

PRELIMINARY REPORT OF 051224

last update on Sat Dec 24 10:50:02 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 2005-12-23 00:00:00 to 2005-12-24 10:50:03

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	22	0	8	0	10
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	22	0	8	0	10
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	22	0	8	0	10
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	22	0	8	0	10

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	26	22	19	6	28
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	26	22	19	6	28
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	26	22	19	6	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	26	22	19	6	28

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	-3.723808	0.252876	-0.210377
7	P1	-2.759055	0.129262	-0.153144
11	P1	-4.144667	0.032693	0.019498
15	P1	-5.116585	1.717680	-0.587104
19	P1	-3.045317	0.065106	-0.136723
22	P1	-4.437797	0.022535	-0.040203
26	P1	-4.394279	0.060759	0.108319
30	P1	-5.658276	0.034796	-0.073528
3	P1	-15.804202	2.796149	-0.721883
7	P1	-15.334322	2.690030	-0.805027
11	P1	-16.328459	0.480738	-0.150465
15	P1	-12.764704	0.972603	-0.150576
19	P1	-13.438826	0.363722	-0.315996
22	P1	-15.981597	0.633150	0.094684
26	P1	-15.106618	1.081389	-0.317623
30	P1	-15.601151	2.488374	-0.634120

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.827085	0.111891	0.195874
7	P2	-22.546080	0.105656	0.033906
11	P2	-16.533476	0.128982	0.248708
15	P2	-7.278118	0.104264	0.018910
19	P2	-9.218476	0.102831	0.007014
22	P2	-17.879009	0.112417	-0.080346
26	P2	-16.372837	0.131543	0.041470
30	P2	-19.788183	0.118147	0.061710

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.235810	0.007570	0.000621
7	P3	-8.235810	0.007570	0.000621
11	P3	-8.235810	0.007570	0.000621
15	P3	-8.235810	0.007570	0.000621
19	P3	-8.235810	0.007570	0.000621
22	P3	-8.235810	0.007570	0.000621
26	P3	-8.235810	0.007570	0.000621
30	P3	-8.235810	0.007570	0.000621

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	-3.706009	0.008318	-0.011301
7	P1	-2.771835	0.012336	0.011964
11	P1	-2.875702	0.015568	-0.000088
15	P1	-3.413371	0.022114	-0.018716
19	P1	-3.393026	0.013853	-0.013980
22	P1	-5.127474	0.018761	0.021918
26	P1	-5.846560	0.016429	-0.029795
30	P1	-5.283657	0.033240	-0.016276
3	P1	-11.483974	0.041066	-0.010669
7	P1	-9.964520	0.047339	-0.016276
11	P1	-10.052412	0.060129	0.020296
15	P1	-10.571630	0.079326	0.100154
19	P1	-15.519985	0.074218	-0.054969
22	P1	-20.949732	0.969299	-0.080459
26	P1	-17.157551	0.300406	-0.005361
30	P1	-18.267118	0.303034	0.342858

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.609941	0.029818	0.059038
7	P2	-23.046095	0.056526	-0.032637
11	P2	-11.608868	0.020596	0.126126
15	P2	-4.990622	0.021128	-0.027333
19	P2	-6.971457	0.021702	-0.042200
22	P2	-8.205930	0.022712	-0.041449
26	P2	-24.052811	0.030556	-0.016317
30	P2	-22.130669	0.017883	-0.041540

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.077868	0.002457	-0.008199
7	P3	-8.078043	0.002462	-0.007889
11	P3	-8.077971	0.002443	-0.008311
15	P3	-8.077903	0.002446	-0.008516
19	P3	-8.078016	0.002459	-0.008138
22	P3	-8.078009	0.002459	-0.008030
26	P3	-8.078004	0.002427	-0.007909
30	P3	-8.077703	0.002452	-0.008341

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	0.000459818
	stdev	2.18983e-07
MEAN Q	mean	0.000474855
	stdev	2.36779e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128989
	stdev	0.00110510
STDEV Q	mean	0.129273
	stdev	0.00111747



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005122[234]

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_1PNPDE20051222_200902_00000502043_00343_19936_4599.N1	0	11
ASA_IMM_1PNPDK20051222_125406_000001212043_00339_19932_9583.N1	1	0
ASA_WSM_1PNPDE20051222_160845_000002082043_00341_19934_5342.N1	0	44







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

✕

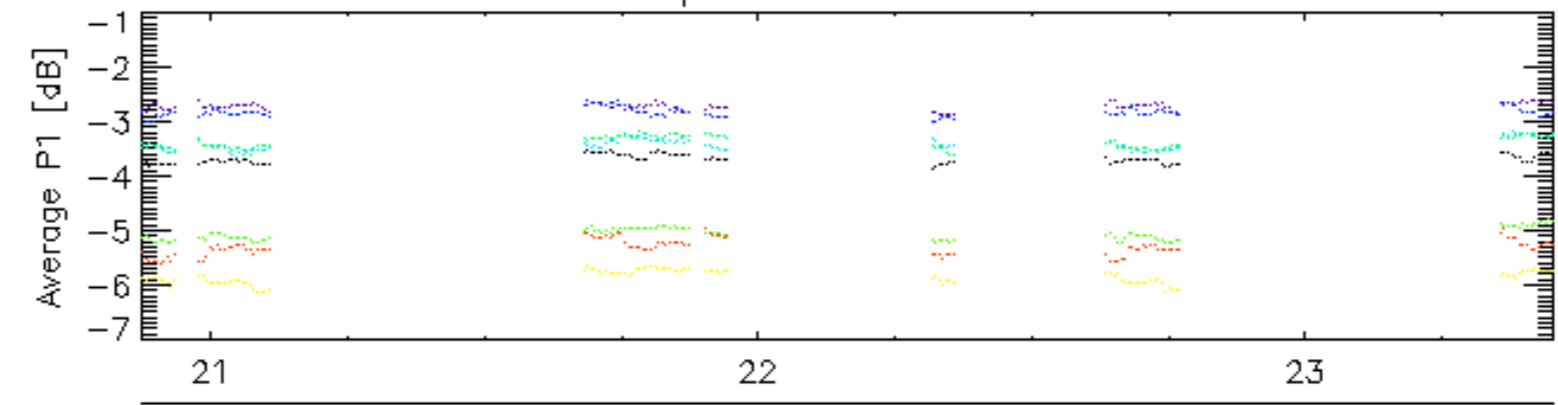
Descending

7.6 - Doppler evolution versus ANX for GM1

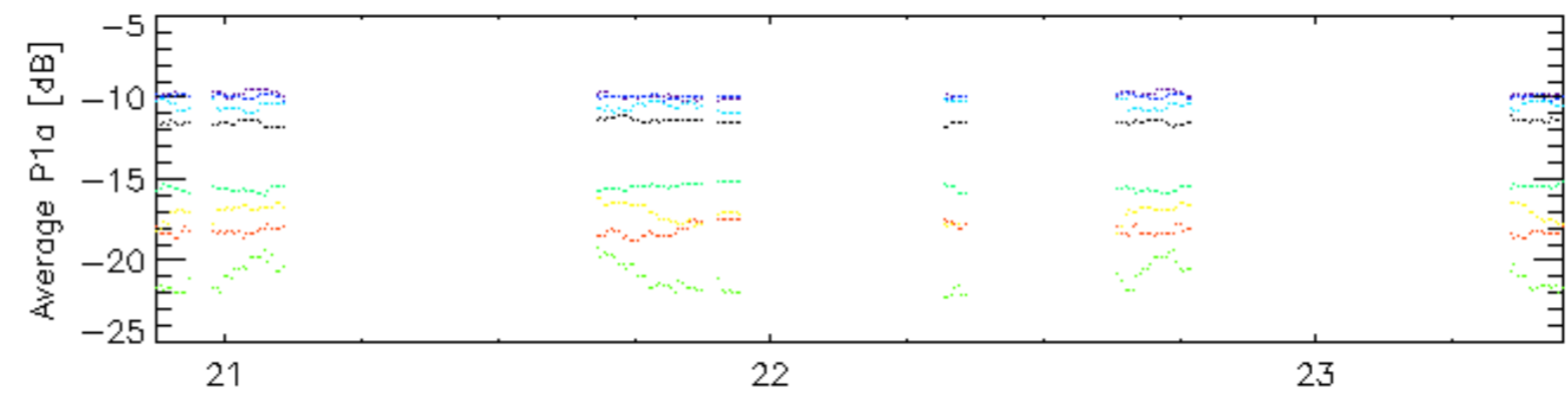
Evolution Doppler error versus ANX

✕

Cal pulses for GM1 SS3

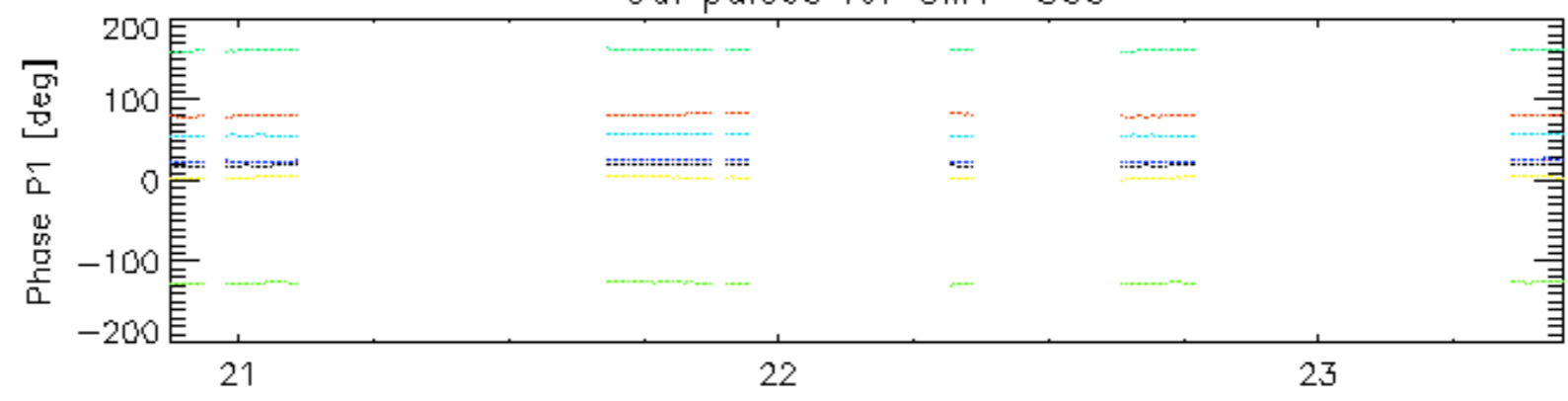


23-Dec

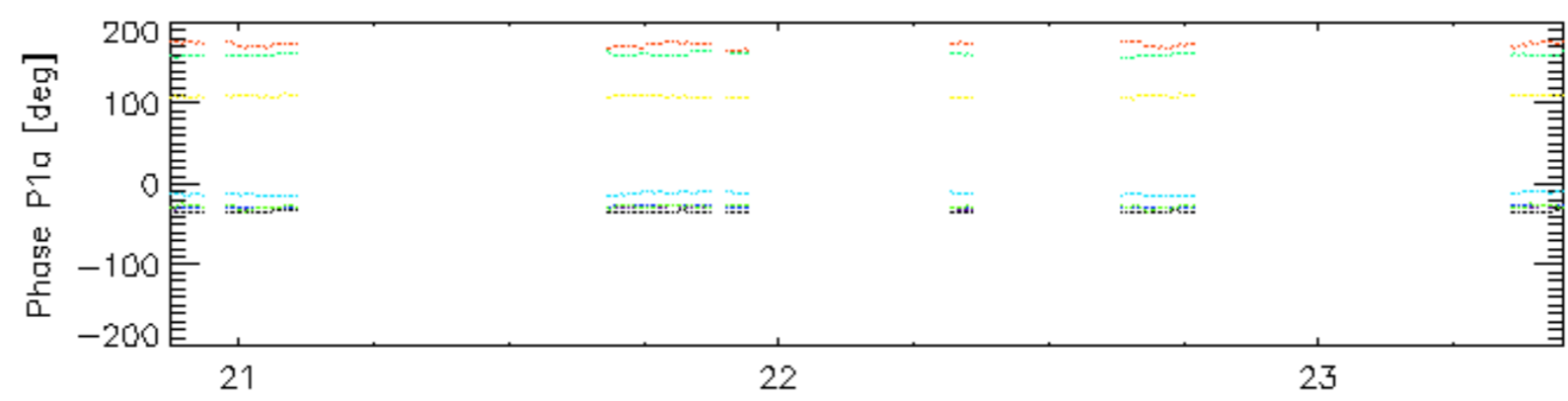


23-Dec

Cal pulses for GM1 SS3

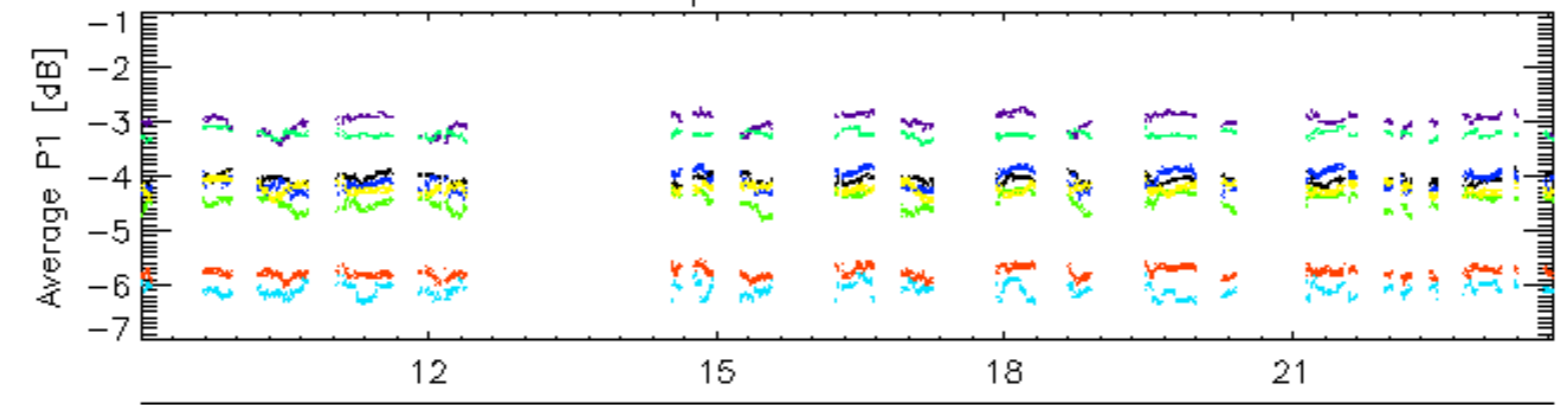


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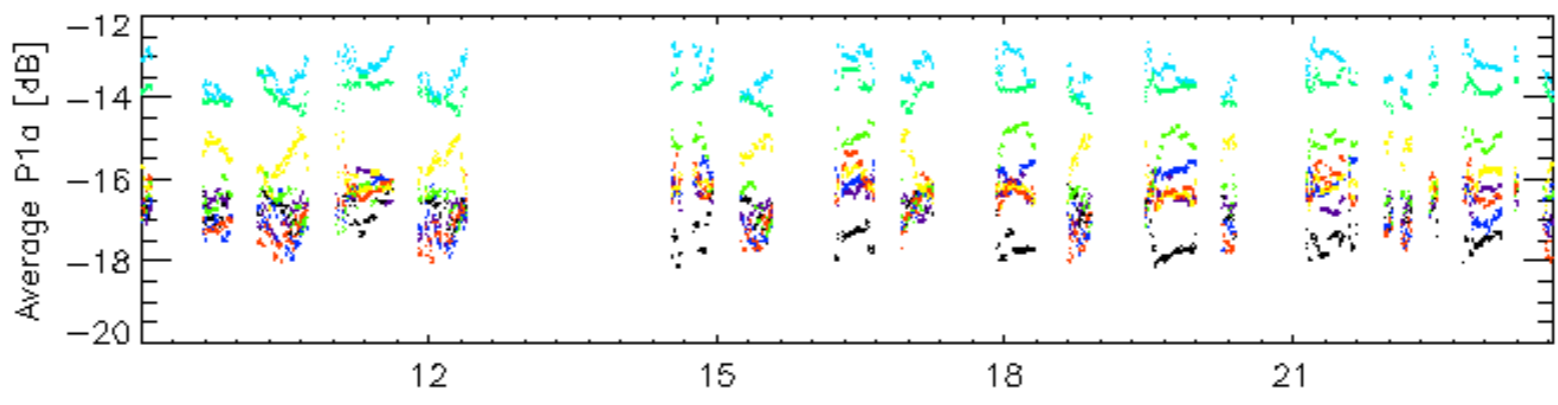


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 ^{23-Dec}

Cal pulses for WVS IS2

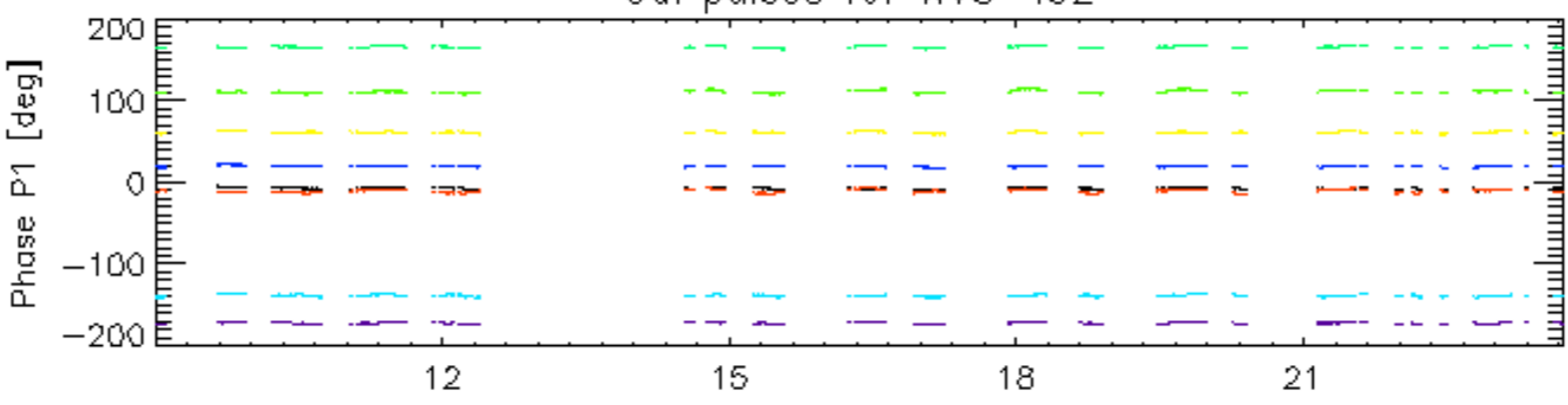


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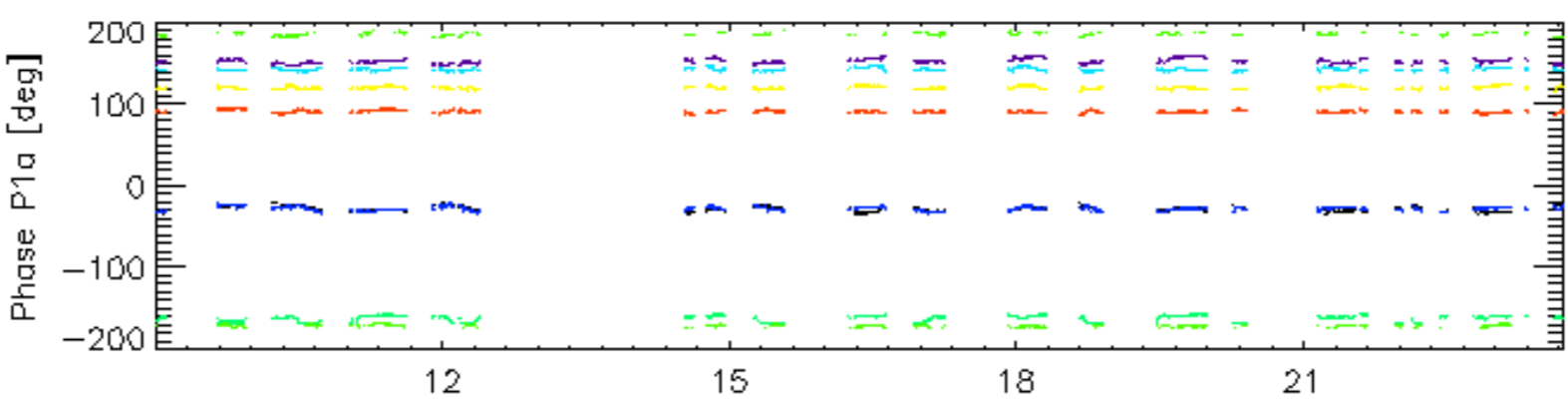


23-Dec

Cal pulses for WVS IS2

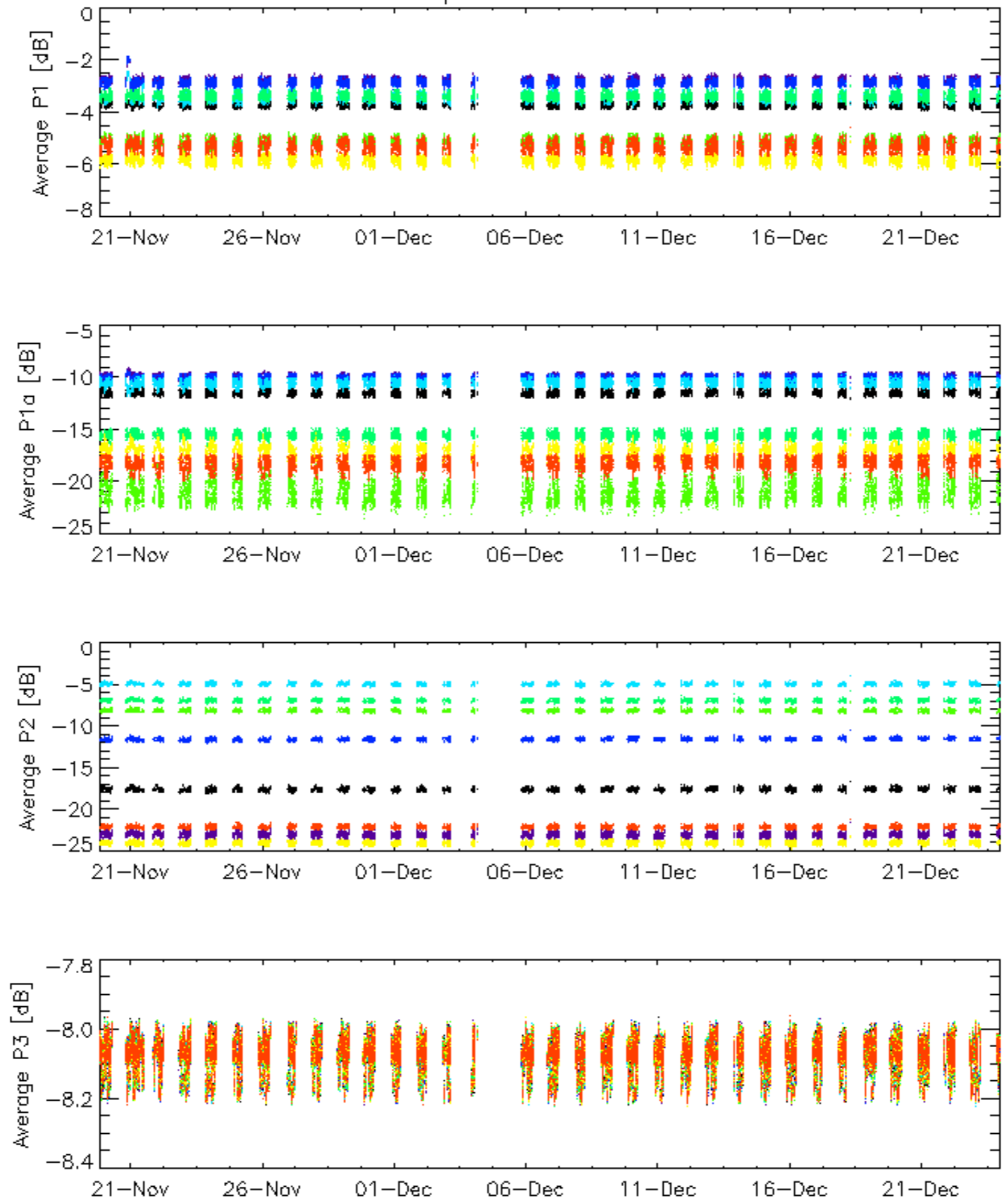


23-Dec



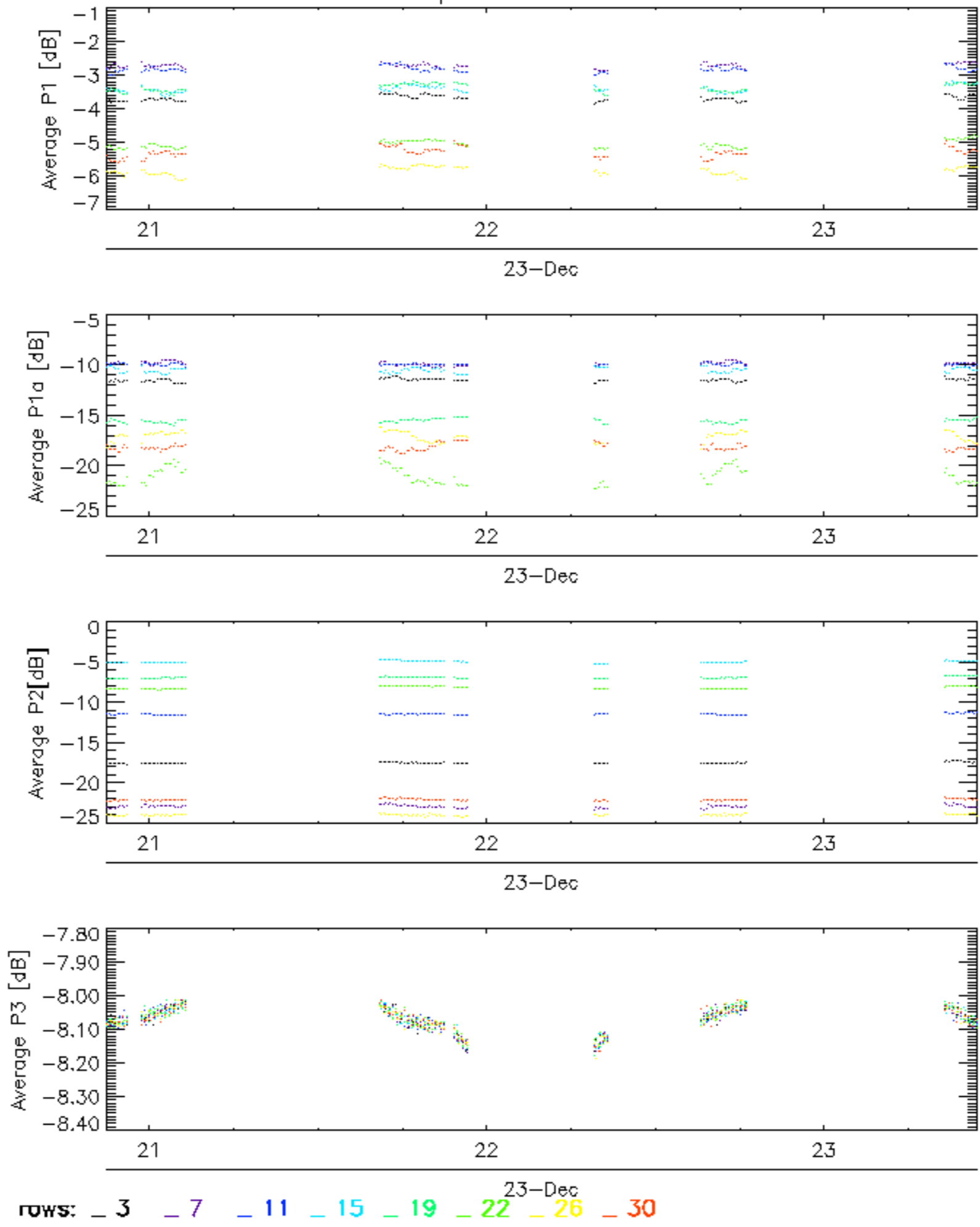
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

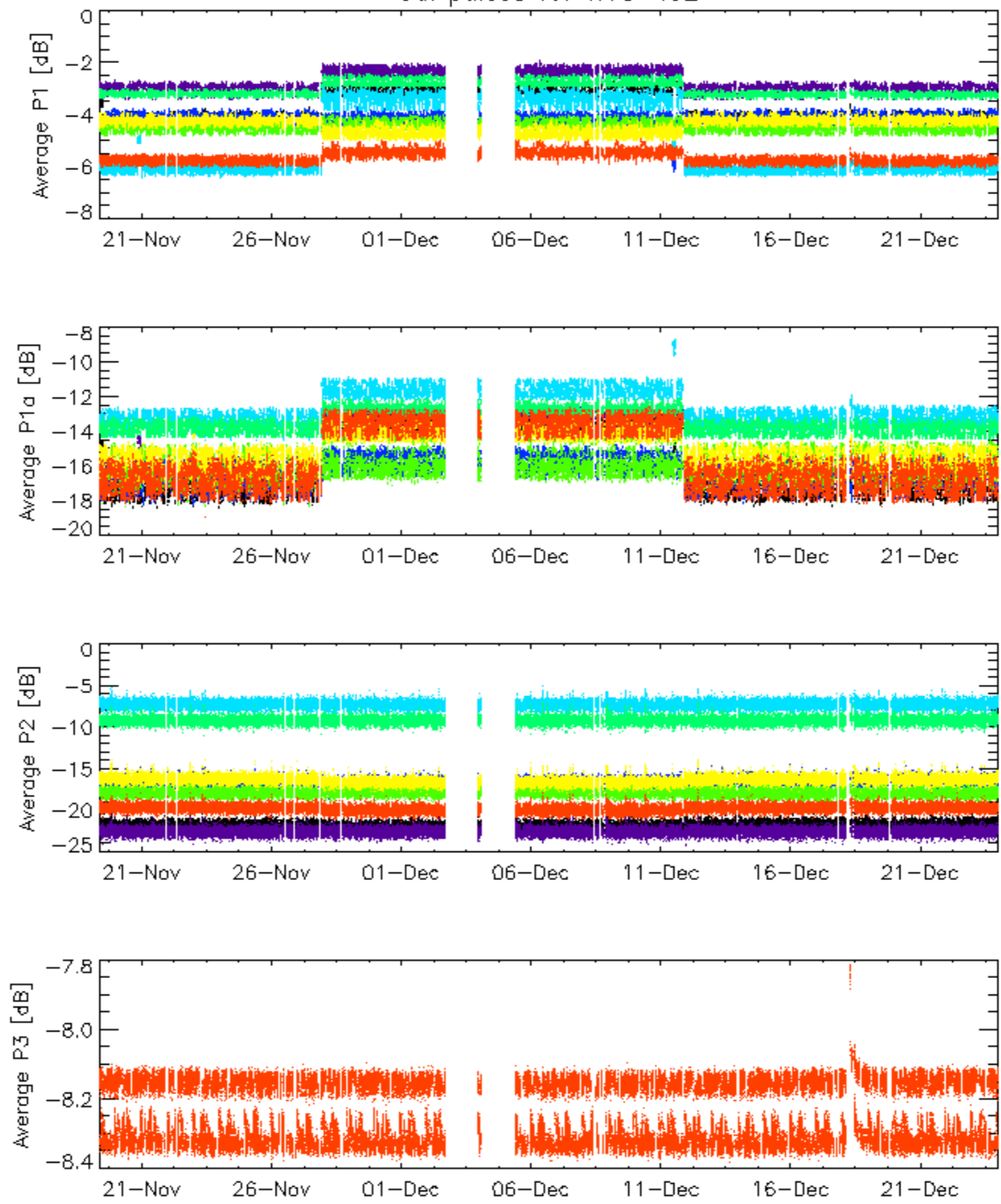


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

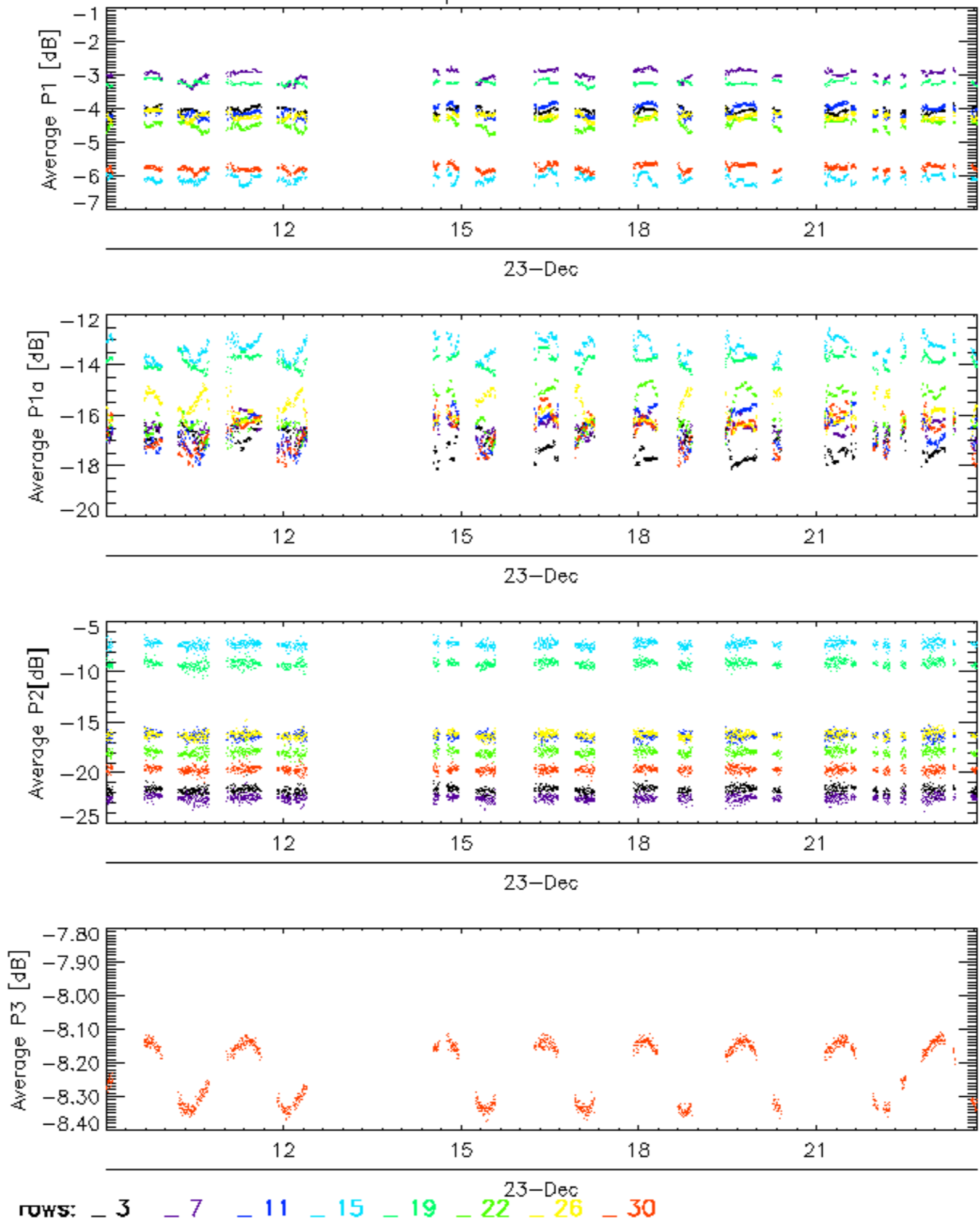


Cal pulses for WVS IS2

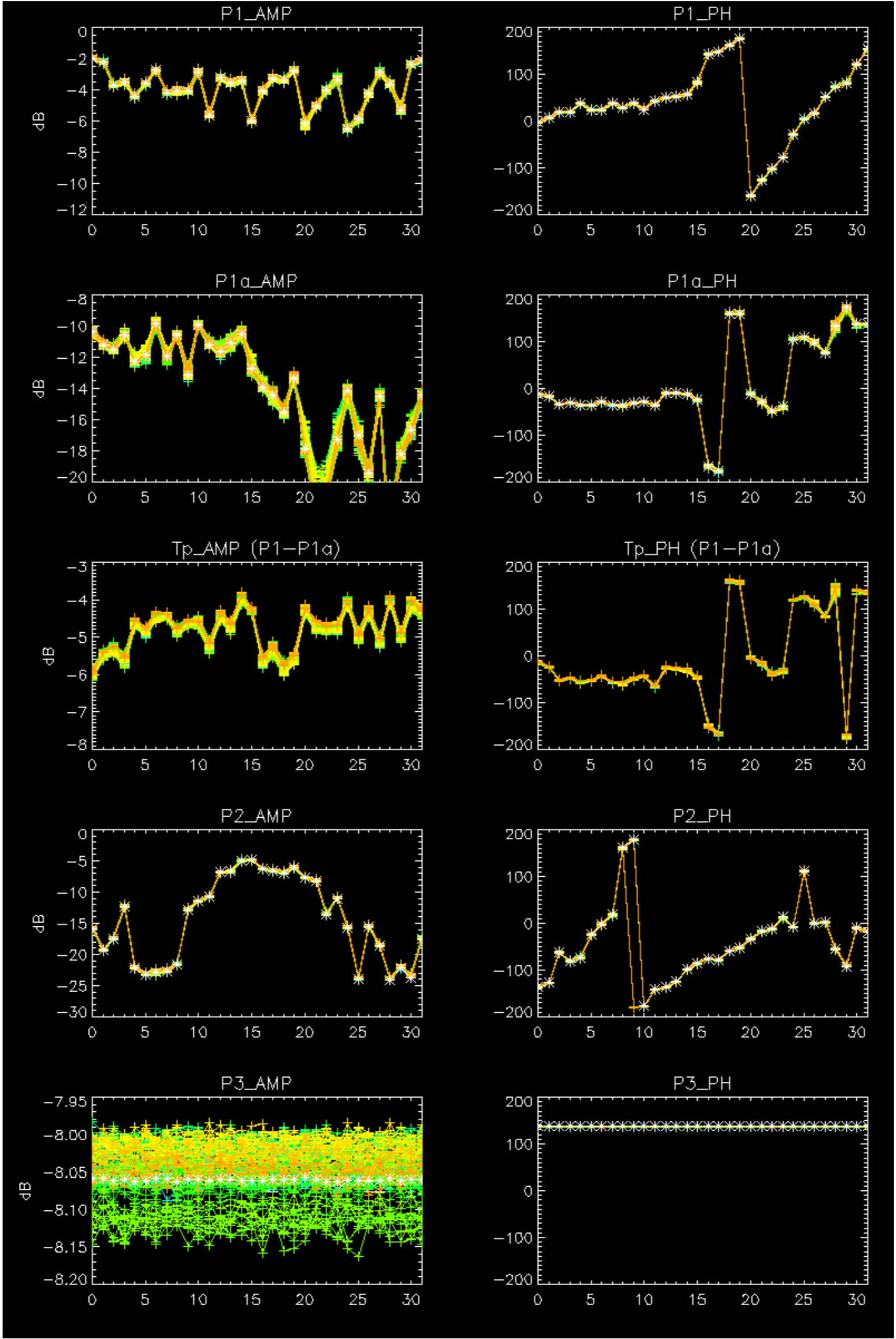


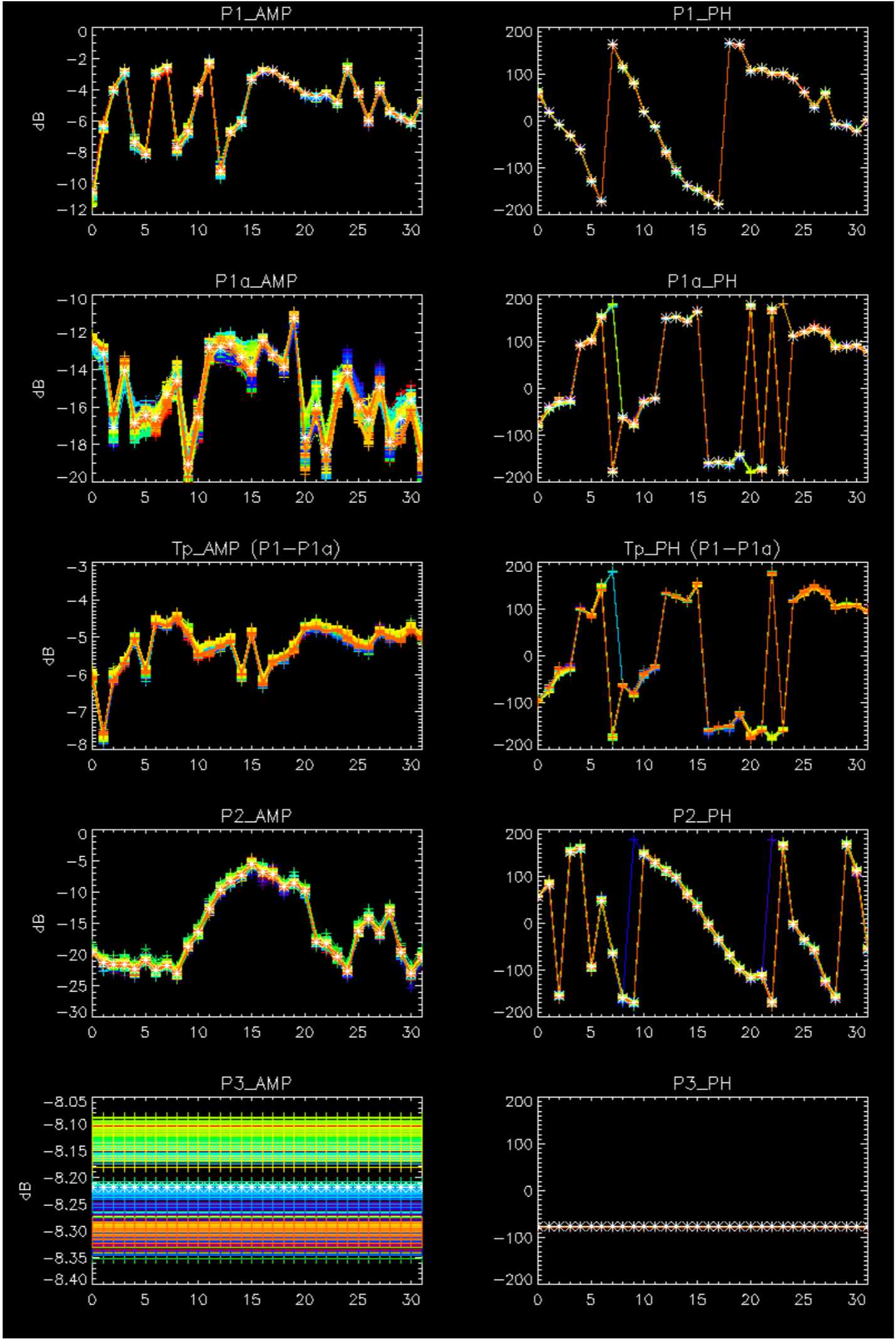
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



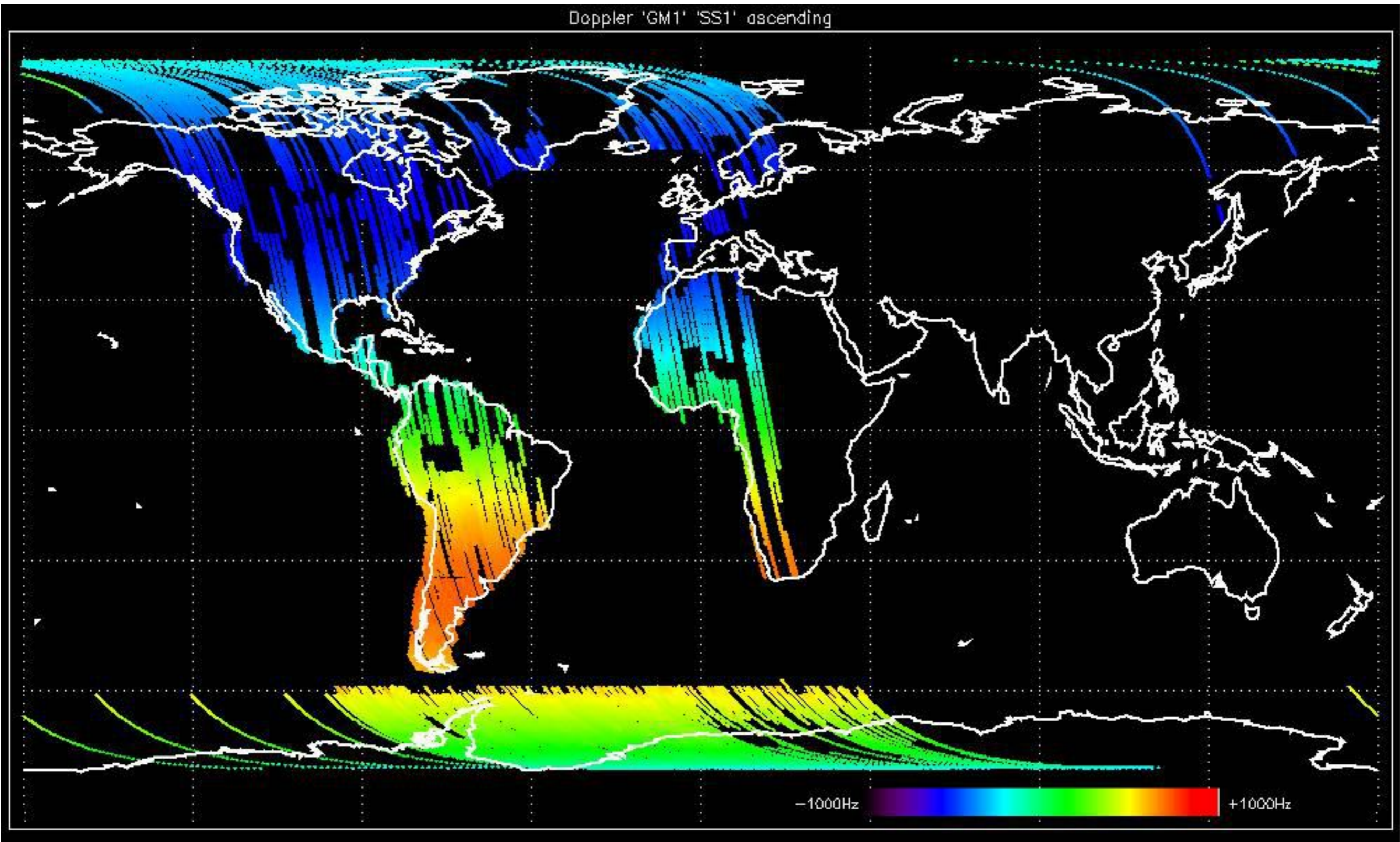
No anomalies observed.



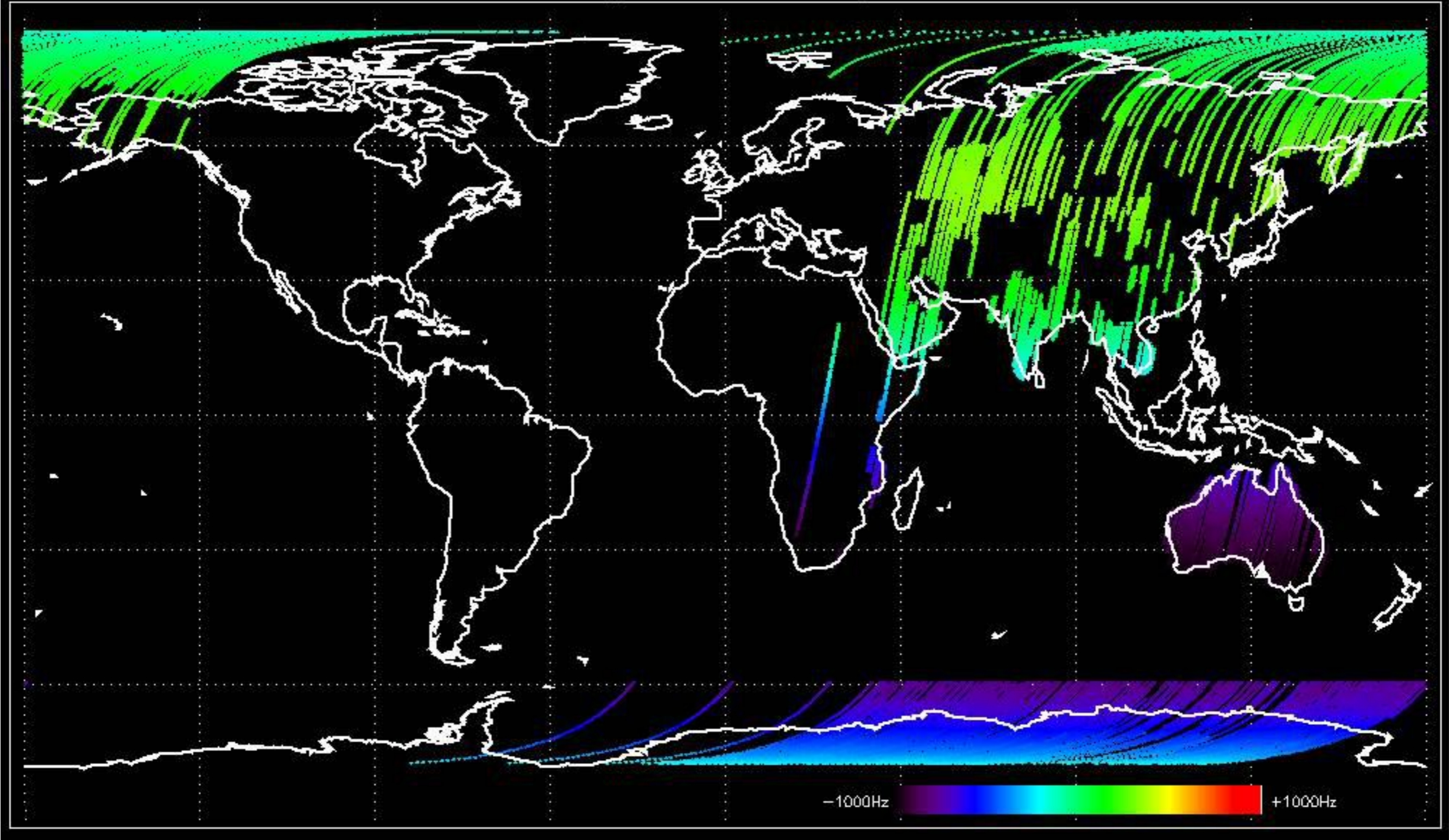


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

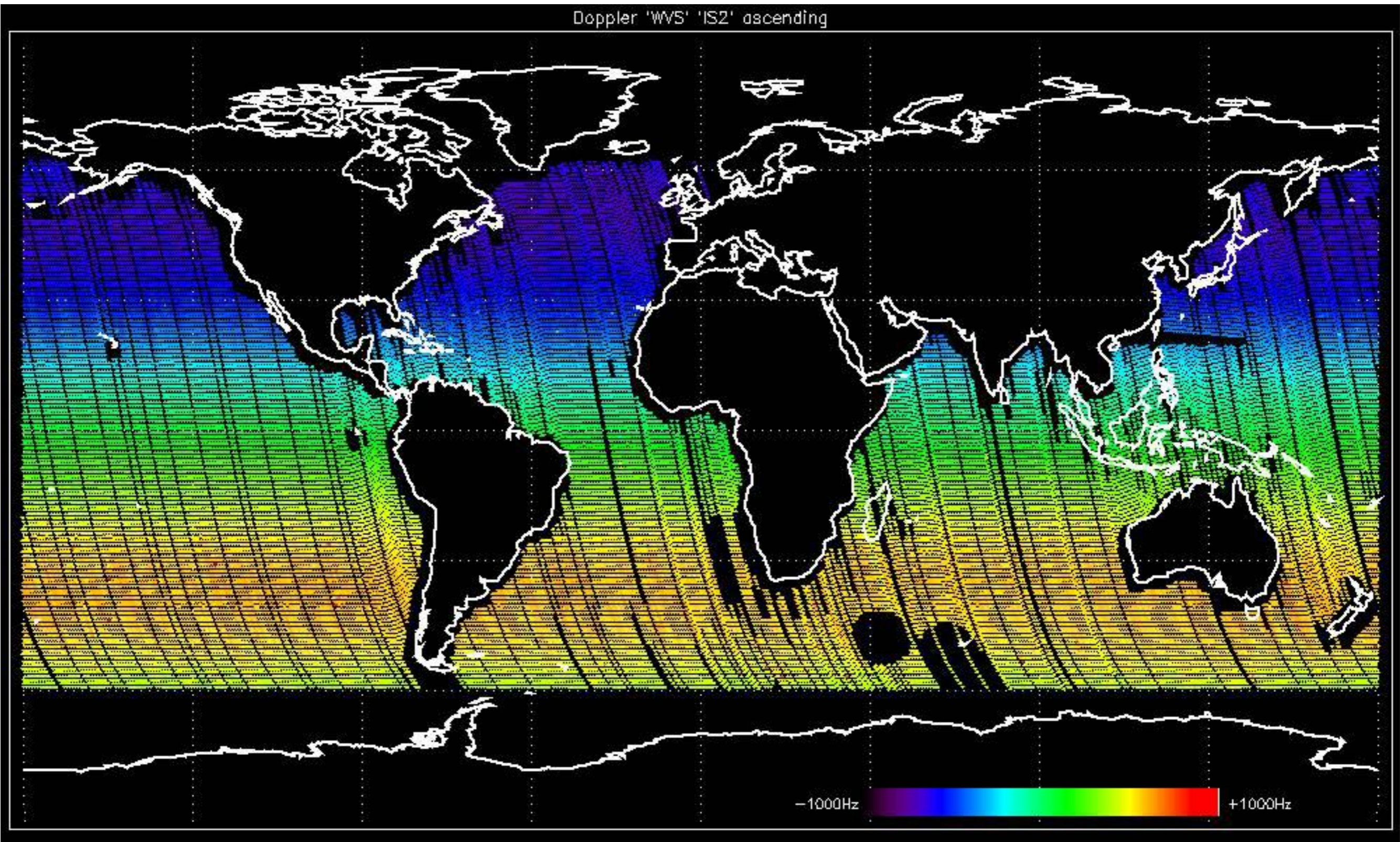
Doppler 'GM1' 'SS1' ascending



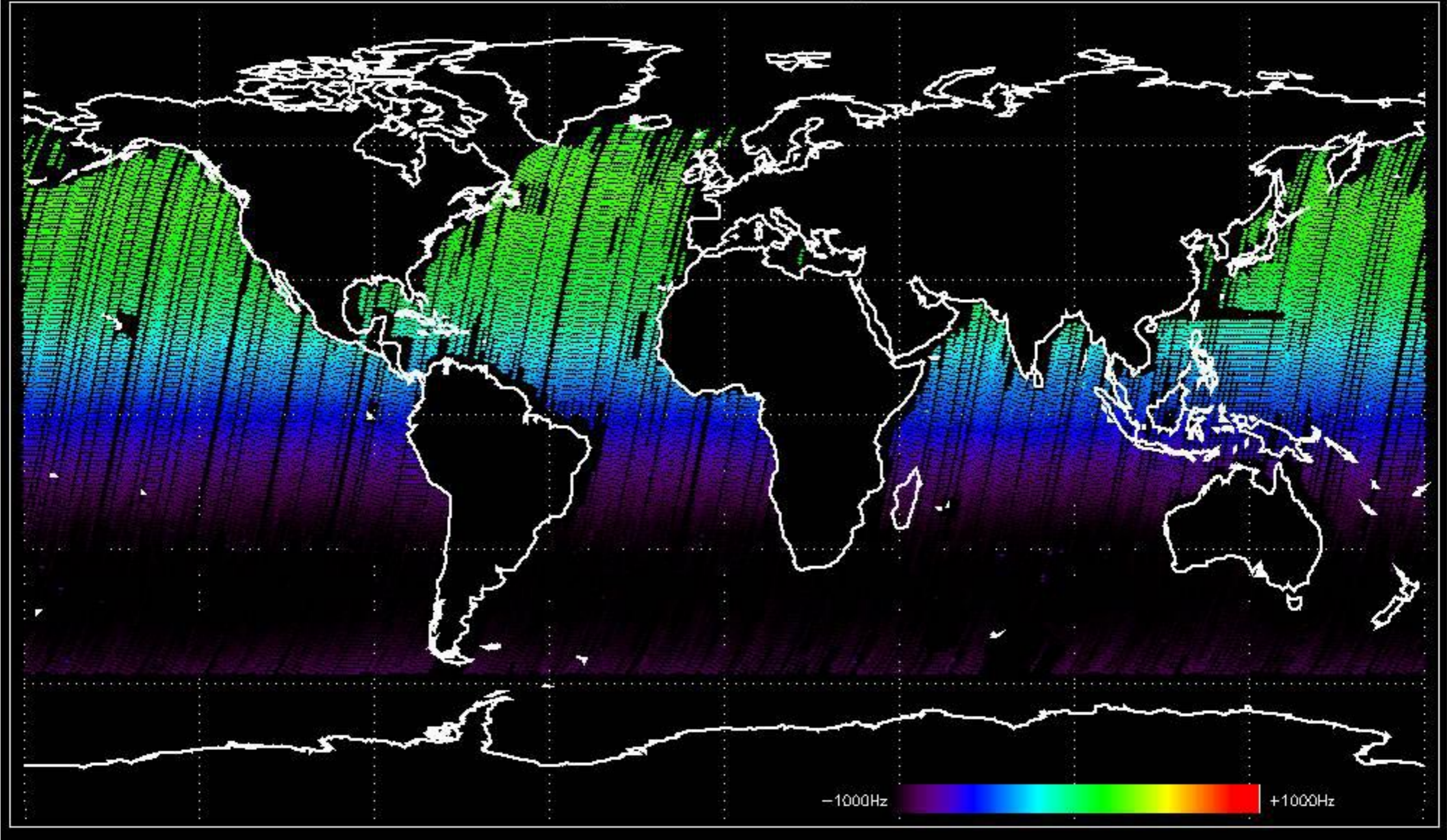
Doppler 'GM1' 'SS1' descending

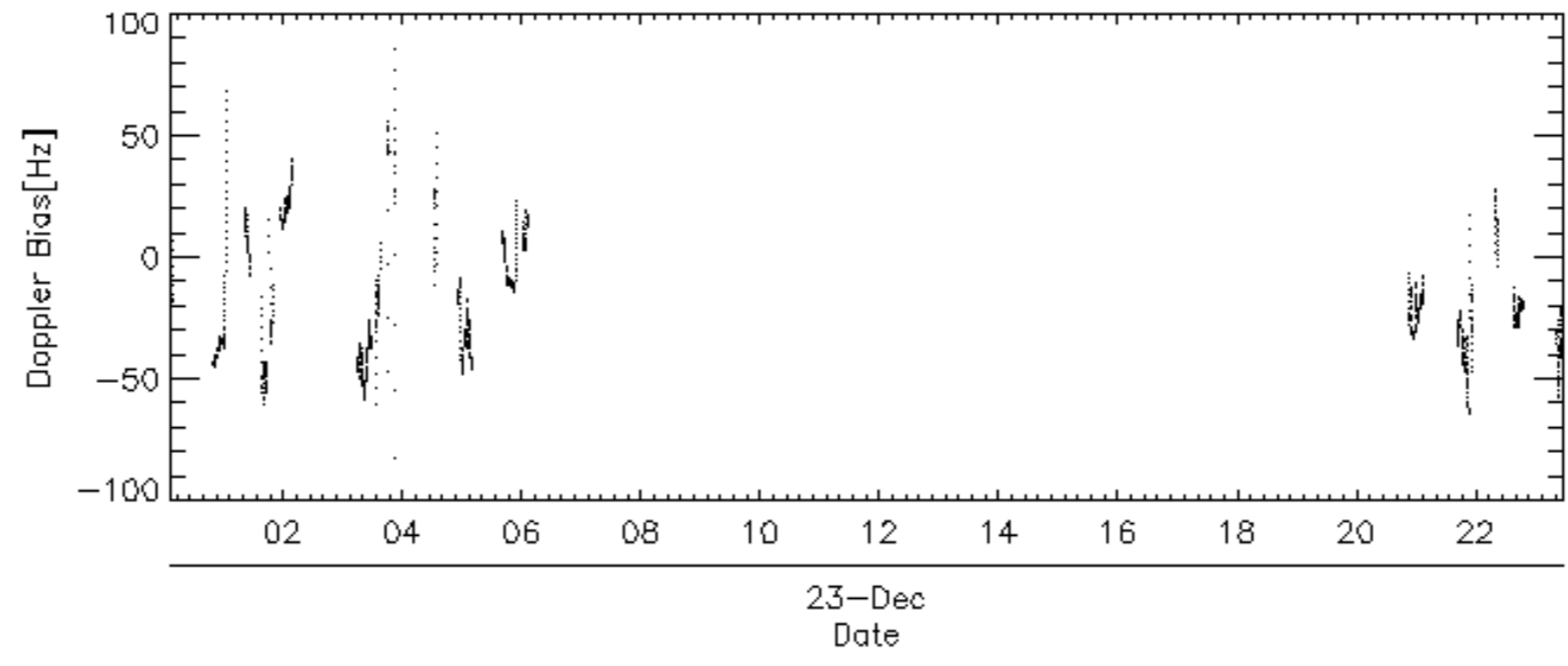
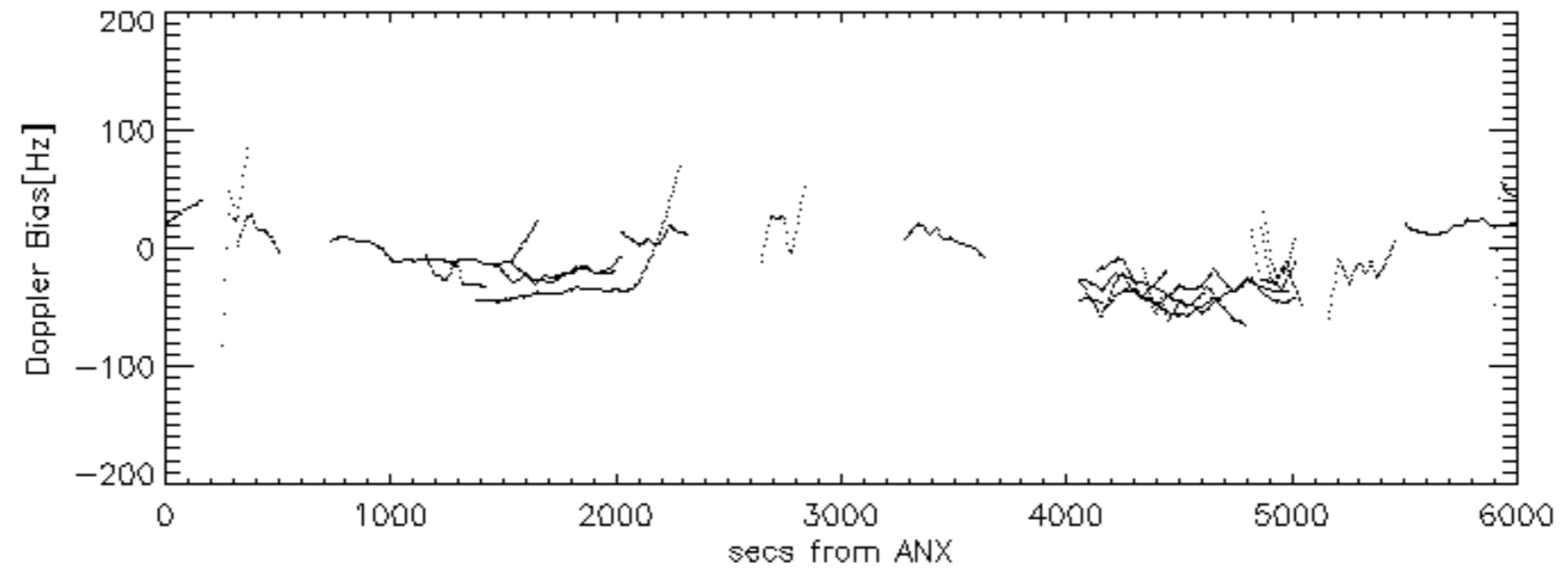
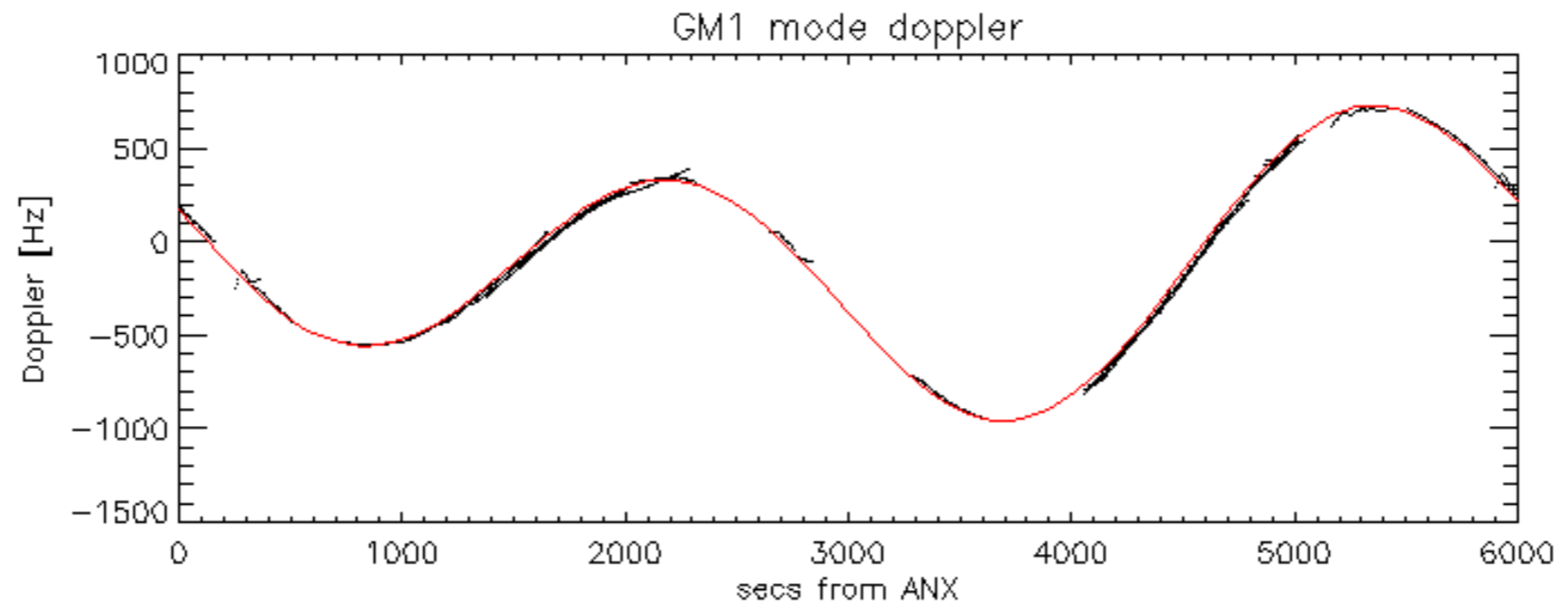


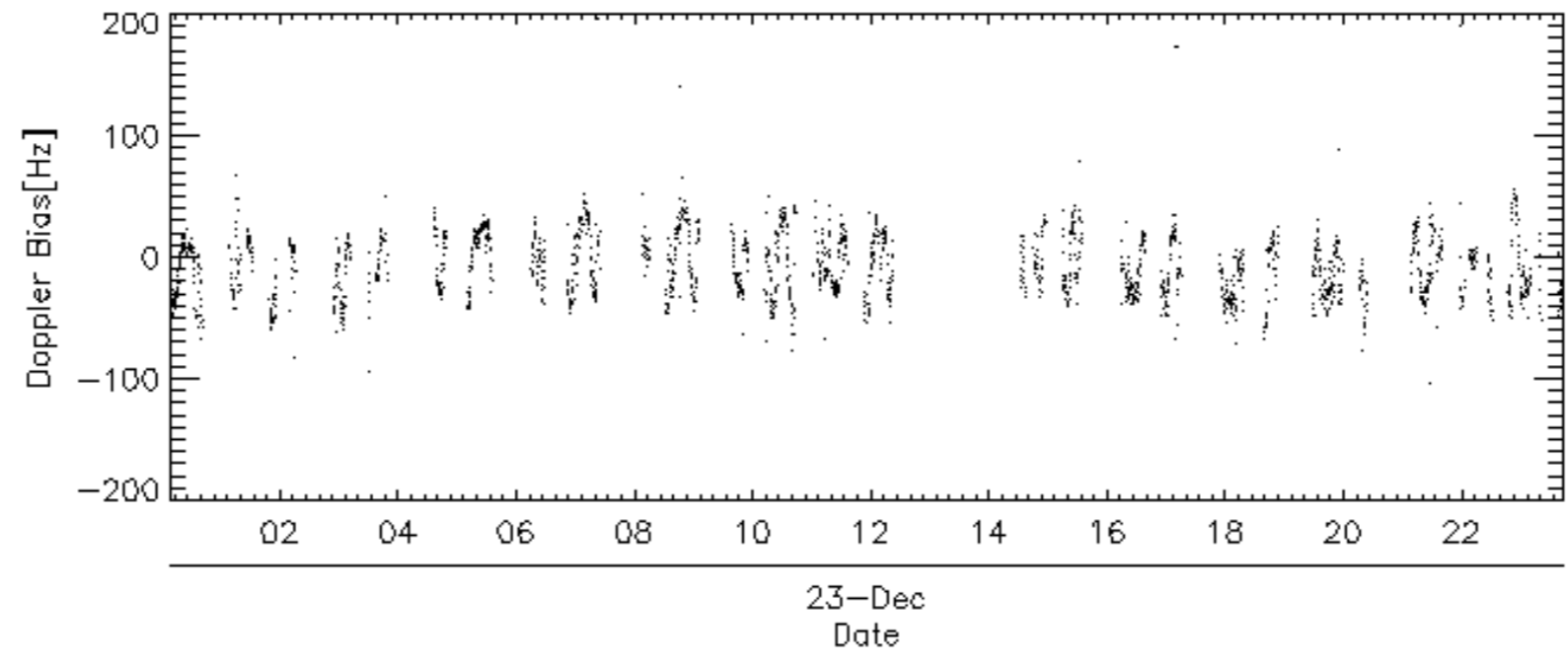
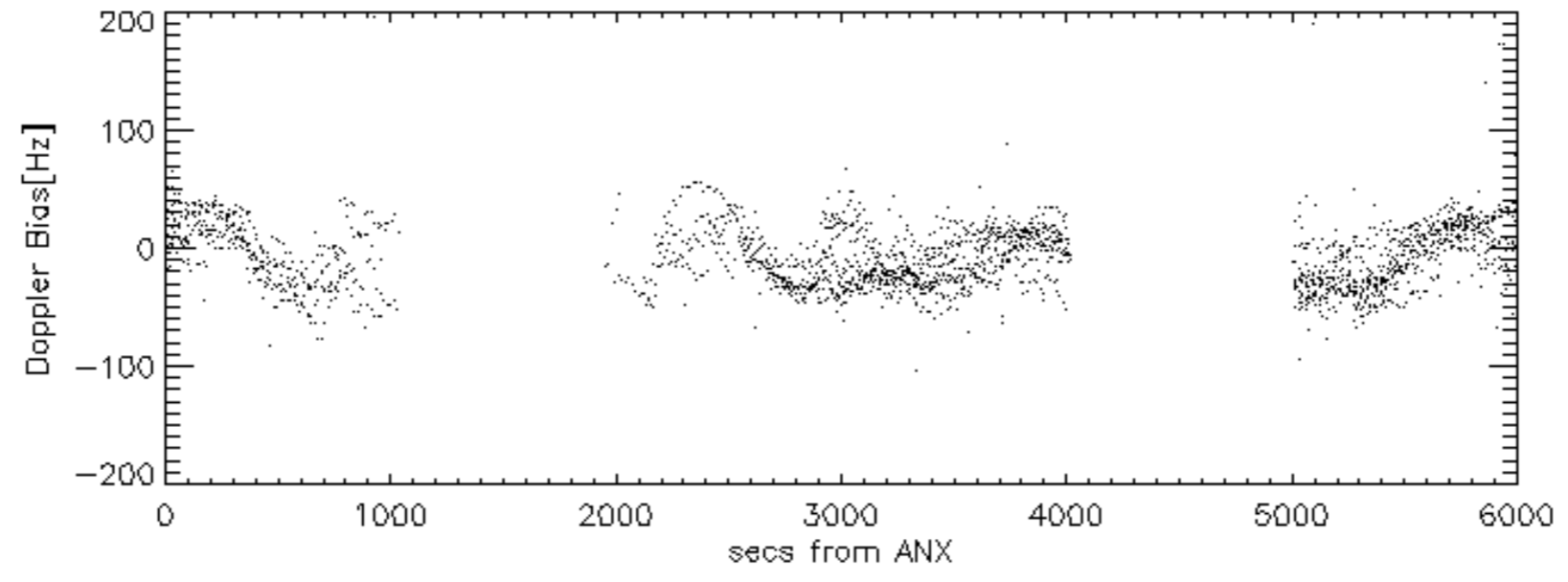
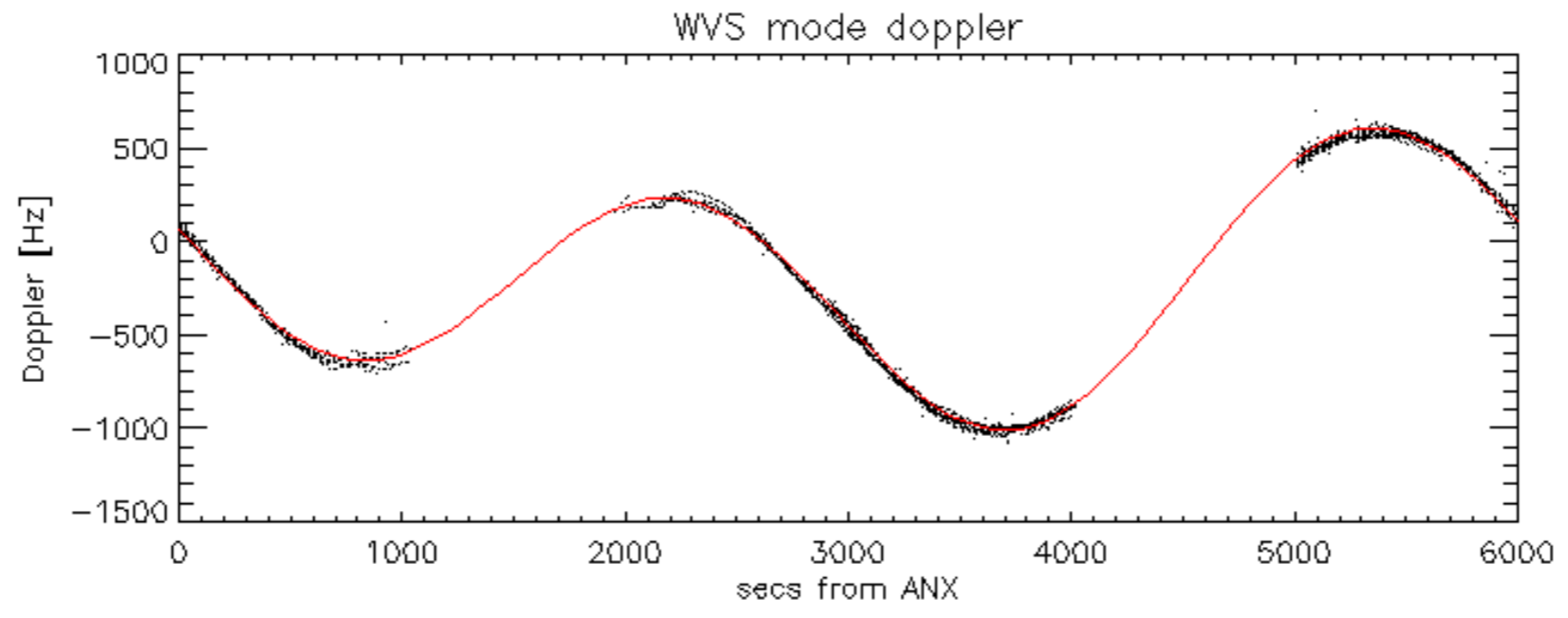
Doppler 'WVS' 'IS2' ascending



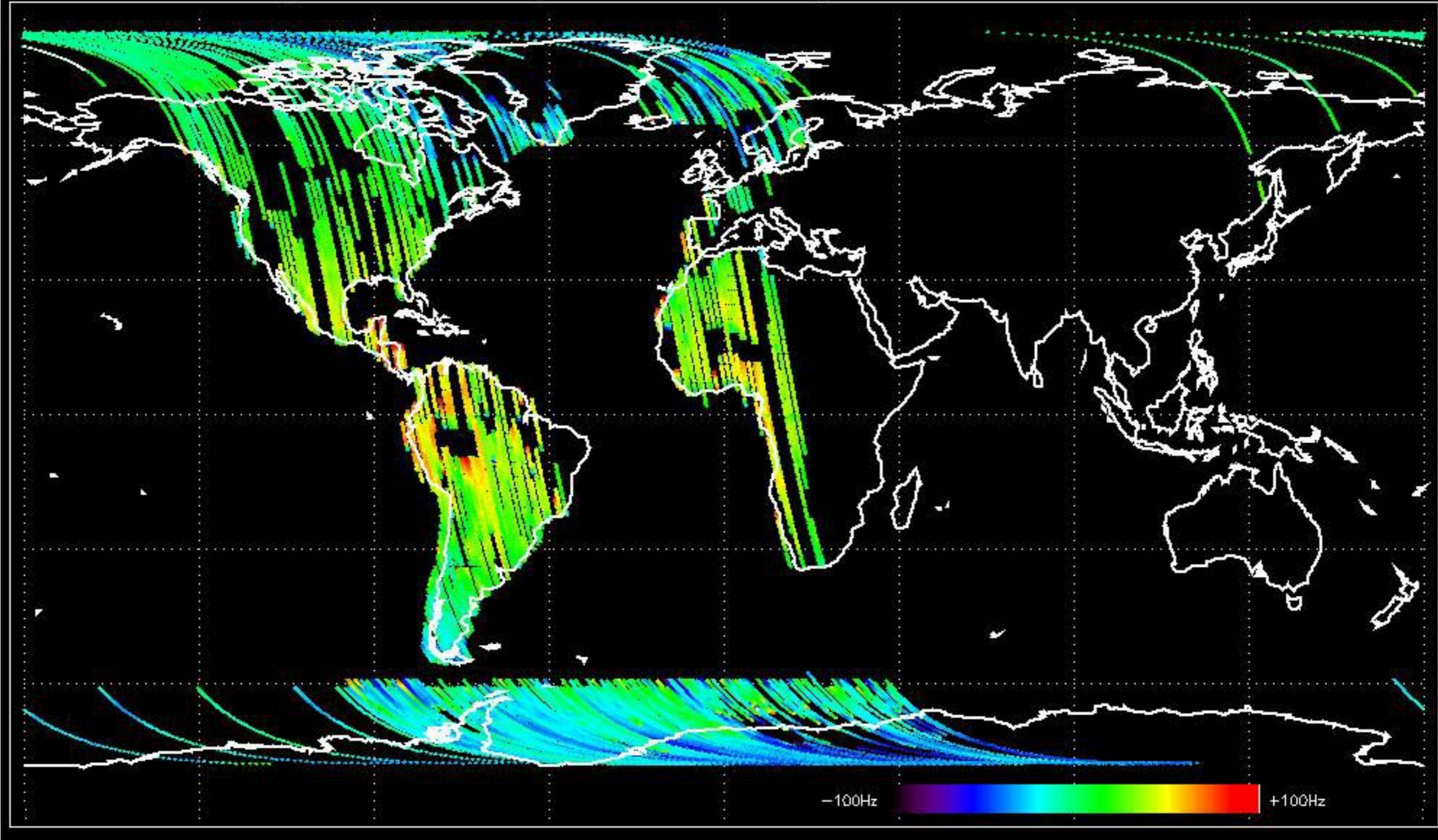
Doppler 'WVS' 'IS2' descending



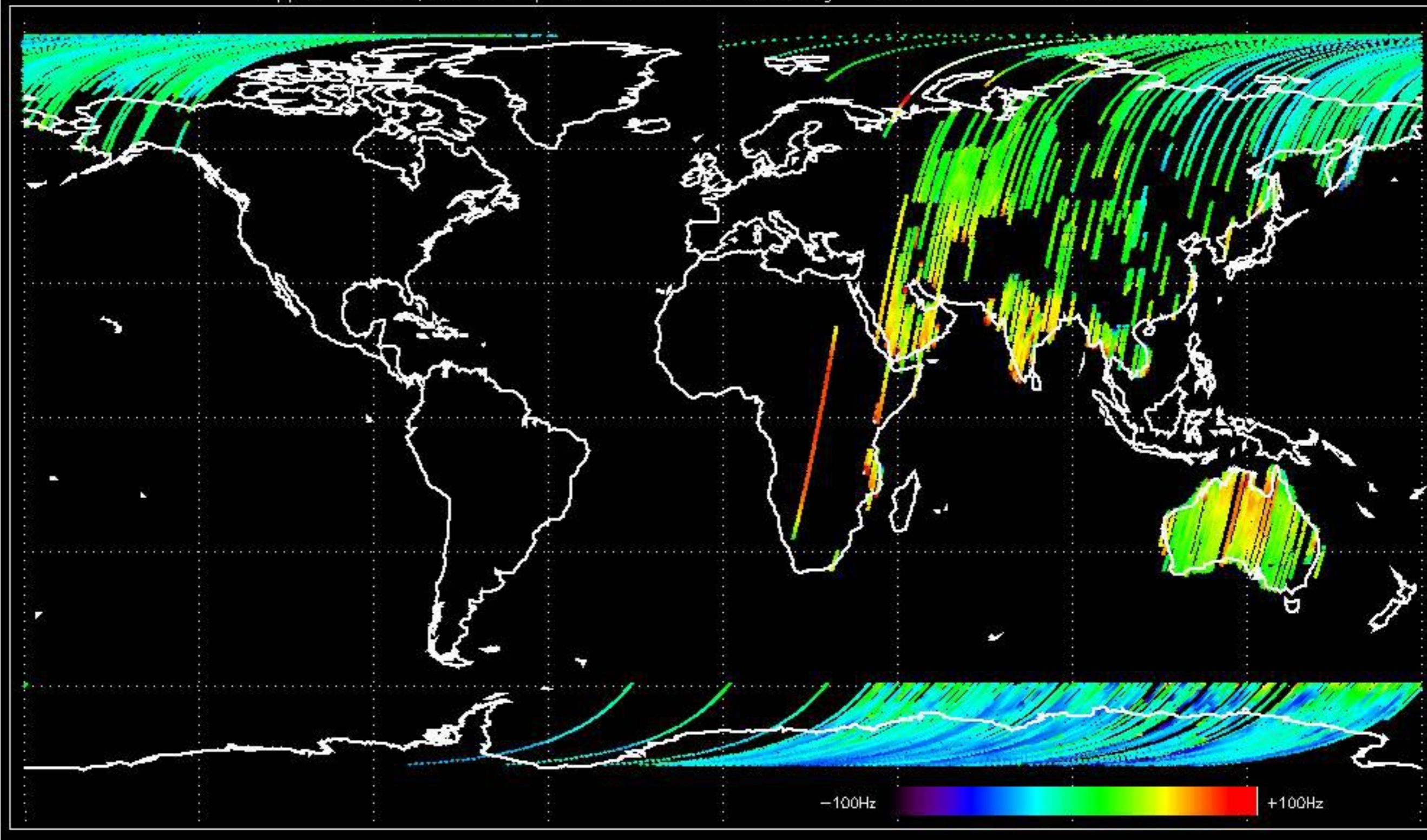




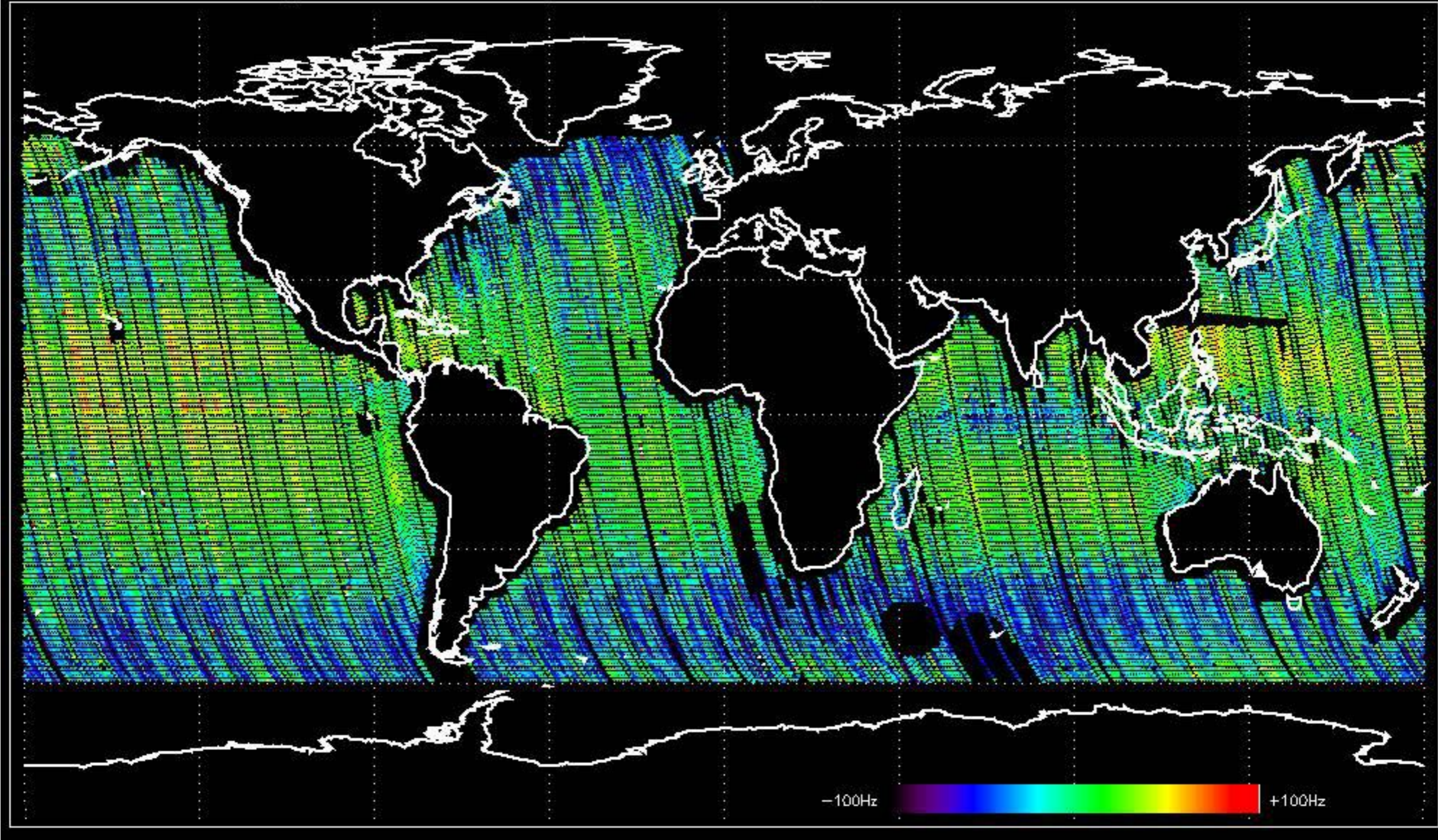
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.708643 Hz



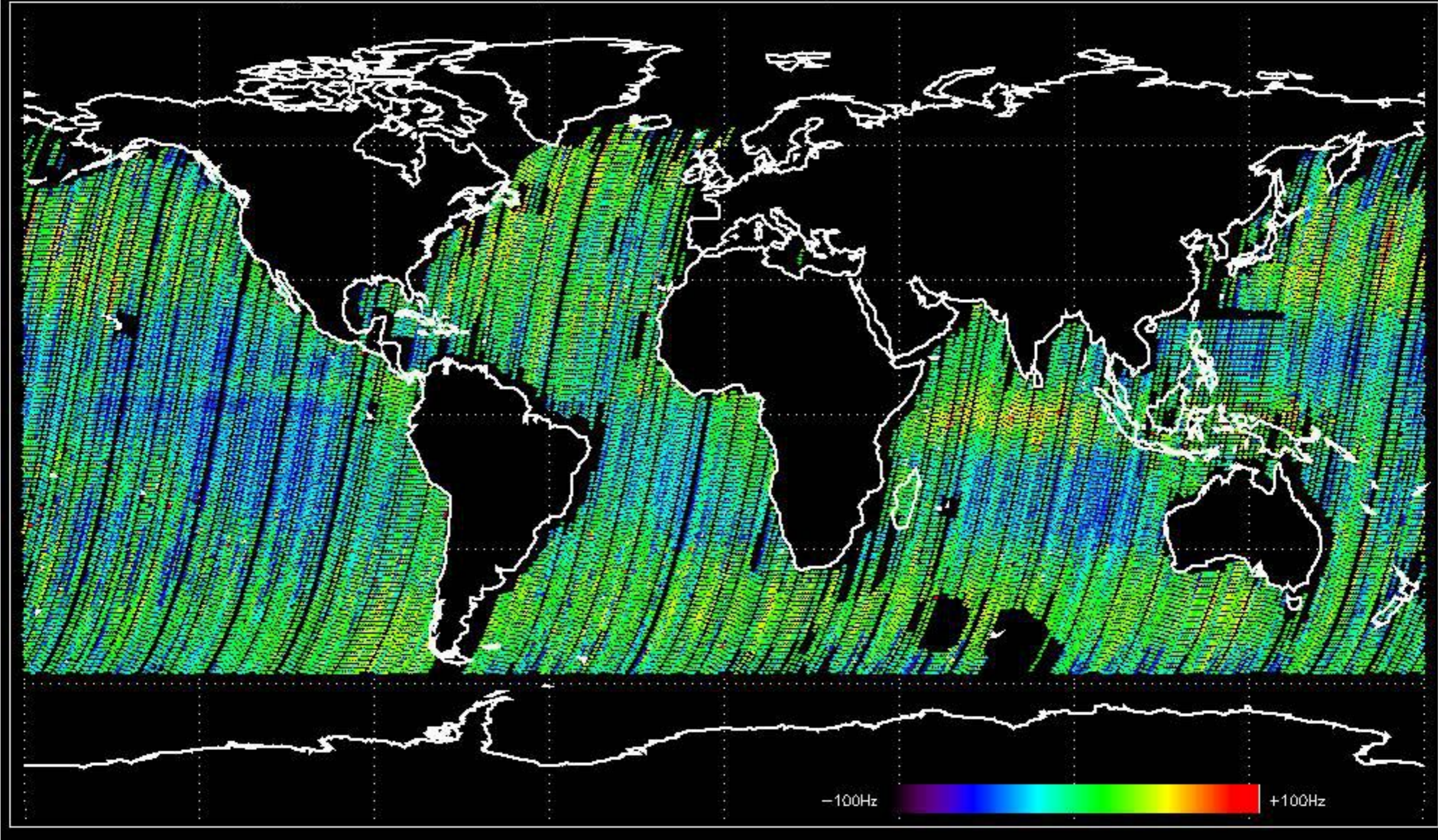
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.330791 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -10.049434 Hz

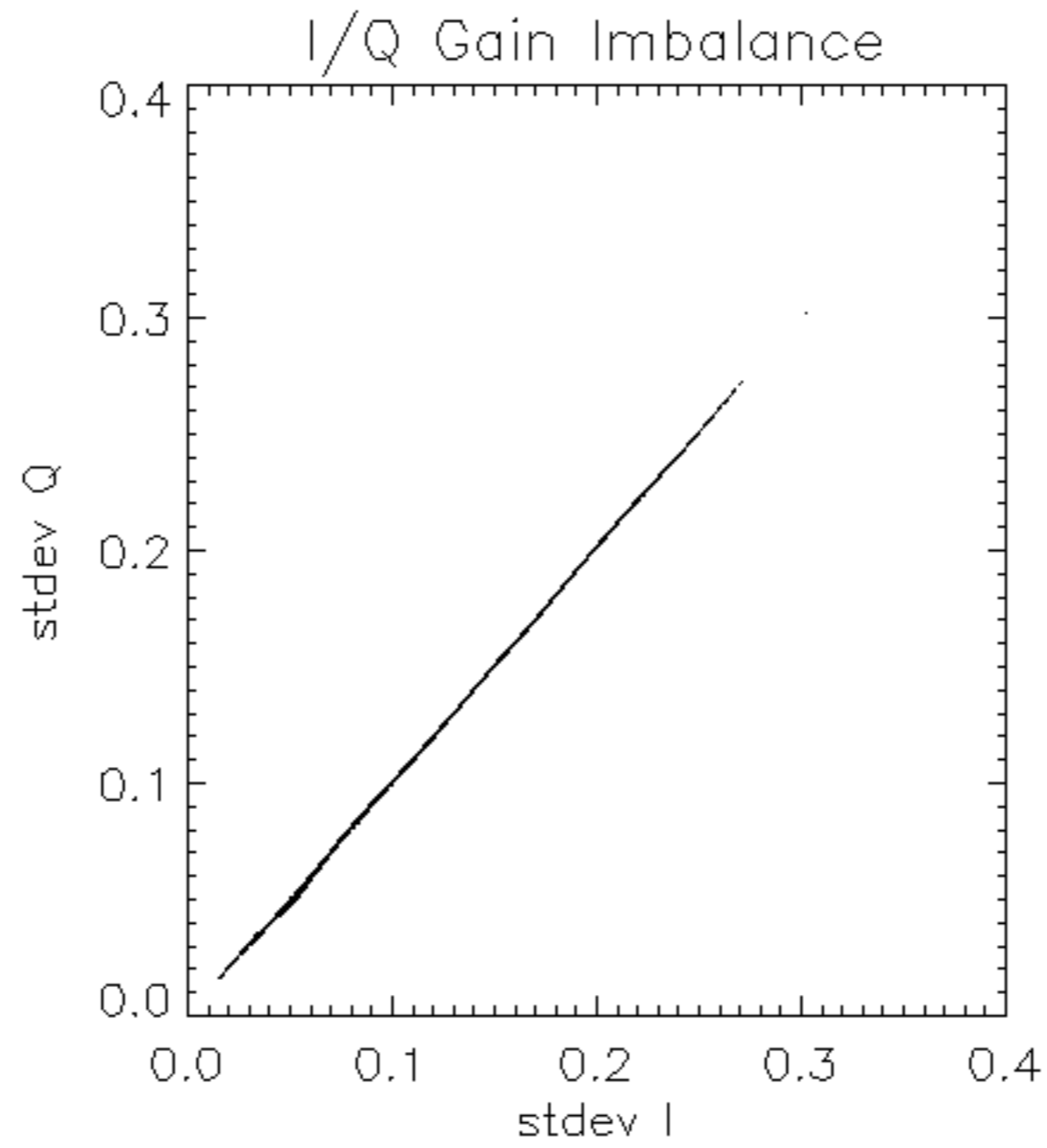


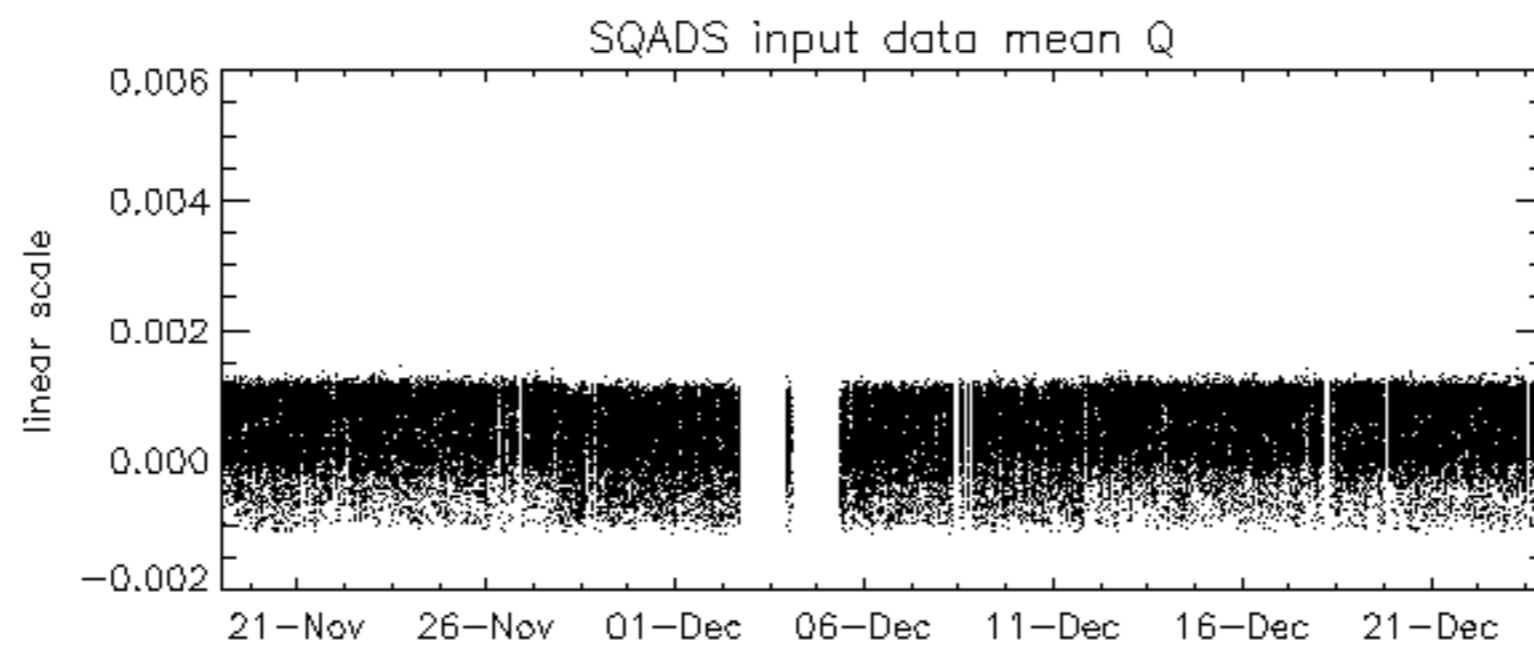
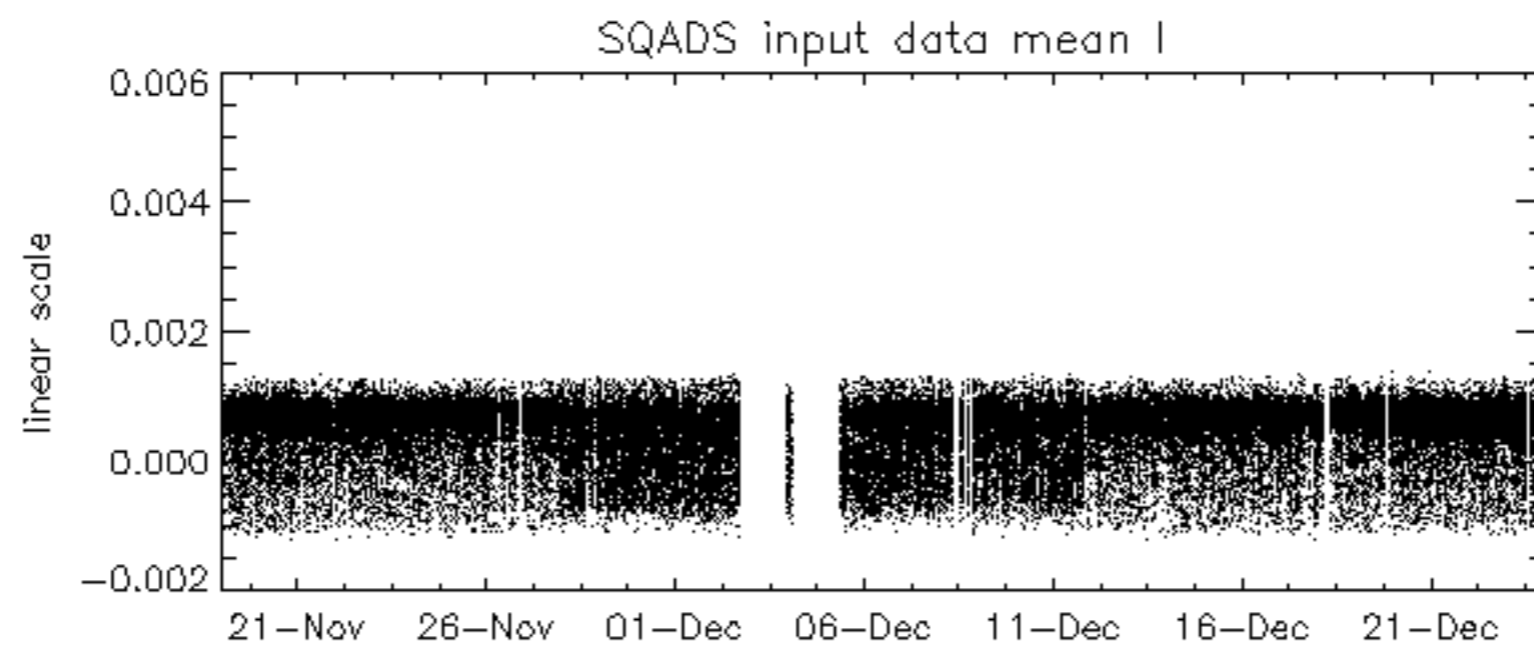
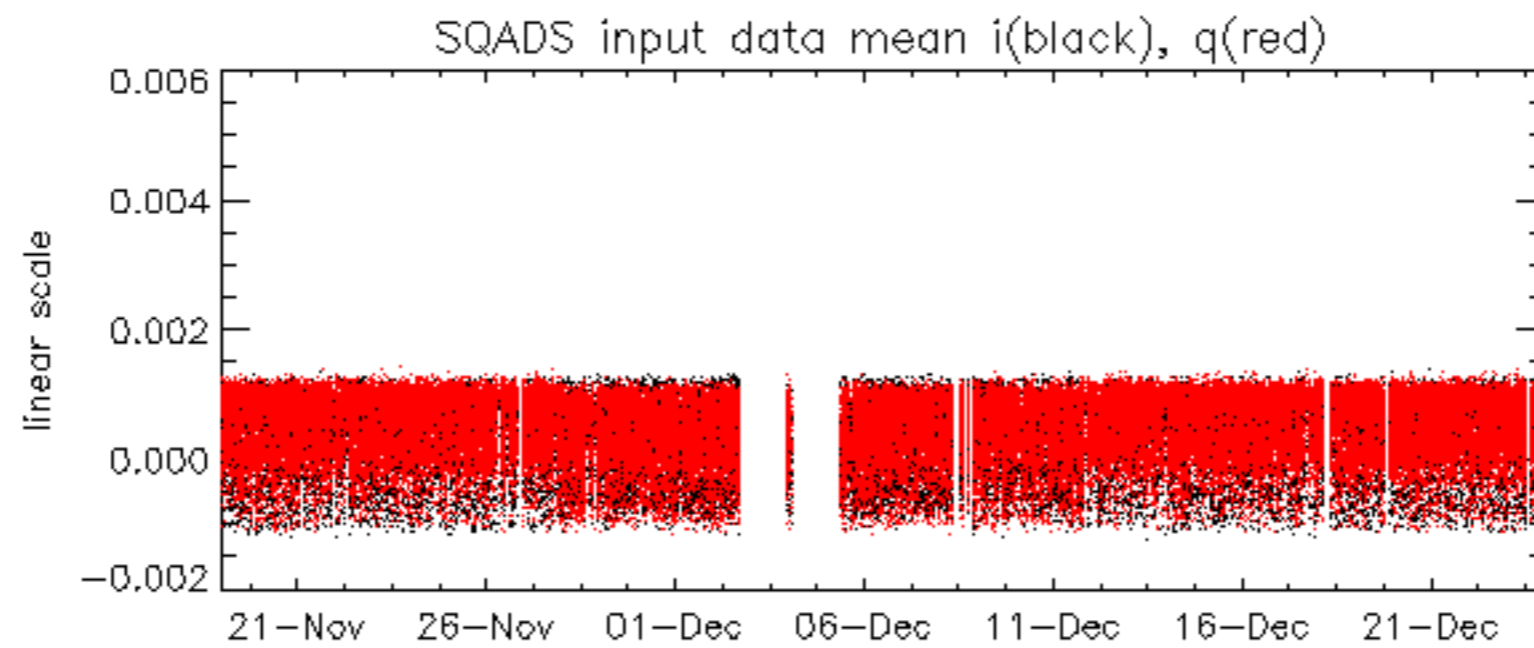
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.900839 Hz

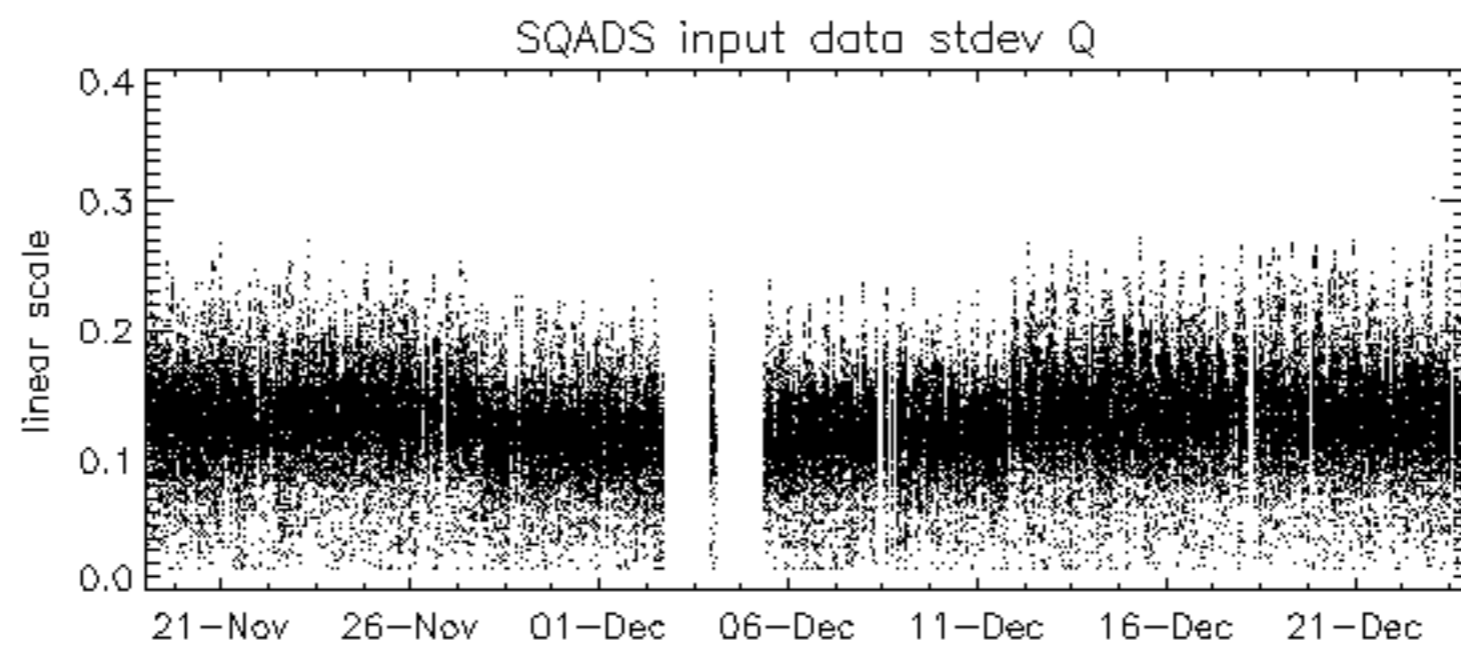
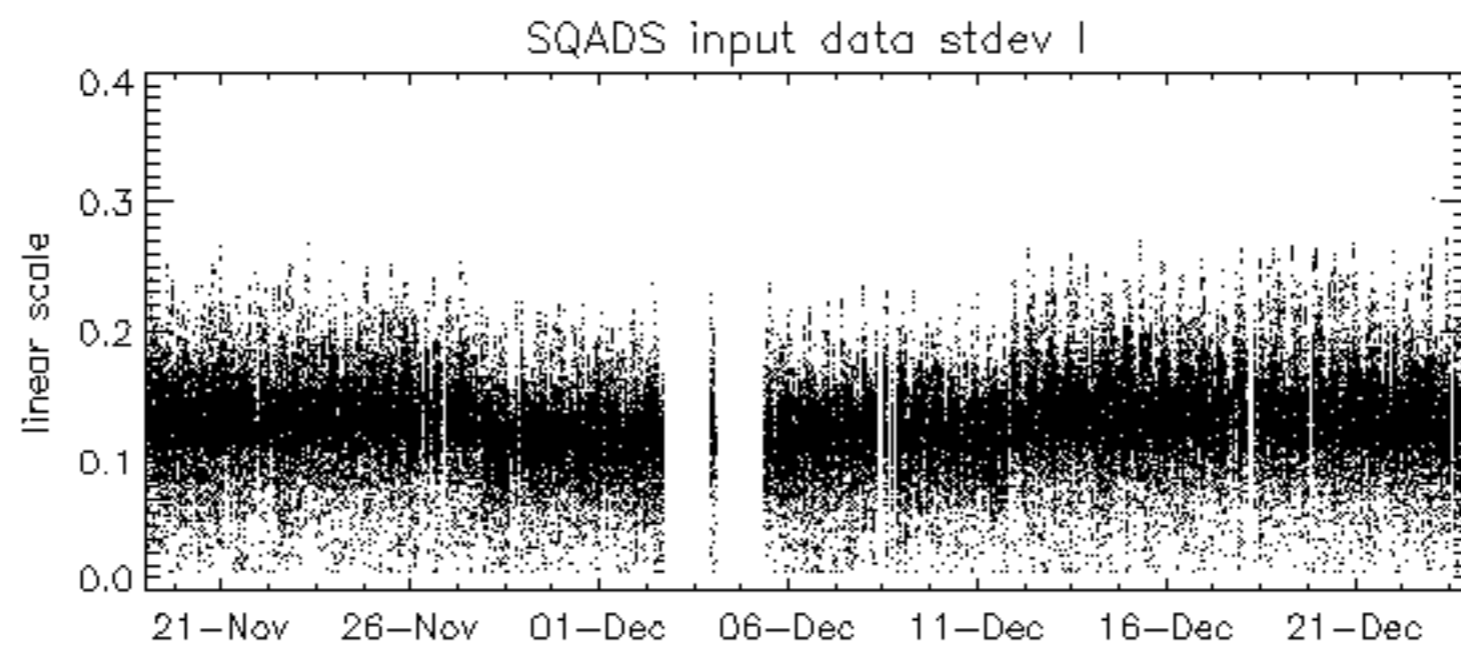
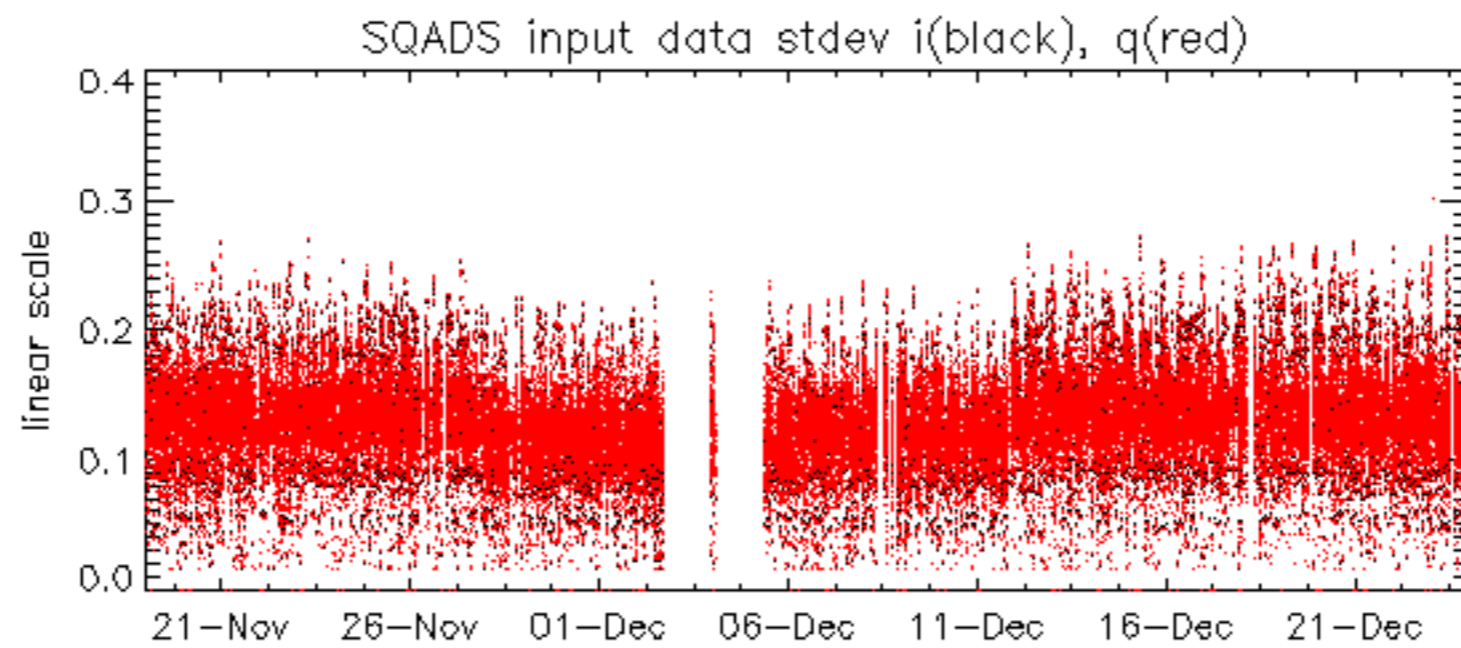


No anomalies observed on available MS products:

No anomalies observed.



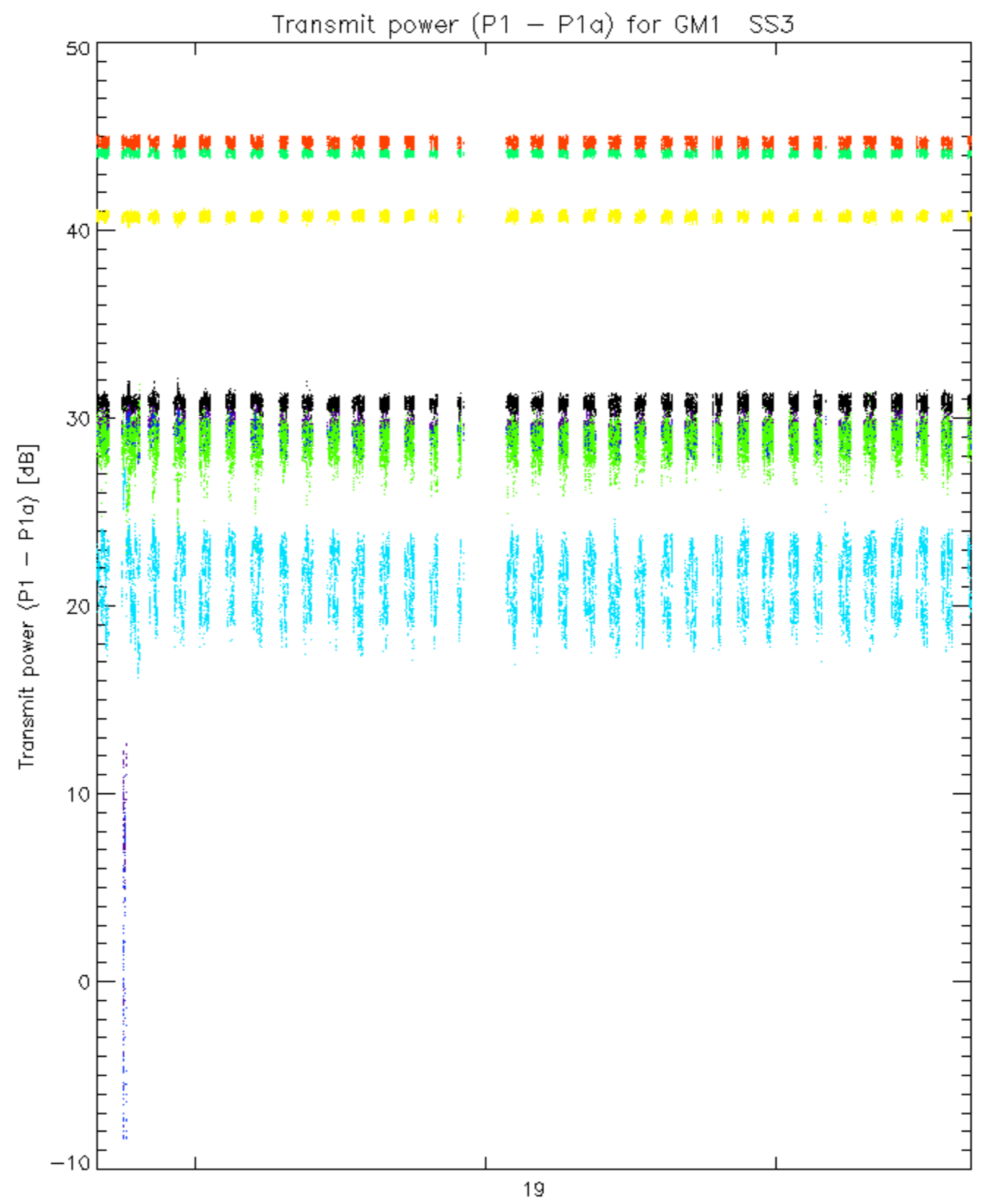


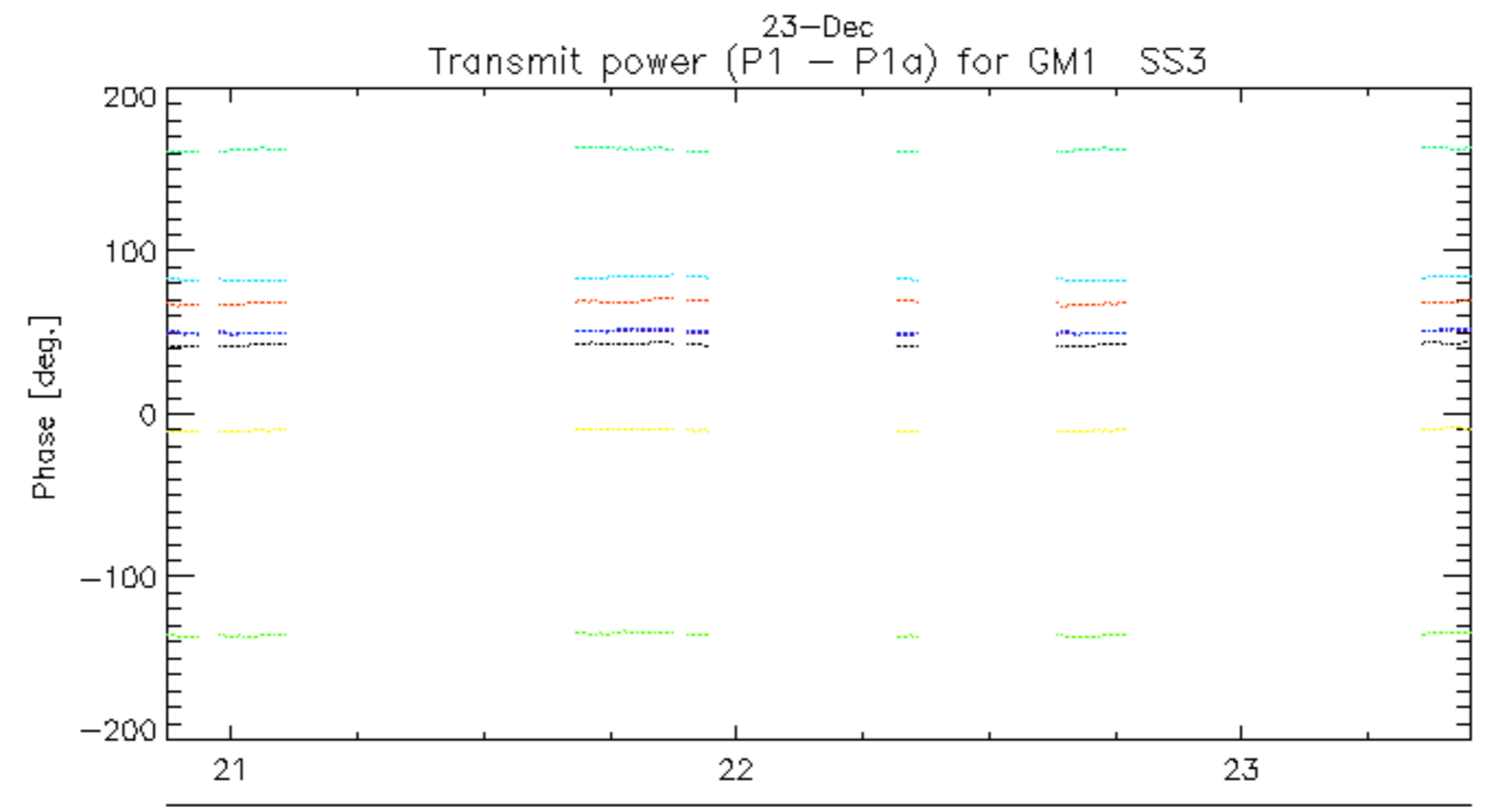
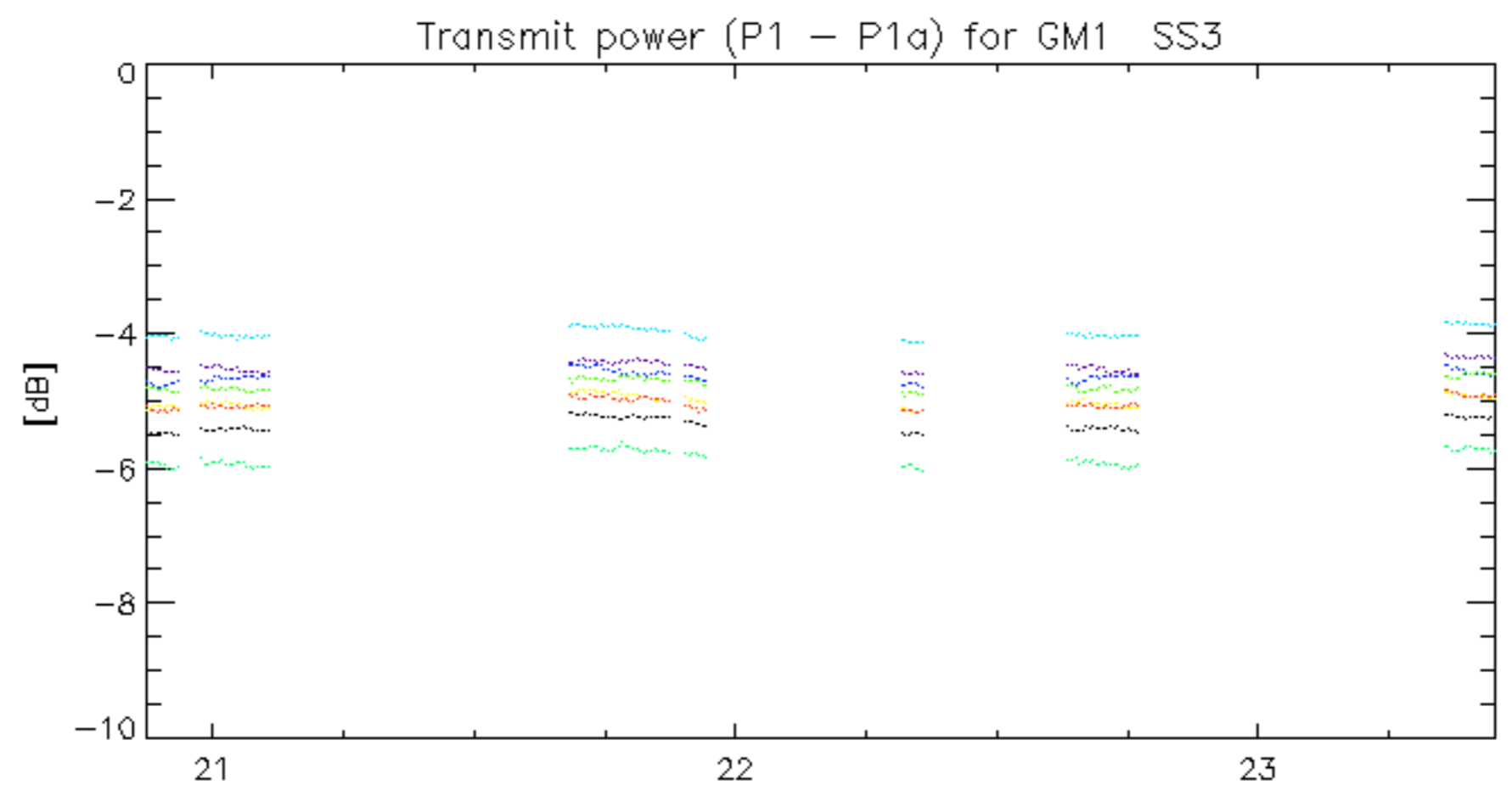


Summary of analysis for the last 3 days 2005122[234]

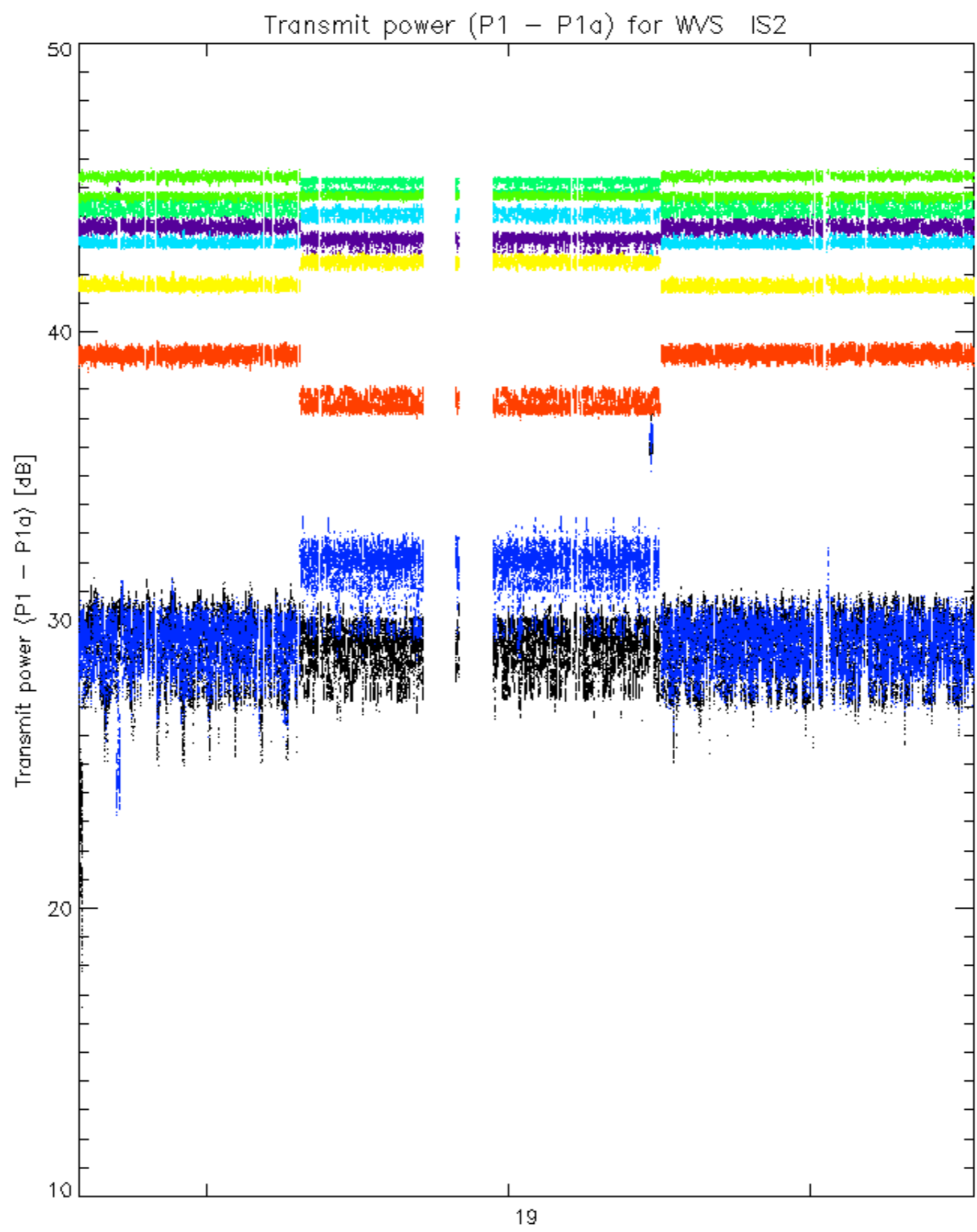
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051222_200902_00000502043_00343_19936_4599.N1	0	11
ASA_IMM_1PNPDK20051222_125406_000001212043_00339_19932_9583.N1	1	0
ASA_WSM_1PNPDE20051222_160845_000002082043_00341_19934_5342.N1	0	44

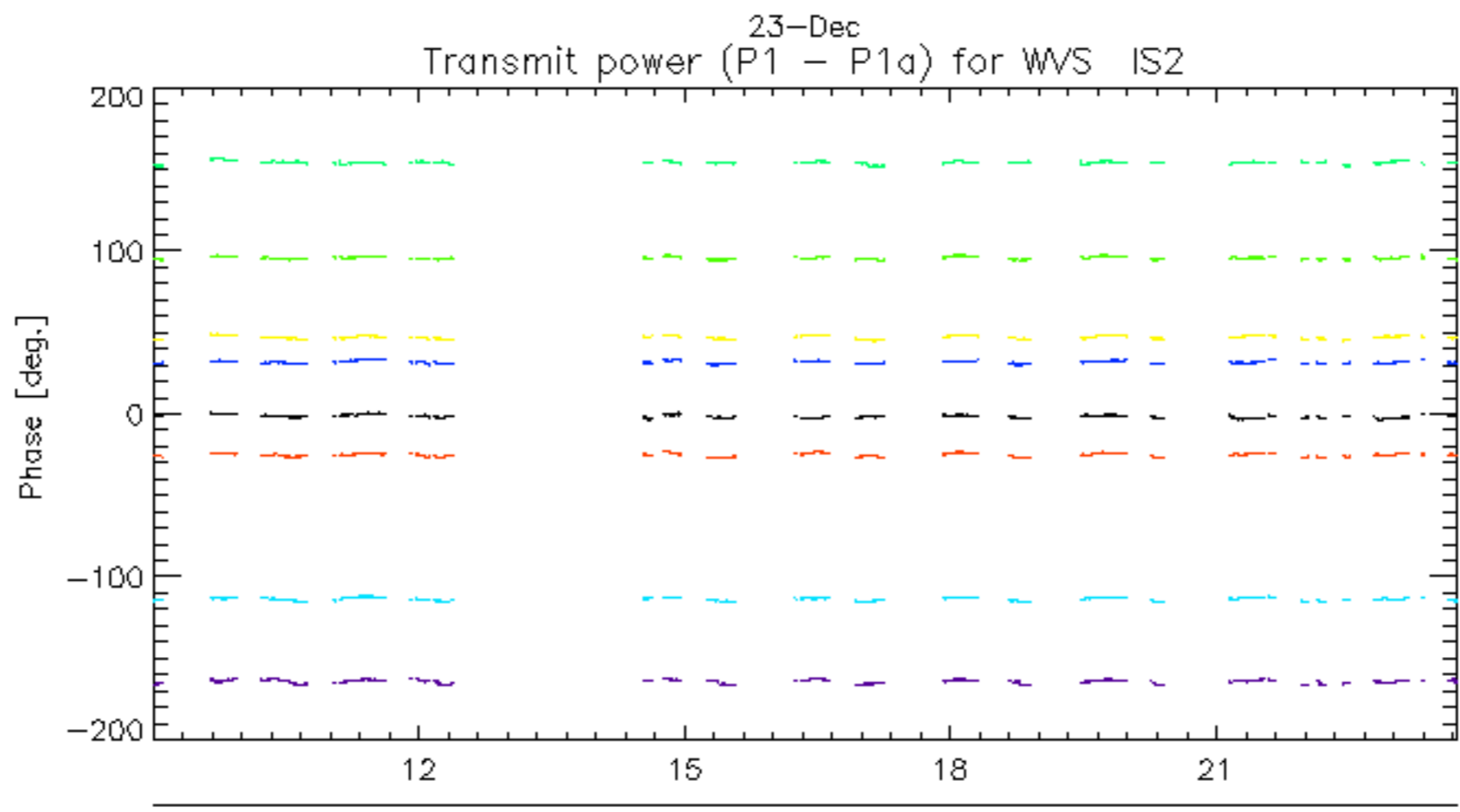
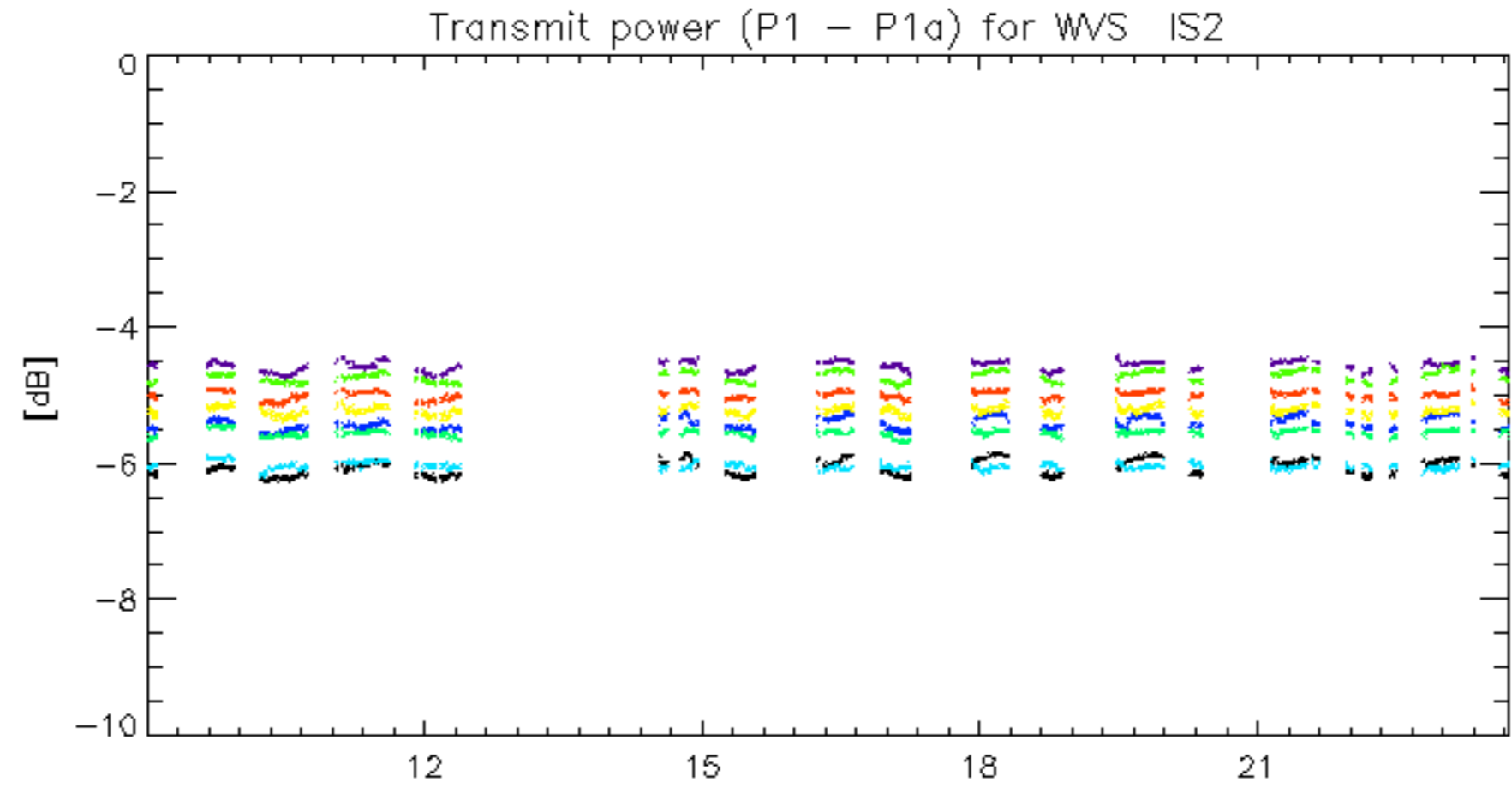




23-Dec
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.