

PRELIMINARY REPORT OF 061109

last update on Thu Nov 9 16:36:30 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 2006-11-08 00:00:00 to 2006-11-09 16:36:30

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	36	66	21	8	25
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	36	66	21	8	25
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	66	21	8	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	66	21	8	25

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	39	57	20	9	50
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	39	57	20	9	50
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	57	20	9	50
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	57	20	9	50

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	20061109 100809
H	20061108 071834

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
☒	☒
☒	☒
☒	☒
☒	☒

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	-3.954444	0.009191	0.004121
7	P1	-3.115126	0.019323	-0.112713
11	P1	-4.114269	0.024499	-0.067965
15	P1	-6.250943	0.015271	-0.105624
19	P1	-3.599256	0.066026	-0.055712
22	P1	-4.651270	0.131862	-0.078949
26	P1	-3.997226	0.126904	0.108408
30	P1	-5.891332	0.240952	0.047977
3	P1	-16.554449	0.224370	0.291378
7	P1	-17.182358	0.184918	-0.300425
11	P1	-17.085423	0.429316	-0.220448
15	P1	-12.965591	0.118853	-0.343204
19	P1	-14.825966	0.374293	-0.305208
22	P1	-15.733290	0.501347	-0.580096
26	P1	-15.082411	0.231982	0.034982
30	P1	-17.184303	0.727398	-0.856003

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.839407	0.088130	-0.049533
7	P2	-21.743542	0.093843	0.051361
11	P2	-15.687094	0.106198	0.104482
15	P2	-7.096227	0.107488	-0.094023
19	P2	-9.159782	0.101318	-0.112905
22	P2	-18.187147	0.095457	-0.141214
26	P2	-16.484926	0.107277	-0.185838
30	P2	-19.470877	0.090137	-0.016776

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.218104	0.007620	-0.048430
7	P3	-8.218104	0.007620	-0.048430
11	P3	-8.218104	0.007620	-0.048430
15	P3	-8.218104	0.007620	-0.048430
19	P3	-8.218104	0.007620	-0.048430
22	P3	-8.218104	0.007620	-0.048430
26	P3	-8.218013	0.007639	-0.048284
30	P3	-8.218013	0.007639	-0.048284

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.923879	0.178700	0.078787
7	P1	-2.614505	1.151325	0.381775
11	P1	-2.900501	0.142846	0.149617
15	P1	-3.699625	0.130634	0.102823
19	P1	-3.522888	0.140394	-0.068018
22	P1	-5.067402	0.104818	0.012439
26	P1	-5.998550	0.266092	-0.086538
30	P1	-5.300744	0.177348	-0.111094
3	P1	-11.752139	0.435438	0.200479
7	P1	-10.153768	1.460703	0.431576
11	P1	-10.414582	0.395145	0.386193
15	P1	-10.880034	0.532345	0.509960
19	P1	-15.748586	2.479202	-0.183917
22	P1	-21.160845	1.655990	-0.757058

26	P1	-15.947479	0.450360	-0.464157
30	P1	-17.977814	0.537110	0.331667

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.387808	0.270323	-0.285336
7	P2	-22.053474	1.496482	-0.714219
11	P2	-10.879143	0.239131	-0.252492
15	P2	-4.921907	0.073686	-0.152430
19	P2	-6.905963	0.147763	-0.167341
22	P2	-8.265777	0.488982	0.056833
26	P2	-24.176878	1.138785	-0.585827
30	P2	-21.882044	0.580987	-0.298095

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.069696	0.003294	-0.048303
7	P3	-8.069610	0.003269	-0.048248
11	P3	-8.069607	0.003276	-0.048820
15	P3	-8.069521	0.003273	-0.048013
19	P3	-8.069593	0.003277	-0.048334
22	P3	-8.069474	0.003280	-0.048598
26	P3	-8.069394	0.003269	-0.049324
30	P3	-8.069480	0.003278	-0.049485

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	0.000552519
	stdev	1.73143e-07
MEAN Q	mean	0.000519200
	stdev	2.18759e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137224
	stdev	0.00112063
STDEV Q	mean	0.137590
	stdev	0.00113810



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006110[789]

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_1PNPDK20061108_143314_000000352052_00425_24527_3678.N1	1	0
ASA_IMM_1PNPDK20061108_202032_000000362052_00429_24531_3691.N1	1	0
ASA_GM1_1PNPDK20061107_102250_000002232052_00409_24511_8176.N1	0	8
ASA_WSM_1PNPDE20061108_001656_000002632052_00417_24519_0001.N1	0	29



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

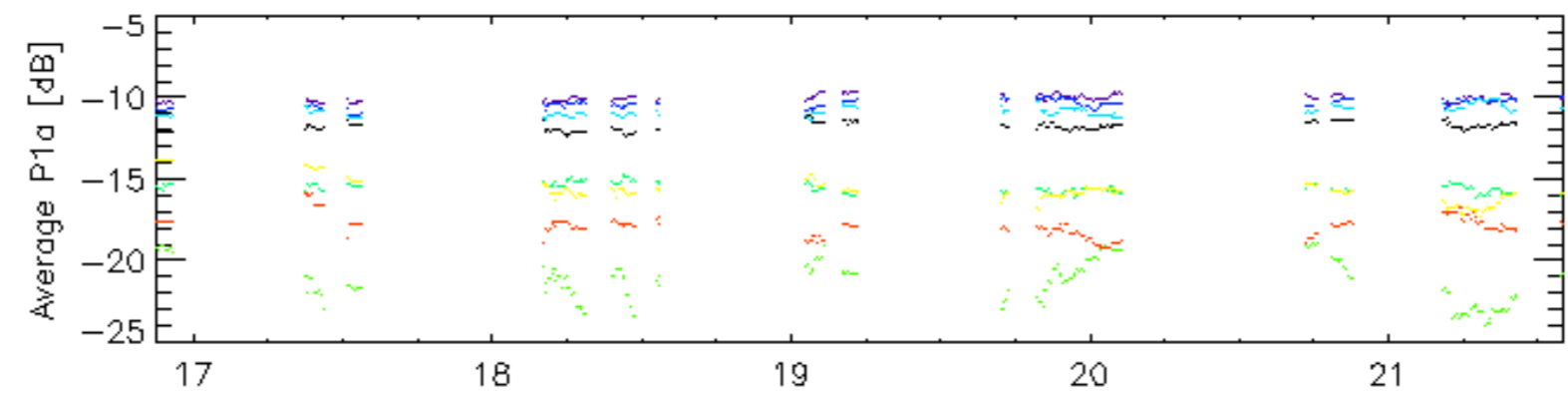
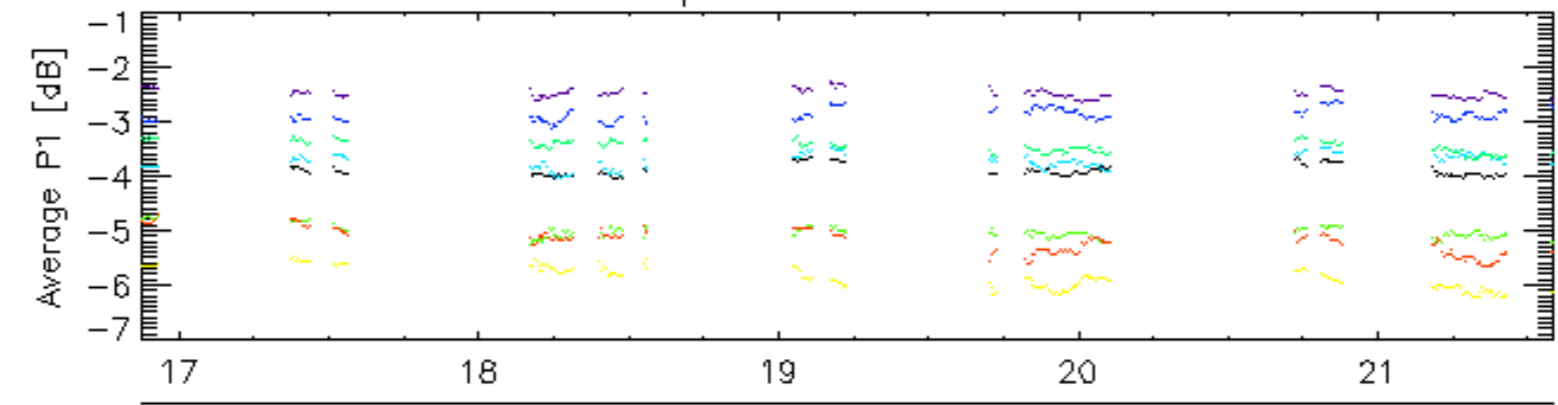
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

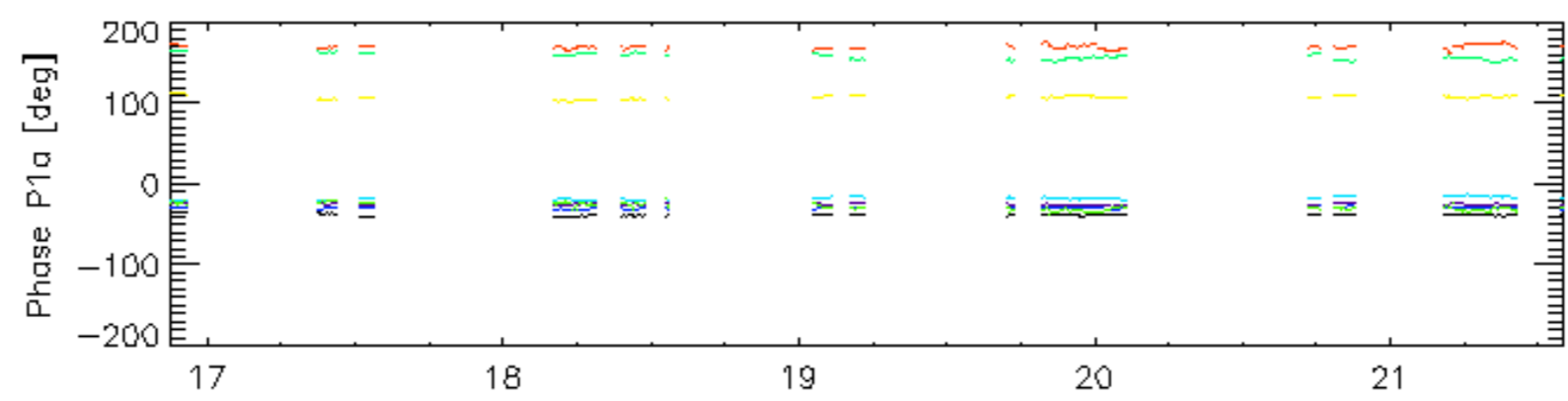
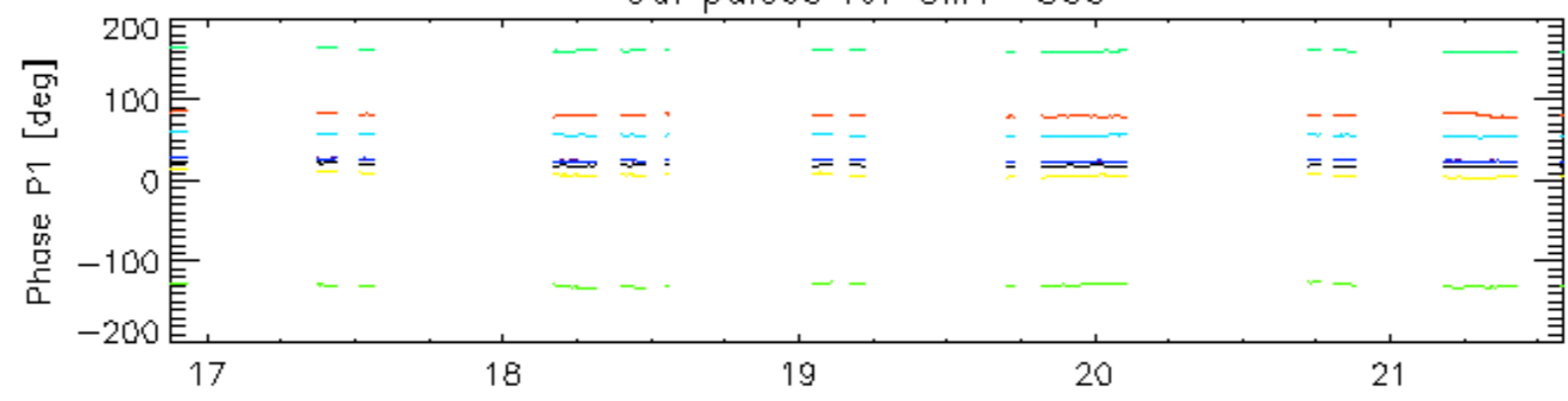
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

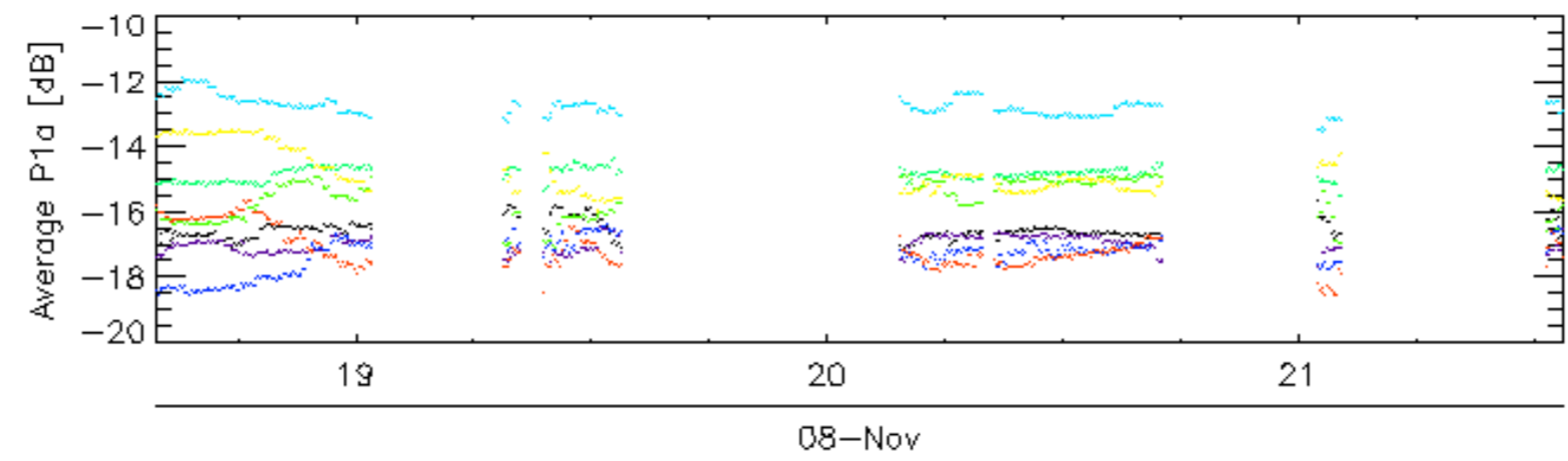
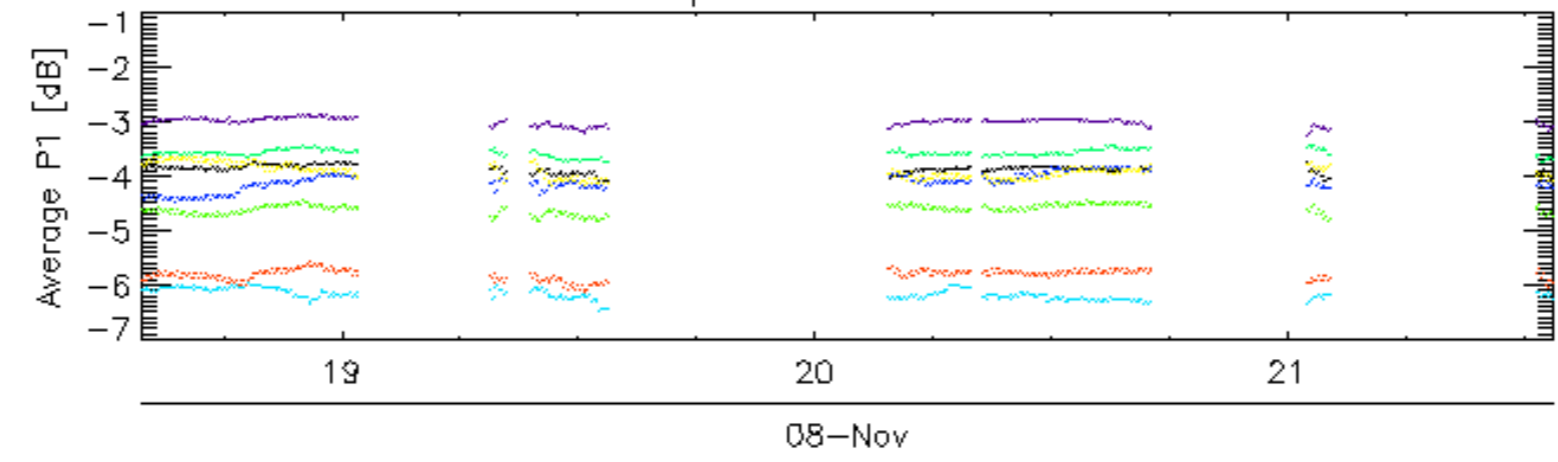


Cal pulses for GM1 SS3

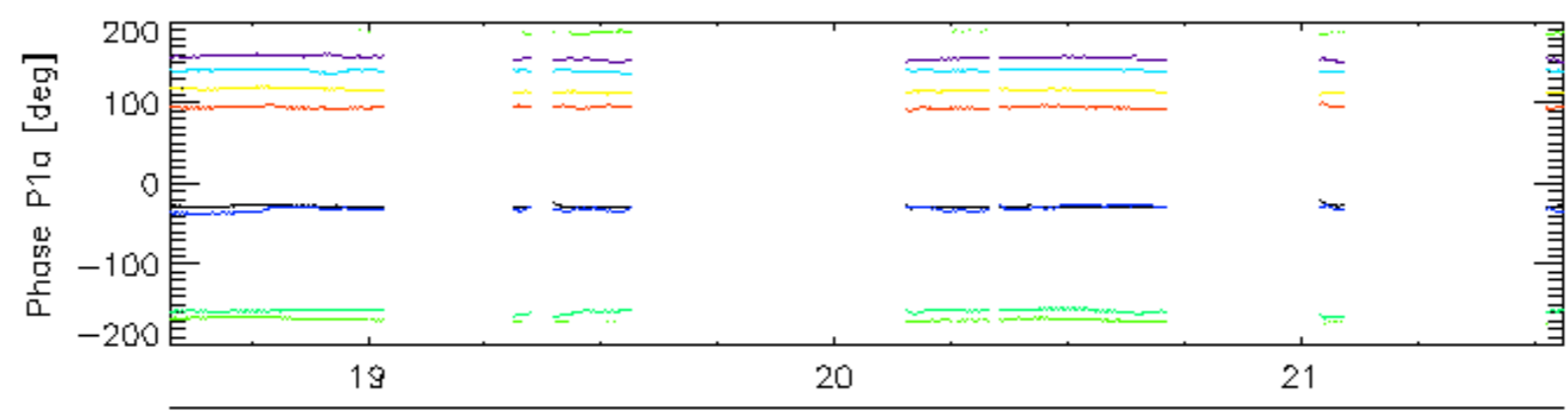
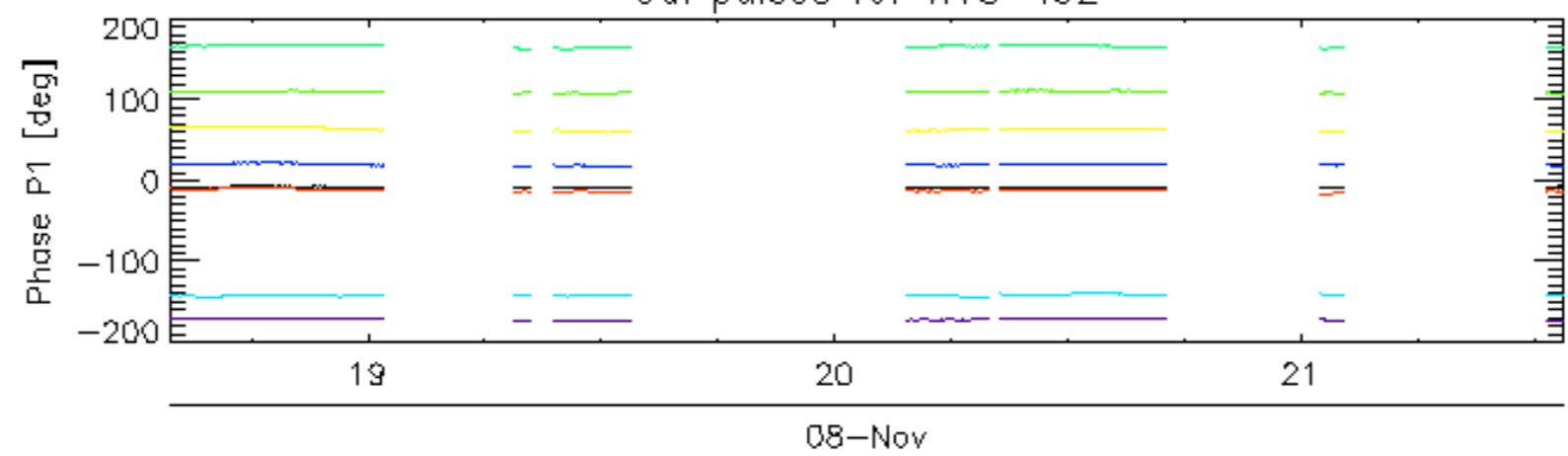


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

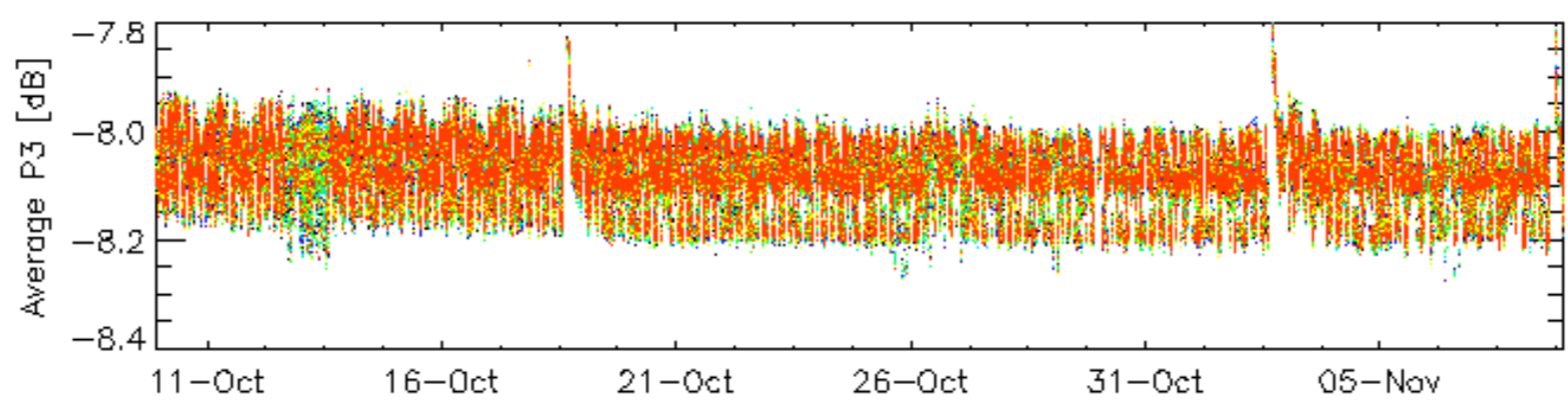
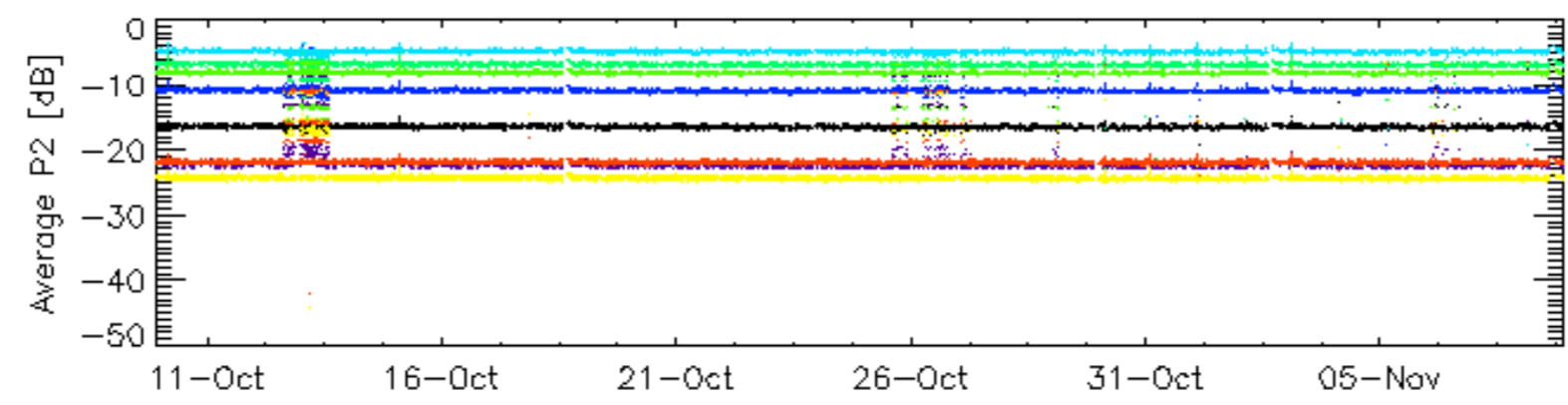
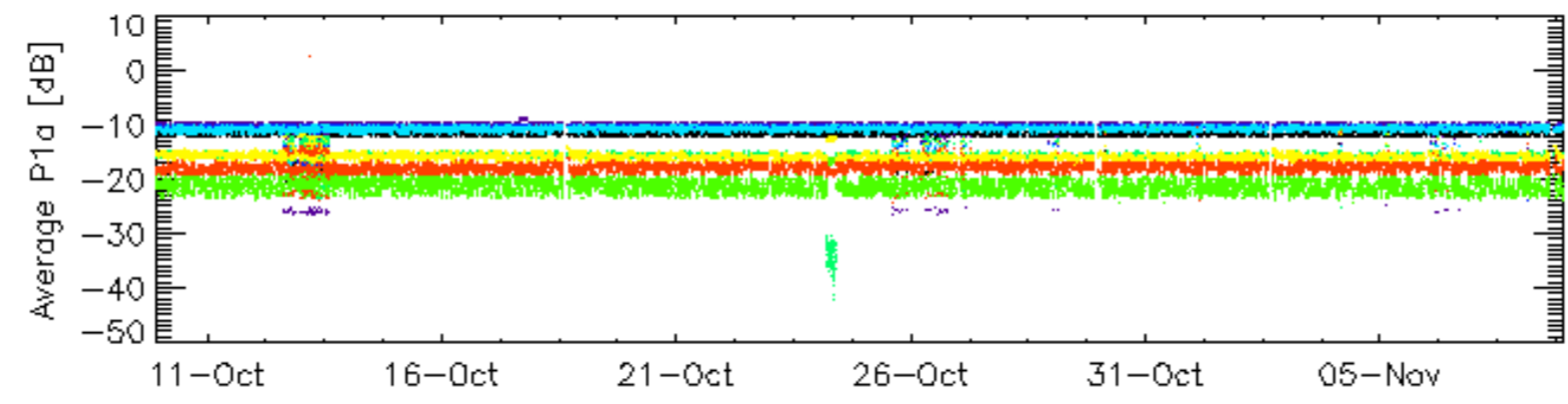
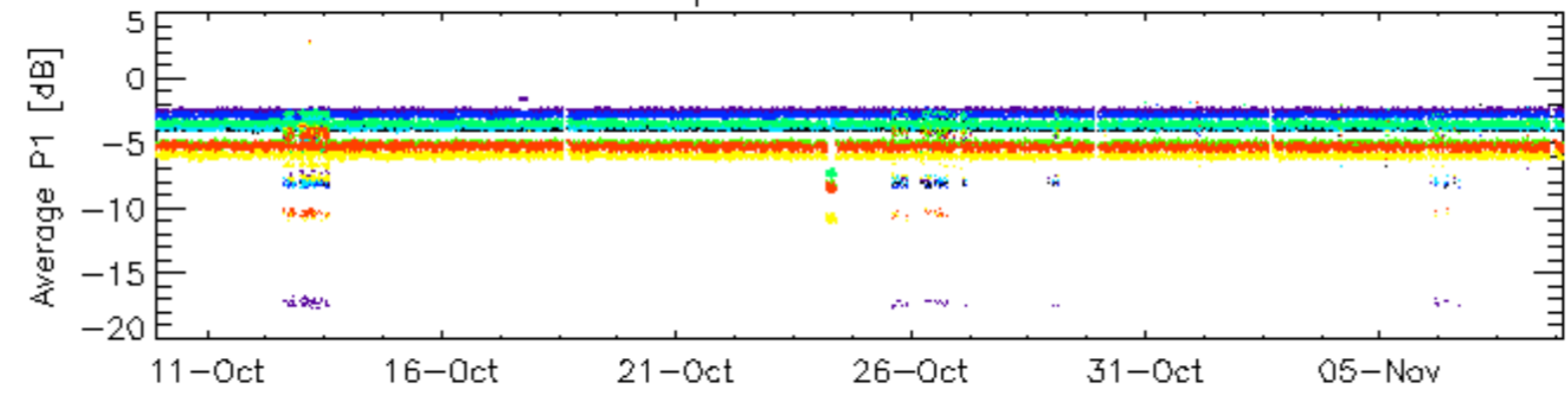


Cal pulses for WVS IS2



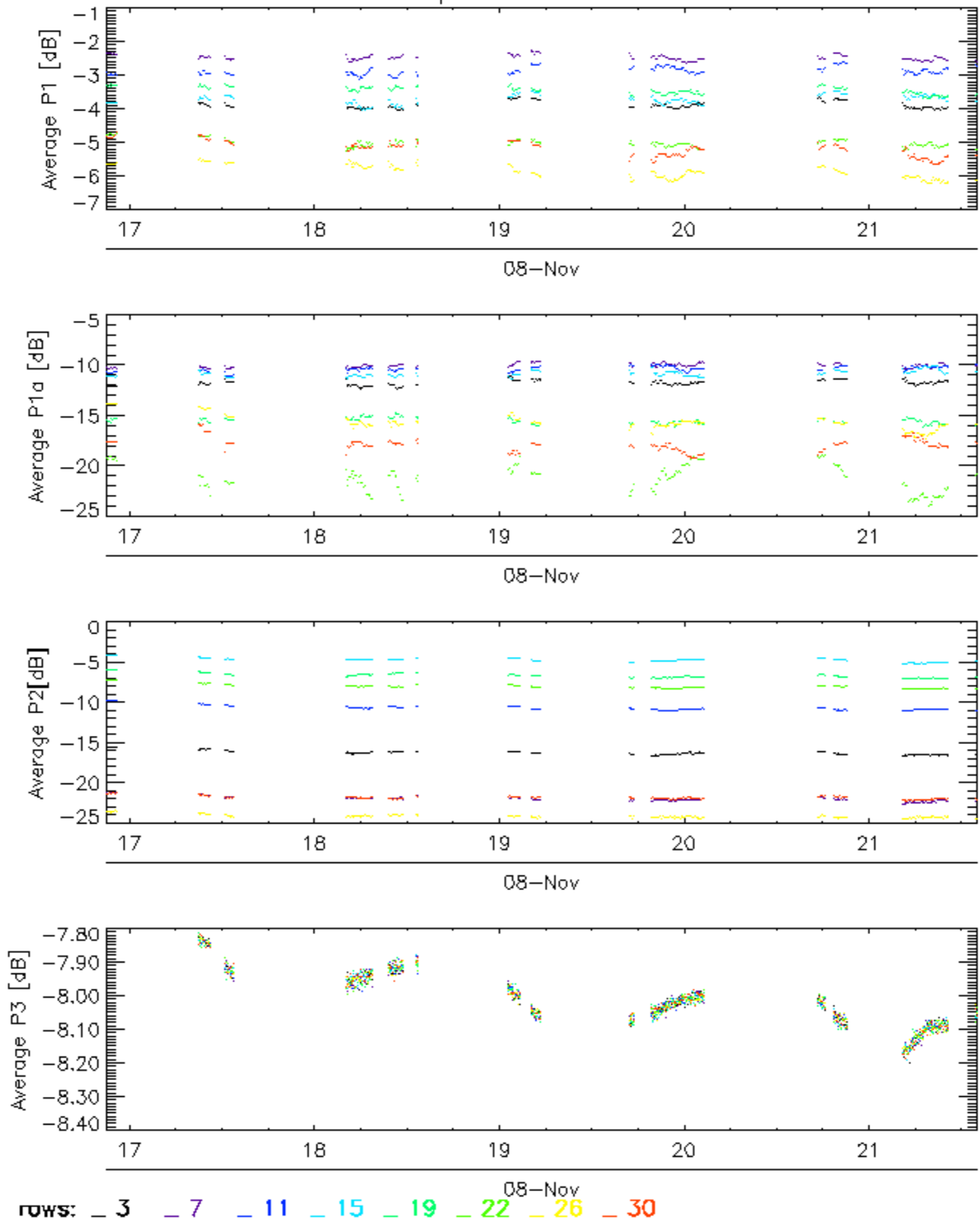
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

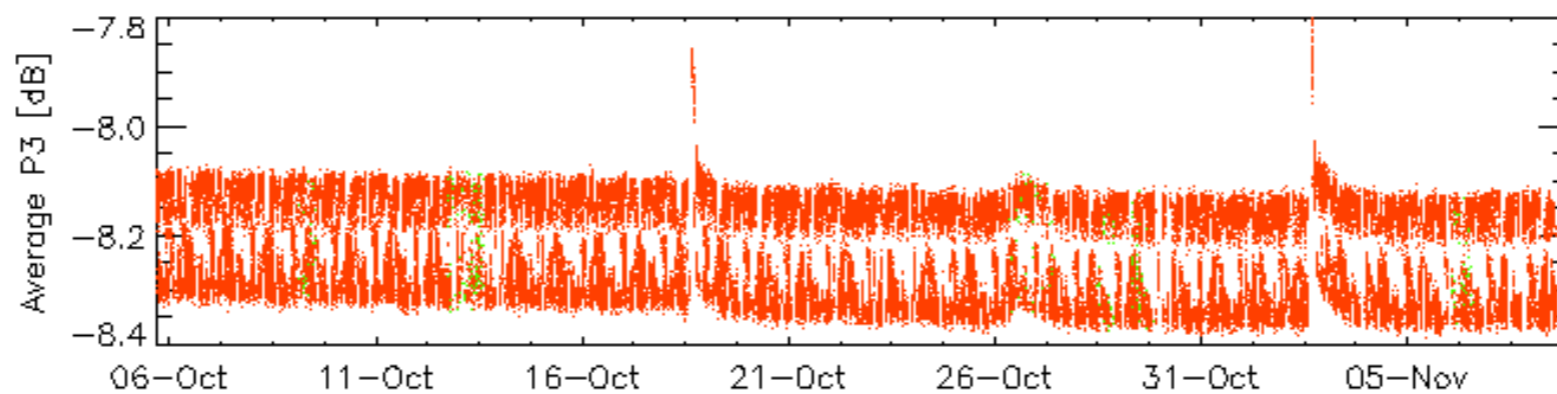
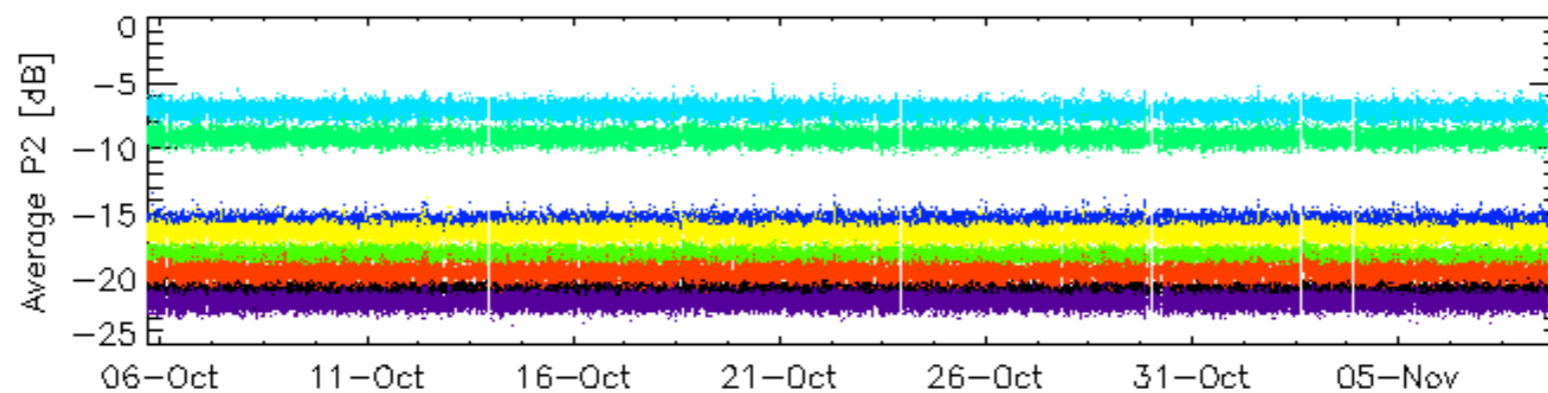
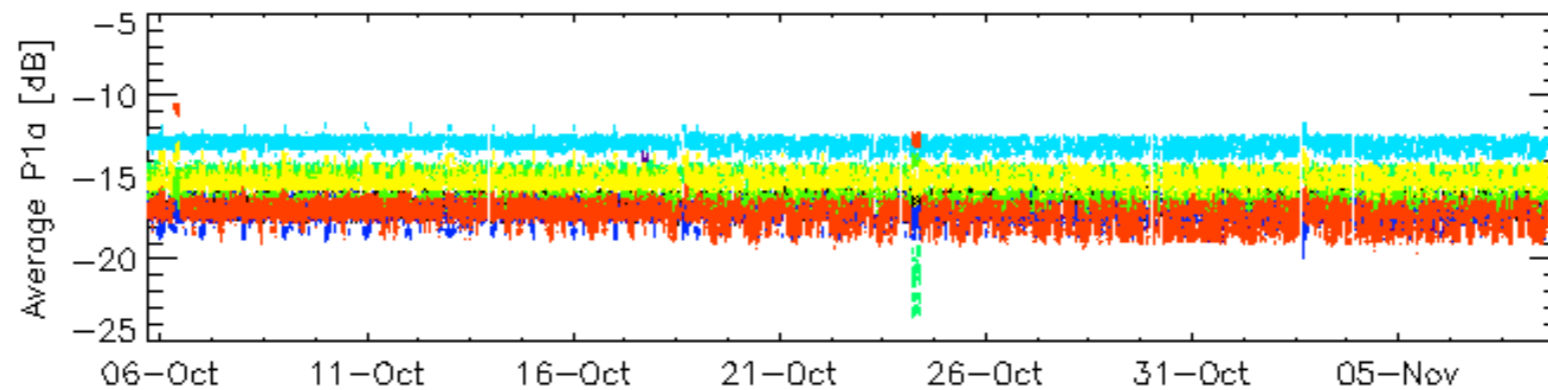
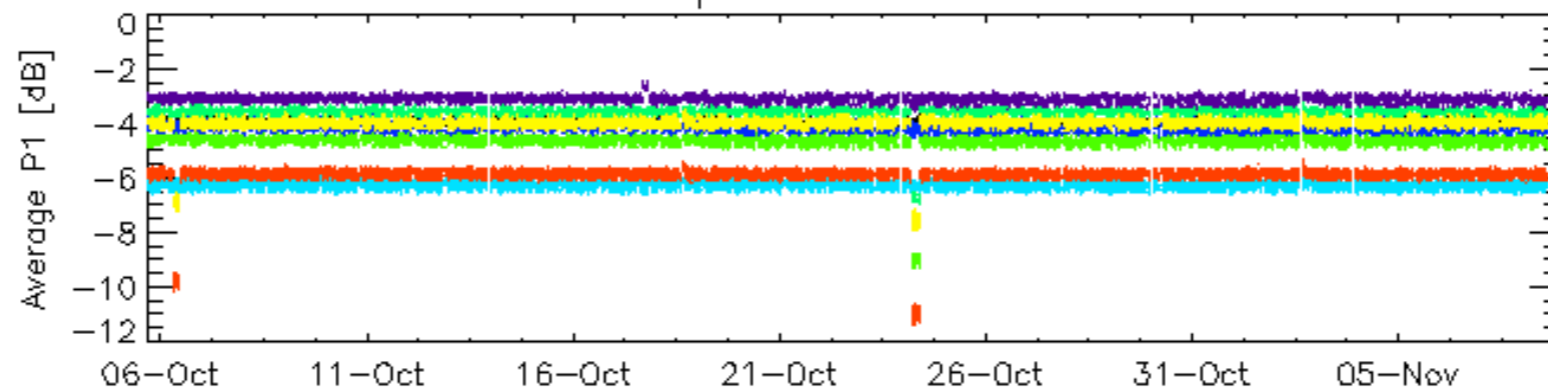


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

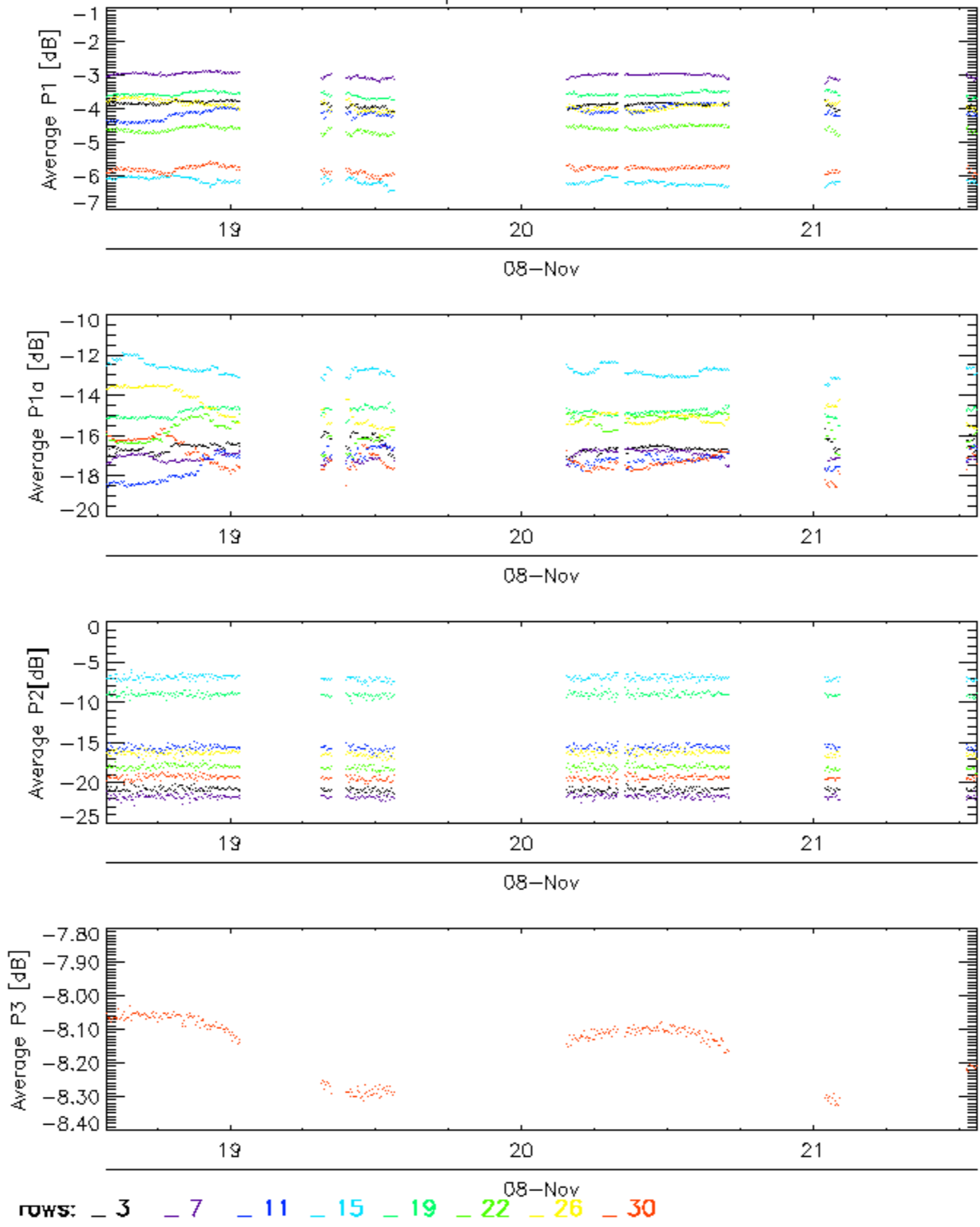


Cal pulses for WVS IS2



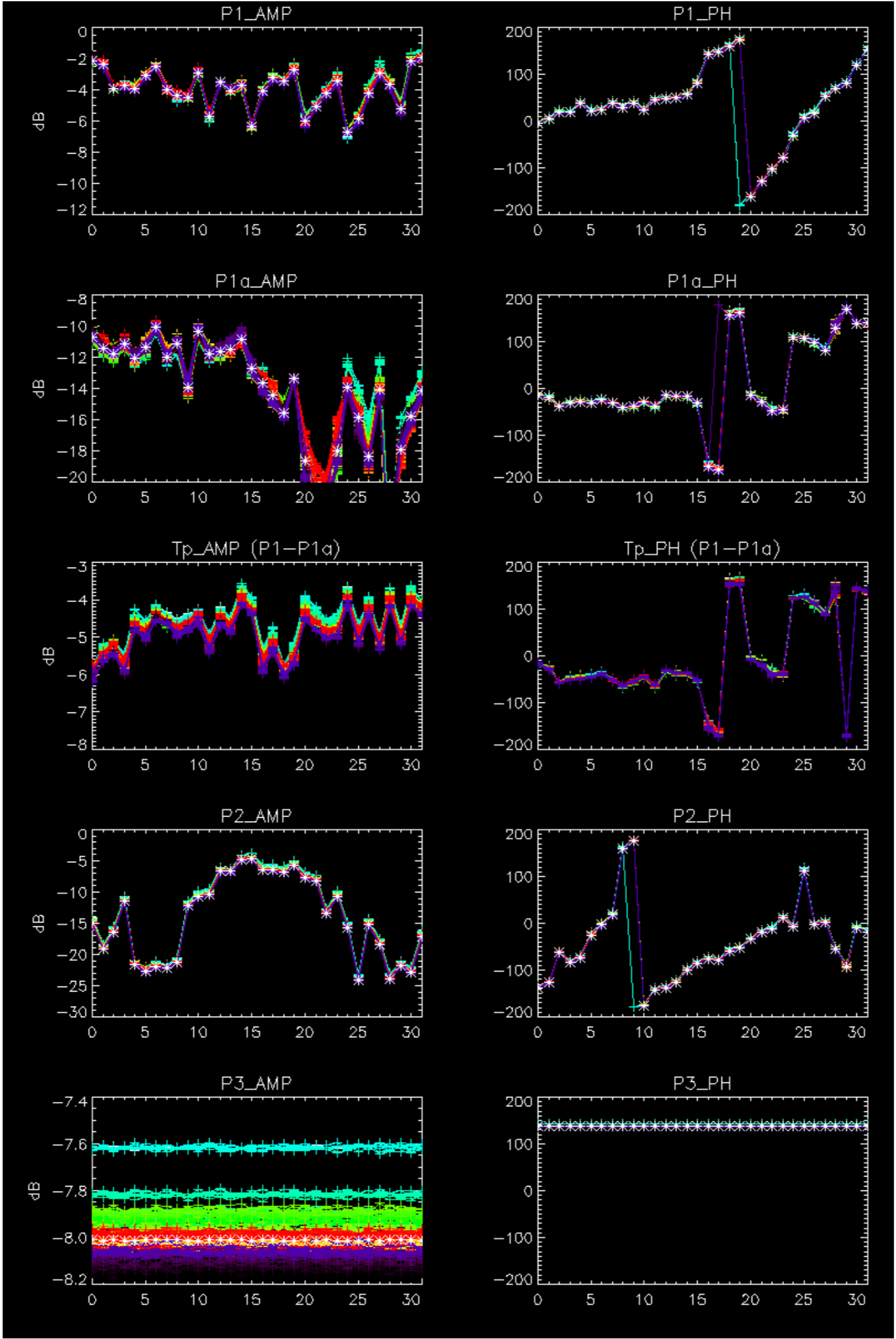
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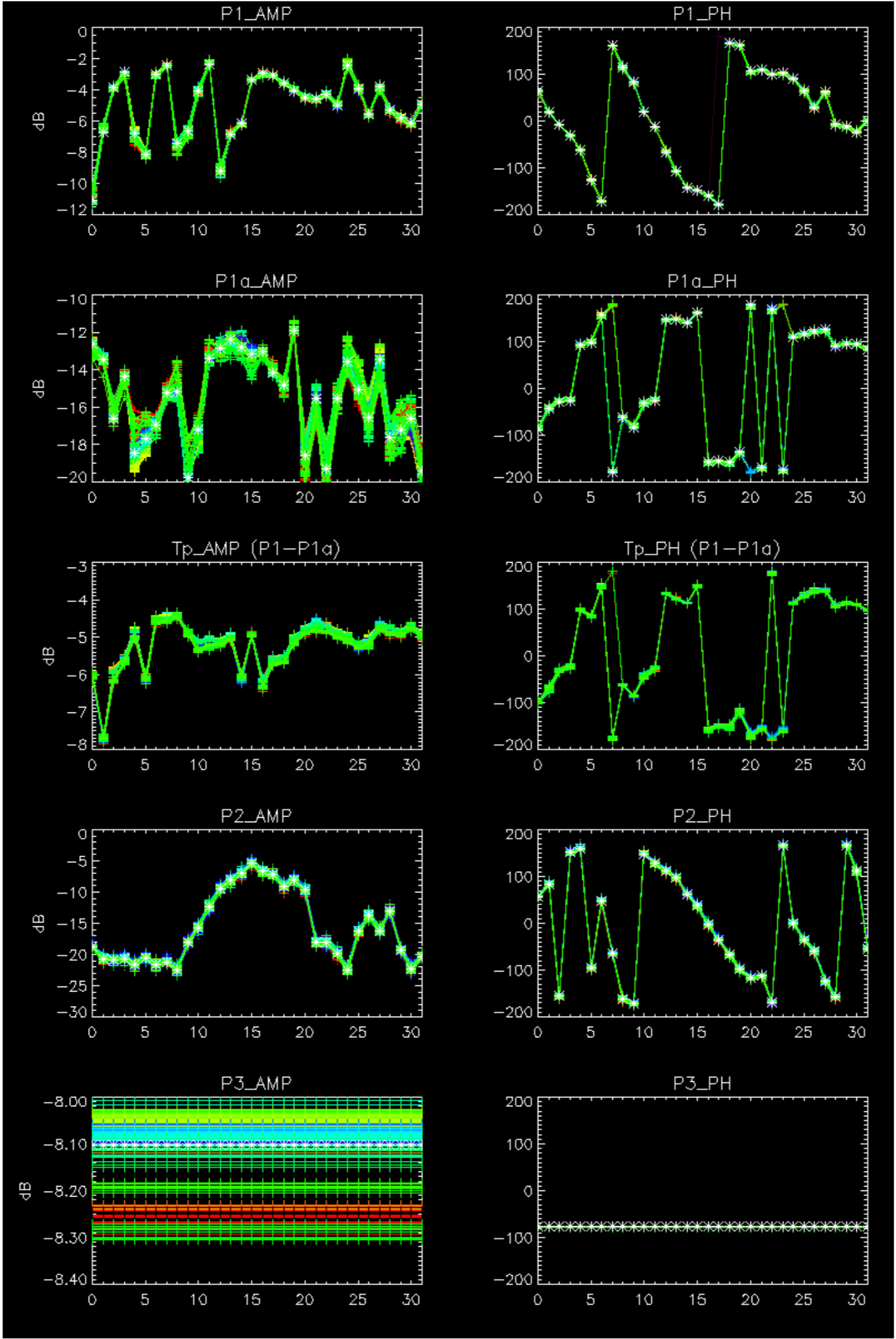
Cal pulses for WVS IS2



No anomalies observed on available browse products

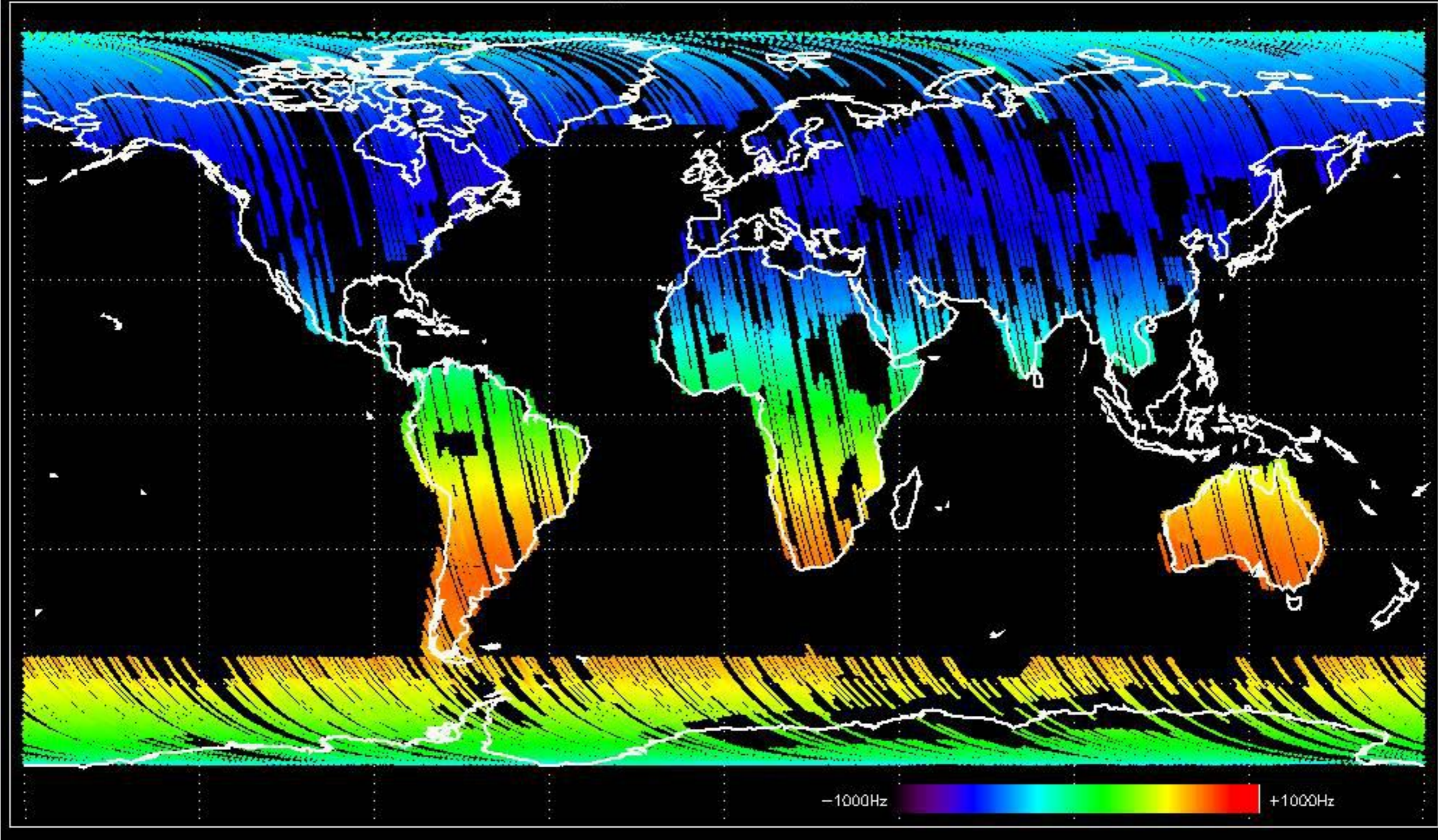
No anomalies observed.



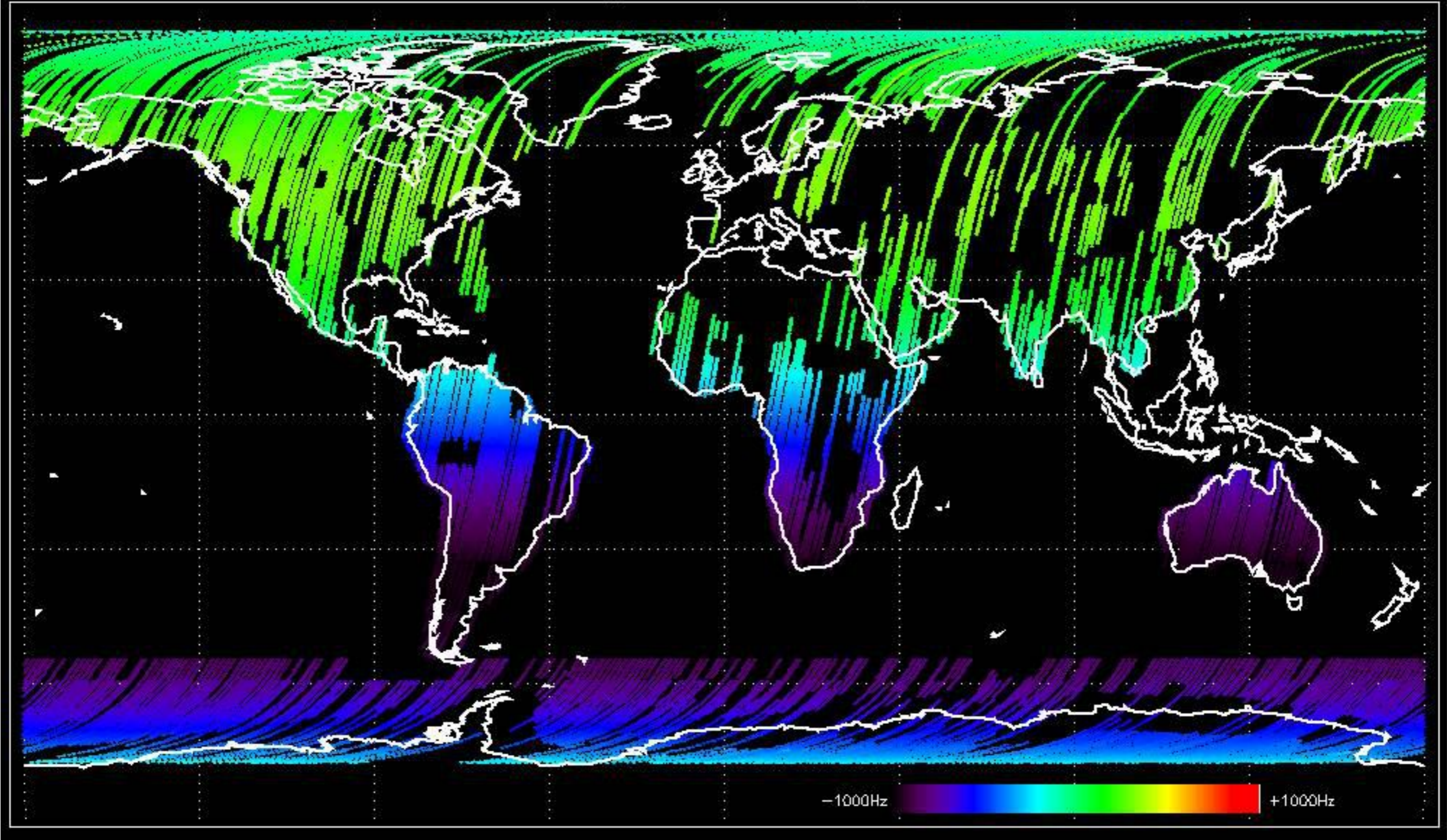


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

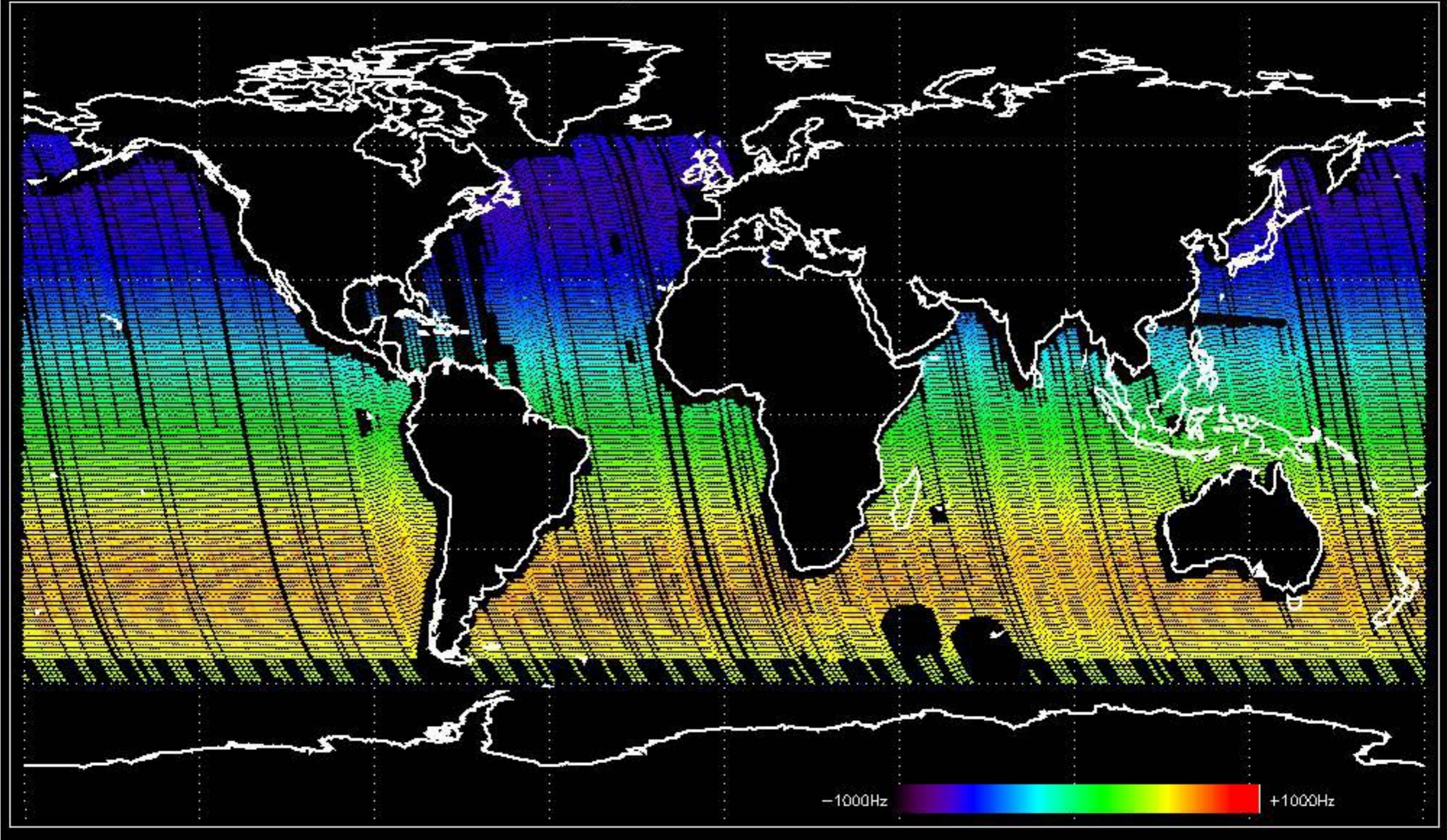
Doppler 'GM1' 'SS1' ascending



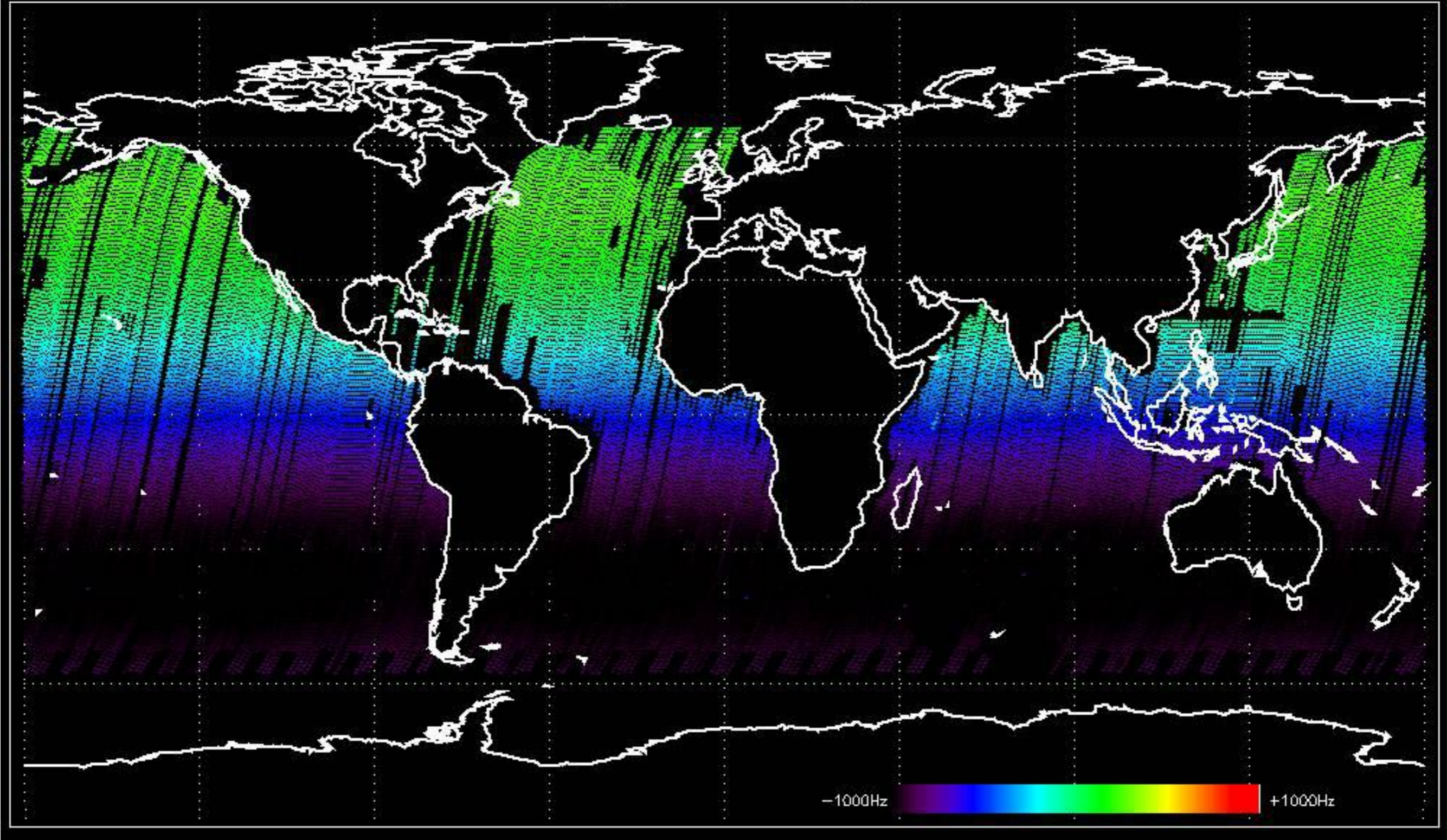
Doppler 'GM1' 'SS1' descending

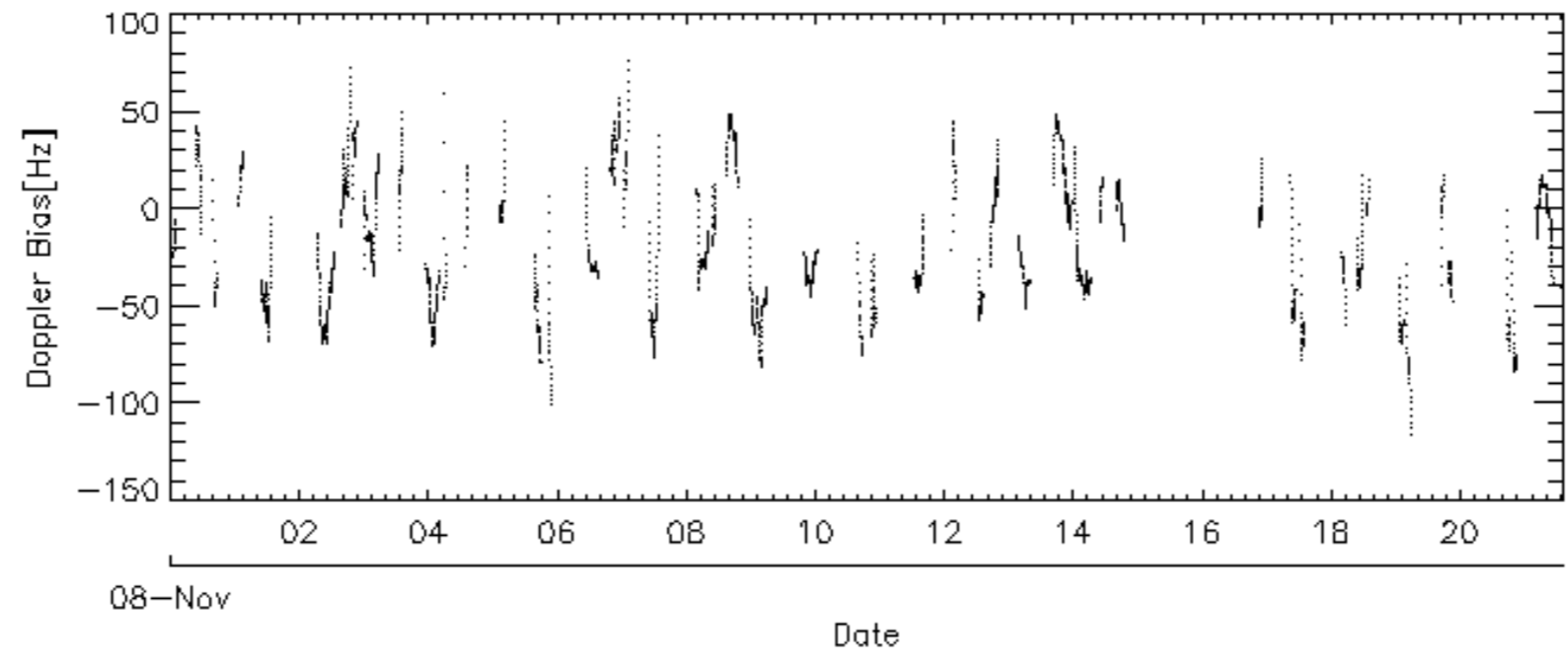
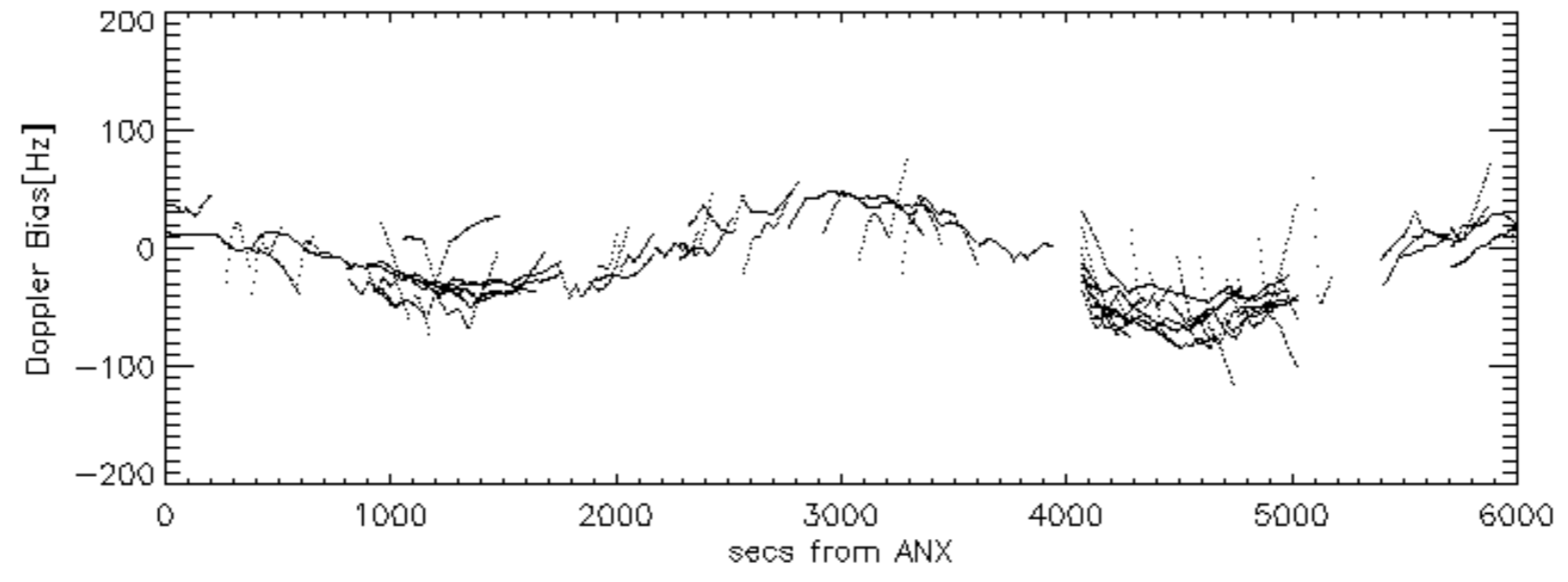
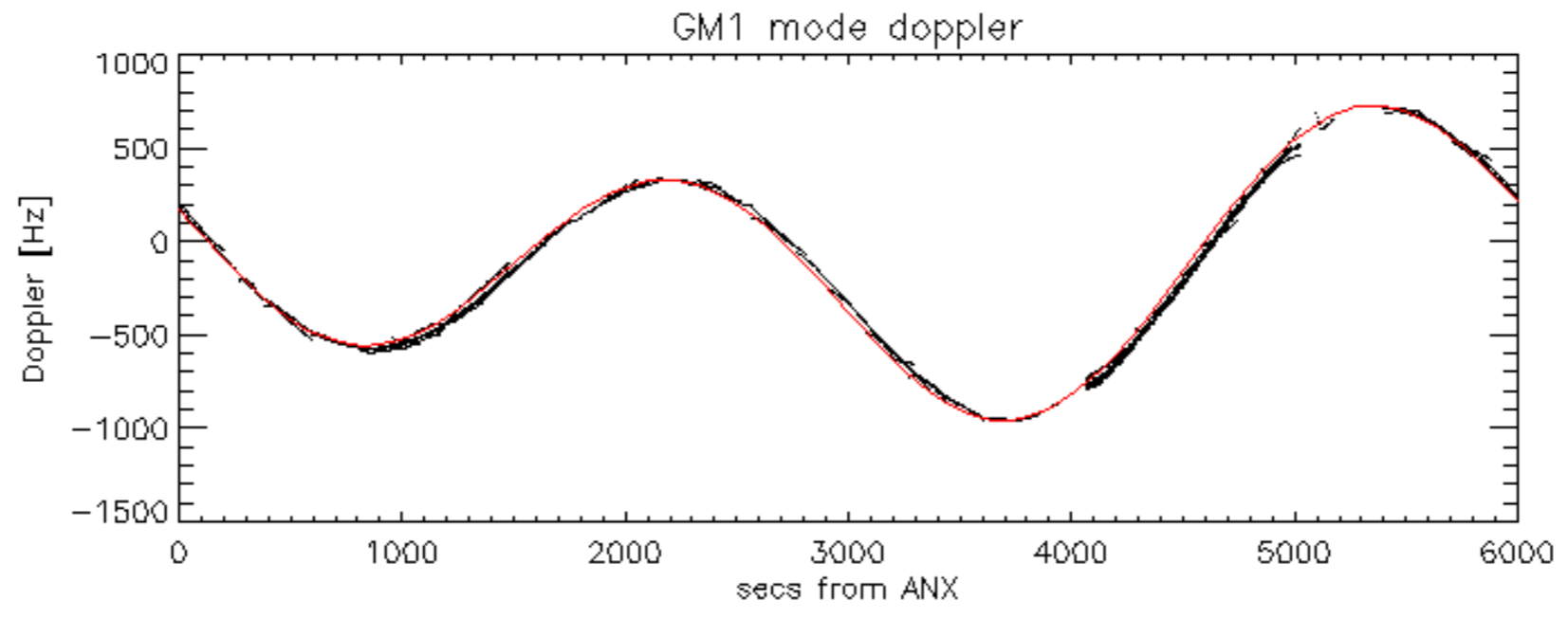


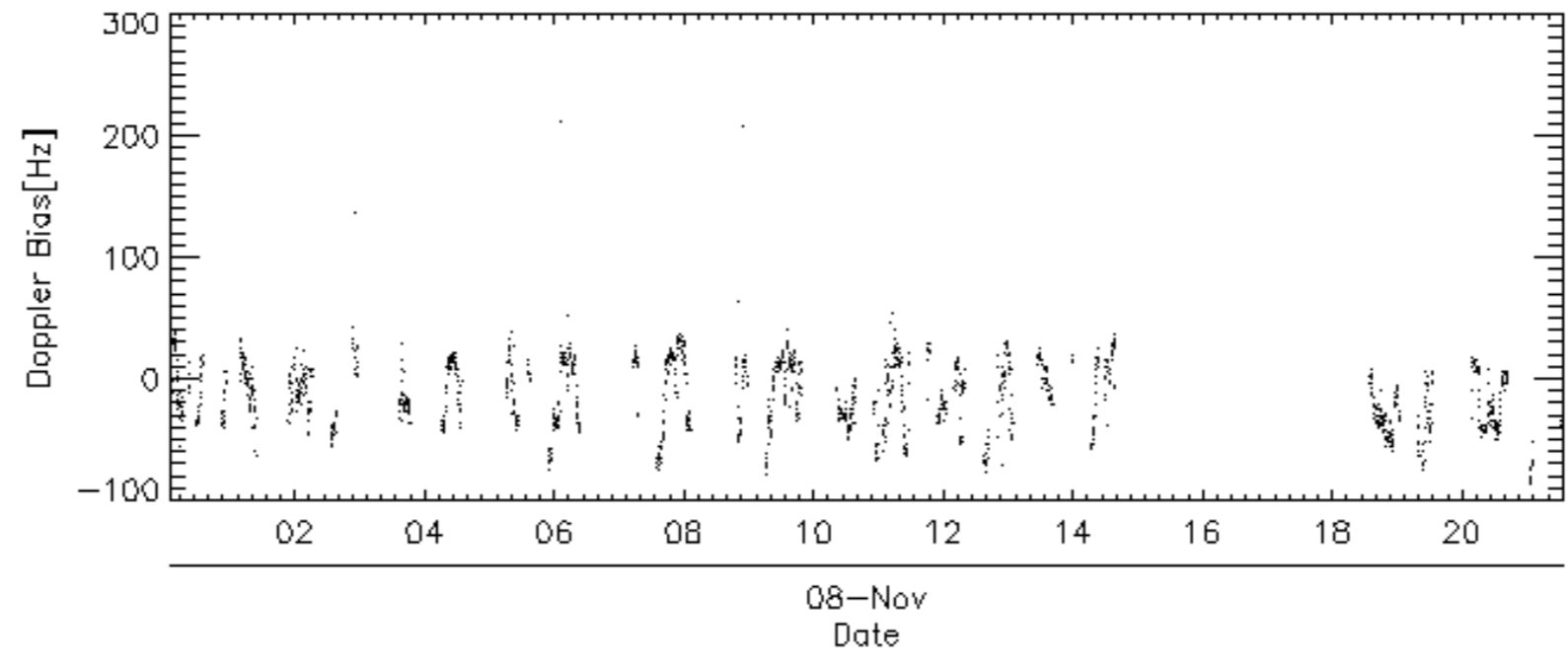
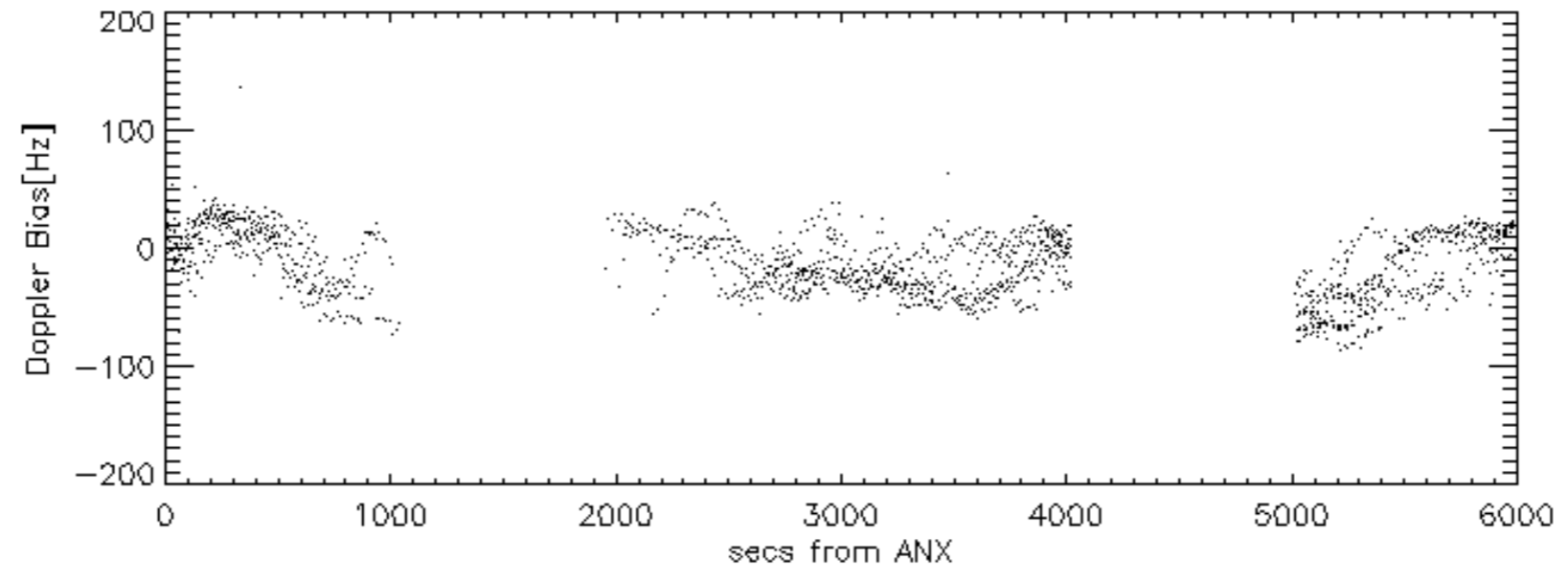
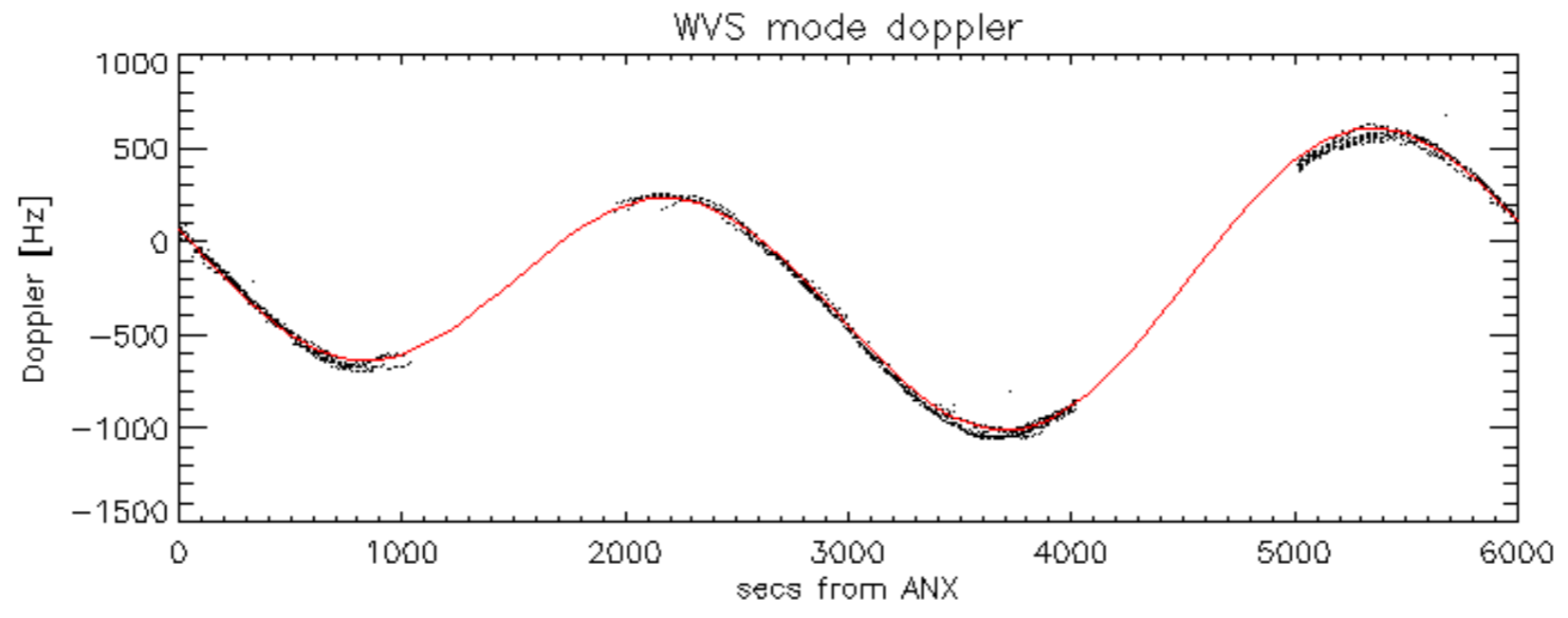
Doppler 'WVS' 'IS2' ascending



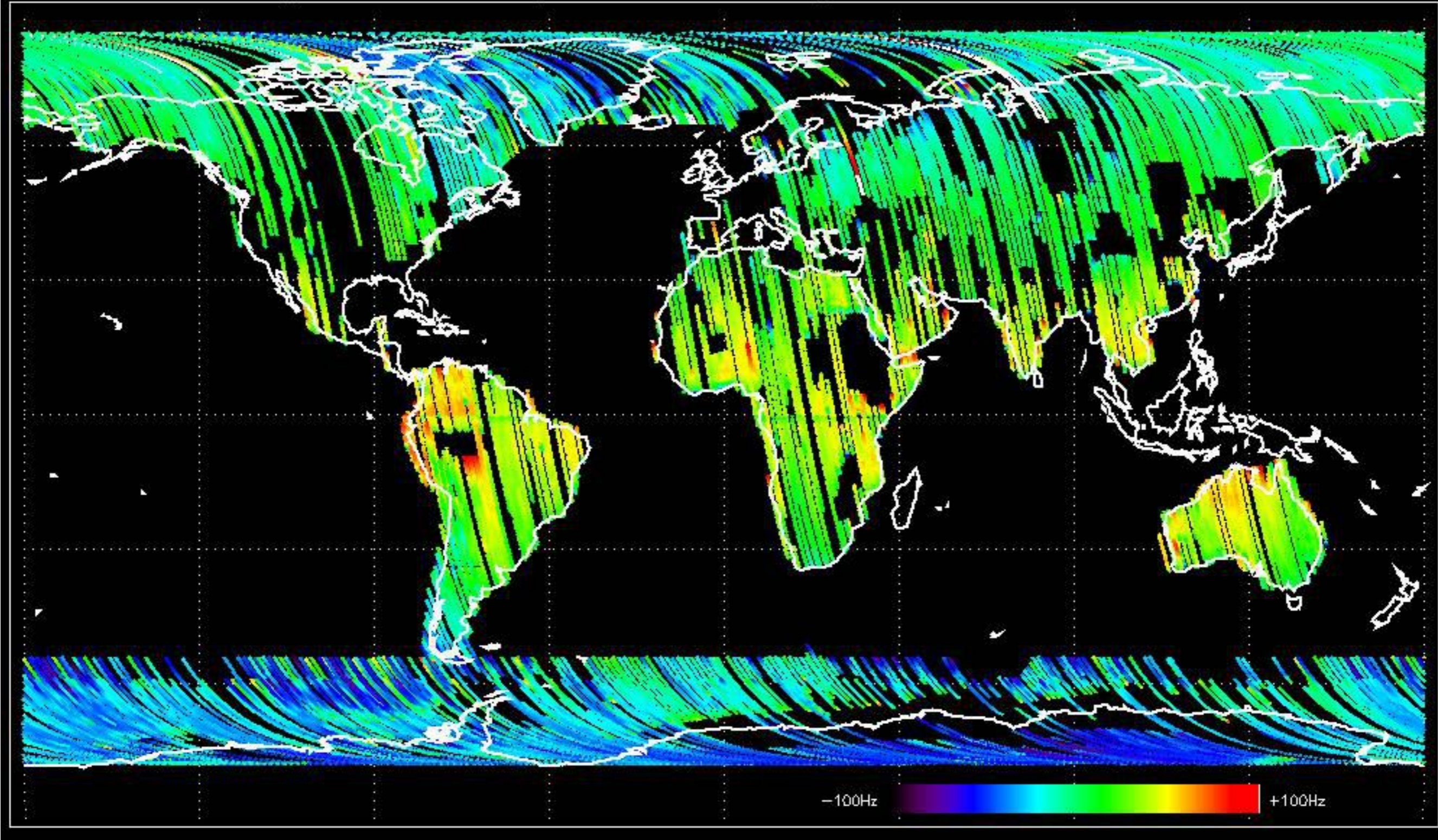
Doppler 'WVS' 'IS2' descending



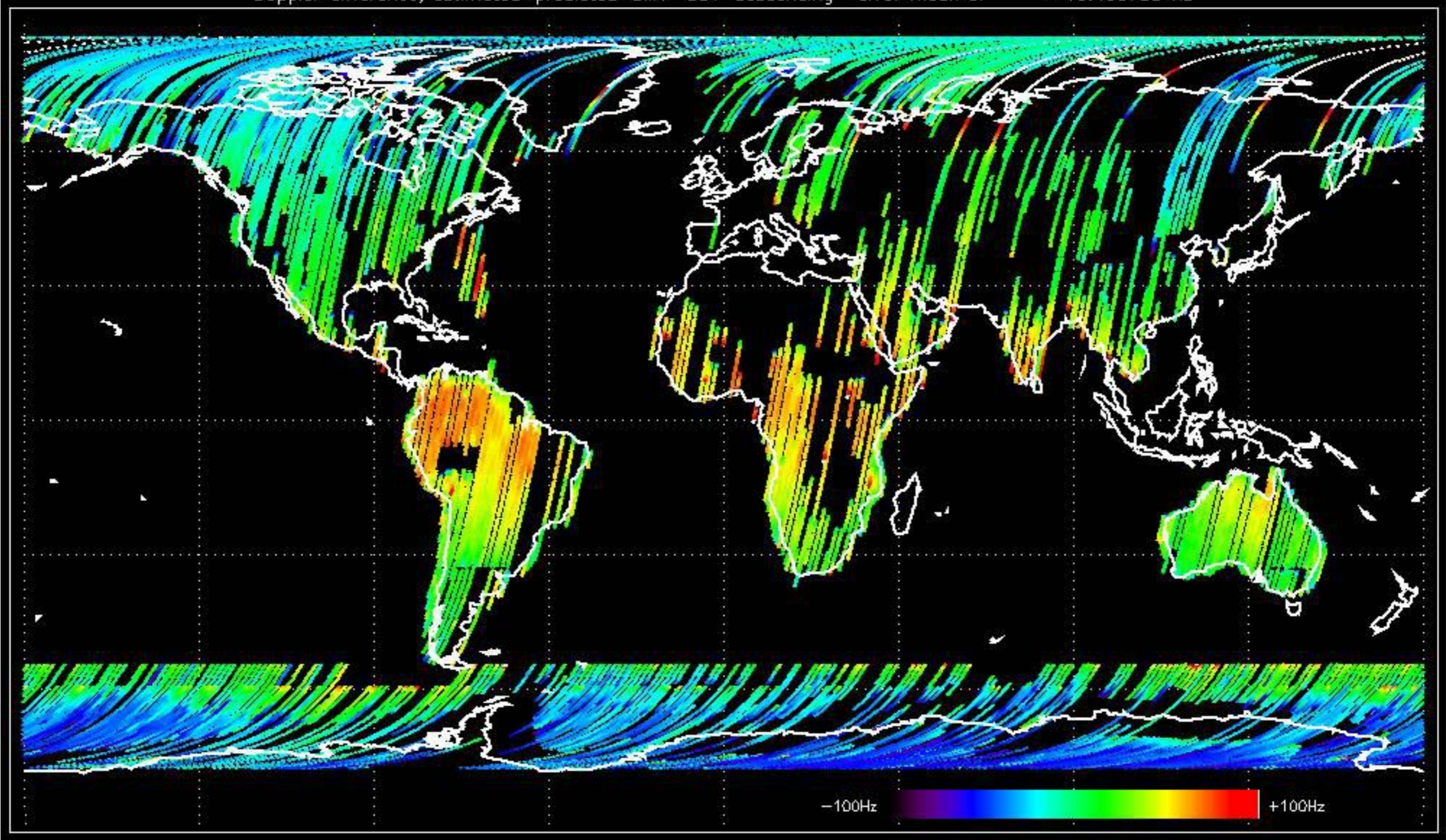




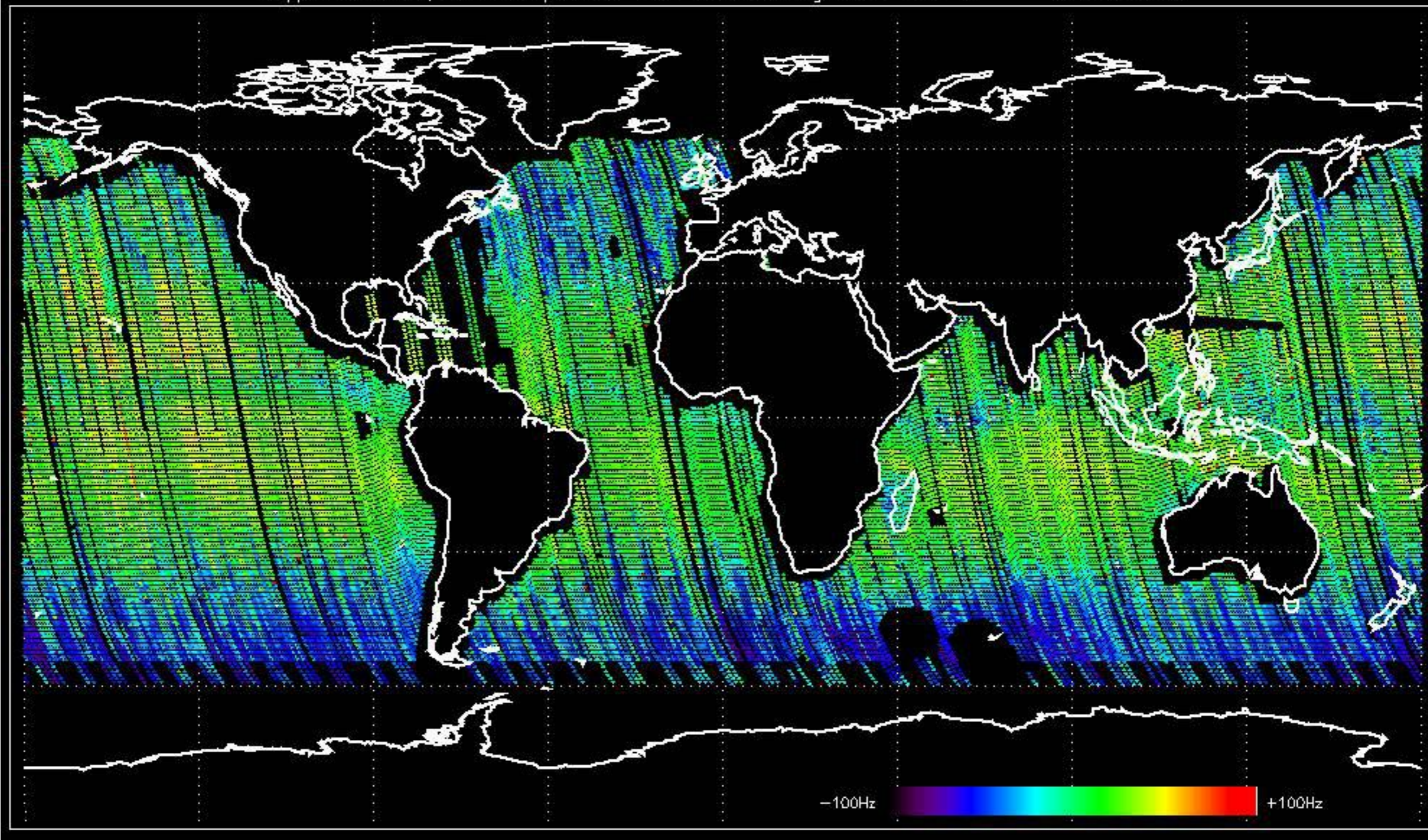
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.203471 Hz



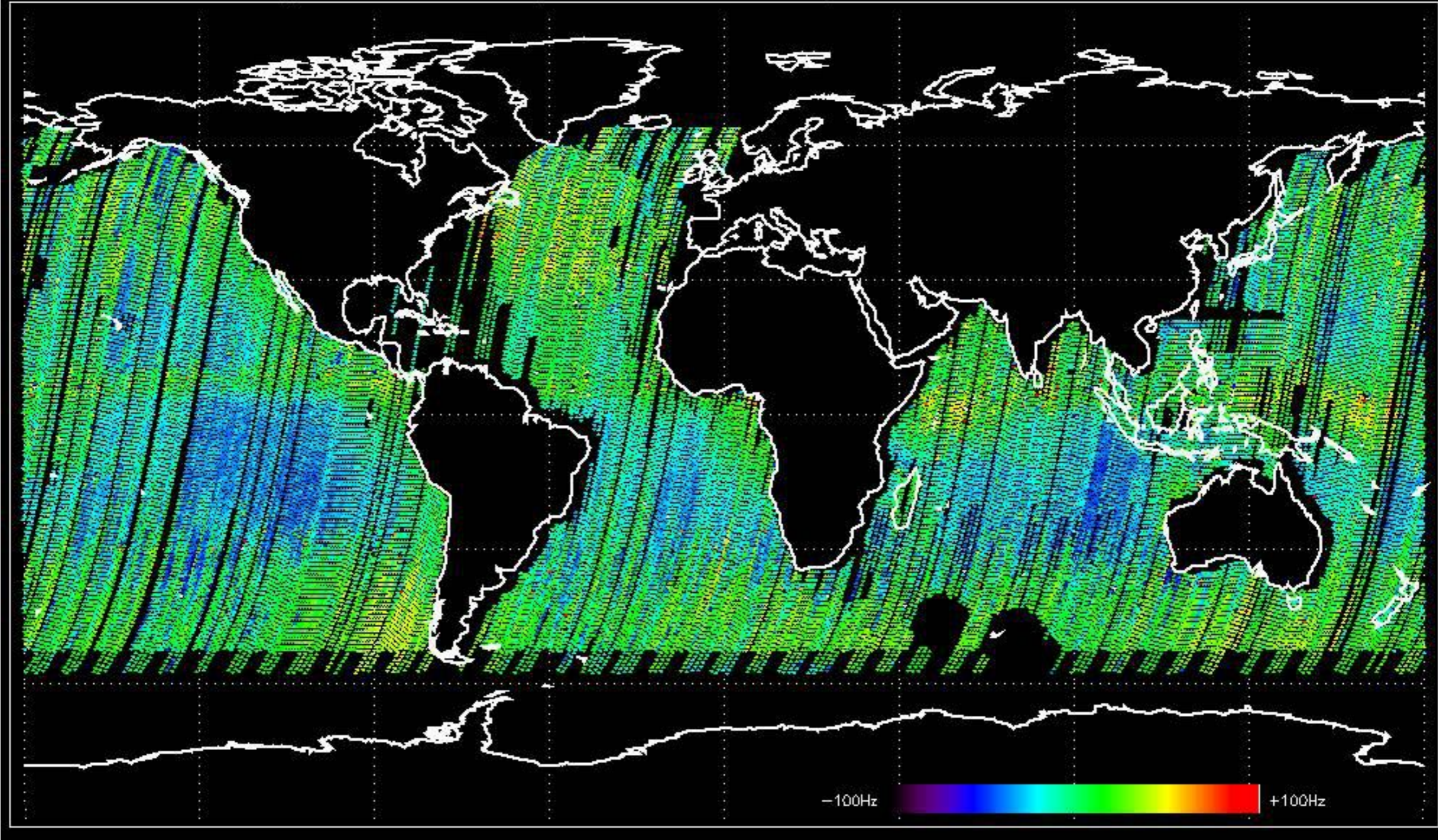
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.460758 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.8969862 Hz

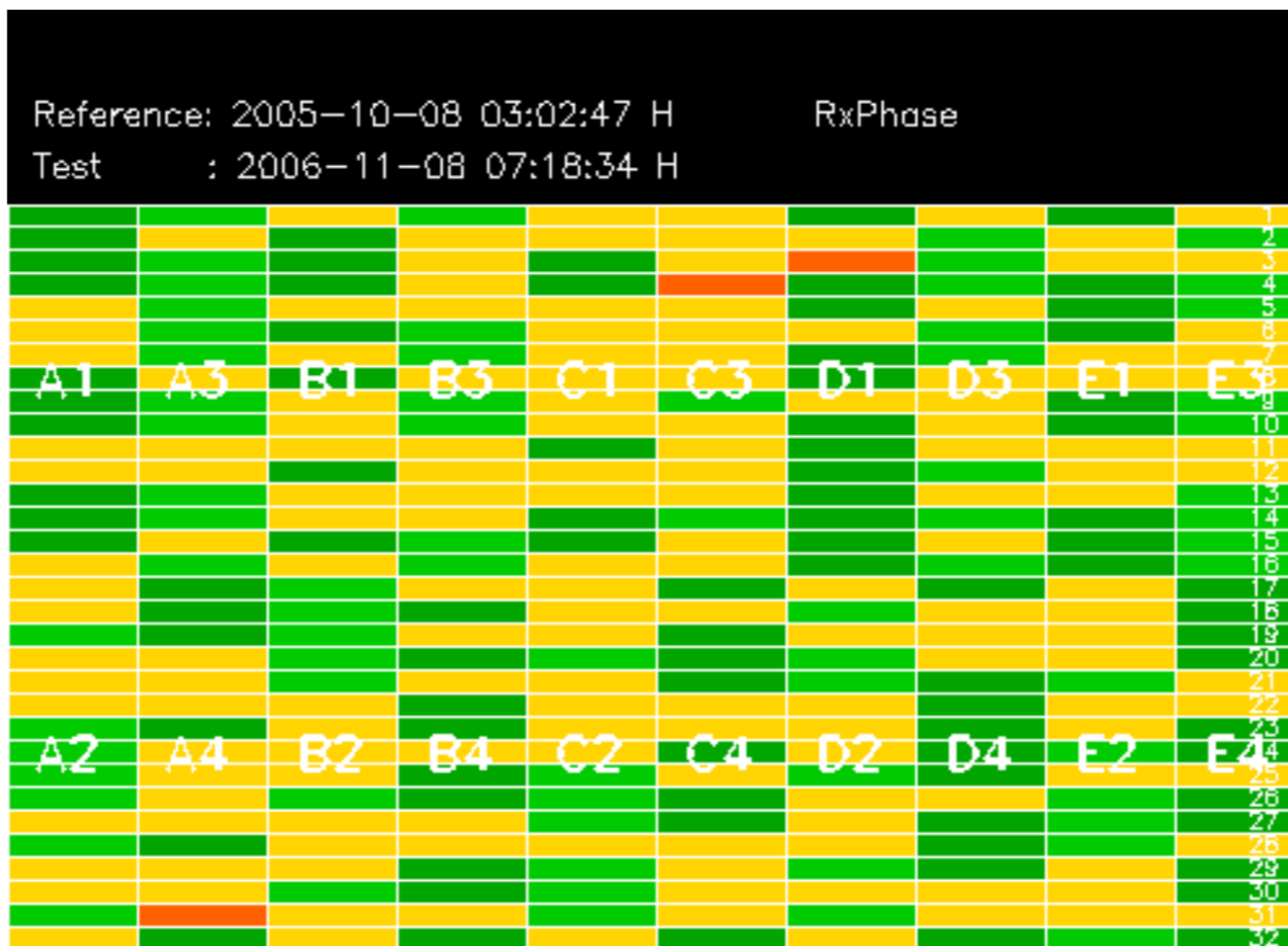


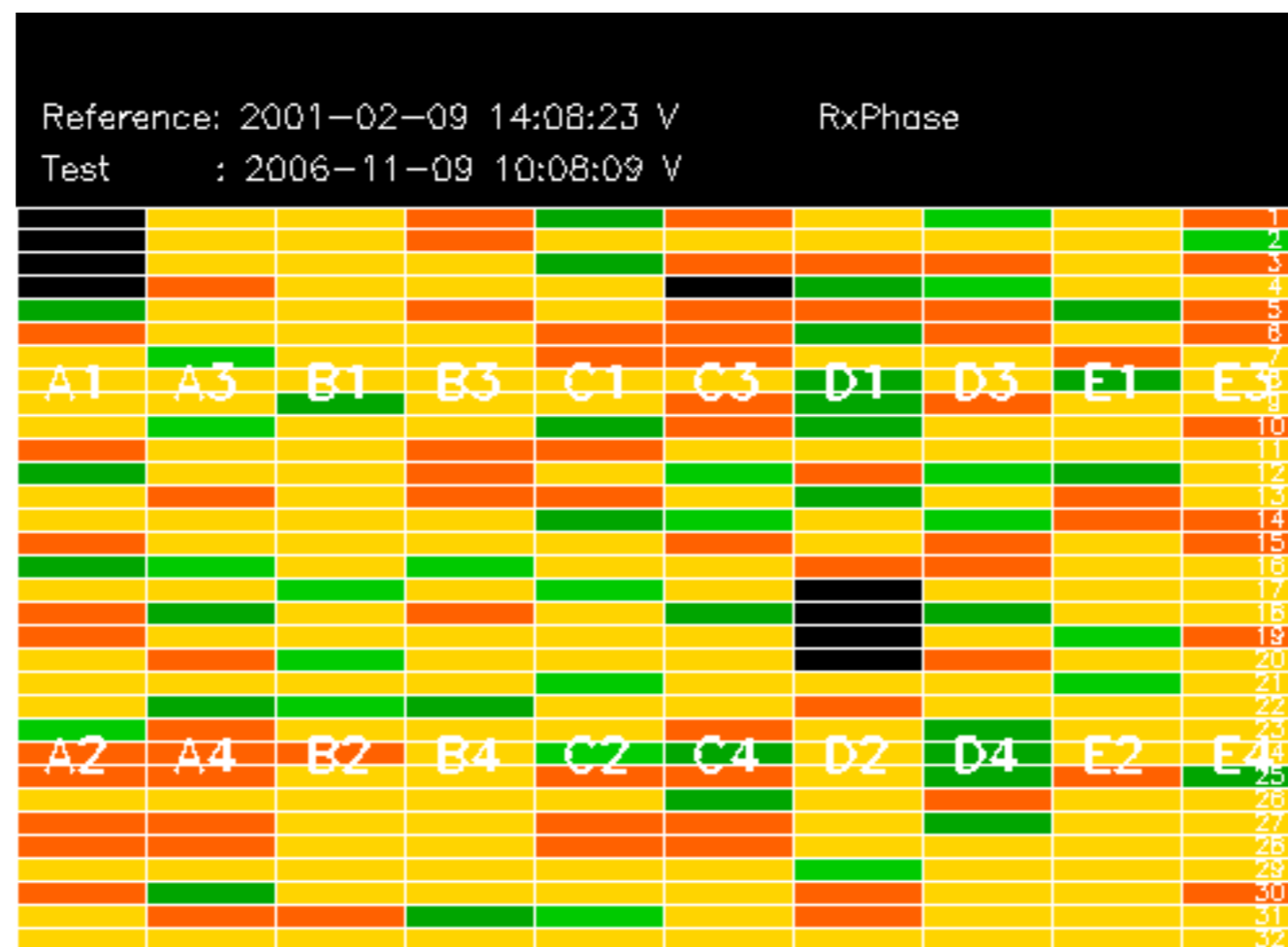
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.8066263 Hz

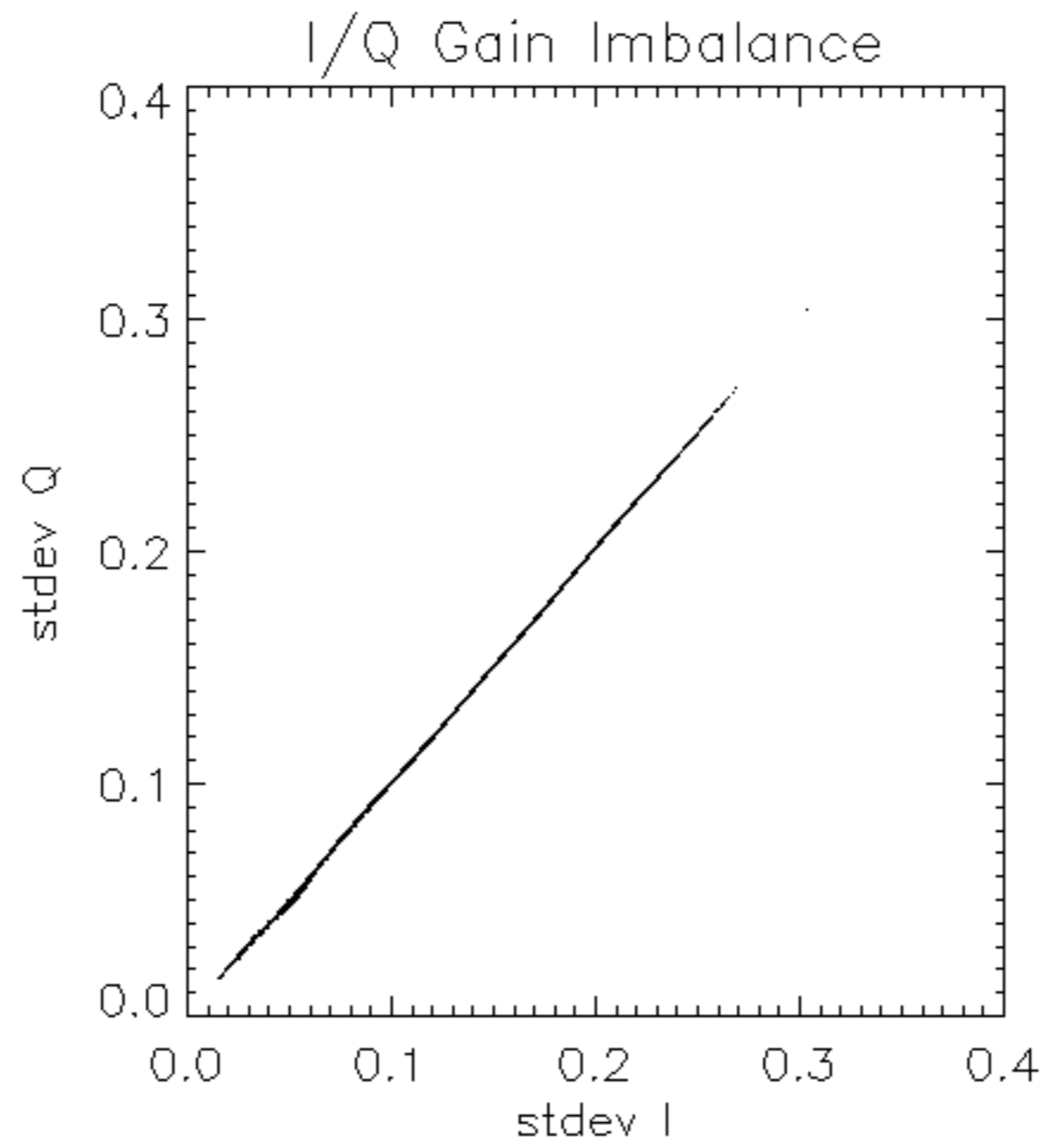


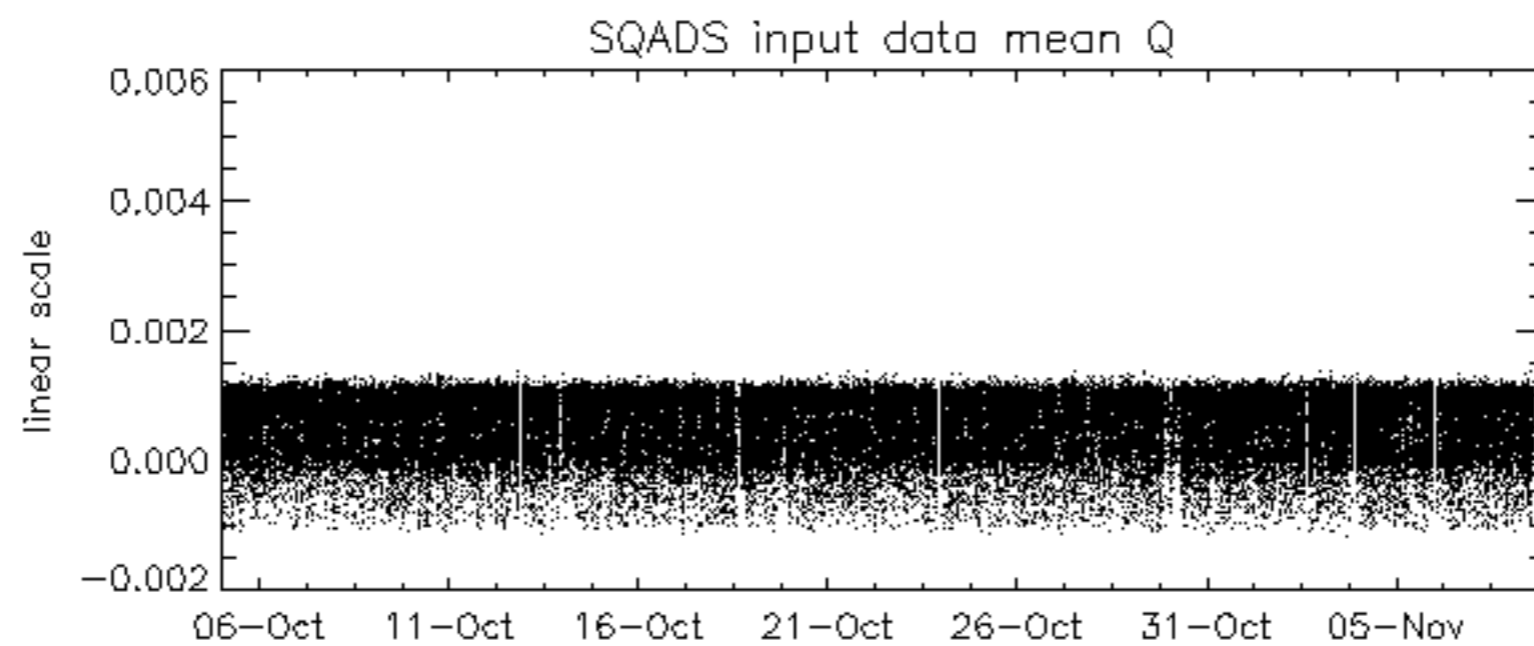
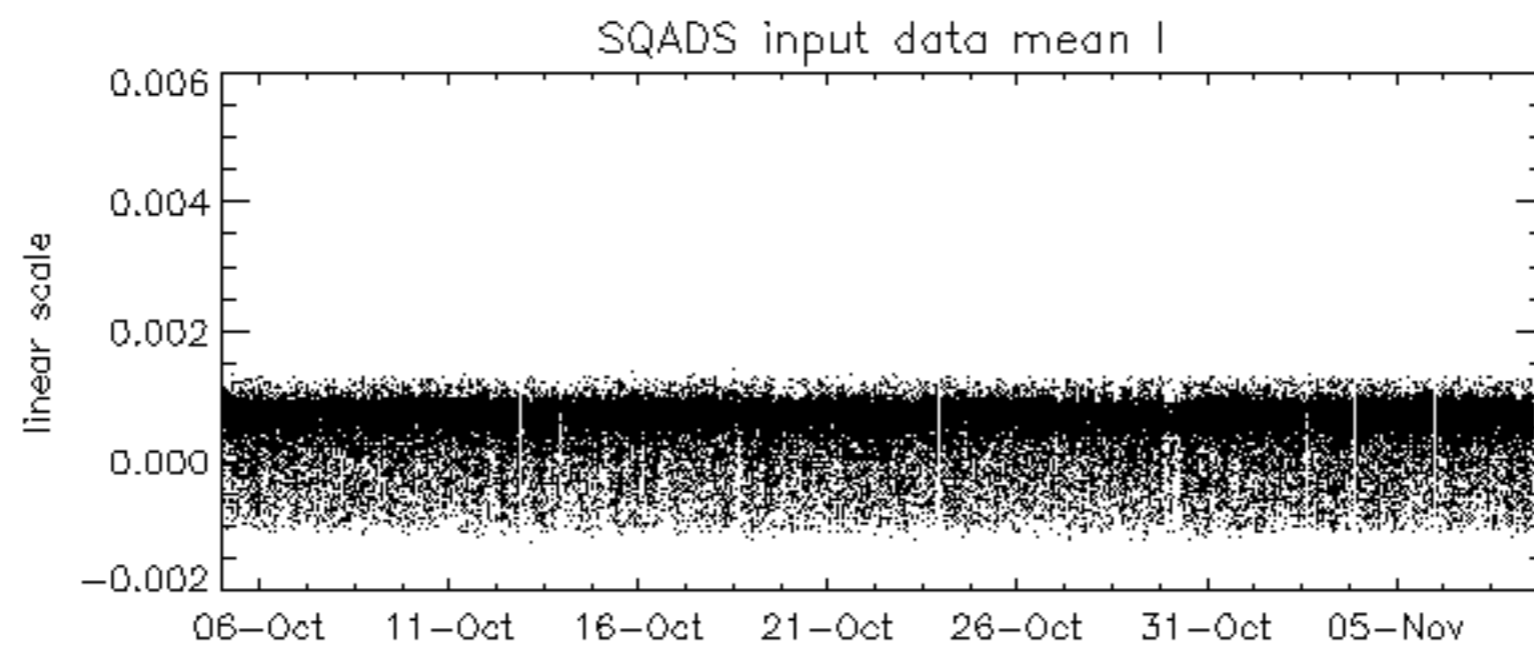
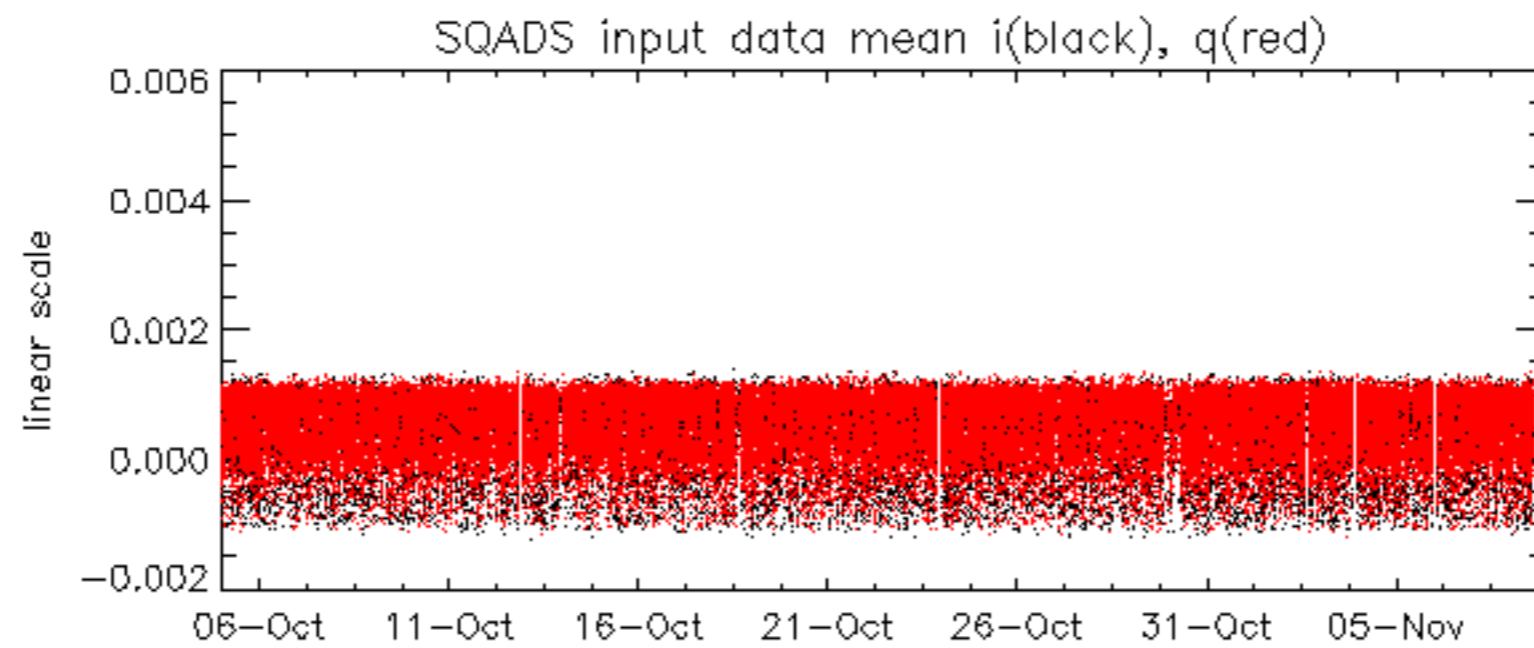
No anomalies observed on available MS products:

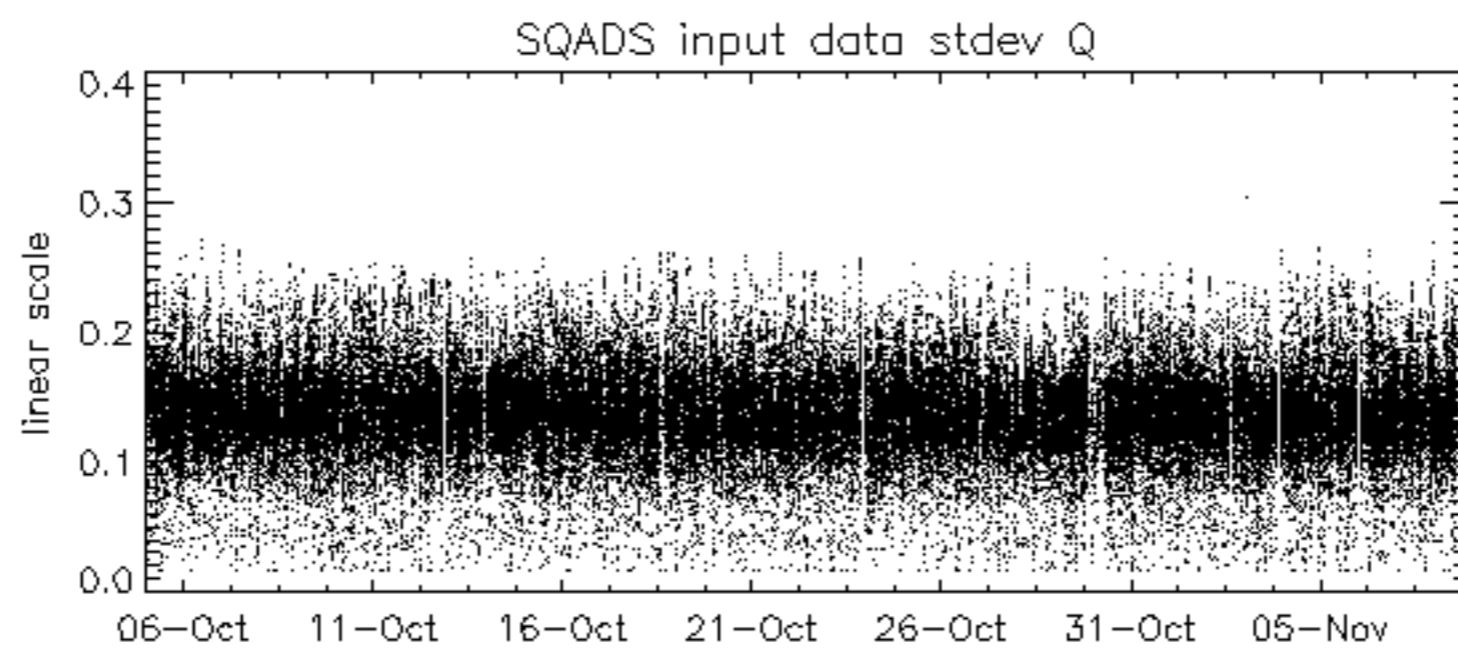
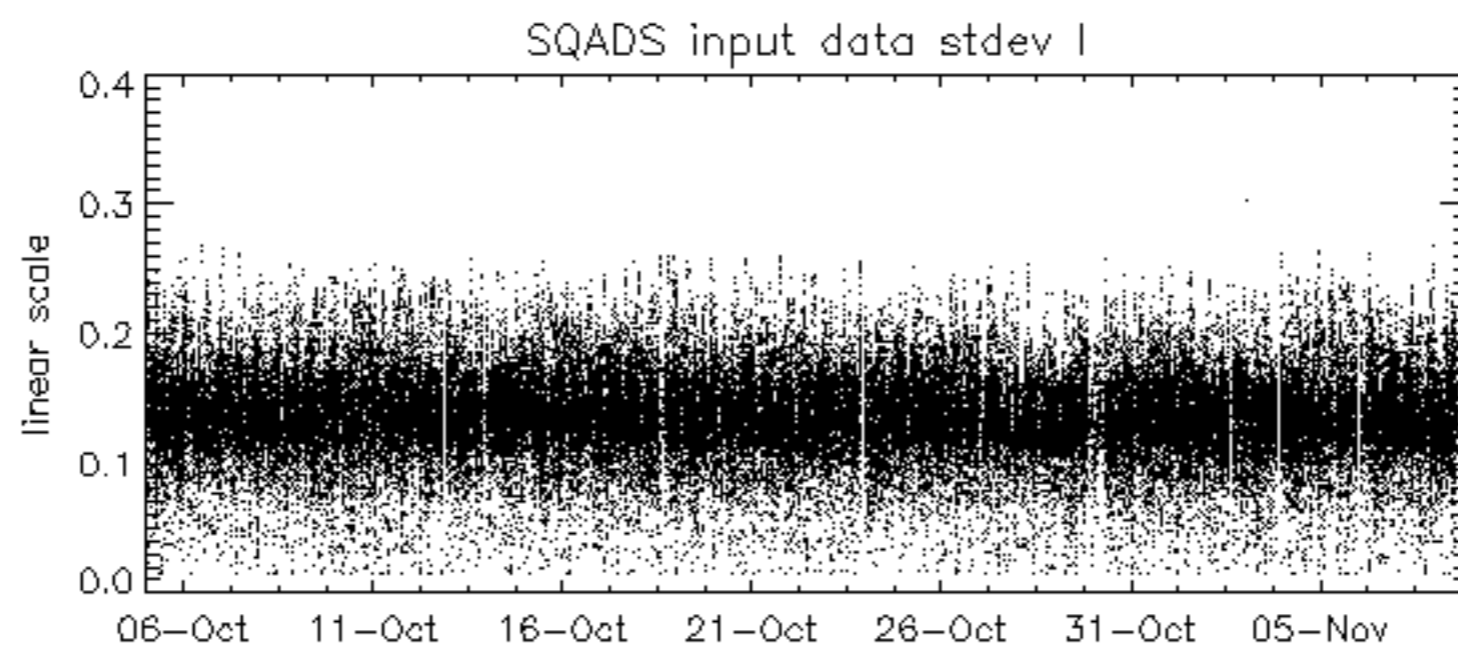
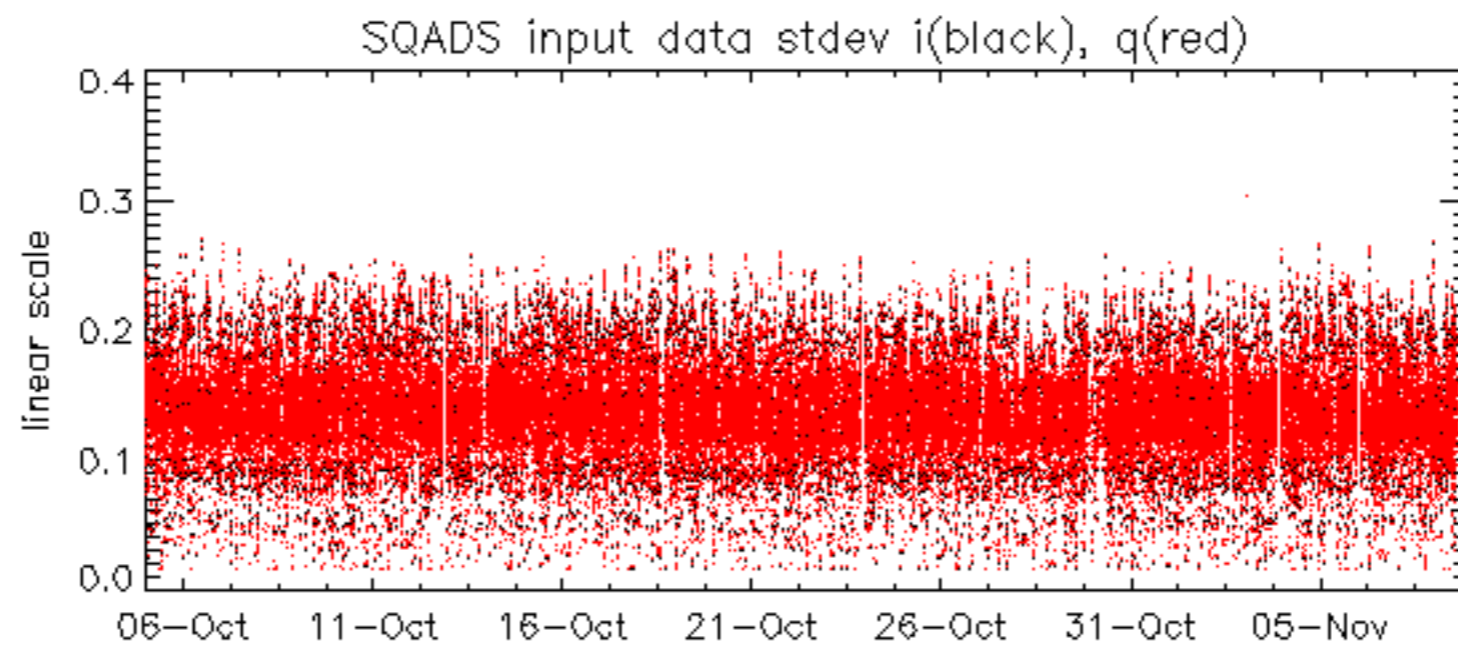
No anomalies observed.







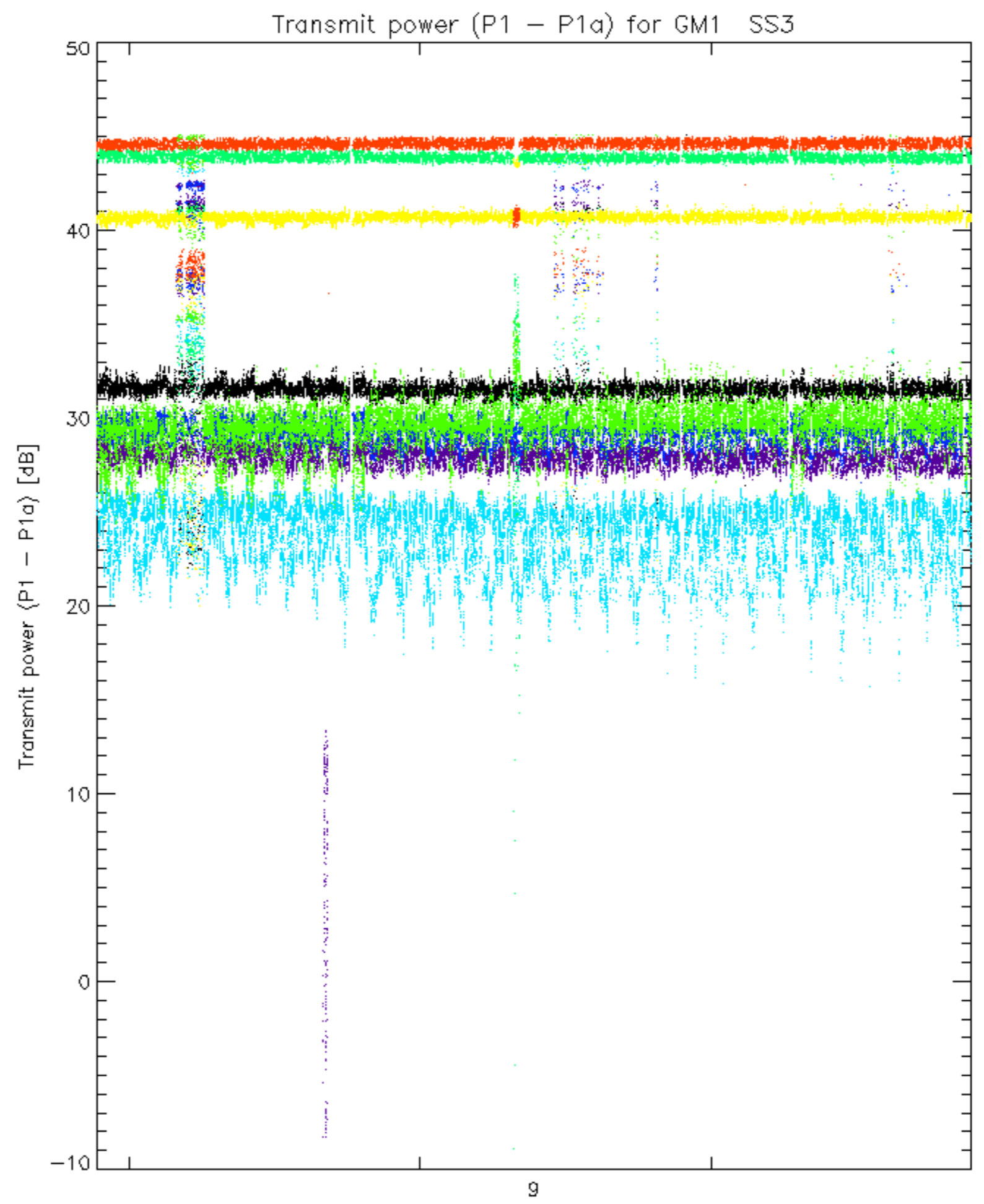


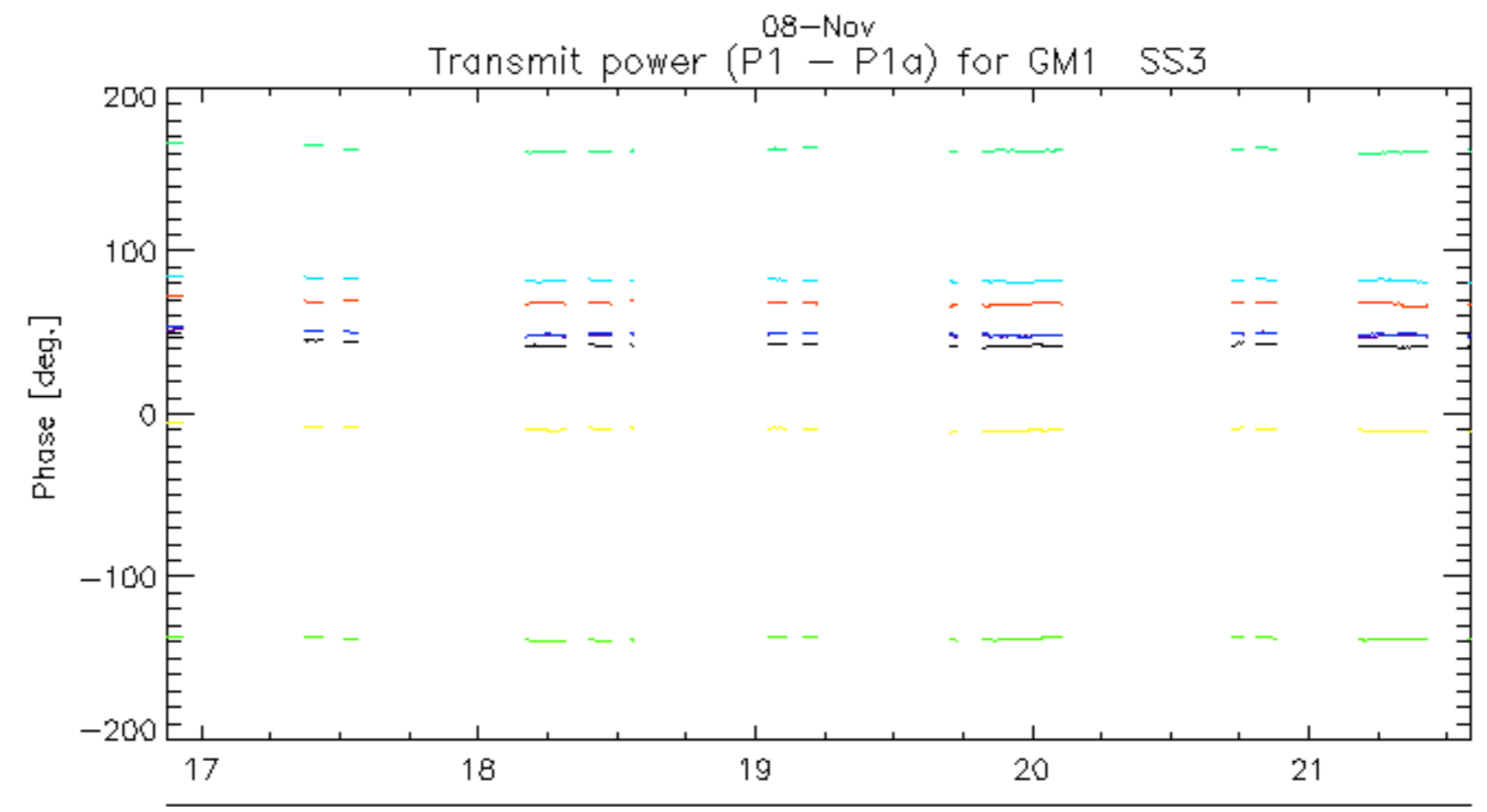
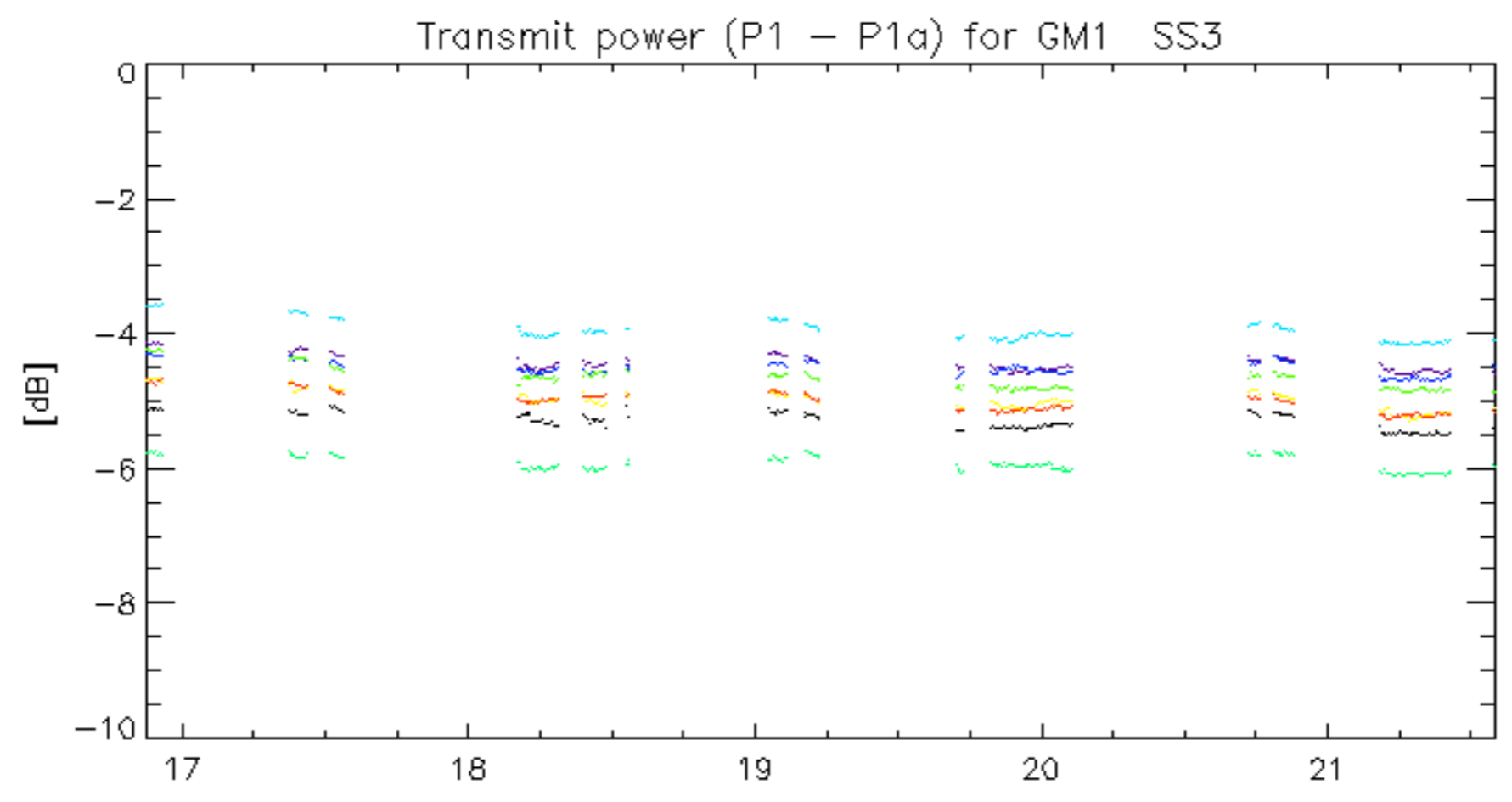


Summary of analysis for the last 3 days 2006110[789]

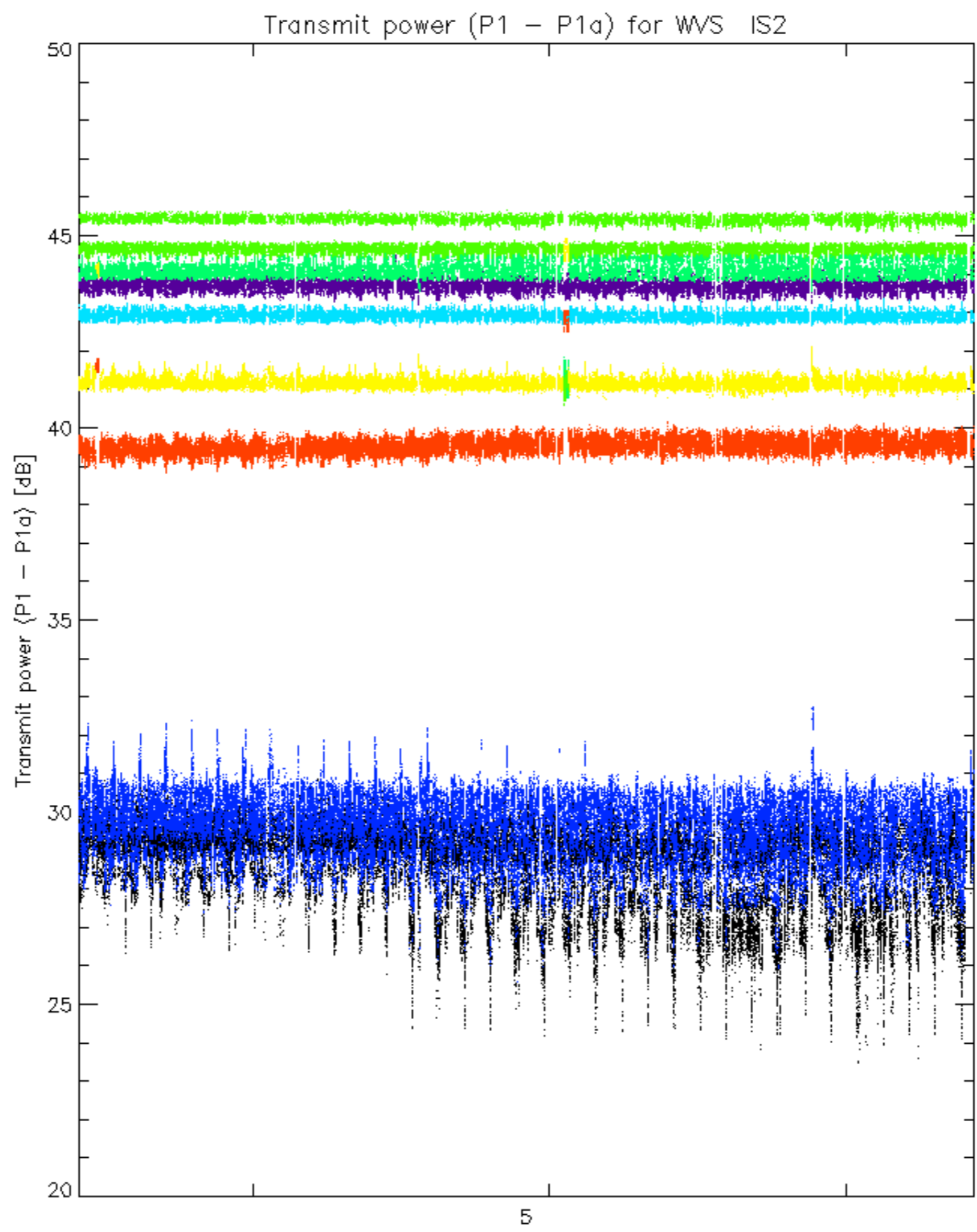
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

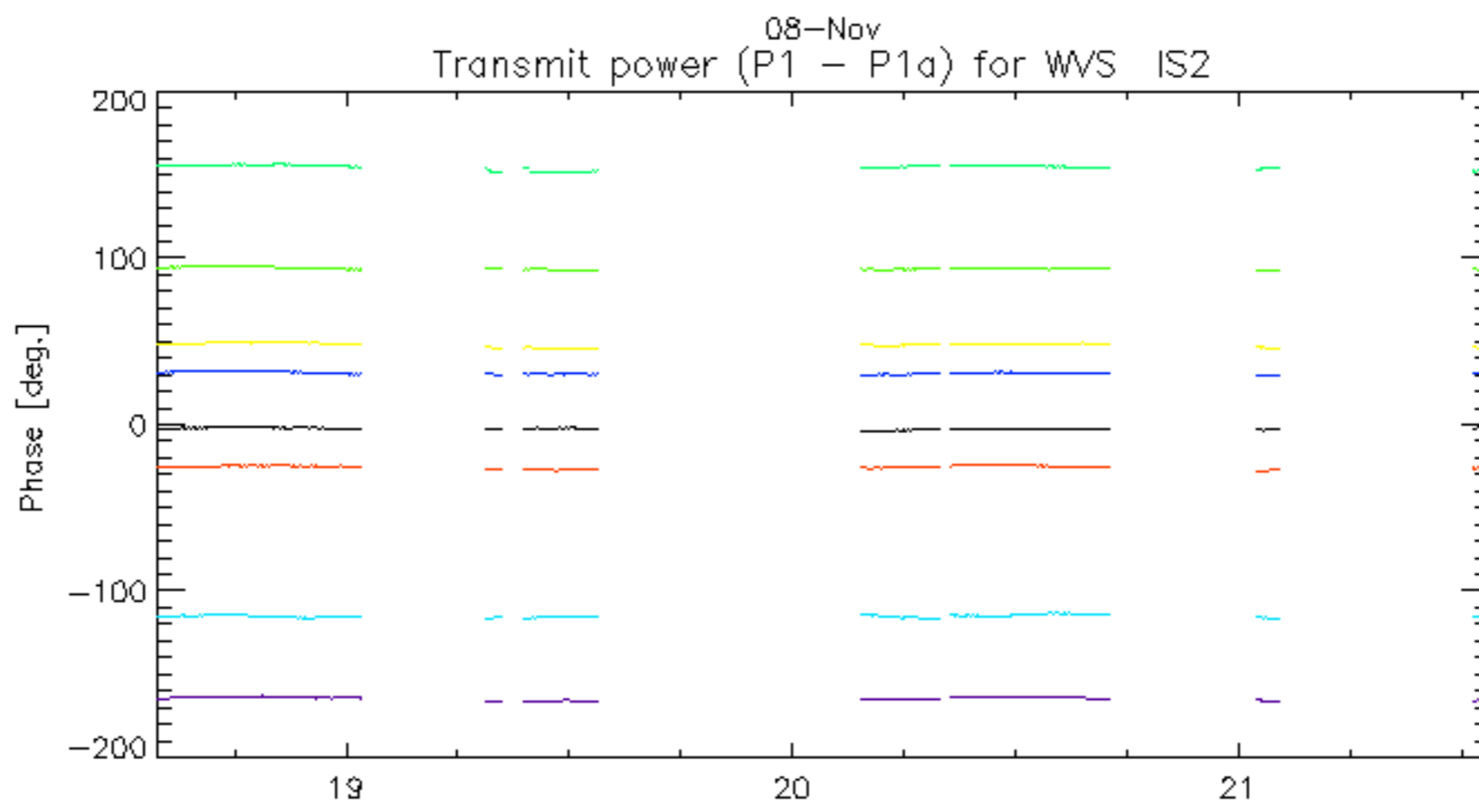
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20061108_143314_000000352052_00425_24527_3678.N1	1	0
ASA_IMM_1PNPDK20061108_202032_000000362052_00429_24531_3691.N1	1	0
ASA_GM1_1PNPDK20061107_102250_000002232052_00409_24511_8176.N1	0	8
ASA_WSM_1PNPDE20061108_001656_000002632052_00417_24519_0001.N1	0	29





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





08-Nov
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.