

PRELIMINARY REPORT OF 060127

last update on Fri Jan 27 16:48:02 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 2006-01-26 00:00:00 to 2006-01-27 16:48:02

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	0	7	1	25
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	33	0	7	1	25
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	0	7	1	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	0	7	1	25

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	52	57	23	9	62
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	52	57	23	9	62
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	52	57	23	9	62
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	52	57	23	9	62

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	20060127 063518
H	20060124 081008

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	-4.035090	0.007397	0.058445
7	P1	-3.002028	0.014070	-0.043117
11	P1	-4.100949	0.022528	-0.016106
15	P1	-6.065079	0.017128	-0.005169
19	P1	-3.249247	0.006010	-0.038251
22	P1	-4.485517	0.019918	-0.006158
26	P1	-4.210791	0.012832	0.035519
30	P1	-5.773767	0.009837	-0.025303
3	P1	-16.937943	0.269103	0.276784
7	P1	-16.608030	0.126173	-0.132514
11	P1	-16.604063	0.304788	-0.060657
15	P1	-13.238832	0.115917	0.063790
19	P1	-13.884930	0.075989	-0.054499
22	P1	-15.903615	0.567224	0.048389
26	P1	-15.767577	0.257042	0.031874
30	P1	-16.603344	0.335973	-0.063544

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.612547	0.094184	0.103798
7	P2	-22.475721	0.097448	0.096496
11	P2	-16.305367	0.103447	0.094808
15	P2	-7.218363	0.103534	0.029091
19	P2	-9.175452	0.098264	0.013015
22	P2	-17.942019	0.094637	-0.036556
26	P2	-16.222670	0.100541	-0.010603
30	P2	-19.656479	0.084143	0.025619

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.214797	0.007332	0.008531
7	P3	-8.214797	0.007332	0.008531
11	P3	-8.214797	0.007332	0.008531
15	P3	-8.214797	0.007332	0.008531
19	P3	-8.214797	0.007332	0.008531
22	P3	-8.214797	0.007332	0.008531
26	P3	-8.214797	0.007332	0.008531
30	P3	-8.214797	0.007332	0.008531

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	-3.724076	0.010943	-0.009904
7	P1	-2.750773	0.007649	0.044108
11	P1	-2.867820	0.011213	0.003152
15	P1	-3.461226	0.018604	-0.045074
19	P1	-3.379185	0.013113	0.002424
22	P1	-5.123401	0.021834	-0.005355
26	P1	-5.855525	0.015402	-0.006520
30	P1	-5.248589	0.029978	0.017178
3	P1	-11.521371	0.039129	-0.029947
7	P1	-9.924865	0.050628	0.026902
11	P1	-10.079257	0.050787	-0.052296
15	P1	-10.622389	0.084627	-0.036570
19	P1	-15.475280	0.061322	0.024941
22	P1	-20.639322	1.183816	0.289810

26	P1	-16.829466	0.334098	0.333964
30	P1	-18.149315	0.314089	-0.022545

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.431805	0.031707	0.195071
7	P2	-22.873598	0.058707	0.186302
11	P2	-11.437159	0.019345	0.121189
15	P2	-4.923917	0.023814	0.062967
19	P2	-6.923177	0.022252	0.050456
22	P2	-8.195439	0.022446	0.012424
26	P2	-23.977337	0.024357	0.045715
30	P2	-22.100163	0.017573	0.031850

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.055861	0.002415	0.029402
7	P3	-8.055795	0.002411	0.029675
11	P3	-8.055916	0.002415	0.030209
15	P3	-8.055822	0.002433	0.029906
19	P3	-8.055963	0.002420	0.029548
22	P3	-8.055841	0.002410	0.028918
26	P3	-8.055811	0.002410	0.028757
30	P3	-8.055926	0.002424	0.029695

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	0.000559550
	stdev	1.69180e-07
MEAN Q	mean	0.000520944
	stdev	2.14436e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139152
	stdev	0.00119598
STDEV Q	mean	0.139511
	stdev	0.00121564



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006012[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_IMM_1PNPDE20060126_200857_000000502044_00343_20437_1212.N1	0	11
ASA_IMM_1PNPDK20060126_125400_000001222044_00339_20433_0406.N1	1	0
ASA_WSM_1PNPDE20060126_142816_000000672044_00340_20434_2512.N1	0	67





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

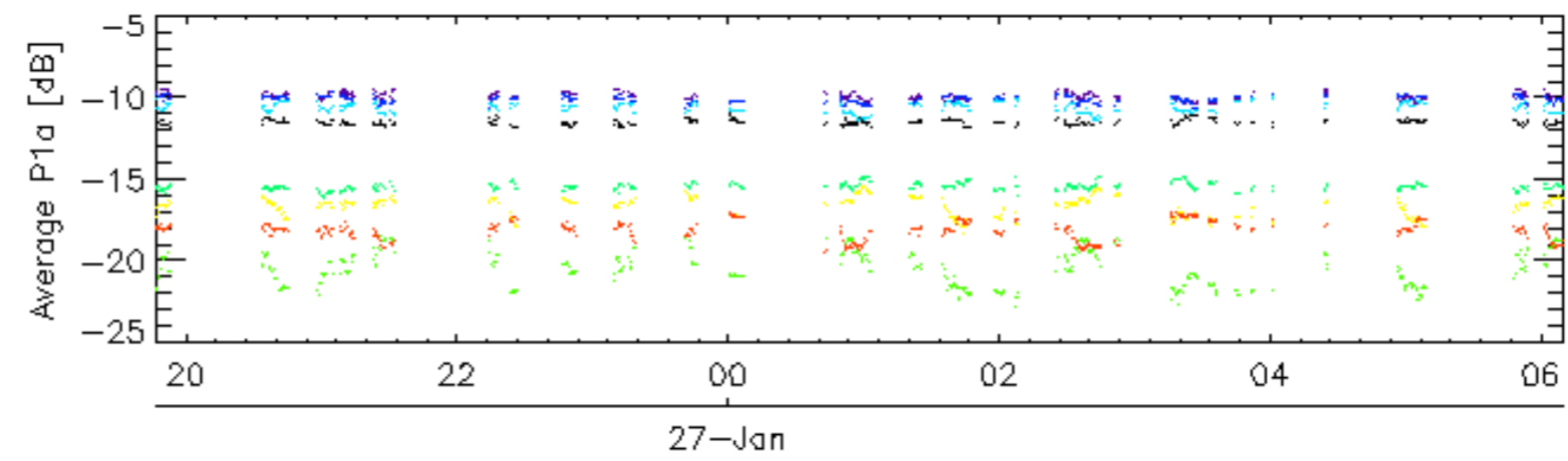
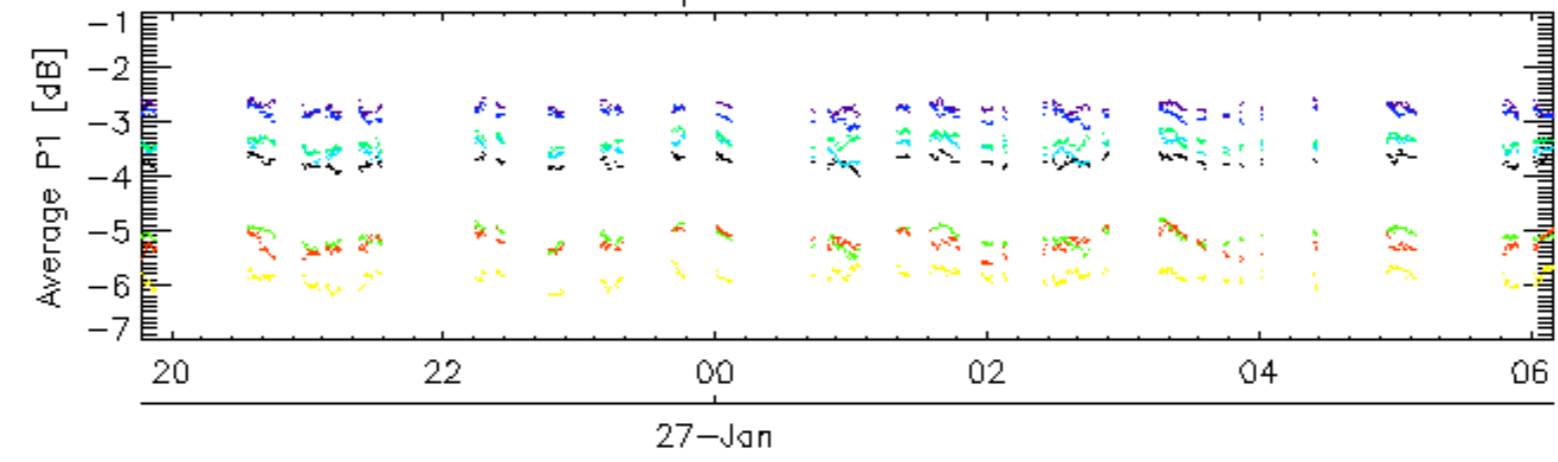
7.5 - Absolute Doppler for GM1

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

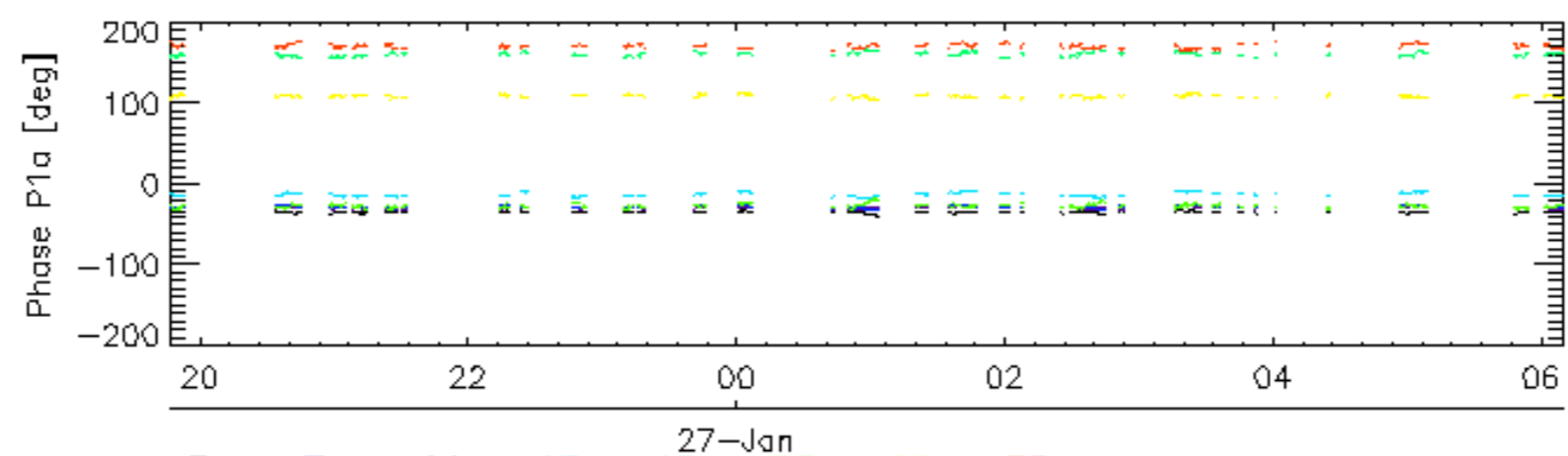
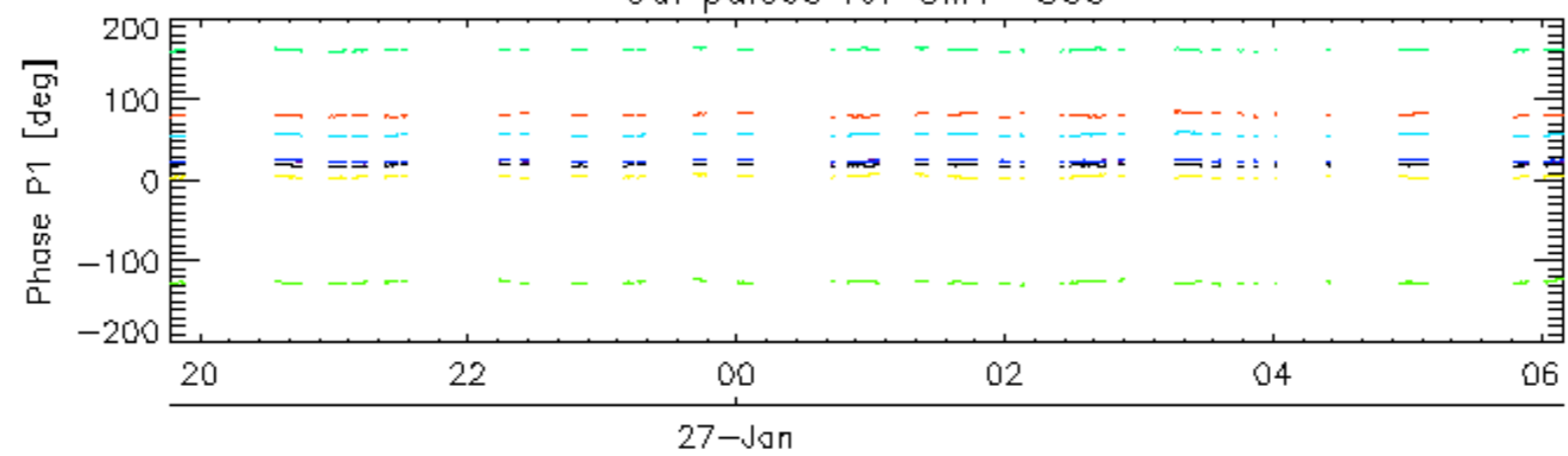
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

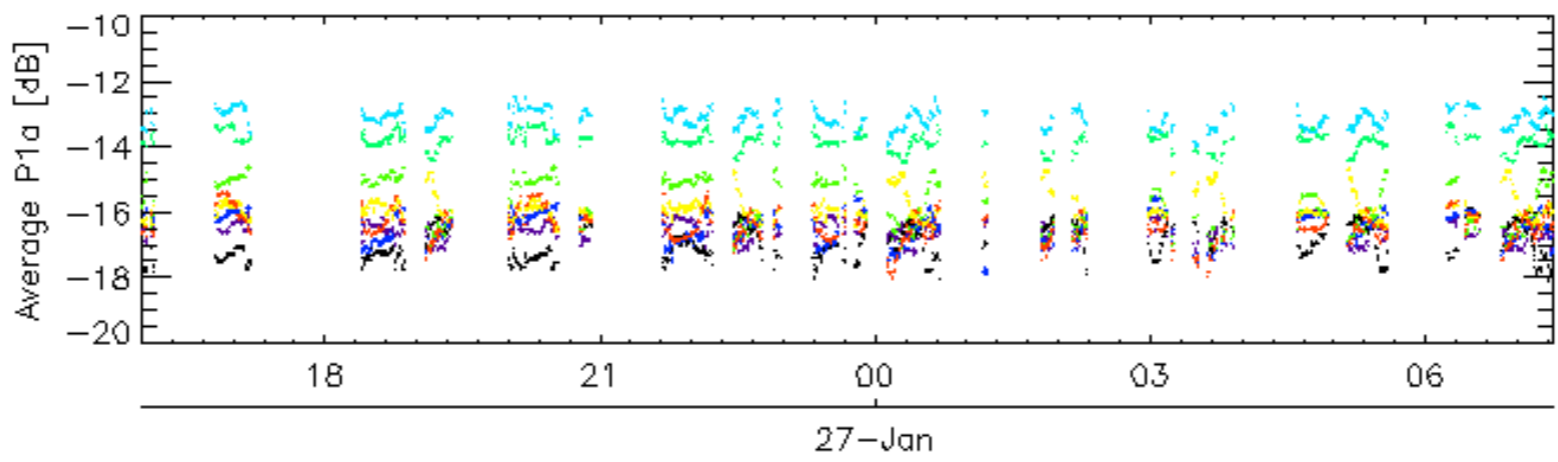
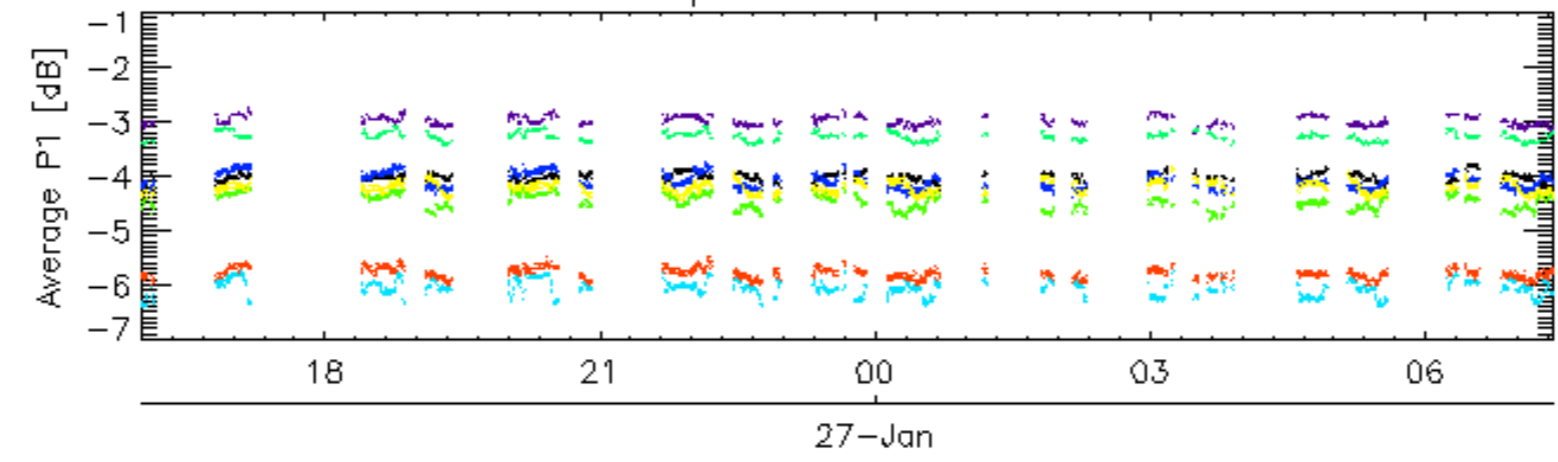


Cal pulses for GM1 SS3

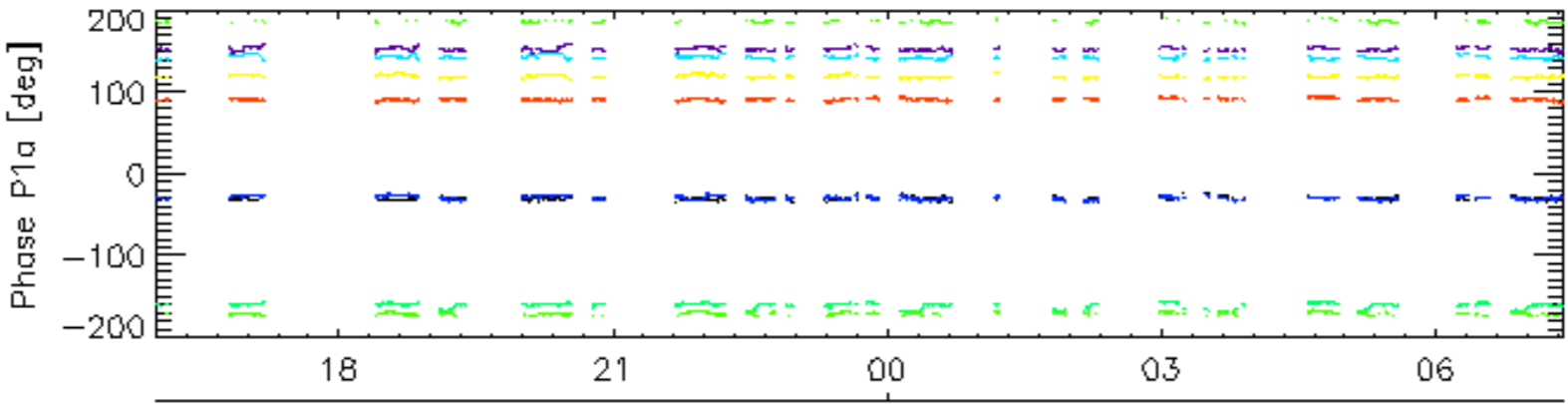
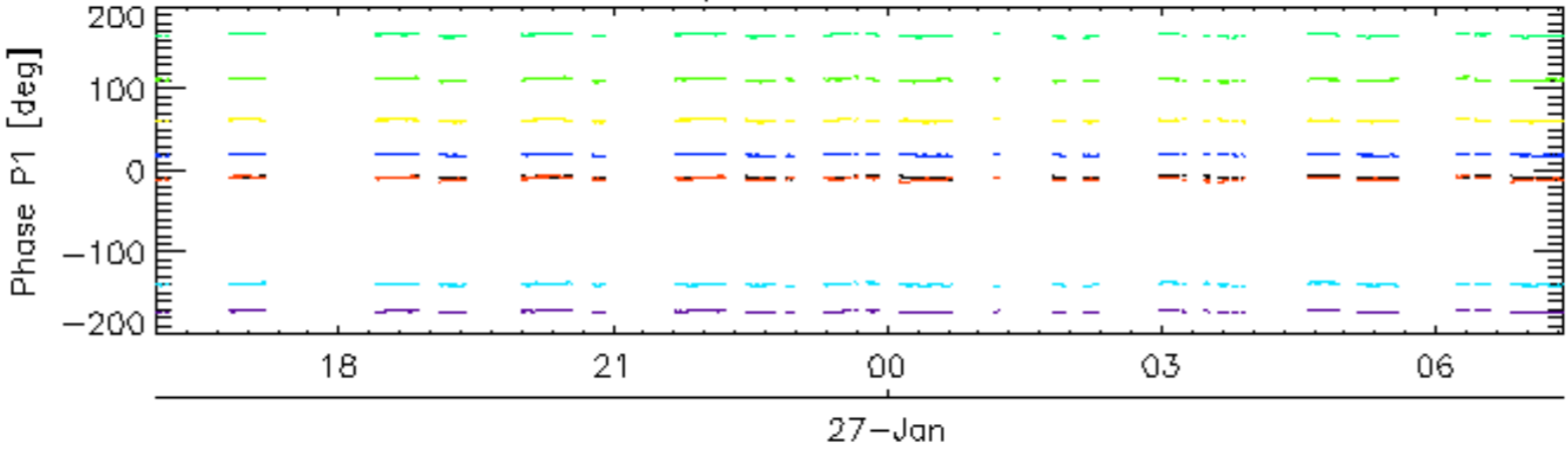


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

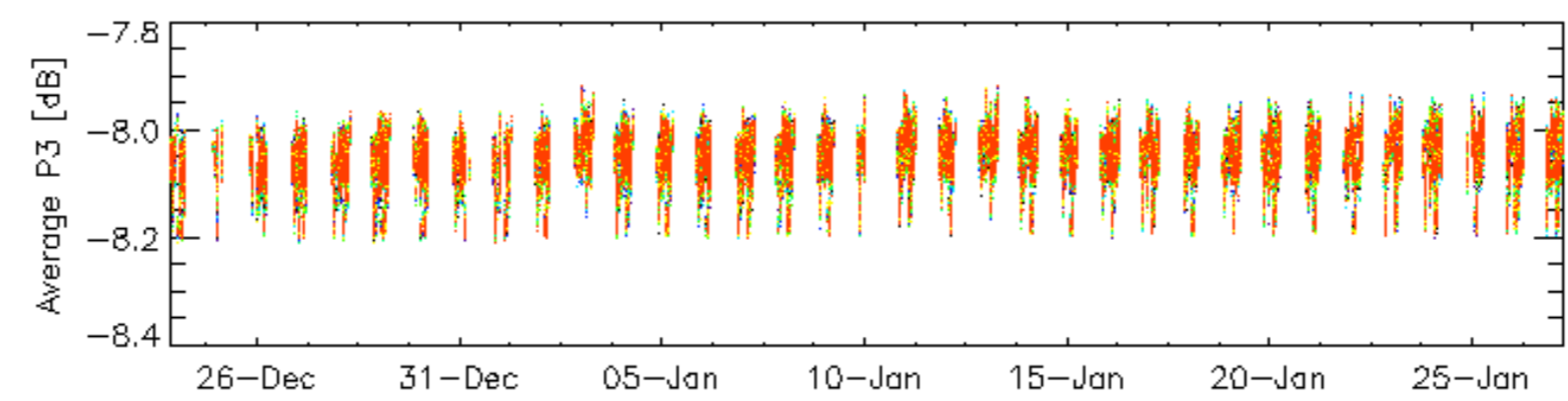
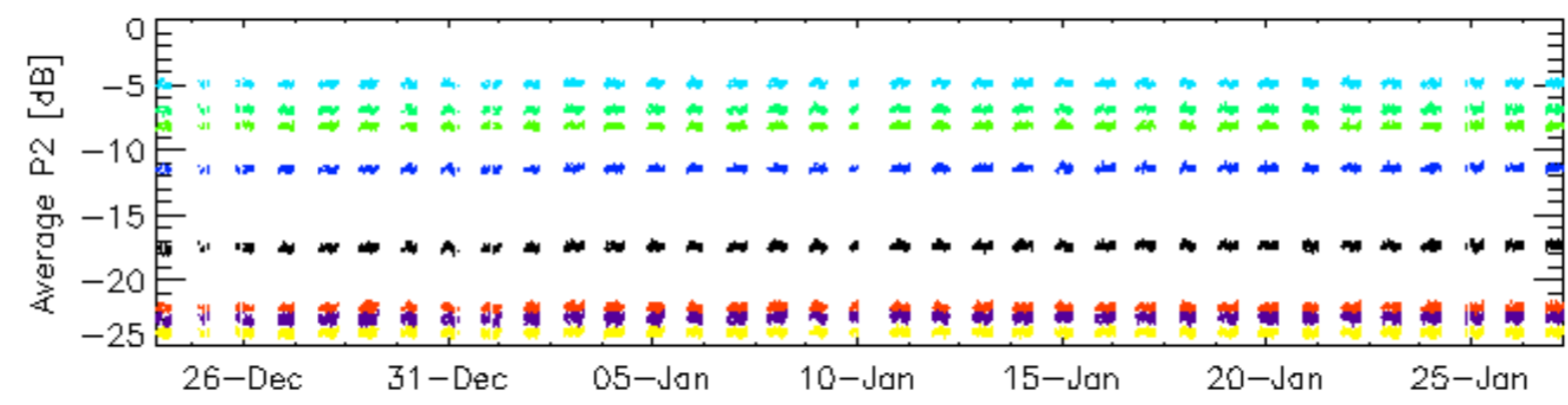
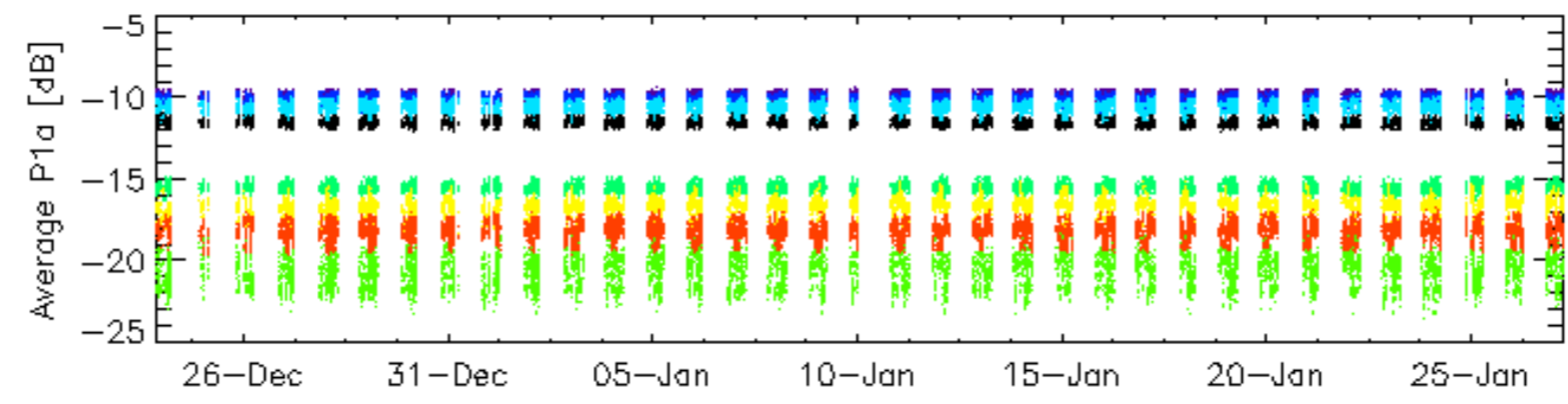
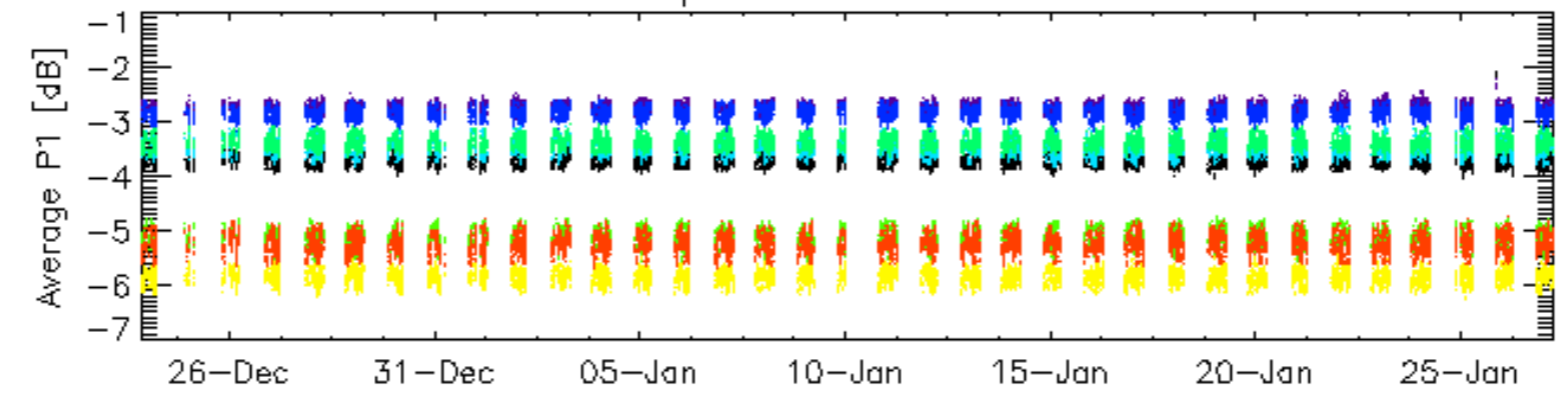


Cal pulses for WVS IS2



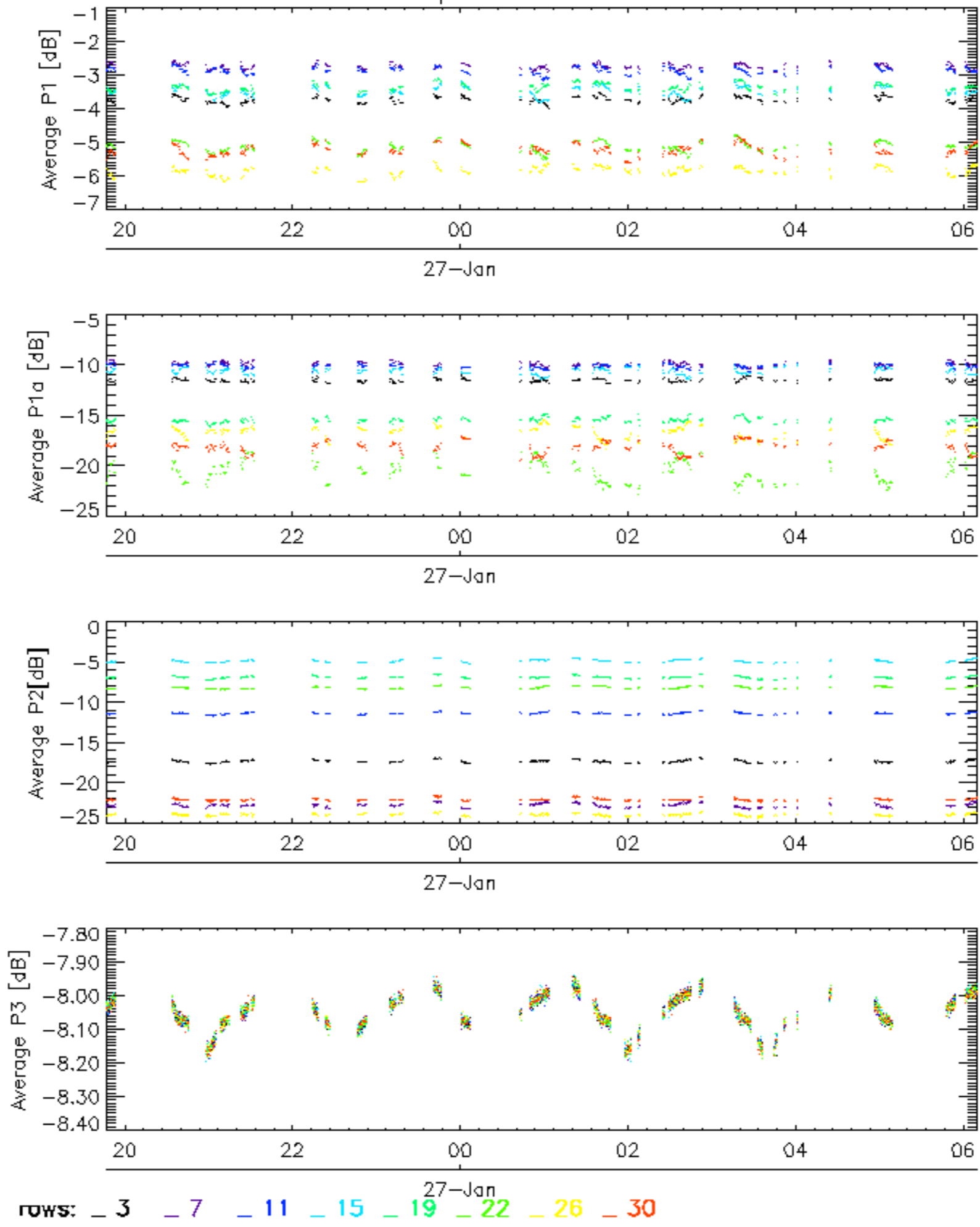
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 27-Jan

Cal pulses for GM1 SS3

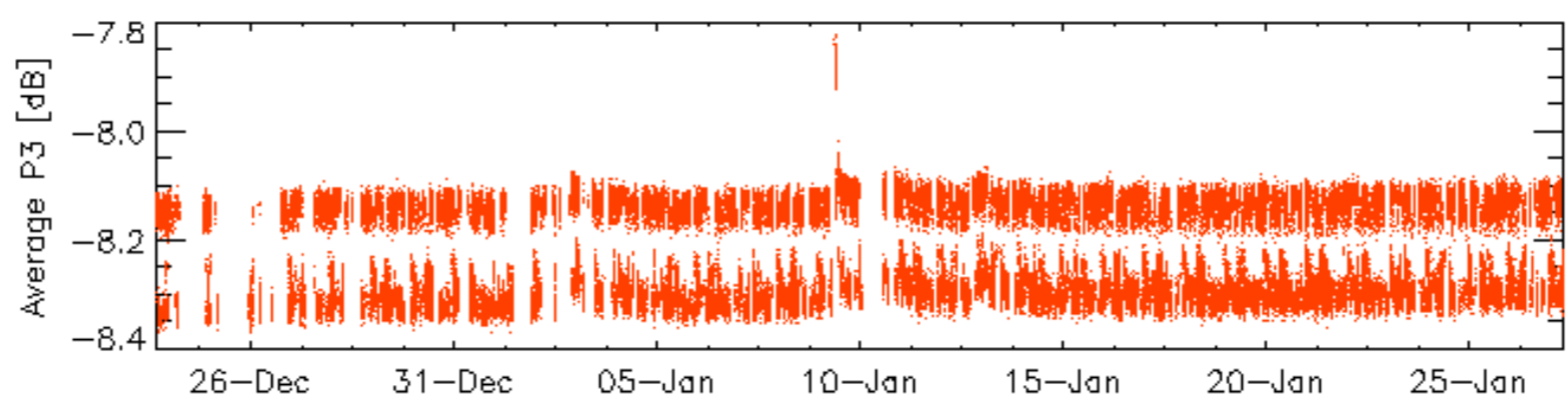
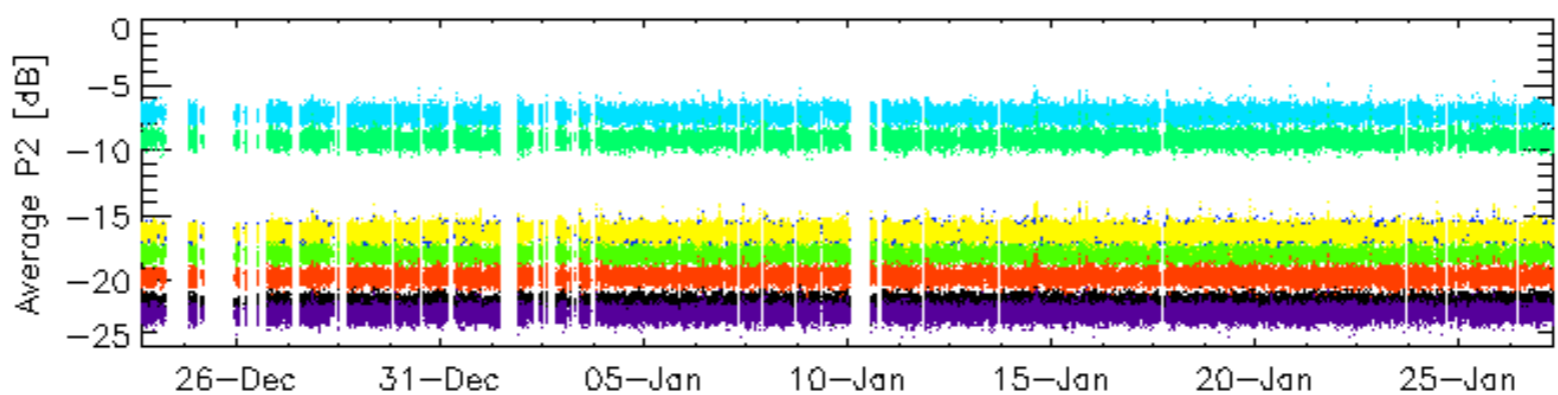
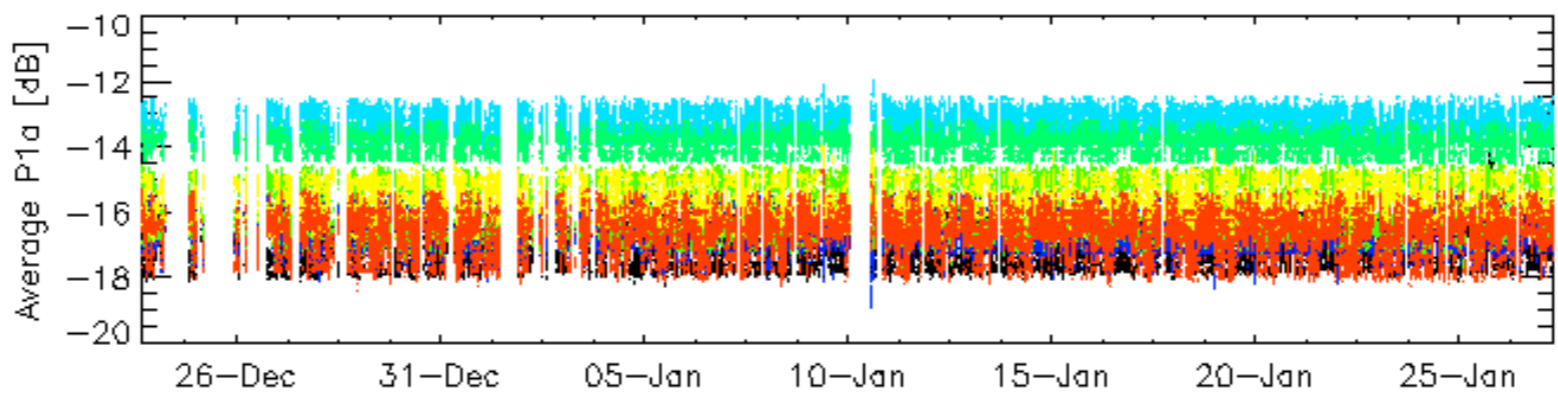
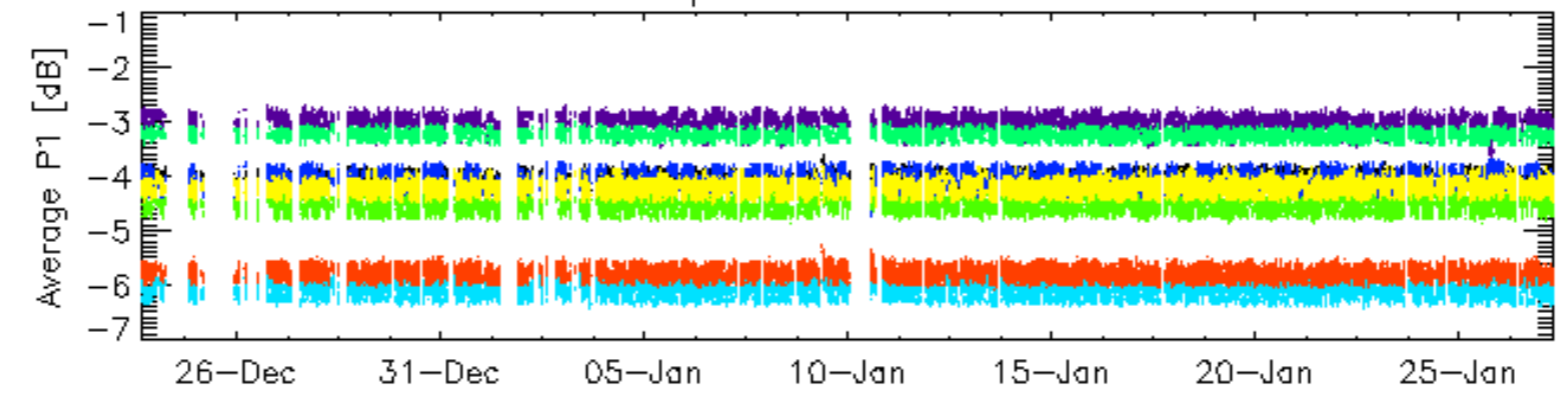


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

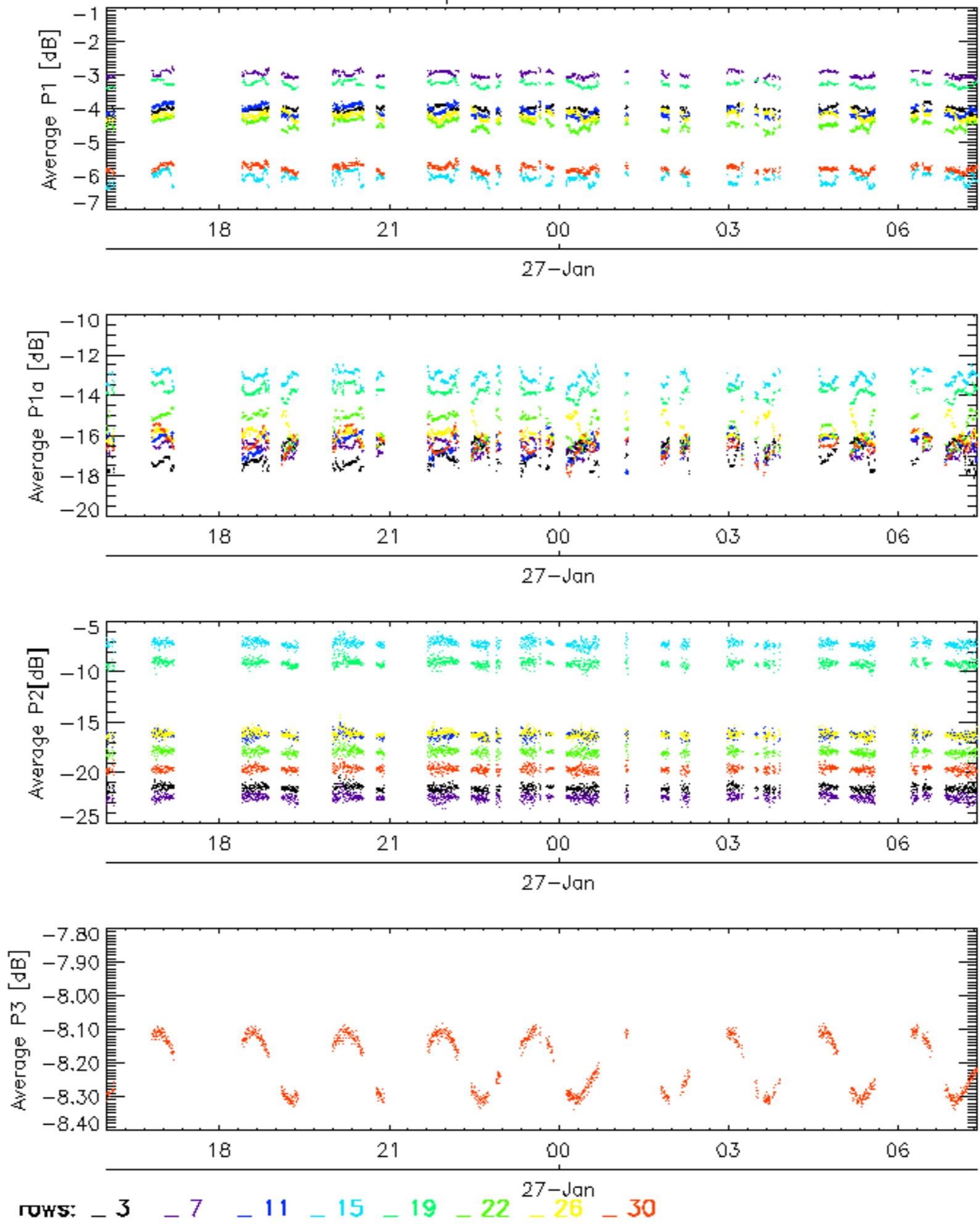


Cal pulses for WVS IS2



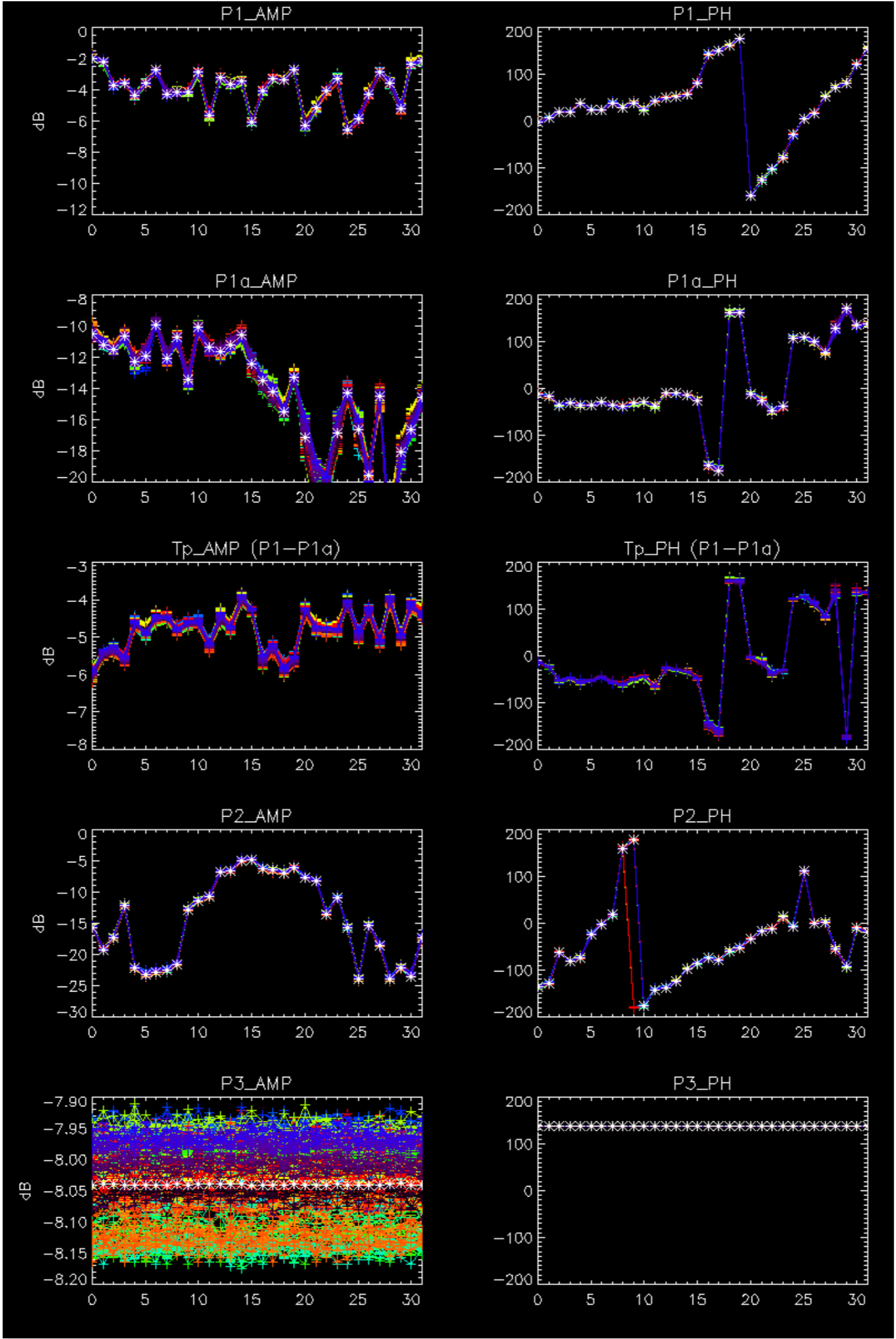
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

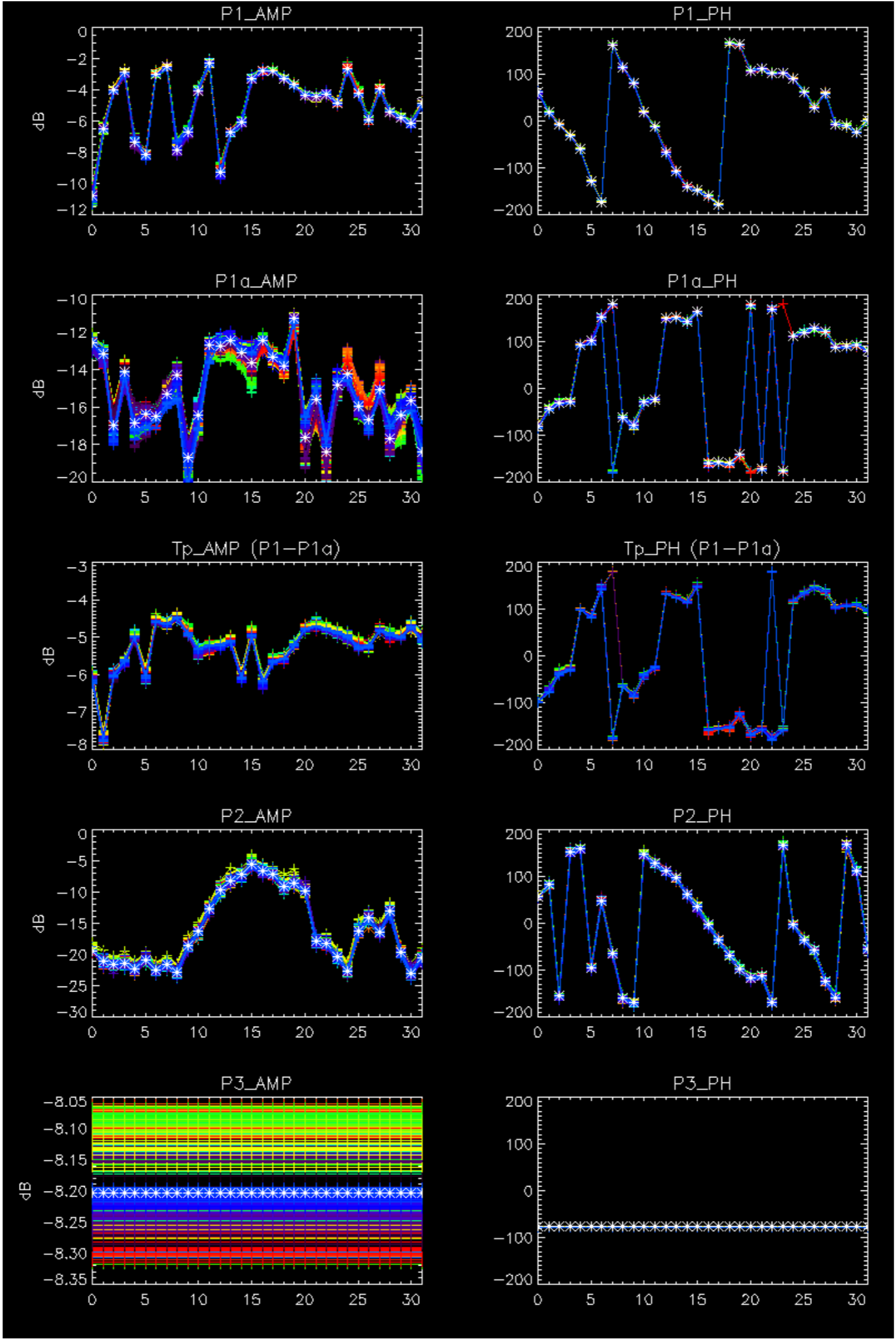
Cal pulses for WVS IS2



No anomalies observed on available browse products

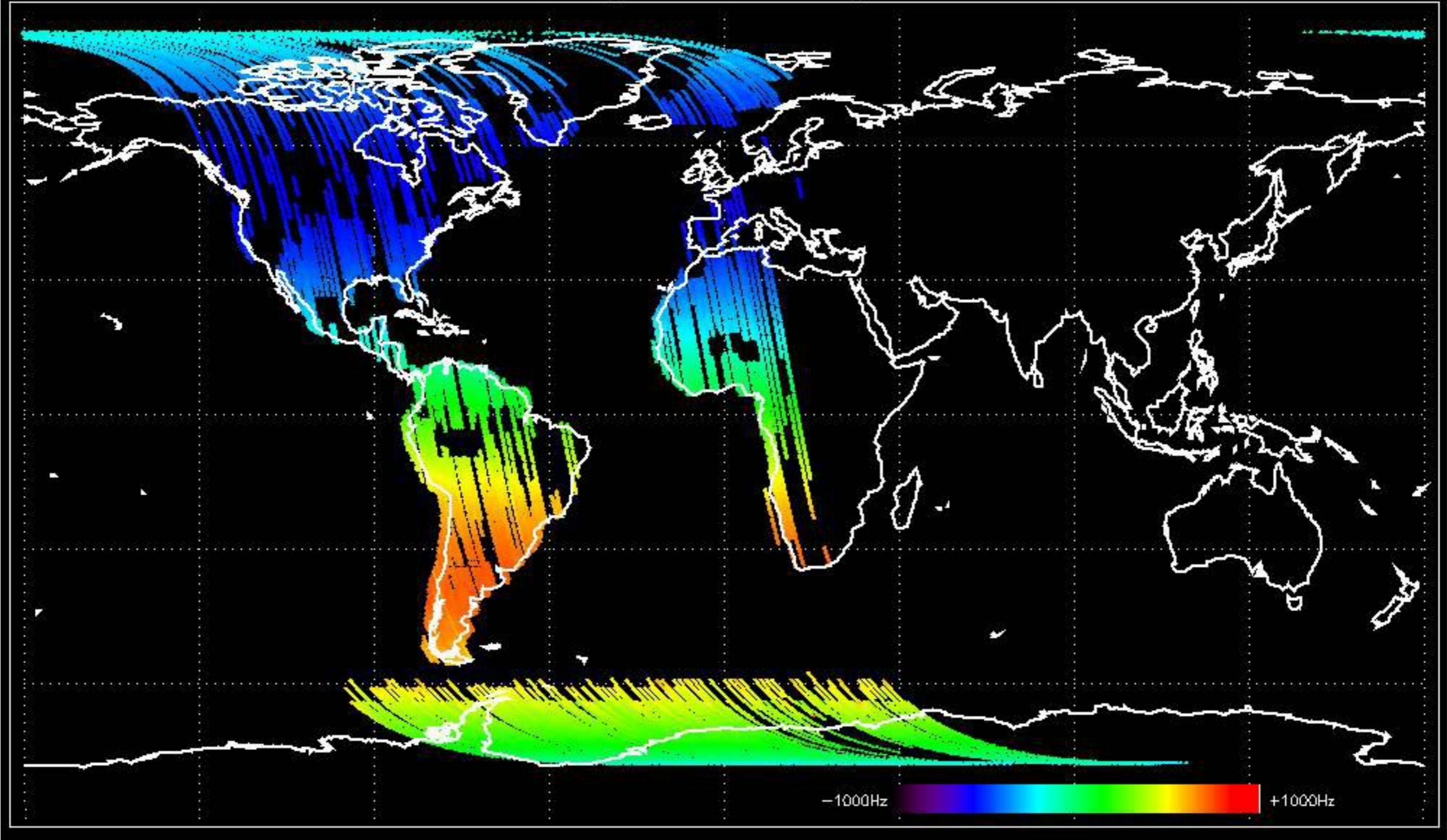
No anomalies observed.



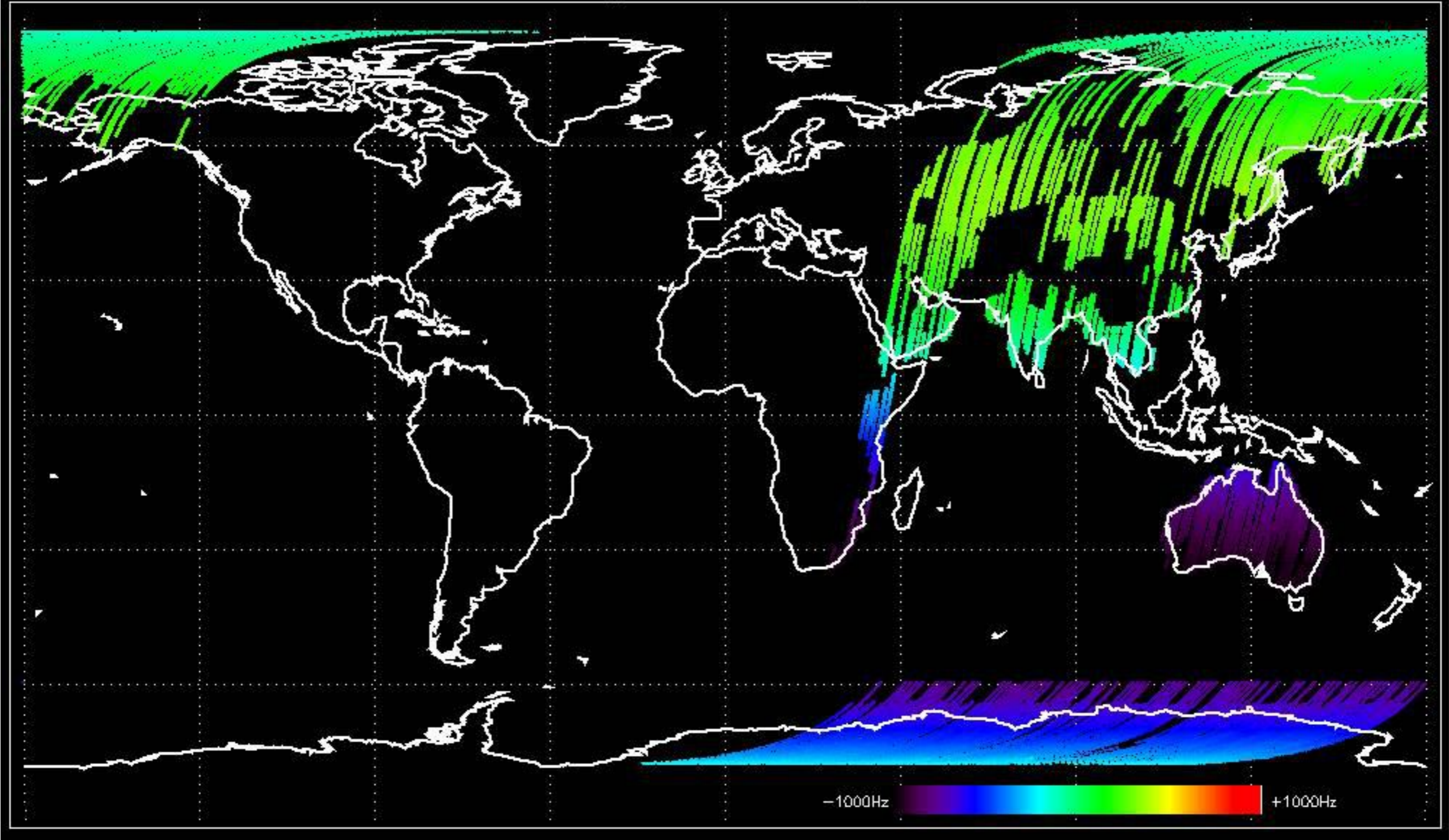


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

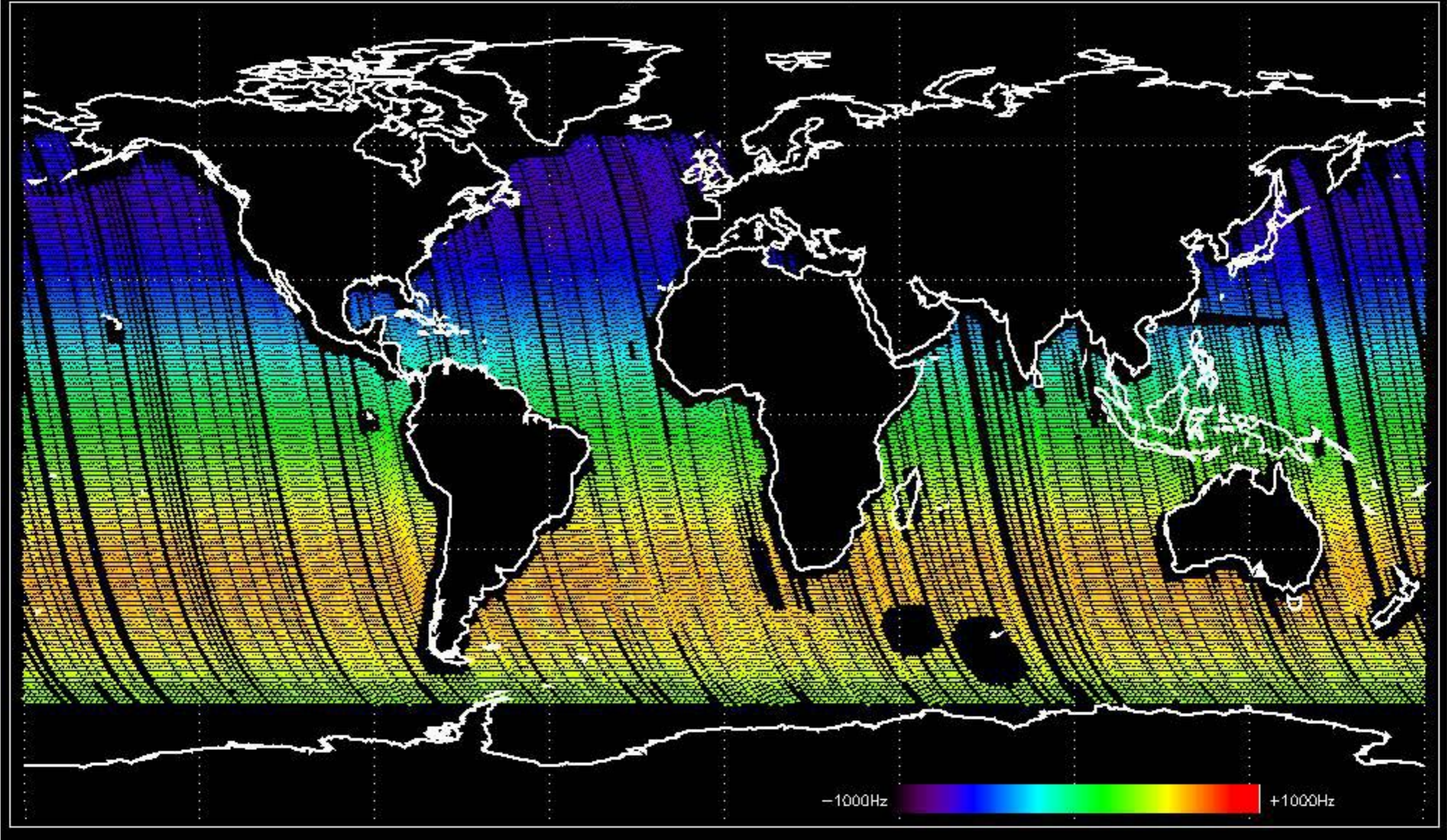
Doppler 'GM1' 'SS1' ascending



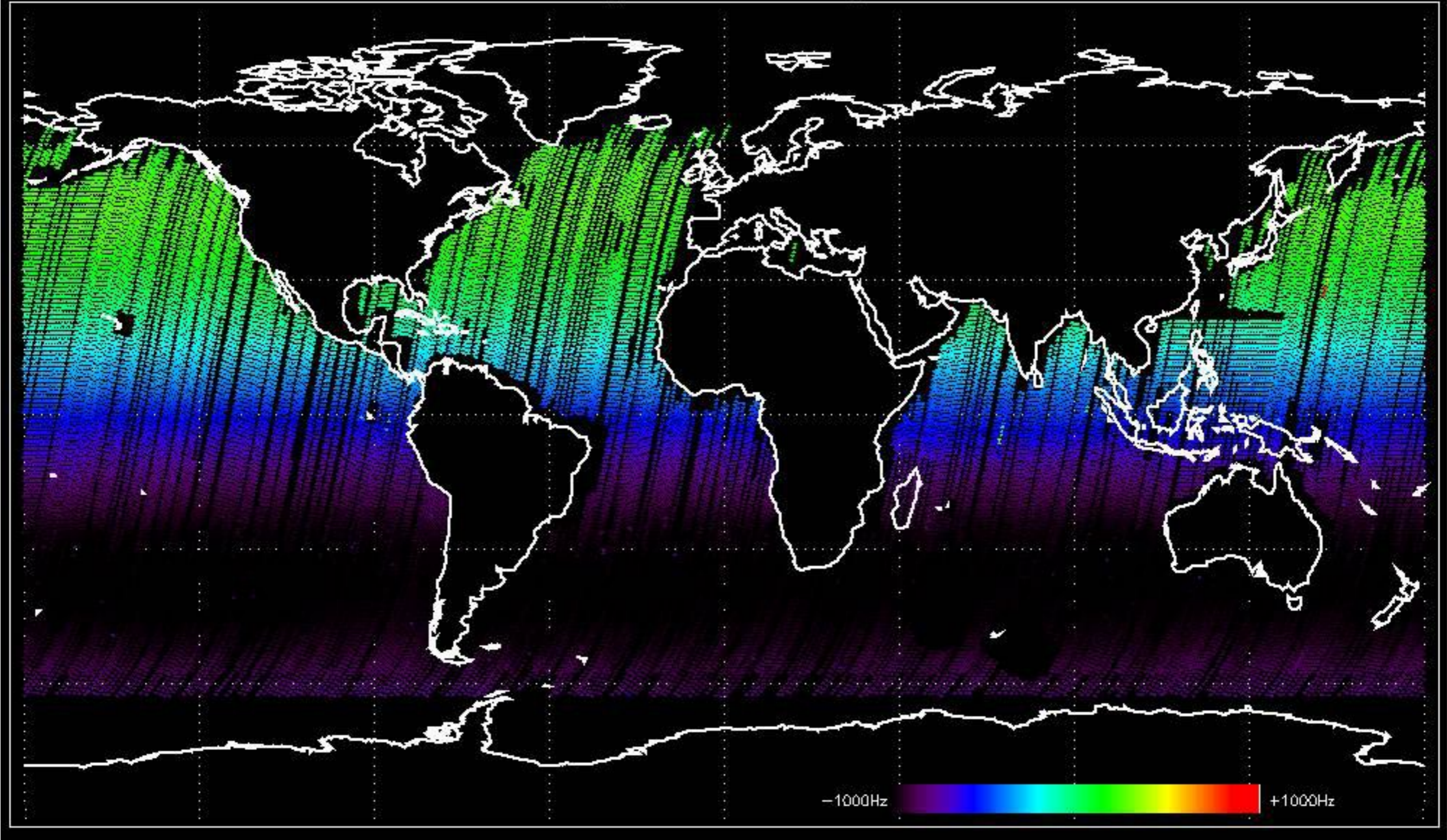
Doppler 'GM1' 'SS1' descending

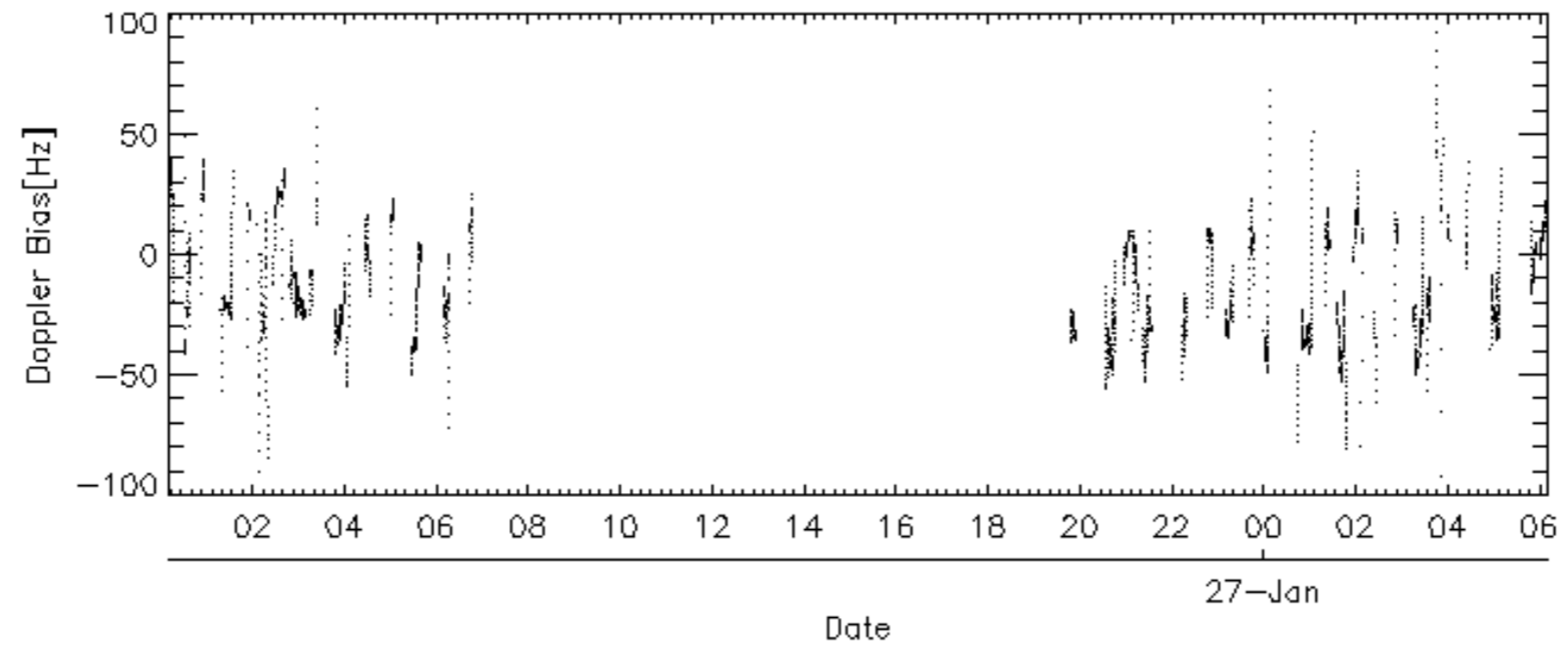
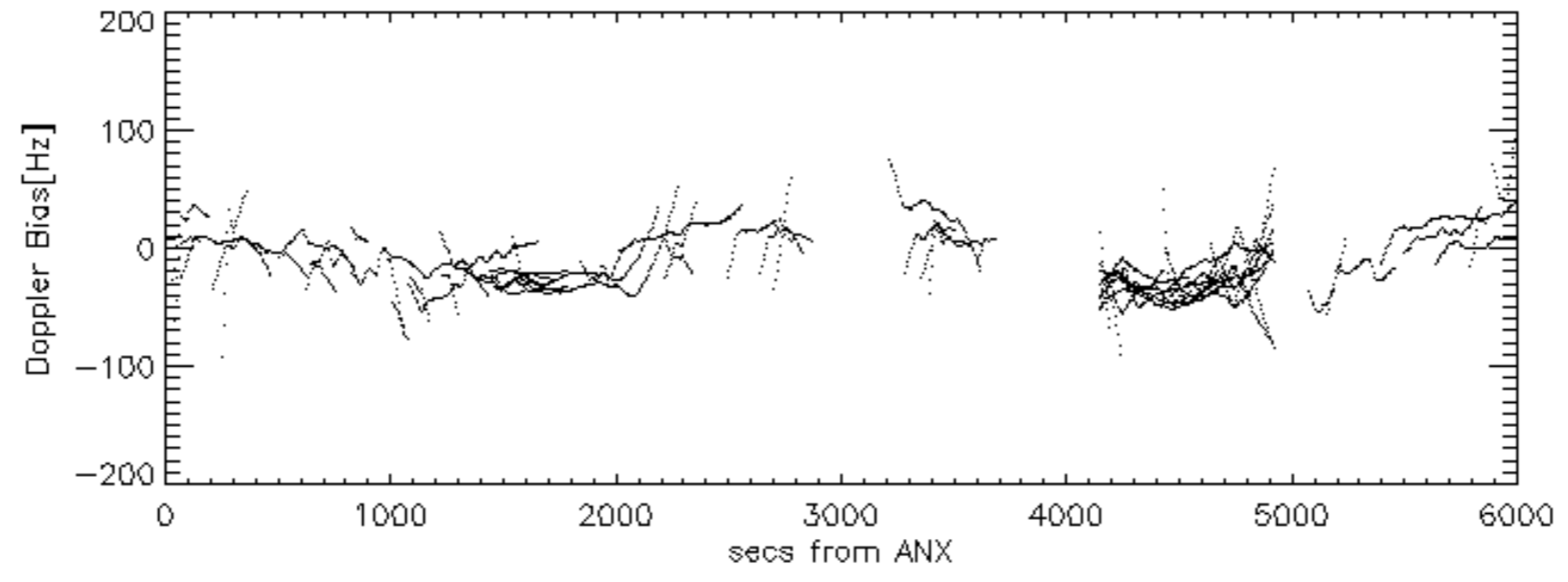
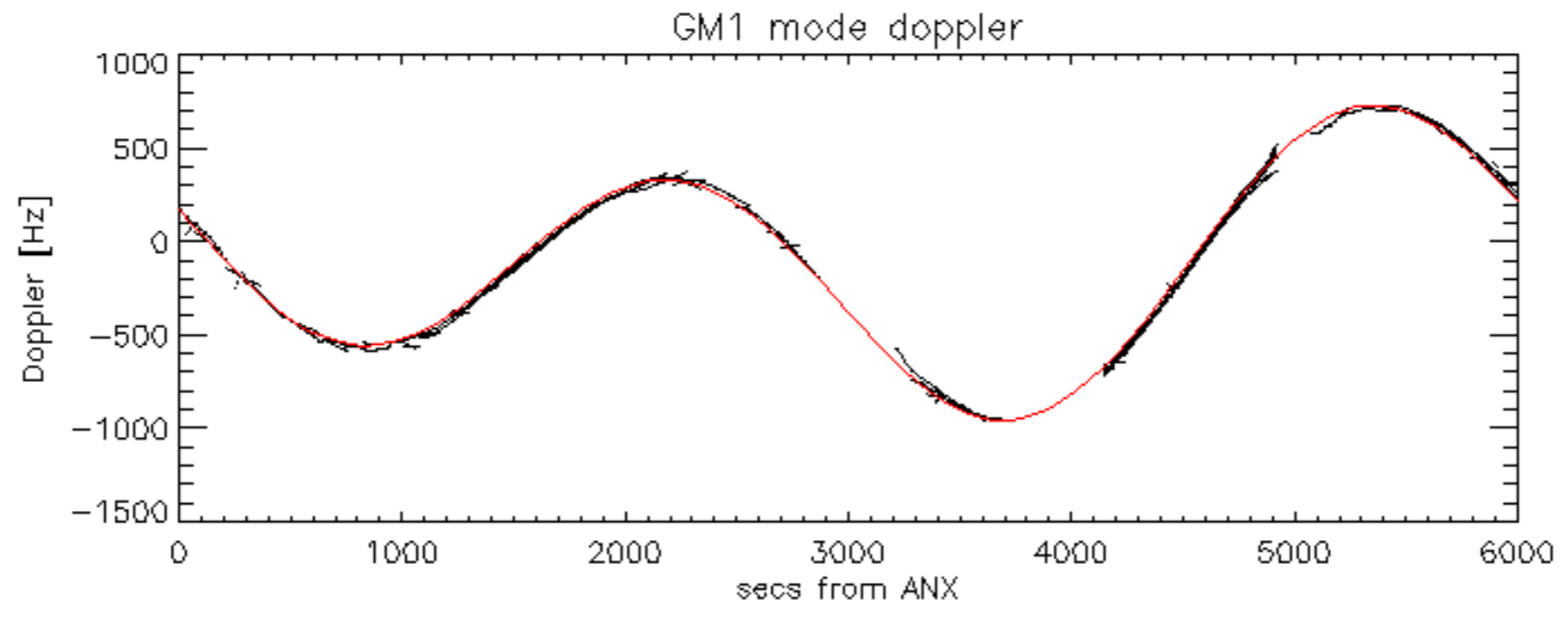


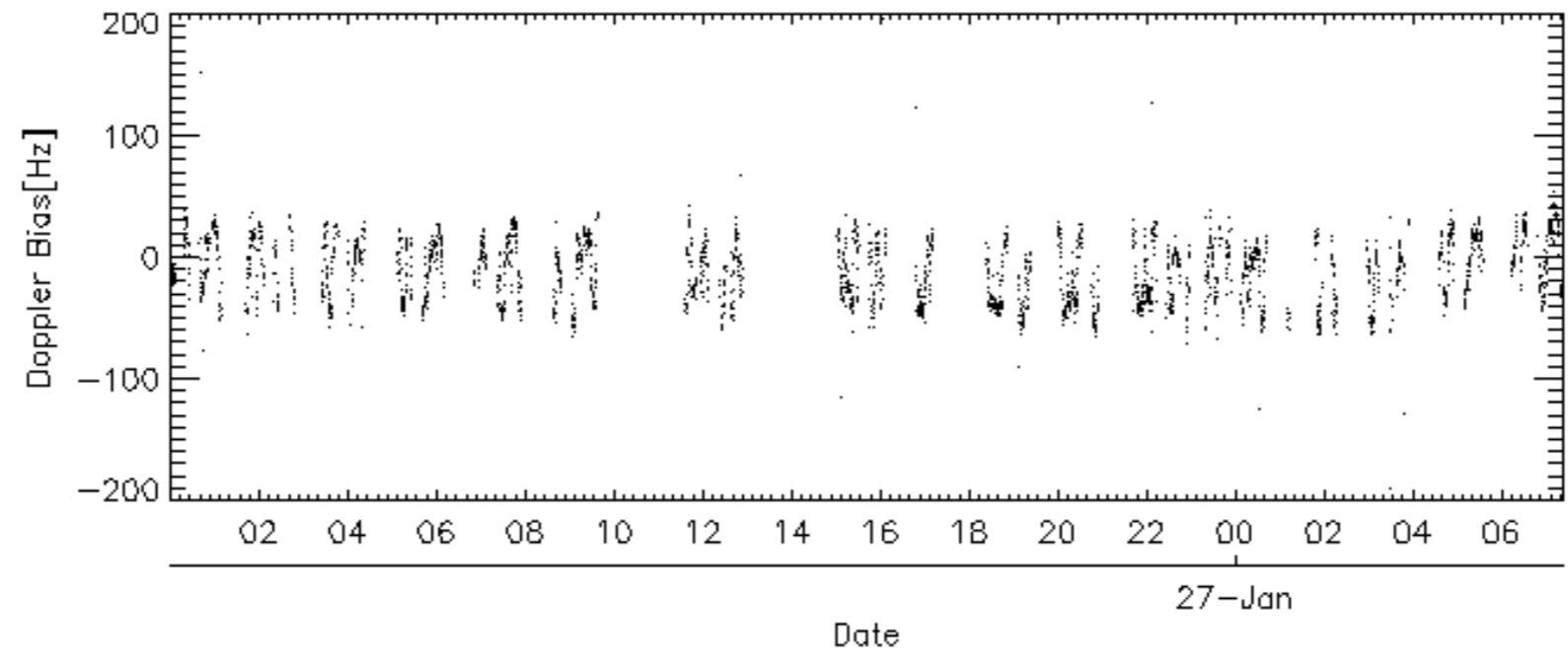
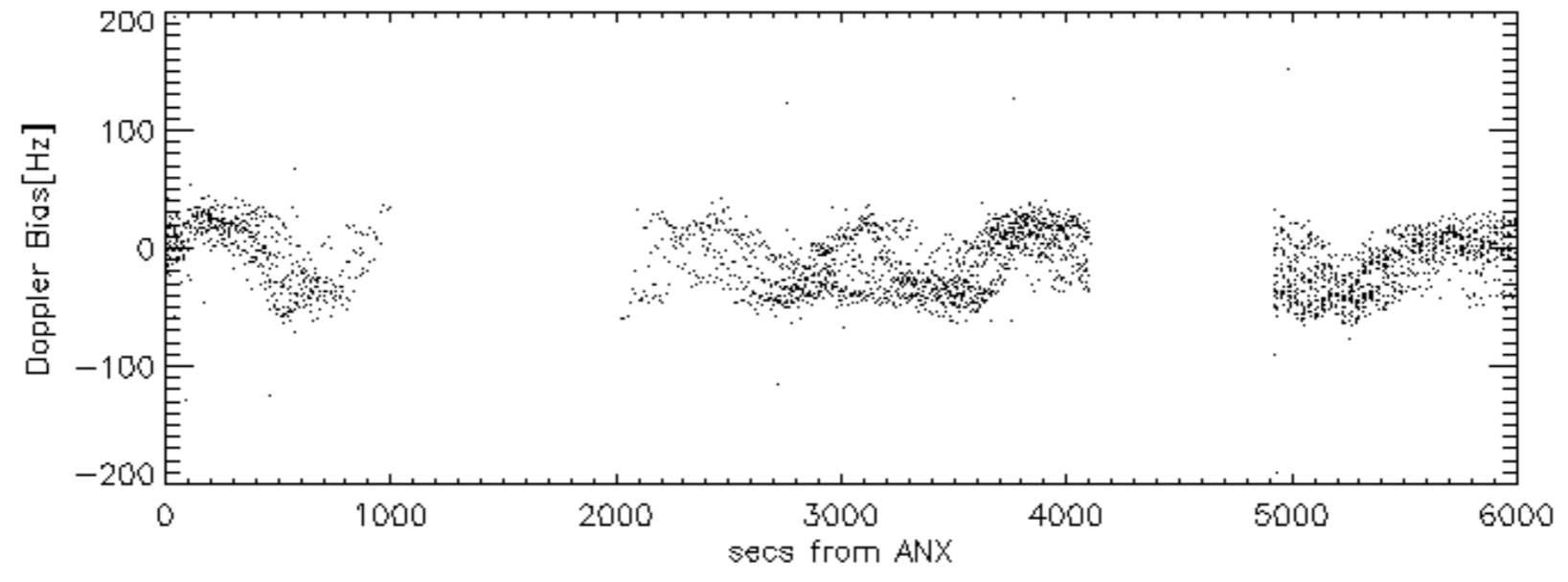
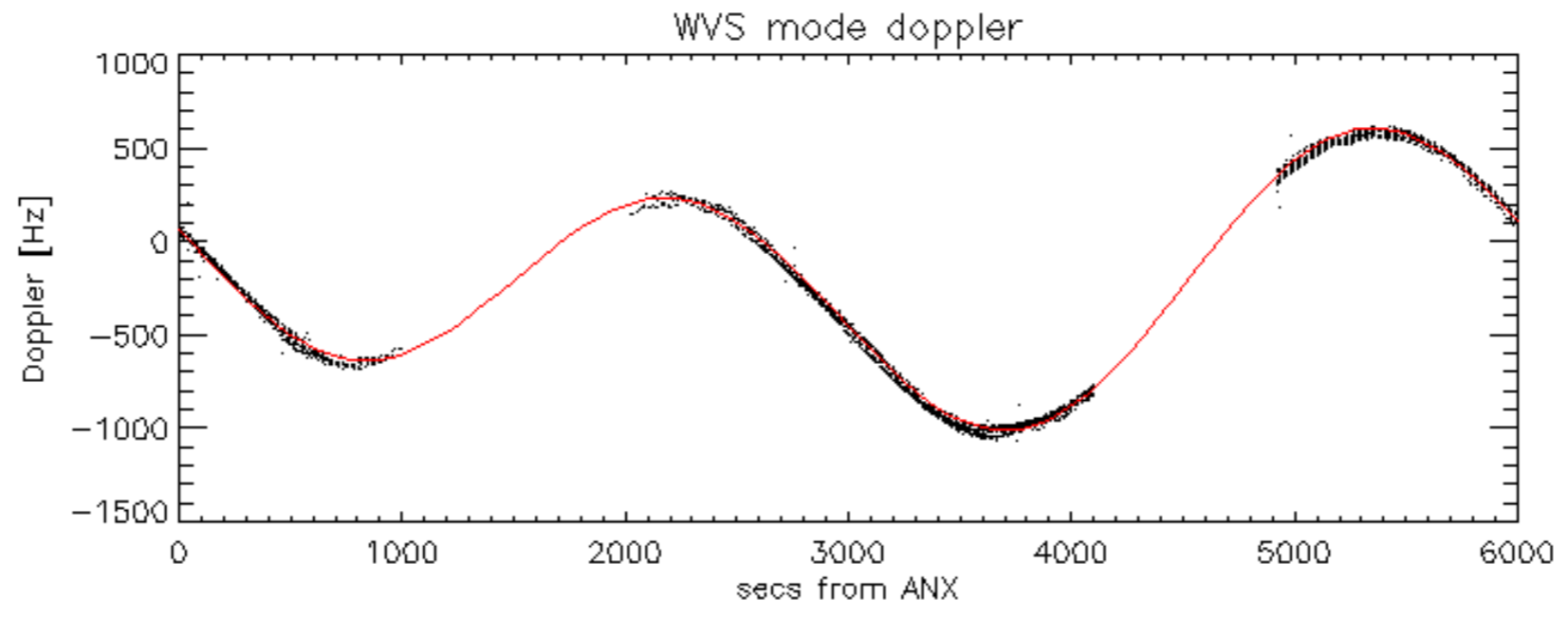
Doppler 'WVS' 'IS2' ascending



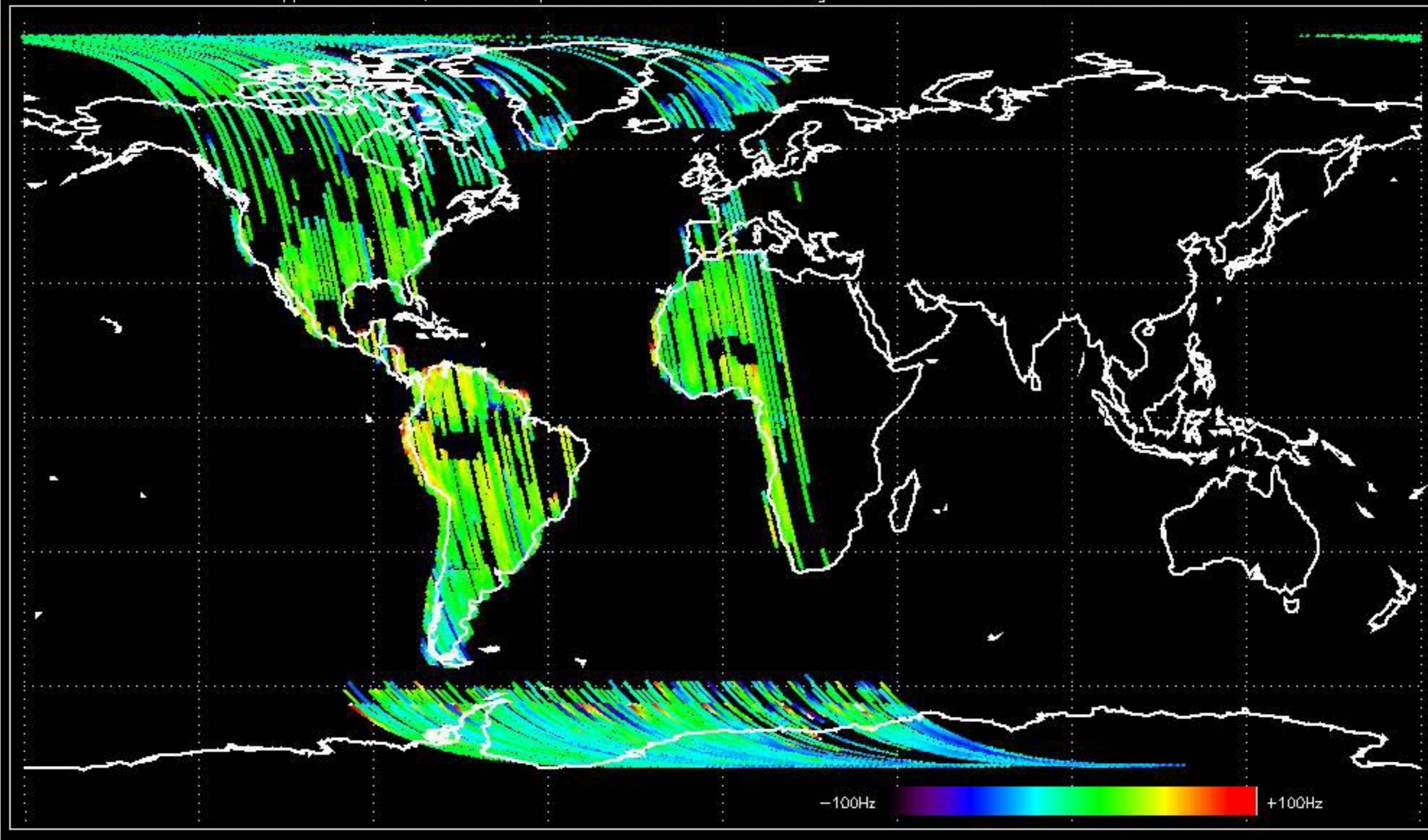
Doppler 'WVS' 'IS2' descending



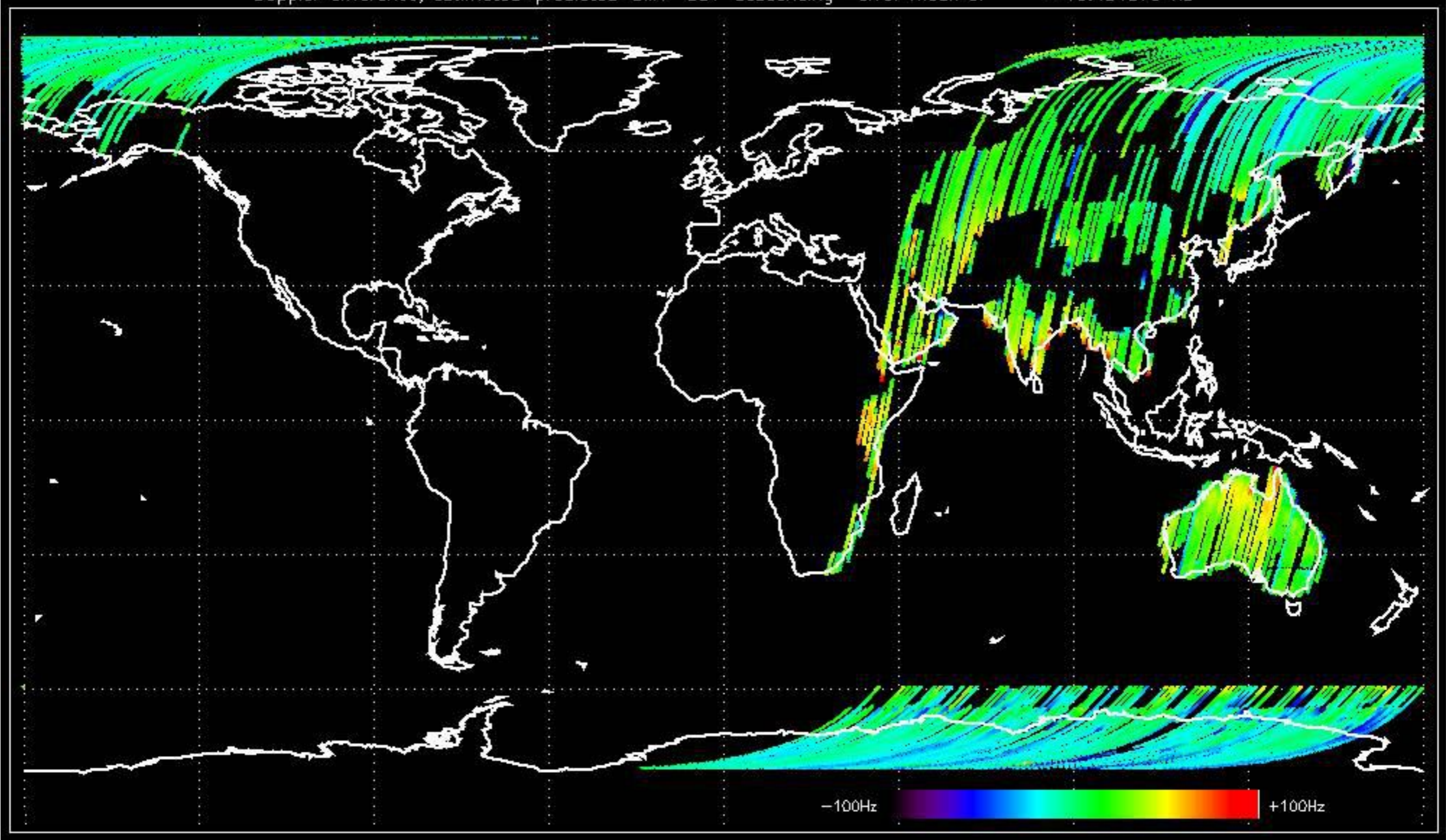




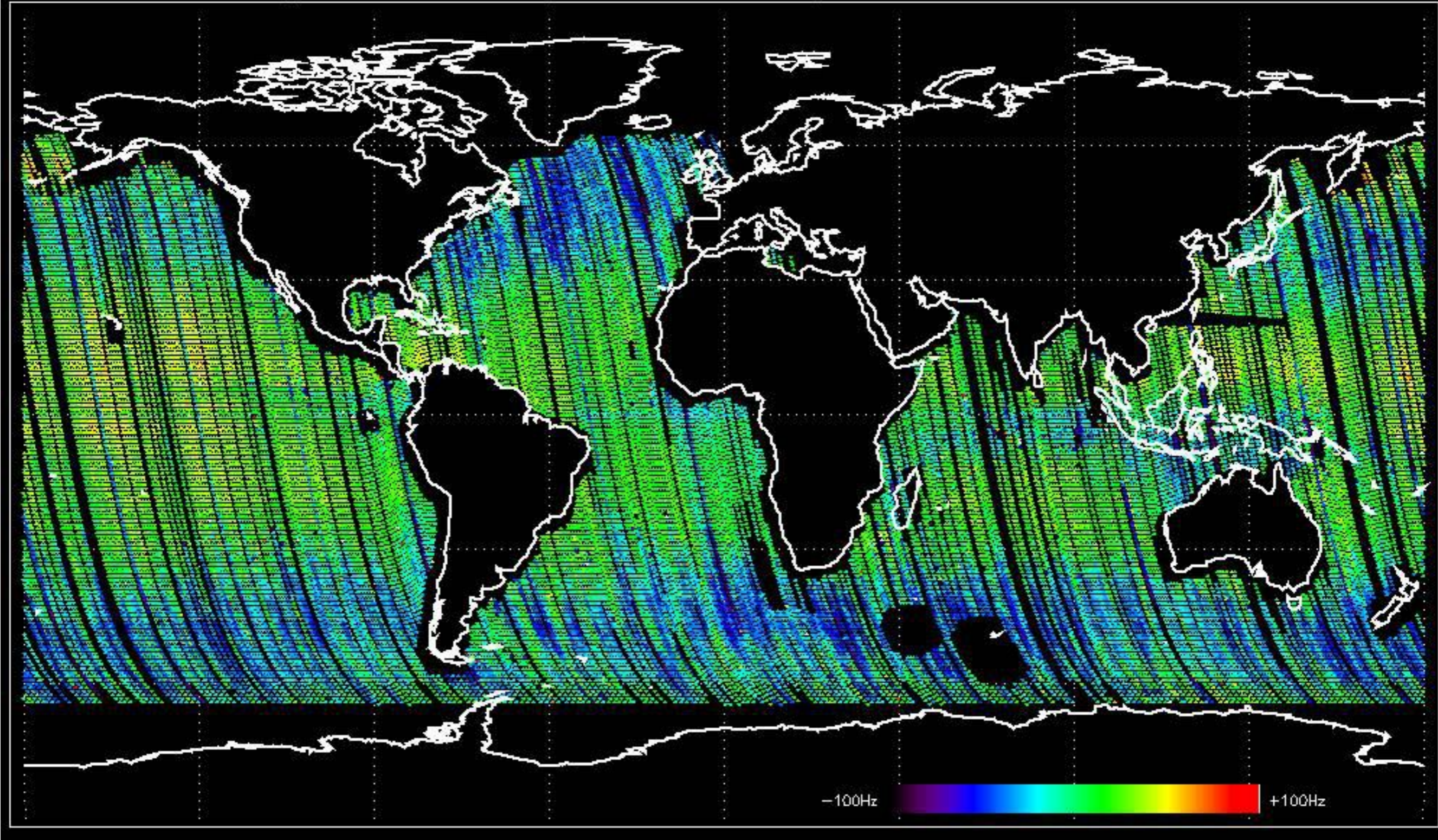
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.503070 Hz



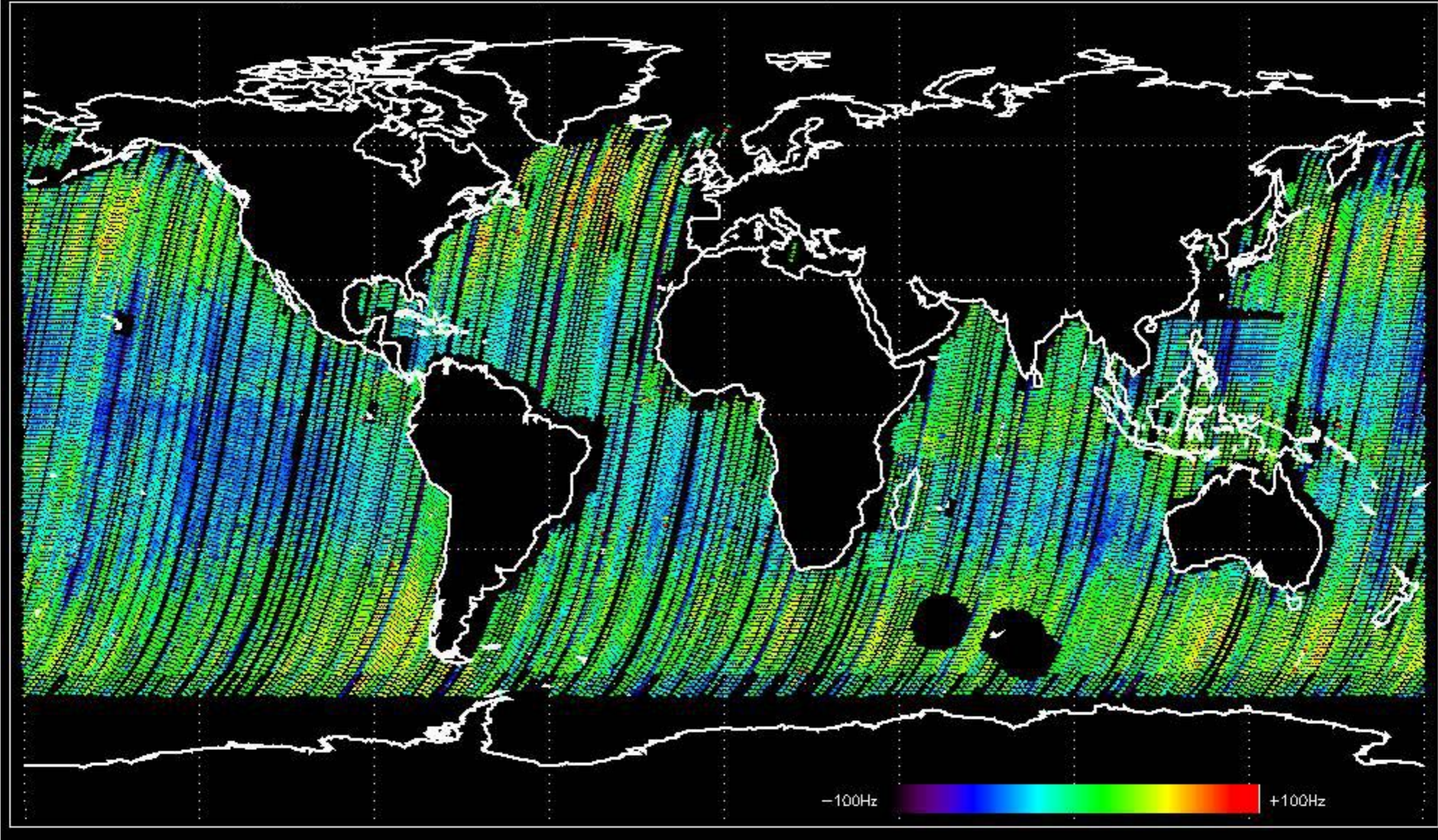
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.481373 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.6090846 Hz

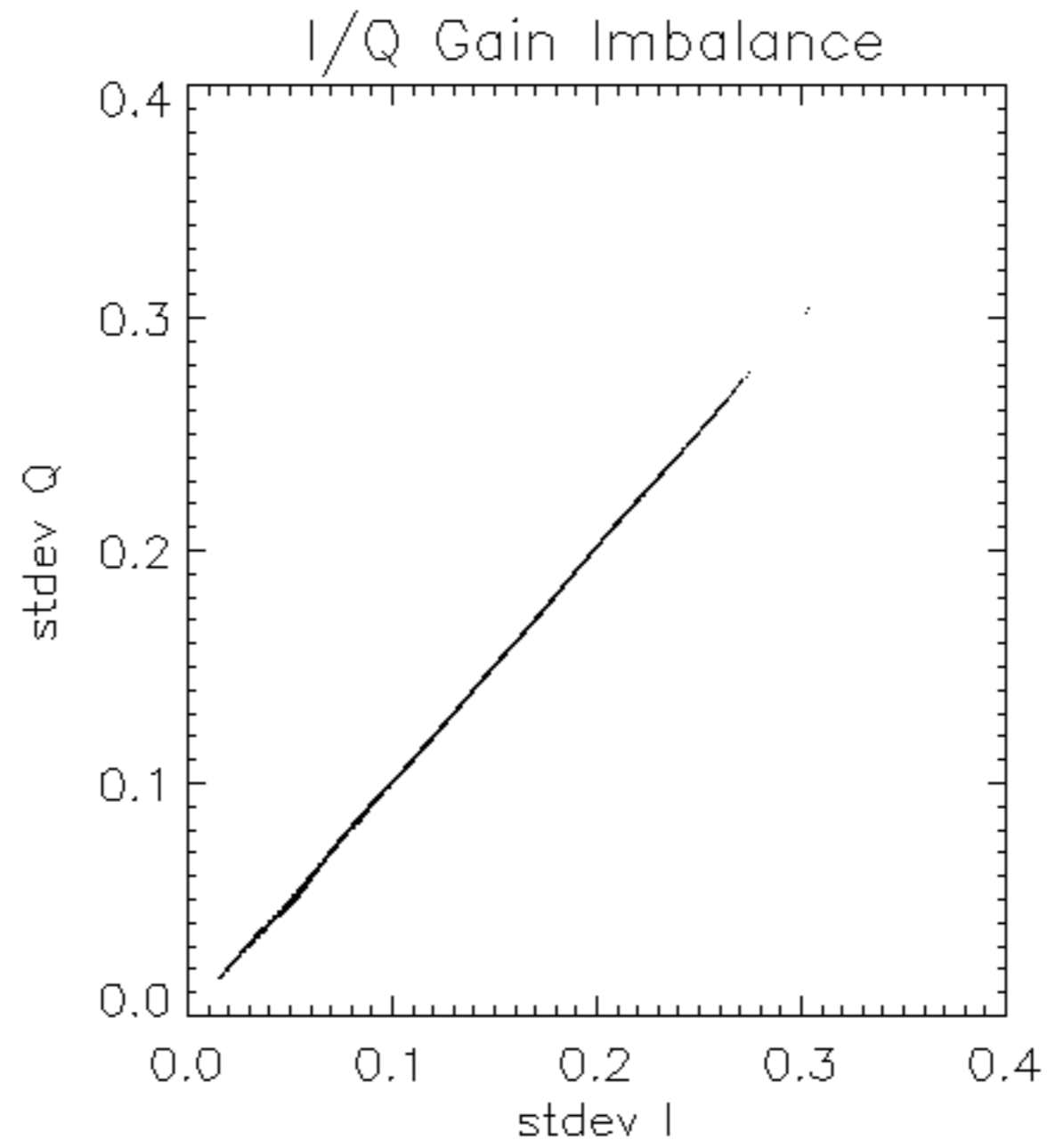


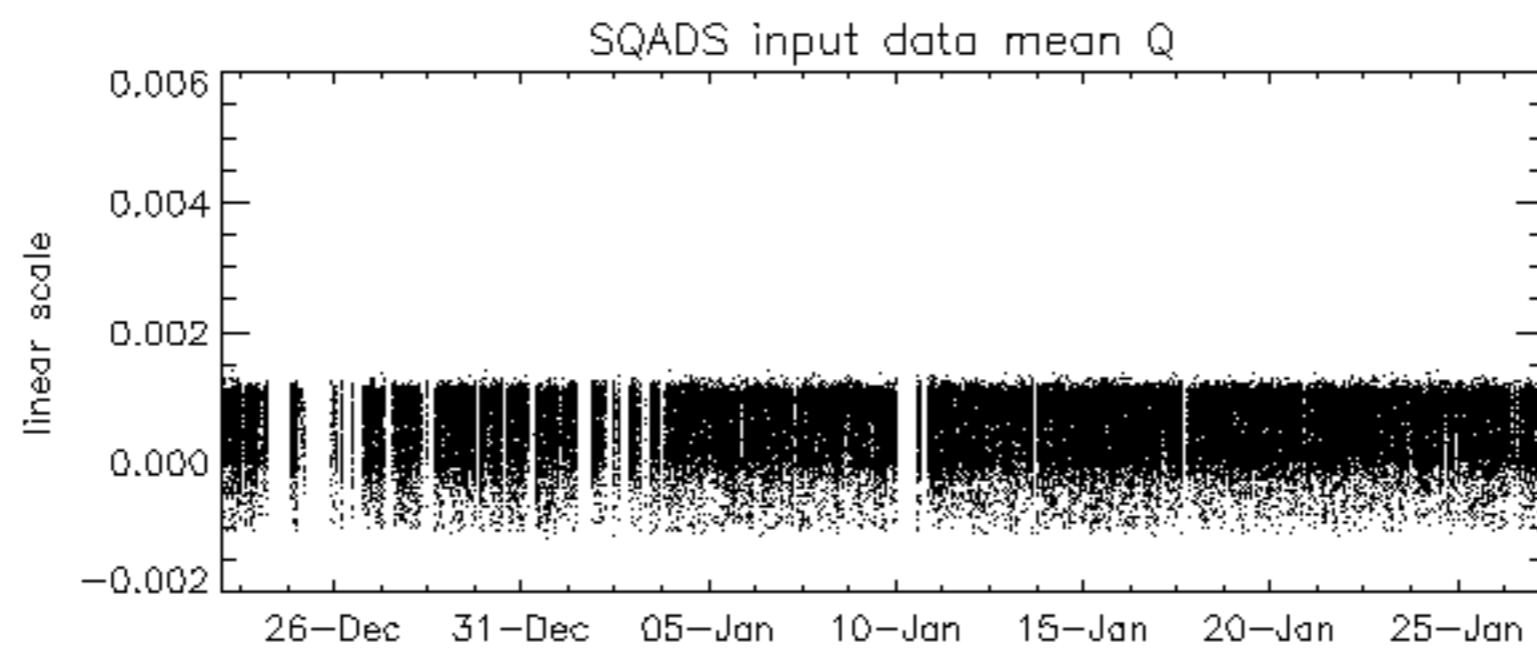
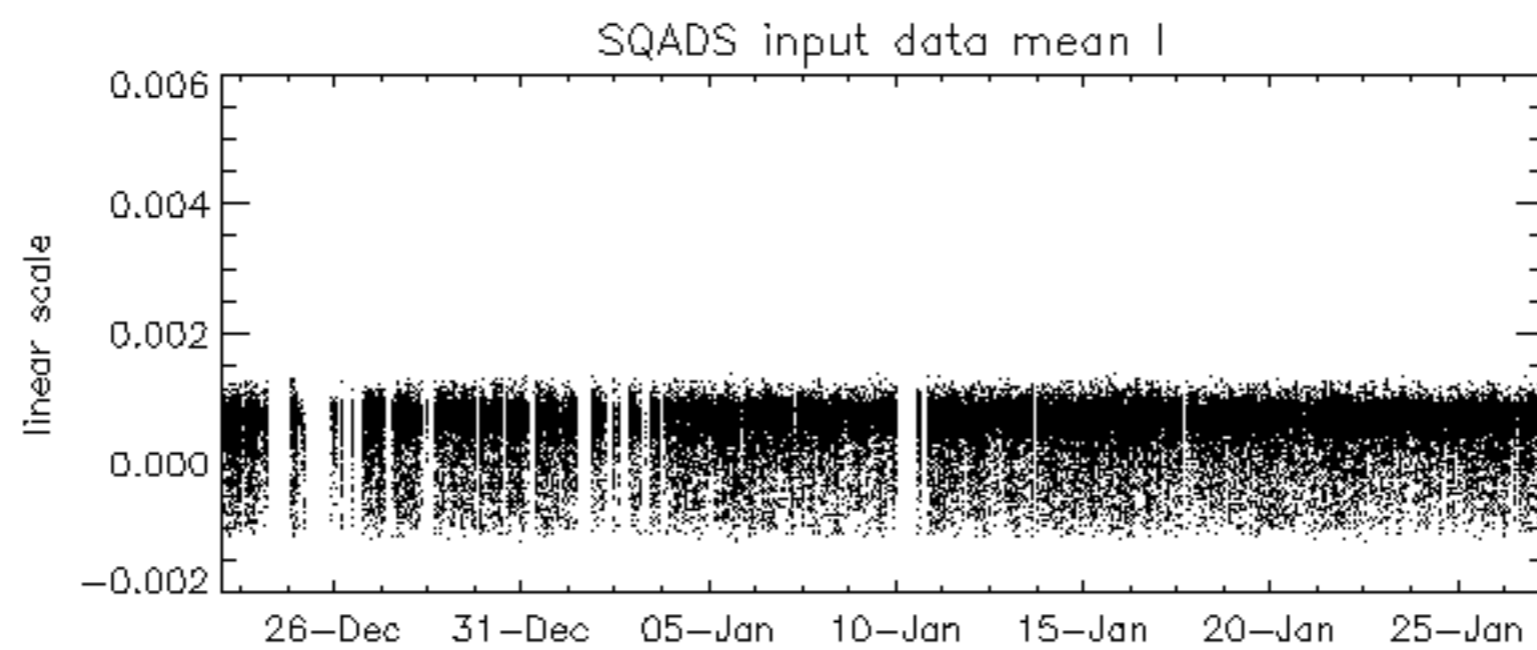
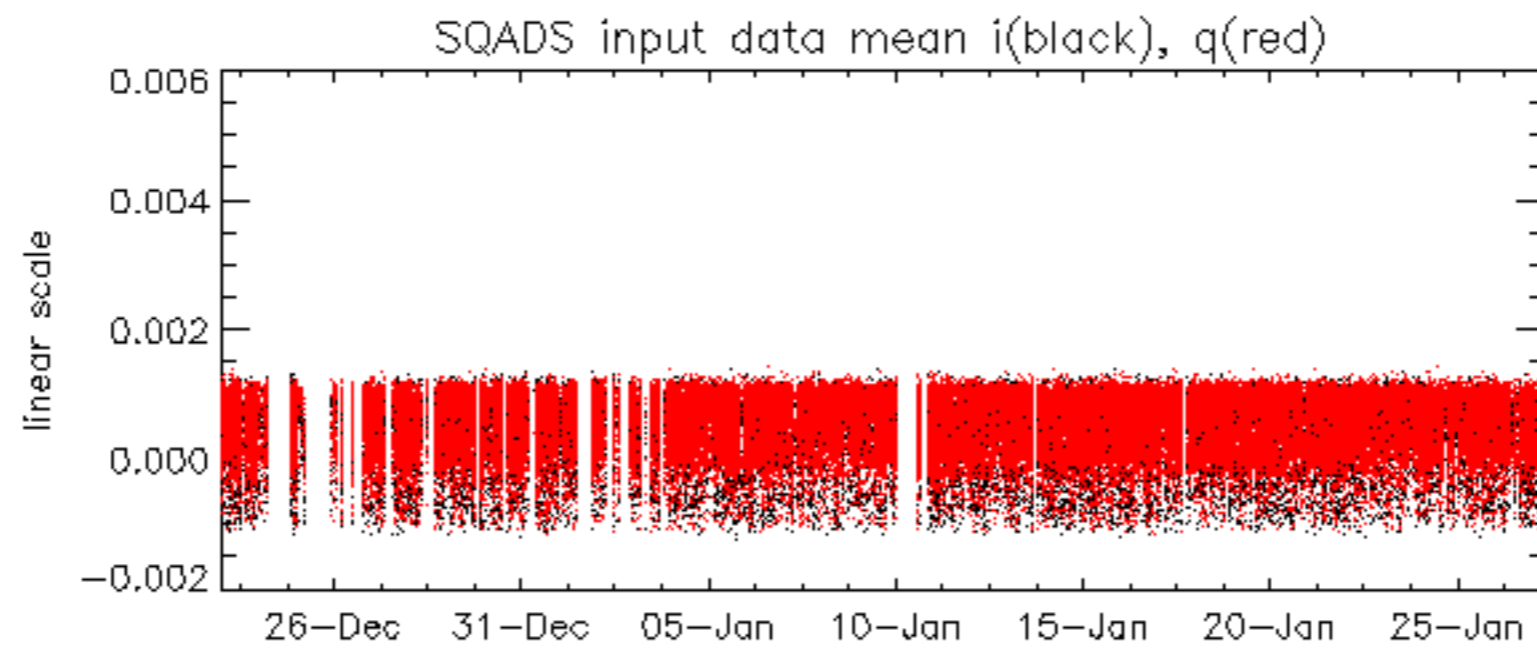
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.330845 Hz

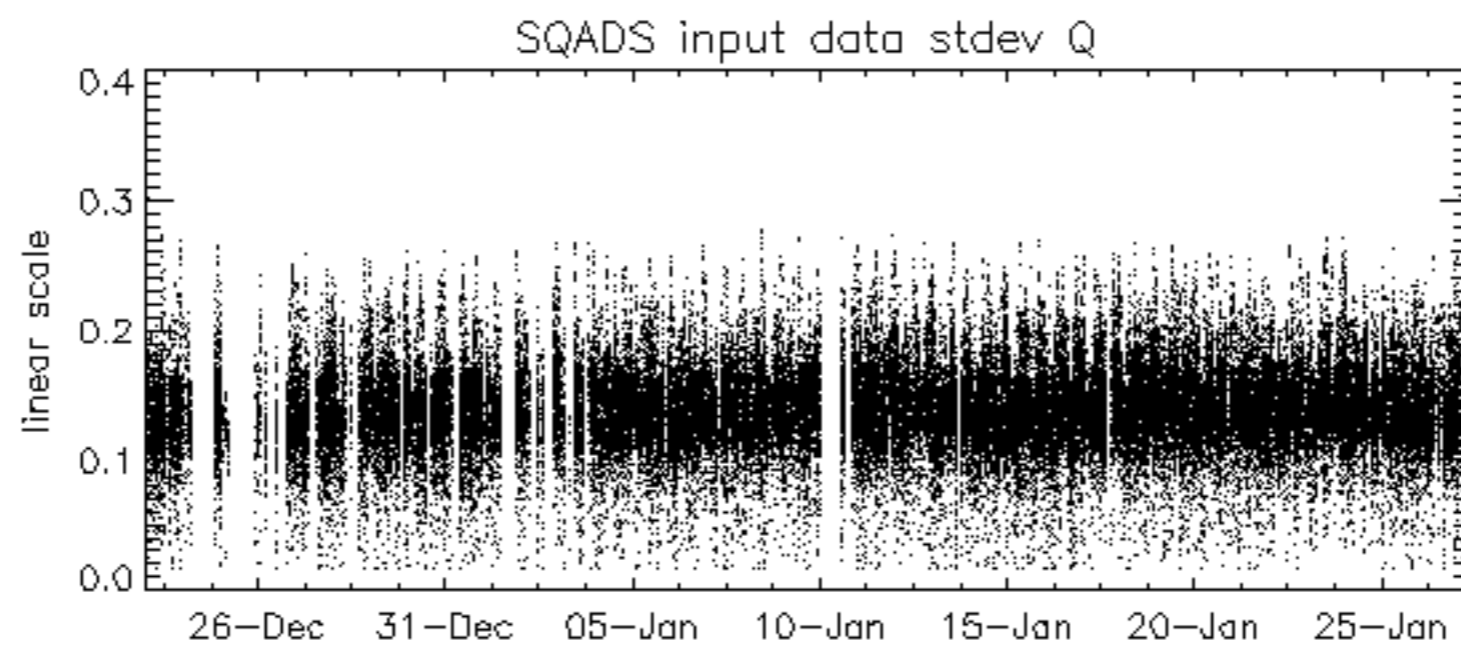
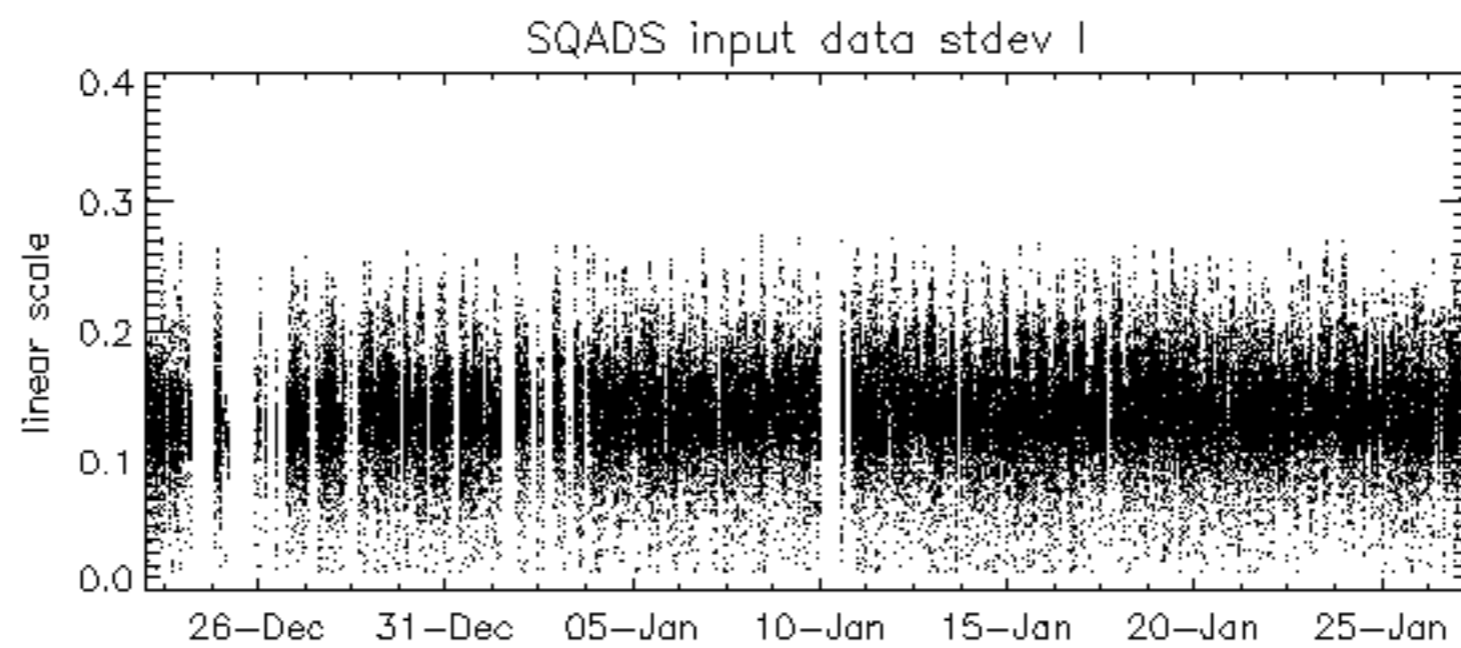
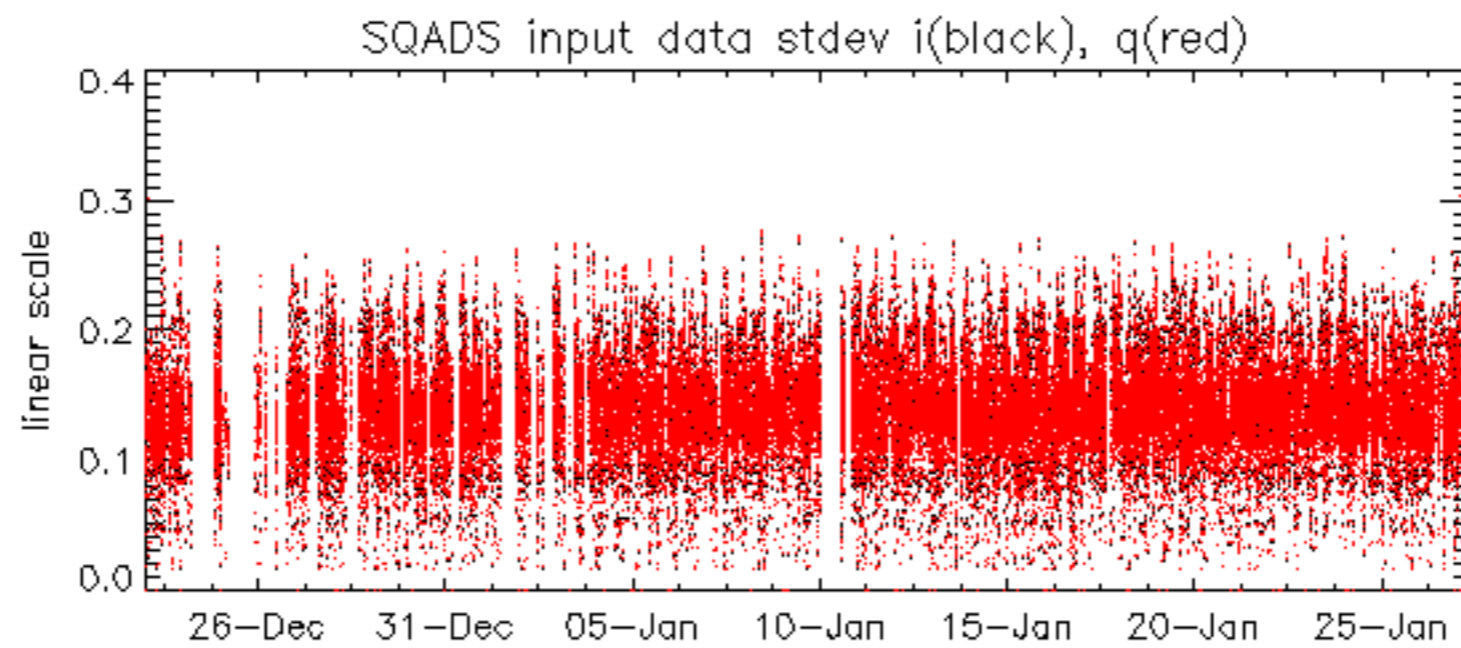


No anomalies observed on available MS products:

No anomalies observed.



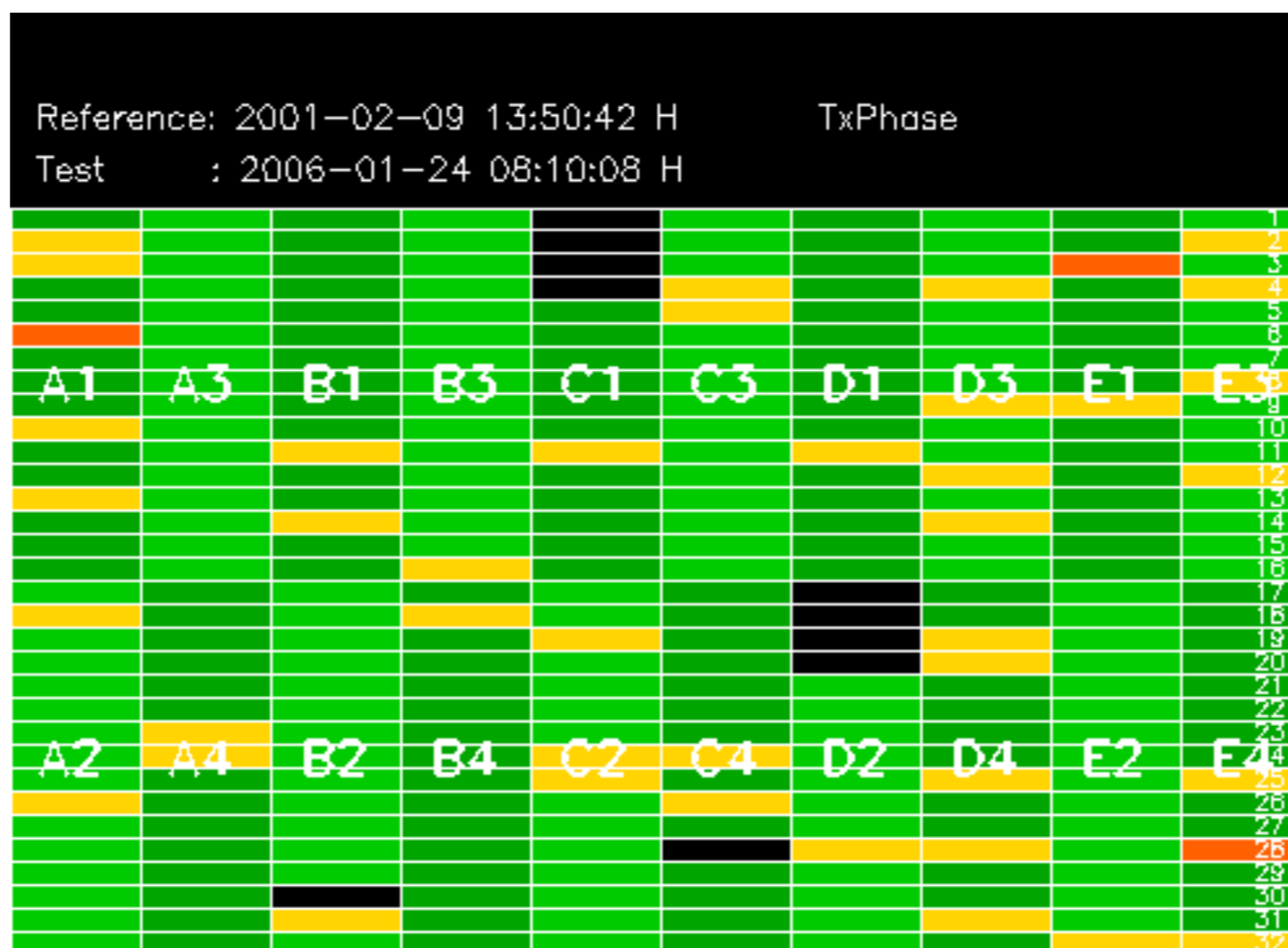




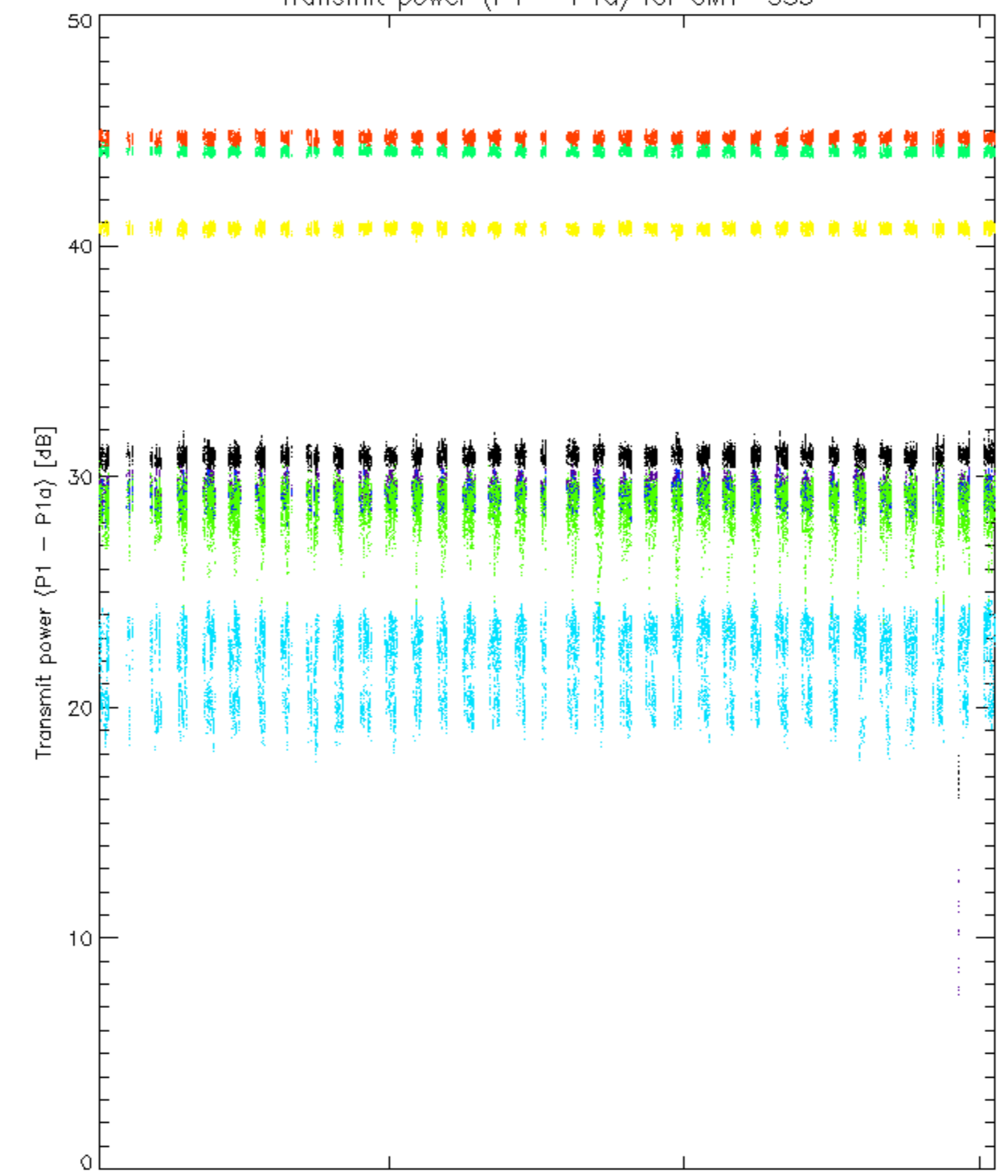
Summary of analysis for the last 3 days 2006012[567]

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

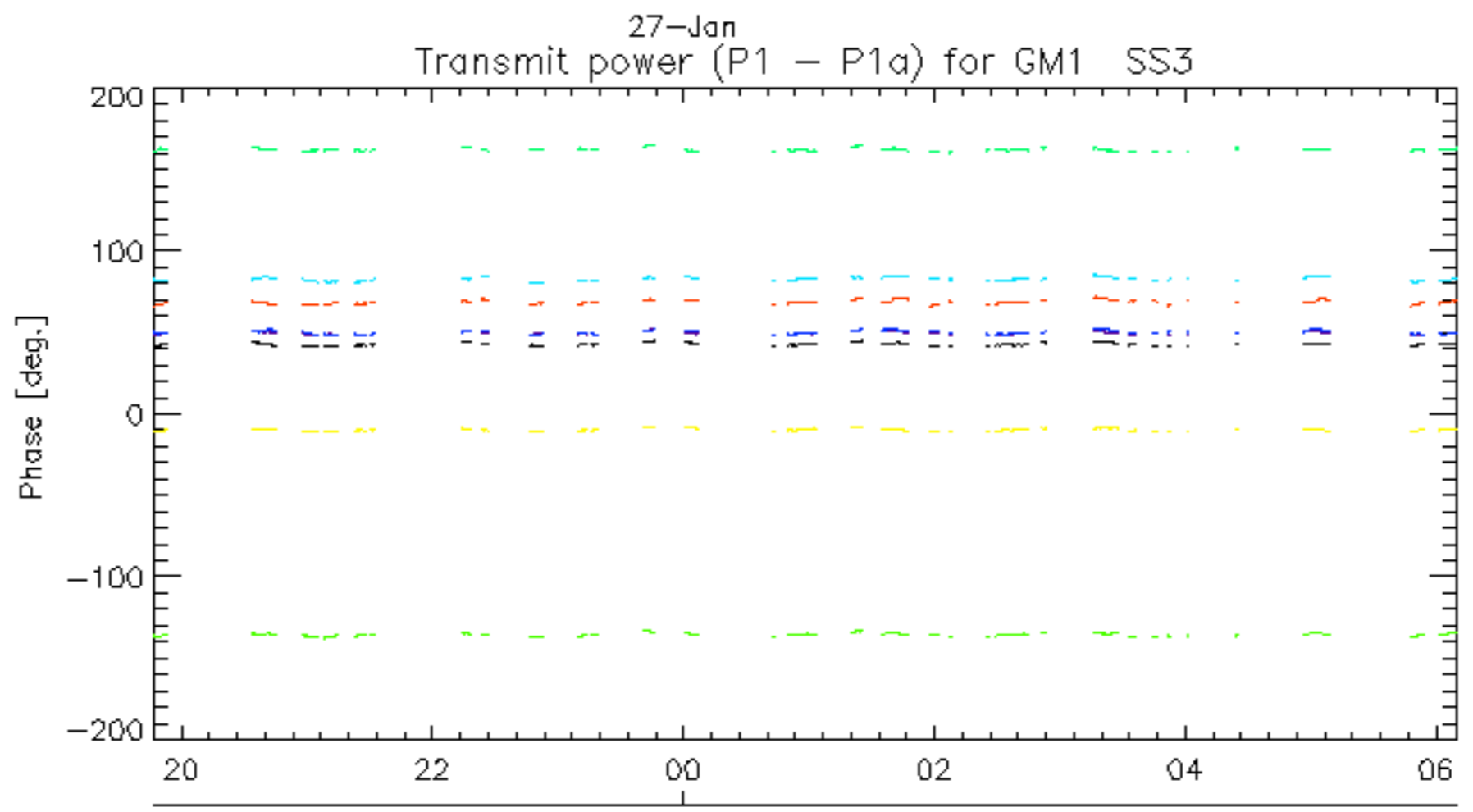
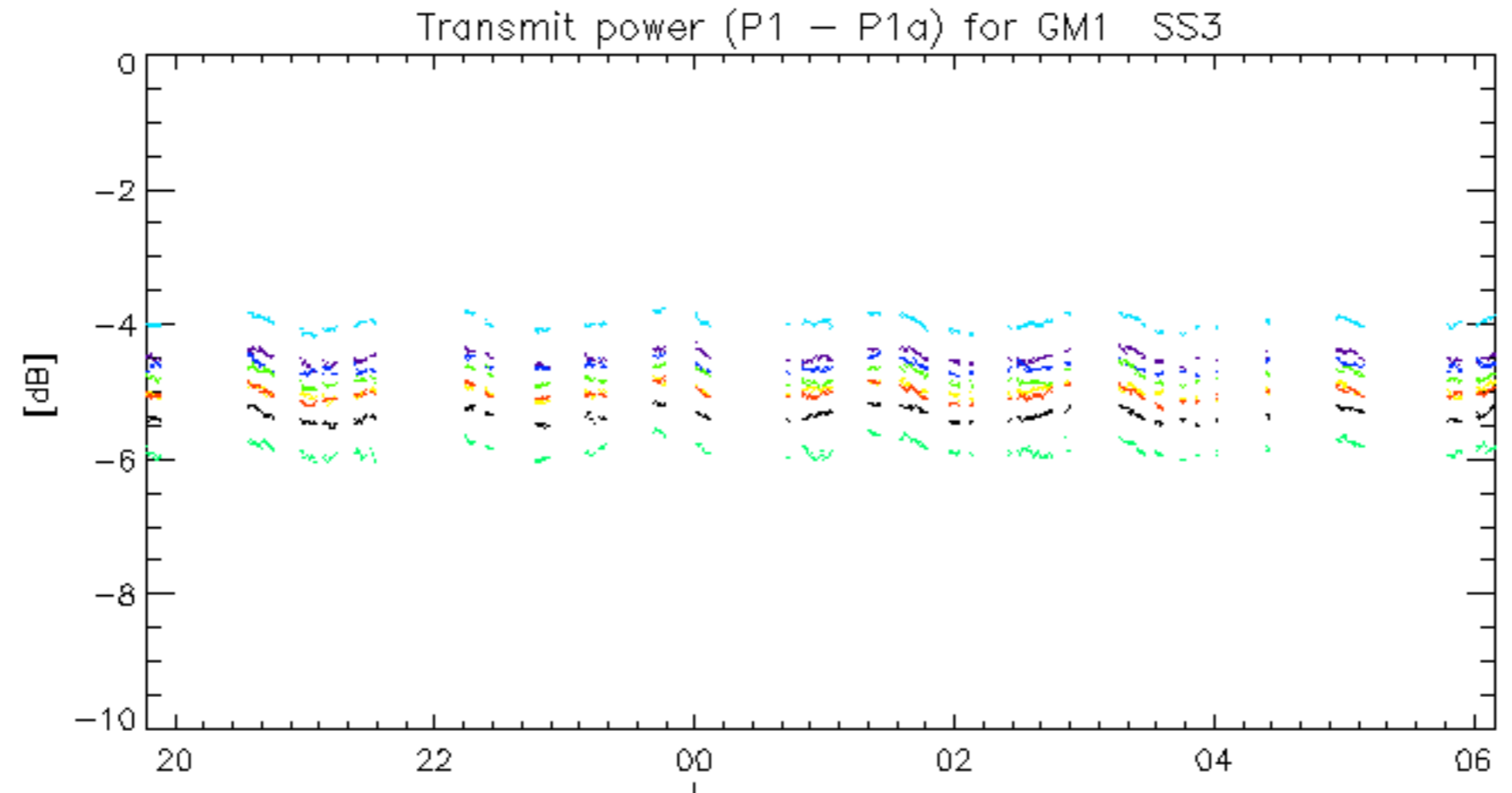
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060126_200857_00000502044_00343_20437_1212.N1	0	11
ASA_IMM_1PNPDK20060126_125400_000001222044_00339_20433_0406.N1	1	0
ASA_WSM_1PNPDE20060126_142816_00000672044_00340_20434_2512.N1	0	67



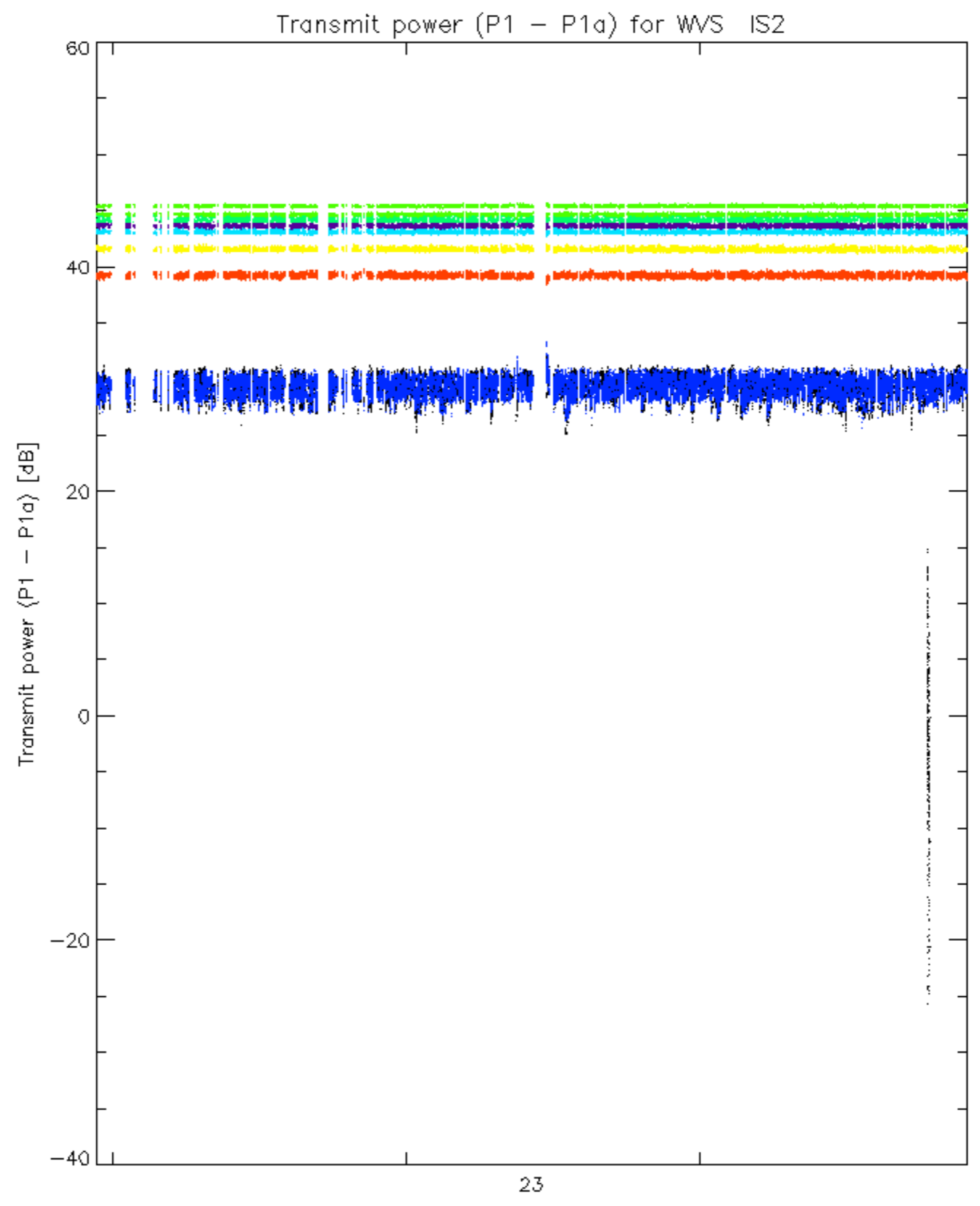
Transmit power (P1 - P1a) for GM1 SS3



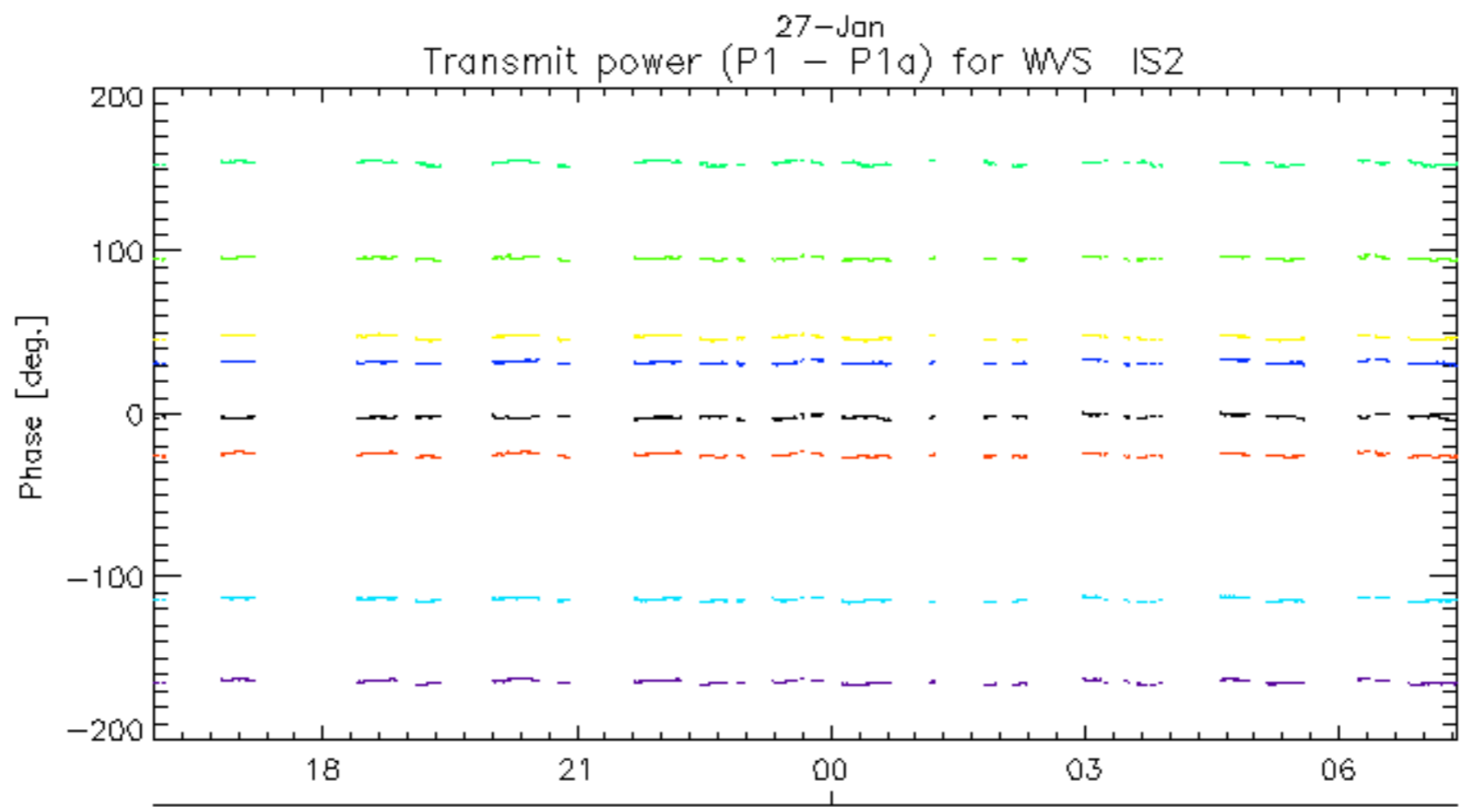
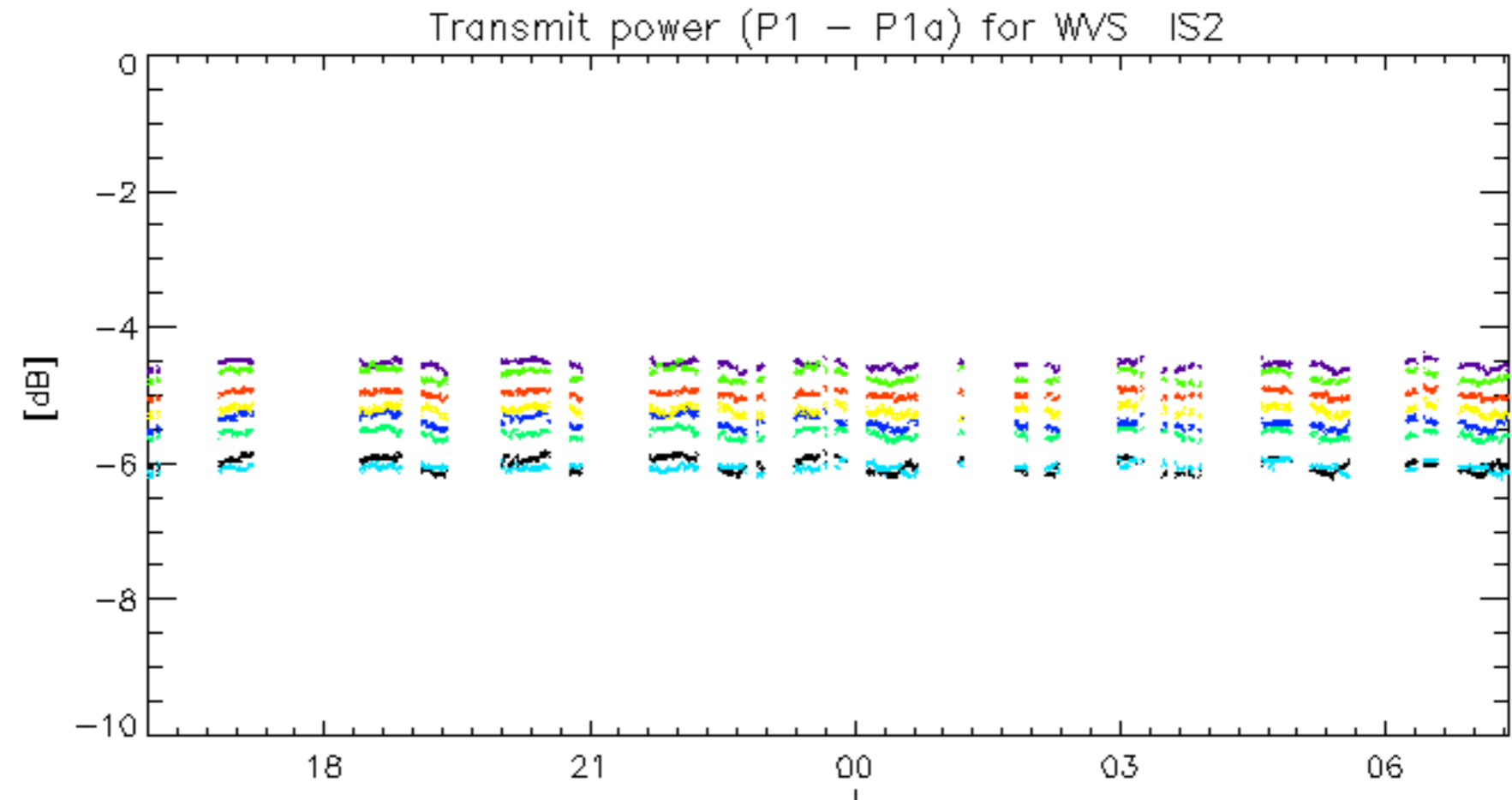
rows: 3 7 11 15 19 22 26 30



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



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



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

No unavailabilities during the reported period.