

PRELIMINARY REPORT OF 051227

last update on Tue Dec 27 16:33:35 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 2005-12-26 00:00:00 to 2005-12-27 16:33:35

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	5	0	0	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	5	0	0	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	5	0	0	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	5	0	0	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	25	39	23	14	48
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	25	39	23	14	48
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	25	39	23	14	48
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	25	39	23	14	48

2.3 - Browse Visual Inspection

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	20051223 063522
H	20051222 070659

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	-3.691151	0.262605	-0.580134
7	P1	-2.736966	0.134321	-0.398898
11	P1	-4.144507	0.034333	0.048126
15	P1	-5.028159	1.790773	-1.600570
19	P1	-3.030252	0.068496	-0.326144
22	P1	-4.432179	0.023051	-0.092195
26	P1	-4.408706	0.063041	0.277668
30	P1	-5.647914	0.036082	-0.186863
3	P1	-15.696159	2.891072	-2.013737
7	P1	-15.233847	2.809841	-2.009880
11	P1	-16.296841	0.481352	-0.433134
15	P1	-12.681580	0.949406	-0.879261
19	P1	-13.403493	0.379720	-0.742786
22	P1	-15.944343	0.644363	-0.063235
26	P1	-15.035797	1.103576	-1.098280
30	P1	-15.492579	2.569417	-1.777367

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.821024	0.114099	0.259113
7	P2	-22.544508	0.106836	0.037365
11	P2	-16.528921	0.132176	0.332046
15	P2	-7.280023	0.105211	0.055226
19	P2	-9.216655	0.103949	0.011711
22	P2	-17.875189	0.113844	-0.135576
26	P2	-16.387623	0.132437	0.195386
30	P2	-19.798296	0.120503	0.174373

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.236250	0.007602	0.009931
7	P3	-8.236250	0.007602	0.009931
11	P3	-8.236250	0.007602	0.009931
15	P3	-8.236250	0.007602	0.009931
19	P3	-8.236250	0.007602	0.009931
22	P3	-8.236250	0.007602	0.009931
26	P3	-8.236250	0.007602	0.009931
30	P3	-8.236250	0.007602	0.009931

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	-3.708527	0.008320	-0.009138
7	P1	-2.776285	0.007787	0.039965
11	P1	-2.881288	0.009502	0.024335
15	P1	-3.421540	0.016612	0.010160
19	P1	-3.394043	0.014116	-0.006554
22	P1	-5.128717	0.018583	0.030849
26	P1	-5.850135	0.016439	-0.017683
30	P1	-5.284612	0.033181	0.007293
3	P1	-11.487419	0.041394	-0.001186
7	P1	-9.970242	0.045896	0.017995
11	P1	-10.053697	0.057753	0.002268
15	P1	-10.564377	0.072896	0.024523
19	P1	-15.520968	0.074786	-0.030314
22	P1	-20.953363	0.957527	0.044637
26	P1	-17.153723	0.293542	0.065261
30	P1	-18.246288	0.300715	0.333700

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.606386	0.029746	0.099735
7	P2	-23.049761	0.056125	0.022498
11	P2	-11.599749	0.020374	0.163205
15	P2	-4.992907	0.021162	-0.003204
19	P2	-6.975559	0.021393	-0.007560
22	P2	-8.210822	0.022559	-0.022680
26	P2	-24.053617	0.030345	0.012887
30	P2	-22.134180	0.017448	-0.026094

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.078316	0.002459	-0.004210
7	P3	-8.078457	0.002457	-0.004416
11	P3	-8.078439	0.002445	-0.004748
15	P3	-8.078411	0.002446	-0.004583
19	P3	-8.078479	0.002457	-0.004475
22	P3	-8.078445	0.002456	-0.004143
26	P3	-8.078486	0.002423	-0.004320
30	P3	-8.078193	0.002447	-0.004731

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	0.000454398
	stdev	2.20083e-07
MEAN Q	mean	0.000469267
	stdev	2.36112e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128838
	stdev	0.00111272
STDEV Q	mean	0.129122
	stdev	0.00112522



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[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_1PNPDE20051225_025346_000000362043_00376_19969_4740.N1	1	0
ASA_IMM_1PNPDE20051227_003806_000000502043_00403_19996_4808.N1	1	0
ASA_WSM_1PNPDE20051226_144425_000002632043_00397_19990_5732.N1	0	75





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

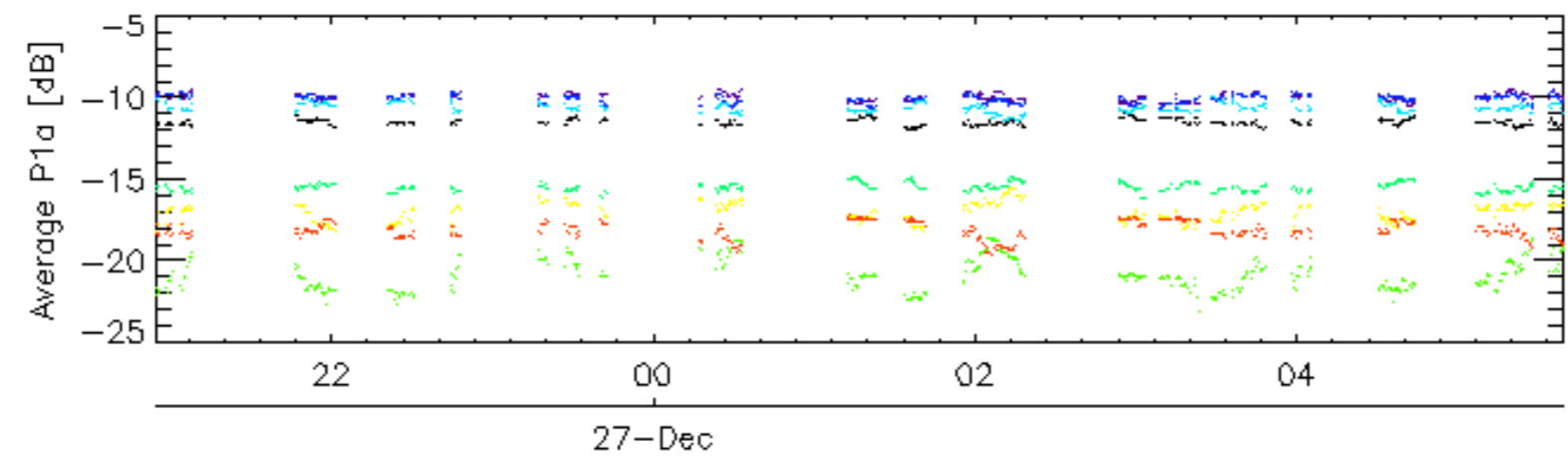
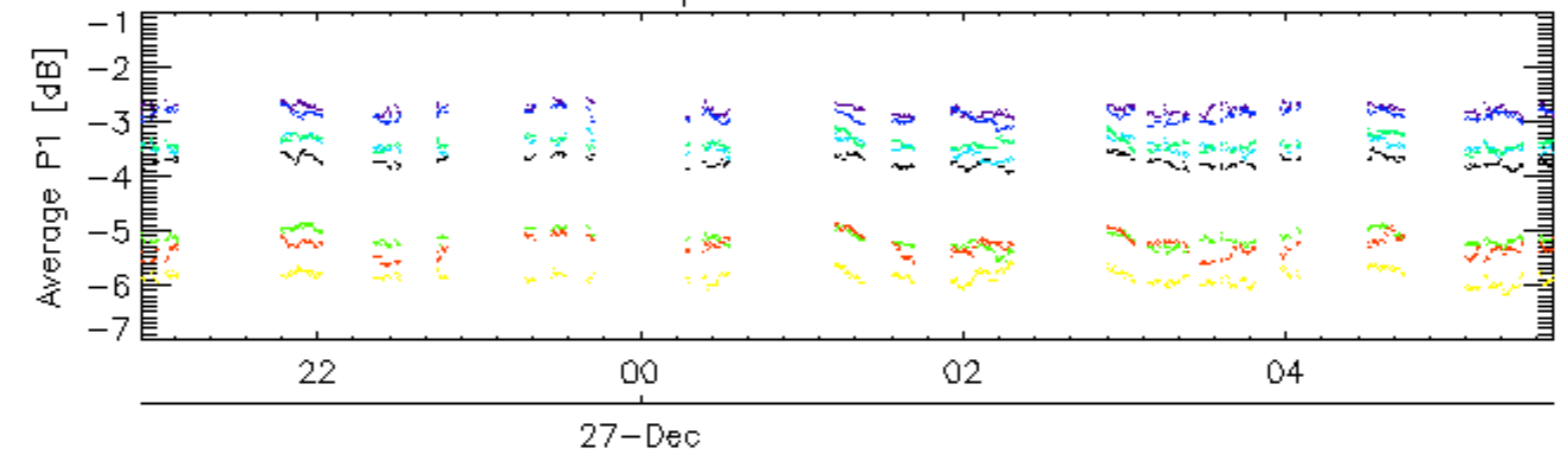
Ascending

Descending

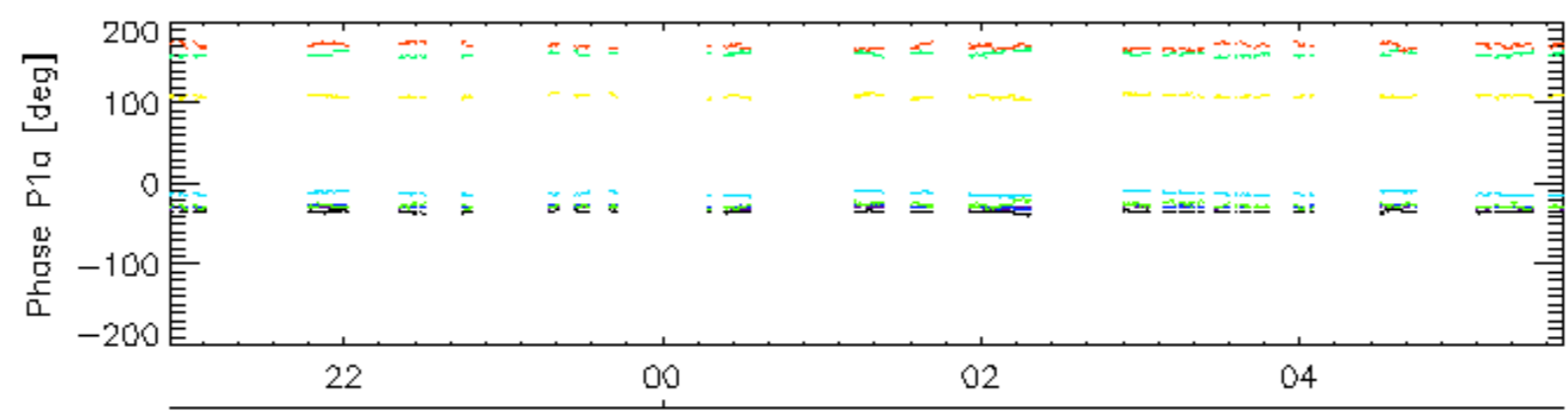
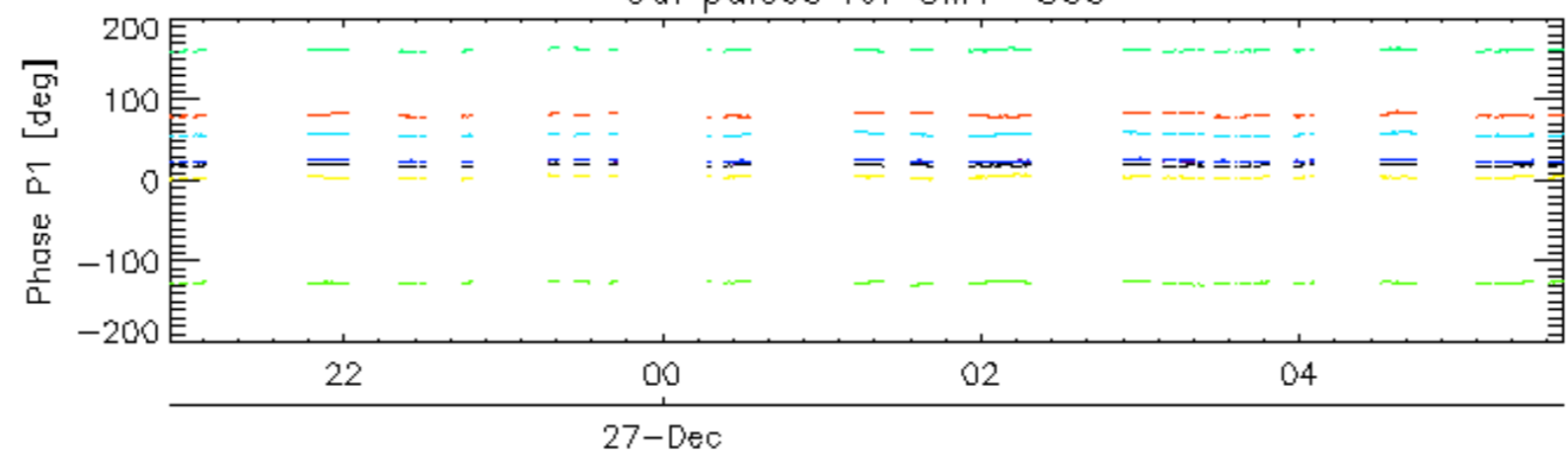
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

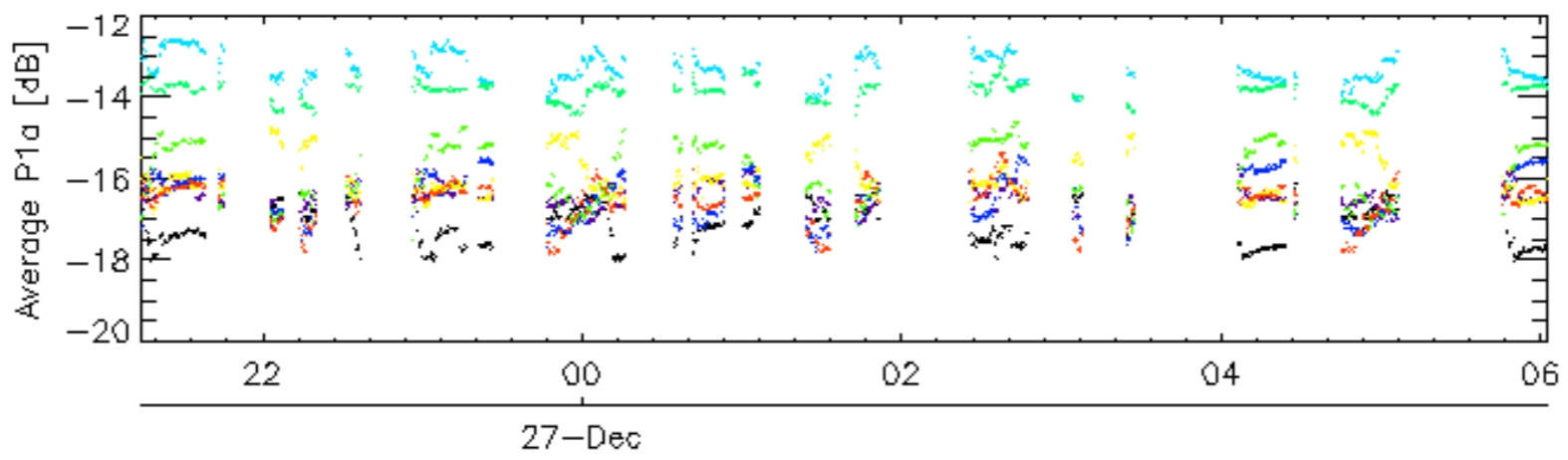
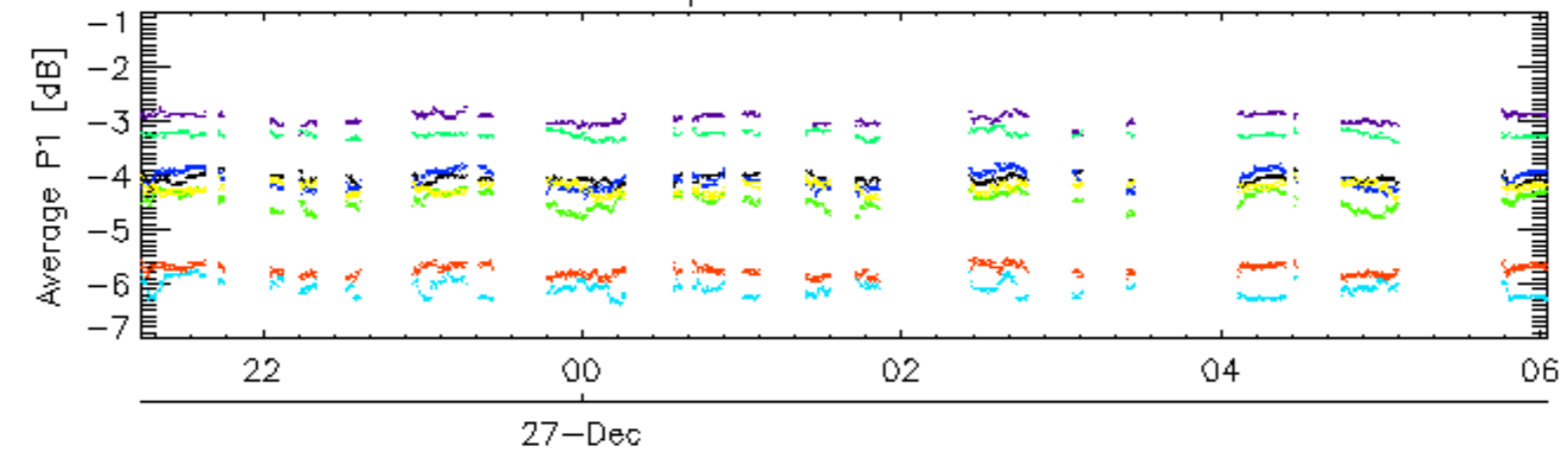


Cal pulses for GM1 SS3

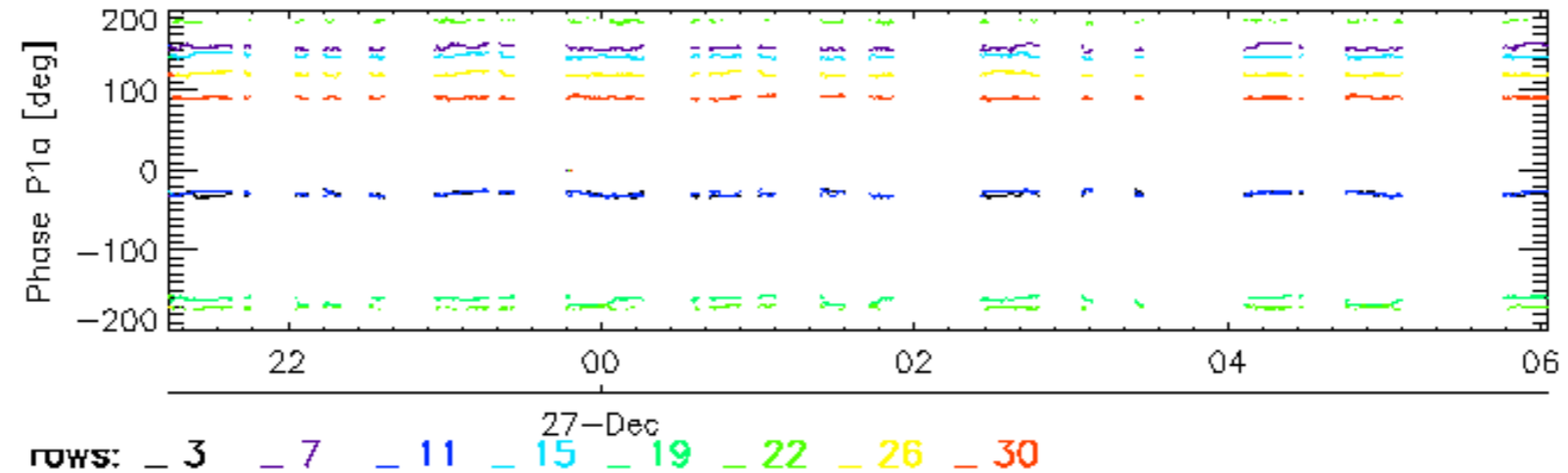
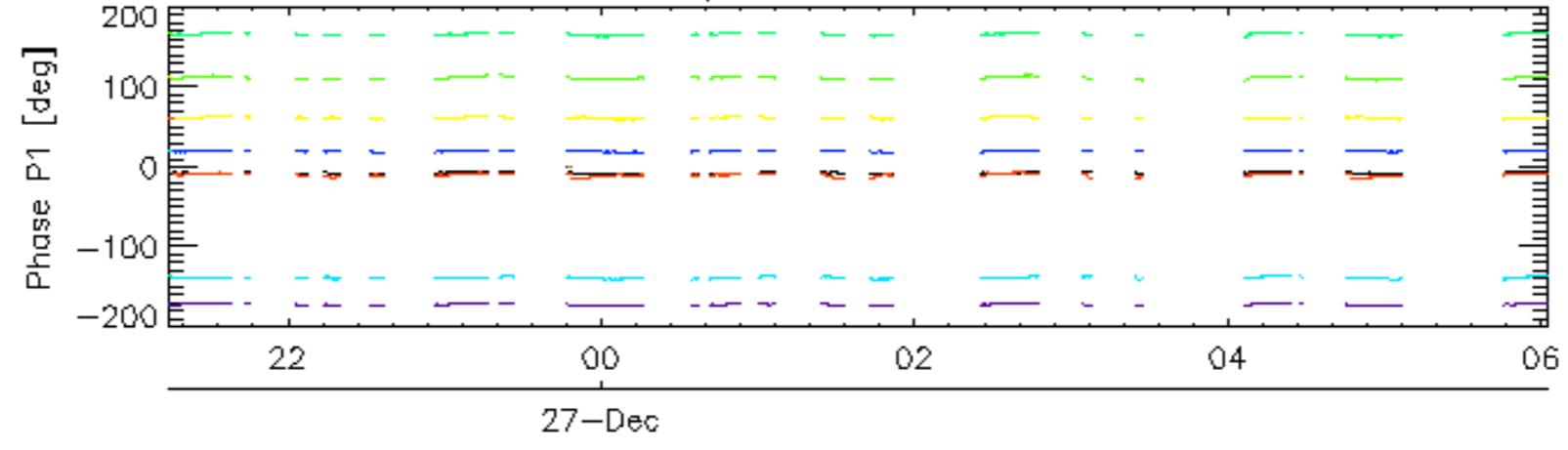


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

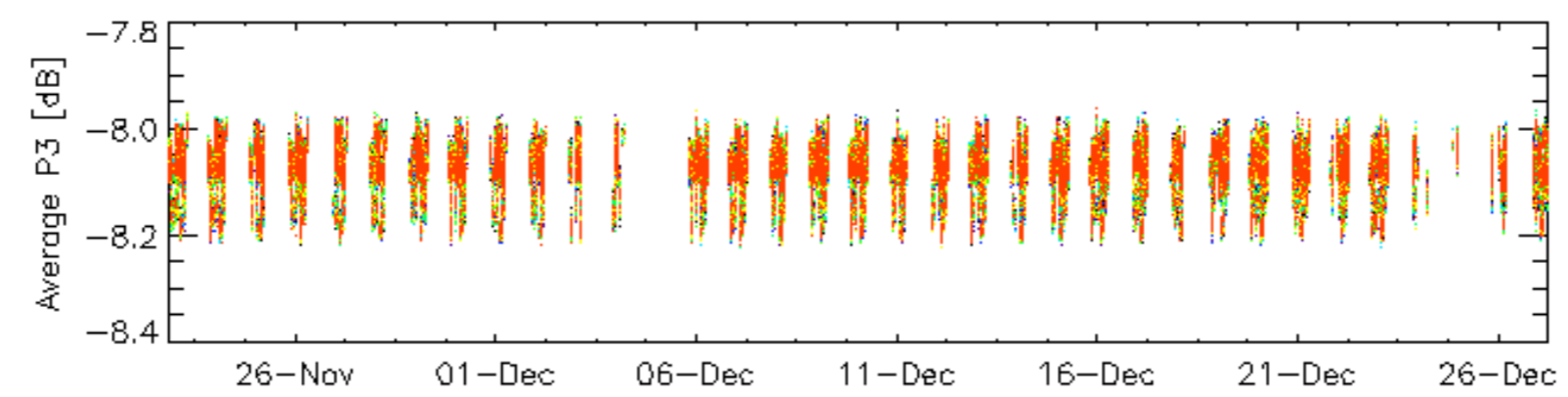
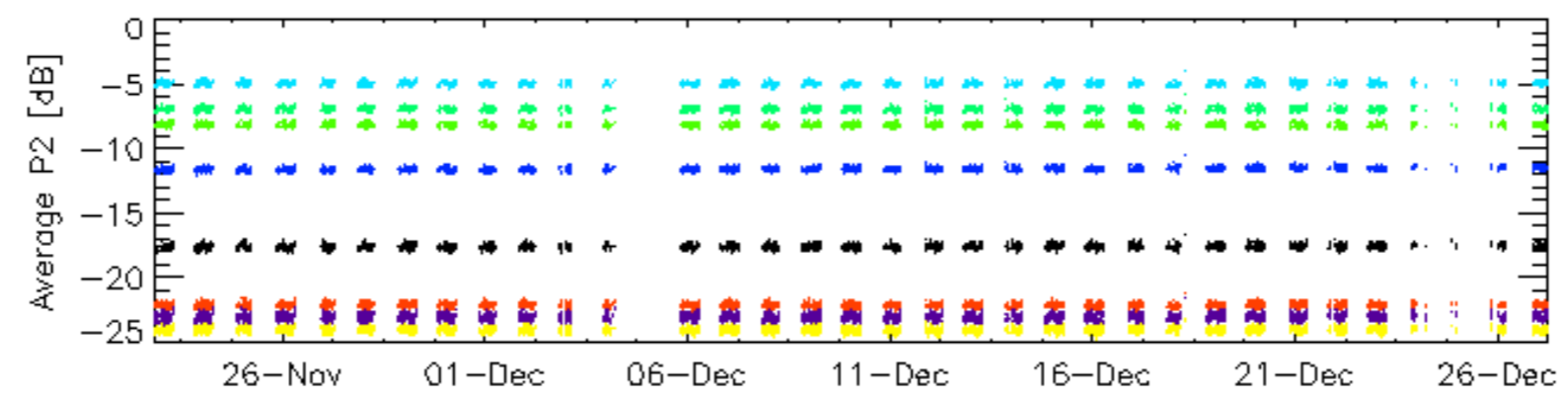
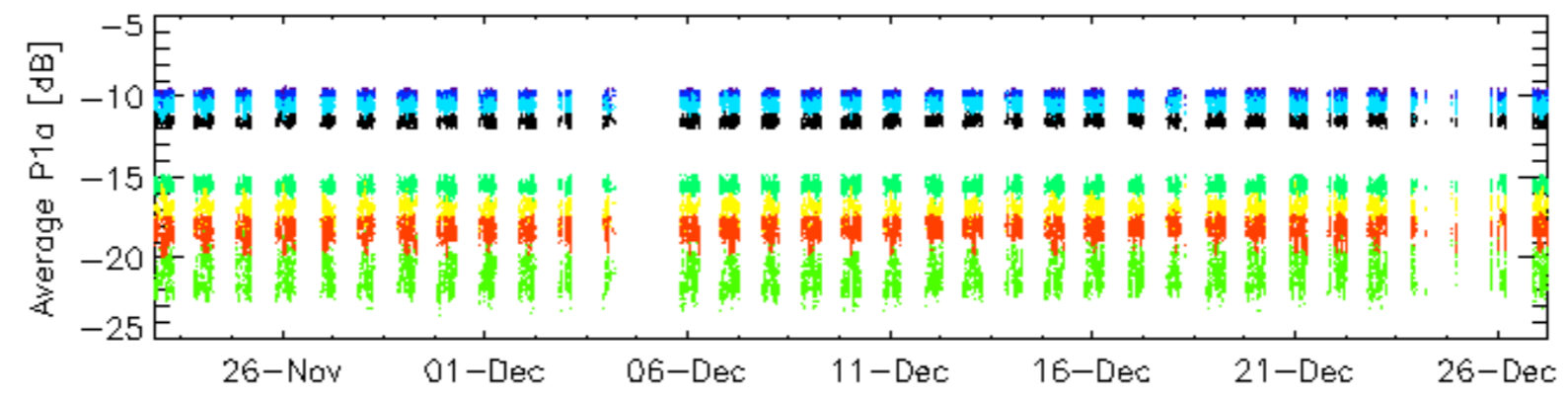
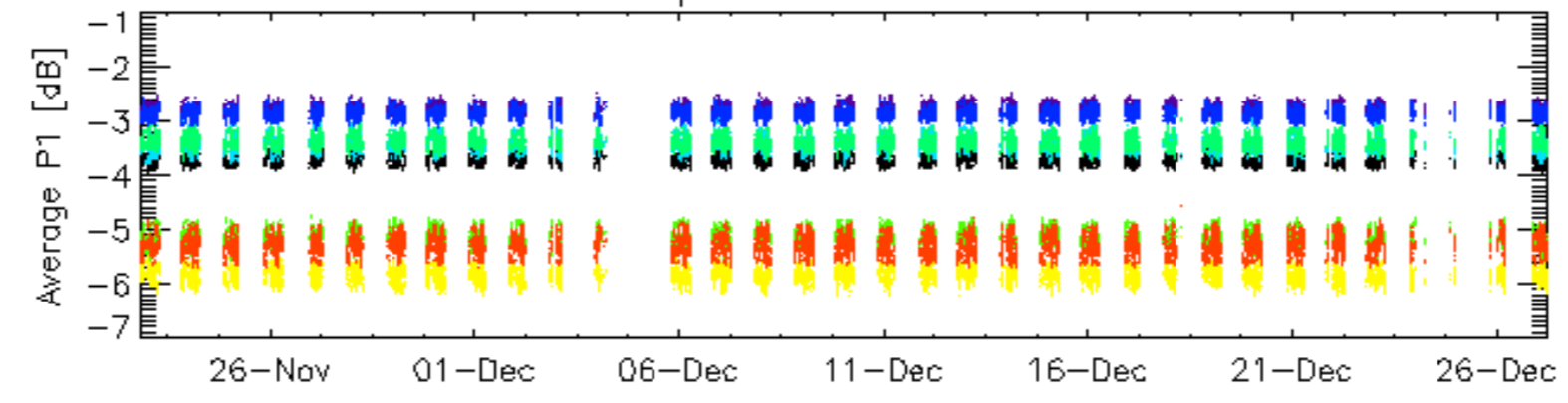


Cal pulses for WVS IS2



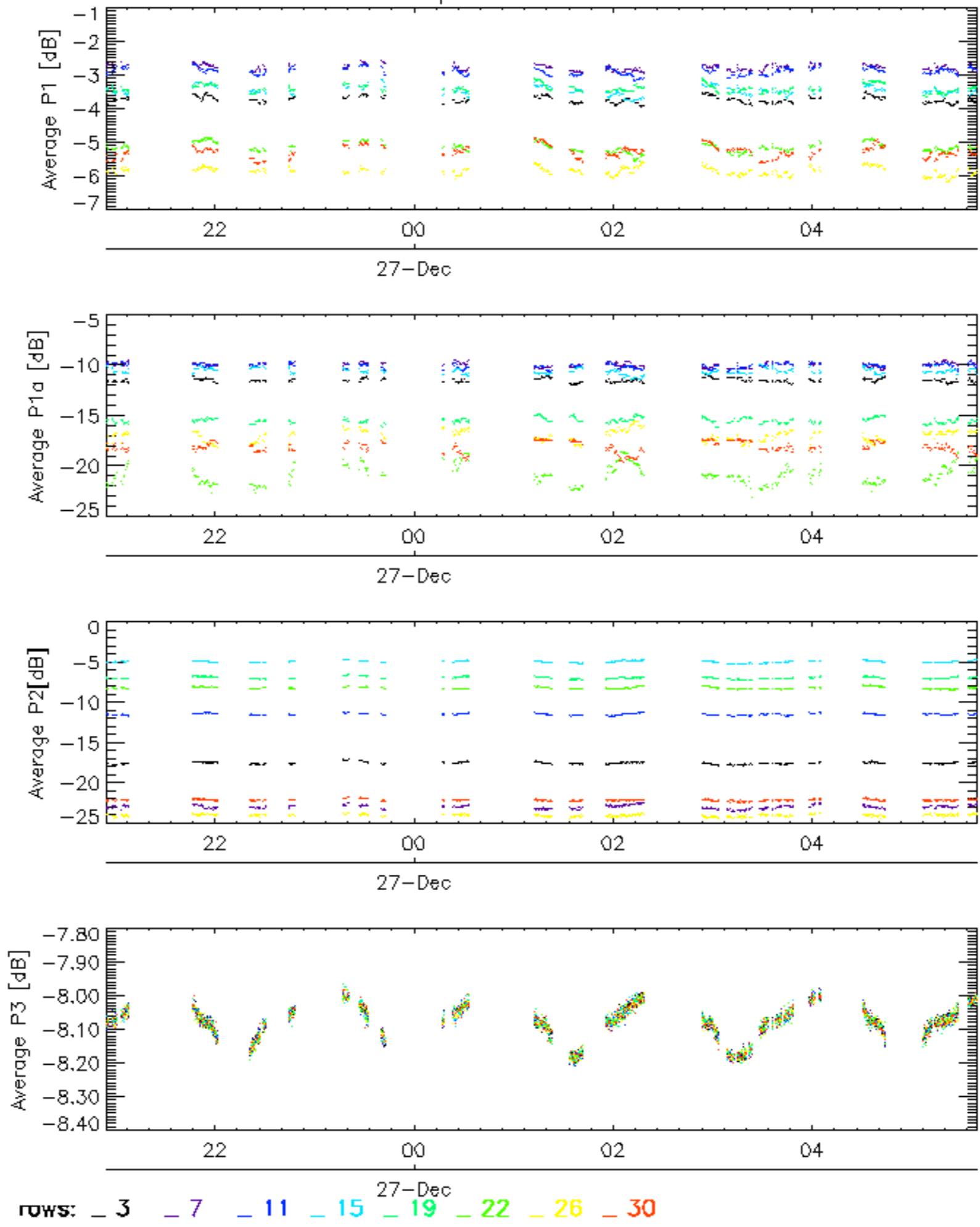
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

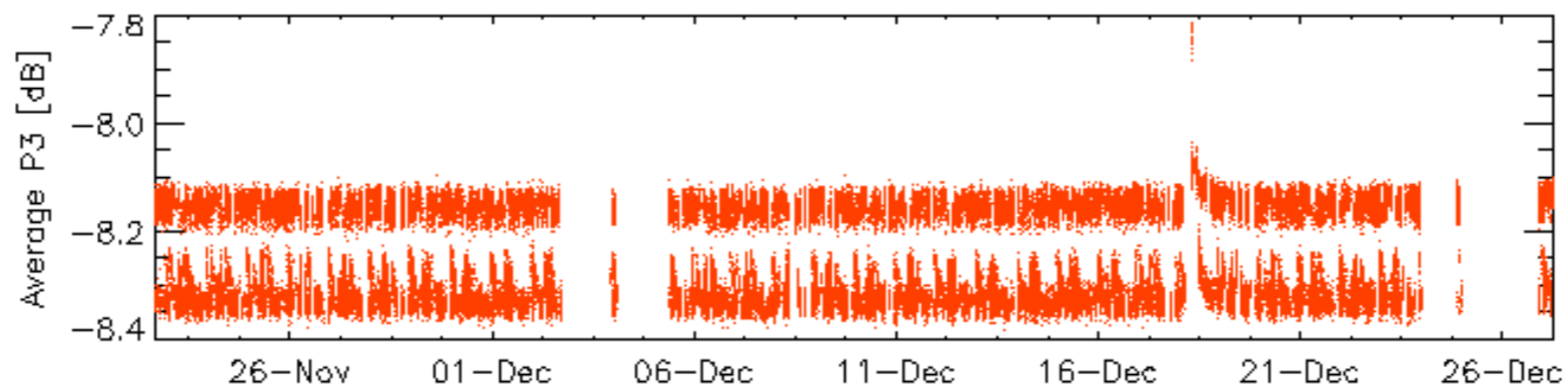
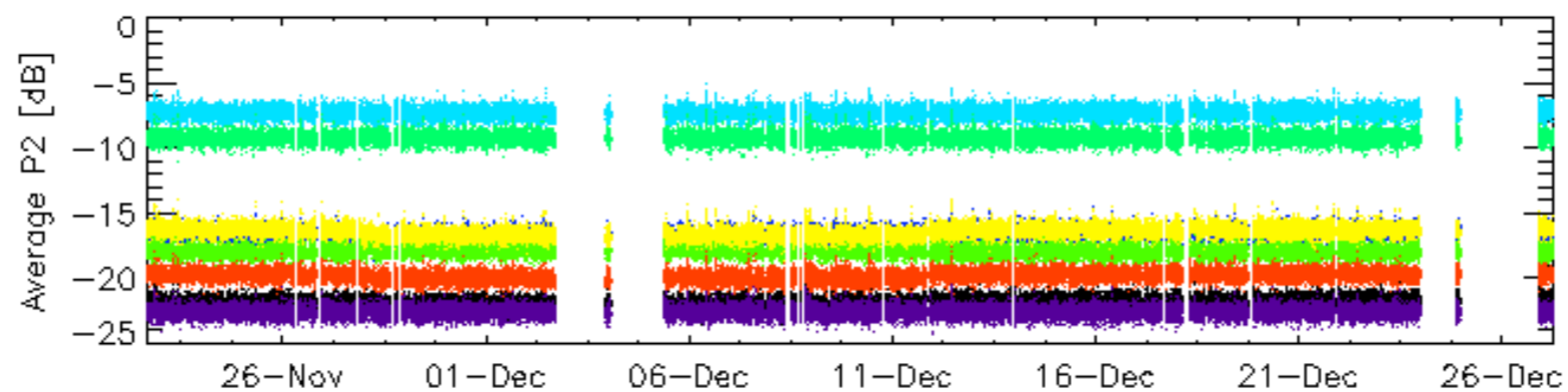
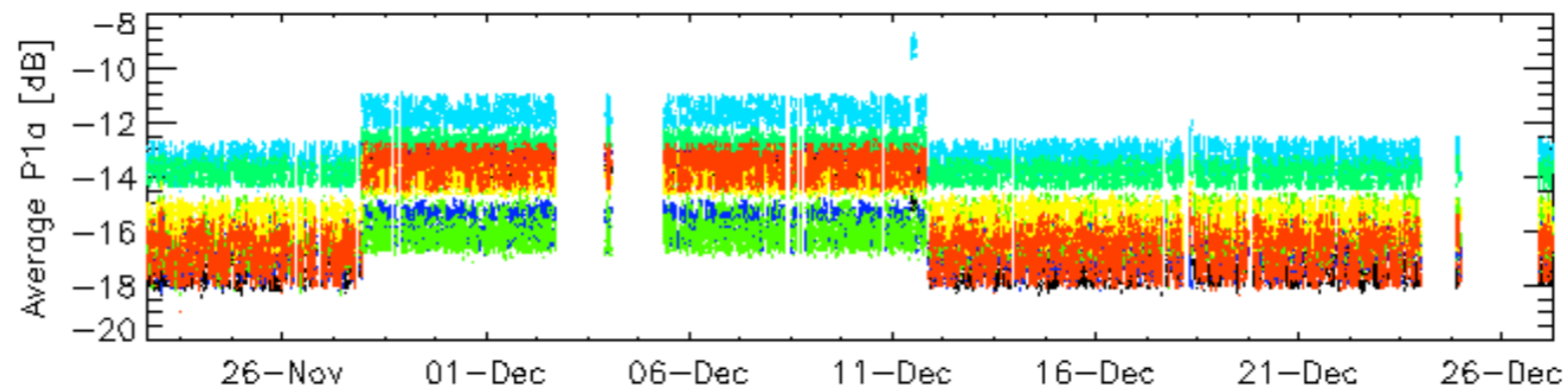
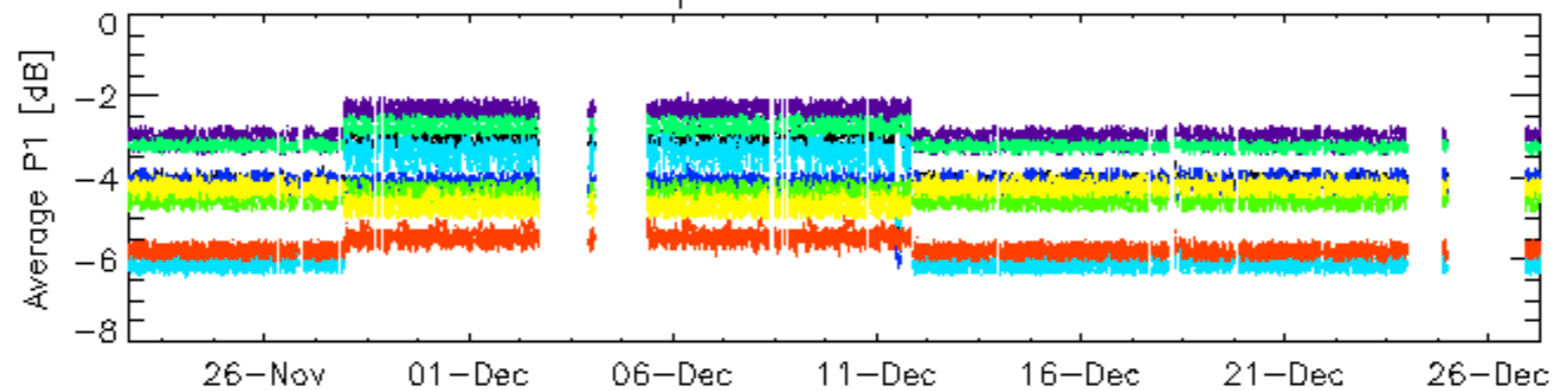


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

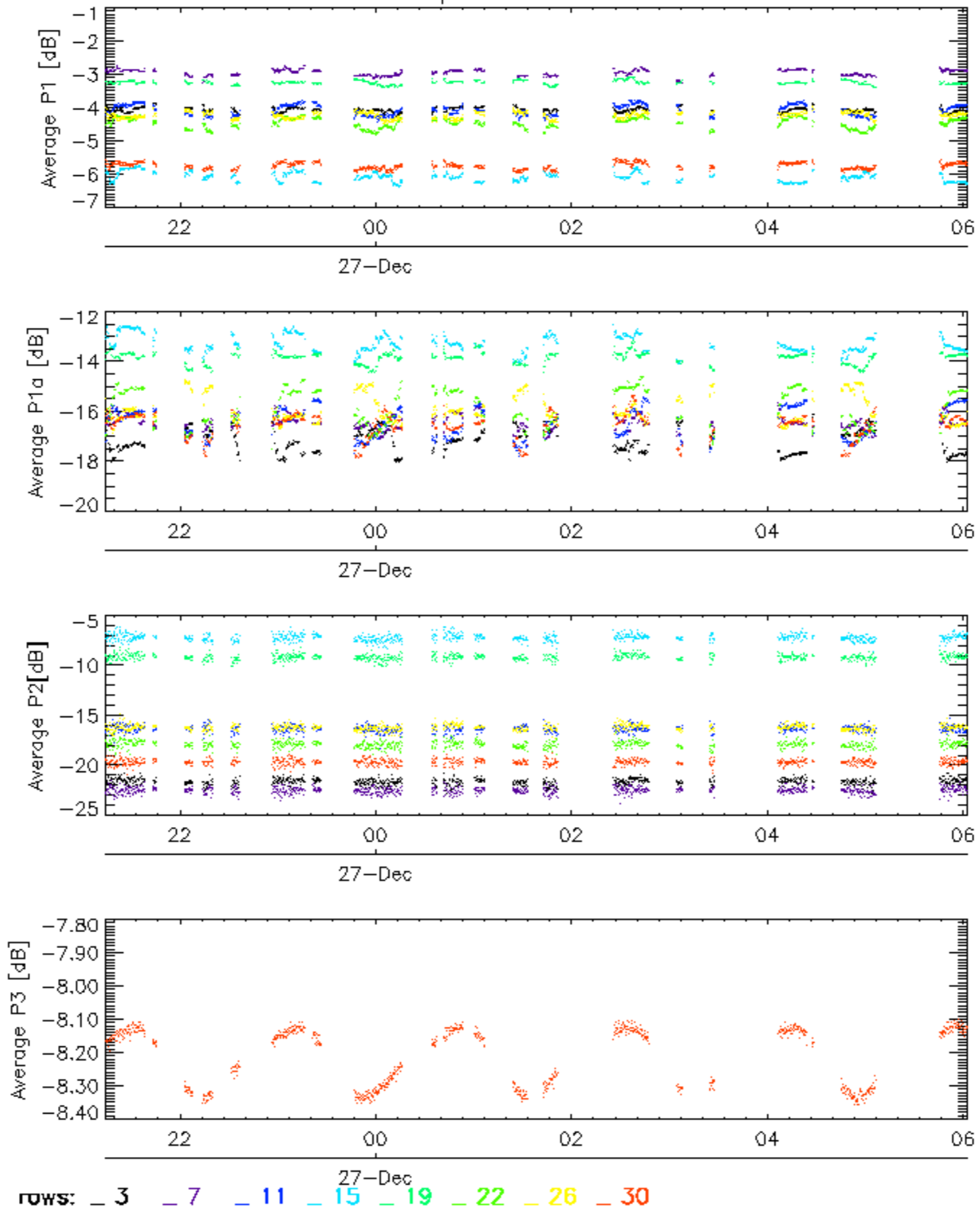


Cal pulses for WVS IS2

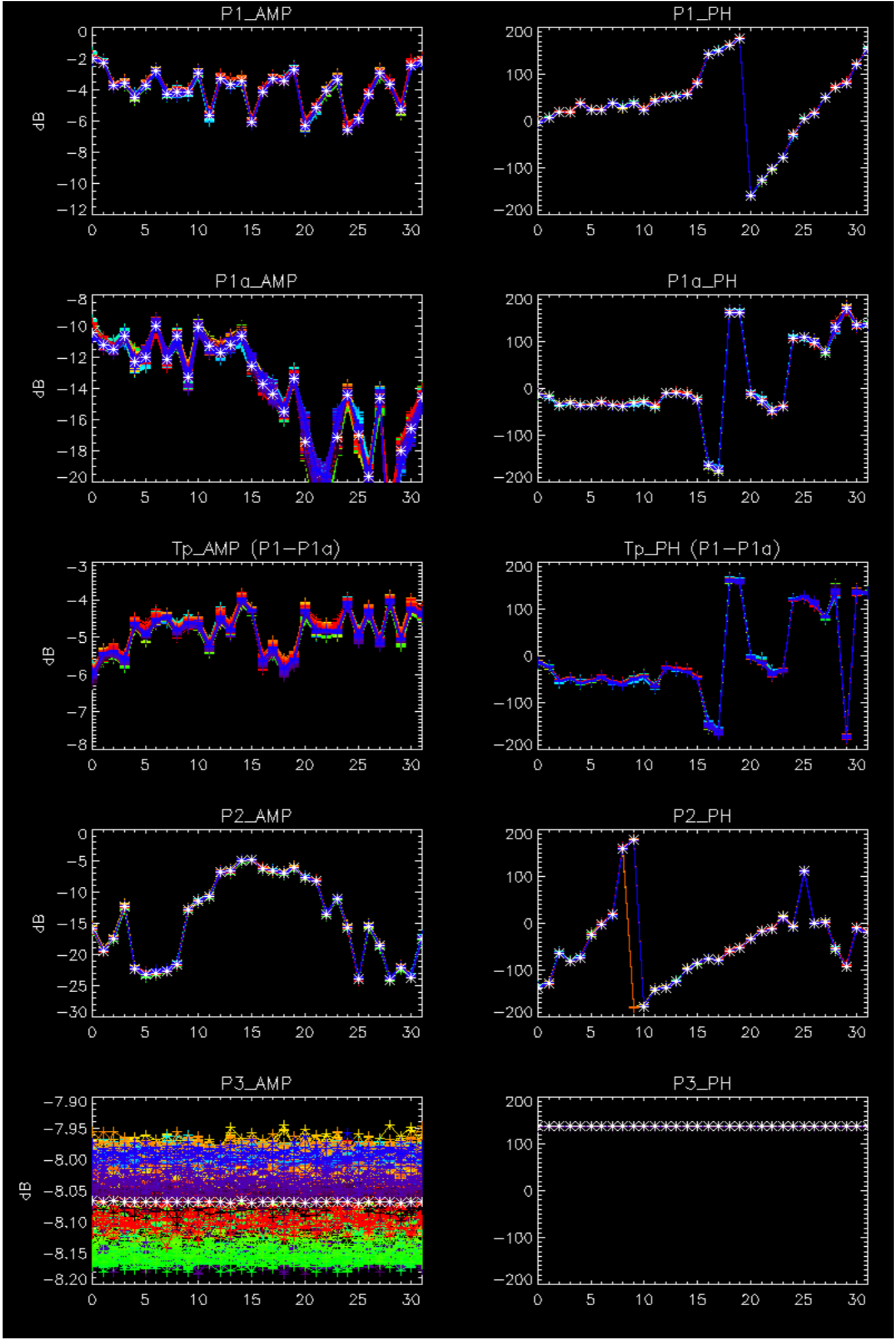


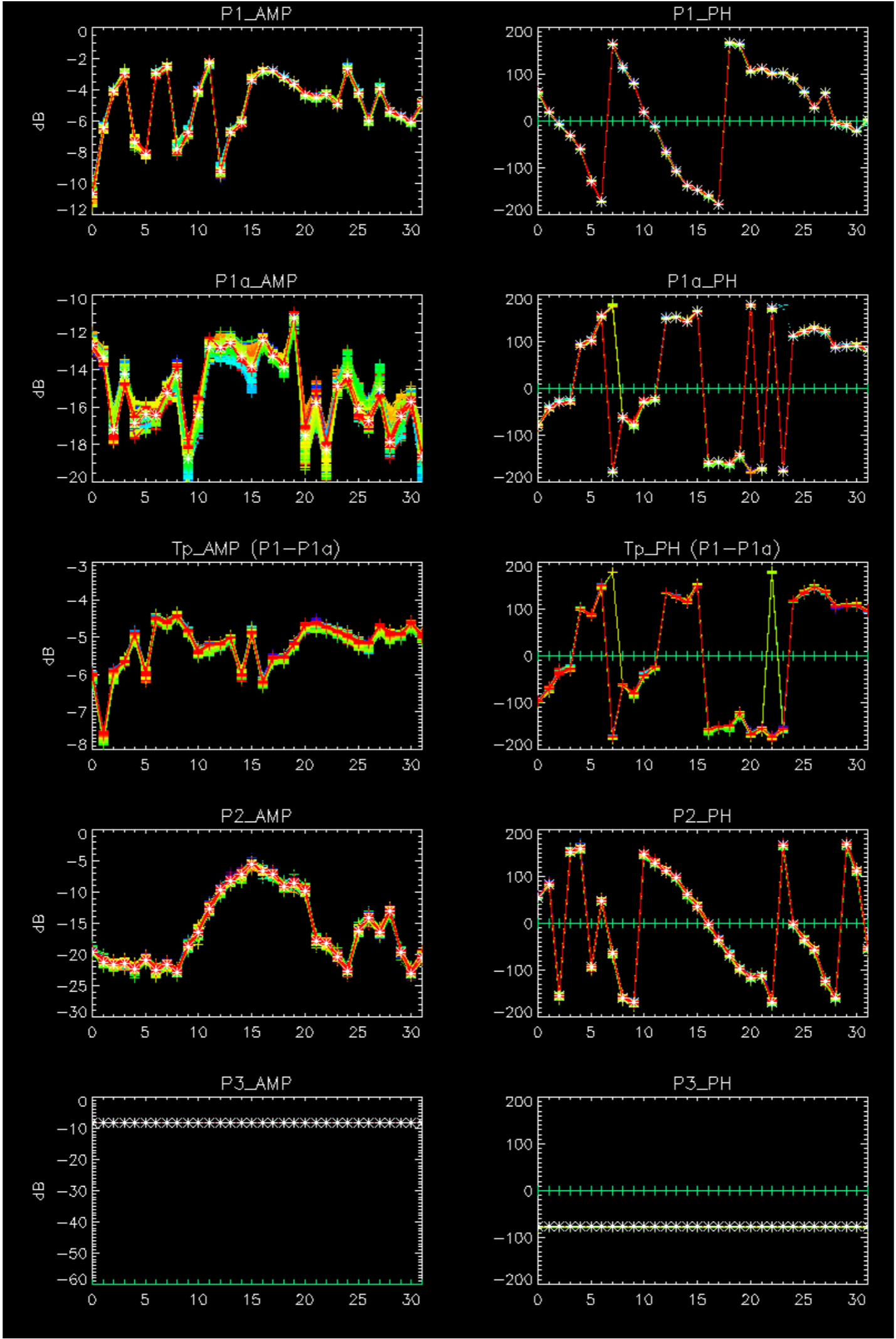
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



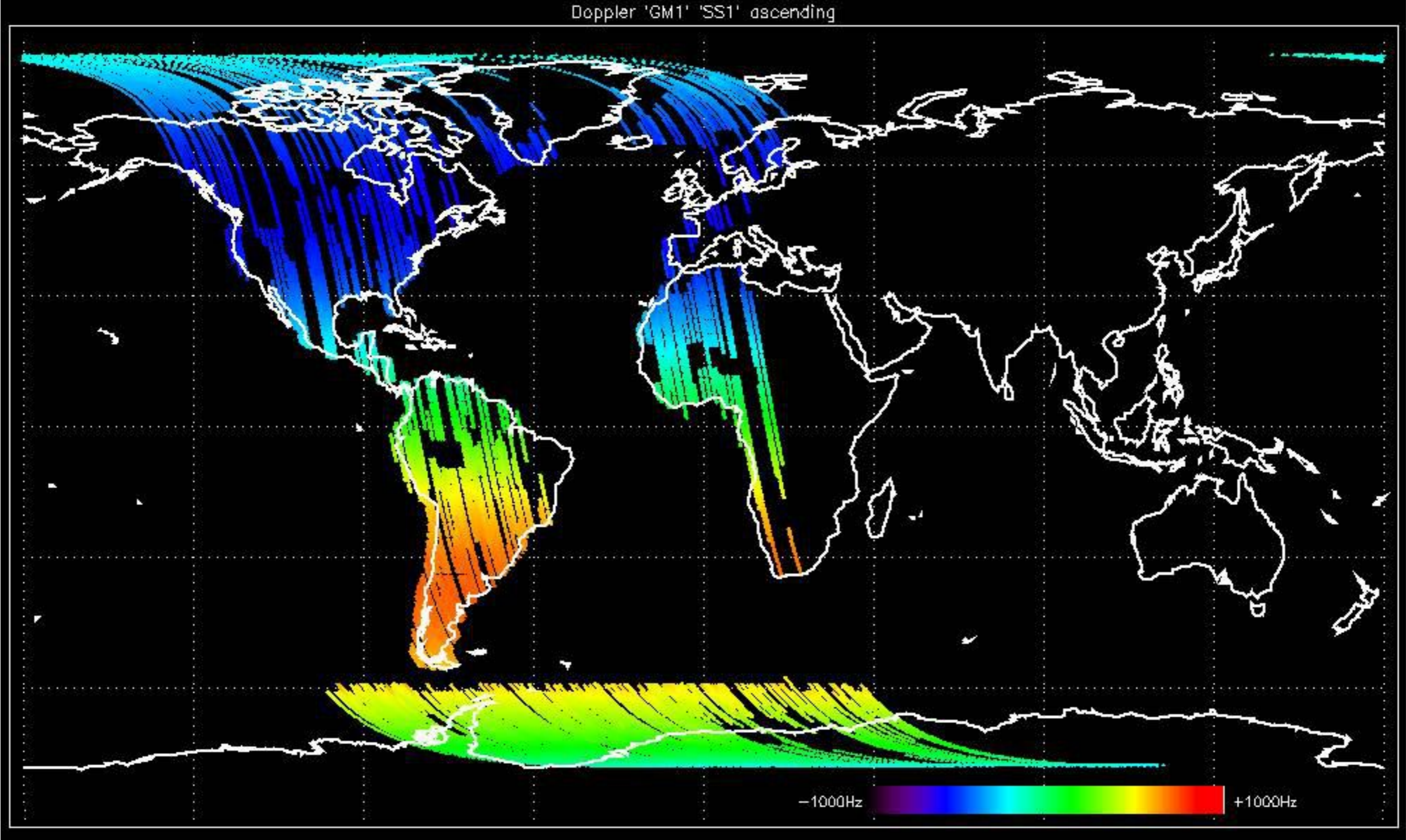
No anomalies observed.



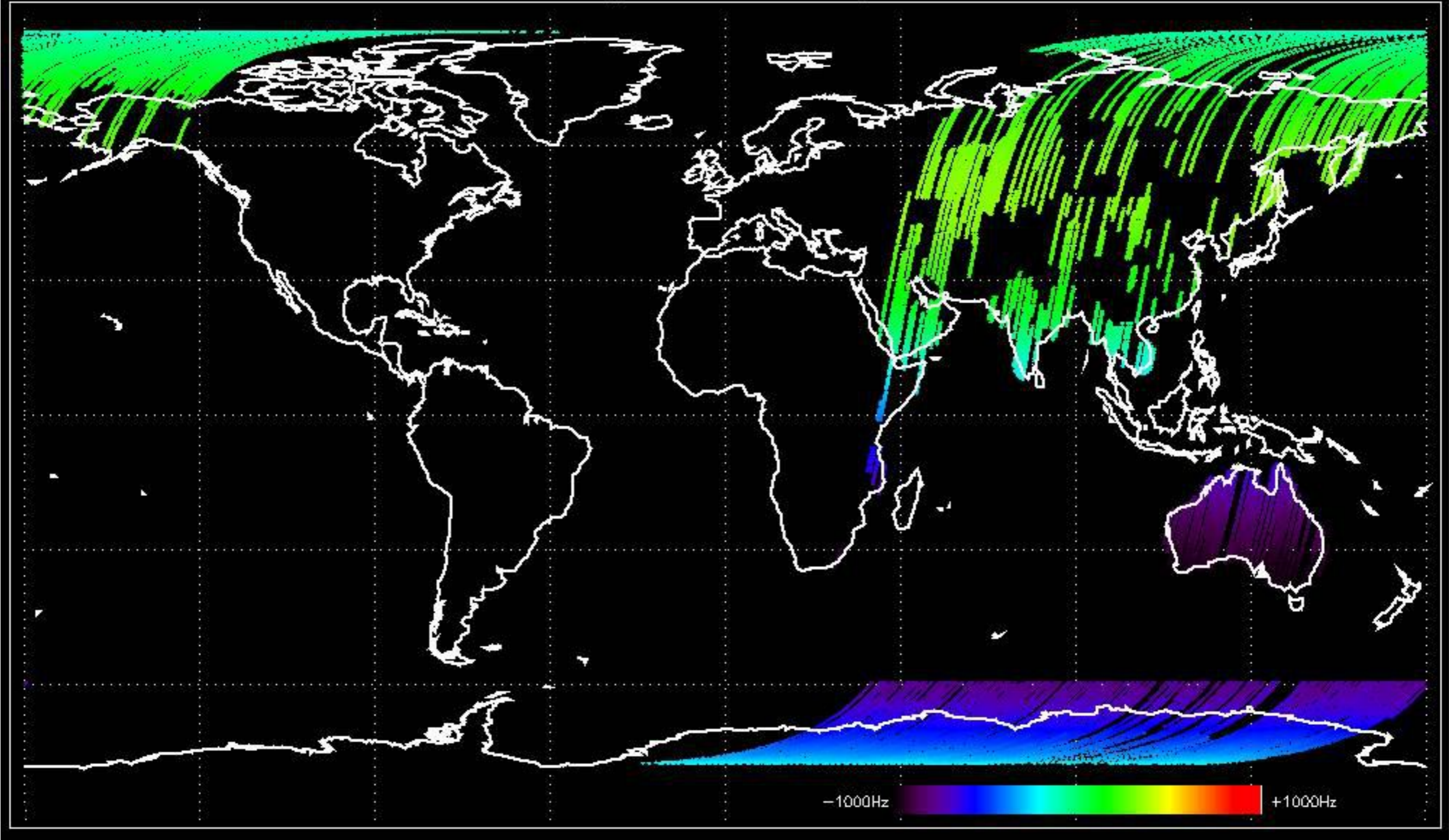


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

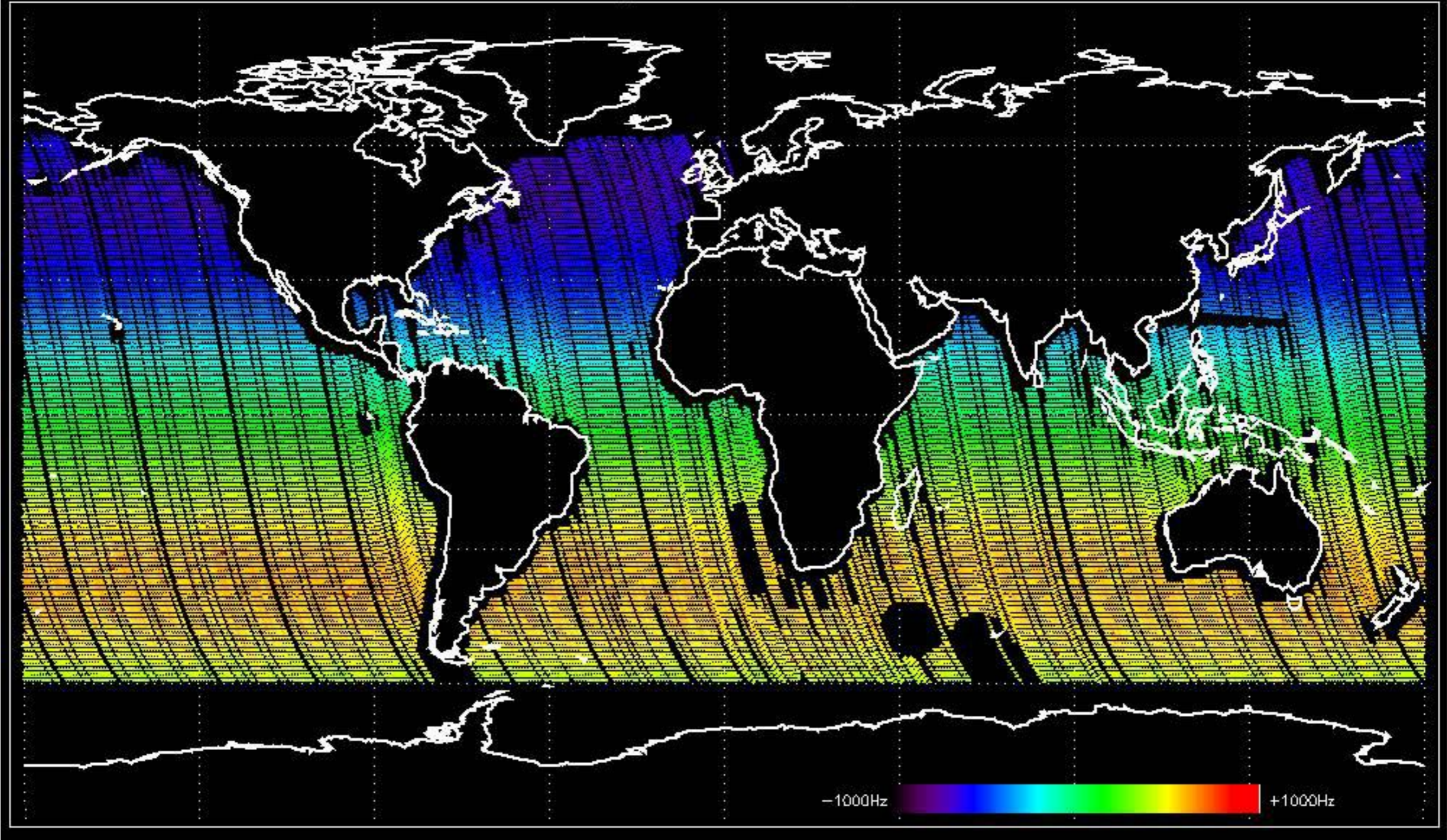
Doppler 'GM1' 'SS1' ascending



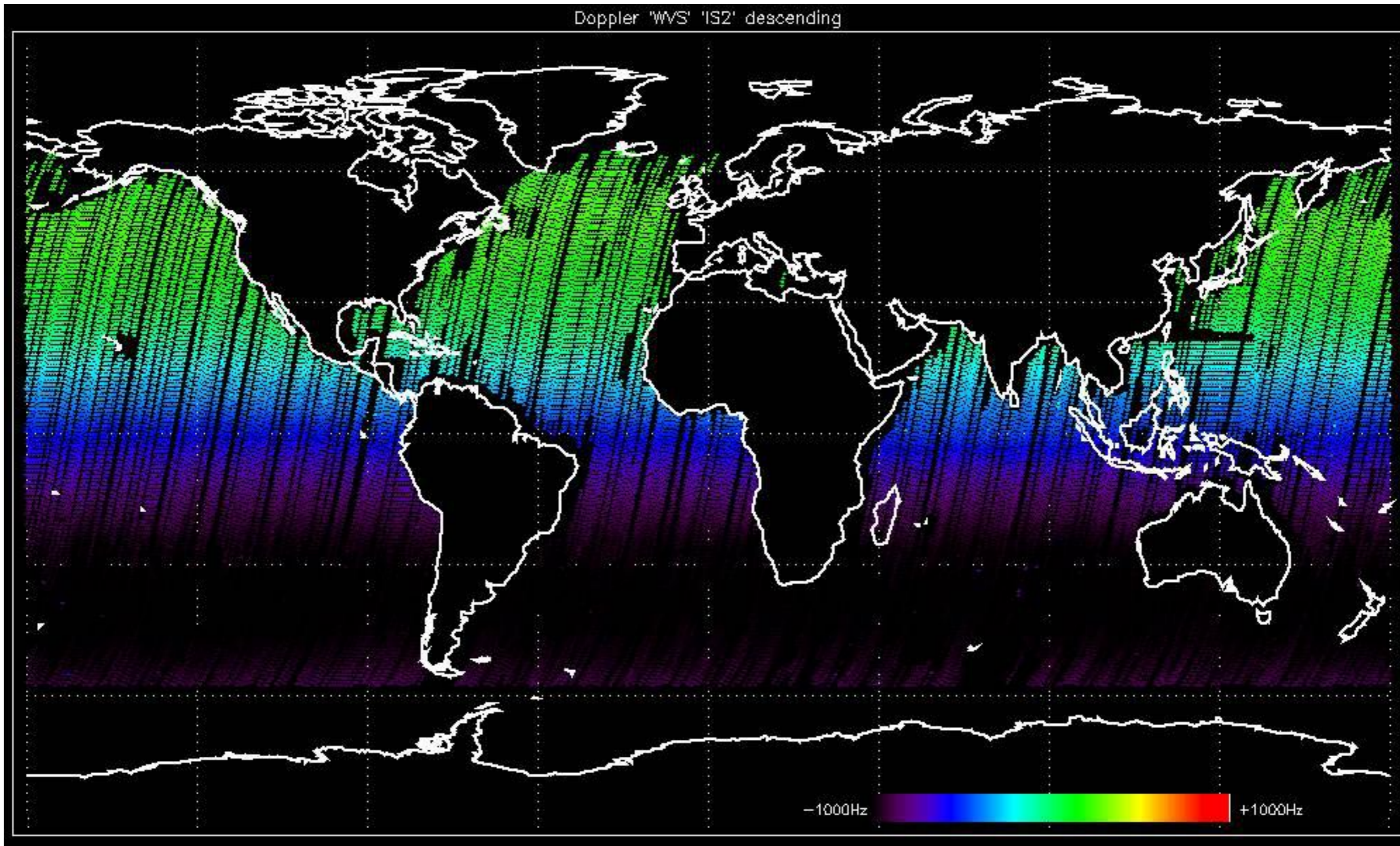
Doppler 'GM1' 'SS1' descending

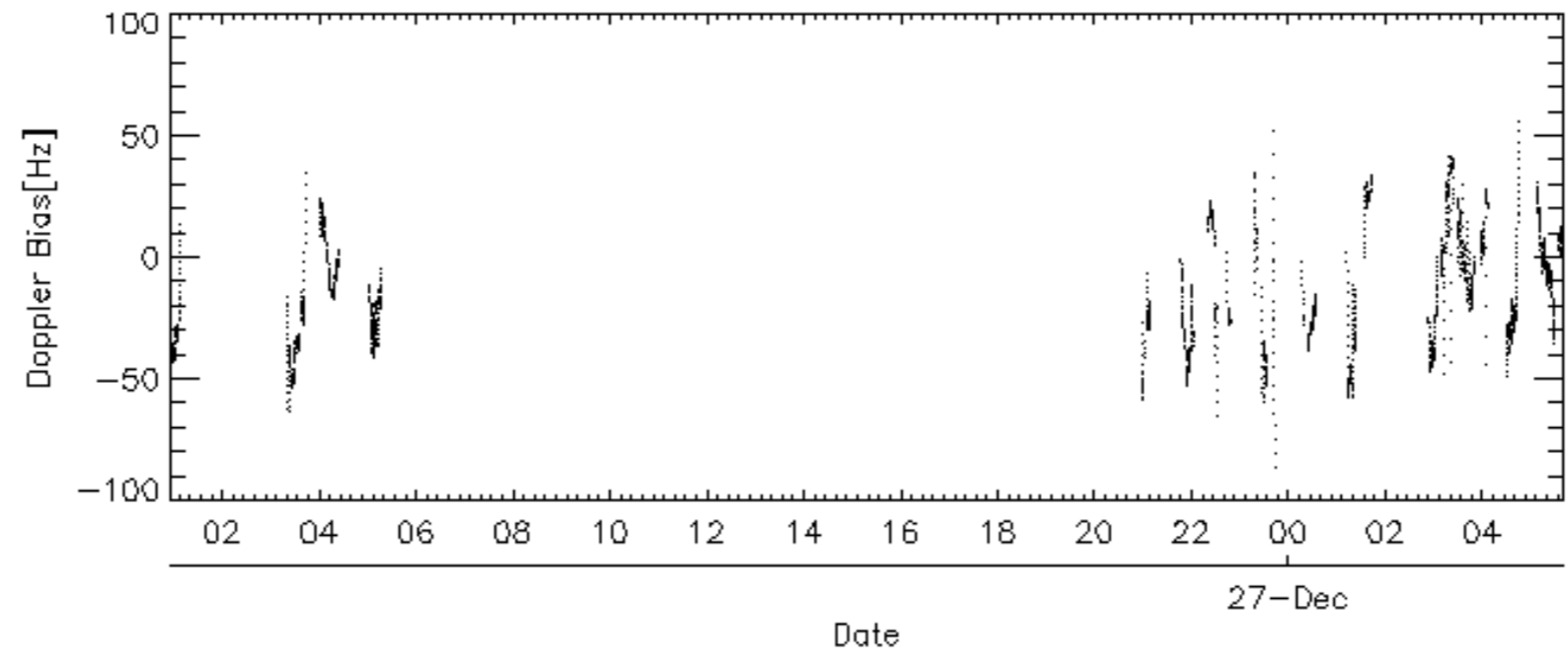
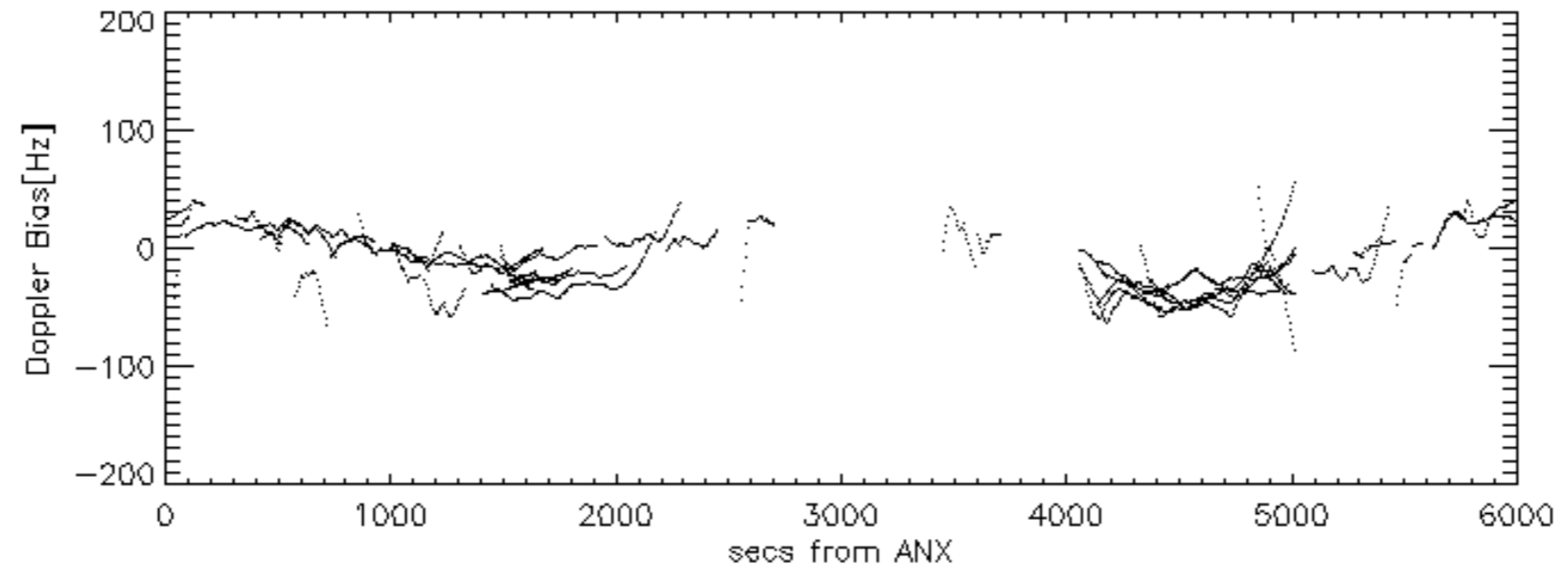
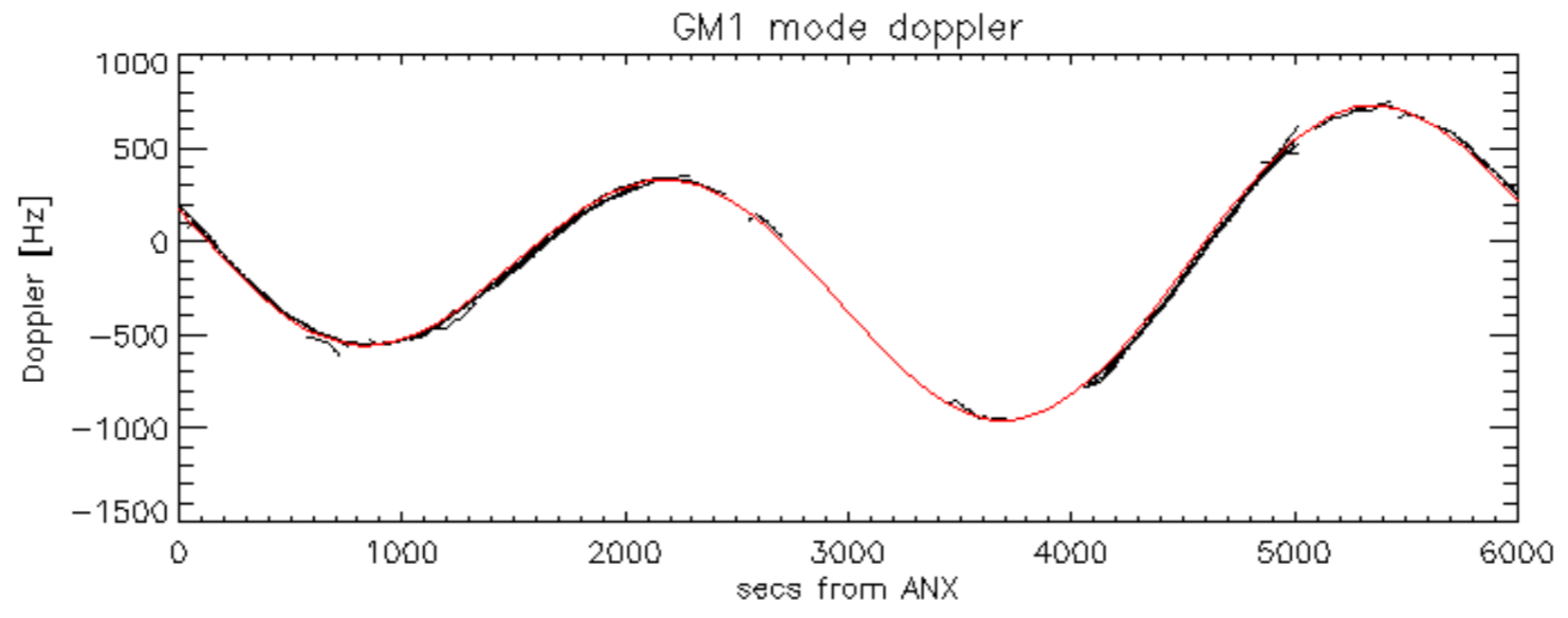


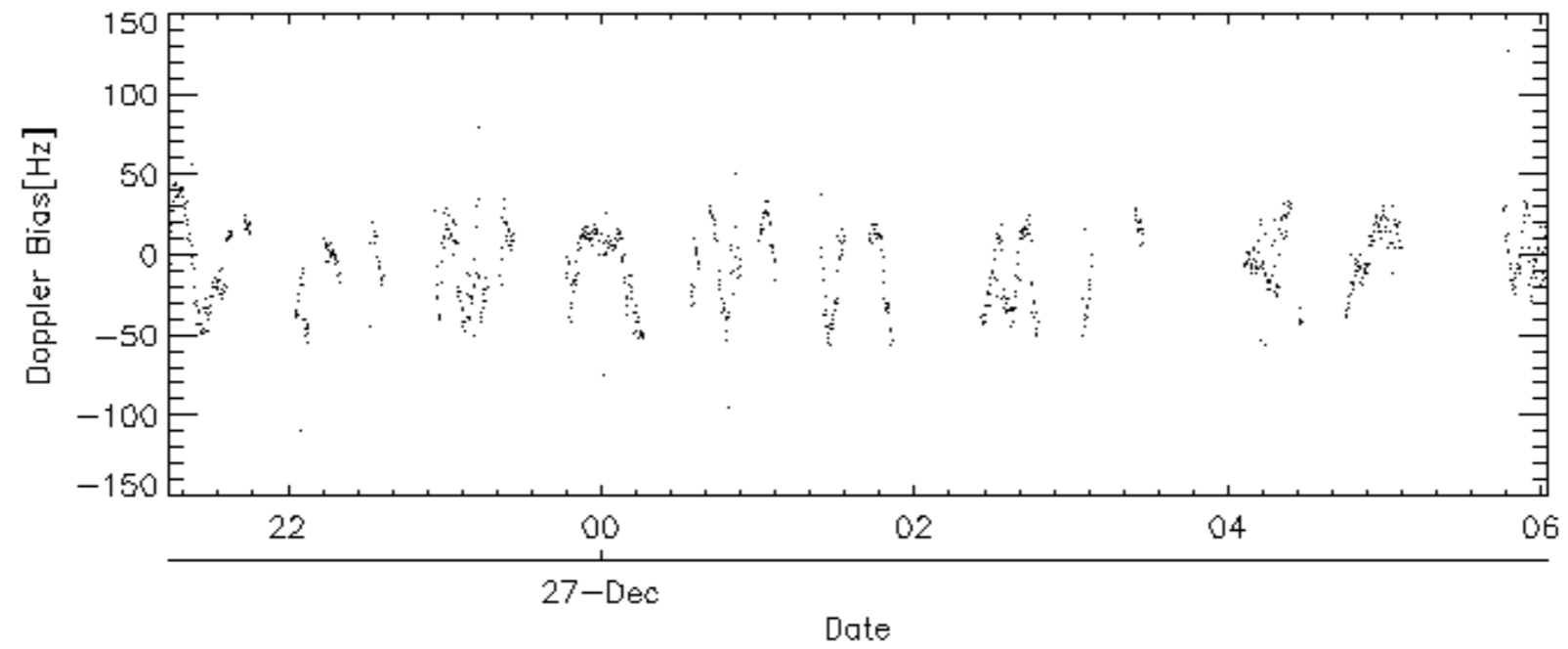
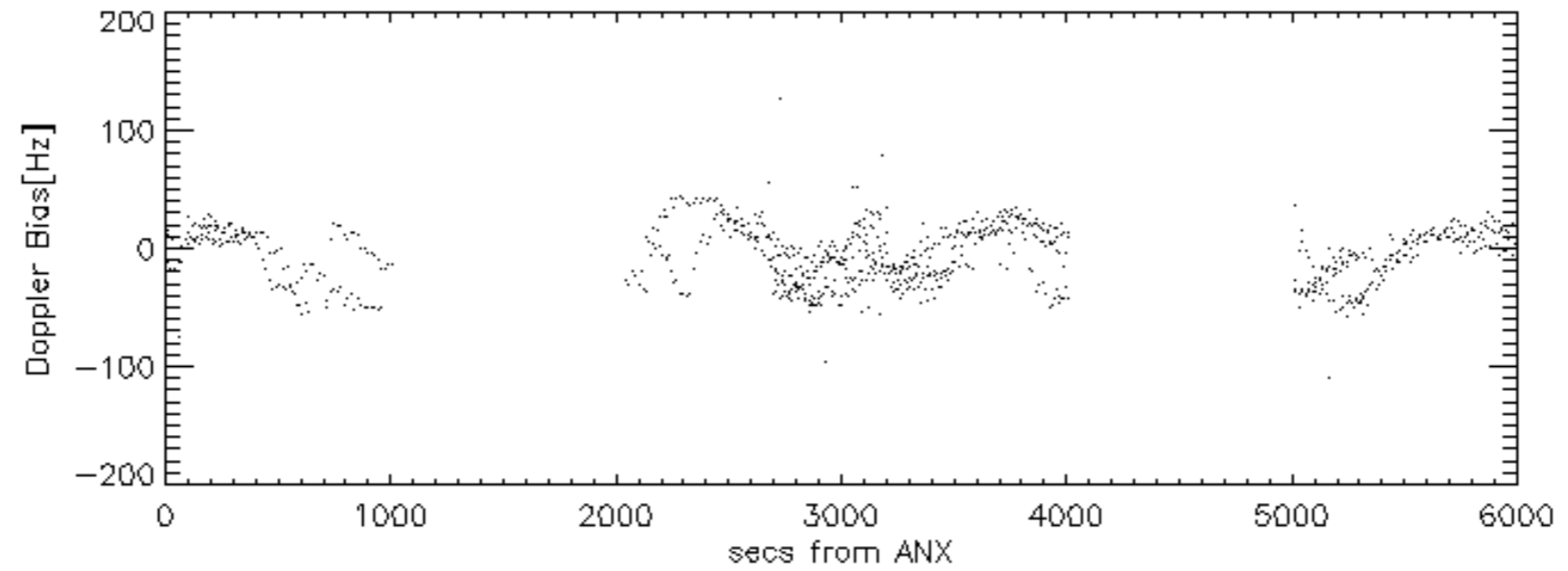
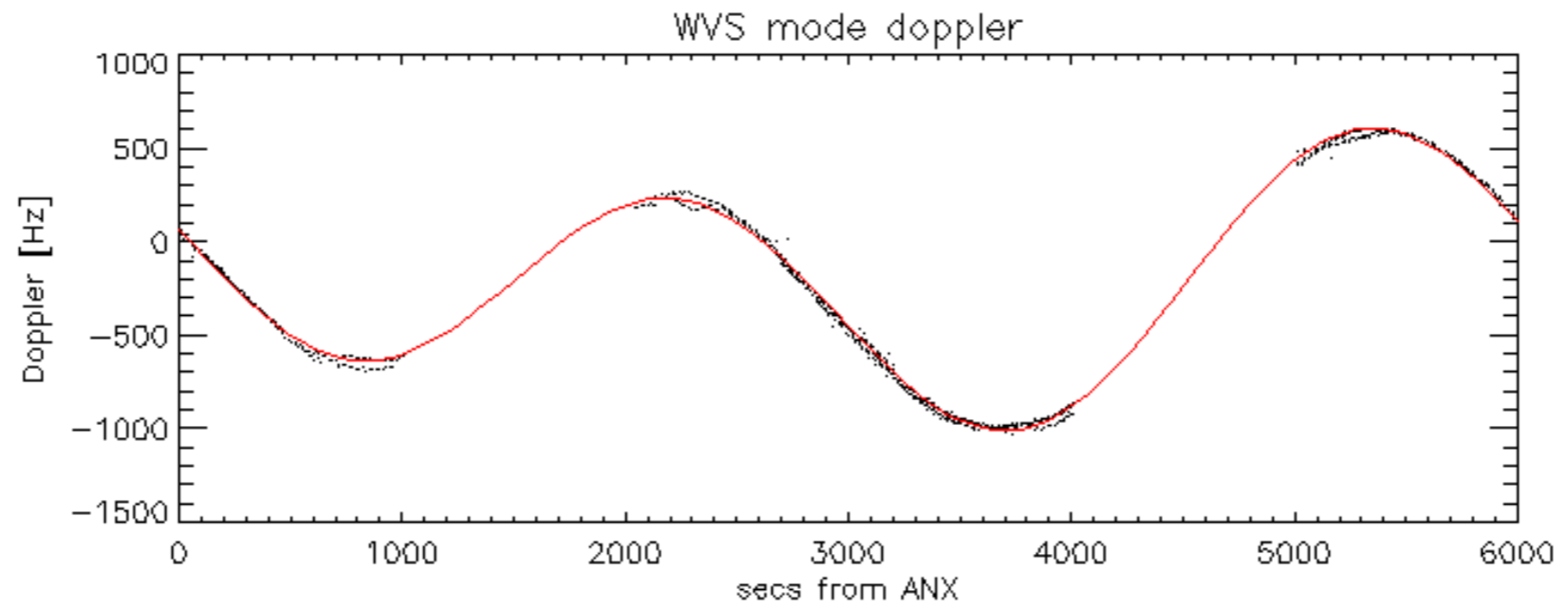
Doppler 'WVS' 'IS2' ascending



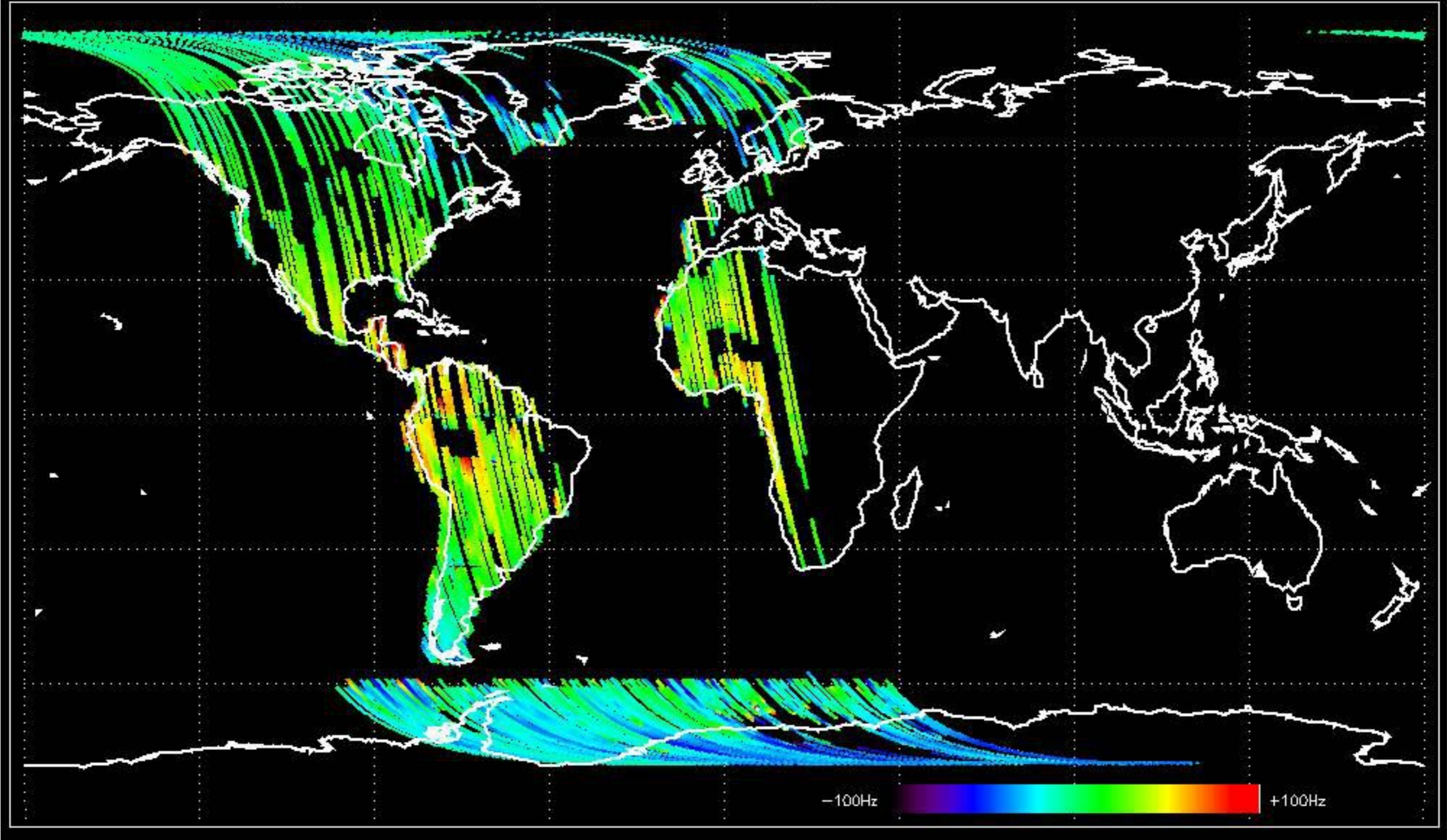
Doppler 'WVS' 'IS2' descending



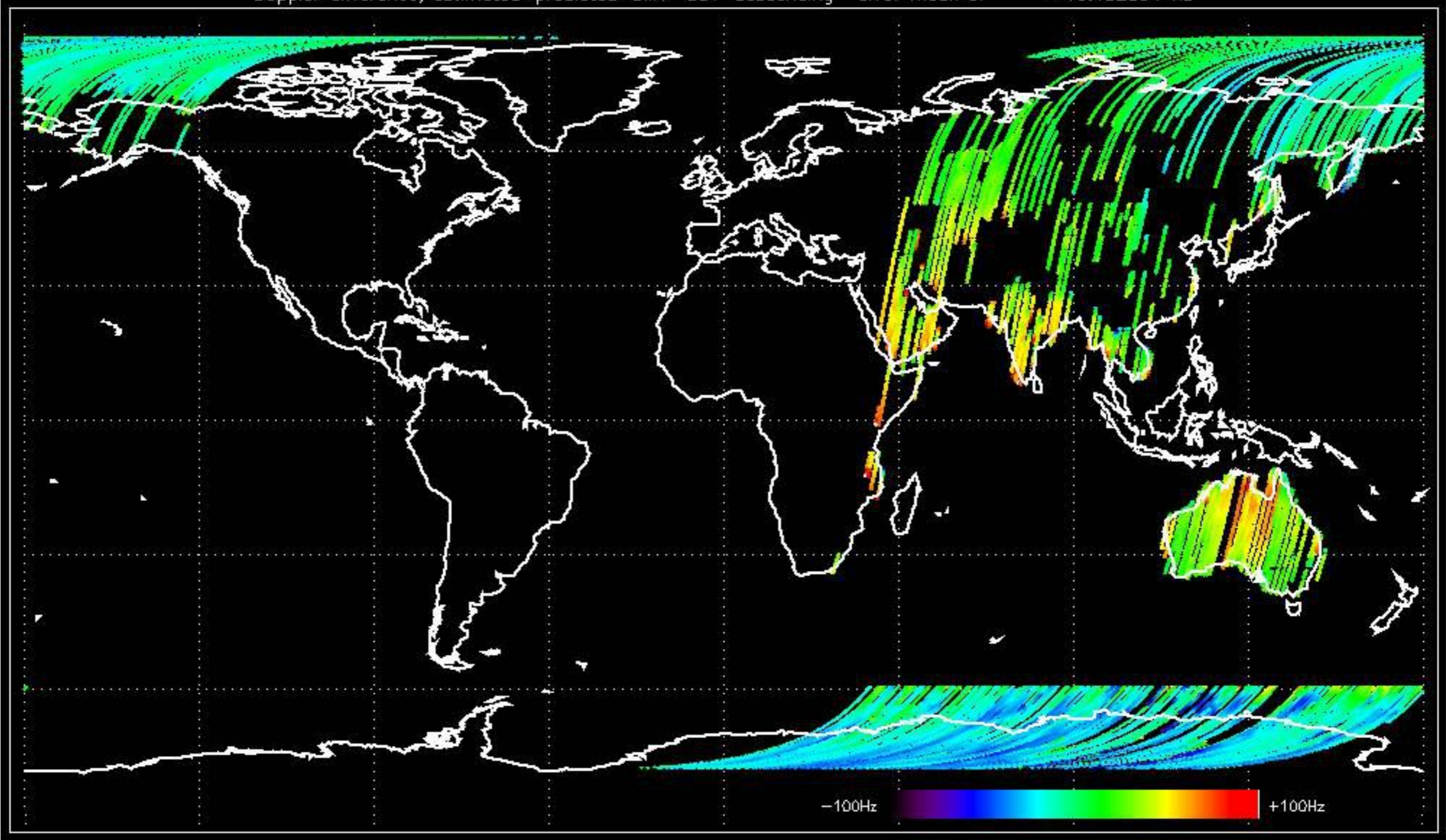




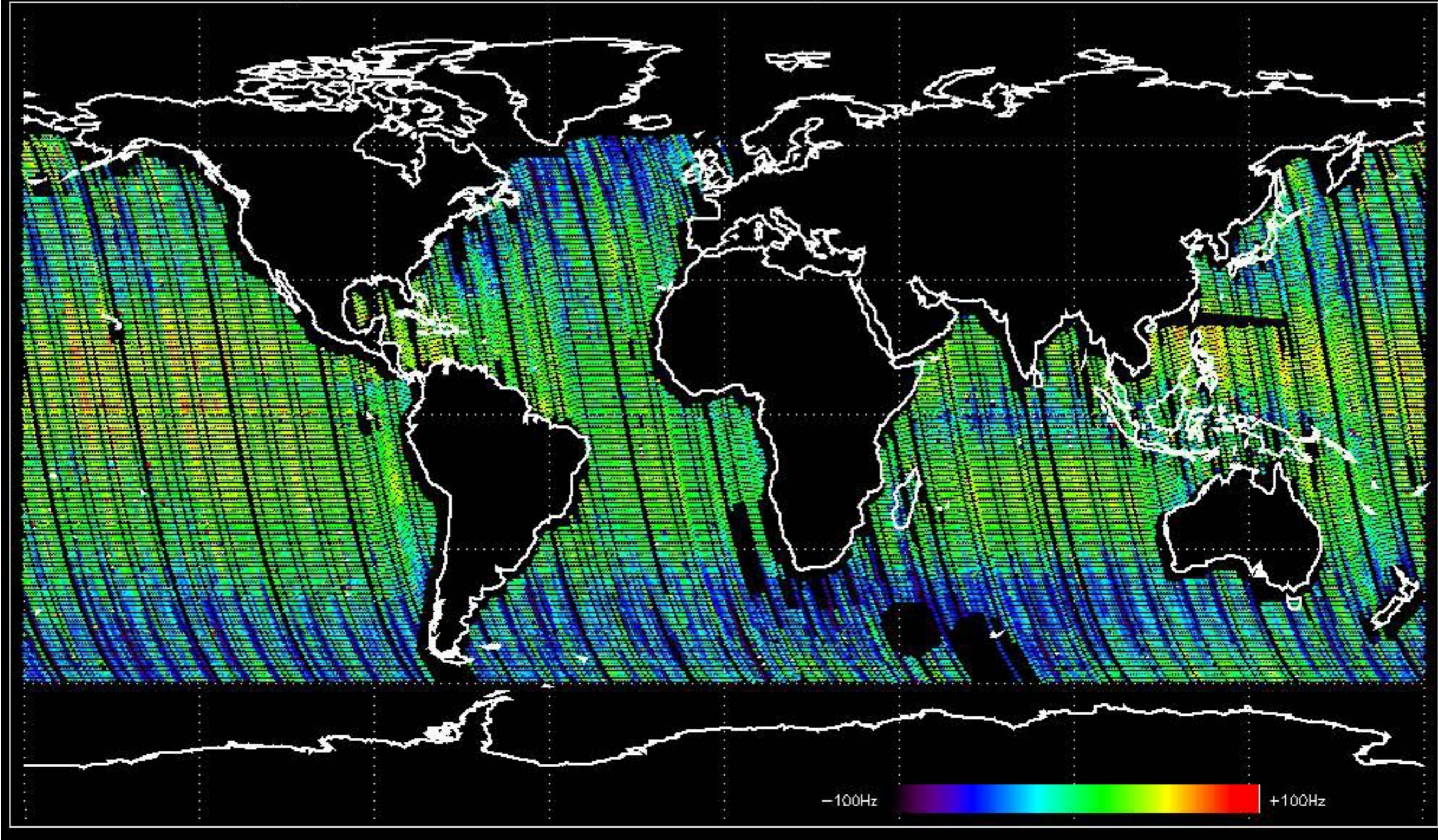
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.324715 Hz



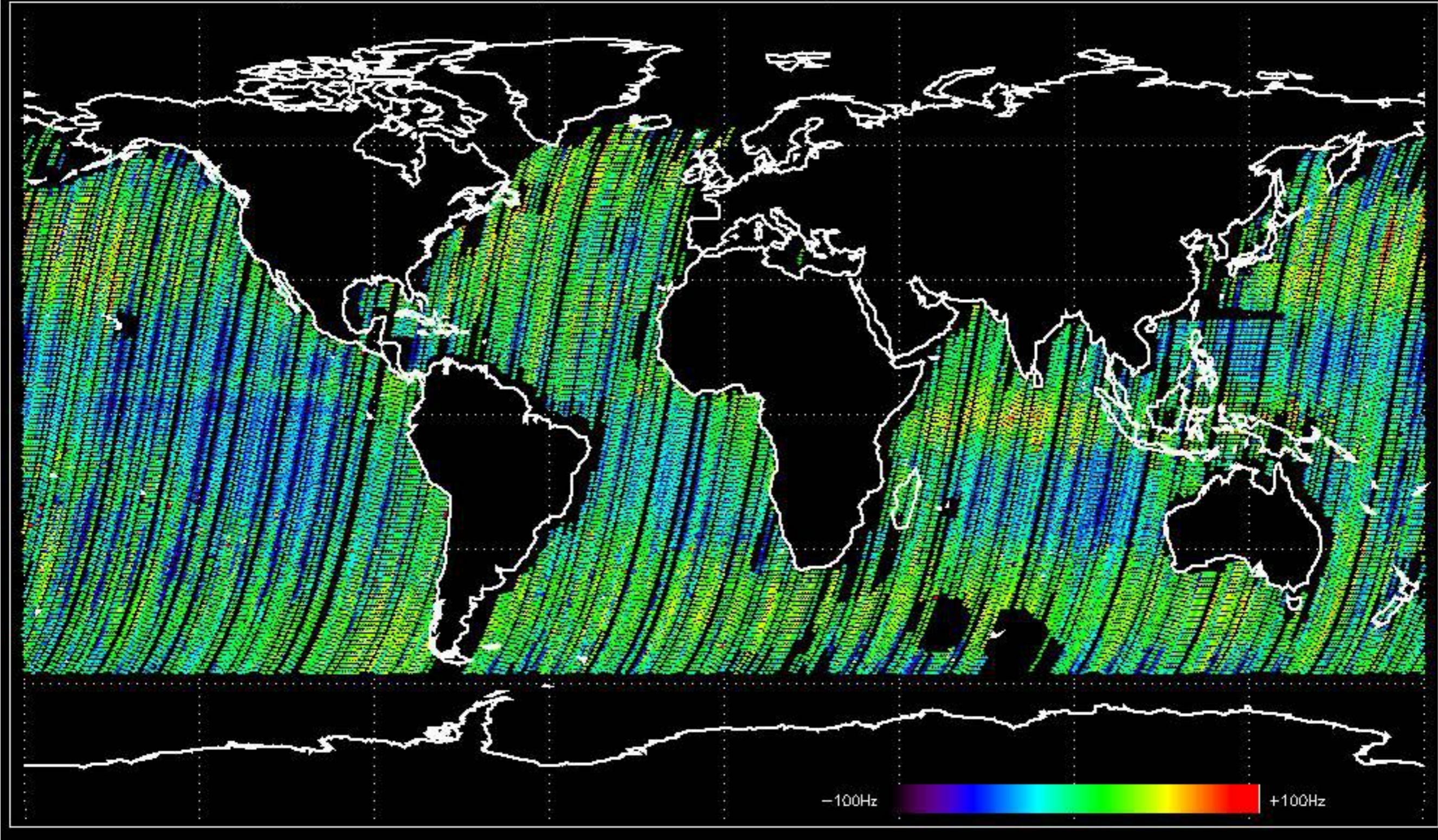
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.132894 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.896499 Hz

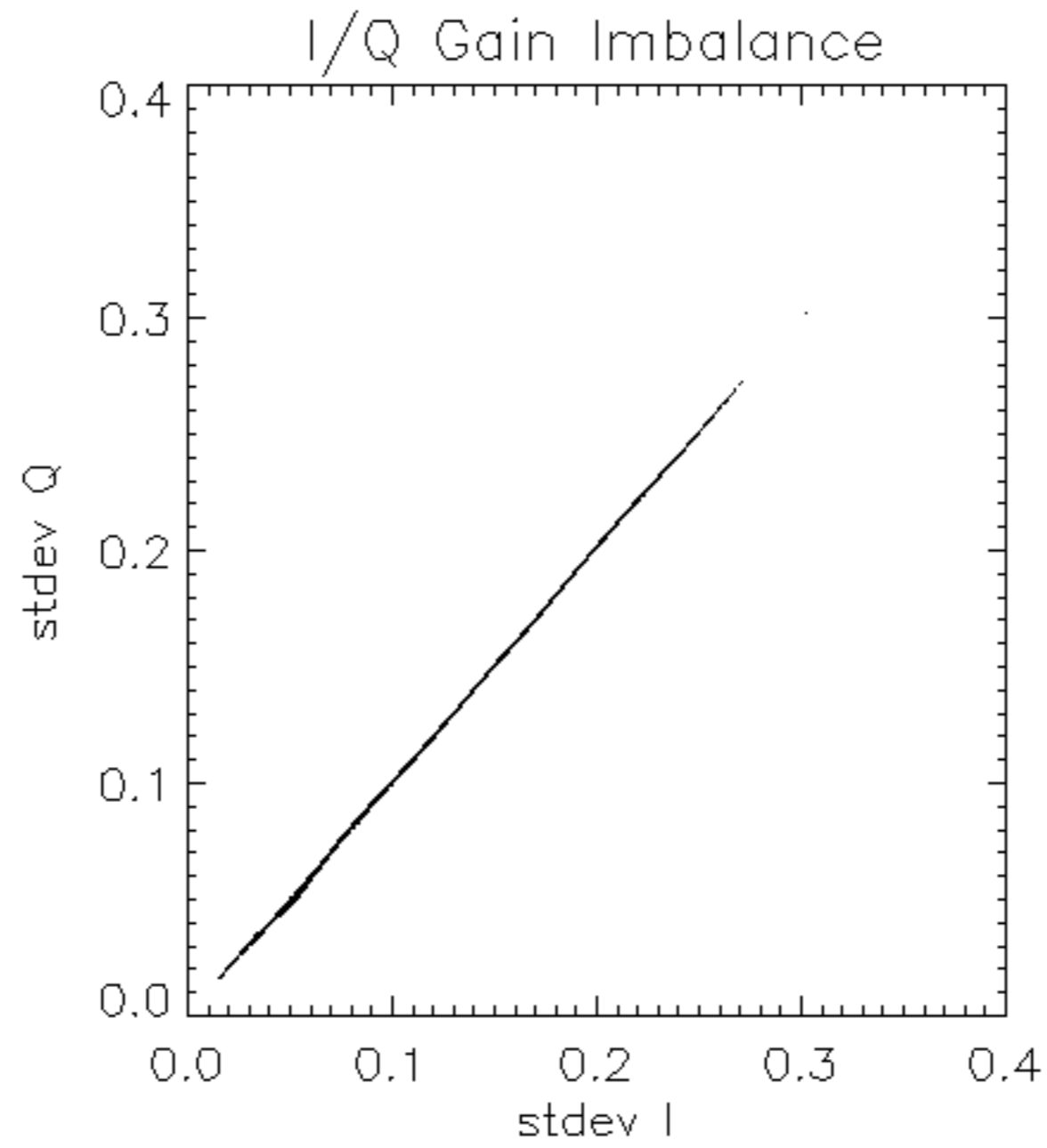


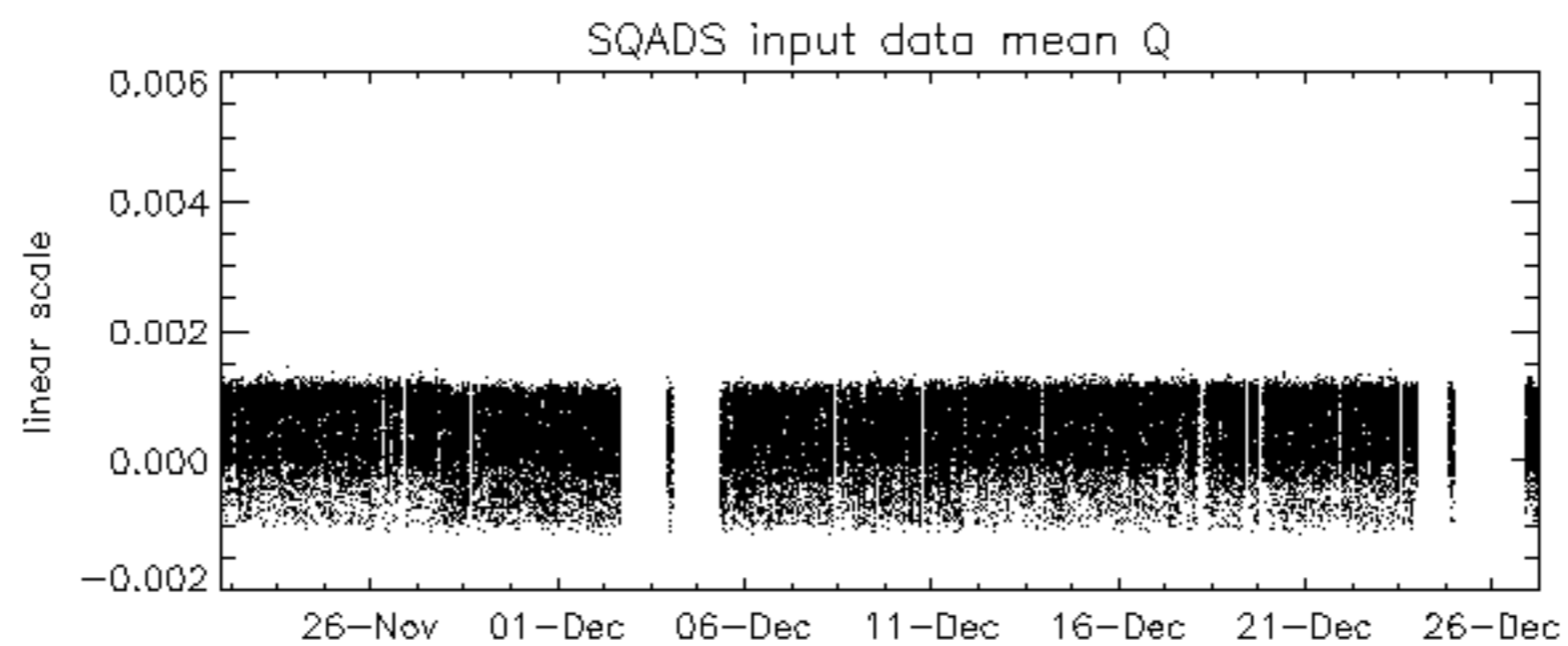
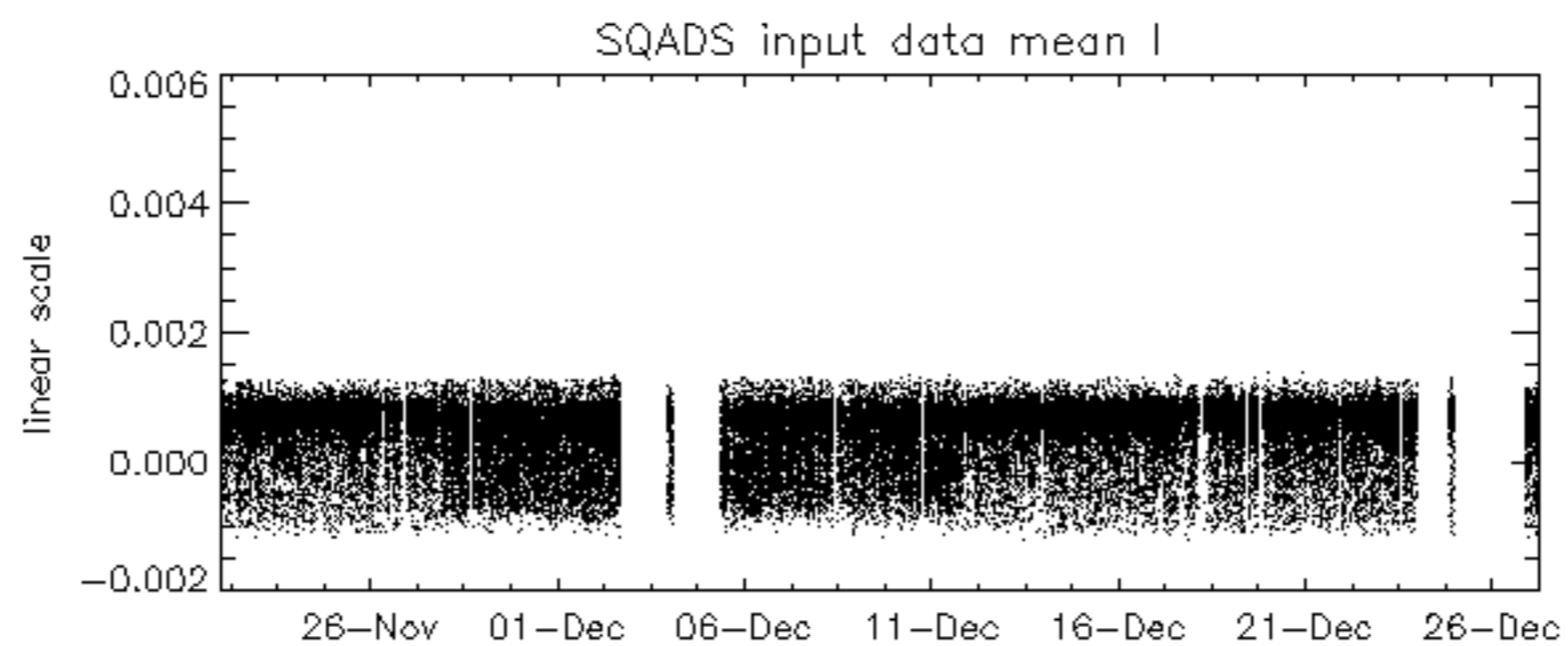
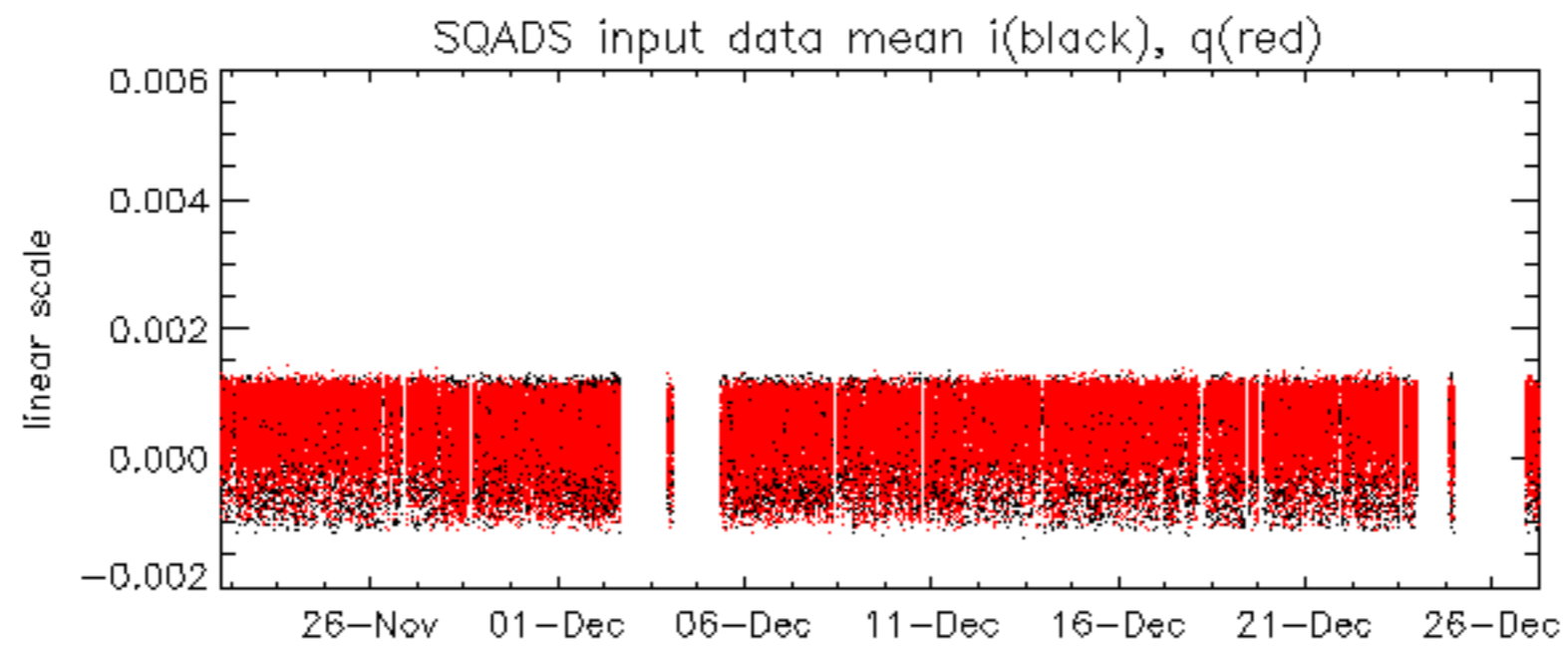
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.667078 Hz

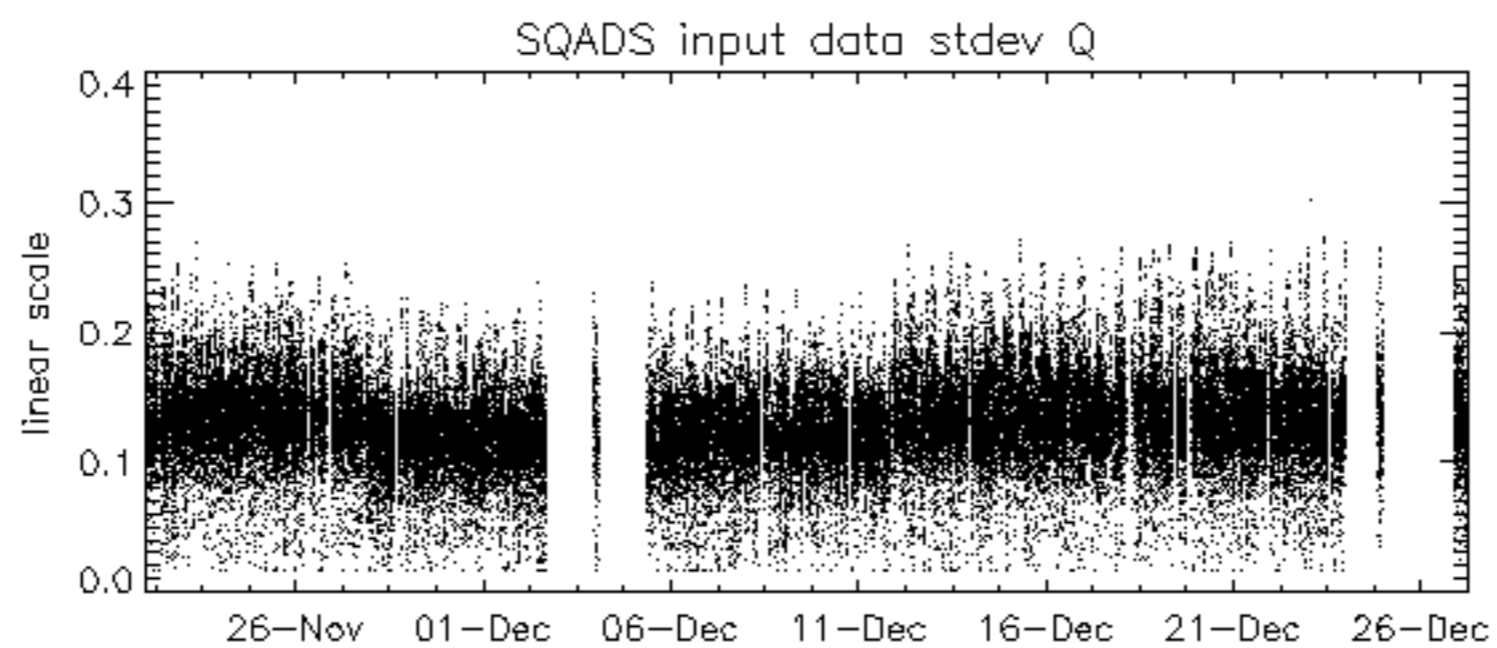
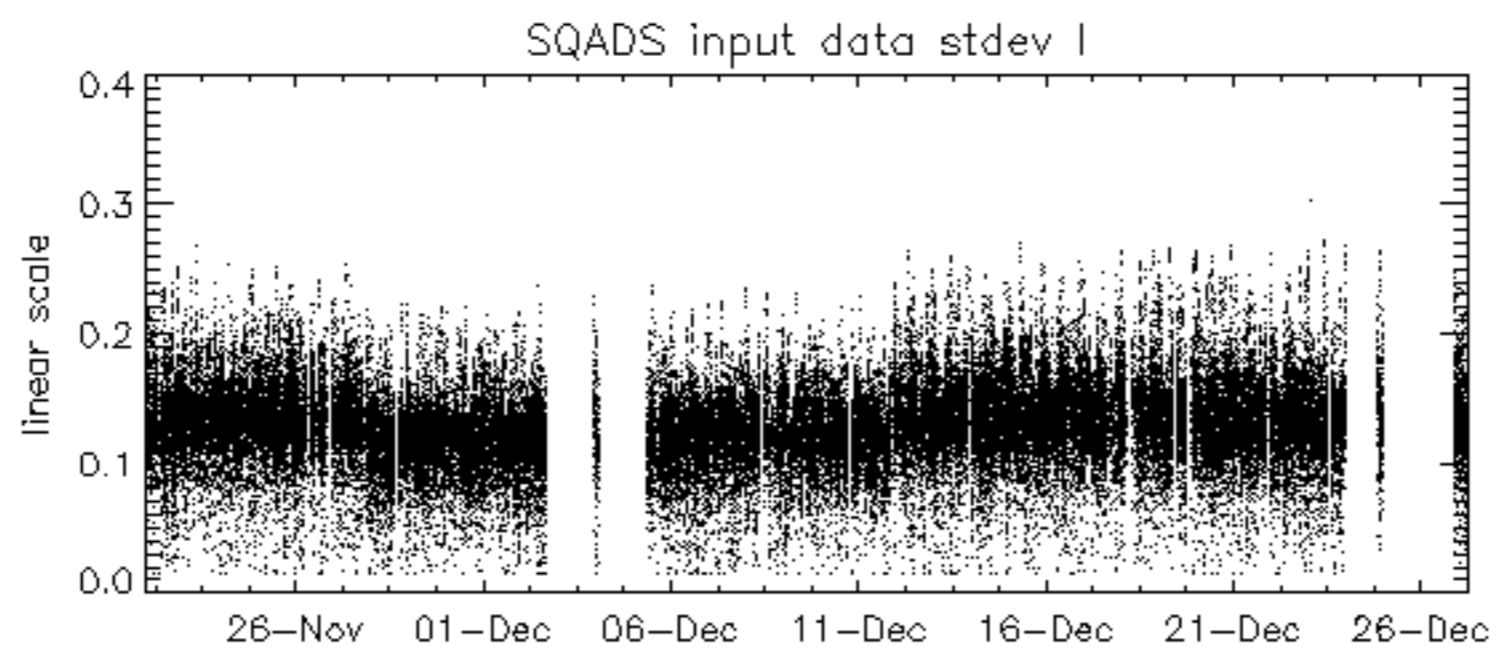
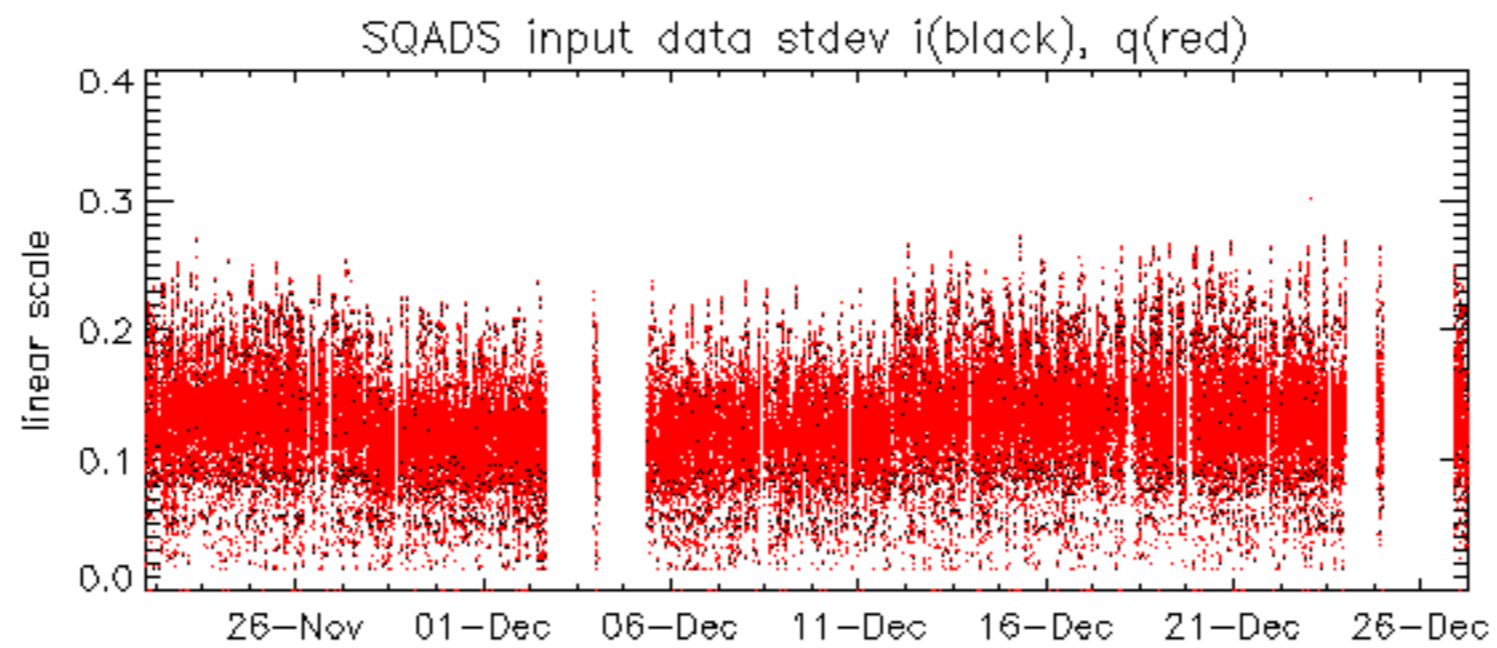


No anomalies observed on available MS products:

No anomalies observed.



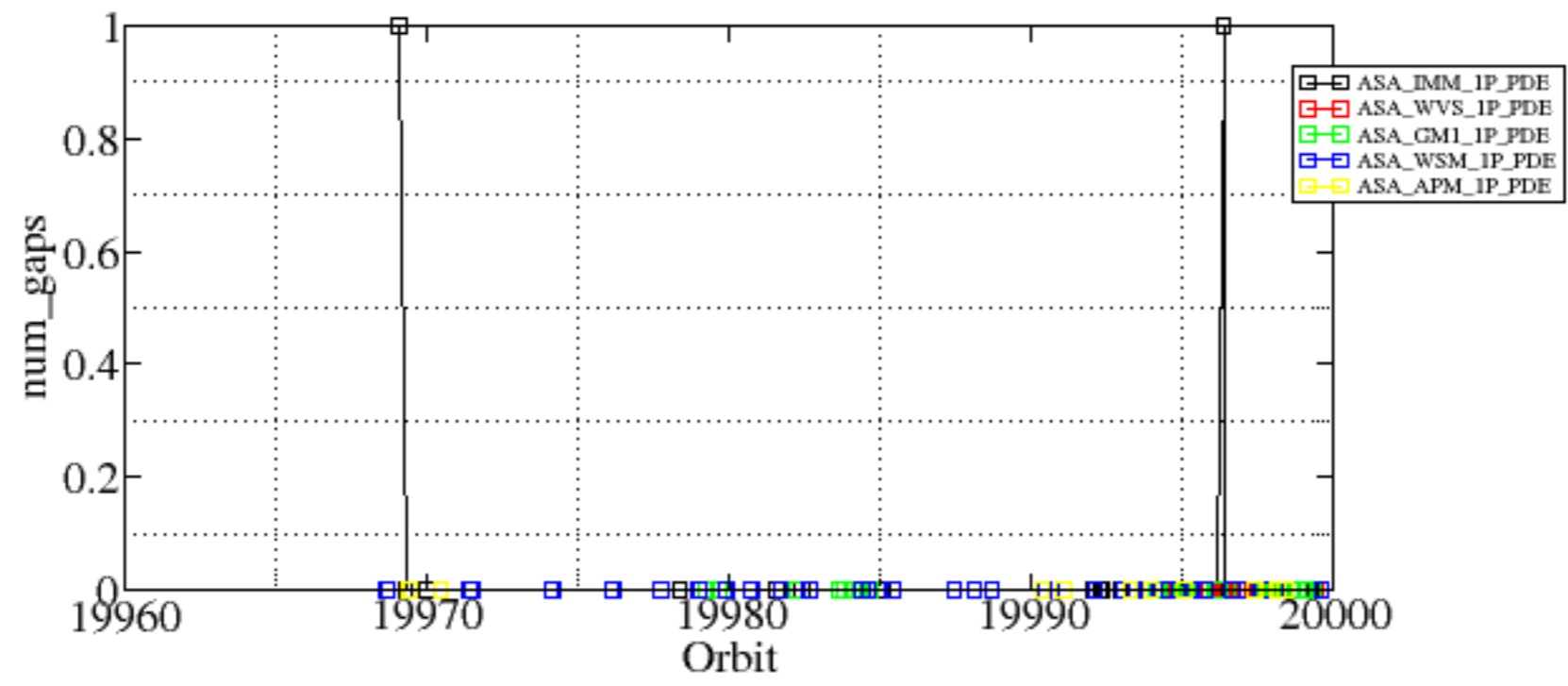


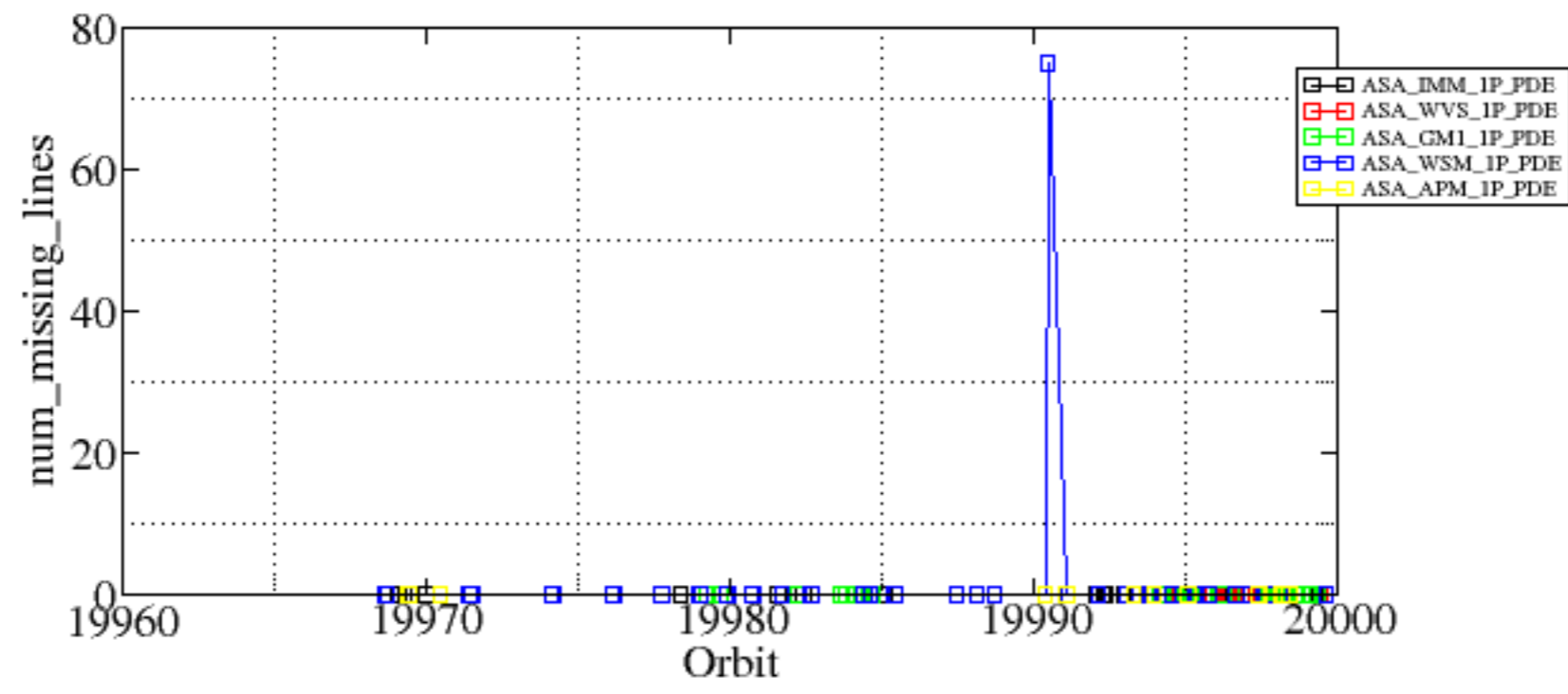


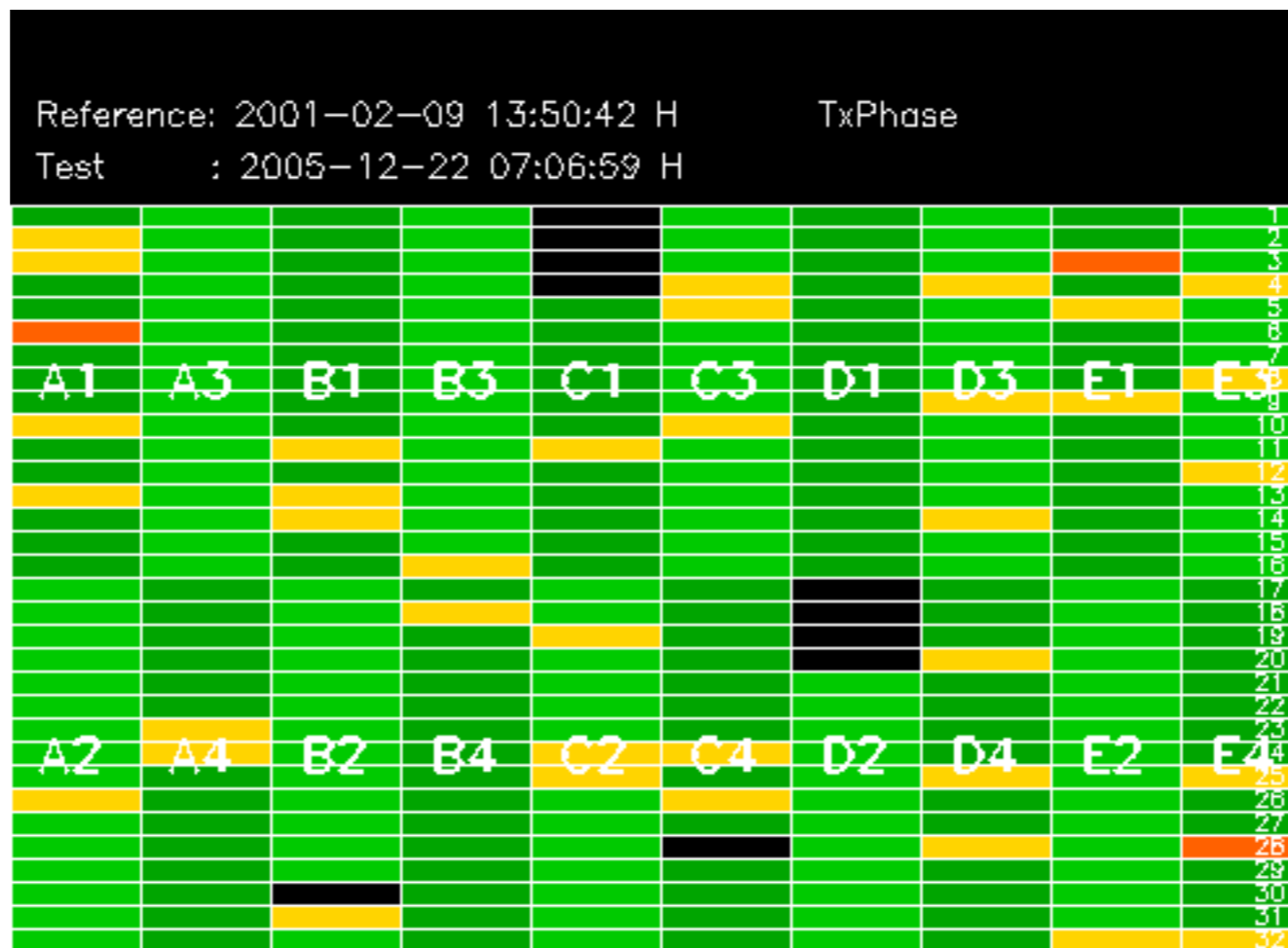
Summary of analysis for the last 3 days 2005122[567]

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

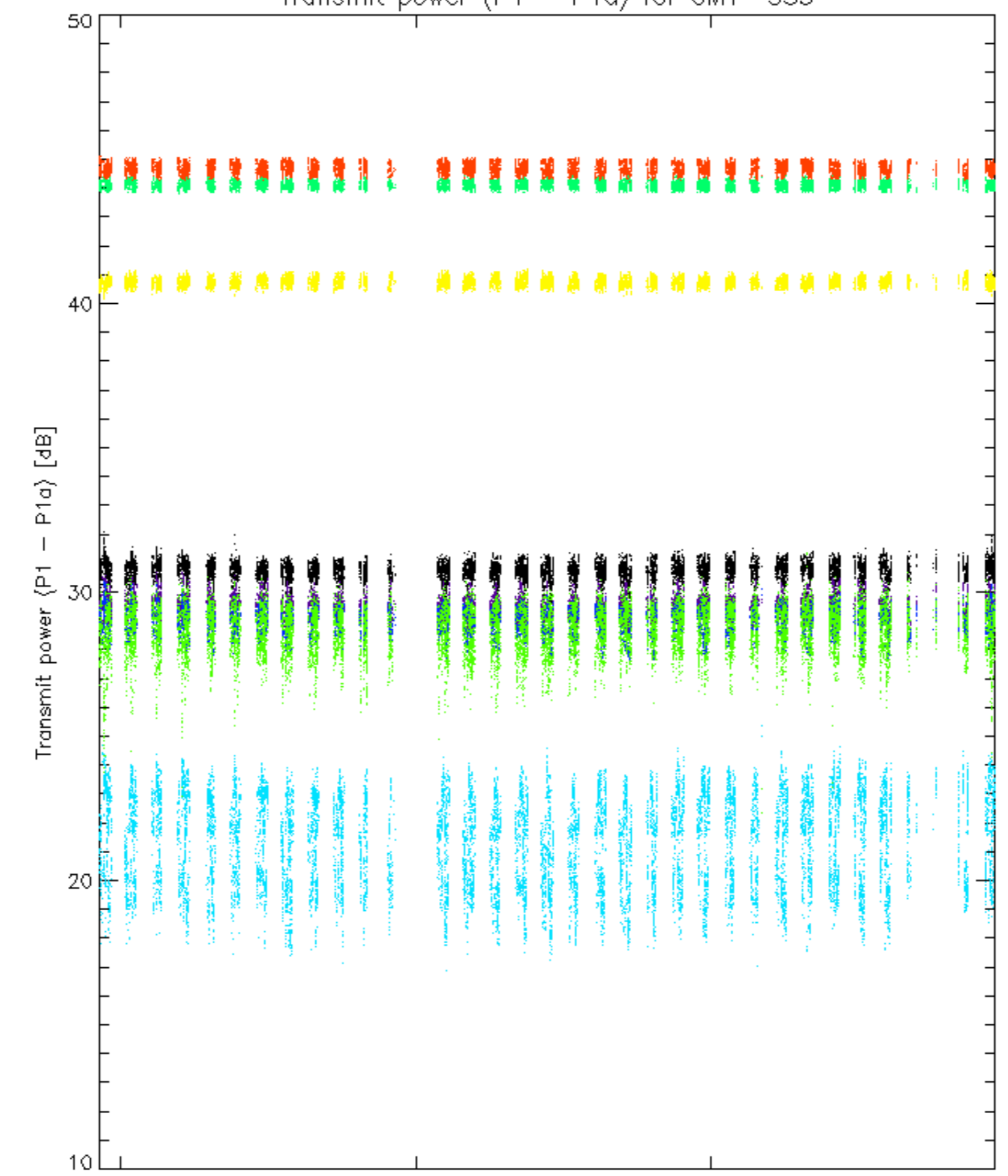
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051225_025346_000000362043_00376_19969_4740.N1	1	0
ASA_IMM_1PNPDE20051227_003806_000000502043_00403_19996_4808.N1	1	0
ASA_WSM_1PNPDE20051226_144425_000002632043_00397_19990_5732.N1	0	75





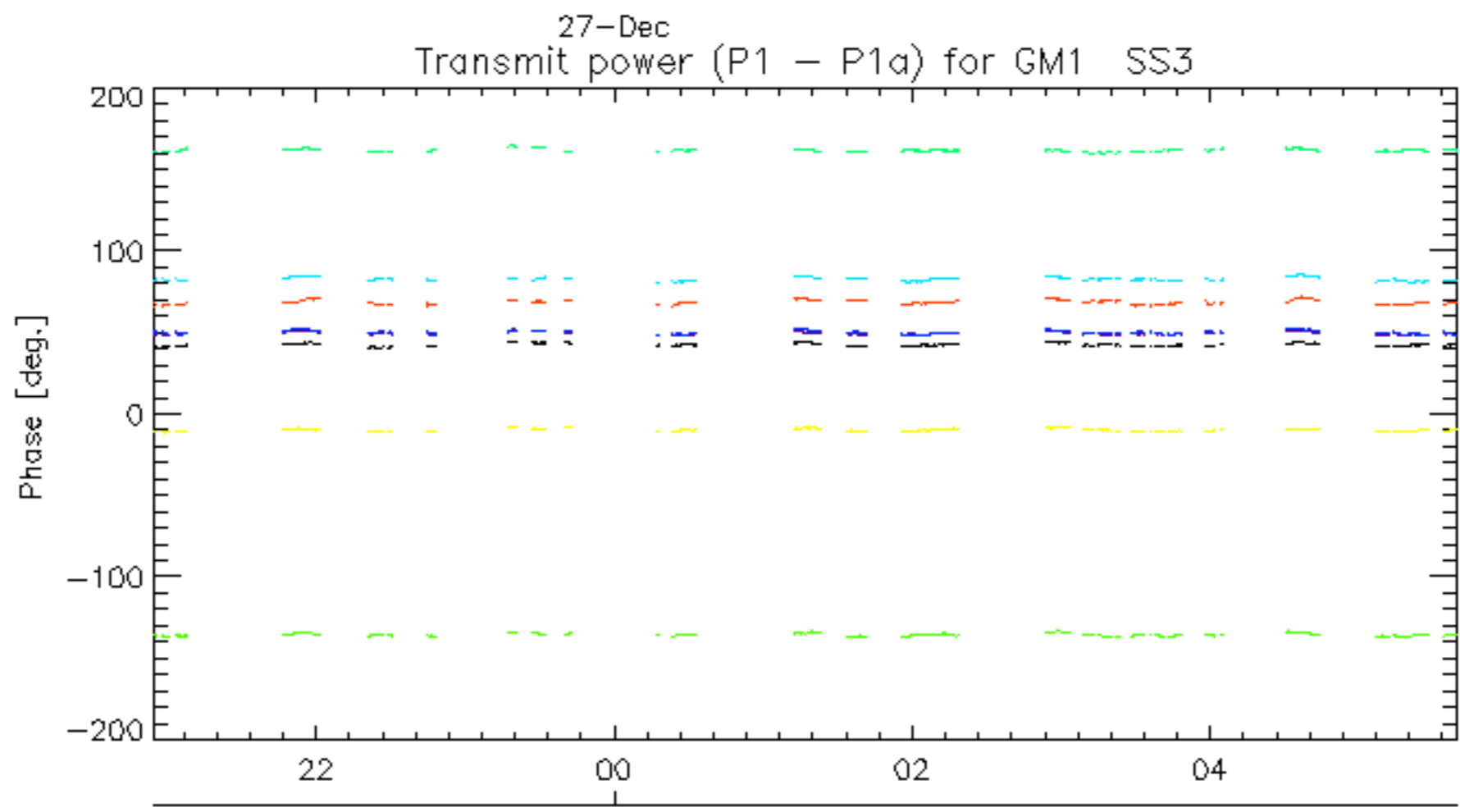
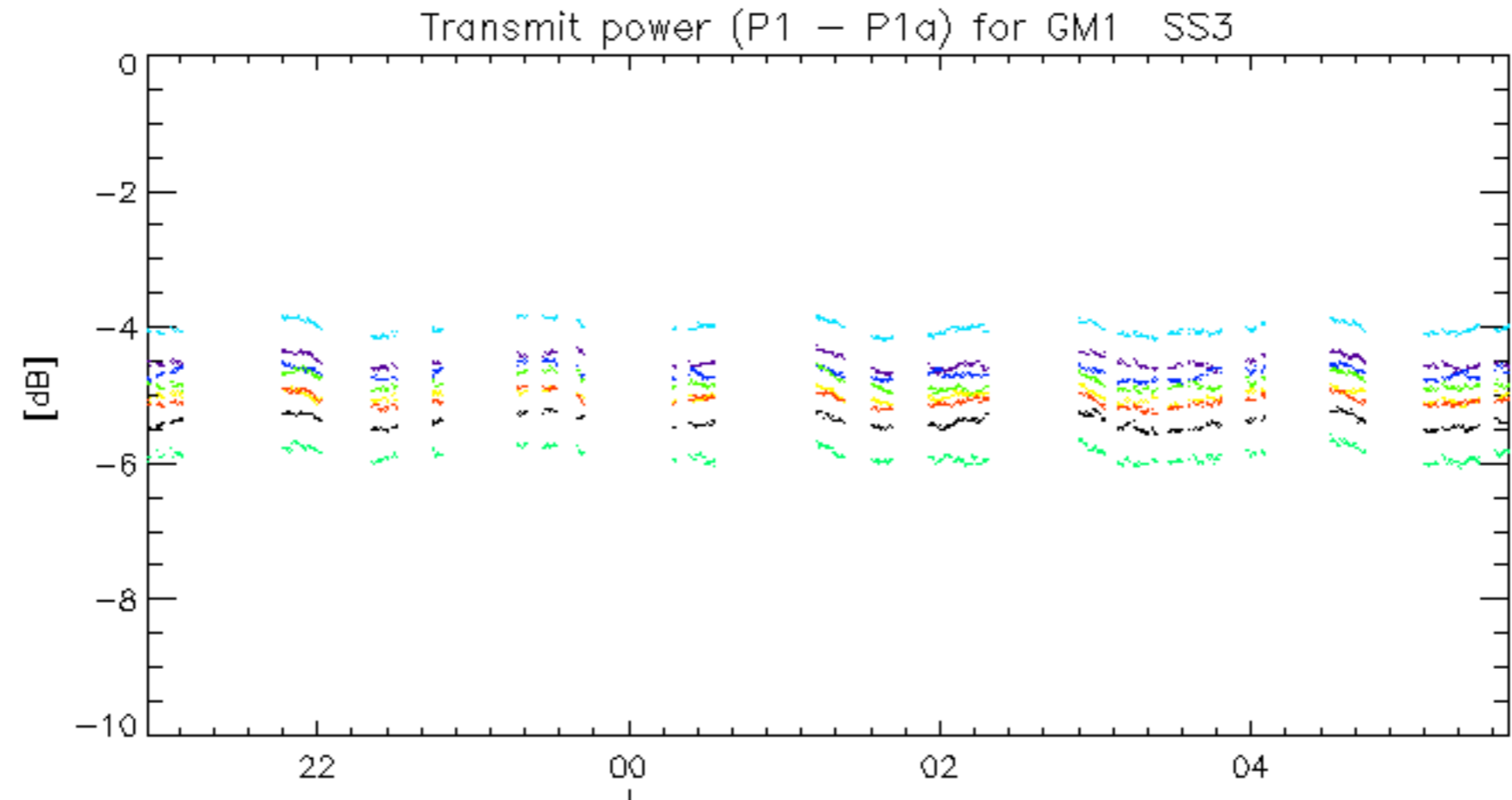


Transmit power (P1 - P1a) for GM1 SS3

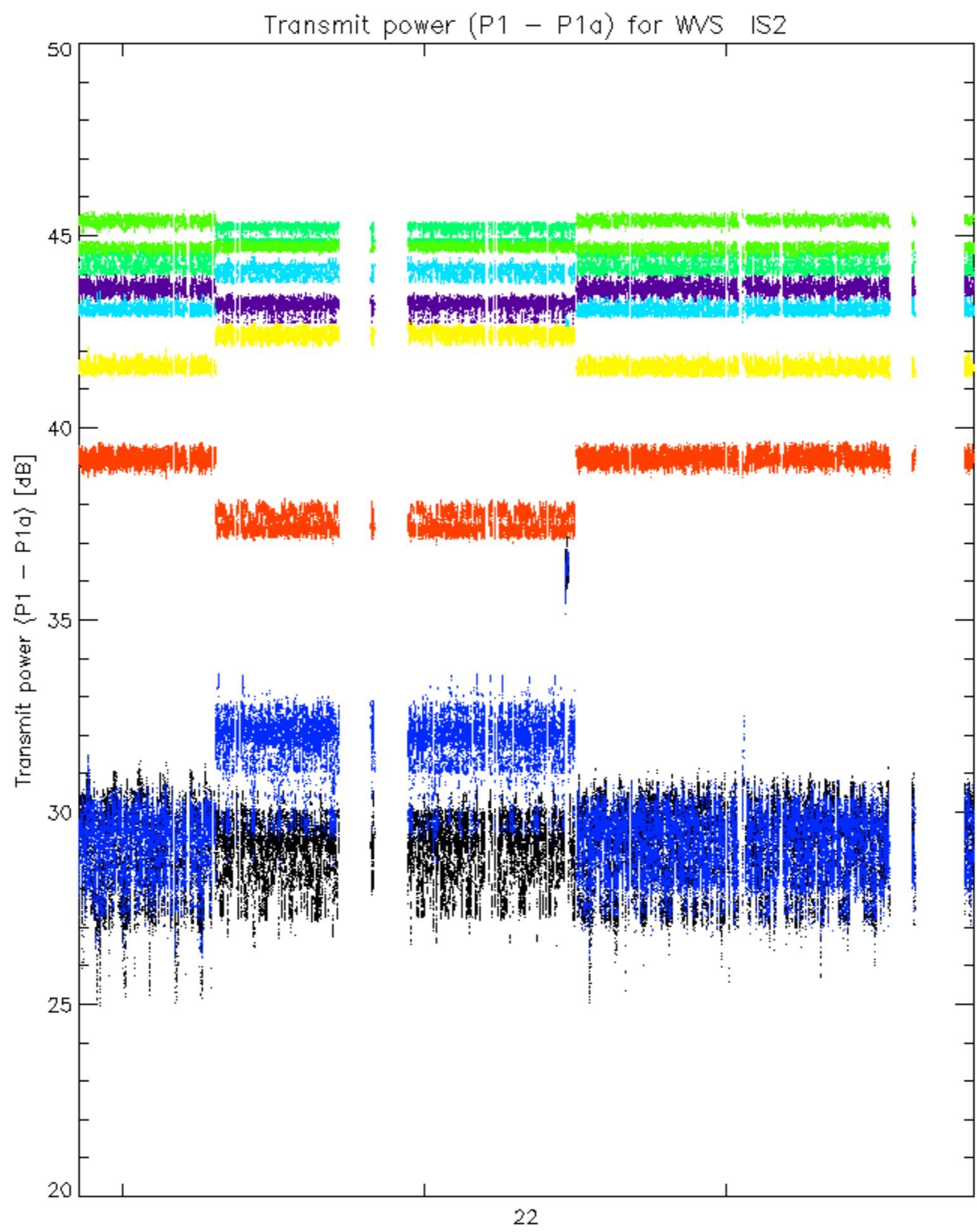


22

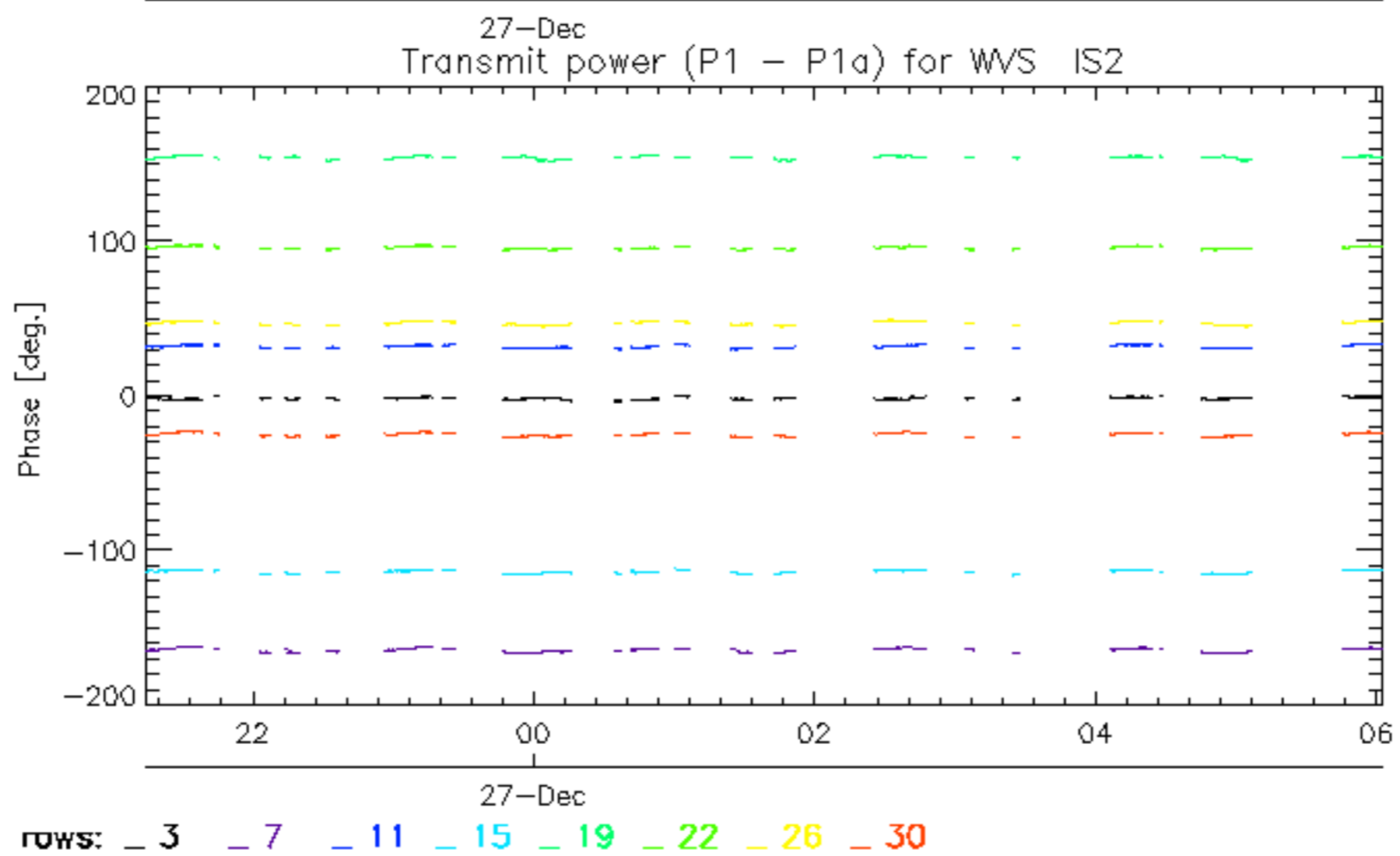
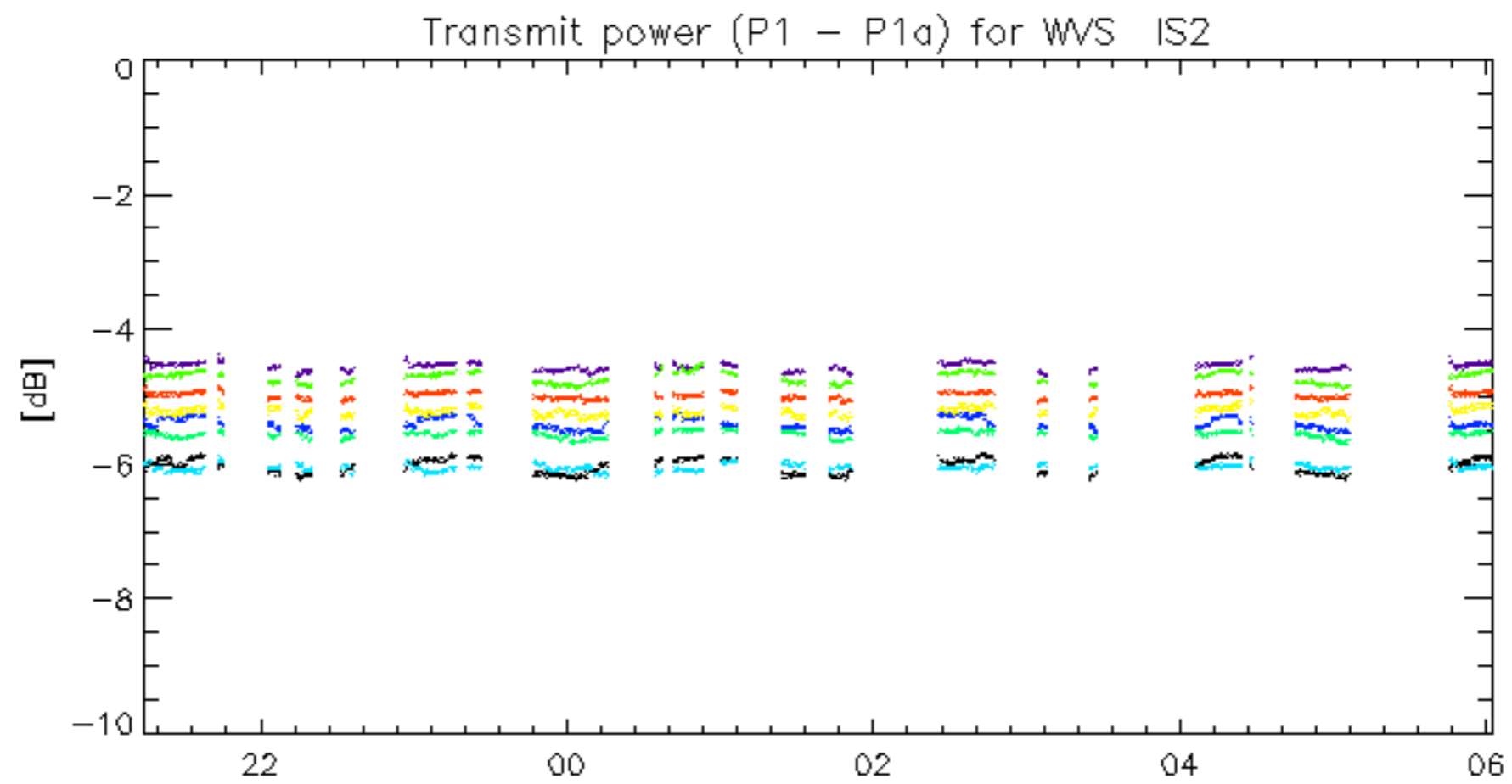
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



No unavailabilities during the reported period.