

PRELIMINARY REPORT OF 060111

last update on Wed Jan 11 16:49:24 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 2006-01-10 00:00:00 to 2006-01-11 16:49:25

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	22	0	8	0	21
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	22	0	8	0	21
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	22	0	8	0	21
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	22	0	8	0	21

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	13	35	23	4	35
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	13	35	23	4	35
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	13	35	23	4	35
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	13	35	23	4	35

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	20060108 095336
H	20060111 081845

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	-3.931158	0.131597	-0.588114
7	P1	-2.905995	0.074151	-0.439100
11	P1	-4.125934	0.037678	0.092954
15	P1	-5.703824	0.881092	-1.743196
19	P1	-3.165871	0.037428	-0.353153
22	P1	-4.470260	0.022499	-0.089483
26	P1	-4.287312	0.038240	0.322170
30	P1	-5.726459	0.022290	-0.199075
3	P1	-16.538059	1.573880	-2.218406
7	P1	-16.101057	1.503054	-2.307718
11	P1	-16.493595	0.437540	-0.536713
15	P1	-13.056313	0.556076	-1.024386
19	P1	-13.712900	0.233159	-0.787904
22	P1	-15.966319	0.596923	-0.020948
26	P1	-15.497657	0.693865	-1.267154
30	P1	-16.223742	1.441885	-1.858352

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.711103	0.107319	0.260068
7	P2	-22.520760	0.102243	0.076486
11	P2	-16.400284	0.117715	0.282486
15	P2	-7.251328	0.104642	0.090388
19	P2	-9.201377	0.102067	0.058934
22	P2	-17.919554	0.104912	-0.085208
26	P2	-16.287704	0.119348	0.300459
30	P2	-19.715120	0.102214	0.240614

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.227924	0.007798	0.034895
7	P3	-8.227924	0.007798	0.034895
11	P3	-8.227924	0.007798	0.034895
15	P3	-8.227924	0.007798	0.034895
19	P3	-8.227924	0.007798	0.034895
22	P3	-8.227924	0.007798	0.034895
26	P3	-8.227924	0.007798	0.034895
30	P3	-8.227924	0.007798	0.034895

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	-3.714722	0.008537	-0.019317
7	P1	-2.763553	0.007700	0.009732
11	P1	-2.871438	0.009889	0.025199
15	P1	-3.431540	0.017300	-0.069387
19	P1	-3.387965	0.014250	0.033066
22	P1	-5.121667	0.019891	0.007177
26	P1	-5.852952	0.015627	0.002199
30	P1	-5.269804	0.032946	0.050622
3	P1	-11.497450	0.036771	-0.046230
7	P1	-9.951034	0.048406	0.074271
11	P1	-10.058635	0.053675	-0.007156
15	P1	-10.577352	0.075088	-0.113123
19	P1	-15.508649	0.070737	0.085895
22	P1	-20.839270	1.022965	0.496841

26	P1	-17.035082	0.313731	0.490616
30	P1	-18.157763	0.281890	0.033729

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.537140	0.032247	0.230032
7	P2	-22.987164	0.059548	0.291936
11	P2	-11.520677	0.020722	0.208215
15	P2	-4.968211	0.023494	0.123060
19	P2	-6.959007	0.022450	0.087885
22	P2	-8.206627	0.022524	0.041077
26	P2	-24.022913	0.029723	0.142413
30	P2	-22.125099	0.017902	0.075819

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.071373	0.002550	0.033056
7	P3	-8.071458	0.002544	0.033315
11	P3	-8.071565	0.002538	0.032786
15	P3	-8.071495	0.002537	0.033211
19	P3	-8.071516	0.002544	0.033023
22	P3	-8.071295	0.002533	0.033541
26	P3	-8.071305	0.002527	0.033634
30	P3	-8.071300	0.002536	0.032523

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	0.000509222
	stdev	1.97130e-07
MEAN Q	mean	0.000497491
	stdev	2.27472e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133955
	stdev	0.00118091
STDEV Q	mean	0.134273
	stdev	0.00119703



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006011[901]

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
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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

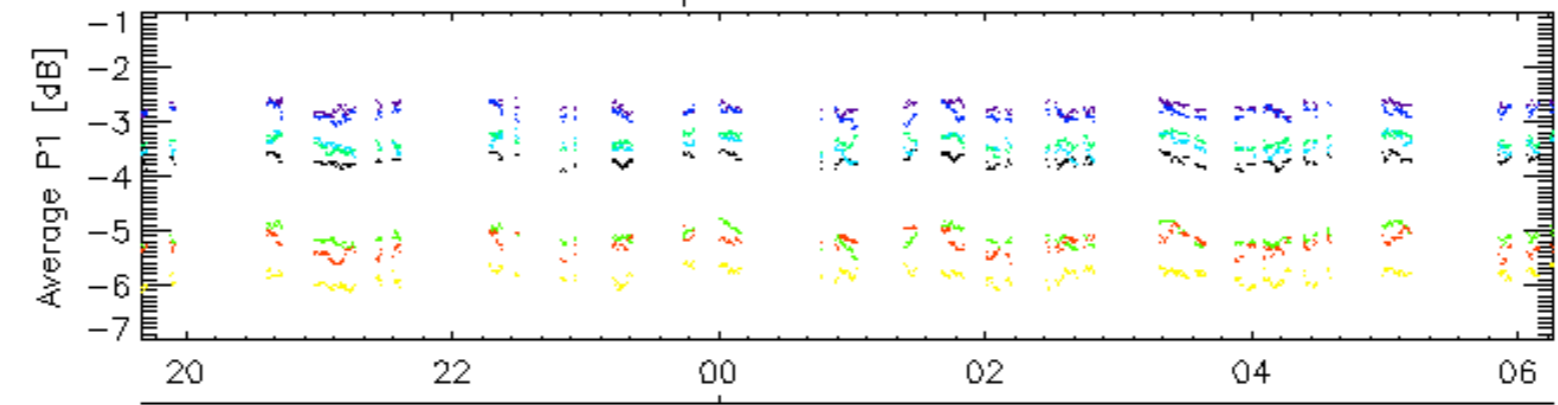
Ascending

Descending

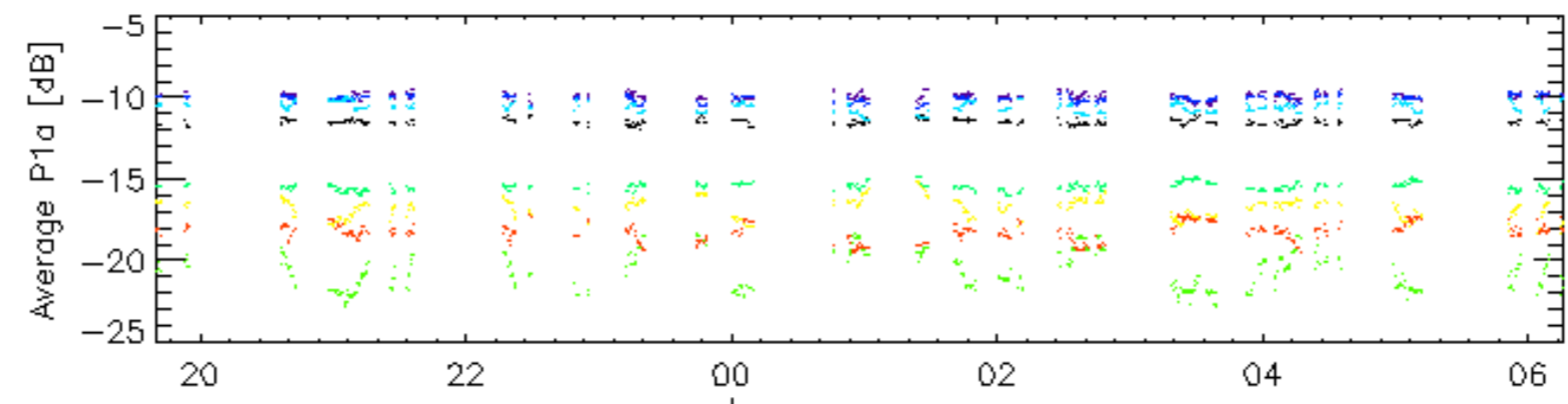
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

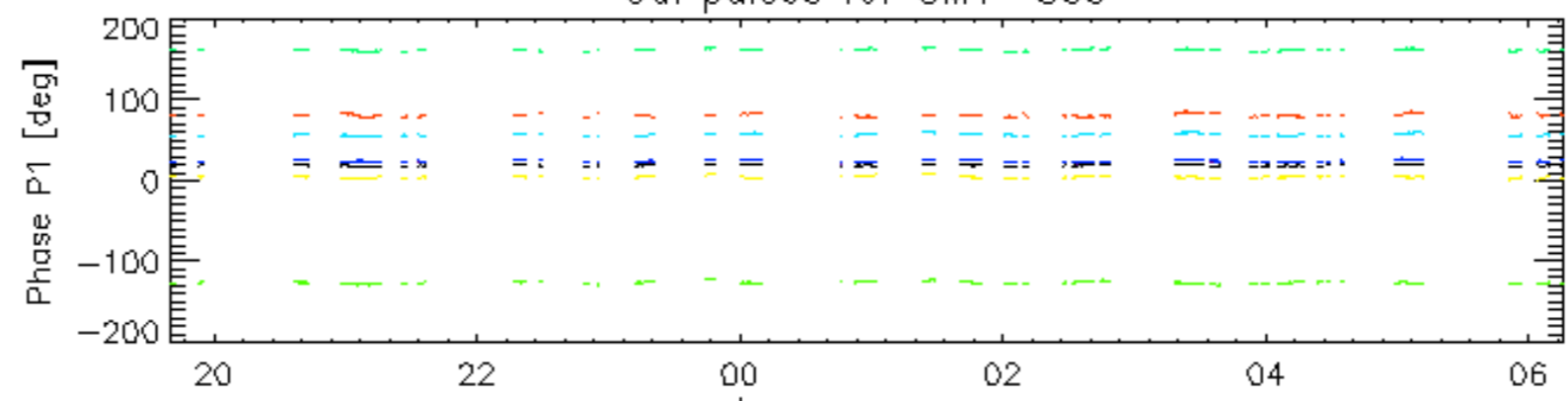


11-Jan

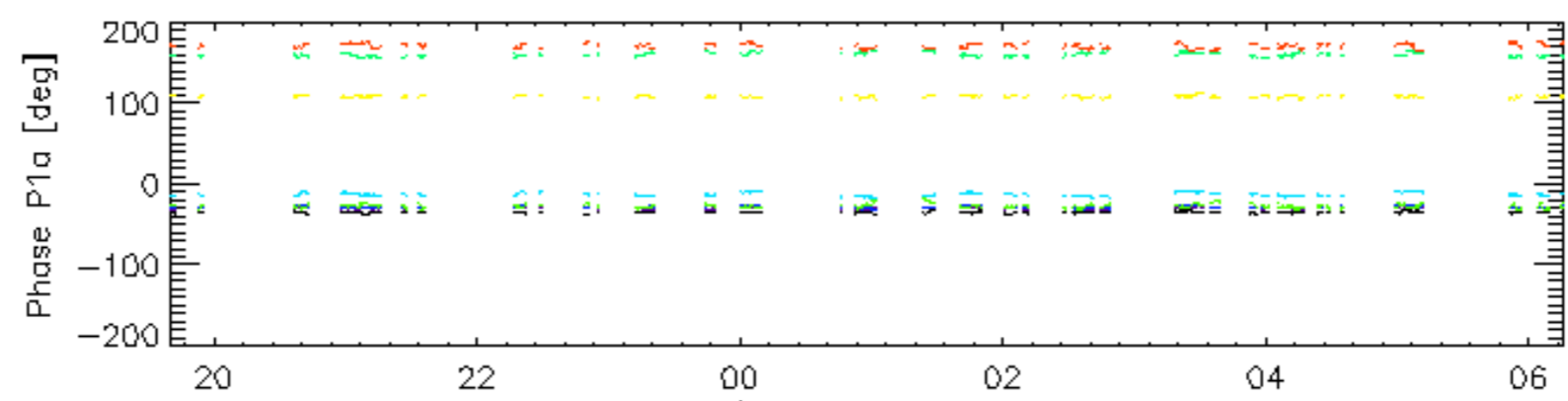


11-Jan

Cal pulses for GM1 SS3



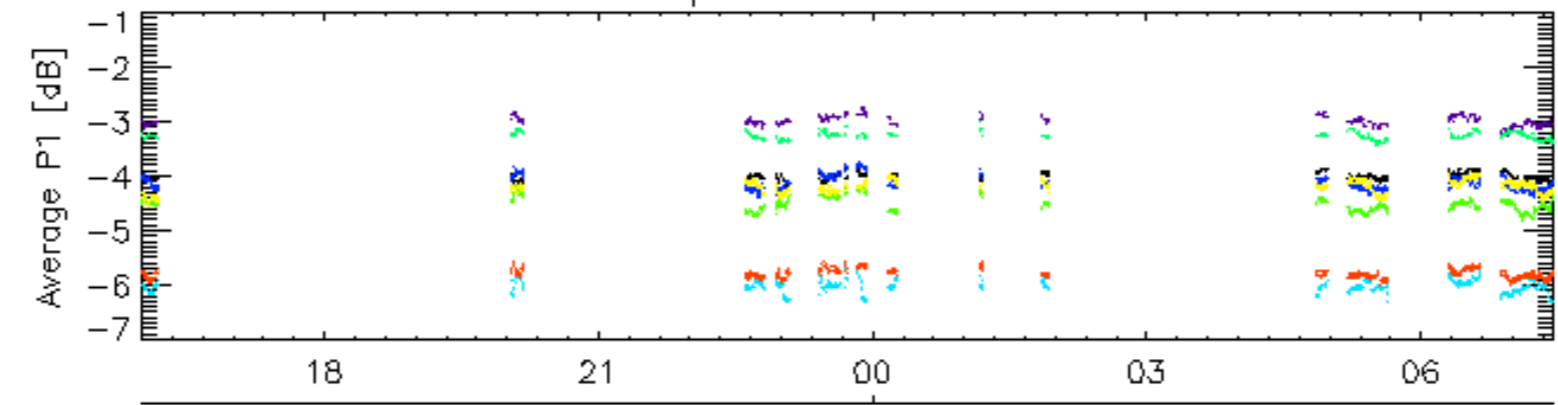
11-Jan



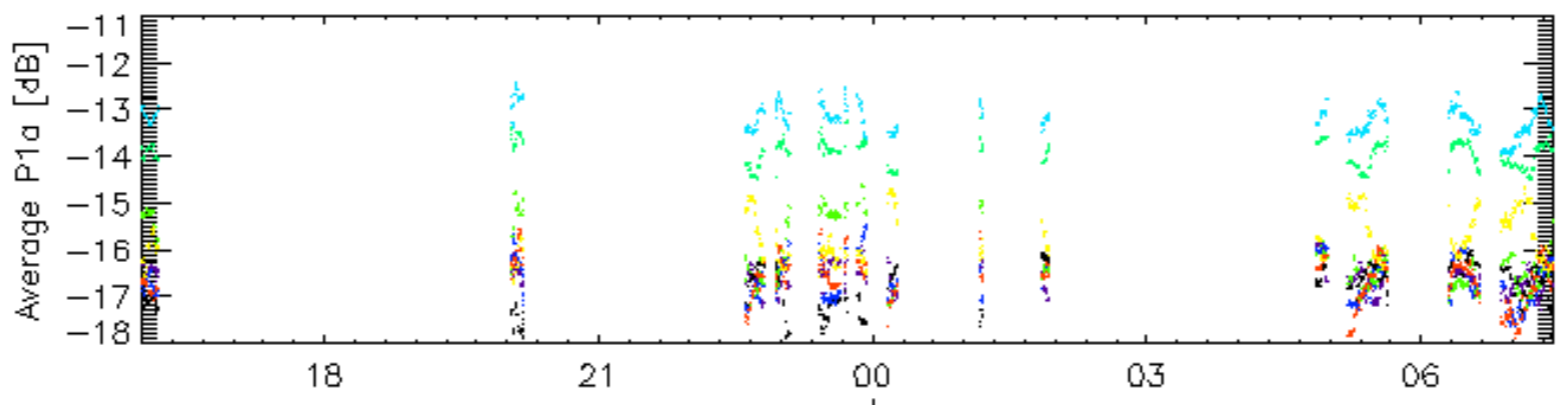
11-Jan

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

Cal pulses for WVS IS2

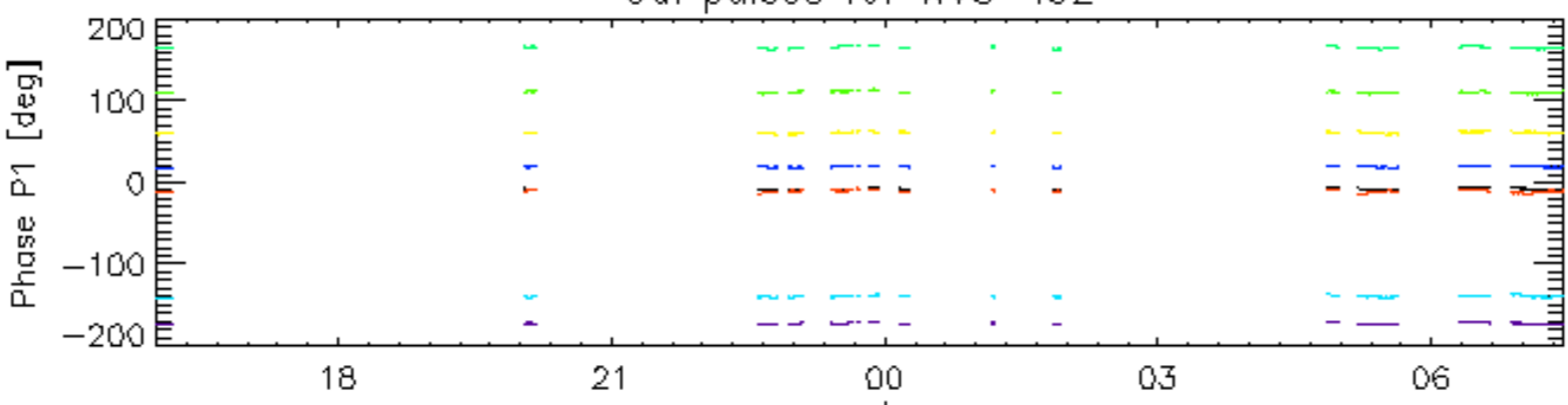


11-Jan

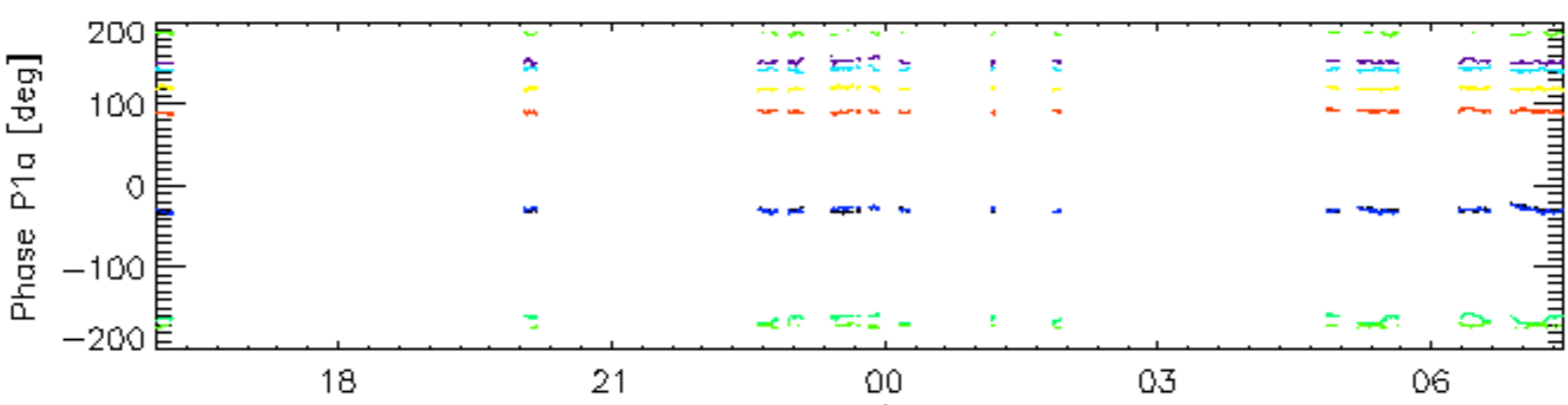


11-Jan

Cal pulses for WVS IS2

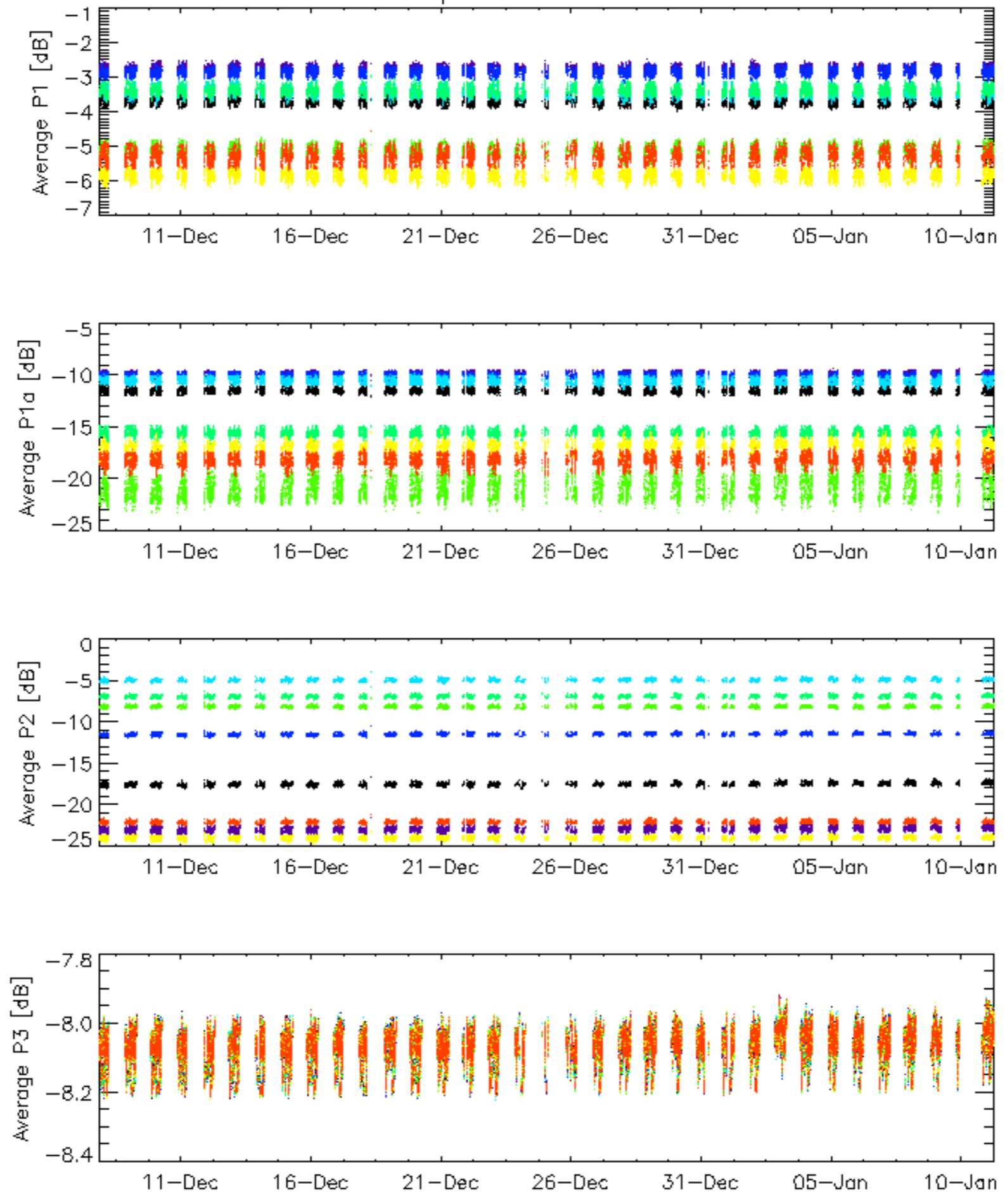


11-Jan



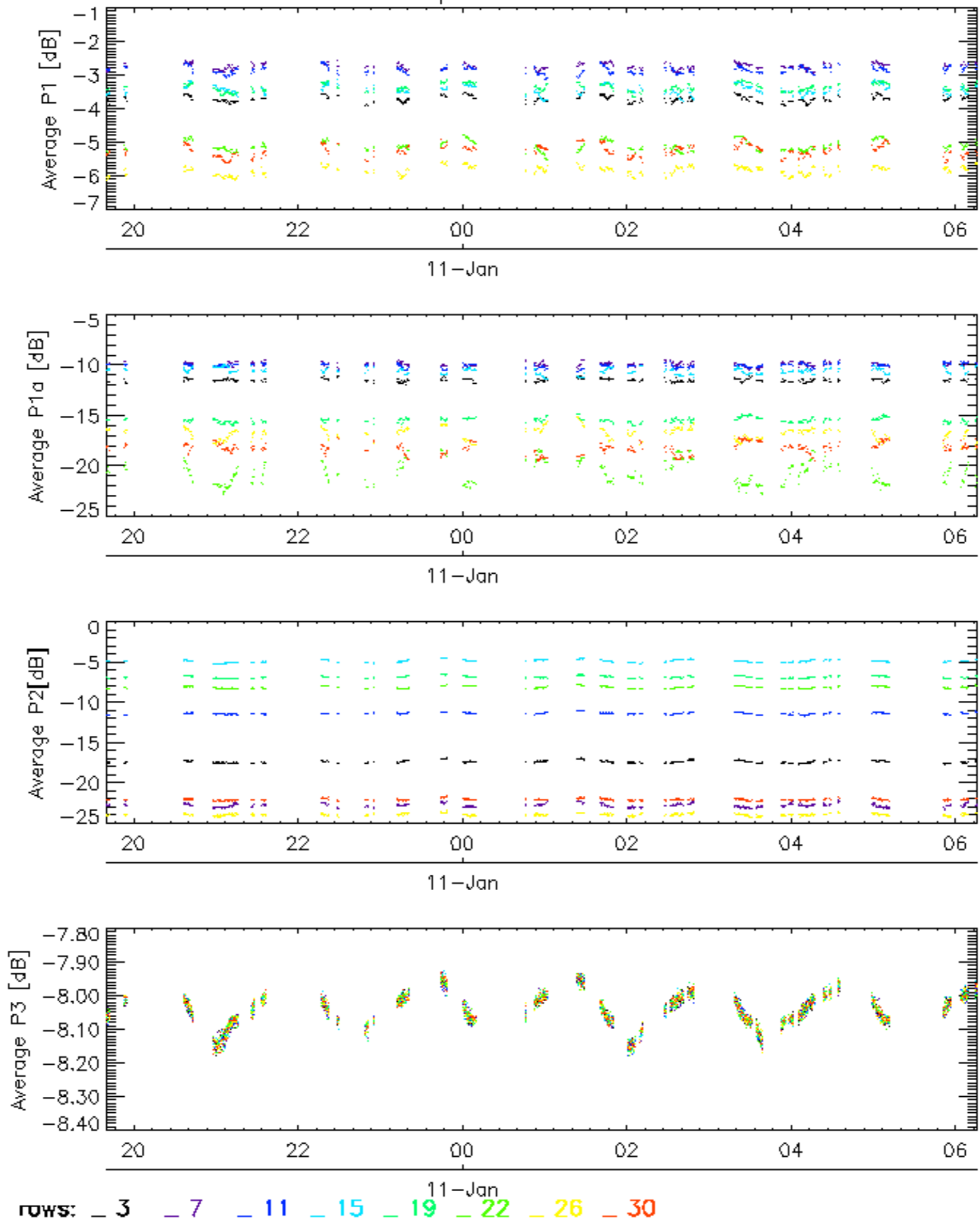
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Cal pulses for GM1 SS3

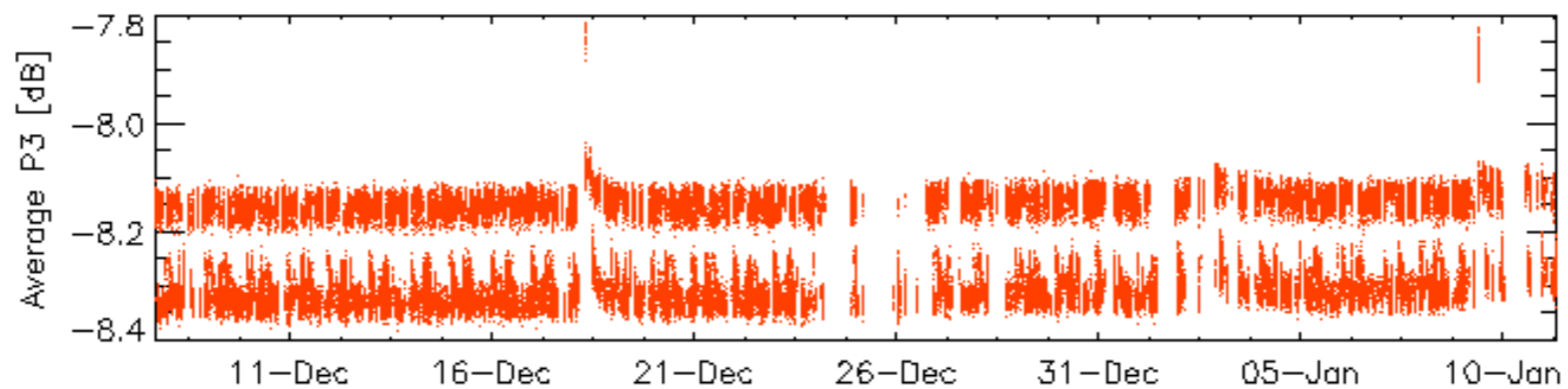
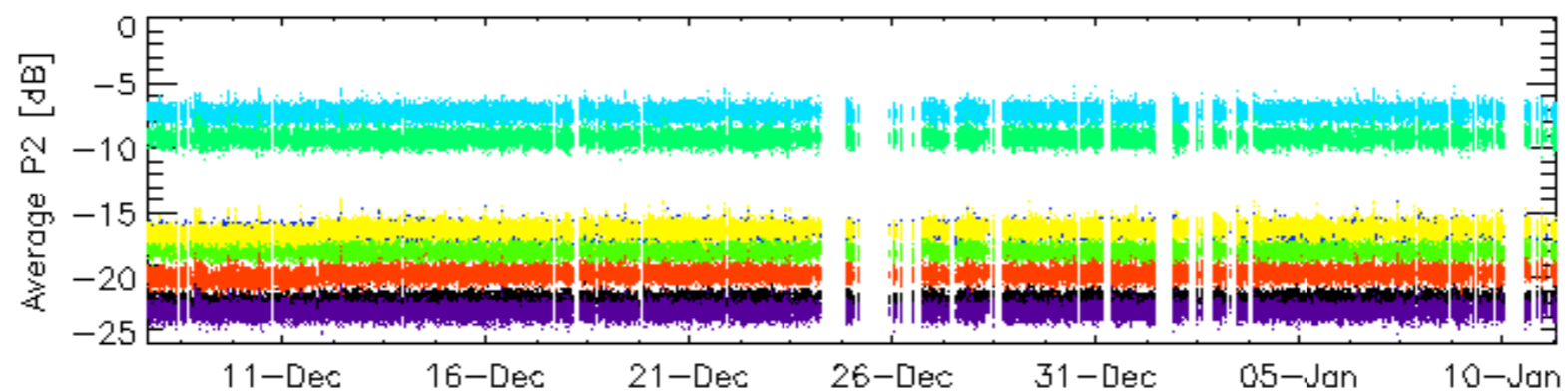
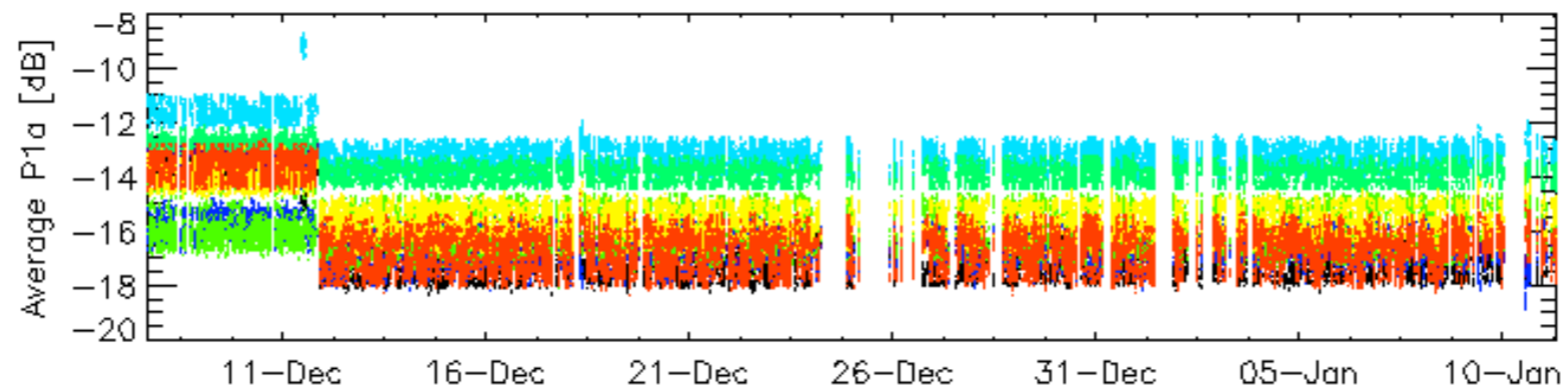
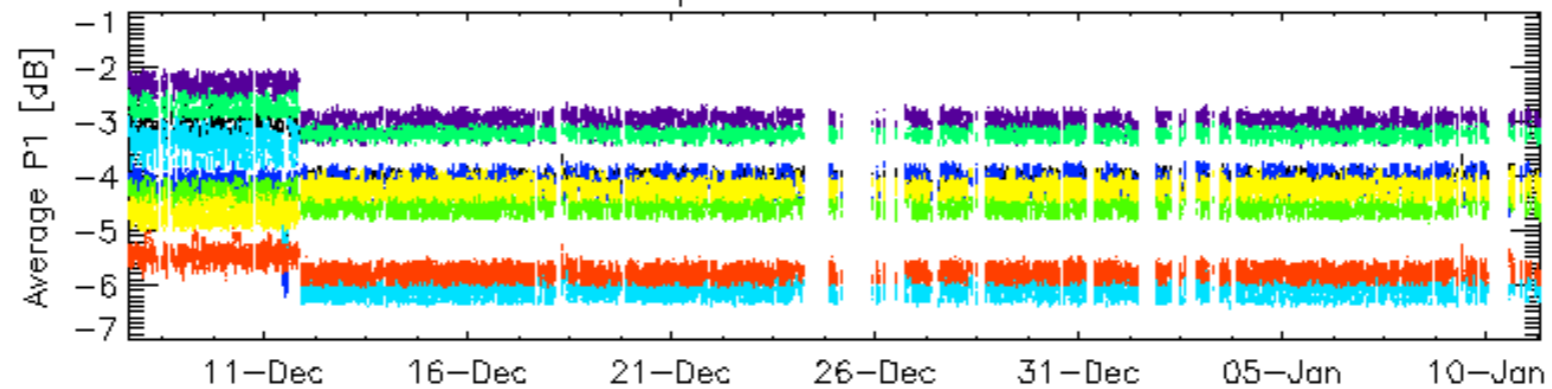


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

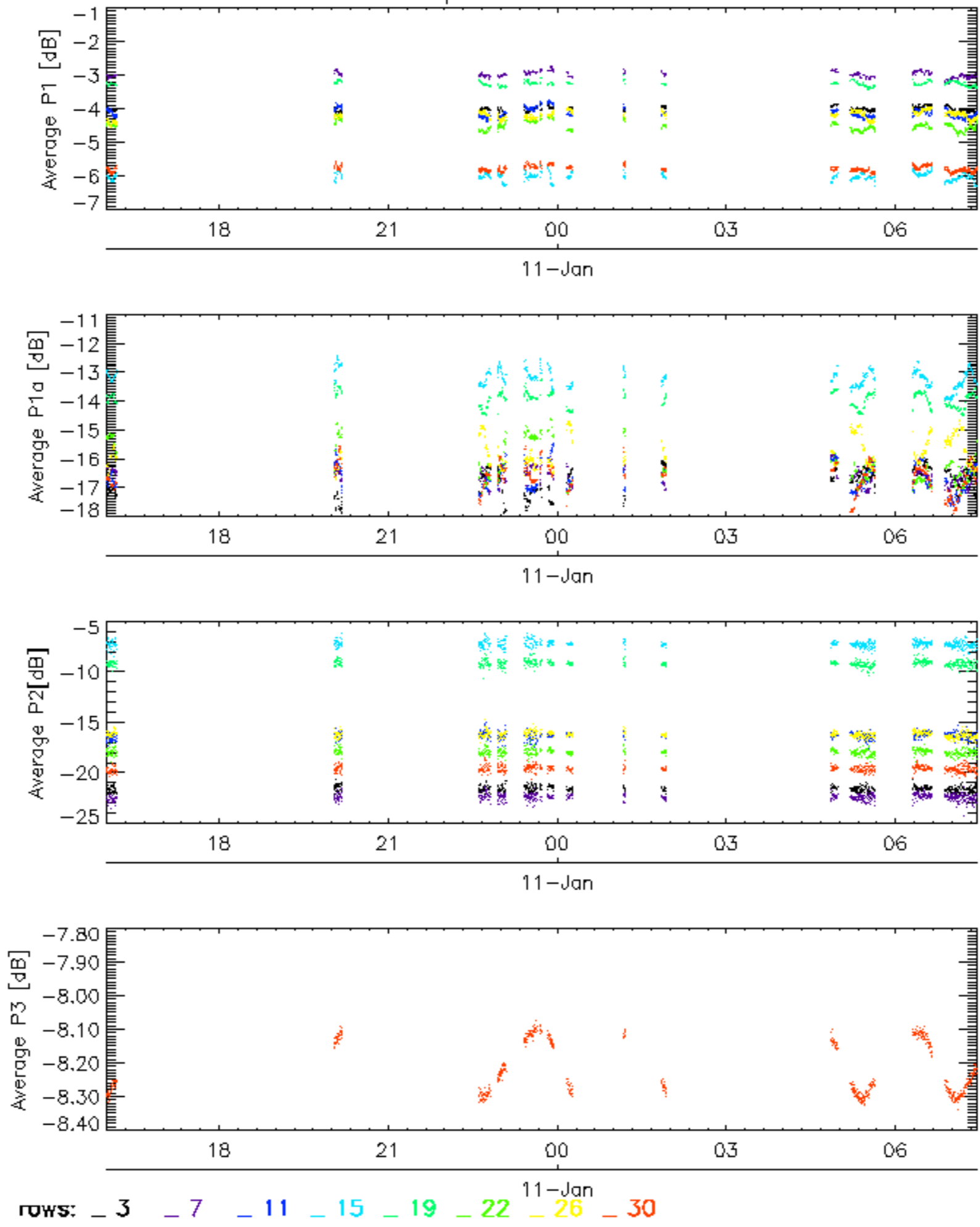


Cal pulses for WVS IS2



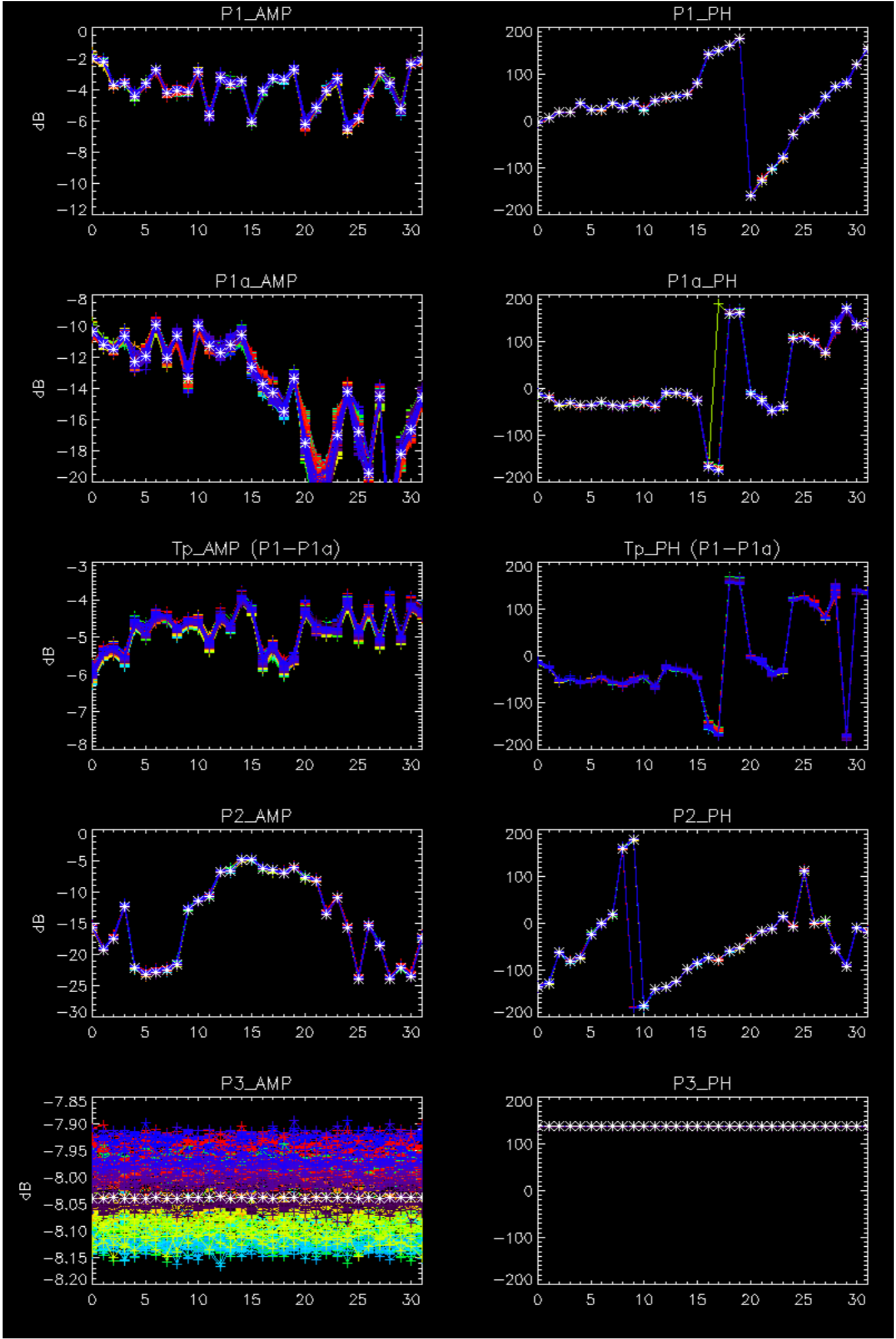
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

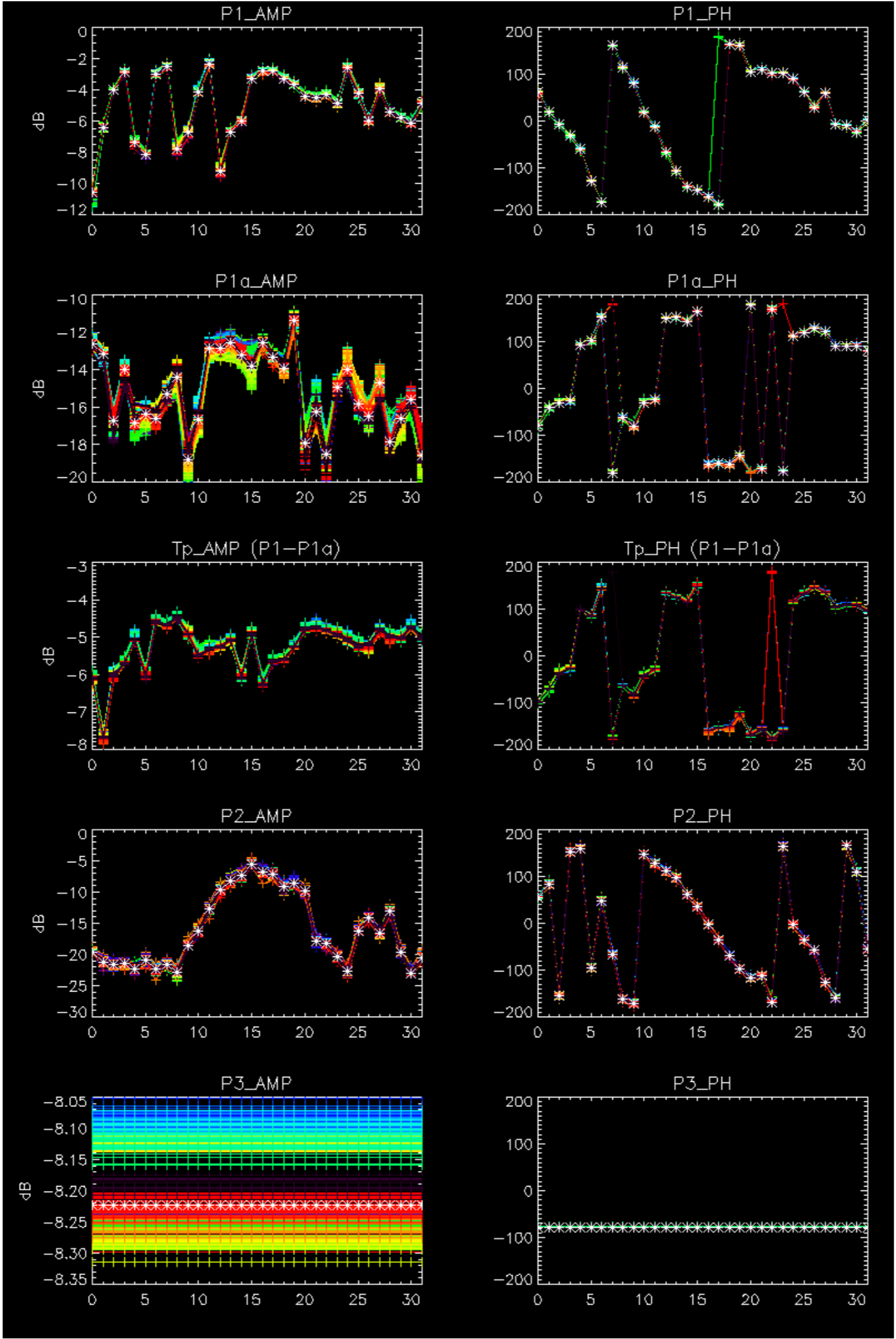
Cal pulses for WVS IS2



No anomalies observed on available browse products

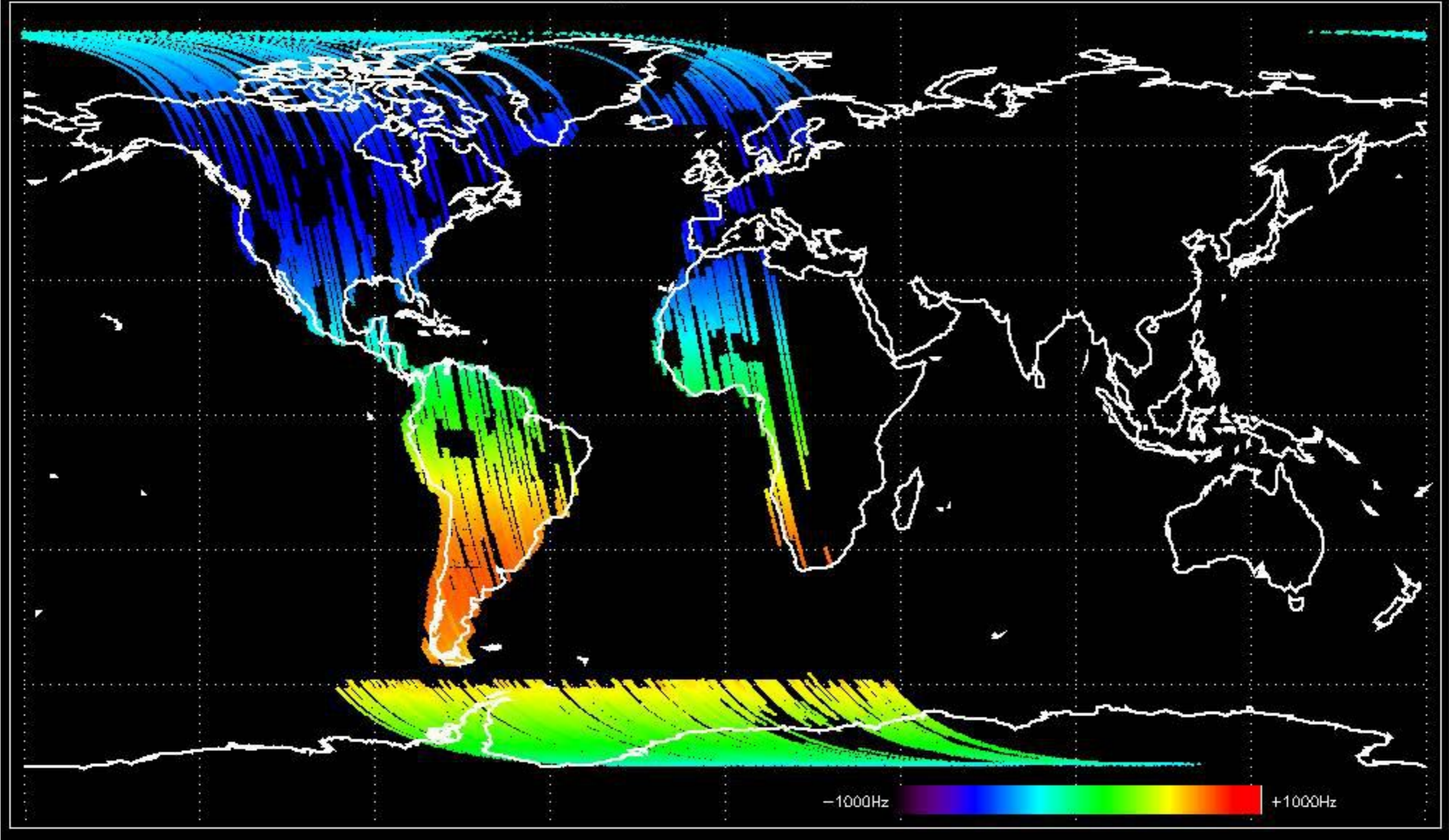
No anomalies observed.



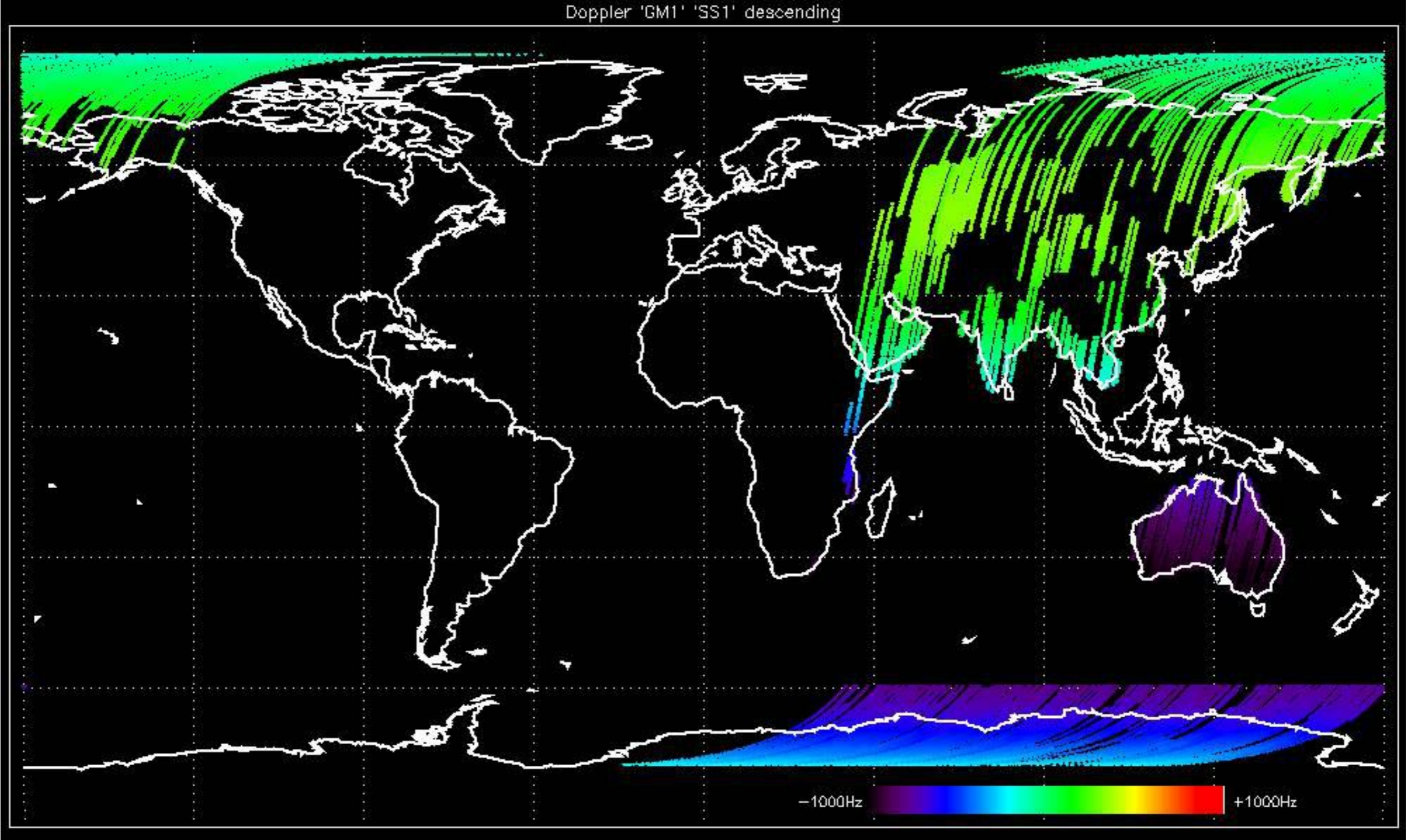


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

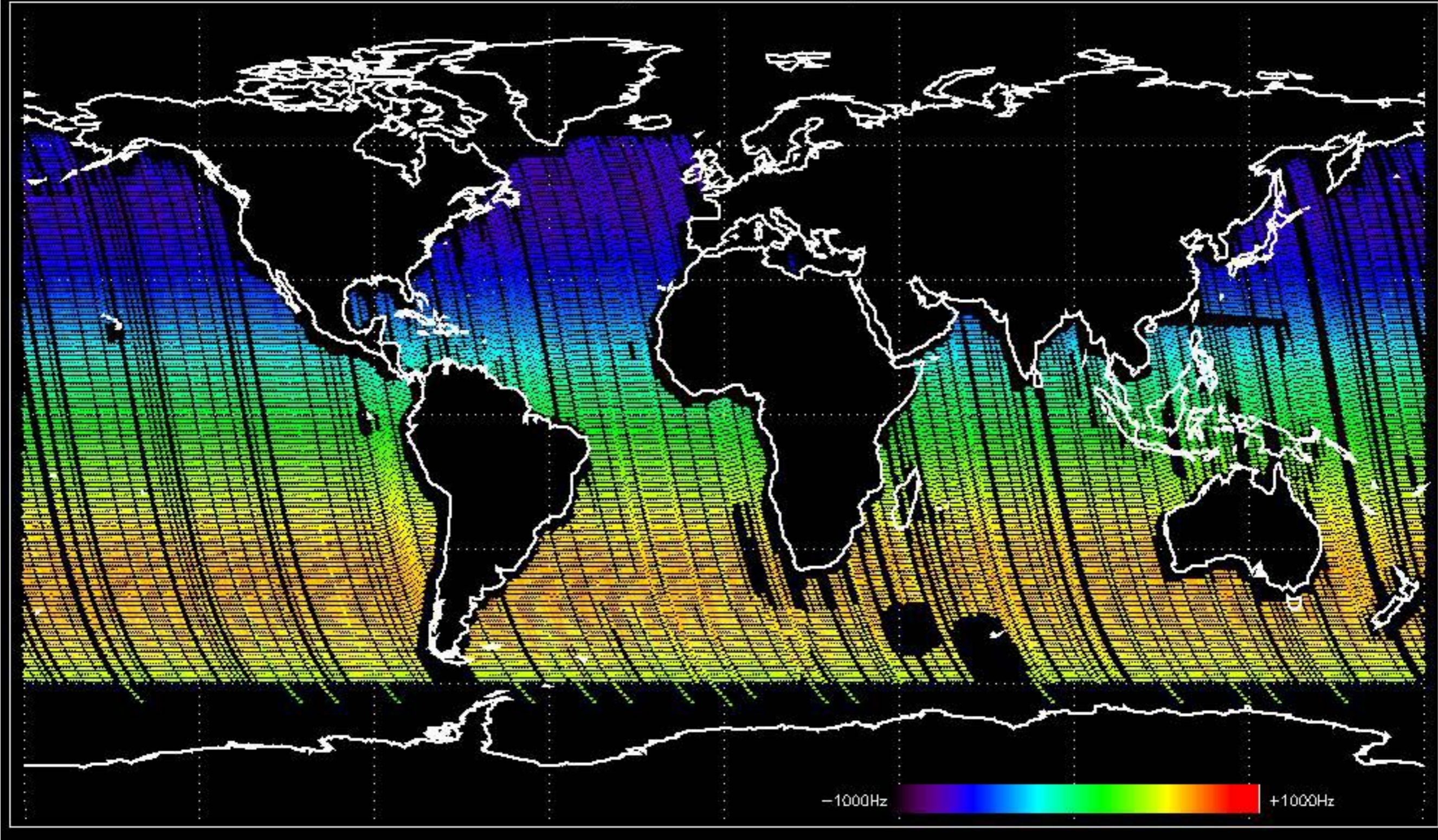
Doppler 'GM1' 'SS1' ascending



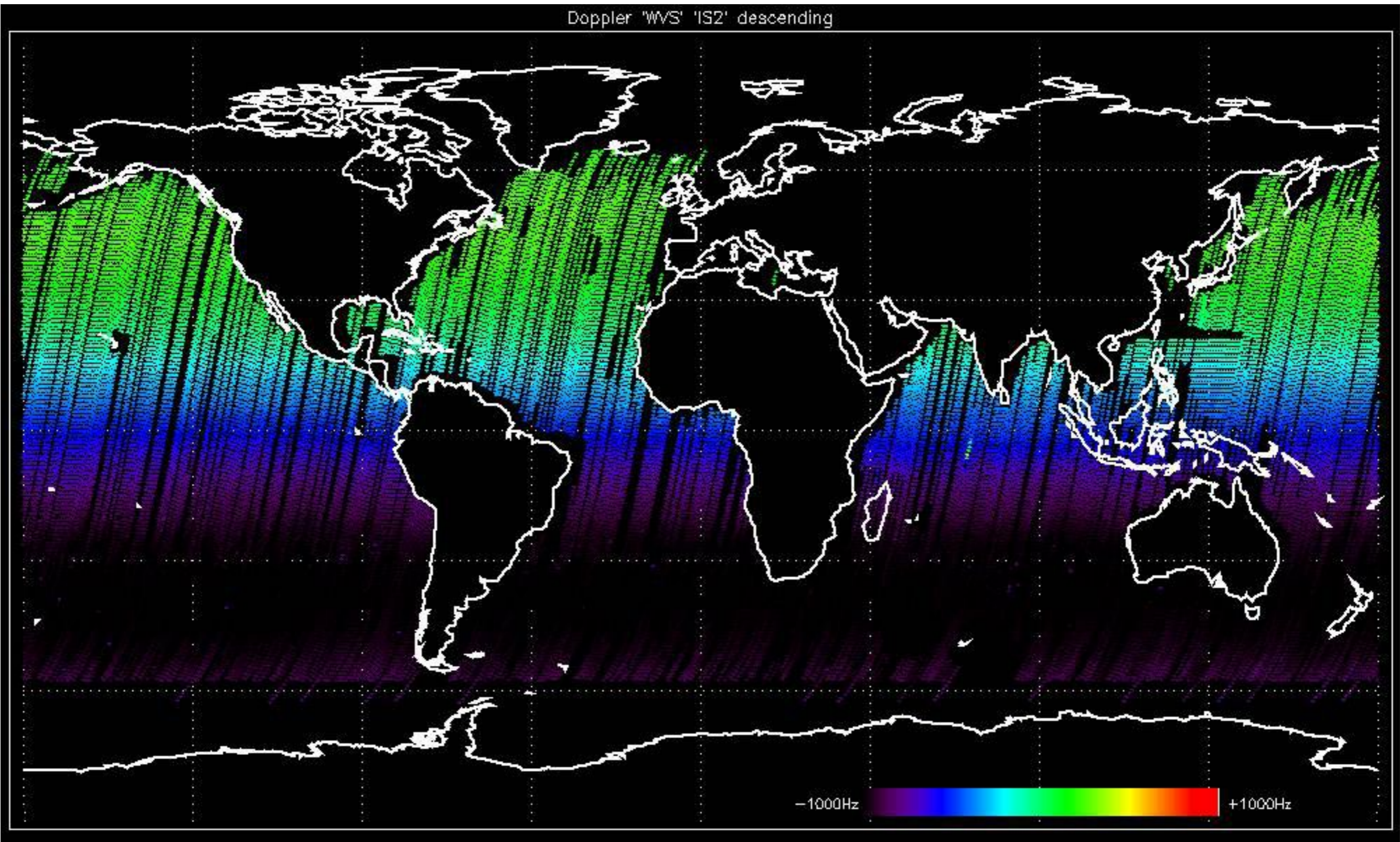
Doppler 'GM1' 'SS1' descending

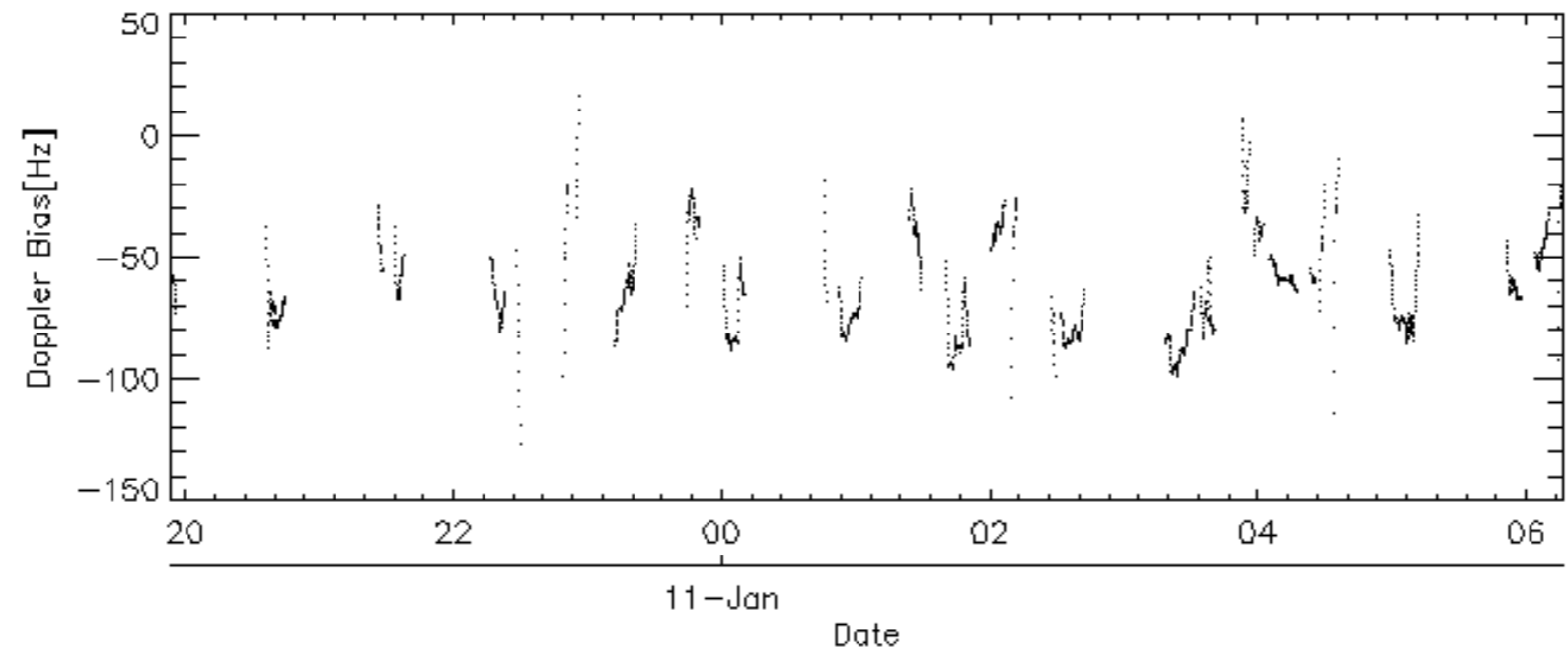
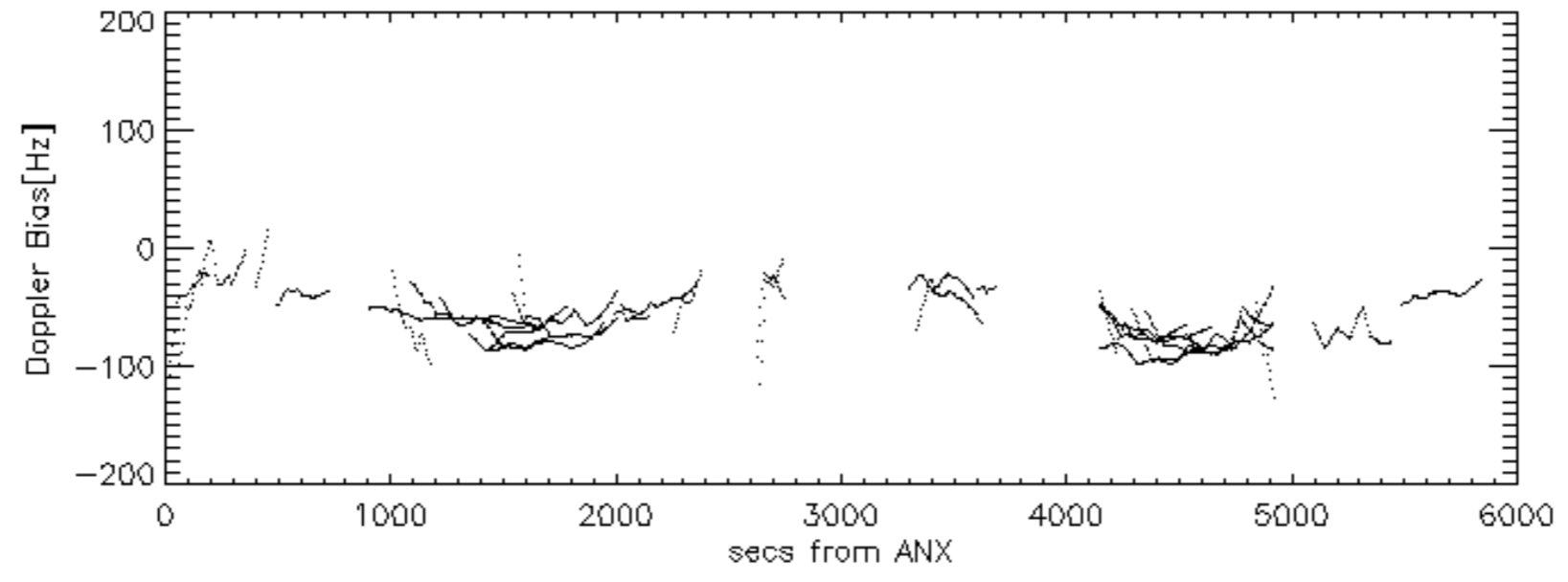
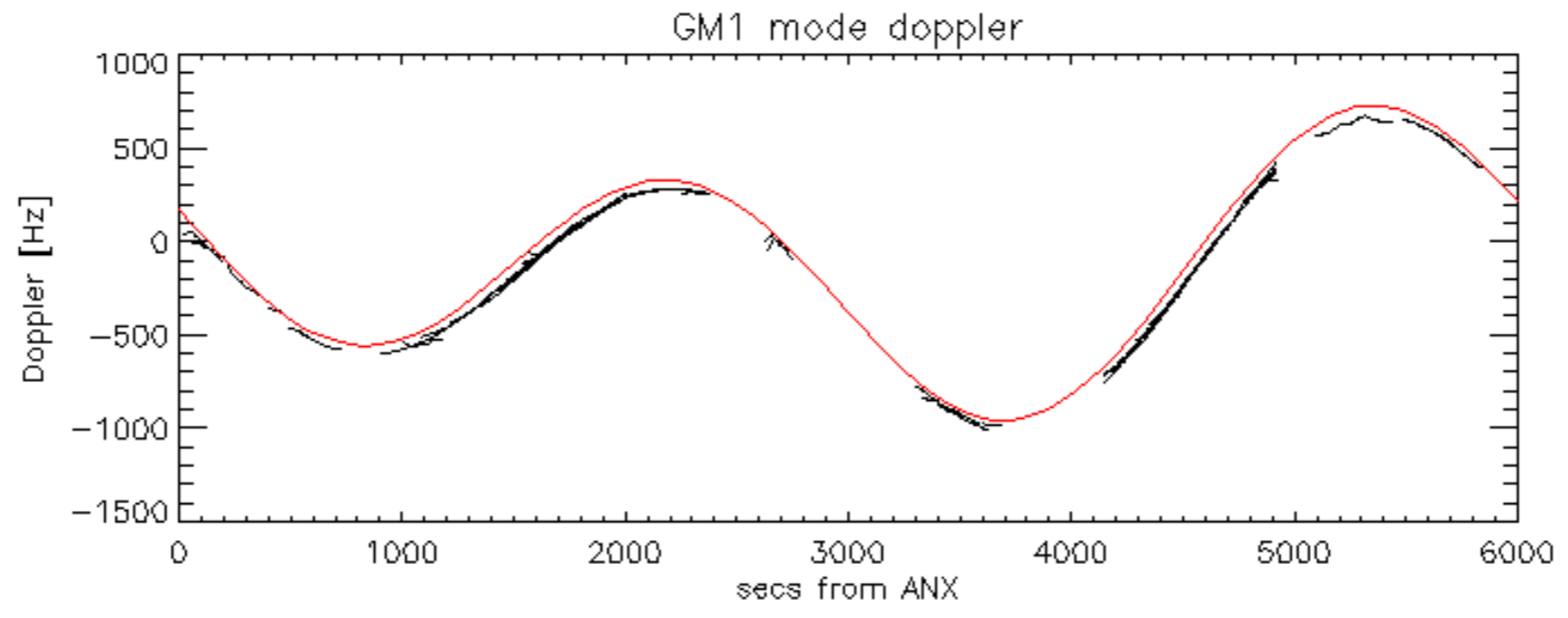


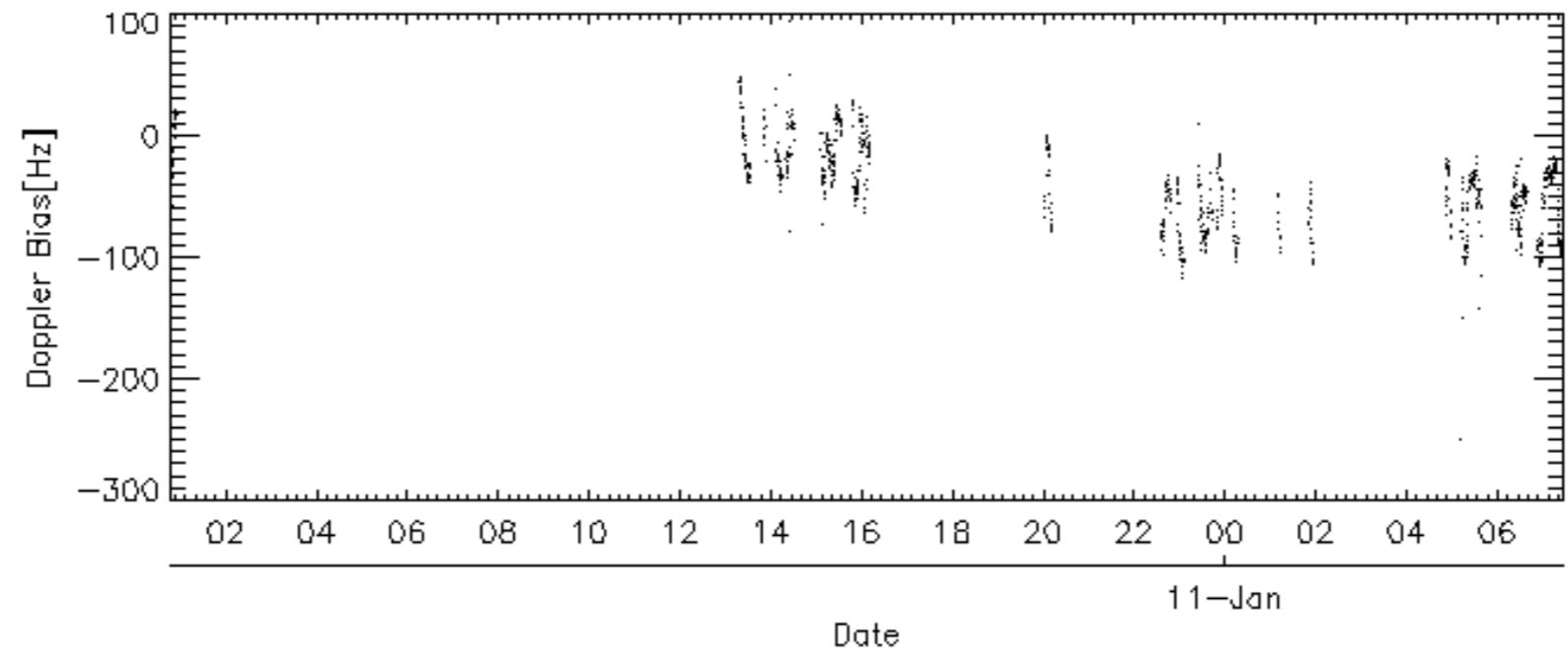
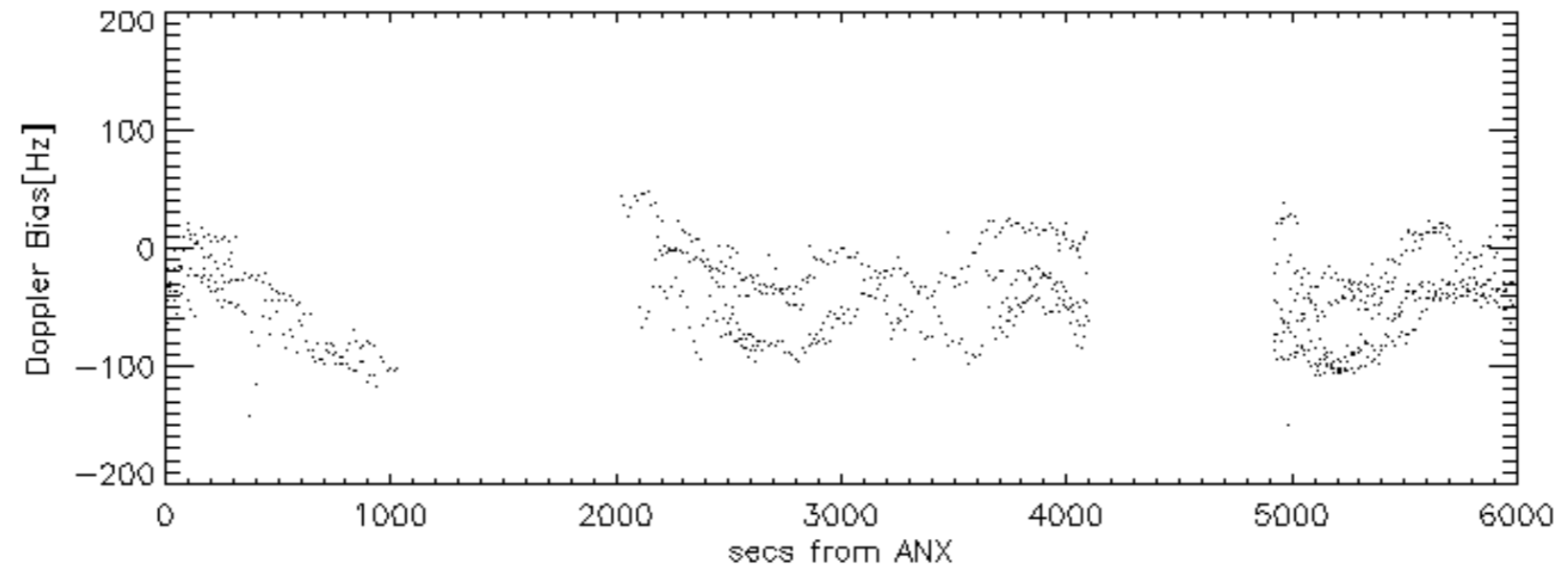
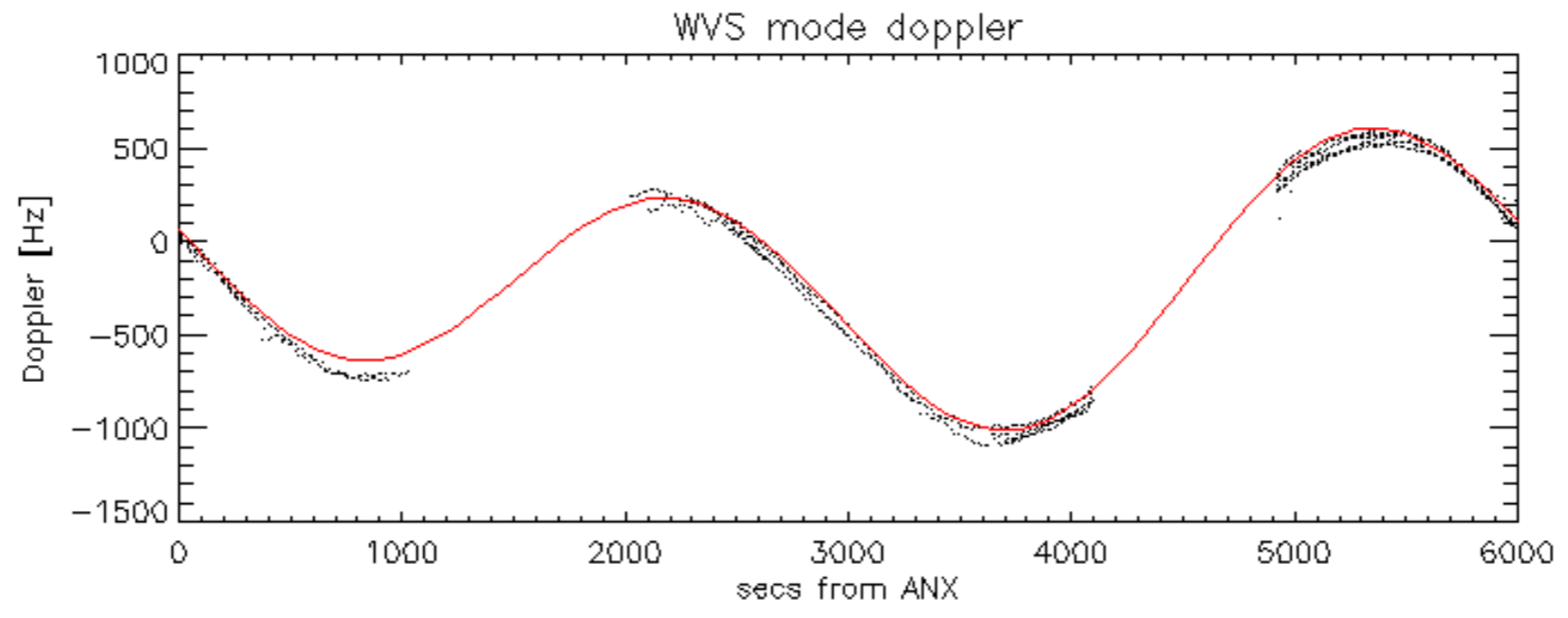
Doppler 'WVS' 'IS2' ascending



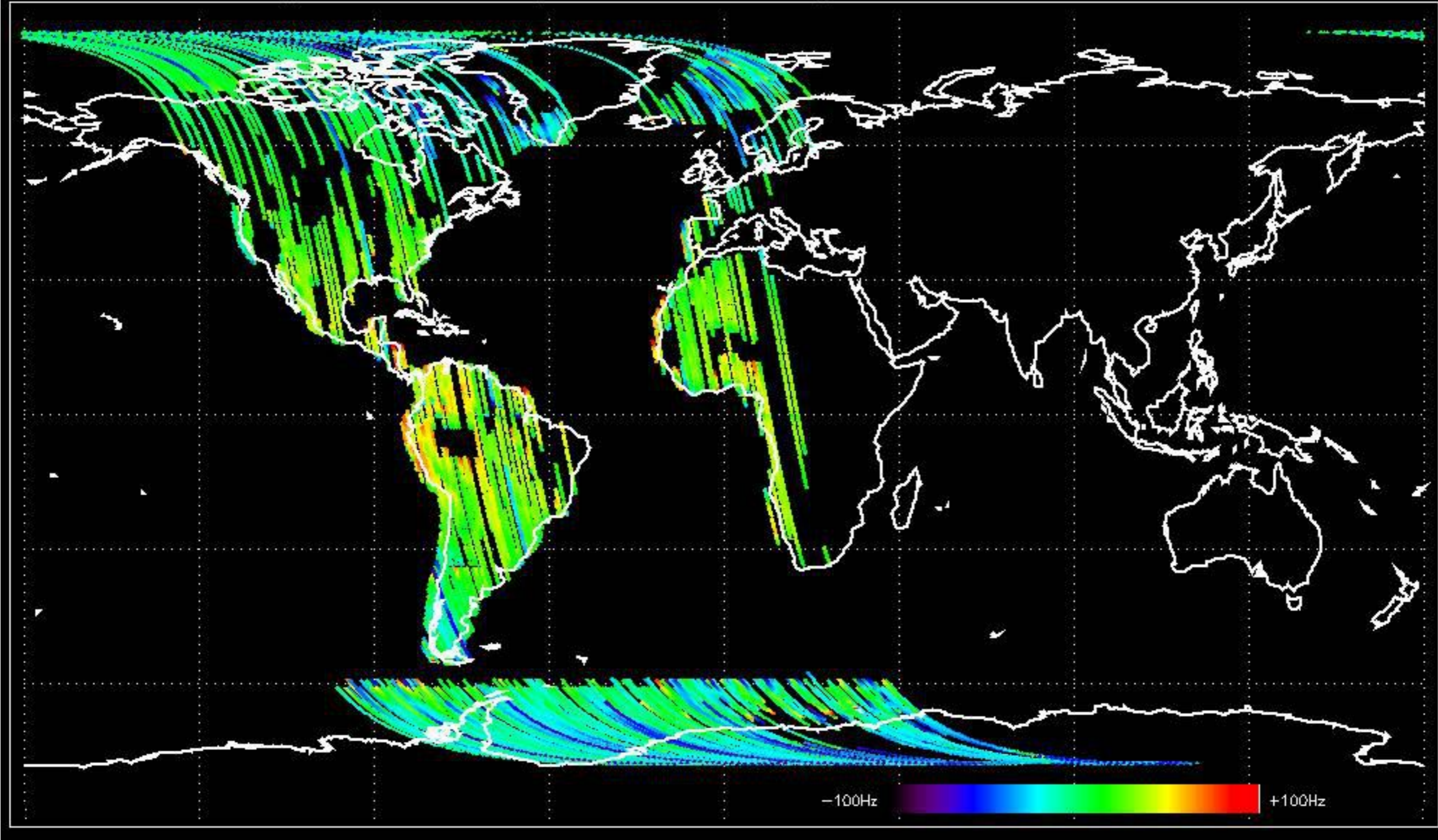
Doppler 'WVS' 'IS2' descending



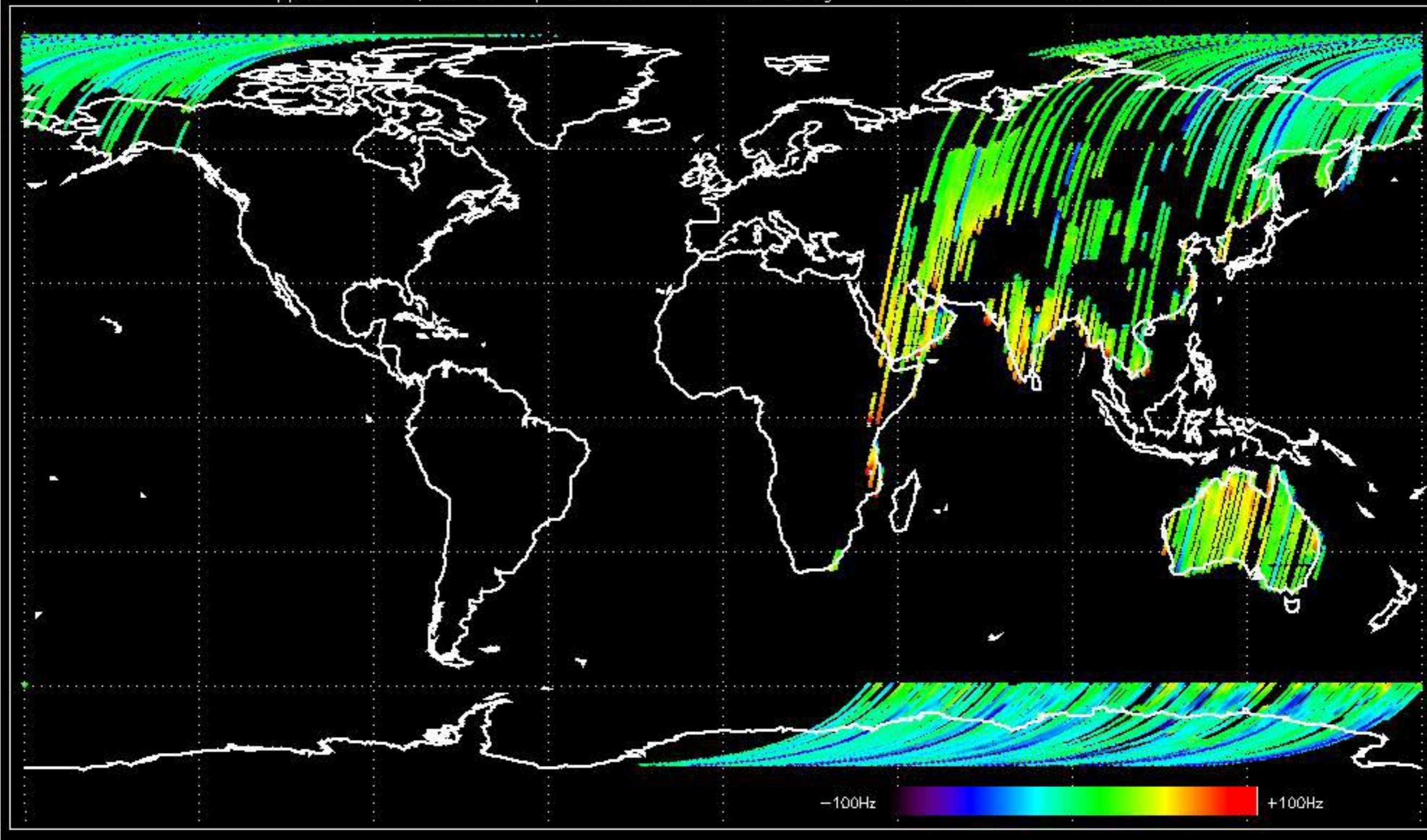




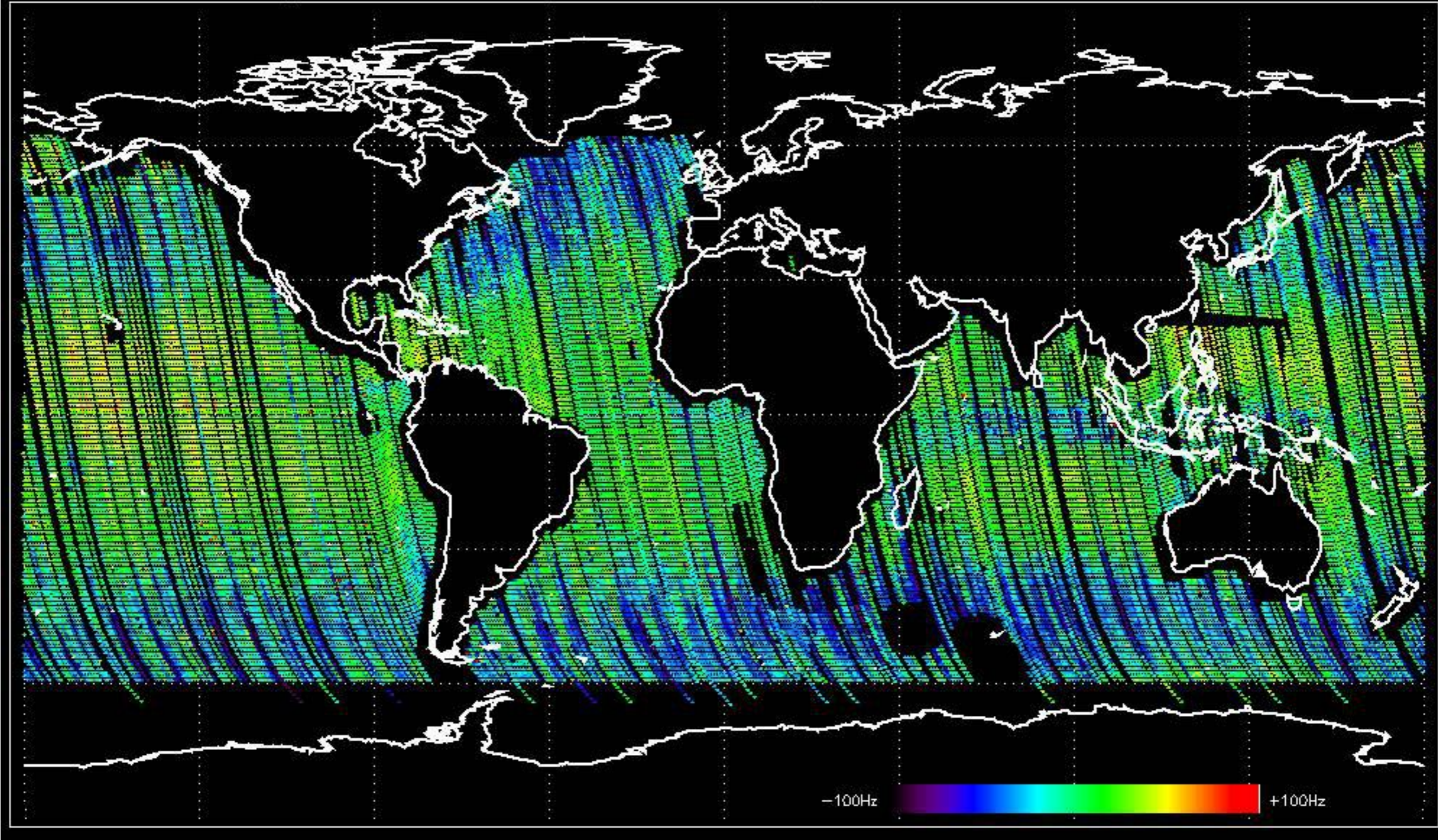
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.225637 Hz



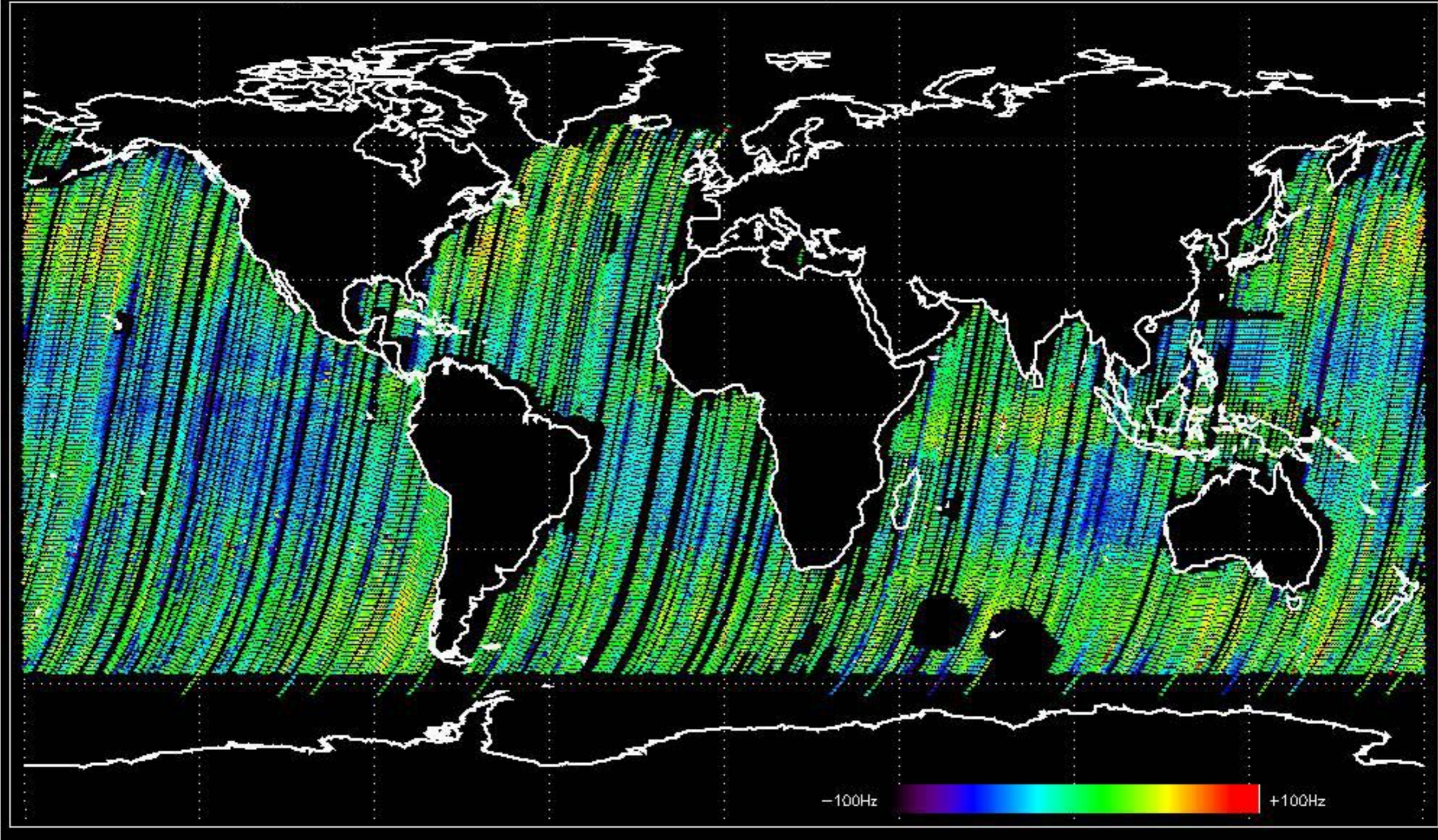
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.224729 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.5486295 Hz

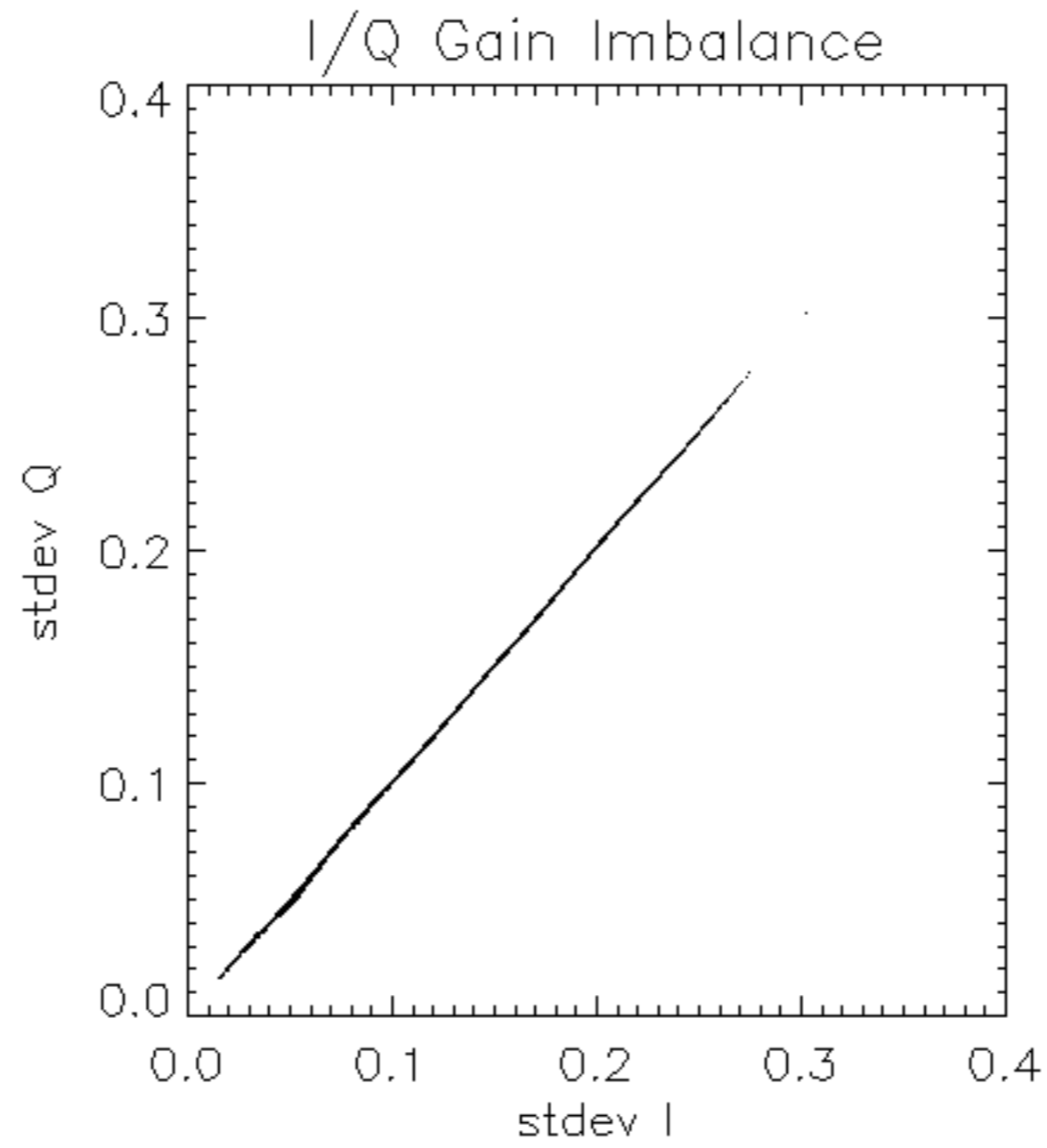


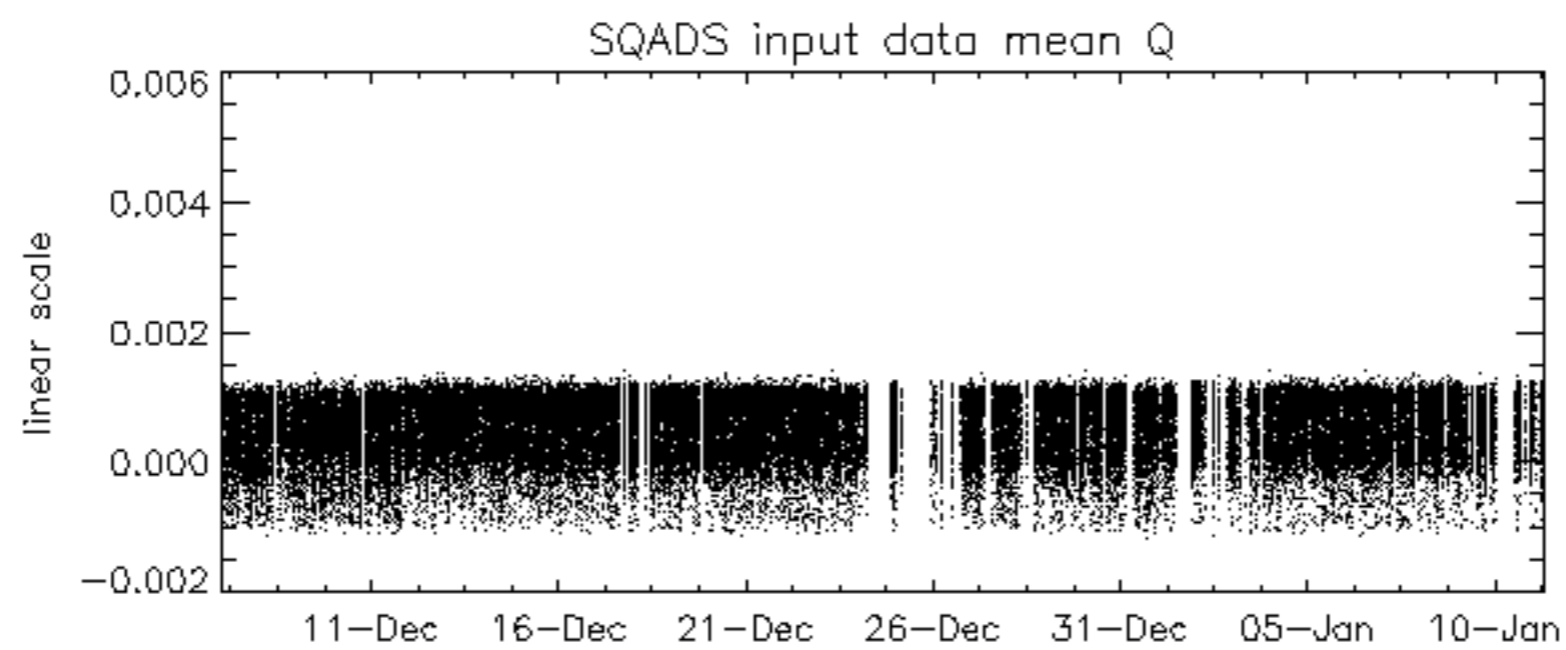
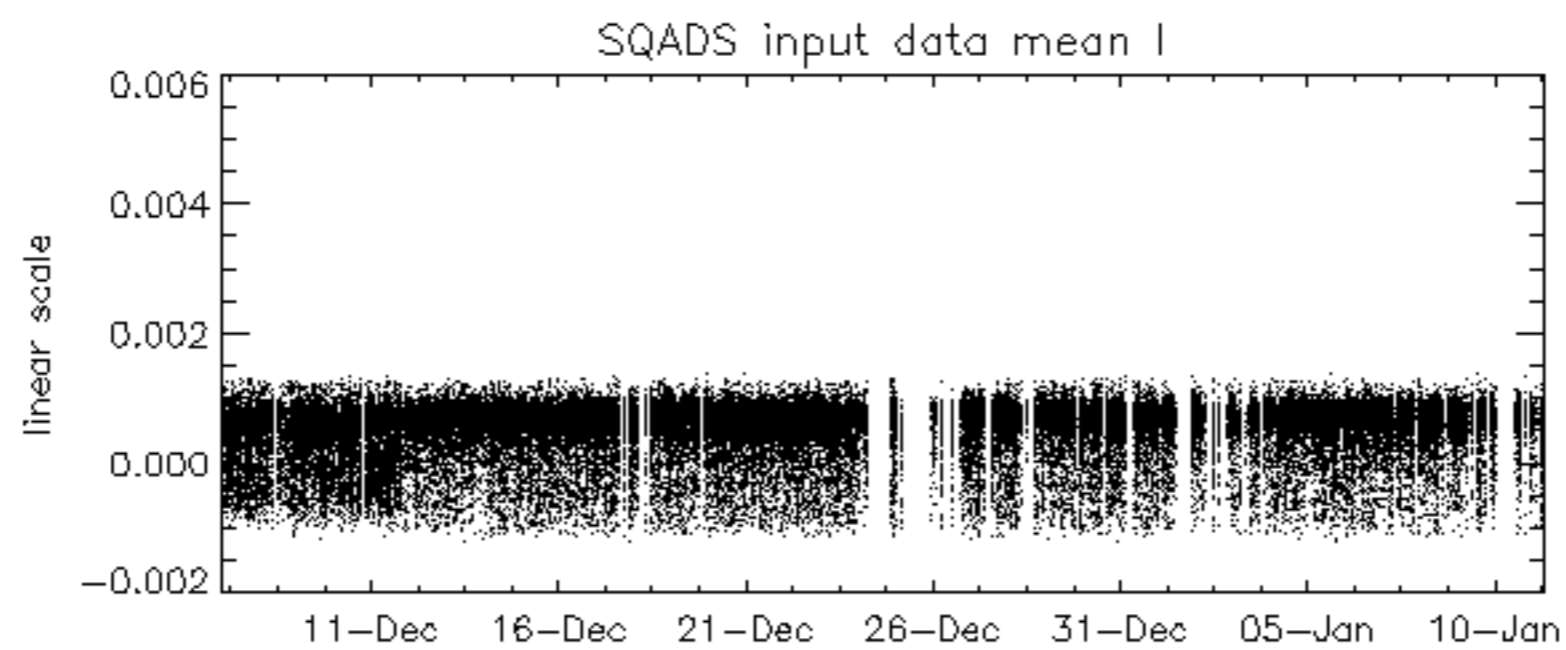
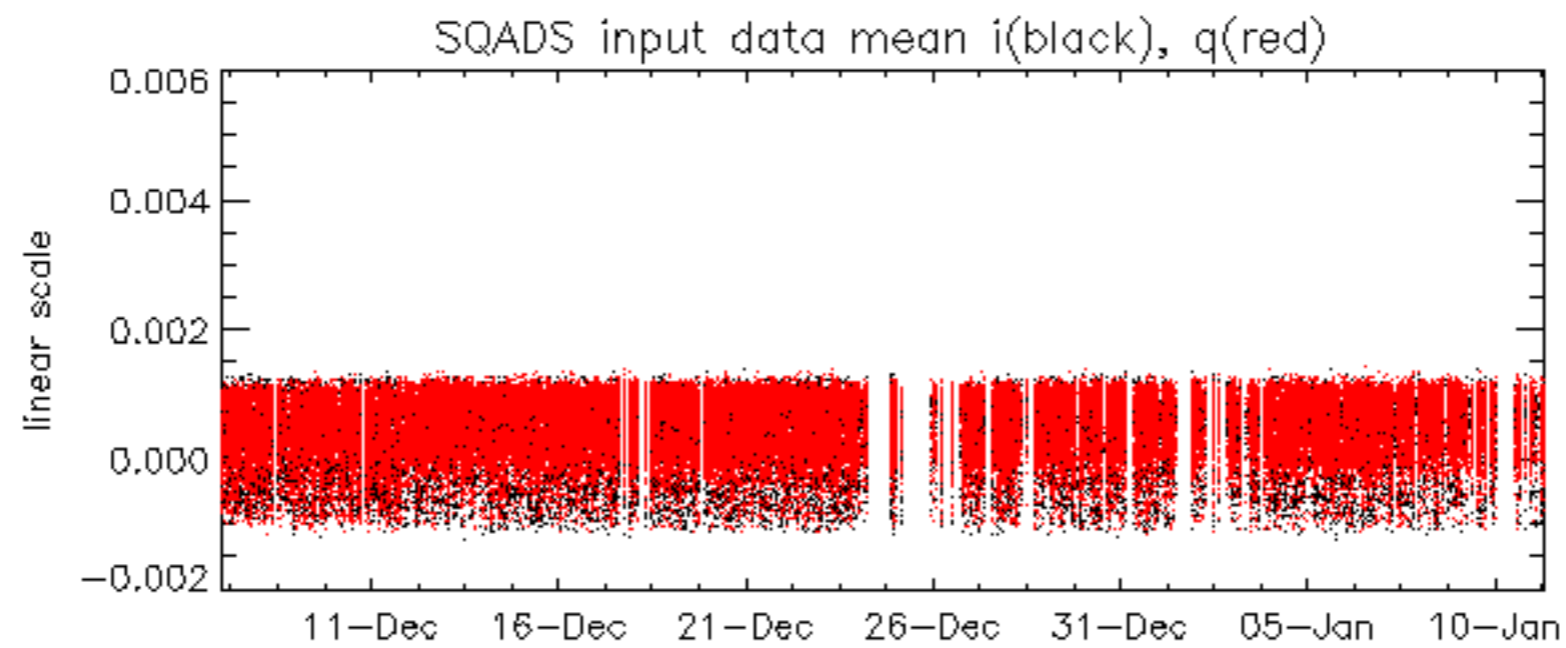
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.770347 Hz

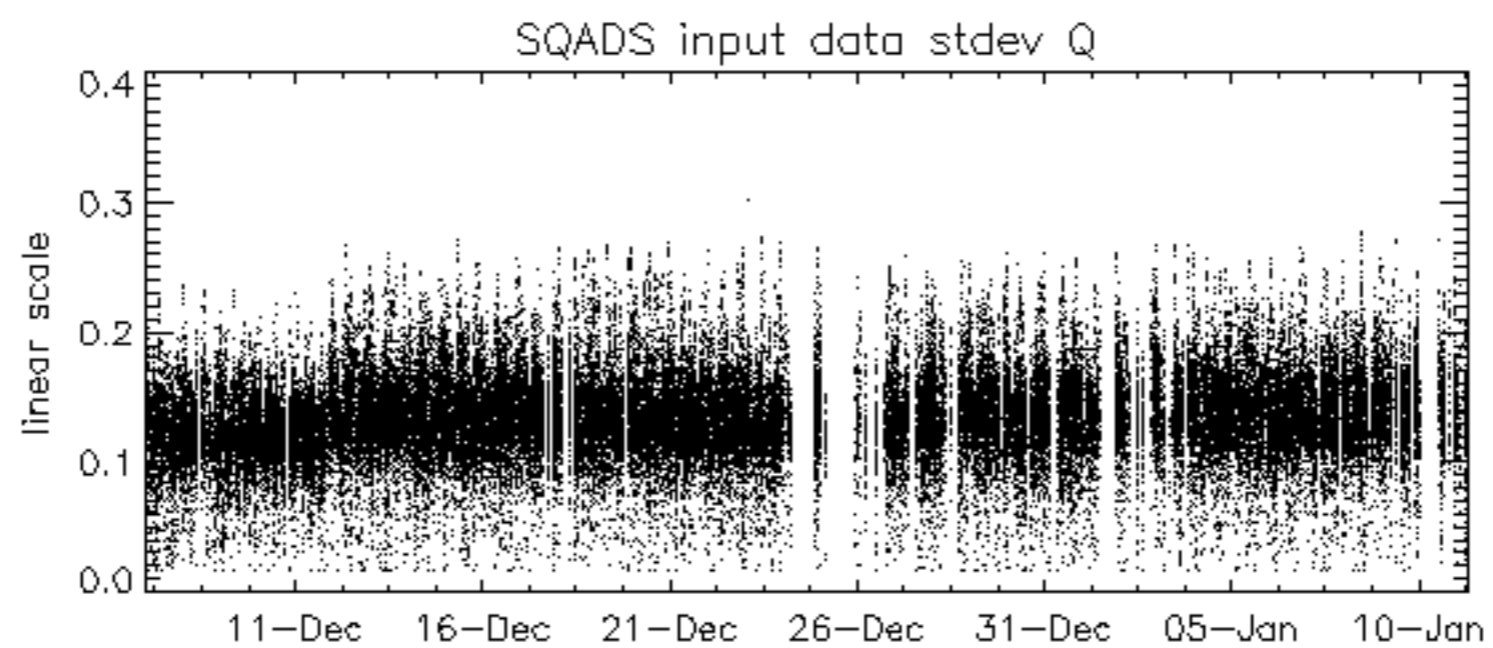
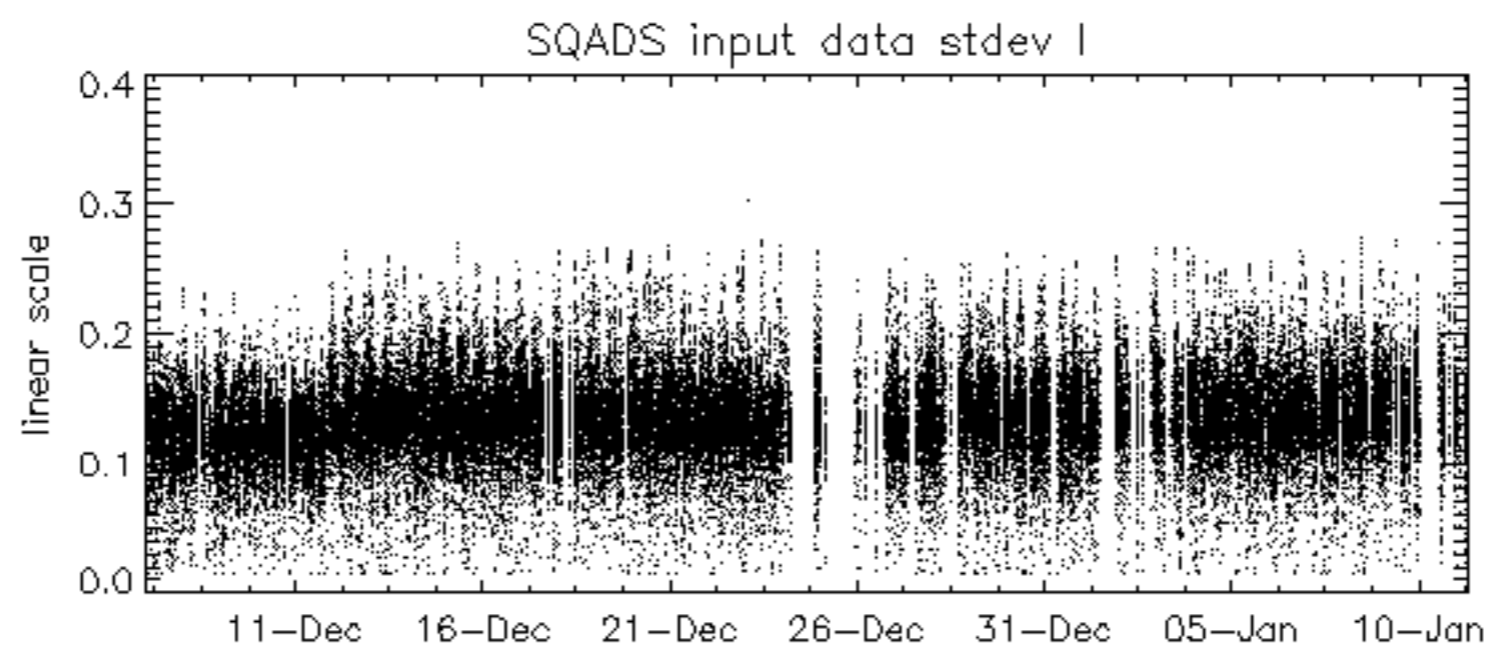
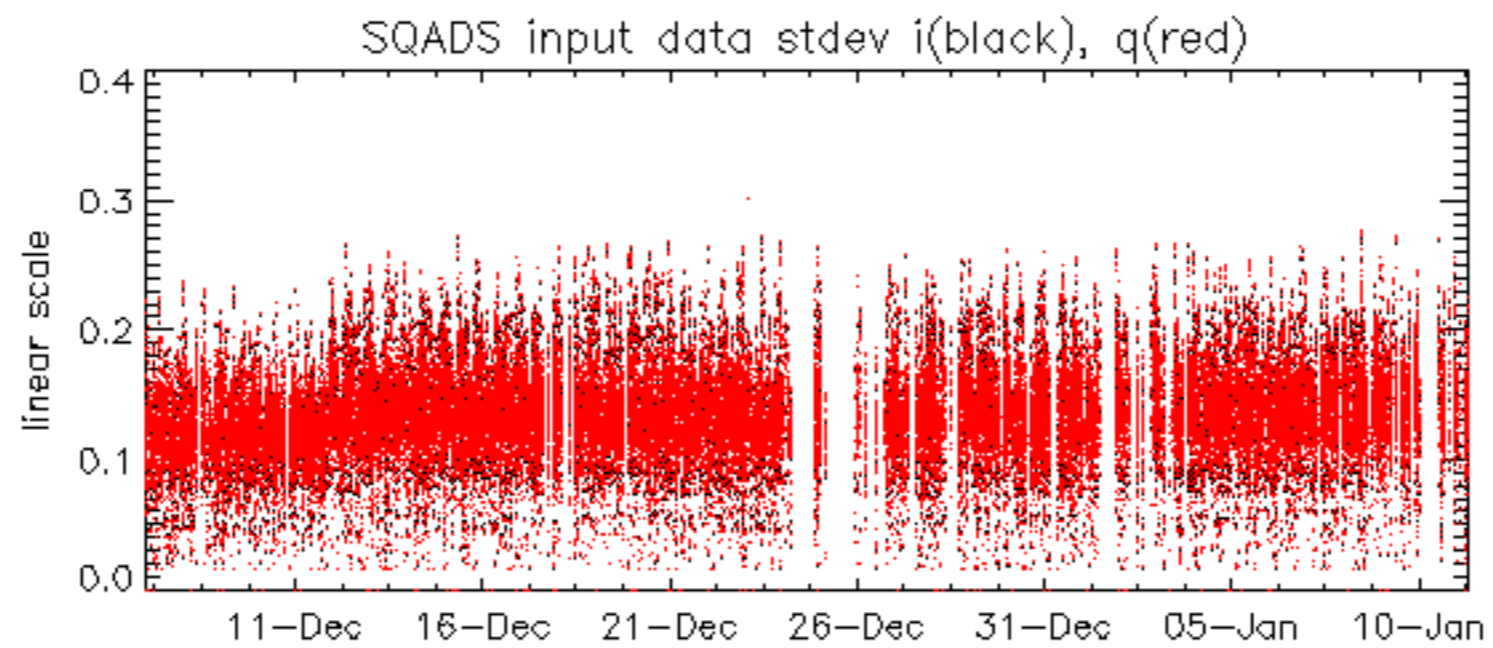


No anomalies observed on available MS products:

No anomalies observed.



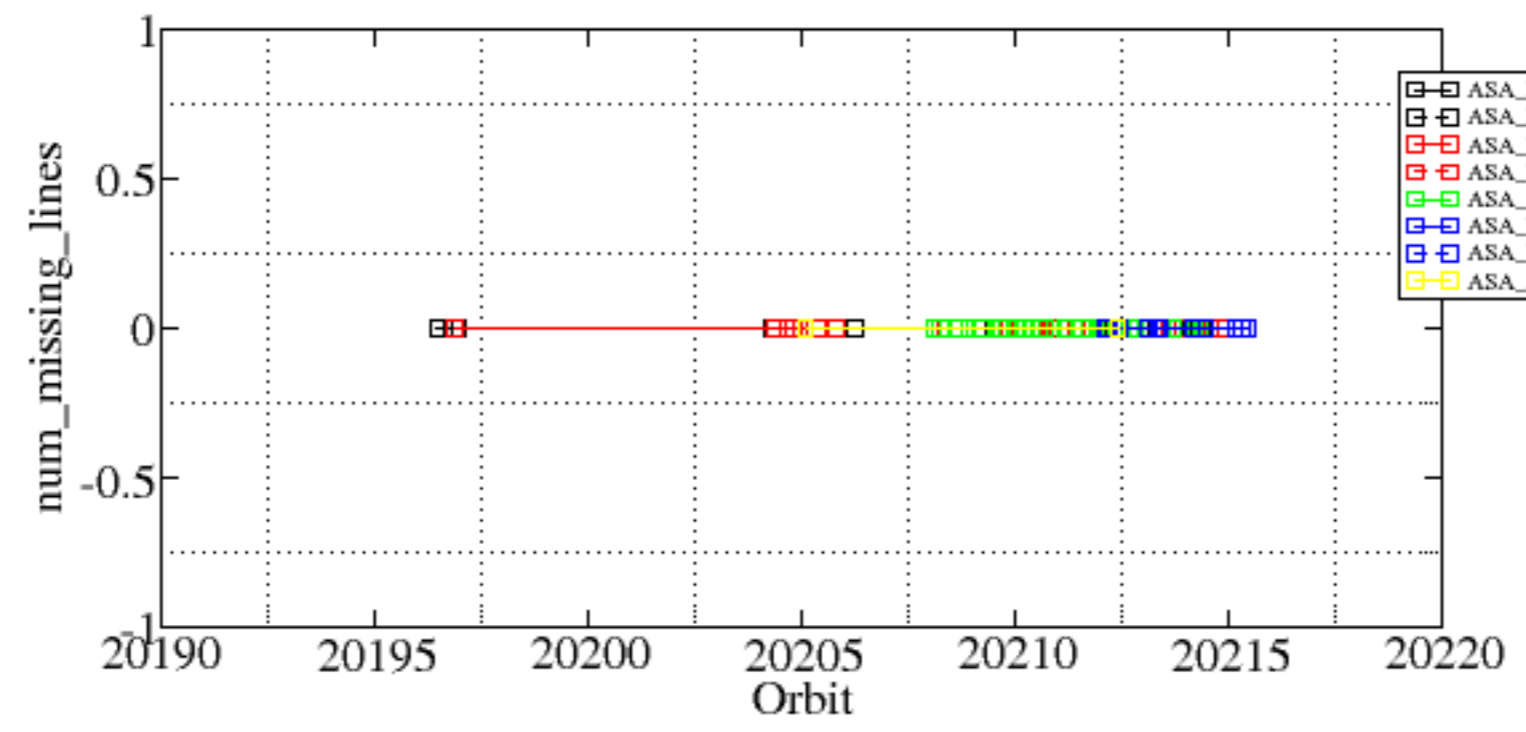




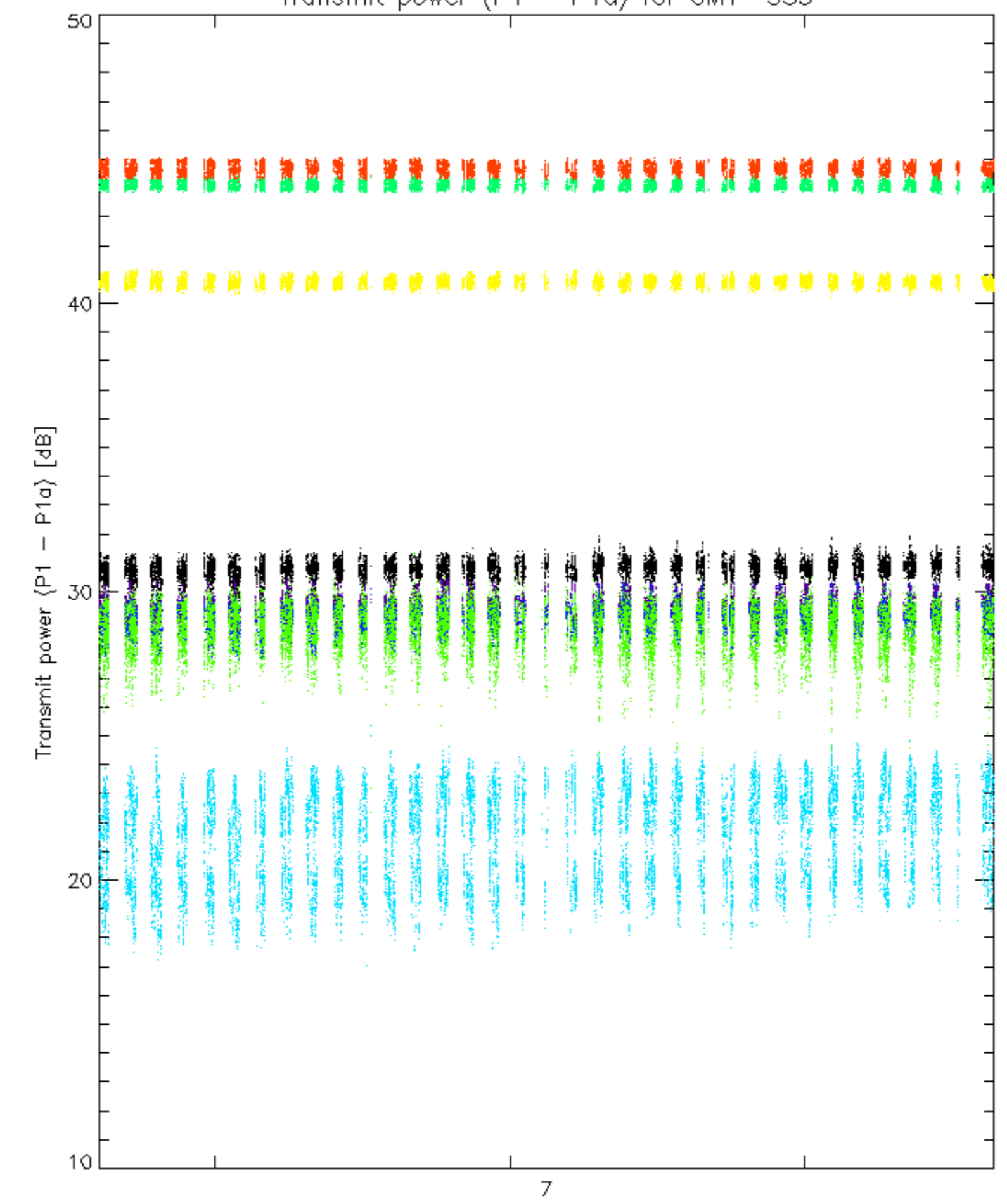
Summary of analysis for the last 3 days 2006011[901]

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

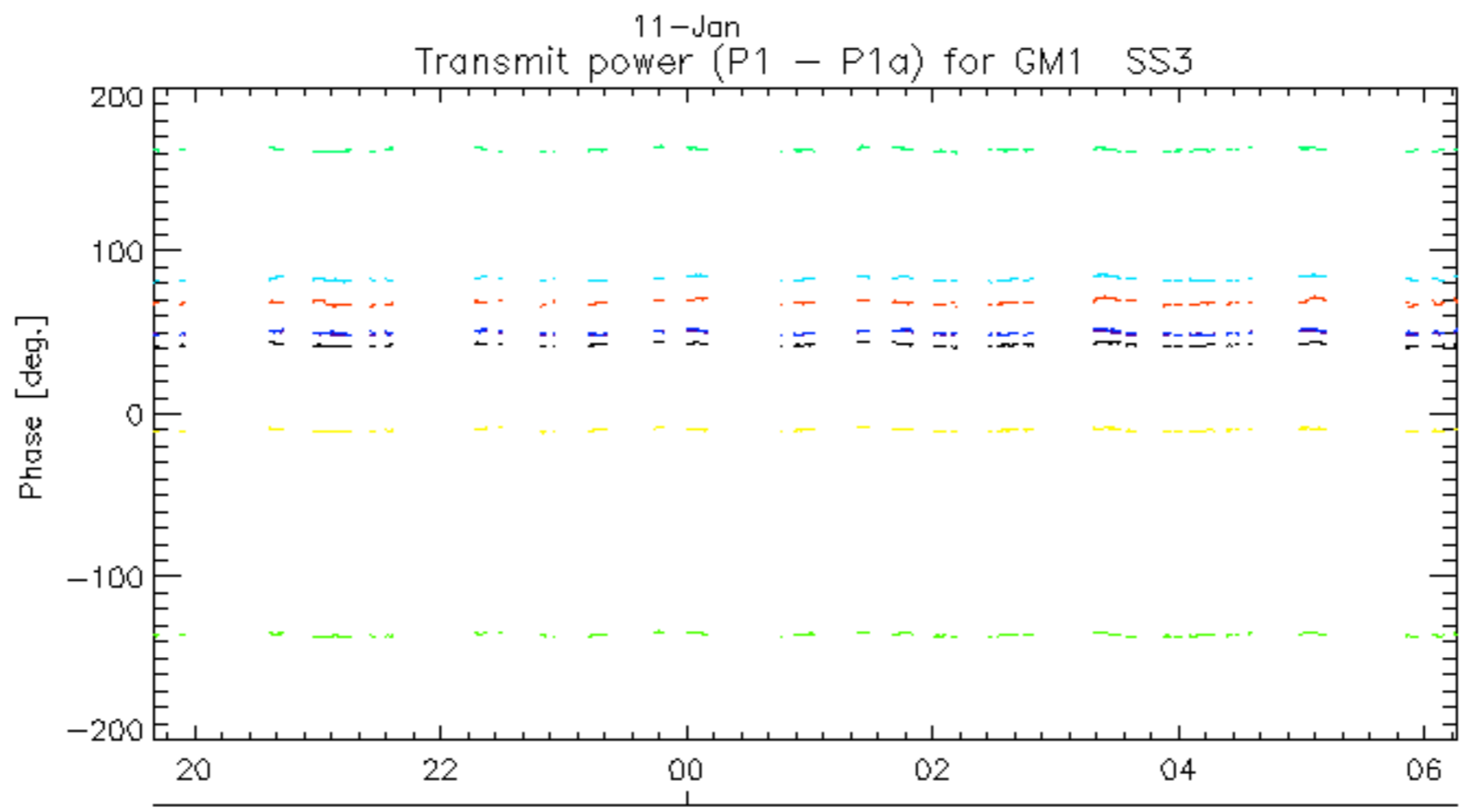
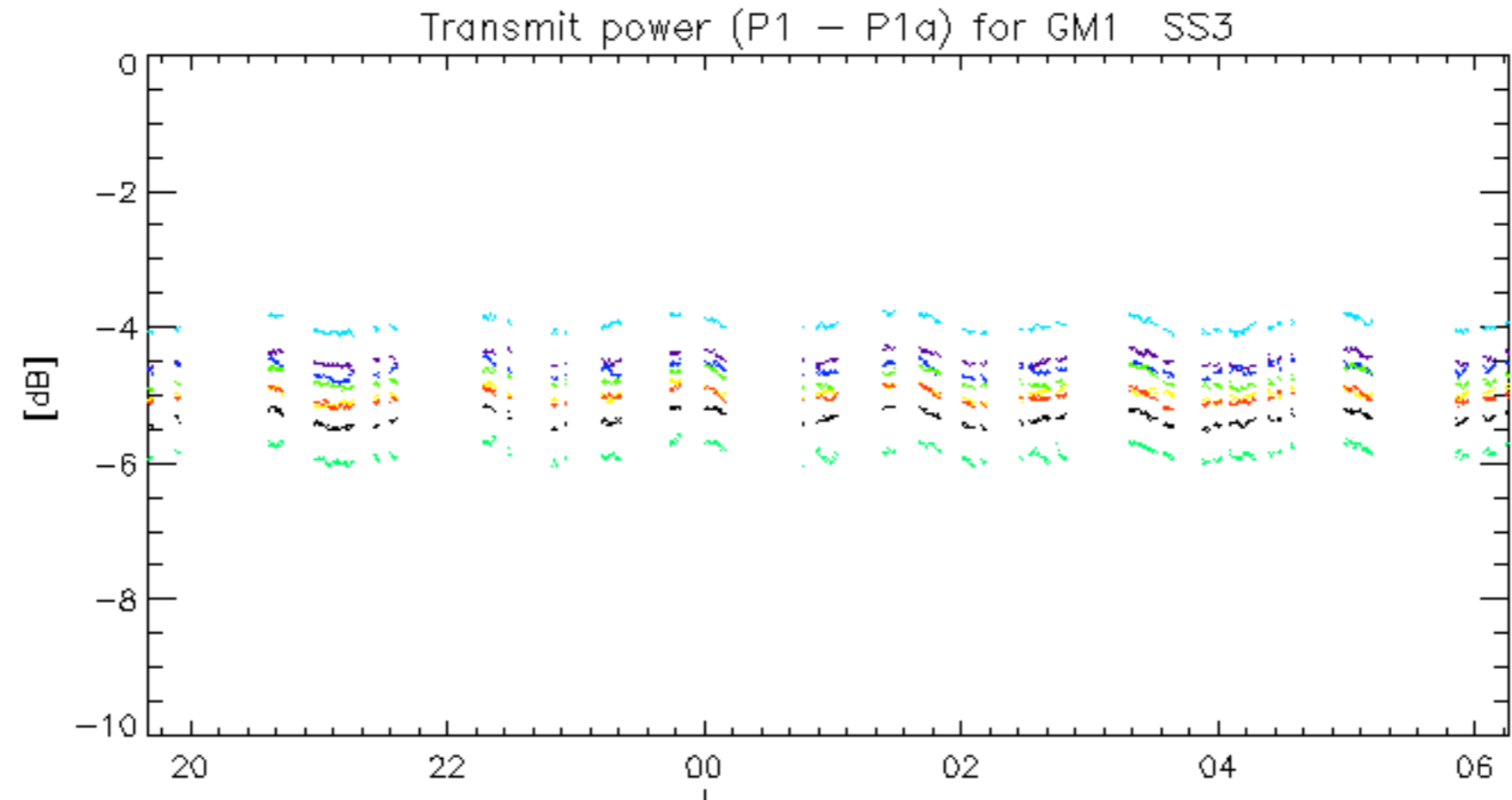
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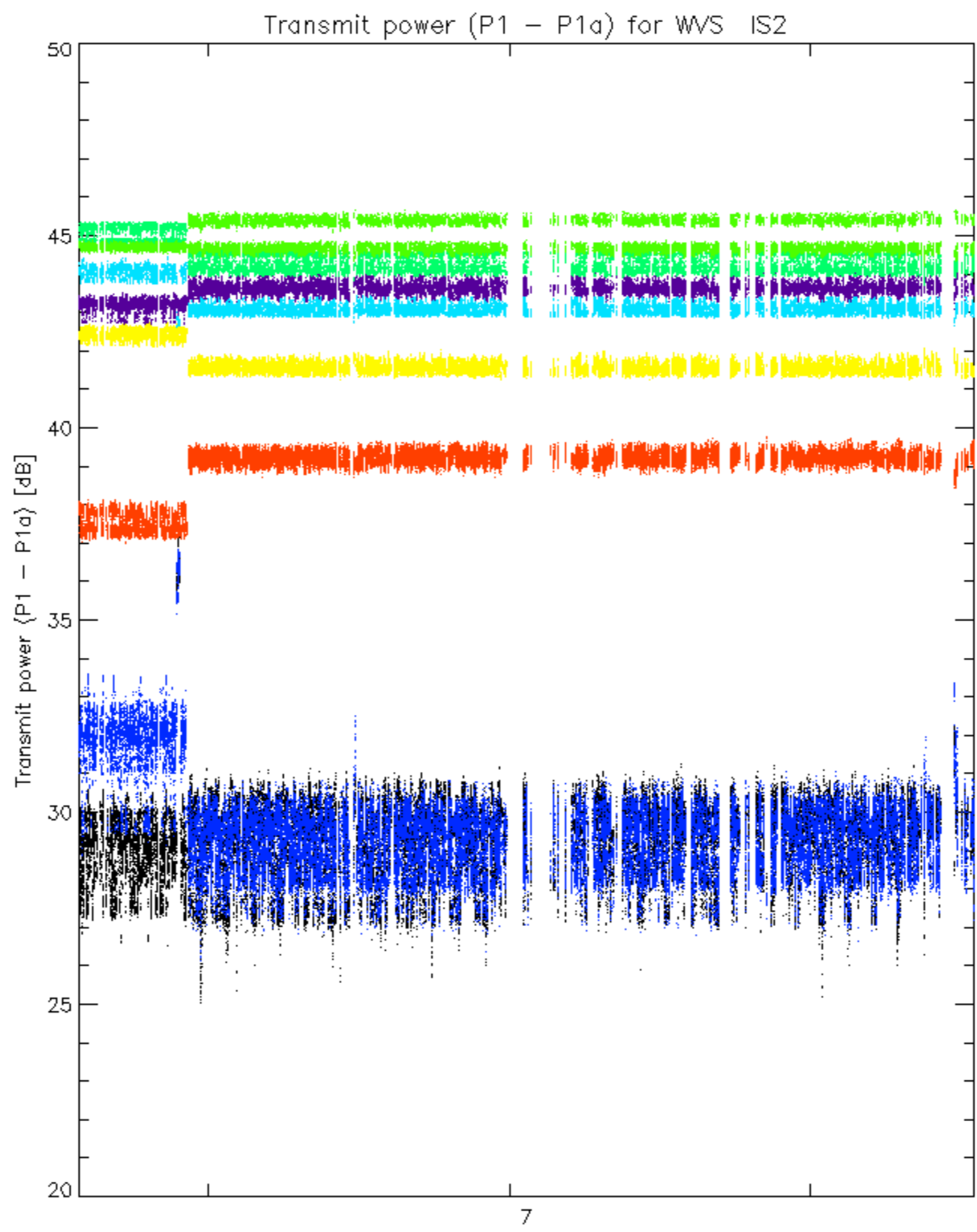
Transmit power (P1 - P1a) for GM1 SS3



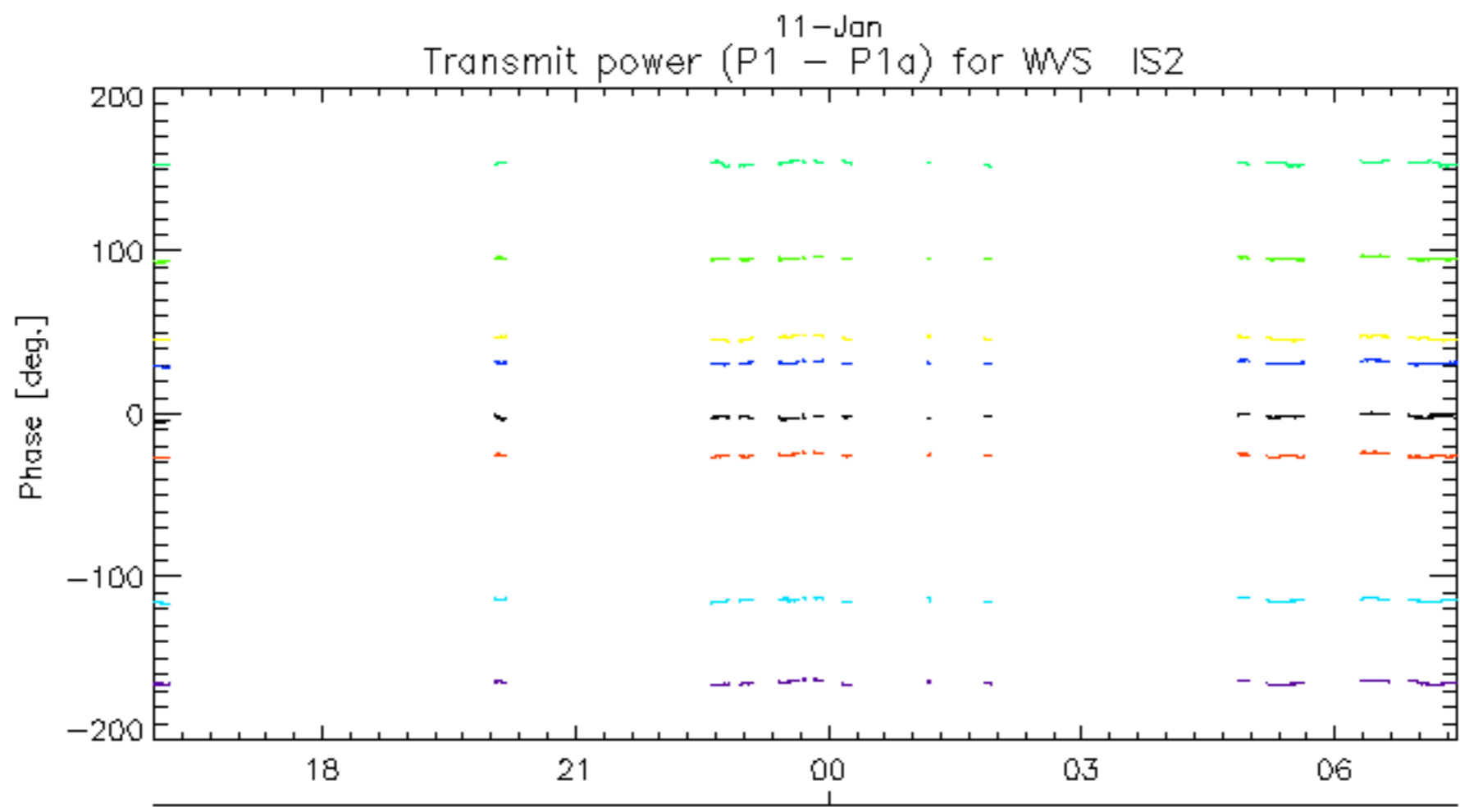
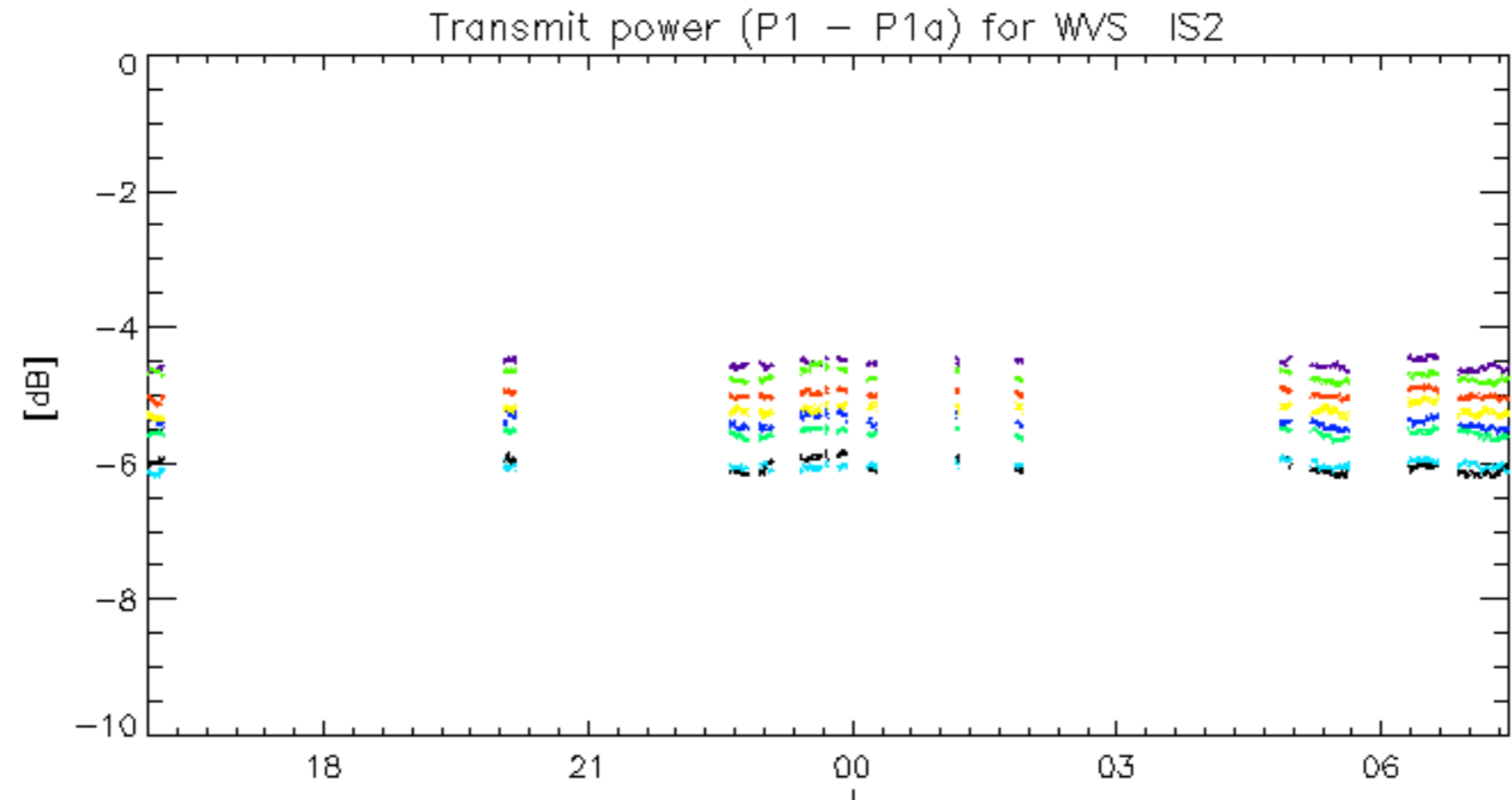
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.