

PRELIMINARY REPORT OF 060207

last update on Tue Feb 7 16:40:46 GMT 2006

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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 - Auxiliary files

Summary of the auxiliary files used from 2006-02-06 00:00:00 to 2006-02-07 16:40:46

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	0	6	0	26
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	0	6	0	26
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	0	6	0	26
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	0	6	0	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	34	33	14	7	54
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	34	33	14	7	54
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	34	33	14	7	54
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	34	33	14	7	54

2.3 - Browse Visual Inspection

No anomalies observed on available browse products

2.4 - 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	20060206 180508
H	20060205 183645

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

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

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	-4.019665	0.008084	0.052355
7	P1	-3.002395	0.013328	-0.010150
11	P1	-4.094561	0.022497	0.022681
15	P1	-6.060452	0.017619	0.009682
19	P1	-3.254011	0.006484	-0.012973
22	P1	-4.476381	0.019245	0.028099
26	P1	-4.200626	0.013125	0.045570
30	P1	-5.770222	0.010386	0.011872
3	P1	-16.919340	0.265634	0.078961
7	P1	-16.640989	0.126568	-0.120886
11	P1	-16.601332	0.305422	-0.031856
15	P1	-13.195863	0.113896	0.130704
19	P1	-13.889009	0.072696	-0.022209
22	P1	-15.827332	0.572894	0.258921
26	P1	-15.761395	0.252941	0.070123
30	P1	-16.585827	0.322627	0.041790

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.570862	0.093452	0.149062
7	P2	-22.446438	0.097116	0.104327
11	P2	-16.281113	0.103070	0.096503
15	P2	-7.201199	0.103759	0.058756
19	P2	-9.164002	0.097919	0.038485
22	P2	-17.940388	0.094723	-0.004323
26	P2	-16.215448	0.101711	0.021308
30	P2	-19.644035	0.085028	0.031510

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.206128	0.007511	0.031231
7	P3	-8.206128	0.007511	0.031231
11	P3	-8.206128	0.007511	0.031231
15	P3	-8.206128	0.007511	0.031231
19	P3	-8.206128	0.007511	0.031231
22	P3	-8.206128	0.007511	0.031231
26	P3	-8.206128	0.007511	0.031231
30	P3	-8.206128	0.007511	0.031231

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	-3.730193	0.011151	-0.040135
7	P1	-2.745781	0.007566	0.013086
11	P1	-2.875270	0.012464	-0.064088
15	P1	-3.483312	0.019980	-0.092540
19	P1	-3.378885	0.012410	-0.023037
22	P1	-5.134495	0.021512	-0.074556
26	P1	-5.850283	0.016915	0.010537
30	P1	-5.236422	0.028864	0.040174
3	P1	-11.536813	0.041680	-0.059654
7	P1	-9.921116	0.047900	-0.028475
11	P1	-10.108854	0.052502	-0.165485
15	P1	-10.650647	0.093379	-0.142428
19	P1	-15.463930	0.061966	0.027542
22	P1	-20.497072	1.260197	0.473930

26	P1	-16.686880	0.349346	0.492165
30	P1	-18.194921	0.327131	-0.177747

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.361935	0.037097	0.213144
7	P2	-22.796999	0.068341	0.225540
11	P2	-11.393852	0.024374	0.137187
15	P2	-4.895148	0.028239	0.067526
19	P2	-6.902832	0.025284	0.048514
22	P2	-8.185021	0.025296	0.010968
26	P2	-23.957573	0.025905	0.011308
30	P2	-22.087864	0.019194	0.011912

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.044192	0.002749	0.037331
7	P3	-8.044031	0.002751	0.036923
11	P3	-8.044029	0.002749	0.037680
15	P3	-8.044166	0.002761	0.037314
19	P3	-8.044186	0.002754	0.037616
22	P3	-8.044155	0.002744	0.037258
26	P3	-8.044160	0.002751	0.036962
30	P3	-8.044152	0.002762	0.037626

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	0.000567101
	stdev	1.64066e-07
MEAN Q	mean	0.000527665
	stdev	2.10834e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139976
	stdev	0.00115273
STDEV Q	mean	0.140339
	stdev	0.00117215



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006020[567]

The assumptions 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_1PNPDE20060207_051935_000003422045_00005_20600_2226.N1	1	0
ASA_WSM_1PNPDE20060206_040934_000000612044_00491_20585_3904.N1	0	1
ASA_APM_1PNPDE20060205_141423_000000822044_00483_20577_0339.N1	0	30





7 - Doppler Analysis

Preliminary report. The data is not yet controlled



7.1 - Unbiased Doppler Error for WVS

Evolution of unbiased Doppler error (Real - Expected)


Ascending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Ascending

Descending

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX



7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

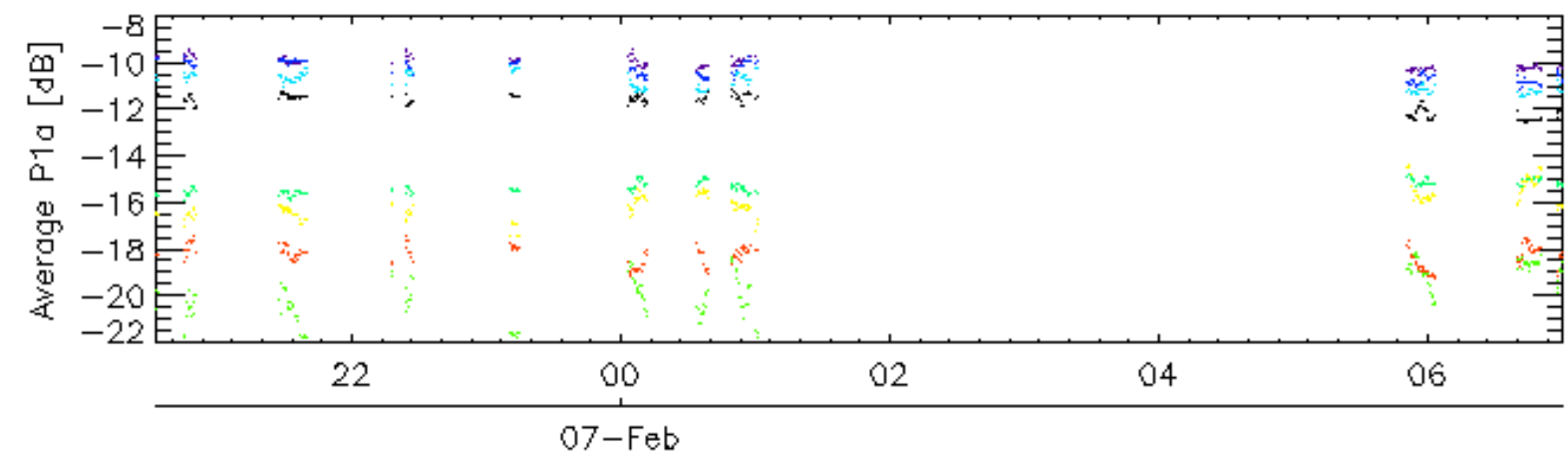
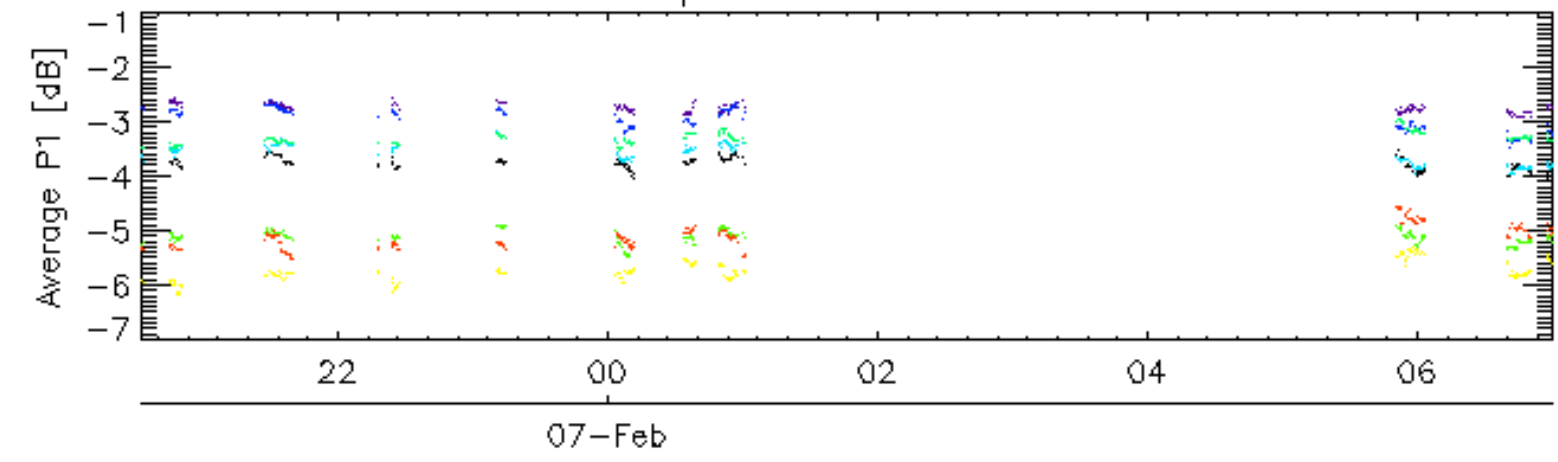
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

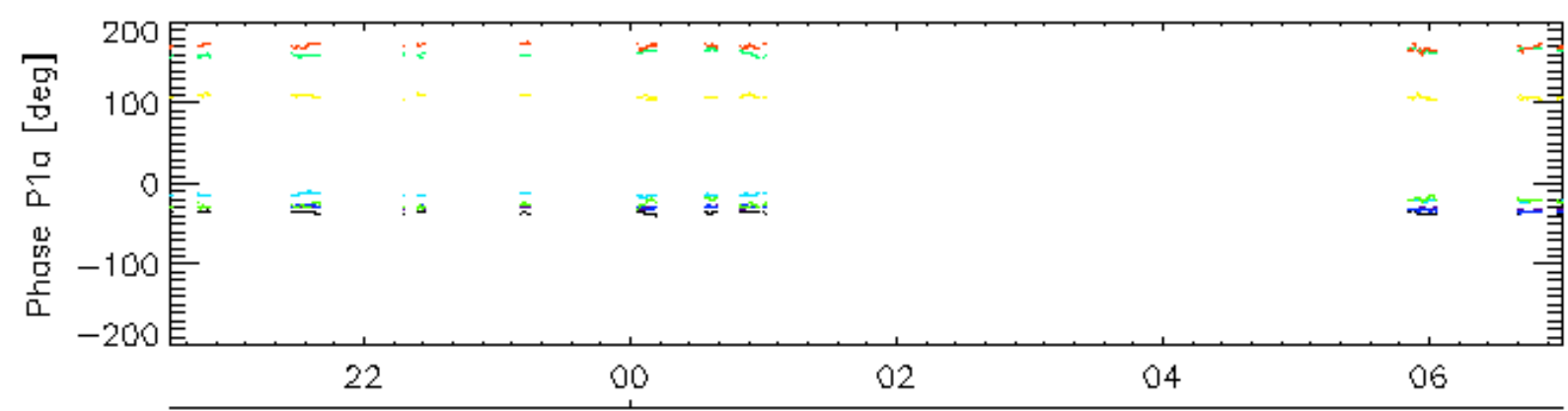
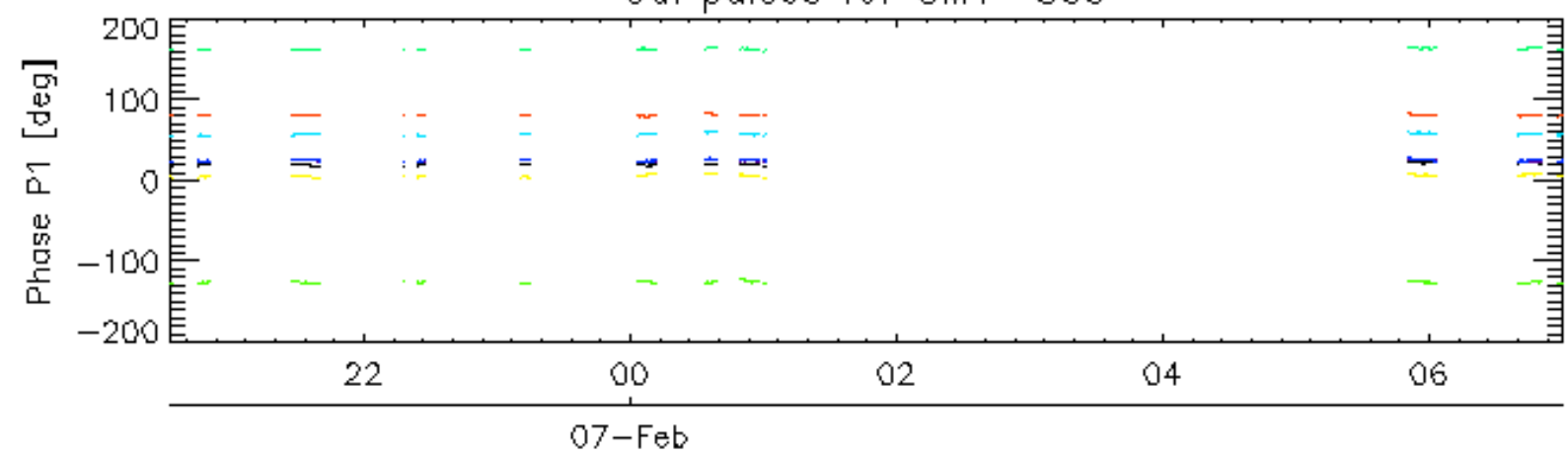
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

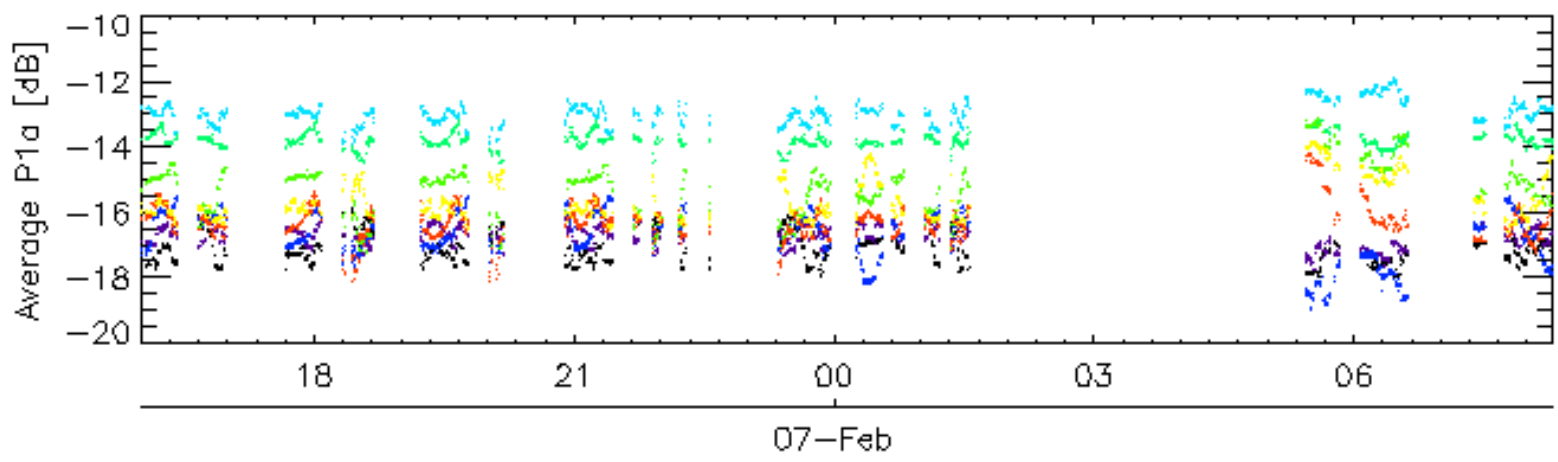
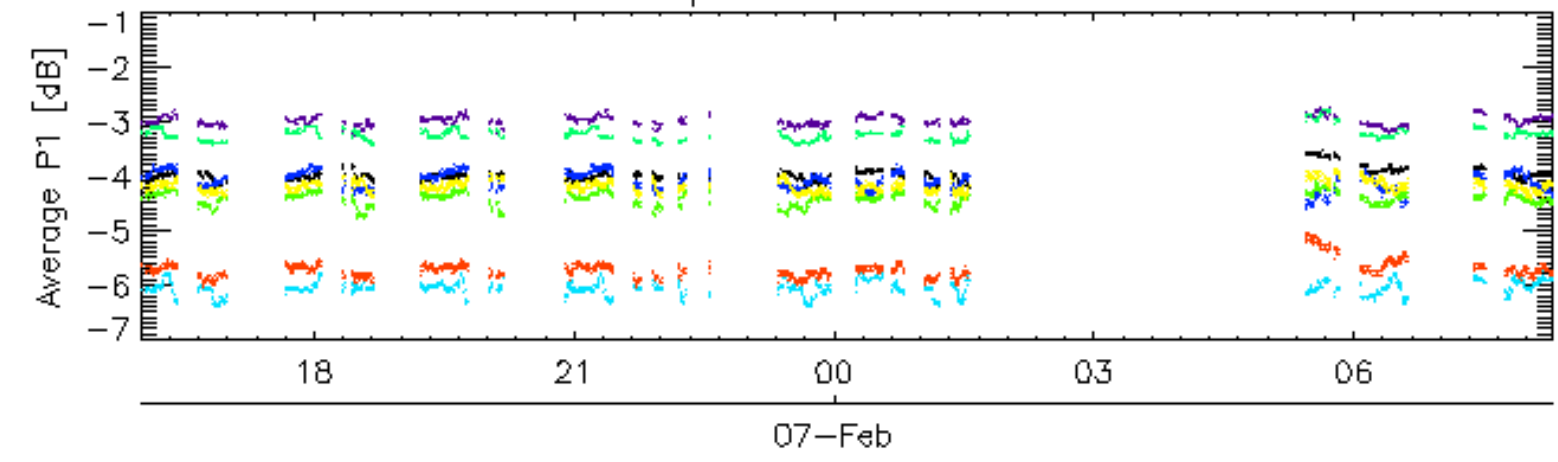


Cal pulses for GM1 SS3

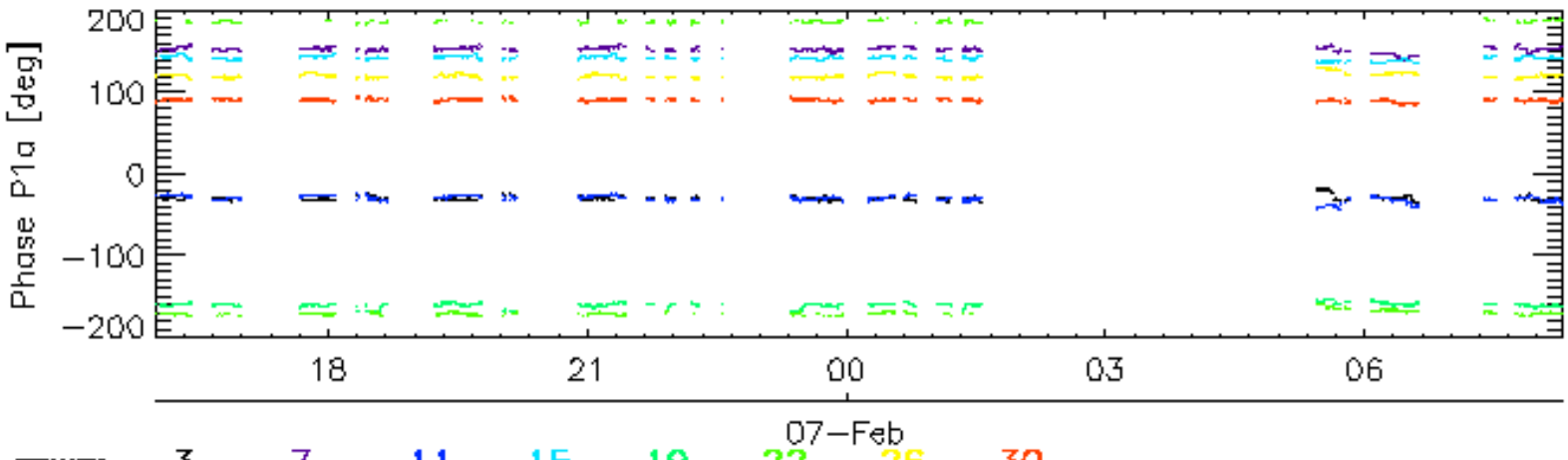
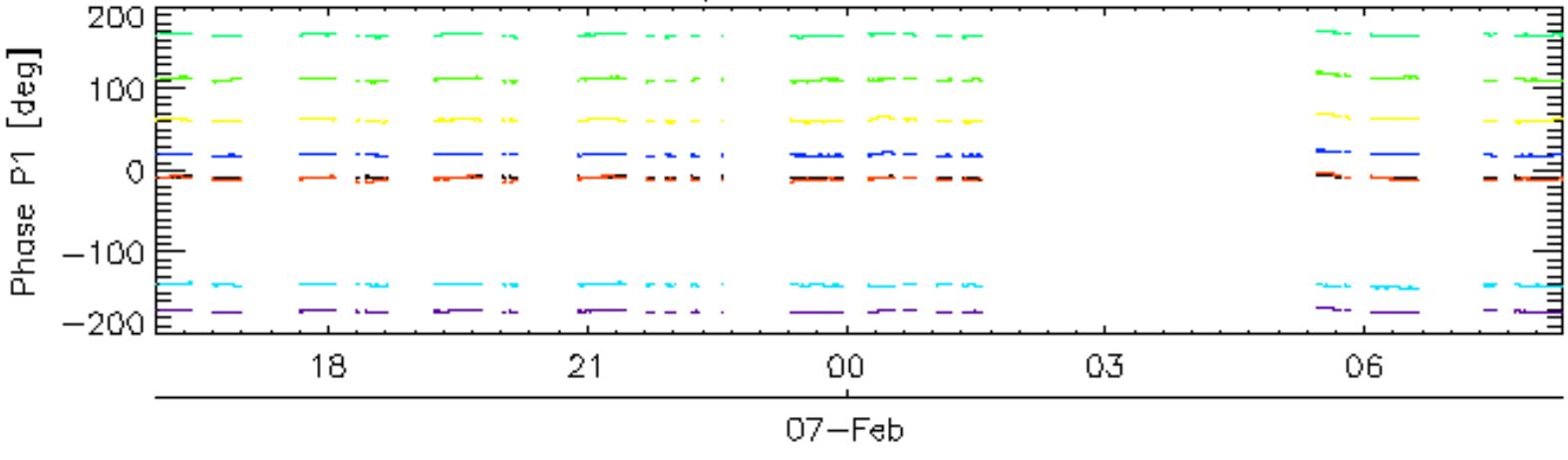


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

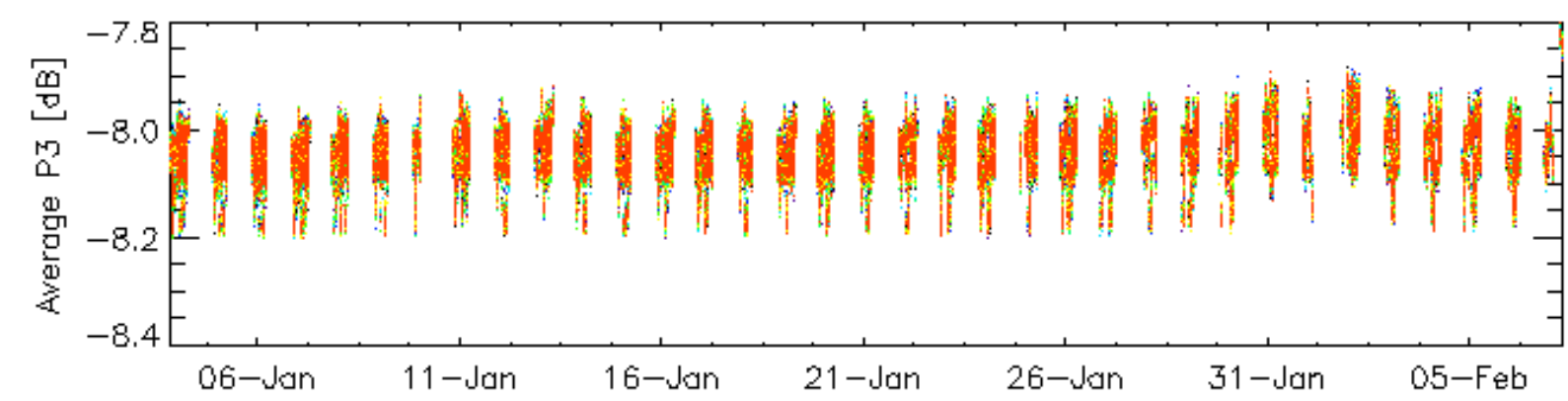
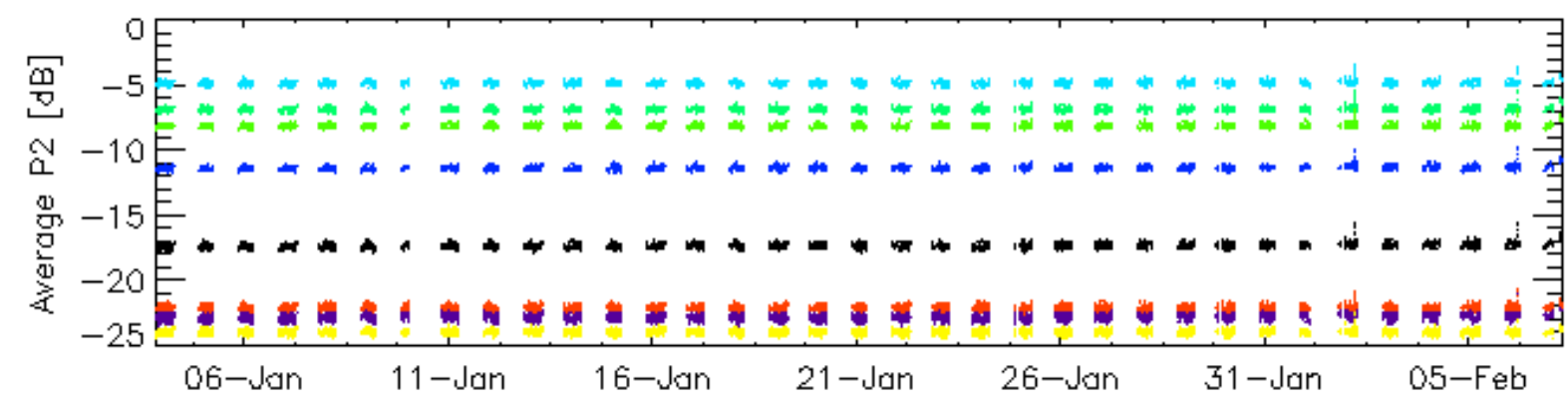
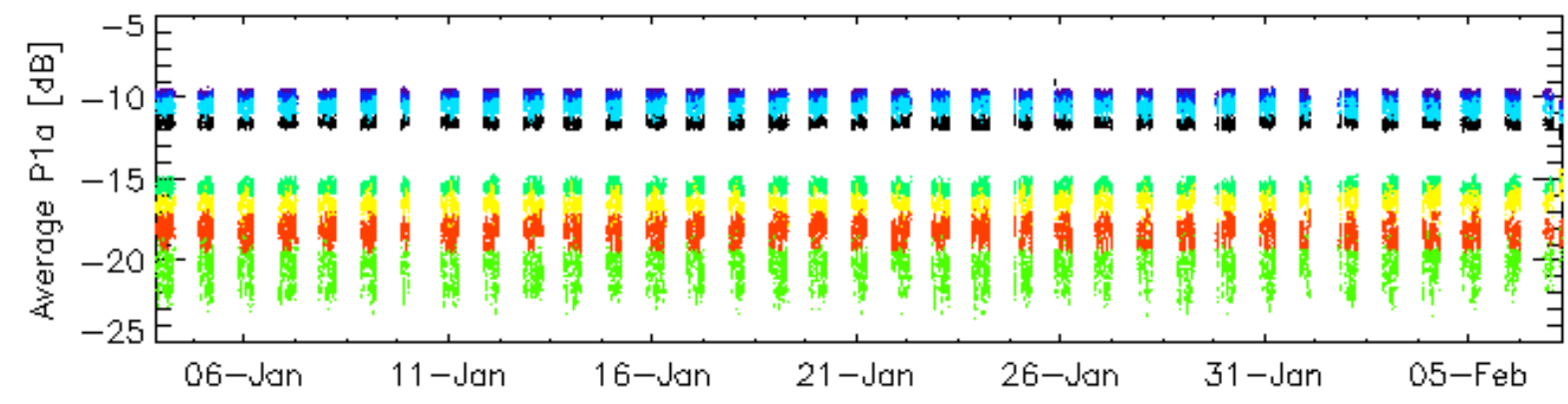
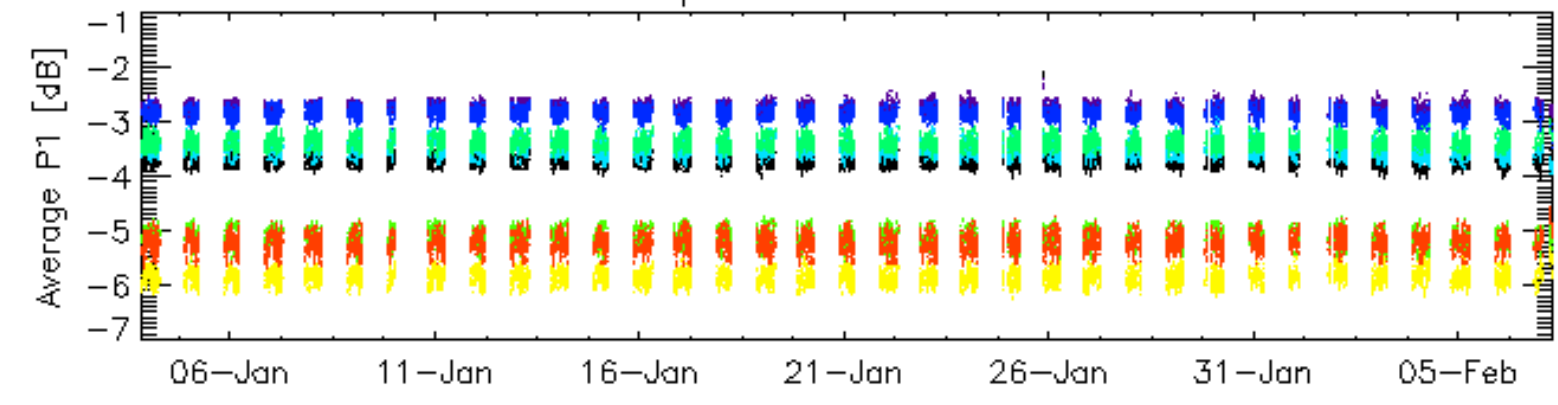


Cal pulses for WVS IS2



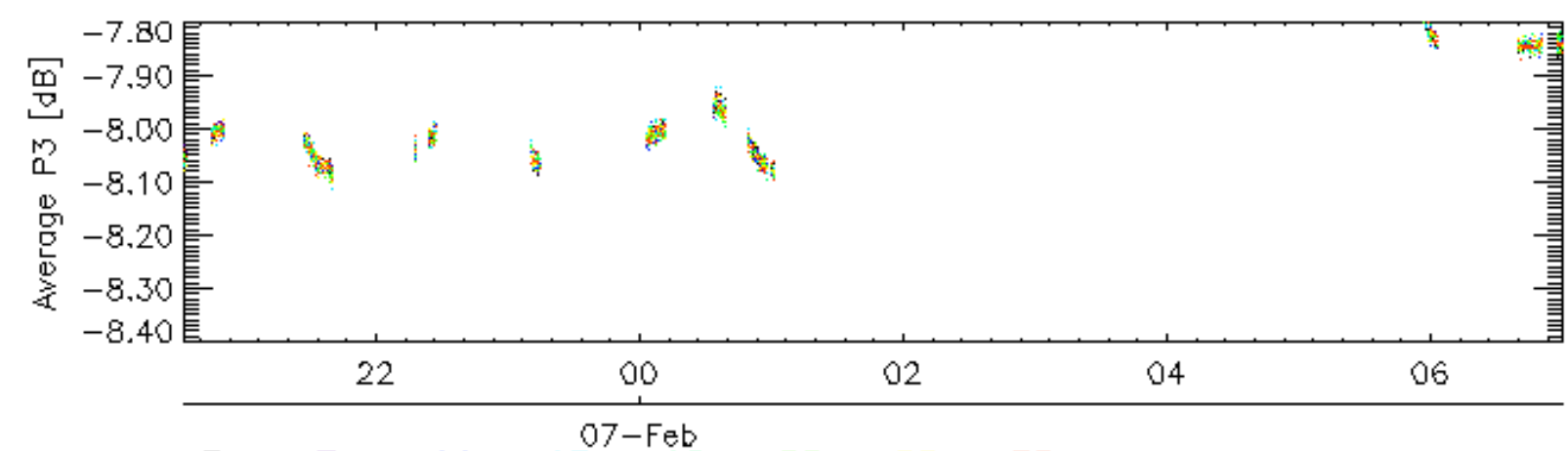
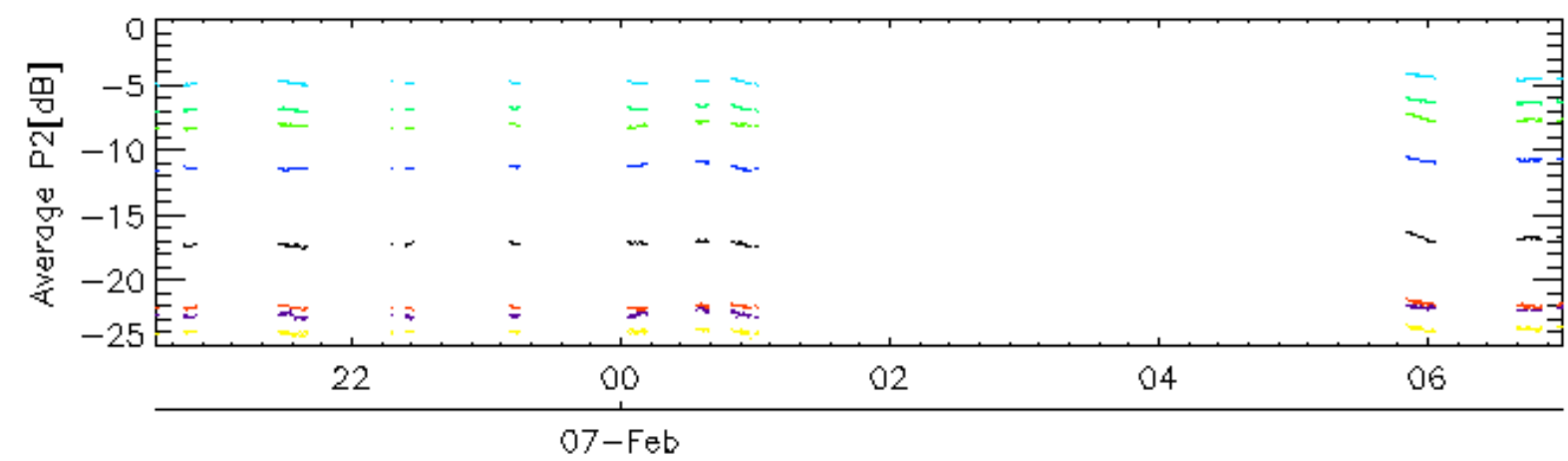
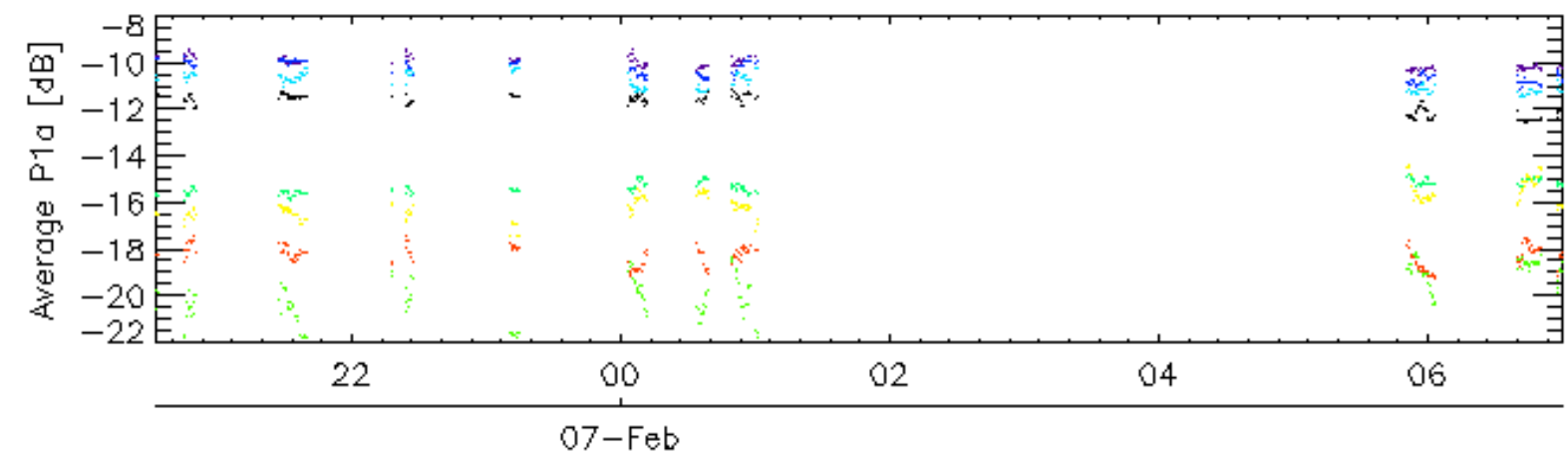
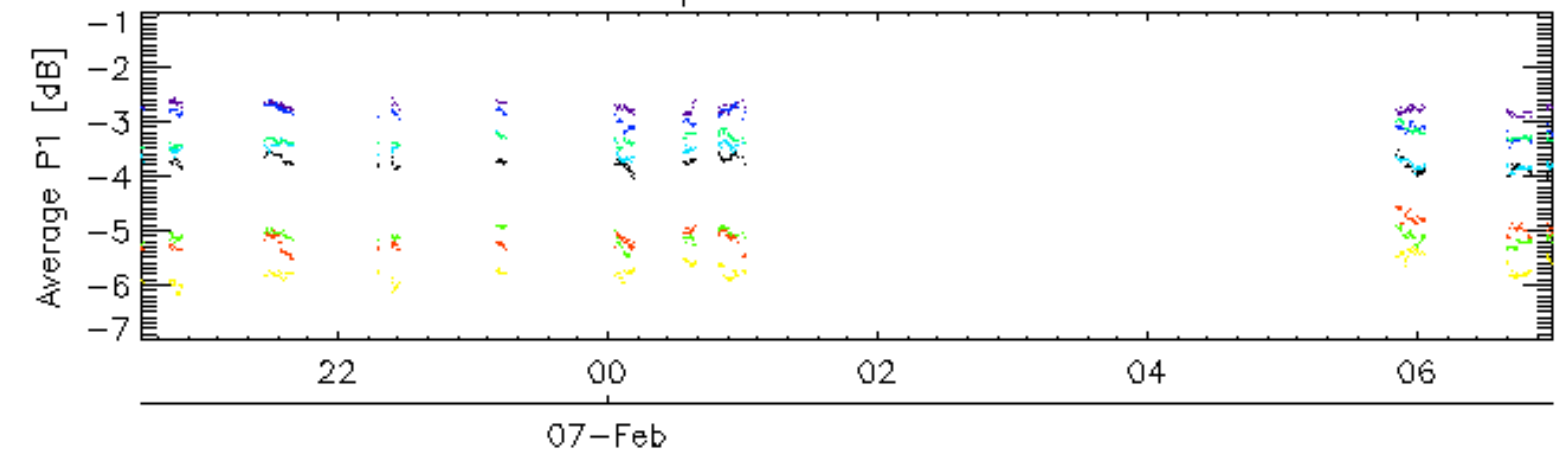
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



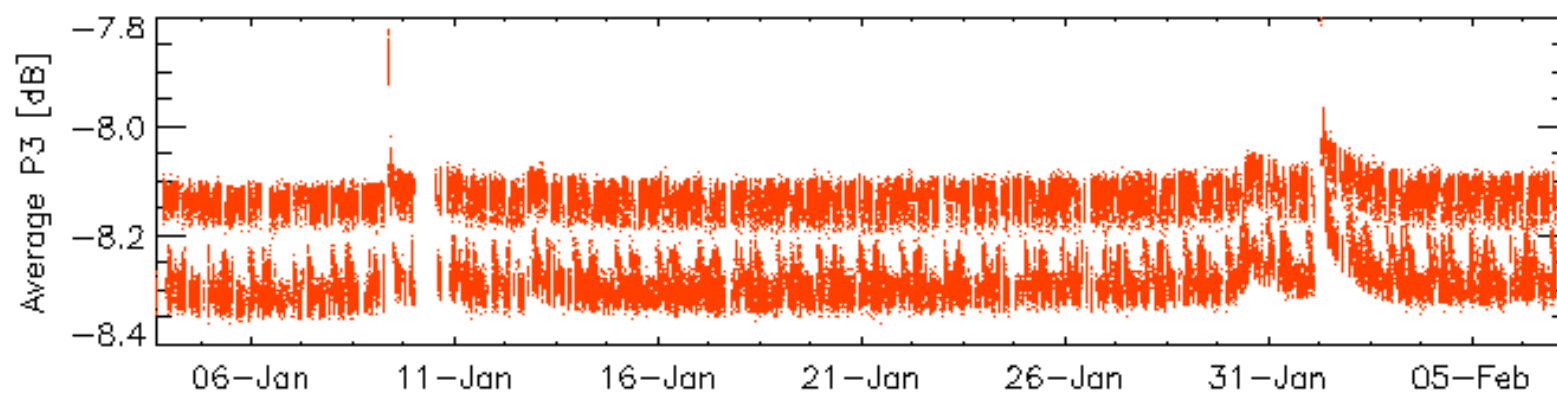
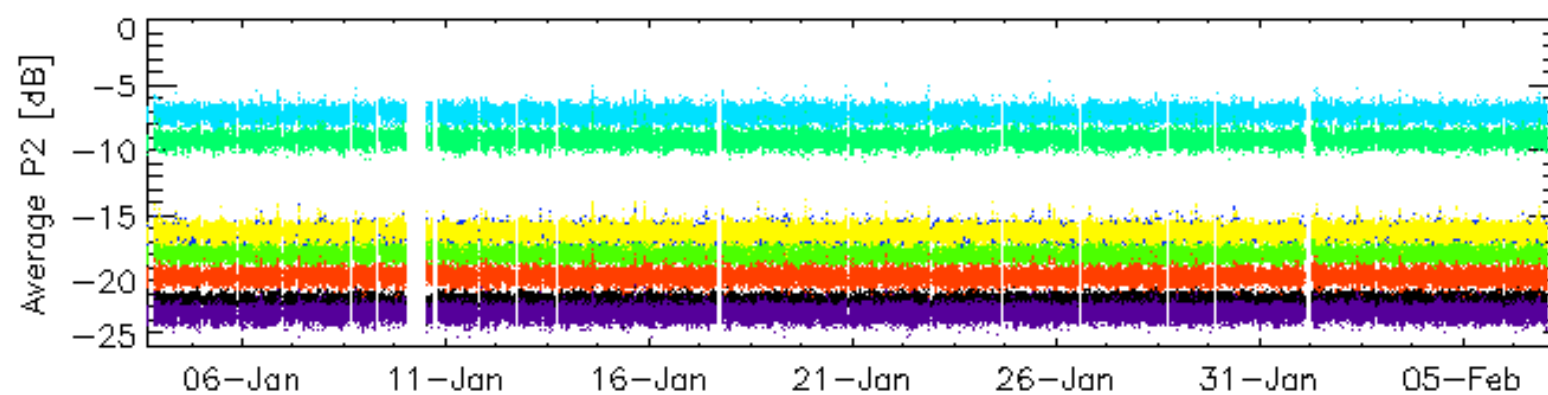
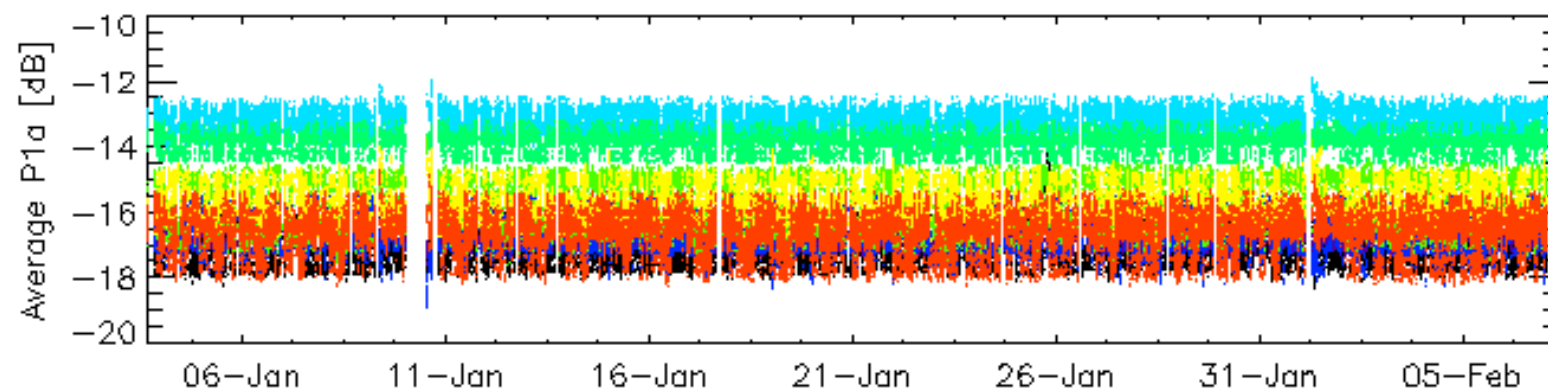
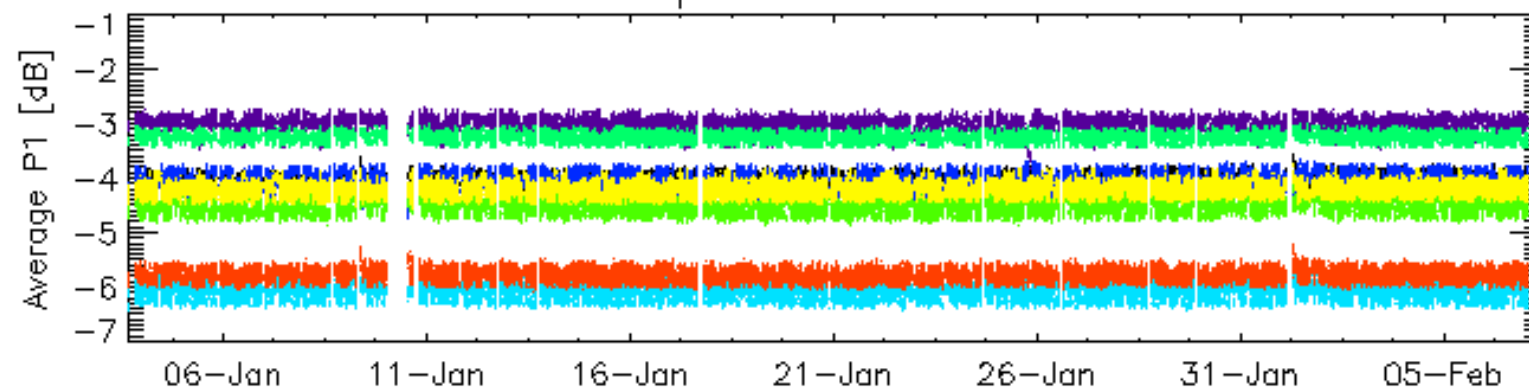
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3



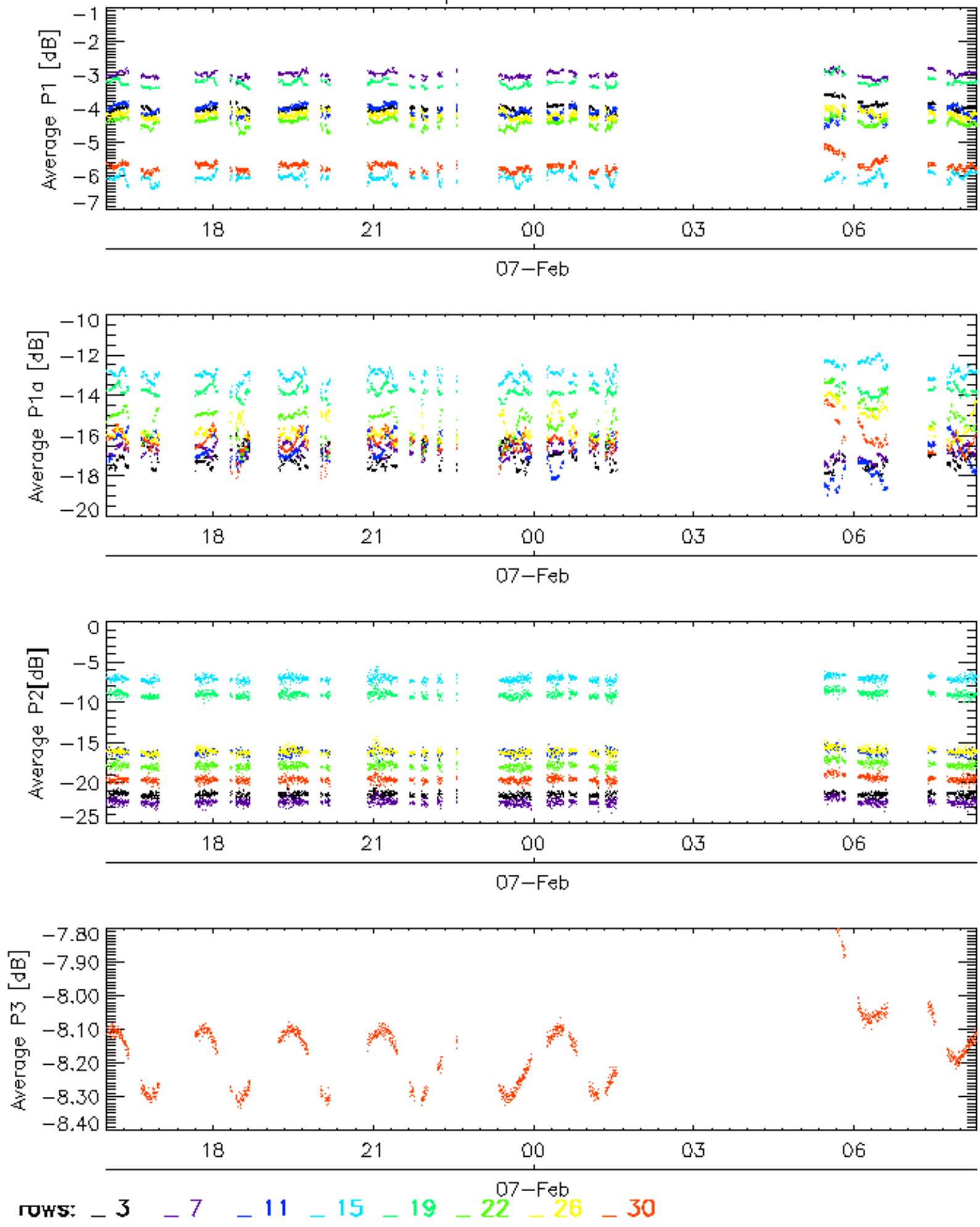
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2



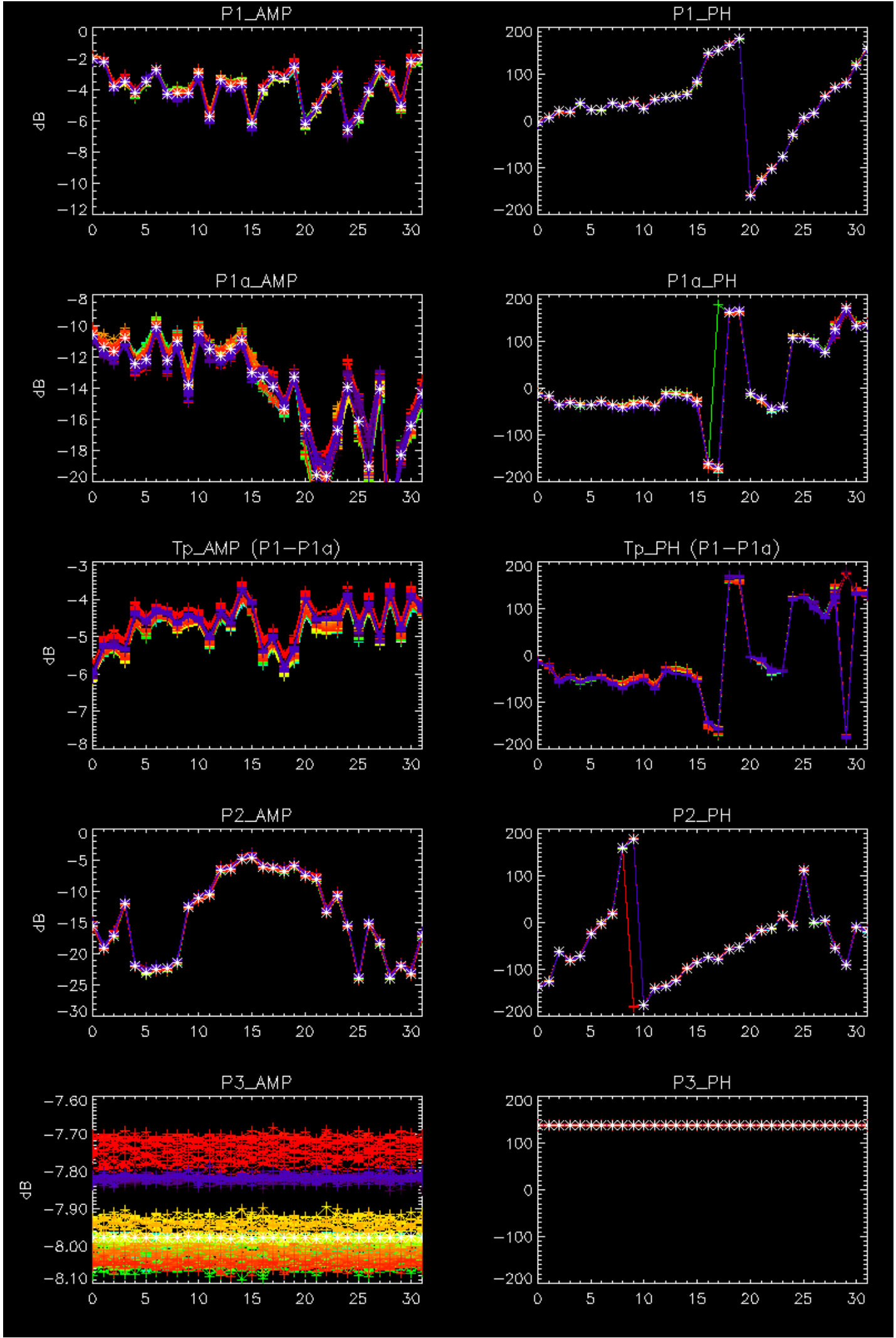
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

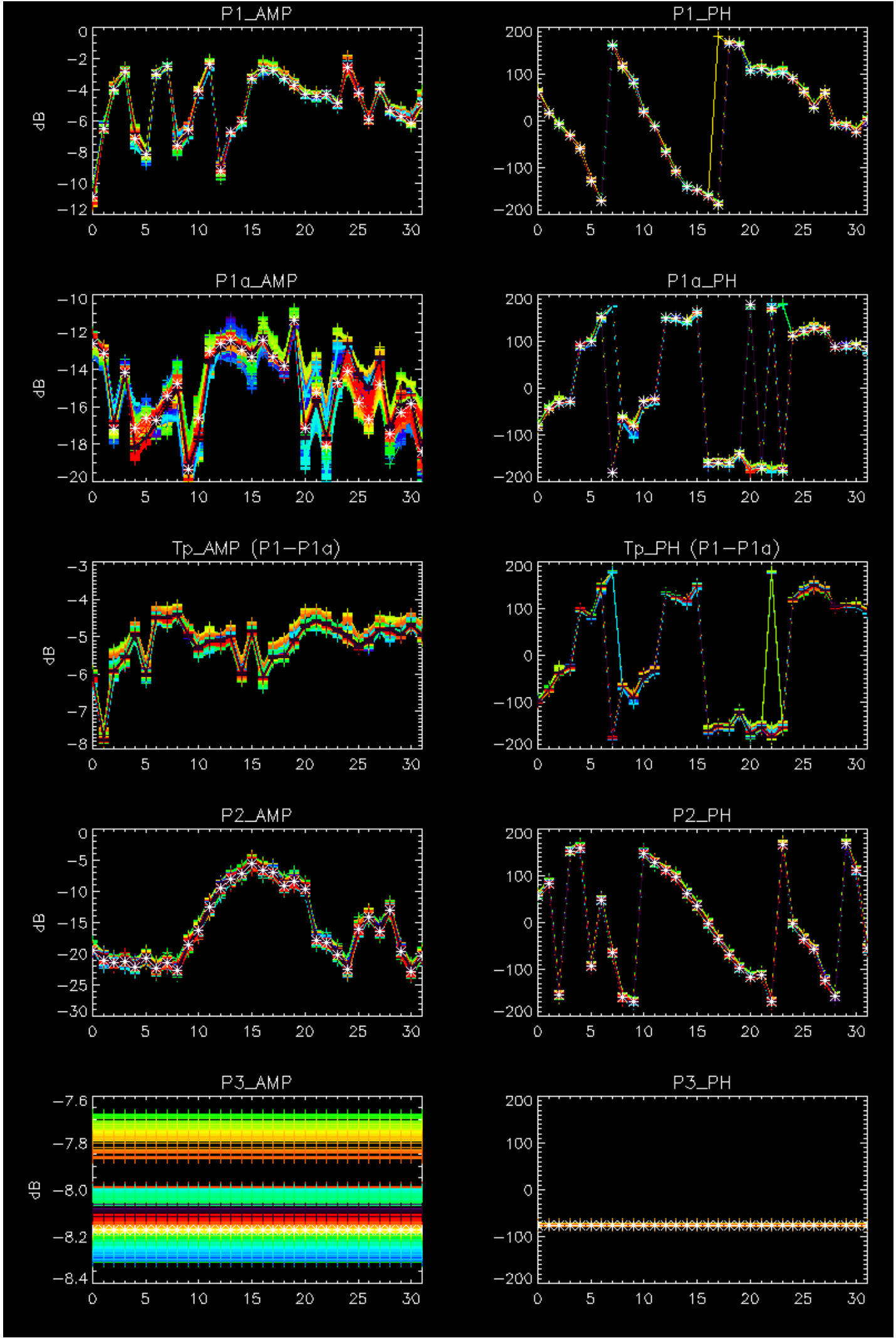
Cal pulses for WVS IS2



No anomalies observed on available browse products

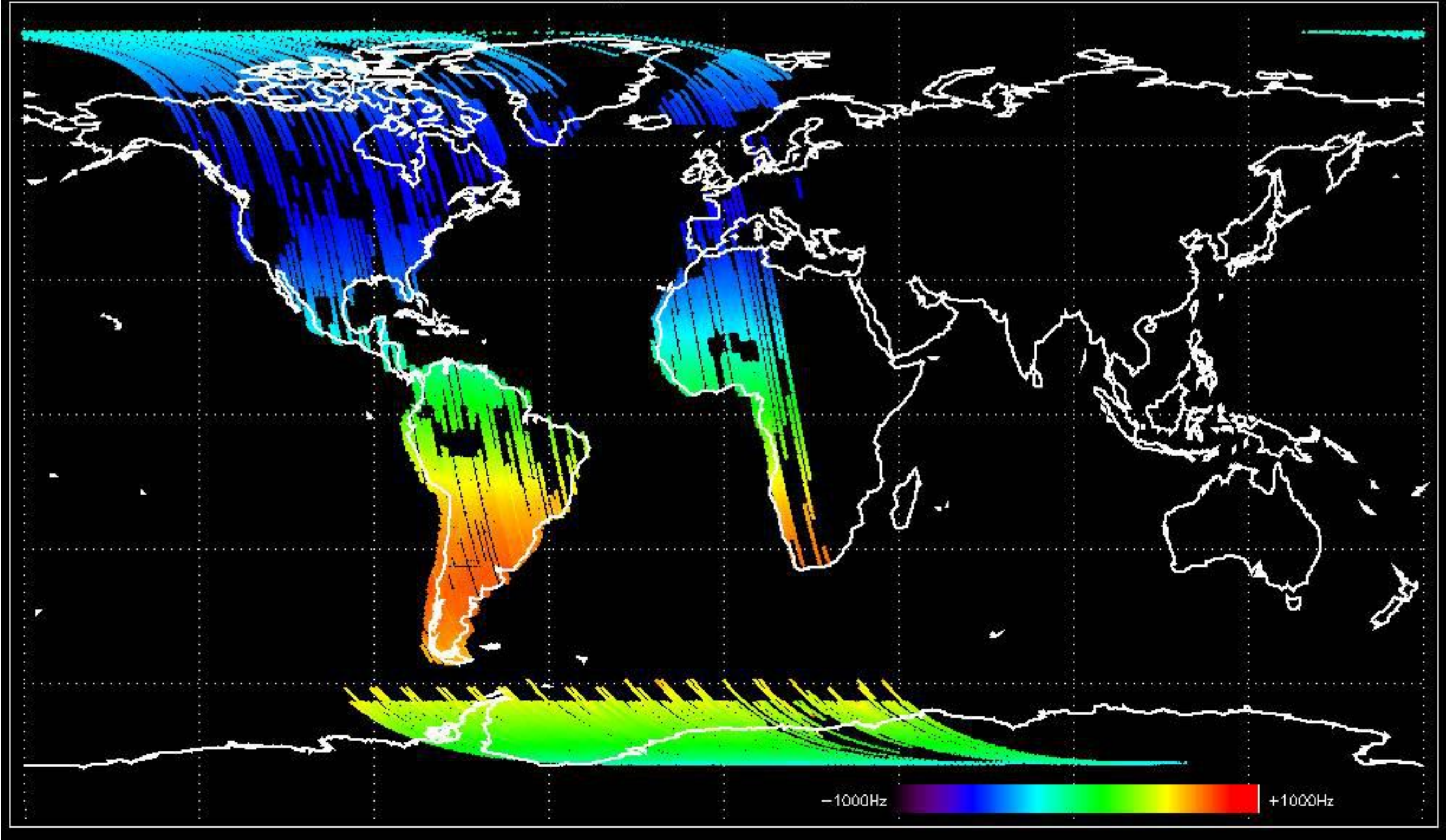
No anomalies observed.



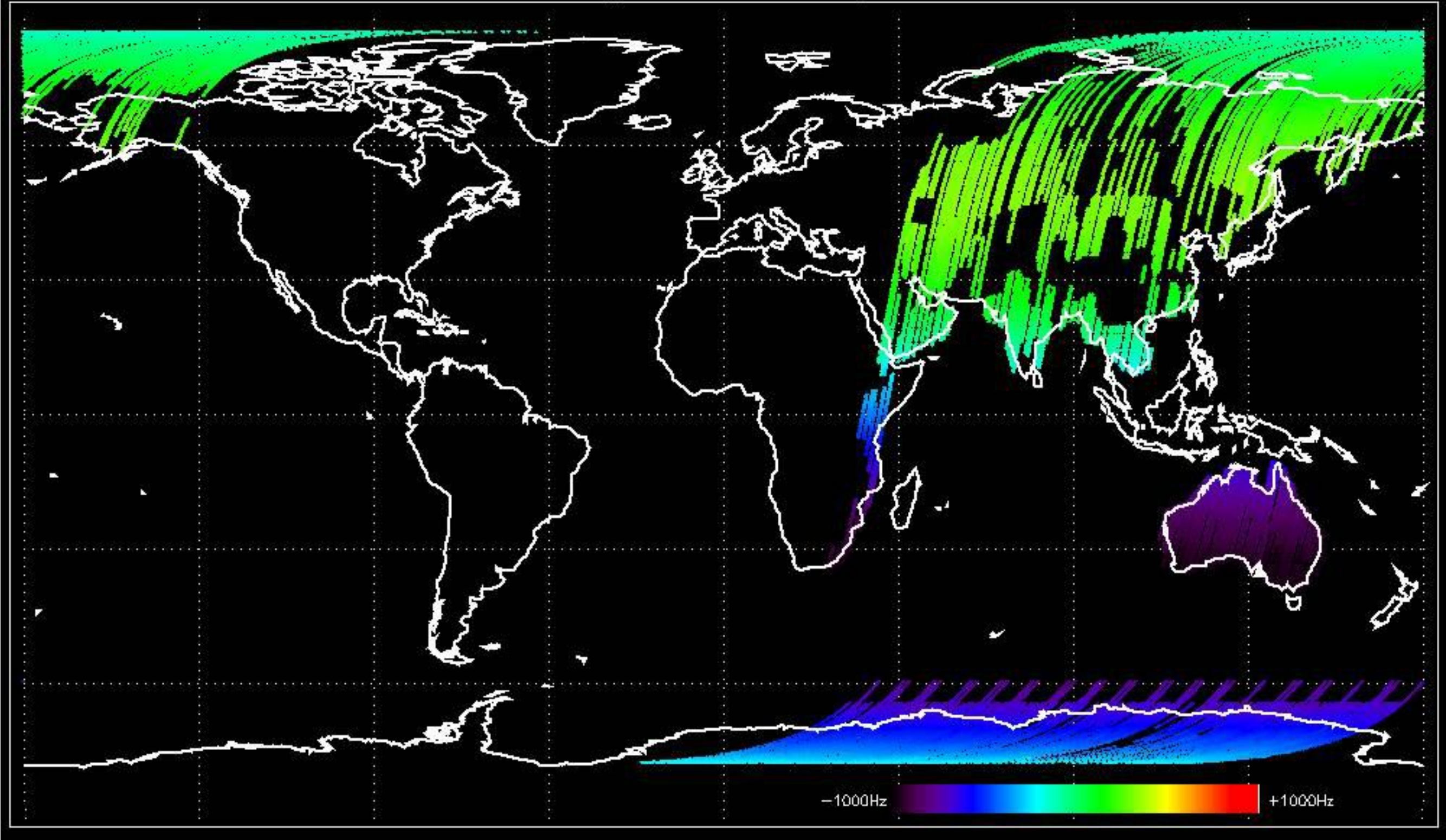


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

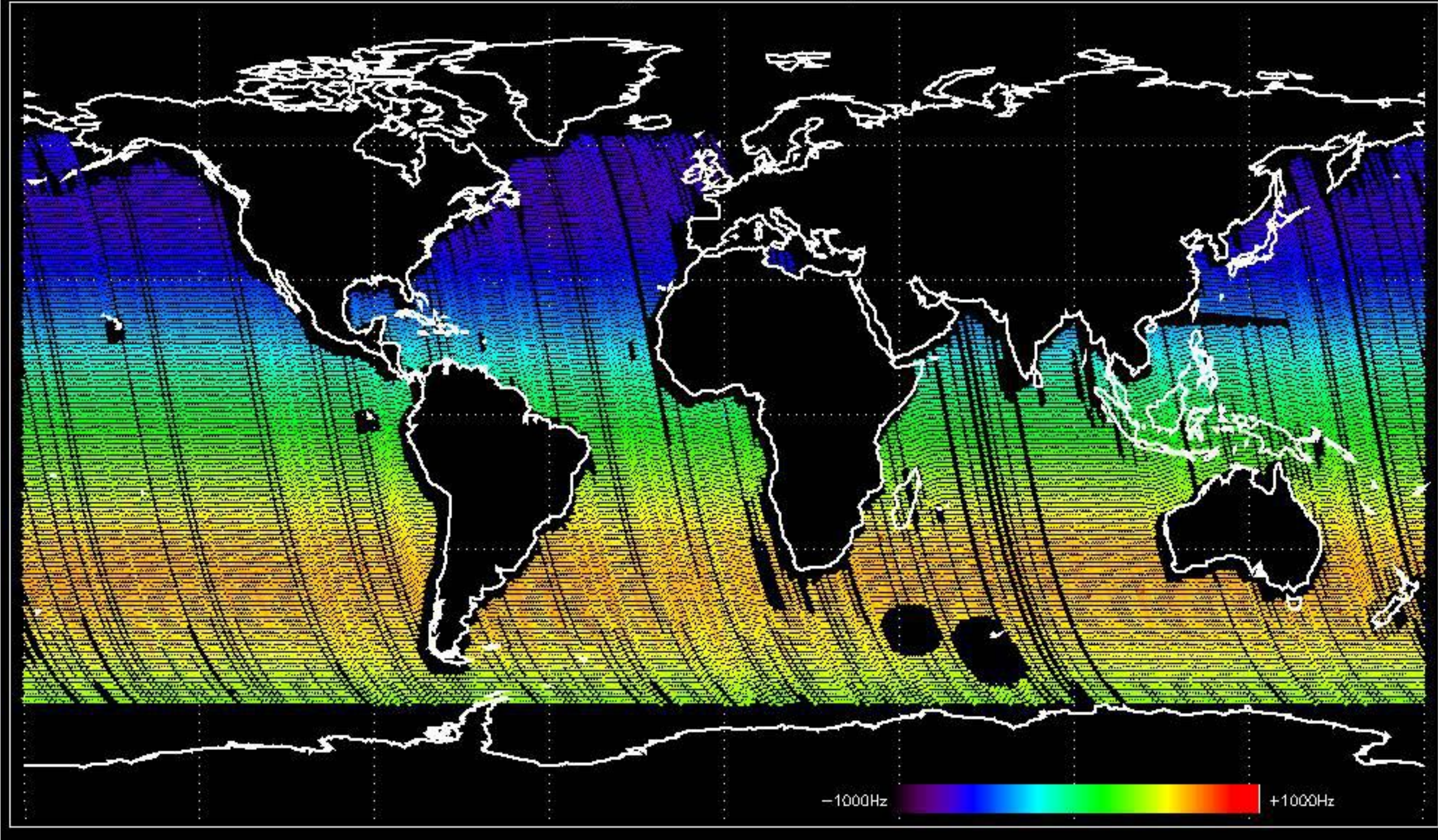
Doppler 'GM1' 'SS1' ascending



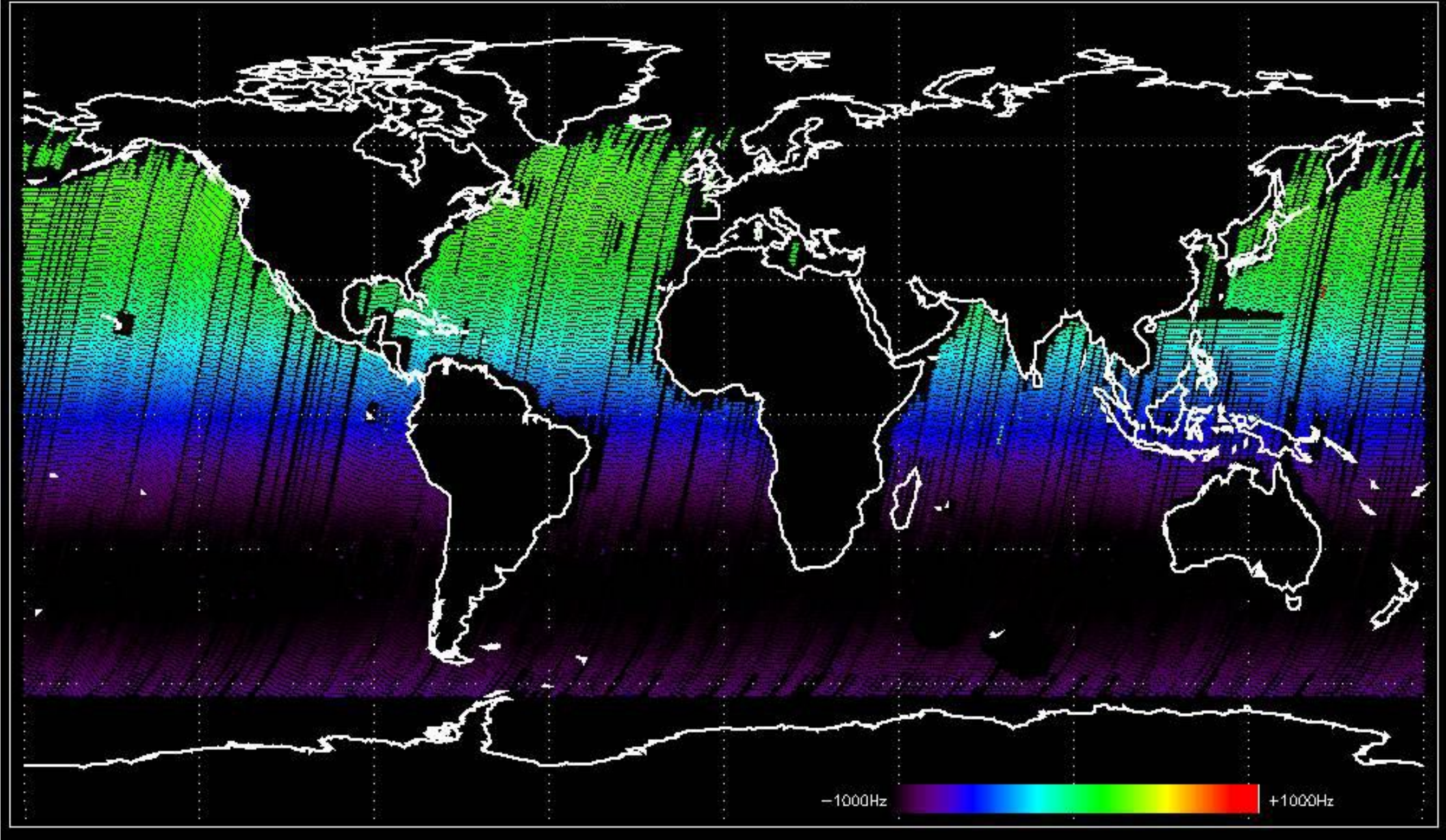
Doppler 'GM1' 'SS1' descending



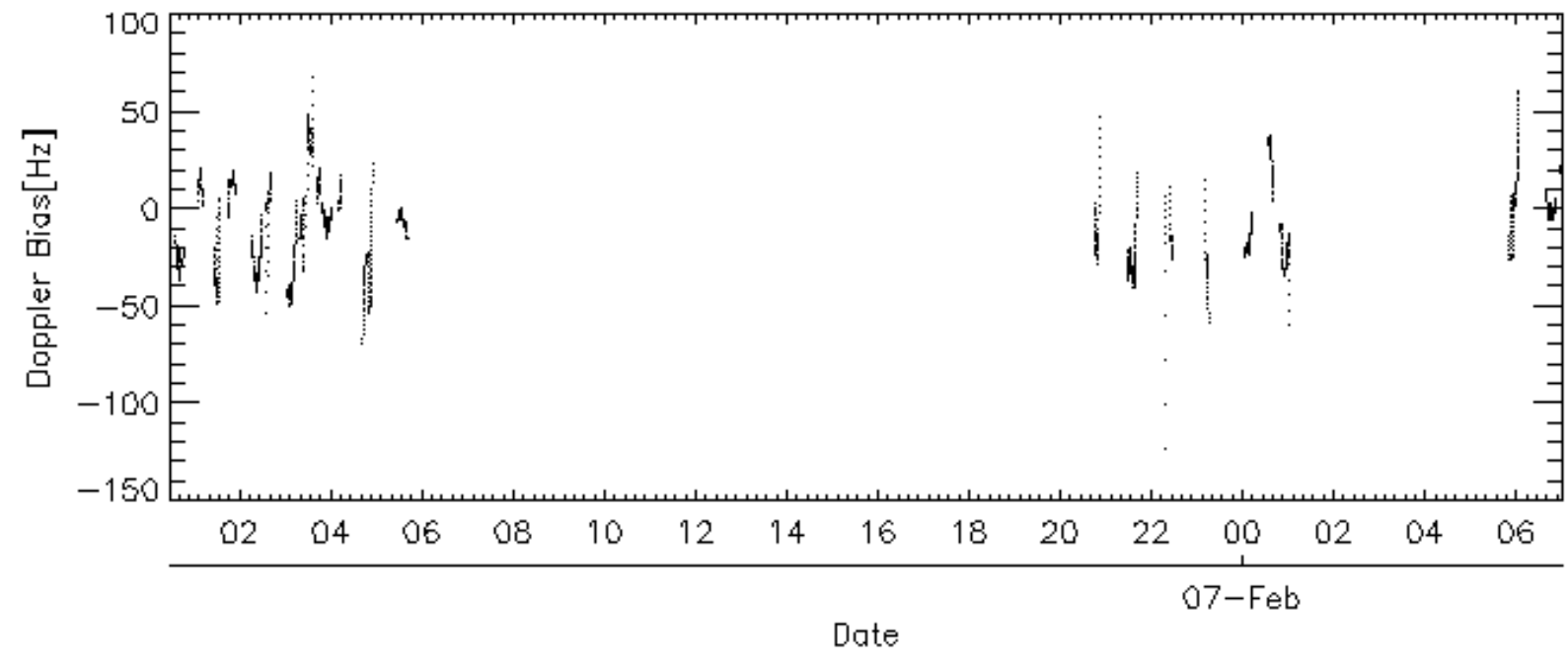
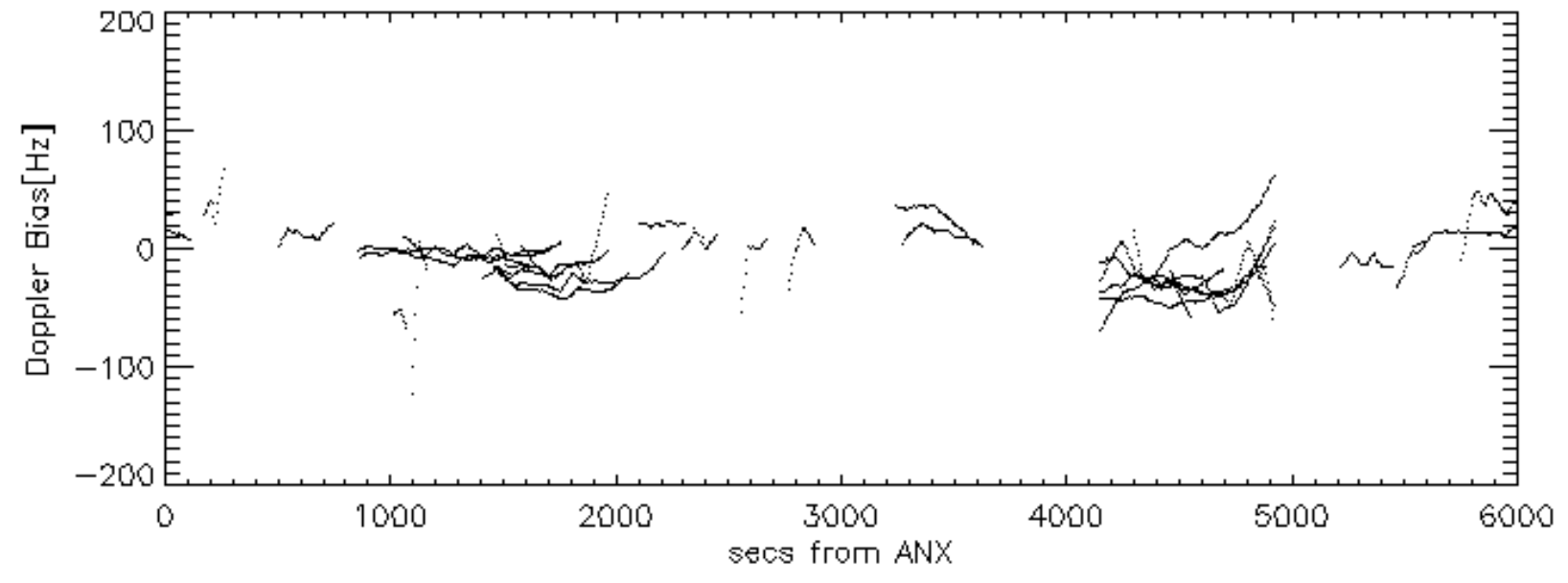
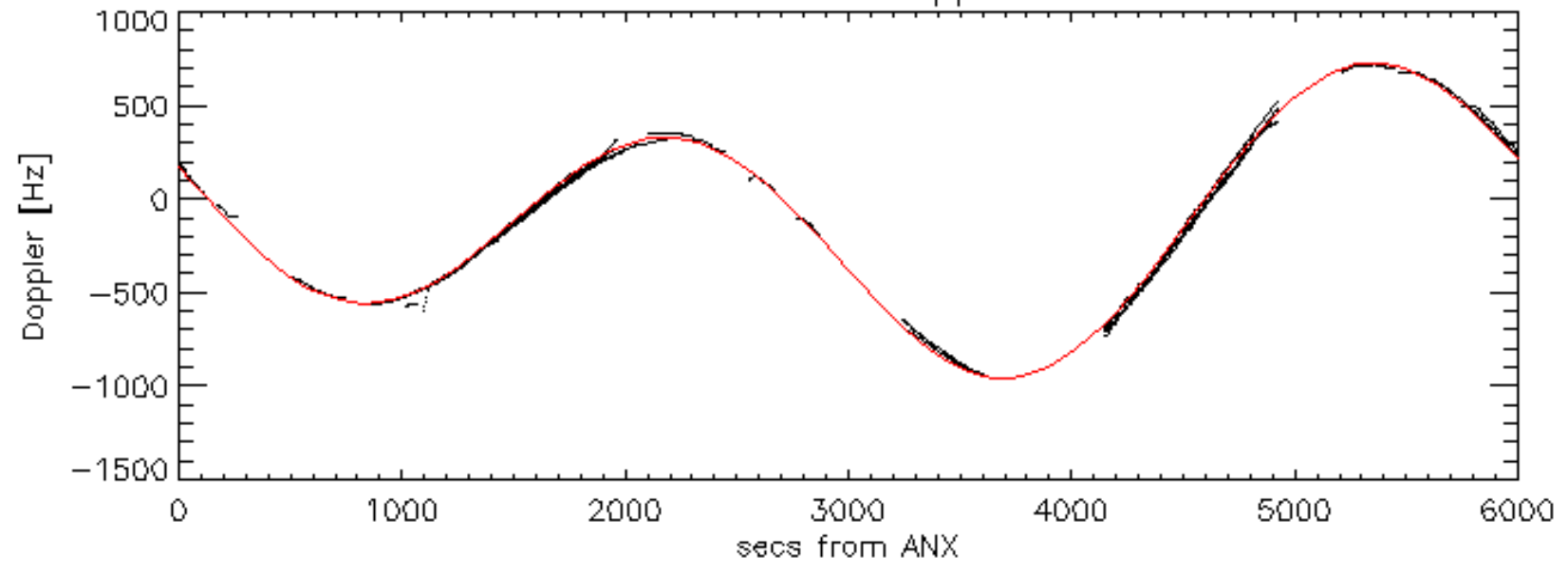
Doppler 'WVS' 'IS2' ascending

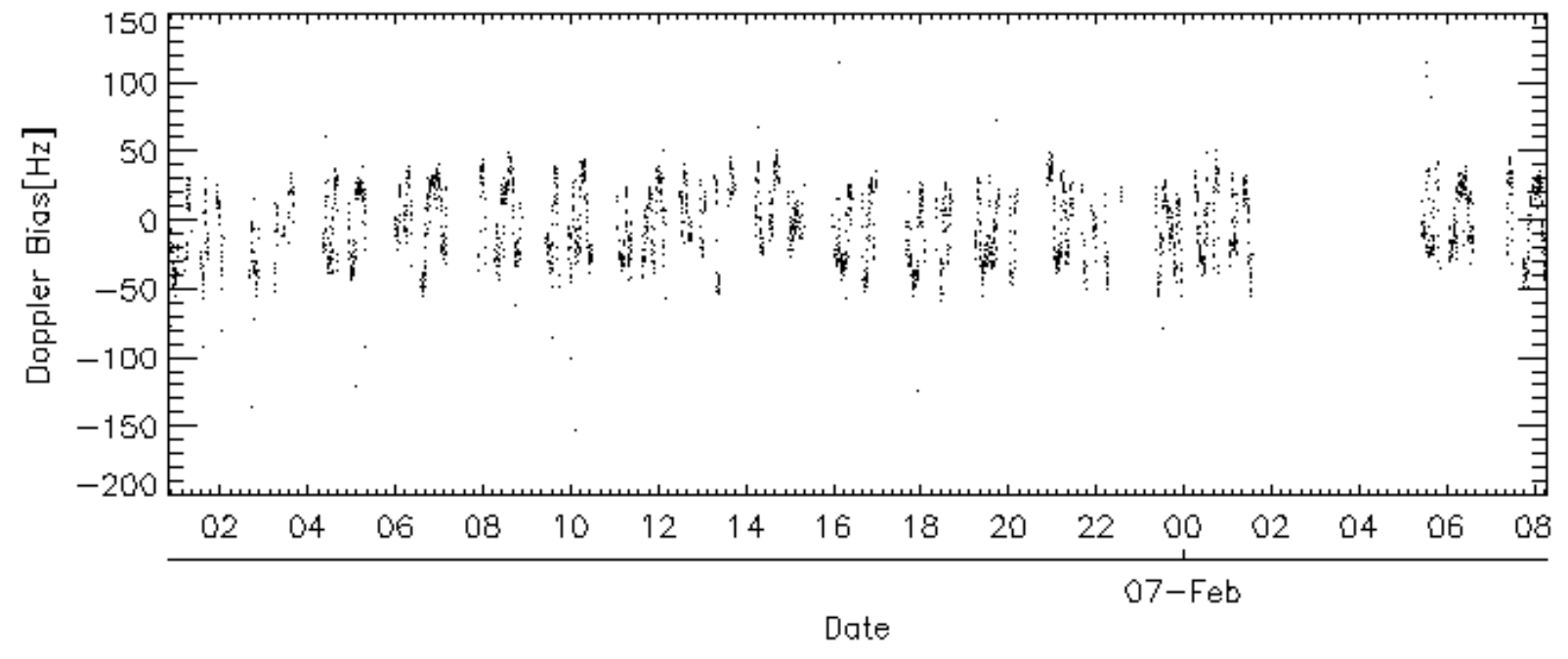
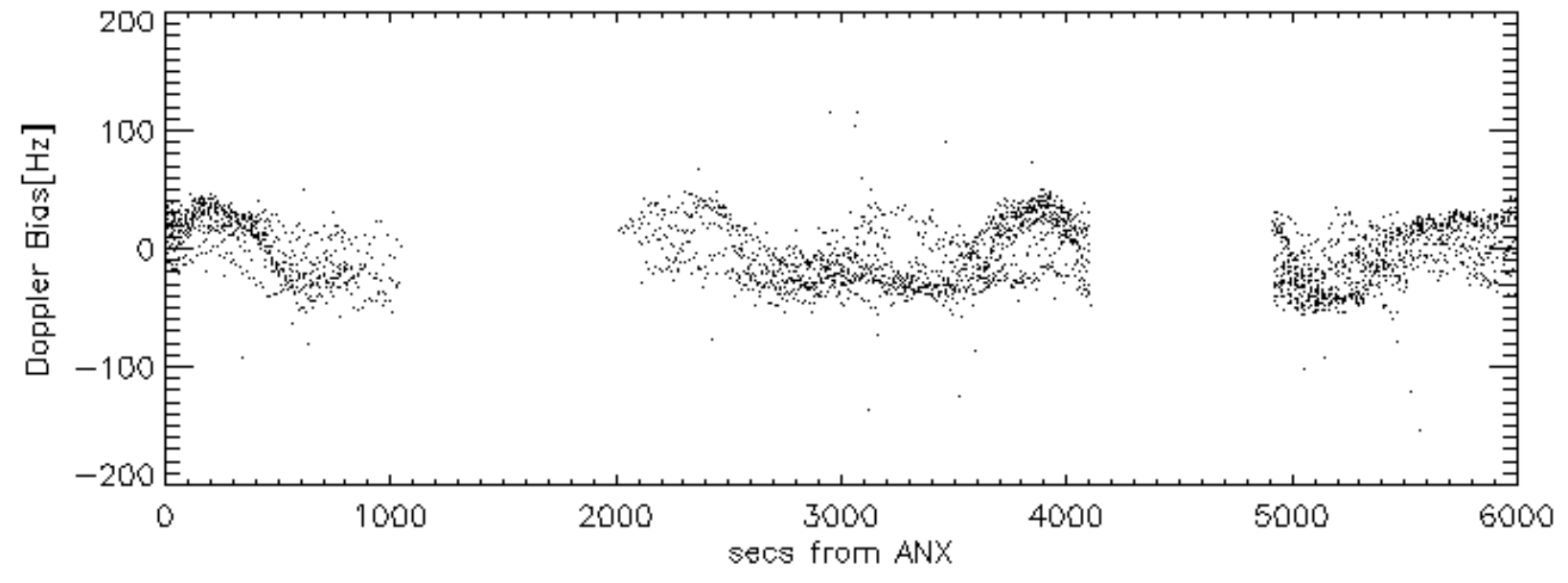
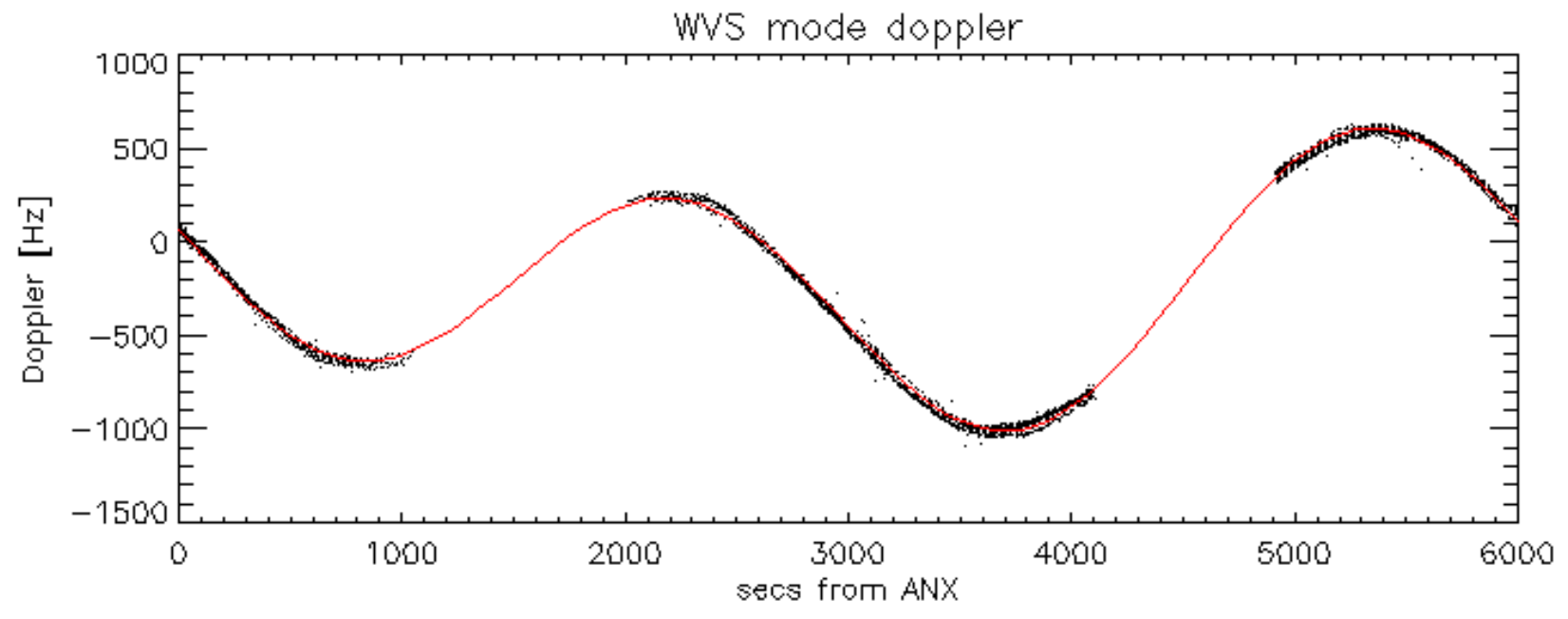


Doppler 'WVS' 'IS2' descending

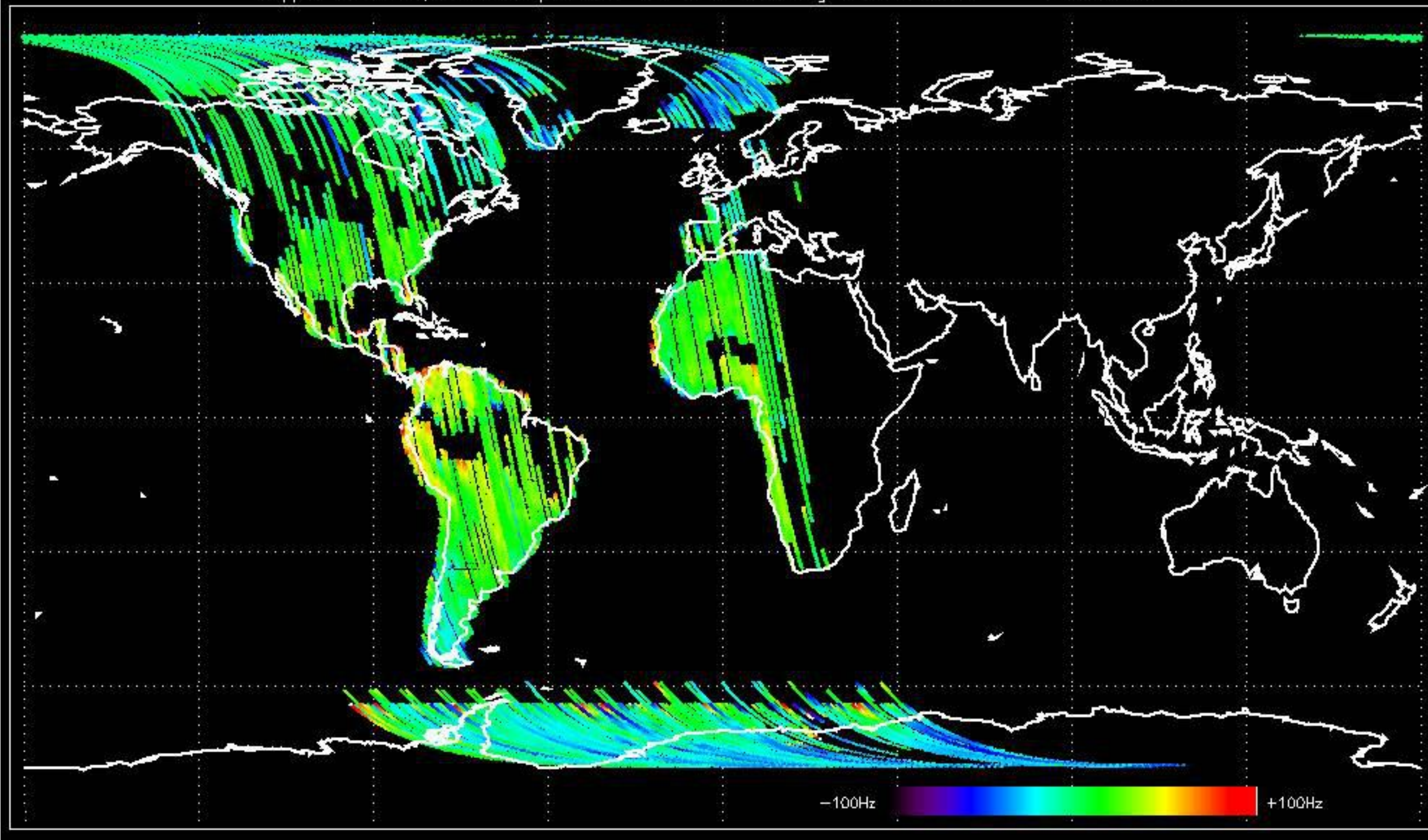


GM1 mode doppler

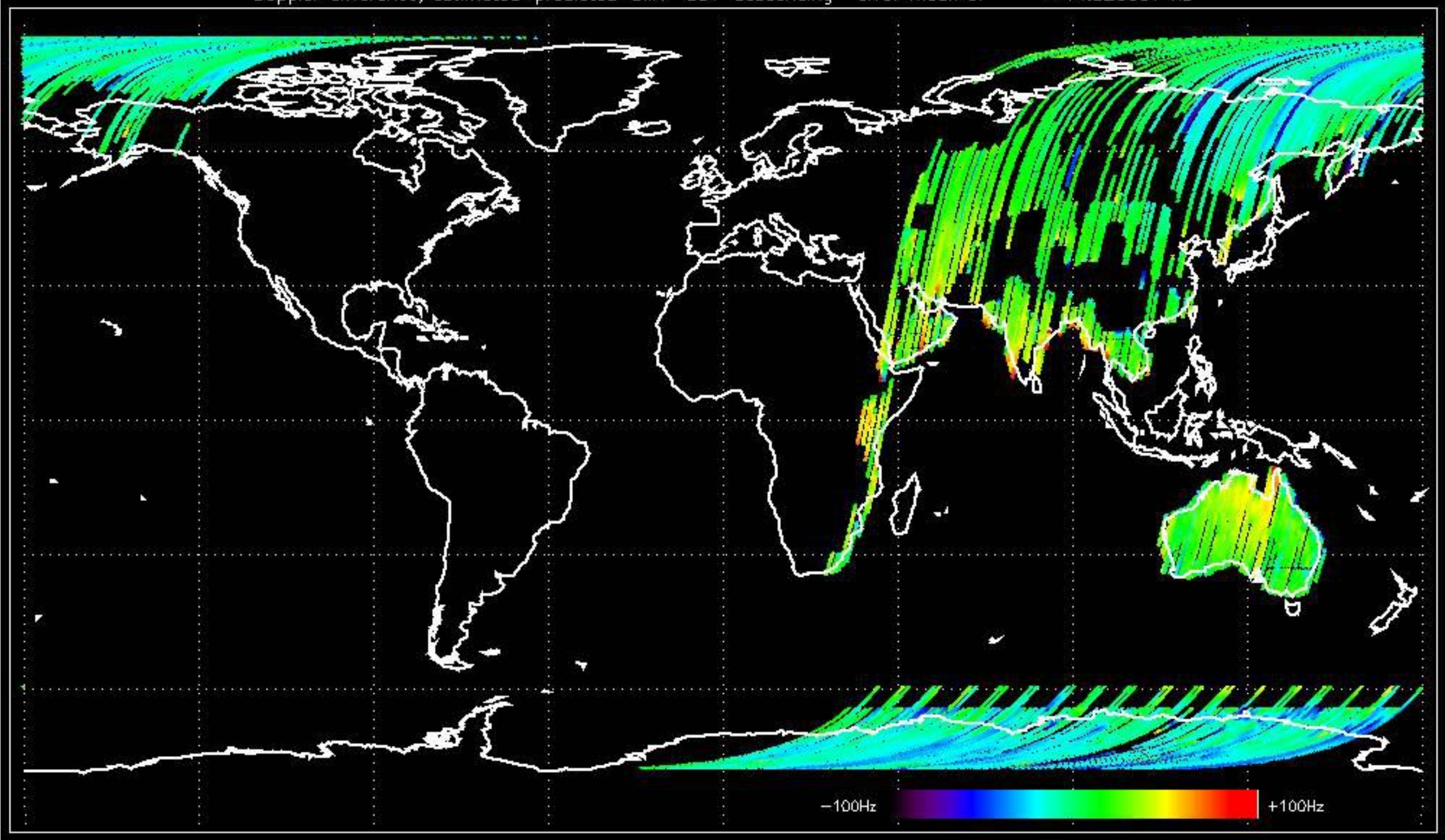




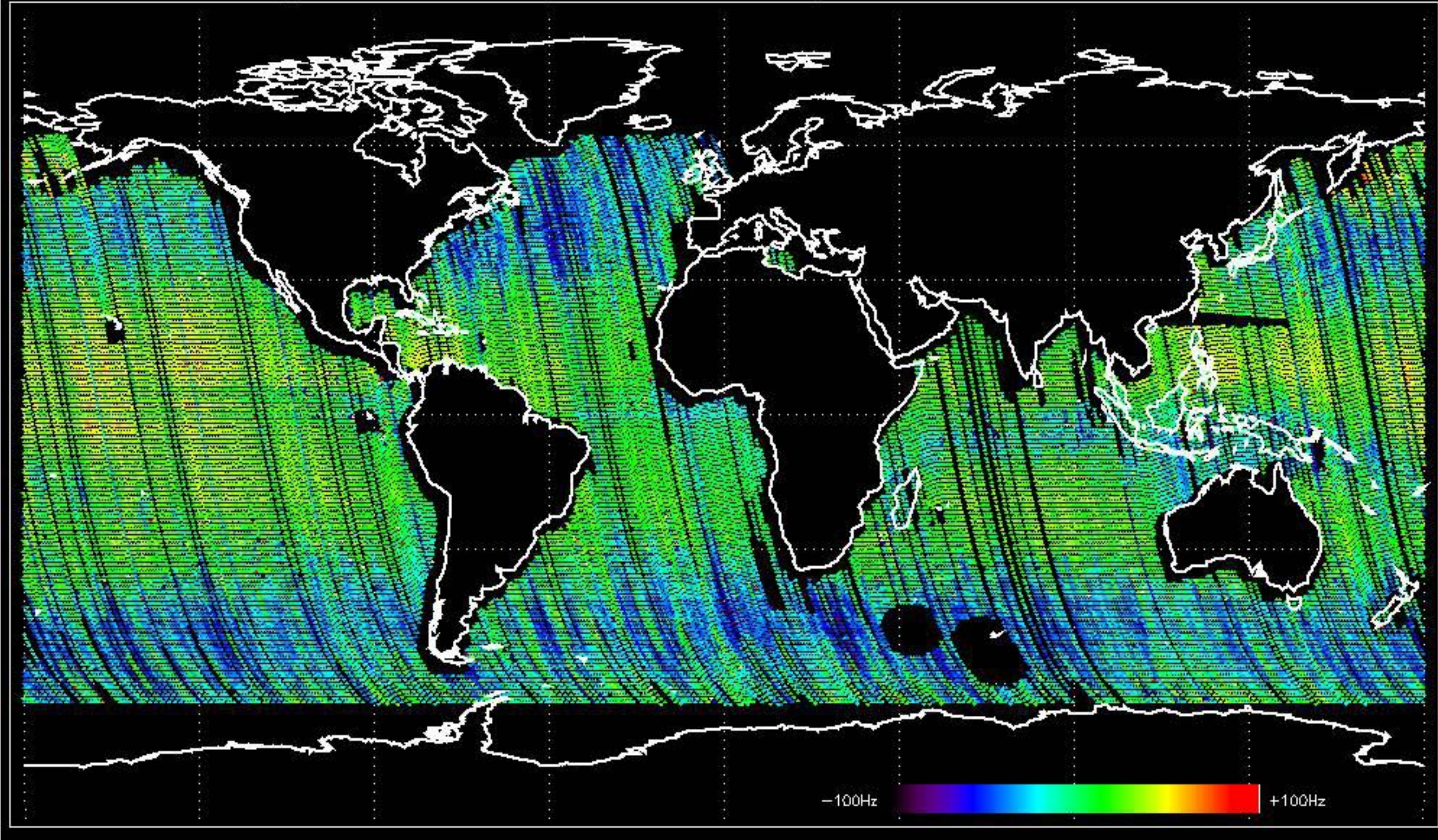
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.443631 Hz



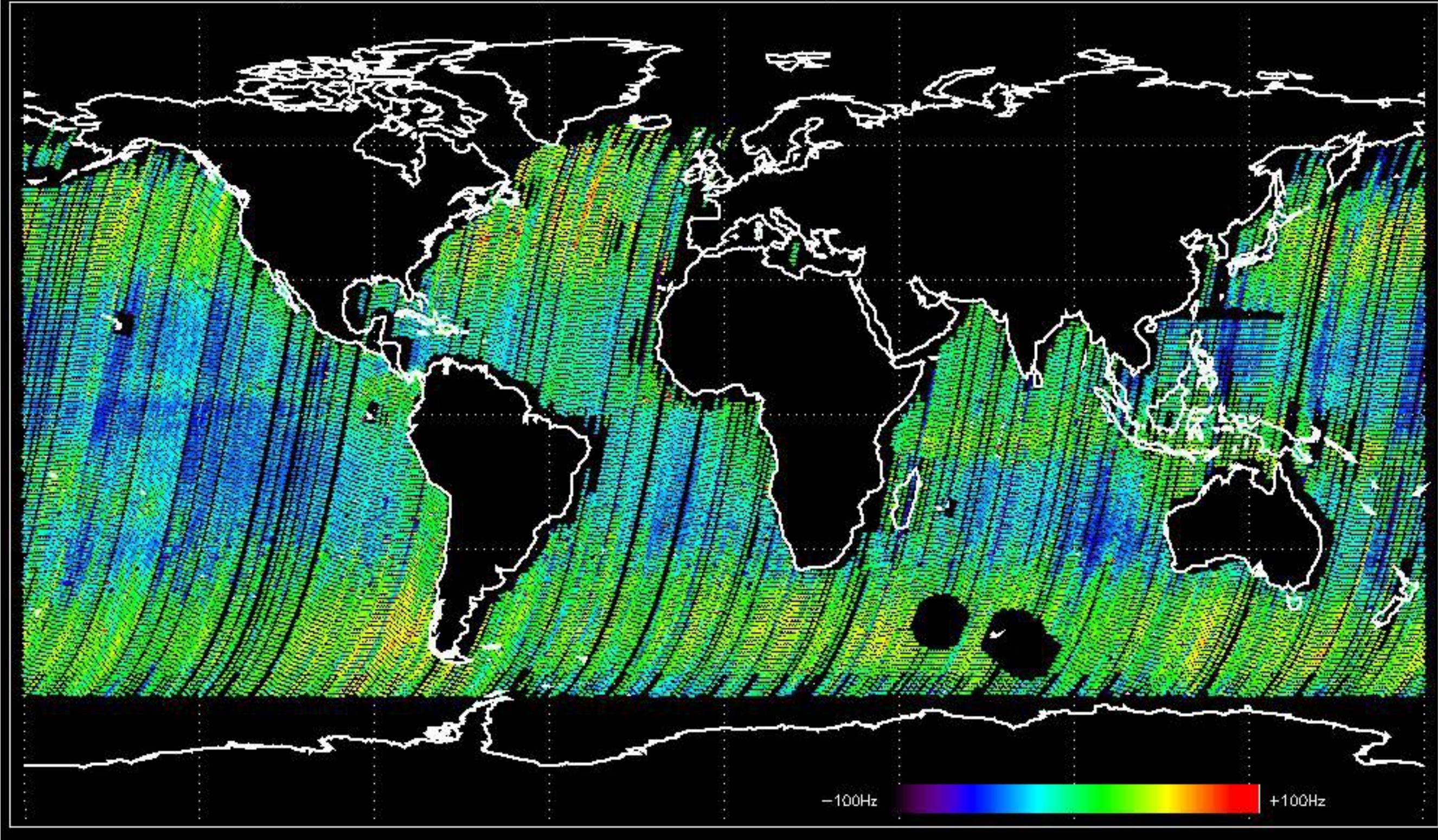
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.326661 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.0758817 Hz

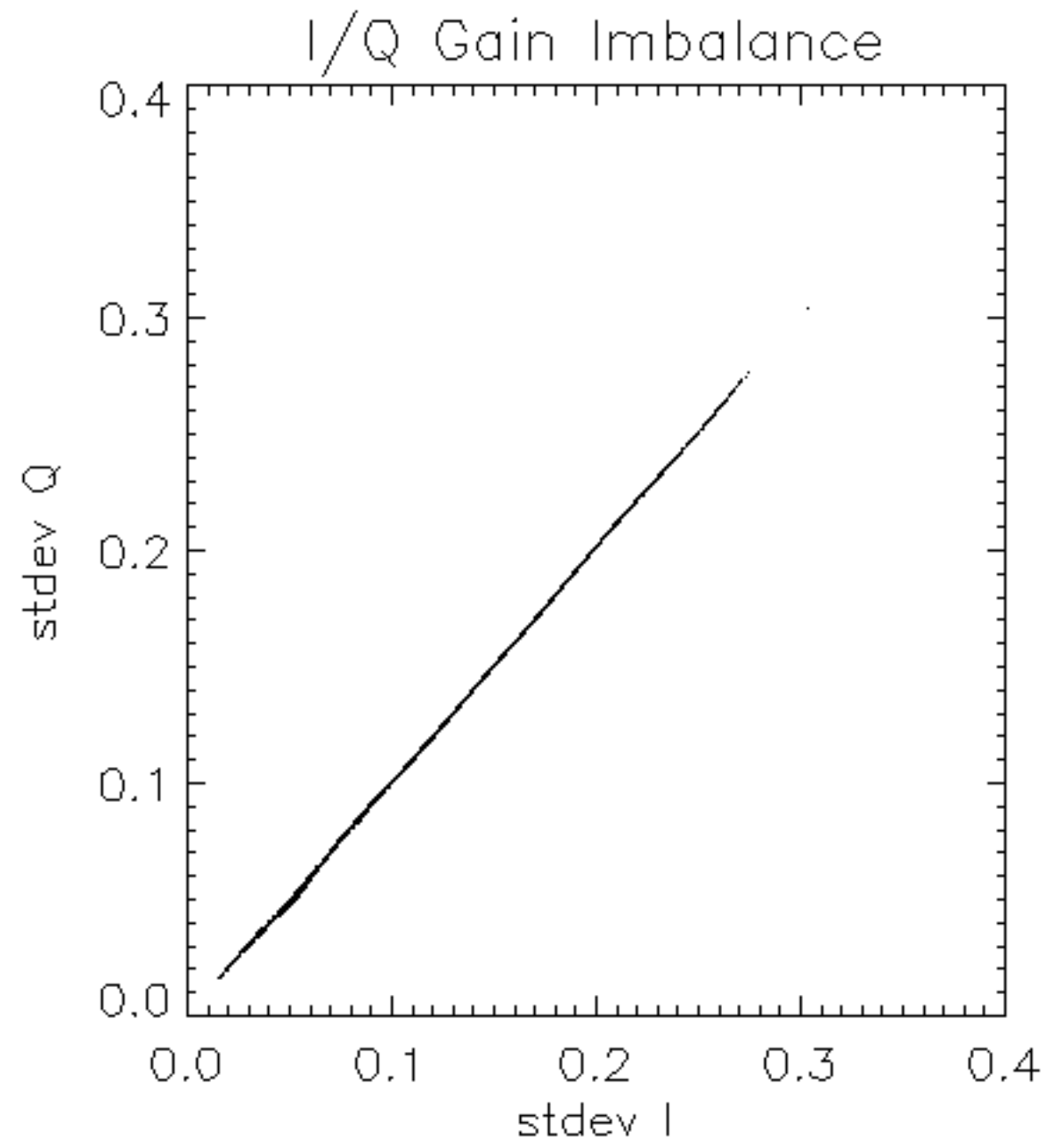


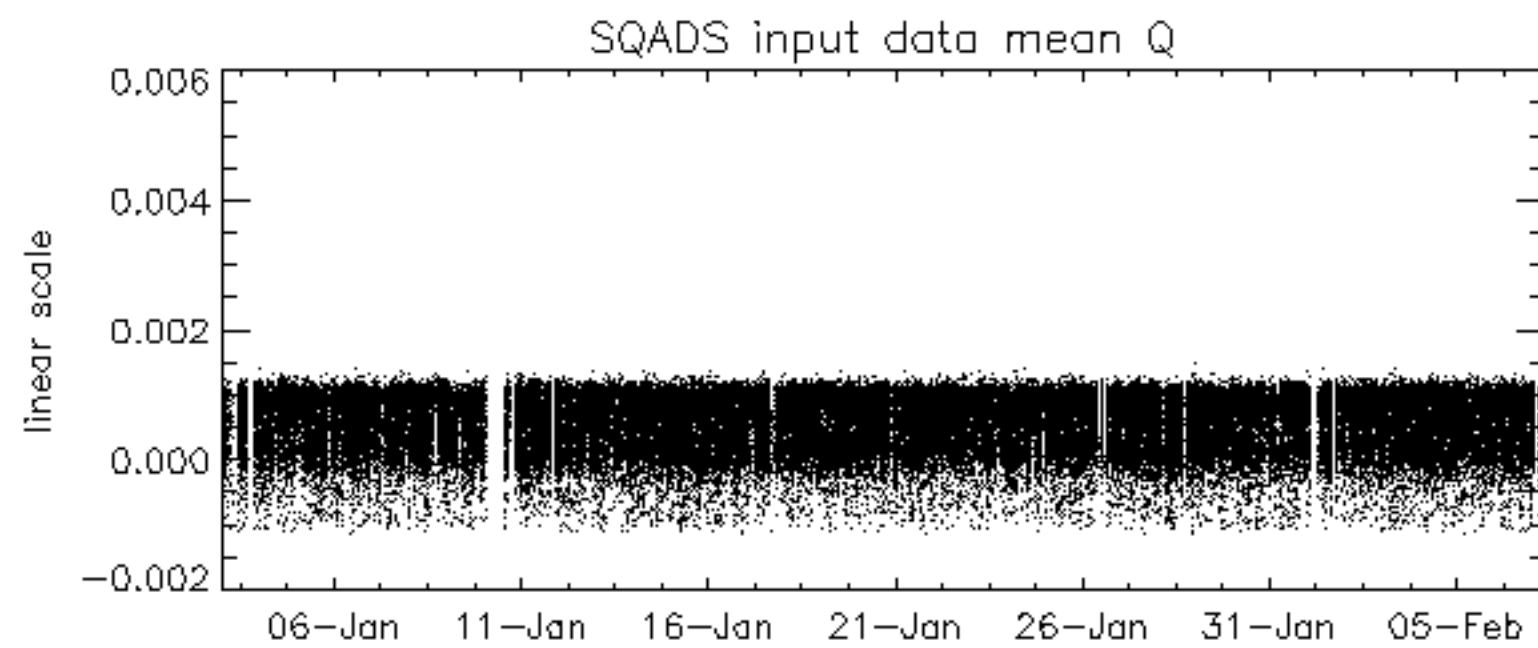
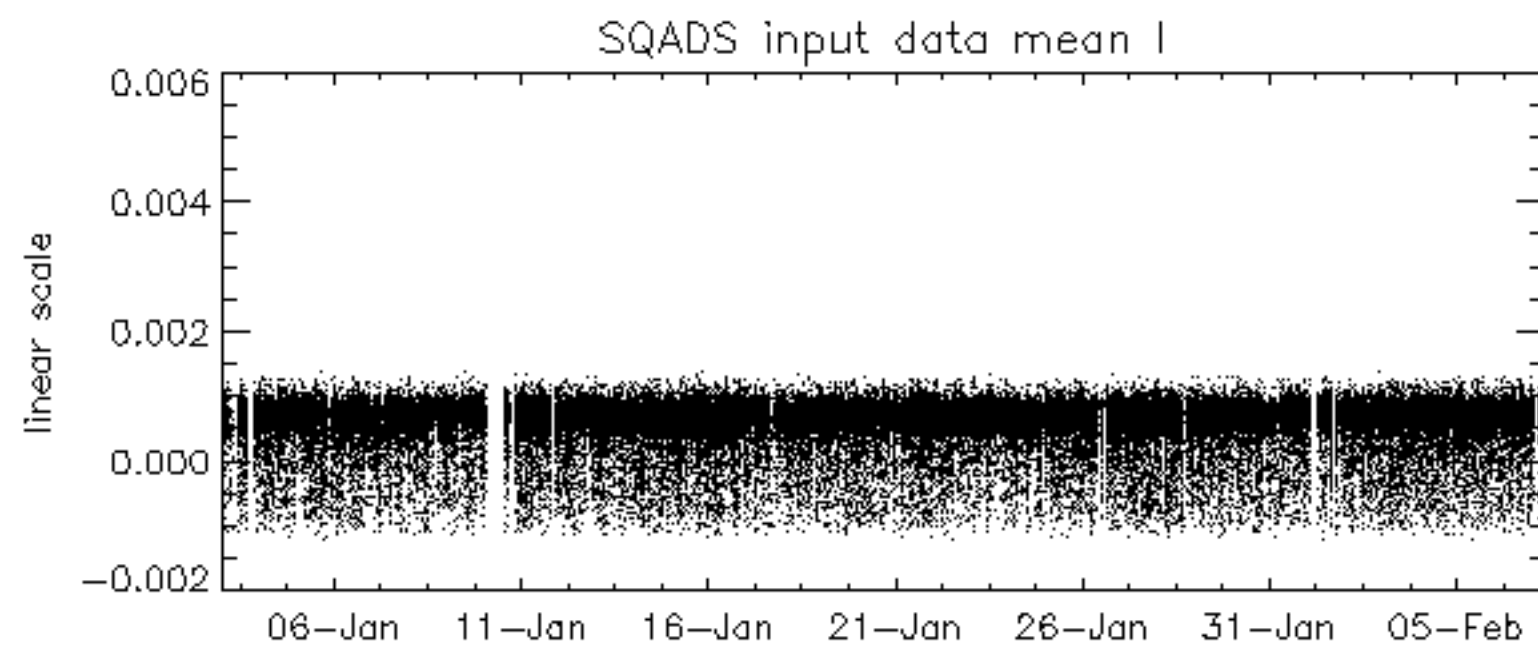
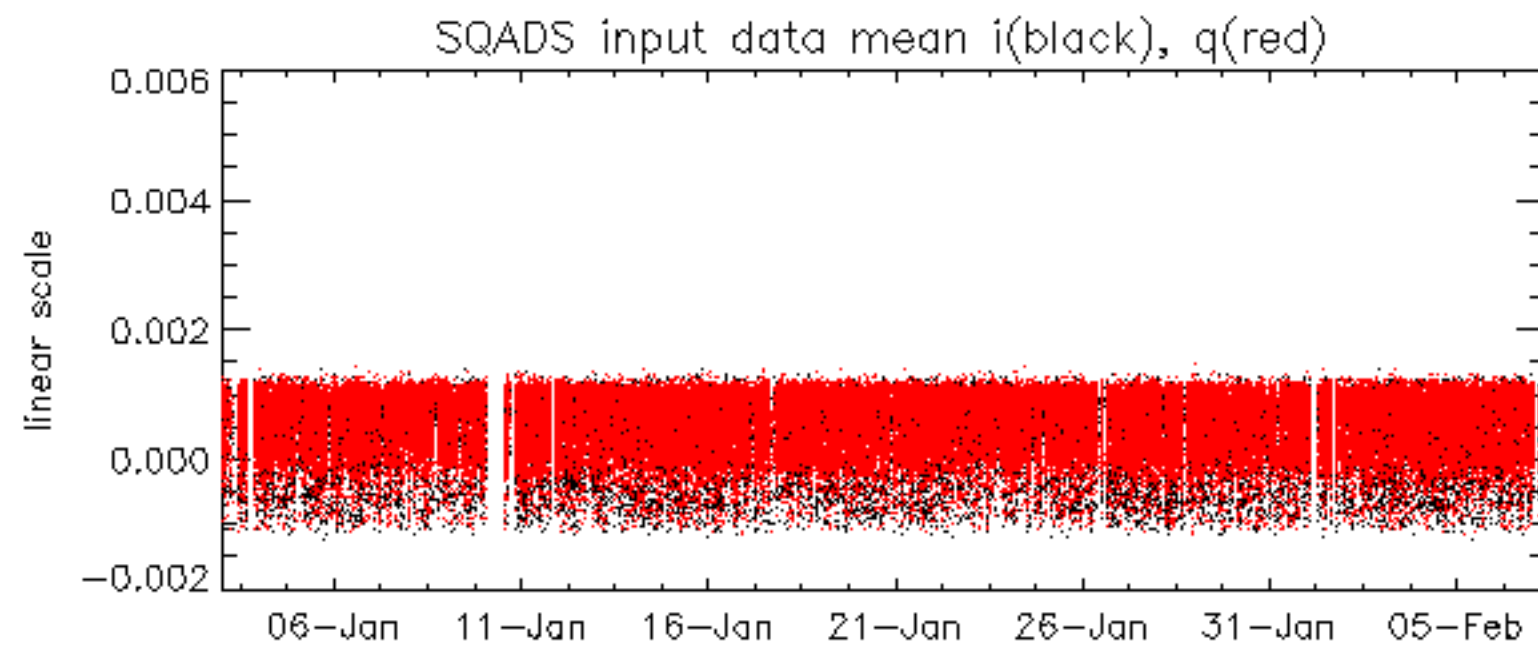
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.166781 Hz

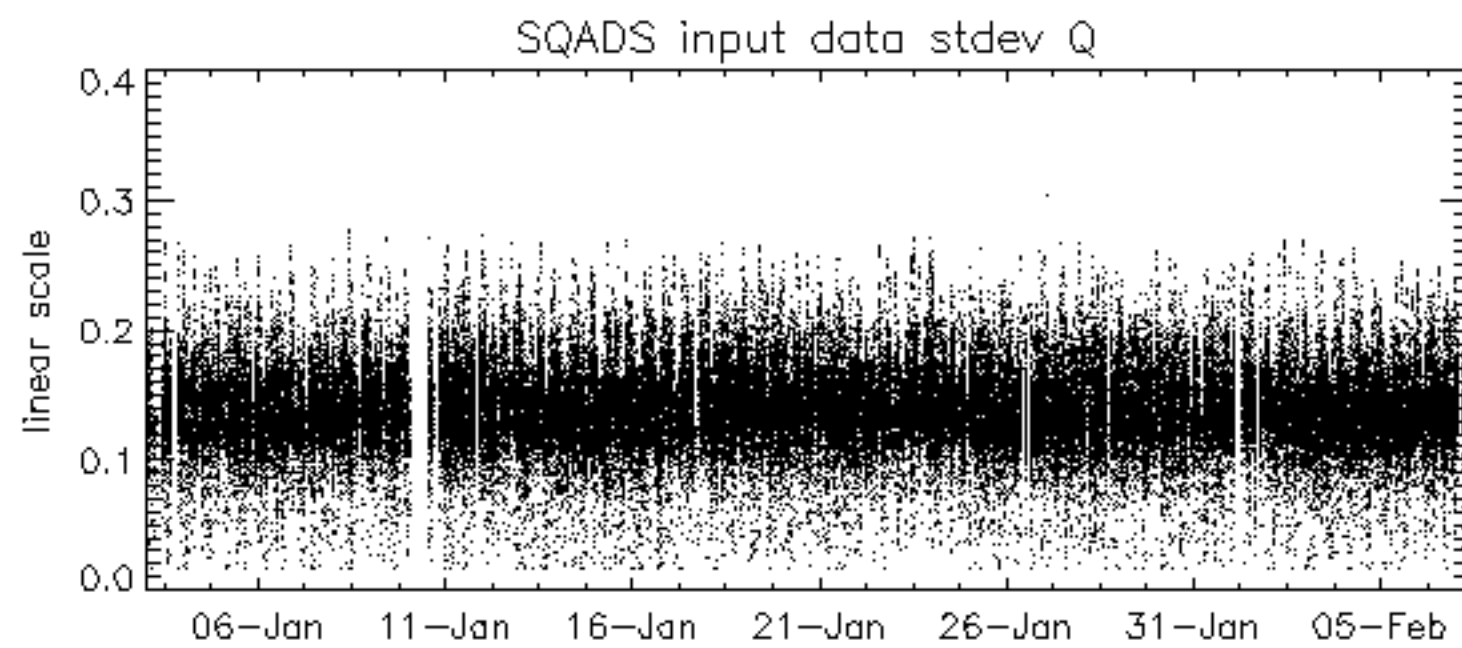
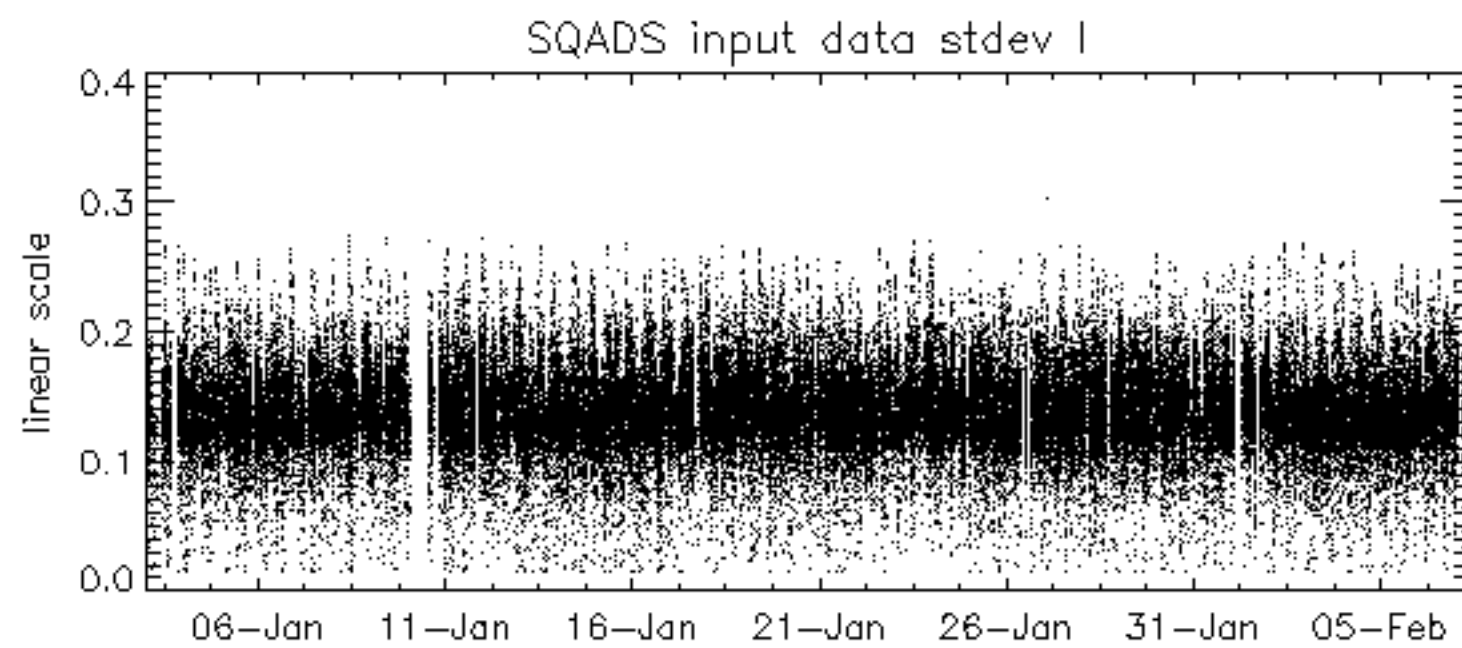
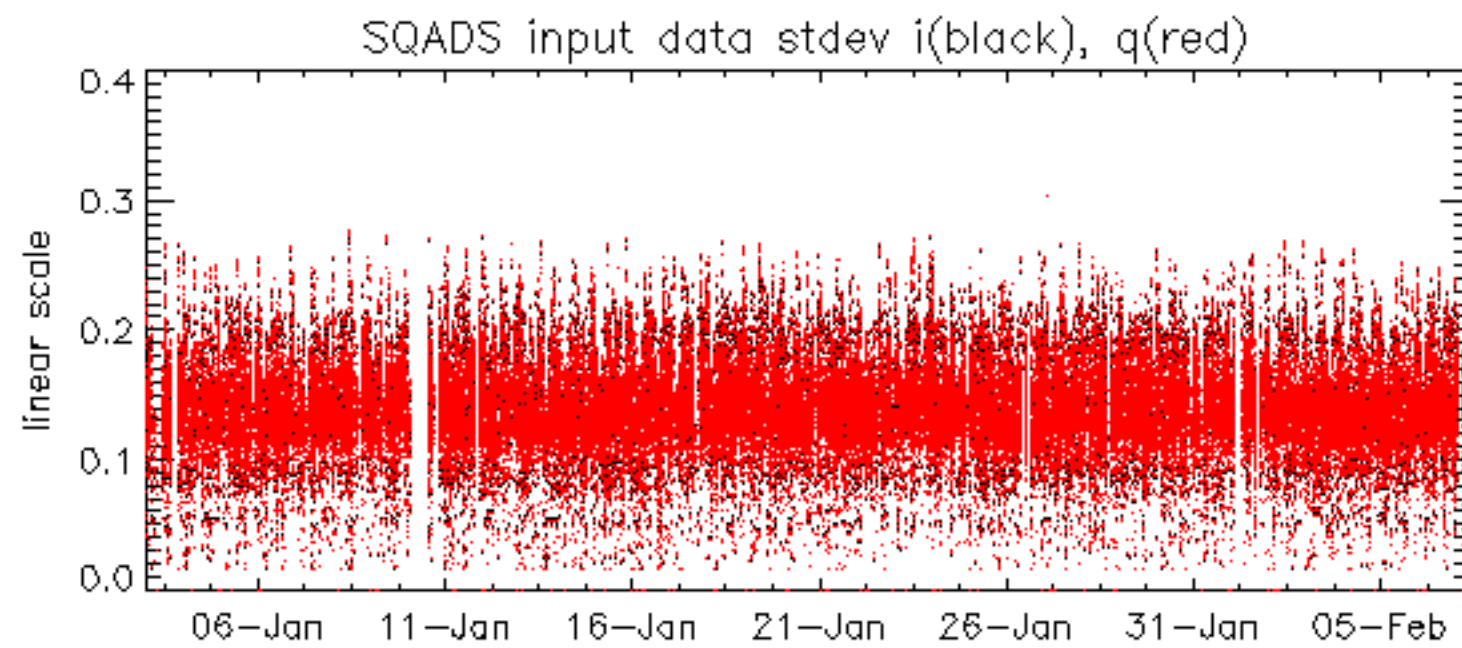


No anomalies observed on available MS products:

No anomalies observed.



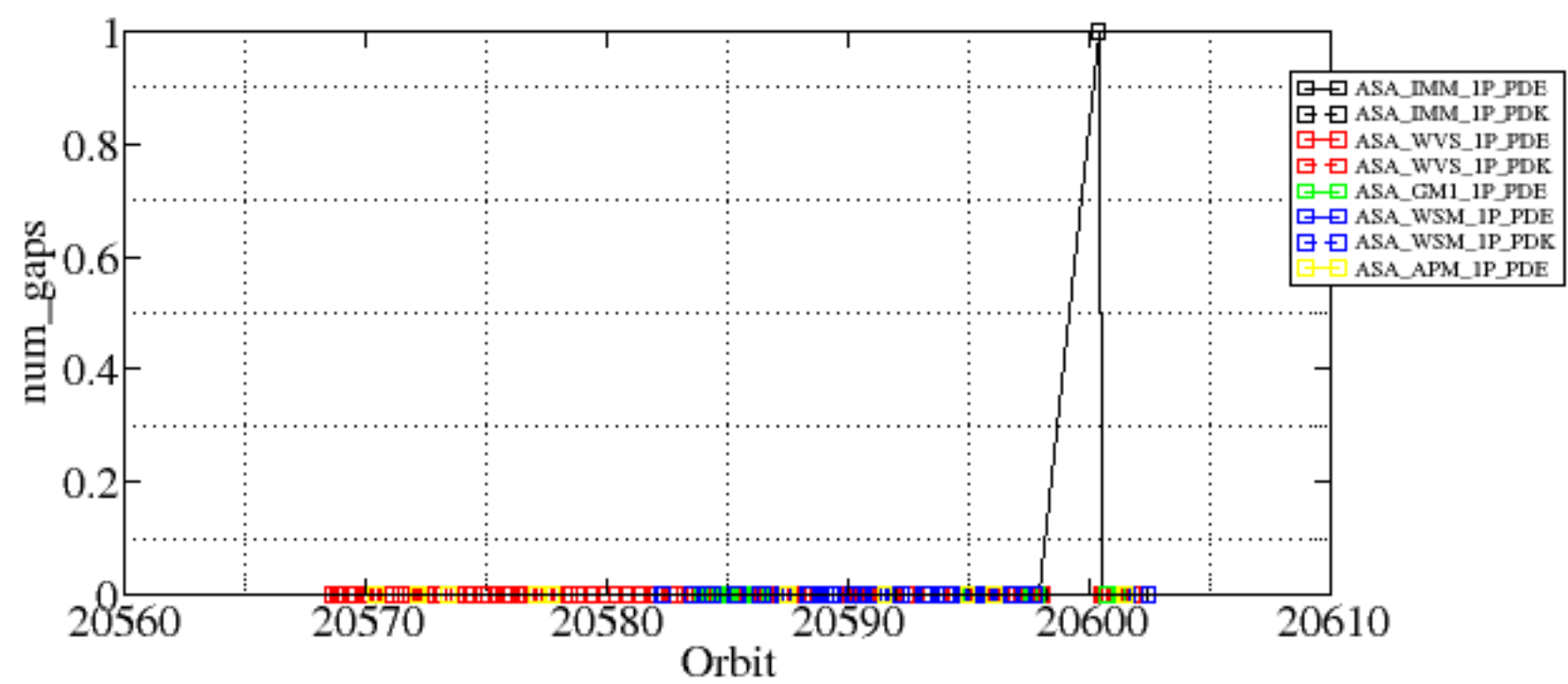




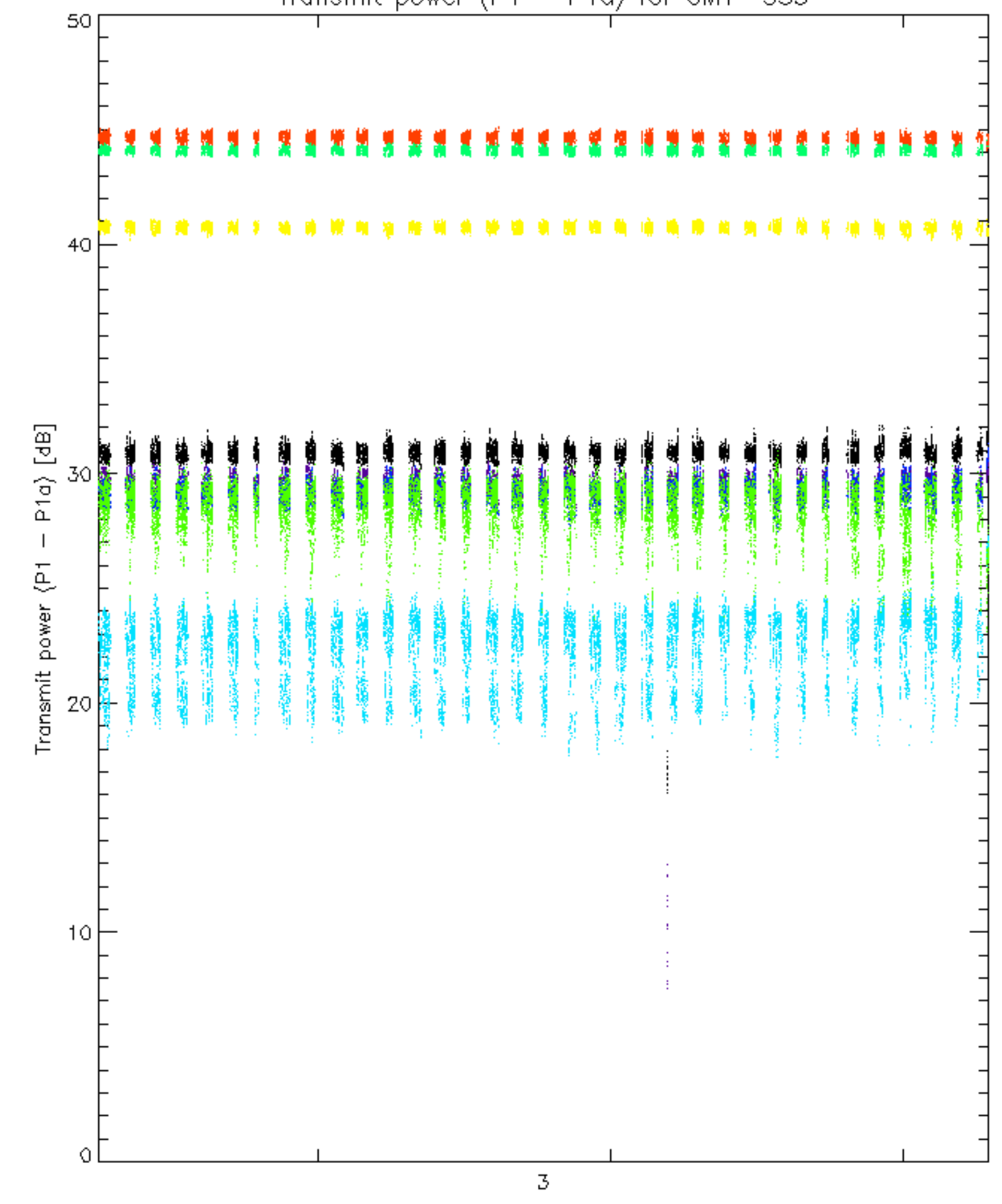
Summary of analysis for the last 3 days 2006020[567]

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

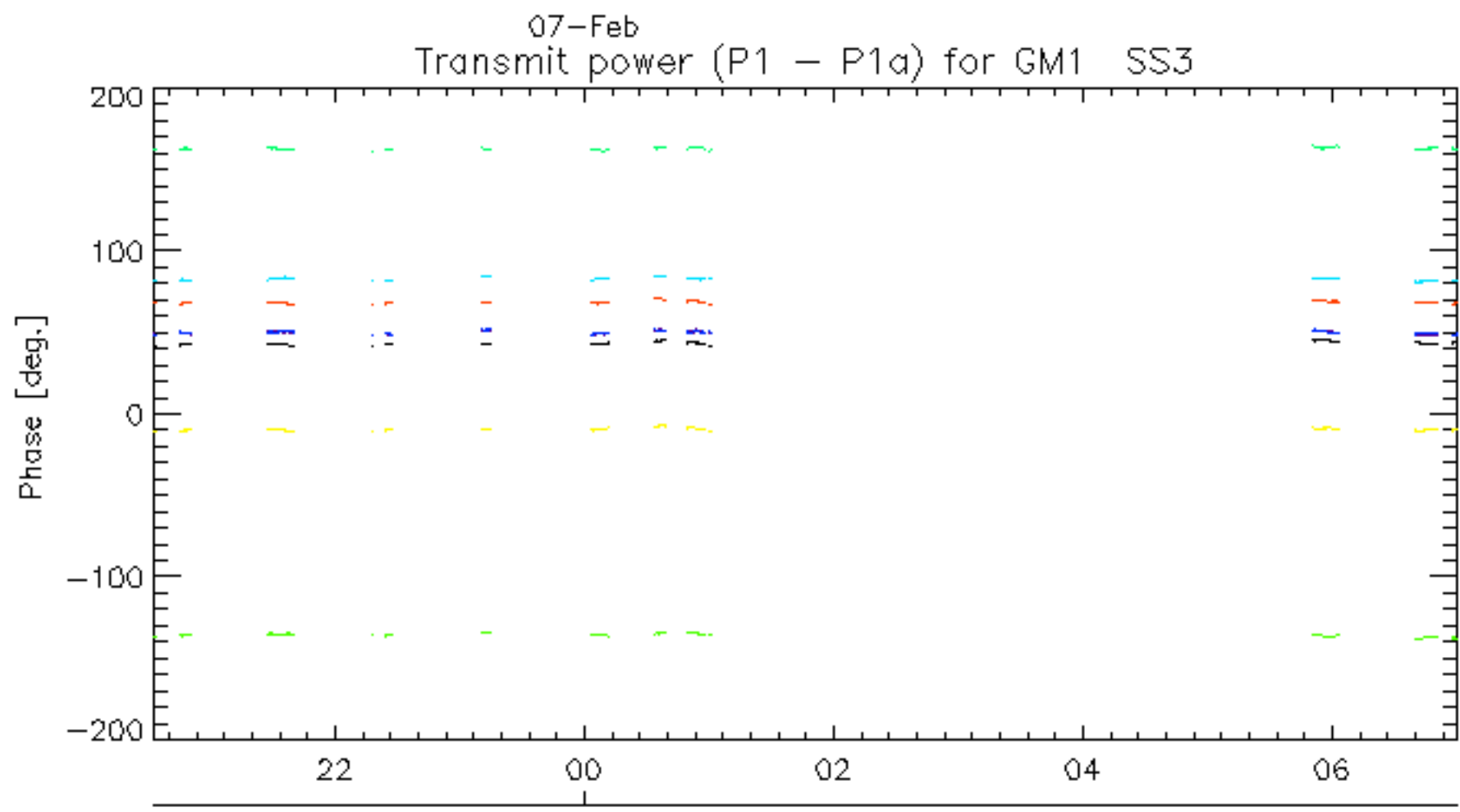
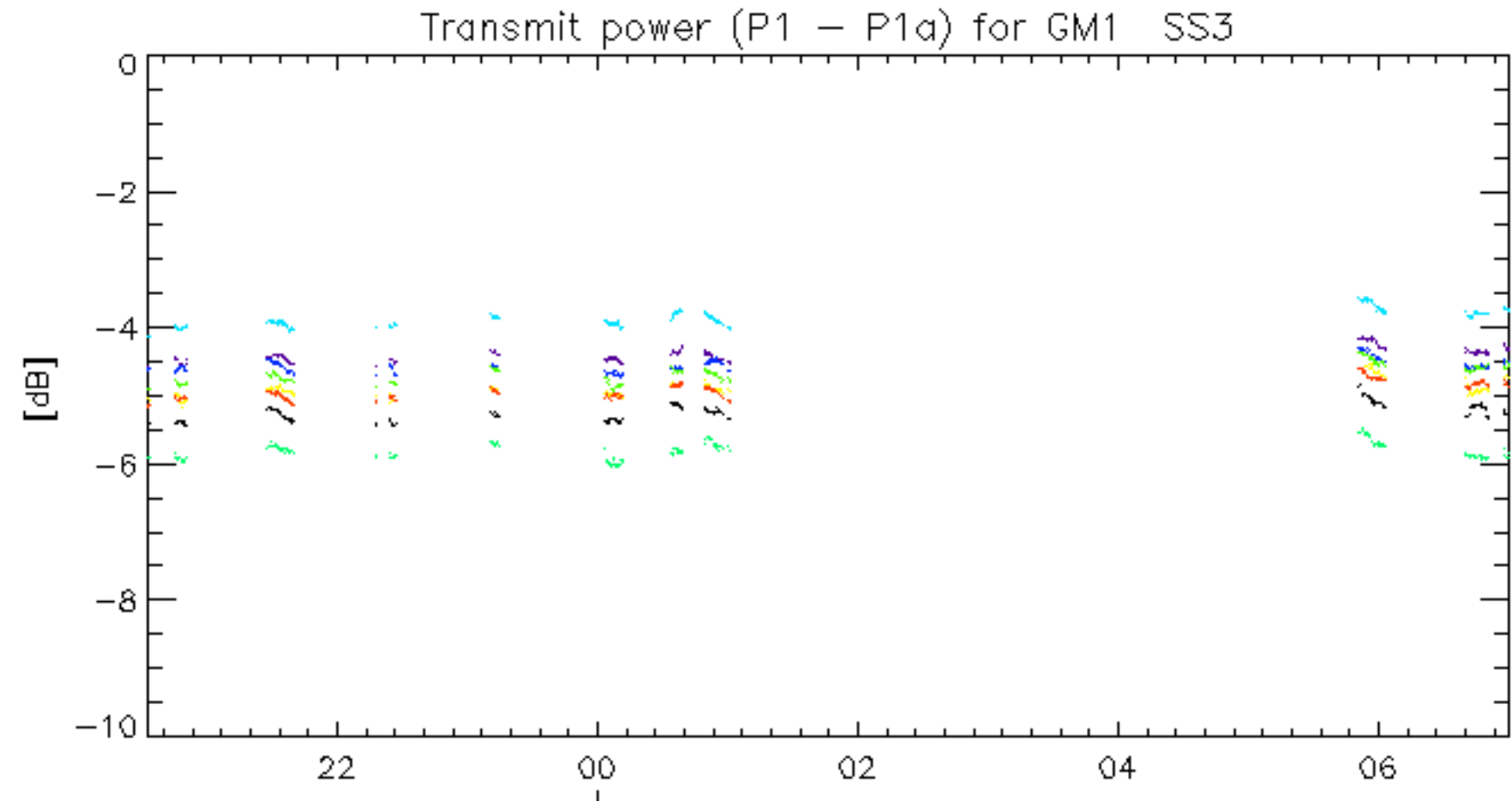
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060207_051935_000003422045_00005_20600_2226.N1	1	0
ASA_WSM_1PNPDE20060206_040934_00000612044_00491_20585_3904.N1	0	1
ASA_APM_1PNPDE20060205_141423_00000822044_00483_20577_0339.N1	0	30



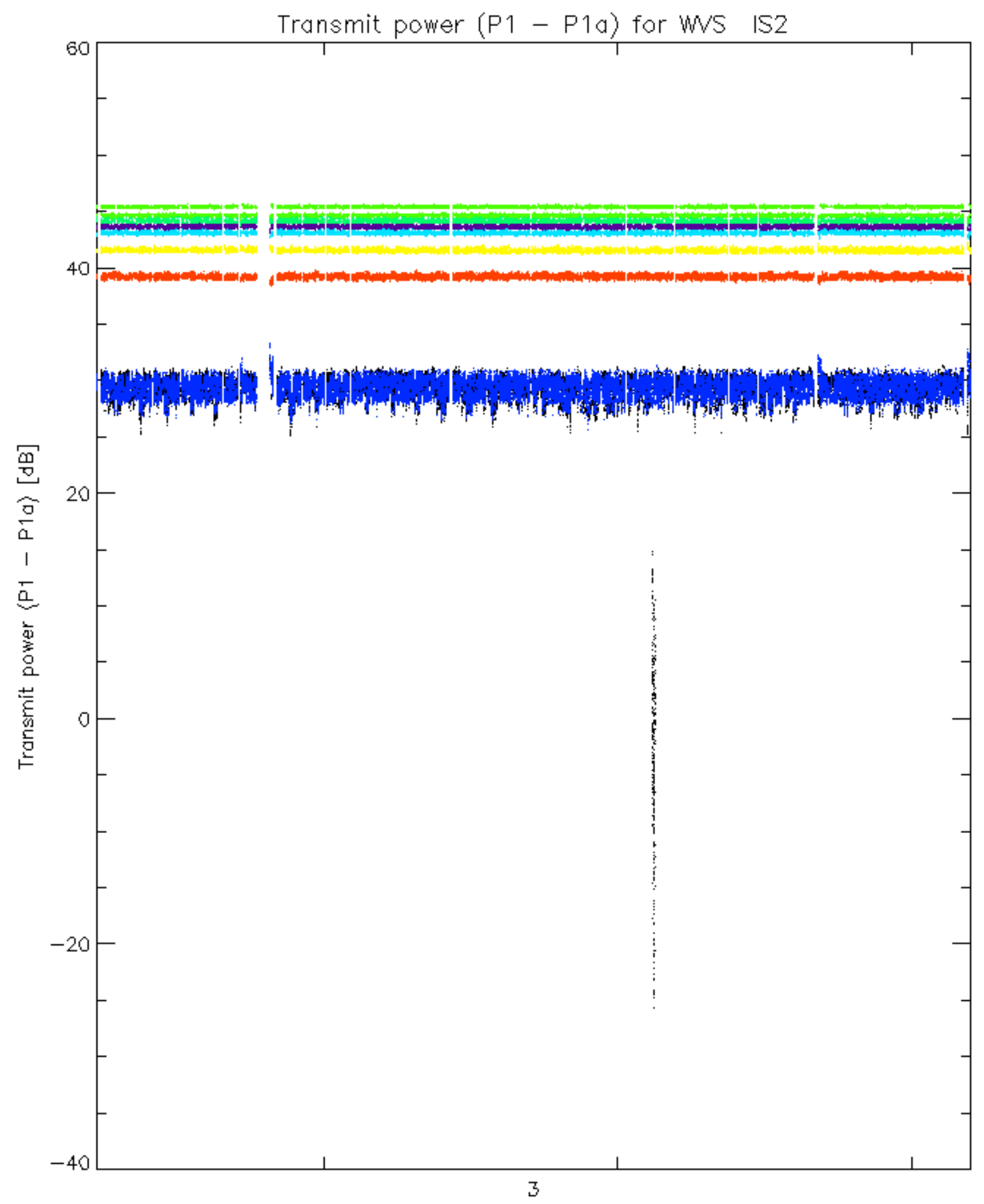
Transmit power (P1 - P1a) for GM1 SS3



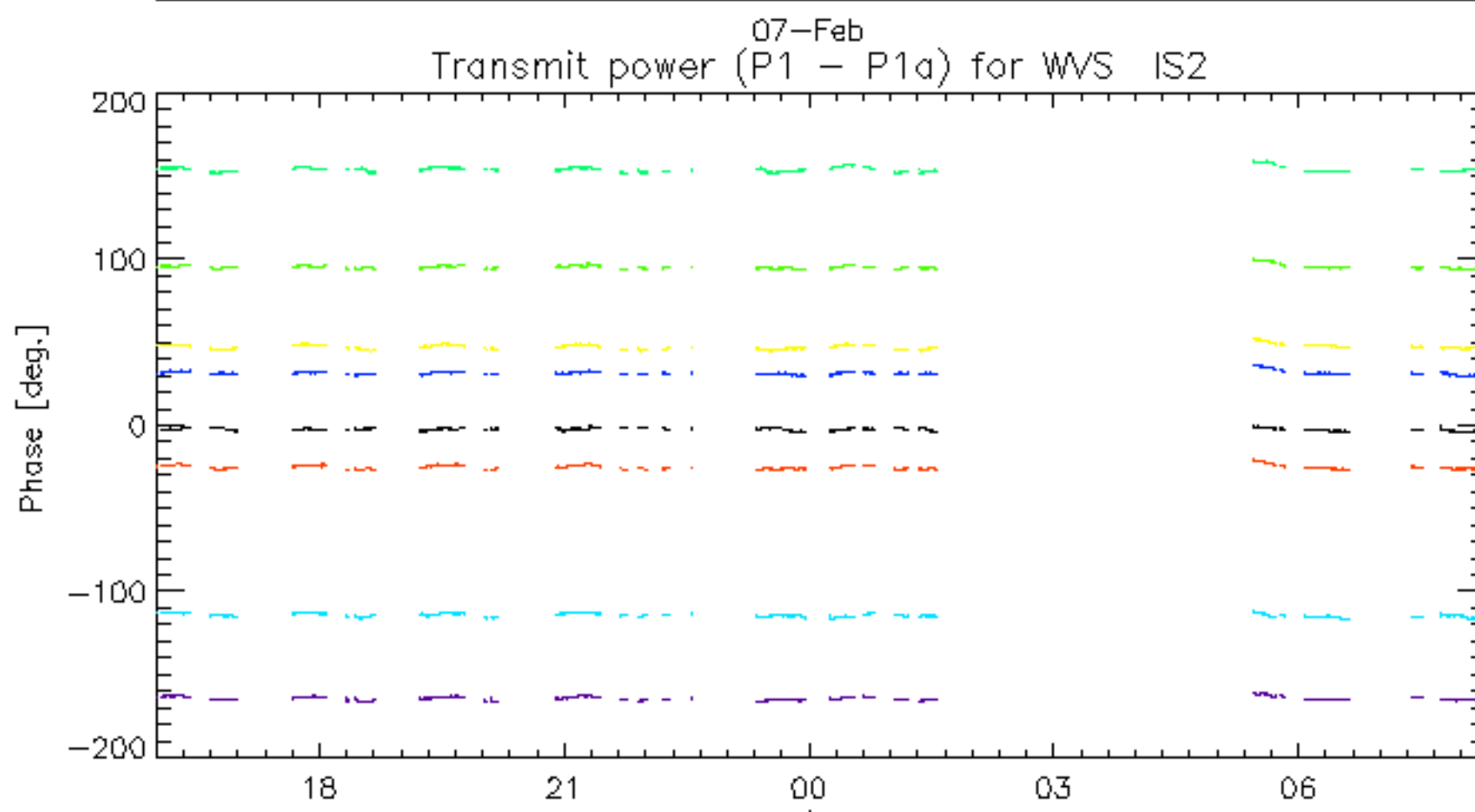
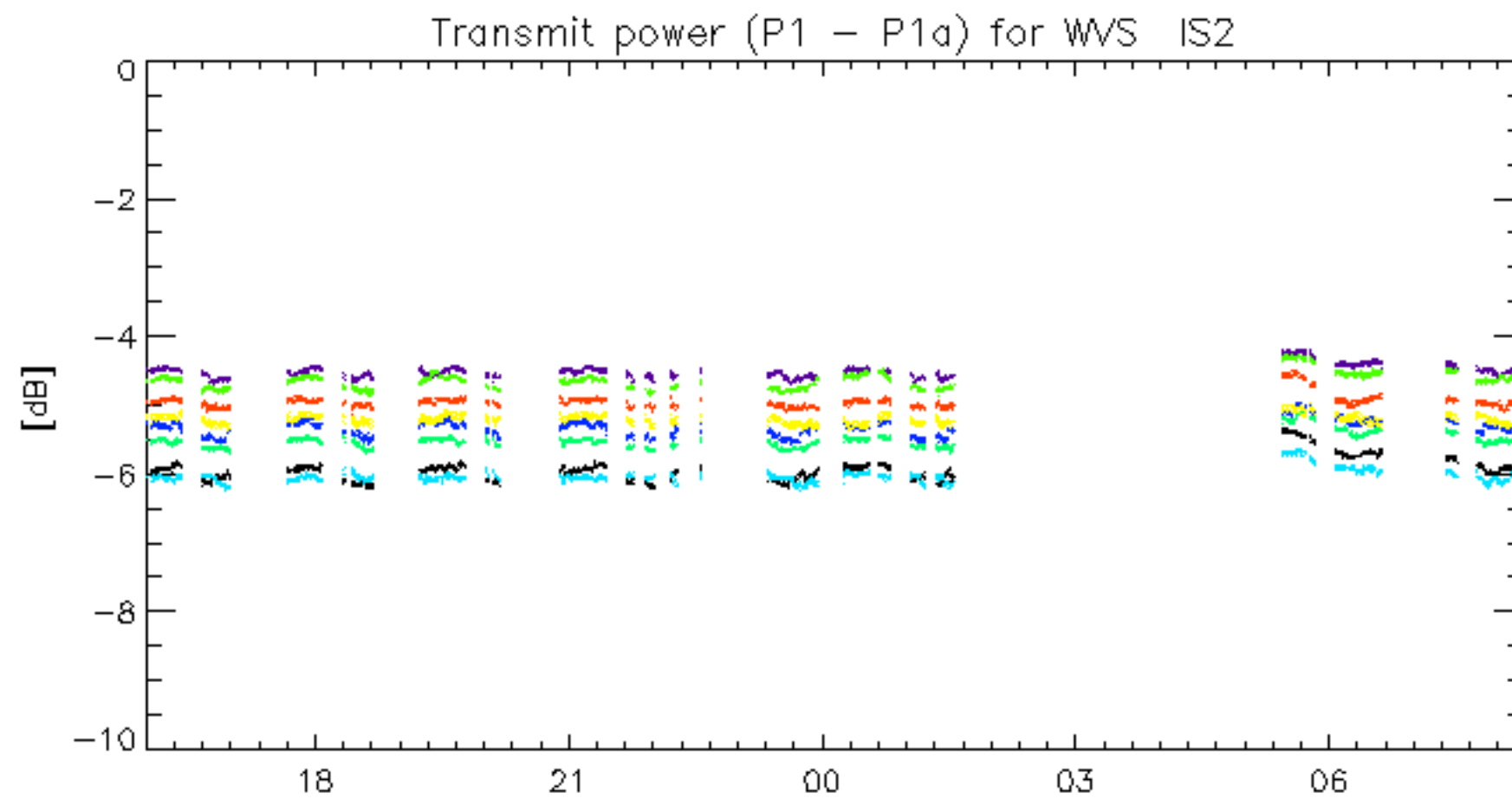
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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No unavailabilities during the reported period.