

PRELIMINARY REPORT OF 051212

last update on Mon Dec 12 16:46:51 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 2005-12-11 00:00:00 to 2005-12-12 16:46:51

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	0	16	0	27
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	45	0	16	0	27
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	0	16	0	27
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	0	16	0	27

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	41	28	15	69
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	37	41	28	15	69
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	41	28	15	69
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	41	28	15	69

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	20051210 064401
H	20051211 061224

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	-3.518366	0.184739	0.514939
7	P1	-2.750578	0.123755	0.895687
11	P1	-4.152880	0.030635	-0.069529
15	P1	-5.116226	1.708452	3.589372
19	P1	-3.032490	0.060495	0.626662
22	P1	-4.438323	0.020805	0.211622
26	P1	-4.397912	0.059831	-0.601702
30	P1	-5.652639	0.033185	0.405195
3	P1	-15.140858	1.923593	2.018126
7	P1	-15.303275	2.598488	4.372612
11	P1	-16.311289	0.463492	1.035462
15	P1	-12.807589	1.021704	2.597244
19	P1	-13.409463	0.334525	1.445960
22	P1	-16.072954	0.624375	1.007555
26	P1	-15.132277	1.114865	2.672748
30	P1	-15.592217	2.439631	4.084777

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.878712	0.105106	-0.057559
7	P2	-22.558128	0.104254	0.030332
11	P2	-16.593386	0.118937	-0.124547
15	P2	-7.280405	0.103635	-0.070562
19	P2	-9.221704	0.100967	0.048706
22	P2	-17.859140	0.109508	0.171324
26	P2	-16.358149	0.133464	-0.538209
30	P2	-19.785110	0.119280	-0.409250

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.234525	0.007318	-0.017116
7	P3	-8.234525	0.007318	-0.017116
11	P3	-8.234525	0.007318	-0.017116
15	P3	-8.234525	0.007318	-0.017116
19	P3	-8.234525	0.007318	-0.017116
22	P3	-8.234525	0.007318	-0.017116
26	P3	-8.234525	0.007318	-0.017116
30	P3	-8.234525	0.007318	-0.017116

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	-3.694611	0.007940	-0.024560
7	P1	-2.781898	0.011121	0.023659
11	P1	-2.877026	0.014289	-0.011009
15	P1	-3.400580	0.021659	-0.022850
19	P1	-3.381541	0.013493	-0.027499
22	P1	-5.118662	0.019770	-0.023561
26	P1	-5.827305	0.016297	-0.055312
30	P1	-5.271735	0.032847	-0.018778
3	P1	-11.468060	0.042502	-0.034582
7	P1	-9.971420	0.046023	-0.006009
11	P1	-10.050611	0.060797	-0.021825
15	P1	-10.570127	0.083679	0.007016
19	P1	-15.505836	0.074258	-0.031687
22	P1	-20.934986	0.967590	-0.232328

26	P1	-17.207367	0.308159	0.048062
30	P1	-18.332582	0.317089	0.155657

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.642982	0.030507	0.056136
7	P2	-23.056713	0.061737	-0.014465
11	P2	-11.660091	0.022024	0.101020
15	P2	-4.979807	0.021960	-0.050609
19	P2	-6.959084	0.021891	-0.035312
22	P2	-8.178973	0.023934	-0.072438
26	P2	-24.043224	0.031923	-0.053580
30	P2	-22.114573	0.020447	-0.044490

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.073886	0.002469	-0.012178
7	P3	-8.073973	0.002479	-0.012189
11	P3	-8.073858	0.002463	-0.012118
15	P3	-8.073870	0.002475	-0.011985
19	P3	-8.074061	0.002481	-0.011695
22	P3	-8.073947	0.002474	-0.012189
26	P3	-8.073835	0.002458	-0.012464
30	P3	-8.073738	0.002474	-0.011952

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	0.000464670
	stdev	2.17483e-07
MEAN Q	mean	0.000482546
	stdev	2.37684e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129116
	stdev	0.00107826
STDEV Q	mean	0.129402
	stdev	0.00109030



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005121[012]

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_1PNPDE20051211_004056_000000622043_00174_19767_3704.N1	1	0
ASA_WSM_1PNPDE20051210_012121_000004282043_00160_19753_3544.N1	0	65
ASA_WSM_1PNPDE20051210_161814_000001462043_00169_19762_3611.N1	0	1
ASA_WSM_1PNPDE20051211_023139_000002262043_00175_19768_3714.N1	0	39
ASA_WSM_1PNPDE20051212_015902_000001842043_00189_19782_3870.N1	0	39



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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

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

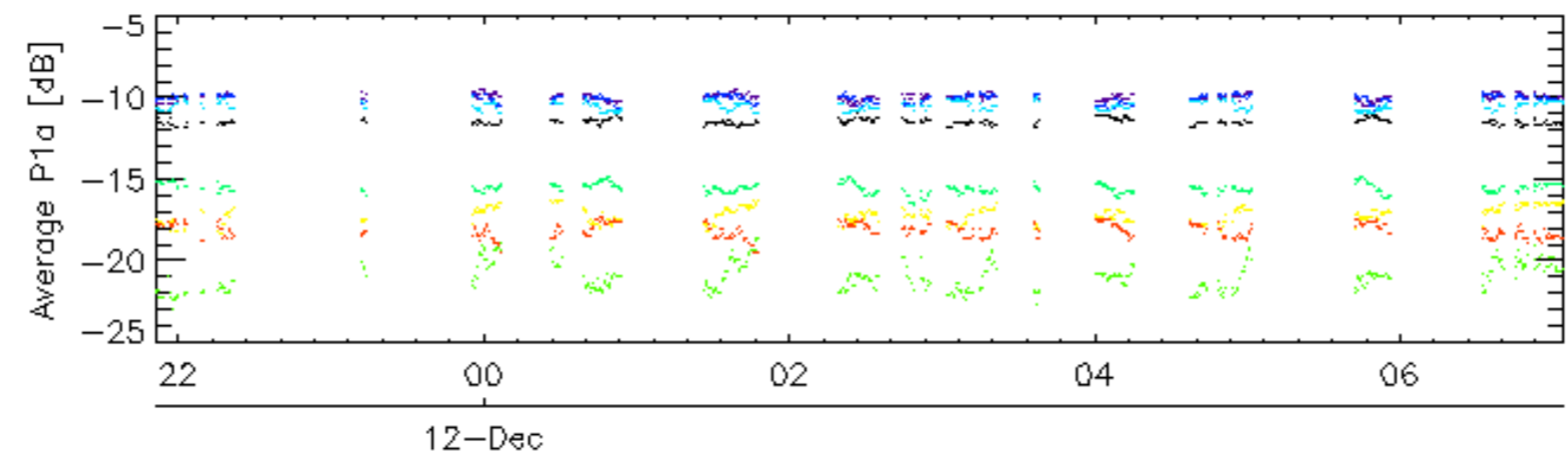
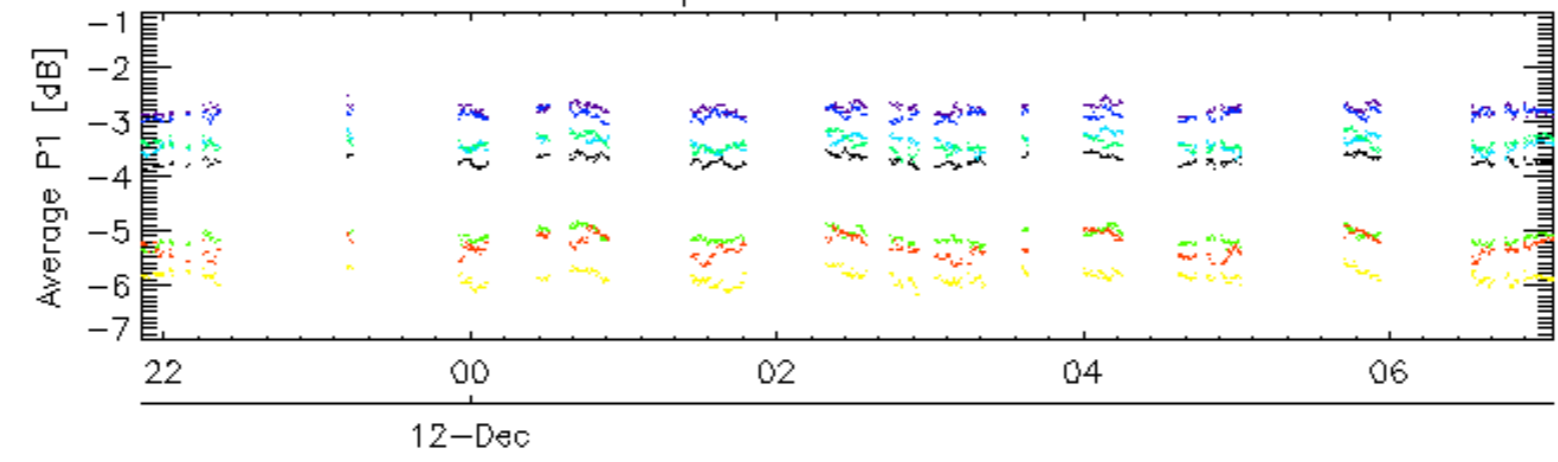
Ascending

Descending

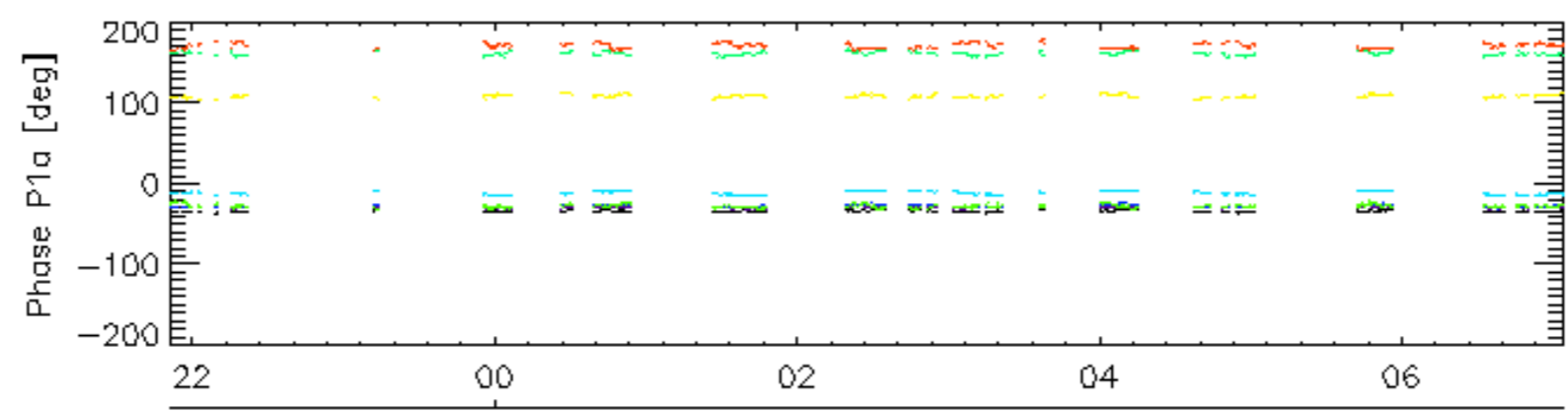
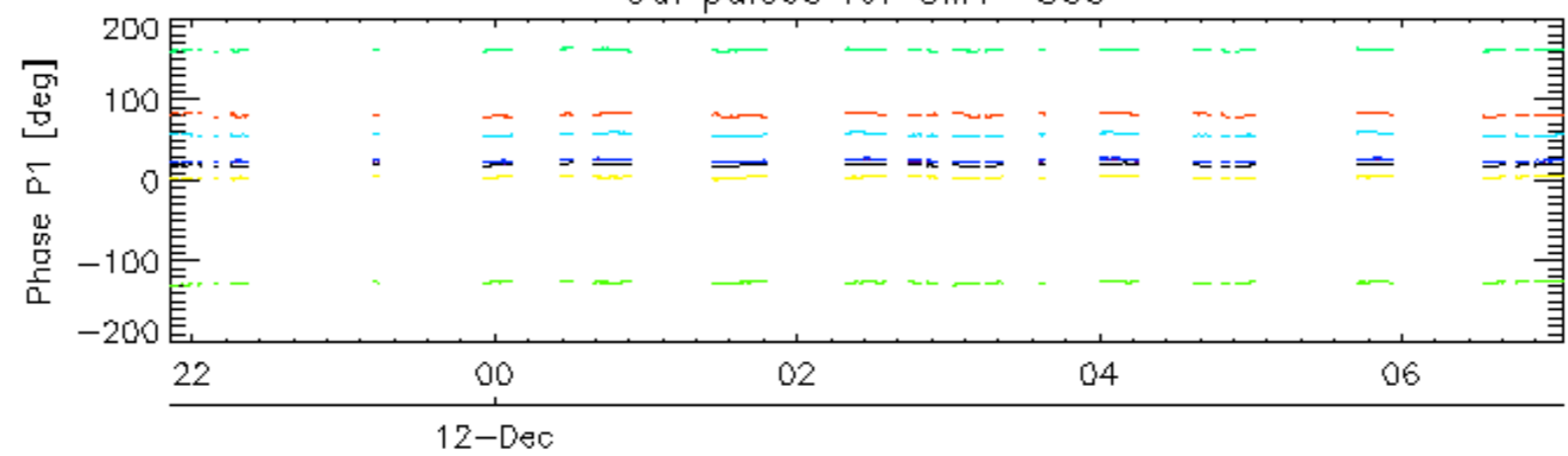
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

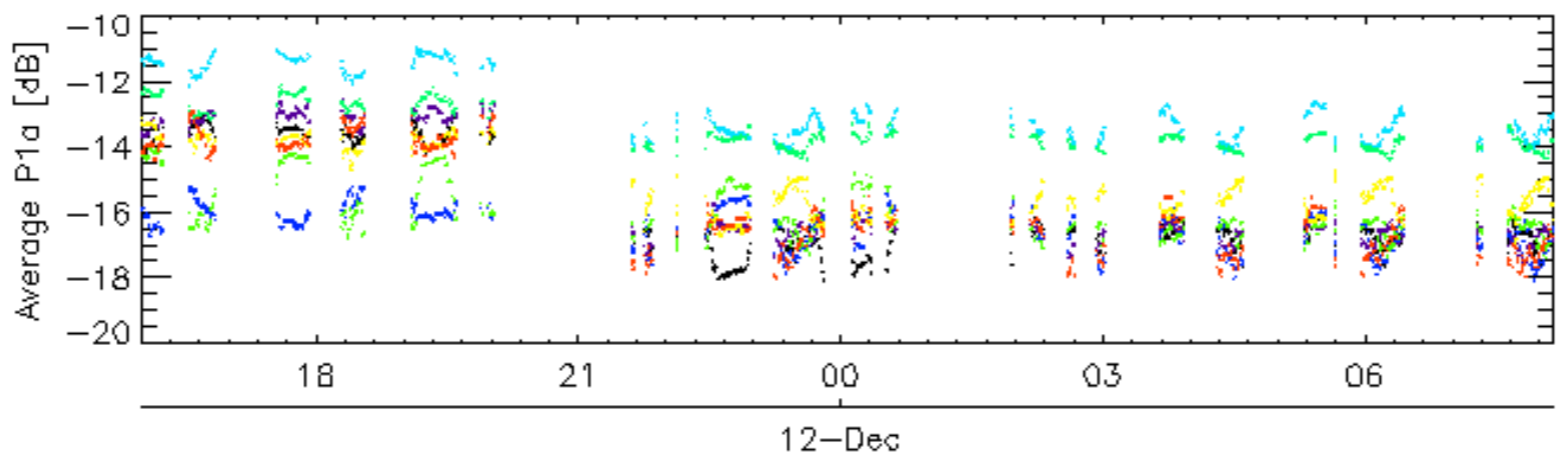
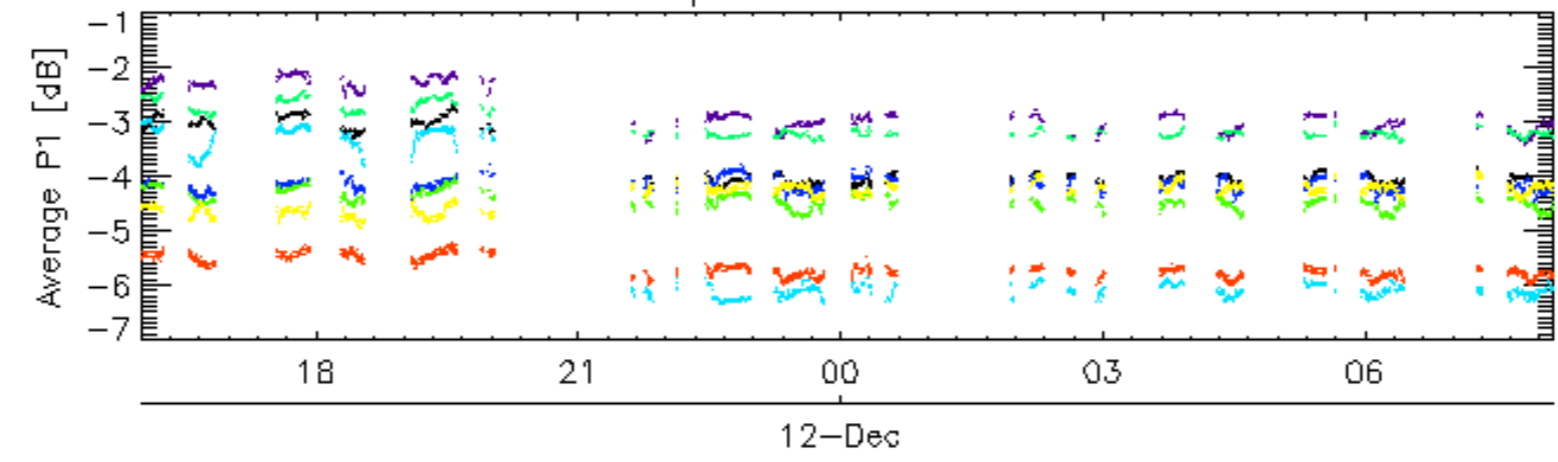


Cal pulses for GM1 SS3

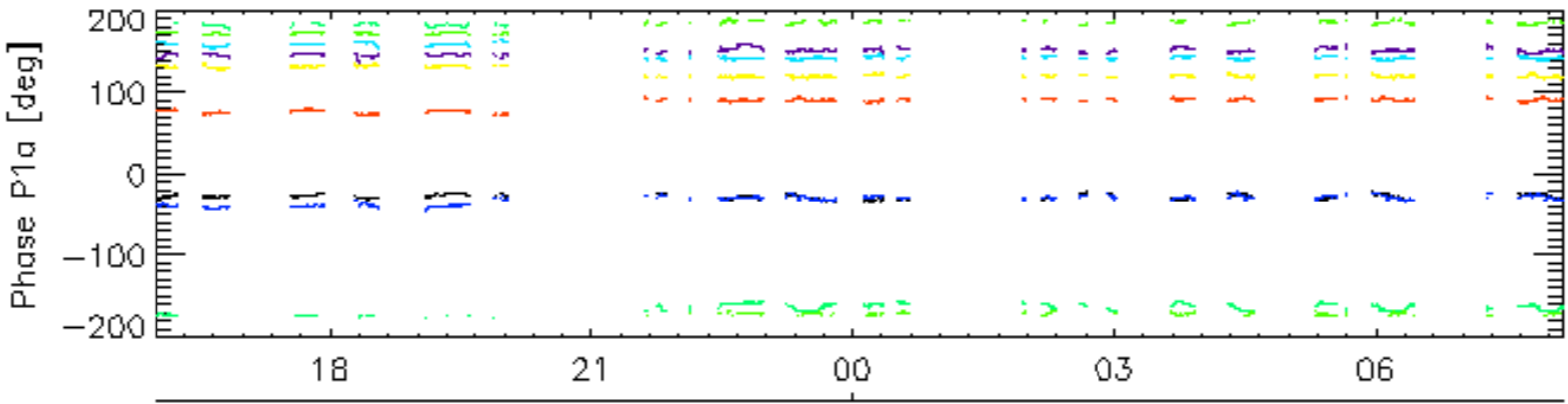
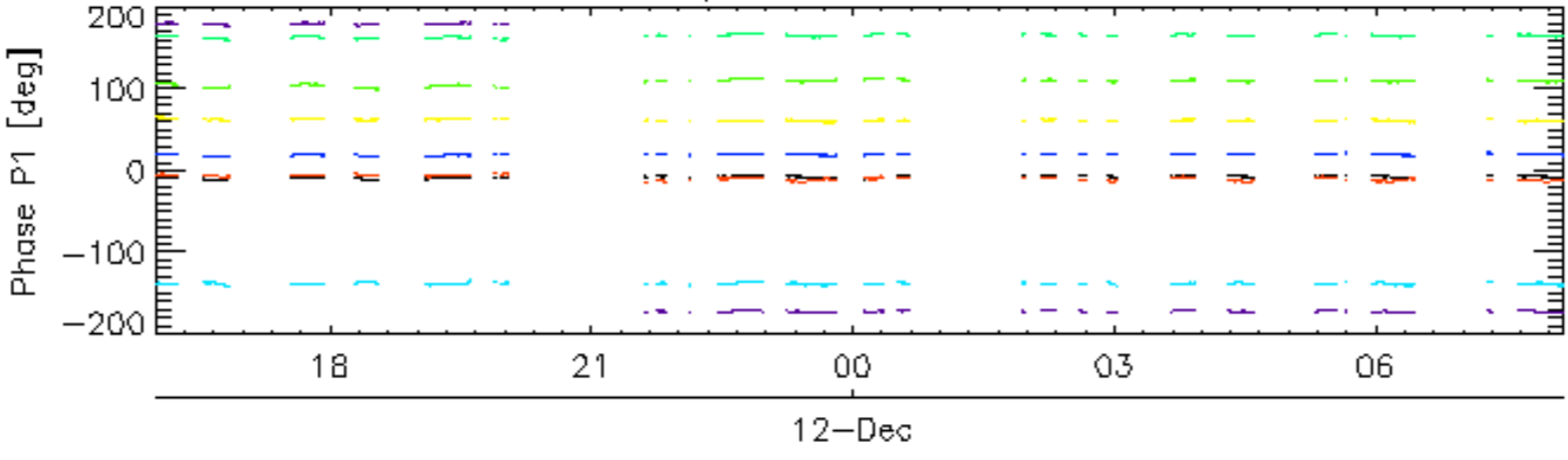


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

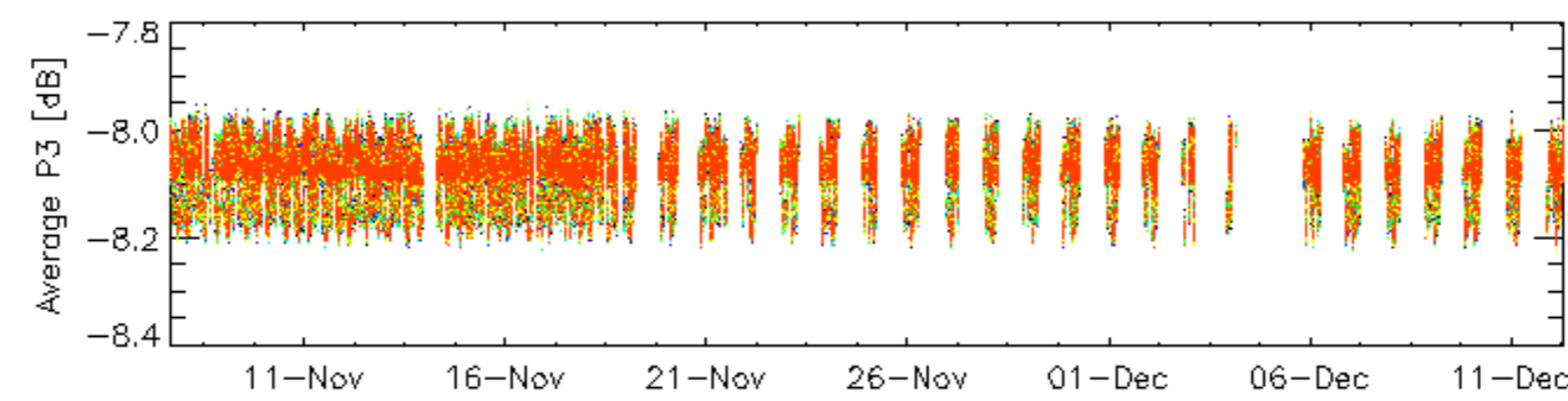
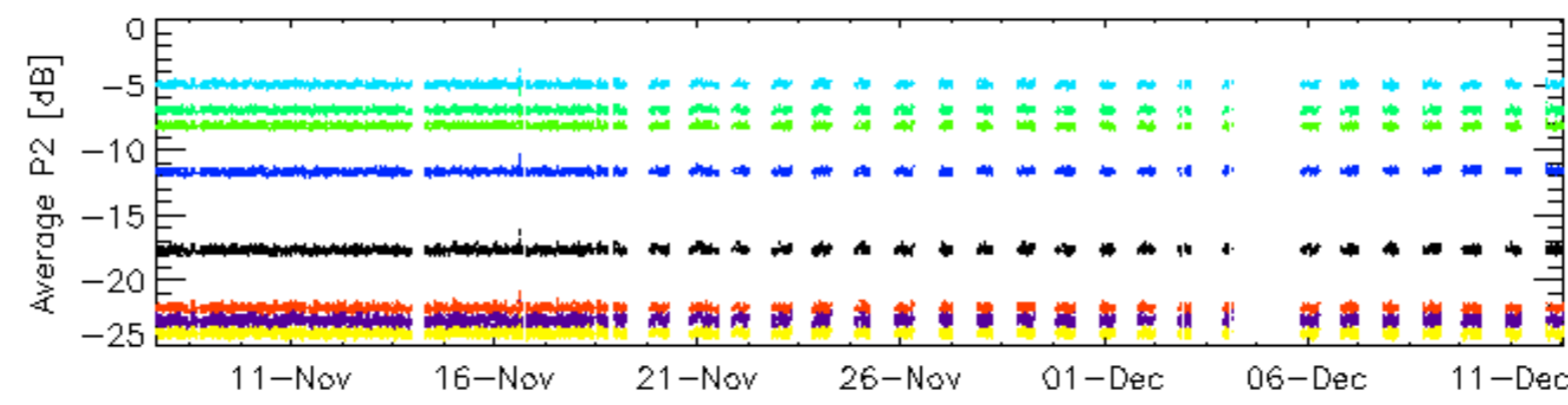
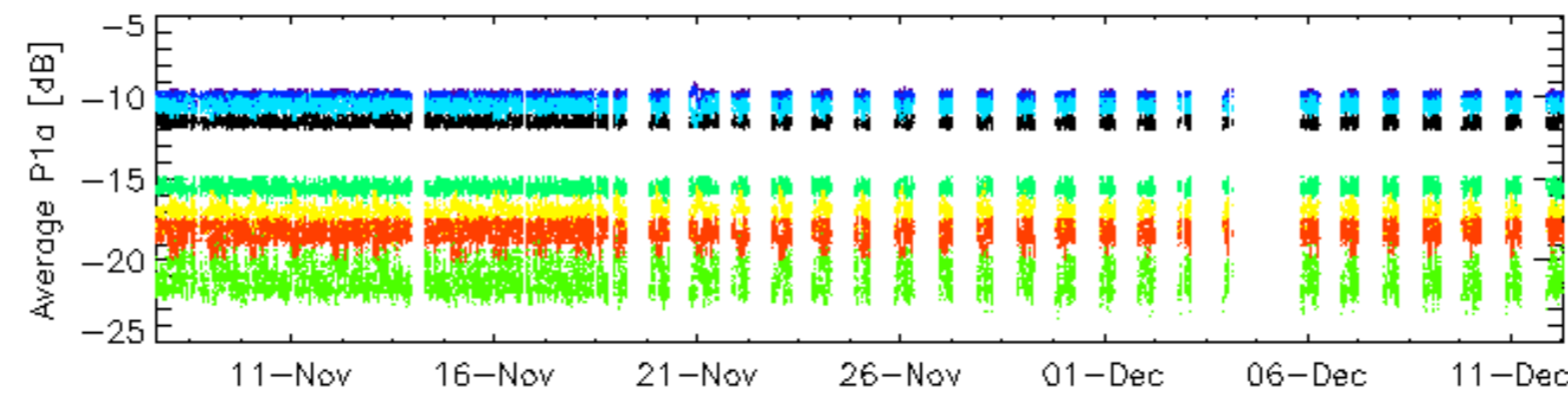
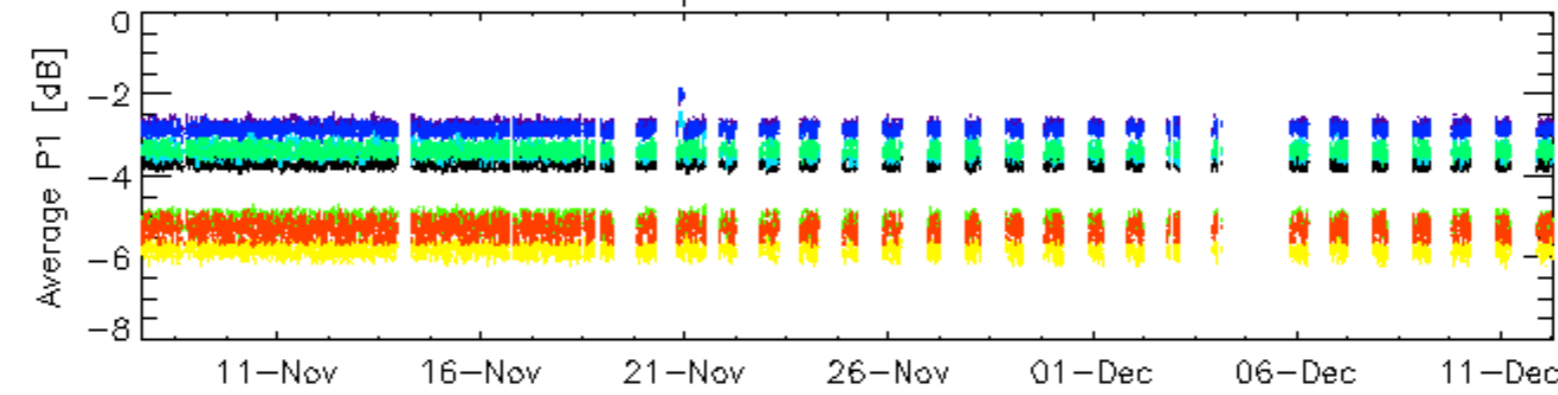


Cal pulses for WVS IS2



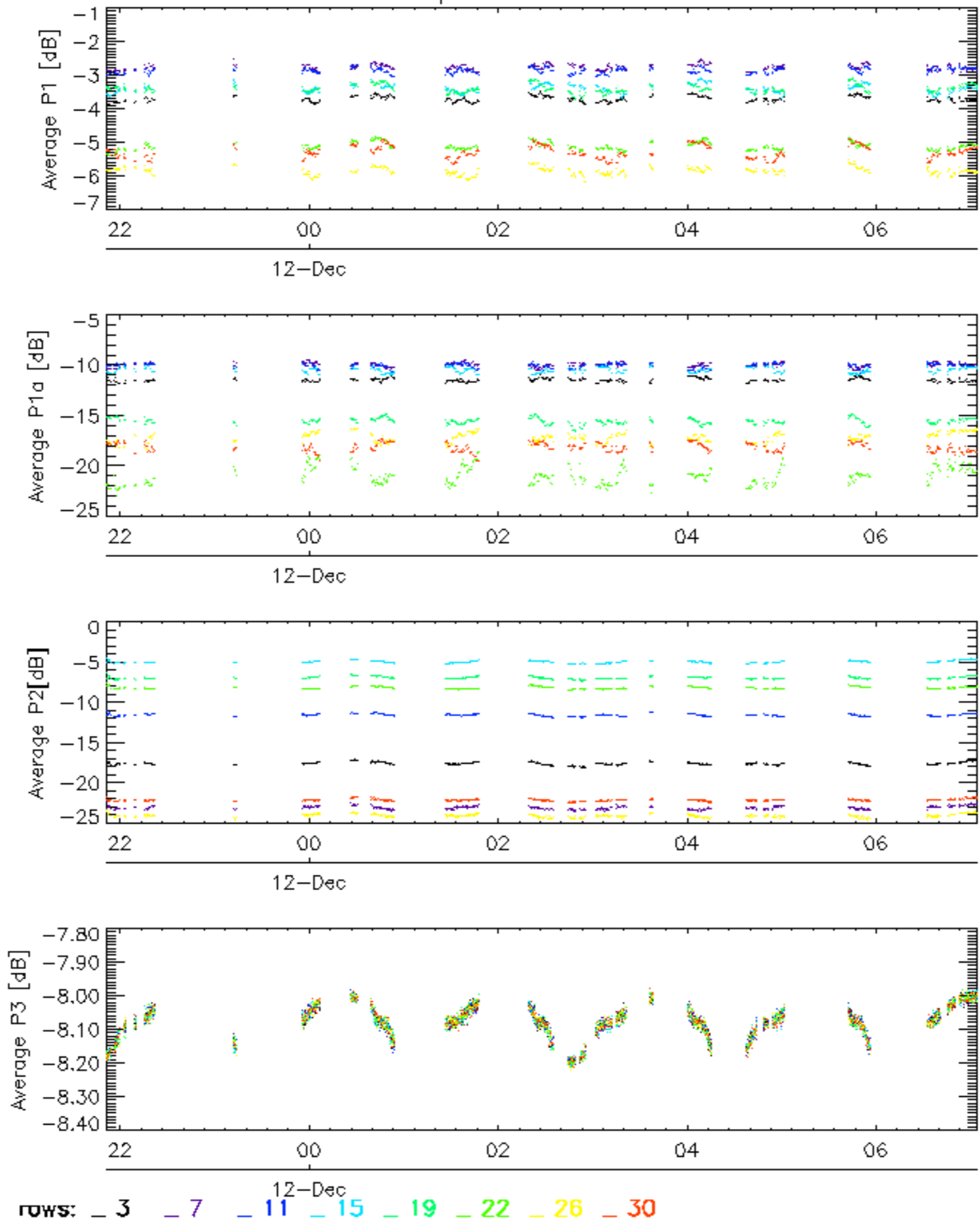
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

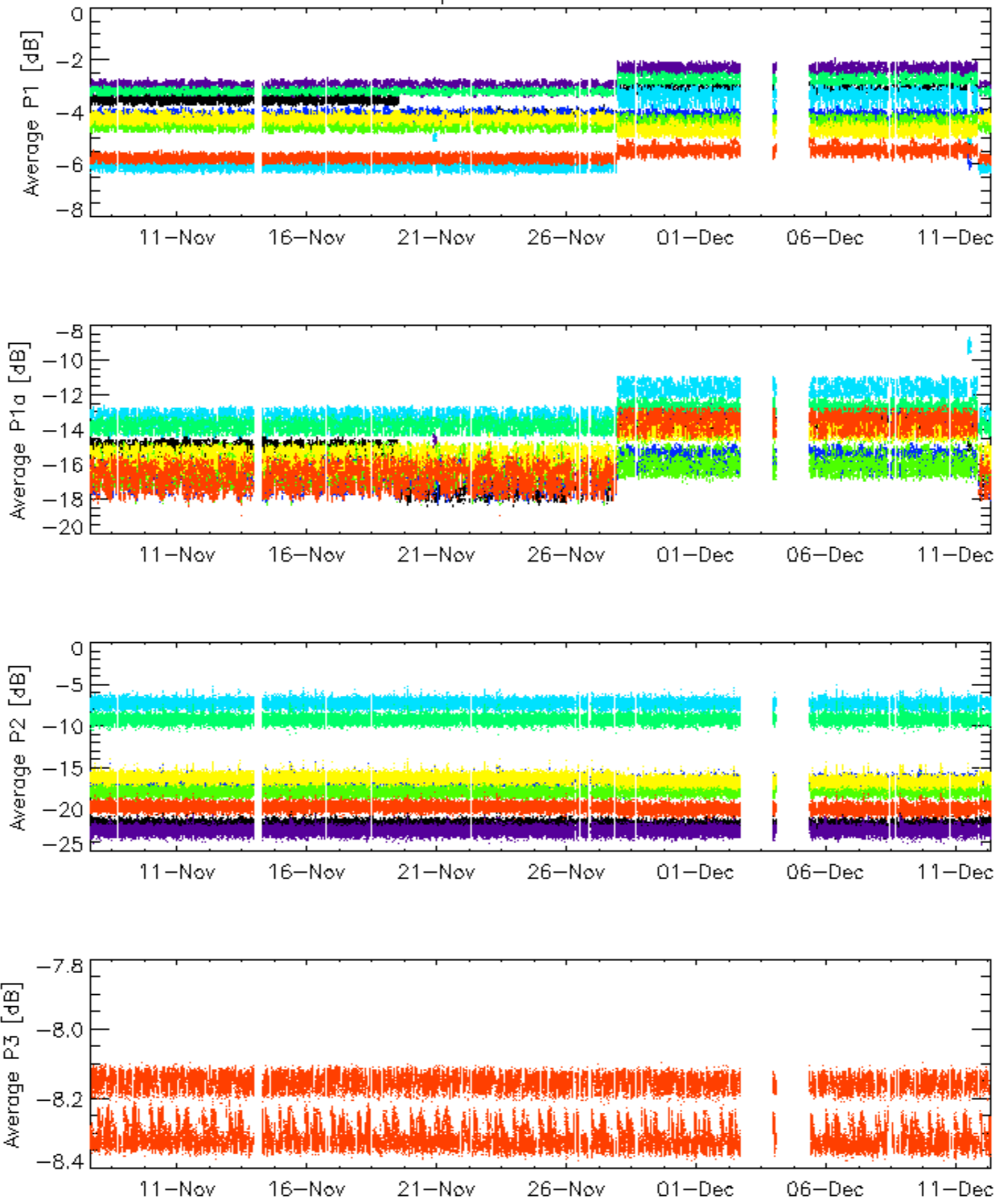


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

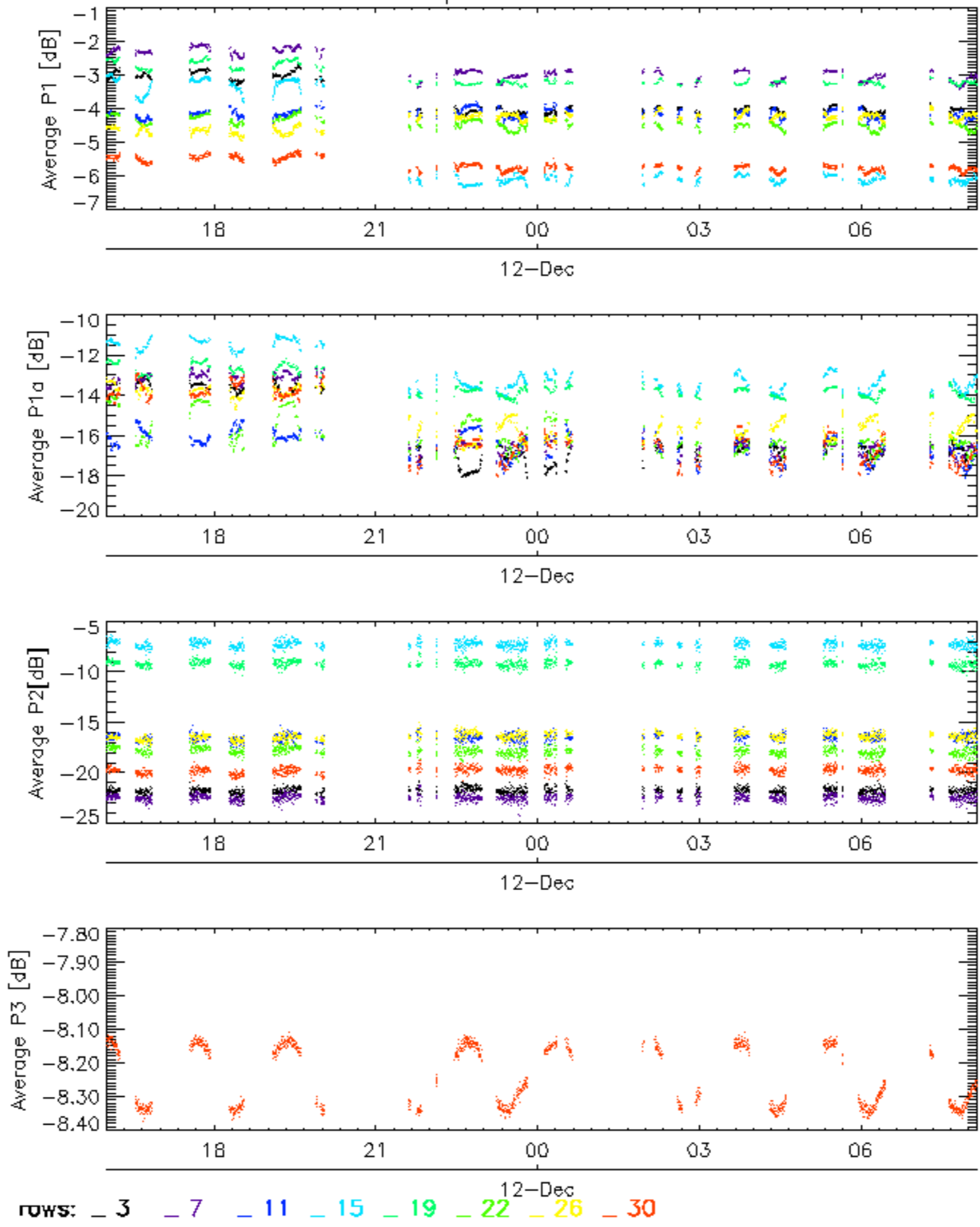


Cal pulses for WVS IS2



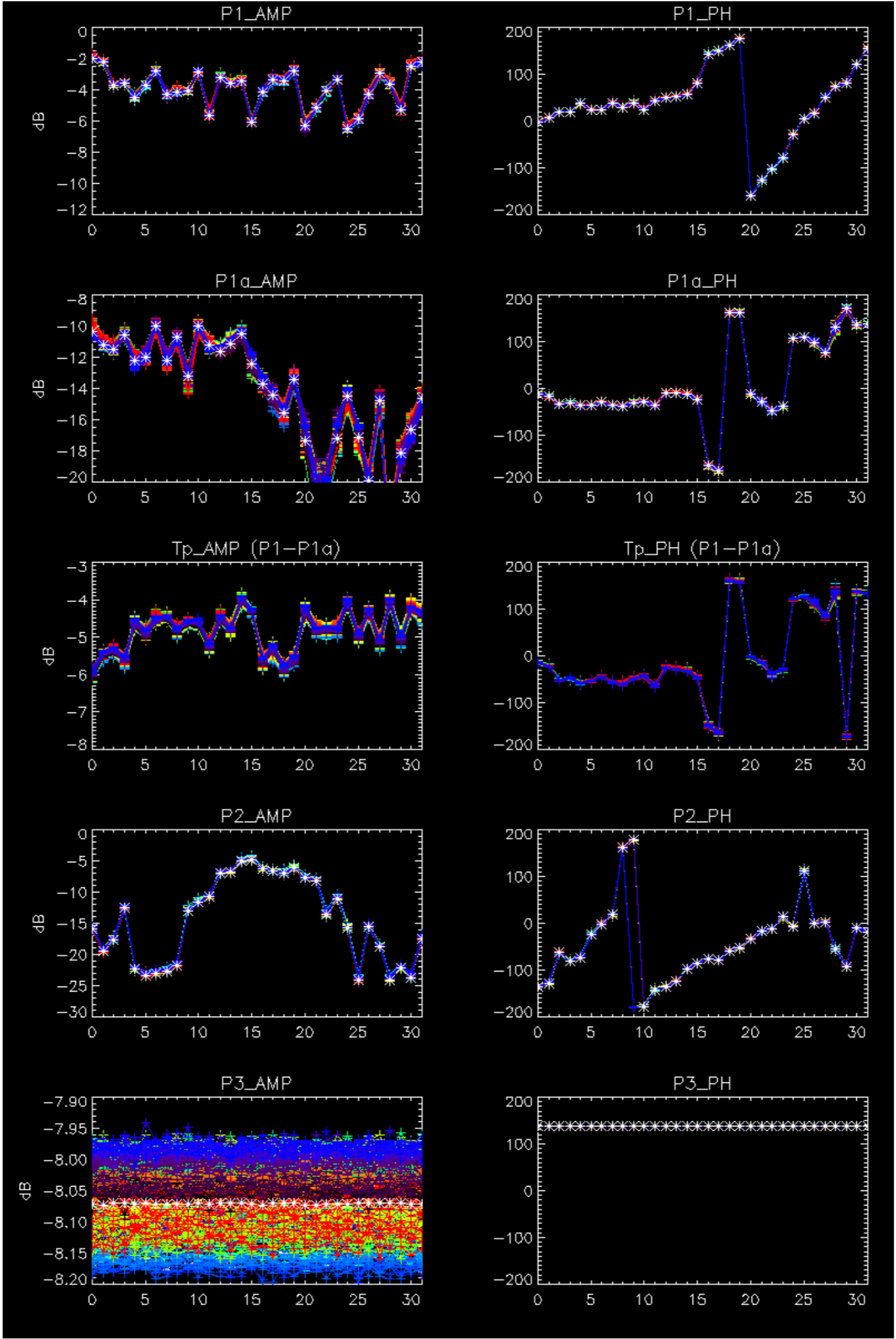
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

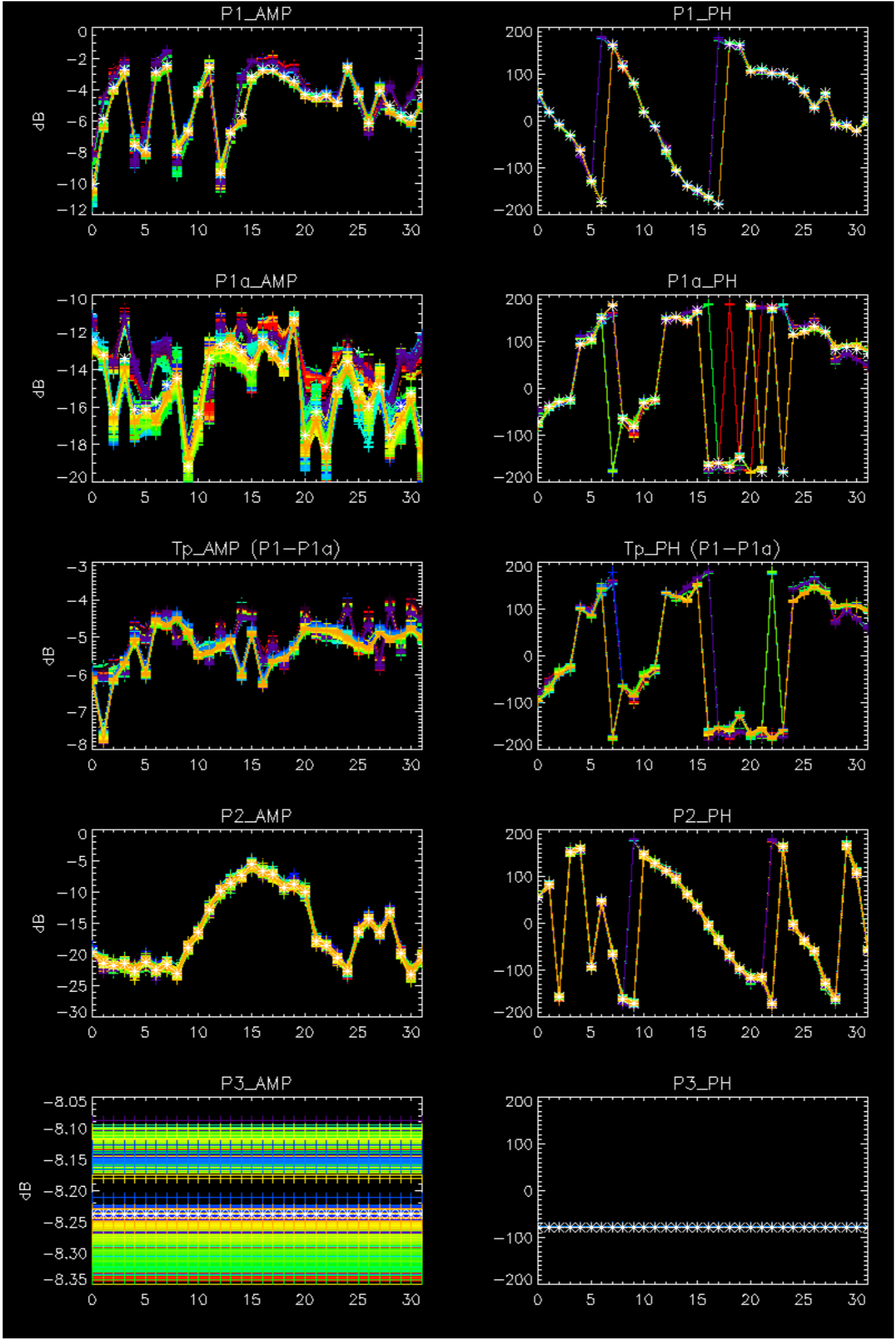
Cal pulses for WVS IS2



No anomalies observed on available browse products

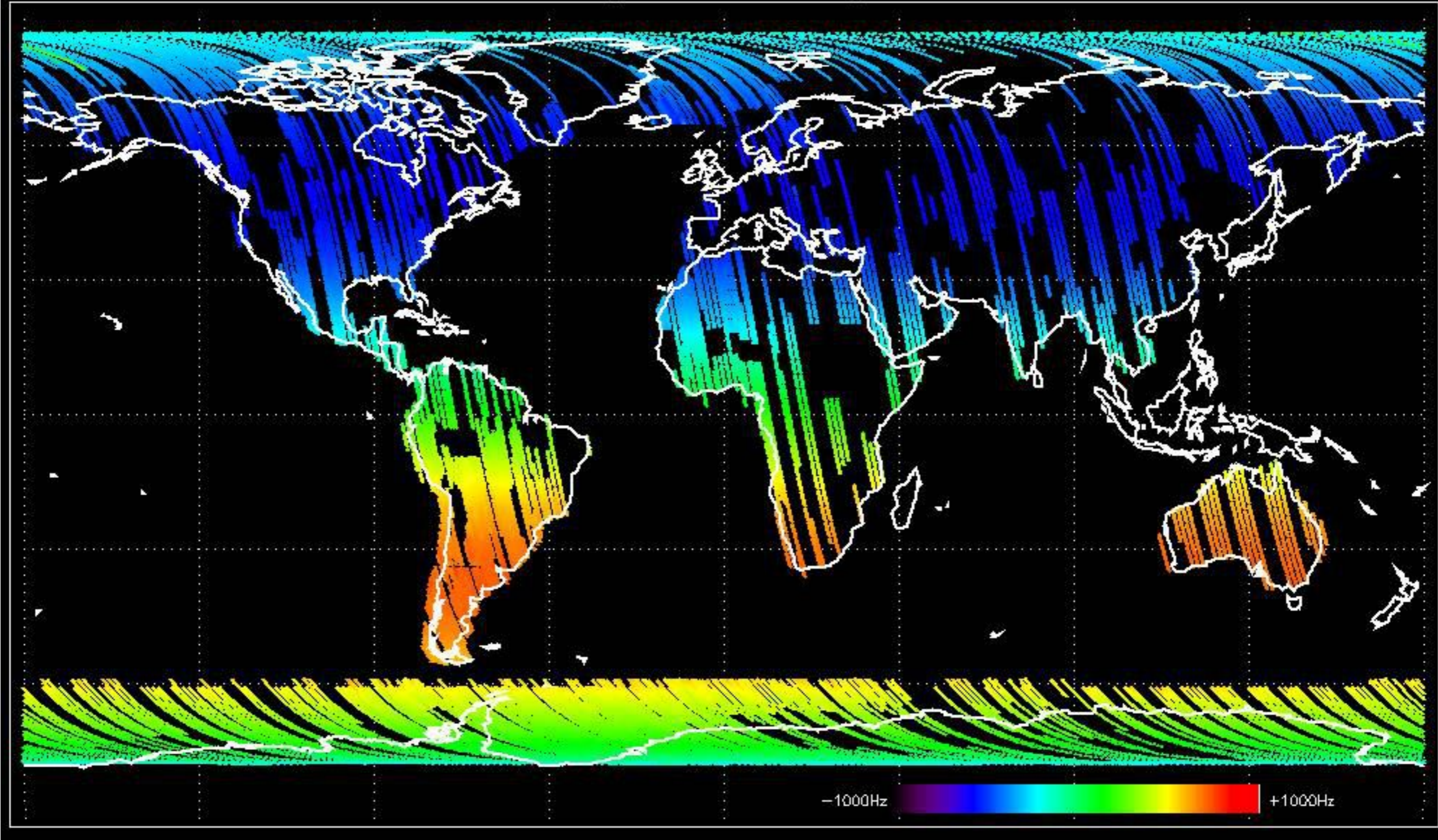
No anomalies observed.



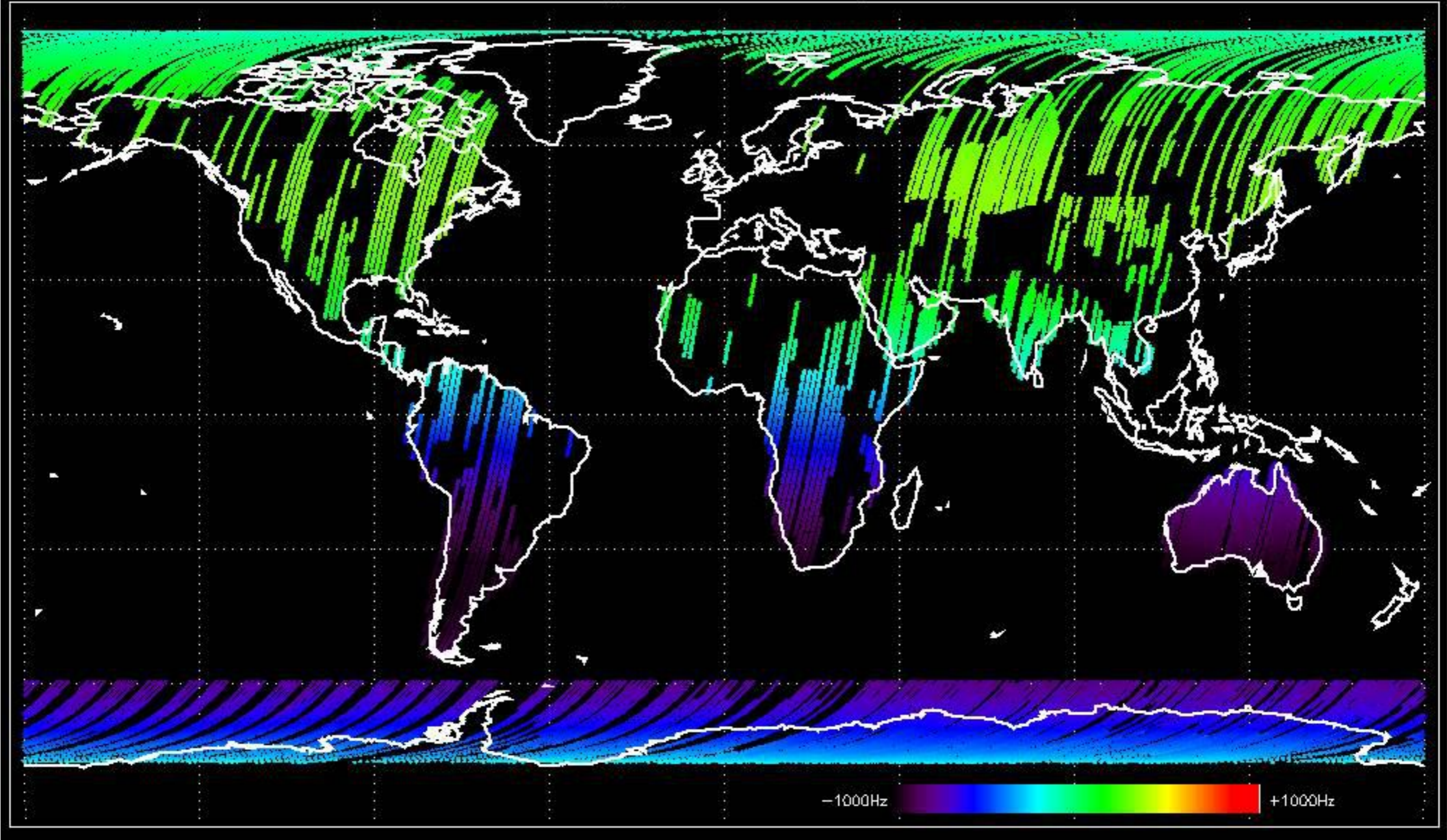


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

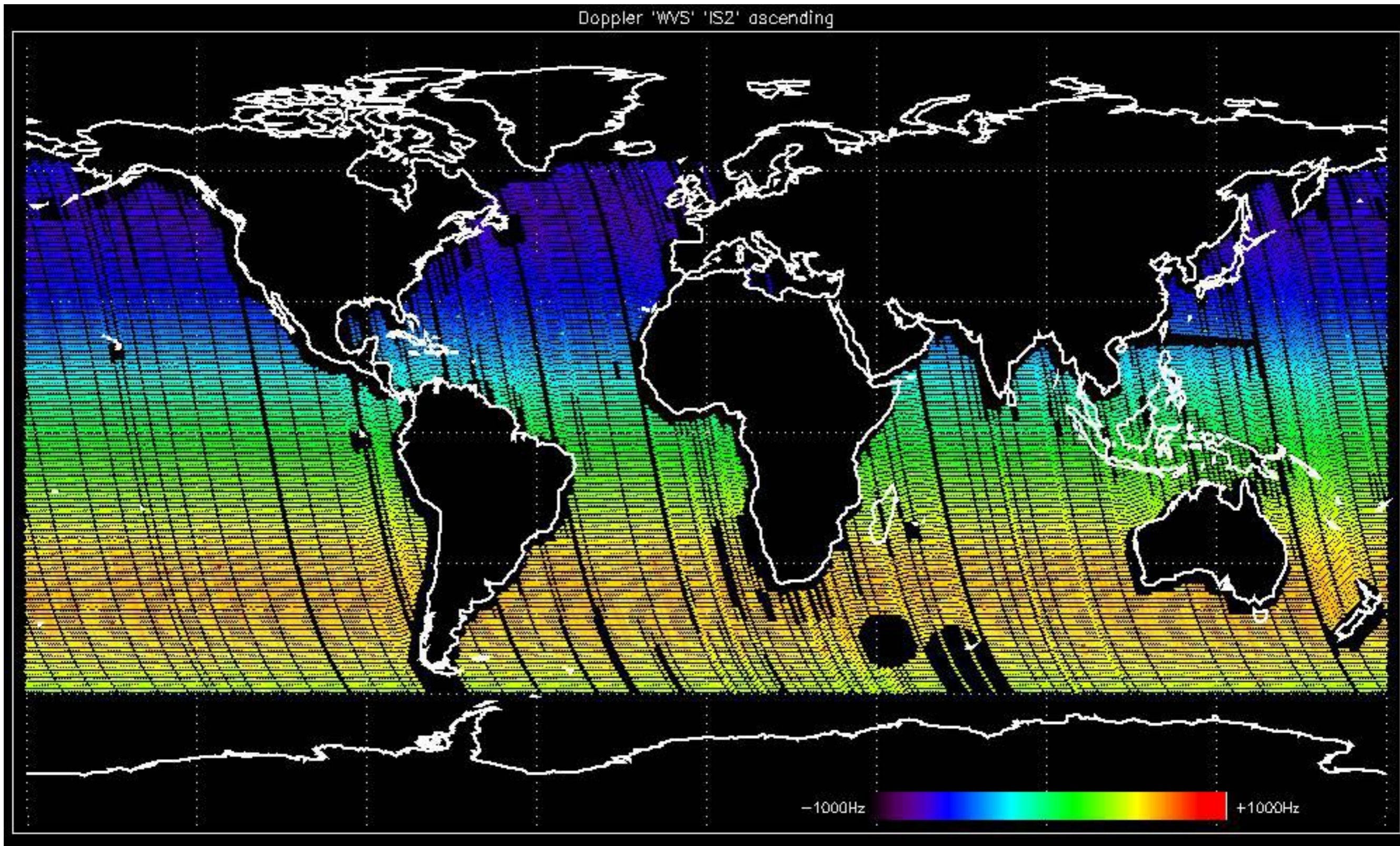
Doppler 'GM1' 'SS1' ascending



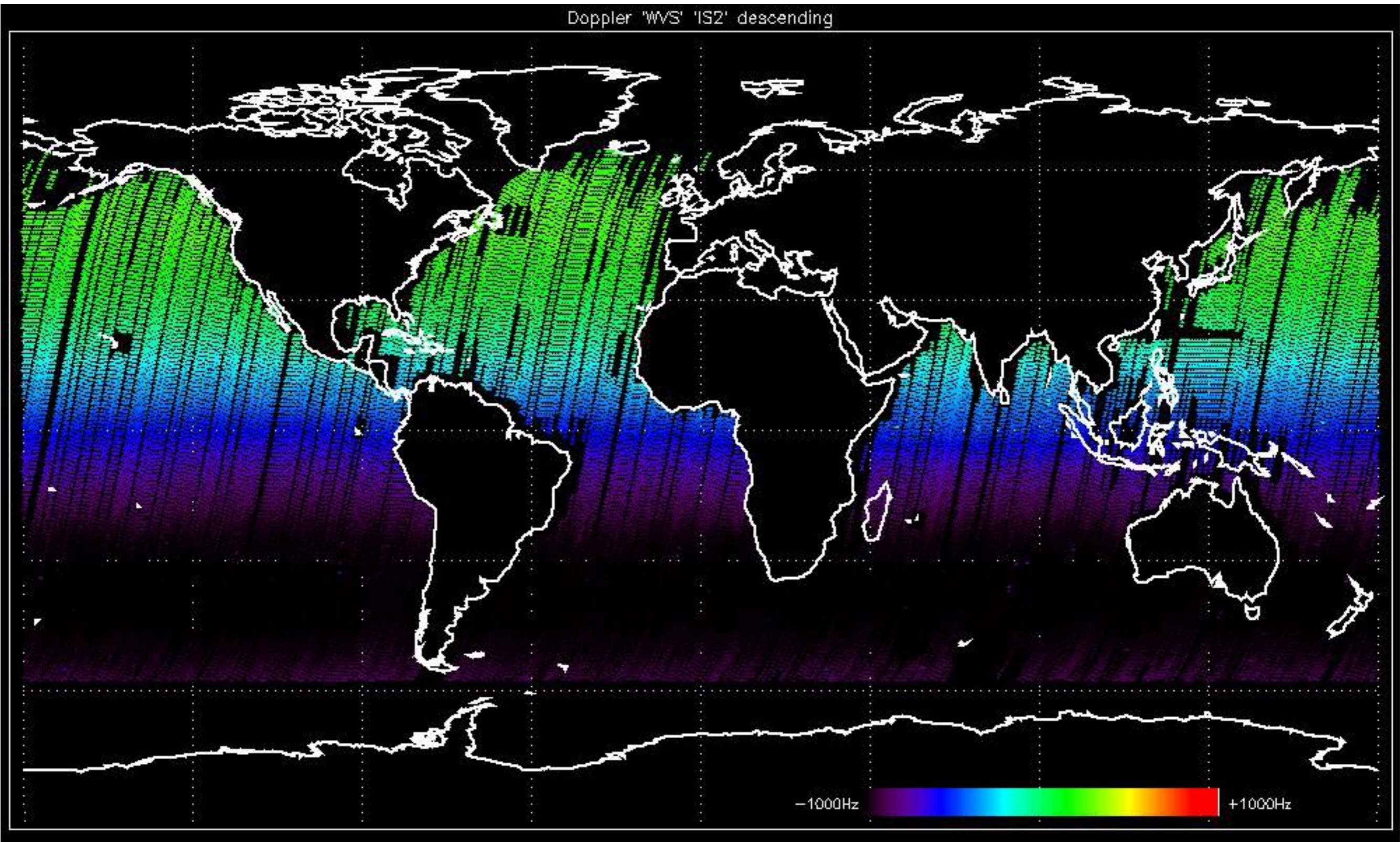
Doppler 'GM1' 'SS1' descending

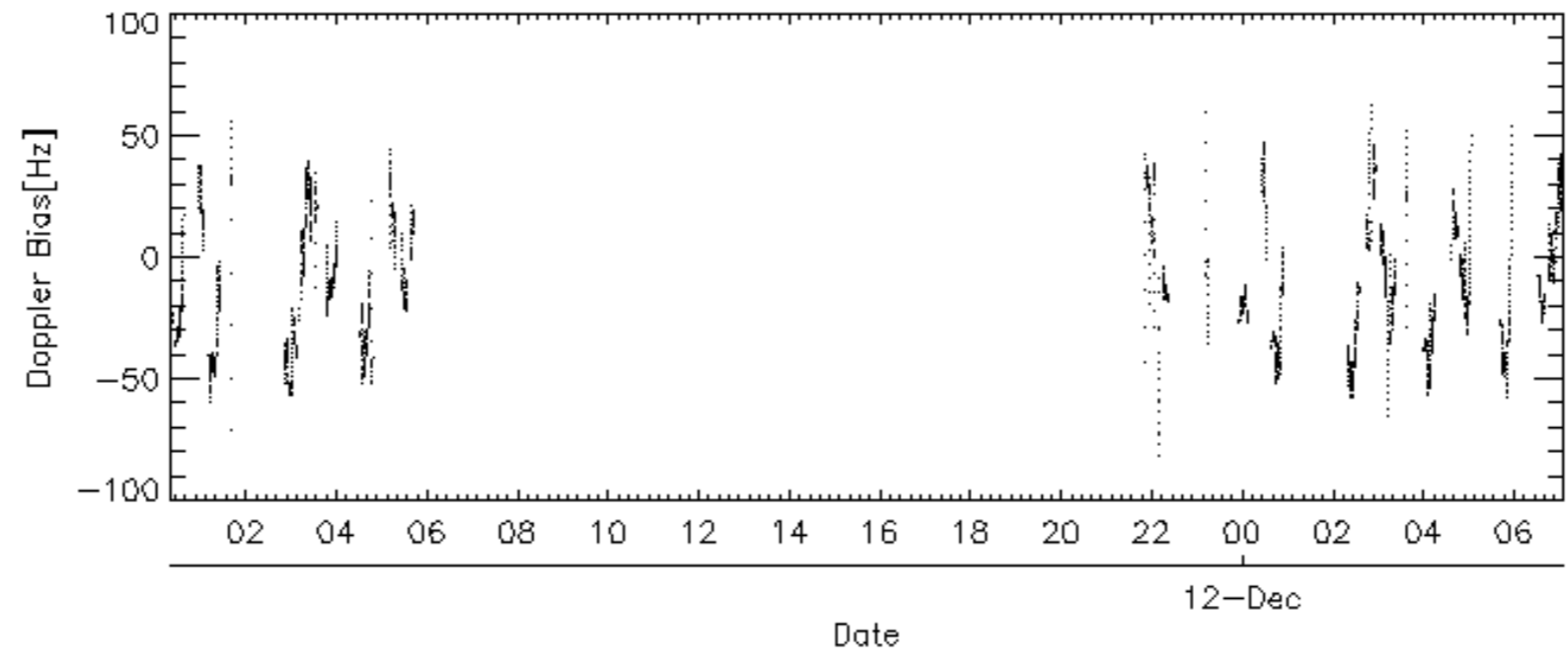
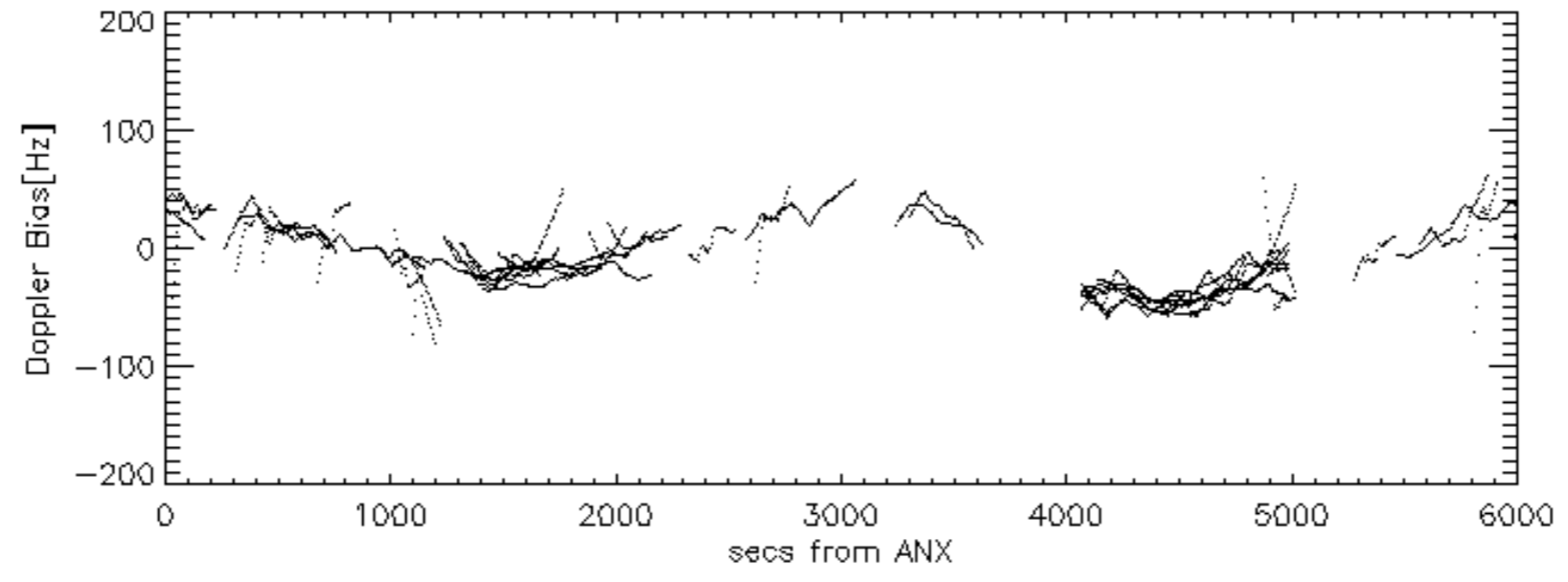
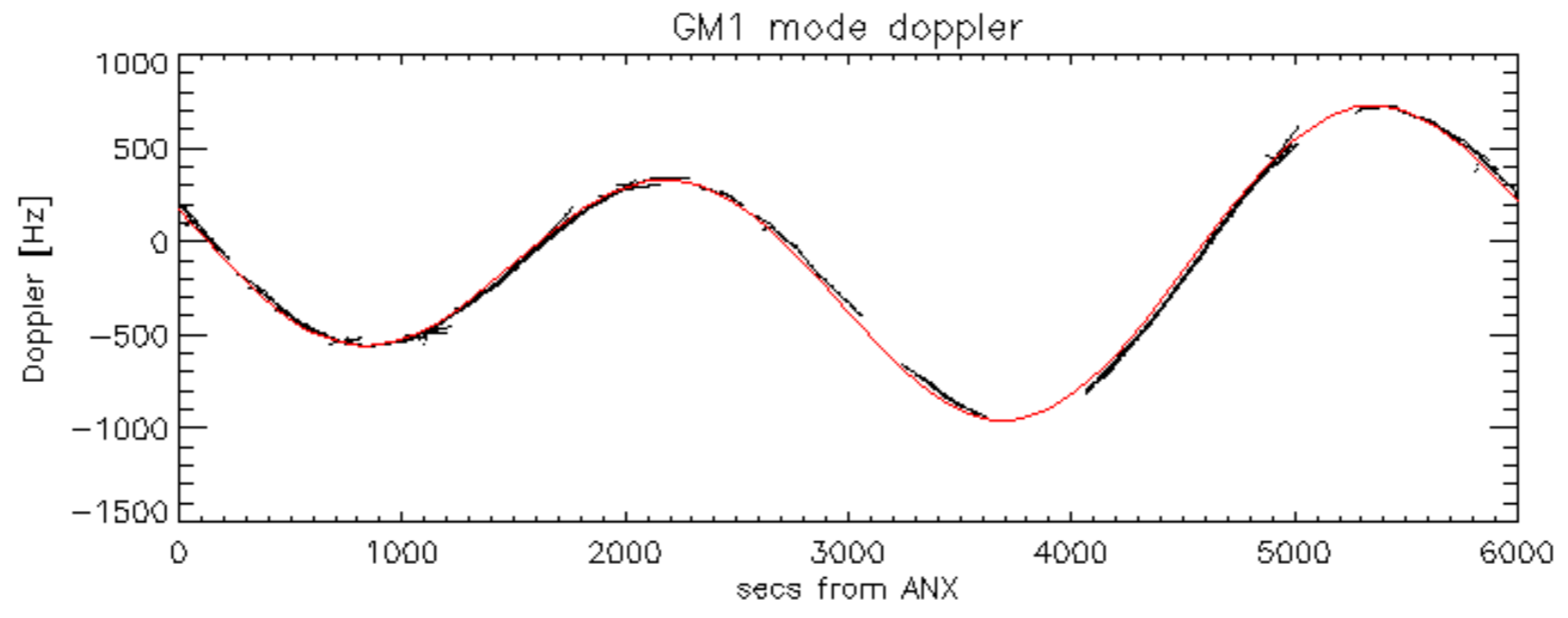


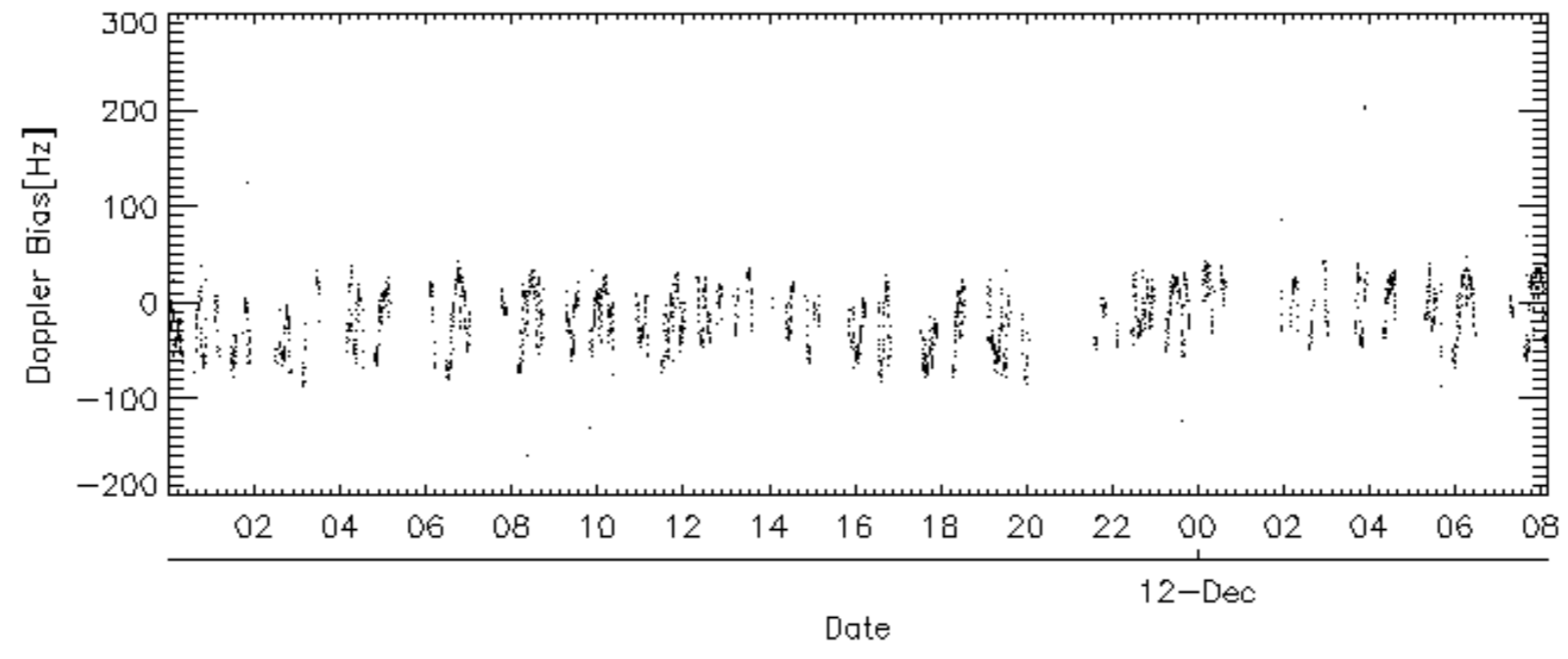
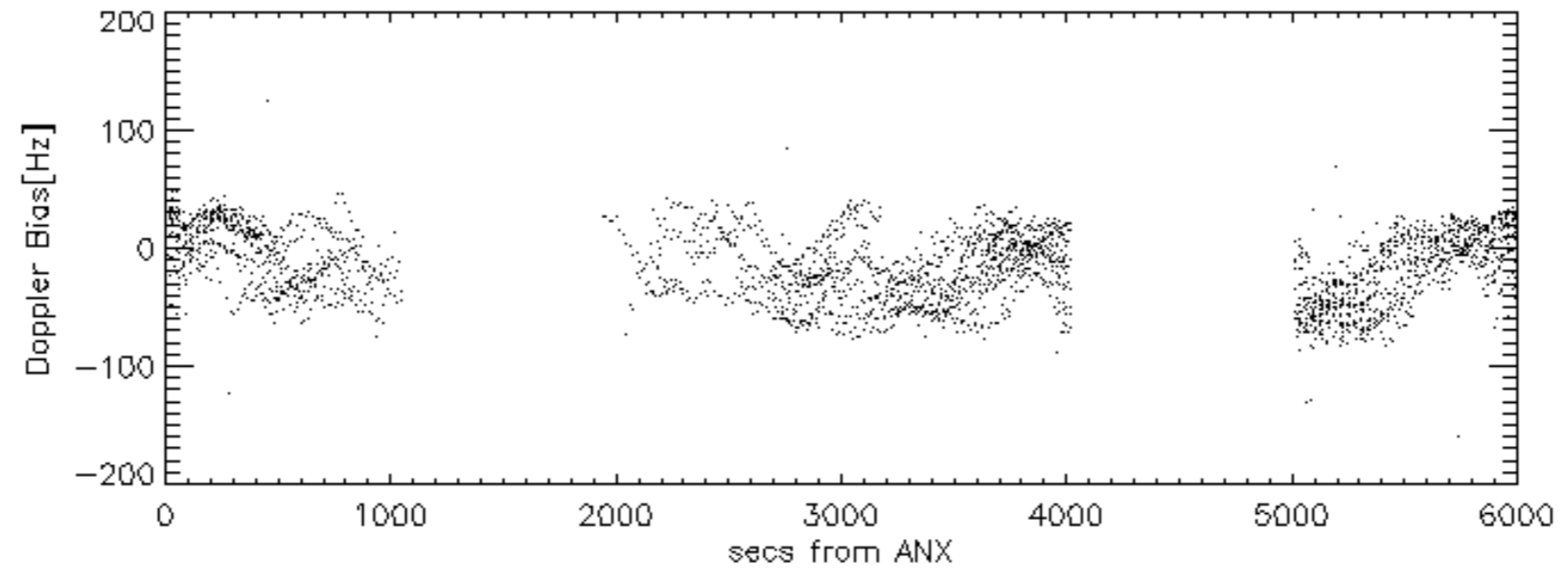
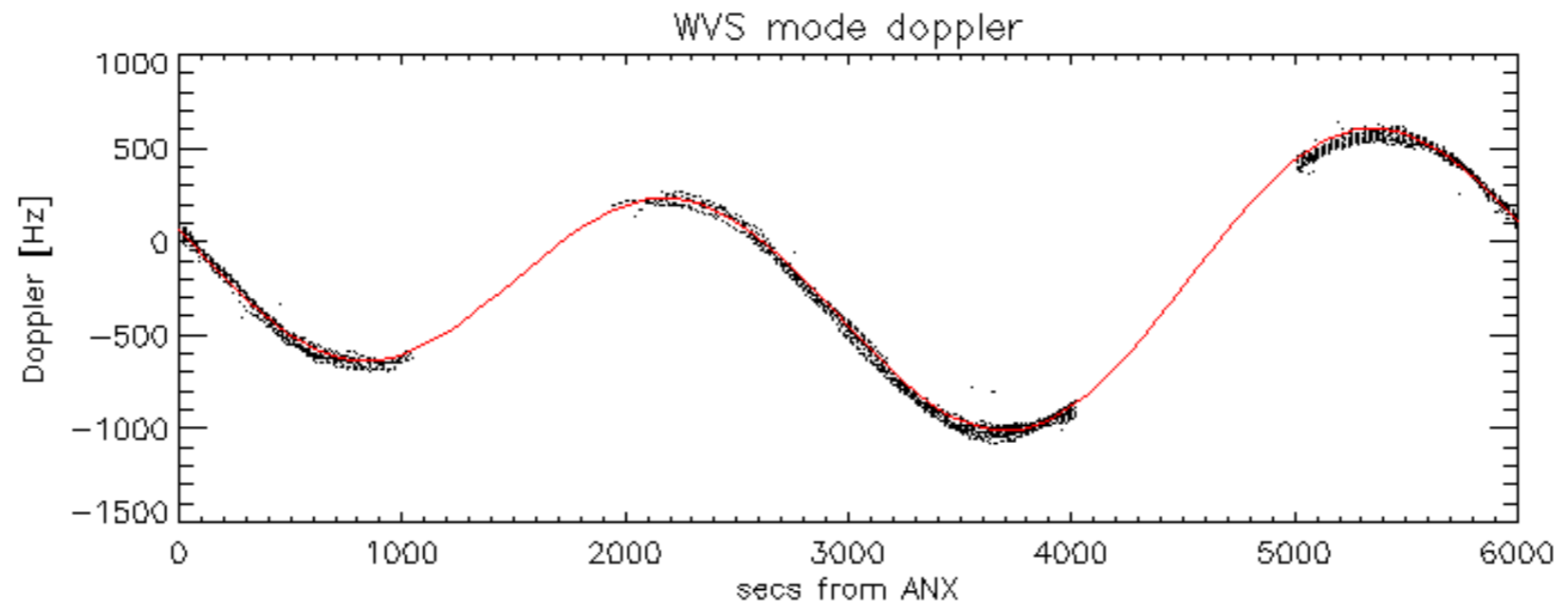
Doppler 'WVS' 'IS2' ascending



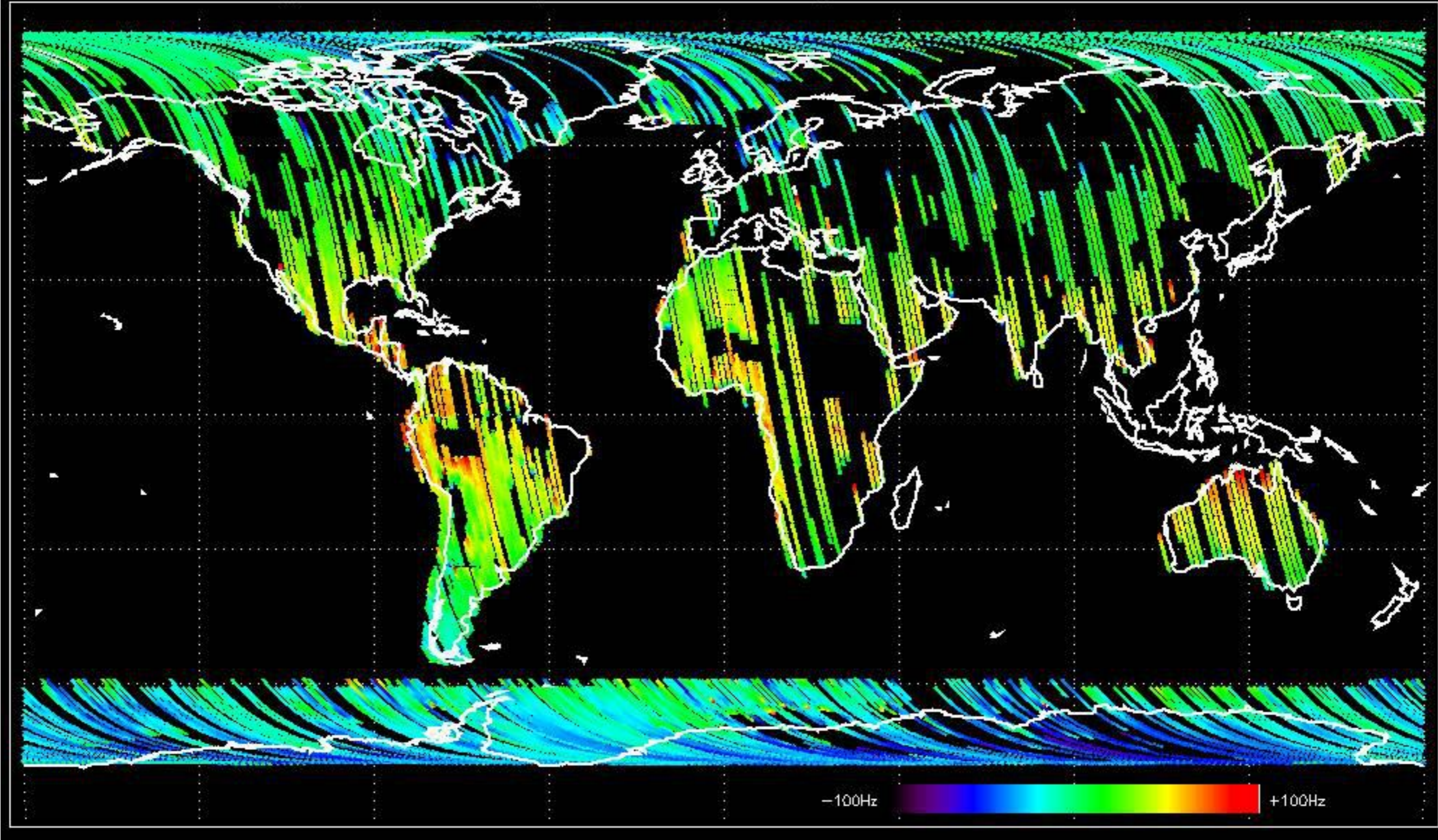
Doppler 'WVS' 'IS2' descending



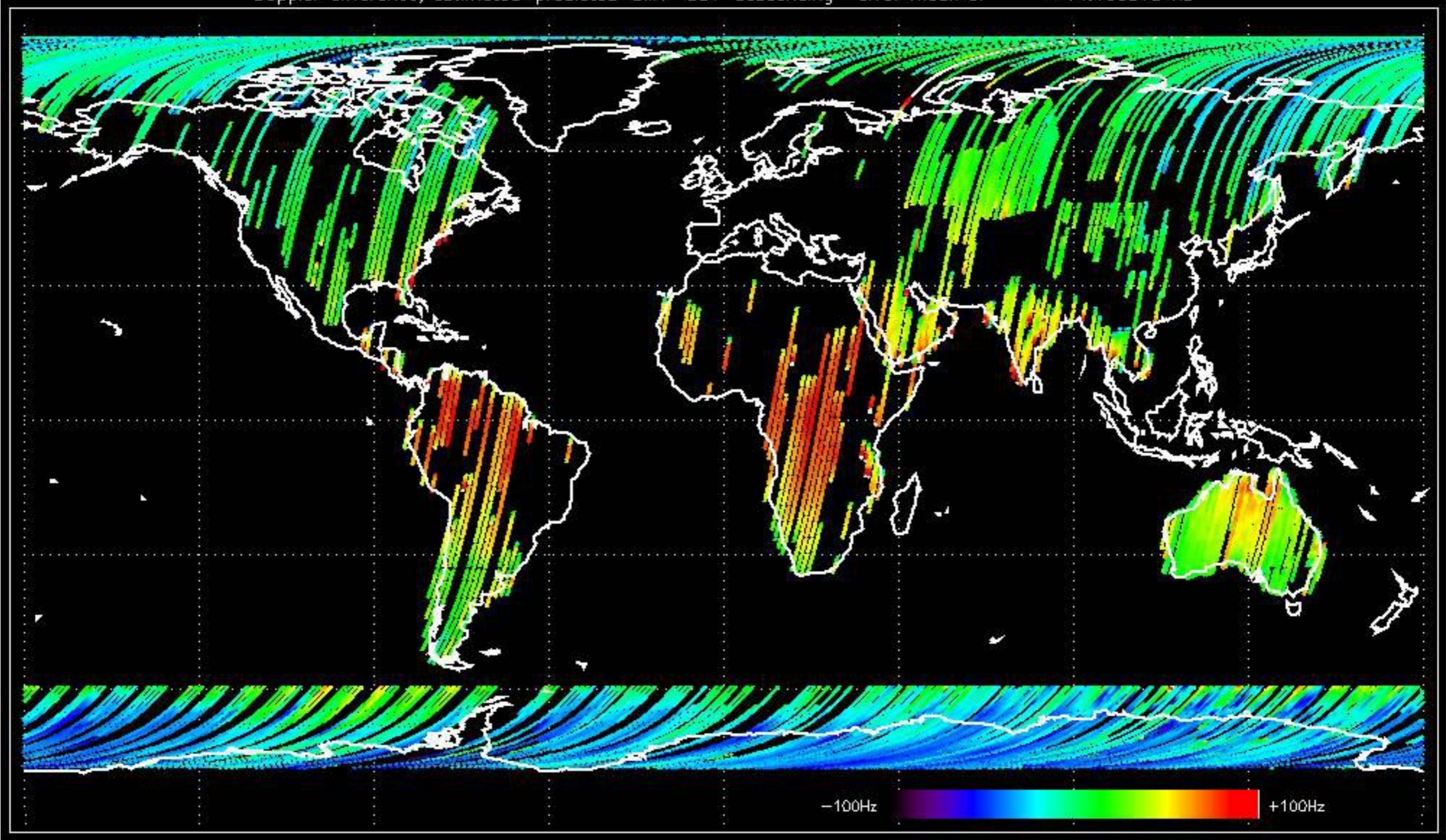




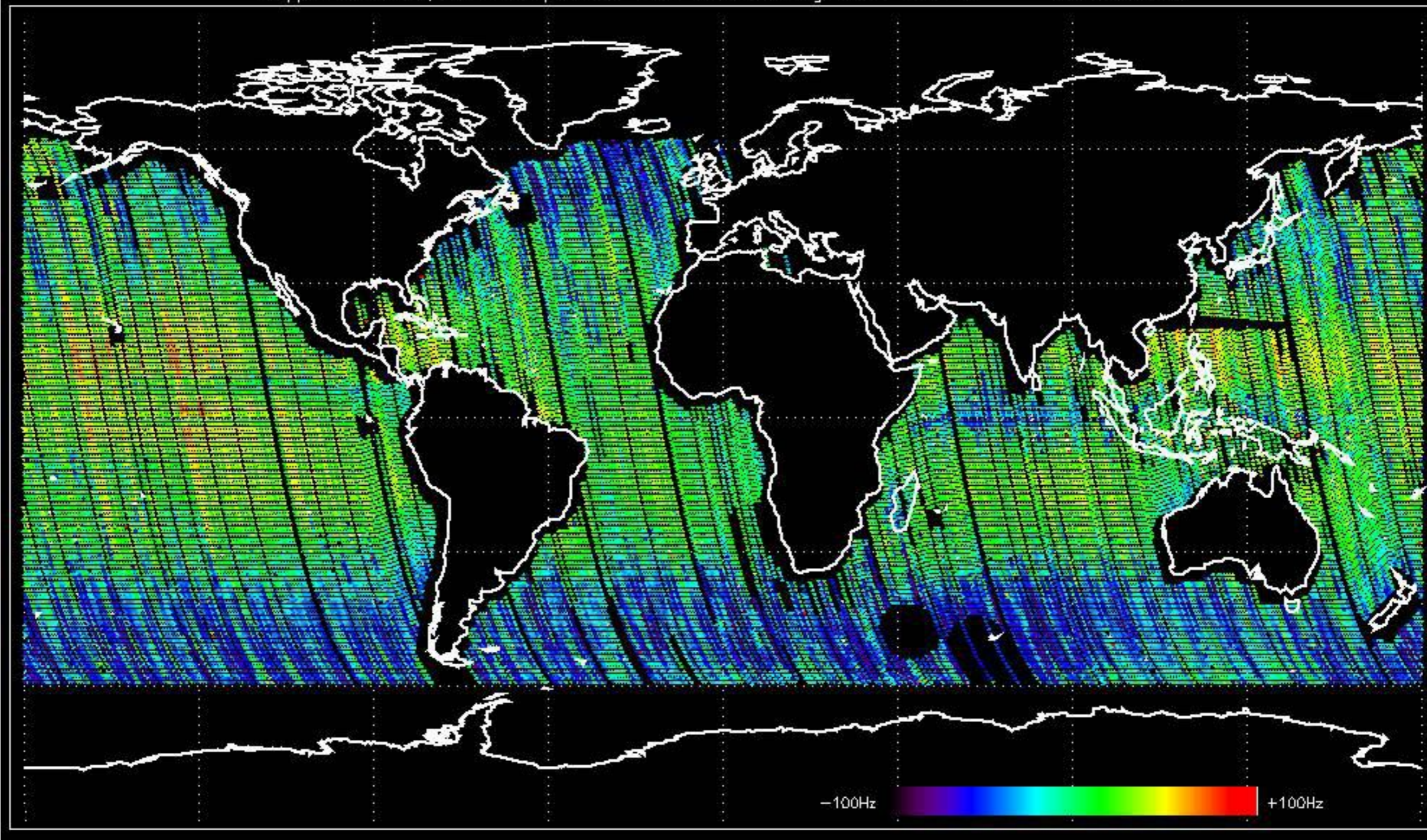
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.912892 Hz



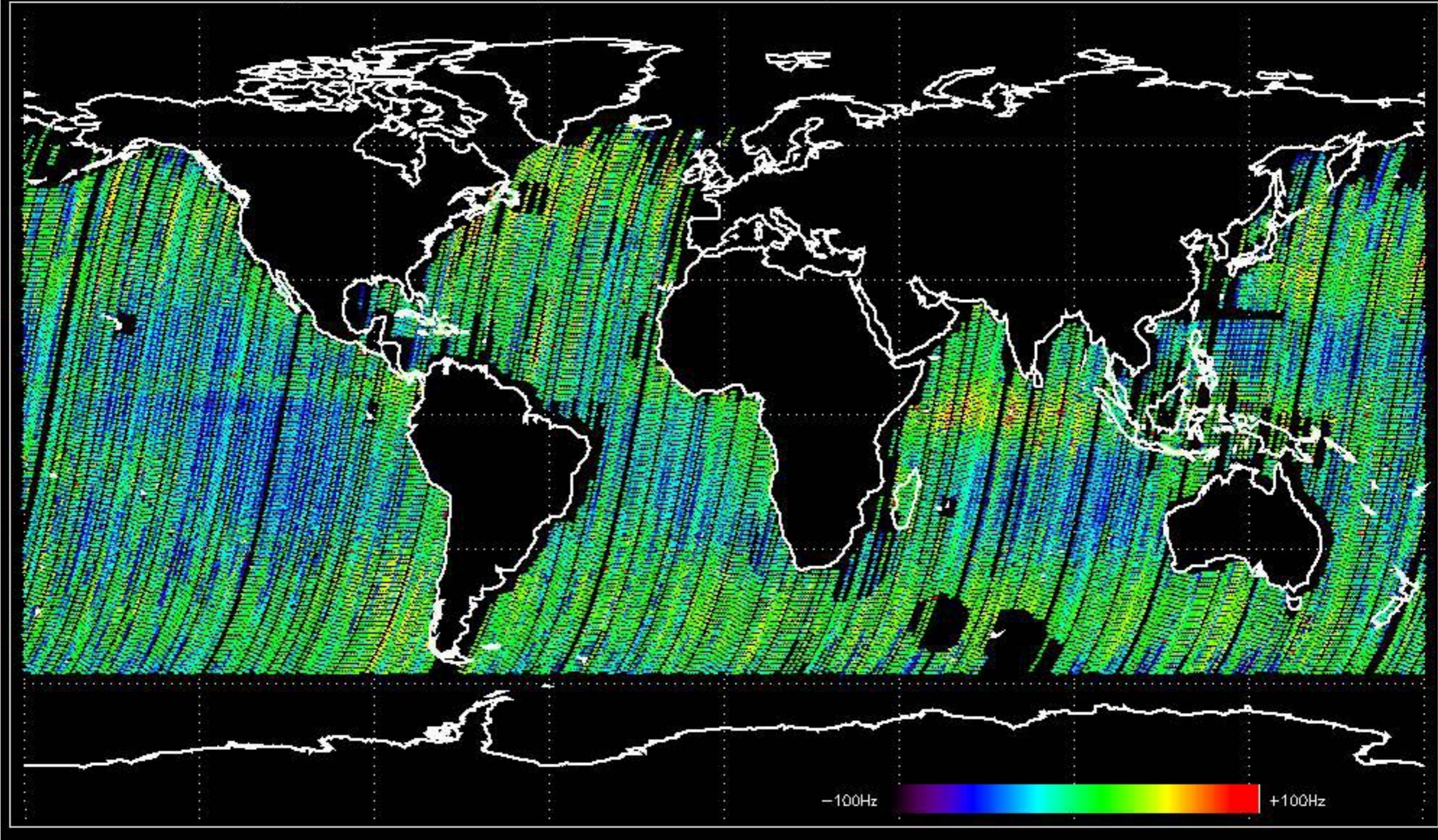
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.100518 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.3977630 Hz

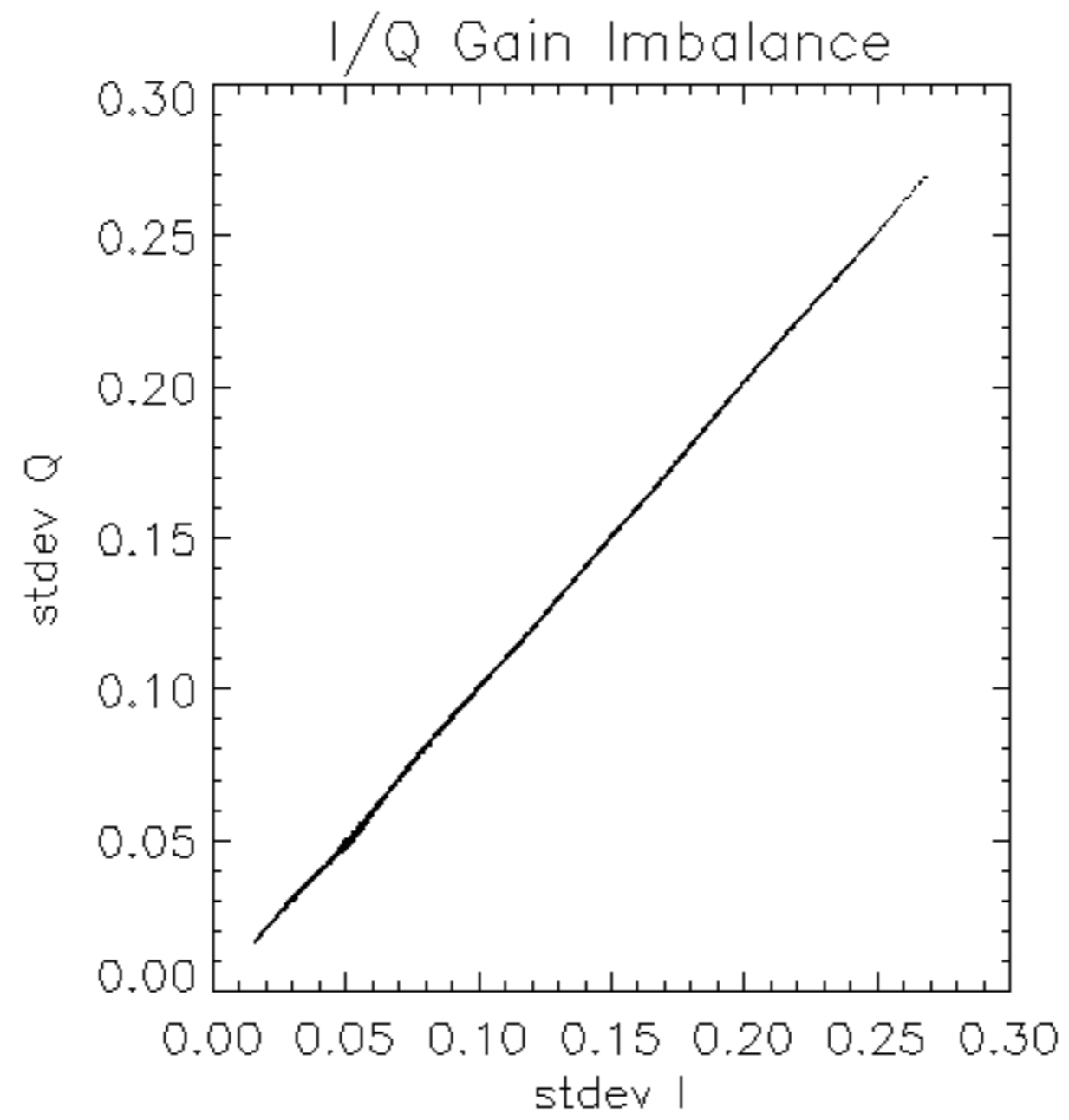


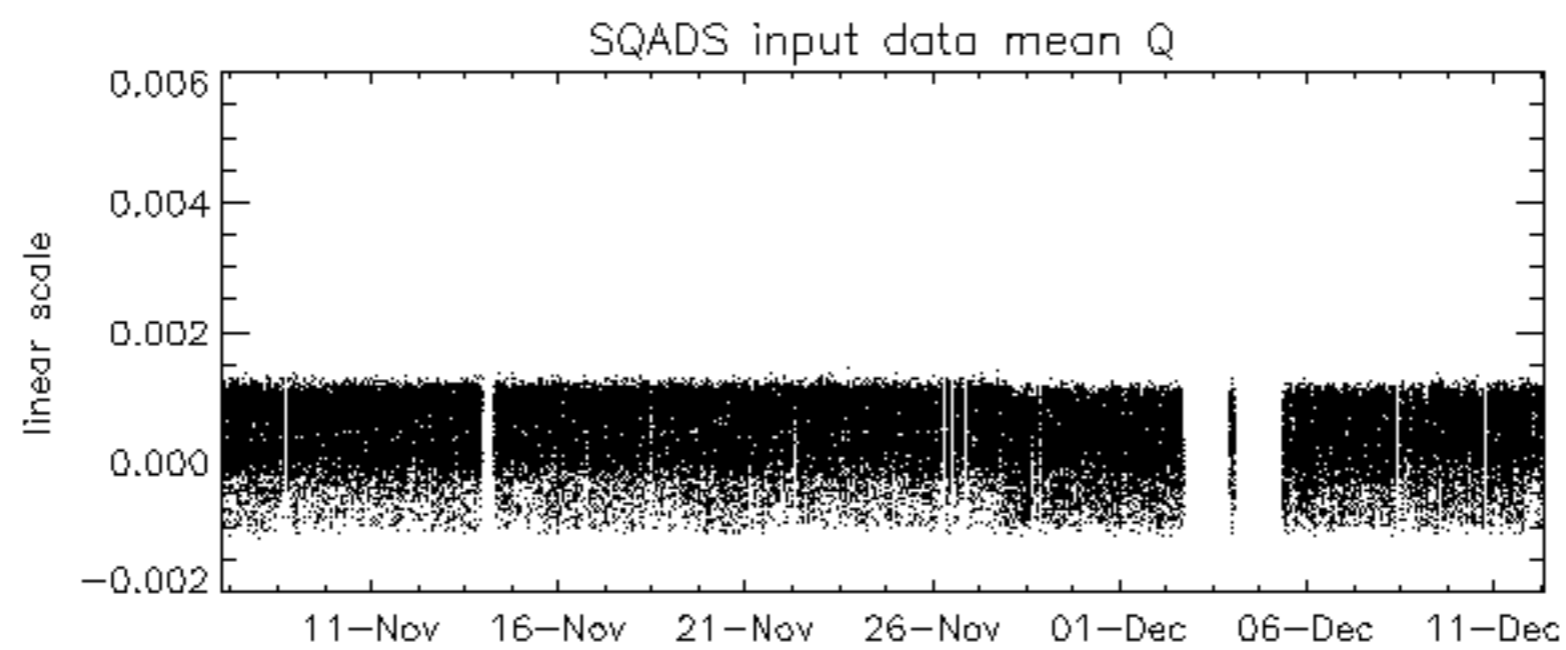
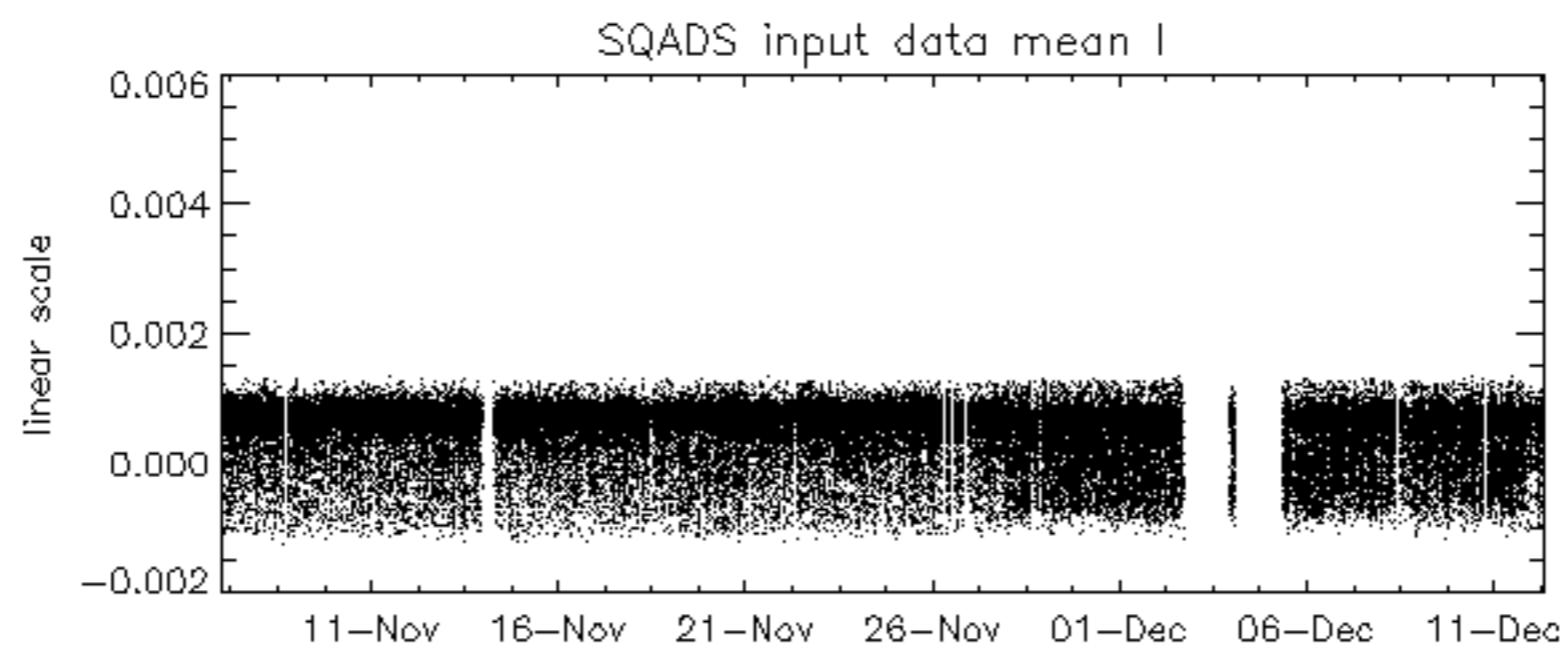
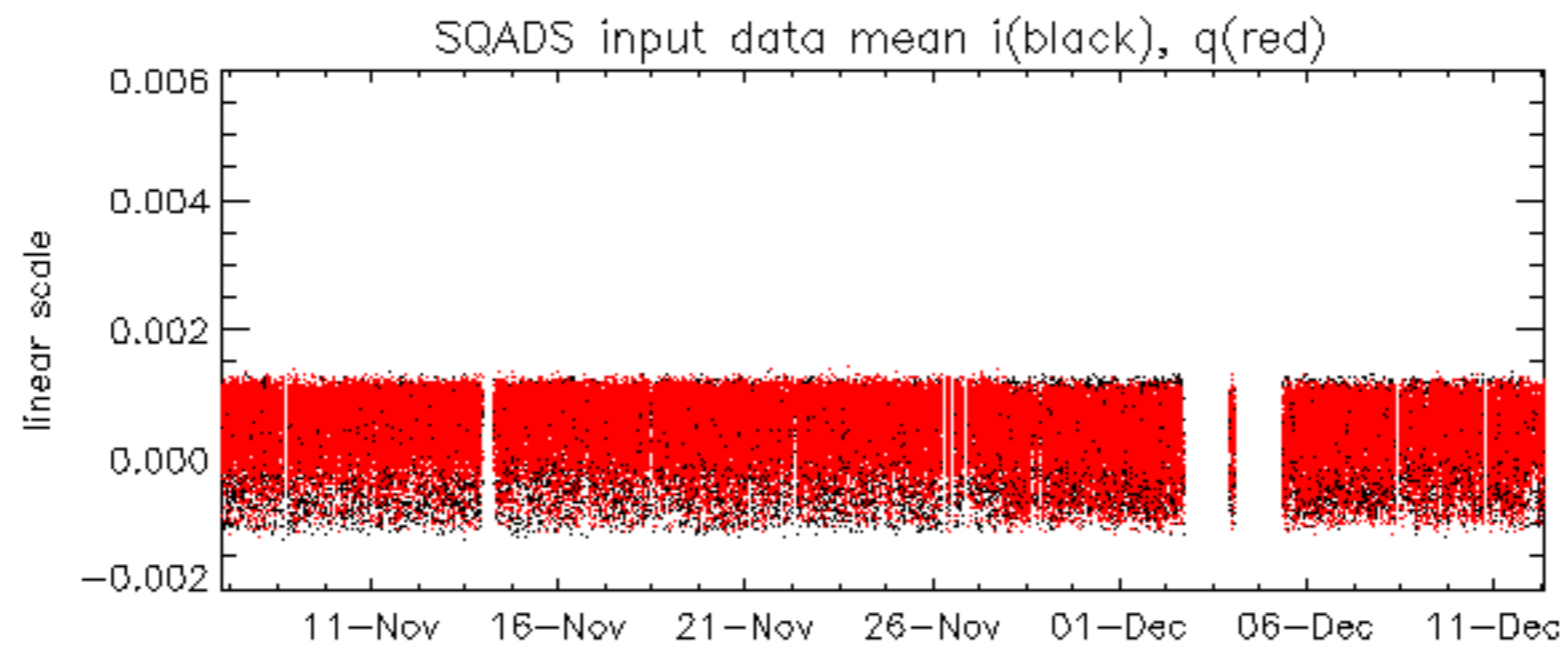
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -12.903072 Hz

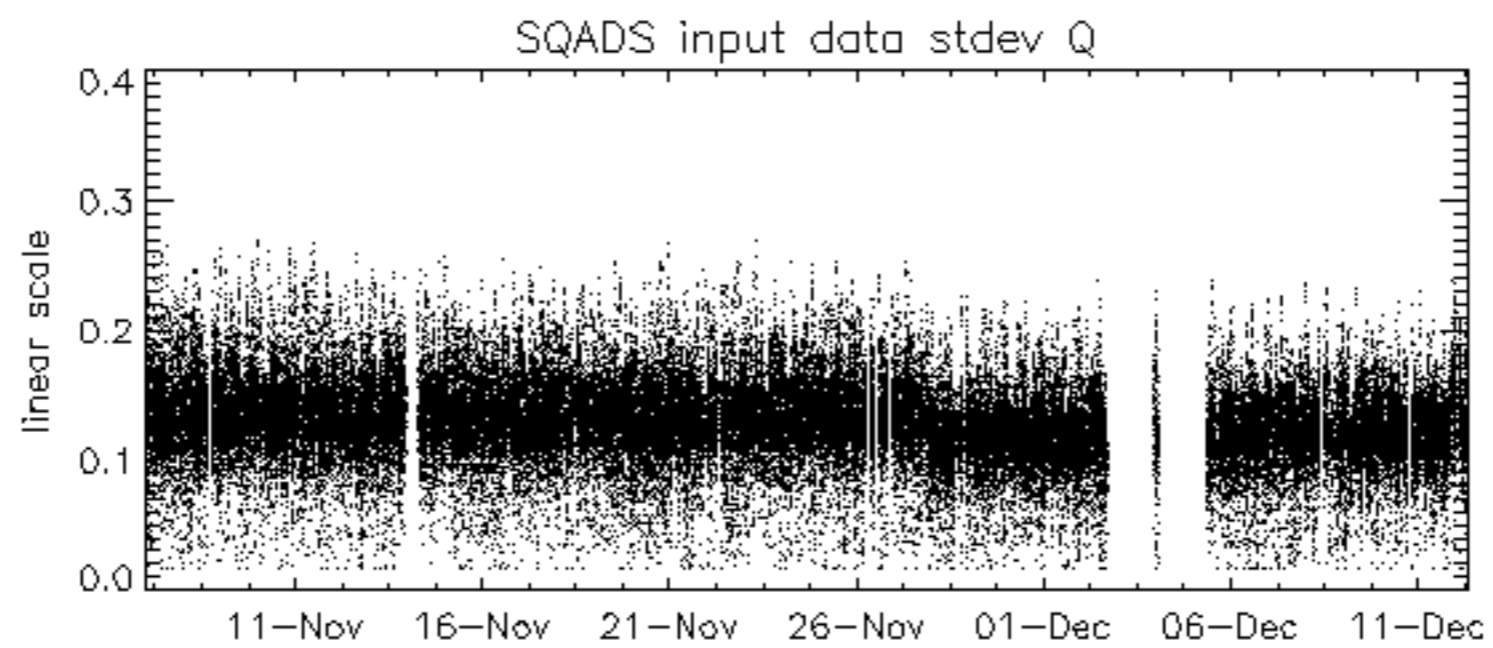
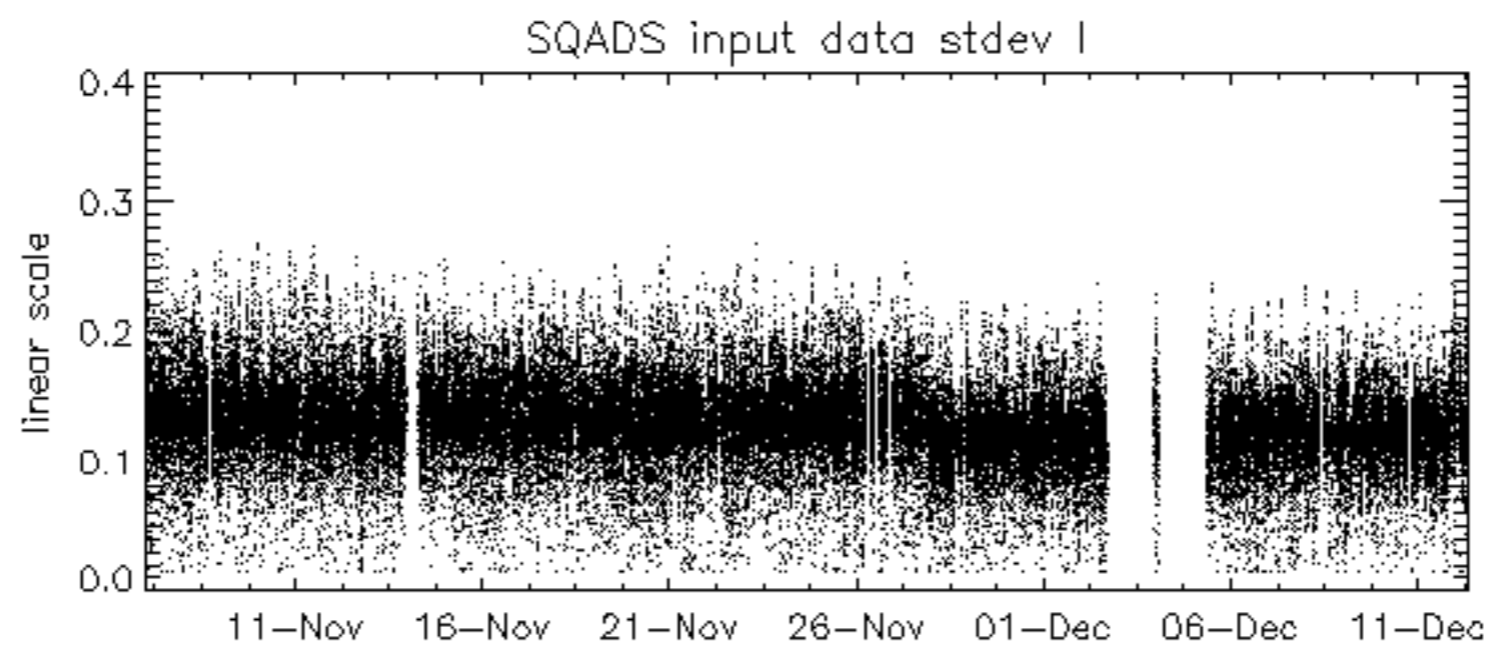
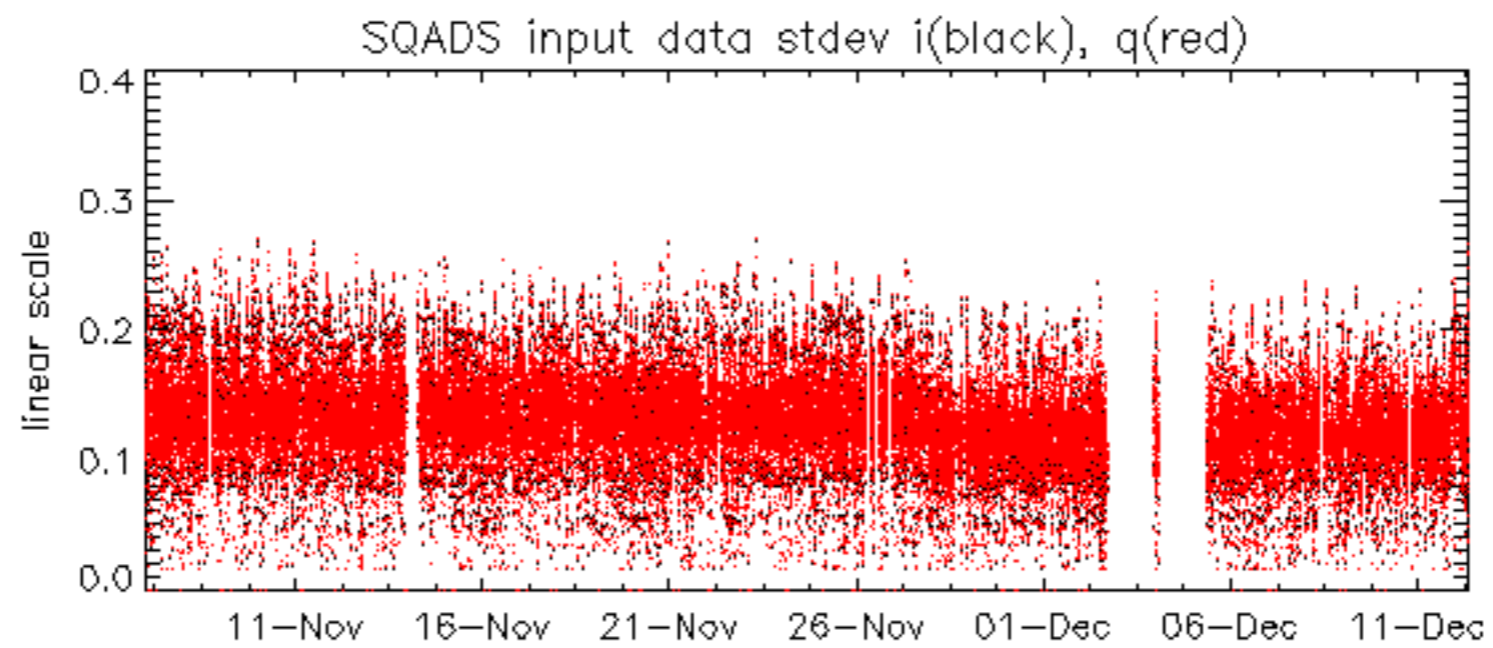


No anomalies observed on available MS products:

No anomalies observed.



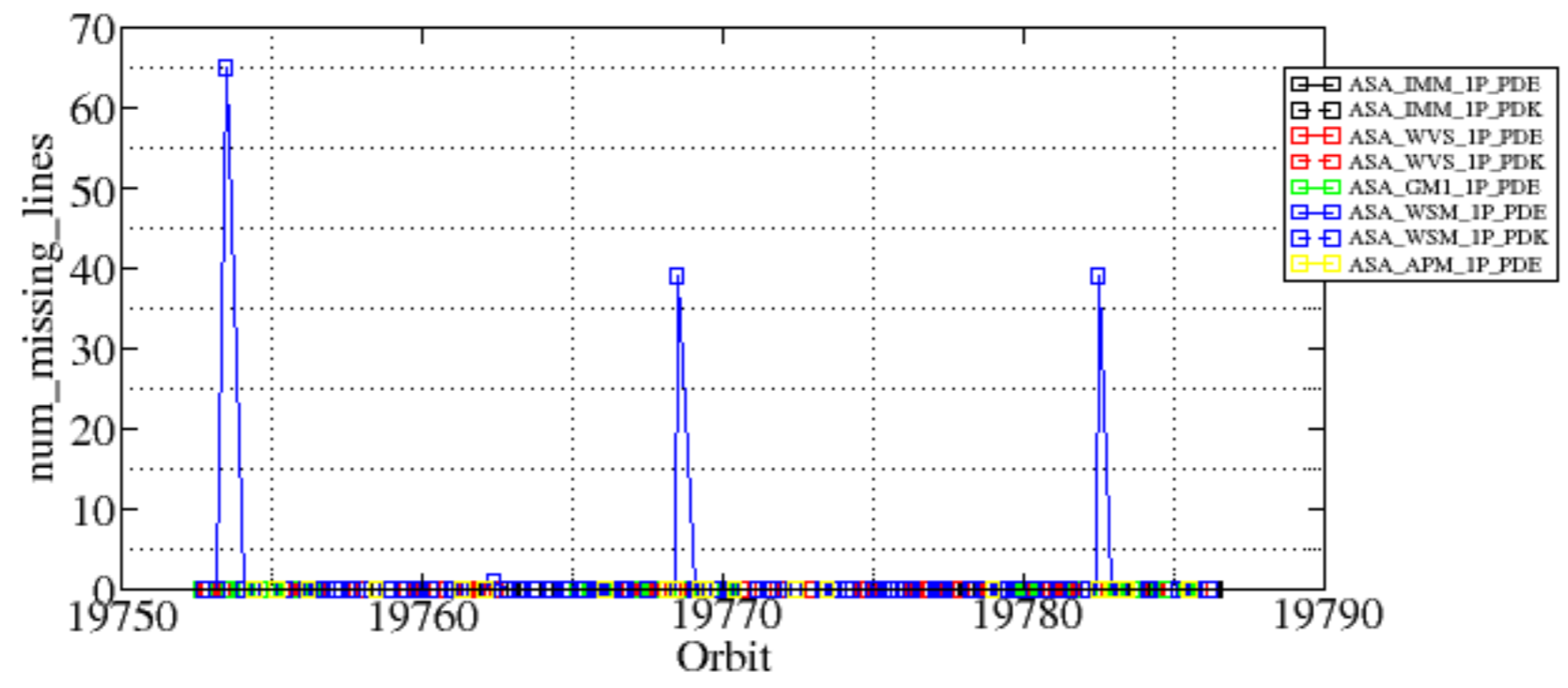


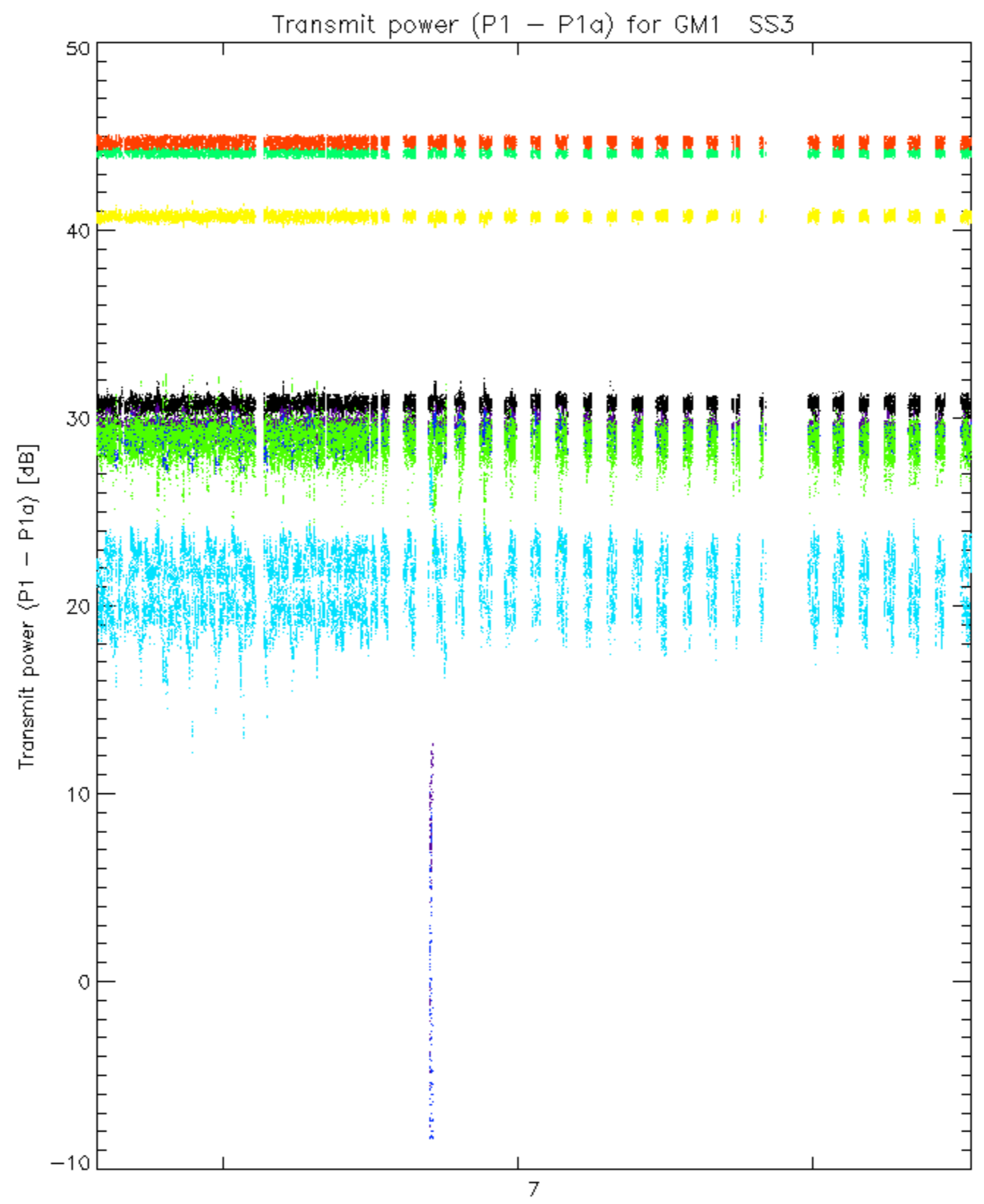


Summary of analysis for the last 3 days 2005121[012]

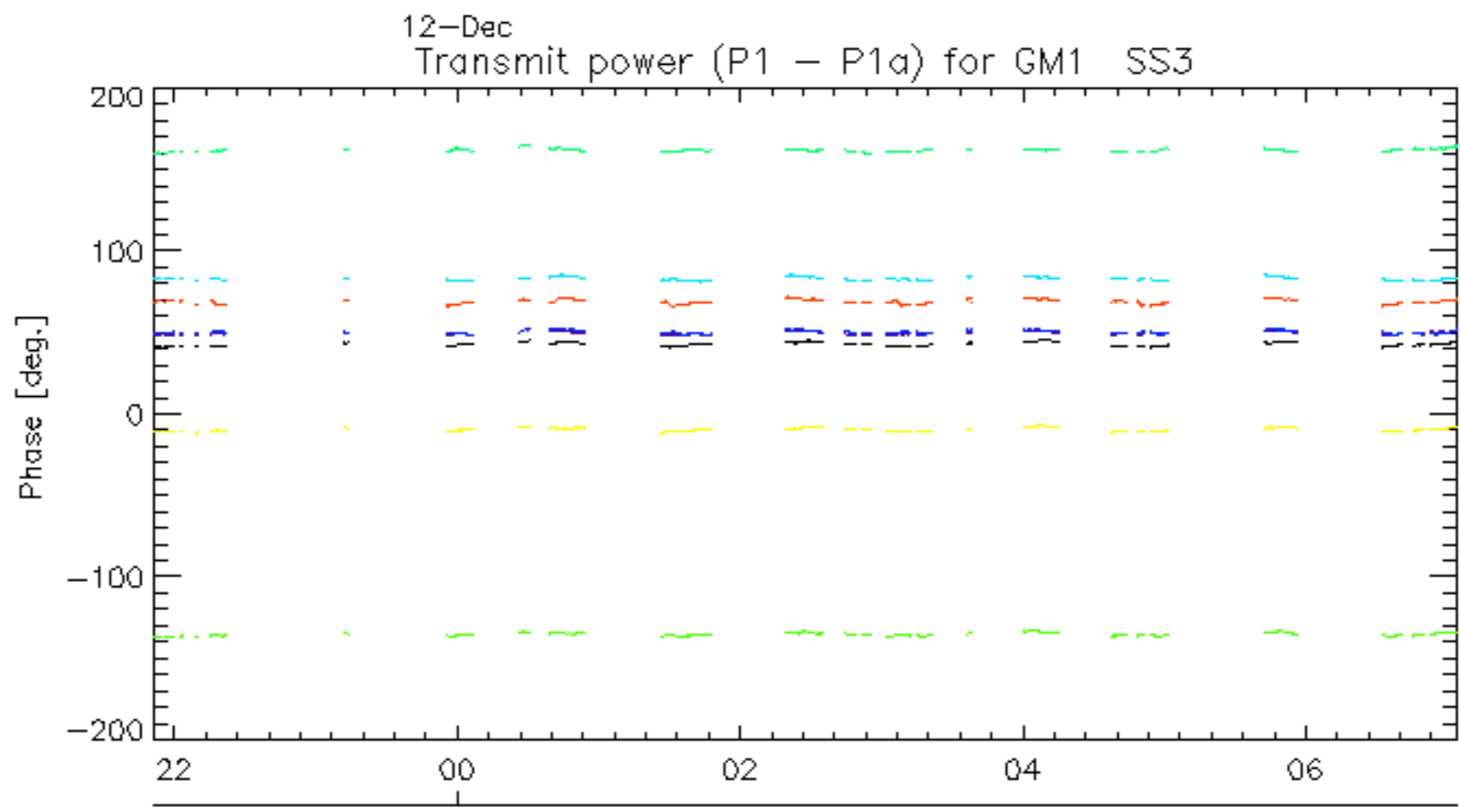
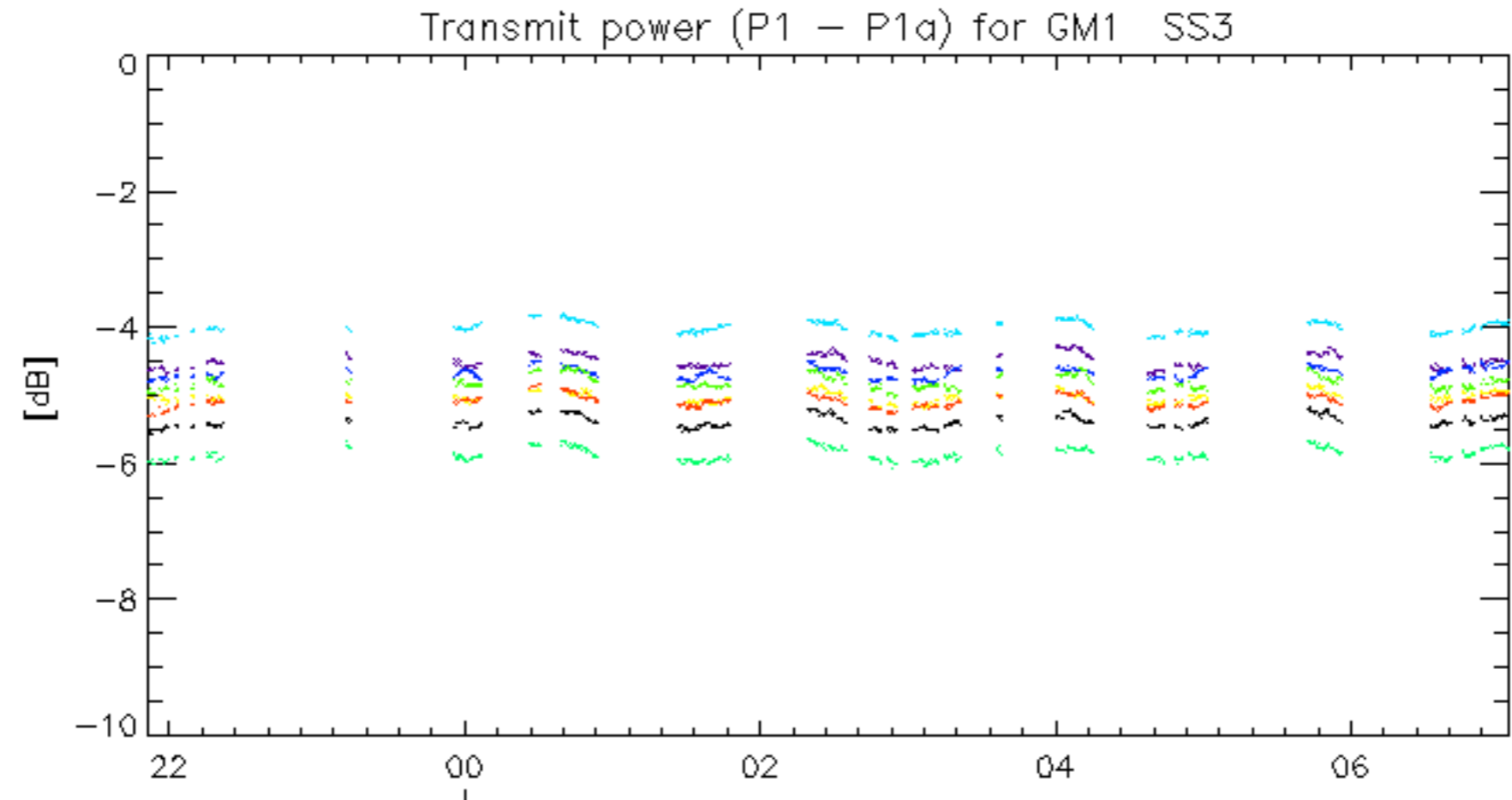
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051211_004056_00000622043_00174_19767_3704.N1	1	0
ASA_WSM_1PNPDE20051210_012121_000004282043_00160_19753_3544.N1	0	65
ASA_WSM_1PNPDE20051210_161814_000001462043_00169_19762_3611.N1	0	1
ASA_WSM_1PNPDE20051211_023139_000002262043_00175_19768_3714.N1	0	39
ASA_WSM_1PNPDE20051212_015902_000001842043_00189_19782_3870.N1	0	39

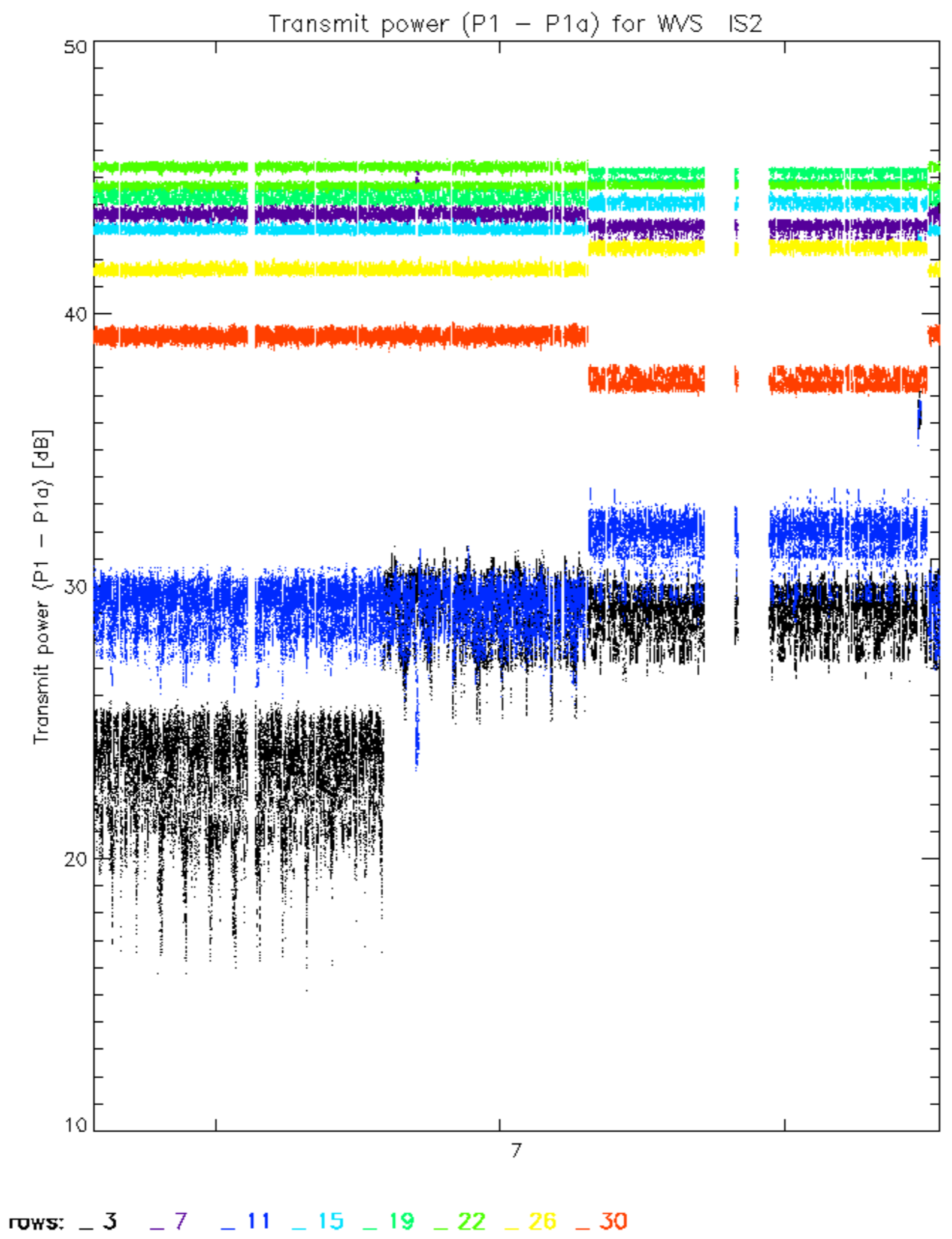


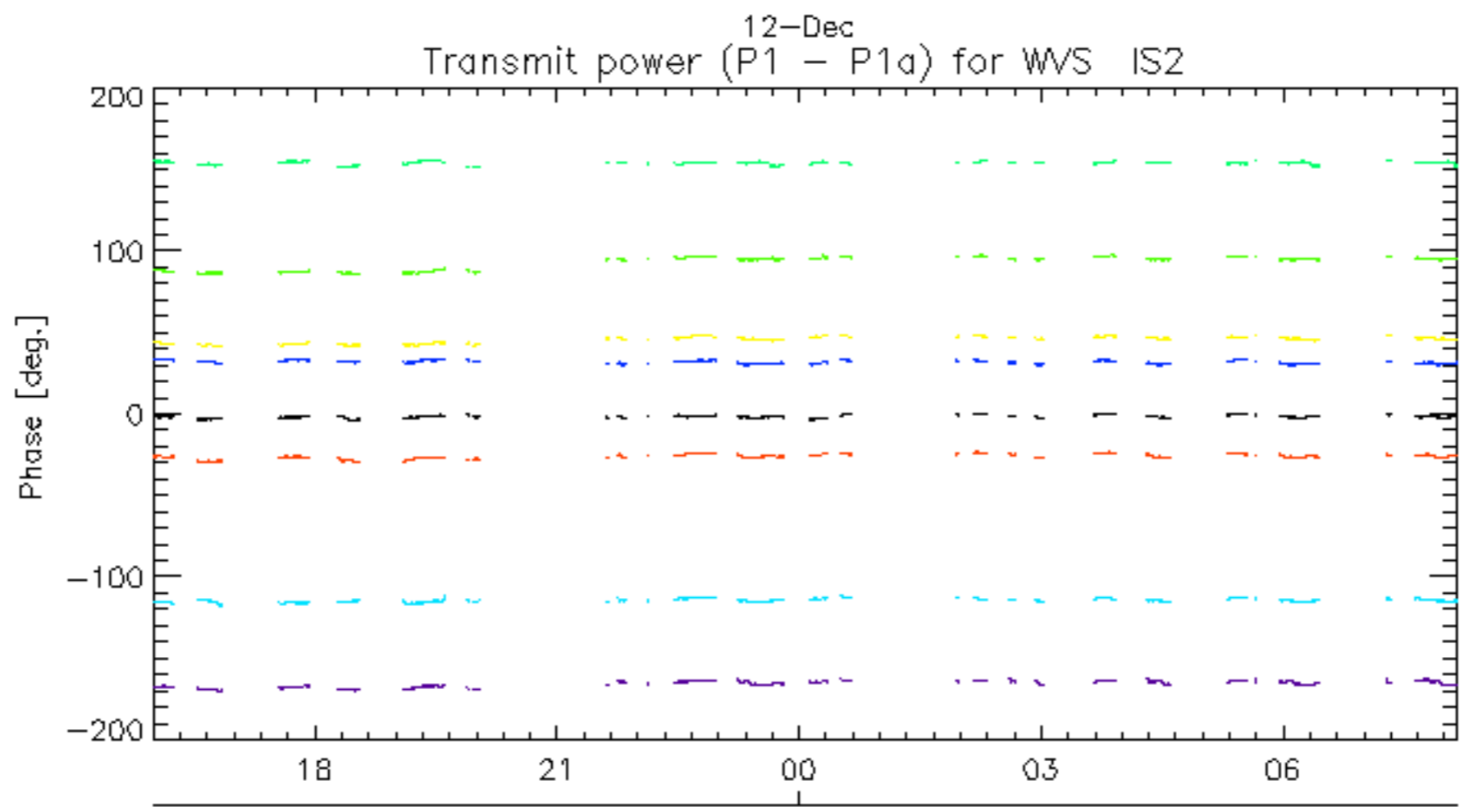
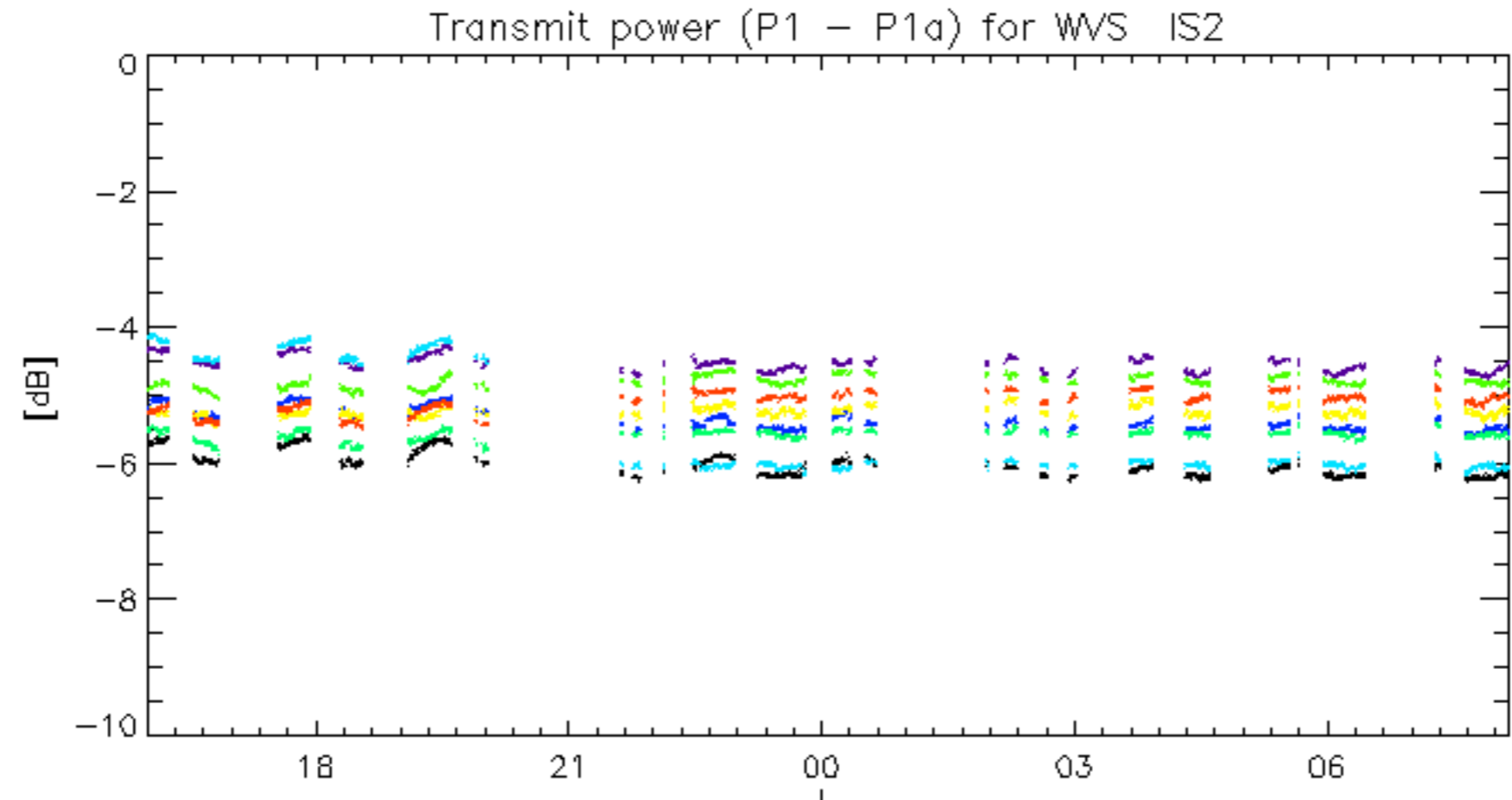


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





12-Dec
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.