

REPORT OF 040512

last update on Wed May 12 13:27:48 GMT 2004

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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 - Browse Visual Inspection

No anomalies observed on available browse products

2.3 - Data Analysis

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

3 - Module Stepping Mode

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

- ASA_MS__0PNPDK20040511_195257_000000152026_00414_11490_0119.N1

Polarisation	Start Time
V	20040511 195257
H	20040510 202334

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

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

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.597015	0.084329	-0.020800
7	P1	-3.325486	0.062175	-0.048170
11	P1	-4.597686	0.031414	0.098021
15	P1	-4.933390	0.043682	0.123517
19	P1	-3.370873	0.005485	-0.036777
22	P1	-4.520458	0.013594	-0.028807
24	P1	-4.982409	0.014547	0.107274
28	P1	-4.591624	0.013743	0.005557

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.412165	0.082228	-0.056794

7	P2	-22.883514	0.113105	-0.041017
11	P2	-15.814297	0.121491	0.156461
15	P2	-7.171104	0.092357	-0.050819
19	P2	-9.526294	0.122968	-0.029395
22	P2	-17.635706	0.093529	0.038795
24	P2	-20.951799	0.096246	0.063296
28	P2	-16.606829	0.084393	-0.006390

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.135488	0.003152	-0.008076
7	P3	-8.135489	0.003153	-0.008082
11	P3	-8.135490	0.003153	-0.008083
15	P3	-8.135493	0.003153	-0.008082
19	P3	-8.135494	0.003153	-0.008080
22	P3	-8.135492	0.003153	-0.008079
24	P3	-8.135500	0.003152	-0.008053
28	P3	-8.135549	0.003147	-0.007569

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.244279	0.313801	0.067736
7	P1	-2.876365	0.266849	-0.086840
11	P1	-3.808668	0.021862	0.062694
15	P1	-4.004764	0.357584	0.266024
19	P1	-3.270270	0.059289	-0.141693
22	P1	-5.783838	0.044443	0.156507
24	P1	-4.054595	0.084492	0.078932
28	P1	-2.896746	0.066632	-0.108522

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.128546	0.040650	-0.077443
7	P2	-22.987391	0.027550	-0.006585
11	P2	-11.071518	0.197338	-0.179300
15	P2	-4.945250	0.032700	-0.126582
19	P2	-6.853223	0.033308	-0.098746
22	P2	-7.708535	0.028080	-0.038535
24	P2	-11.032769	0.060589	-0.128145
28	P2	-19.032818	0.025971	-0.061698

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.971631	0.003724	-0.019273
7	P3	-7.971634	0.003728	-0.019064
11	P3	-7.971548	0.003720	-0.018940
15	P3	-7.971553	0.003733	-0.019203
19	P3	-7.971605	0.003721	-0.019258
22	P3	-7.971792	0.003706	-0.018953
24	P3	-7.971462	0.003738	-0.018918
28	P3	-7.971545	0.003738	-0.019526

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	0.000493337
	stdev	2.21840e-07
MEAN Q	mean	0.000519021
	stdev	2.56574e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128596
	stdev	0.00107327
STDEV Q	mean	0.128836
	stdev	0.00108606





5.3 - Gain imbalance I/Q



6 - Doppler Analysis

No anomalies observed in Doppler evolution.
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)

Ascending

Descending

6.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

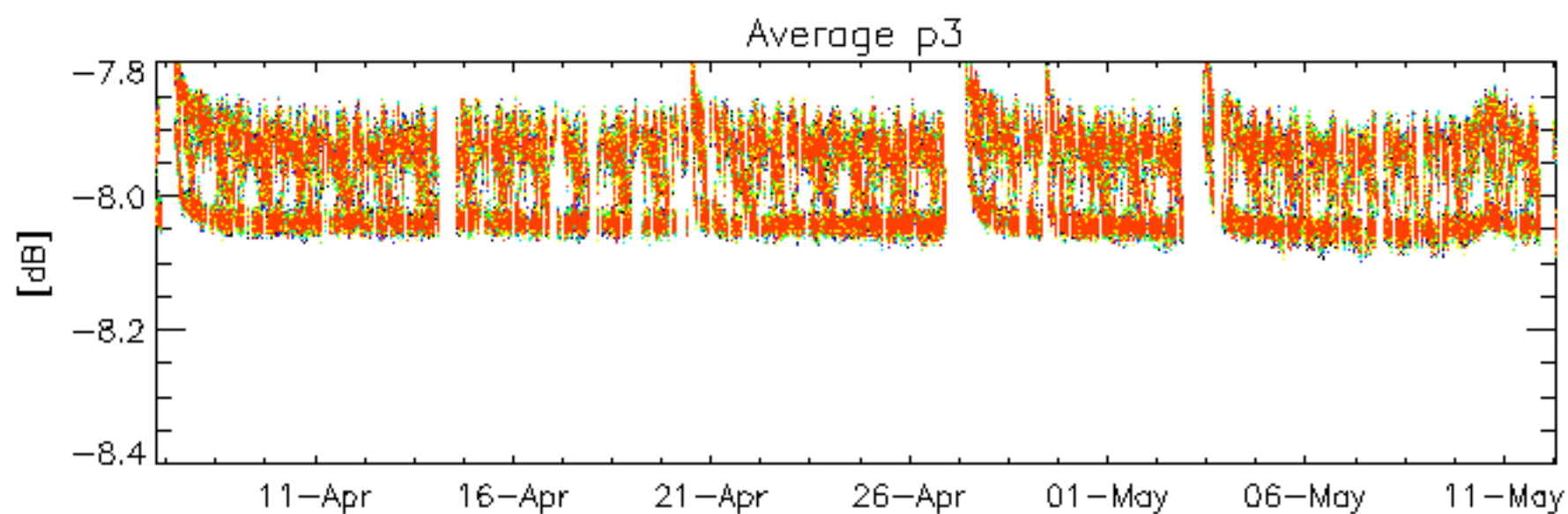
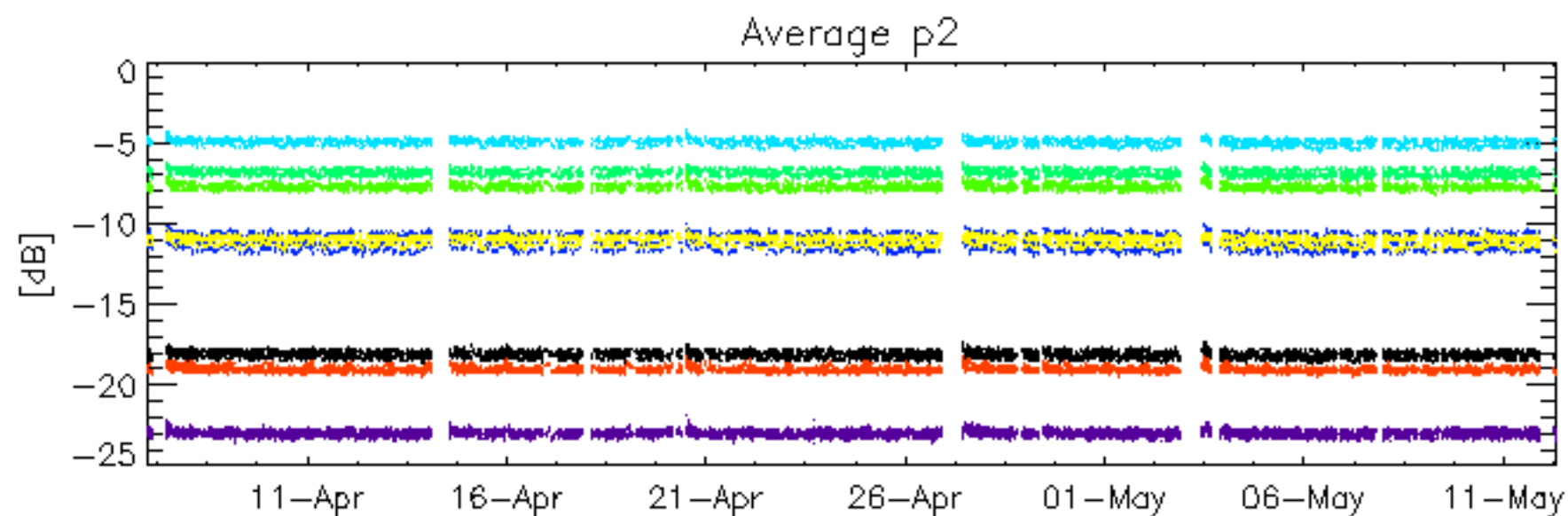
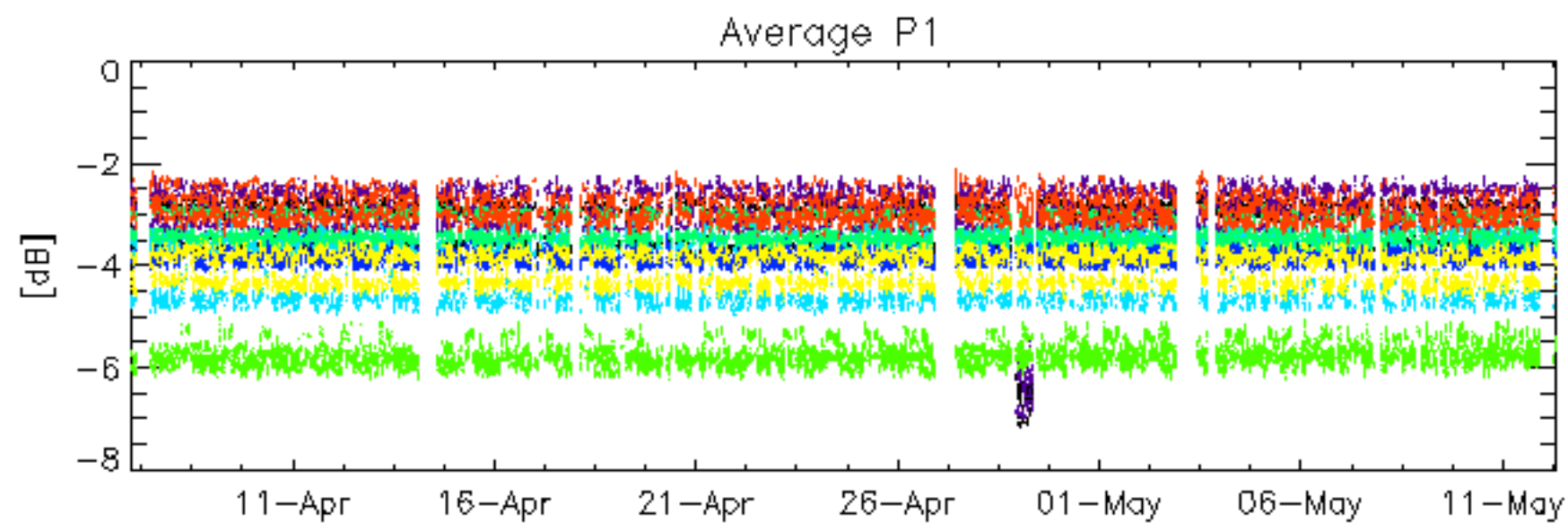
Ascending

Descending

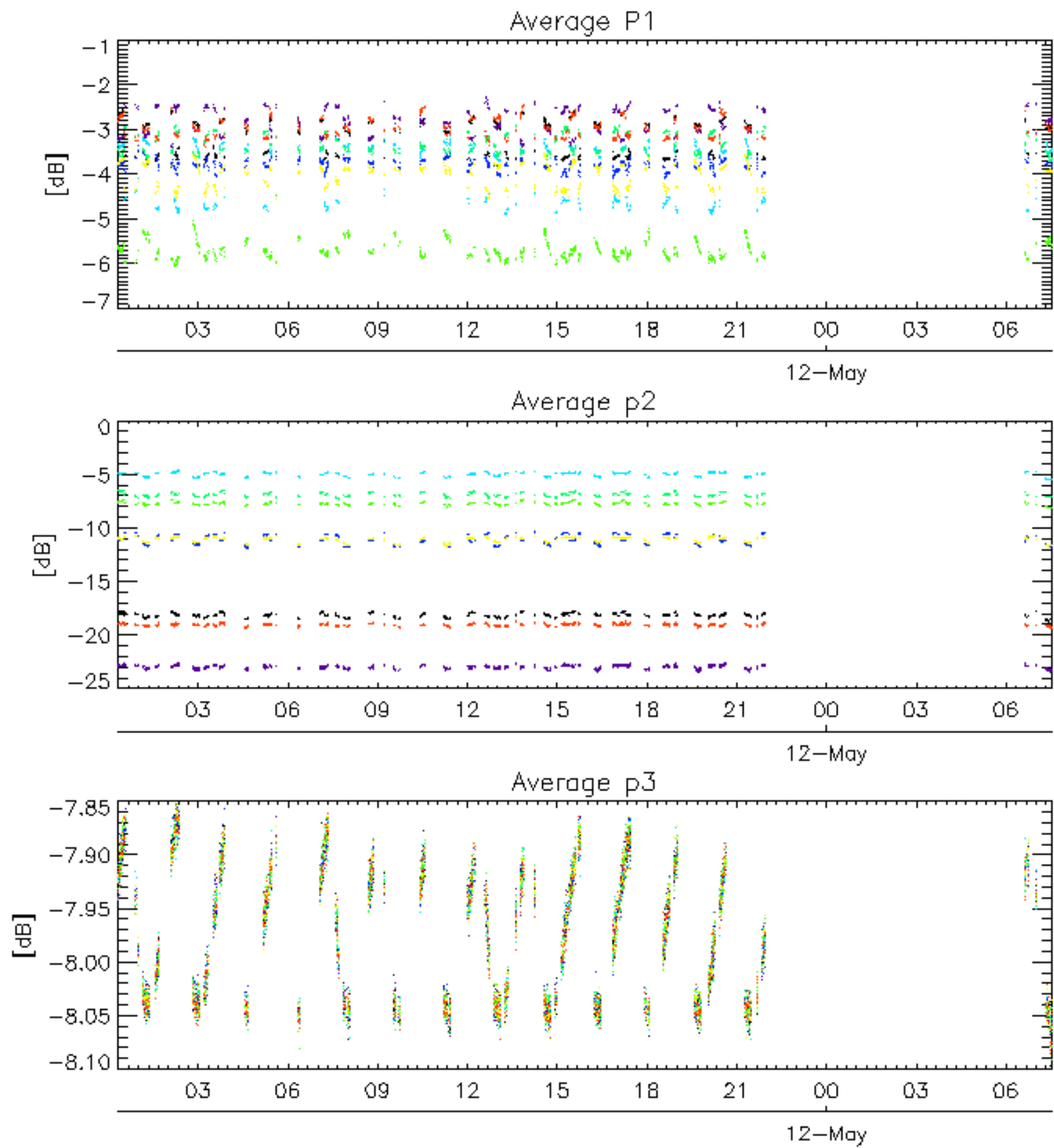
6.6 - Doppler evolution versus ANX for GM1

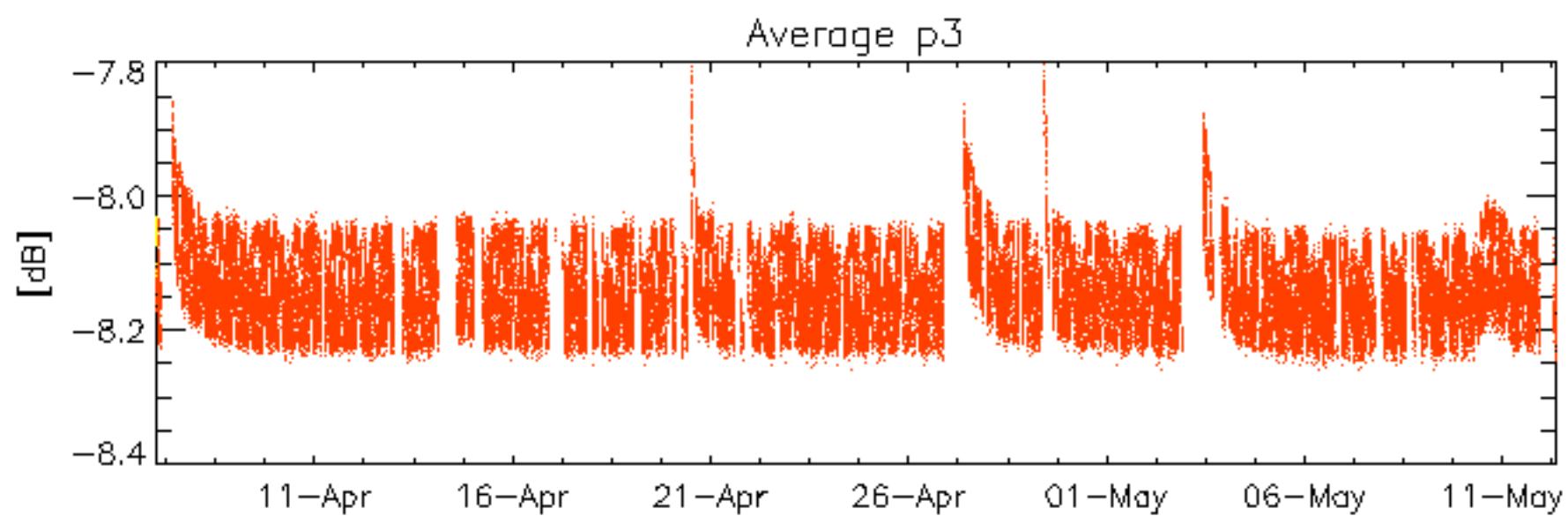
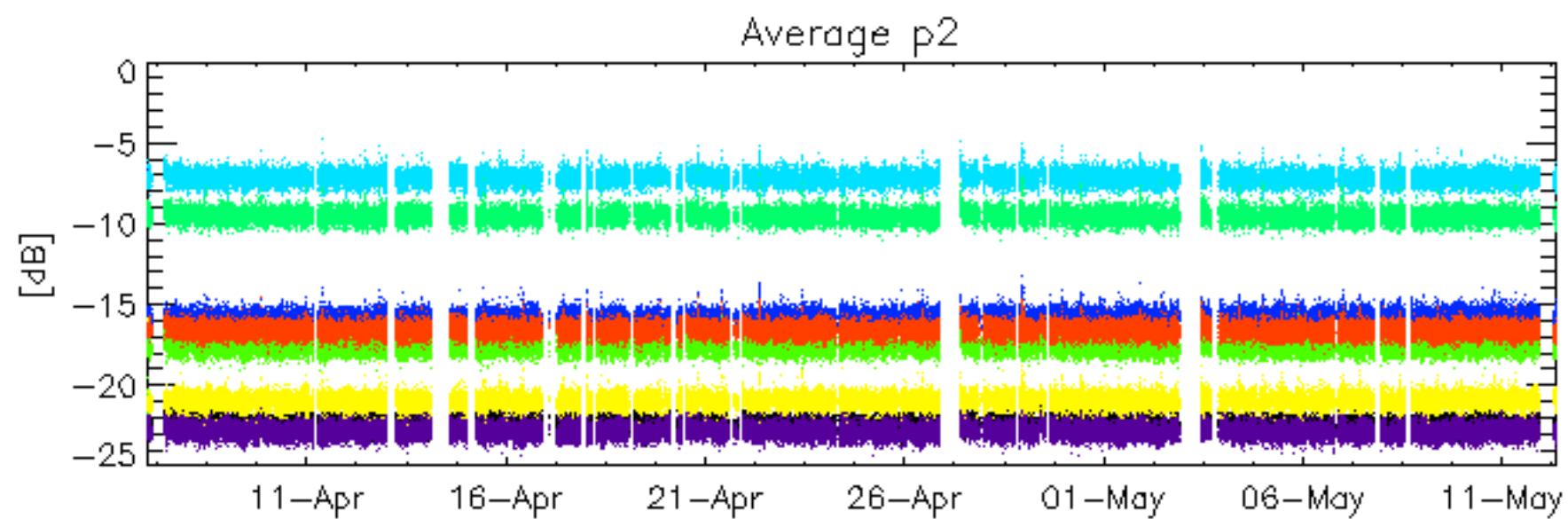
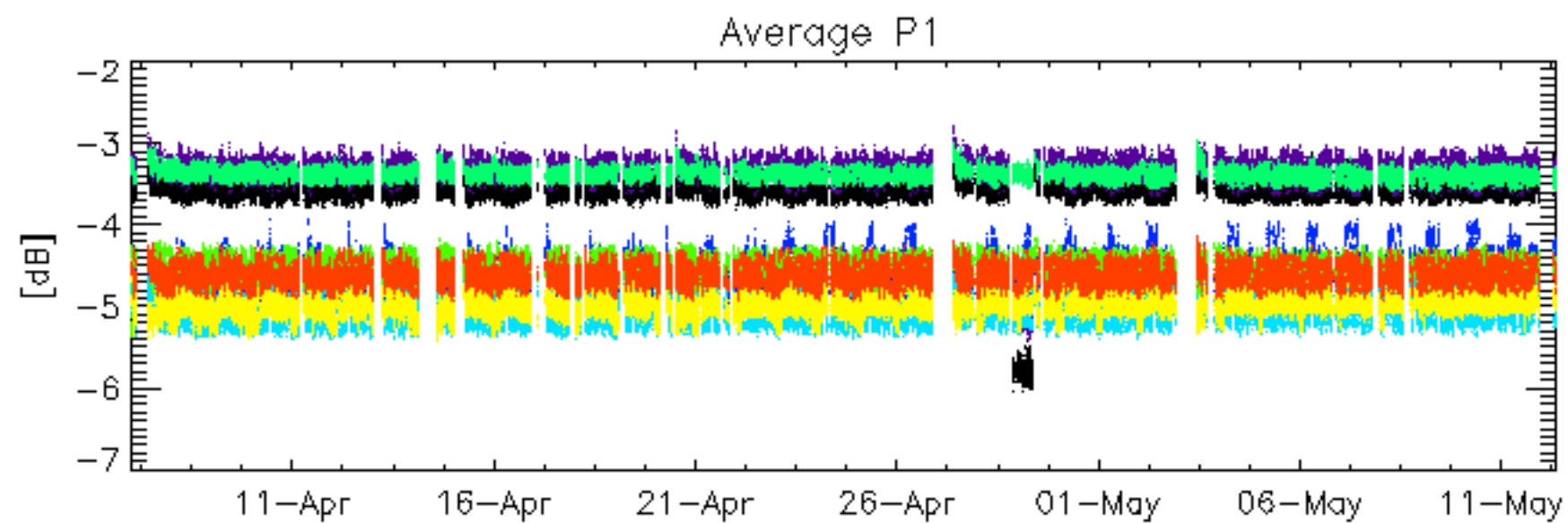
Evolution Doppler error versus ANX



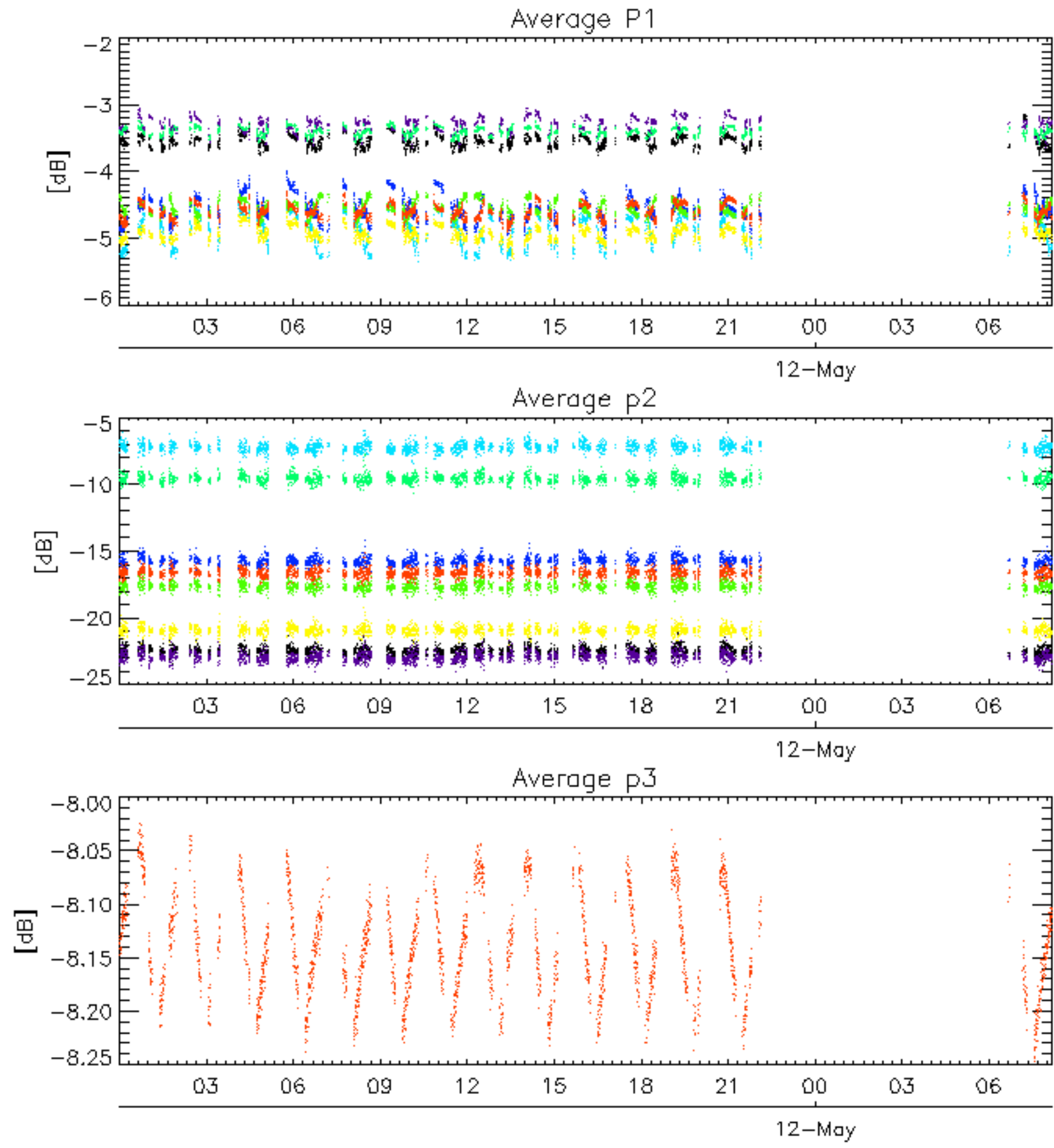


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28





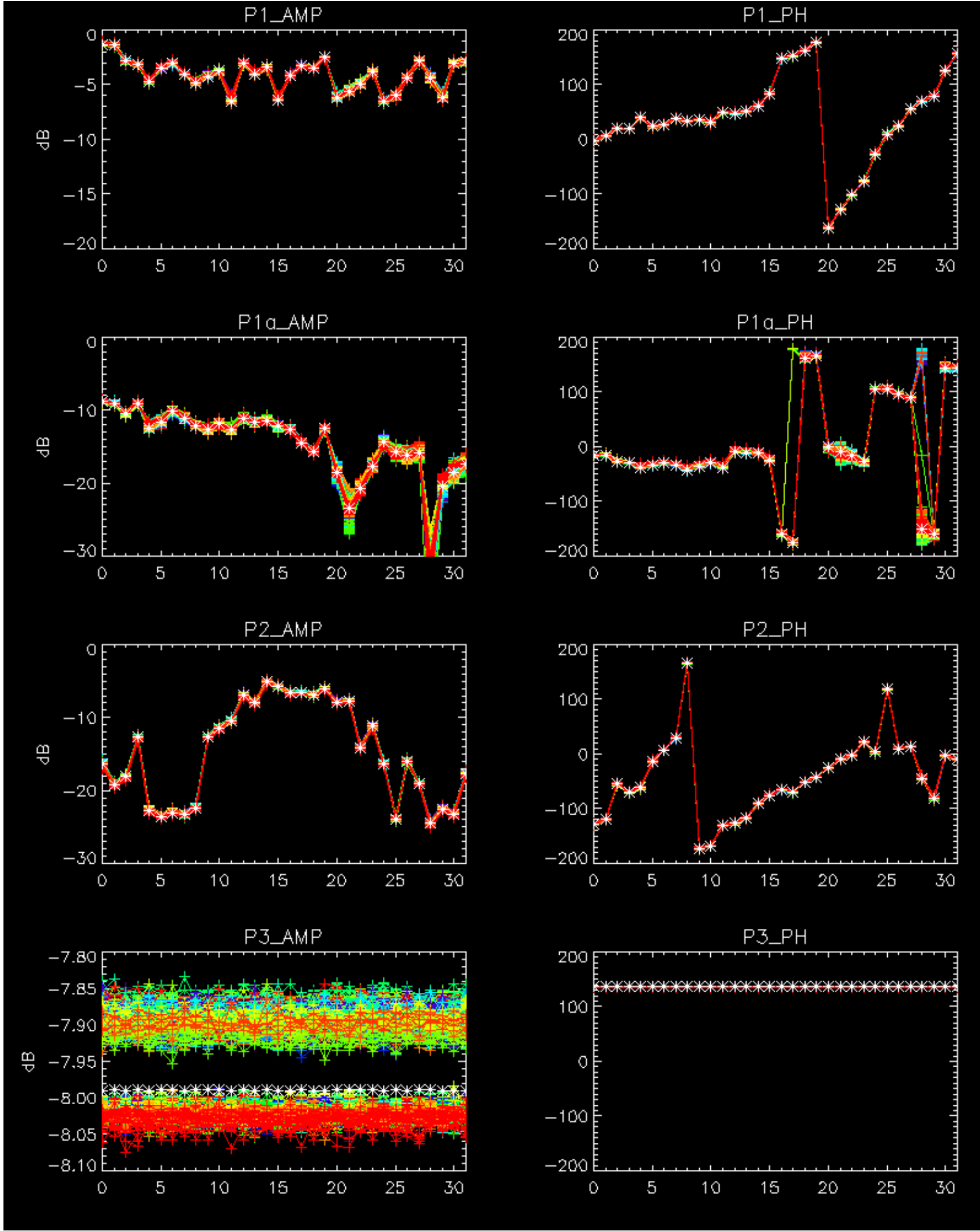
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

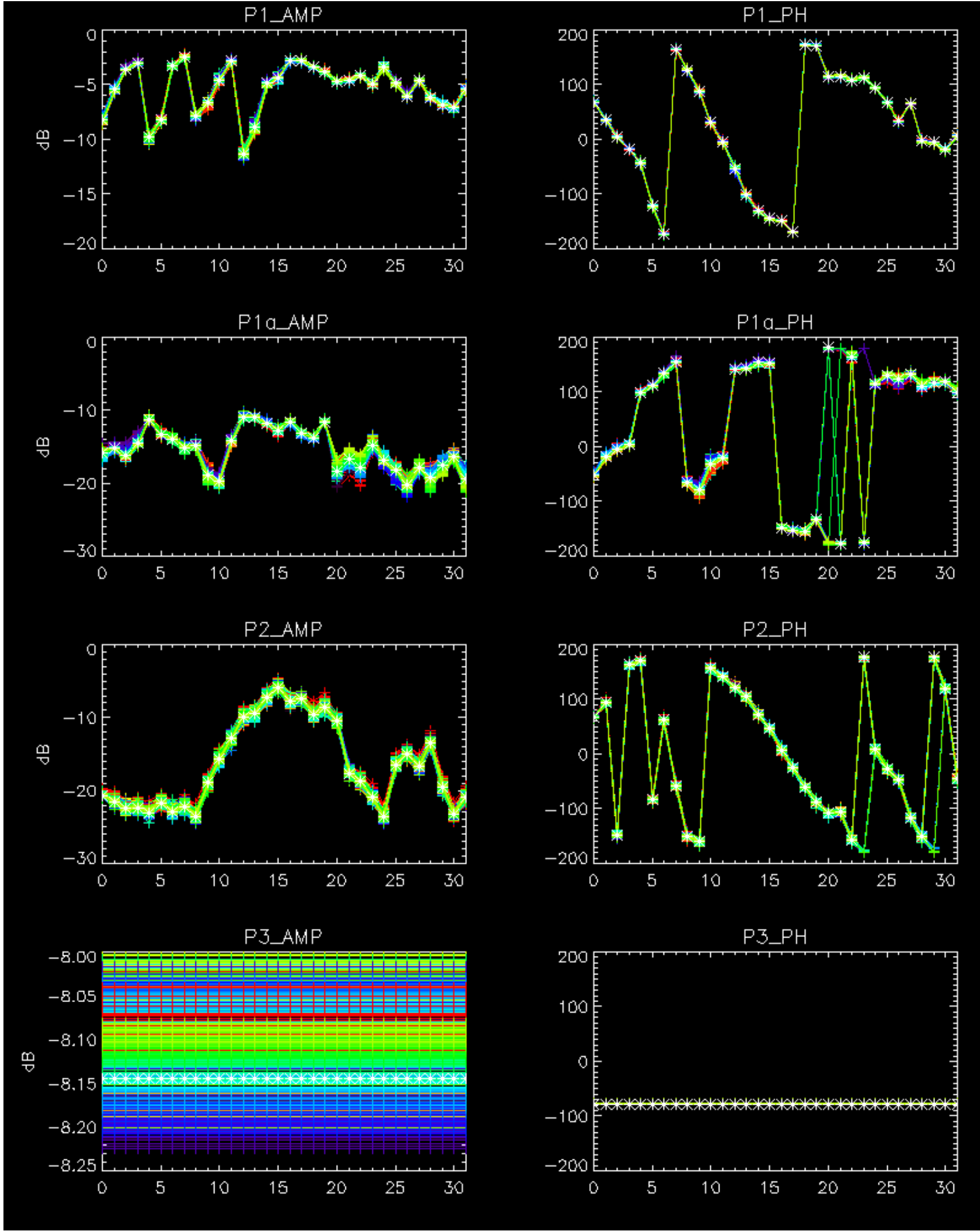


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

No anomalies observed on available browse products

No anomalies observed.

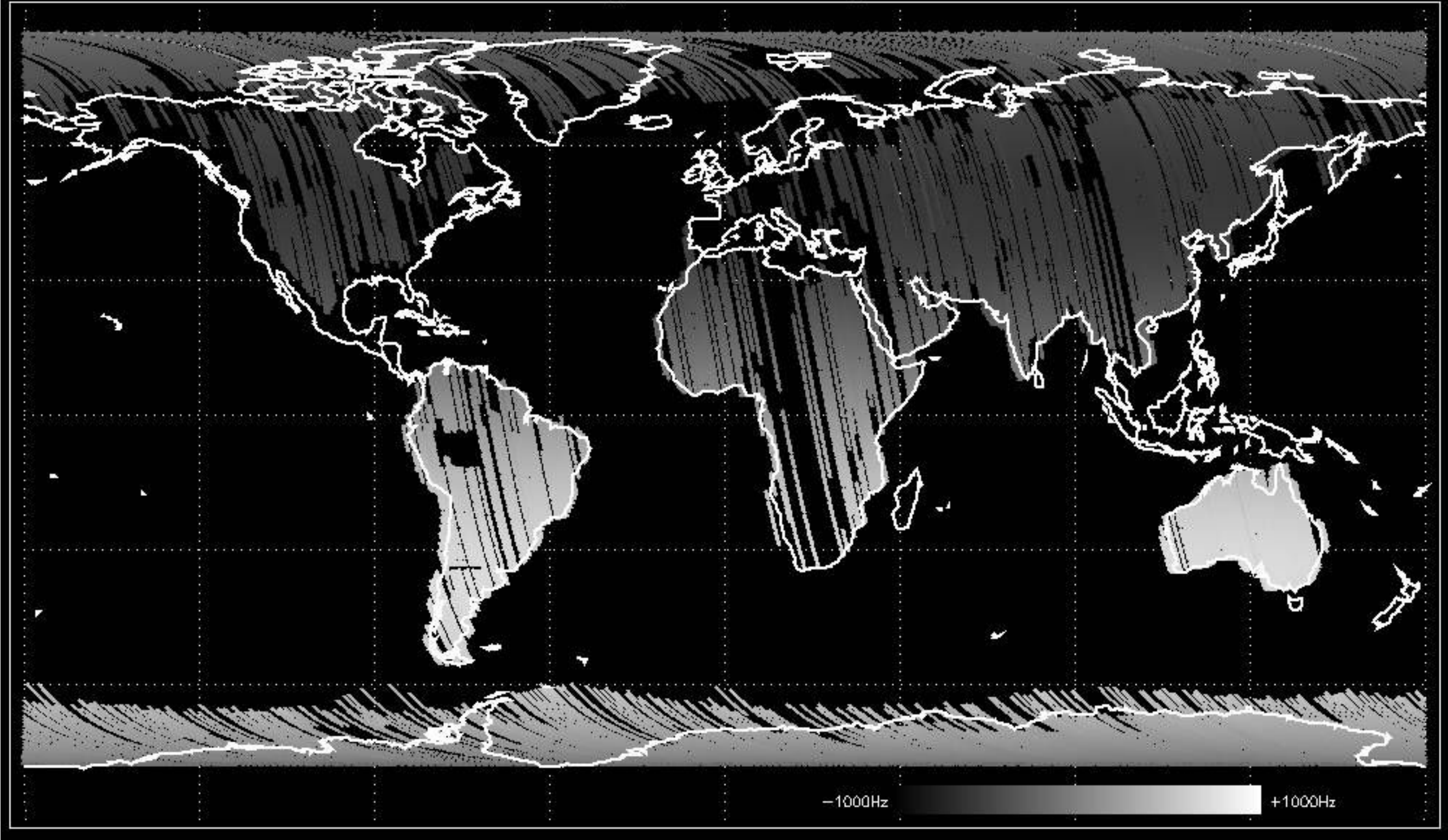




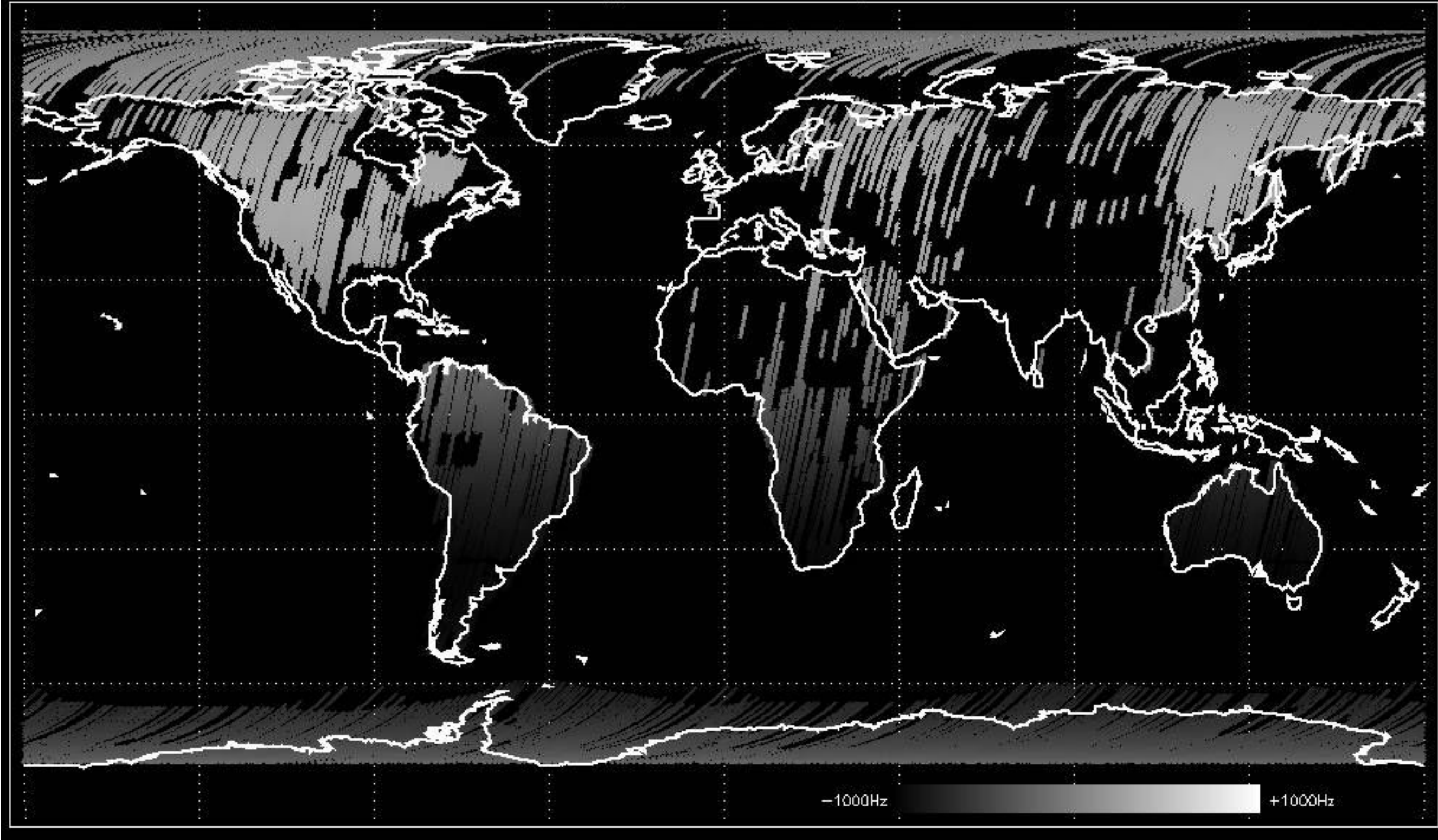
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

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

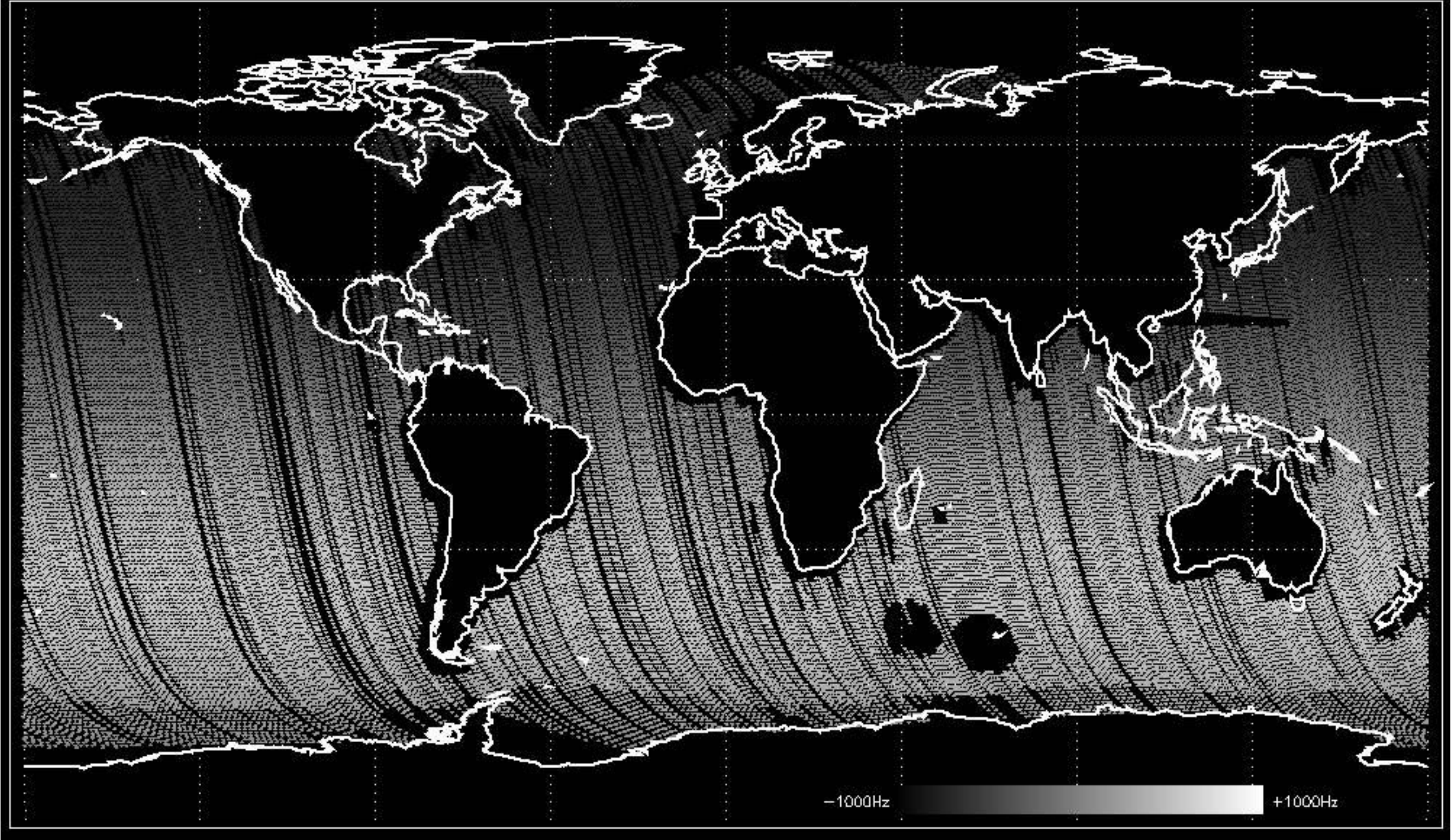
Doppler 'GM1' 'SS1' ascending

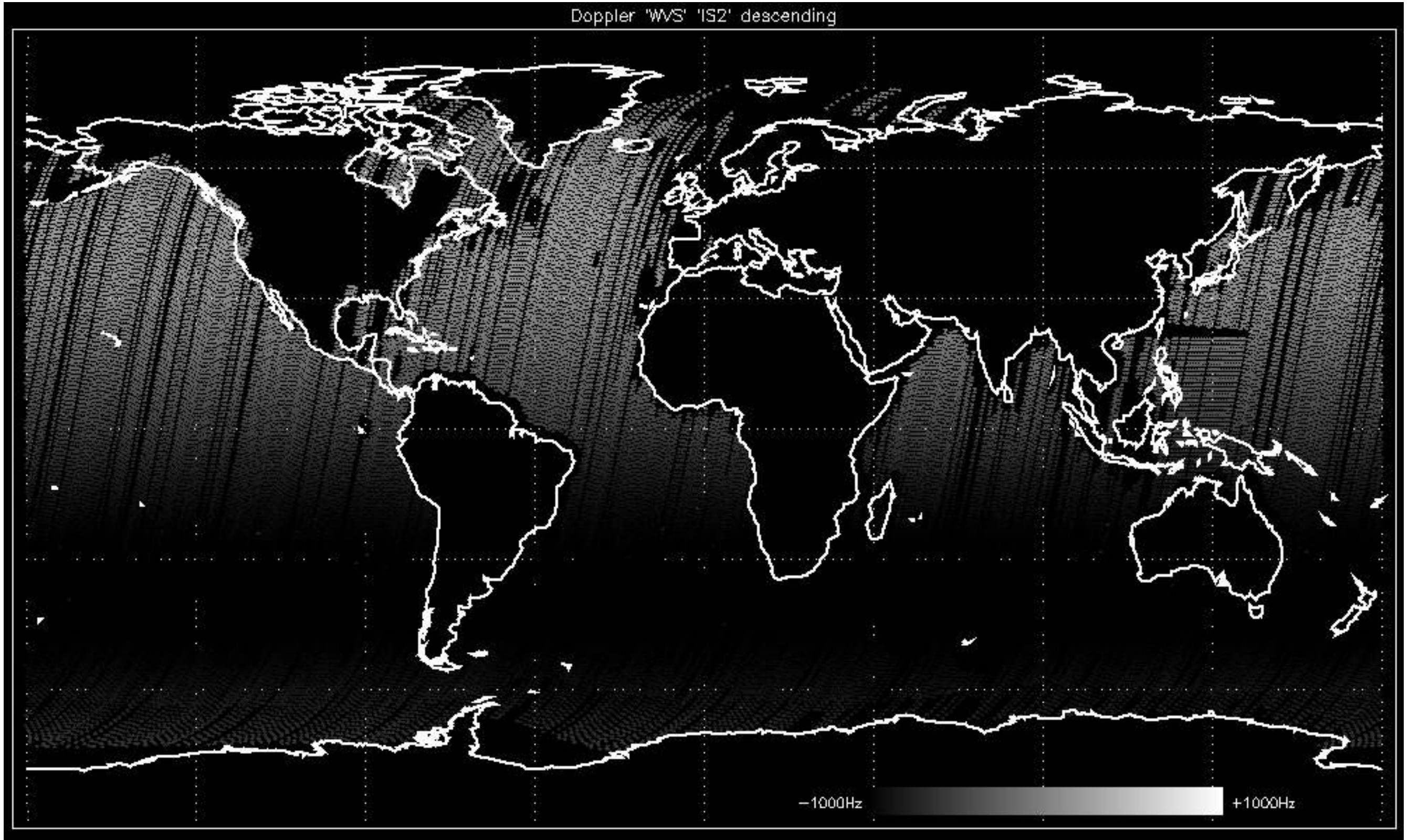


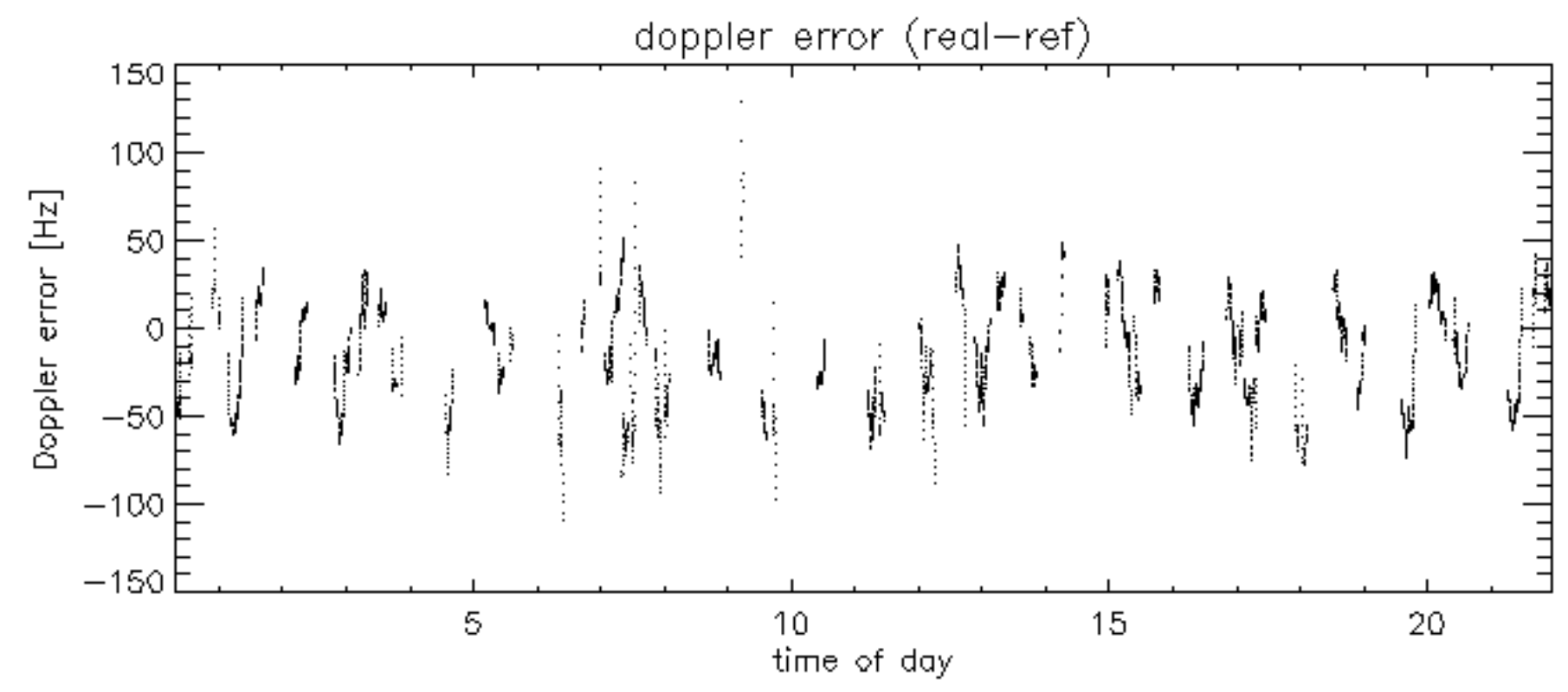
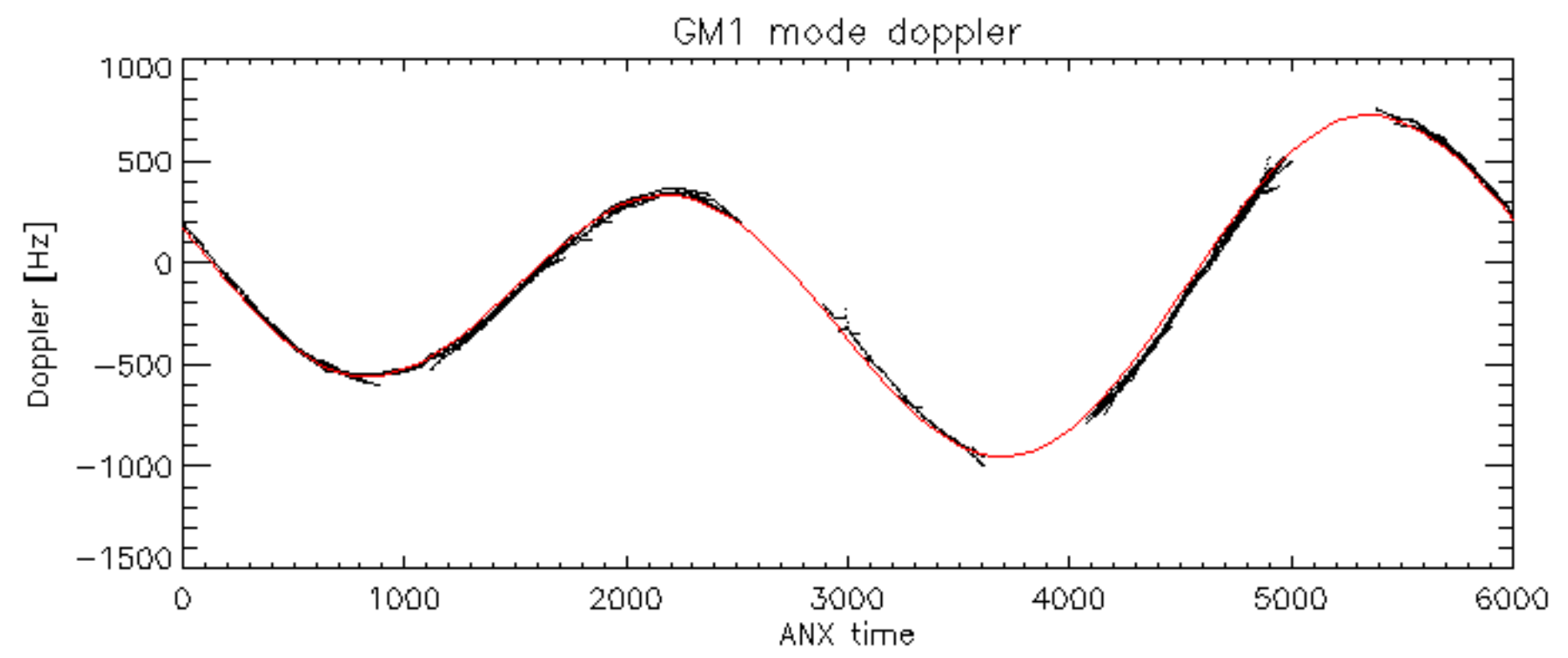
Doppler 'GM1' 'SS1' descending

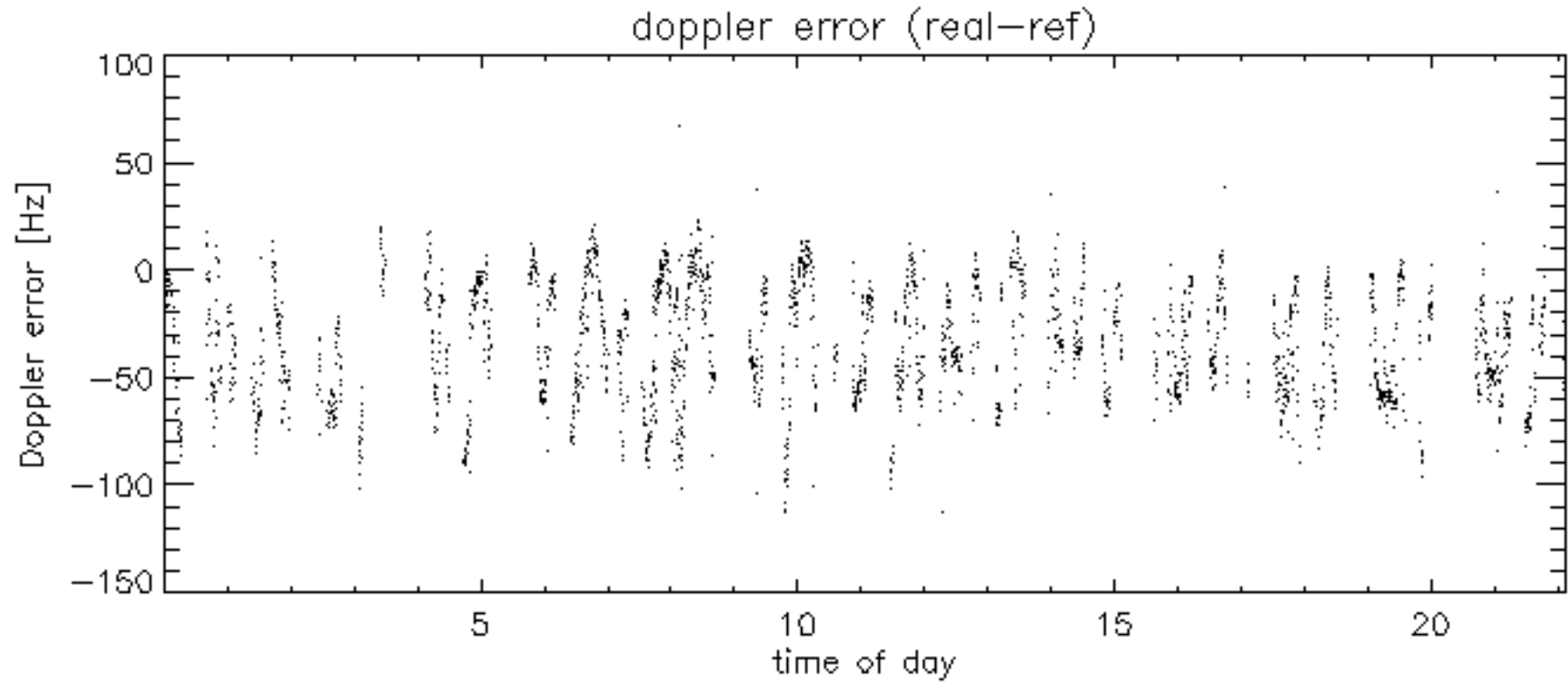
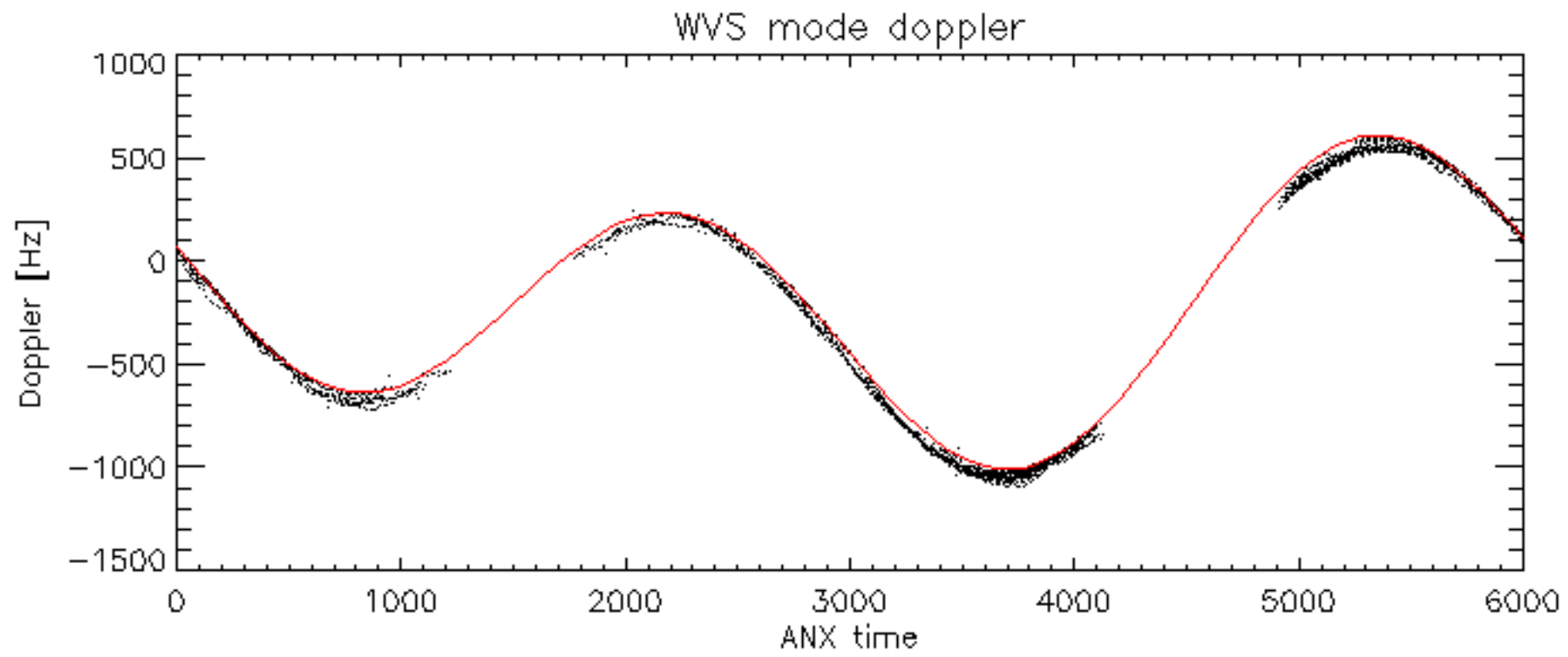


Doppler 'WVS' 'IS2' ascending

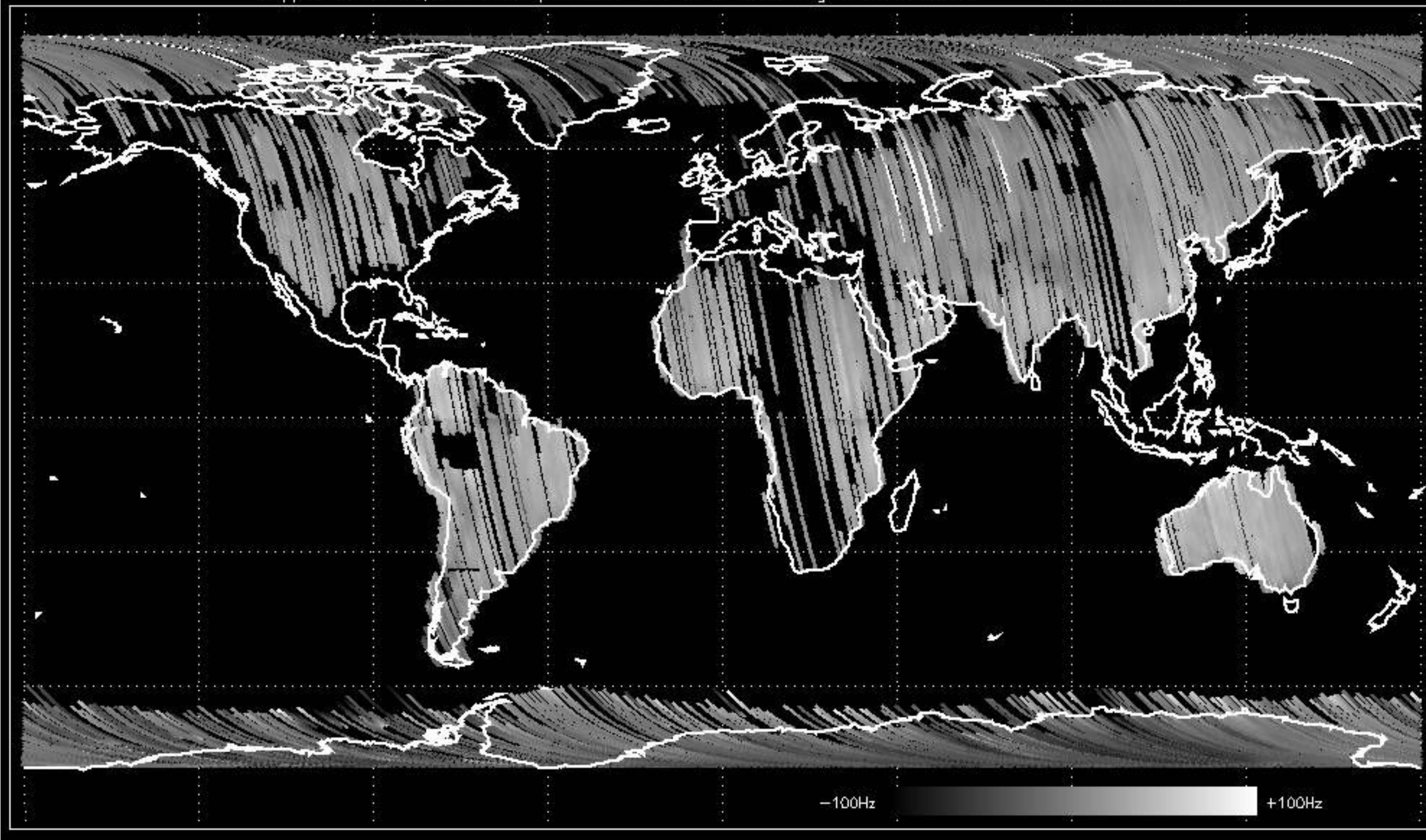




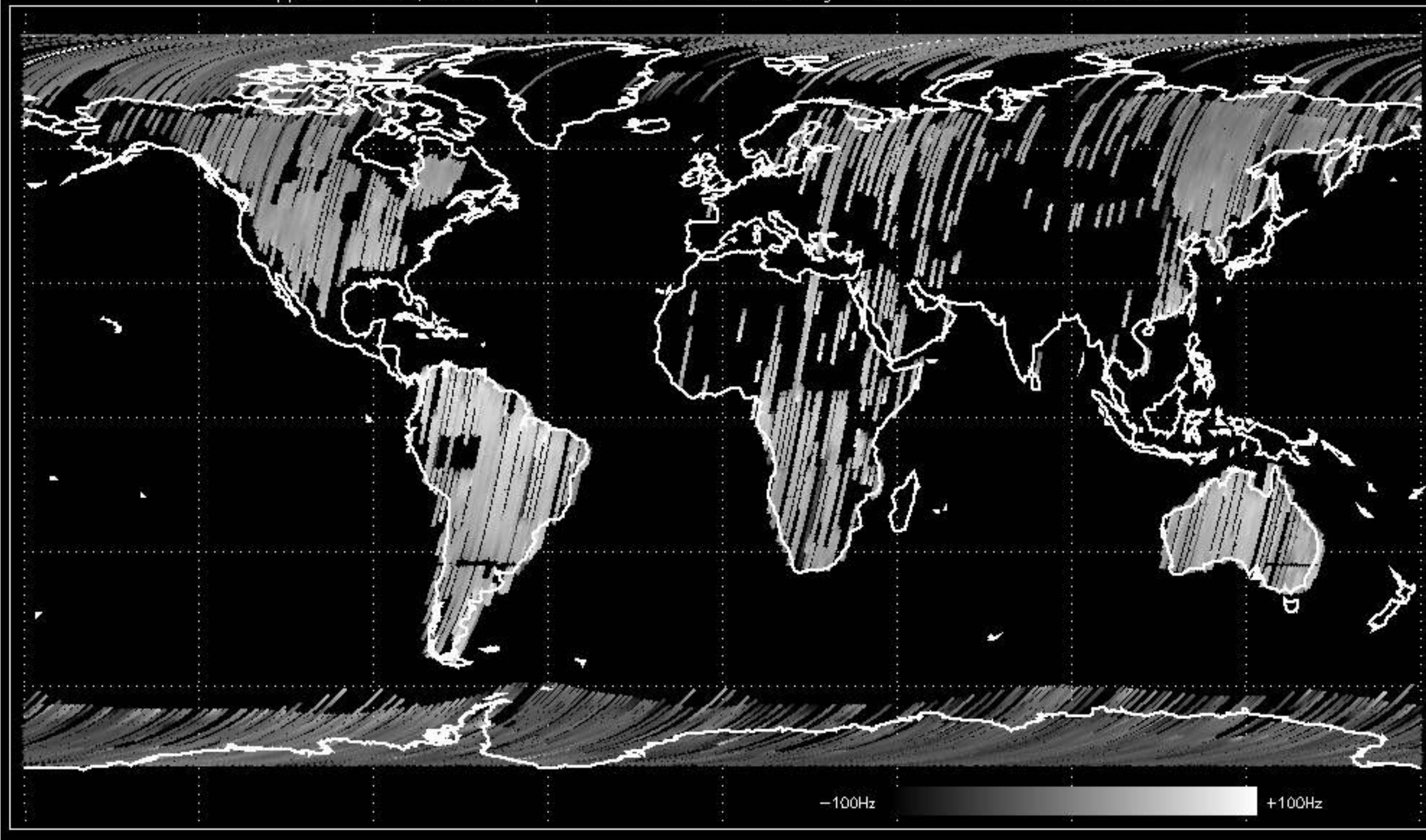




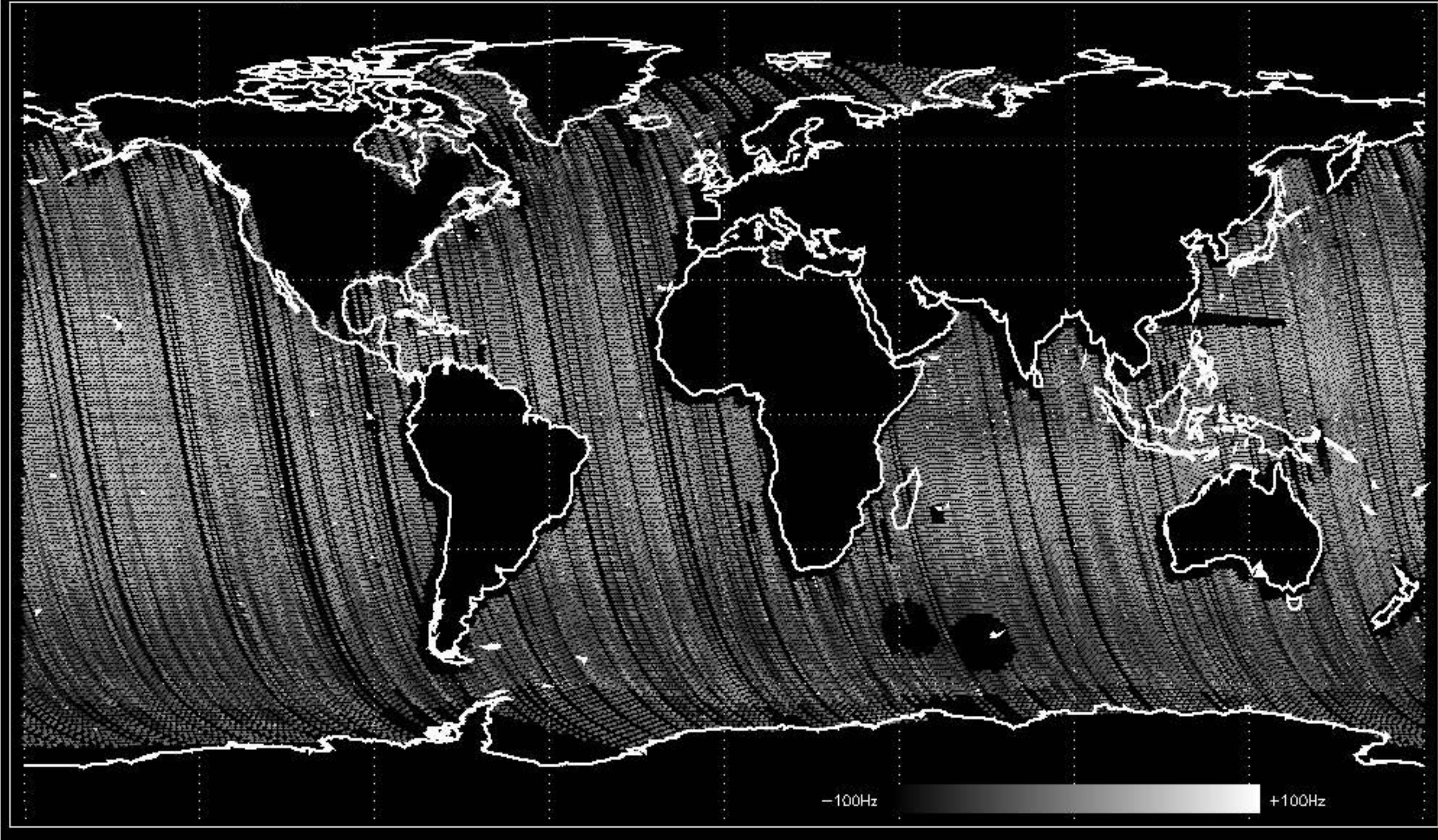
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.242894 Hz



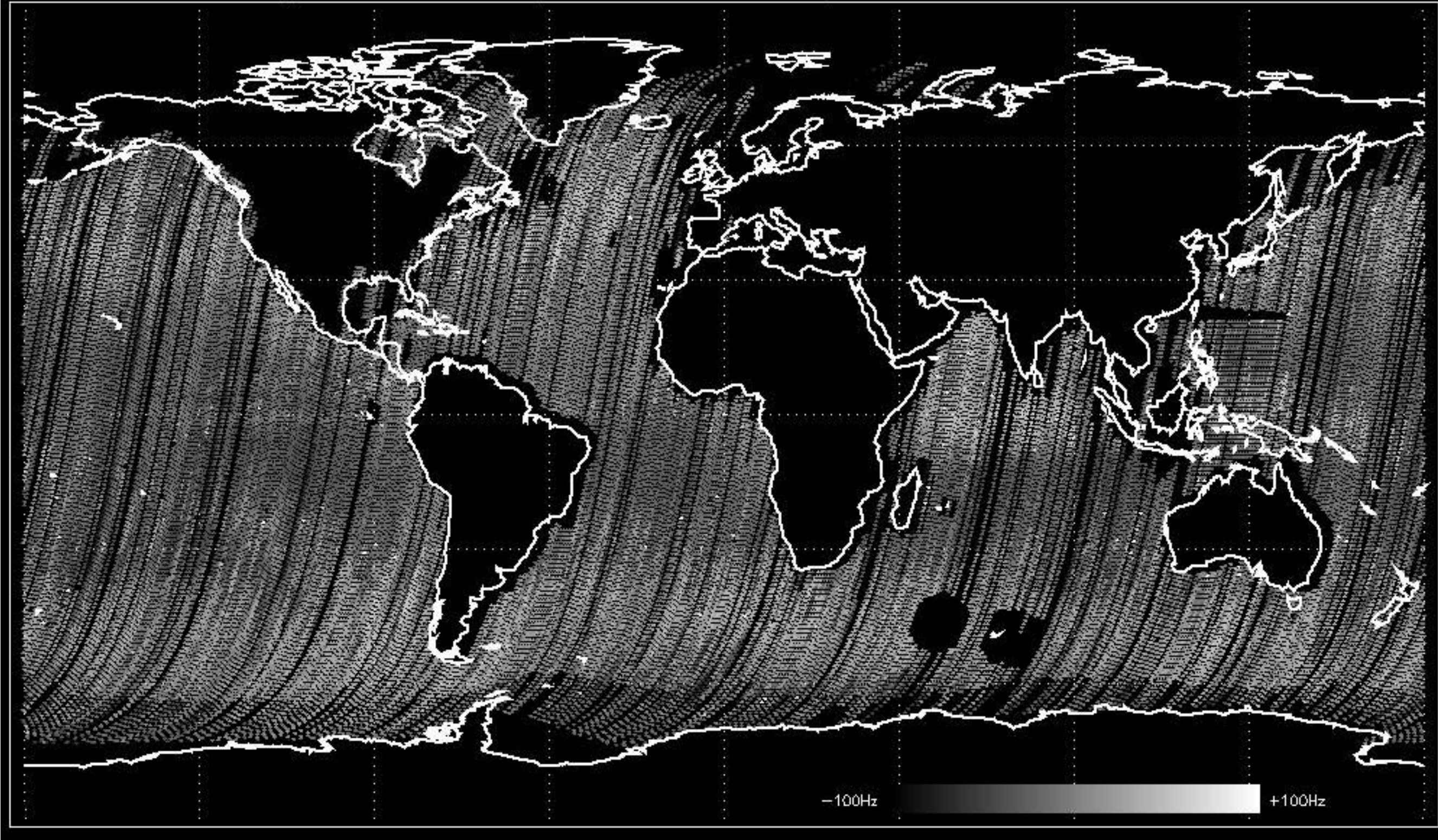
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.770578 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -37.092241 Hz



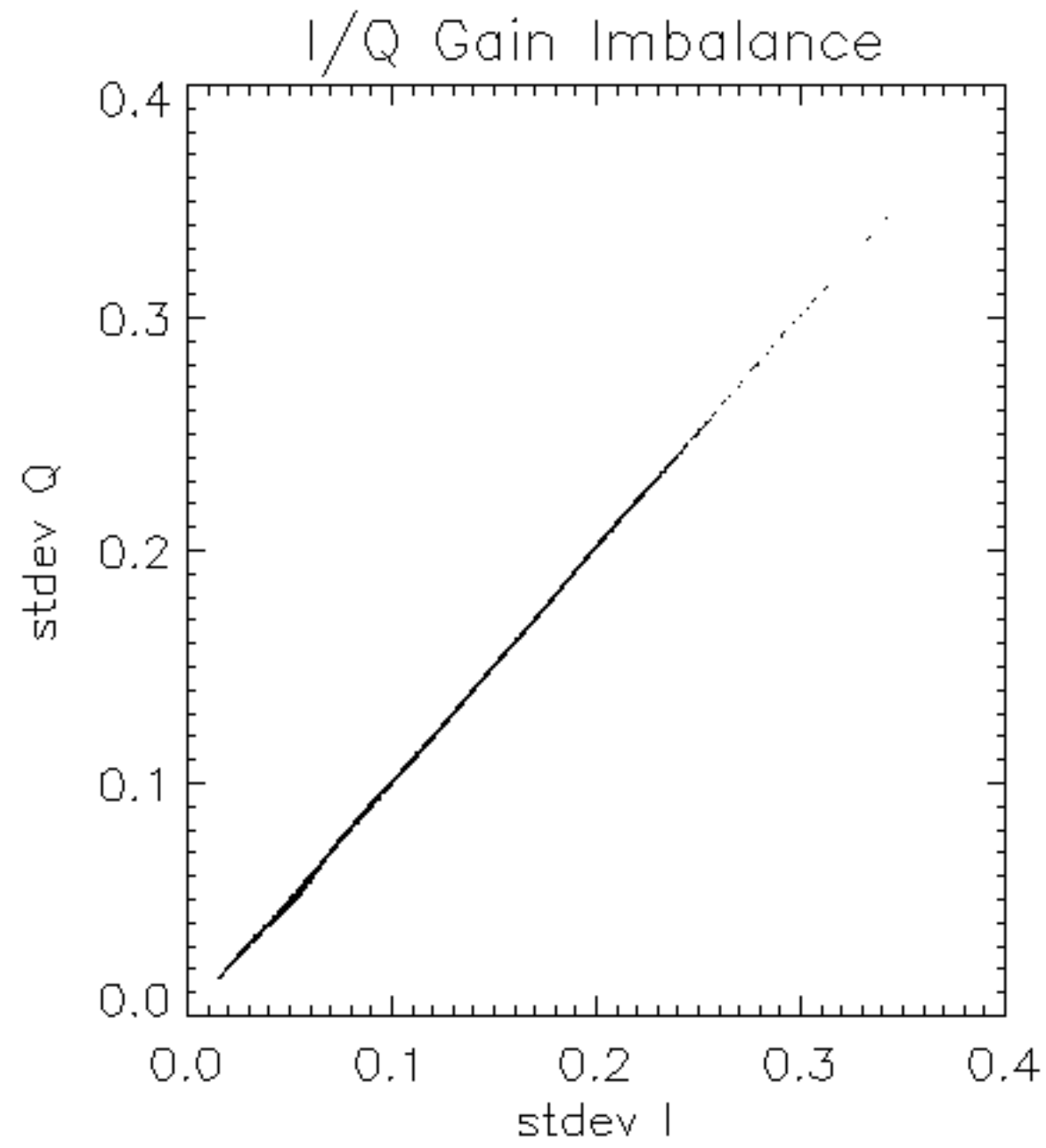
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.204719 Hz

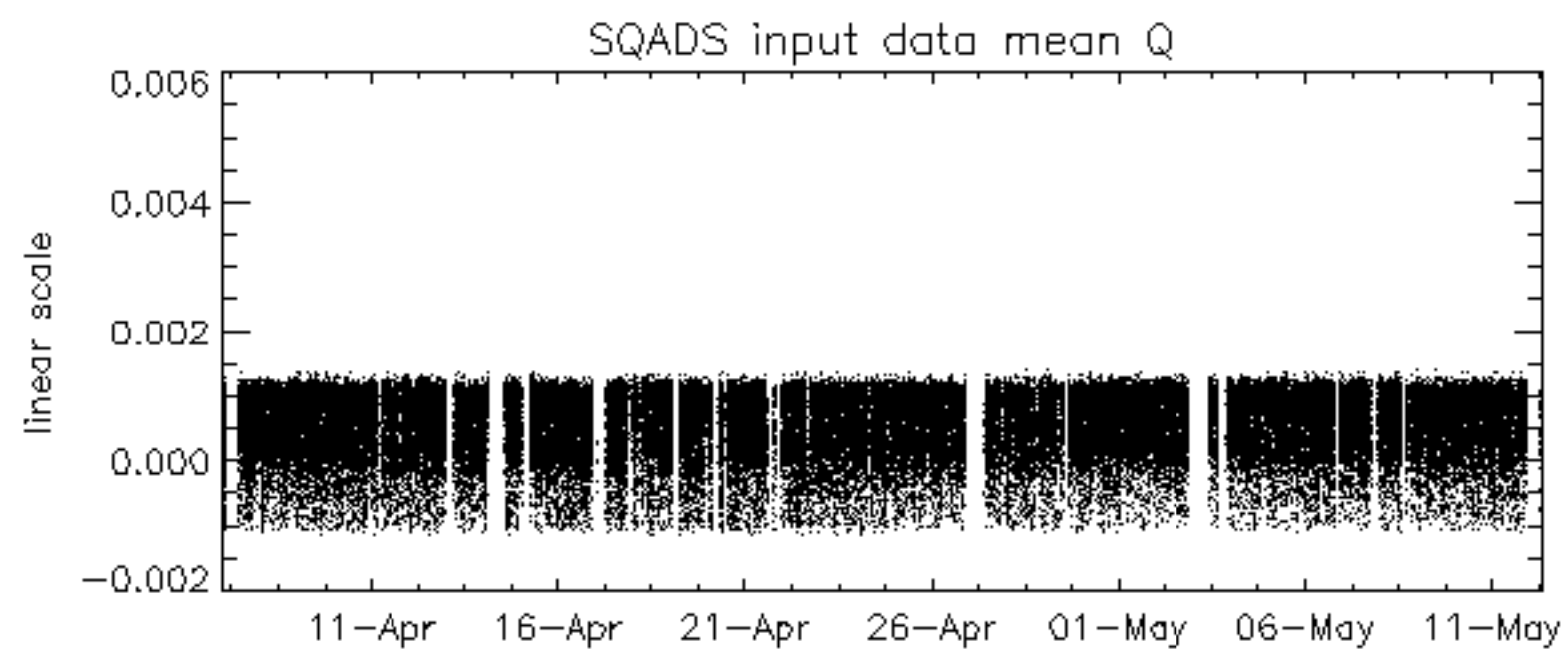
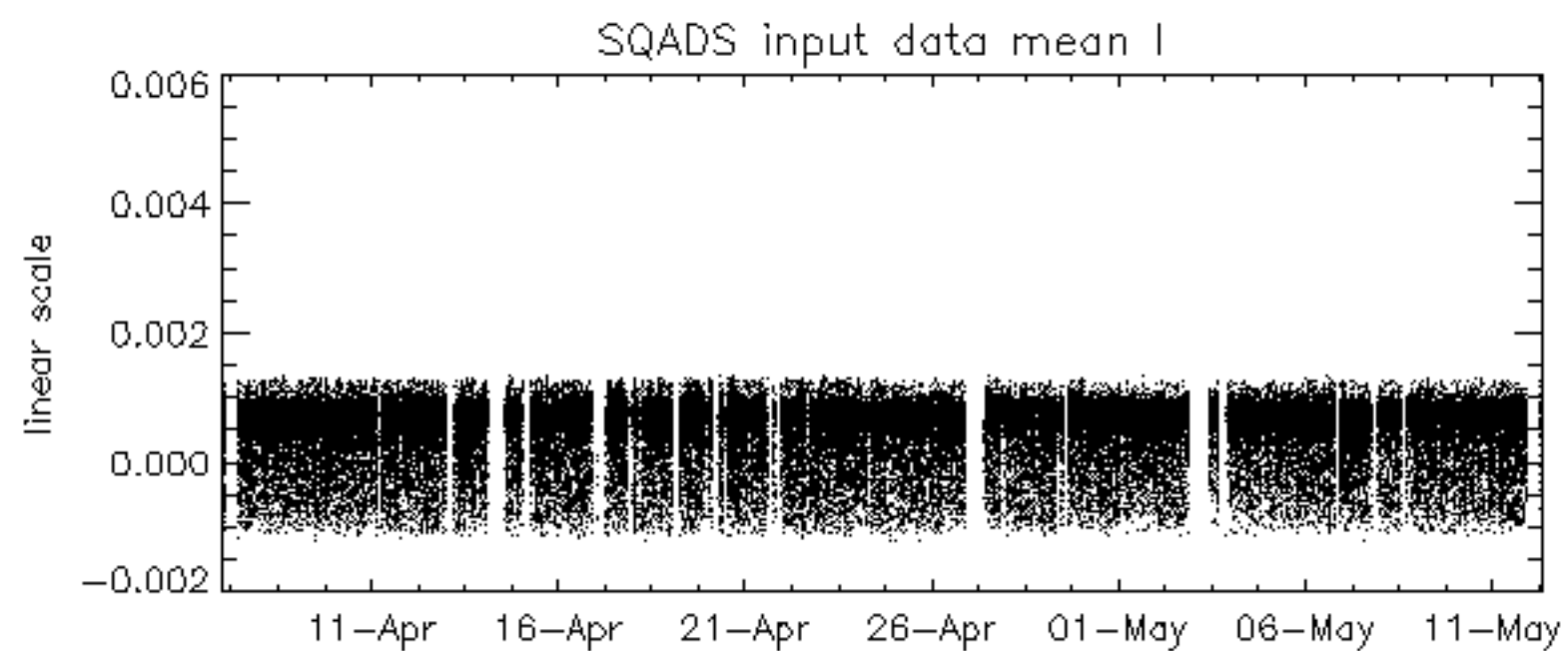
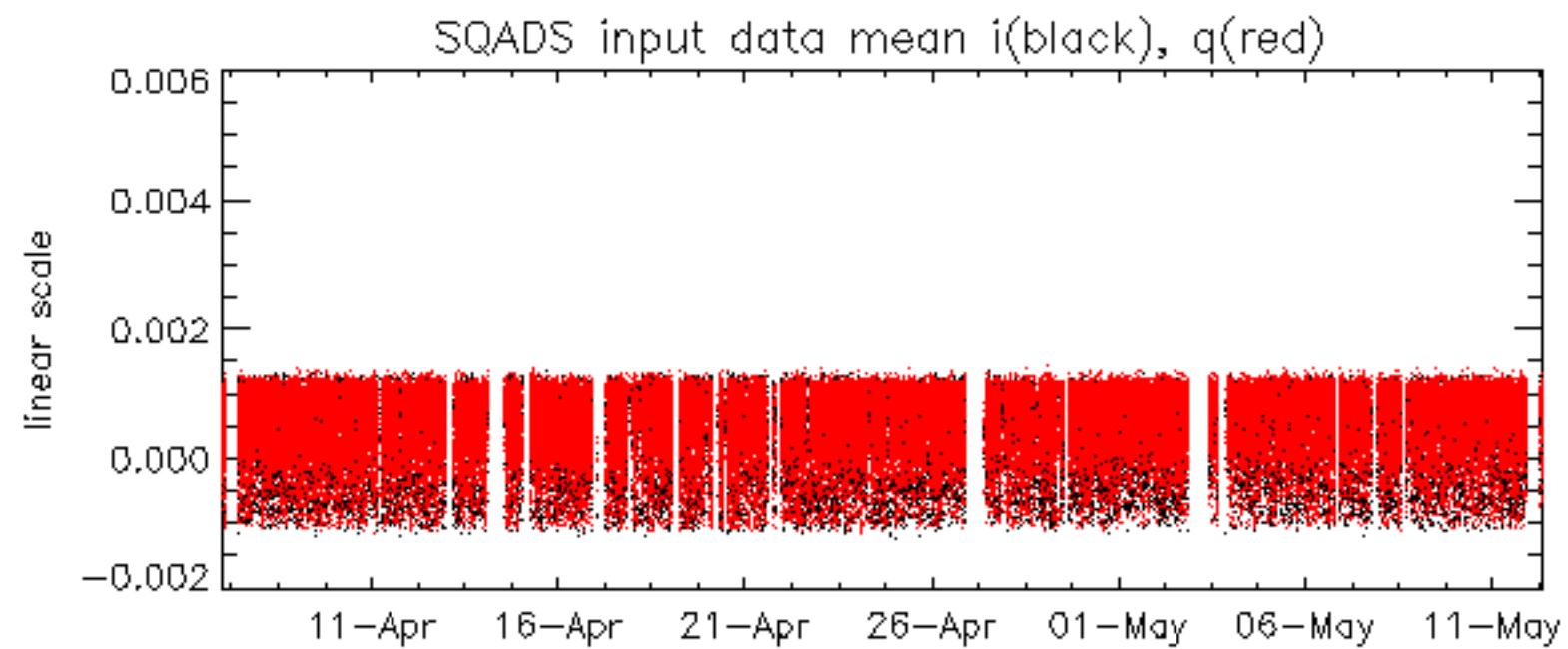


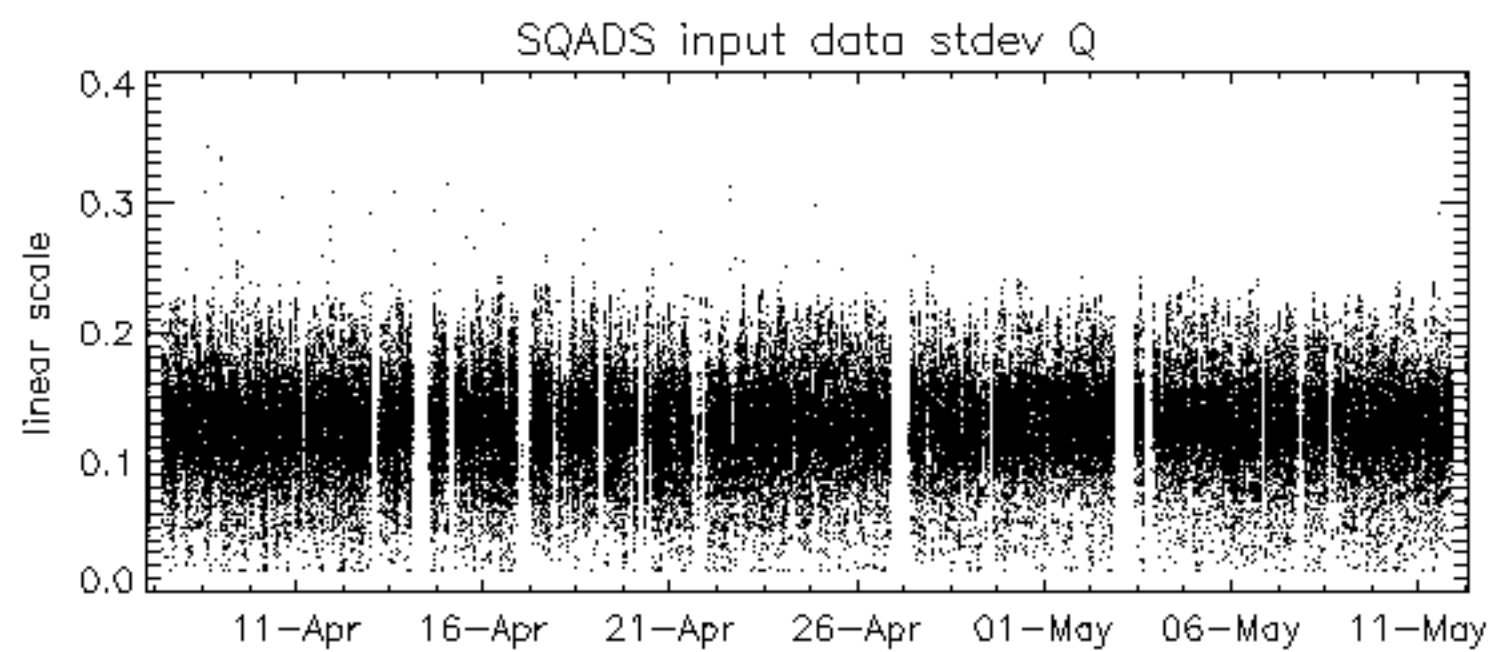
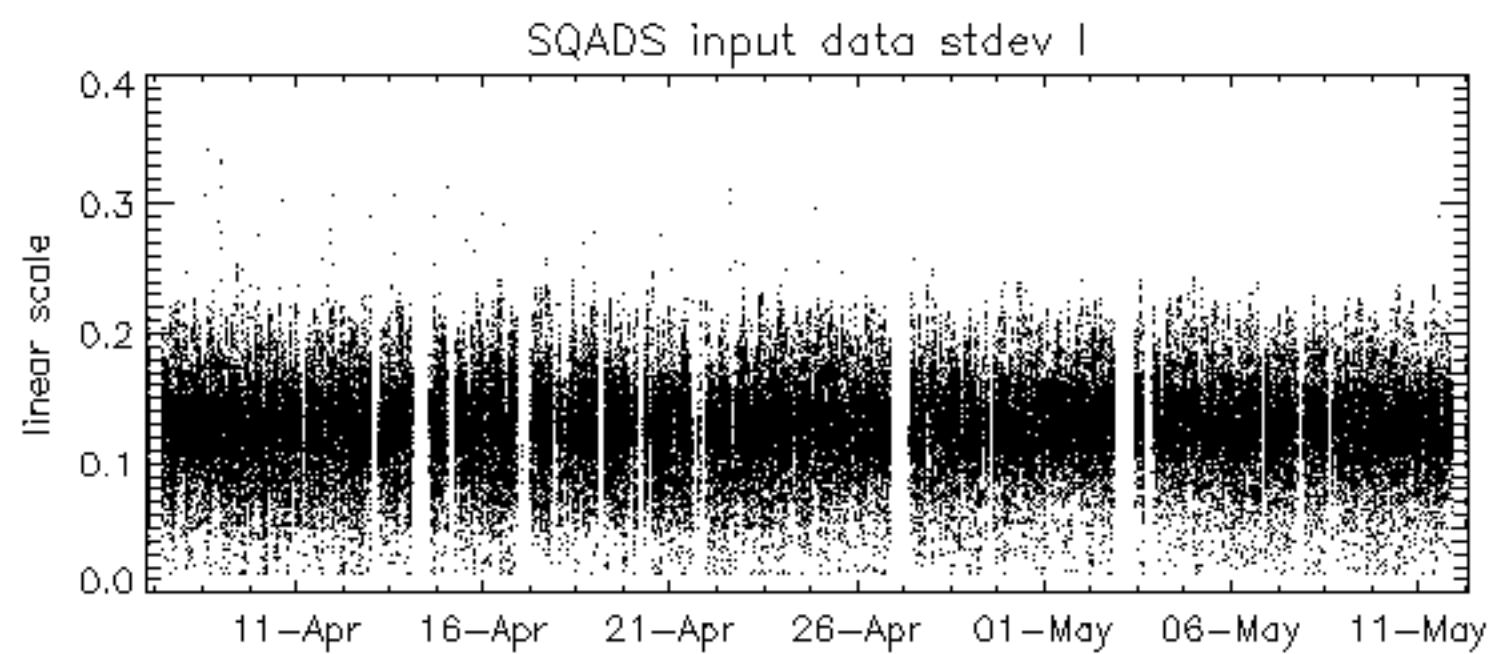
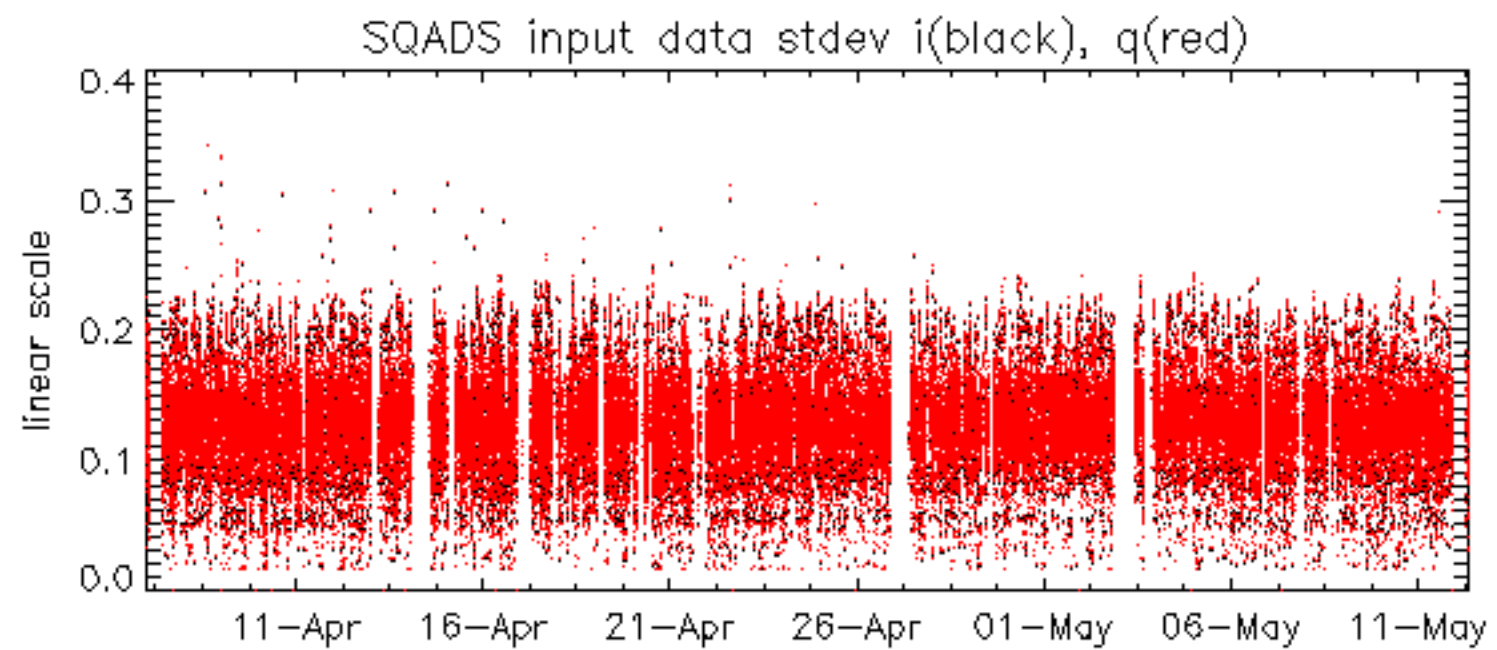
The MS mode provides an internal health check on an individual module basis.
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No anomalies observed on available MS products:

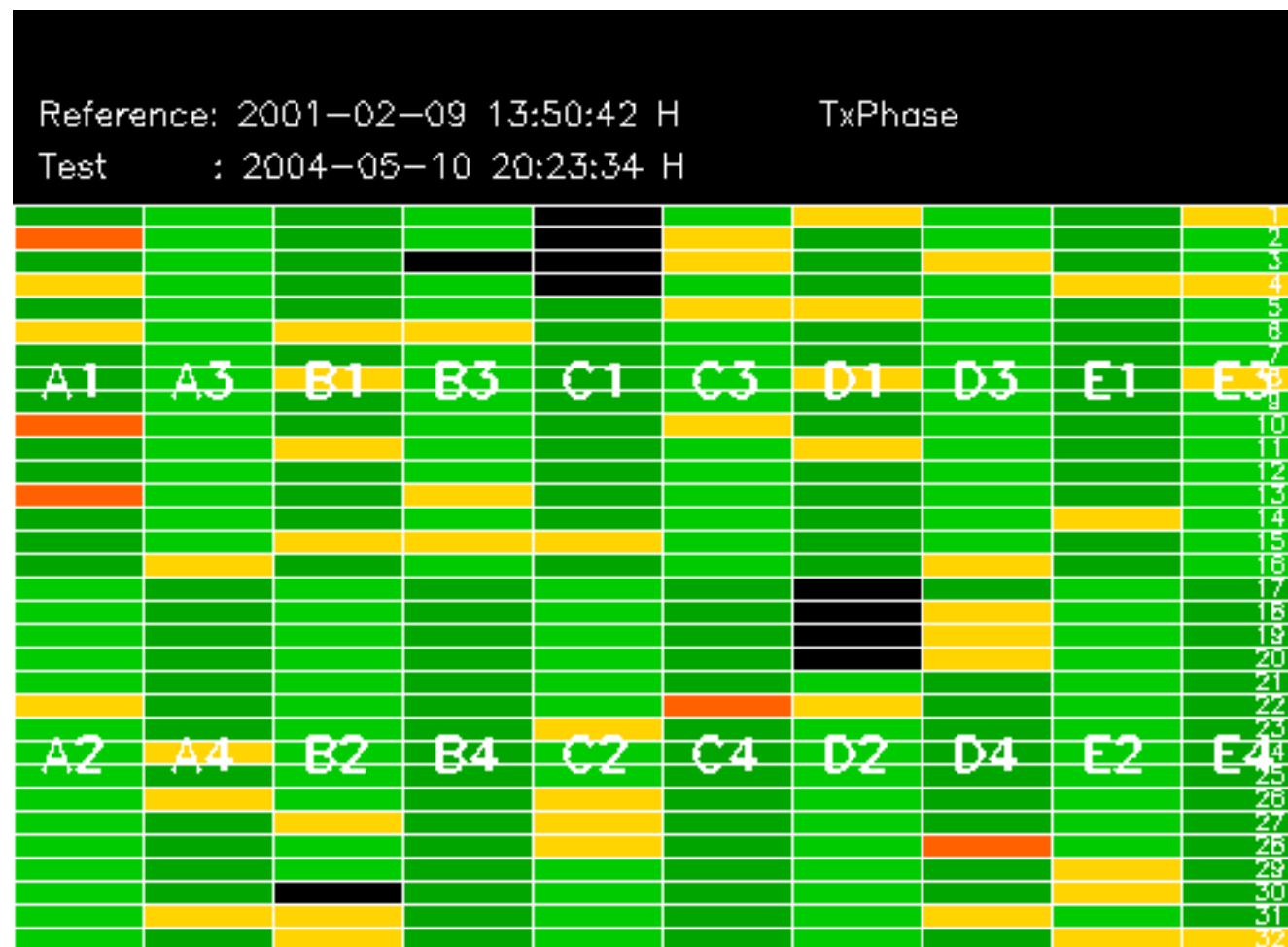
- ASA_MS__0PNPDK20040511_195257_000000152026_00414_11490_0119.N1

No anomalies observed.









No unavailabilities during the reported period.