

PRELIMINARY REPORT OF 051206

last update on Tue Dec 6 16:33:58 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 2005-12-05 00:00:00 to 2005-12-06 16:33:58

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	0	17	0	20
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	44	0	17	0	20
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	0	17	0	20
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	0	17	0	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	44	35	12	44
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	45	44	35	12	44
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	44	35	12	44
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	44	35	12	44

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

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	20051124 100809
H	20051127 183652

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
☒
☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

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	-3.577914	0.127616	0.056650
7	P1	-2.865595	0.085461	0.626030
11	P1	-4.141840	0.017399	-0.011177
15	P1	-5.580192	1.112422	2.608216
19	P1	-3.111811	0.040272	0.440148
22	P1	-4.466722	0.018637	0.163927
26	P1	-4.316982	0.043194	-0.449658
30	P1	-5.704003	0.024114	0.278196
3	P1	-15.381902	1.429392	0.326948
7	P1	-15.871323	1.720526	3.130608
11	P1	-16.446775	0.413167	0.675578
15	P1	-13.146081	0.677222	1.787674
19	P1	-13.593556	0.239784	1.033244
22	P1	-16.208746	0.540976	0.845403
26	P1	-15.481164	0.821199	1.909374
30	P1	-16.115622	1.692976	2.901090

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.875353	0.101356	-0.049731
7	P2	-22.569654	0.100660	0.060577
11	P2	-16.589489	0.112478	-0.067752
15	P2	-7.271609	0.100226	-0.050978
19	P2	-9.226612	0.097191	0.017046
22	P2	-17.873278	0.104069	0.080780
26	P2	-16.283045	0.119582	-0.417158
30	P2	-19.729664	0.105462	-0.316115

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.231505	0.007244	-0.017223
7	P3	-8.231505	0.007244	-0.017223
11	P3	-8.231505	0.007244	-0.017223
15	P3	-8.231505	0.007244	-0.017223
19	P3	-8.231505	0.007244	-0.017223
22	P3	-8.231505	0.007244	-0.017223
26	P3	-8.231505	0.007244	-0.017223
30	P3	-8.231505	0.007244	-0.017223

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	-3.689651	0.007809	-0.036674
7	P1	-2.783937	0.010810	0.002952
11	P1	-2.872514	0.013467	-0.025447
15	P1	-3.393654	0.021501	-0.060726
19	P1	-3.376610	0.013091	-0.035196
22	P1	-5.113165	0.019691	-0.047494
26	P1	-5.820046	0.015917	-0.058286
30	P1	-5.263111	0.032005	-0.051970
3	P1	-11.464265	0.041088	-0.033709
7	P1	-9.966477	0.045272	-0.010835
11	P1	-10.045526	0.060700	-0.031691
15	P1	-10.562494	0.083522	-0.093560
19	P1	-15.503356	0.073088	-0.008453
22	P1	-20.910894	0.968918	-0.080671

26	P1	-17.224518	0.302646	0.160405
30	P1	-18.346972	0.315038	-0.005133

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.658522	0.030585	0.093111
7	P2	-23.066420	0.062363	0.078502
11	P2	-11.685118	0.023063	0.115014
15	P2	-4.973576	0.021240	-0.030304
19	P2	-6.952650	0.021675	-0.028362
22	P2	-8.169820	0.023712	-0.068094
26	P2	-24.028608	0.032301	-0.077221
30	P2	-22.111208	0.020632	-0.017141

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.071105	0.002477	-0.014957
7	P3	-8.071115	0.002483	-0.015563
11	P3	-8.071003	0.002474	-0.015349
15	P3	-8.071071	0.002481	-0.015072
19	P3	-8.071273	0.002484	-0.014991
22	P3	-8.071144	0.002476	-0.015147
26	P3	-8.070977	0.002464	-0.015640
30	P3	-8.070997	0.002478	-0.014754

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	0.000503831
	stdev	2.02381e-07
MEAN Q	mean	0.000508530
	stdev	2.32594e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.132562
	stdev	0.00110835
STDEV Q	mean	0.132876
	stdev	0.00112271



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005120[456]

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_IMM_1PNPDE20051205_182347_000000352043_00099_19692_3137.N1	0	3
ASA_WSM_1PNPDE20051206_014940_000002812043_00103_19696_2963.N1	0	3
ASA_WSM_1PNPDE20051206_042641_000001832043_00105_19698_2974.N1	0	61





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)

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

7.5 - Absolute Doppler for GM1

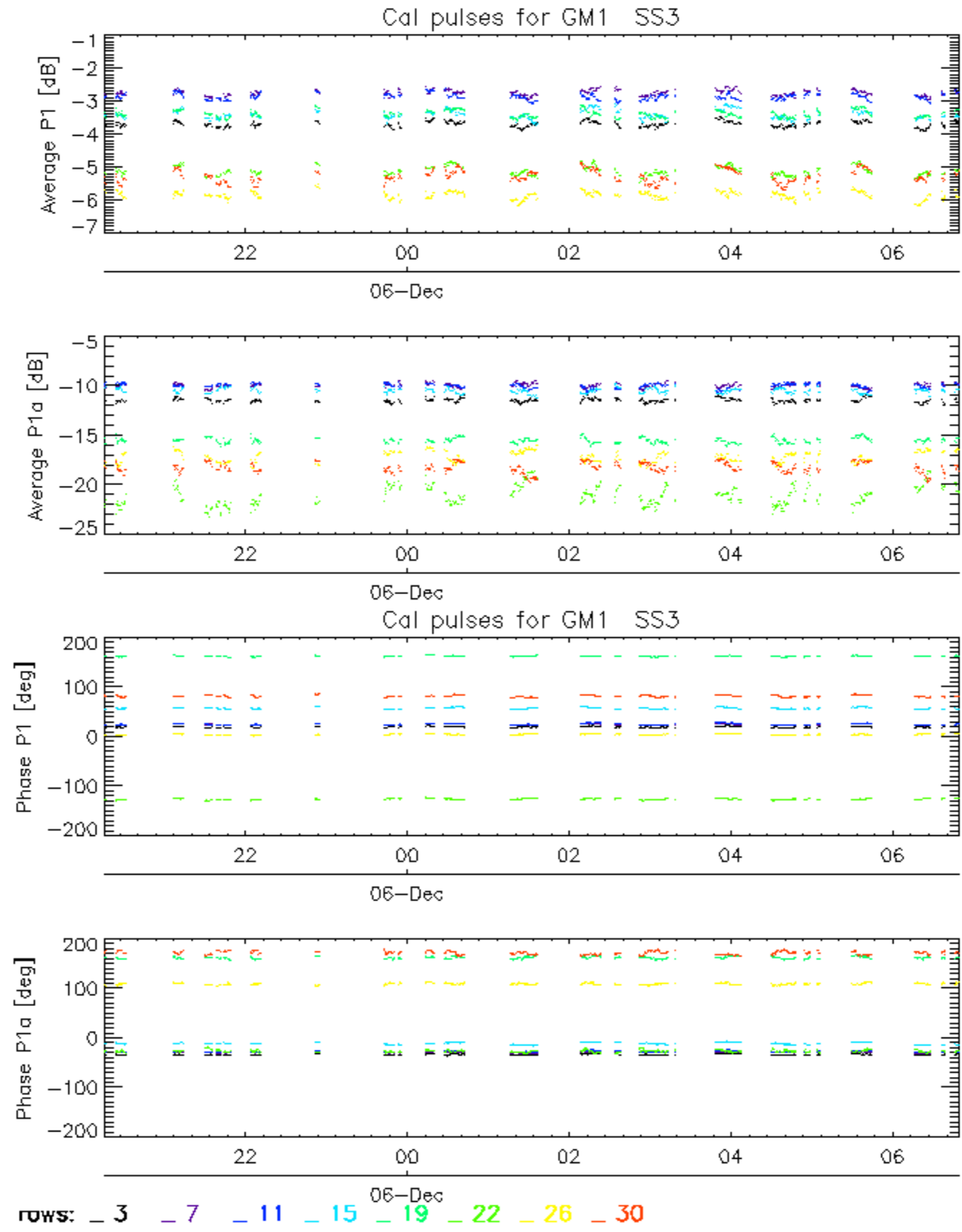
Evolution of Absolute Doppler

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

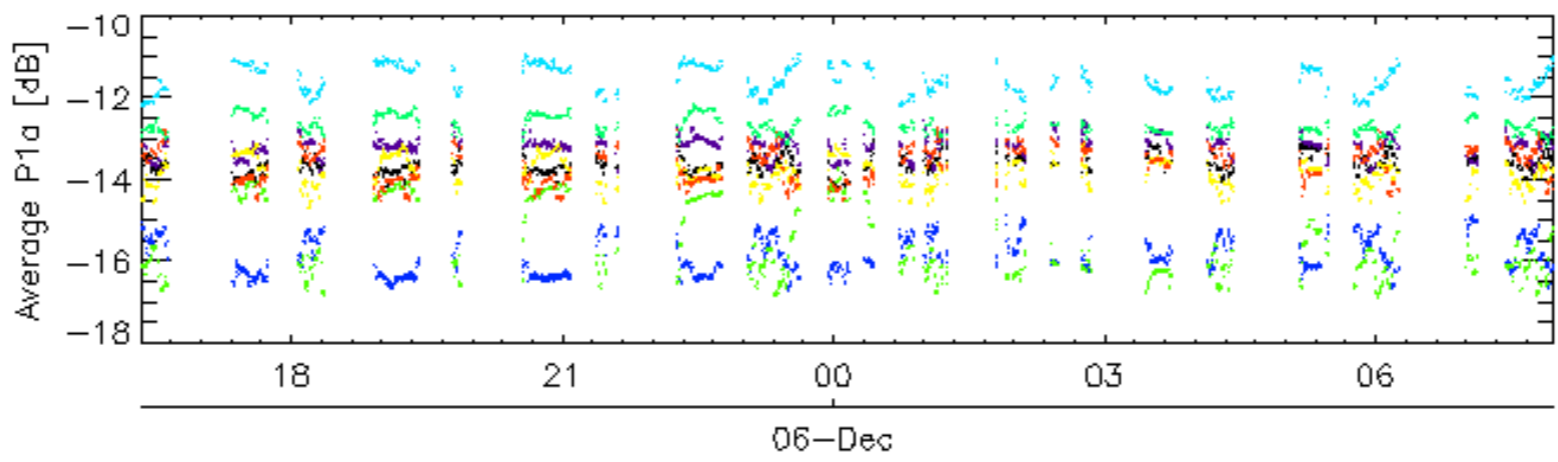
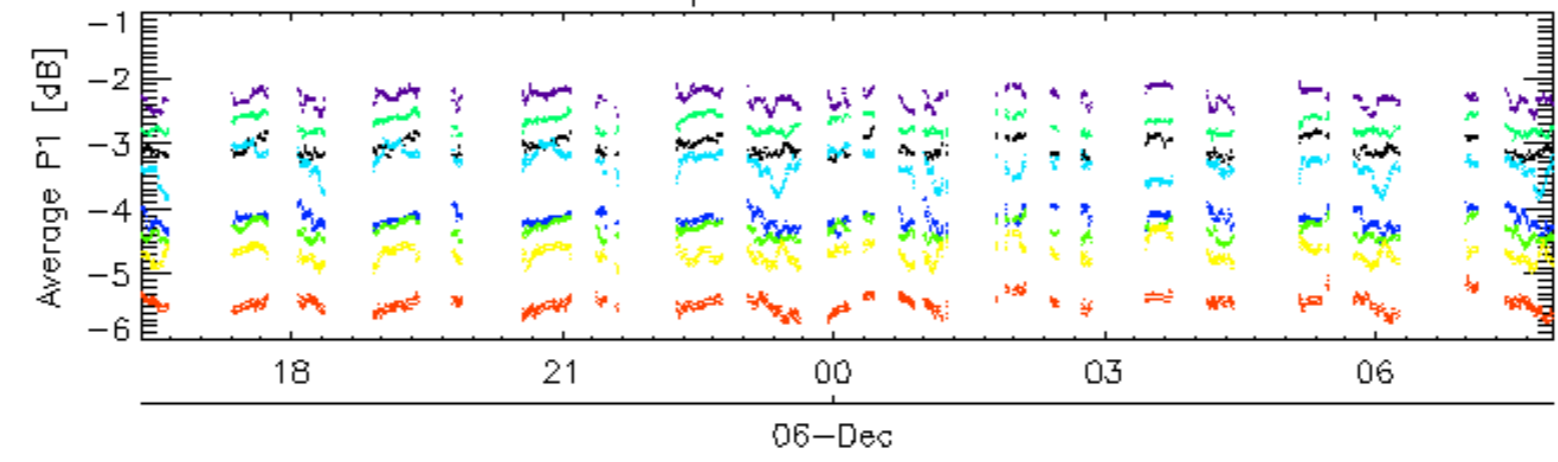
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

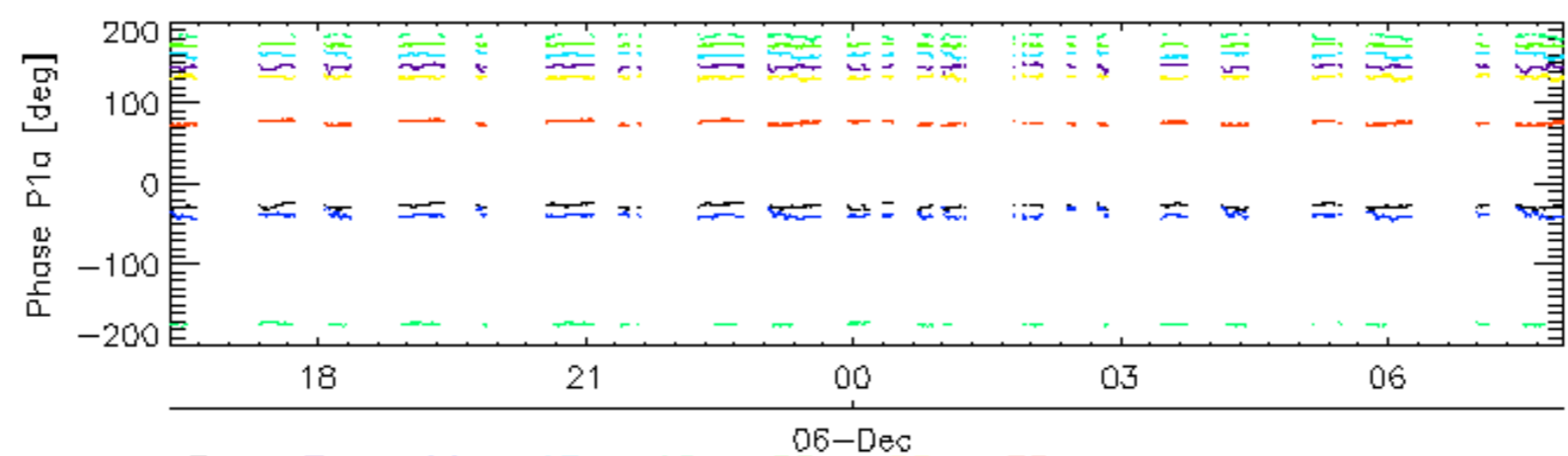
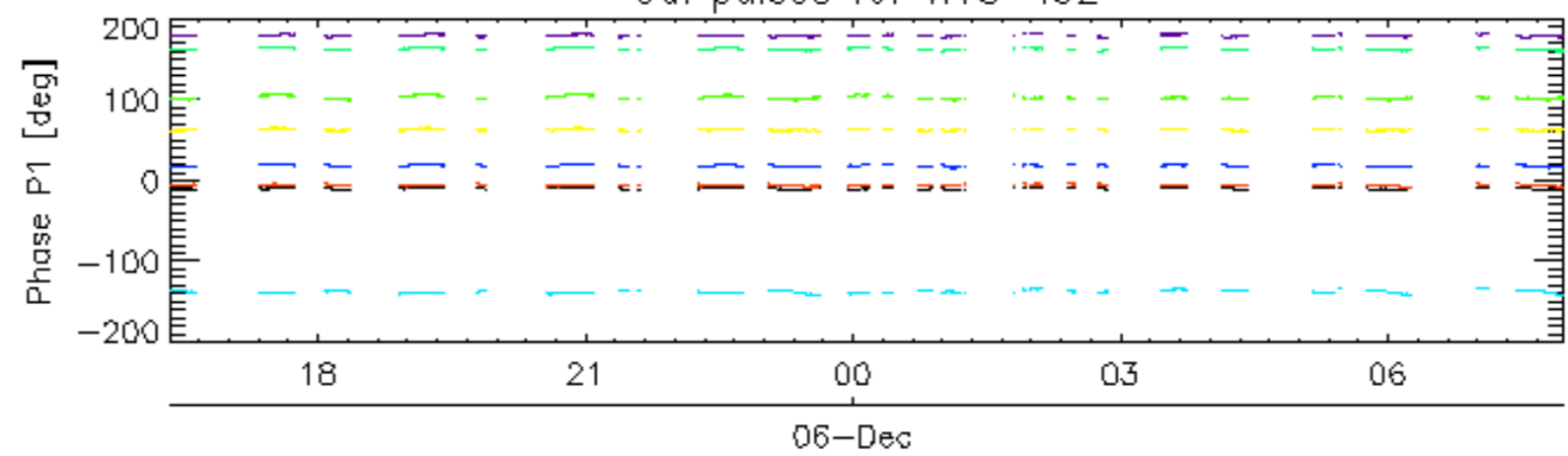
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Cal pulses for WVS IS2

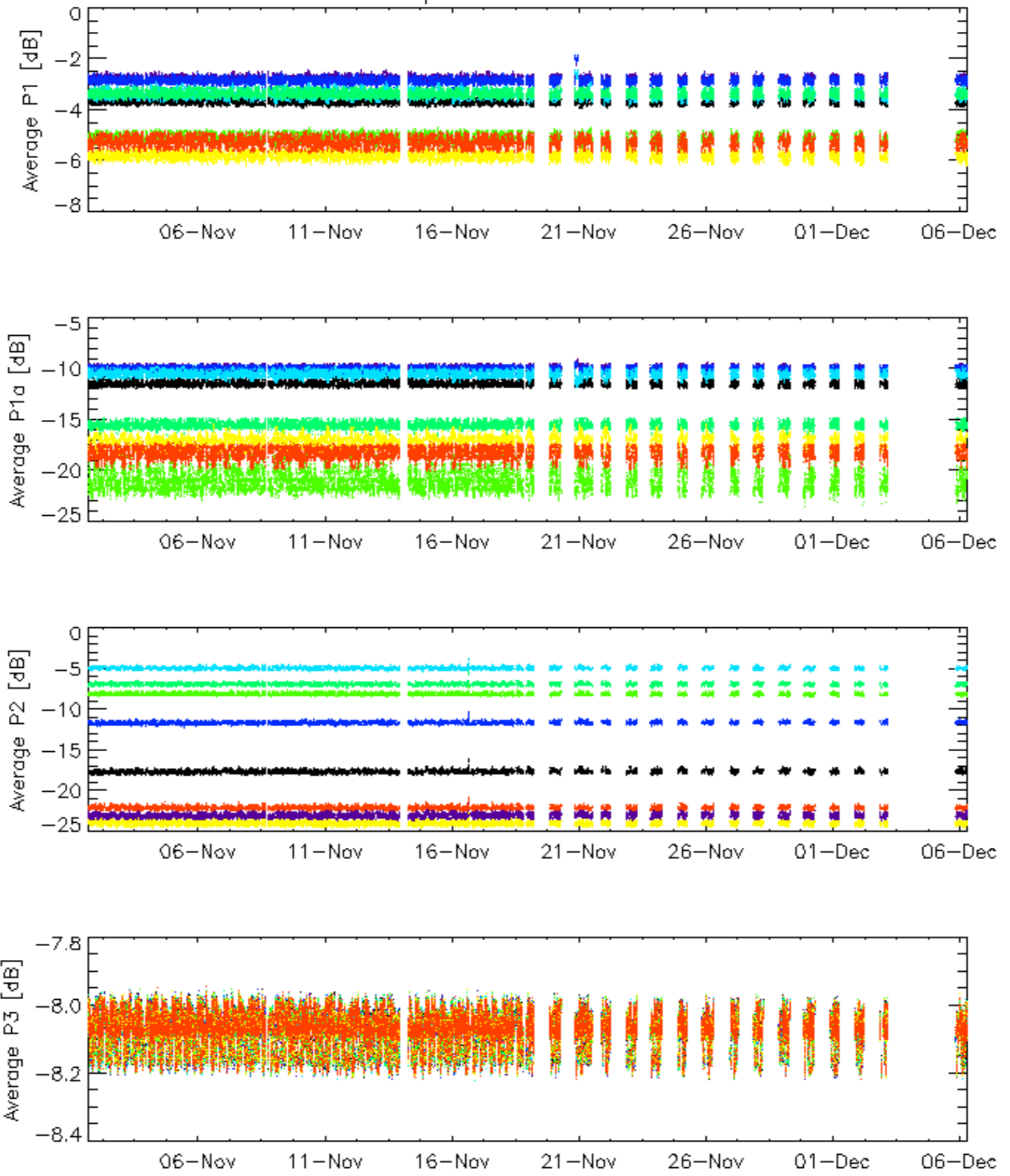


Cal pulses for WVS IS2



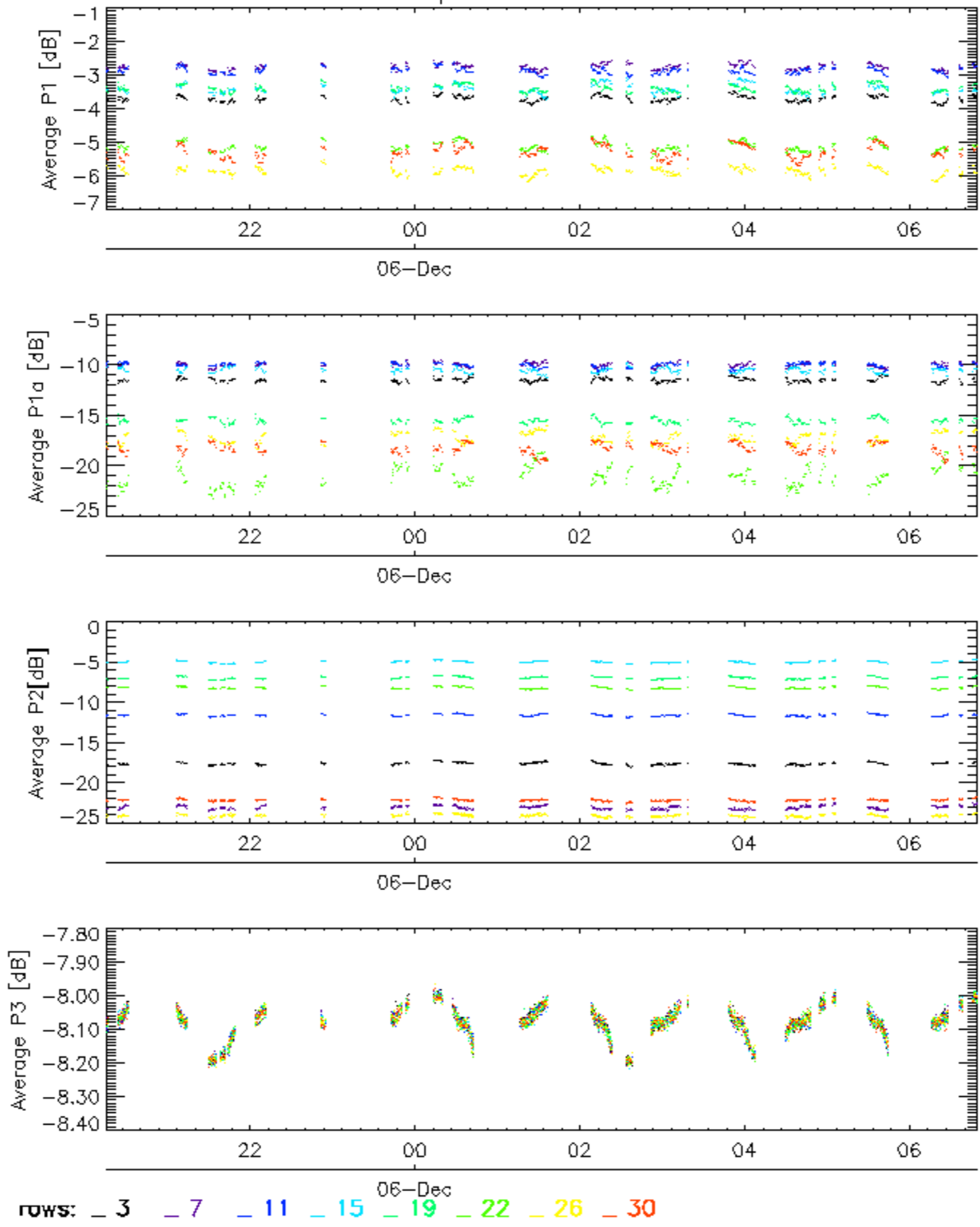
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

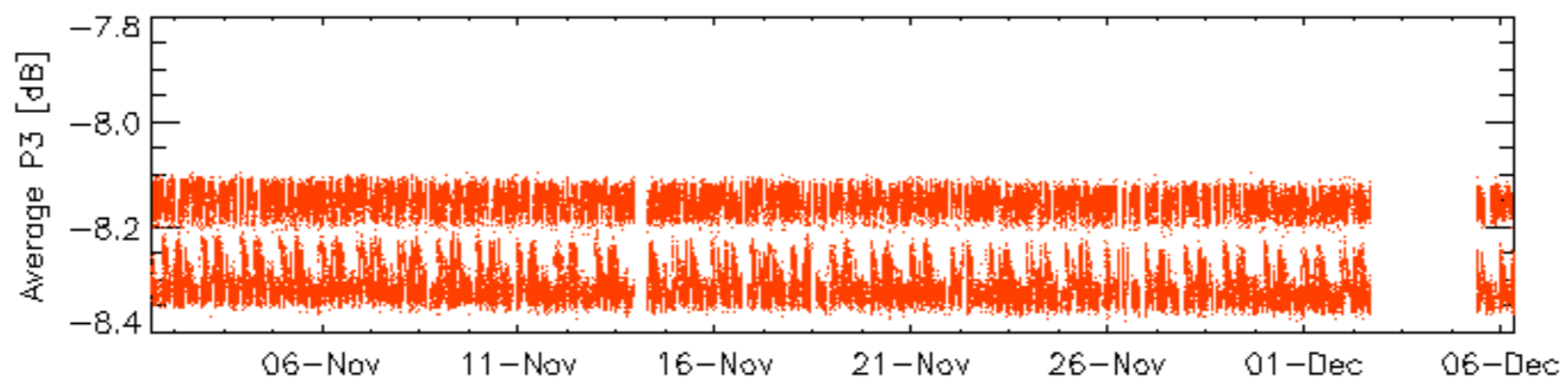
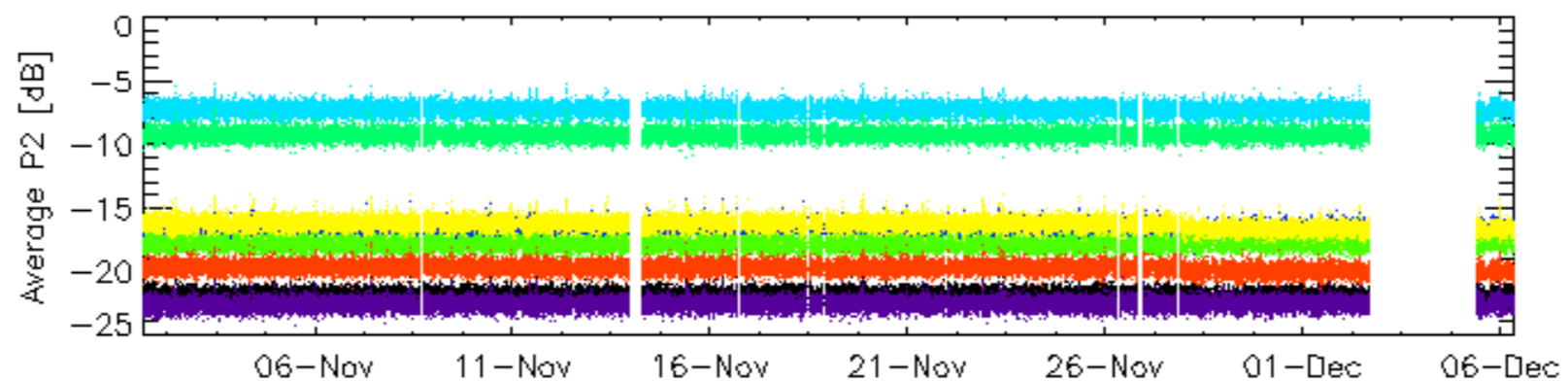
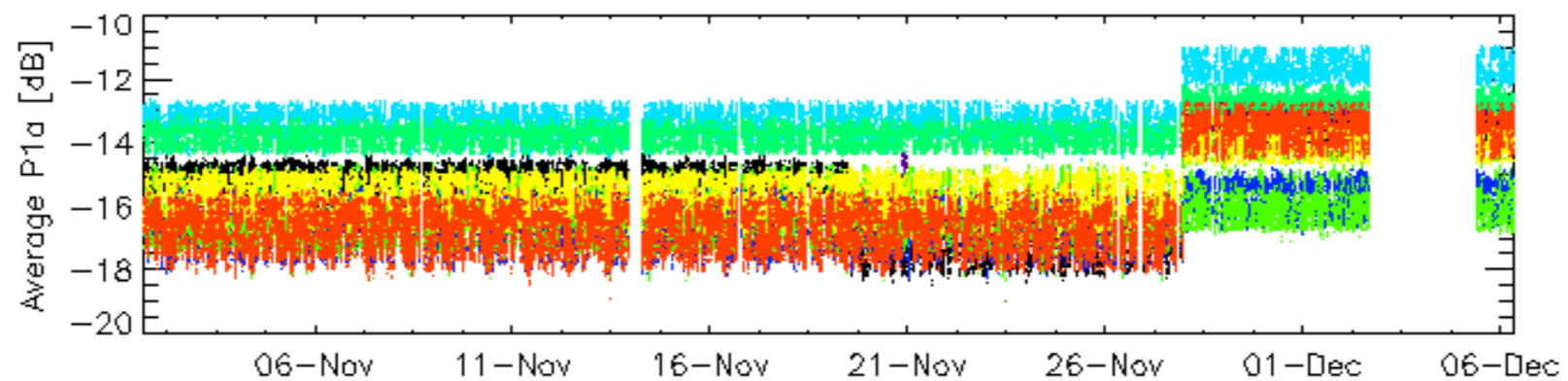
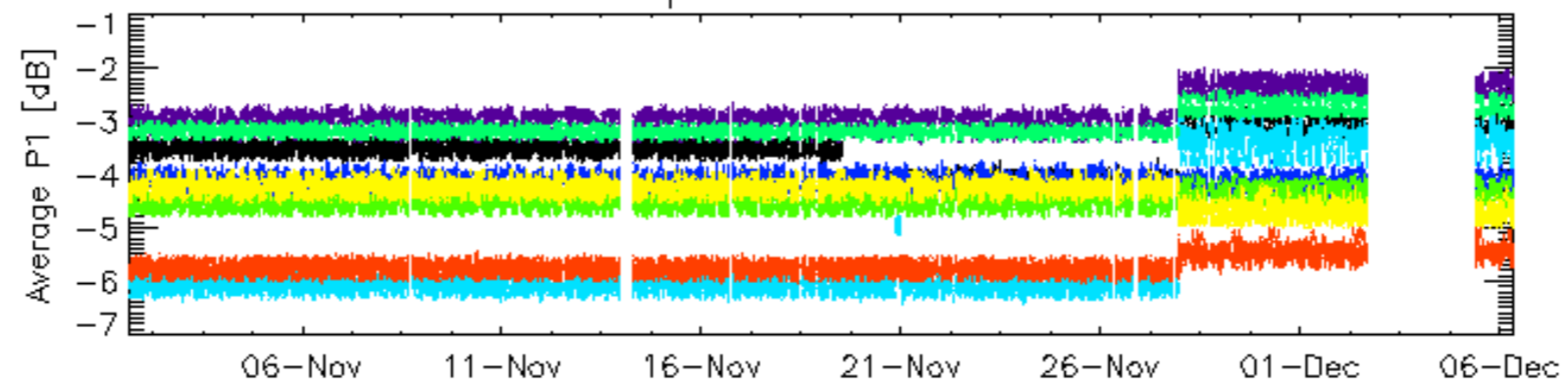


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

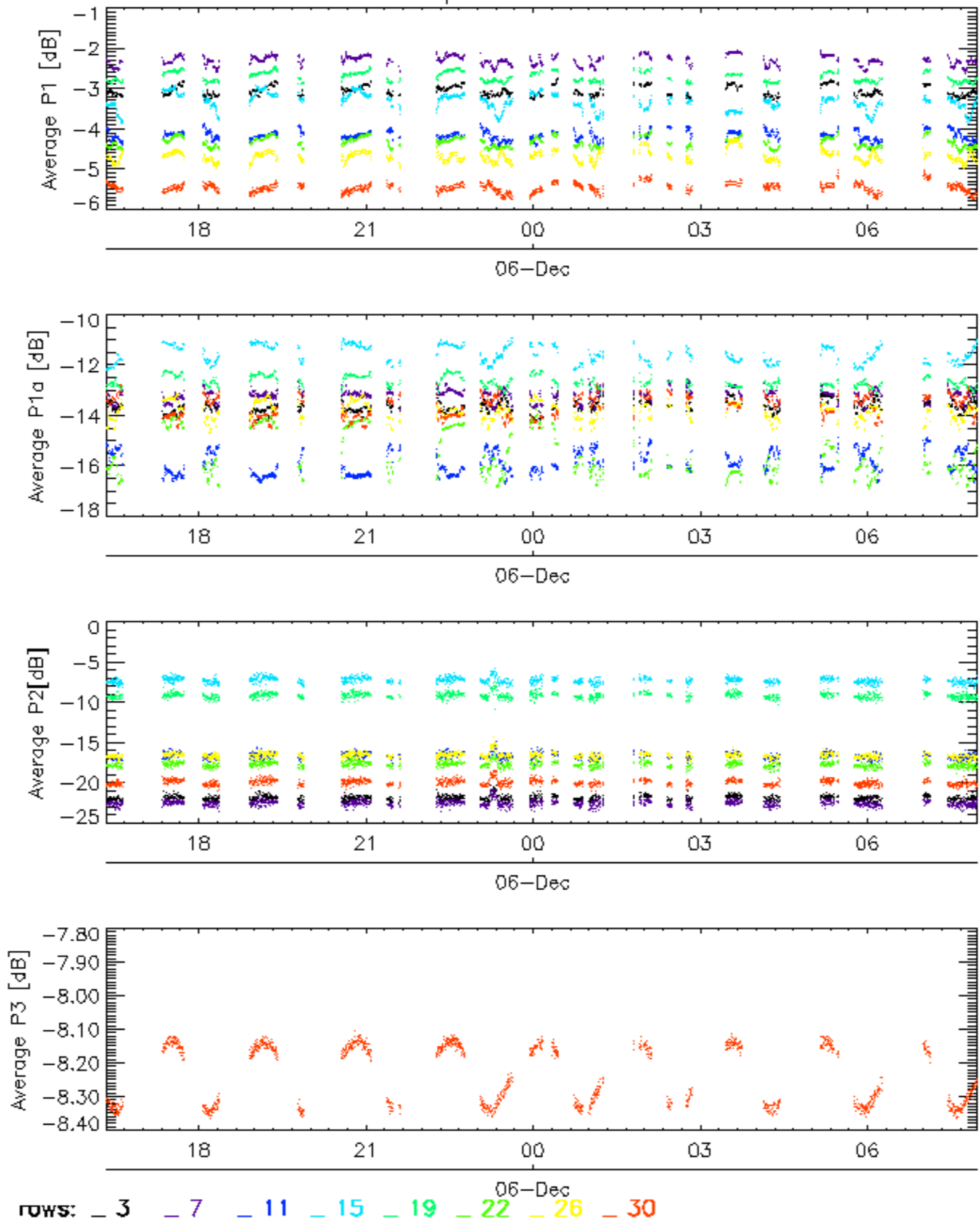


Cal pulses for WVS IS2



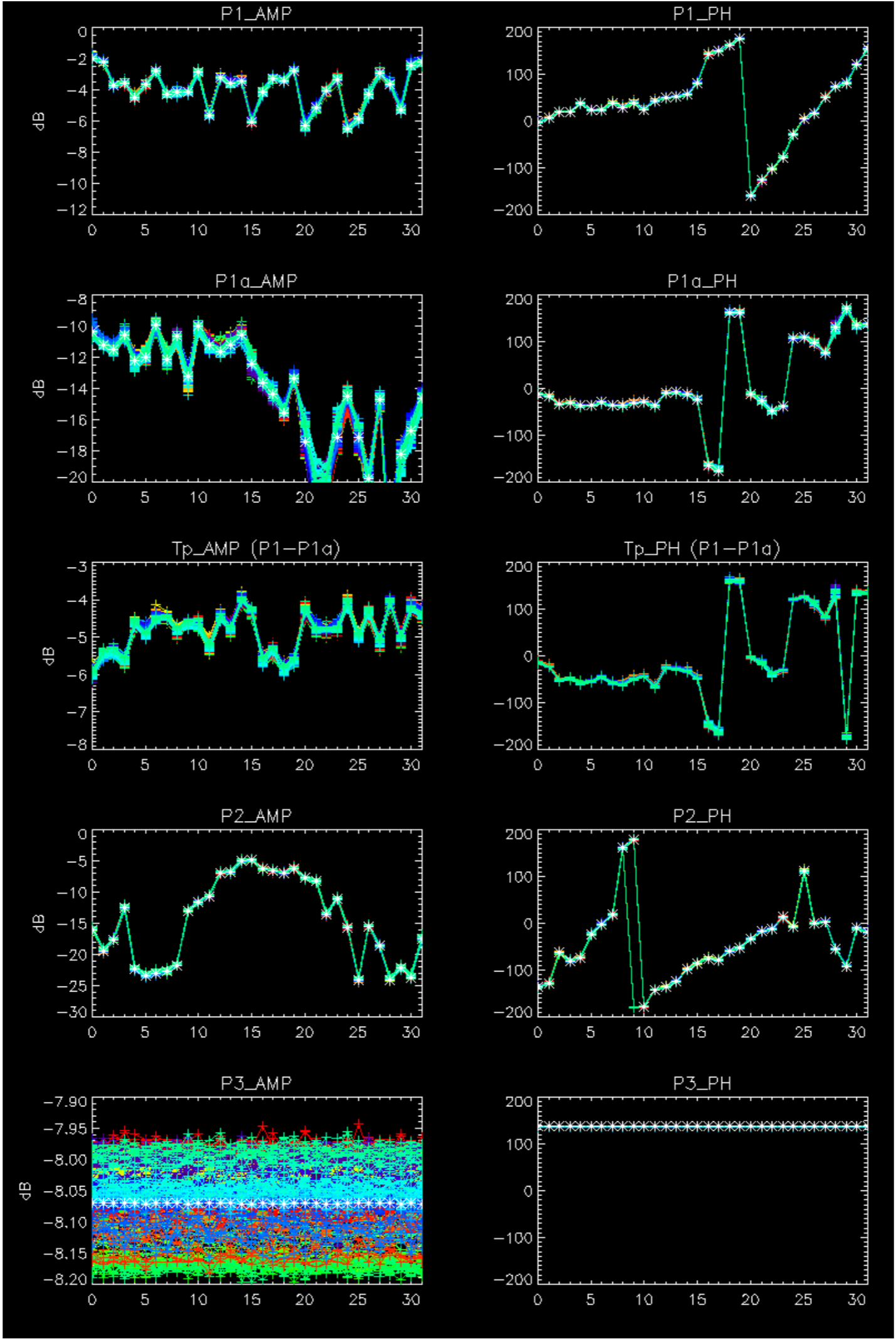
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

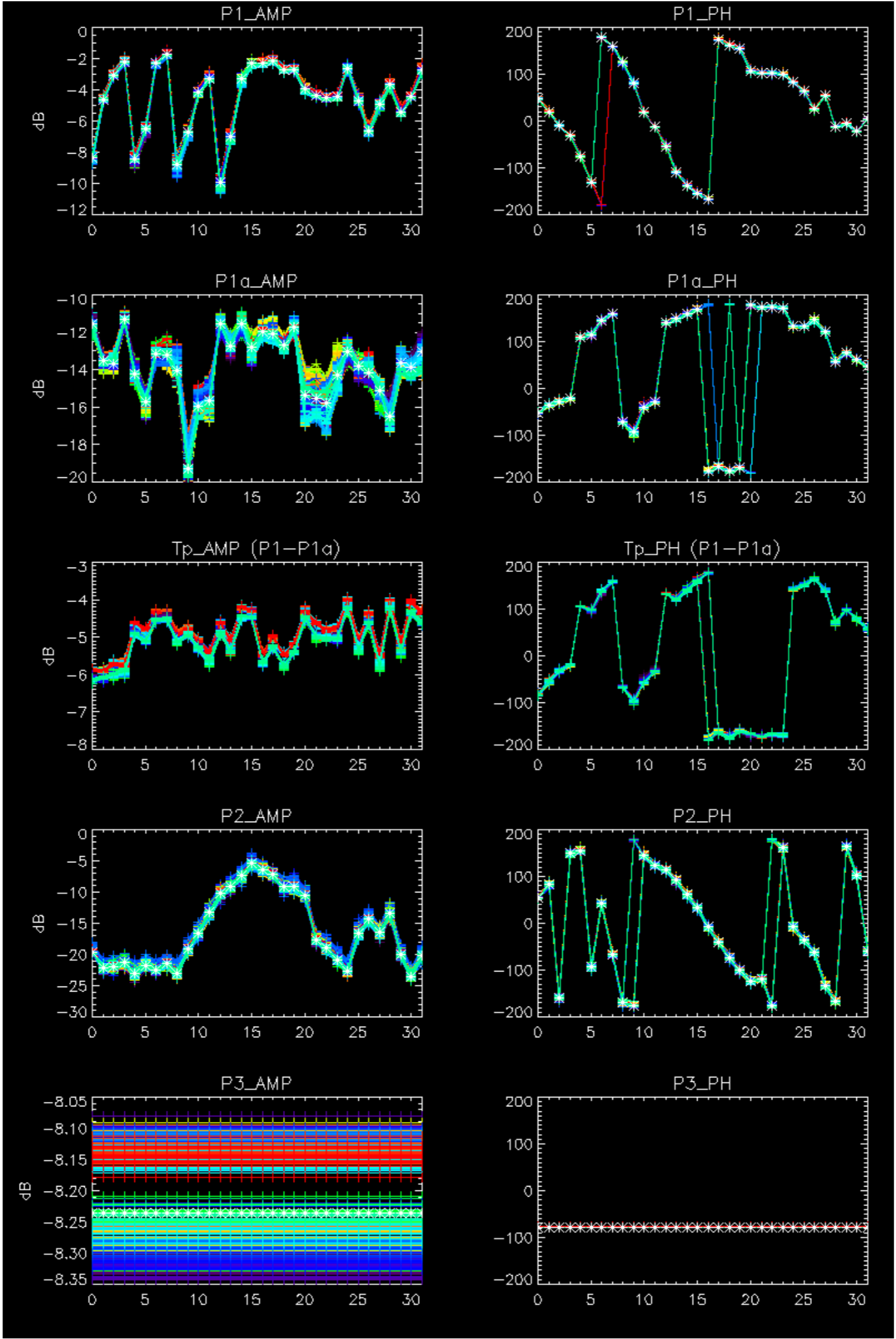
Cal pulses for WVS IS2



No anomalies observed on available browse products

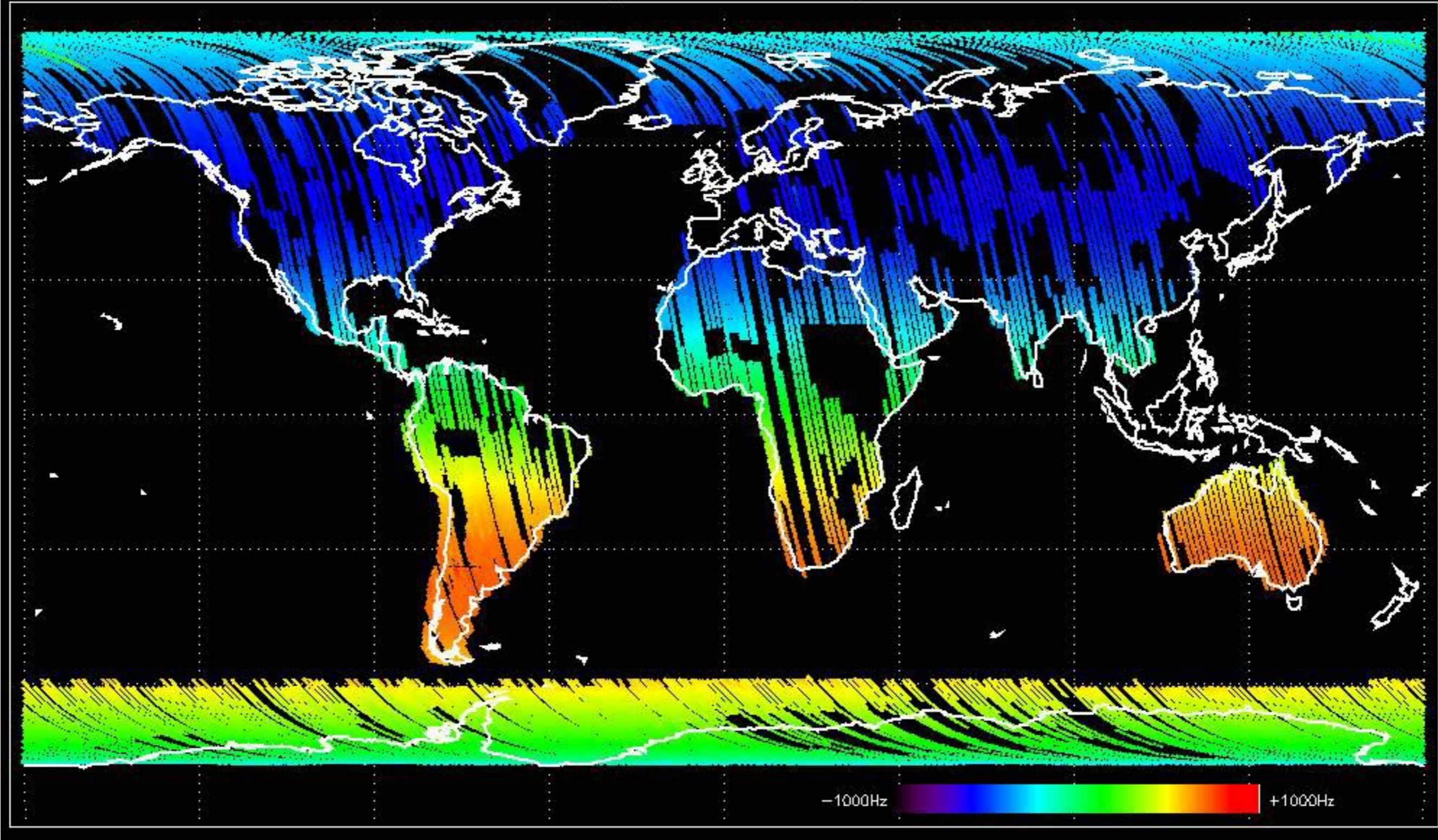
No anomalies observed.



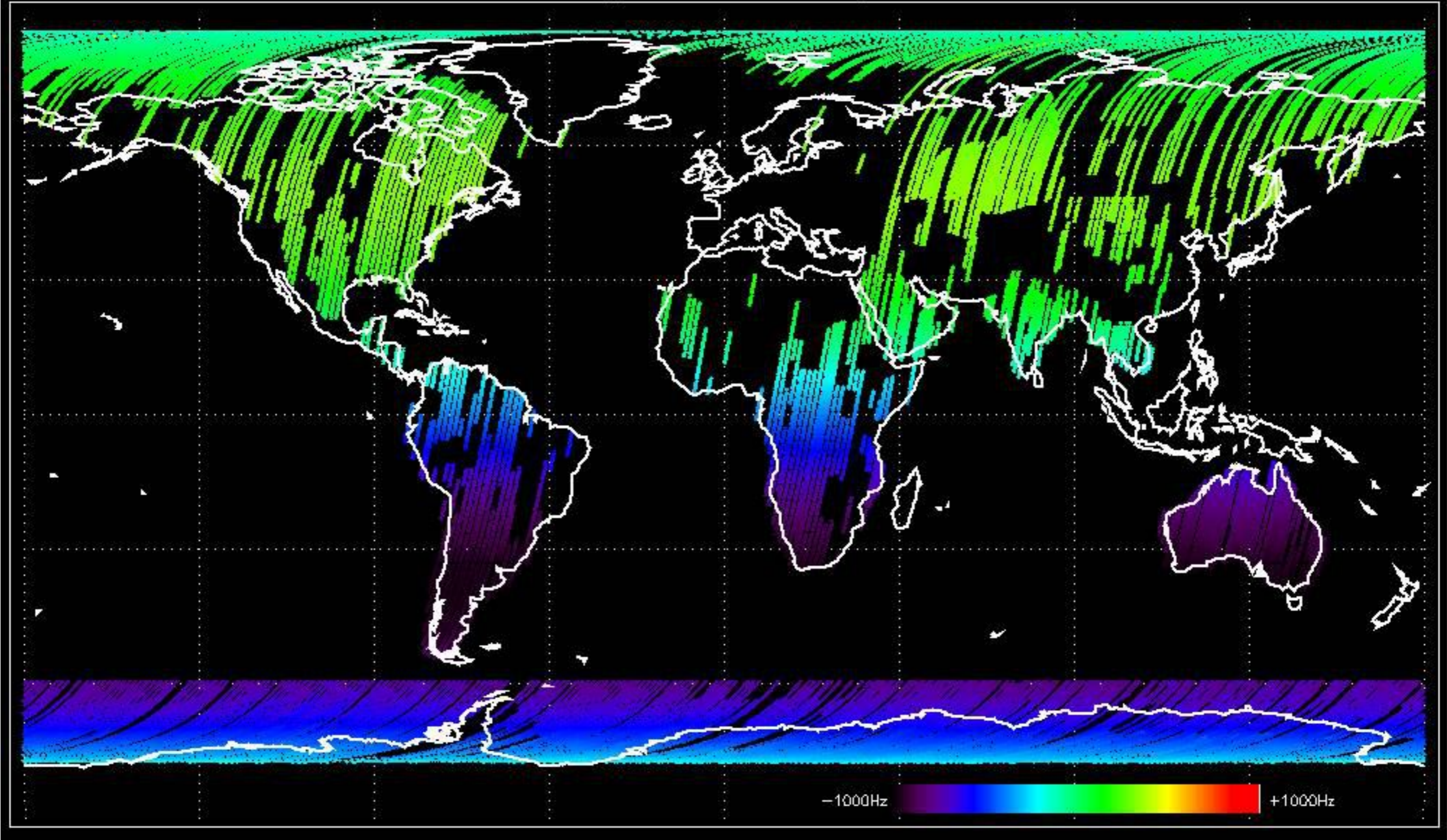


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

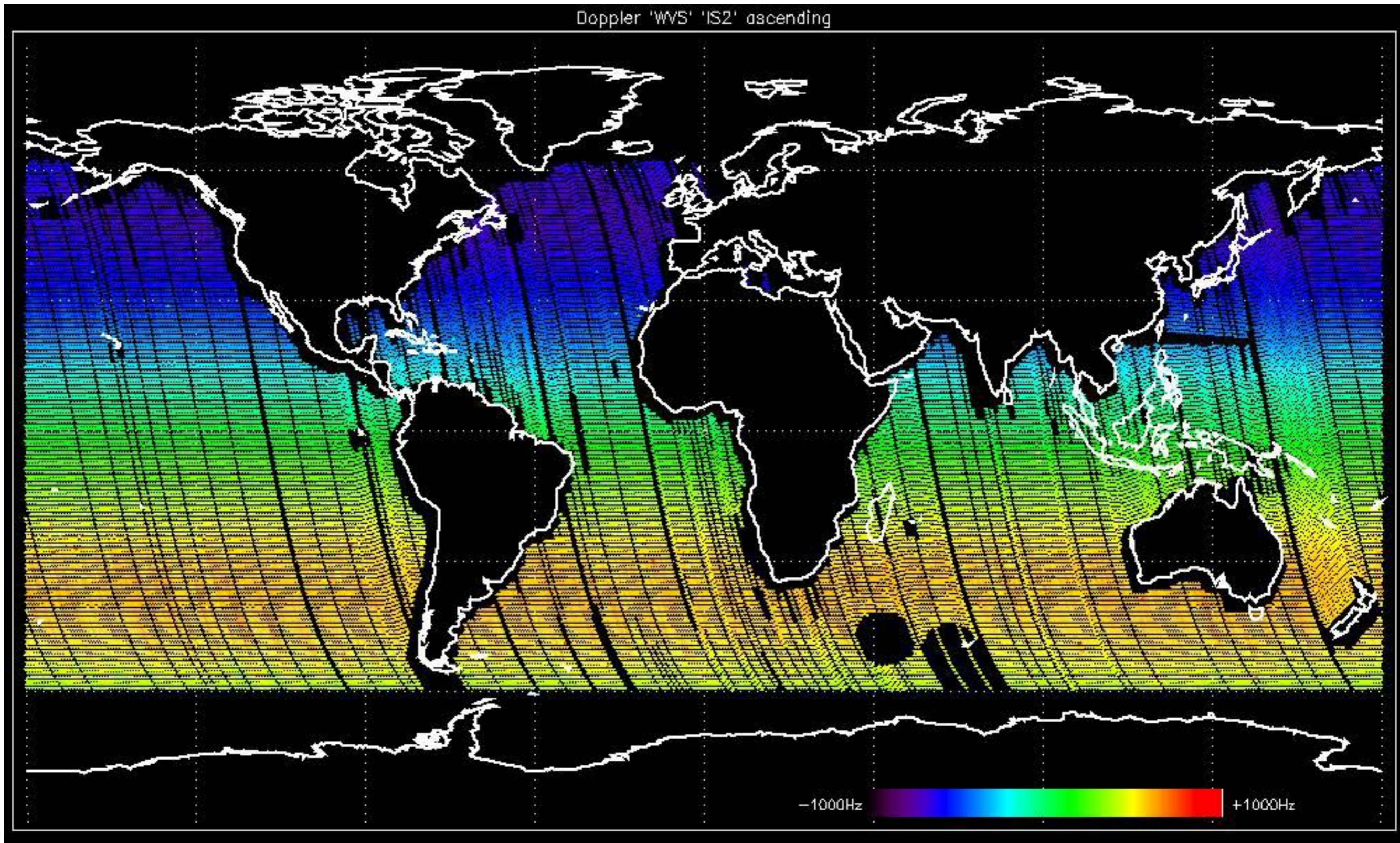
Doppler 'GM1' 'SS1' ascending



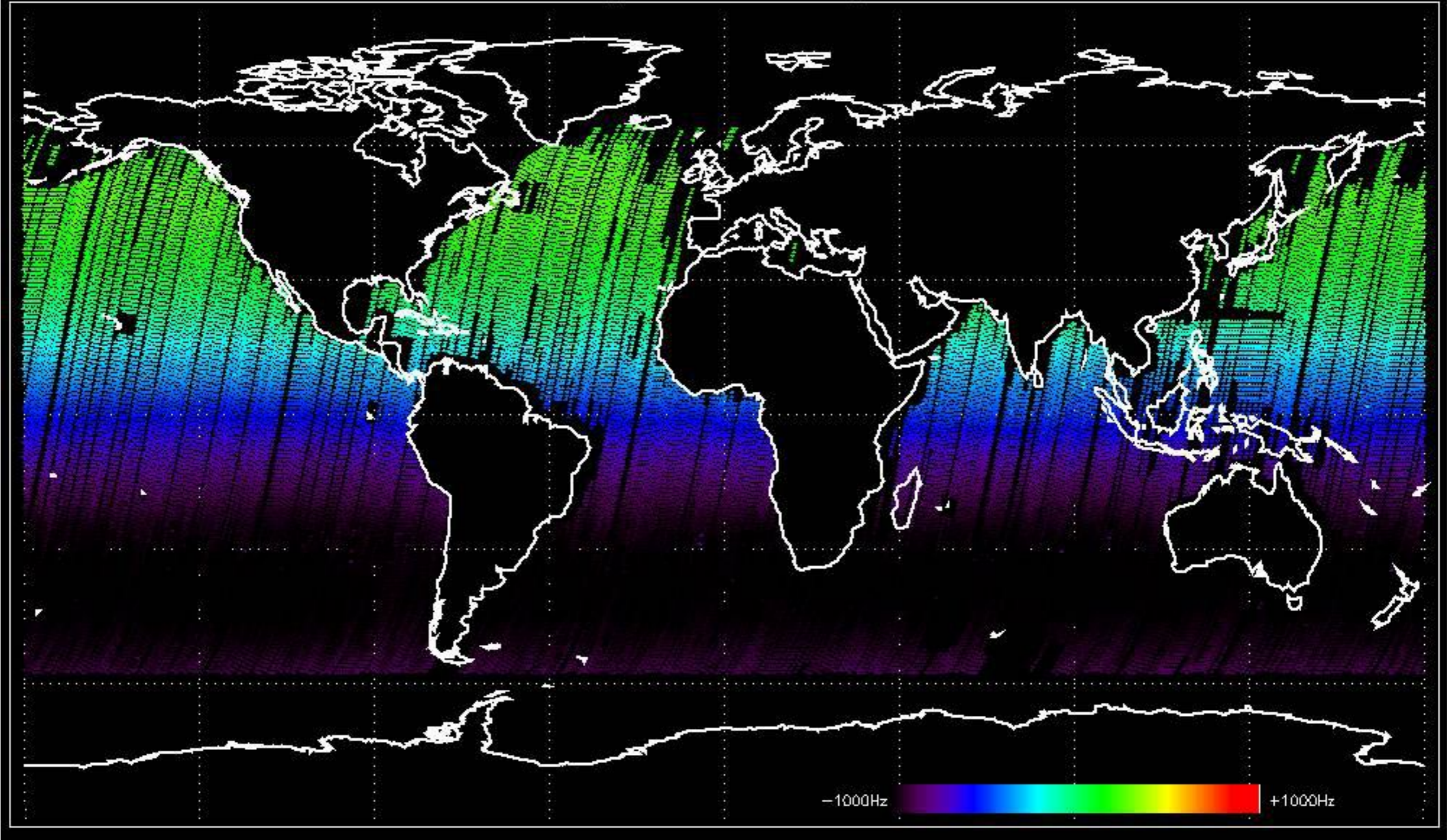
Doppler 'GM1' 'SS1' descending



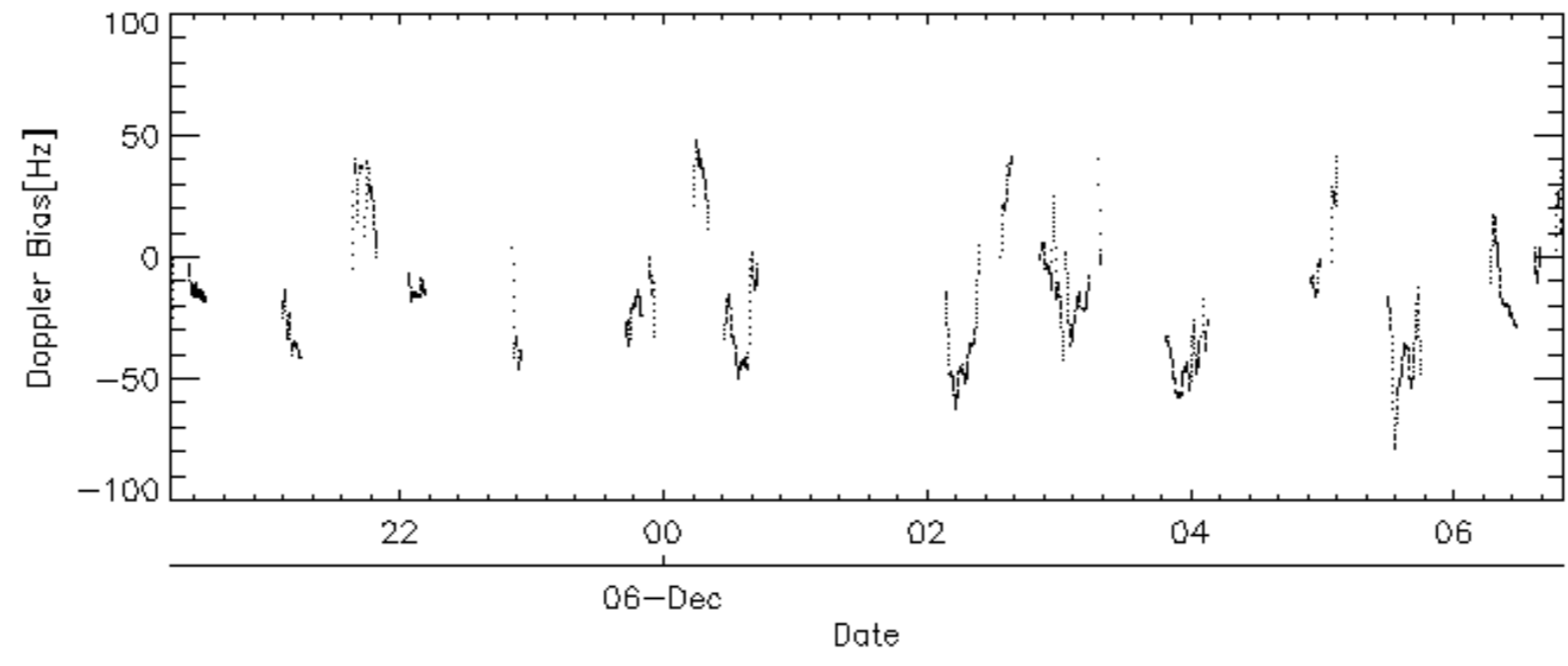
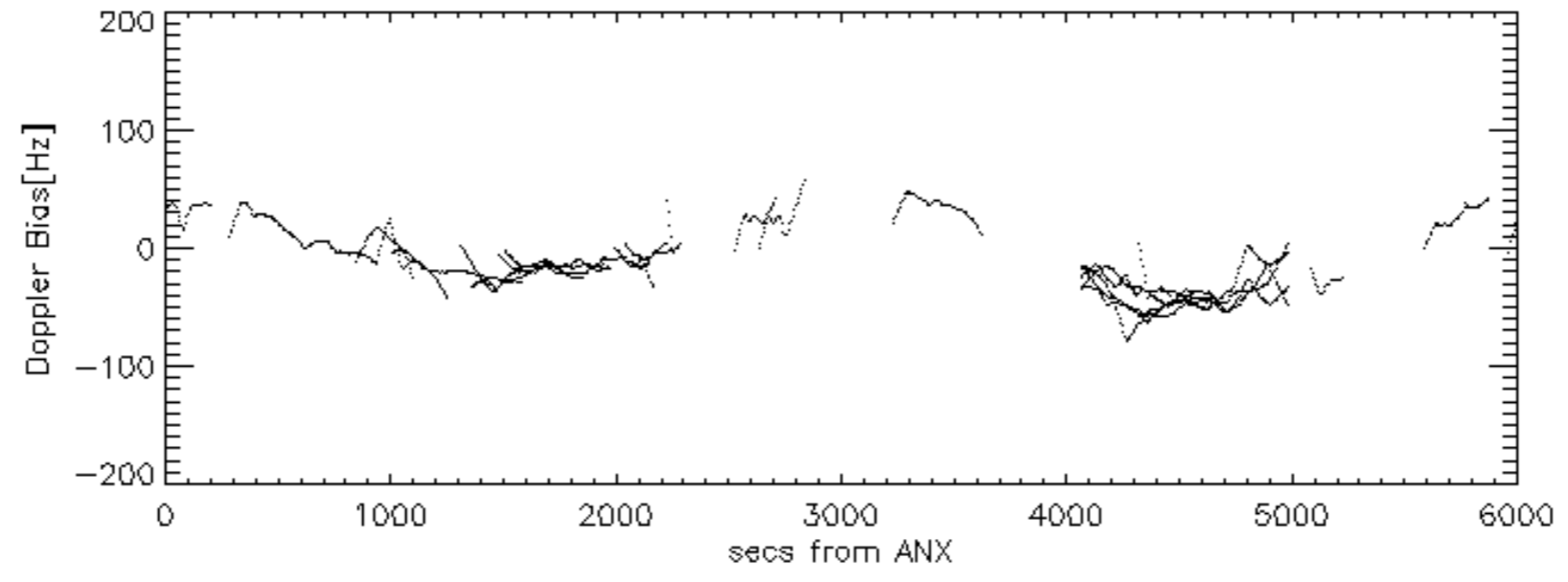
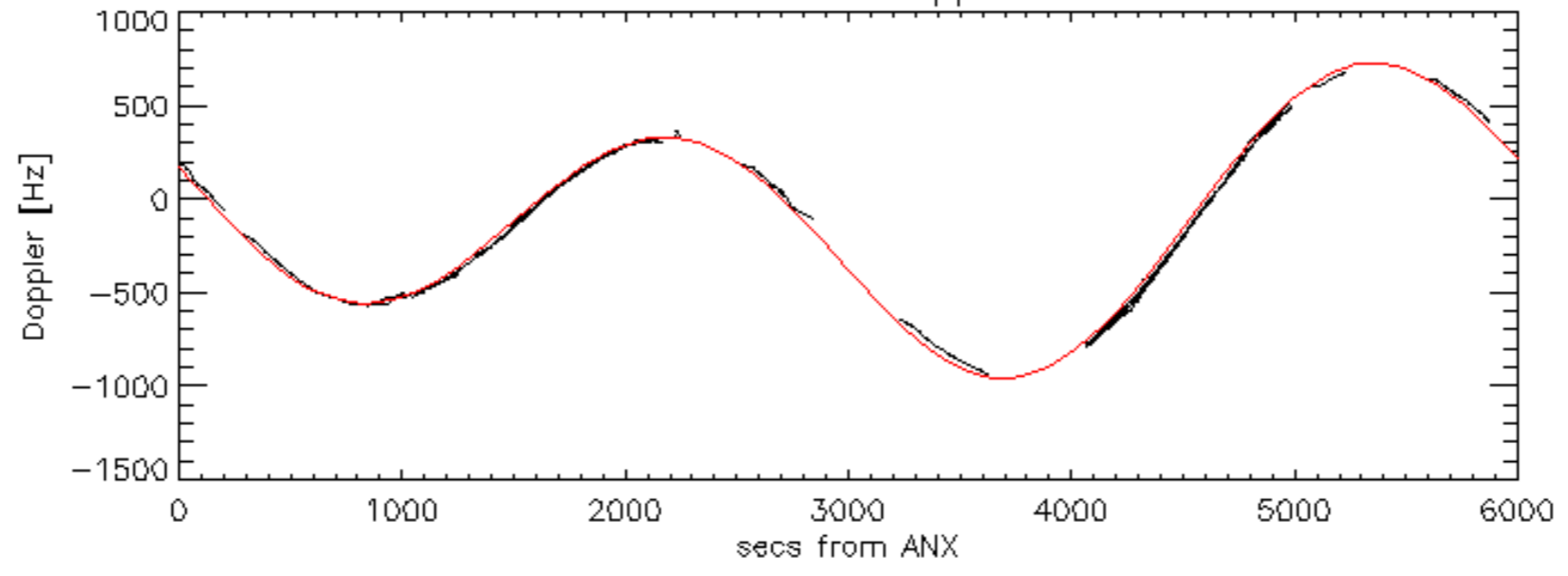
Doppler 'WVS' 'IS2' ascending

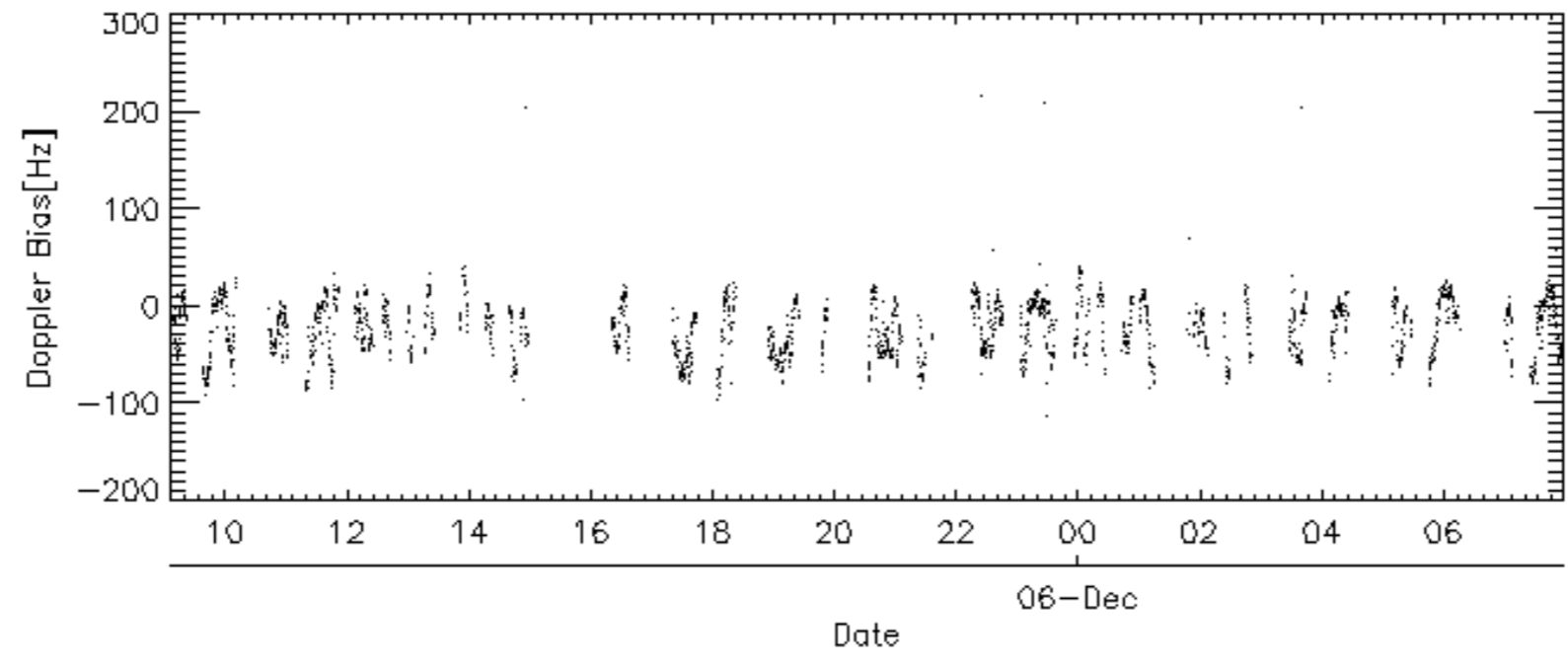
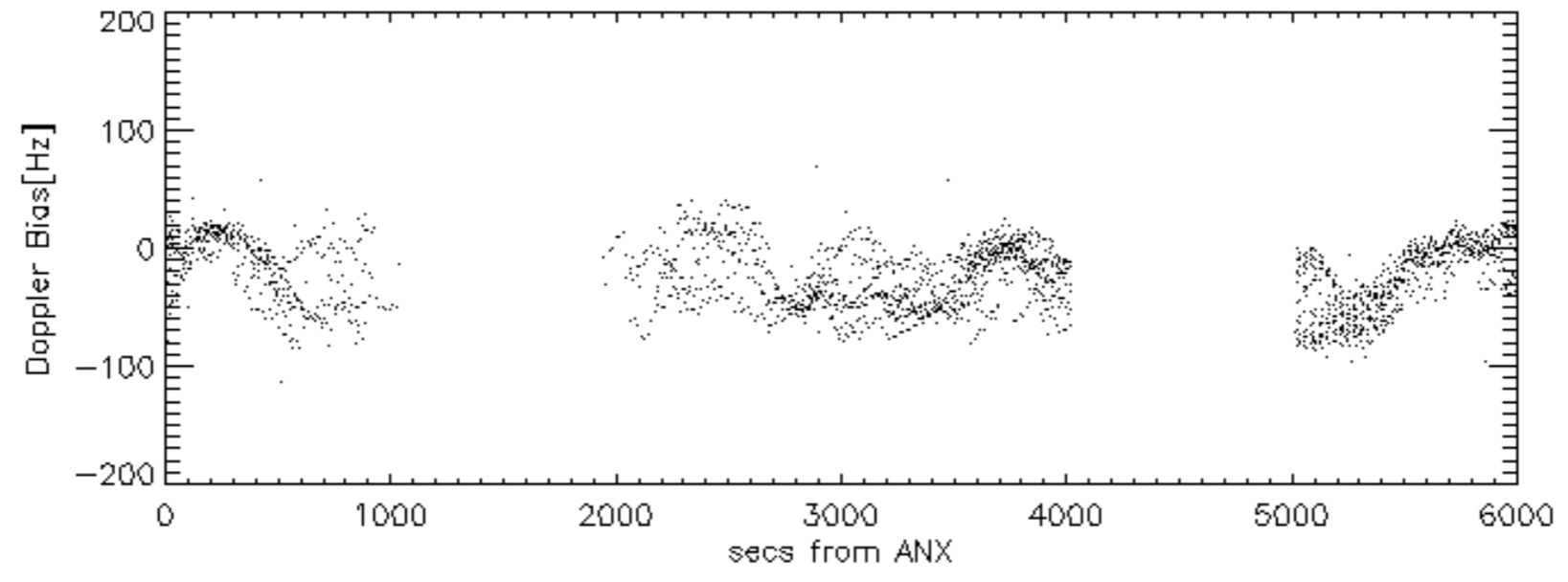
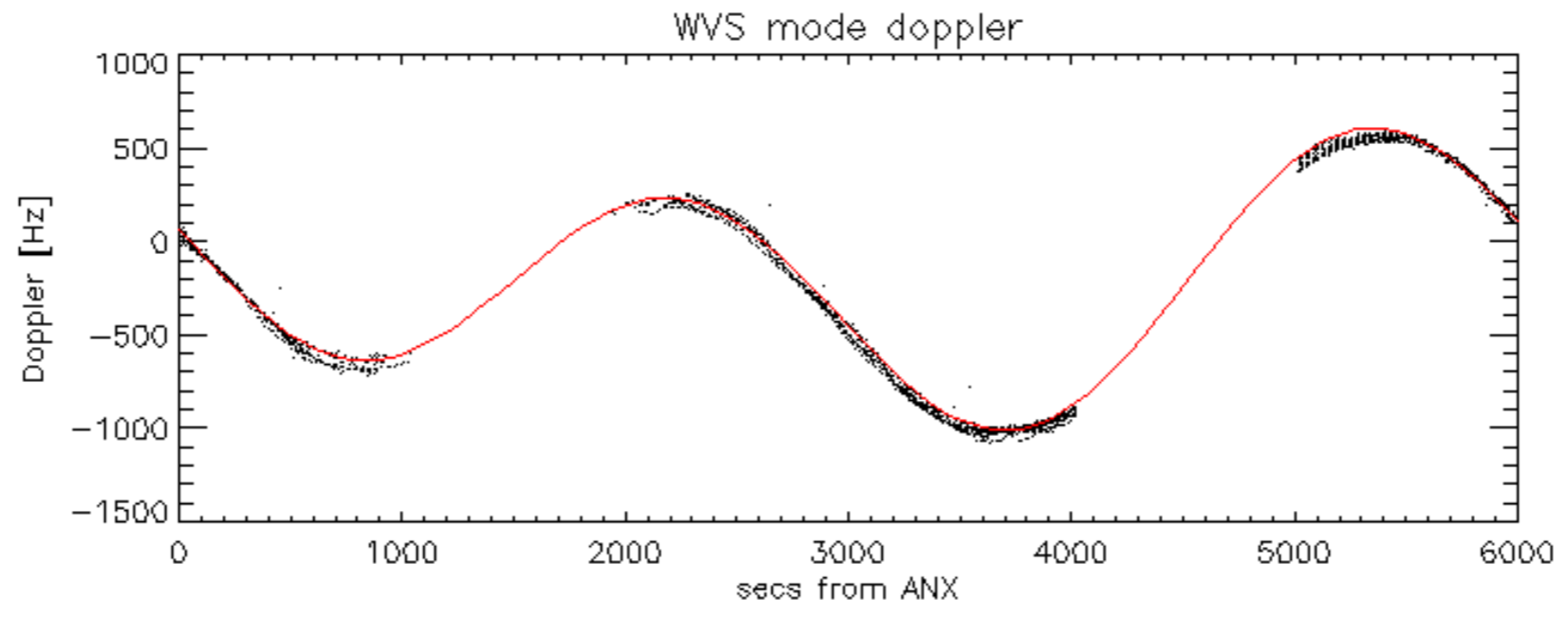


Doppler 'WVS' 'IS2' descending

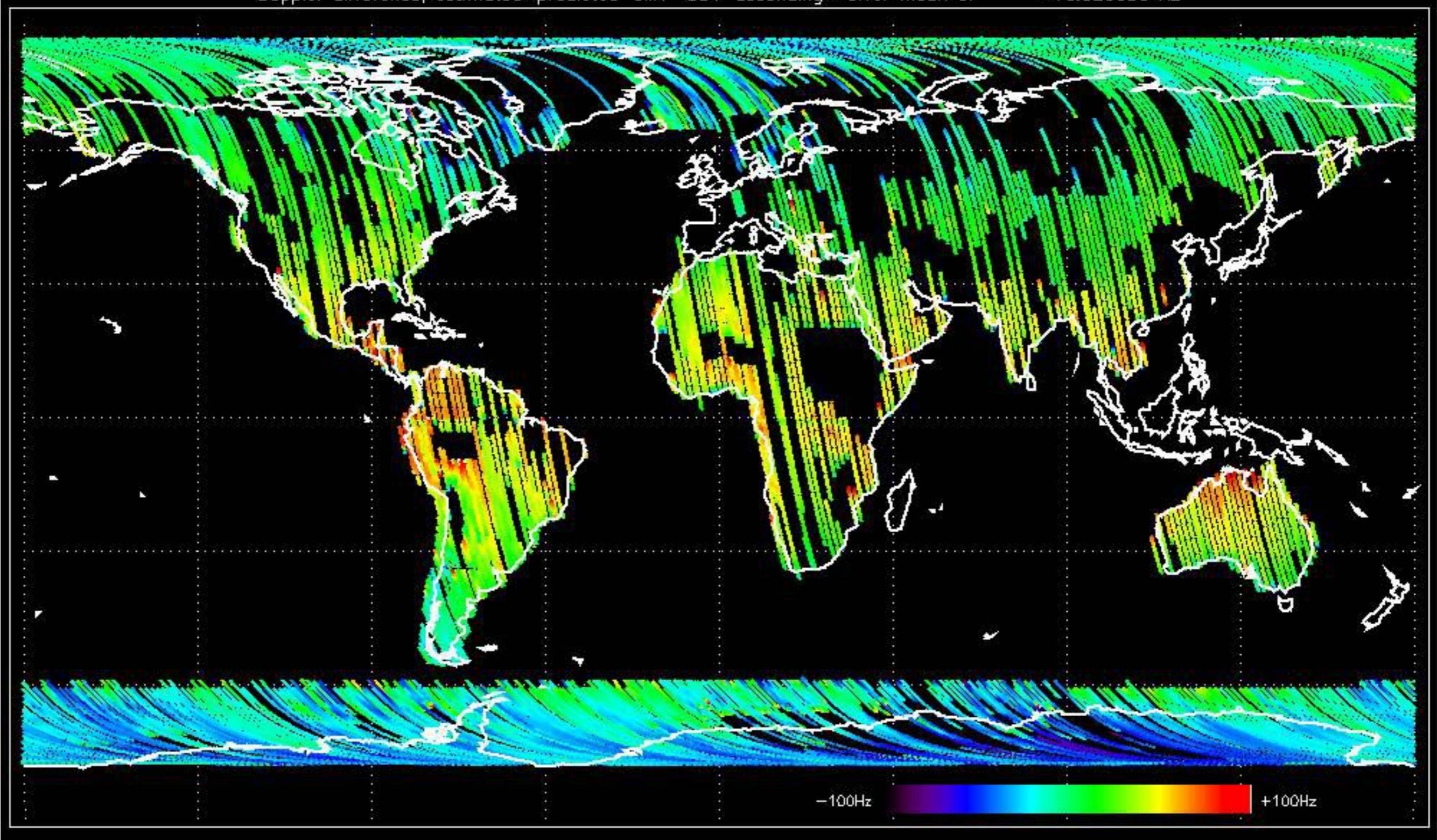


GM1 mode doppler

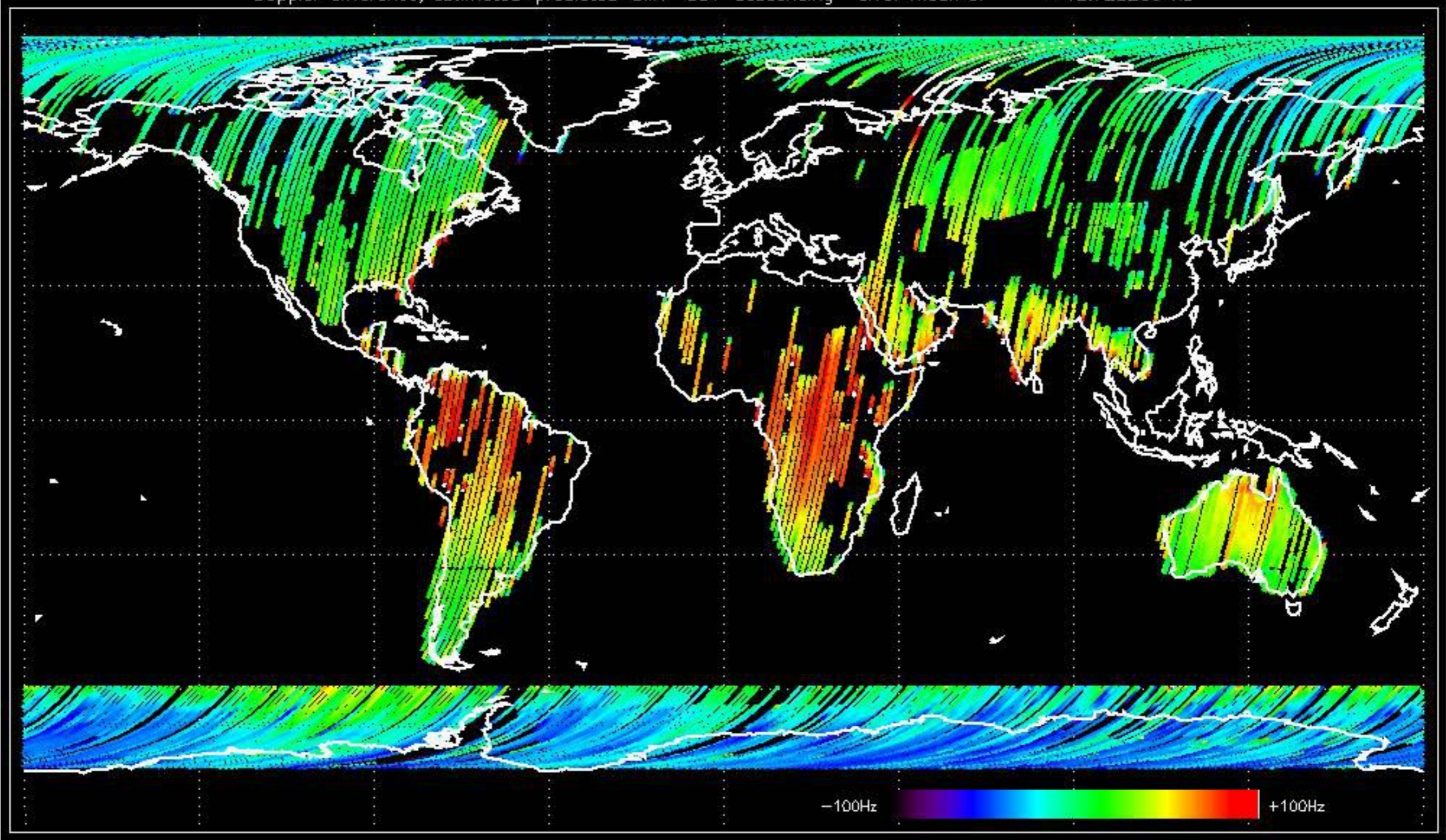




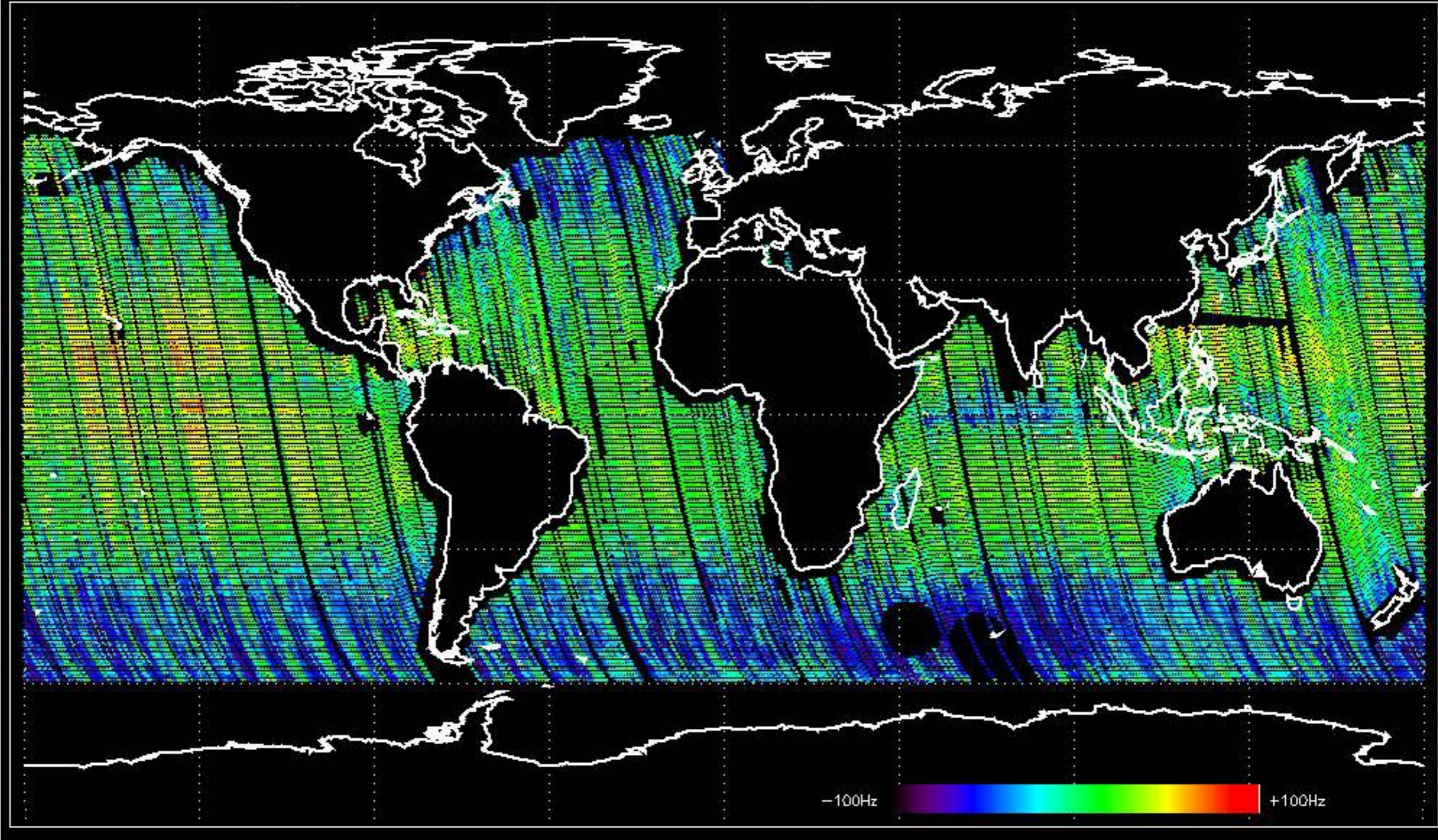
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.325530 Hz



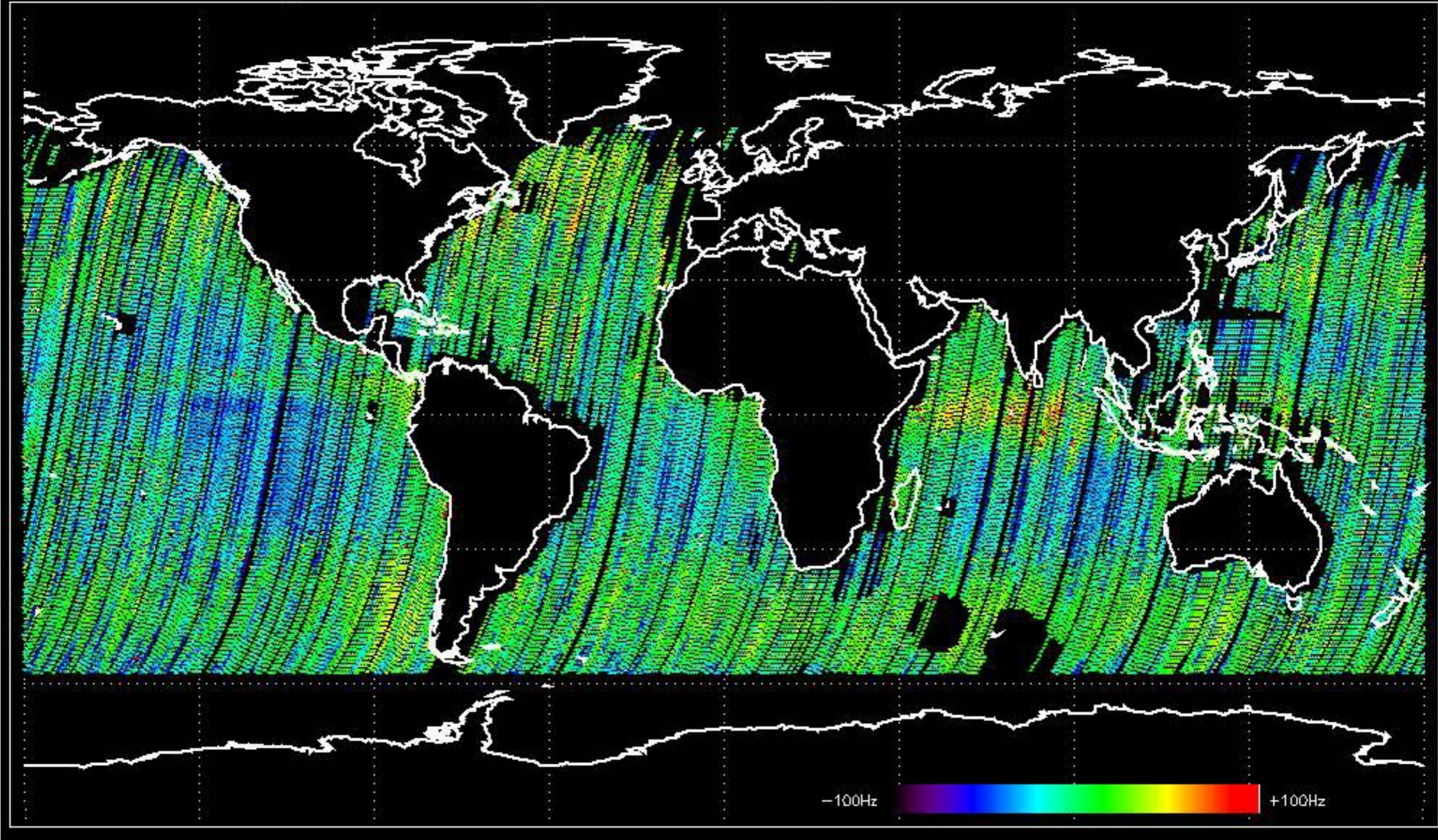
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -12.725266 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.6426306 Hz

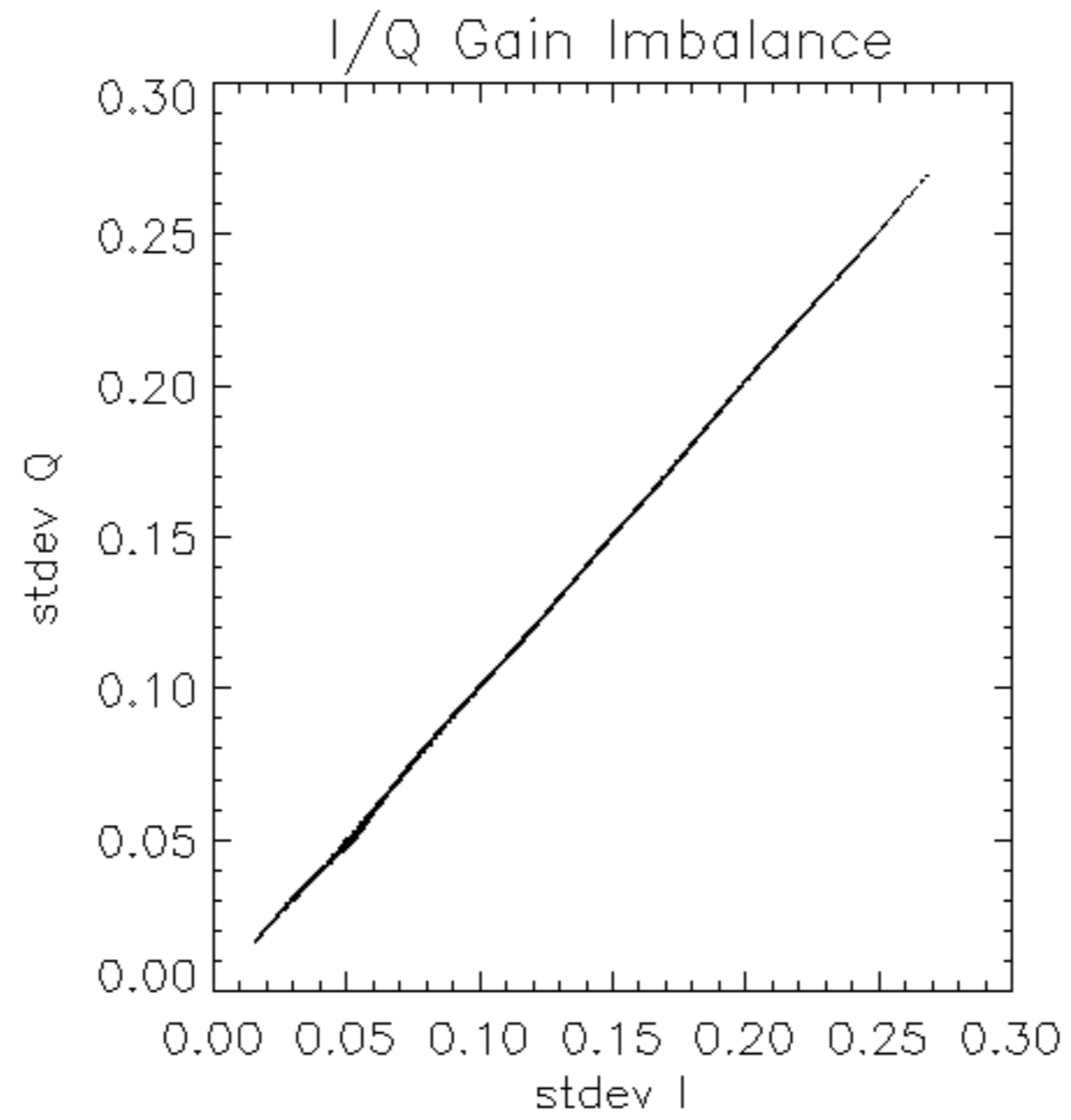


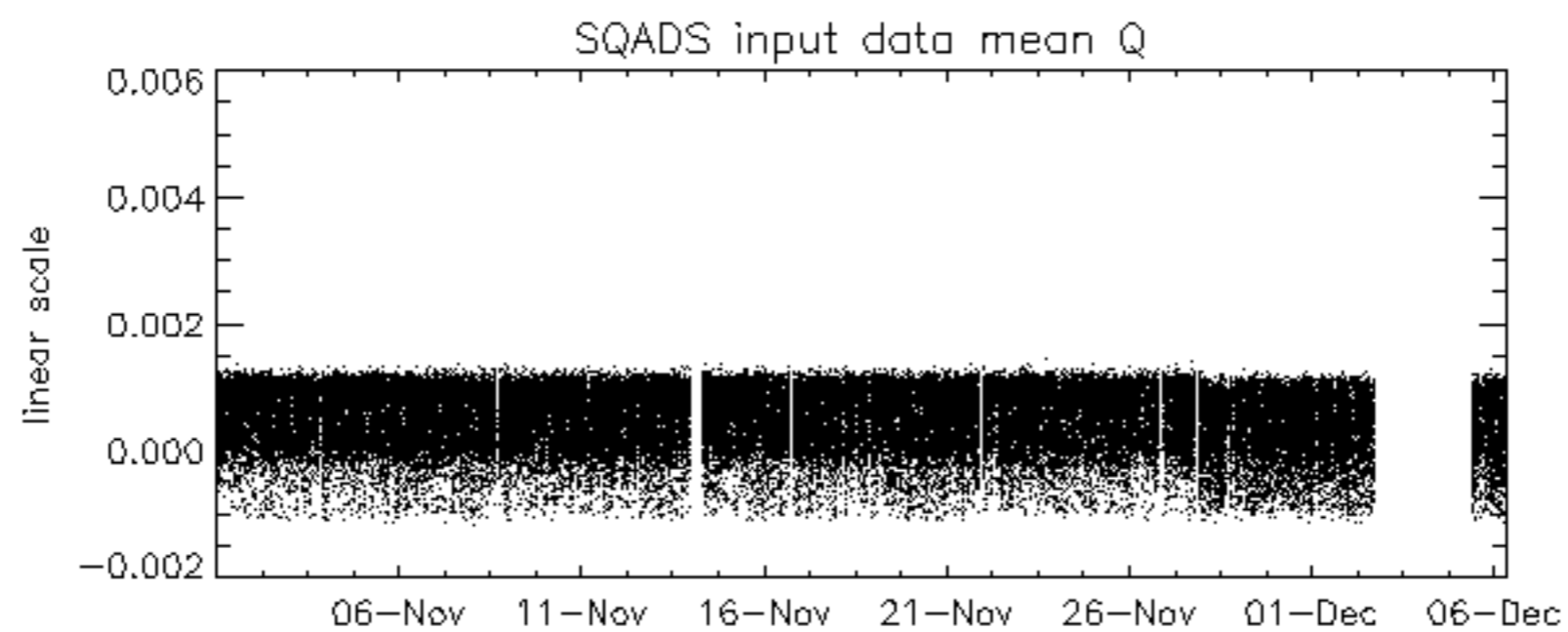
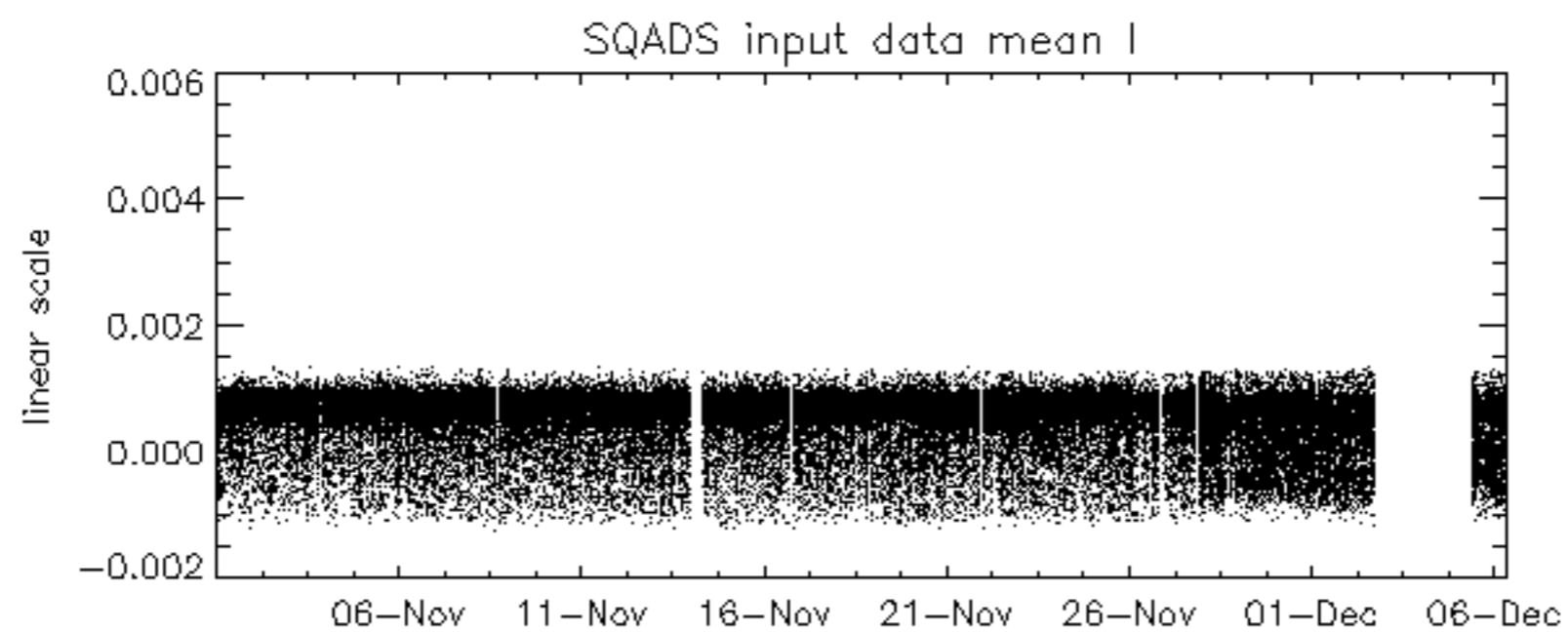
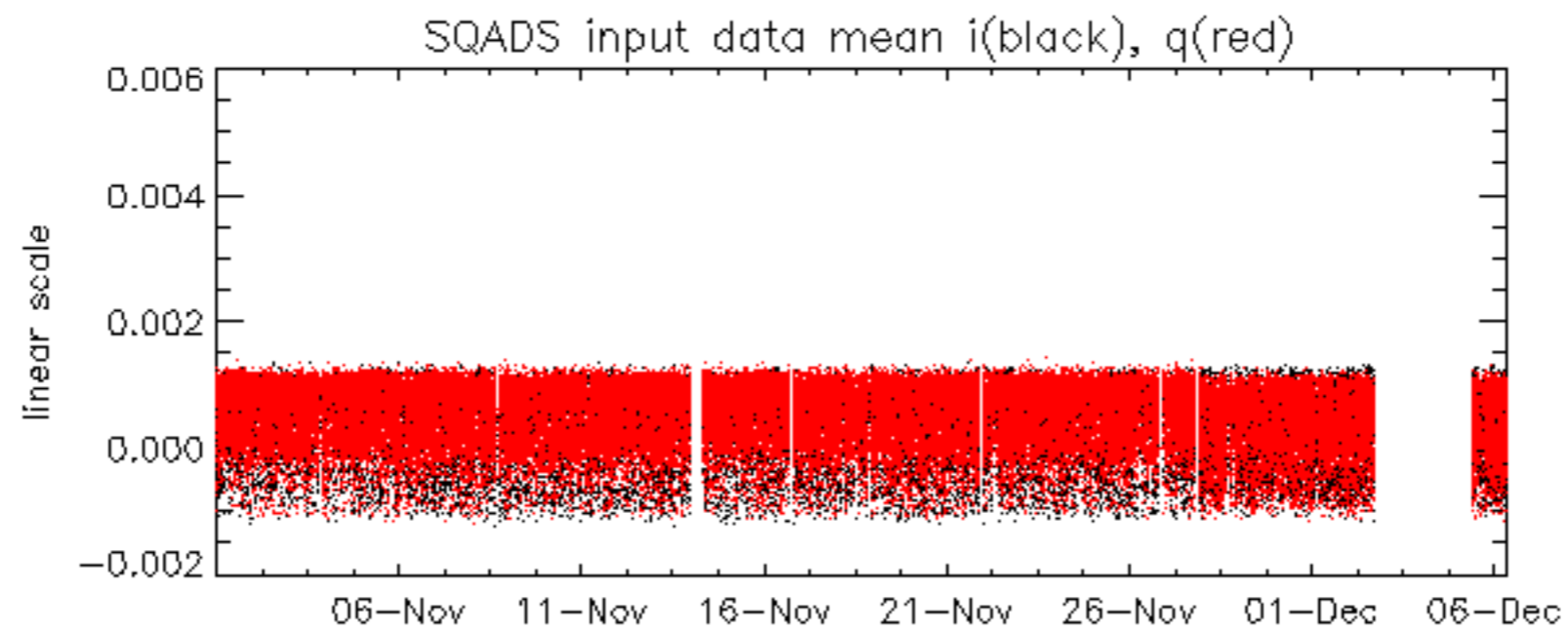
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.7438215 Hz

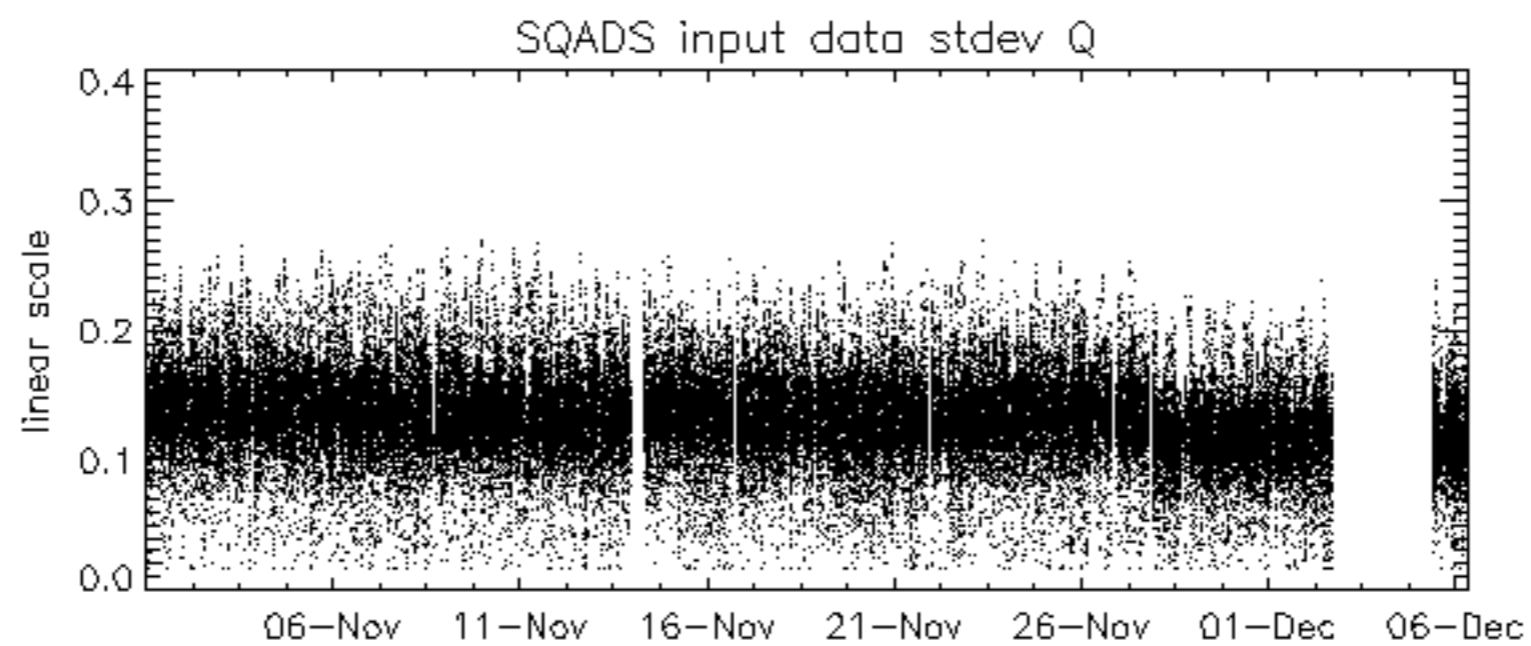
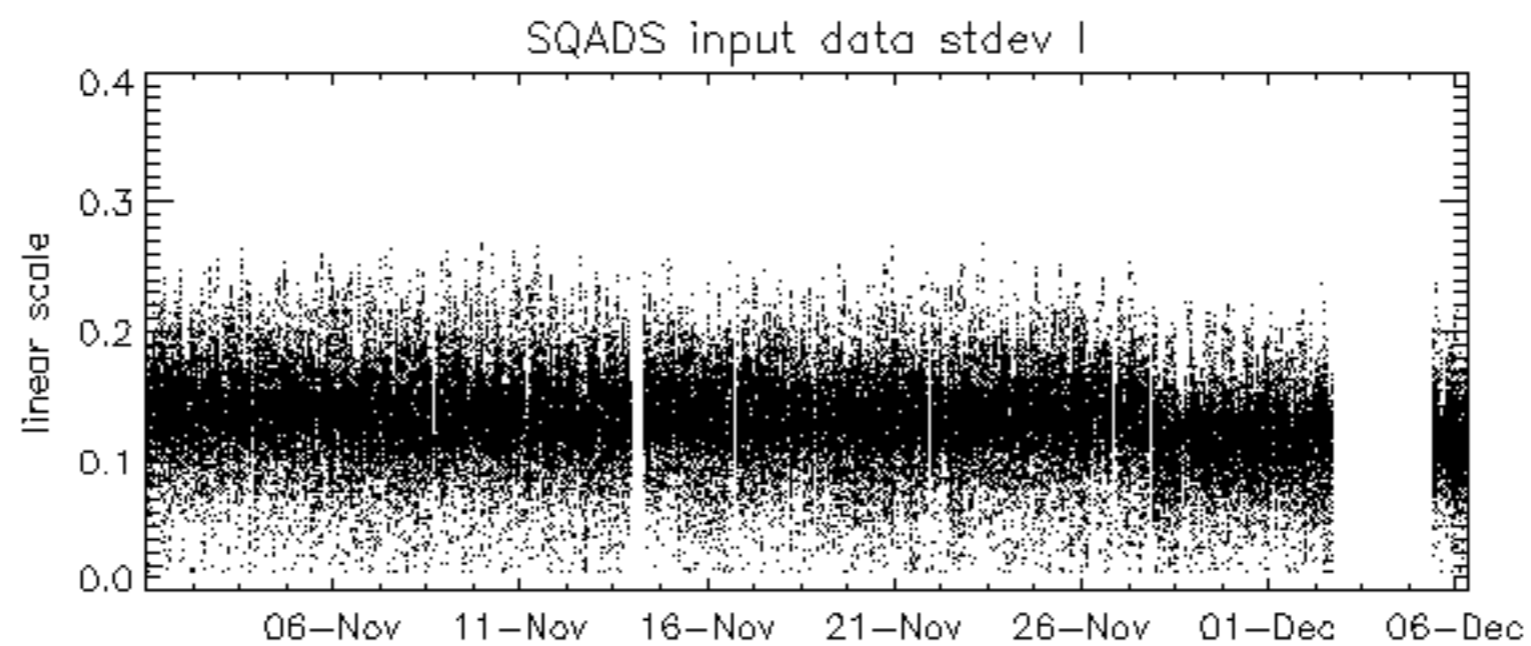
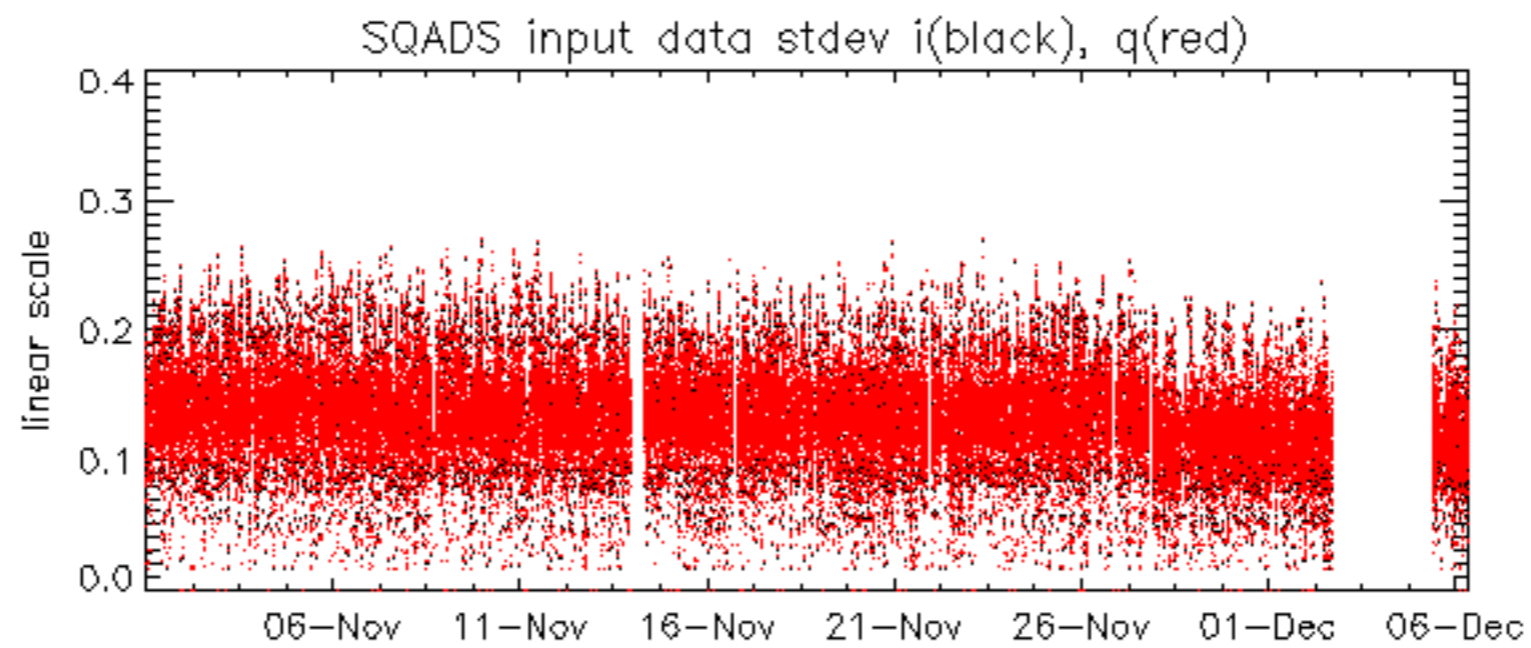


No anomalies observed on available MS products:

No anomalies observed.



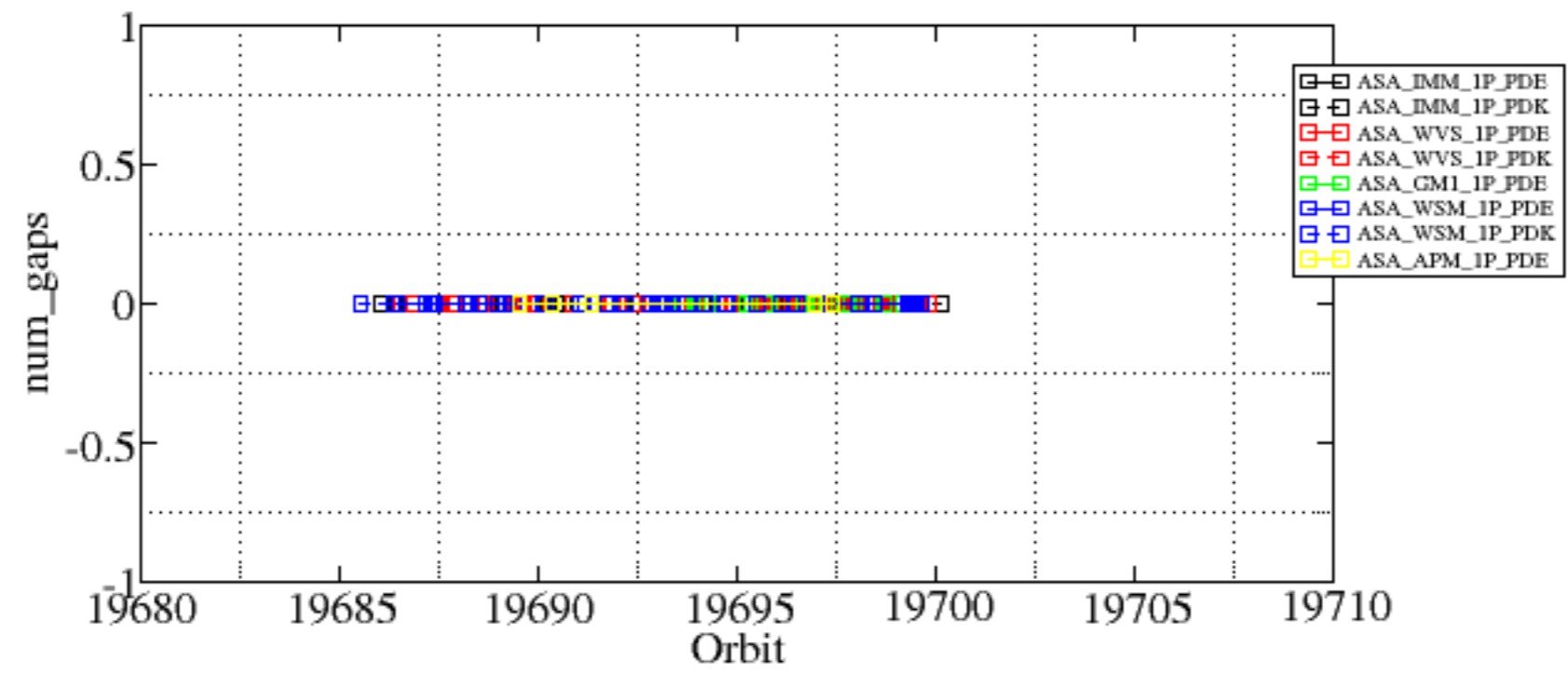


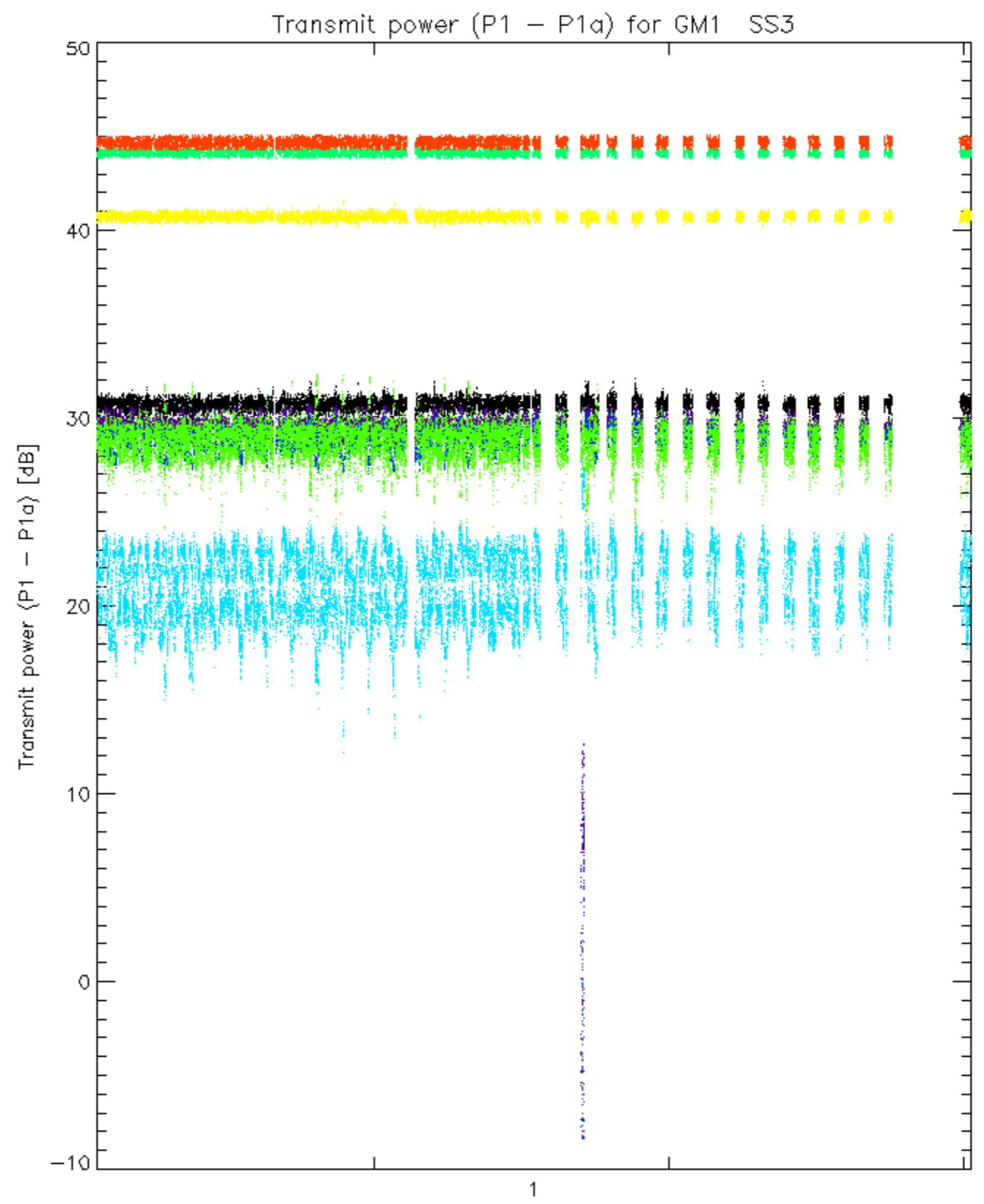


Summary of analysis for the last 3 days 2005120[456]

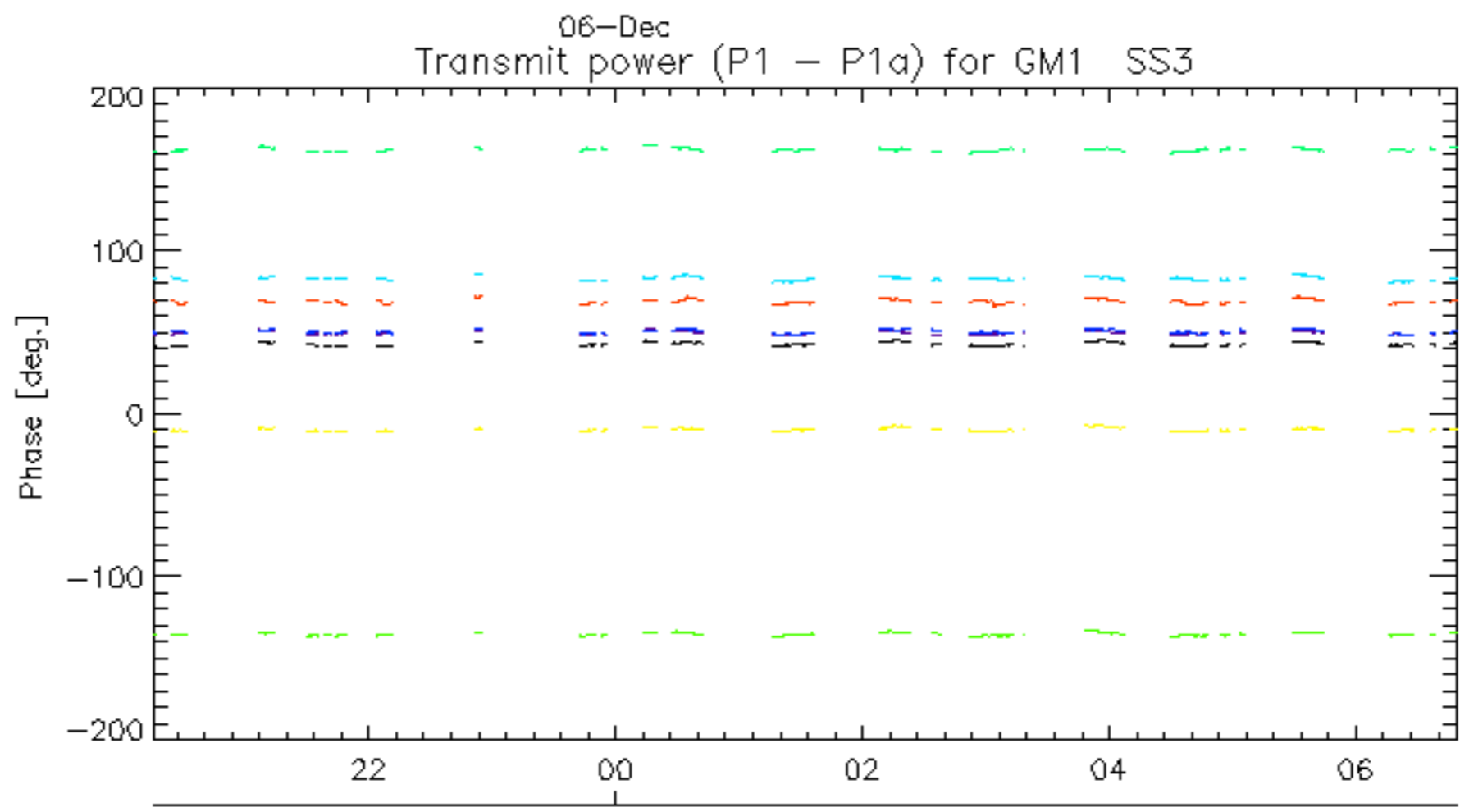
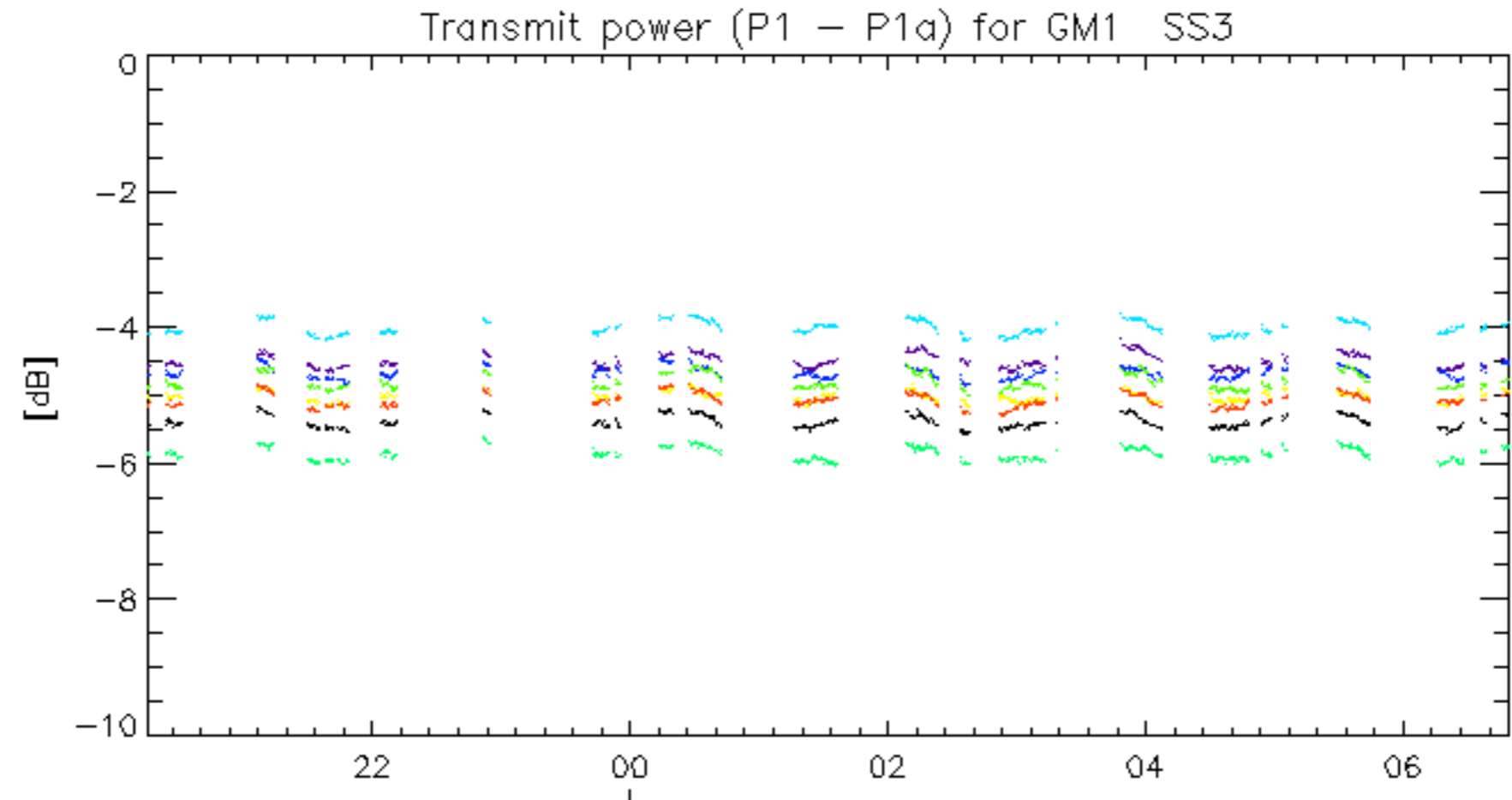
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051205_182347_000000352043_00099_19692_3137.N1	0	3
ASA_WSM_1PNPDE20051206_014940_000002812043_00103_19696_2963.N1	0	3
ASA_WSM_1PNPDE20051206_042641_000001832043_00105_19698_2974.N1	0	61

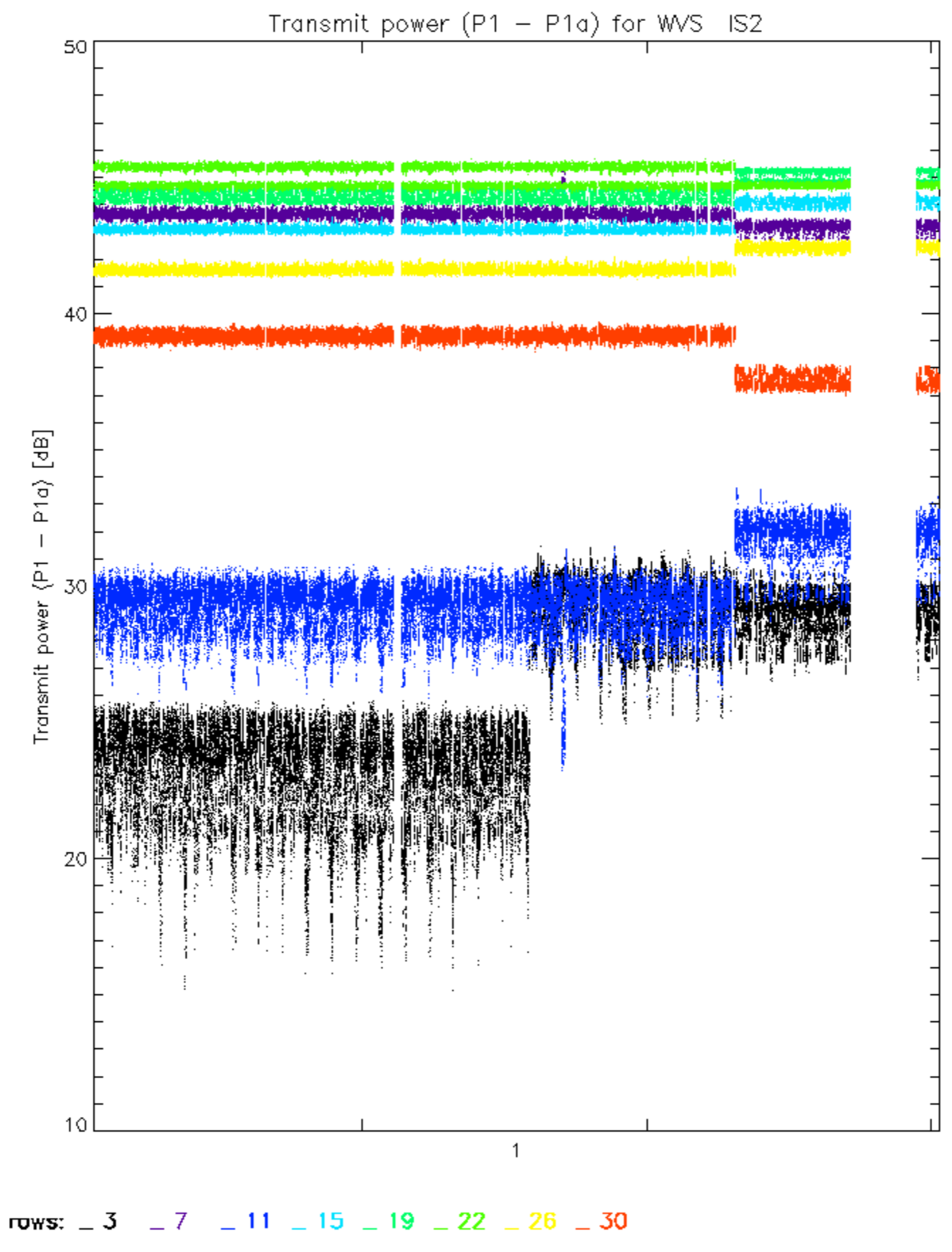


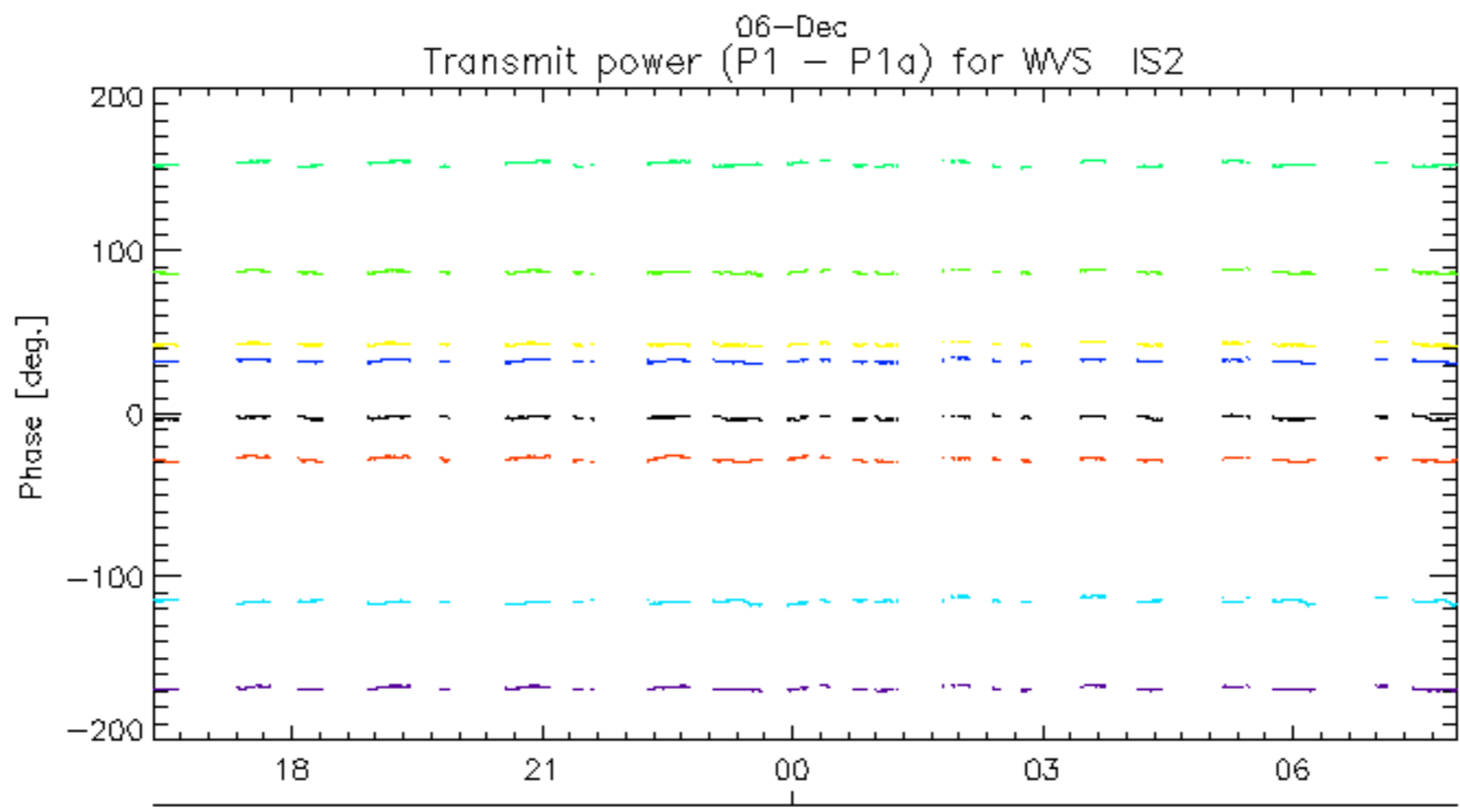
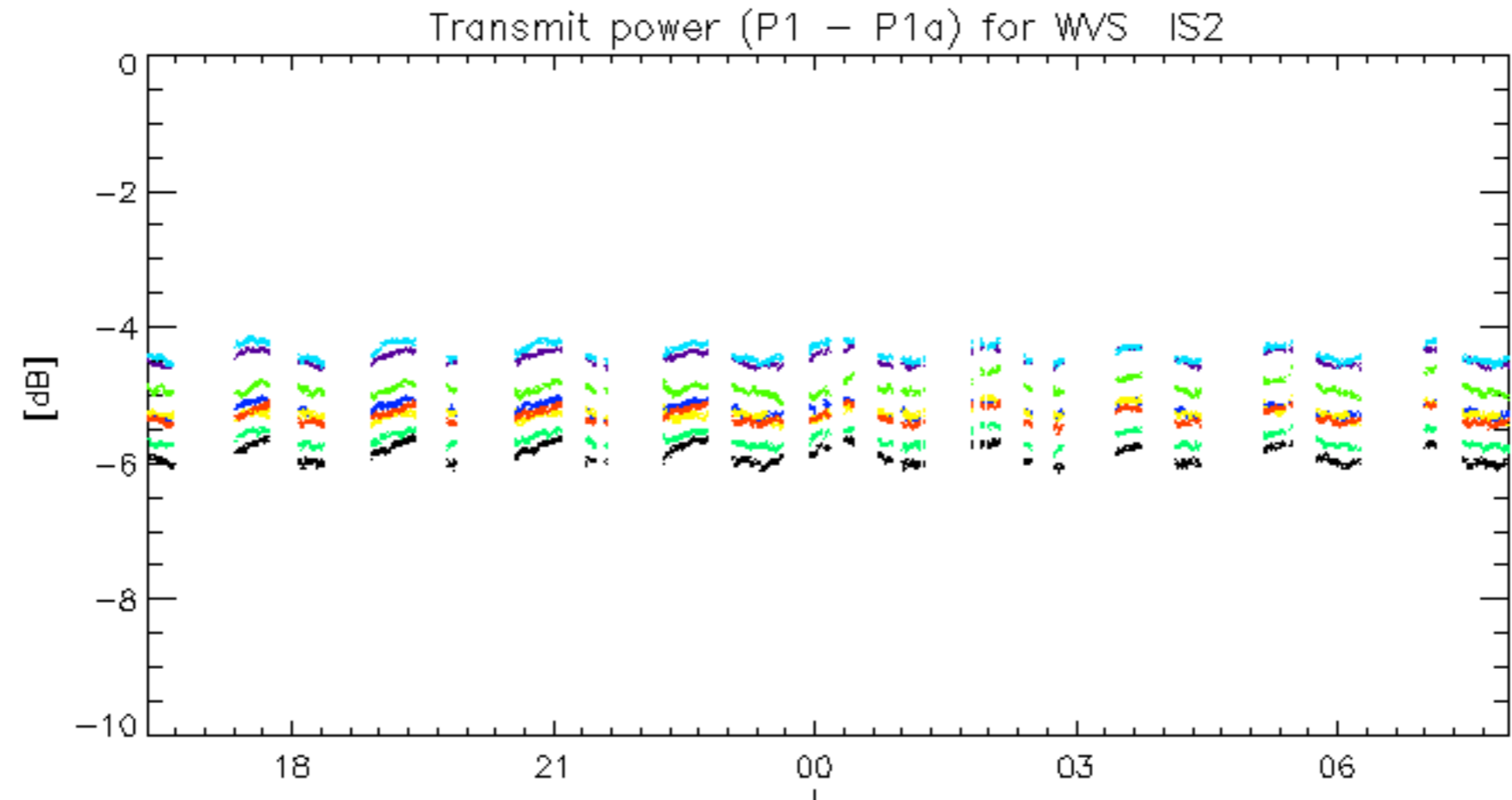


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.