

REPORT OF 040813

last update on Fri Aug 13 14:48:29 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

ASAR unavailable from 12 Aug 2004 05:41:04.000 to 12 Aug 2004 10:13:40.000 and from 12 Aug 2004 18:45:00.000 to 12 Aug 2004 19:09:50.000.

2.2 - Browse Visual Inspection

No anomalies observed on available browse products

2.3 - Data Analysis

- Anomaly detected on internal calibration pulses due to Temperature-OOLs on Tile B1:
- > P1 and P1a (probably rows from 1 to 16) cal. pulses affected by a power drop
- > Anomaly detected on 12-AUG-2004 around 13:45:00
- 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__0PNPDE20040812_040602_000000152029_00233_12812_0008.N1

Polarisation	Start Time
V	20040811 043740
H	20040812 040602

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

- Anomaly detected on internal calibration pulses due to Temperature-OOLs on Tile B1:
- > P1 and P1a (probably rows from 1 to 16) cal. pulses affected by a power drop

-> Anomaly detected on 12-AUG-2004 around 13:45:00

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	-3.491563	0.053208	-0.045178
7	P1	-3.342244	0.047041	-0.074699
11	P1	-4.642509	0.118741	-0.117147
15	P1	-5.751475	0.129773	-0.106681
19	P1	-3.453562	0.005013	0.003978

22	P1	-4.557731	0.010948	0.043504
24	P1	-4.957284	0.018991	0.016496
30	P1	-6.910185	0.025238	-0.062799
3	P1	-16.244026	0.527450	-0.118873
7	P1	-13.994518	0.165004	-0.136380
11	P1	-20.065382	0.390452	-0.177978
15	P1	-11.791493	0.179338	-0.101293
19	P1	-13.864740	0.032426	-0.008733
22	P1	-16.285194	0.338073	0.153528
24	P1	-14.588375	0.282505	0.157359
30	P1	-17.695892	0.429635	-0.157367

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.313725	0.078798	0.055450
7	P2	-22.676394	0.124321	0.102543
11	P2	-15.407681	0.152241	0.104999
15	P2	-7.088305	0.090999	0.105394
19	P2	-9.559484	0.172379	0.113620
22	P2	-17.387432	0.109109	0.147117
24	P2	-20.752439	0.083694	0.000174
30	P2	-19.317699	0.078290	0.135926

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.141063	0.002381	0.017172
7	P3	-8.141062	0.002381	0.017160
11	P3	-8.141065	0.002382	0.017214
15	P3	-8.141063	0.002381	0.017186
19	P3	-8.141061	0.002381	0.017153
22	P3	-8.141051	0.002380	0.017102
24	P3	-8.141047	0.002380	0.017076
30	P3	-8.140967	0.002378	0.016958

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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✕

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	-2.865855	0.194732	0.262159
7	P1	-3.023816	0.232556	-0.168210
11	P1	-3.866064	0.185641	-0.055995
15	P1	-3.641361	0.368462	0.568875
19	P1	-3.458580	0.025629	-0.099767
22	P1	-5.669819	0.047309	0.017775
24	P1	-3.887356	0.037170	0.104996
30	P1	-6.173496	0.075592	0.011816
3	P1	-10.666623	0.584339	0.327782
7	P1	-10.081953	0.246912	-0.264054
11	P1	-12.048072	0.201306	-0.204606
15	P1	-11.668699	0.215444	0.217563
19	P1	-15.529028	0.248711	-0.509468
22	P1	-22.989058	2.697613	-1.788960
24	P1	-17.670481	0.279264	-0.583081
30	P1	-20.492949	2.006369	0.738881

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.991751	0.086232	0.088494
7	P2	-22.784212	0.257935	0.049833
11	P2	-11.017938	0.132239	-0.060290
15	P2	-4.949155	0.042587	0.024331
19	P2	-6.789338	0.061199	0.156751
22	P2	-7.485587	0.110256	0.173526
24	P2	-11.037492	0.147939	0.032654
30	P2	-22.239386	0.116985	0.056930

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.983069	0.003919	0.005702
7	P3	-7.983224	0.003925	0.005889
11	P3	-7.983160	0.003919	0.005338
15	P3	-7.983069	0.003920	0.005622
19	P3	-7.983181	0.003926	0.005635
22	P3	-7.983123	0.003915	0.005817
24	P3	-7.983197	0.003940	0.005628
30	P3	-7.983209	0.003914	0.005976

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	0.000493785
	stdev	2.14230e-07
MEAN Q	mean	0.000535030
	stdev	2.45520e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129269
	stdev	0.00103730
STDEV Q	mean	0.129518
	stdev	0.00104939





5.3 - Gain imbalance I/Q





6 - 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)	
	
	Acsending
	
	Descending

6.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler	
	
	Acsending
	
	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)**

Acsending

Descending

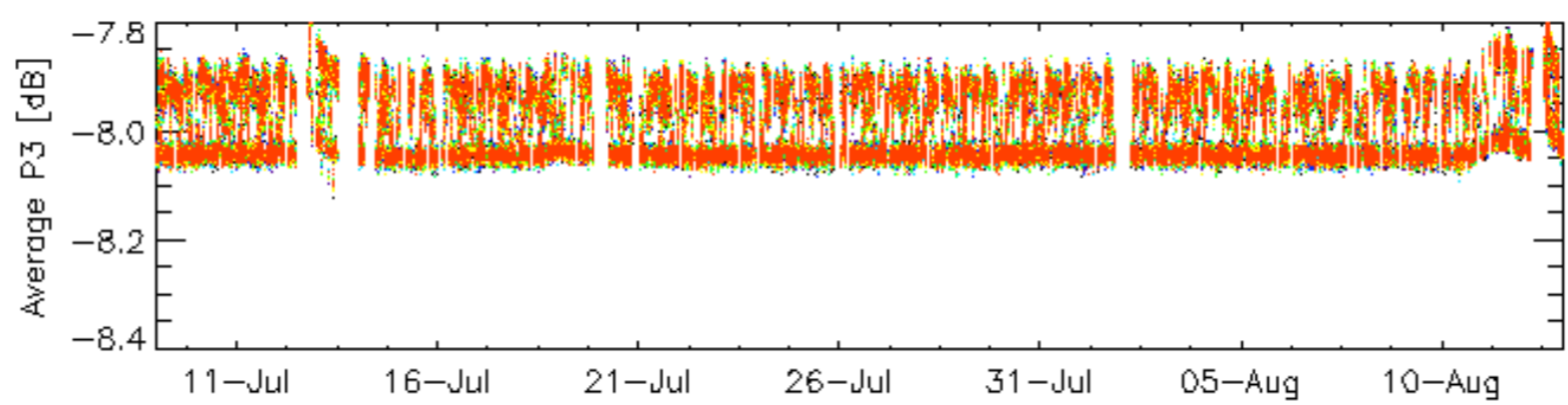
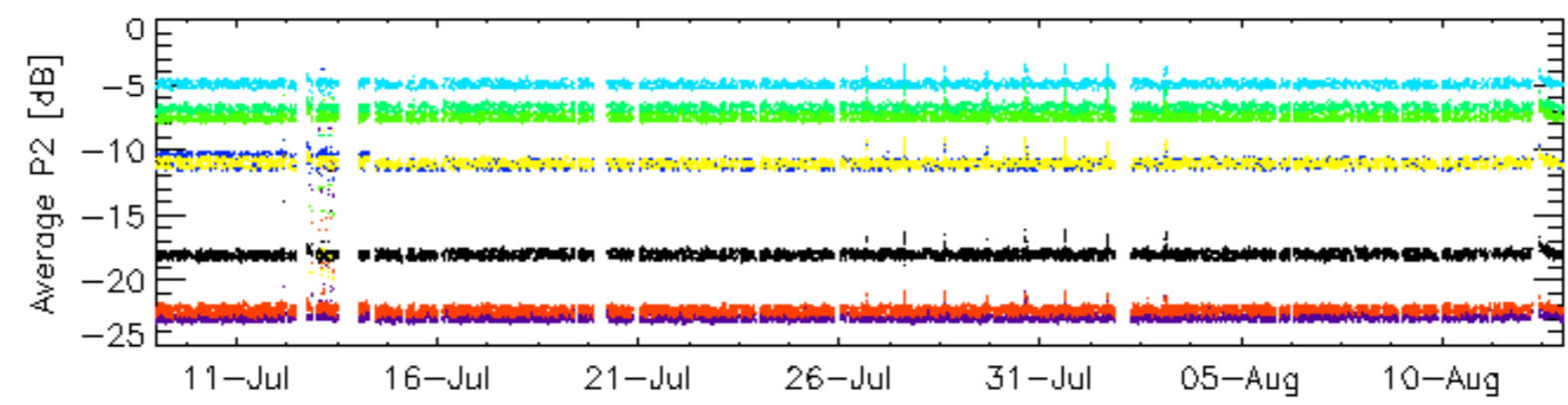
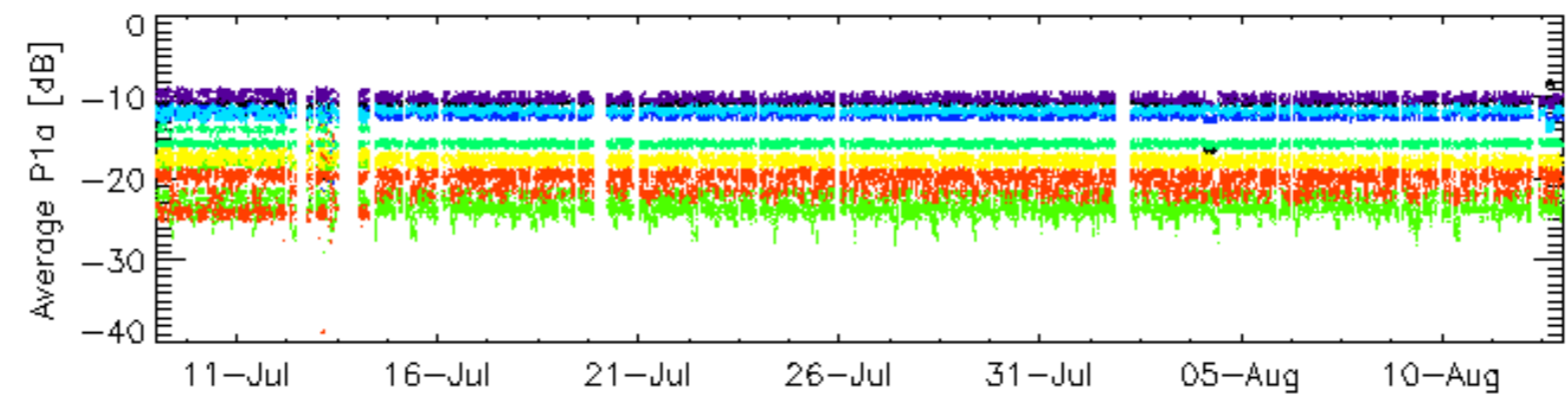
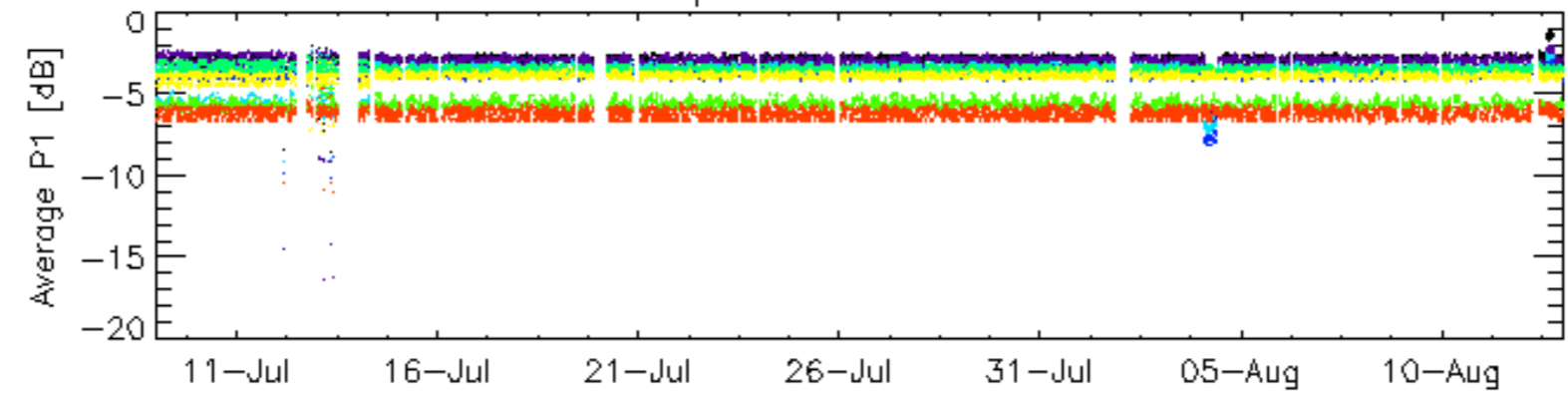
6.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

Acsending

Descending

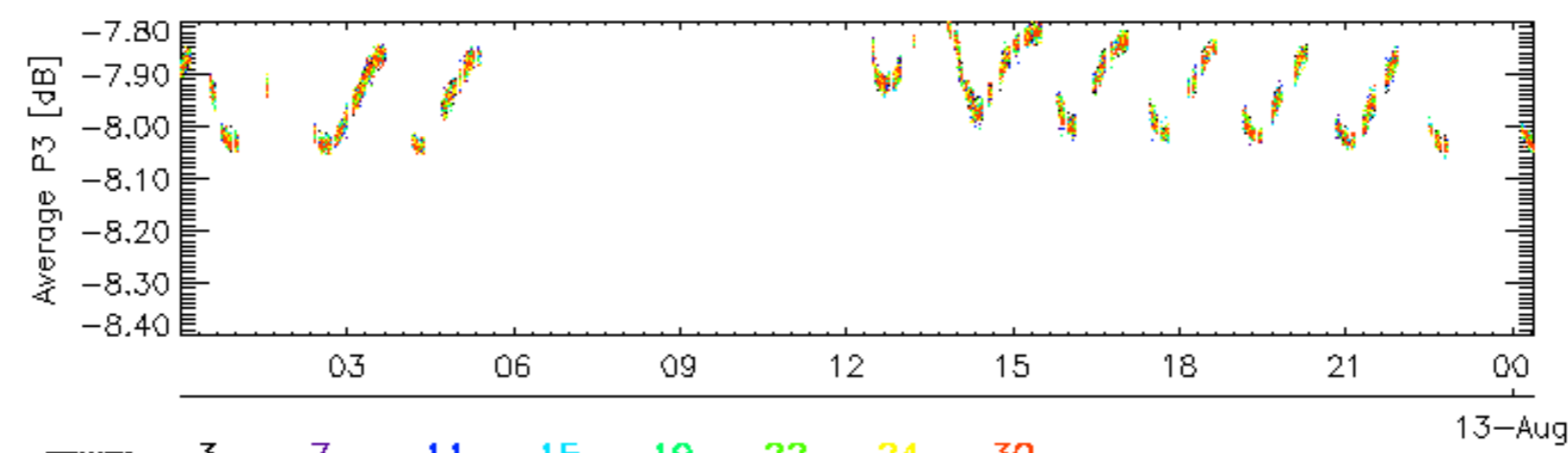
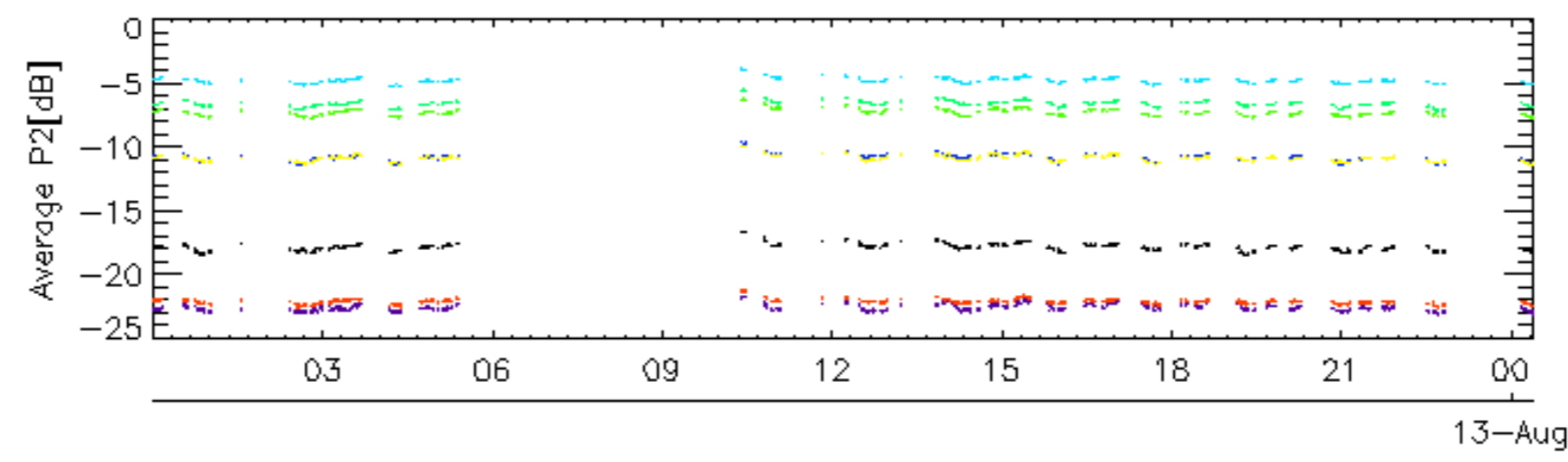
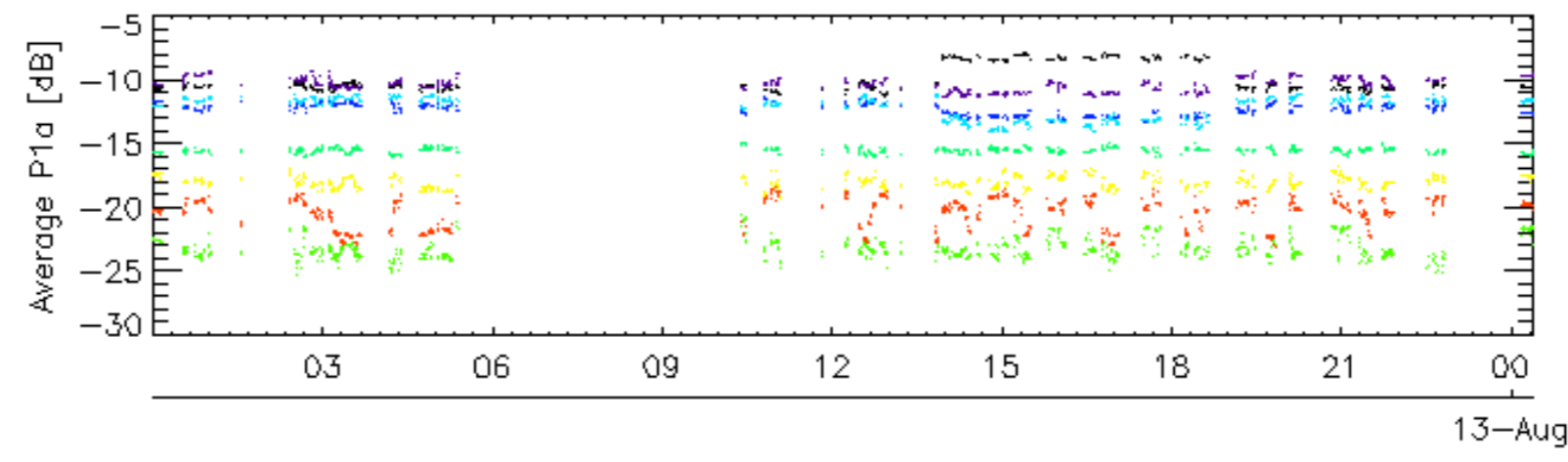
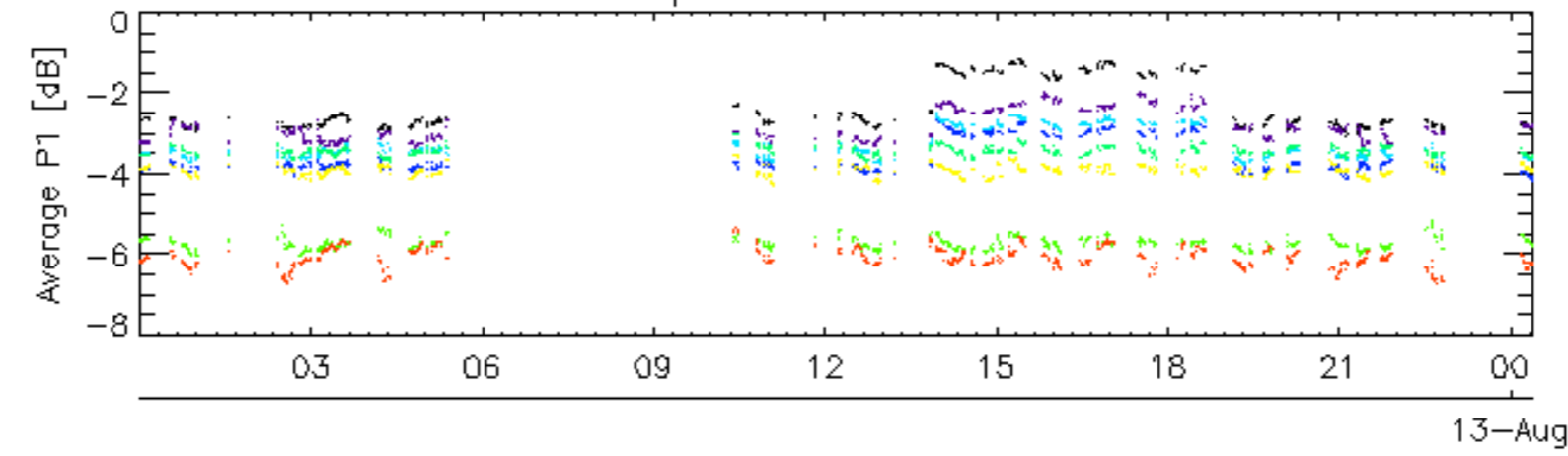
6.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

Cal pulses for GM1 SS3



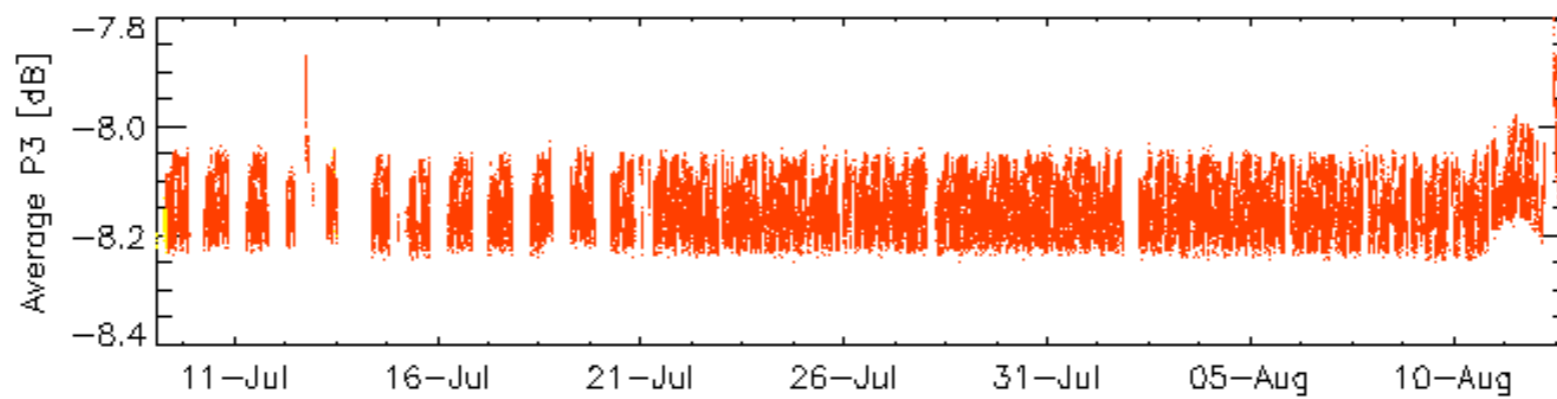
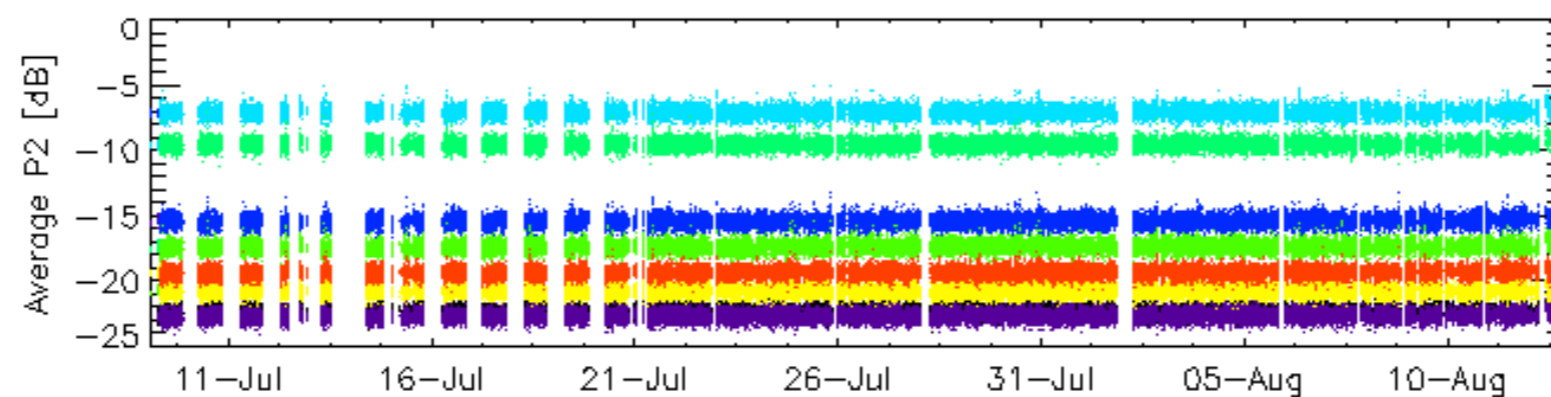
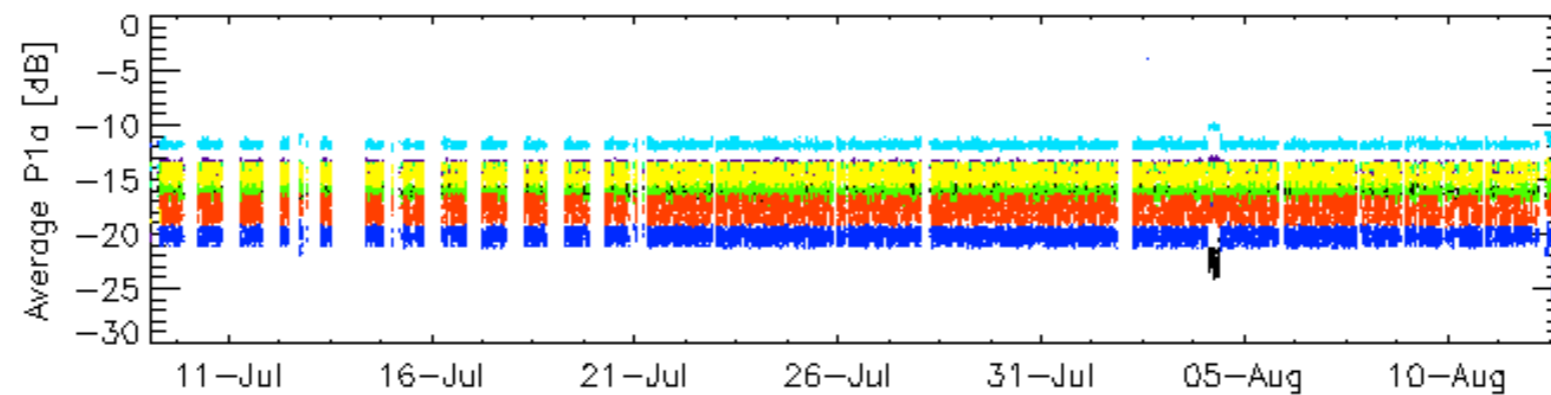
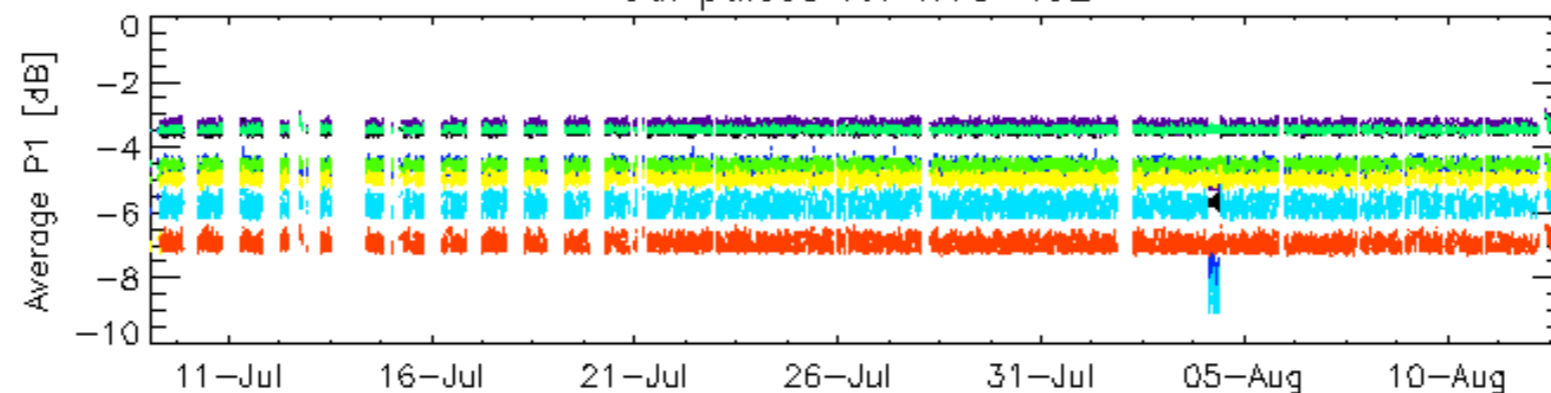
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

Cal pulses for GM1 SS3



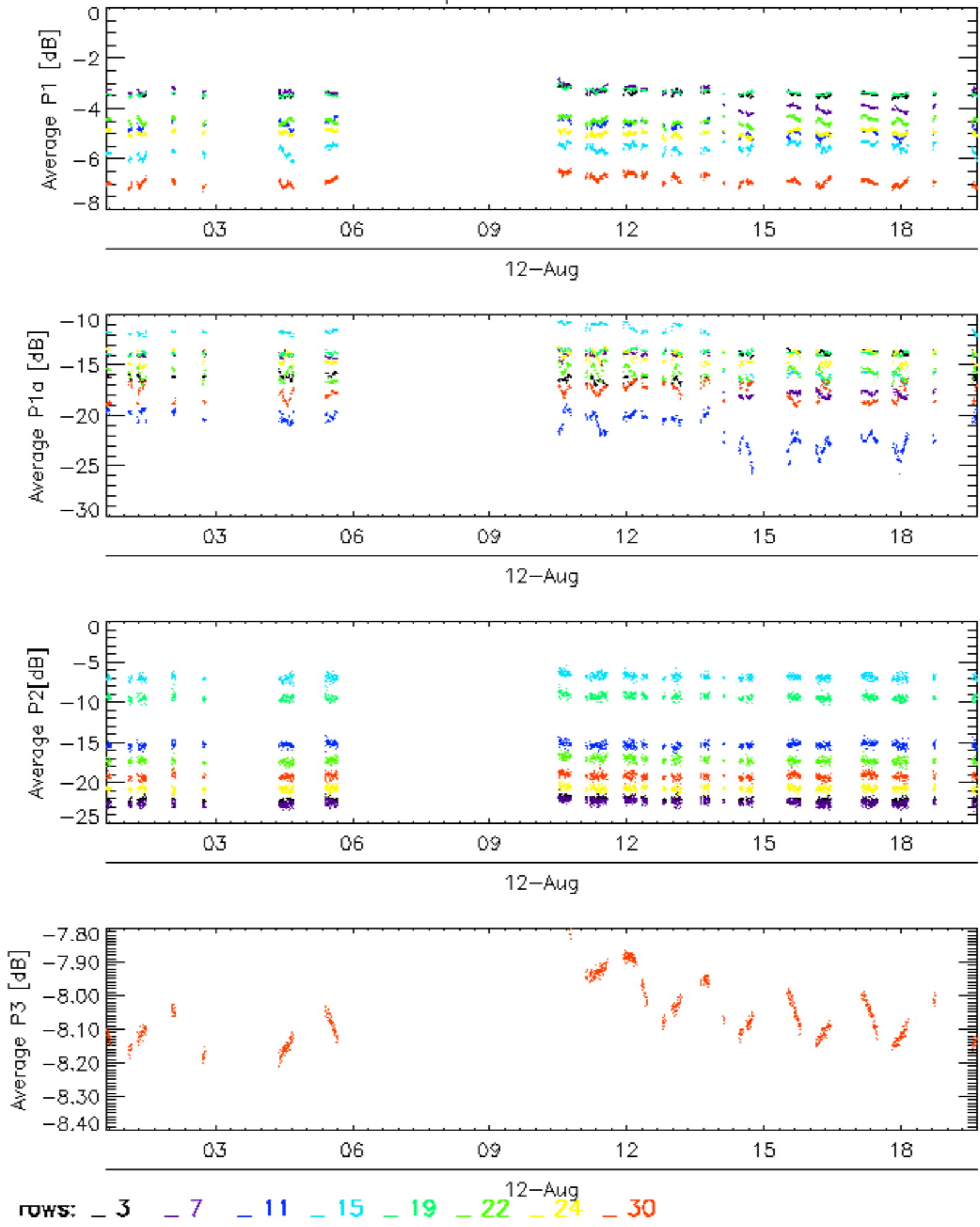
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30

Cal pulses for WVS IS2



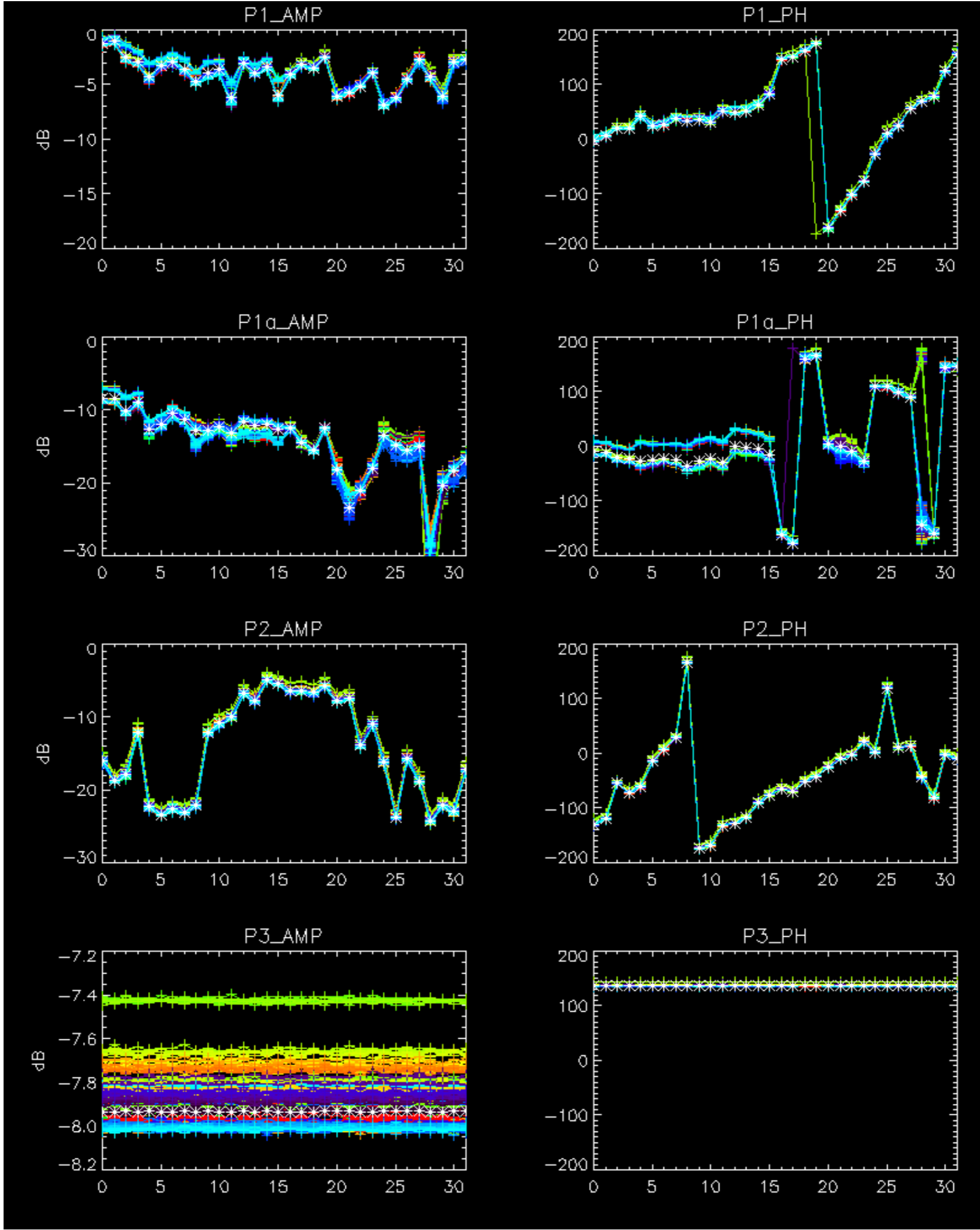
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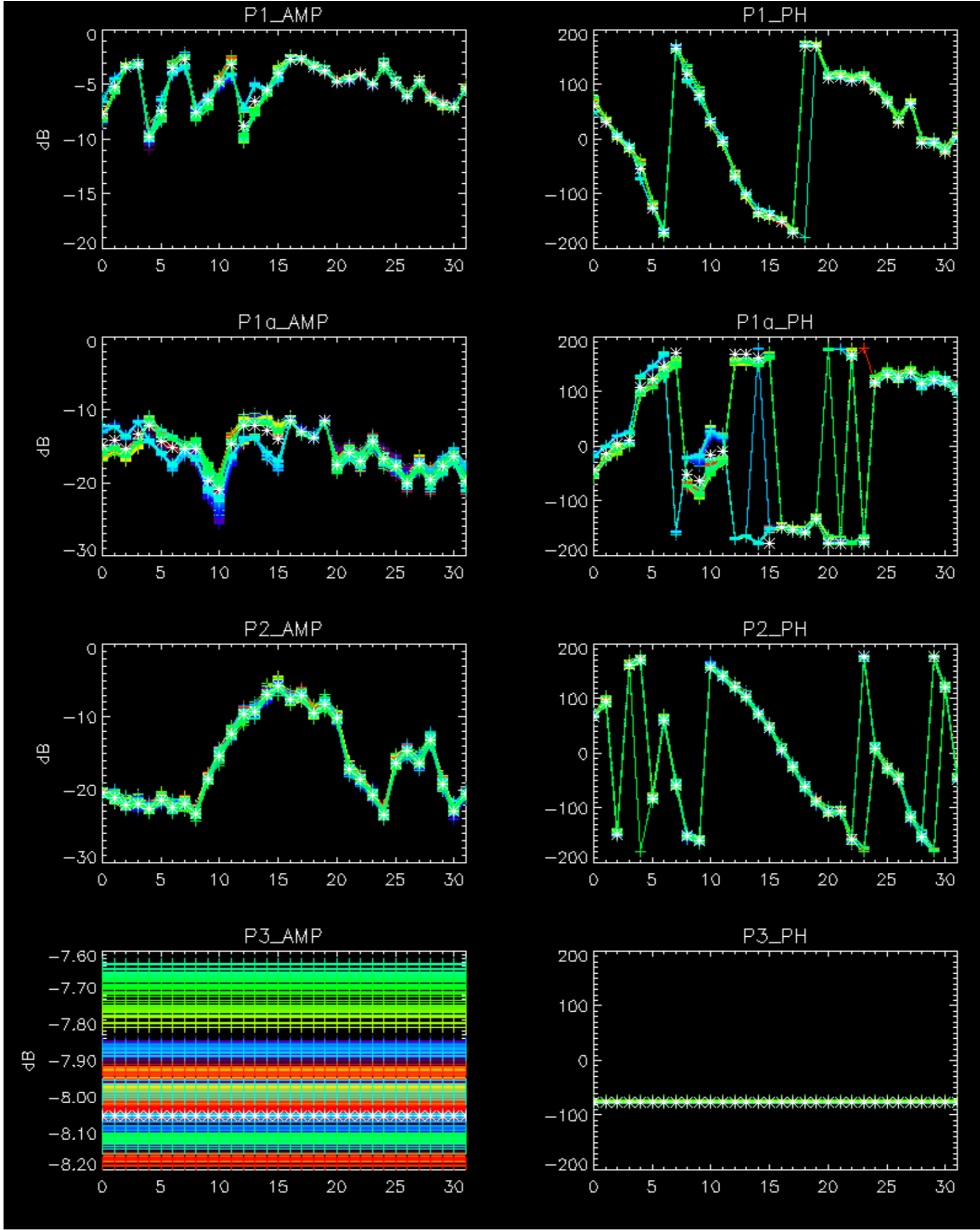
Cal pulses for WVS IS2



No anomalies observed on available browse products

-Anomaly detected on internal calibration pulses due to Temperature-00Ls on Tile B1:
-> P1 and P1a (probably rows from 1 to 16) cal. pulses affected by a power drop
-> Anomaly detected on 12-AUG-2004 around 13:45:00

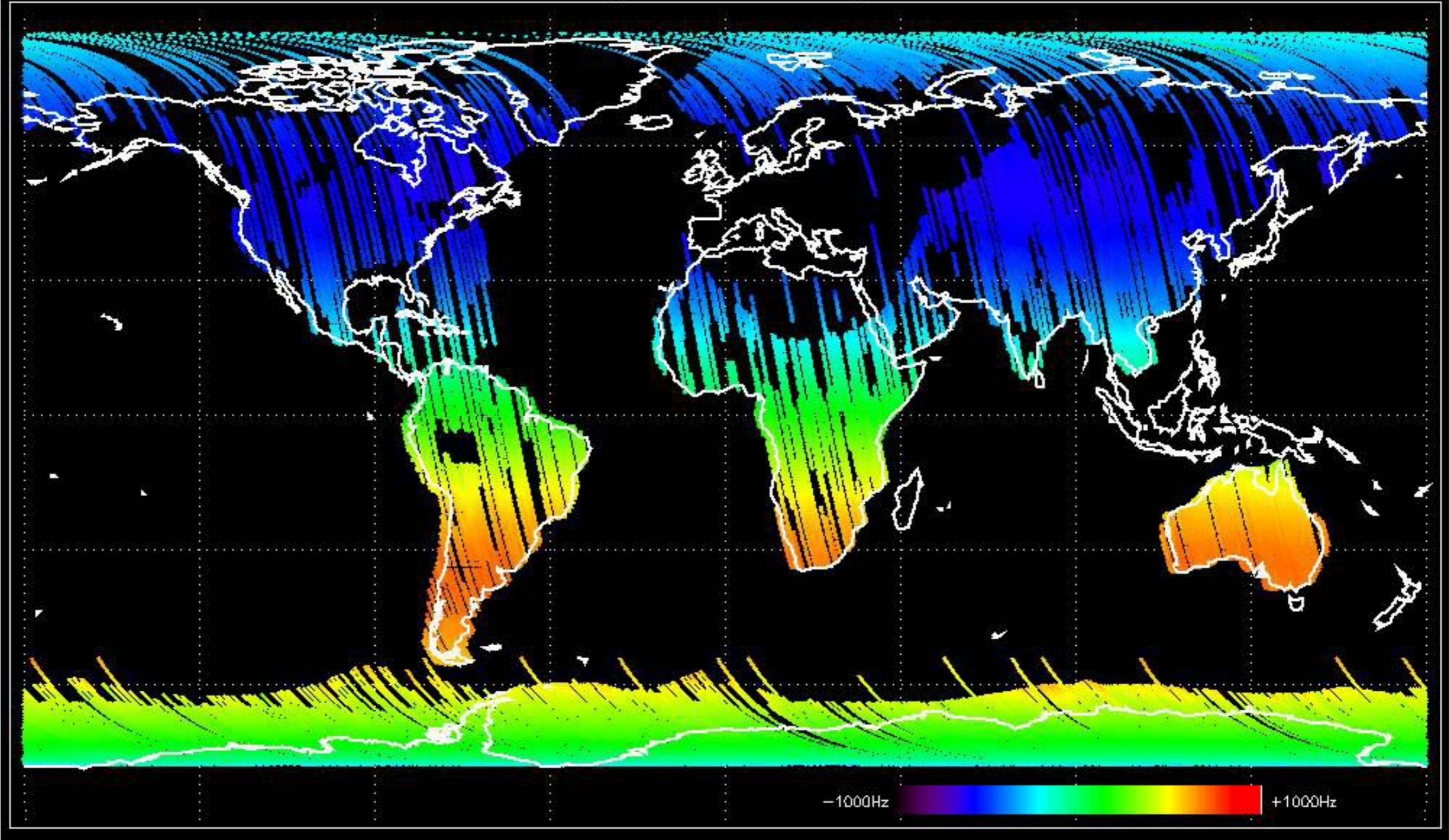




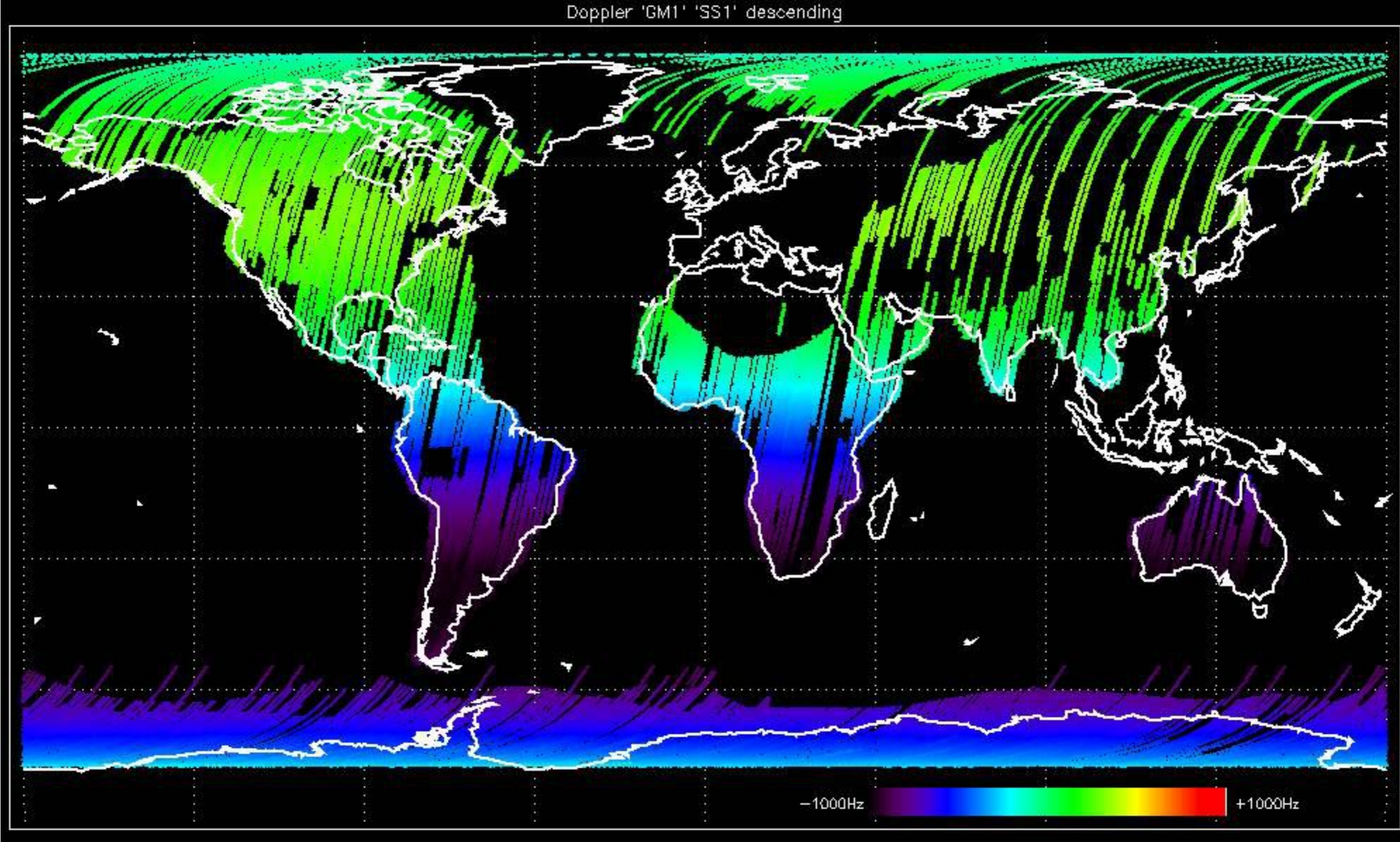
-Anomaly detected on internal calibration pulses due to Temperature-00Ls on Tile B1:
-> P1 and P1a (probably rows from 1 to 16) cal. pulses affected by a power drop
-> Anomaly detected on 12-AUG-2004 around 13:45:00
-Stable raw data statistics.
-Nominal Doppler behavior.

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

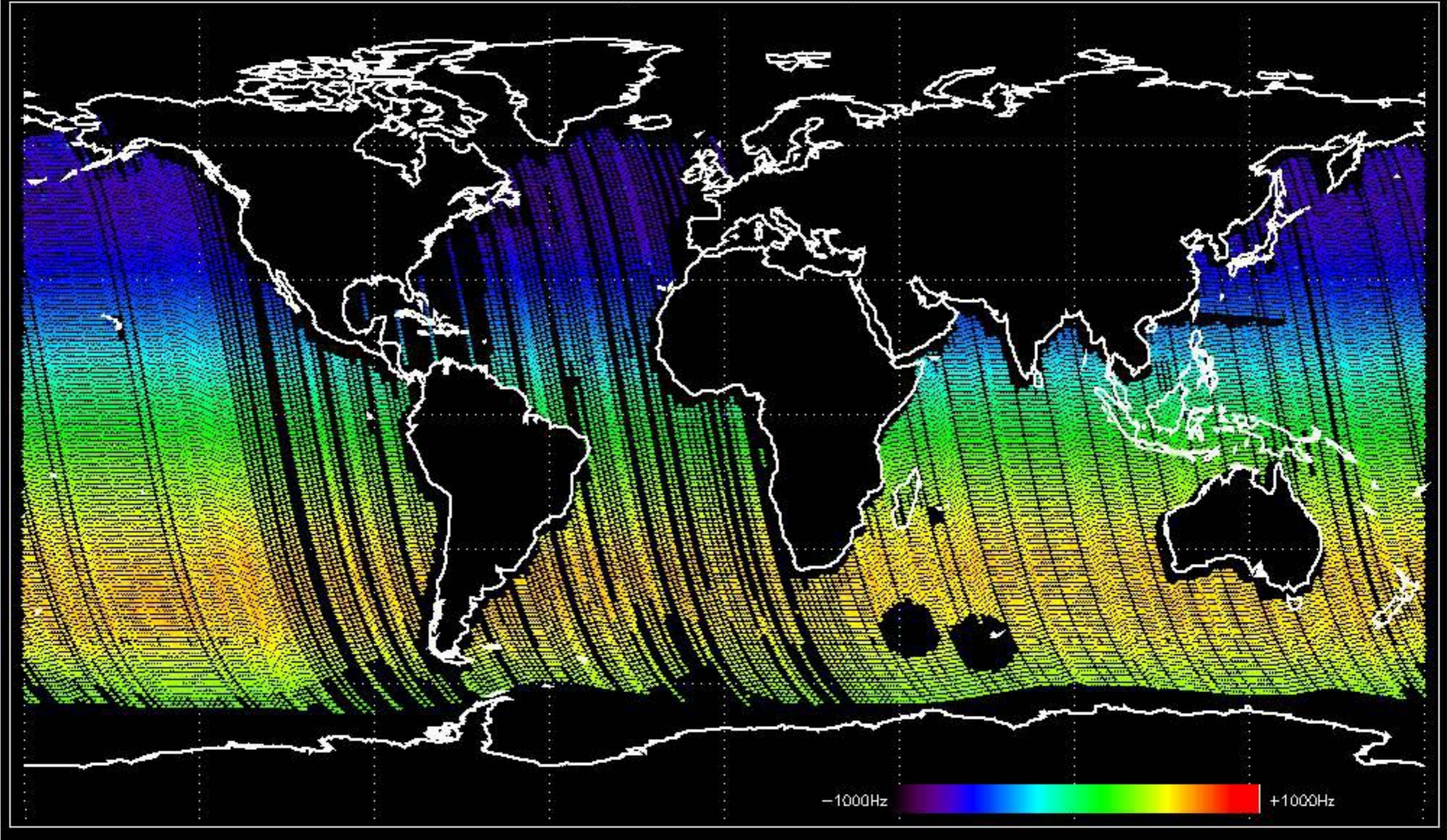
Doppler 'GM1' 'SS1' ascending



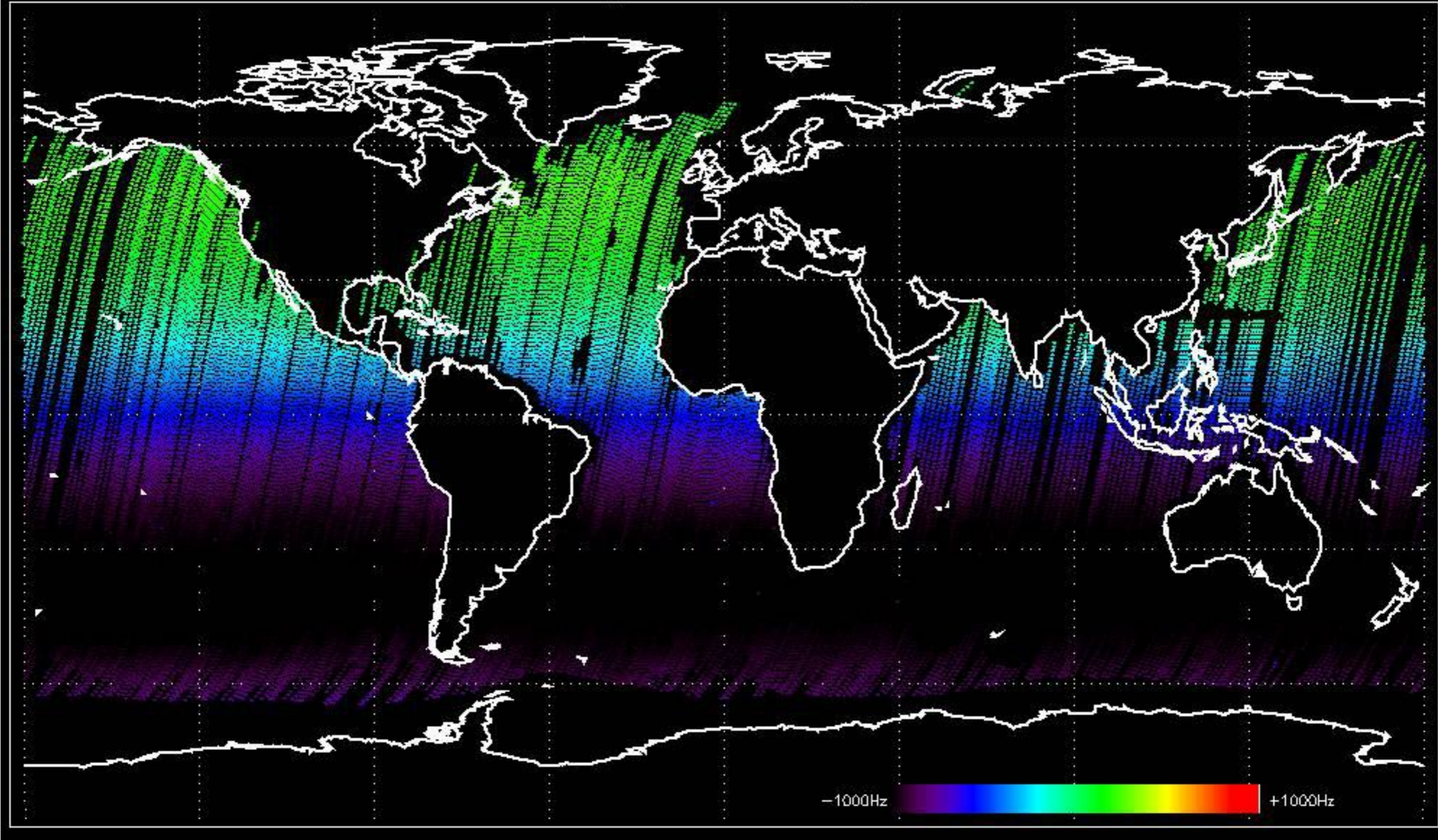
Doppler 'GM1' 'SS1' descending



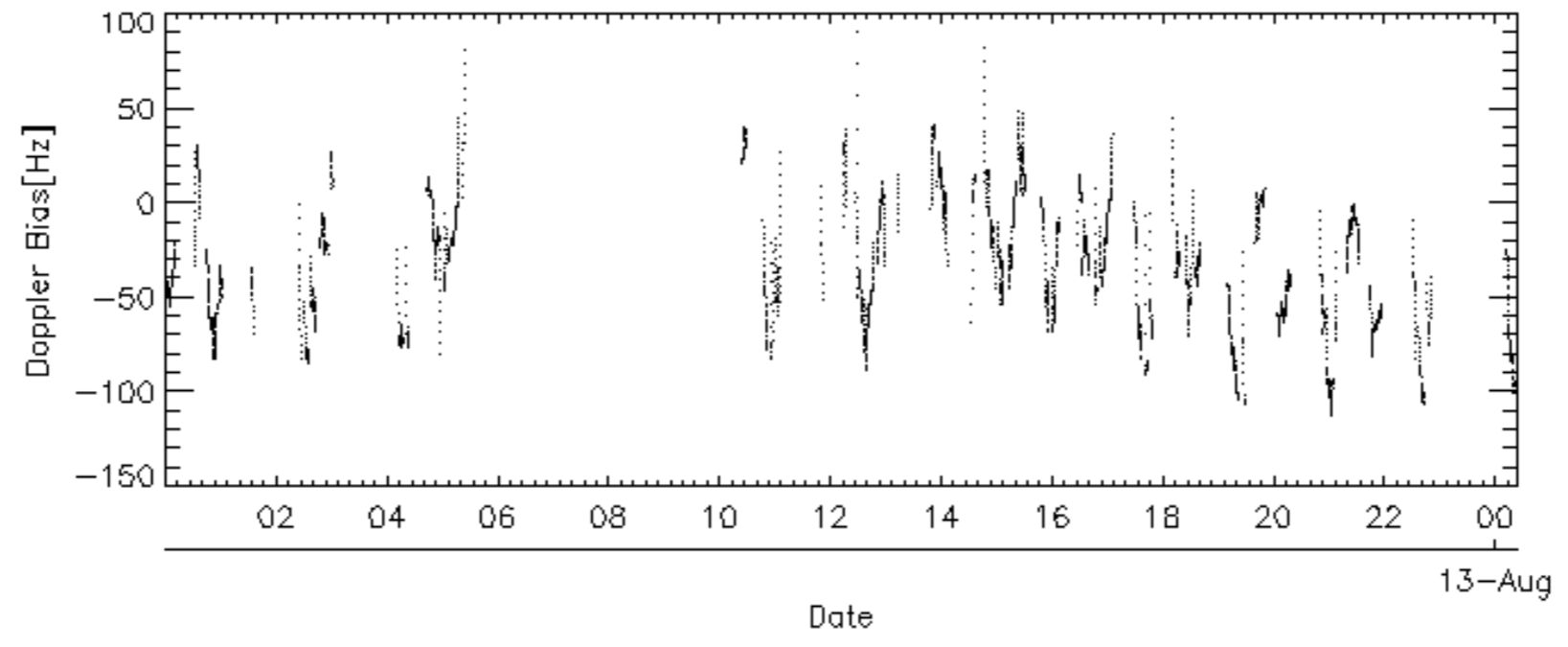
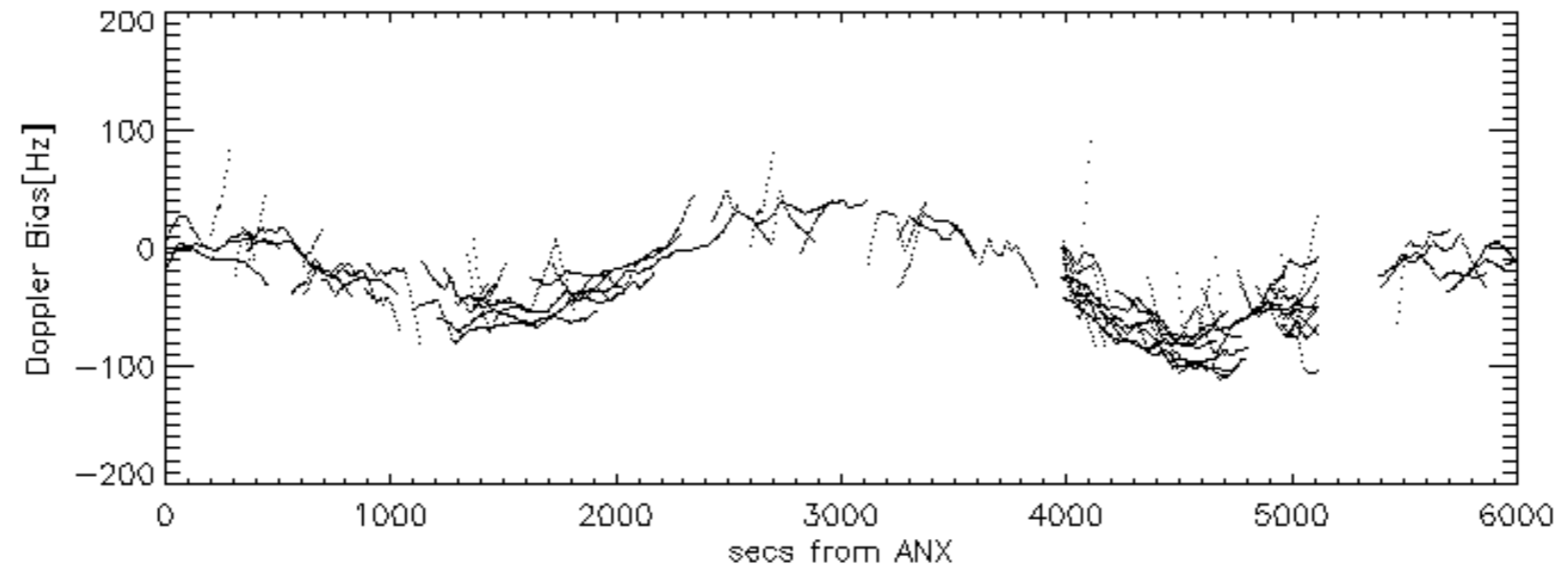
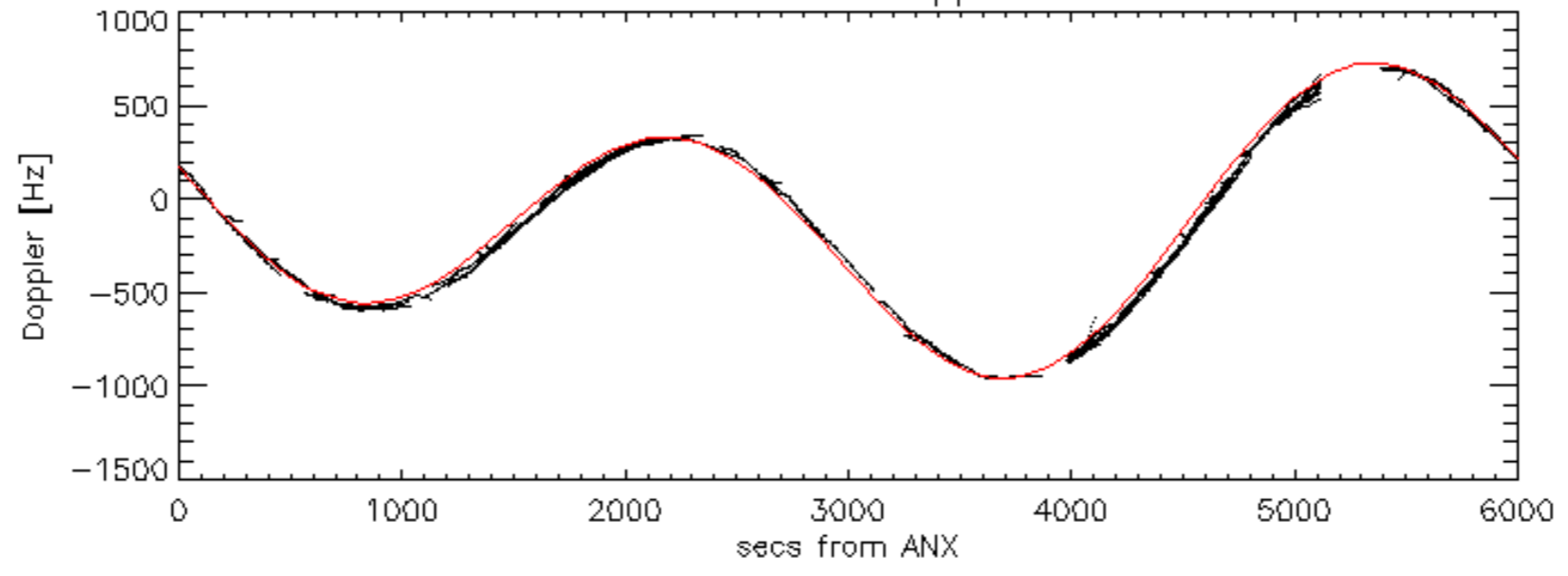
Doppler 'WVS' 'IS2' ascending

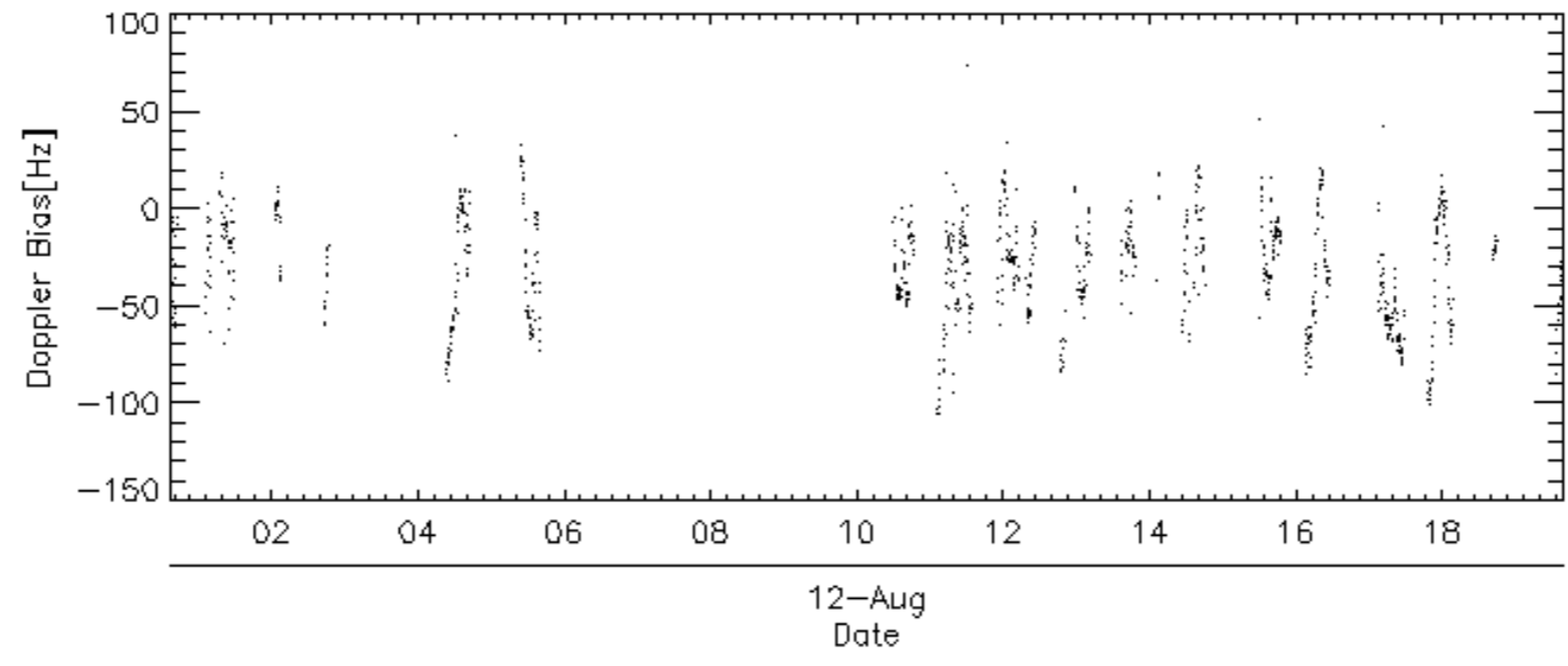
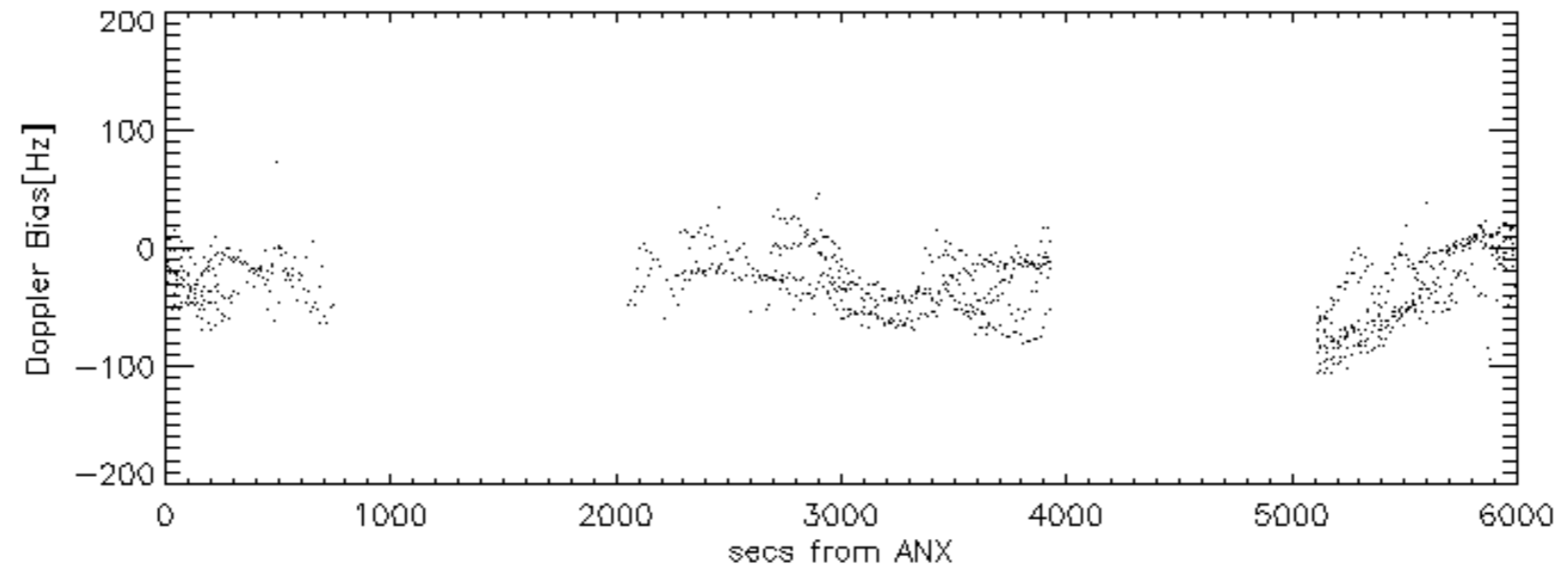
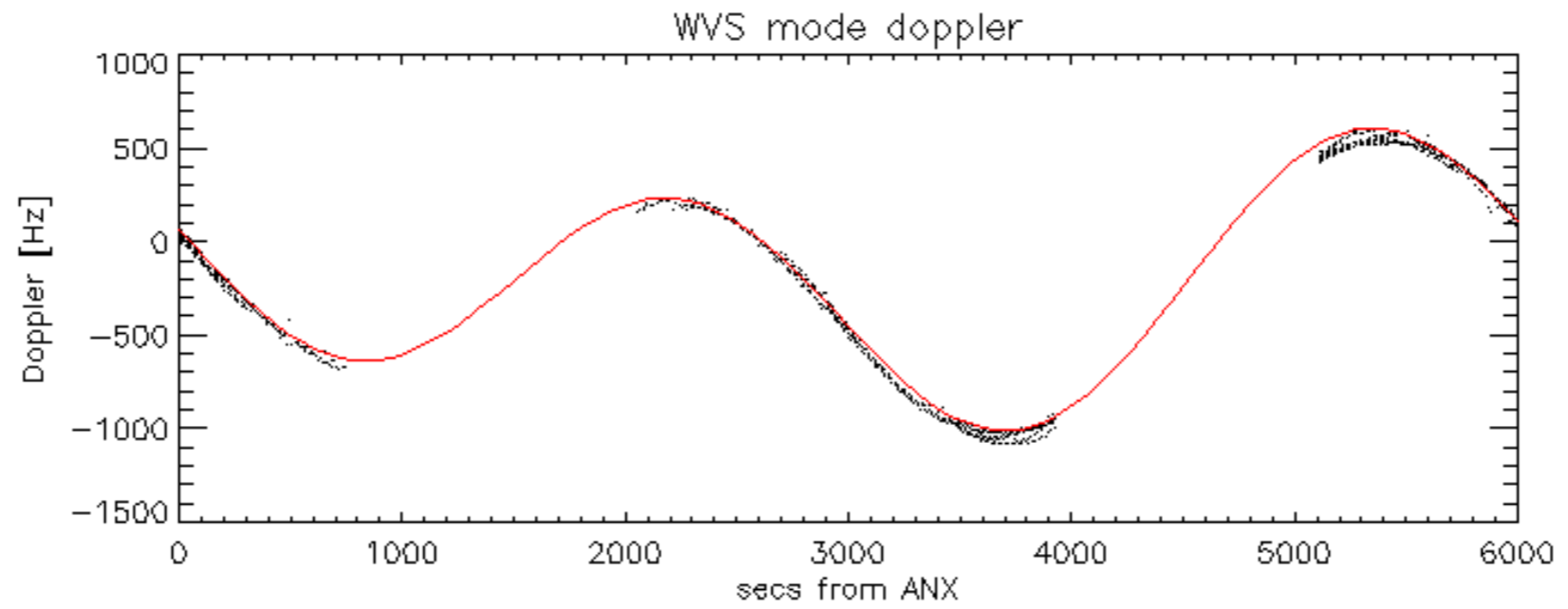


Doppler 'WVS' 'IS2' descending

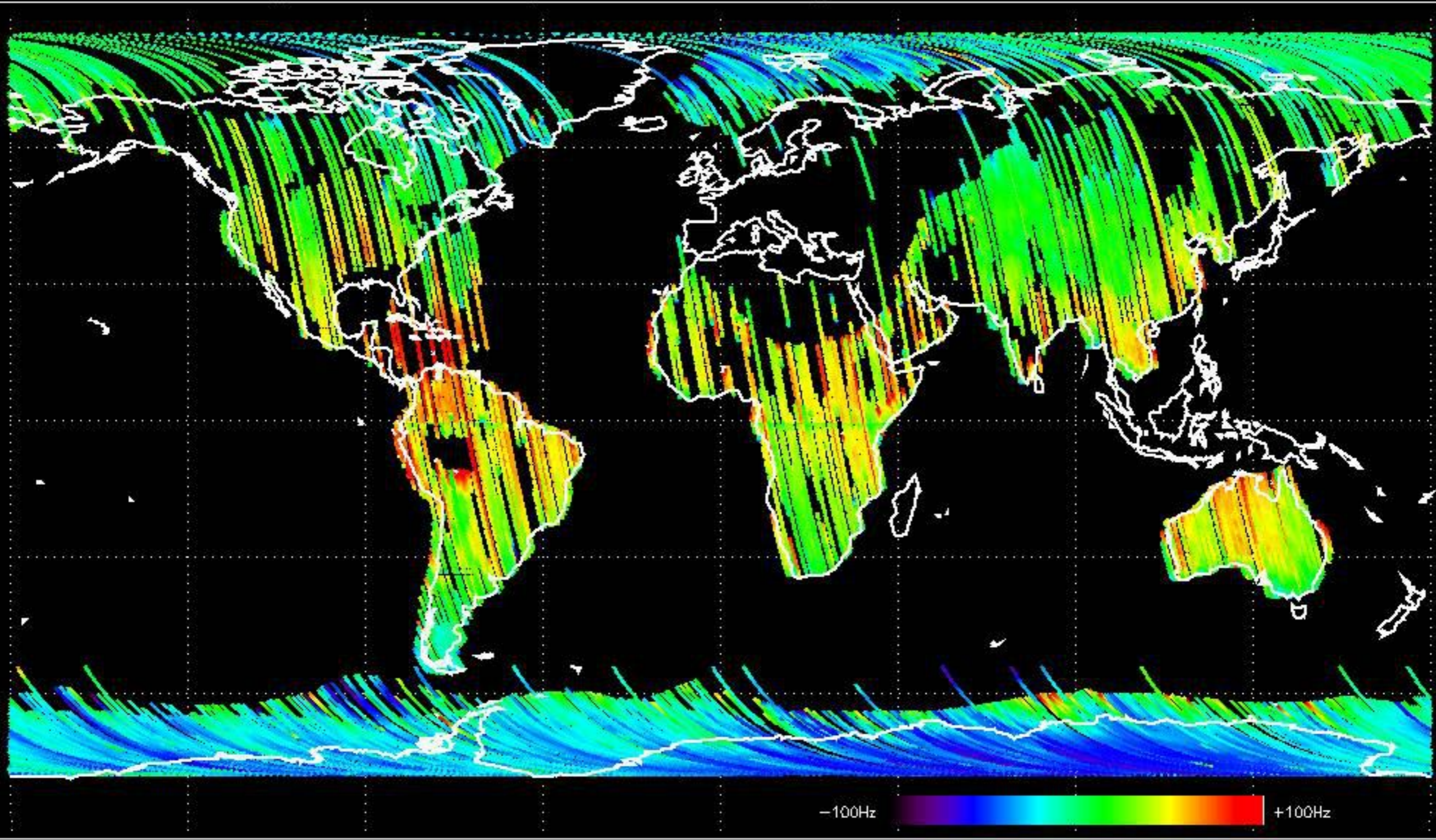


GM1 mode doppler

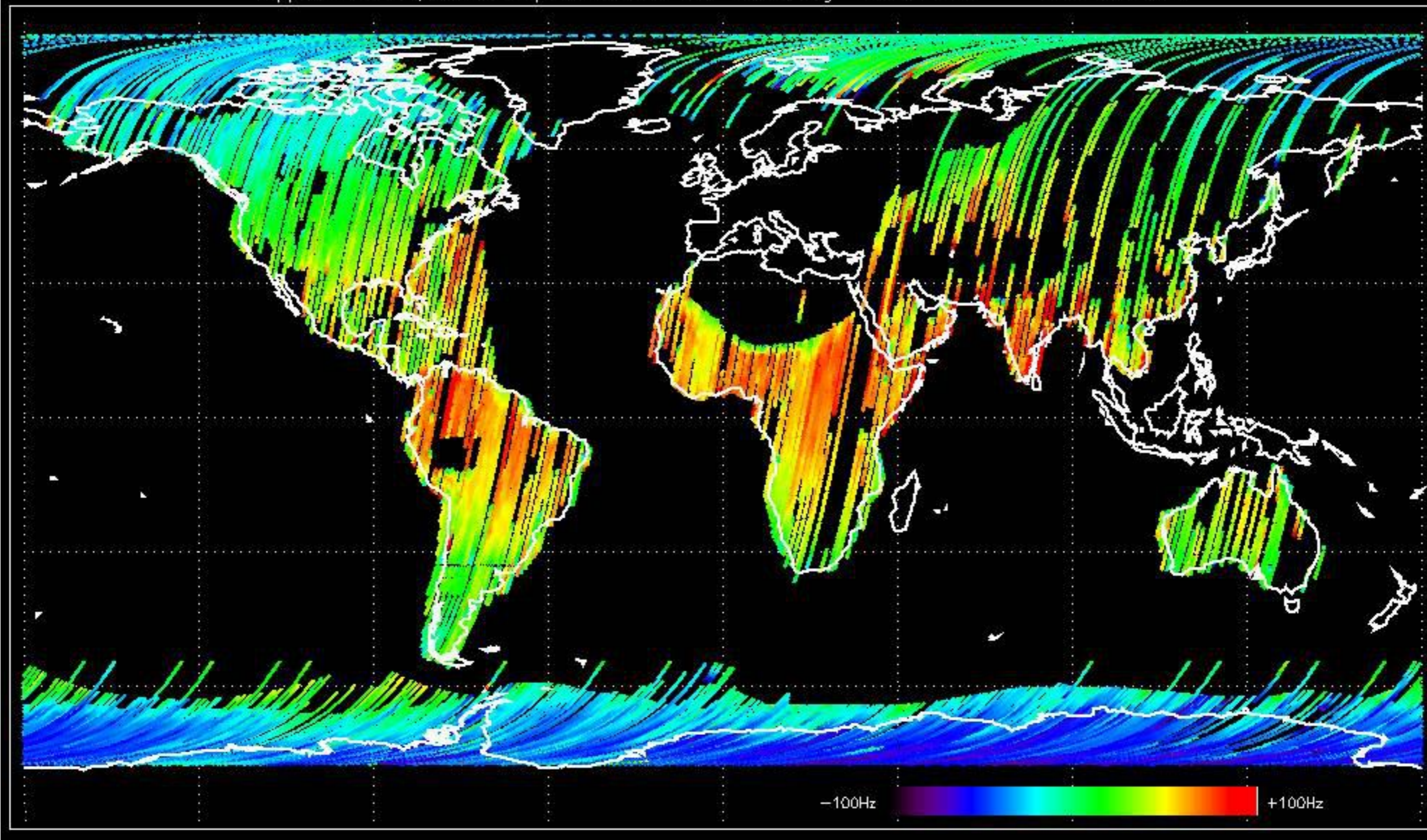




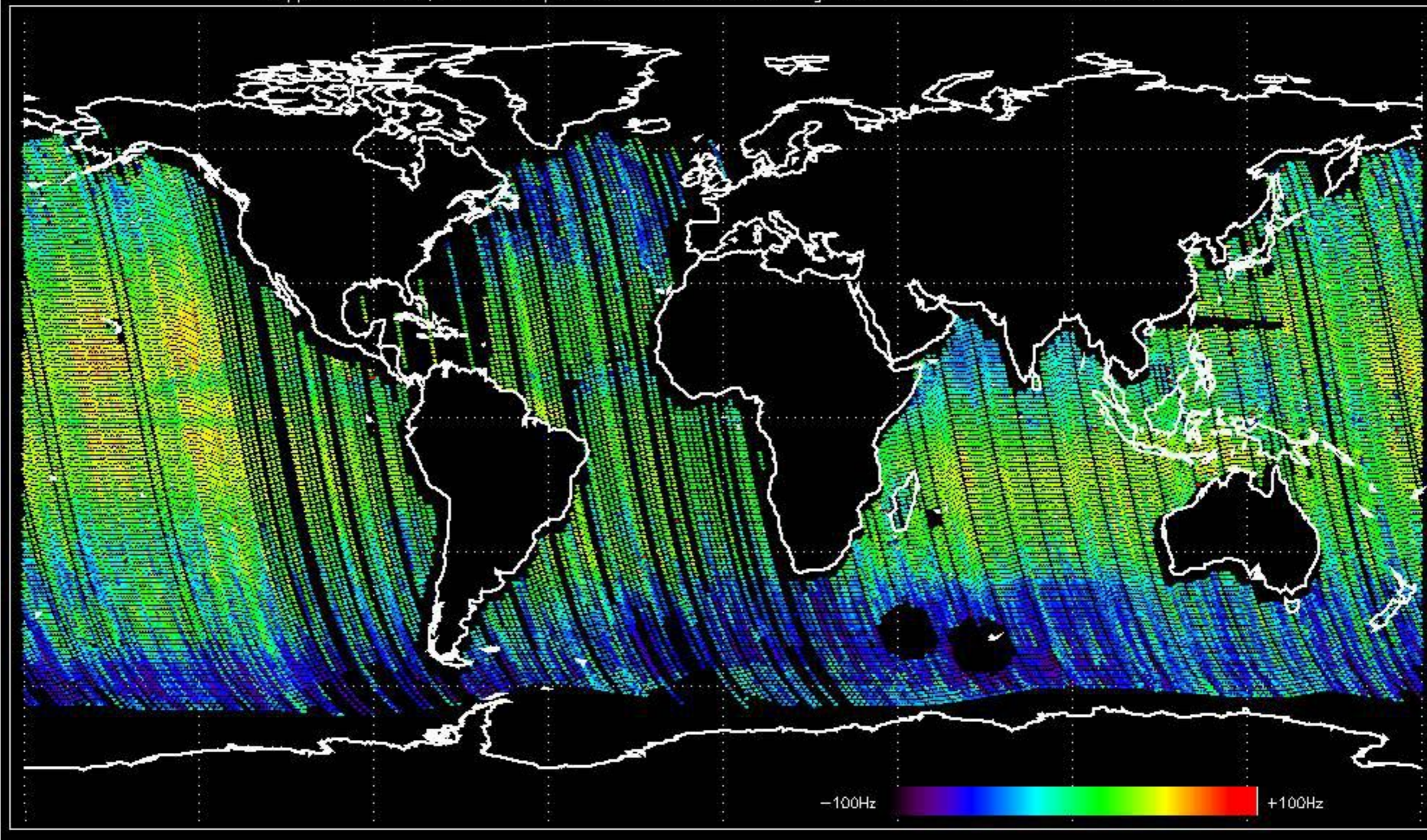
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -38.291733 Hz



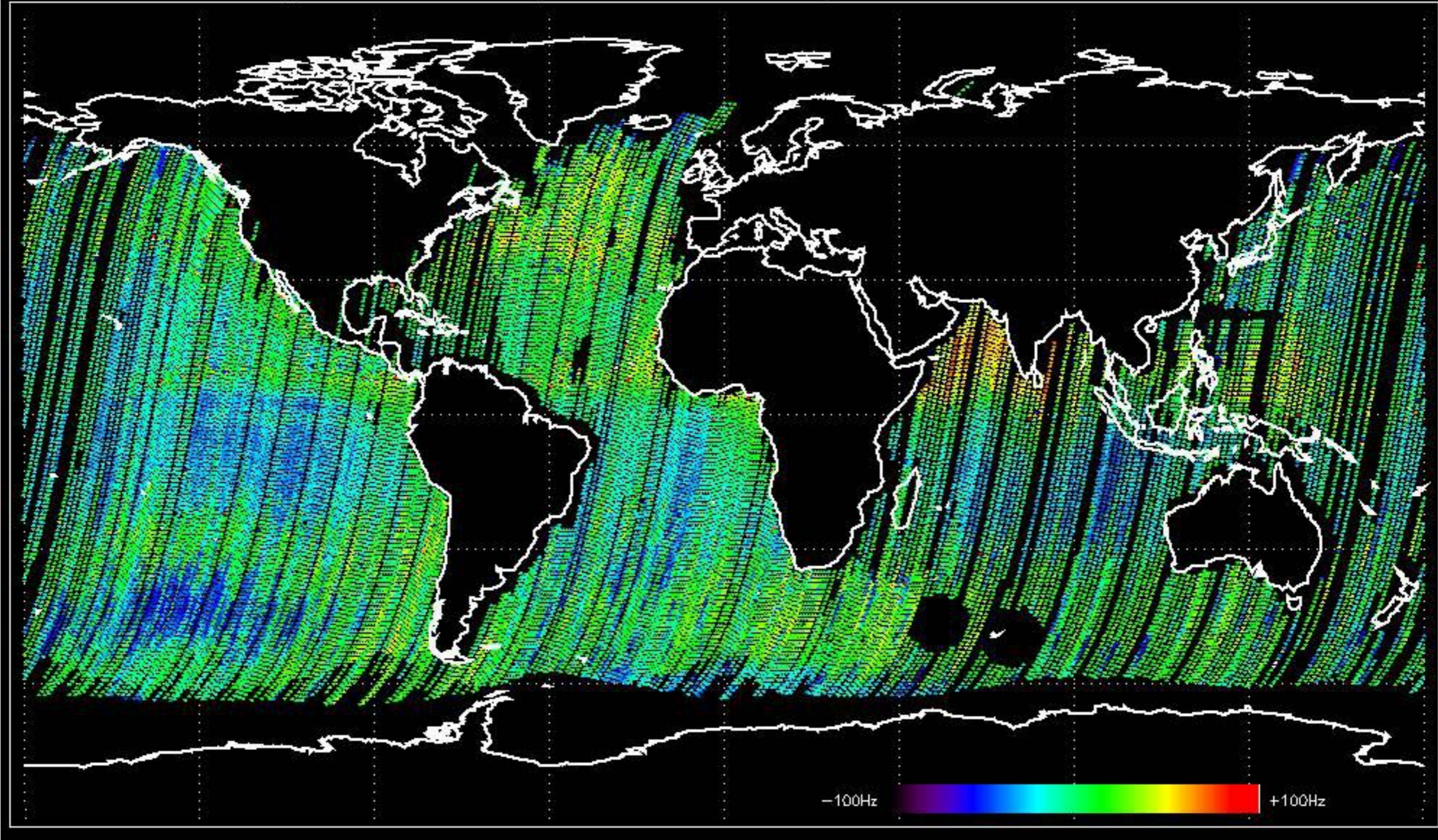
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -27.275909 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -28.698804 Hz



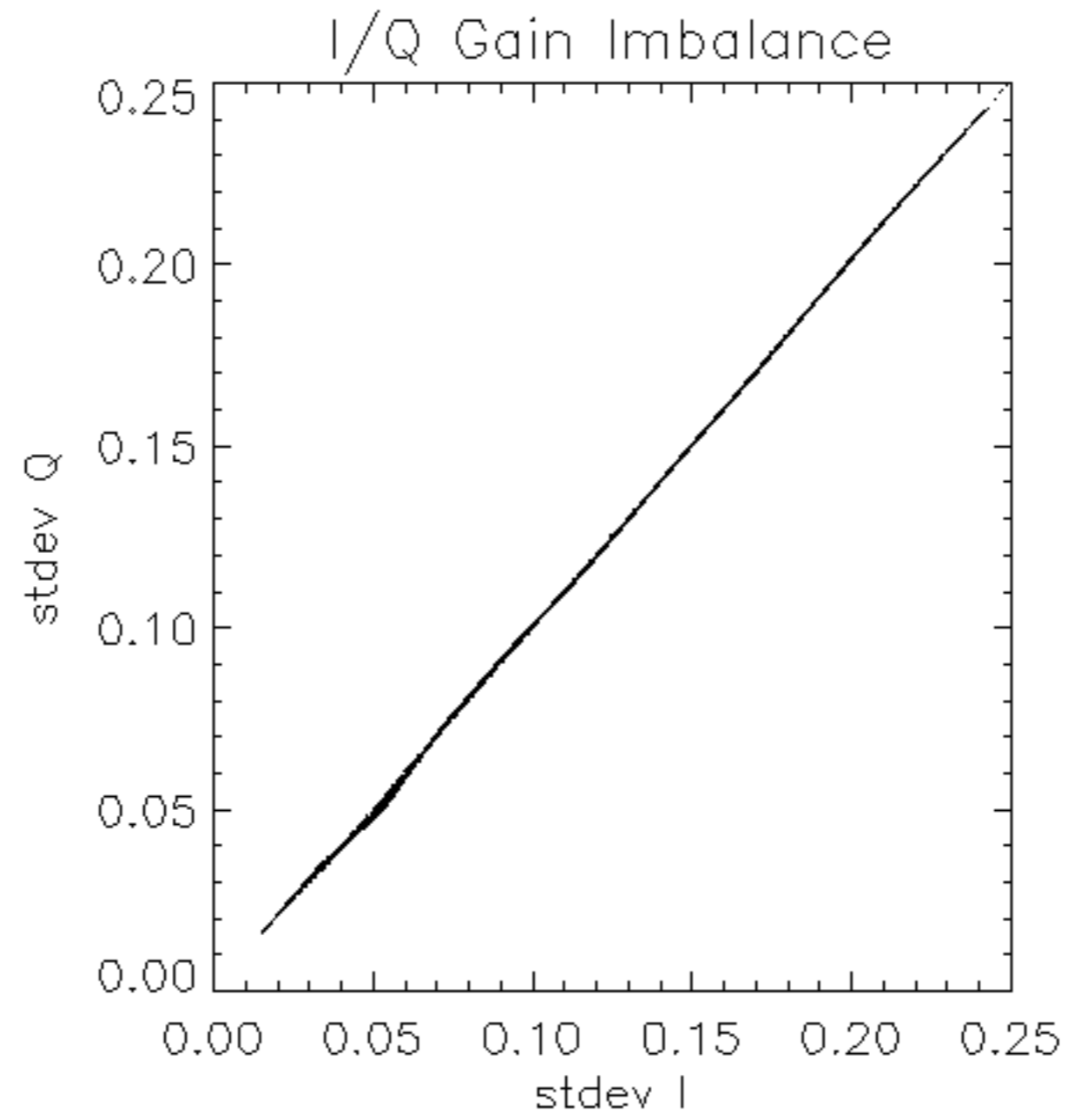
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -29.747535 Hz

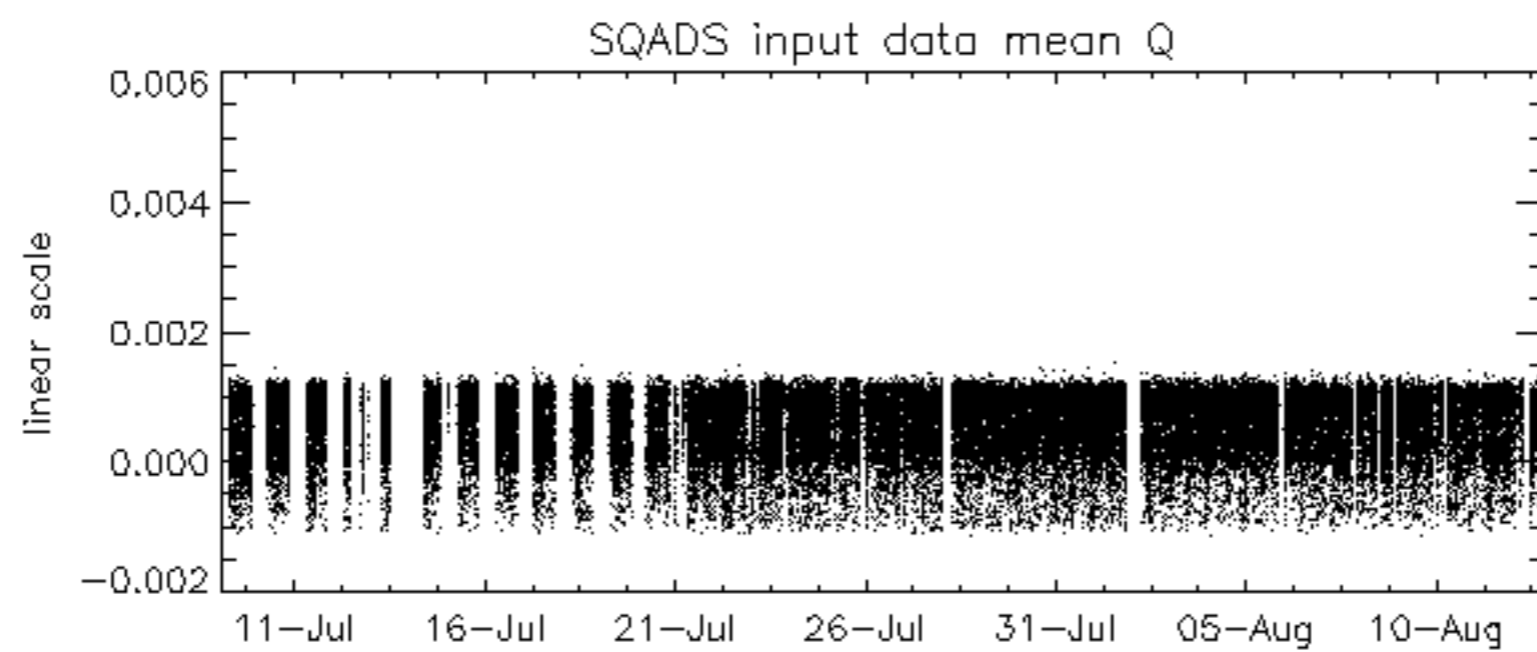
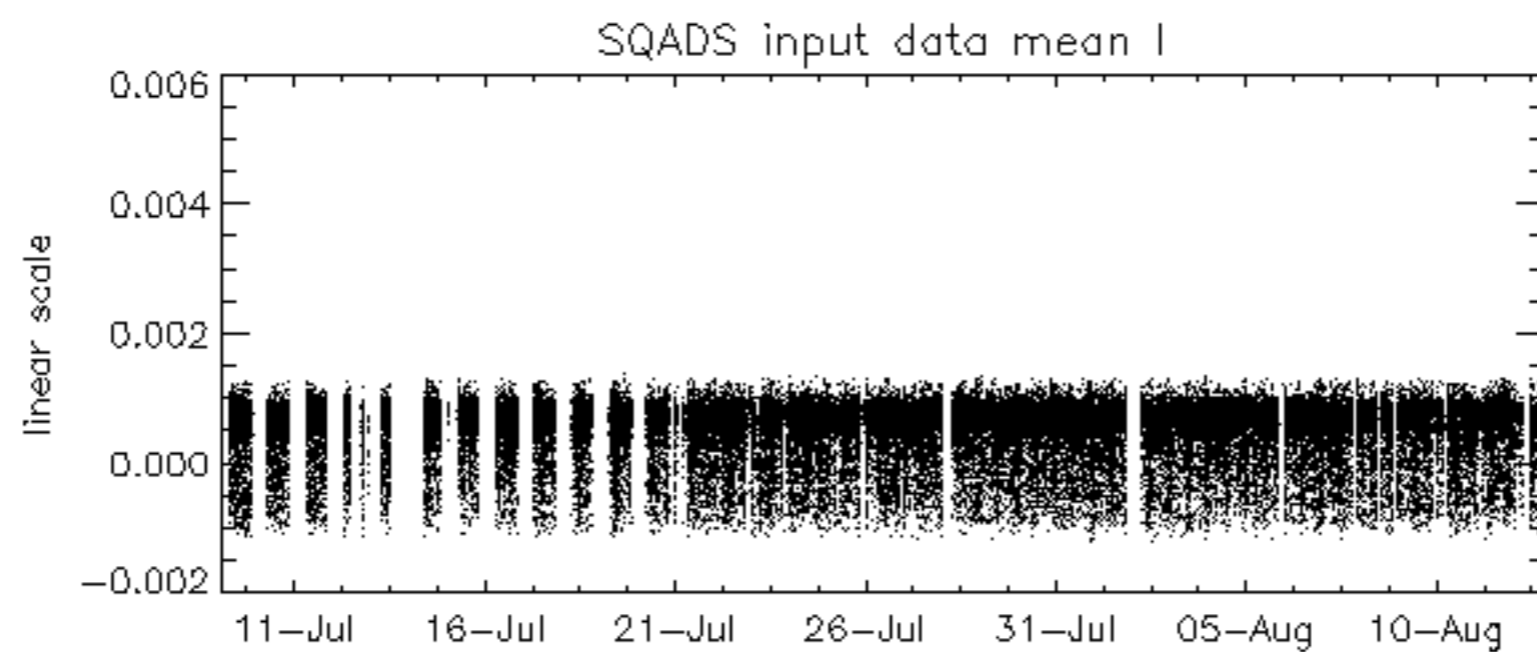
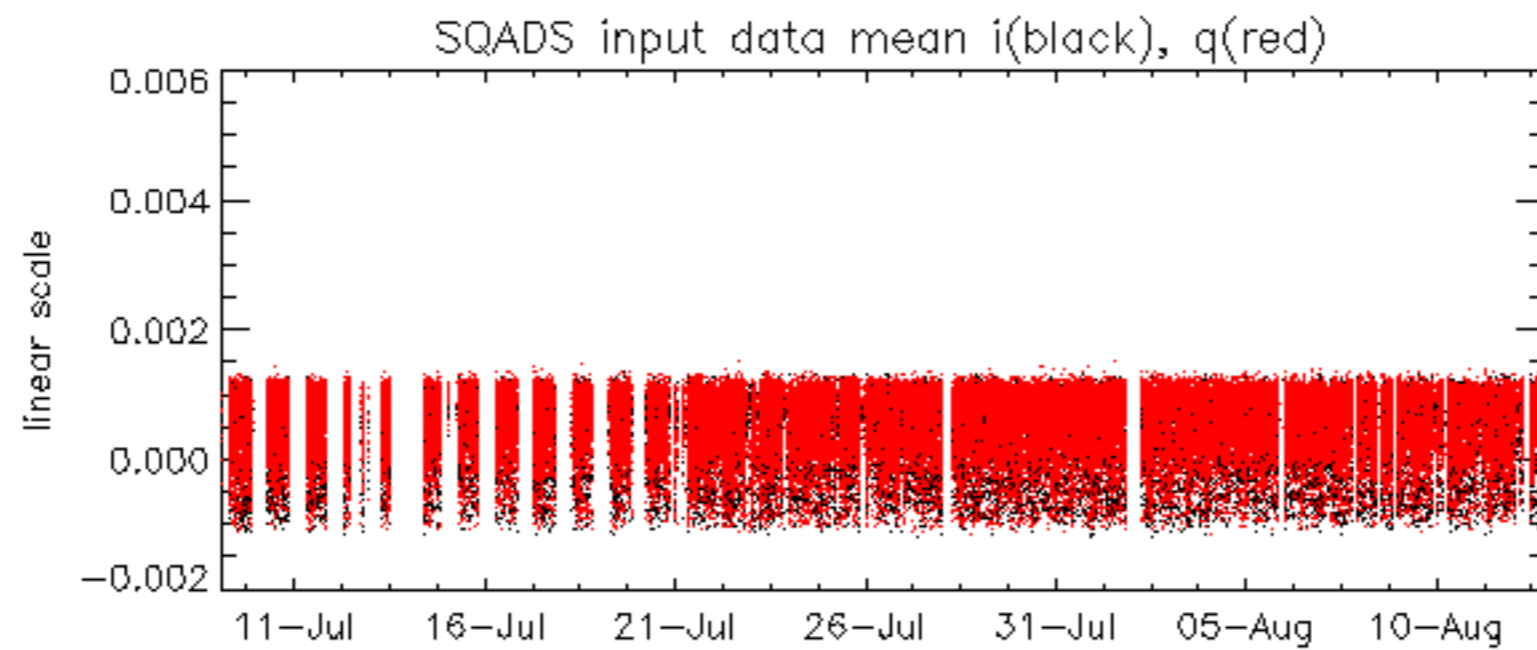


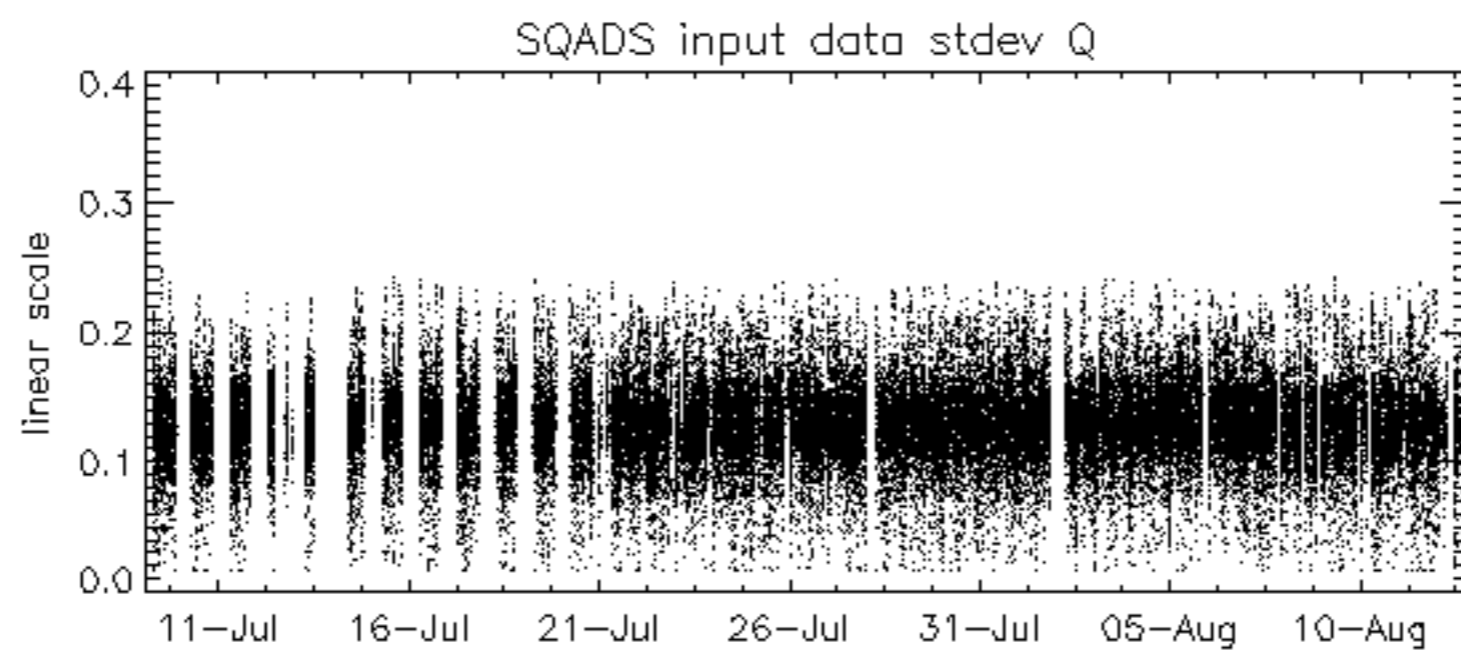
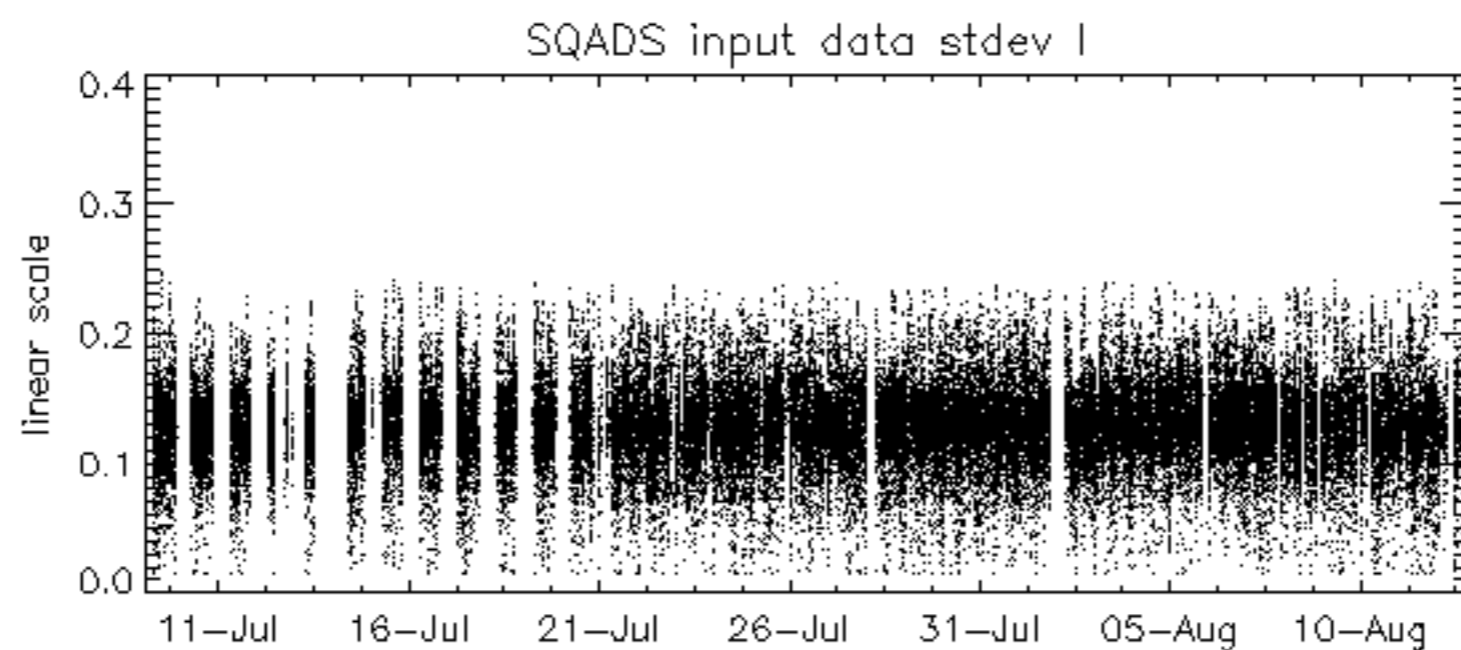
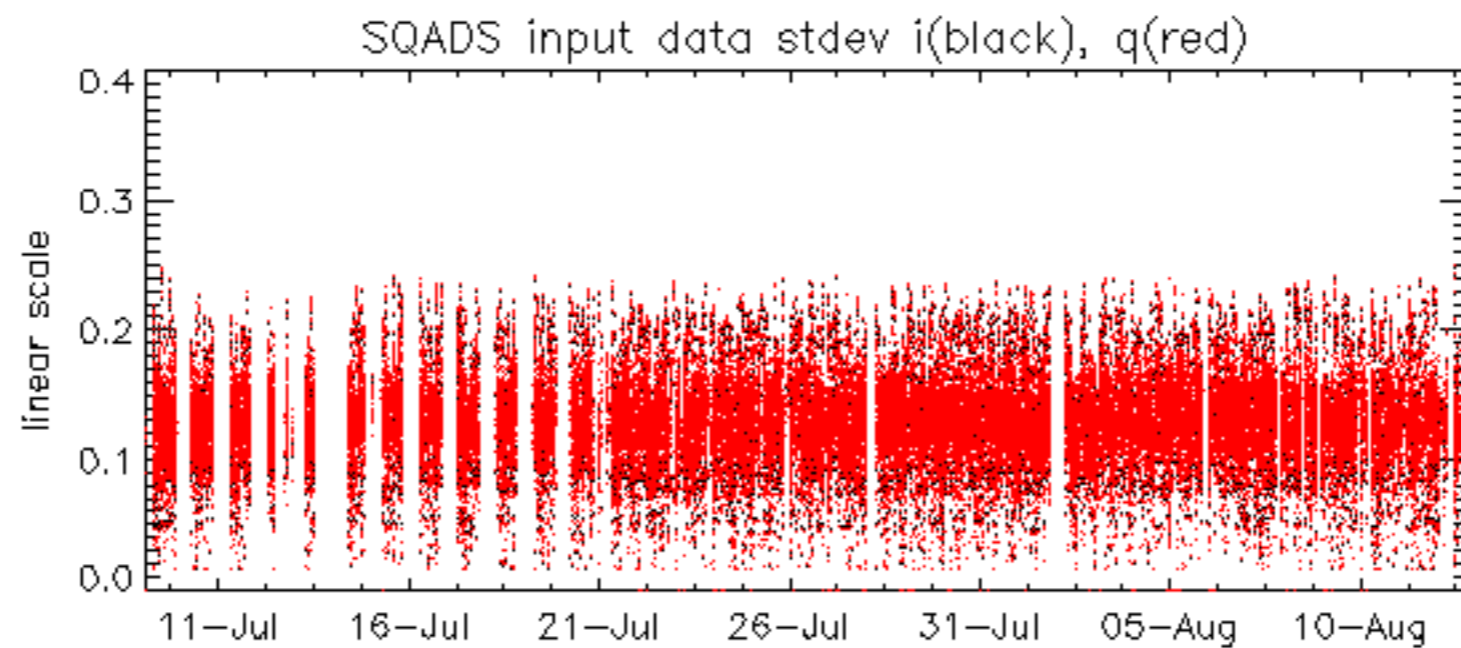
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

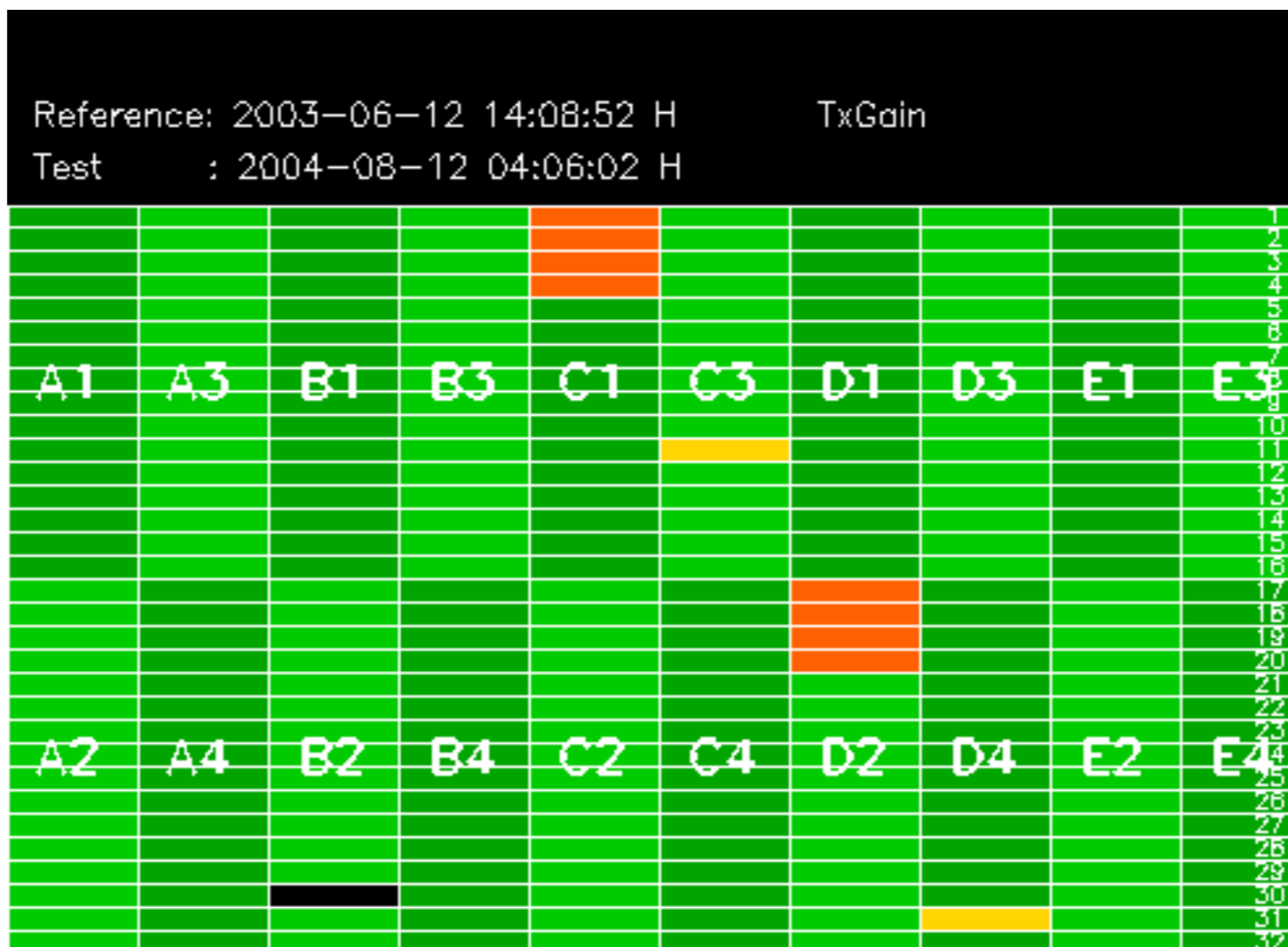
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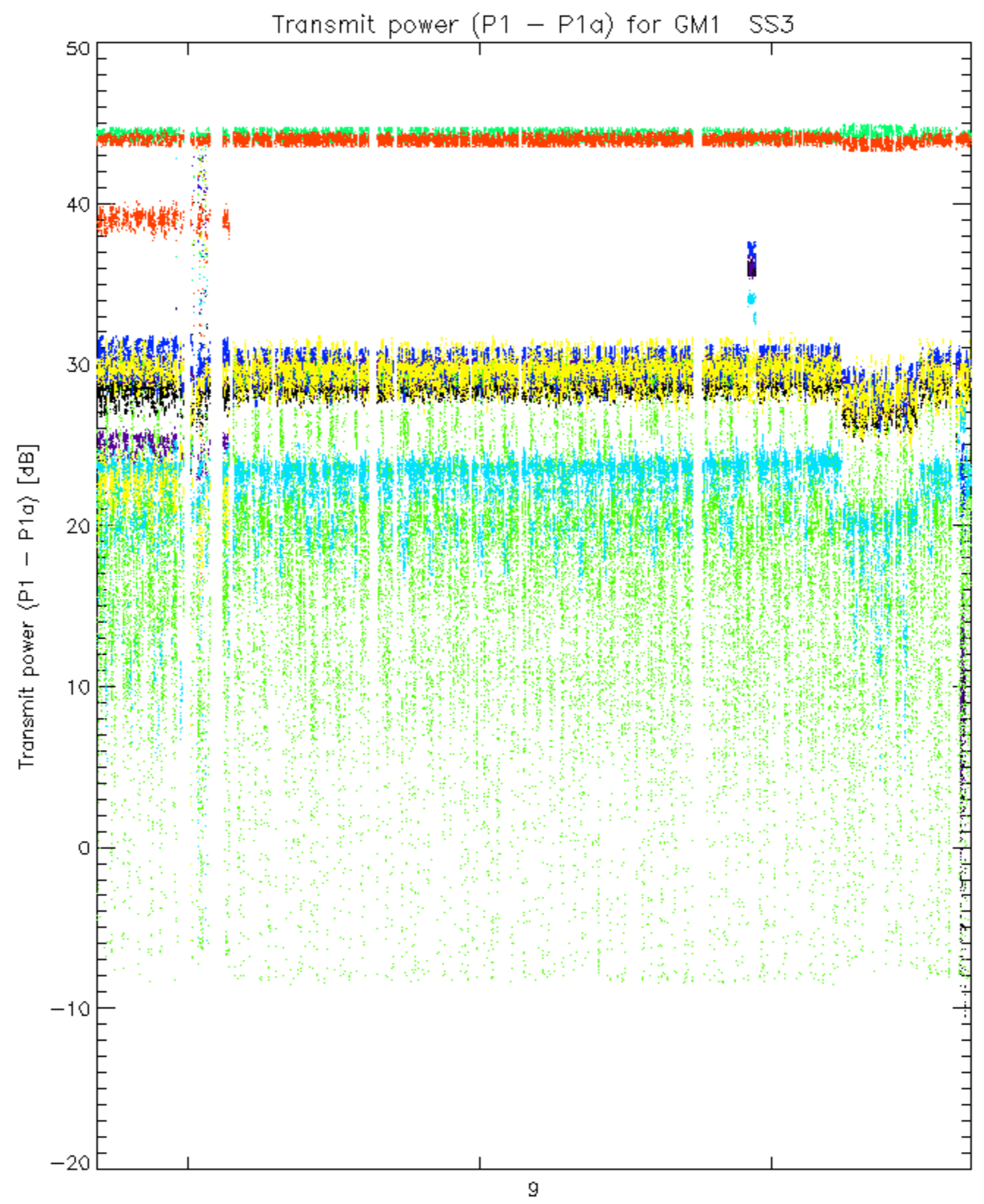
No anomalies observed.



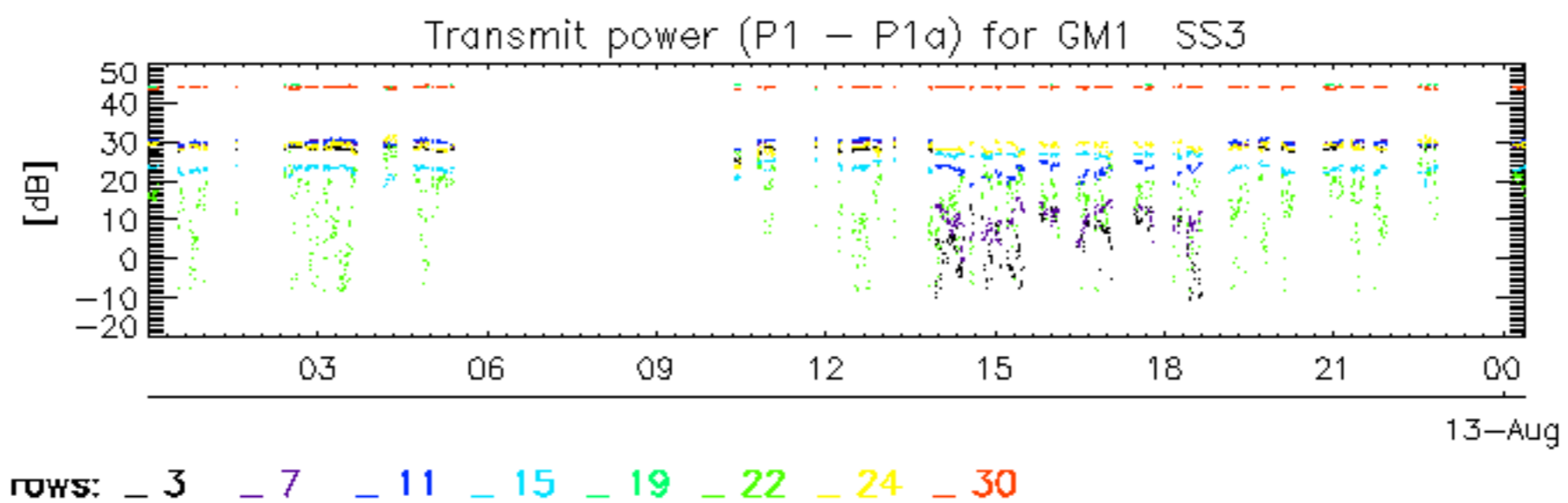


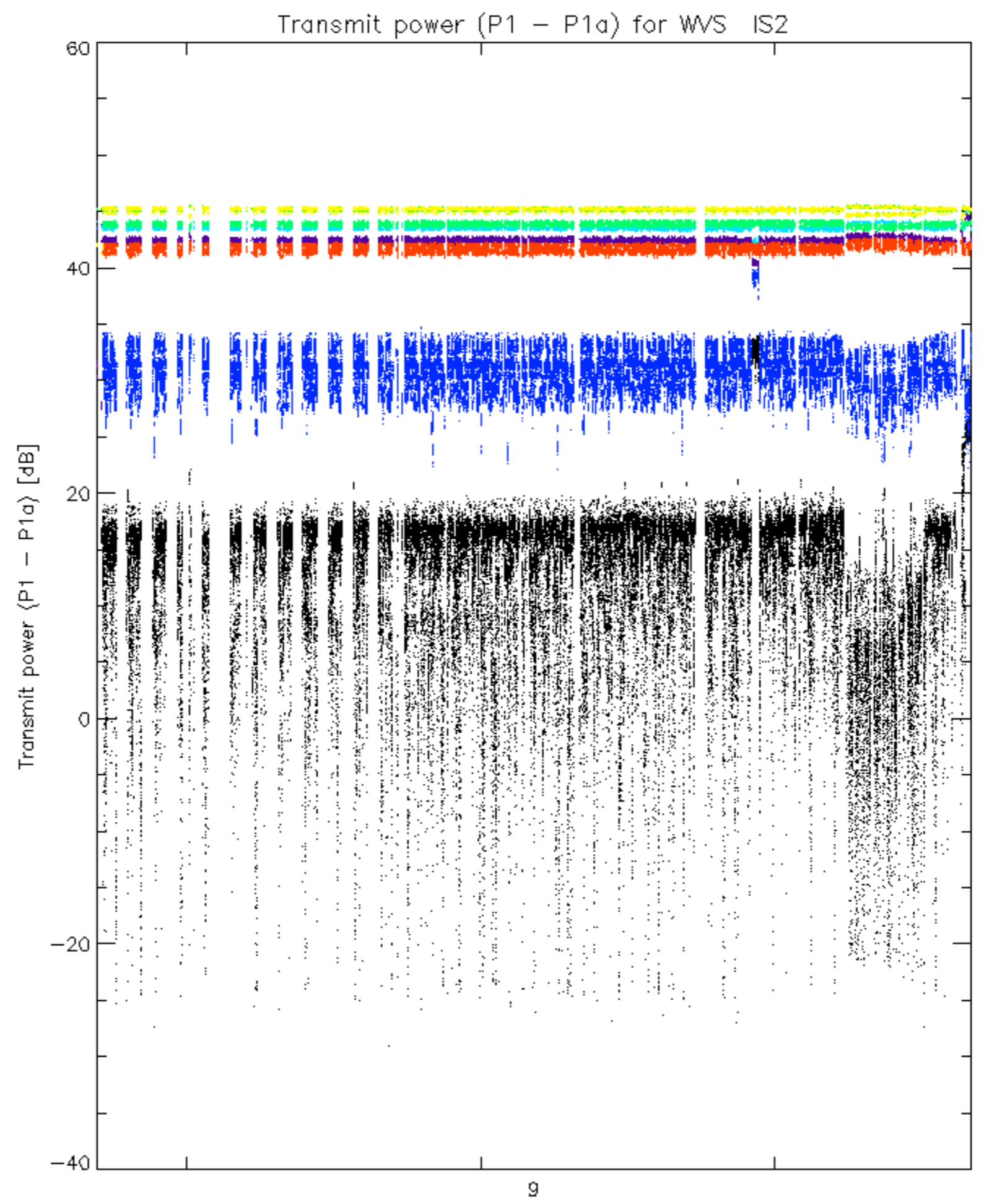


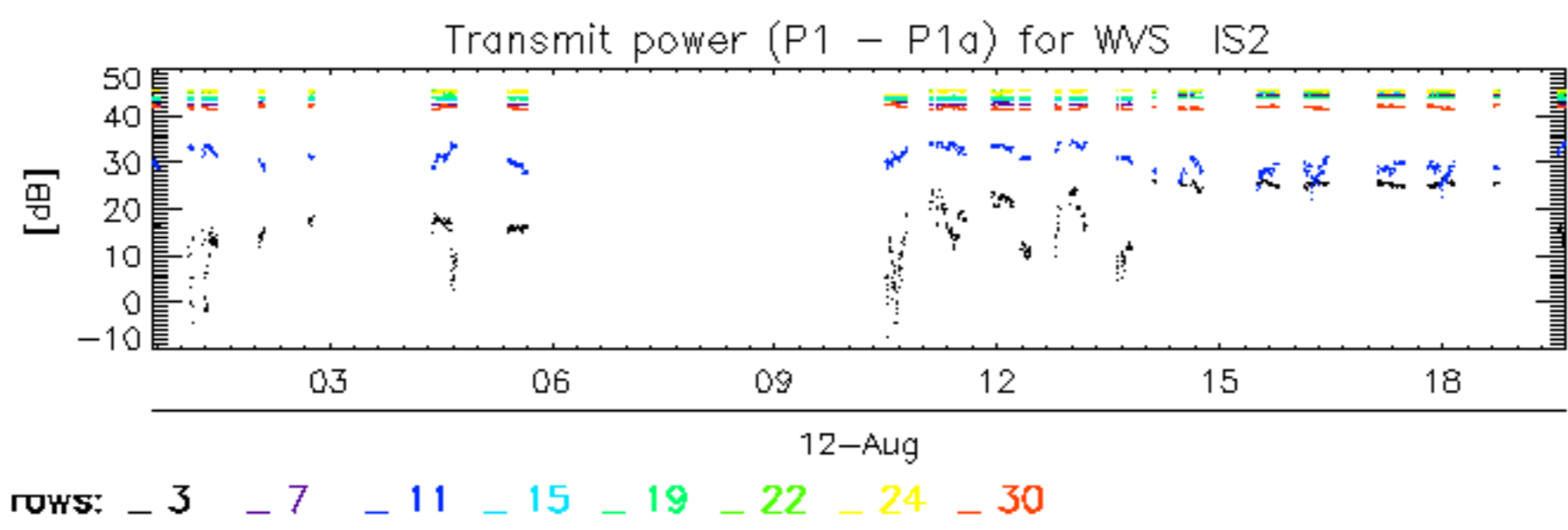




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 24 _ 30







ASAR unavailable from 12 Aug 2004 05:41:04.000 to 12 Aug 2004 10:13:40.000 and from
12 Aug 2004 18:45:00.000 to 12 Aug 2004 19:09:50.000.