

PRELIMINARY REPORT OF 060123

last update on Mon Jan 23 17:07:56 GMT 2006

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 2006-01-22 00:00:00 to 2006-01-23 17:07:56

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	0	10	0	28
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	0	10	0	28
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	0	10	0	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	0	10	0	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	49	47	14	48
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	49	47	14	48
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	49	47	14	48
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	49	47	14	48

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	20060123 084145
H	20060121 030235

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	-4.042089	0.007395	0.057400
7	P1	-2.999708	0.014035	-0.008067
11	P1	-4.103942	0.022442	-0.001176
15	P1	-6.065777	0.016884	0.008110
19	P1	-3.245630	0.005783	-0.027008
22	P1	-4.488128	0.020035	0.008108
26	P1	-4.215946	0.012470	0.030196
30	P1	-5.774102	0.009837	-0.009914
3	P1	-16.960337	0.248474	0.163296
7	P1	-16.595676	0.128653	-0.110356
11	P1	-16.608418	0.316311	-0.046536
15	P1	-13.253078	0.121208	0.114634
19	P1	-13.880695	0.075655	-0.033943
22	P1	-15.938156	0.566257	0.172623
26	P1	-15.769221	0.259860	0.018245
30	P1	-16.614523	0.346592	0.031410

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.634218	0.096413	0.136544
7	P2	-22.487961	0.097966	0.091664
11	P2	-16.319410	0.103696	0.096504
15	P2	-7.225155	0.103507	0.046680
19	P2	-9.184105	0.098784	0.045809
22	P2	-17.943092	0.095559	-0.000752
26	P2	-16.226561	0.100804	0.022879
30	P2	-19.659372	0.084392	0.040858

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.218152	0.007483	0.020784
7	P3	-8.218152	0.007483	0.020784
11	P3	-8.218152	0.007483	0.020784
15	P3	-8.218152	0.007483	0.020784
19	P3	-8.218152	0.007483	0.020784
22	P3	-8.218152	0.007483	0.020784
26	P3	-8.218152	0.007483	0.020784
30	P3	-8.218152	0.007483	0.020784

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.722751	0.008592	-0.008190
7	P1	-2.756051	0.007728	0.046780
11	P1	-2.866848	0.010980	0.022202
15	P1	-3.454412	0.018421	-0.043346
19	P1	-3.381989	0.013561	0.023400
22	P1	-5.122051	0.021575	0.012606
26	P1	-5.856440	0.015604	0.006261
30	P1	-5.254262	0.030224	0.042094
3	P1	-11.518523	0.033532	-0.047975
7	P1	-9.926493	0.050023	0.066060
11	P1	-10.070910	0.050935	-0.018430
15	P1	-10.615182	0.081089	-0.044199
19	P1	-15.484674	0.063062	0.053593
22	P1	-20.675241	1.146709	0.358249

26	P1	-16.878704	0.324441	0.392679
30	P1	-18.152431	0.307819	0.027775

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.458548	0.031742	0.225394
7	P2	-22.900080	0.057997	0.231980
11	P2	-11.457721	0.019542	0.151138
15	P2	-4.934494	0.023617	0.092256
19	P2	-6.931745	0.022099	0.079945
22	P2	-8.199279	0.022917	0.034685
26	P2	-23.987007	0.025153	0.094706
30	P2	-22.105511	0.017440	0.055777

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.060451	0.002428	0.039503
7	P3	-8.060396	0.002433	0.040069
11	P3	-8.060524	0.002439	0.040173
15	P3	-8.060346	0.002439	0.039513
19	P3	-8.060572	0.002440	0.039712
22	P3	-8.060405	0.002428	0.038853
26	P3	-8.060297	0.002426	0.039243
30	P3	-8.060432	0.002435	0.039502

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	0.000553300
	stdev	1.74921e-07
MEAN Q	mean	0.000517169
	stdev	2.17888e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138411
	stdev	0.00121111
STDEV Q	mean	0.138764
	stdev	0.00123028



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006012[123]

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_1PNPDE20060123_004758_000002002044_00288_20382_0815.N1	1	0
ASA_WSM_1PNPDE20060122_152526_000001462044_00283_20377_2004.N1	0	1
ASA_WSM_1PNPDE20060122_181420_000001522044_00285_20379_2017.N1	0	64





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)

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

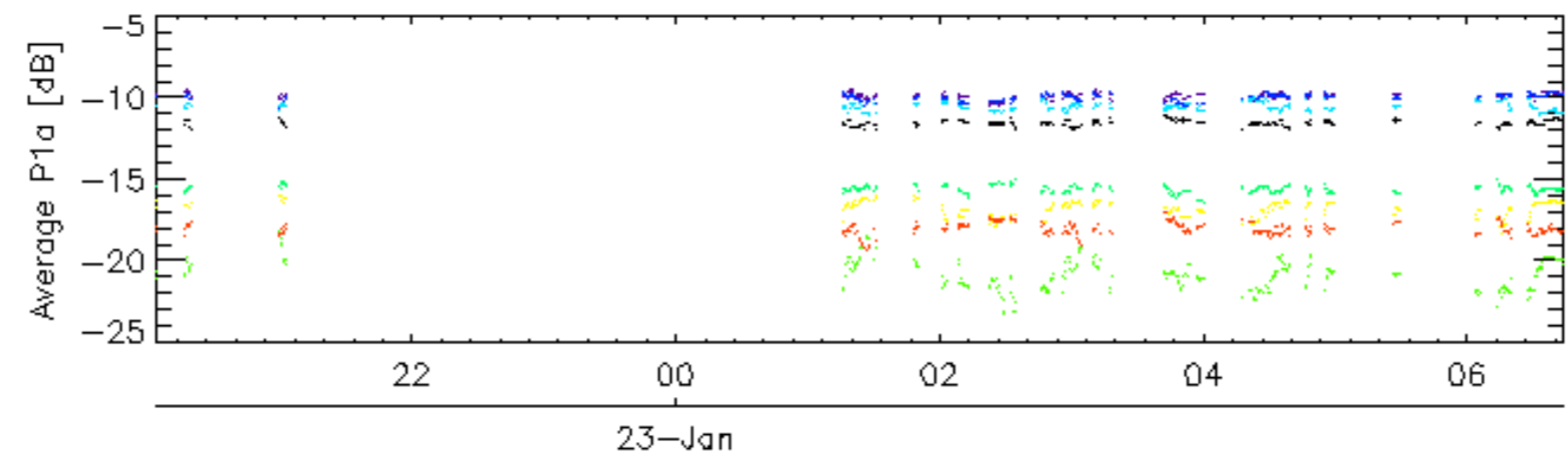
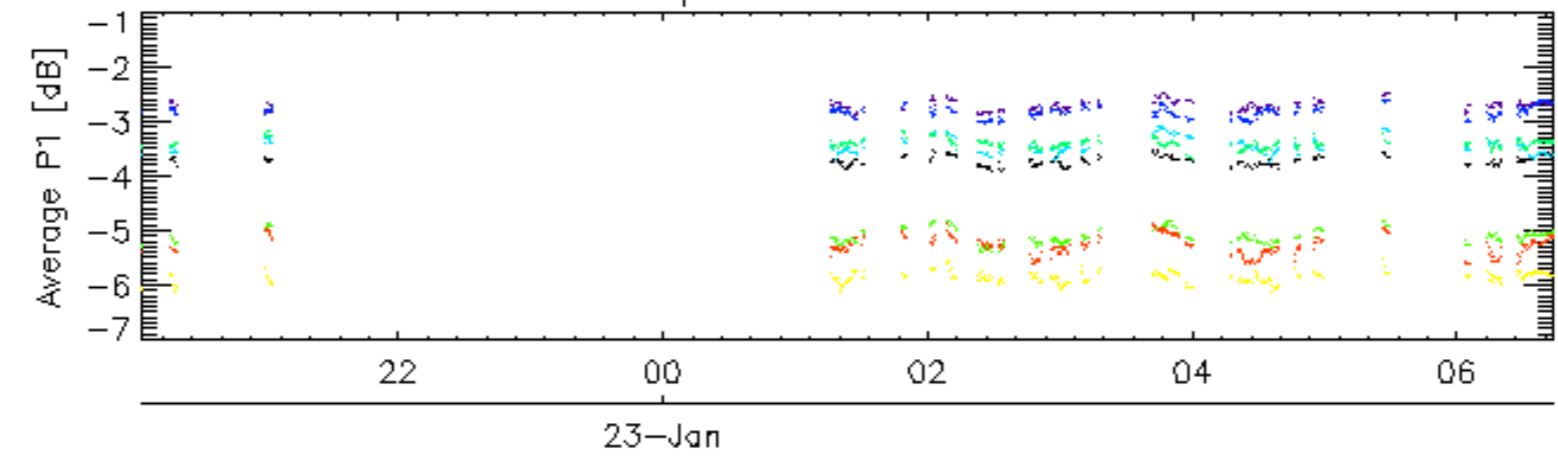
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

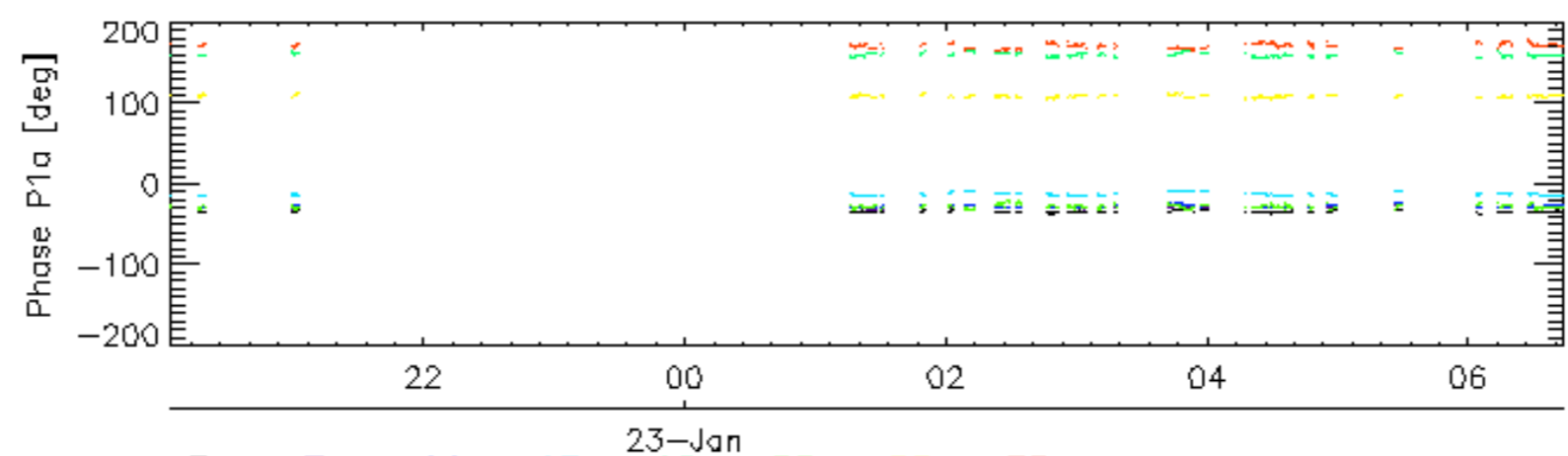
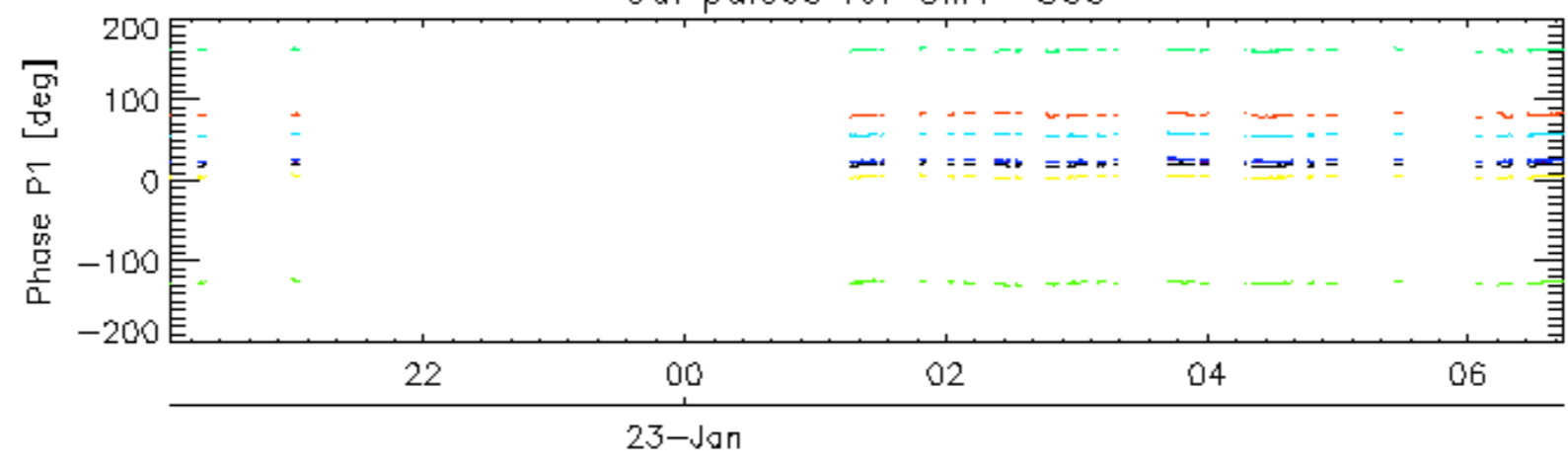
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

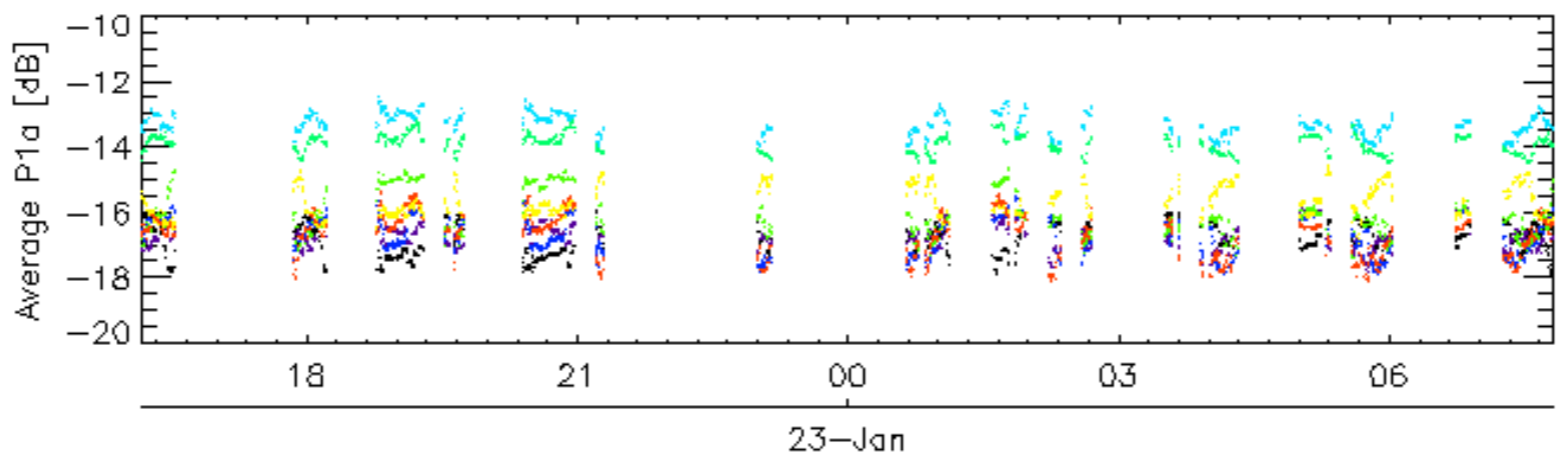
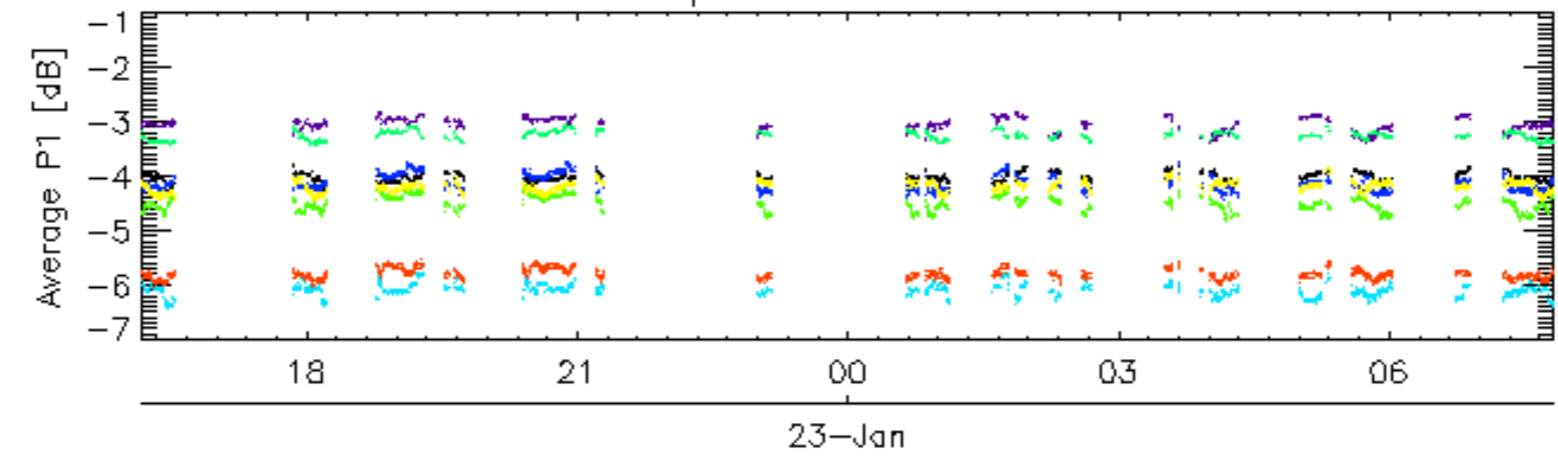


Cal pulses for GM1 SS3

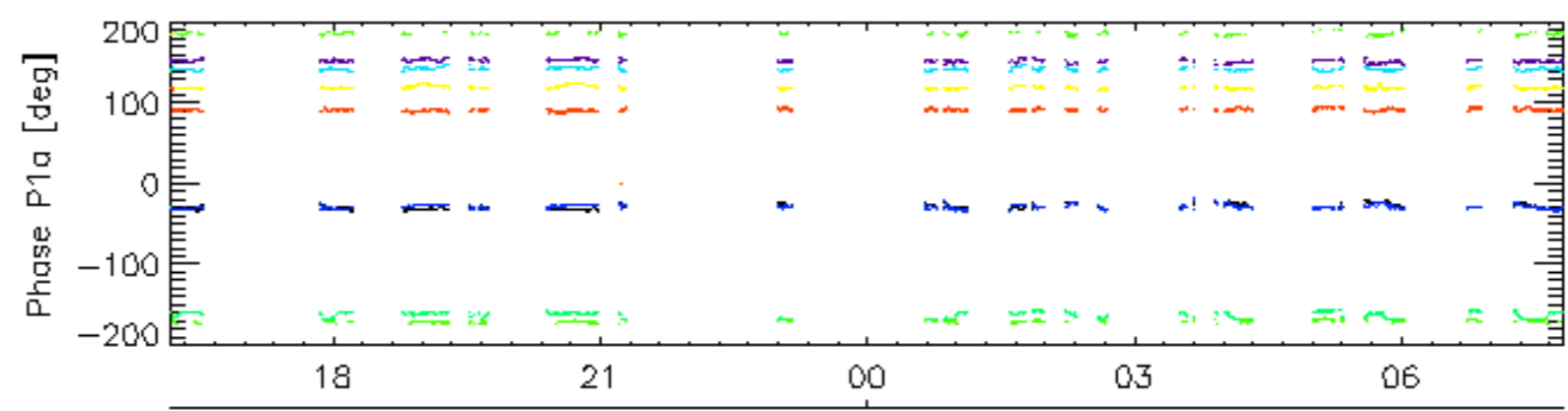
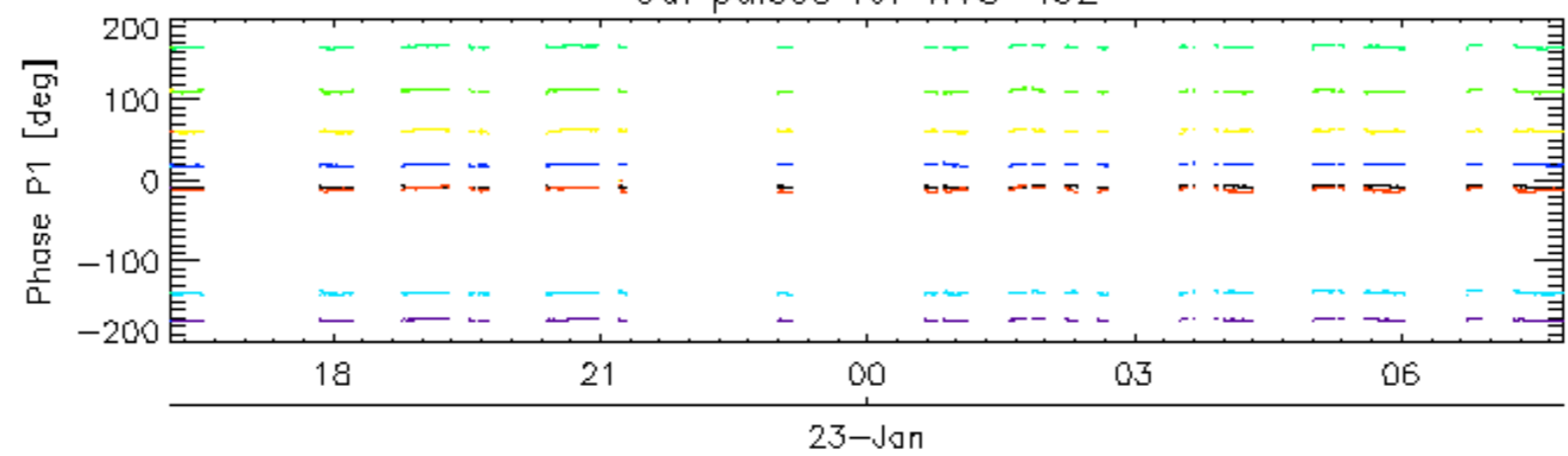


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

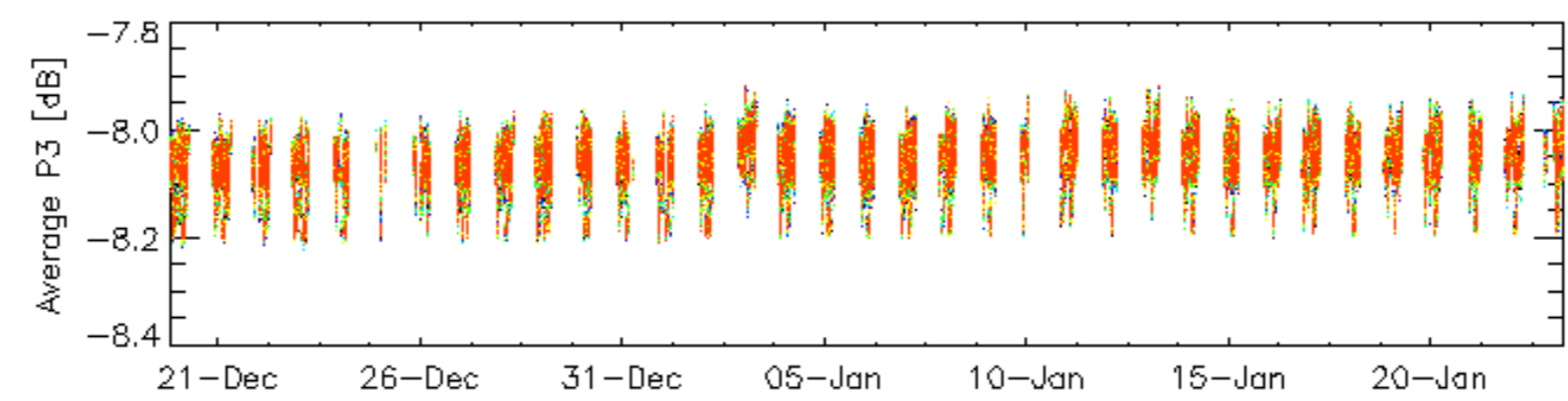
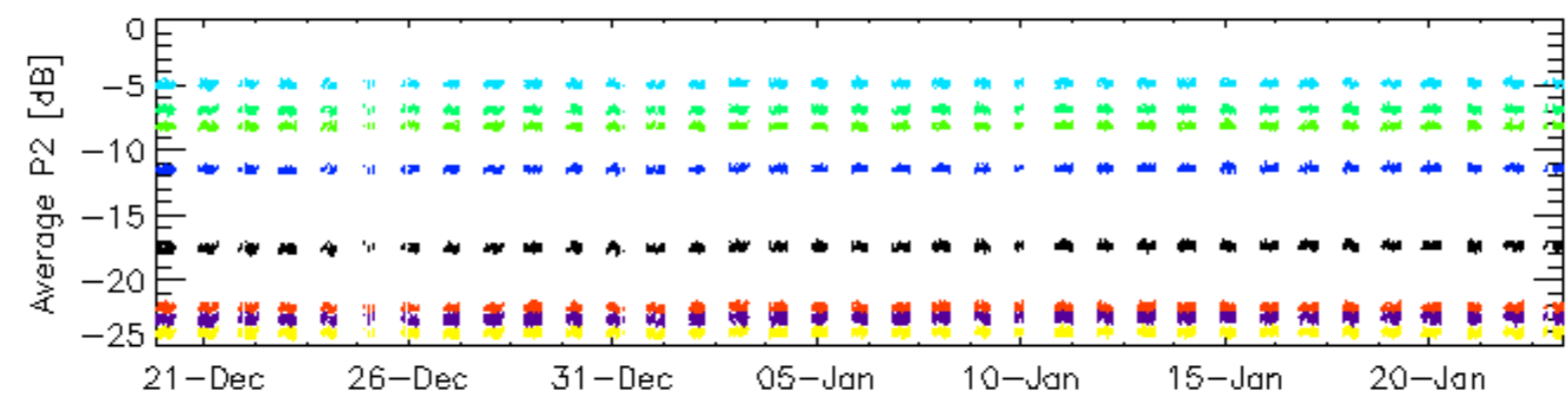
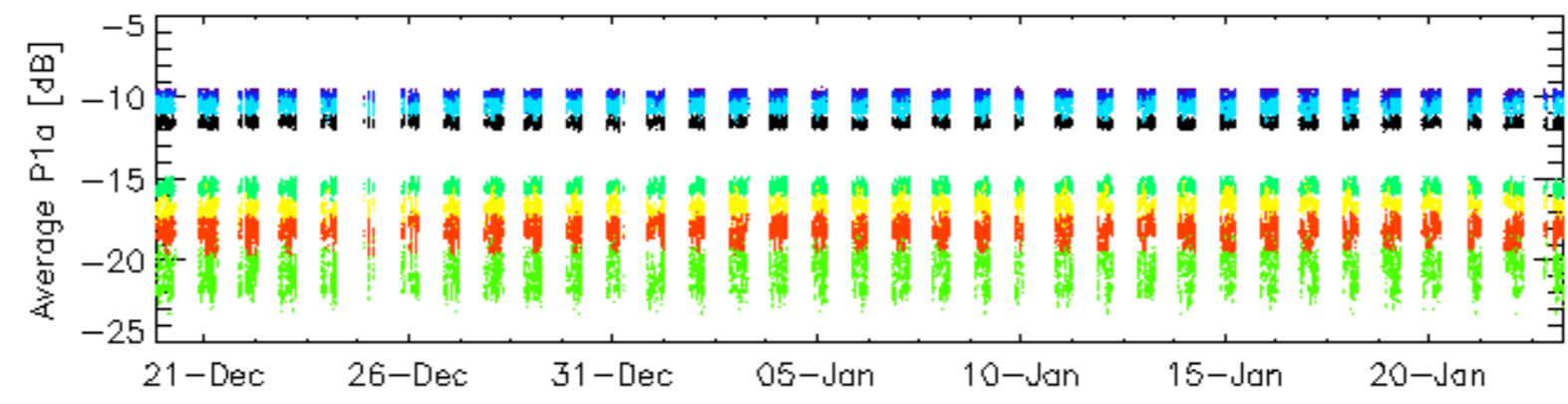
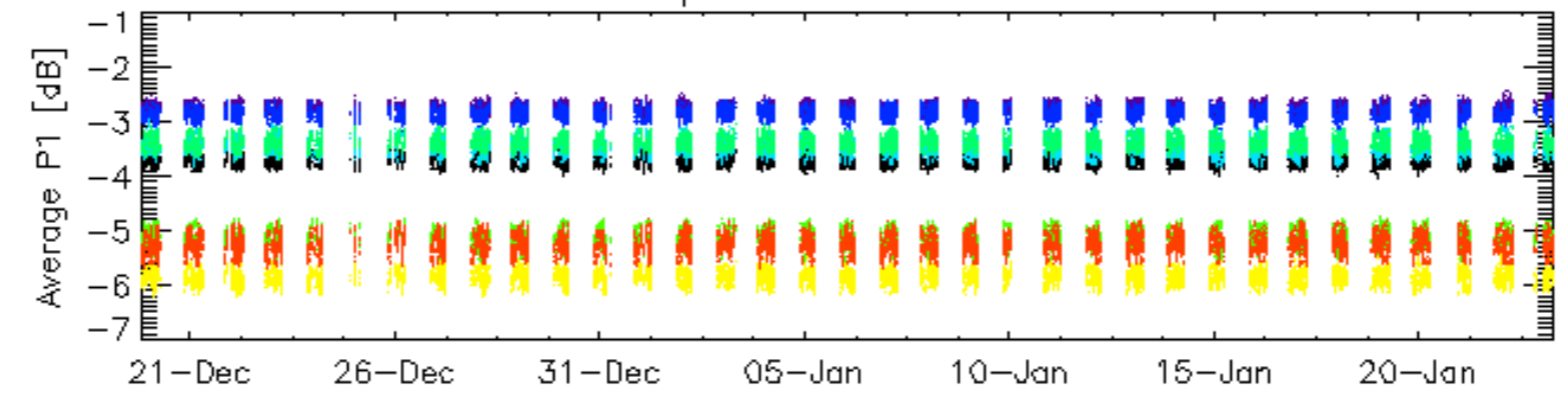


Cal pulses for WVS IS2



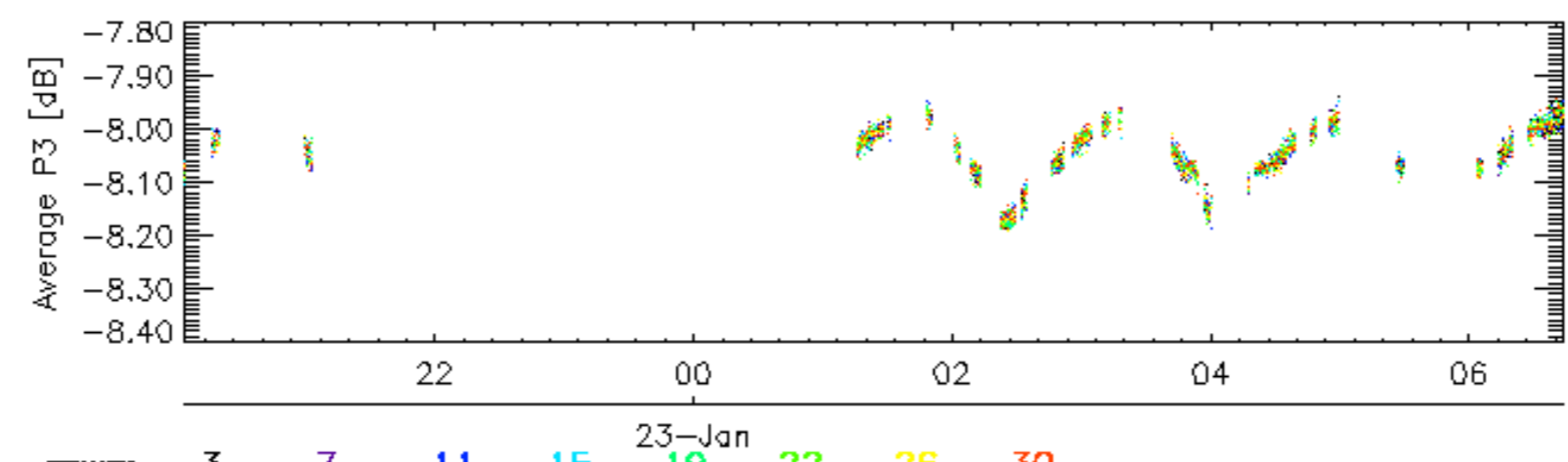
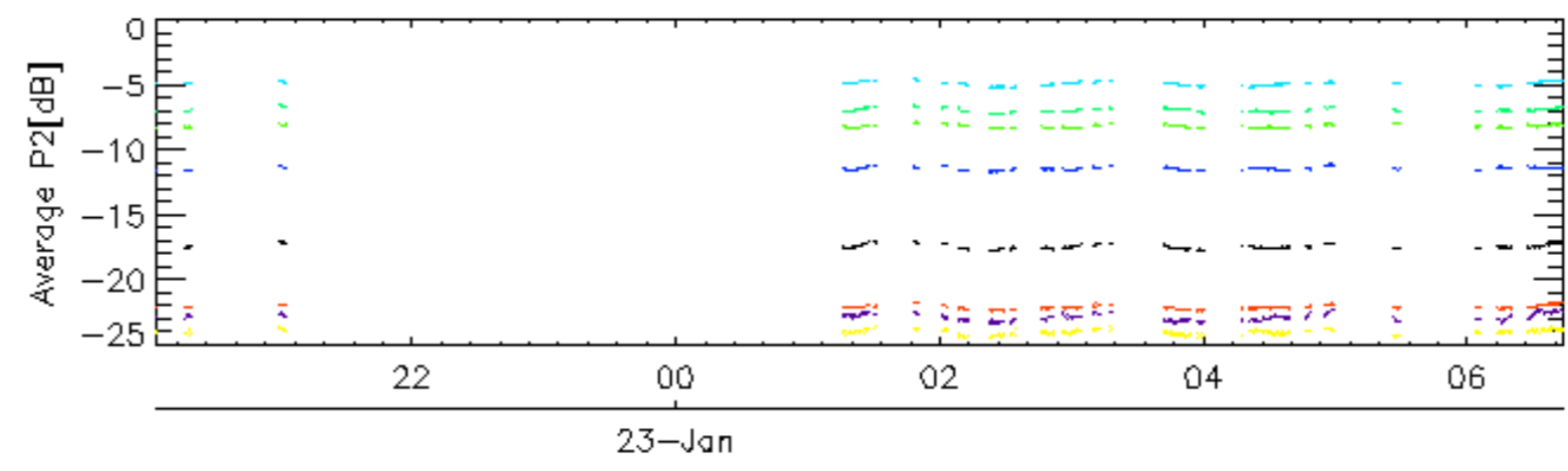
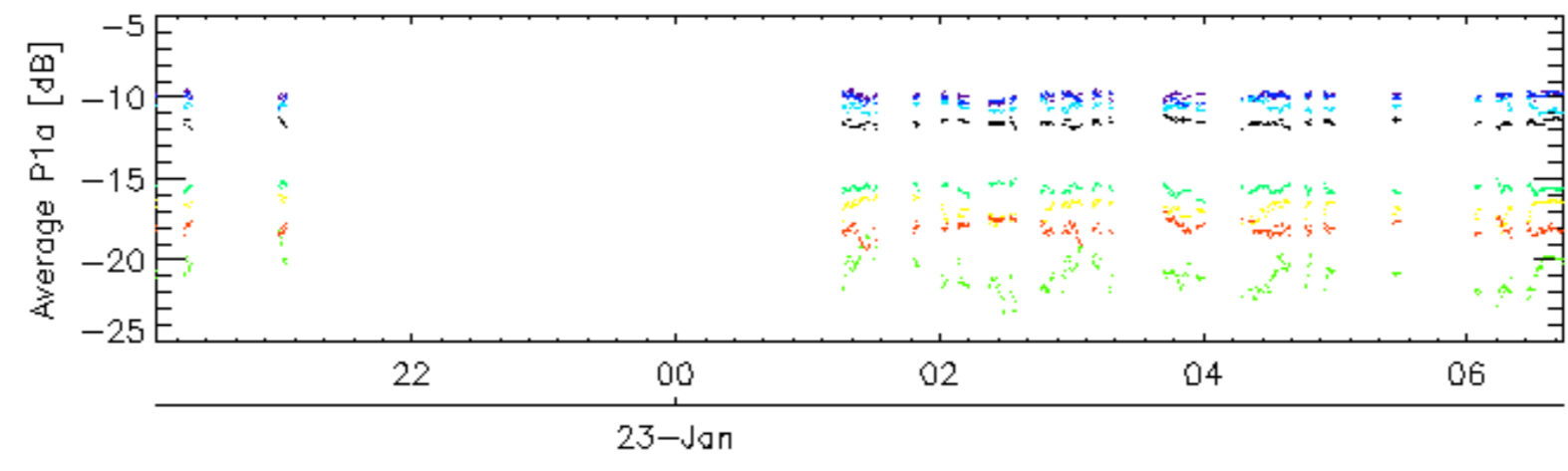
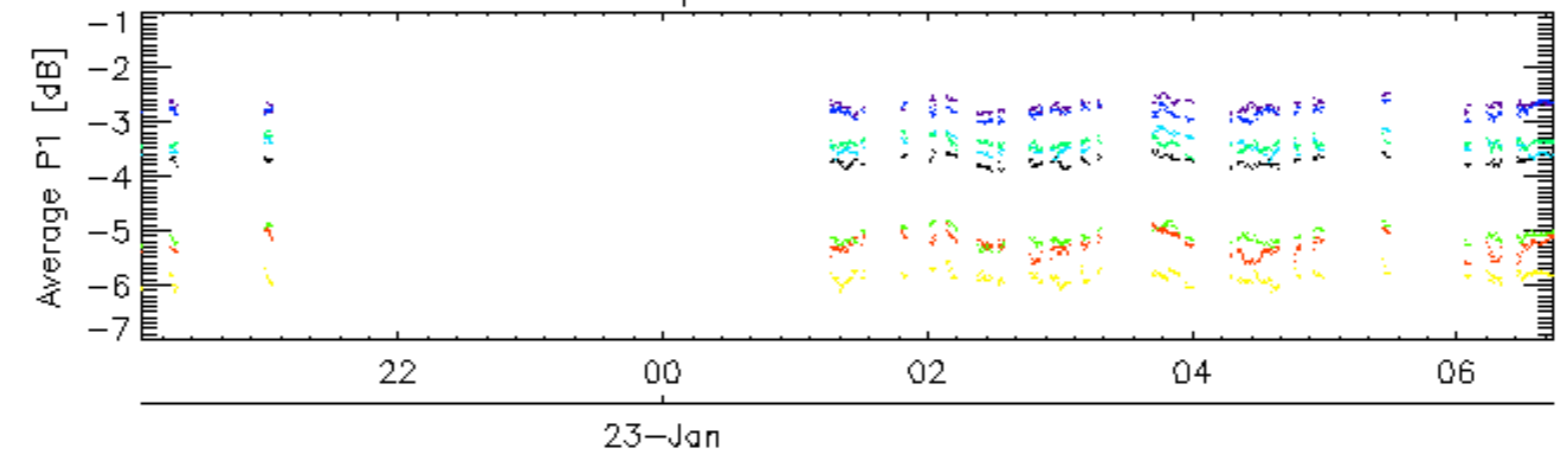
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



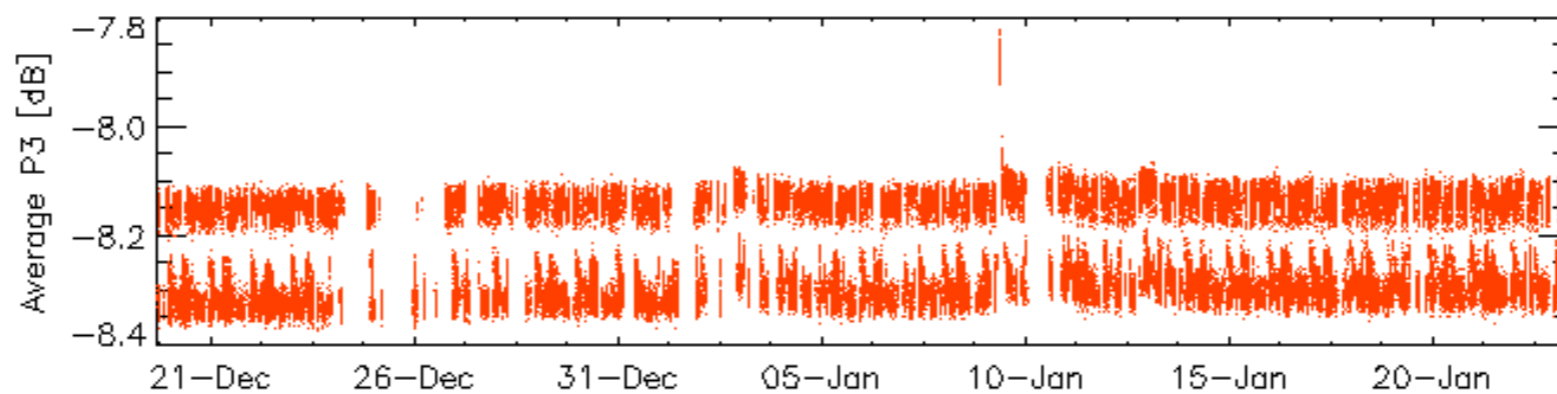
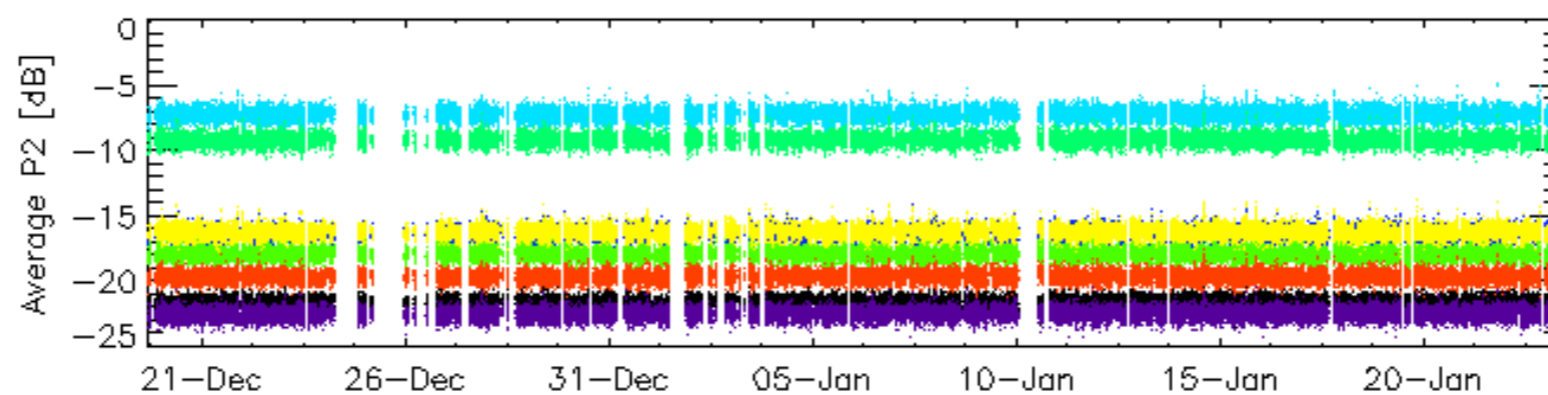
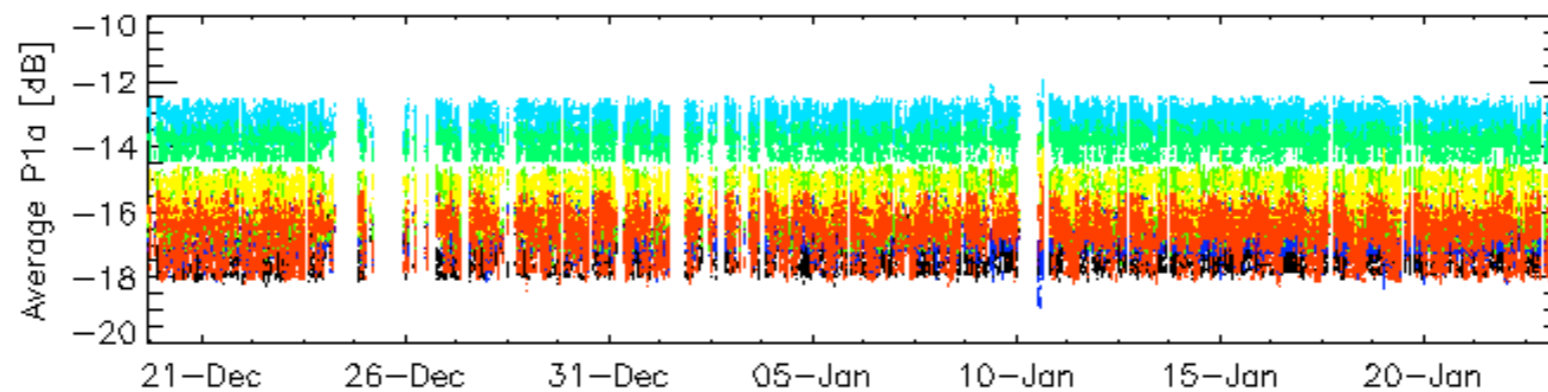
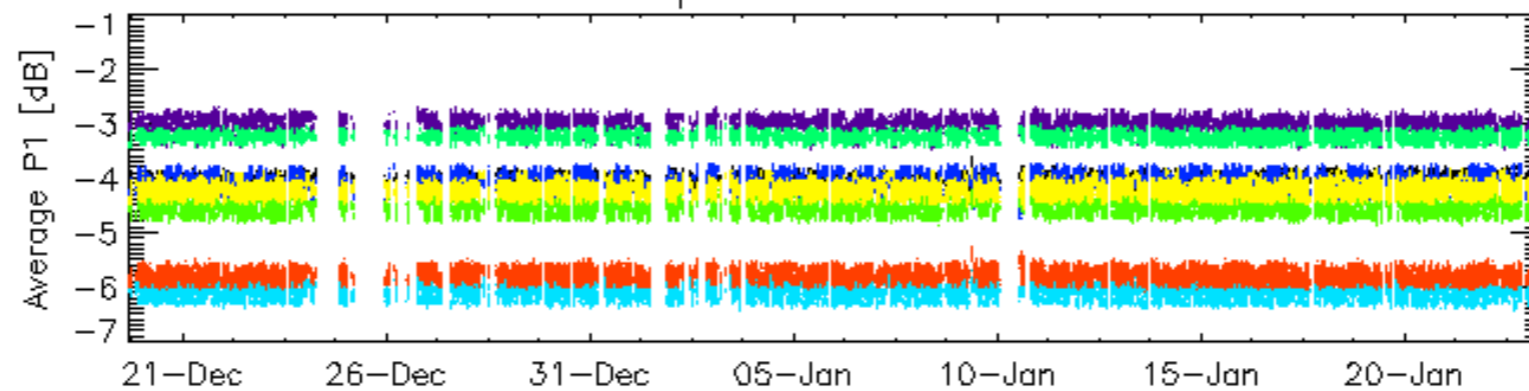
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



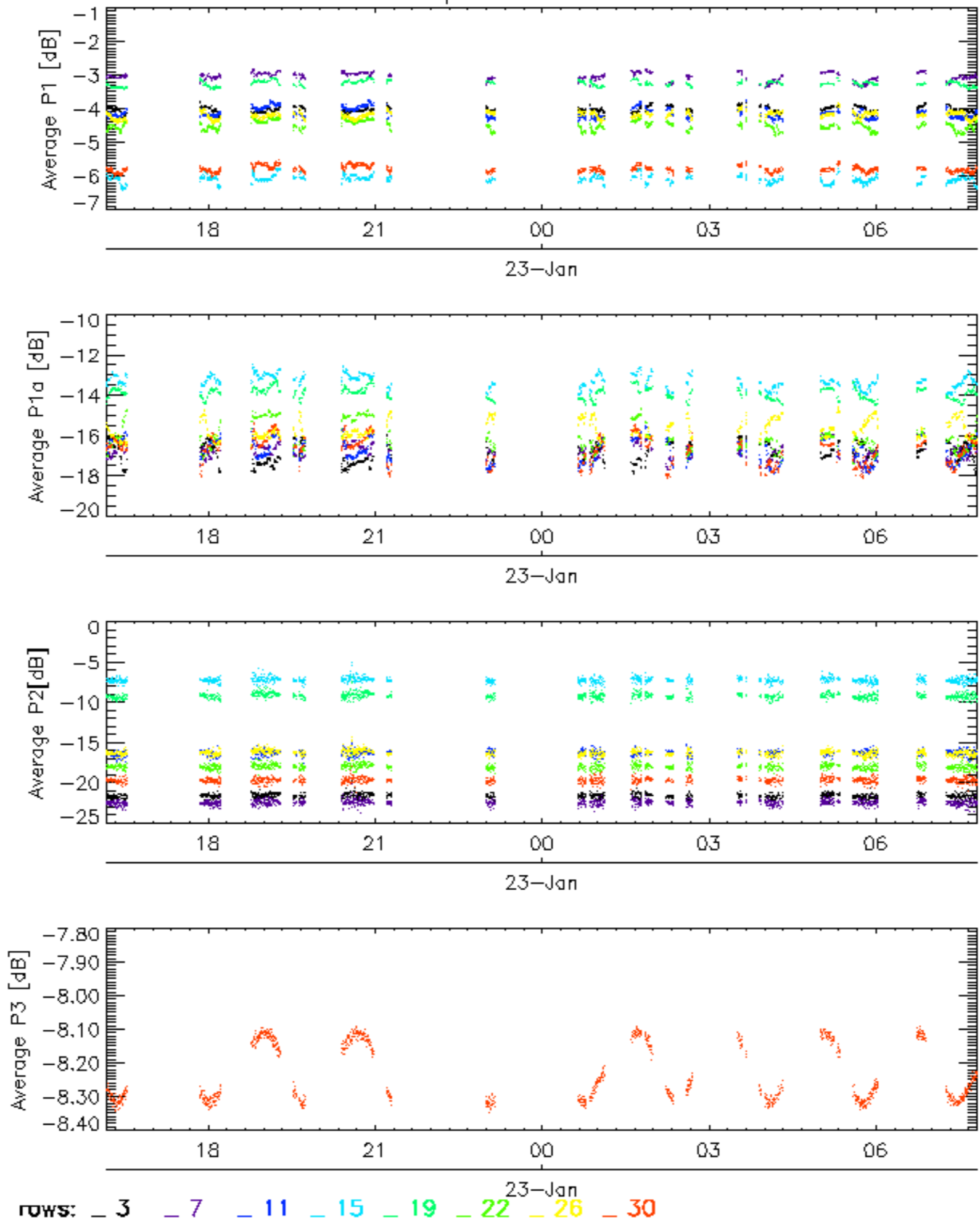
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2



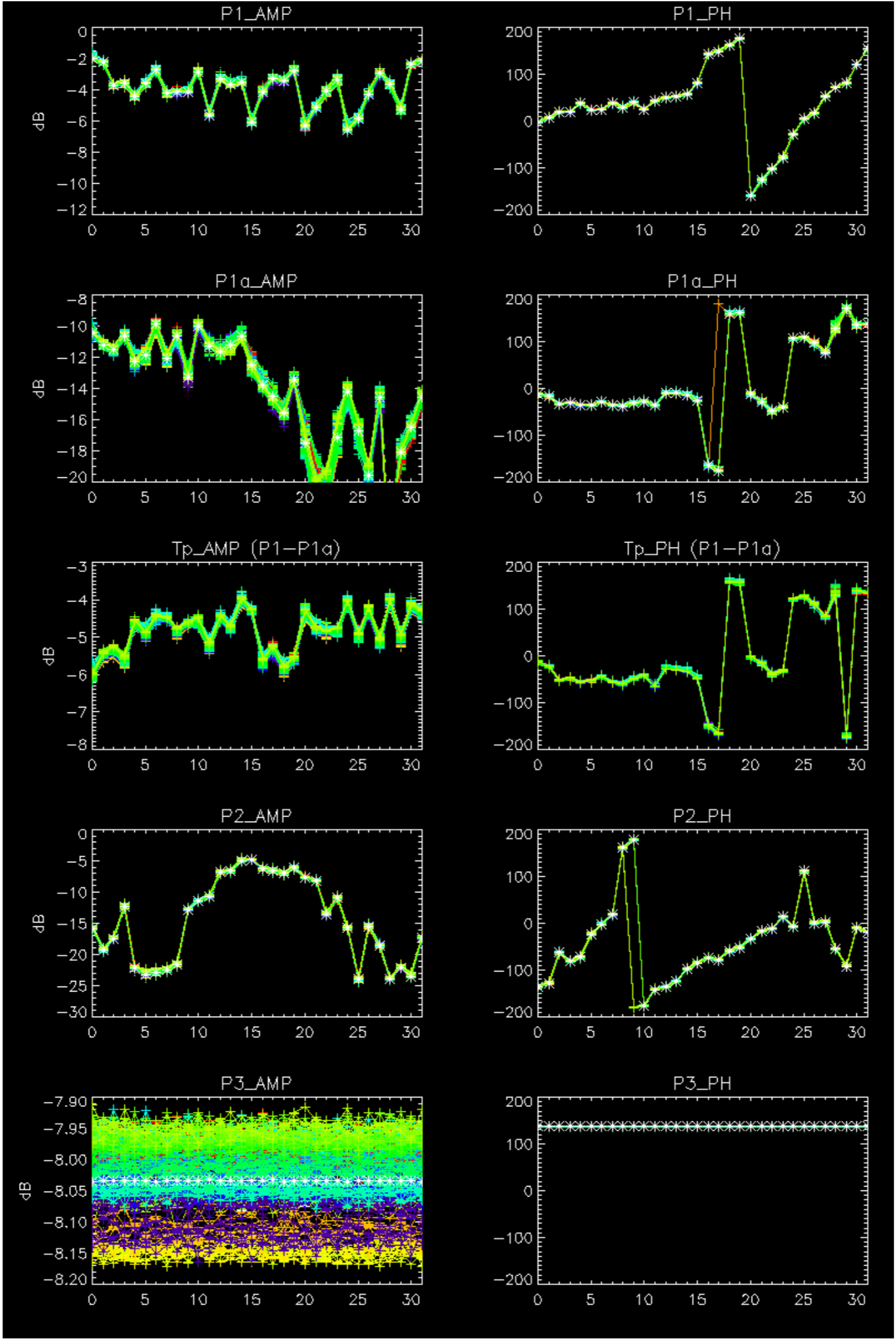
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

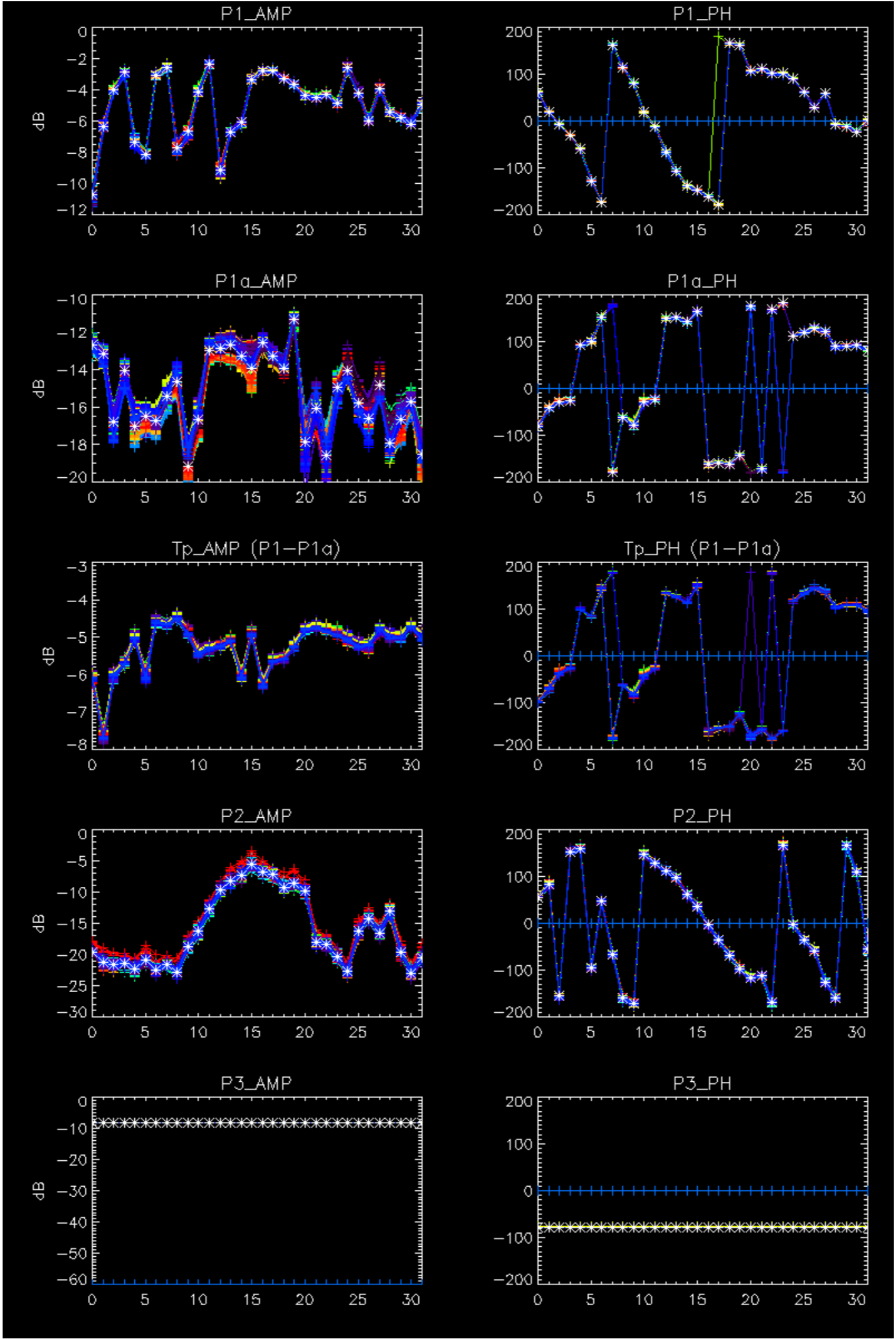
Cal pulses for WVS IS2



No anomalies observed on available browse products

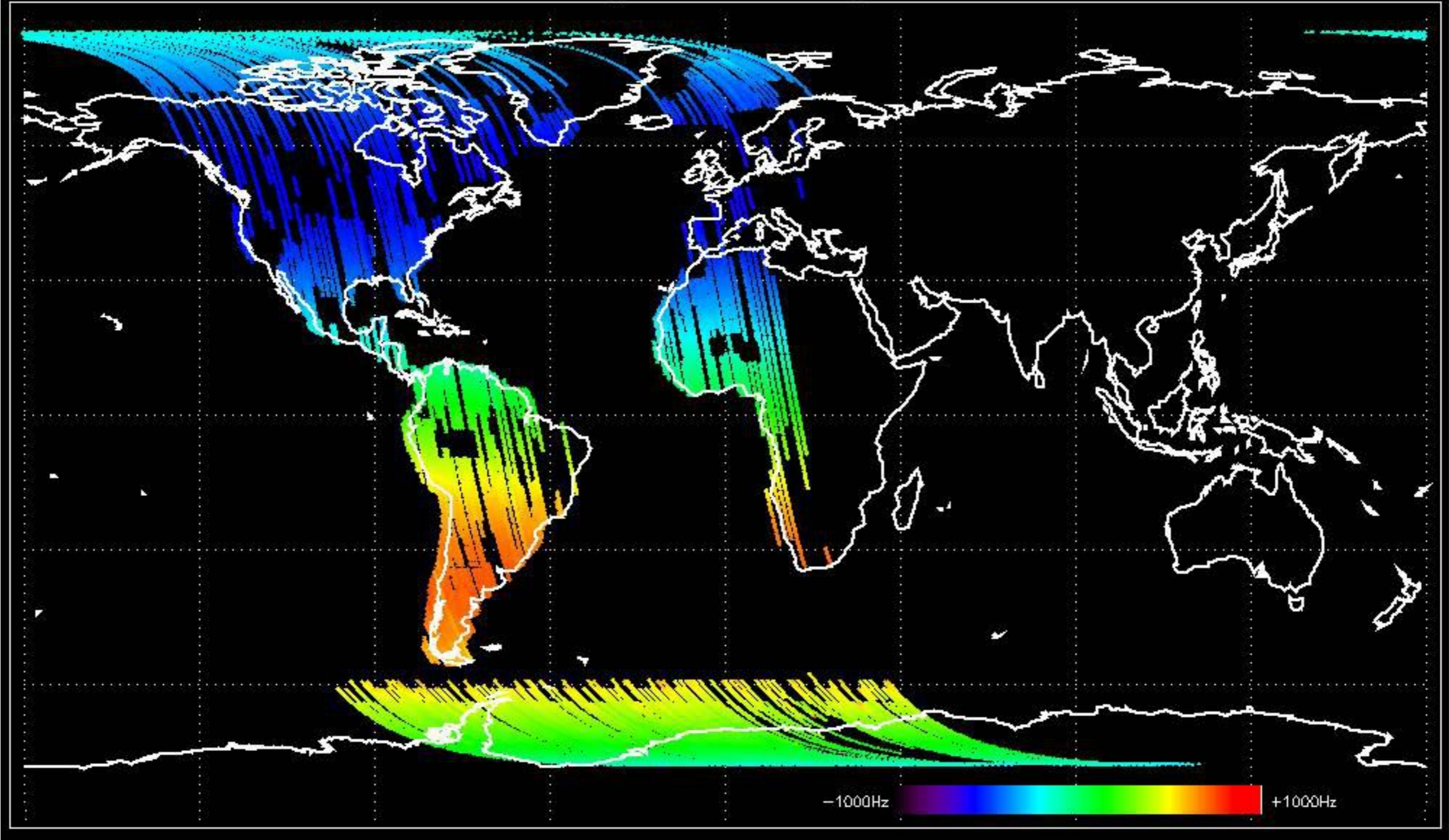
No anomalies observed.



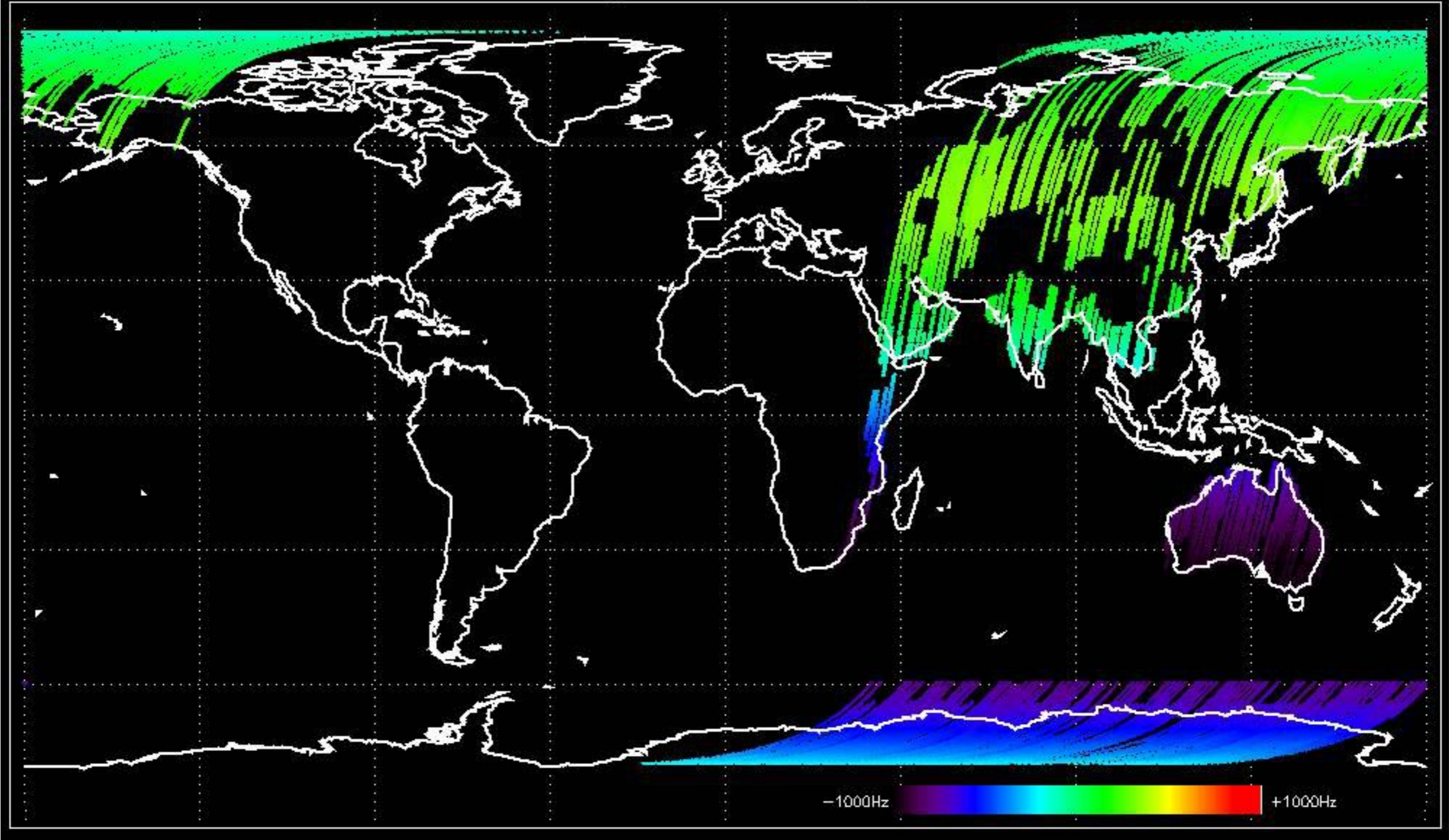


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

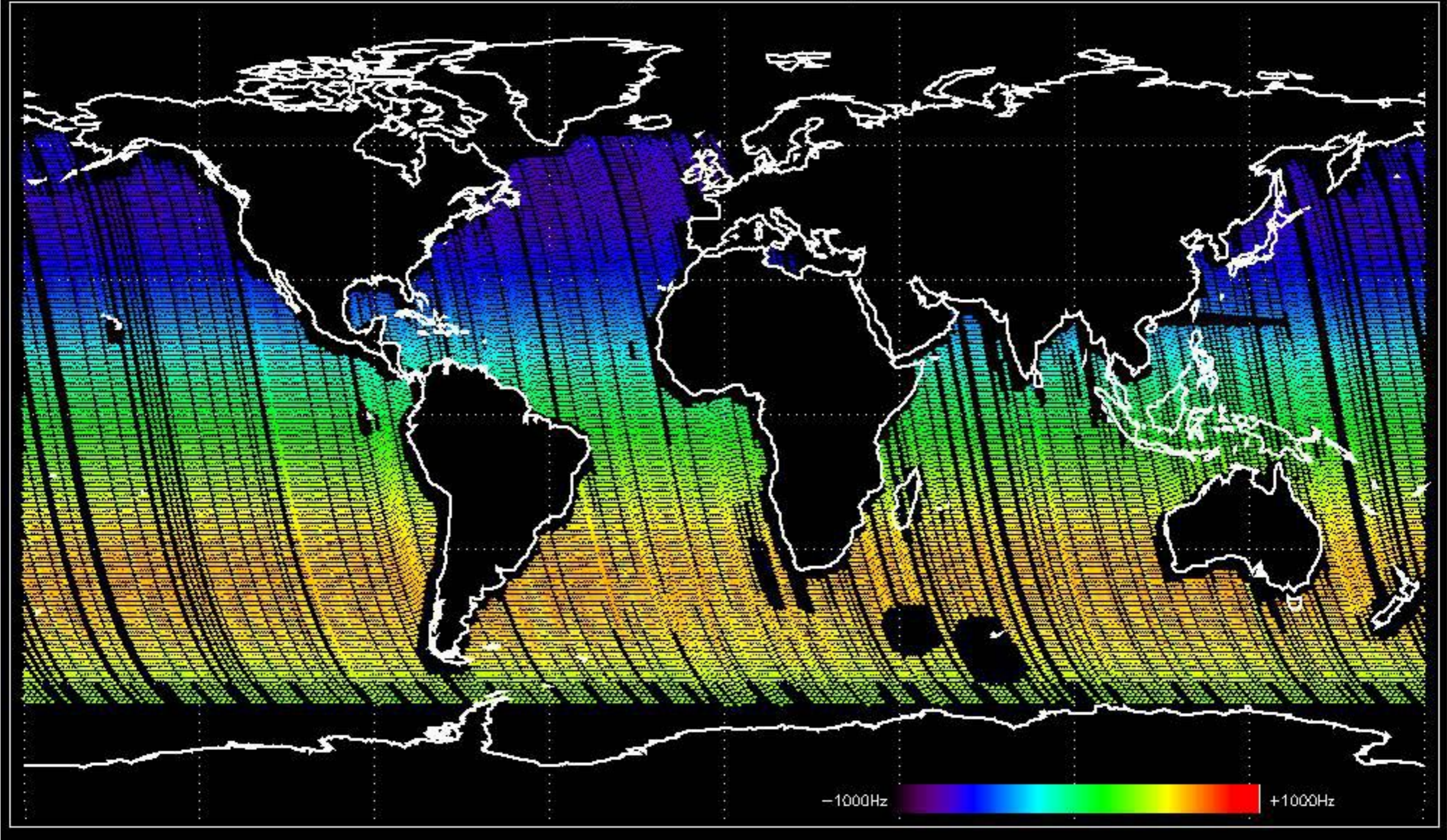
Doppler 'GM1' 'SS1' ascending



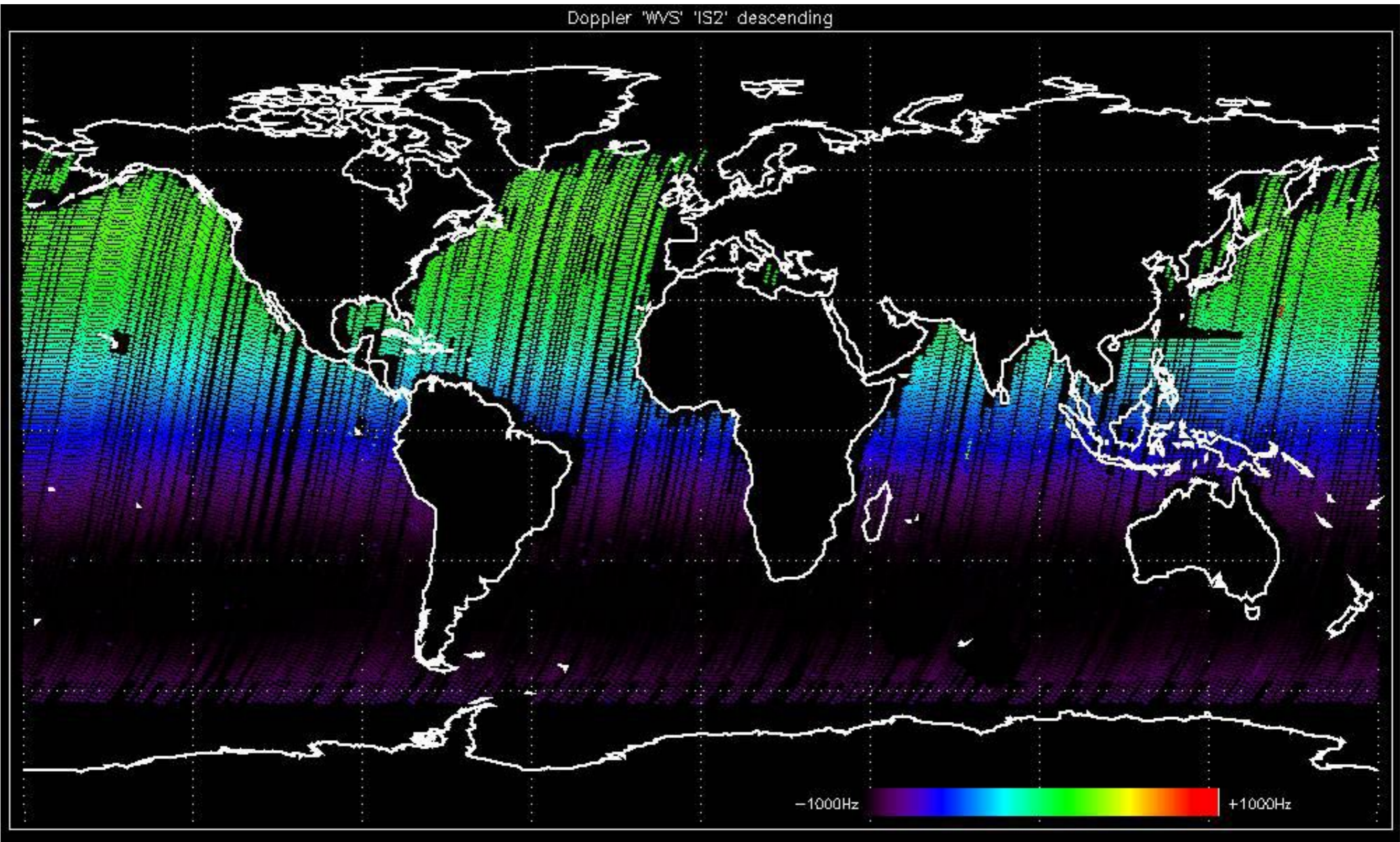
Doppler 'GM1' 'SS1' descending



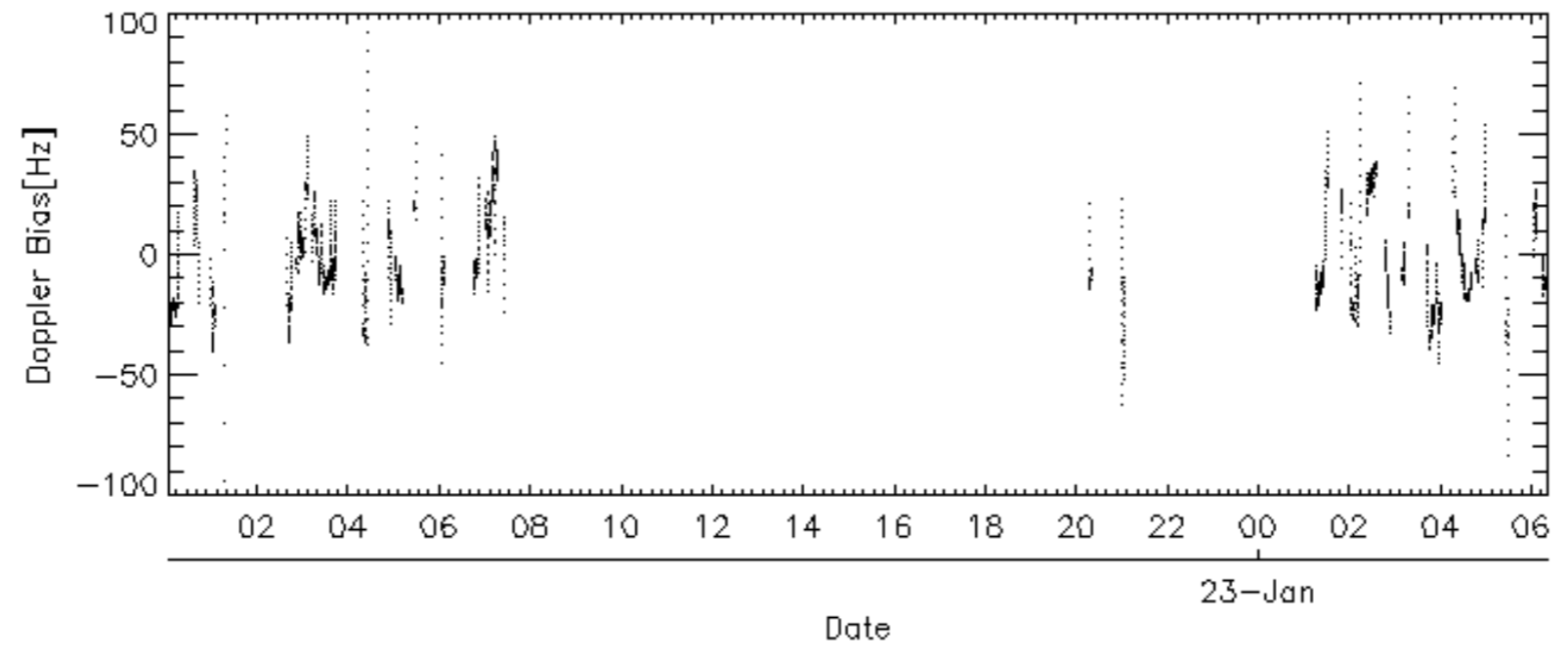
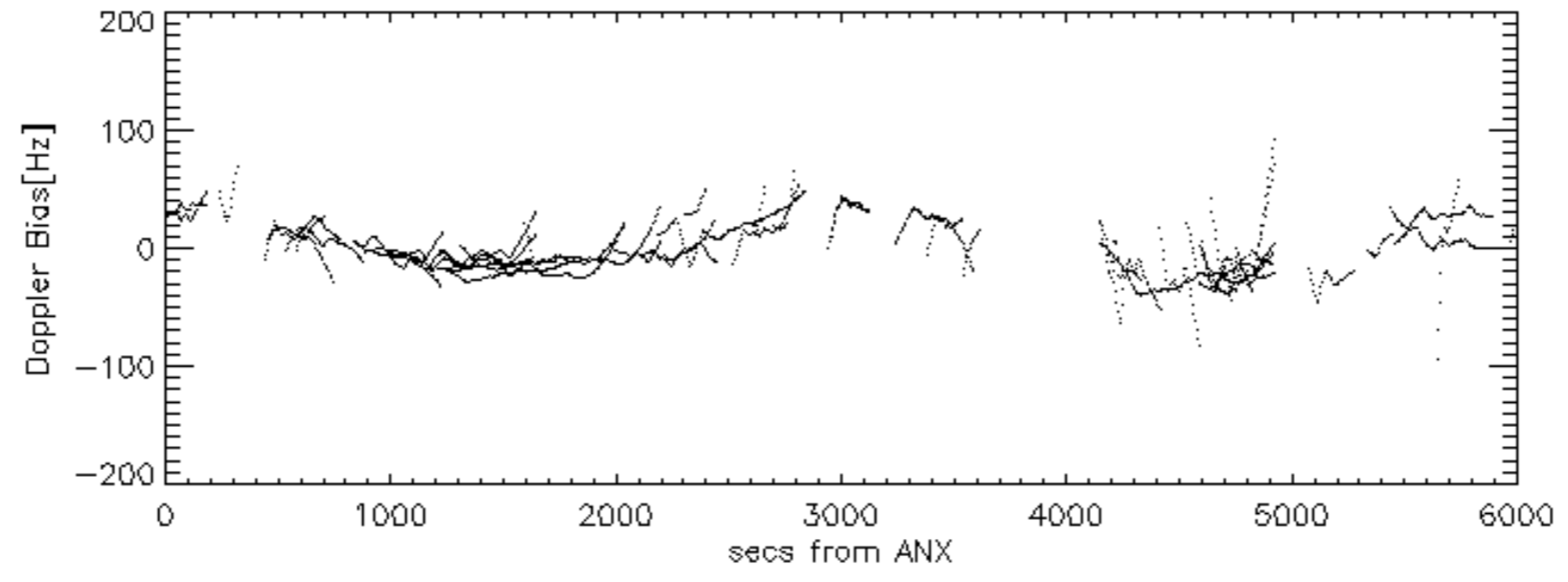
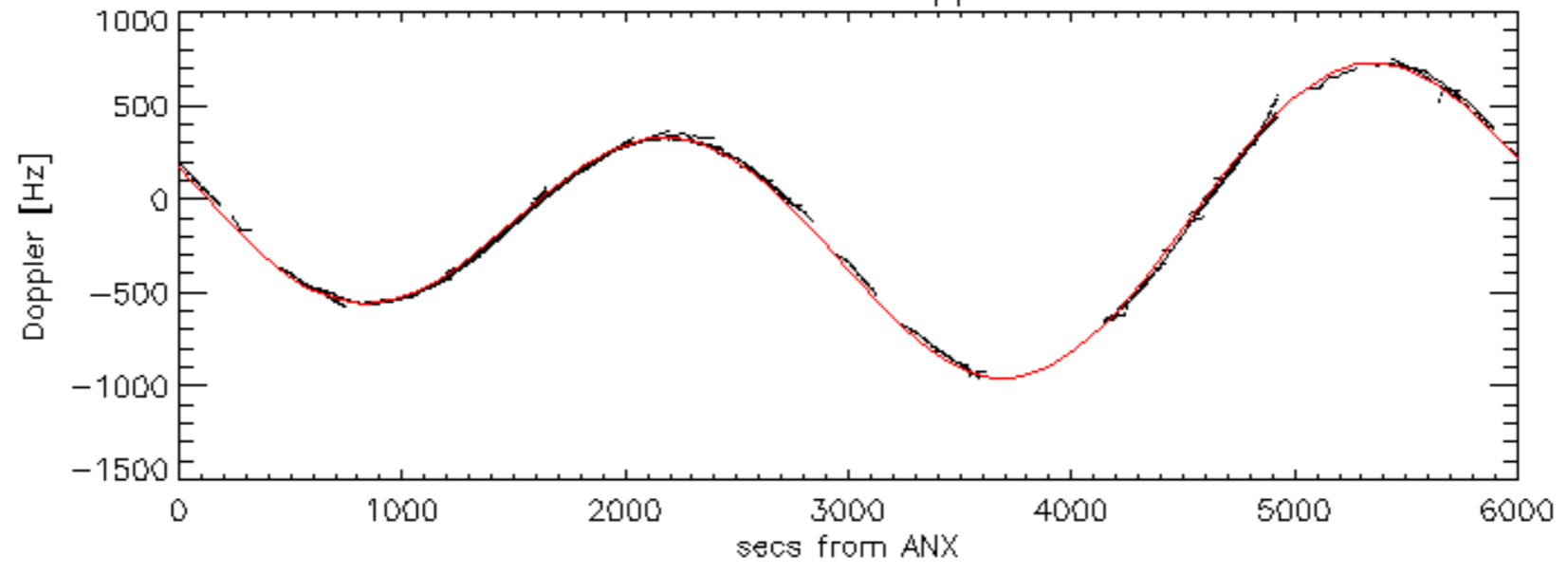
Doppler 'WVS' 'IS2' ascending

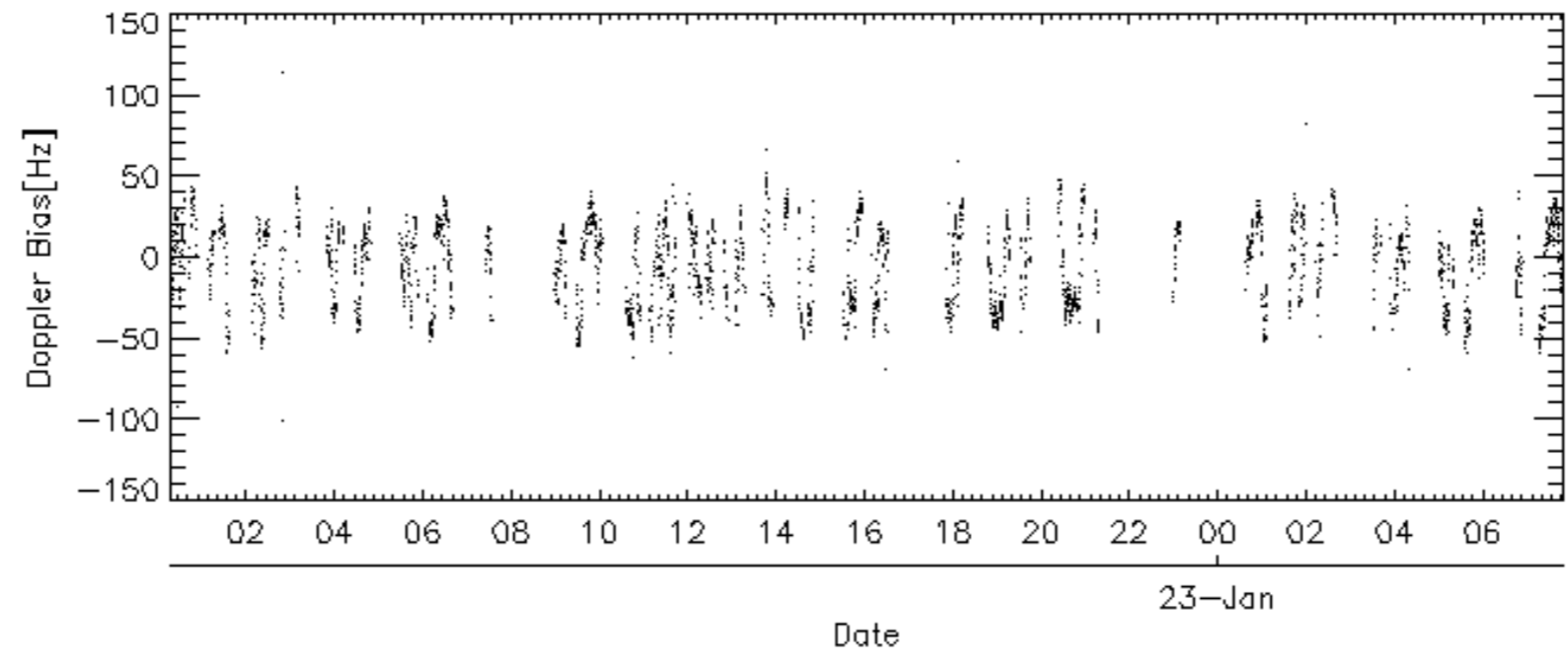
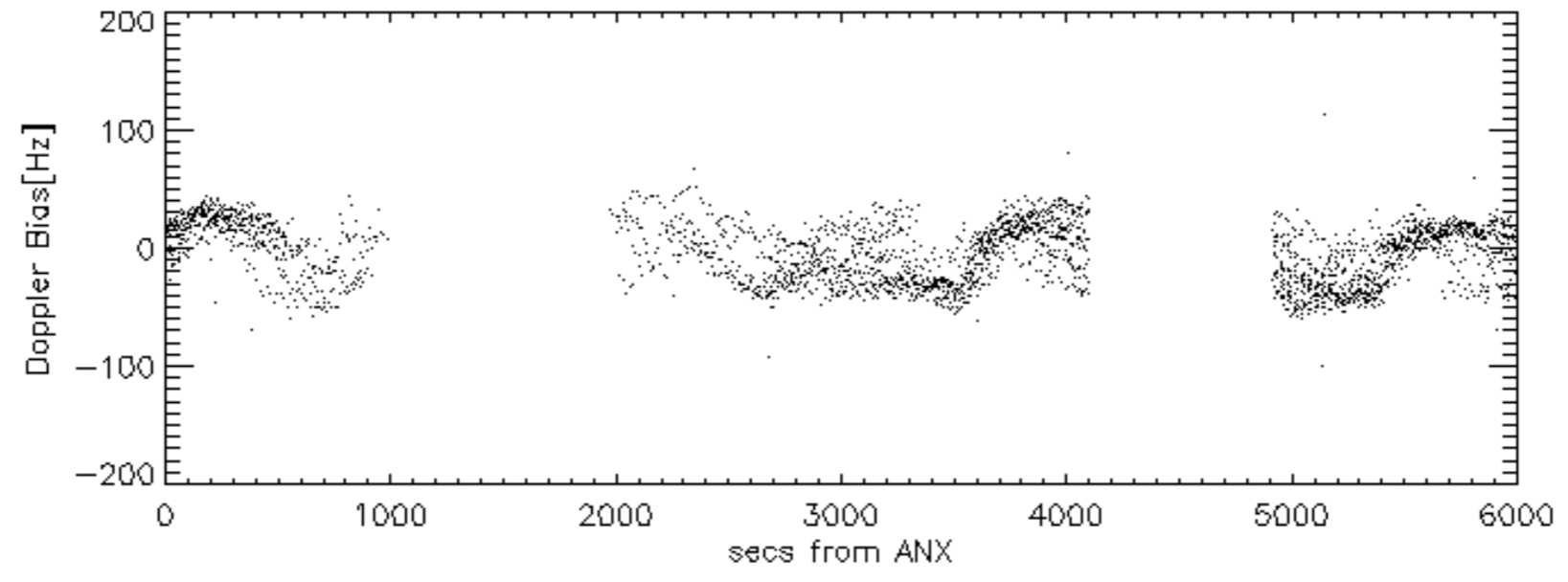
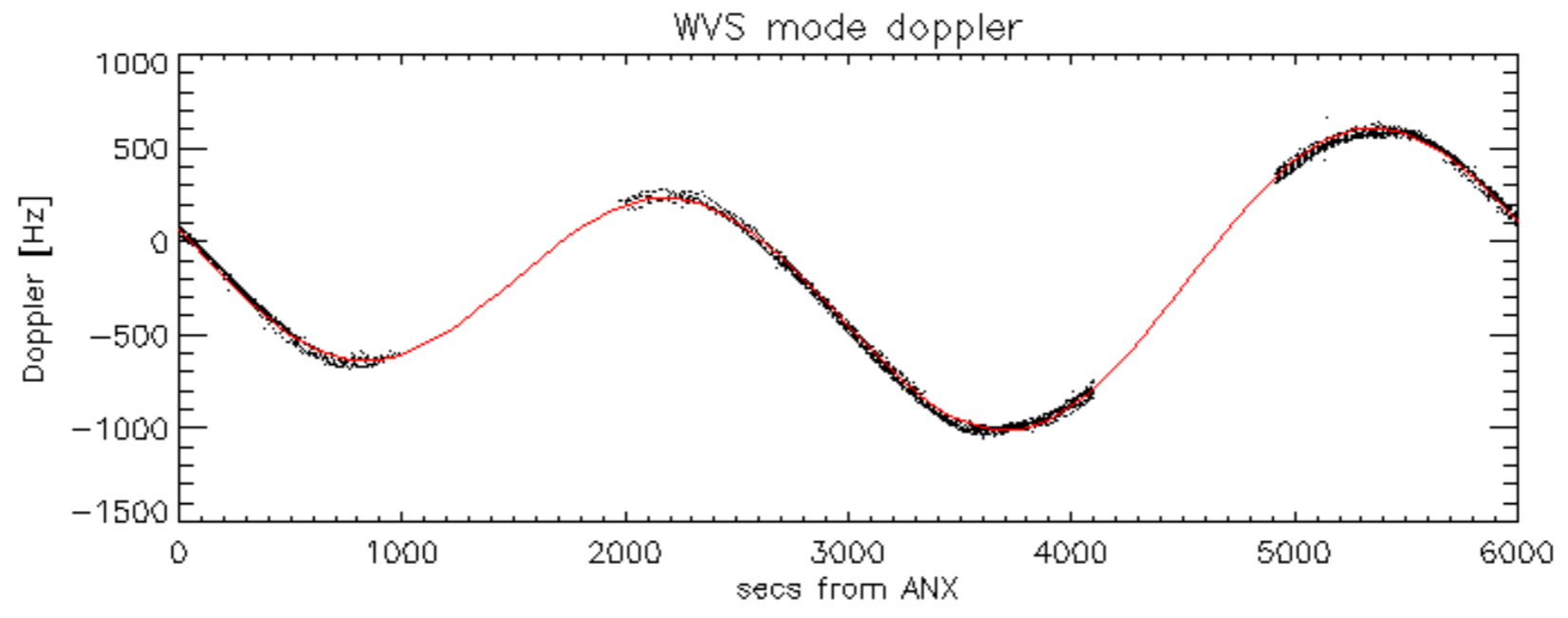


Doppler 'WVS' 'IS2' descending

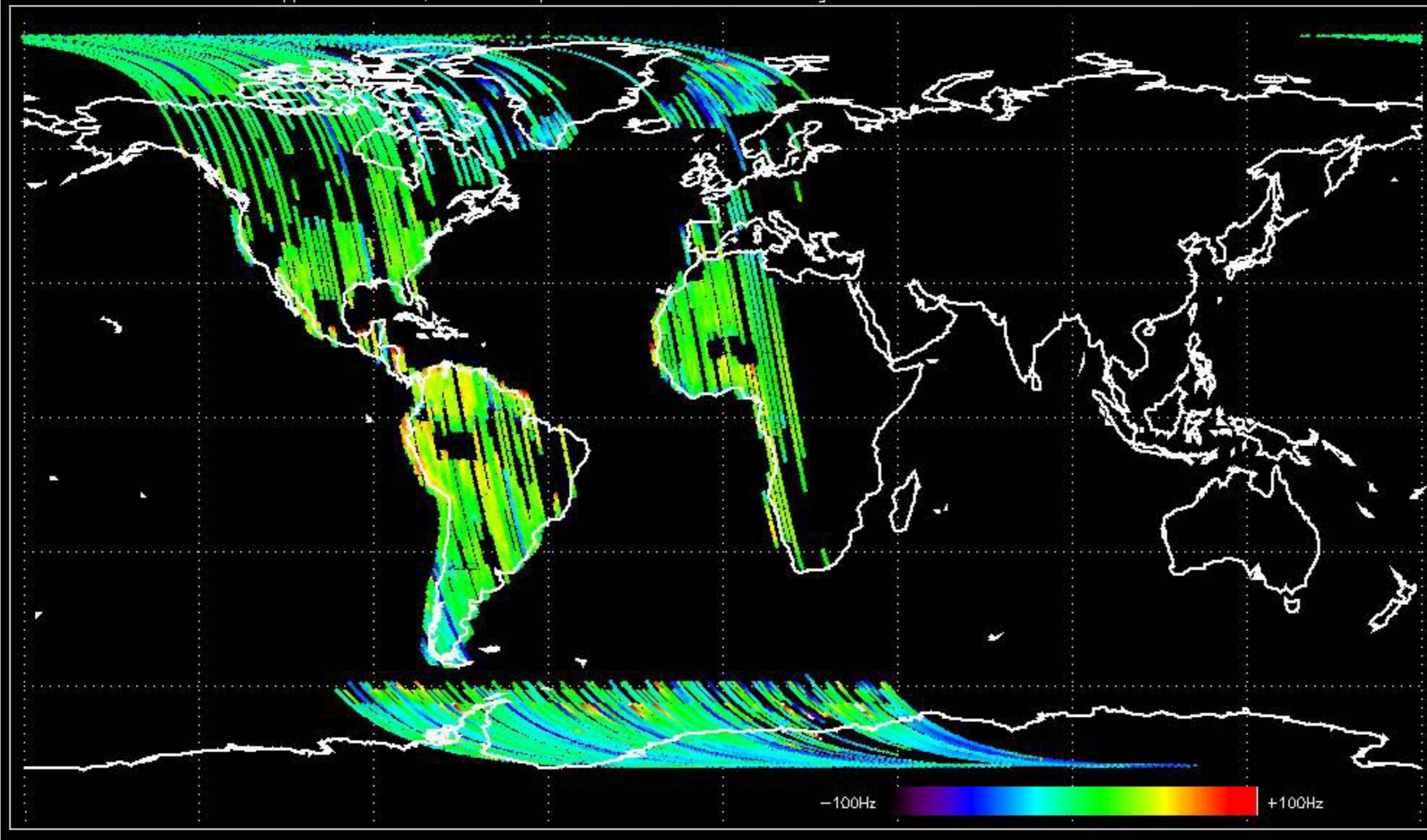


GM1 mode doppler

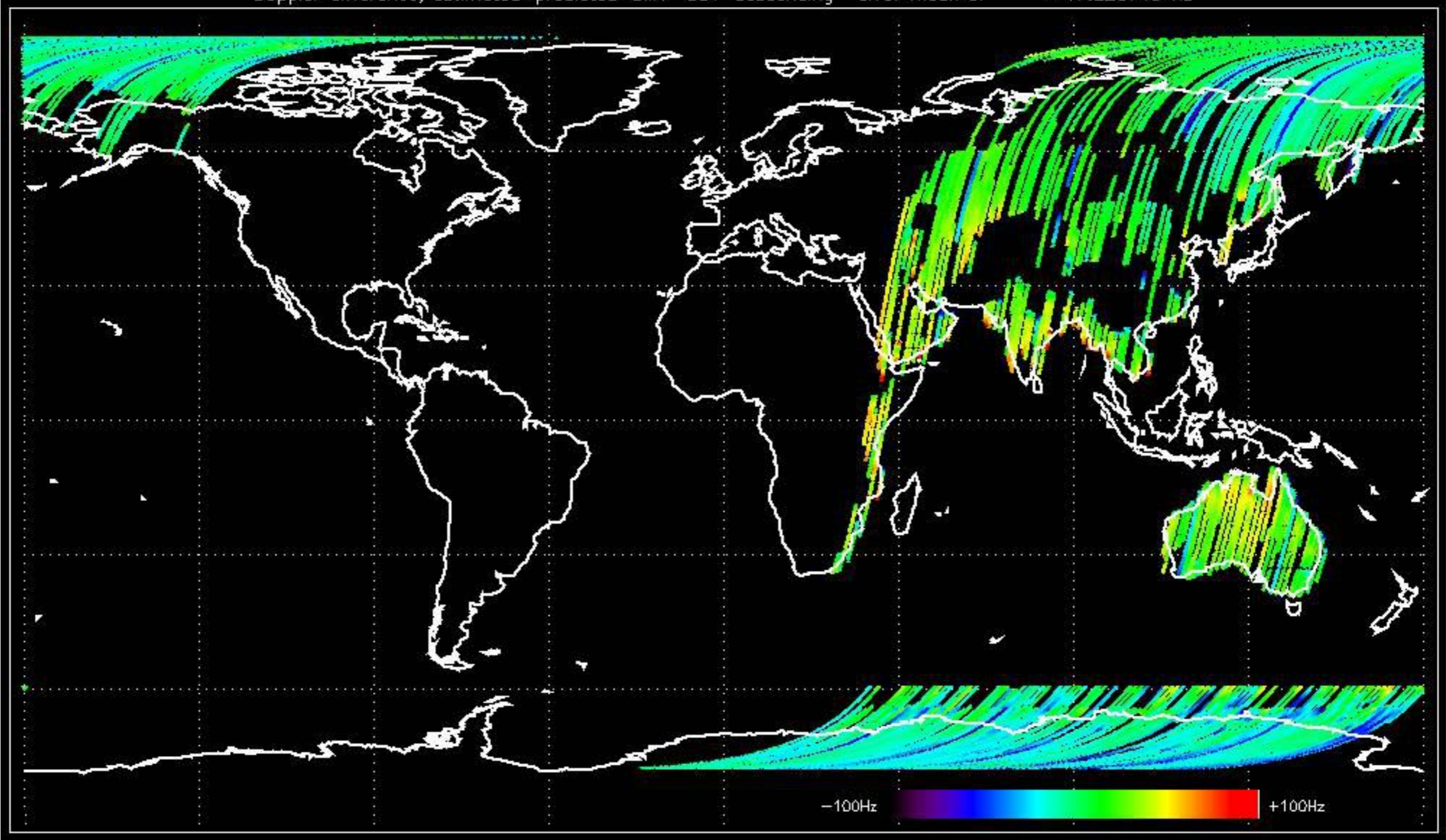




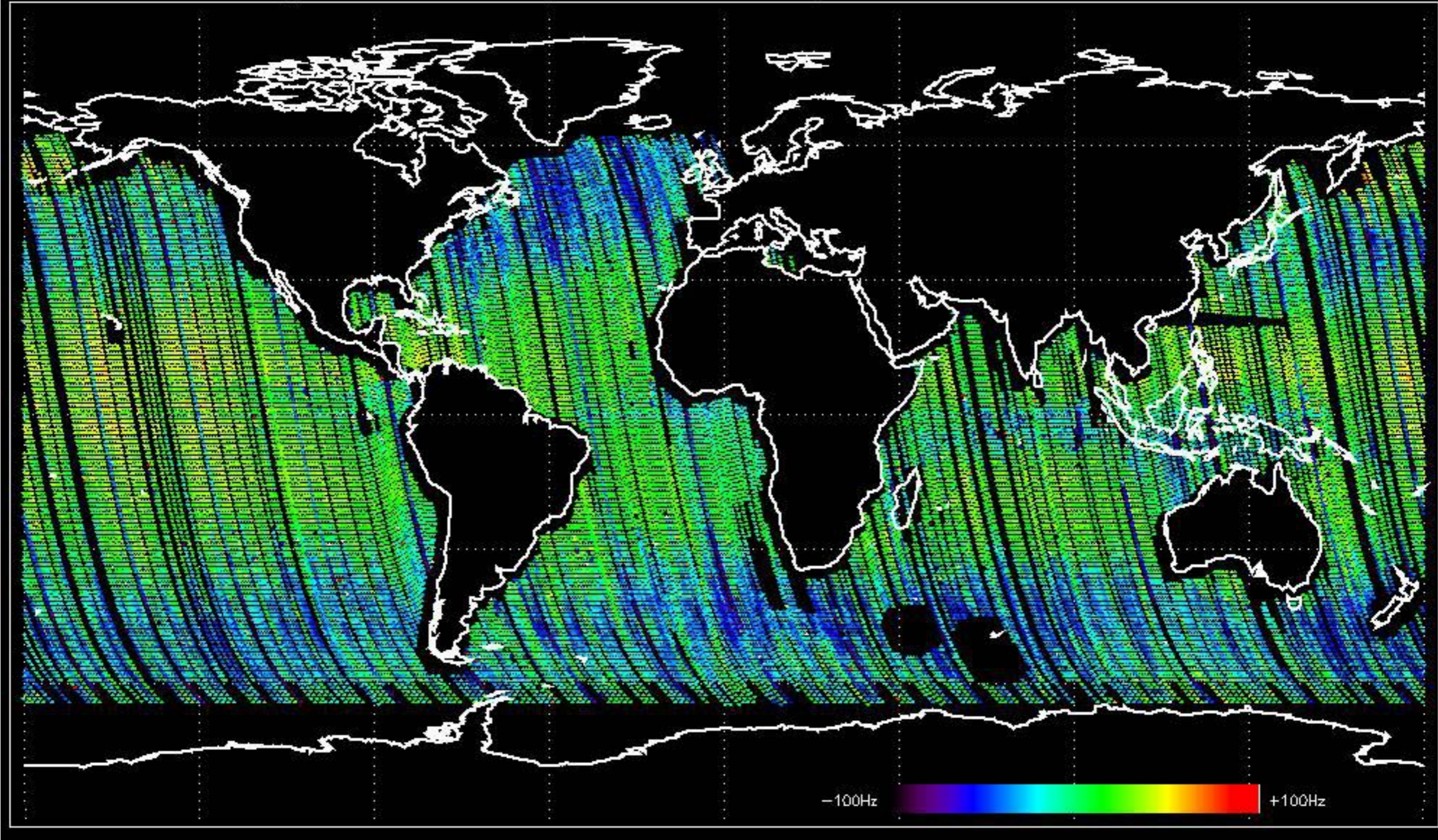
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -12.019527 Hz



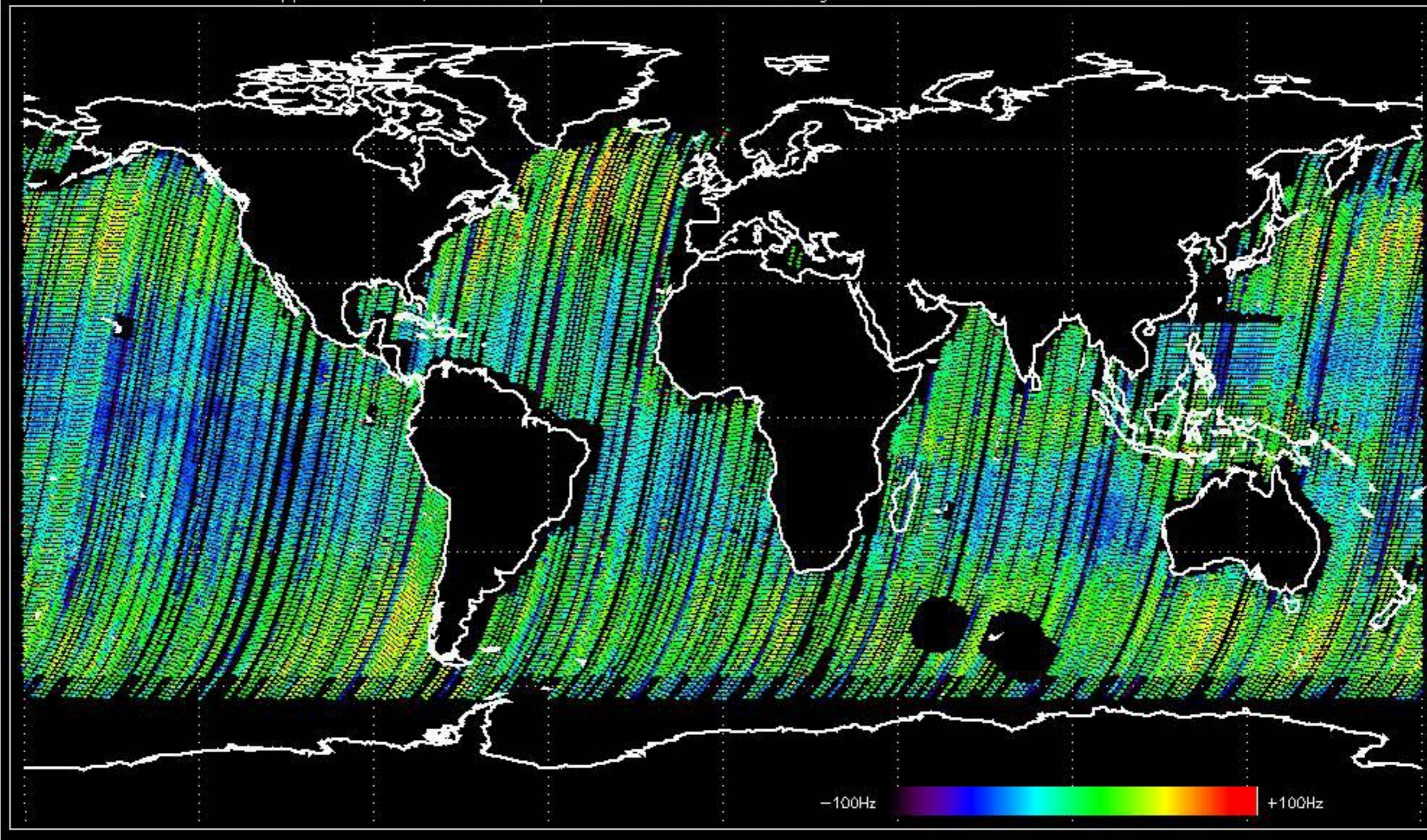
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.220745 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.1412222 Hz

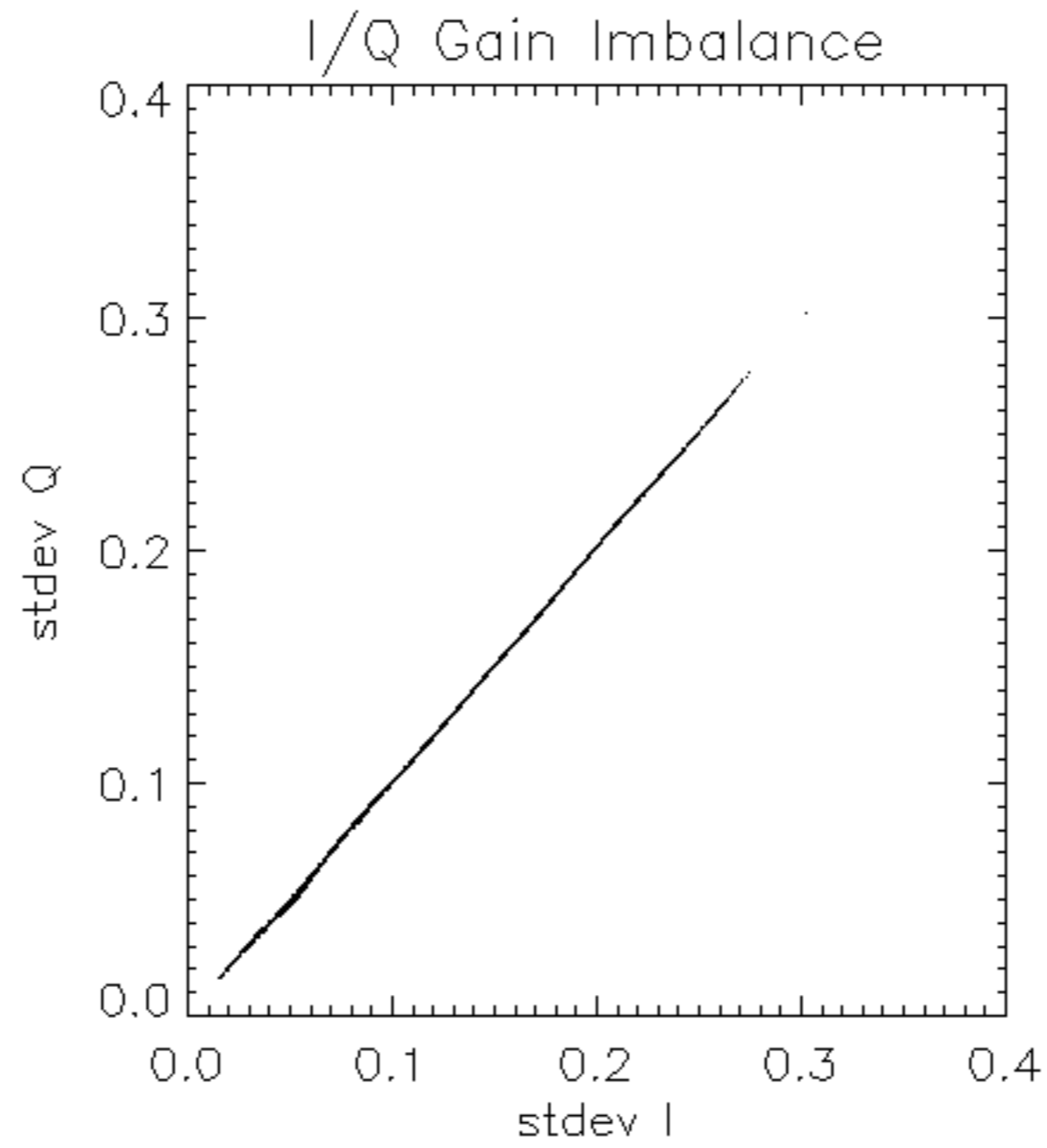


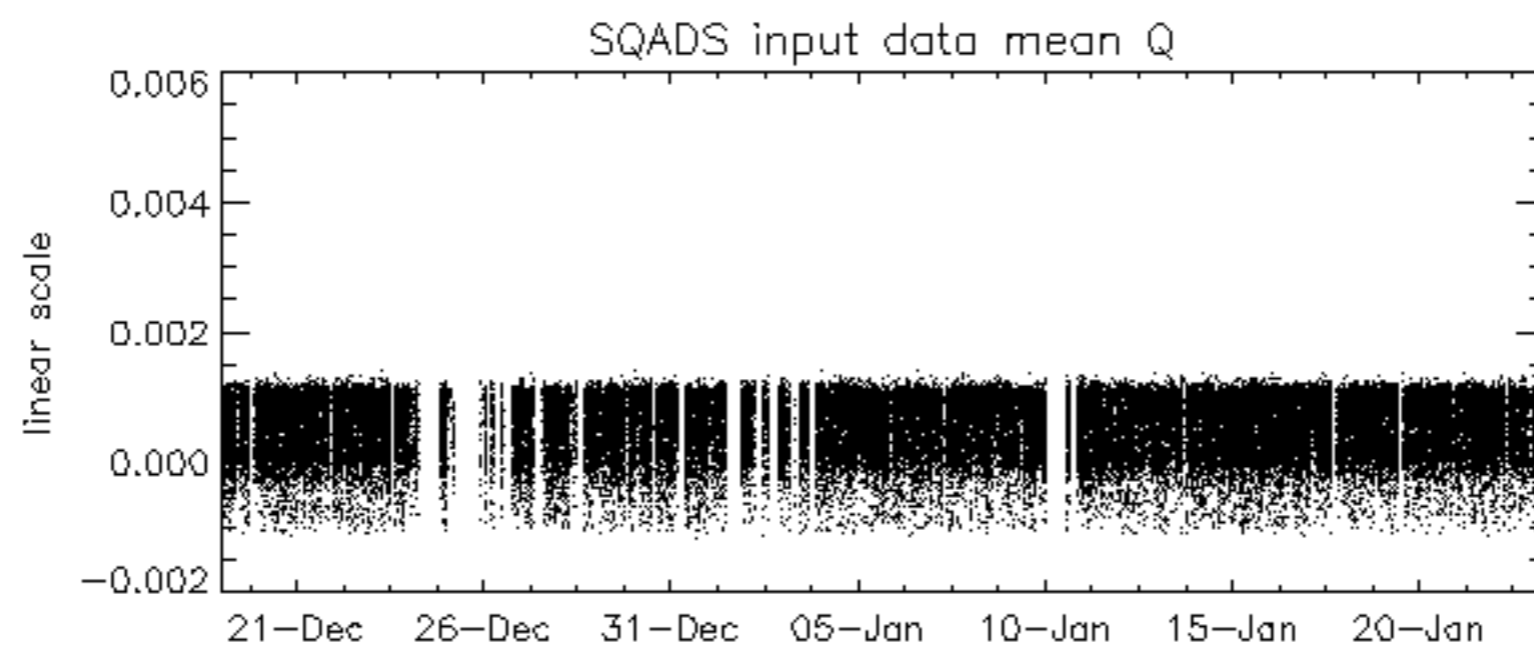
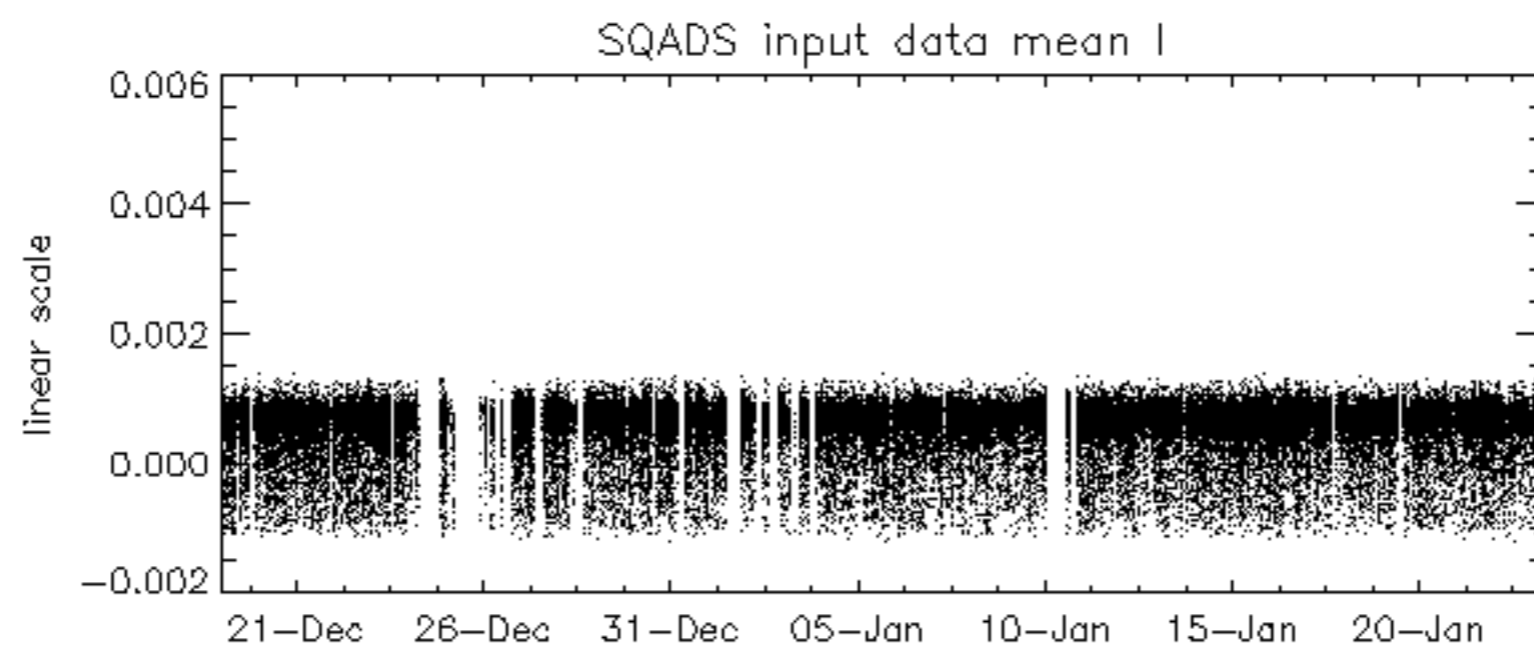
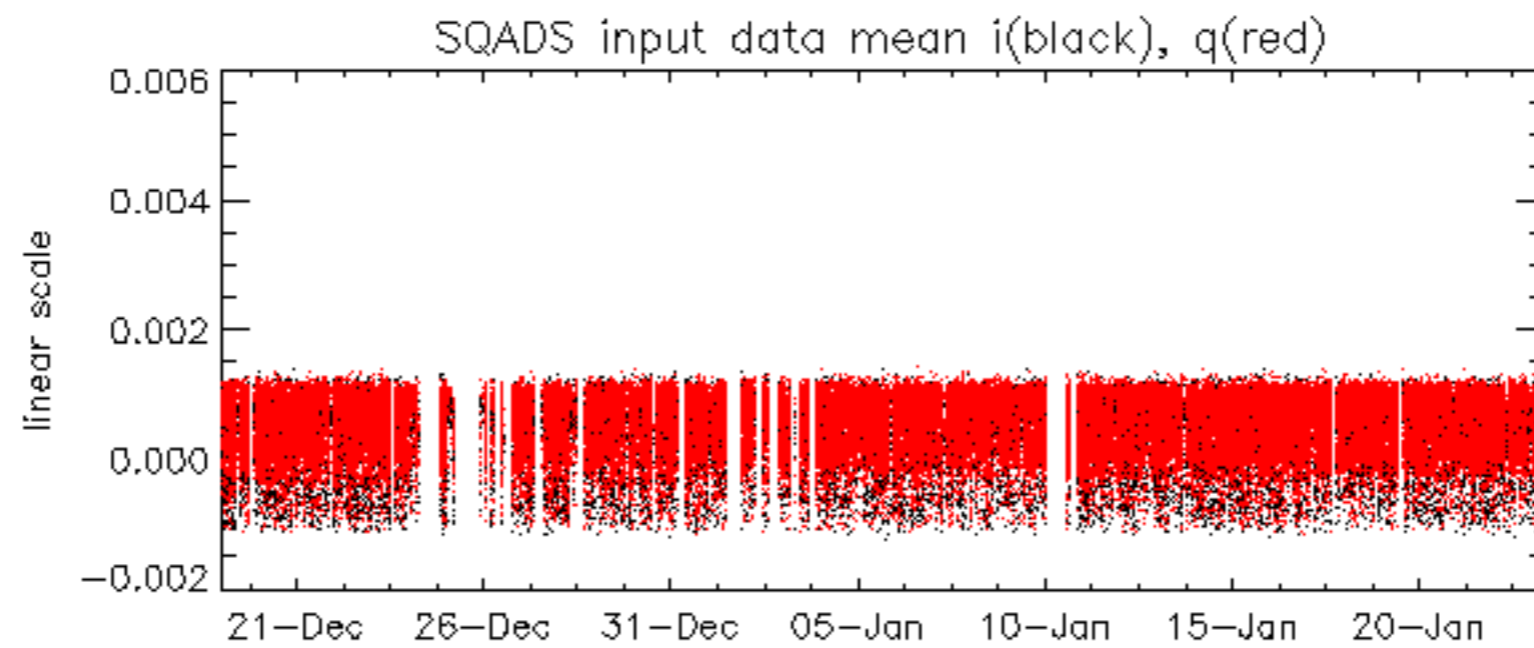
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.8406351 Hz

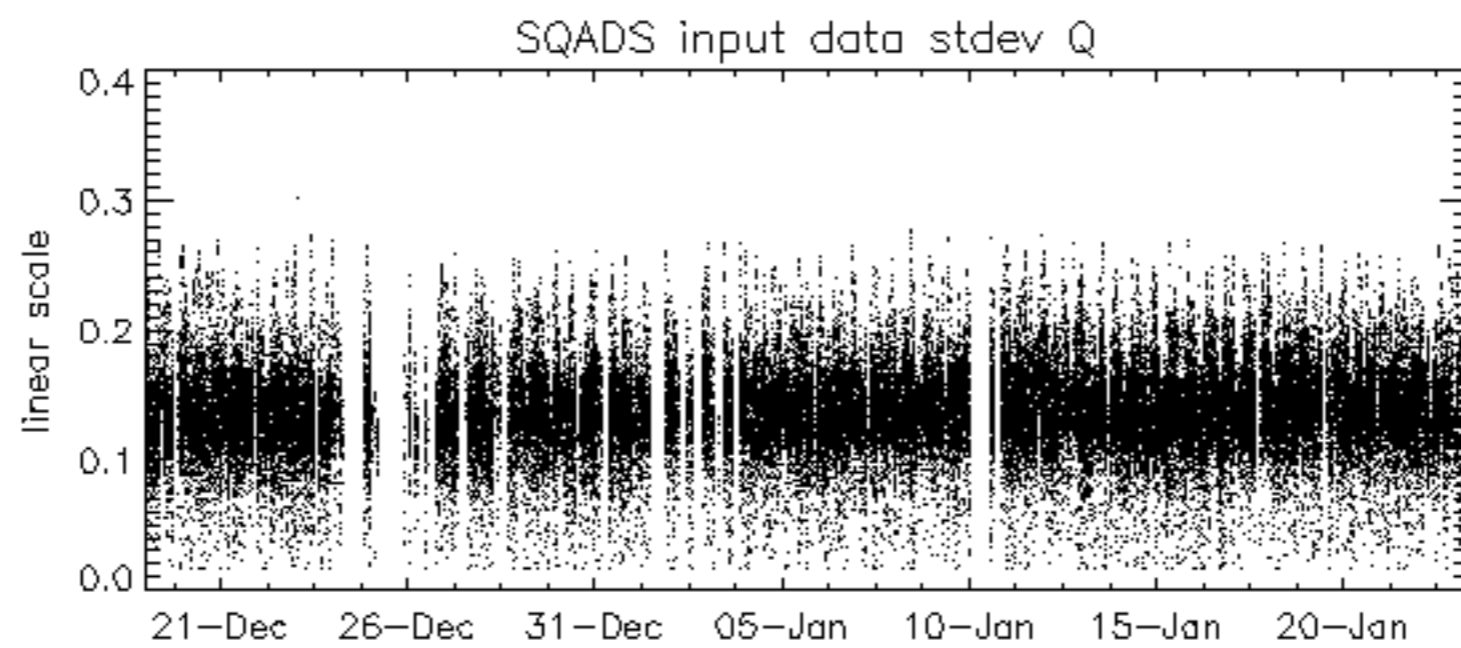
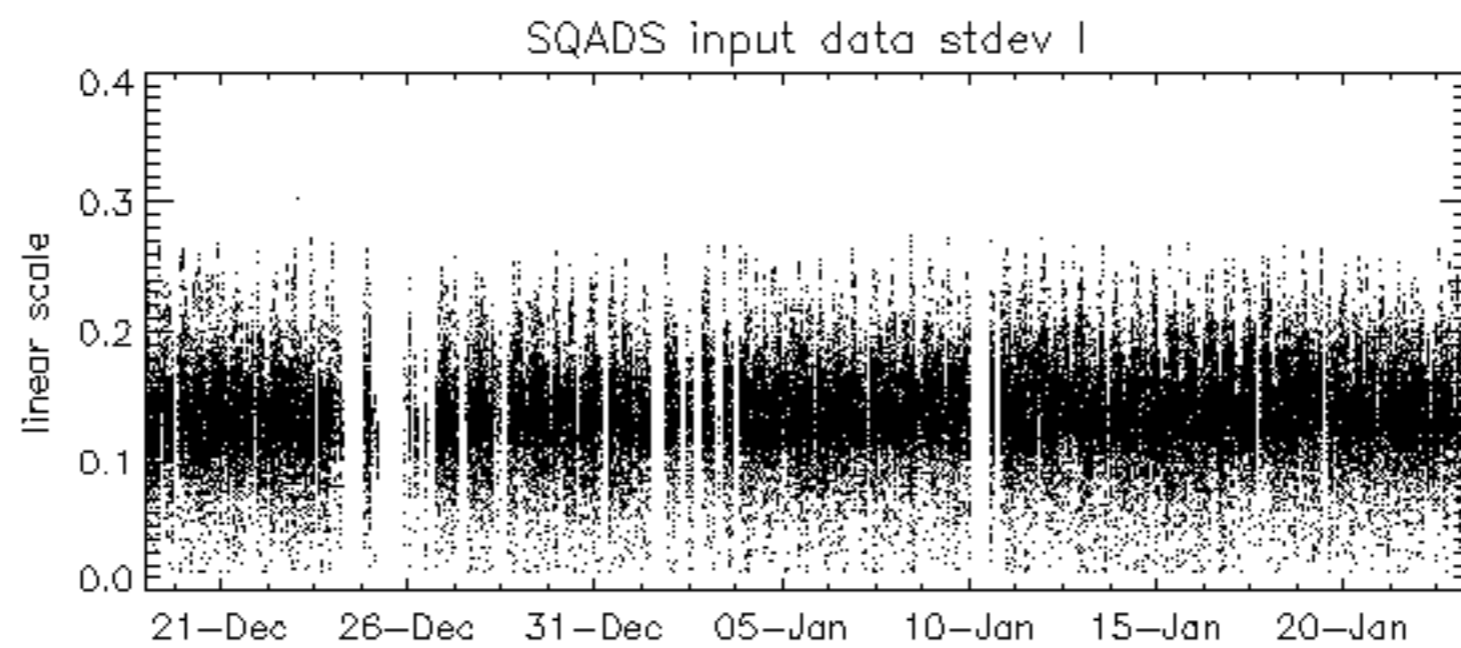
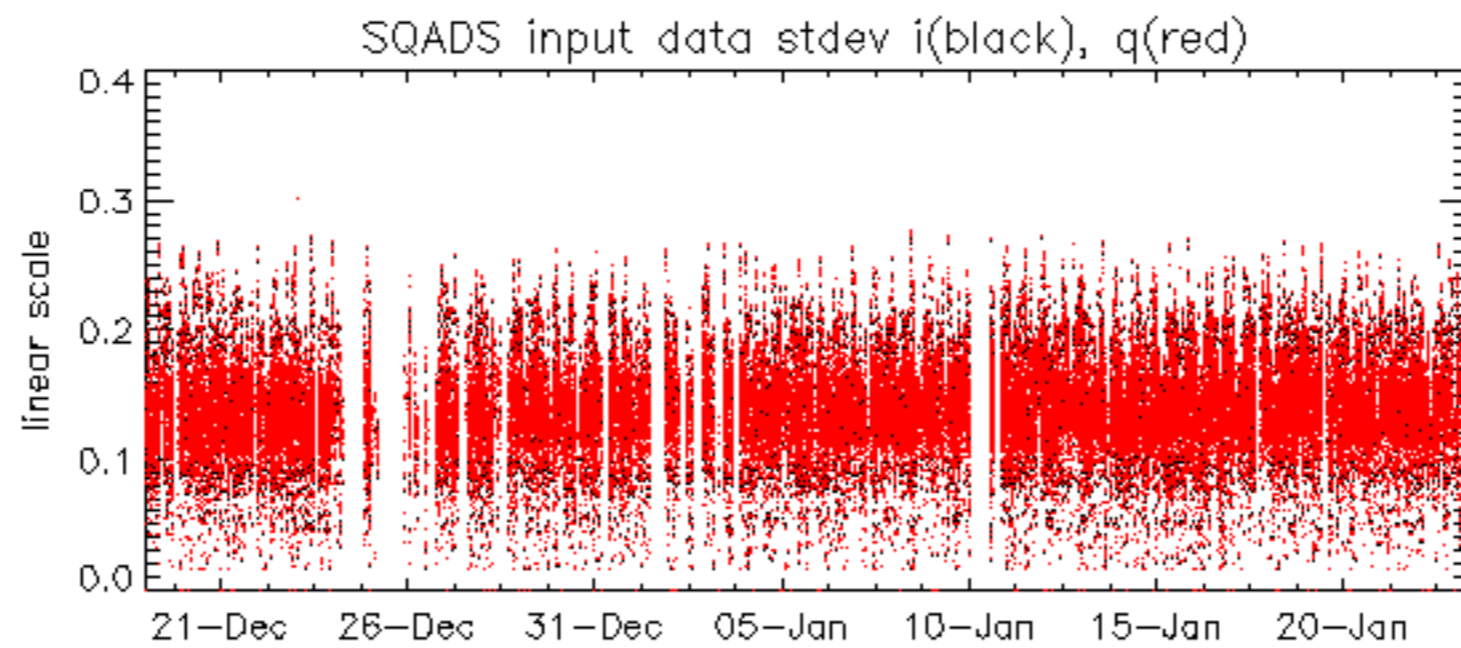


No anomalies observed on available MS products:

No anomalies observed.





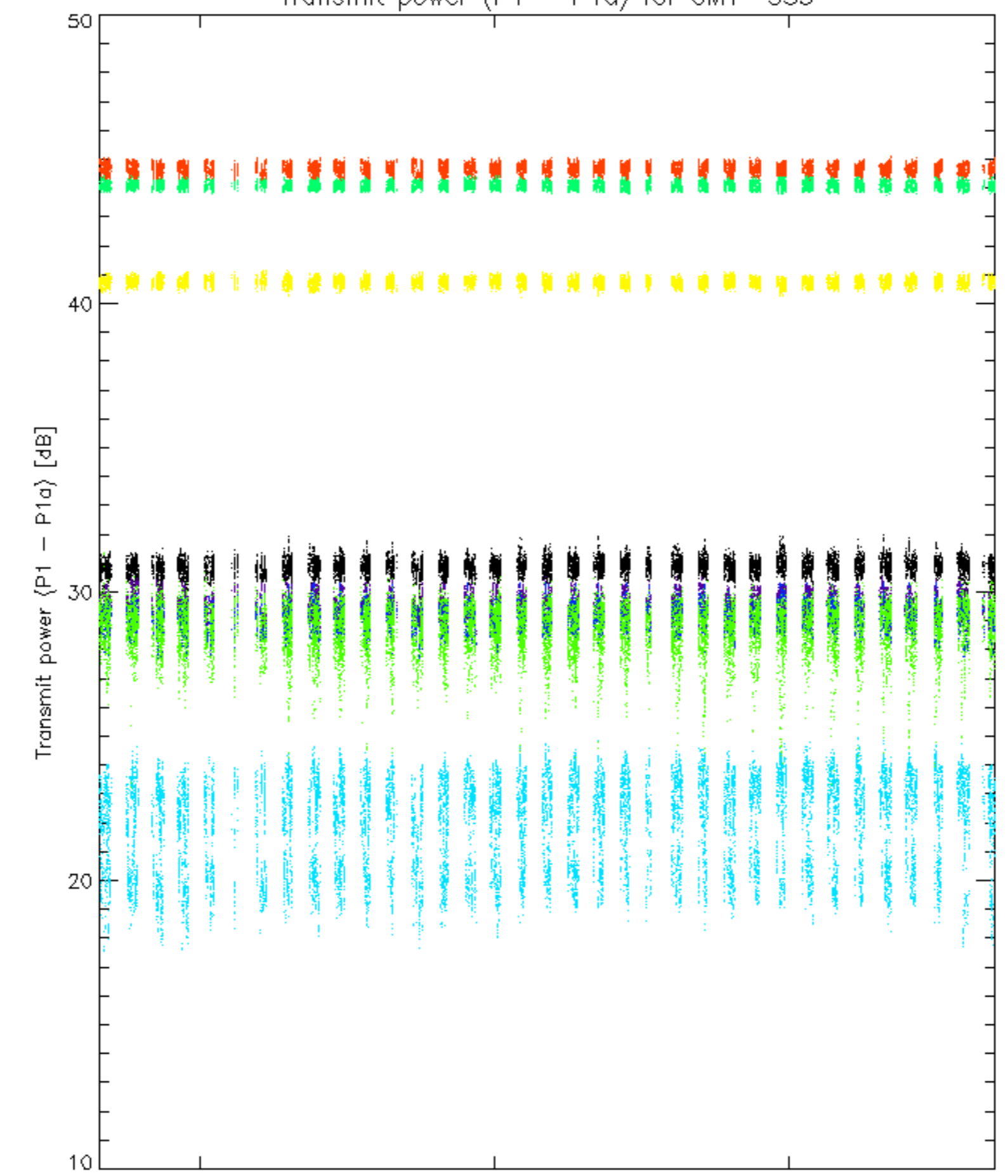


Summary of analysis for the last 3 days 2006012[123]

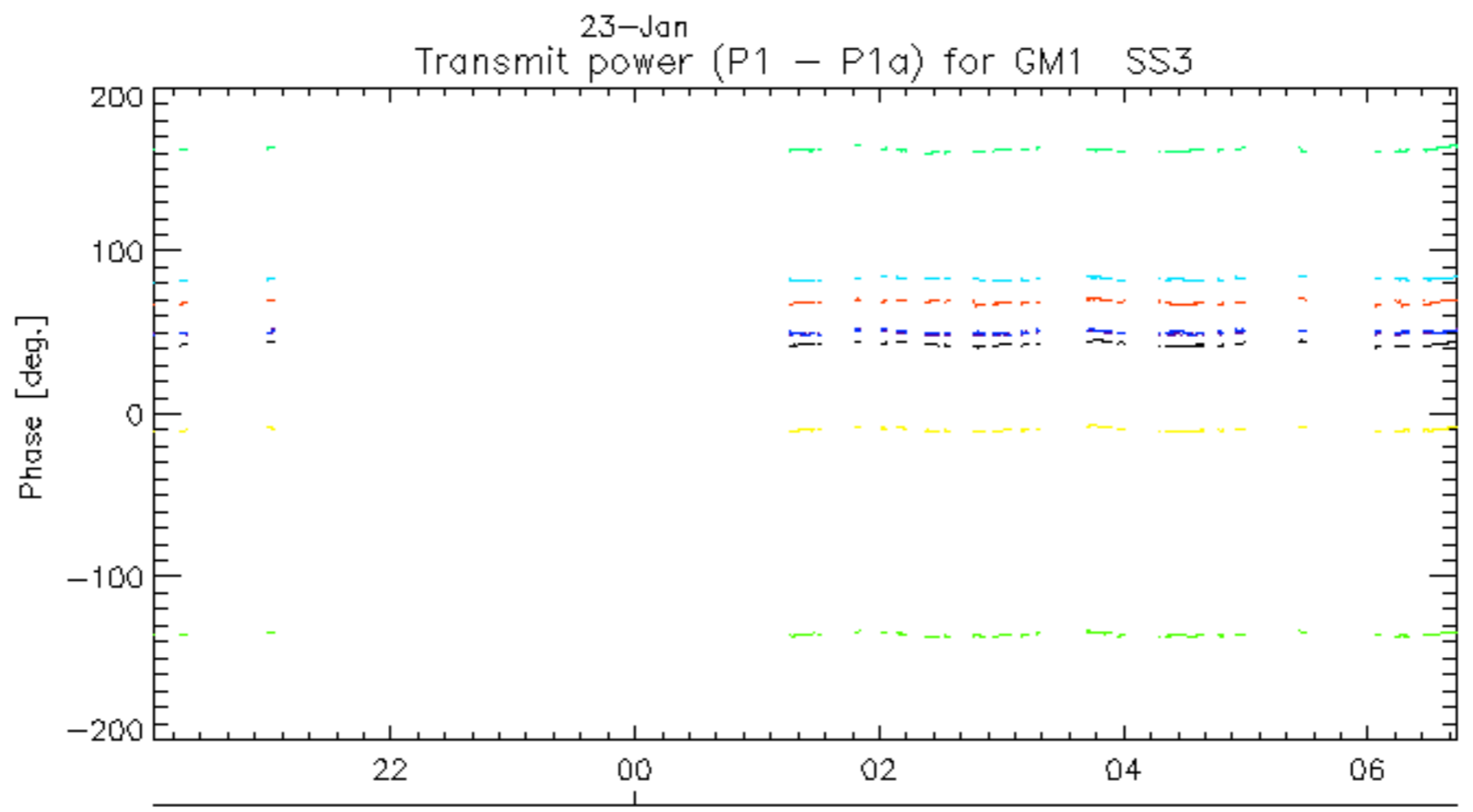
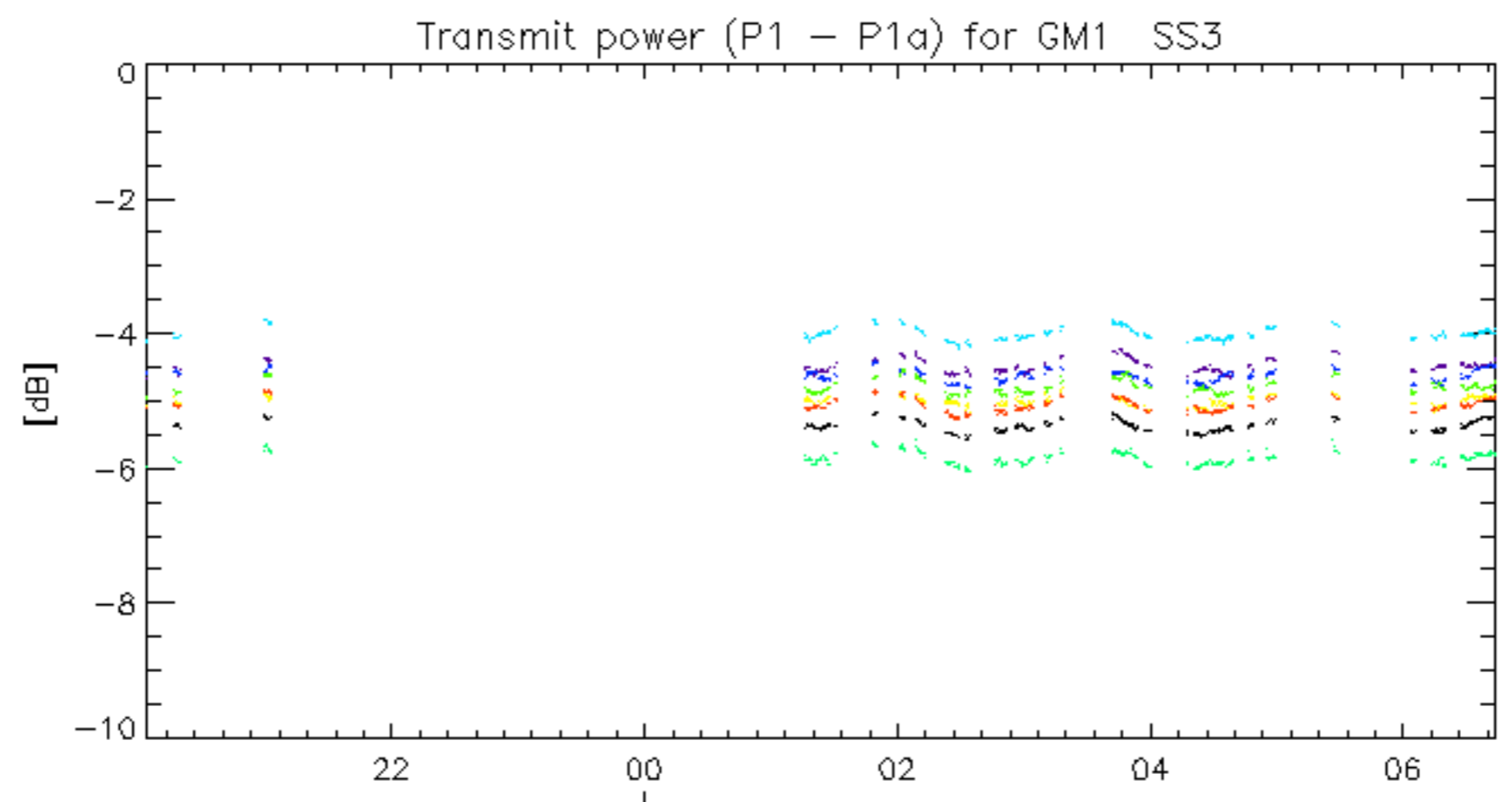
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060123_004758_000002002044_00288_20382_0815.N1	1	0
ASA_WSM_1PNPDE20060122_152526_000001462044_00283_20377_2004.N1	0	1
ASA_WSM_1PNPDE20060122_181420_000001522044_00285_20379_2017.N1	0	64

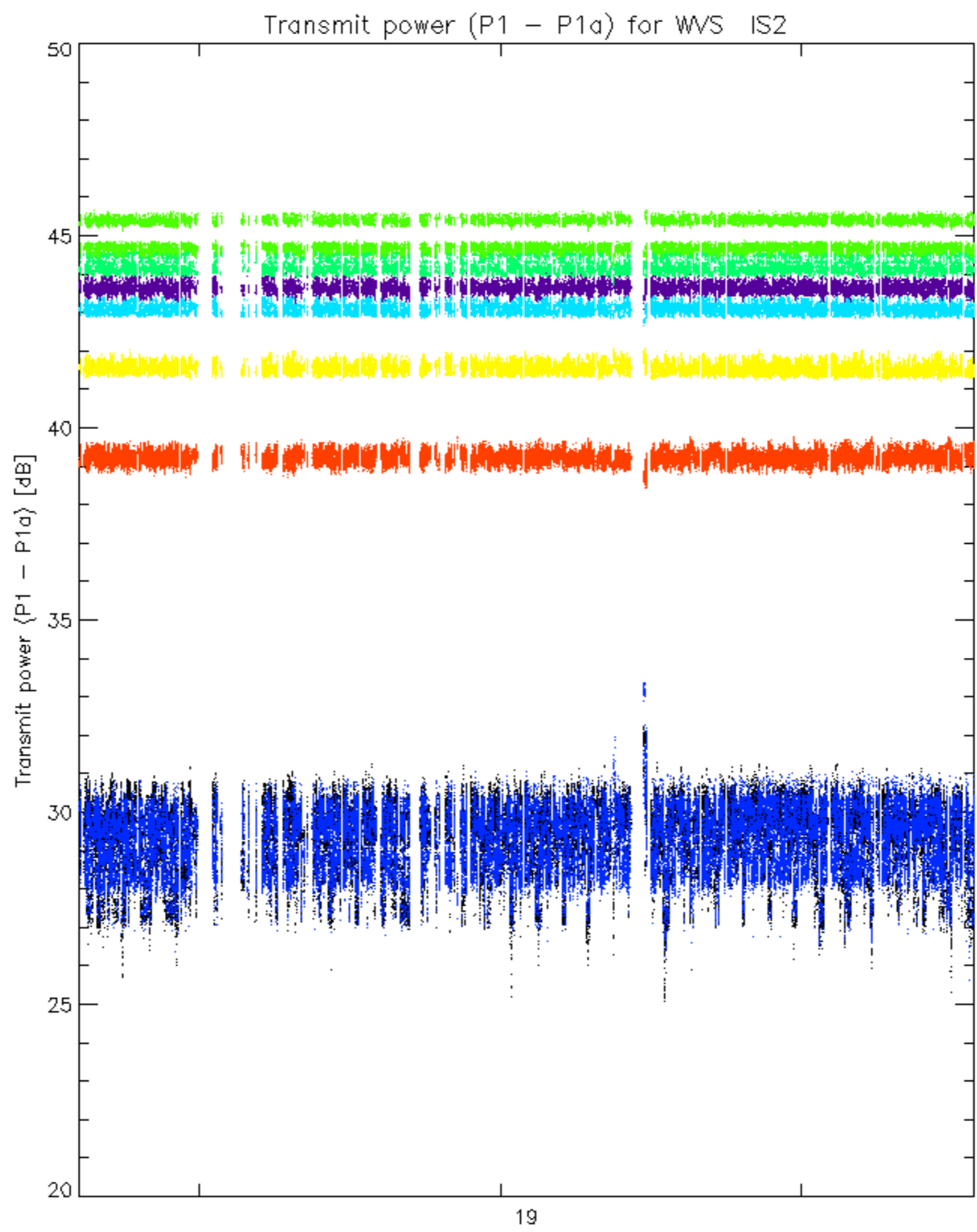
Transmit power (P1 - P1a) for GM1 SS3



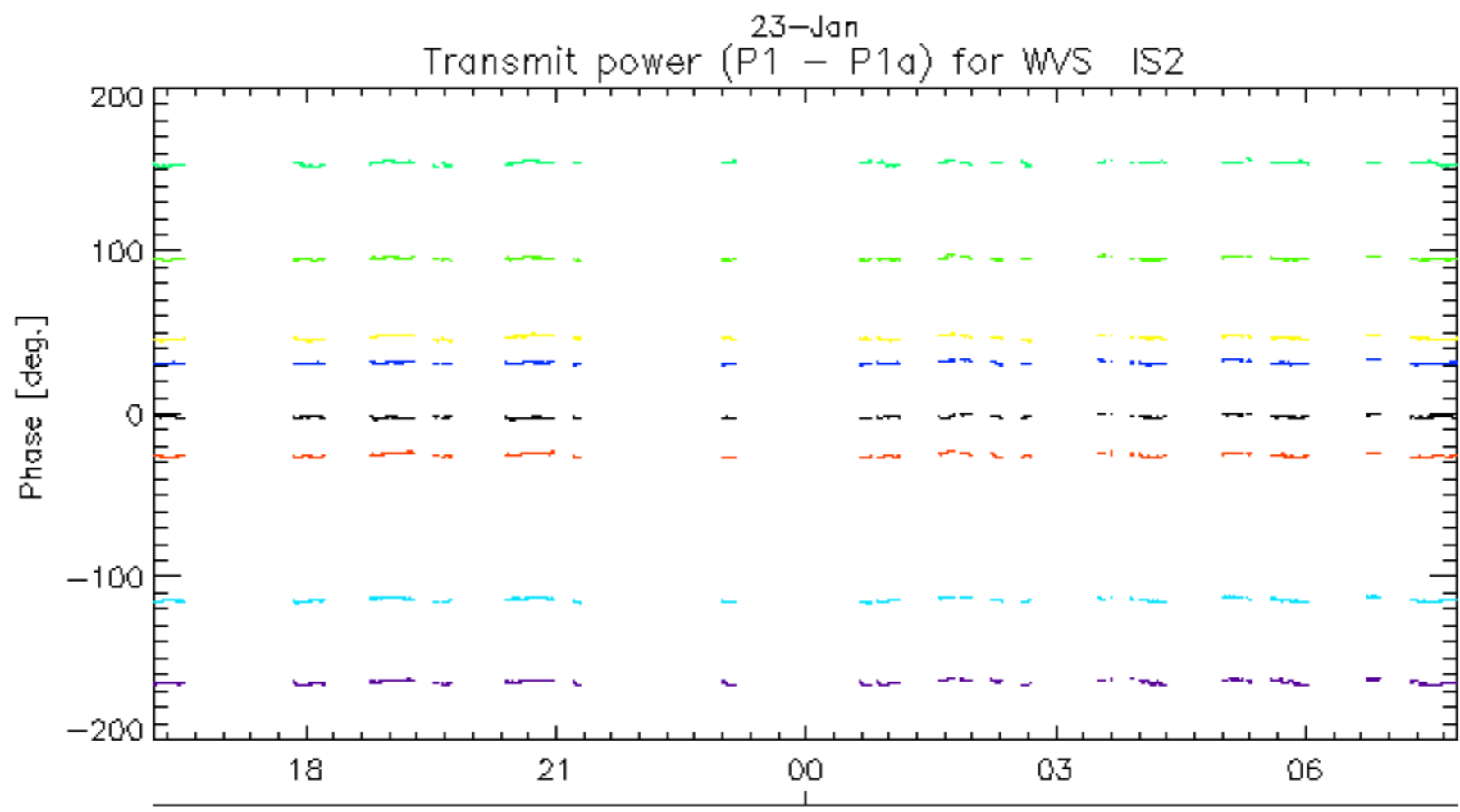
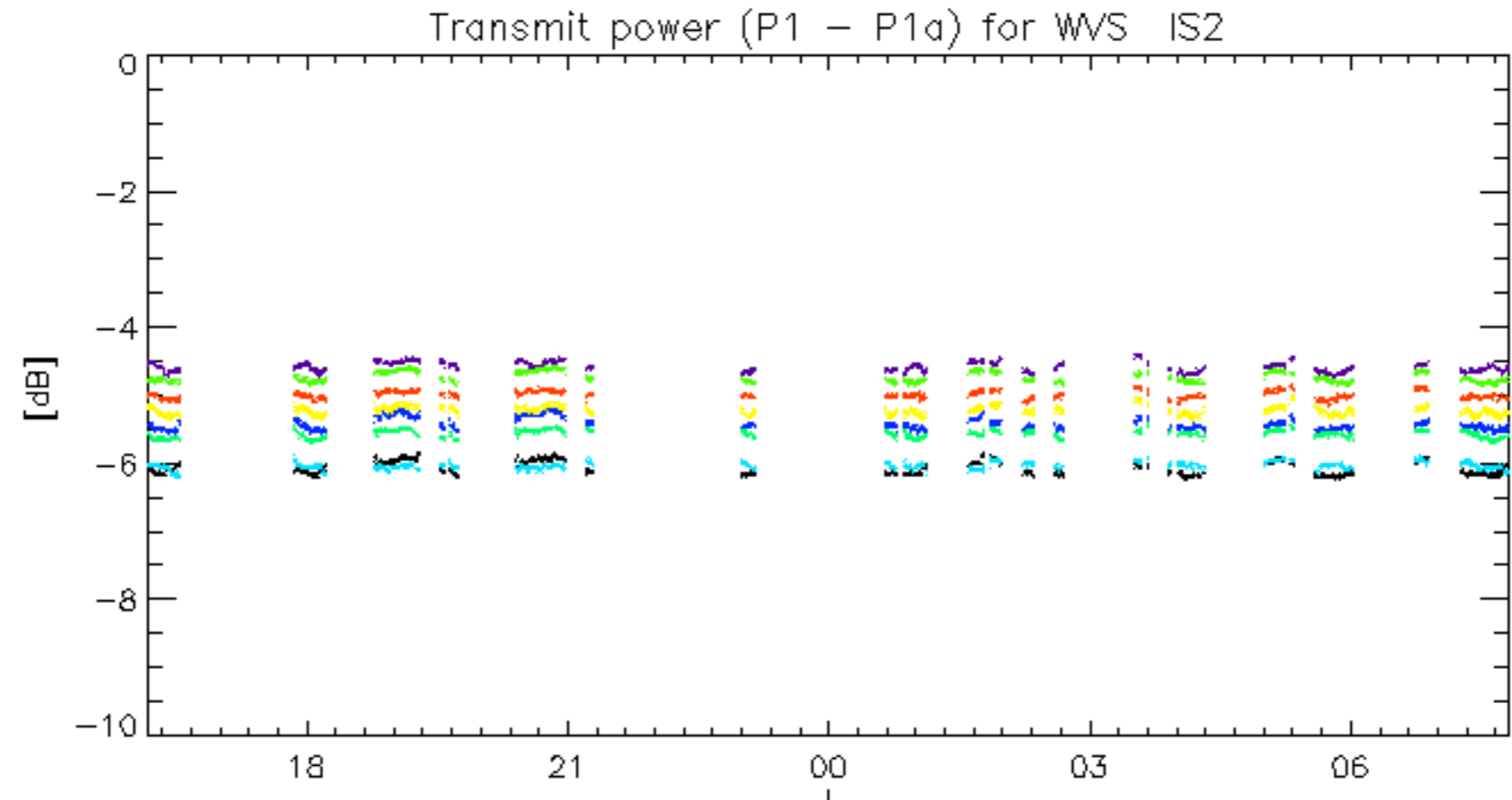
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.