

PRELIMINARY REPORT OF 051007

last update on Fri Oct 7 16:37:52 GMT 2005

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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 2005-10-06 00:00:00 to 2005-10-07 16:37:52

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	40	66	11	1	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	40	66	11	1	0
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	40	66	11	1	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	40	66	11	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	40	56	30	11	44
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	40	56	30	11	44
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	40	56	30	11	44
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	40	56	30	11	44

2.3 - Browse Visual Inspection

No anomalies detected

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	20051005 043738
H	20051004 050915

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

MSM in H/H polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
<input type="checkbox"/>
<input type="checkbox"/>

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.538343	0.072368	-0.144909
7	P1	-2.991999	0.038470	0.479171
11	P1	-4.291007	0.148705	1.067436
15	P1	-5.924016	0.045905	-0.489320
19	P1	-3.239368	0.181504	0.646464
22	P1	-4.502139	0.024075	0.294383
26	P1	-4.484205	0.109518	0.887960
30	P1	-6.050464	0.512047	1.893385
3	P1	-15.859102	1.962924	1.228045
7	P1	-16.718203	5.130210	0.975891
11	P1	-18.451952	13.888243	9.705919
15	P1	-13.684576	10.062852	-0.184278
19	P1	-13.763877	0.262658	1.035319
22	P1	-17.321100	24.958315	3.117129
26	P1	-17.866198	23.258209	5.152933
30	P1	-17.656488	9.695504	4.484020

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.823809	0.103571	-0.226241
7	P2	-22.529514	0.270332	-1.024980
11	P2	-15.998992	2.397758	-4.131262
15	P2	-7.200039	0.119619	-0.130910
19	P2	-9.187034	0.202414	0.307308
22	P2	-17.422962	0.254190	-1.292973
26	P2	-16.210331	0.135943	0.626529
30	P2	-19.447399	0.227428	-0.934792

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.174010	0.004756	-0.031864
7	P3	-8.174010	0.004756	-0.031864
11	P3	-8.174010	0.004756	-0.031864
15	P3	-8.174010	0.004756	-0.031864
19	P3	-8.174010	0.004756	-0.031864
22	P3	-8.174010	0.004756	-0.031864
26	P3	-8.174010	0.004756	-0.031864
30	P3	-8.174010	0.004756	-0.031864

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.313135	0.289943	-1.462616
7	P1	-2.949822	0.072133	0.372449
11	P1	-3.221927	0.310258	1.709933
15	P1	-3.474209	0.033683	0.384331
19	P1	-3.348866	0.069269	0.169155
22	P1	-5.190979	0.185190	0.404950
26	P1	-5.992850	0.724799	1.478307
30	P1	-5.337579	0.416275	0.952741
3	P1	-11.498679	0.481034	0.097986
7	P1	-11.544368	22.044249	5.061404
11	P1	-12.709419	42.990135	9.343831
15	P1	-12.767566	37.375786	6.965334
19	P1	-15.311419	0.230760	-0.357945
22	P1	-21.805553	5.902637	6.663222

26	P1	-17.251059	5.753971	-0.439531
30	P1	-19.519651	1.979568	2.512358

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.618214	0.062384	-0.446273
7	P2	-22.808018	0.298838	-1.242116
11	P2	-11.205118	1.006164	-2.808759
15	P2	-4.937271	0.048477	0.277123
19	P2	-6.780150	0.119383	-0.364436
22	P2	-7.765462	0.254155	-1.508612
26	P2	-23.880688	0.043284	0.174272
30	P2	-22.073877	0.062560	0.004630

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.016651	0.002917	-0.032628
7	P3	-8.016706	0.002921	-0.033037
11	P3	-8.016462	0.002923	-0.033018
15	P3	-8.016558	0.002924	-0.033125
19	P3	-8.016759	0.002917	-0.032714
22	P3	-8.016475	0.002924	-0.033044
26	P3	-8.016766	0.002921	-0.033036
30	P3	-8.016616	0.002931	-0.032719

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	0.000527659
	stdev	1.86489e-07
MEAN Q	mean	0.000521838
	stdev	2.19304e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135018
	stdev	0.00110005
STDEV Q	mean	0.135336
	stdev	0.00111527



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005100[567]

The assumptions 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_1PNPDK20051005_103508_000005862041_00223_18814_7480.N1	0	15
ASA_WSM_1PNPDE20051005_015357_000001592041_00218_18809_2400.N1	0	48
ASA_WSM_1PNPDE20051005_165617_000001592041_00227_18818_2484.N1	0	65
ASA_WSM_1PNPDE20051006_044316_000003062041_00234_18825_2610.N1	0	53
ASA_WSM_1PNPDE20051006_162645_000001762041_00241_18832_2652.N1	0	44



ASA_WSM_1PNPDE20051006_180926_000001832041_00242_18833_2673.N1	0	19
ASA_WSM_1PNPDE20051006_184205_000000852041_00242_18833_2698.N1	0	1
ASA_WSM_1PNPDE20051007_013227_000002392041_00246_18837_2779.N1	0	55





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

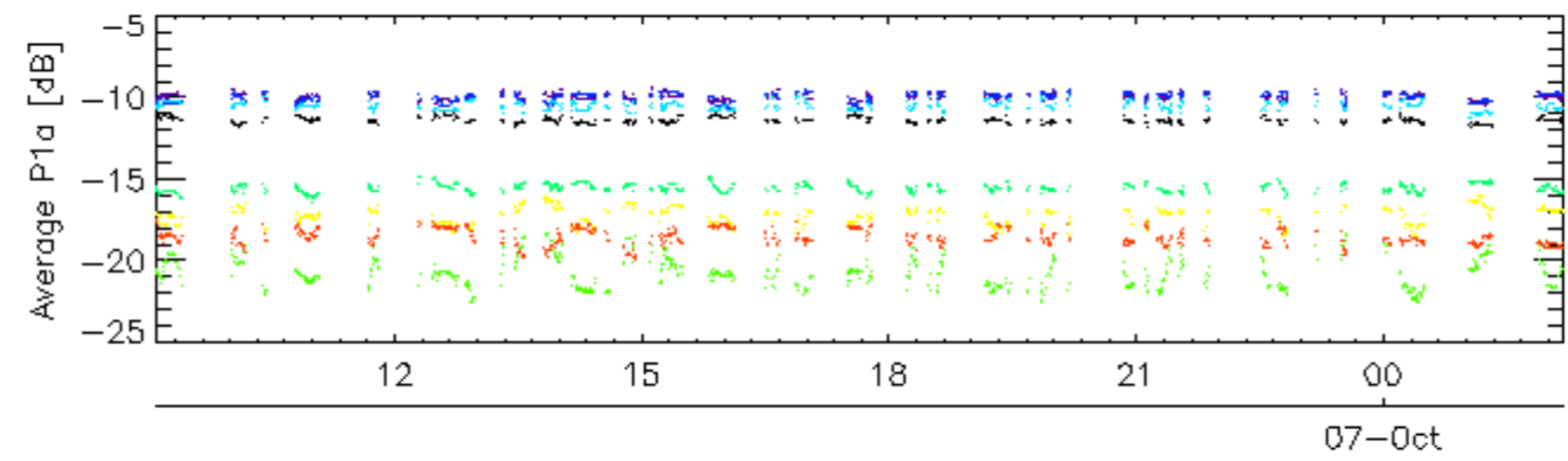
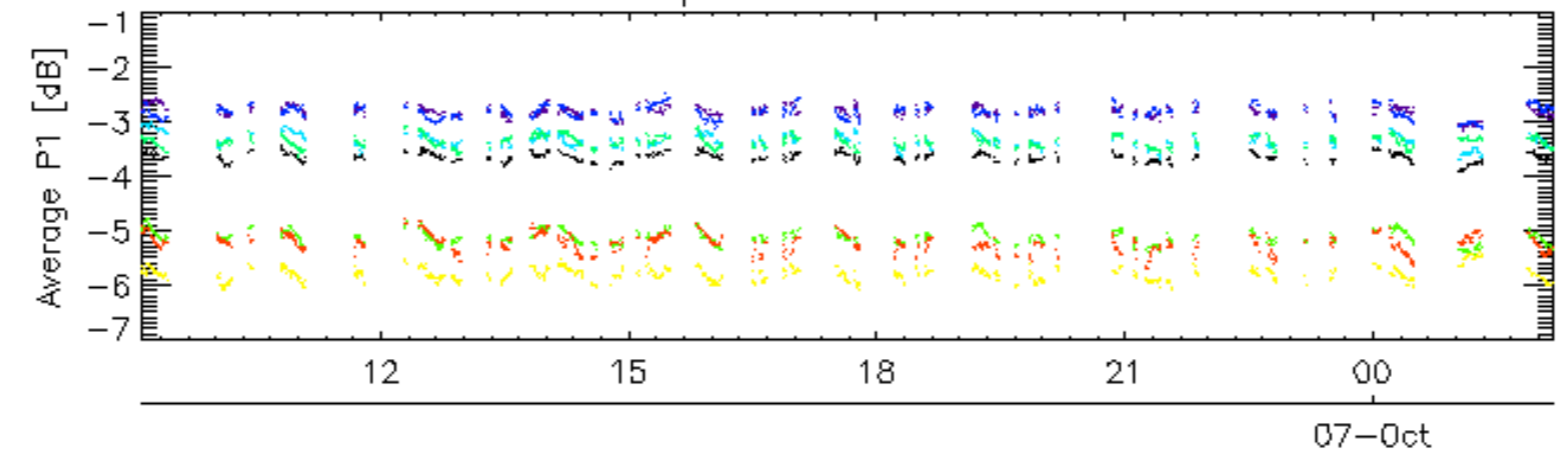
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler	
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

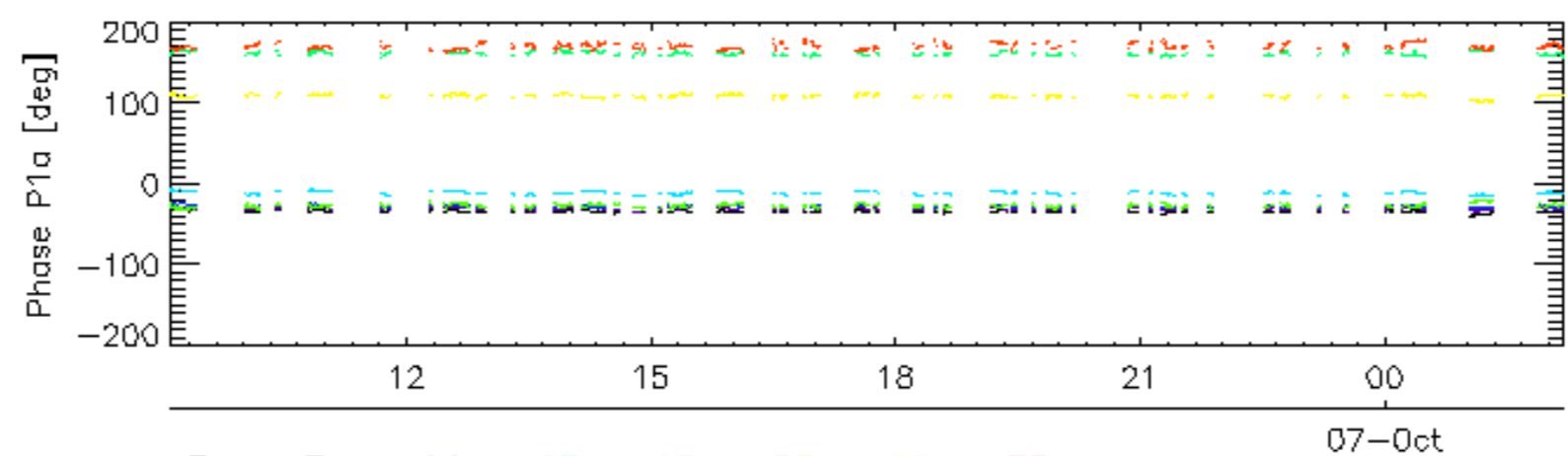
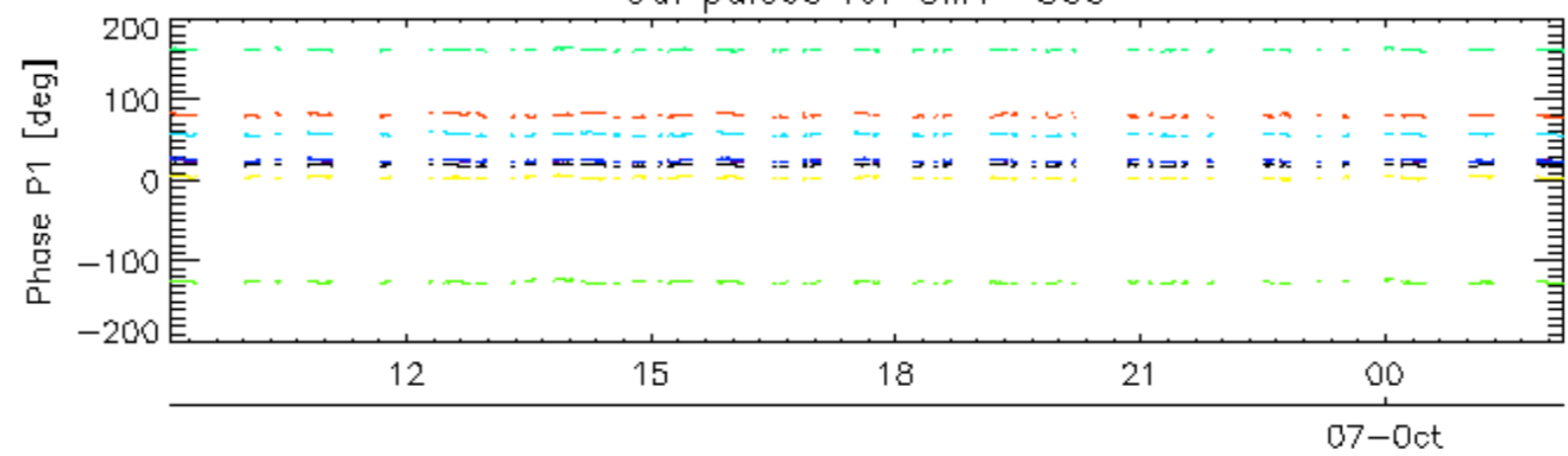
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX	
<input type="checkbox"/>	

Cal pulses for GM1 SS3

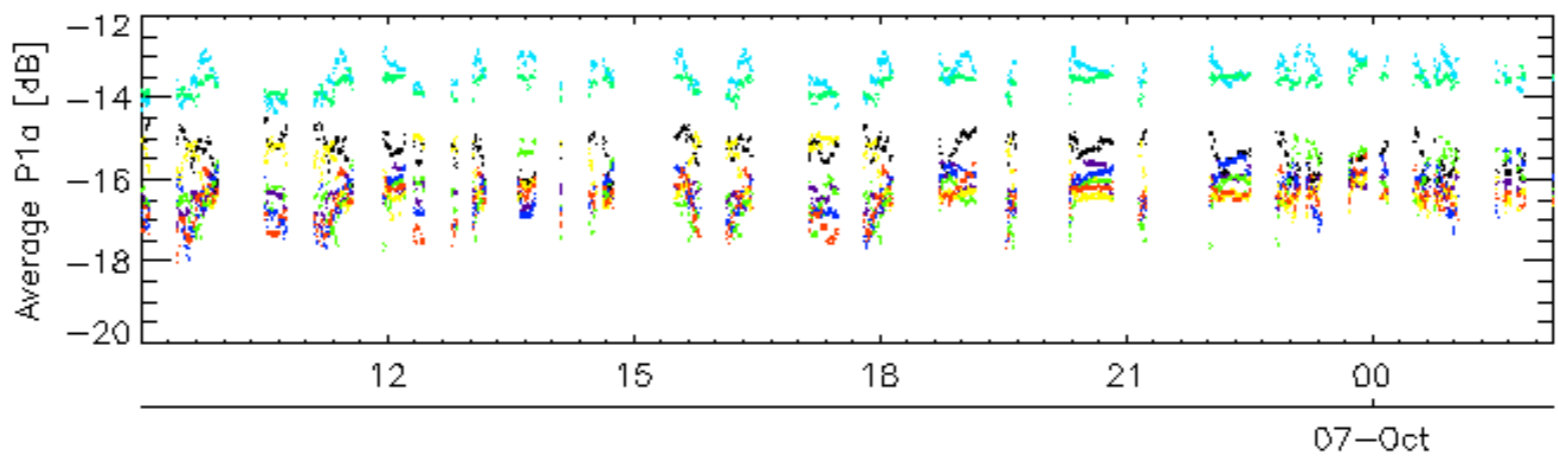
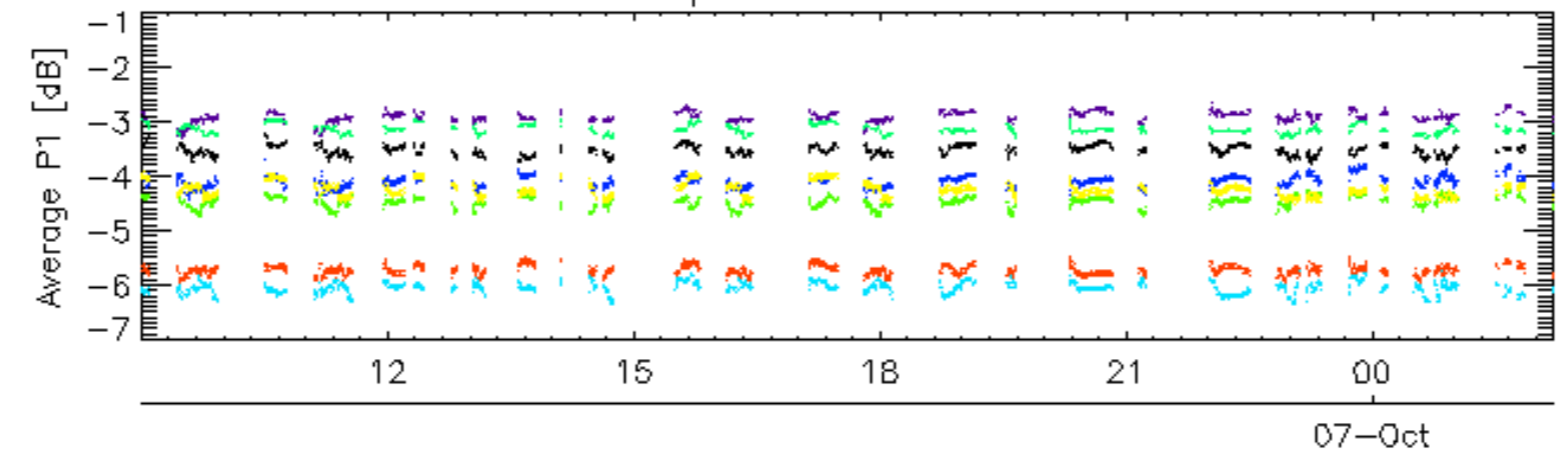


Cal pulses for GM1 SS3

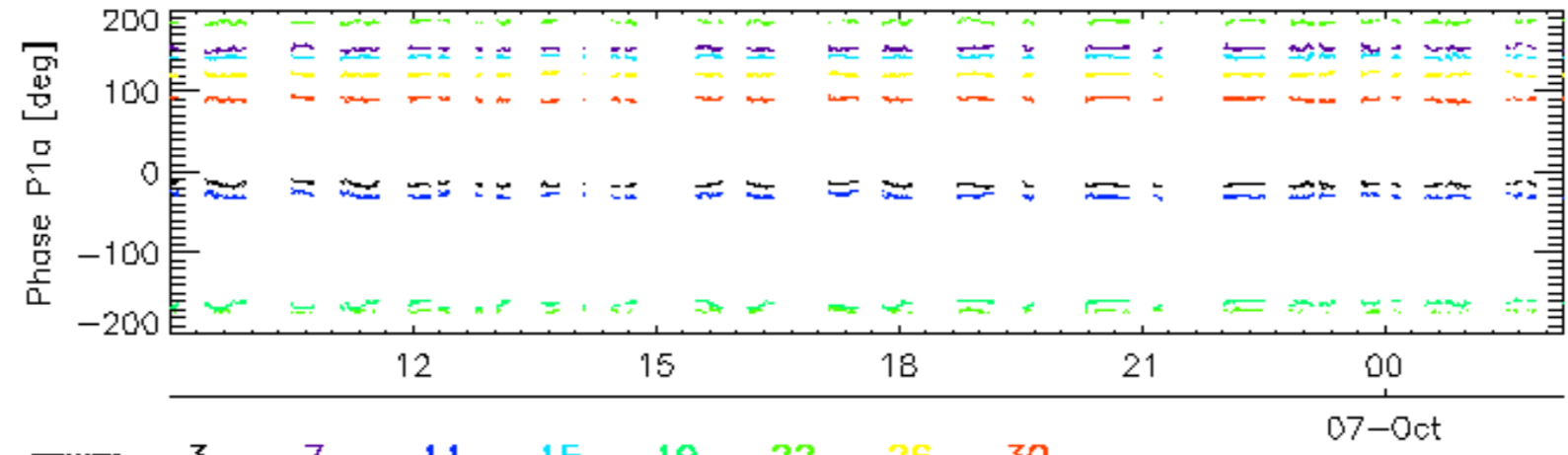
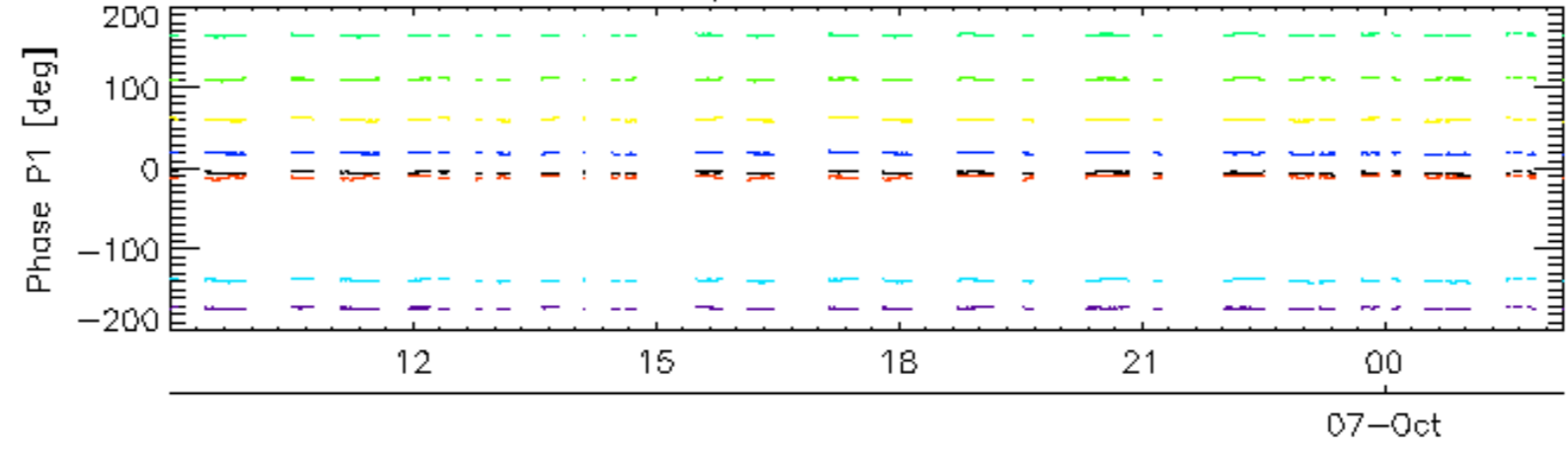


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

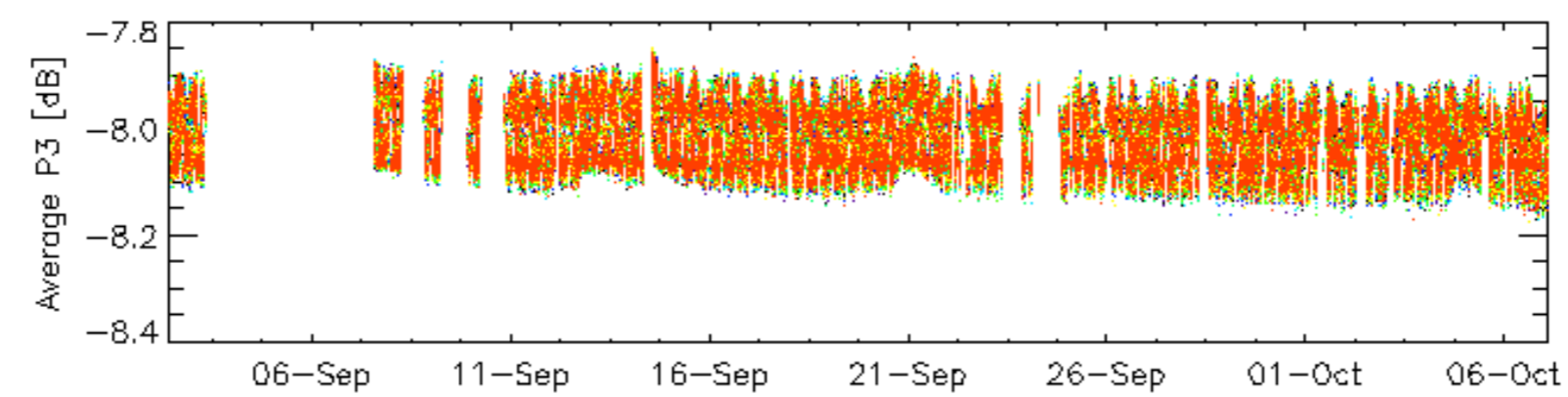
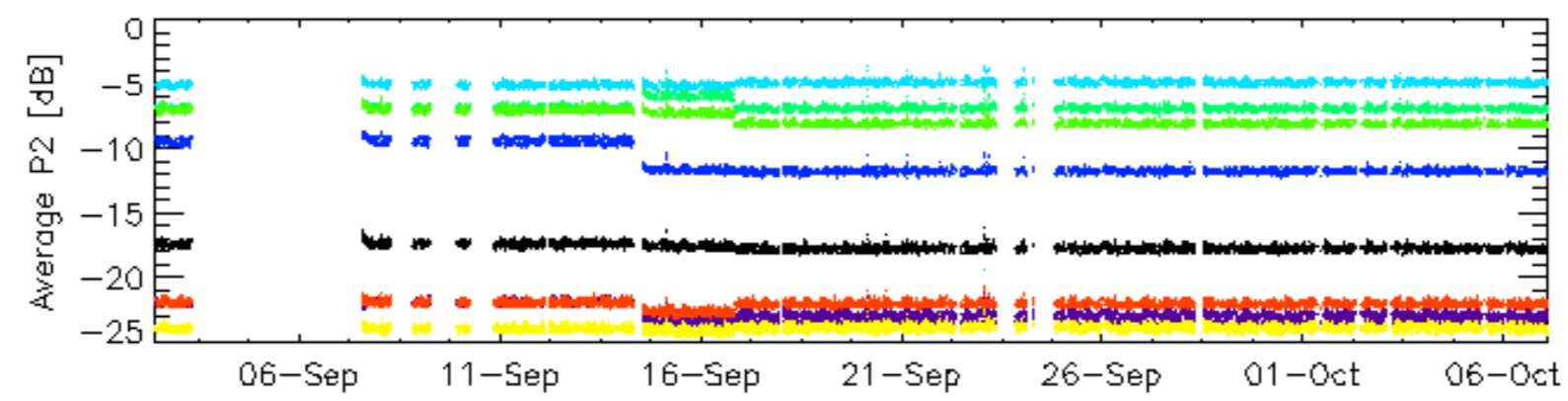
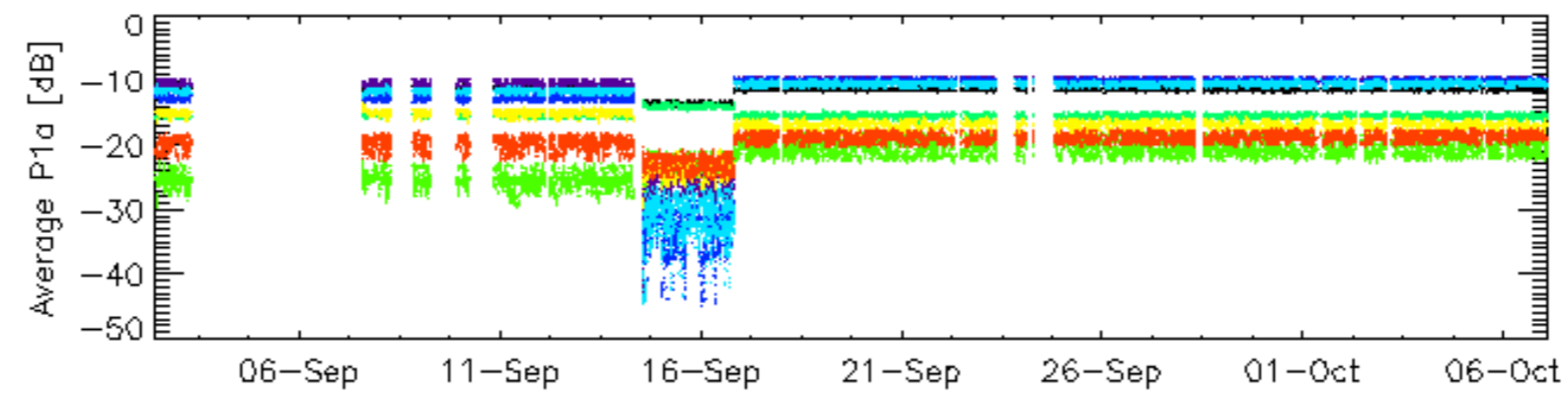
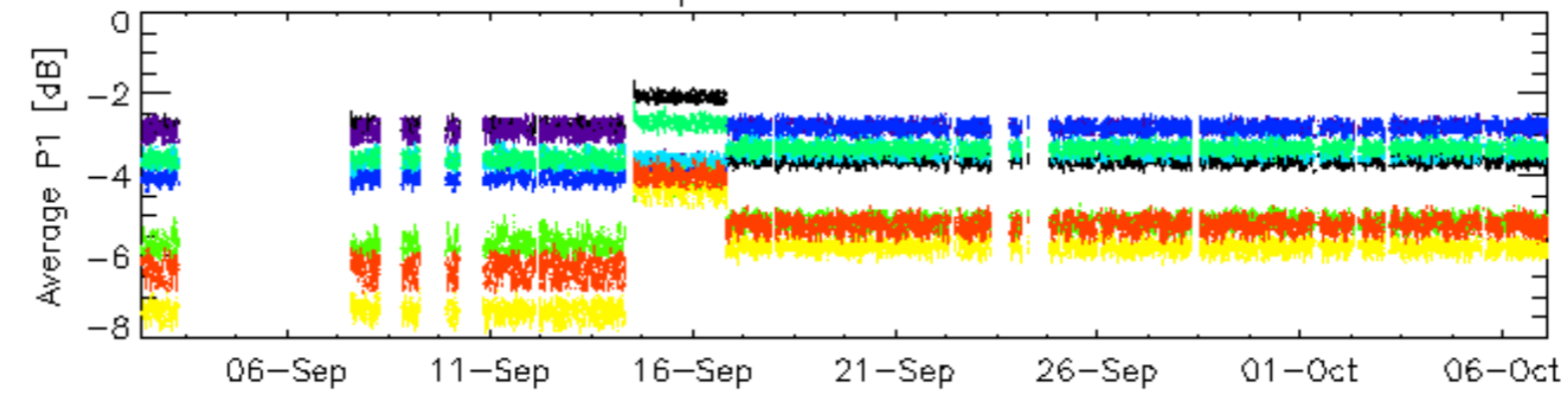


Cal pulses for WVS IS2



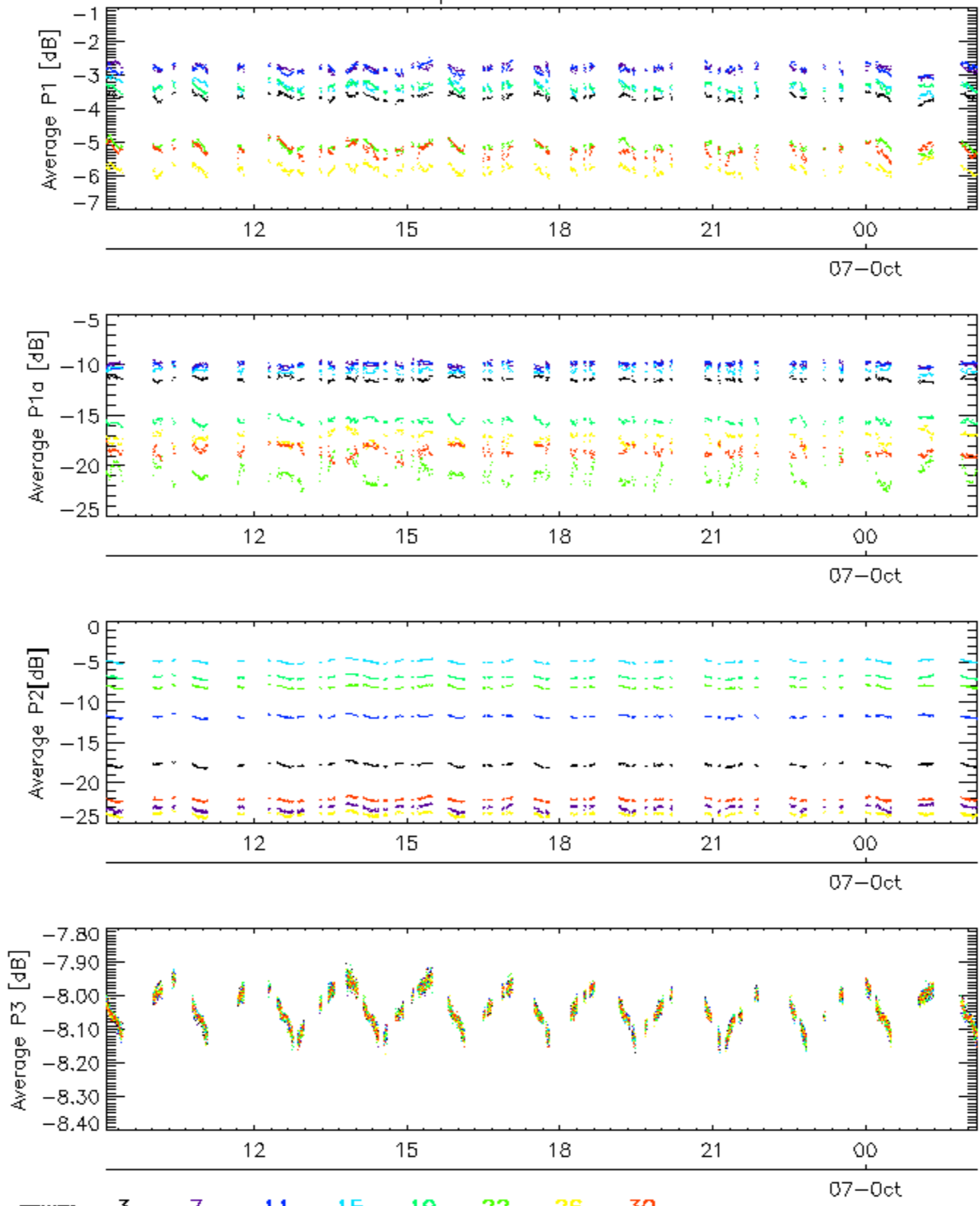
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

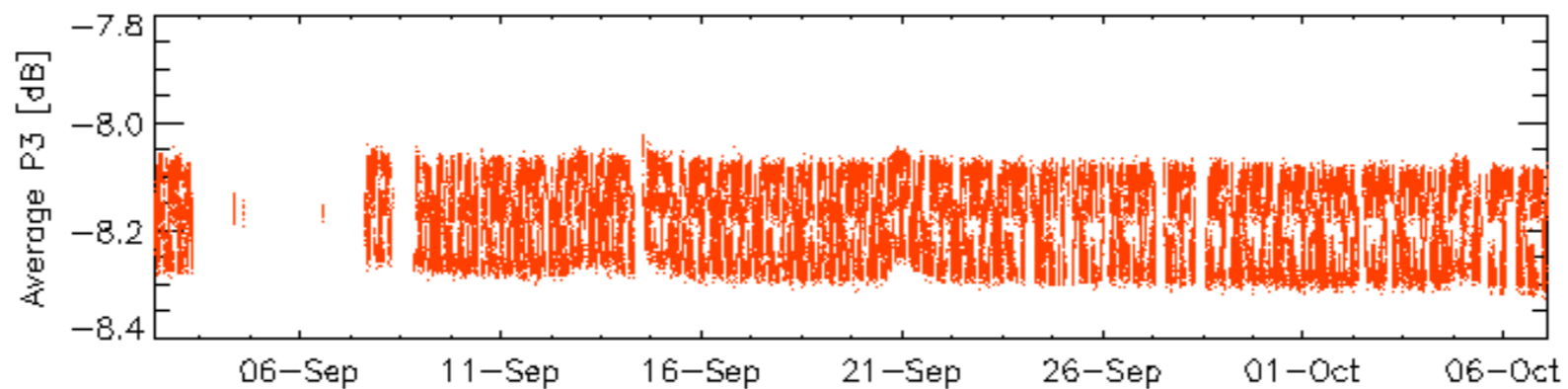
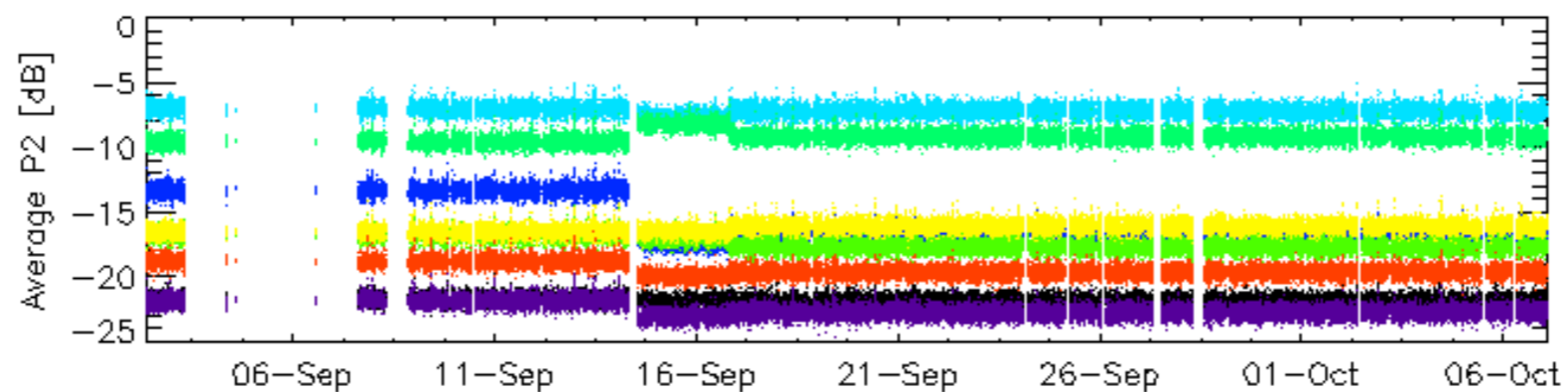
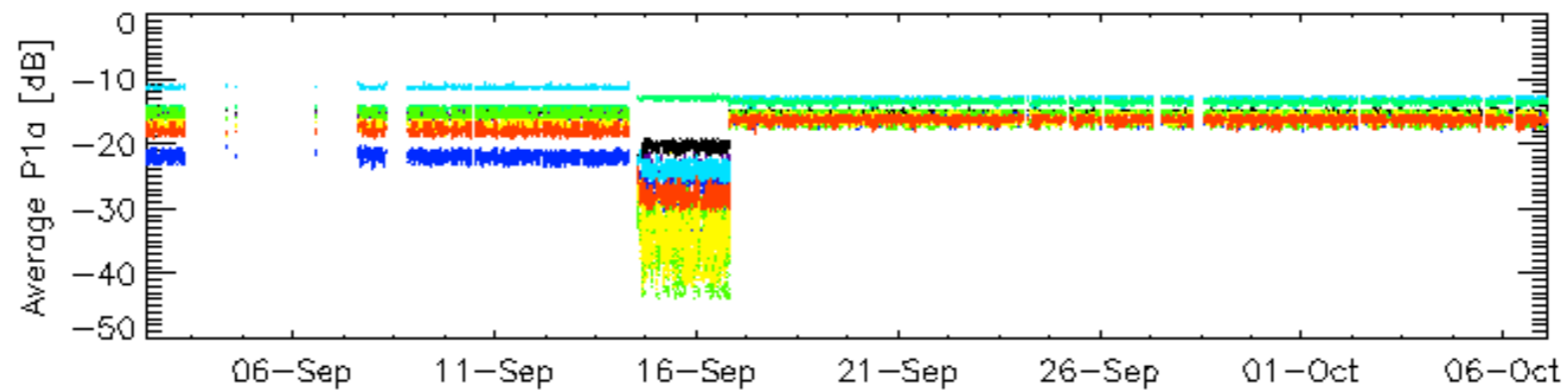
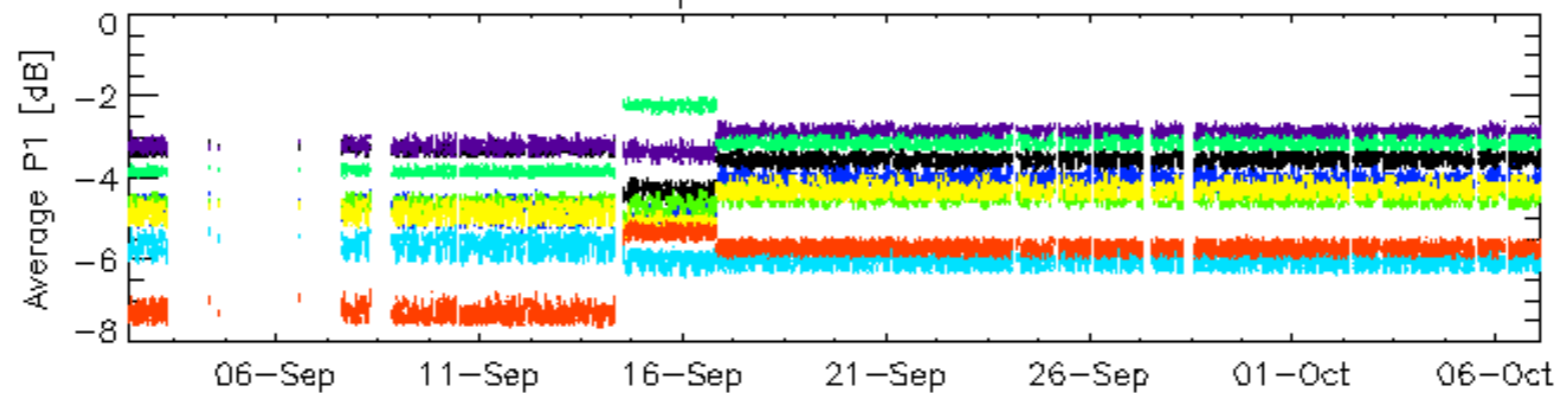


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

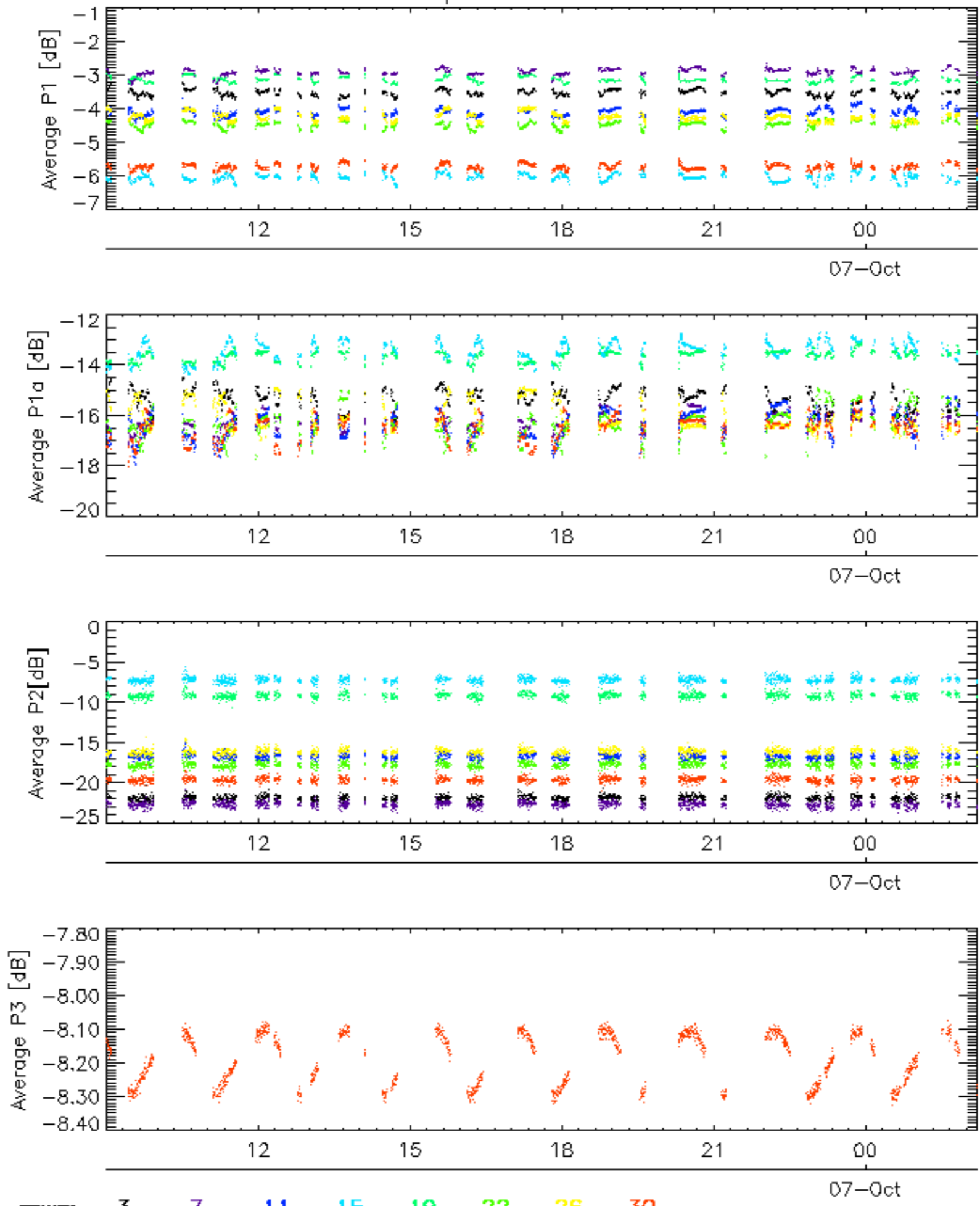


Cal pulses for WVS IS2



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

Cal pulses for WVS IS2

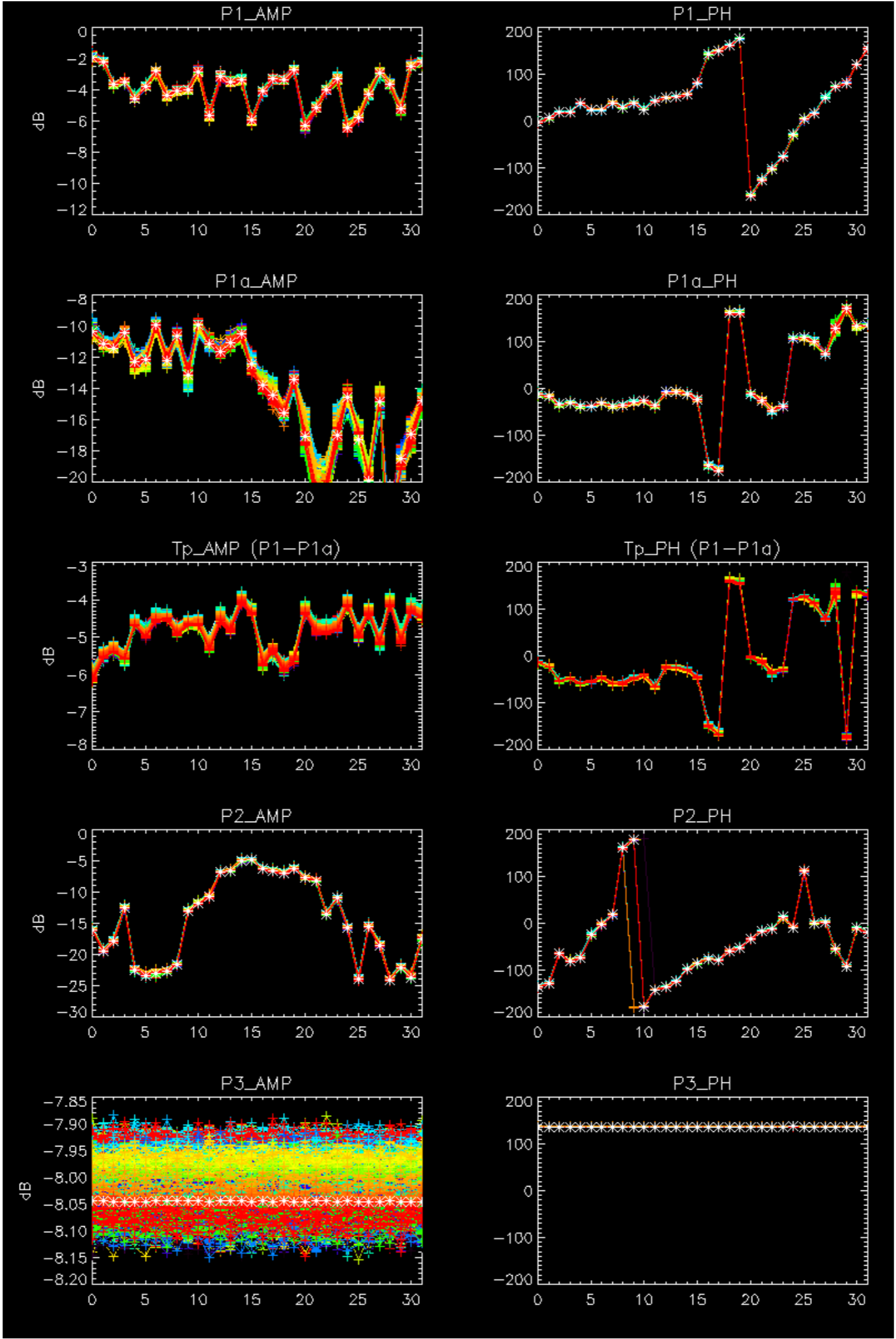


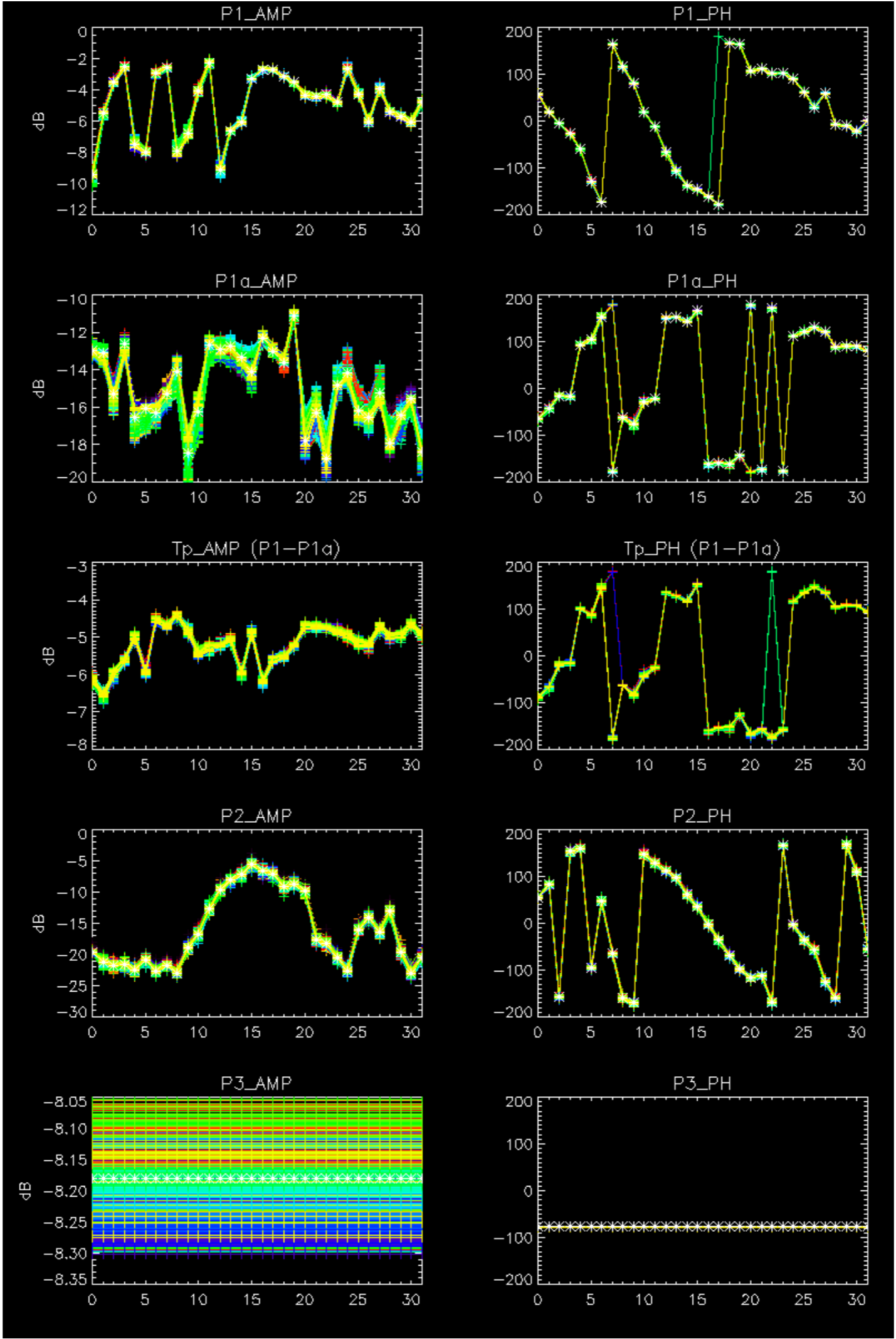
rows: 3 7 11 15 19 22 26 30

No anomalies detected



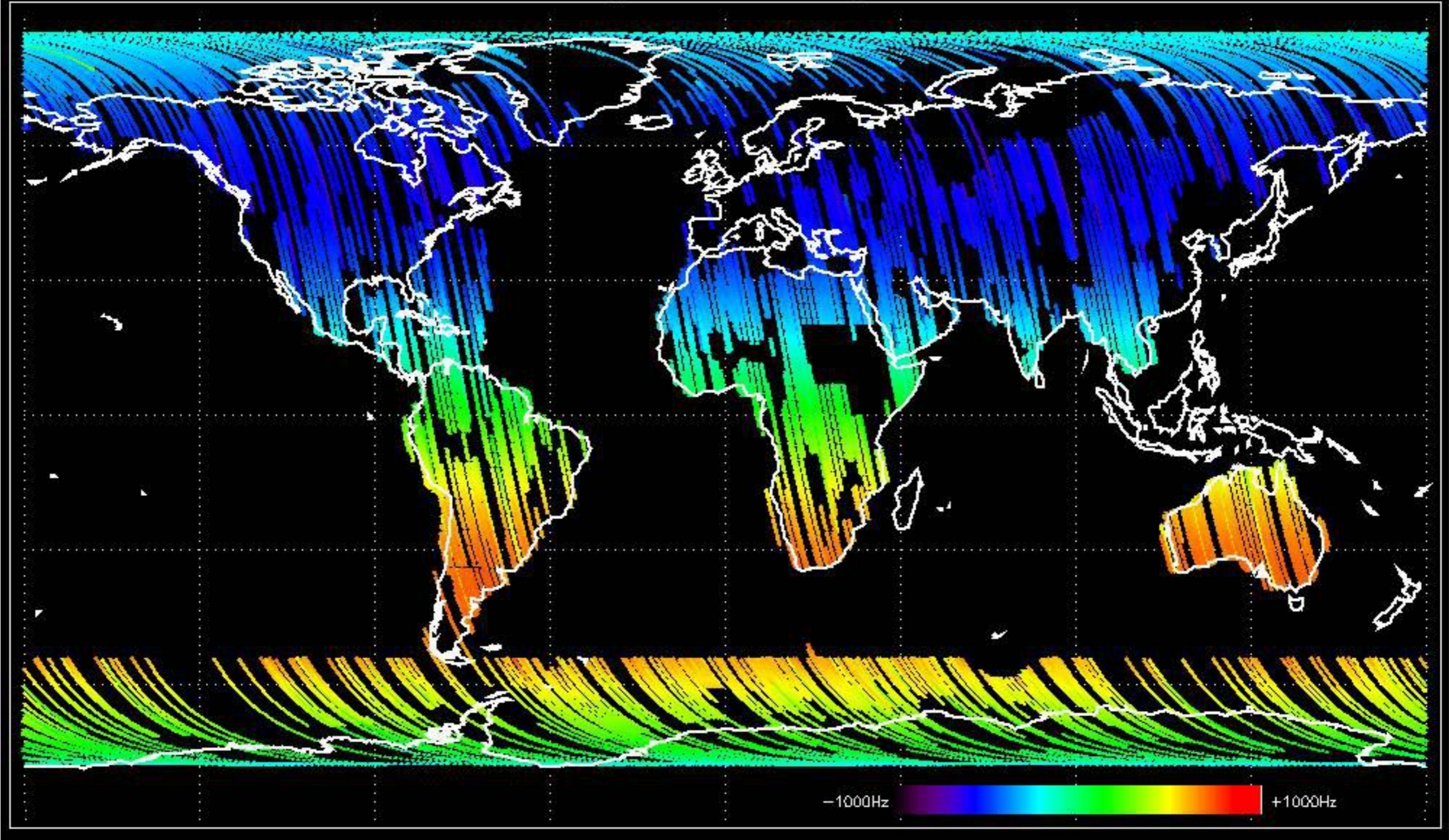
No anomalies observed.



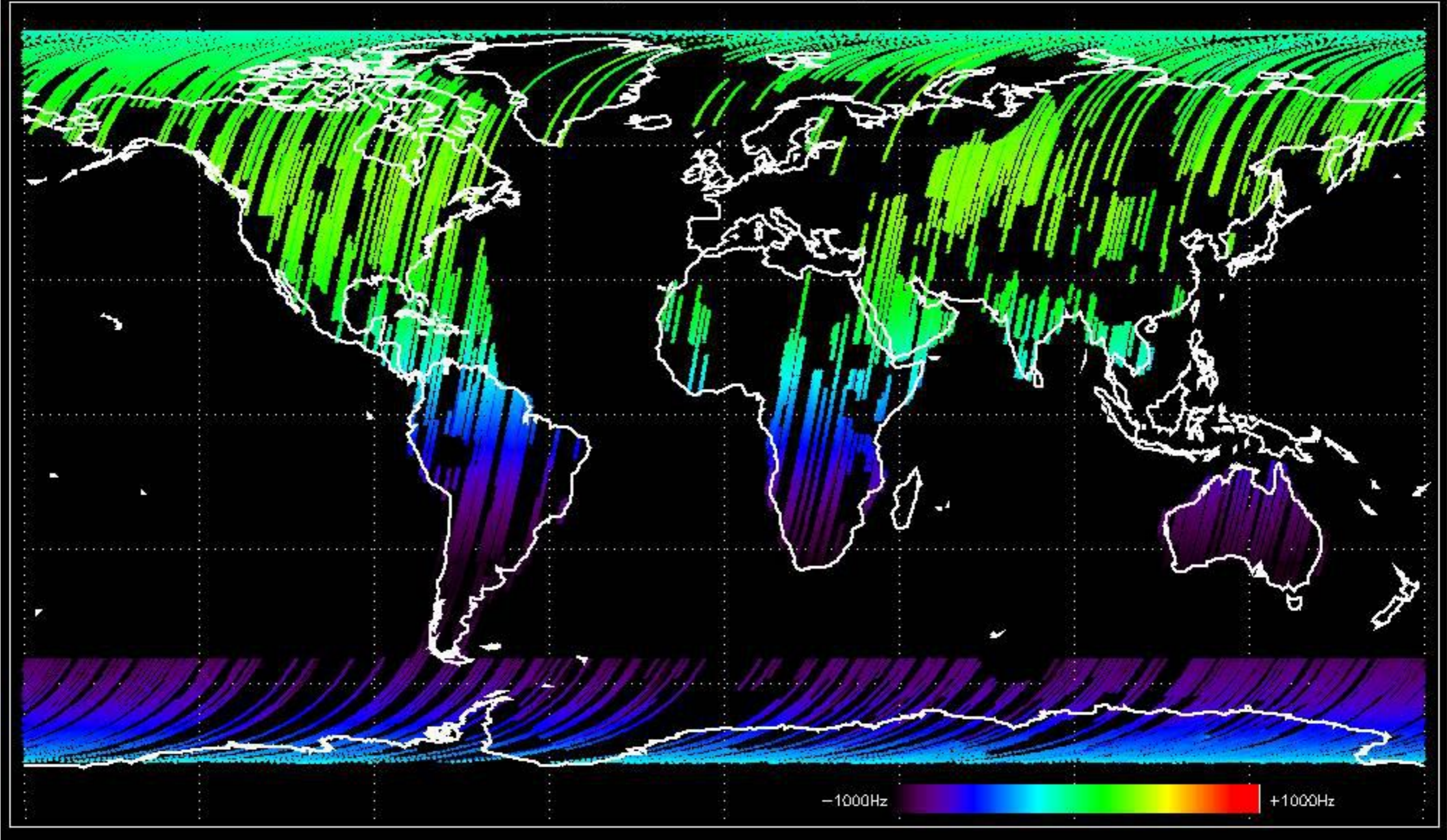


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

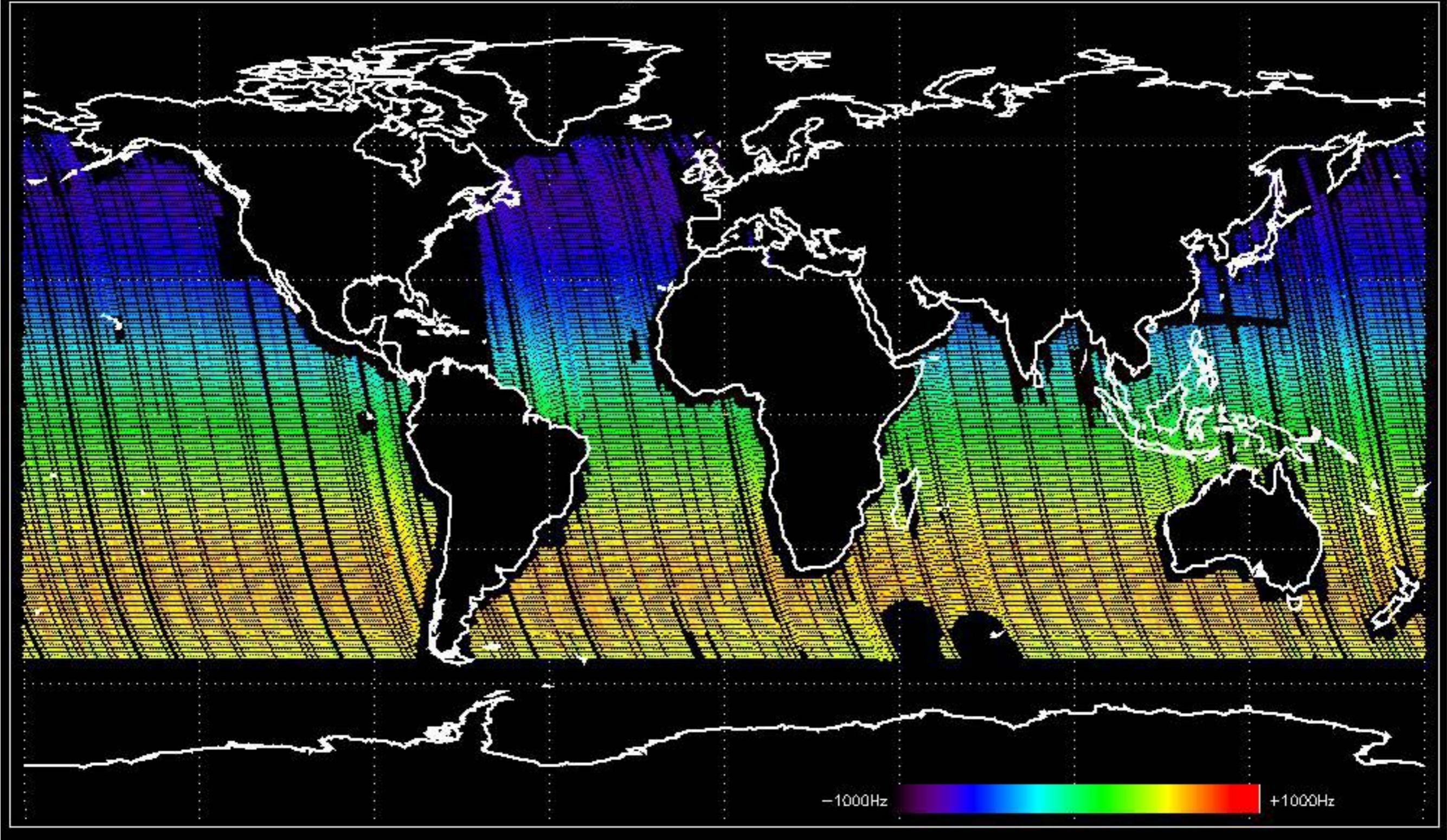
Doppler 'GM1' 'SS1' ascending



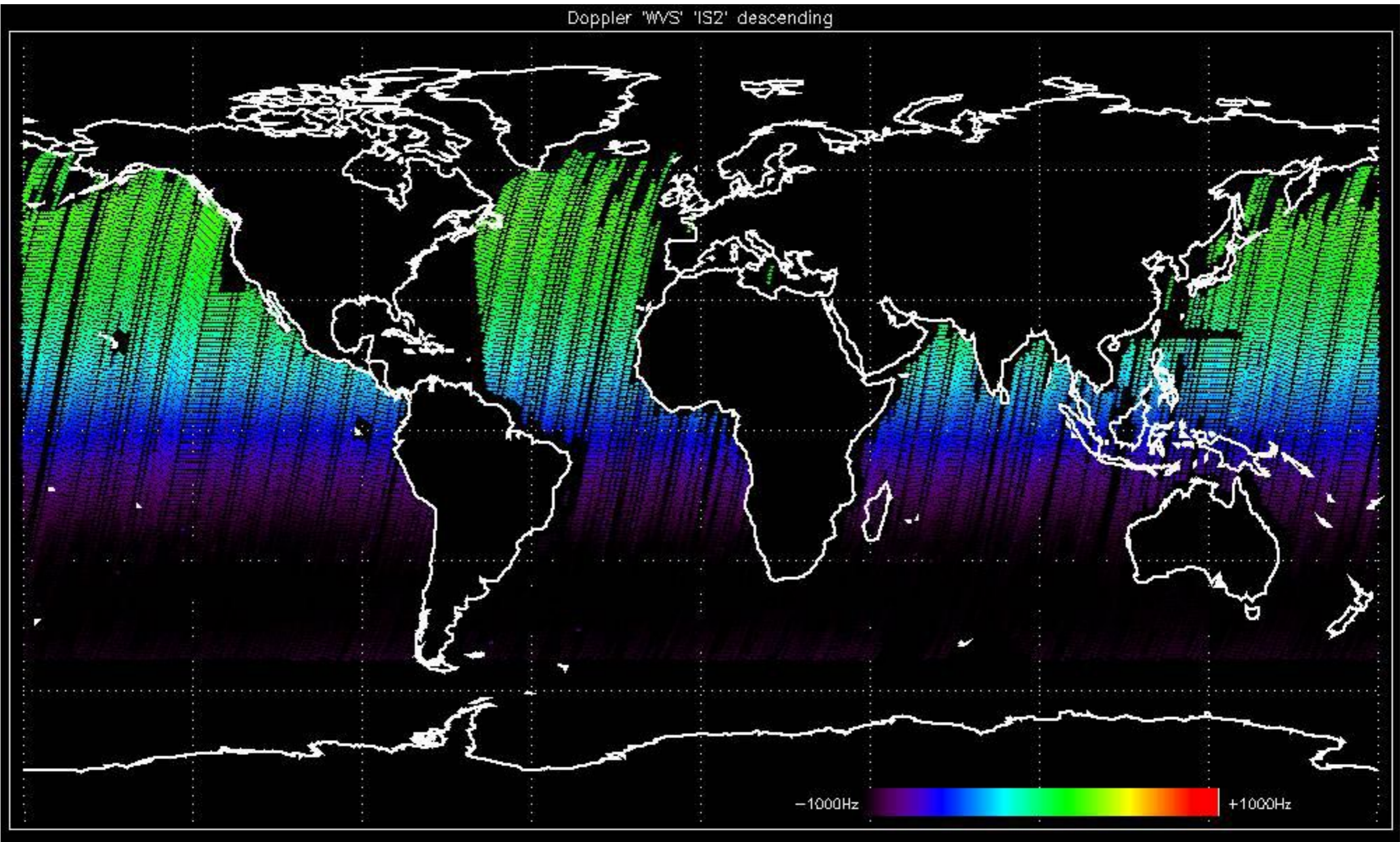
Doppler 'GM1' 'SS1' descending



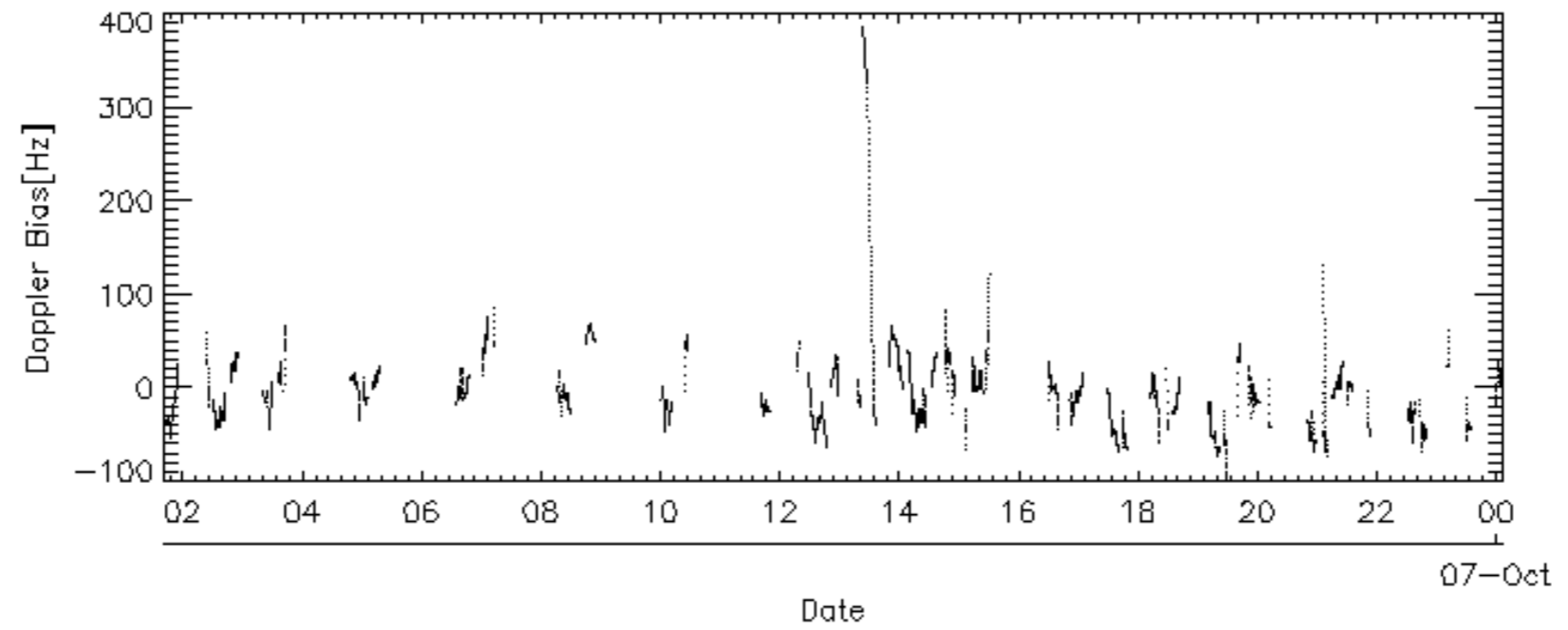
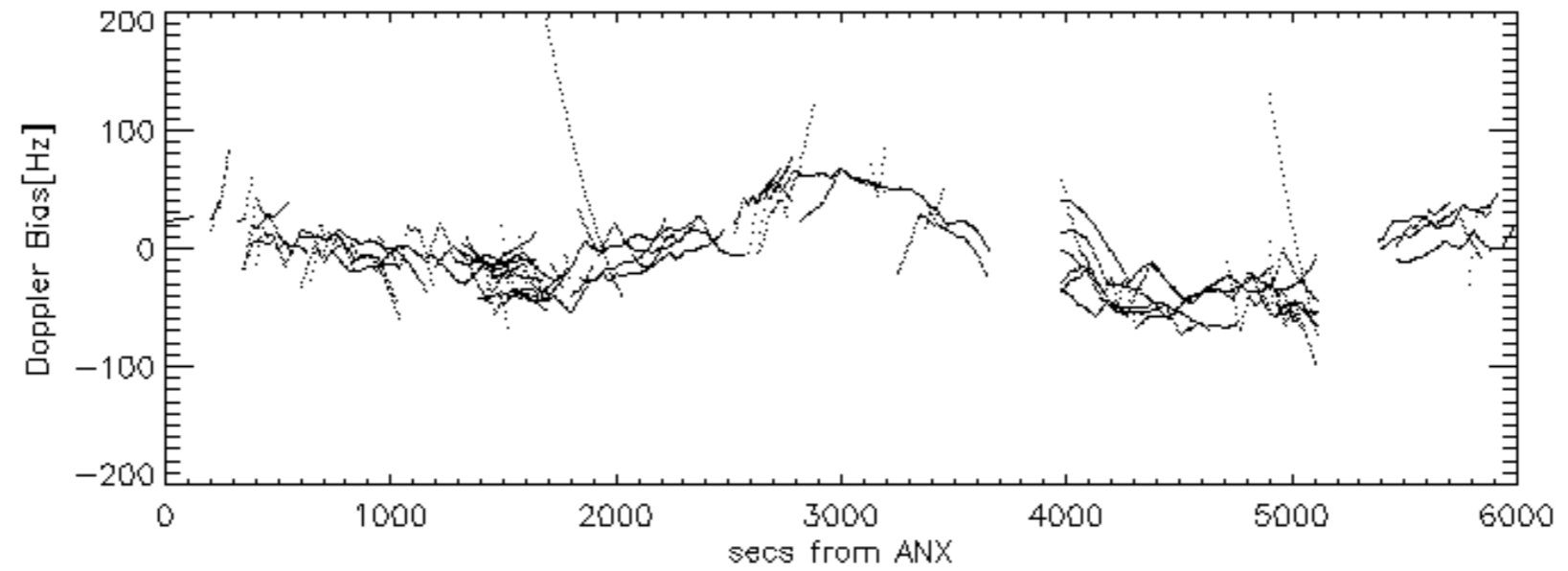
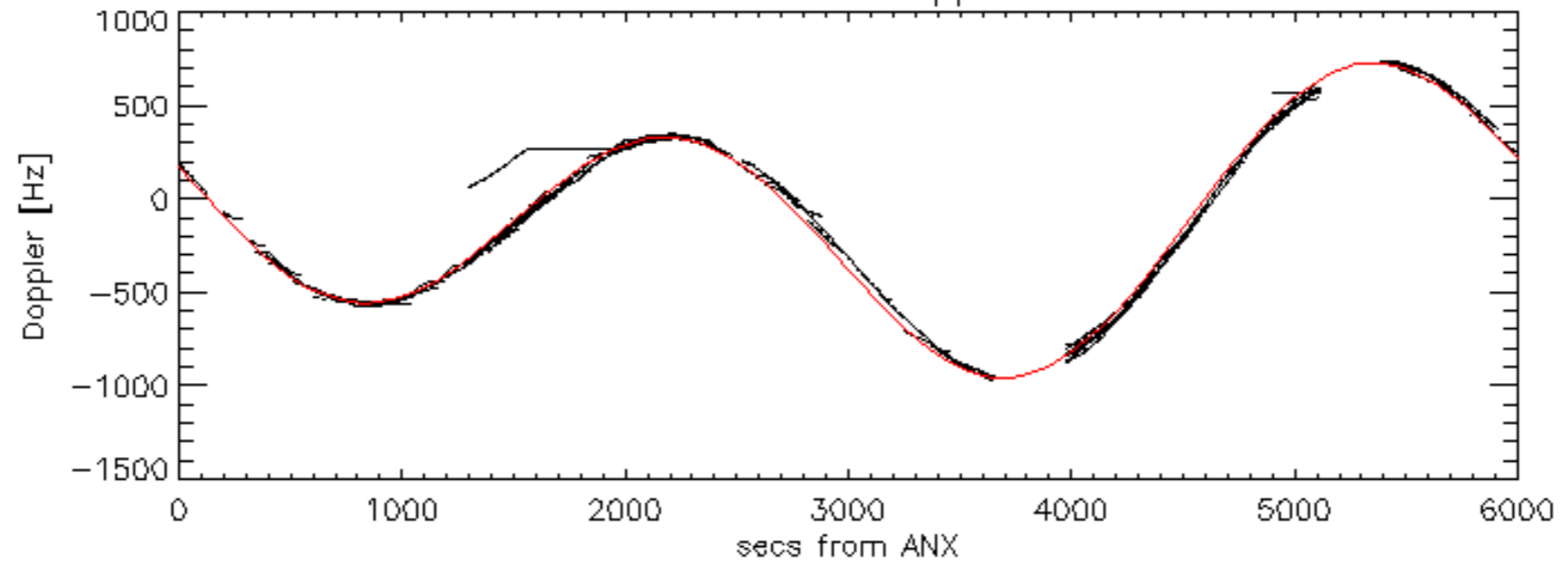
Doppler 'WVS' 'IS2' ascending

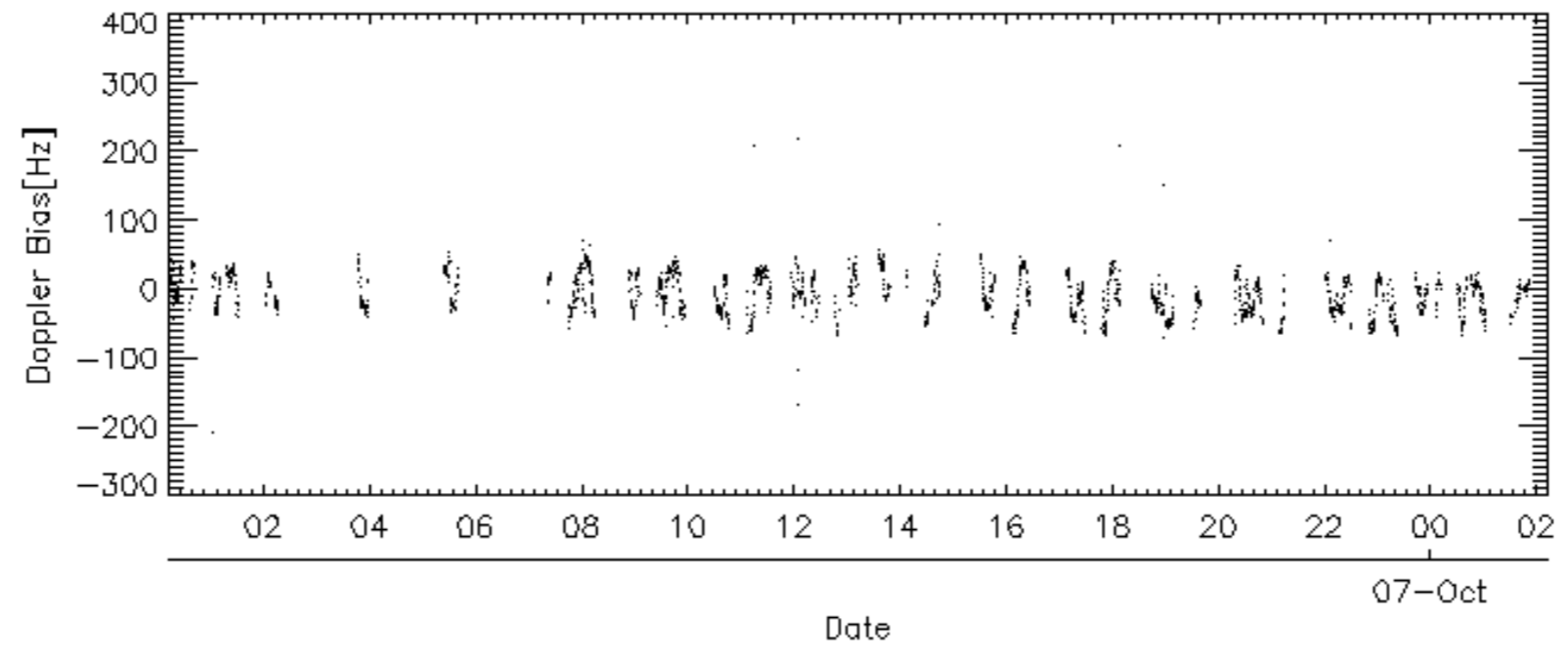
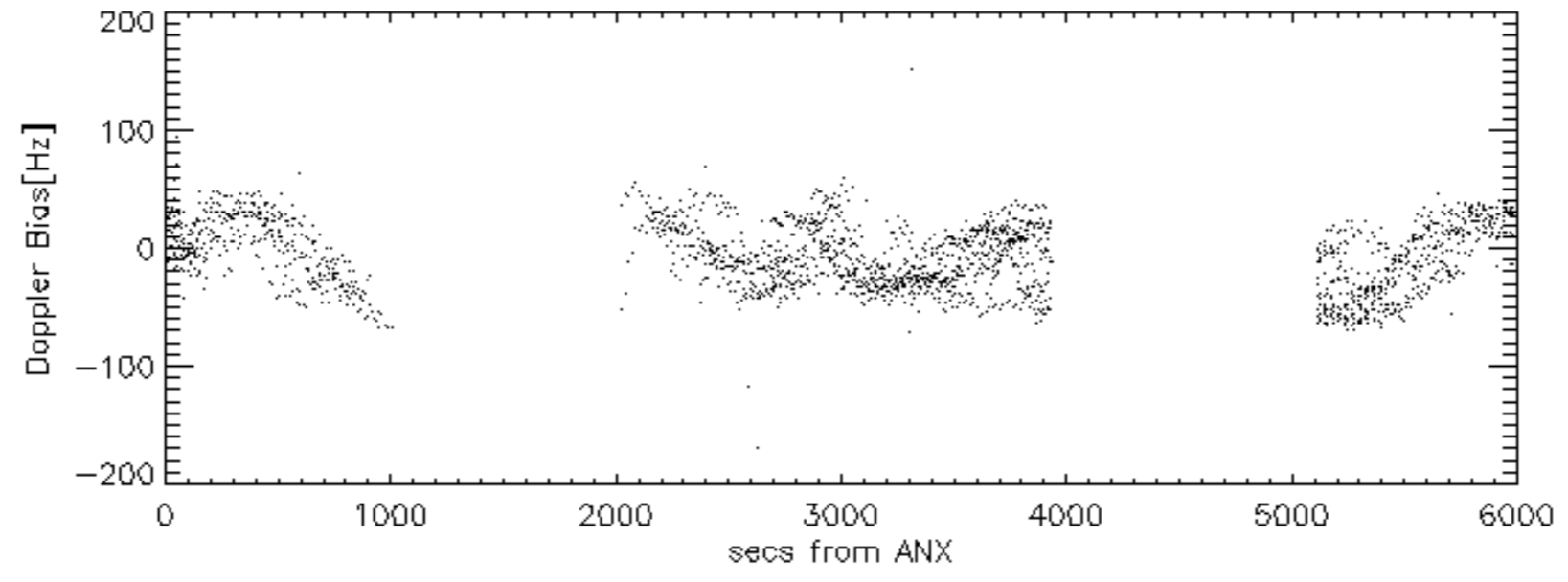
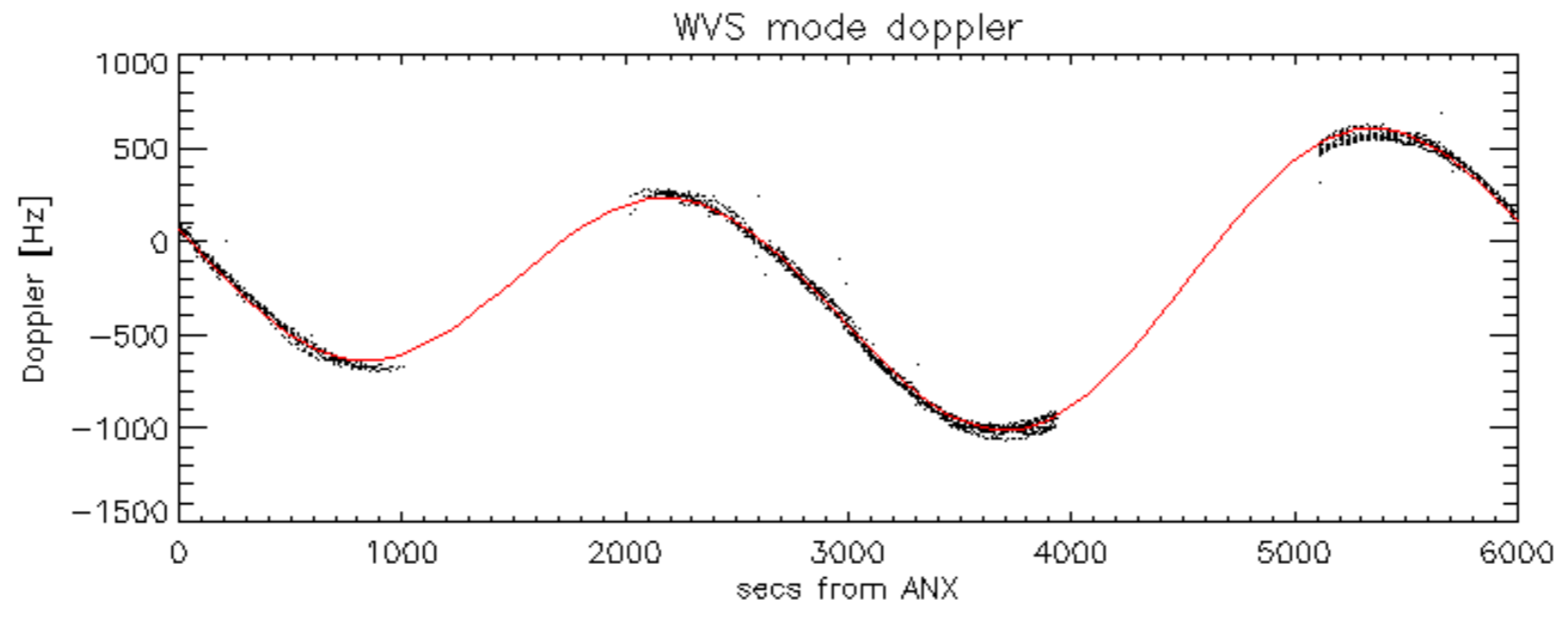


Doppler 'WVS' 'IS2' descending

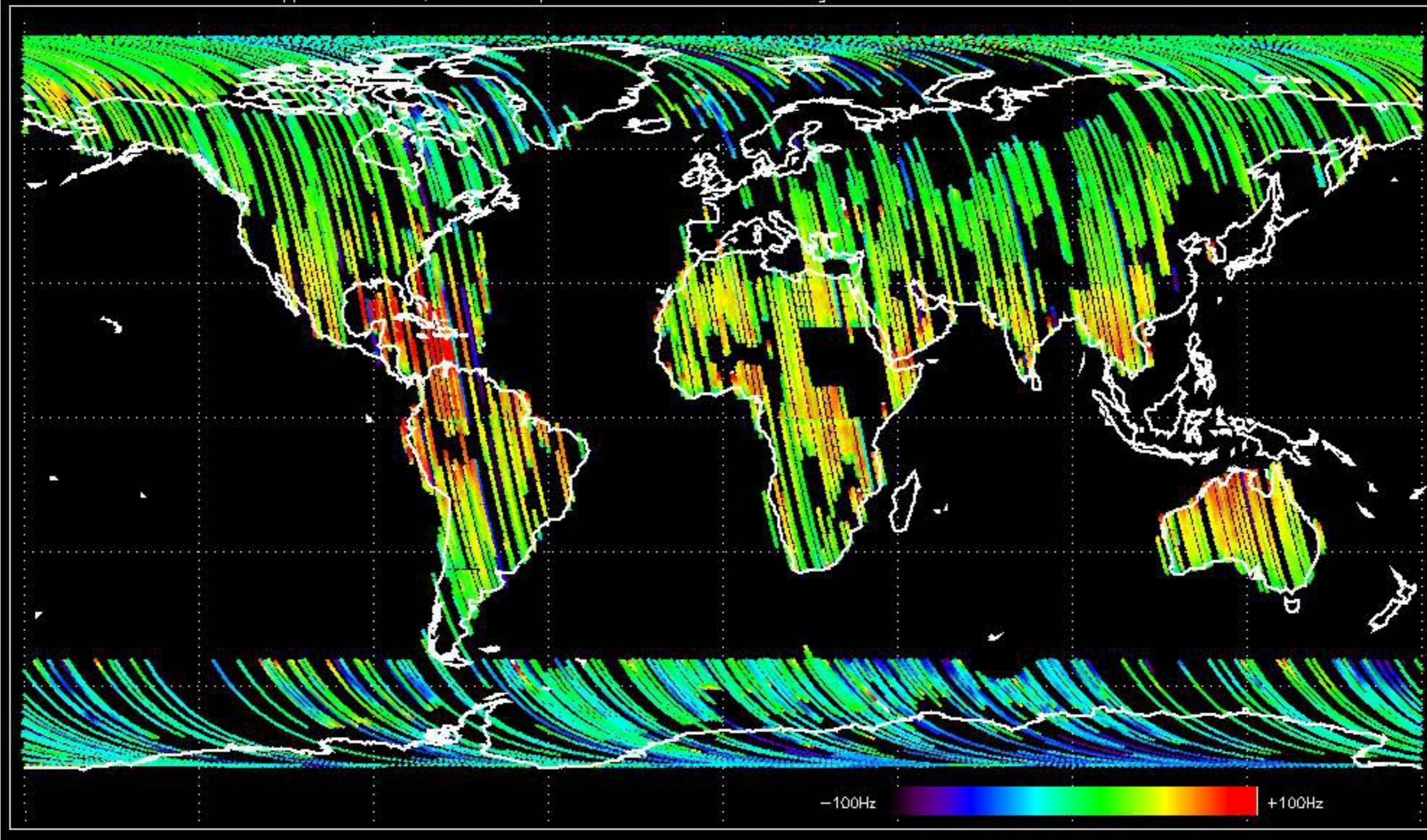


GM1 mode doppler

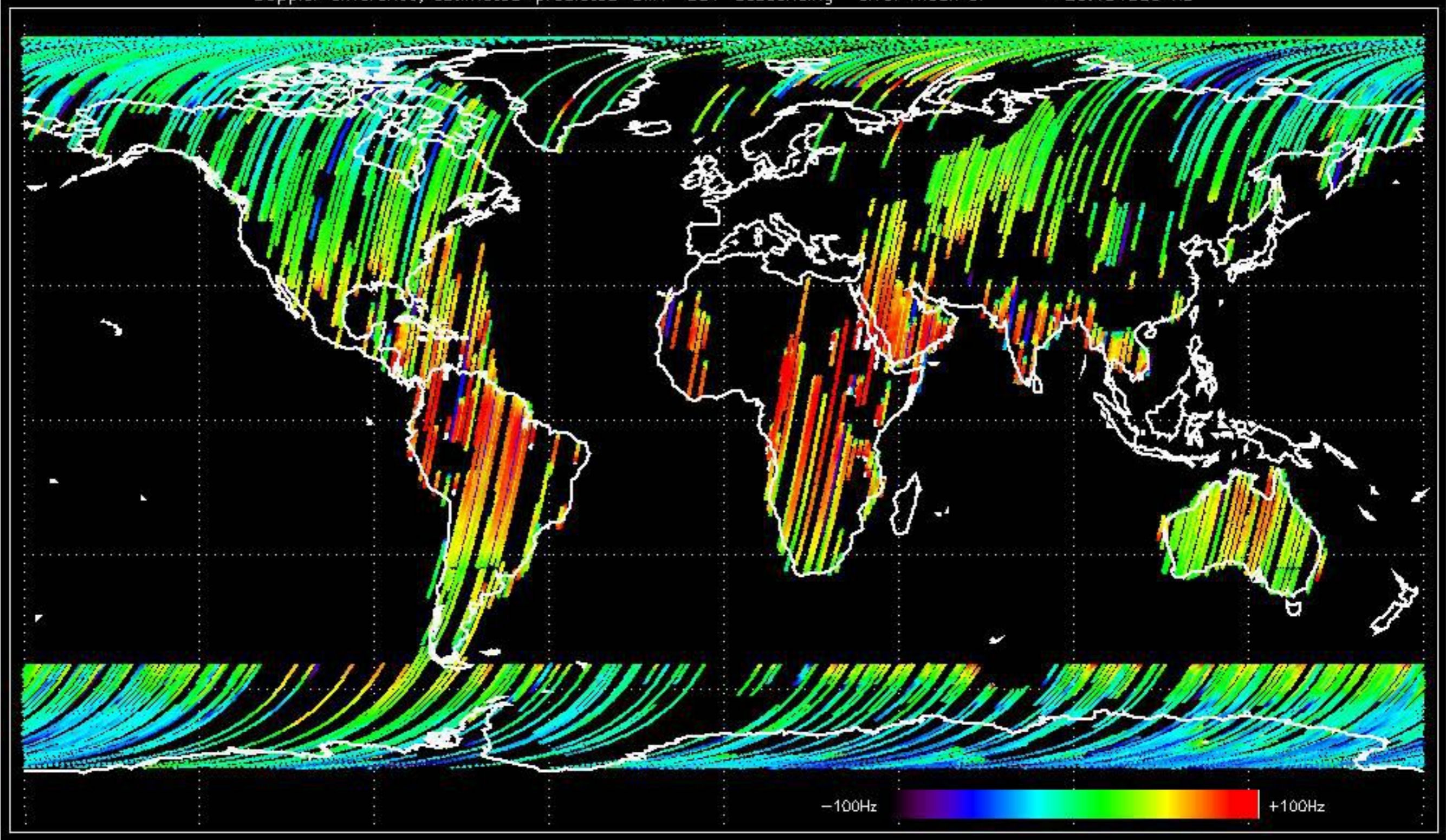




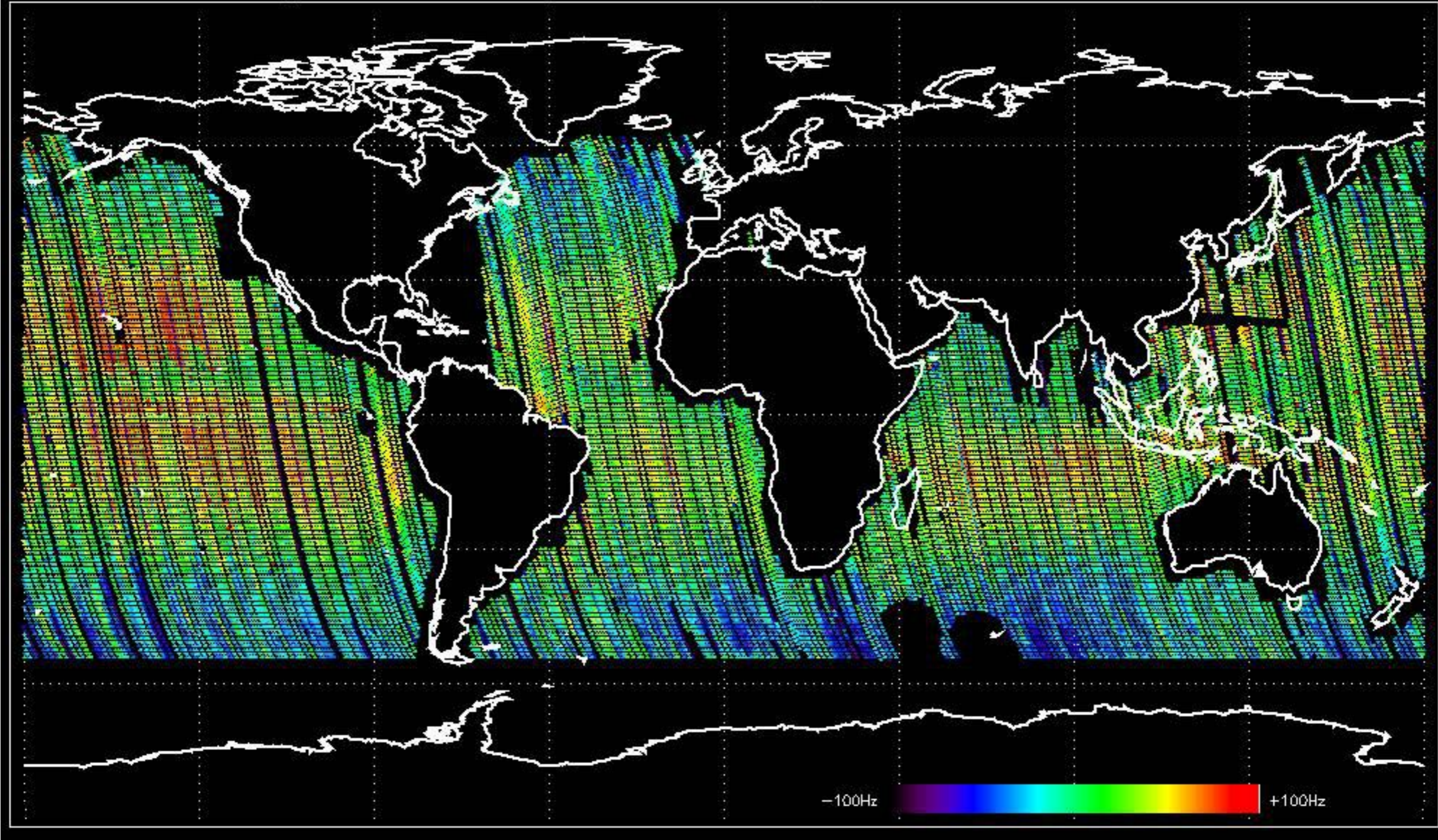
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -25.056540 Hz



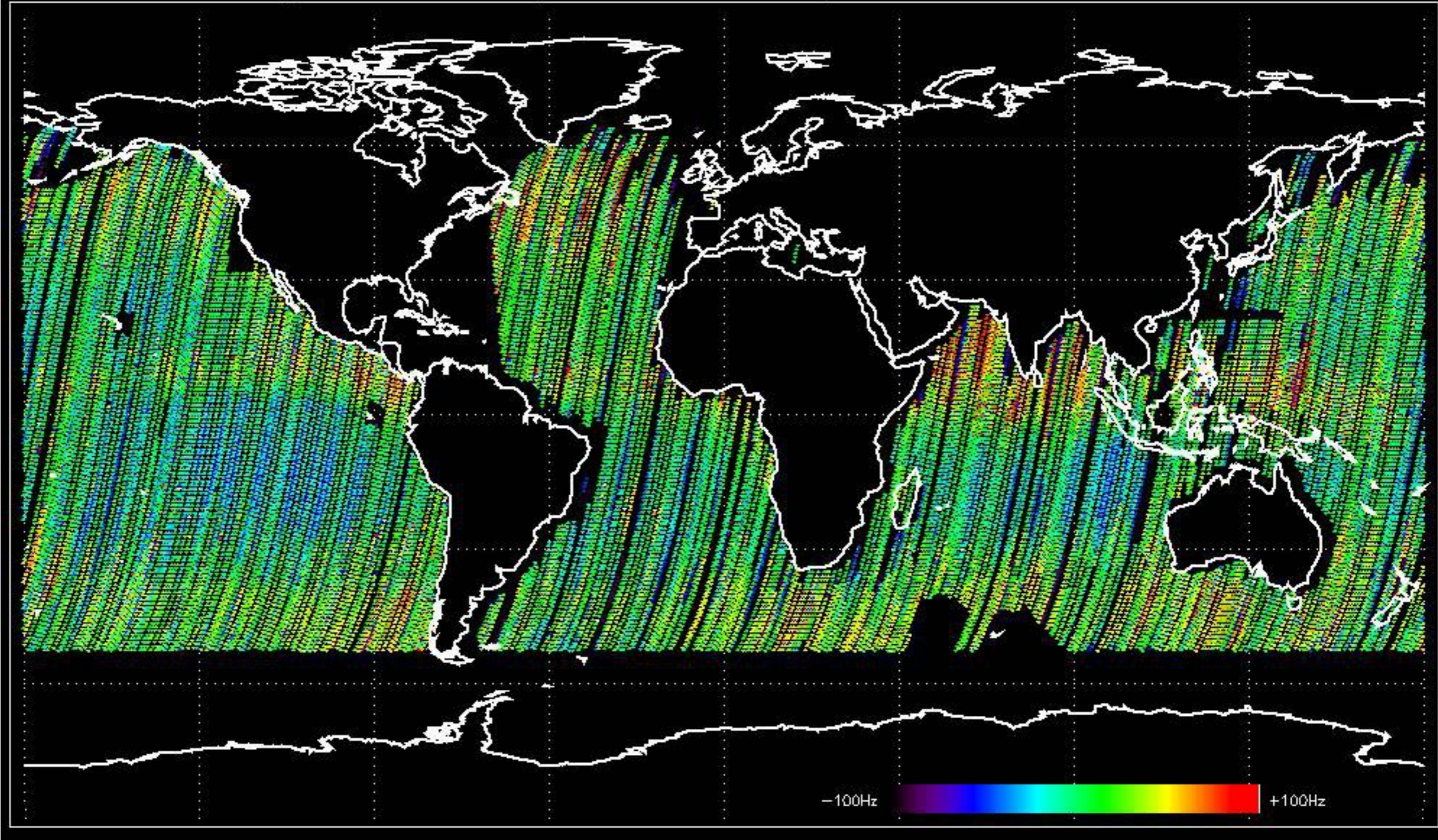
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -23.184835 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -20.235990 Hz

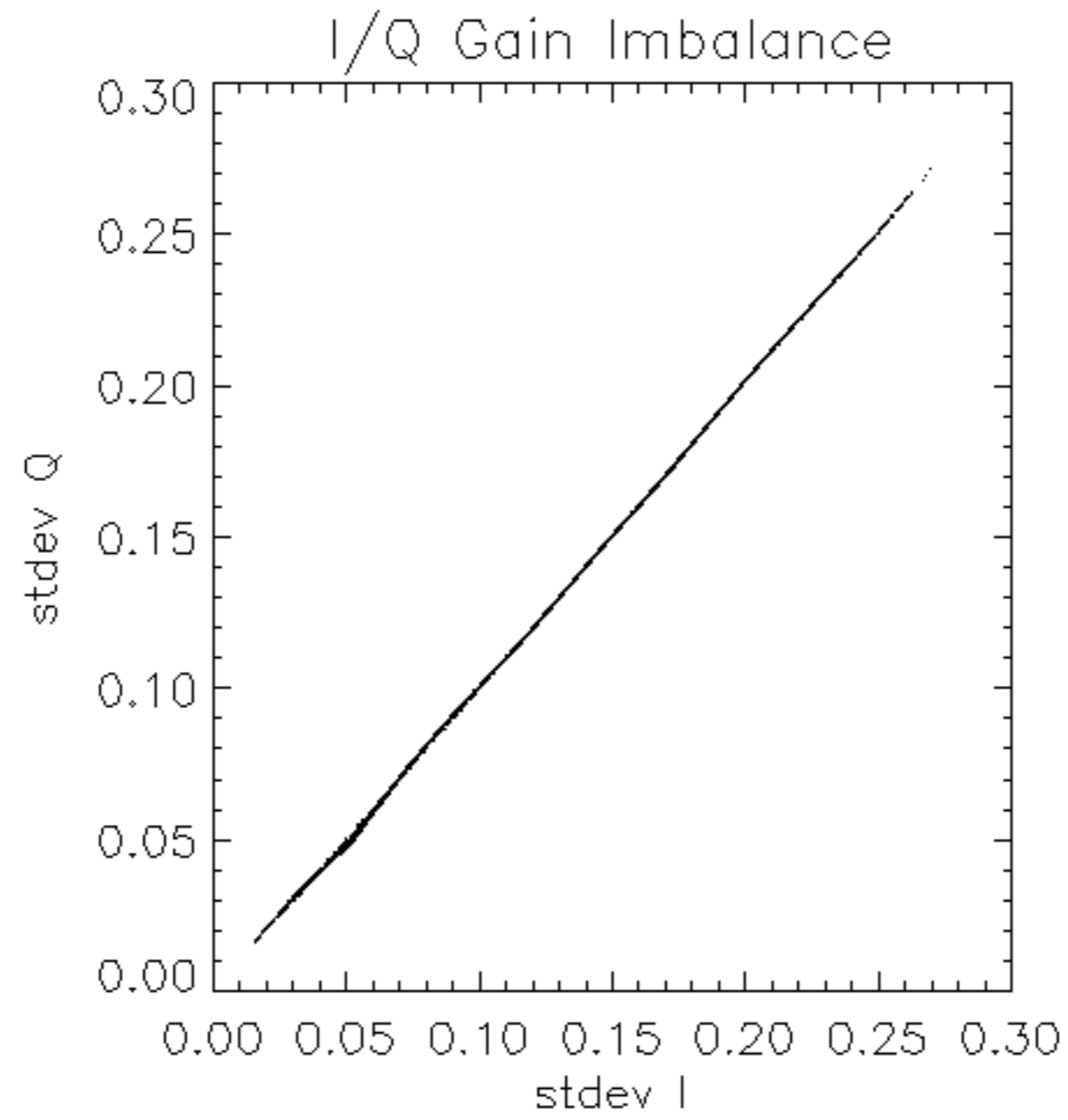


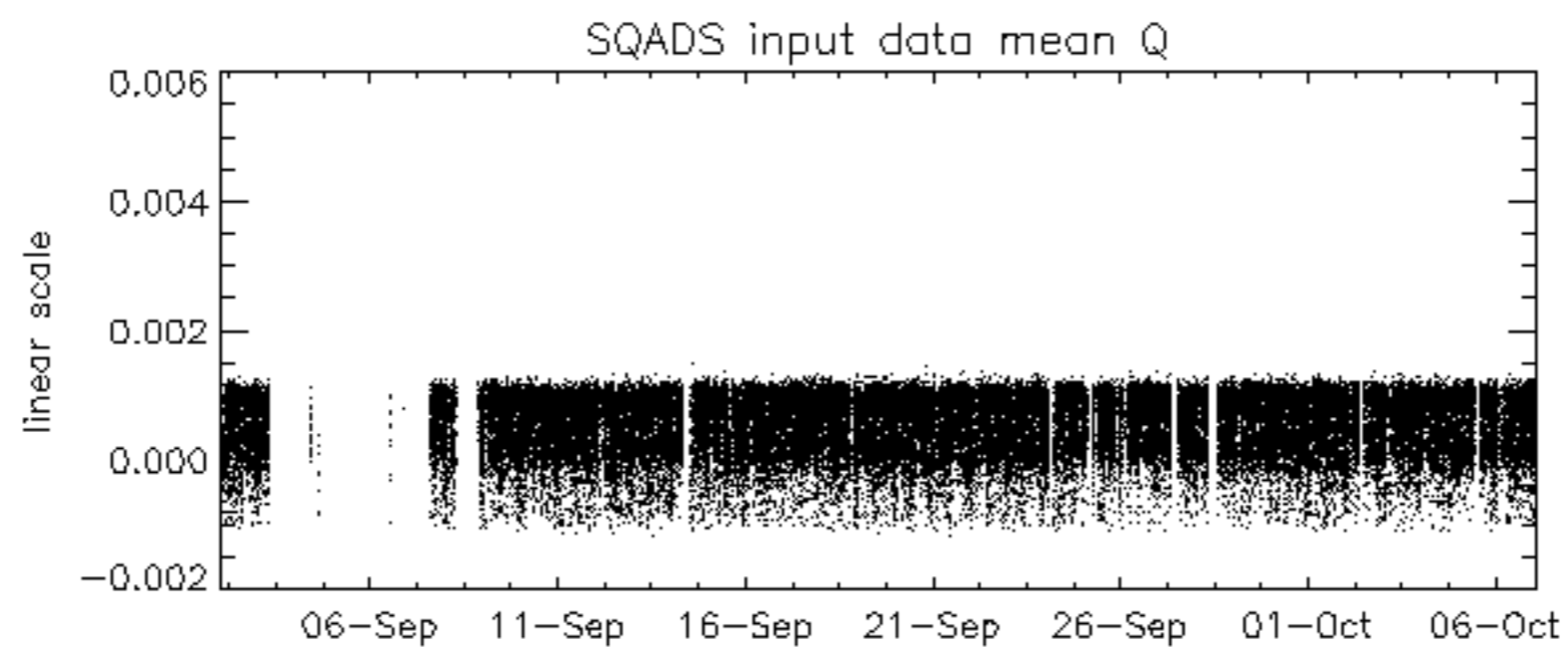
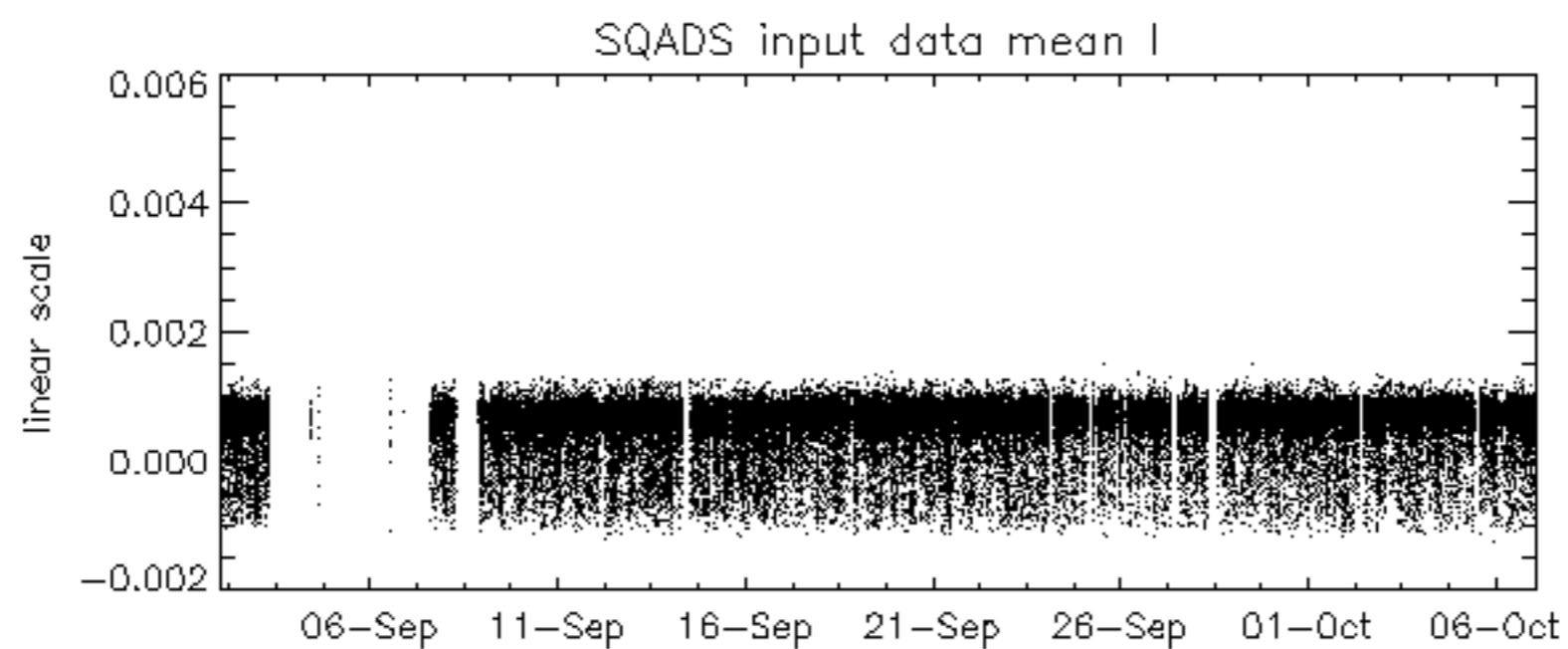
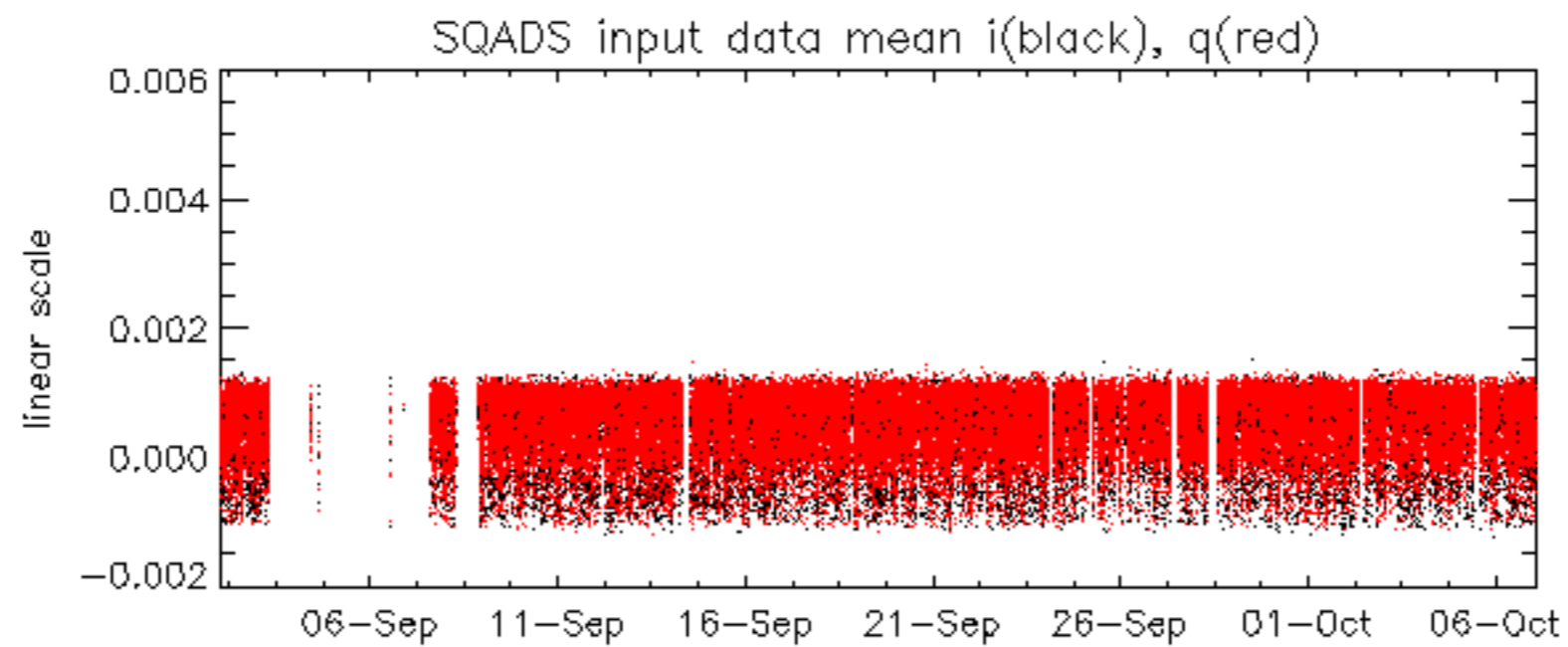
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -24.875981 Hz

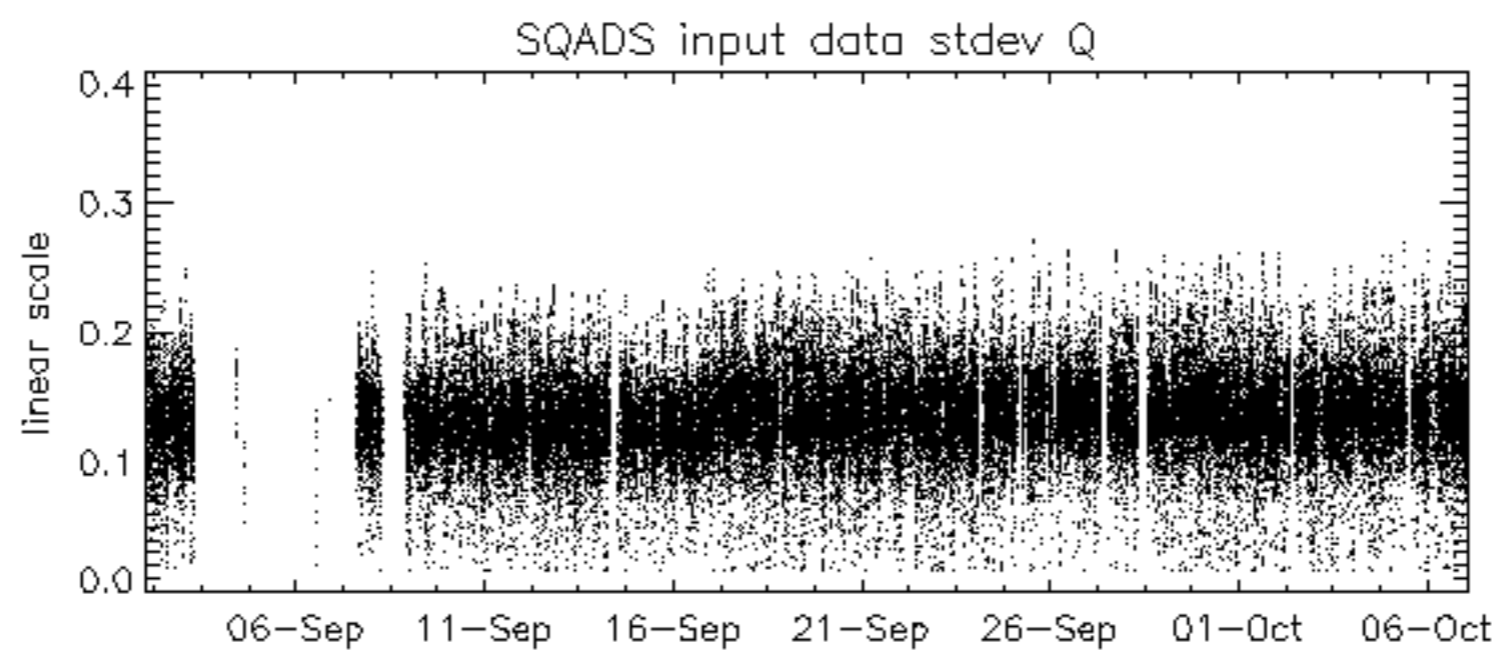
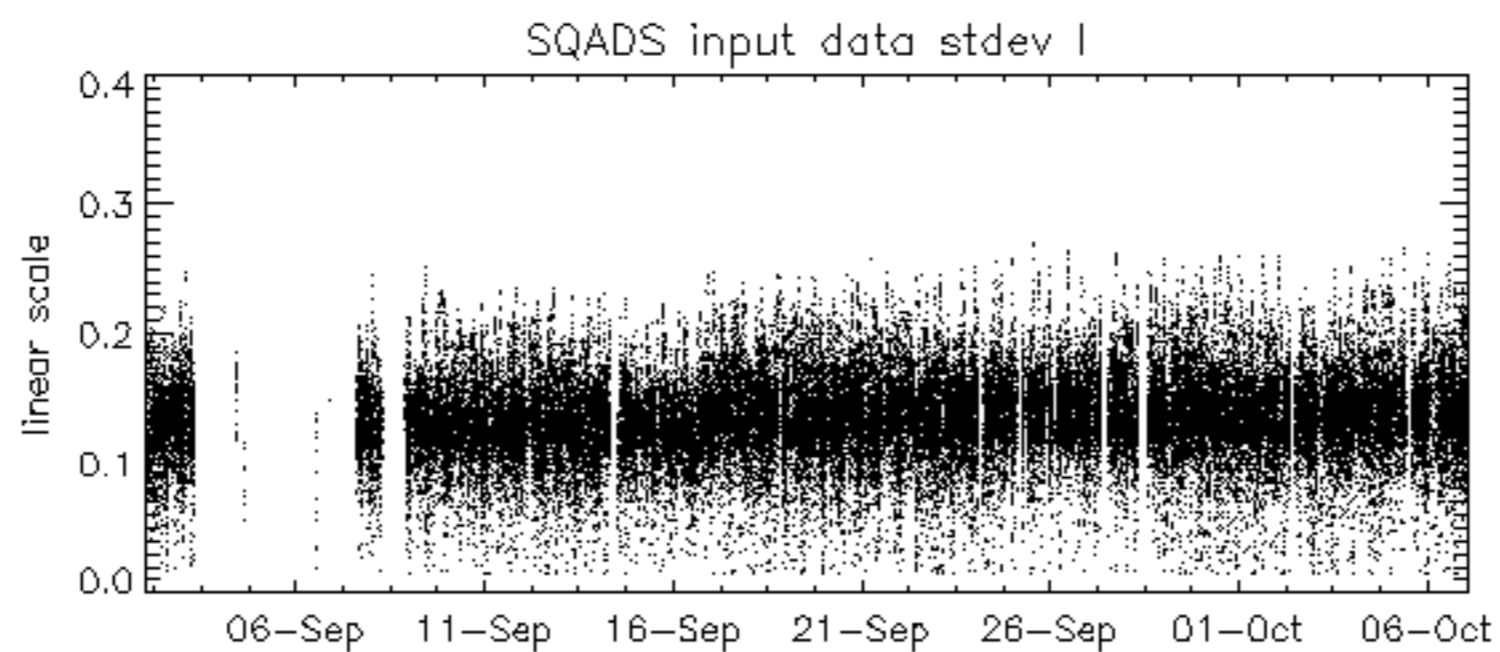
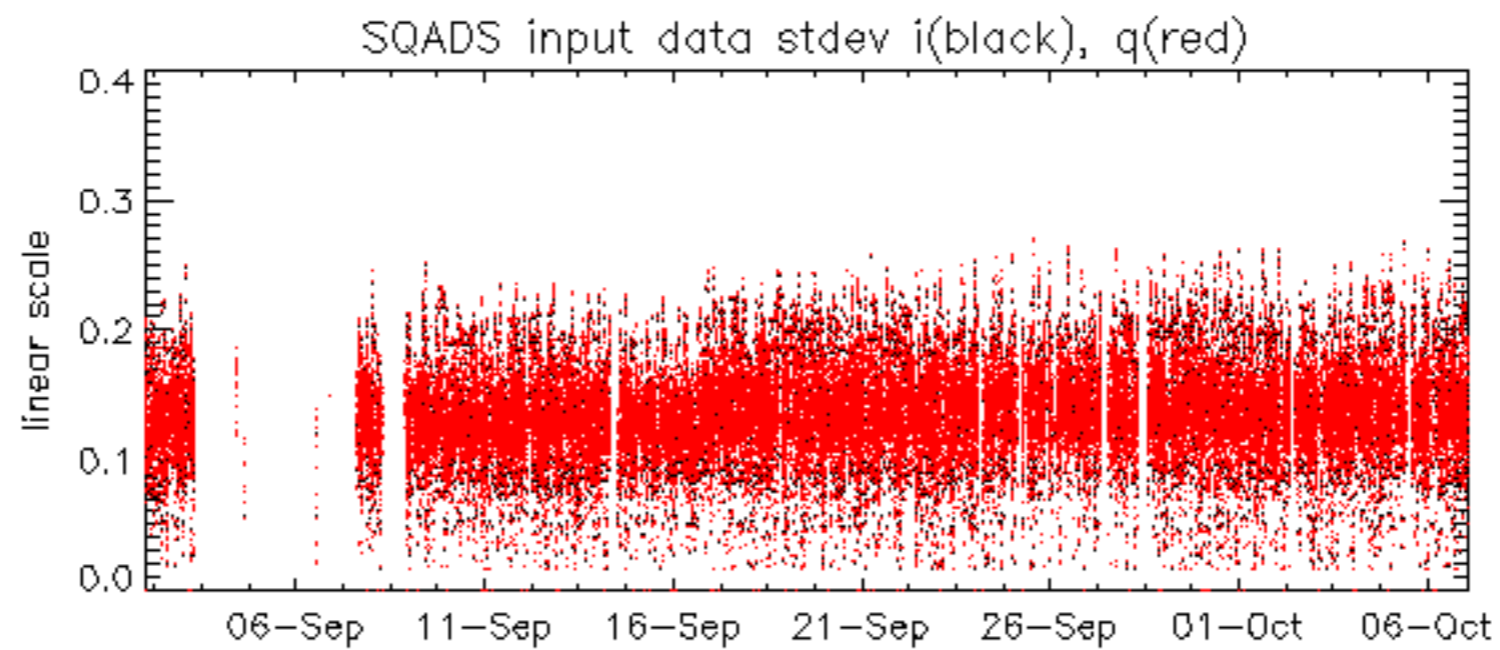


No anomalies observed on available MS products:

No anomalies observed.



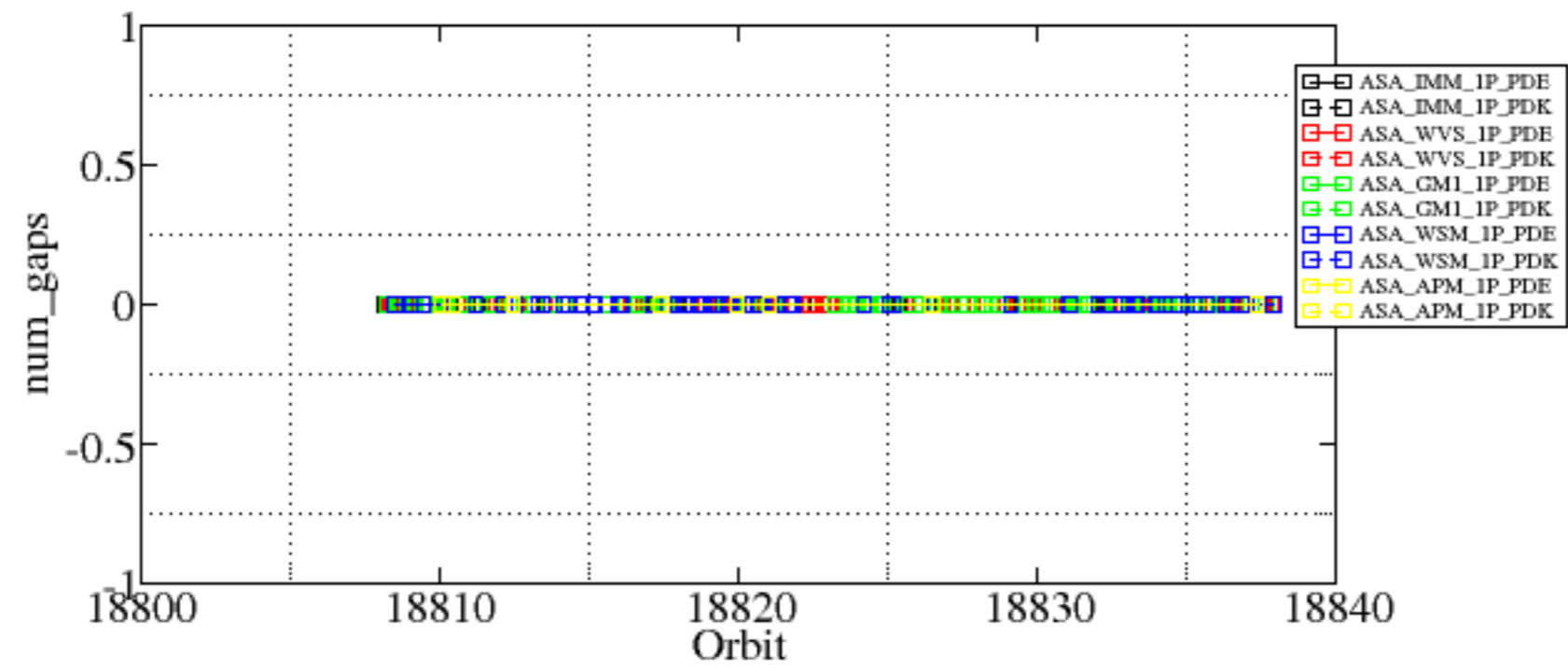


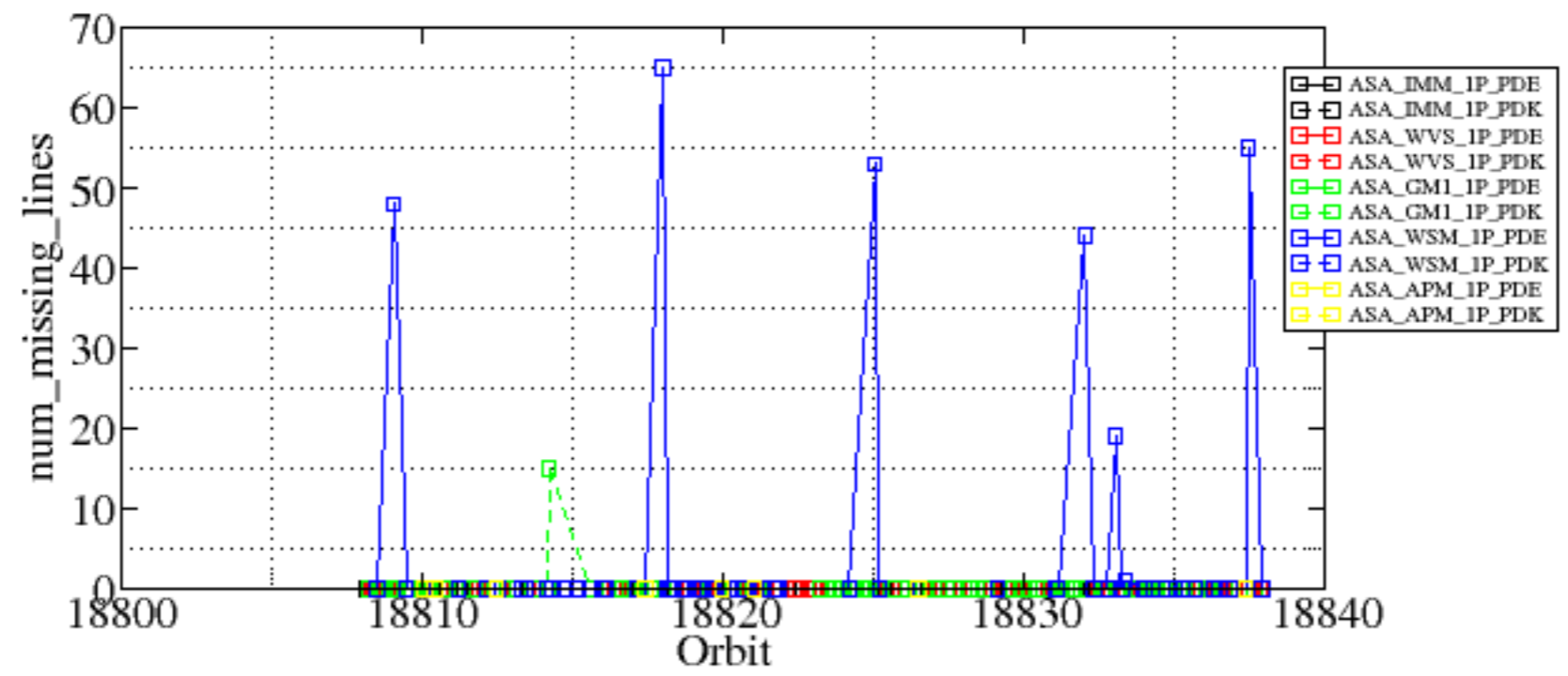


Summary of analysis for the last 3 days 2005100[567]

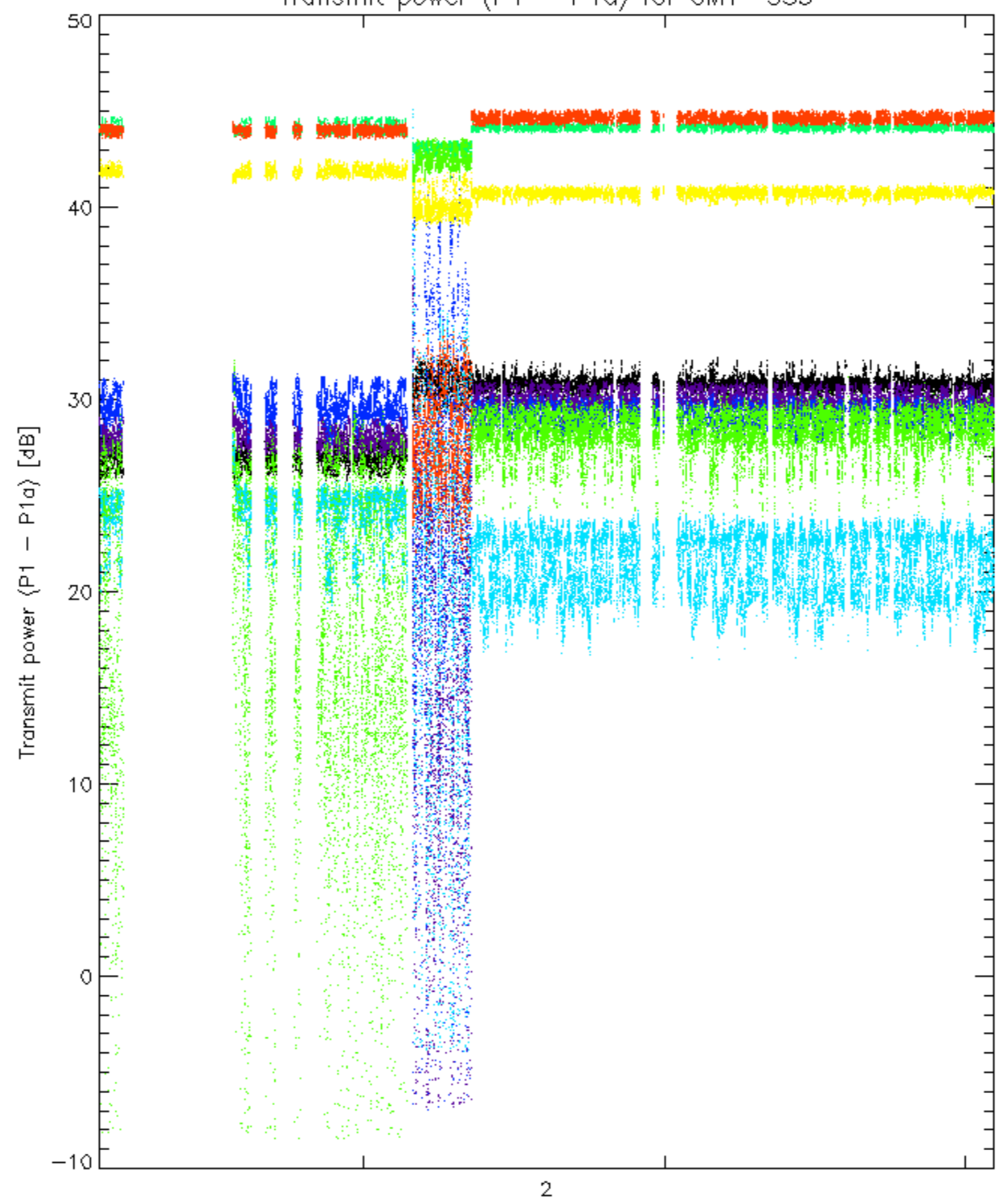
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20051005_103508_000005862041_00223_18814_7480.N1	0	15
ASA_WSM_1PNPDE20051005_015357_000001592041_00218_18809_2400.N1	0	48
ASA_WSM_1PNPDE20051005_165617_000001592041_00227_18818_2484.N1	0	65
ASA_WSM_1PNPDE20051006_044316_000003062041_00234_18825_2610.N1	0	53
ASA_WSM_1PNPDE20051006_162645_000001762041_00241_18832_2652.N1	0	44
ASA_WSM_1PNPDE20051006_180926_000001832041_00242_18833_2673.N1	0	19
ASA_WSM_1PNPDE20051006_184205_000000852041_00242_18833_2698.N1	0	1
ASA_WSM_1PNPDE20051007_013227_000002392041_00246_18837_2779.N1	0	55

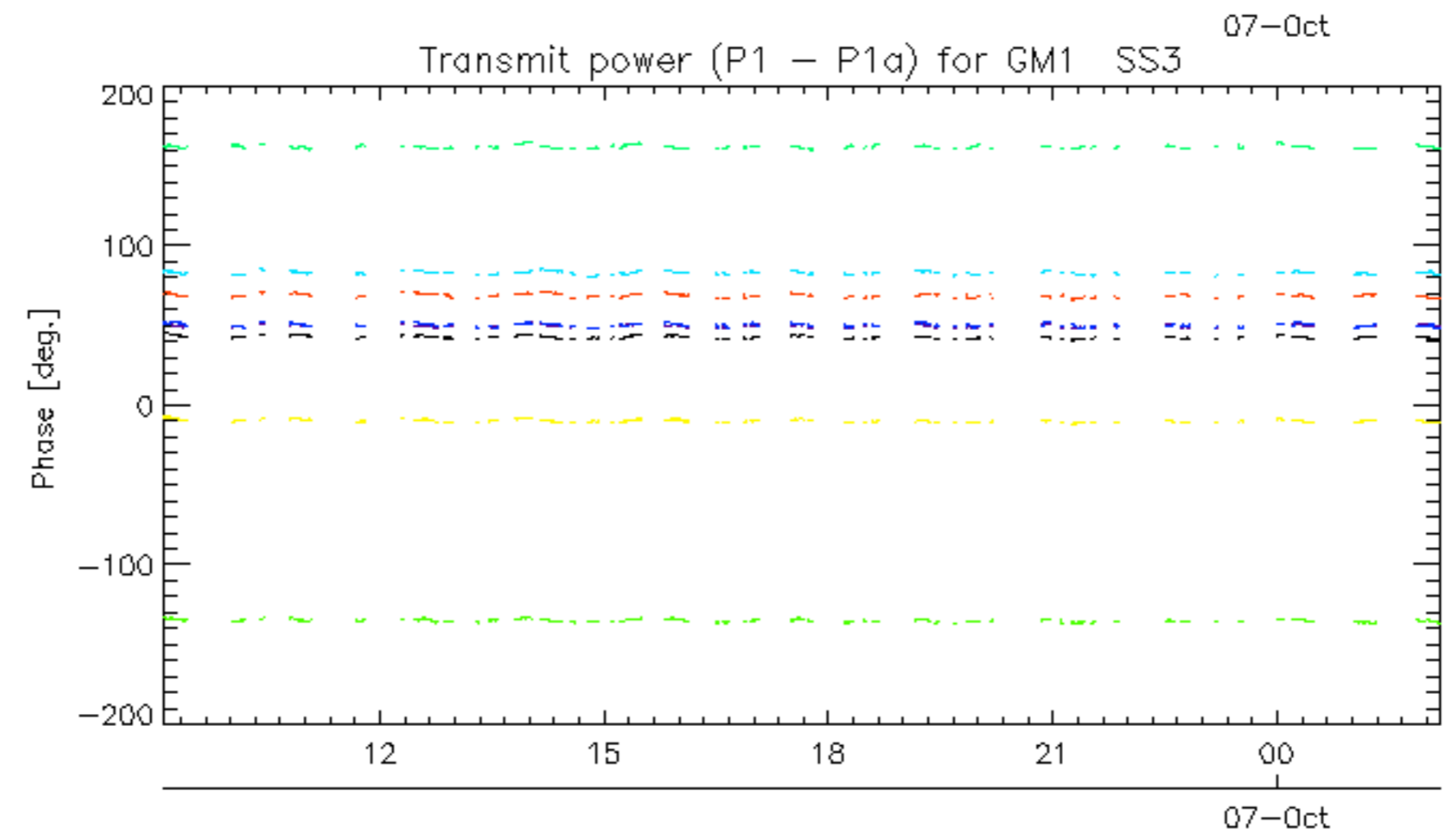
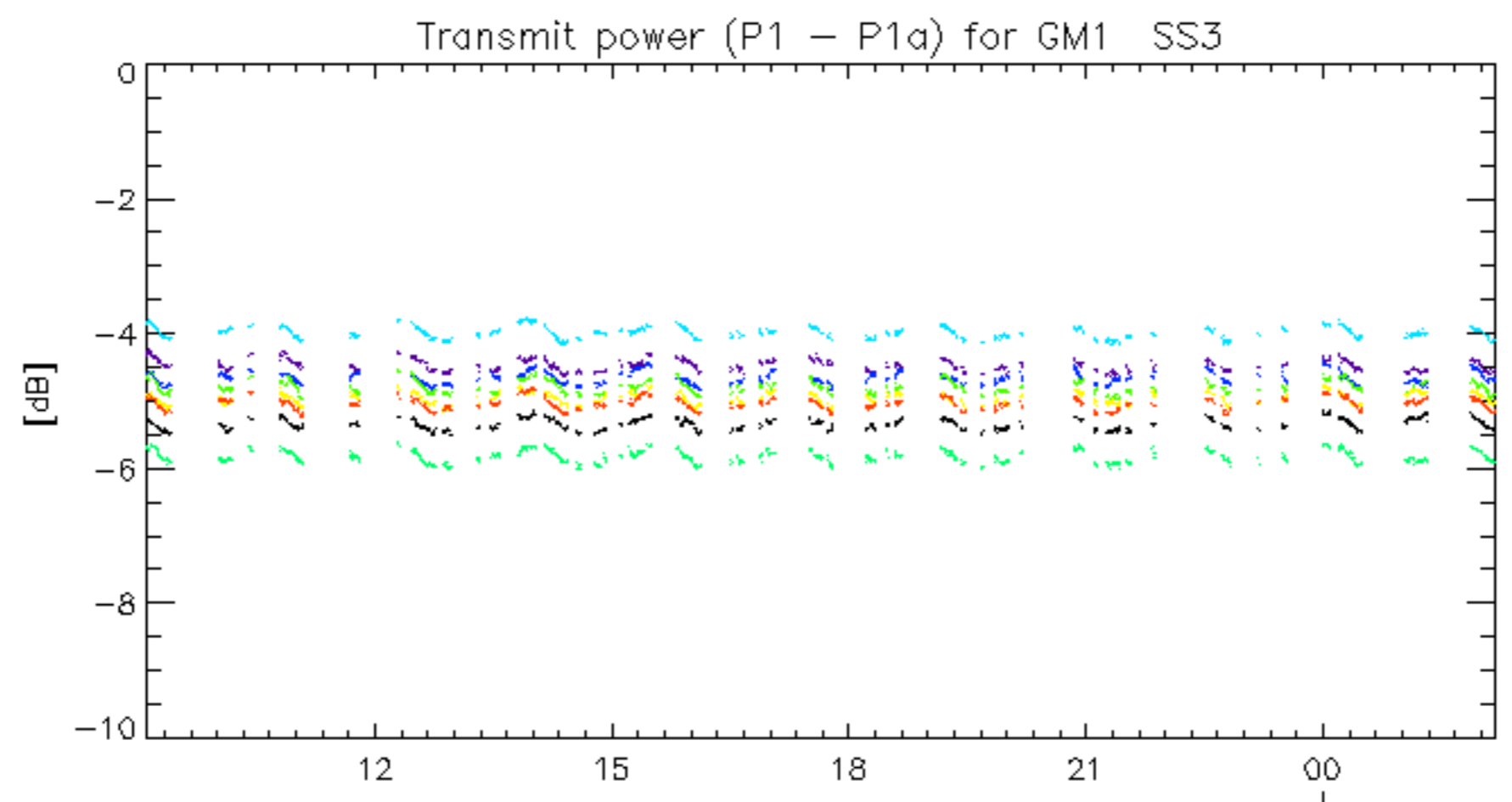




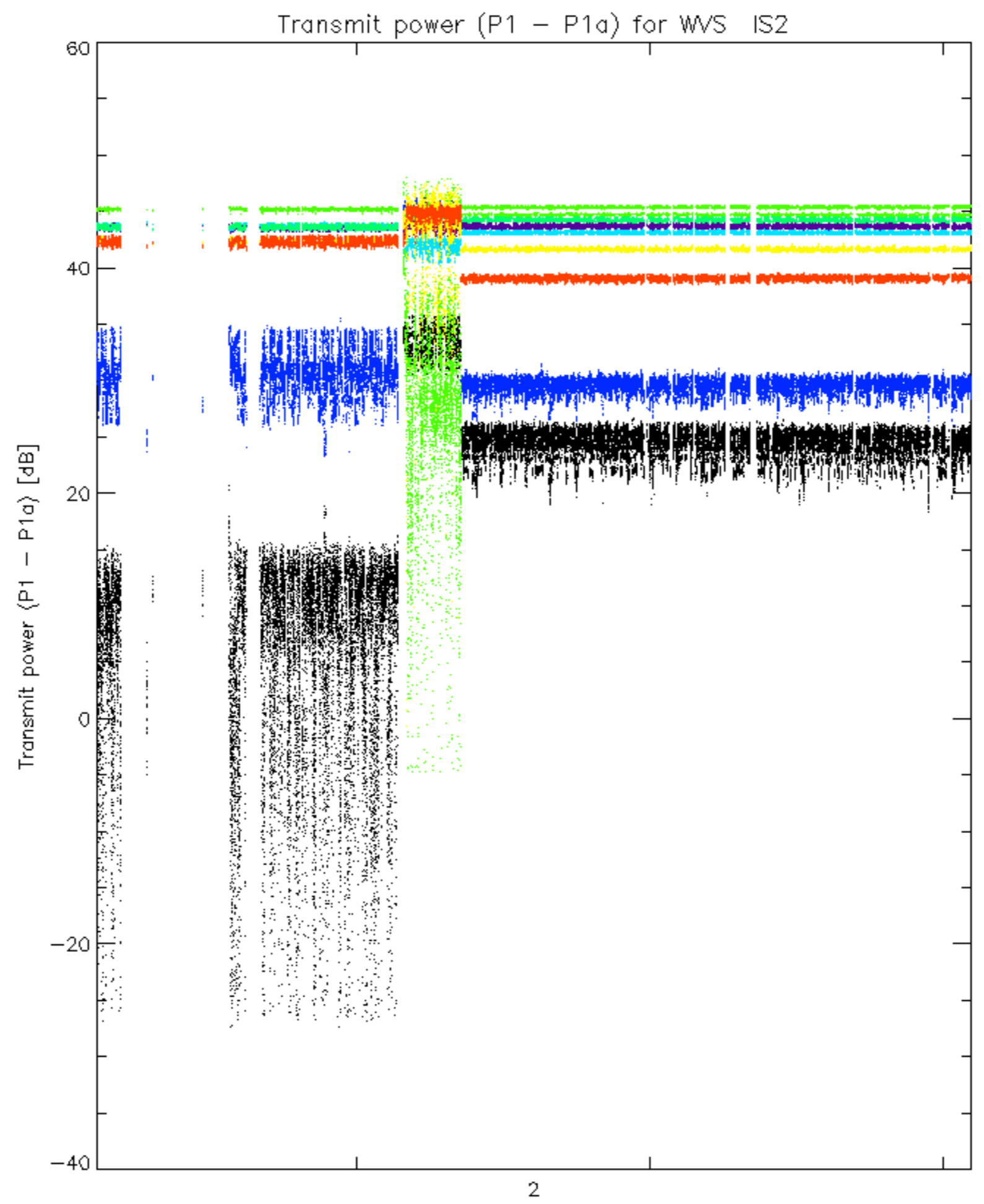
Transmit power (P1 - P1a) for GM1 SS3

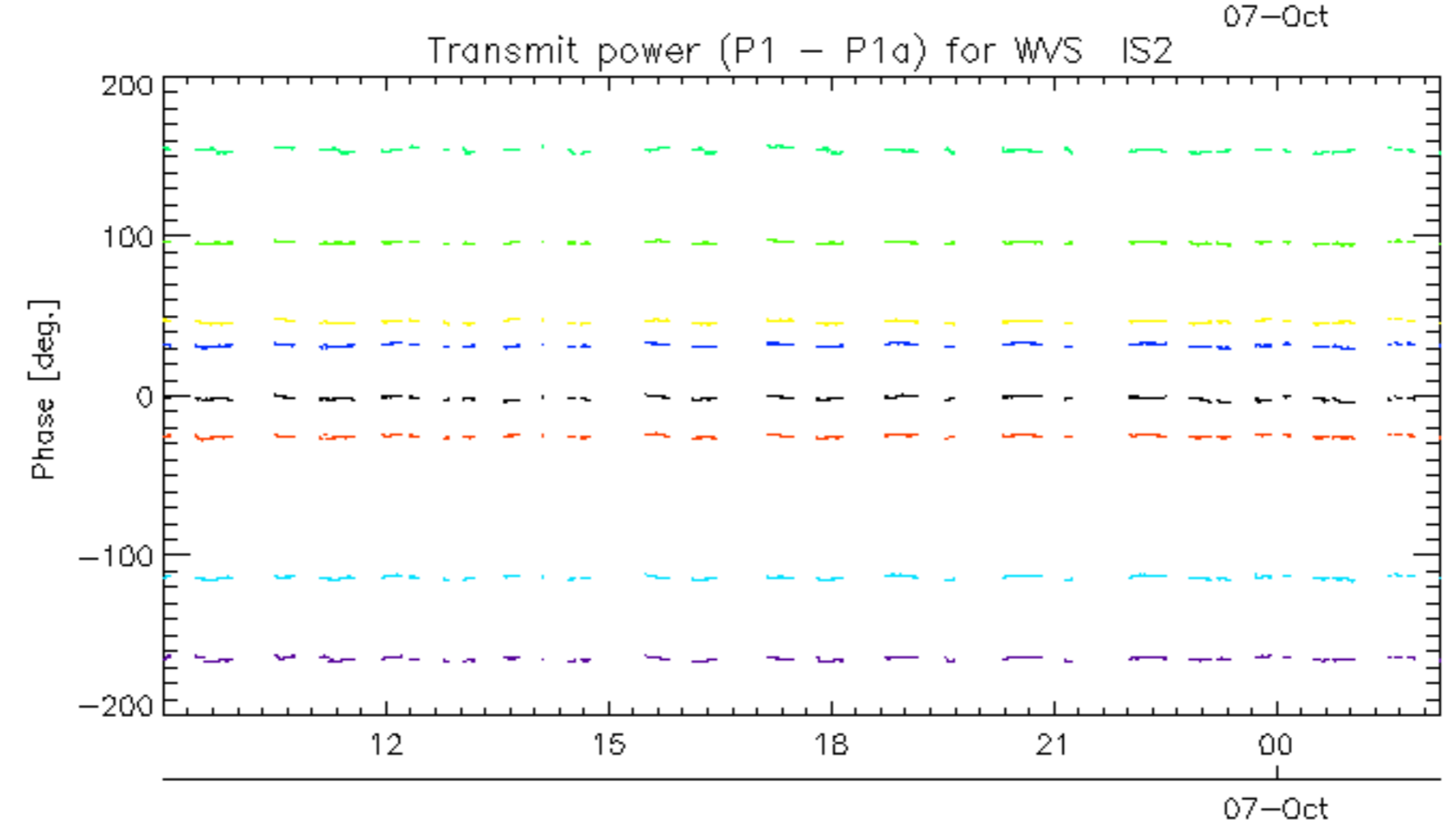
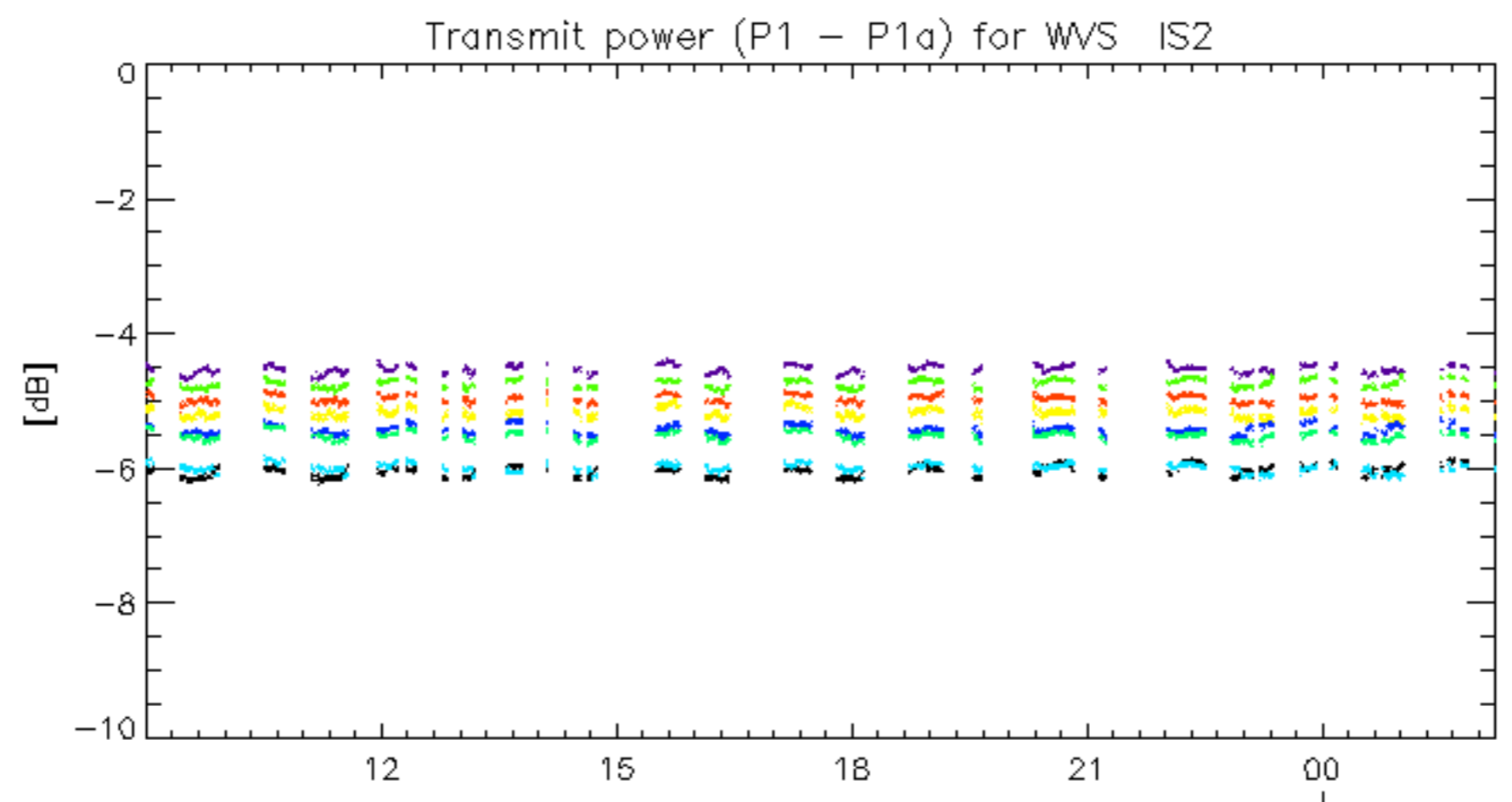


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No unavailabilities during the reported period.