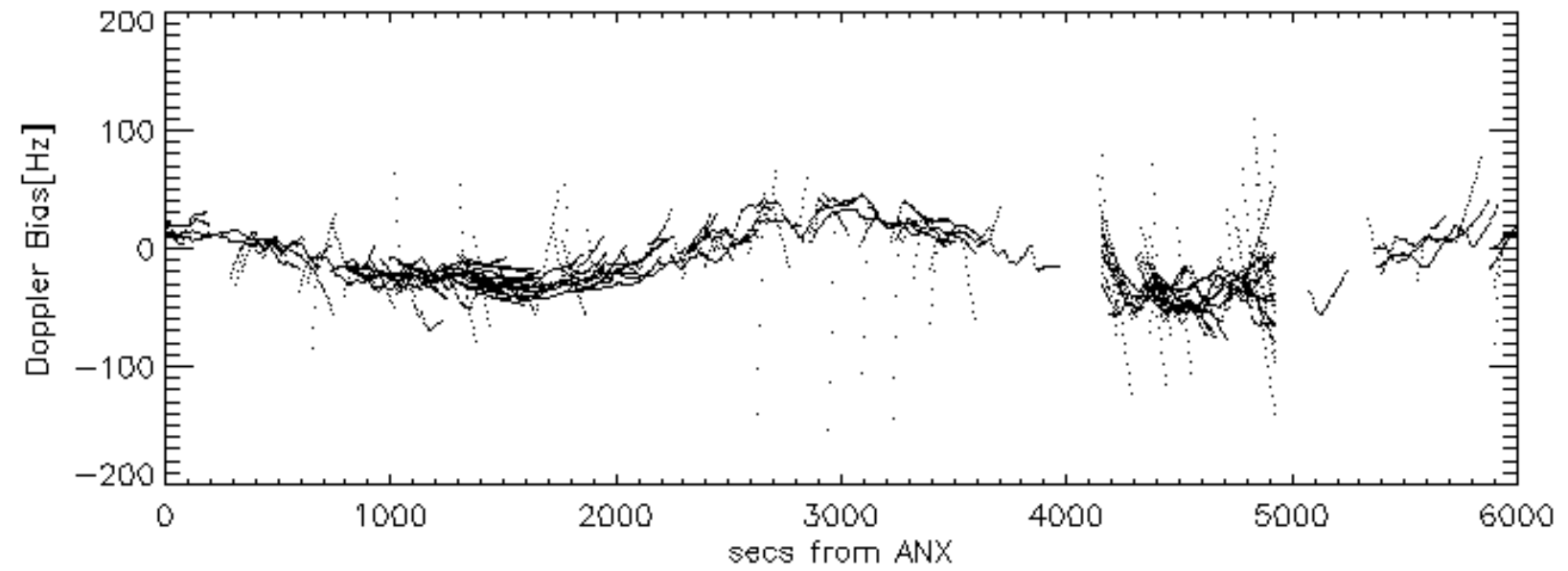
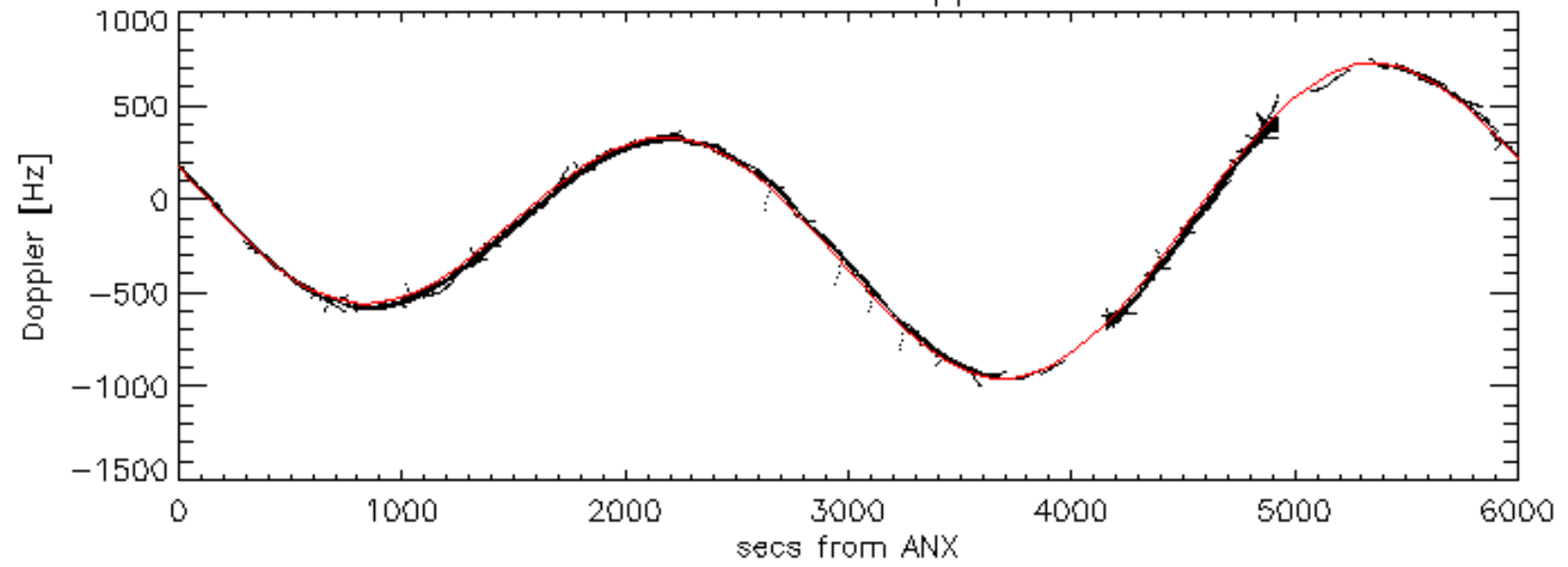
Doppler 'WVS' 'IS2' ascending

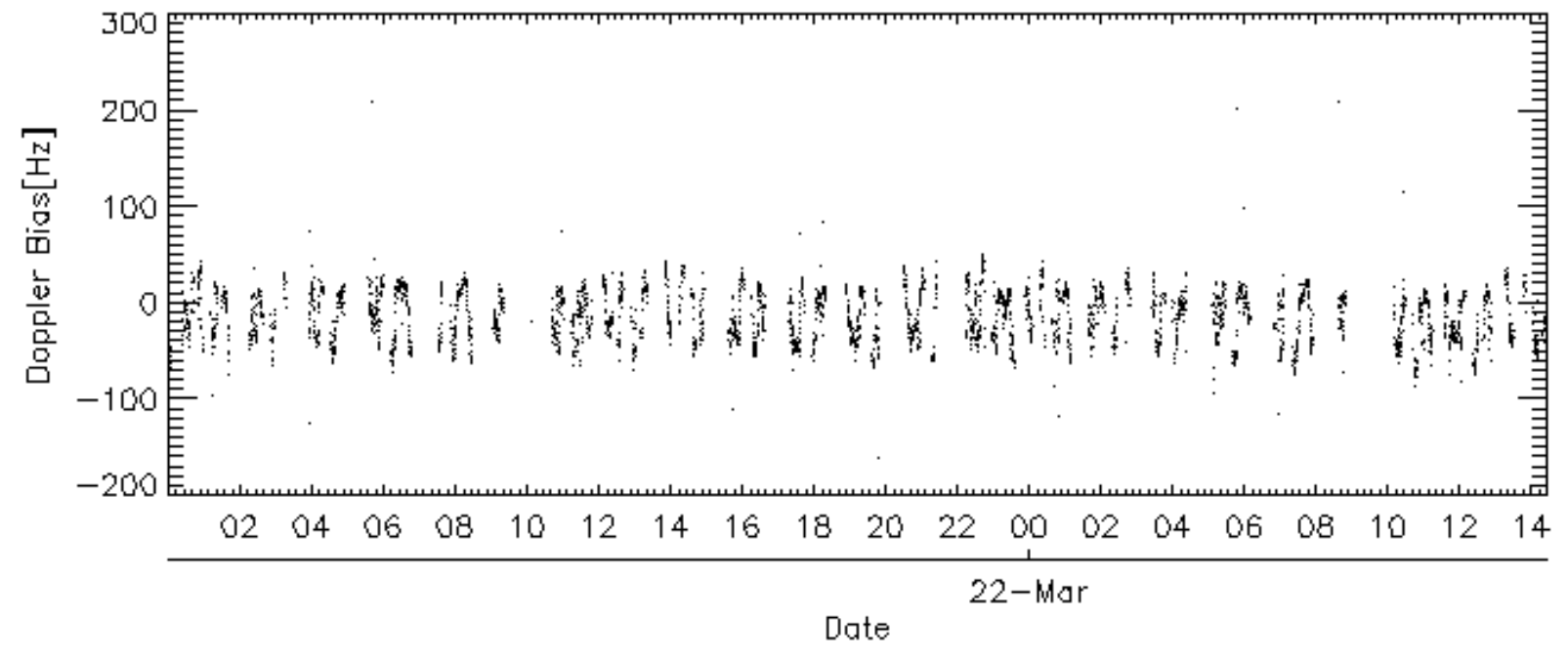
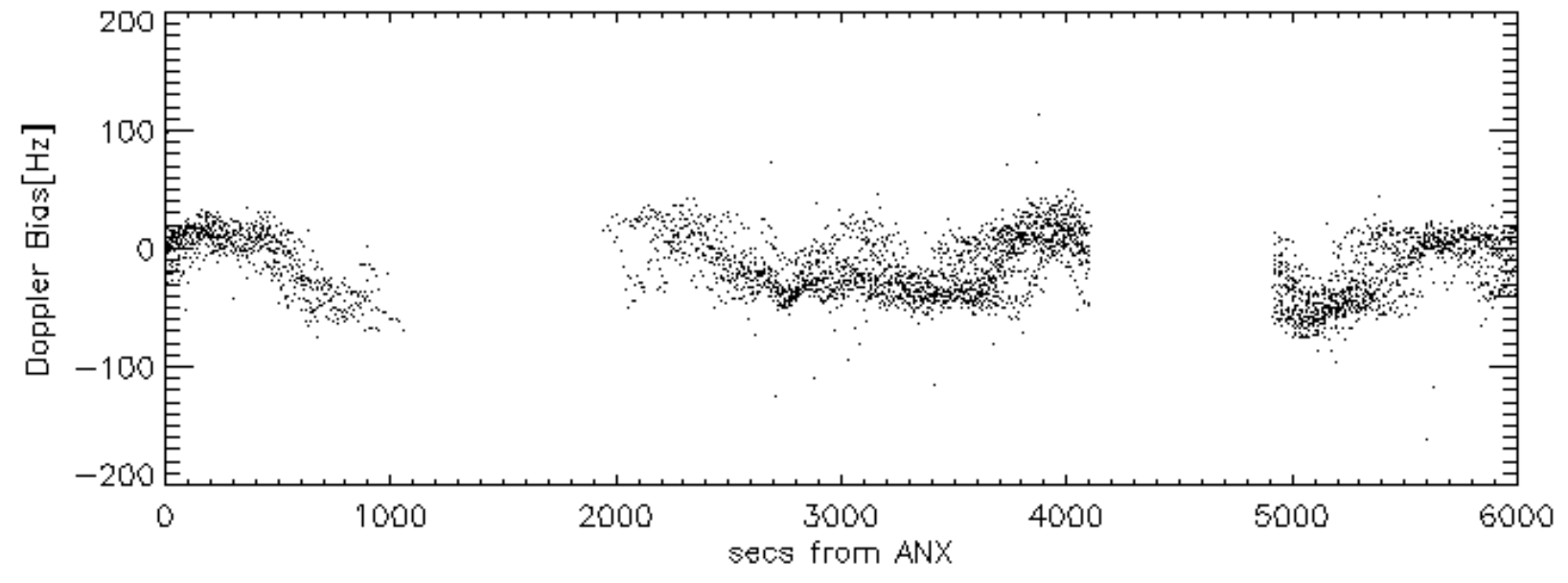
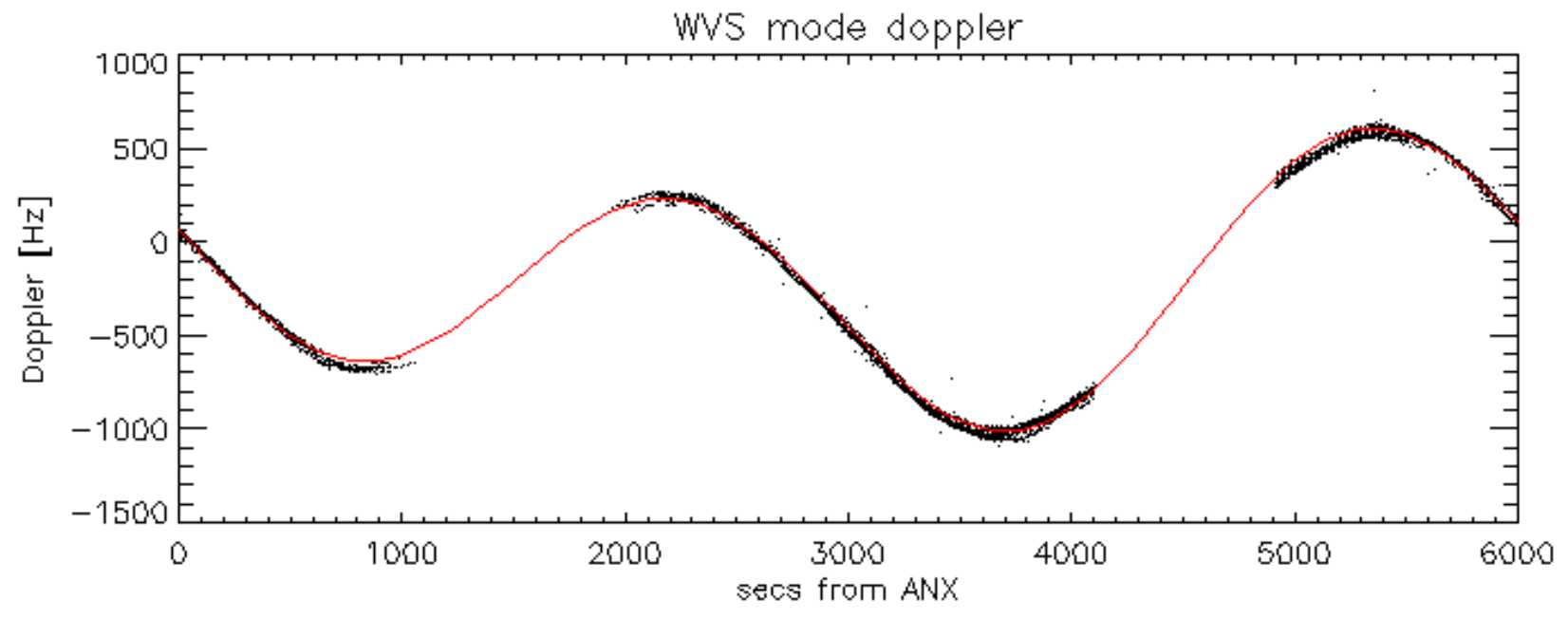


Doppler 'WVS' 'IS2' descending

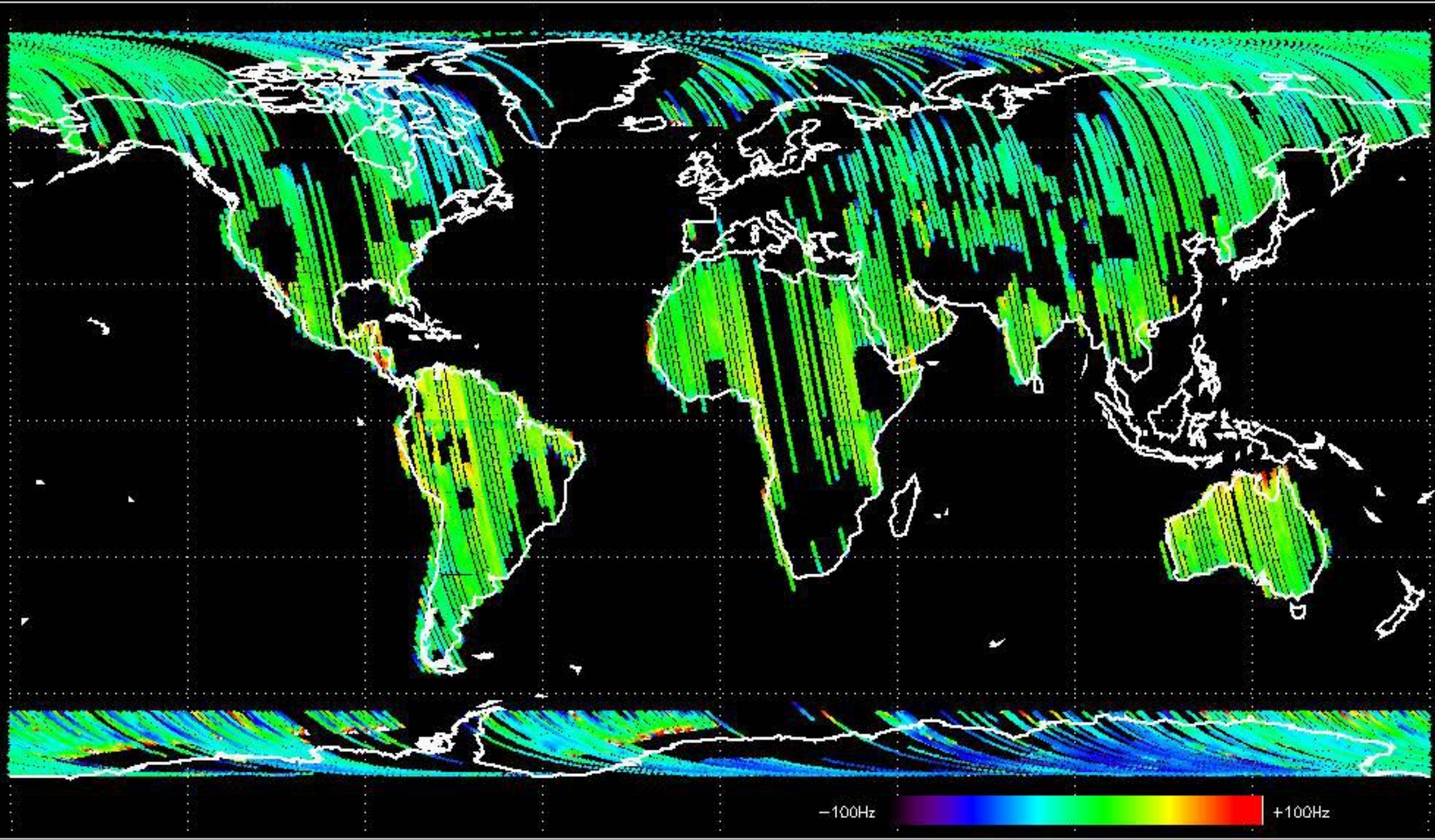


GM1 mode doppler



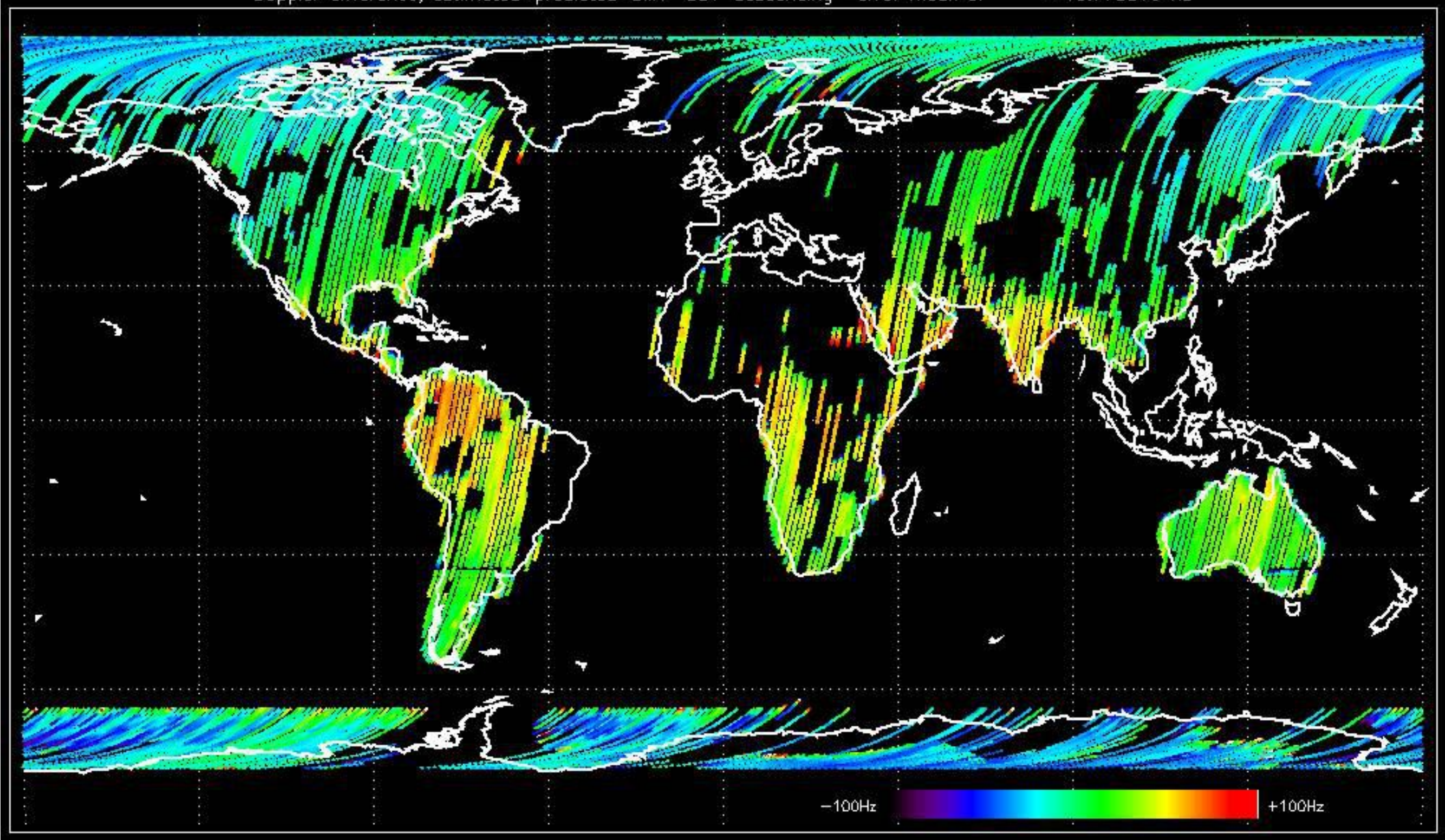


Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.355080 Hz

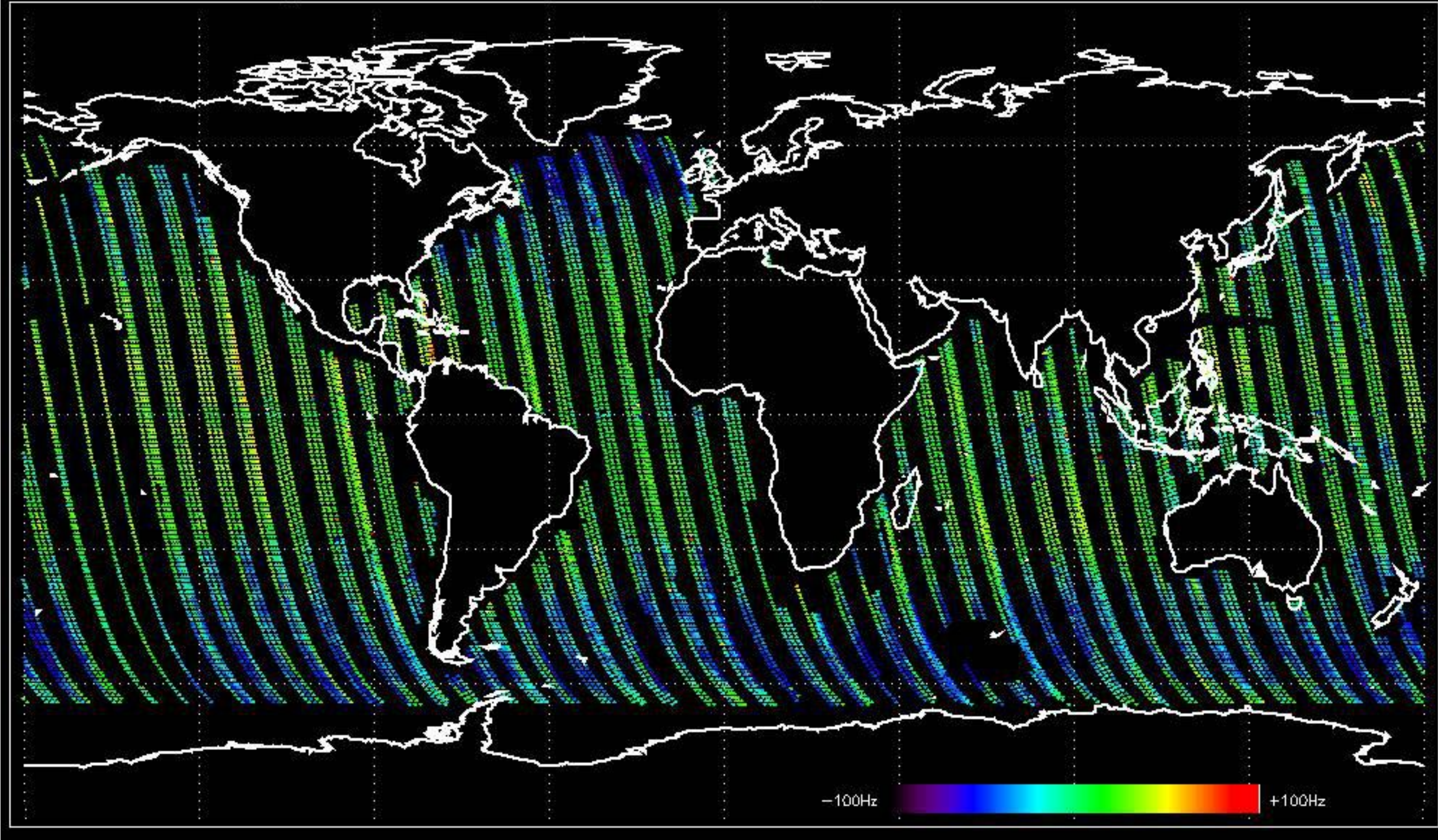


-100Hz +100Hz

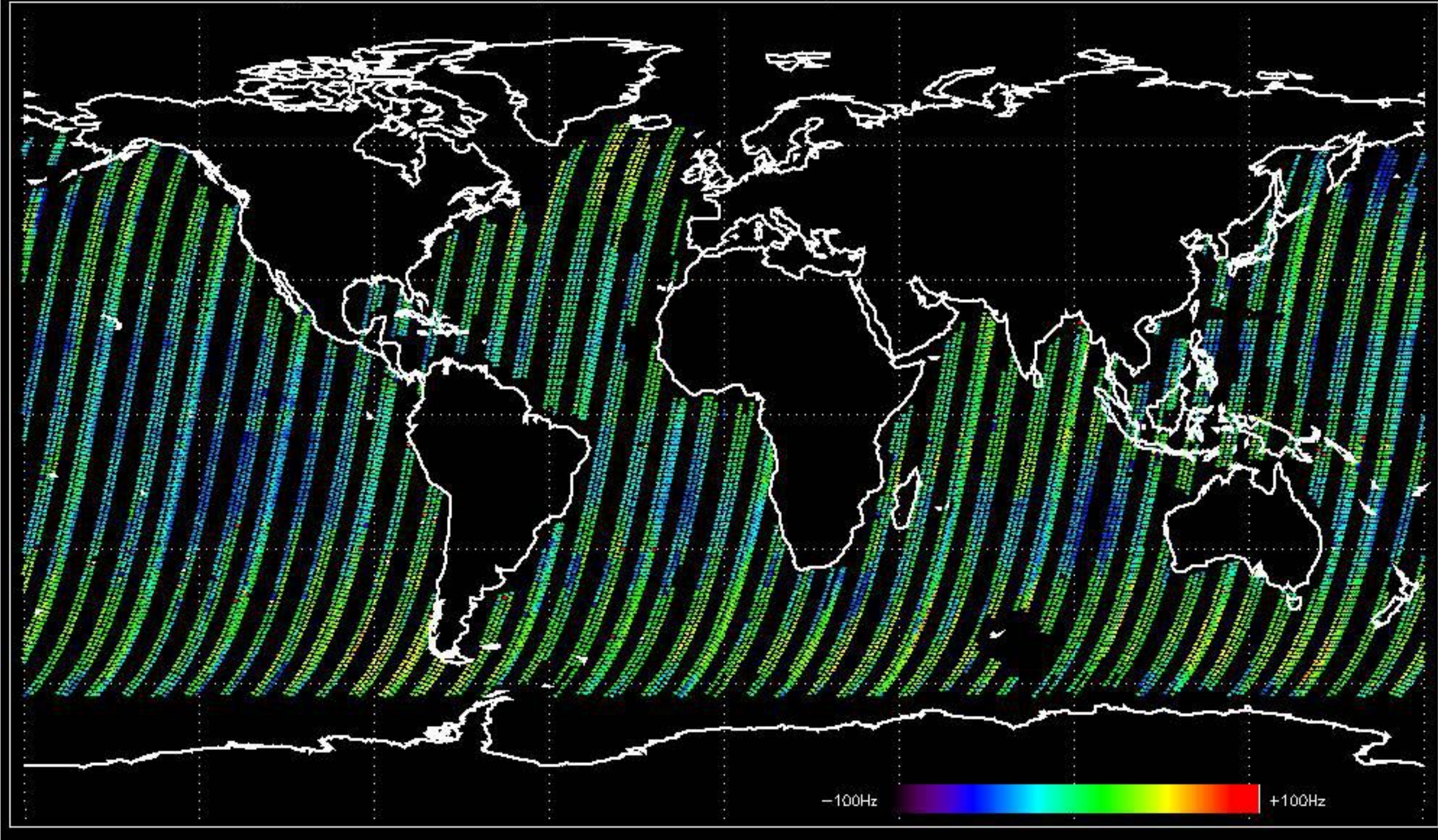
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.775516 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -15.877549 Hz

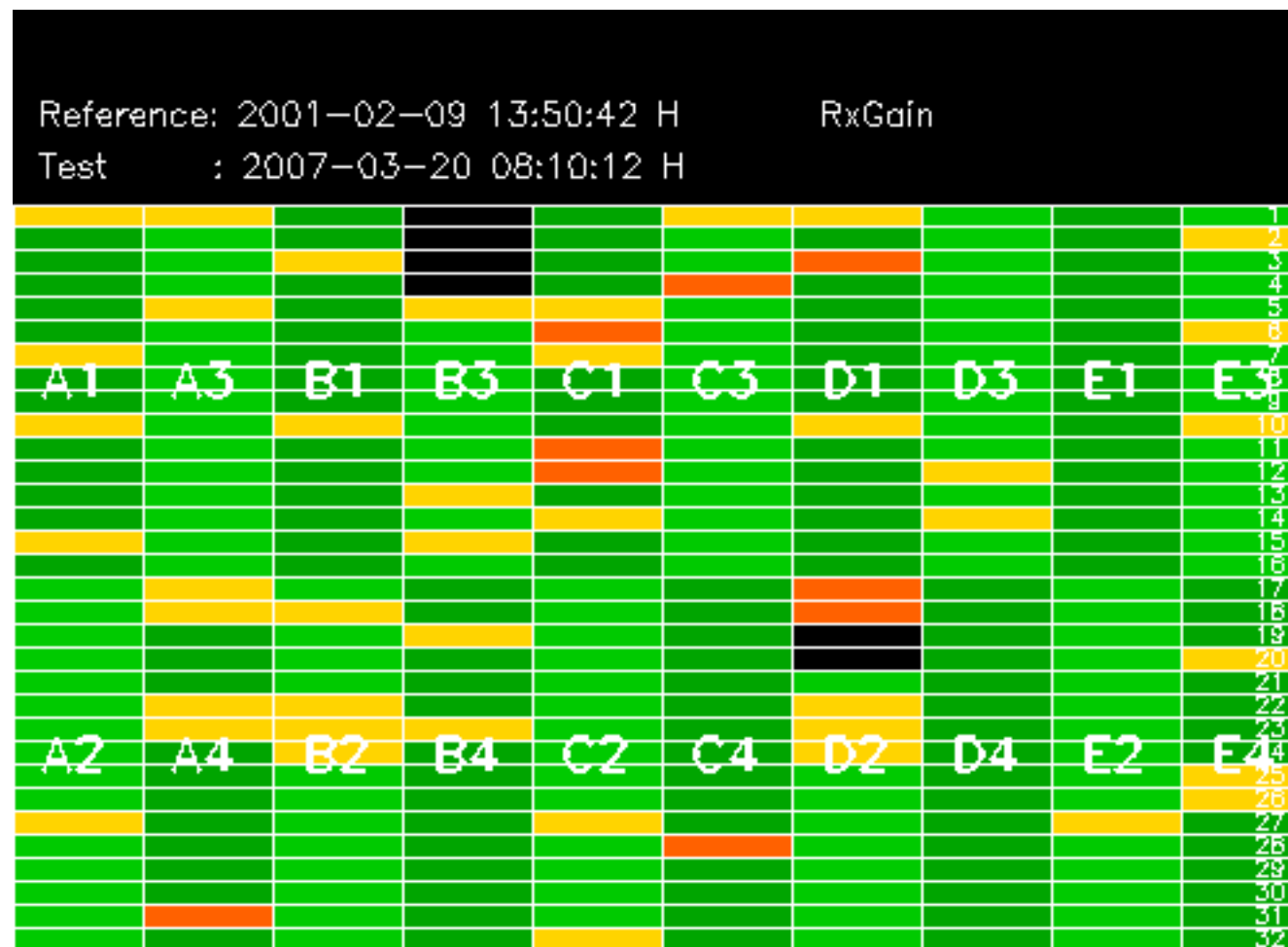


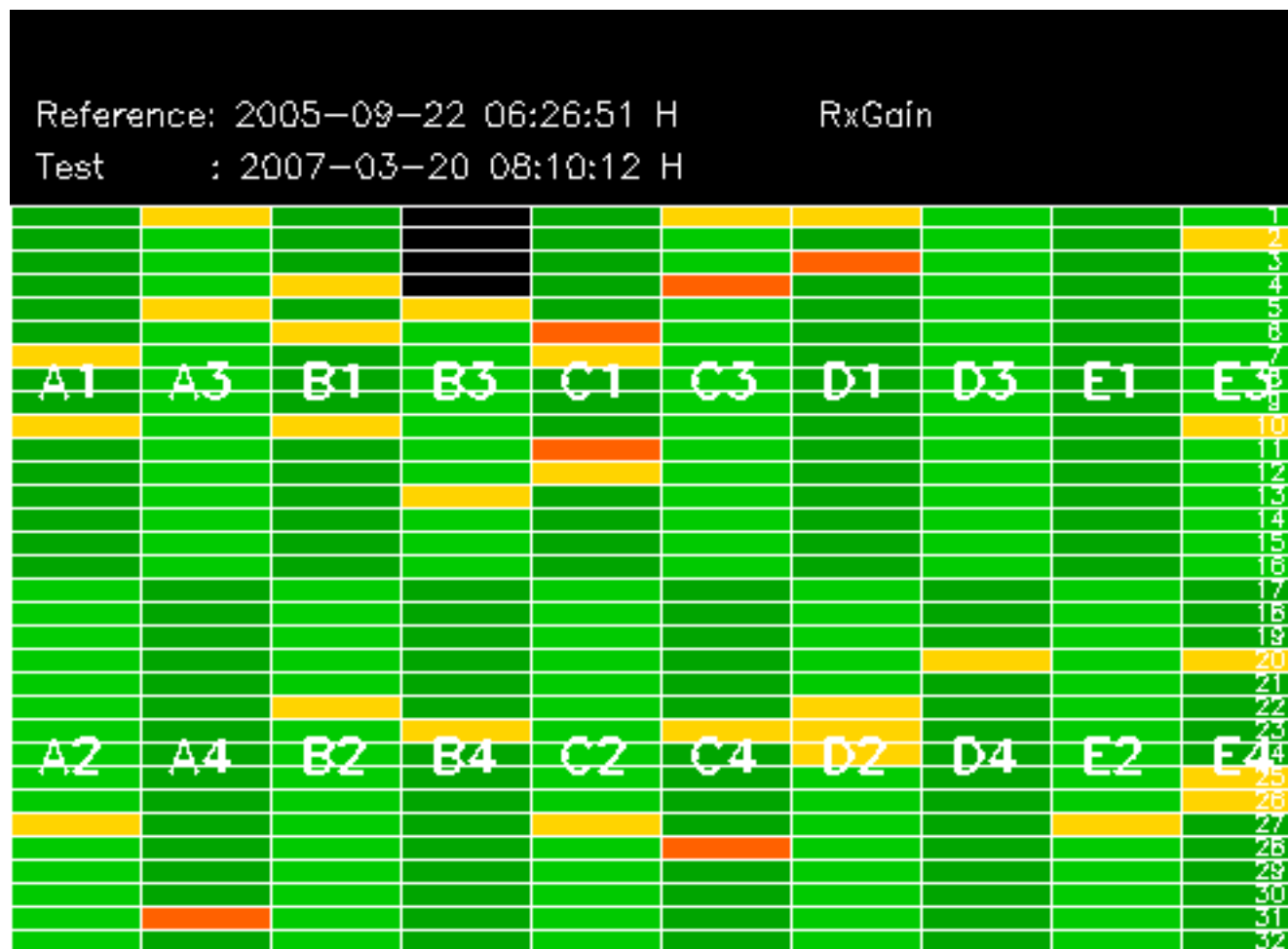
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.262691 Hz

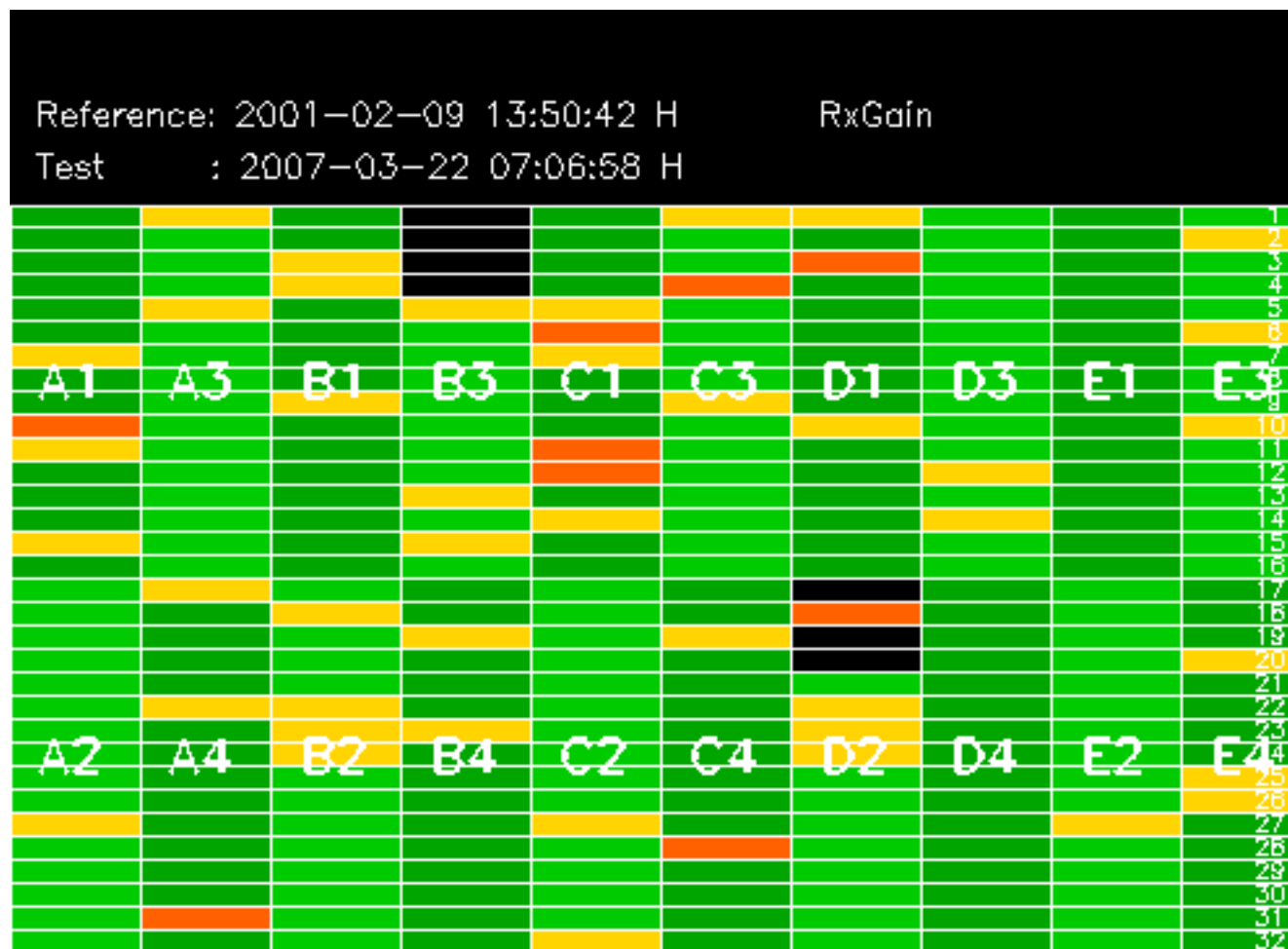


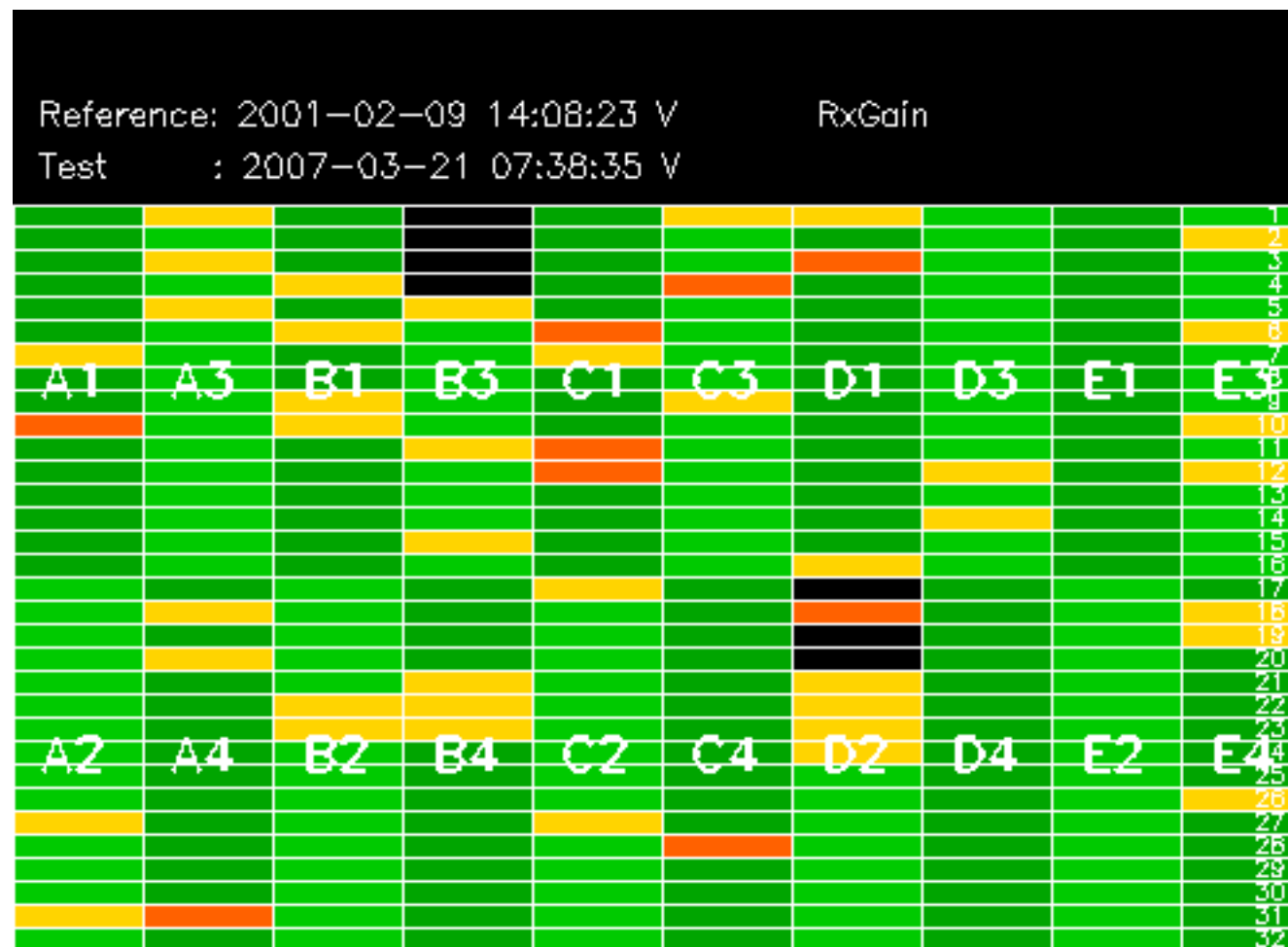
No anomalies observed on available MS products:

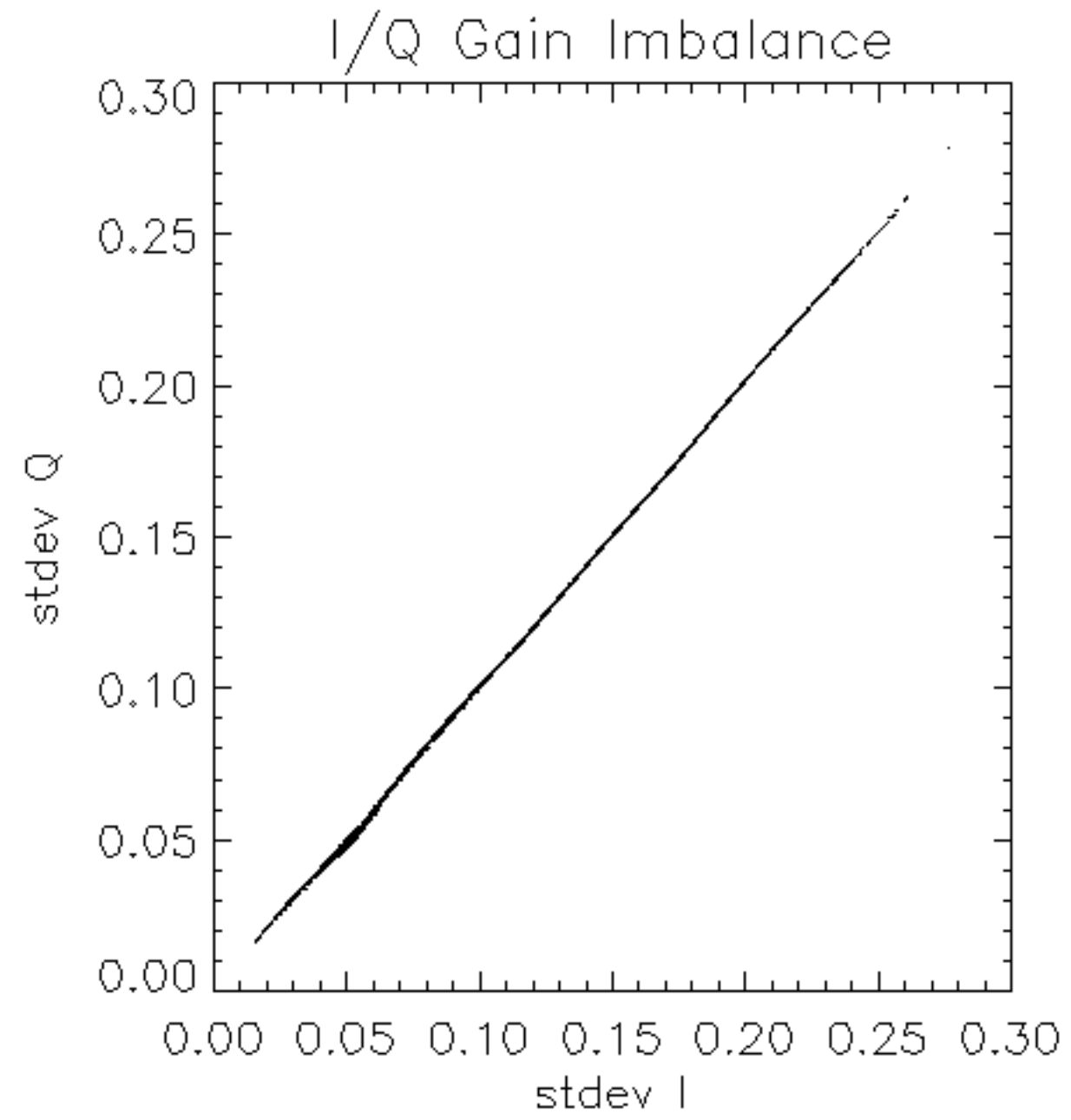
No anomalies observed.

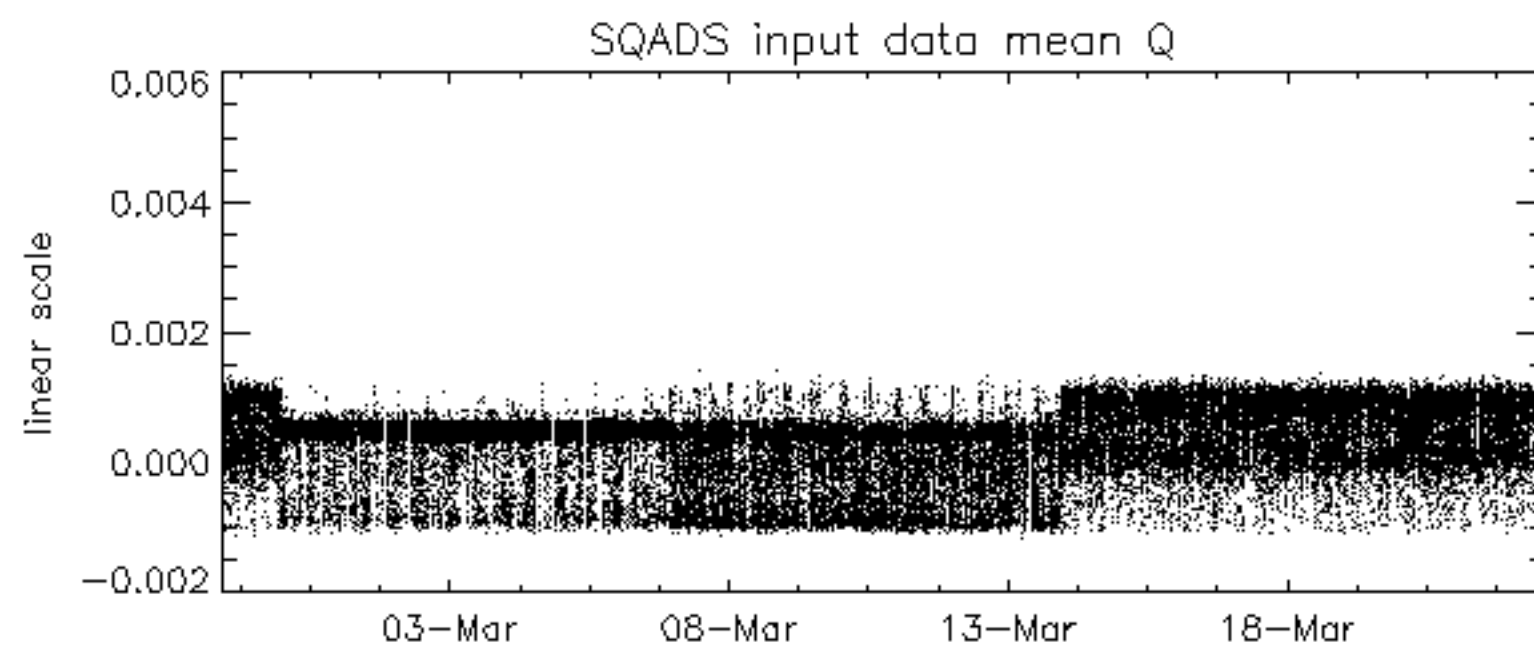
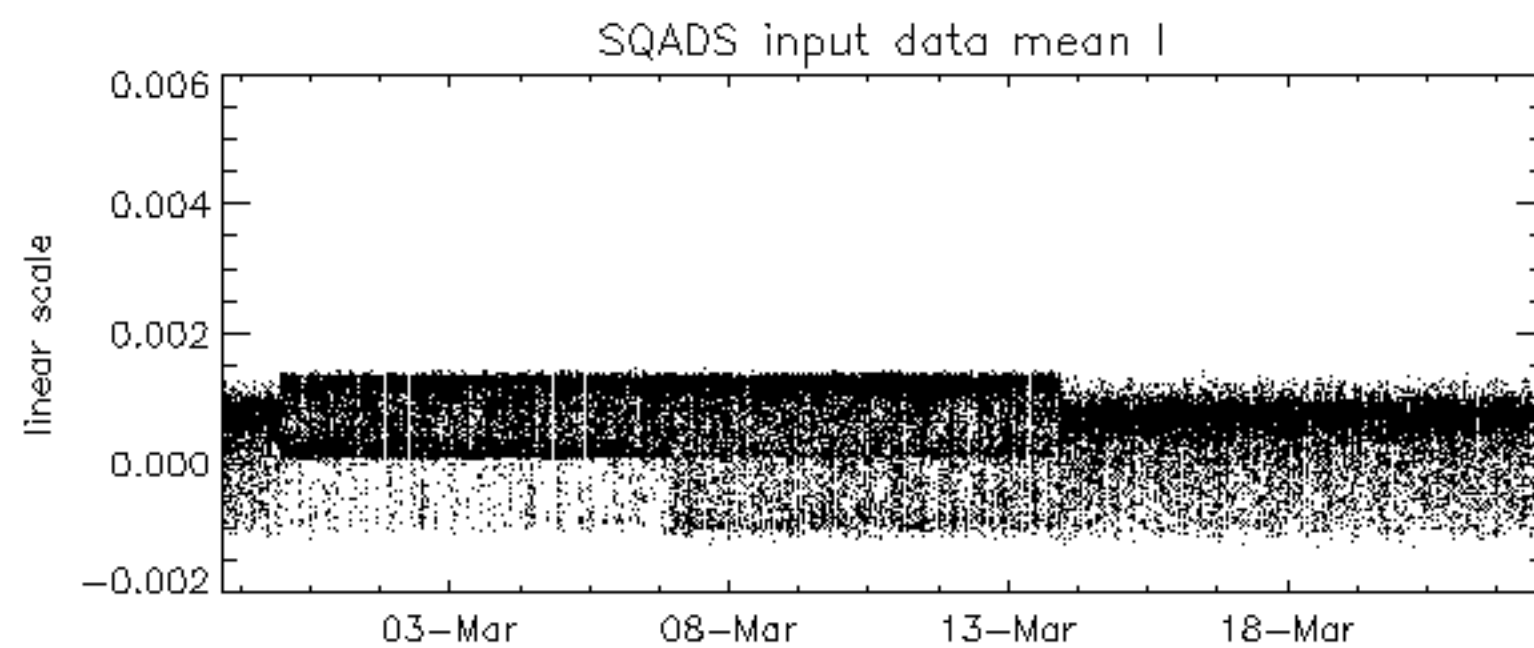
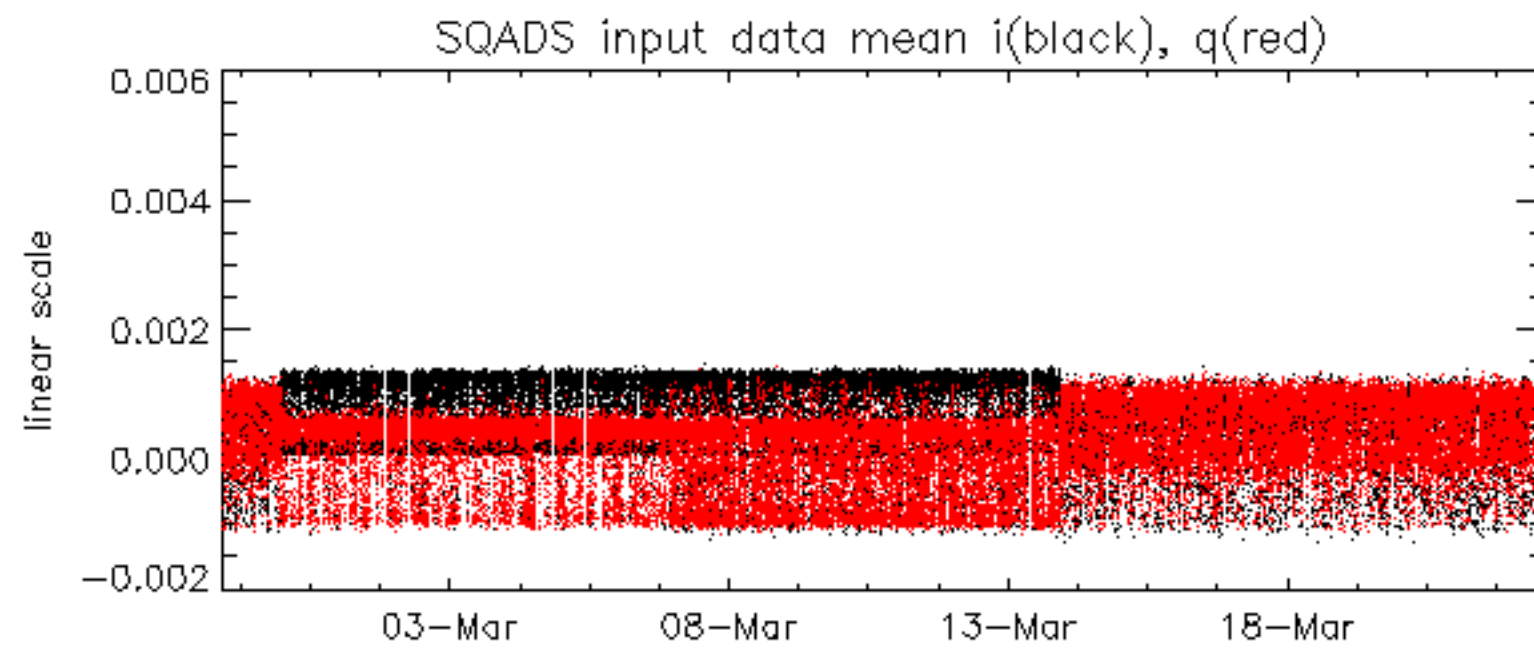


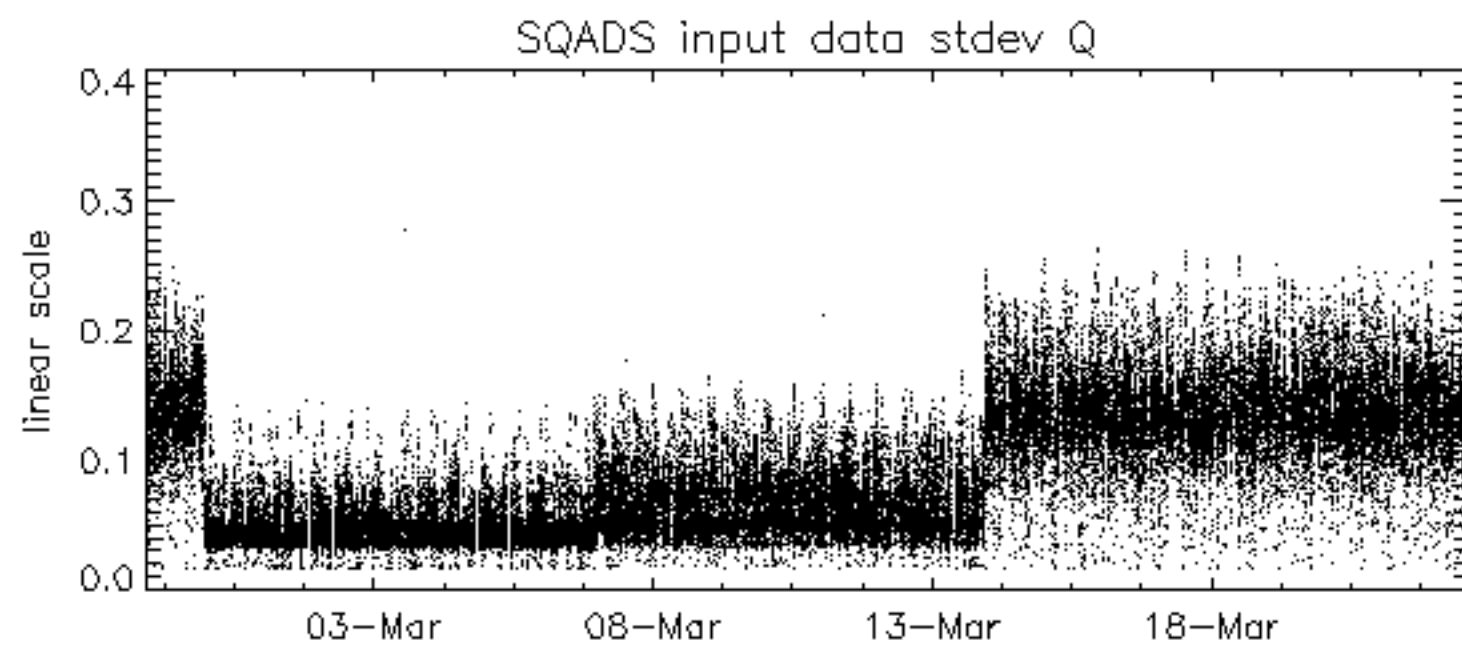
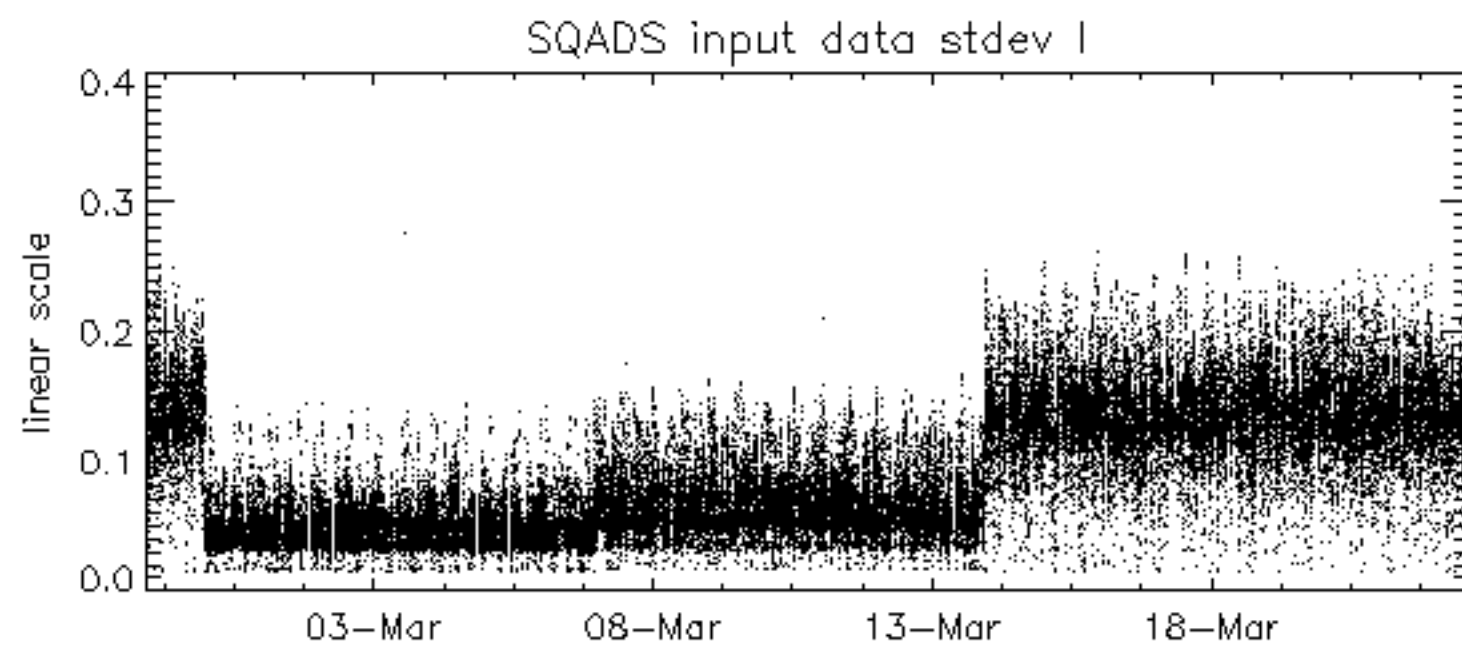
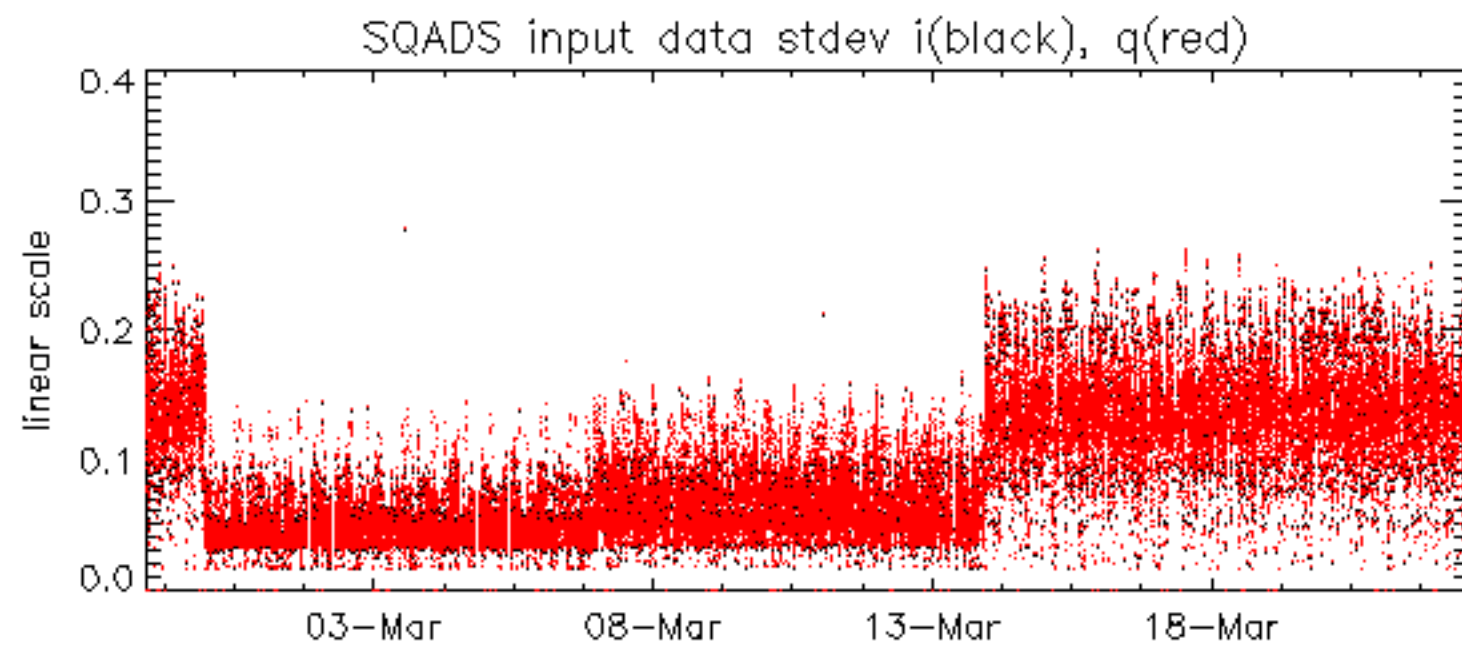








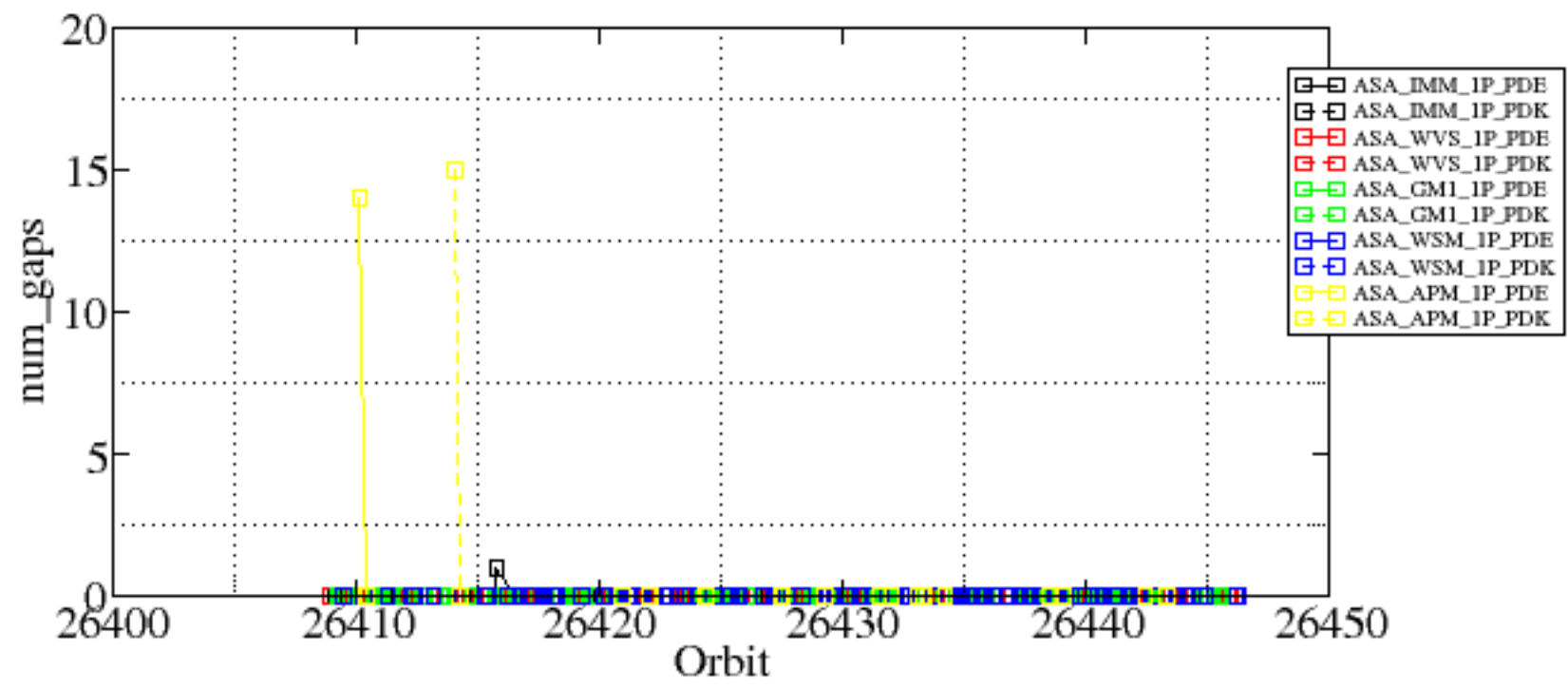


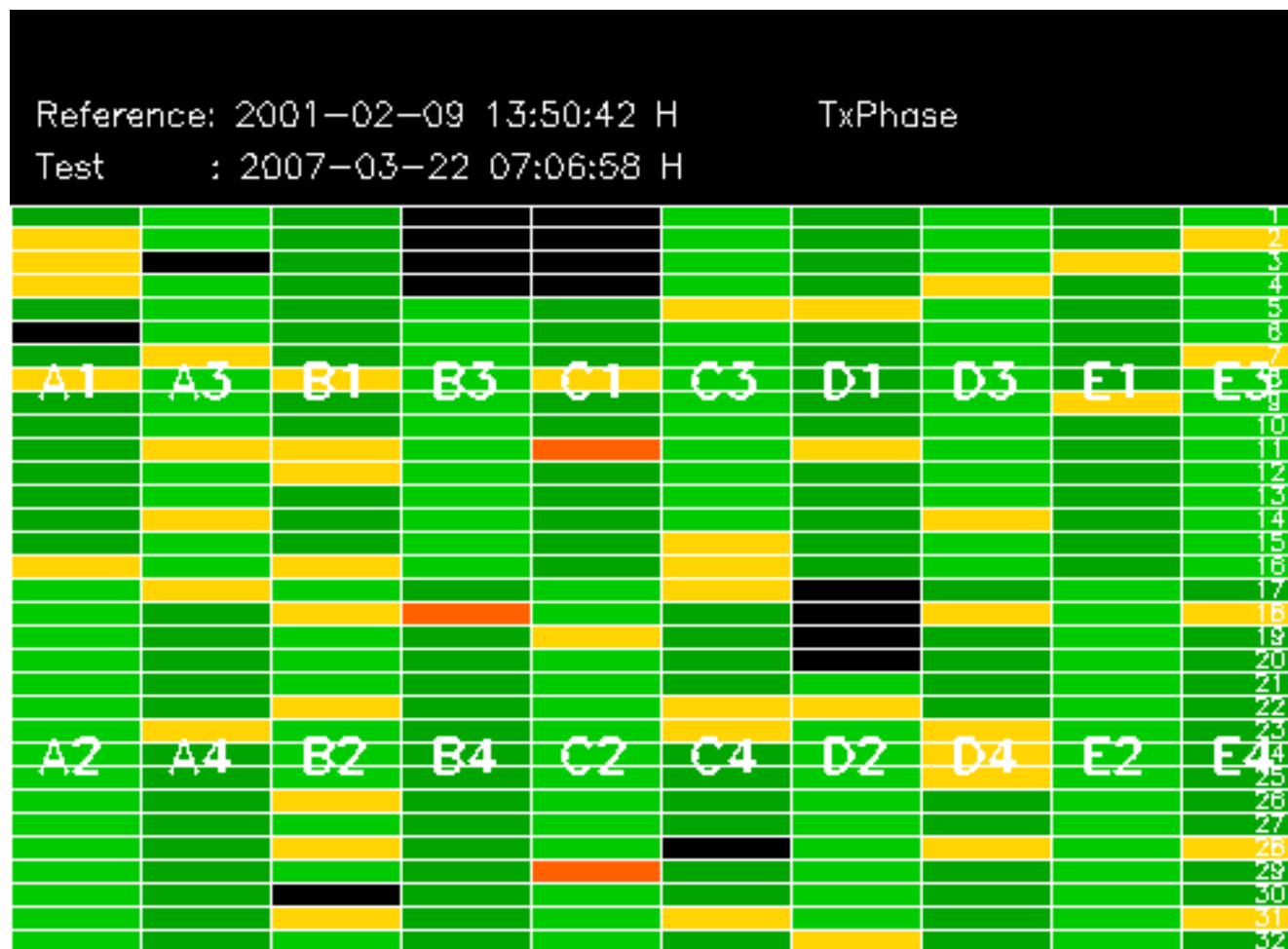


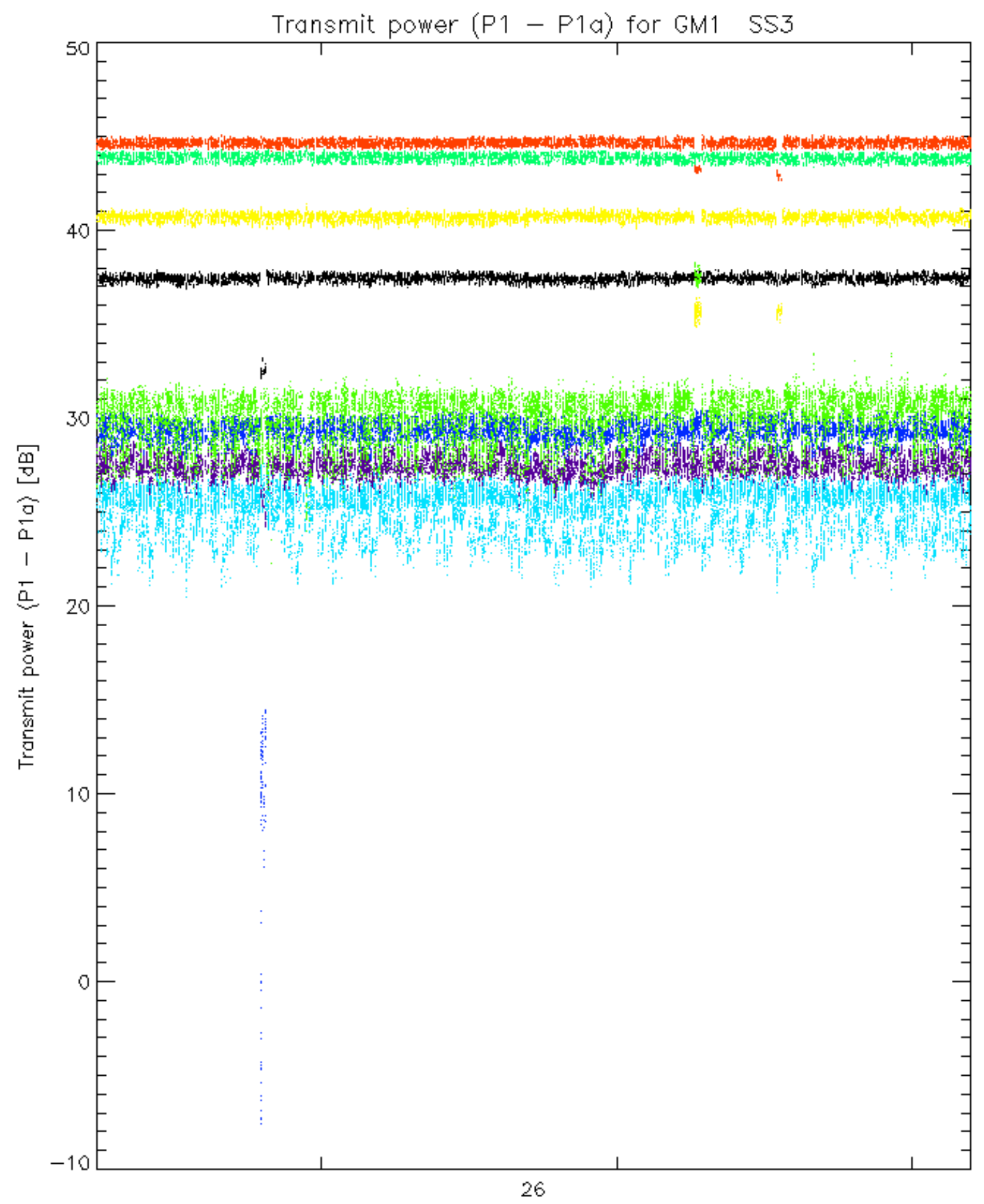
Summary of analysis for the last 3 days 2007032[012]

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

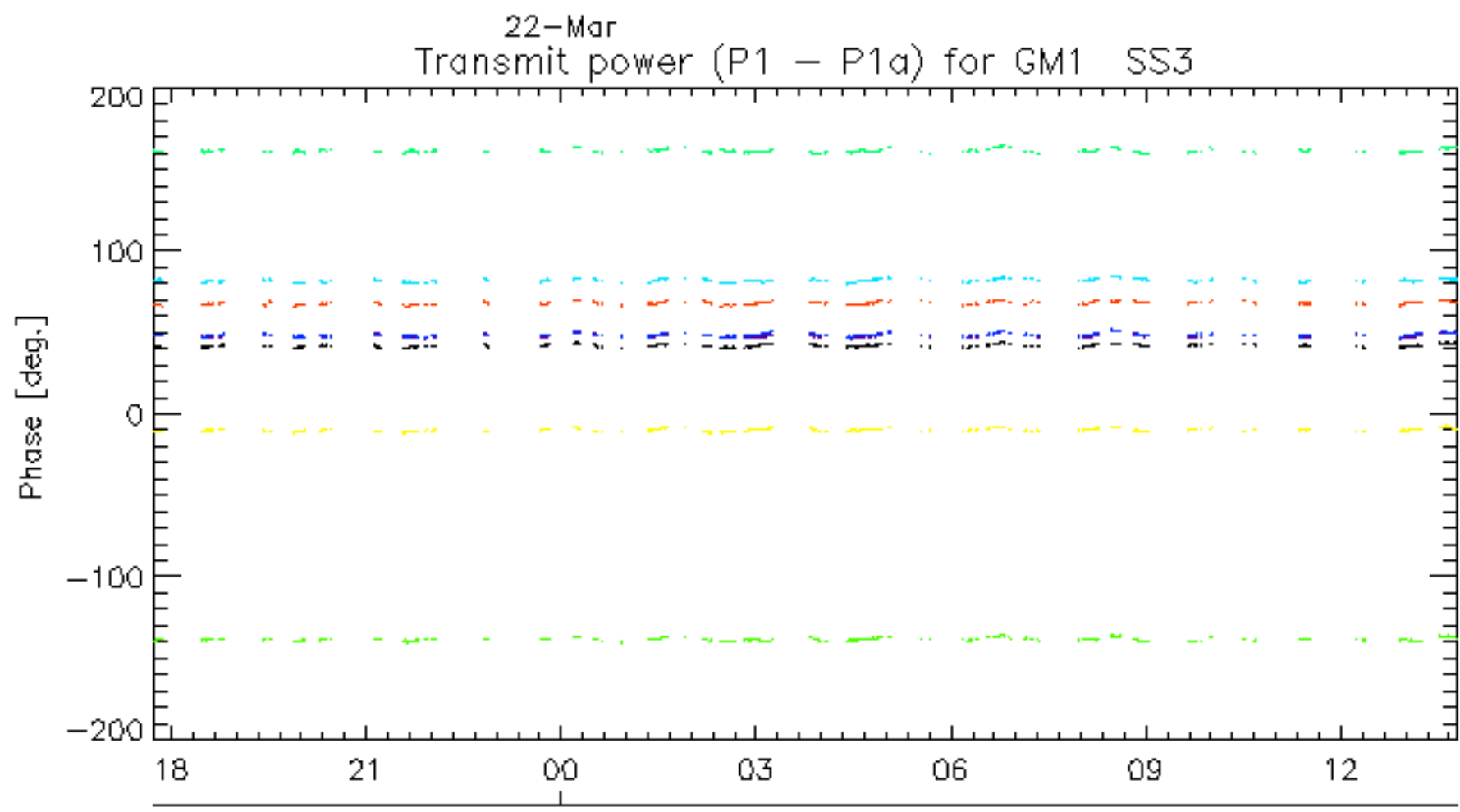
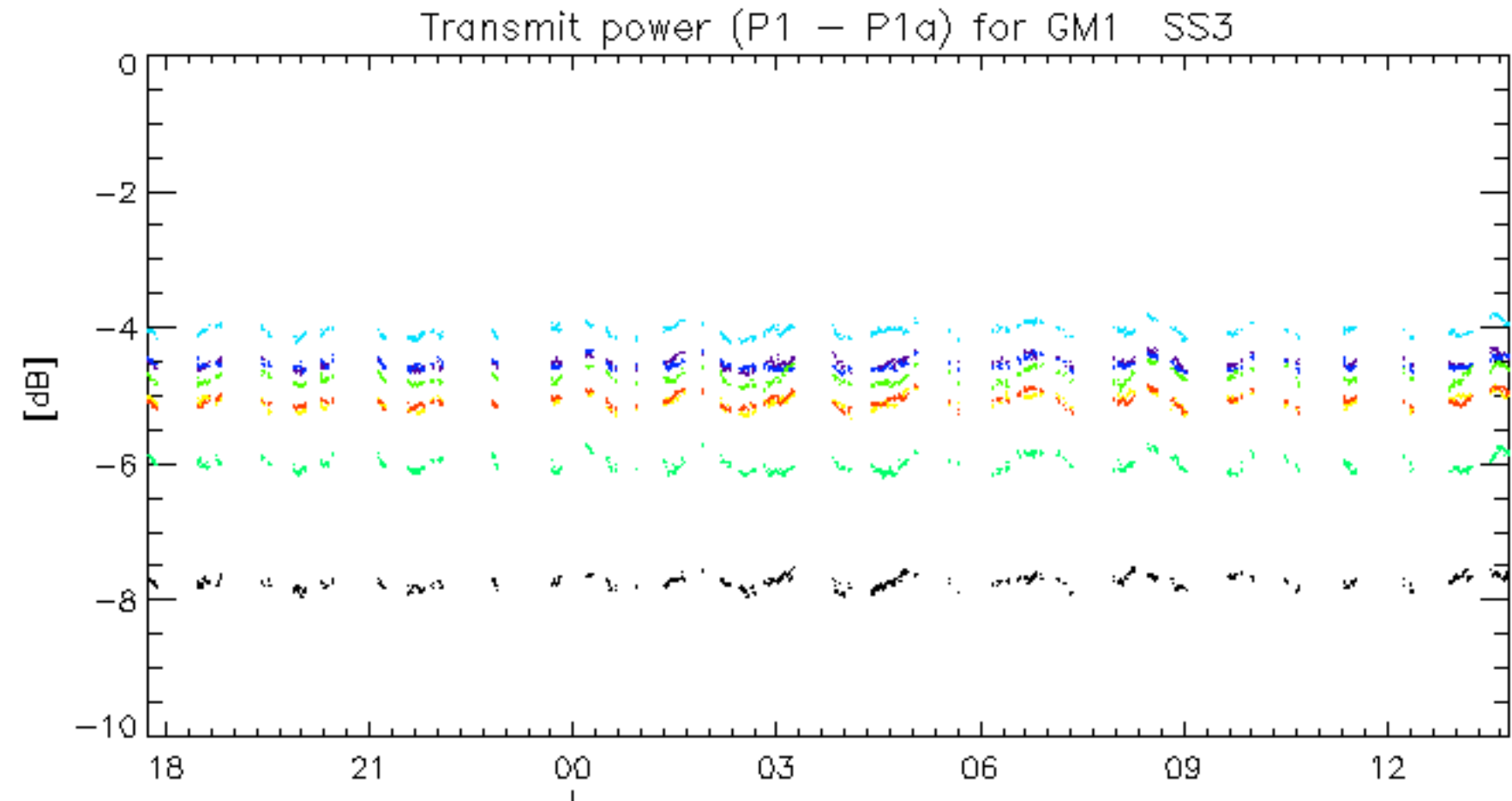
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070320_114001_000002562056_00309_26415_9412.N1	1	52
ASA_IMM_1PNPDK20070320_131732_000000812056_00310_26416_7792.N1	0	5
ASA_IMM_1PNPDK20070320_135505_000000602056_00311_26417_7788.N1	0	24
ASA_IMM_1PNPDK20070320_135505_000000792056_00311_26417_7798.N1	0	24
ASA_IMM_1PNPDK20070321_134012_000003212056_00325_26431_9071.N1	0	1
ASA_IMM_1PNPDK20070321_134114_000002592056_00325_26431_8917.N1	0	1
ASA_WSM_1PNPDE20070320_010734_000000852056_00303_26409_8706.N1	0	32
ASA_WSM_1PNPDE20070321_003657_000001402056_00317_26423_0187.N1	0	31
ASA_WSM_1PNPDE20070321_163800_000000972056_00327_26433_1254.N1	0	10
ASA_WSM_1PNPDE20070322_000619_000002022056_00331_26437_1723.N1	0	32
ASA_WSM_1PNPDK20070320_123133_000003062056_00310_26416_7660.N1	0	17
ASA_WSM_1PNPDK20070320_135308_000000852056_00311_26417_7800.N1	0	21
ASA_WSM_1PNPDK20070321_102446_000003002056_00323_26429_8662.N1	0	2
ASA_WSM_1PNPDK20070321_124220_000001332056_00324_26430_8919.N1	0	1
ASA_WSM_1PNPDK20070321_214927_000002322056_00330_26436_9457.N1	0	3
ASA_APM_1PNPDE20070320_021347_000000402056_00304_26410_8728.N1	14	0
ASA_APM_1PNPDK20070320_084923_000000402056_00308_26414_7265.N1	15	257





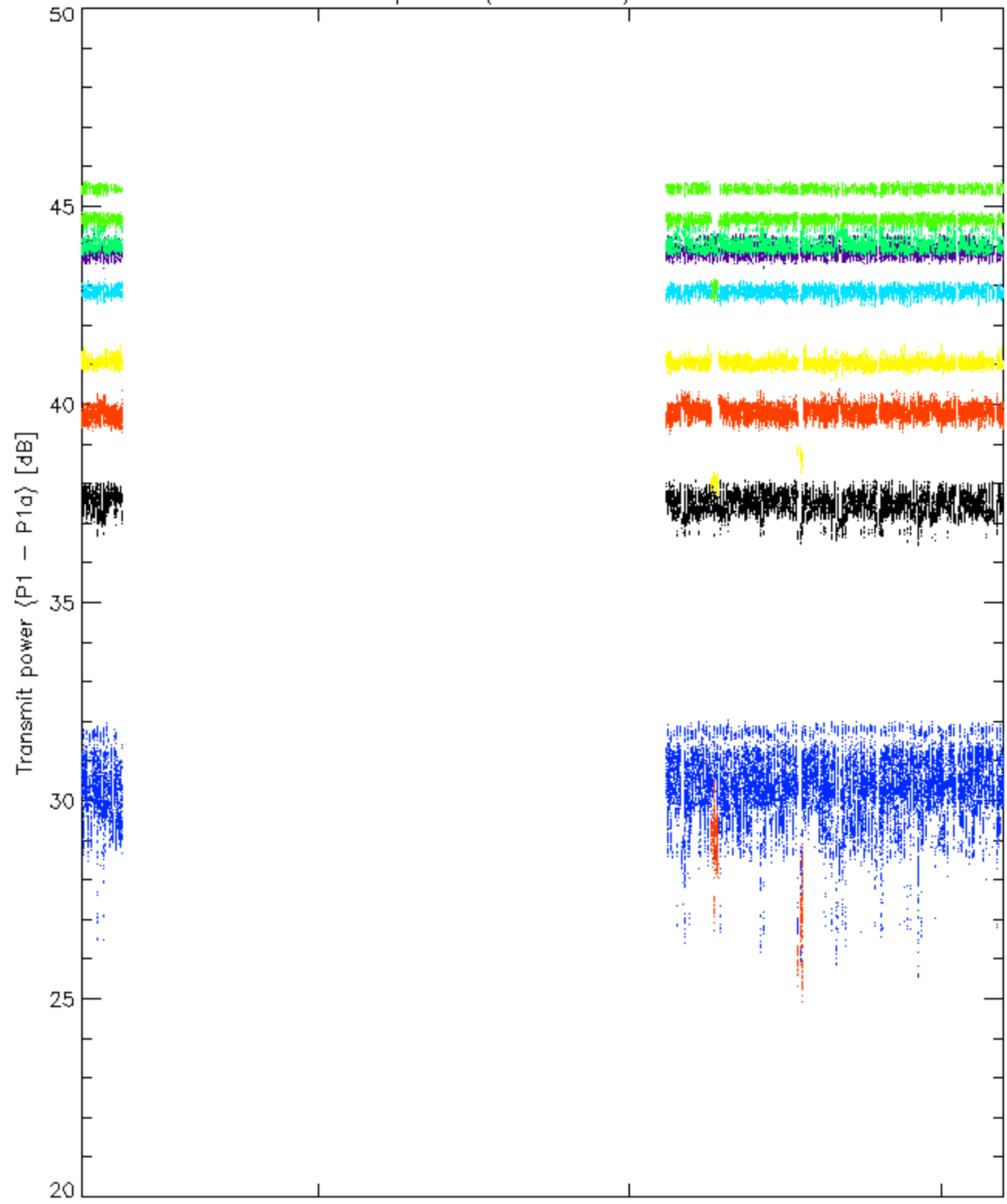


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



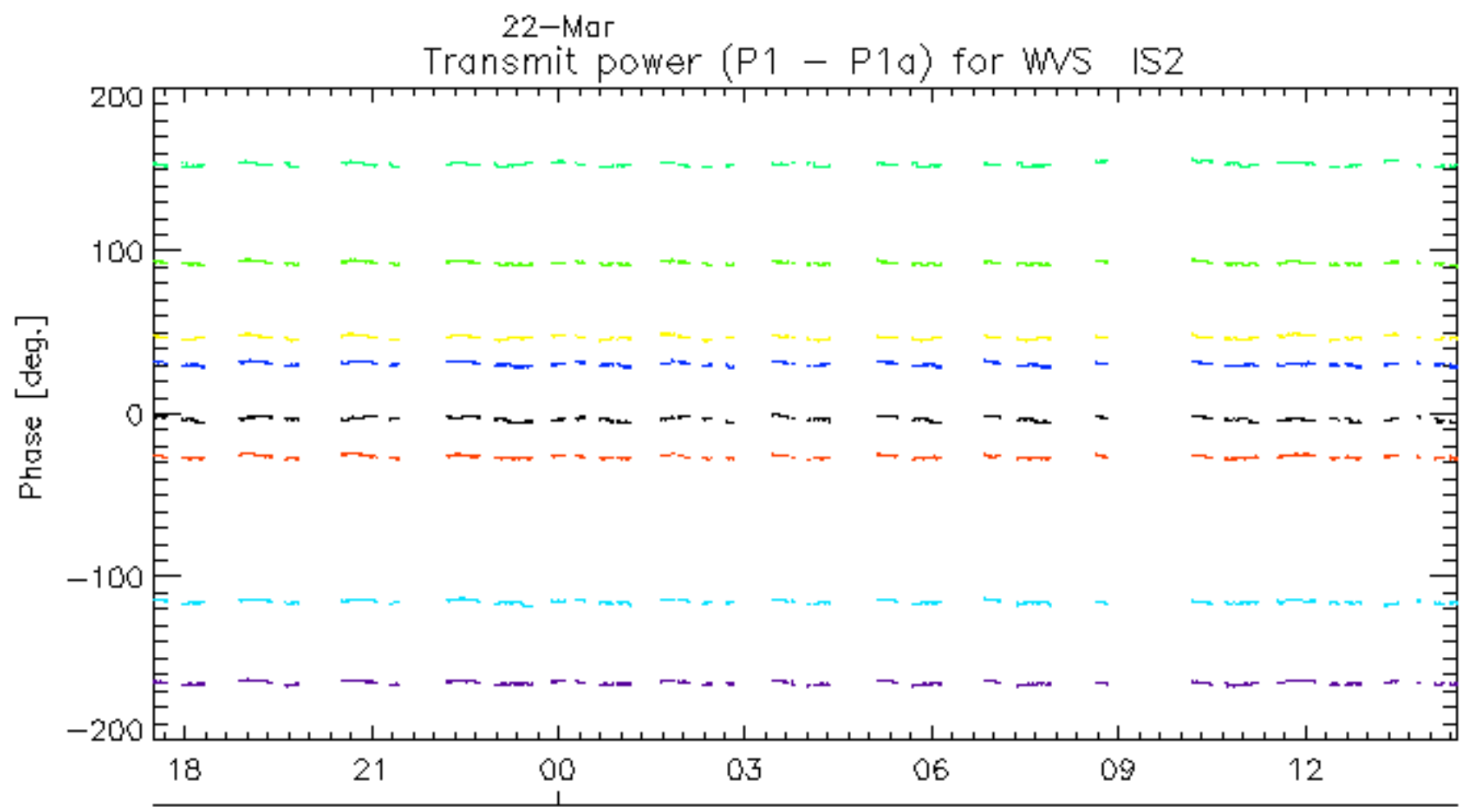
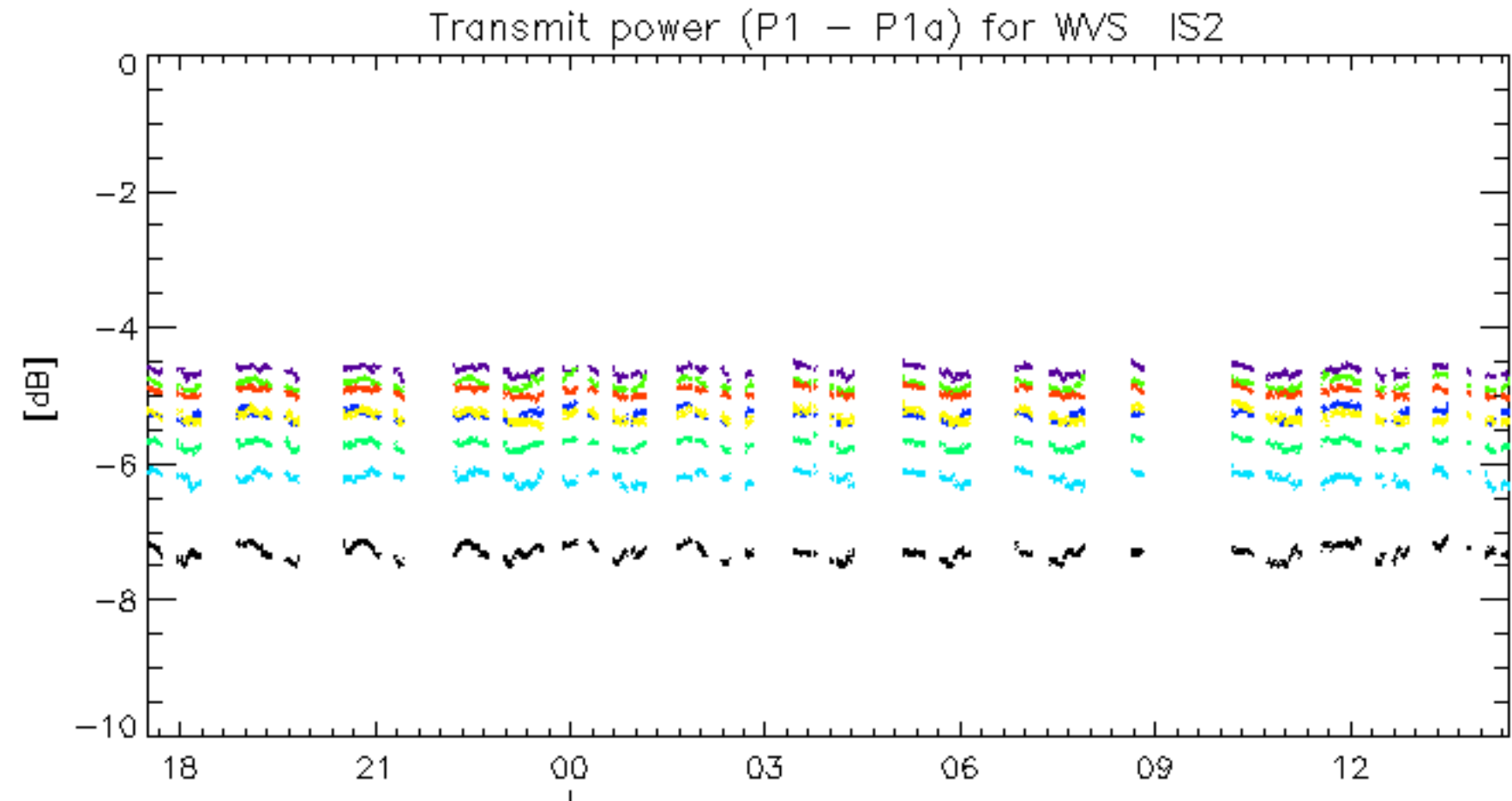
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



26

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



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

No unavailabilities during the reported period.