

PRELIMINARY REPORT OF 051228

last update on Wed Dec 28 16:40:50 GMT 2005

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2005-12-27 00:00:00 to 2005-12-28 16:40:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	13	0	7	0	10
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	13	0	7	0	10
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	13	0	7	0	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	13	0	7	0	10

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	47	38	12	43
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	39	47	38	12	43
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	47	38	12	43
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	47	38	12	43

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	20051227 042853
H	20051222 070659

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
<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
<input type="checkbox"/>

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	-3.688280	0.262262	-0.751413
7	P1	-2.733990	0.133299	-0.513886
11	P1	-4.143298	0.034460	0.059991
15	P1	-5.021815	1.791687	-2.066652
19	P1	-3.029987	0.068875	-0.407952
22	P1	-4.432314	0.023361	-0.114004
26	P1	-4.409377	0.063207	0.355151
30	P1	-5.647195	0.036136	-0.237862
3	P1	-15.690014	2.894104	-2.618006
7	P1	-15.225034	2.806994	-2.576683
11	P1	-16.294899	0.477322	-0.572834
15	P1	-12.669252	0.937827	-1.193332
19	P1	-13.402524	0.381804	-0.929104
22	P1	-15.930083	0.643781	-0.121094
26	P1	-15.029655	1.098609	-1.435453
30	P1	-15.481296	2.558695	-2.284461

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.815786	0.114872	0.288121
7	P2	-22.543549	0.106722	0.040292
11	P2	-16.523649	0.133224	0.373890
15	P2	-7.278754	0.105331	0.071303
19	P2	-9.215292	0.103652	0.019707
22	P2	-17.875183	0.113249	-0.156091
26	P2	-16.387730	0.132243	0.270690
30	P2	-19.798634	0.120488	0.232626

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235708	0.007632	0.015750
7	P3	-8.235708	0.007632	0.015750
11	P3	-8.235708	0.007632	0.015750
15	P3	-8.235708	0.007632	0.015750
19	P3	-8.235708	0.007632	0.015750
22	P3	-8.235708	0.007632	0.015750
26	P3	-8.235708	0.007632	0.015750
30	P3	-8.235708	0.007632	0.015750

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	-3.709317	0.008354	-0.018356
7	P1	-2.774818	0.007685	0.031721
11	P1	-2.880540	0.009307	0.017201
15	P1	-3.421371	0.016607	-0.008891
19	P1	-3.394745	0.014300	-0.006286
22	P1	-5.128088	0.018512	0.011550
26	P1	-5.852442	0.016439	-0.016040
30	P1	-5.283763	0.033247	0.006527
3	P1	-11.488093	0.041544	-0.014137
7	P1	-9.968616	0.046596	0.019097
11	P1	-10.054355	0.057568	-0.002472
15	P1	-10.563848	0.071727	-0.004796
19	P1	-15.522242	0.074890	-0.010489
22	P1	-20.949499	0.953649	0.104867
26	P1	-17.150326	0.290574	0.128663
30	P1	-18.233078	0.297289	0.293367

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.602751	0.029752	0.100272
7	P2	-23.049601	0.055333	0.049067
11	P2	-11.594070	0.020216	0.163703
15	P2	-4.993568	0.021087	0.009973
19	P2	-6.975743	0.021404	-0.009585
22	P2	-8.212790	0.022523	-0.019303
26	P2	-24.053249	0.030313	0.013673
30	P2	-22.135223	0.017231	-0.022191

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.078411	0.002452	-0.000310
7	P3	-8.078562	0.002447	-0.000570
11	P3	-8.078574	0.002436	-0.001133
15	P3	-8.078548	0.002438	-0.000588
19	P3	-8.078610	0.002449	-0.000811
22	P3	-8.078571	0.002445	-0.000262
26	P3	-8.078561	0.002413	-0.000310
30	P3	-8.078352	0.002444	-0.000846

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	0.000453807
	stdev	2.20133e-07
MEAN Q	mean	0.000467461
	stdev	2.36385e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128846
	stdev	0.00111722
STDEV Q	mean	0.129131
	stdev	0.00112977



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[678]

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_1PNPDE20051227_003806_00000502043_00403_19996_4808.N1	1	0
ASA_IMM_1PNPDE20051228_002245_000003782043_00417_20010_4893.N1	1	0
ASA_WSM_1PNPDE20051226_144425_000002632043_00397_19990_5732.N1	0	75
ASA_WSM_1PNPDE20051227_164743_000001832043_00413_20006_5861.N1	0	8
ASA_WSM_1PNPDK20051226_122120_000000672043_00396_19989_2885.N1	0	74







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)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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



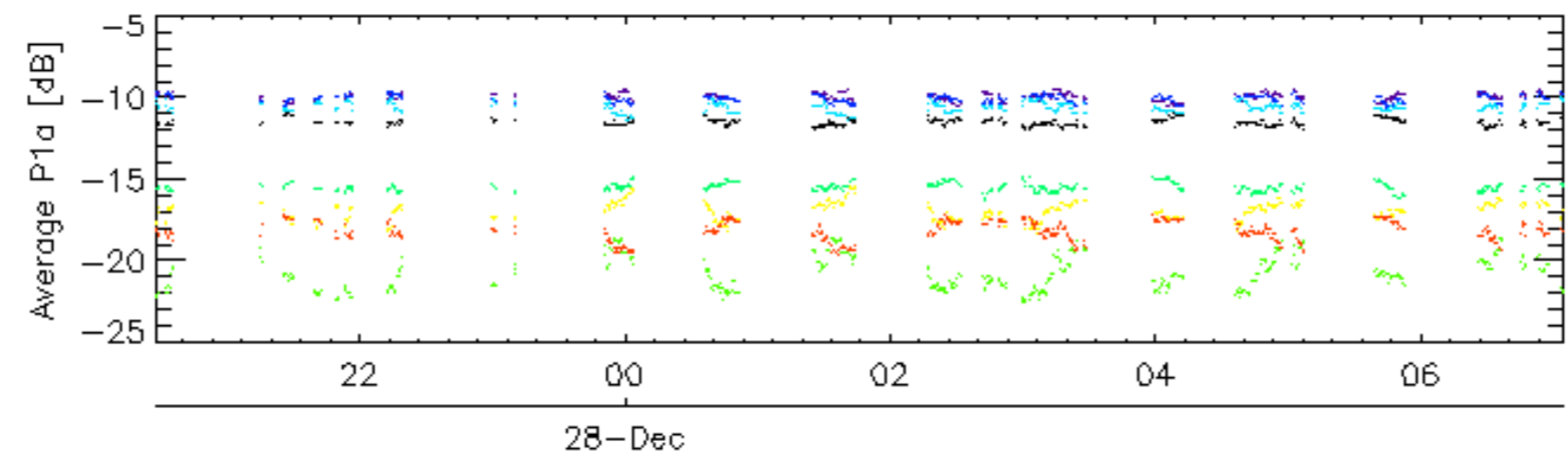
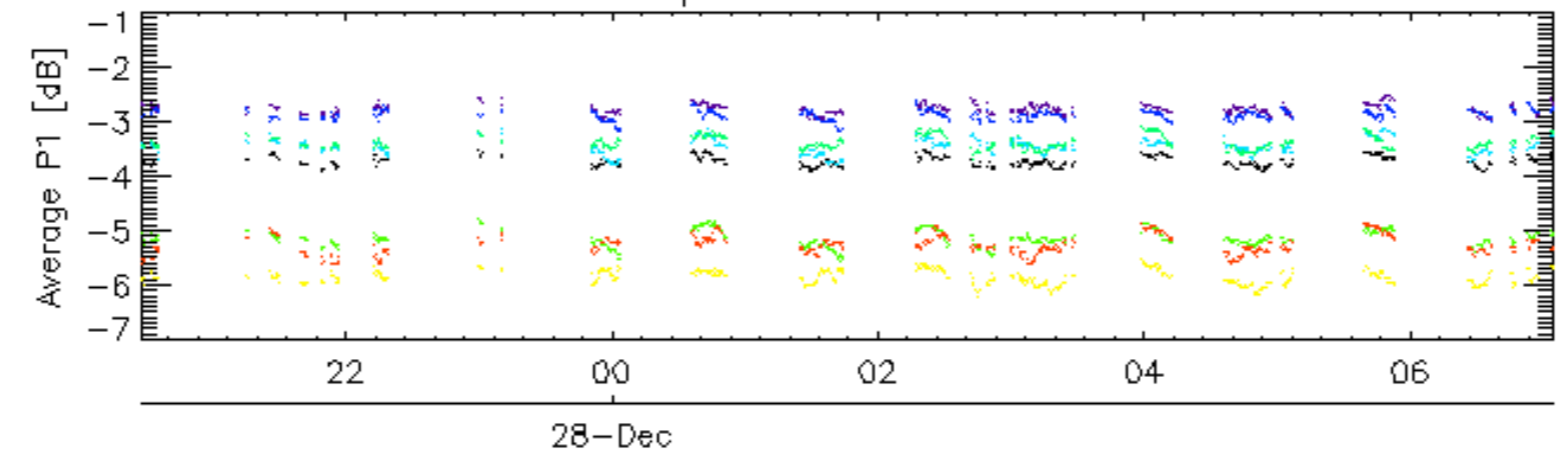
Descending

7.6 - Doppler evolution versus ANX for GM1

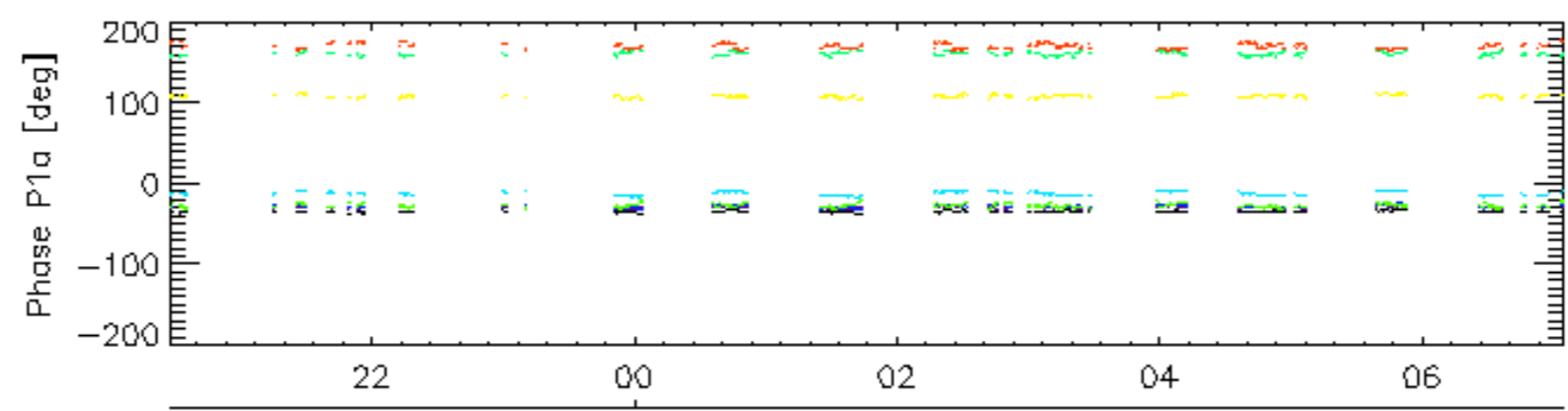
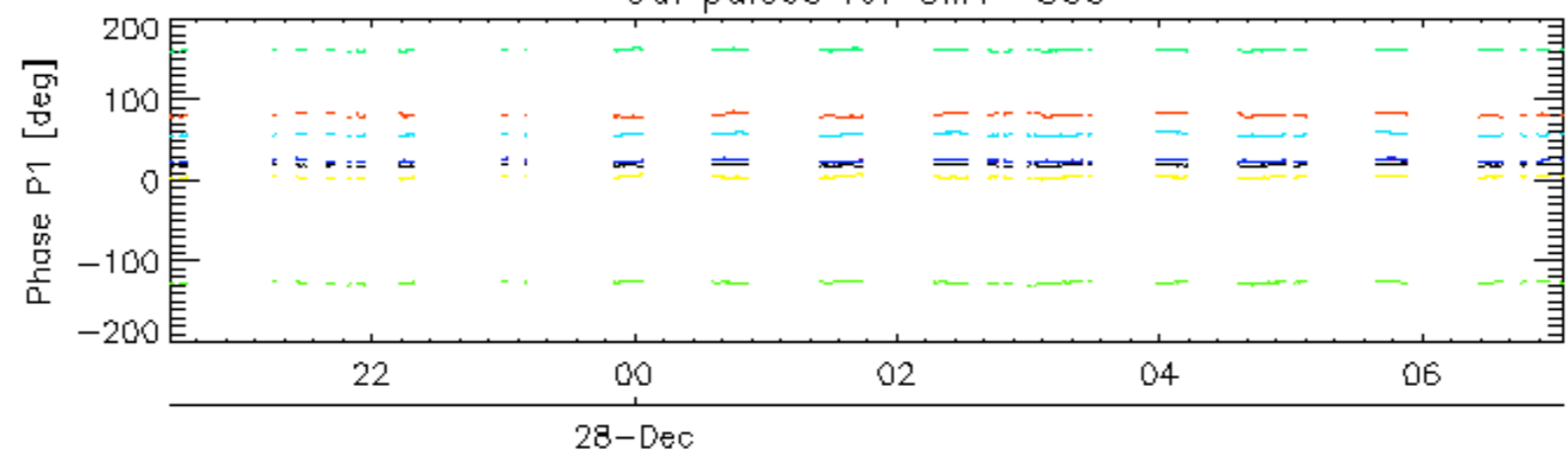
Evolution Doppler error versus ANX



Cal pulses for GM1 SS3

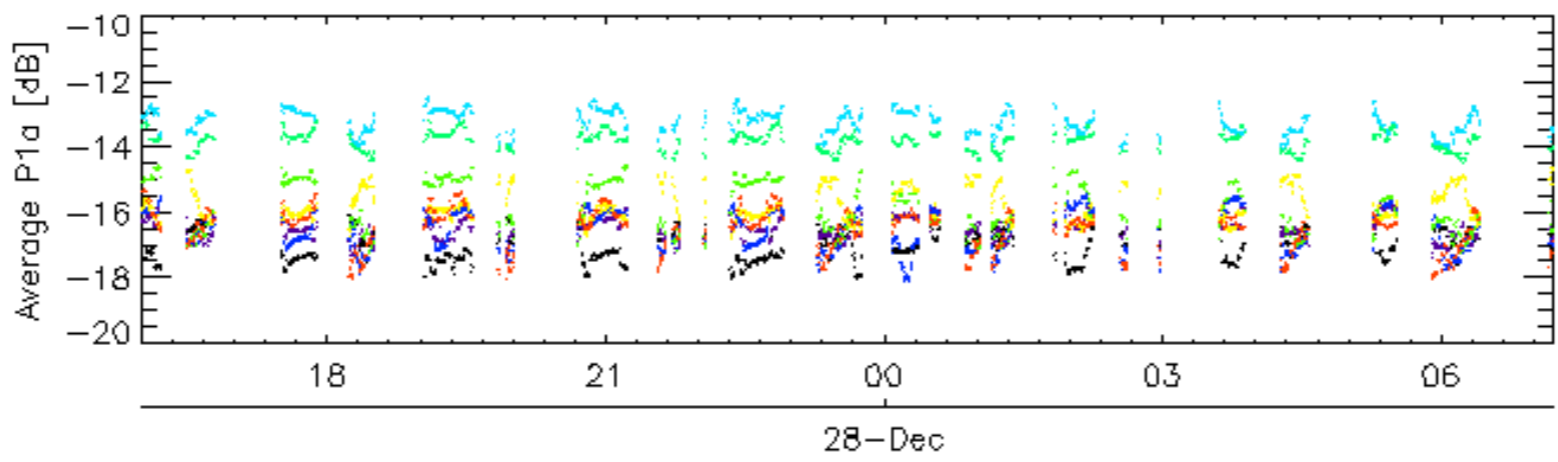
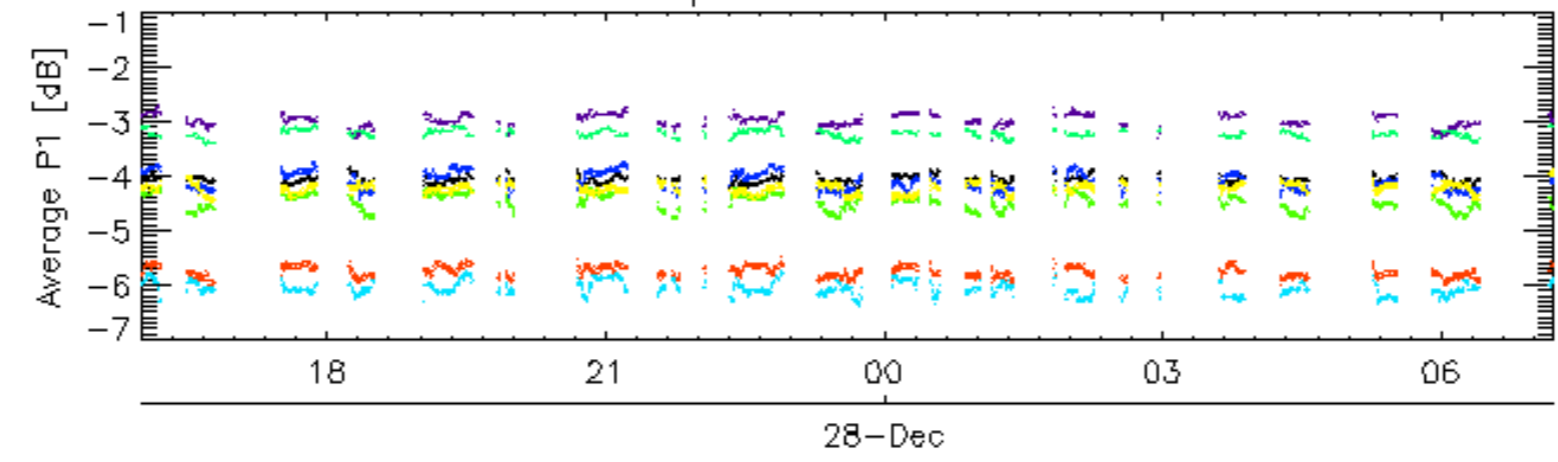


Cal pulses for GM1 SS3

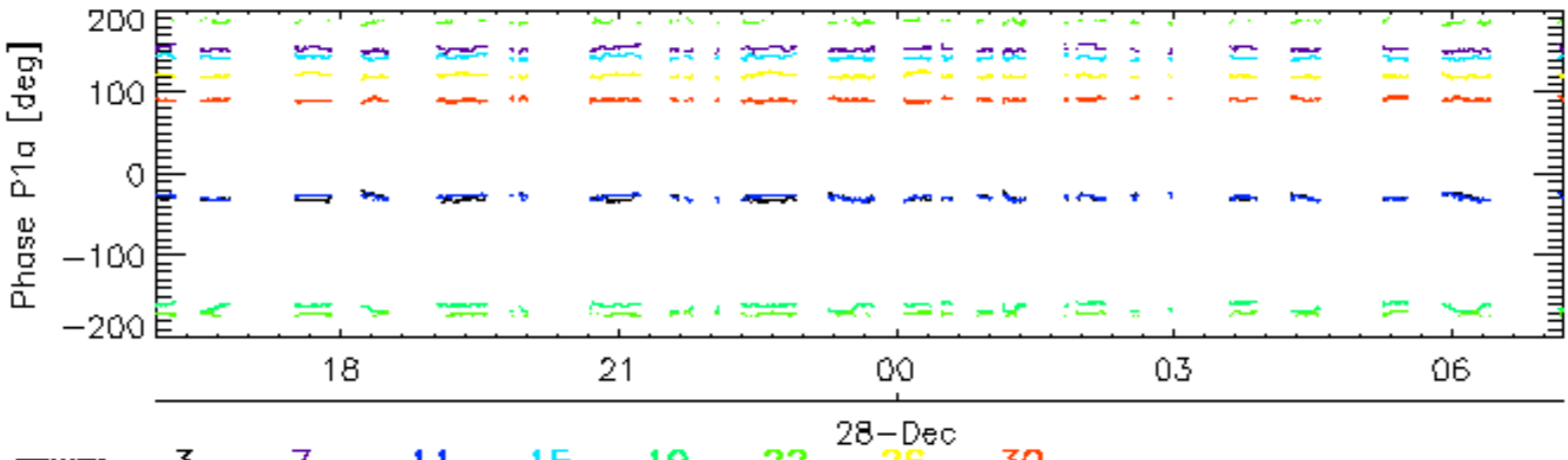
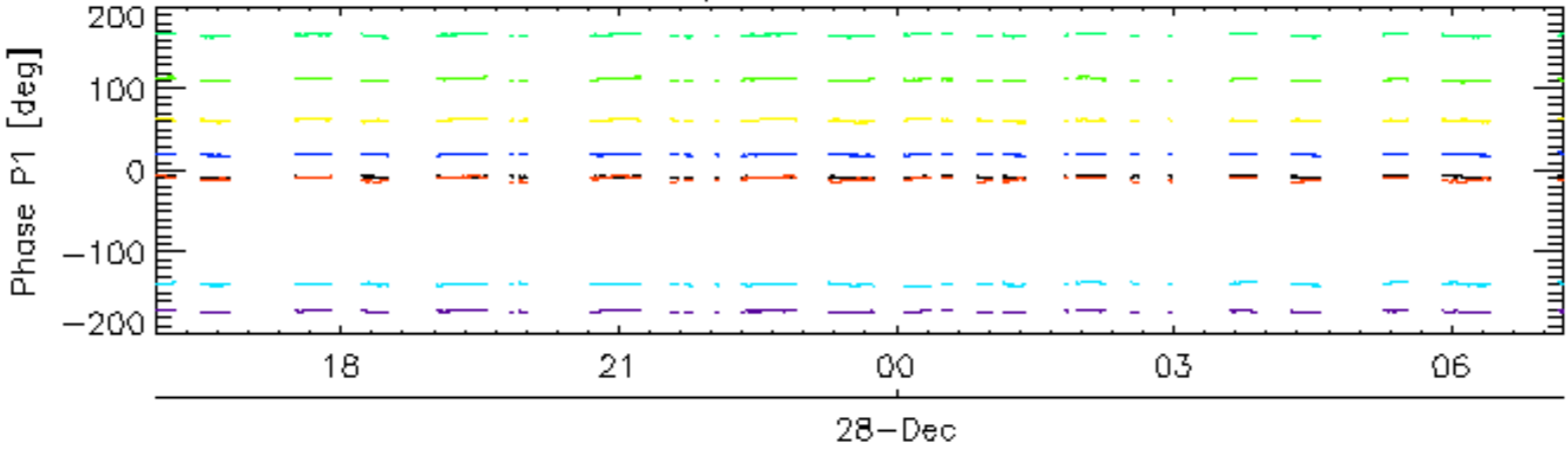


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

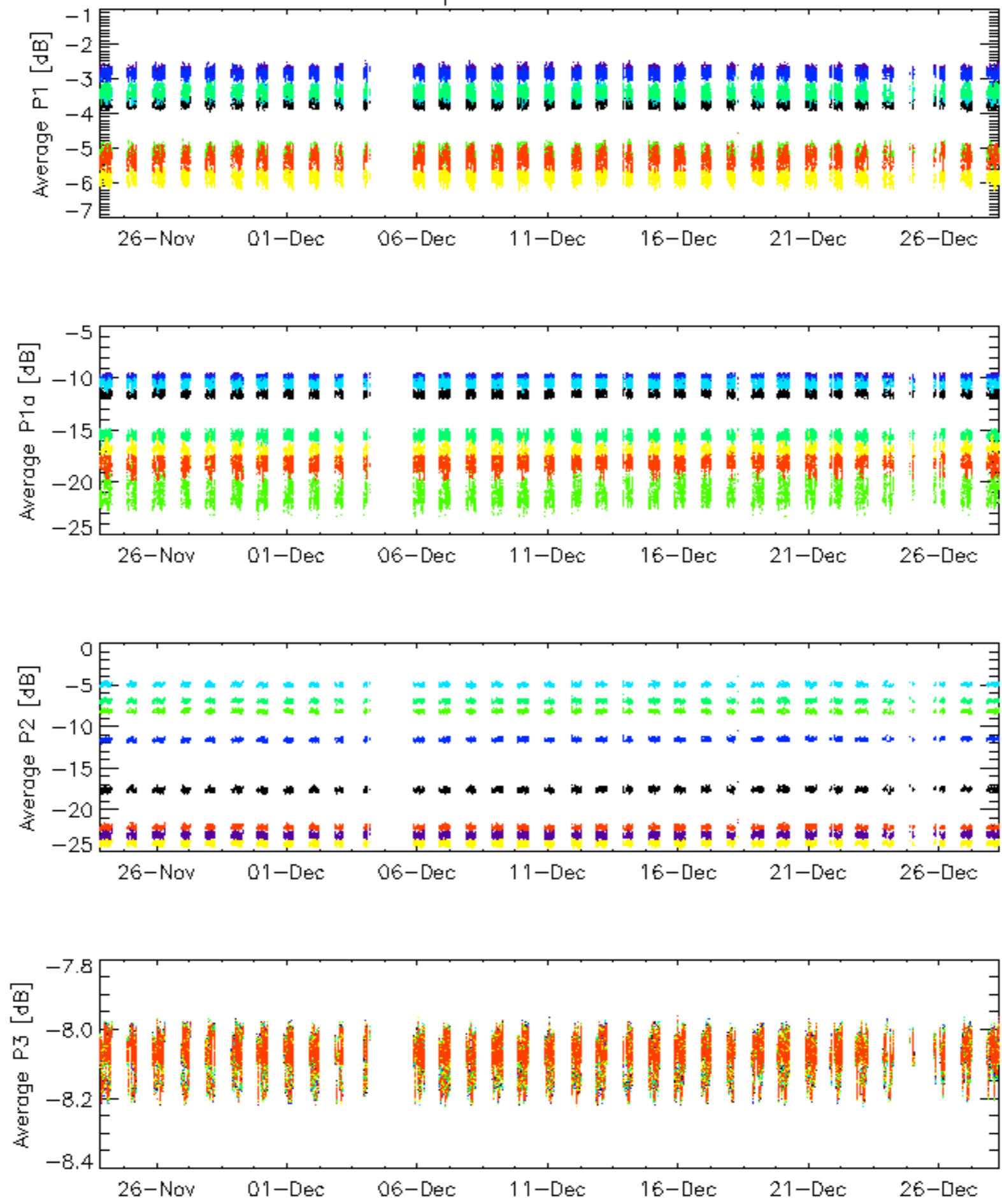


Cal pulses for WVS IS2



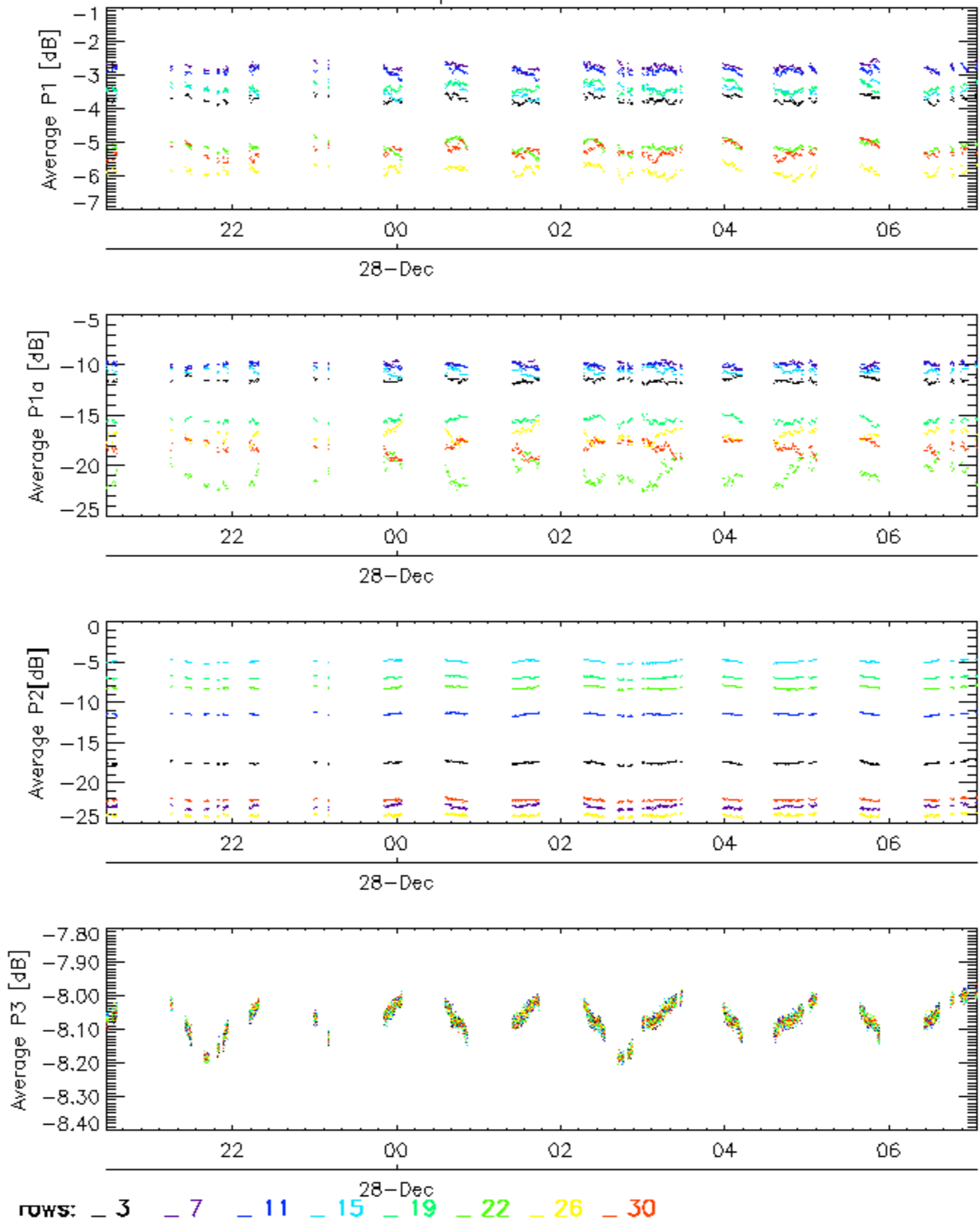
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

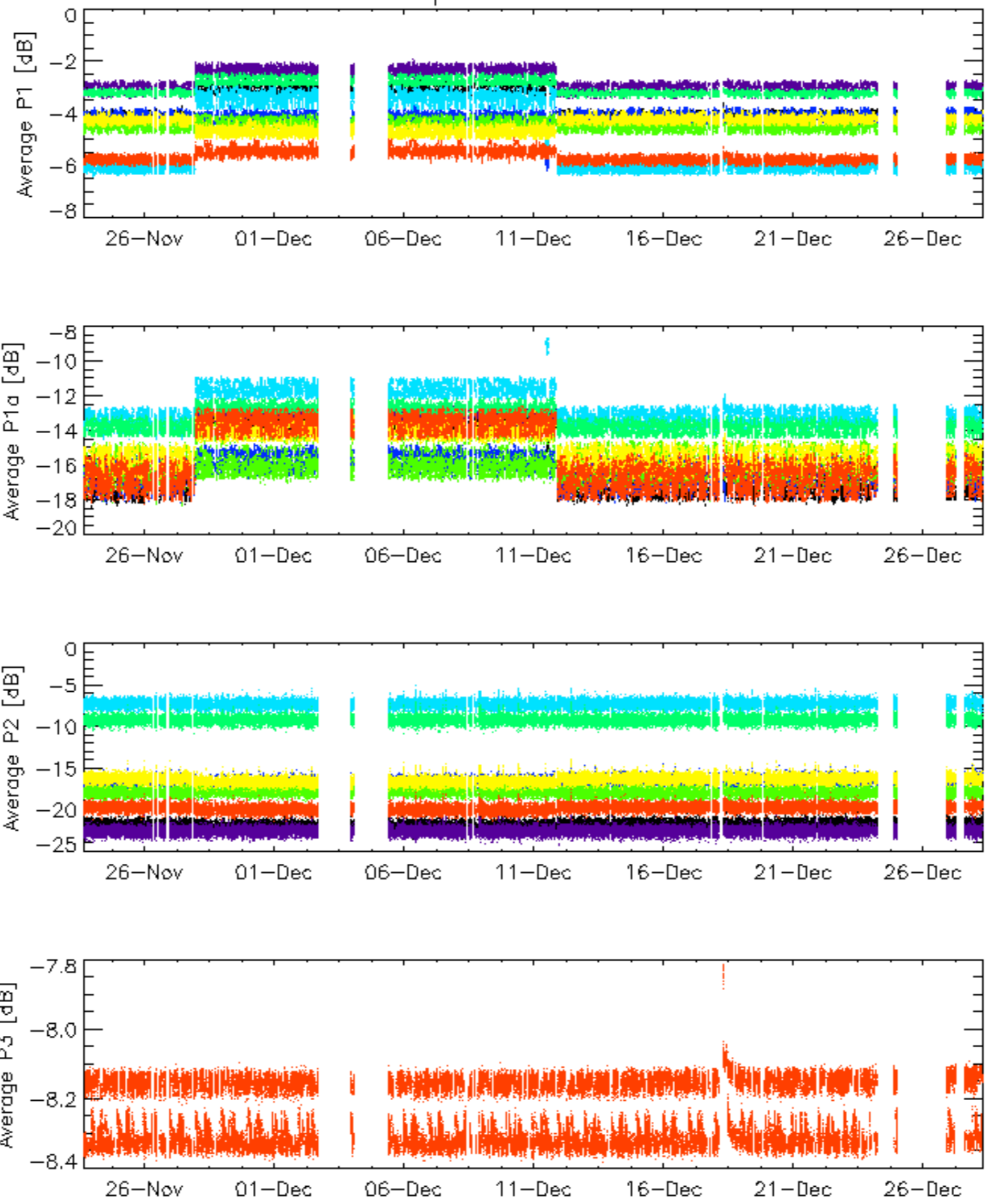


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

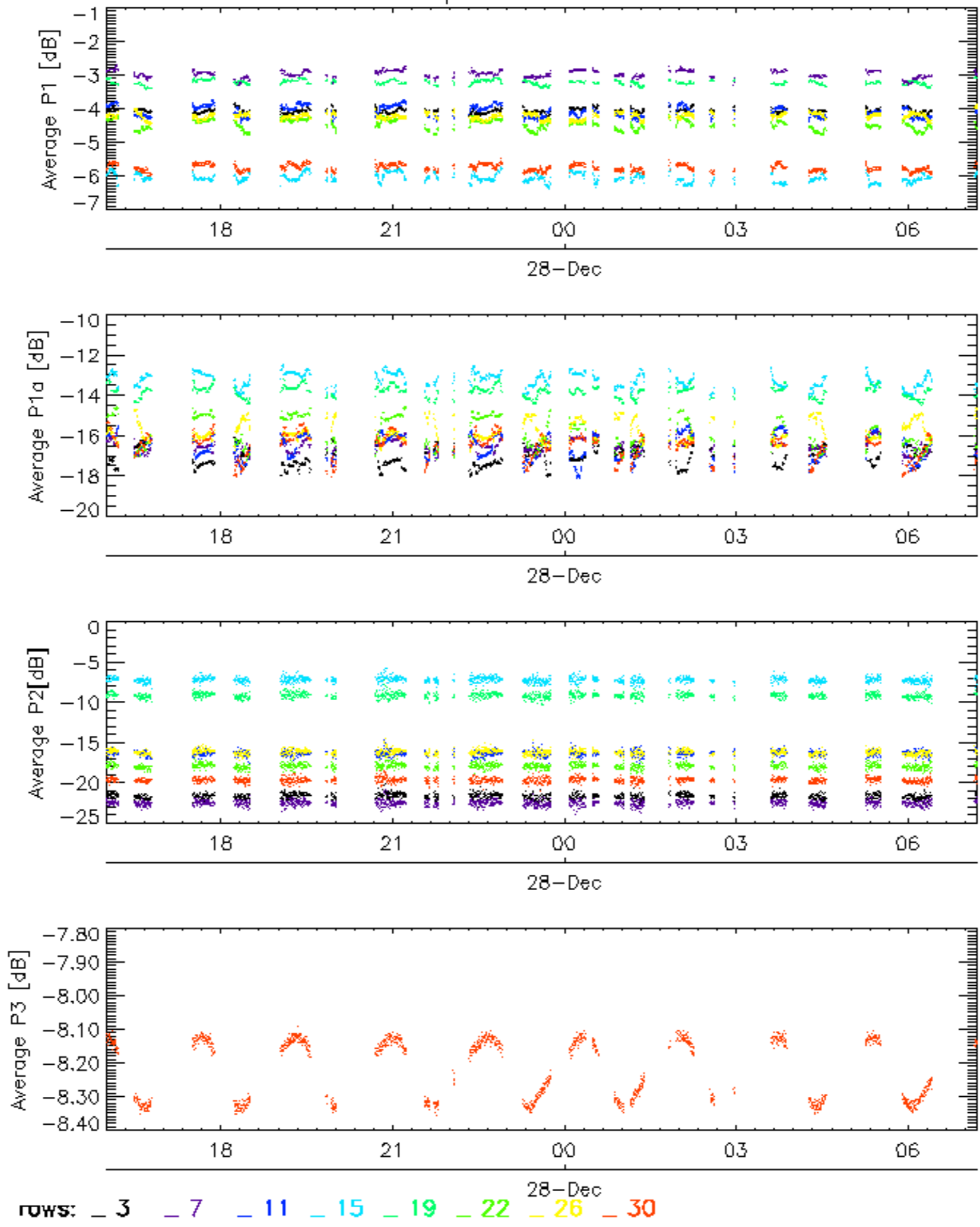


Cal pulses for WVS IS2

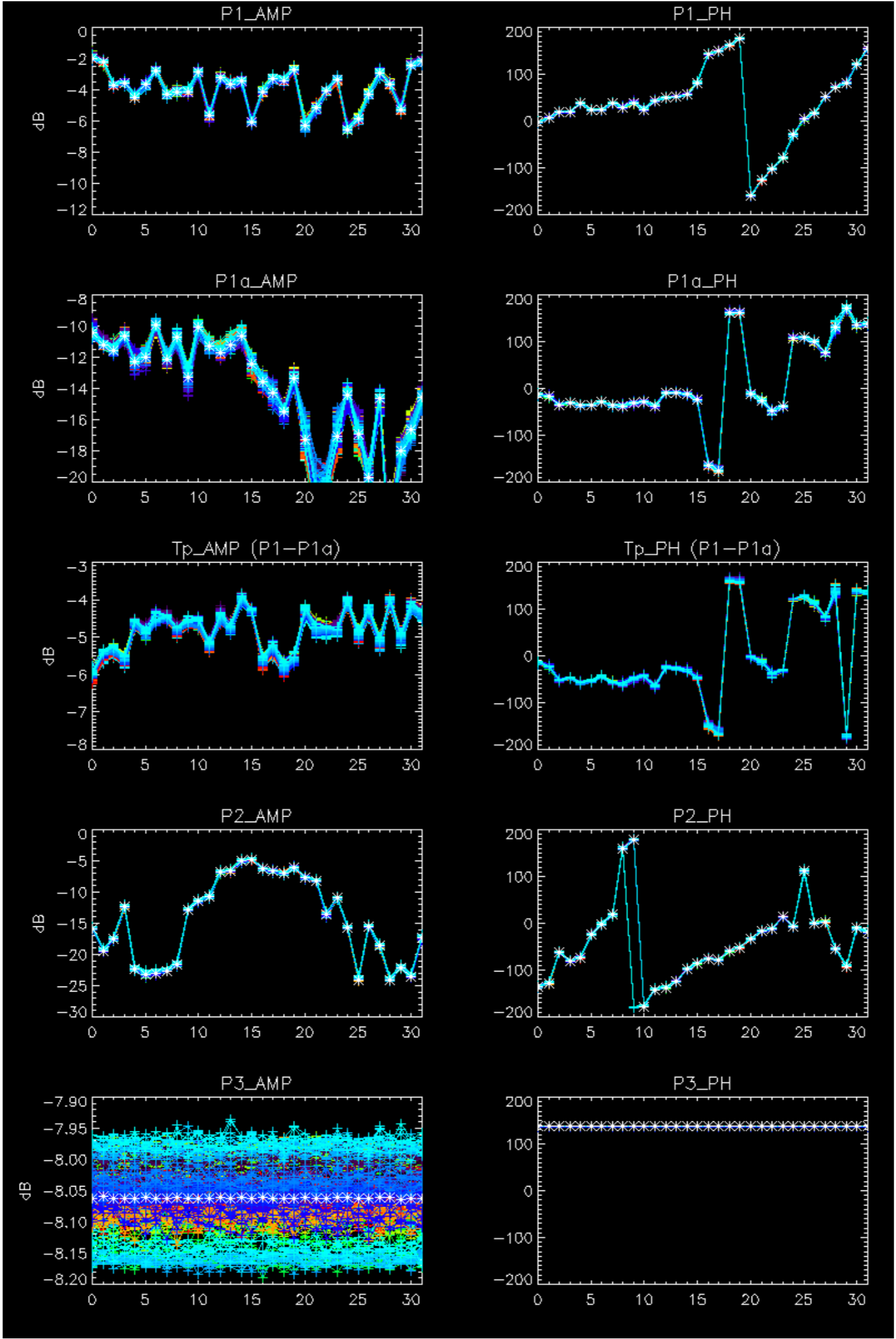


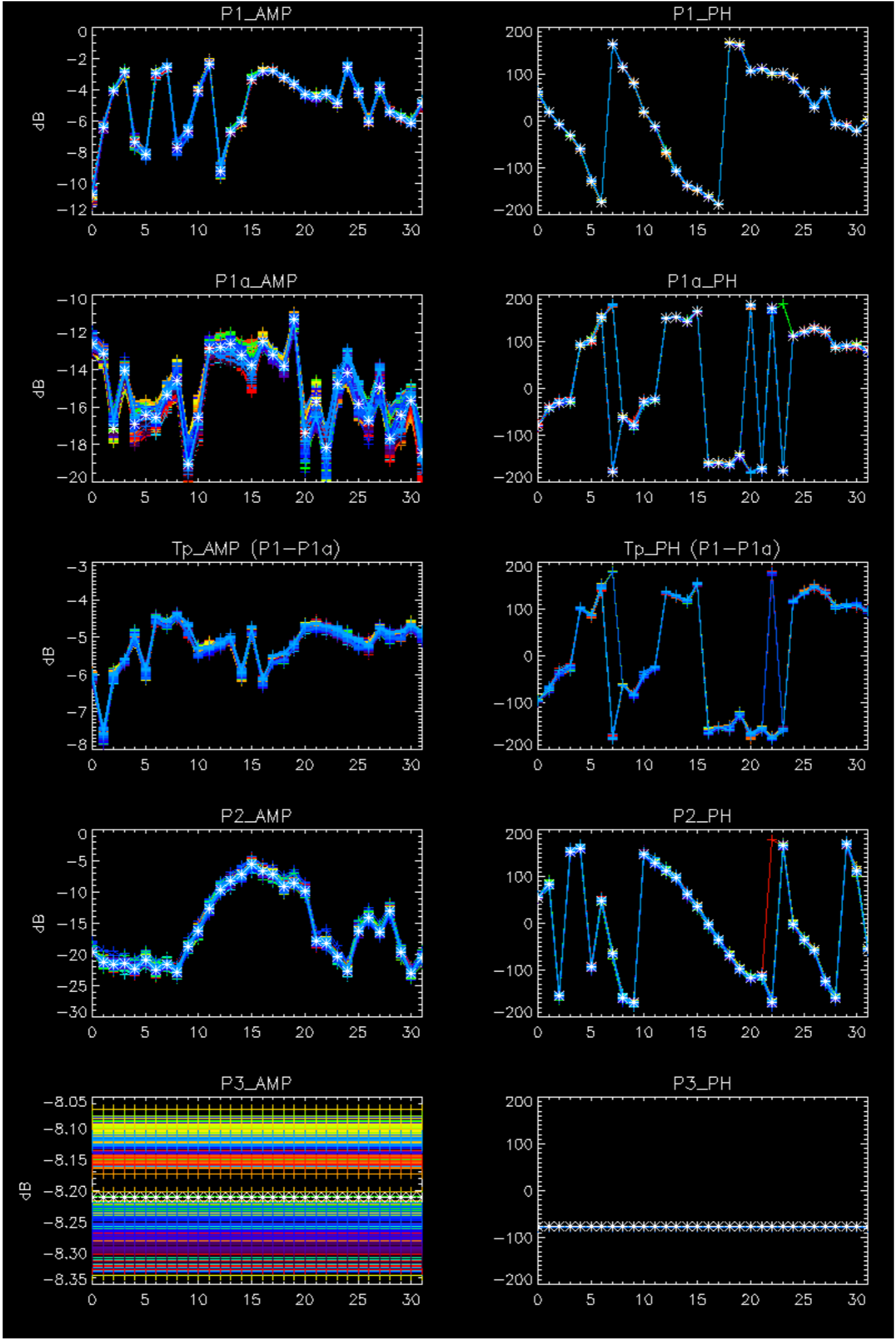
rows: [_ 3](#) [_ 7](#) [_ 11](#) [_ 15](#) [_ 19](#) [_ 22](#) [_ 26](#) [_ 30](#)

Cal pulses for WVS IS2



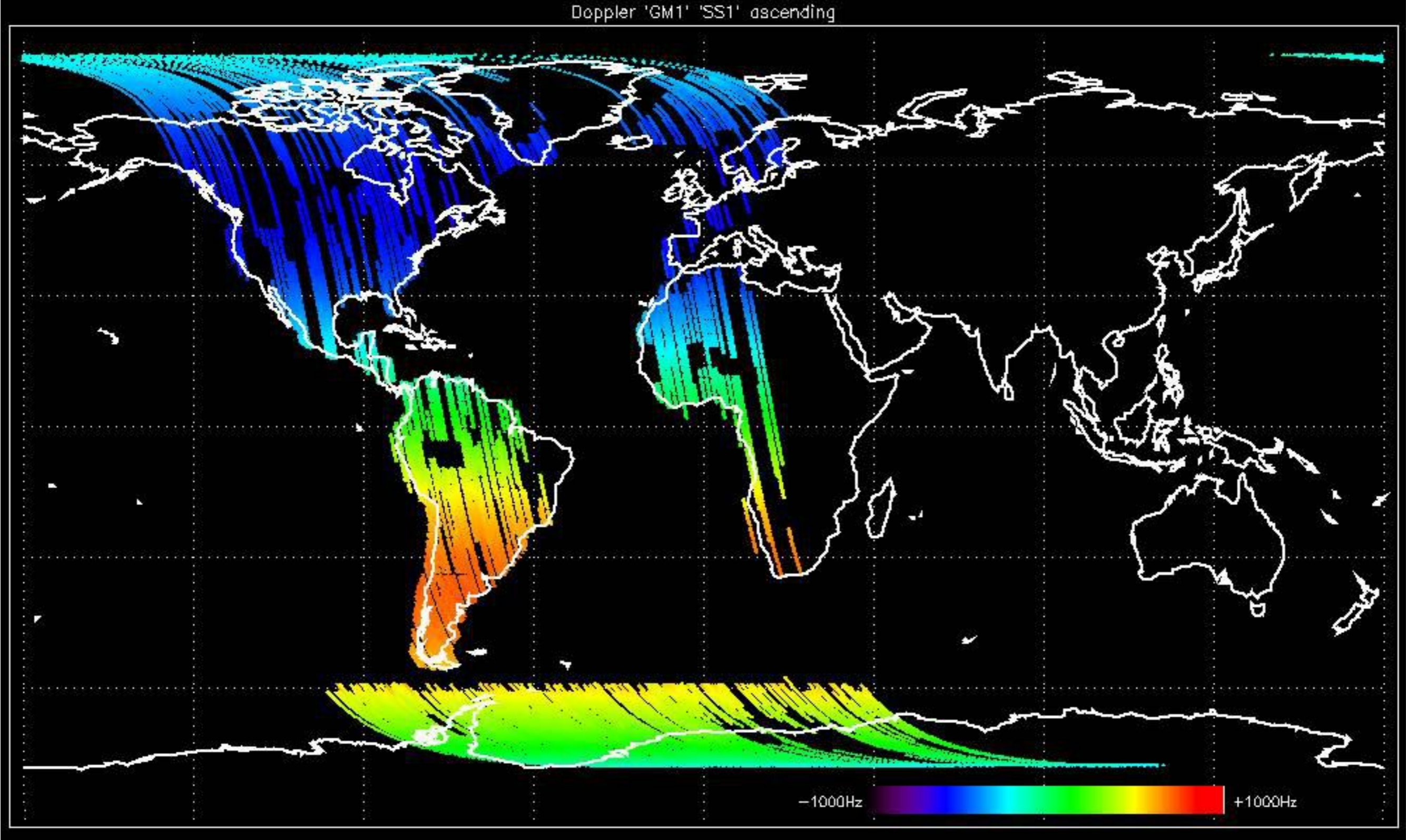
No anomalies observed.



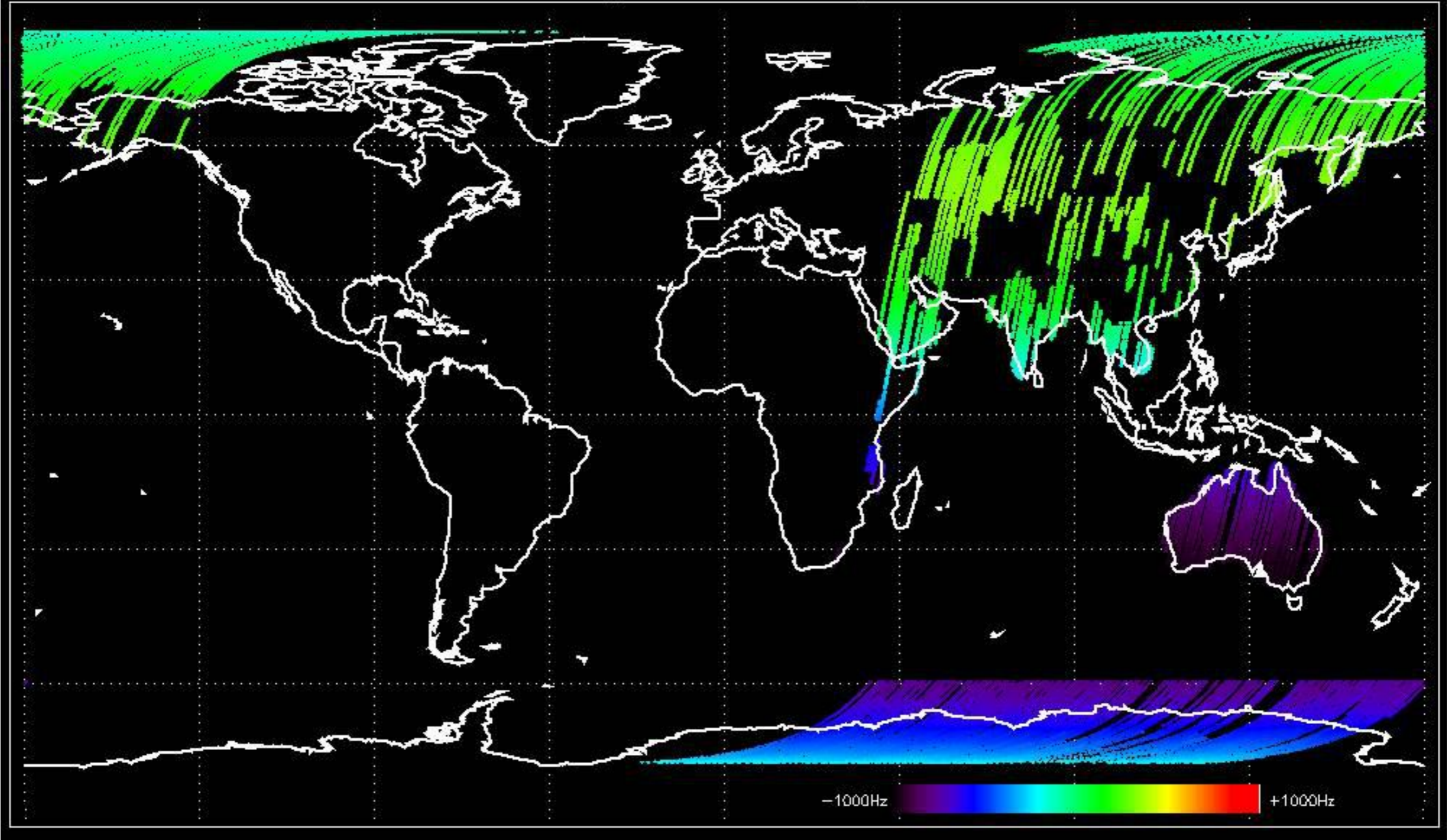


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

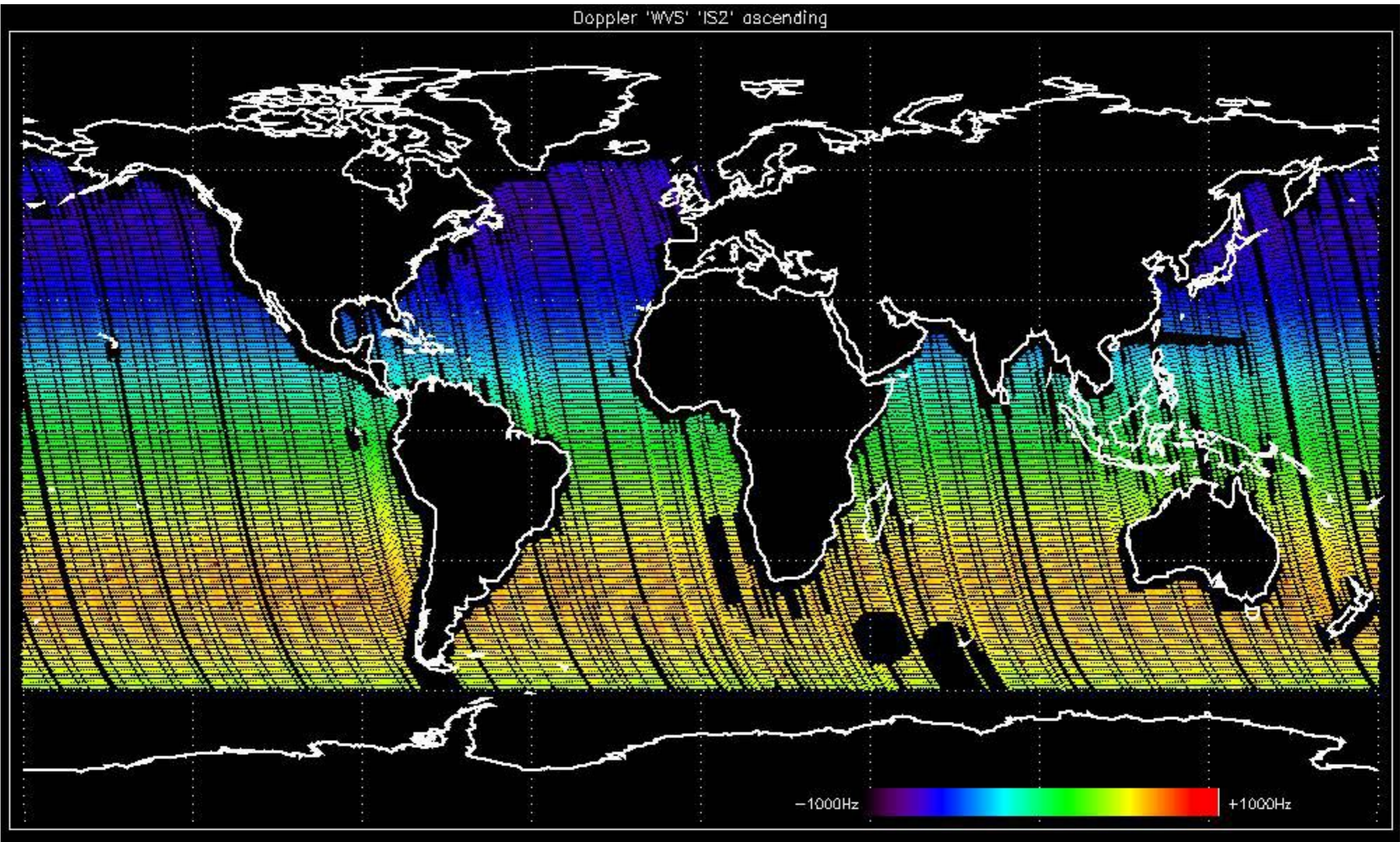
Doppler 'GM1' 'SS1' ascending



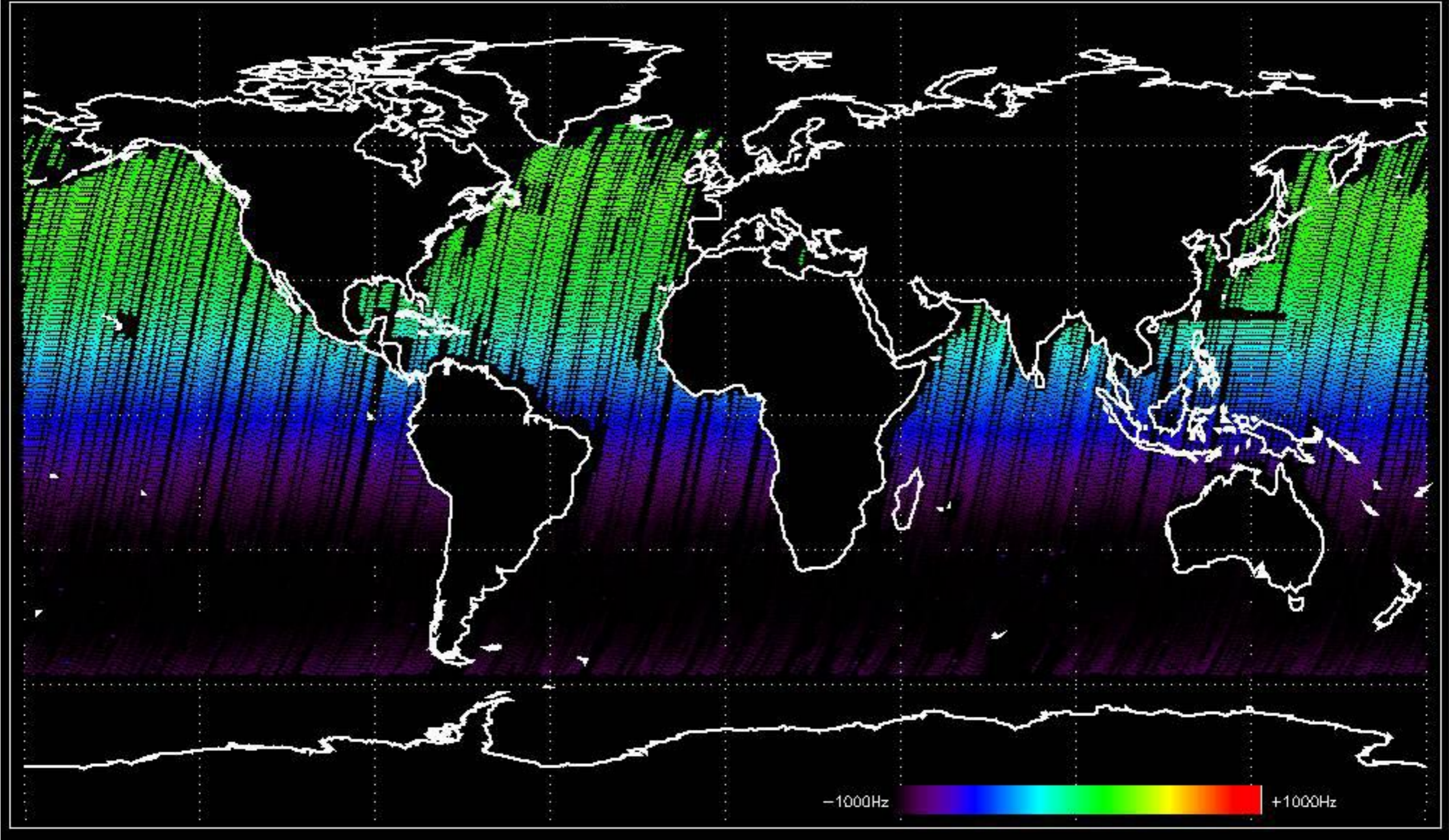
Doppler 'GM1' 'SS1' descending



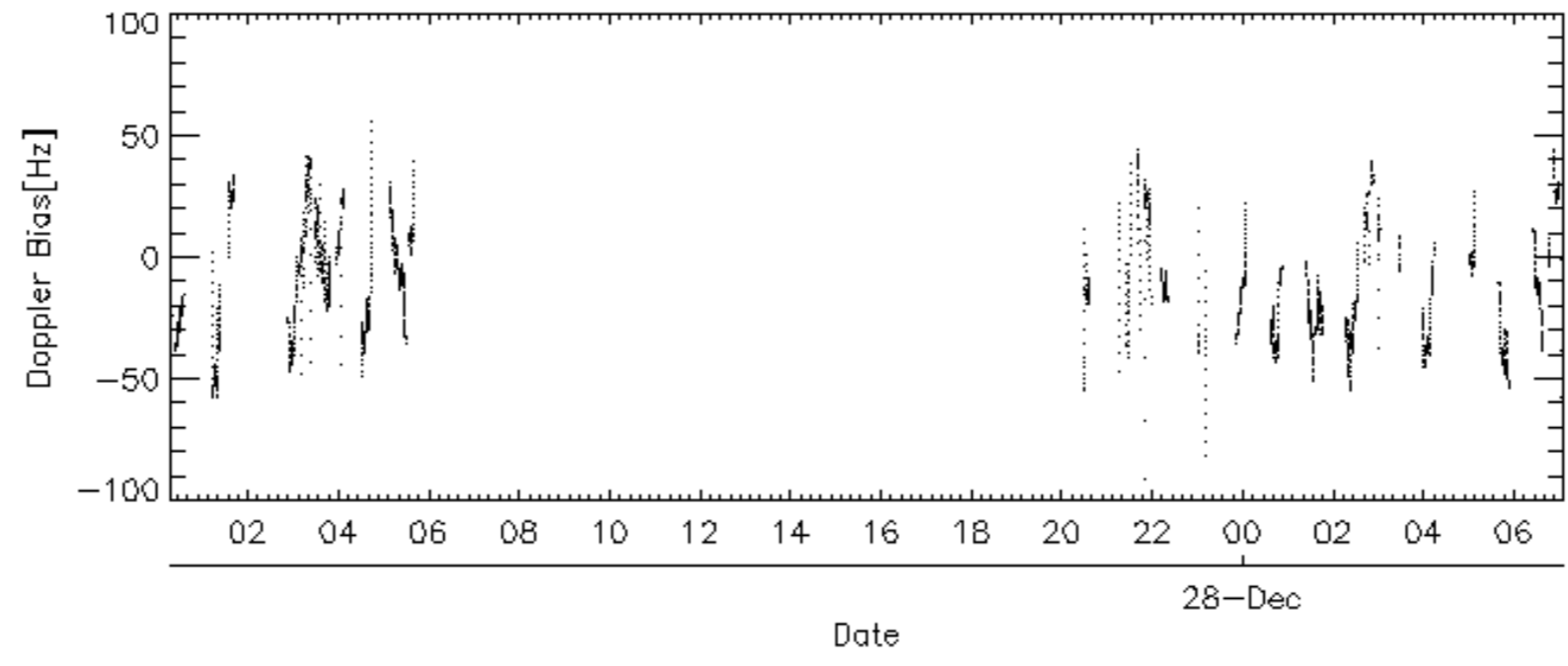
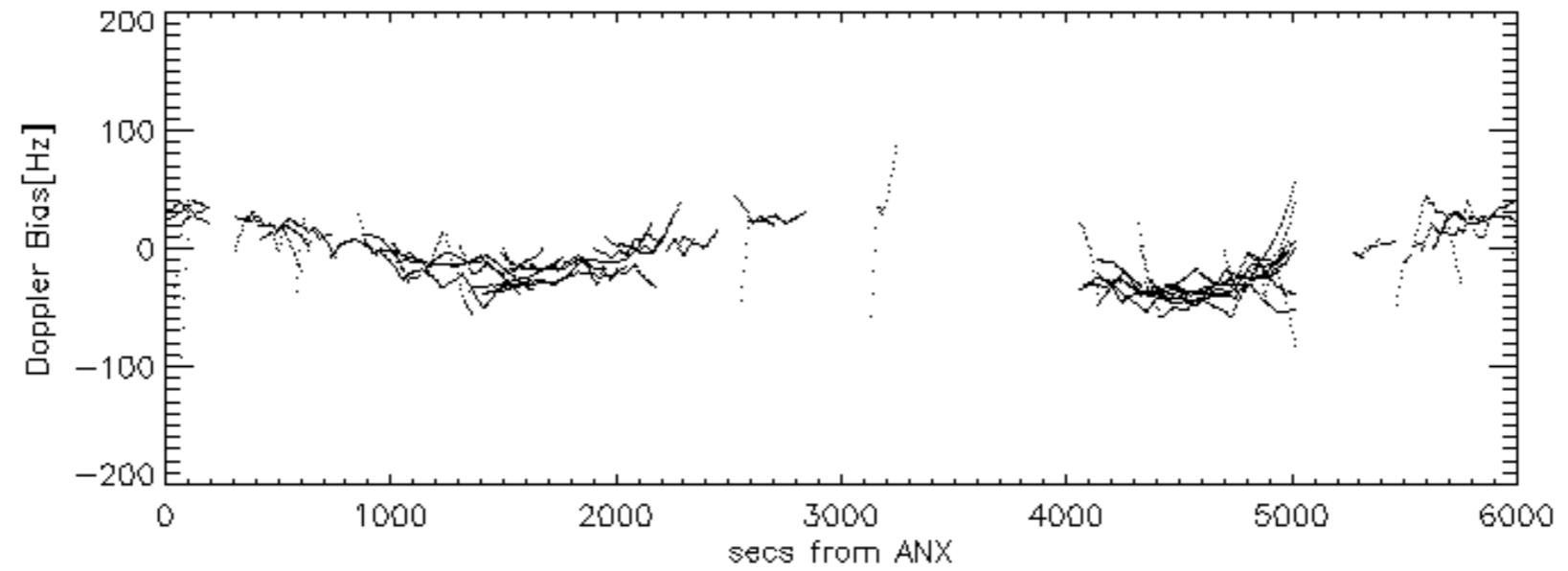
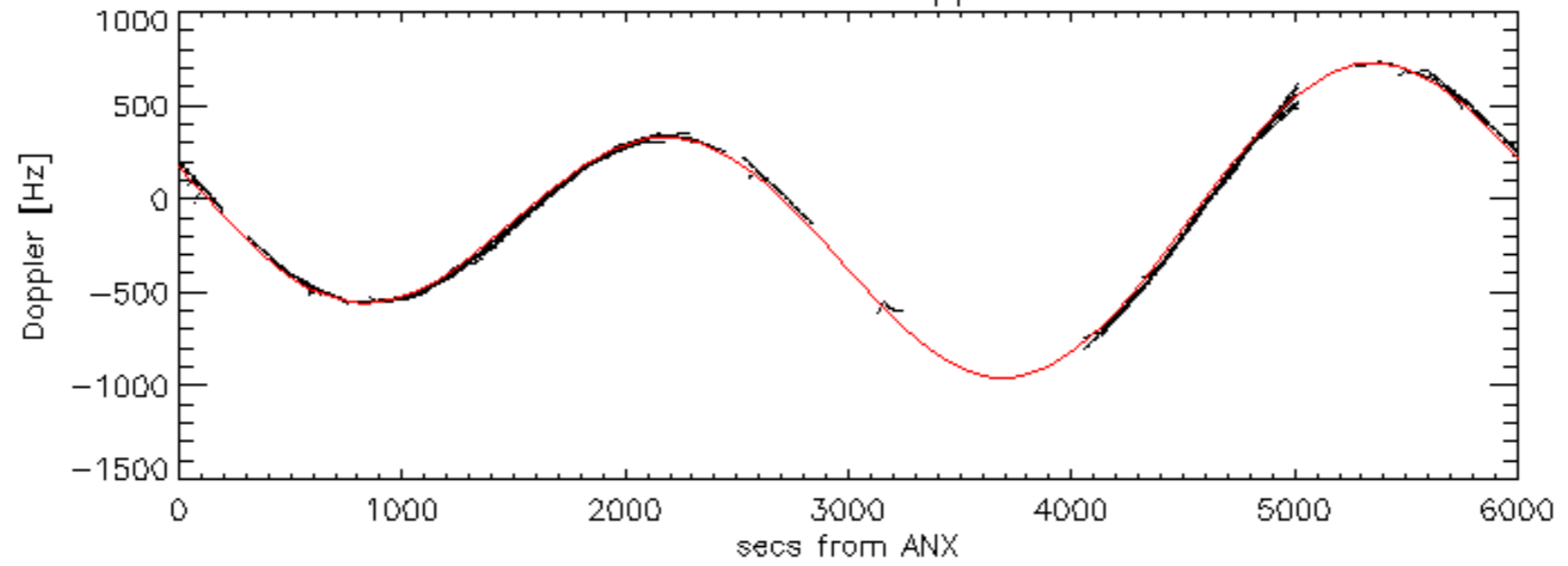
Doppler 'WVS' 'IS2' ascending

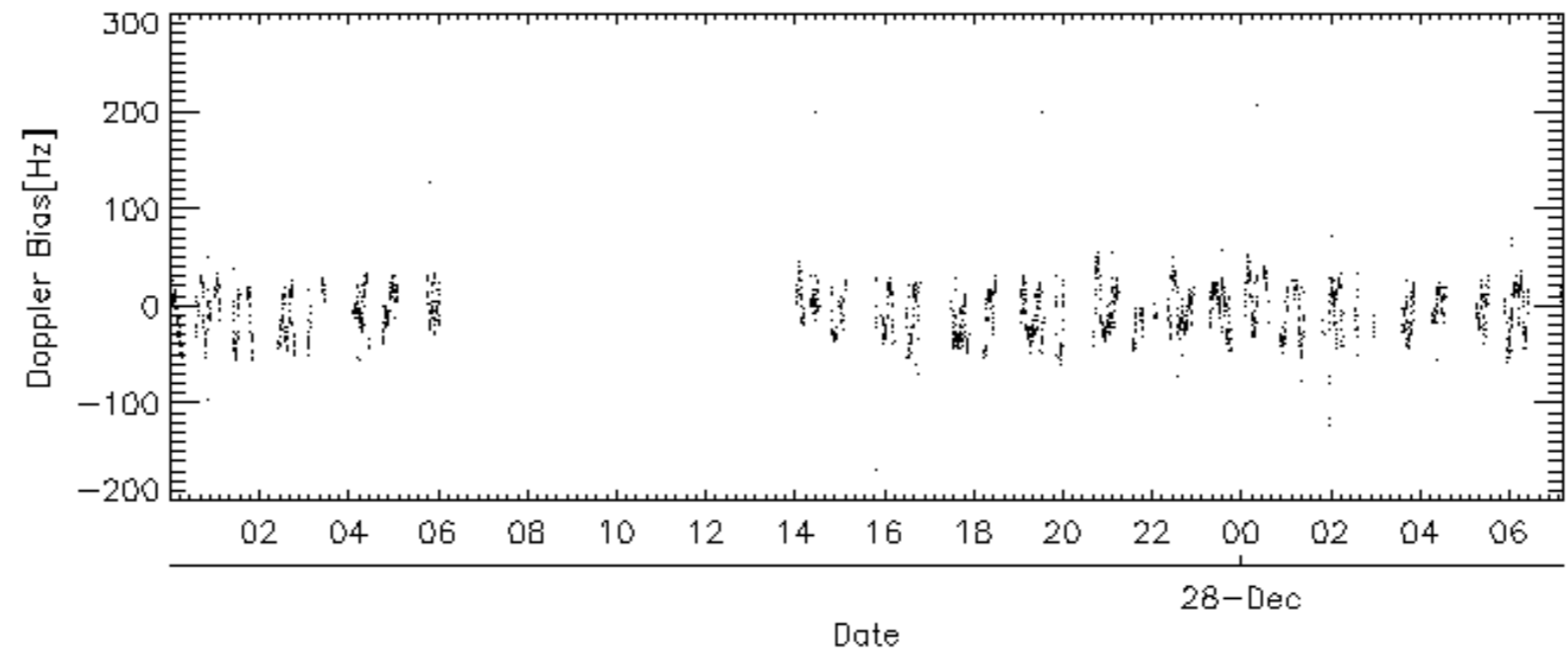
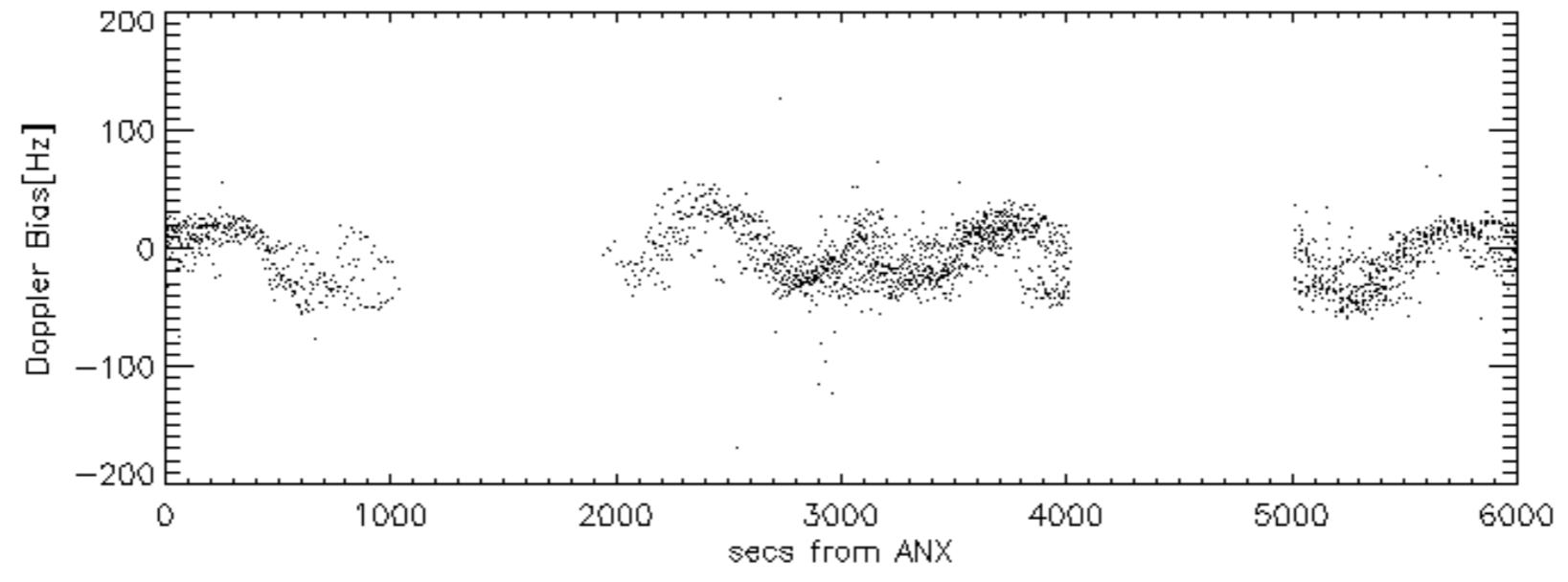
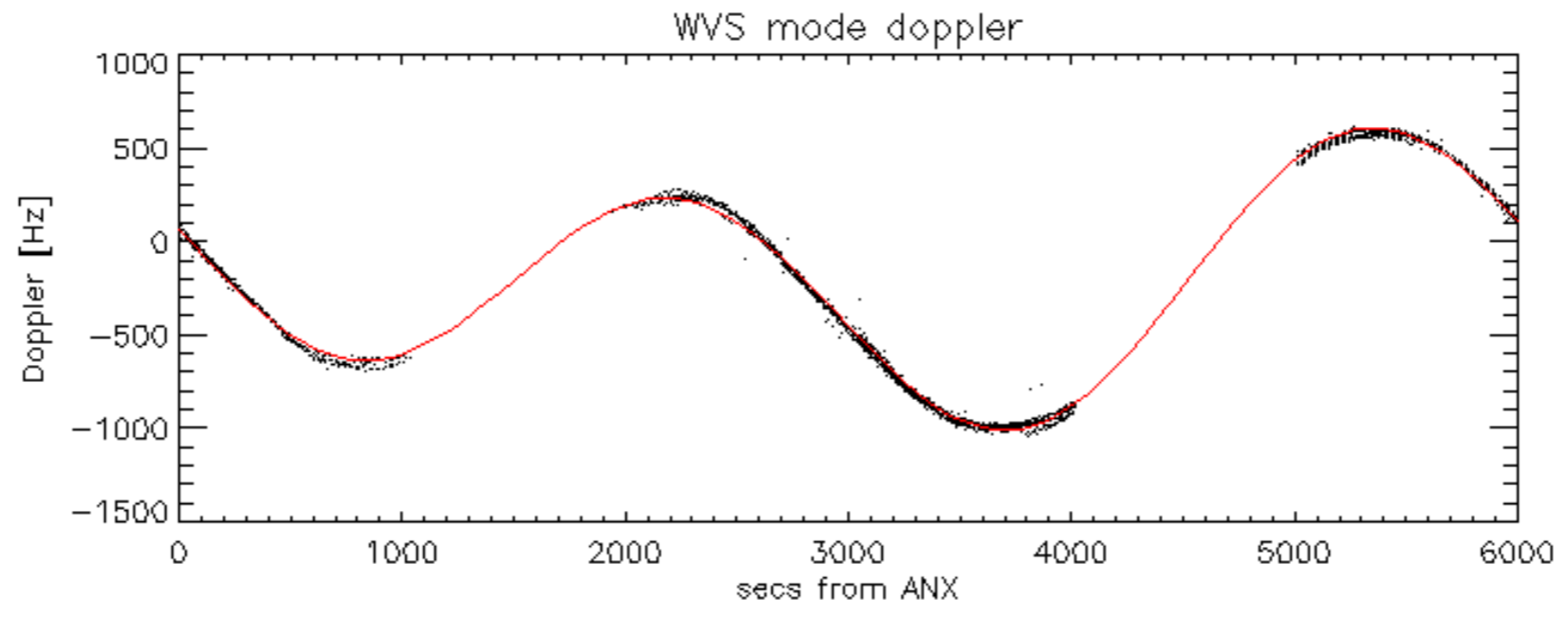


Doppler 'WVS' 'IS2' descending

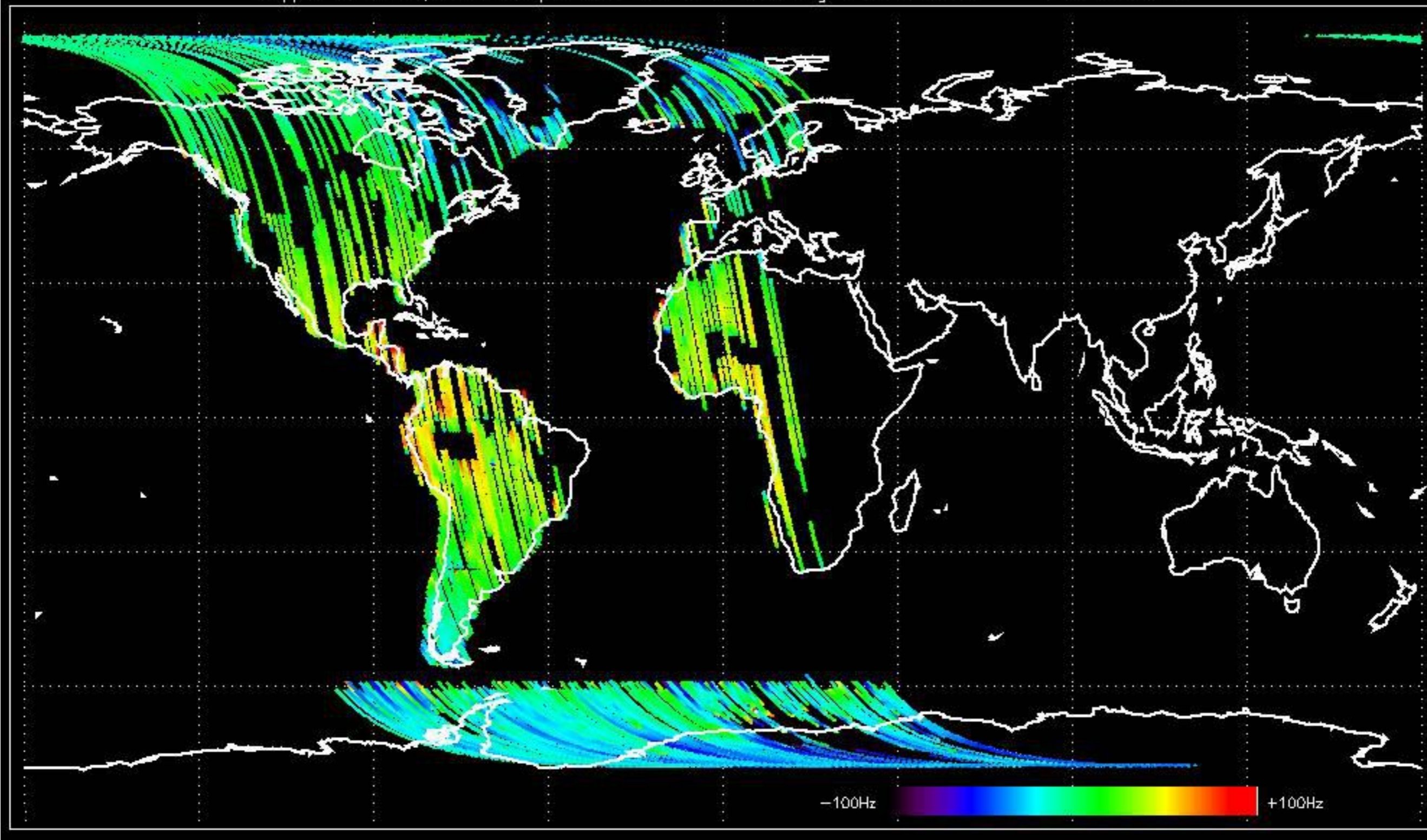


GM1 mode doppler

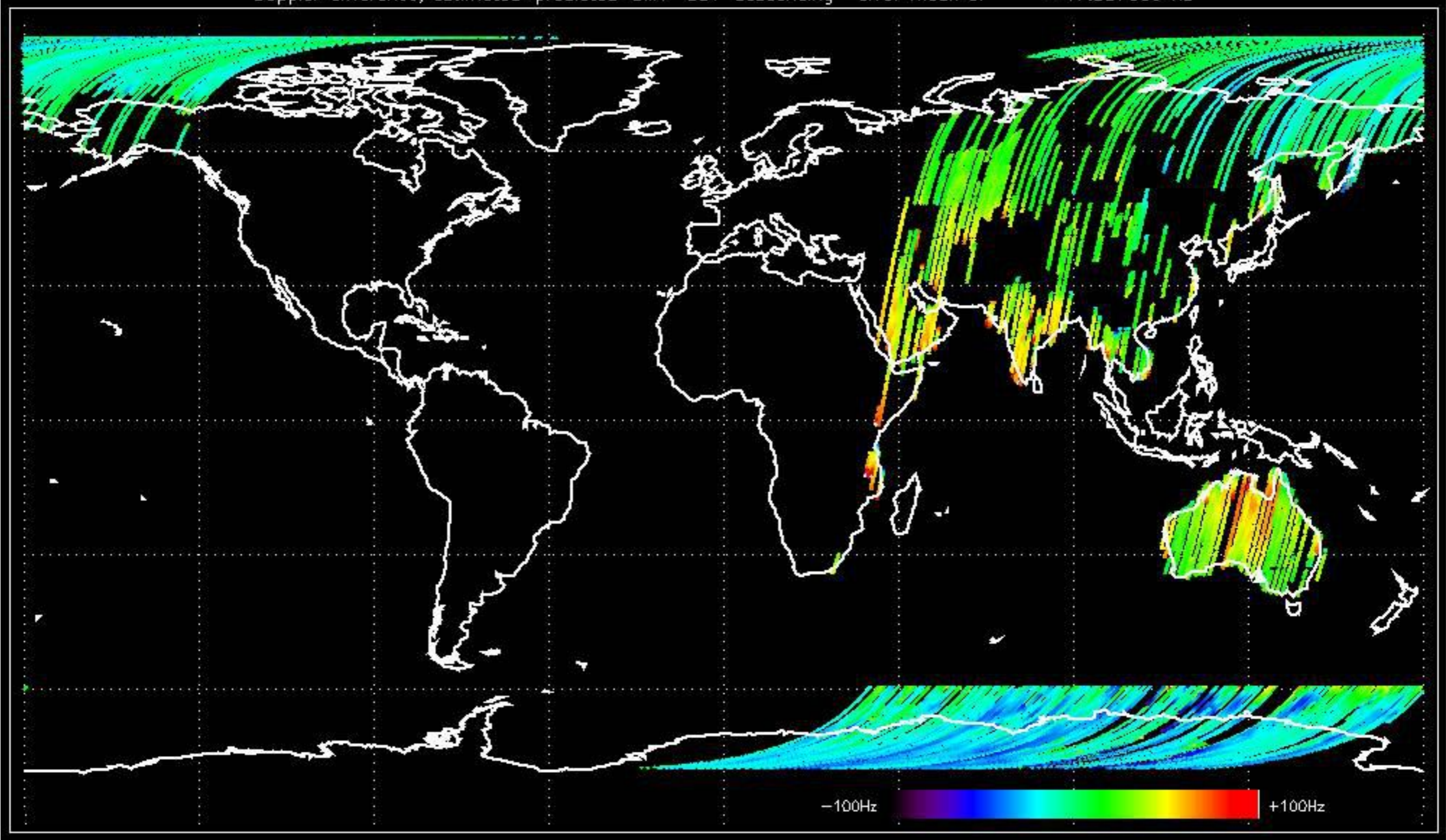




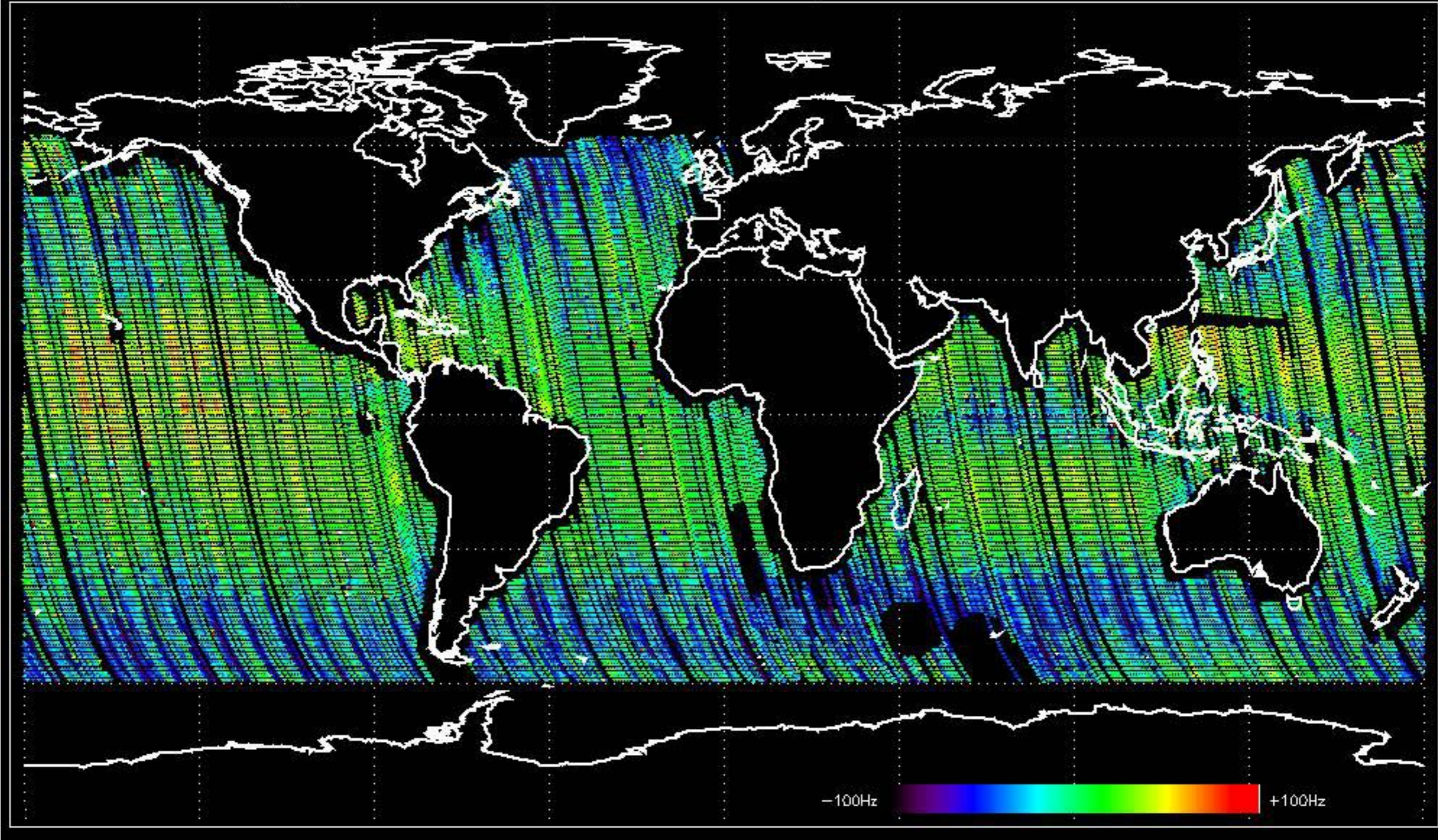
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.227669 Hz



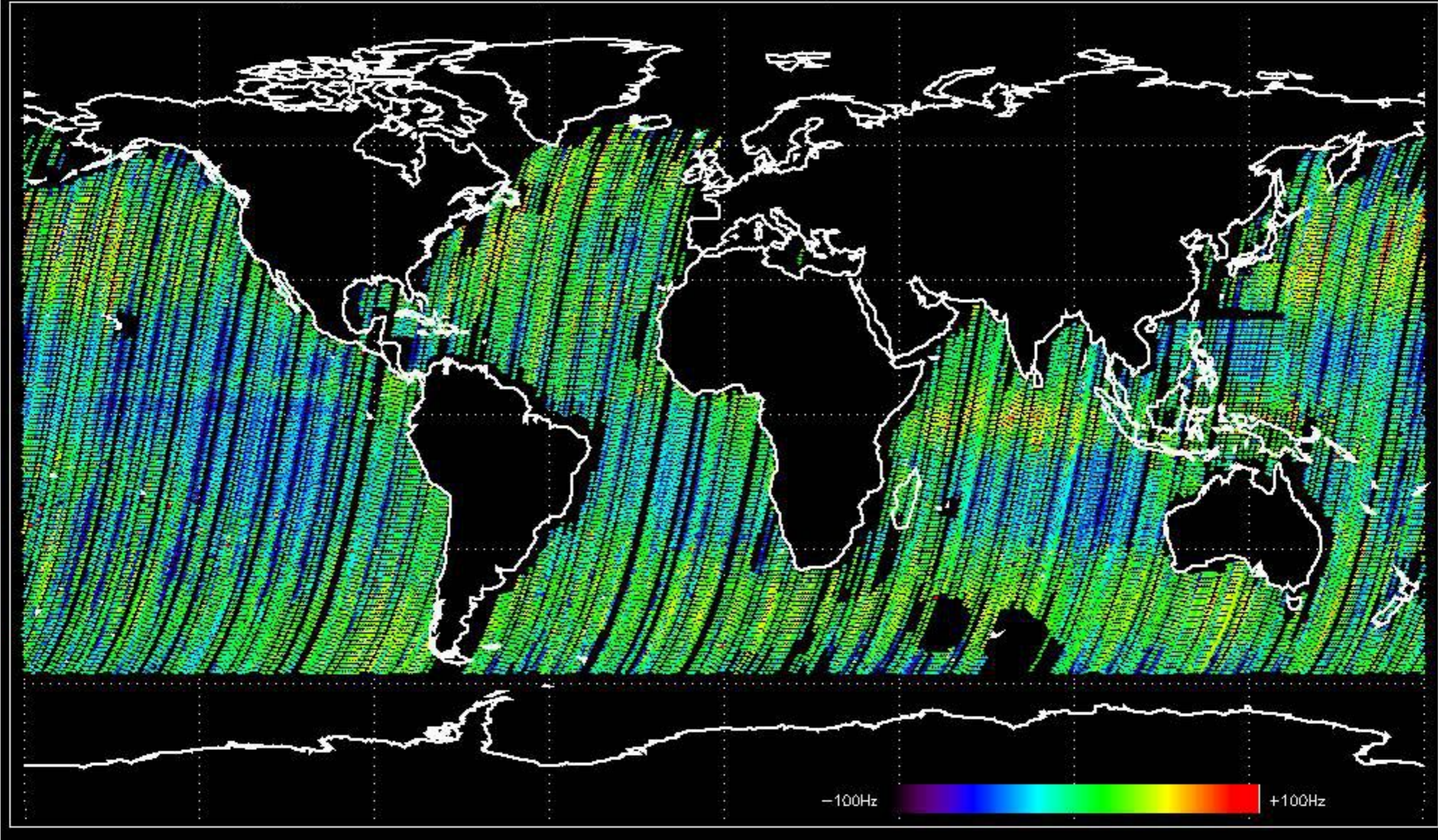
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.987666 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.101113 Hz

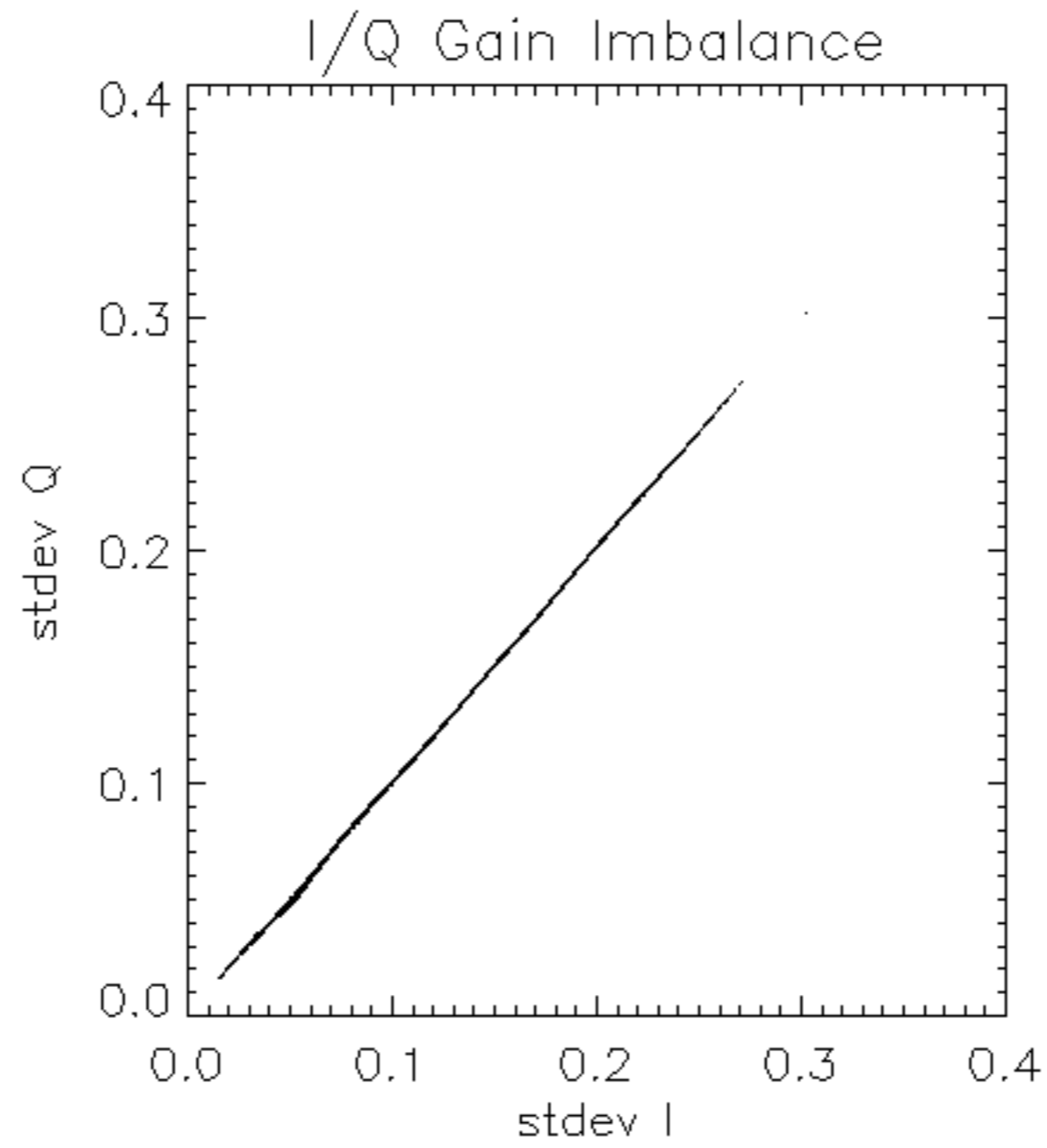


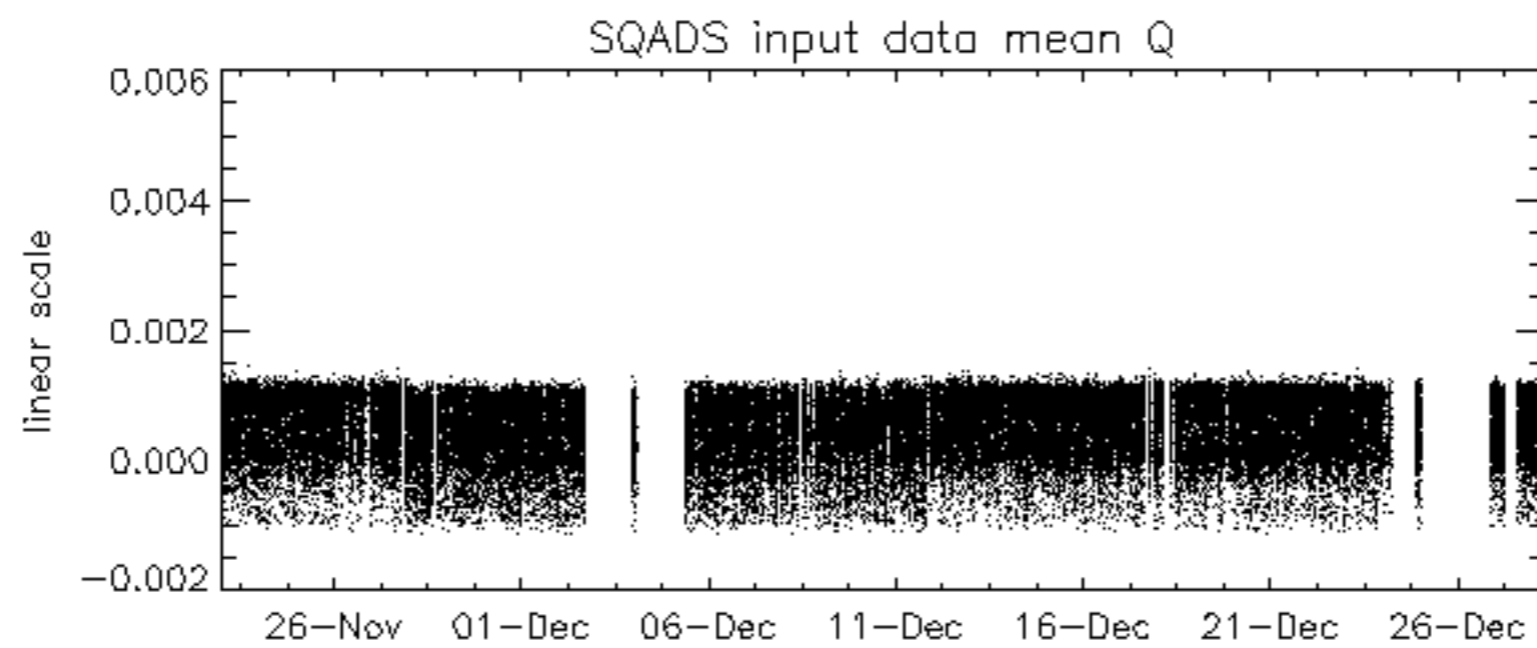
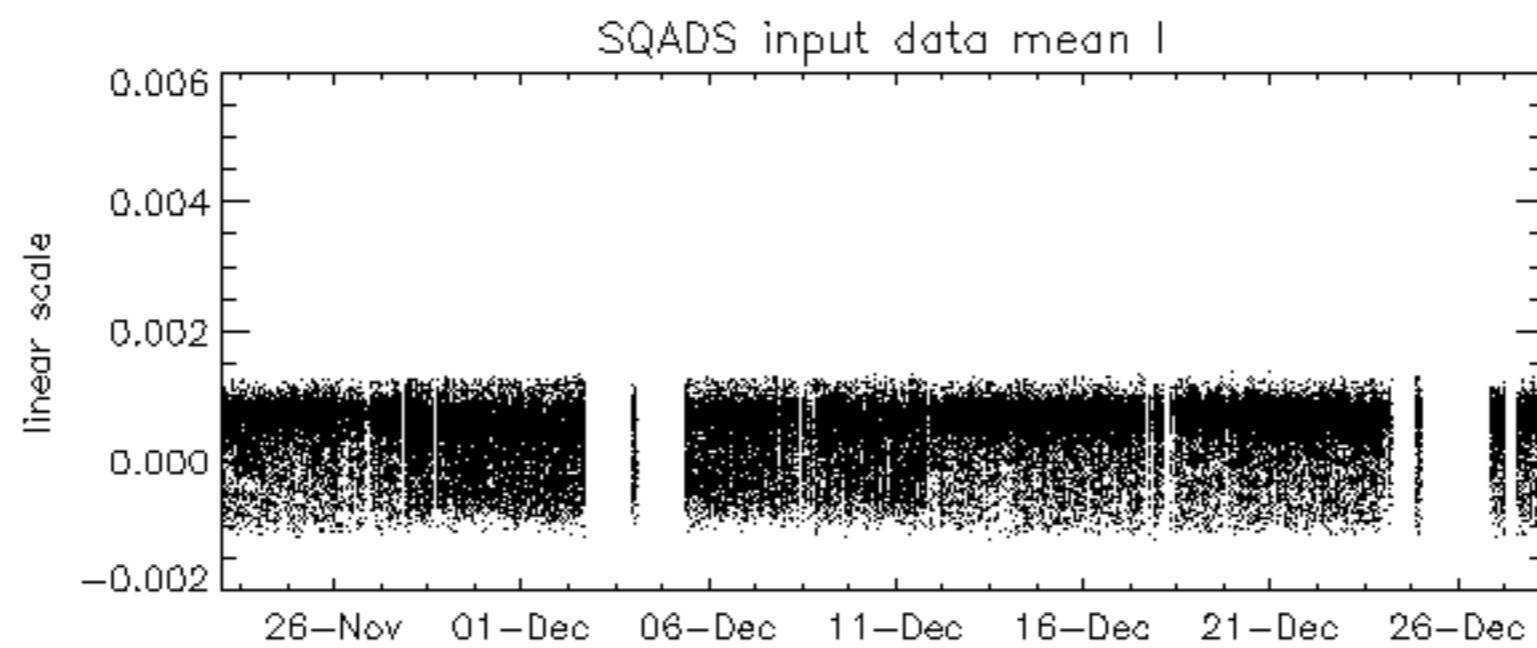
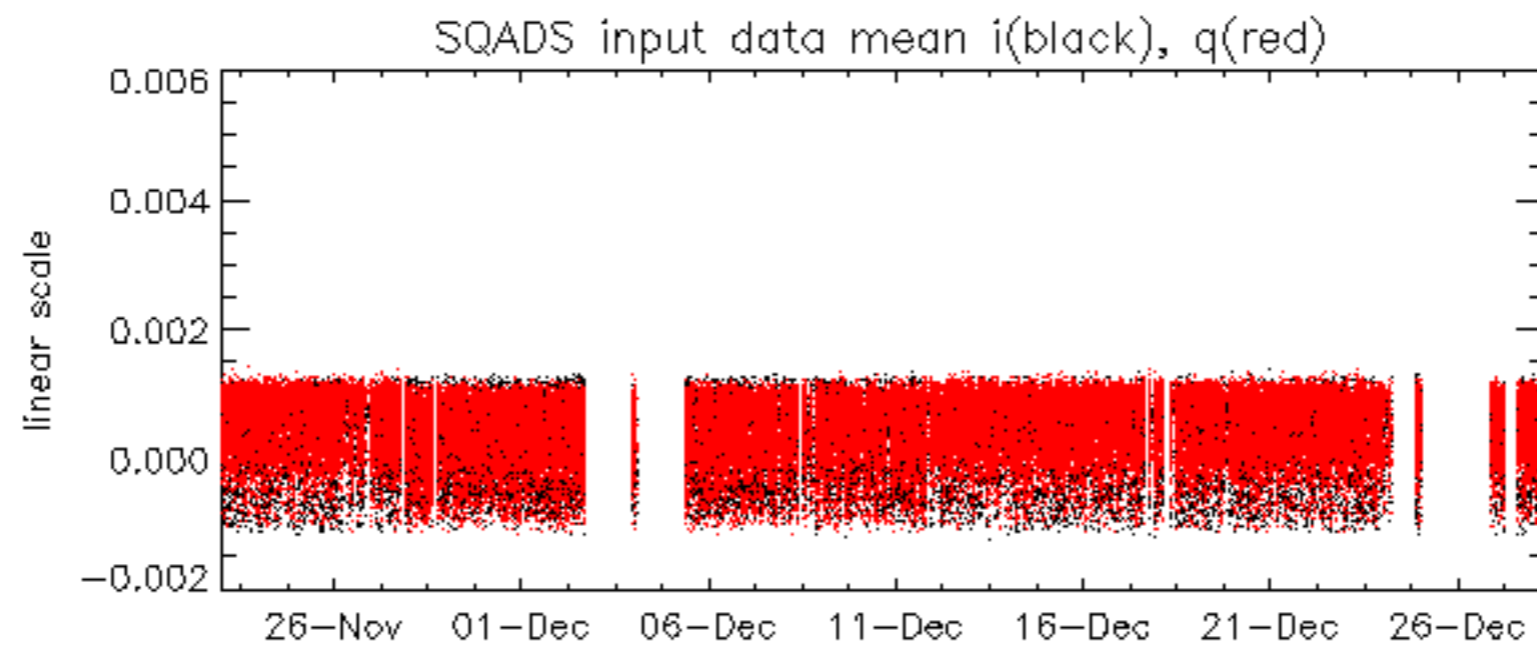
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.675512 Hz

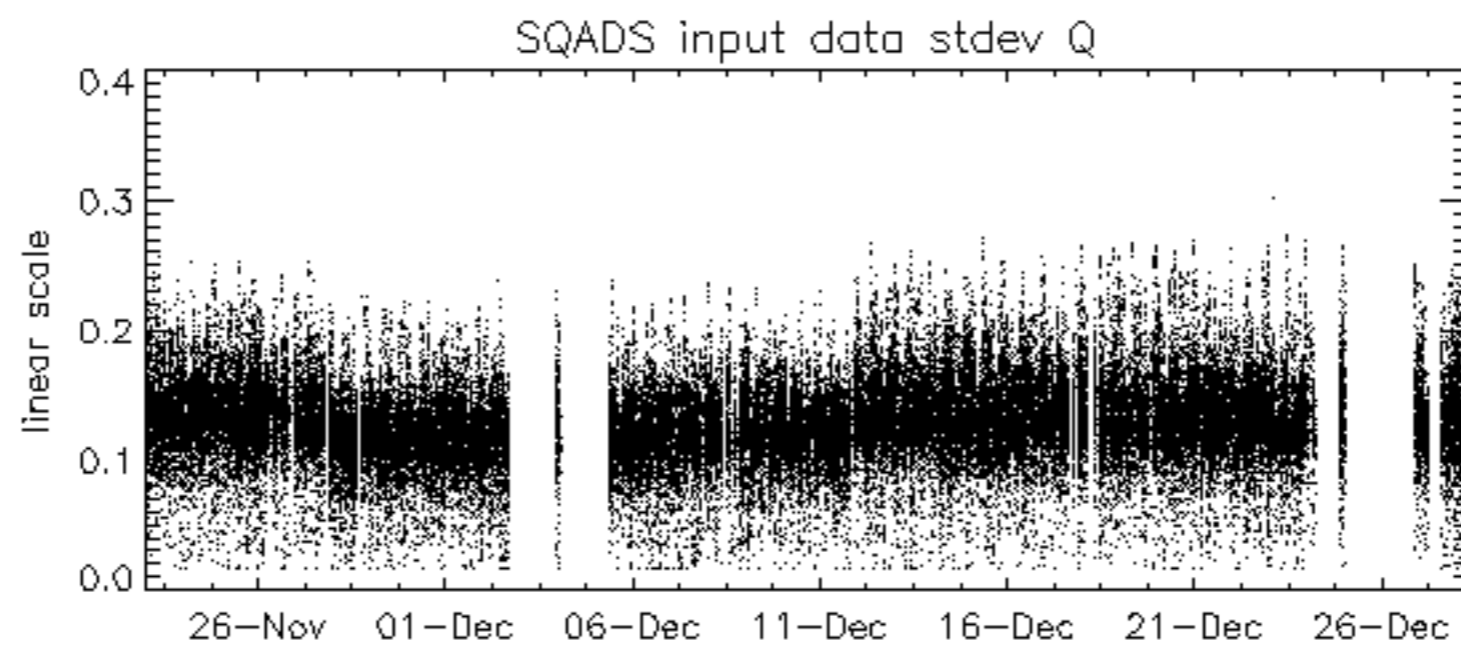
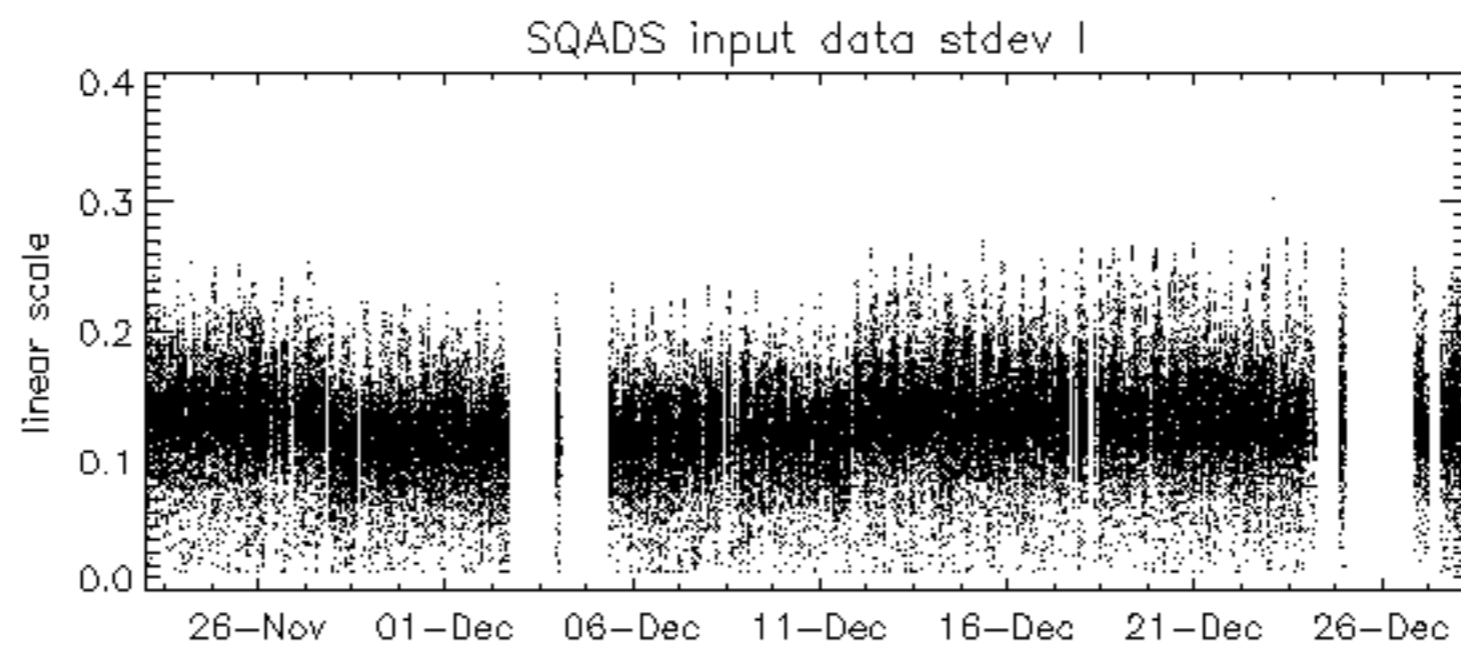
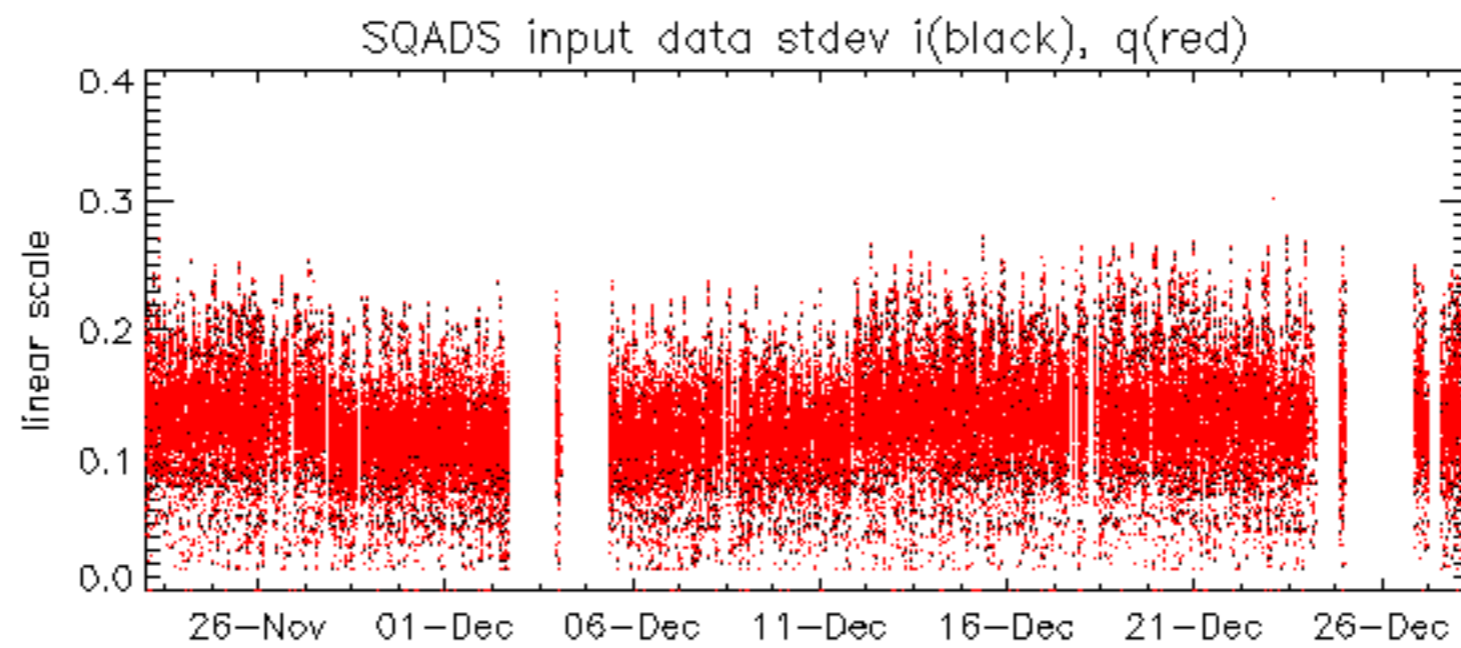


No anomalies observed on available MS products:

No anomalies observed.



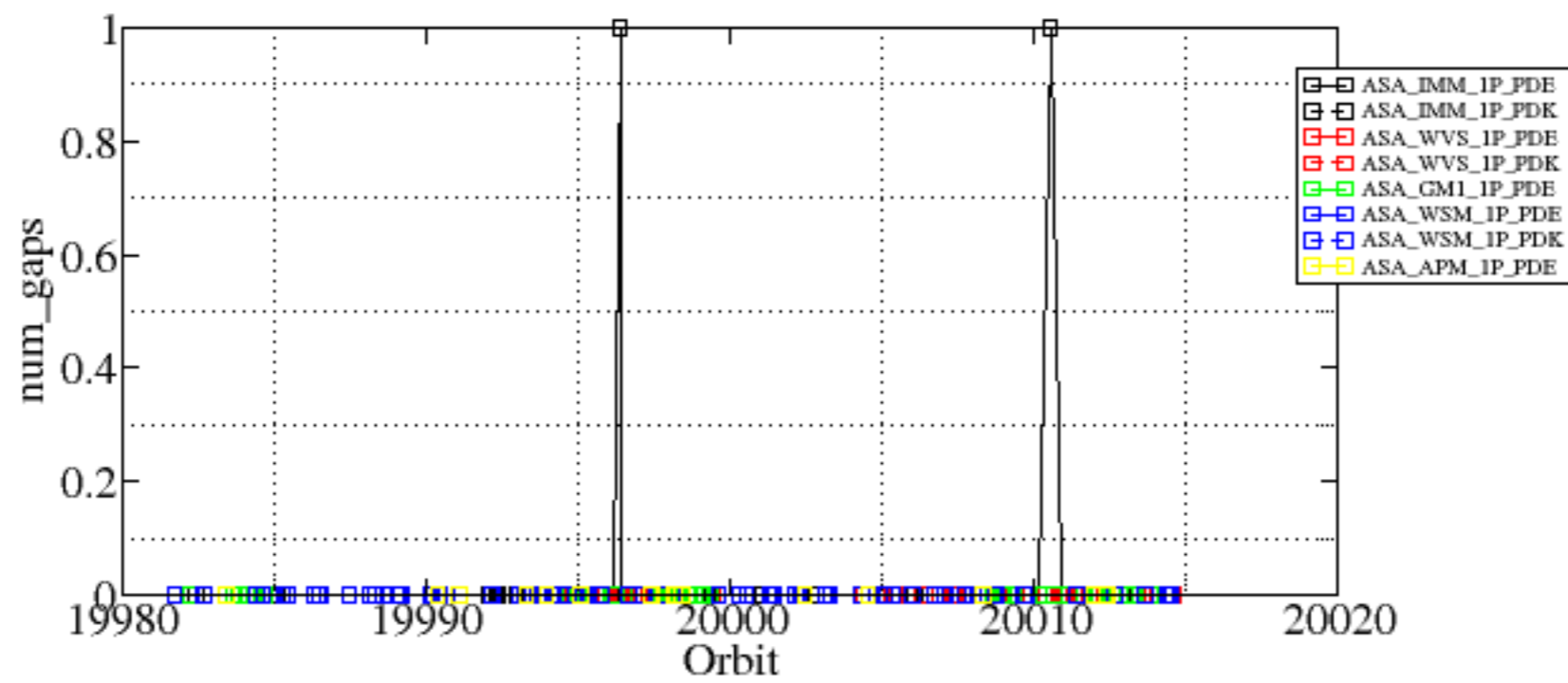




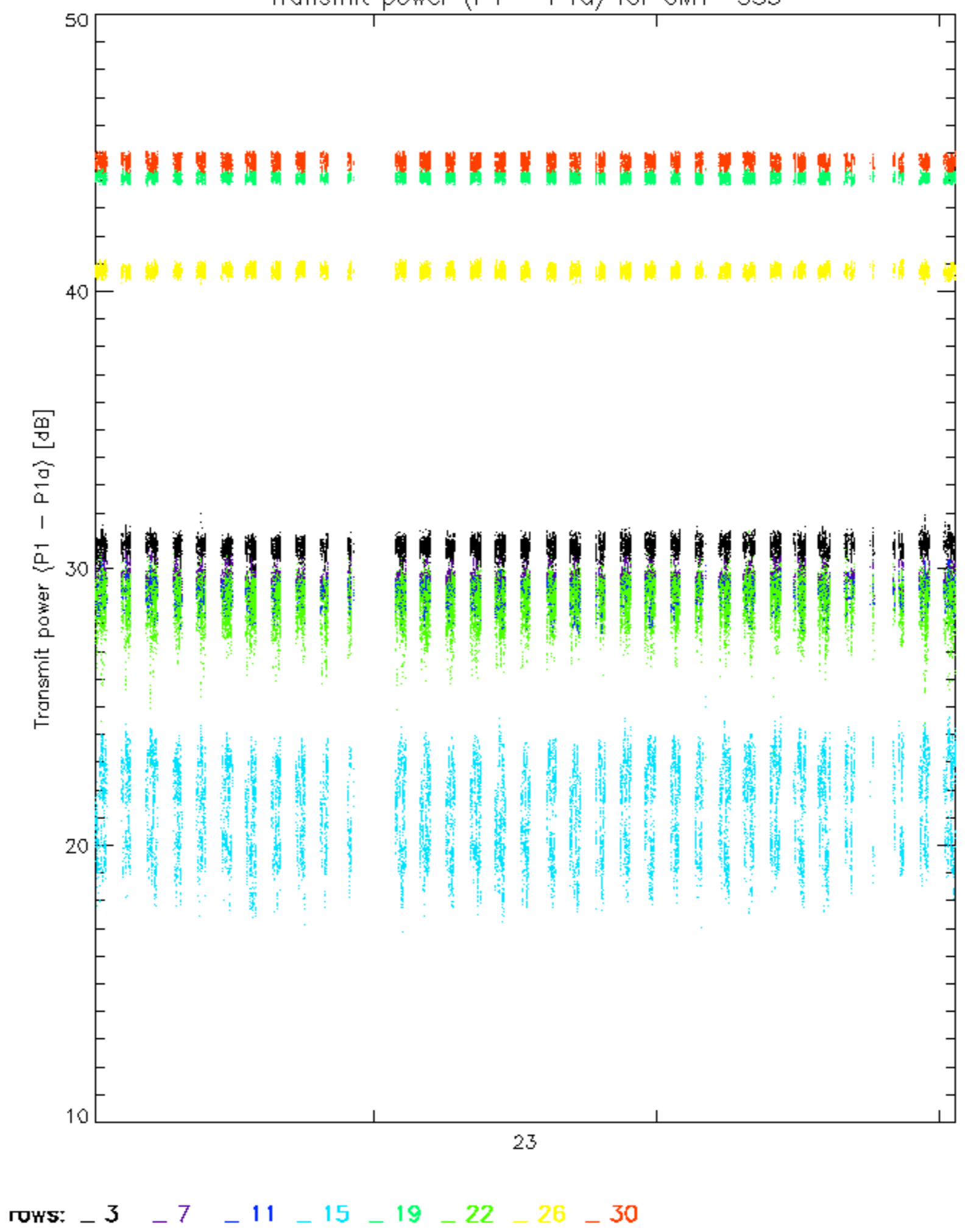
Summary of analysis for the last 3 days 2005122[678]

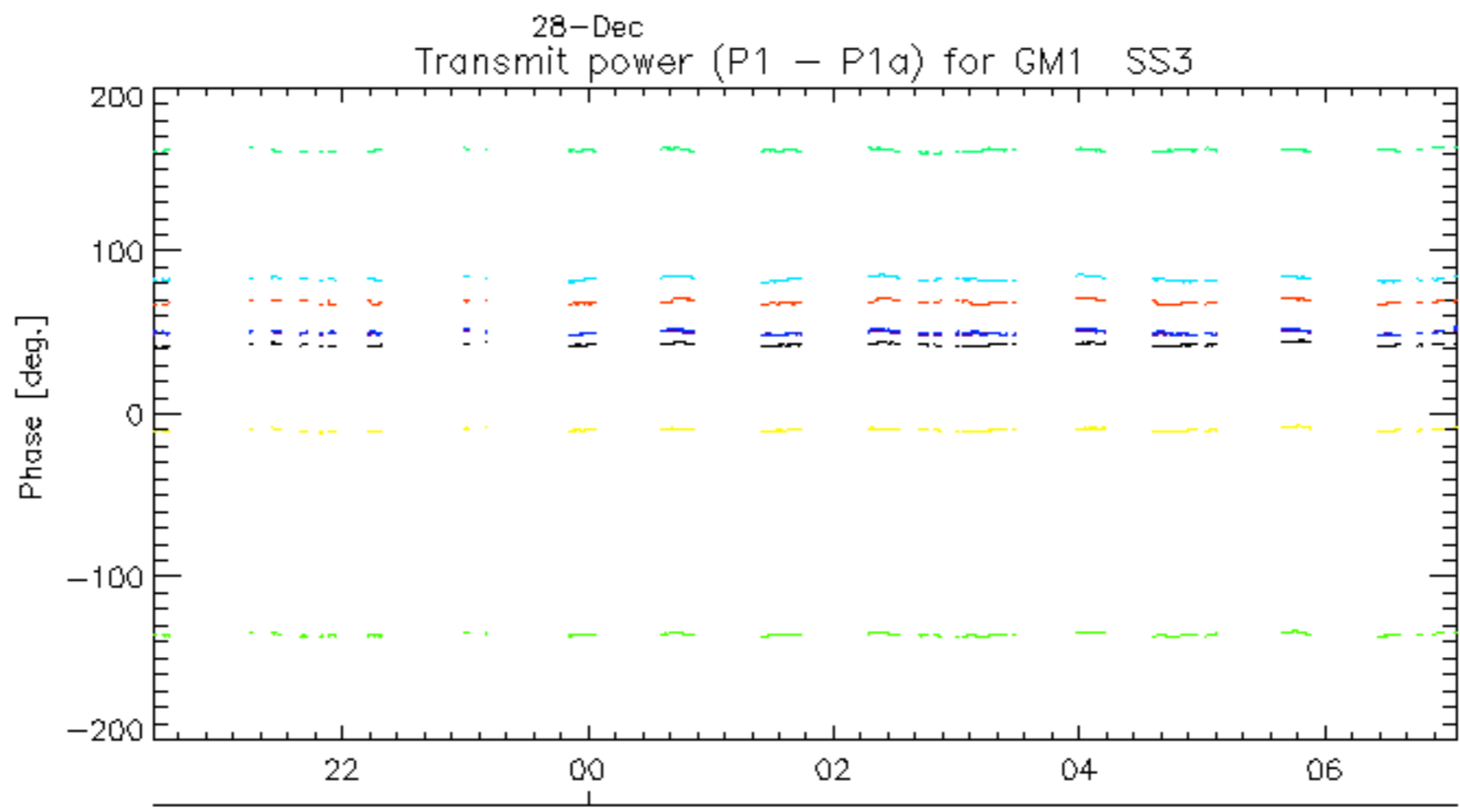
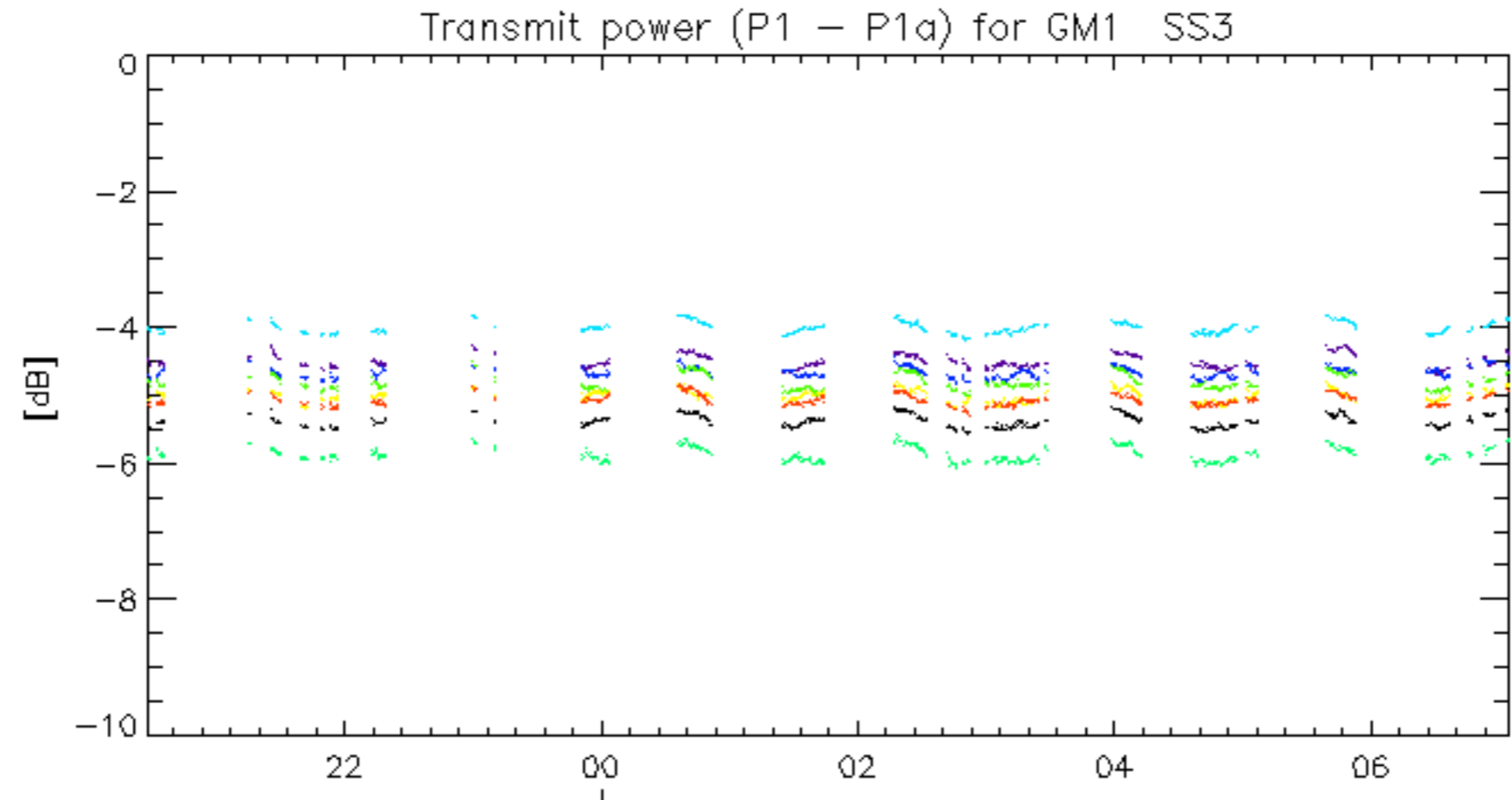
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051227_003806_00000502043_00403_19996_4808.N1	1	0
ASA_IMM_1PNPDE20051228_002245_000003782043_00417_20010_4893.N1	1	0
ASA_WSM_1PNPDE20051226_144425_000002632043_00397_19990_5732.N1	0	75
ASA_WSM_1PNPDE20051227_164743_000001832043_00413_20006_5861.N1	0	8
ASA_WSM_1PNPDK20051226_122120_000000672043_00396_19989_2885.N1	0	74



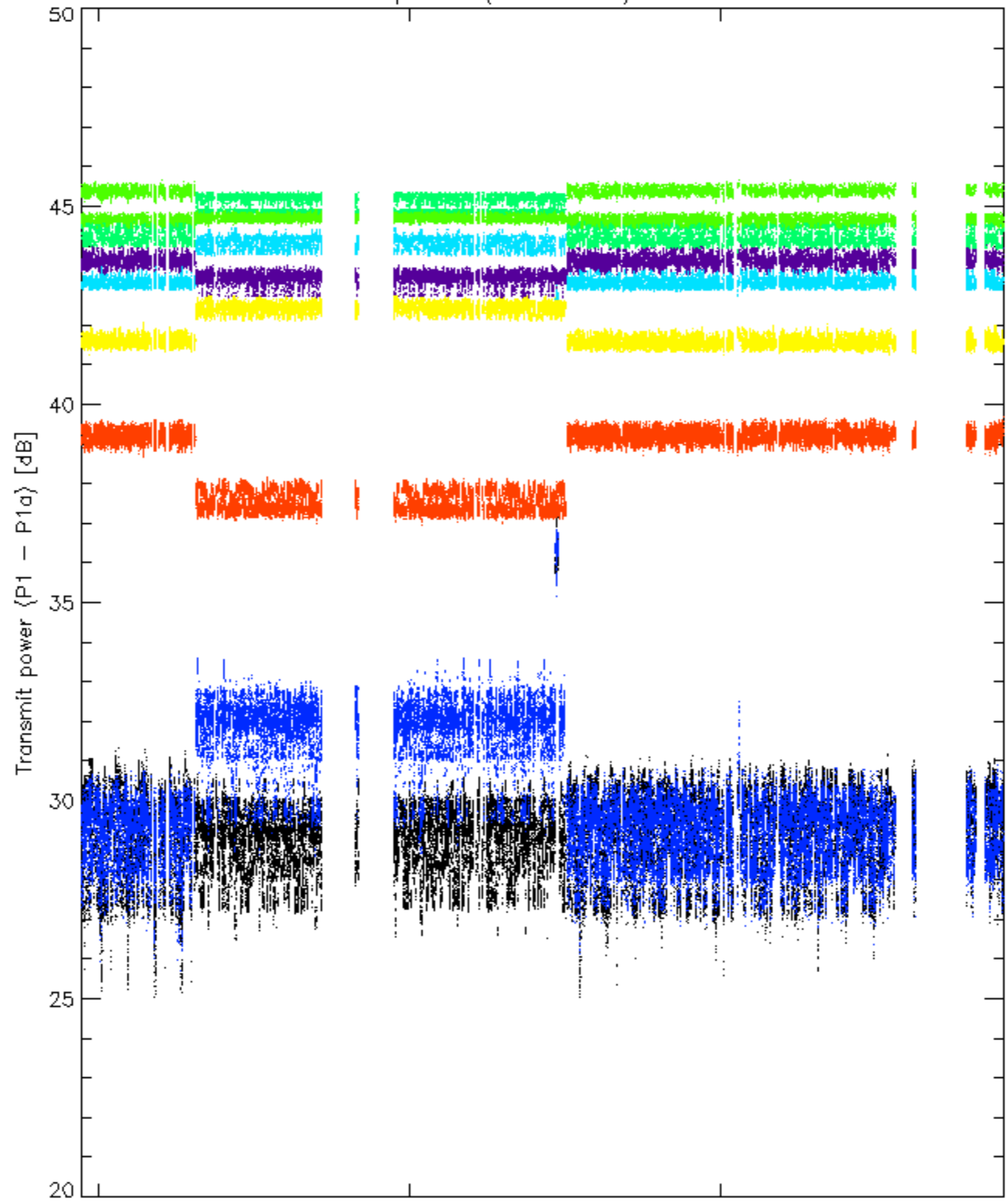
Transmit power (P1 - P1a) for GM1 SS3



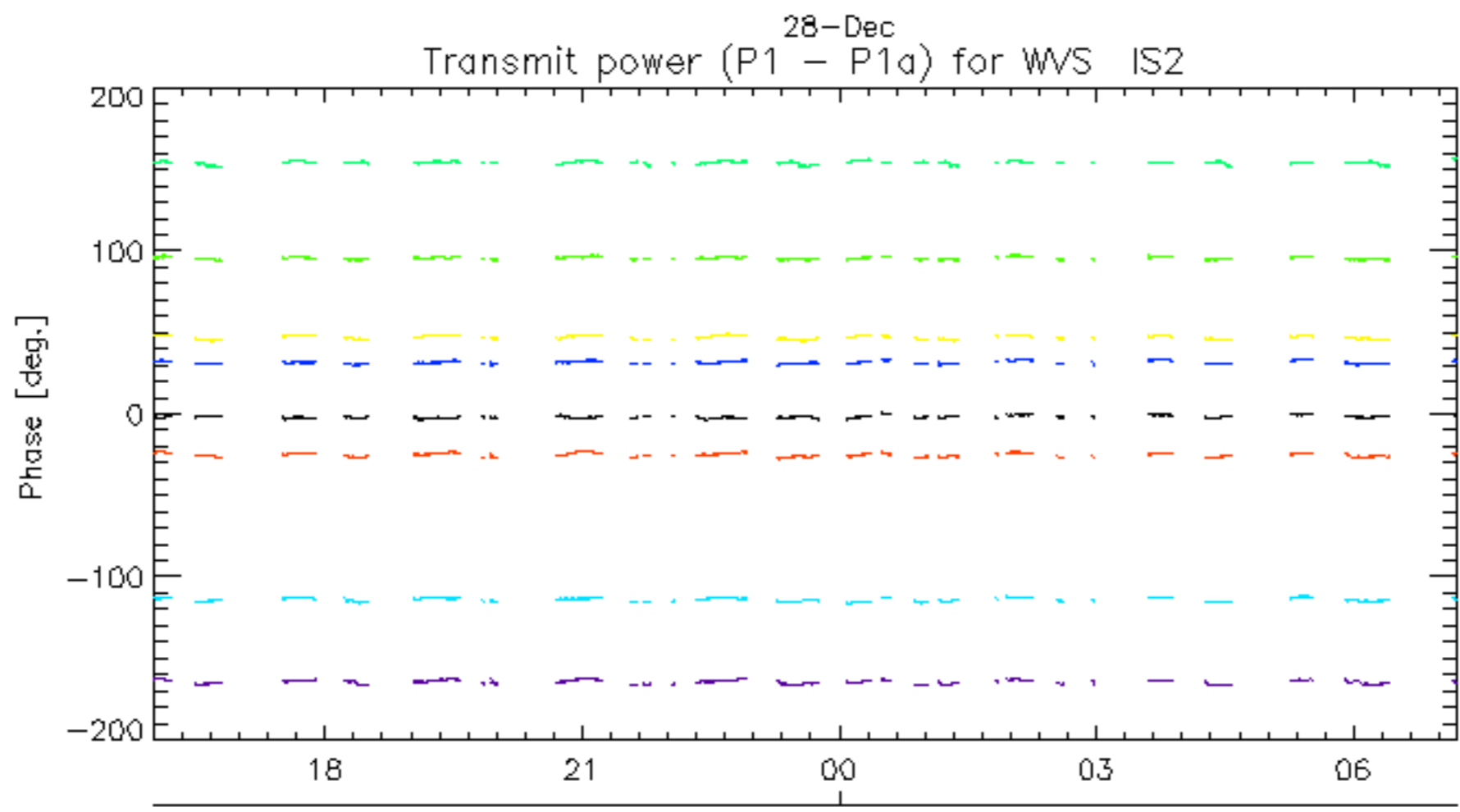
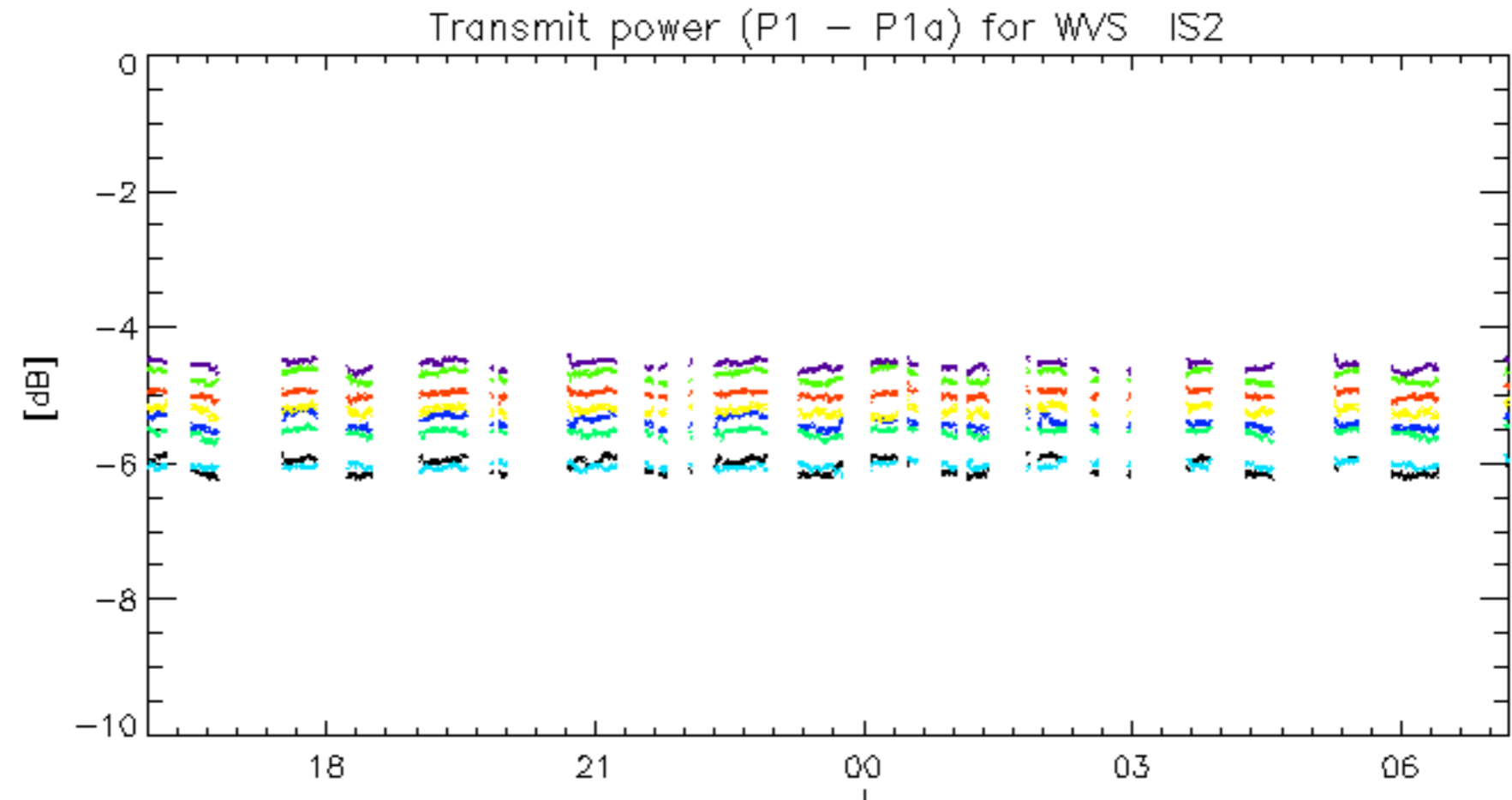


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



rows: 3 7 11 15 19 22 26 30



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

No unavailabilities during the reported period.