

PRELIMINARY REPORT OF 051016

last update on Sun Oct 16 16:43:27 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 2005-10-15 00:00:00 to 2005-10-16 16:43:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	35	71	13	1	28
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	35	71	13	1	28
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	35	71	13	1	28
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	35	71	13	1	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	41	56	28	16	73
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	41	56	28	16	73
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	56	28	16	73
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	41	56	28	16	73

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	20051014 063530
H	20051015 060353

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
<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
<input type="checkbox"/>

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	-3.568574	0.055155	0.134890
7	P1	-2.946424	0.029957	0.244764
11	P1	-4.179512	0.103070	0.561051
15	P1	-5.986306	0.028488	-0.205930
19	P1	-3.144639	0.107120	0.009106
22	P1	-4.472825	0.020398	0.140508
26	P1	-4.385961	0.082954	0.537216
30	P1	-5.810696	0.226575	0.593145
3	P1	-15.778995	1.784563	1.667704
7	P1	-16.753031	4.370194	2.066688
11	P1	-17.474075	10.907907	6.039548
15	P1	-13.894731	8.058719	2.331838
19	P1	-13.632448	0.146180	0.171782
22	P1	-17.253454	21.733355	5.045724
26	P1	-17.504095	20.898058	6.062397
30	P1	-17.306793	8.709995	4.166824

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.852783	0.101431	-0.072447
7	P2	-22.656250	0.178769	-0.254227
11	P2	-16.516441	1.094359	-1.324715
15	P2	-7.225157	0.115171	0.017992
19	P2	-9.136656	0.166589	-0.127131
22	P2	-17.580738	0.187459	-0.696752
26	P2	-16.147226	0.118428	0.270488
30	P2	-19.571735	0.153107	-0.291614

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.181426	0.005196	-0.038417
7	P3	-8.181426	0.005196	-0.038417
11	P3	-8.181426	0.005196	-0.038417
15	P3	-8.181426	0.005196	-0.038417
19	P3	-8.181426	0.005196	-0.038417
22	P3	-8.181426	0.005196	-0.038417
26	P3	-8.181426	0.005196	-0.038417
30	P3	-8.181426	0.005196	-0.038417

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	-3.458655	0.226164	-0.960194
7	P1	-2.915205	0.062466	0.360108
11	P1	-3.040410	0.194363	0.929312
15	P1	-3.431980	0.027356	0.214703
19	P1	-3.323156	0.050549	-0.089689
22	P1	-5.124630	0.122732	-0.048964
26	P1	-5.808419	0.402106	0.255732
30	P1	-5.215118	0.249425	0.105572
3	P1	-11.522906	0.380847	0.476488
7	P1	-11.208836	18.787645	5.680102
11	P1	-11.992782	37.112984	8.880468
15	P1	-12.287247	31.984079	7.561173
19	P1	-15.342954	0.208213	-0.501568
22	P1	-21.078882	3.708111	3.304347
26	P1	-17.420565	4.373160	1.332299
30	P1	-19.256659	1.675057	2.086796

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.663099	0.051213	-0.199489
7	P2	-22.954916	0.188626	-0.465245
11	P2	-11.527695	0.491454	-1.168475
15	P2	-4.915175	0.043321	0.136004
19	P2	-6.807939	0.104457	-0.391797
22	P2	-7.933969	0.162320	-0.839233
26	P2	-23.872326	0.042894	0.074005
30	P2	-22.084988	0.053632	0.116362

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.023668	0.002895	-0.039382
7	P3	-8.023735	0.002898	-0.039628
11	P3	-8.023563	0.002906	-0.040035
15	P3	-8.023642	0.002897	-0.039774
19	P3	-8.023811	0.002902	-0.039555
22	P3	-8.023562	0.002905	-0.039672
26	P3	-8.023867	0.002895	-0.039630
30	P3	-8.023680	0.002906	-0.039545

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	0.000543962
	stdev	1.78773e-07
MEAN Q	mean	0.000531823
	stdev	2.18463e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136307
	stdev	0.00111233
STDEV Q	mean	0.136639
	stdev	0.00112811



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[456]

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_WSM_1PNPDE20051014_011413_000003542041_00346_18937_3867.N1	0	23
ASA_WSM_1PNPDE20051014_175039_000002012041_00356_18947_3964.N1	0	1
ASA_WSM_1PNPDE20051014_185457_000002312041_00357_18948_4242.N1	0	52
ASA_WSM_1PNPDE20051014_185458_000002312041_00357_18948_3963.N1	0	52
ASA_WSM_1PNPDE20051015_182654_000002262041_00371_18962_4160.N1	0	34







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)



Ascending



Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler



Ascending



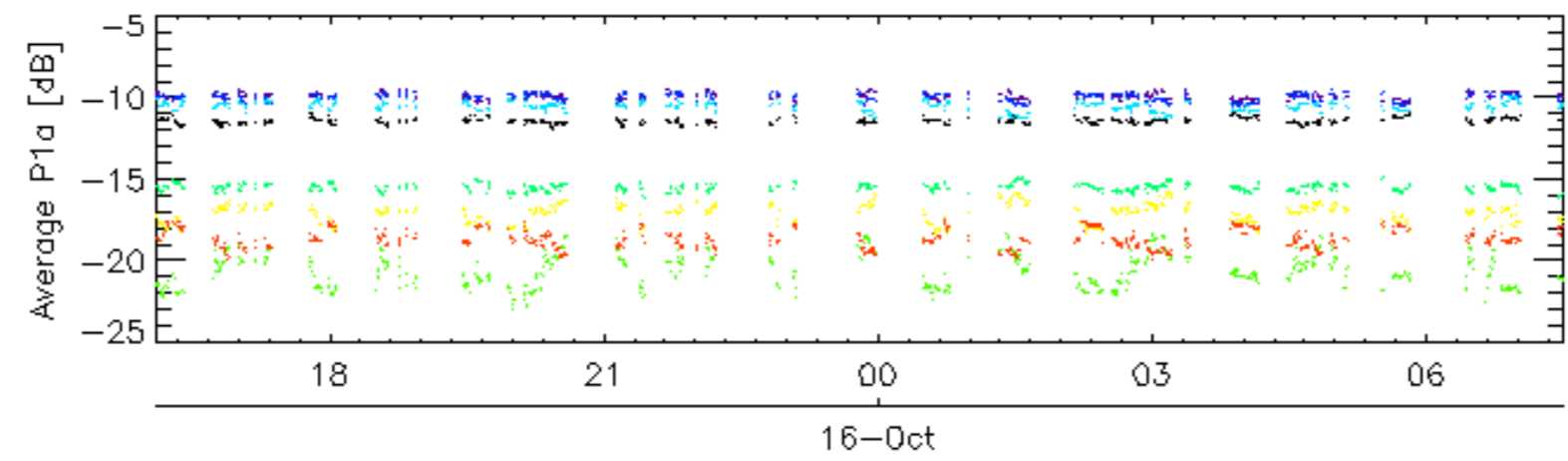
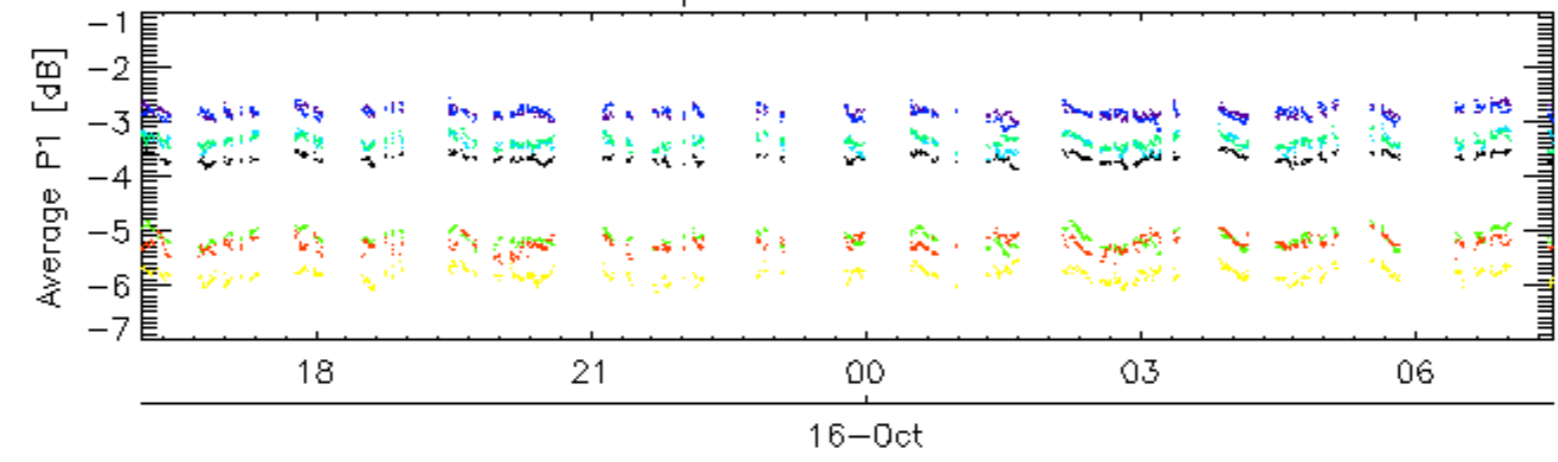
Descending

7.6 - Doppler evolution versus ANX for GM1

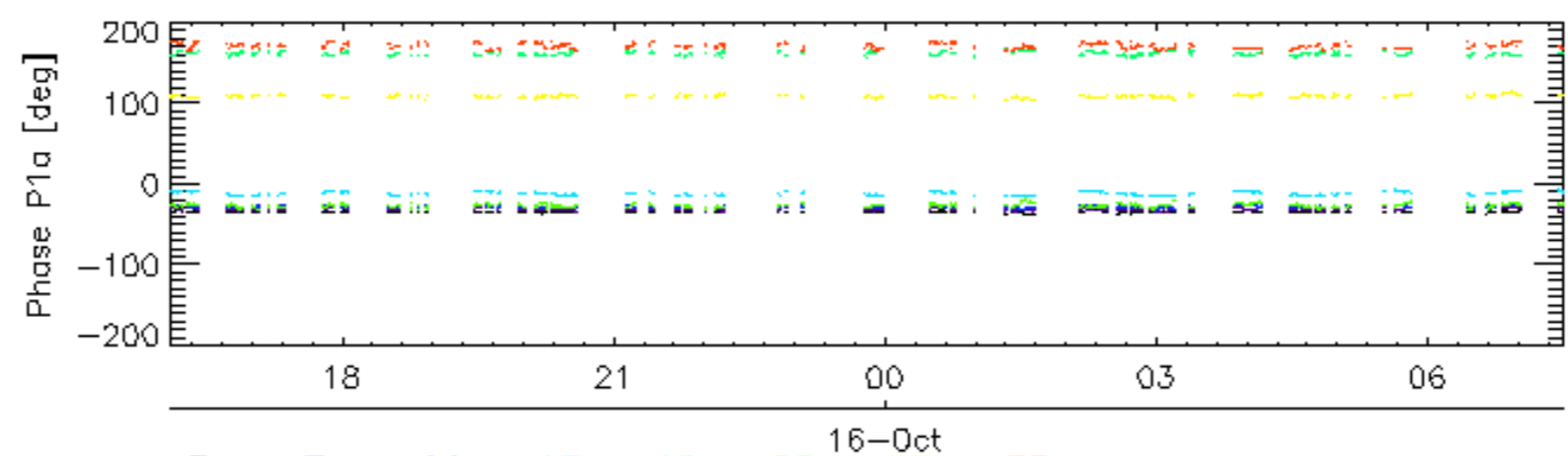
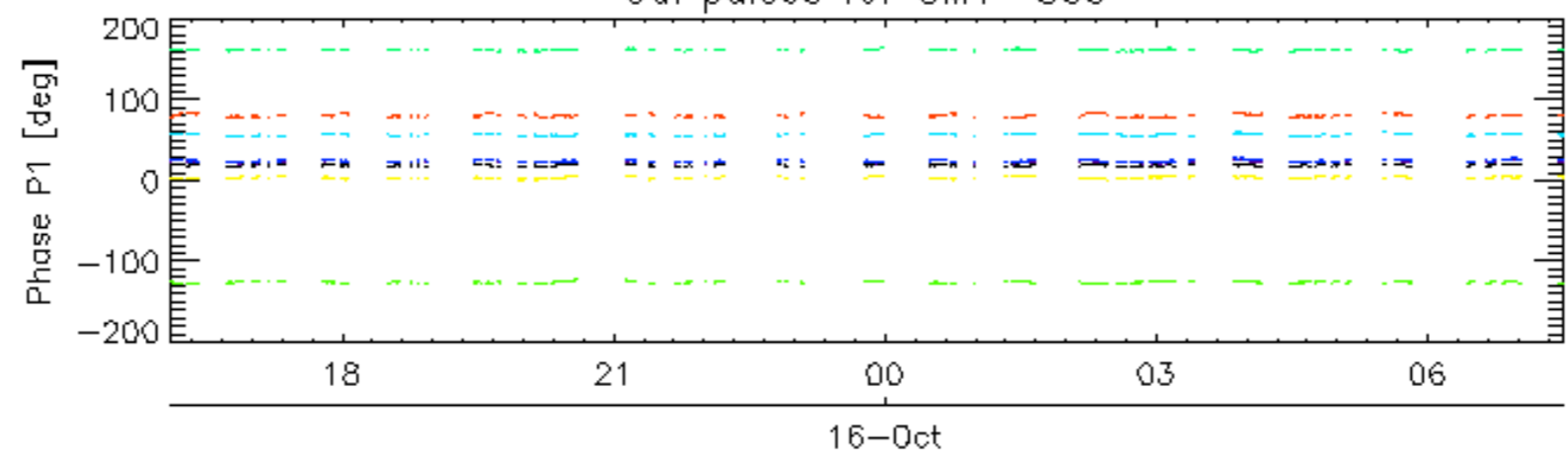
Evolution Doppler error versus ANX



Cal pulses for GM1 SS3

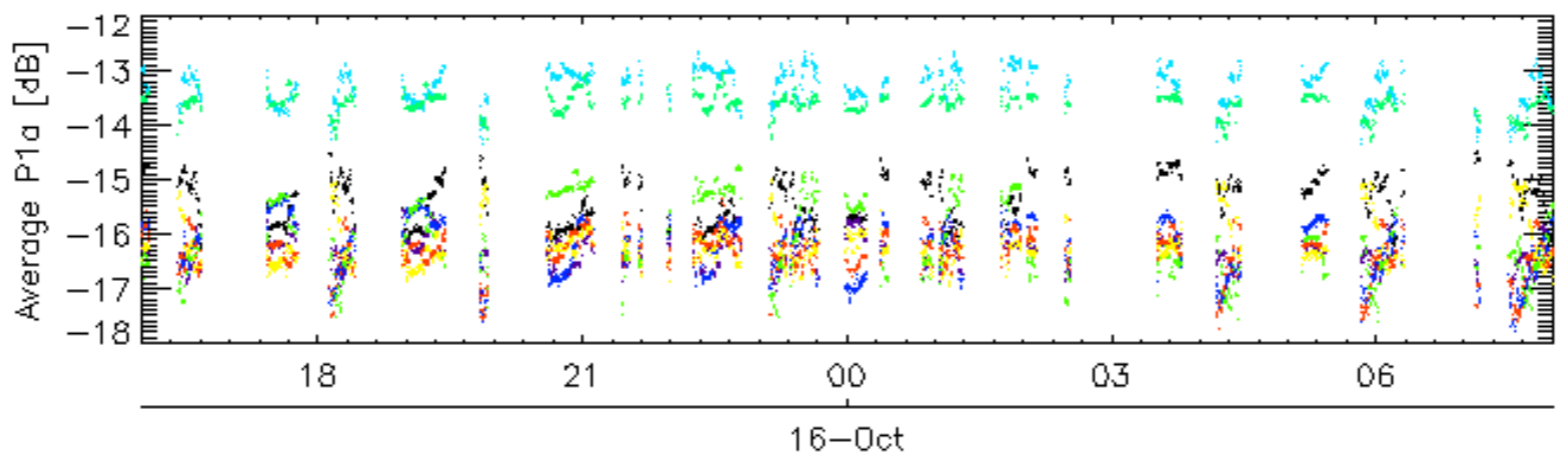
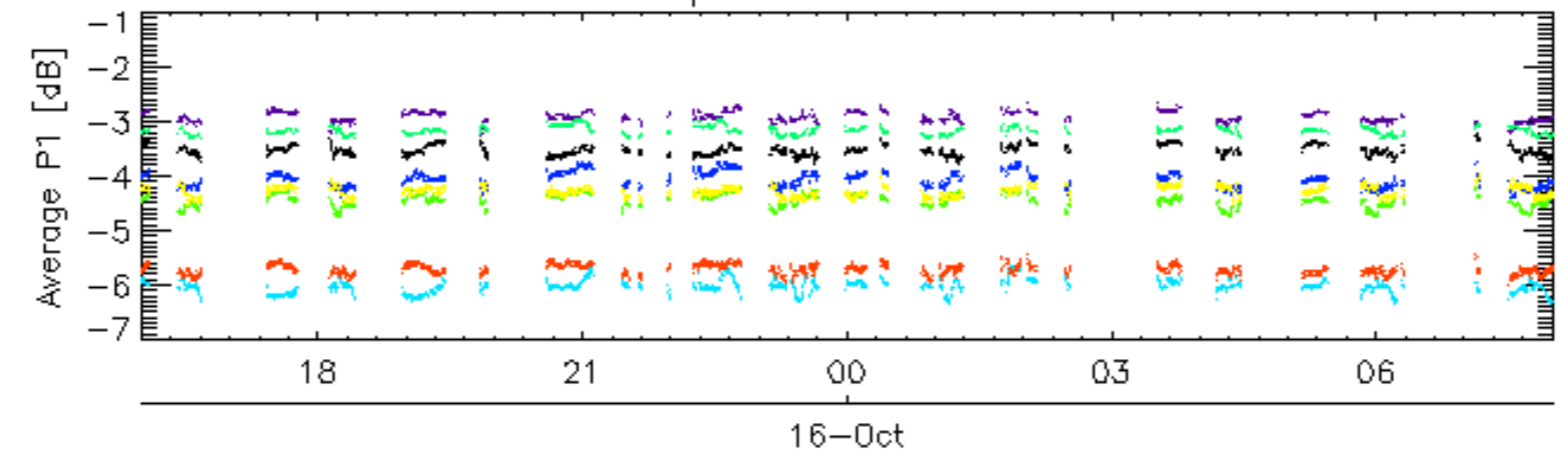


Cal pulses for GM1 SS3

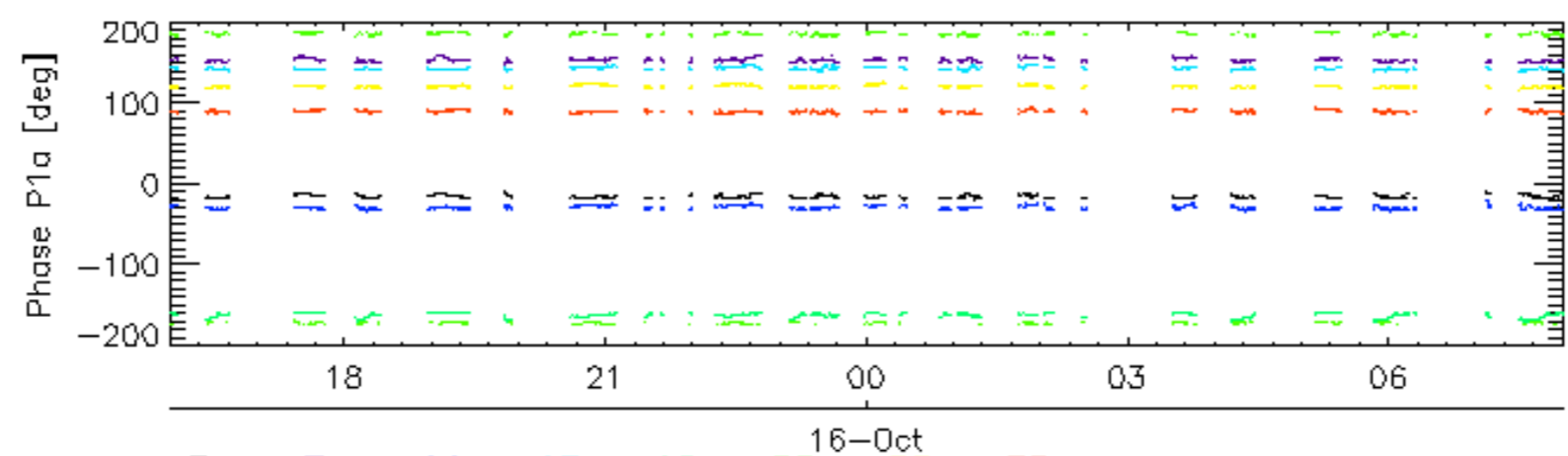
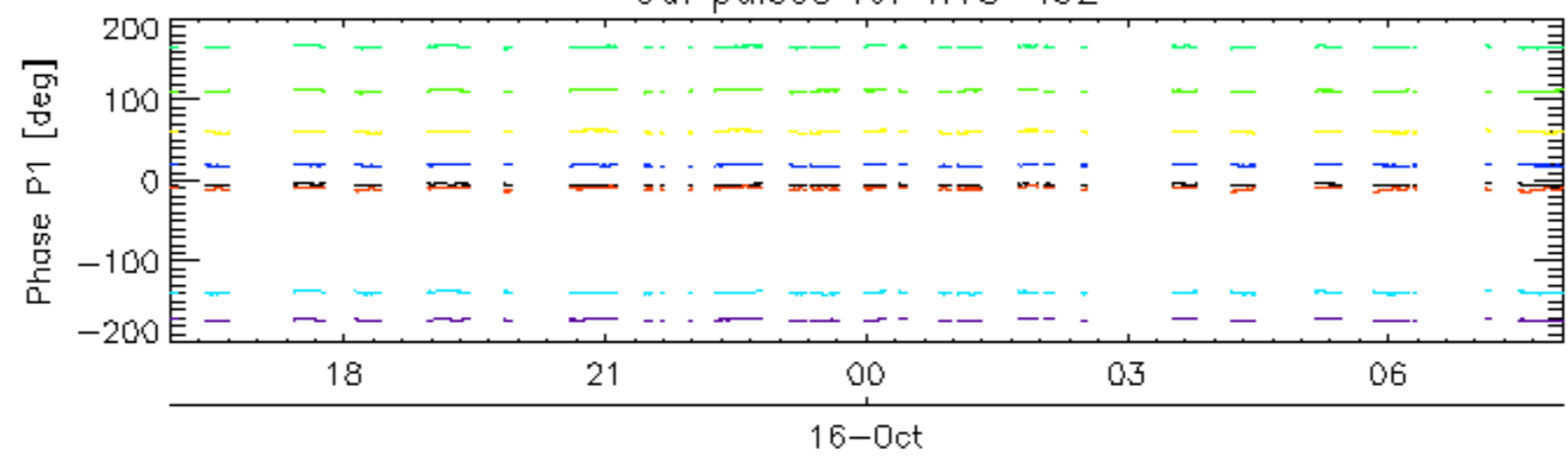


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

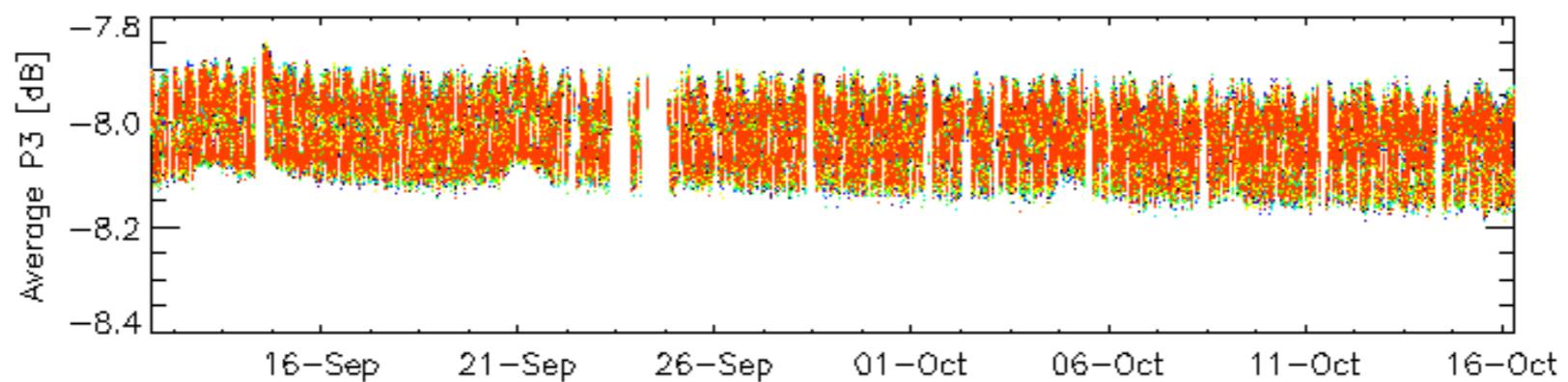
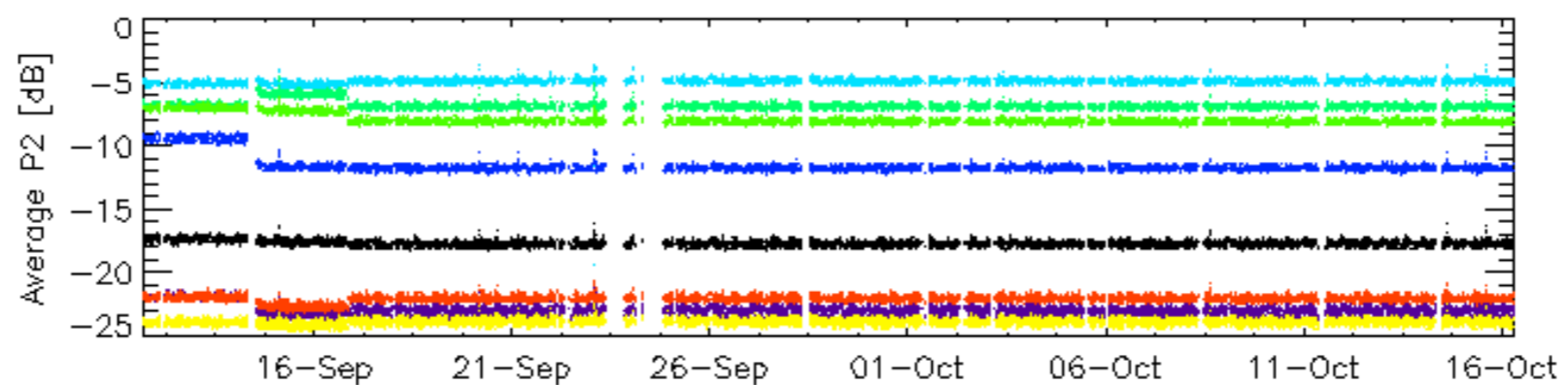
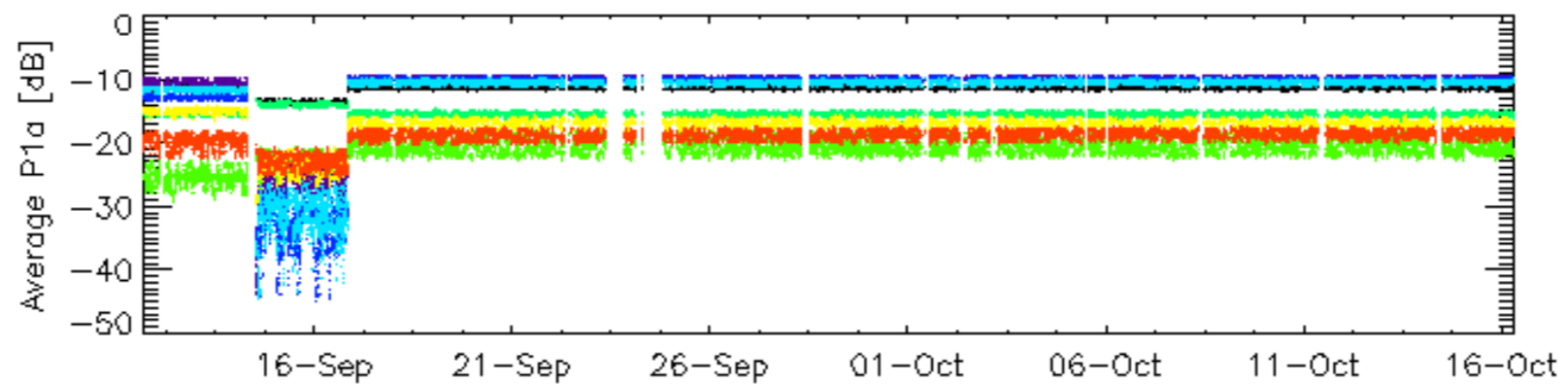
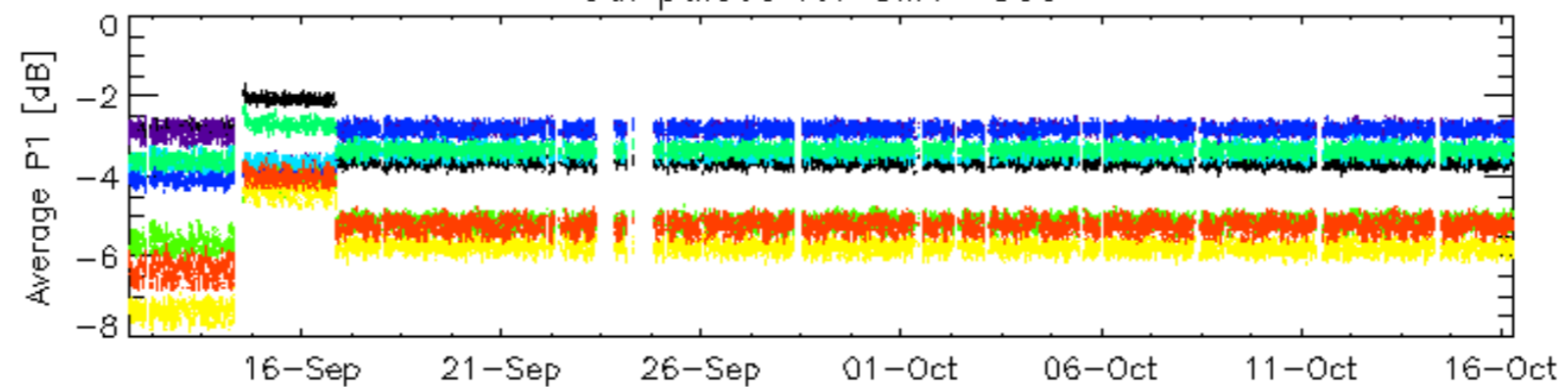


Cal pulses for WVS IS2



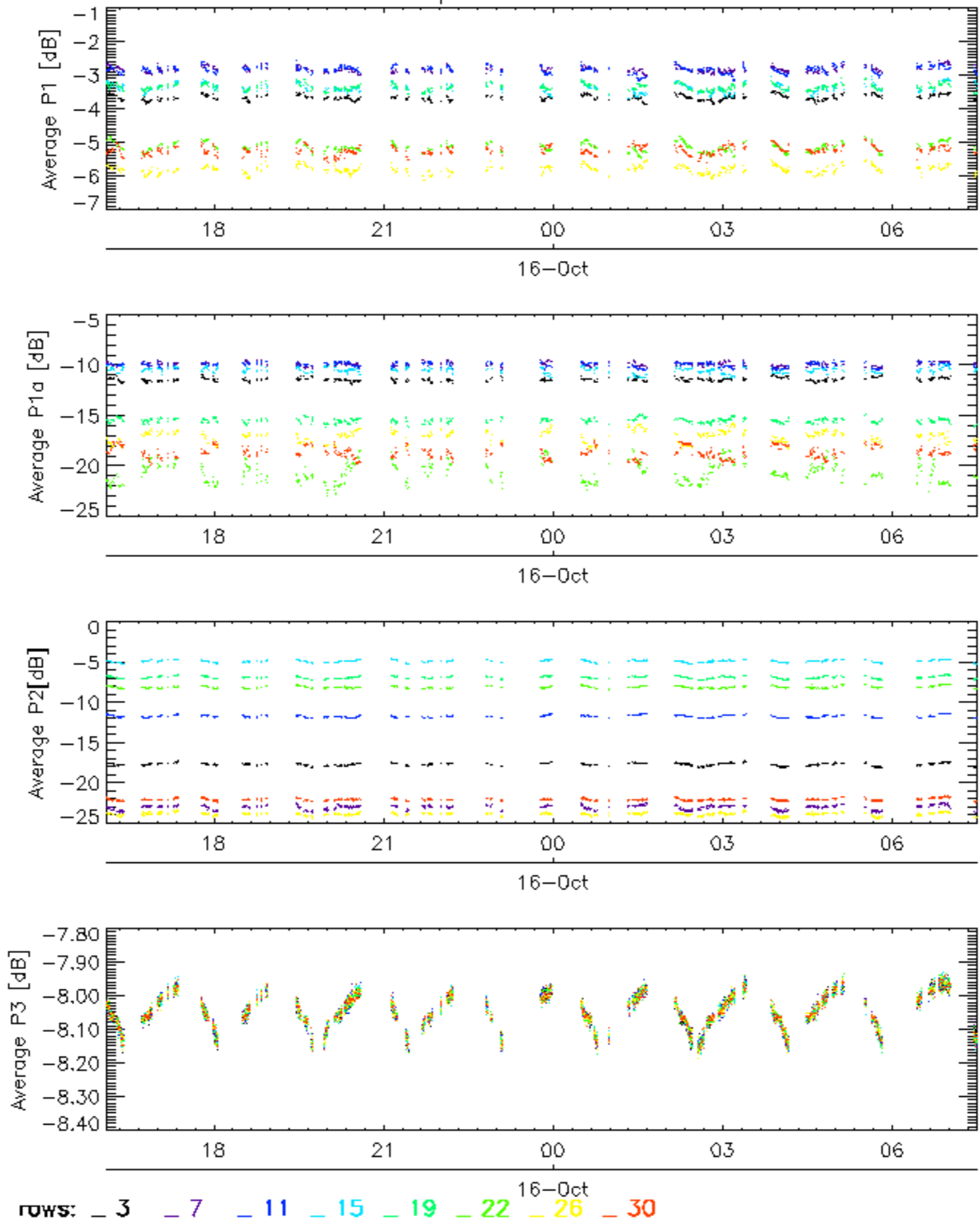
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

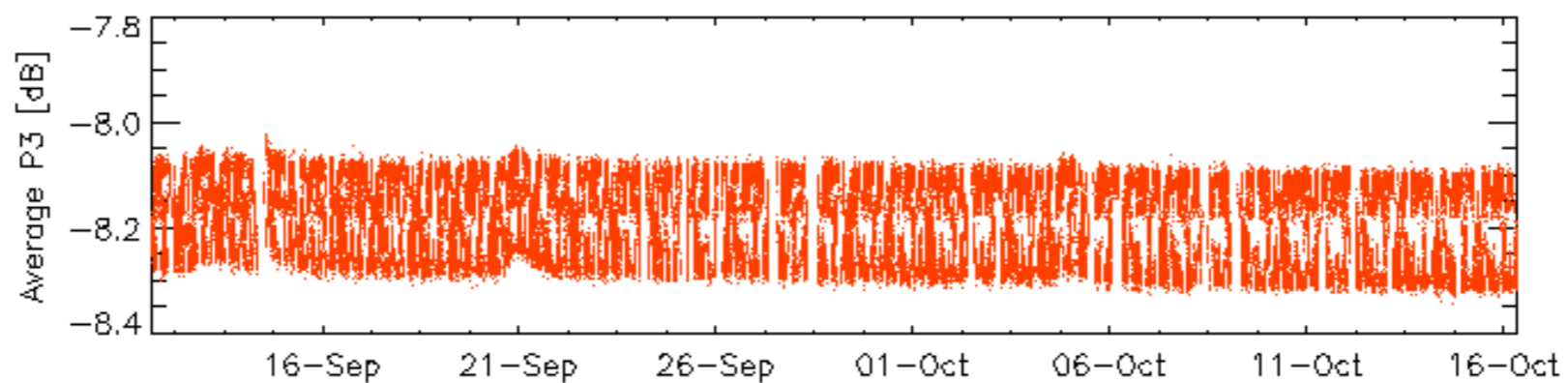
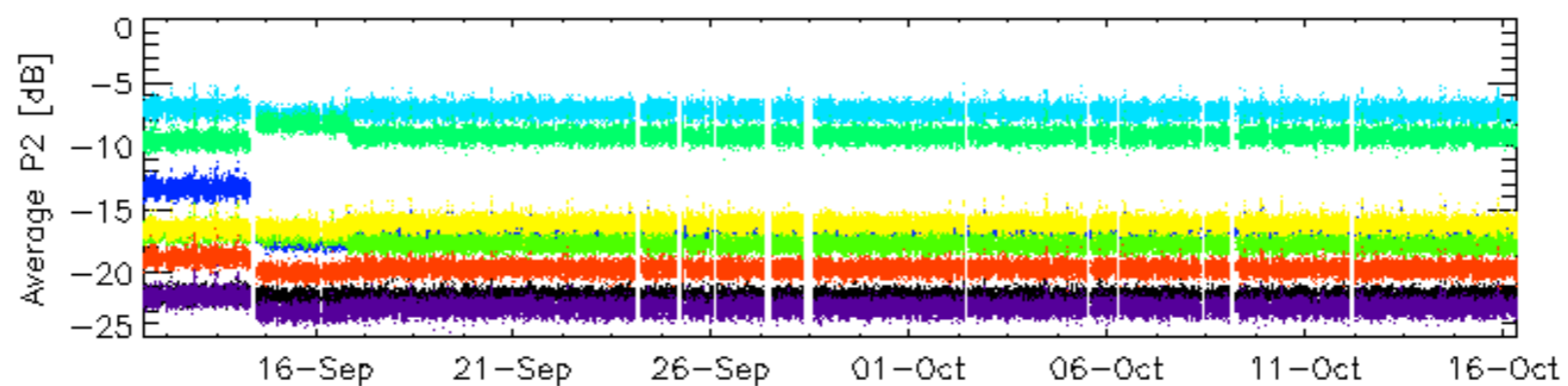
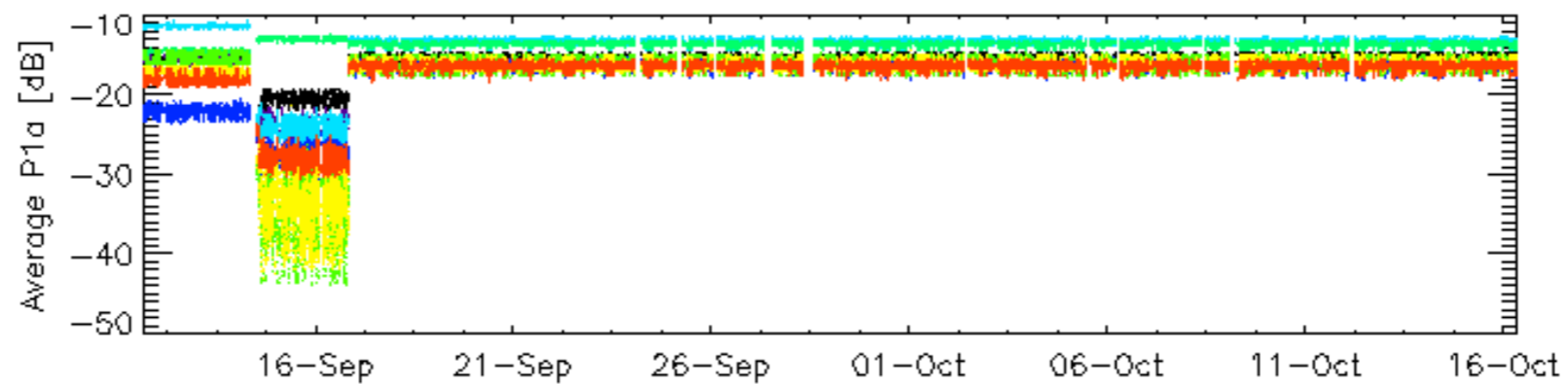
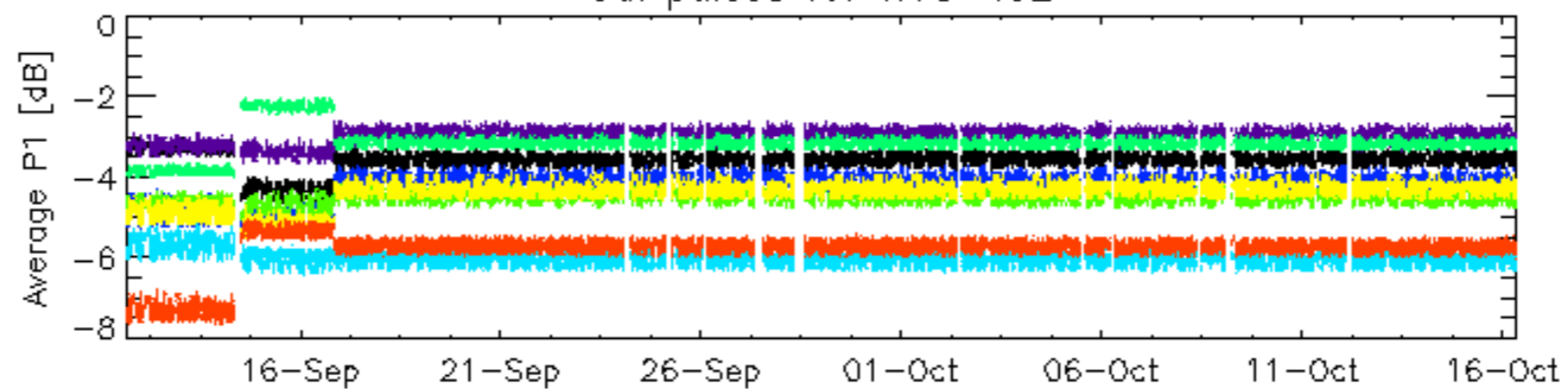


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

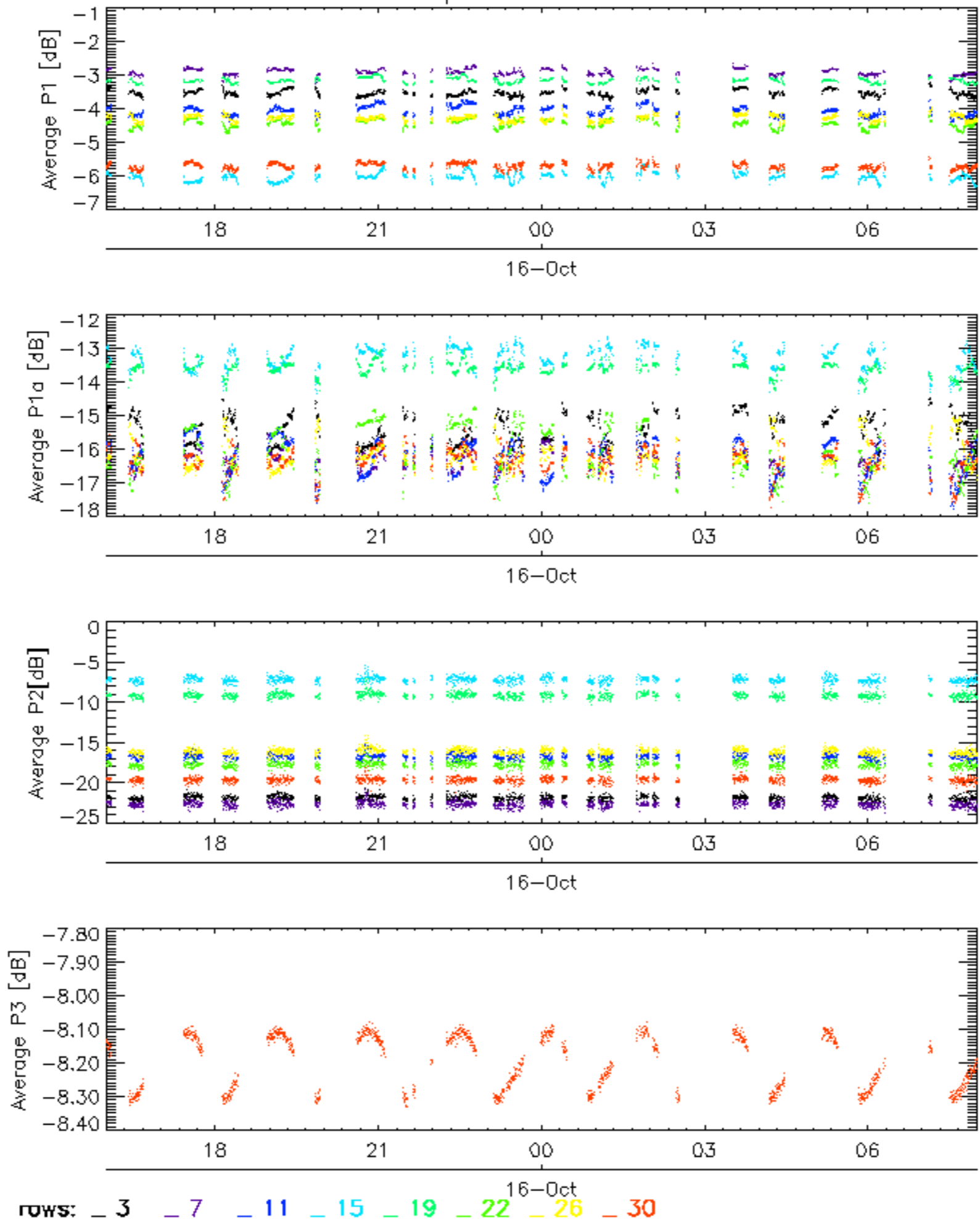


Cal pulses for WVS IS2

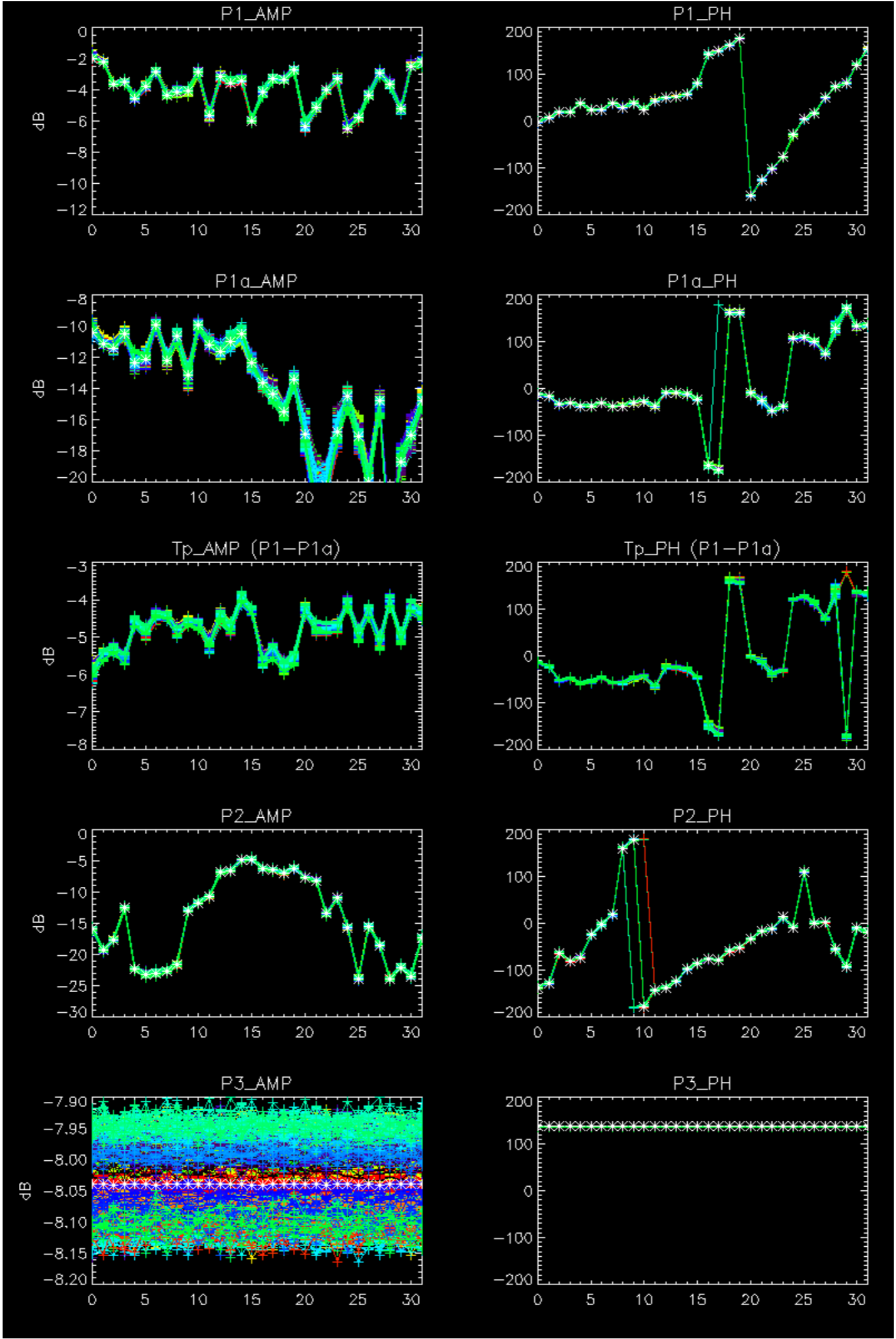


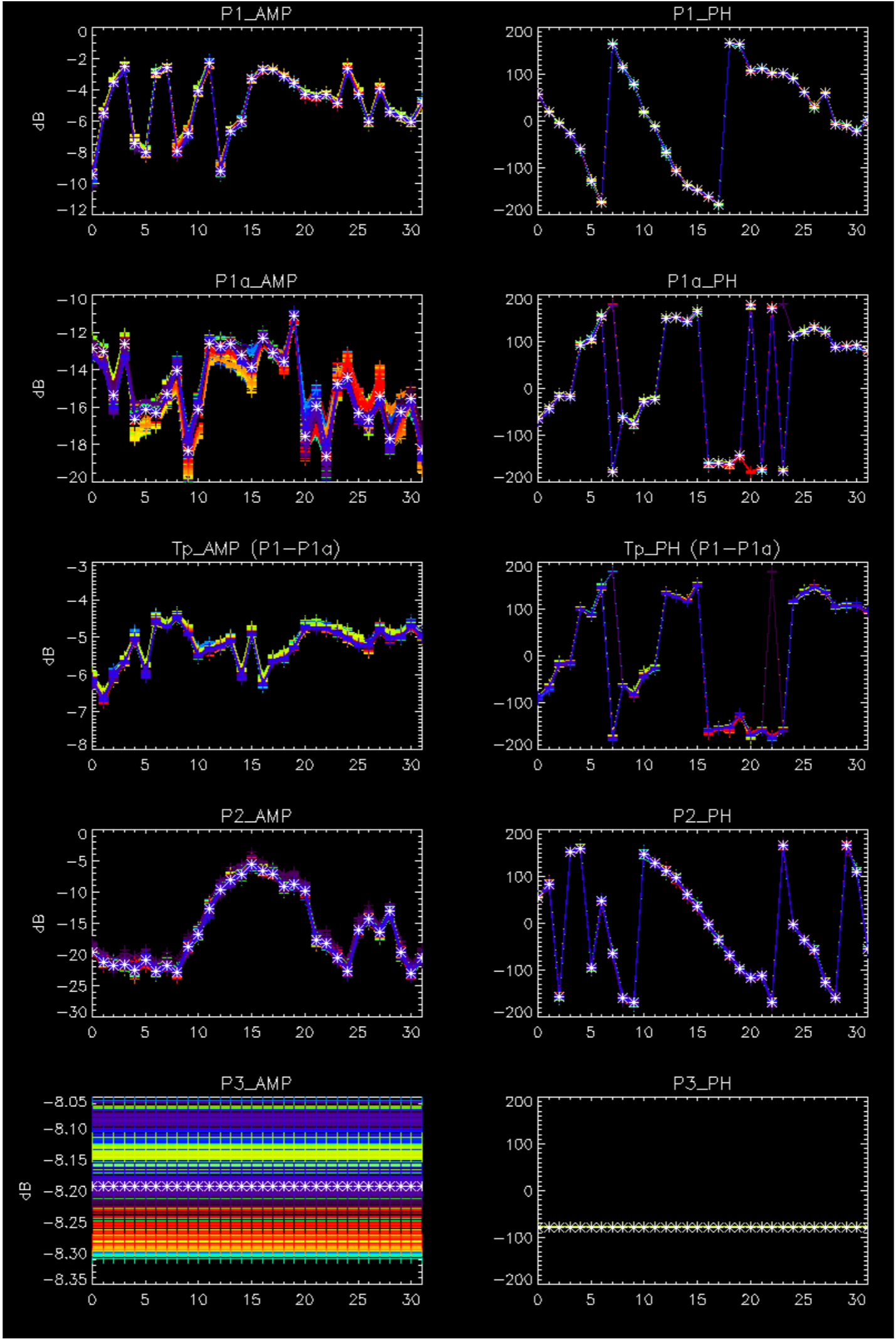
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Cal pulses for WVS IS2



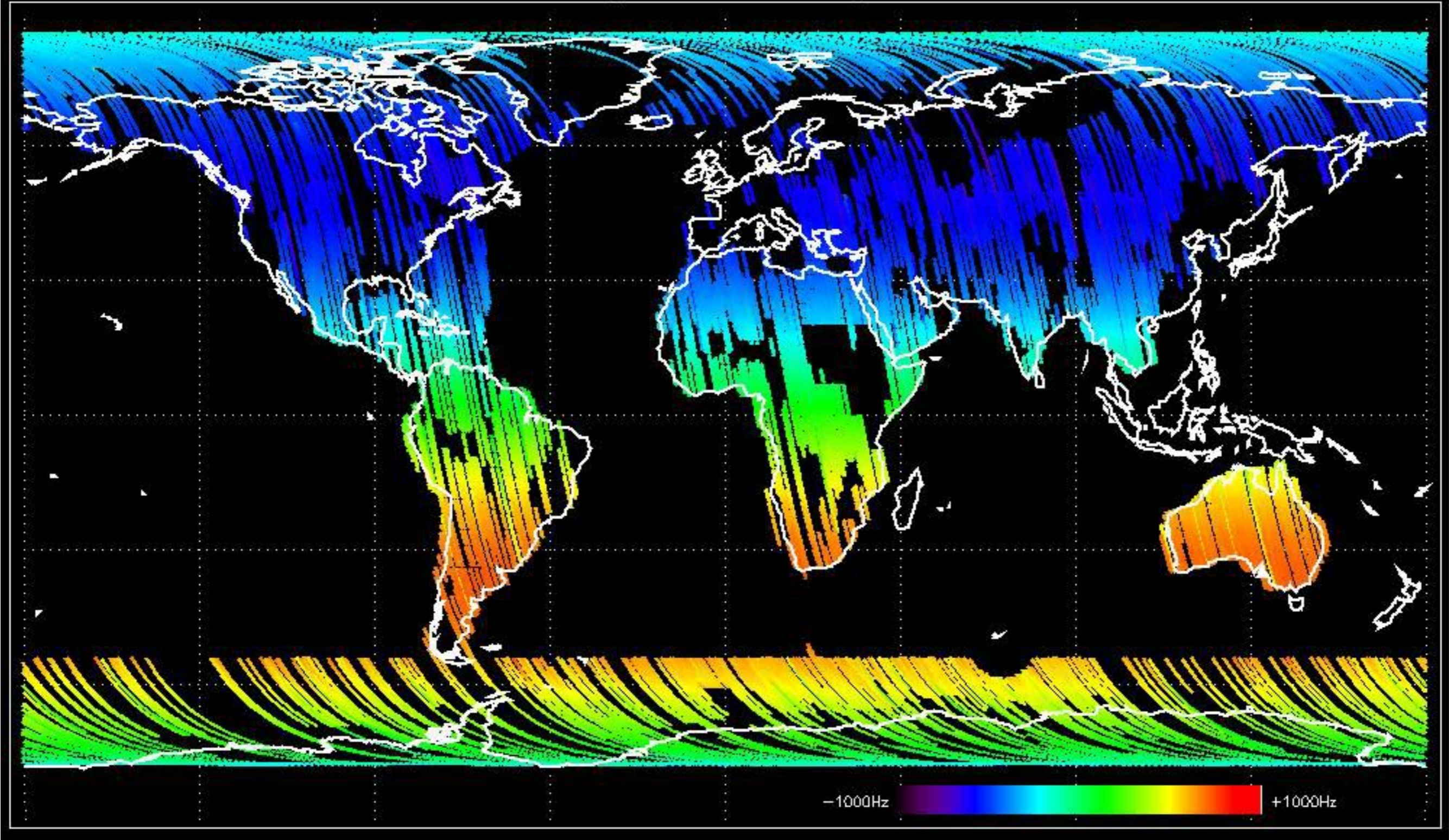
No anomalies observed.



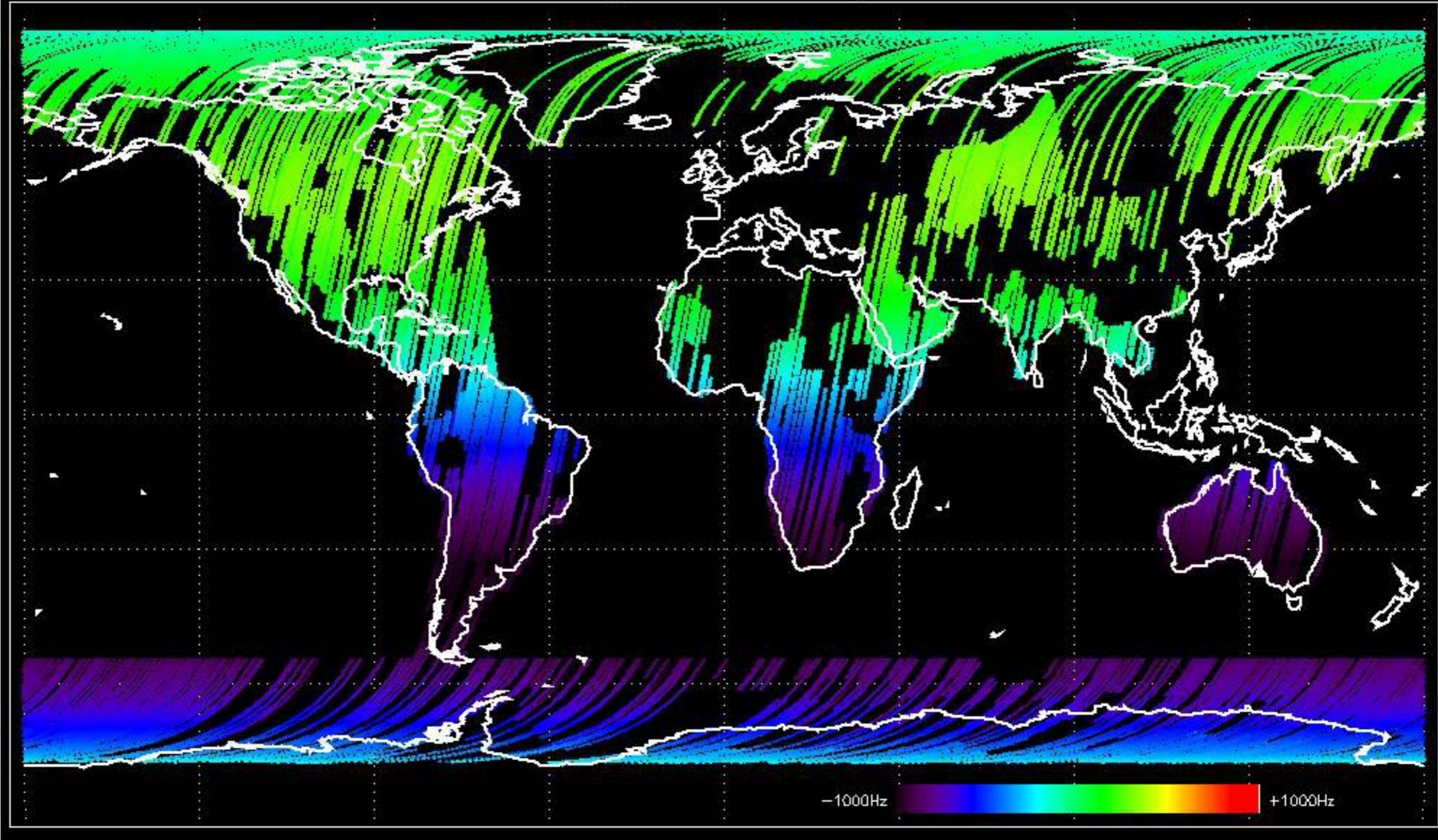


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

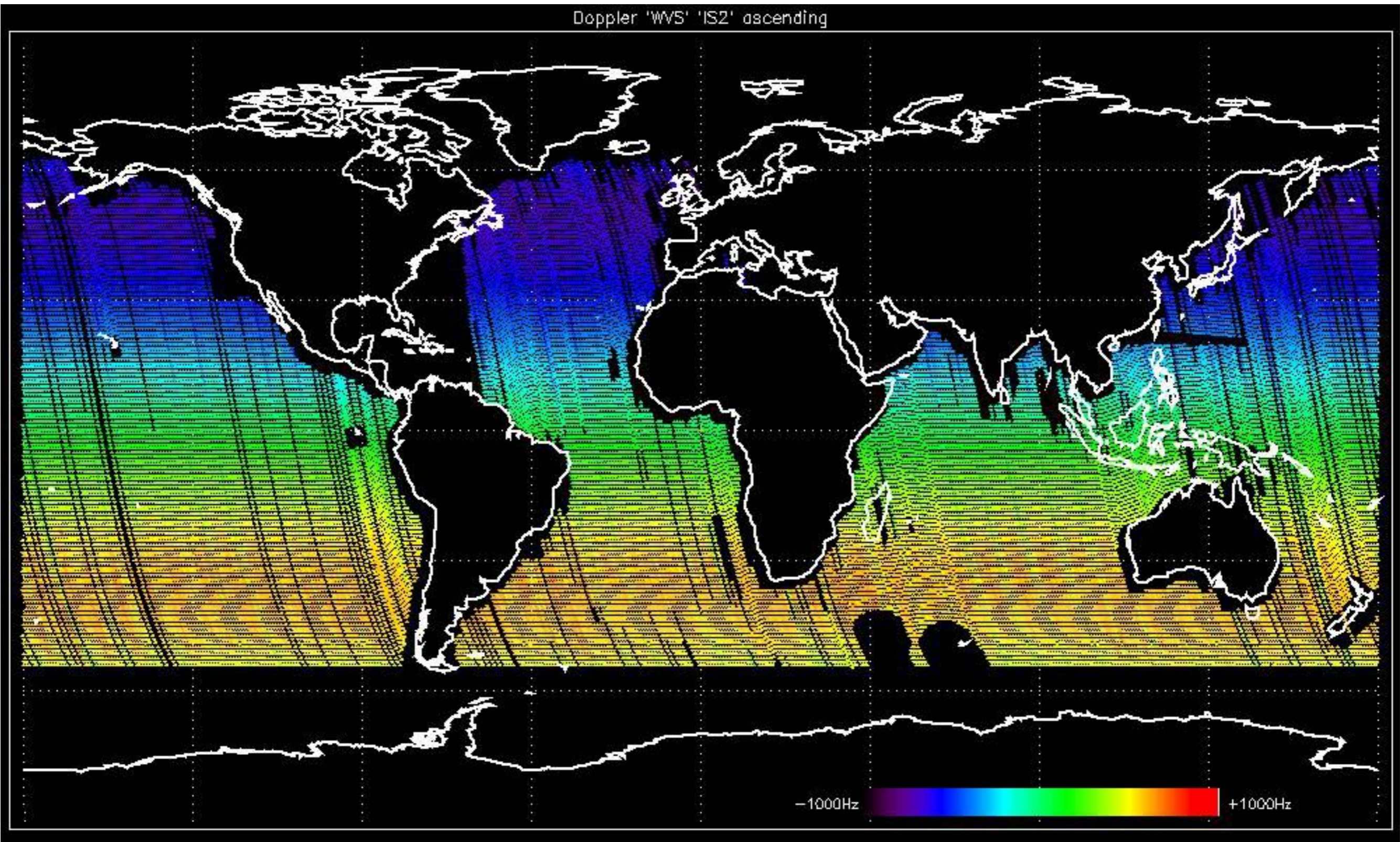
Doppler 'GM1' 'SS1' ascending



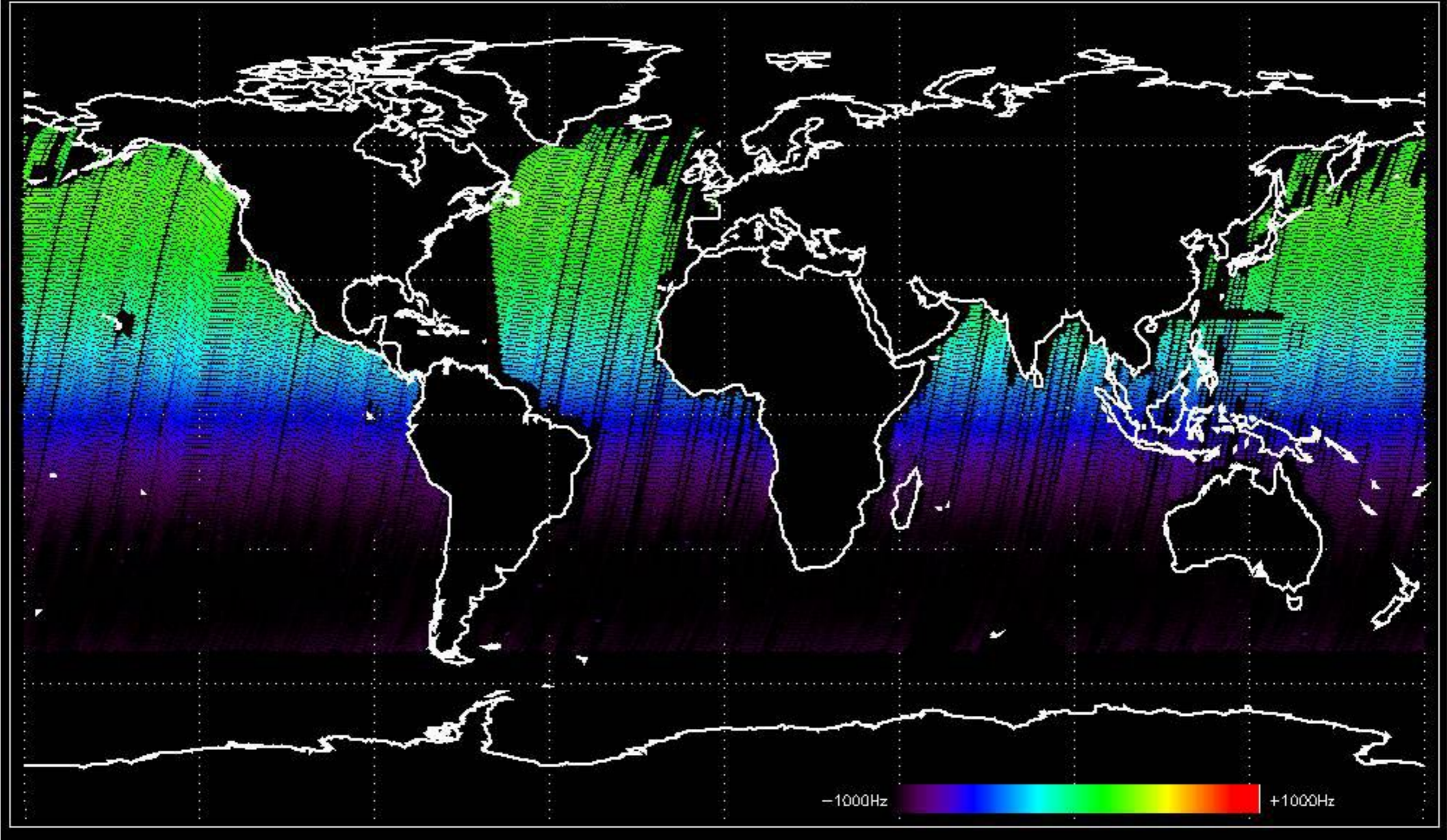
Doppler 'GM1' 'SS1' descending



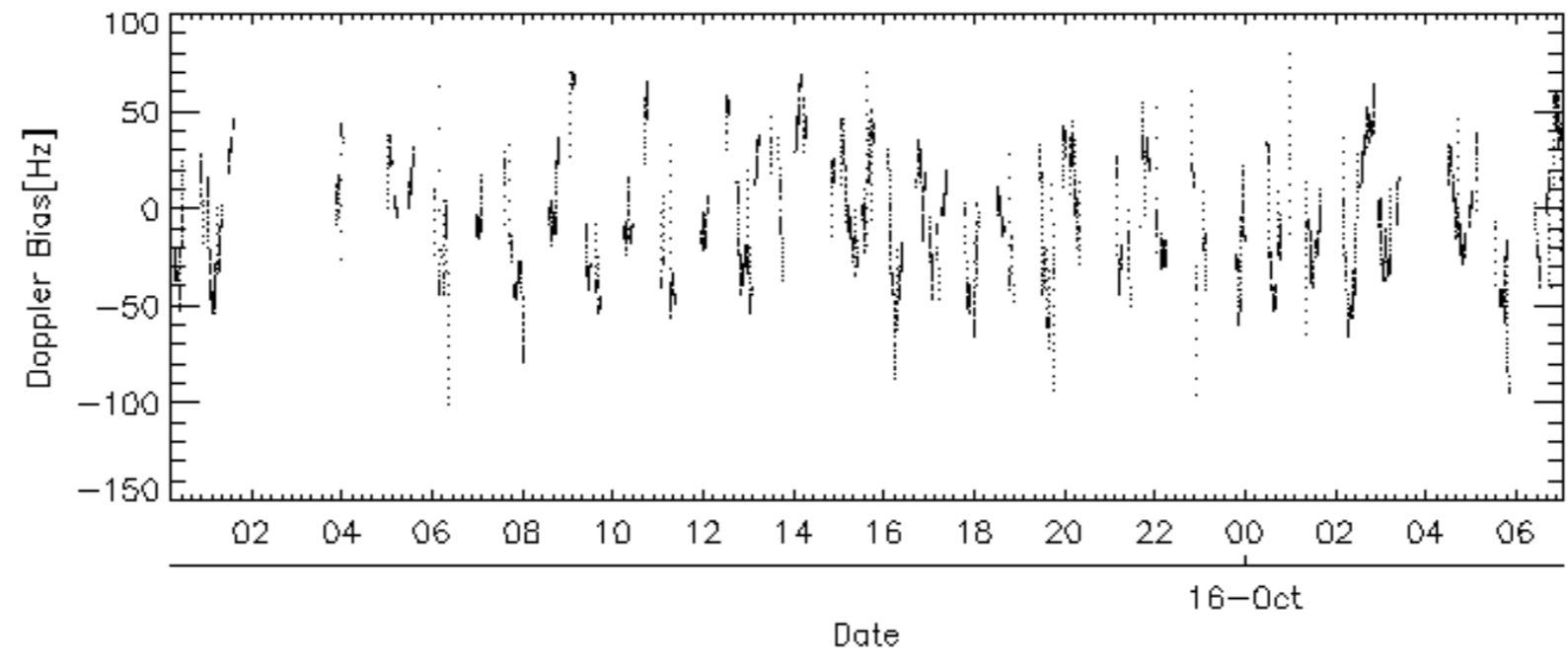
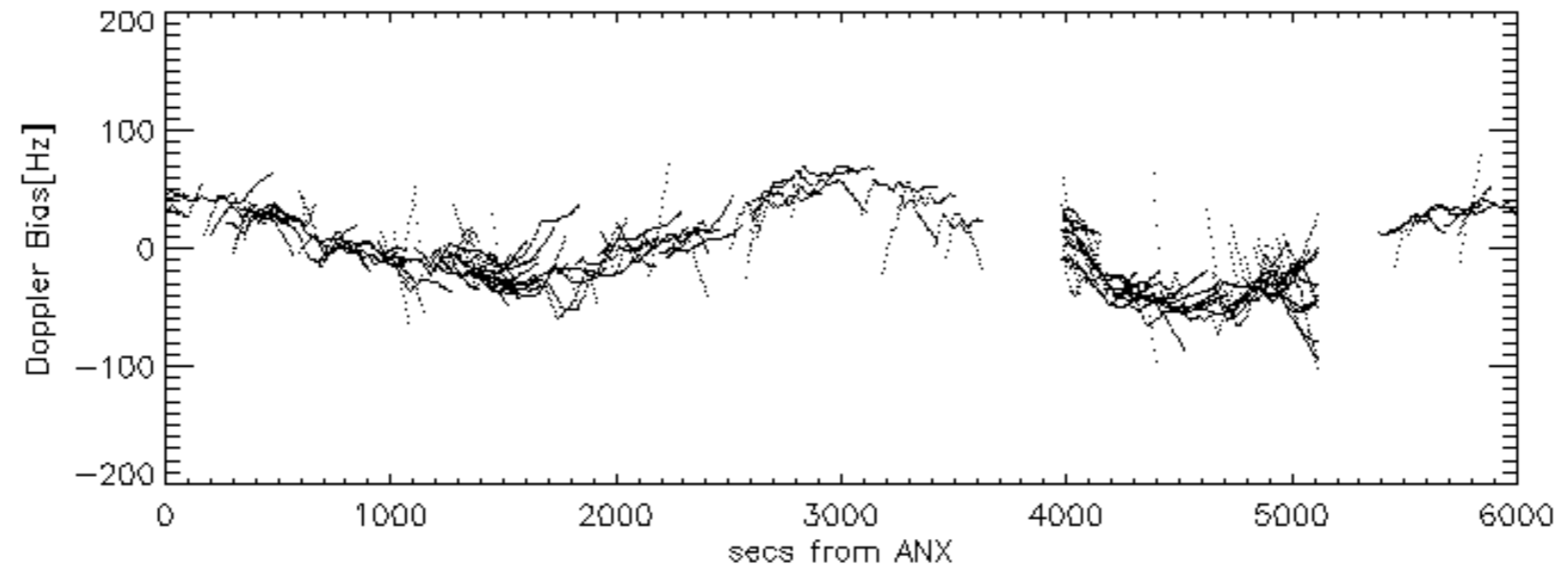
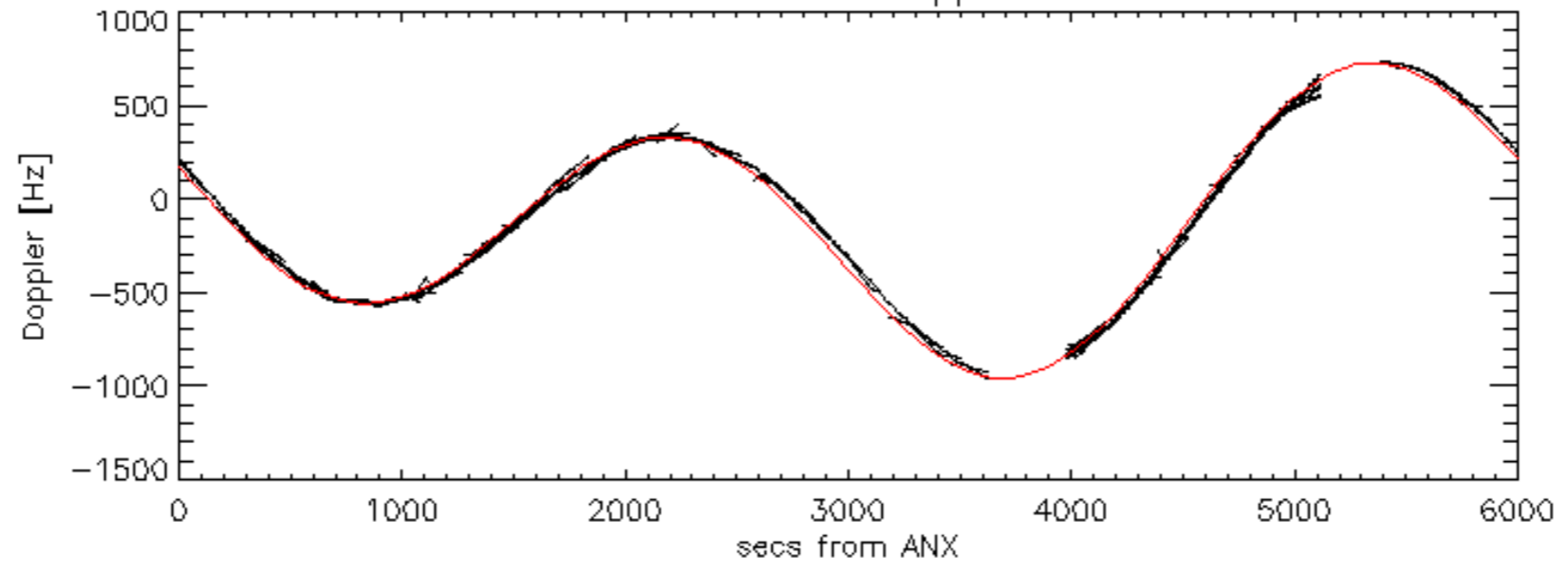
Doppler 'WVS' 'IS2' ascending

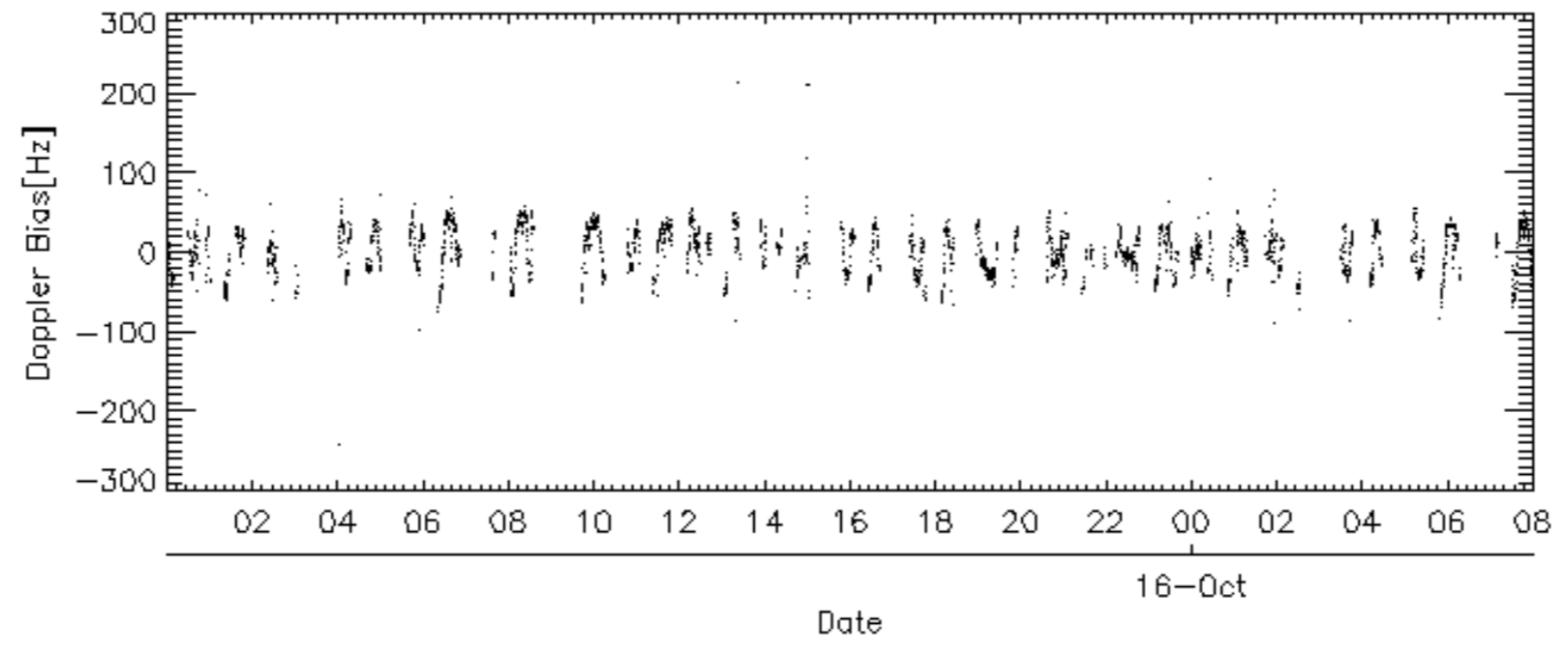
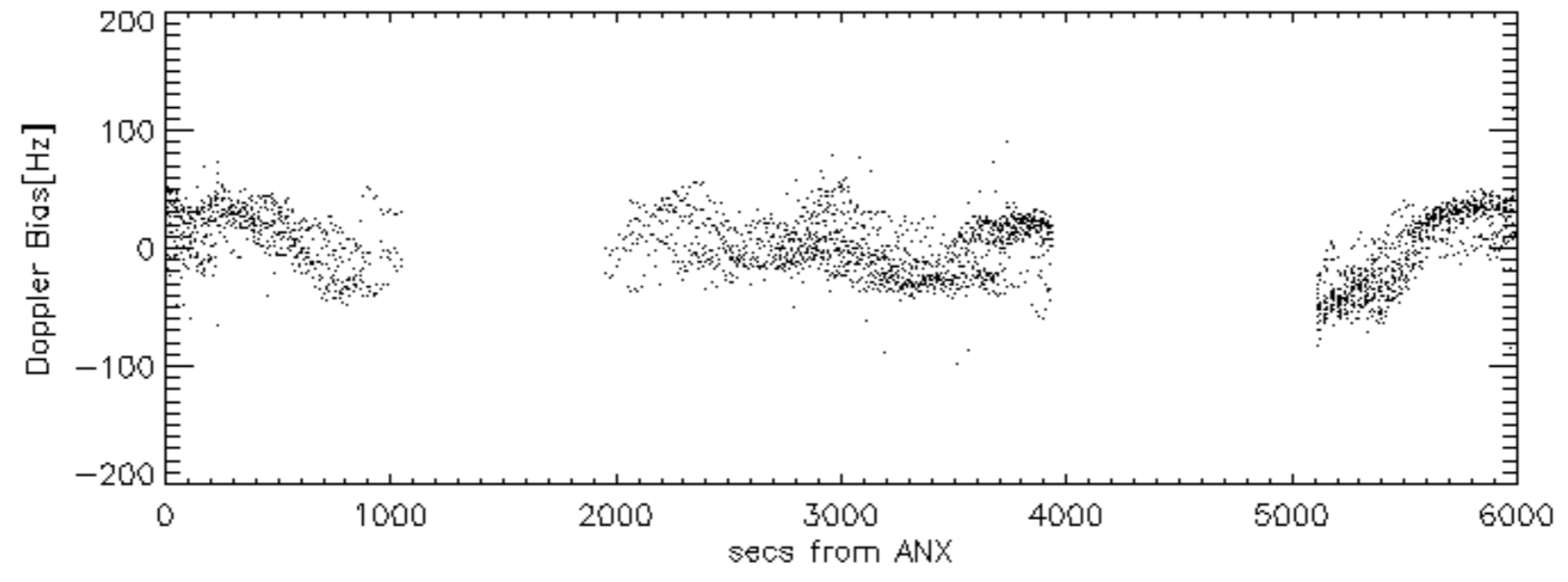
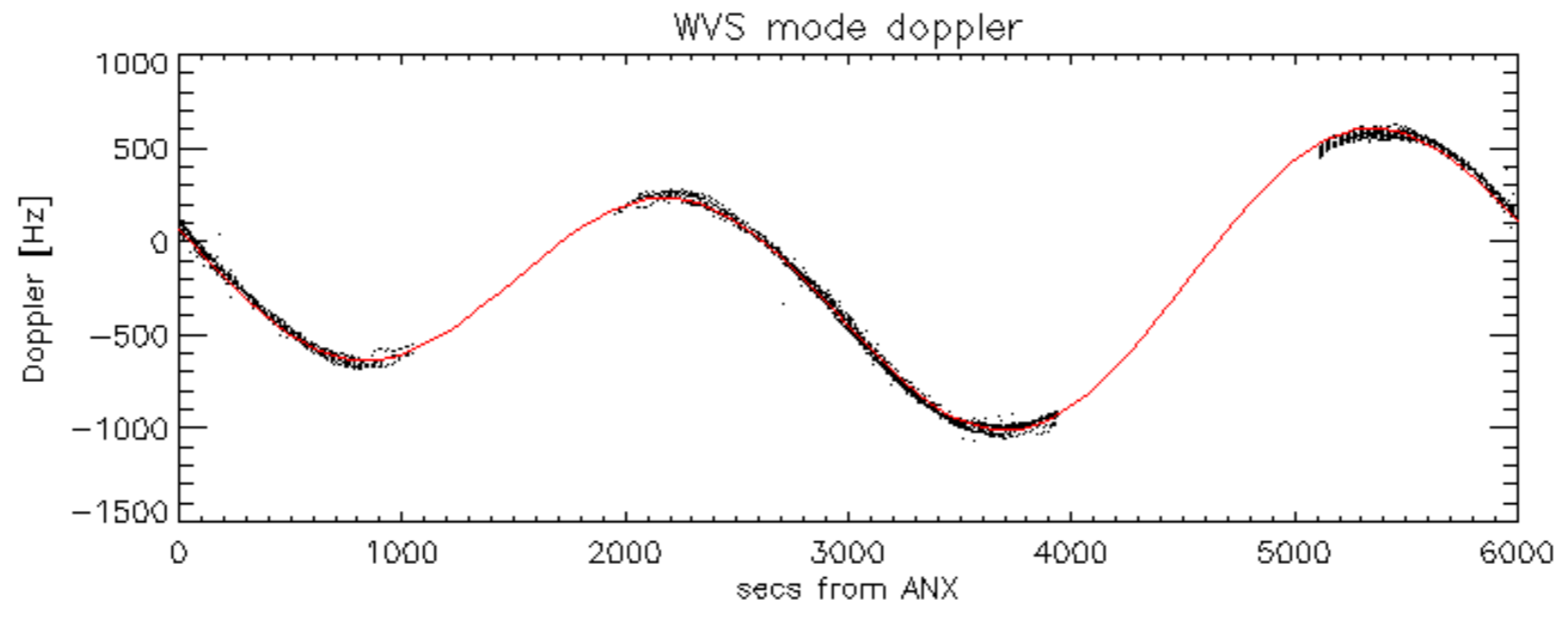


Doppler 'WVS' 'IS2' descending

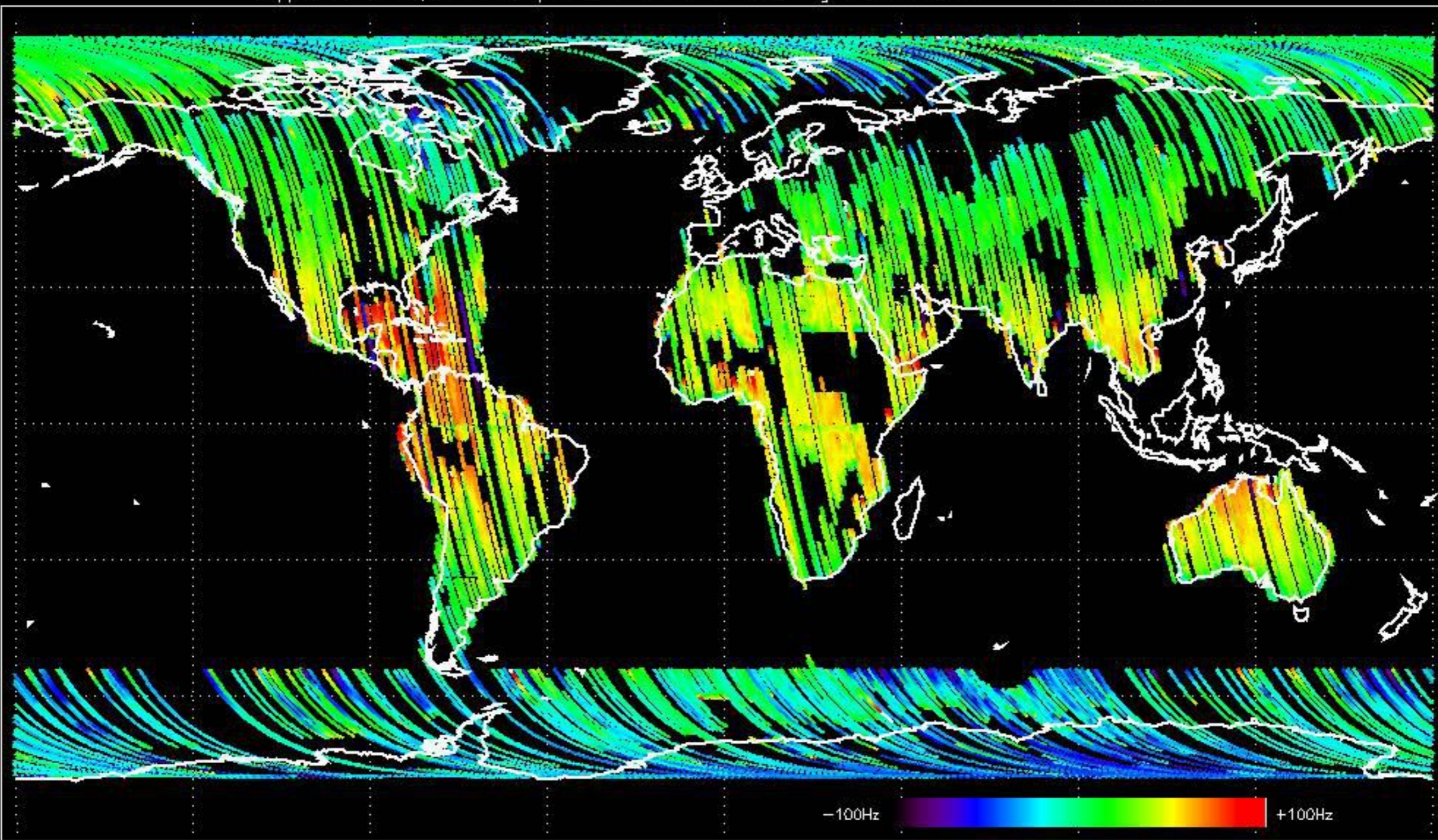


GM1 mode doppler

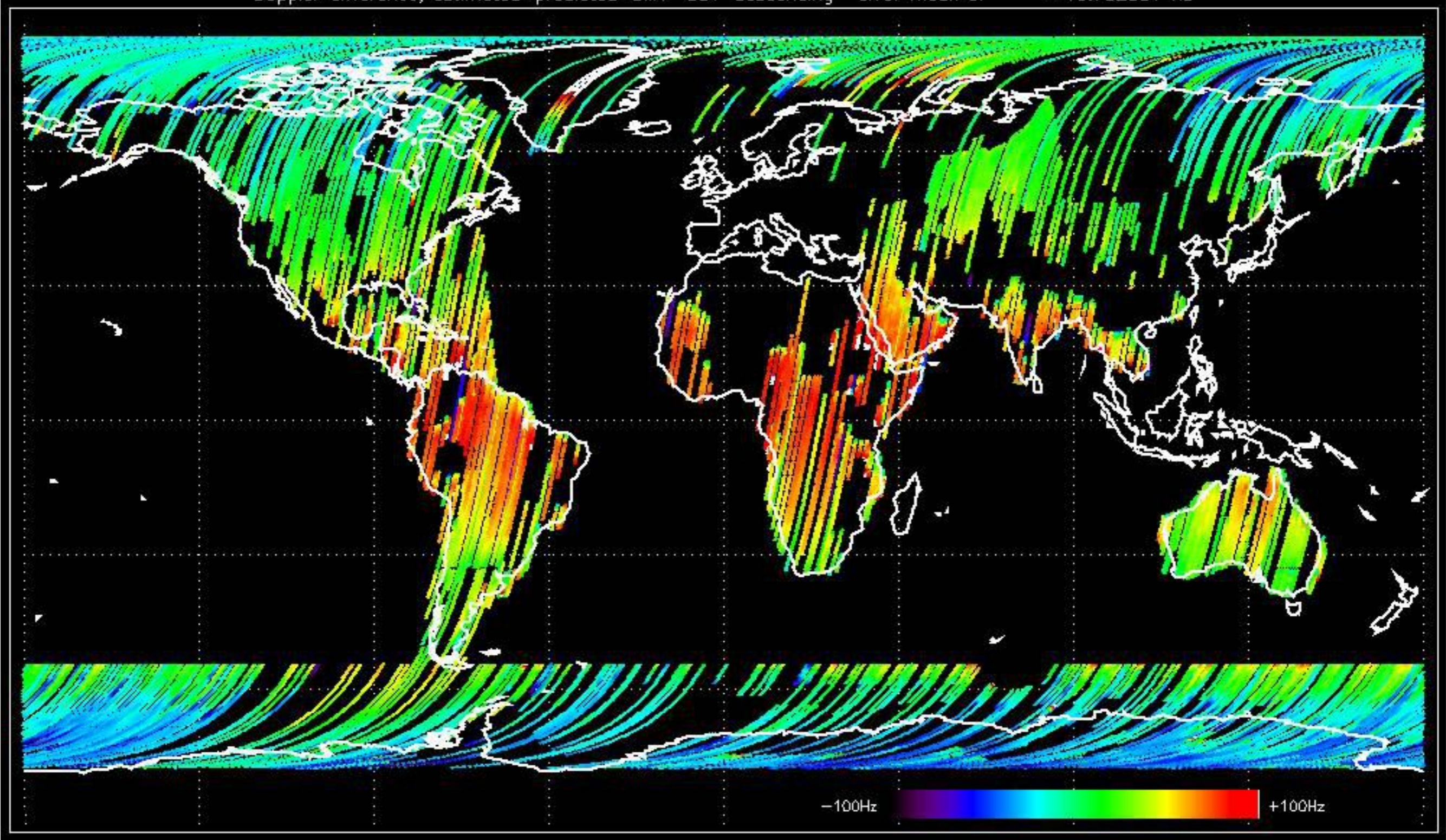




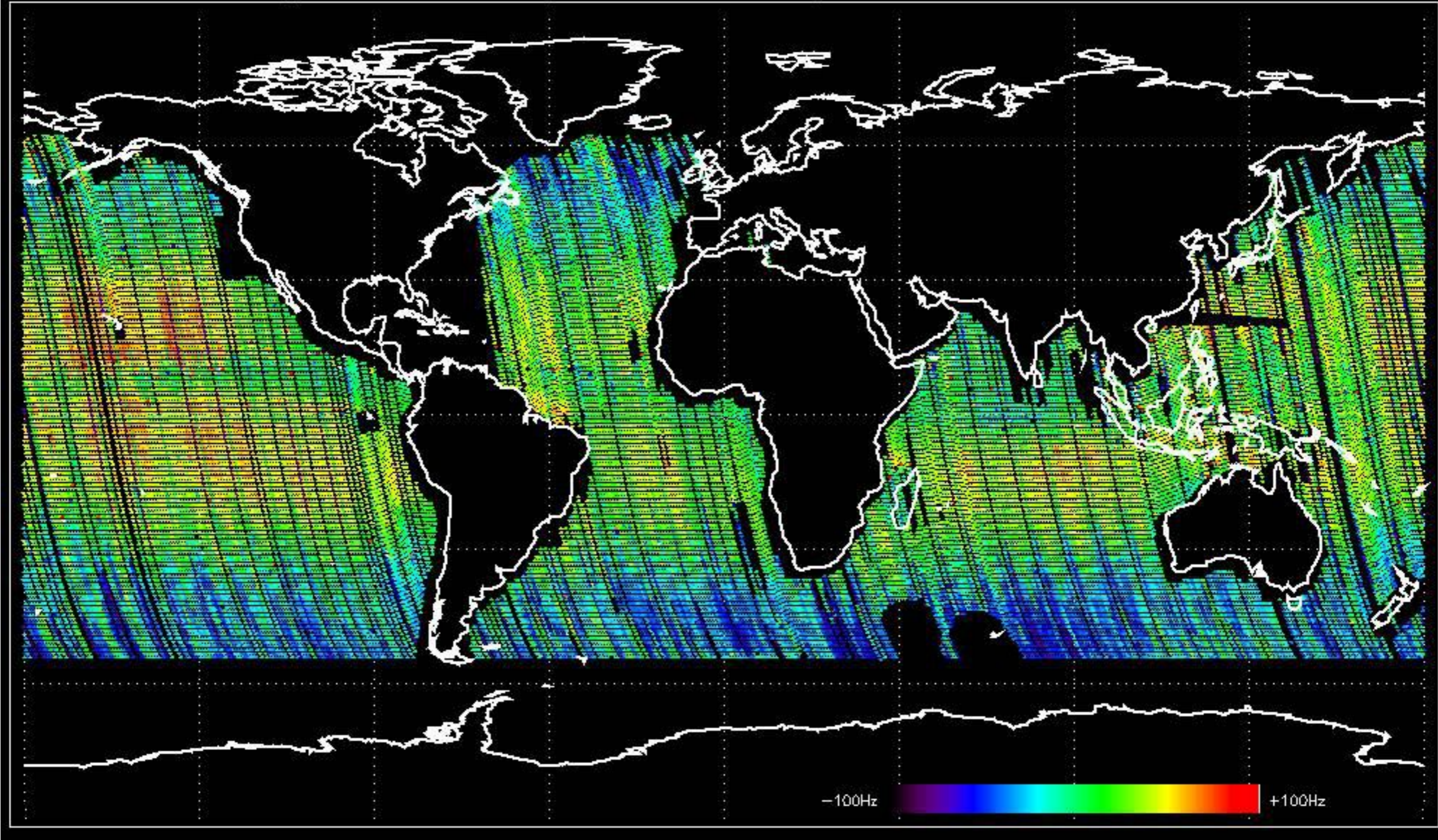
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.676419 Hz



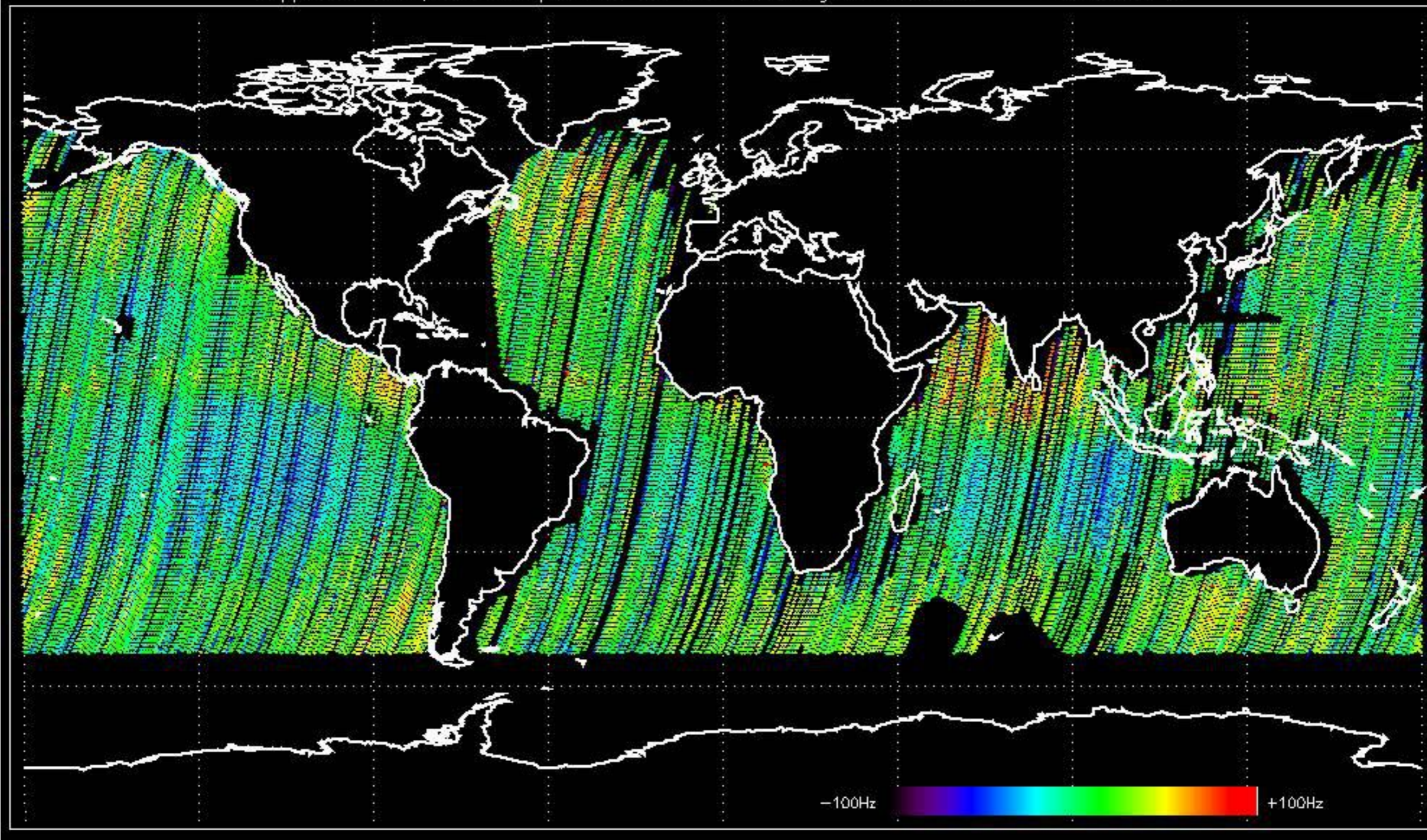
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.752051 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -12.212299 Hz

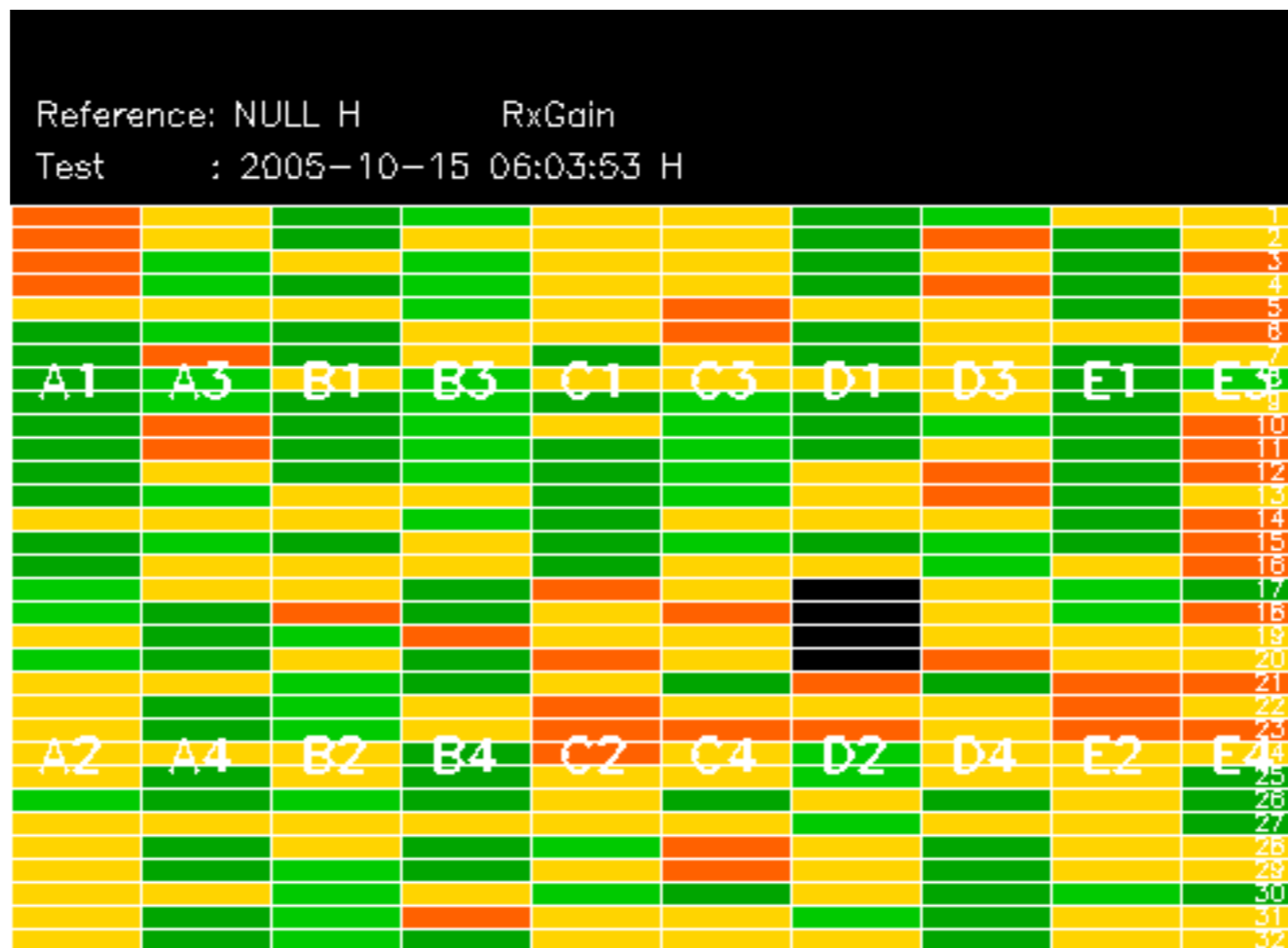


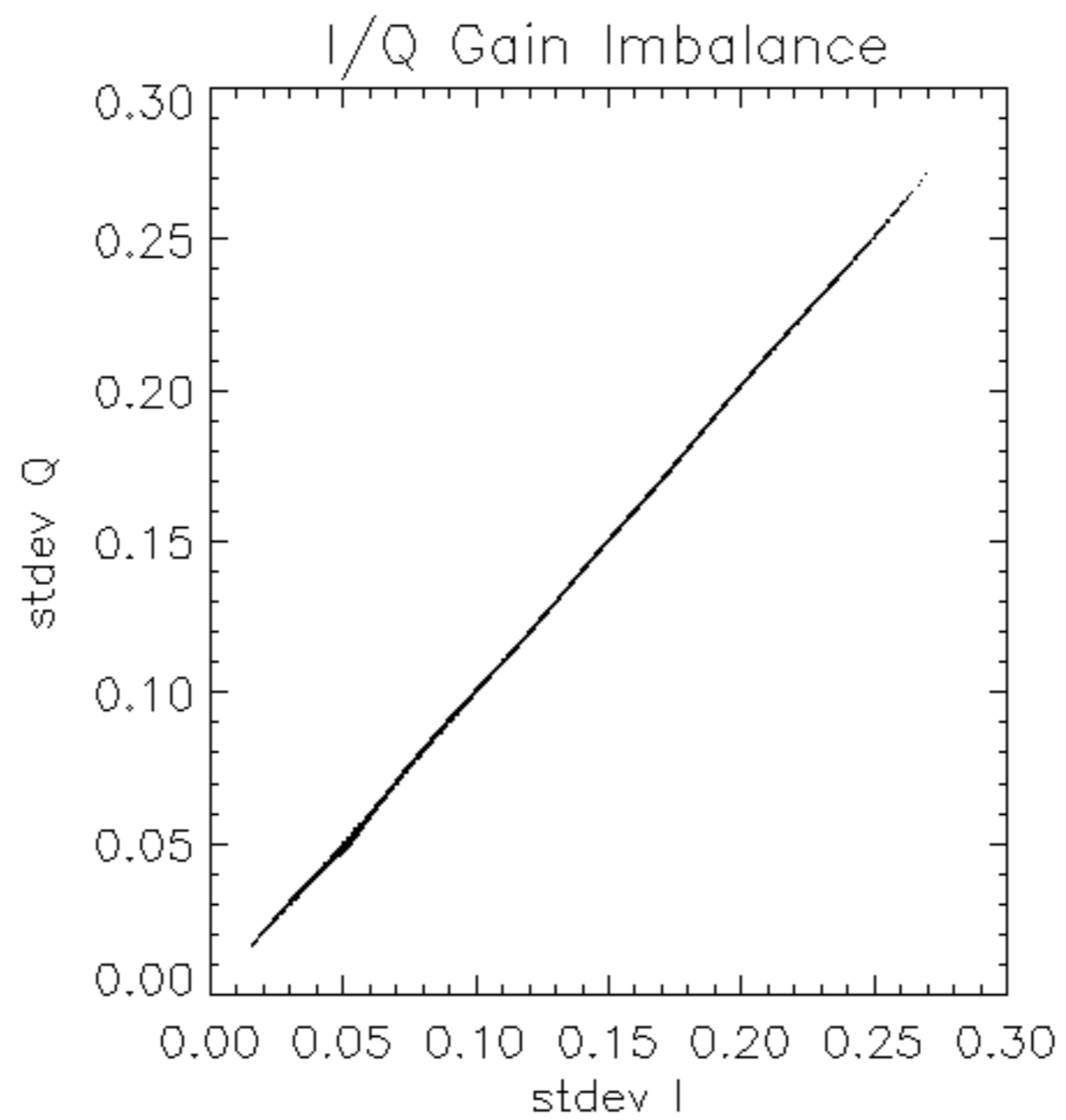
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -16.057480 Hz

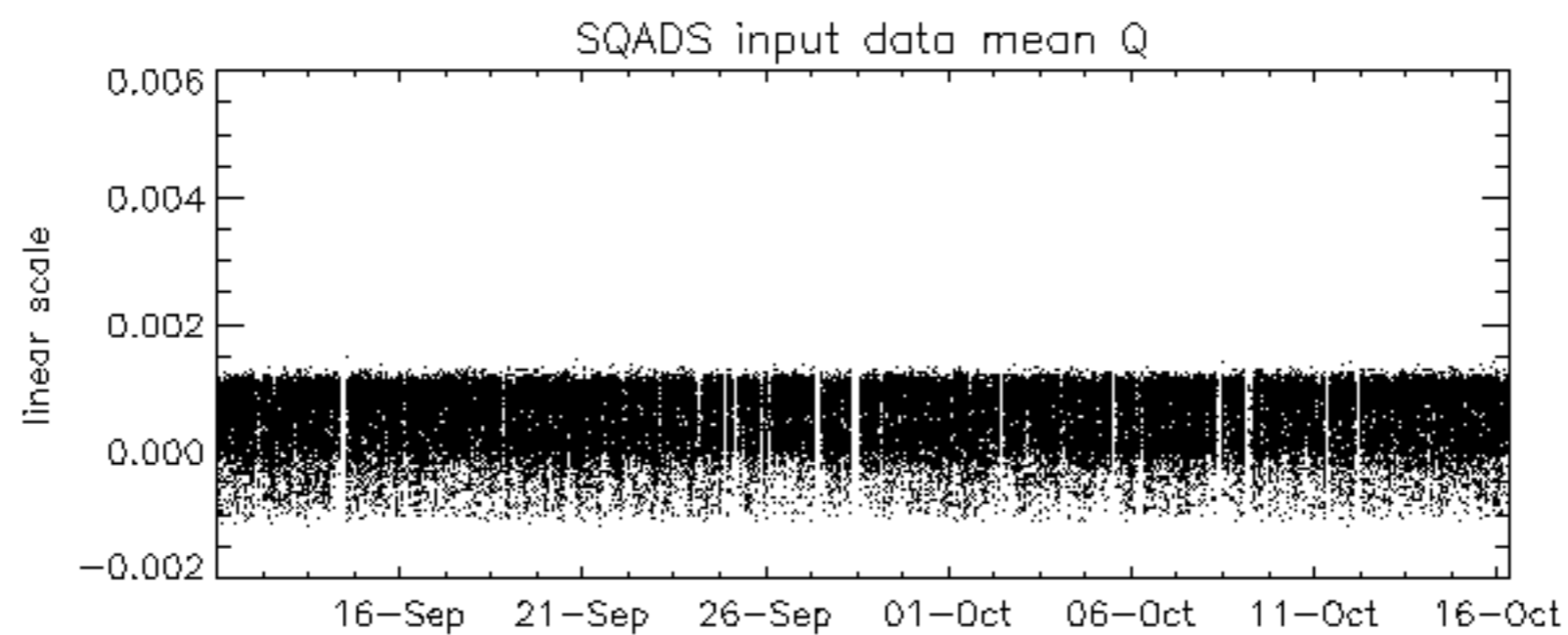
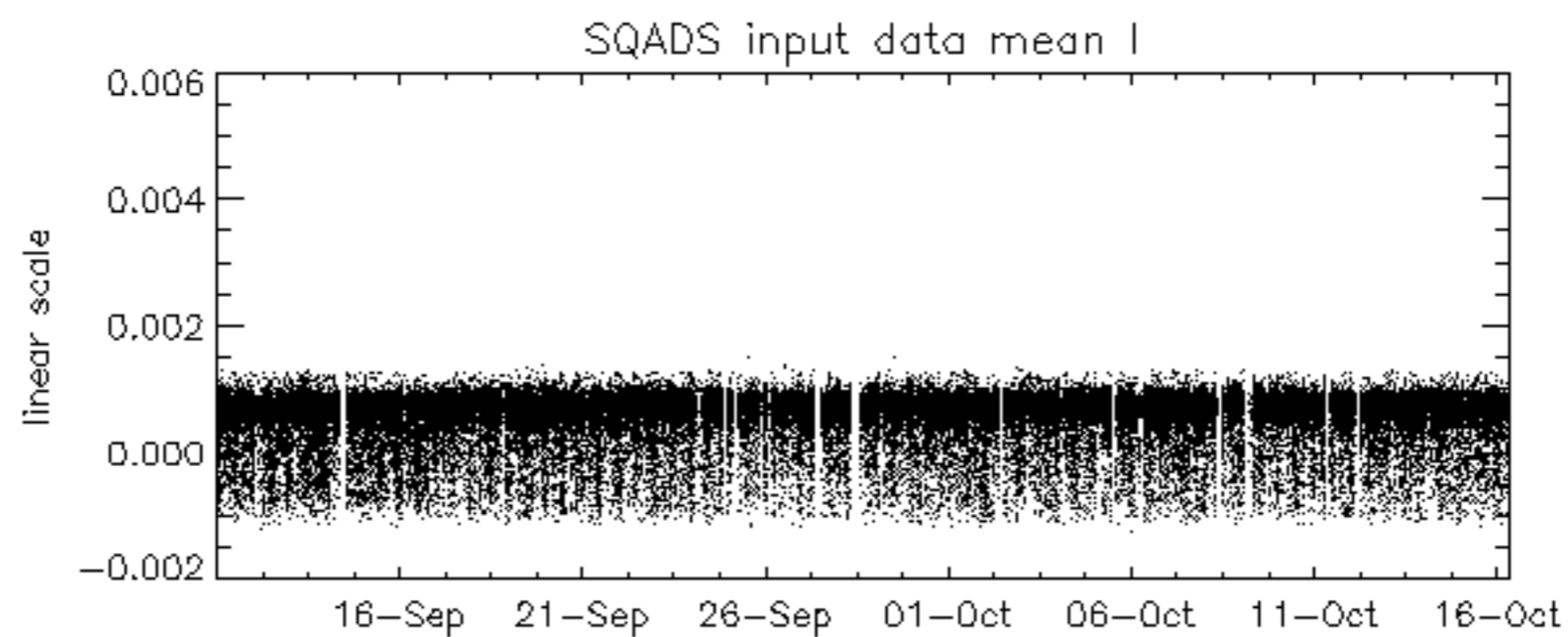
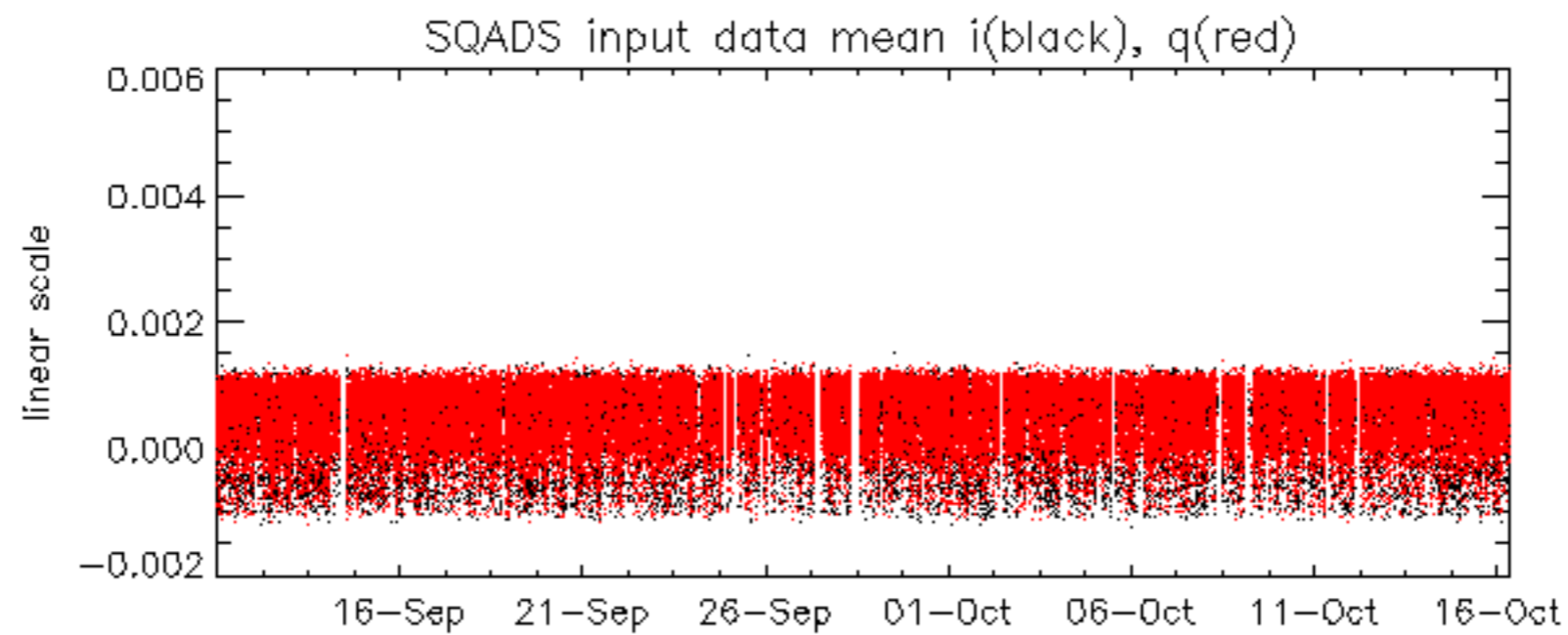


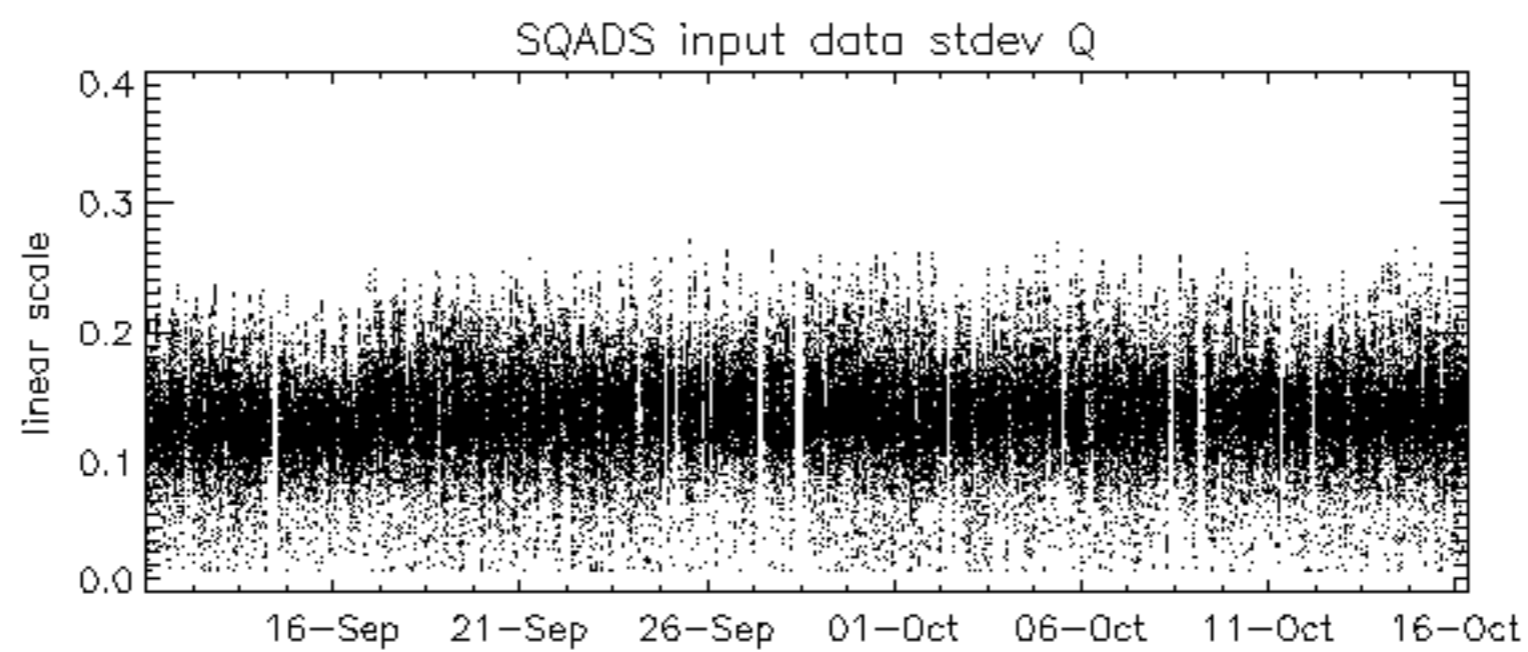
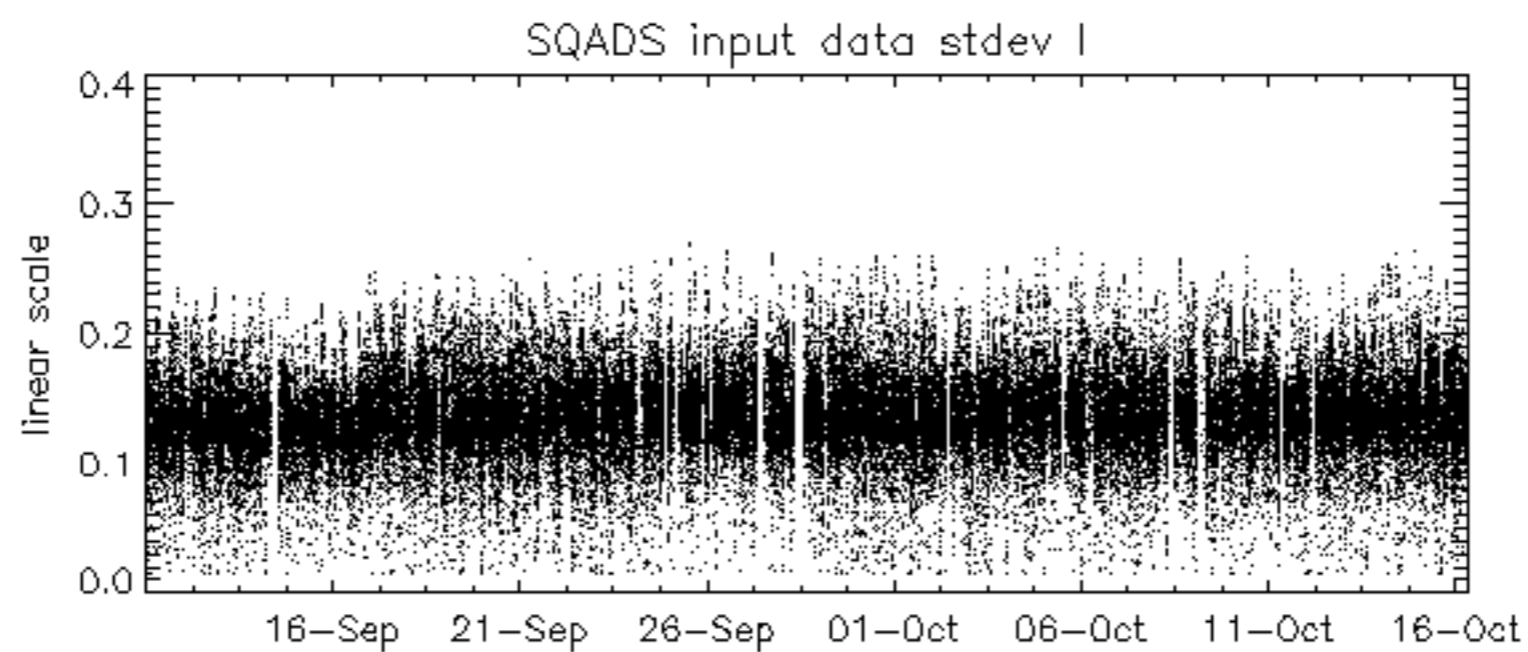
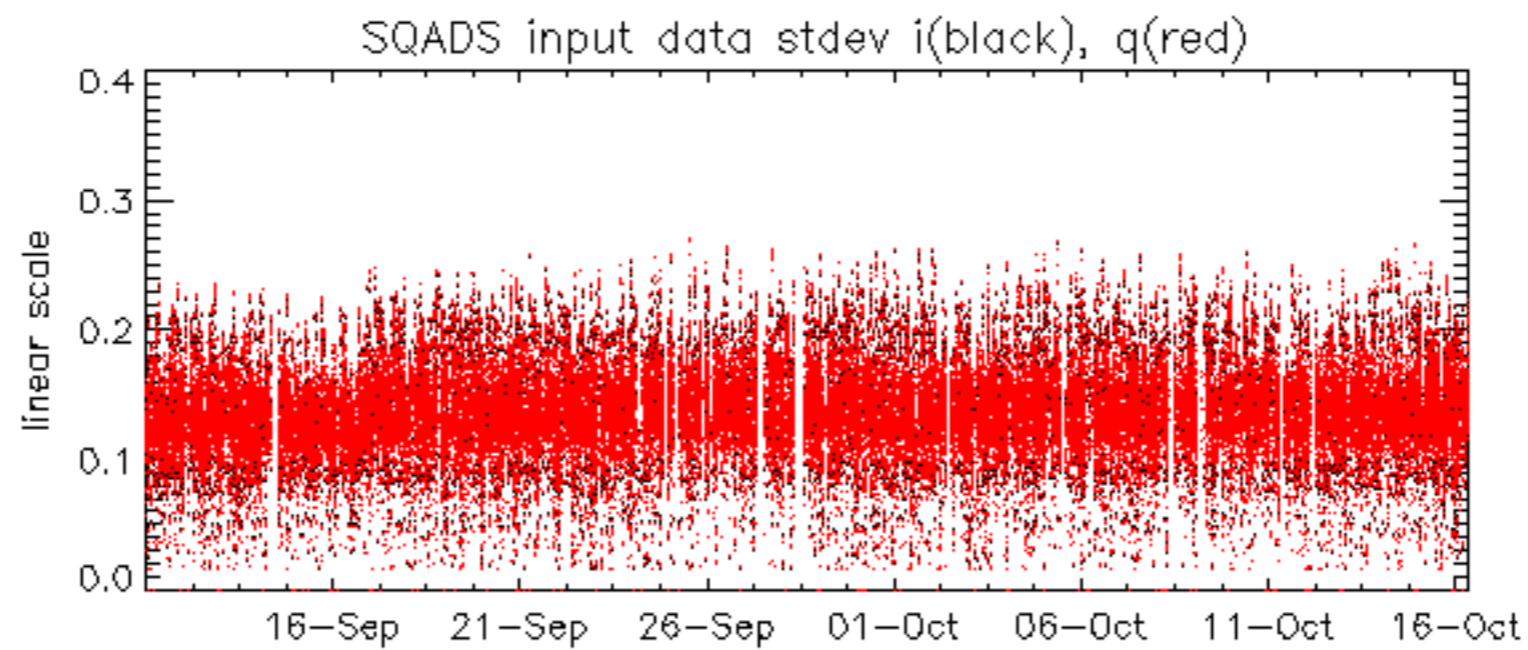
No anomalies observed on available MS products:

No anomalies observed.





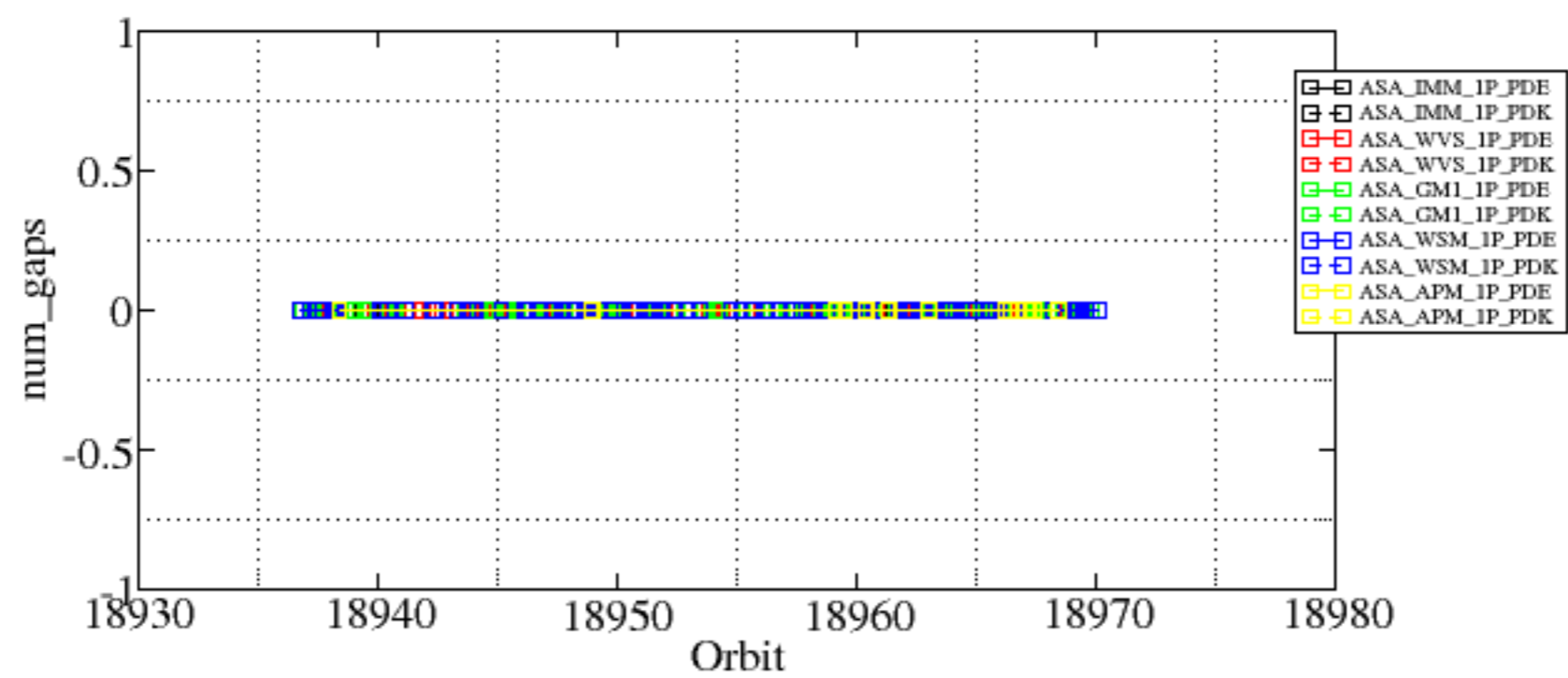




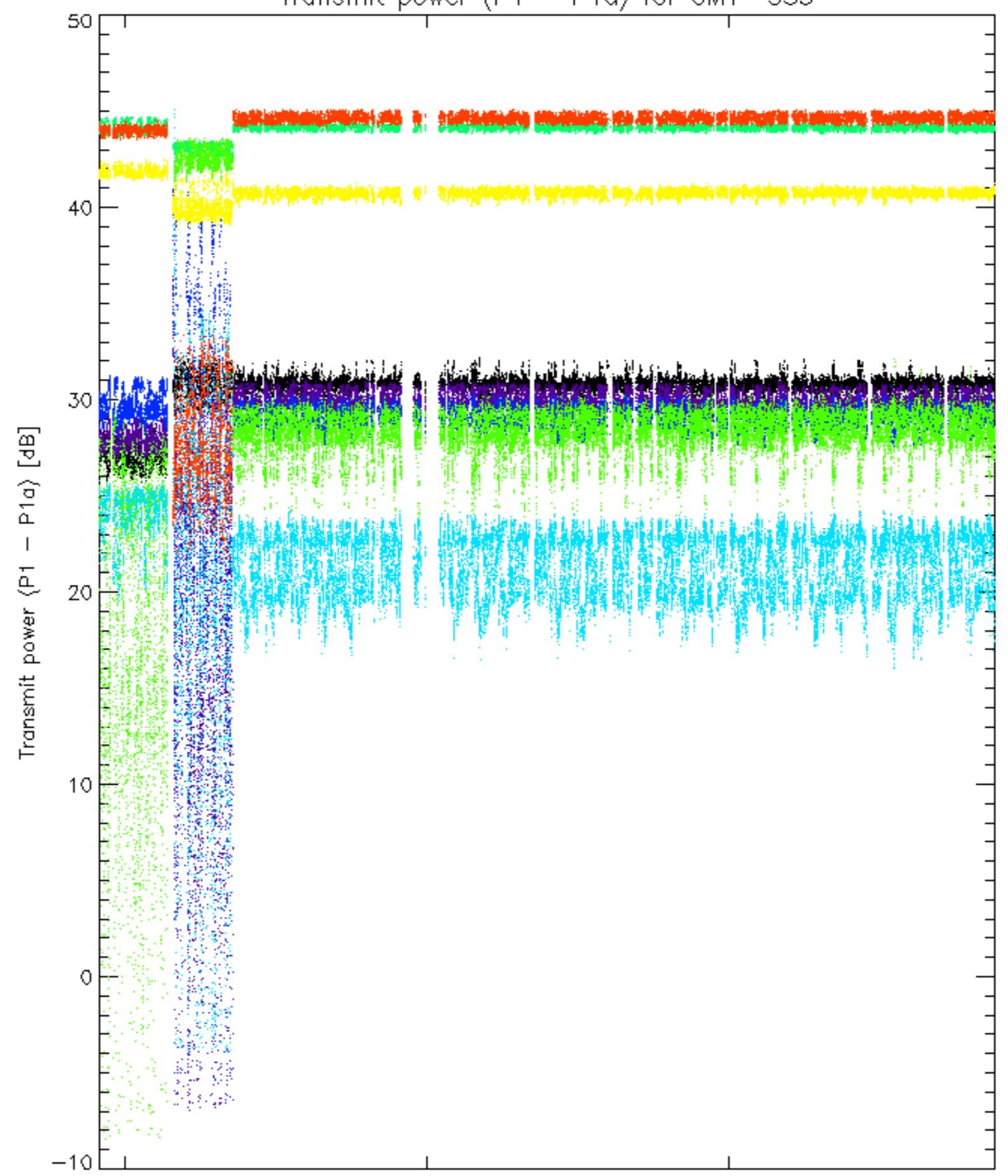
Summary of analysis for the last 3 days 2005101[456]

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

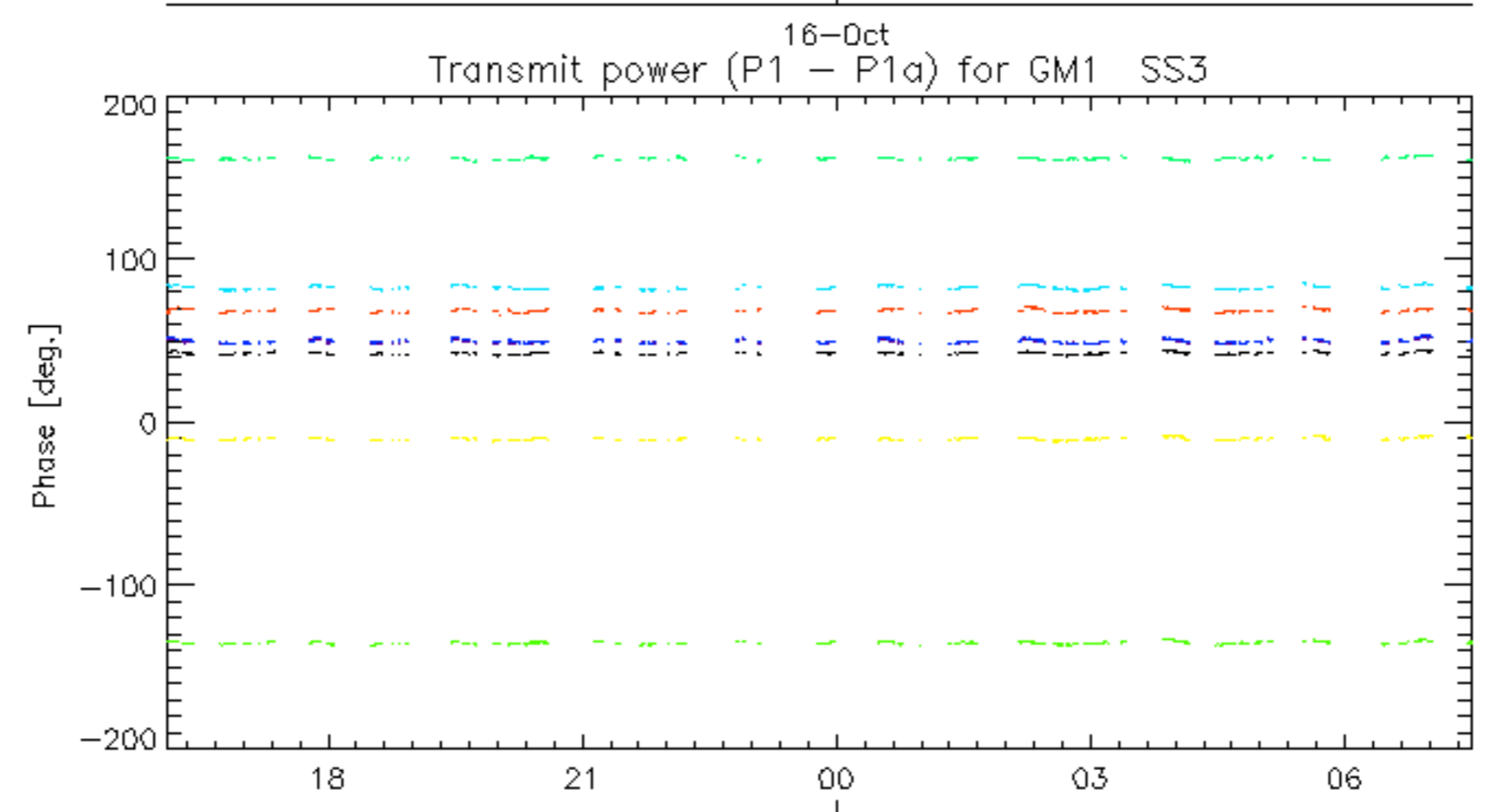
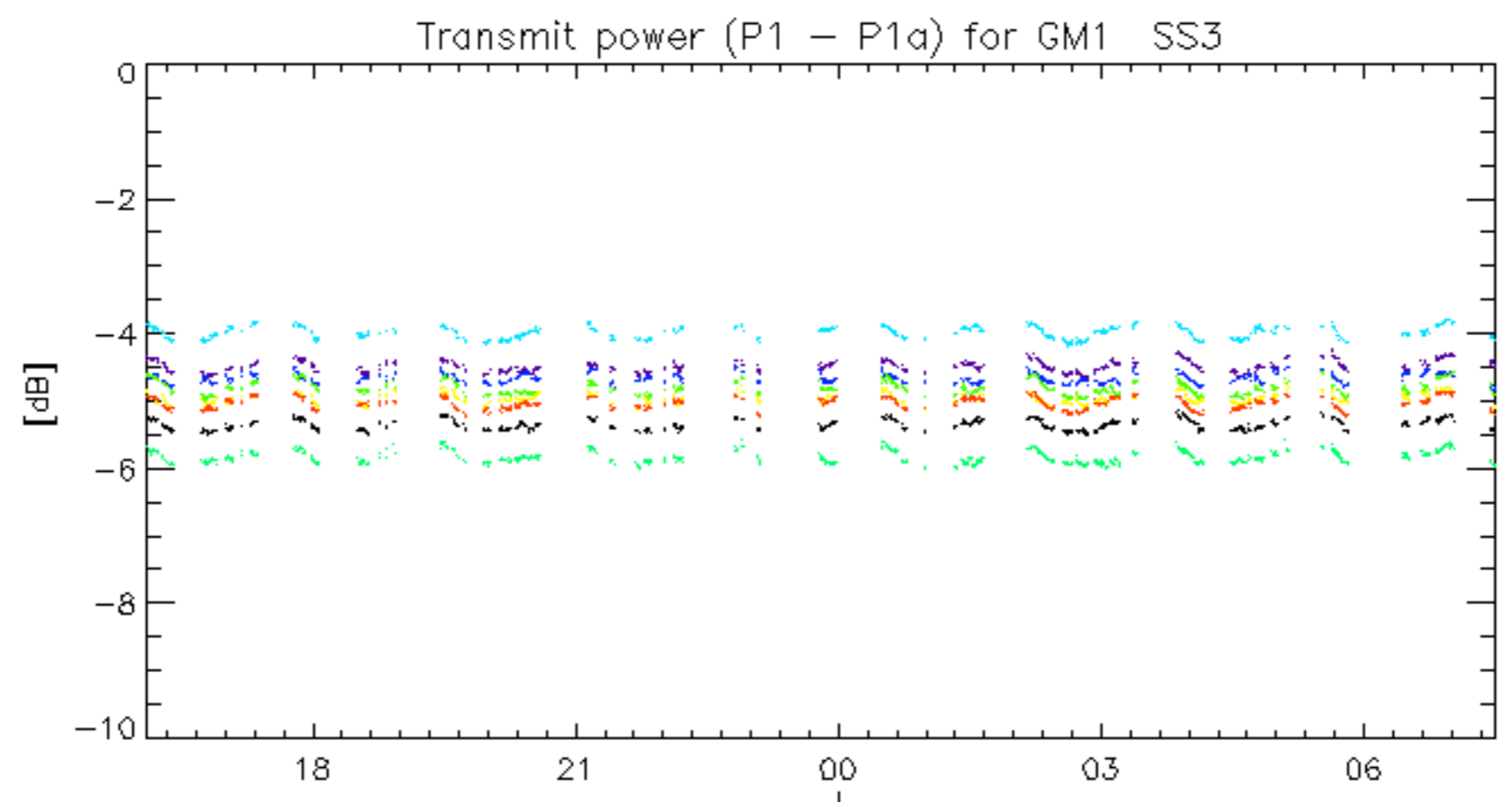
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20051014_011413_000003542041_00346_18937_3867.N1	0	23
ASA_WSM_1PNPDE20051014_175039_000002012041_00356_18947_3964.N1	0	1
ASA_WSM_1PNPDE20051014_185457_000002312041_00357_18948_4242.N1	0	52
ASA_WSM_1PNPDE20051014_185458_000002312041_00357_18948_3963.N1	0	52
ASA_WSM_1PNPDE20051015_182654_000002262041_00371_18962_4160.N1	0	34



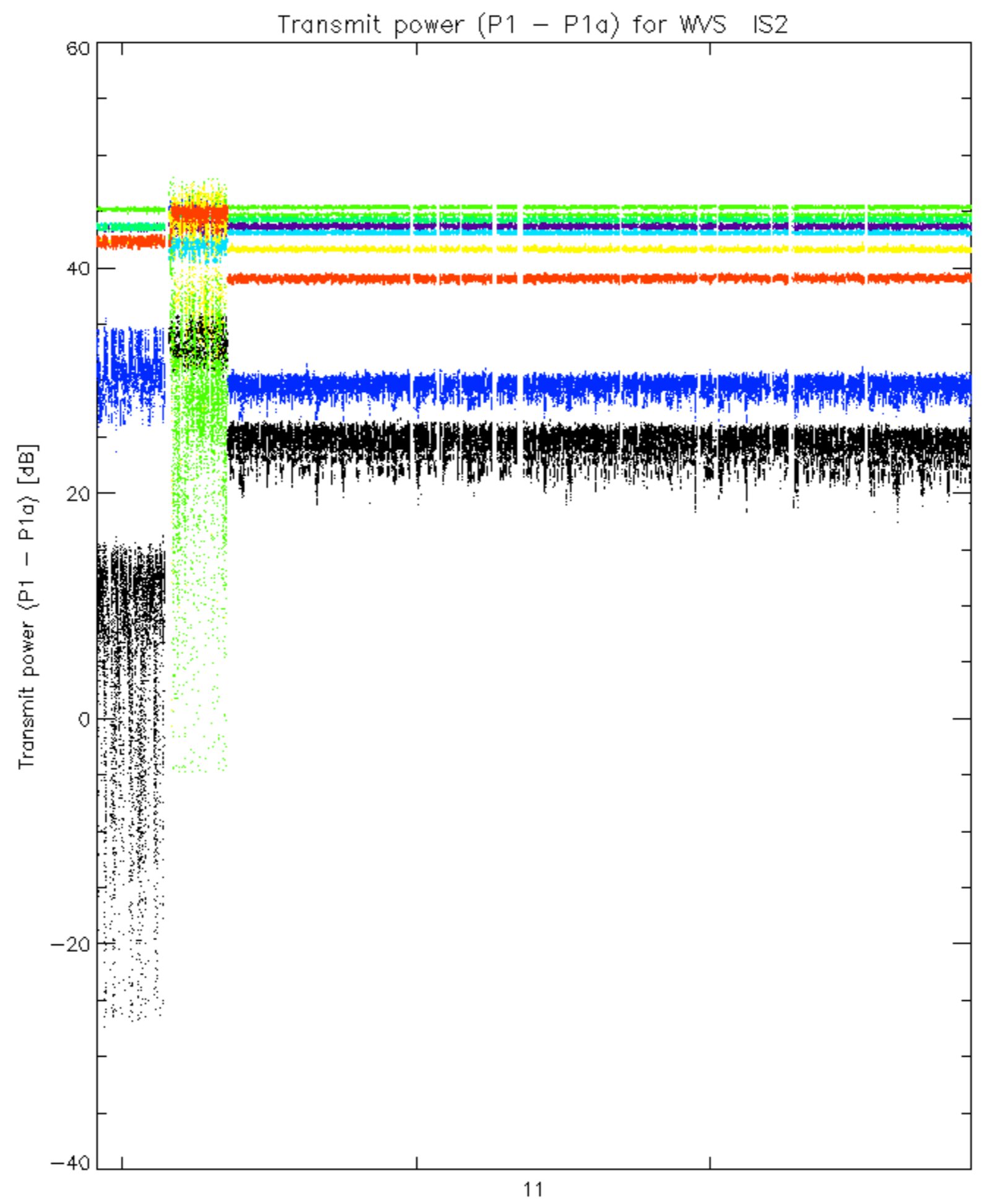
Transmit power (P1 - P1a) for GM1 SS3



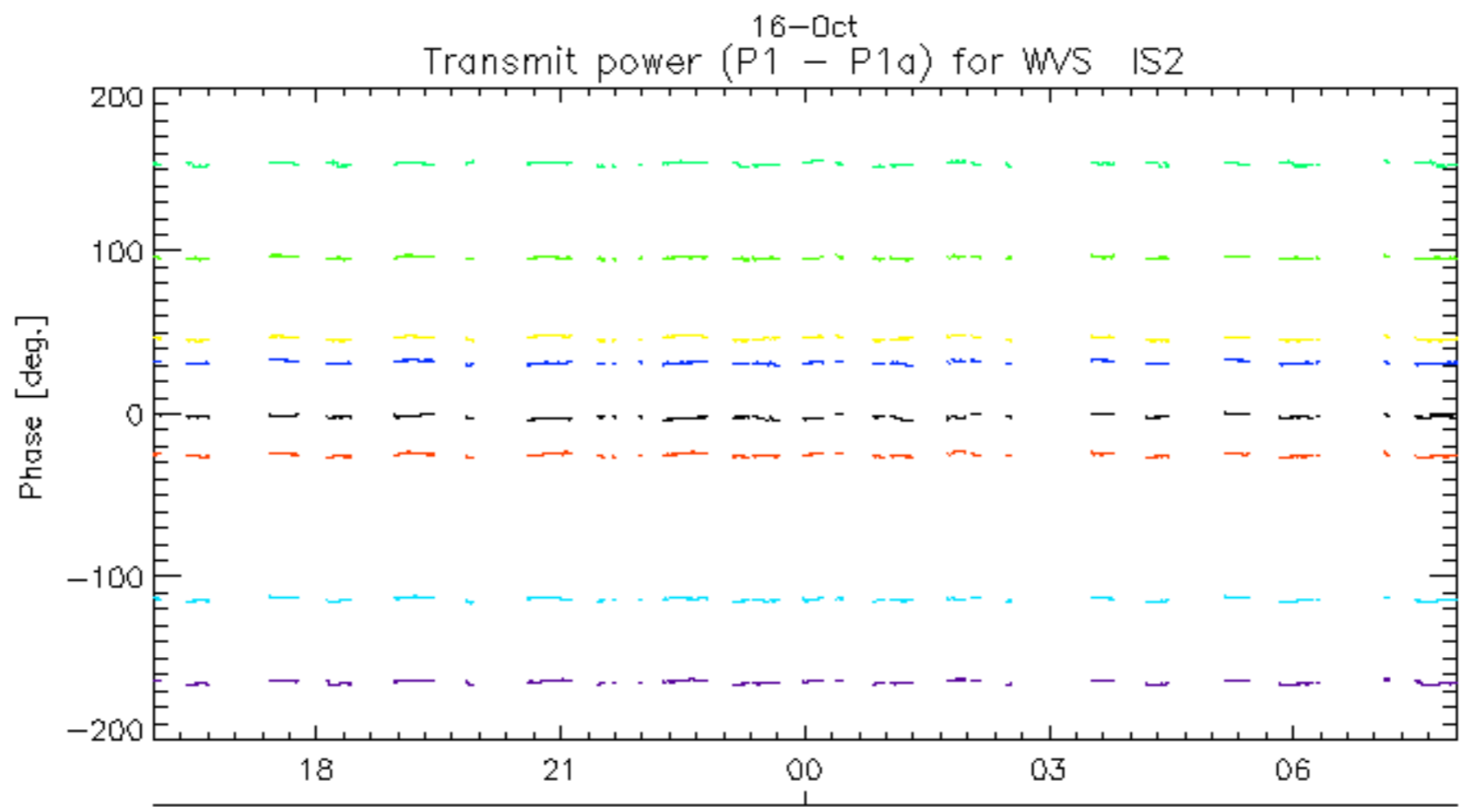
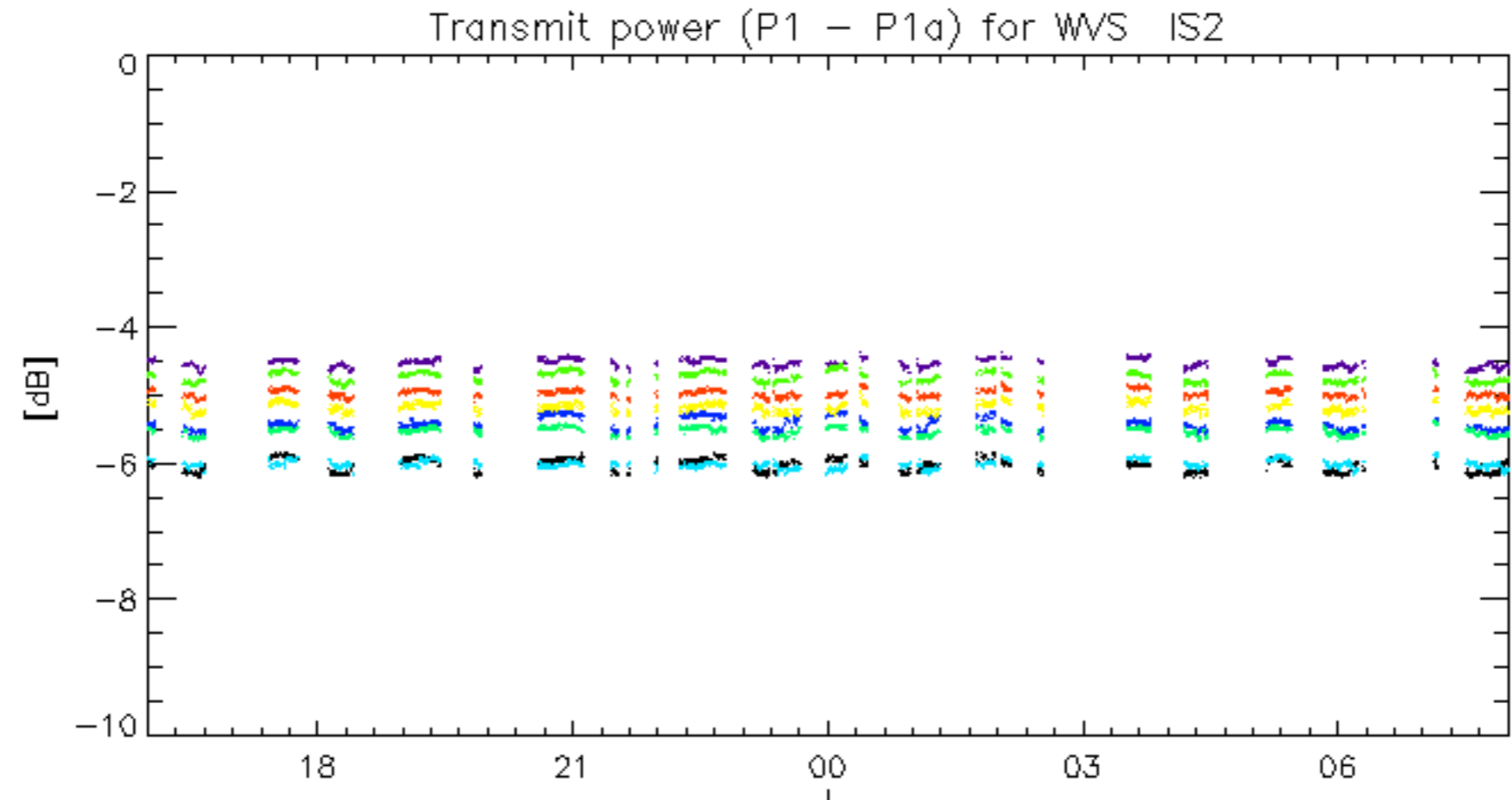
rows: 3 7 11 15 19 22 26 30



16-Oct
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.