

PRELIMINARY REPORT OF 050421

last update on Thu Apr 21 10:50:01 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 2005-04-20 00:00:00 to 2005-04-21 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	24	41	0	3	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	24	41	0	3	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	24	41	0	3	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	24	41	0	3	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	47	59	4	13	1
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	47	59	4	13	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	47	59	4	13	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	47	59	4	13	1

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	20050420 073846
H	20050421 070709

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

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

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	-3.340430	0.013557	-0.020056
7	P1	-3.115600	0.010033	0.003168
11	P1	-4.666278	0.032275	0.006206
15	P1	-5.601413	0.044488	0.085210
19	P1	-3.703401	0.004013	-0.028952
22	P1	-4.550621	0.012219	-0.083530
26	P1	-4.907933	0.019752	0.056892
30	P1	-7.174962	0.024207	0.082251
3	P1	-15.776909	0.339199	0.020920
7	P1	-15.526957	0.089671	0.002844
11	P1	-21.103909	0.454943	-0.372150
15	P1	-11.525485	0.055655	0.184004
19	P1	-14.315899	0.028507	0.000610
22	P1	-15.786642	0.318903	-0.341486
26	P1	-17.630968	0.180885	0.027890
30	P1	-17.915581	0.356650	0.173203

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.046801	0.082413	0.019743
7	P2	-22.221958	0.098875	0.021873
11	P2	-14.229290	0.109530	0.156744
15	P2	-7.059499	0.092637	-0.050801
19	P2	-9.643209	0.095438	-0.038097
22	P2	-16.883383	0.097349	0.020851
26	P2	-16.454769	0.095380	-0.052461
30	P2	-18.825438	0.086023	0.003585

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.165215	0.004412	-0.001074
7	P3	-8.165215	0.004412	-0.001074
11	P3	-8.165214	0.004412	-0.001070
15	P3	-8.165214	0.004412	-0.001070
19	P3	-8.165214	0.004412	-0.001070
22	P3	-8.165214	0.004412	-0.001070
26	P3	-8.165214	0.004412	-0.001070
30	P3	-8.165215	0.004412	-0.001072

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	-2.725842	0.026418	-0.111724
7	P1	-3.007476	0.046161	-0.006935
11	P1	-3.979429	0.027069	-0.022914
15	P1	-3.540802	0.036759	-0.017050
19	P1	-3.615798	0.013987	-0.029337
22	P1	-5.705460	0.042871	0.089933
26	P1	-7.300284	0.025312	-0.037226
30	P1	-6.268214	0.060816	-0.079427
3	P1	-10.711831	0.162076	-0.150196
7	P1	-10.356036	0.177975	-0.135677
11	P1	-12.536393	0.139581	-0.110389
15	P1	-11.694818	0.100426	0.046590
19	P1	-15.597261	0.054399	-0.054018
22	P1	-24.859911	1.586677	-0.771015

26	P1	-15.560042	0.251868	-0.252070
30	P1	-20.165058	1.231468	0.088855

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.745810	0.040173	-0.015600
7	P2	-22.301197	0.045690	0.030834
11	P2	-10.078536	0.058274	0.013902
15	P2	-5.022615	0.034508	-0.114875
19	P2	-6.858315	0.050885	-0.102573
22	P2	-7.078515	0.038587	-0.055478
26	P2	-23.871246	0.037485	-0.096188
30	P2	-21.900900	0.042973	-0.080344

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.000667	0.003556	-0.014760
7	P3	-8.000852	0.003541	-0.014718
11	P3	-8.000718	0.003548	-0.014705
15	P3	-8.000855	0.003553	-0.015151
19	P3	-8.000875	0.003544	-0.015178
22	P3	-8.000823	0.003536	-0.014827
26	P3	-8.000780	0.003541	-0.014976
30	P3	-8.000769	0.003543	-0.014780

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	0.000479611
	stdev	2.15322e-07
MEAN Q	mean	0.000493154
	stdev	2.32684e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129544
	stdev	0.00104037
STDEV Q	mean	0.129806
	stdev	0.00105226



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005042[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

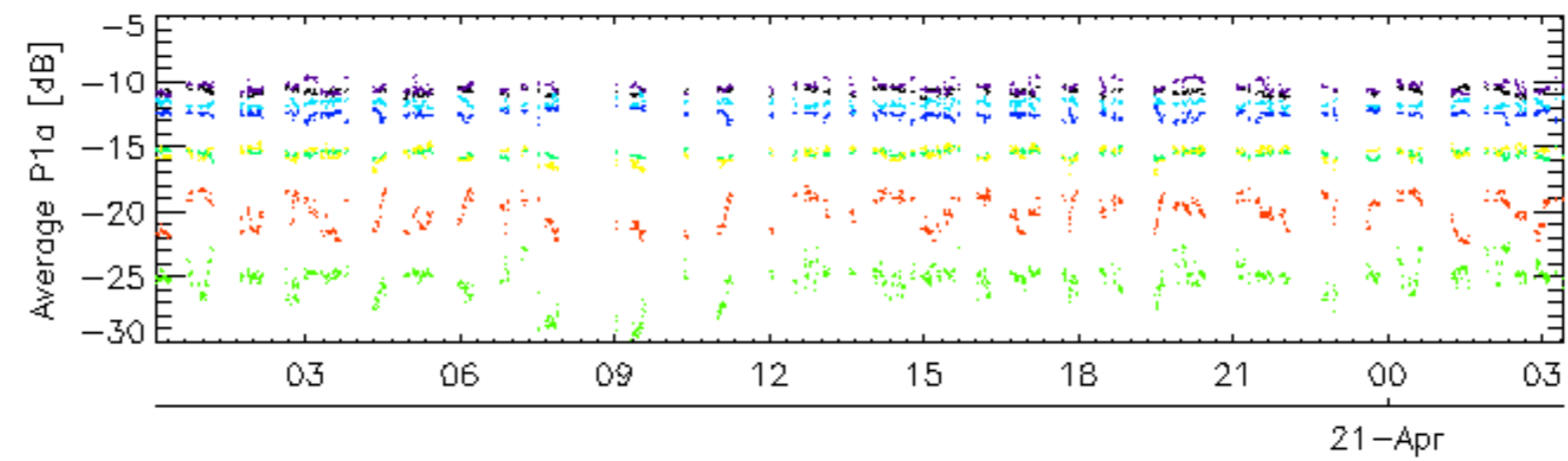
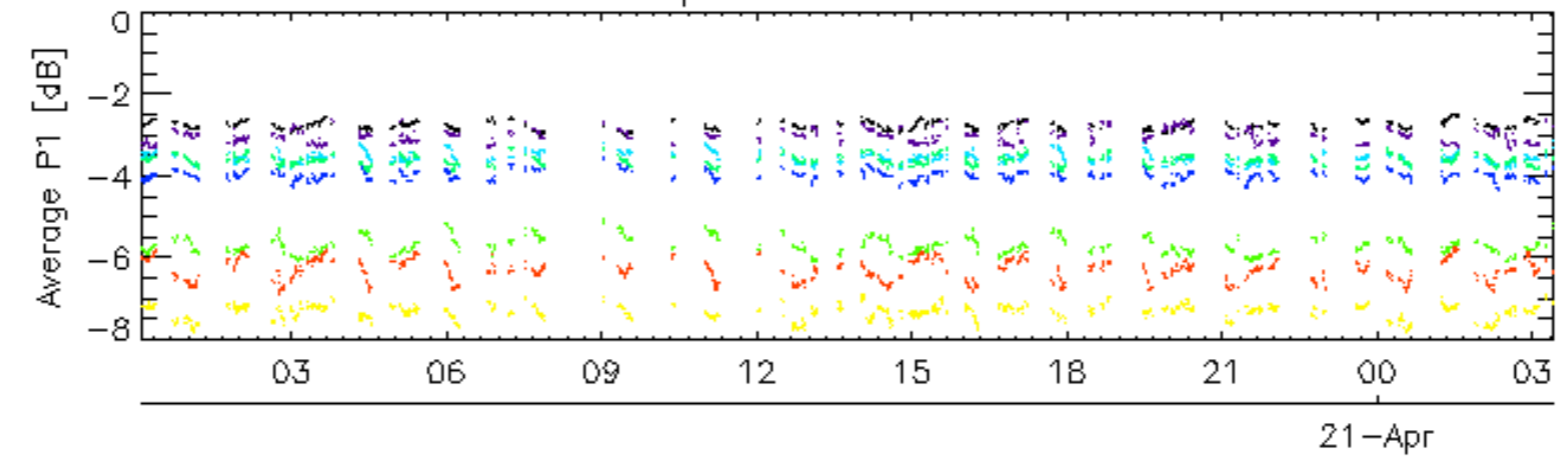
Ascending

Descending

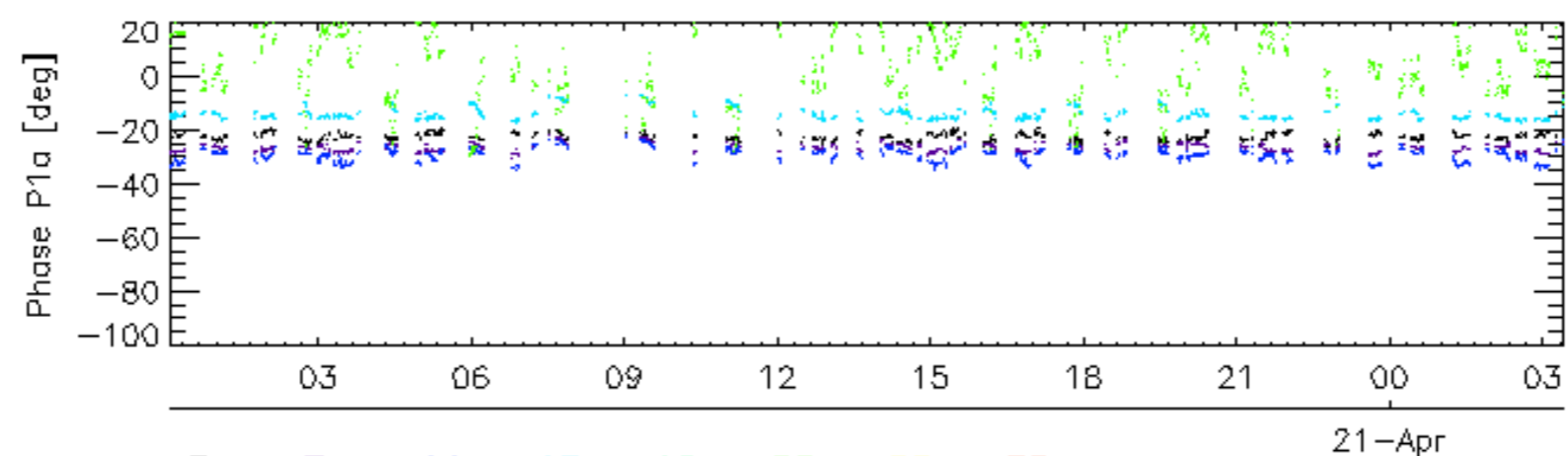
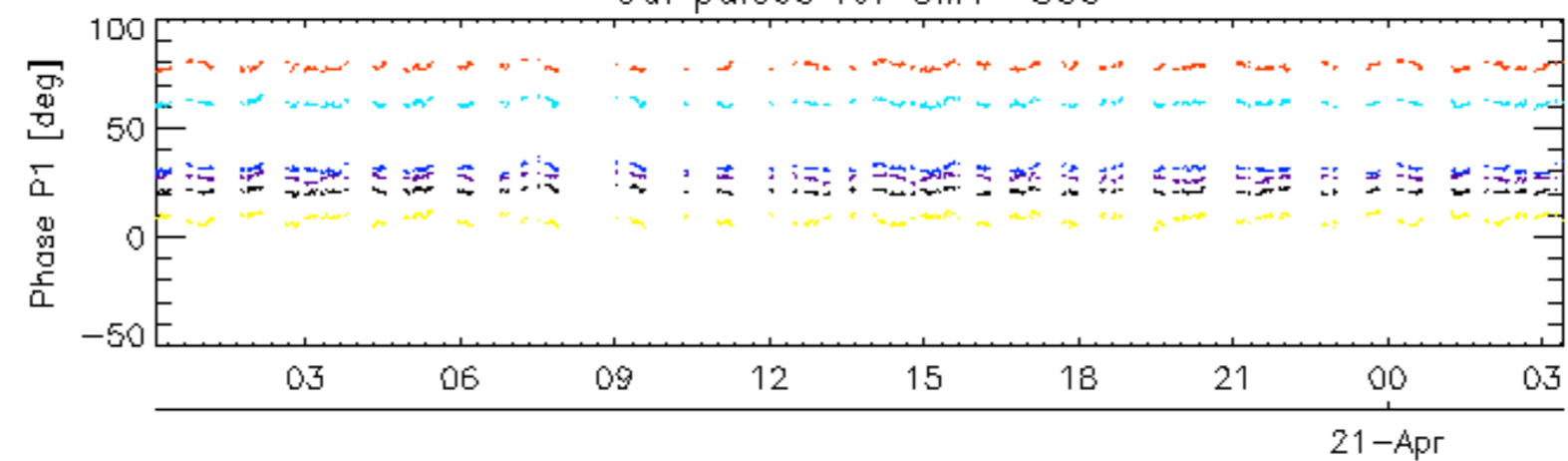
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

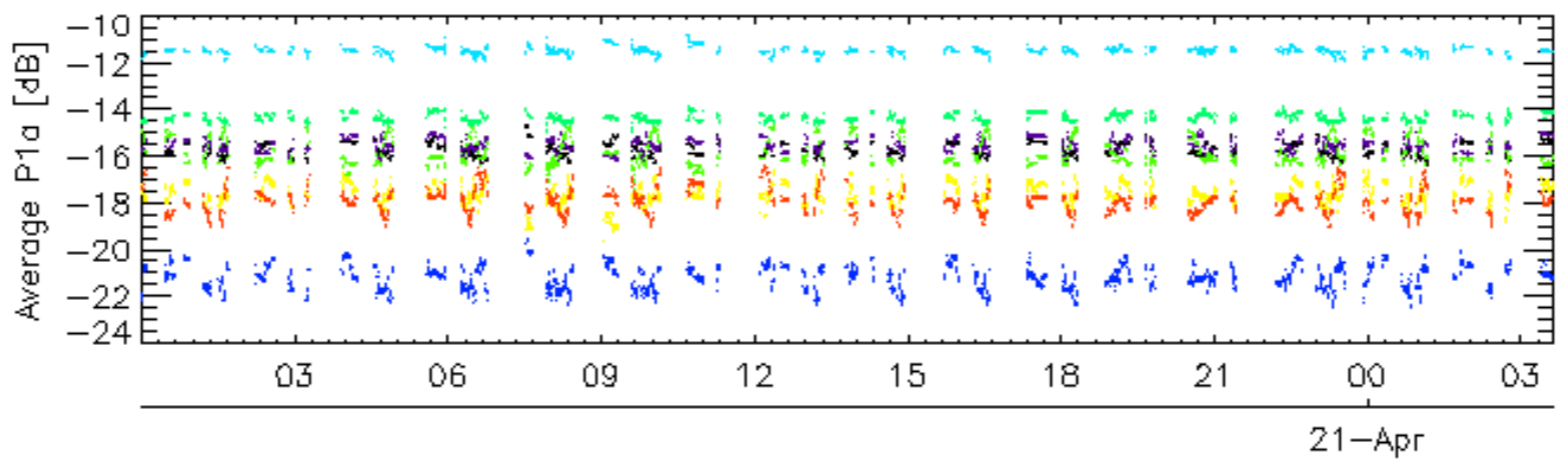
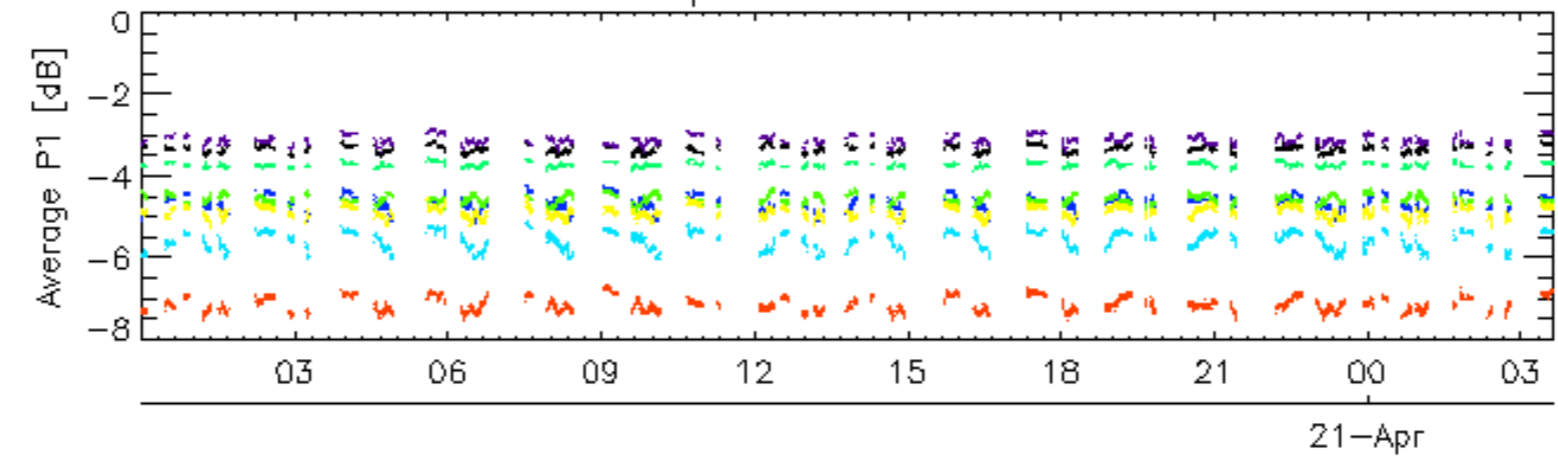


Cal pulses for GM1 SS3

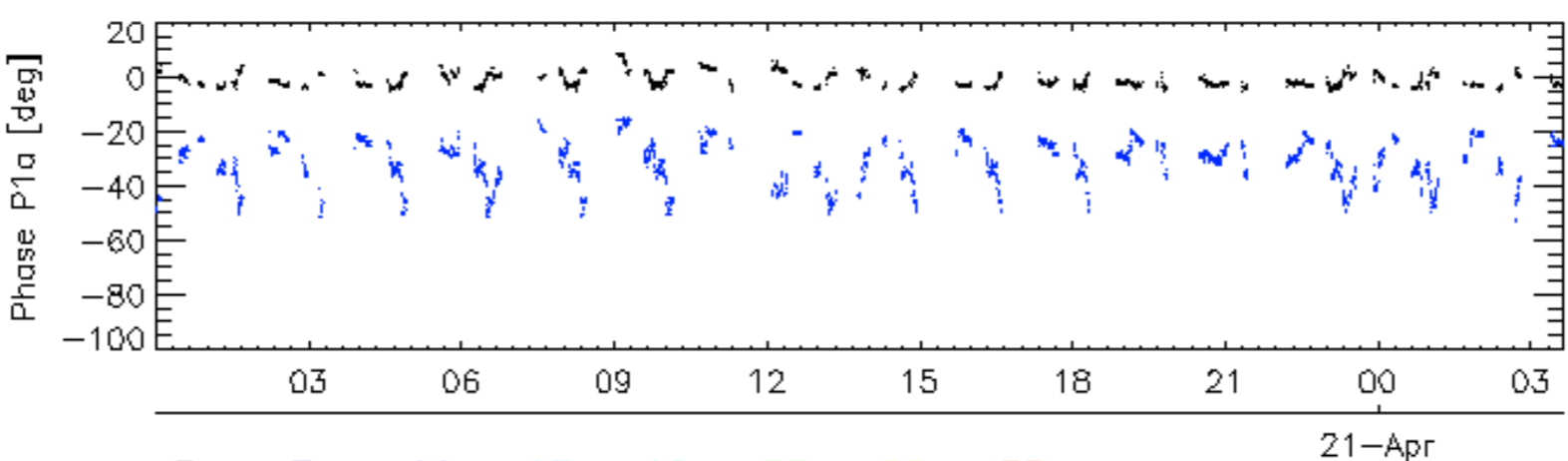
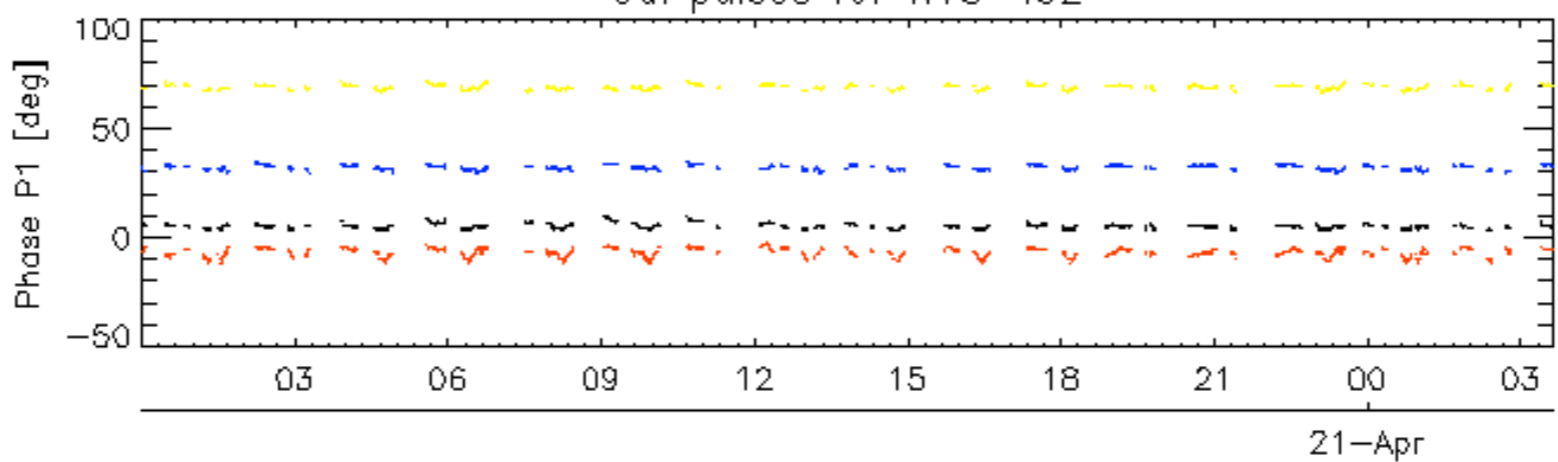


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

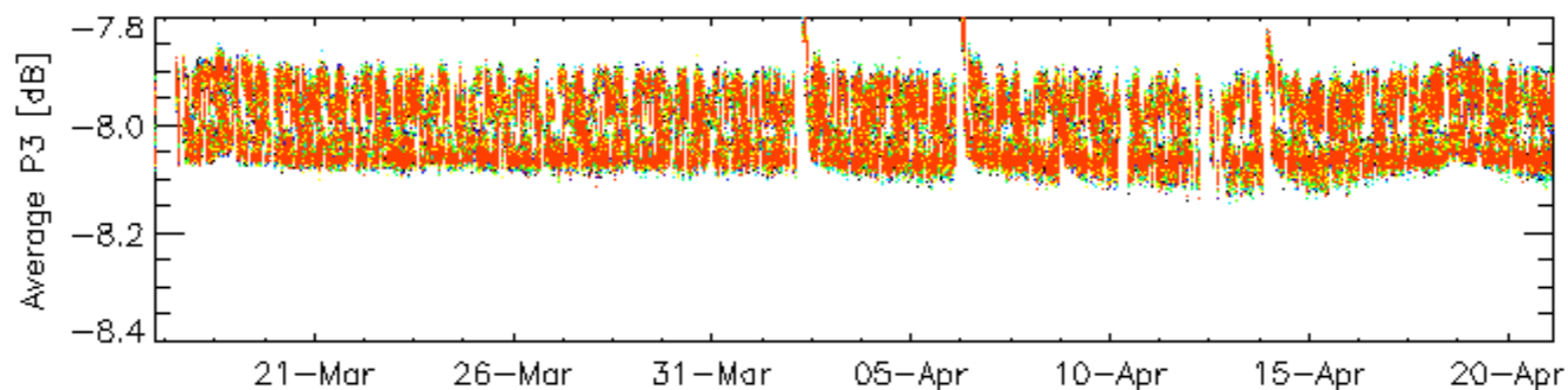
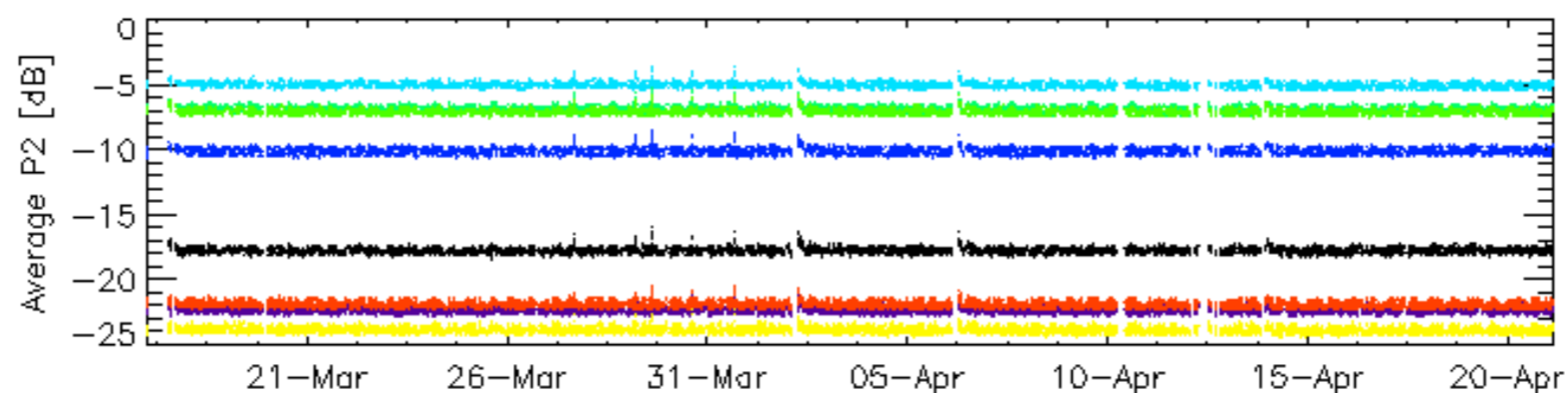
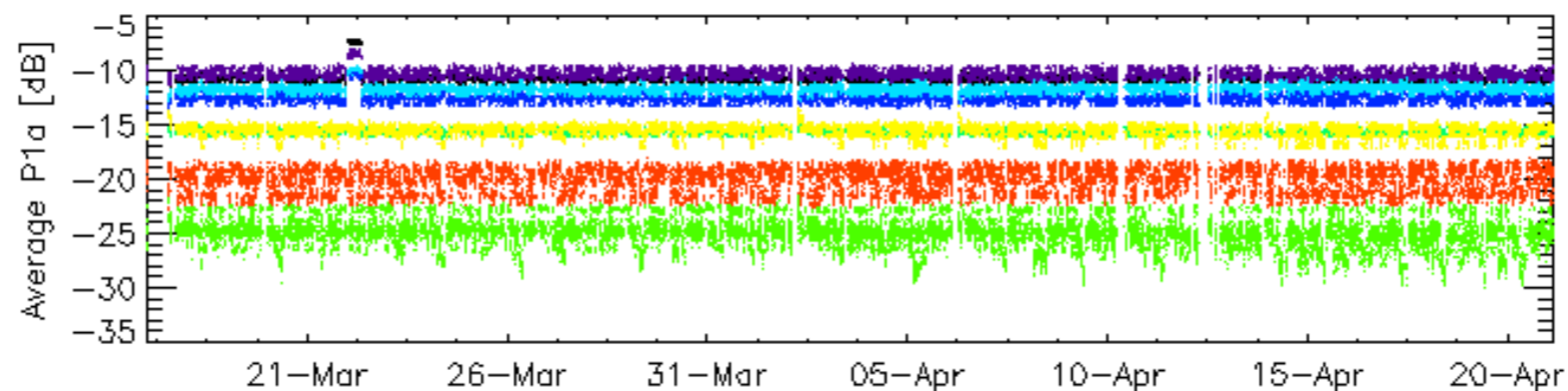
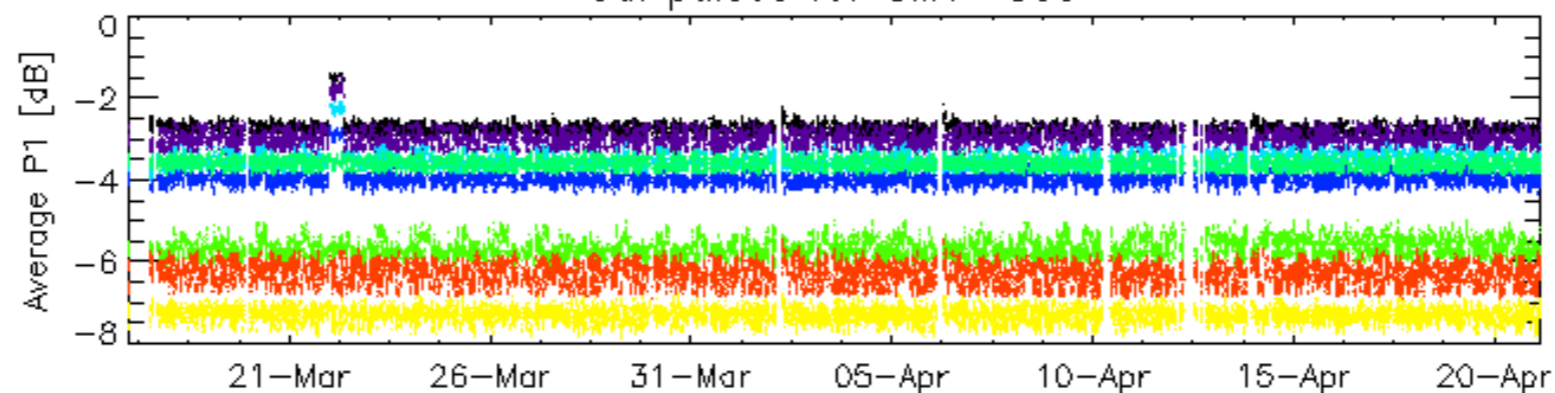


Cal pulses for WVS IS2



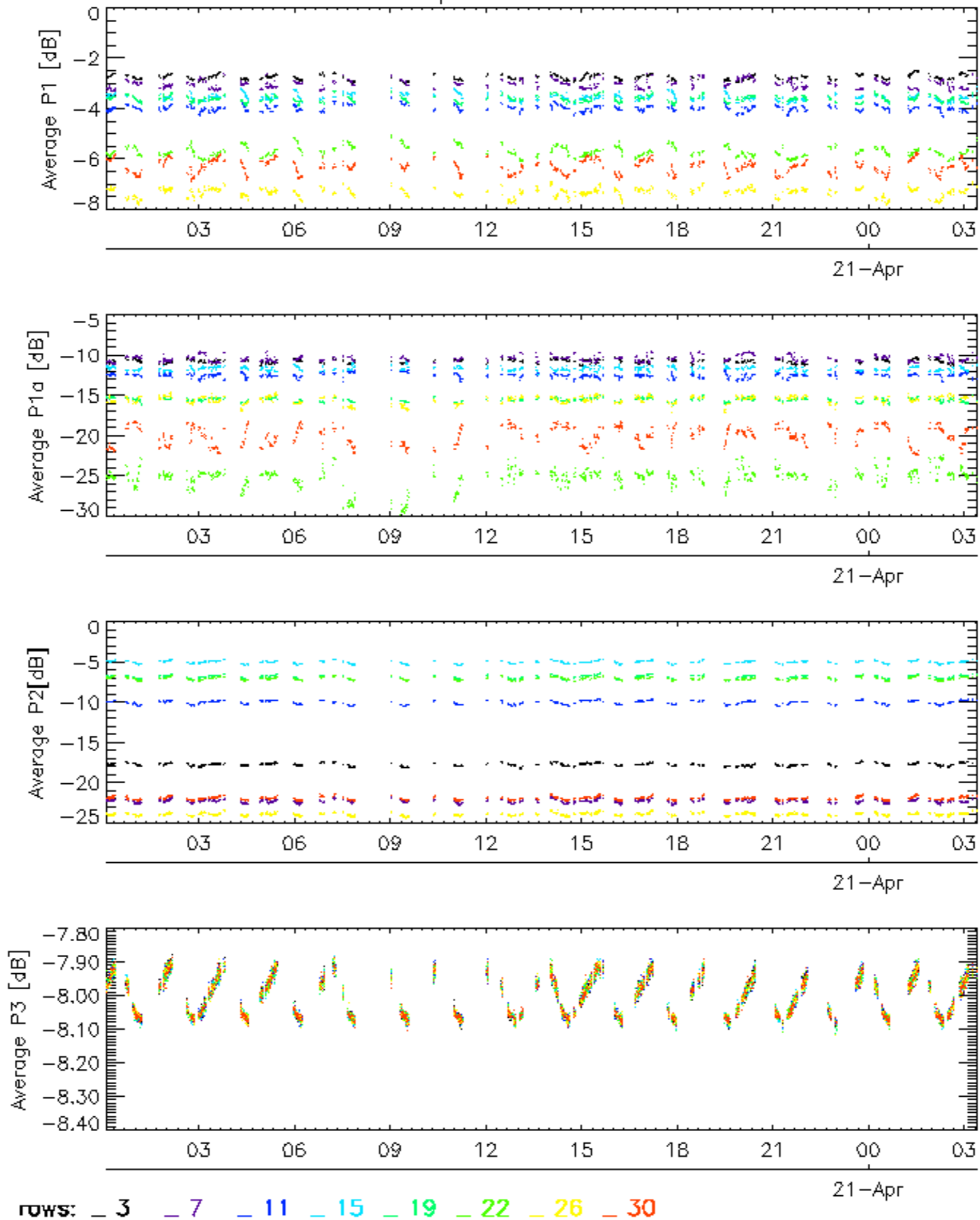
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

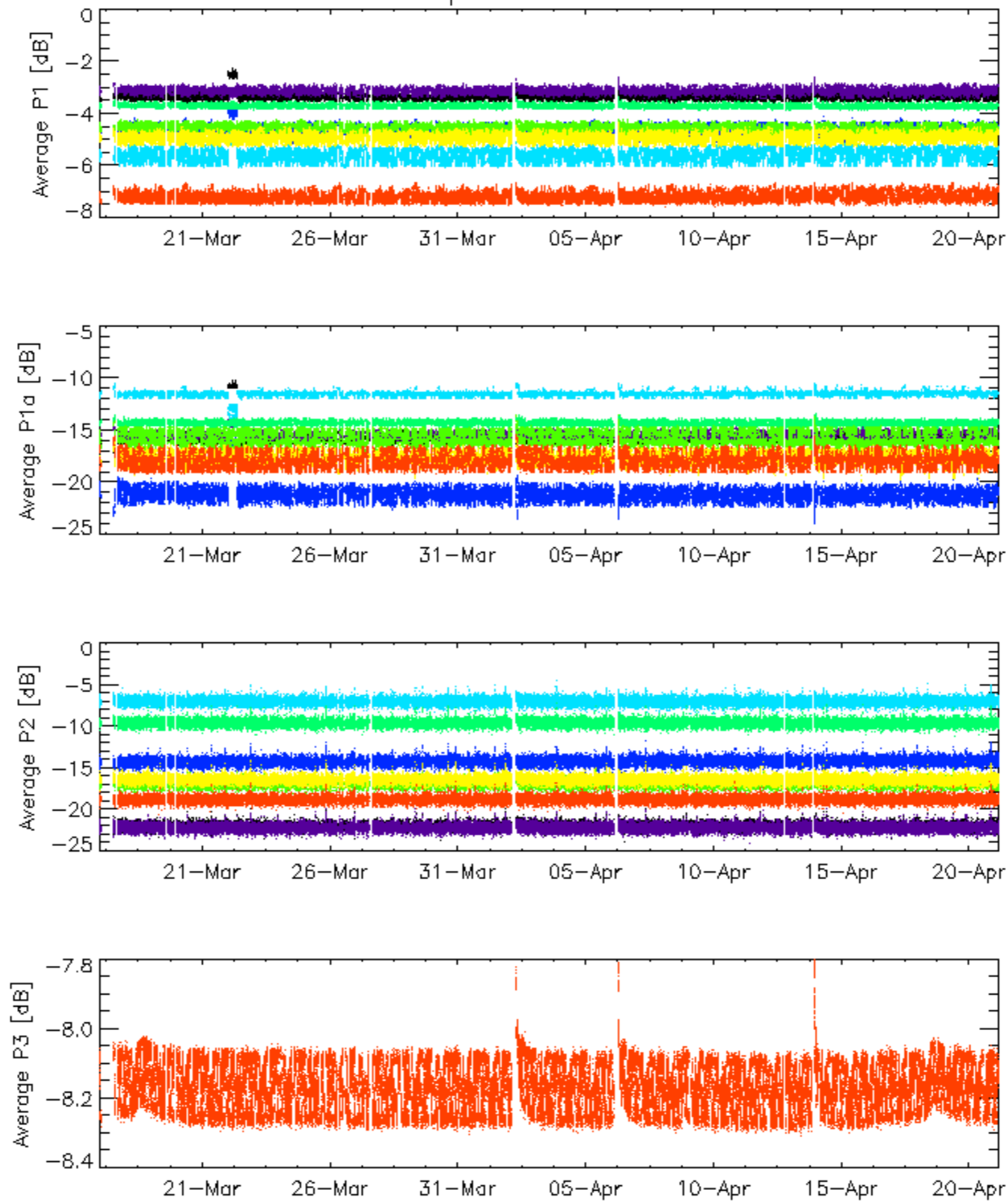


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

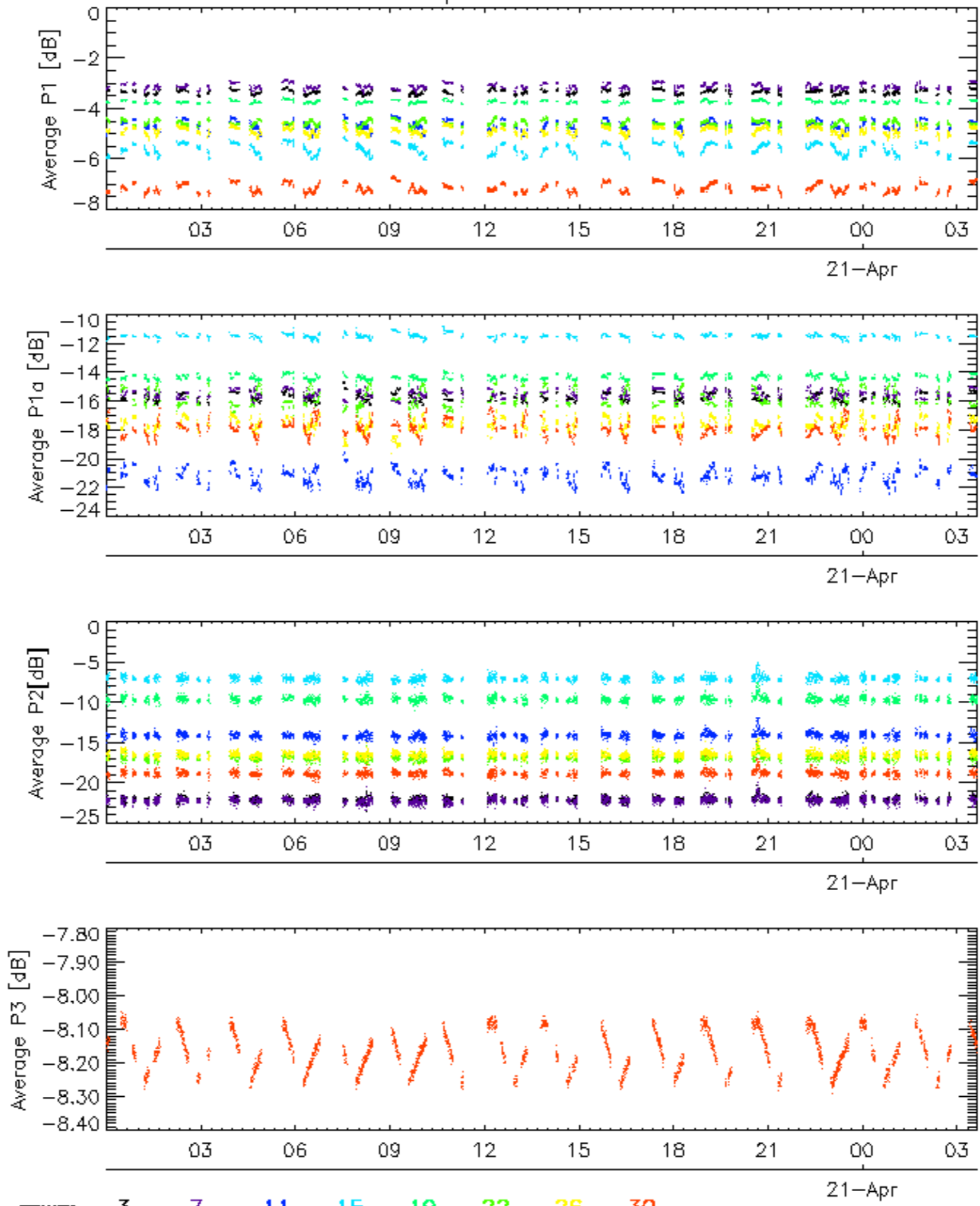


Cal pulses for WVS IS2



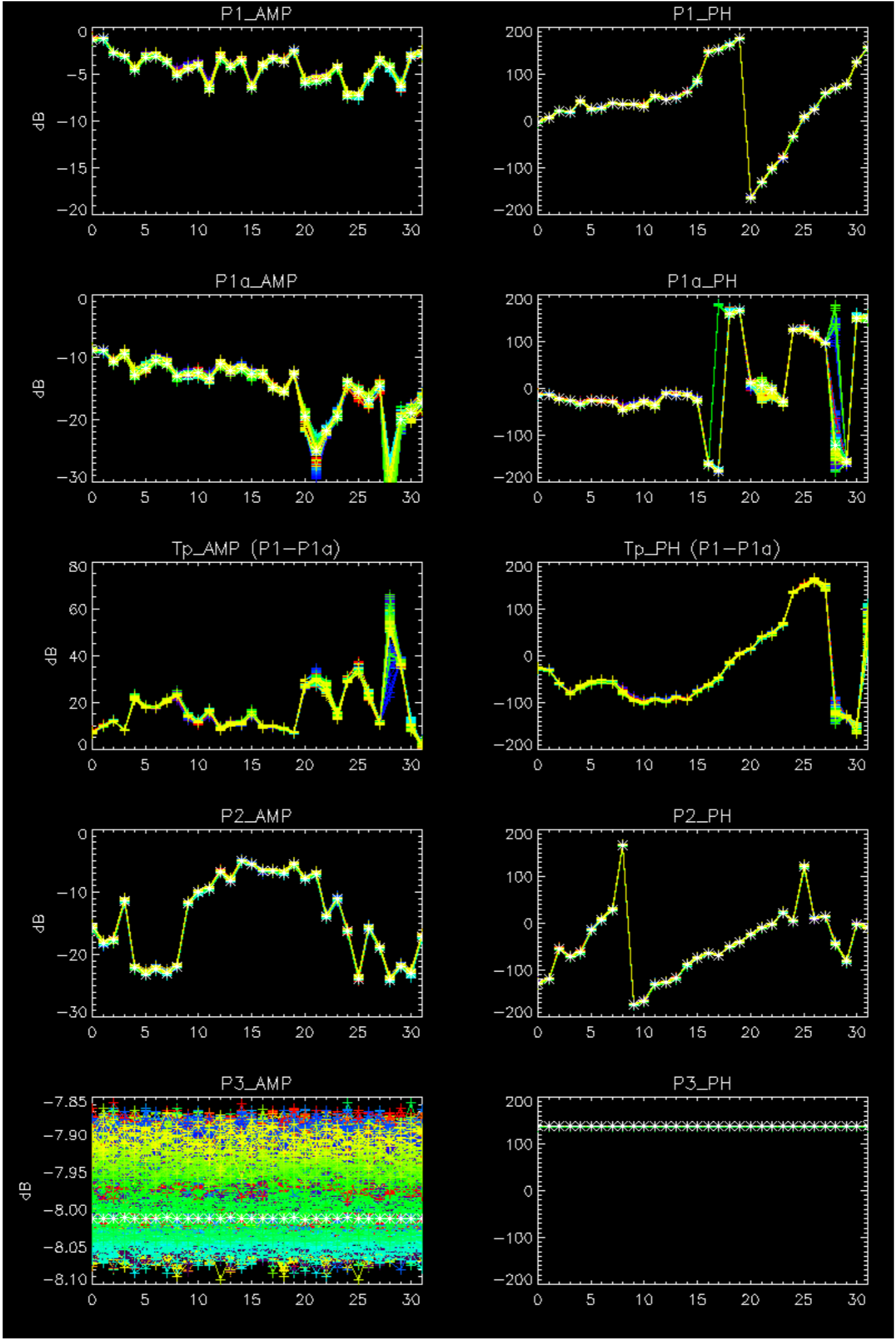
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

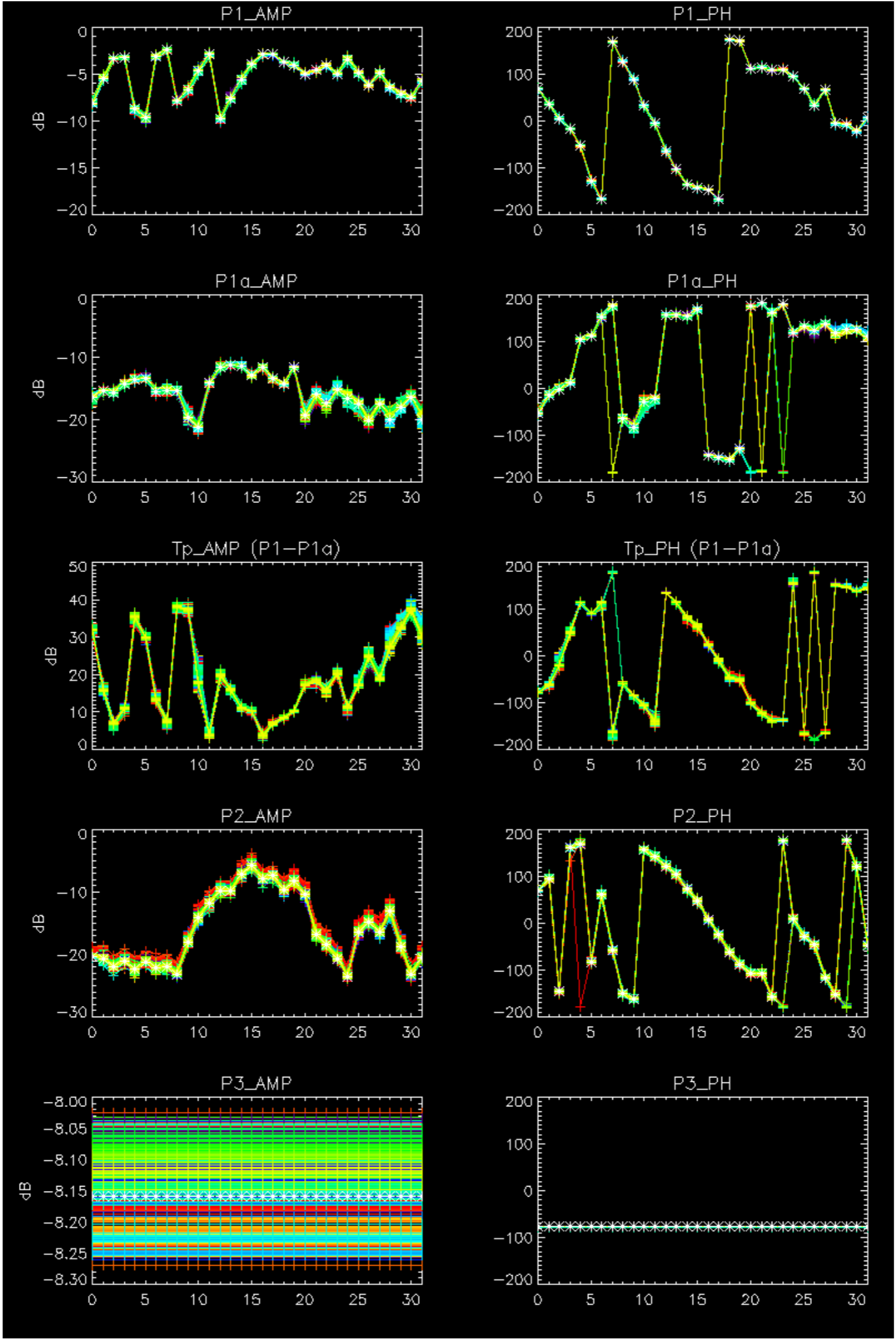
Cal pulses for WVS IS2



No anomalies observed on available browse products

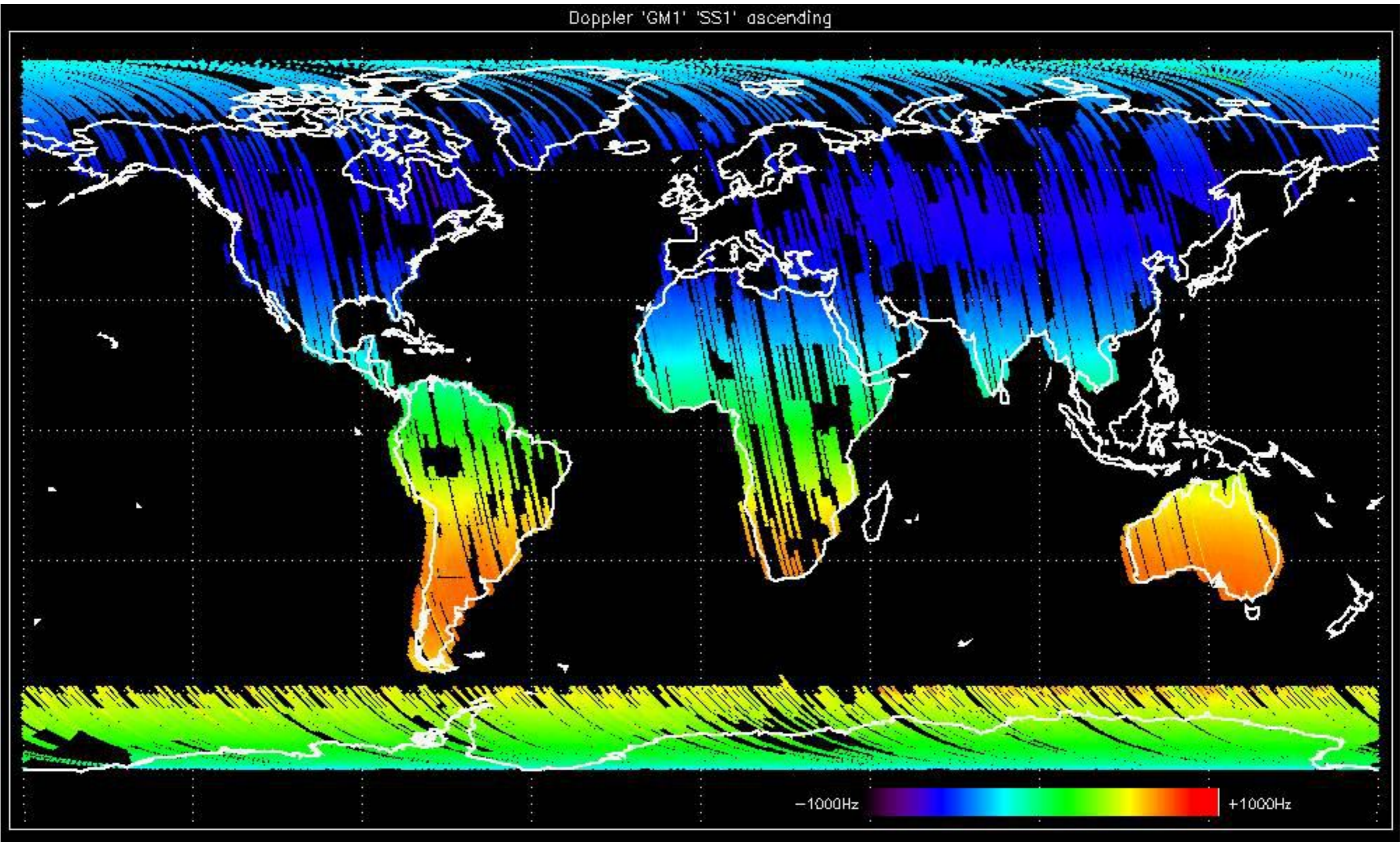
No anomalies observed.



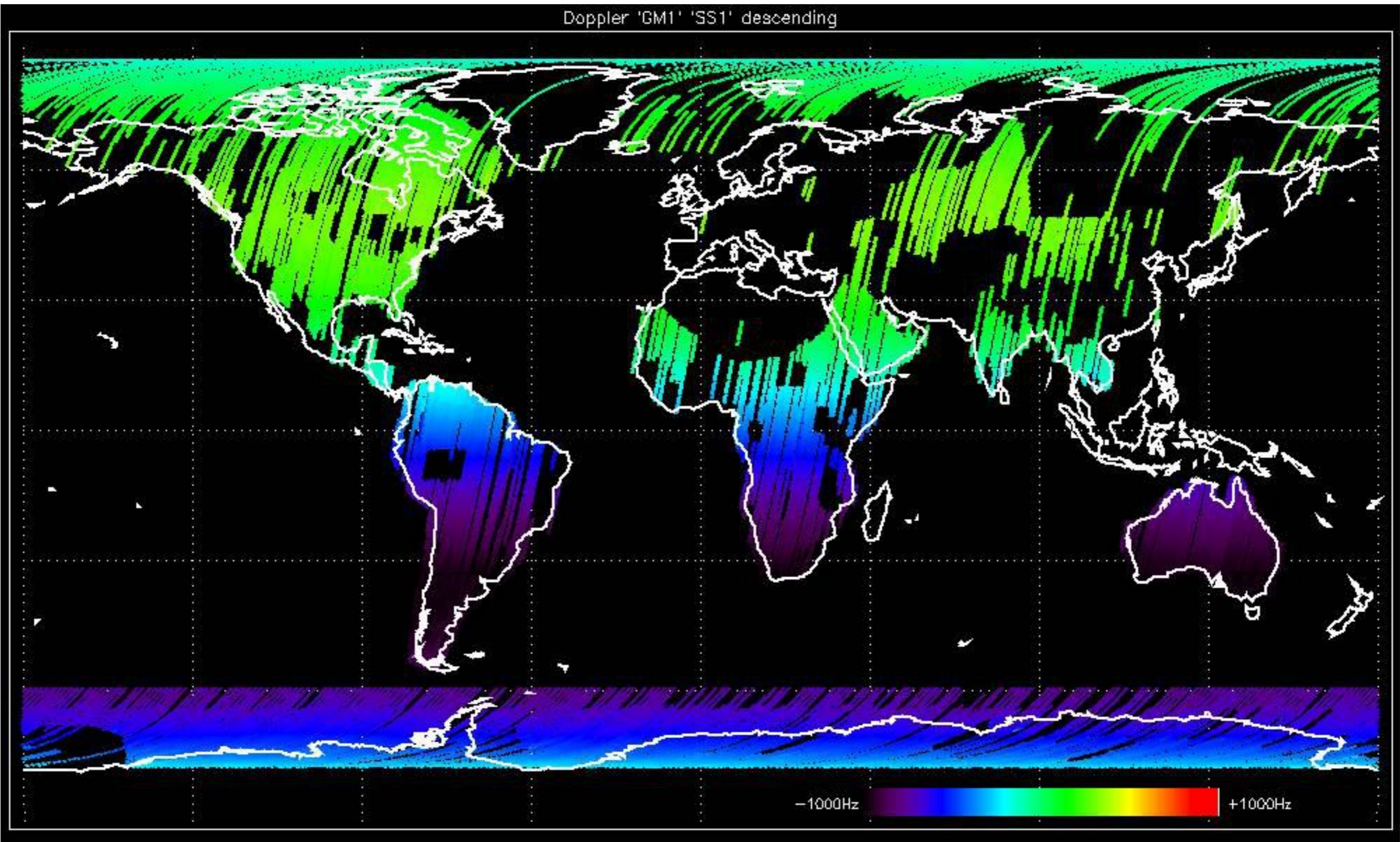


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

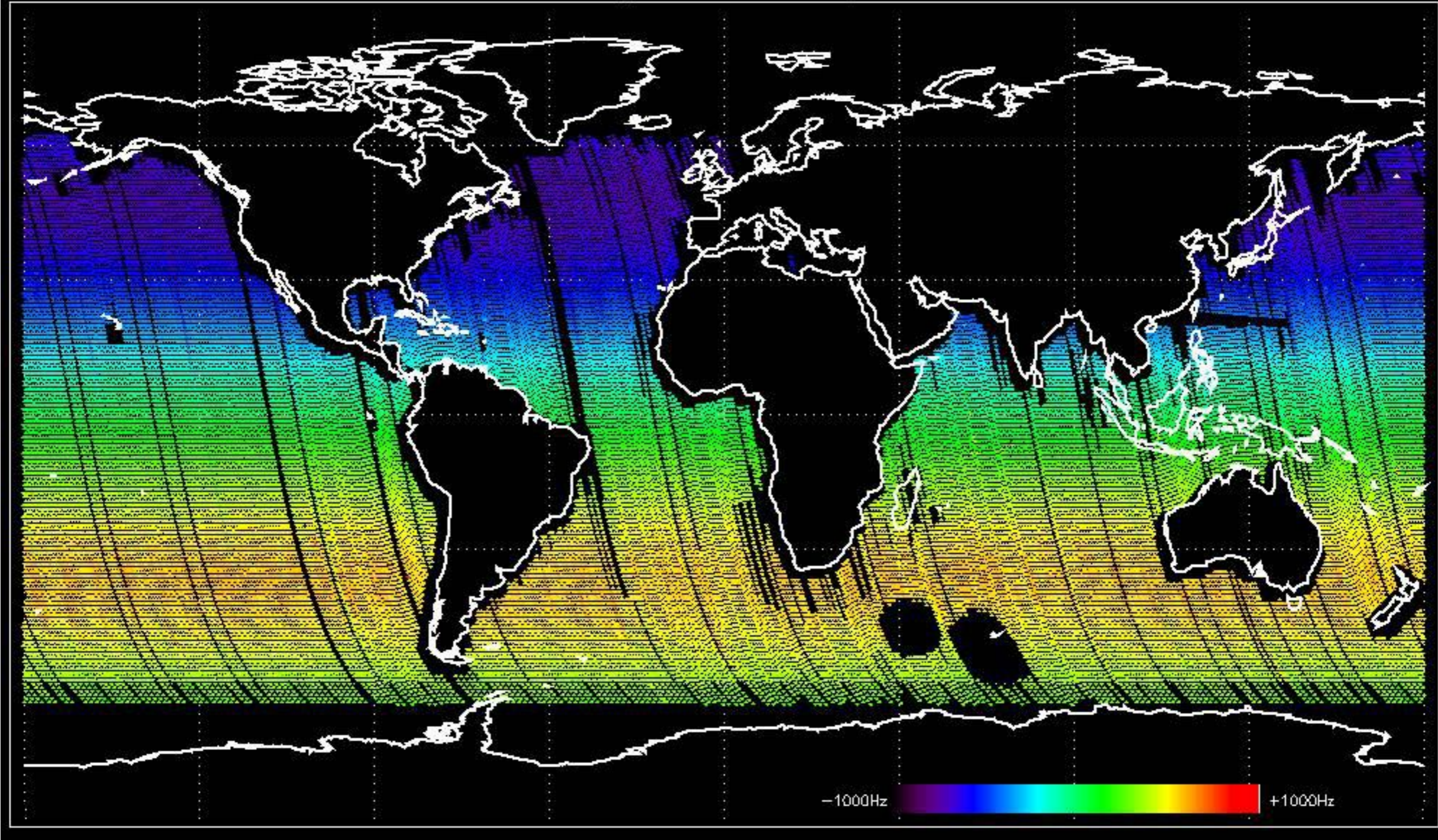
Doppler 'GM1' 'SS1' ascending



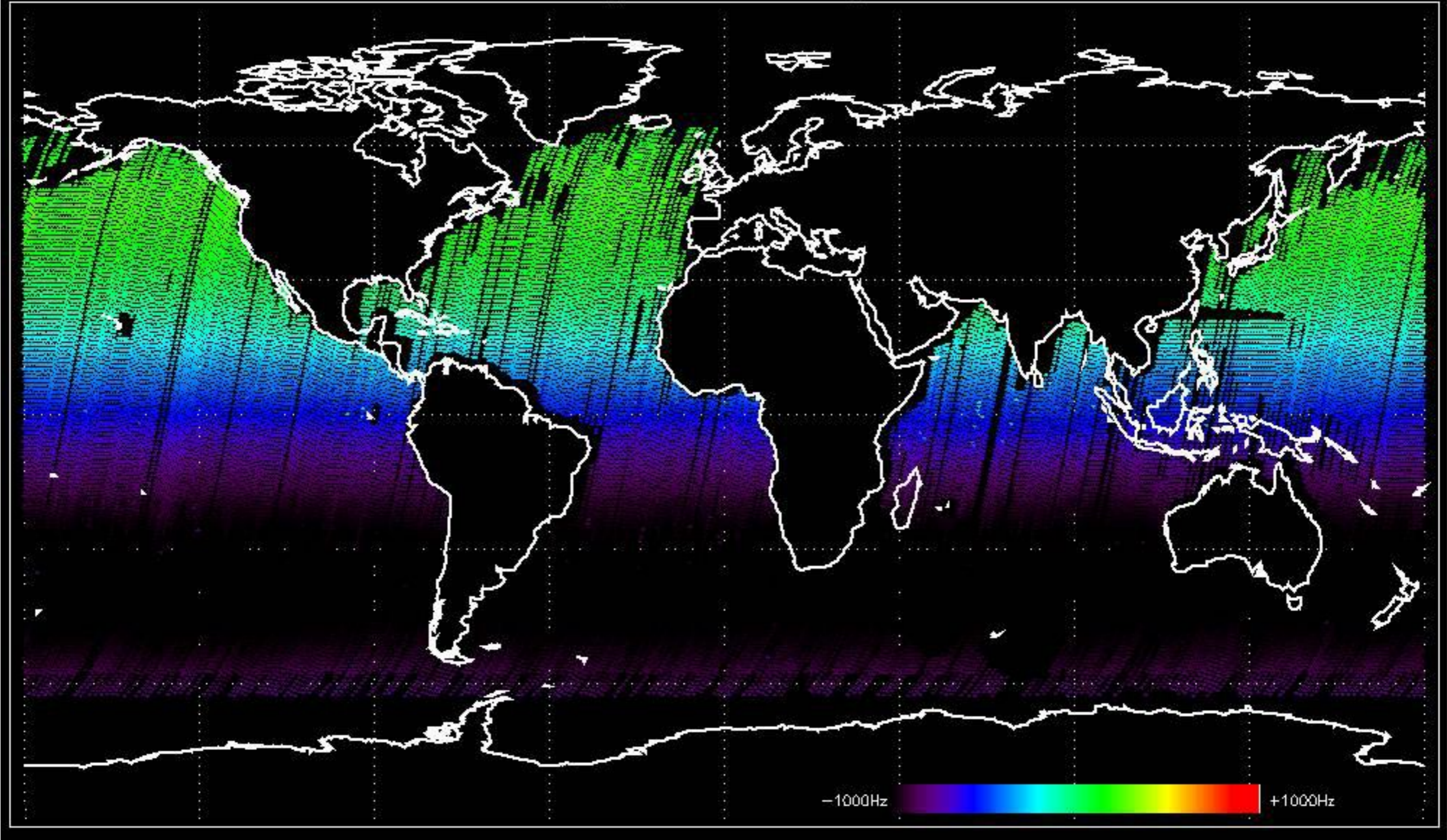
Doppler 'GM1' 'SS1' descending



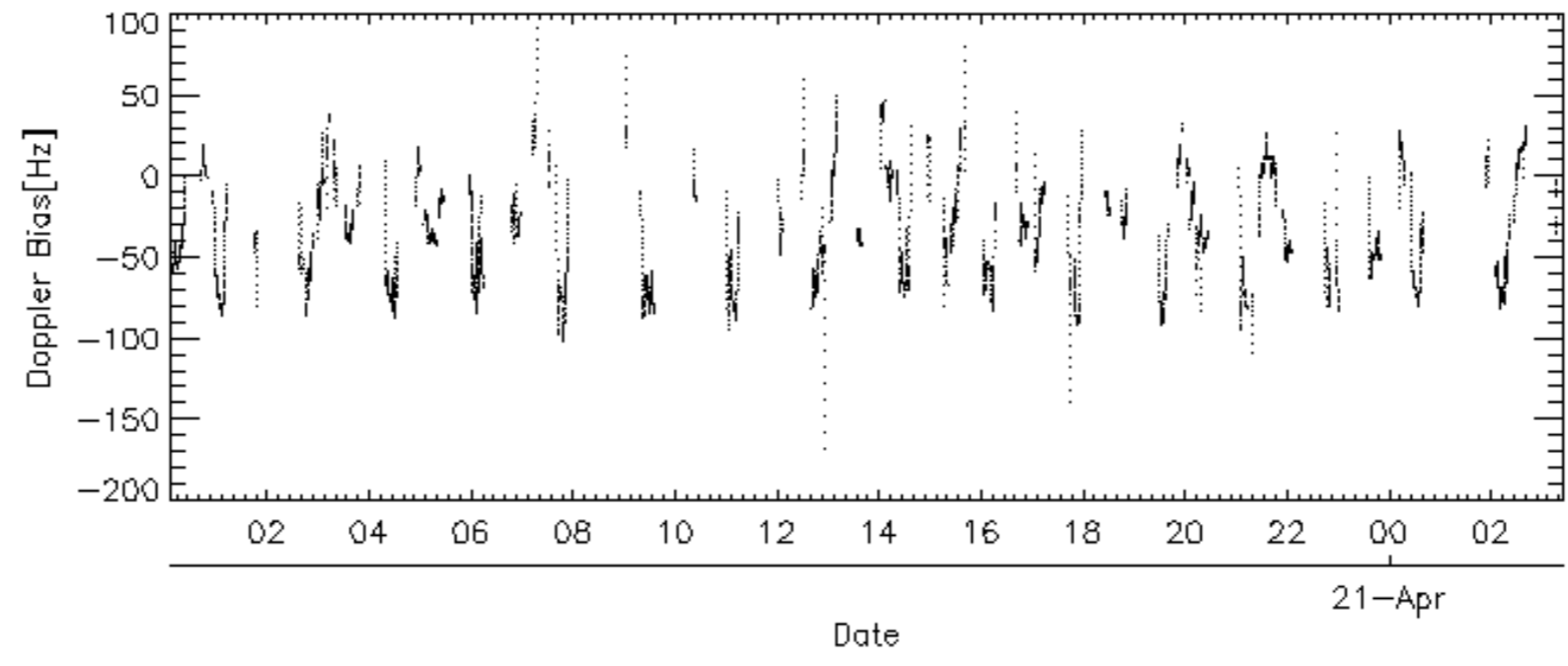
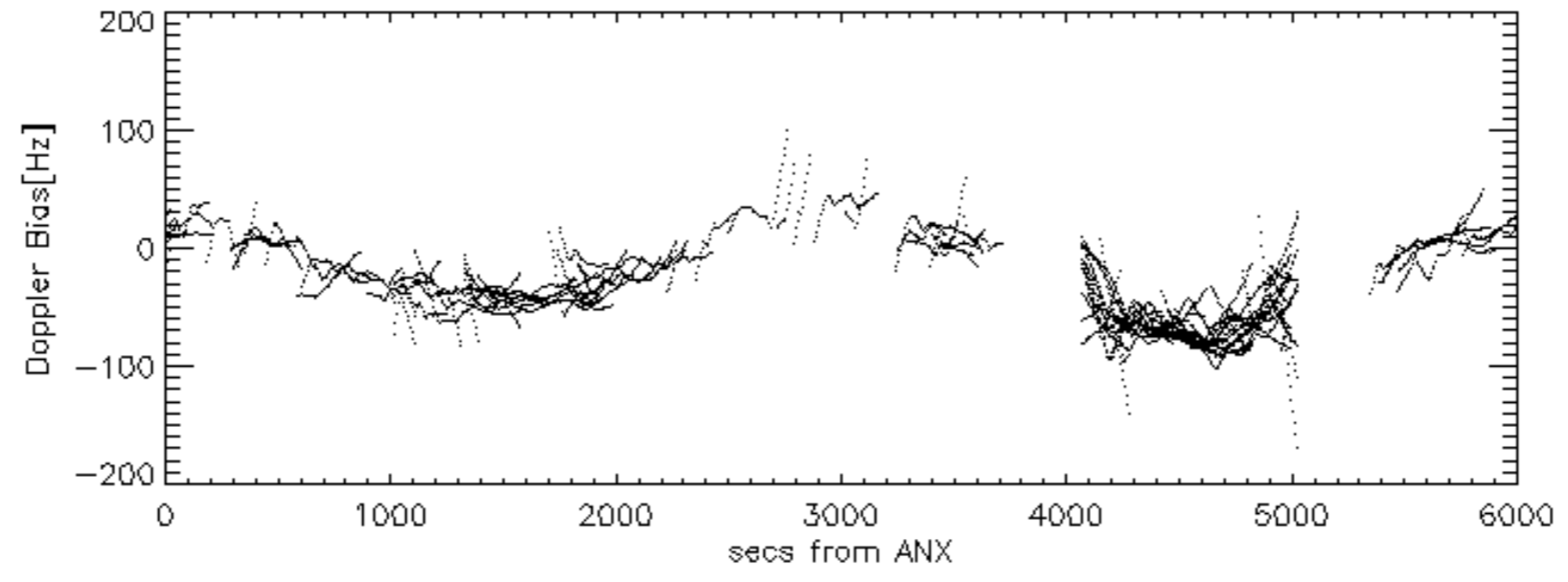
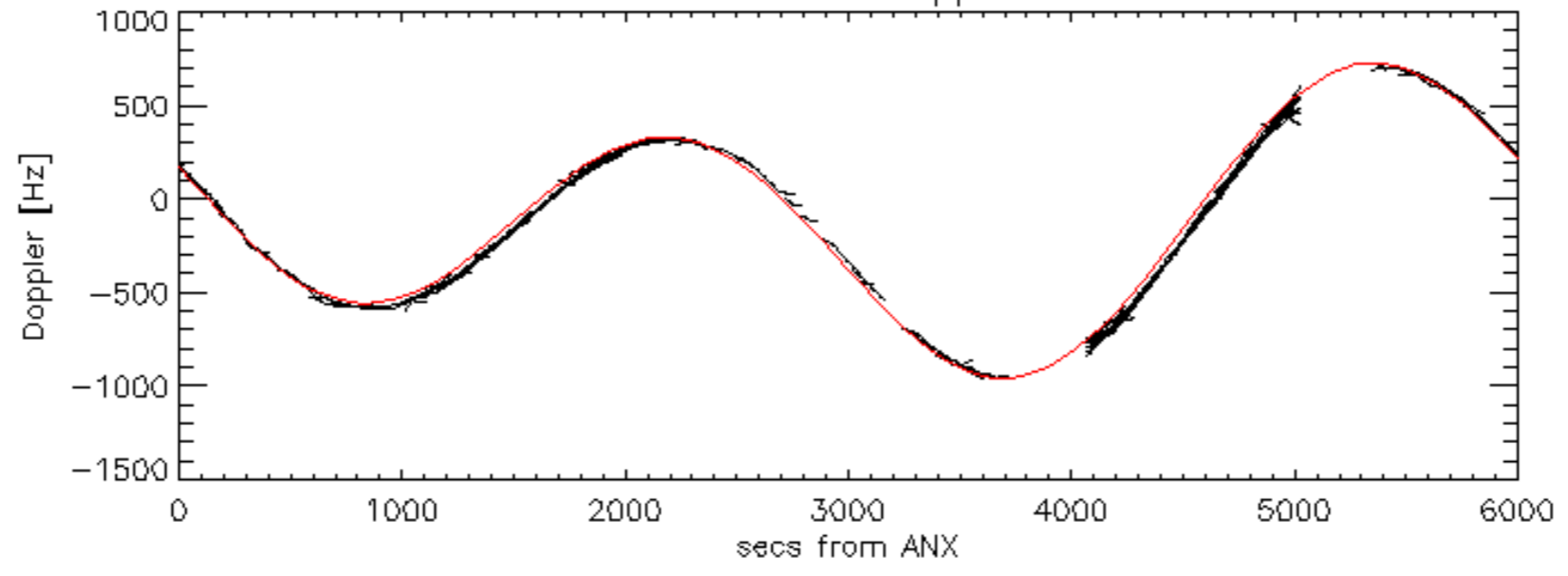
Doppler 'WVS' 'IS2' ascending

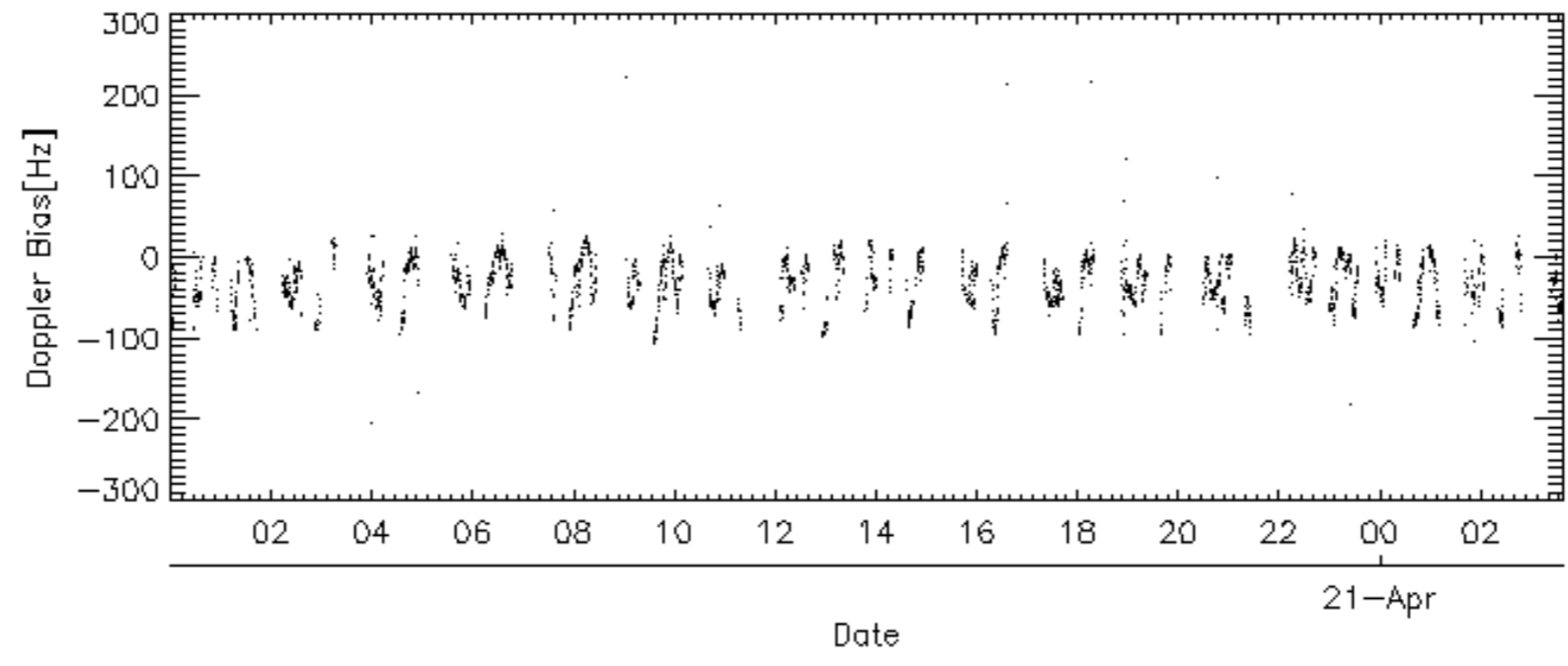
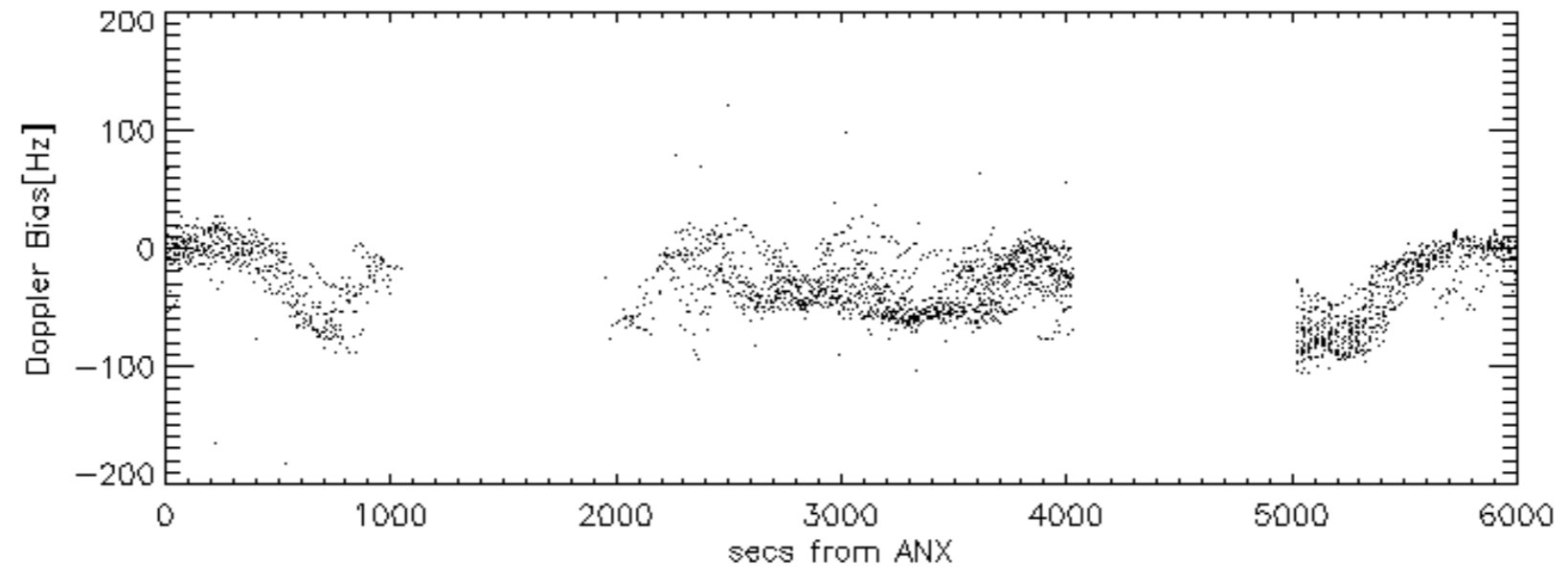
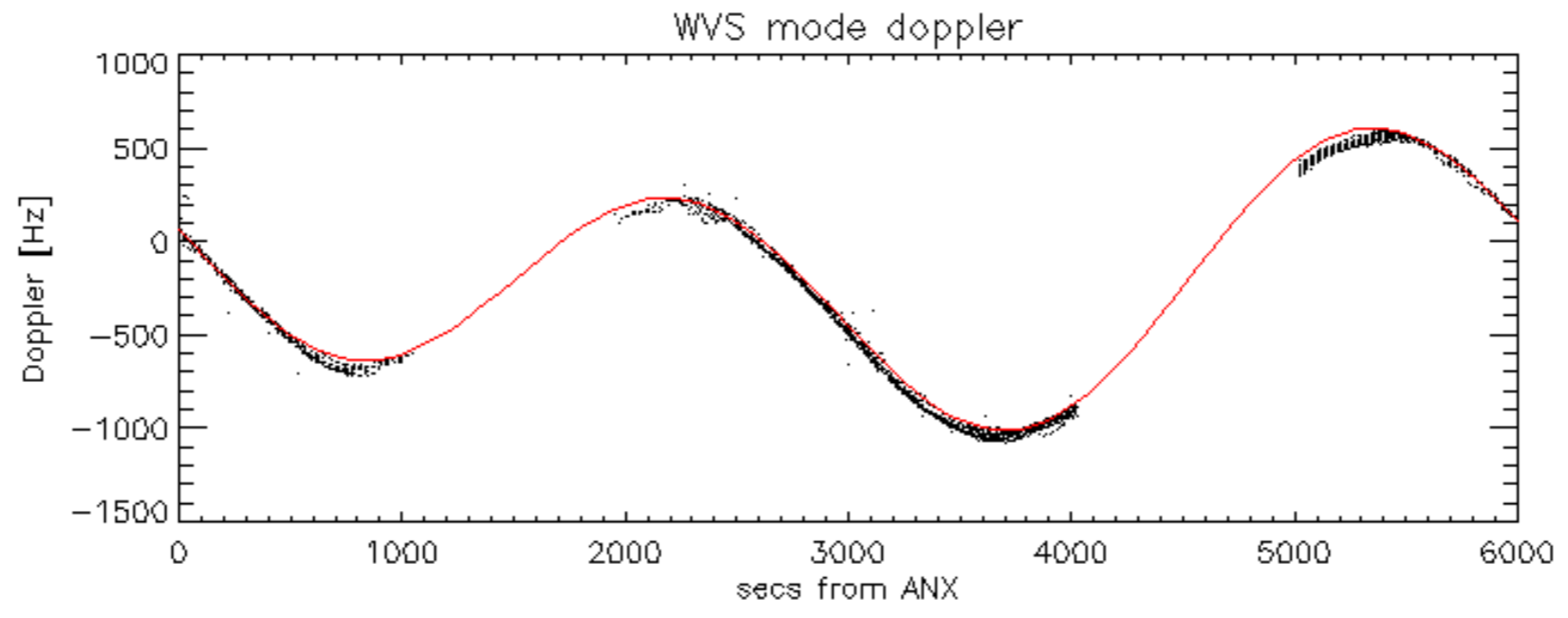


Doppler 'WVS' 'IS2' descending

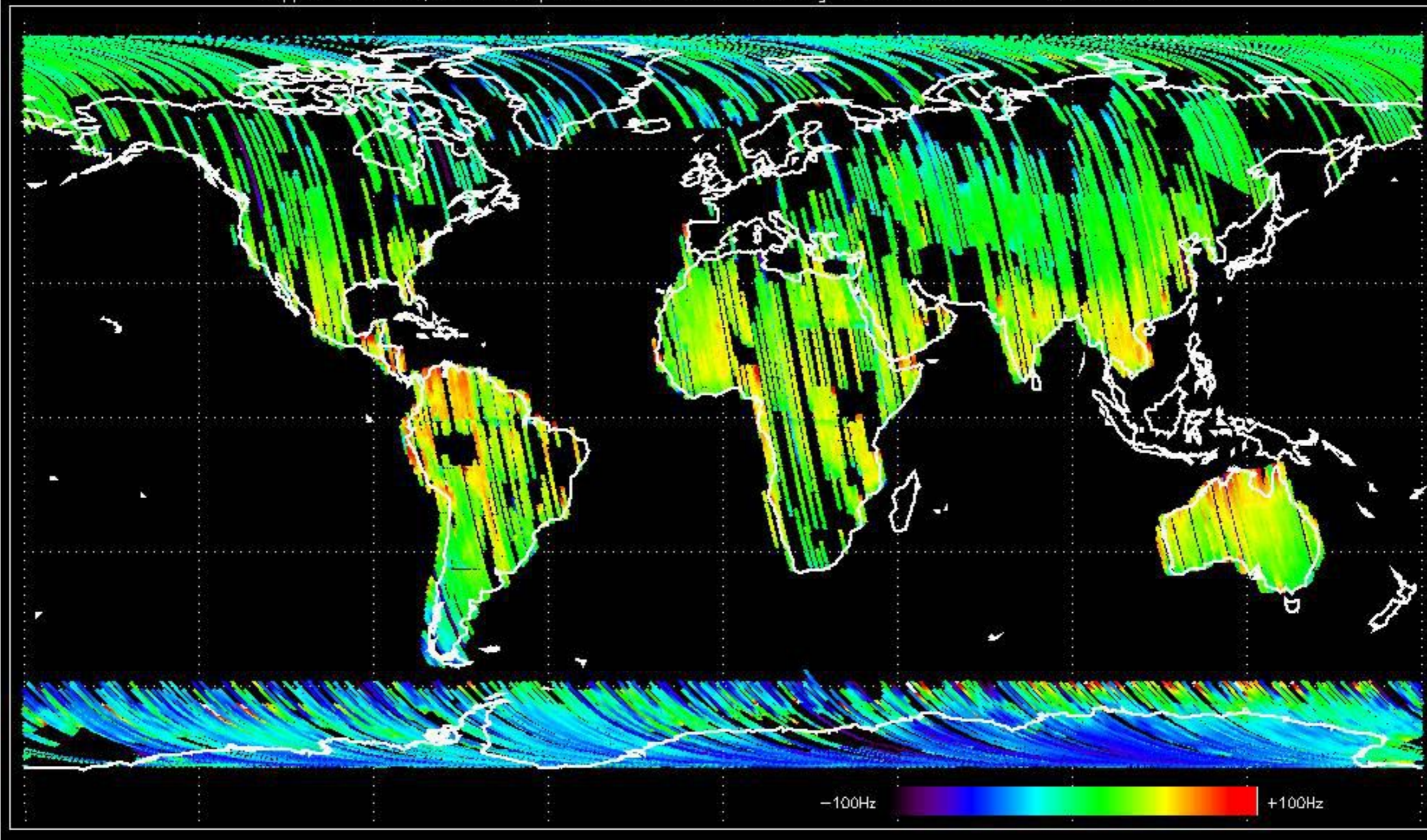


GM1 mode doppler

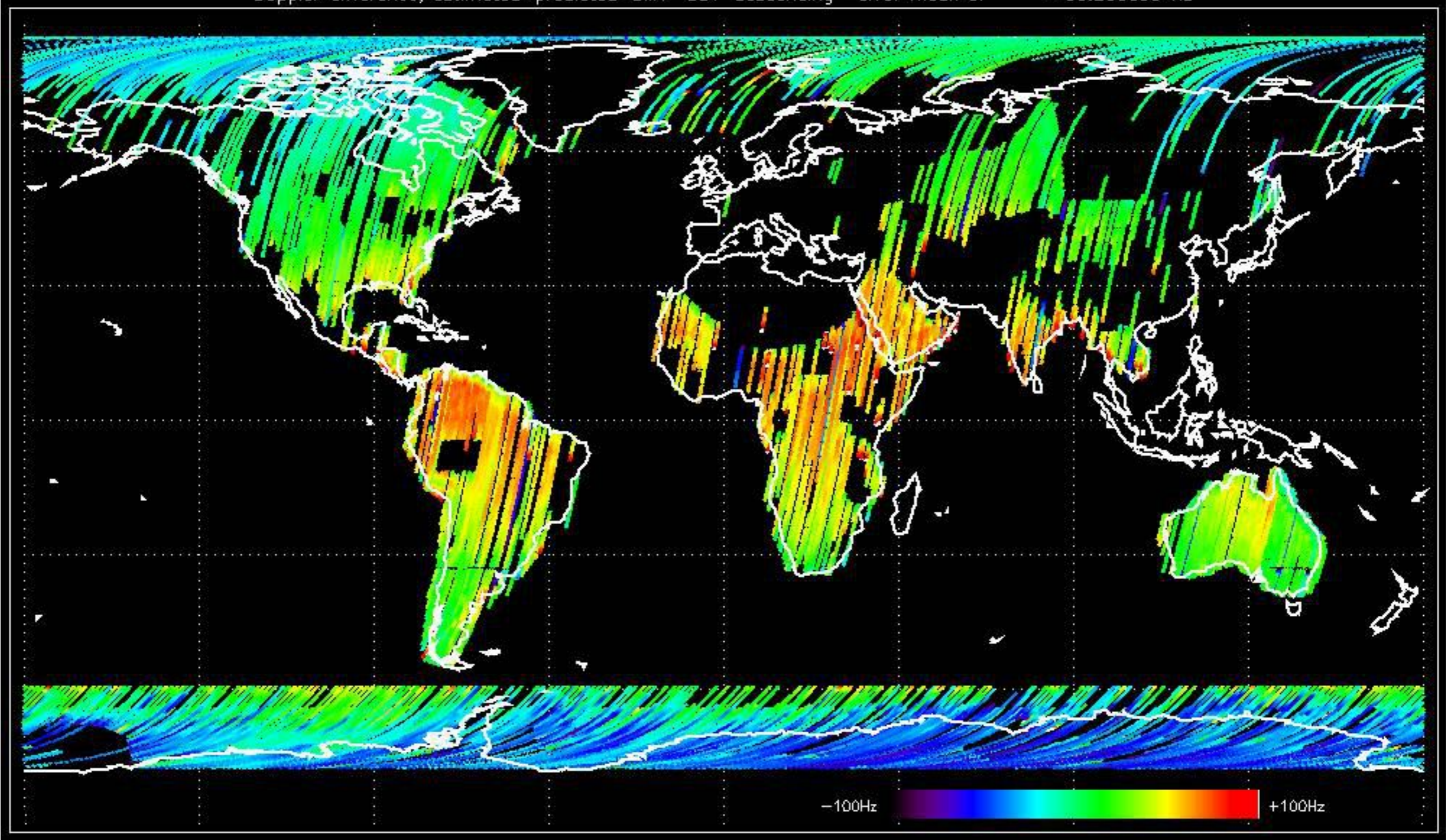




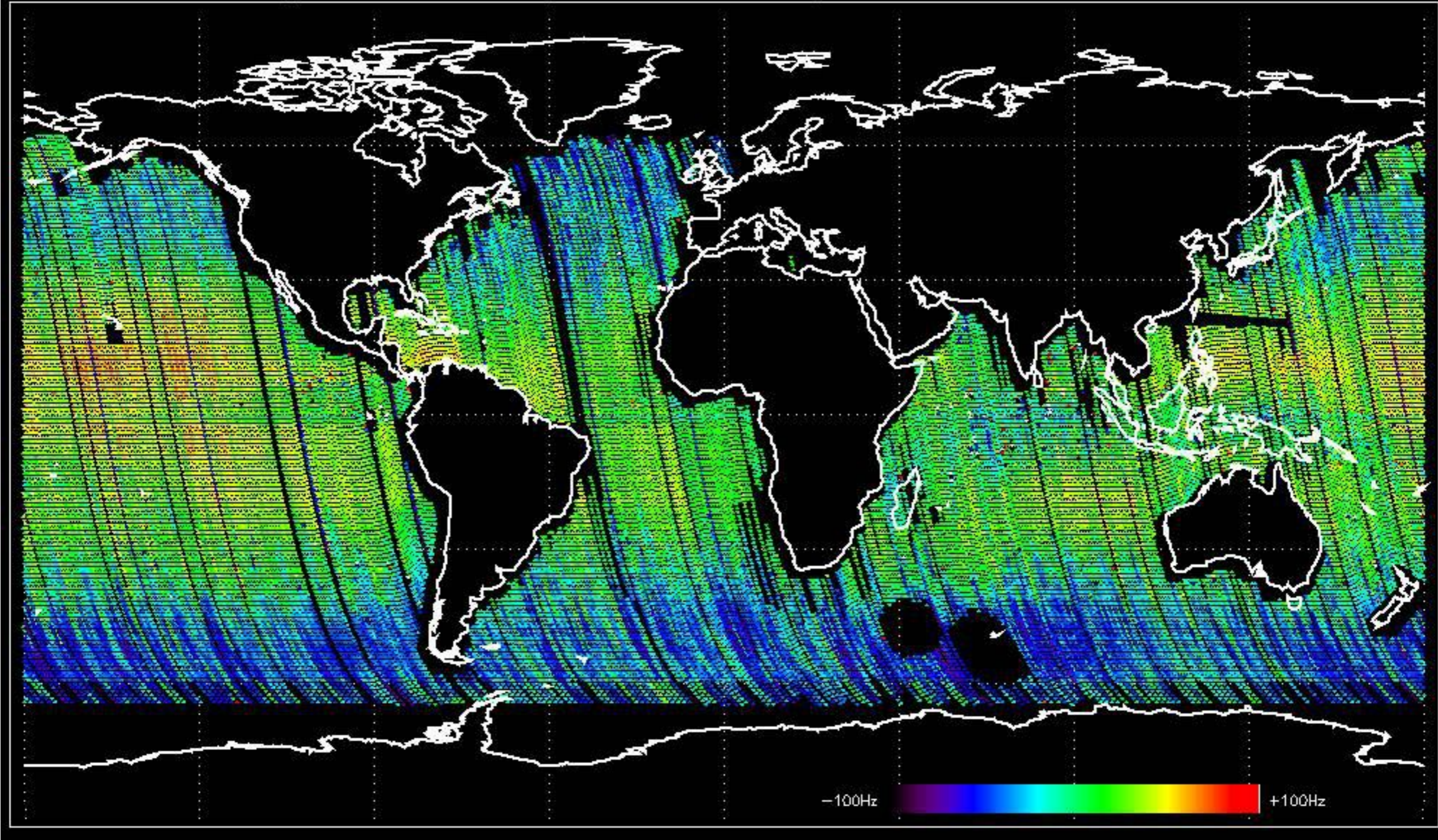
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -37.976065 Hz



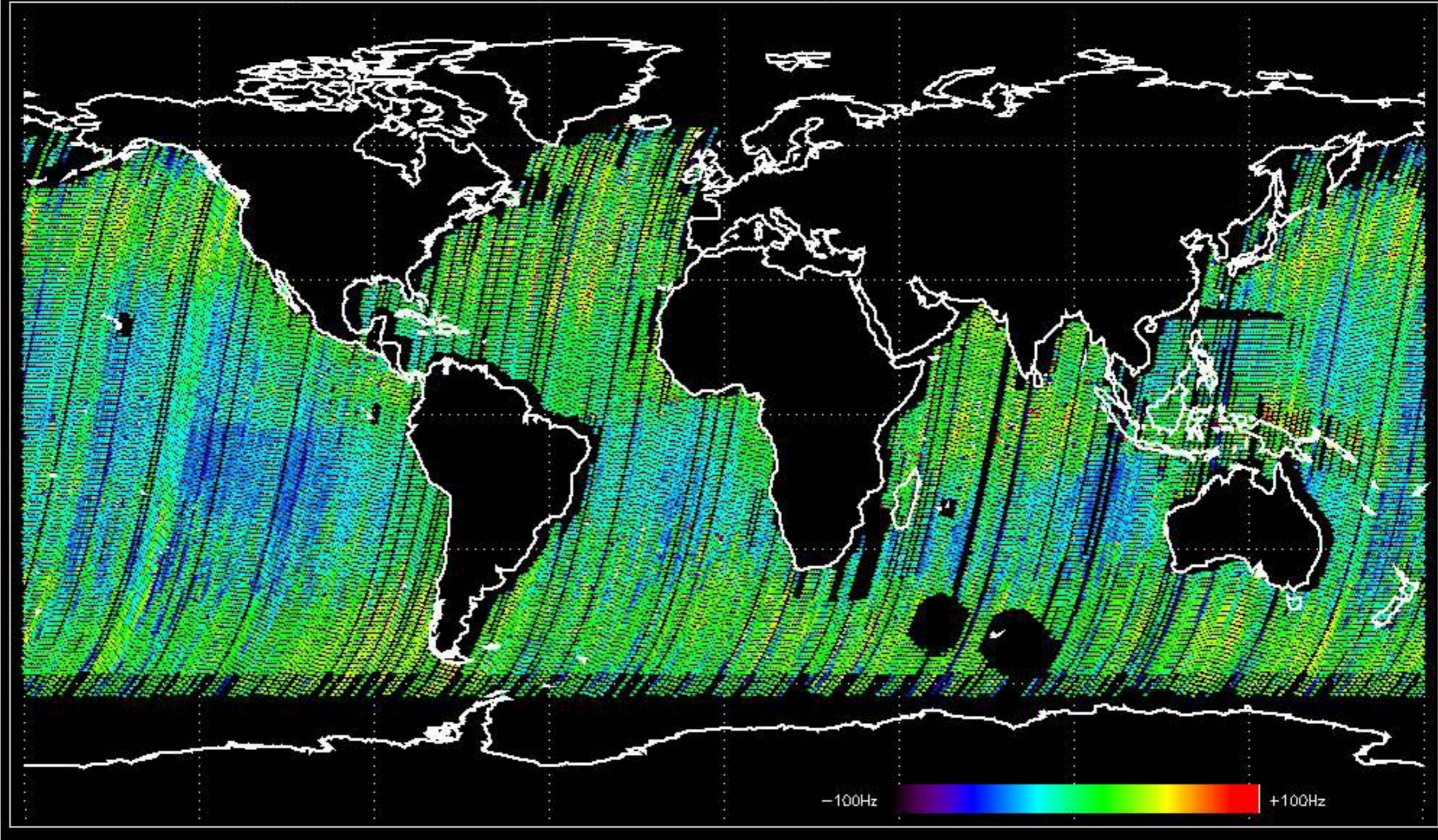
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -30.260699 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -37.350064 Hz

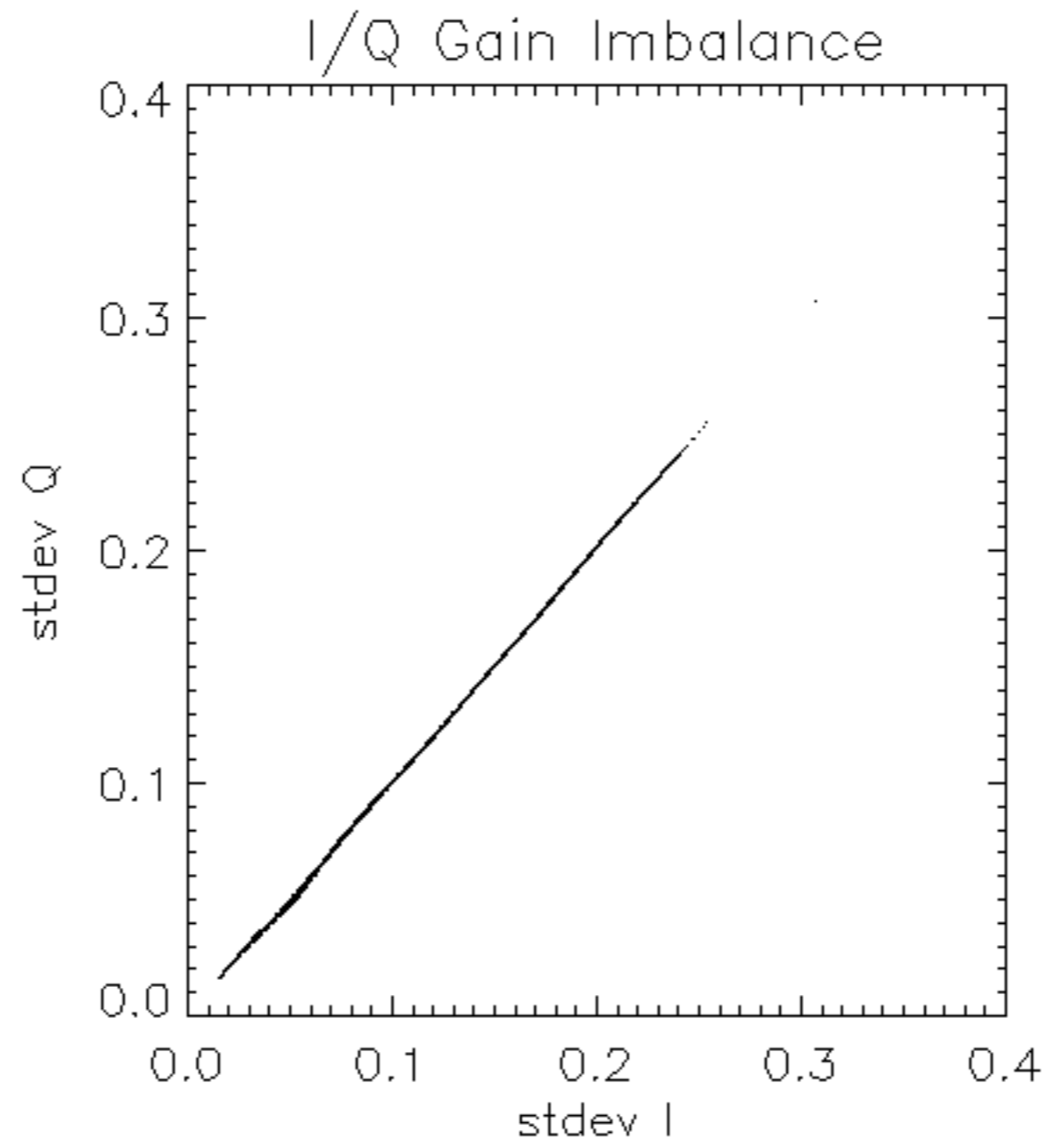


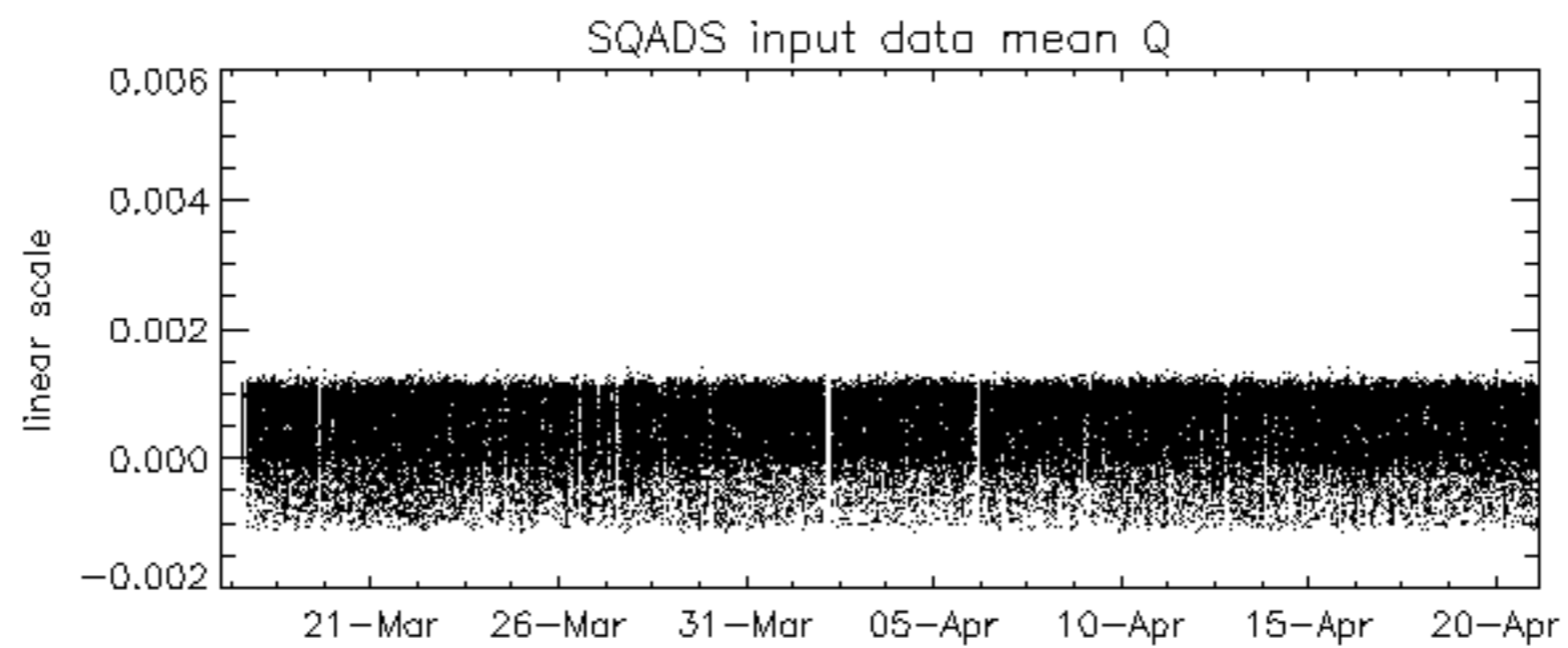
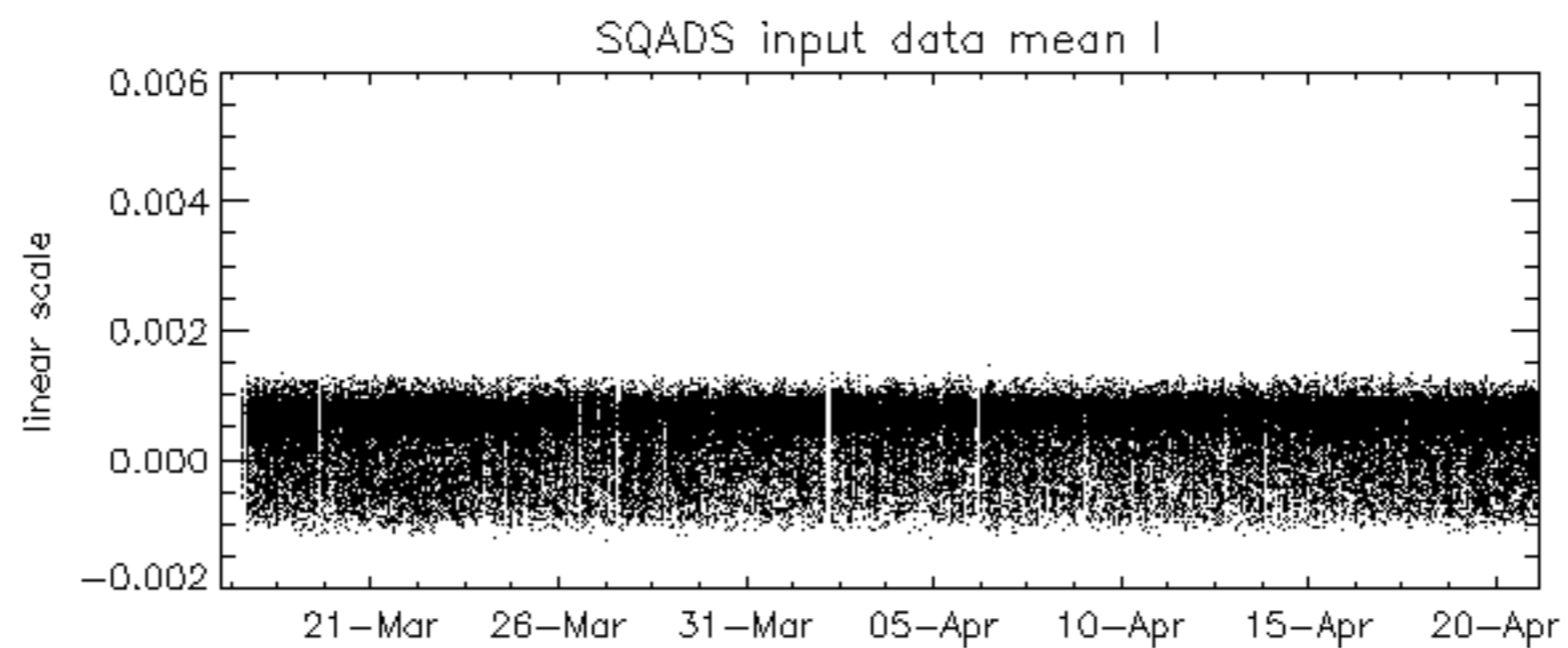
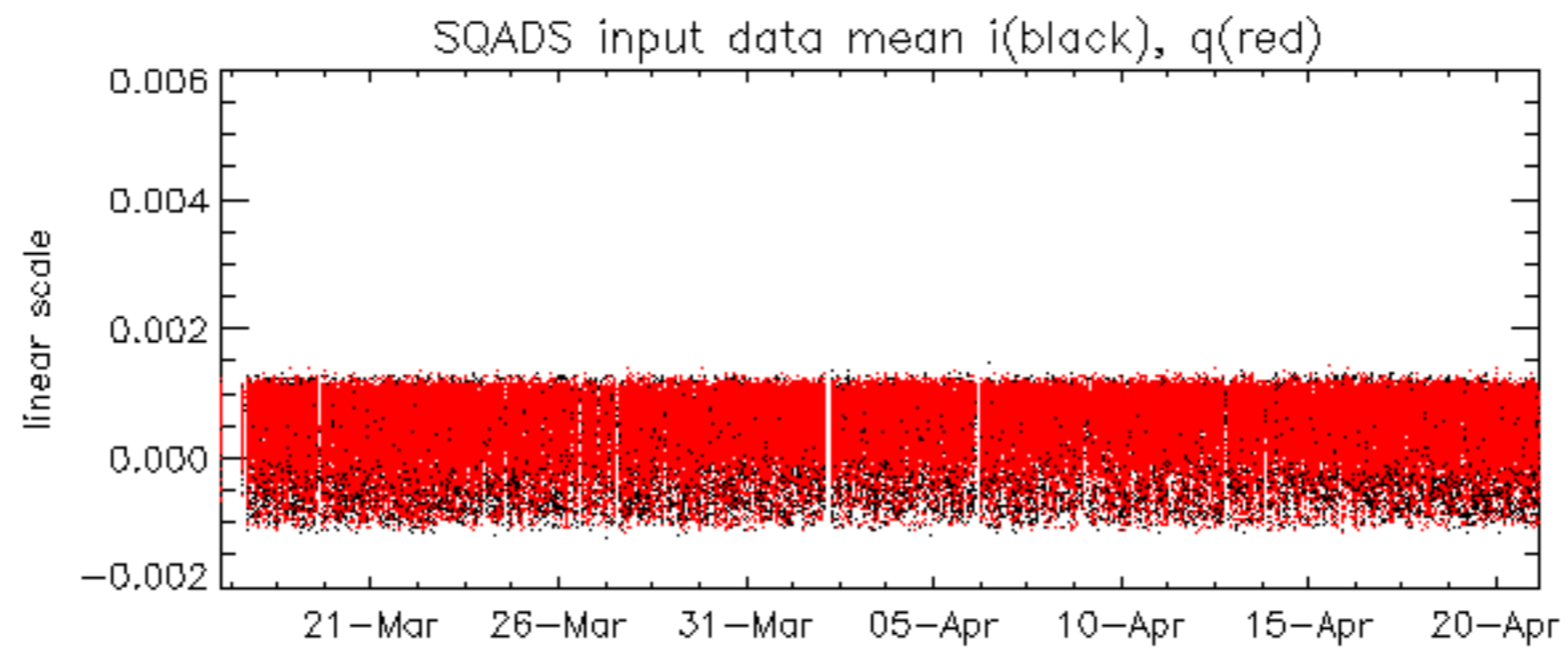
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -38.691468 Hz

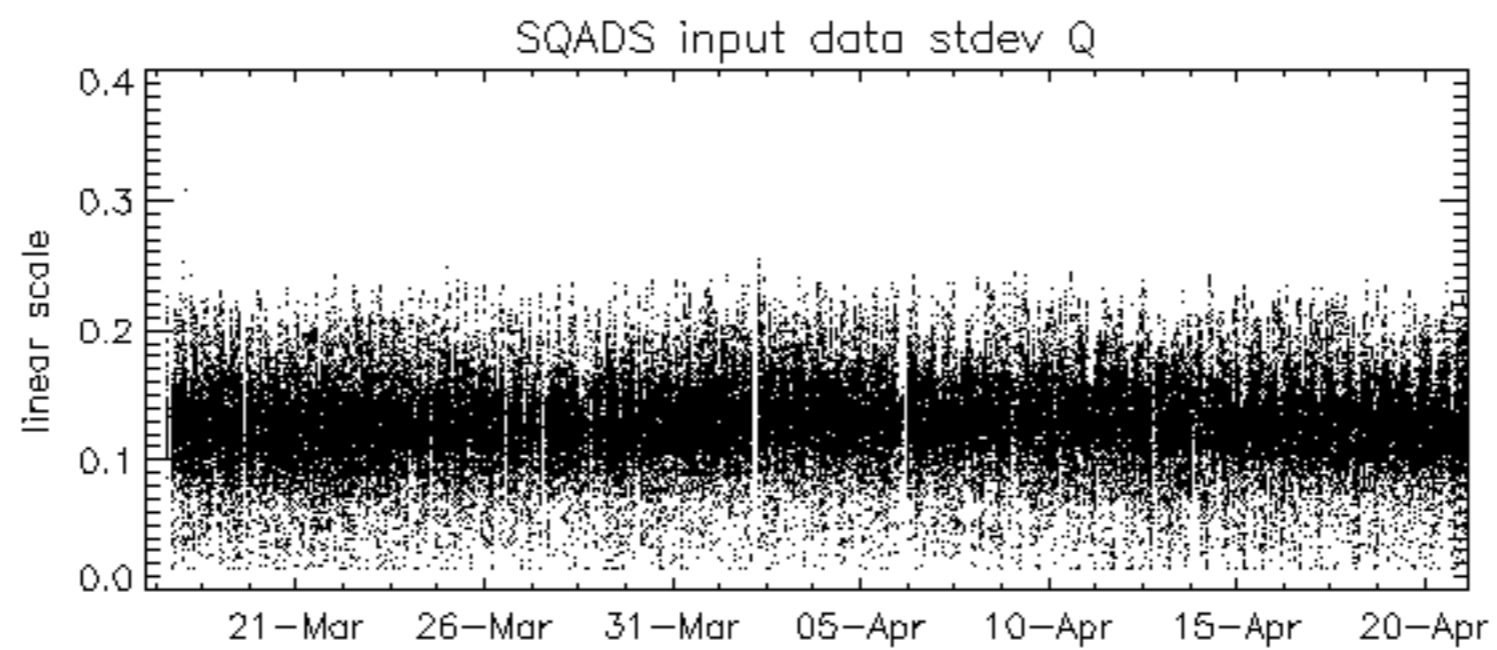
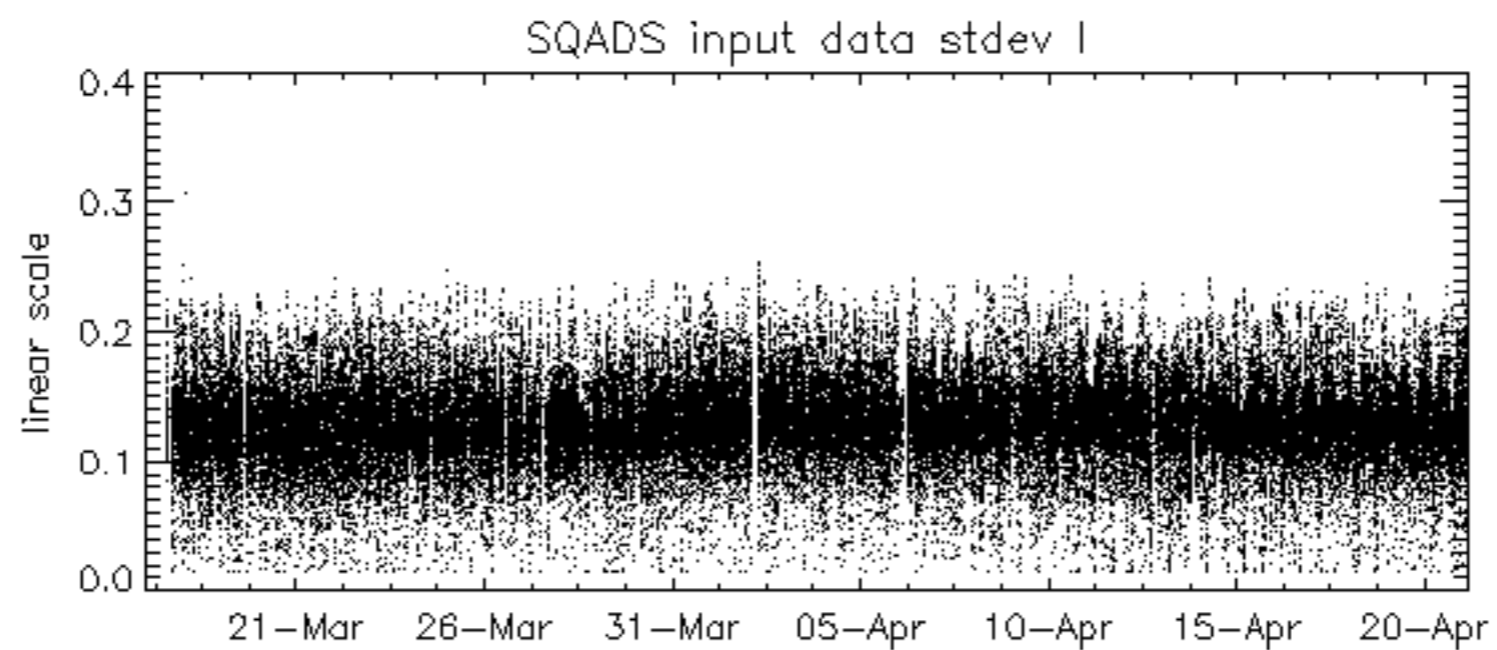
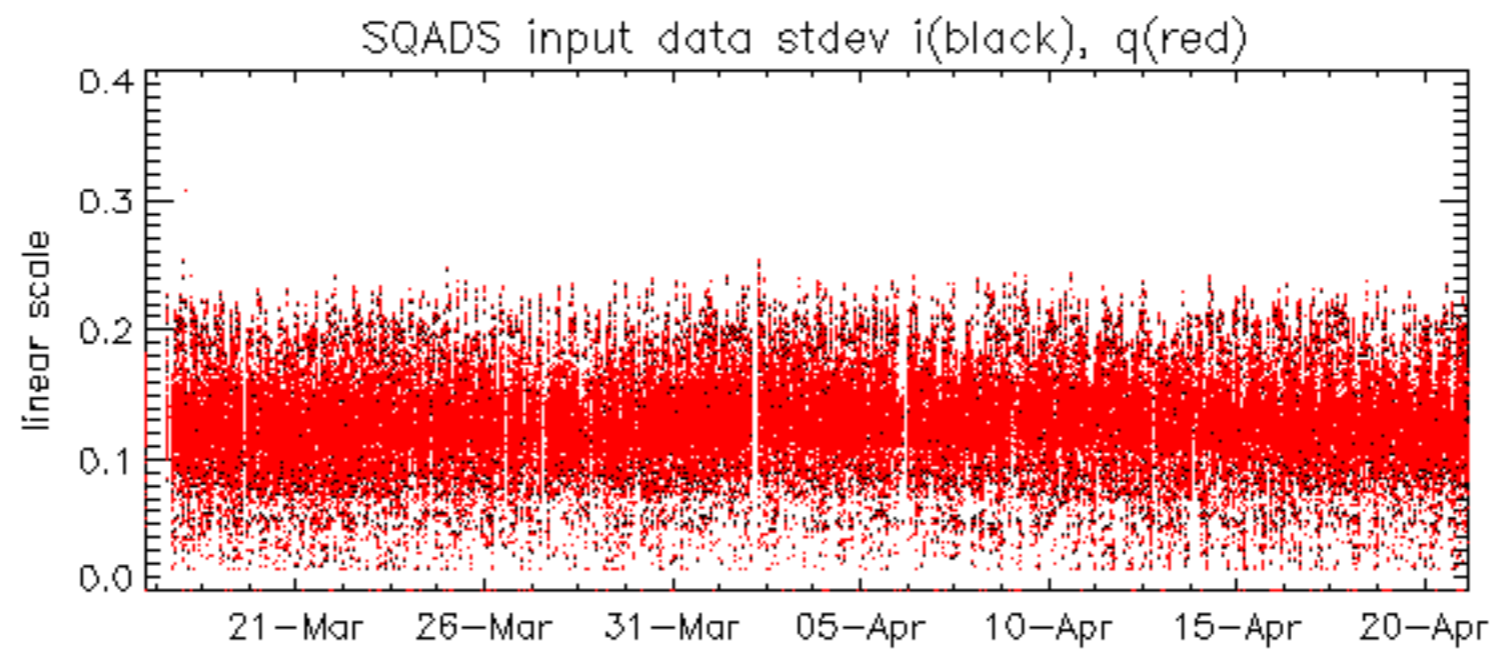


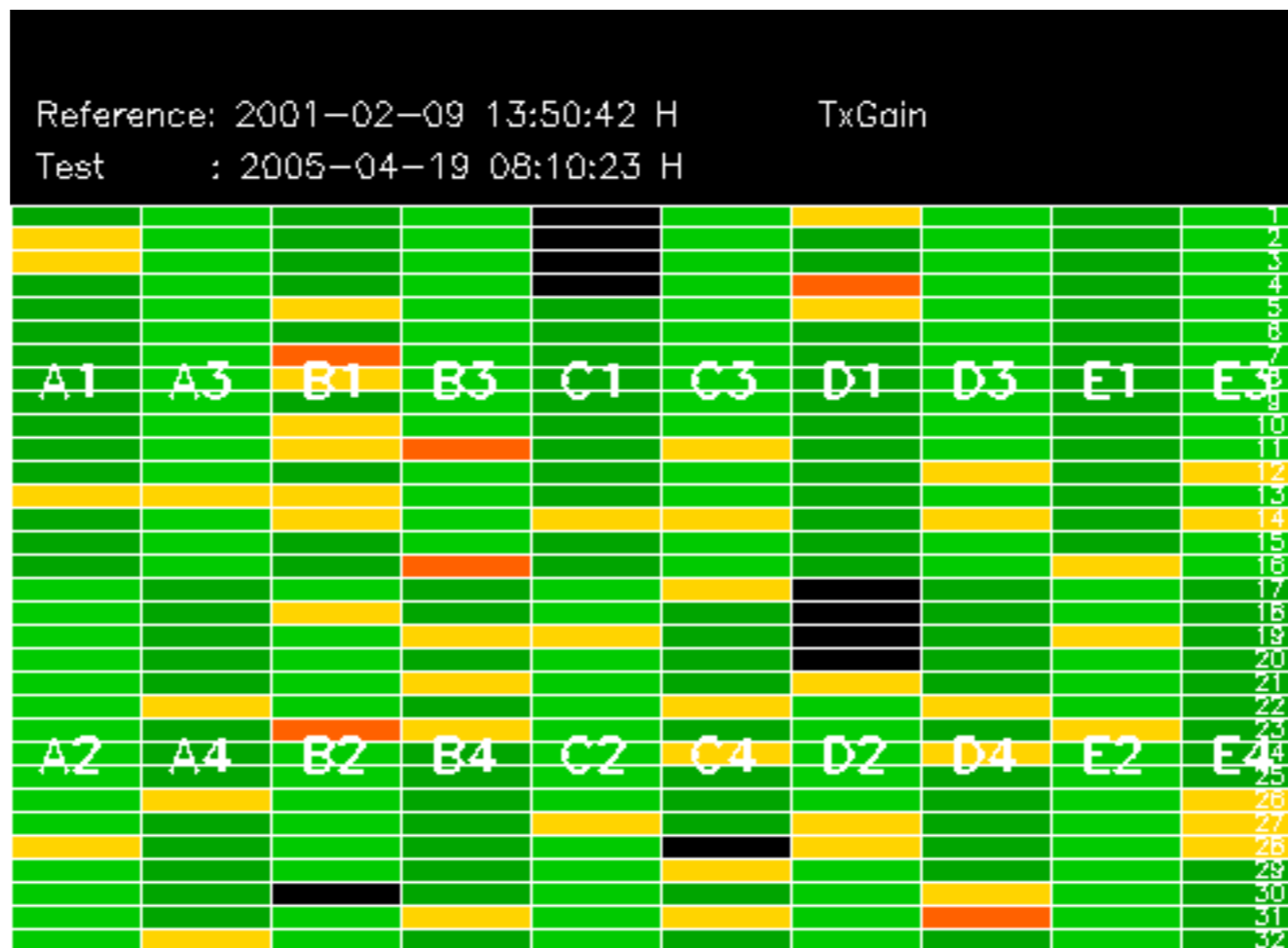
No anomalies observed on available MS products:

No anomalies observed.





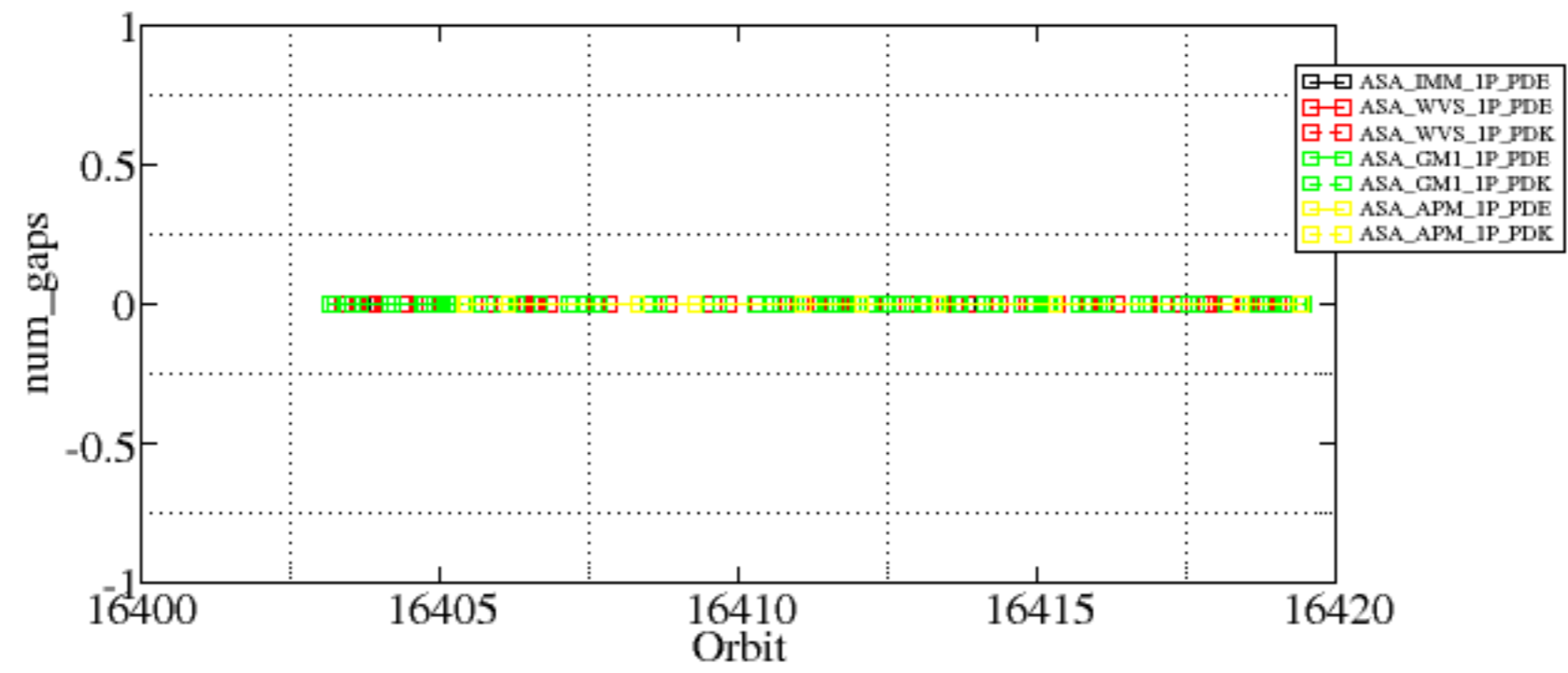


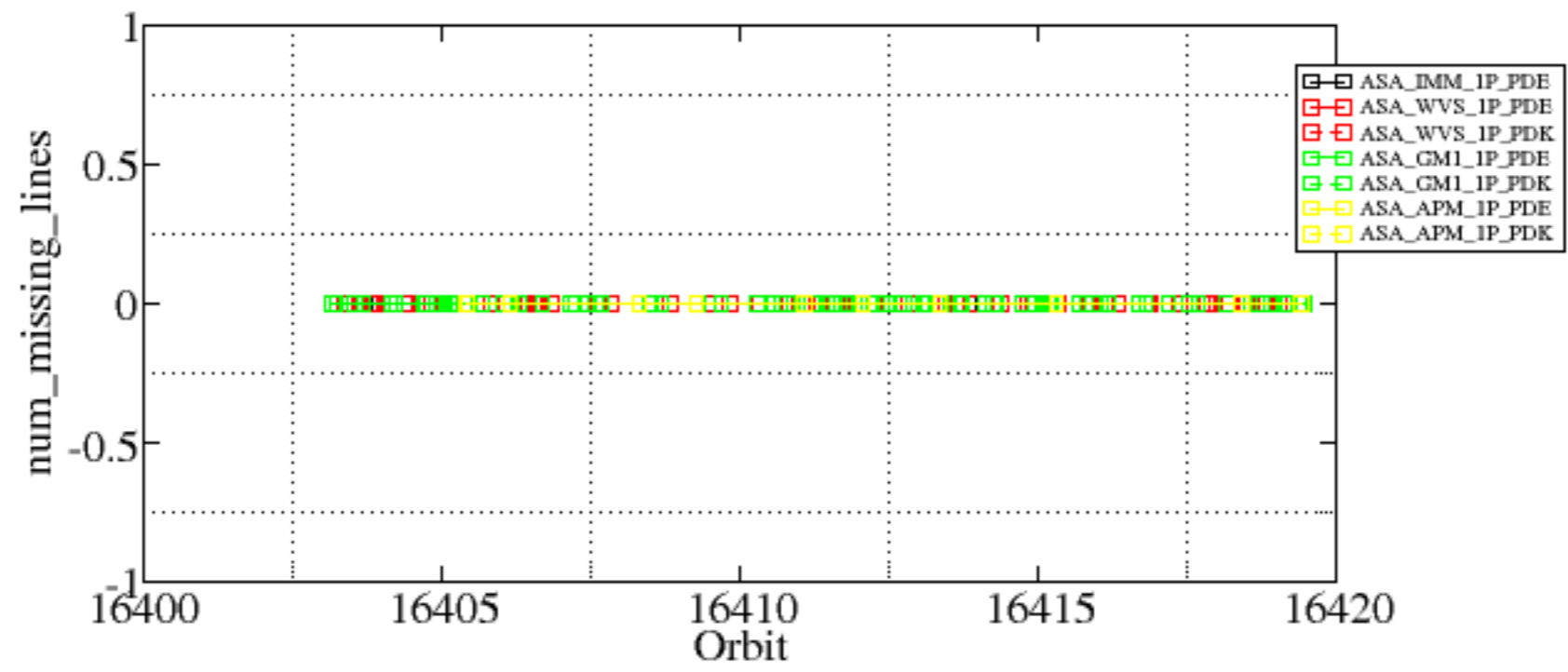


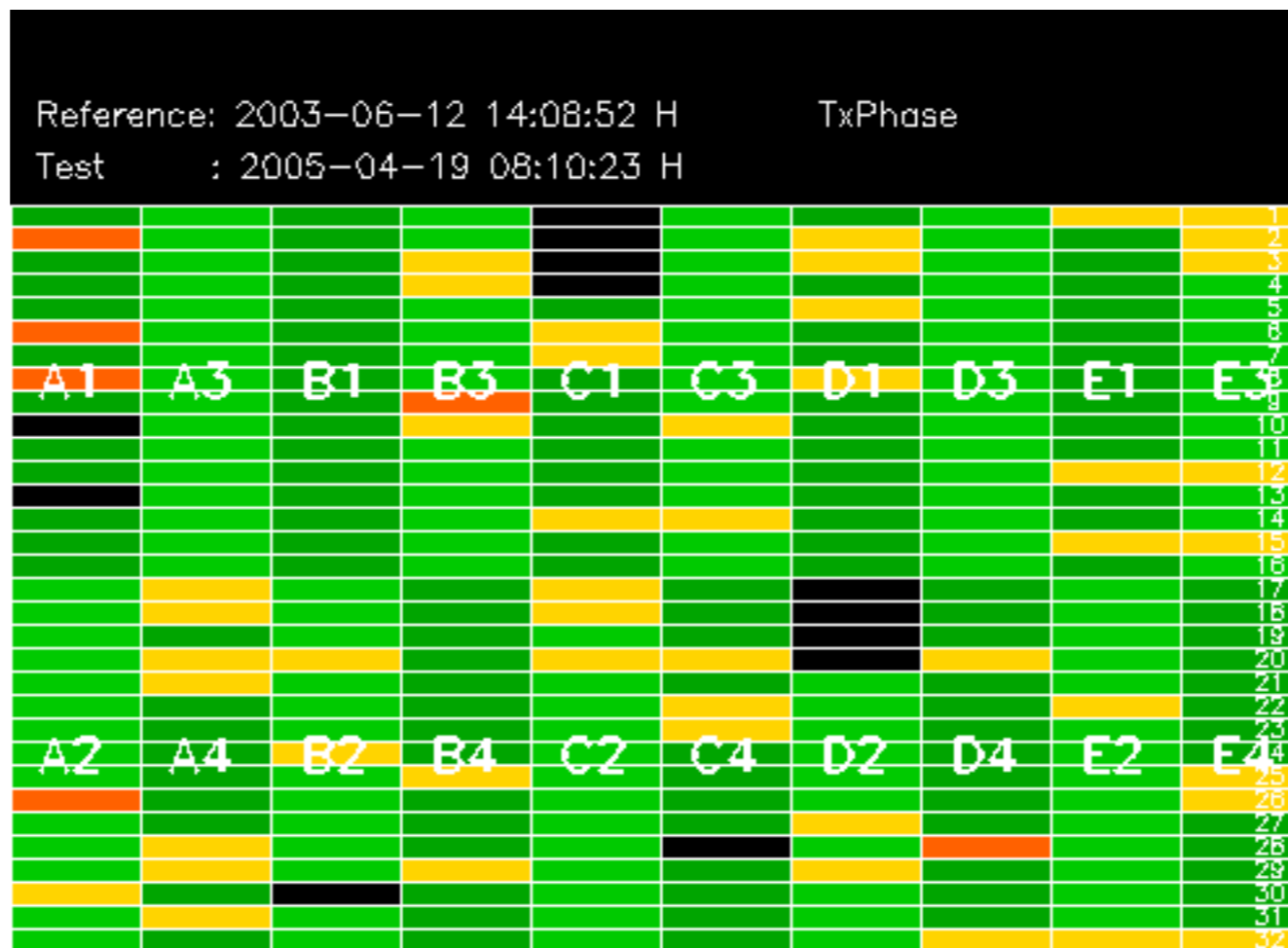
Summary of analysis for the last 3 days 2005042[901]

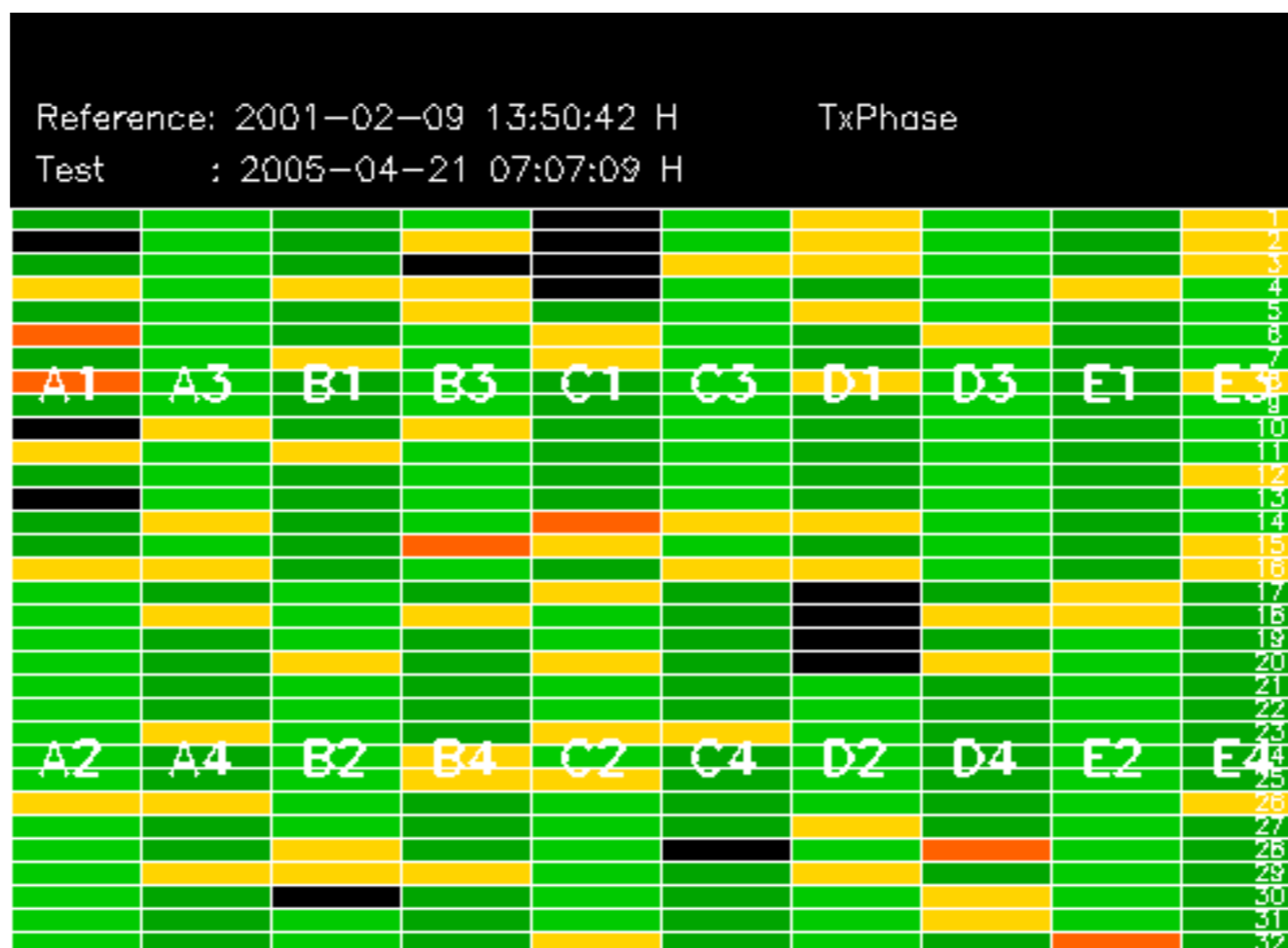
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

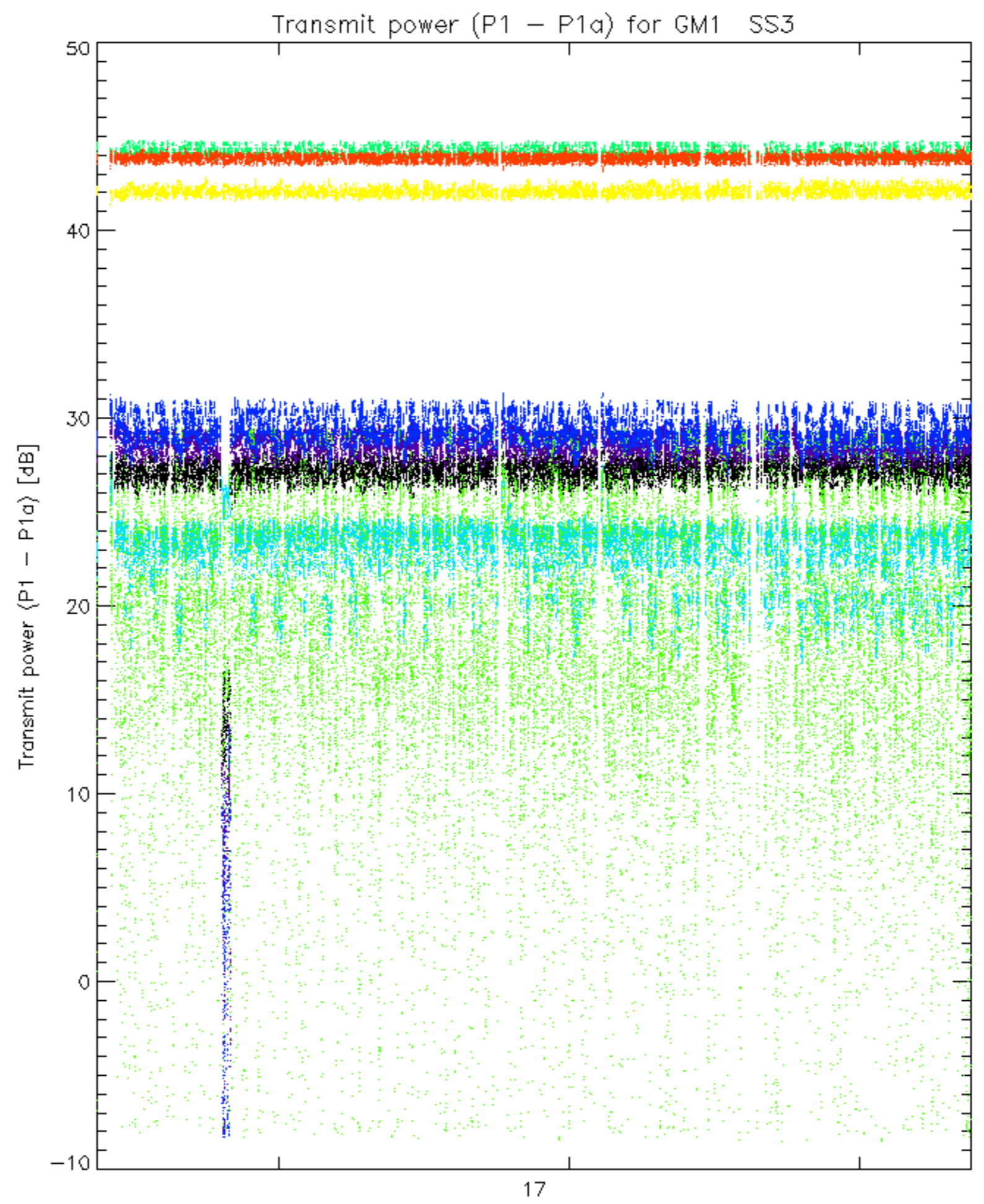
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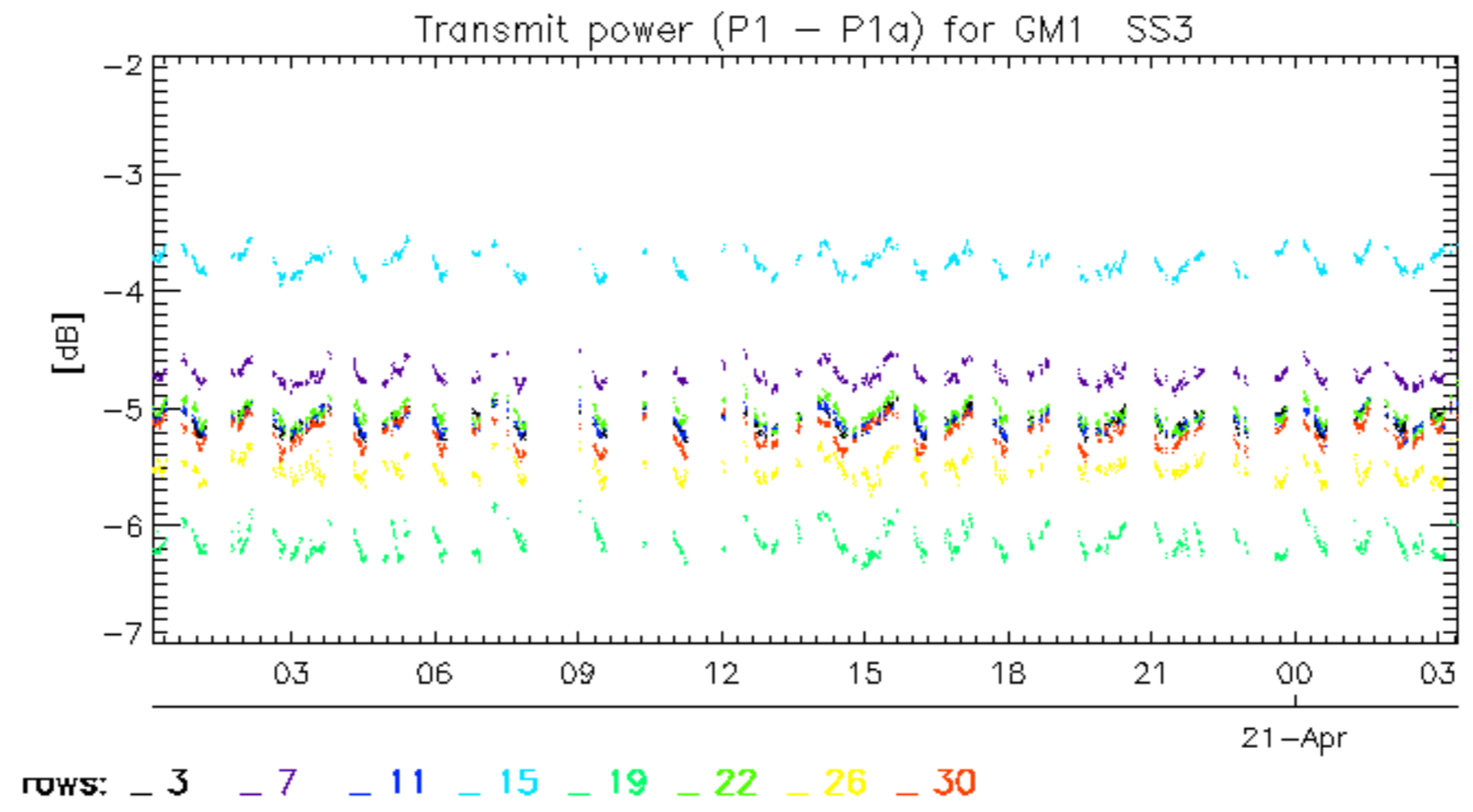


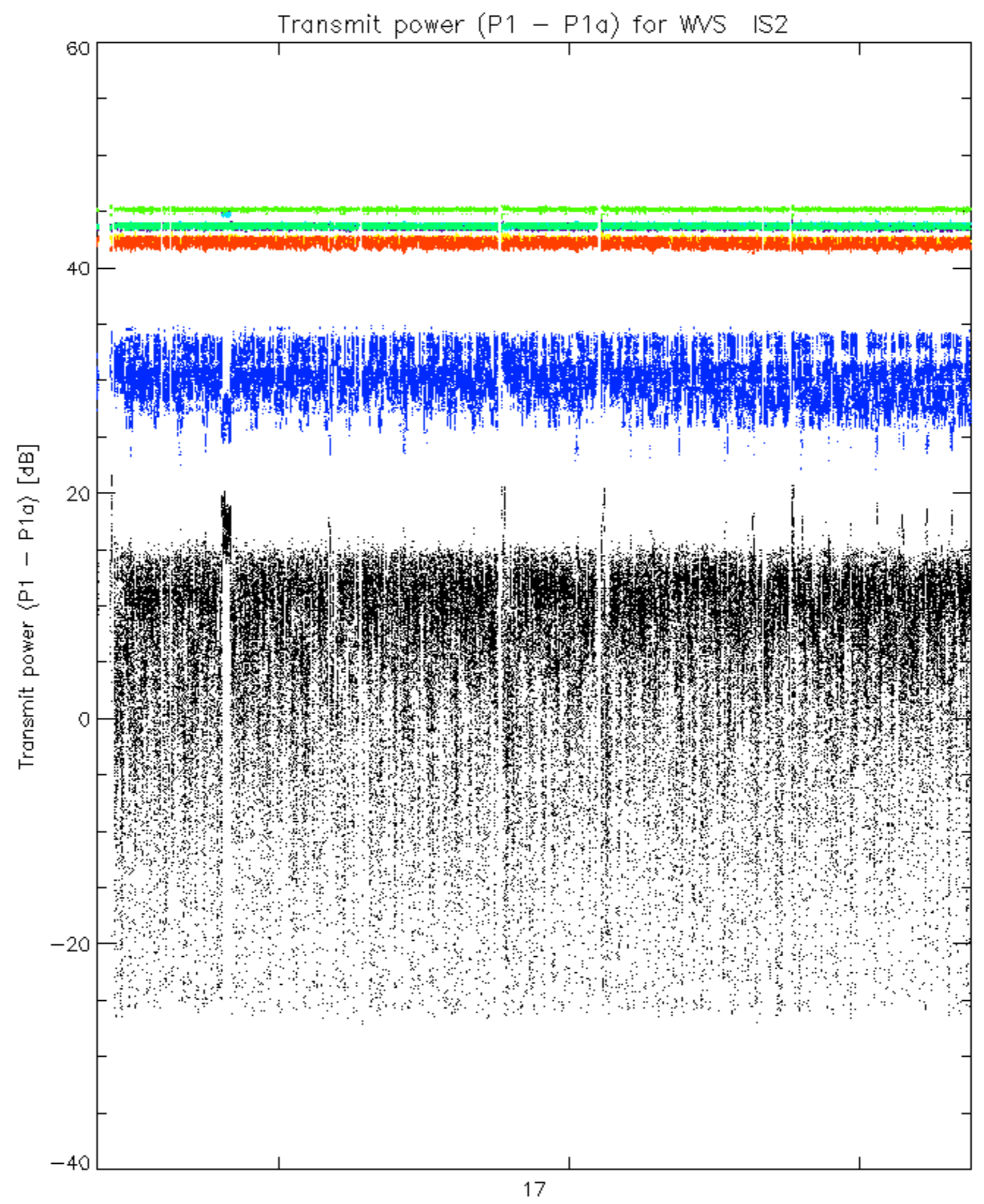


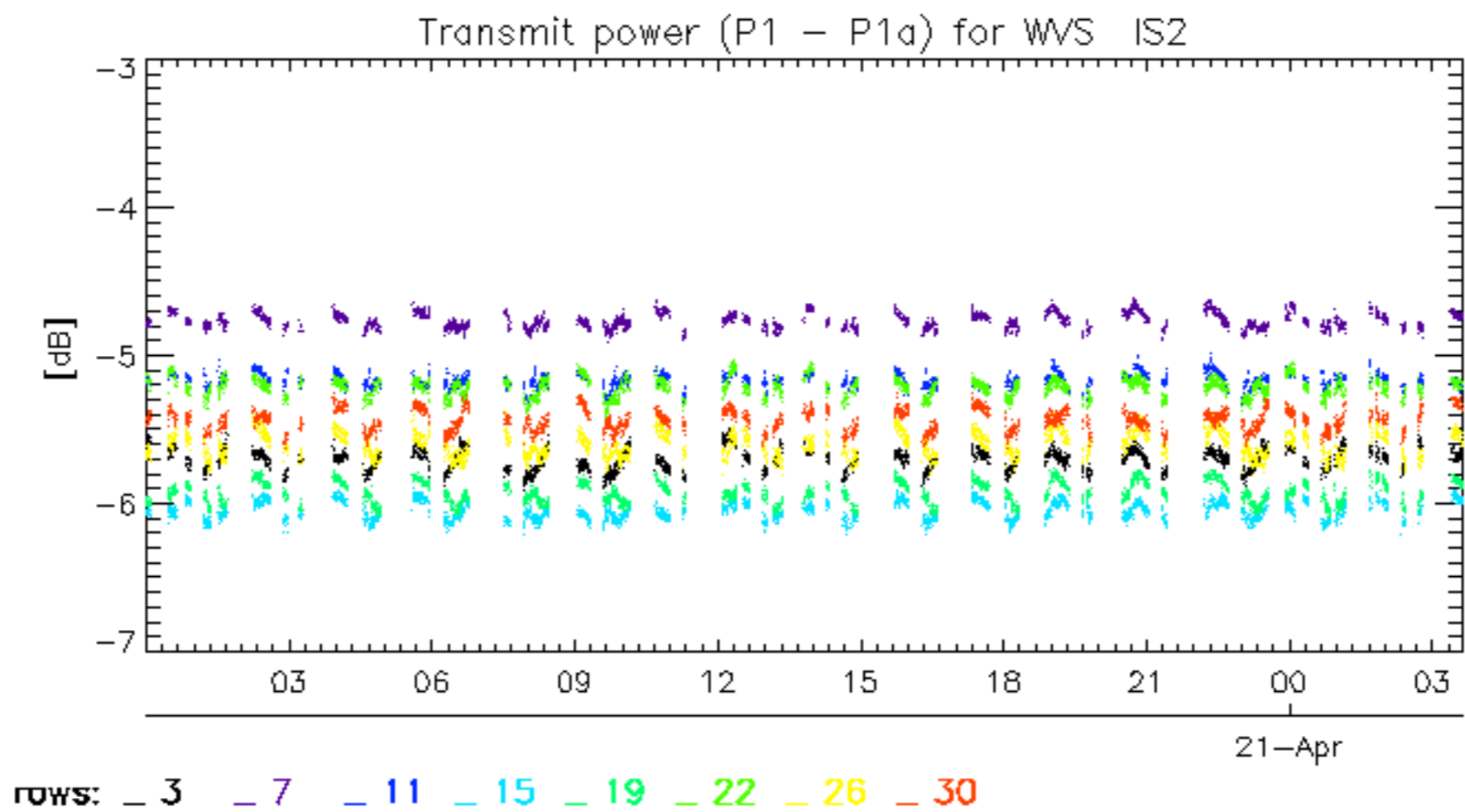




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30







No unavailabilities during the reported period.