

PRELIMINARY REPORT OF 060125

last update on Wed Jan 25 16:48:59 GMT 2006

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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 2006-01-24 00:00:00 to 2006-01-25 16:48:59

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	0	7	0	19
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	0	7	0	19
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	0	7	0	19
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	0	7	0	19

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	45	54	9	53
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	45	54	9	53
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	45	54	9	53
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	45	54	9	53

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	20060125 073832
H	20060124 081008

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
<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	-4.038532	0.007333	0.058534
7	P1	-3.000459	0.013803	-0.024026
11	P1	-4.102742	0.022564	-0.009385
15	P1	-6.065610	0.017009	-0.000850
19	P1	-3.247263	0.005878	-0.032442
22	P1	-4.487039	0.020093	0.003925
26	P1	-4.212924	0.012659	0.032455
30	P1	-5.773925	0.009817	-0.017971
3	P1	-16.953123	0.248517	0.205581
7	P1	-16.602940	0.129912	-0.144710
11	P1	-16.610003	0.312206	-0.070876
15	P1	-13.249236	0.119010	0.085981
19	P1	-13.884770	0.075947	-0.044312
22	P1	-15.923114	0.566261	0.102167
26	P1	-15.765930	0.260141	0.016587
30	P1	-16.614981	0.343581	-0.024008

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.623554	0.095312	0.115522
7	P2	-22.481028	0.097743	0.097069
11	P2	-16.312037	0.103535	0.095578
15	P2	-7.222635	0.103498	0.040652
19	P2	-9.180055	0.098624	0.029119
22	P2	-17.943241	0.095259	-0.018338
26	P2	-16.225420	0.100513	0.005244
30	P2	-19.657923	0.084216	0.032851

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.216693	0.007418	0.015457
7	P3	-8.216693	0.007418	0.015457
11	P3	-8.216693	0.007418	0.015457
15	P3	-8.216693	0.007418	0.015457
19	P3	-8.216693	0.007418	0.015457
22	P3	-8.216693	0.007418	0.015457
26	P3	-8.216693	0.007418	0.015457
30	P3	-8.216693	0.007418	0.015457

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	-3.723823	0.008636	-0.016006
7	P1	-2.752086	0.007646	0.047193
11	P1	-2.866767	0.011141	0.012088
15	P1	-3.456874	0.018556	-0.047018
19	P1	-3.381137	0.013275	0.010965
22	P1	-5.122110	0.021561	0.002752
26	P1	-5.856829	0.015513	-0.000751
30	P1	-5.250131	0.029918	0.024592
3	P1	-11.520056	0.033743	-0.058285
7	P1	-9.923875	0.050110	0.055489
11	P1	-10.075897	0.051266	-0.031192
15	P1	-10.619557	0.082098	-0.041817
19	P1	-15.481421	0.063270	0.042390
22	P1	-20.659275	1.151832	0.326700
26	P1	-16.853682	0.326894	0.363473
30	P1	-18.145542	0.308229	-0.006914

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.446779	0.032100	0.211858
7	P2	-22.888781	0.058370	0.209499
11	P2	-11.447658	0.019702	0.141123
15	P2	-4.930046	0.023417	0.074471
19	P2	-6.927273	0.022069	0.067050
22	P2	-8.197783	0.022657	0.020835
26	P2	-23.983583	0.025206	0.073100
30	P2	-22.103275	0.017468	0.041389

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.057743	0.002402	0.036276
7	P3	-8.057688	0.002407	0.037047
11	P3	-8.057795	0.002413	0.037150
15	P3	-8.057673	0.002419	0.036523
19	P3	-8.057868	0.002414	0.036555
22	P3	-8.057705	0.002405	0.036120
26	P3	-8.057632	0.002398	0.035987
30	P3	-8.057833	0.002413	0.036476

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	0.000558267
	stdev	1.71359e-07
MEAN Q	mean	0.000519138
	stdev	2.16167e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138944
	stdev	0.00120728
STDEV Q	mean	0.139303
	stdev	0.00122679



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006012[345]

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_IMM_1PNPDE20060123_155721_000002312044_00298_20392_0902.N1	1	0
ASA_WSM_1PNPDE20060123_160304_000001282044_00298_20392_2090.N1	0	2







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

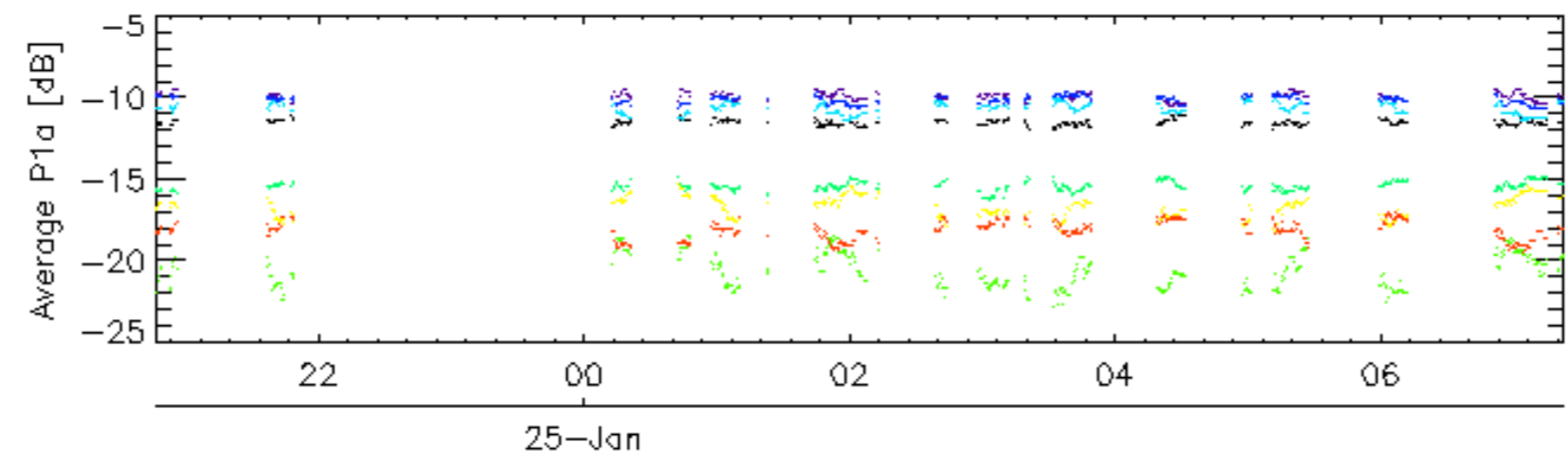
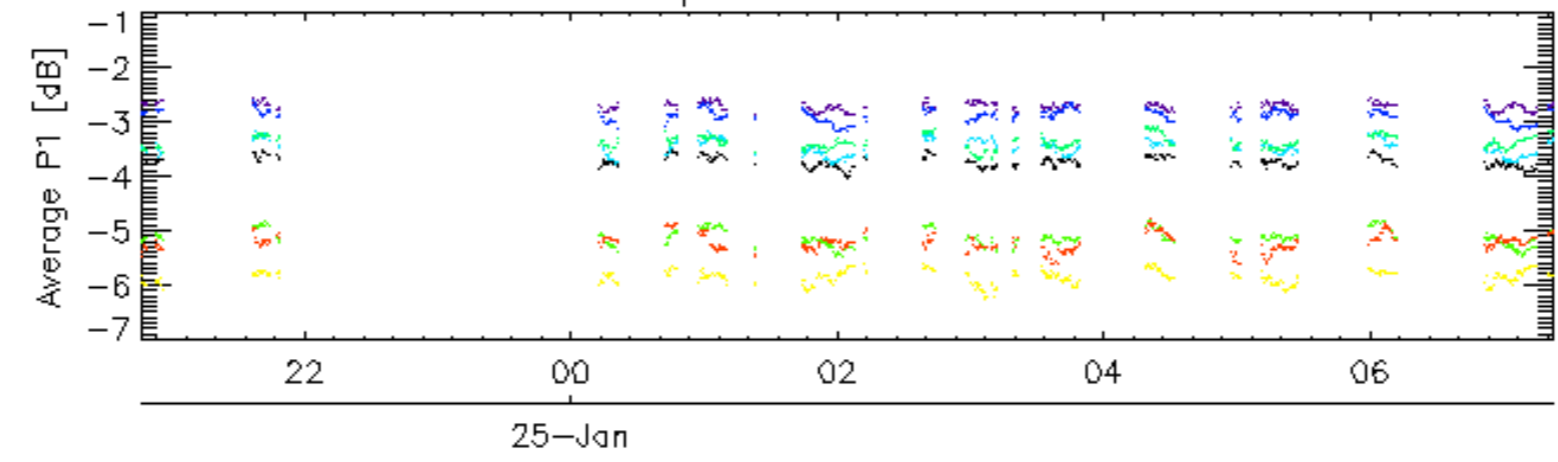
Ascending

Descending

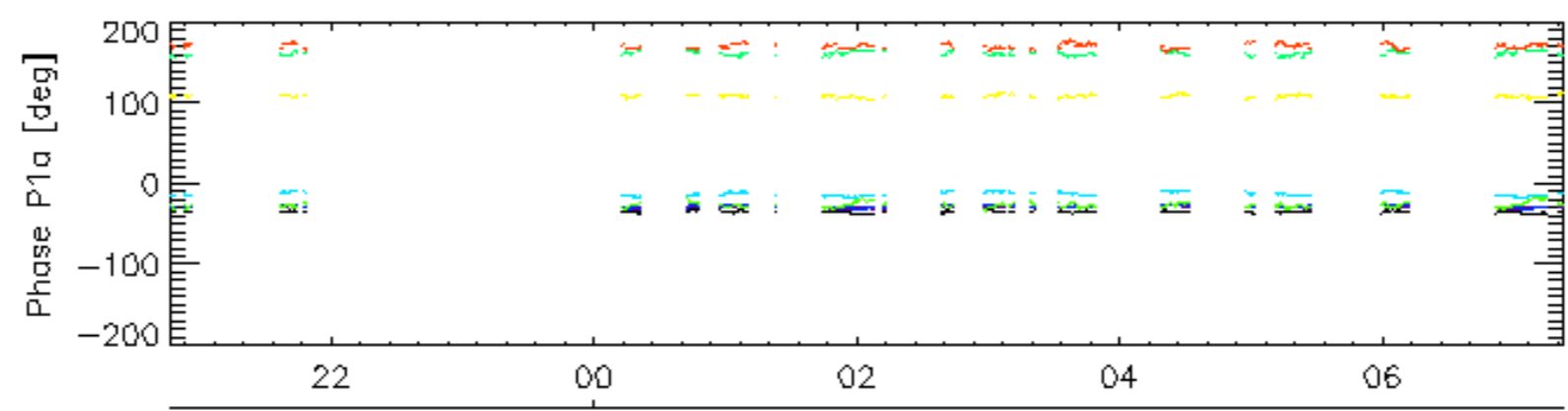
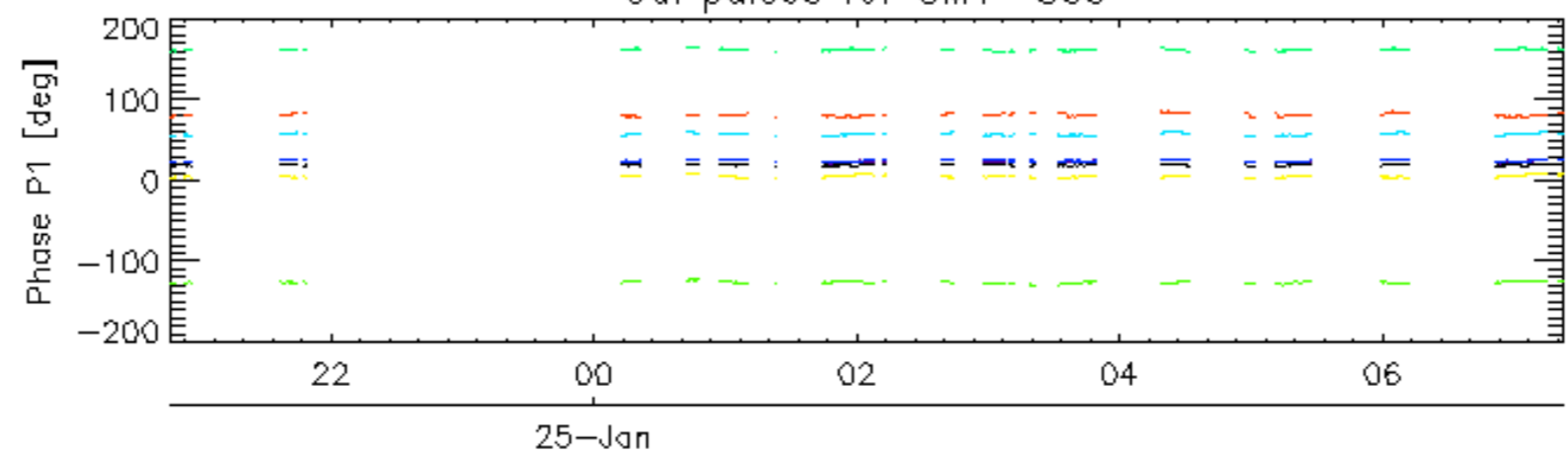
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

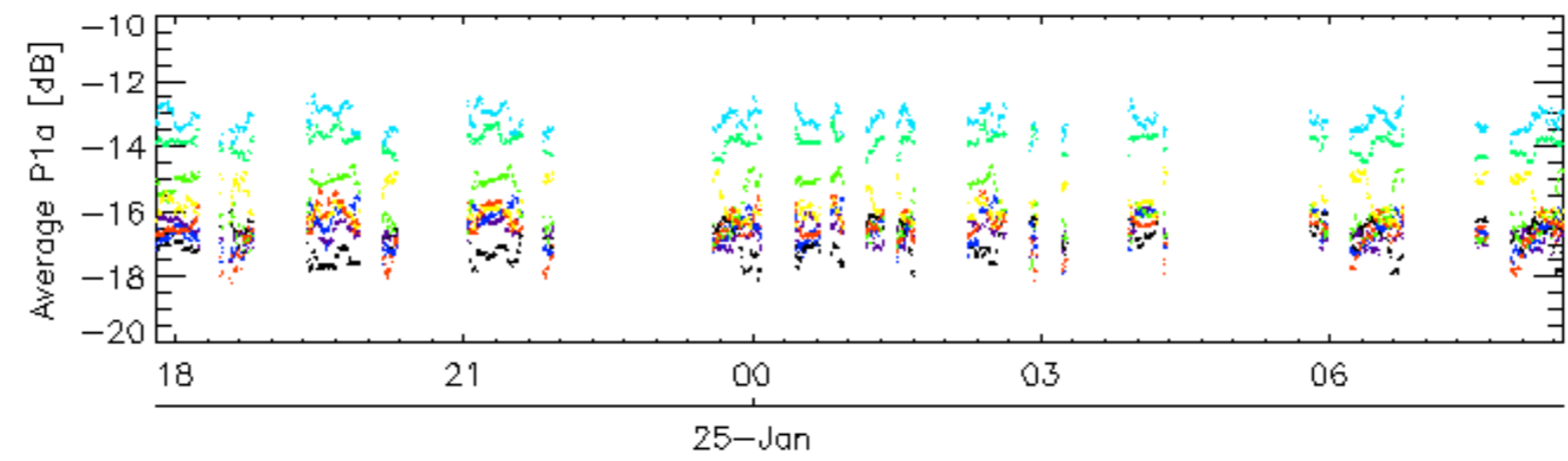
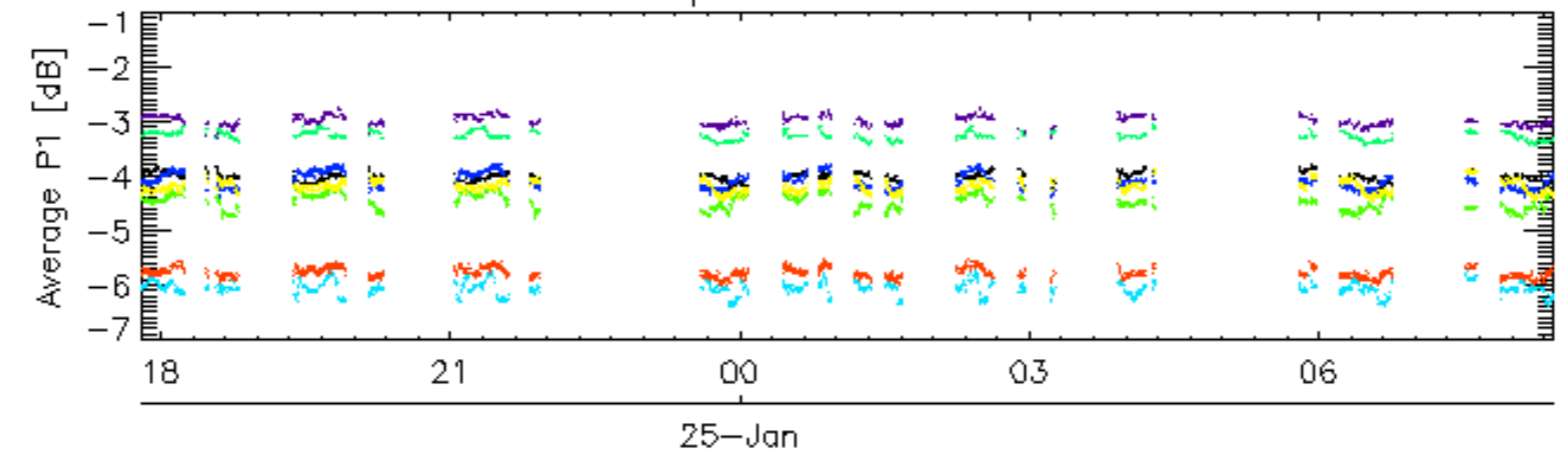


Cal pulses for GM1 SS3

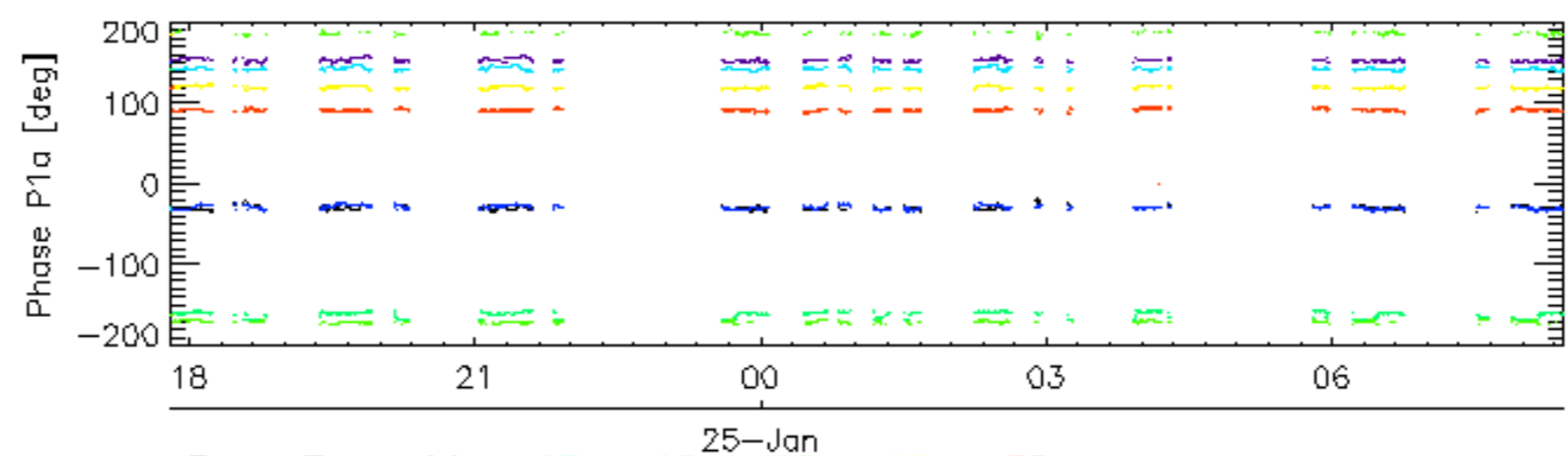
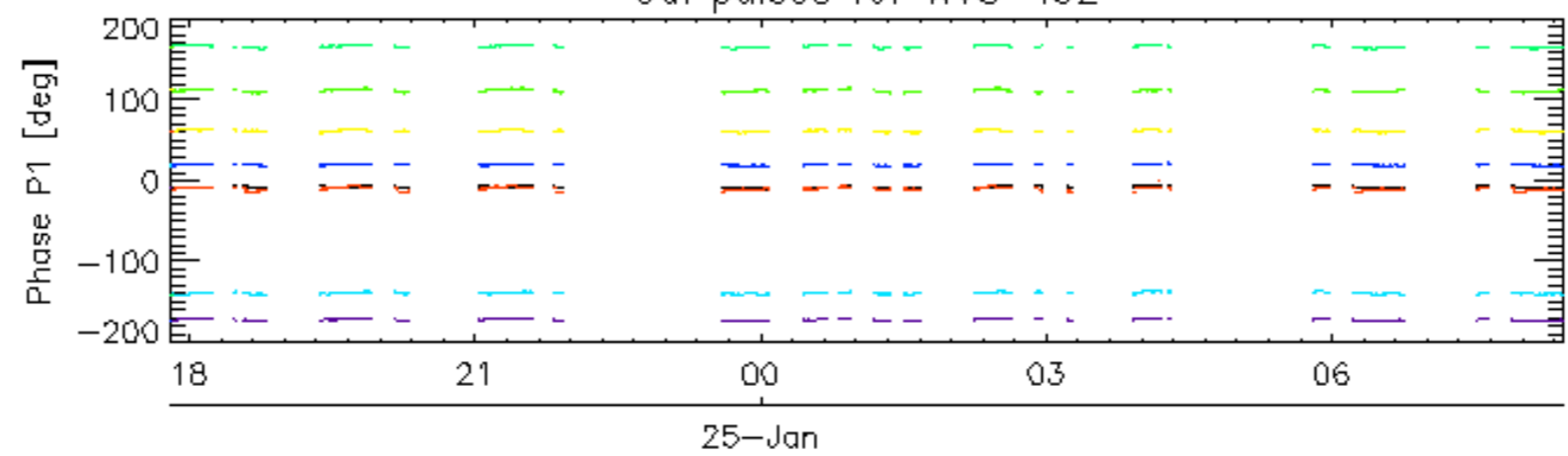


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

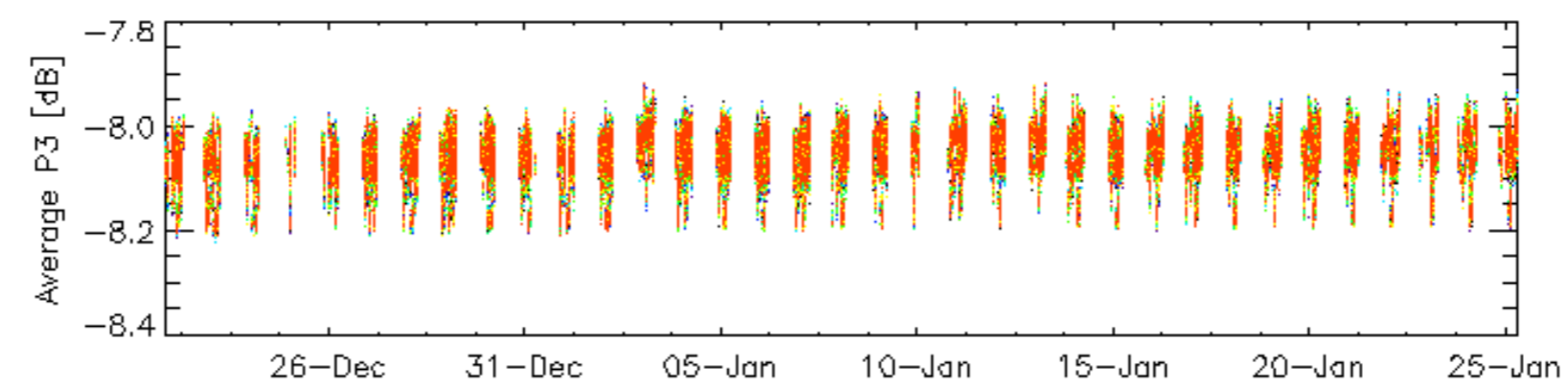
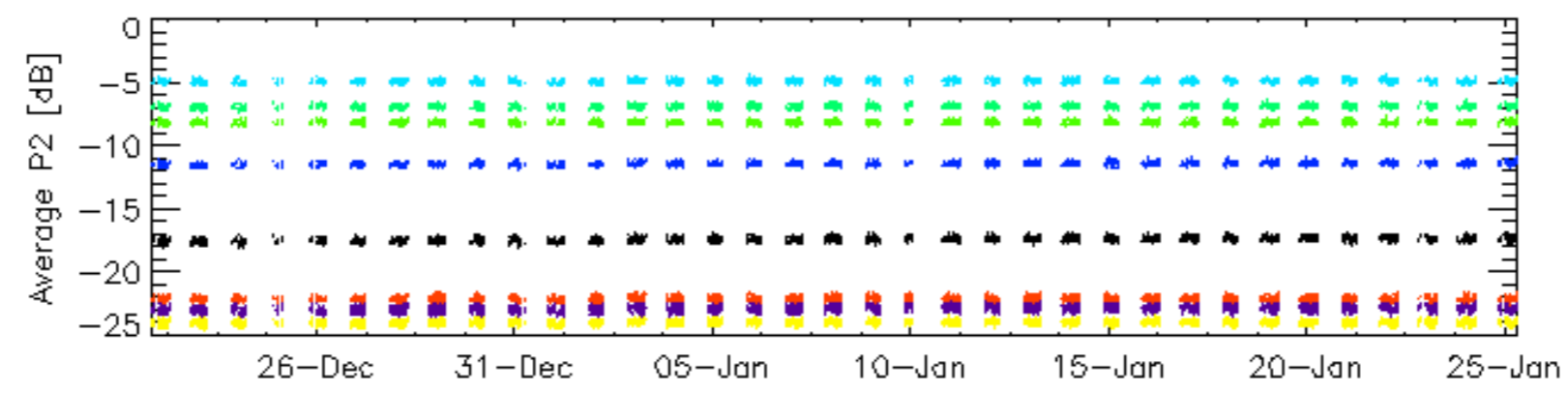
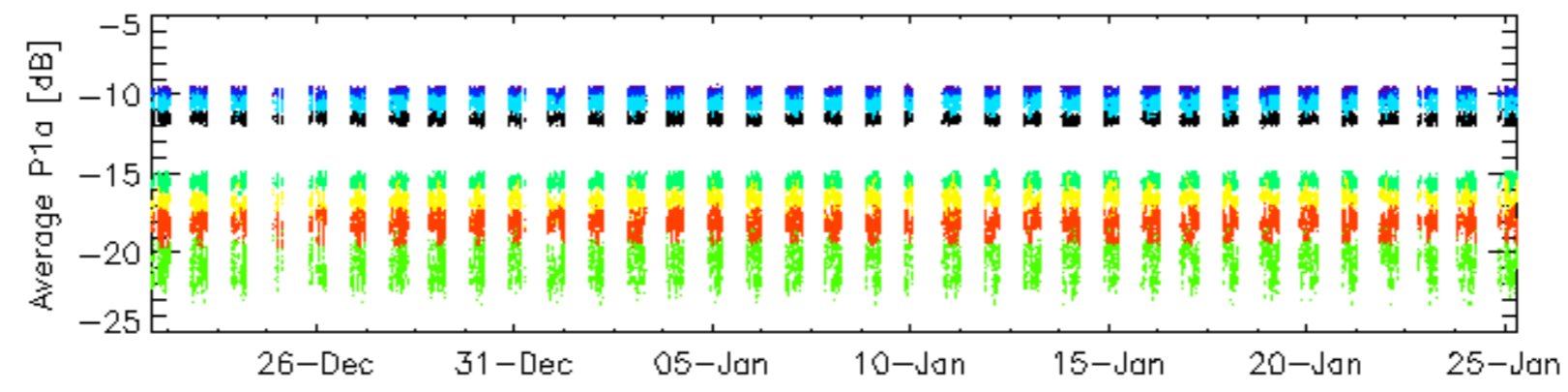
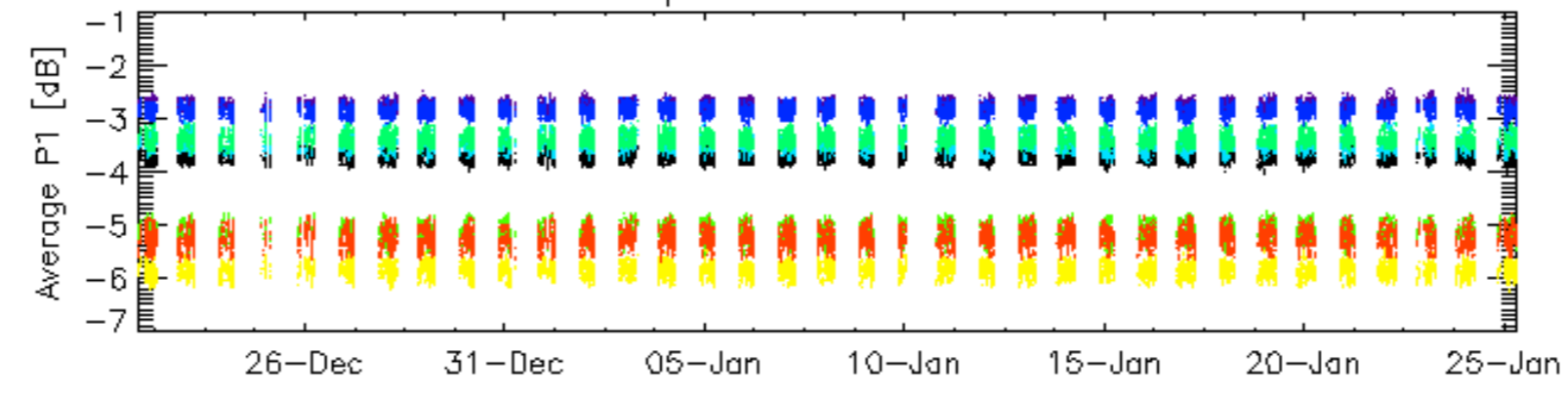


Cal pulses for WVS IS2



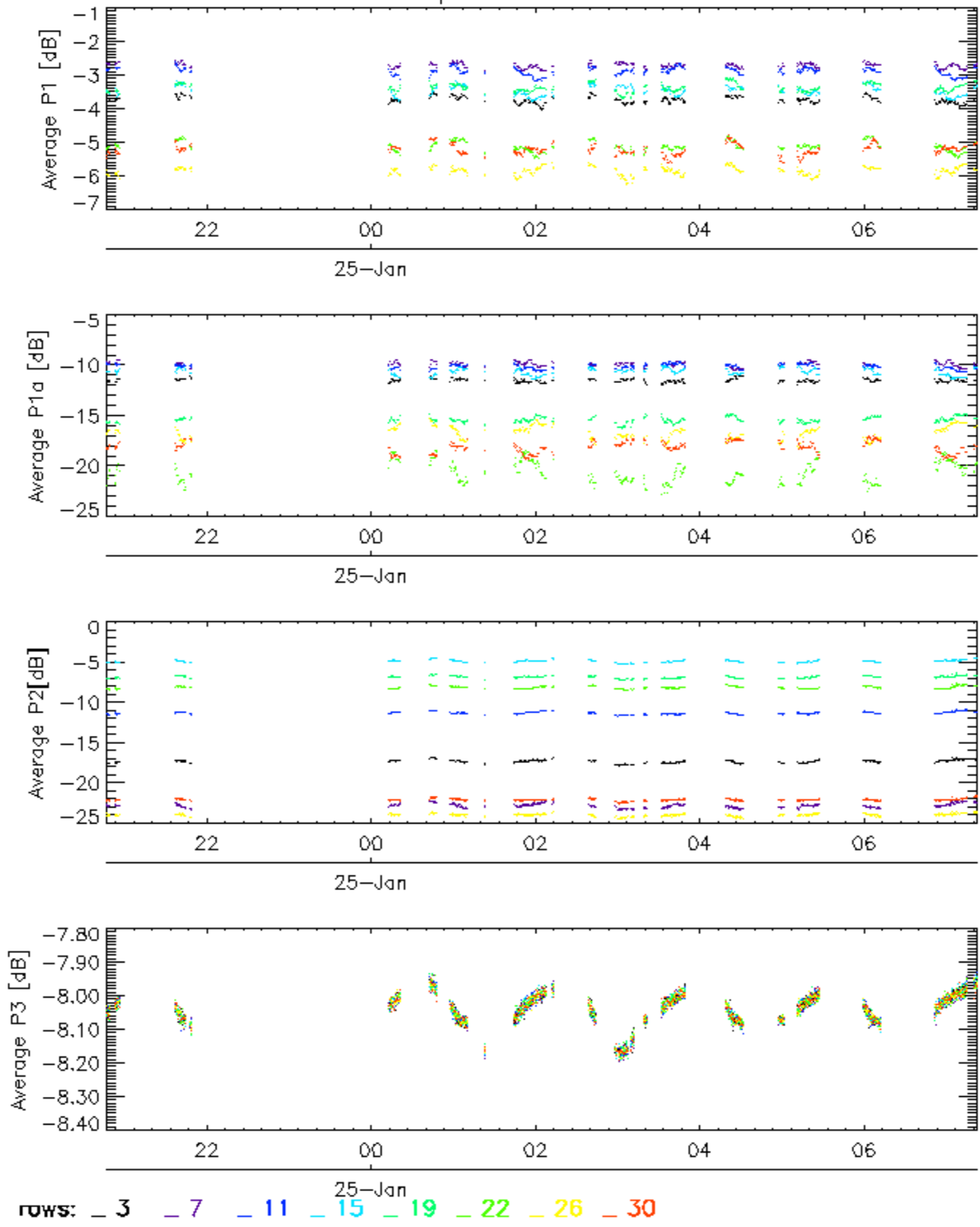
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

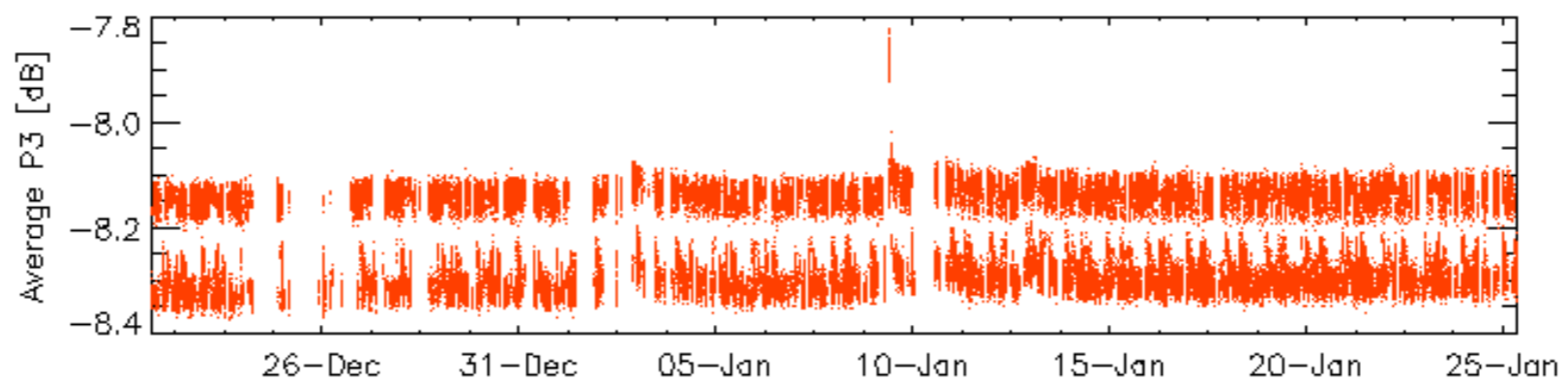
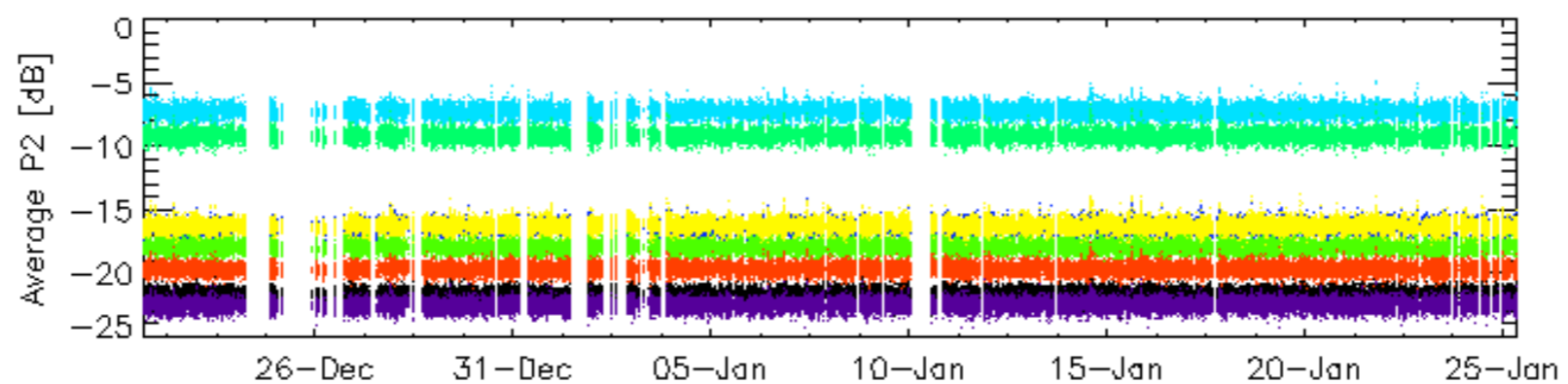
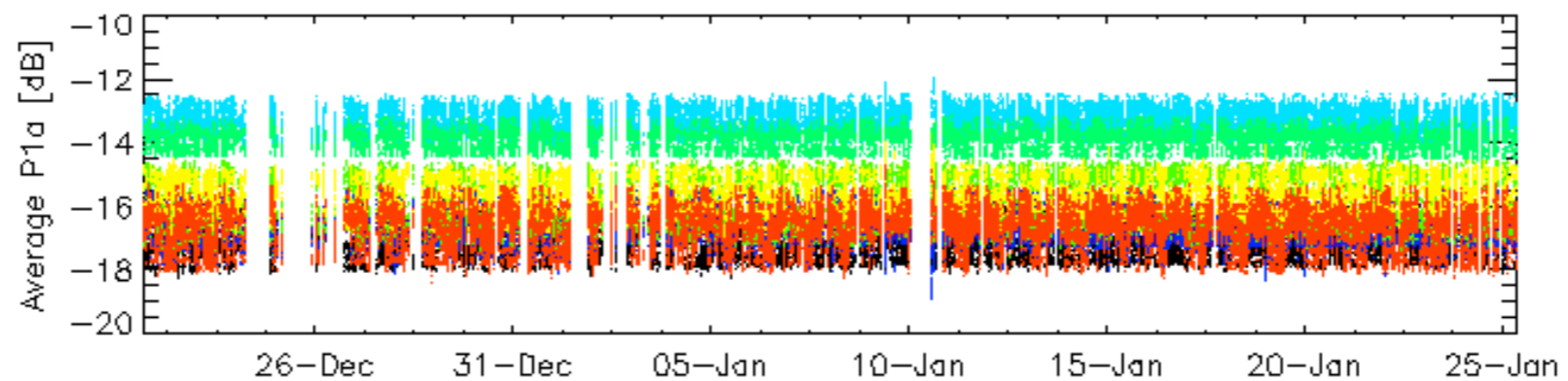
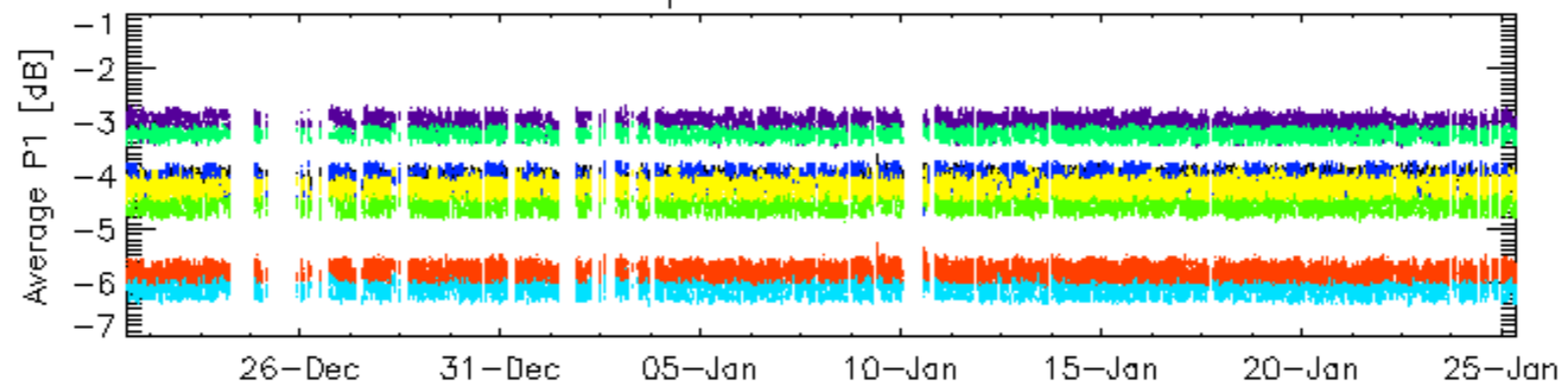


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

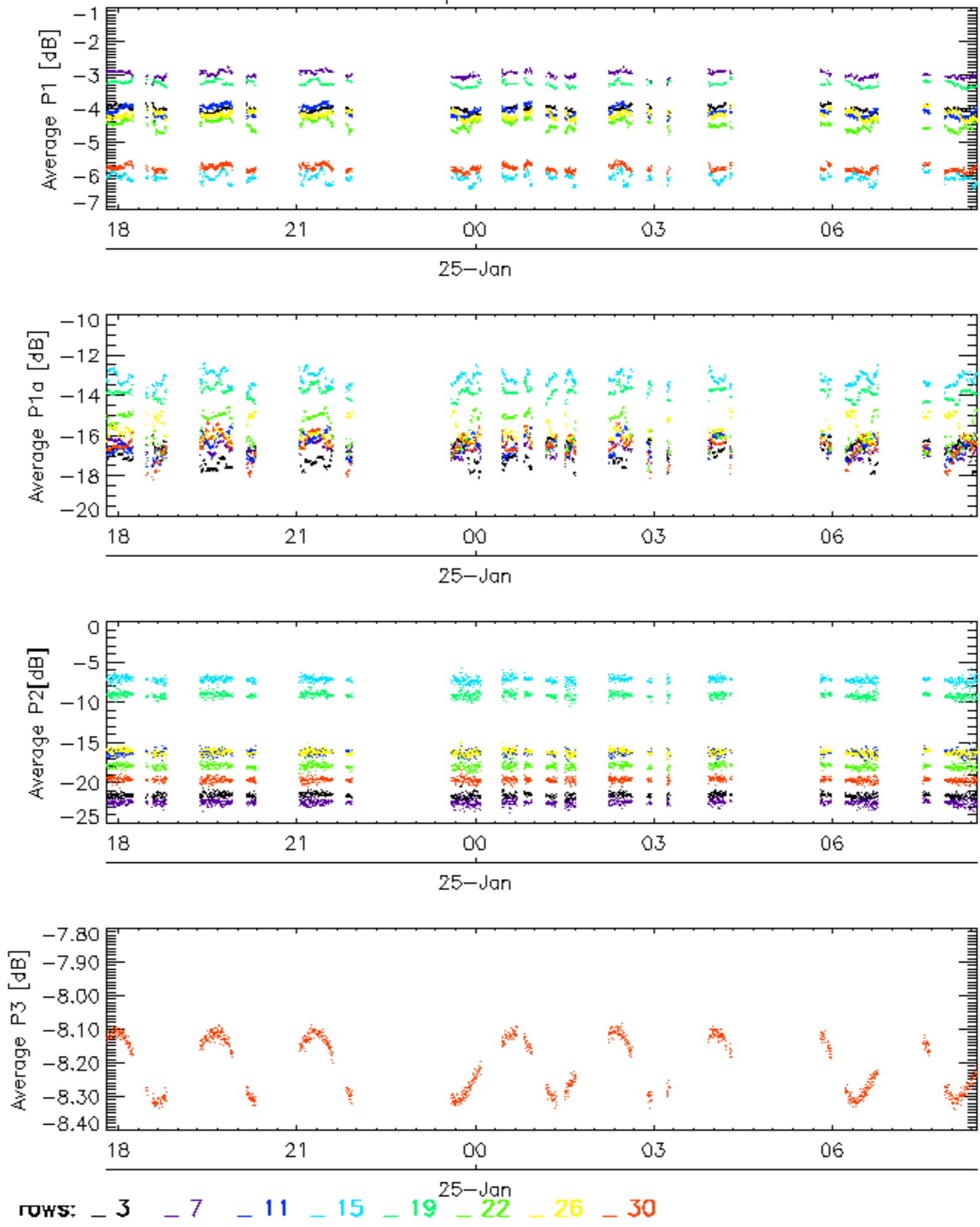


Cal pulses for WVS IS2

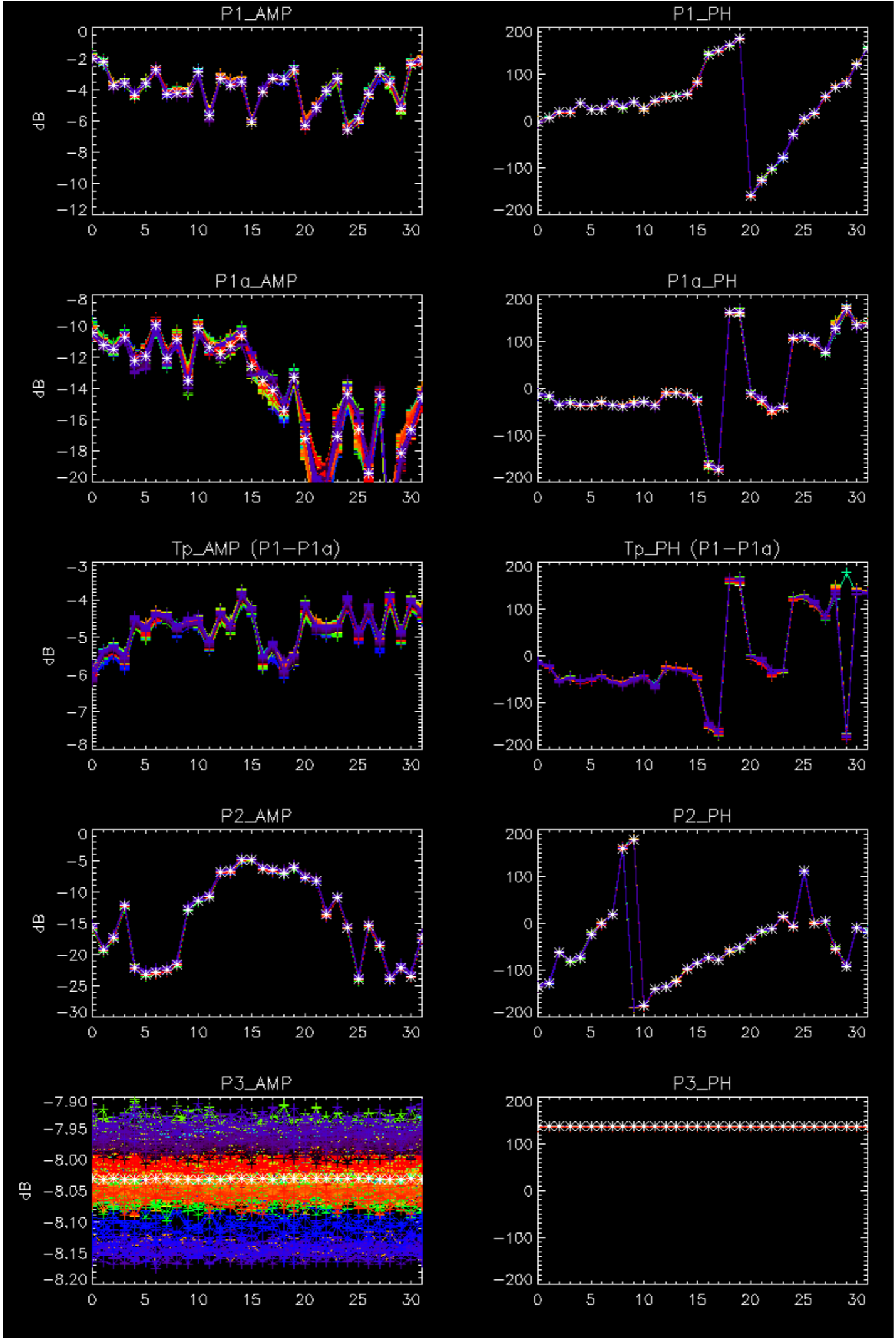


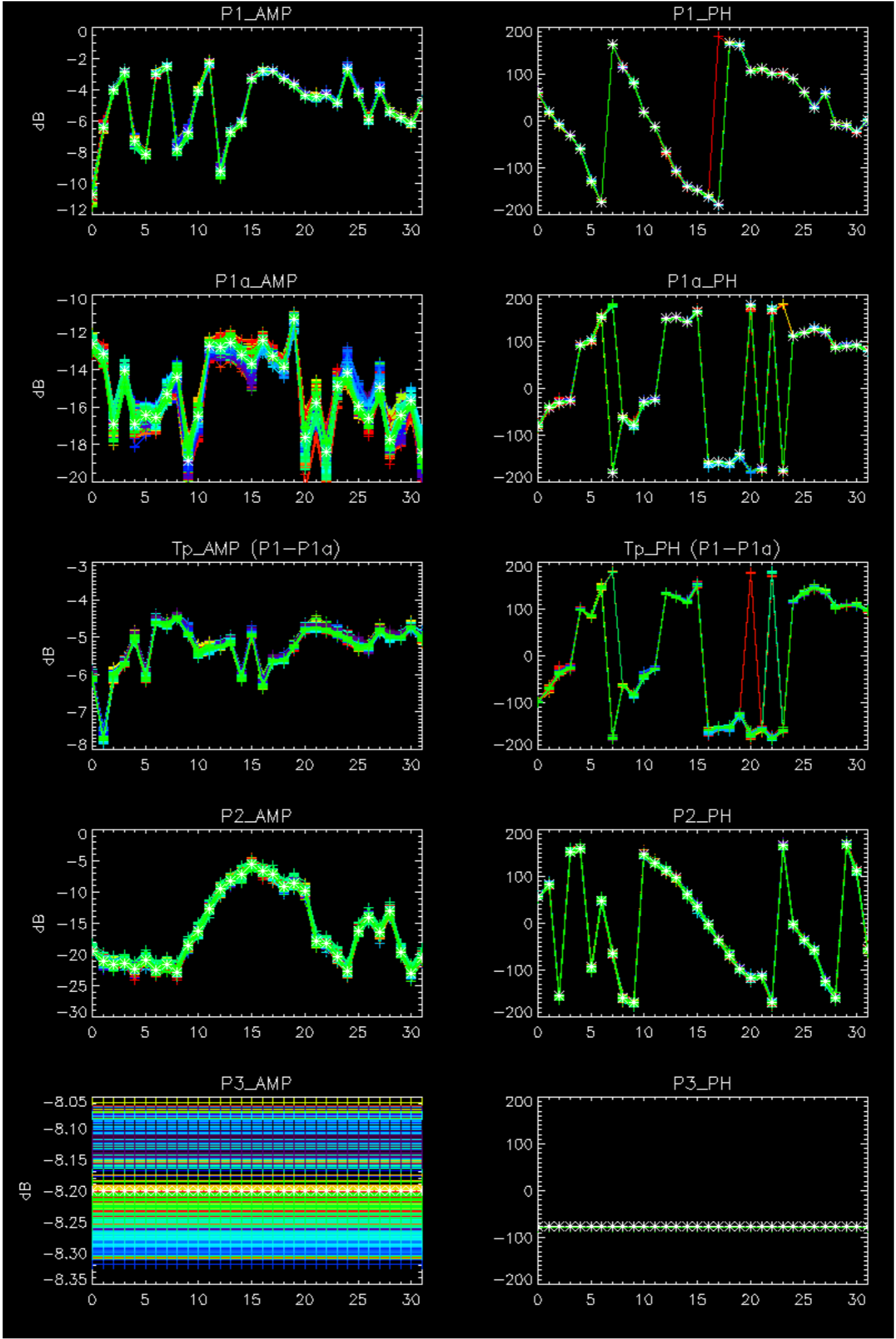
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



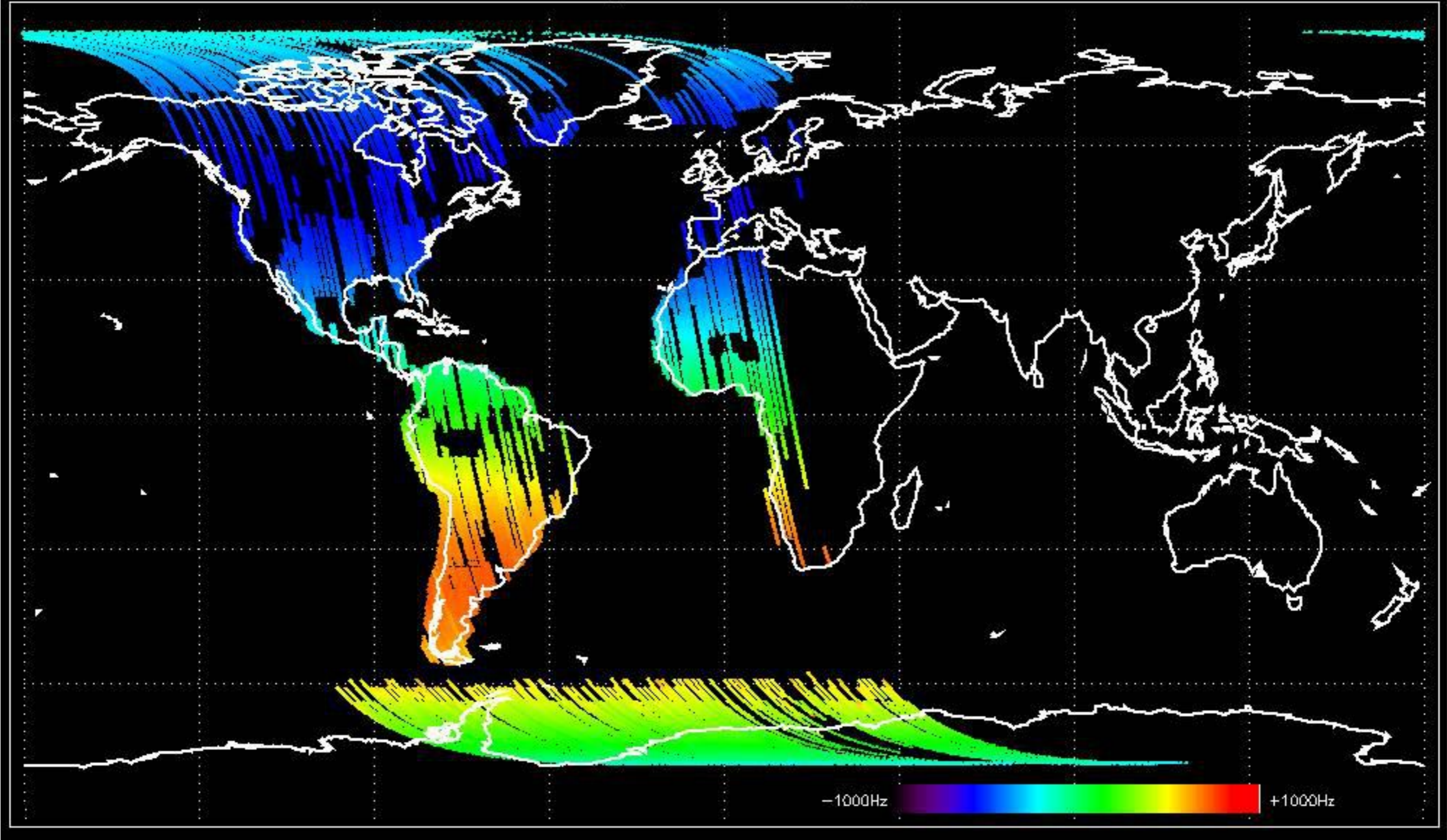
No anomalies observed.



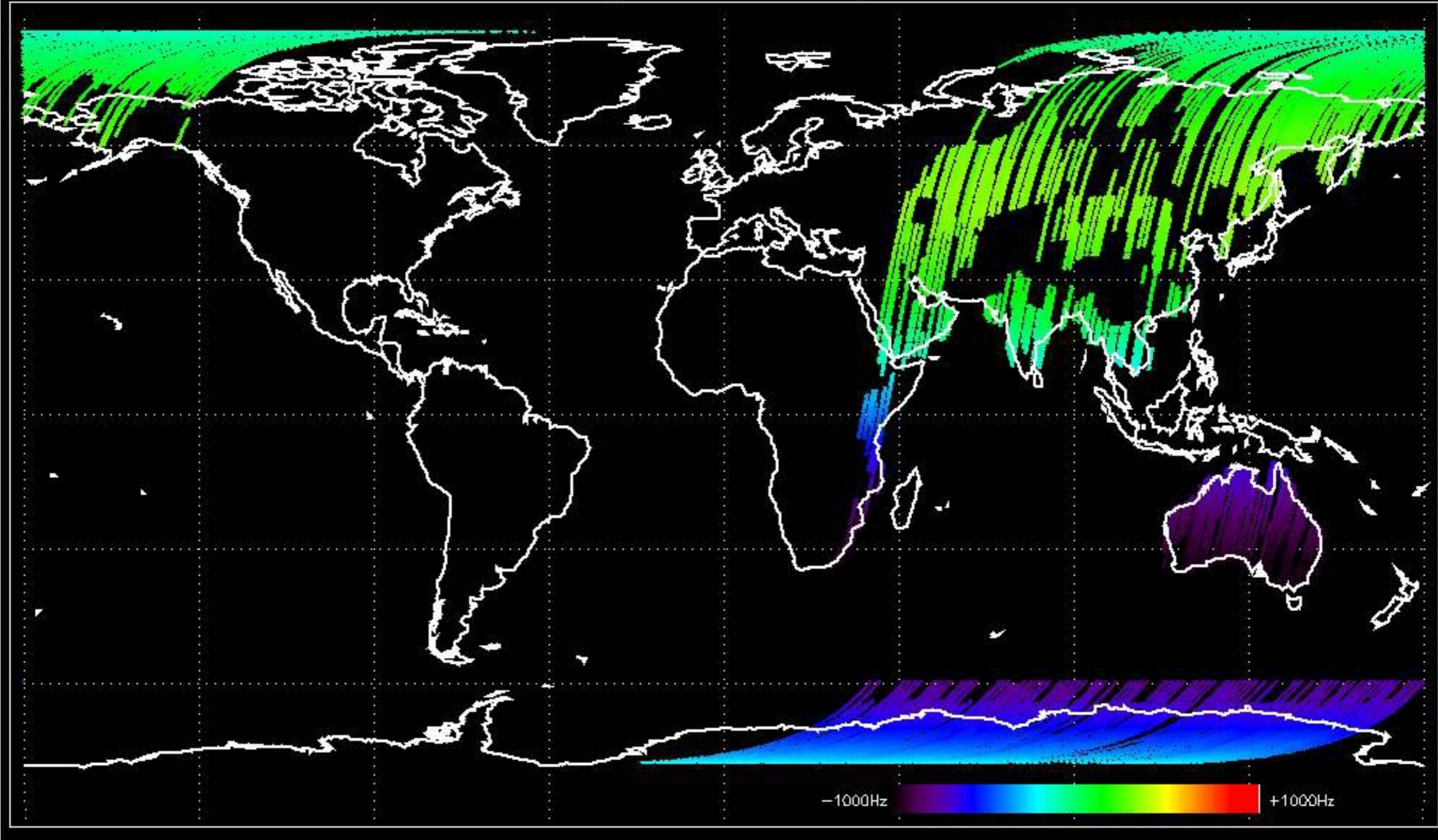


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

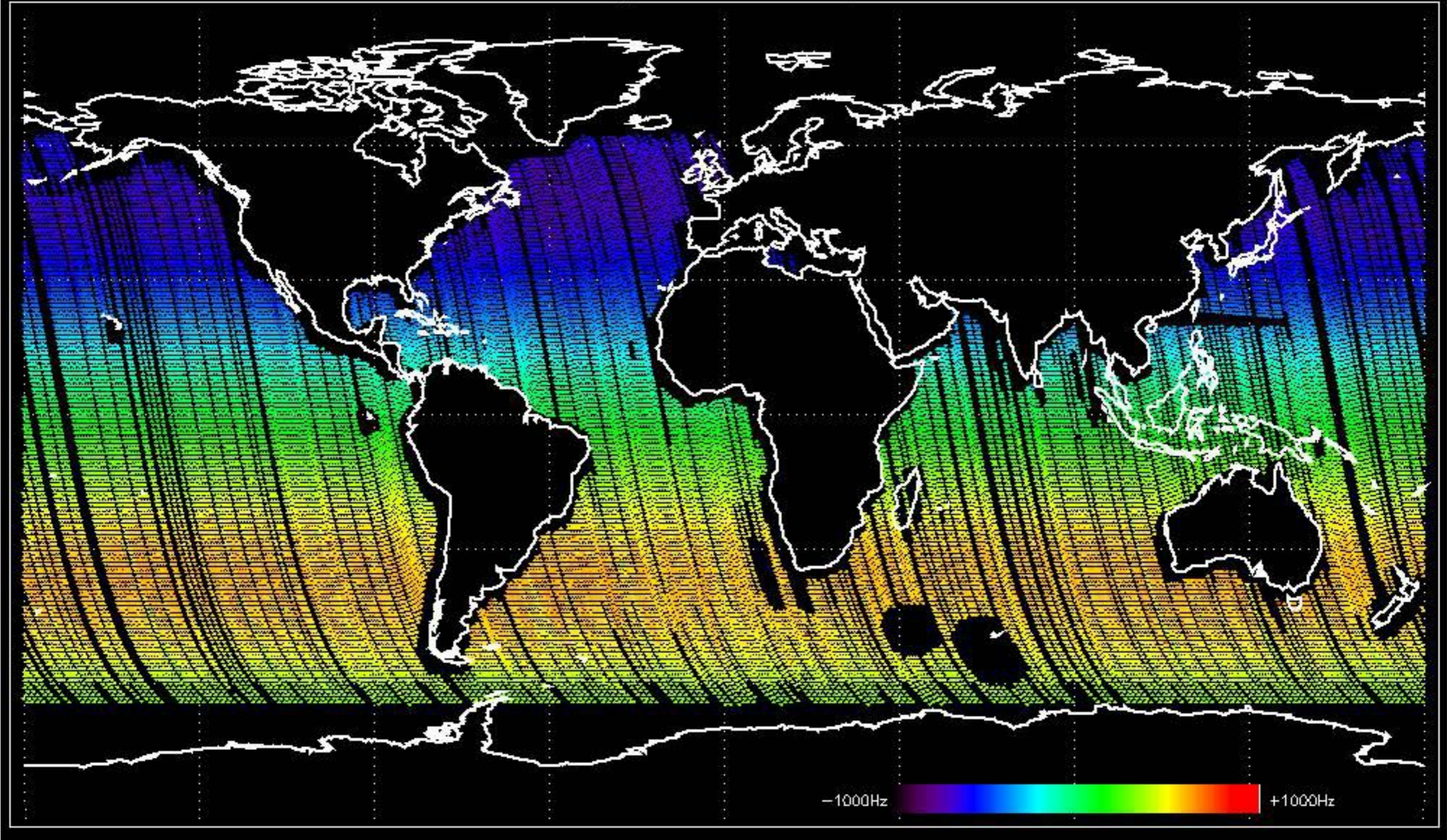
Doppler 'GM1' 'SS1' ascending



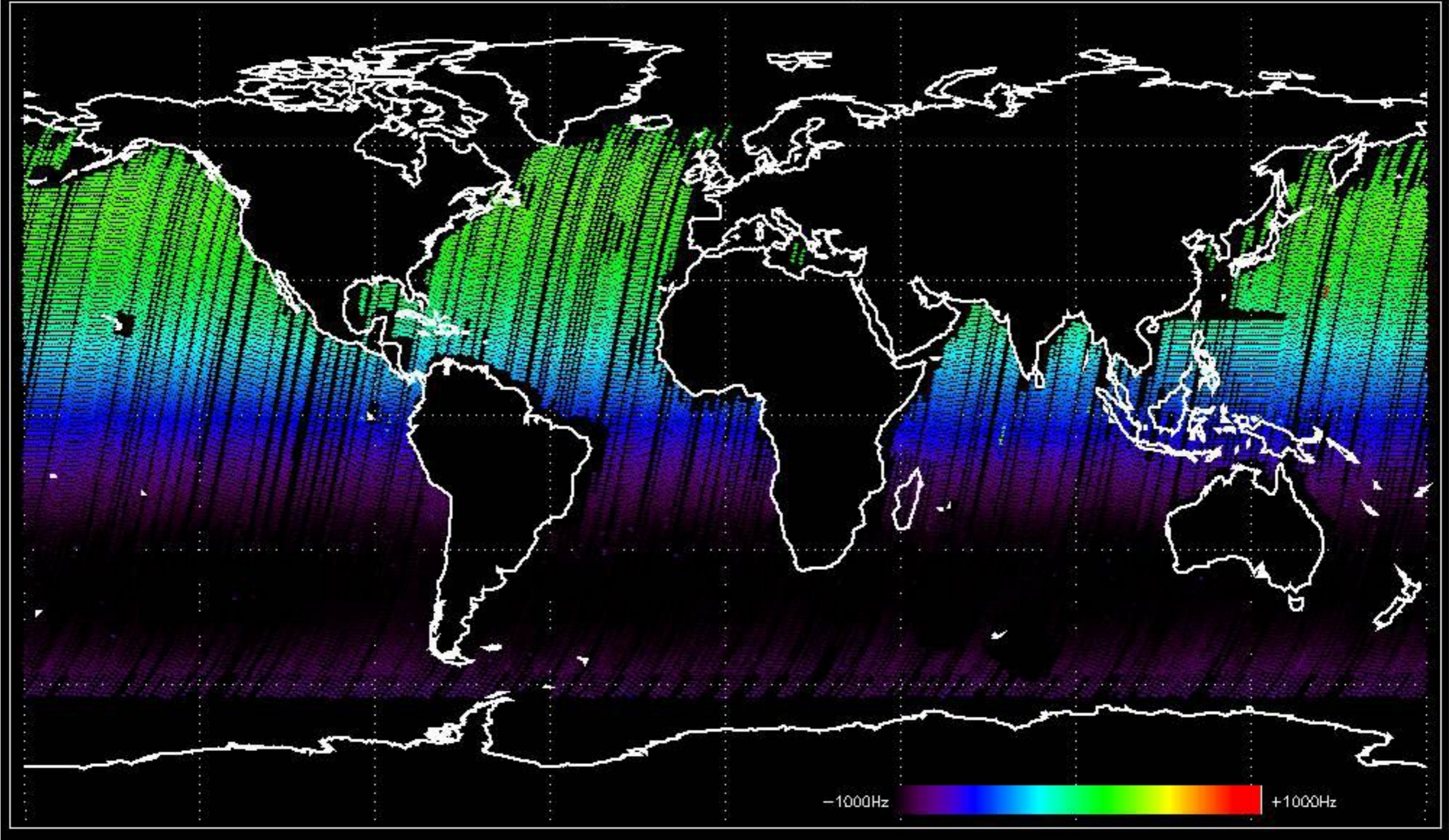
Doppler 'GM1' 'SS1' descending



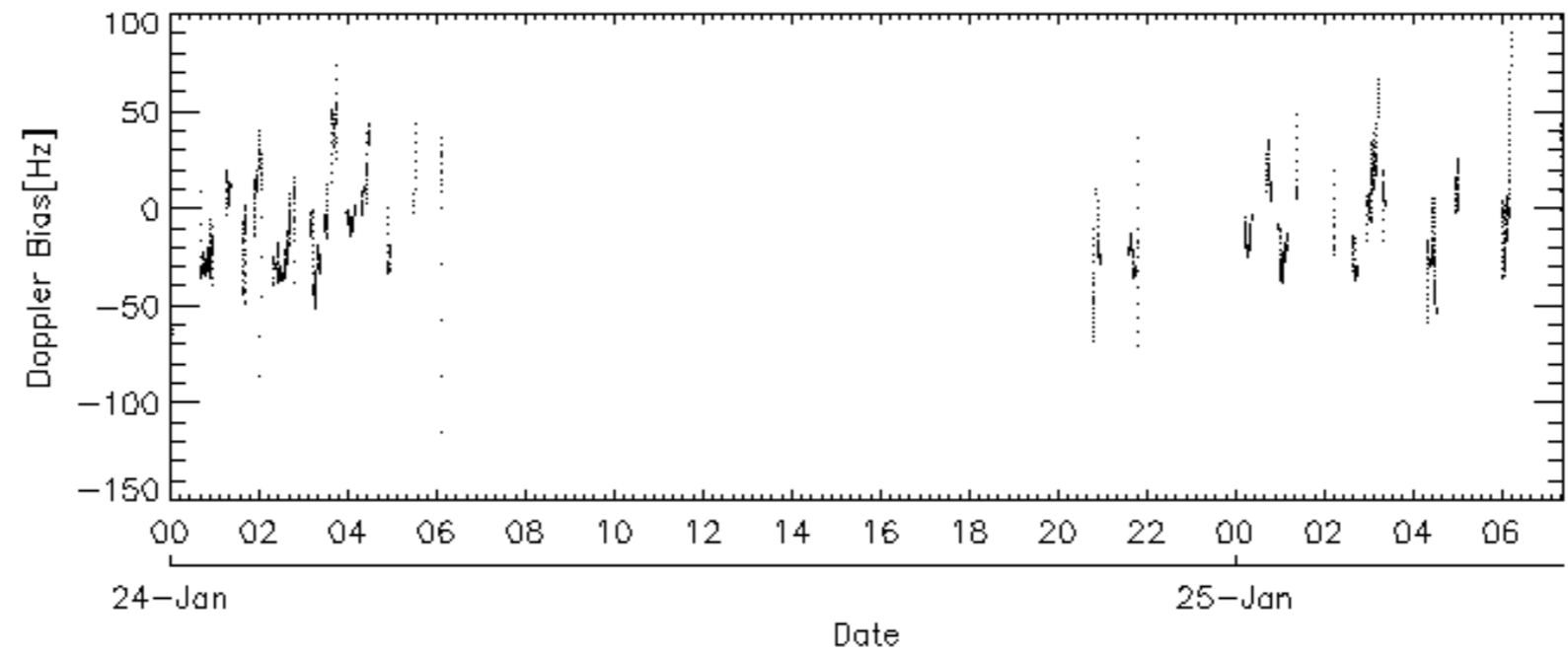
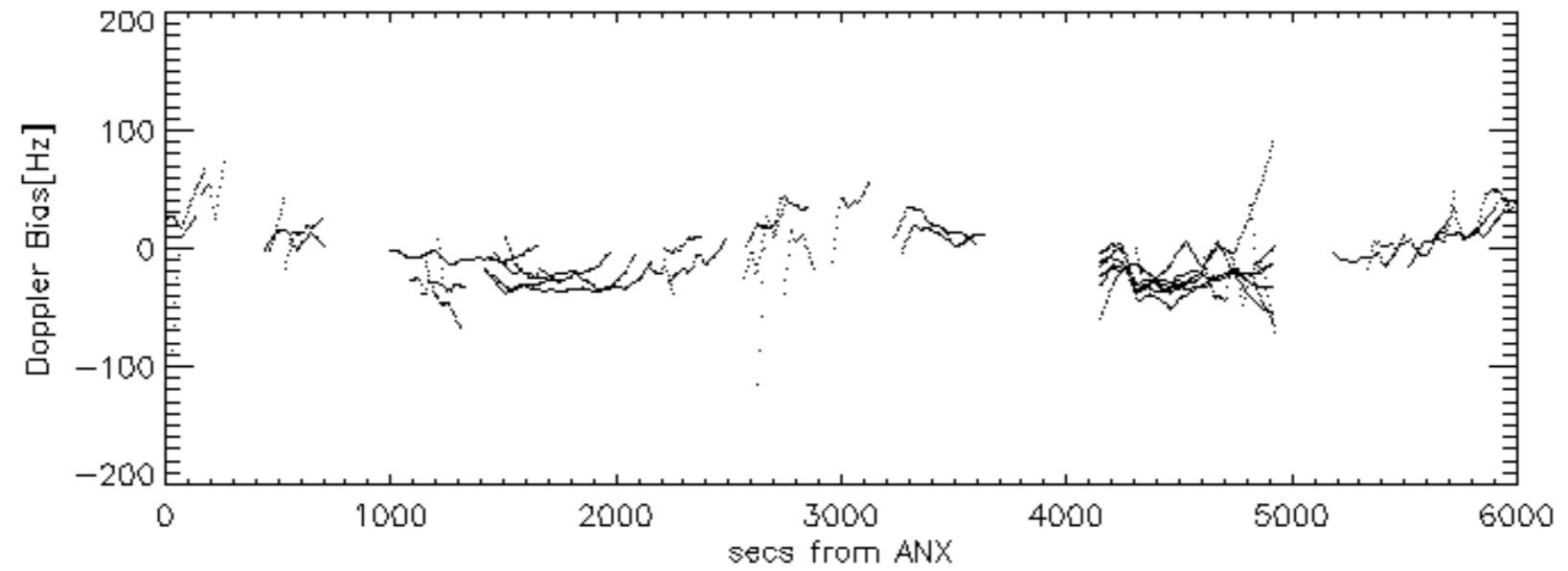
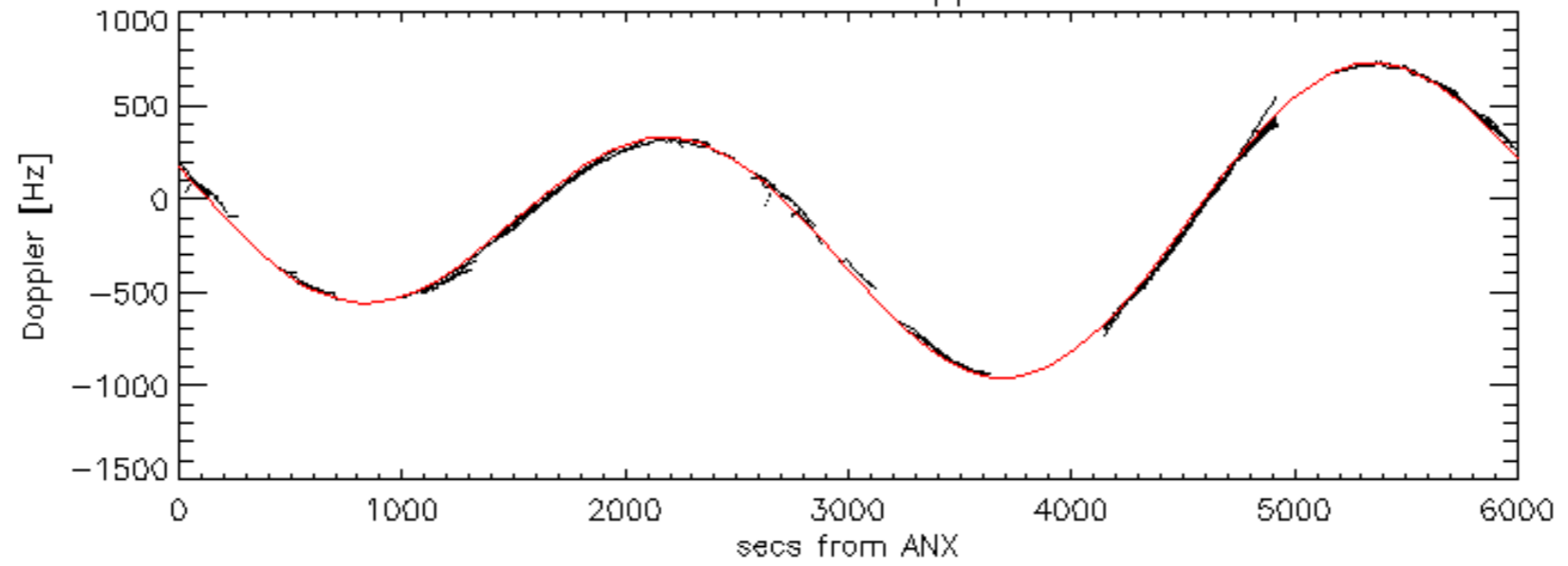
Doppler 'WVS' 'IS2' ascending

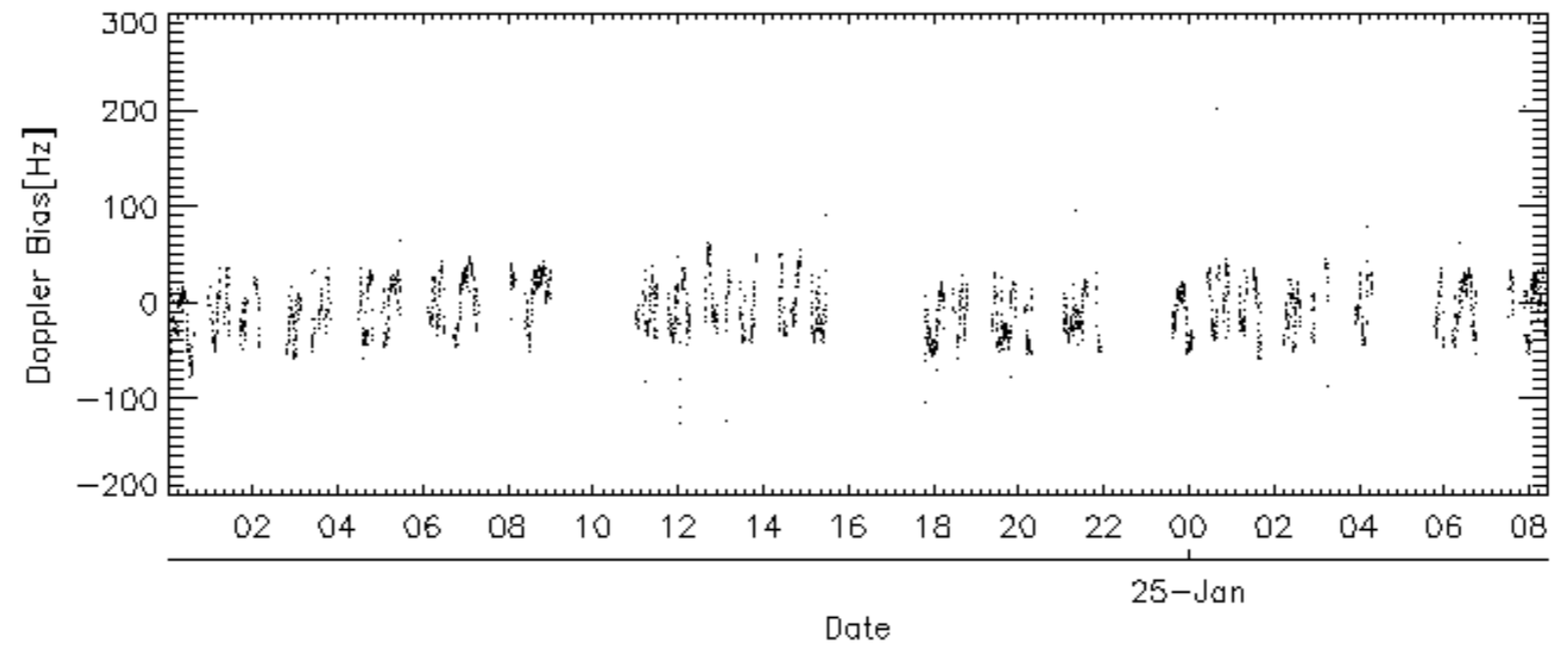
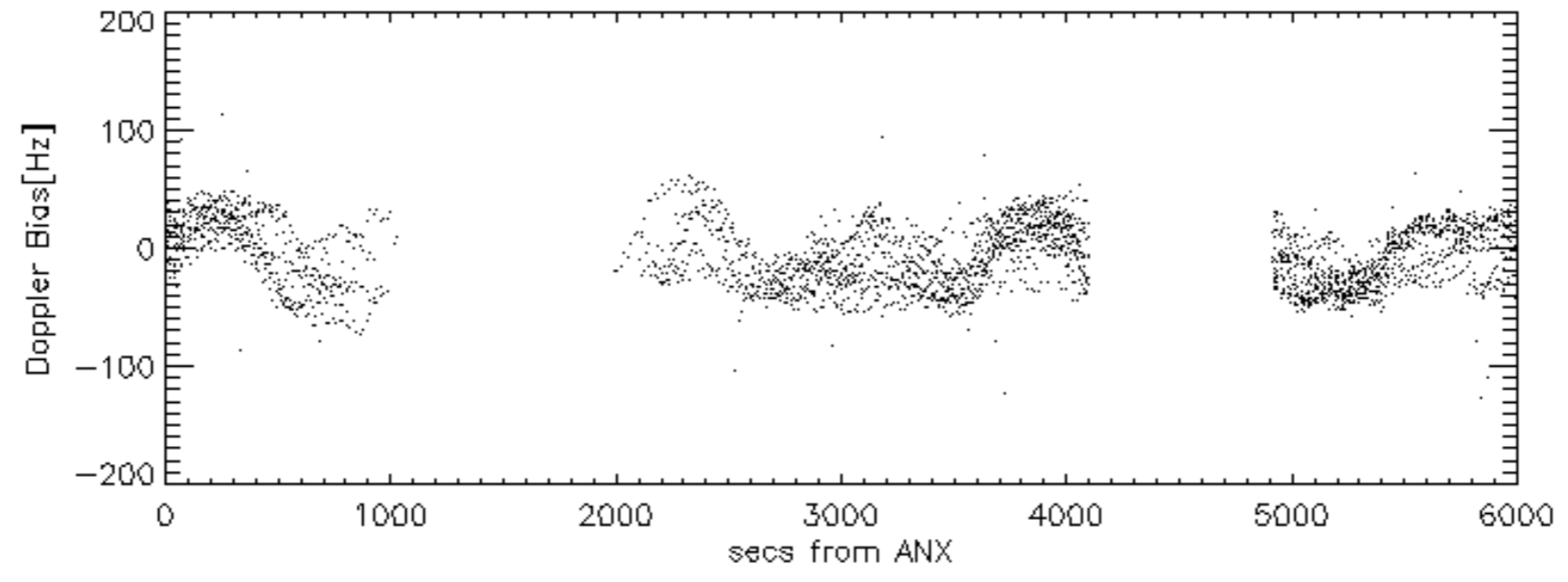
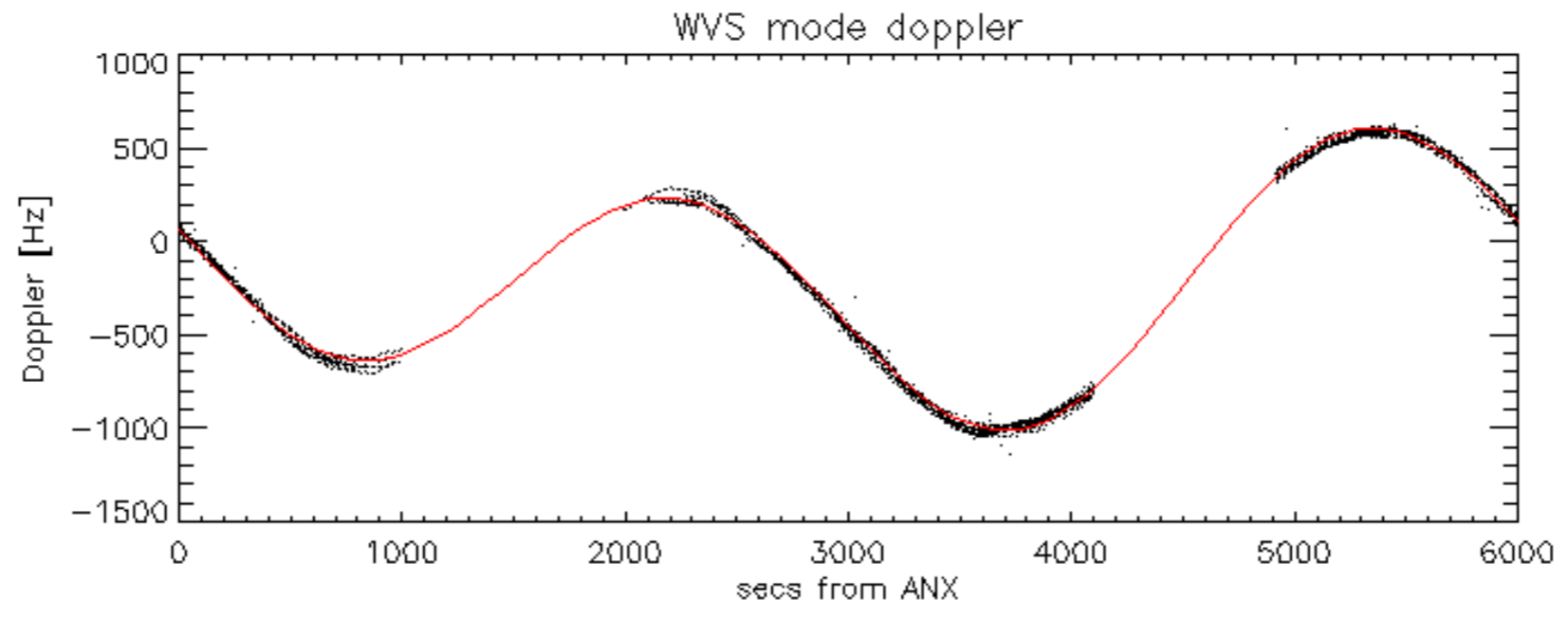


Doppler 'WVS' 'IS2' descending

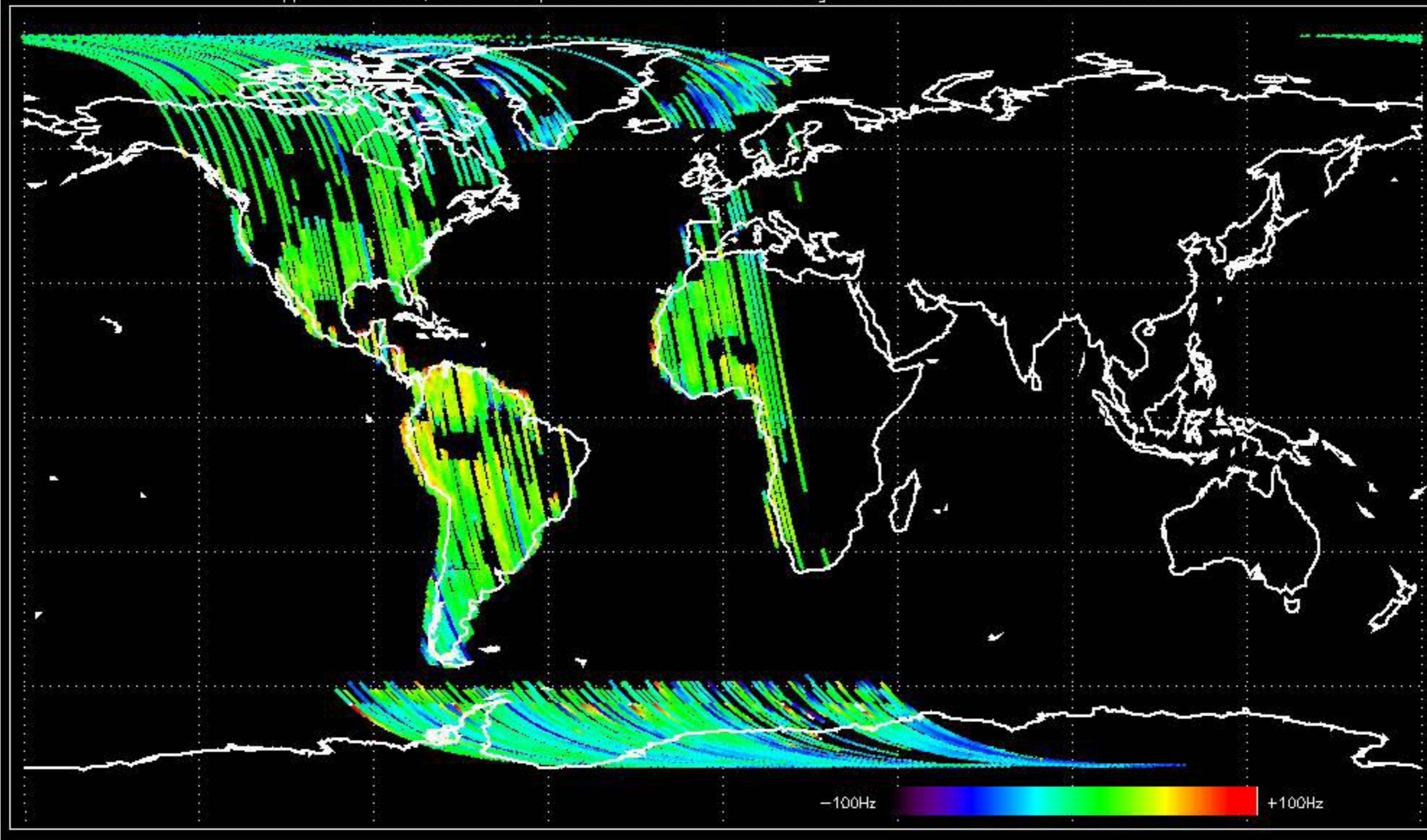


GM1 mode doppler

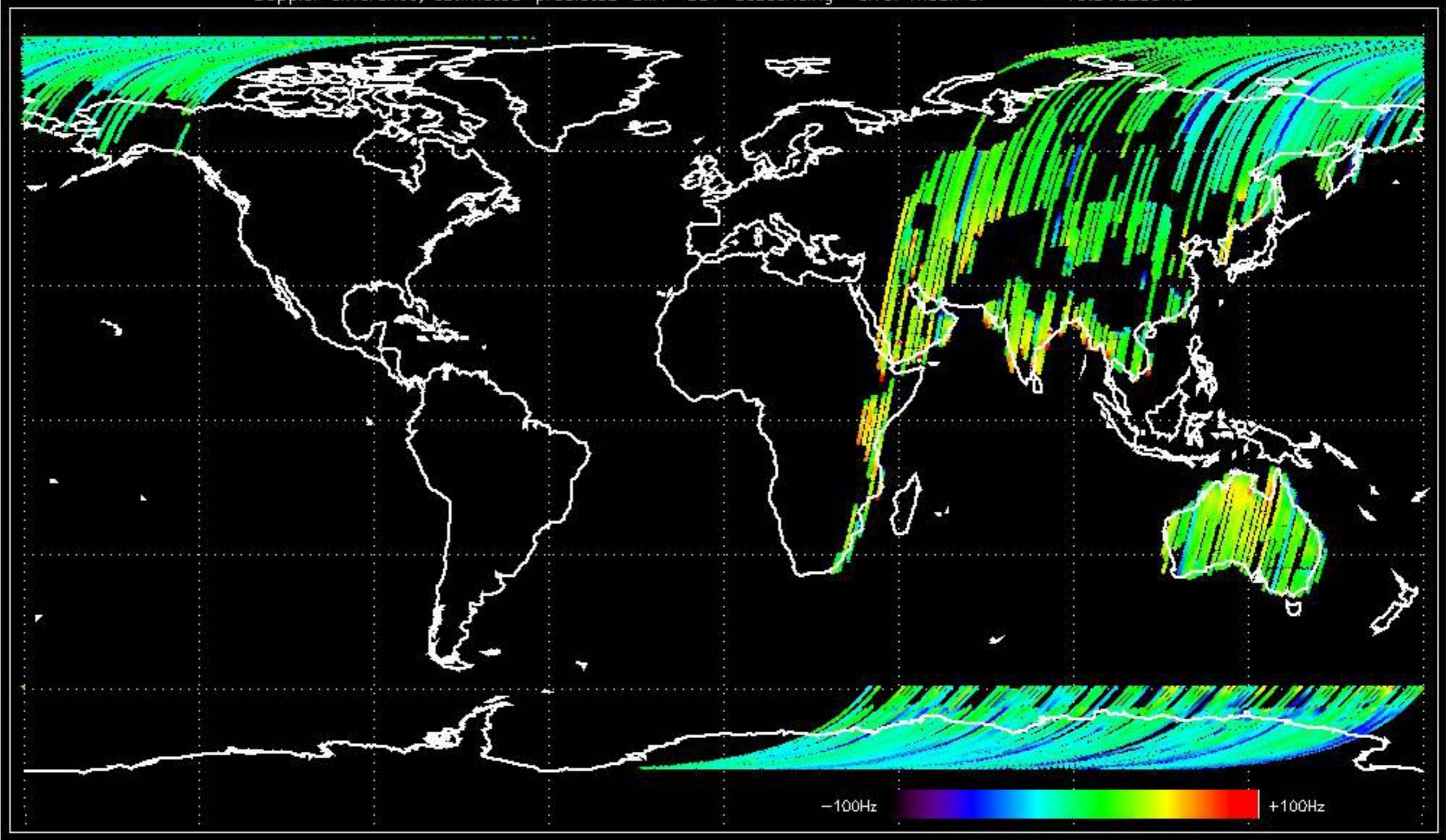




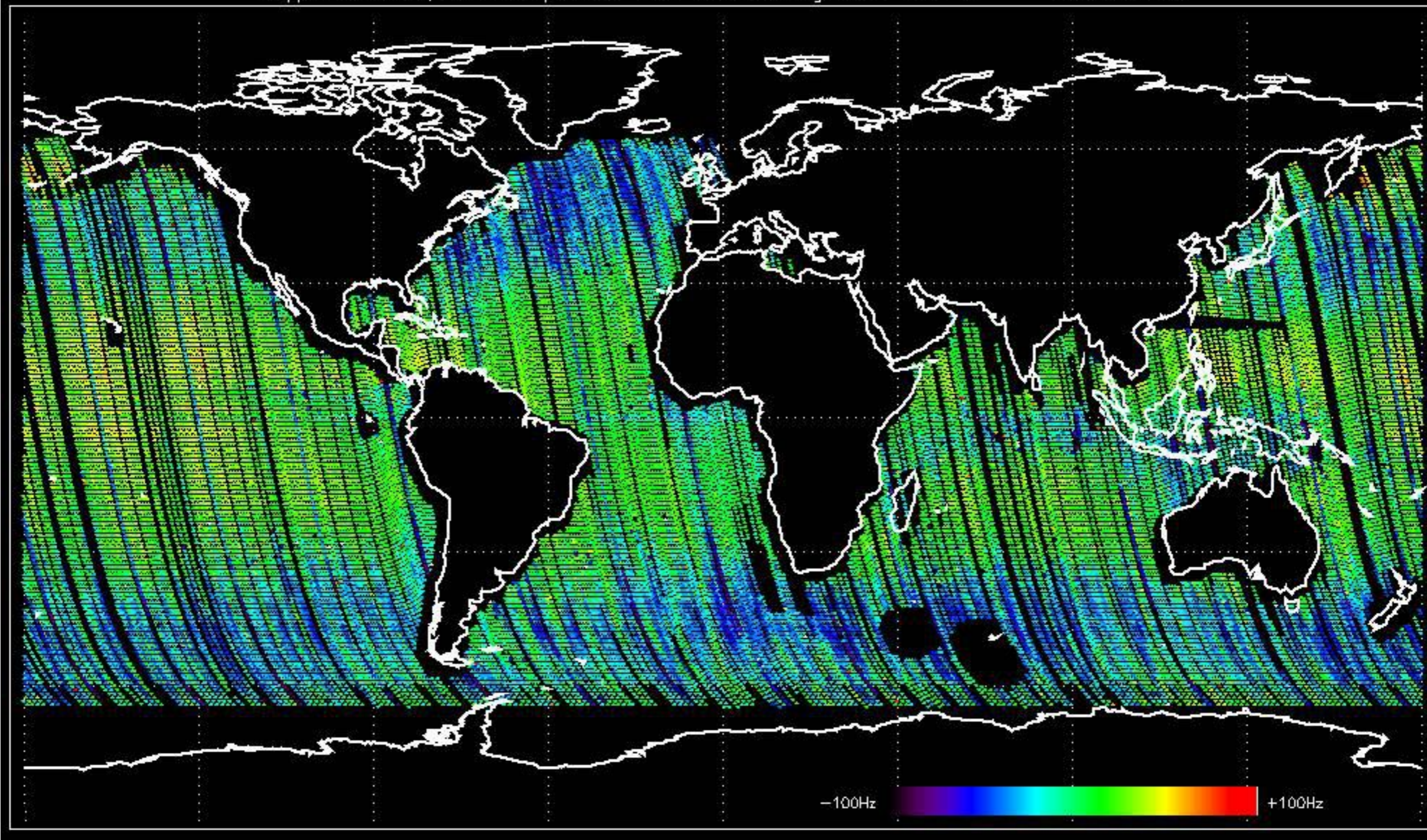
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.857131 Hz



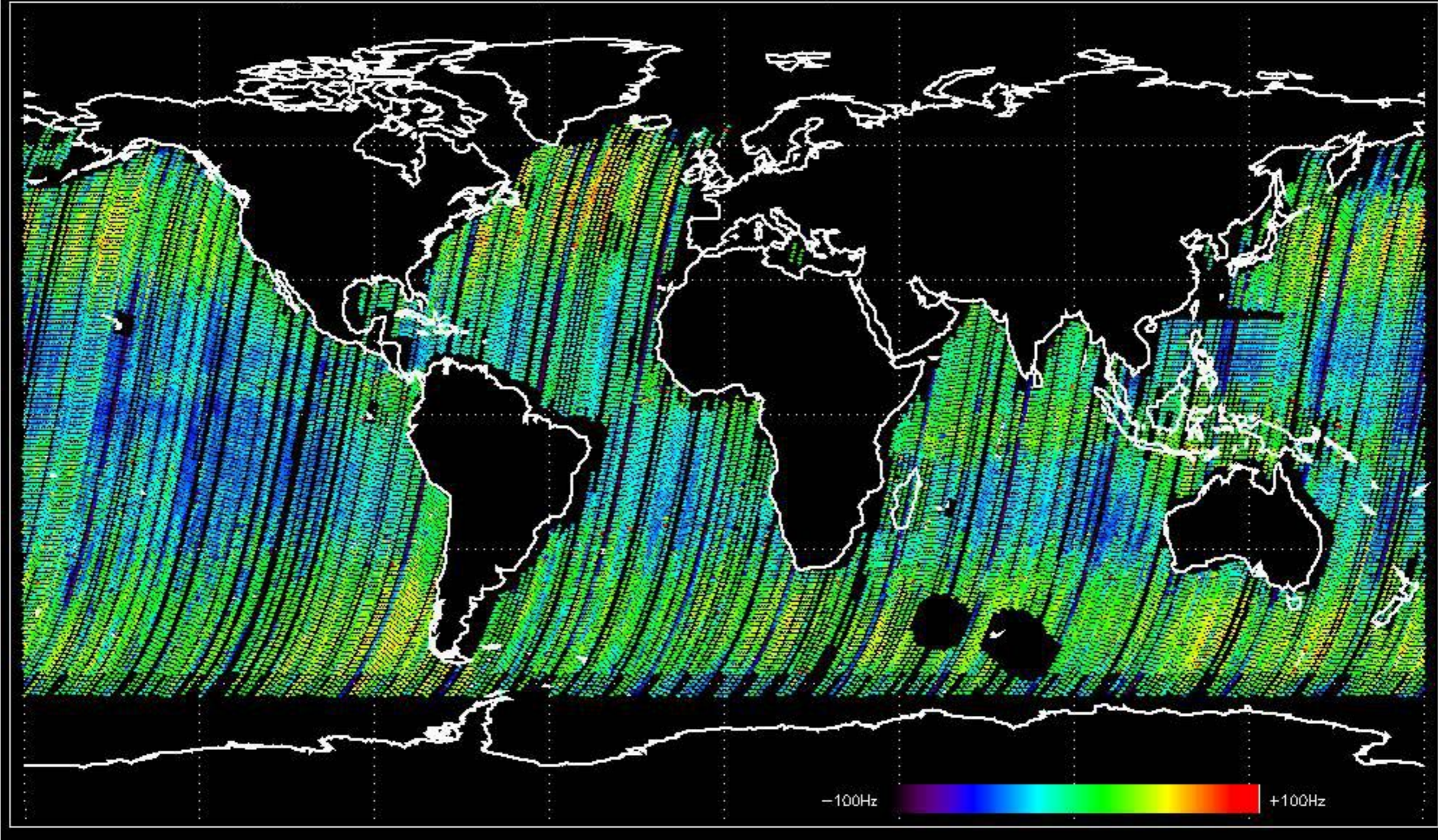
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.946285 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.5003977 Hz

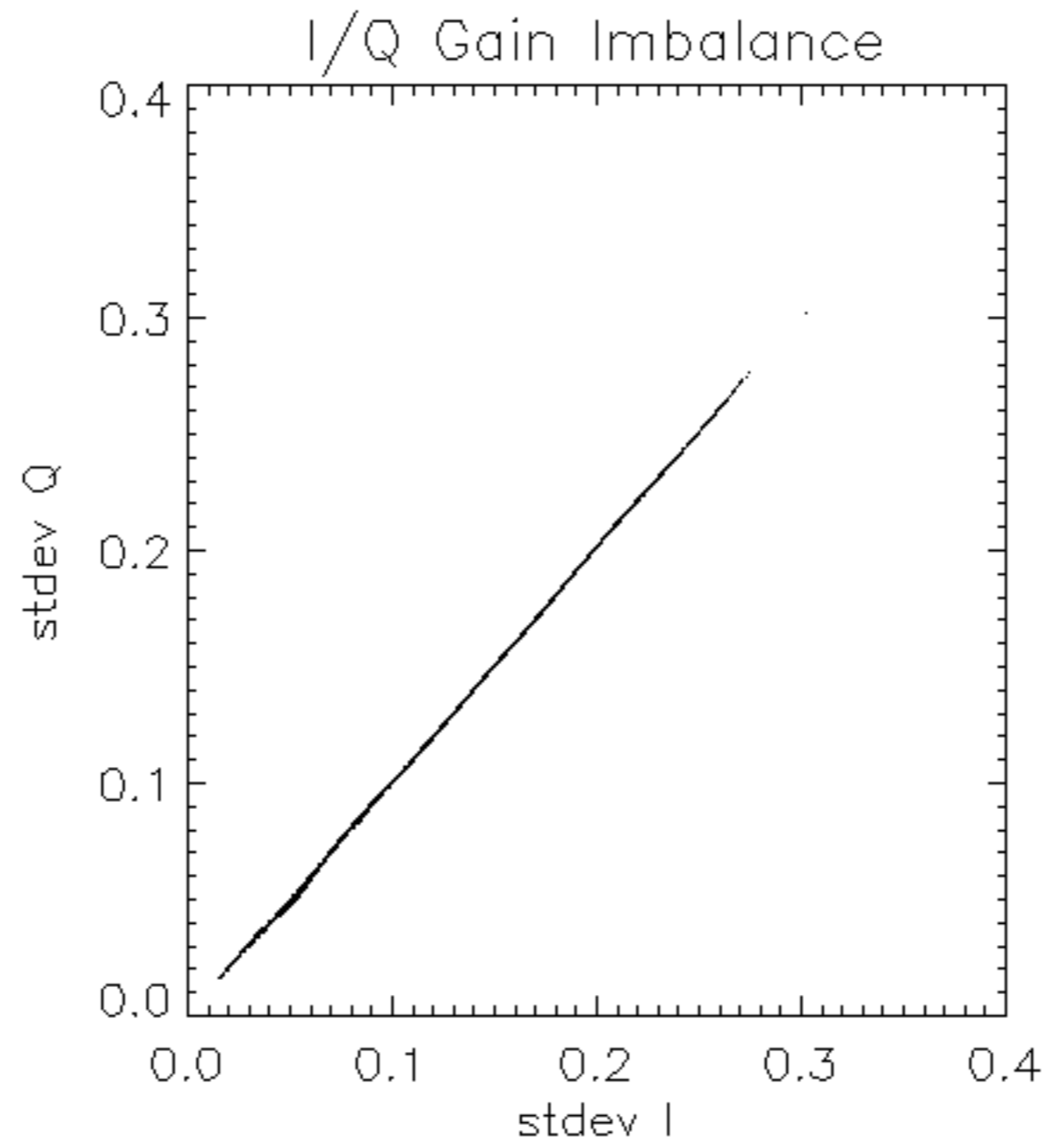


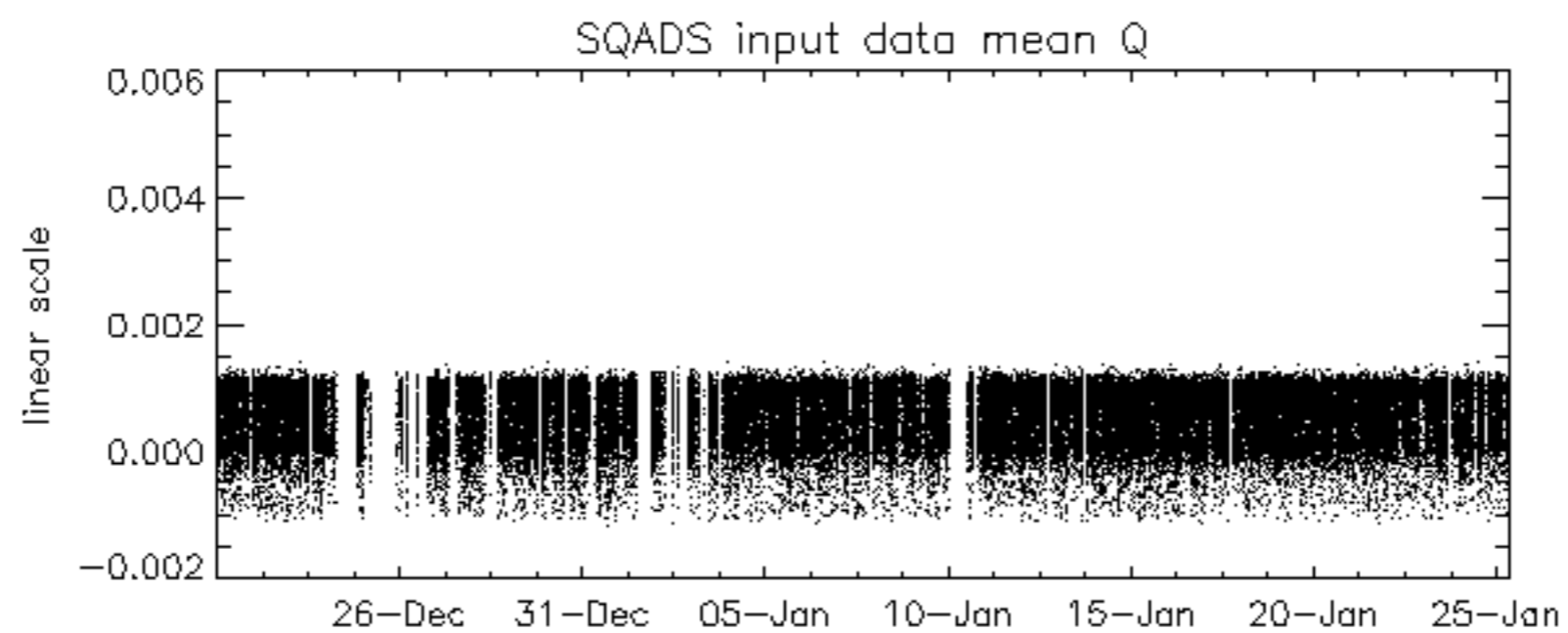
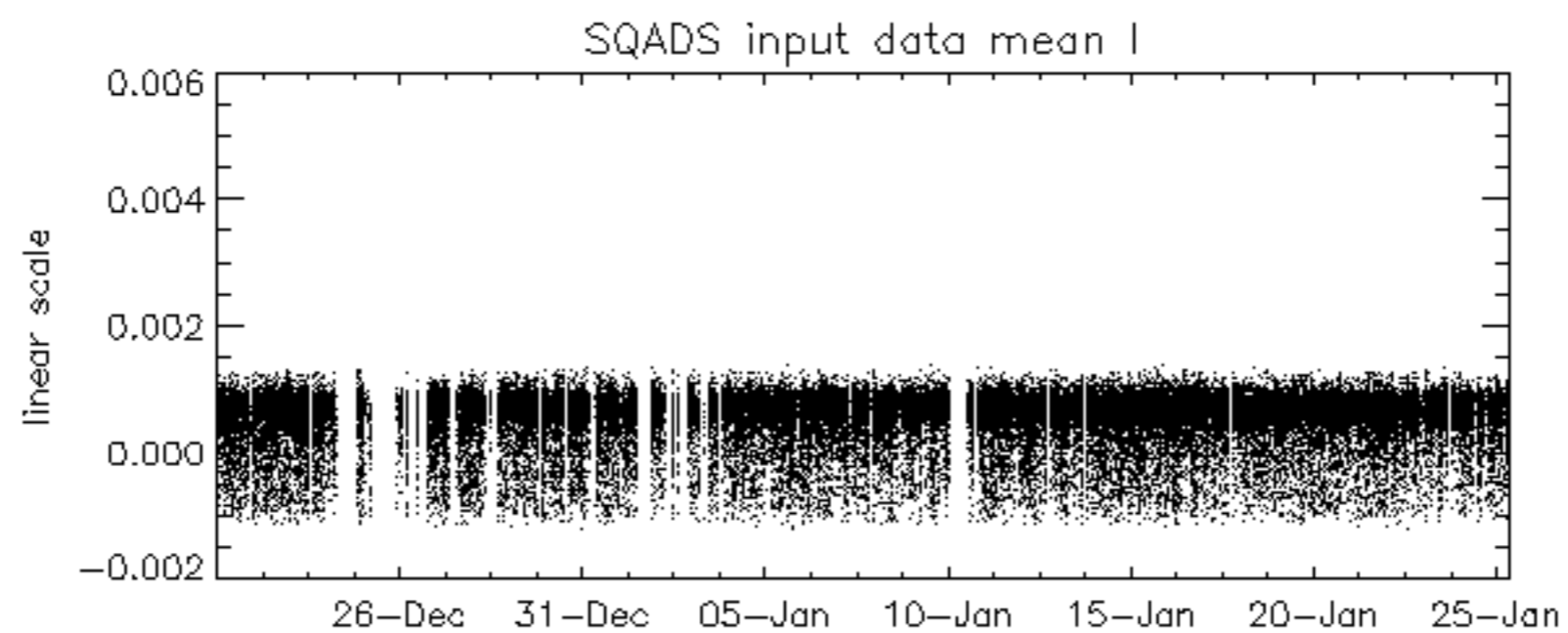
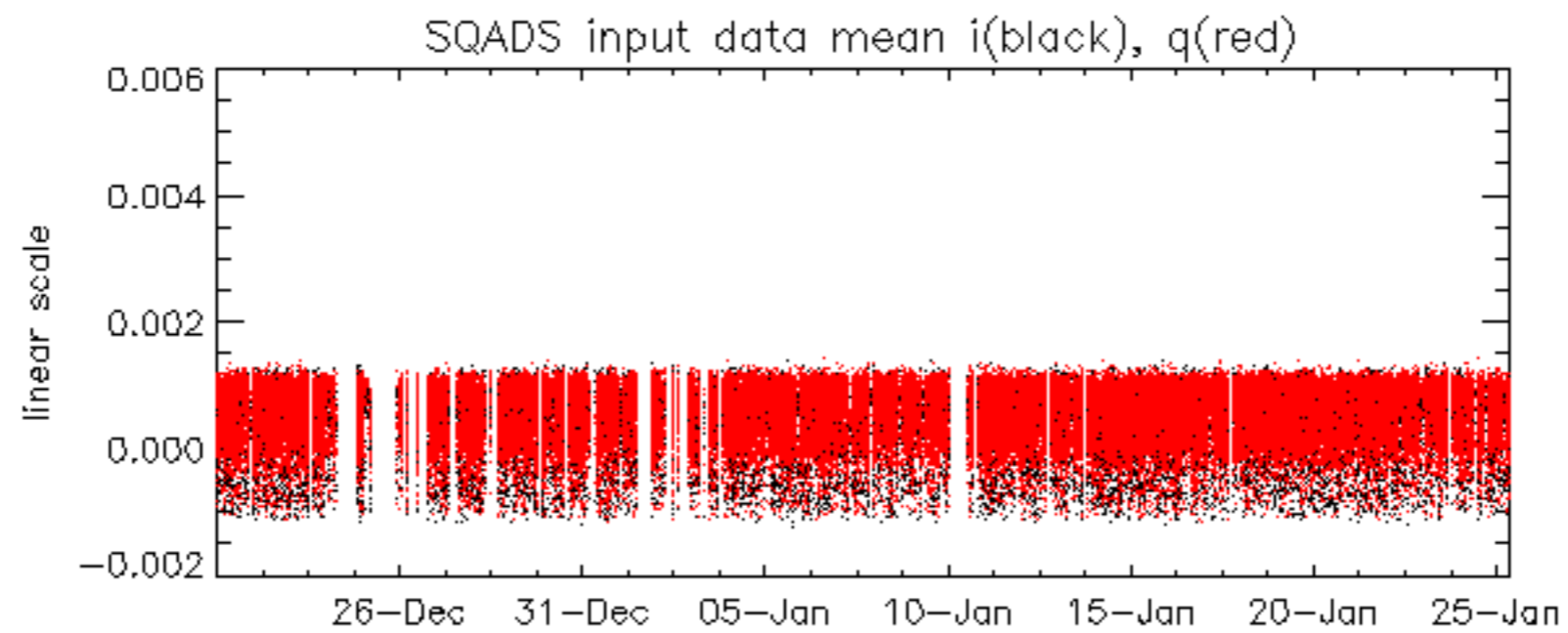
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.079375 Hz

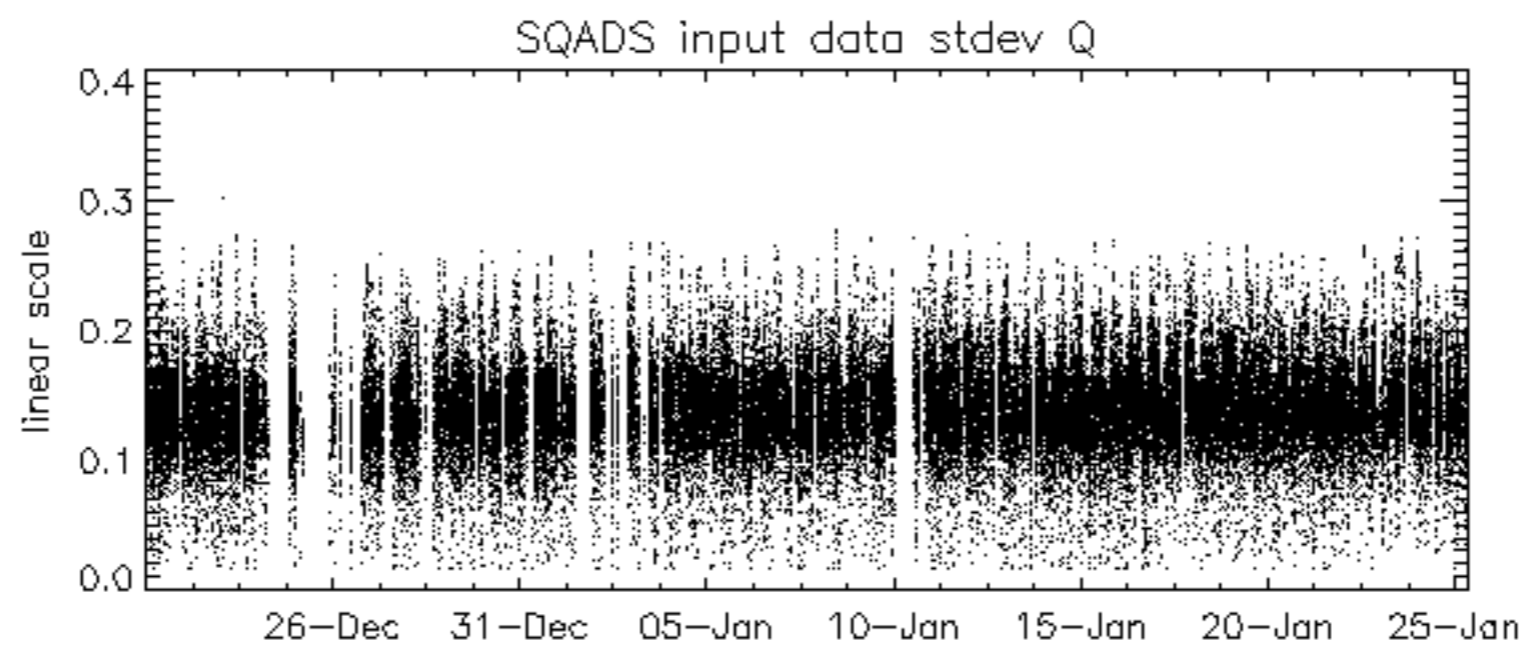
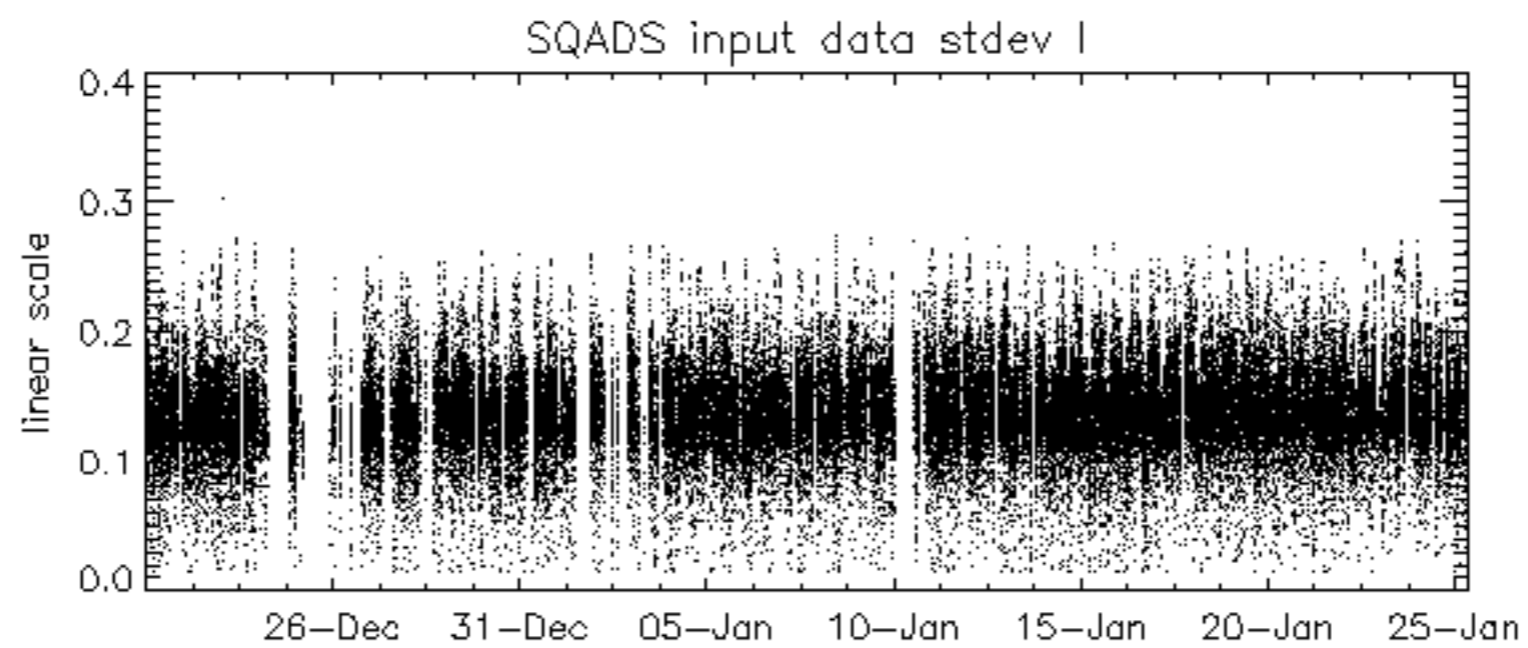
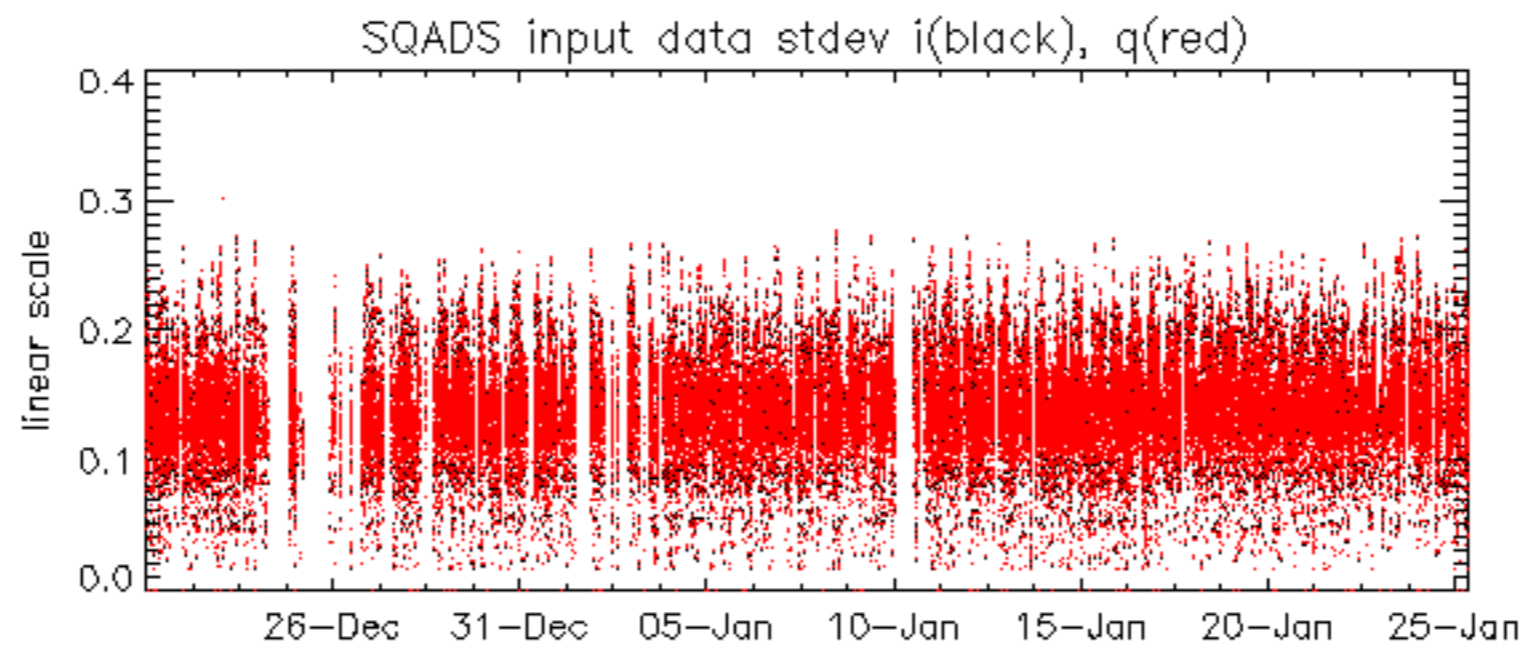


No anomalies observed on available MS products:

No anomalies observed.



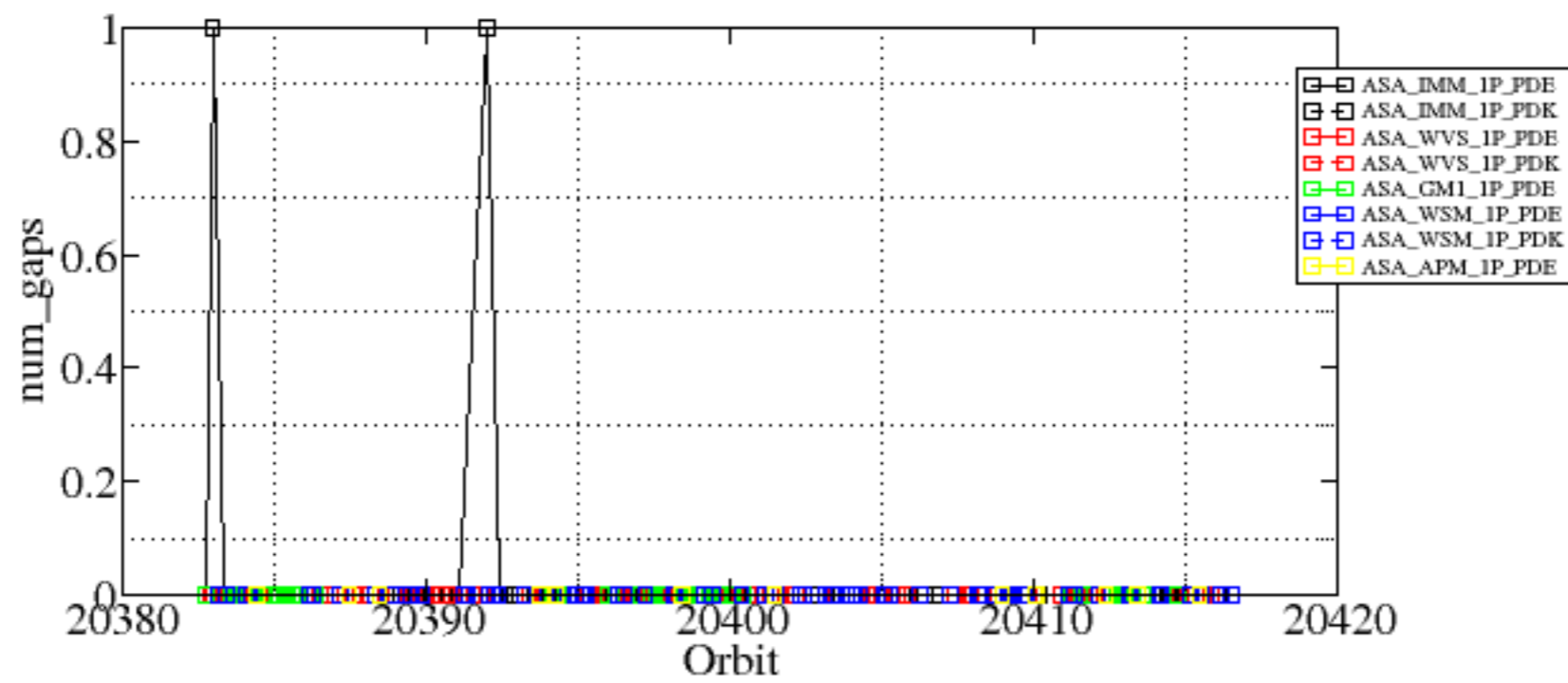


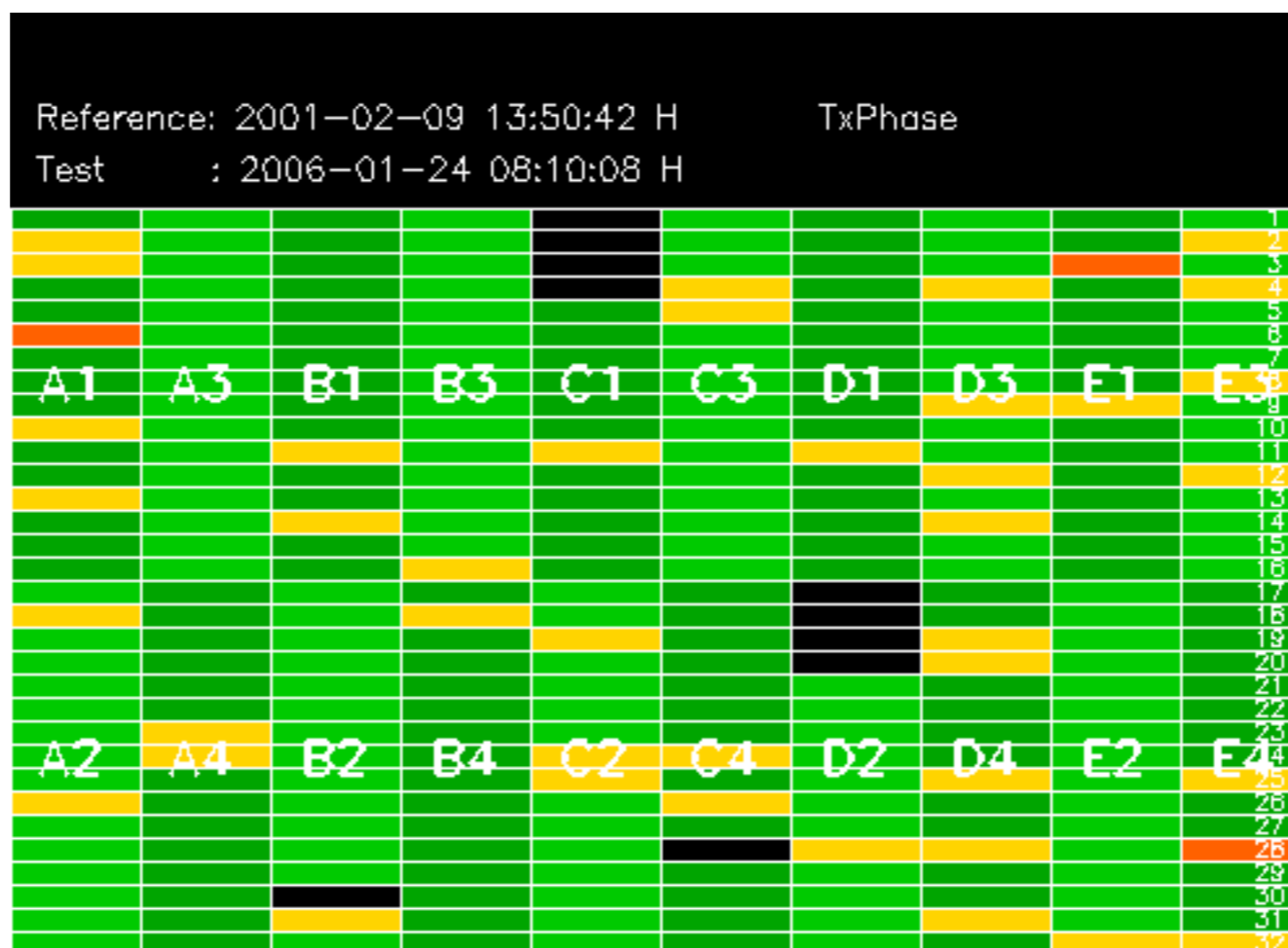


Summary of analysis for the last 3 days 2006012[345]

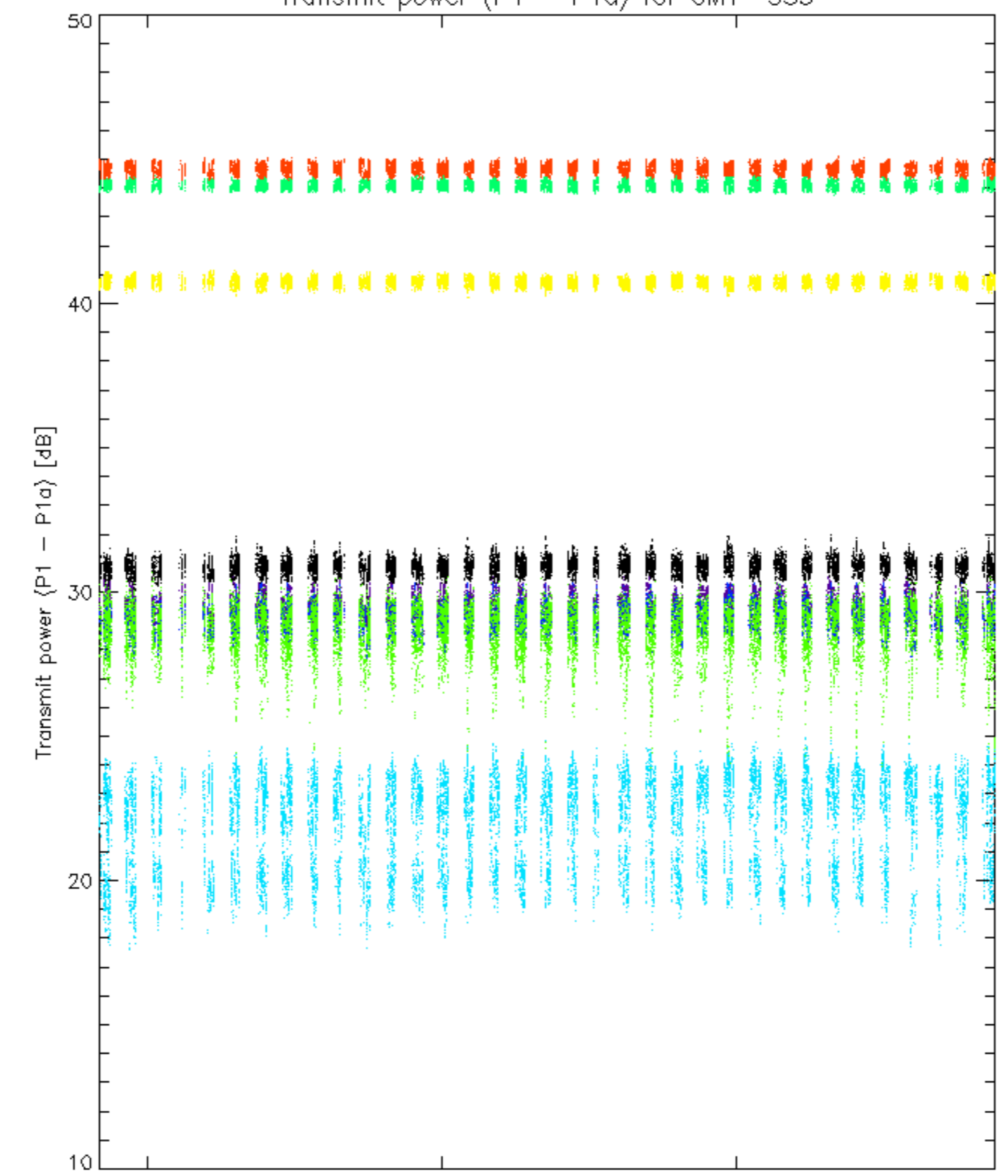
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060123_004758_000002002044_00288_20382_0815.N1	1	0
ASA_IMM_1PNPDE20060123_155721_000002312044_00298_20392_0902.N1	1	0
ASA_WSM_1PNPDE20060123_160304_000001282044_00298_20392_2090.N1	0	2

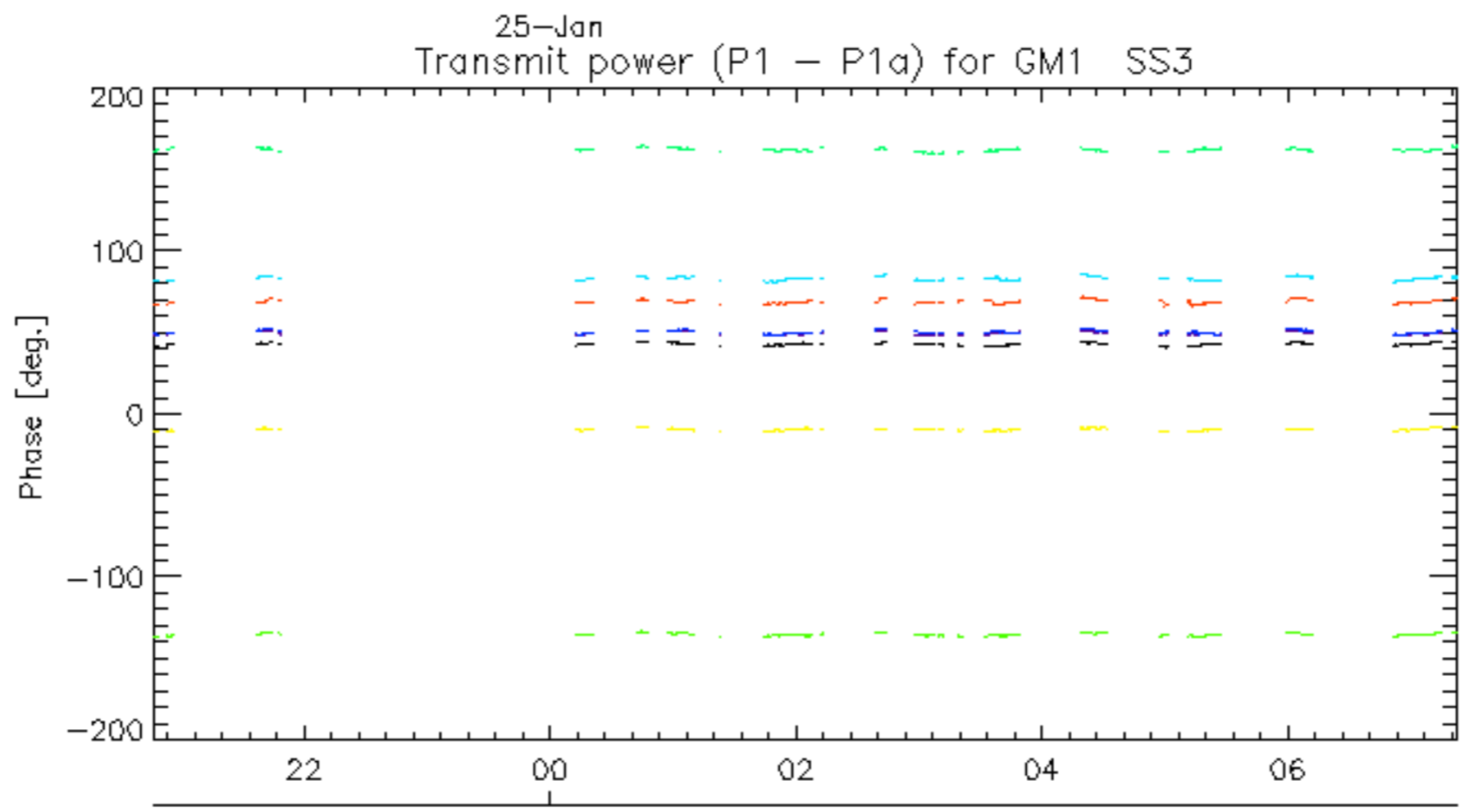
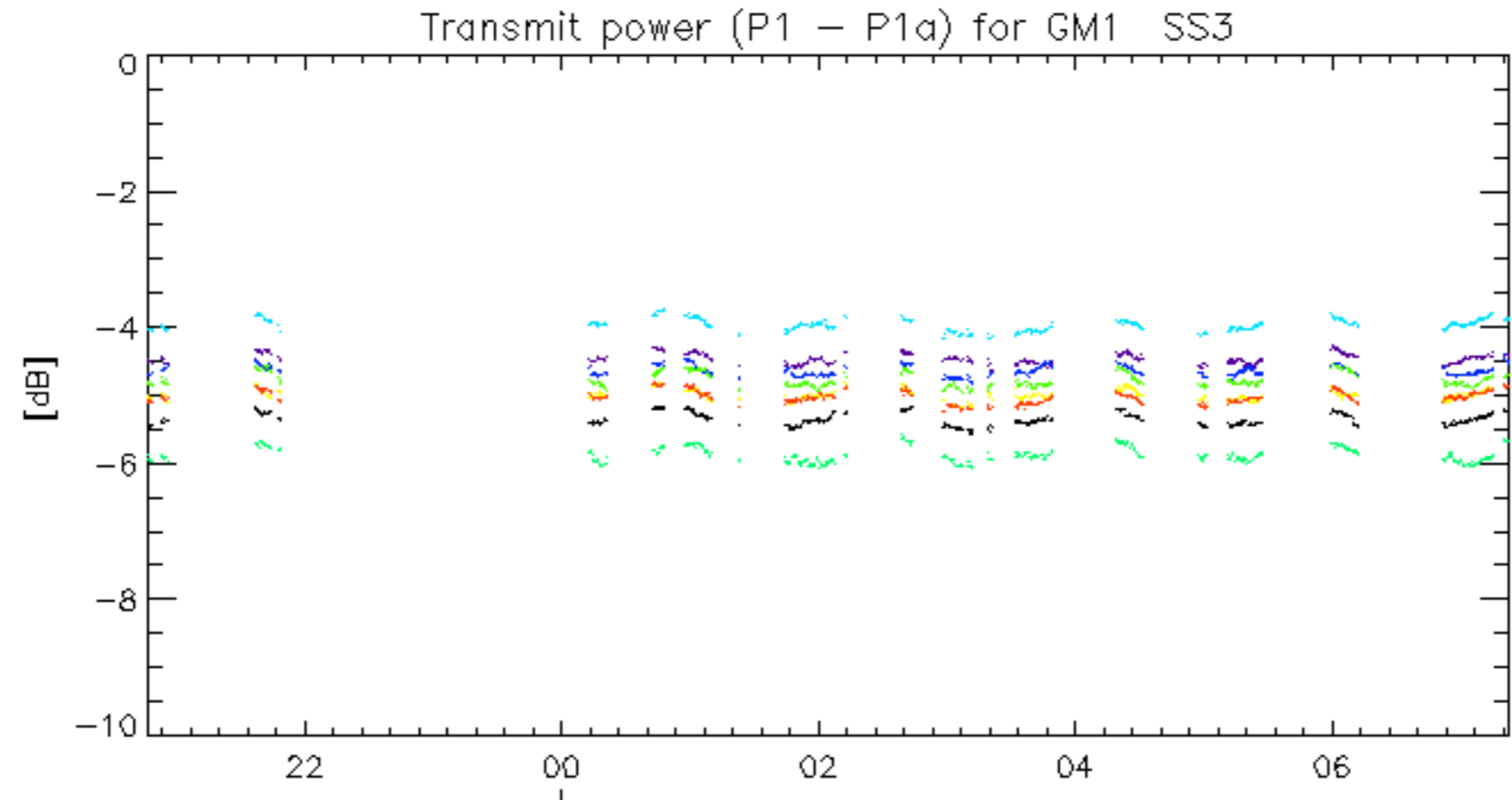




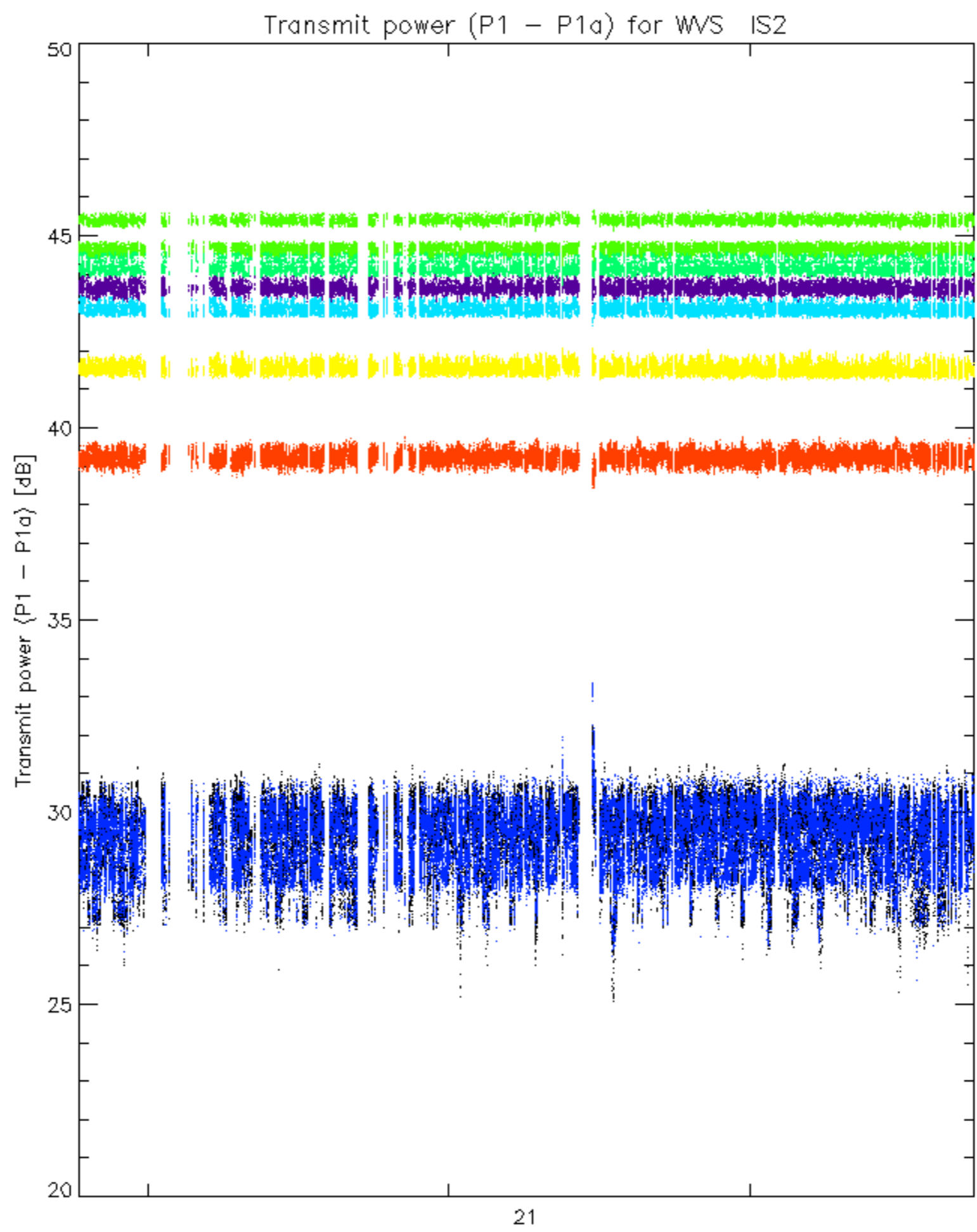
Transmit power (P1 - P1a) for GM1 SS3



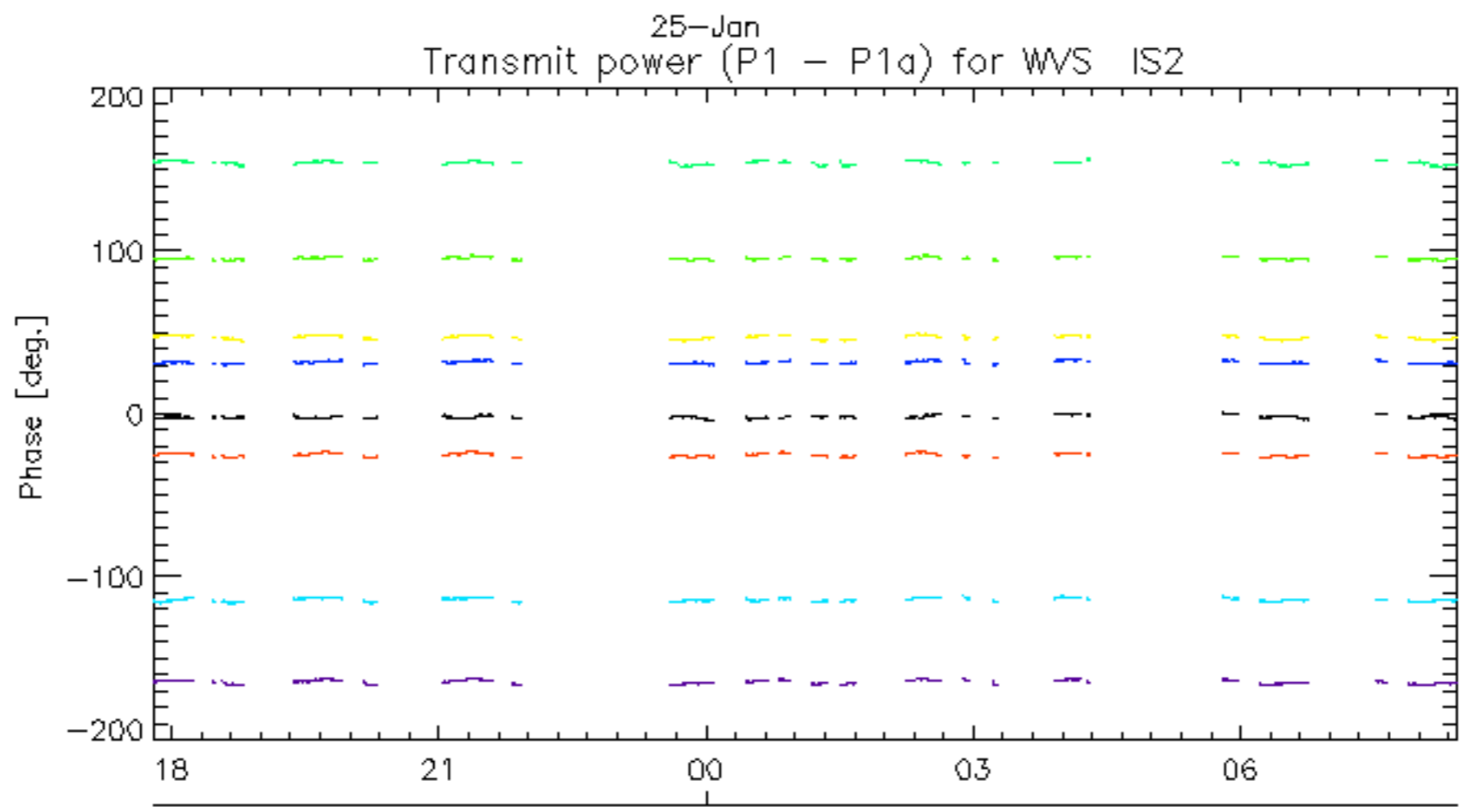
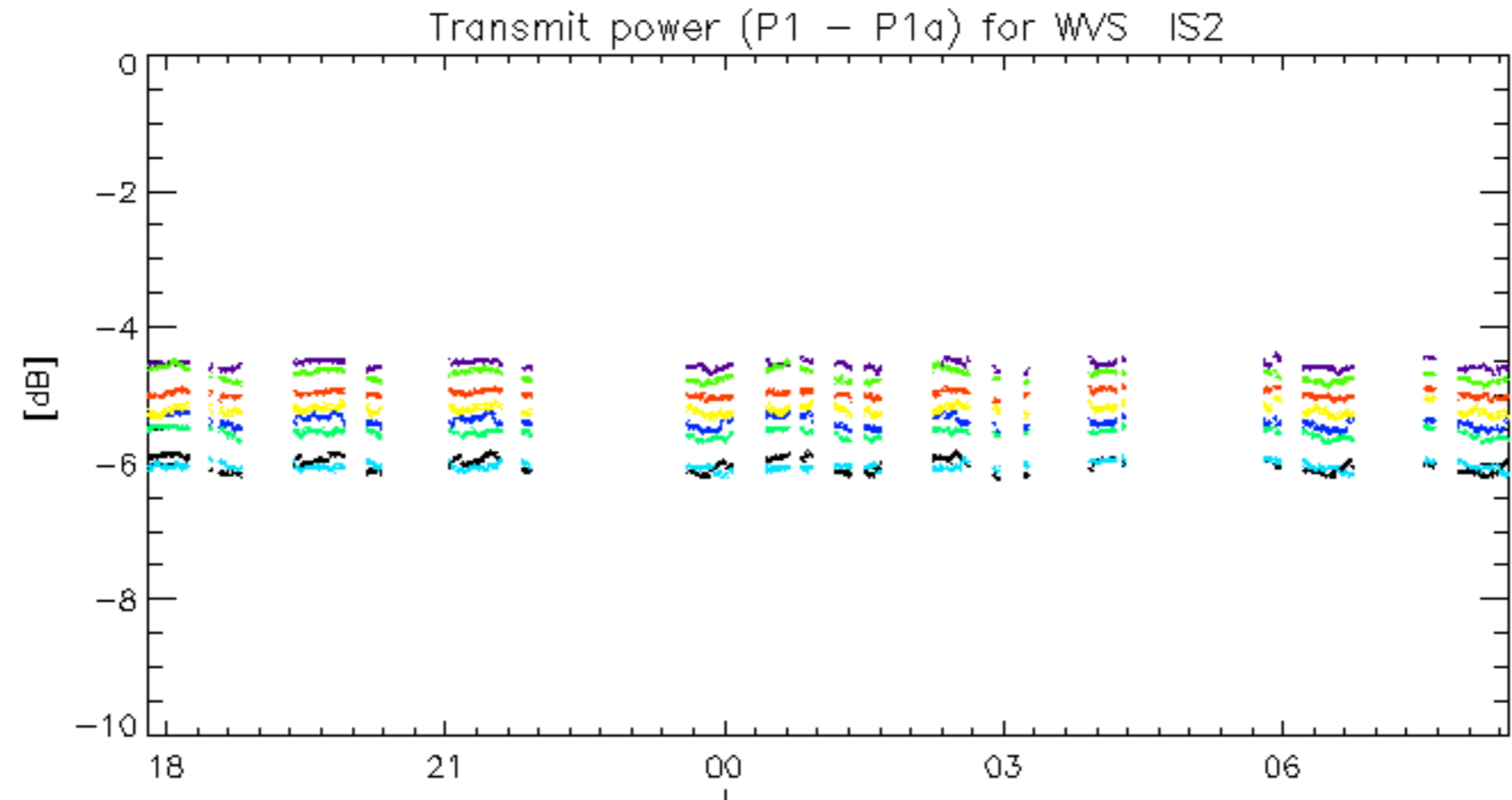
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.