

PRELIMINARY REPORT OF 060322

last update on Wed Mar 22 16:34:37 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 2006-03-21 00:00:00 to 2006-03-22 16:34:37

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	26	43	6	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	26	43	6	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	26	43	6	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	26	43	6	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	50	10	9	28
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	50	10	9	28
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	50	10	9	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	50	10	9	28

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	20060321 085022
H	20060322 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	-4.002396	0.009319	-0.003888
7	P1	-3.009230	0.008433	-0.027152
11	P1	-4.059998	0.019777	0.007889
15	P1	-6.087520	0.021261	-0.065281
19	P1	-3.295164	0.006694	-0.048209
22	P1	-4.459429	0.014437	-0.028294
26	P1	-4.181829	0.111492	0.200246
30	P1	-5.789339	0.167699	0.106570
3	P1	-16.984776	0.248199	0.057248
7	P1	-16.731598	0.100685	-0.106847
11	P1	-16.489864	0.324441	0.096170
15	P1	-13.049084	0.093473	-0.033778
19	P1	-13.944938	0.052454	-0.102479
22	P1	-15.570997	0.459528	-0.090763
26	P1	-15.744819	0.371649	-0.012966
30	P1	-16.494987	0.321943	-0.159681

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.388037	0.086771	0.072557
7	P2	-22.360455	0.096308	0.124052
11	P2	-16.222963	0.100695	0.024201
15	P2	-7.163514	0.098223	-0.009705
19	P2	-9.131189	0.091205	-0.018096
22	P2	-17.944887	0.089129	-0.075277
26	P2	-16.214128	0.094590	-0.050616
30	P2	-19.648827	0.084496	-0.037145

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.193705	0.005754	-0.008530
7	P3	-8.193705	0.005754	-0.008530
11	P3	-8.193705	0.005754	-0.008530
15	P3	-8.193705	0.005754	-0.008530
19	P3	-8.193705	0.005754	-0.008530
22	P3	-8.193705	0.005754	-0.008530
26	P3	-8.193705	0.005754	-0.008530
30	P3	-8.193705	0.005754	-0.008529

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	-3.832655	2.751345	0.340213
7	P1	-2.816937	2.888678	0.411719
11	P1	-3.013121	2.908592	0.387470
15	P1	-3.657454	2.883443	0.419203
19	P1	-3.458024	2.793311	0.347505
22	P1	-5.255546	2.568217	0.322538
26	P1	-5.916661	2.752134	0.685651
30	P1	-5.261506	2.609856	0.452042
3	P1	-11.641006	1.811494	0.268351
7	P1	-10.035059	2.006140	0.285114
11	P1	-10.335970	1.999827	0.261108
15	P1	-10.883562	2.012712	0.257678
19	P1	-15.457000	1.485291	0.229053
22	P1	-20.323088	2.152341	0.094289

26	P1	-16.284309	2.005594	0.146676
30	P1	-18.291885	1.703831	0.464453

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.083492	1.905393	0.100136
7	P2	-22.533182	2.233910	-0.066766
11	P2	-11.264100	2.068523	0.185845
15	P2	-4.903862	2.686851	0.331124
19	P2	-6.911140	2.418537	0.312650
22	P2	-8.203202	2.268038	0.253807
26	P2	-23.907217	2.283296	-0.299167
30	P2	-22.040348	2.154187	-0.181334

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.022684	0.002523	0.004316
7	P3	-8.022727	0.002519	0.004274
11	P3	-8.022648	0.002535	0.004438
15	P3	-8.022796	0.002530	0.004346
19	P3	-8.022671	0.002532	0.004093
22	P3	-8.022766	0.002524	0.004412
26	P3	-8.022764	0.002526	0.004167
30	P3	-8.022622	0.002531	0.004407

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	0.000558405
	stdev	1.74644e-07
MEAN Q	mean	0.000517068
	stdev	2.20761e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138214
	stdev	0.00118715
STDEV Q	mean	0.138578
	stdev	0.00120525



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006032[012]

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_1PNPDE20060320_141119_000001602046_00096_21192_1254.N1	1	0
ASA_WSM_1PNPDE20060321_042632_000001842046_00105_21201_1778.N1	0	60
ASA_WSM_1PNPDE20060321_063926_000000852046_00106_21202_1792.N1	0	1
ASA_WSM_1PNPDK20060320_081910_000000862046_00093_21189_0874.N1	0	41





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

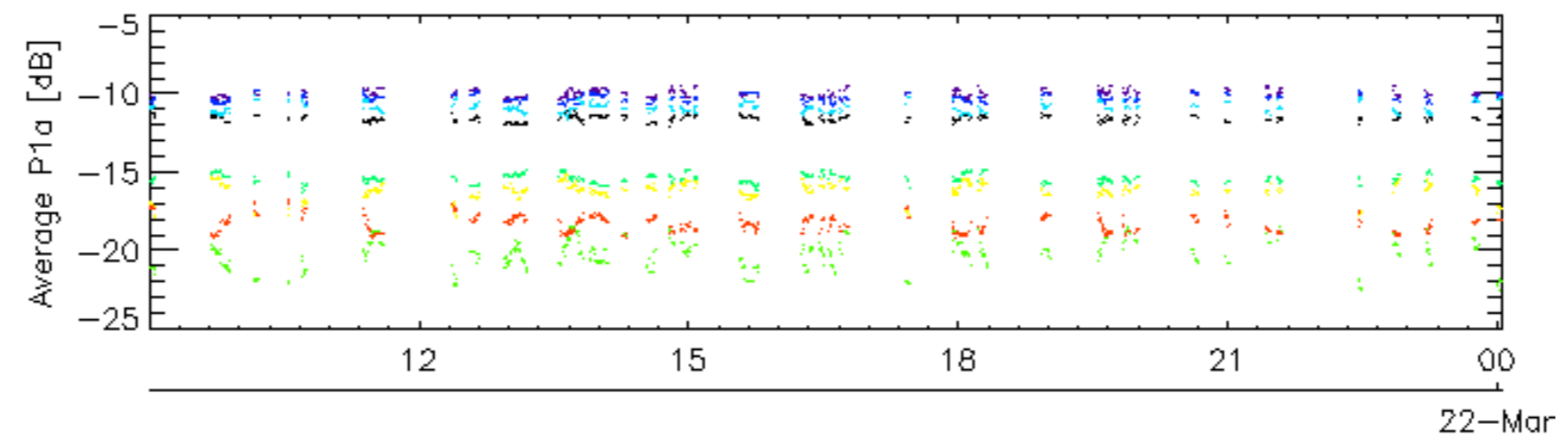
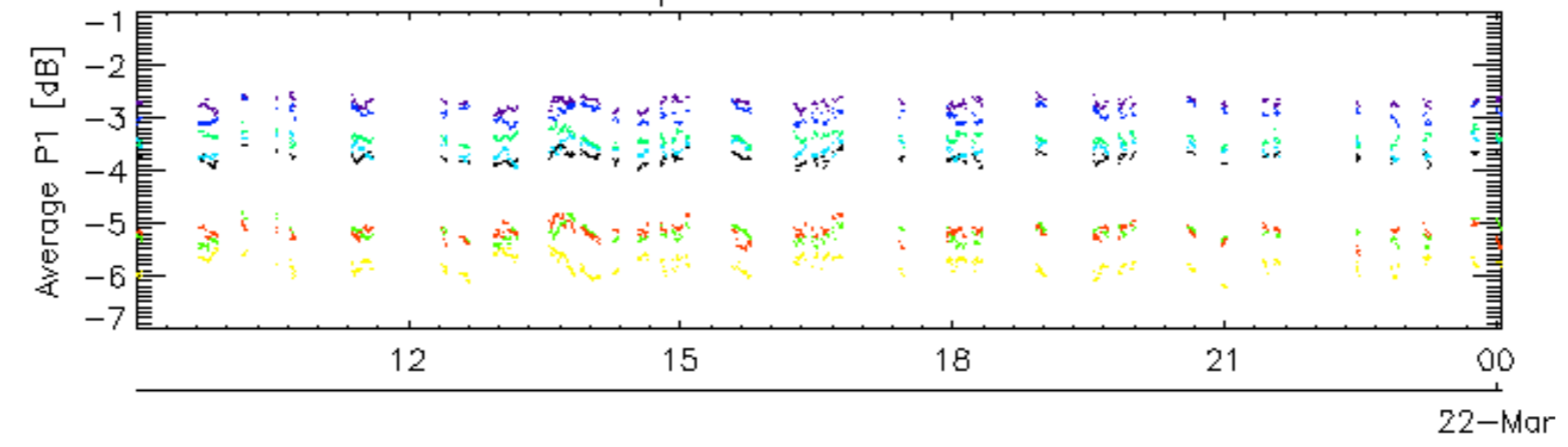
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
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Descending

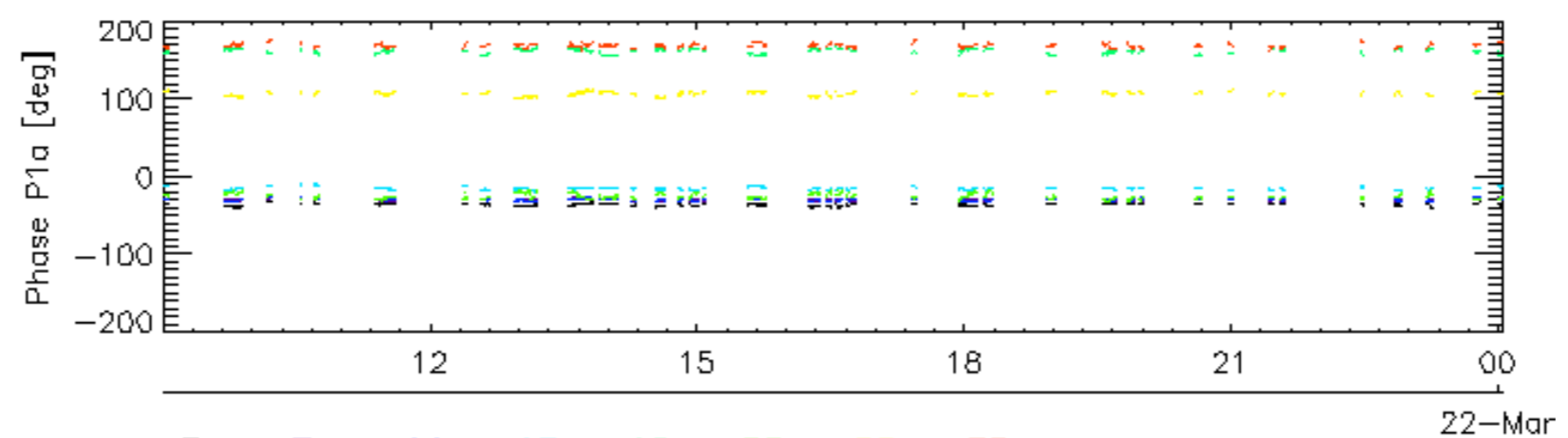
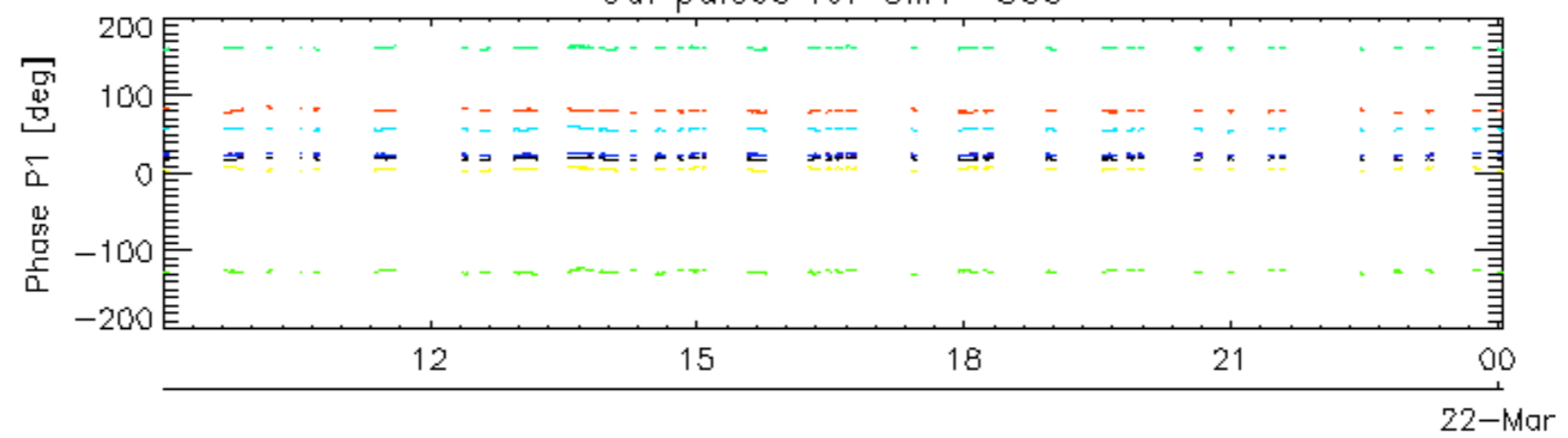
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

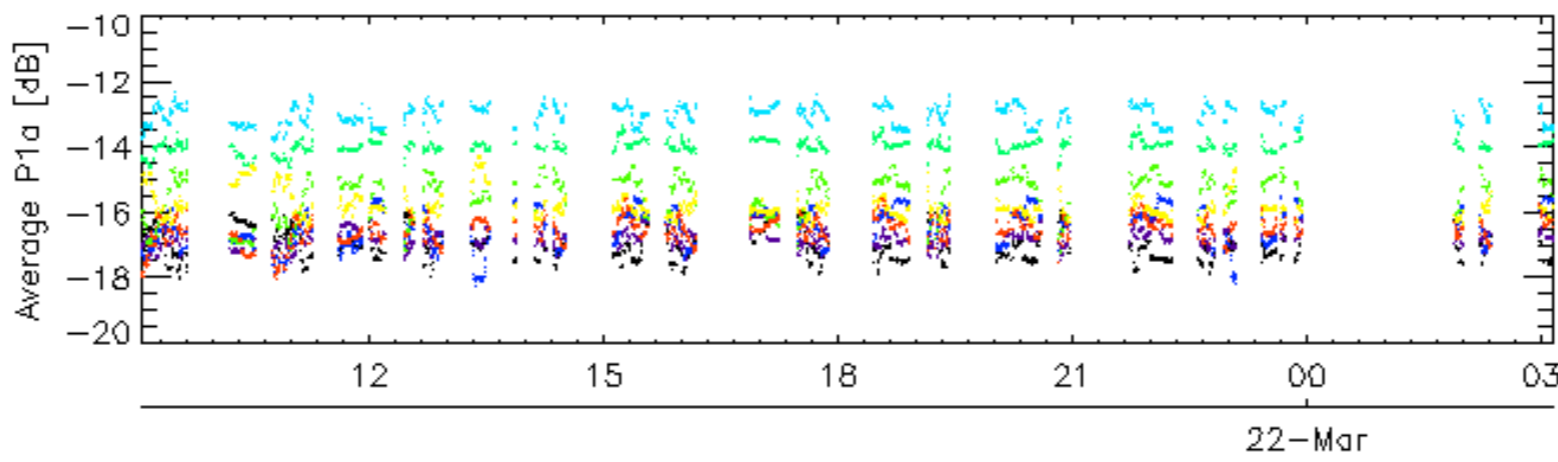
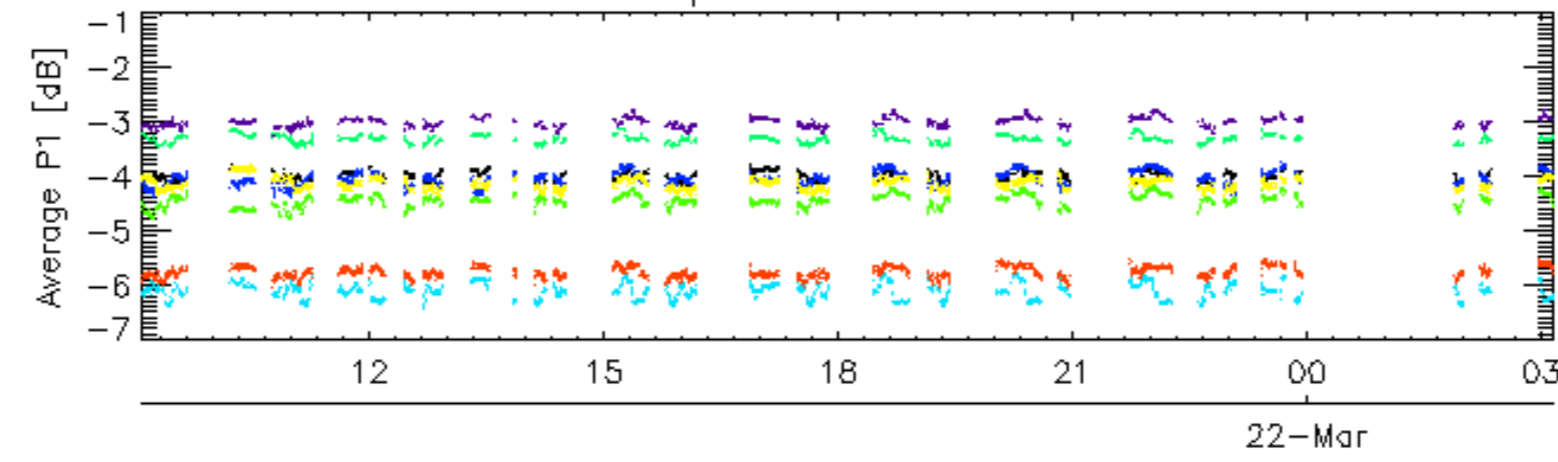


Cal pulses for GM1 SS3

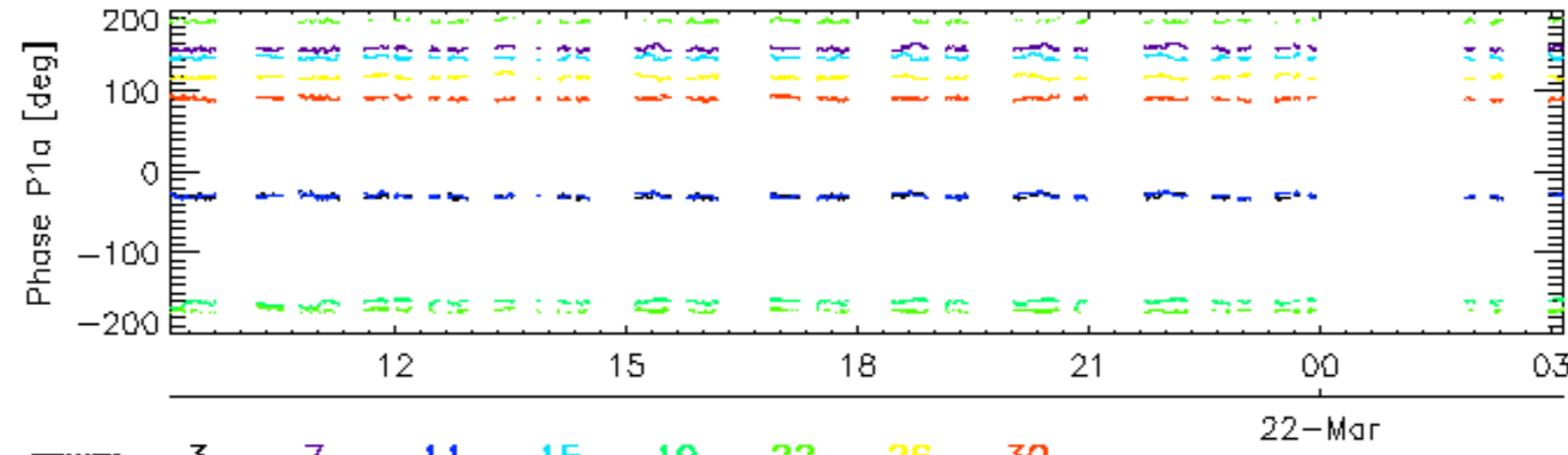
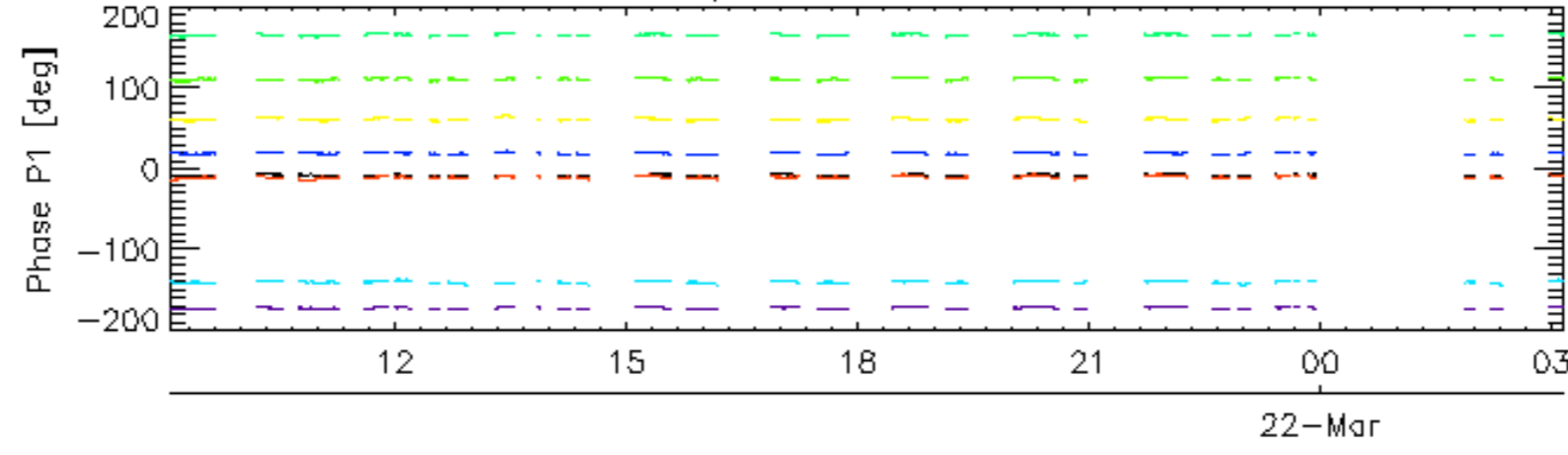


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

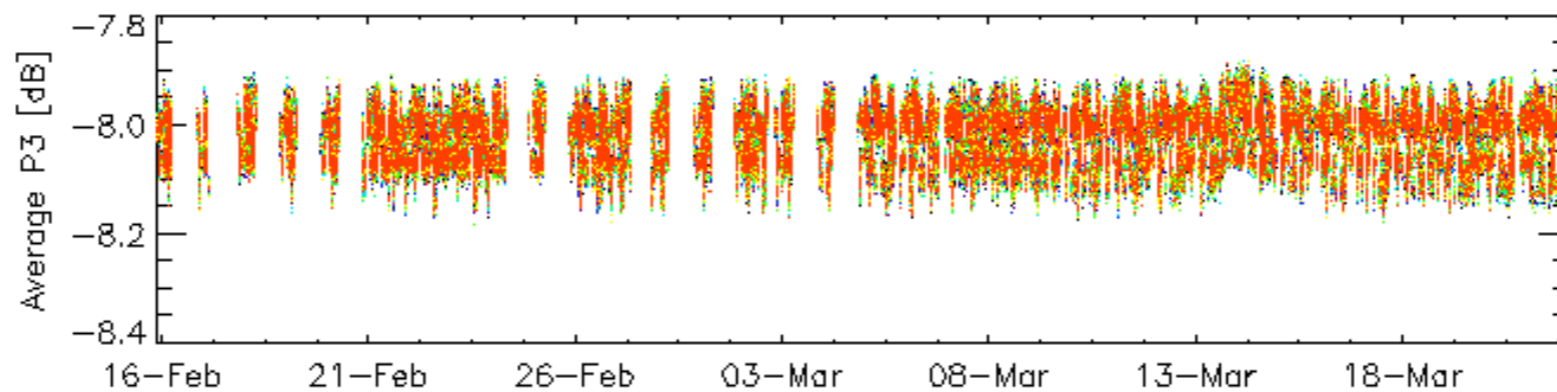
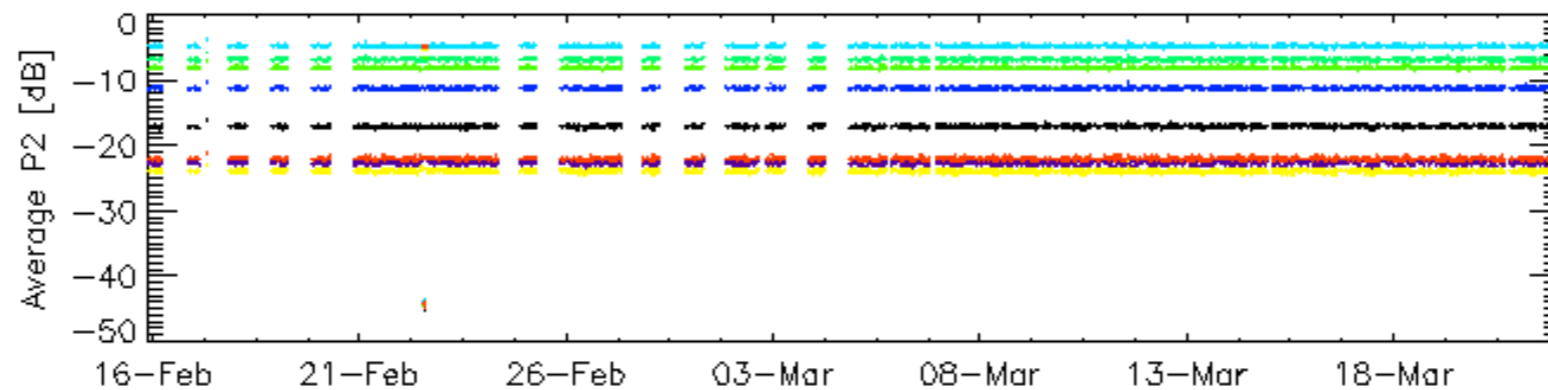
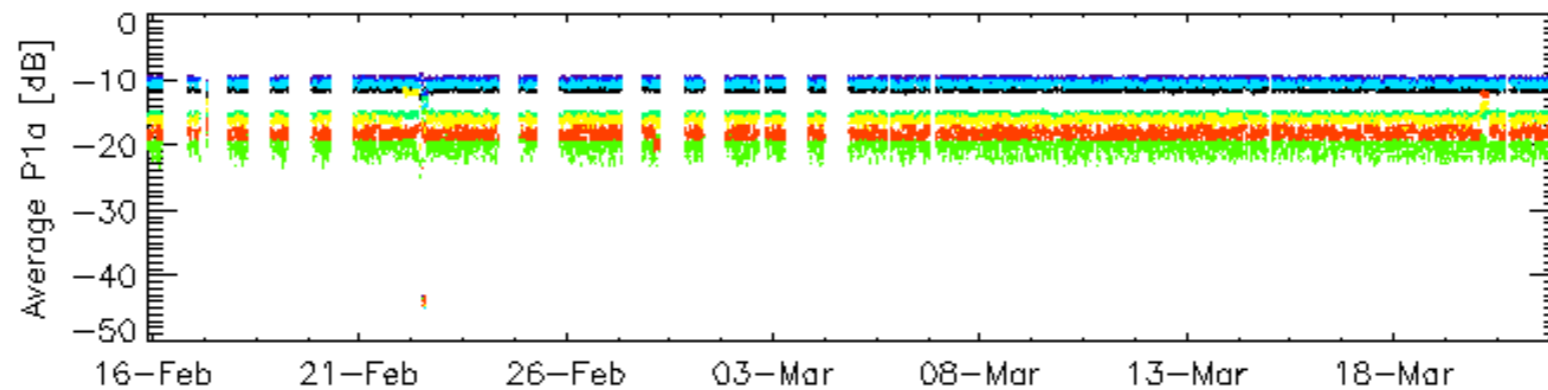
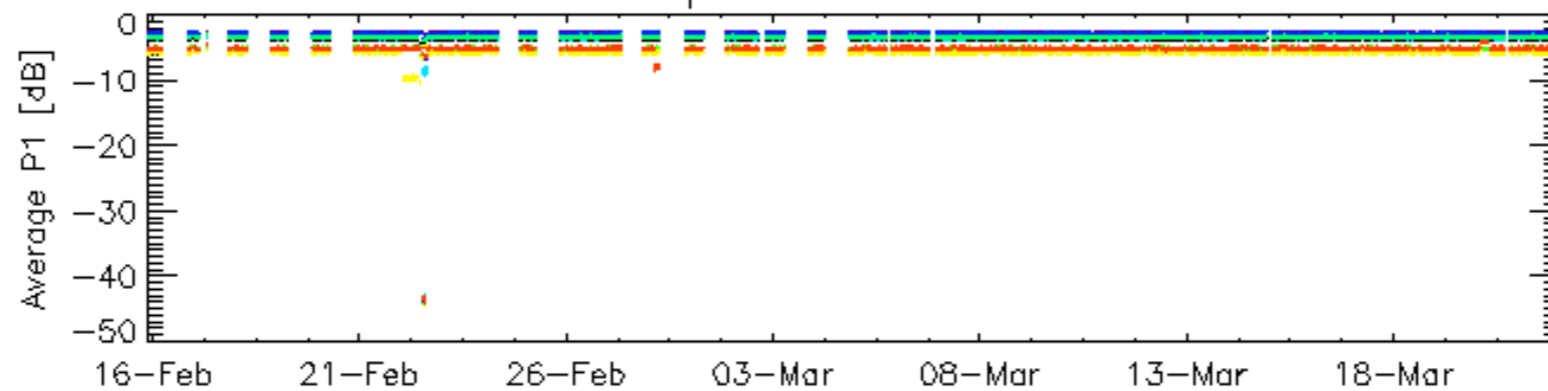


Cal pulses for WVS IS2



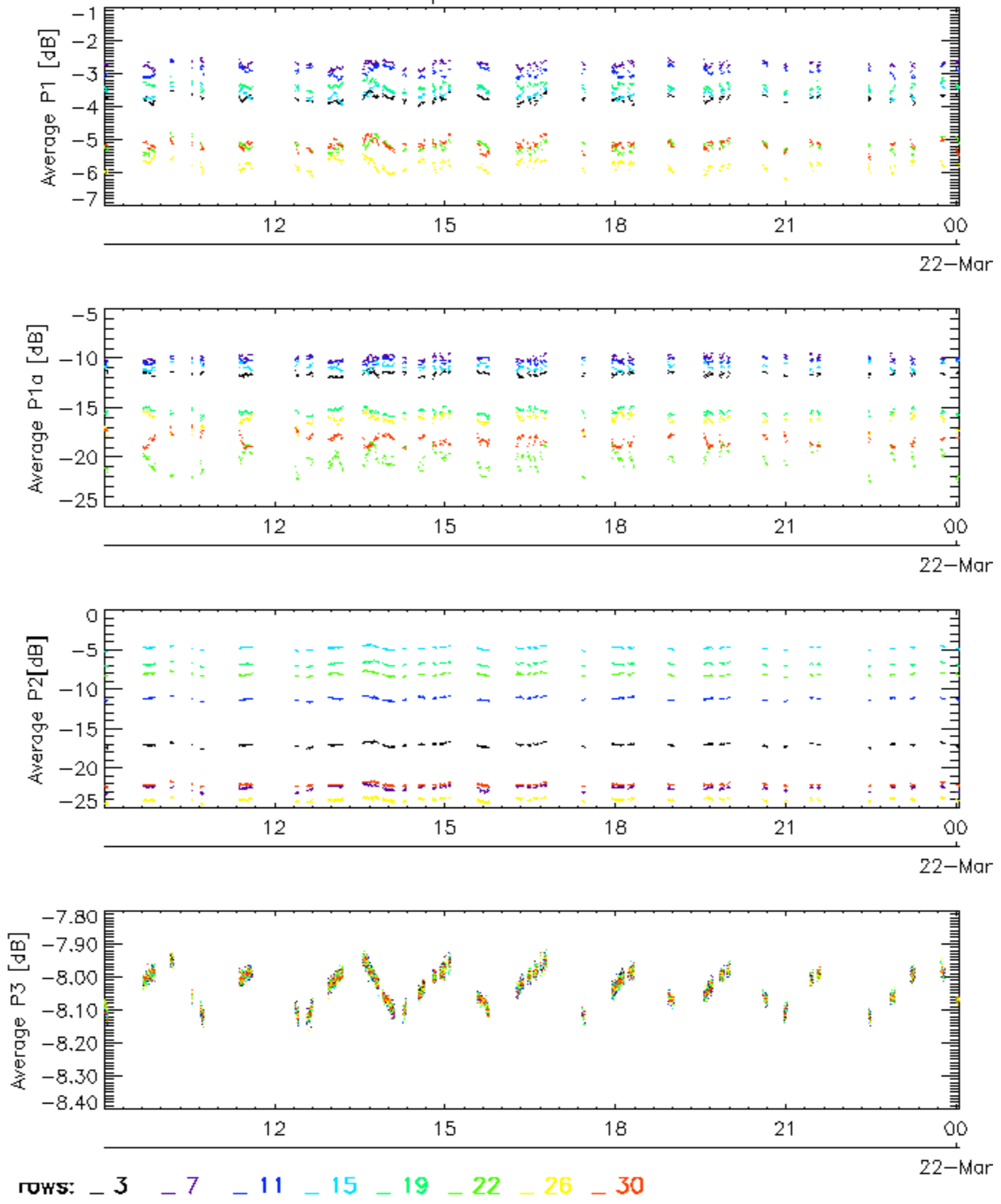
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

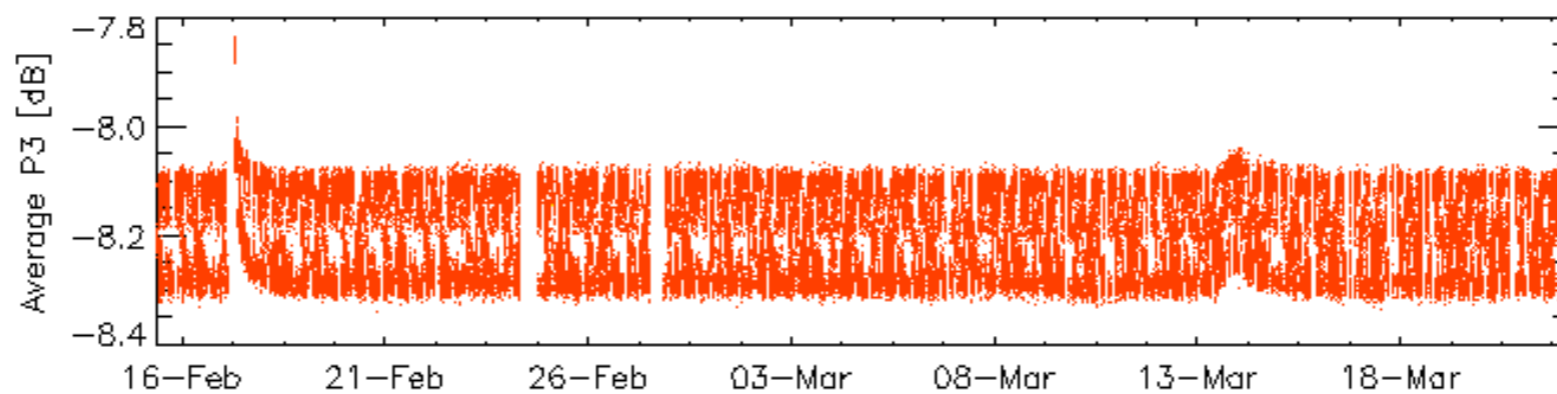
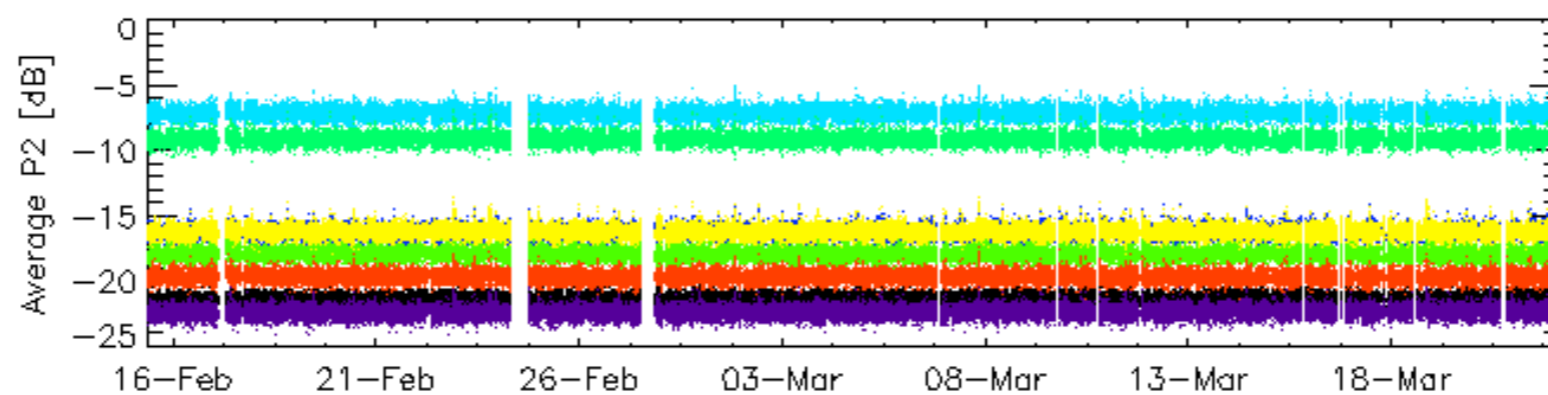
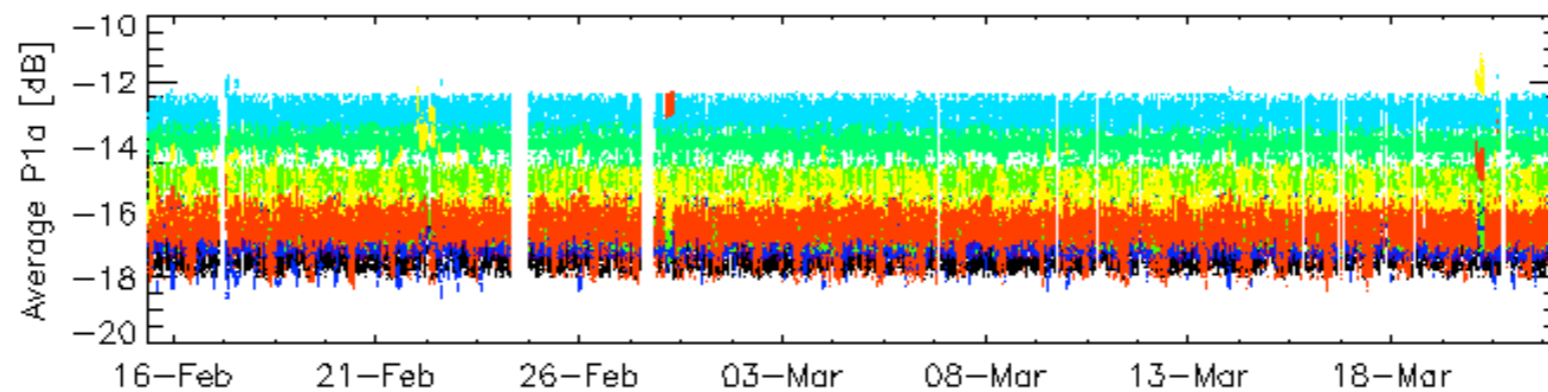
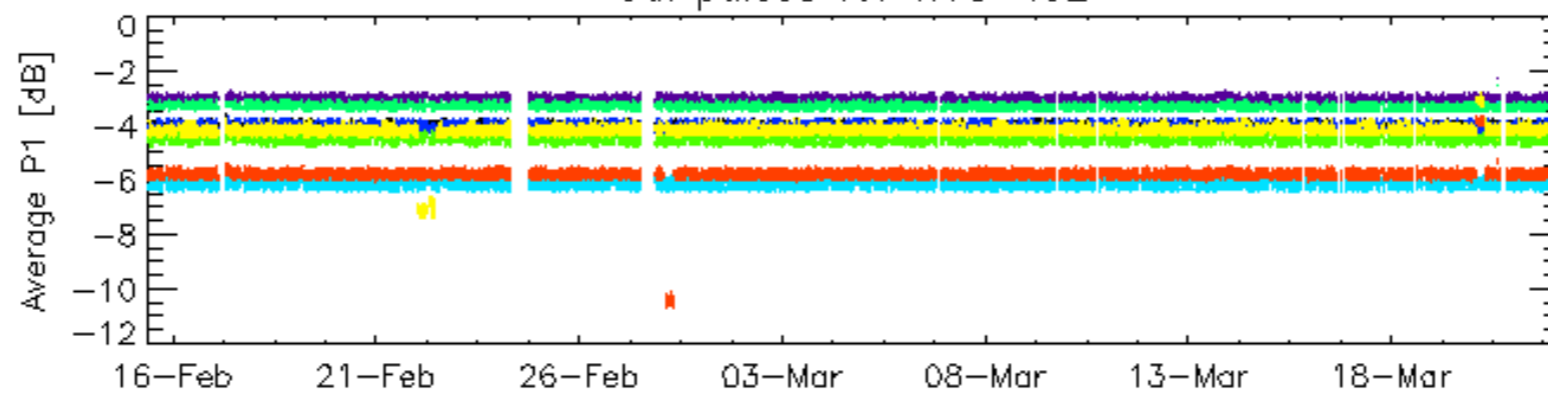


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

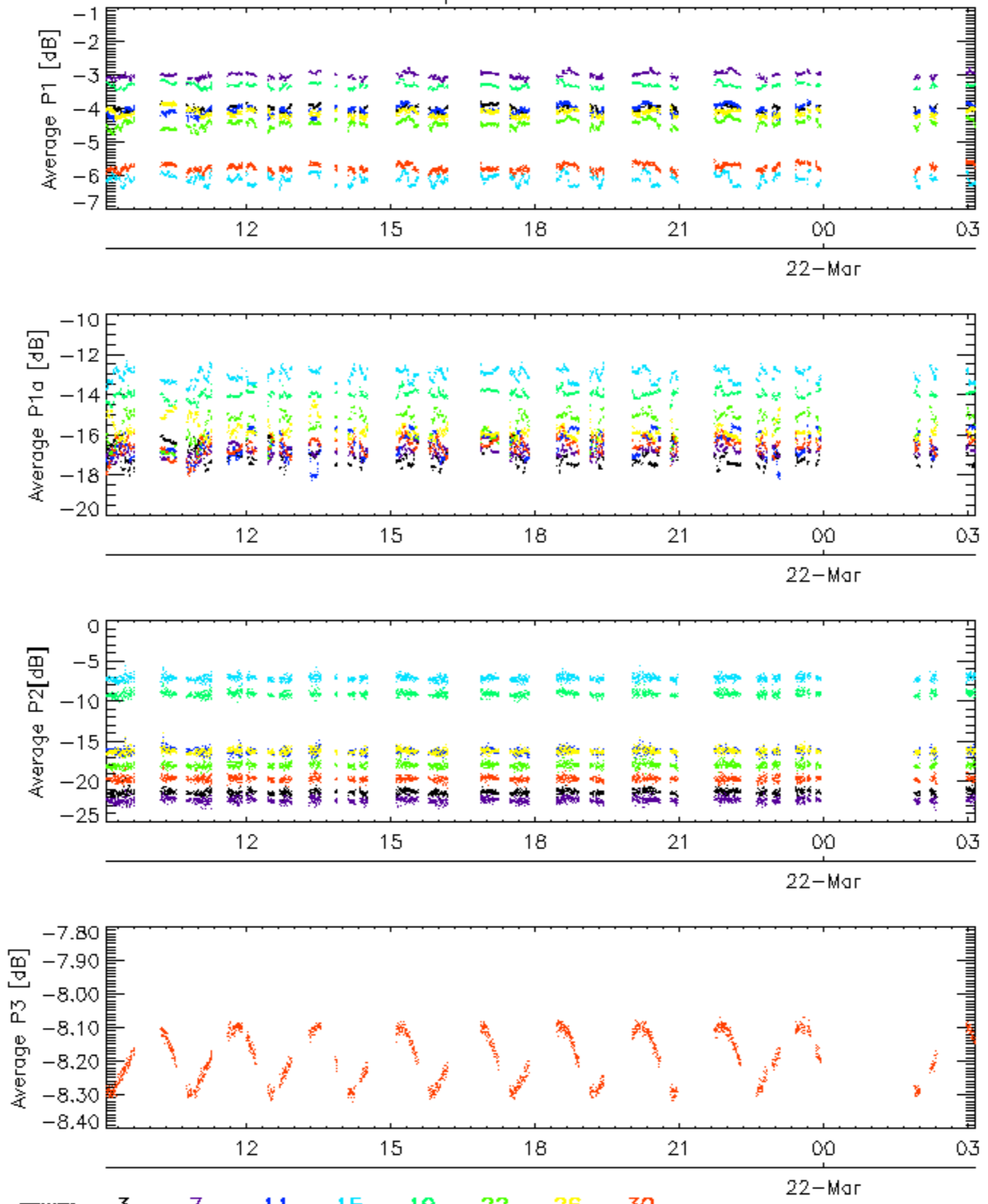


Cal pulses for WVS IS2



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

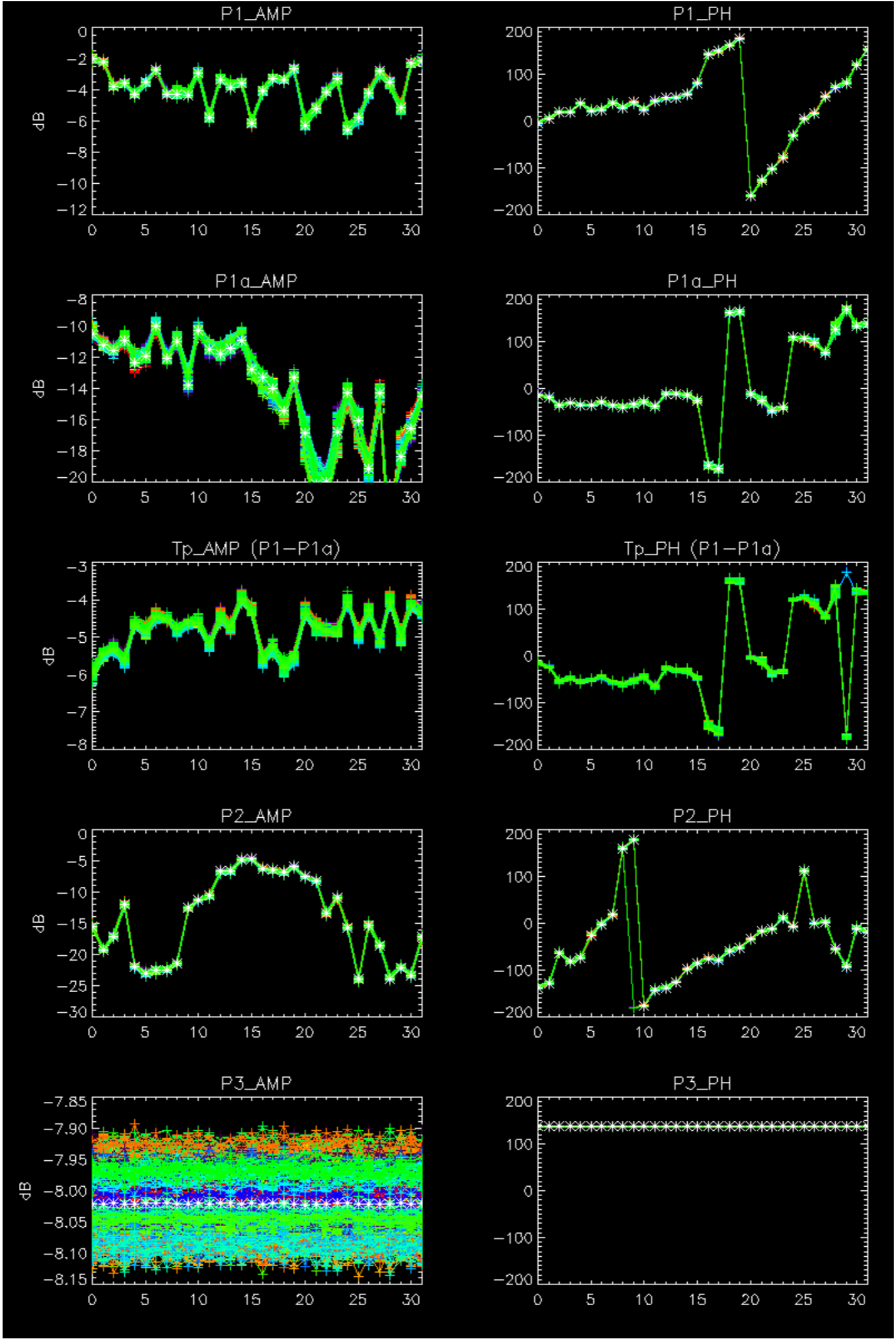
Cal pulses for WVS IS2

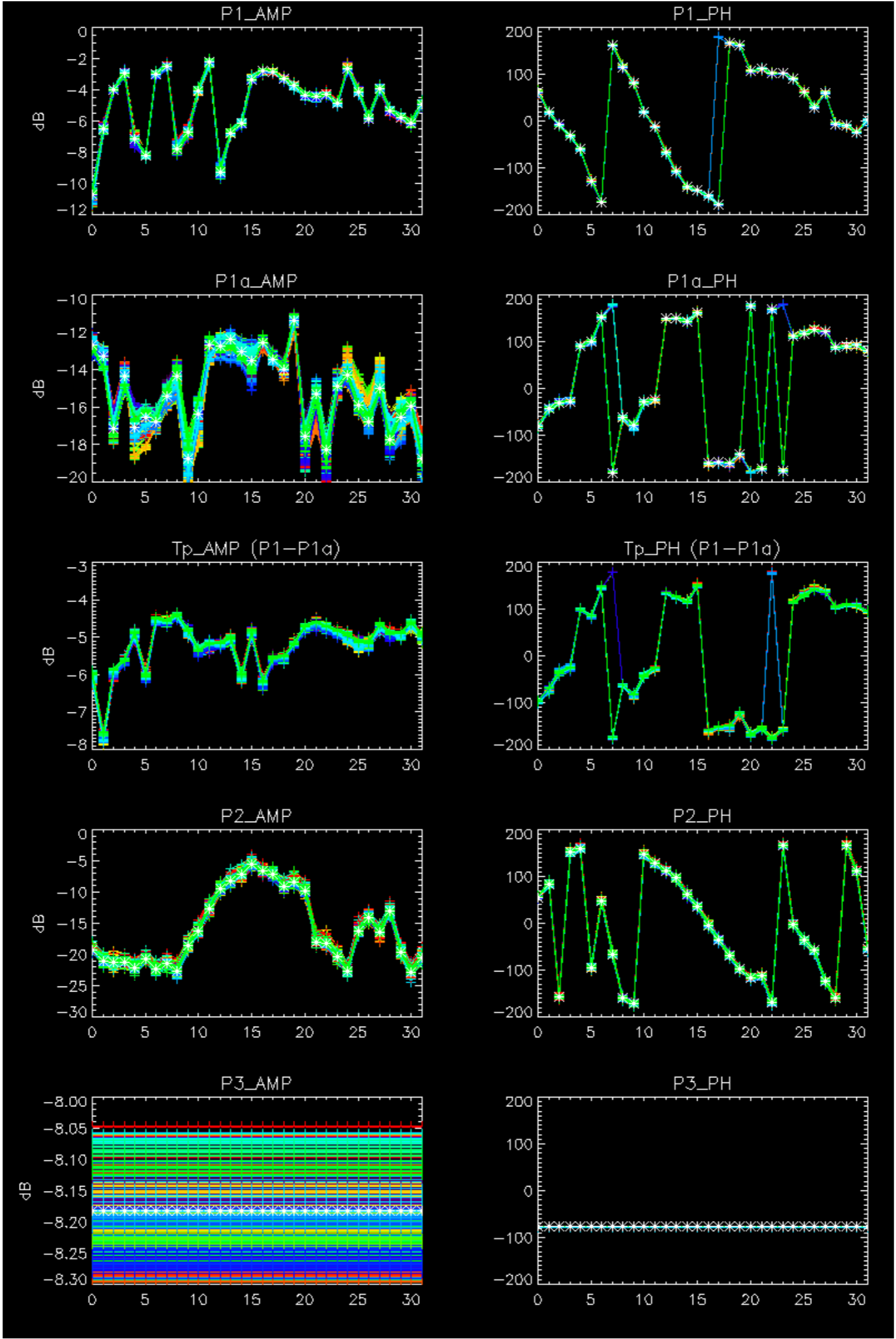


rows: 3 7 11 15 19 22 26 30

No anomalies observed on available browse products

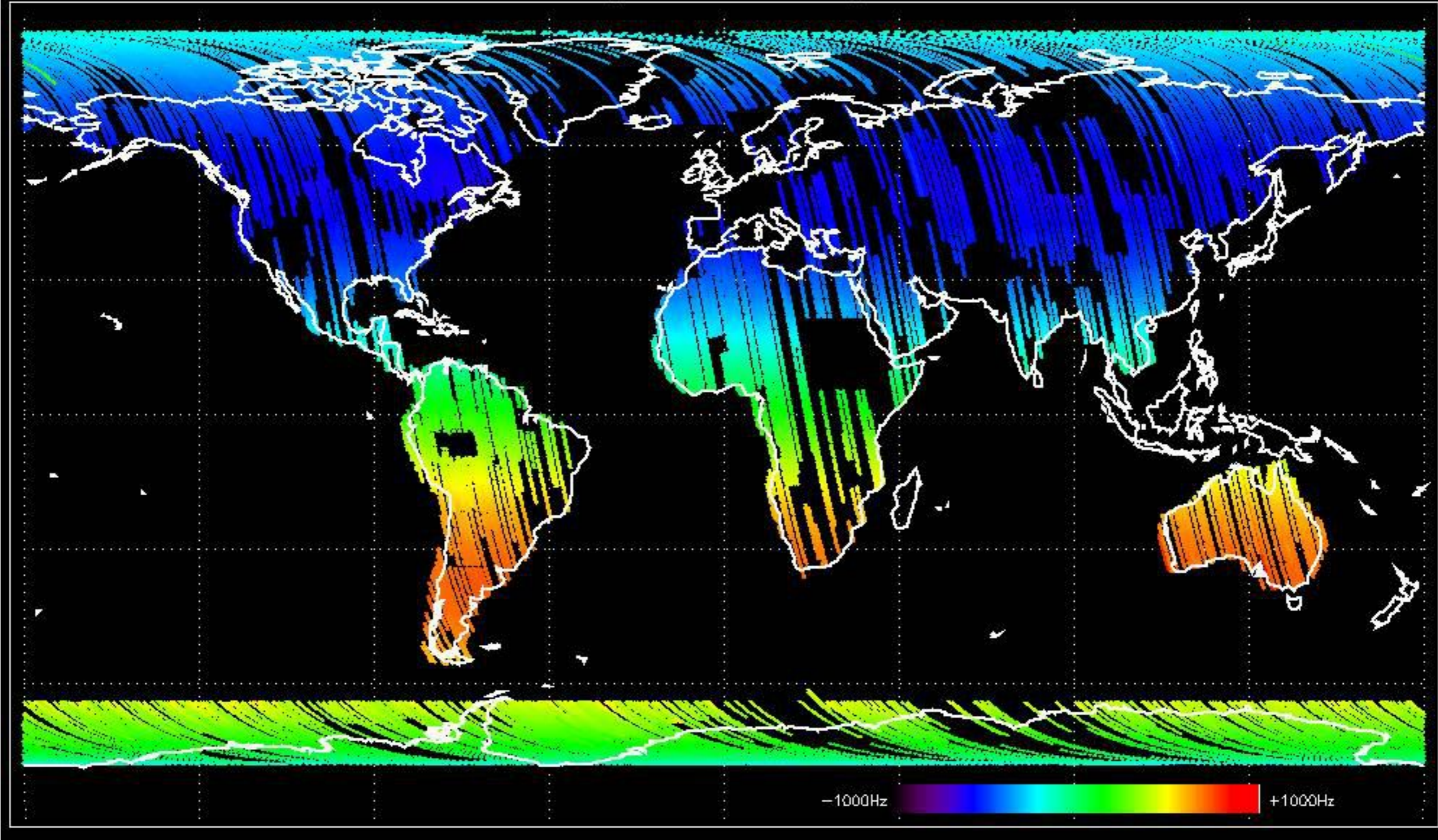
No anomalies observed.



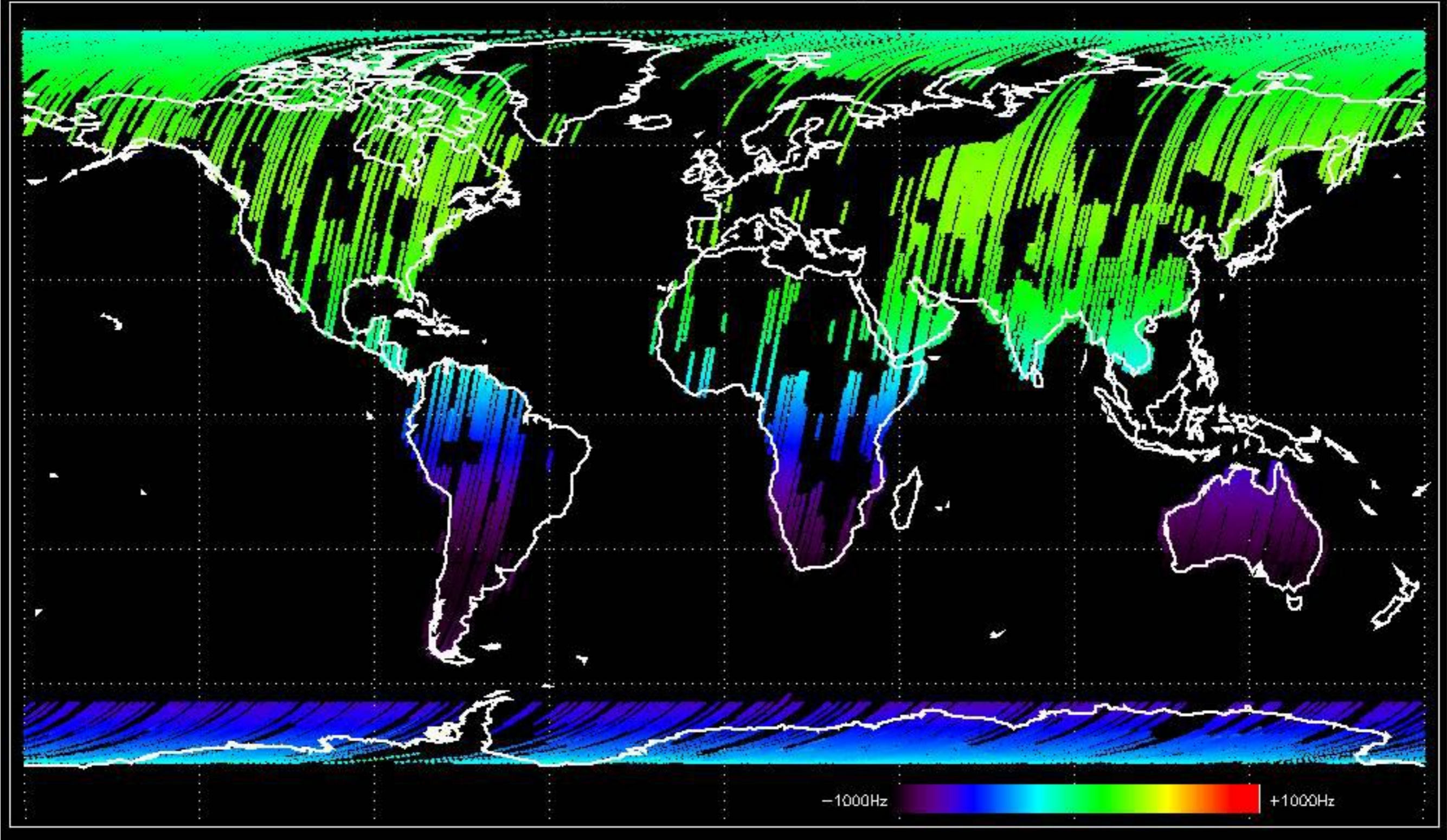


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

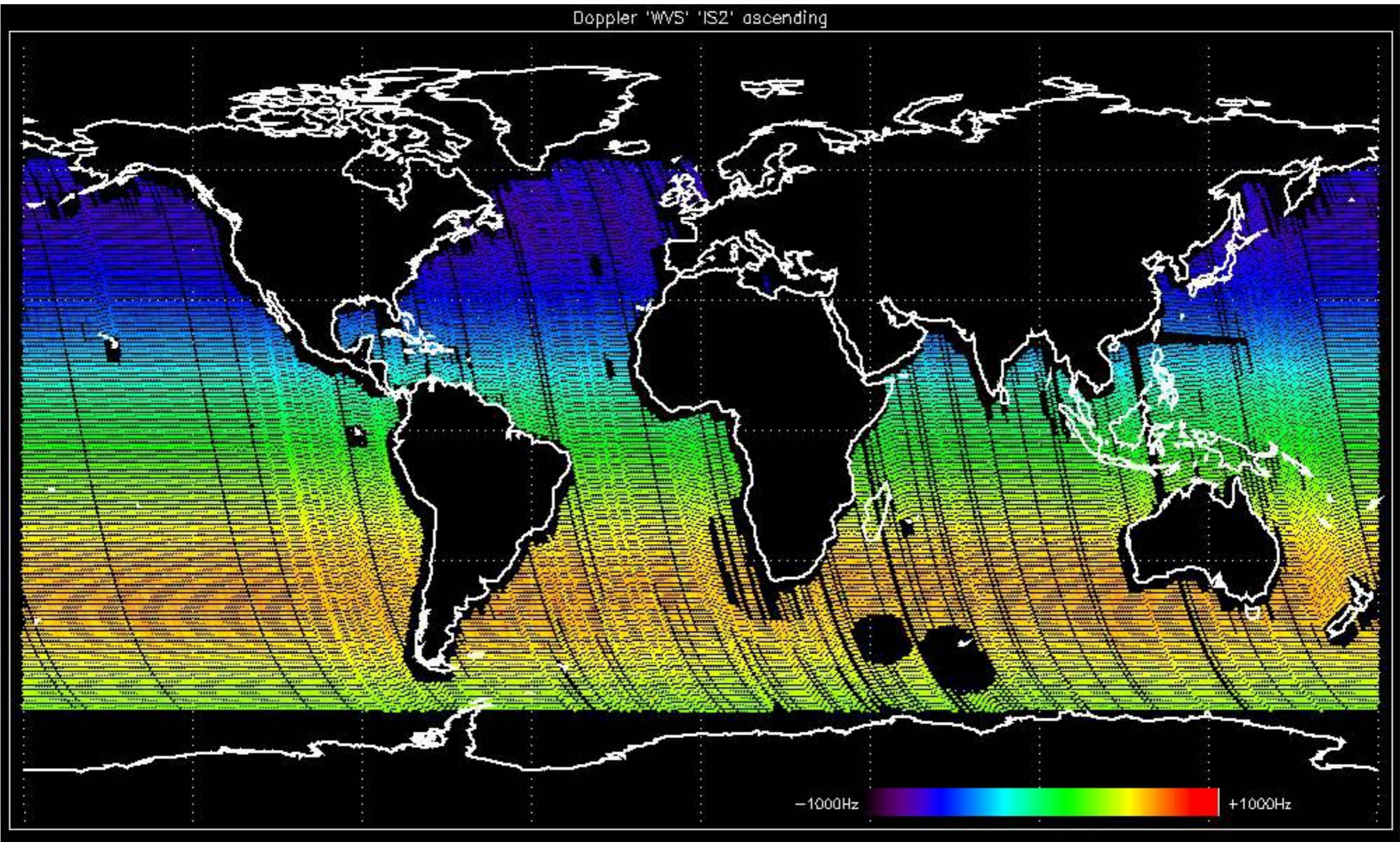
Doppler 'GM1' 'SS1' ascending



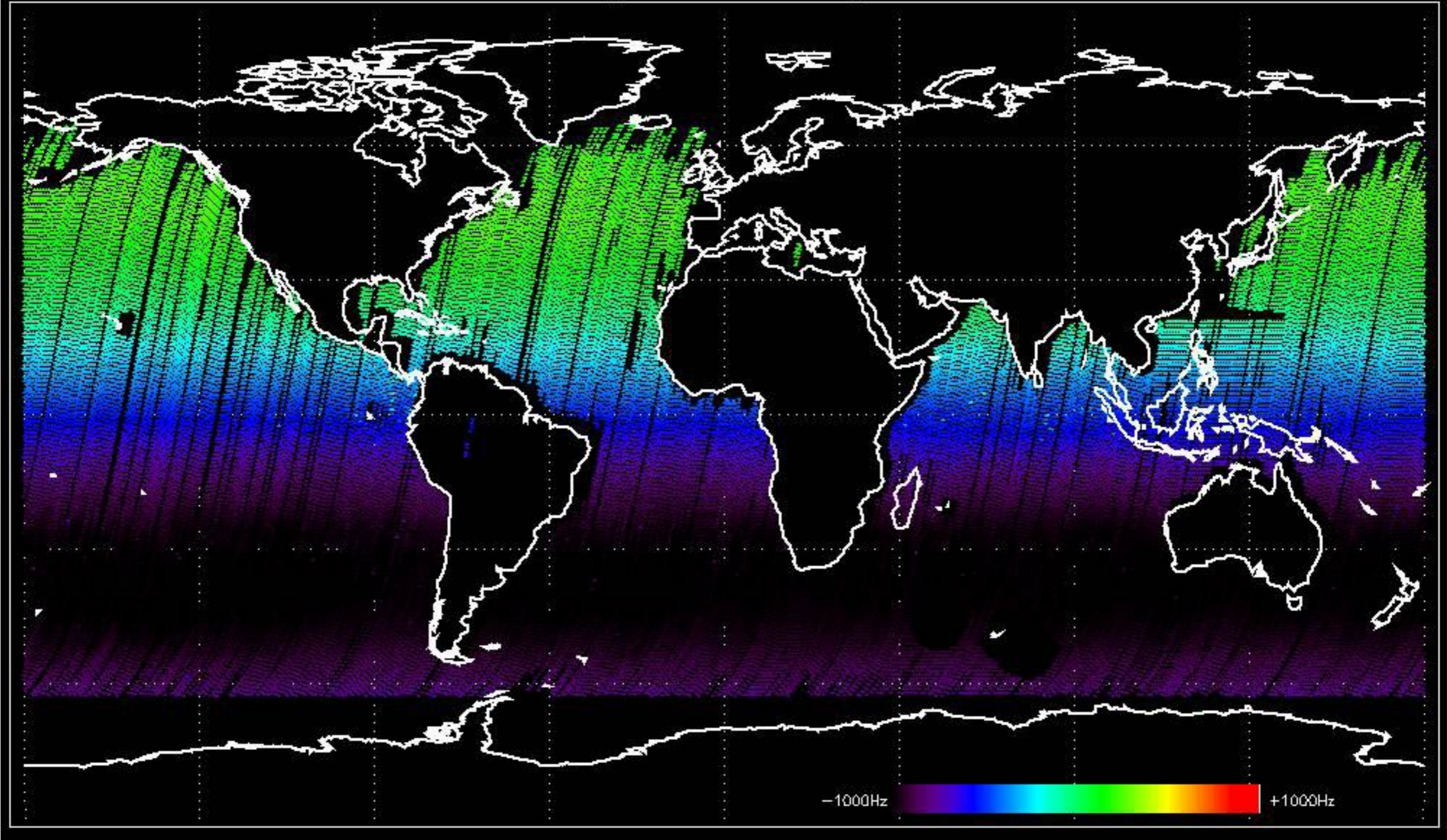
Doppler 'GM1' 'SS1' descending



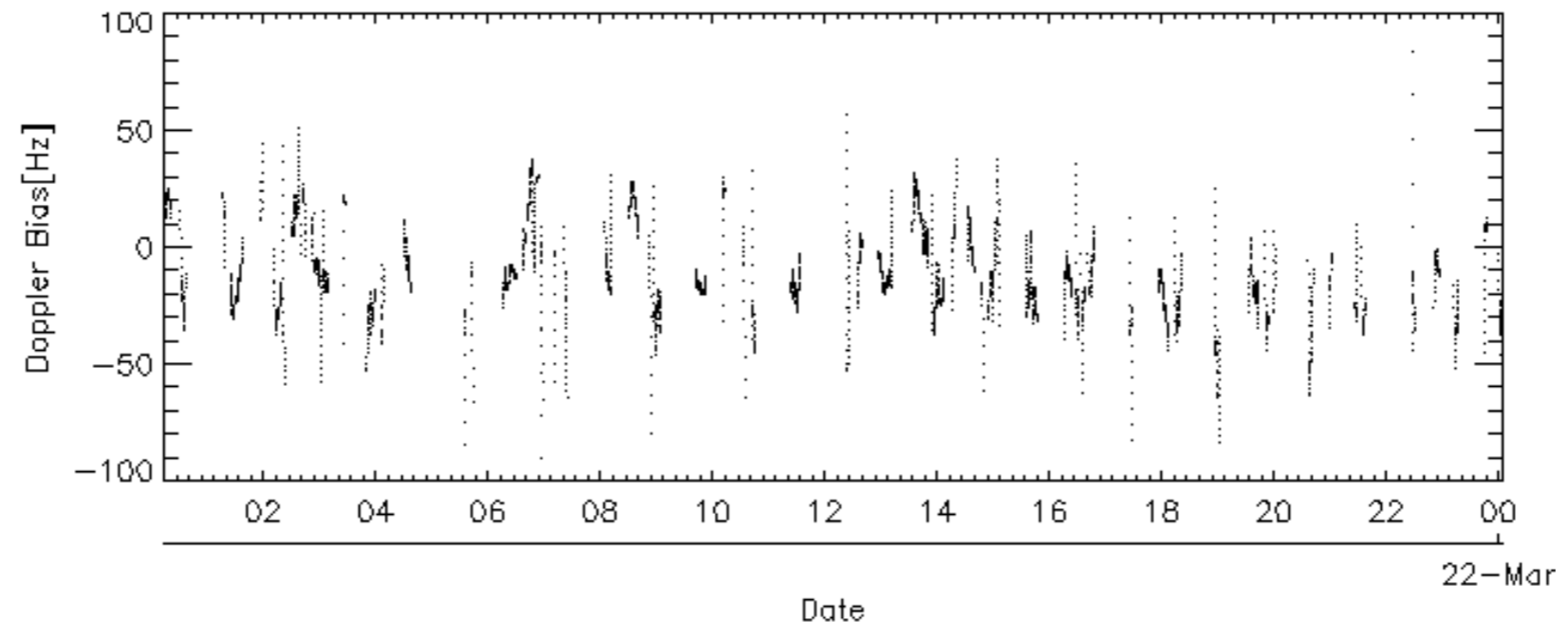
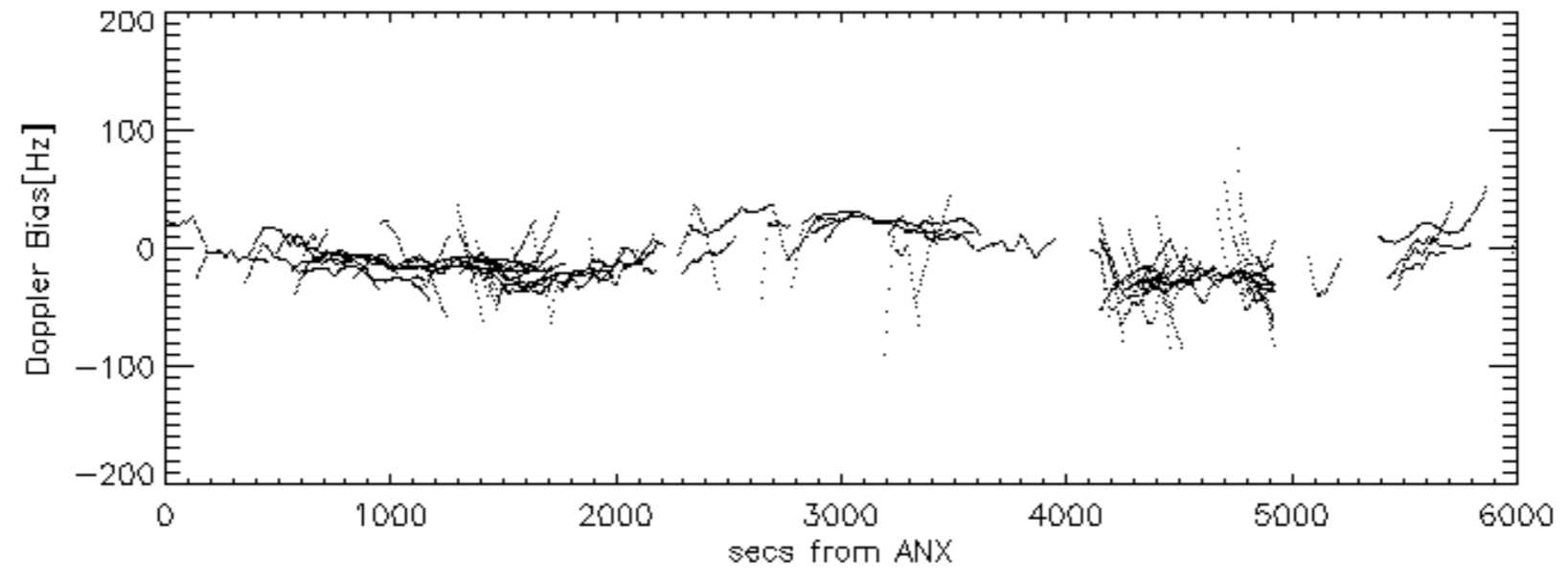
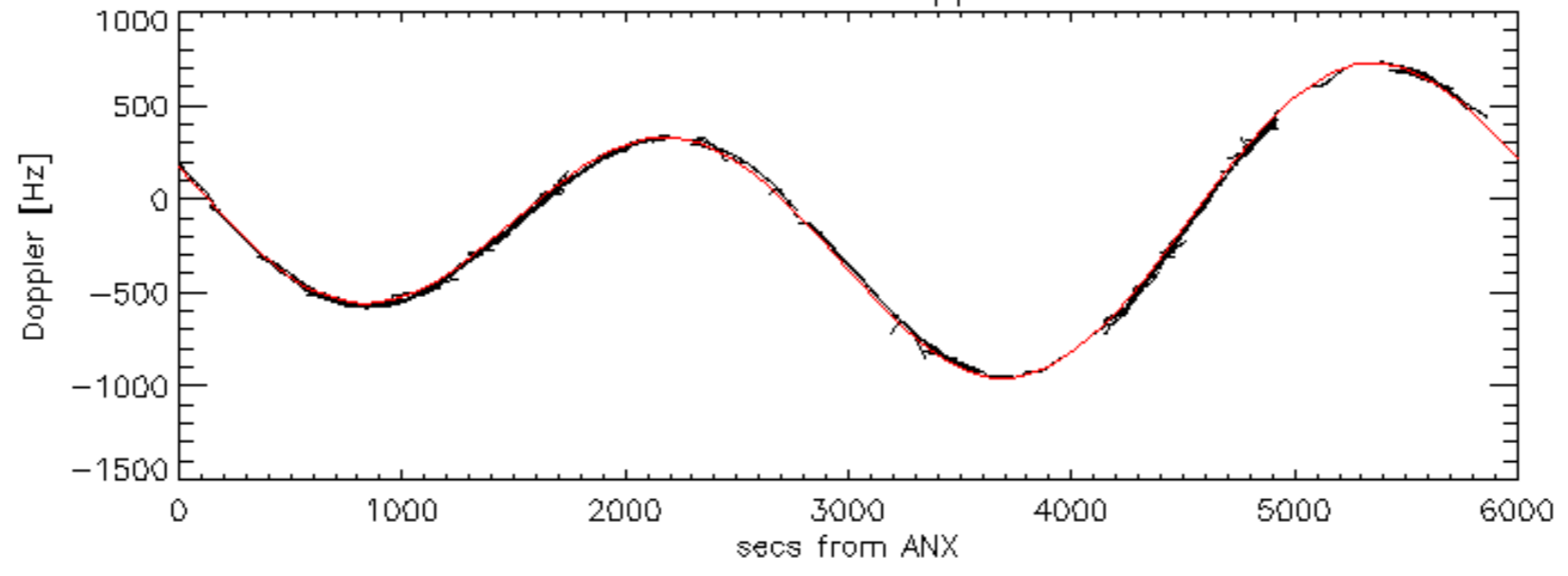
Doppler 'WVS' 'IS2' ascending

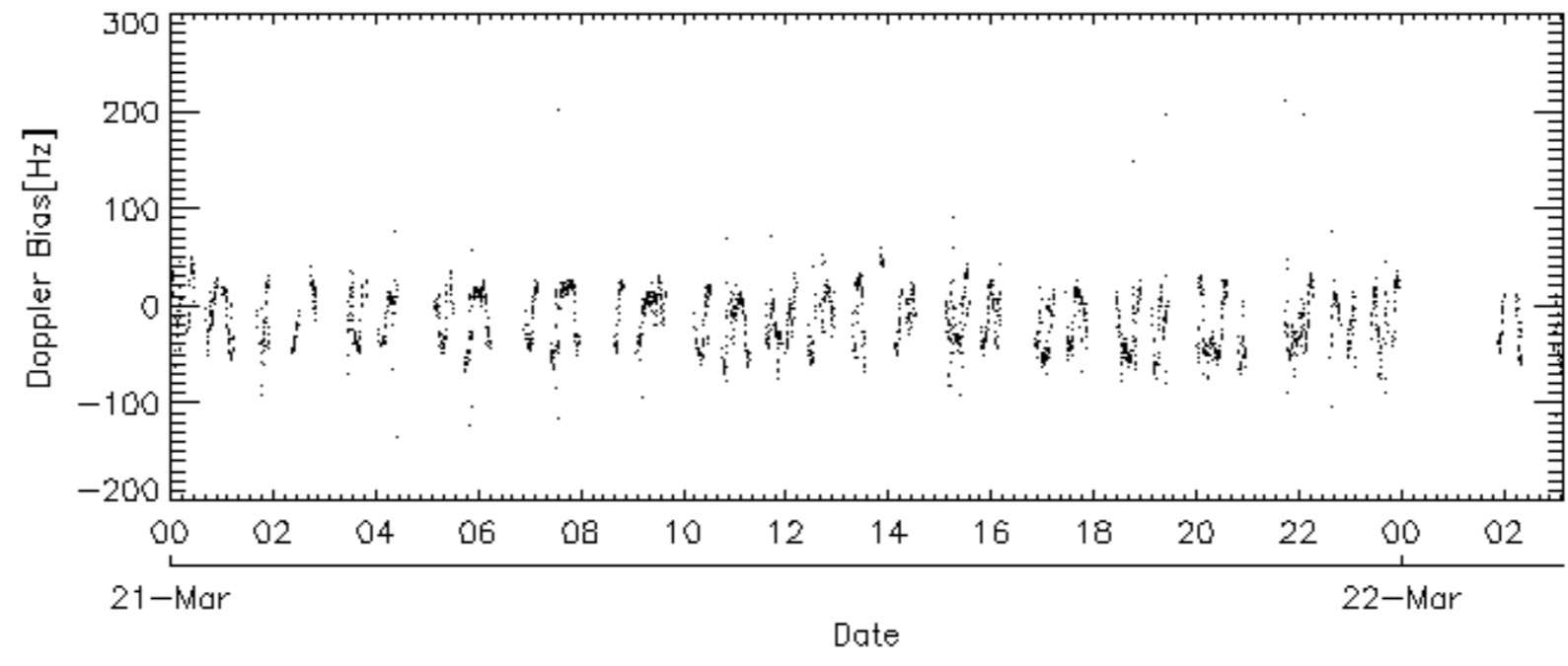
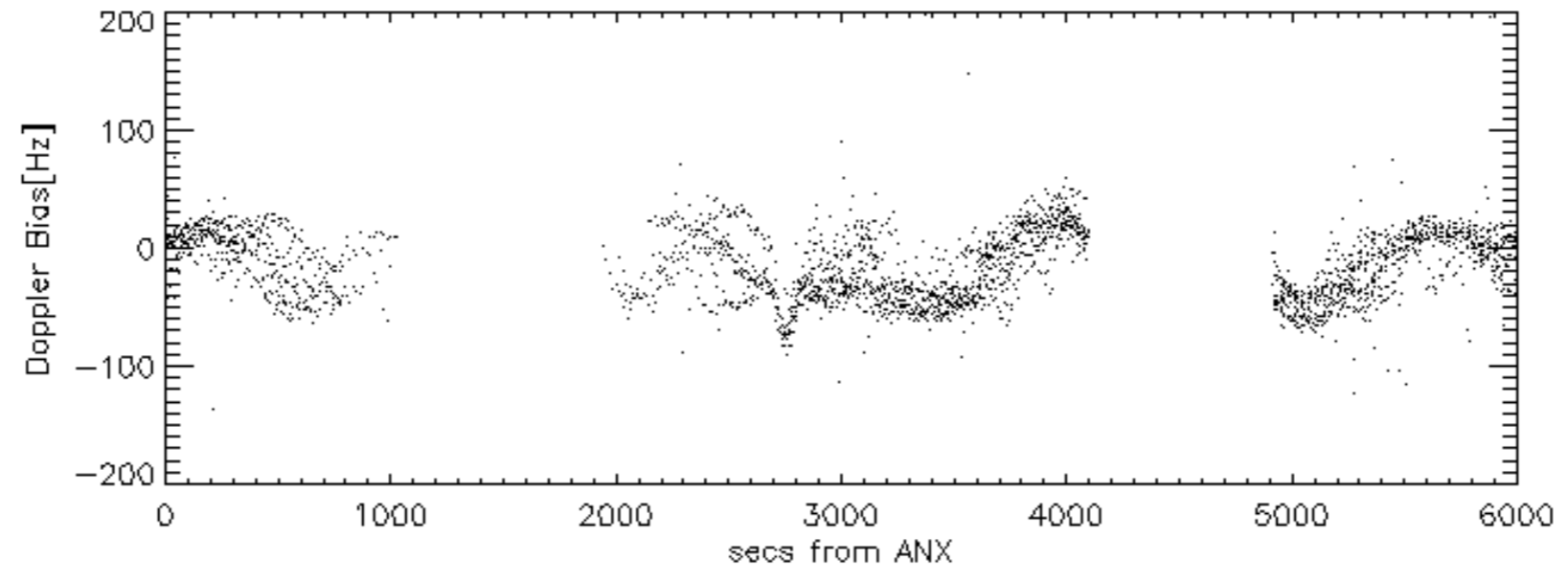
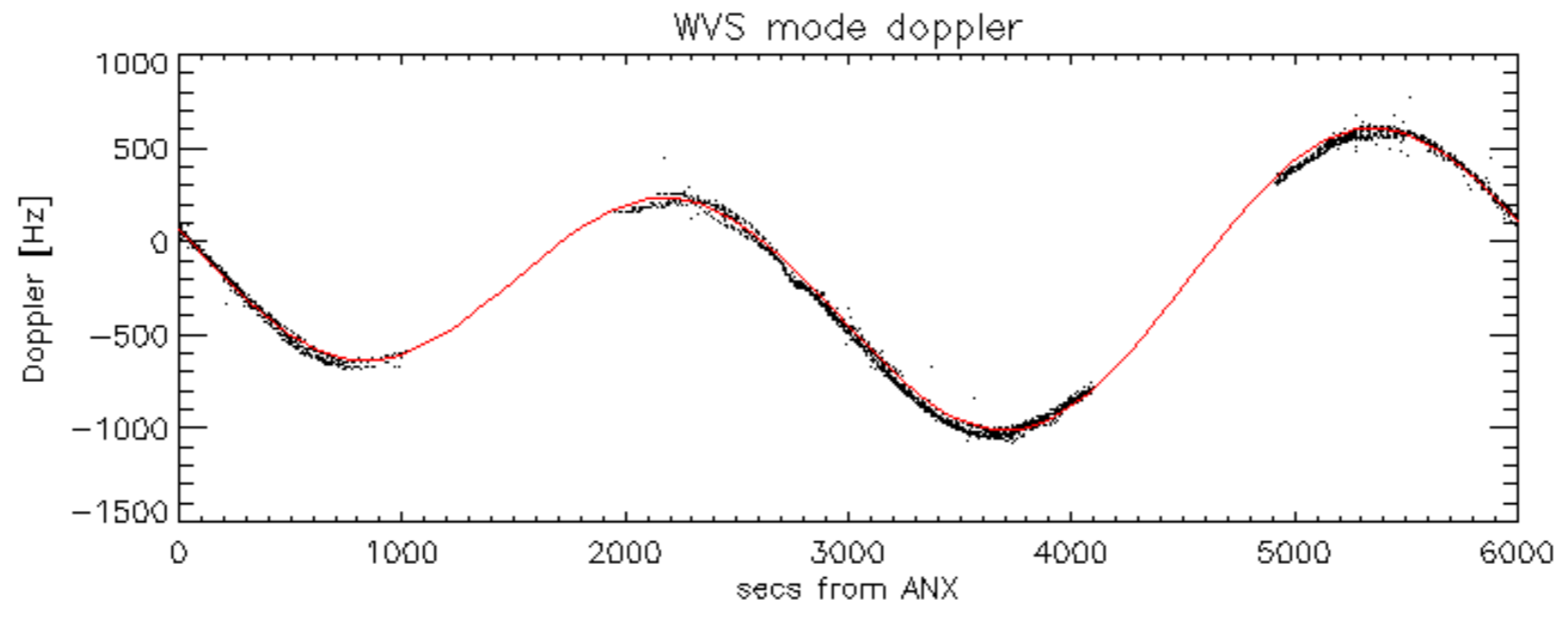


Doppler 'WVS' 'IS2' descending

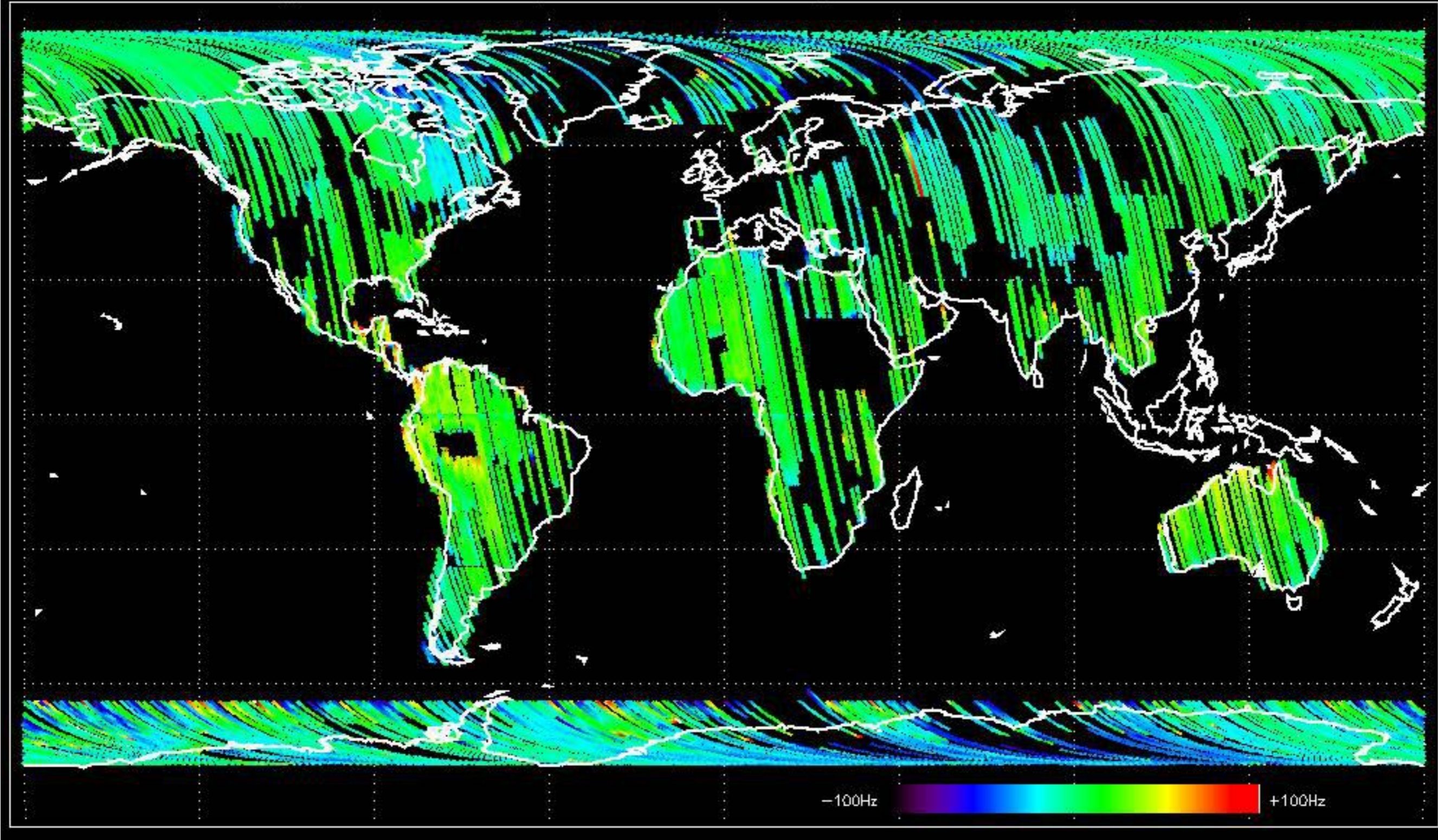


GM1 mode doppler

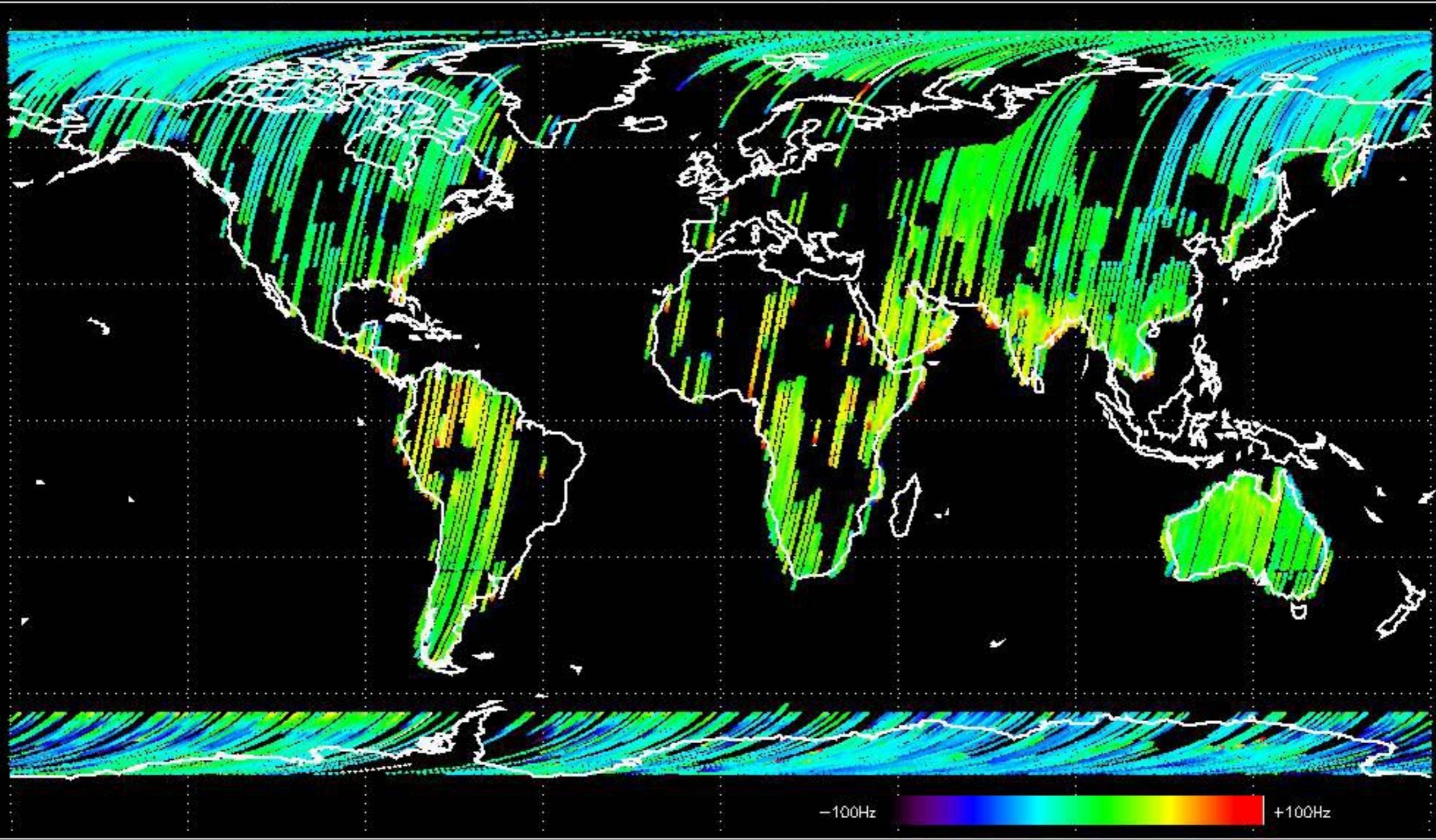




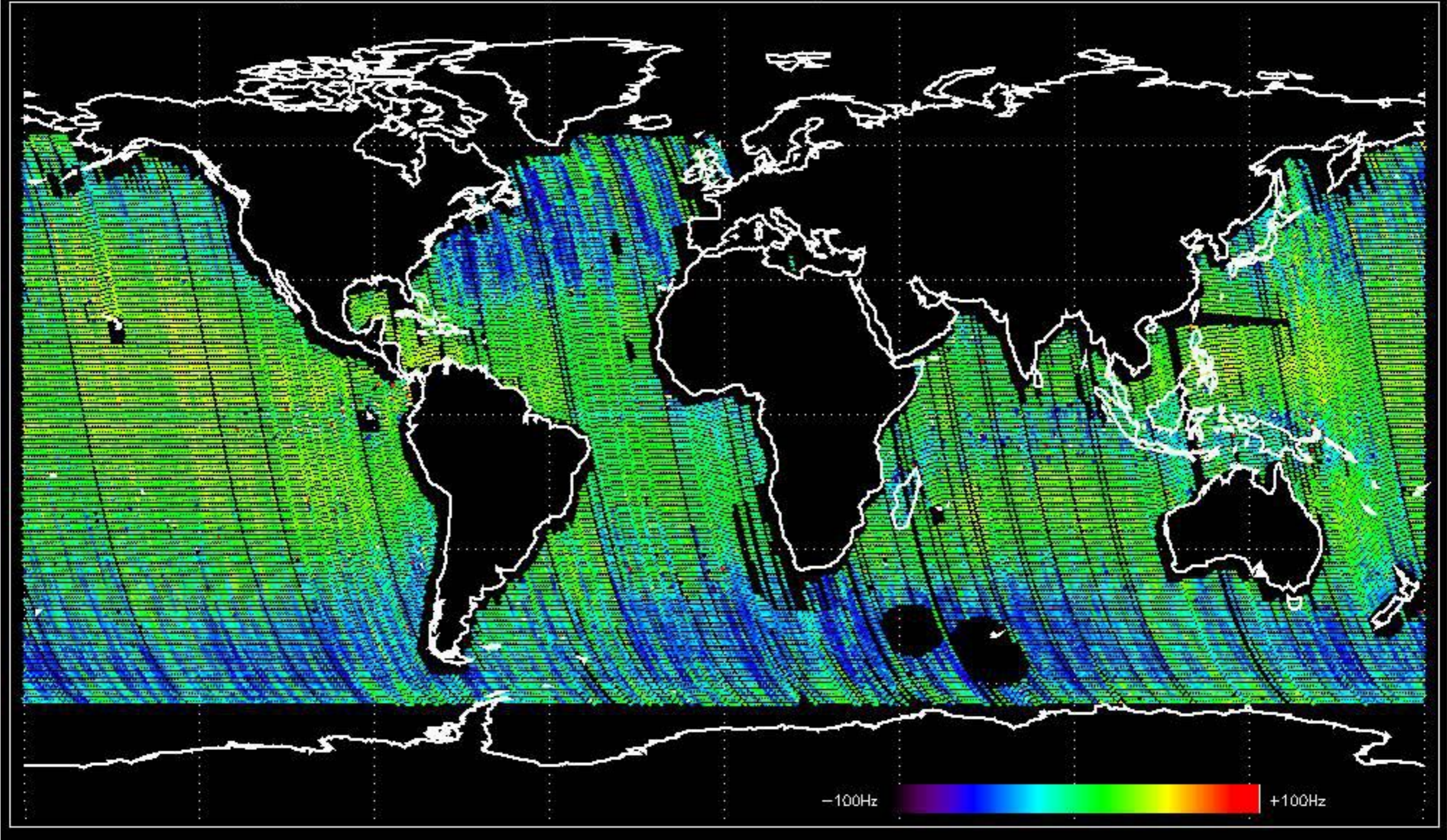
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.8629416 Hz



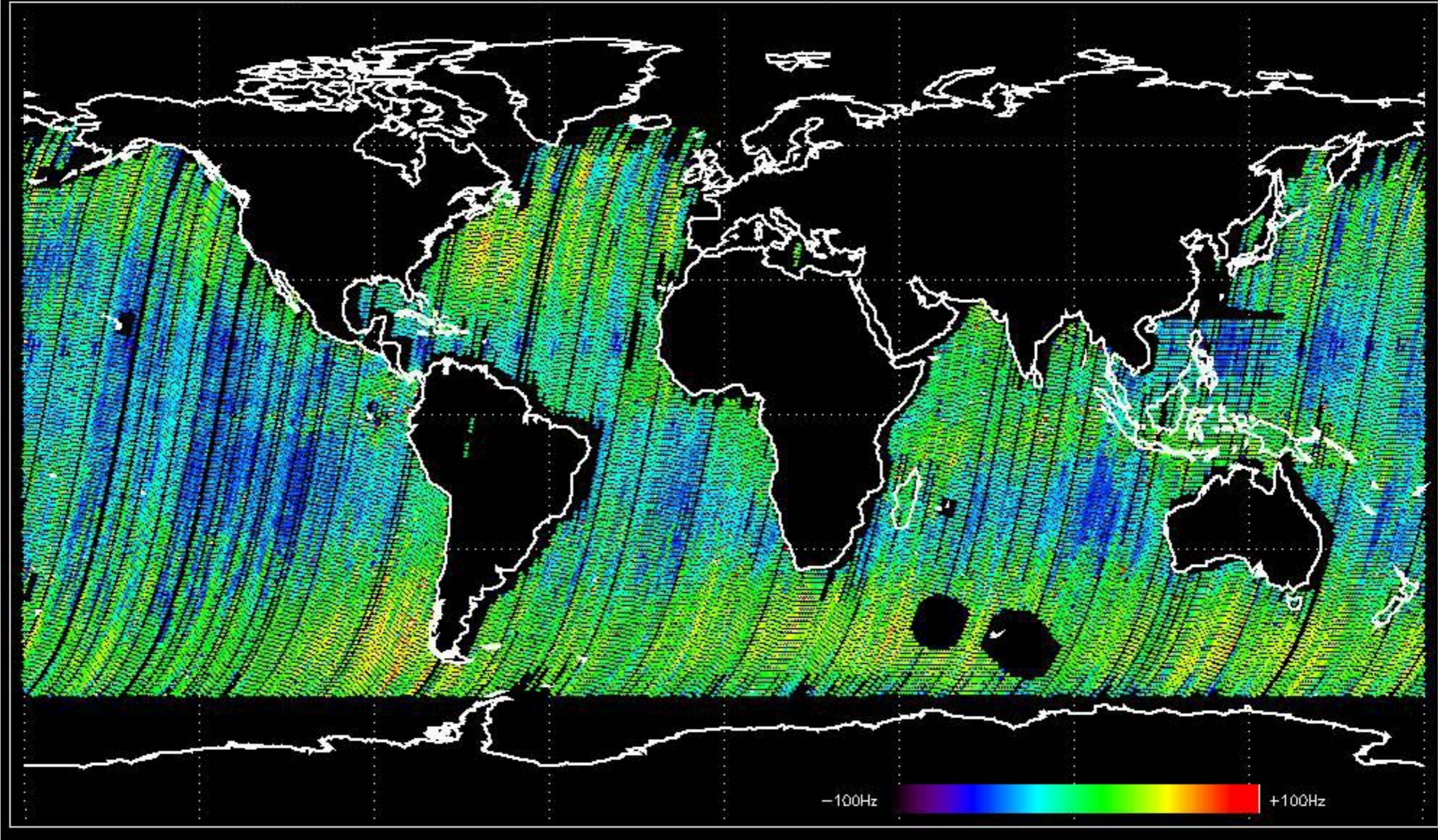
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.1371025 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.5044515 Hz

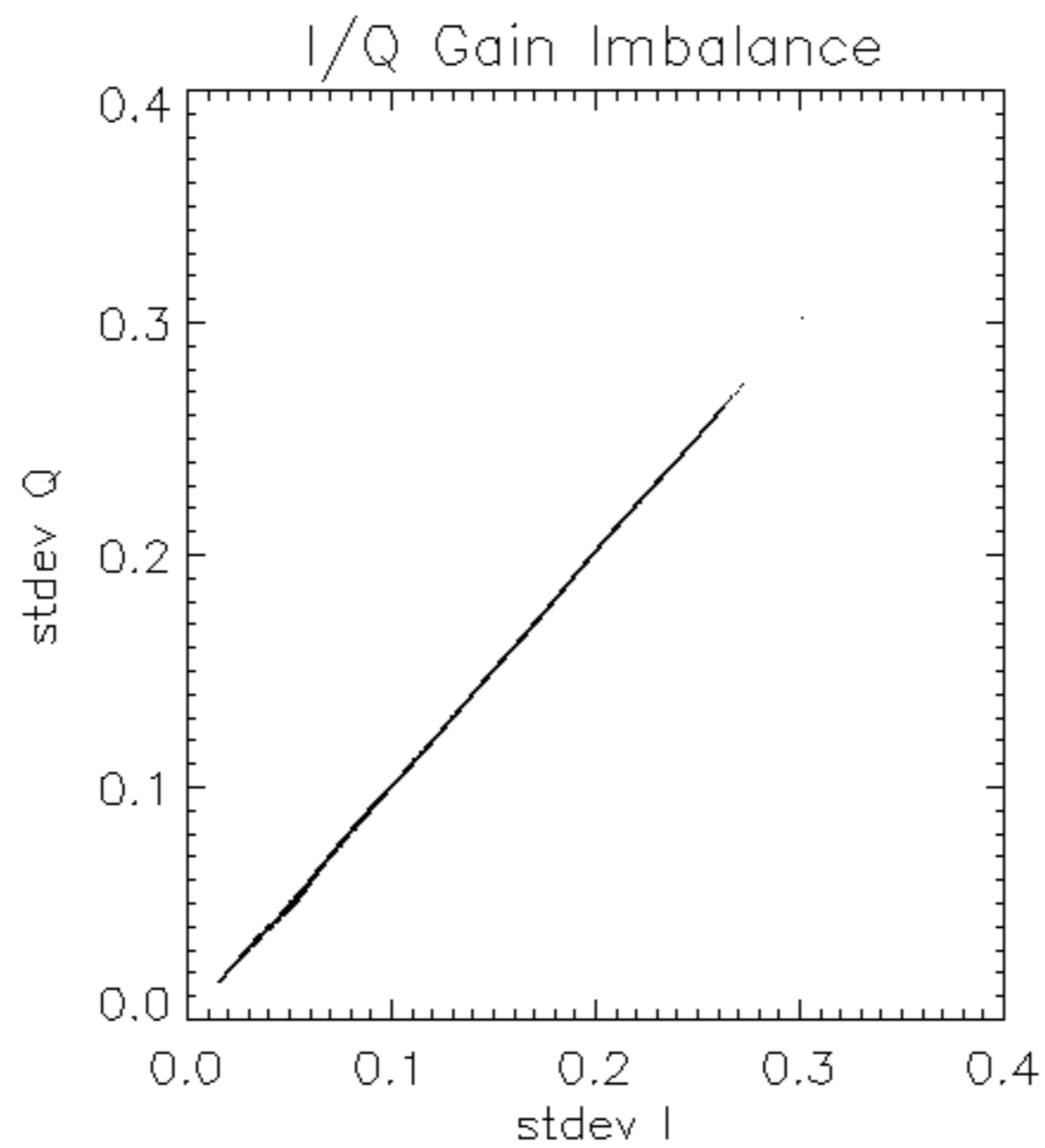


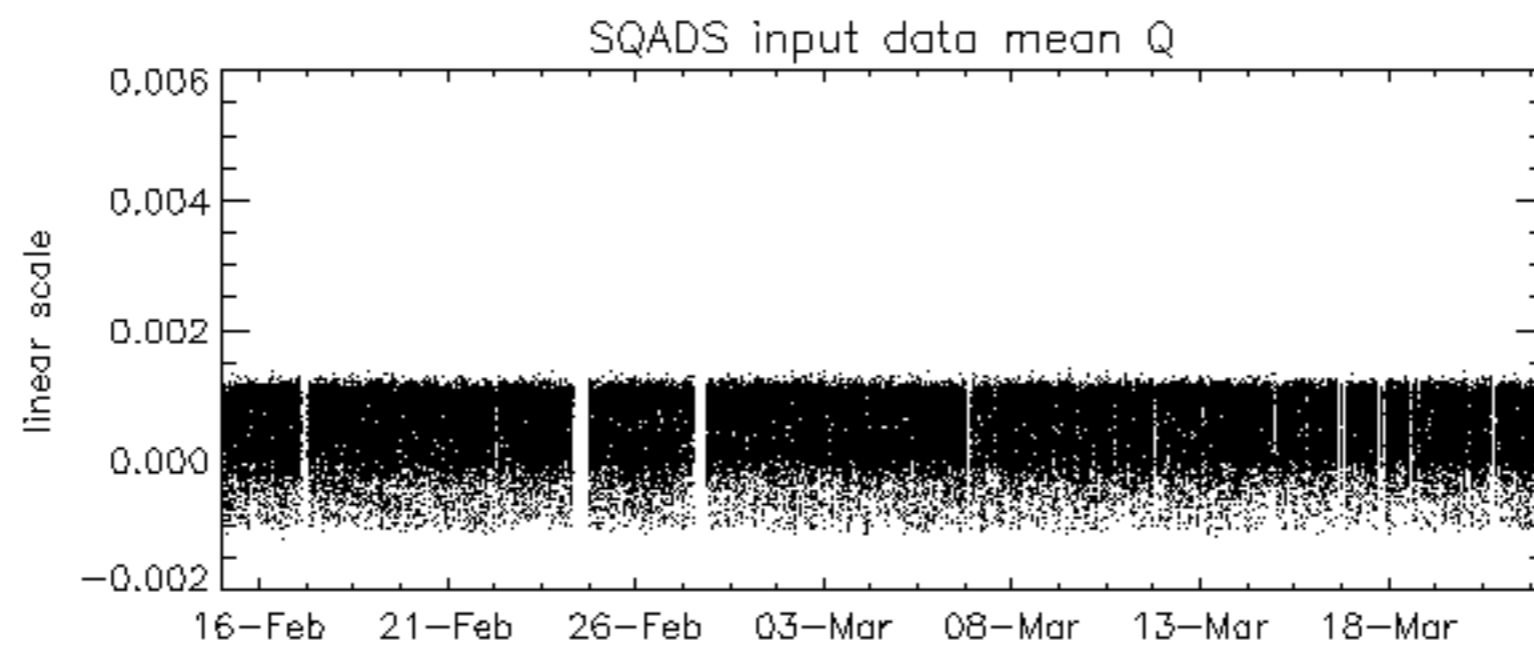
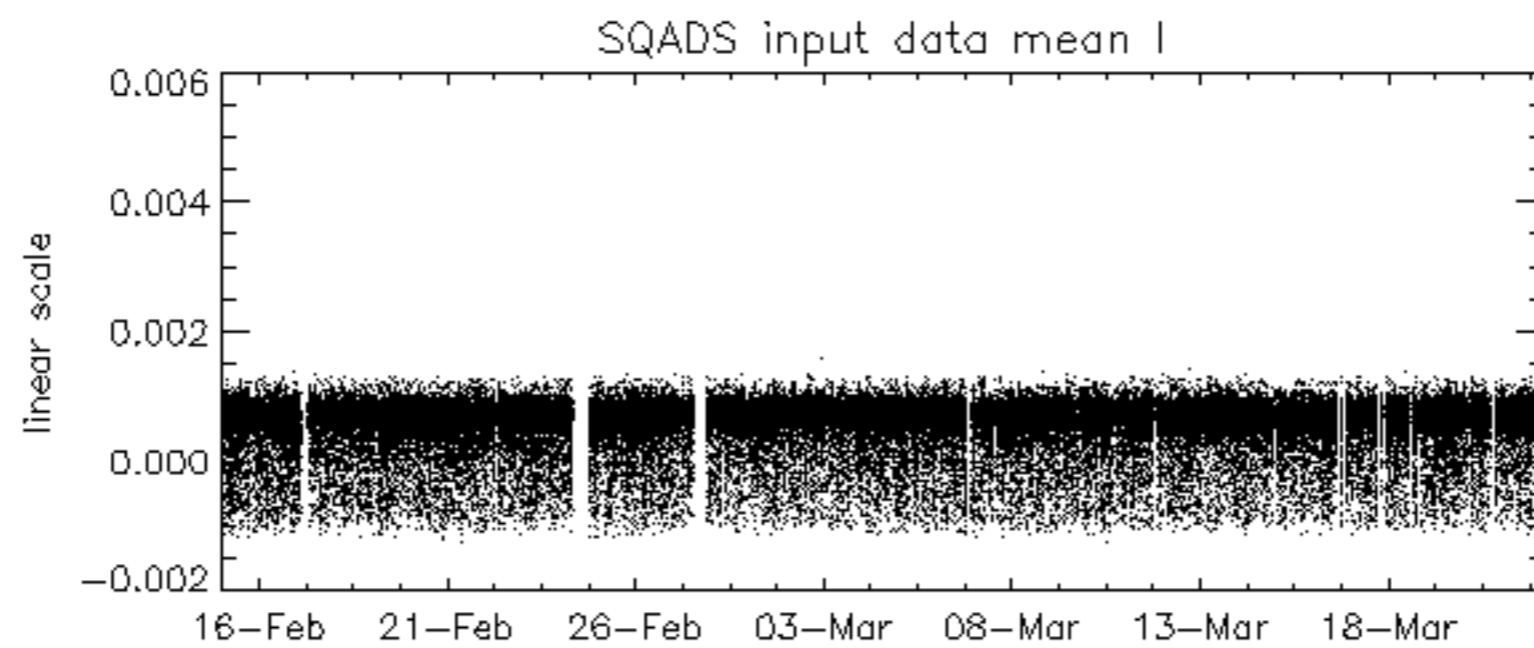
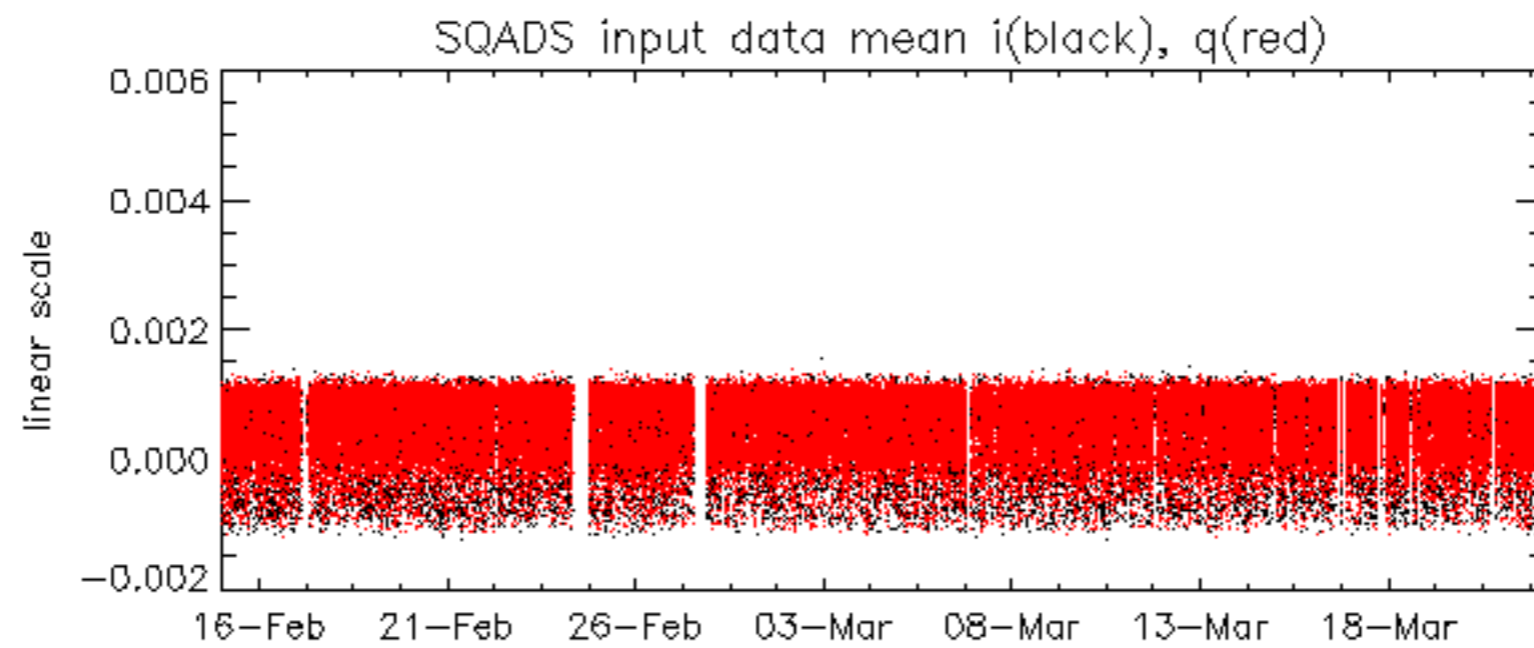
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -8.1795839 Hz

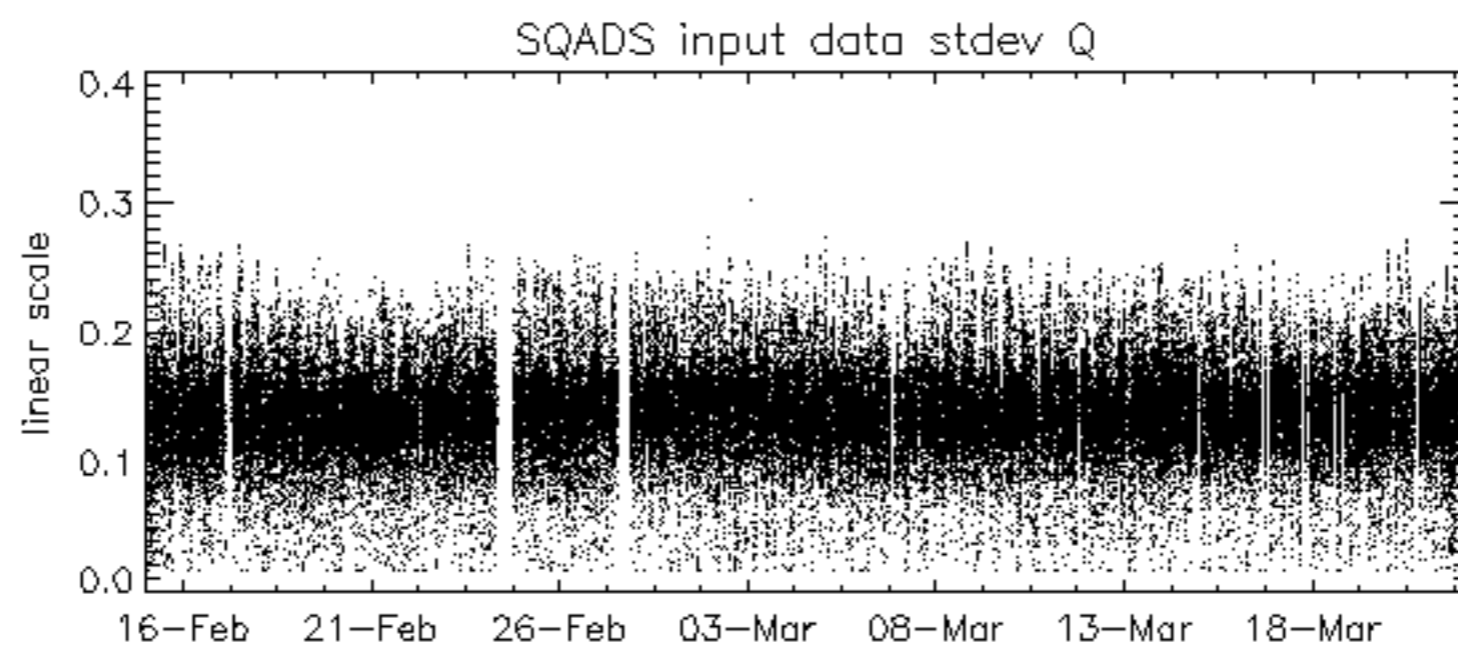
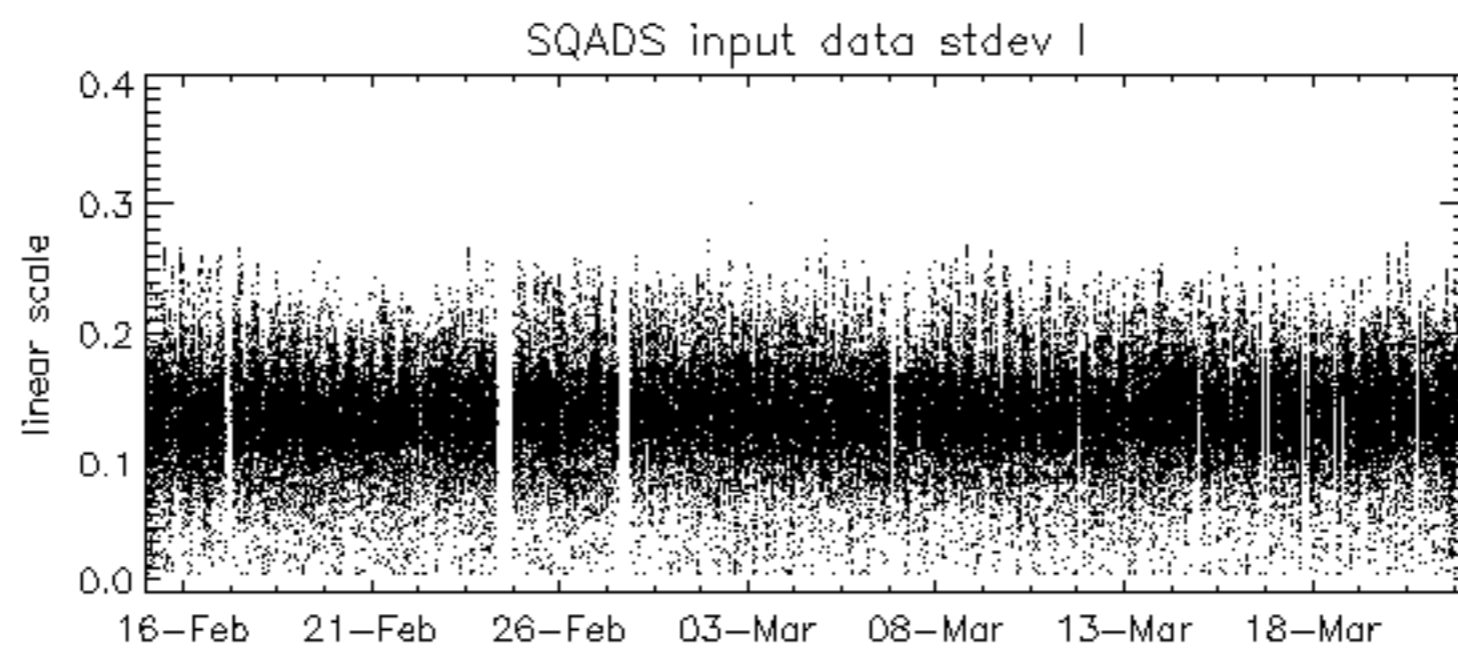
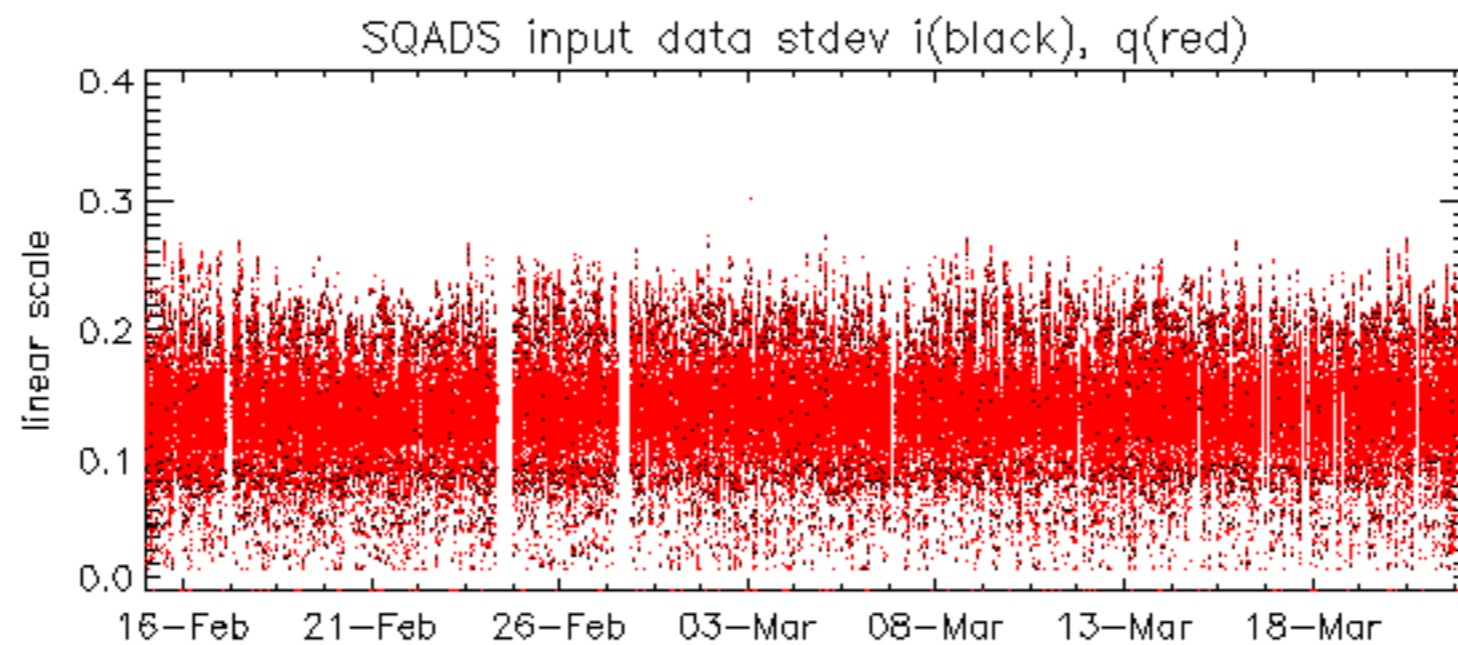


No anomalies observed on available MS products:

No anomalies observed.



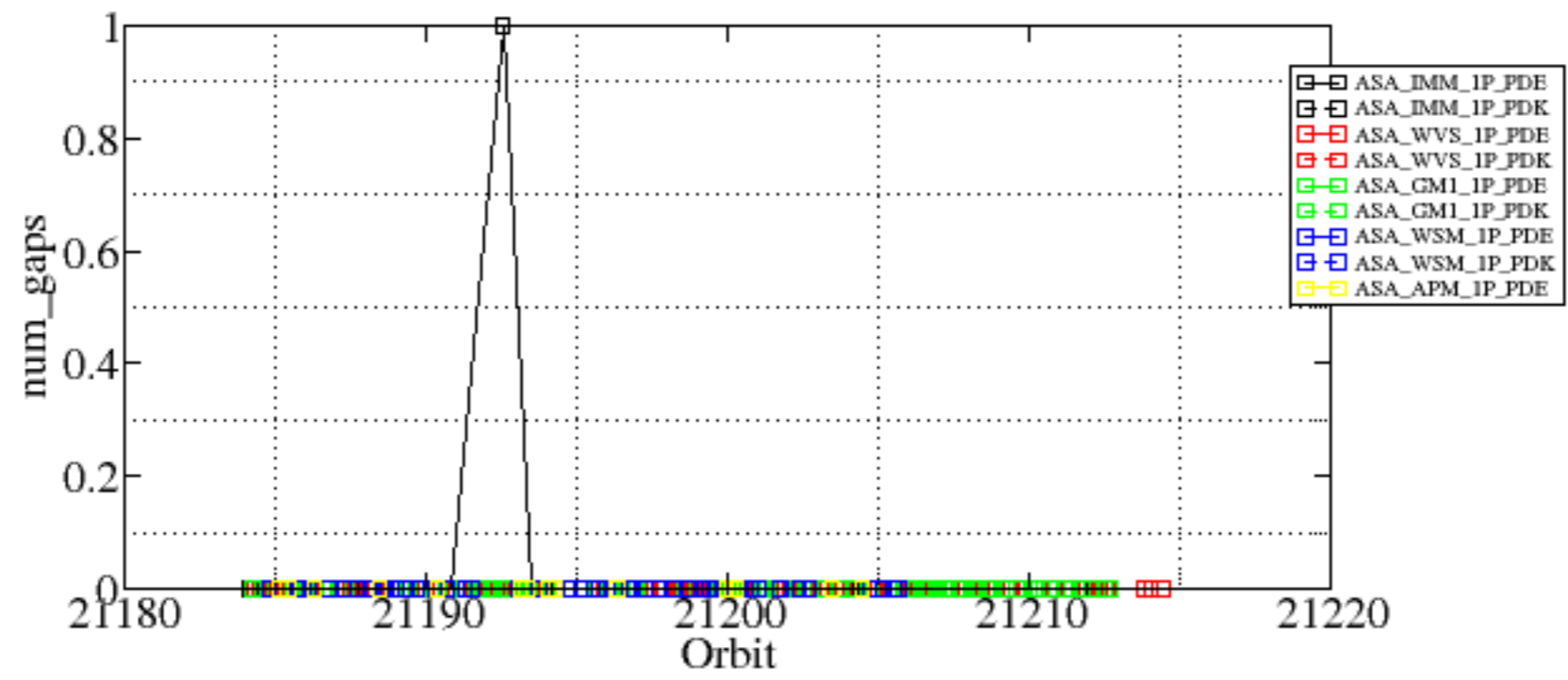


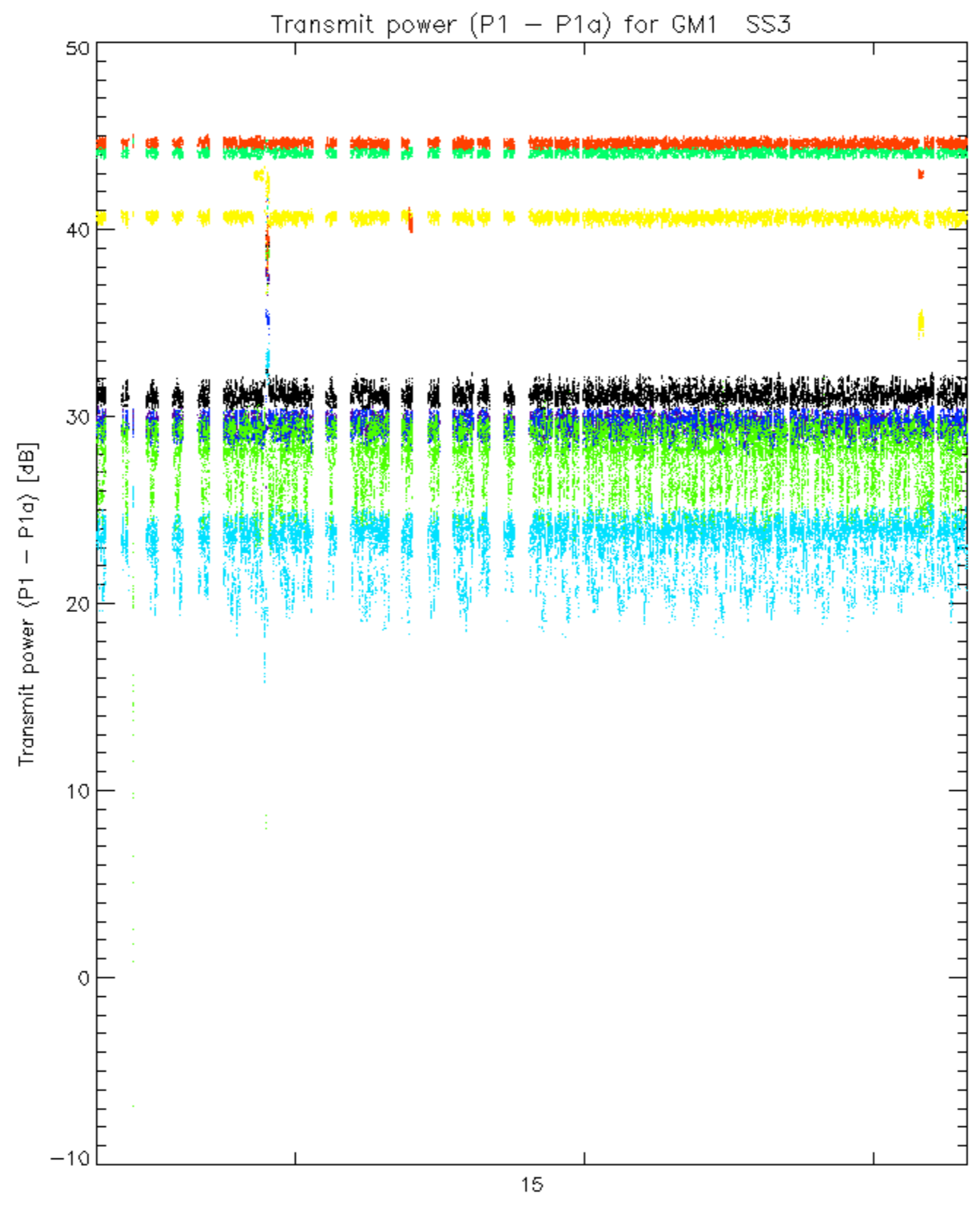


Summary of analysis for the last 3 days 2006032[012]

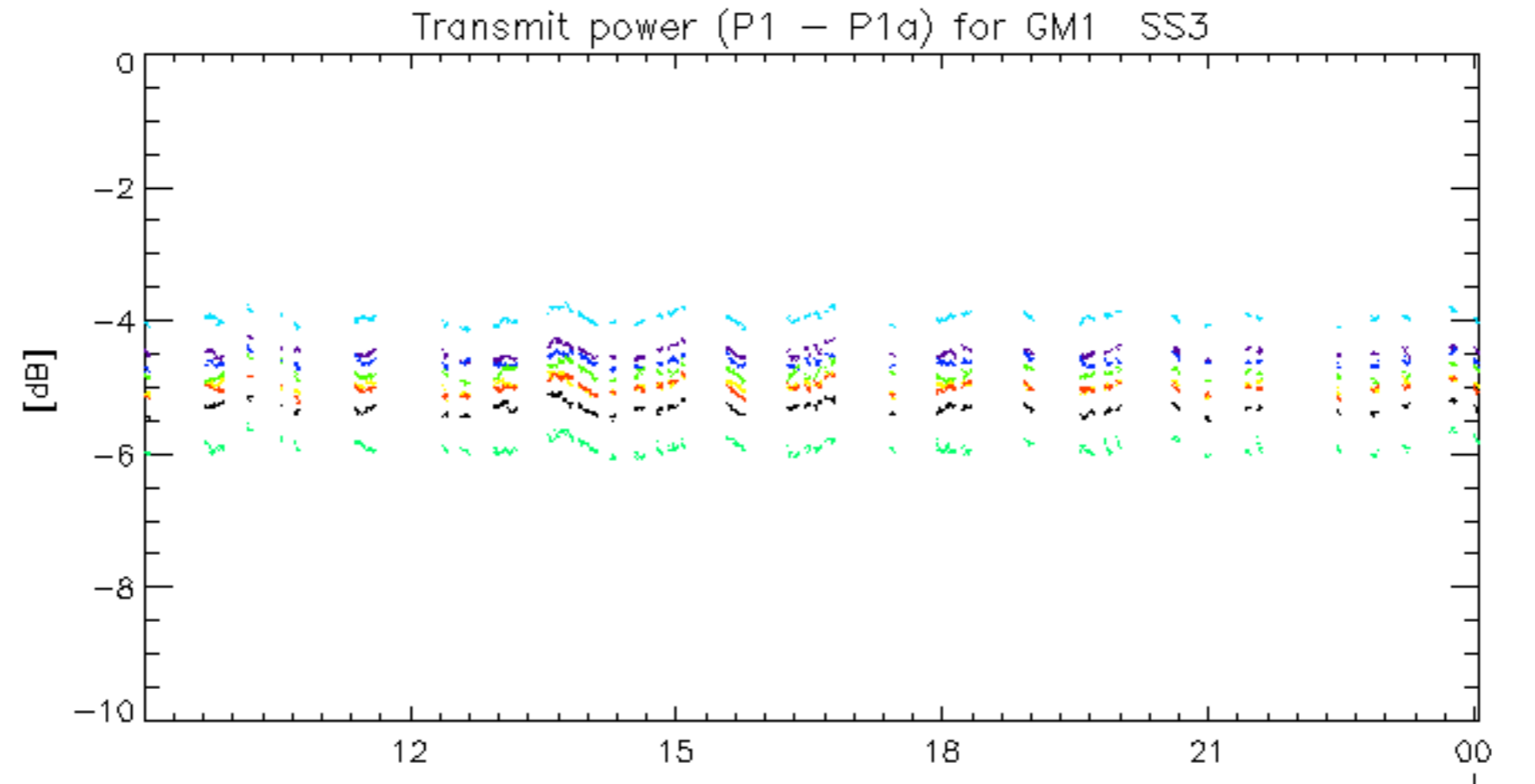
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060320_141119_000001602046_00096_21192_1254.N1	1	0
ASA_WSM_1PNPDE20060321_042632_000001842046_00105_21201_1778.N1	0	60
ASA_WSM_1PNPDE20060321_063926_000000852046_00106_21202_1792.N1	0	1
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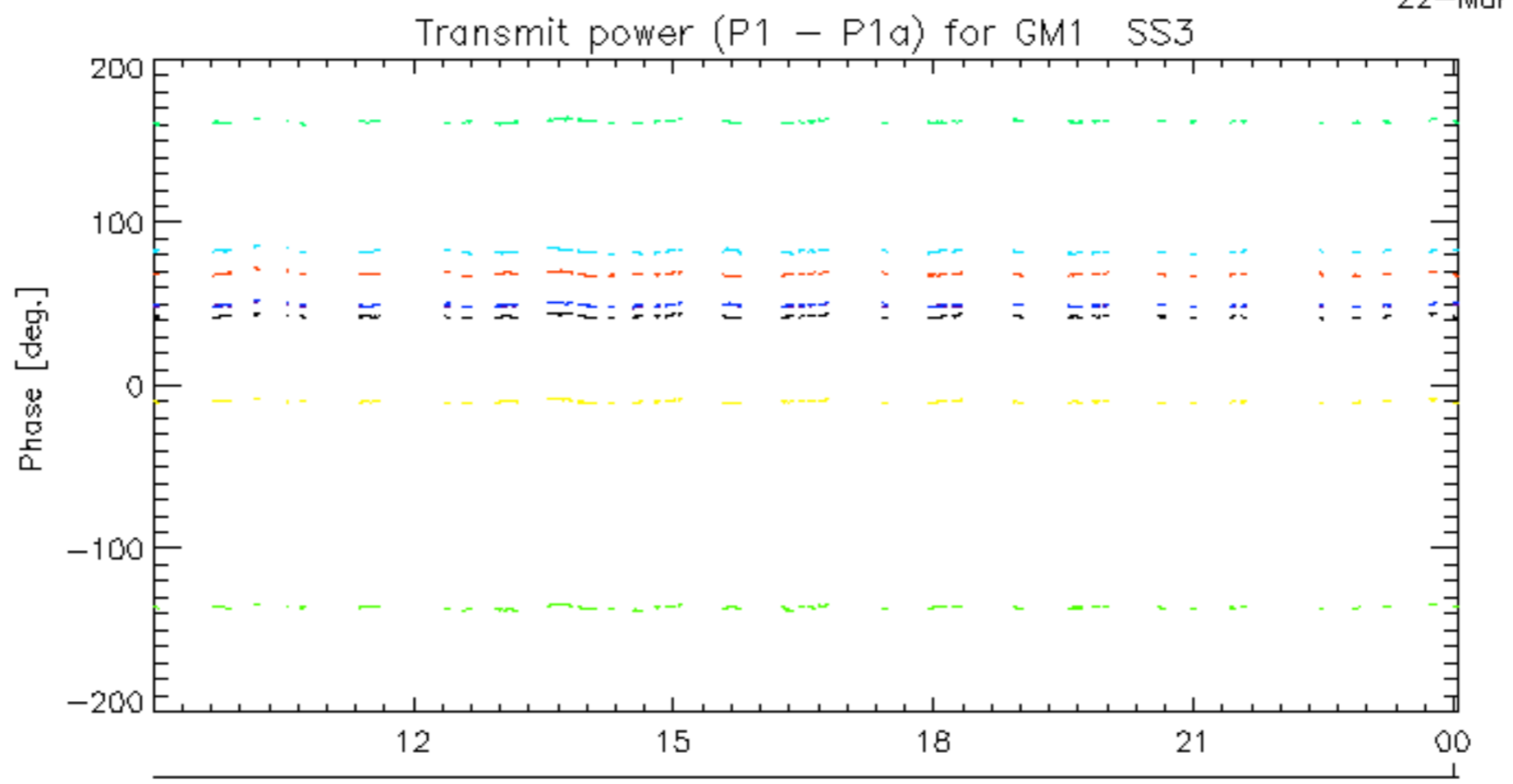




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

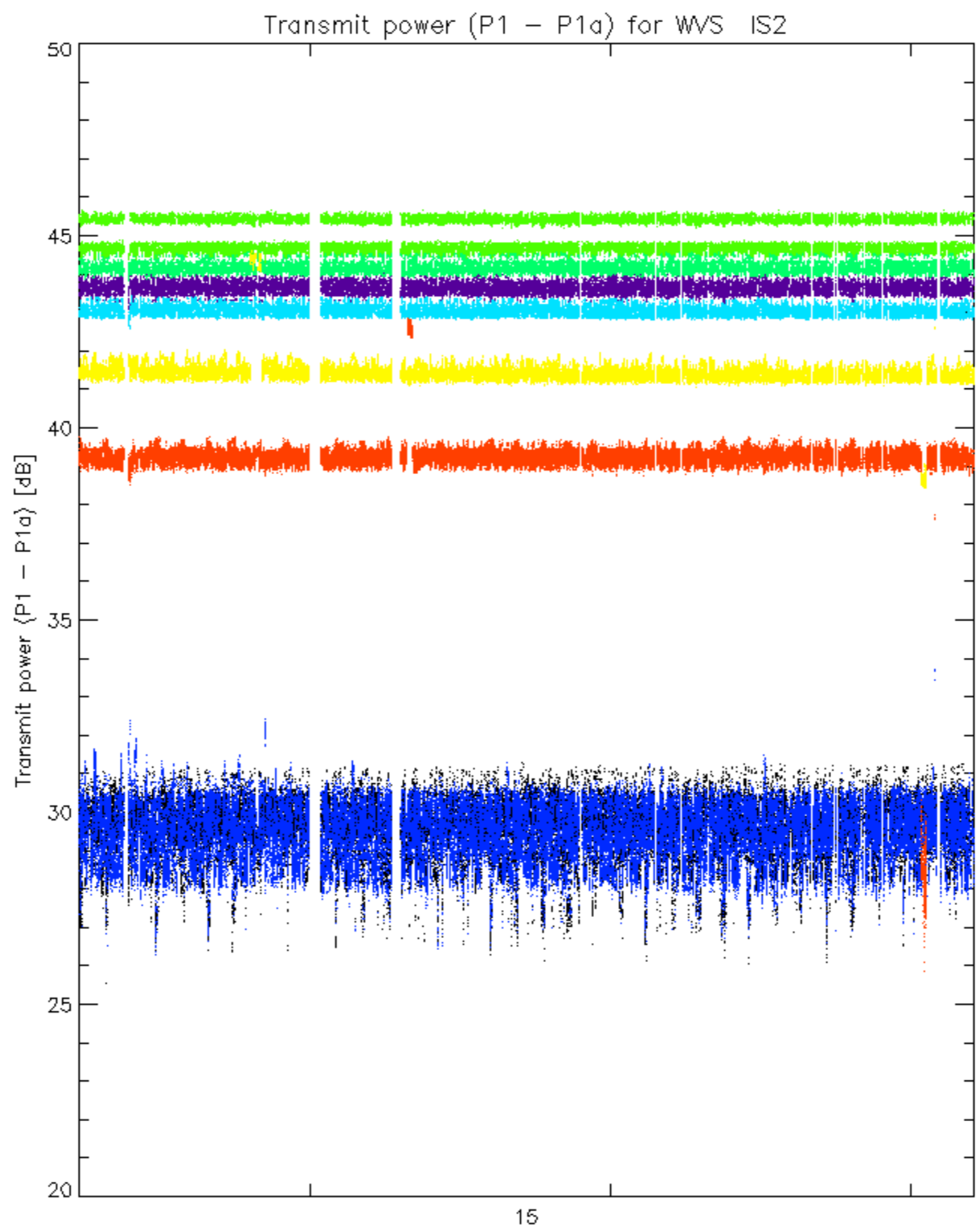


22-Mar

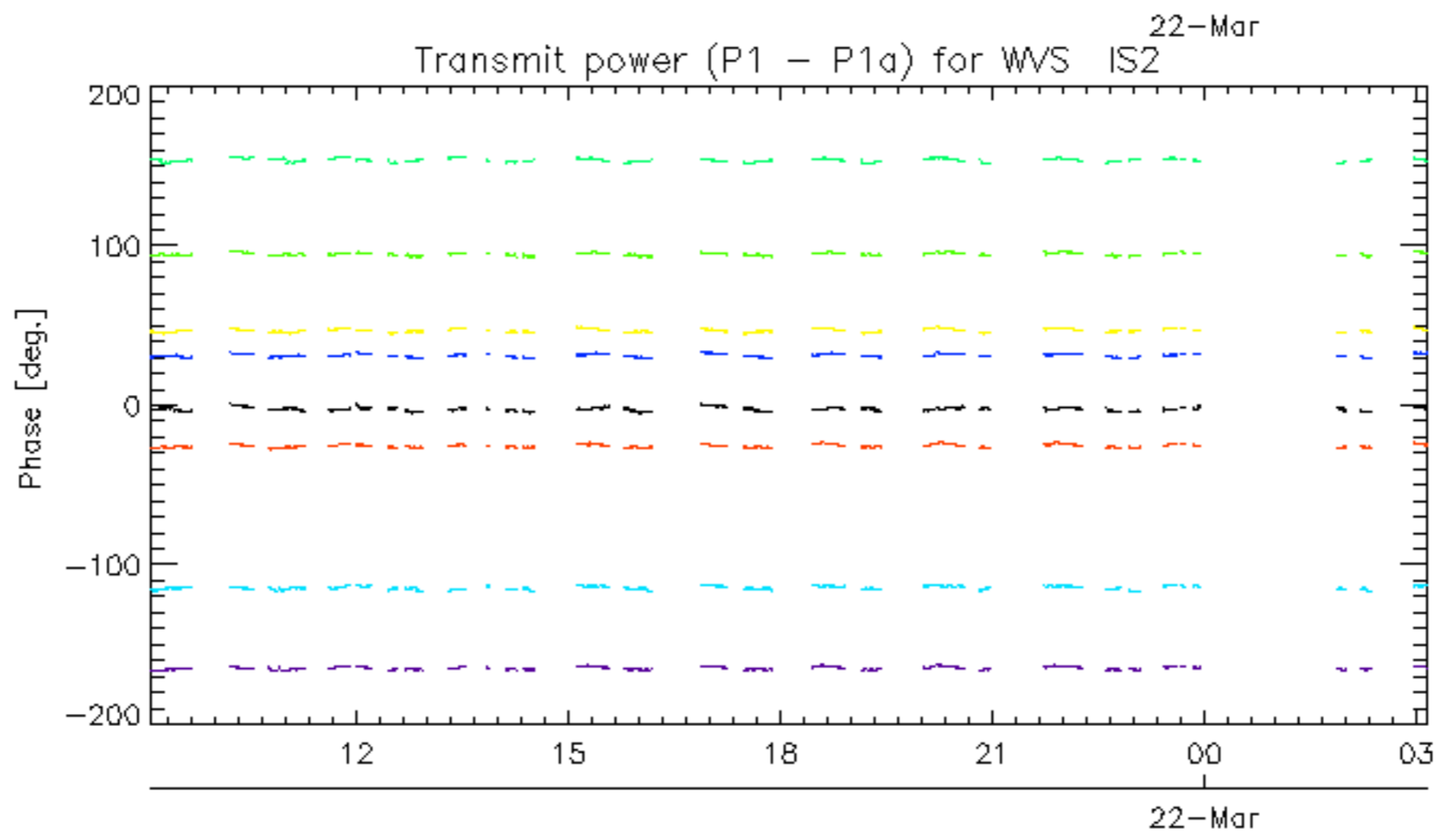
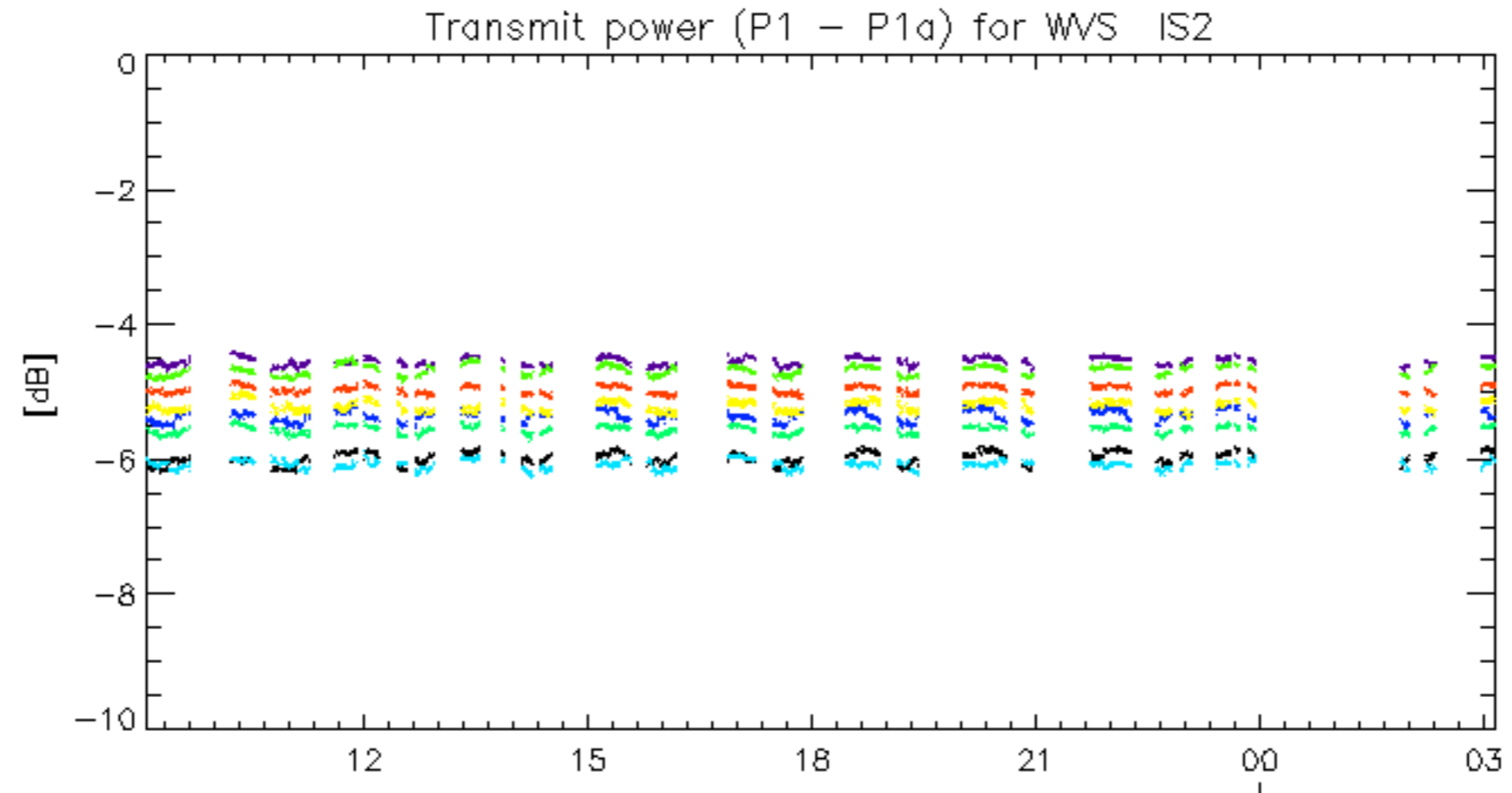


22-Mar

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



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No unavailabilities during the reported period.