

REPORT OF 050505

last update on Thu May 5 13:58:03 GMT 2005

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1 - Introduction

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 2005-05-04 00:00:00 to 2005-05-05 13:58:03

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	17	45	4	9	7
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	17	45	4	9	7
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	17	45	4	9	7
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	17	45	4	9	7

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	41	49	6	8	4
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	41	49	6	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	41	49	6	8	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	41	49	6	8	4

2.3 - Browse Visual Inspection

2.2 - Browse Visual Inspection

No anomalies observed on available browse products

2.4 - Data Analysis

2.3 - 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	20050504 170209
H	20050505 062656

MSM in V/V polarisation

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

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

<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	-3.347692	0.006827	-0.005290
7	P1	-3.112896	0.012416	0.015946
11	P1	-4.666026	0.026452	0.033620
15	P1	-5.572453	0.043777	0.115393
19	P1	-3.713956	0.004176	-0.032383
22	P1	-4.577385	0.012807	-0.061387
26	P1	-4.891817	0.019666	0.045960
30	P1	-7.155234	0.026986	0.055544
3	P1	-15.762772	0.081259	0.198311
7	P1	-15.513934	0.088505	0.075574
11	P1	-21.222975	0.241894	-0.176005
15	P1	-11.464744	0.033089	0.132417
19	P1	-14.324277	0.032369	-0.047946
22	P1	-15.886910	0.329752	-0.249002
26	P1	-17.627388	0.184531	-0.013388
30	P1	-17.875332	0.294757	0.000417

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.046001	0.082970	-0.037915
7	P2	-22.222803	0.103380	-0.048485
11	P2	-14.169066	0.108641	0.170727
15	P2	-7.081398	0.092546	-0.077955
19	P2	-9.649981	0.094885	-0.003429
22	P2	-16.882879	0.096647	-0.029428

26	P2	-16.473770	0.096531	-0.058290
30	P2	-18.824318	0.084949	0.014024

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.166869	0.004041	-0.009999
7	P3	-8.166869	0.004041	-0.009999
11	P3	-8.166867	0.004041	-0.010001
15	P3	-8.166867	0.004041	-0.010001
19	P3	-8.166867	0.004041	-0.010001
22	P3	-8.166867	0.004041	-0.010001
26	P3	-8.166867	0.004041	-0.010001
30	P3	-8.166868	0.004041	-0.010000

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	-2.756848	0.012273	-0.058916
7	P1	-3.001611	0.031066	0.057688
11	P1	-3.977767	0.016970	0.050485
15	P1	-3.539272	0.022202	0.050304
19	P1	-3.624123	0.014640	-0.020532
22	P1	-5.676143	0.048022	0.083431
26	P1	-7.310585	0.024330	-0.023314
30	P1	-6.280563	0.061432	-0.002121
3	P1	-10.763600	0.045752	-0.083121
7	P1	-10.396079	0.151628	-0.051659

11	P1	-12.560077	0.099979	0.012989
15	P1	-11.673095	0.070479	0.133105
19	P1	-15.613120	0.060689	-0.039684
22	P1	-25.165413	1.947984	-1.035222
26	P1	-15.624647	0.294279	-0.179016
30	P1	-20.168394	1.224165	-0.124269

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.757023	0.039496	-0.073917
7	P2	-22.281481	0.047143	0.060665
11	P2	-10.054049	0.057042	0.069991
15	P2	-5.059464	0.037867	-0.107746
19	P2	-6.884998	0.053197	-0.075086
22	P2	-7.093886	0.037785	-0.056912
26	P2	-23.898321	0.037482	-0.077262
30	P2	-21.925512	0.042137	-0.075318

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.003594	0.003701	-0.006880
7	P3	-8.003630	0.003689	-0.006824
11	P3	-8.003561	0.003694	-0.006626
15	P3	-8.003656	0.003700	-0.006736
19	P3	-8.003699	0.003695	-0.006477
22	P3	-8.003628	0.003682	-0.006639
26	P3	-8.003656	0.003692	-0.006381
30	P3	-8.003634	0.003704	-0.006680

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	0.000475450
	stdev	2.17486e-07
MEAN Q	mean	0.000490078
	stdev	2.34782e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128871
	stdev	0.00106060
STDEV Q	mean	0.129132
	stdev	0.00107237



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005050[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
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7 - Doppler Analysis

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

6.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)



Ascending



Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler



Ascending



Descending

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX



6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

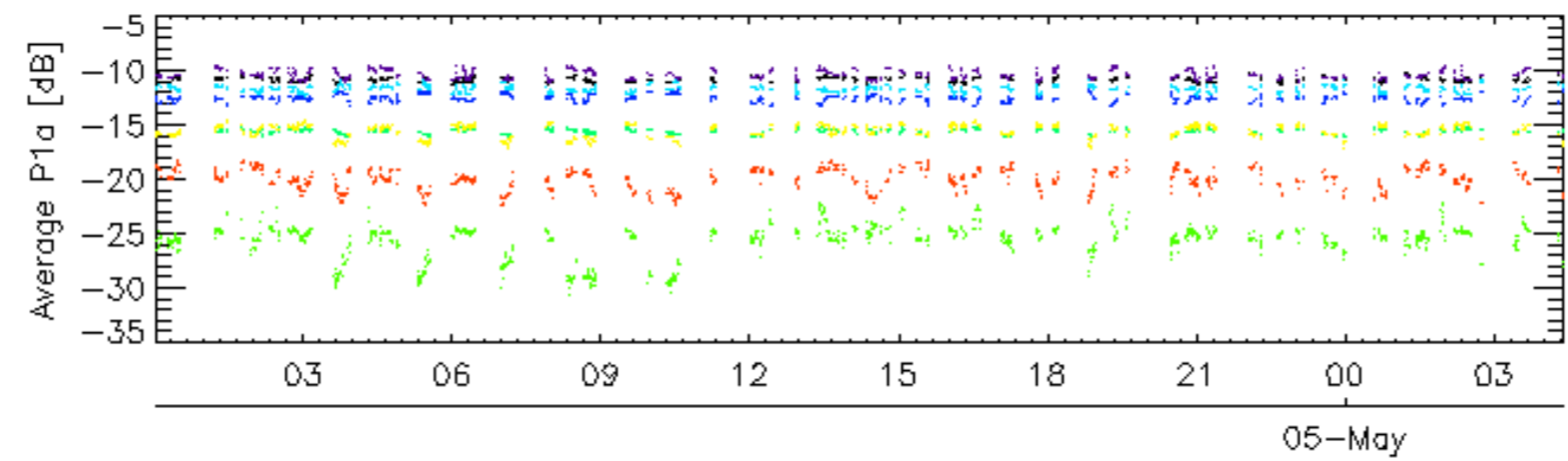
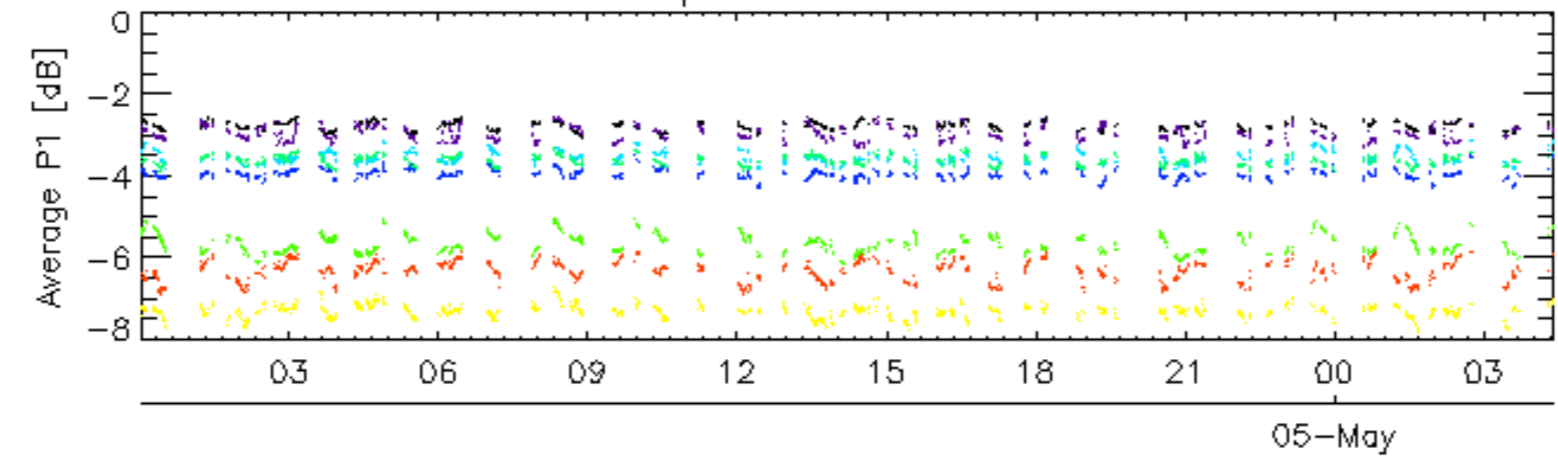
6.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

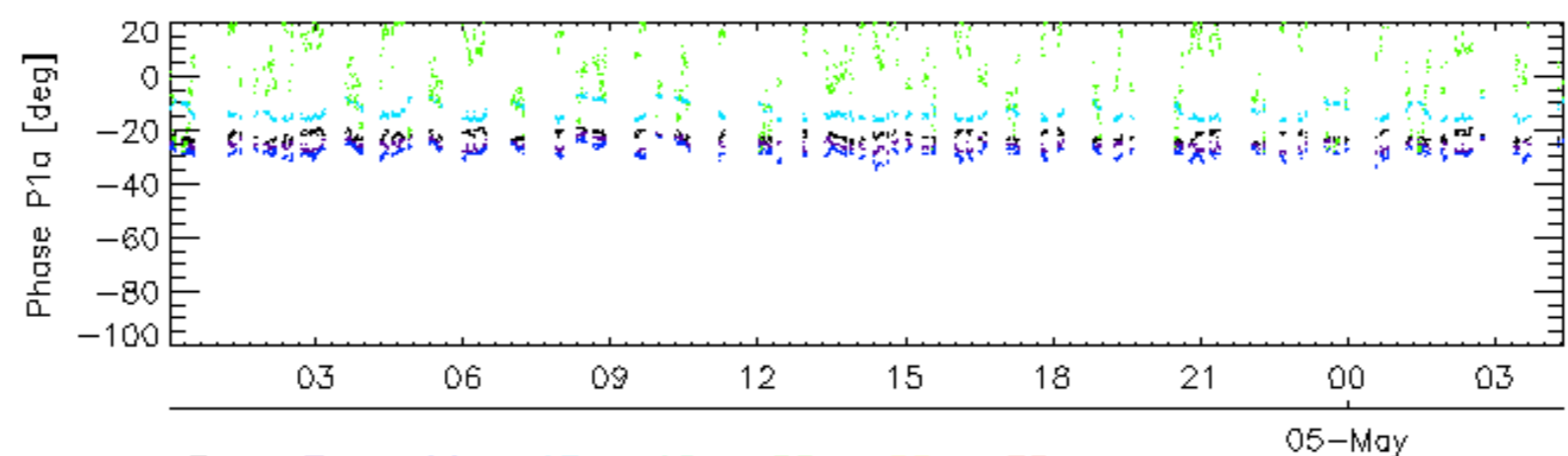
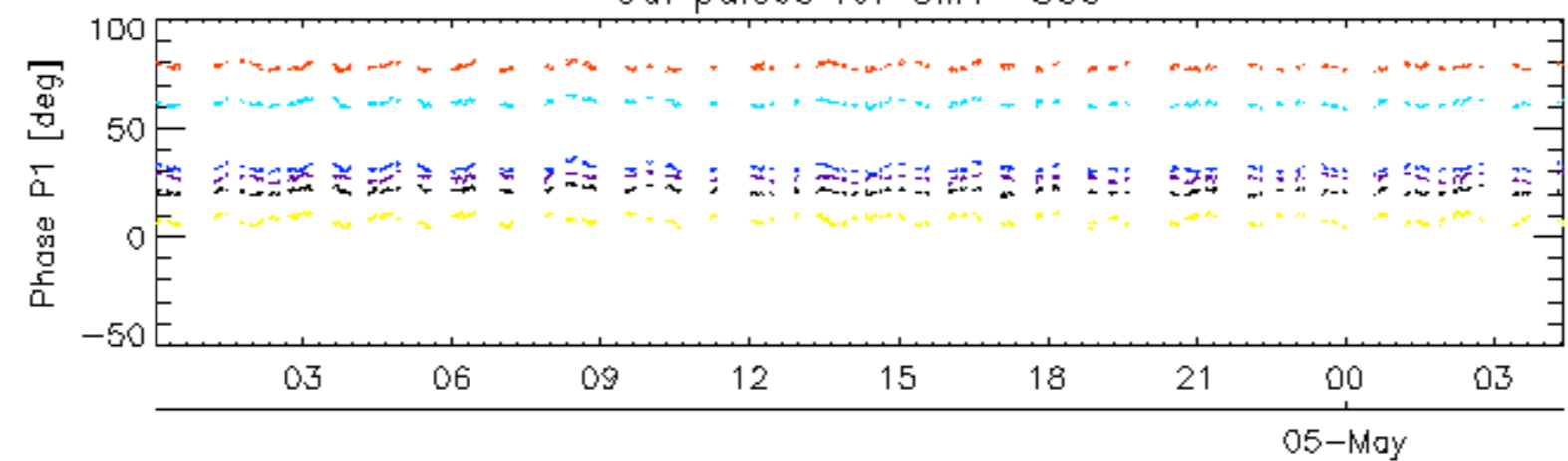
6.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

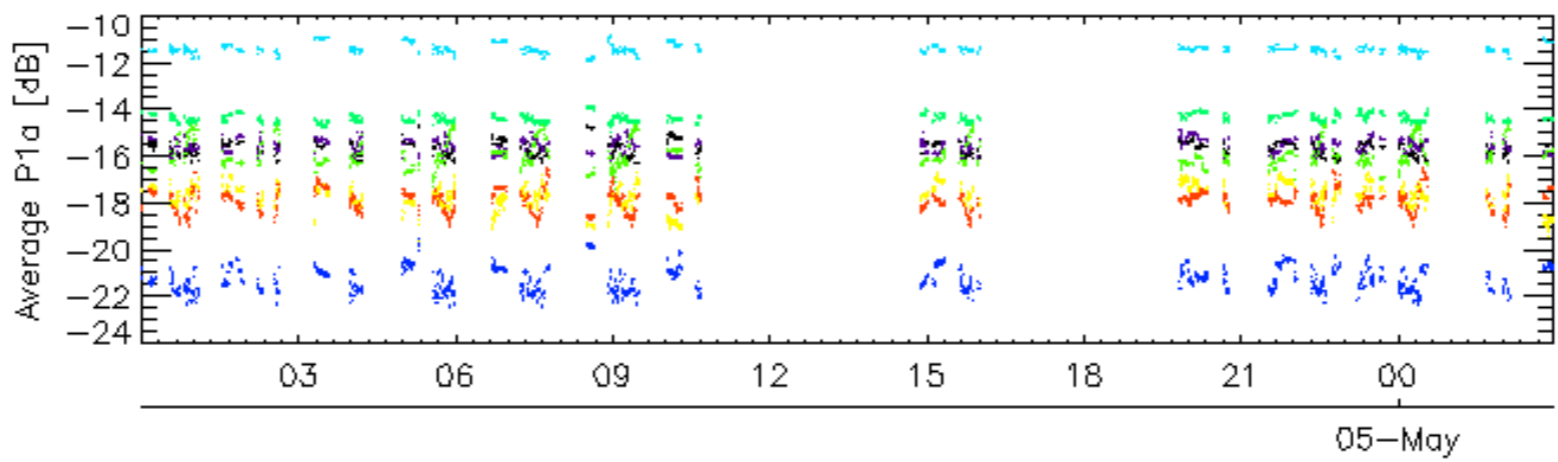
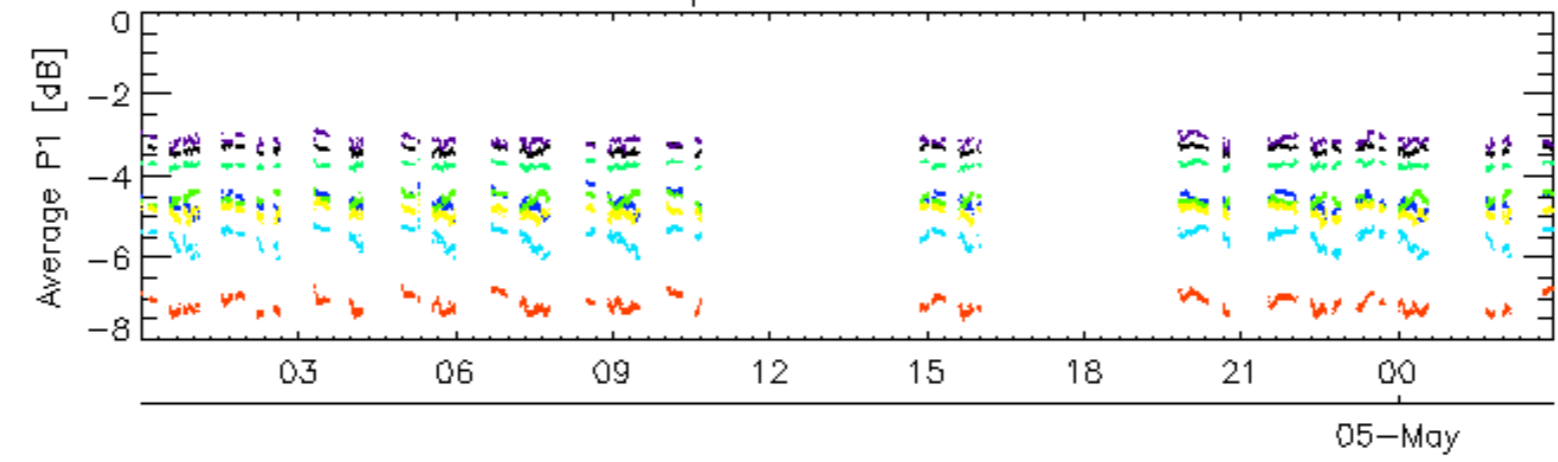


Cal pulses for GM1 SS3

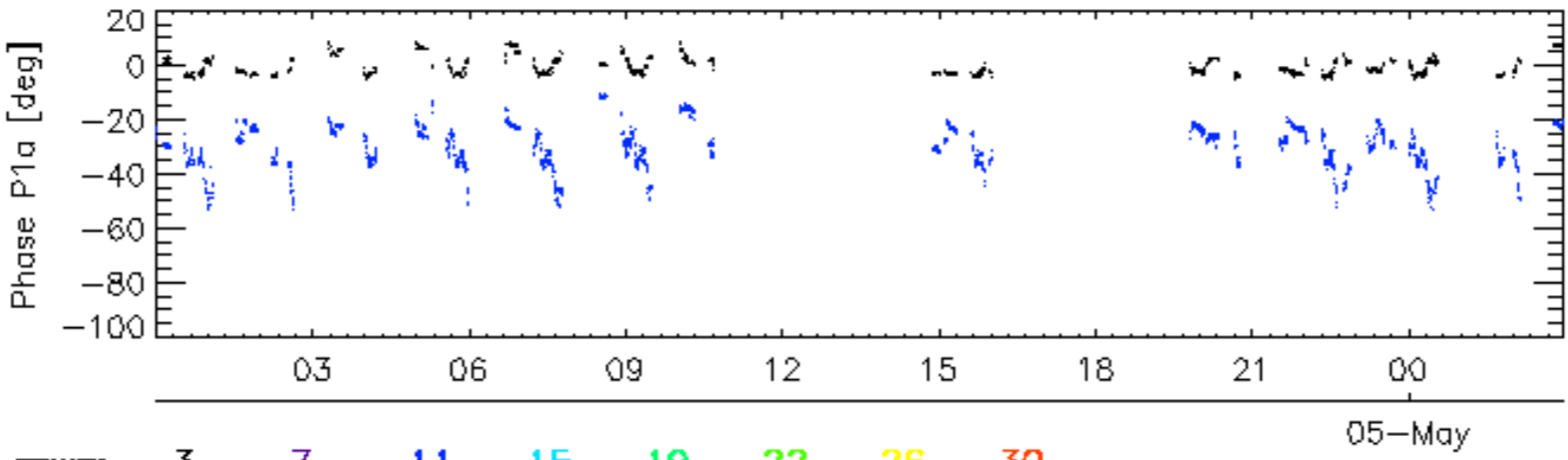
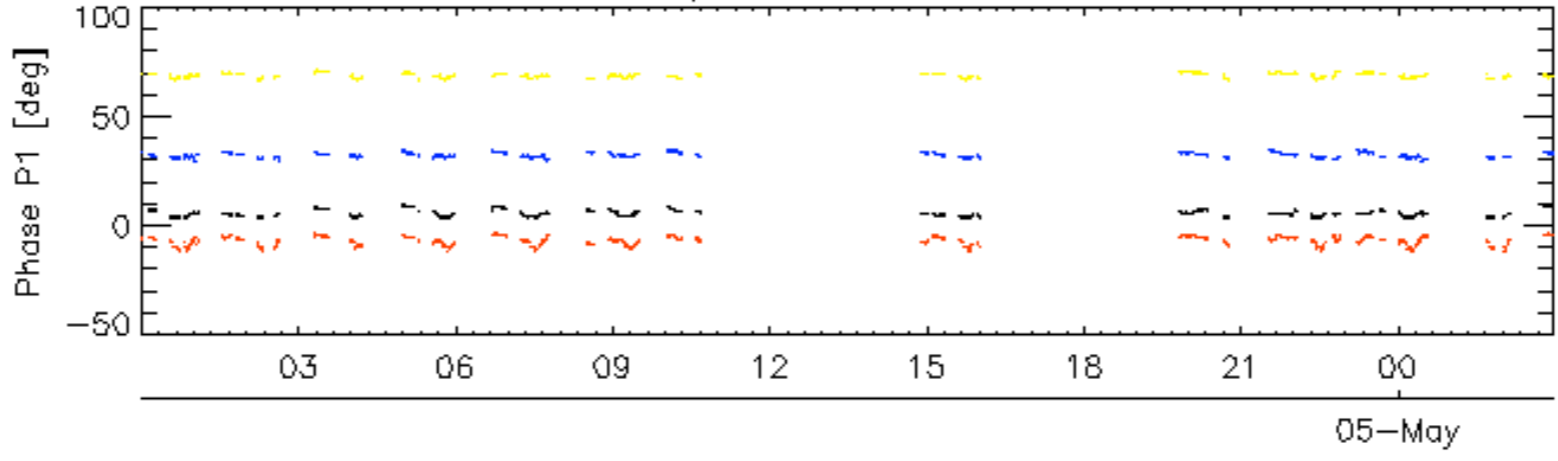


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

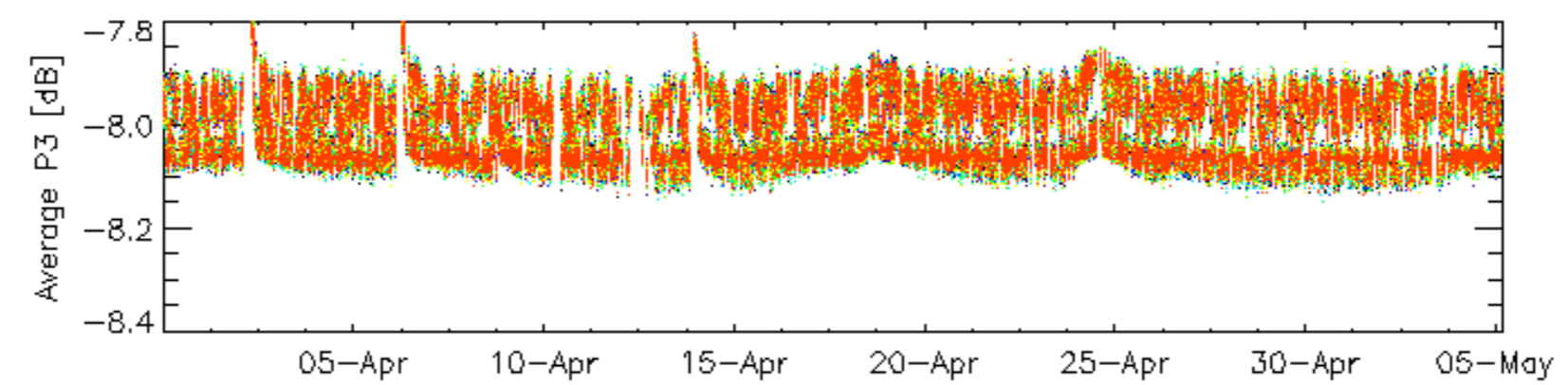
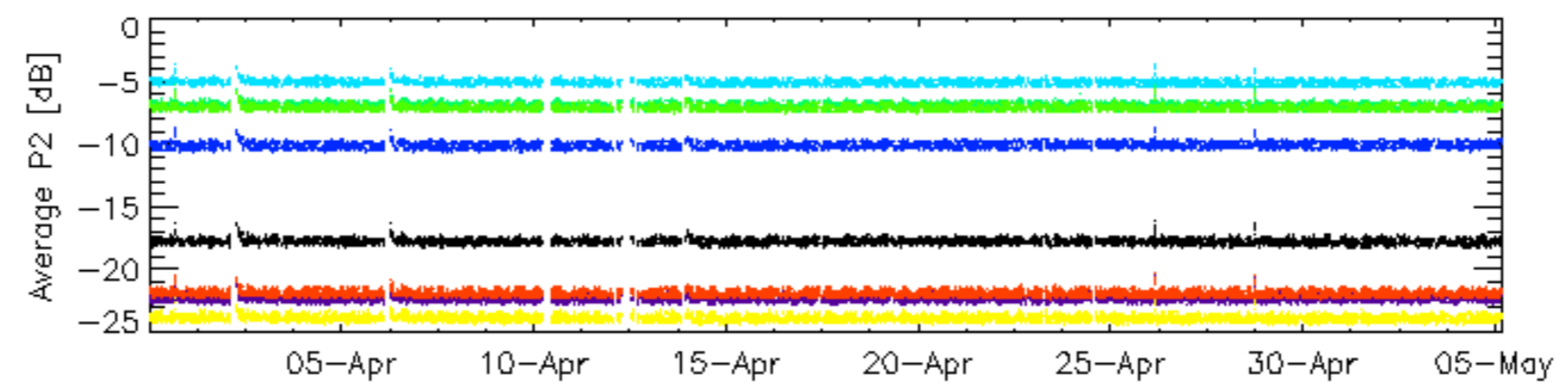
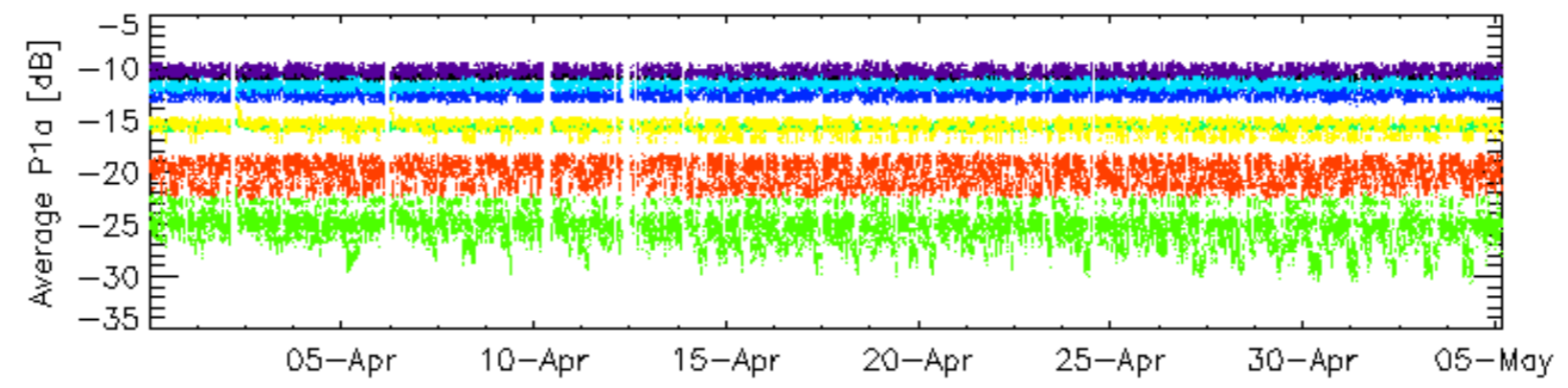
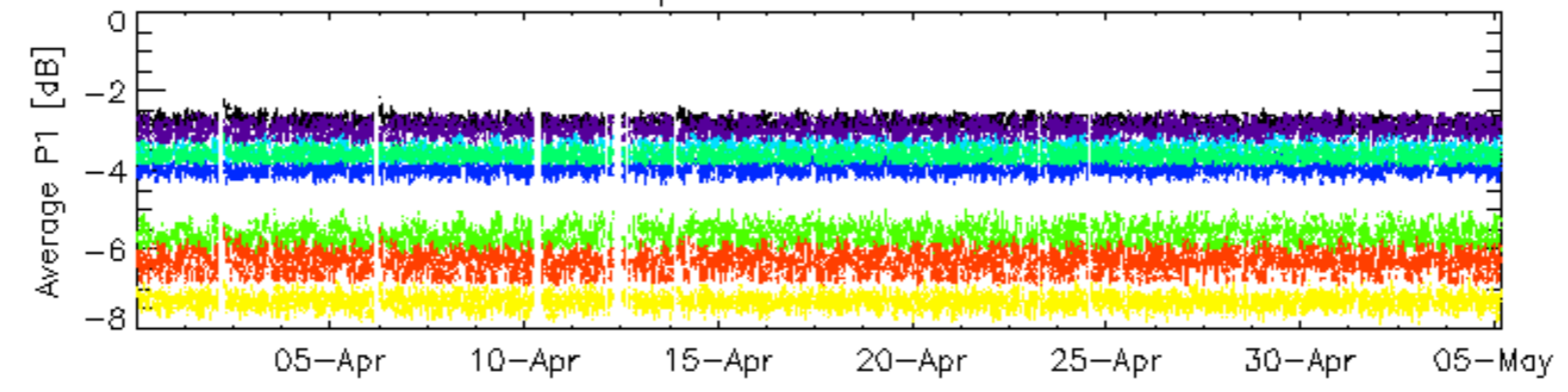


Cal pulses for WVS IS2



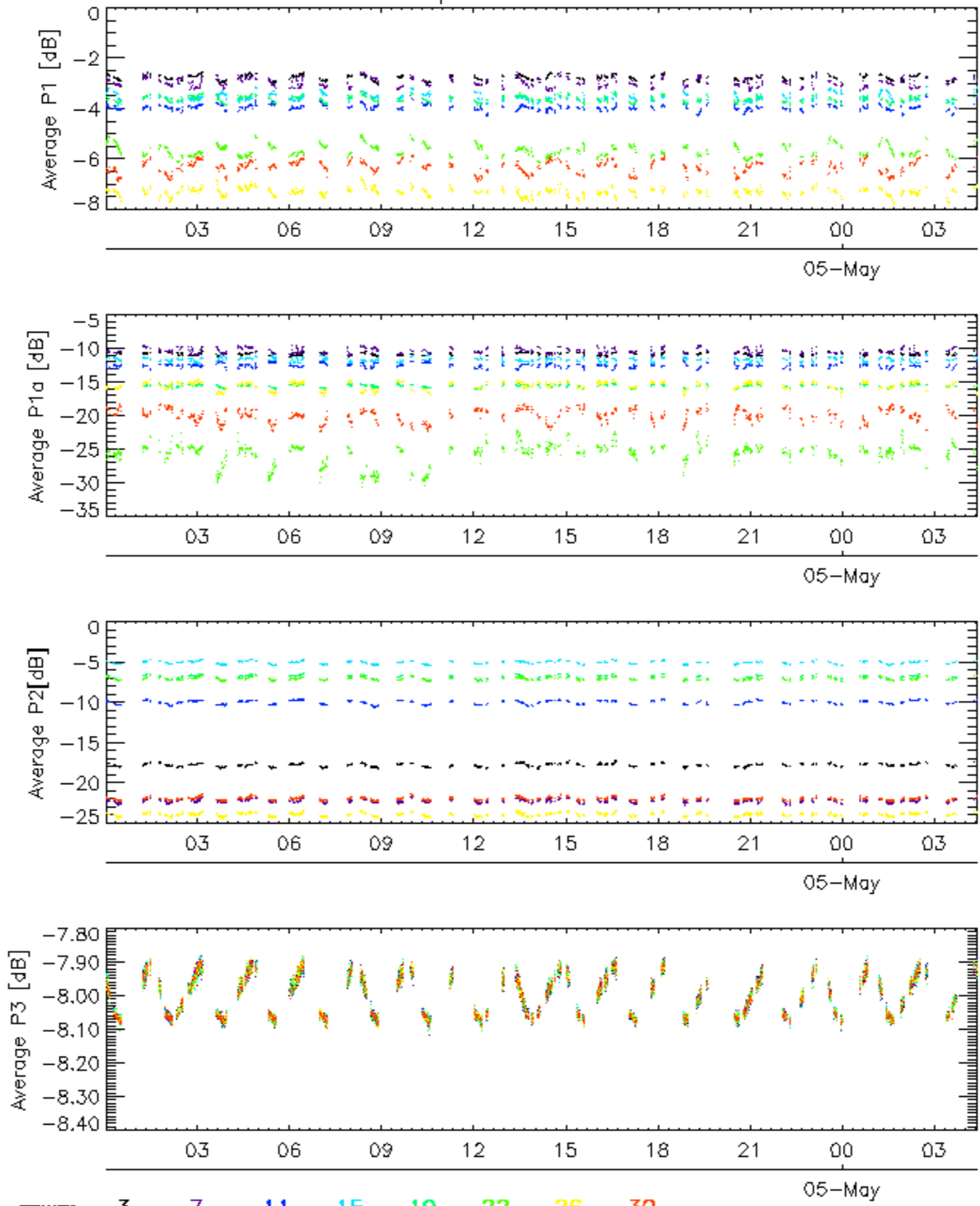
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3



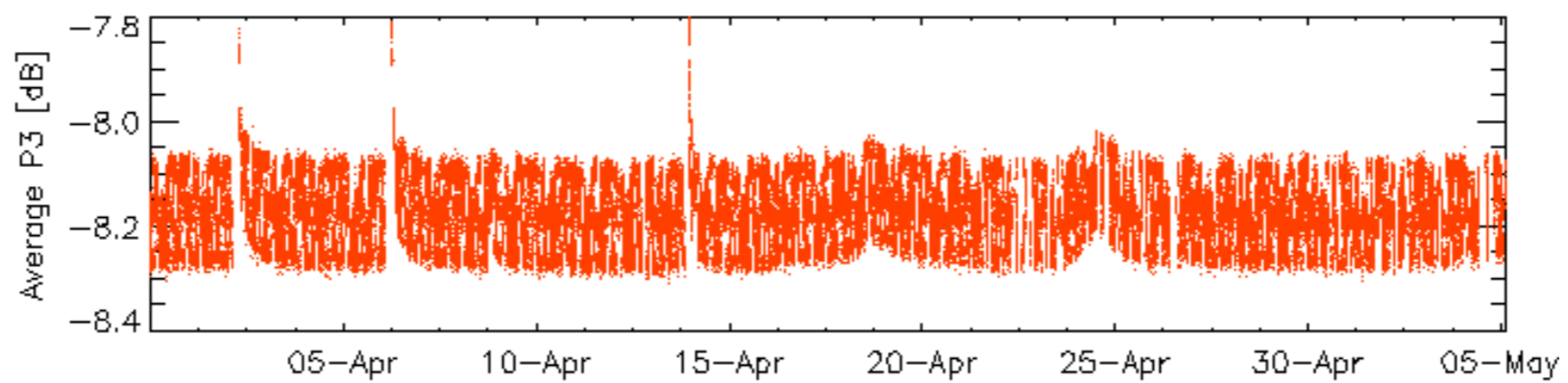
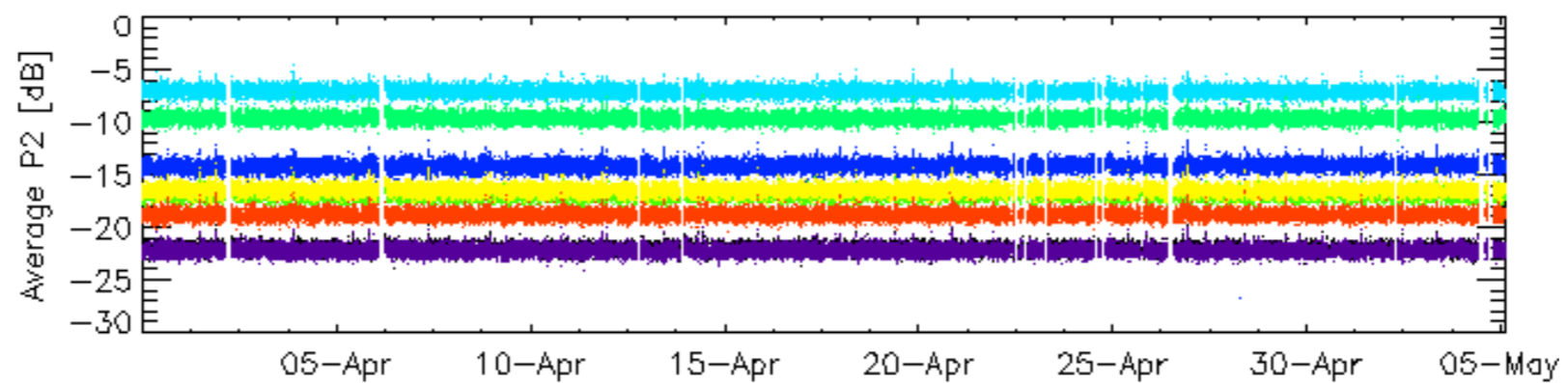
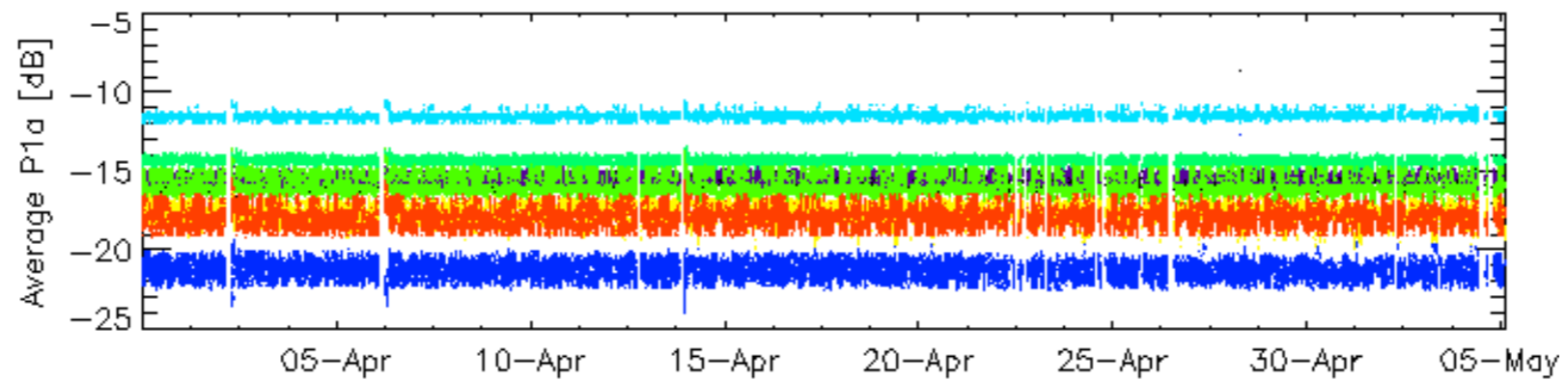
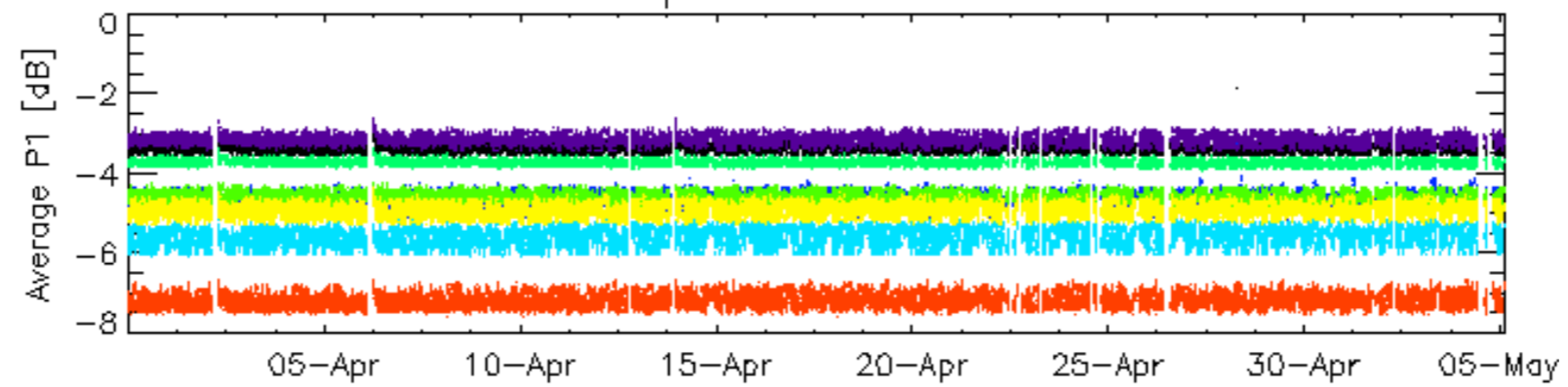
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



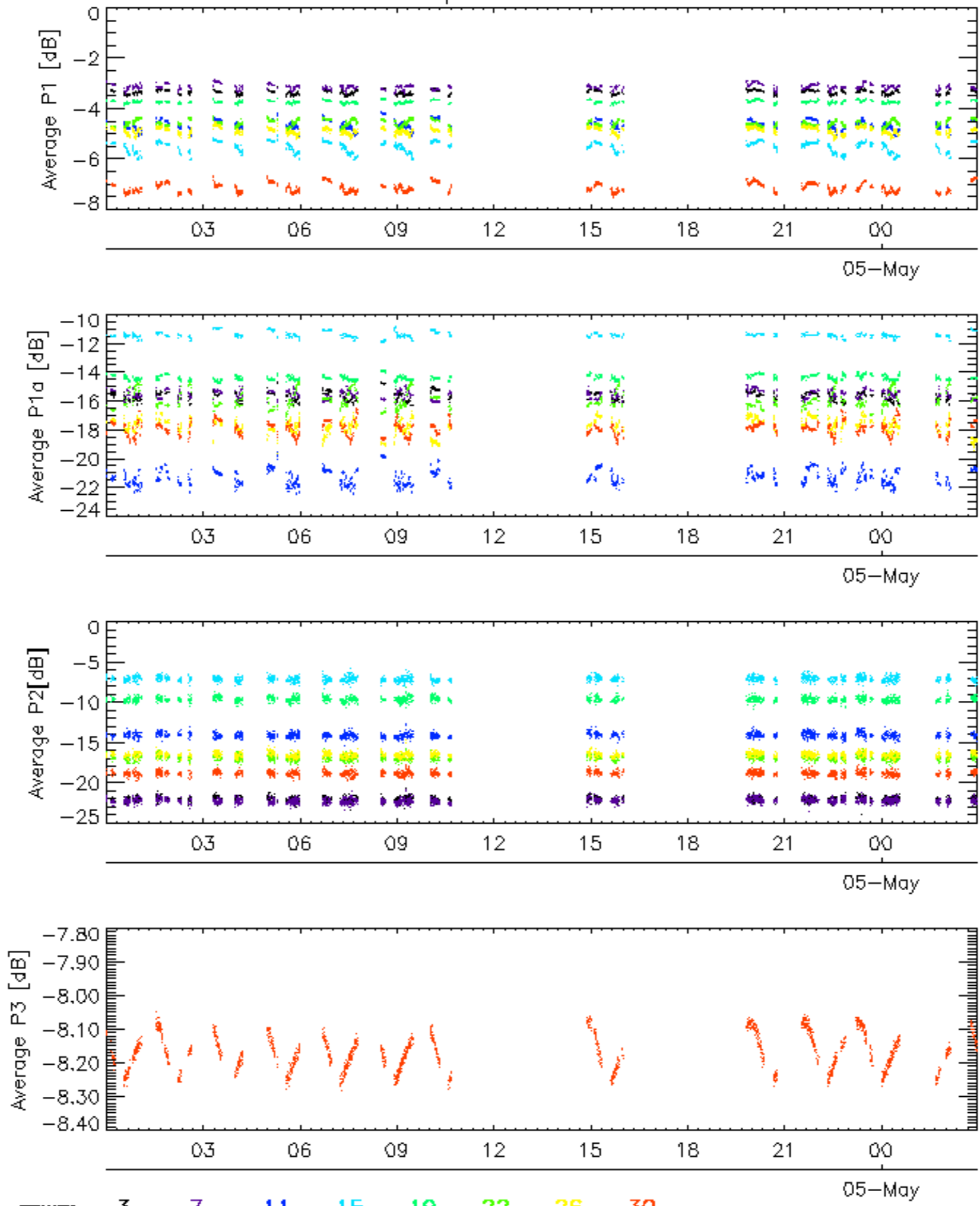
rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2



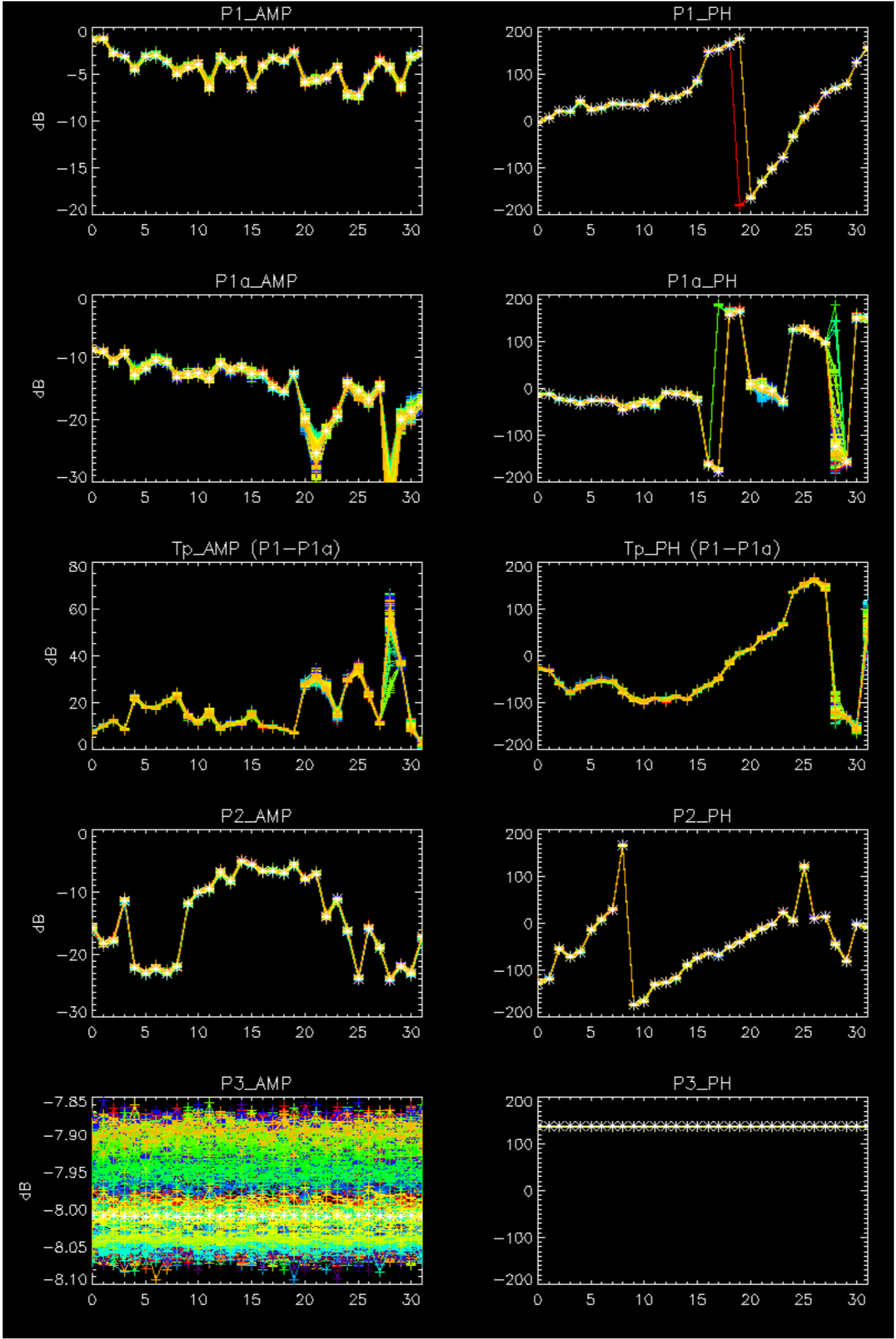
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

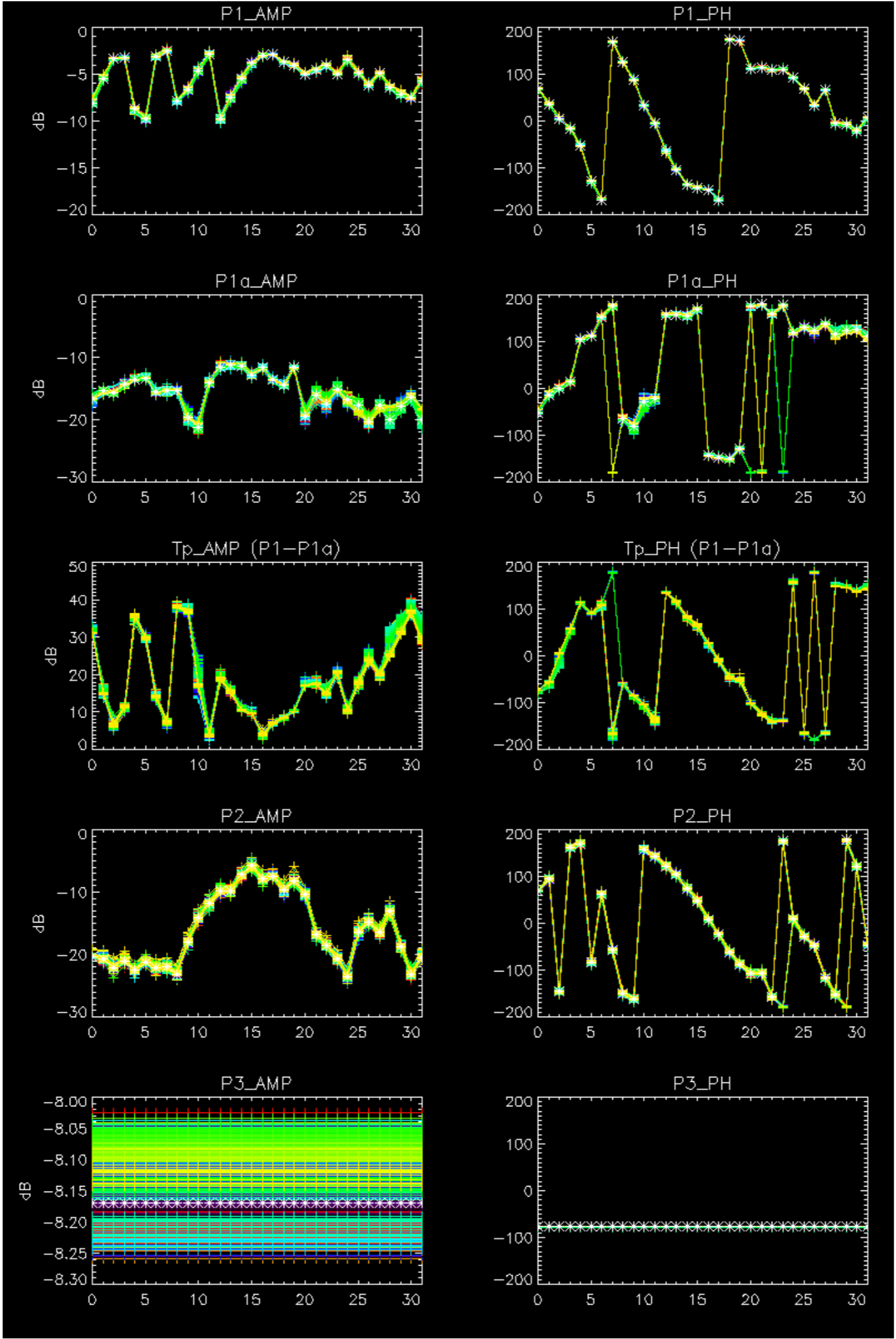
Cal pulses for WVS IS2



No anomalies observed on available browse products

No anomalies observed.

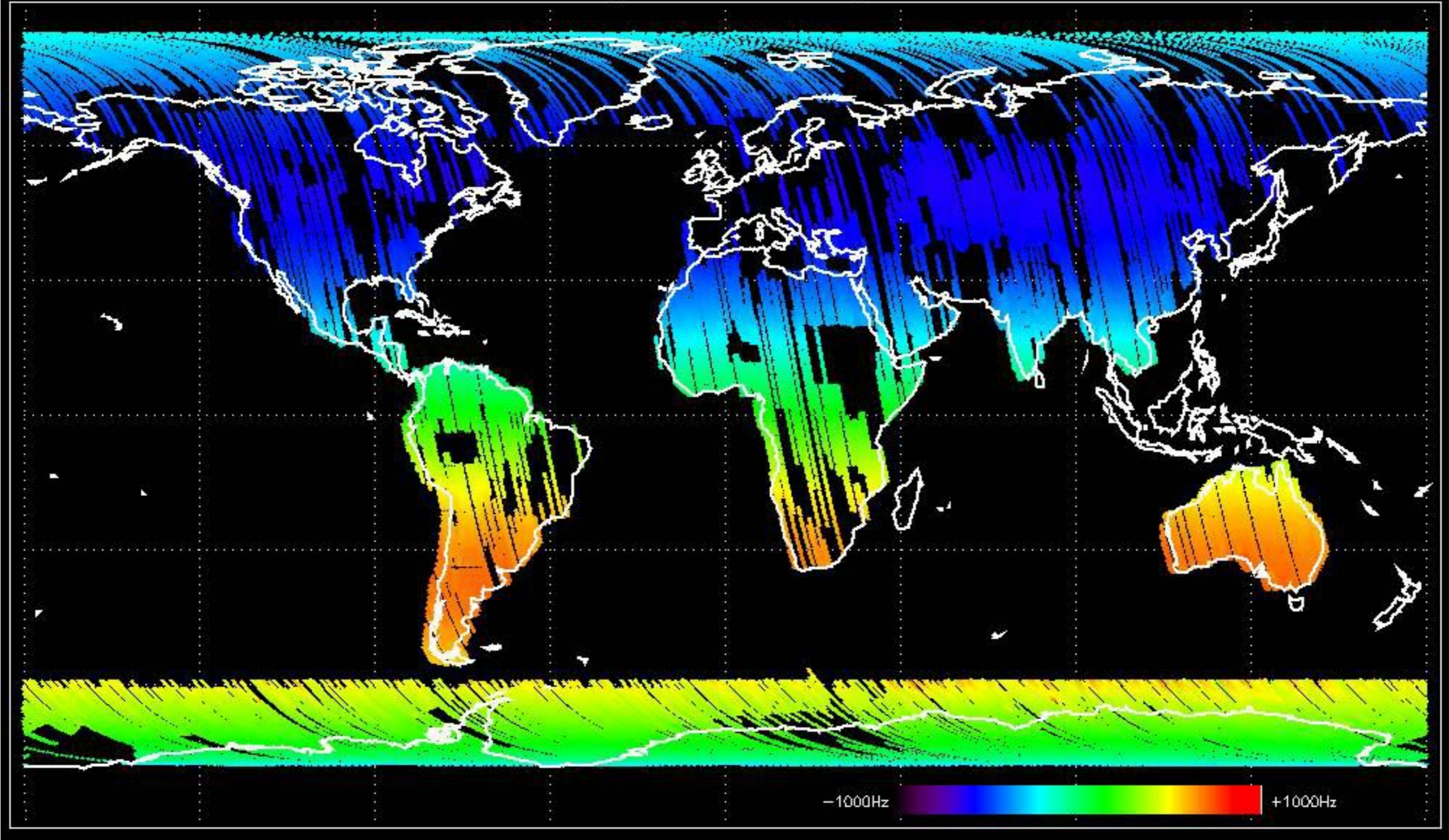




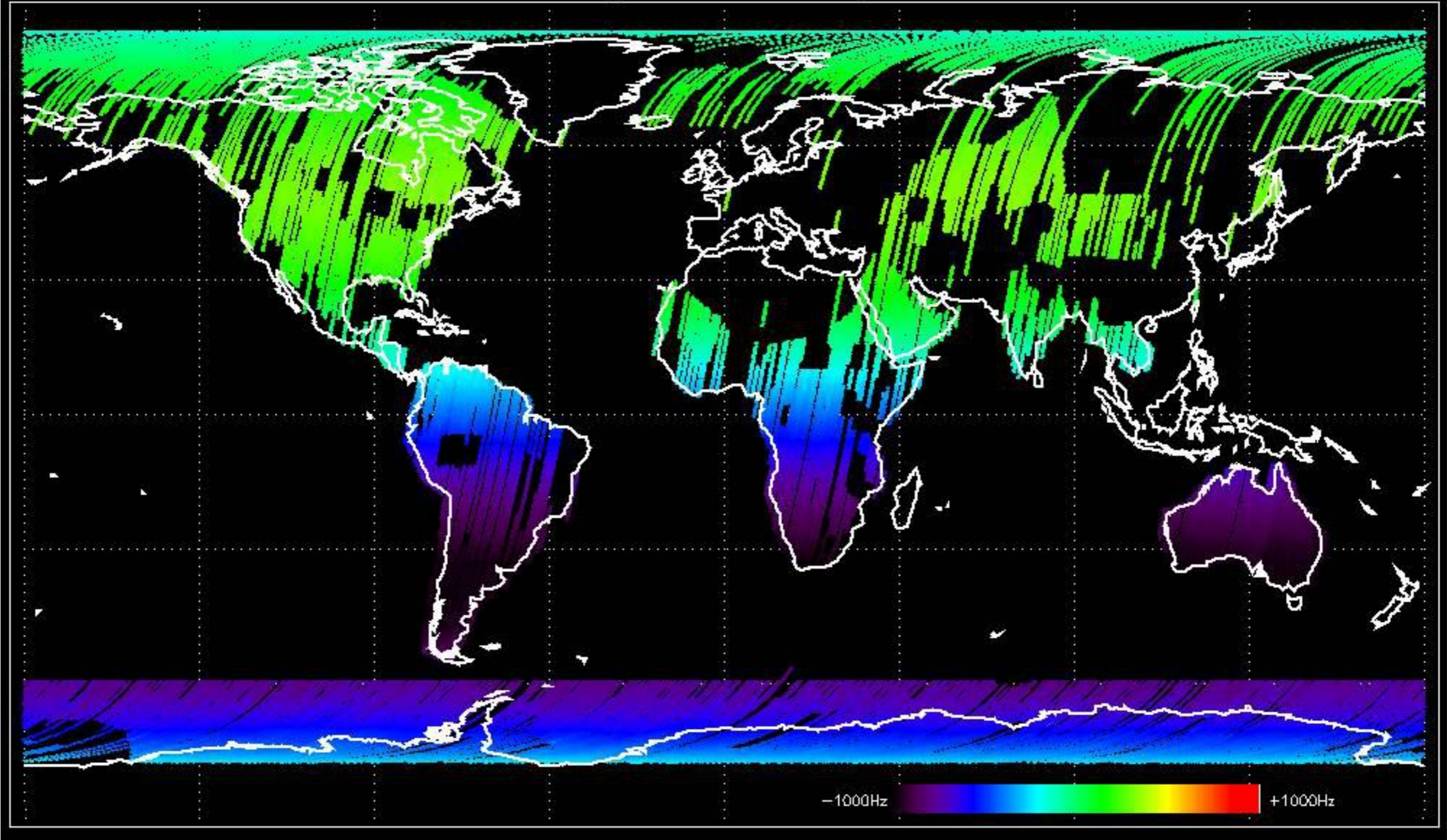
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

No anomalies observed in Doppler evolution.
Doppler analysis performed over the last 35 days.

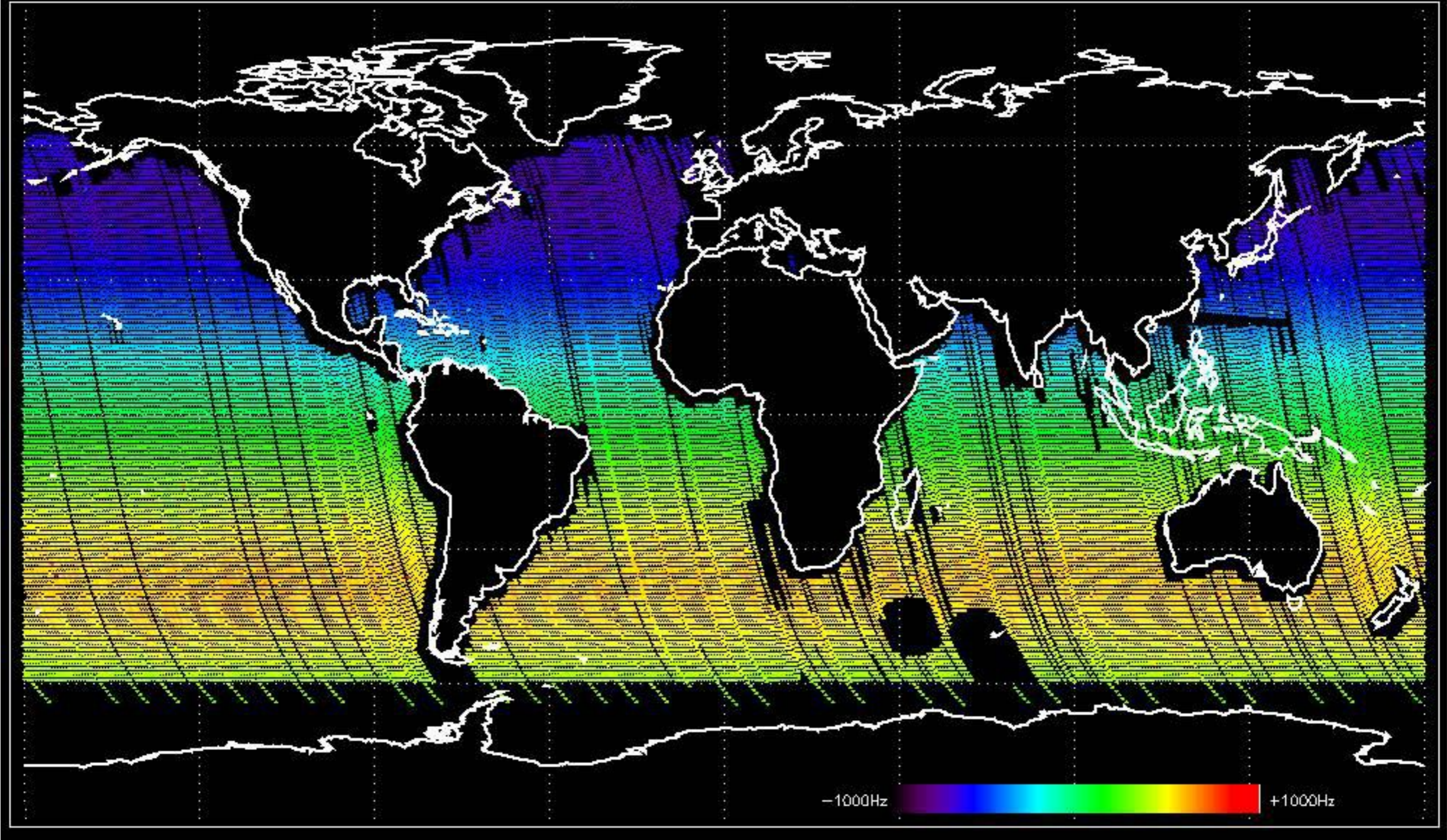
Doppler 'GM1' 'SS1' ascending



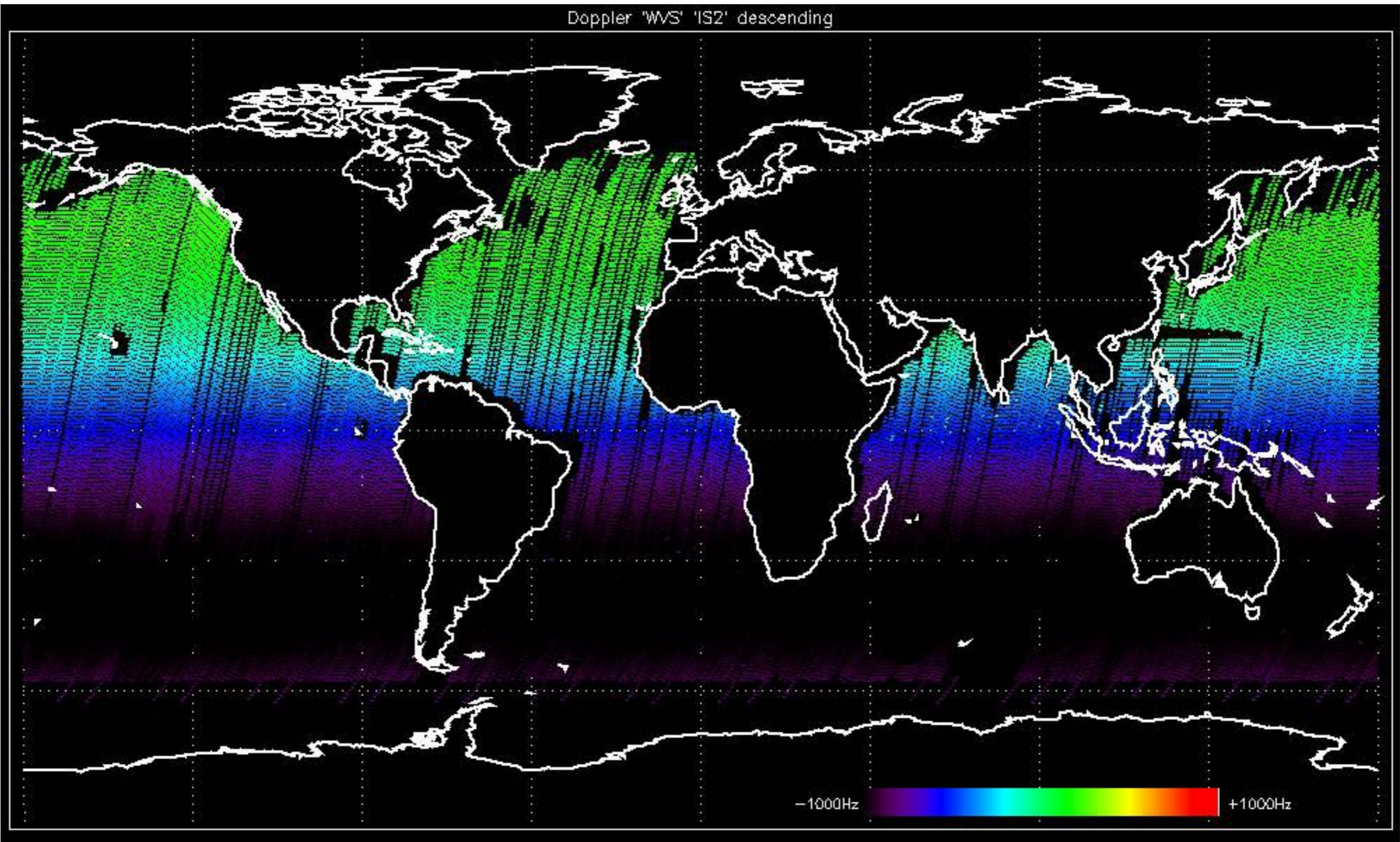
Doppler 'GM1' 'SS1' descending

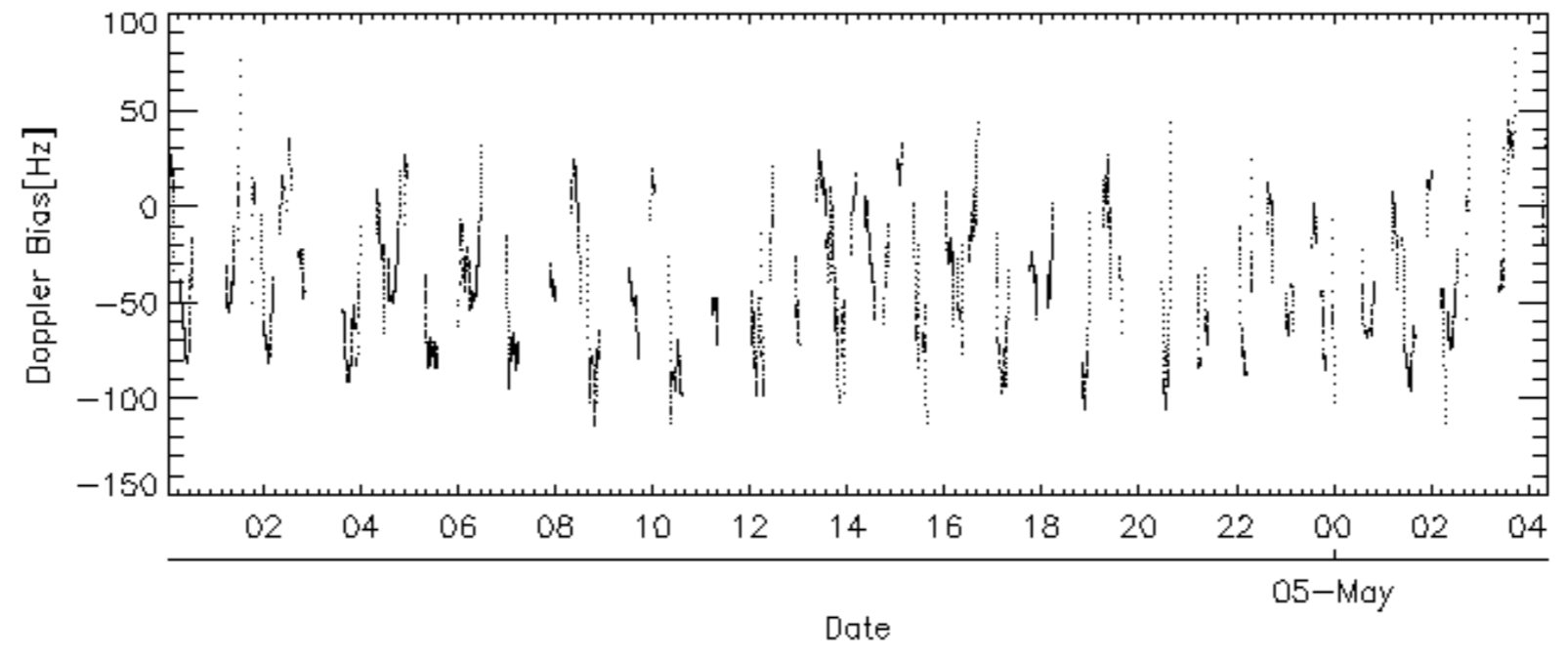
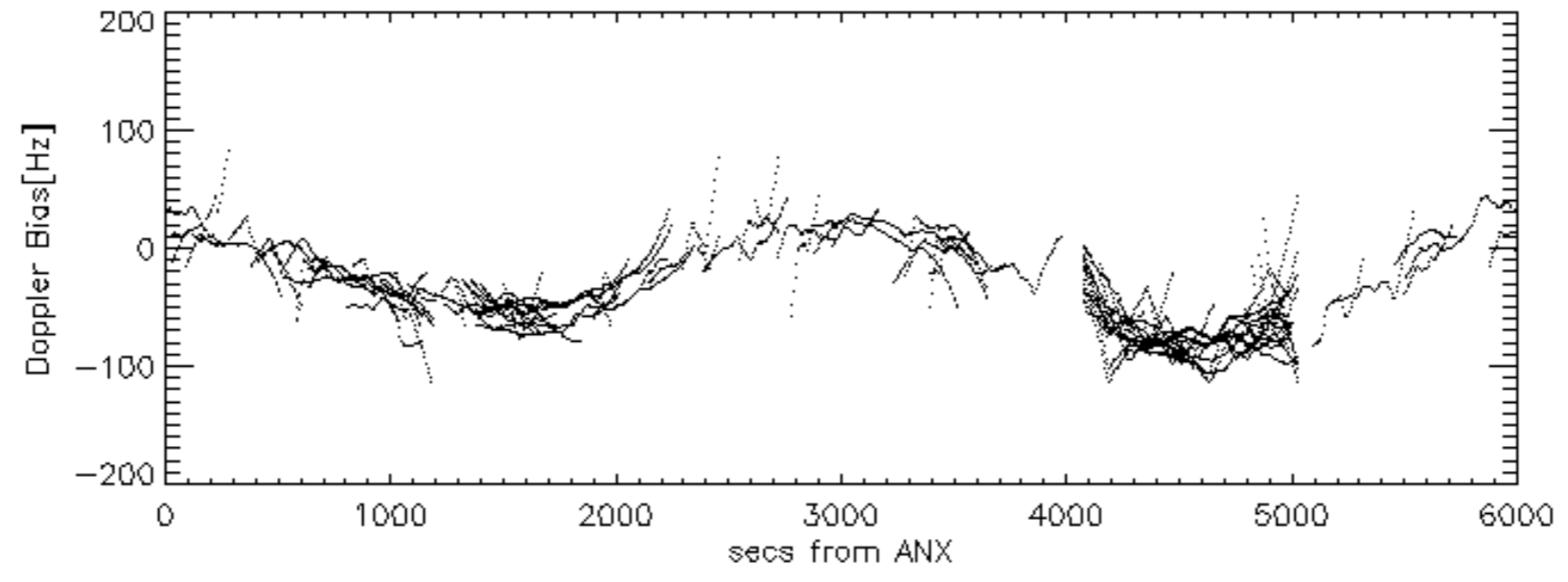
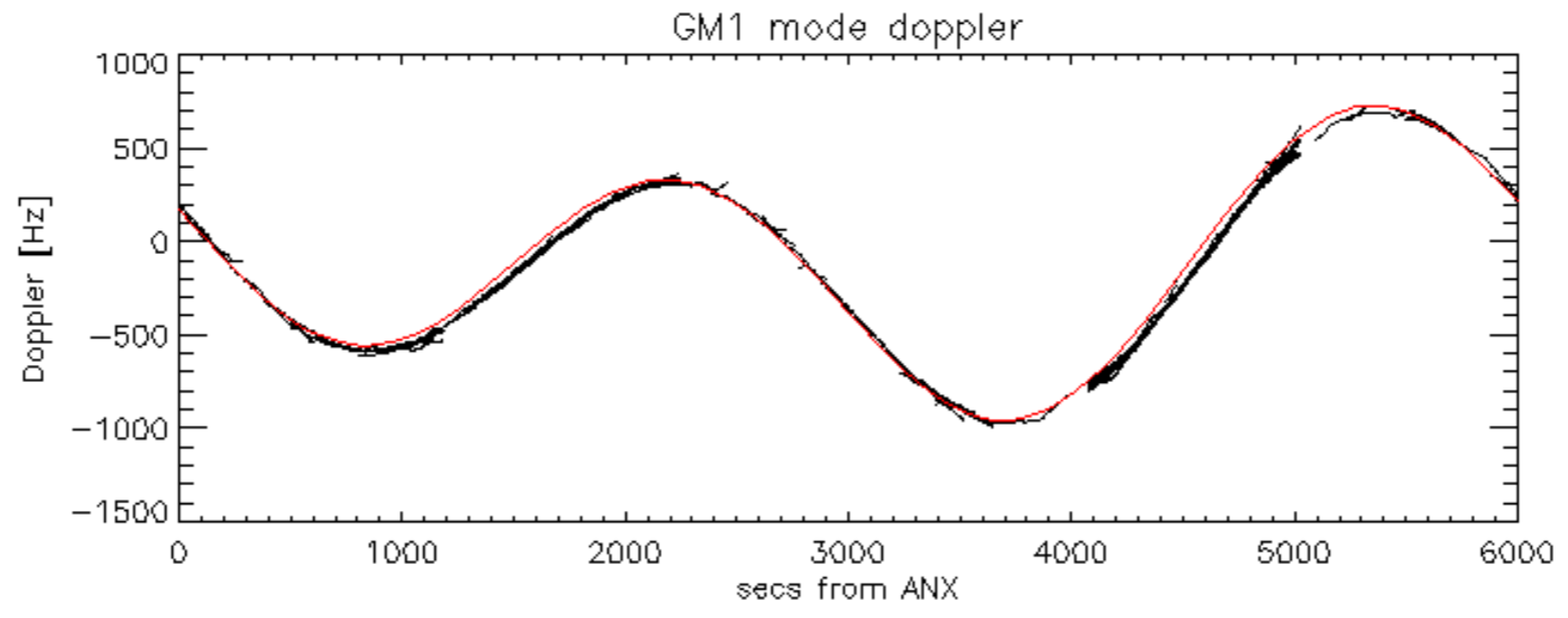


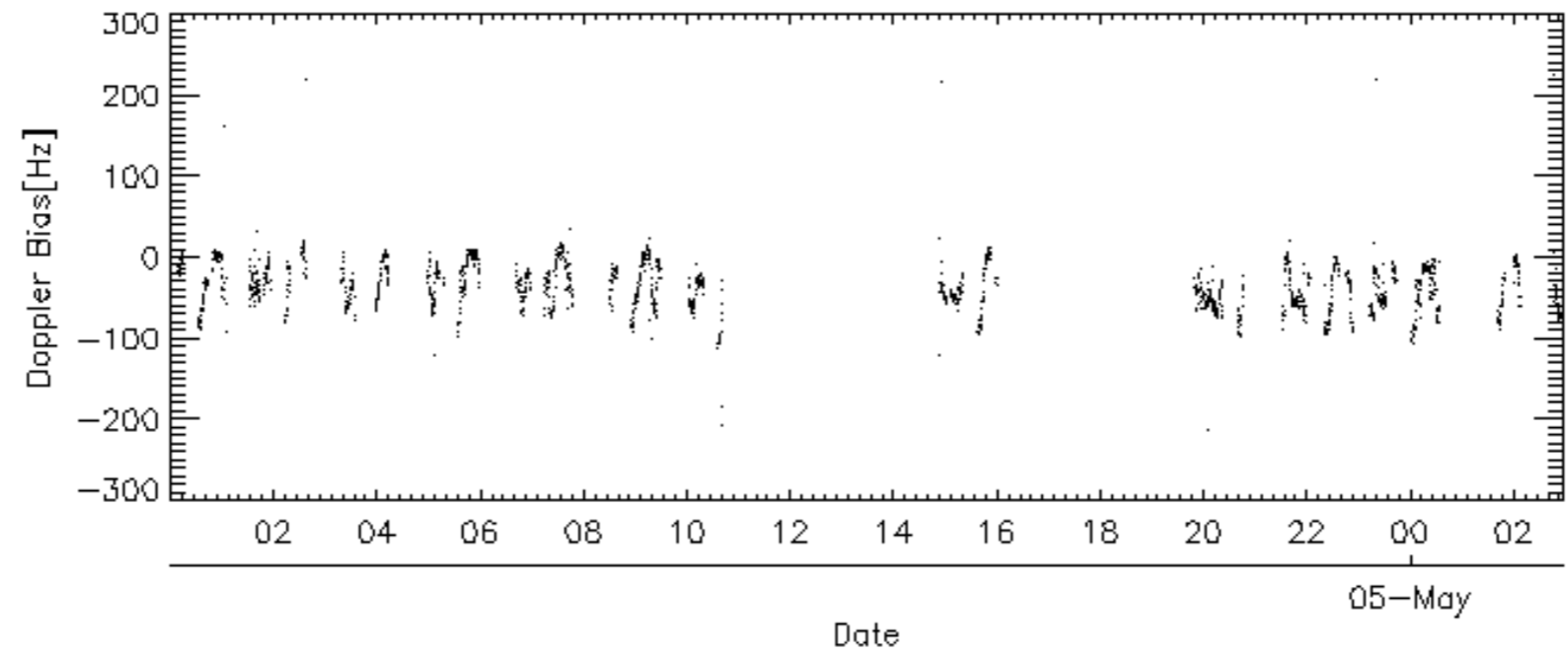
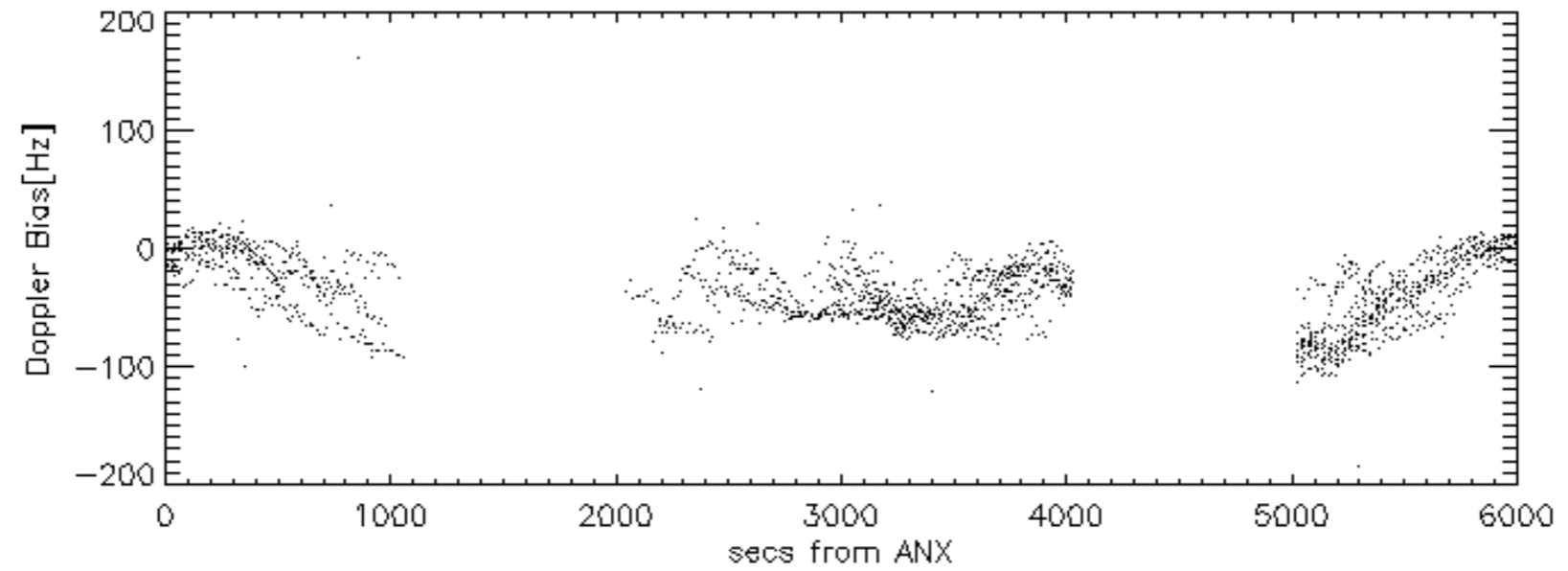
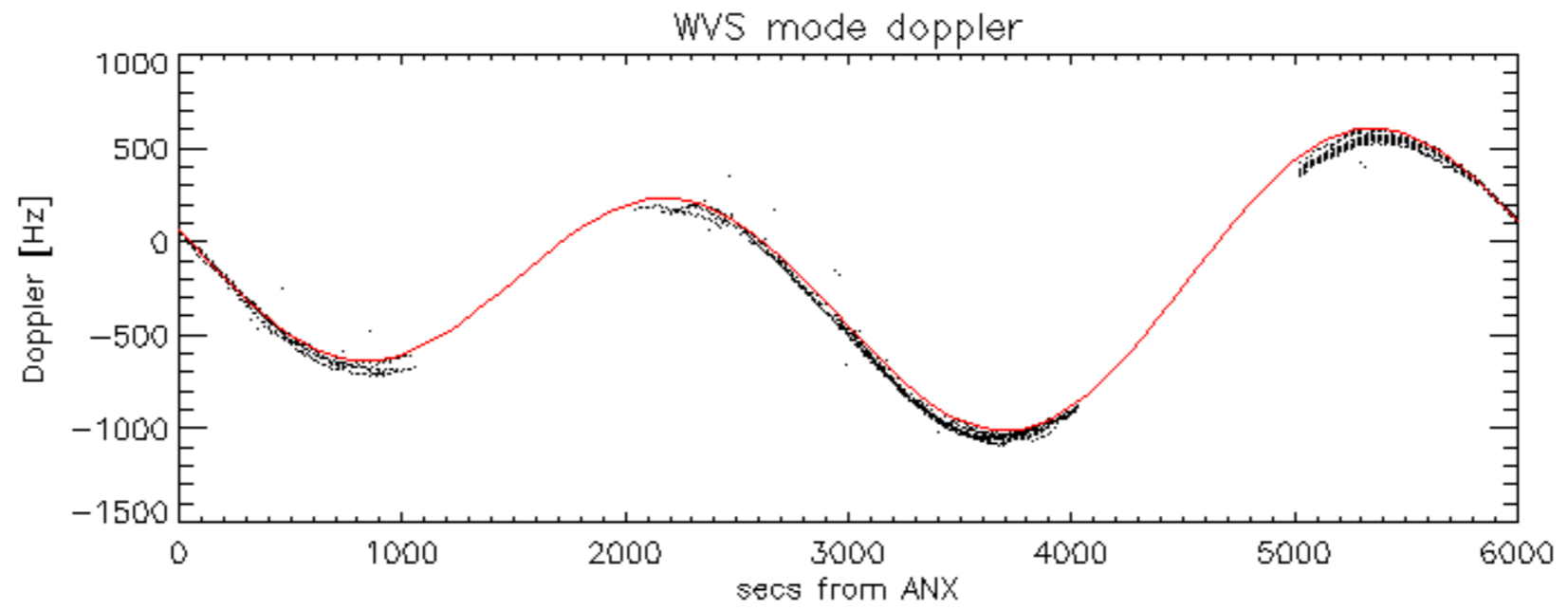
Doppler 'WVS' 'IS2' ascending



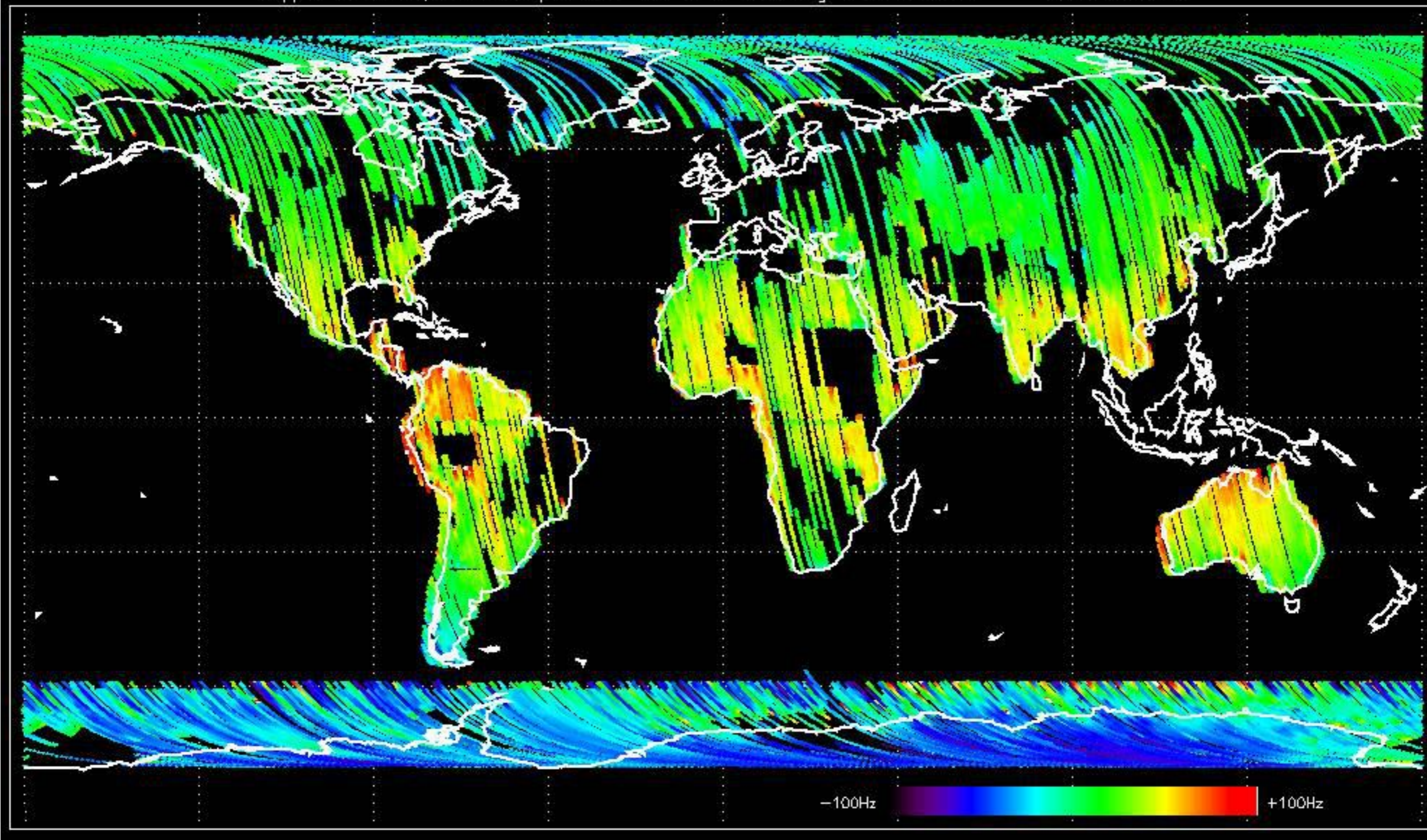
Doppler 'WVS' 'IS2' descending



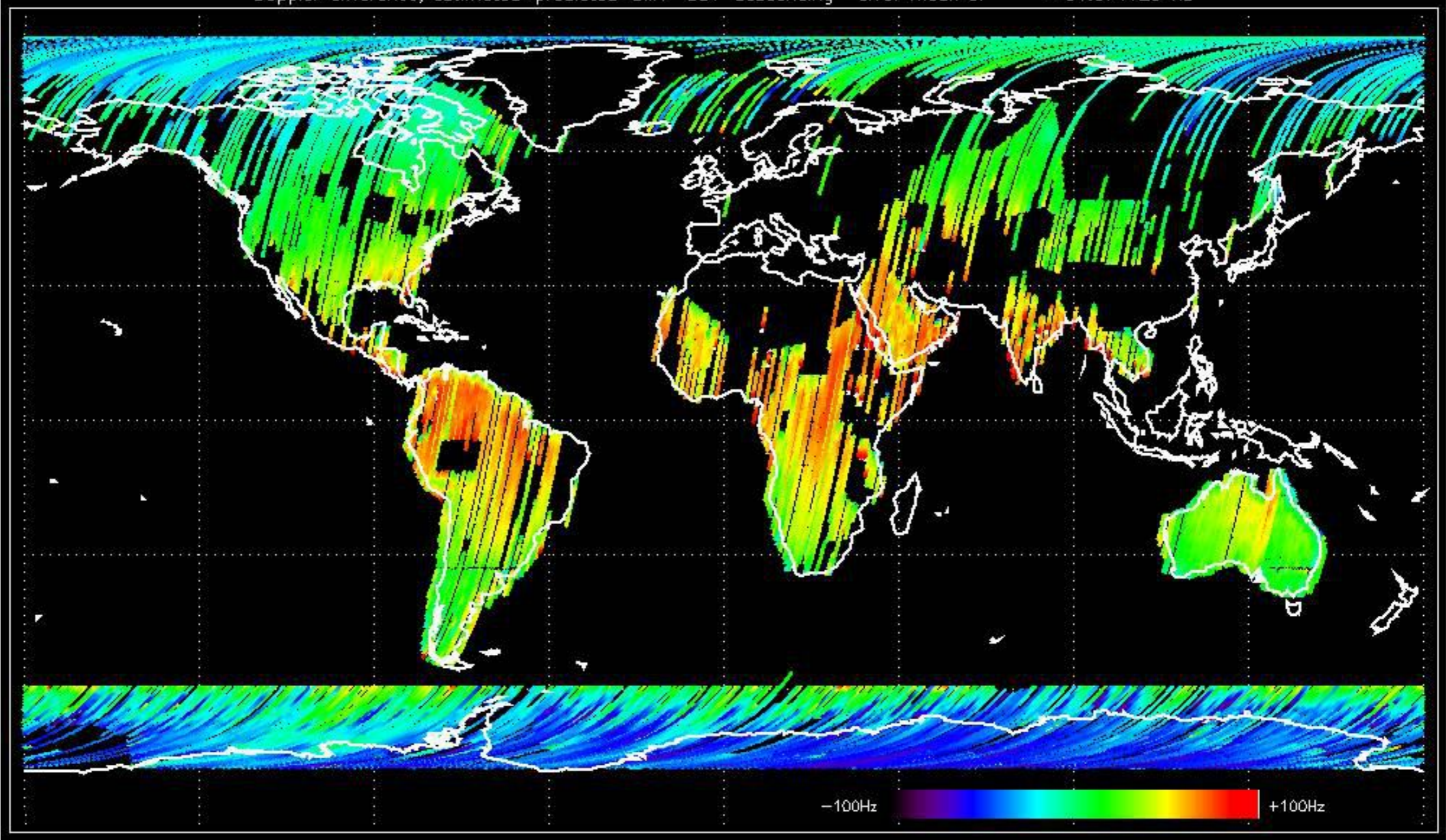




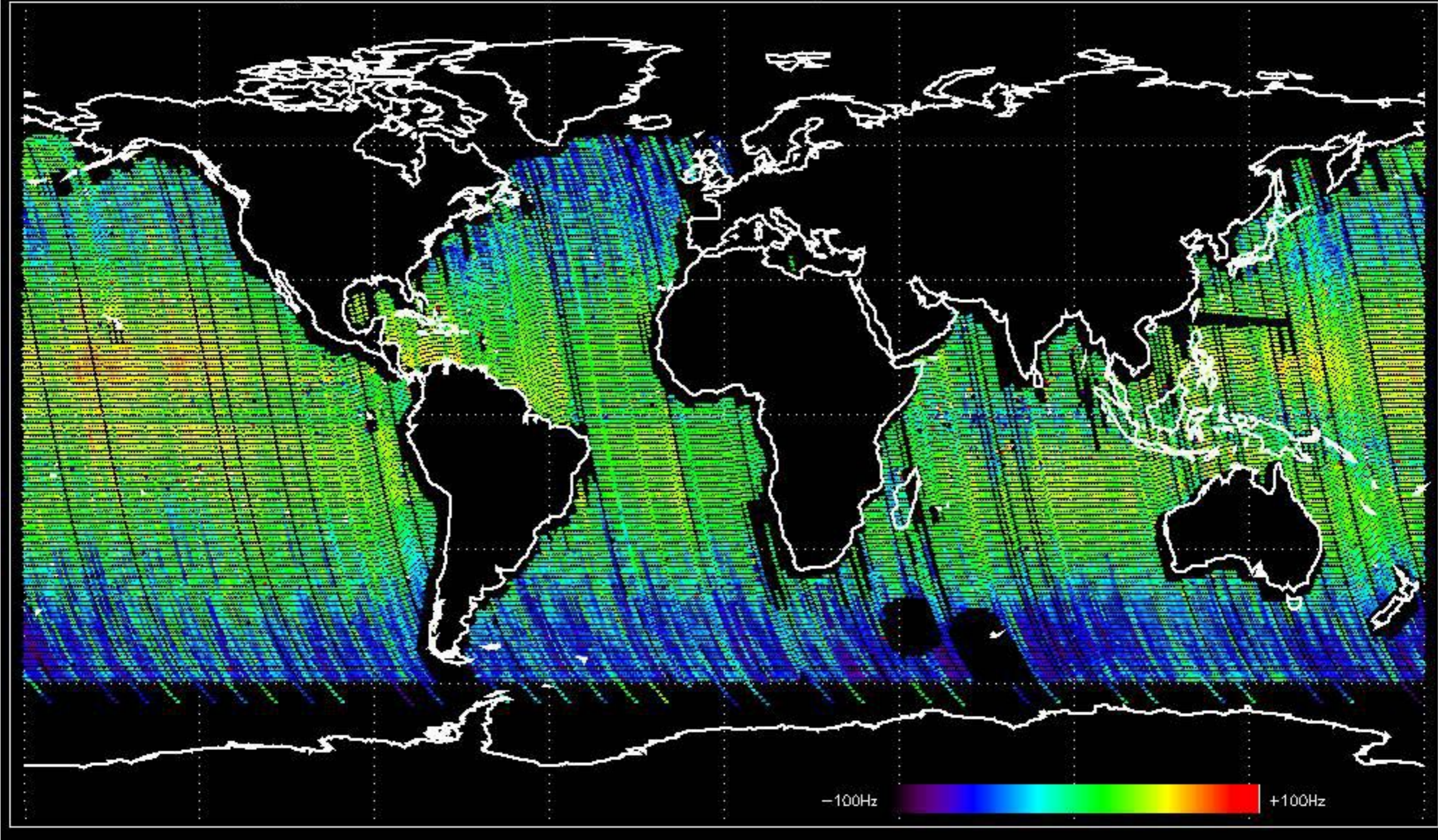
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -39.183175 Hz



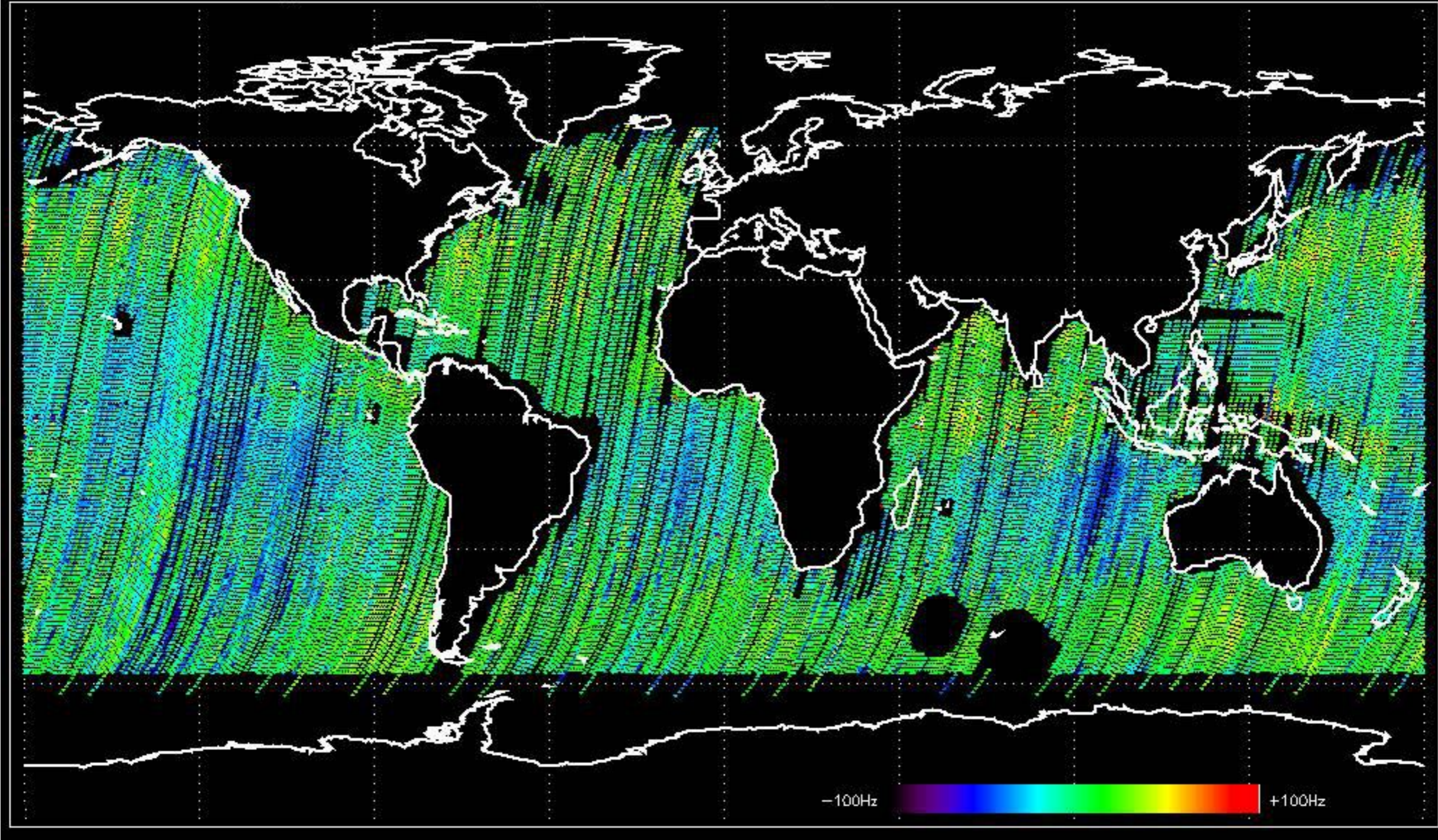
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -31.071129 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -33.091608 Hz

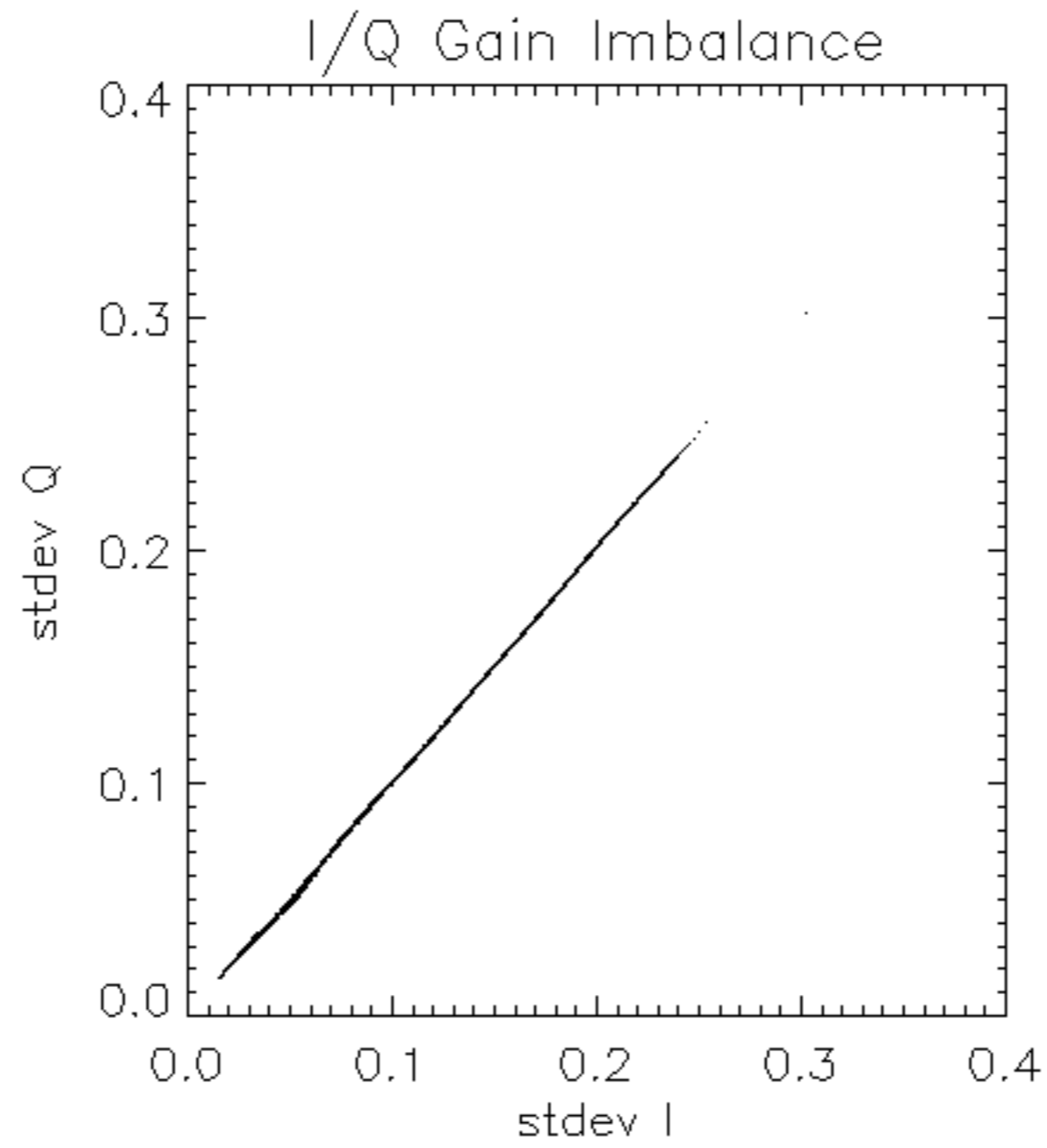


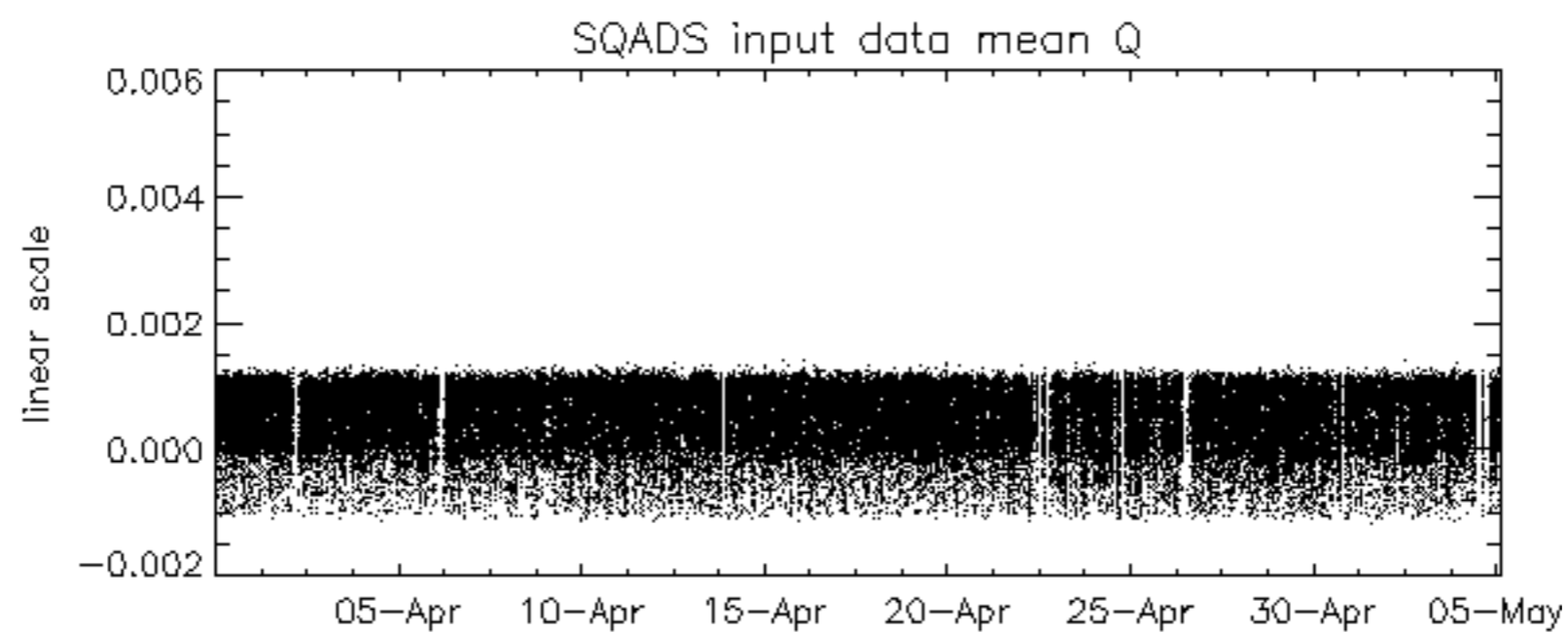
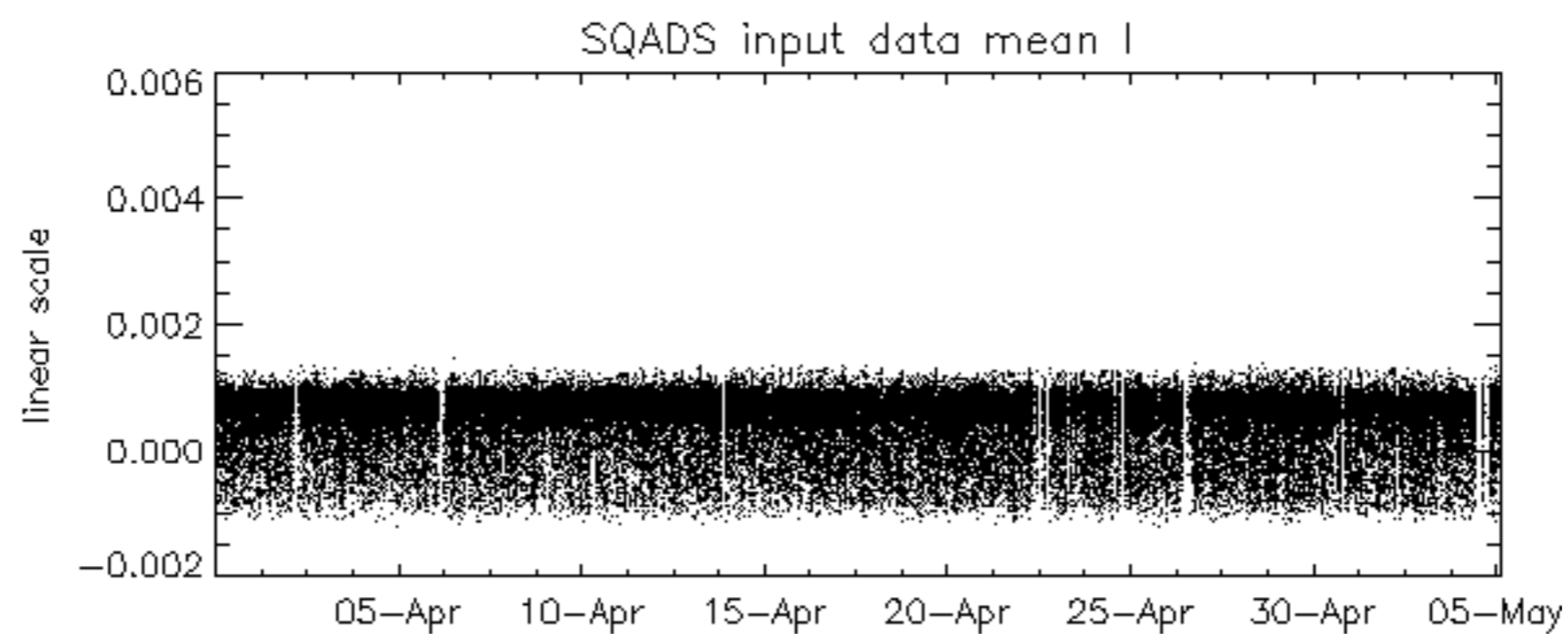
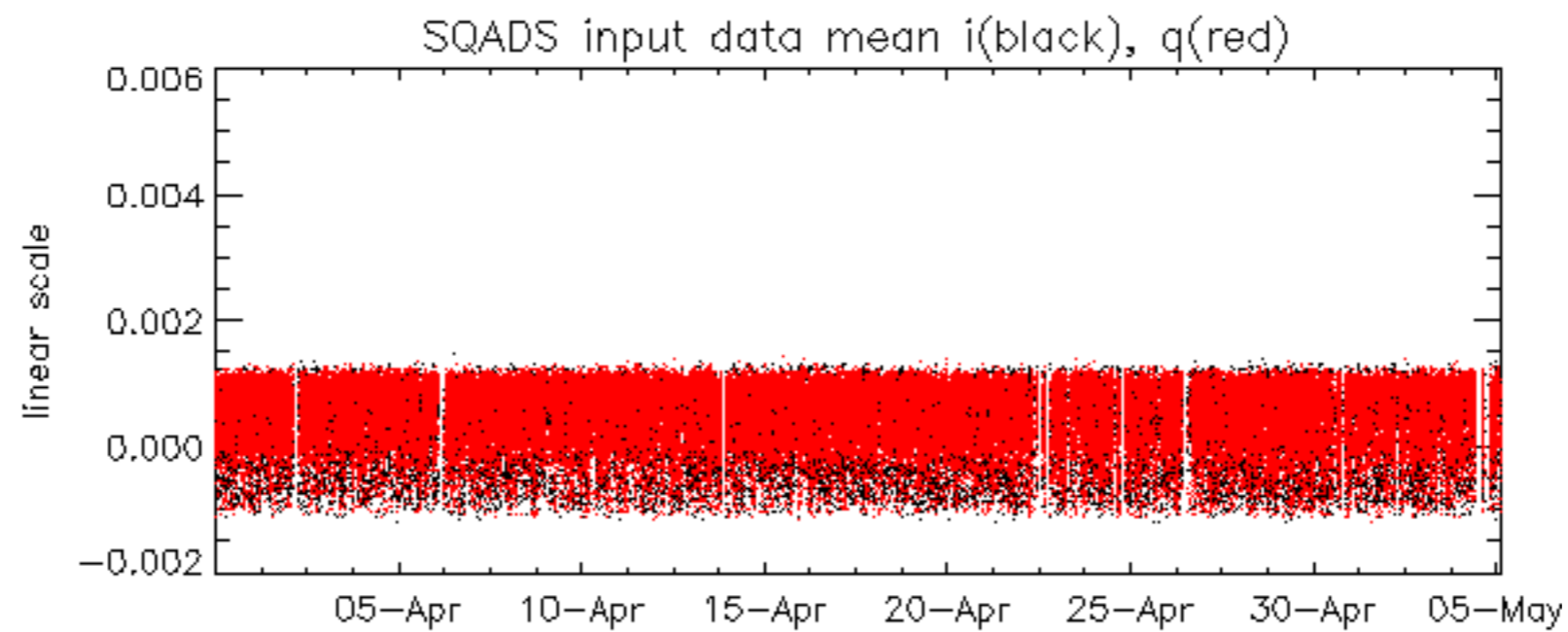
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.294134 Hz

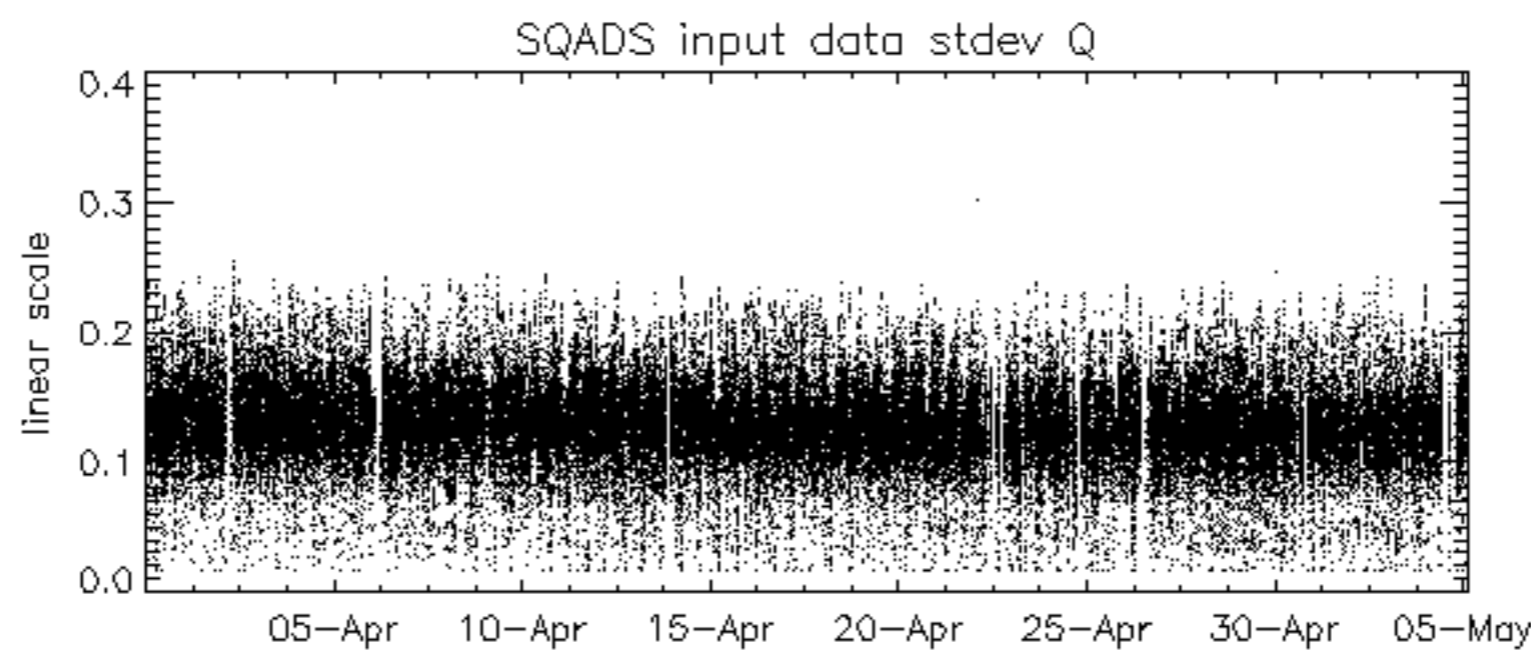
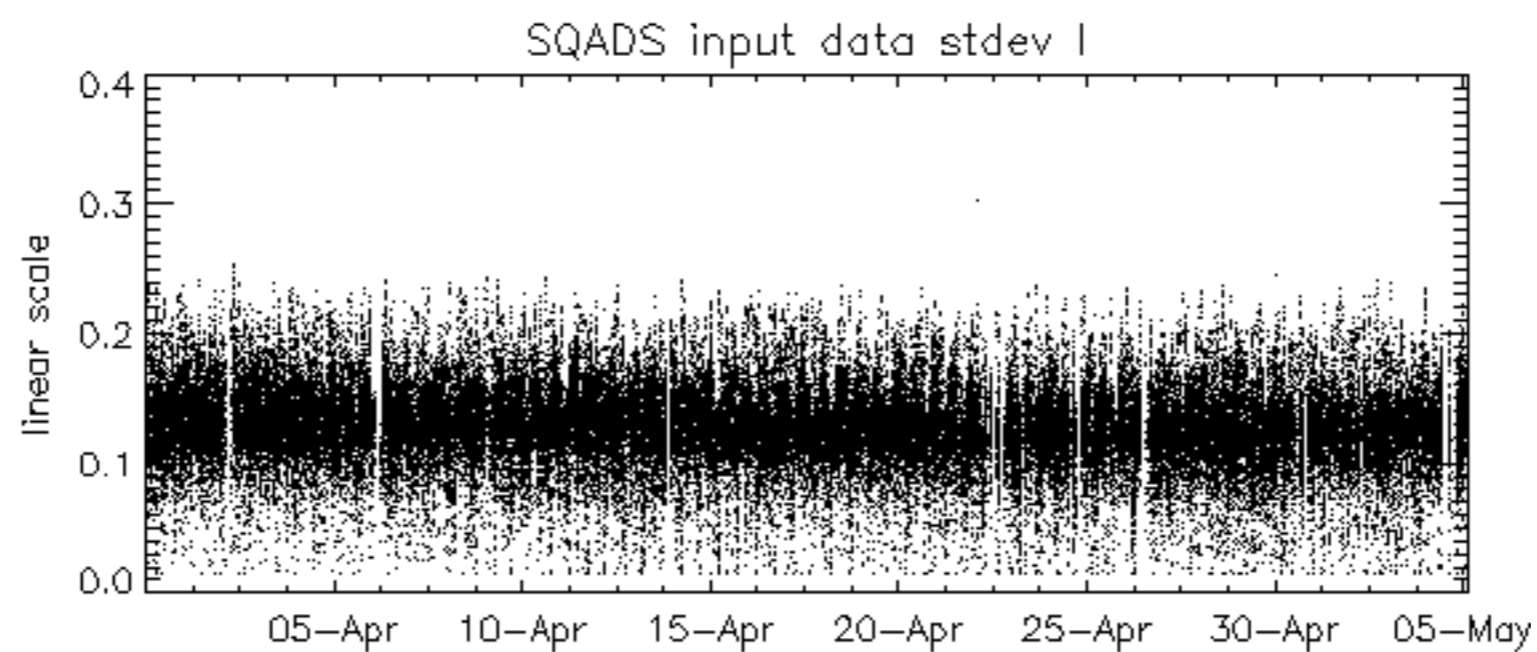
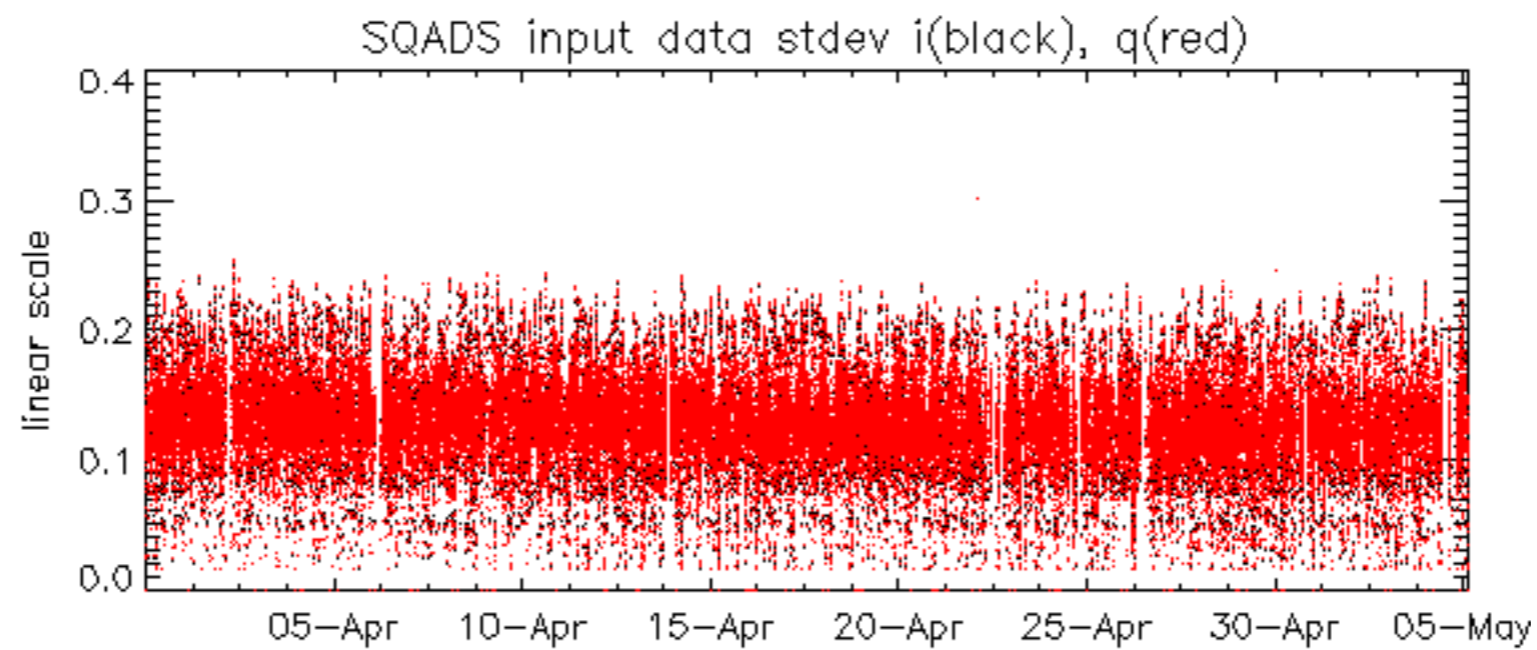


No anomalies observed on available MS products:

No anomalies observed.



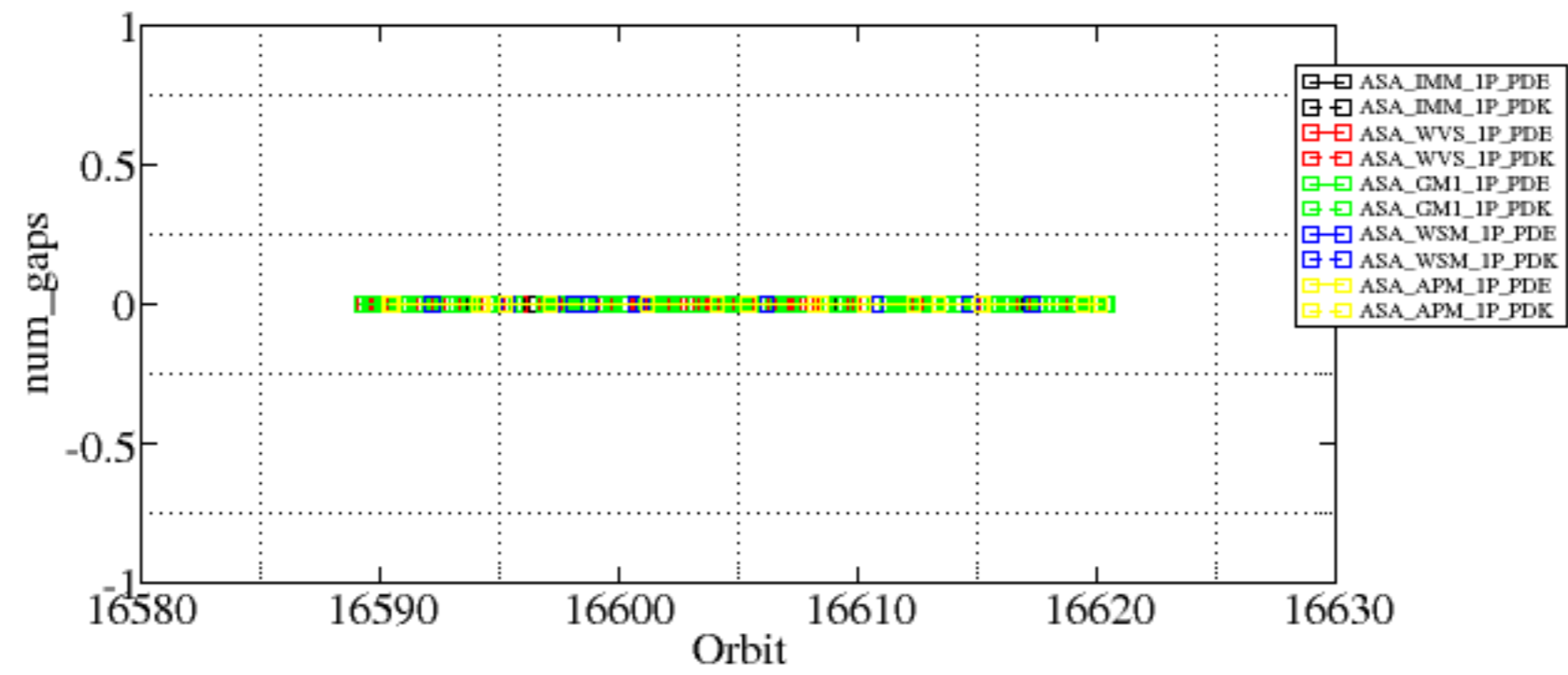


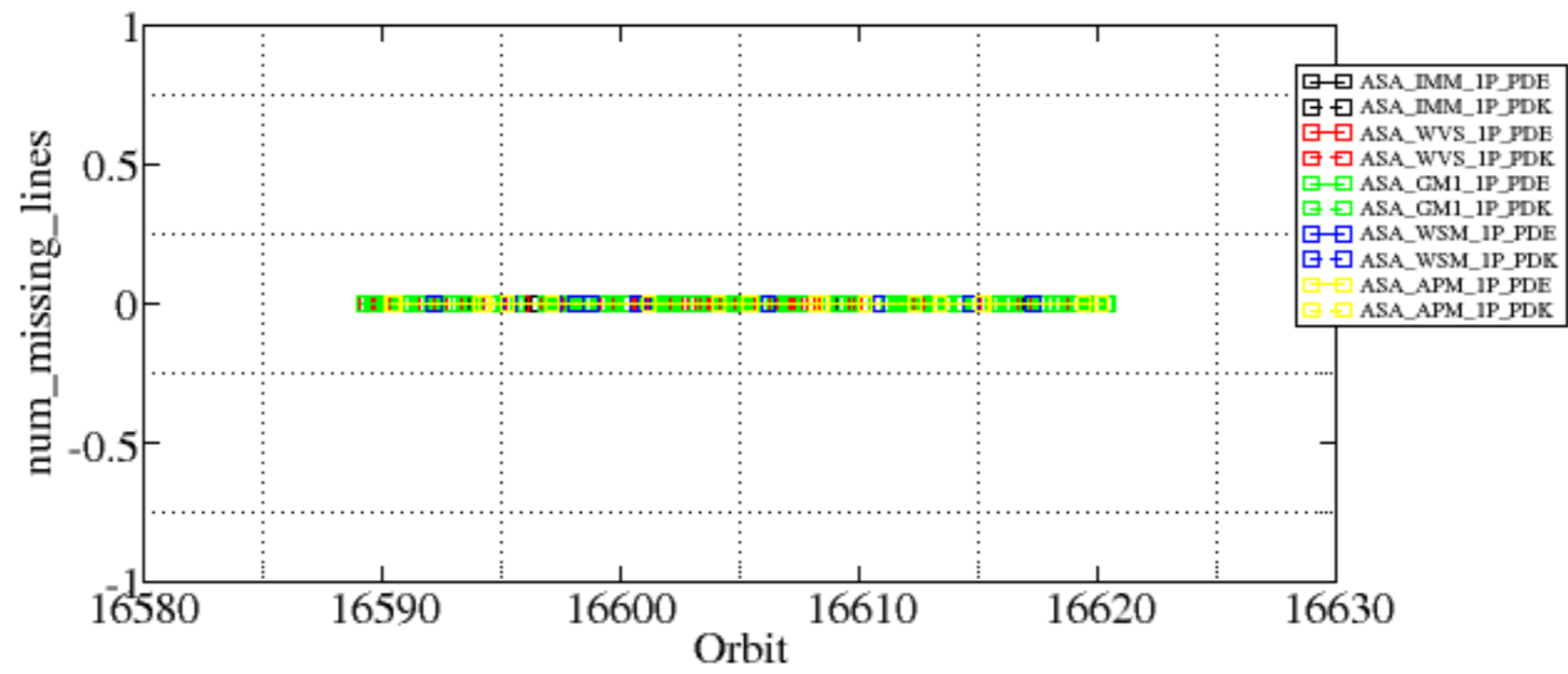


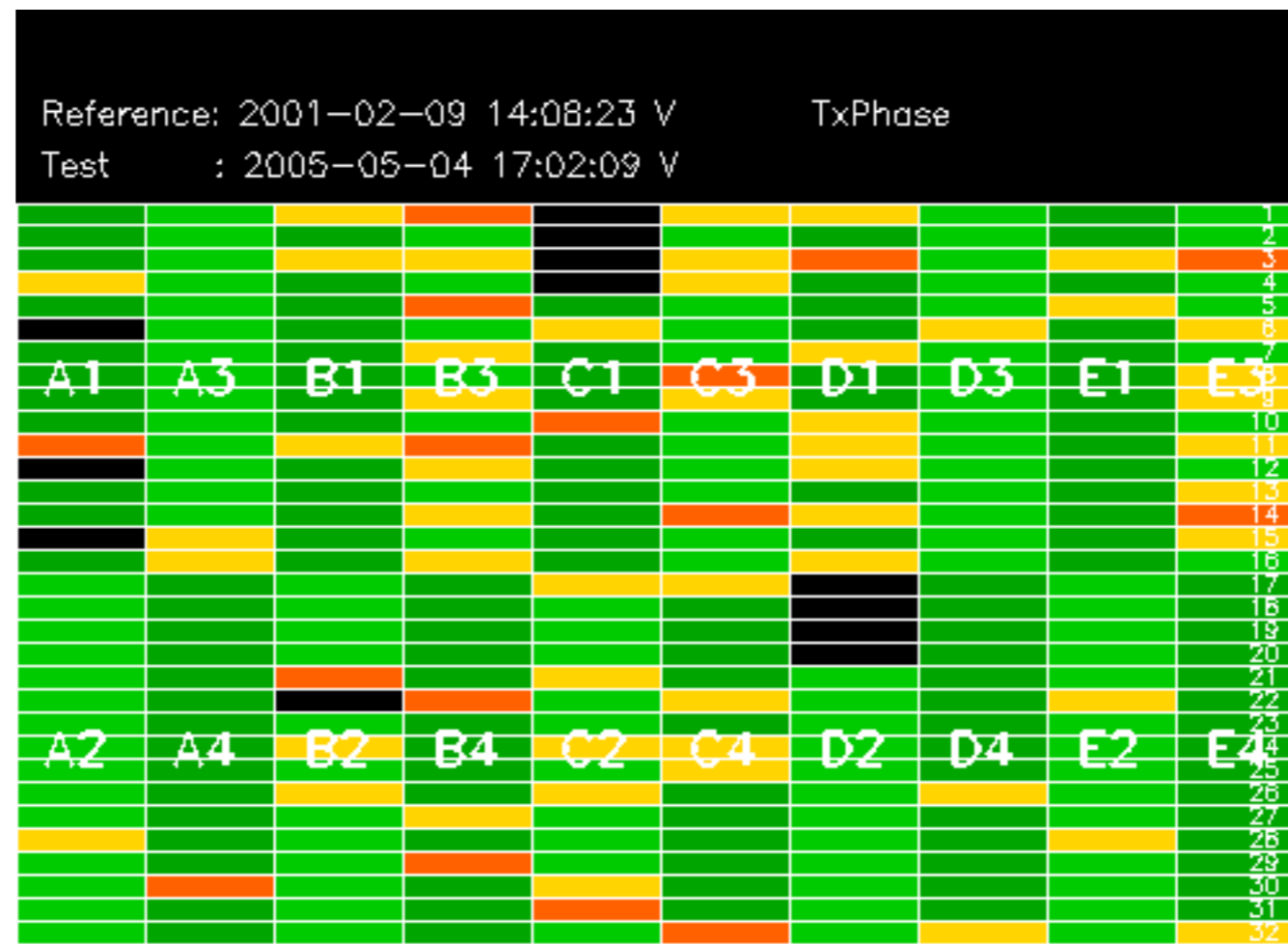
Summary of analysis for the last 3 days 2005050[345]

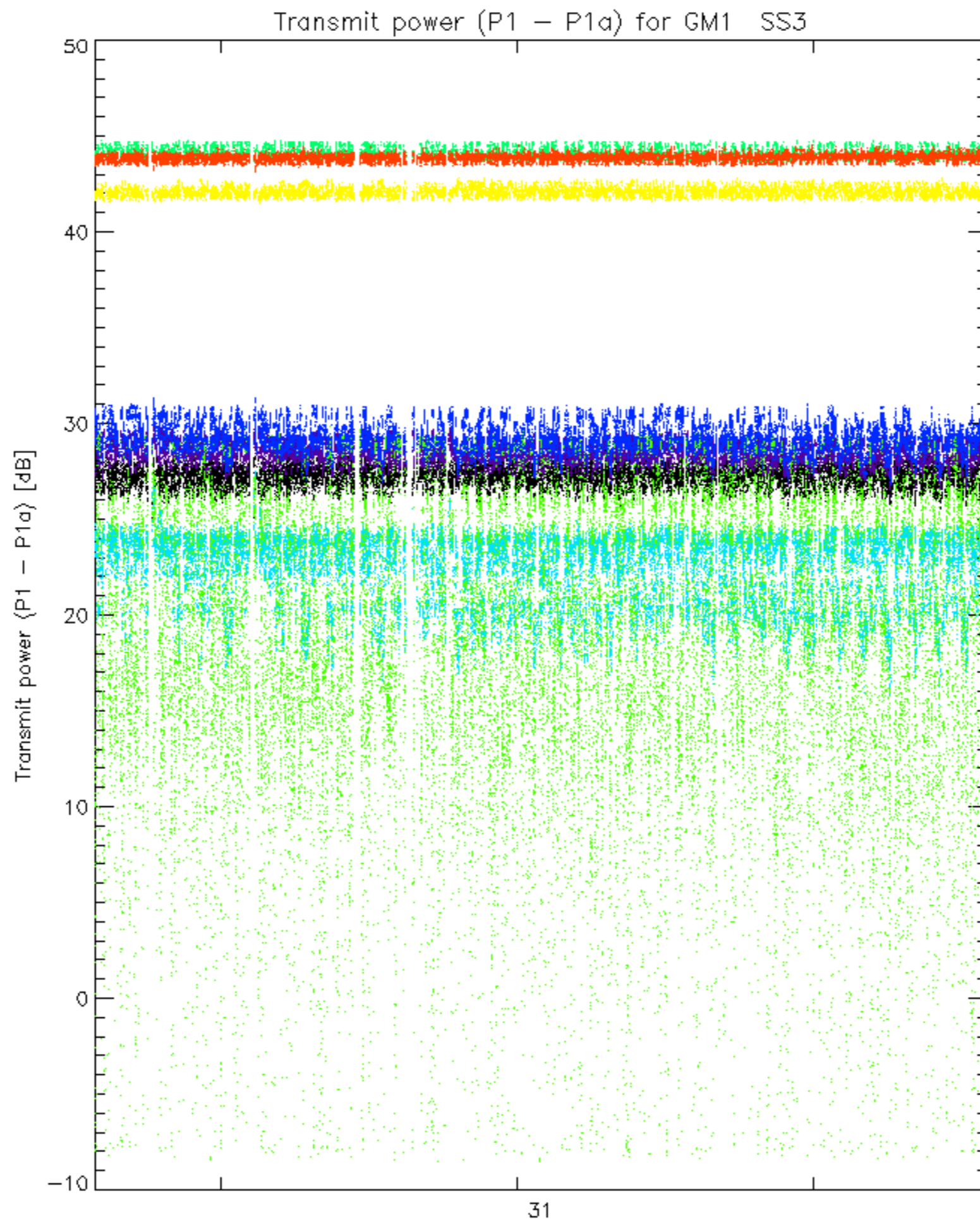
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines

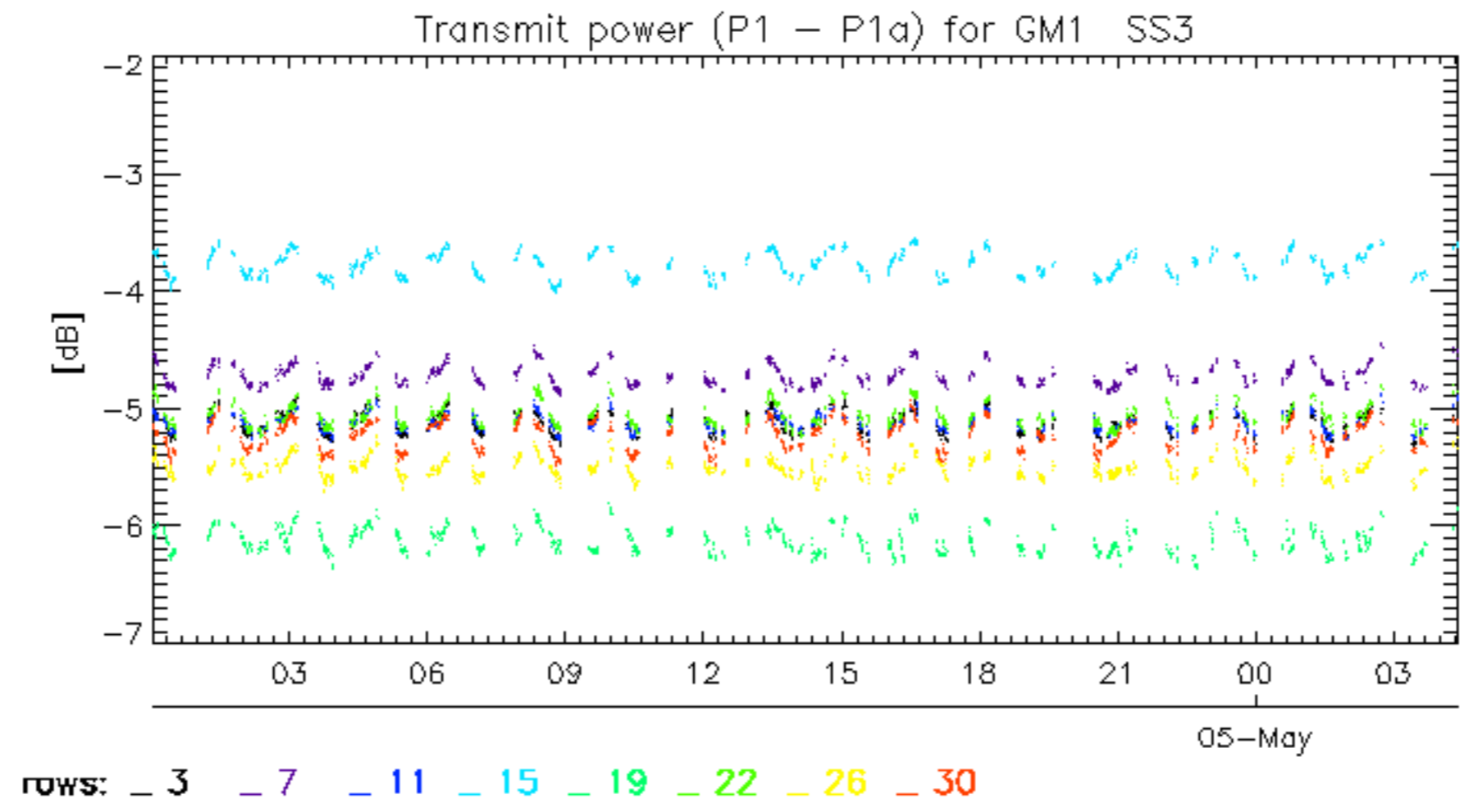


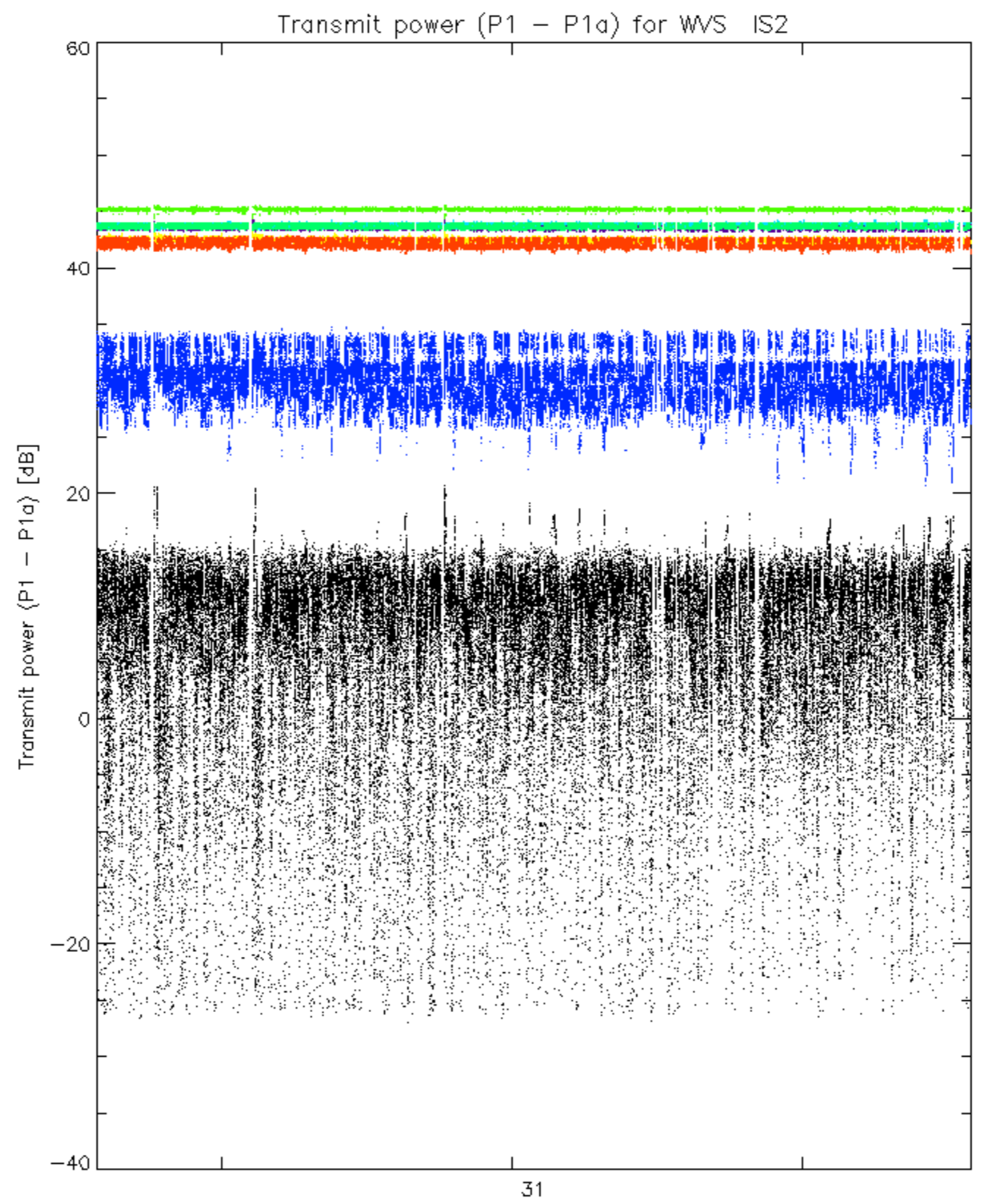




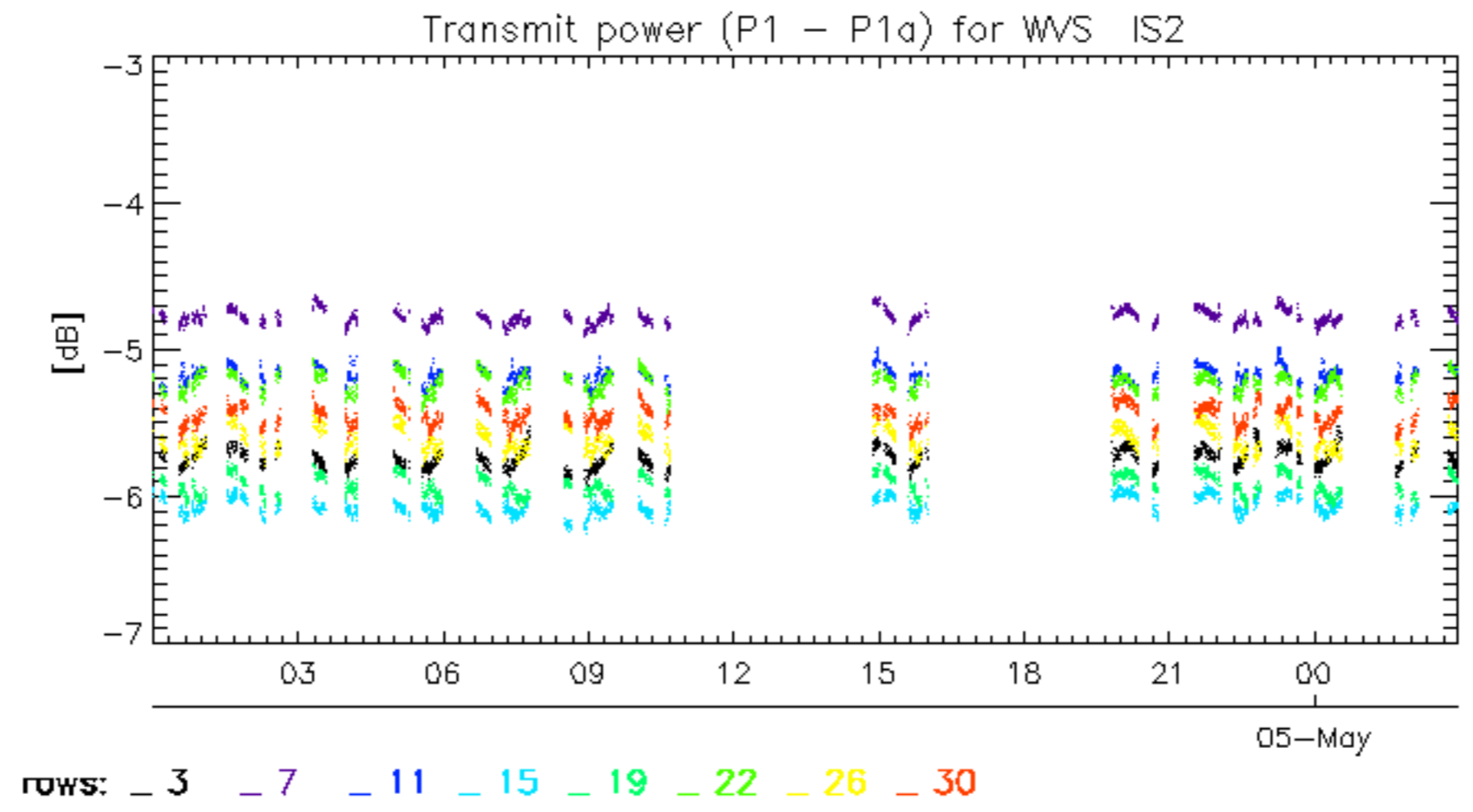


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.