

REPORT OF 050419

last update on Tue Apr 19 12:39:26 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 2005-04-18 00:00:00 to 2005-04-19 12:39:26

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	31	44	6	6	1
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	31	44	6	6	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	31	44	6	6	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	31	44	6	6	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	46	66	6	6	5
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	46	66	6	6	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	46	66	6	6	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	46	66	6	6	5

2.3 - Browse Visual Inspection

2.2 - Browse Visual Inspection

No anomalies observed from browse visual inspection.

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	20050418 084200
H	20050418 015936

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

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	-3.342151	0.013555	-0.013617
7	P1	-3.116497	0.009718	0.001712
11	P1	-4.667524	0.031946	0.001732
15	P1	-5.605605	0.043854	0.076244
19	P1	-3.702454	0.003991	-0.024364
22	P1	-4.547806	0.012061	-0.079564
26	P1	-4.910400	0.019695	0.050185
30	P1	-7.179128	0.023335	0.073241
3	P1	-15.789078	0.339422	0.037837
7	P1	-15.531012	0.087556	0.010315
11	P1	-21.093695	0.453662	-0.358704
15	P1	-11.531212	0.054966	0.169494
19	P1	-14.315002	0.028151	0.005199
22	P1	-15.777842	0.315980	-0.306249
26	P1	-17.631811	0.180276	0.031184
30	P1	-17.922548	0.363088	0.173921

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.049433	0.082130	0.025675
7	P2	-22.224985	0.097629	0.035249
11	P2	-14.239442	0.109220	0.153025
15	P2	-7.058877	0.091860	-0.041610
19	P2	-9.643708	0.094732	-0.036589
22	P2	-16.884615	0.096666	0.020965

26	P2	-16.453636	0.094282	-0.044085
30	P2	-18.826752	0.085567	0.003526

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.165556	0.004480	-0.001875
7	P3	-8.165556	0.004480	-0.001875
11	P3	-8.165555	0.004480	-0.001871
15	P3	-8.165555	0.004480	-0.001871
19	P3	-8.165555	0.004480	-0.001871
22	P3	-8.165555	0.004480	-0.001871
26	P3	-8.165555	0.004480	-0.001871
30	P3	-8.165556	0.004480	-0.001873

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	-2.724260	0.026727	-0.097949
7	P1	-3.007623	0.046377	0.003418
11	P1	-3.979990	0.027358	-0.019923
15	P1	-3.542032	0.036969	-0.011477
19	P1	-3.614262	0.013869	-0.034745
22	P1	-5.708655	0.042367	0.092181
26	P1	-7.299419	0.025261	-0.022460
30	P1	-6.267497	0.060386	-0.077484
3	P1	-10.709169	0.164502	-0.127694
7	P1	-10.349524	0.177580	-0.109505

11	P1	-12.536148	0.140546	-0.108550
15	P1	-11.697778	0.100751	0.048669
19	P1	-15.595495	0.053071	-0.081338
22	P1	-24.824244	1.554780	-0.670779
26	P1	-15.555639	0.248221	-0.237013
30	P1	-20.163013	1.225042	0.082980

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.749147	0.040195	0.002809
7	P2	-22.304876	0.045418	0.040027
11	P2	-10.085221	0.058855	0.026395
15	P2	-5.019453	0.033821	-0.102880
19	P2	-6.856673	0.050395	-0.090350
22	P2	-7.079263	0.038541	-0.038071
26	P2	-23.868481	0.037297	-0.083971
30	P2	-21.899275	0.042738	-0.059070

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.001070	0.003520	-0.014174
7	P3	-8.001255	0.003509	-0.014064
11	P3	-8.001110	0.003516	-0.014169
15	P3	-8.001198	0.003518	-0.014519
19	P3	-8.001264	0.003515	-0.014644
22	P3	-8.001219	0.003502	-0.014076
26	P3	-8.001177	0.003507	-0.014301
30	P3	-8.001111	0.003511	-0.014204

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	0.000480045
	stdev	2.15974e-07
MEAN Q	mean	0.000492765
	stdev	2.33354e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129535
	stdev	0.00104606
STDEV Q	mean	0.129798
	stdev	0.00105799



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005041[789]

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_1PNPDK20050418_124849_000000872036_00296_16382_2654.N1	1	0
ASA_WSM_1PNPDE20050417_181434_000000912036_00285_16371_7319.N1	0	62



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)

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

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

6.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

6.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

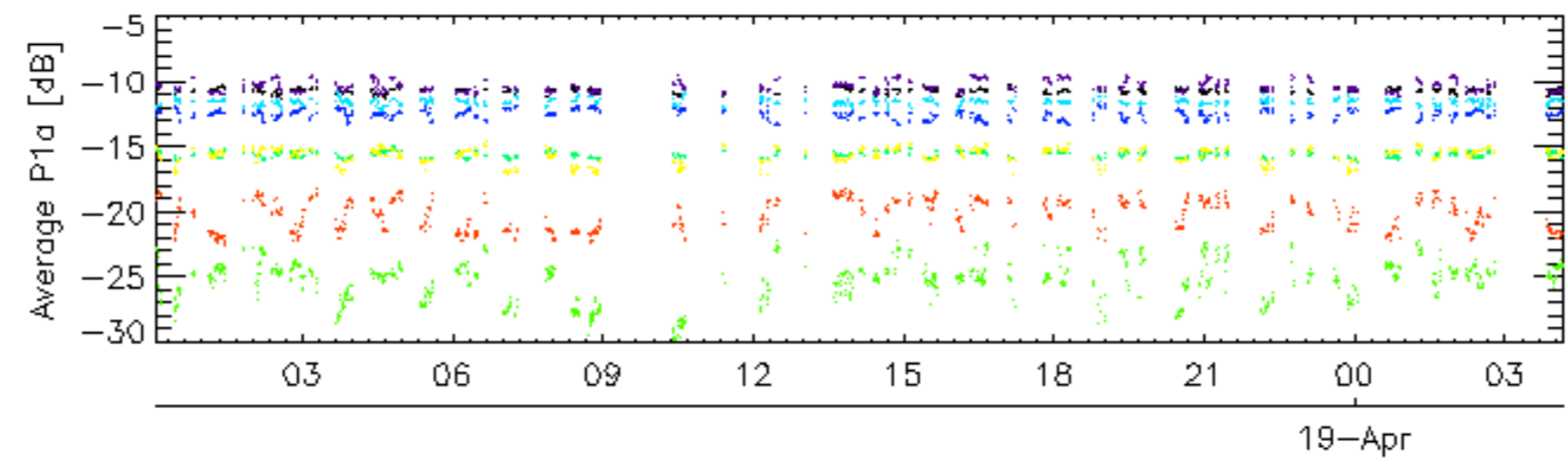
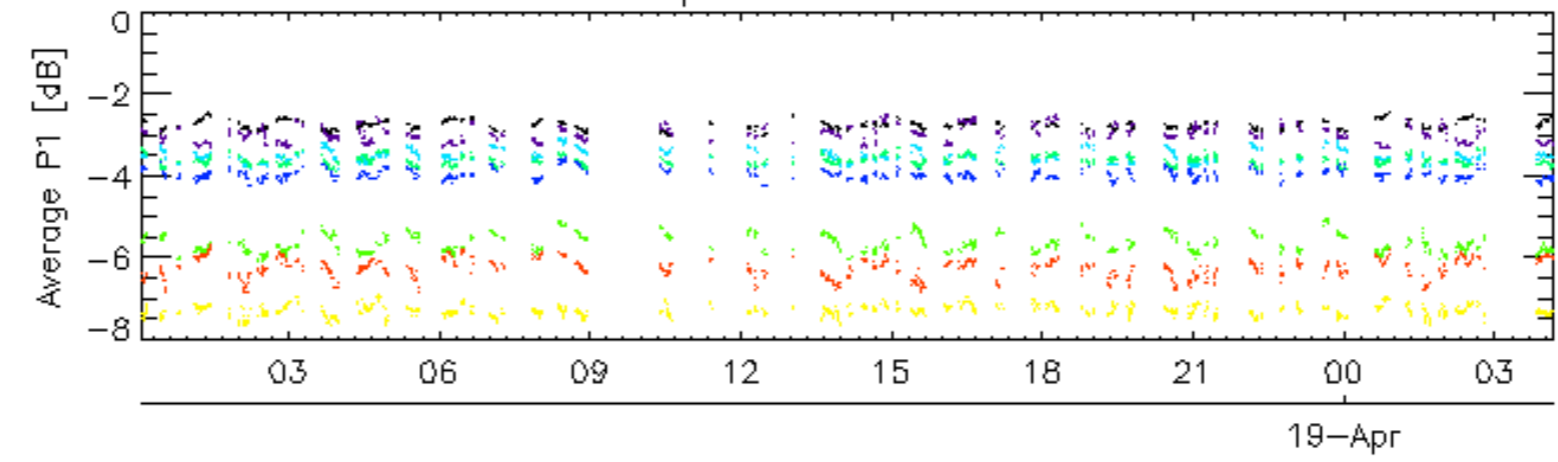
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

6.6 - Doppler evolution versus ANX for GM1

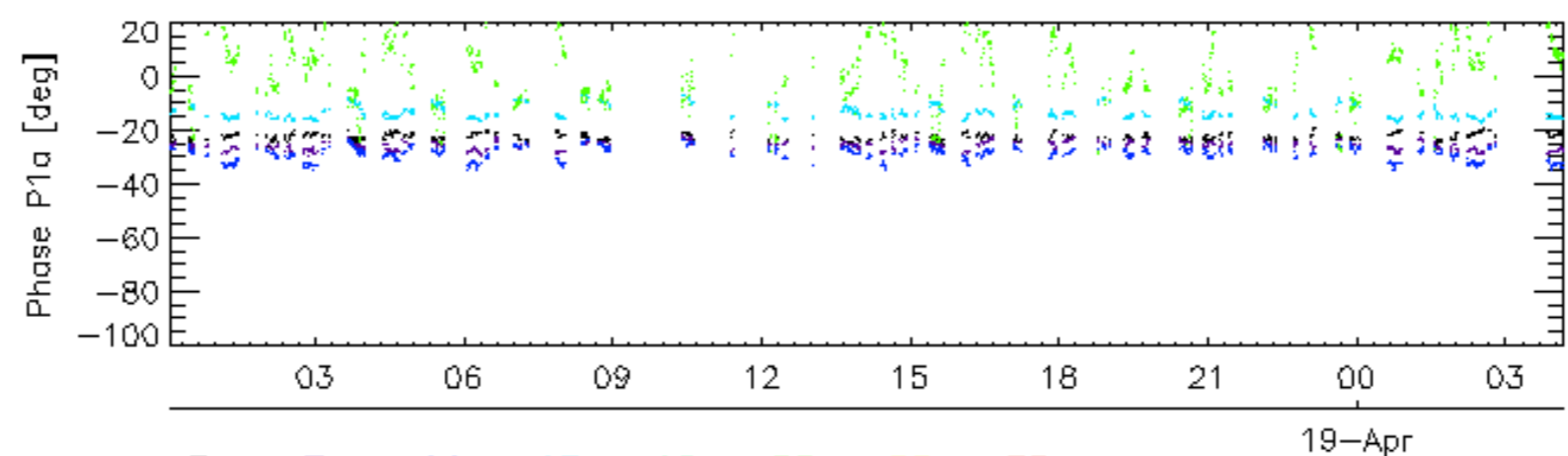
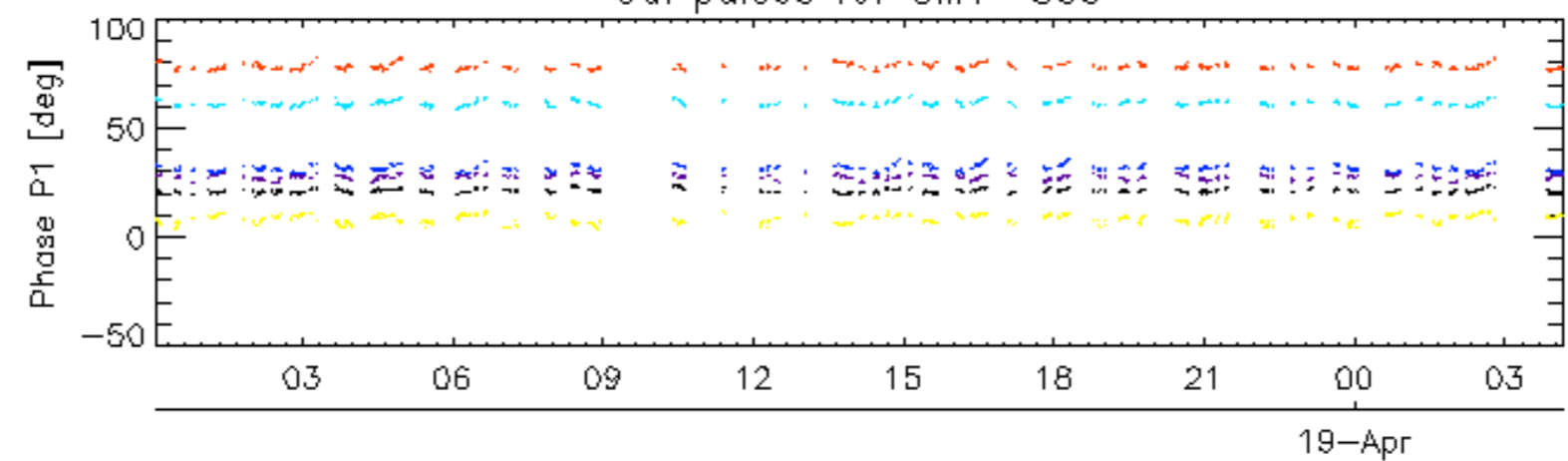
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

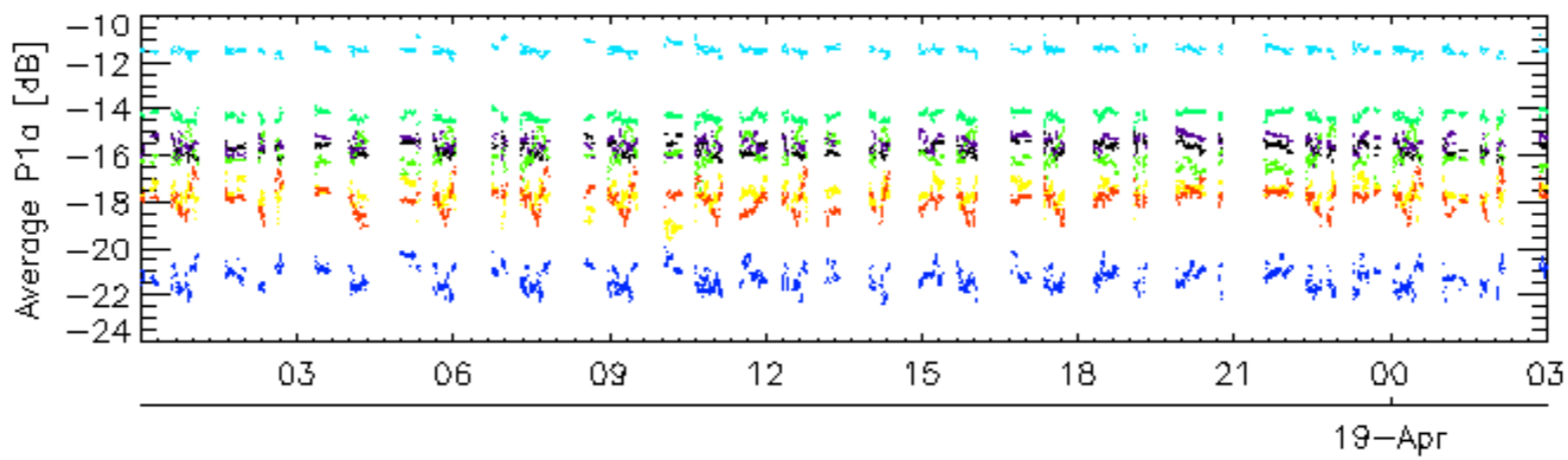
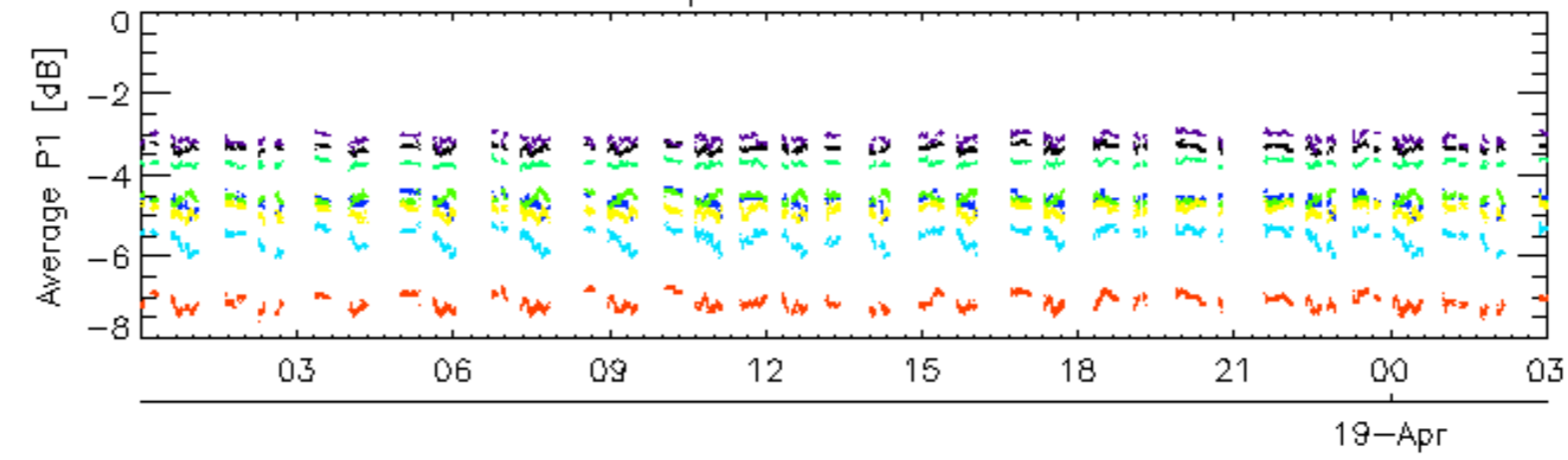


Cal pulses for GM1 SS3

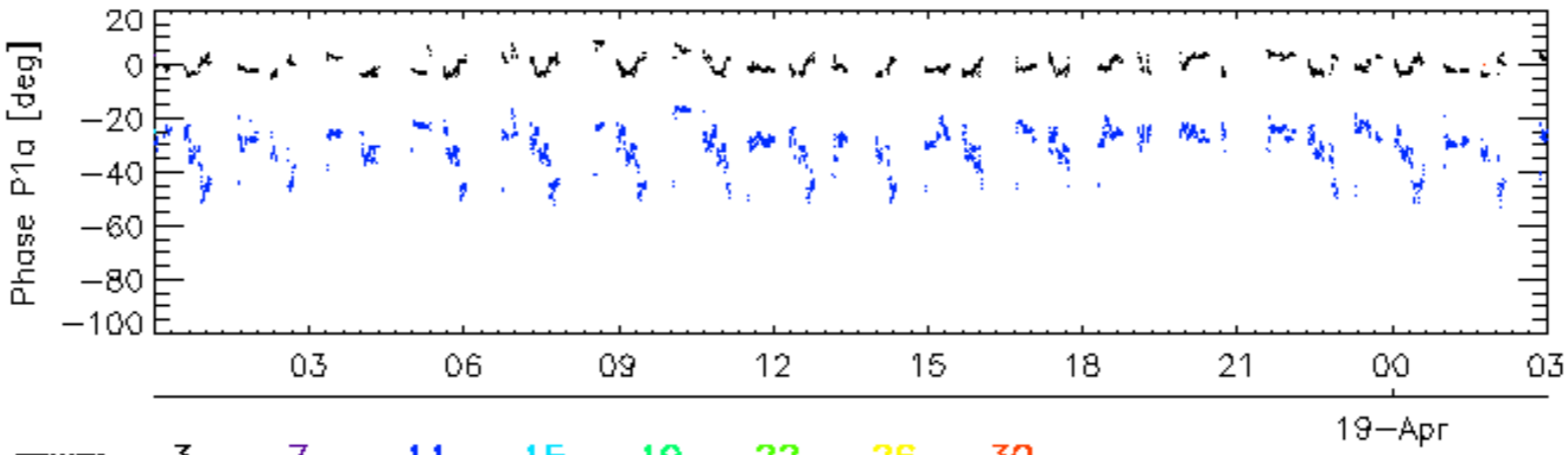
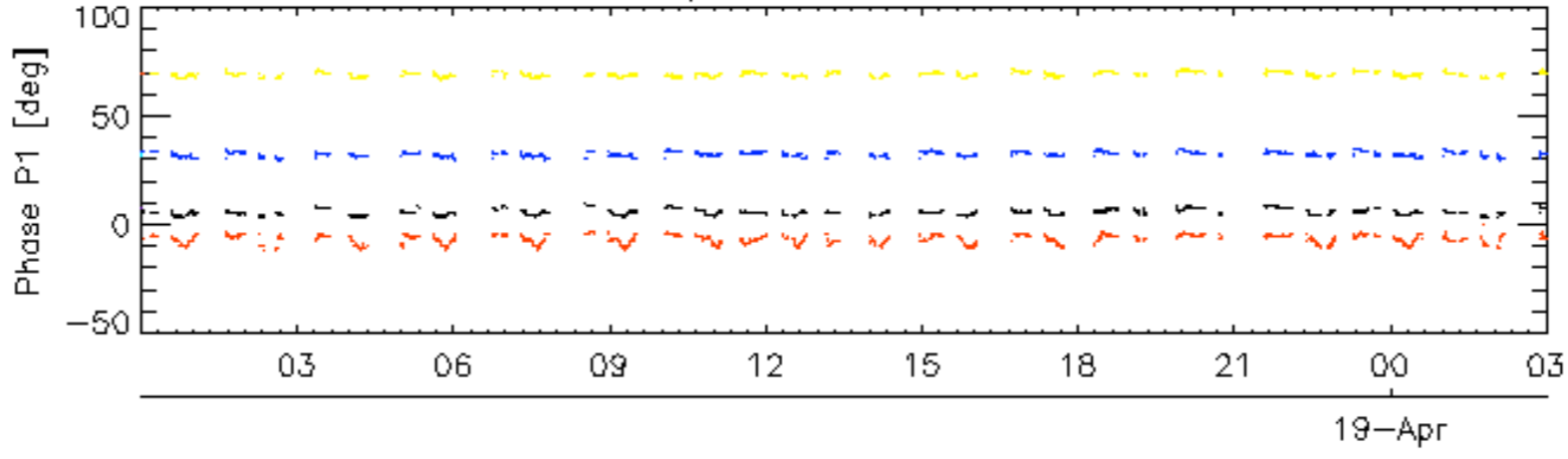


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

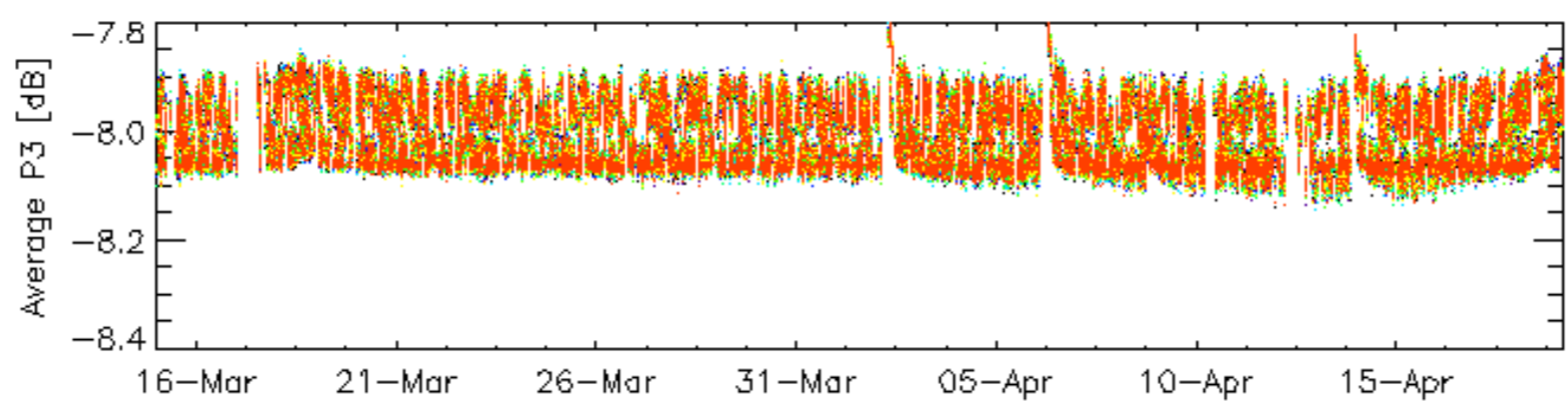
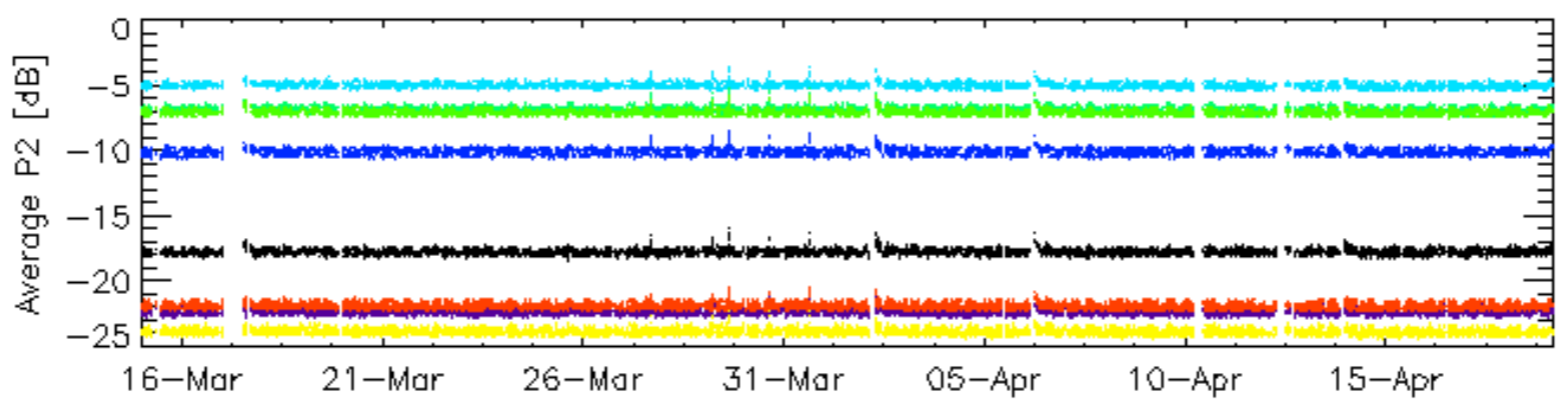
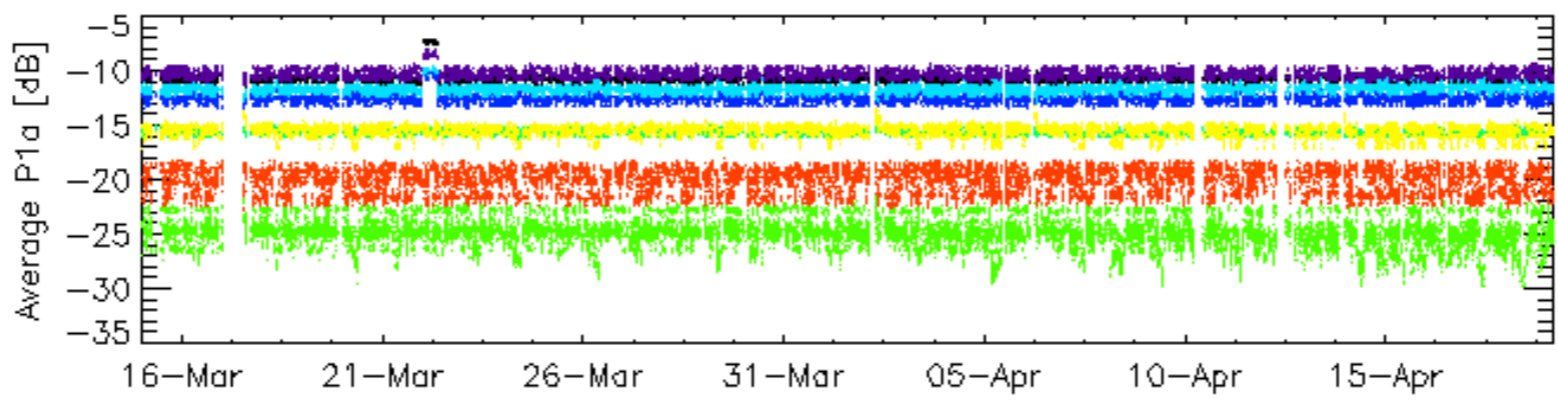
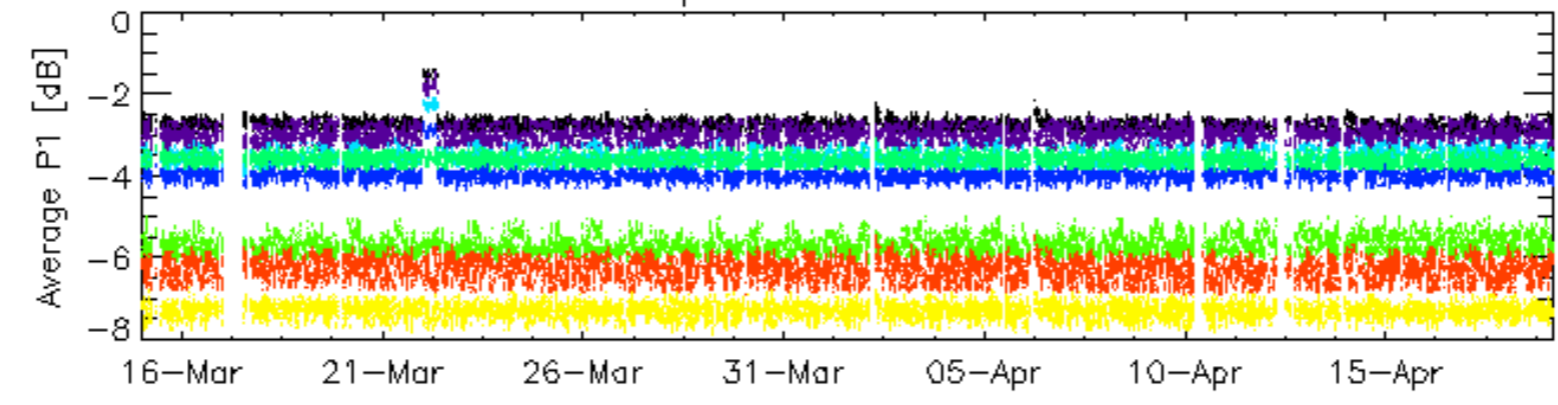


Cal pulses for WVS IS2



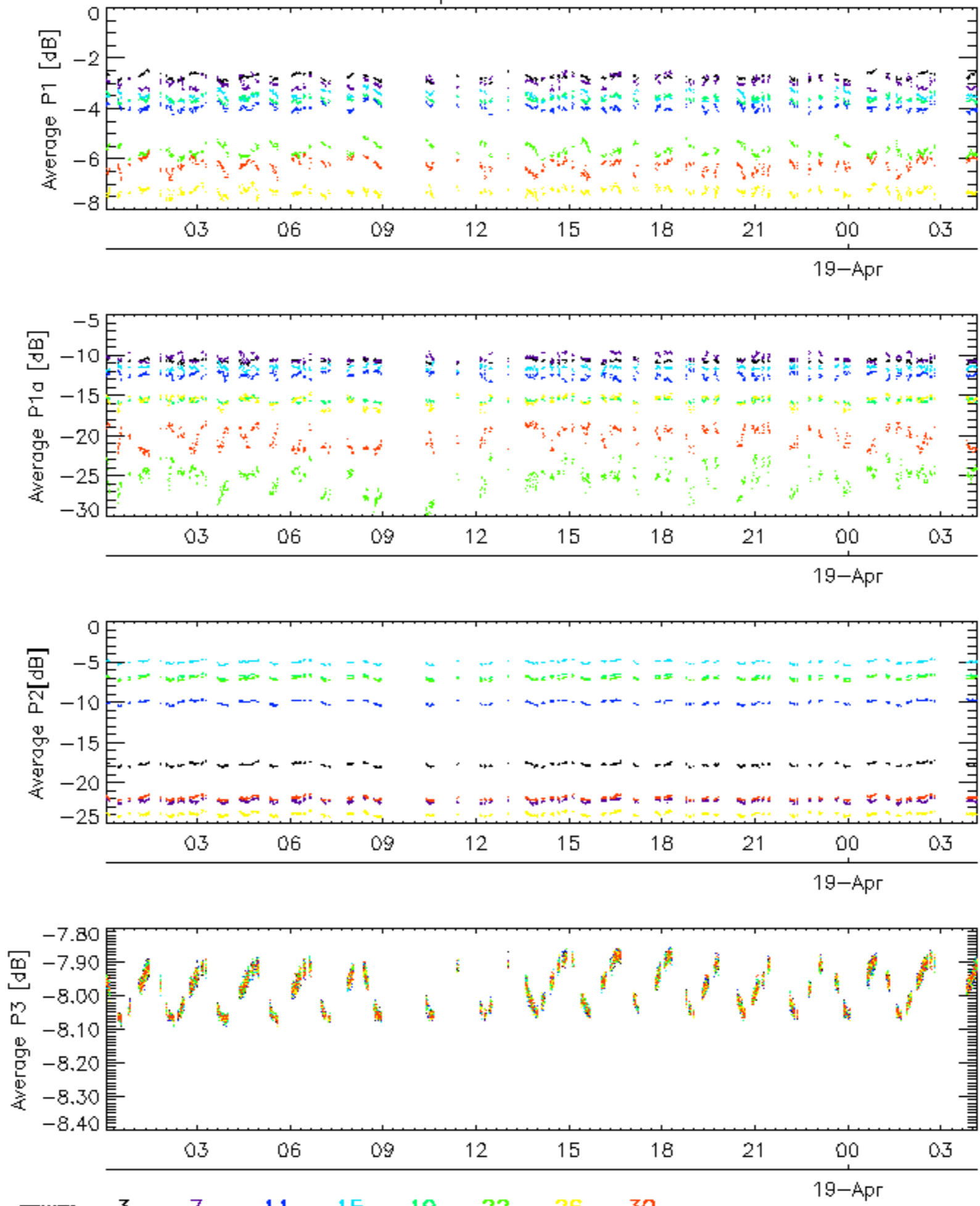
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

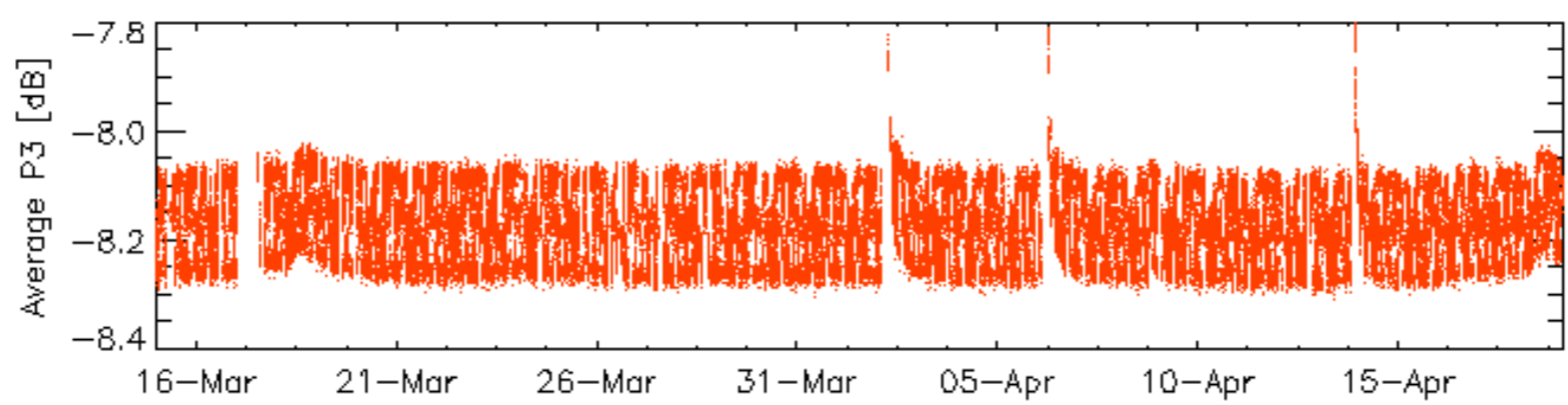
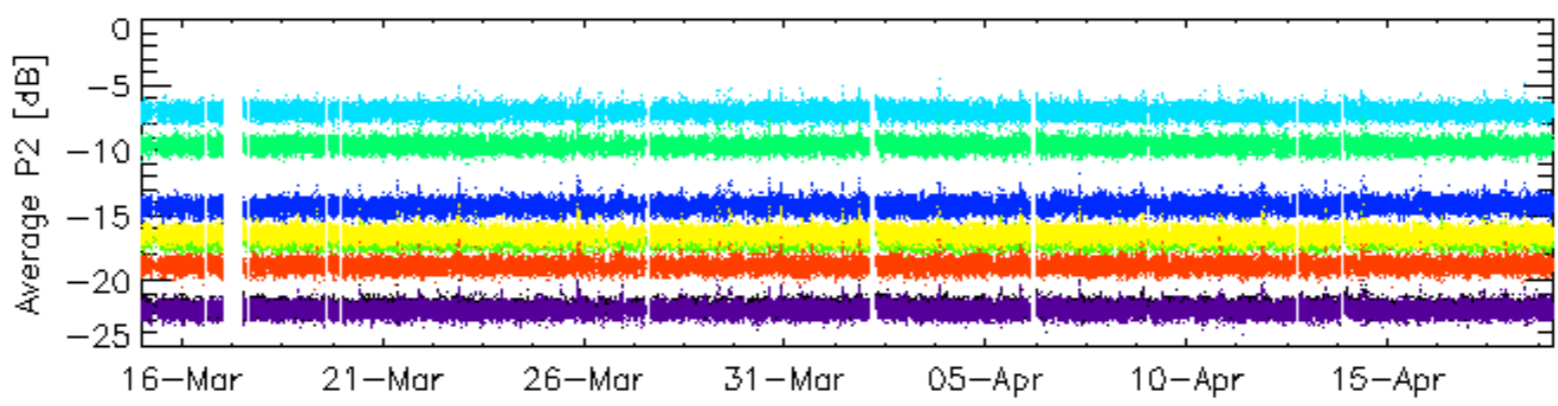
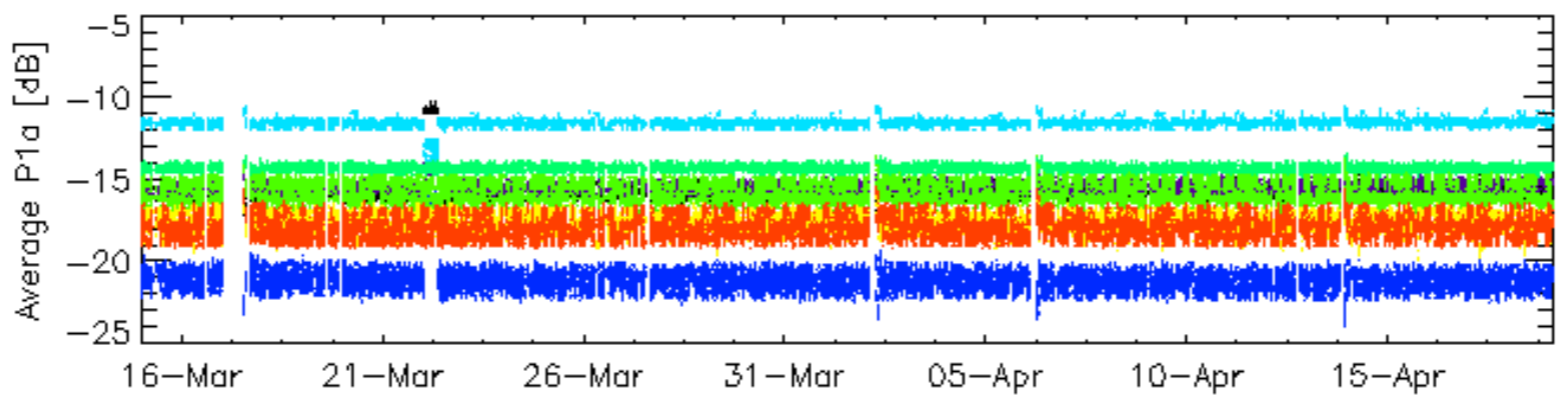
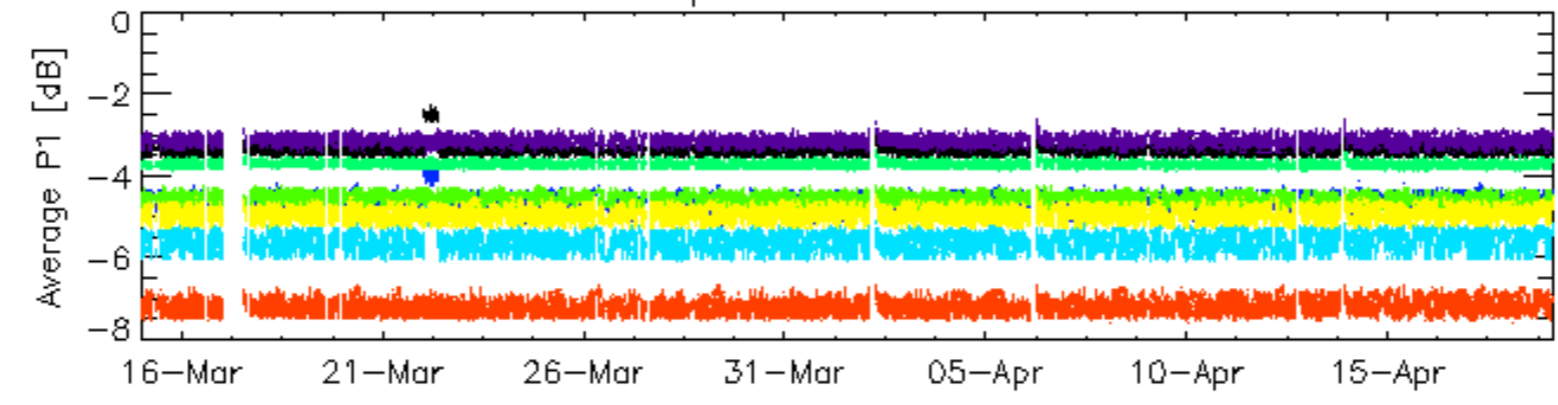


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

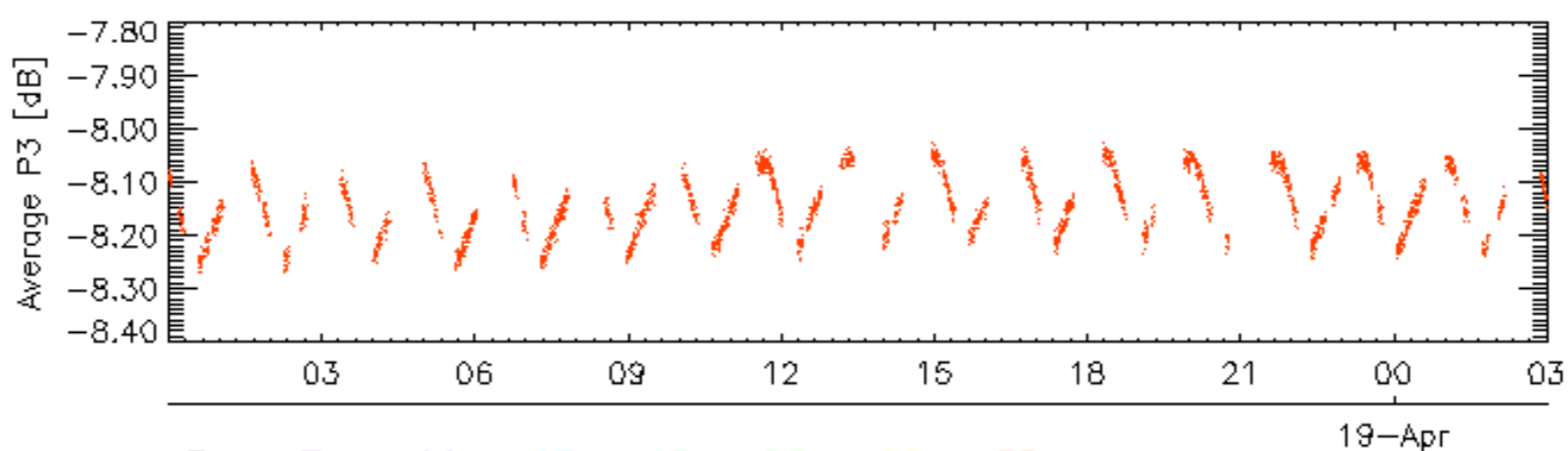
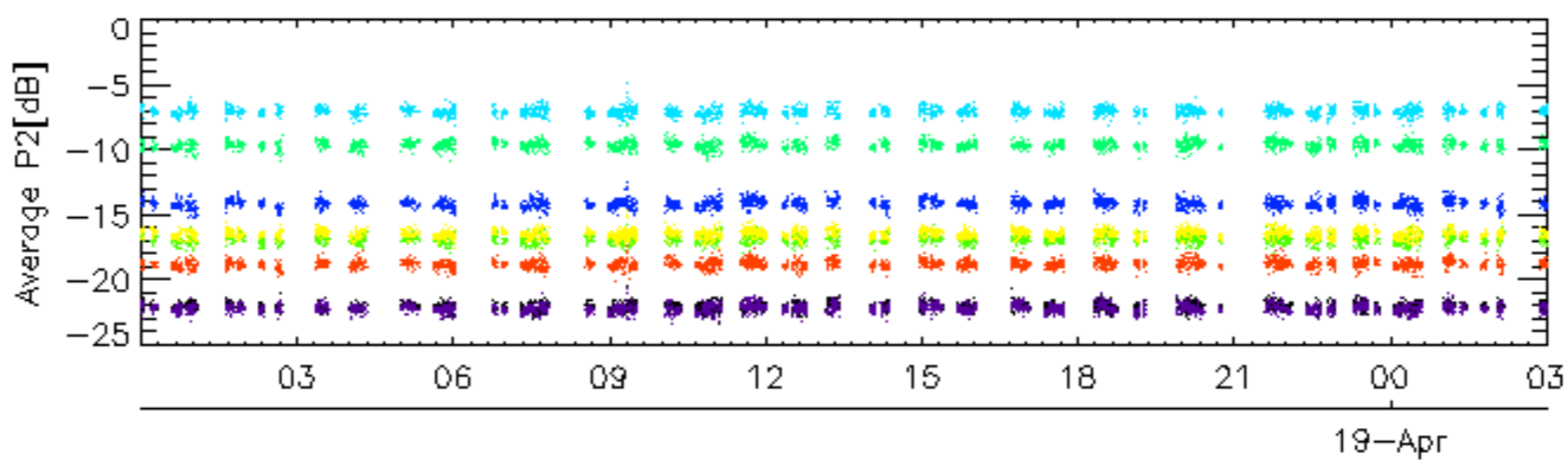
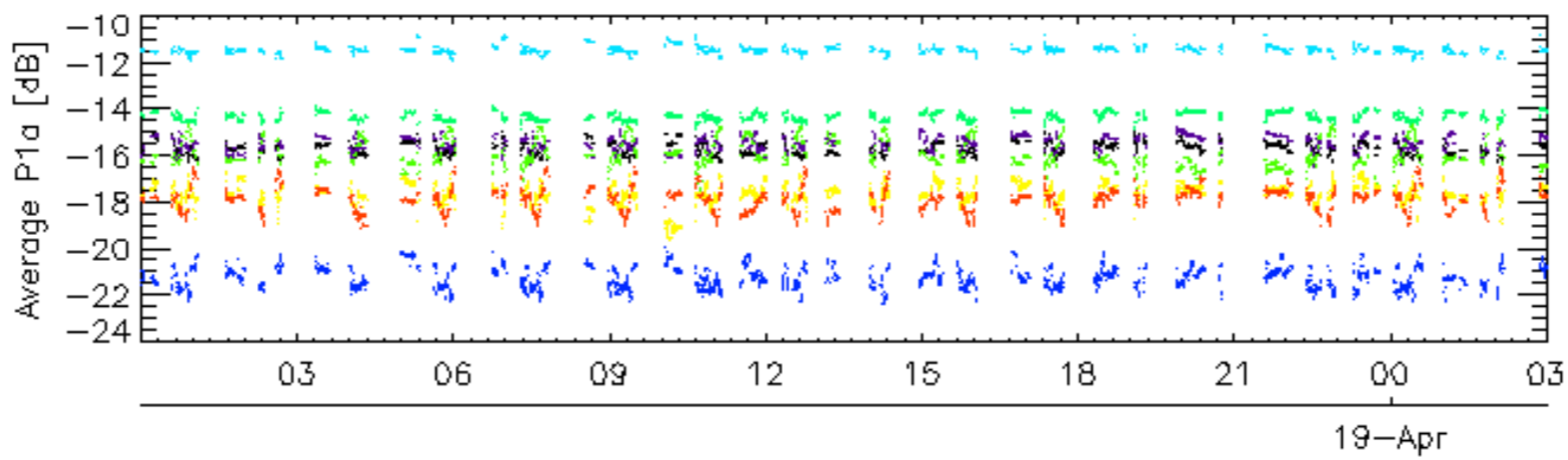
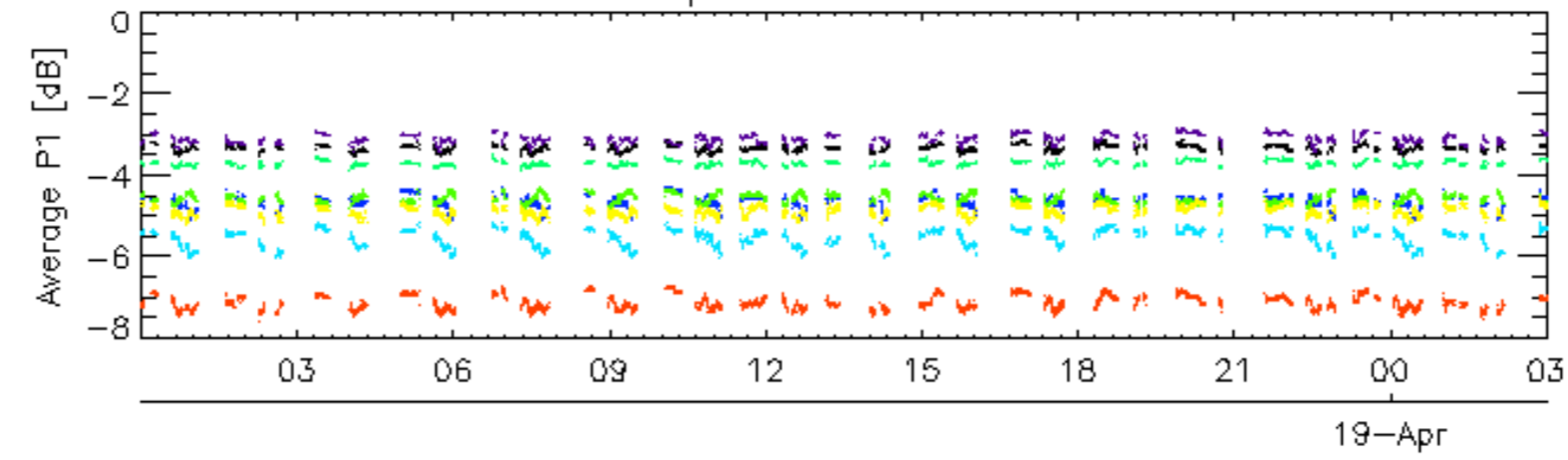


Cal pulses for WVS IS2



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

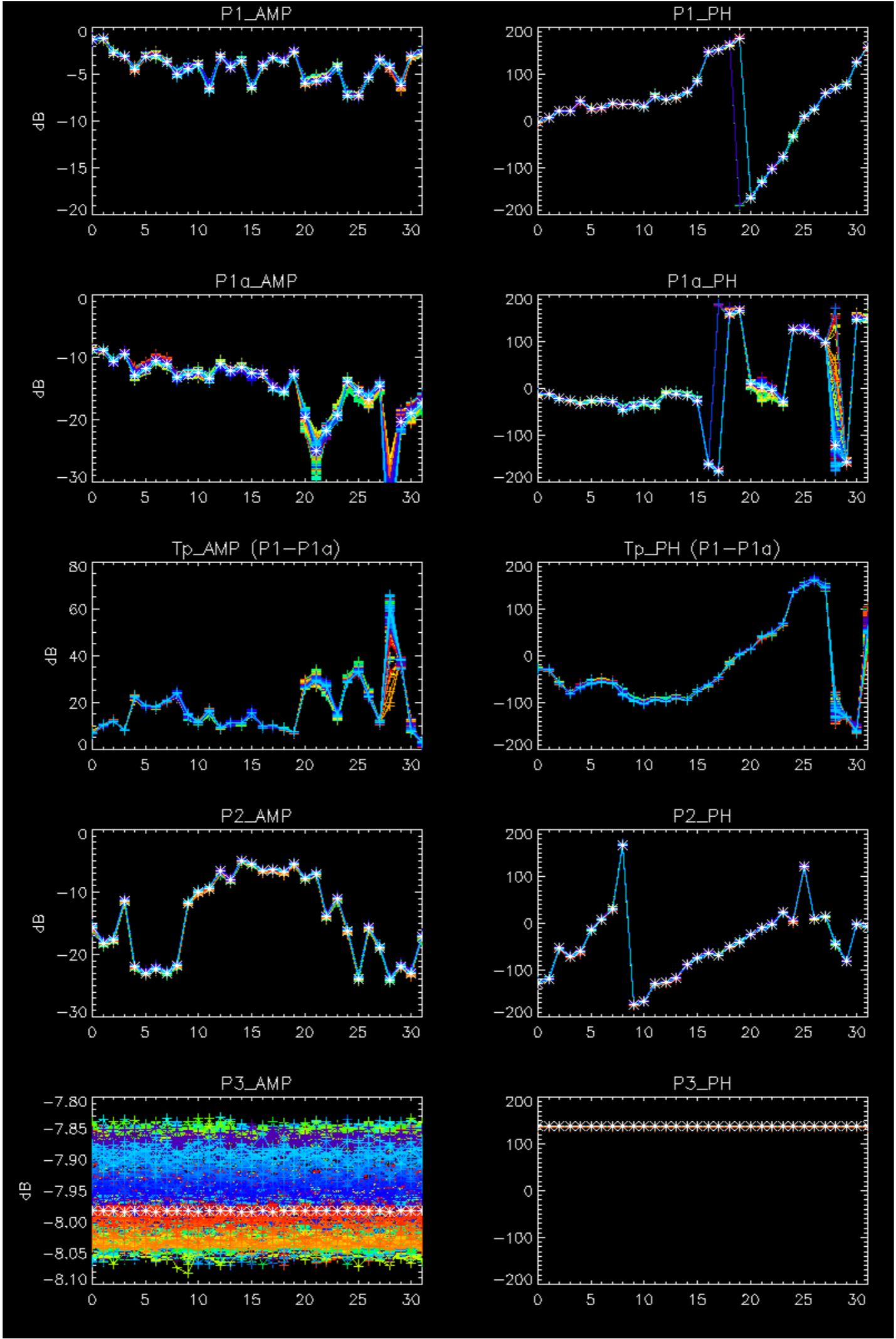
Cal pulses for WVS IS2

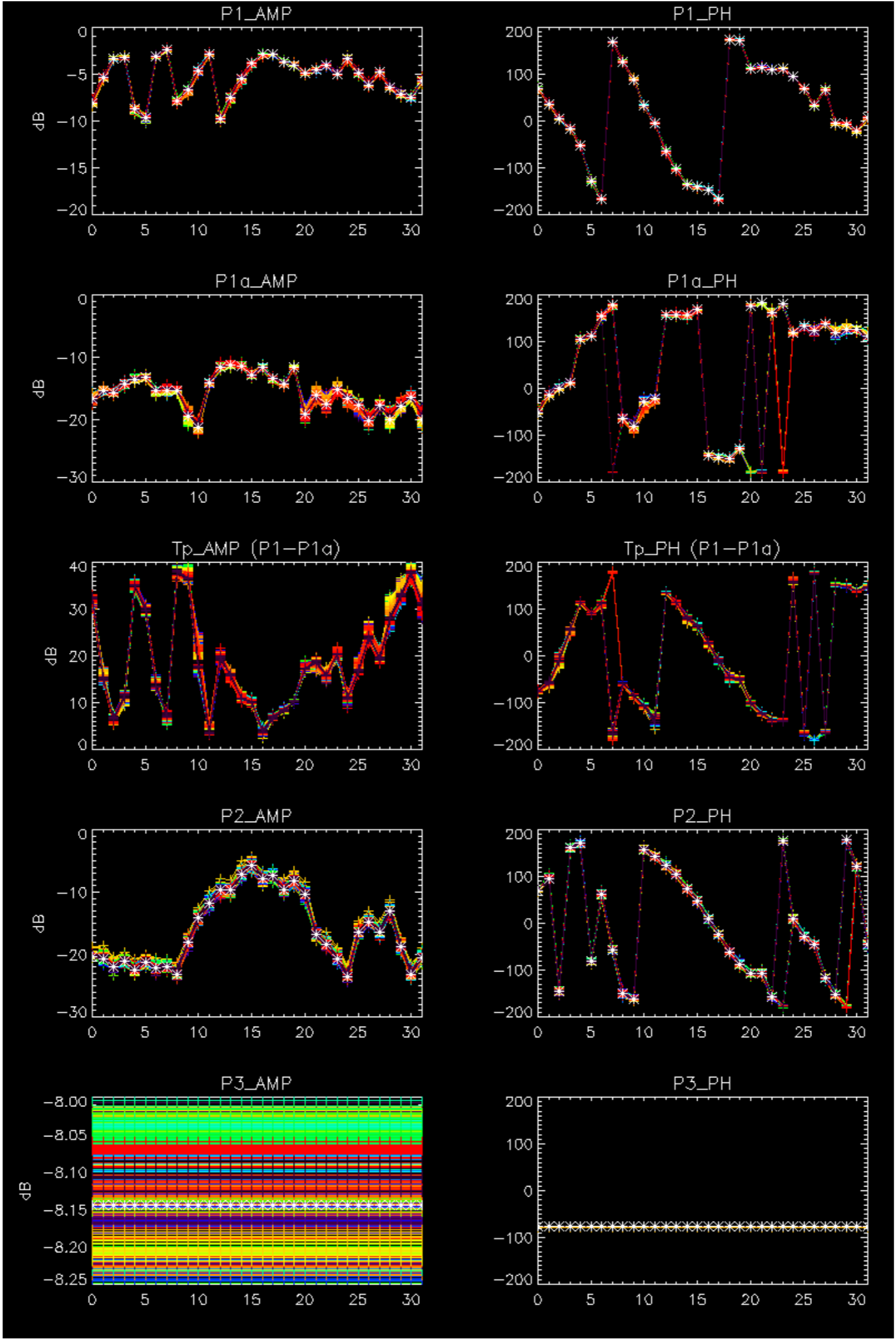


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed from browse visual inspection.

No anomalies observed.

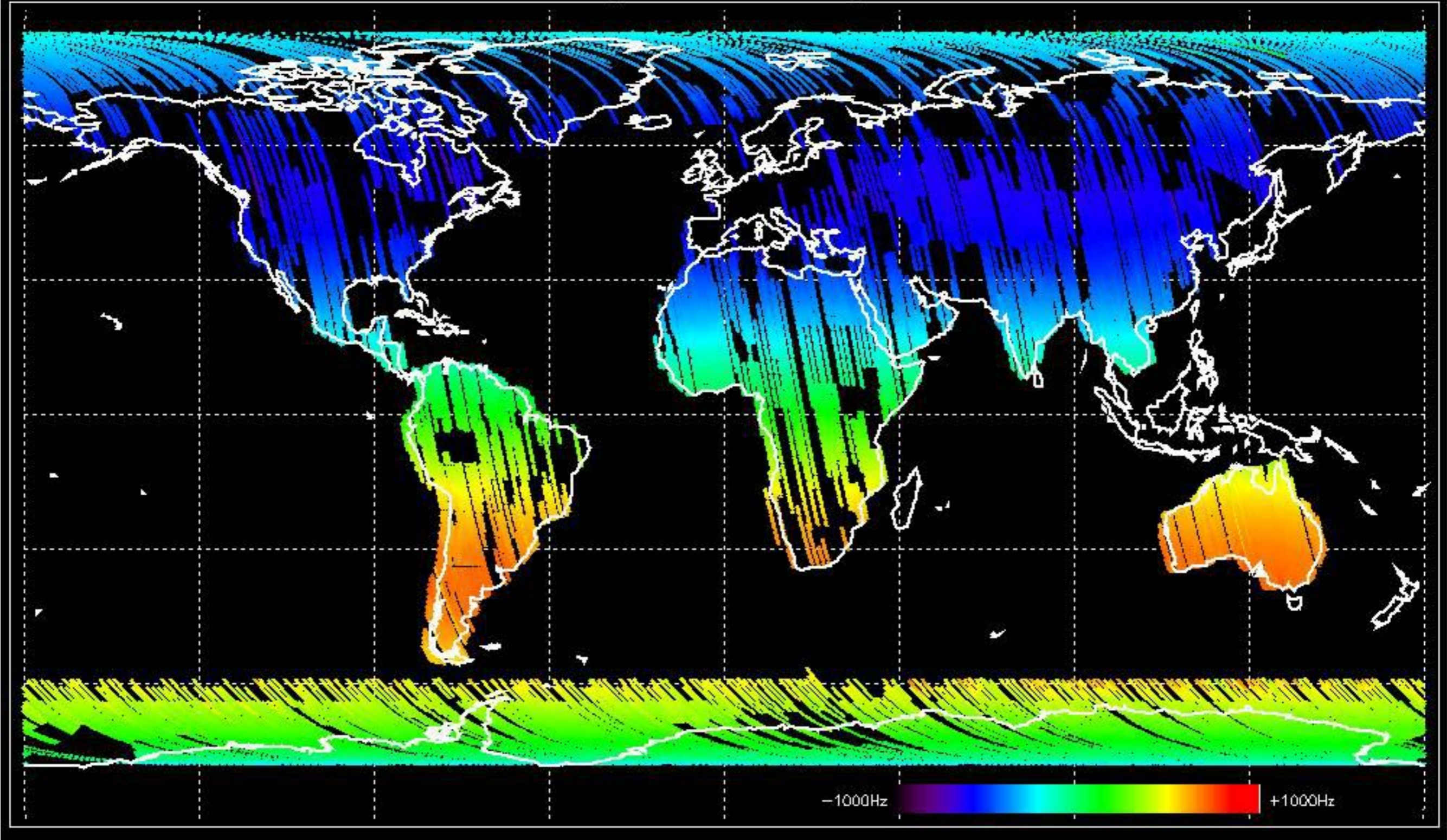




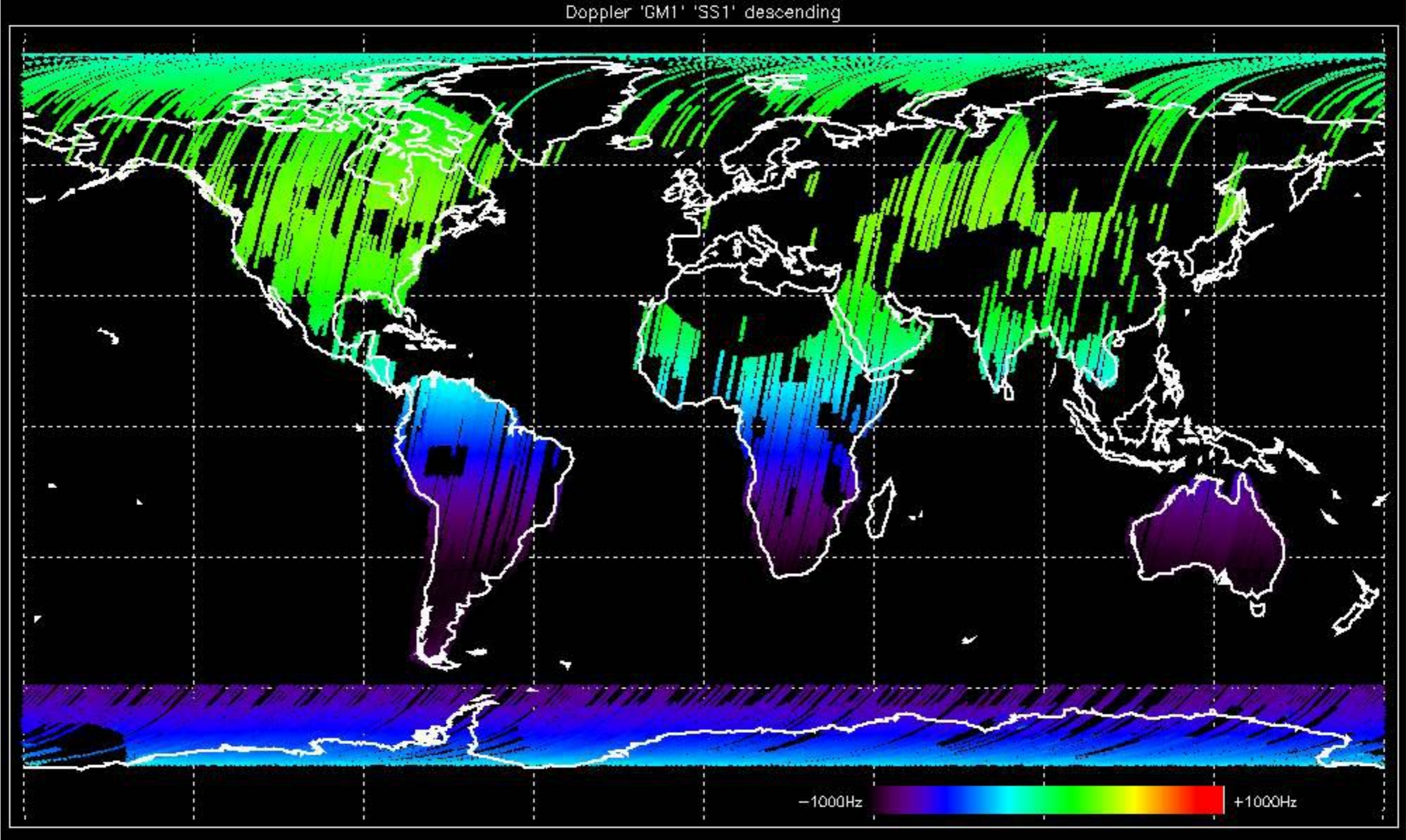
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

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

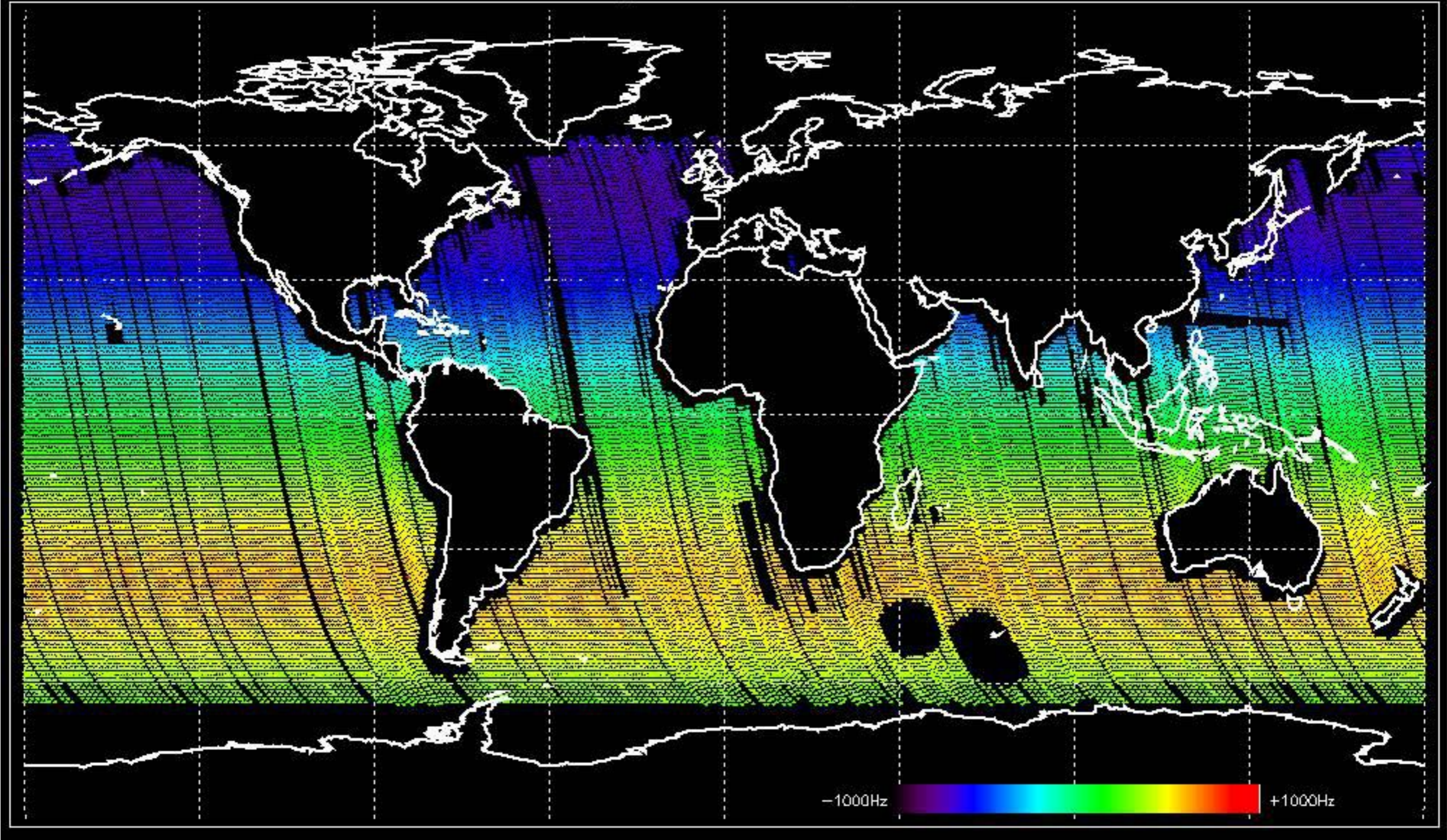
Doppler 'GM1' 'SS1' ascending



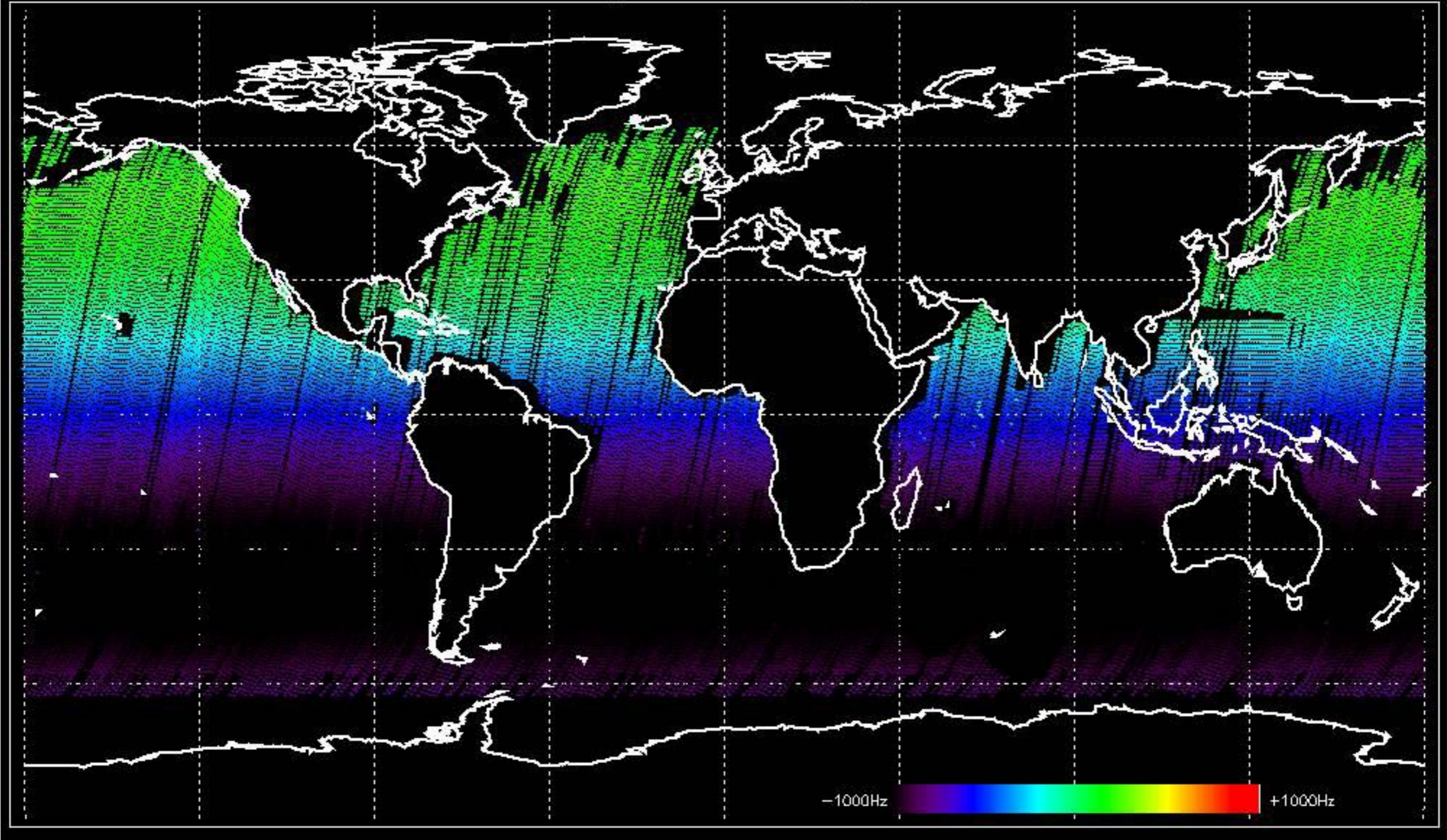
Doppler 'GM1' 'SS1' descending



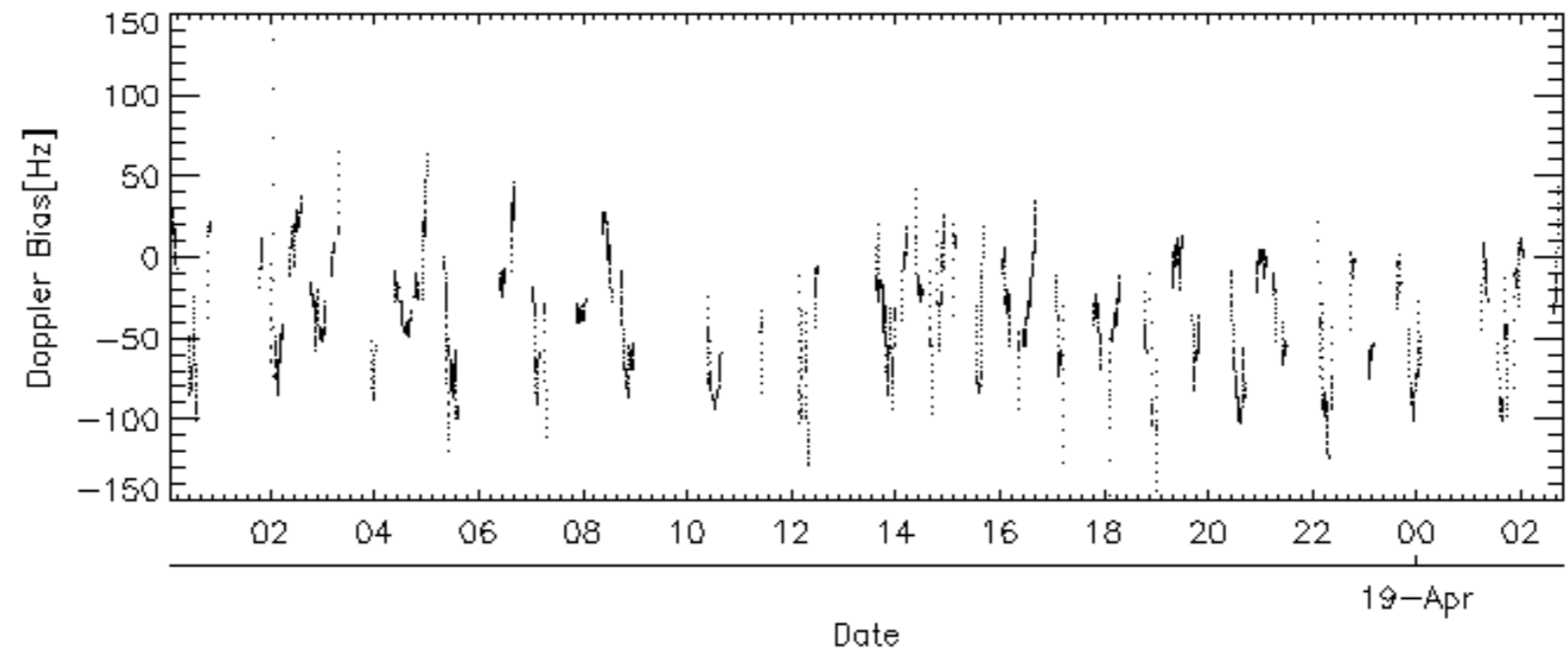
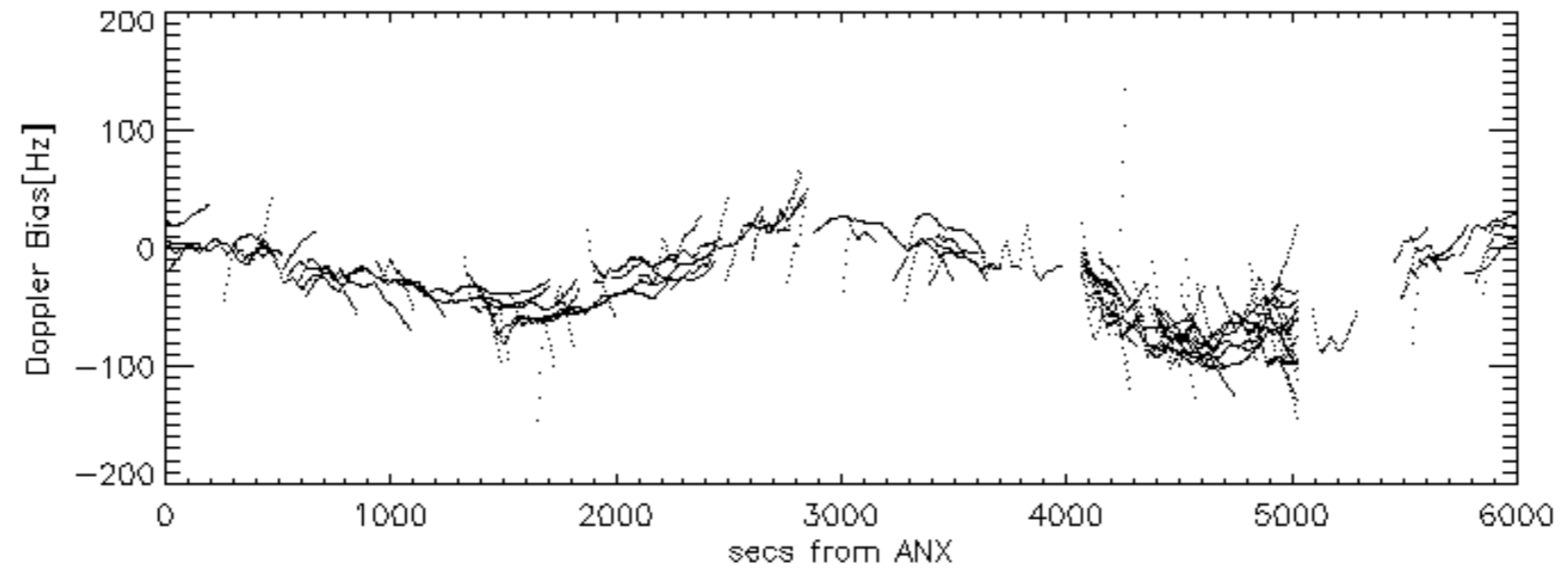
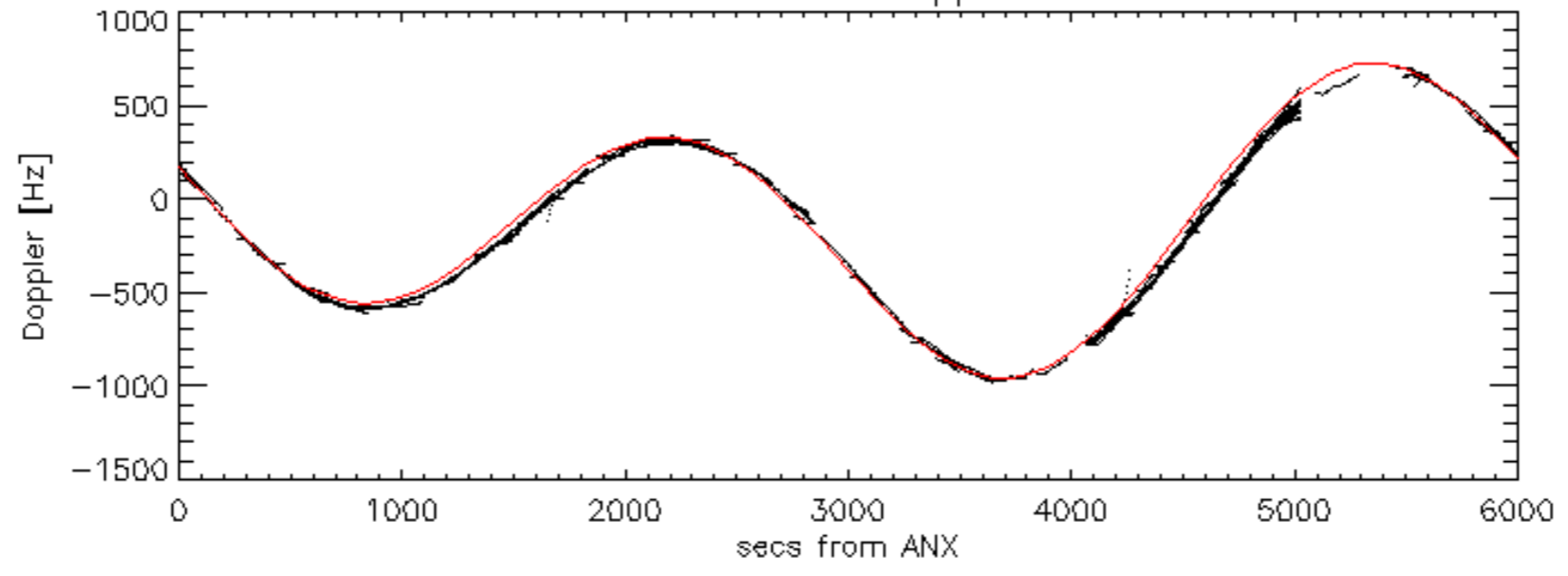
Doppler 'WVS' 'IS2' ascending

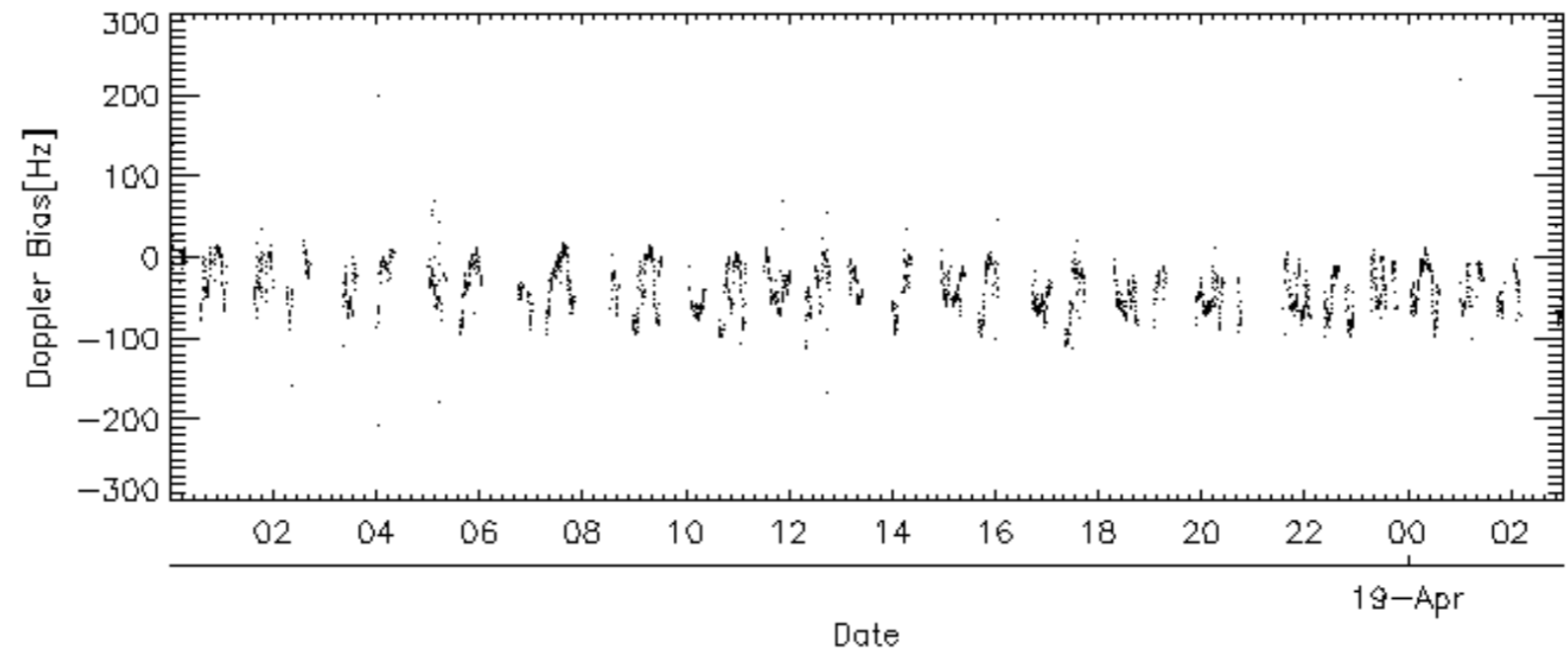
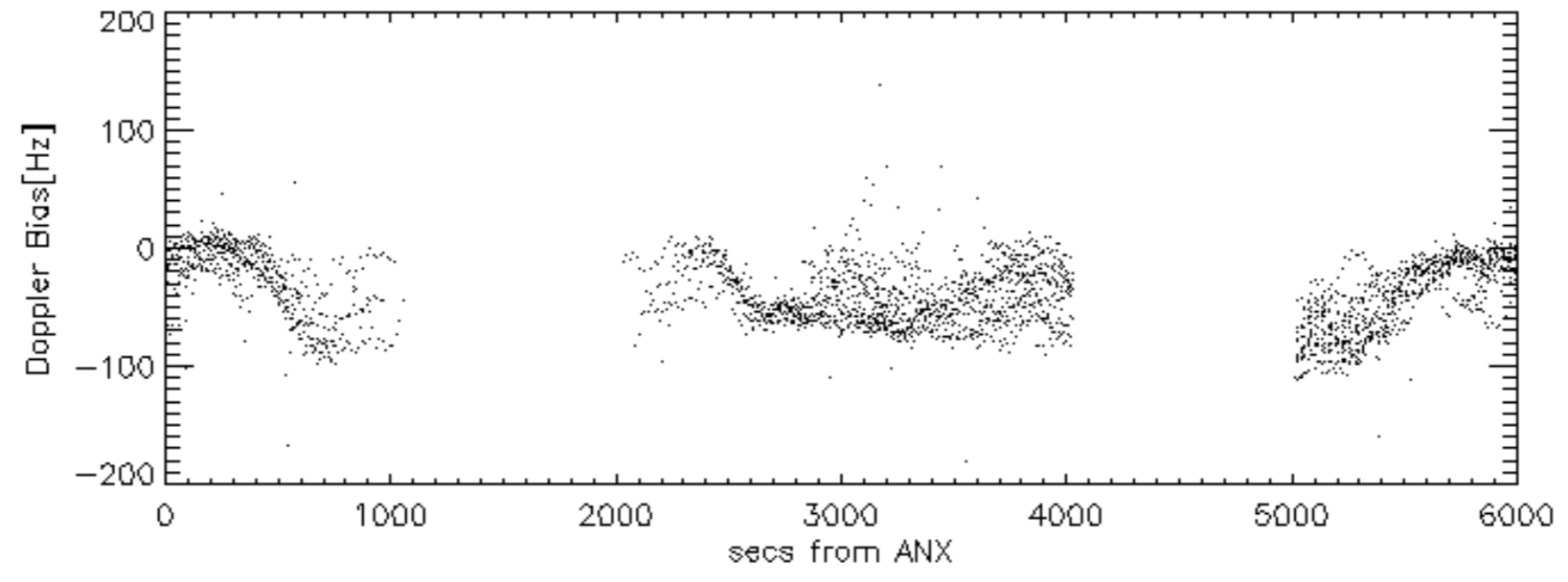
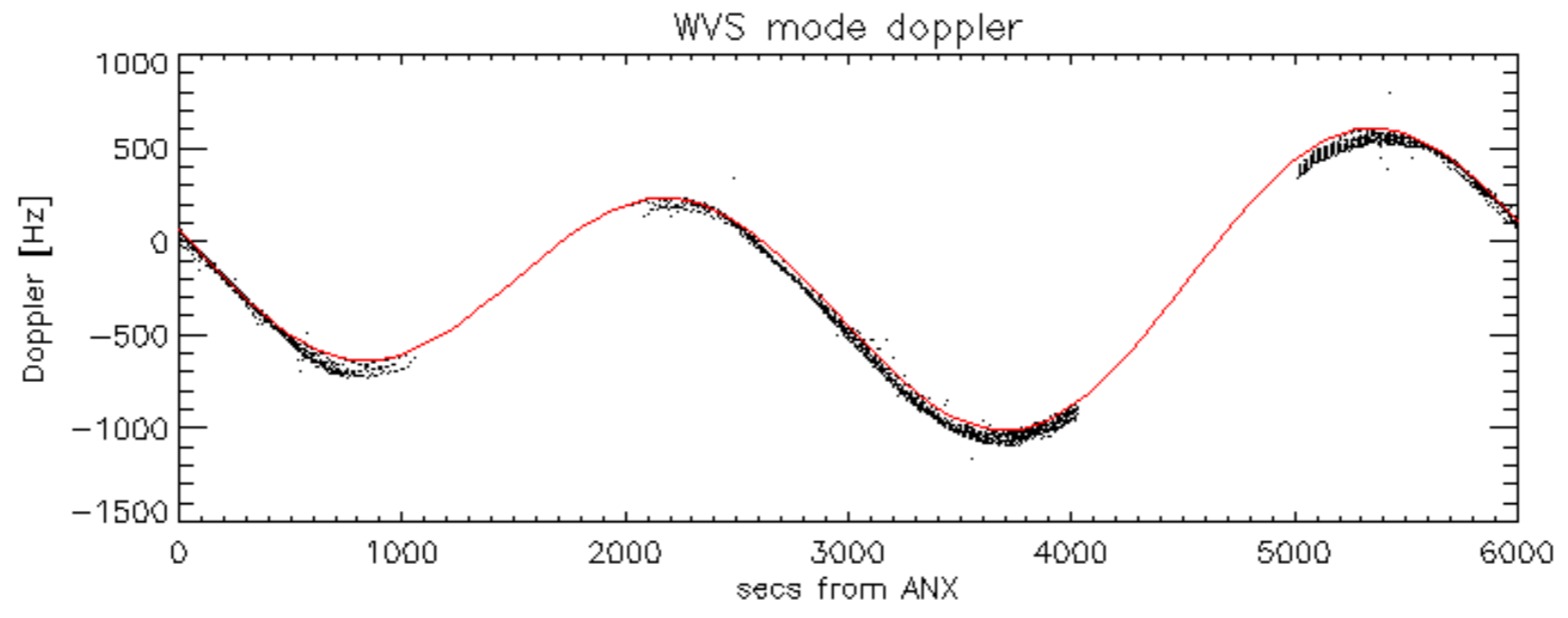


Doppler 'WVS' 'IS2' descending

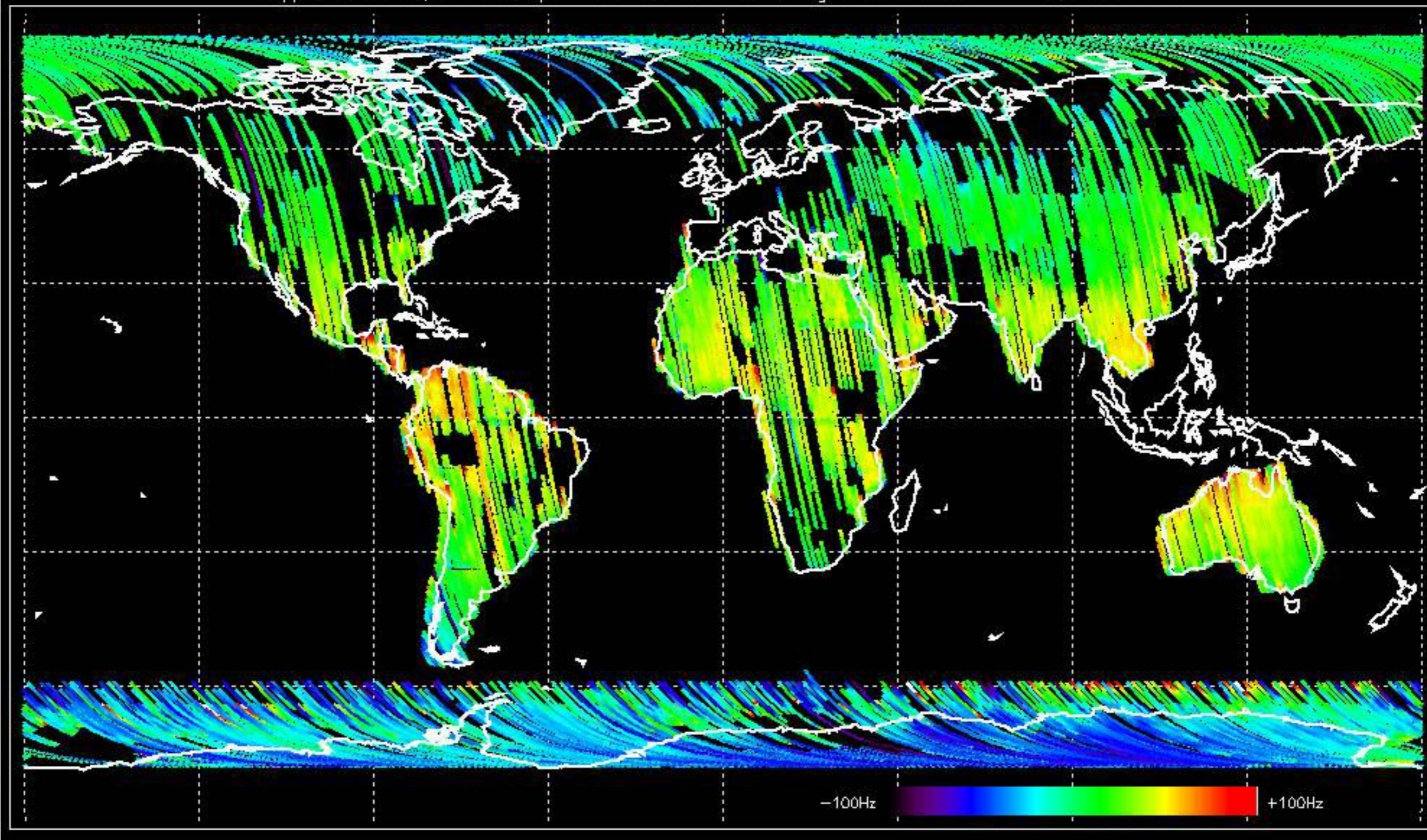


GM1 mode doppler

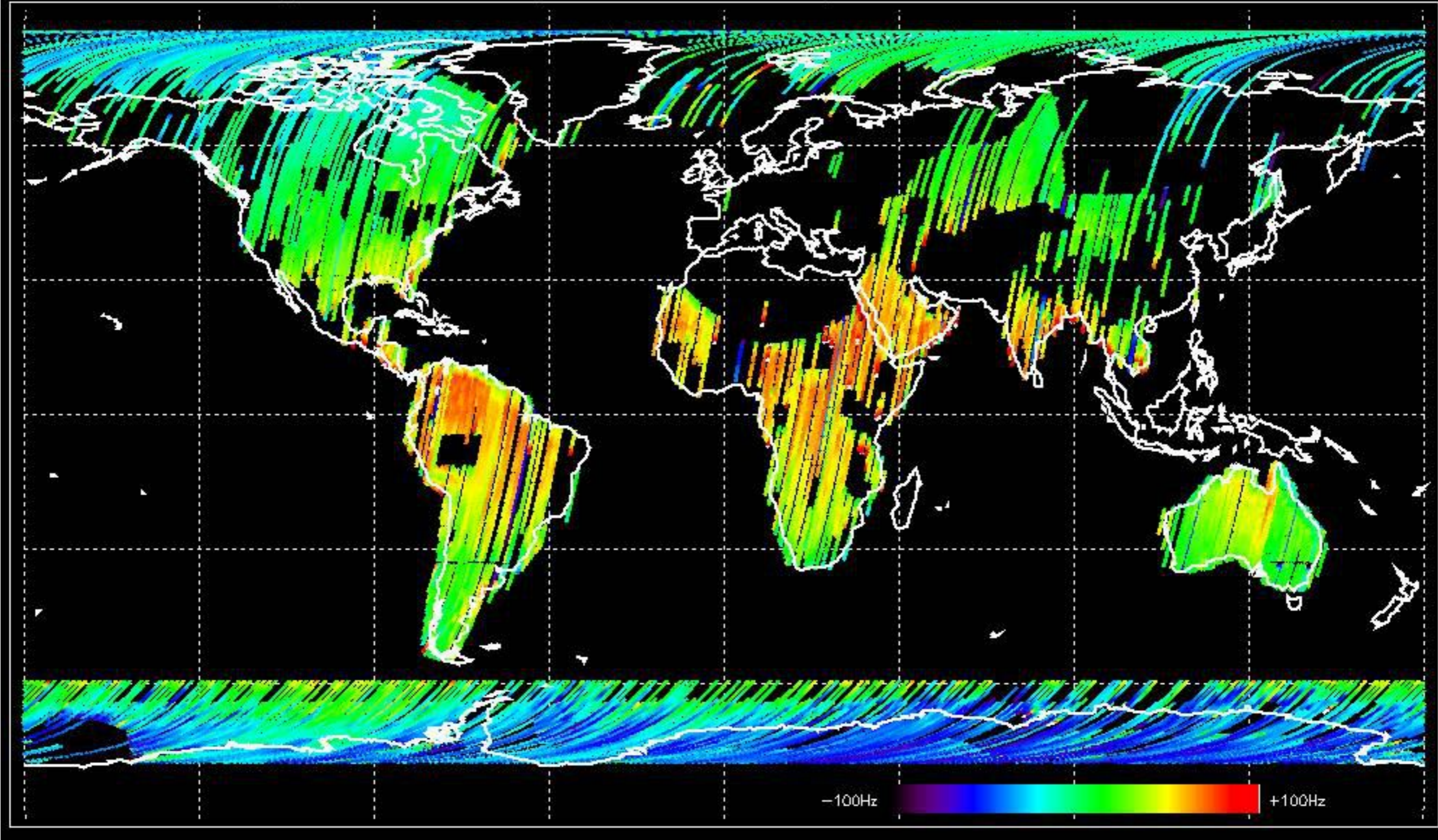




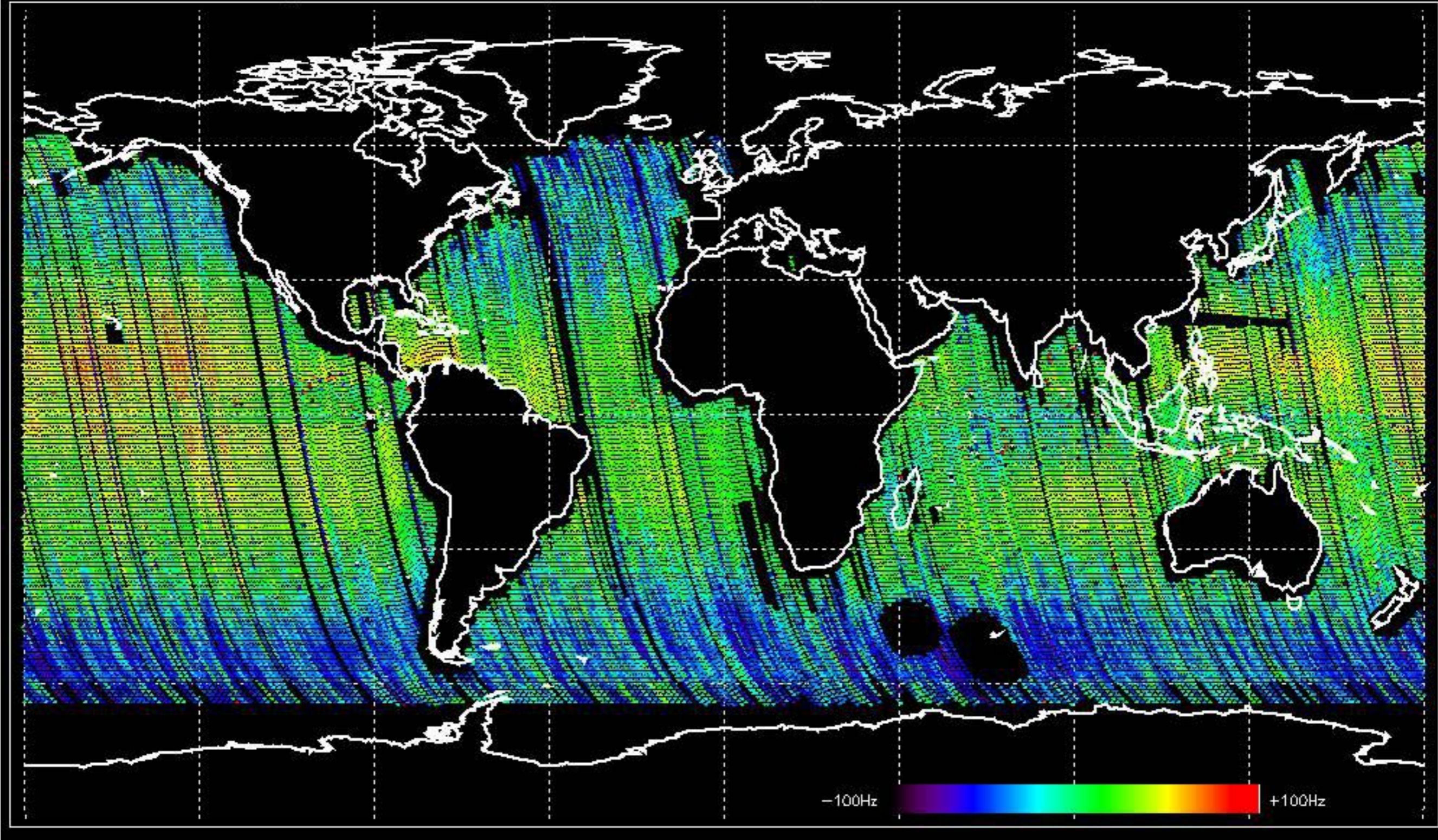
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -37.569688 Hz



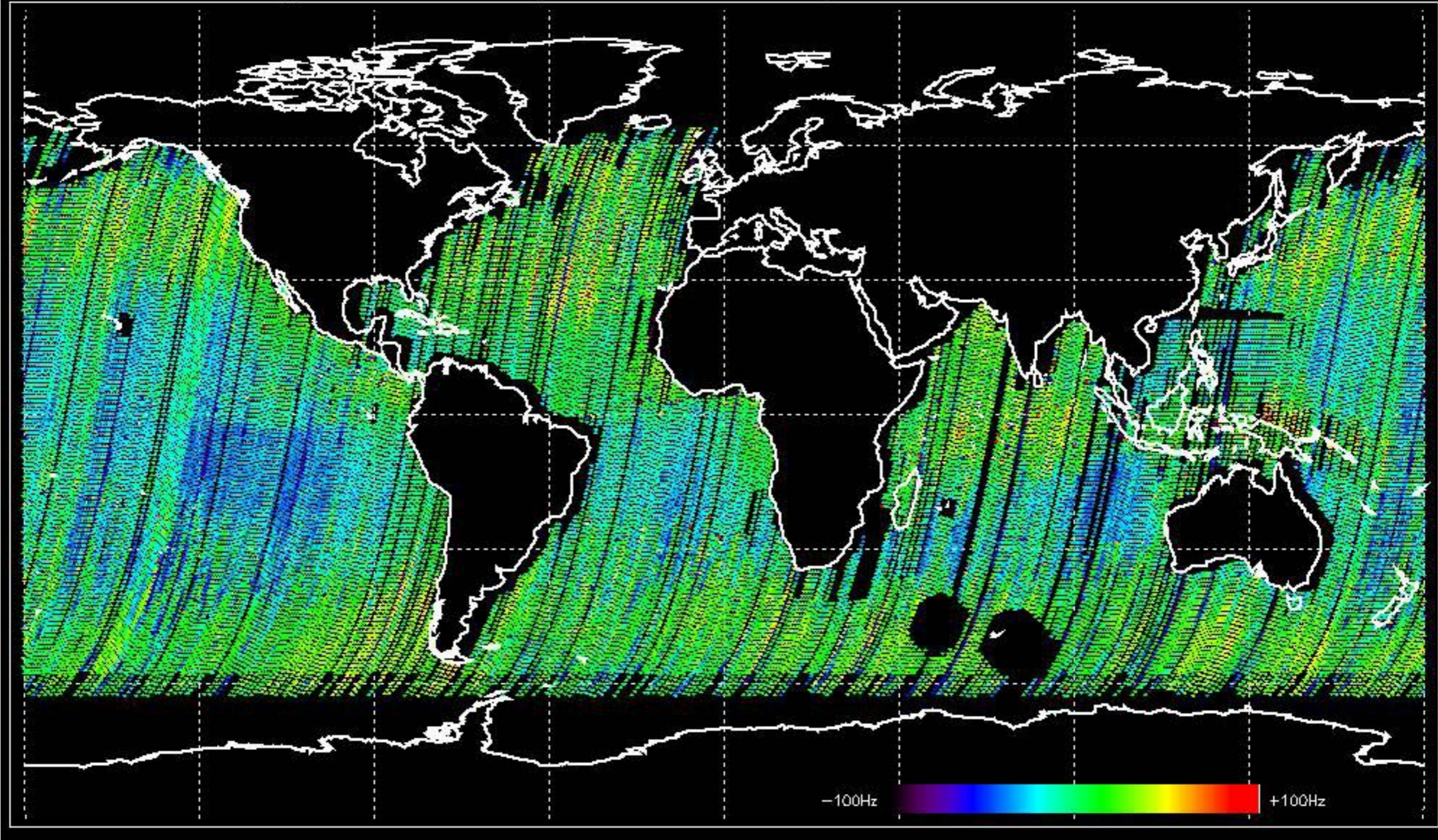
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -30.117783 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -37.833826 Hz

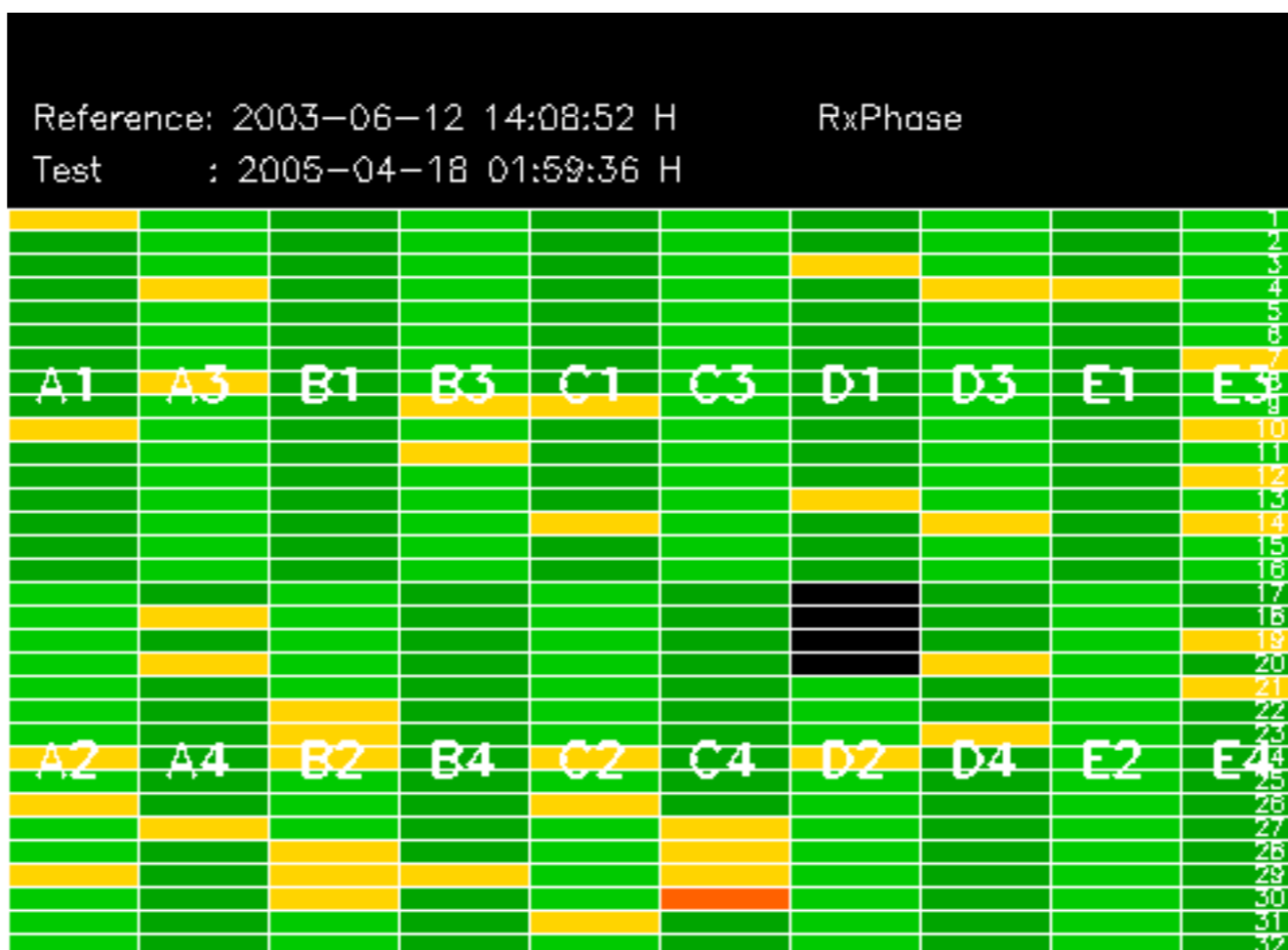


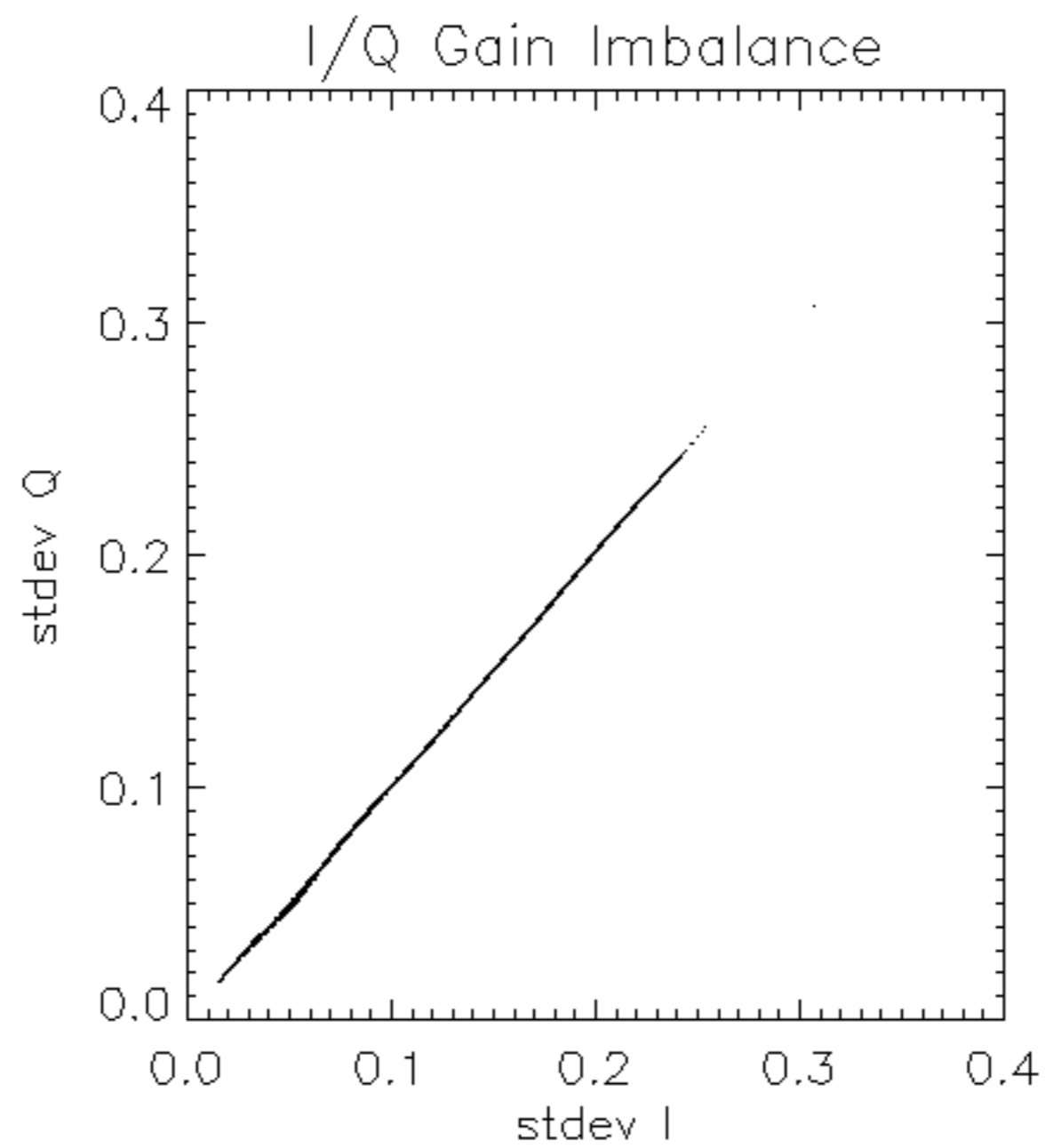
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -38.757589 Hz

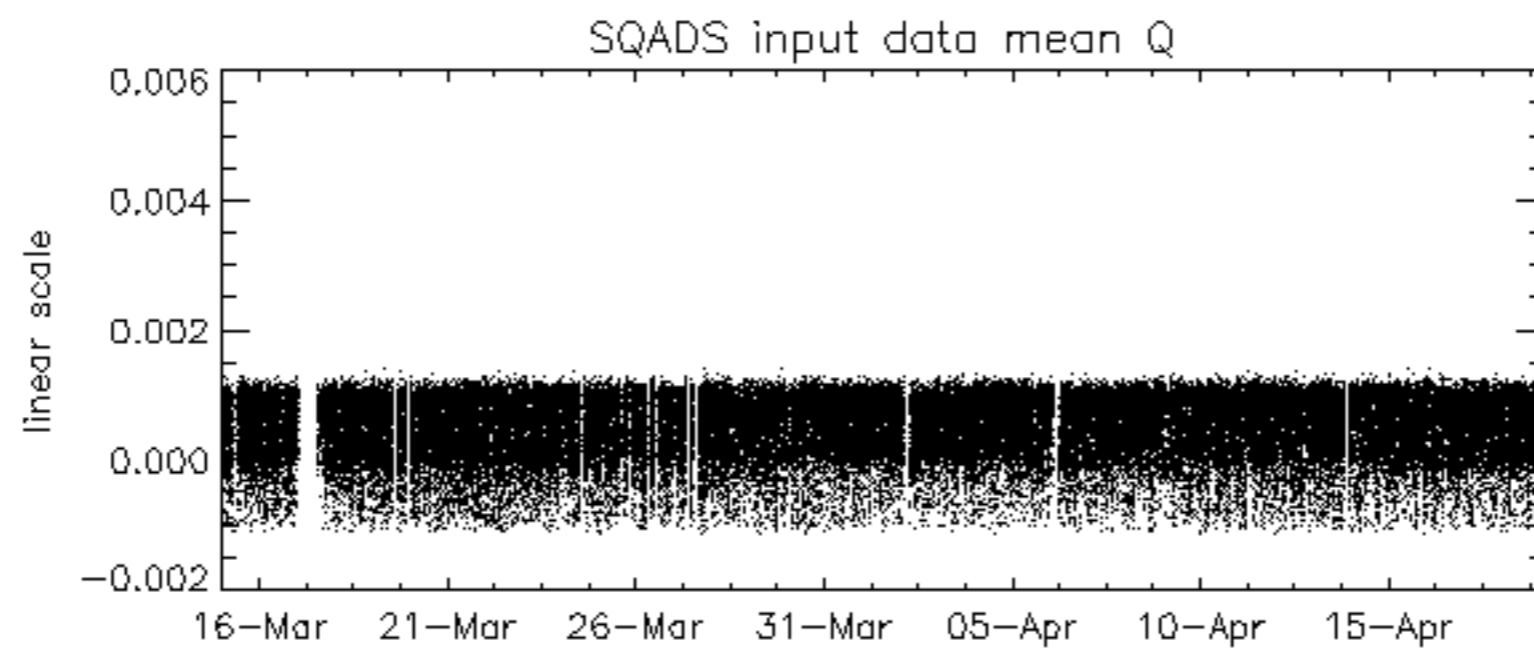
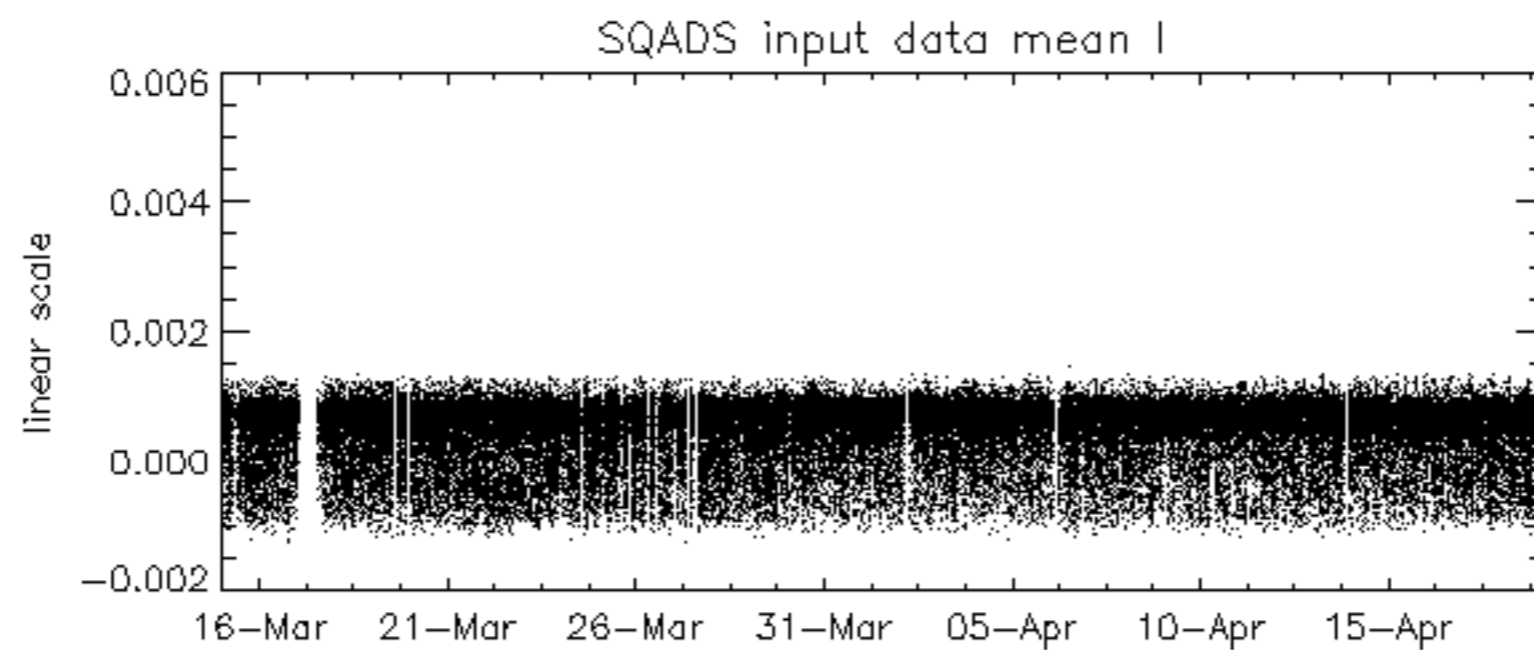
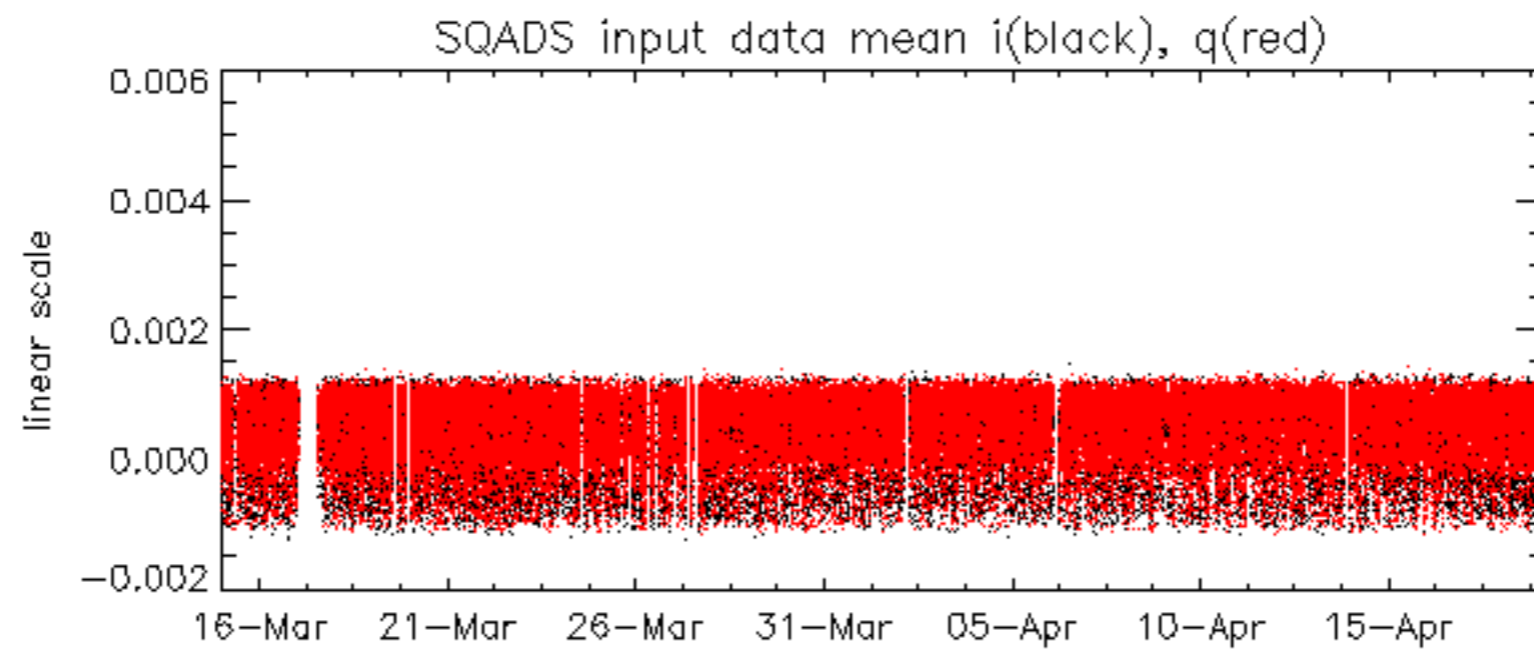


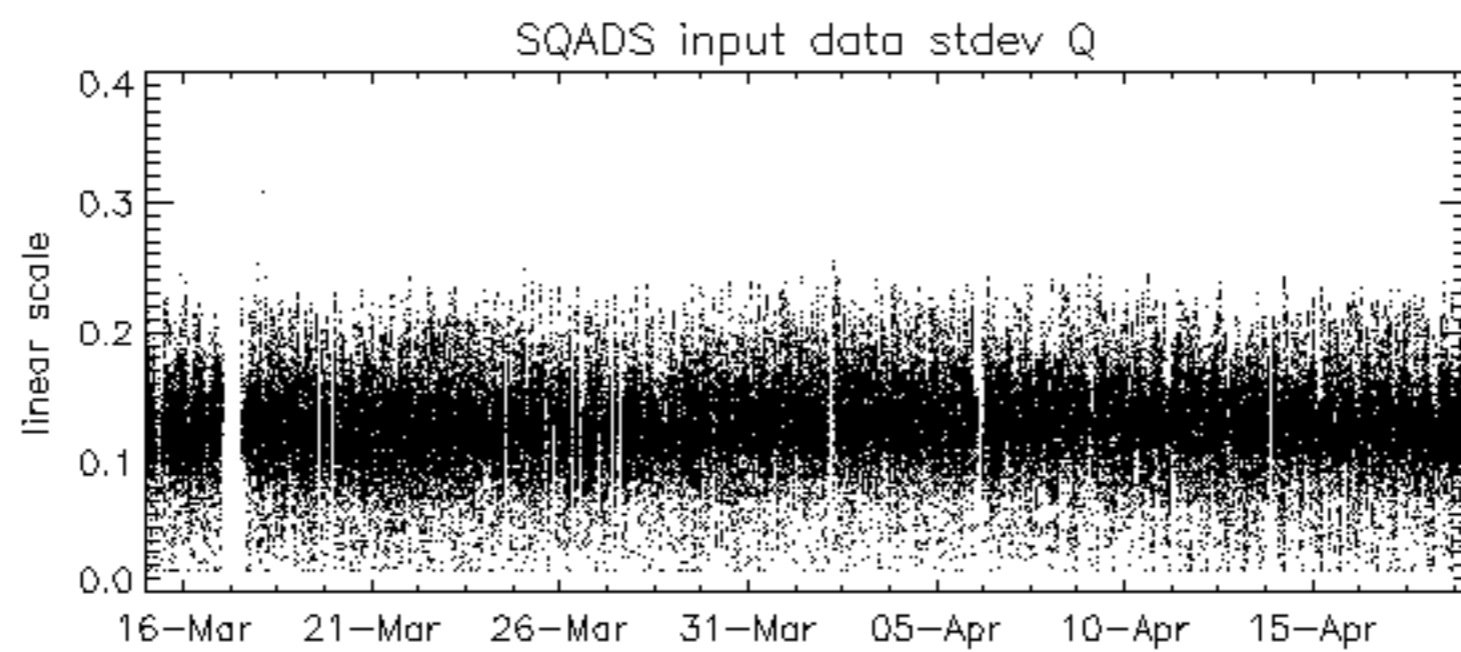
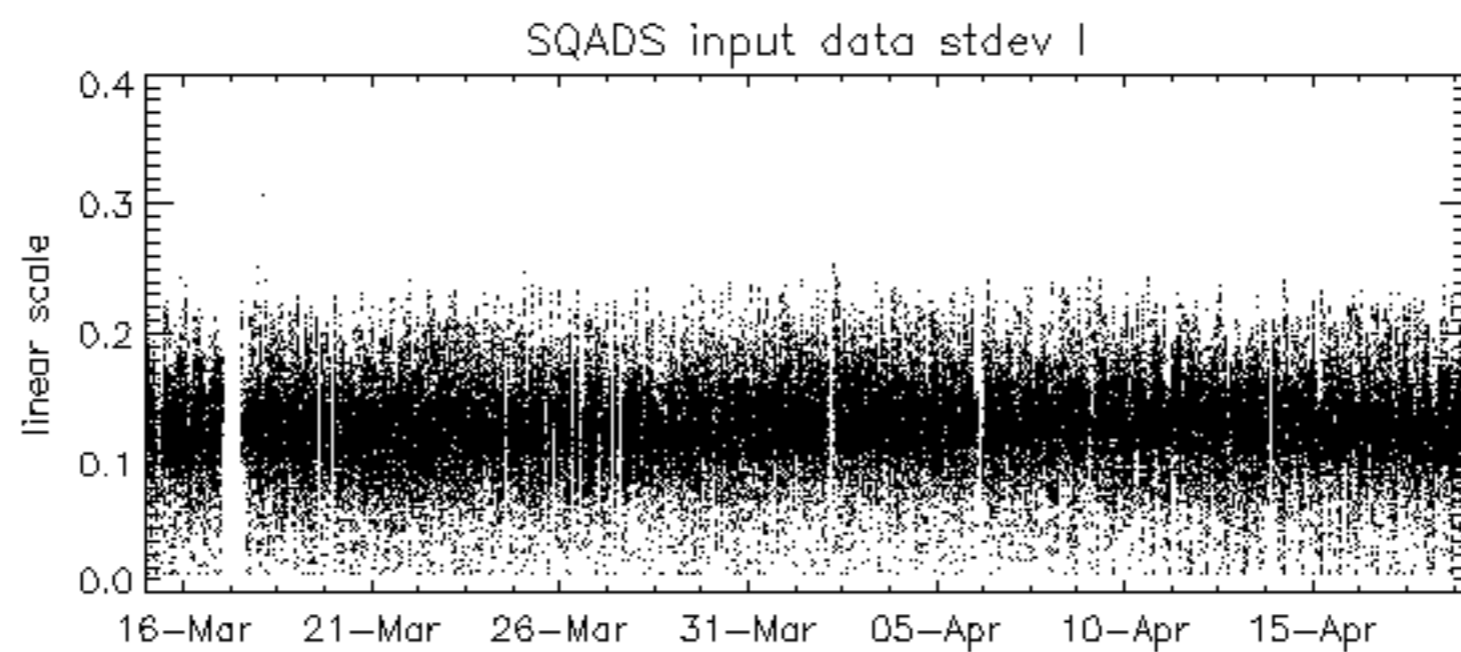
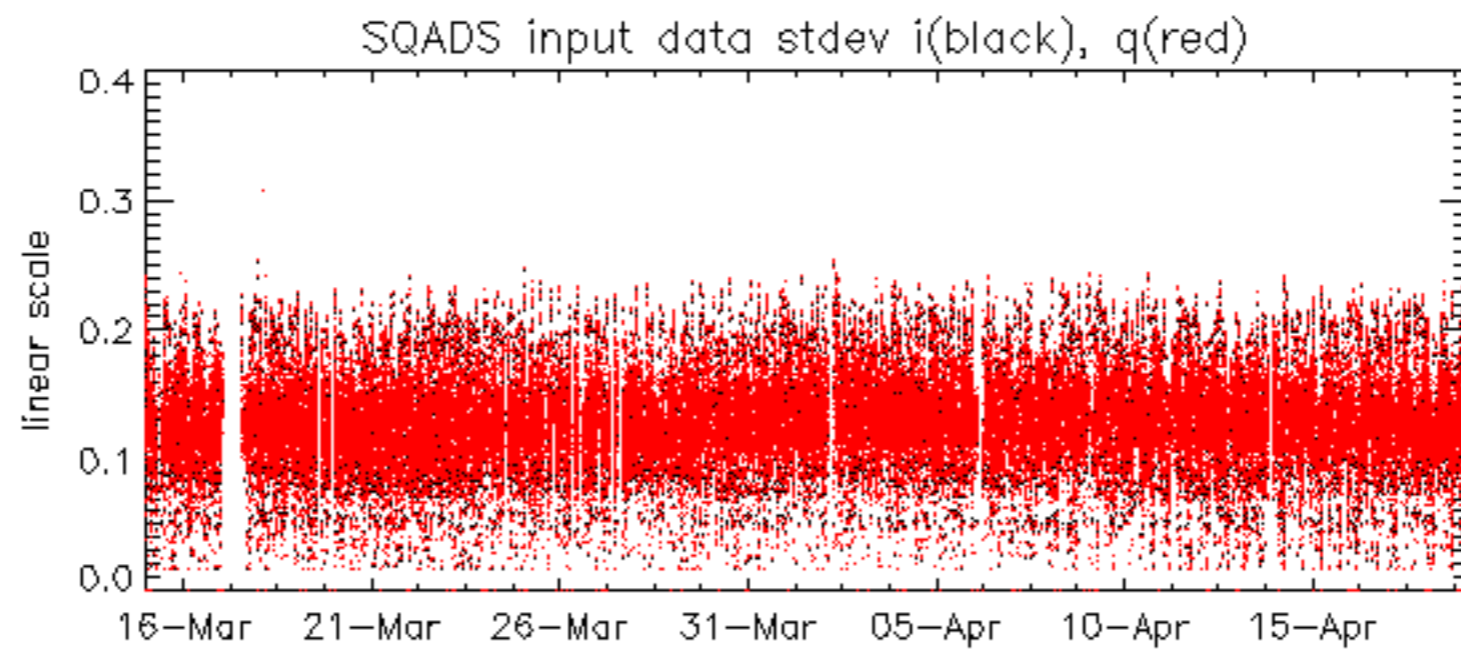
No anomalies observed on available MS products:

No anomalies observed.





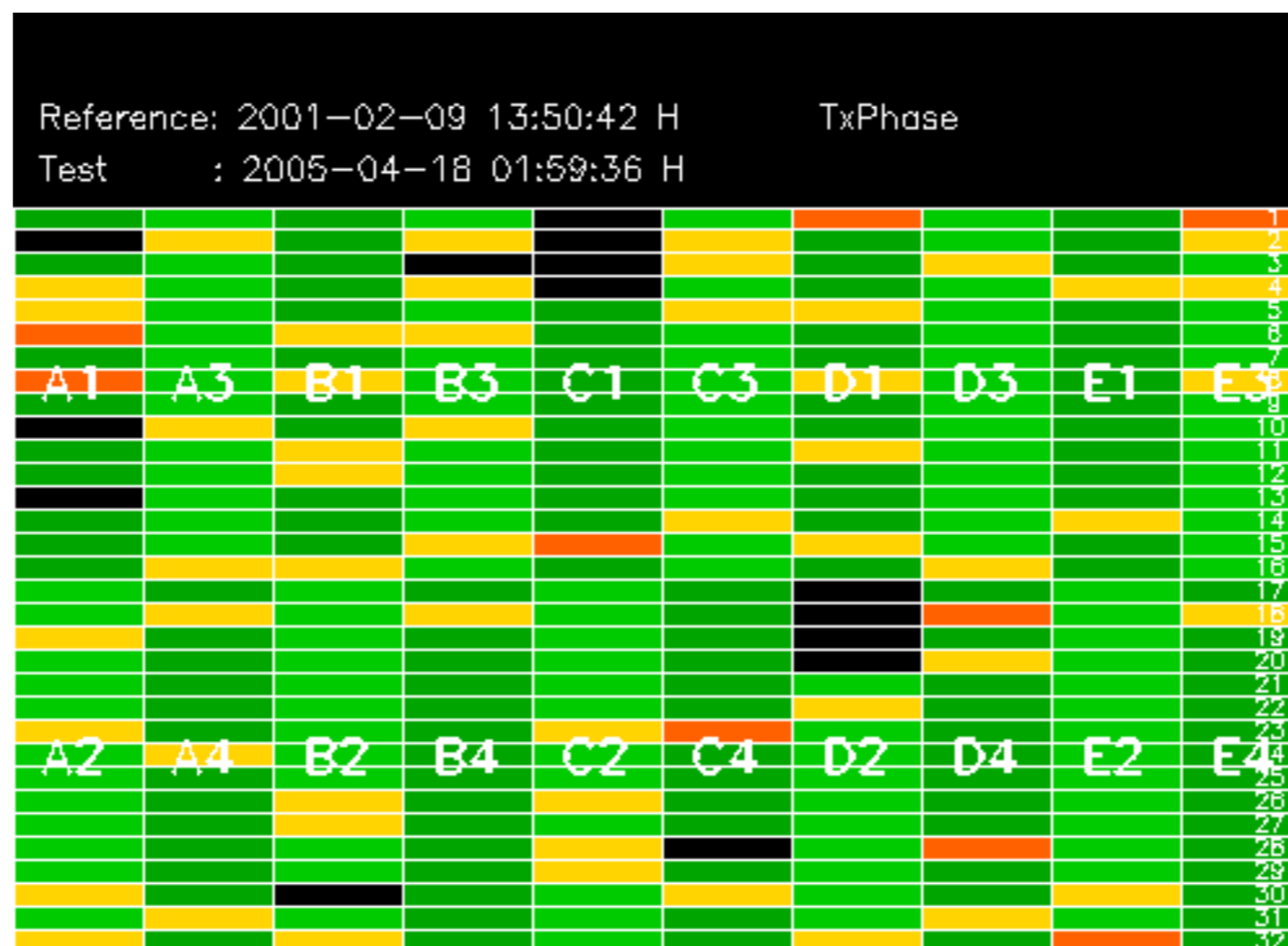


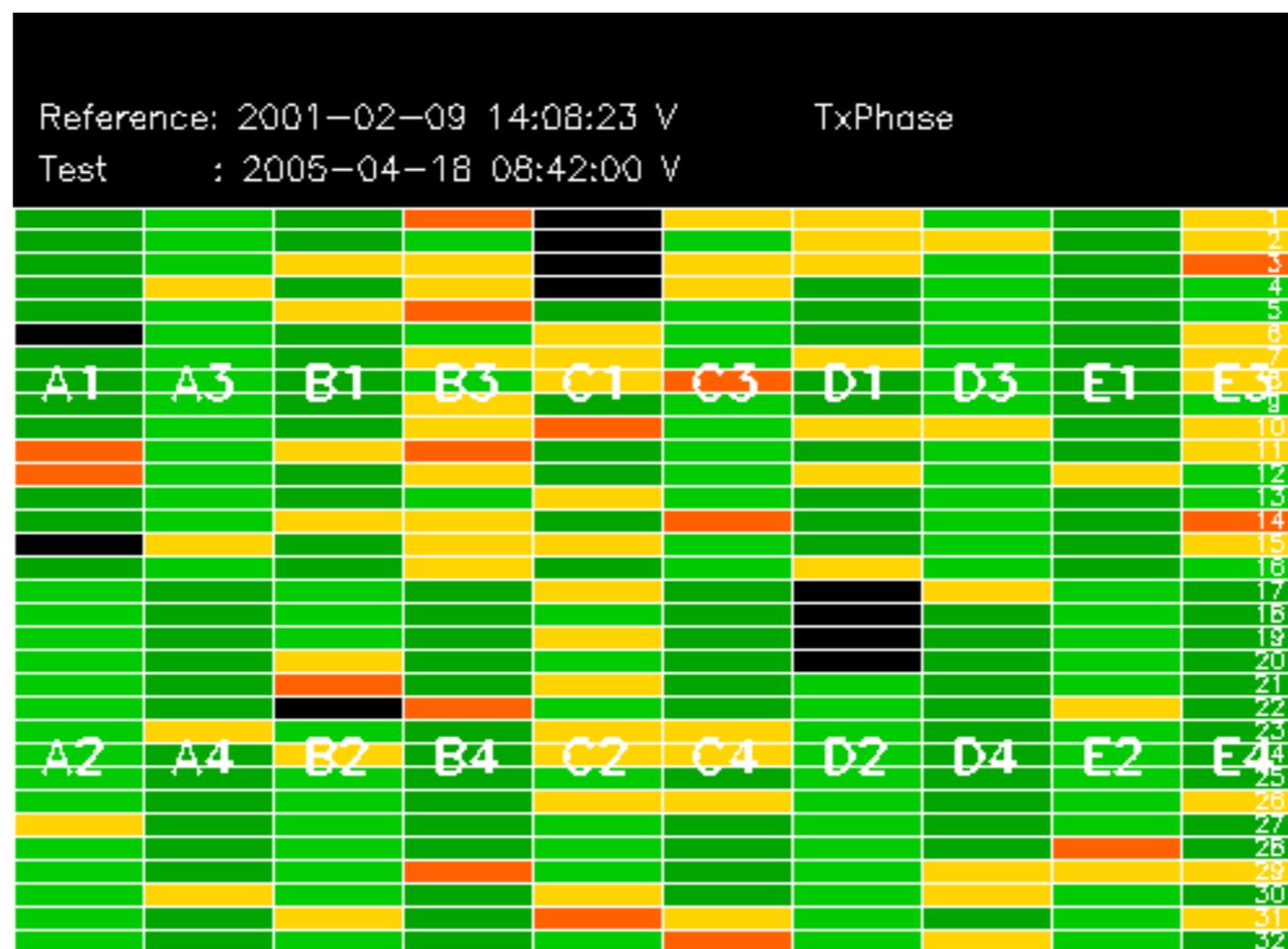


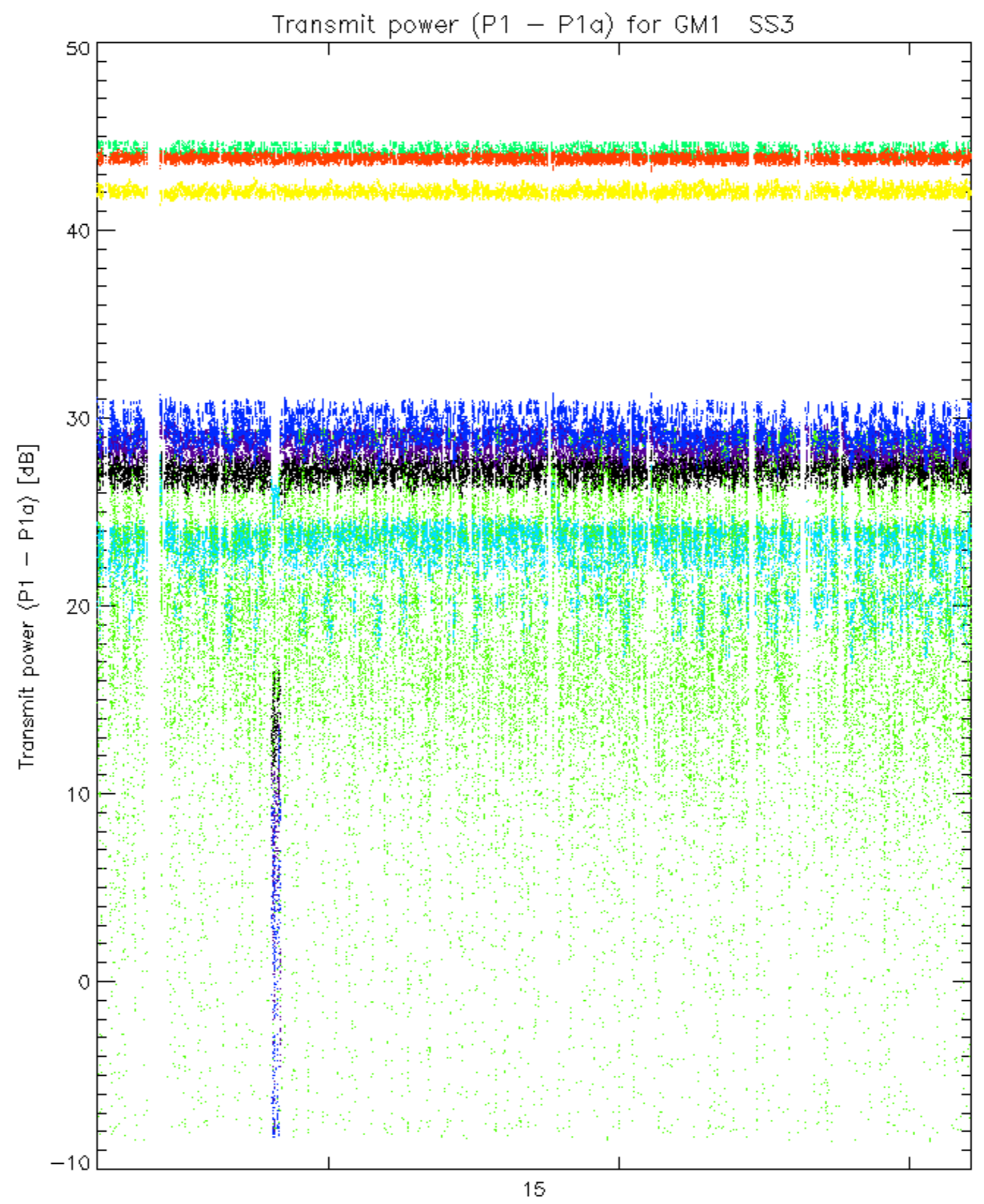
Summary of analysis for the last 3 days 2005041[789]

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

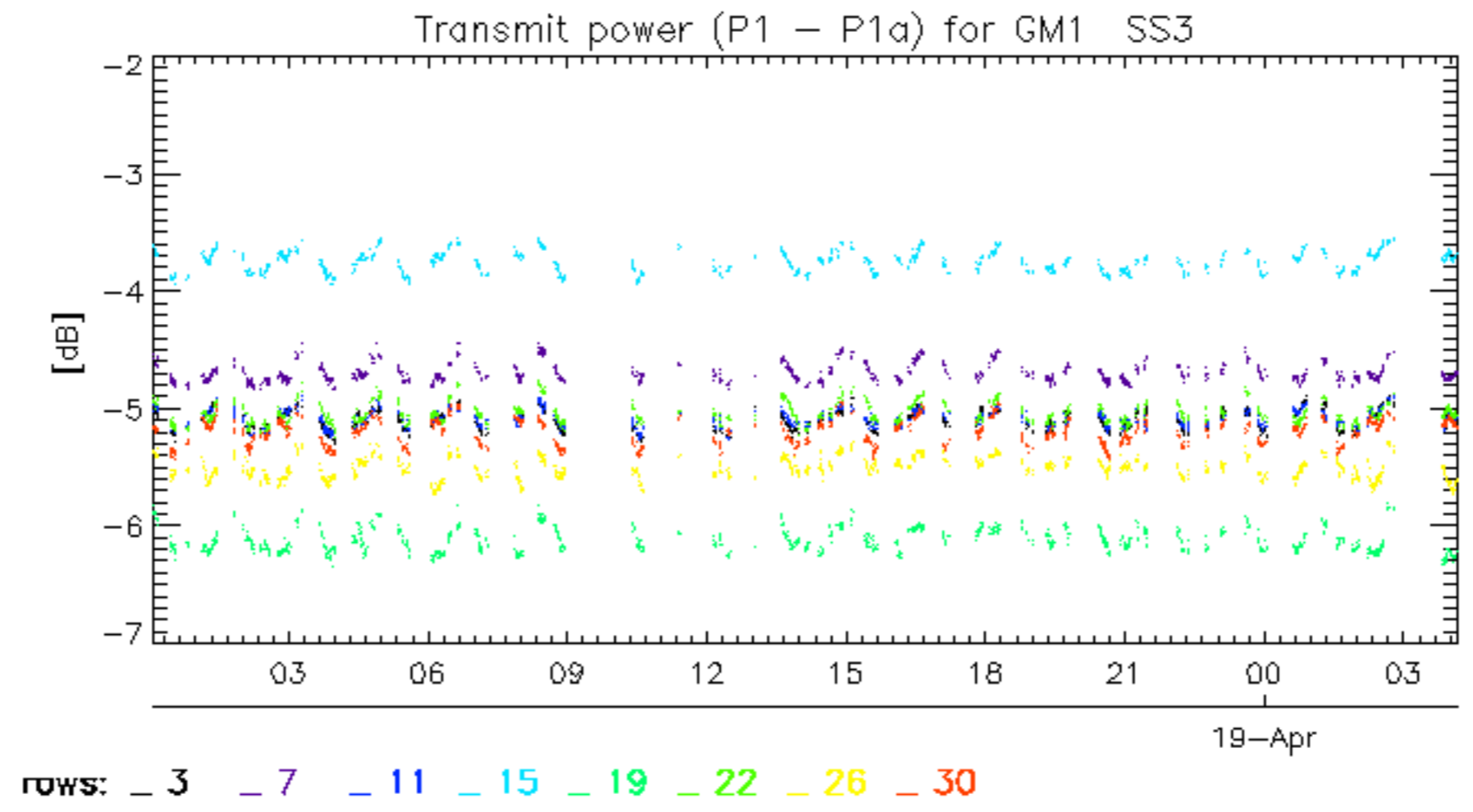
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050418_124849_00000872036_00296_16382_2654.N1	1	0
ASA_WSM_1PNPDE20050417_181434_00000912036_00285_16371_7319.N1	0	62

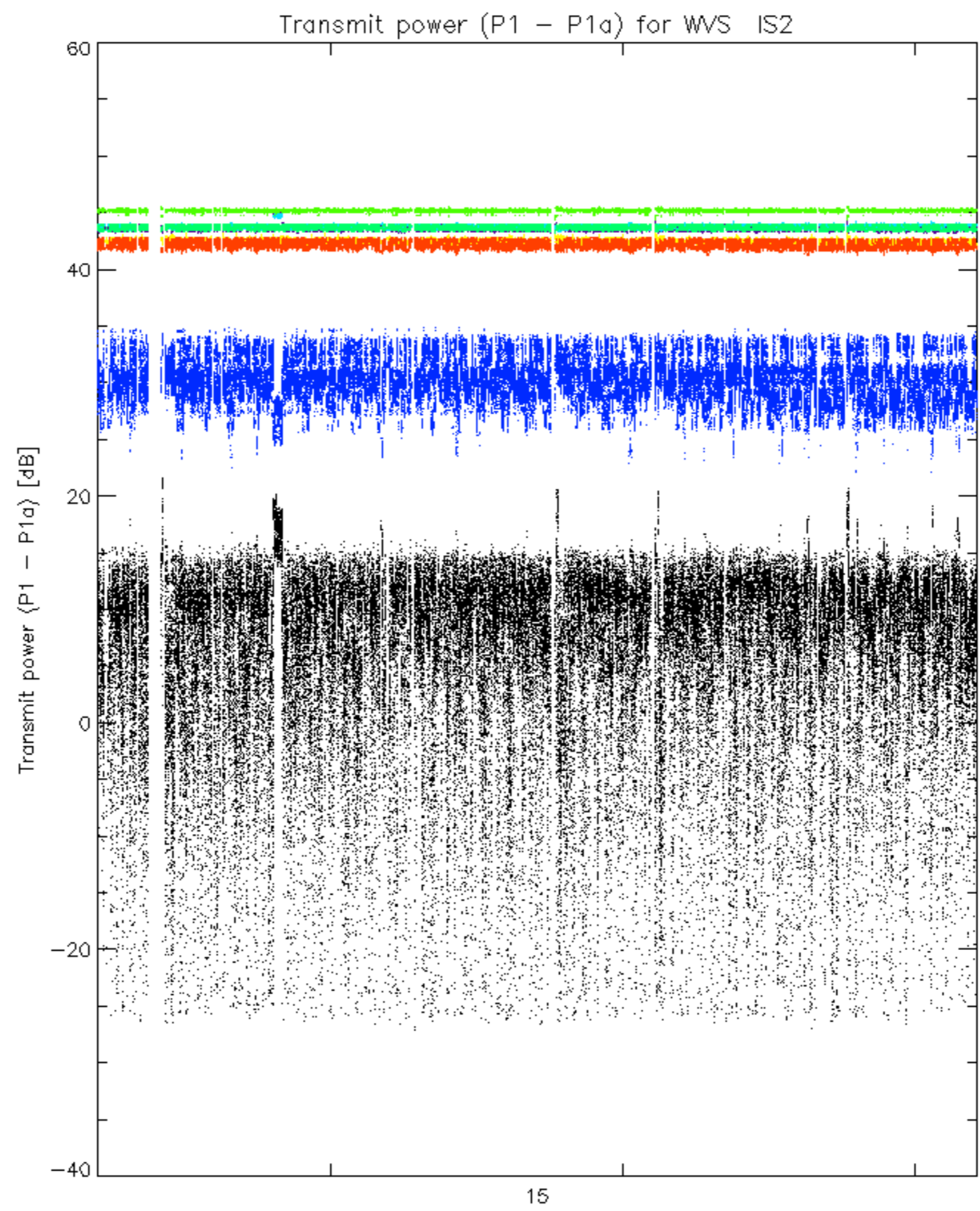




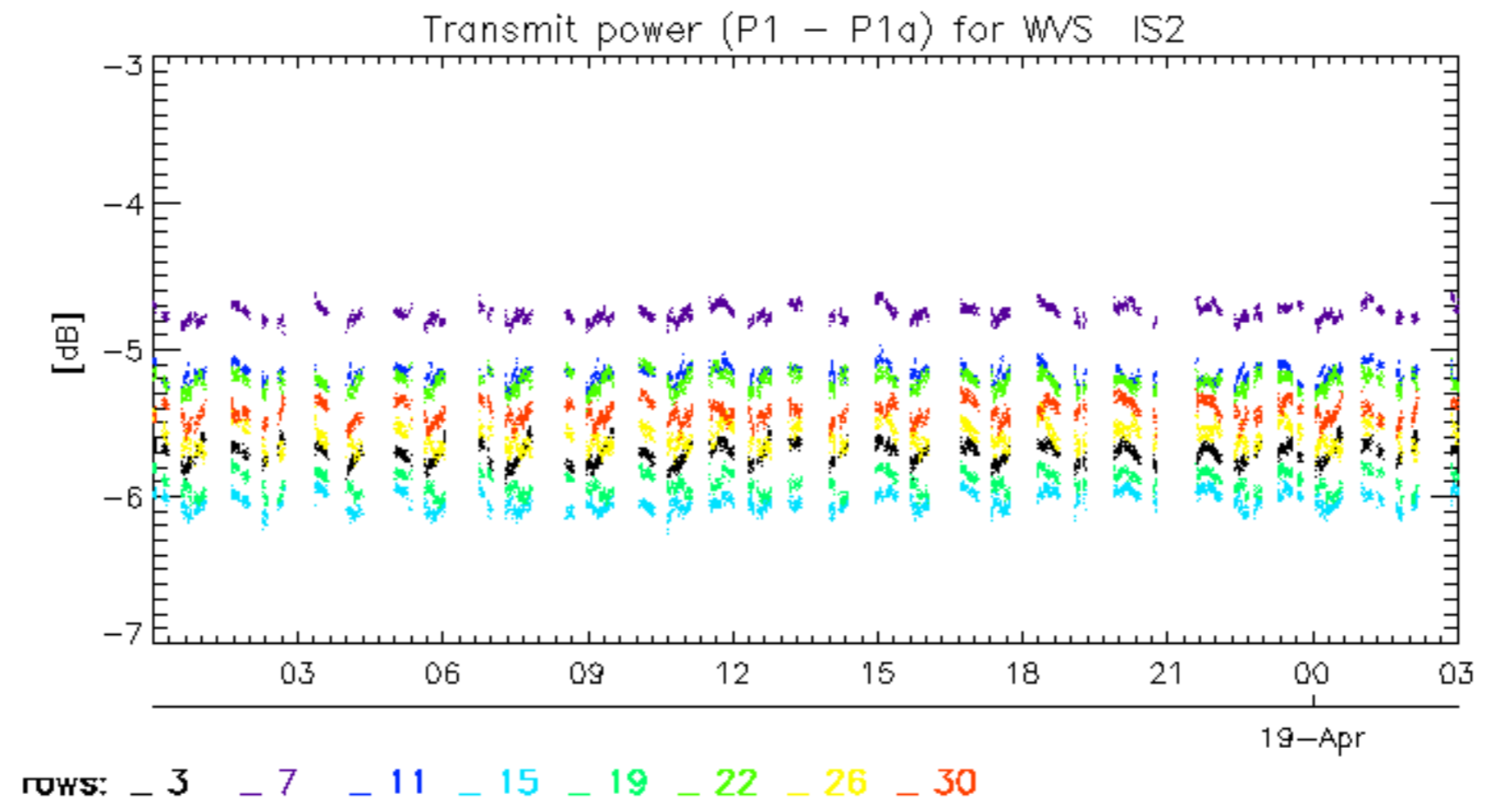


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.