

PRELIMINARY REPORT OF 060827

last update on Sun Aug 27 16:41:08 GMT 2006

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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 2006-08-26 00:00:00 to 2006-08-27 16:41:08

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	78	22	3	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	78	22	3	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	78	22	3	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	78	22	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	25	59	72	16	43
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	25	59	72	16	43
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	25	59	72	16	43
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	25	59	72	16	43

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	20060825 063527
H	20060826 060350

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	-3.943821	0.009890	0.002009
7	P1	-3.081311	0.051103	0.101950
11	P1	-4.086980	0.063226	0.050587
15	P1	-6.201684	0.093696	0.004761
19	P1	-3.458396	0.010058	-0.089213
22	P1	-4.561248	0.024520	0.019064
26	P1	-3.925186	0.019673	-0.032793
30	P1	-5.759154	0.026064	0.029440
3	P1	-16.543350	0.259030	-0.015582
7	P1	-16.863266	0.645226	1.032251
11	P1	-16.863825	0.299261	0.230743
15	P1	-12.989899	0.157175	0.151551
19	P1	-14.518197	0.055526	-0.067457
22	P1	-15.872835	0.542204	0.331986
26	P1	-15.150387	0.216084	-0.157127
30	P1	-17.030388	0.336204	0.205194

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.878578	0.083630	0.093572
7	P2	-21.863914	0.099232	0.001547
11	P2	-15.755939	0.113962	0.036891
15	P2	-7.106037	0.097194	0.026486
19	P2	-9.118353	0.090632	0.011512
22	P2	-18.139132	0.084577	0.026050
26	P2	-16.398996	0.091130	0.002843
30	P2	-19.484776	0.090700	0.037248

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.173031	0.003552	-0.004656
7	P3	-8.173031	0.003552	-0.004656
11	P3	-8.173031	0.003552	-0.004656
15	P3	-8.173031	0.003552	-0.004656
19	P3	-8.173031	0.003552	-0.004656
22	P3	-8.173031	0.003552	-0.004656
26	P3	-8.173079	0.003551	-0.004725
30	P3	-8.173079	0.003551	-0.004725

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	-3.831289	0.021262	-0.012571
7	P1	-2.497428	0.283734	0.336731
11	P1	-2.894634	0.141327	0.001764
15	P1	-3.646867	0.146890	-0.058520
19	P1	-3.430825	0.025247	-0.000705
22	P1	-5.079580	0.034089	0.030259
26	P1	-5.869154	0.023970	-0.022387
30	P1	-5.187922	0.044549	0.043928
3	P1	-11.623577	0.066123	-0.006743
7	P1	-9.916403	0.187451	0.199330
11	P1	-10.290133	0.082866	-0.071060
15	P1	-10.808944	0.173750	-0.149165
19	P1	-15.551452	0.524988	0.113870
22	P1	-20.873613	1.752575	0.250632
26	P1	-16.125011	0.410156	0.248754
30	P1	-17.962477	0.725642	0.156887

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.481380	0.084031	0.127909
7	P2	-22.270100	0.200668	0.151011
11	P2	-10.958560	0.055456	0.150777
15	P2	-4.883339	0.042994	0.027570
19	P2	-6.859226	0.040453	0.010765
22	P2	-8.183164	0.061984	0.024425
26	P2	-24.170574	0.128249	0.011393
30	P2	-21.973207	0.078501	0.038542

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.014045	0.003672	-0.012466
7	P3	-8.013968	0.003673	-0.012615
11	P3	-8.014050	0.003672	-0.012626
15	P3	-8.014071	0.003676	-0.012605
19	P3	-8.014091	0.003686	-0.013046
22	P3	-8.014192	0.003661	-0.012489
26	P3	-8.013998	0.003661	-0.012716
30	P3	-8.013950	0.003673	-0.012368

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	0.000551838
	stdev	1.78413e-07
MEAN Q	mean	0.000531025
	stdev	2.16088e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136263
	stdev	0.00108075
STDEV Q	mean	0.136608
	stdev	0.00109705



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006082[567]

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_1PNPDE20060825_010619_00000812050_00346_23446_4356.N1	1	0
ASA_IMM_1PNPDE20060826_182649_00000352050_00371_23471_4533.N1	0	17
ASA_WSM_1PNPDE20060825_171327_000002322050_00356_23456_9475.N1	0	4







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)


Ascending


Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

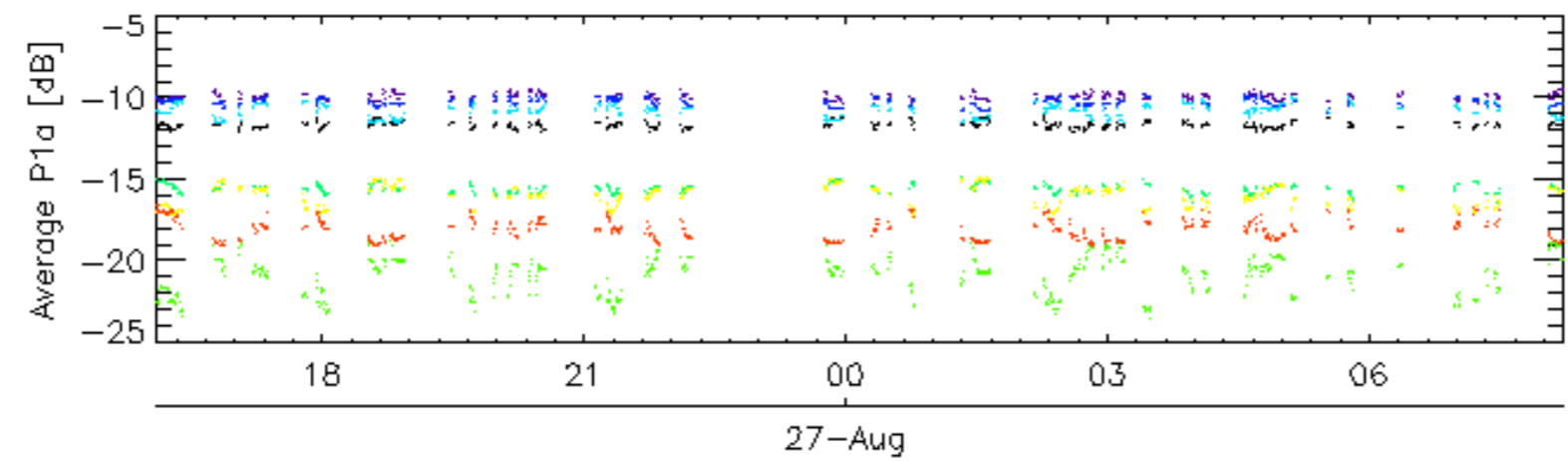
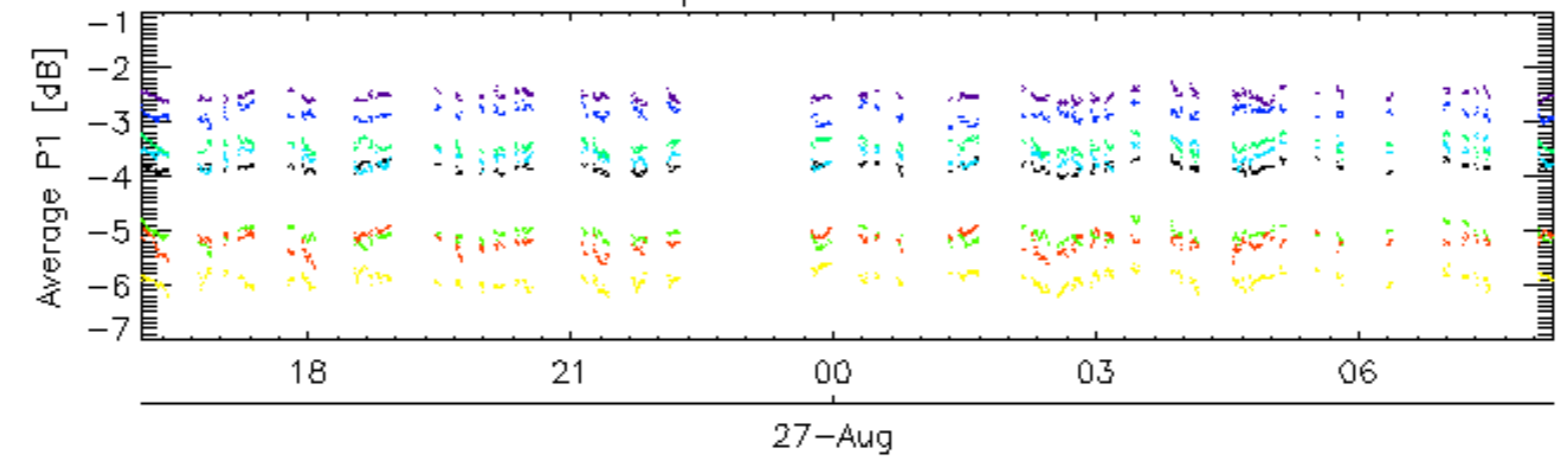
Ascending

Descending

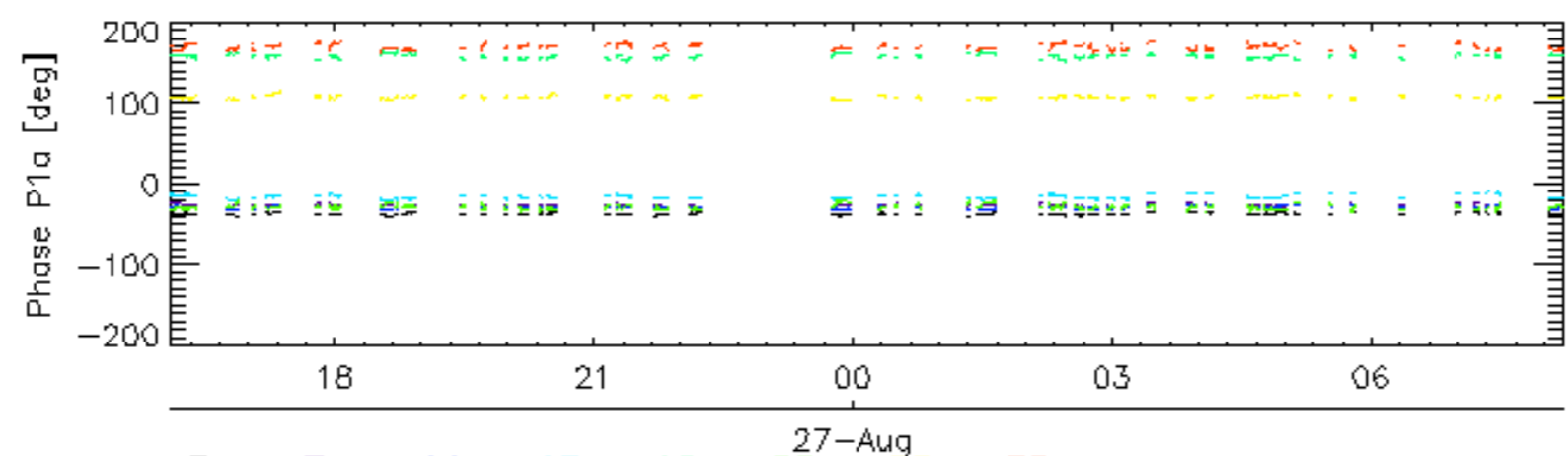
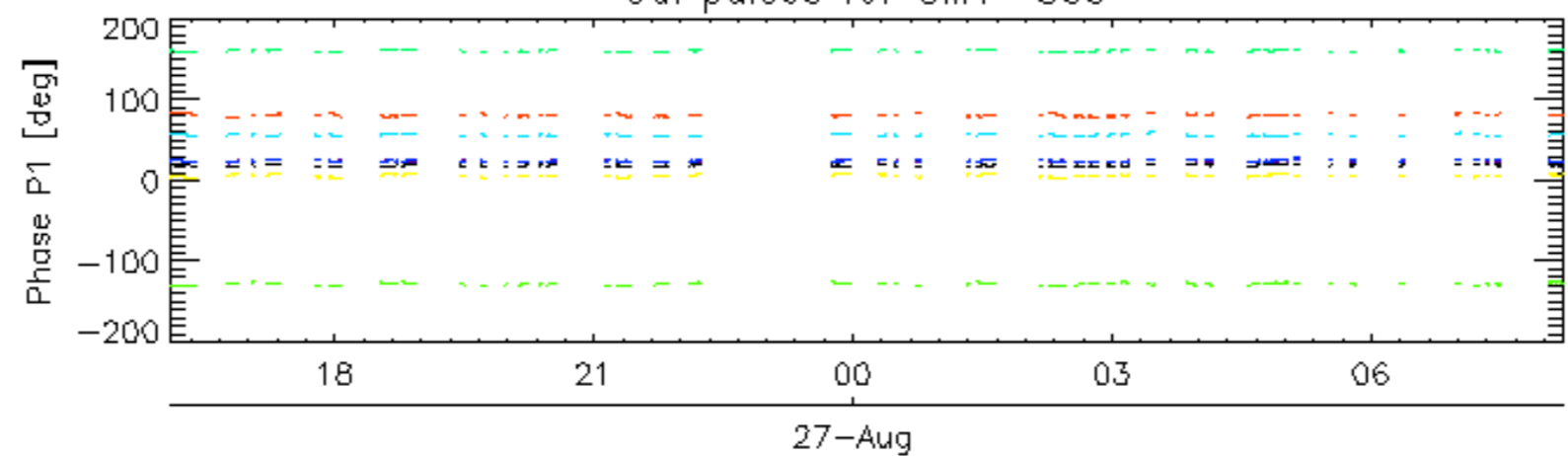
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

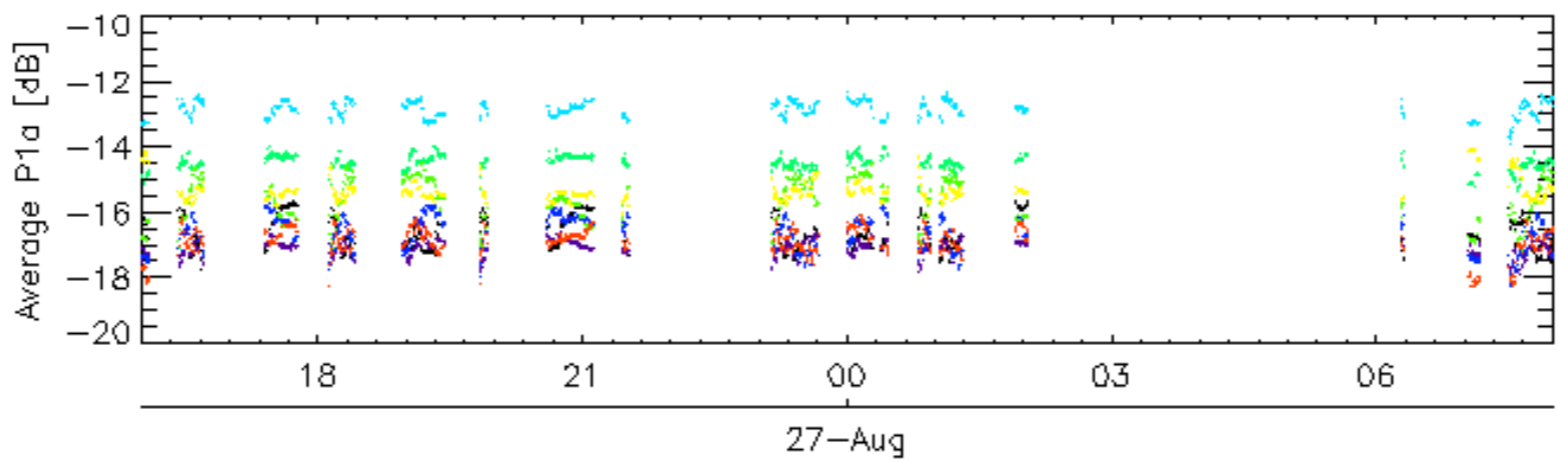
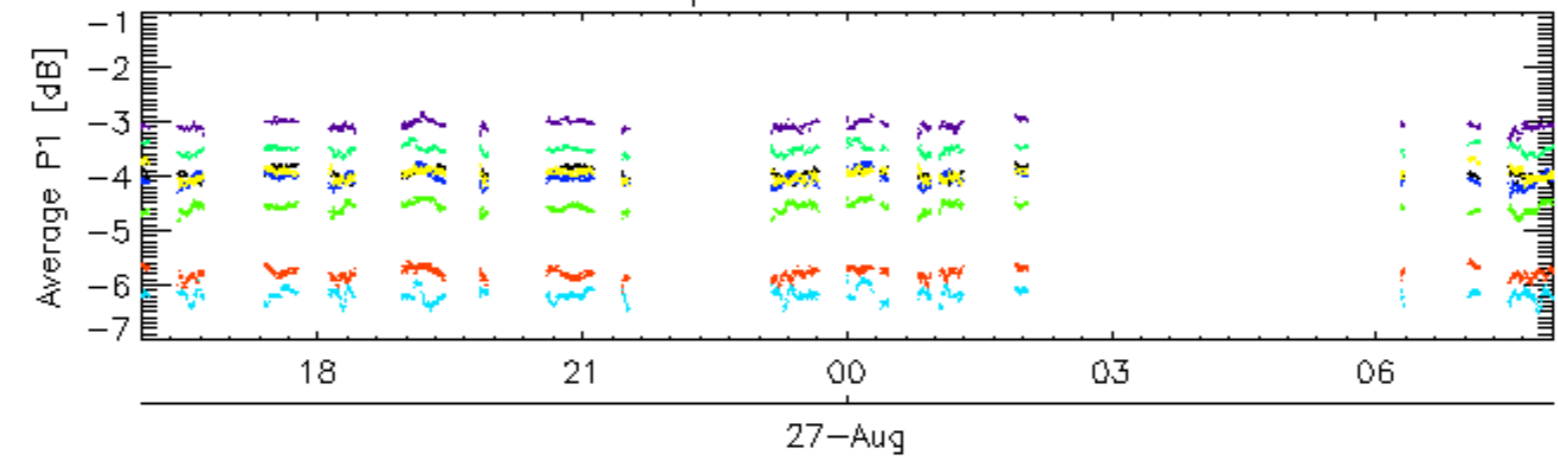


Cal pulses for GM1 SS3

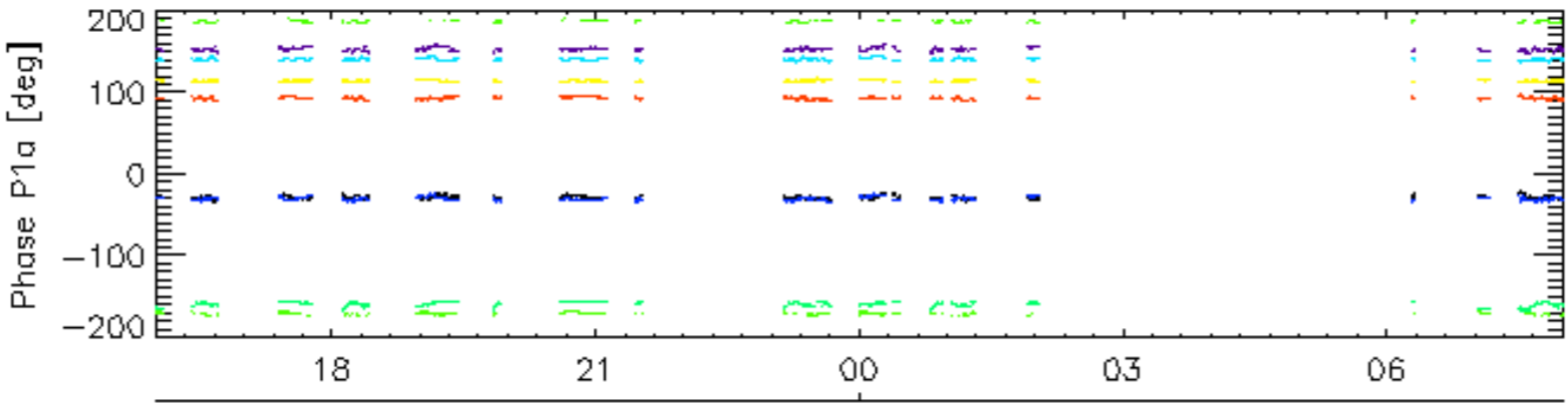
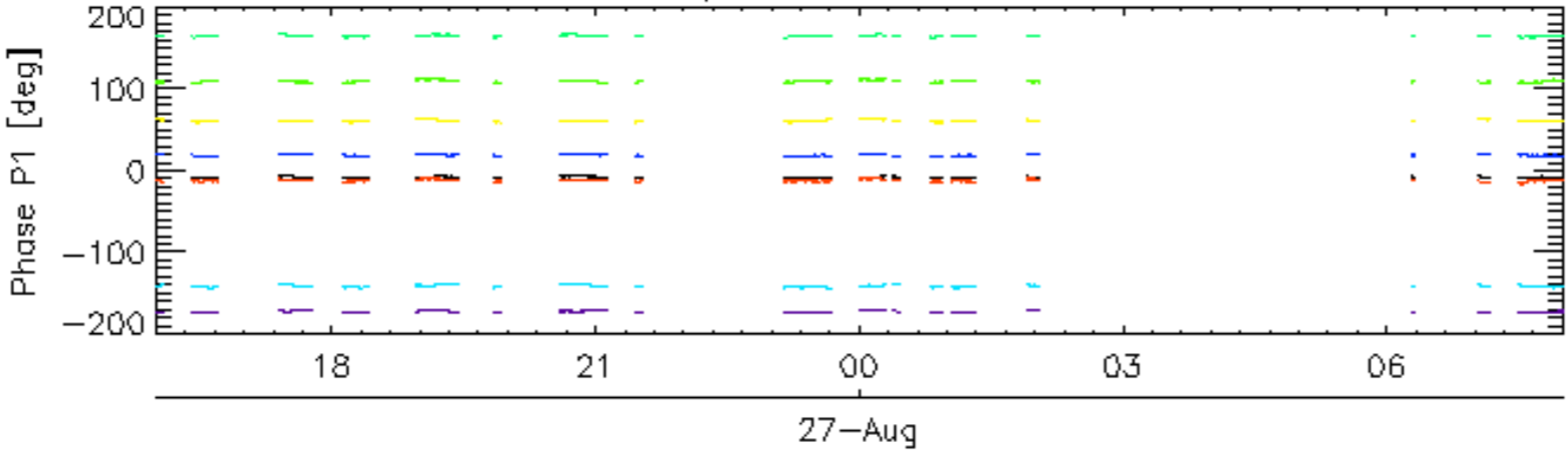


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

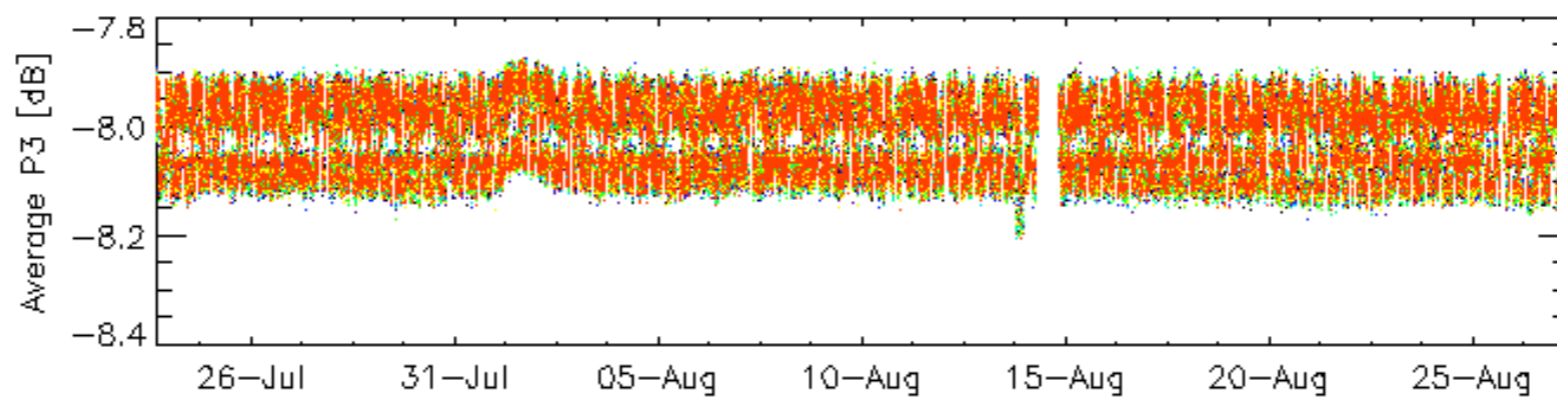
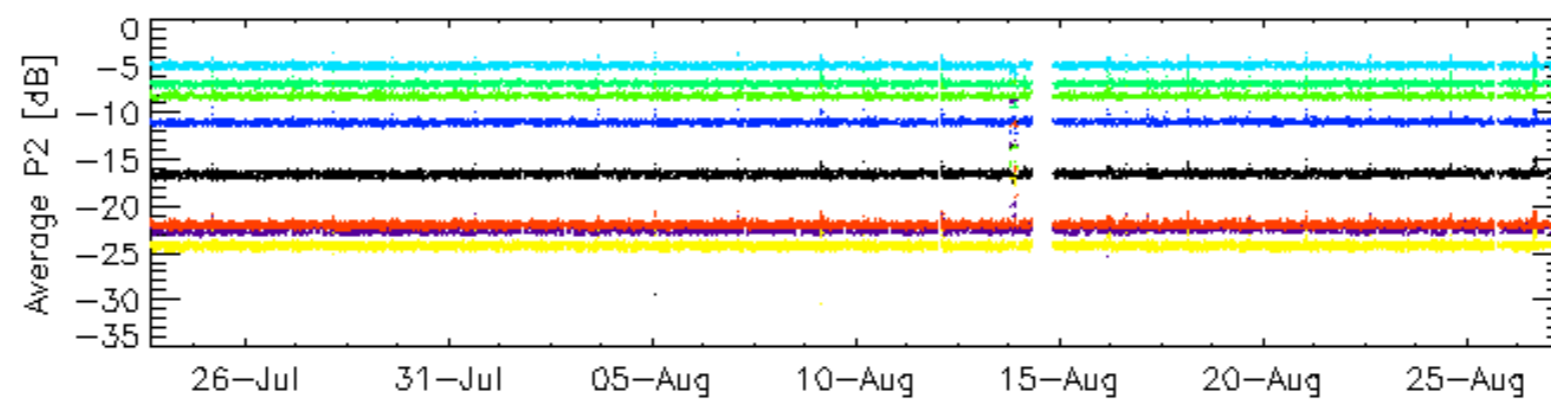
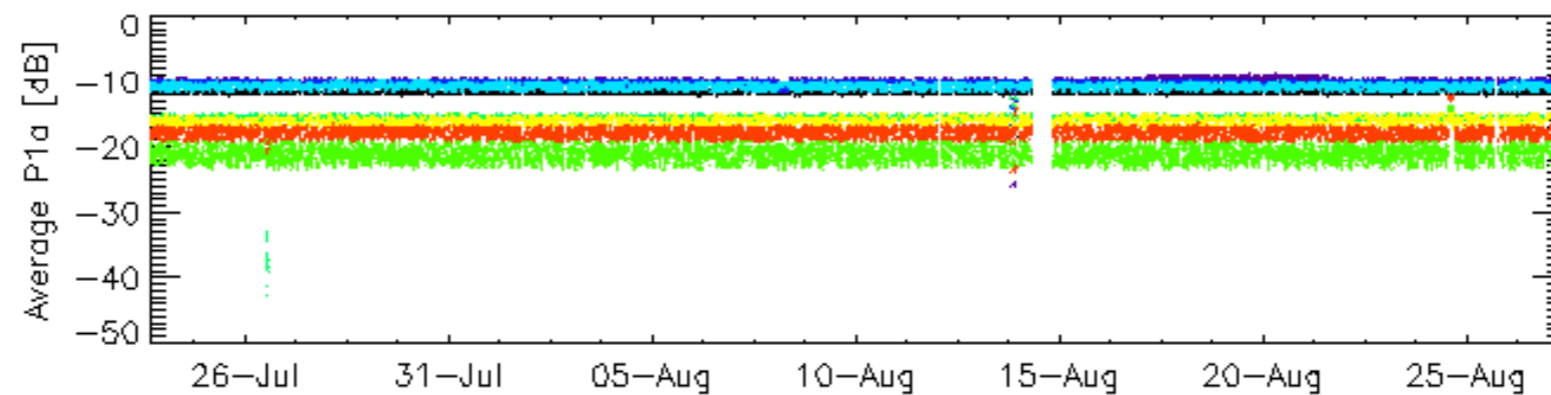
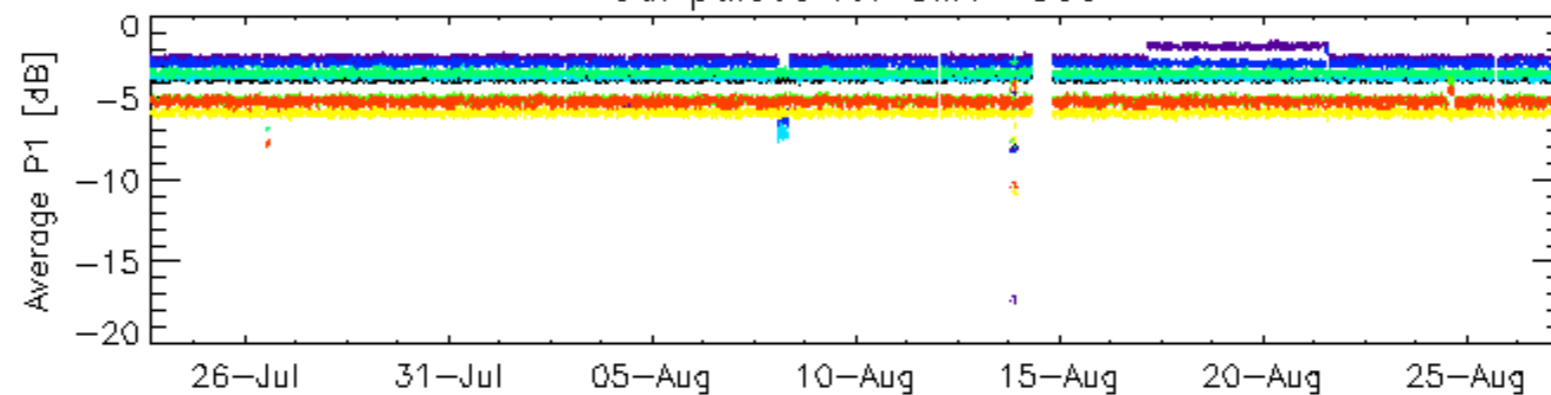


Cal pulses for WVS IS2



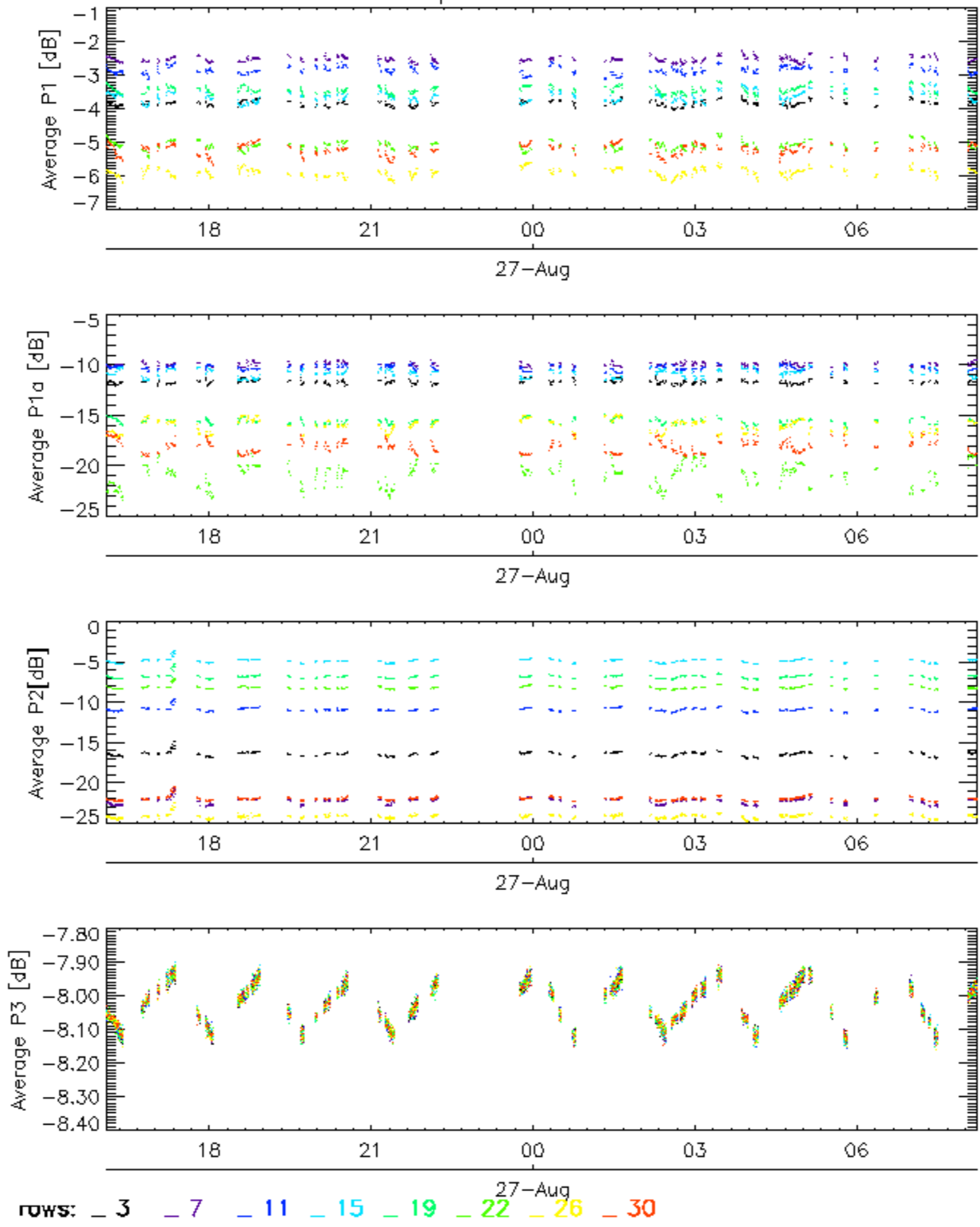
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

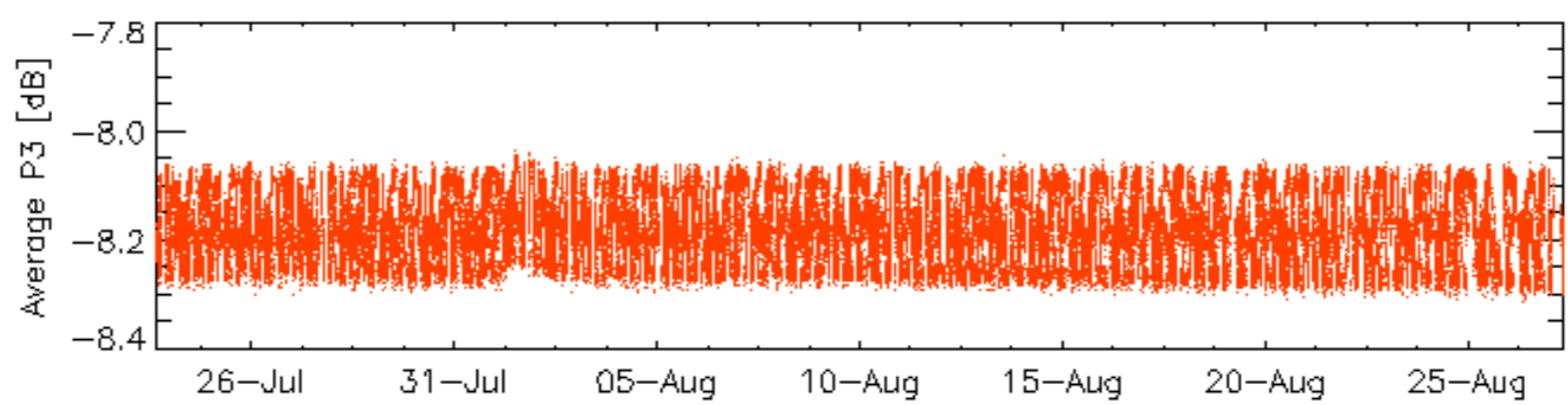
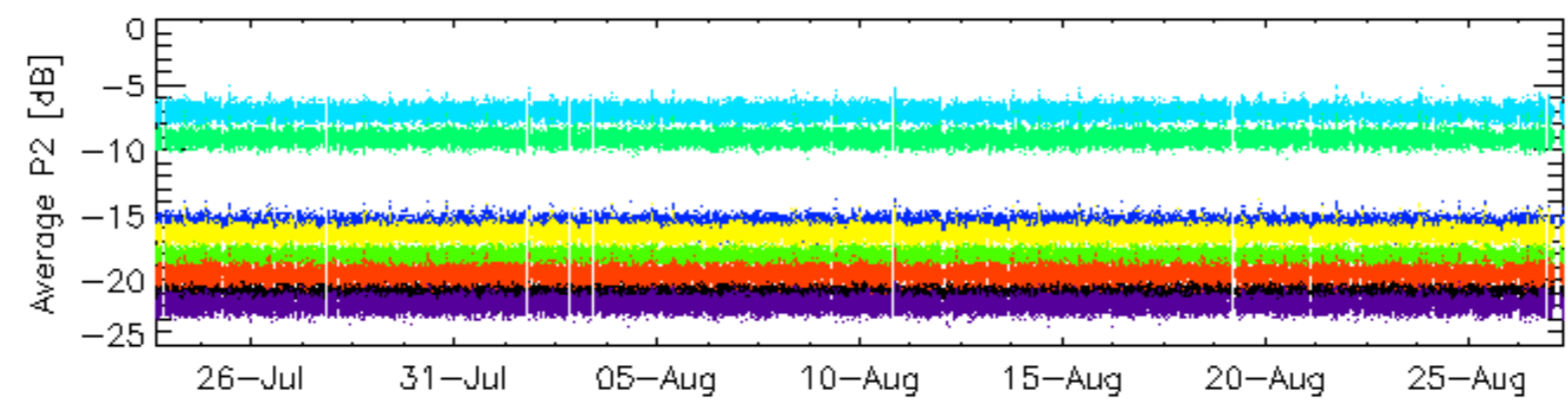
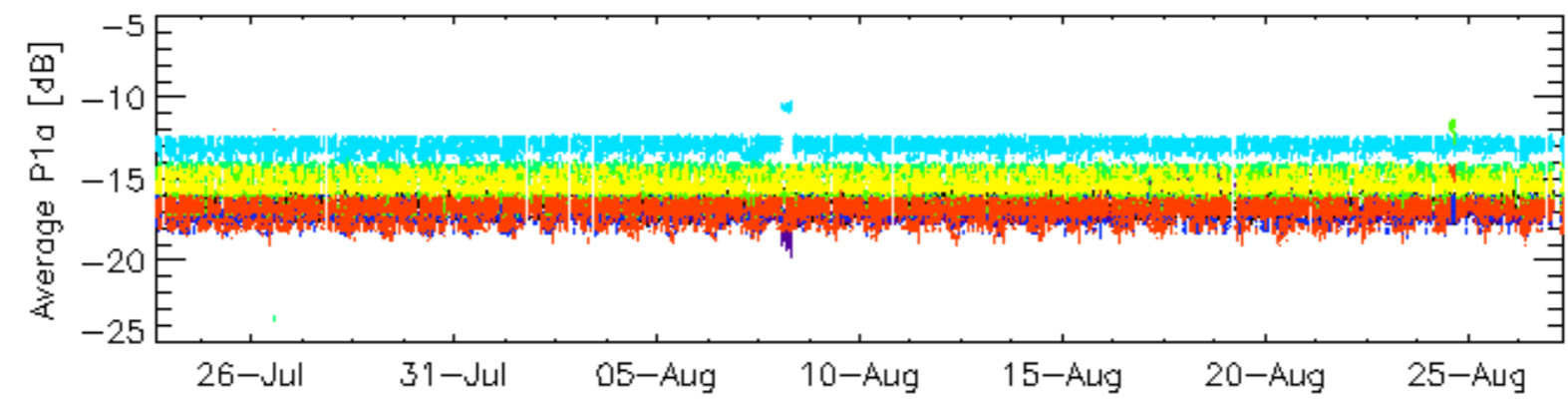
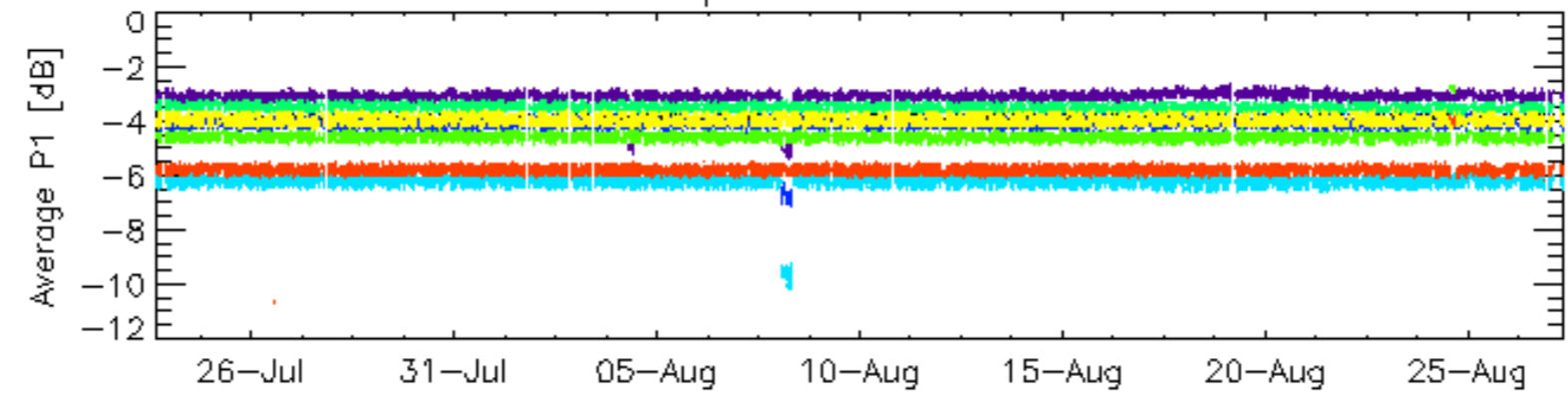


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

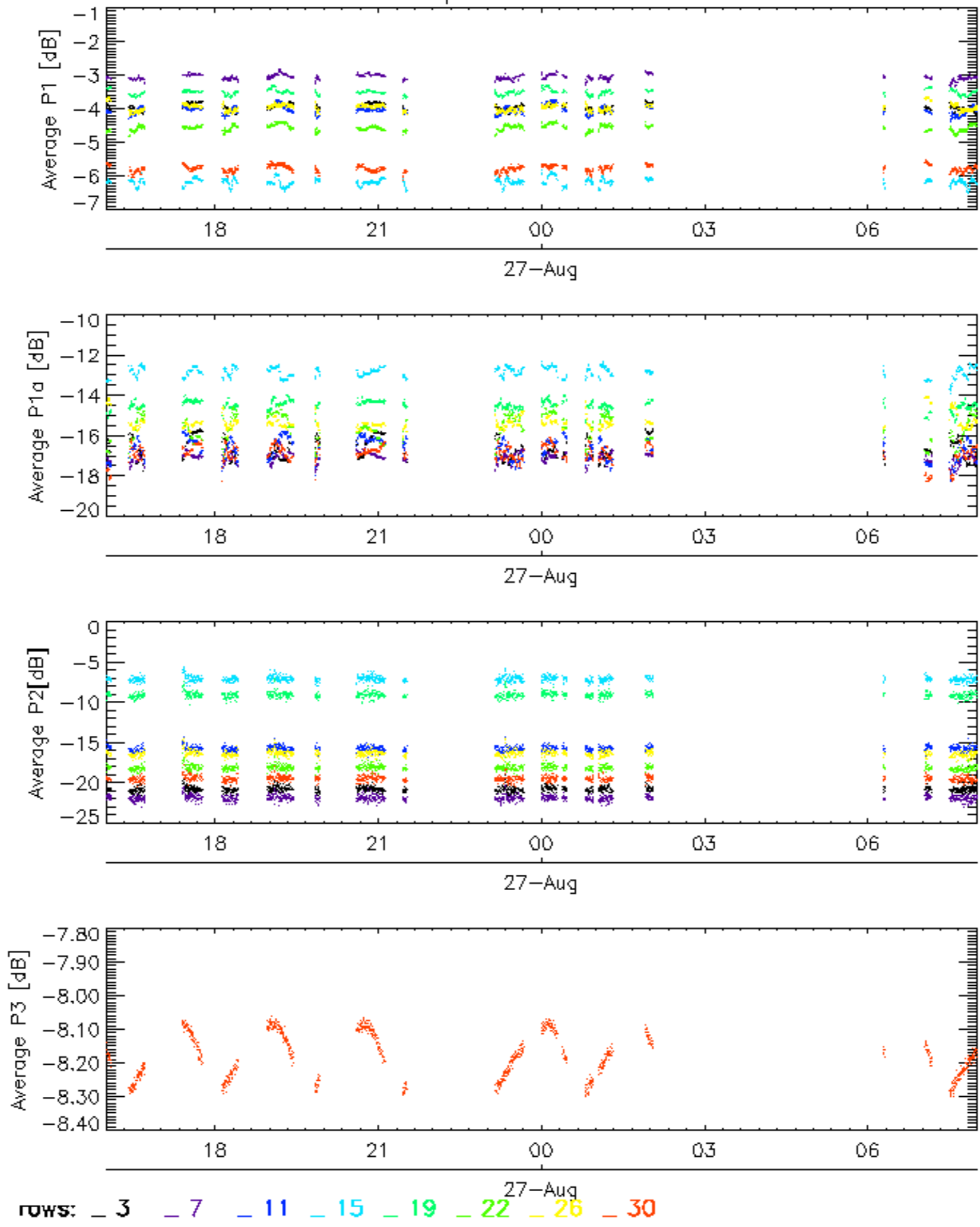


Cal pulses for WVS IS2

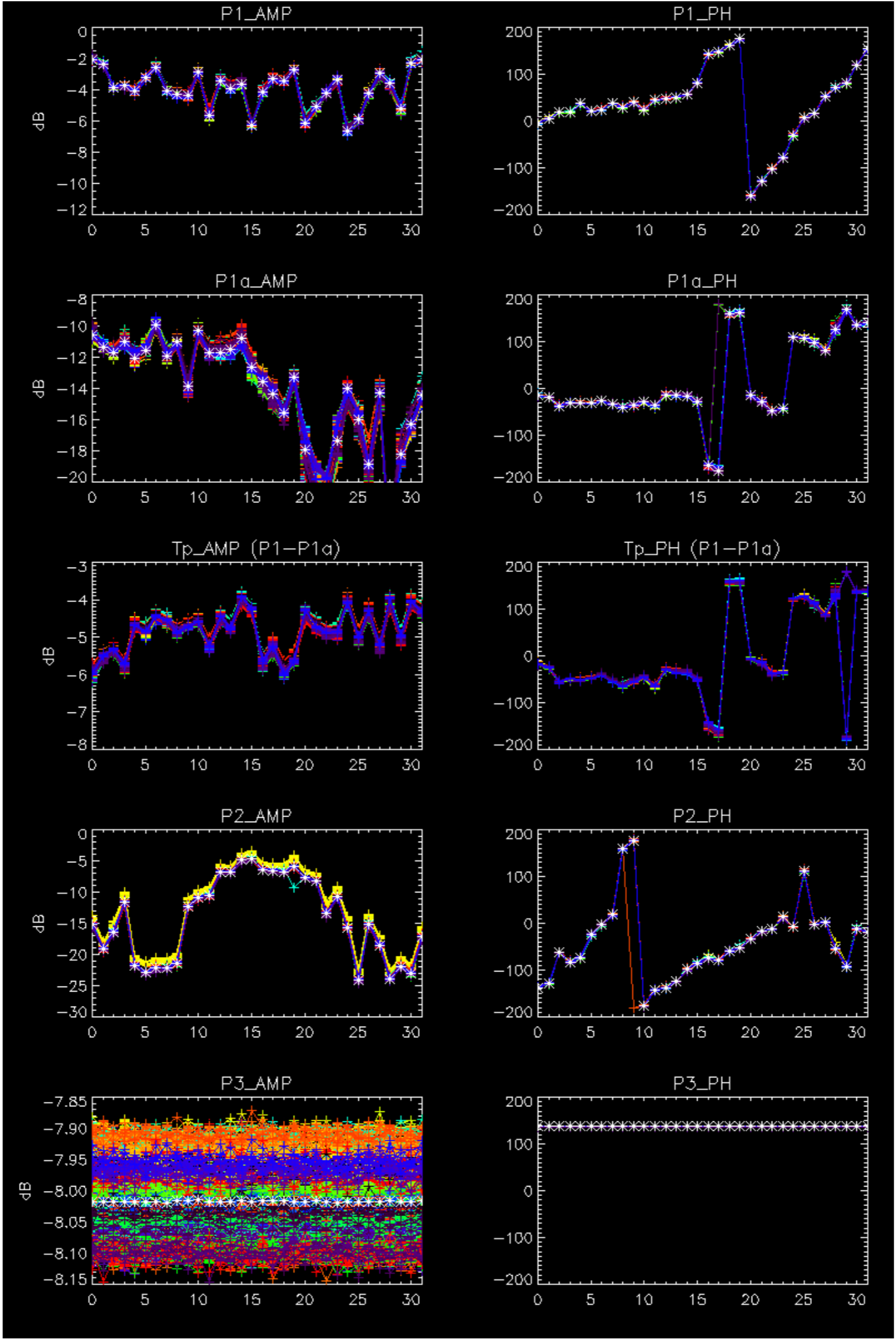


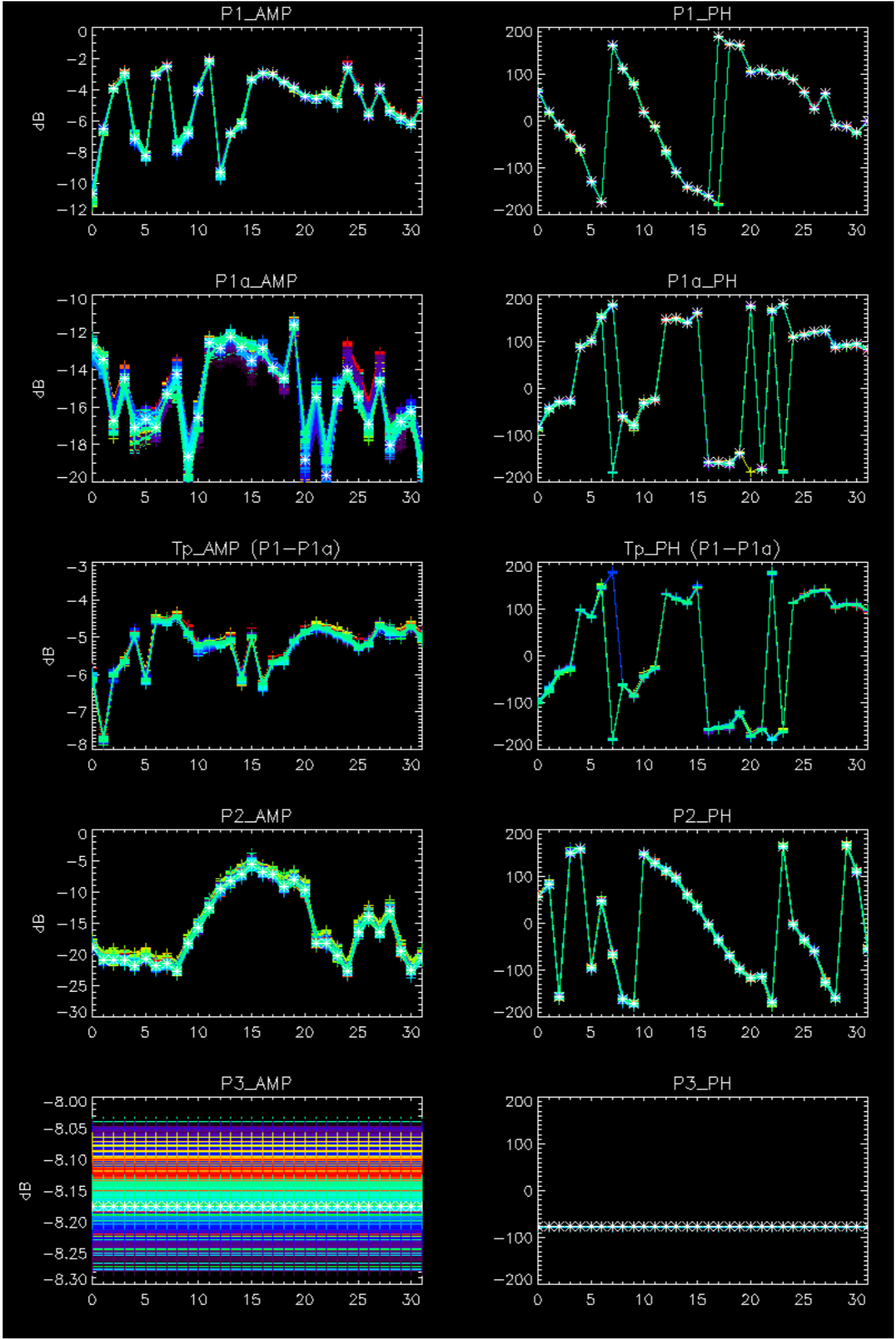
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



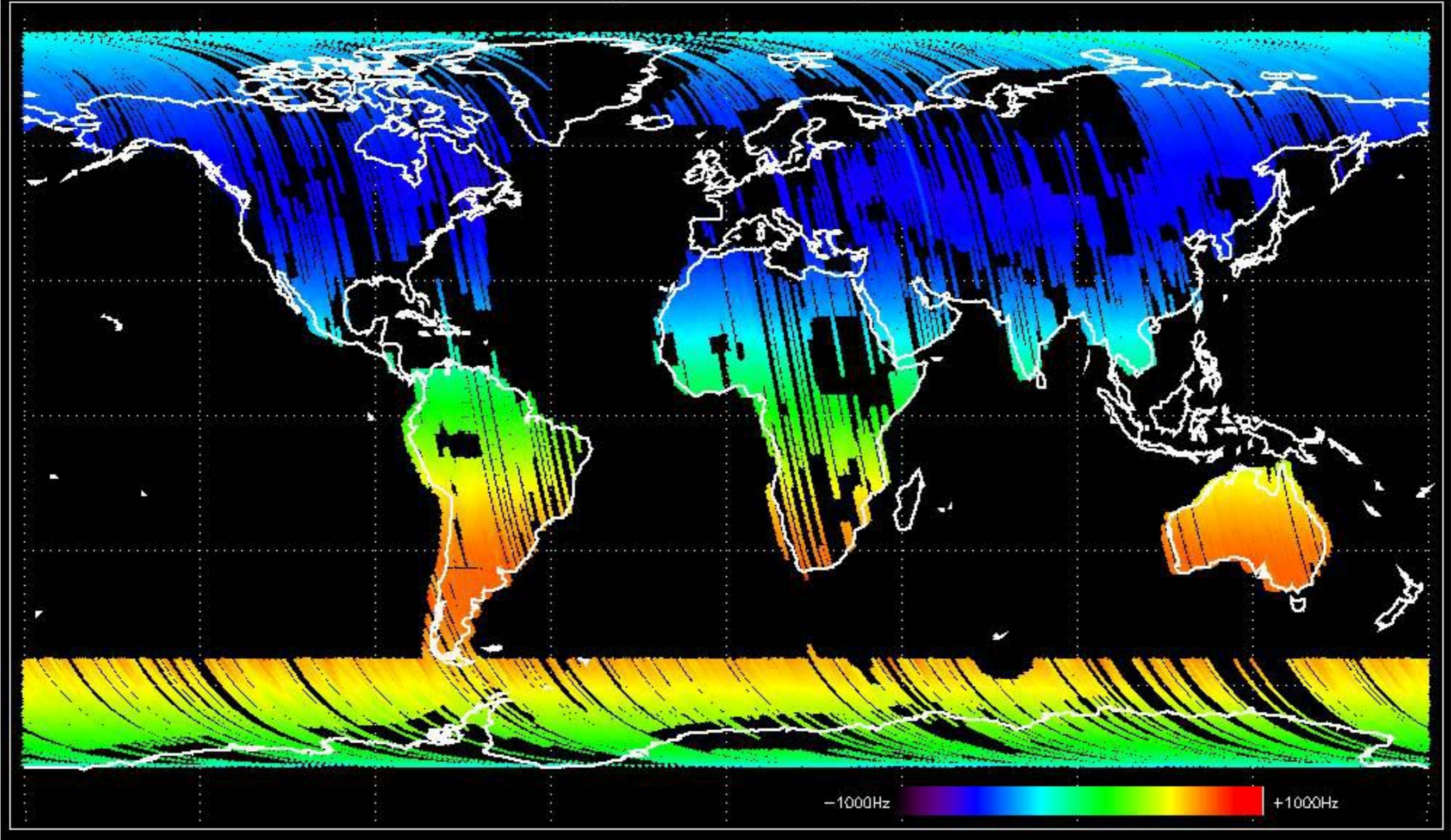
No anomalies observed.



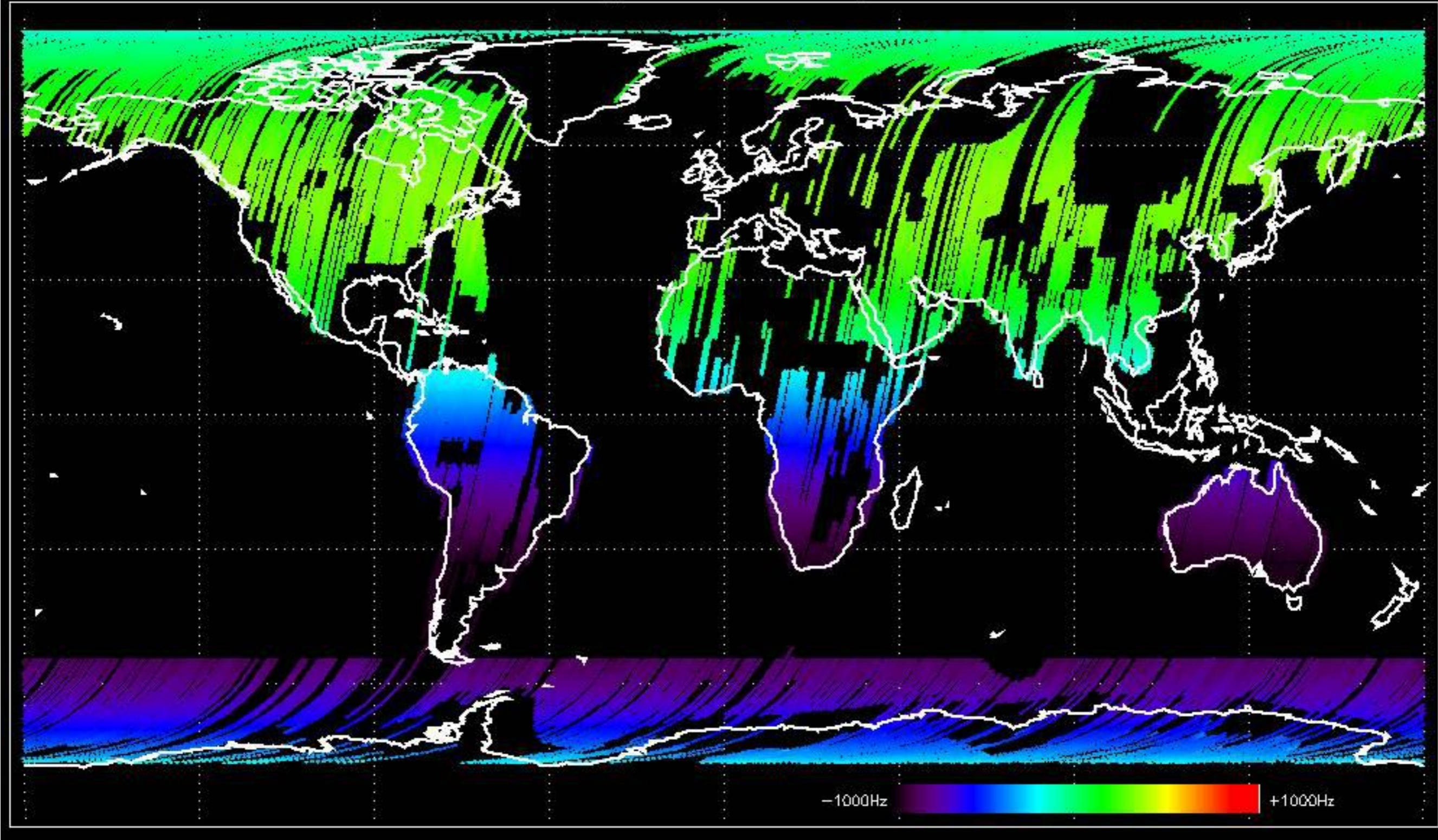


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

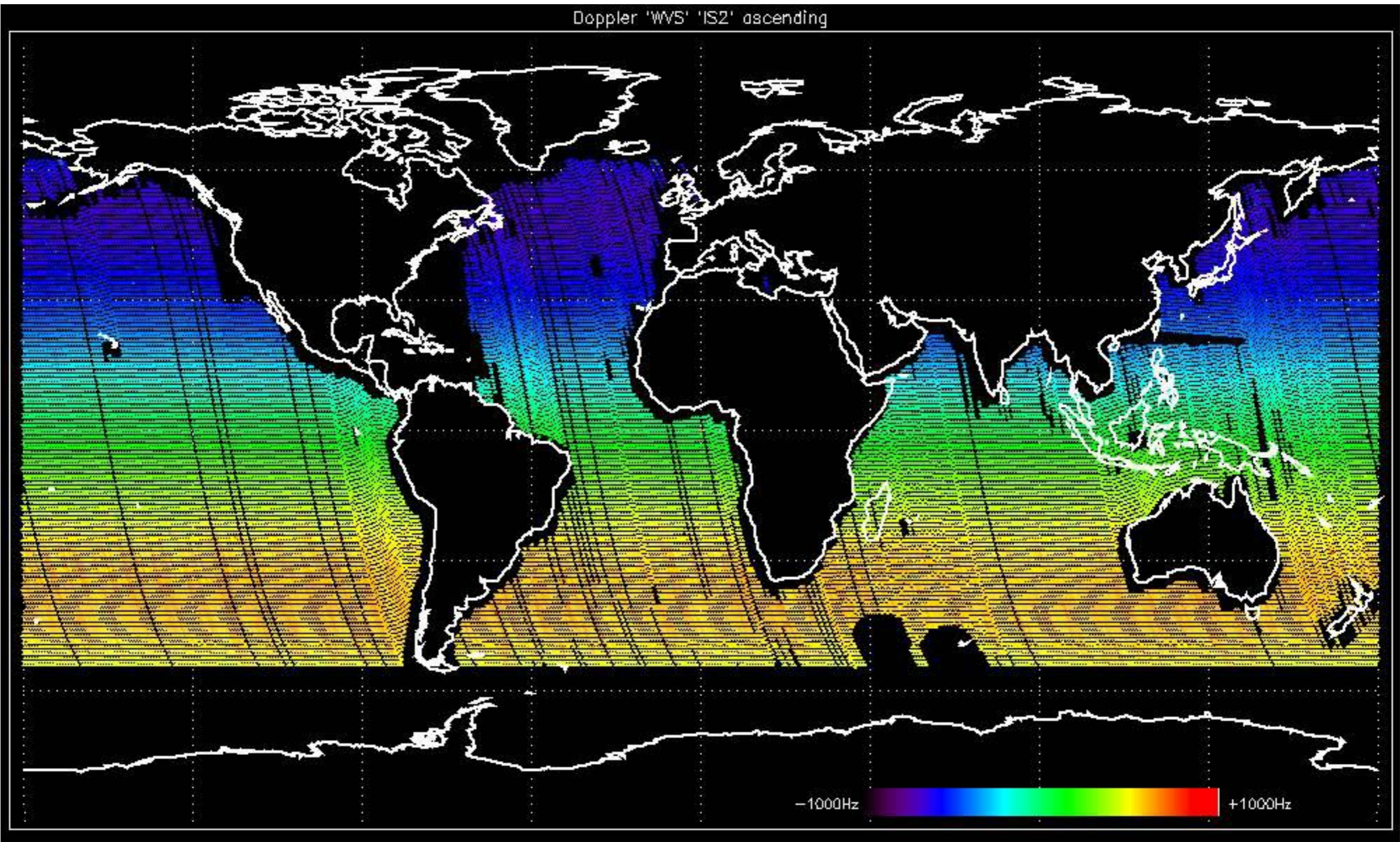
Doppler 'GM1' 'SS1' ascending



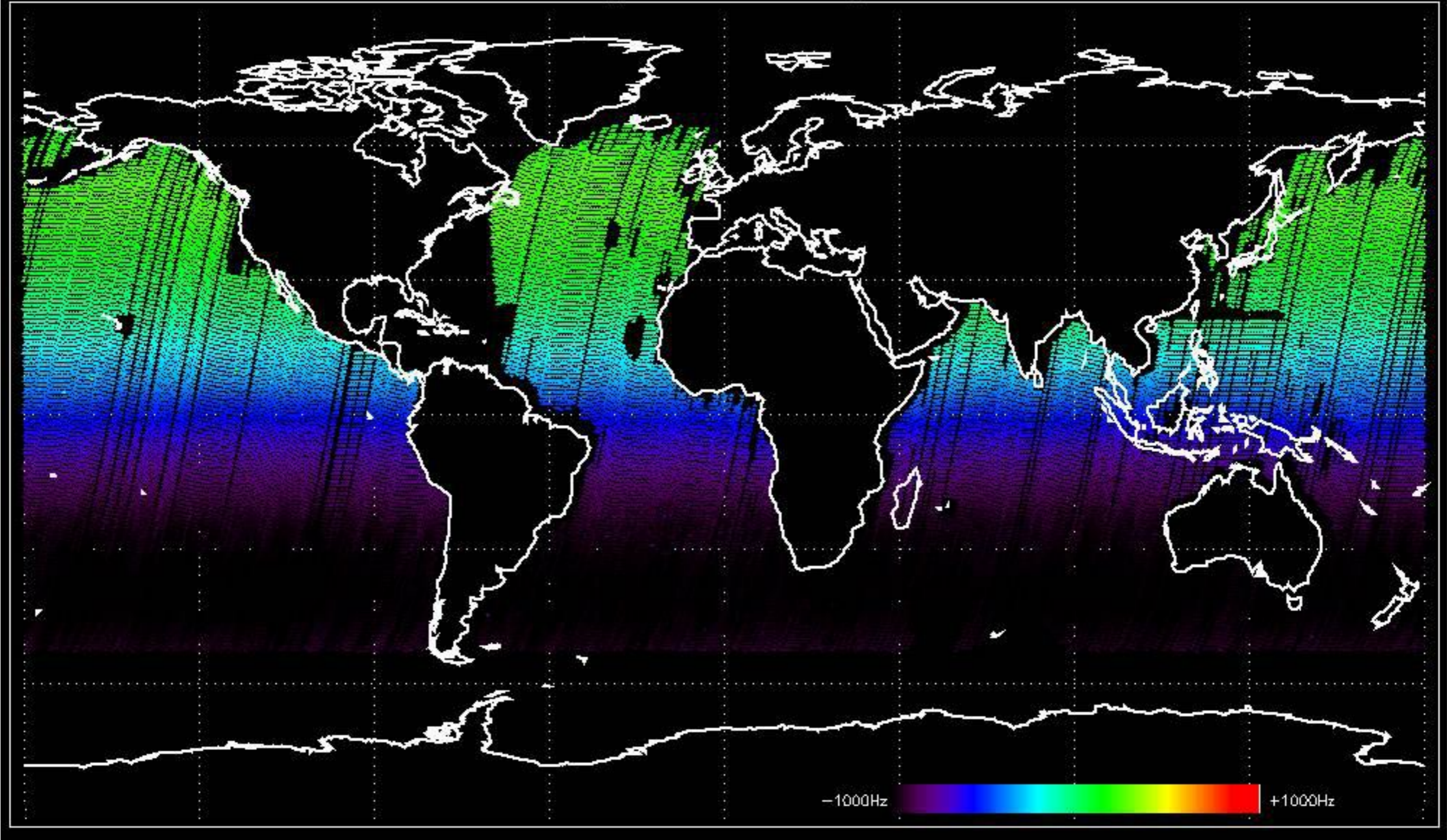
Doppler 'GM1' 'SS1' descending



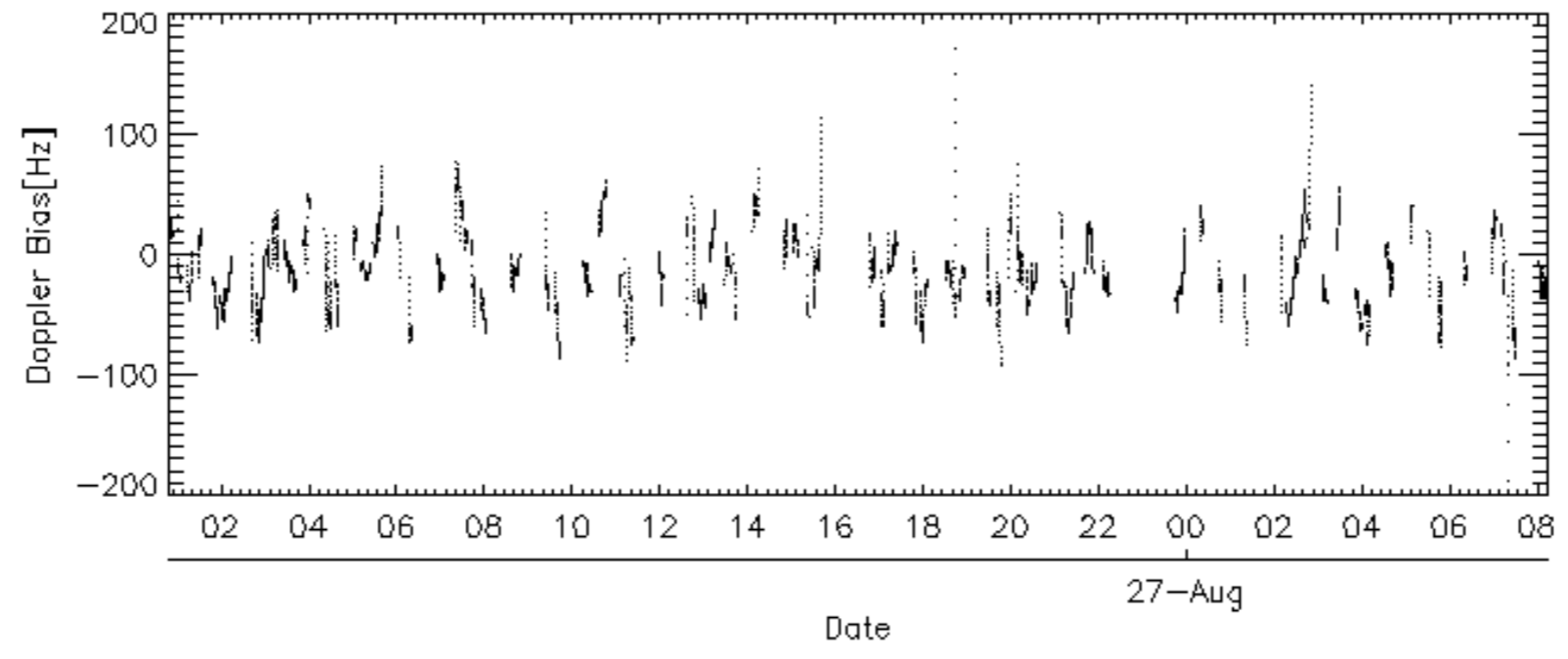
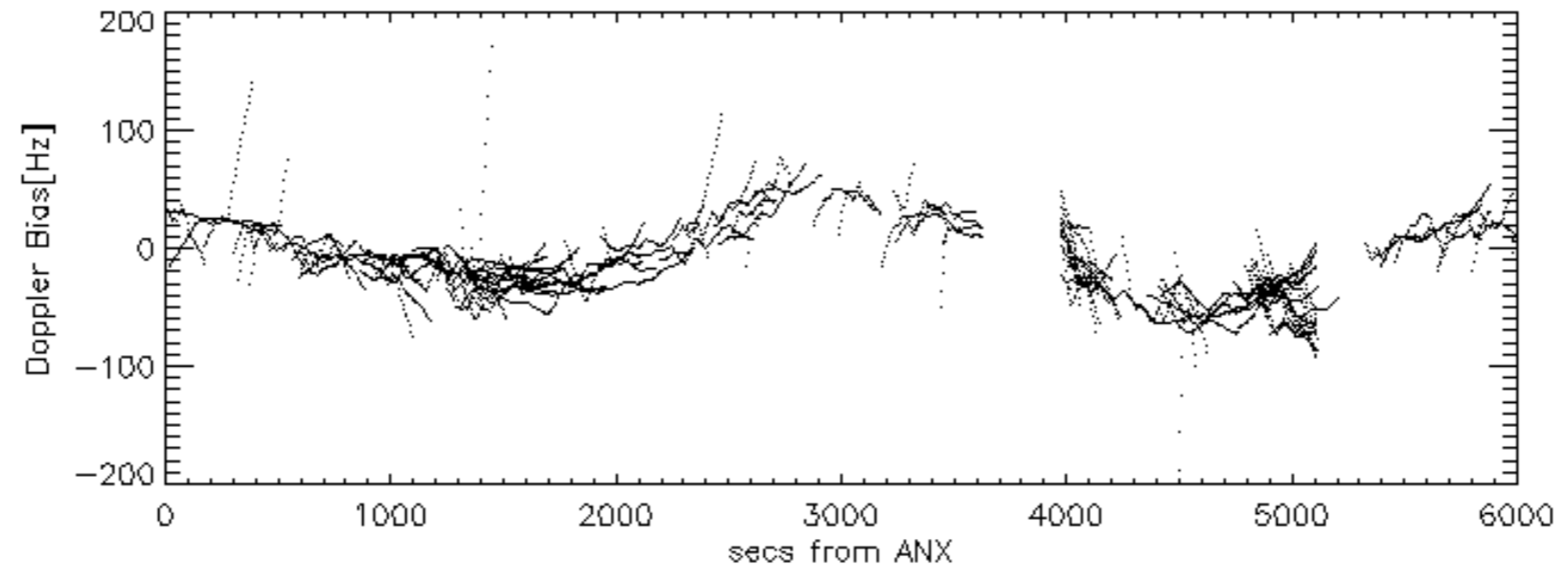
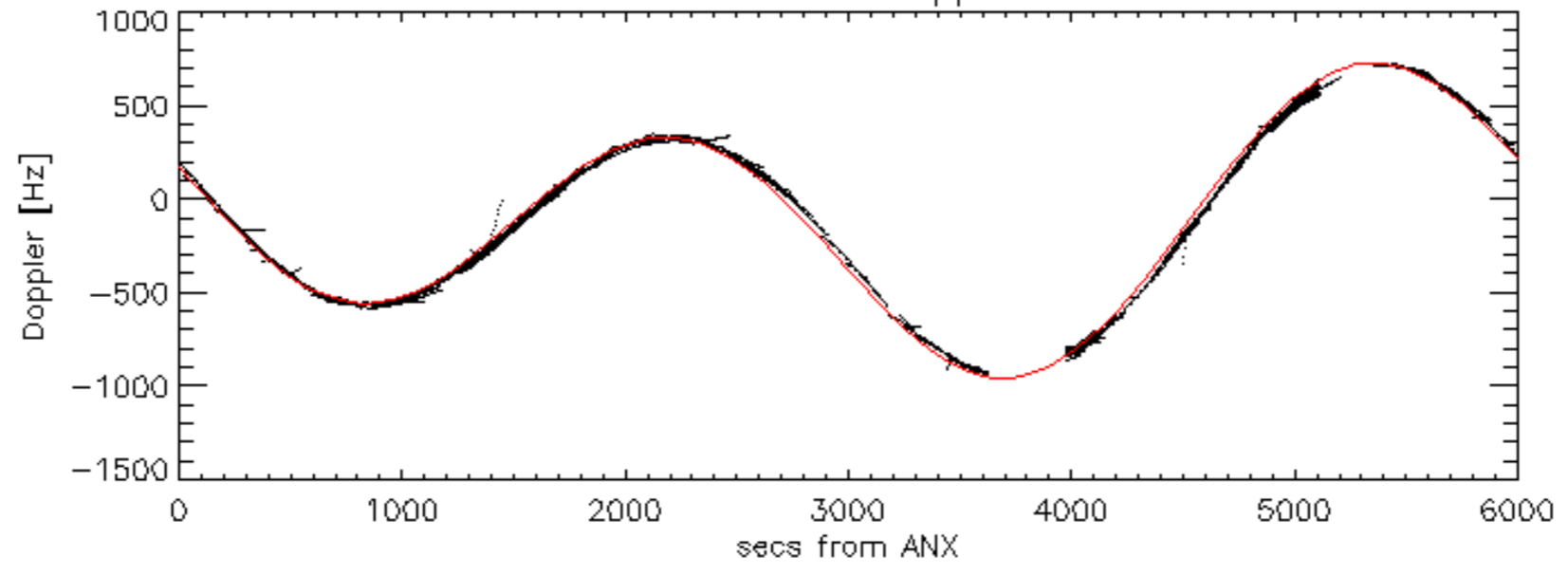
Doppler 'WVS' 'IS2' ascending

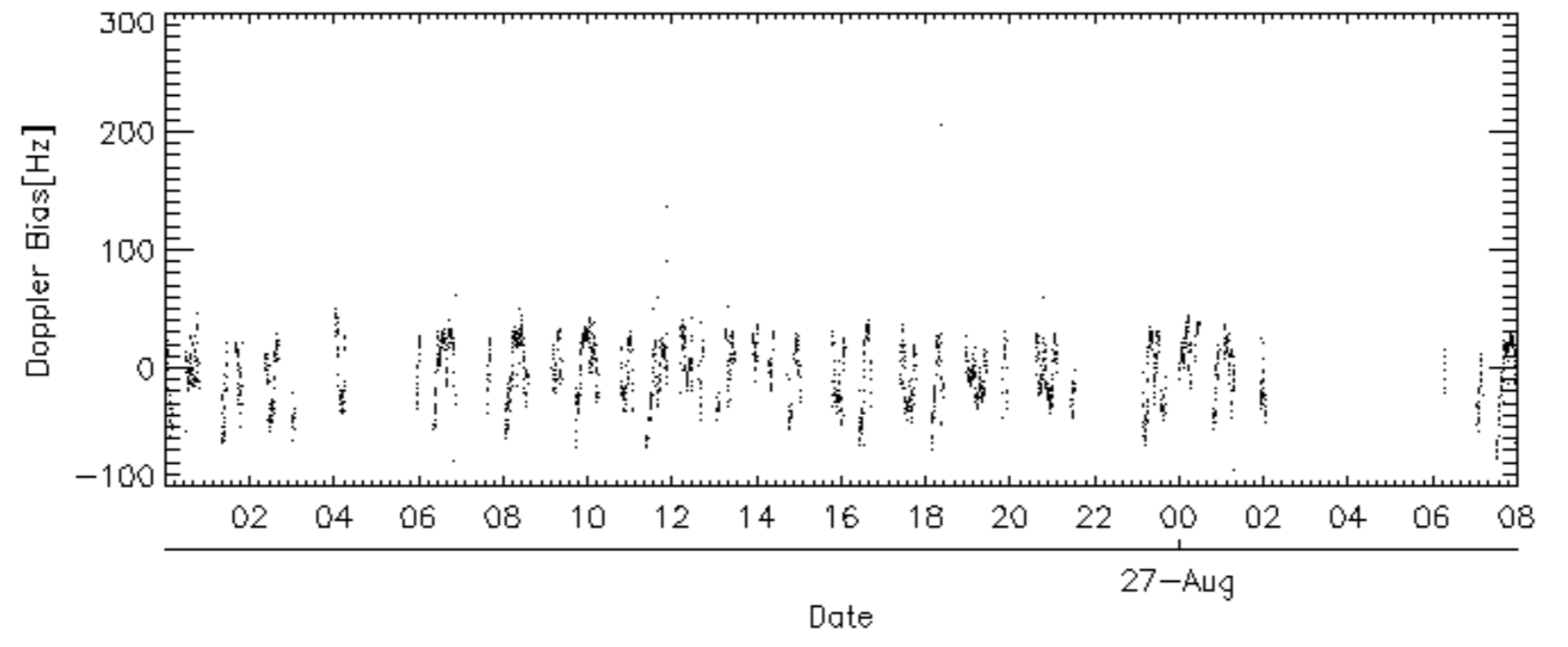
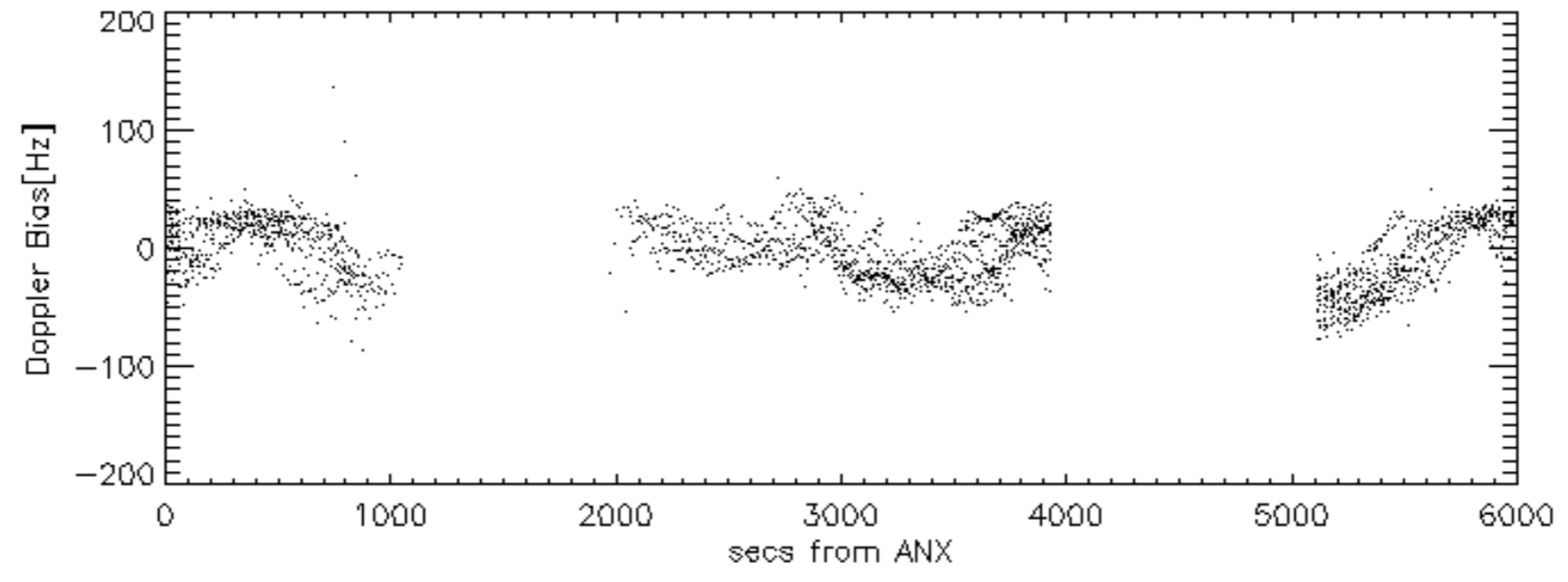
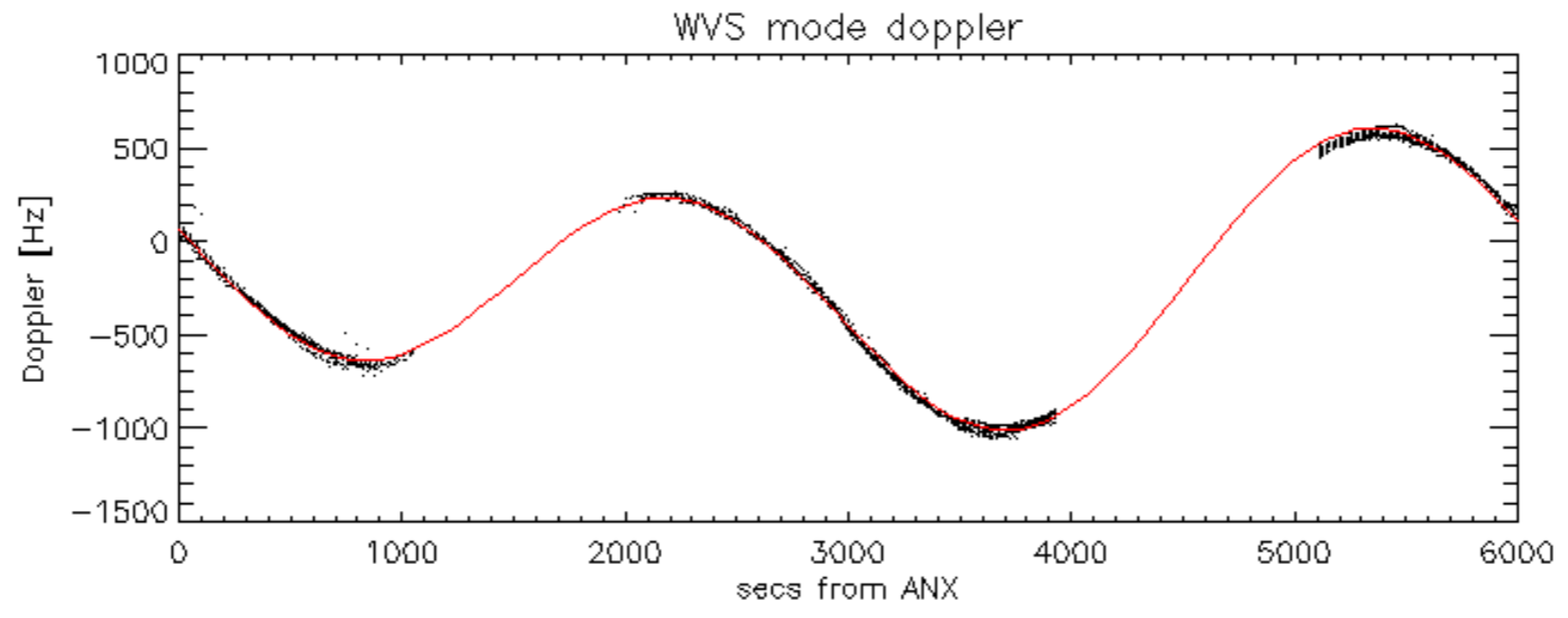


Doppler 'WVS' 'IS2' descending

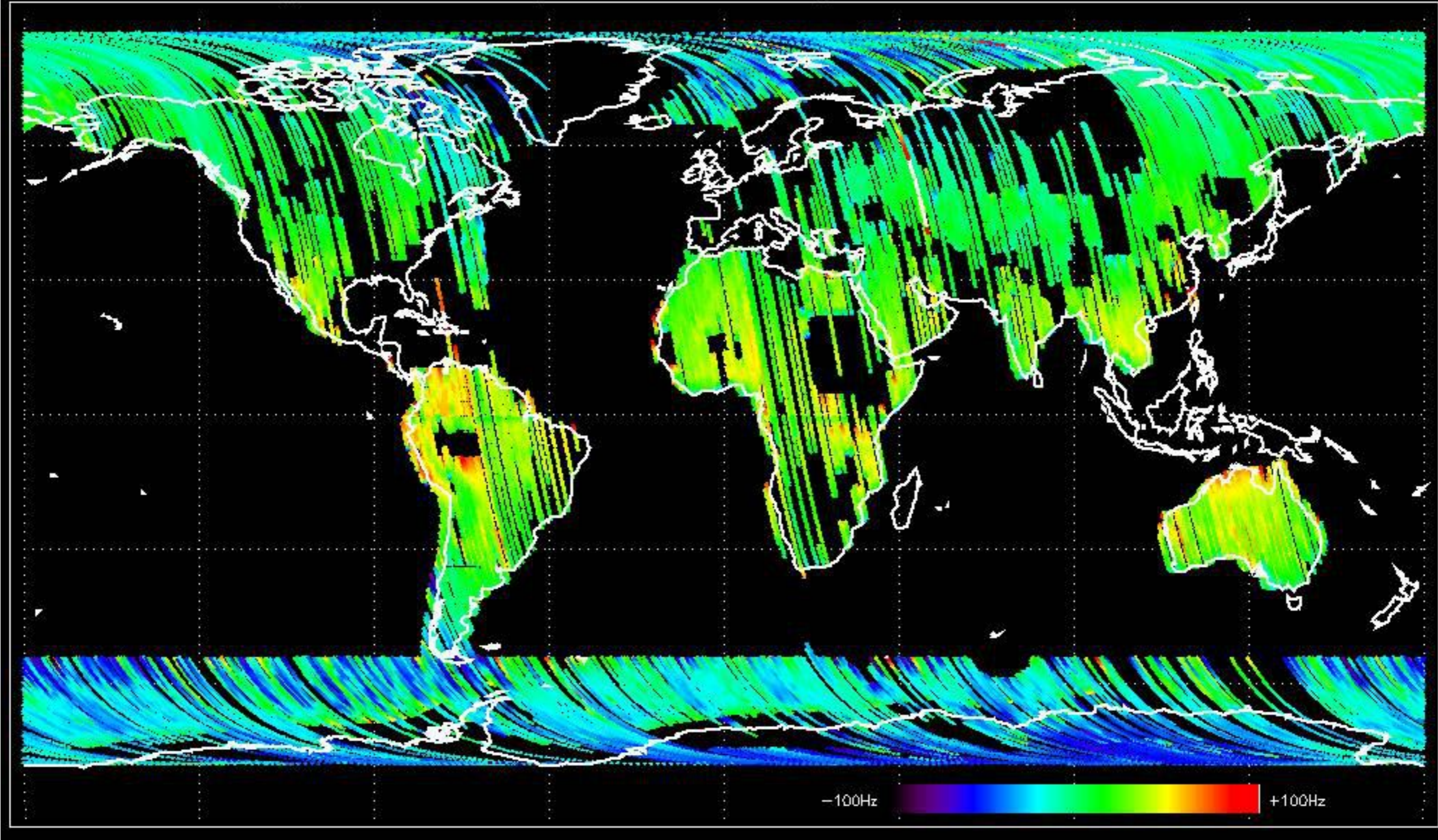


GM1 mode doppler

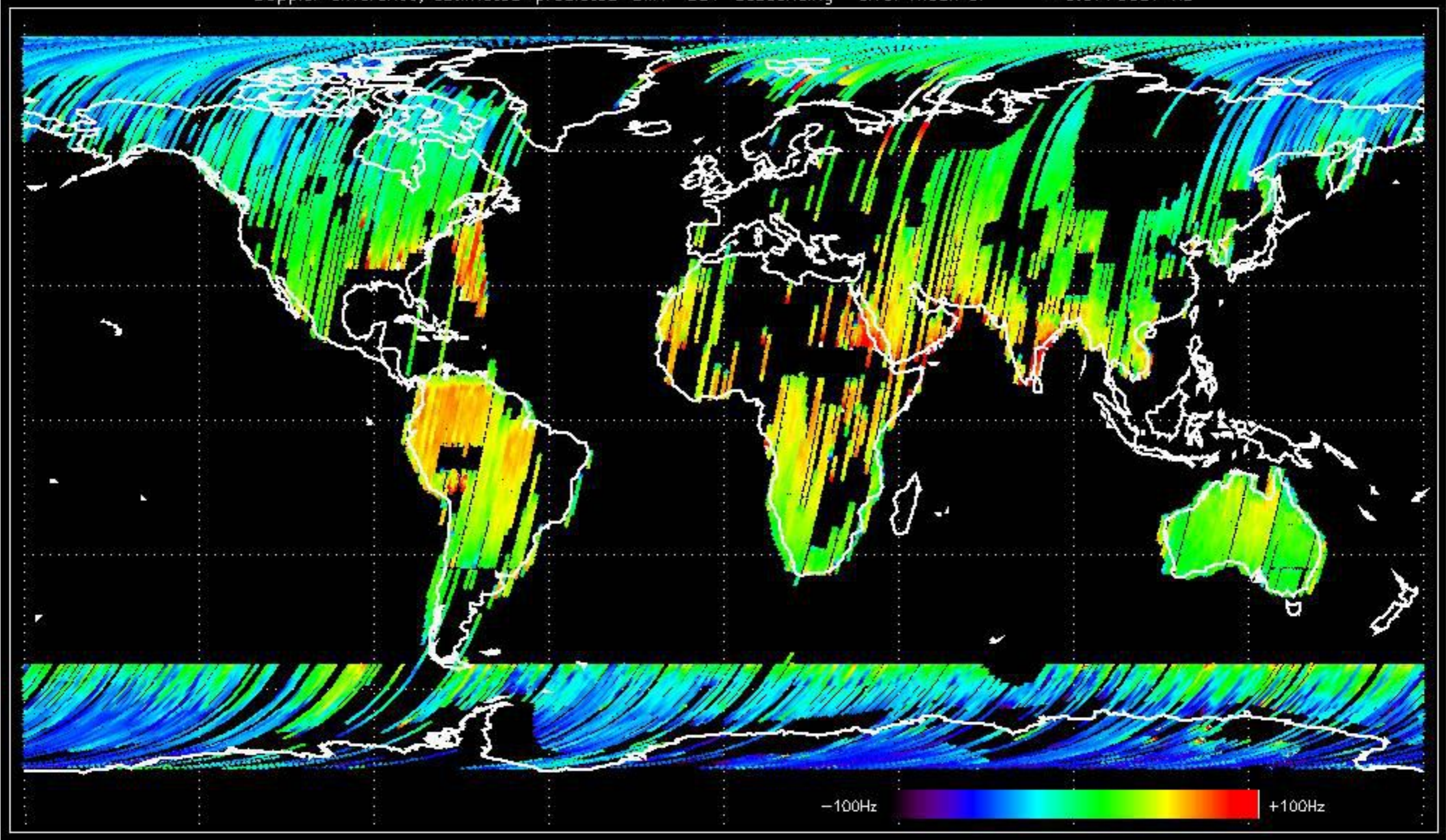




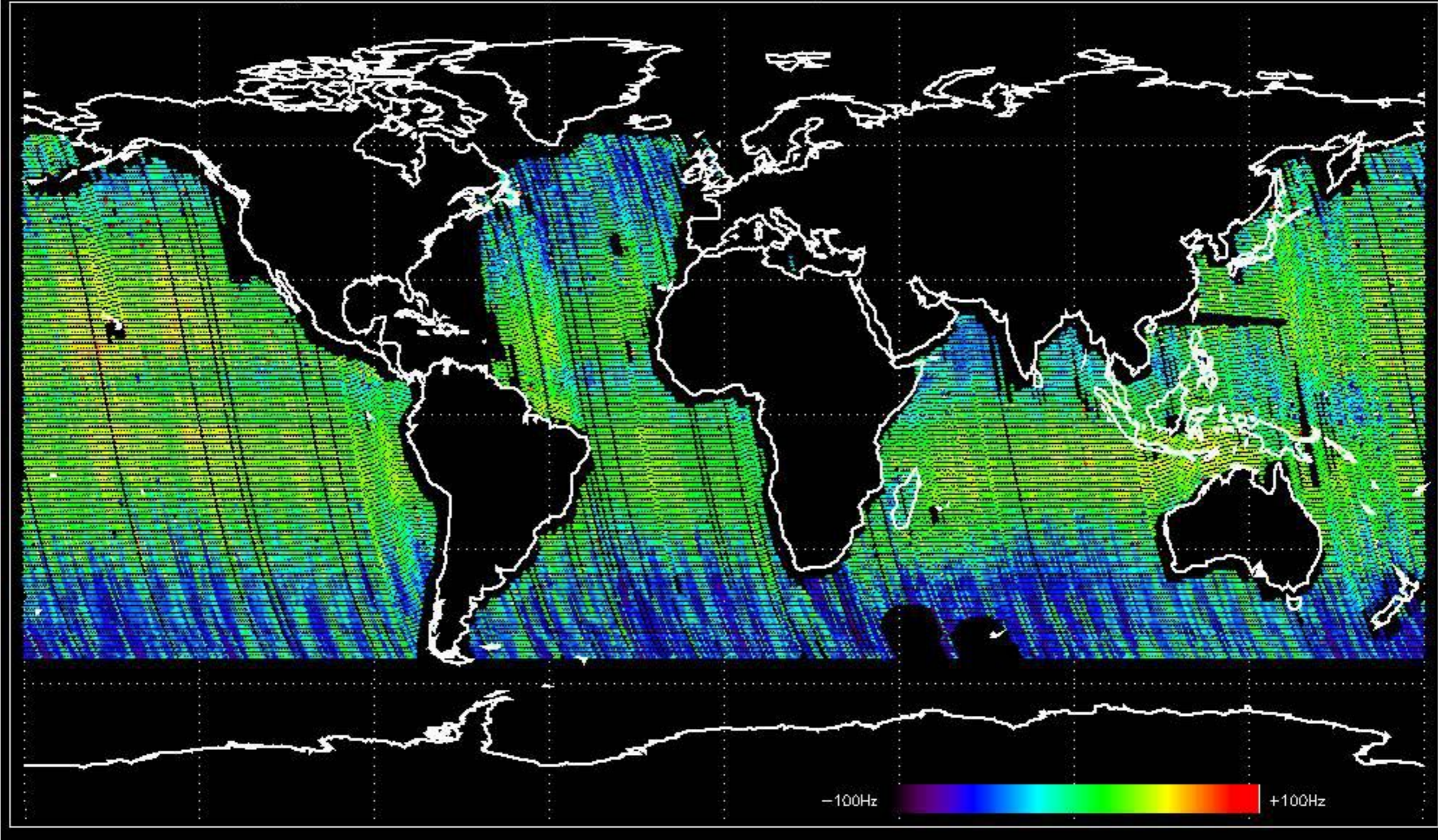
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.443574 Hz



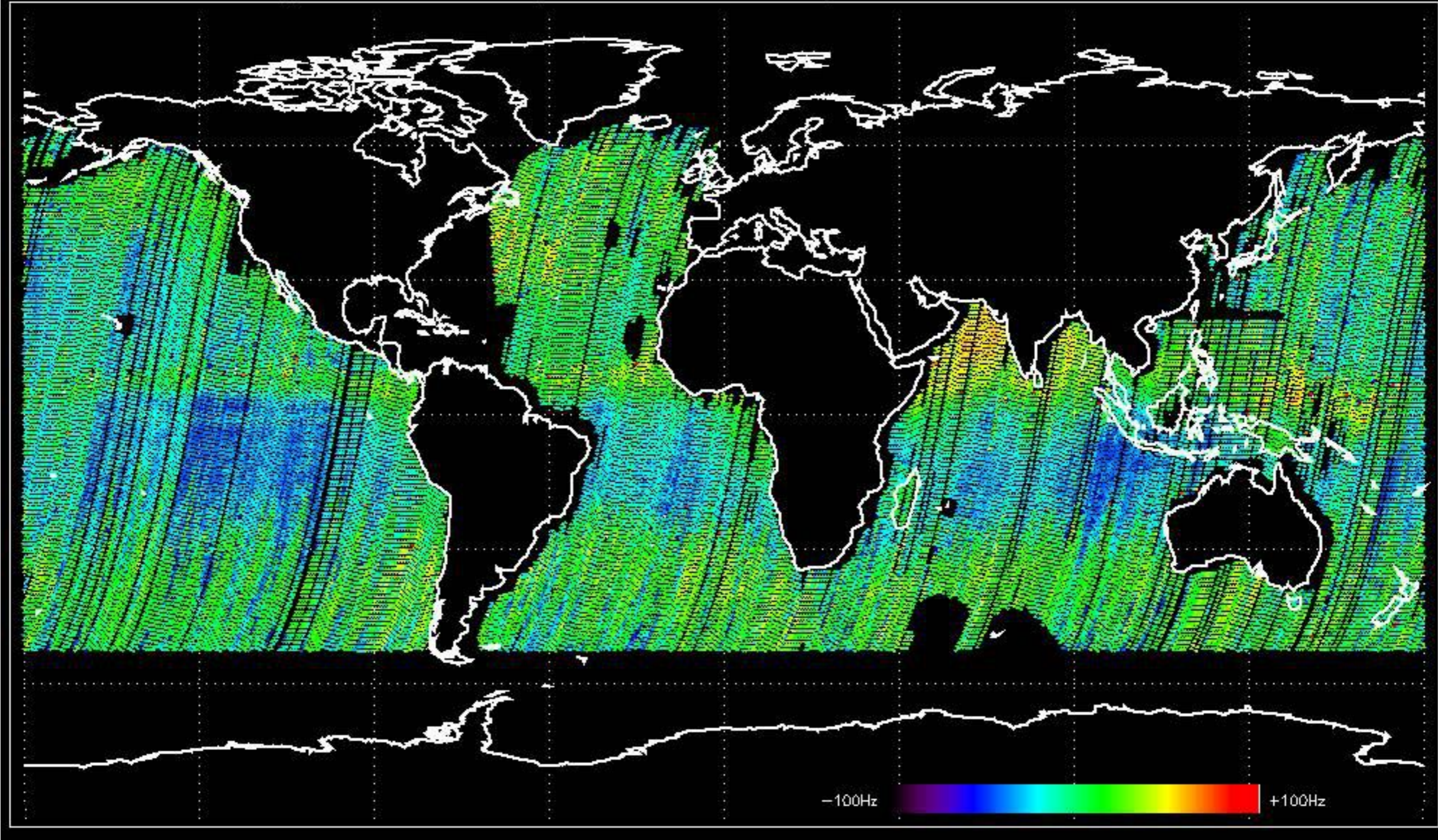
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -9.6770637 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -3.6590984 Hz

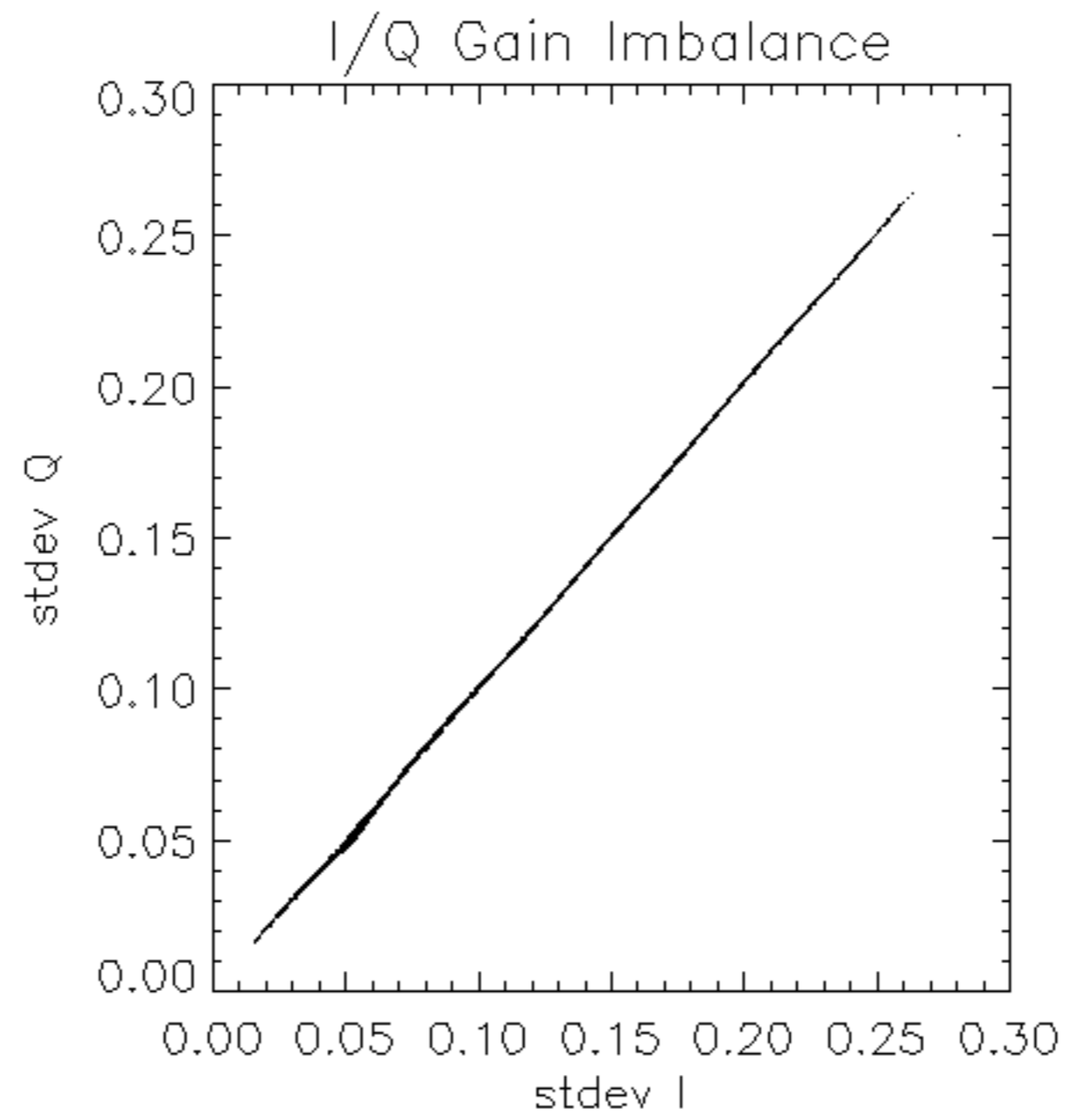


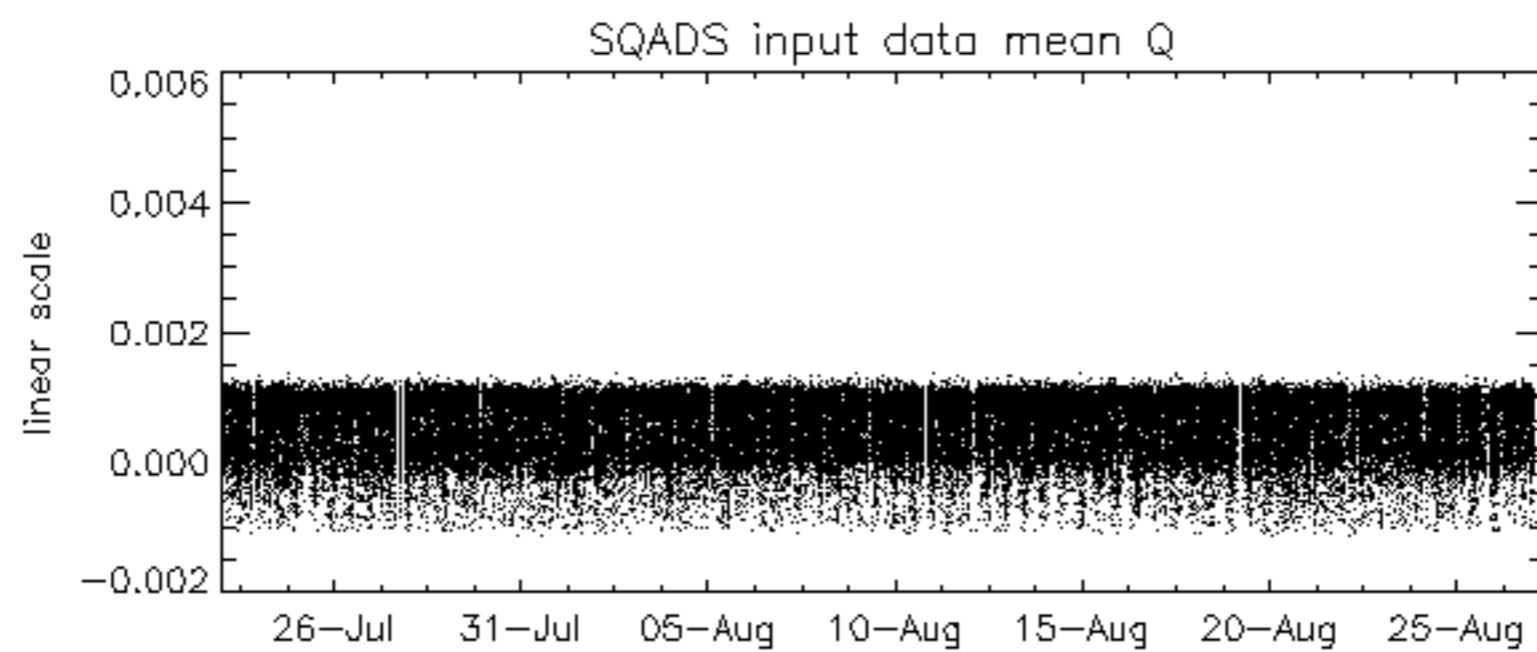
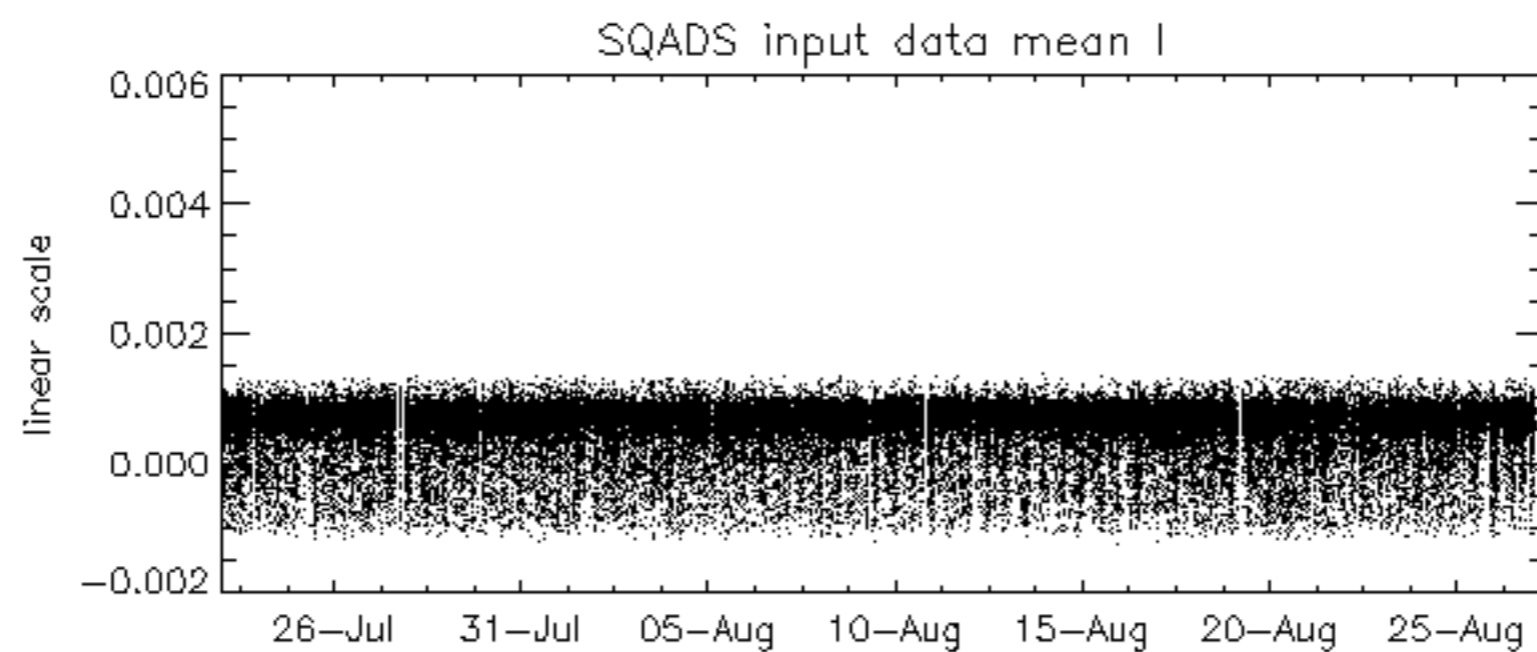
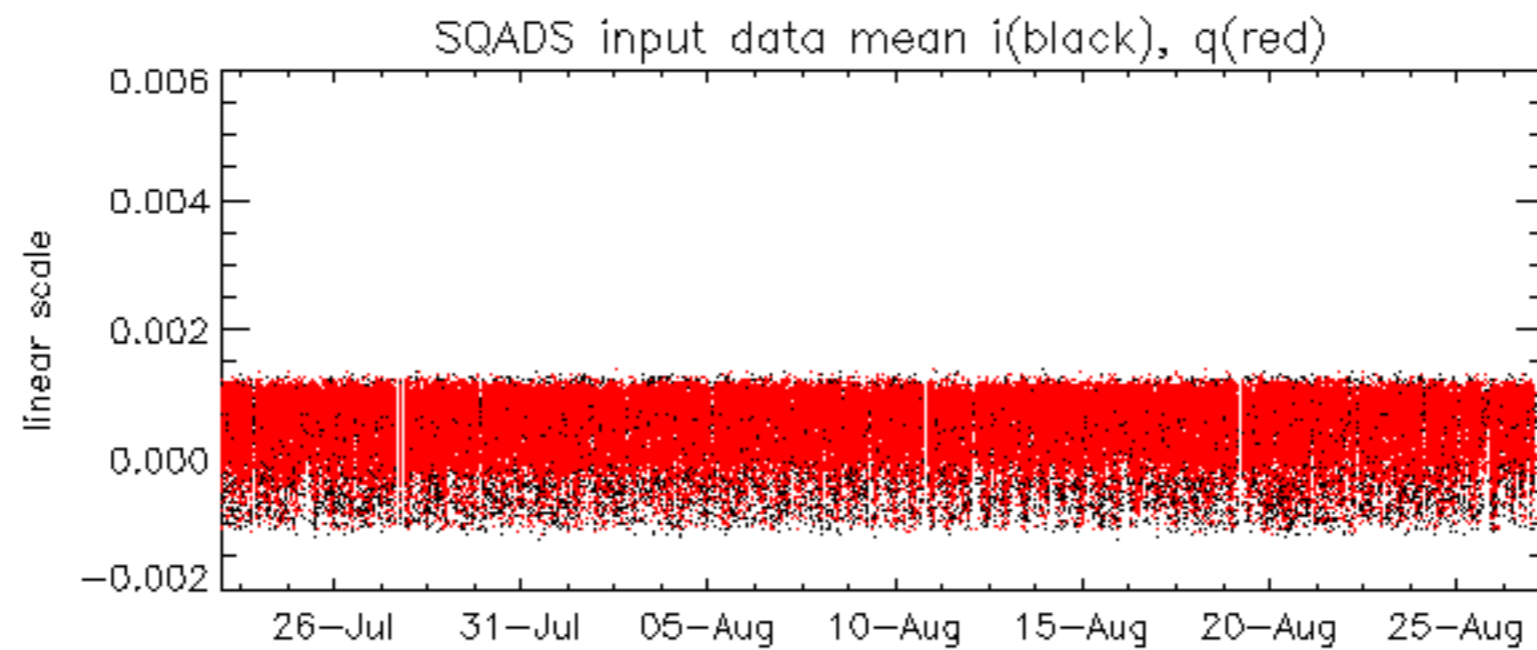
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.4532079 Hz

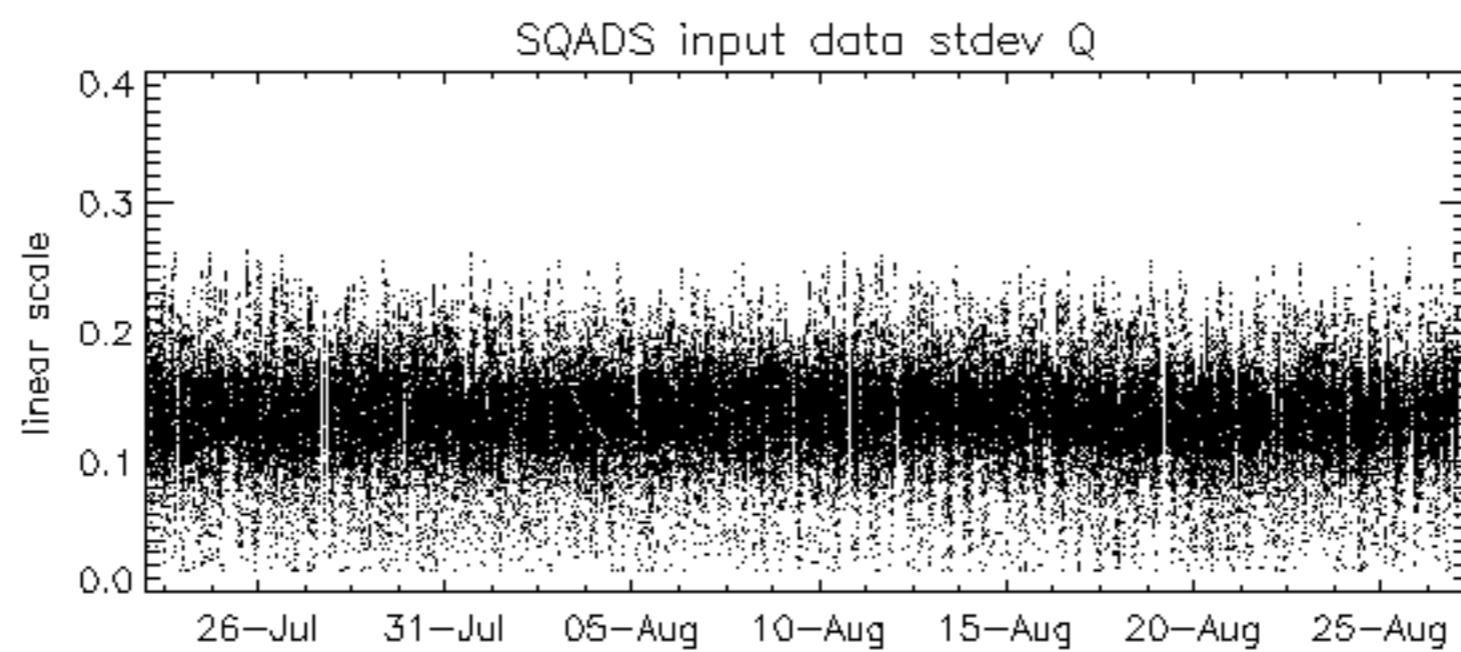
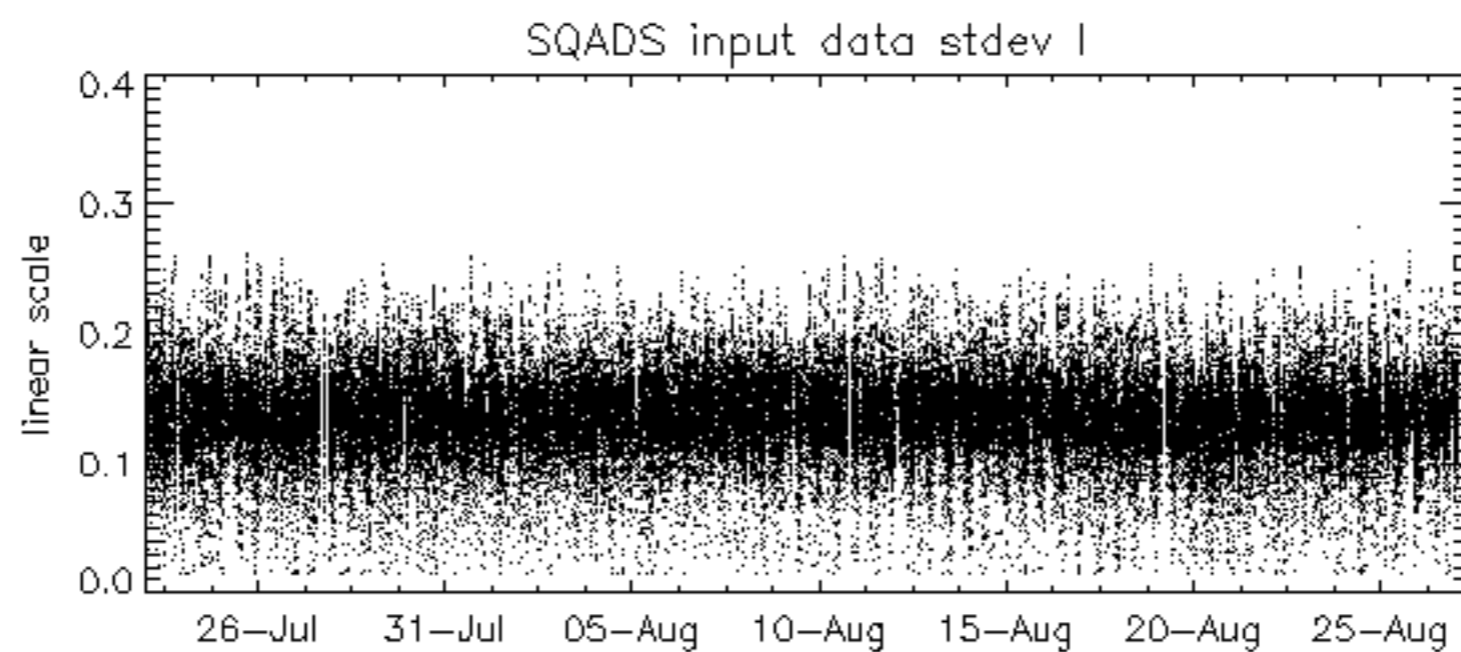
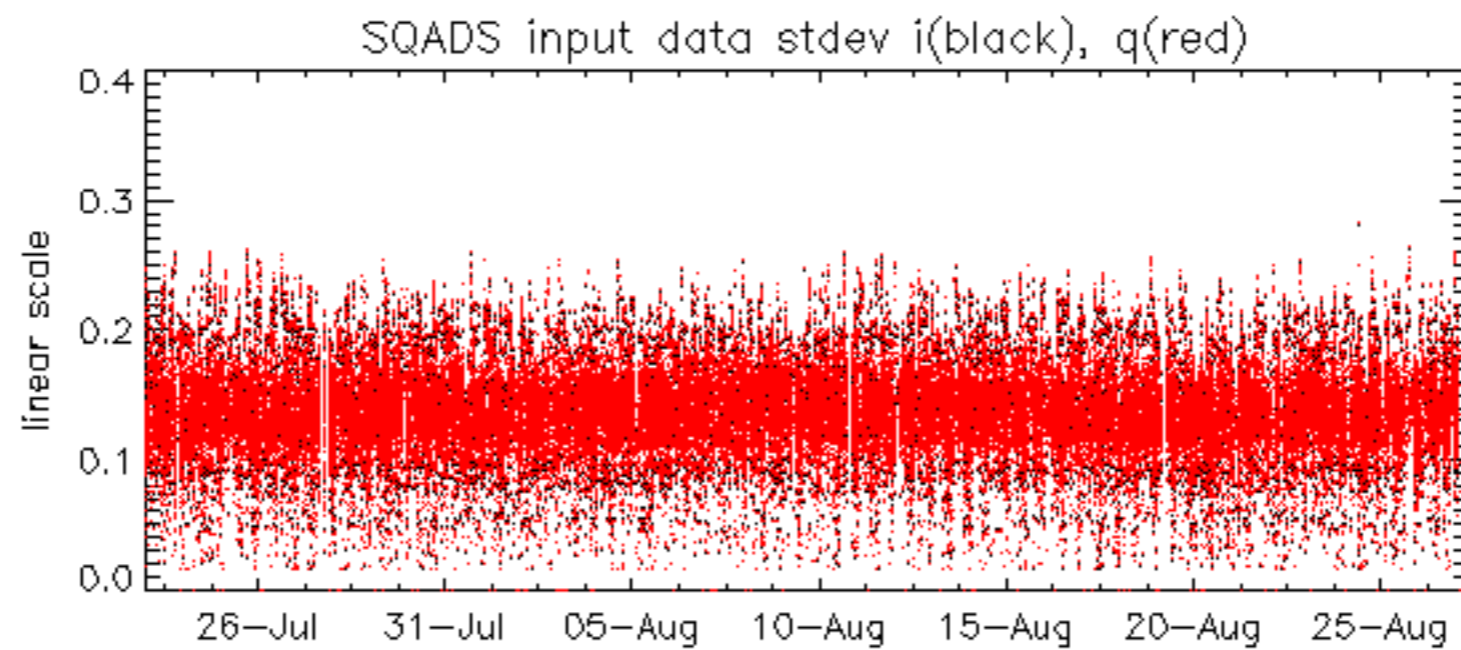


No anomalies observed on available MS products:

No anomalies observed.



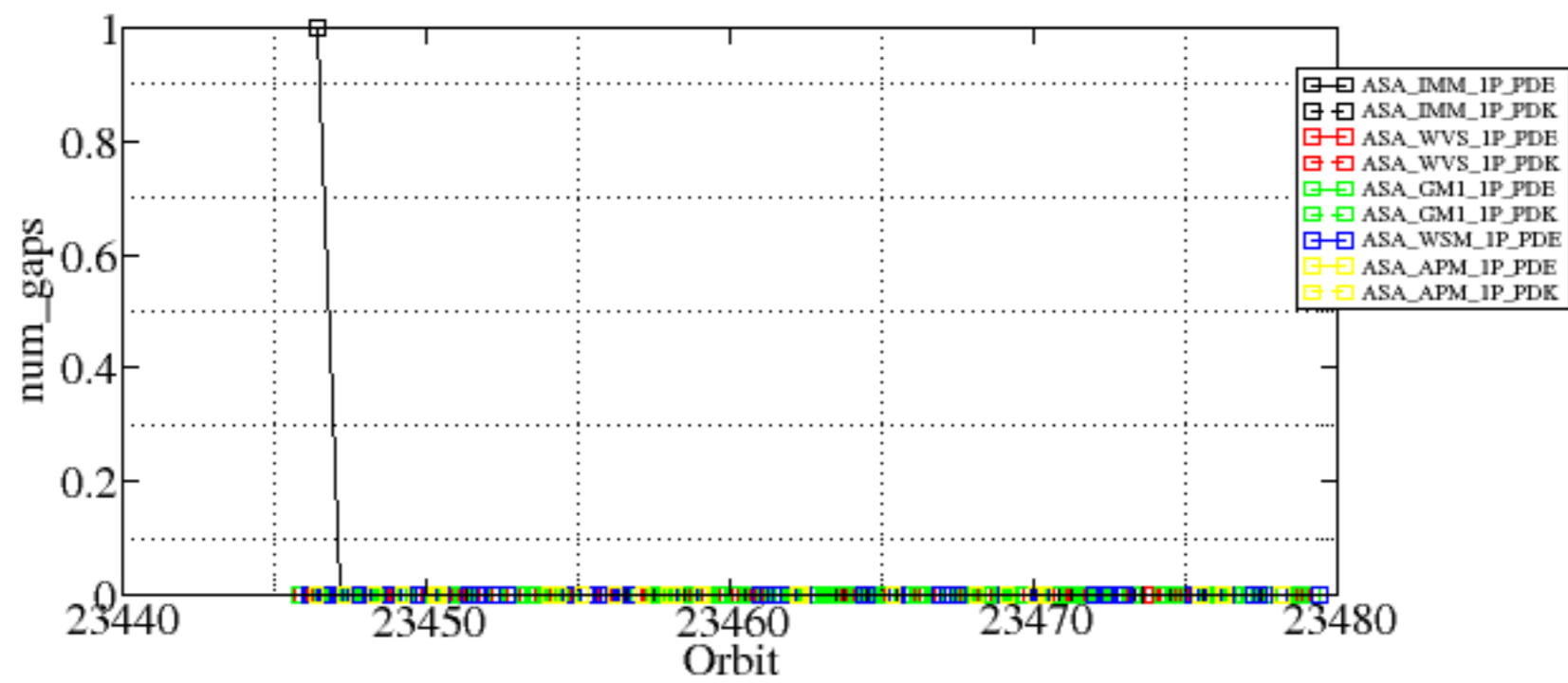




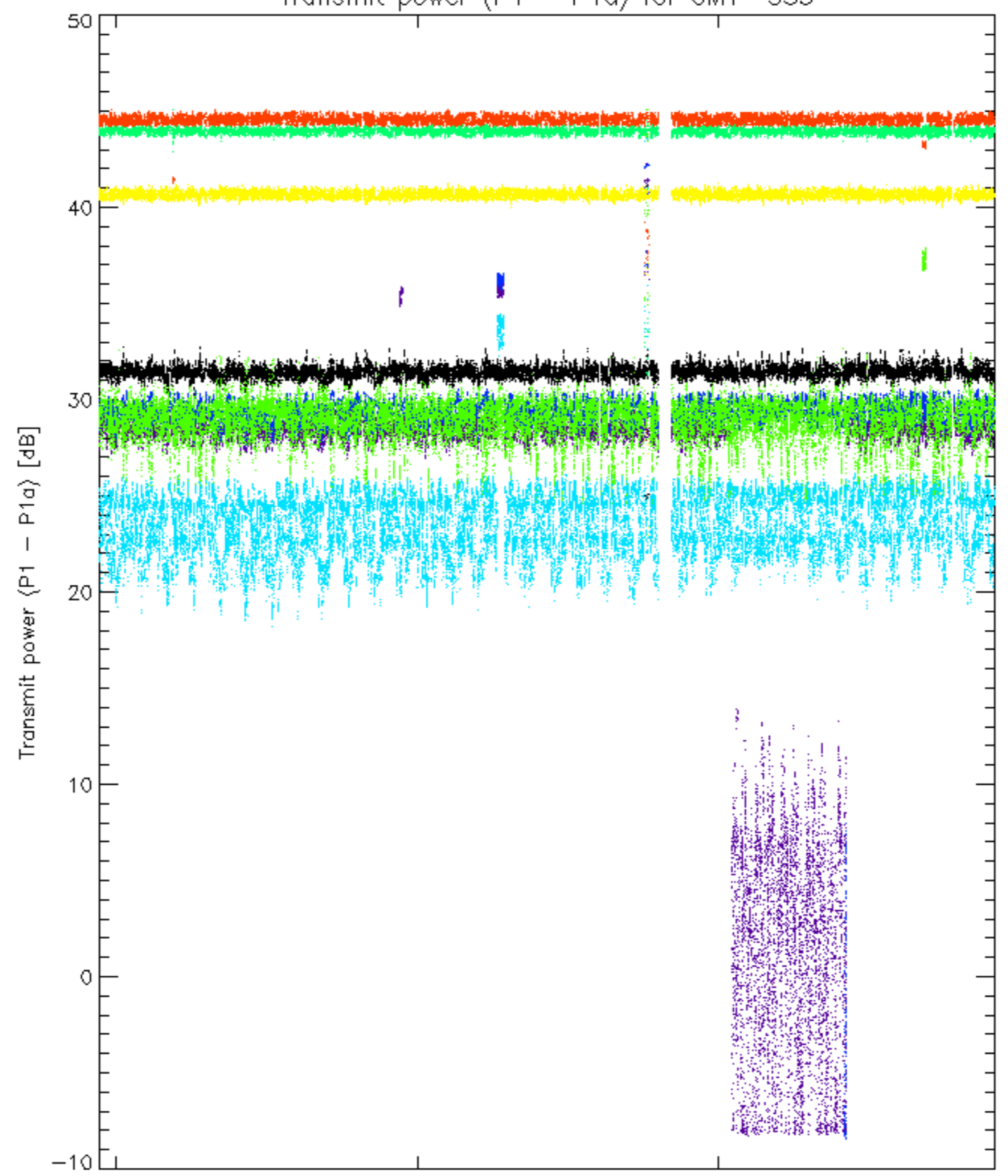
Summary of analysis for the last 3 days 2006082[567]

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

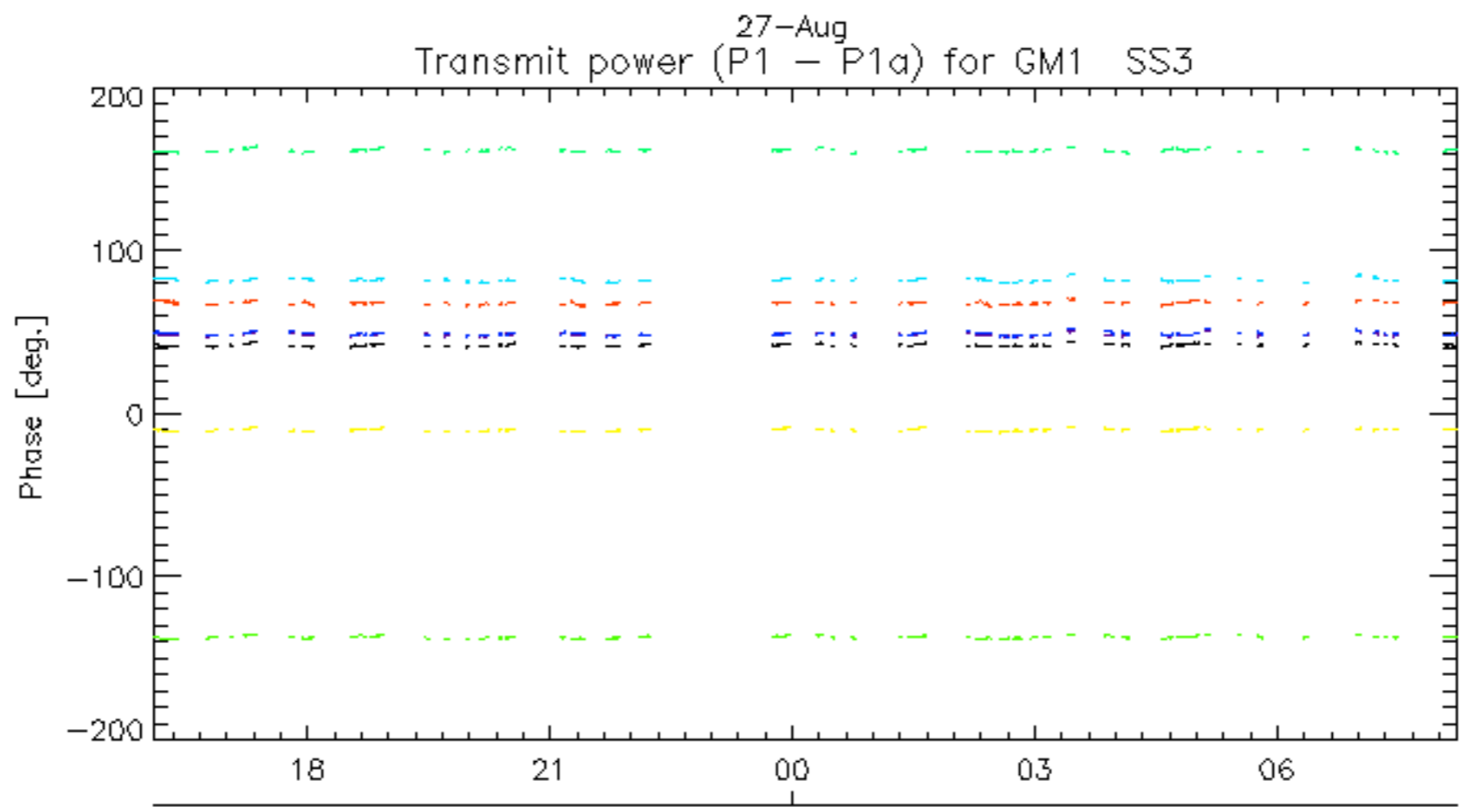
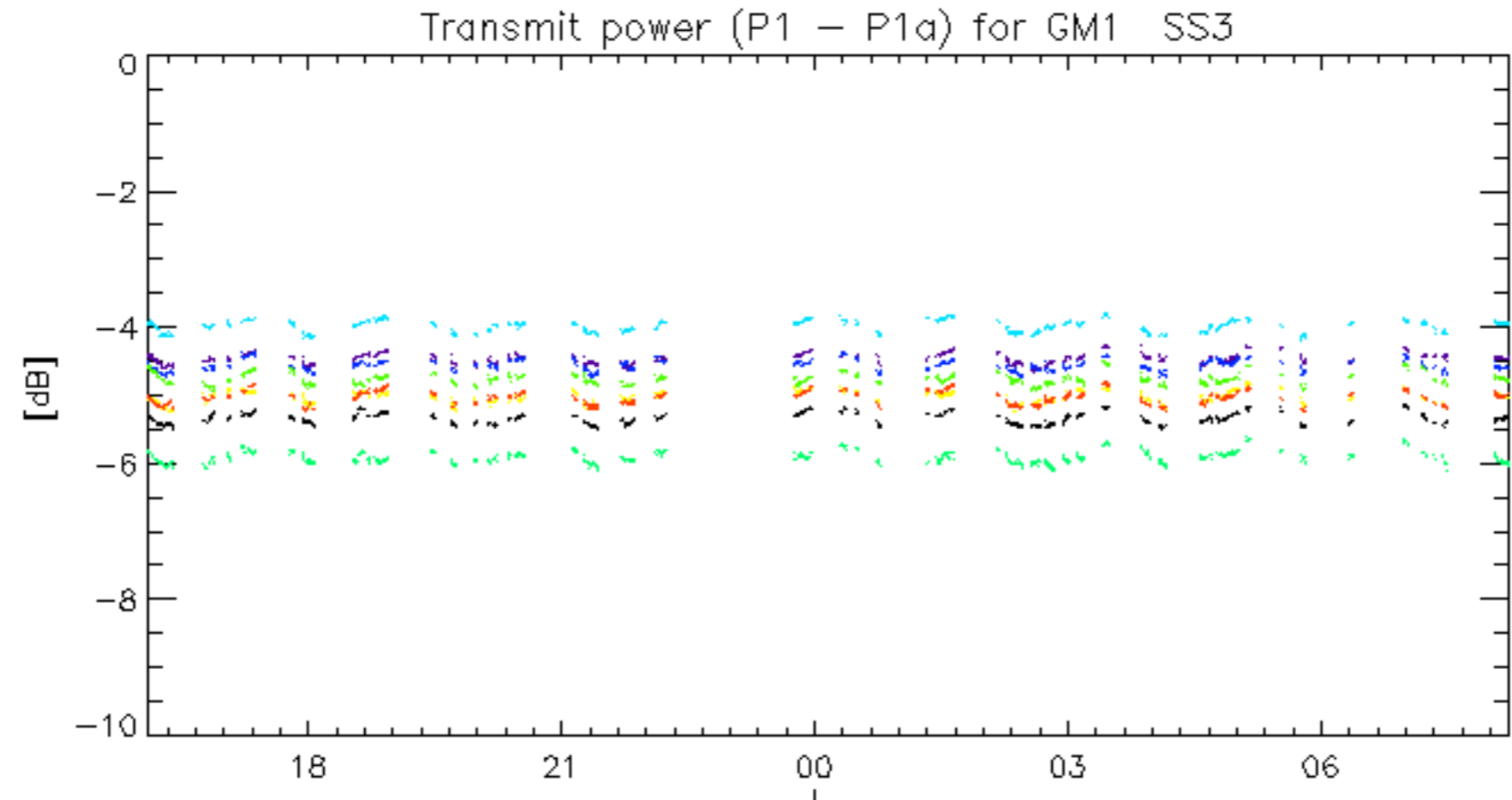
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060825_010619_00000812050_00346_23446_4356.N1	1	0
ASA_IMM_1PNPDE20060826_182649_00000352050_00371_23471_4533.N1	0	17
ASA_WSM_1PNPDE20060825_171327_000002322050_00356_23456_9475.N1	0	4



Transmit power (P1 - P1a) for GM1 SS3

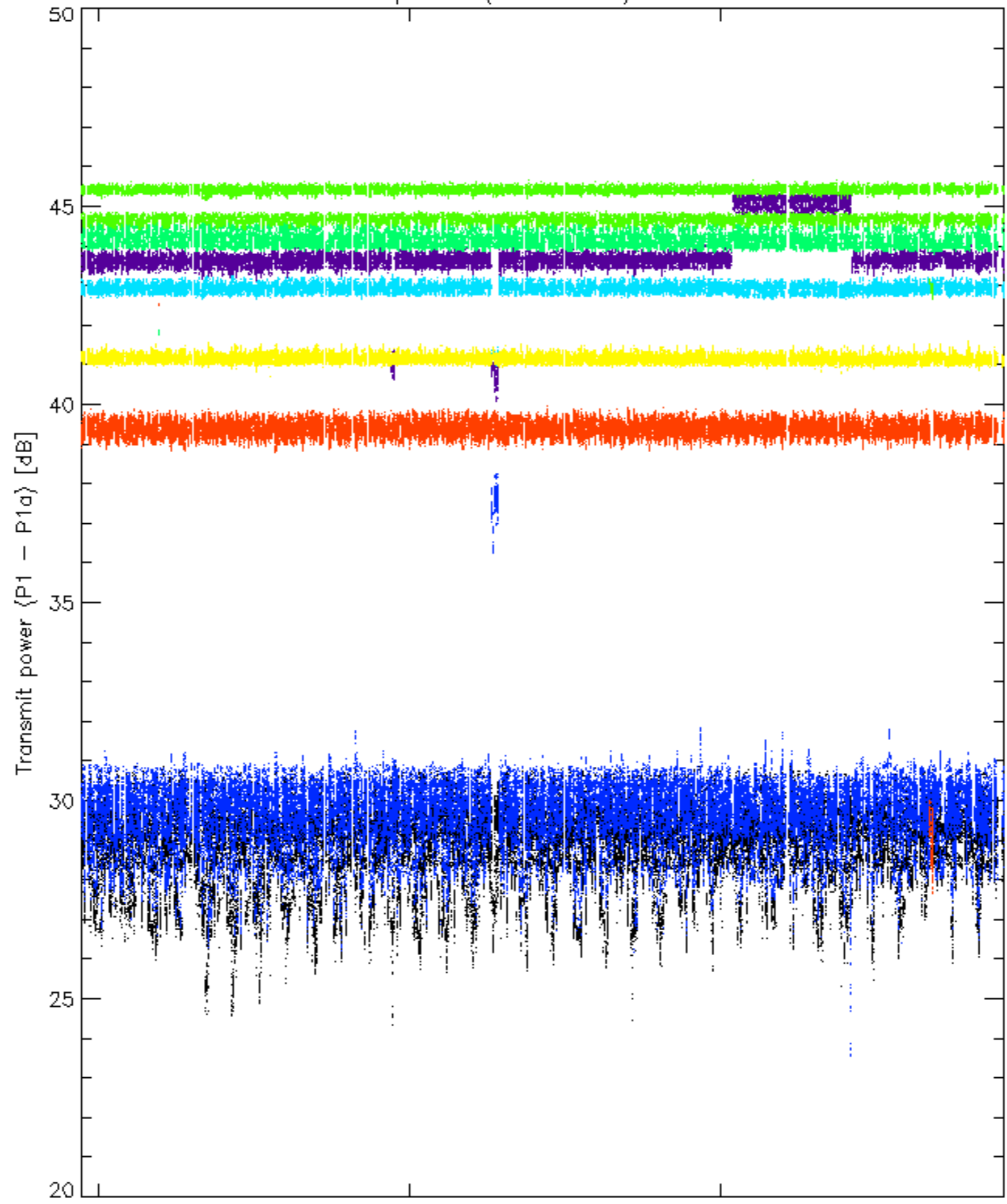


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

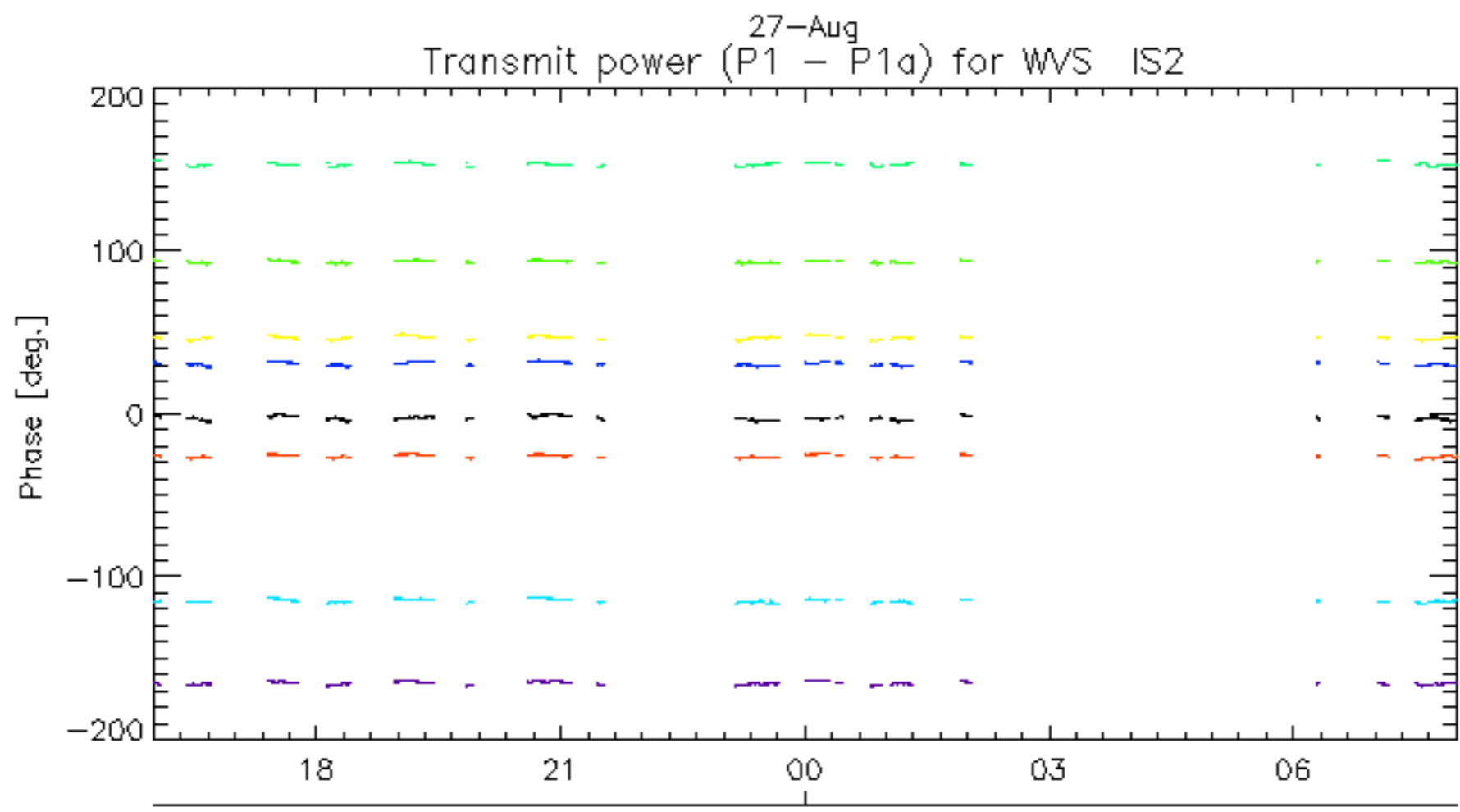
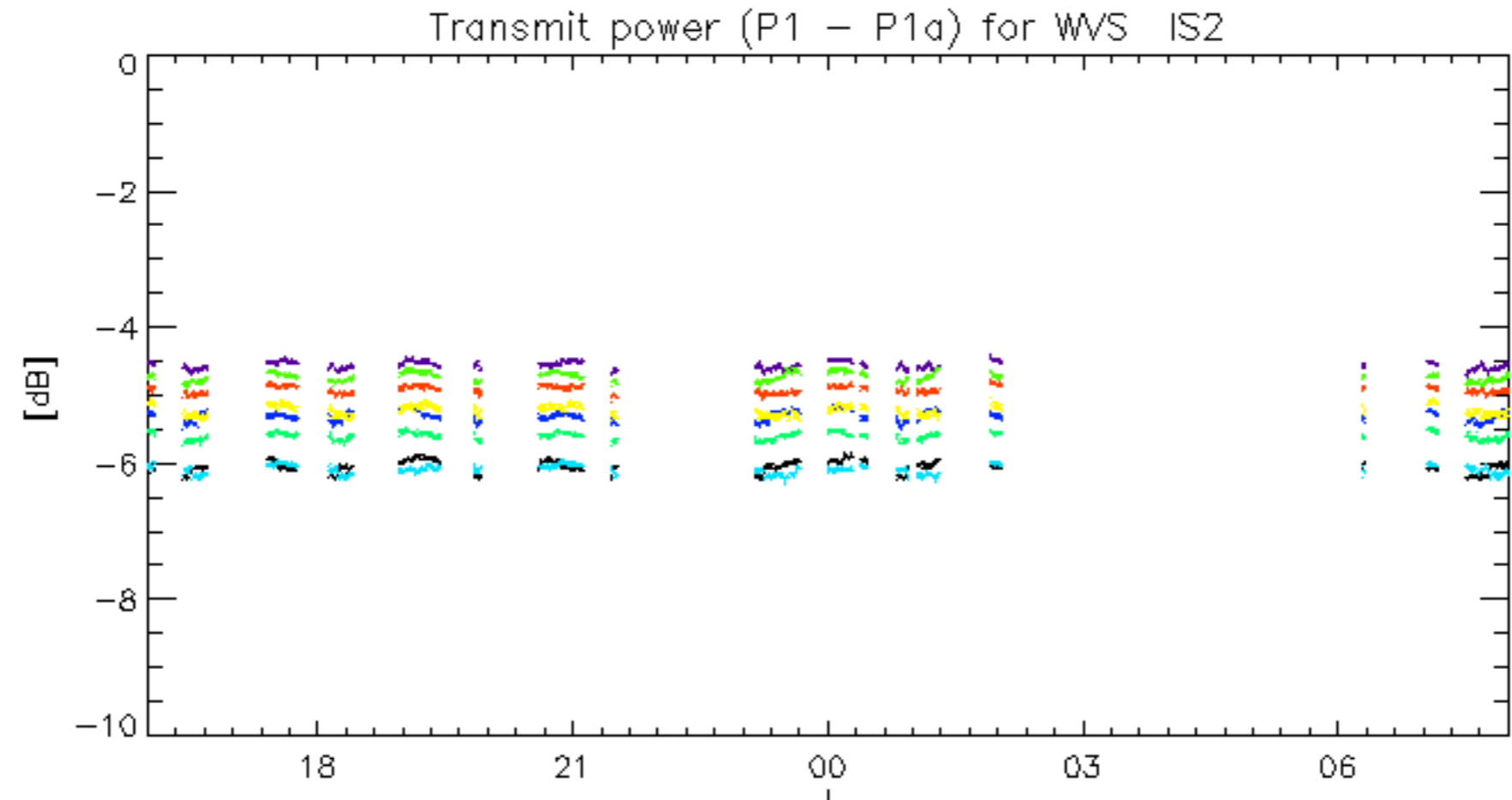


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



27-Aug
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.