

PRELIMINARY REPORT OF 060221

last update on Tue Feb 21 16:41:01 GMT 2006

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2006-02-20 00:00:00 to 2006-02-21 16:41:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	0	14	1	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	0	14	1	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	0	14	1	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	0	14	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	52	42	42	9	49
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	52	42	42	9	49
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	52	42	42	9	49
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	52	42	42	9	49

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	20060220 054043
H	20060219 061220

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
☒	☒
☒	☒
☒	☒
☒	☒

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)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.006720	0.008846	0.022041
7	P1	-3.003067	0.011869	0.028168
11	P1	-4.088039	0.022175	0.043961
15	P1	-6.063056	0.019580	-0.000368
19	P1	-3.265070	0.006631	-0.028333
22	P1	-4.468921	0.017157	0.044580
26	P1	-4.186998	0.012980	0.023417
30	P1	-5.772729	0.010298	0.009964
3	P1	-16.921377	0.262129	-0.181579
7	P1	-16.666544	0.118699	-0.021021
11	P1	-16.580498	0.324907	0.177540
15	P1	-13.137522	0.110435	0.243448
19	P1	-13.898667	0.065844	0.010305
22	P1	-15.728261	0.535942	0.448939
26	P1	-15.757802	0.262390	-0.064938
30	P1	-16.554789	0.291770	0.223186

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.506826	0.091223	0.206940
7	P2	-22.418438	0.094582	0.061021
11	P2	-16.254665	0.100546	0.046483
15	P2	-7.184358	0.101390	0.061423
19	P2	-9.152330	0.095249	0.054453
22	P2	-17.939371	0.092138	0.045007
26	P2	-16.212906	0.098485	0.029392
30	P2	-19.639044	0.084347	0.022809

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.198545	0.007101	0.029276
7	P3	-8.198545	0.007101	0.029276
11	P3	-8.198545	0.007101	0.029276
15	P3	-8.198545	0.007101	0.029276
19	P3	-8.198545	0.007101	0.029276
22	P3	-8.198545	0.007101	0.029276
26	P3	-8.198545	0.007101	0.029276
30	P3	-8.198545	0.007101	0.029276

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.740011	0.011426	-0.013902
7	P1	-2.745473	0.007764	-0.030672
11	P1	-2.894704	0.014693	-0.053698
15	P1	-3.513970	0.020687	-0.090682
19	P1	-3.380129	0.010966	0.021851
22	P1	-5.152084	0.022311	-0.043328
26	P1	-5.836629	0.019466	0.083545
30	P1	-5.220816	0.026863	0.051084
3	P1	-11.553583	0.045062	-0.064359
7	P1	-9.936047	0.049901	-0.054447
11	P1	-10.163774	0.060080	-0.143021
15	P1	-10.698819	0.102638	-0.146119
19	P1	-15.445804	0.062654	0.078875
22	P1	-20.382782	1.199494	0.321997

26	P1	-16.541056	0.373001	0.413896
30	P1	-18.240417	0.322778	-0.215140

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.268478	0.043261	0.299022
7	P2	-22.714033	0.078243	0.289641
11	P2	-11.335629	0.030549	0.183072
15	P2	-4.868234	0.029825	0.118919
19	P2	-6.882459	0.027678	0.085755
22	P2	-8.172971	0.029068	0.090602
26	P2	-23.948420	0.027658	0.064468
30	P2	-22.083786	0.019873	0.034889

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.032673	0.003123	0.034394
7	P3	-8.032659	0.003117	0.034740
11	P3	-8.032610	0.003119	0.034659
15	P3	-8.032660	0.003121	0.034516
19	P3	-8.032703	0.003121	0.034807
22	P3	-8.032694	0.003125	0.035279
26	P3	-8.032794	0.003123	0.034772
30	P3	-8.032573	0.003124	0.034304

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	0.000558800
	stdev	1.69816e-07
MEAN Q	mean	0.000520820
	stdev	2.13424e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139096
	stdev	0.00115994
STDEV Q	mean	0.139452
	stdev	0.00117875



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006022[901]

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_1PNPDE20060221_003709_000001342045_00202_20797_3819.N1	1	0
ASA_IMM_1PNPDK20060220_130809_000001212045_00196_20791_1113.N1	1	0





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)

Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

Acsending

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

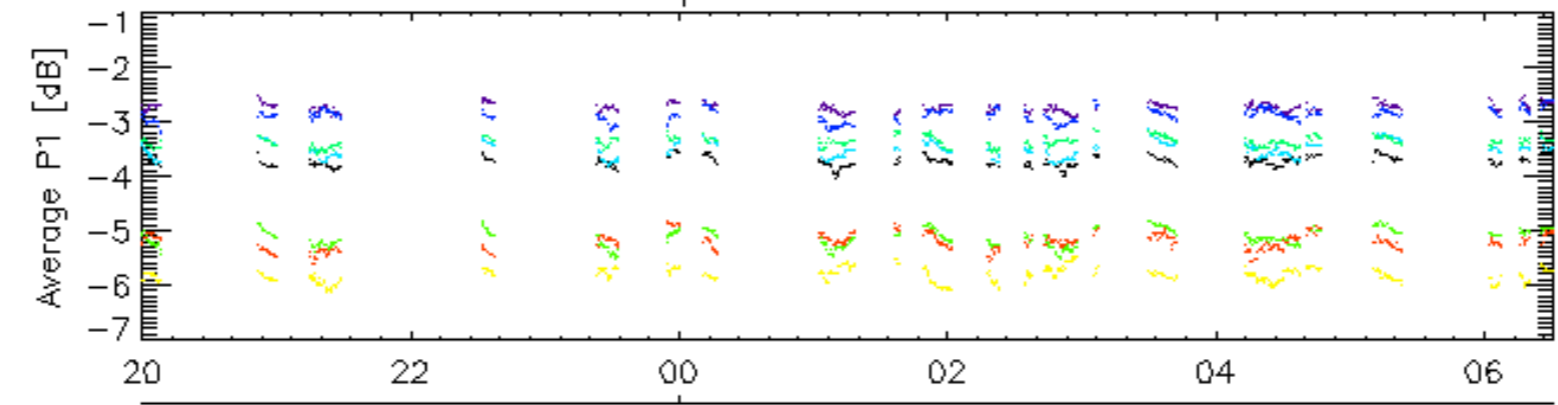
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

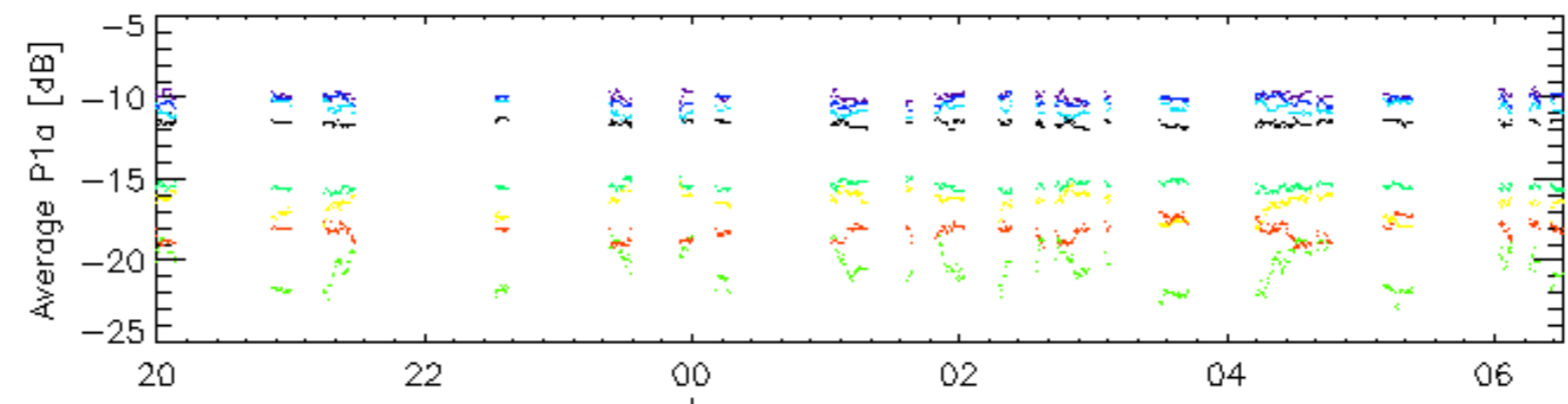
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

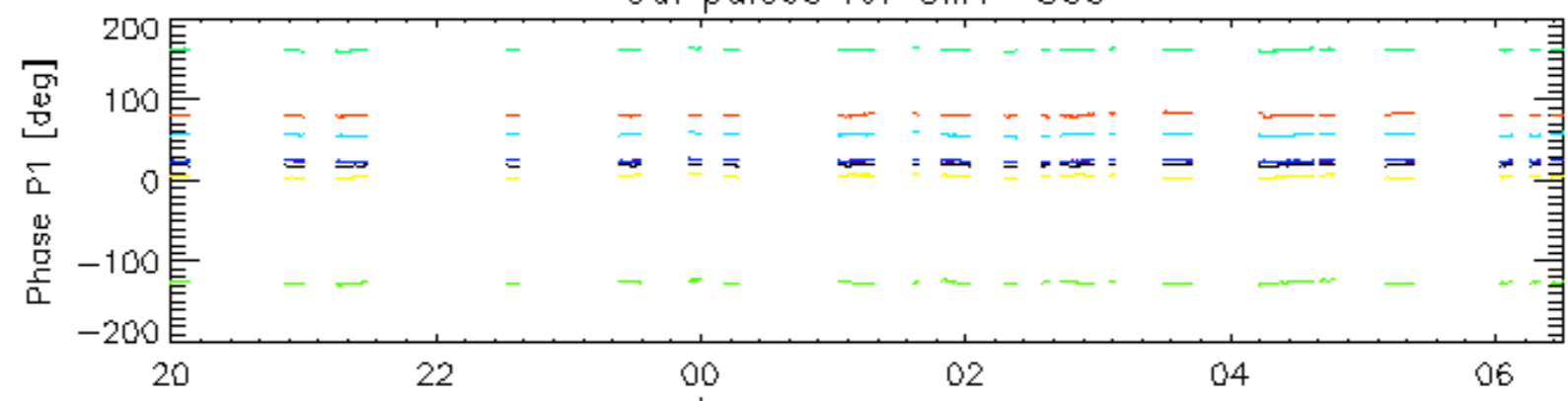


21-Feb

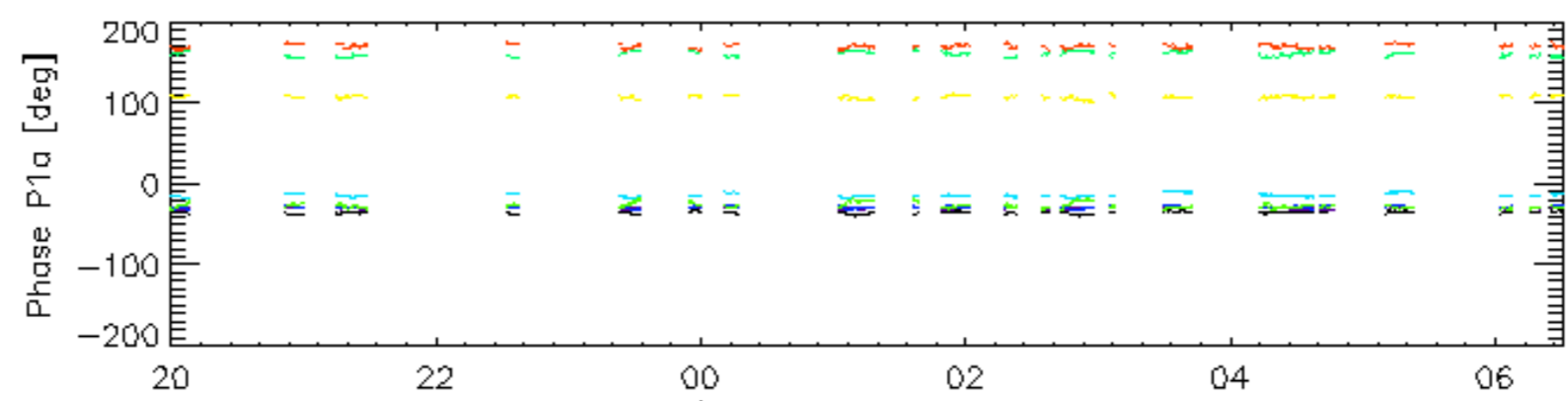


21-Feb

Cal pulses for GM1 SS3



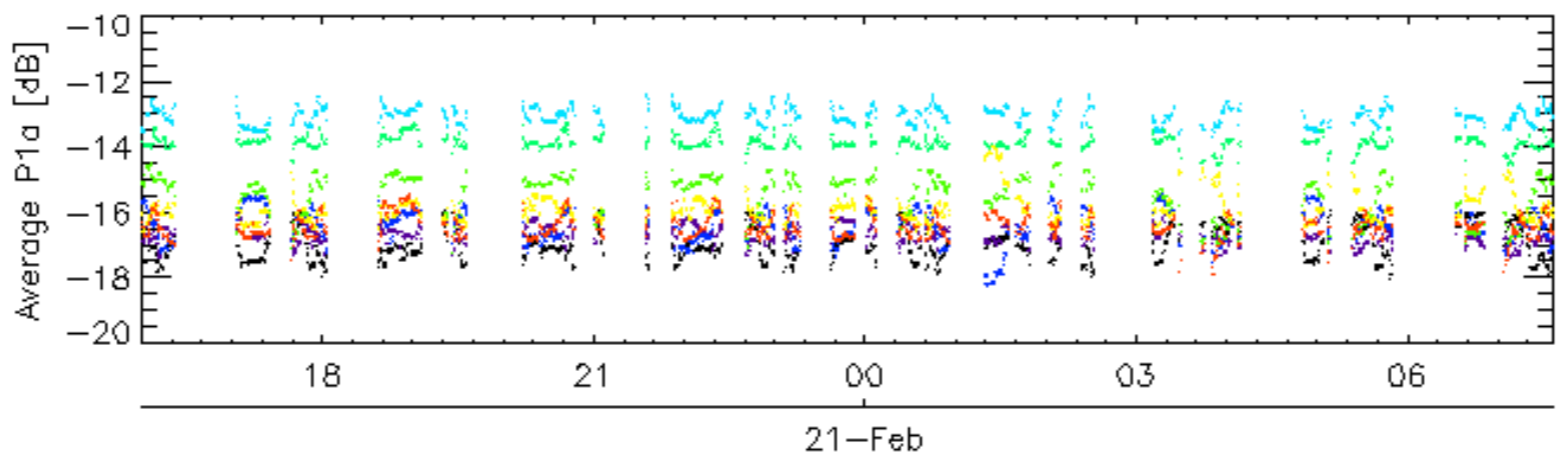
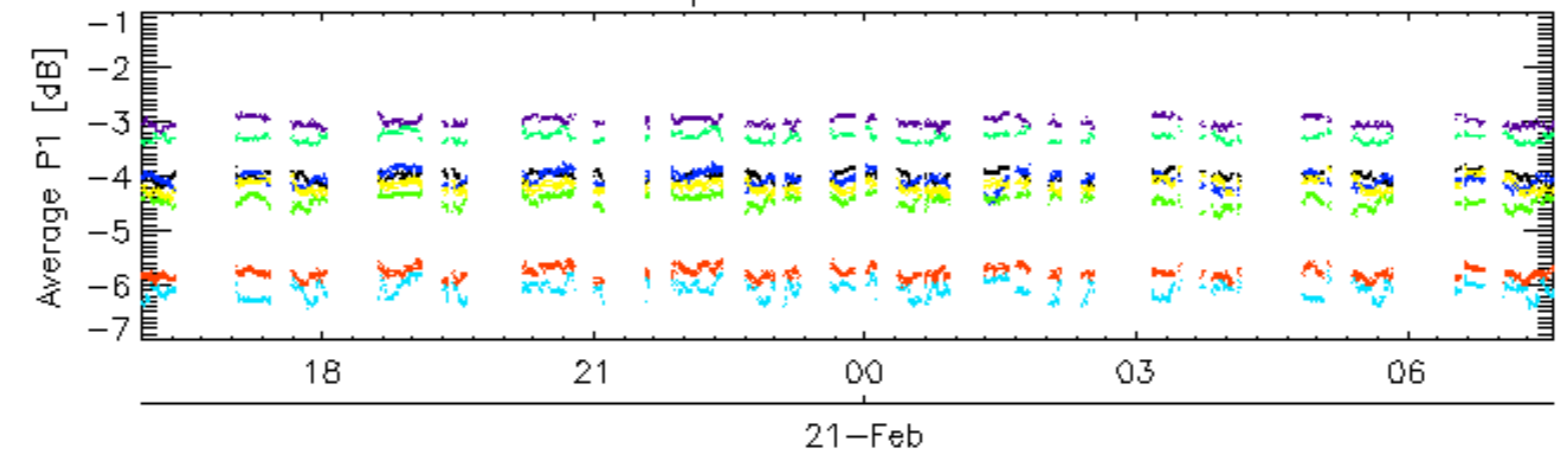
21-Feb



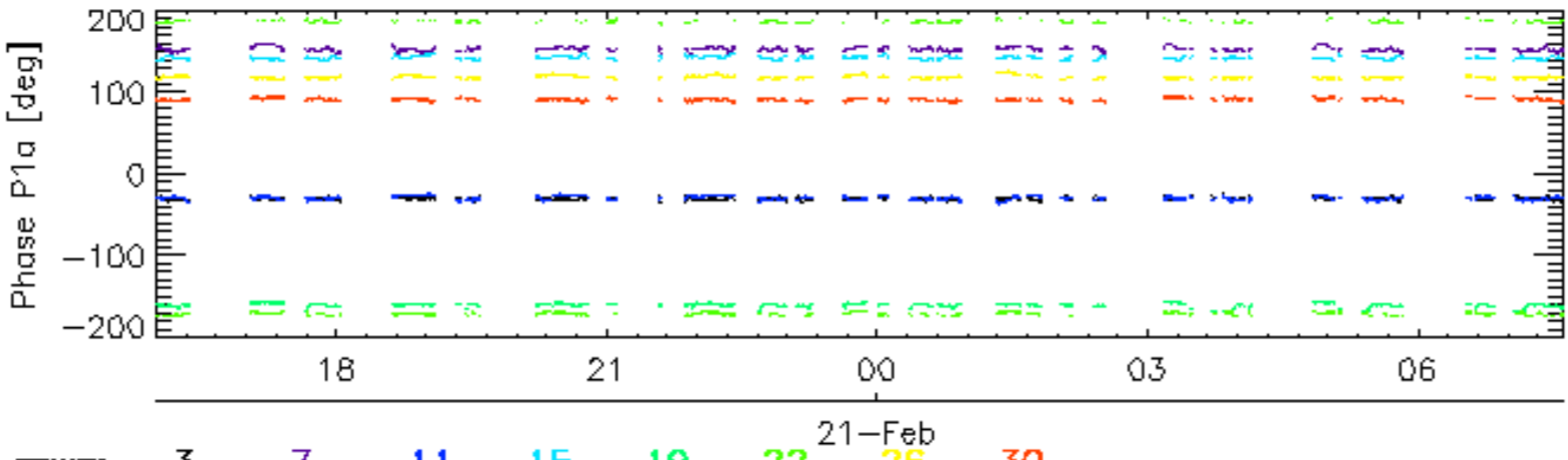
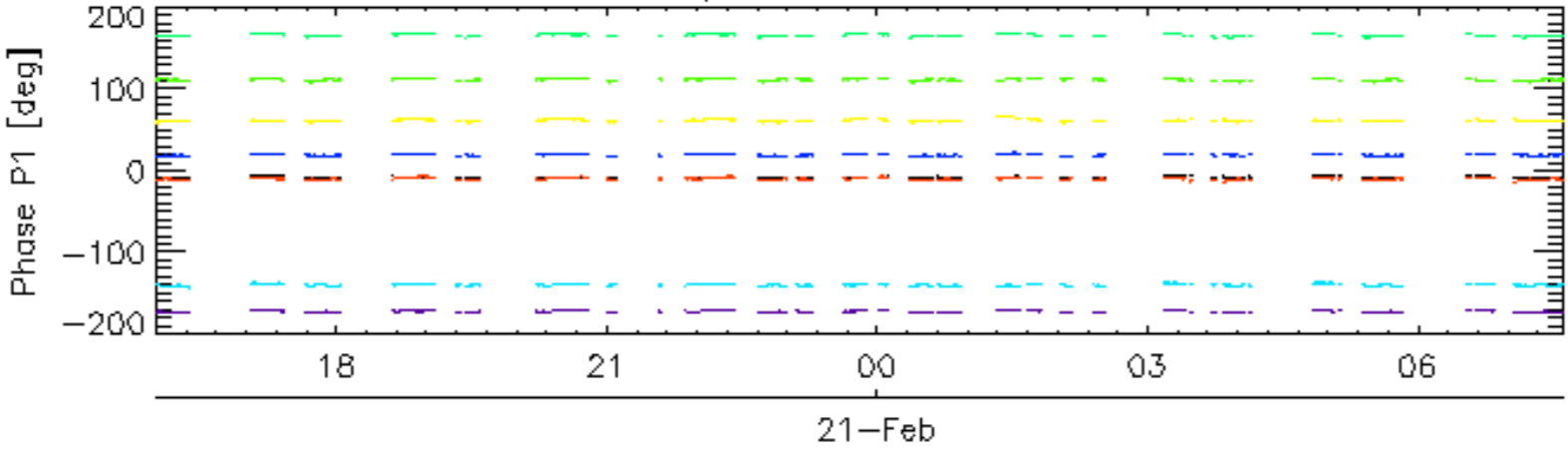
21-Feb

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

Cal pulses for WVS IS2

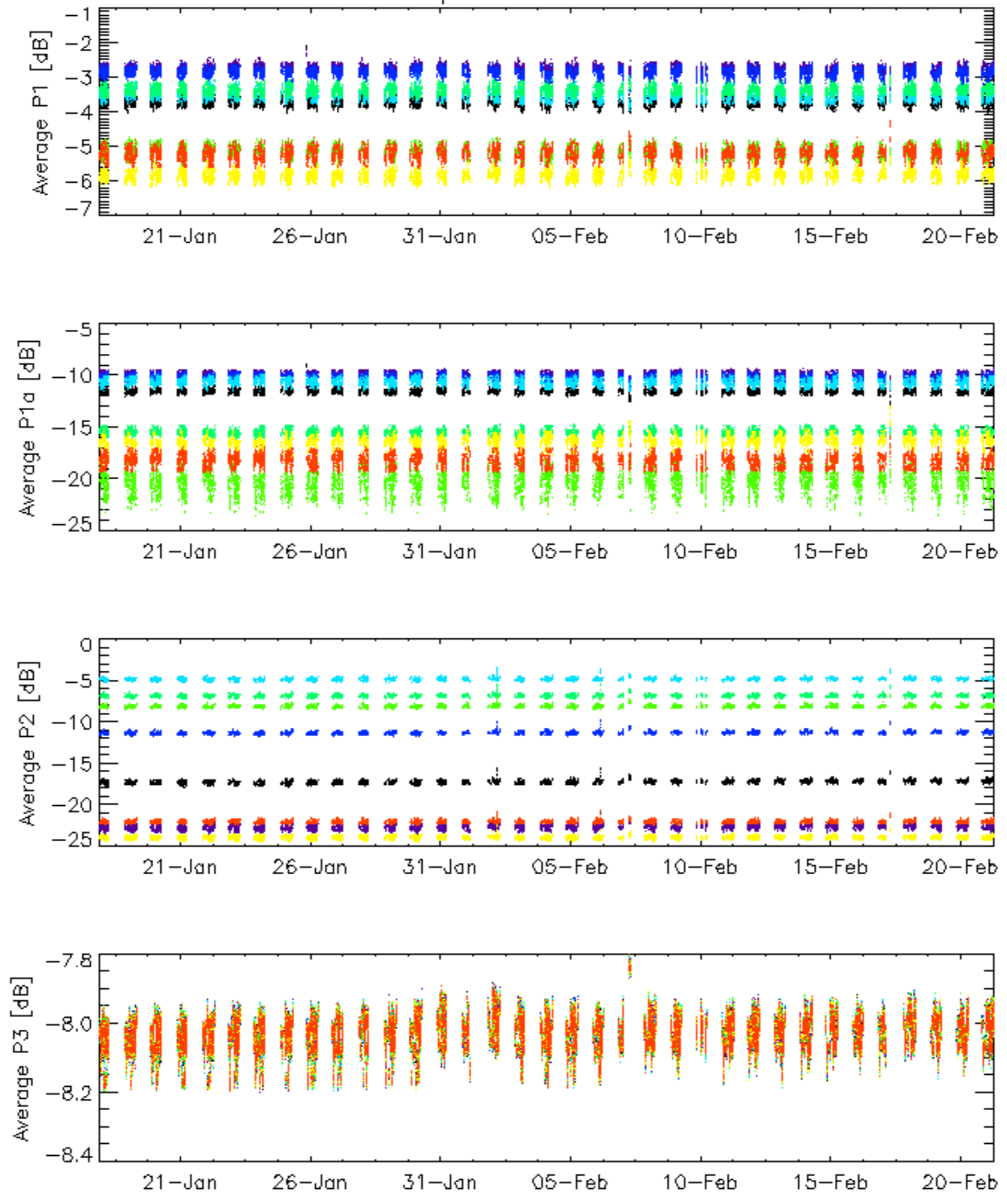


Cal pulses for WVS IS2



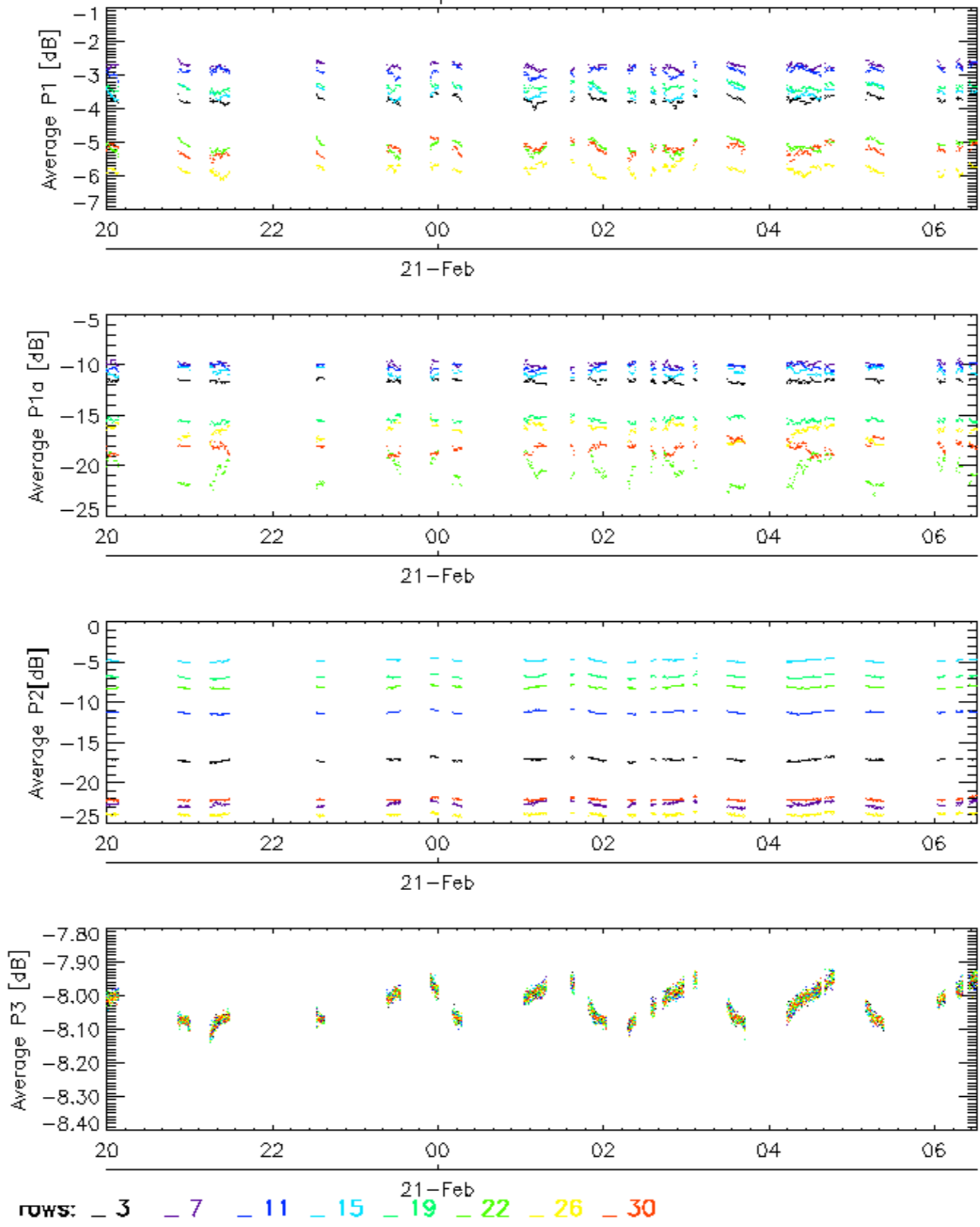
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

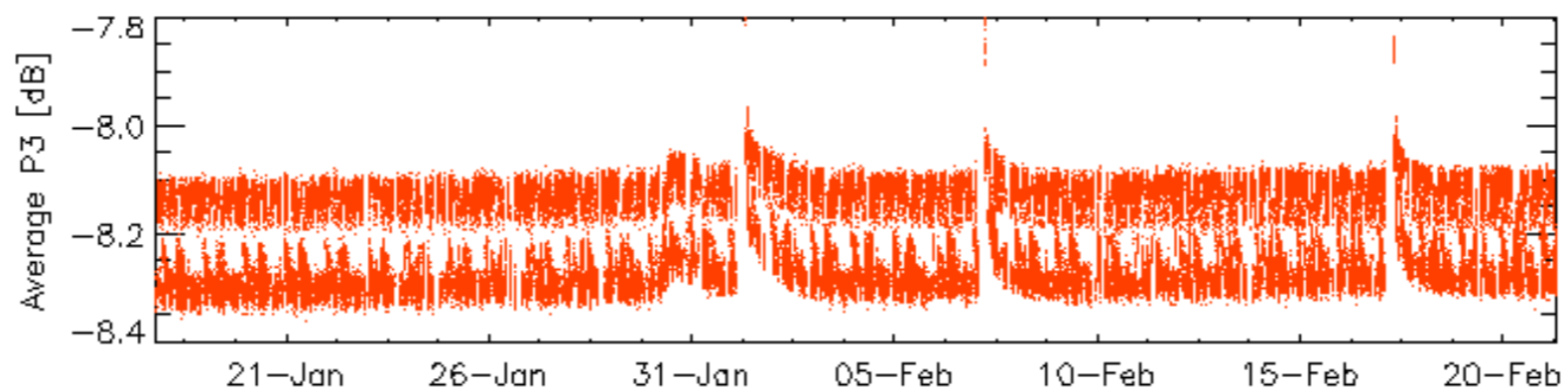
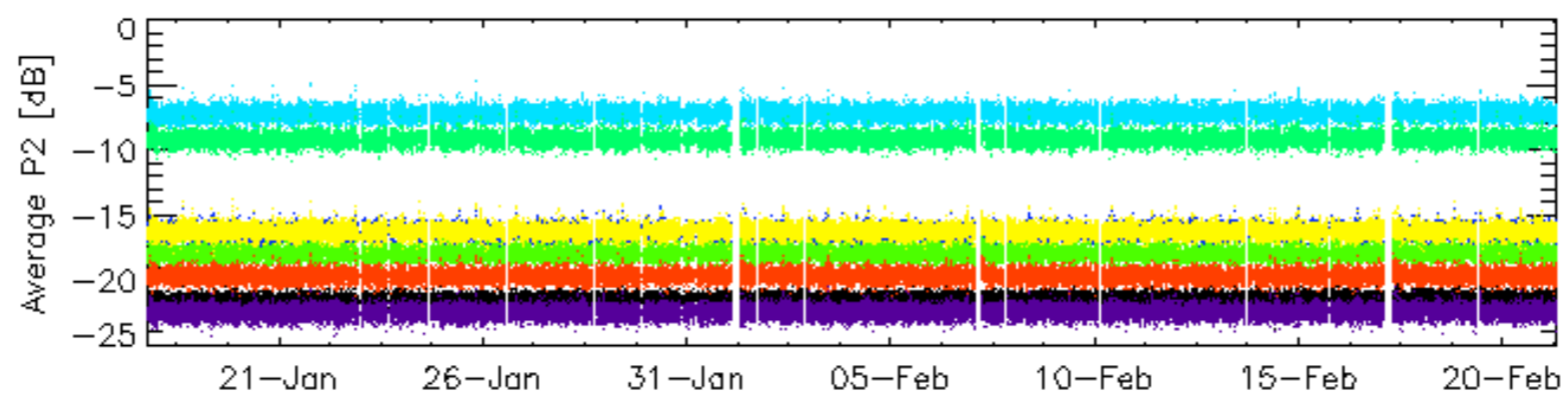
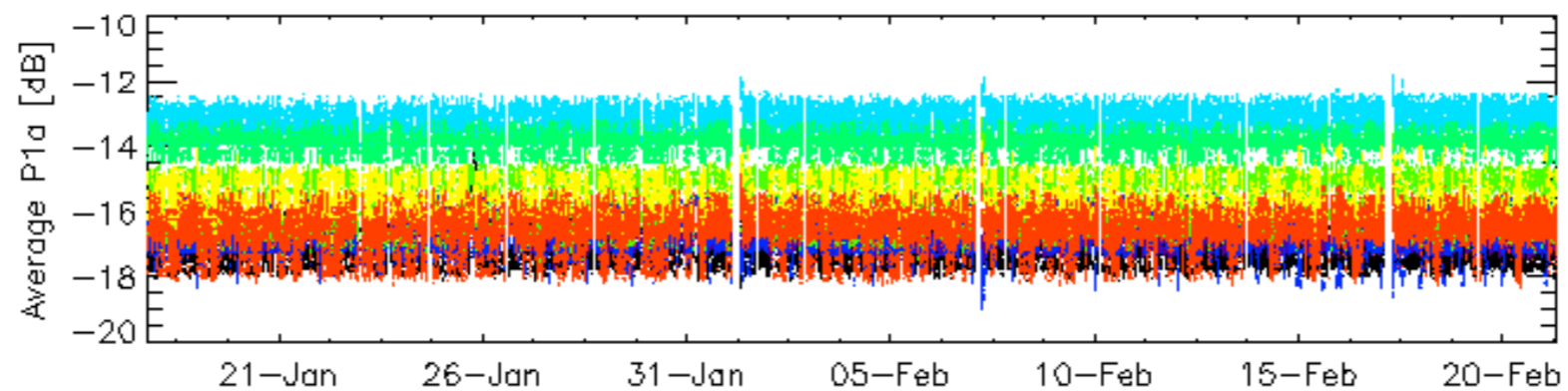
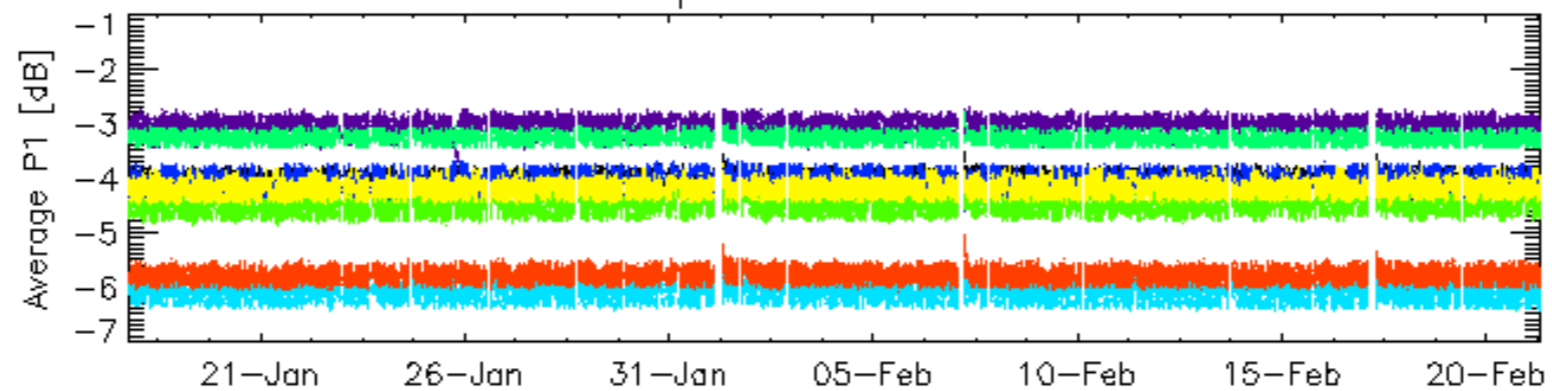


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

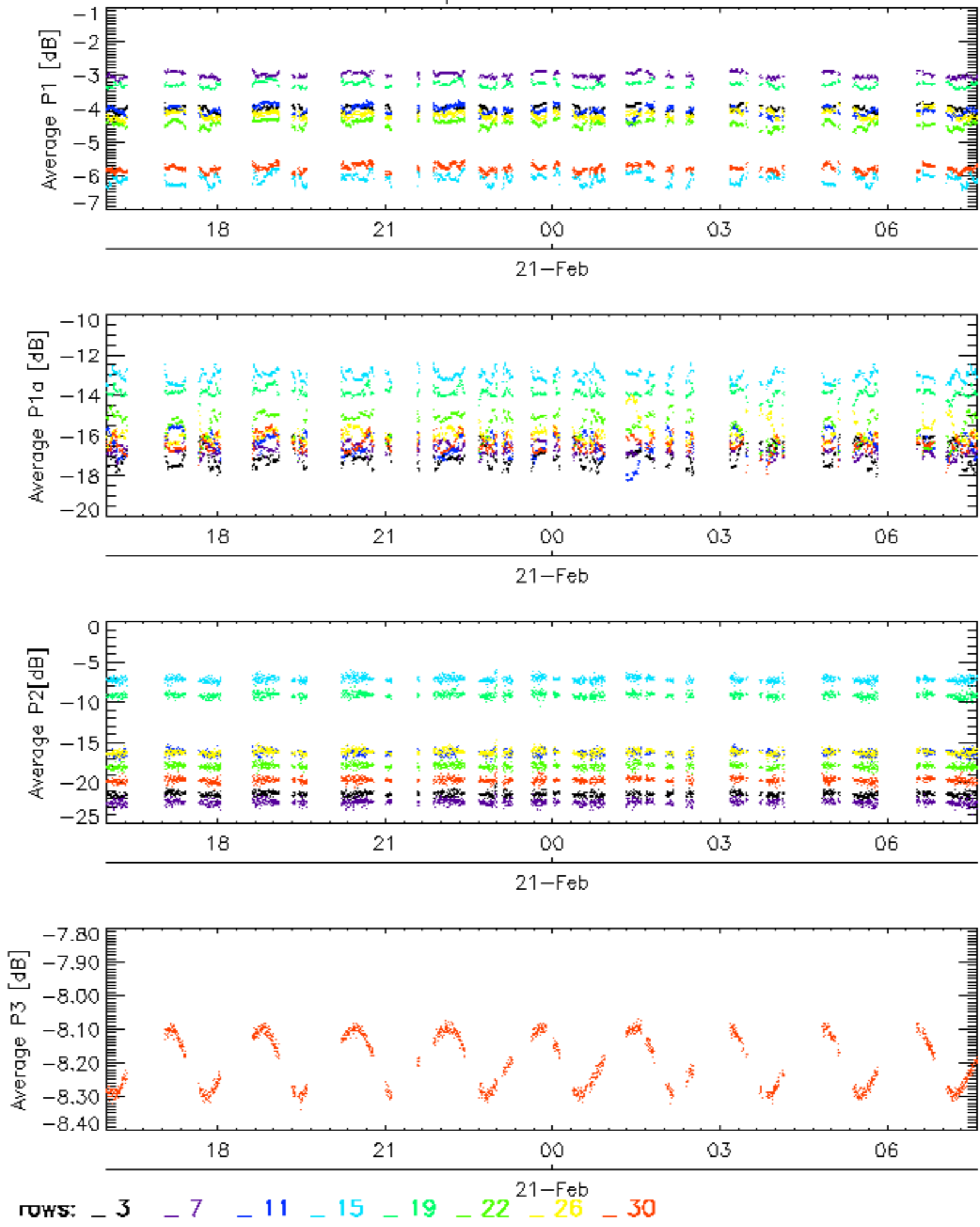


Cal pulses for WVS IS2



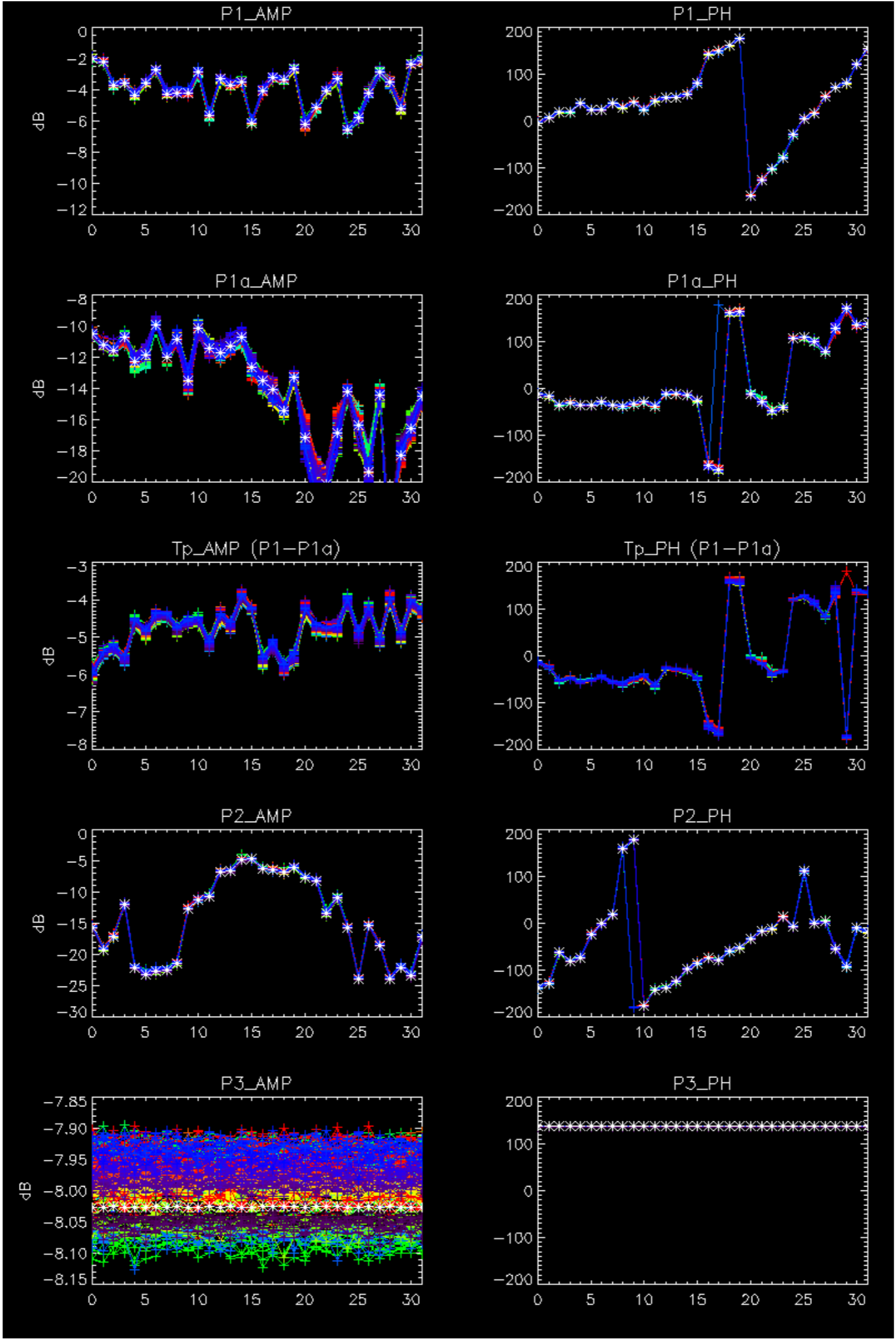
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

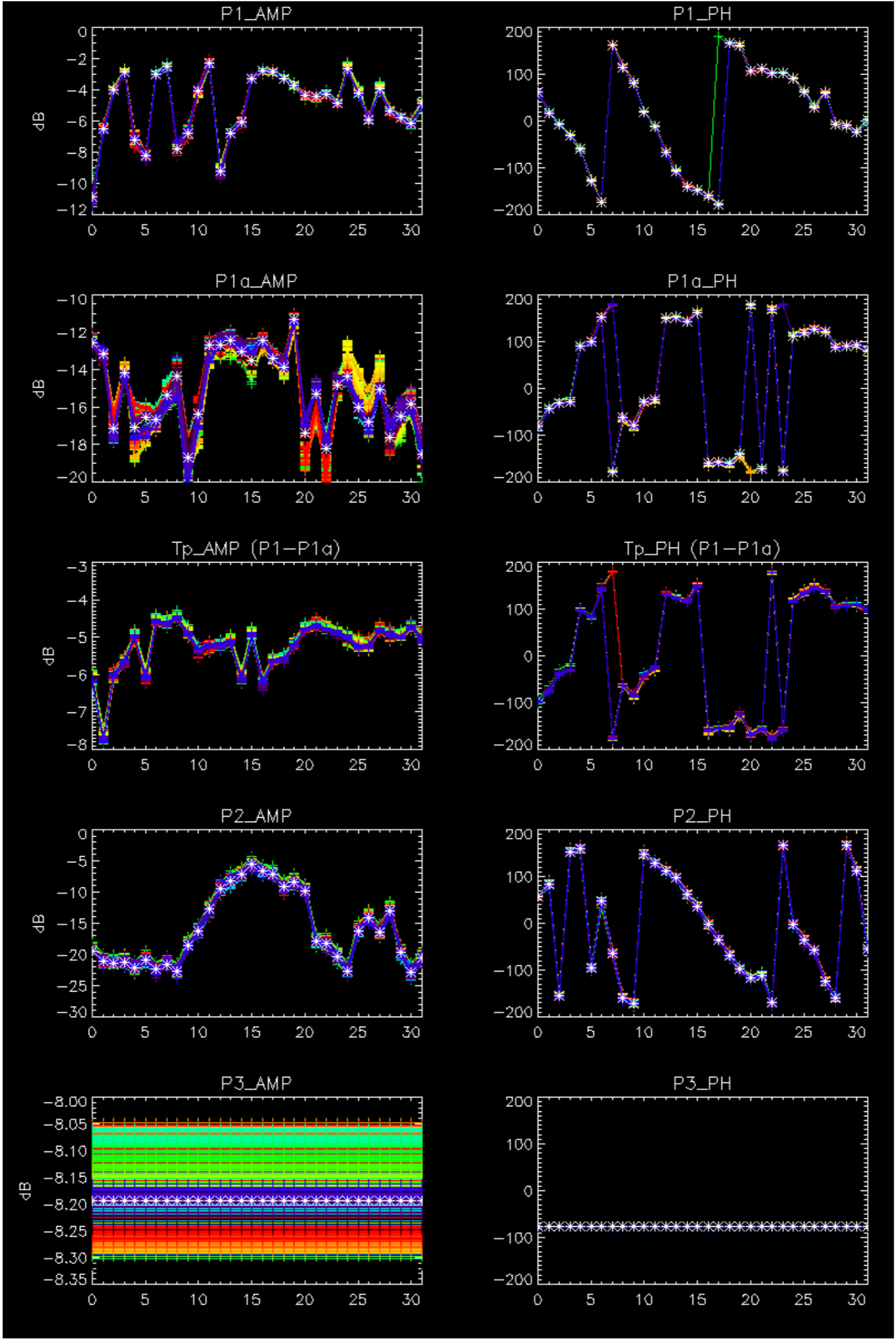
Cal pulses for WVS IS2



No anomalies observed on available browse products

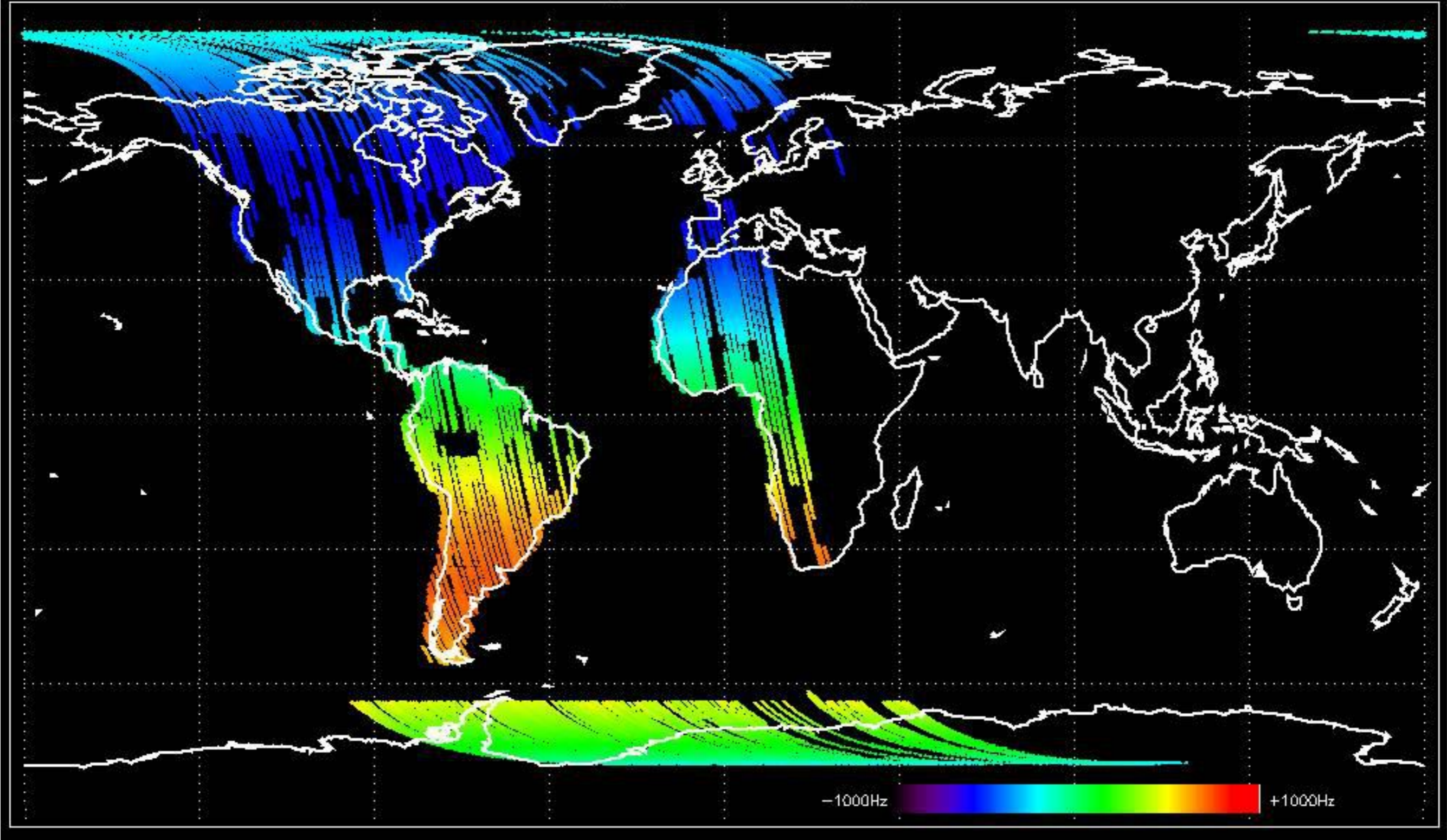
No anomalies observed.



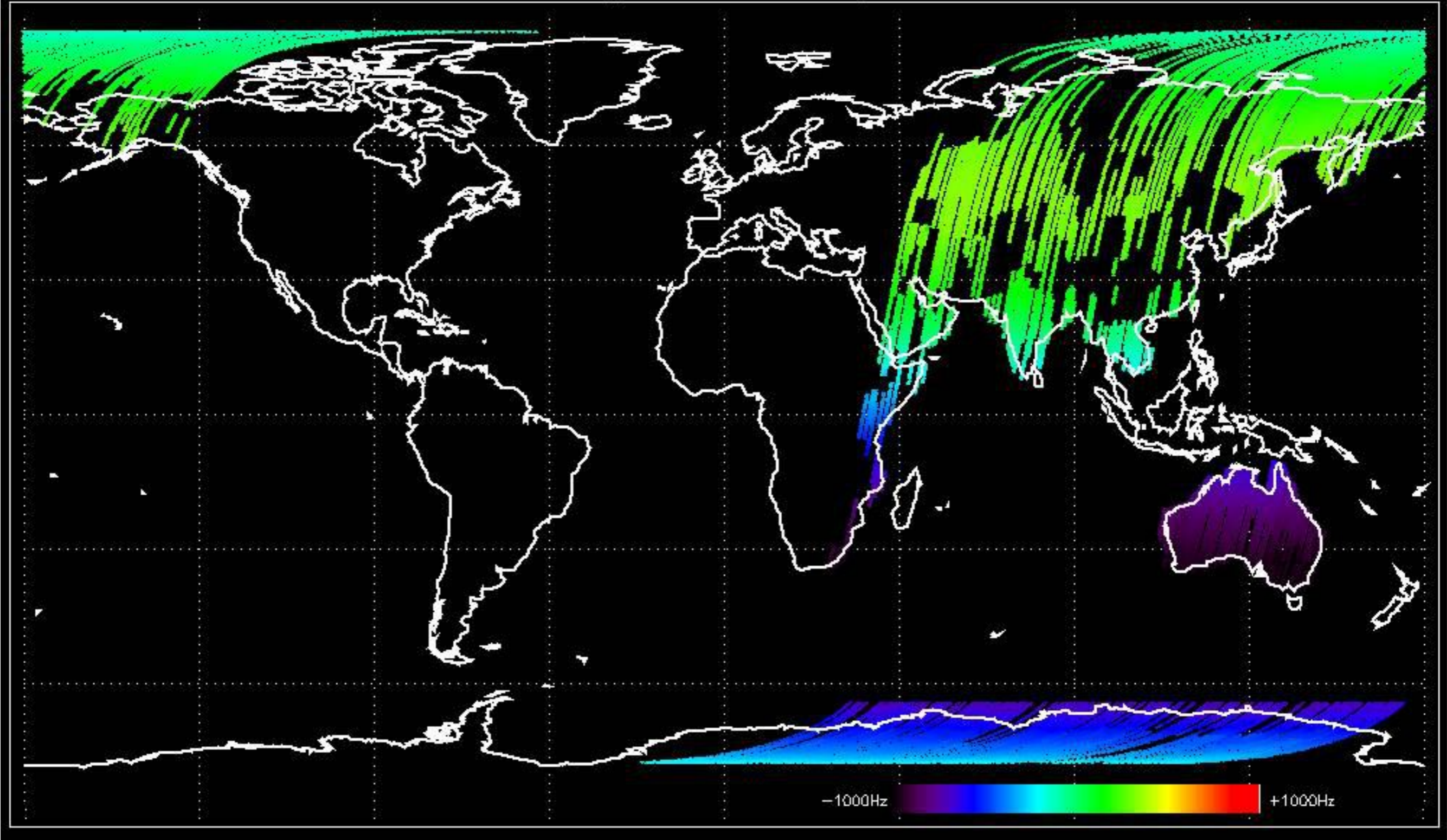


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

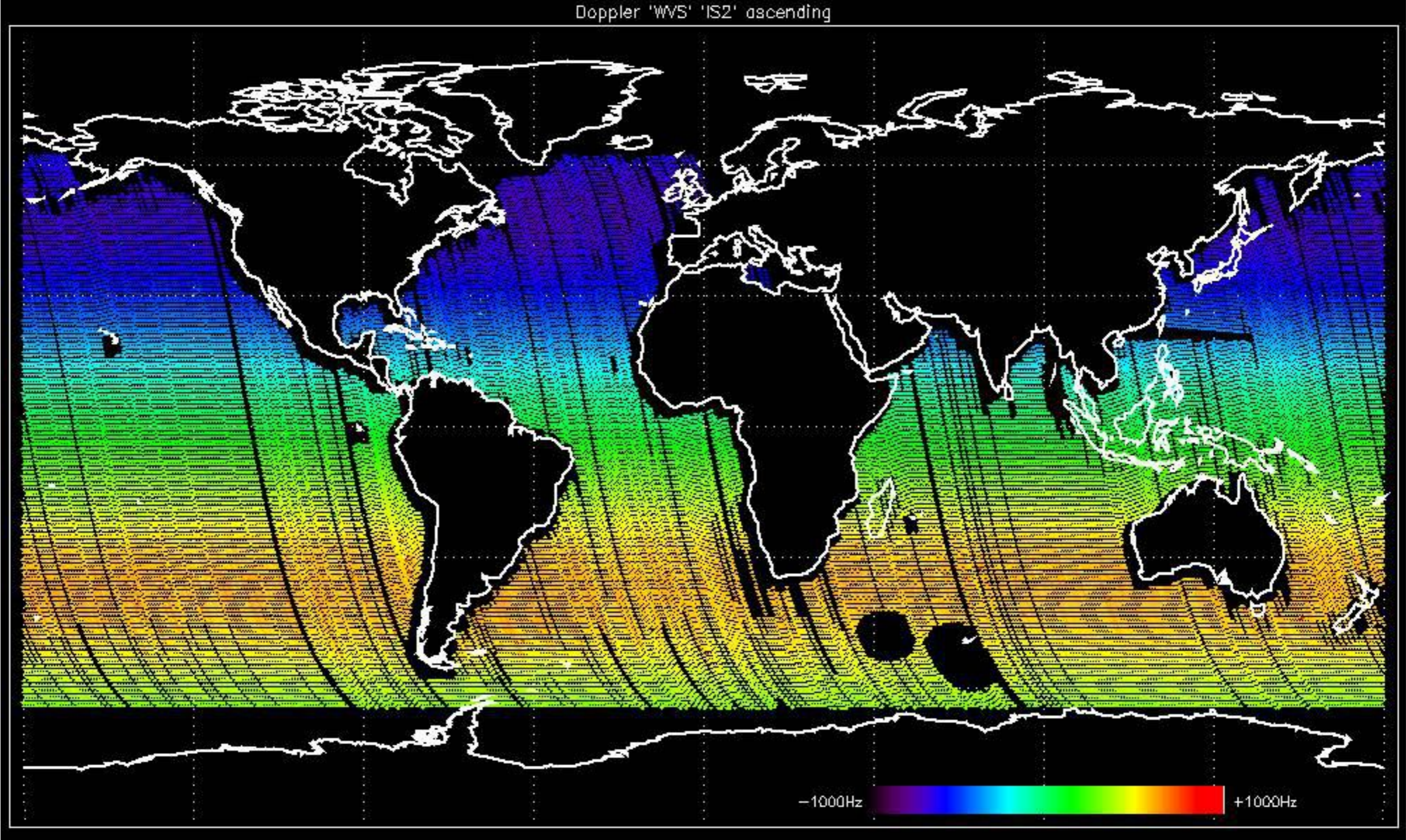
Doppler 'GM1' 'SS1' ascending



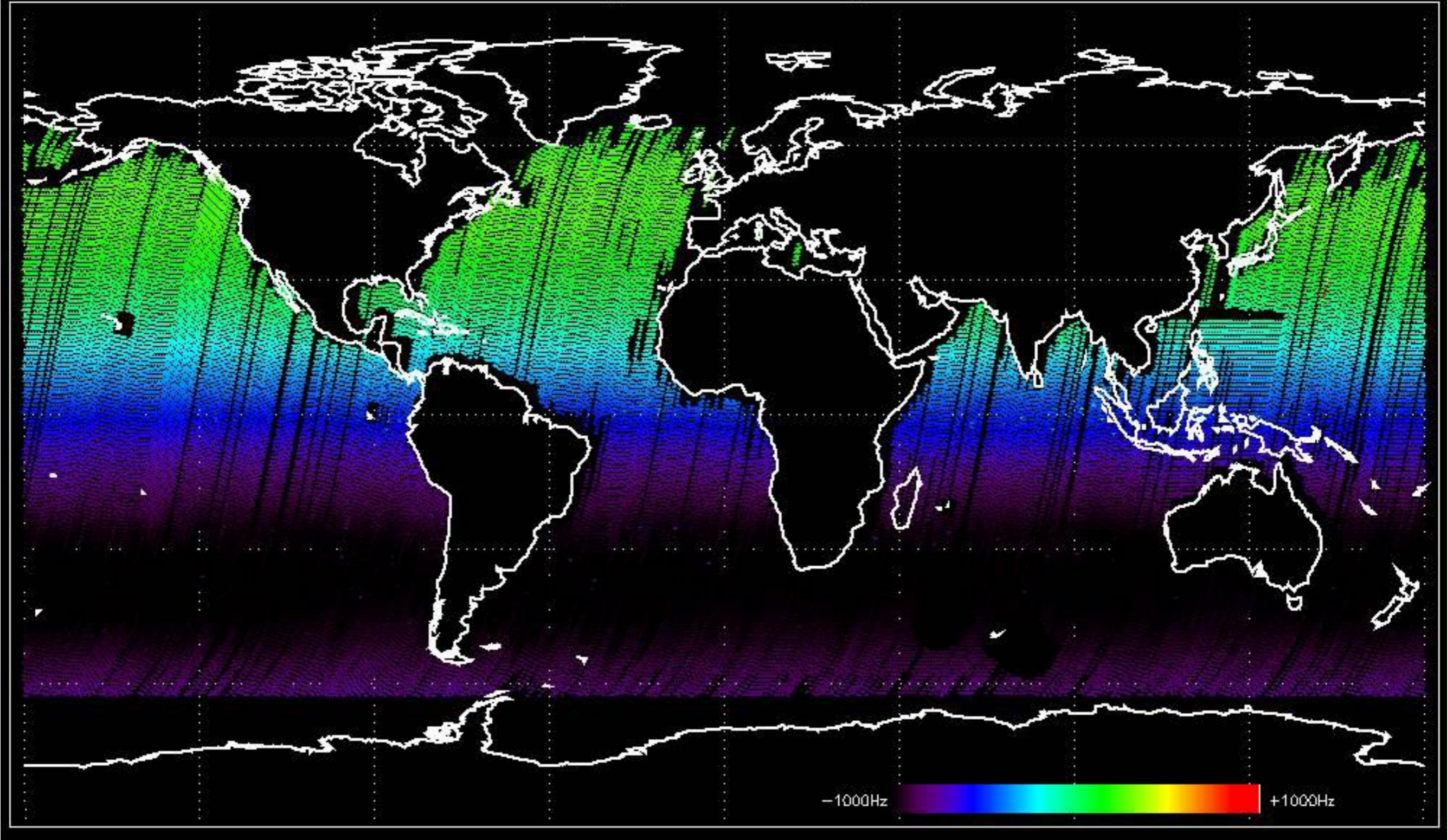
Doppler 'GM1' 'SS1' descending



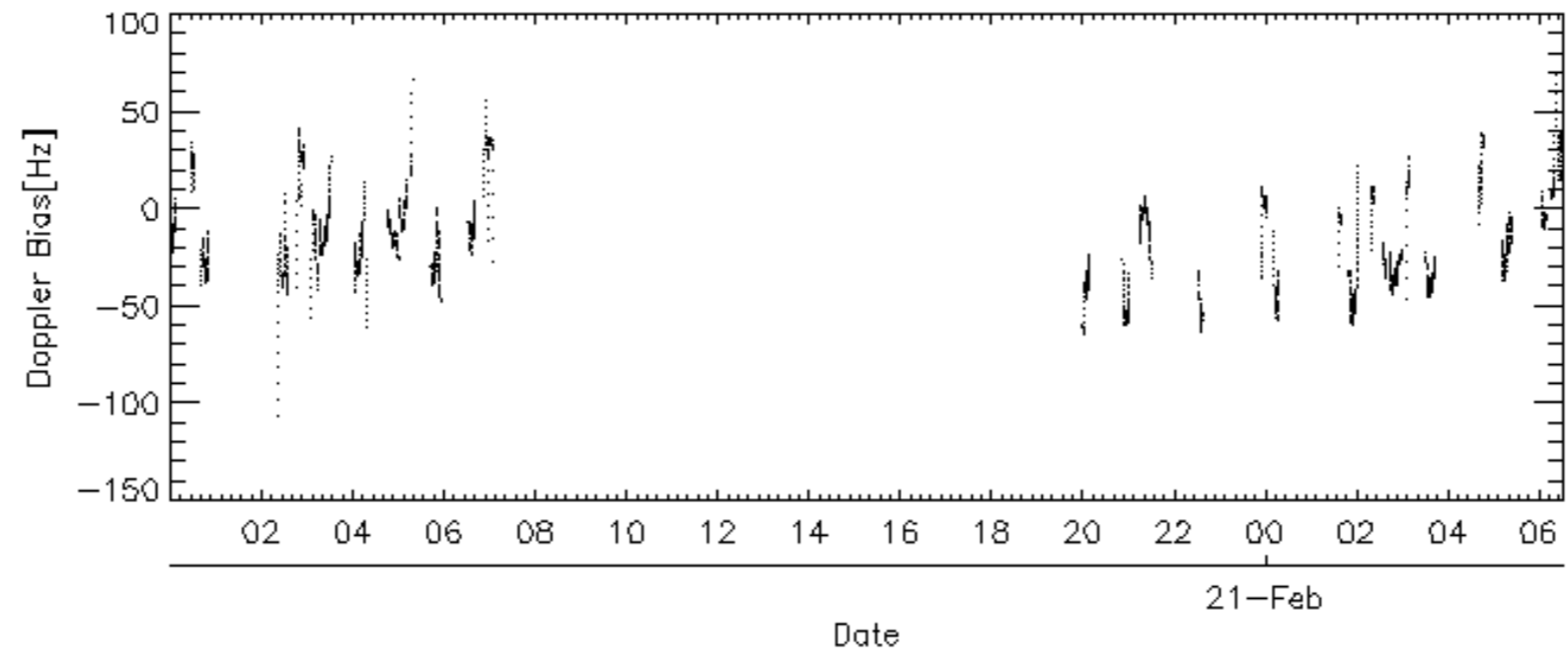
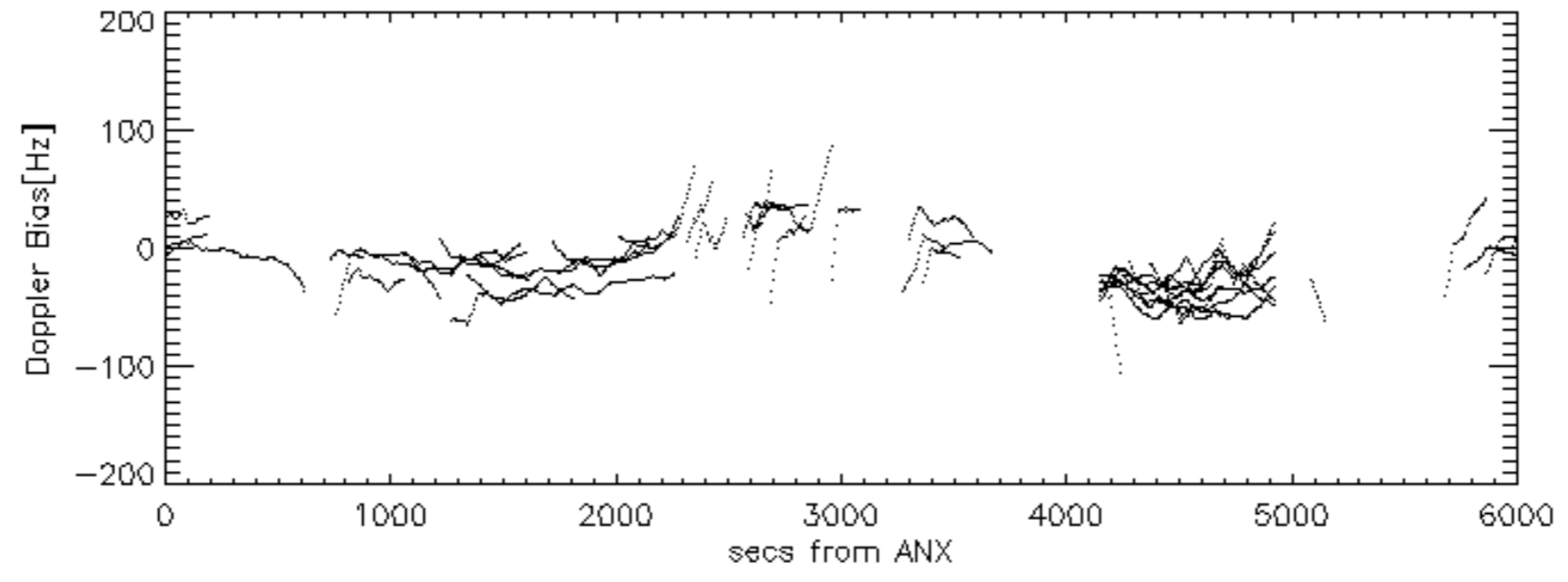
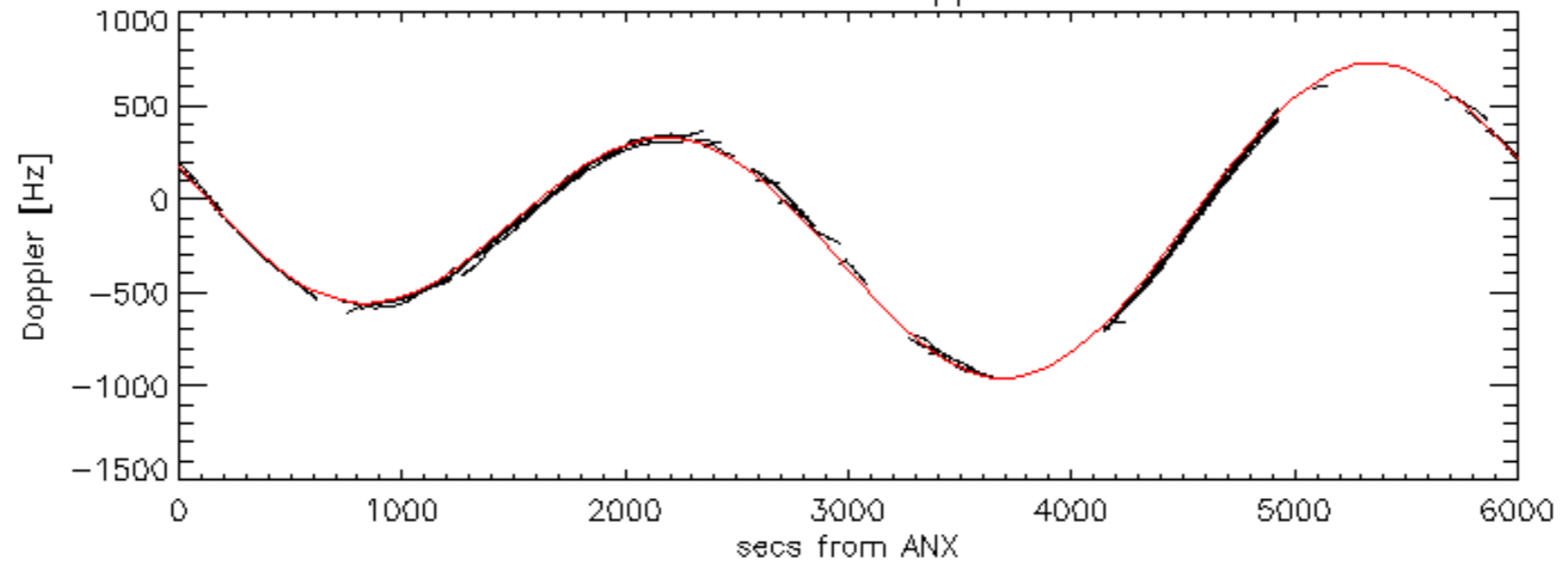
Doppler 'WVS' 'IS2' ascending

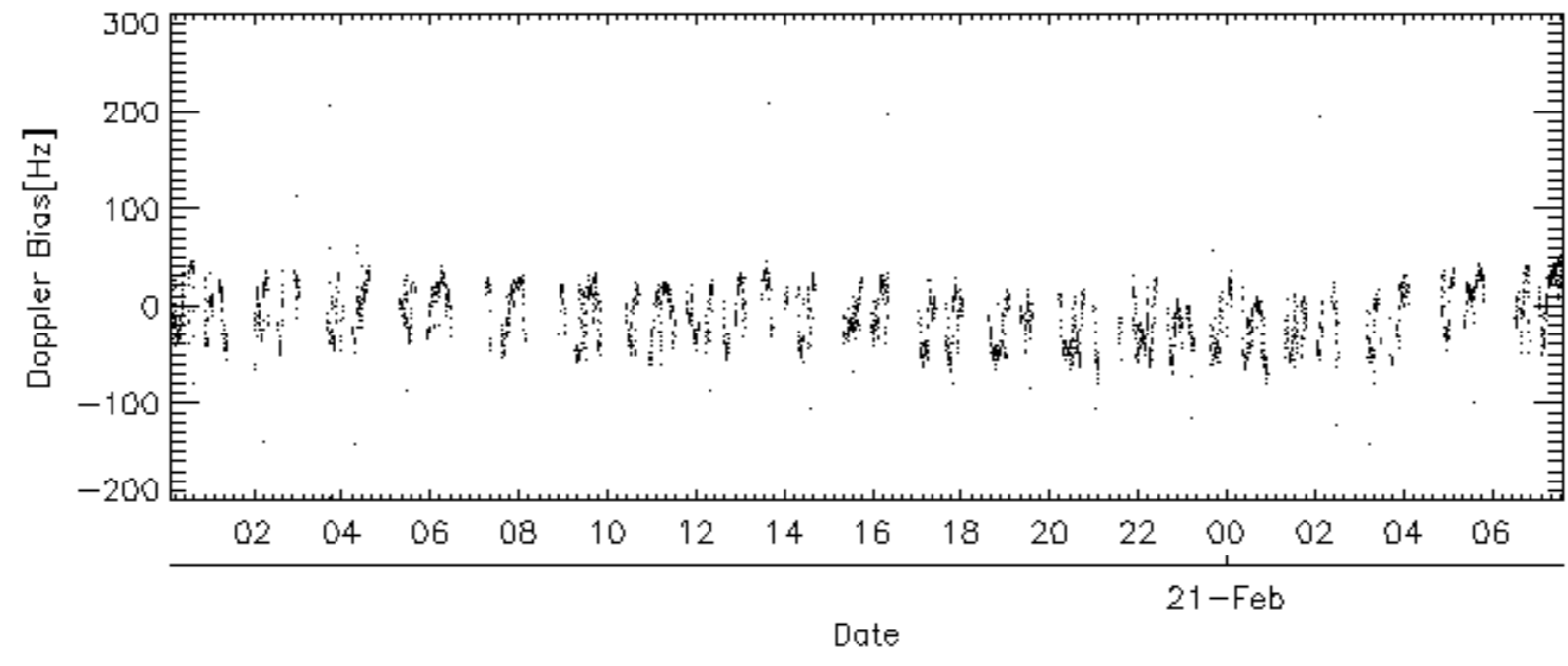
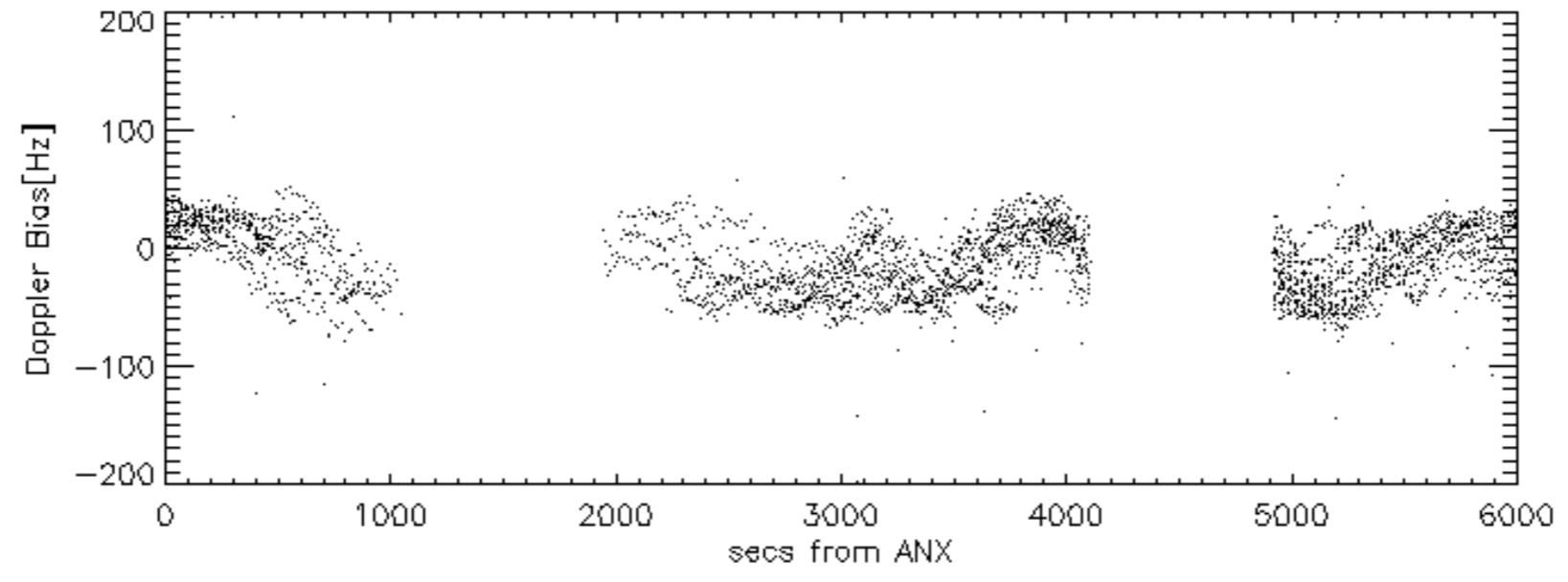
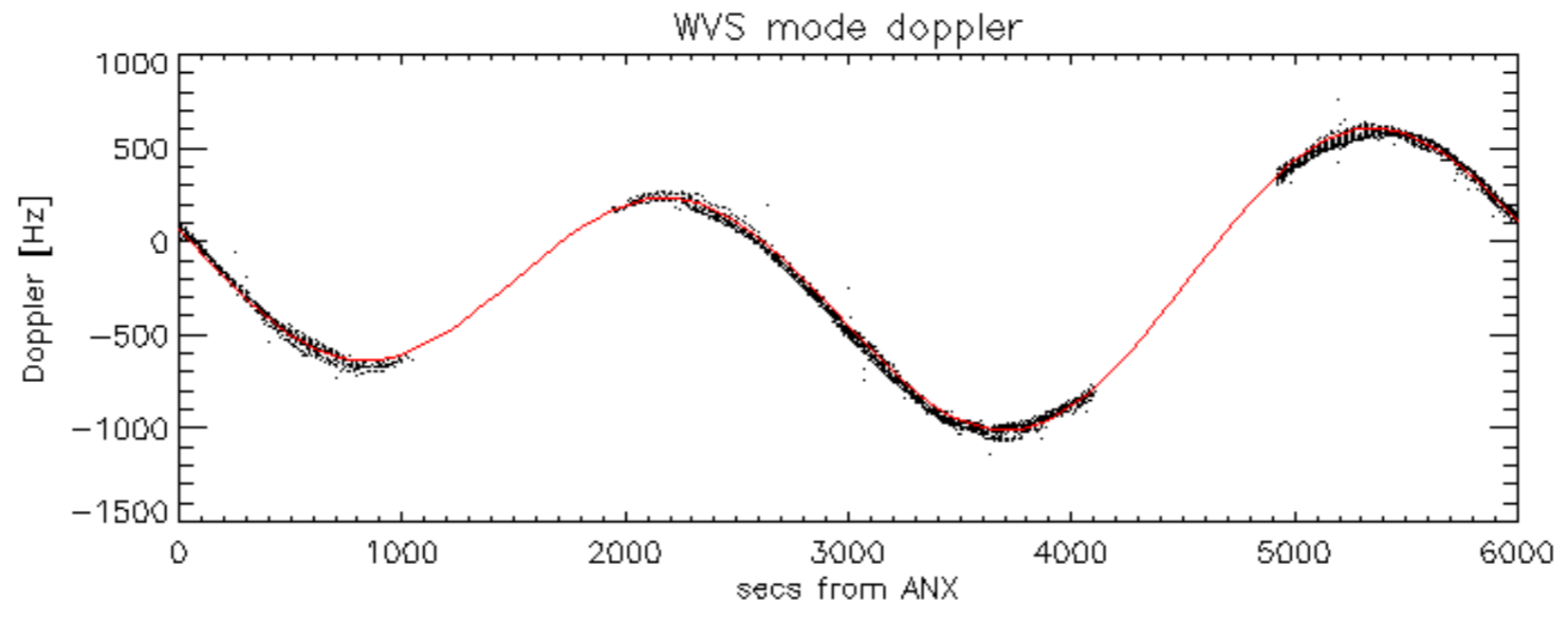


Doppler 'WVS' 'IS2' descending

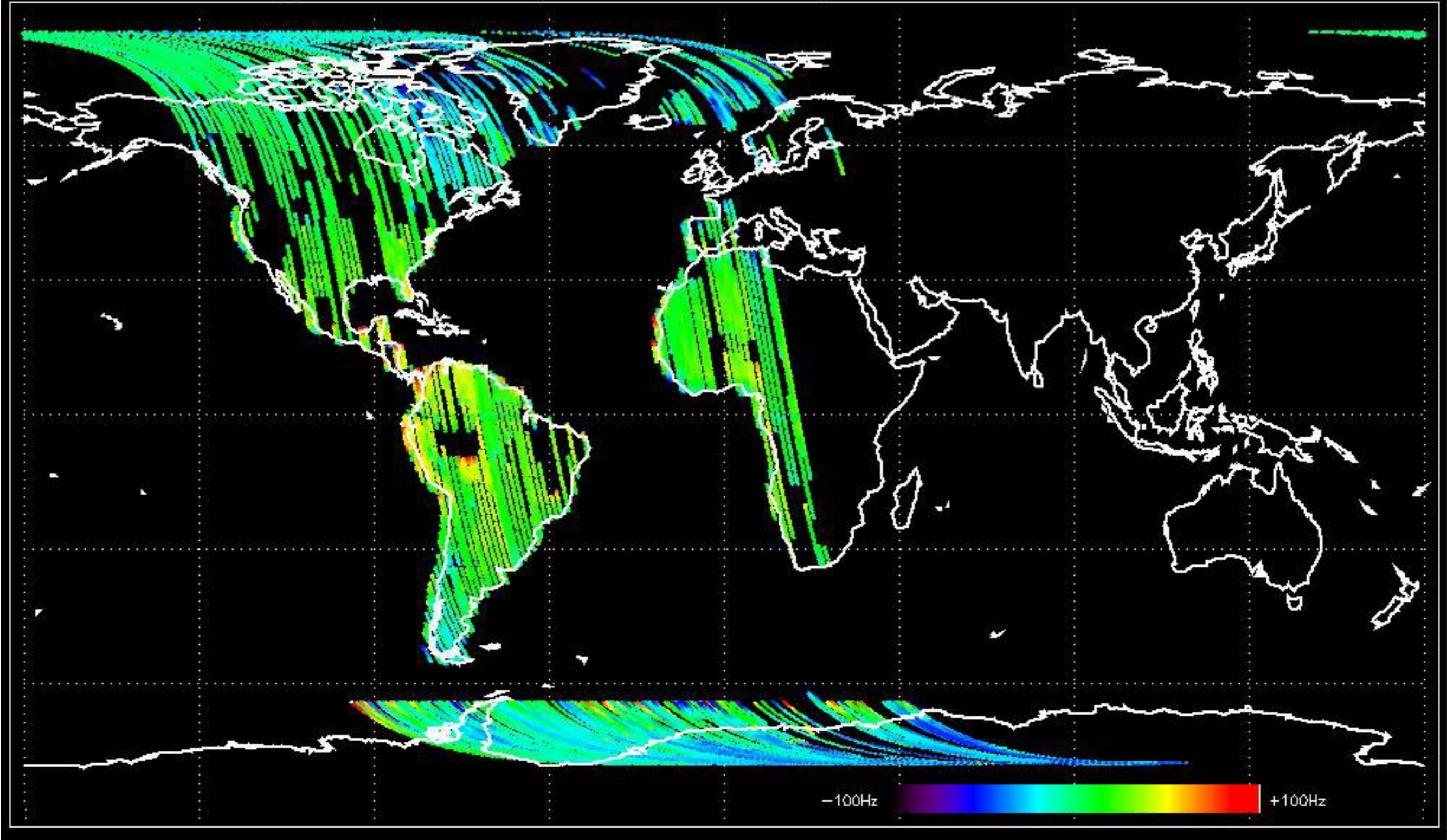


GM1 mode doppler

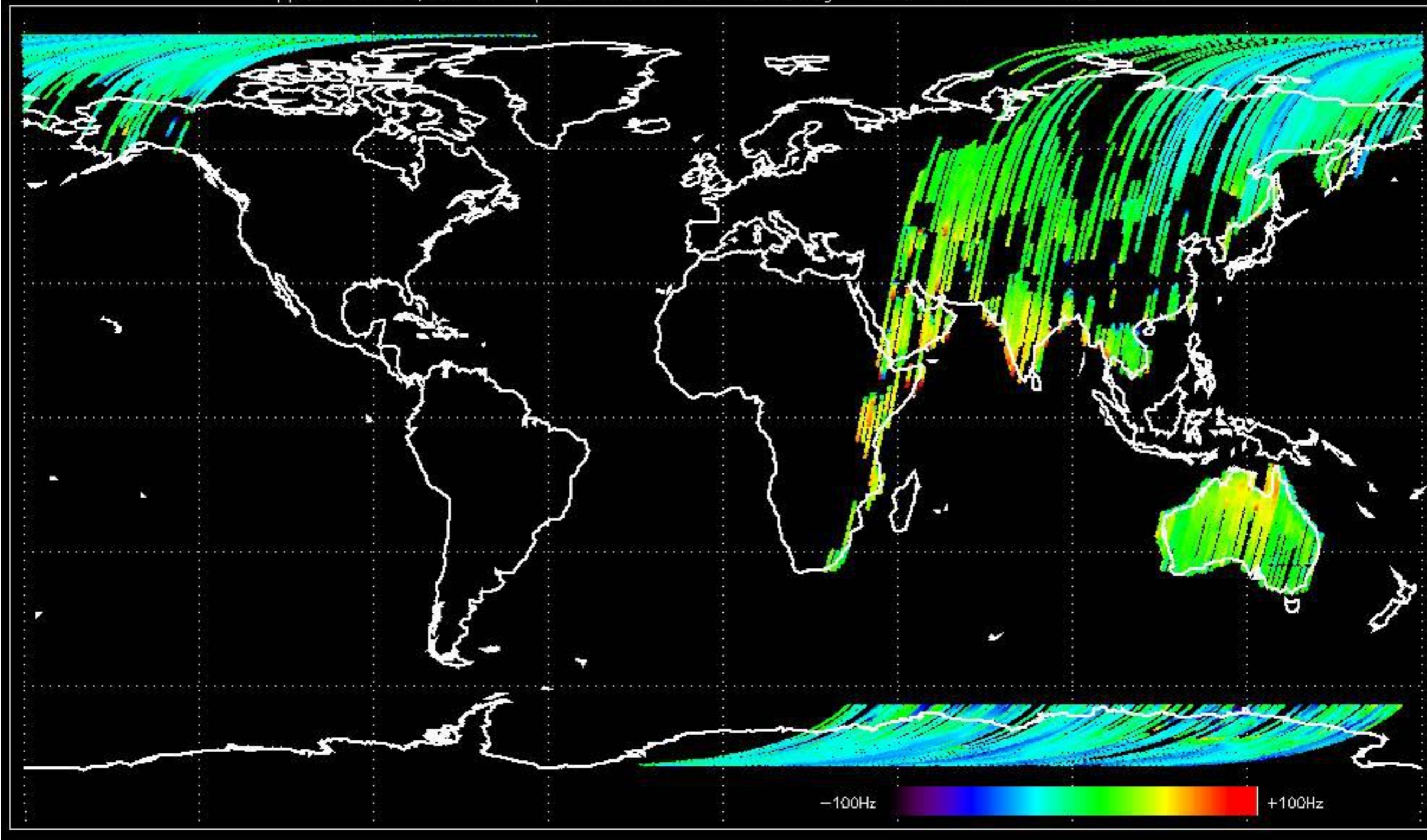




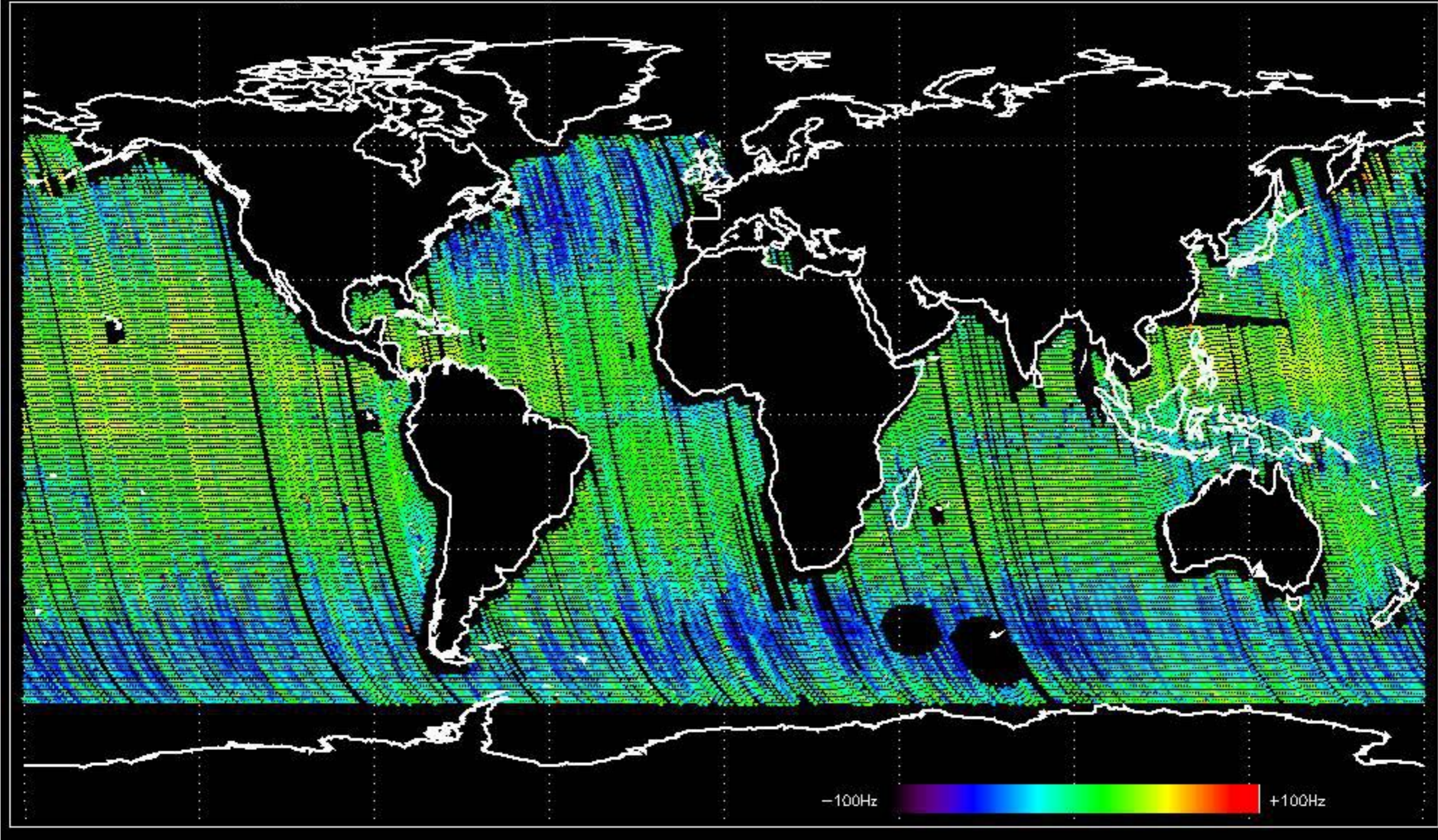
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.620450 Hz



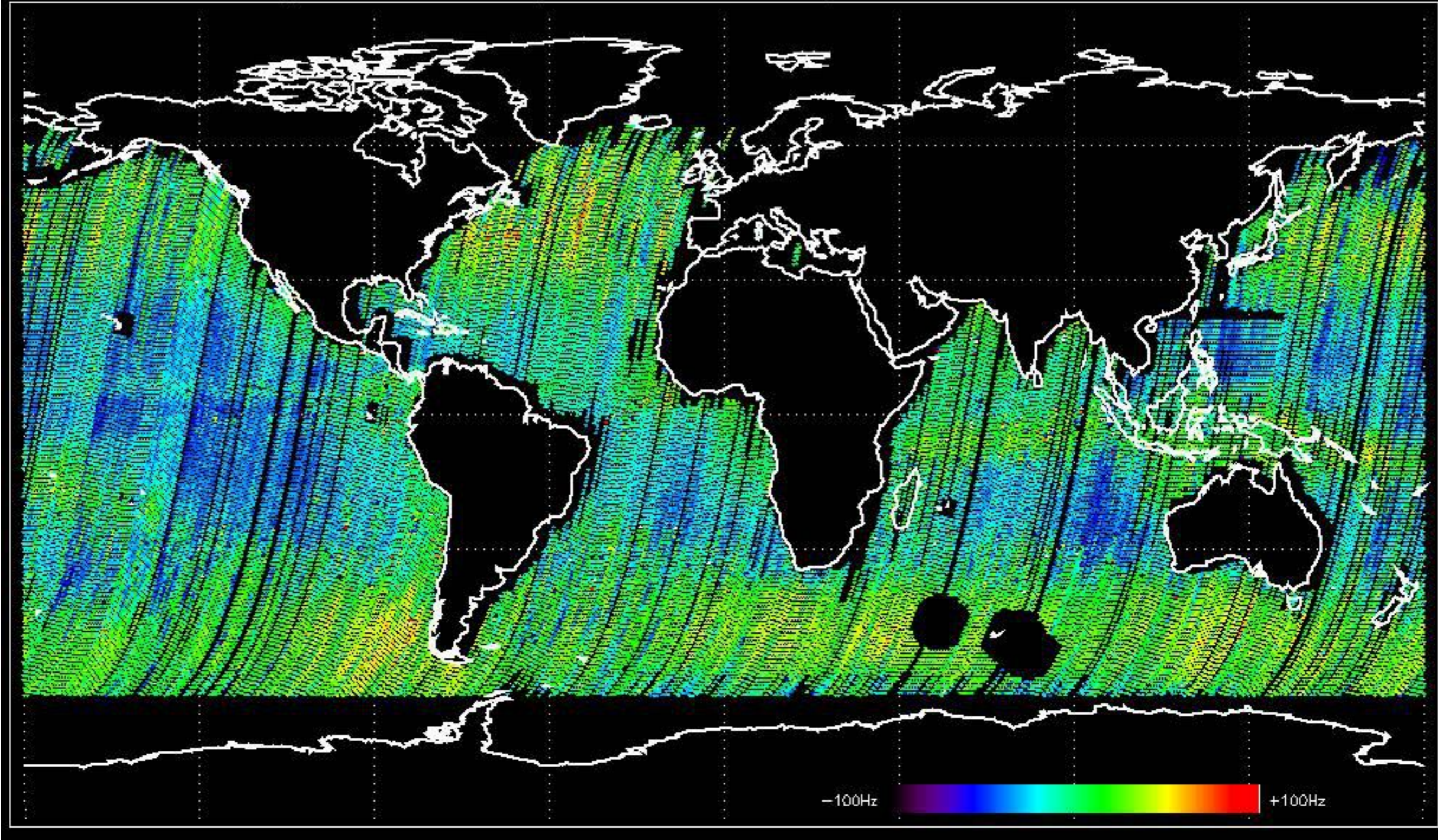
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -12.964769 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.0049793 Hz

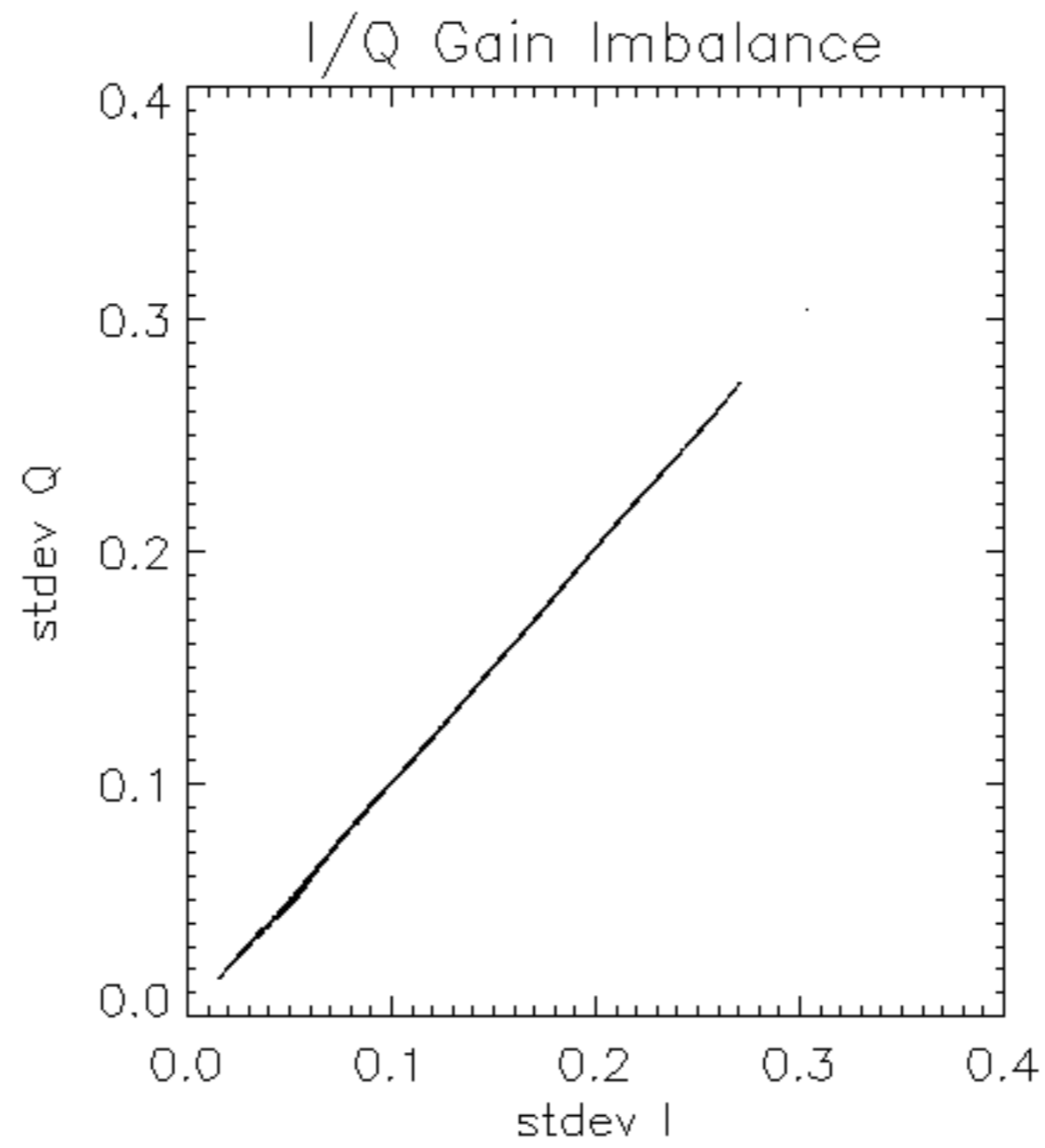


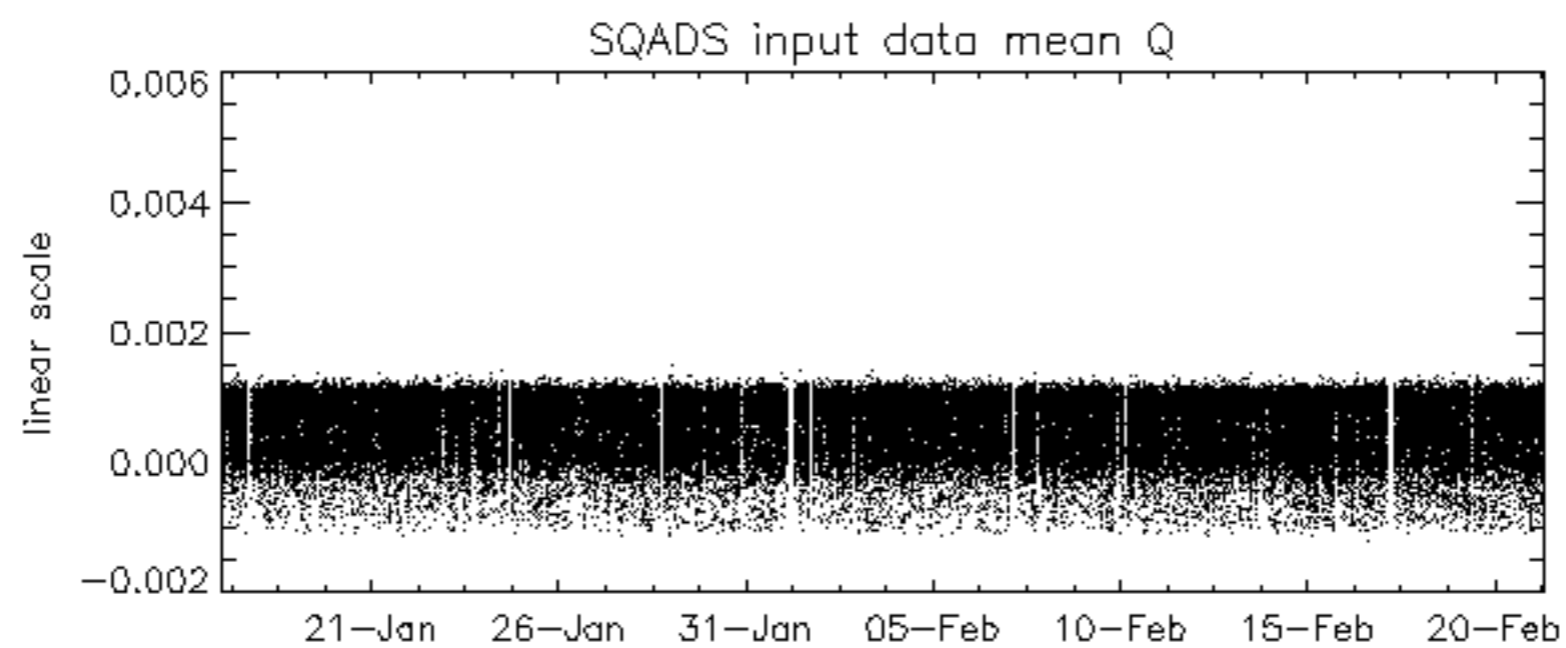
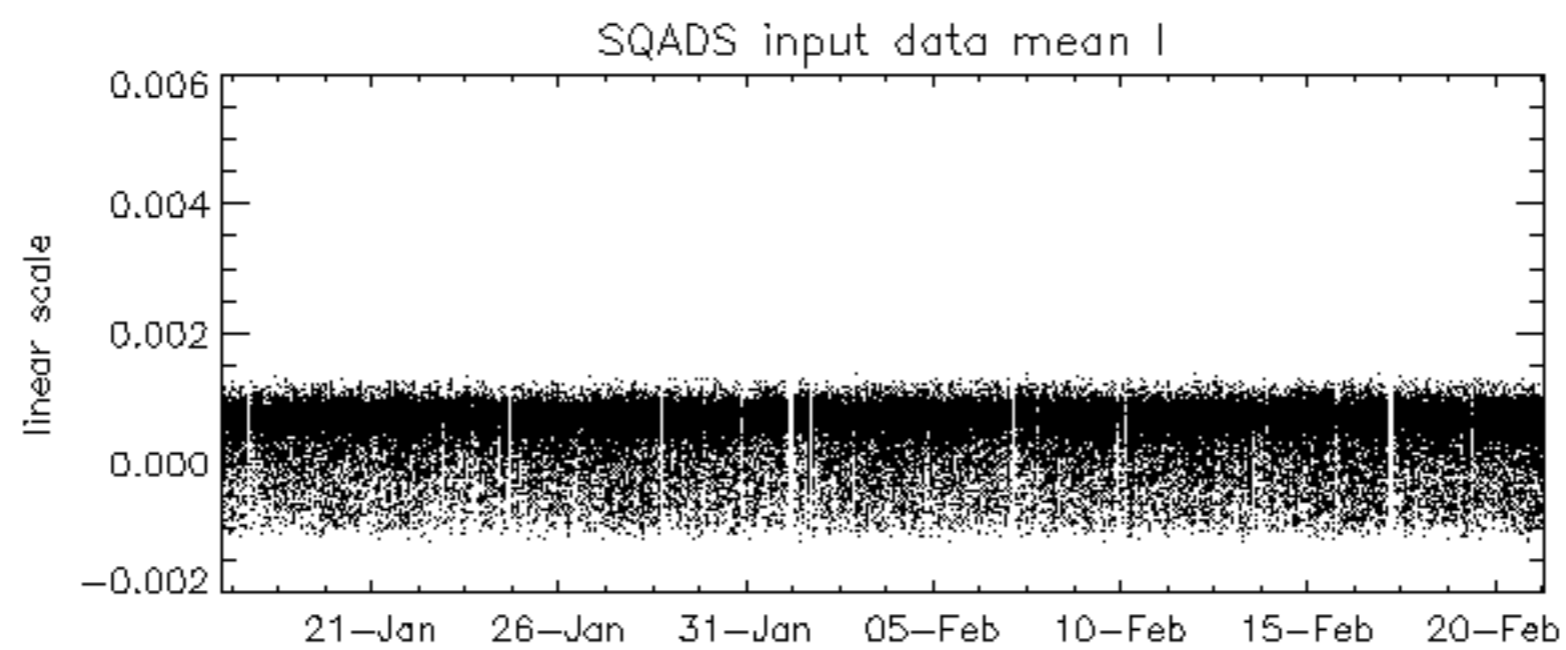
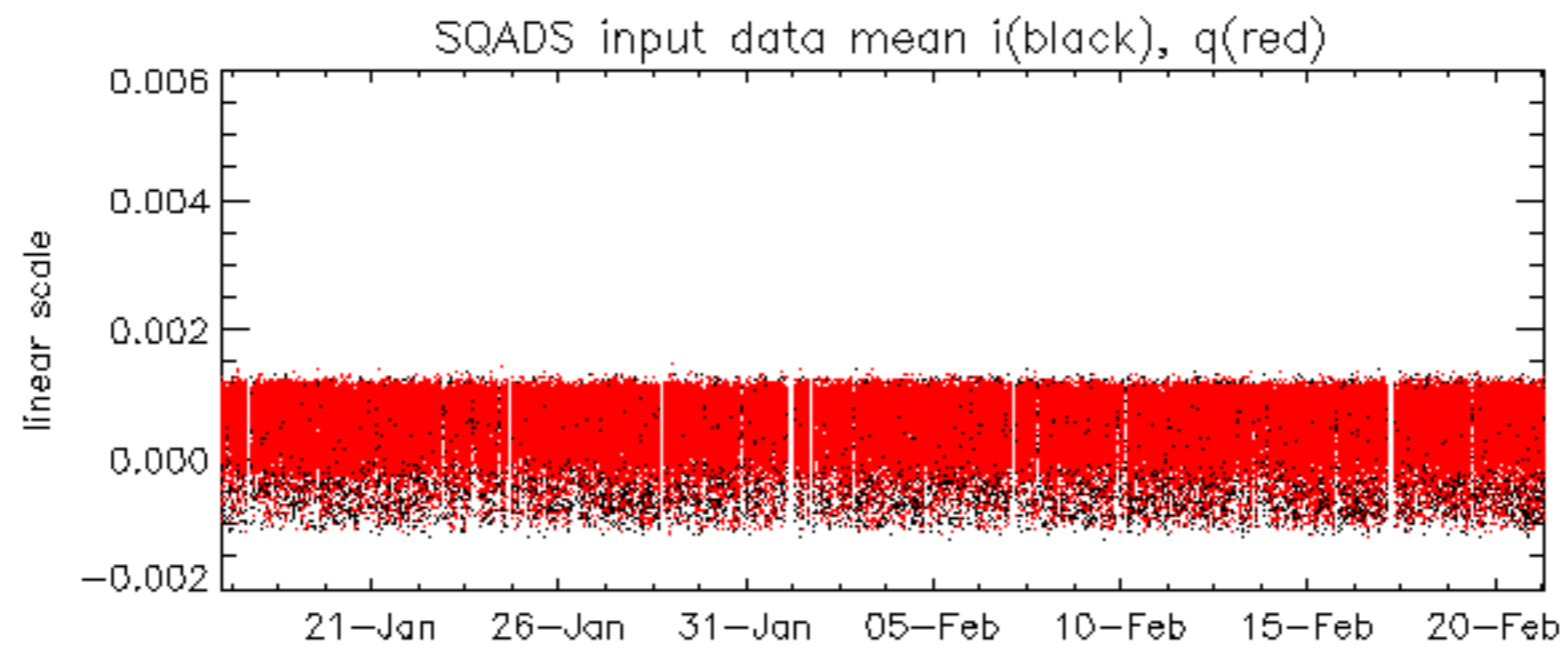
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.9869122 Hz

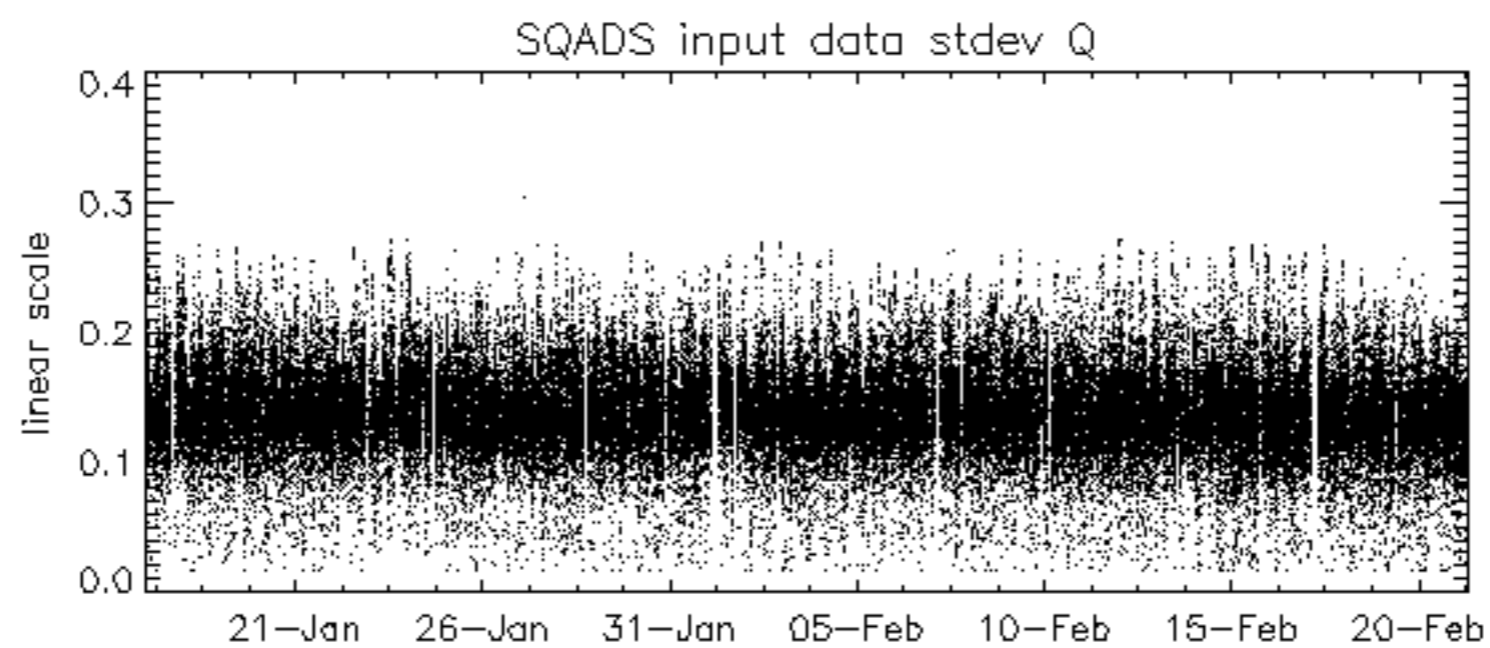
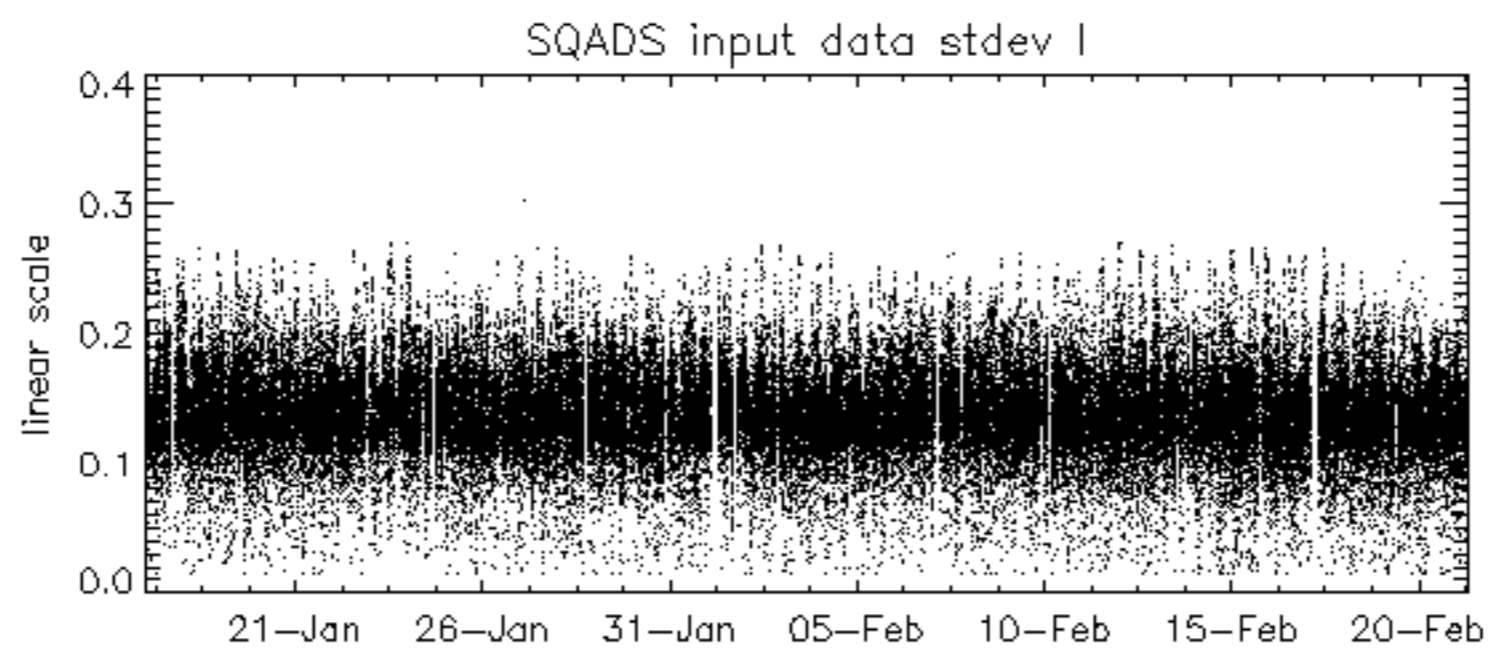
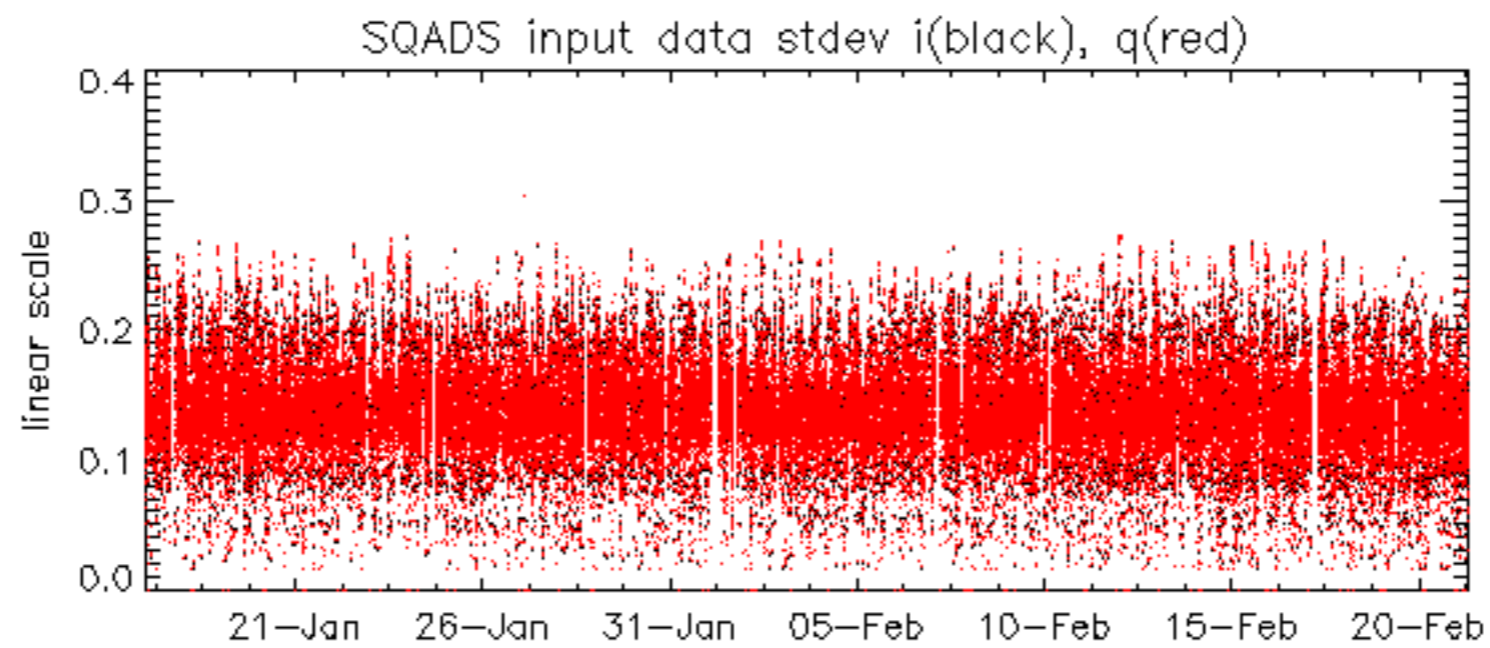


No anomalies observed on available MS products:

No anomalies observed.



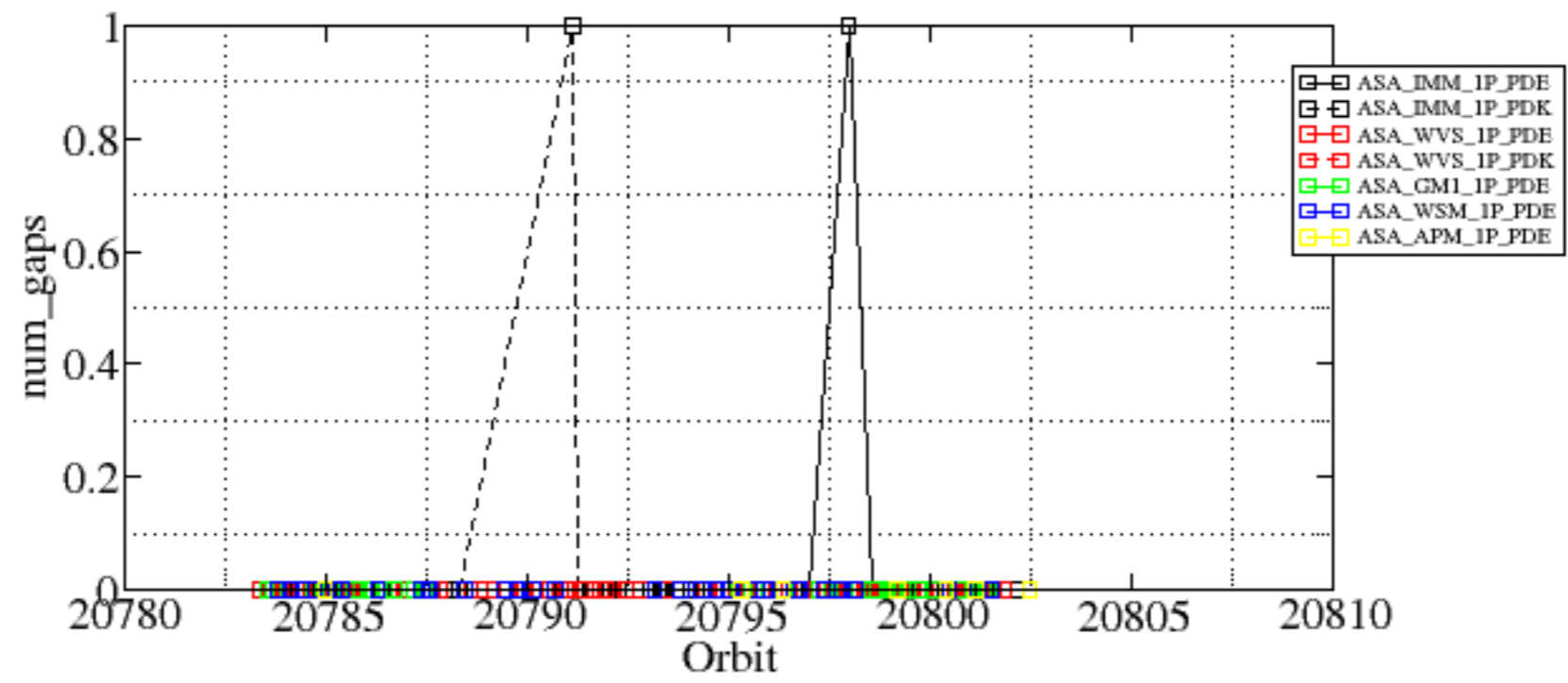


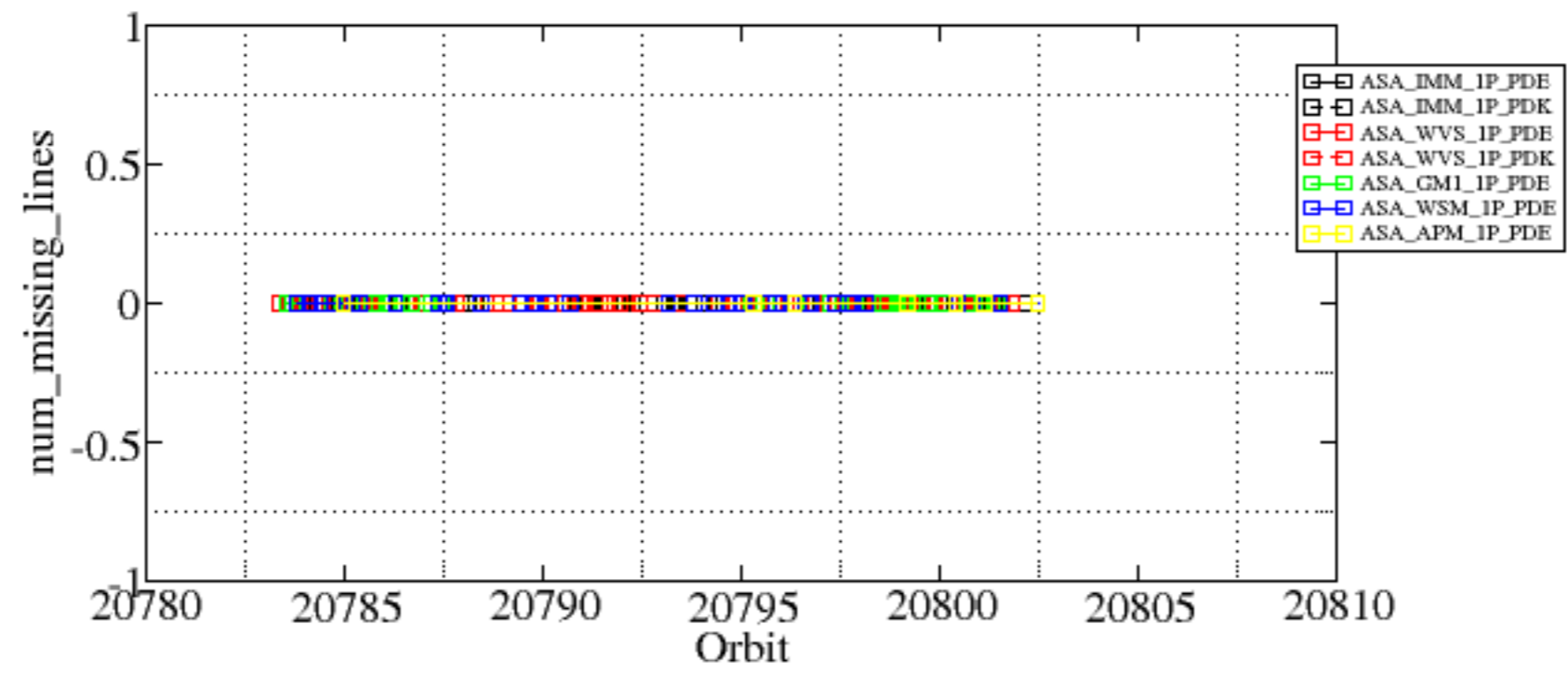


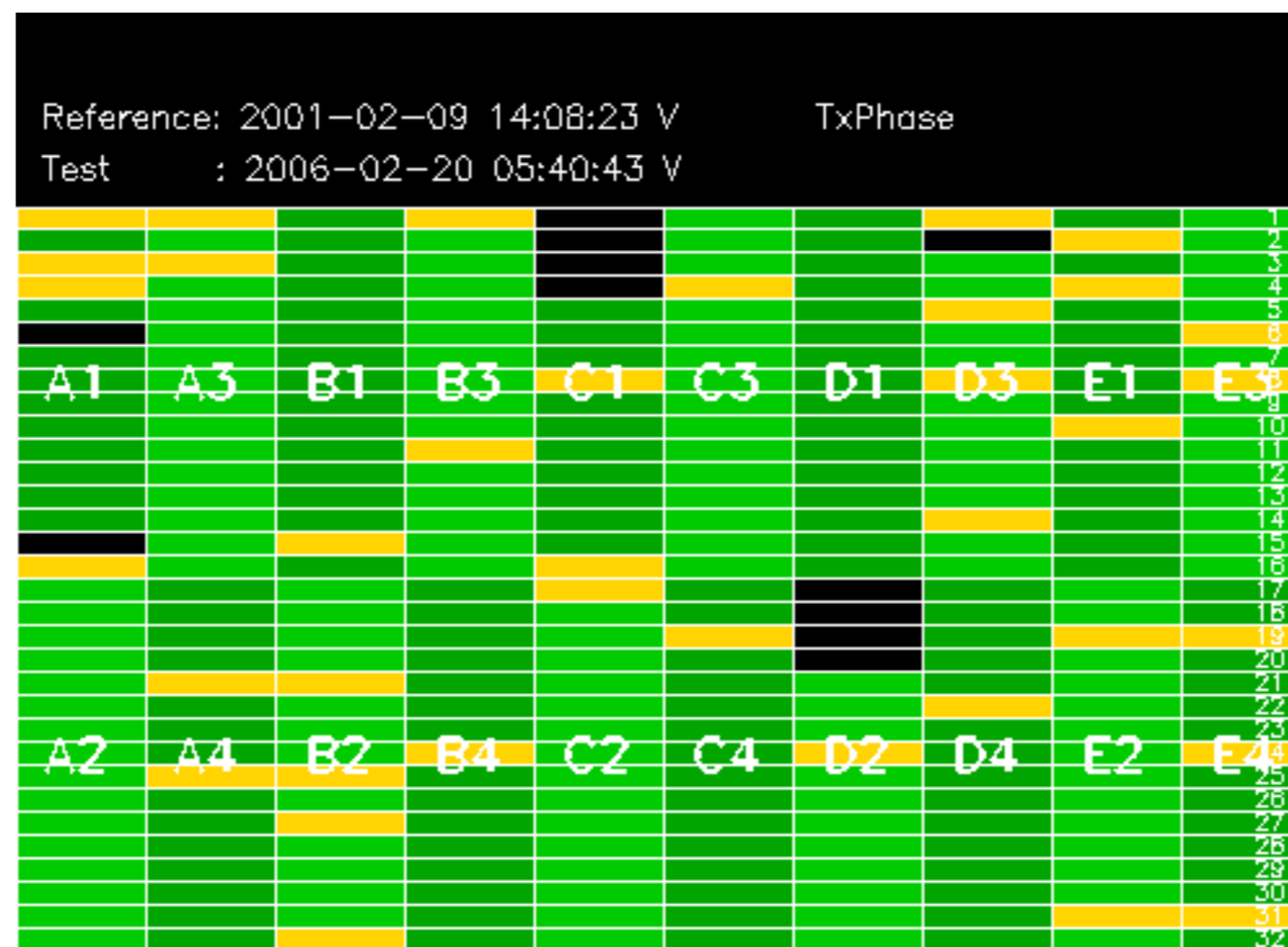
Summary of analysis for the last 3 days 2006022[901]

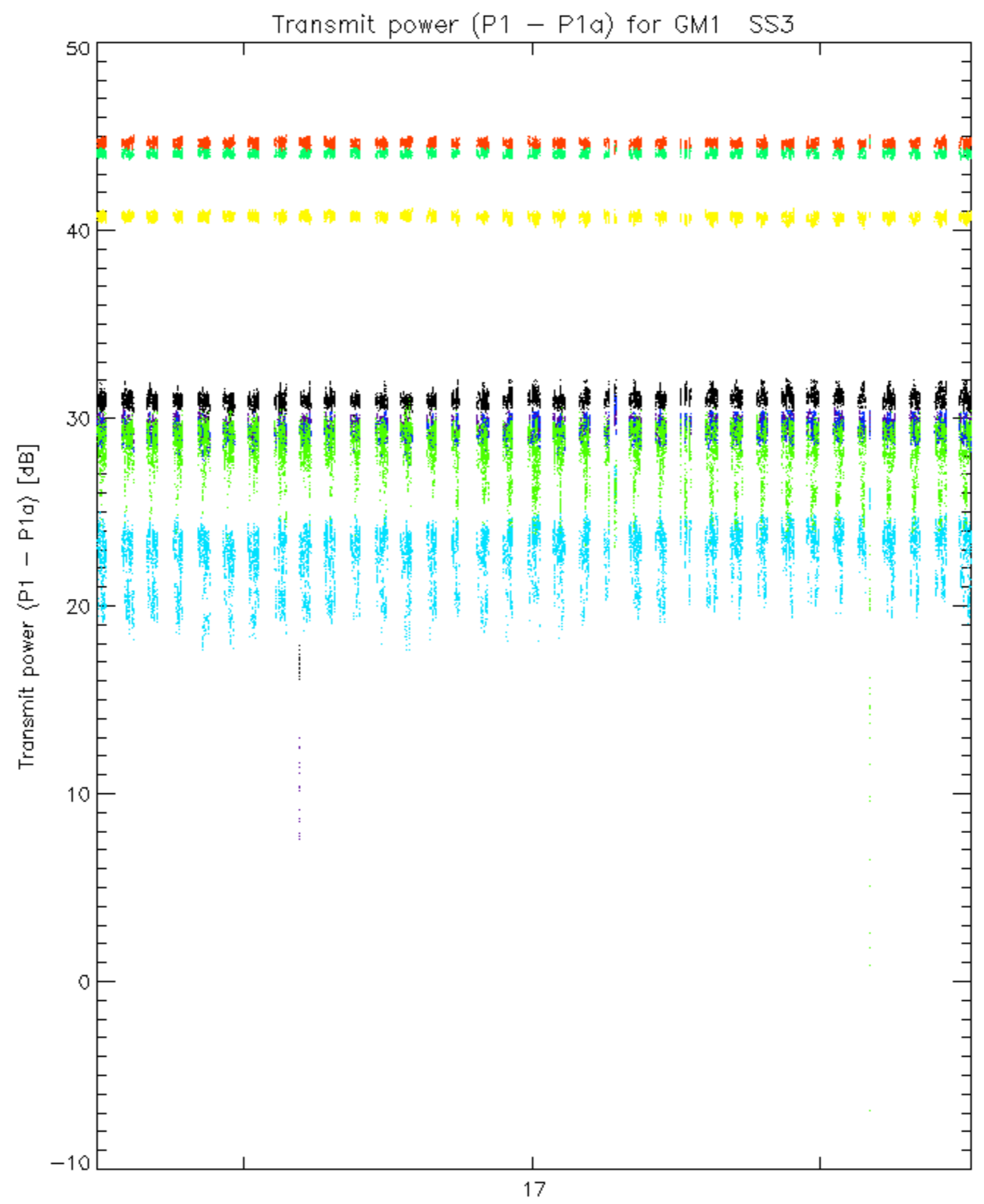
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

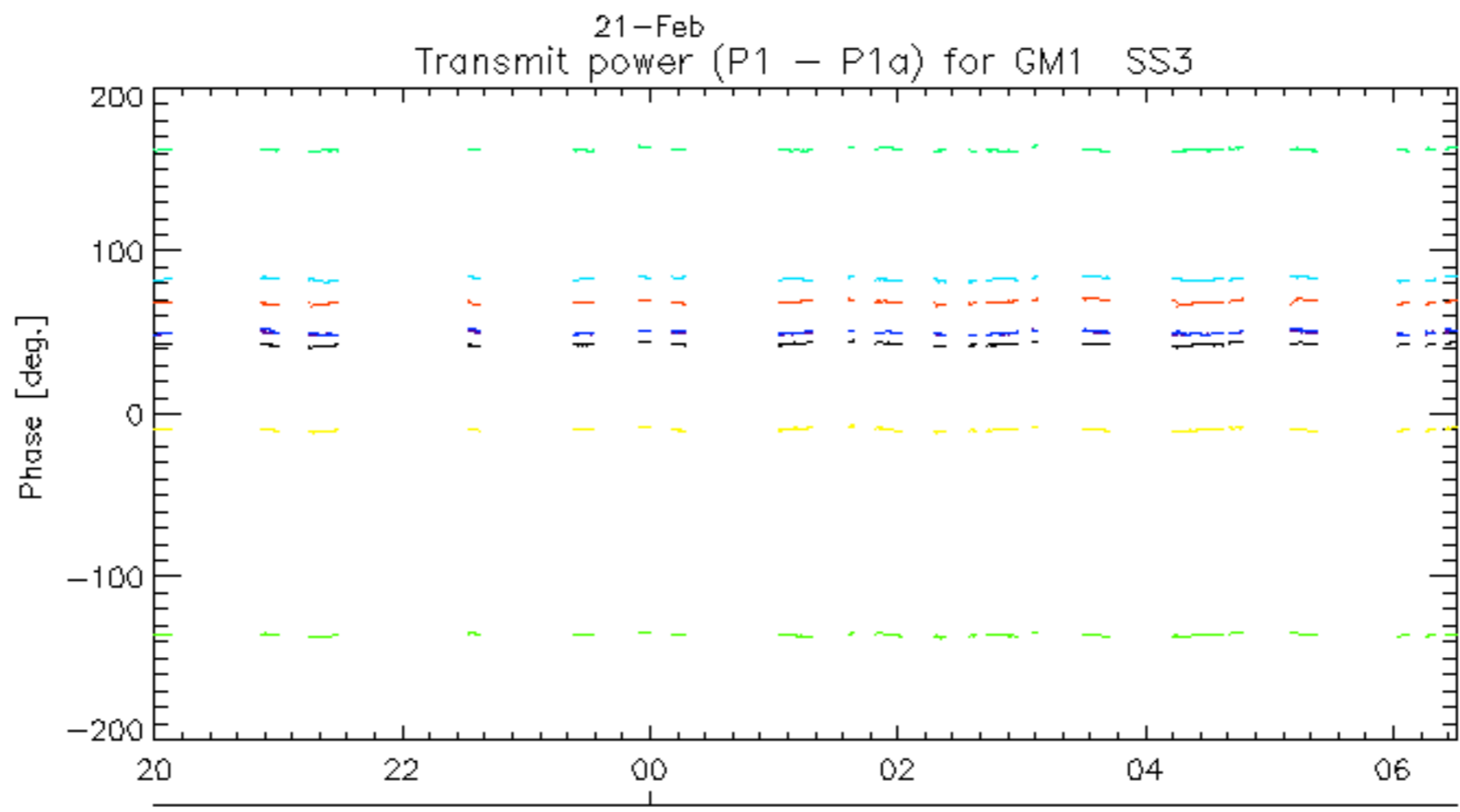
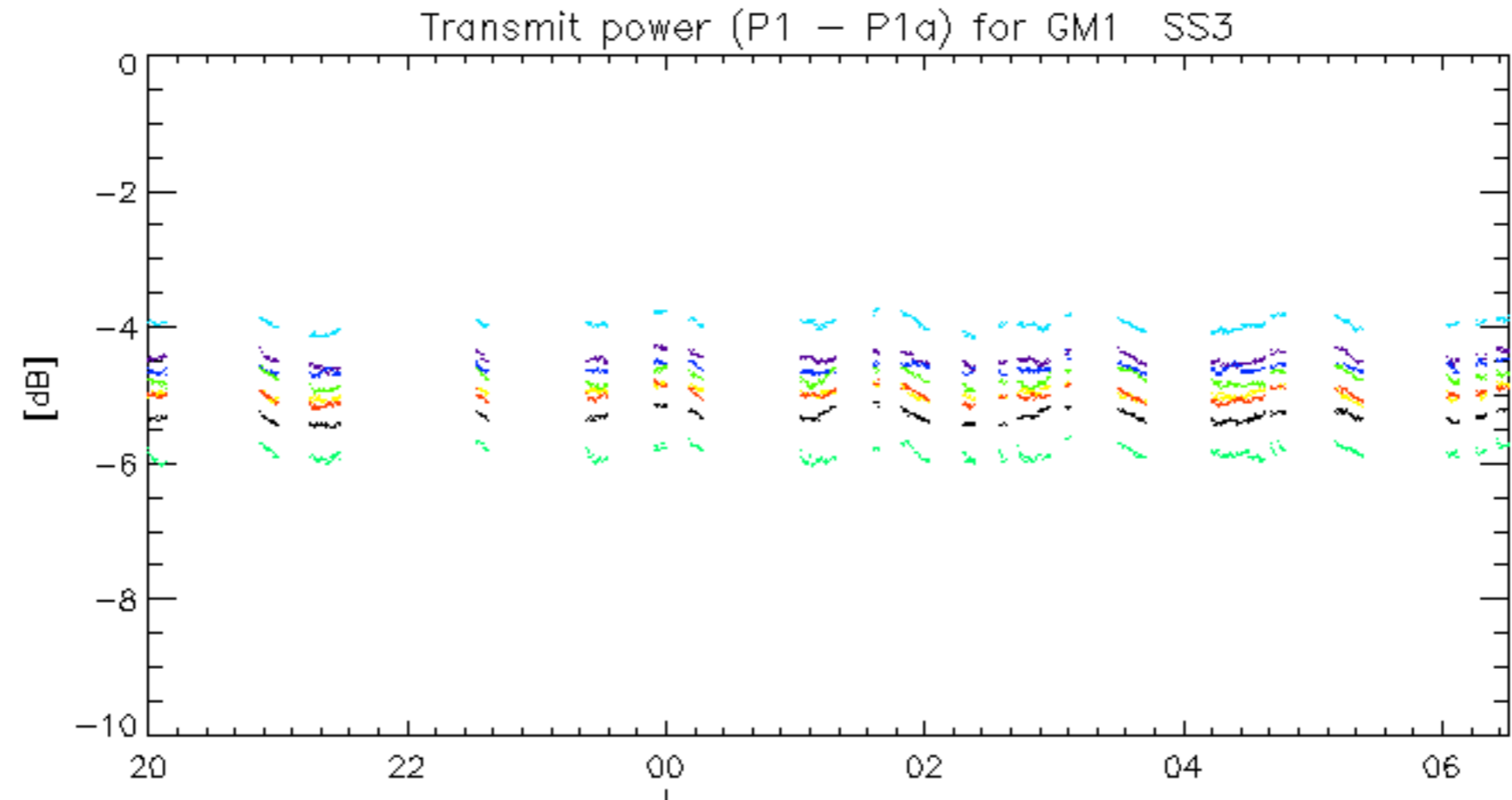
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060221_003709_000001342045_00202_20797_3819.N1	1	0
ASA_IMM_1PNPK20060220_130809_000001212045_00196_20791_1113.N1	1	0



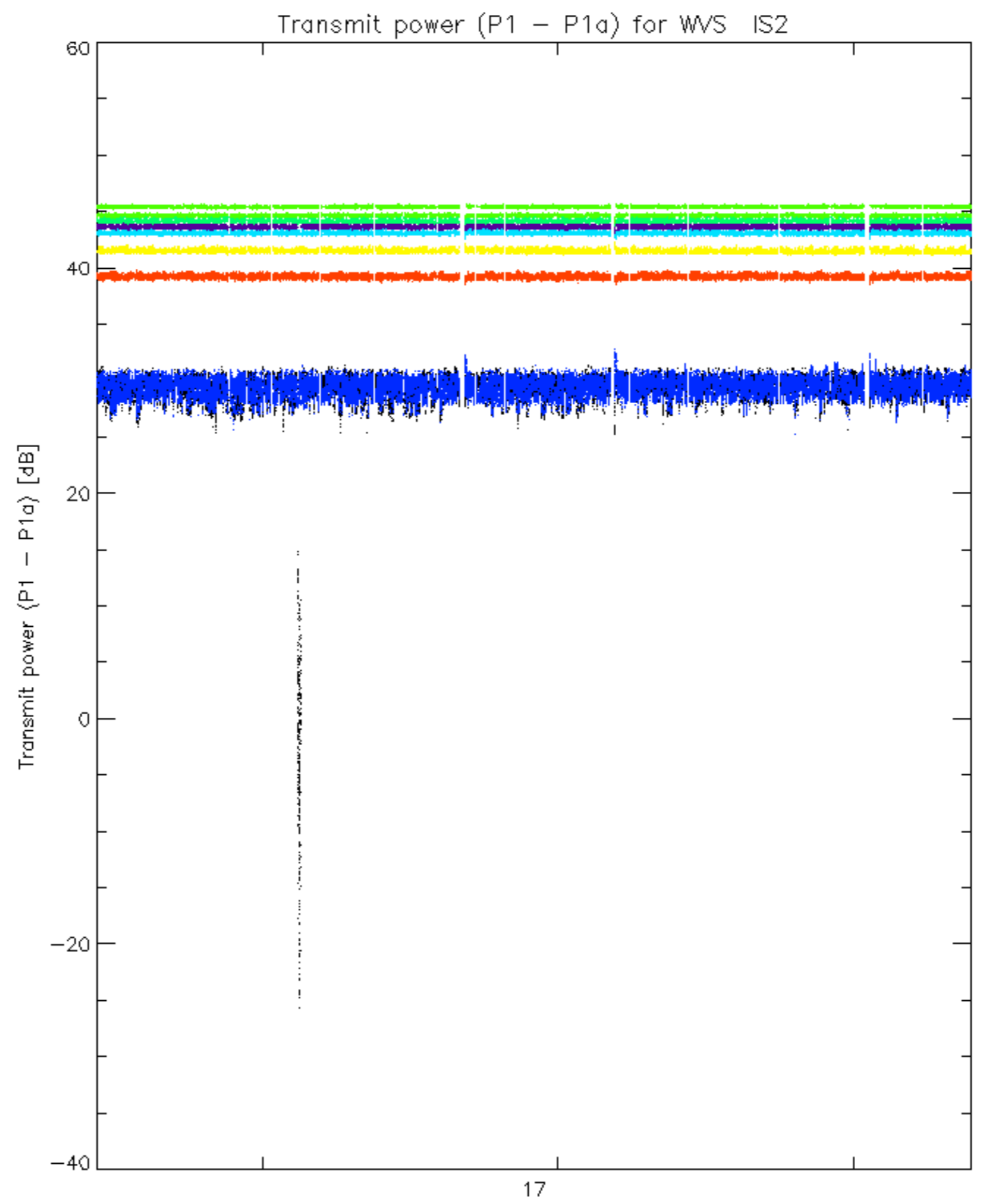




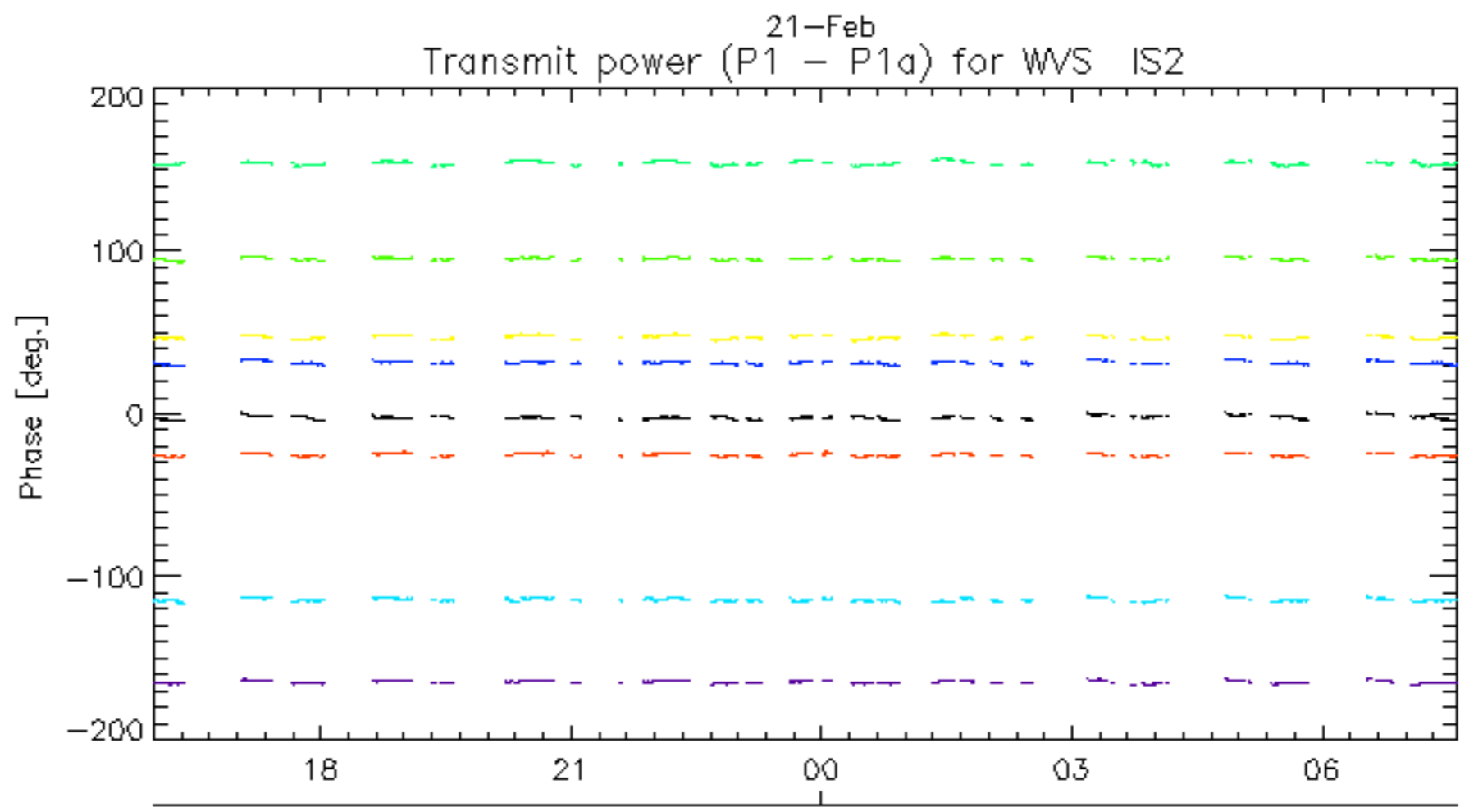
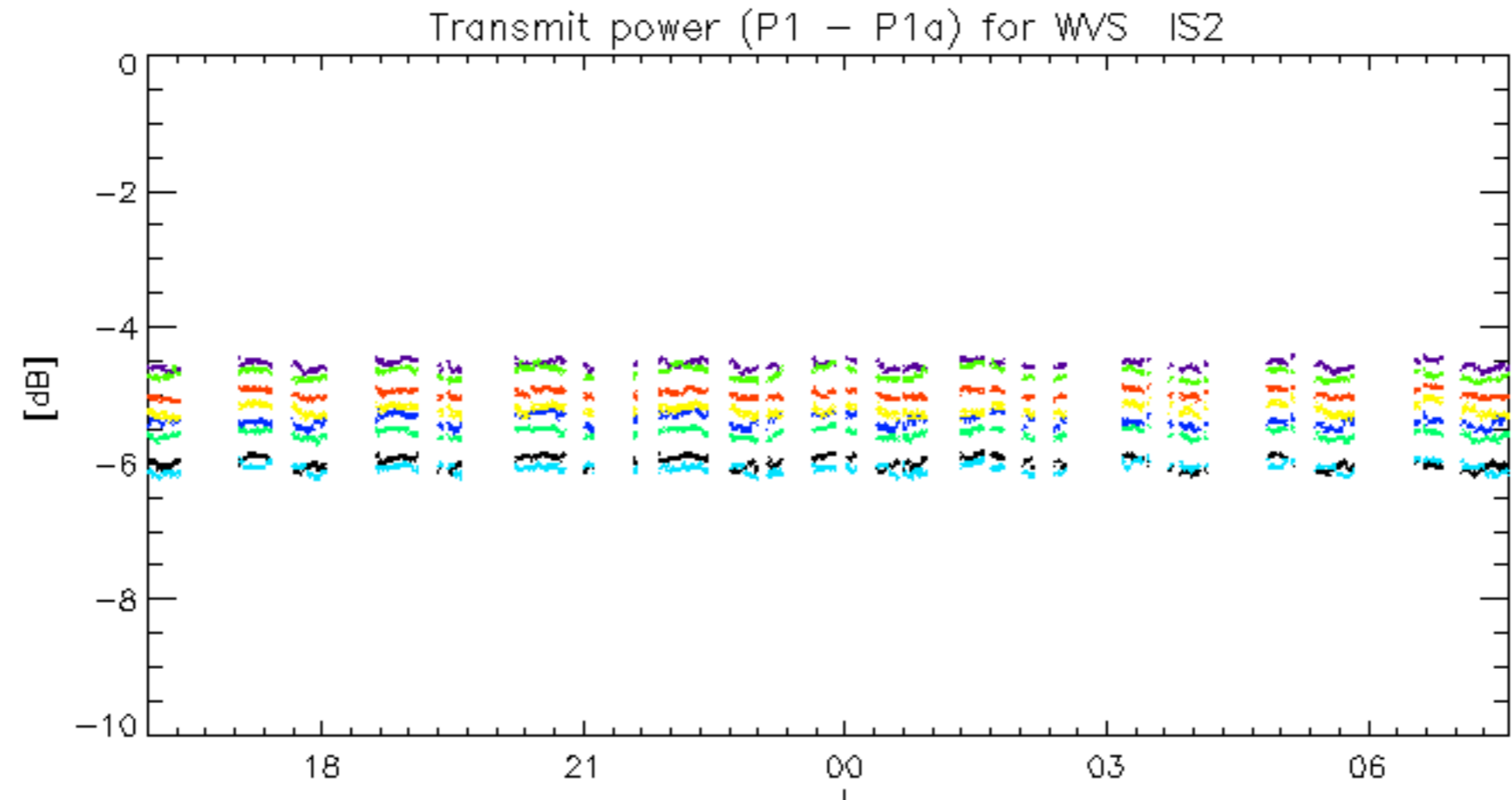




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.