

REPORT OF 040513

last update on Fri May 14 07:49:26 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:

Polarisation	Start Time
V	20040511 195257
H	20040512 210056

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
☒	☒
☒	☒
☒	☒
☒	☒

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	-3.597541	0.083886	-0.001105
7	P1	-3.326604	0.061858	-0.036335
11	P1	-4.594789	0.032221	0.100589
15	P1	-4.930198	0.044389	0.129948
19	P1	-3.373520	0.004923	-0.030179
22	P1	-4.521901	0.013364	-0.030084
24	P1	-4.978746	0.014371	0.104356
28	P1	-4.591714	0.013683	0.009085

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.416767	0.081761	-0.044163
7	P2	-22.888090	0.113047	-0.032287

11	P2	-15.810447	0.120938	0.155616
15	P2	-7.175154	0.092463	-0.039326
19	P2	-9.530480	0.124315	-0.021970
22	P2	-17.637846	0.093204	0.048651
24	P2	-20.951431	0.094935	0.064923
28	P2	-16.610506	0.084040	0.006164

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.137354	0.002987	-0.001418
7	P3	-8.137355	0.002987	-0.001416
11	P3	-8.137356	0.002987	-0.001417
15	P3	-8.137355	0.002987	-0.001424
19	P3	-8.137358	0.002987	-0.001422
22	P3	-8.137359	0.002987	-0.001428
24	P3	-8.137358	0.002987	-0.001434
28	P3	-8.137268	0.002988	-0.001345

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	-3.240813	0.311327	0.086338
7	P1	-2.876022	0.264448	-0.066626
11	P1	-3.806948	0.021858	0.060843
15	P1	-3.996712	0.358772	0.261115
19	P1	-3.275883	0.058677	-0.138744
22	P1	-5.778875	0.045357	0.158673
24	P1	-4.053141	0.084759	0.079289
28	P1	-2.902235	0.065685	-0.100985

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-18.132952	0.040482	-0.071952
7	P2	-22.989944	0.027116	0.003791
11	P2	-11.078372	0.197441	-0.163163
15	P2	-4.951445	0.032927	-0.118370
19	P2	-6.857977	0.033391	-0.088021
22	P2	-7.712378	0.027242	-0.030759
24	P2	-11.038292	0.060962	-0.119672
28	P2	-19.037651	0.024709	-0.045561

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.973182	0.003637	-0.014557
7	P3	-7.973221	0.003641	-0.014421
11	P3	-7.973092	0.003636	-0.014196
15	P3	-7.973098	0.003648	-0.014375
19	P3	-7.973167	0.003636	-0.014507
22	P3	-7.973376	0.003620	-0.014247
24	P3	-7.973028	0.003653	-0.014163
28	P3	-7.973093	0.003655	-0.014851

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	0.000492132
	stdev	2.22159e-07
MEAN Q	mean	0.000520126
	stdev	2.56085e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128520
	stdev	0.00106631
STDEV Q	mean	0.128758
	stdev	0.00107893





5.3 - Gain imbalance I/Q



6 - Doppler Analysis

Preliminary report. The data is not yet controlled

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

<input type="checkbox"/>
Ascending
<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

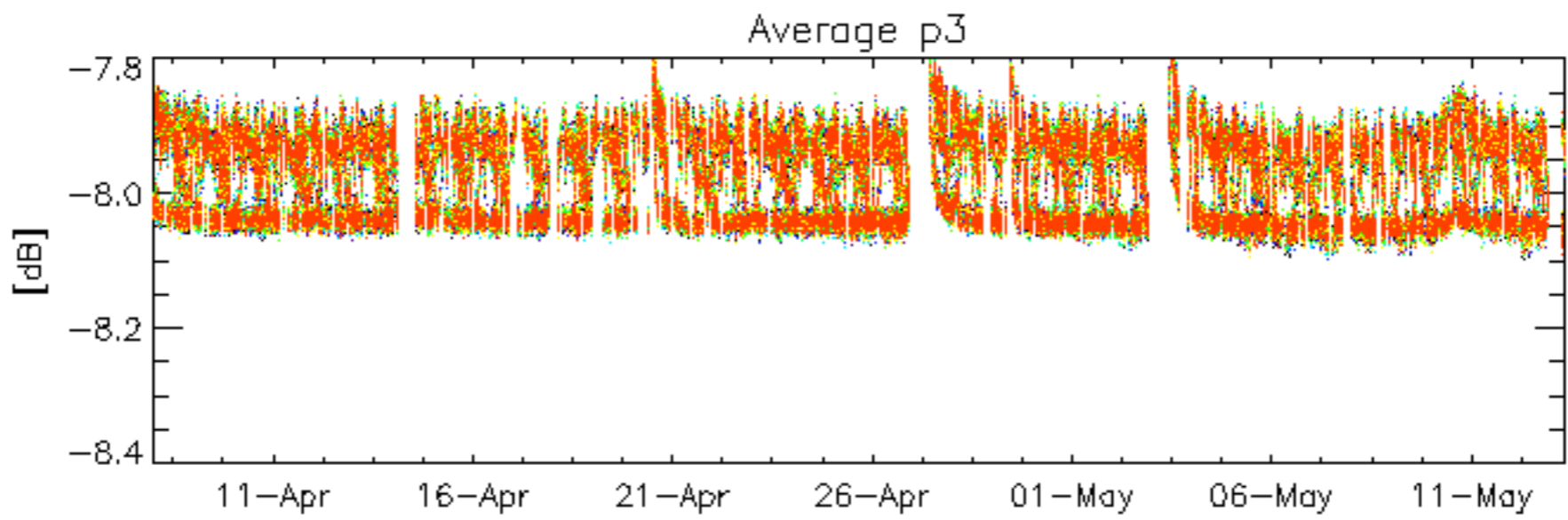
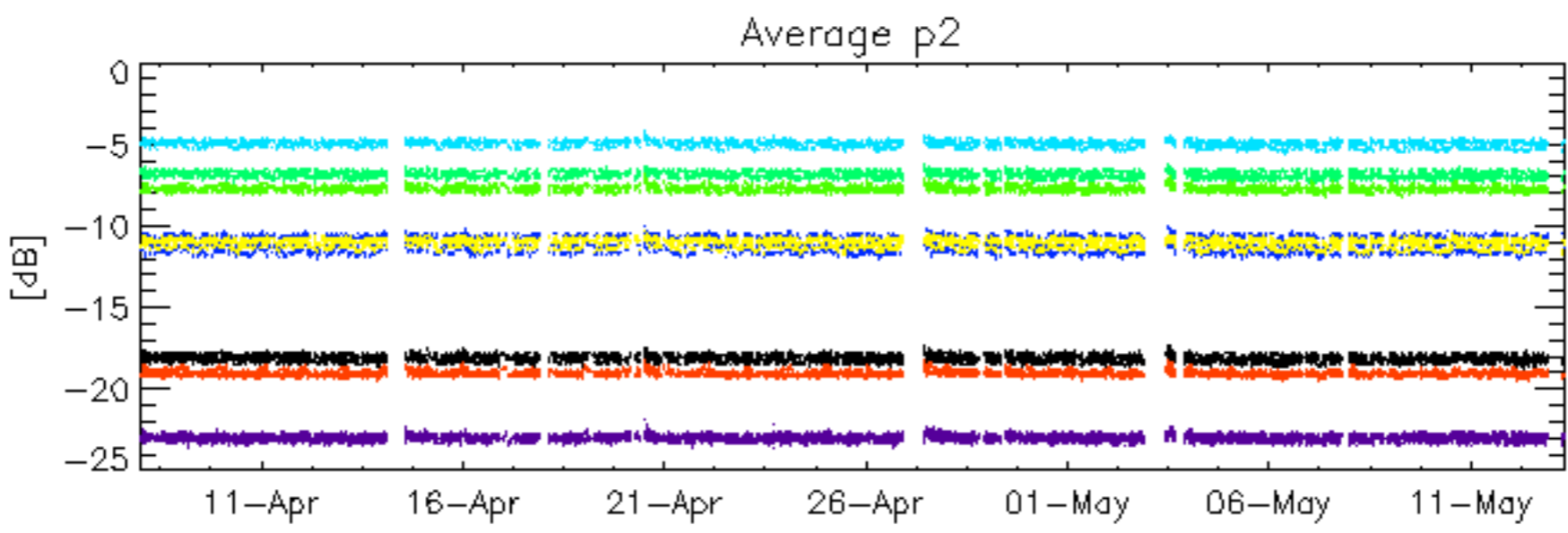
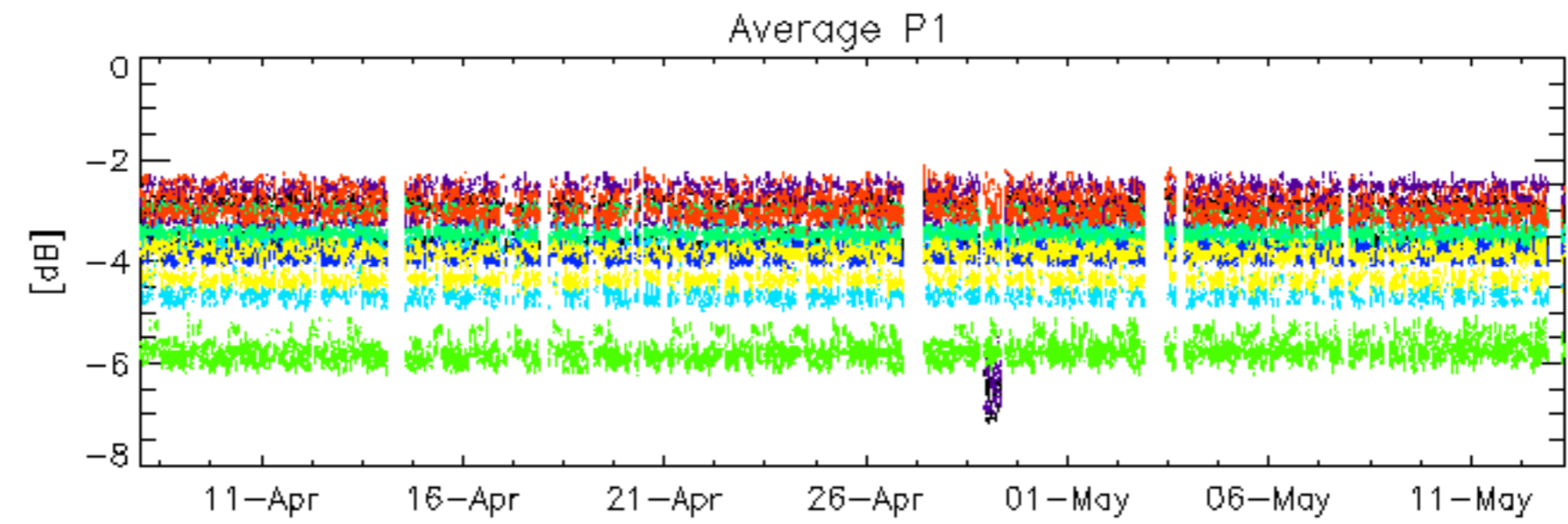
Evolution of Absolute Doppler

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Ascending
<input type="checkbox"/>
Descending

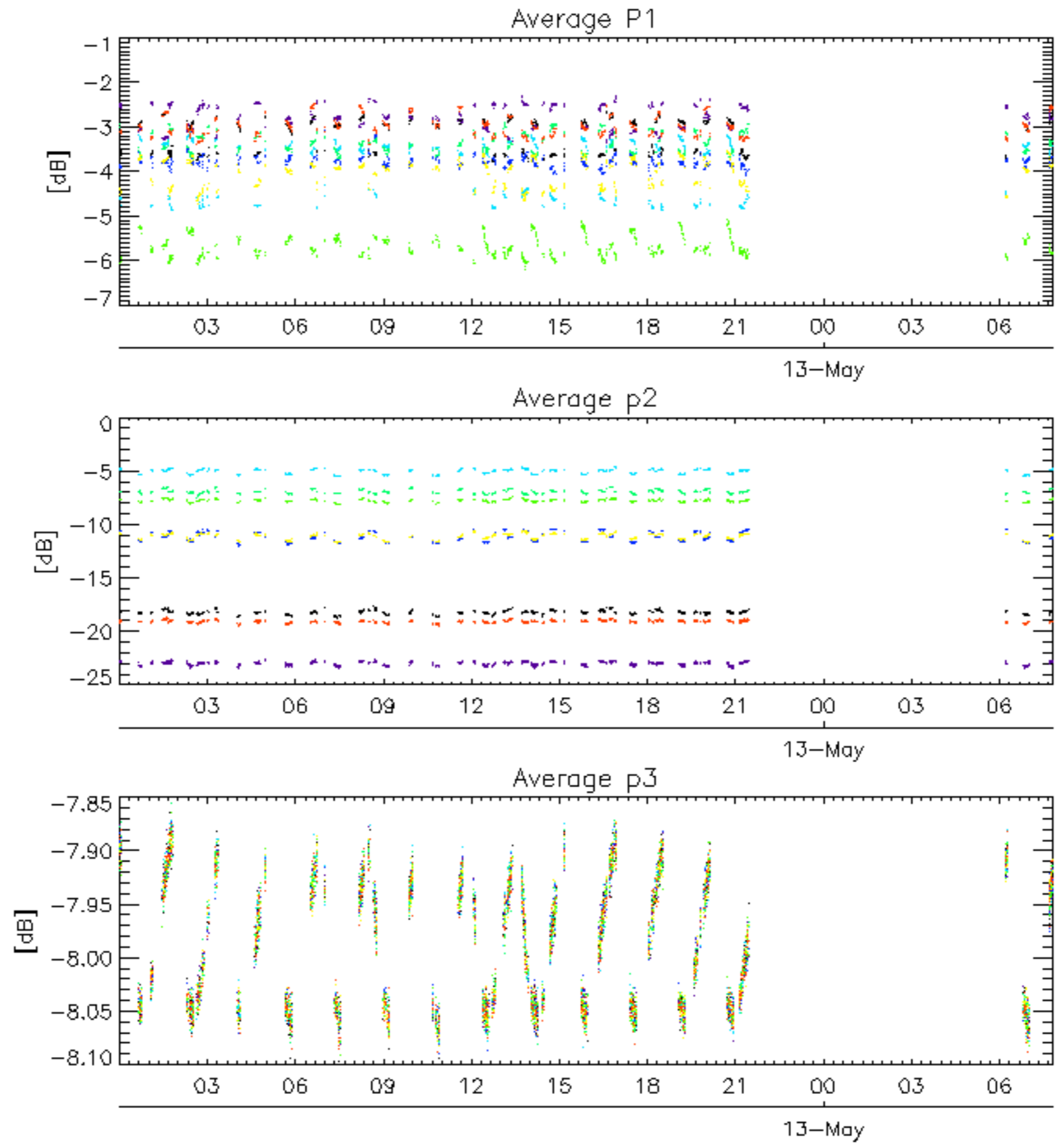
6.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

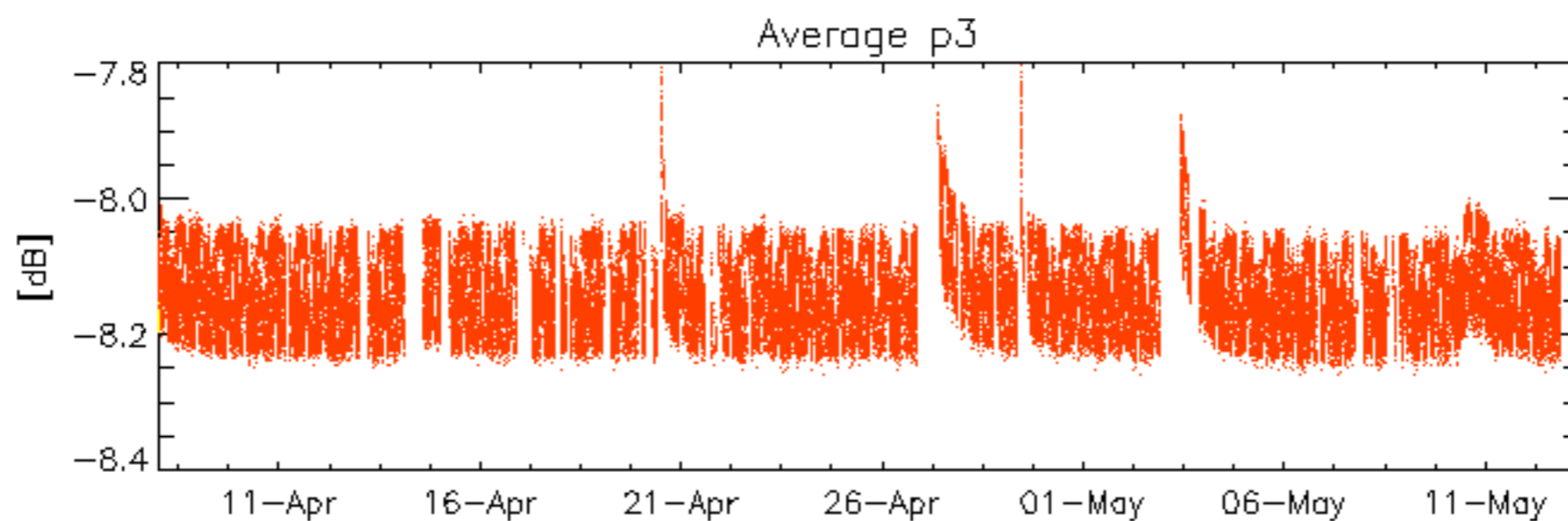
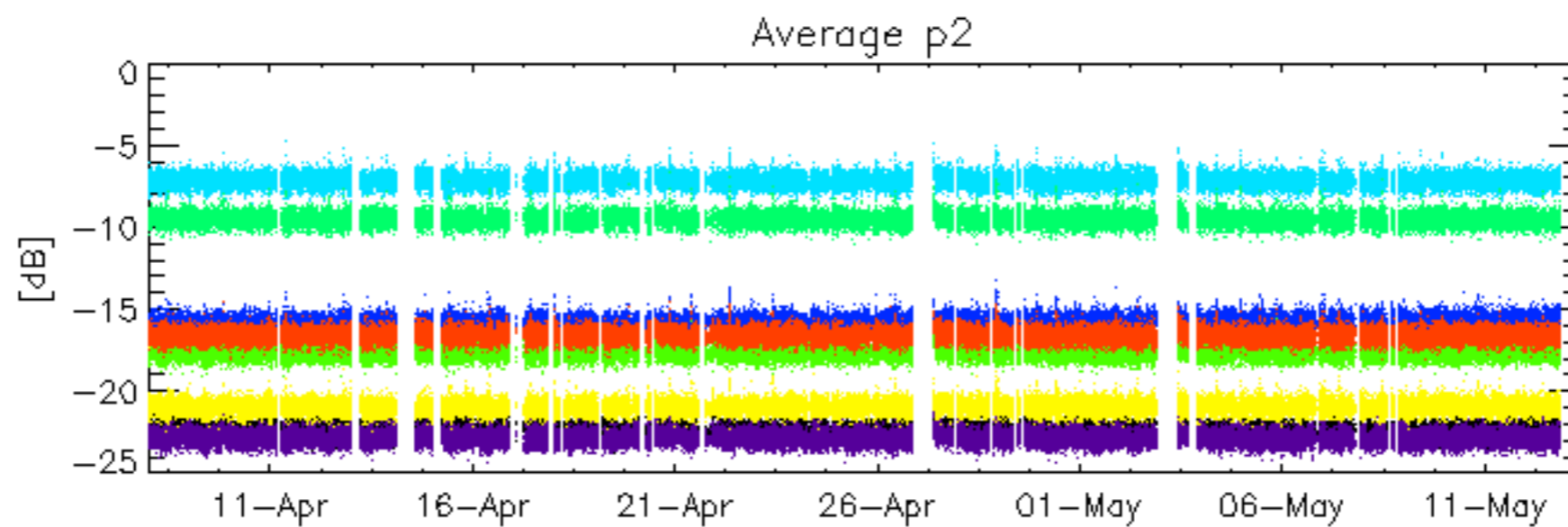
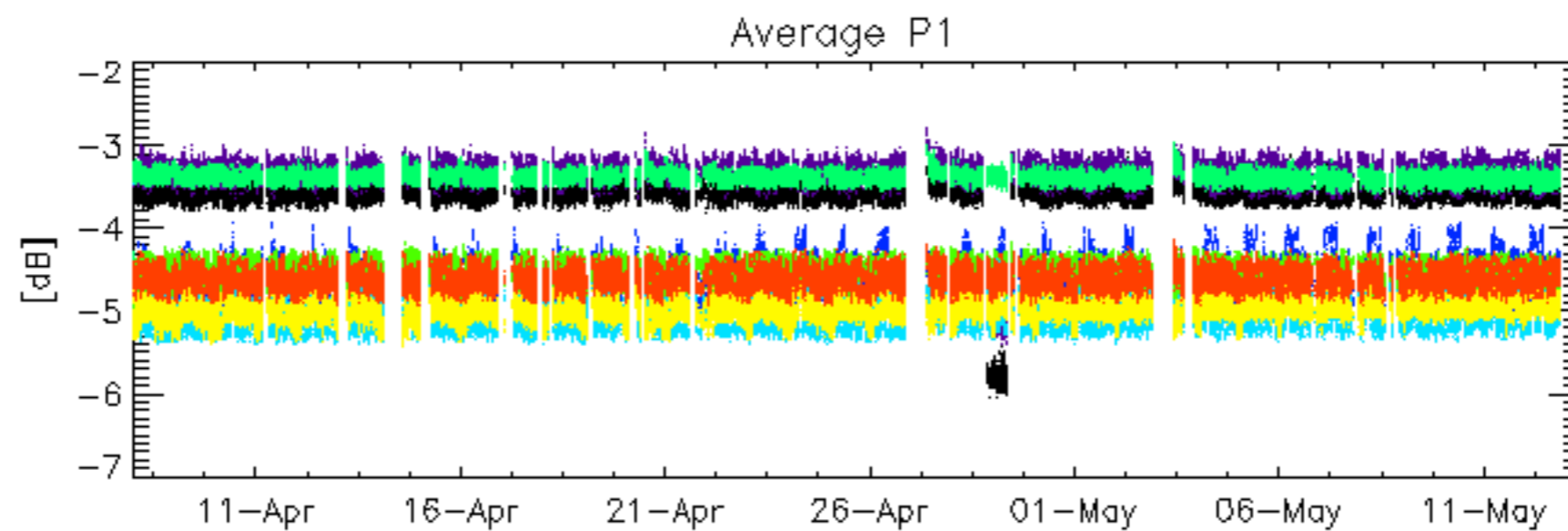
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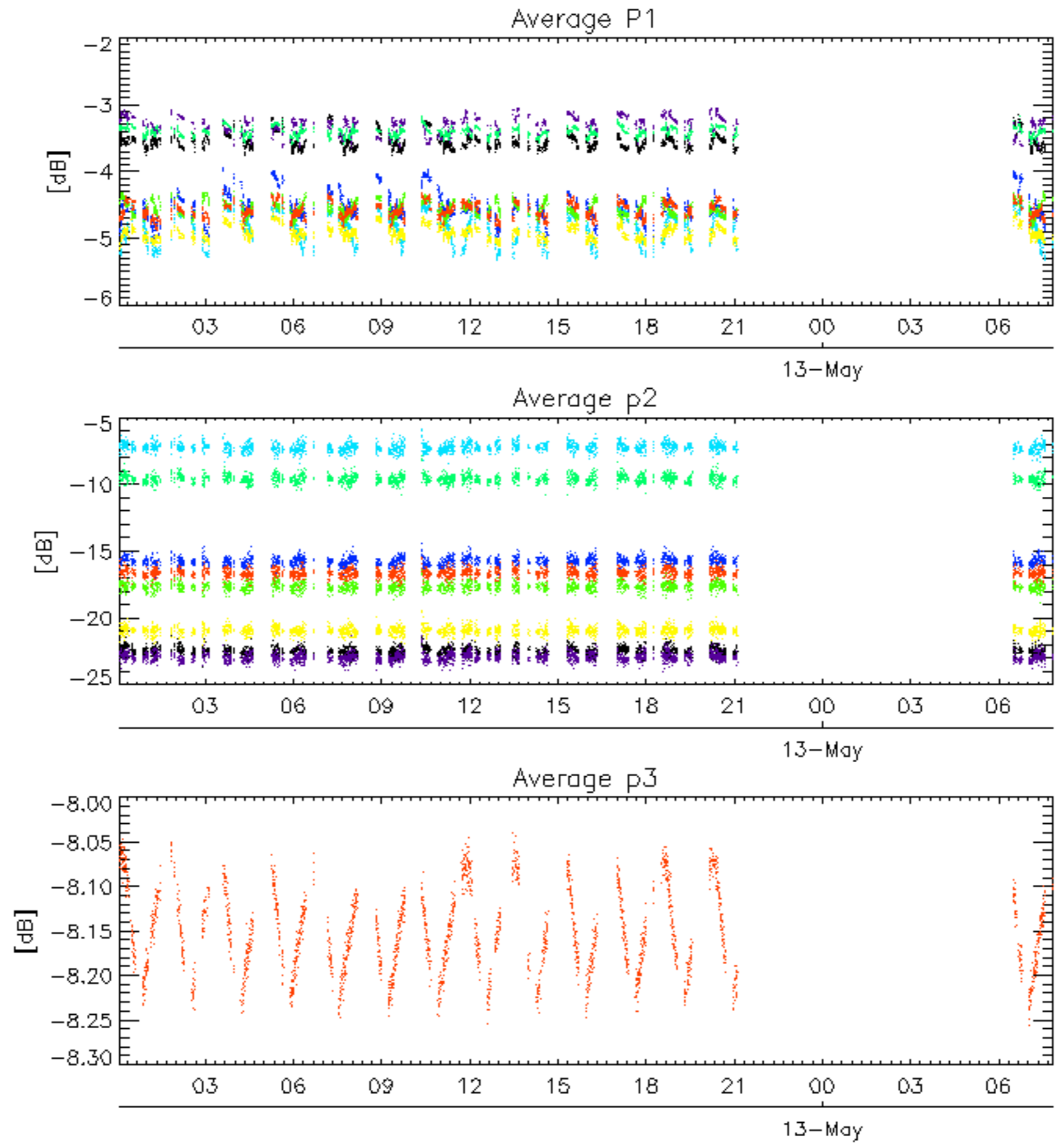
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rows: **3** **7** **11** **15** **19** **22** **24** **28**



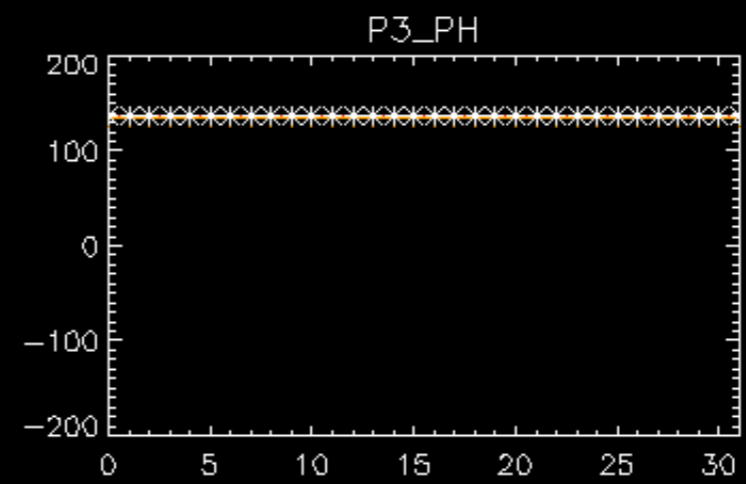
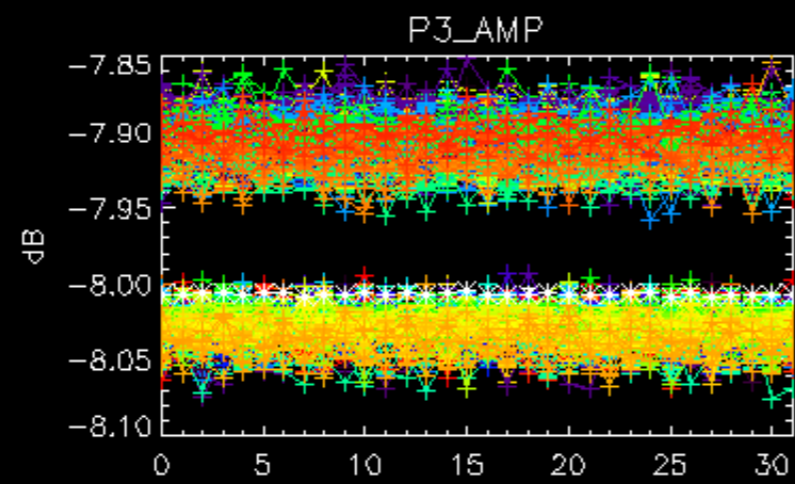
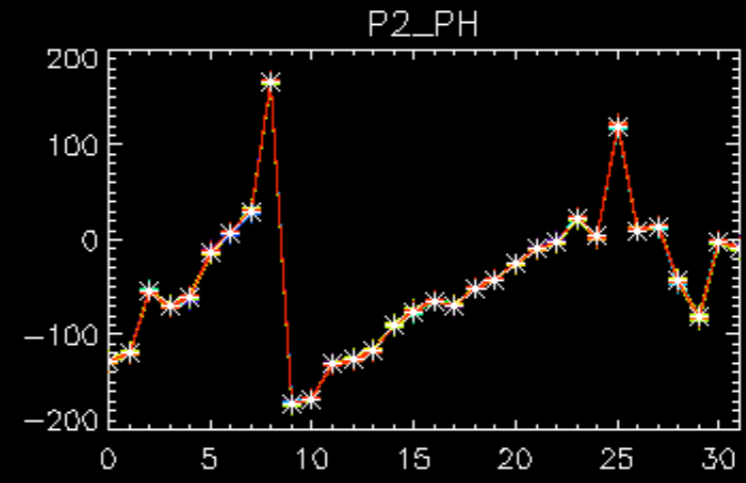
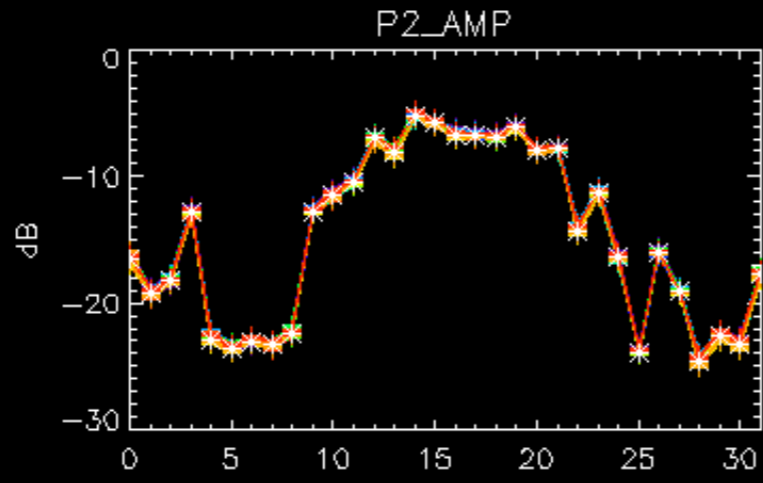
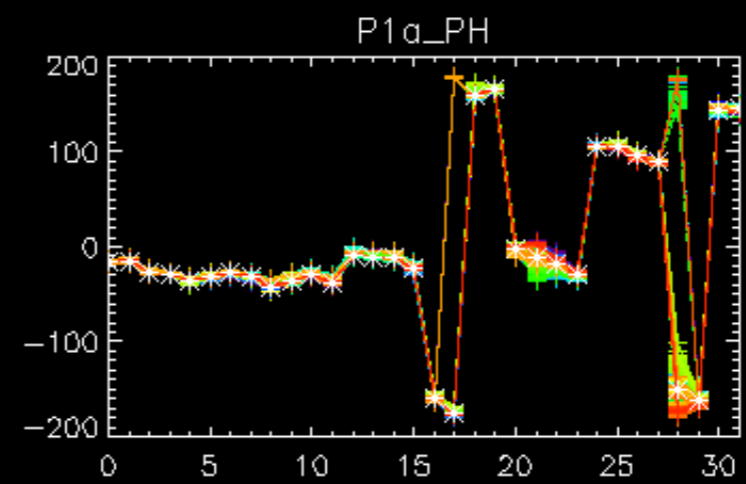
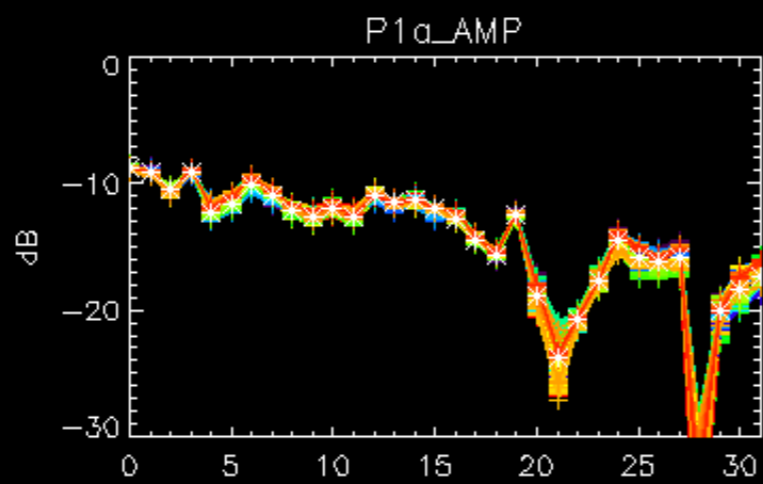
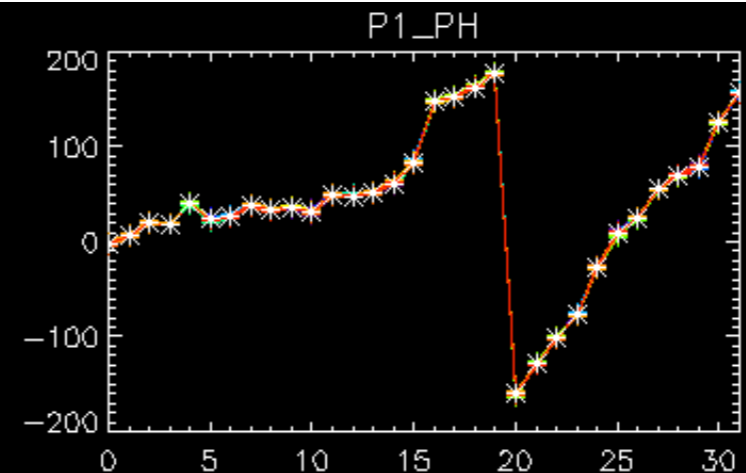
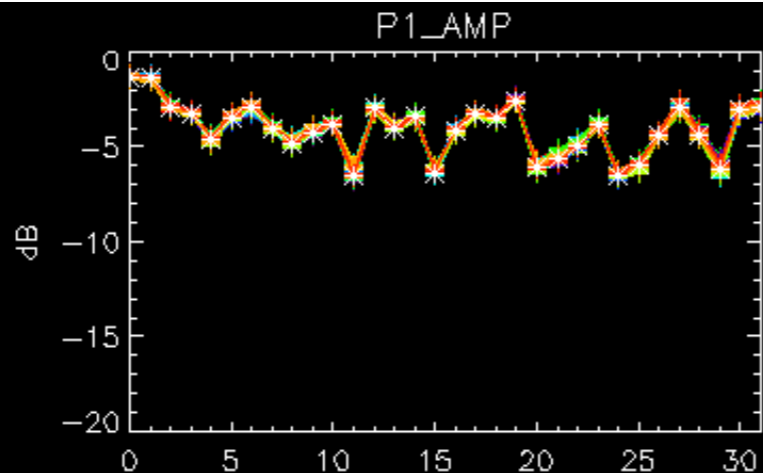
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 28

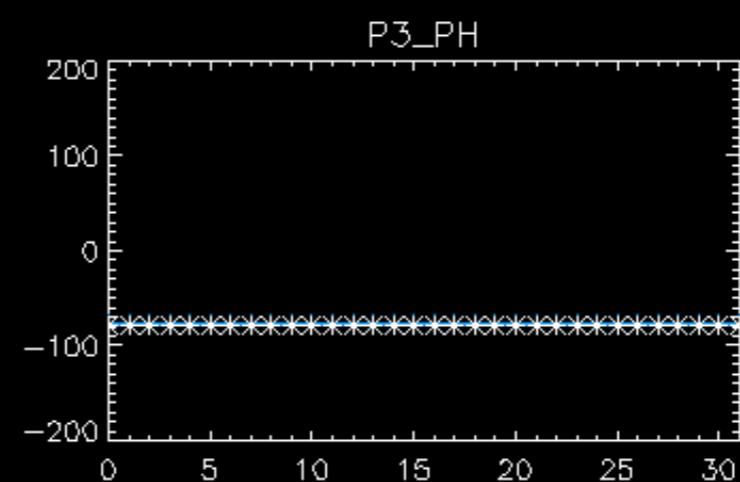
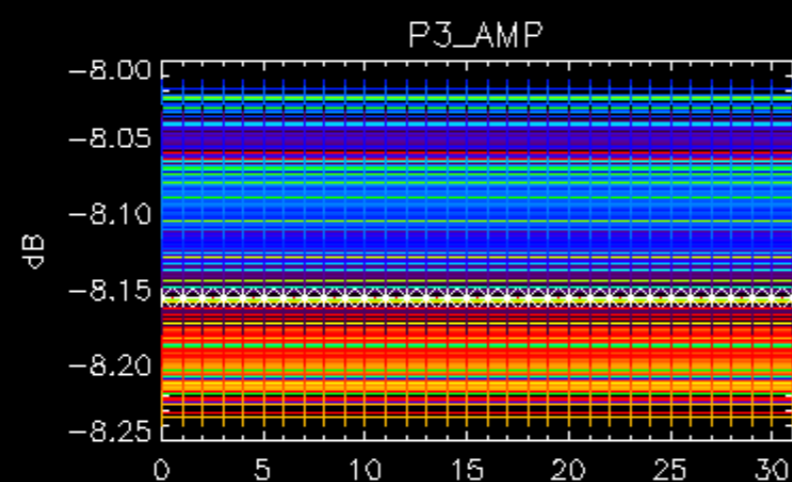
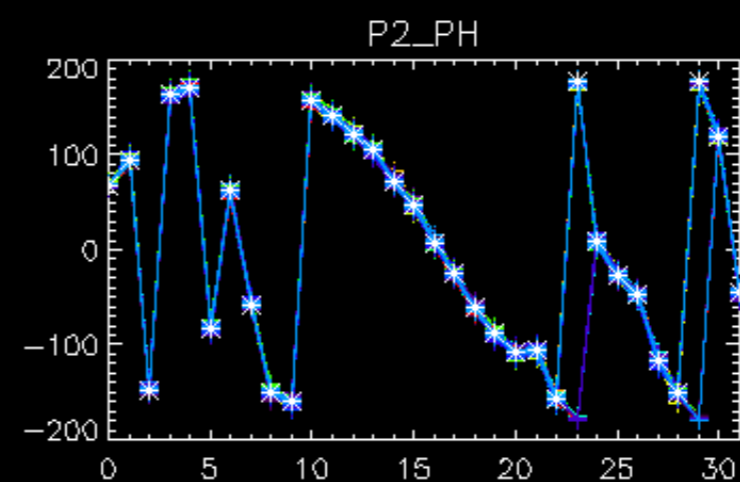
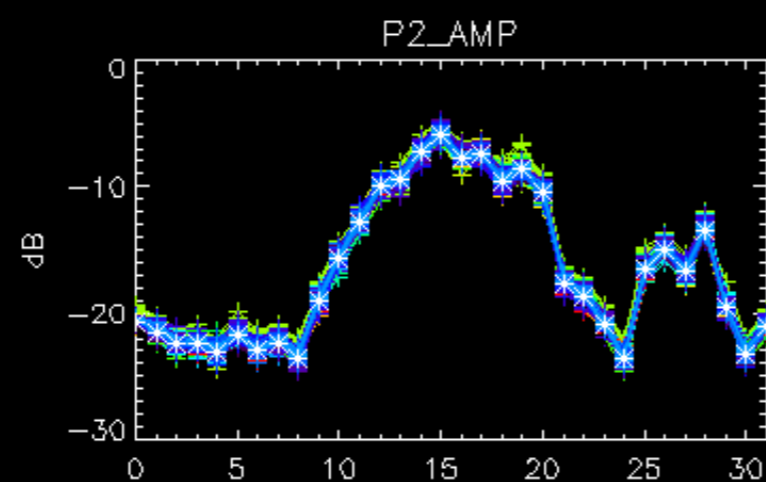
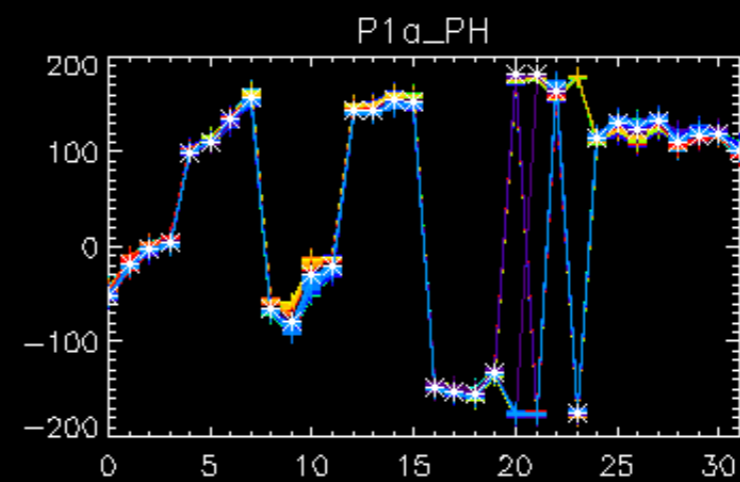
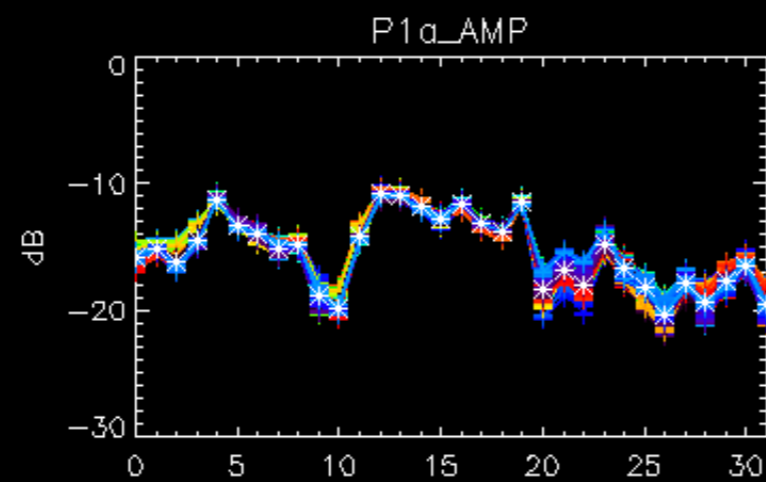
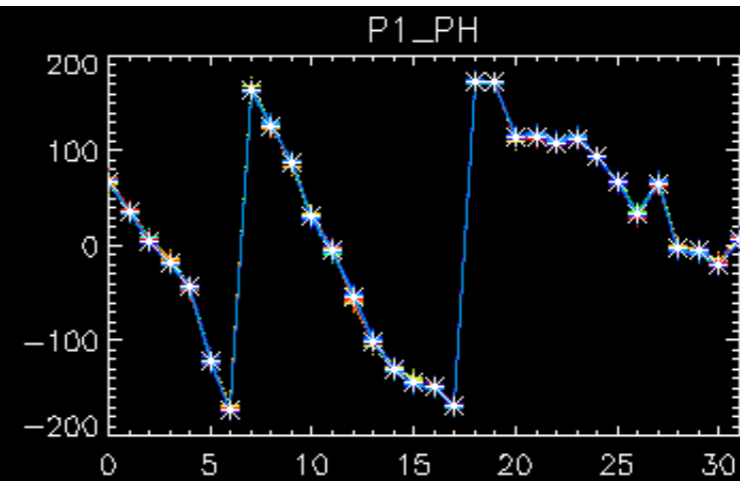
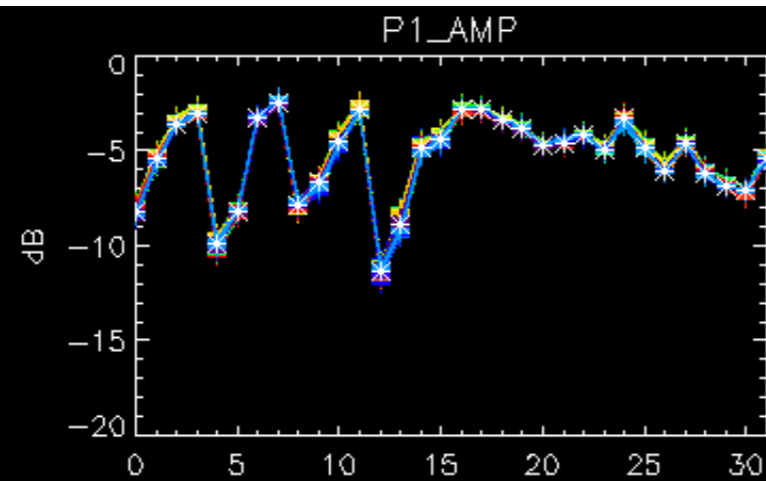


rows: **3** **7** **11** **15** **19** **22** **24** **28**

No anomalies observed on available browse products

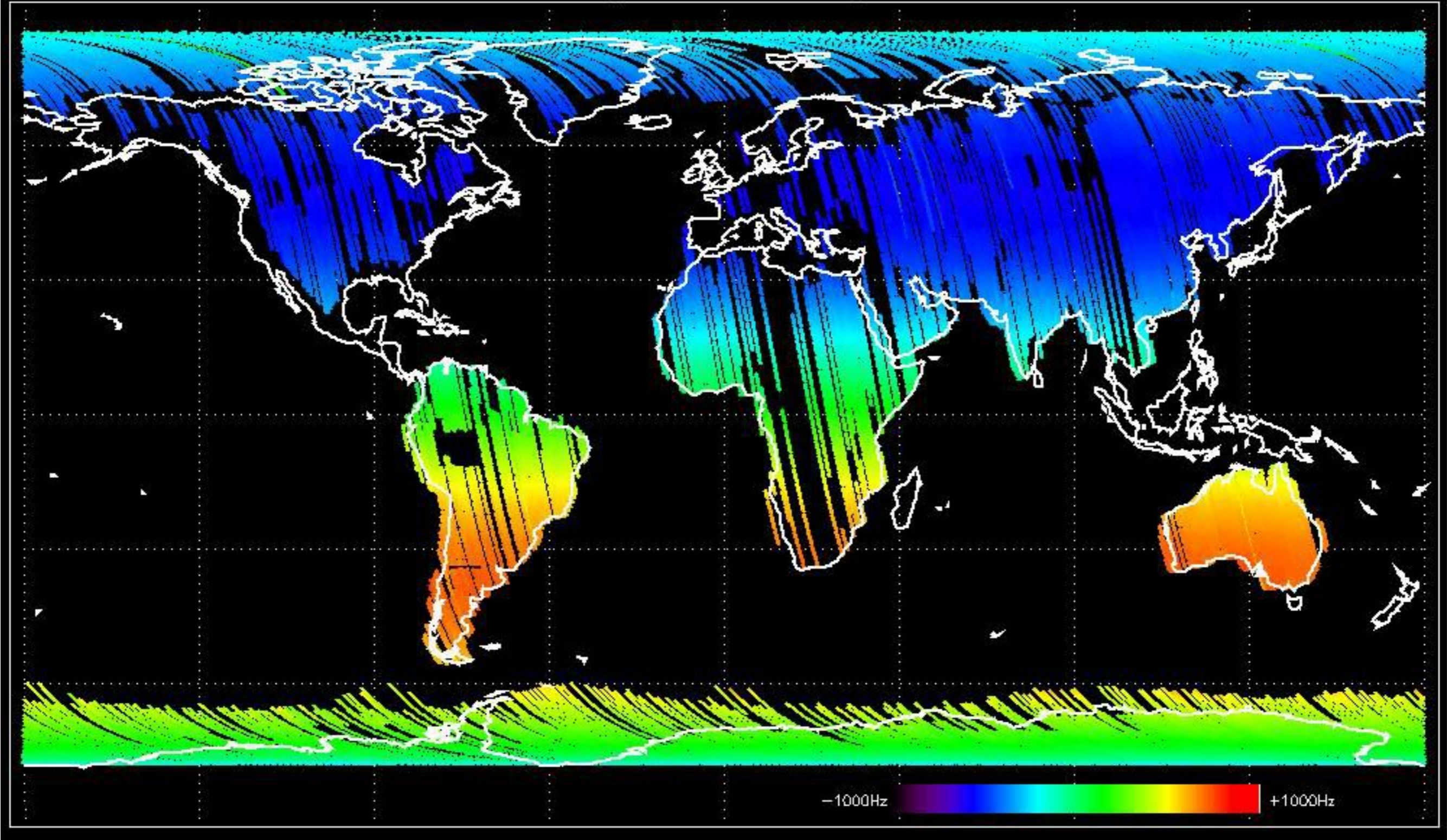
No anomalies observed.



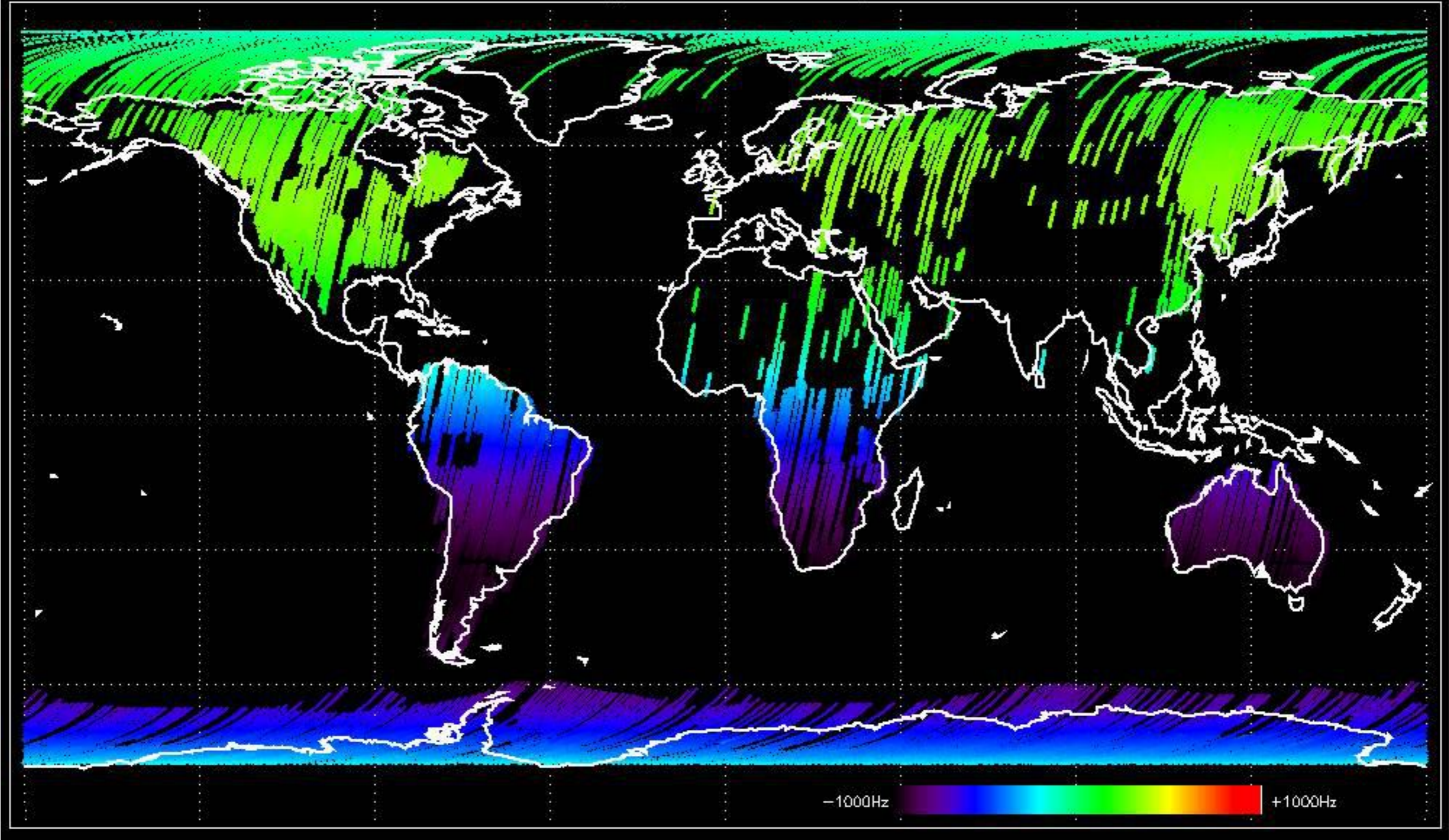


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

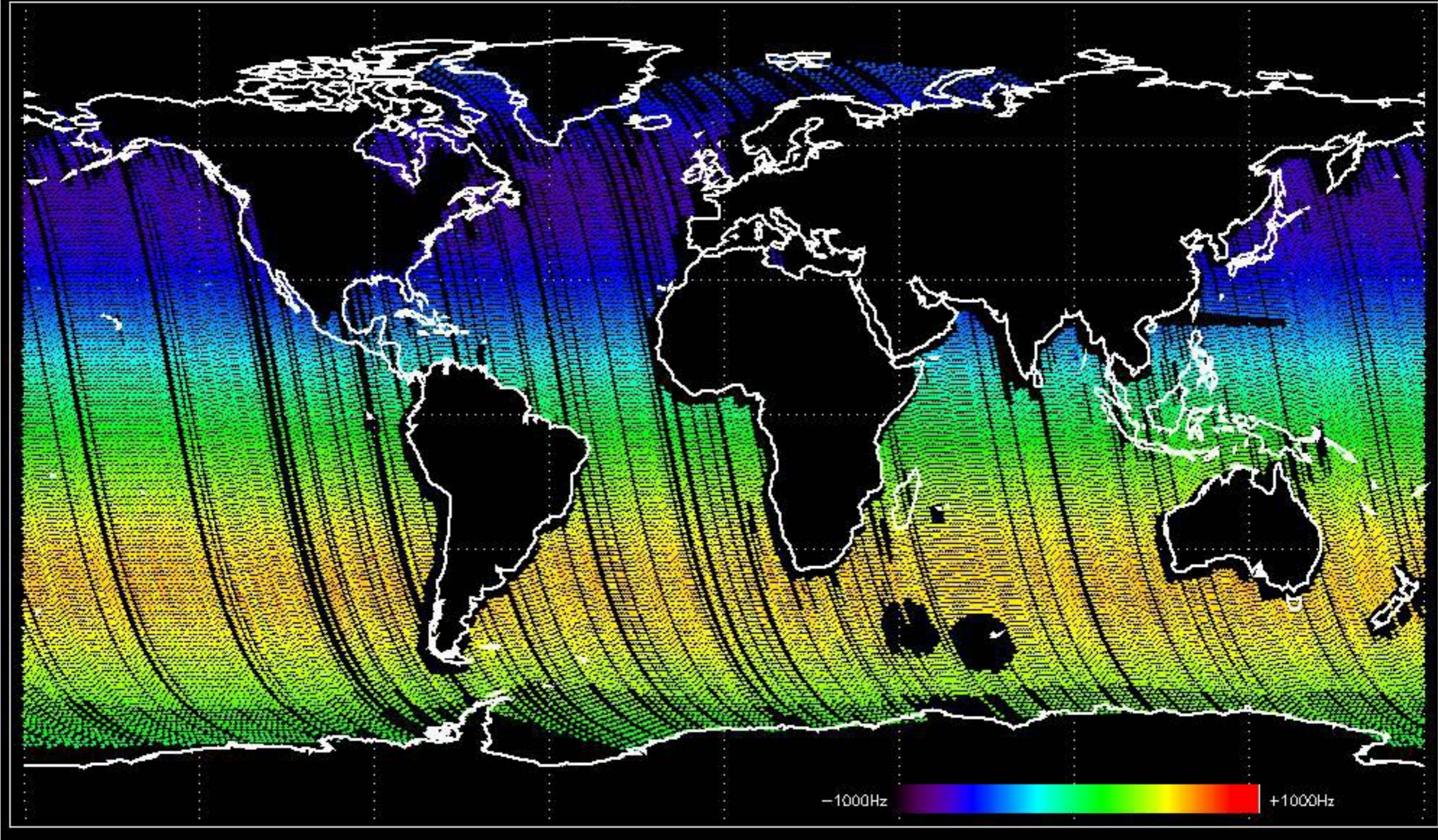
Doppler 'GM1' 'SS1' ascending



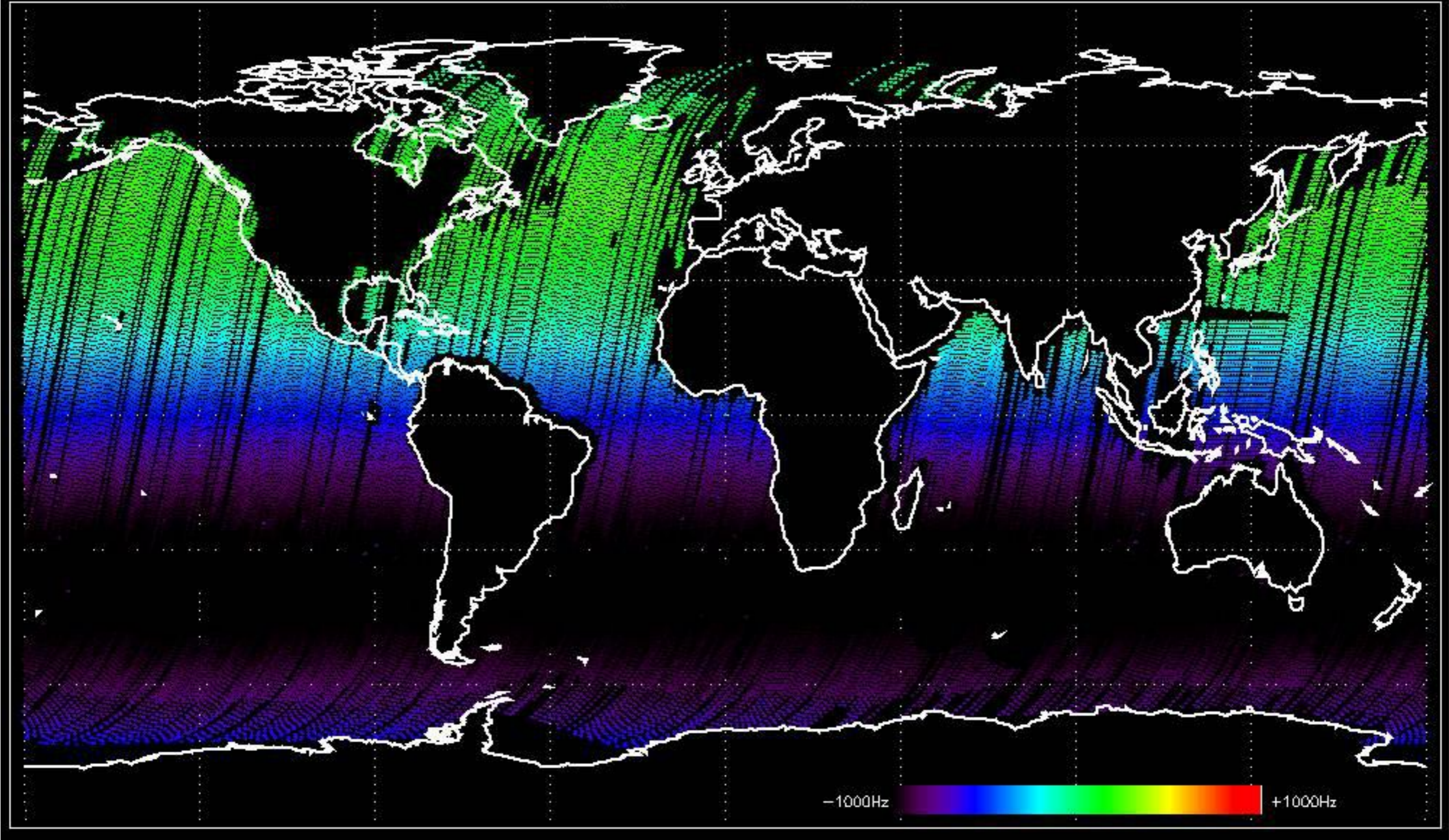
Doppler 'GM1' 'SS1' descending

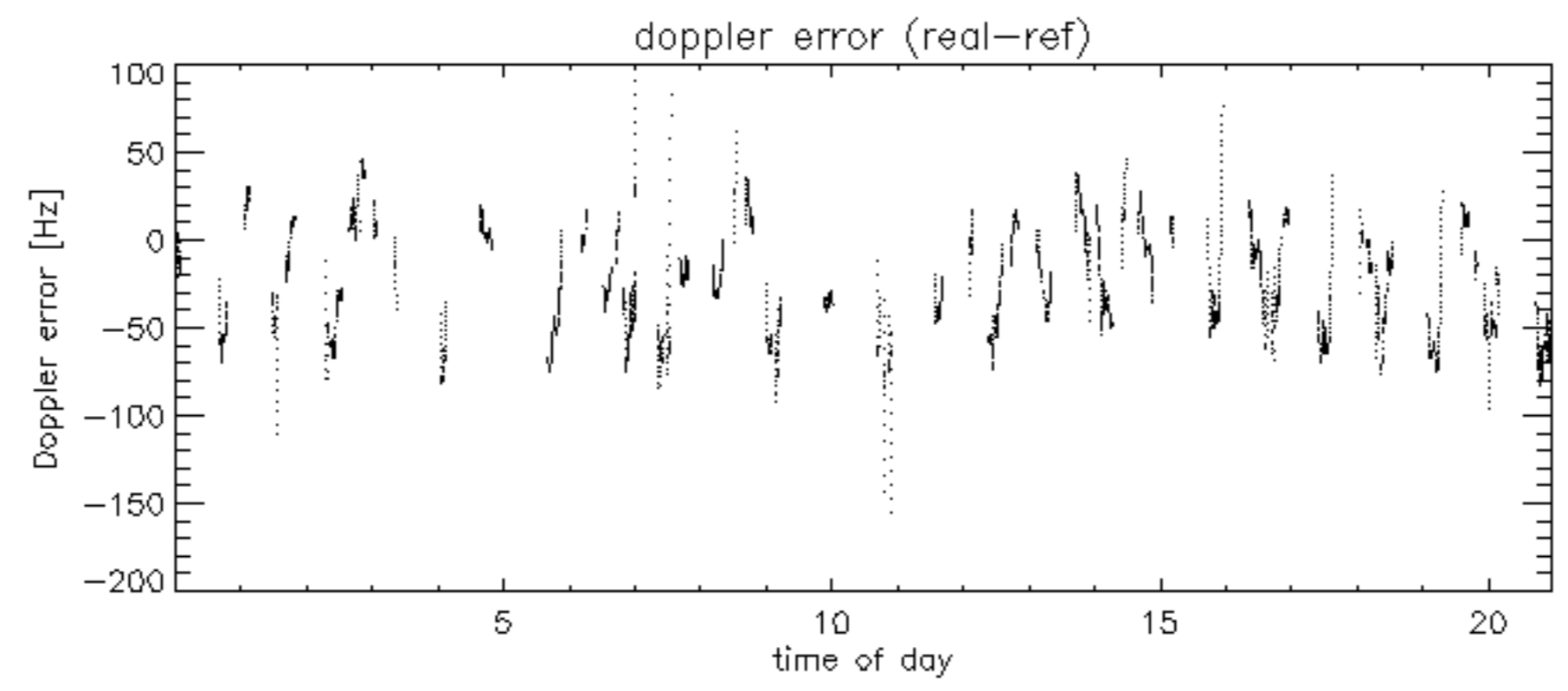
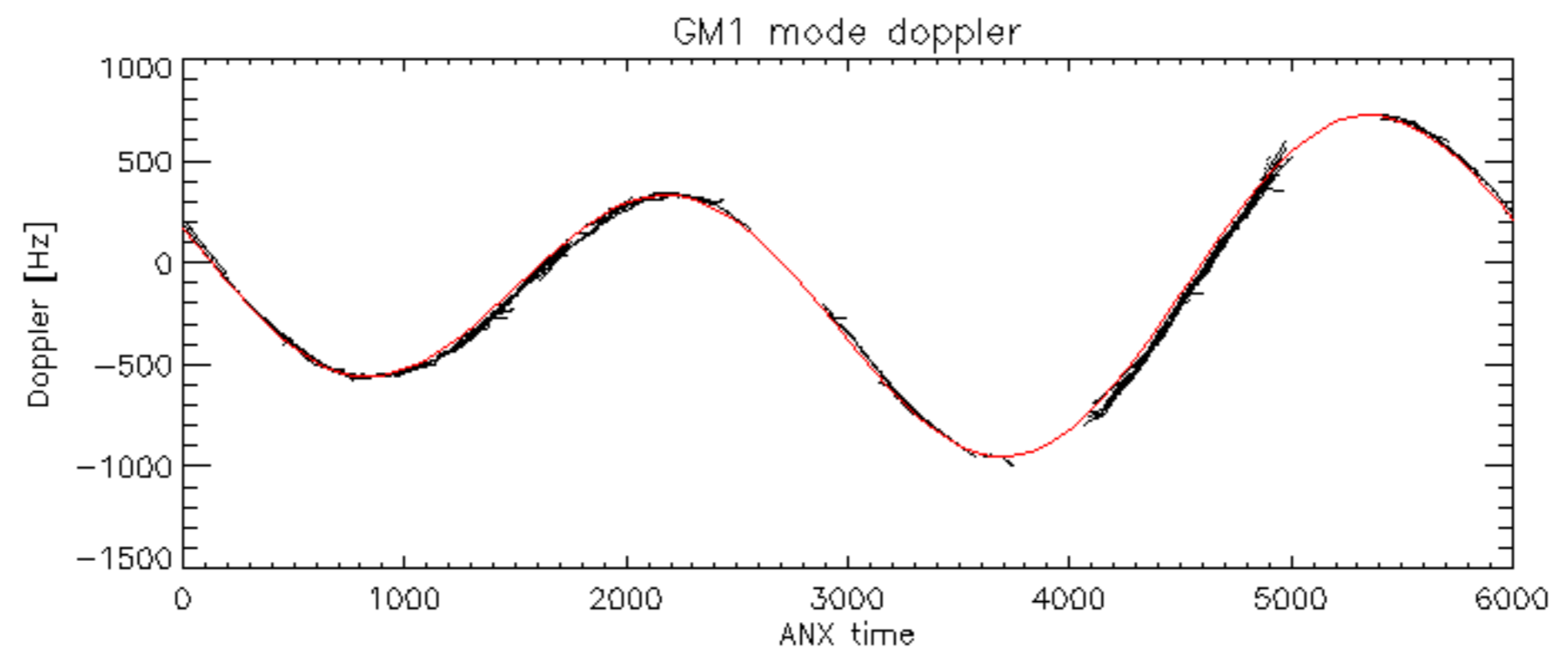


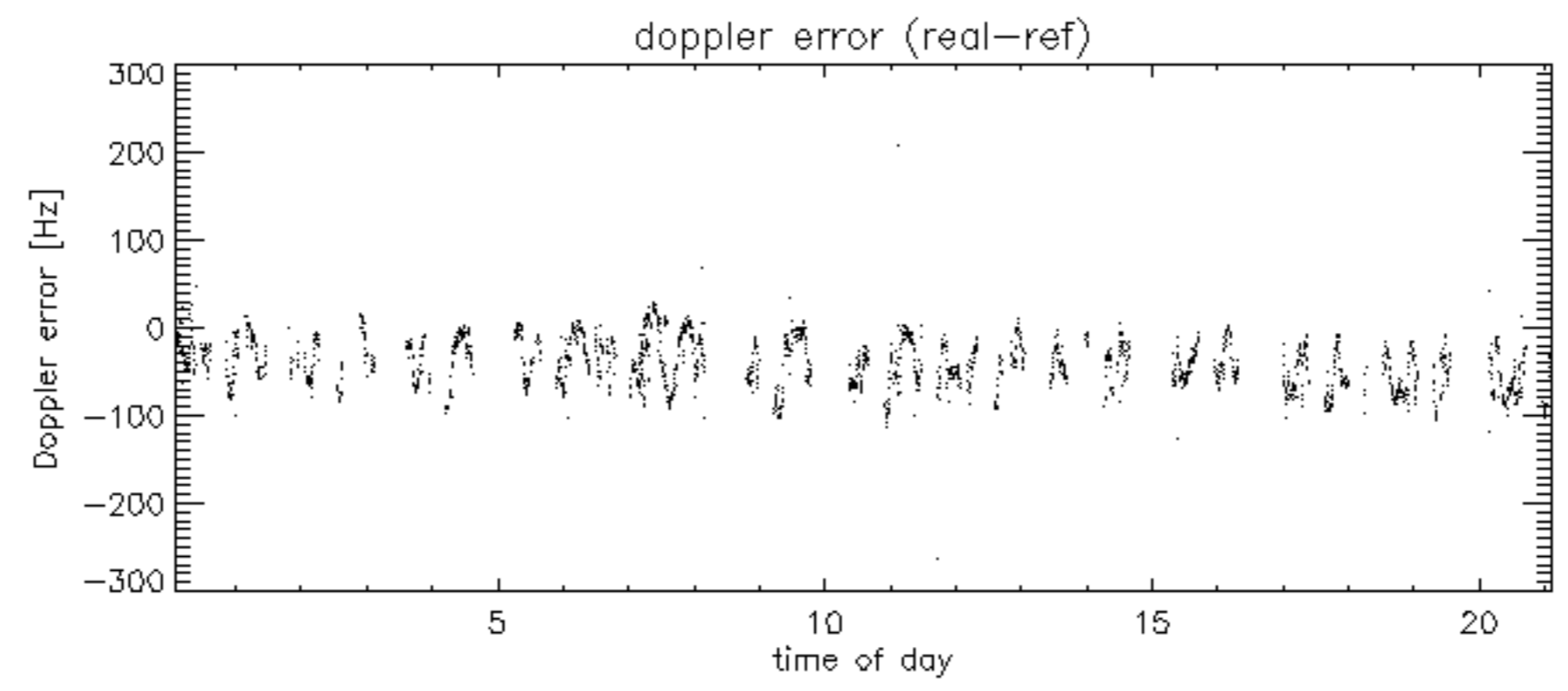
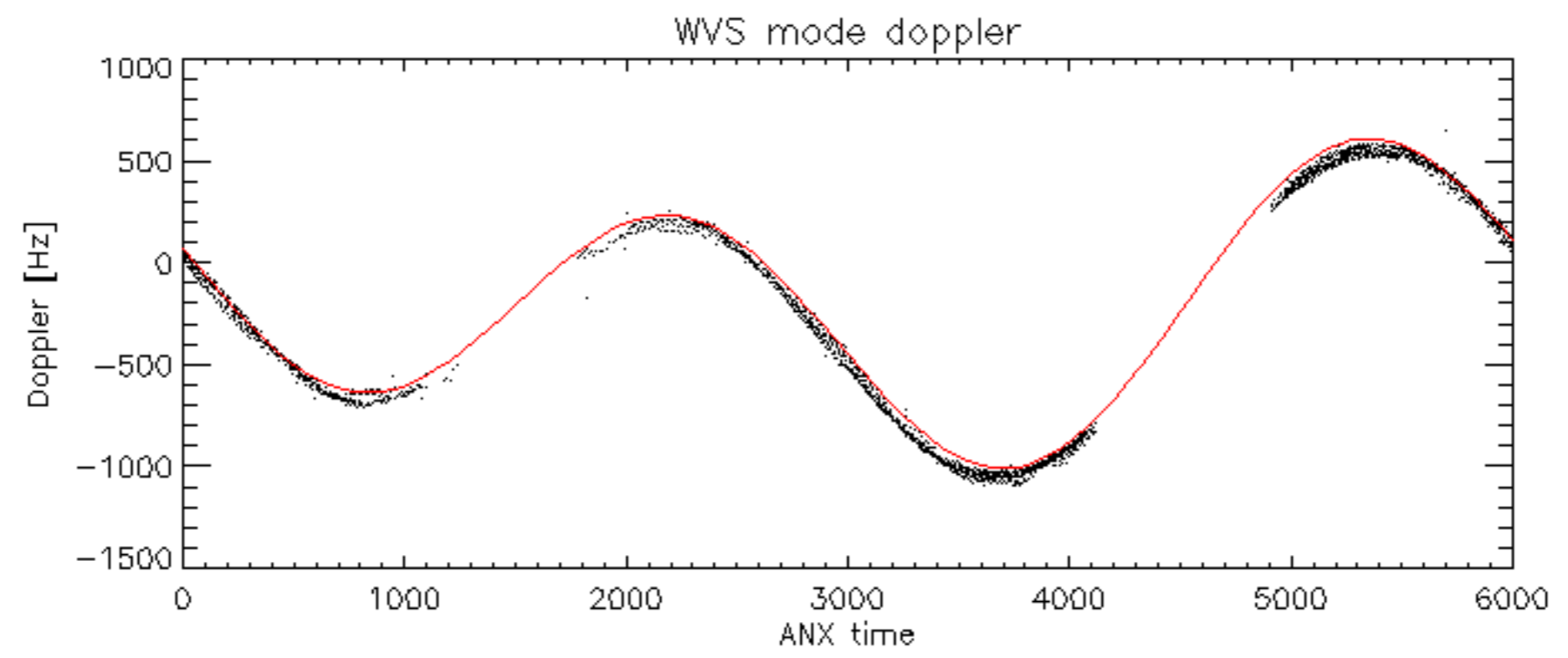
Doppler 'WVS' 'IS2' ascending



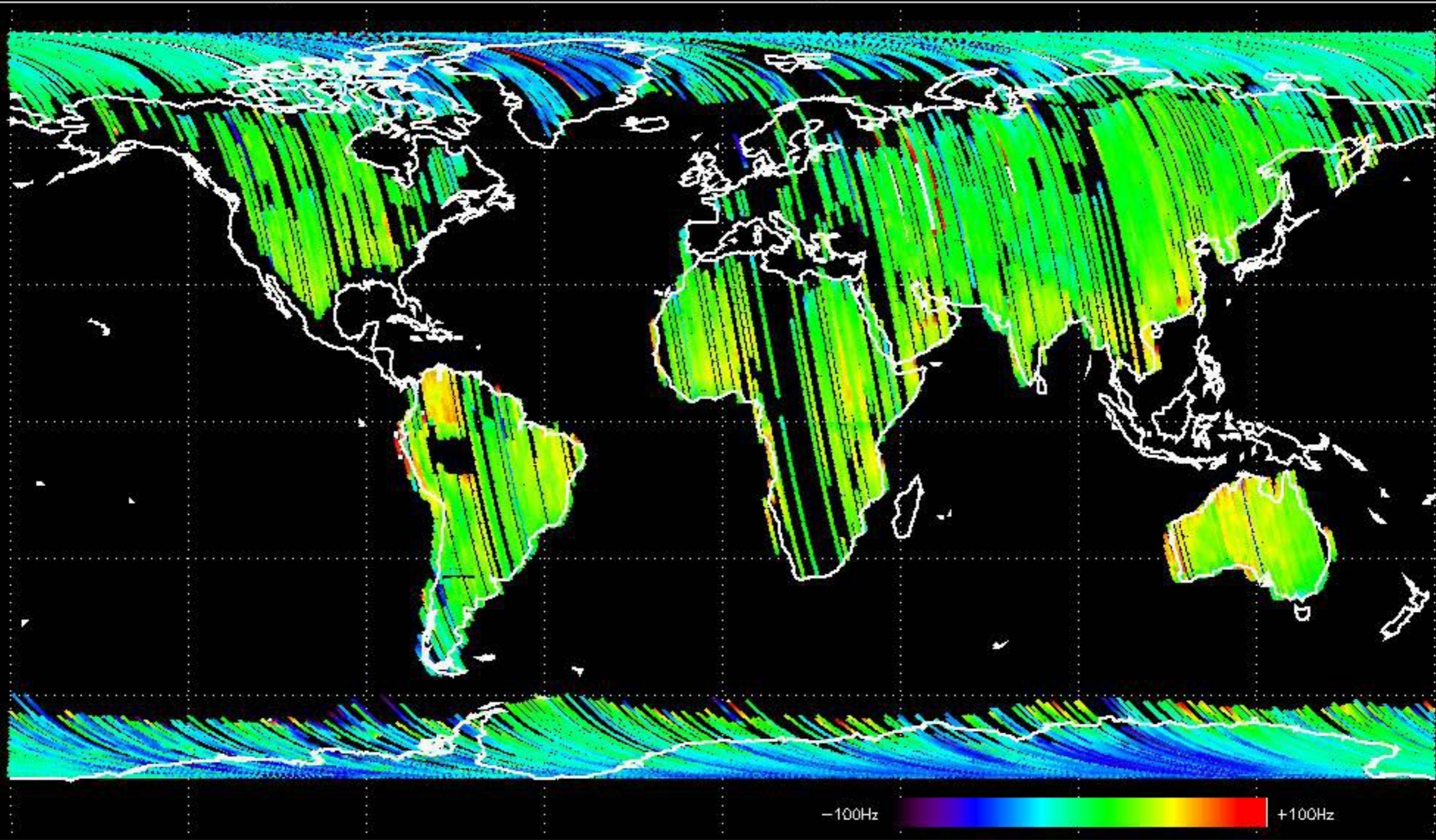
Doppler 'WVS' 'IS2' descending







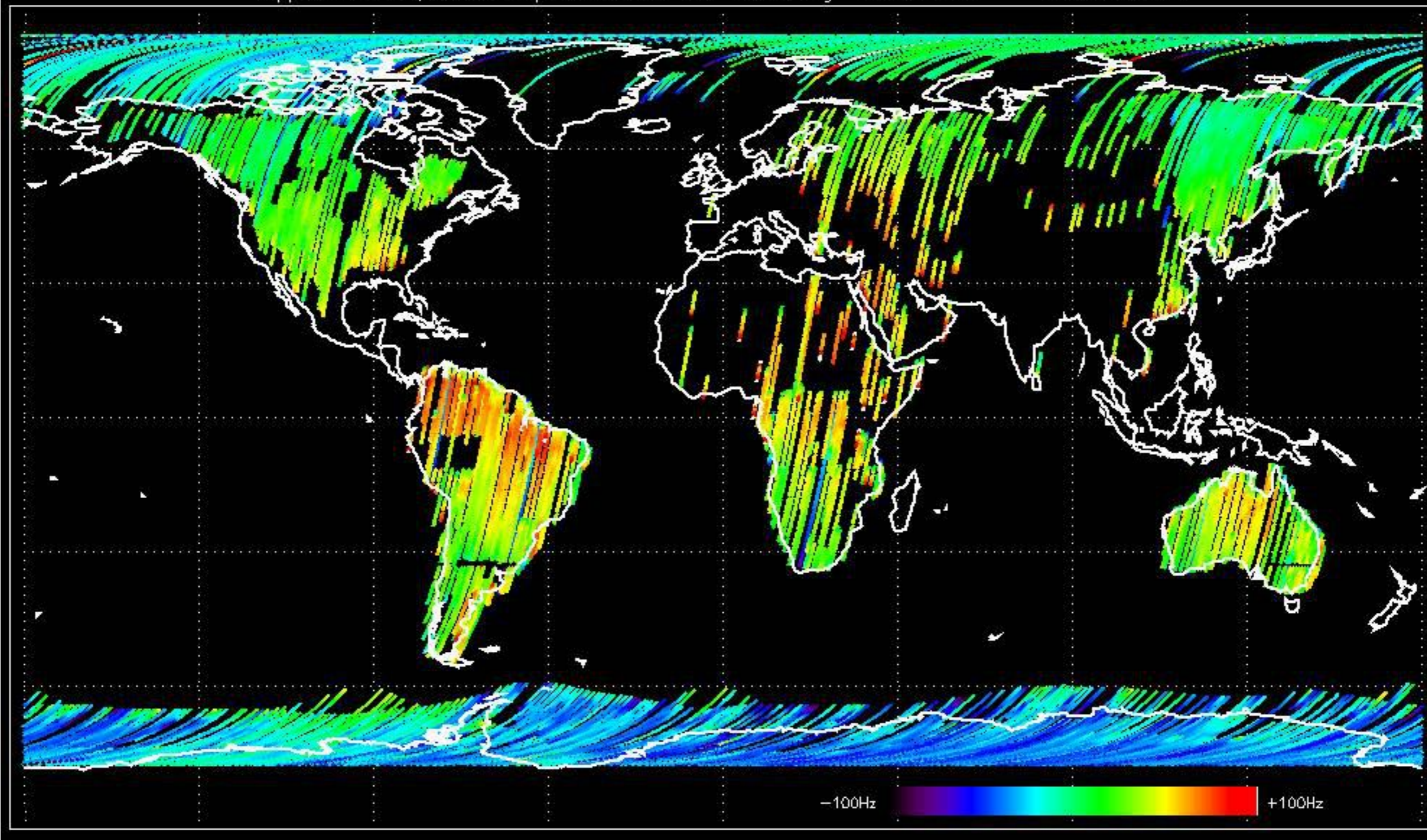
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.448976 Hz



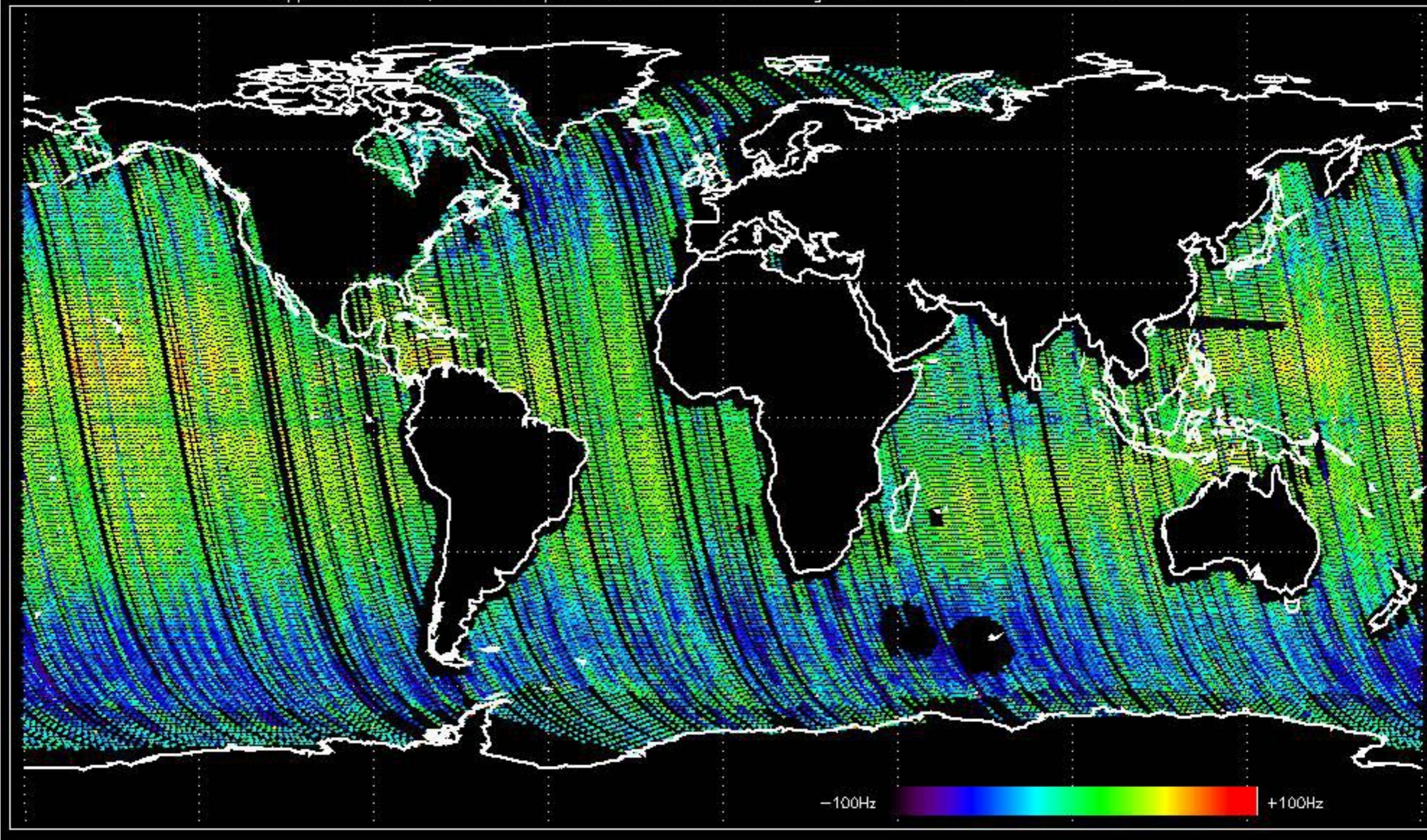
-100Hz

+100Hz

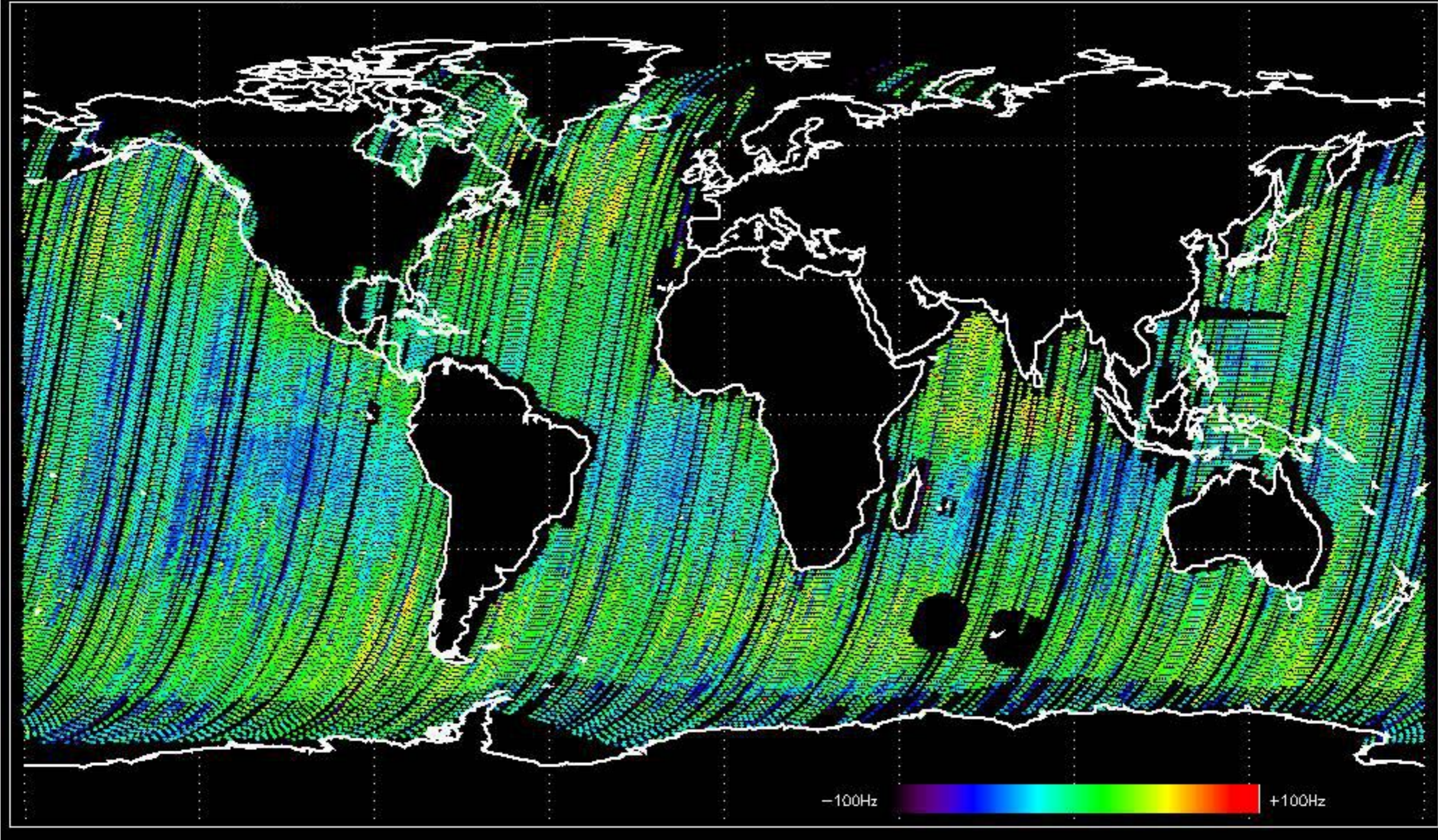
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -20.177903 Hz



Doppler difference, estimated-predicted 'WS' 'IS2' ascending -error mean of -36.982742 Hz

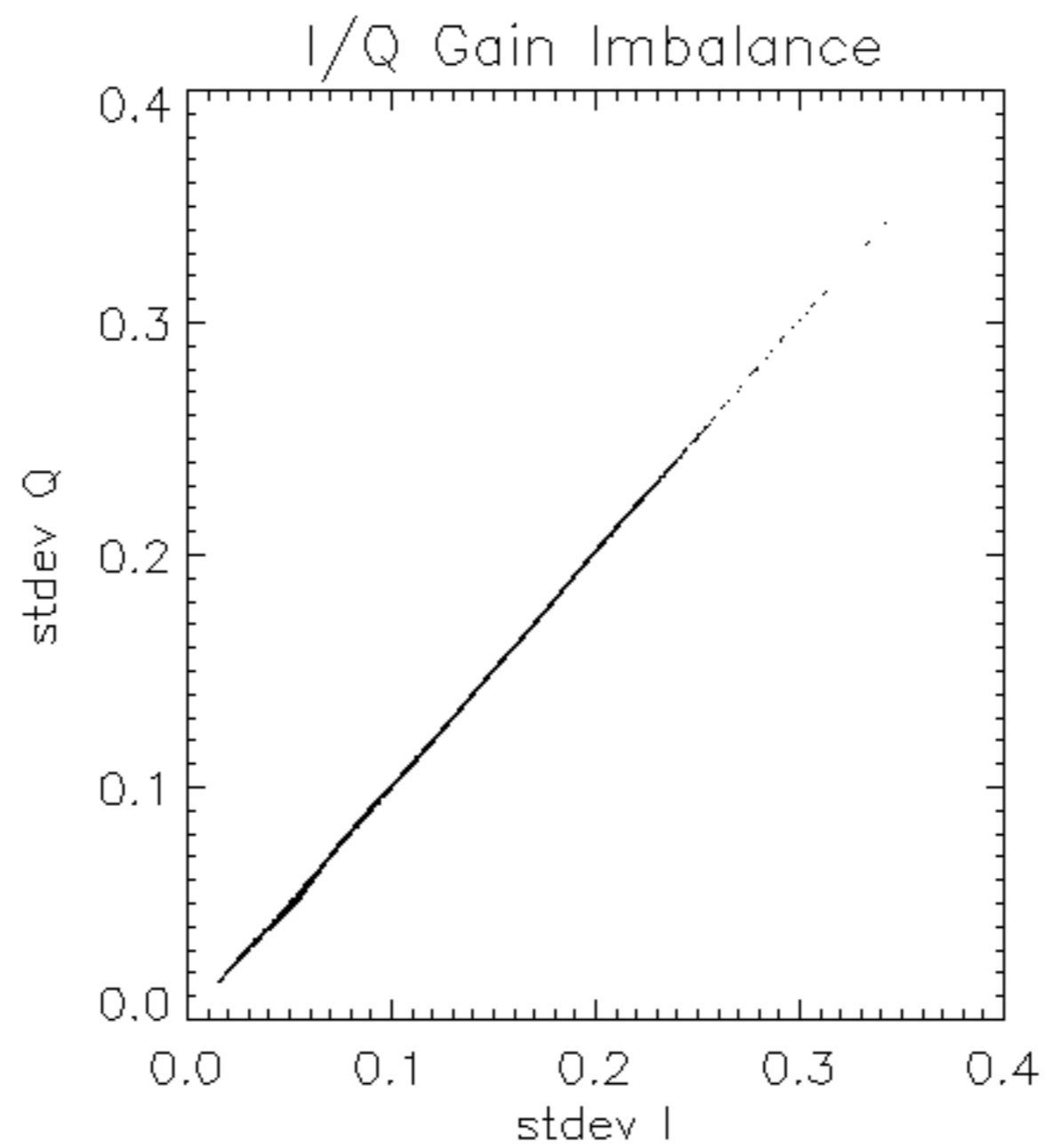


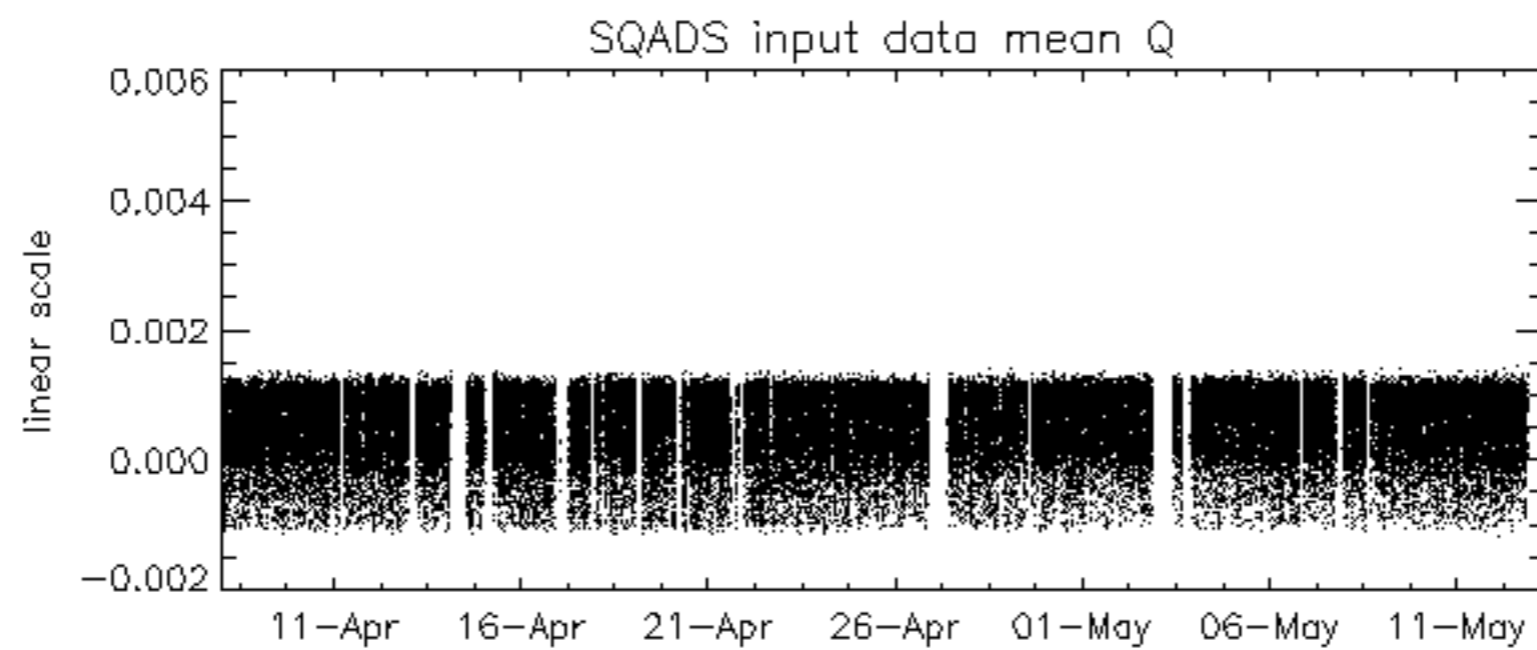
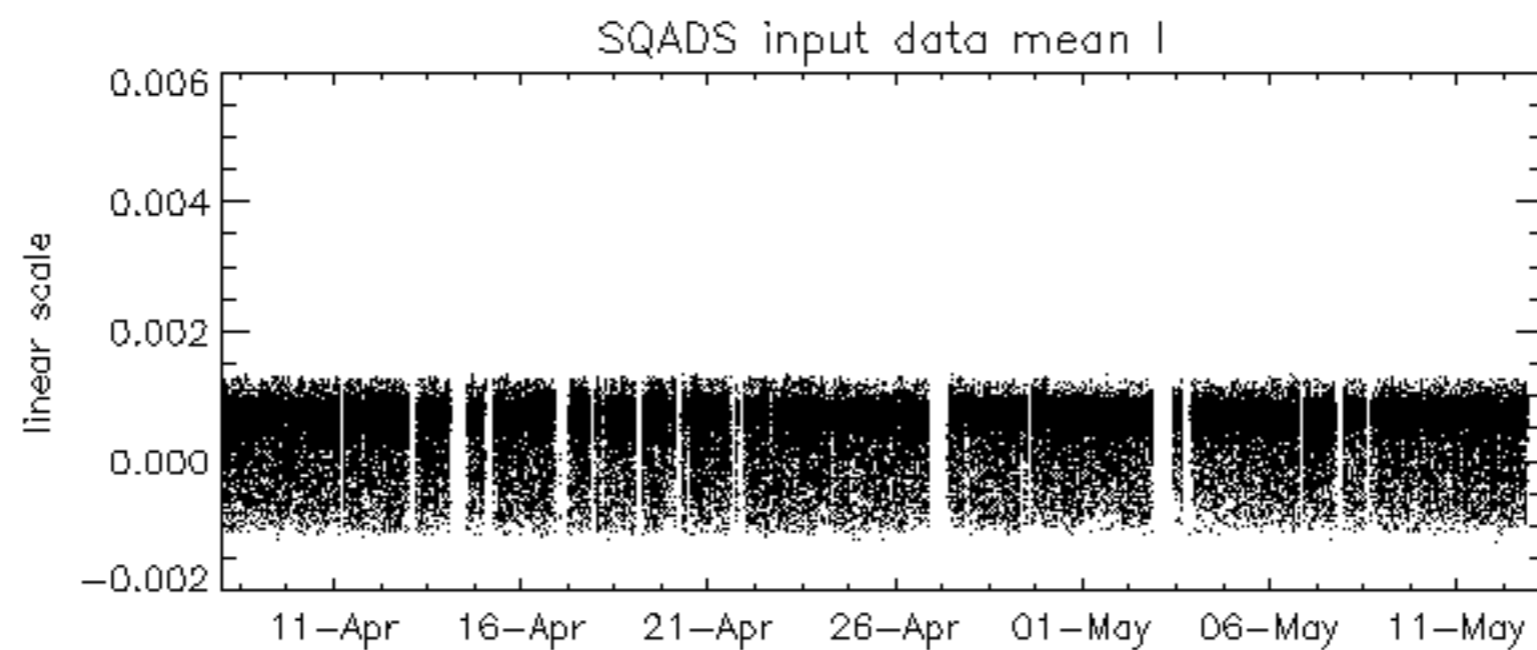
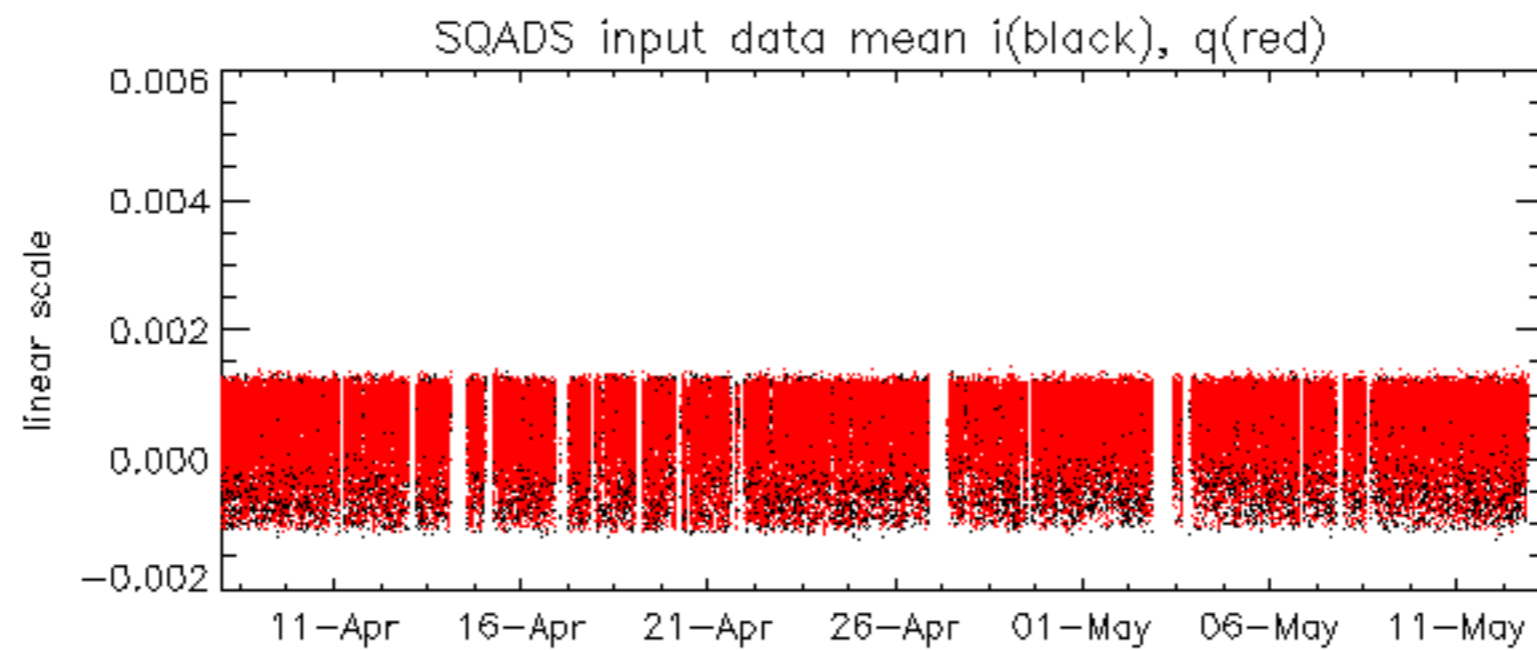
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.498964 Hz

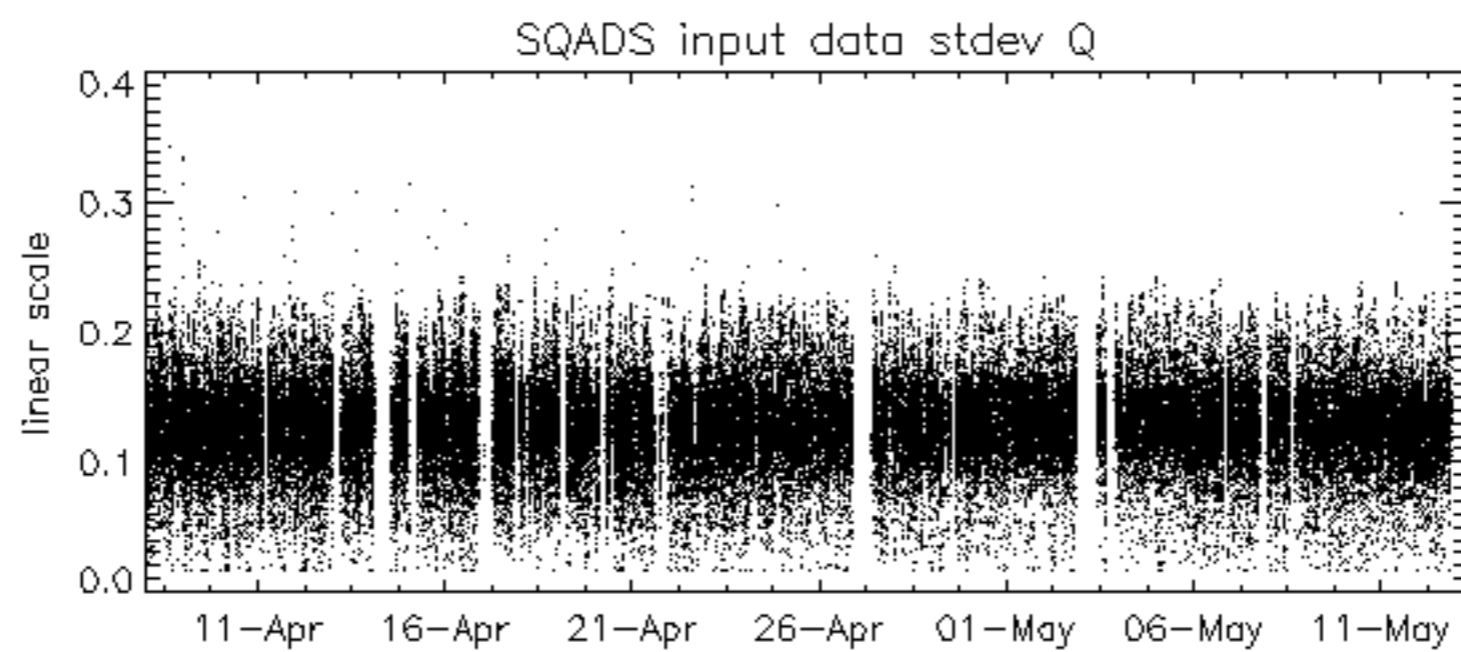
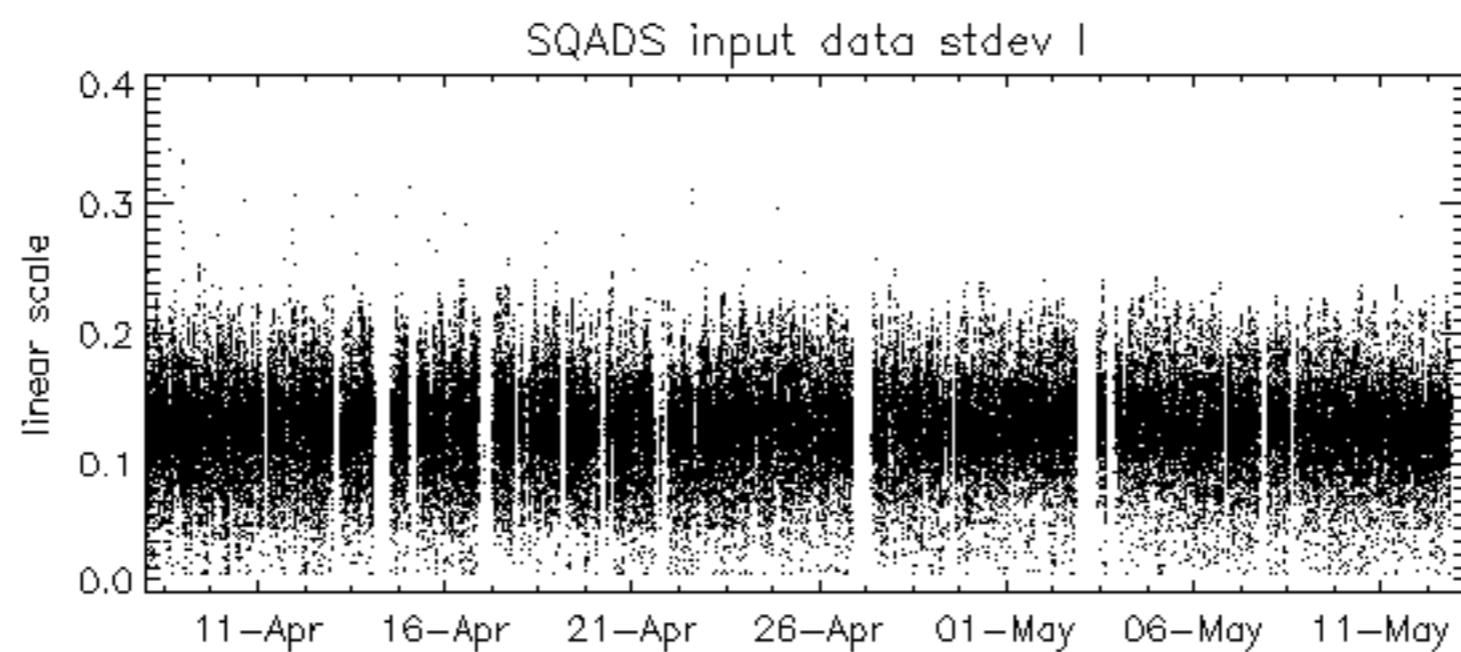
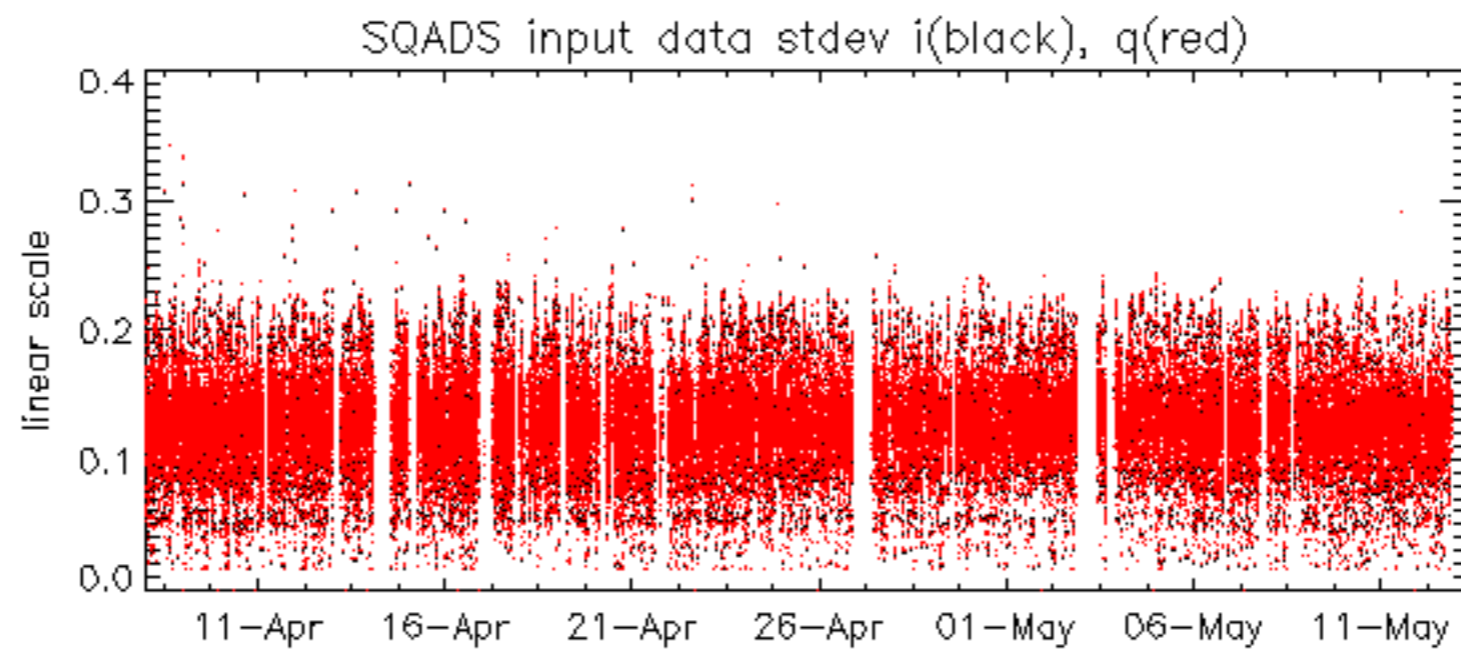


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