

PRELIMINARY REPORT OF 061102

last update on Thu Nov 2 16:32:24 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 2006-11-01 00:00:00 to 2006-11-02 16:32:24

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	68	21	7	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	68	21	7	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	68	21	7	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	68	21	7	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	34	52	17	3	38
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	34	52	17	3	38
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	34	52	17	3	38
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	34	52	17	3	38

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	20061030 084156
H	20061102 070705

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	-3.952064	0.009664	-0.022663
7	P1	-3.102911	0.016922	-0.116012
11	P1	-4.106995	0.024842	-0.065850
15	P1	-6.235271	0.015879	-0.127686
19	P1	-3.590758	0.069438	-0.112214
22	P1	-4.643694	0.137554	-0.151222
26	P1	-4.002865	0.132582	0.010741
30	P1	-5.886979	0.252722	-0.075074
3	P1	-16.585604	0.218483	0.292153
7	P1	-17.155962	0.171421	-0.232883
11	P1	-17.063286	0.426160	-0.121538
15	P1	-12.919156	0.116159	-0.404052
19	P1	-14.787274	0.384955	-0.392652
22	P1	-15.666913	0.488562	-0.575409
26	P1	-15.081724	0.252583	-0.062847
30	P1	-17.086004	0.692728	-0.749512

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.835119	0.088884	-0.058827
7	P2	-21.752165	0.096231	0.065231
11	P2	-15.702281	0.108248	0.109238
15	P2	-7.083862	0.108606	-0.115875
19	P2	-9.145093	0.102055	-0.130937
22	P2	-18.167204	0.096698	-0.169200
26	P2	-16.459856	0.107540	-0.196785
30	P2	-19.468063	0.092286	-0.044344

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.210621	0.007355	-0.067089
7	P3	-8.210621	0.007355	-0.067089
11	P3	-8.210621	0.007355	-0.067089
15	P3	-8.210621	0.007355	-0.067089
19	P3	-8.210621	0.007355	-0.067089
22	P3	-8.210621	0.007355	-0.067089
26	P3	-8.210527	0.007370	-0.067573
30	P3	-8.210527	0.007370	-0.067573

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	-3.928995	0.217424	0.117788
7	P1	-2.639235	1.381300	0.567811
11	P1	-2.909106	0.167857	0.232899
15	P1	-3.703202	0.150930	0.189012
19	P1	-3.526189	0.176088	-0.192780
22	P1	-5.072775	0.129019	-0.040393
26	P1	-6.004547	0.334791	-0.269717
30	P1	-5.302444	0.217824	-0.270815
3	P1	-11.764283	0.526786	0.308517
7	P1	-10.175969	1.748922	0.714546
11	P1	-10.436286	0.467960	0.605280
15	P1	-10.908755	0.614746	0.799150
19	P1	-15.775658	3.181473	-0.740581
22	P1	-21.112257	1.685787	-1.096036

26	P1	-15.922996	0.475876	-0.756501
30	P1	-17.997288	0.558438	0.510965

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.372095	0.318053	-0.453672
7	P2	-22.008291	1.821798	-1.067383
11	P2	-10.864285	0.276592	-0.386962
15	P2	-4.913648	0.058044	-0.242919
19	P2	-6.893676	0.085289	-0.230355
22	P2	-8.270978	0.553612	0.062433
26	P2	-24.136175	1.395273	-0.838841
30	P2	-21.861792	0.704123	-0.433287

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.066594	0.003137	-0.070873
7	P3	-8.066594	0.003116	-0.071595
11	P3	-8.066477	0.003119	-0.071596
15	P3	-8.066516	0.003115	-0.070785
19	P3	-8.066527	0.003110	-0.070997
22	P3	-8.066390	0.003125	-0.071723
26	P3	-8.066285	0.003102	-0.073487
30	P3	-8.066283	0.003100	-0.072539

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	0.000559249
	stdev	1.67830e-07
MEAN Q	mean	0.000524137
	stdev	2.15656e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137717
	stdev	0.00110501
STDEV Q	mean	0.138086
	stdev	0.00112229



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006110[112]

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
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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

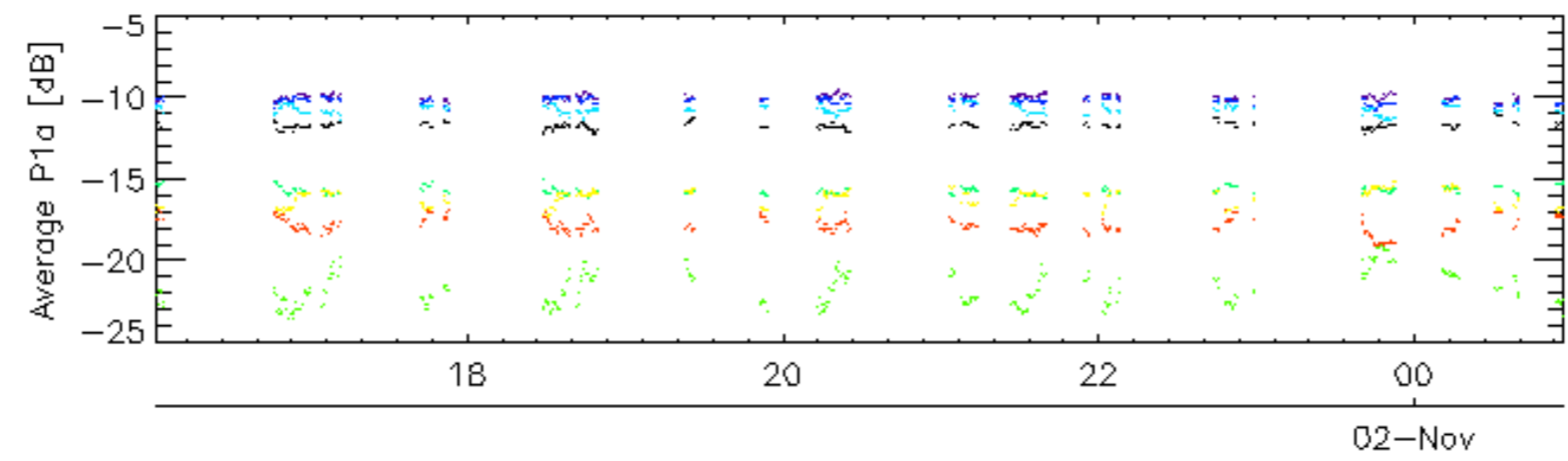
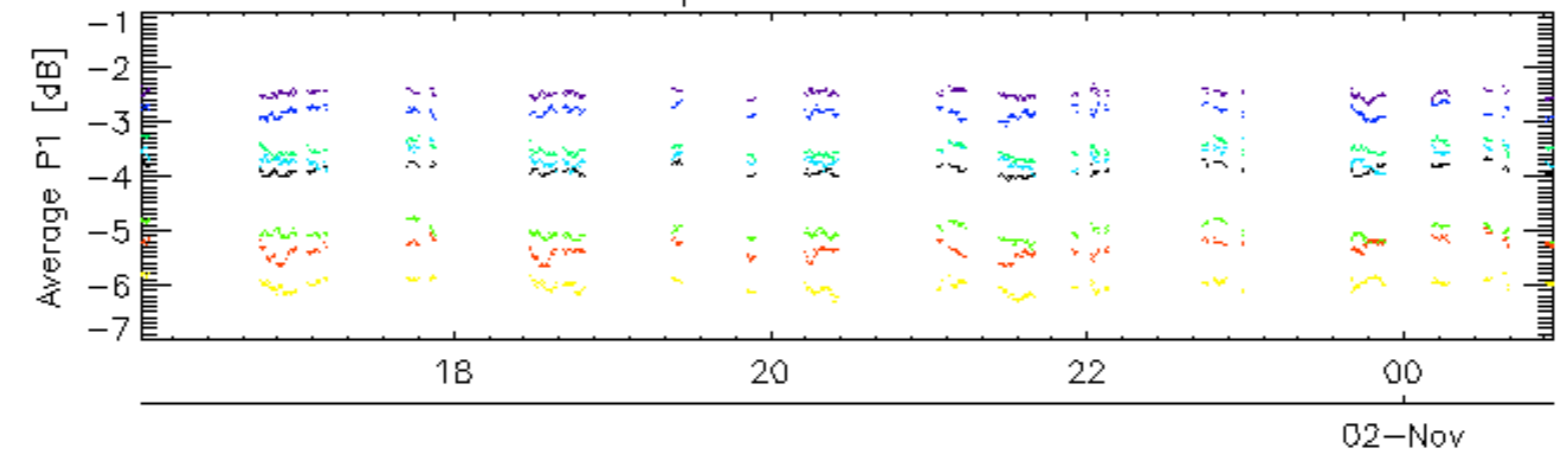
Ascending

Descending

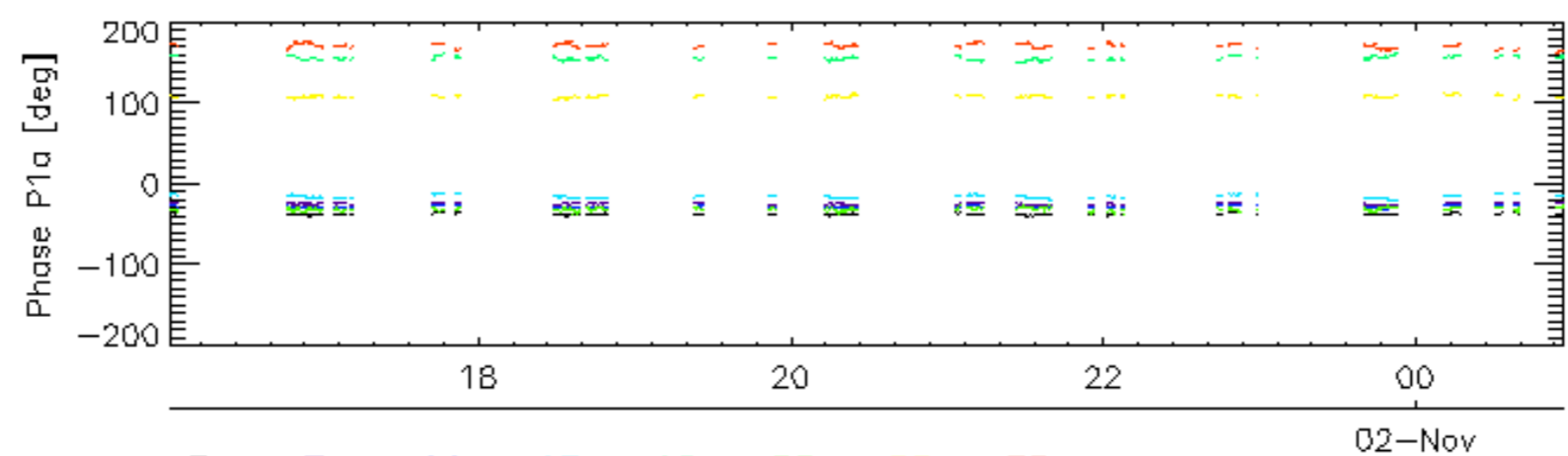
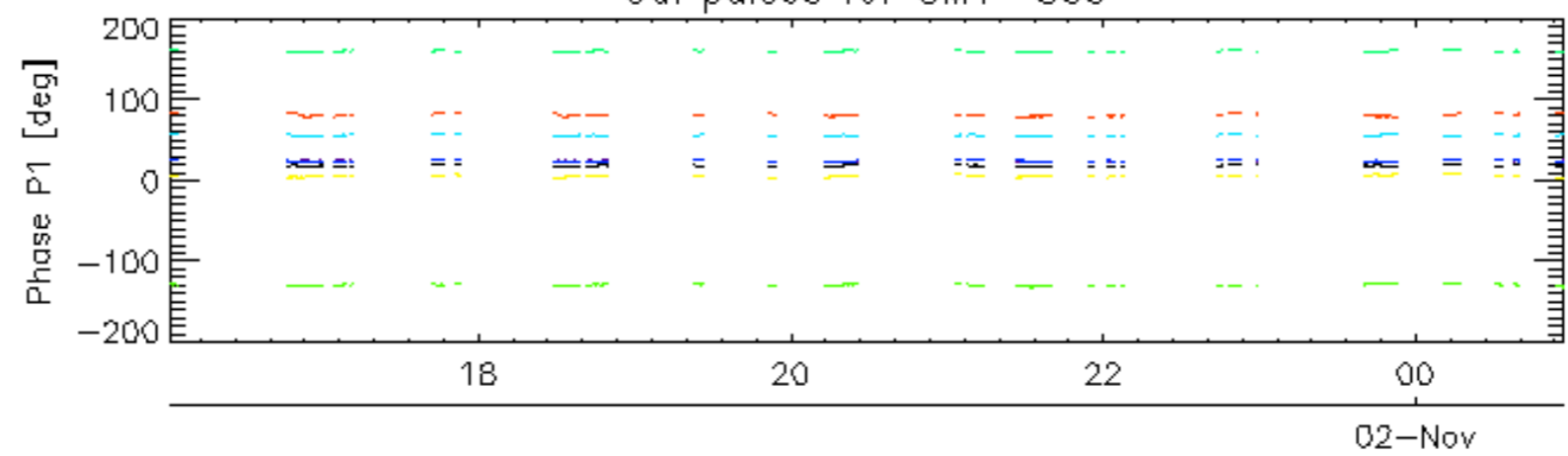
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

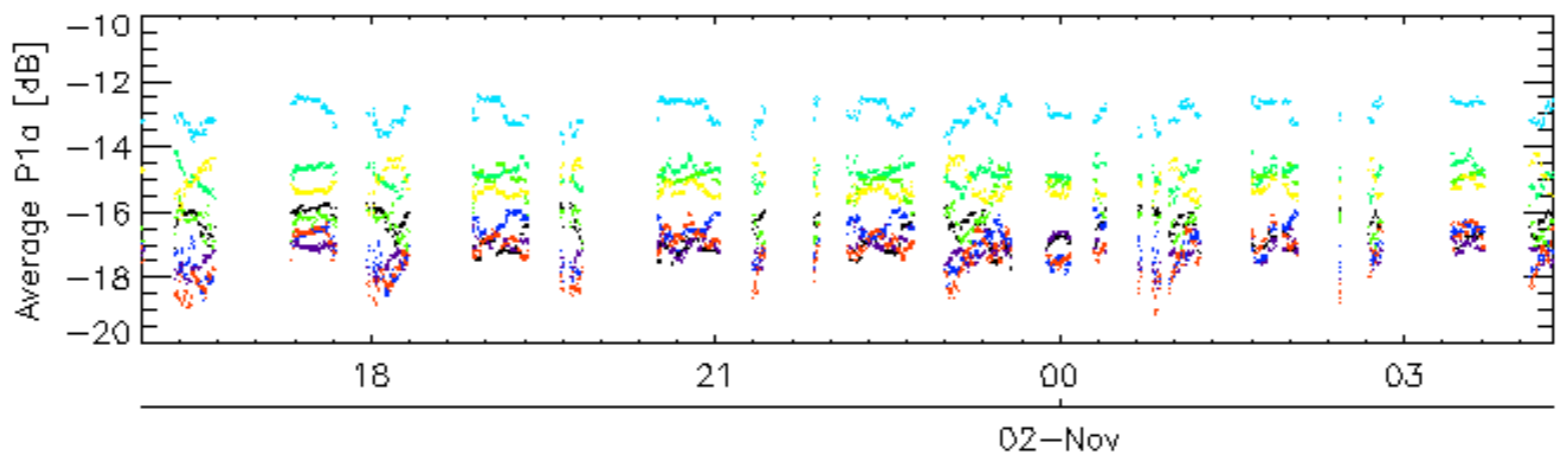
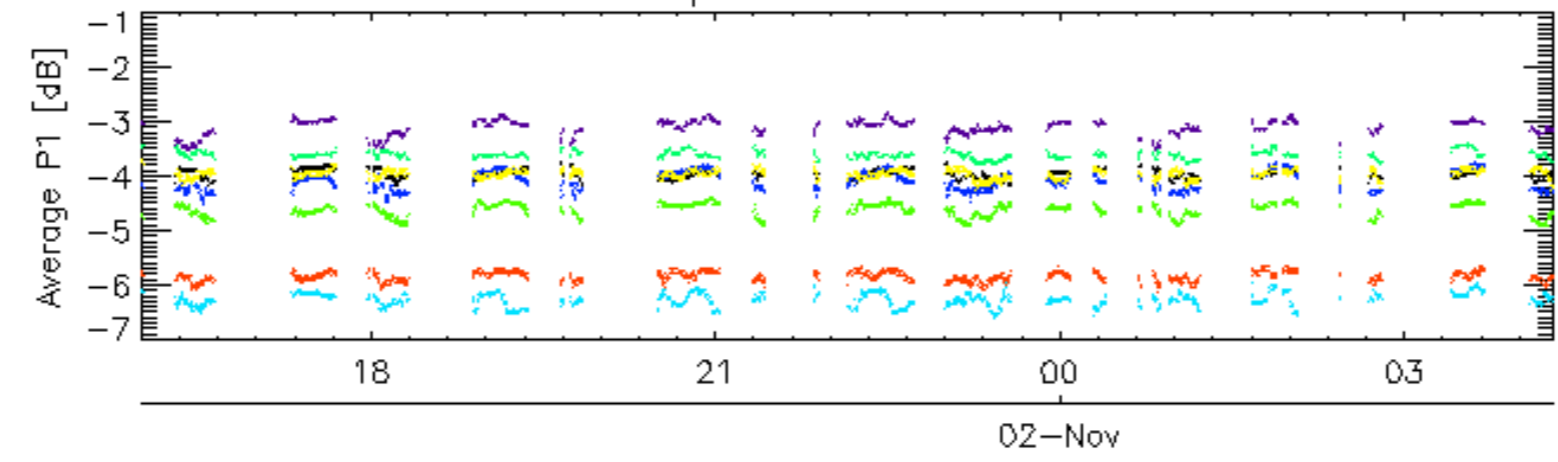


Cal pulses for GM1 SS3

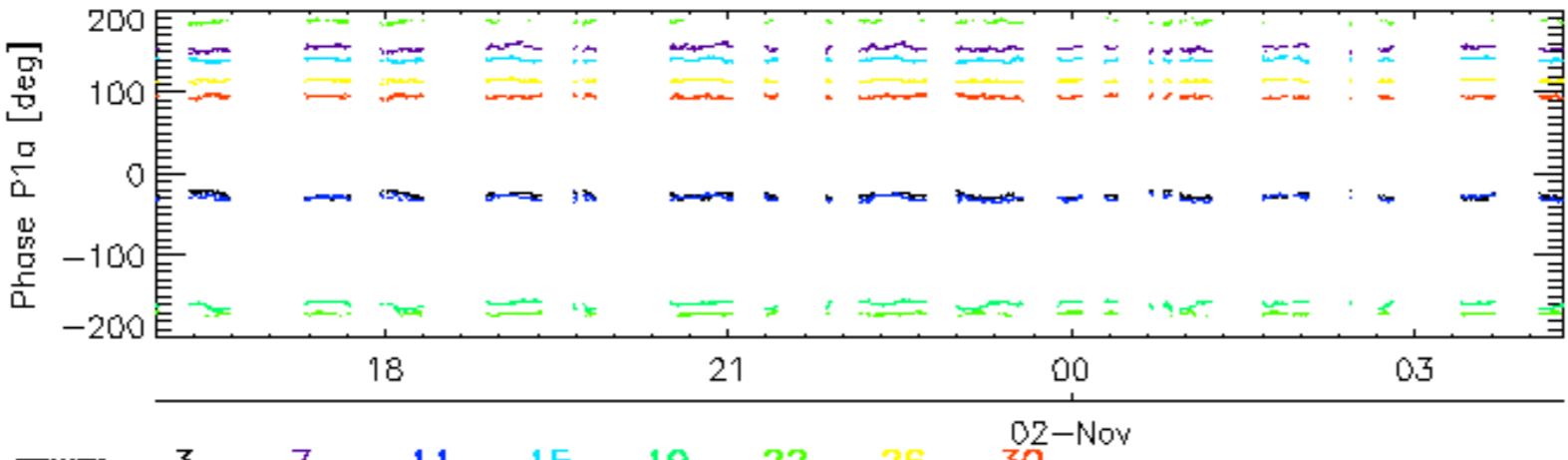
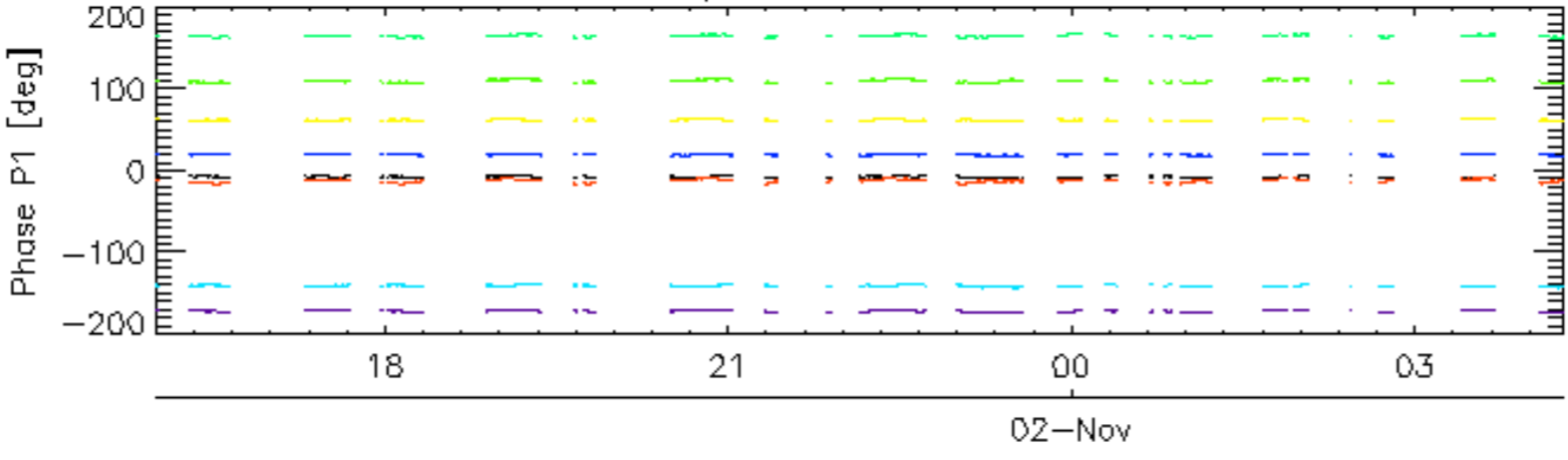


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

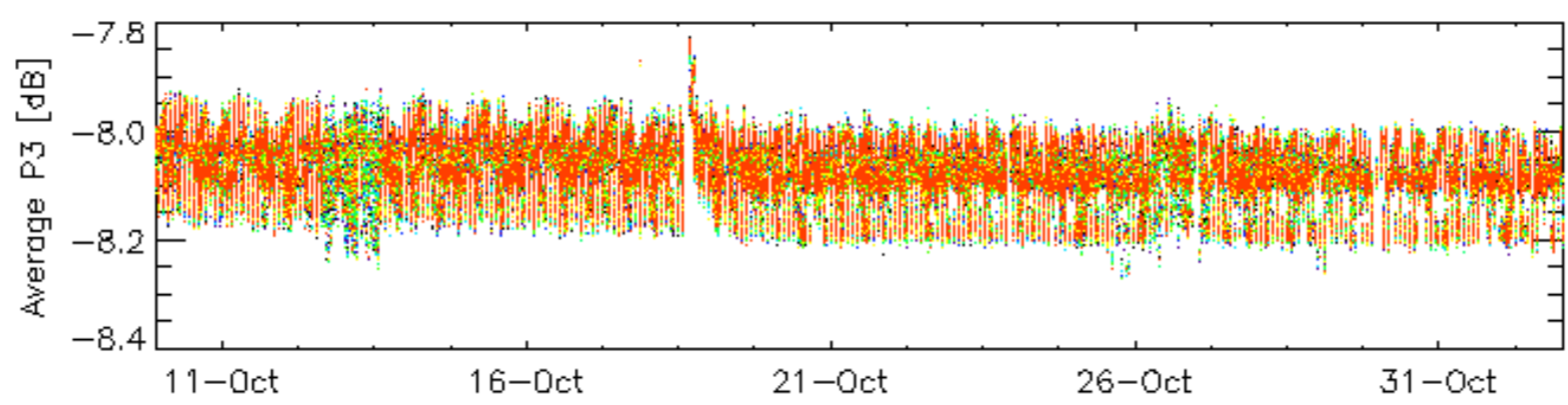
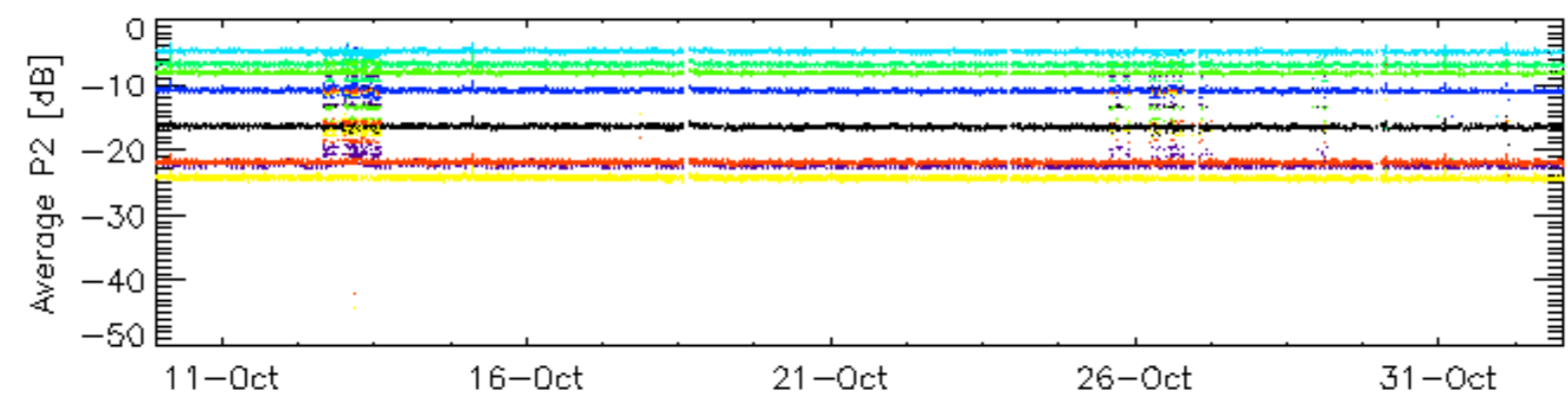
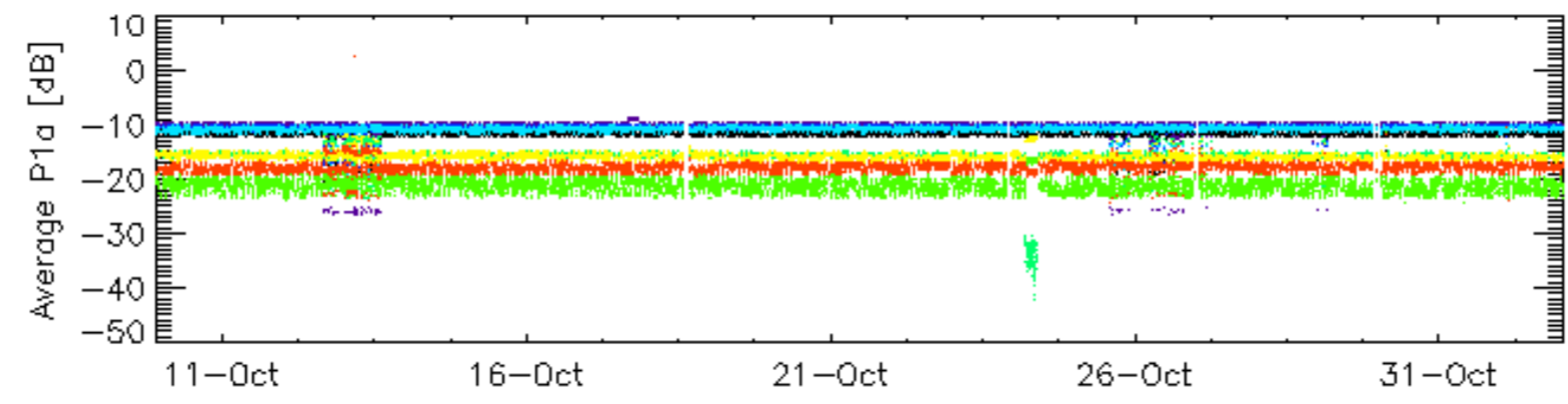
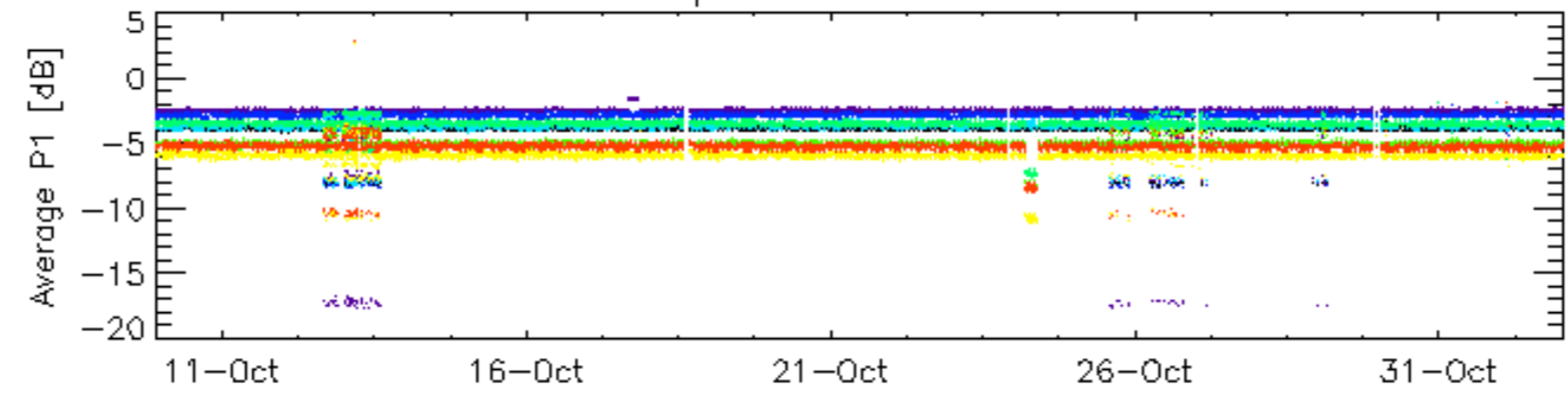


Cal pulses for WVS IS2



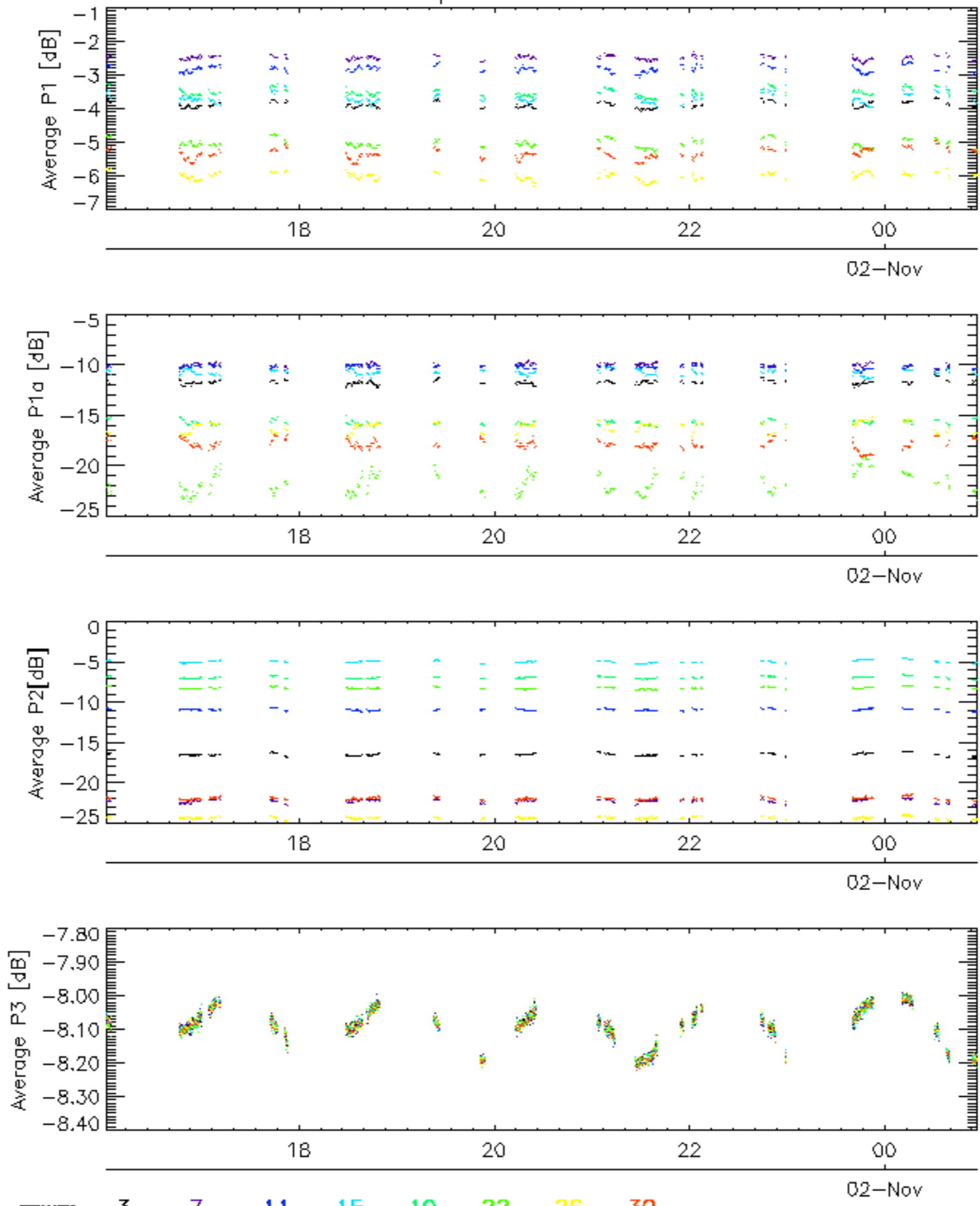
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 02-Nov

Cal pulses for GM1 SS3

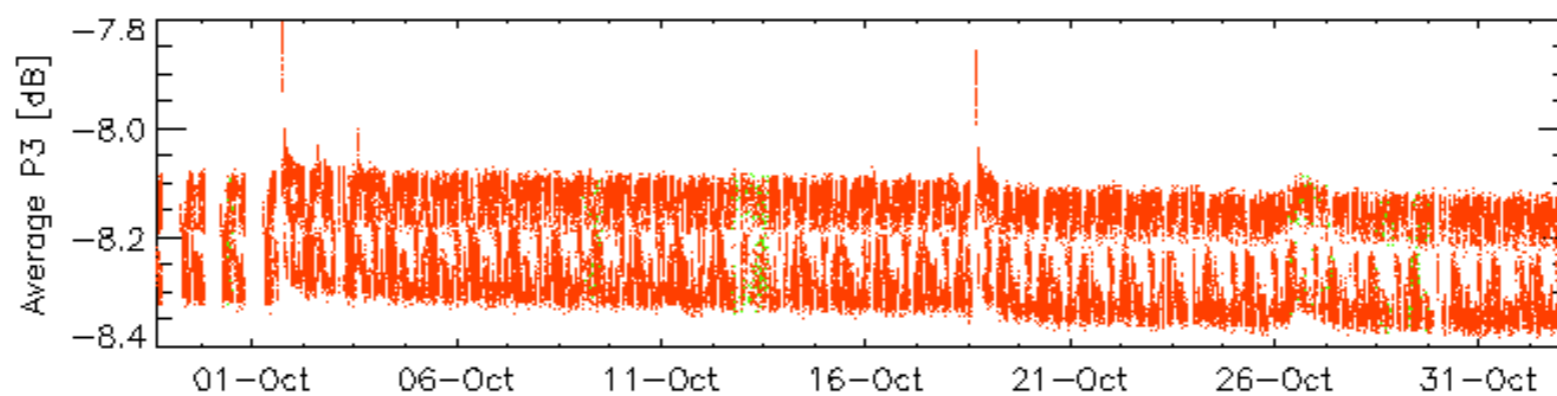
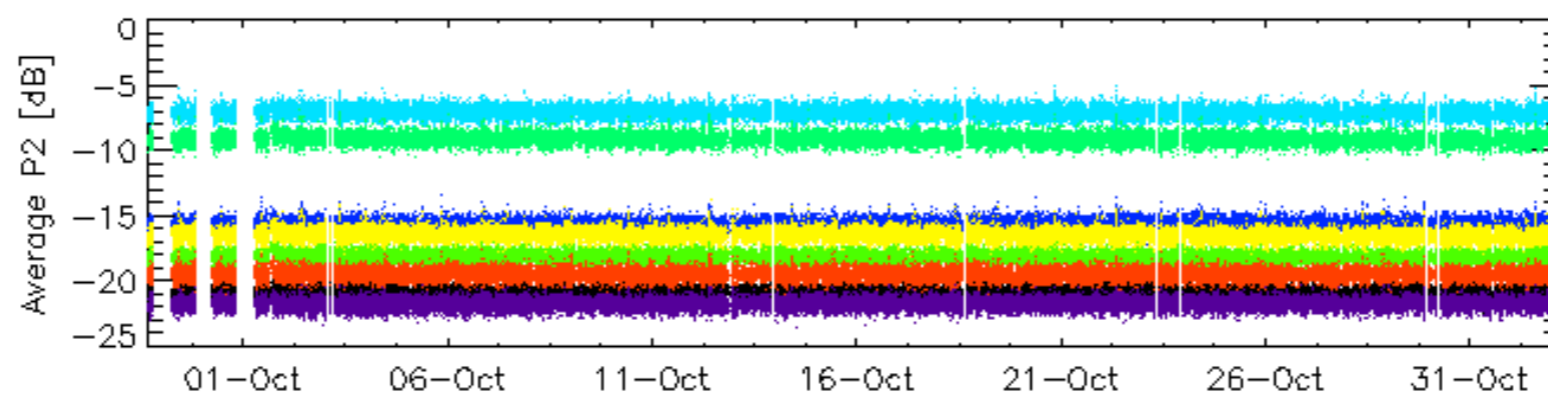
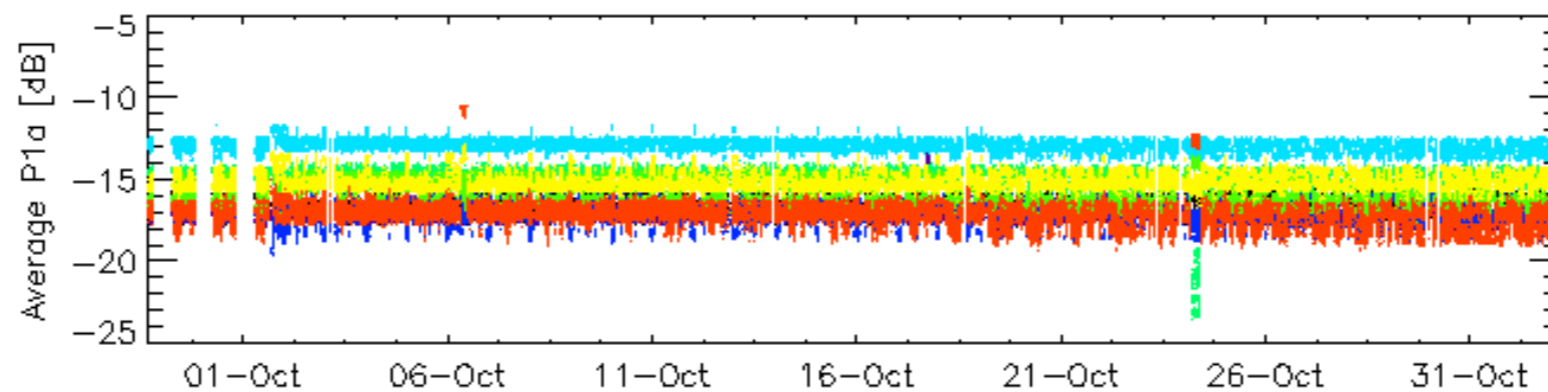
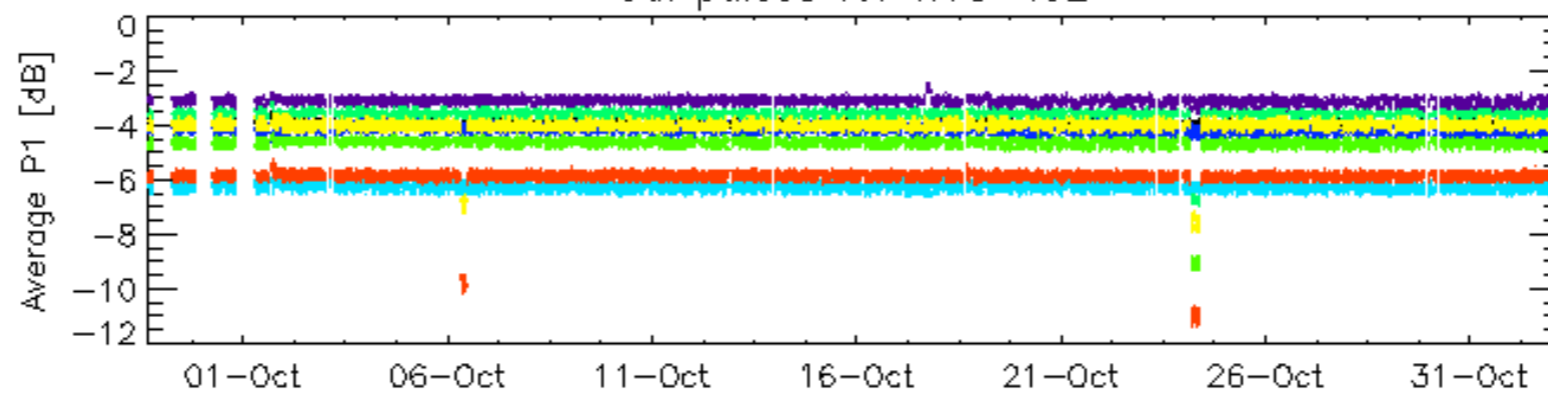


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

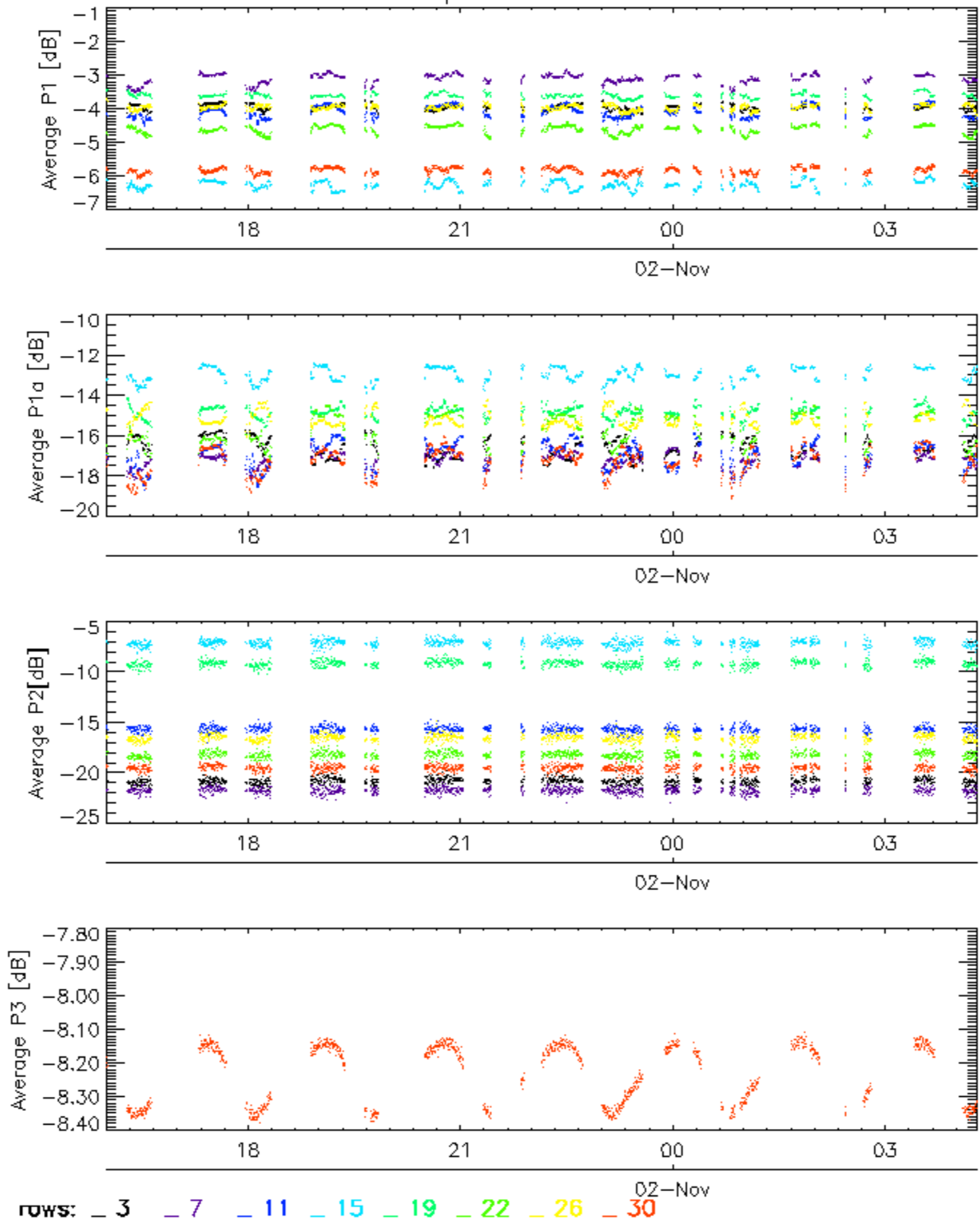


Cal pulses for WVS IS2



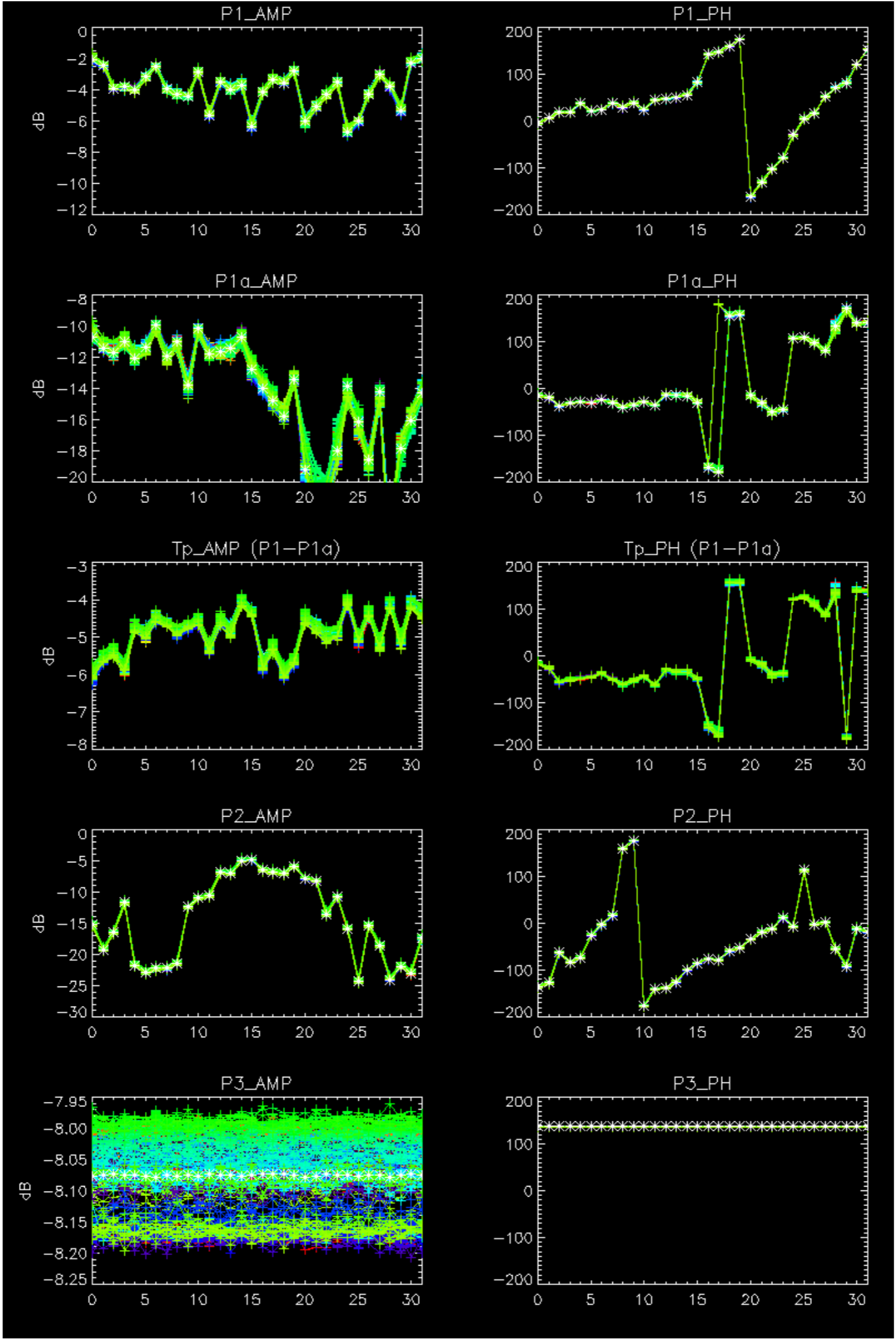
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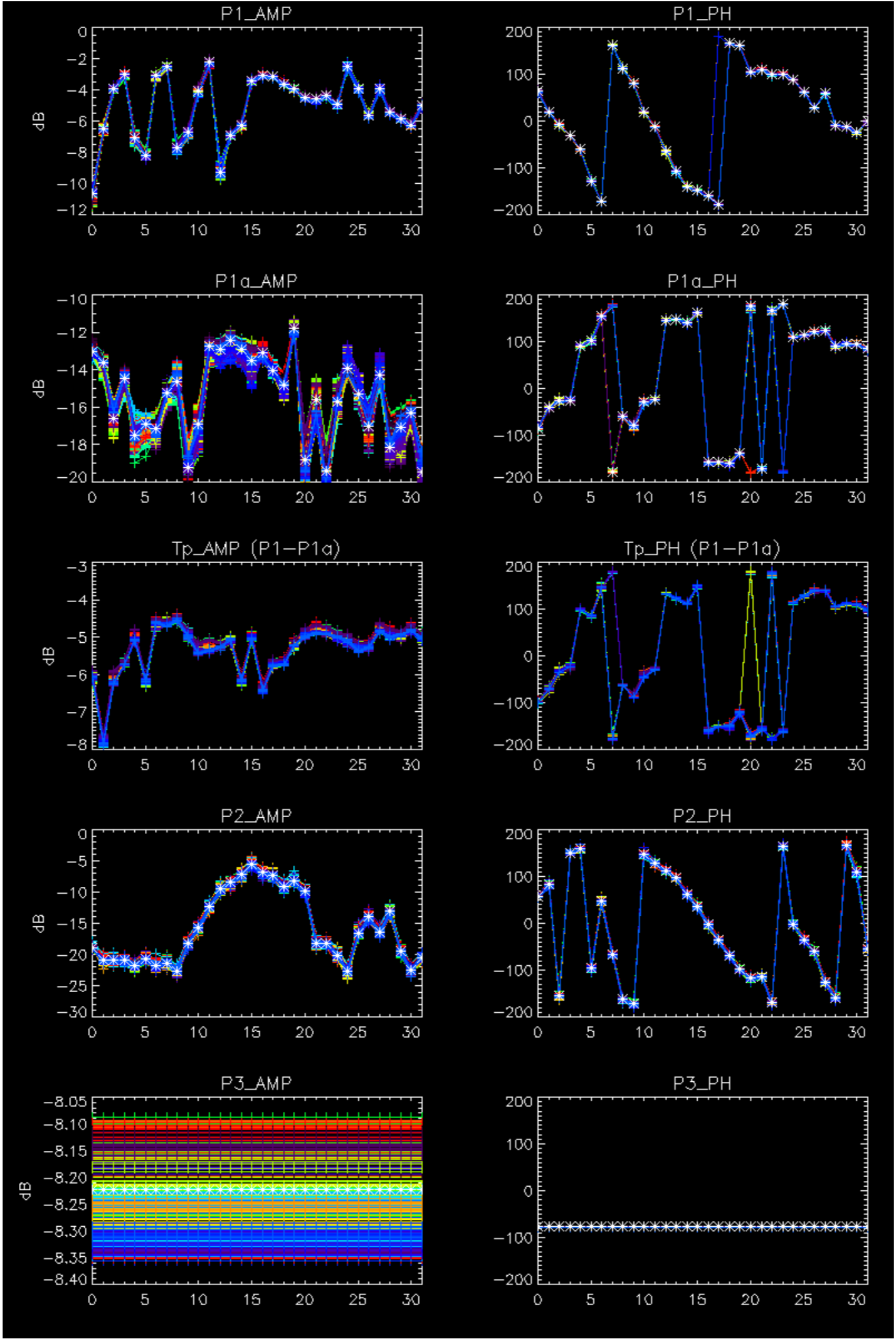
Cal pulses for WVS IS2



No anomalies observed on available browse products

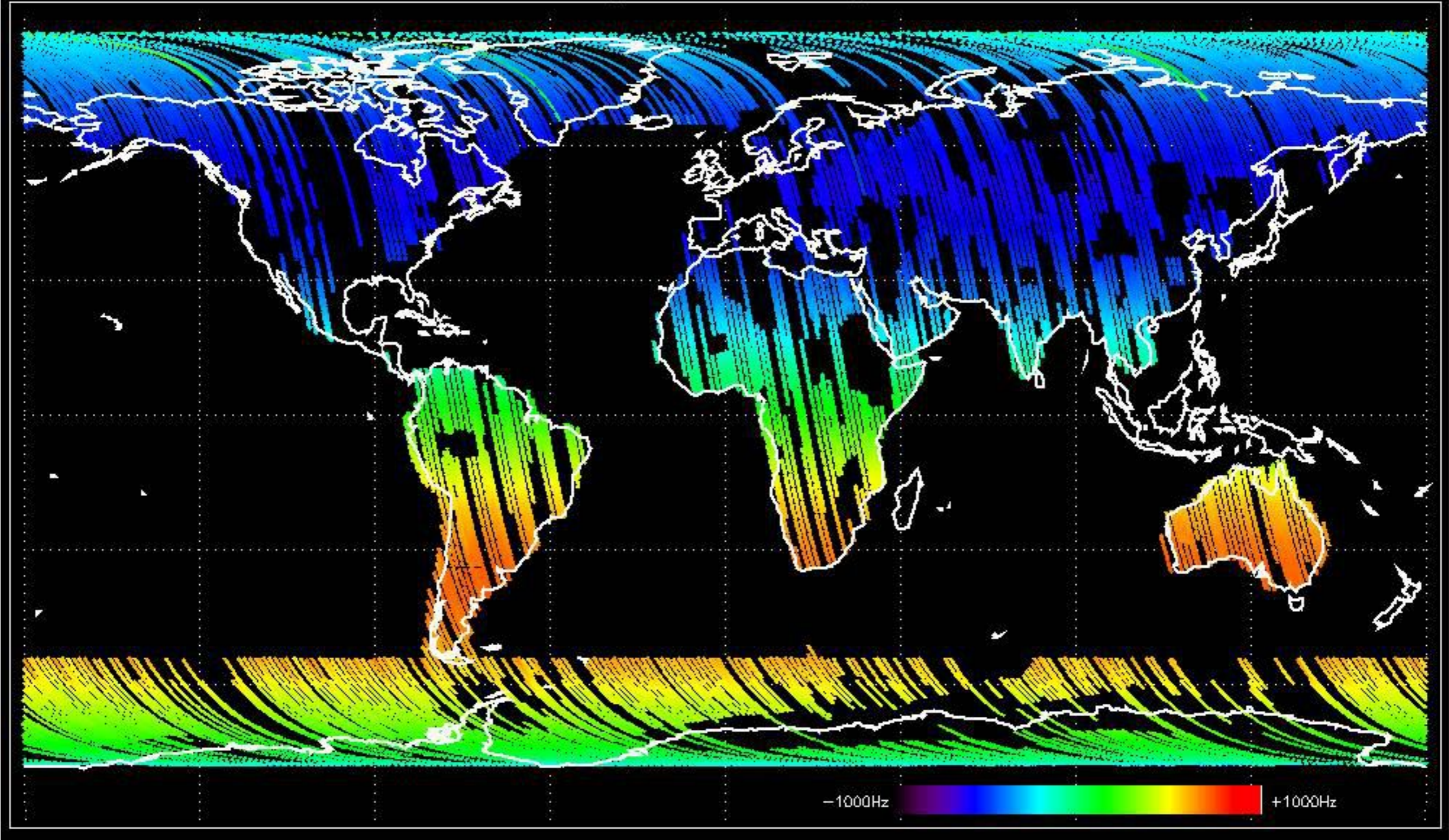
No anomalies observed.



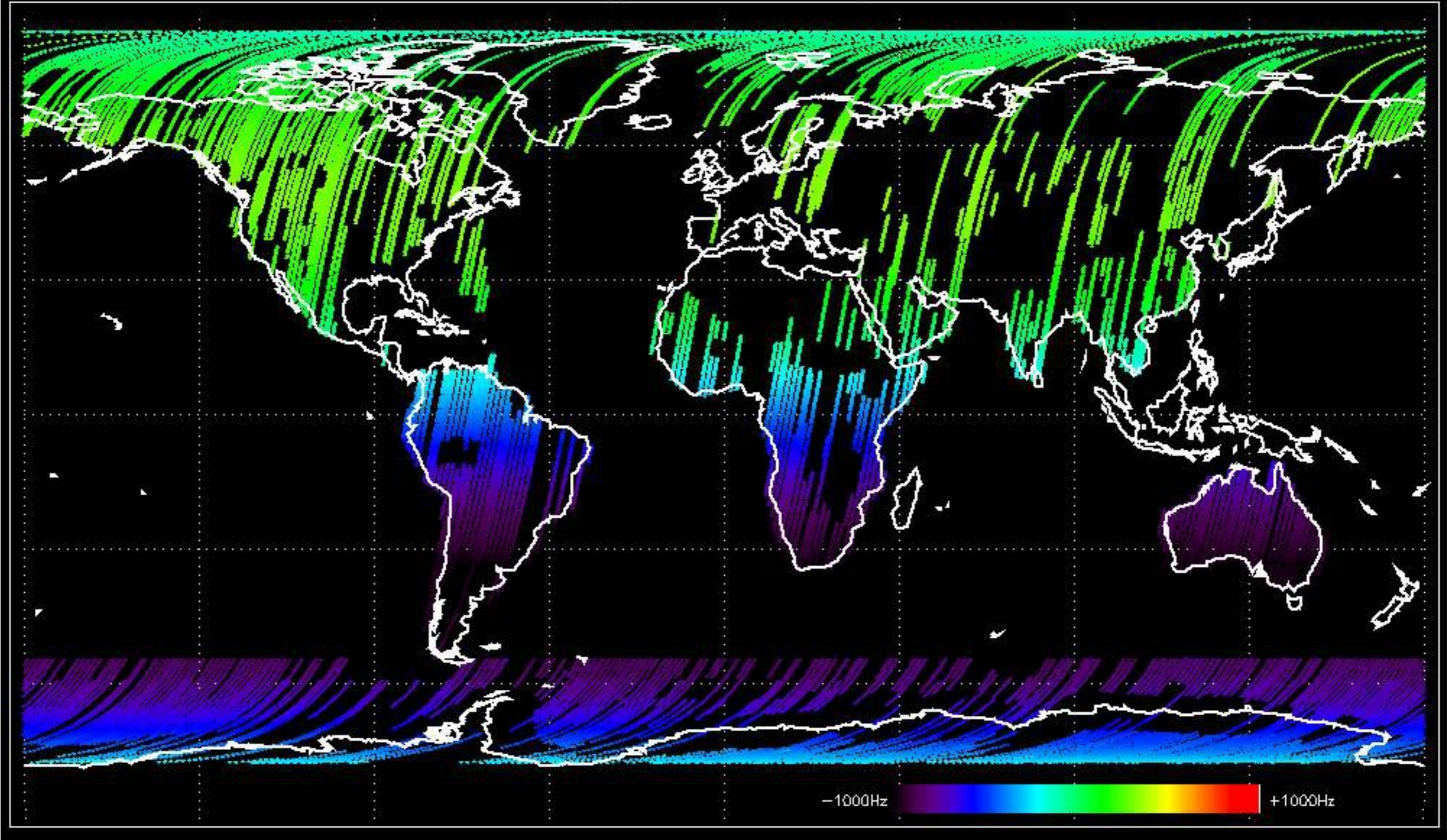


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

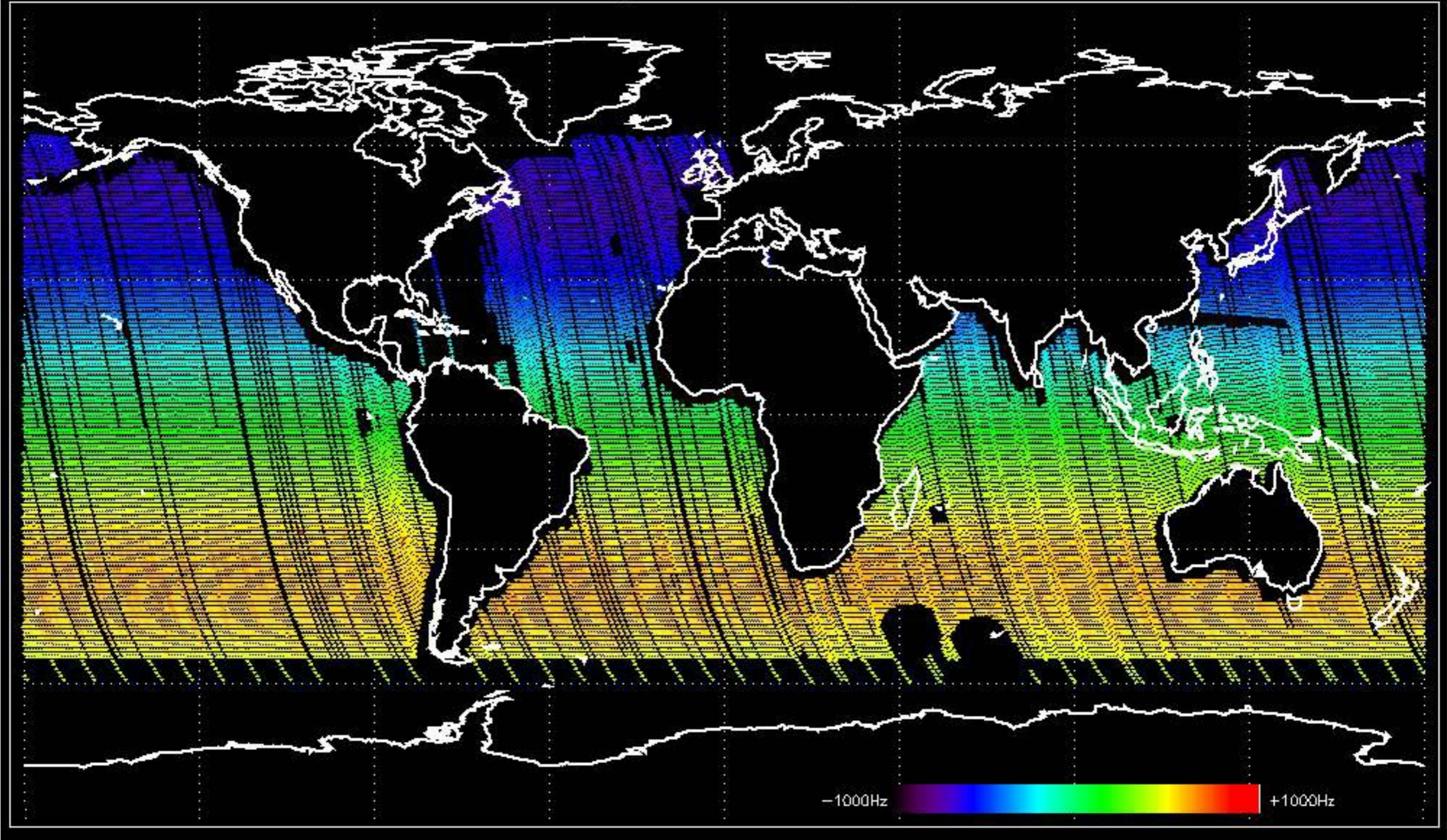
Doppler 'GM1' 'SS1' ascending



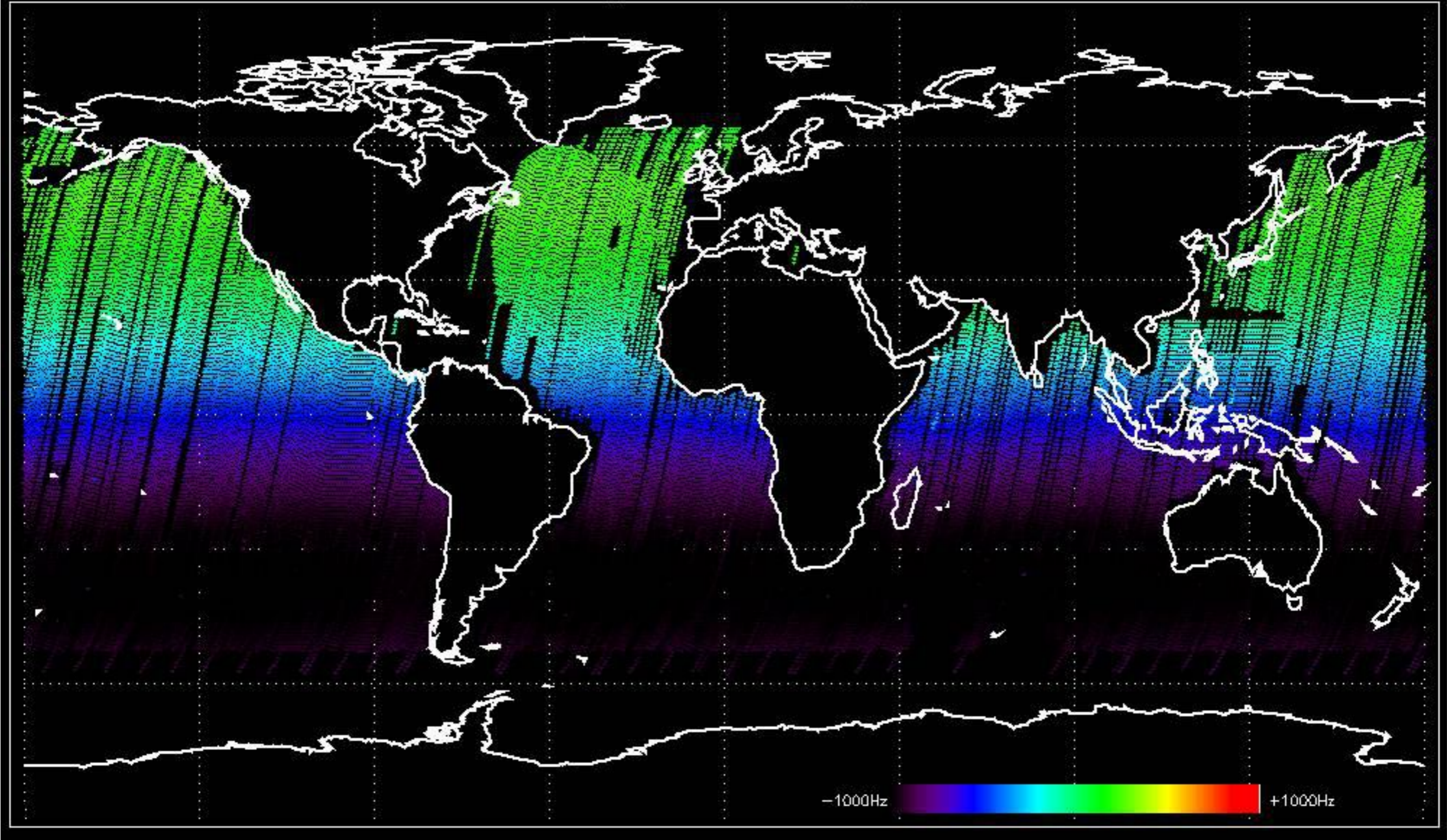
Doppler 'GM1' 'SS1' descending



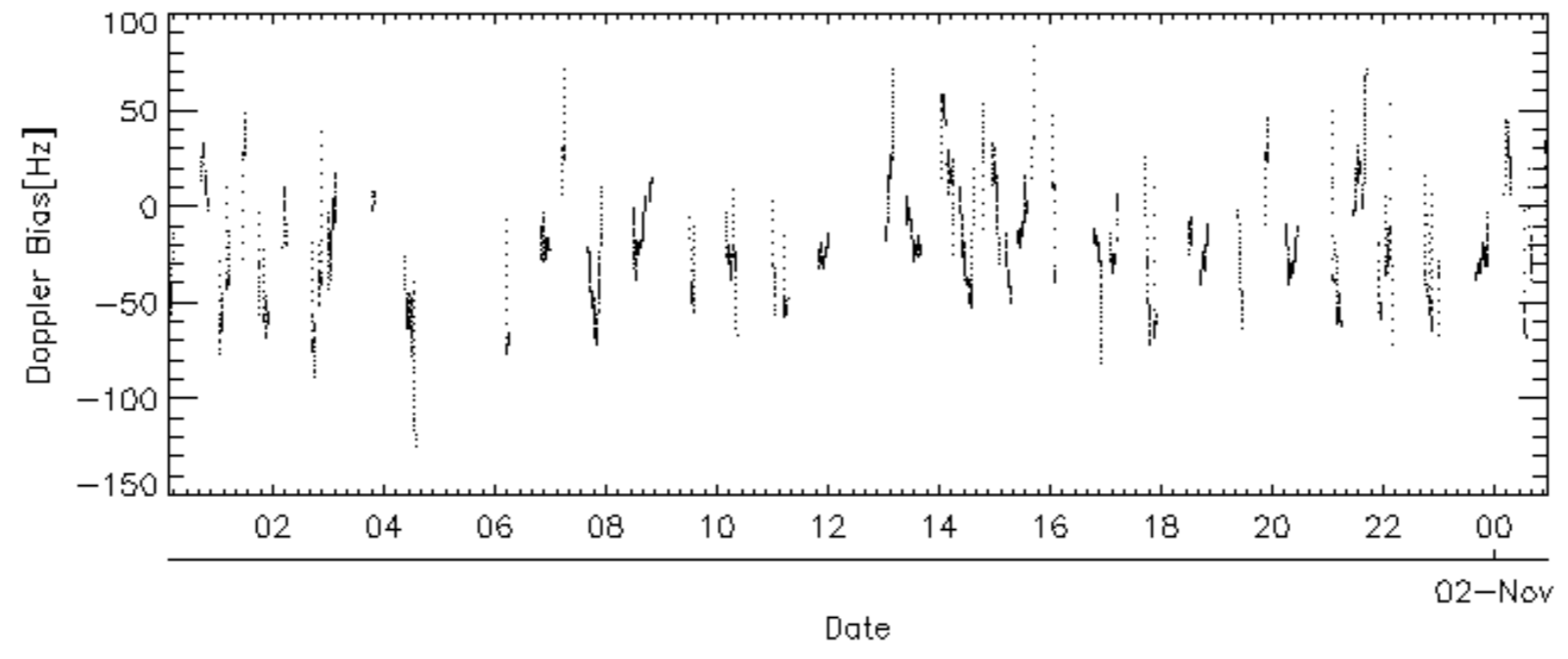
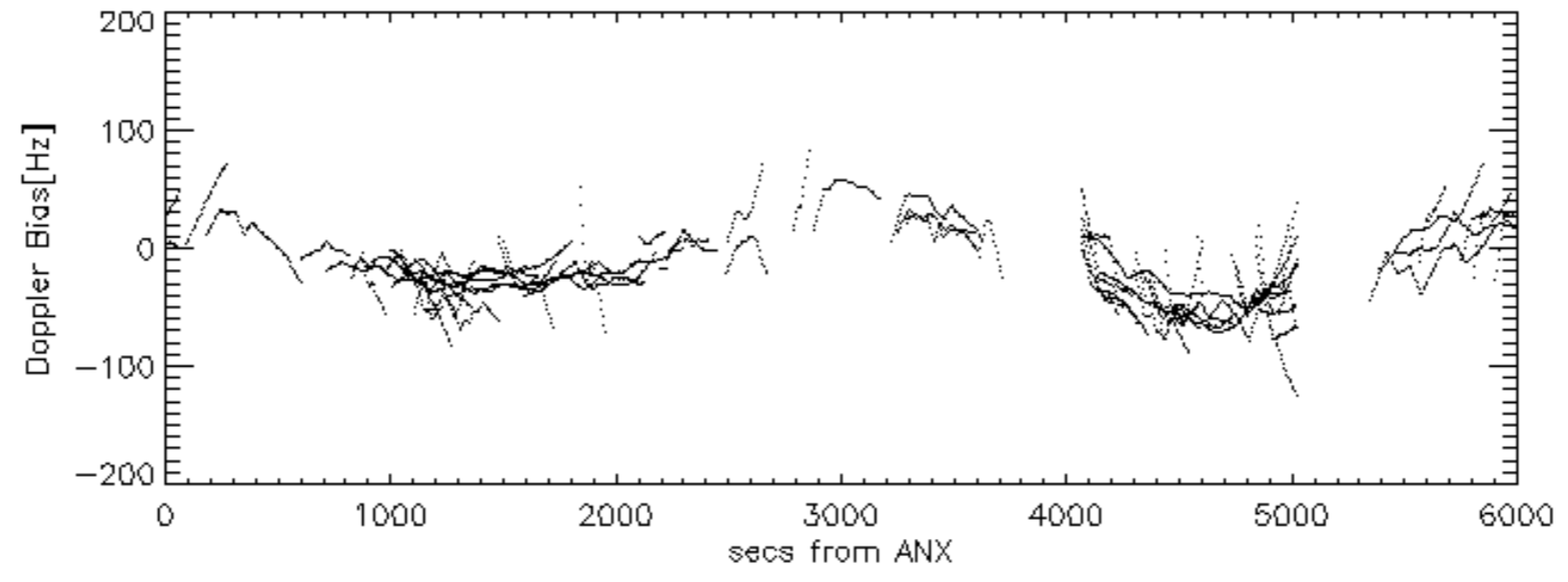
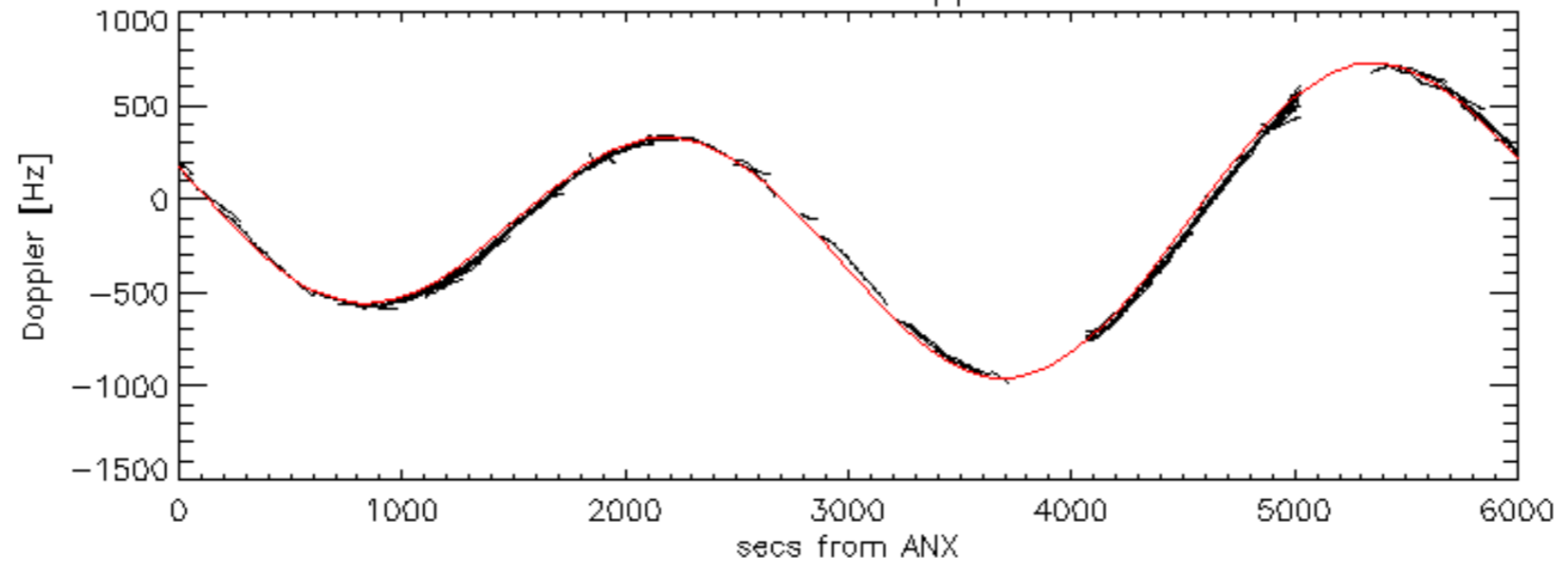
Doppler 'WVS' 'IS2' ascending

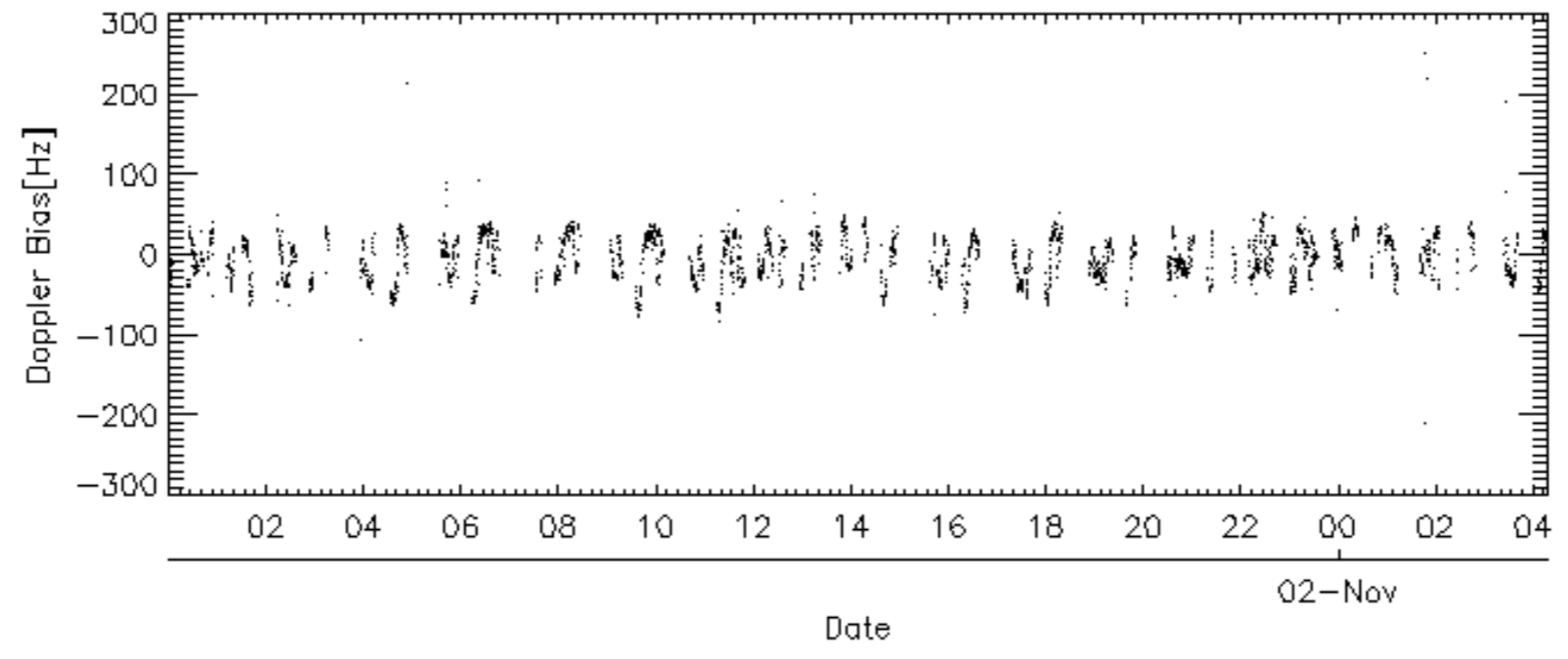
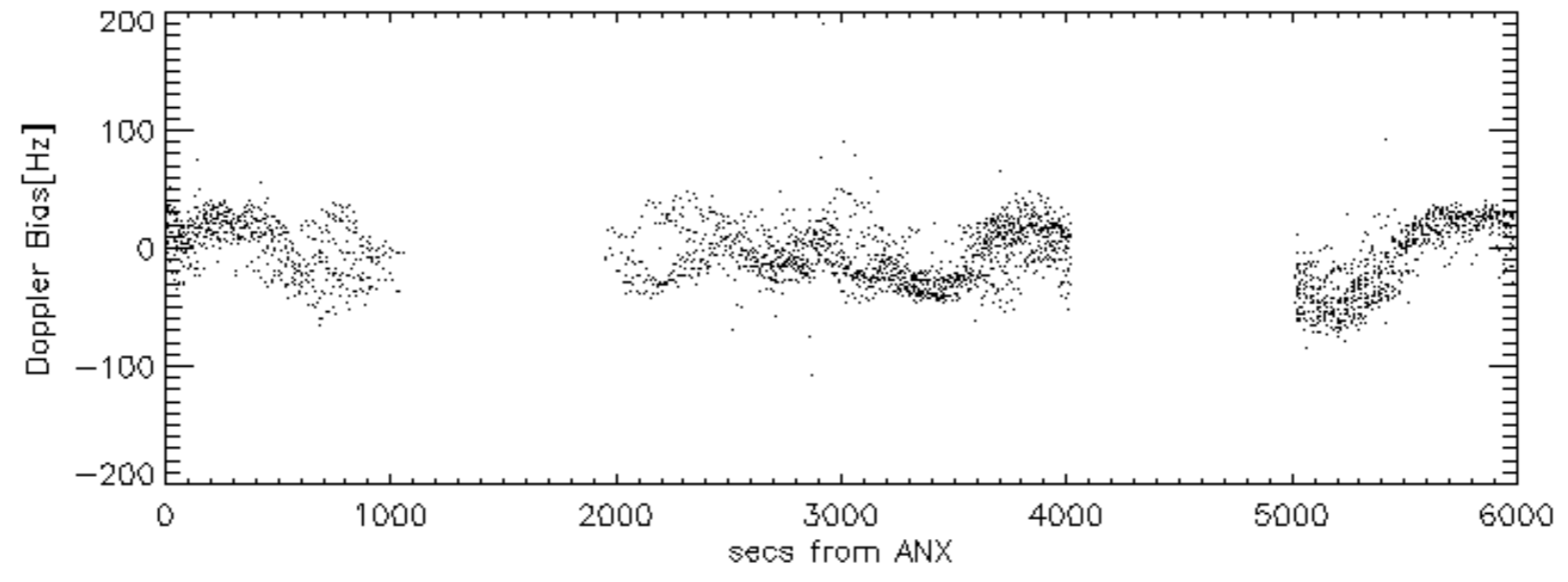
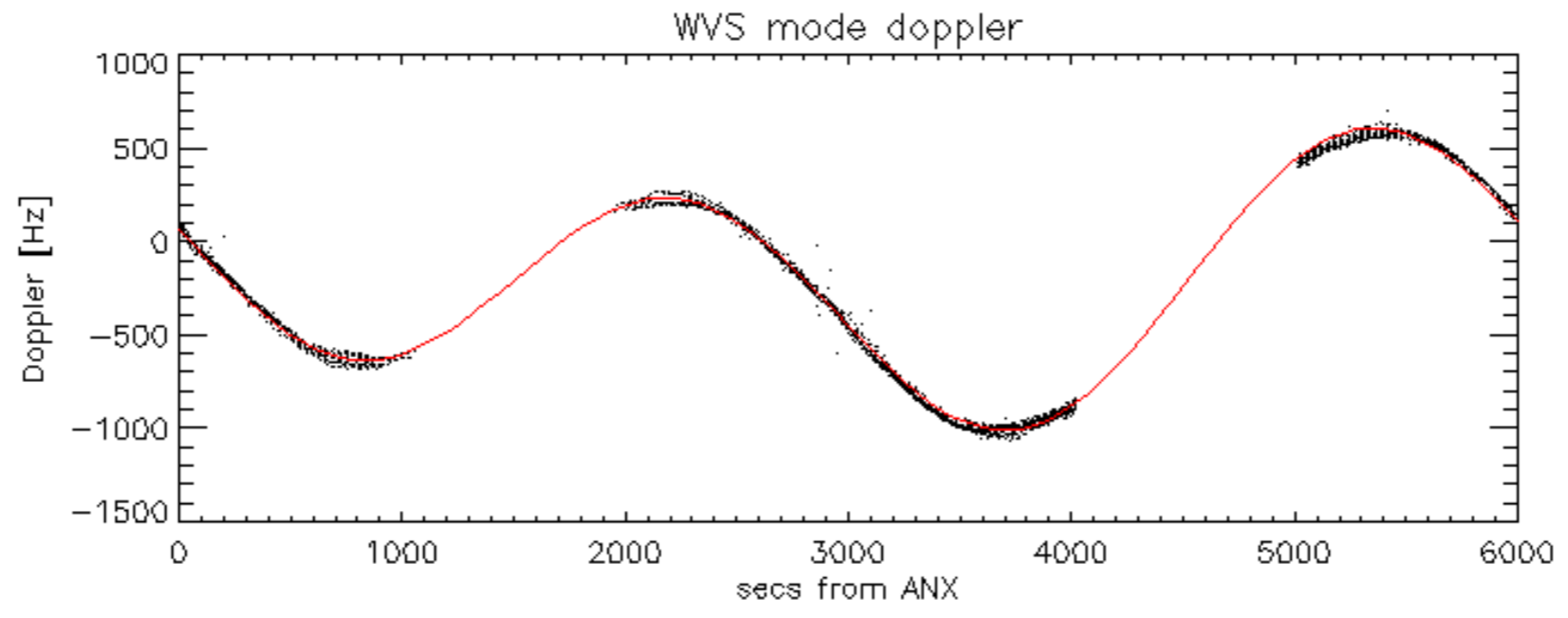


Doppler 'WVS' 'IS2' descending

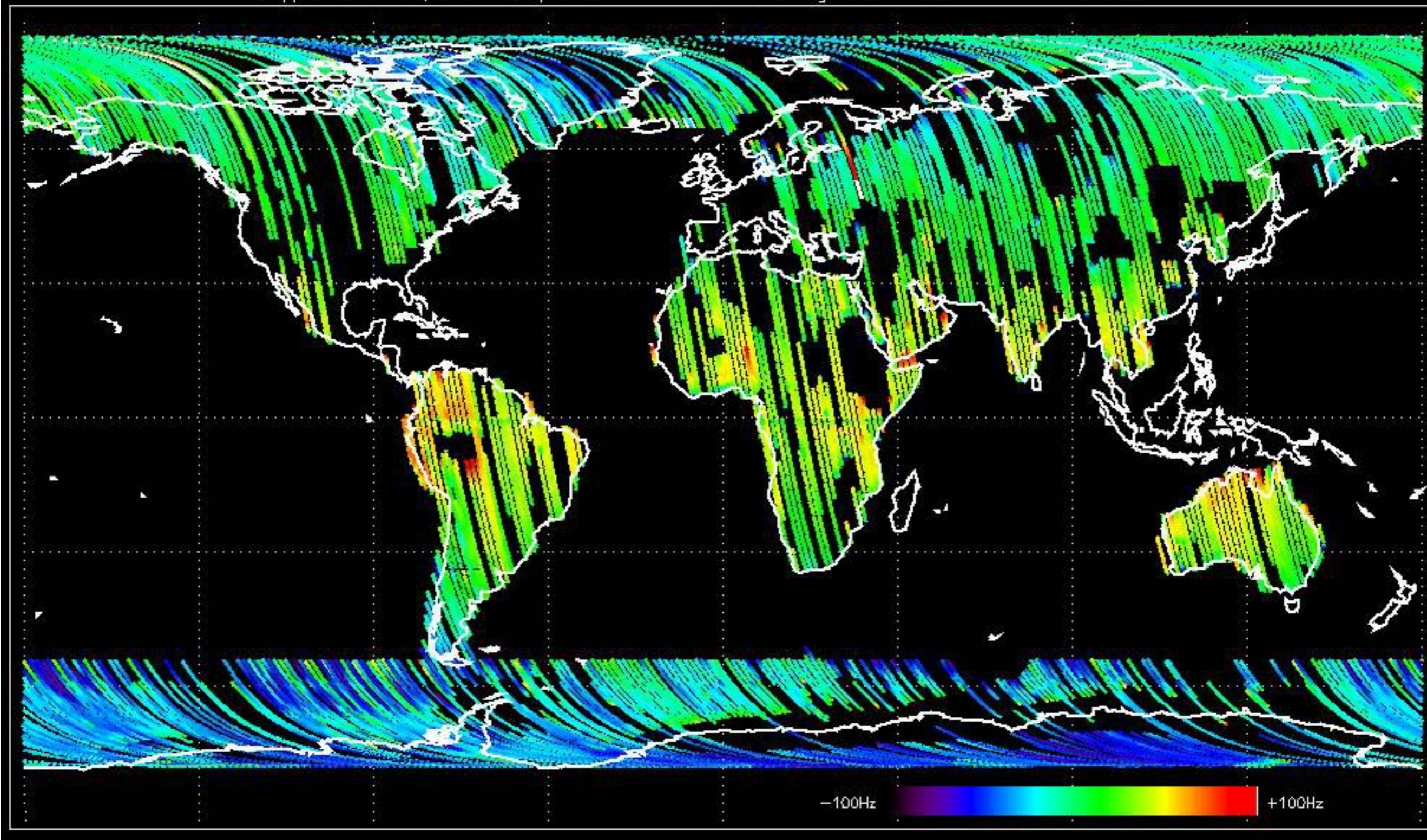


GM1 mode doppler

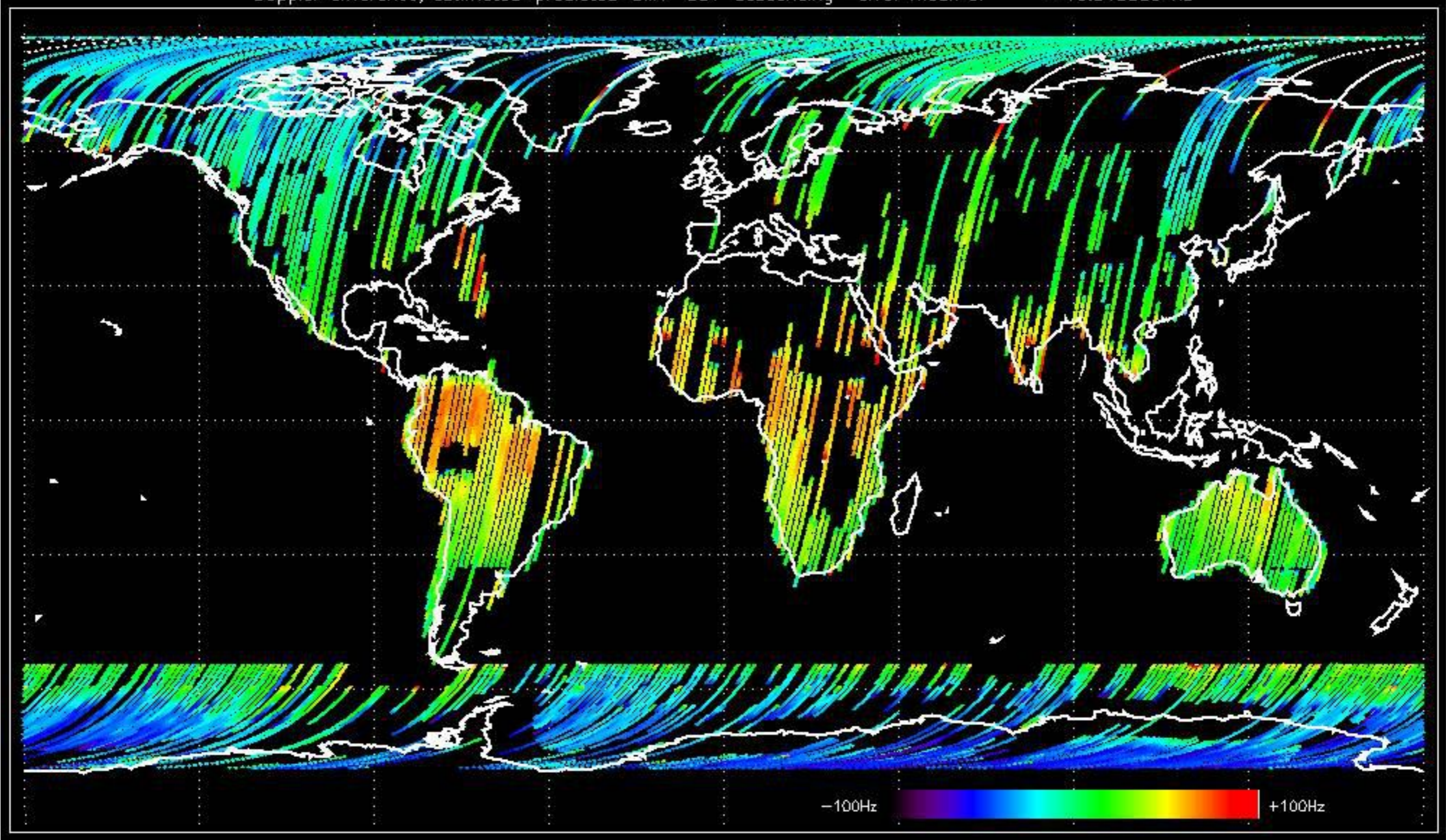




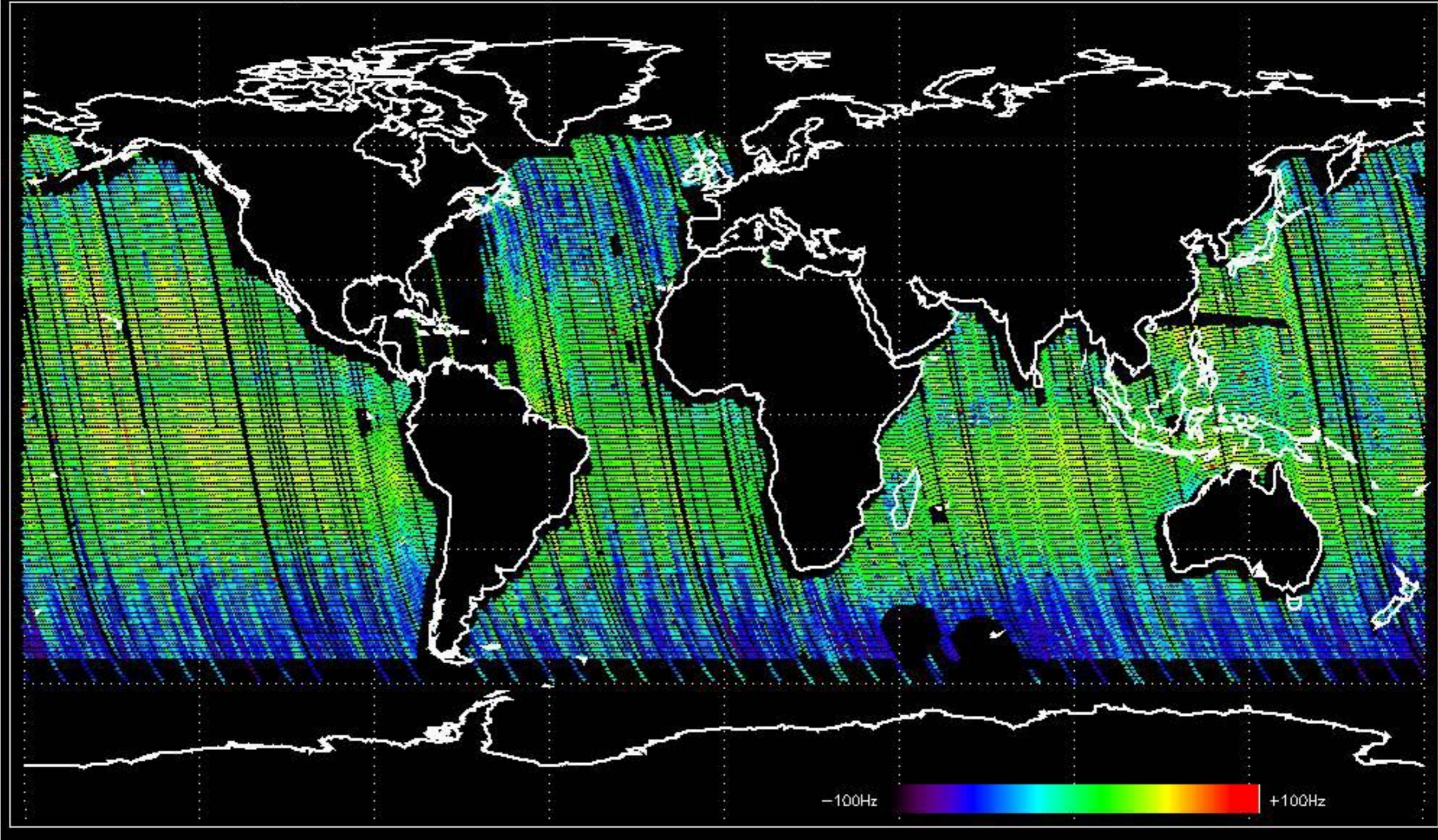
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.620026 Hz



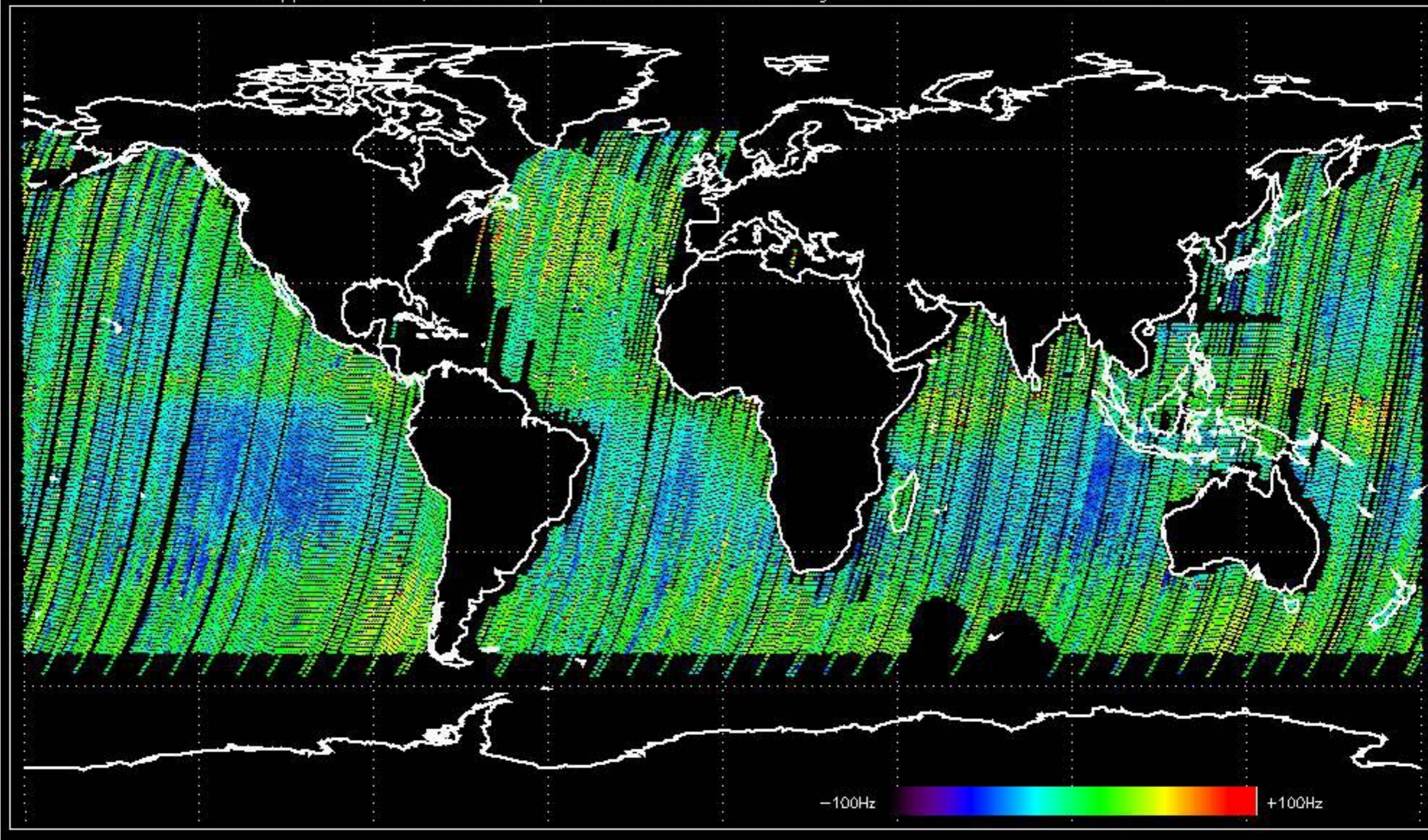
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.515350 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.8854337 Hz

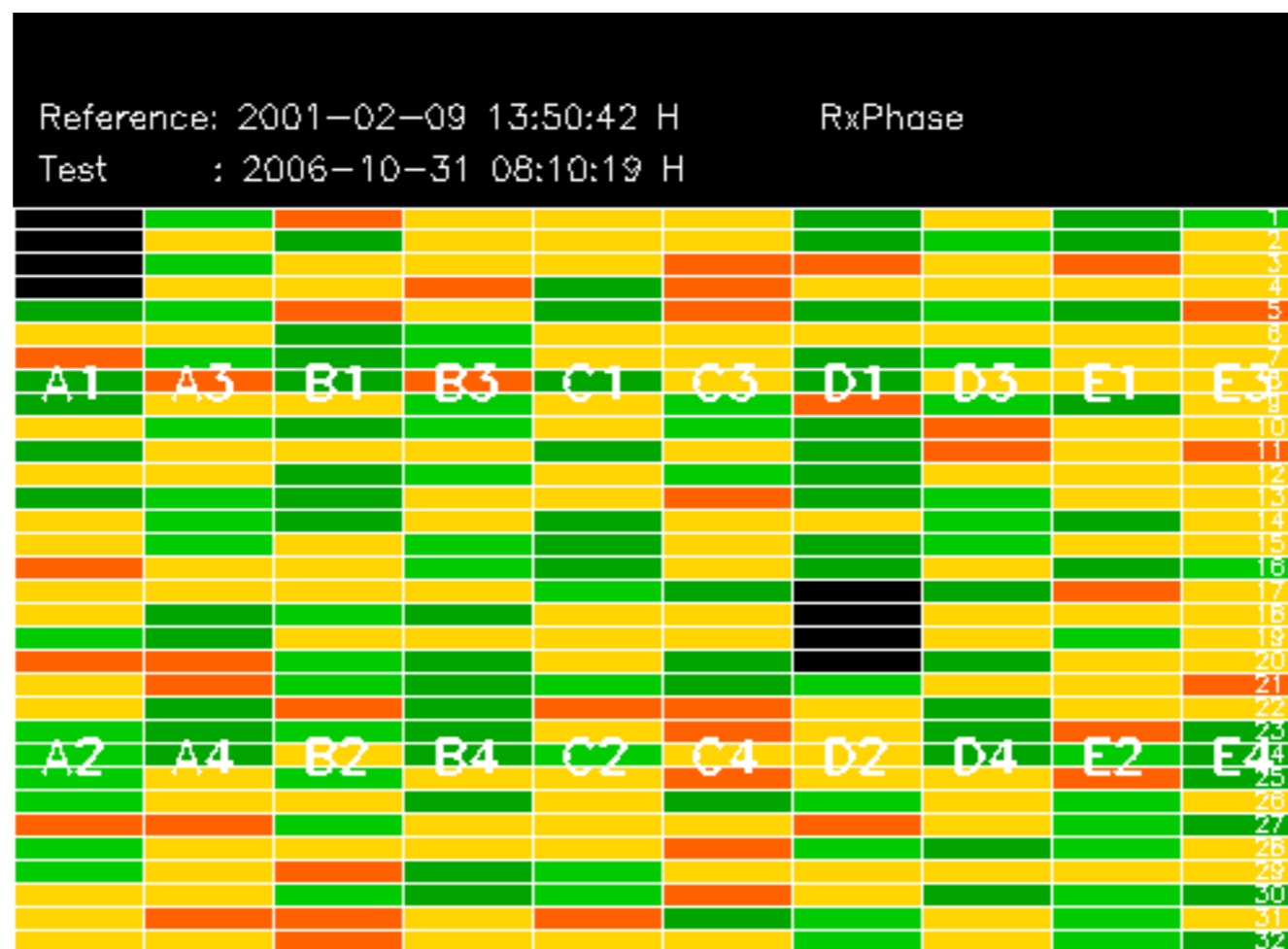


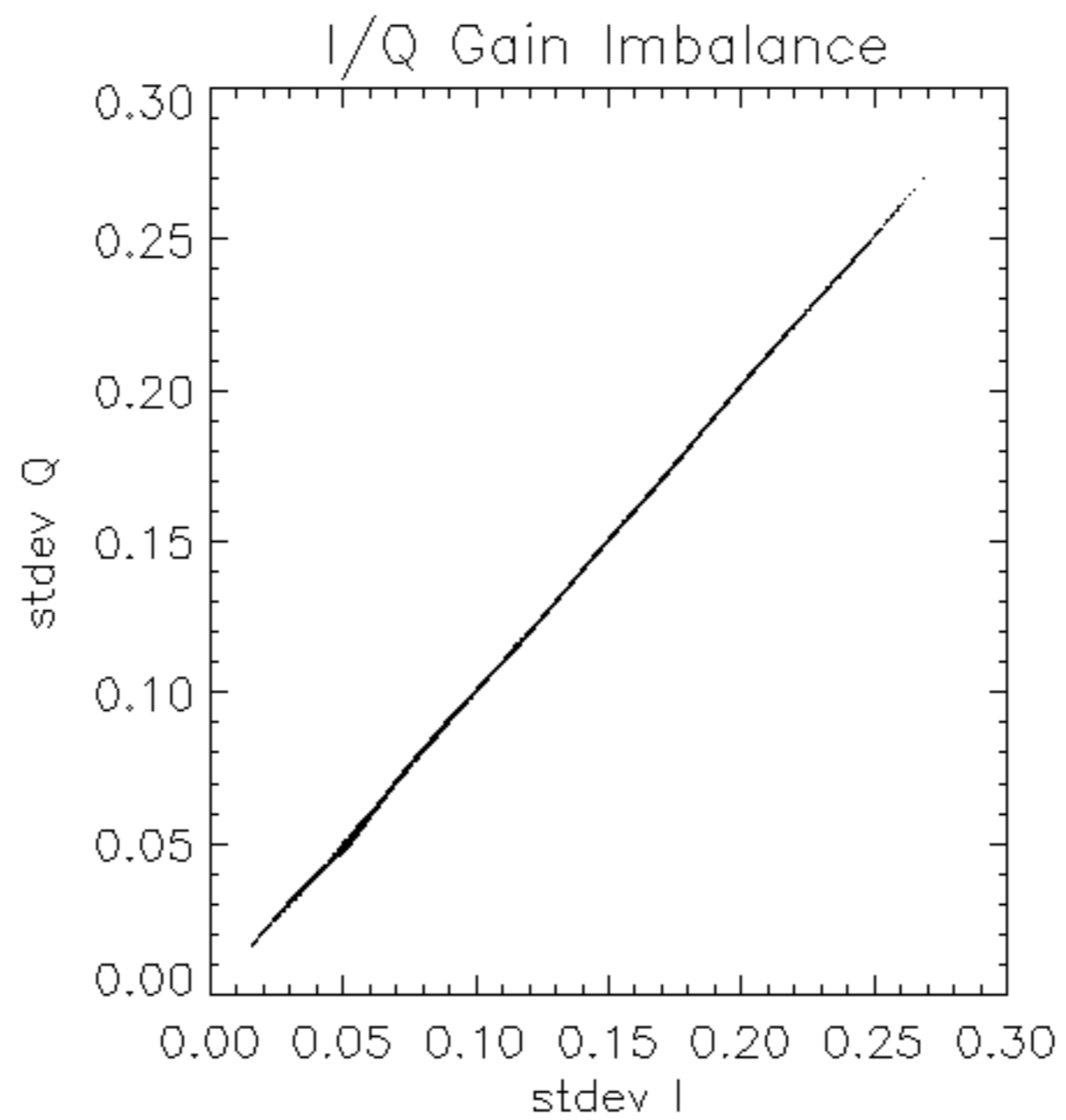
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.354993 Hz

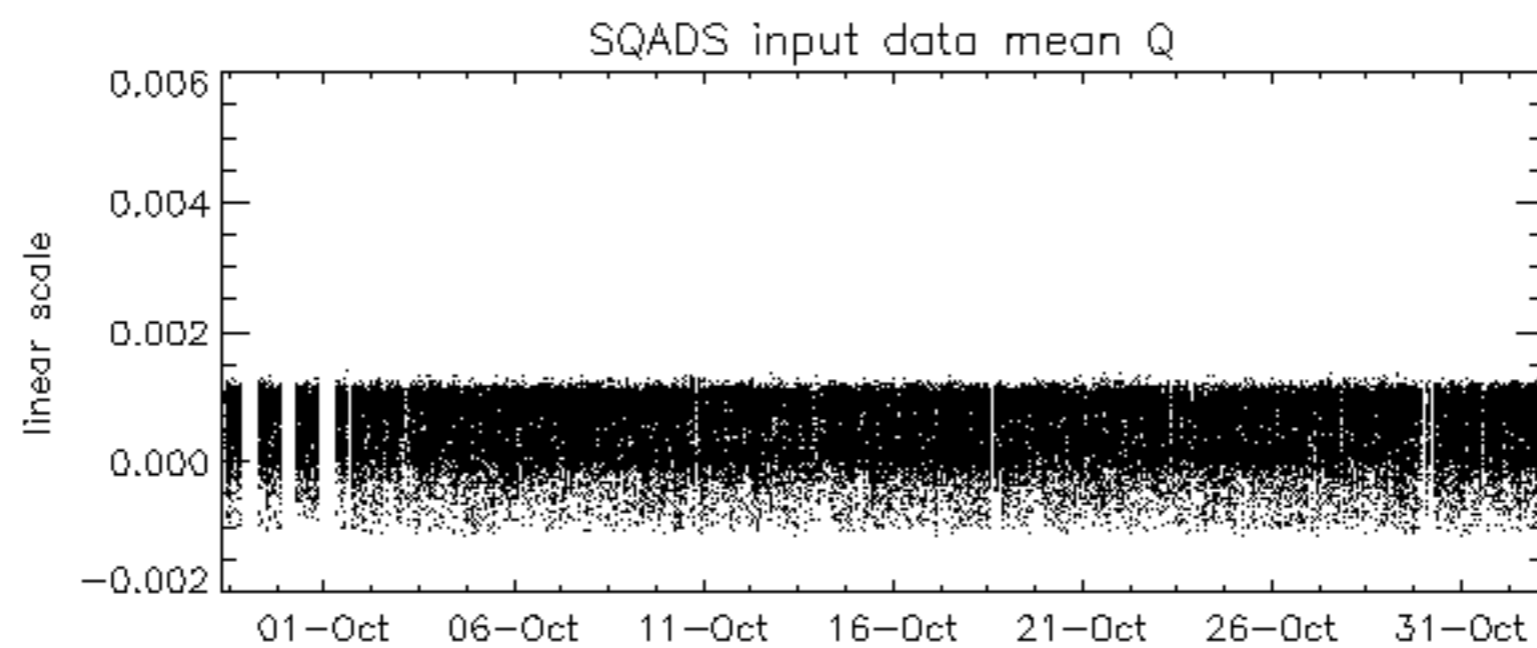
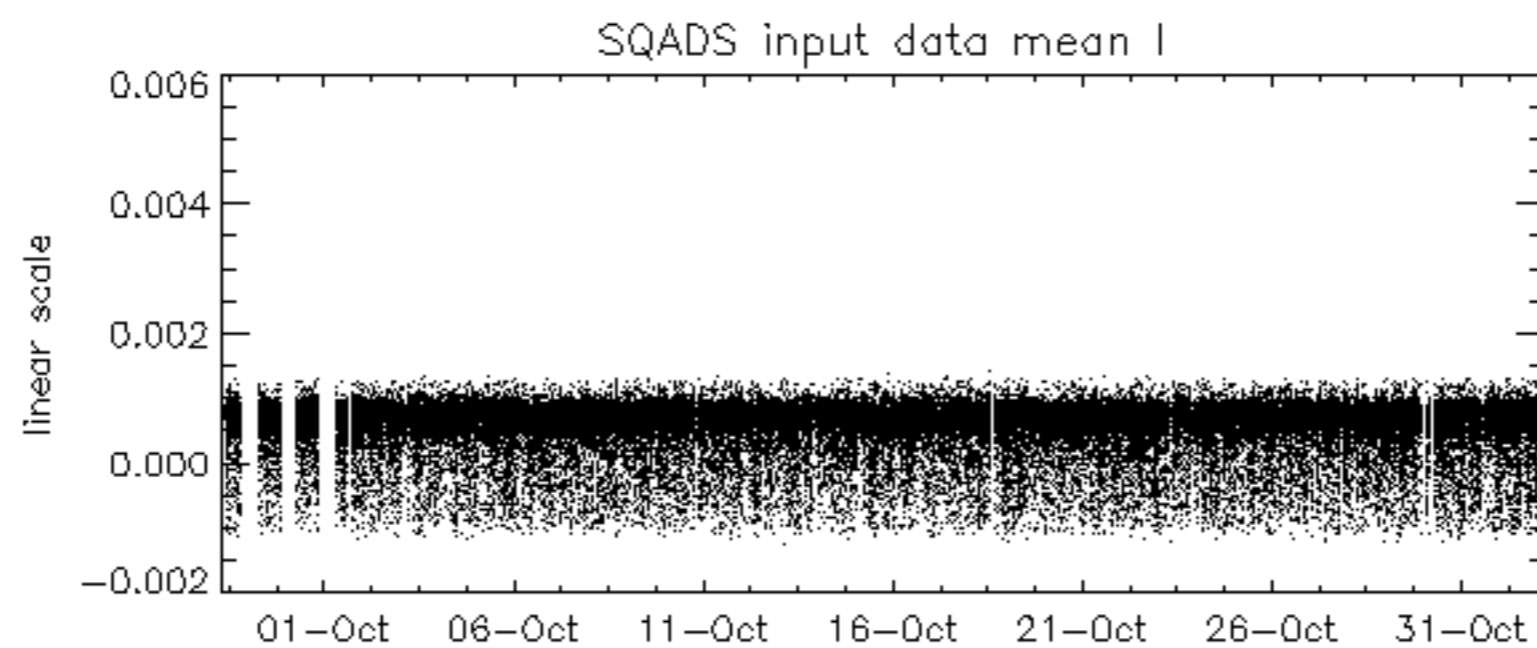
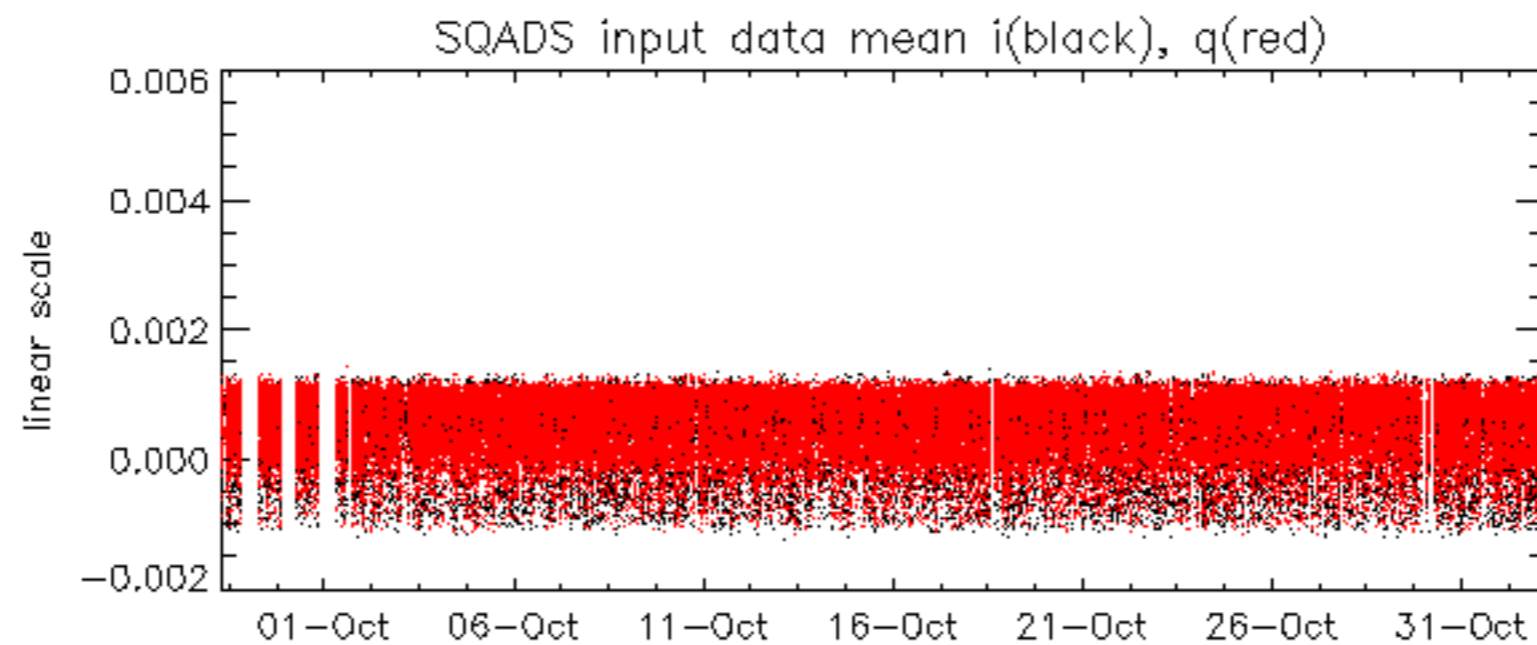


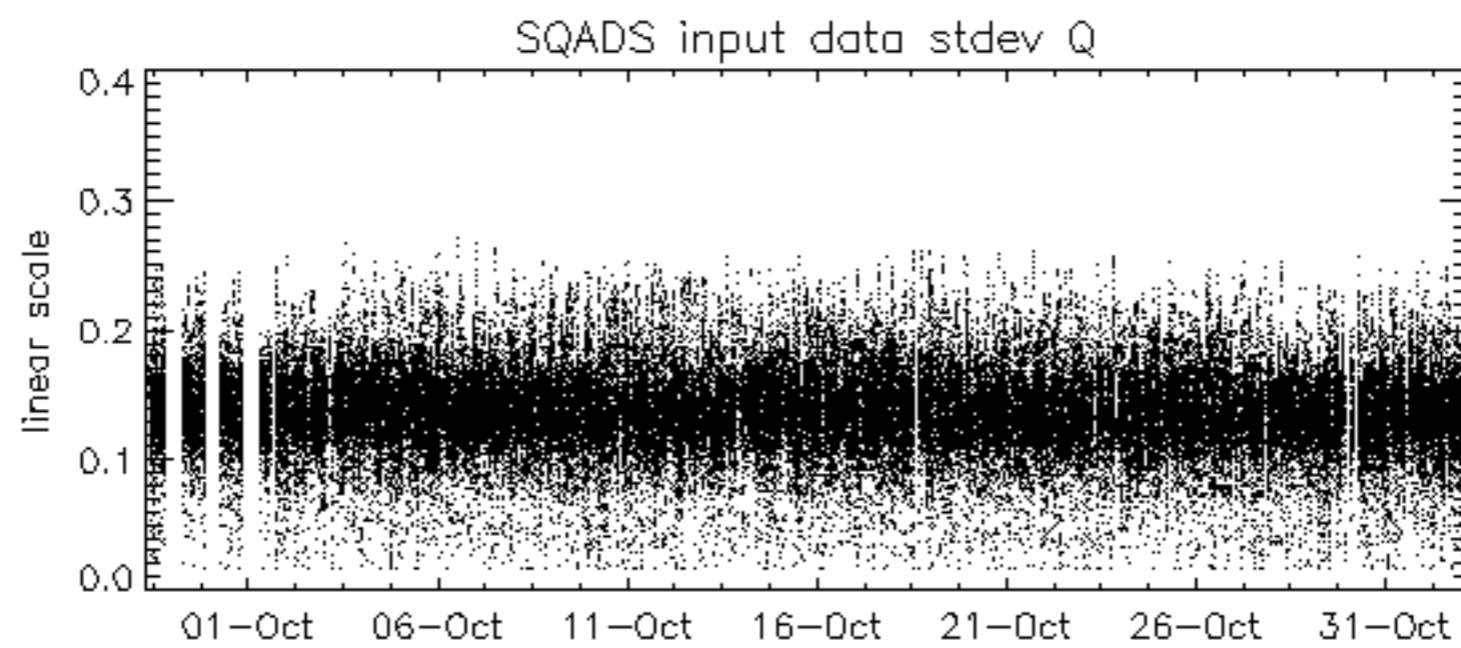
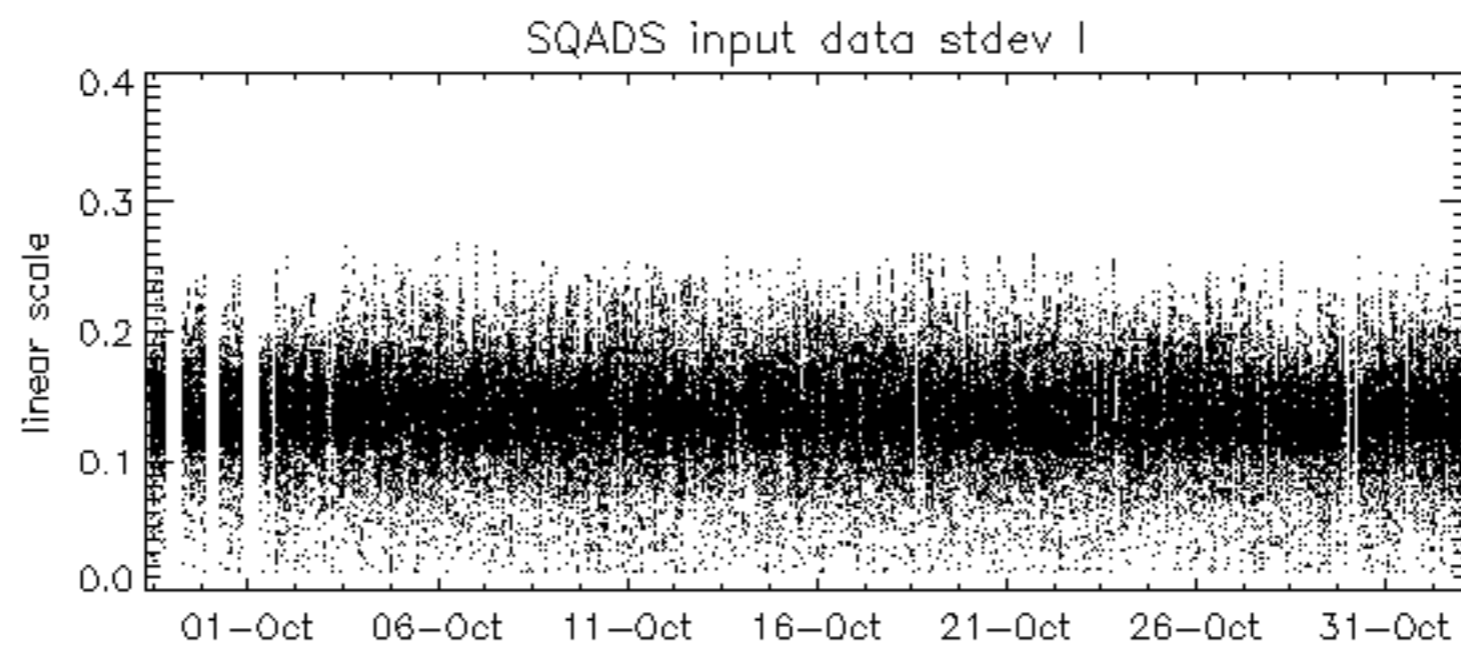
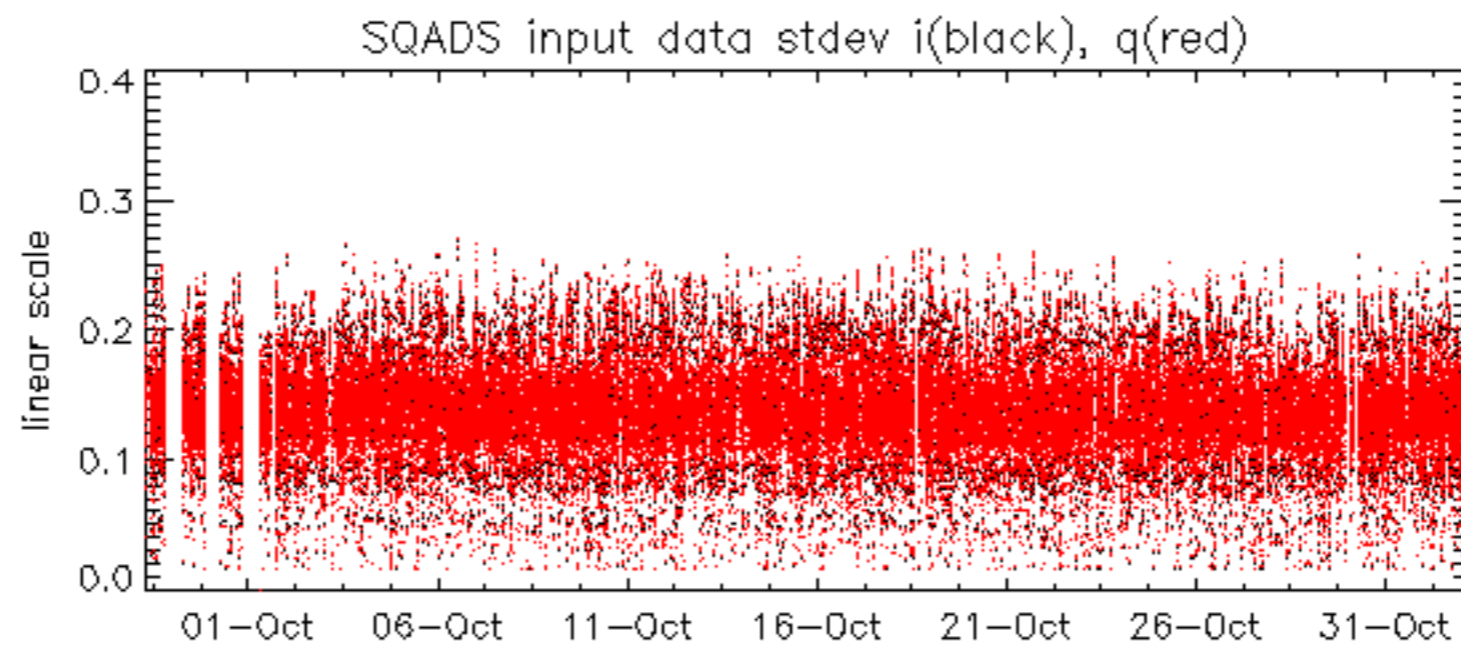
No anomalies observed on available MS products:

No anomalies observed.





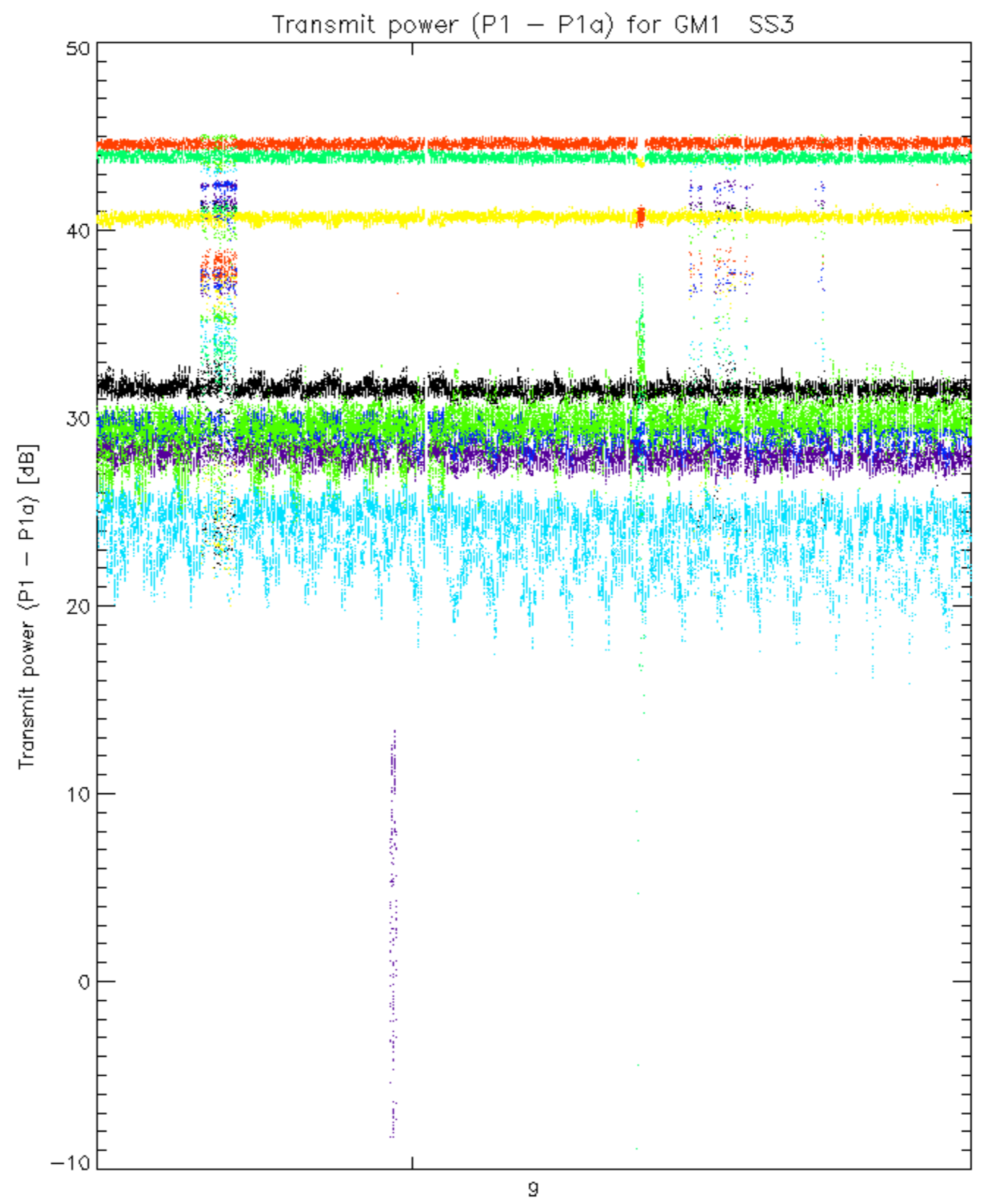




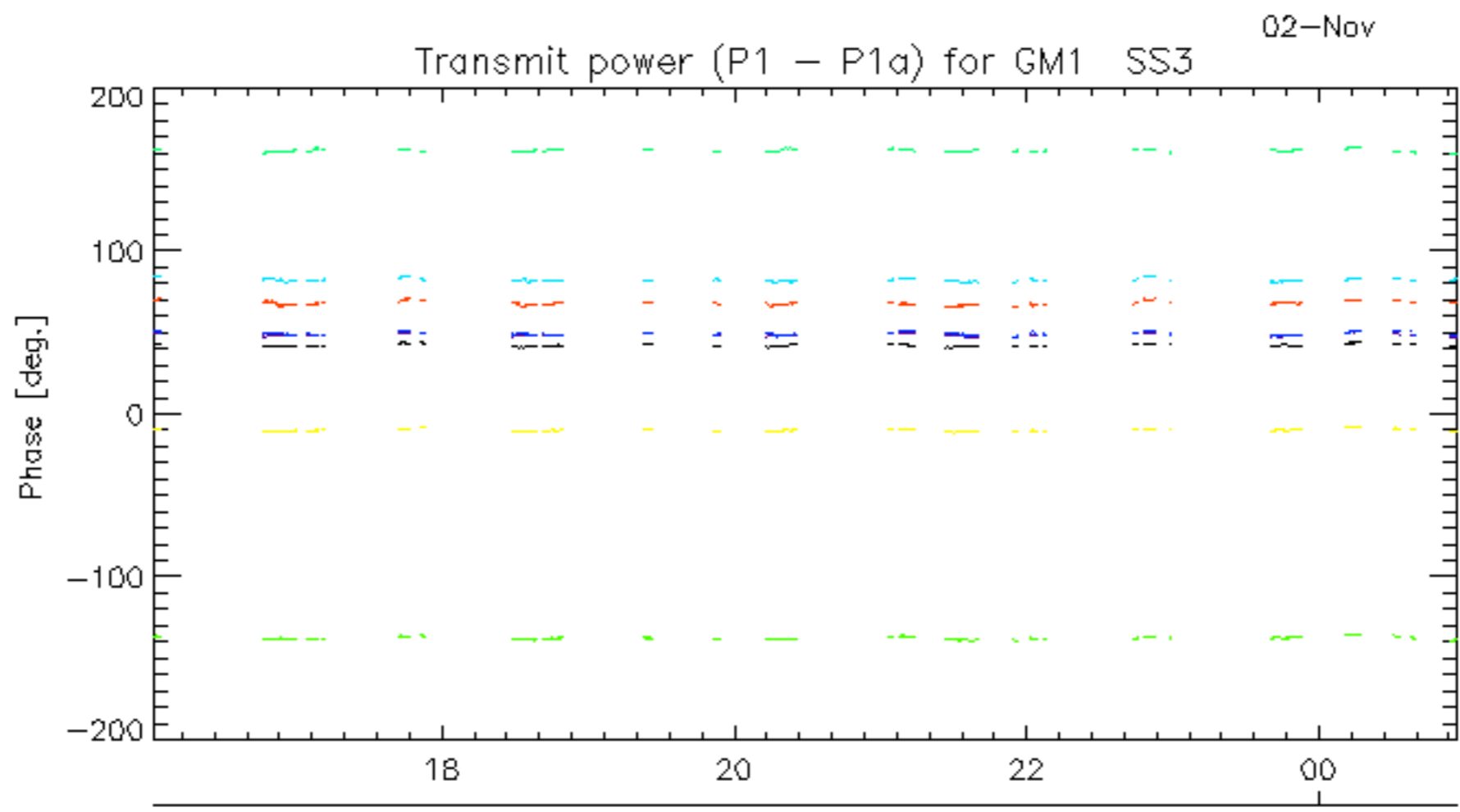
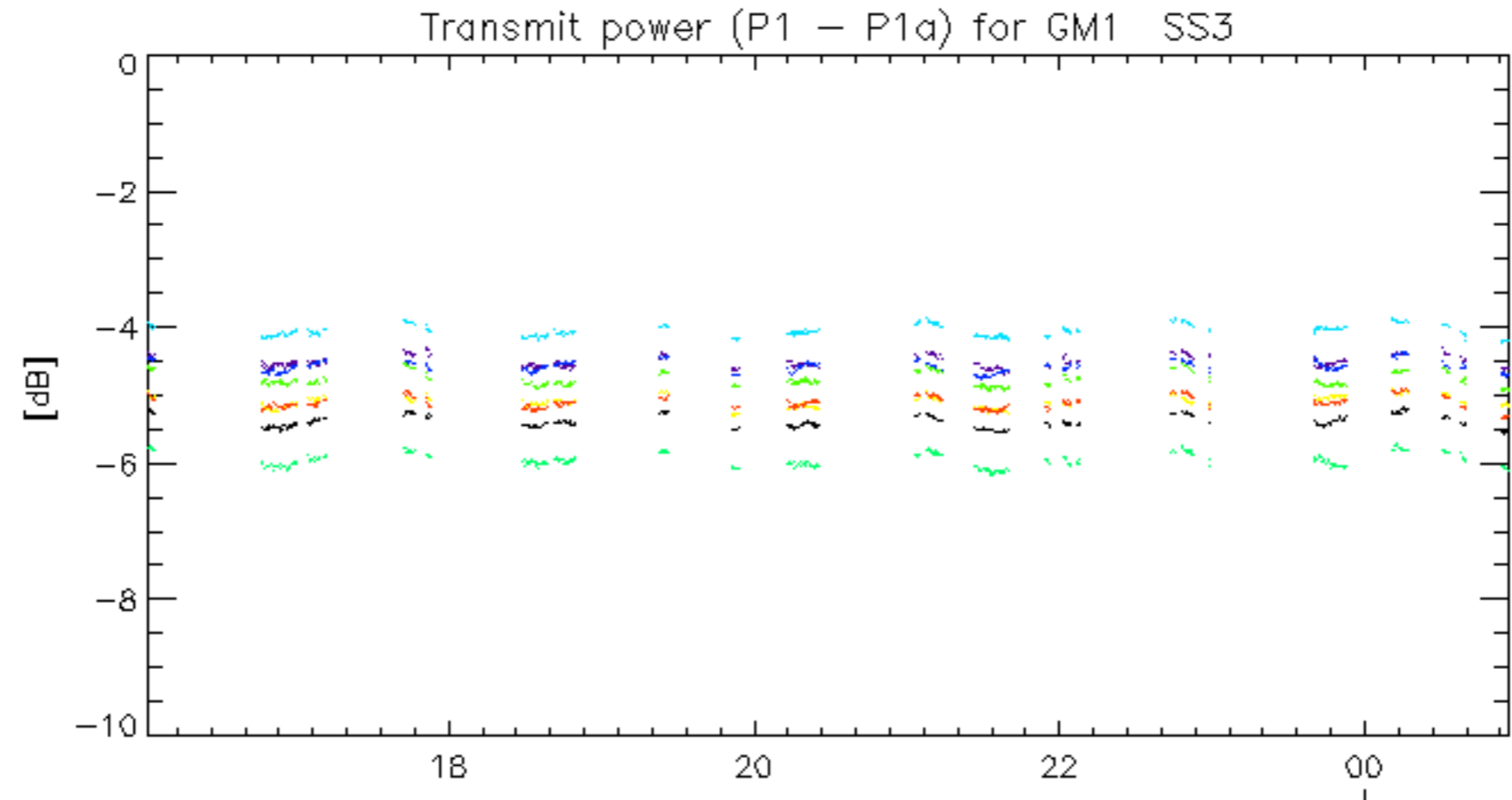
Summary of analysis for the last 3 days 2006110[112]

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

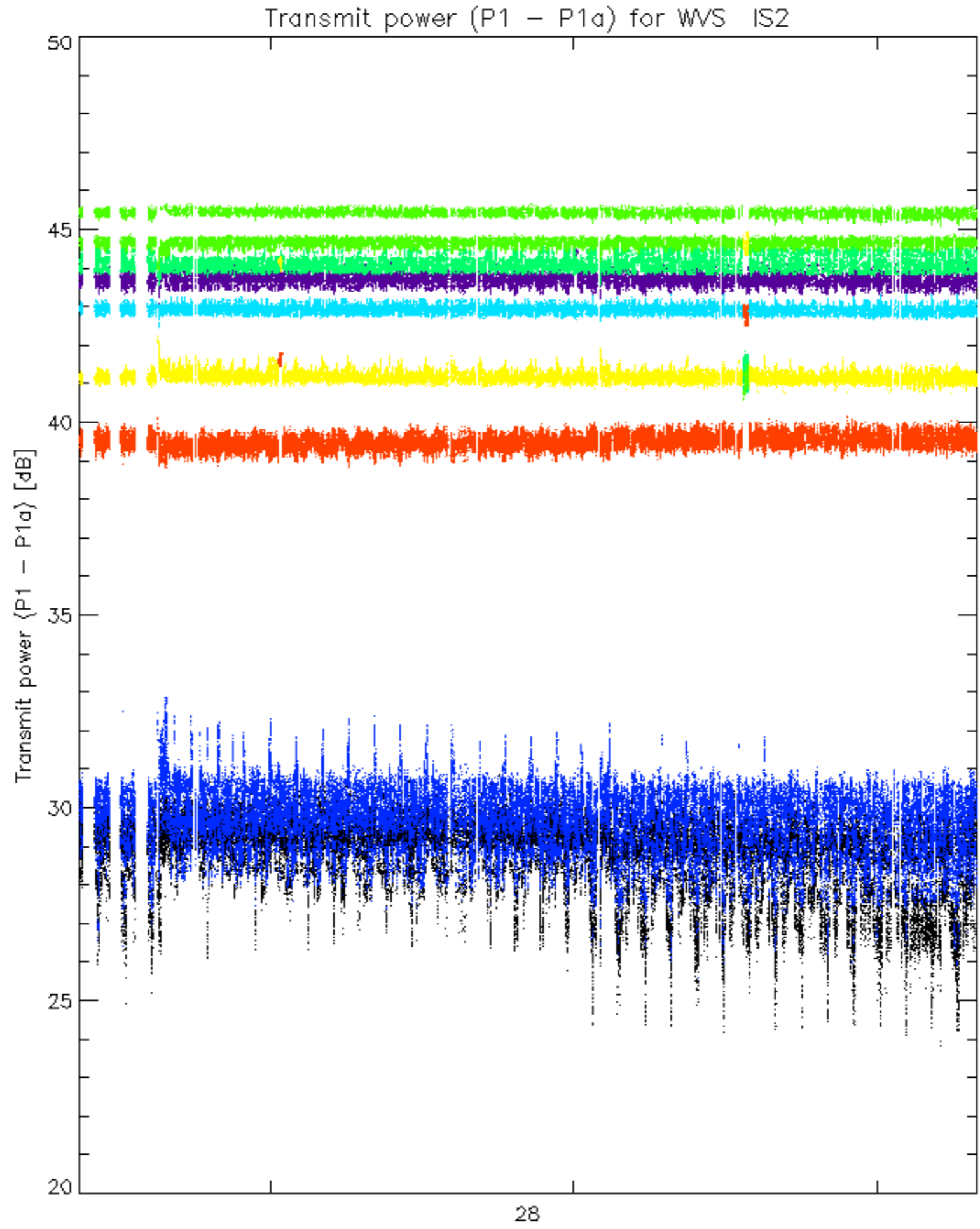
Filename	num_gaps	num_missing_lines



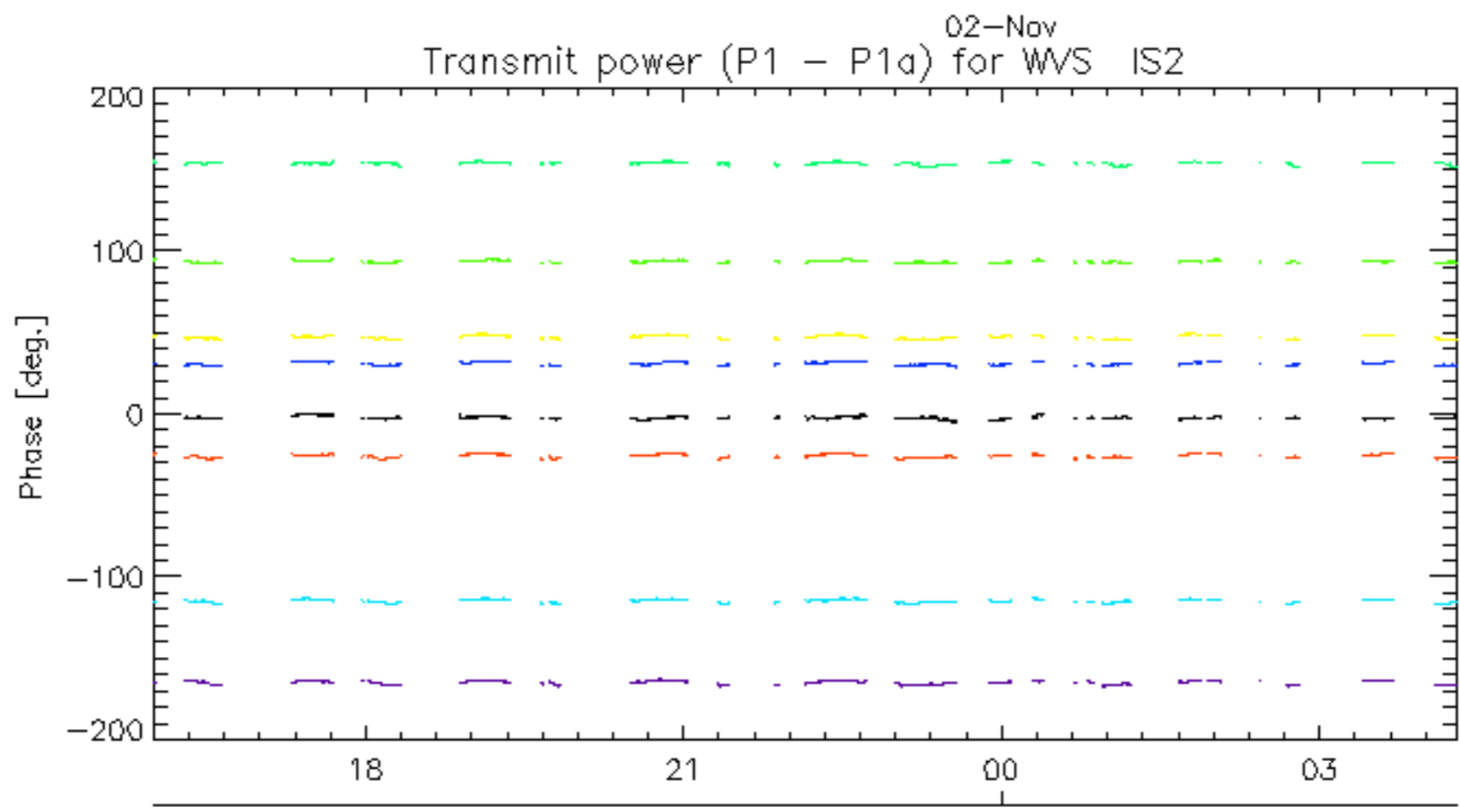
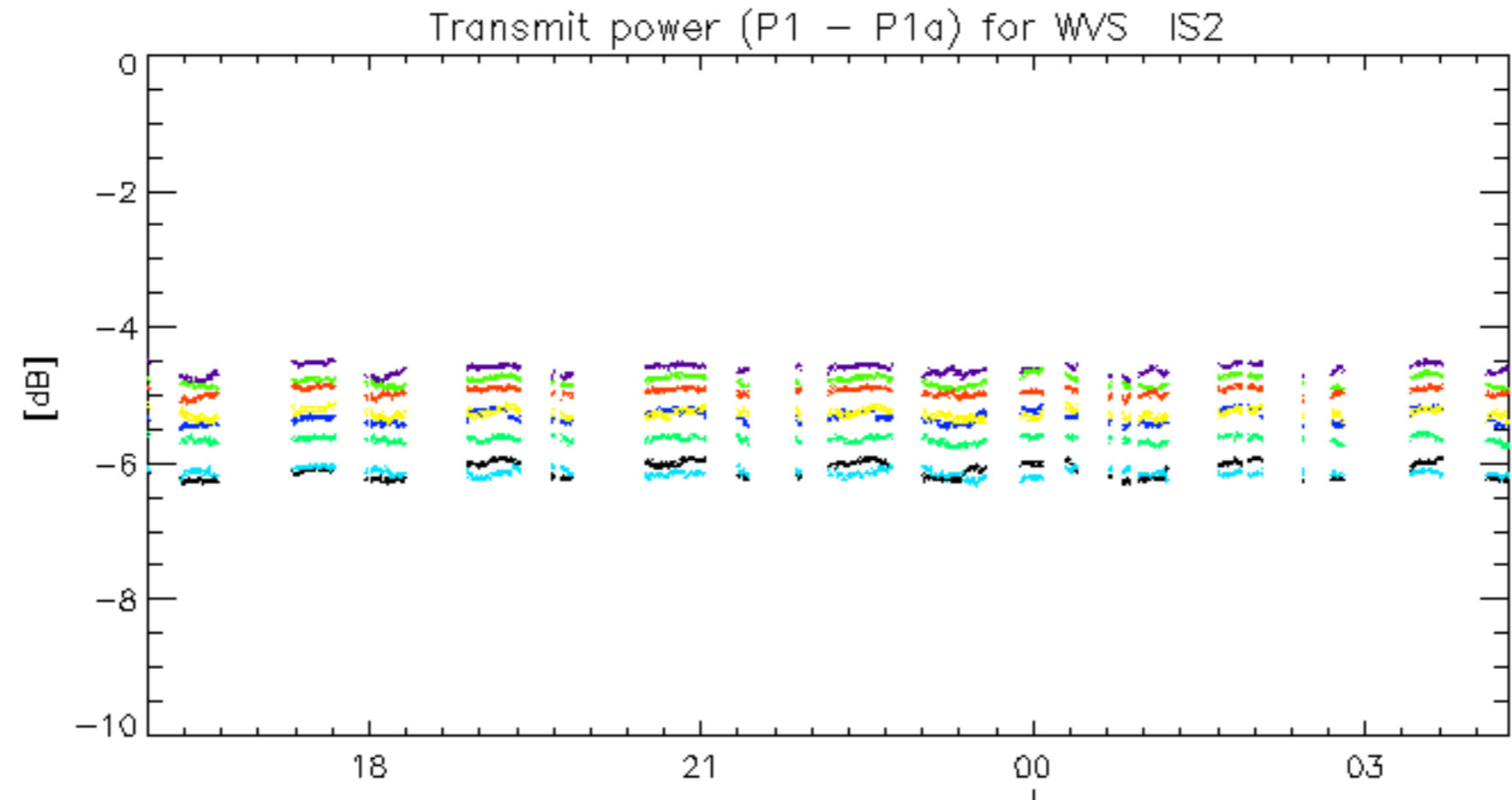
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.