

PRELIMINARY REPORT OF 061106

last update on Mon Nov 6 16:36:06 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 2006-11-05 00:00:00 to 2006-11-06 16:36:06

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	80	28	10	18
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	80	28	10	18
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	80	28	10	18
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	80	28	10	18

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	50	31	6	29
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	38	50	31	6	29
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	38	50	31	6	29
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	50	31	6	29

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	20061105 053214
H	20061106 050036

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
<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)
-----	-------	-----------	------------	-----------------

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.953026	0.009405	-0.005826
7	P1	-3.108320	0.018200	-0.115495
11	P1	-4.108245	0.024810	-0.077220
15	P1	-6.243542	0.015582	-0.117067
19	P1	-3.594936	0.065982	-0.078951
22	P1	-4.645486	0.131259	-0.113566
26	P1	-4.000467	0.125757	0.074024
30	P1	-5.887970	0.239515	-0.005652
3	P1	-16.573757	0.219362	0.311145
7	P1	-17.165760	0.178110	-0.283301
11	P1	-17.069414	0.426161	-0.165384
15	P1	-12.941305	0.115547	-0.381749
19	P1	-14.804315	0.371527	-0.347663
22	P1	-15.687745	0.495232	-0.663562
26	P1	-15.087720	0.237200	0.000600
30	P1	-17.136442	0.700928	-0.823579

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.836042	0.088353	-0.048574
7	P2	-21.748314	0.095140	0.063446
11	P2	-15.694117	0.107375	0.115758
15	P2	-7.088583	0.108562	-0.113685
19	P2	-9.151762	0.101458	-0.122186
22	P2	-18.176186	0.096053	-0.154449
26	P2	-16.471575	0.107743	-0.201592
30	P2	-19.468960	0.090875	-0.018044

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.213906	0.007499	-0.052528
7	P3	-8.213906	0.007499	-0.052528
11	P3	-8.213906	0.007499	-0.052528
15	P3	-8.213906	0.007499	-0.052528
19	P3	-8.213906	0.007499	-0.052528
22	P3	-8.213906	0.007499	-0.052528
26	P3	-8.213828	0.007515	-0.052790
30	P3	-8.213828	0.007515	-0.052790

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	-3.924701	0.185516	0.096356
7	P1	-2.618463	1.171298	0.468580
11	P1	-2.902495	0.144184	0.179951
15	P1	-3.699628	0.132712	0.134797
19	P1	-3.524361	0.152064	-0.102564
22	P1	-5.069691	0.112469	-0.003105
26	P1	-6.000749	0.286604	-0.132064
30	P1	-5.301399	0.188767	-0.151340
3	P1	-11.755243	0.456811	0.238568
7	P1	-10.156226	1.493308	0.546563
11	P1	-10.420335	0.412482	0.461537
15	P1	-10.888007	0.562229	0.606740
19	P1	-15.757442	2.705636	-0.317516
22	P1	-21.148111	1.661945	-0.891006

26	P1	-15.943252	0.459653	-0.573549
30	P1	-17.981340	0.545097	0.404132

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.384453	0.283062	-0.349663
7	P2	-22.041794	1.604327	-0.847341
11	P2	-10.874743	0.247335	-0.298098
15	P2	-4.920921	0.072034	-0.193822
19	P2	-6.903900	0.151862	-0.205373
22	P2	-8.269658	0.520769	0.042423
26	P2	-24.165890	1.203716	-0.677034
30	P2	-21.878149	0.610271	-0.357708

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.068694	0.003246	-0.056117
7	P3	-8.068671	0.003217	-0.056303
11	P3	-8.068585	0.003222	-0.056613
15	P3	-8.068565	0.003219	-0.055865
19	P3	-8.068615	0.003222	-0.056205
22	P3	-8.068481	0.003227	-0.056384
26	P3	-8.068427	0.003209	-0.057039
30	P3	-8.068515	0.003215	-0.057257

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	0.000555876
	stdev	1.71130e-07
MEAN Q	mean	0.000522185
	stdev	2.17836e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137379
	stdev	0.00111097
STDEV Q	mean	0.137747
	stdev	0.00112815



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006110[456]

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_1PNPDK20061104_182651_000000352052_00371_24473_3469.N1	0	16
ASA_IMM_1PNPDK20061105_201452_000000352052_00386_24488_3554.N1	0	11
ASA_GM1_1PNPDK20061104_145005_000002232052_00368_24470_7981.N1	0	15
ASA_GM1_1PNPDK20061105_153556_000001872052_00383_24485_8060.N1	0	8
ASA_WSM_1PNPDE20061104_004249_000002012052_00360_24462_0001.N1	0	29

ASA_WSM_1PNPDE20061105_001112_000002612052_00374_24476_0001.N1	0	29
ASA_WSM_1PNPDE20061105_032220_000001472052_00376_24478_0001.N1	0	1



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

7.2 - Absolute Doppler for WVS

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX	
<input type="checkbox"/>	

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

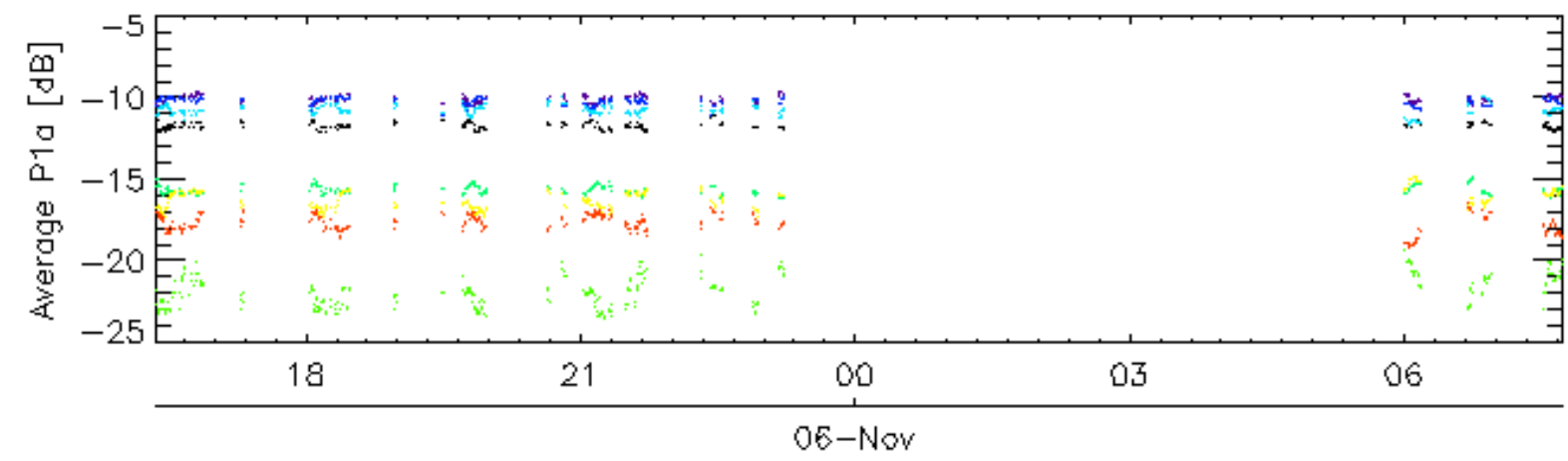
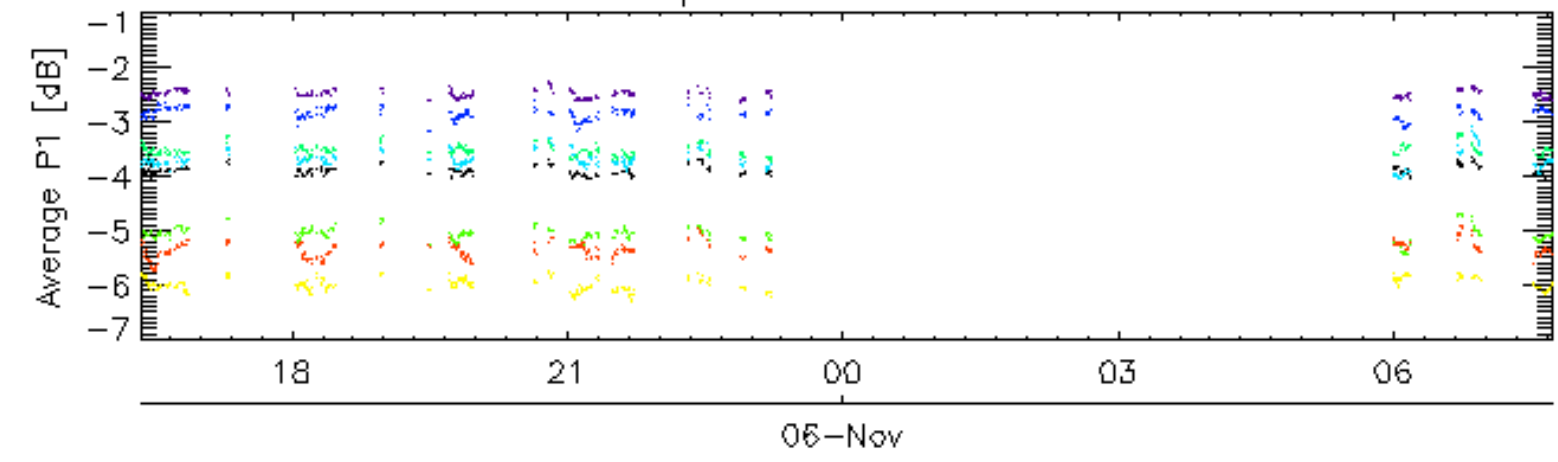
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

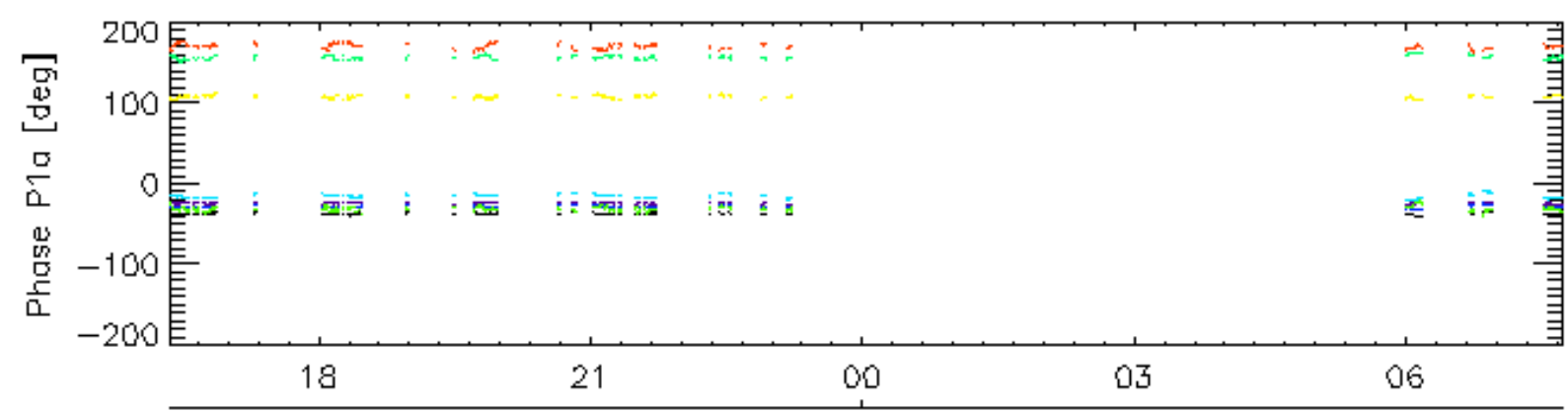
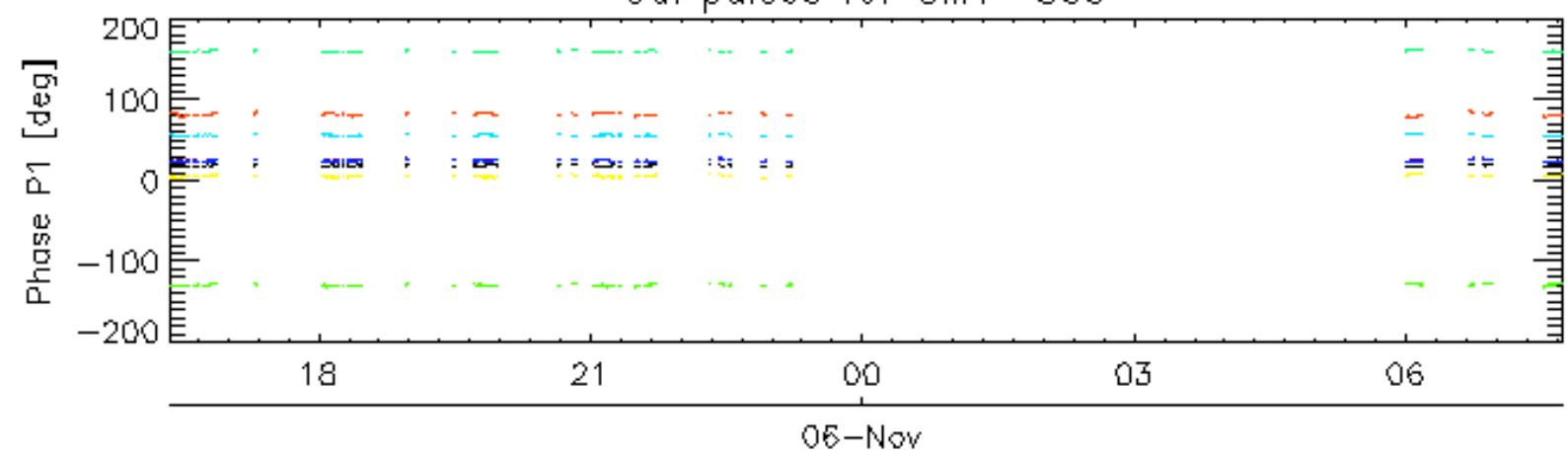
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

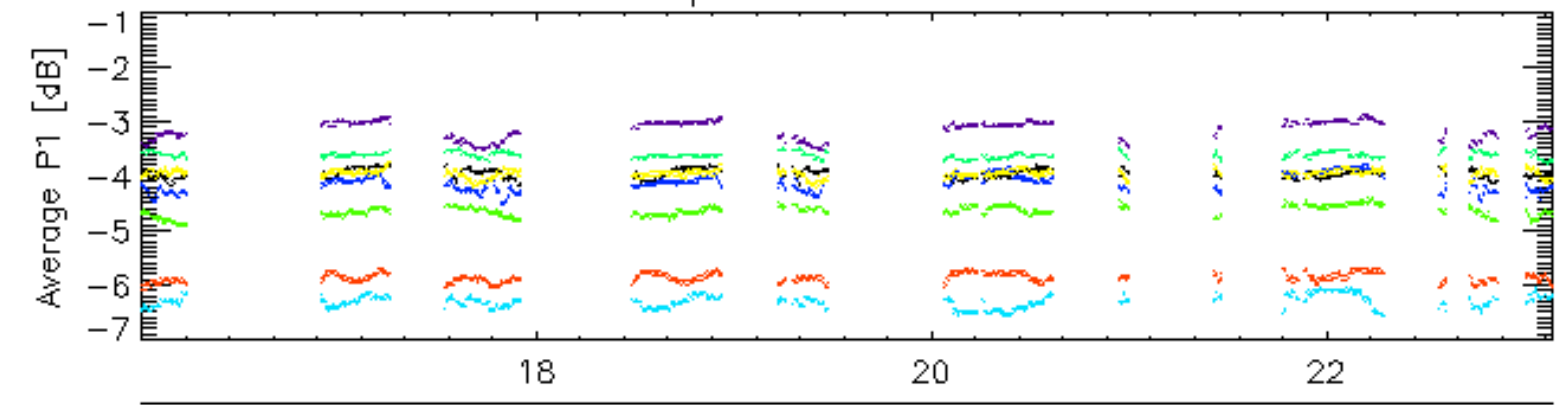


Cal pulses for GM1 SS3

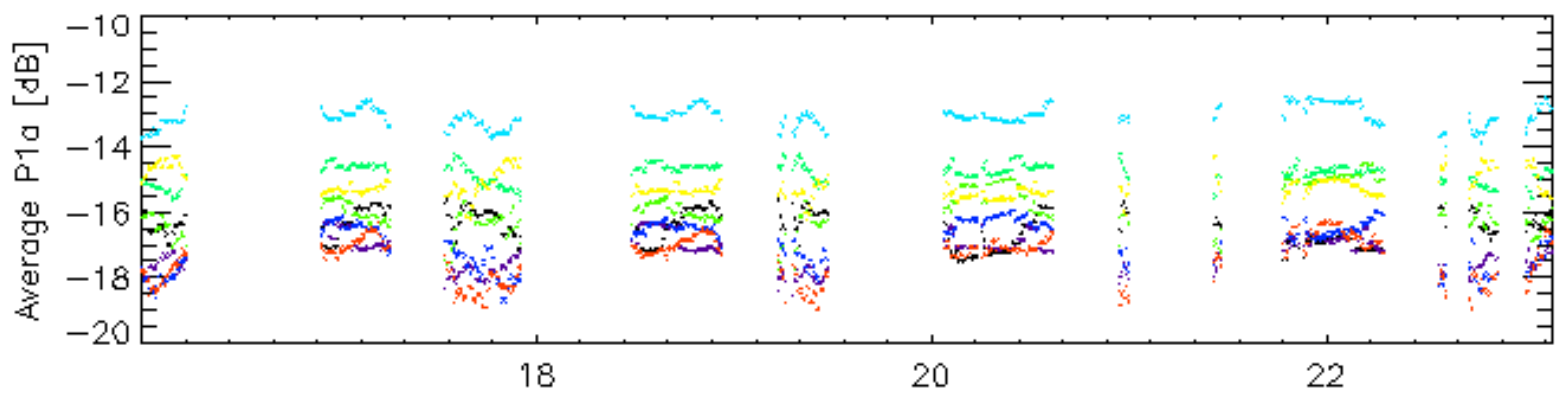


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

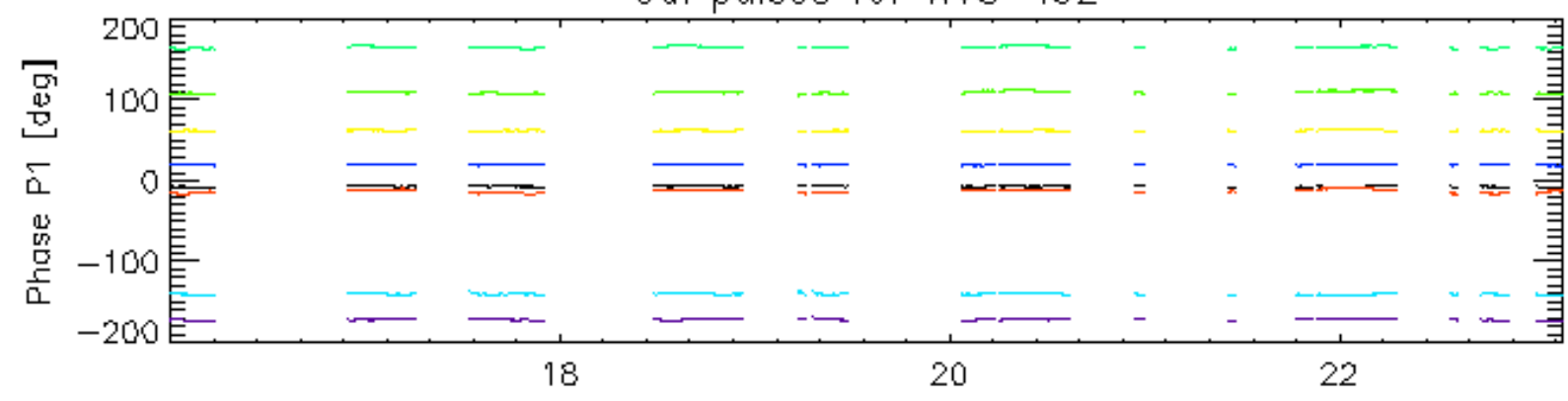


05-Nov

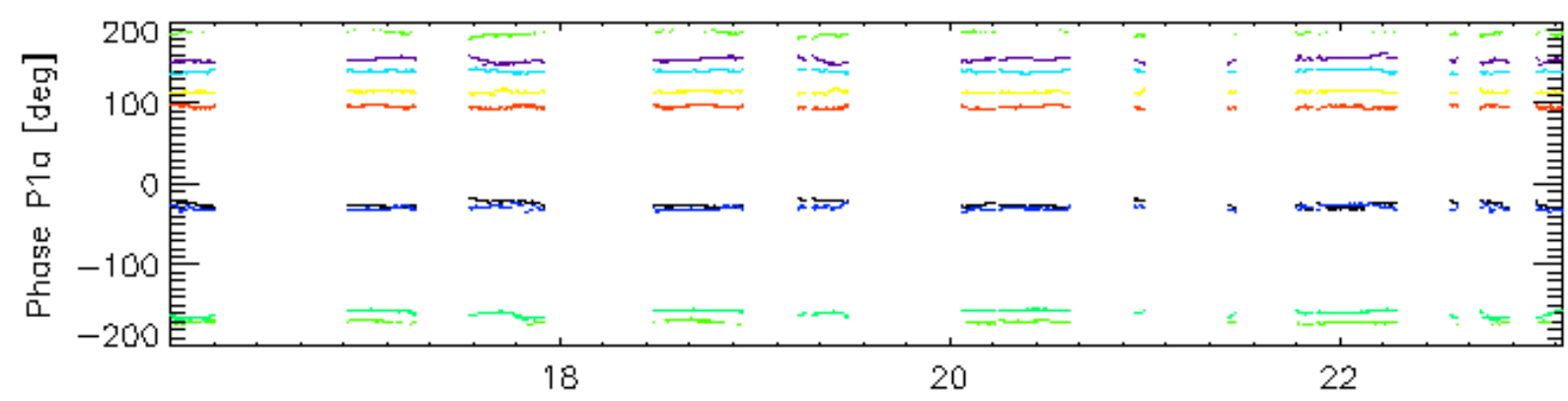


05-Nov

Cal pulses for WVS IS2

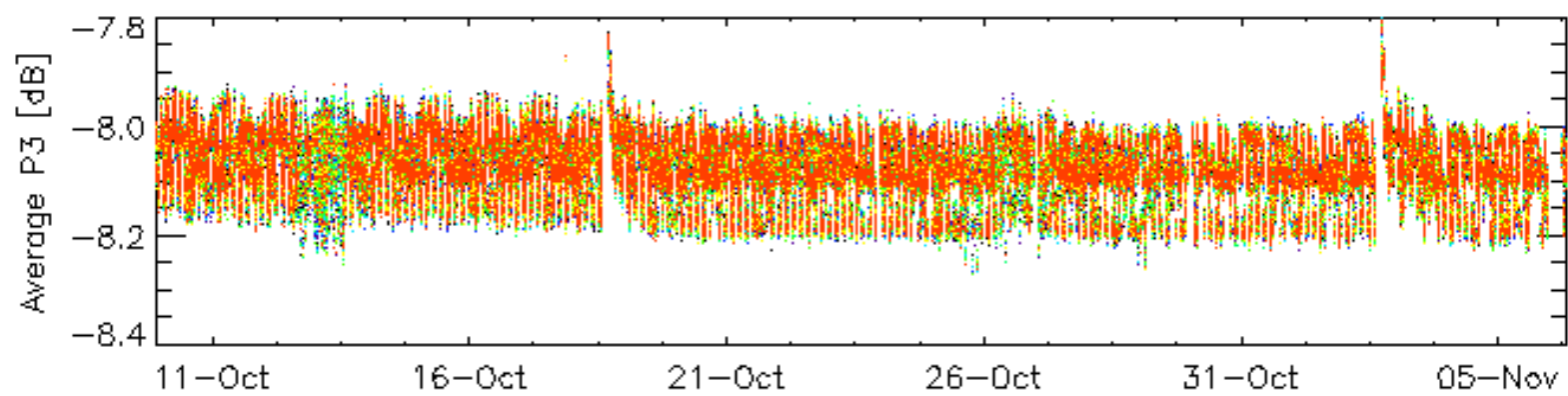
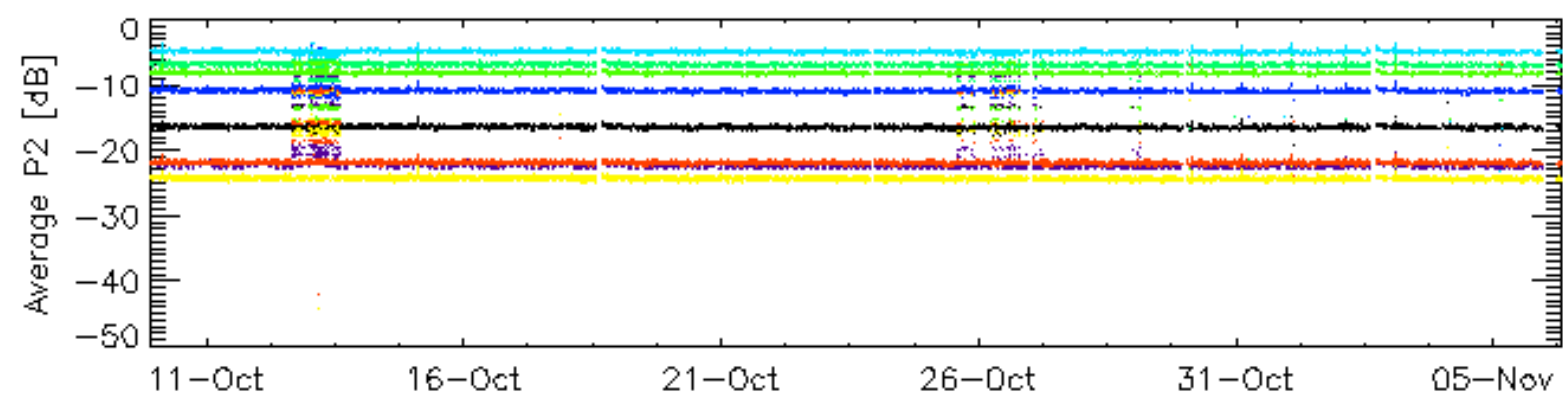
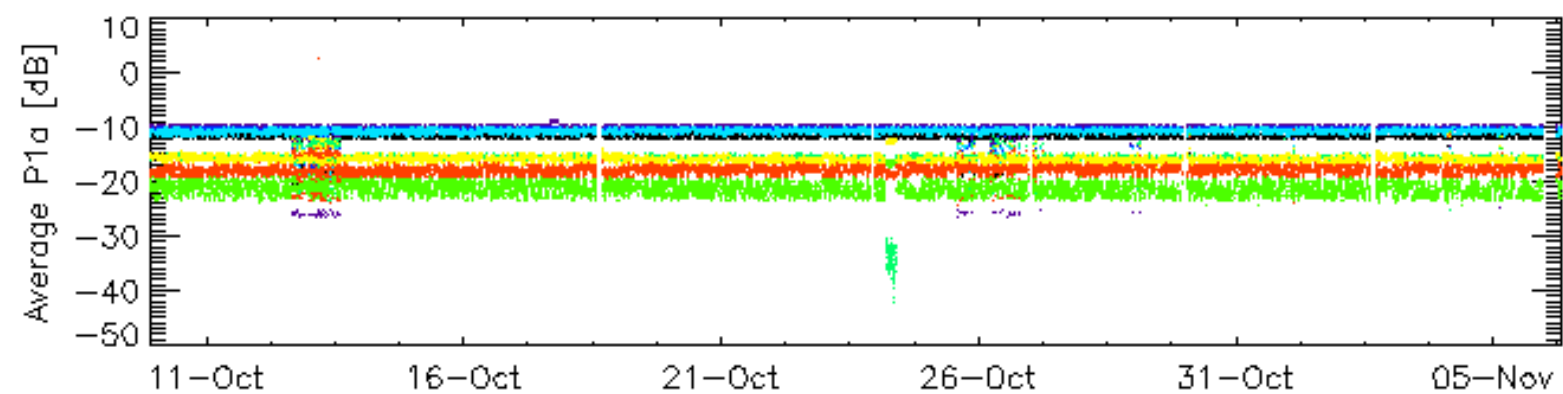
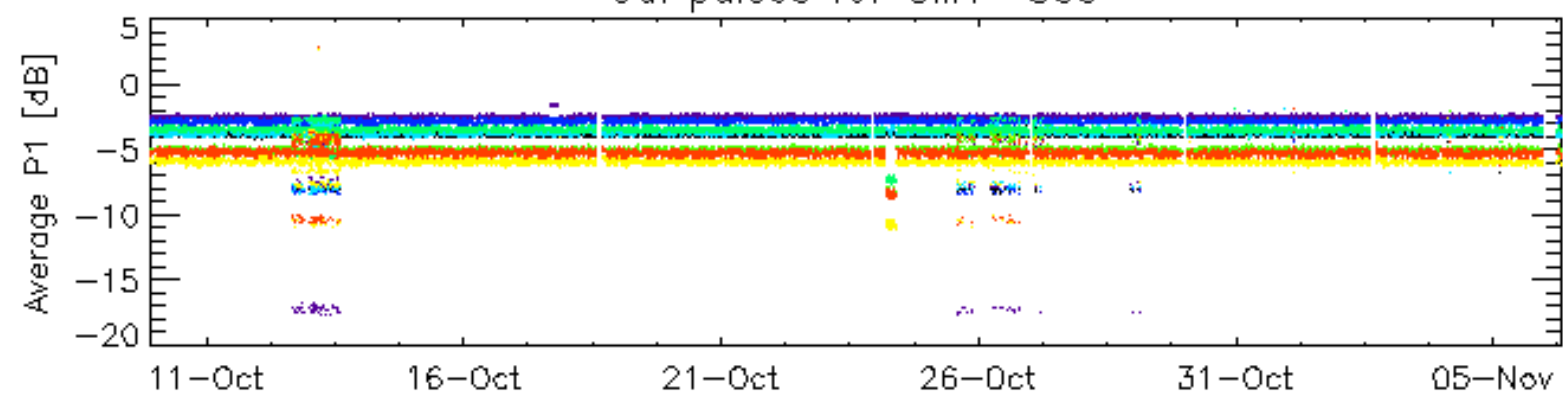


05-Nov



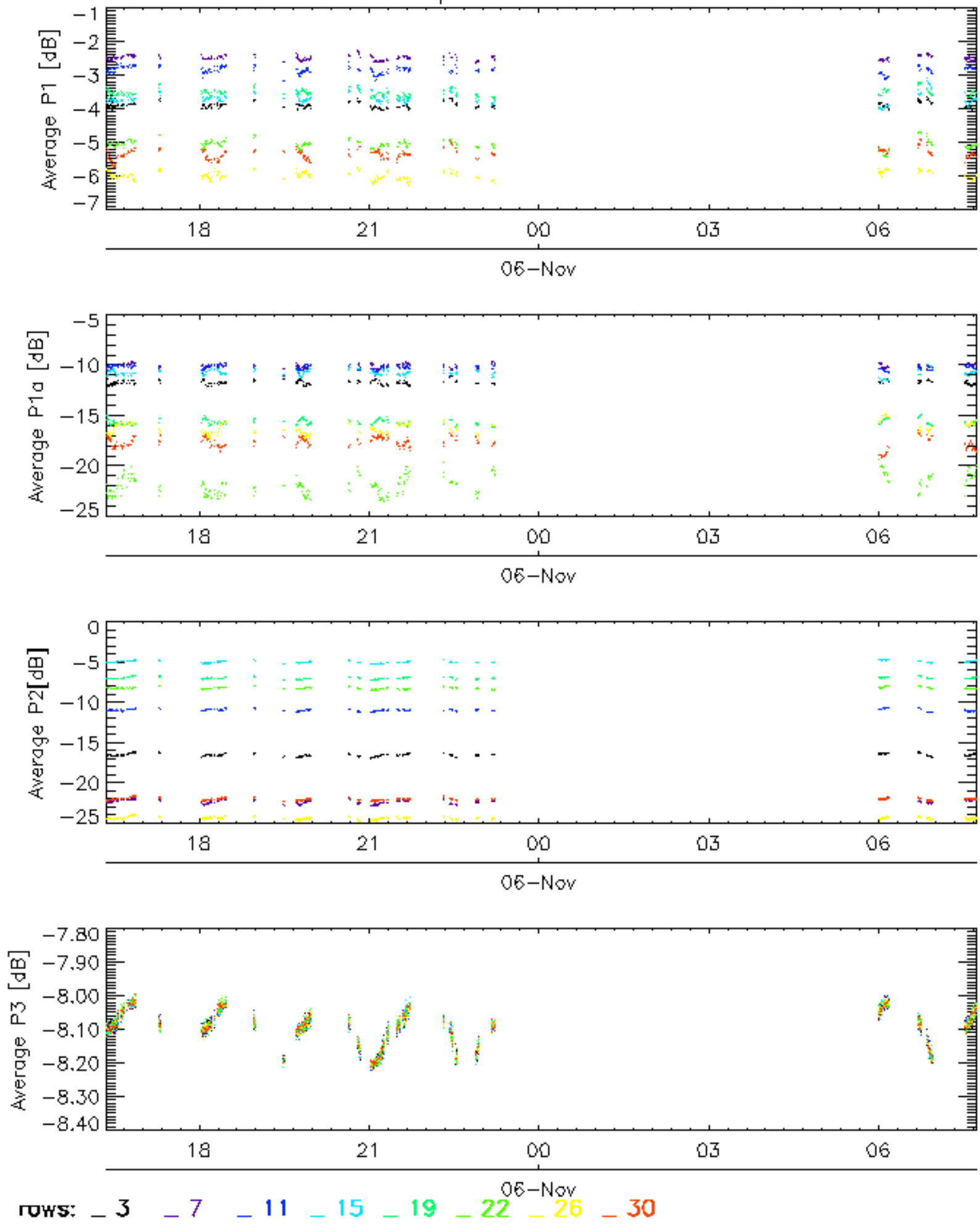
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

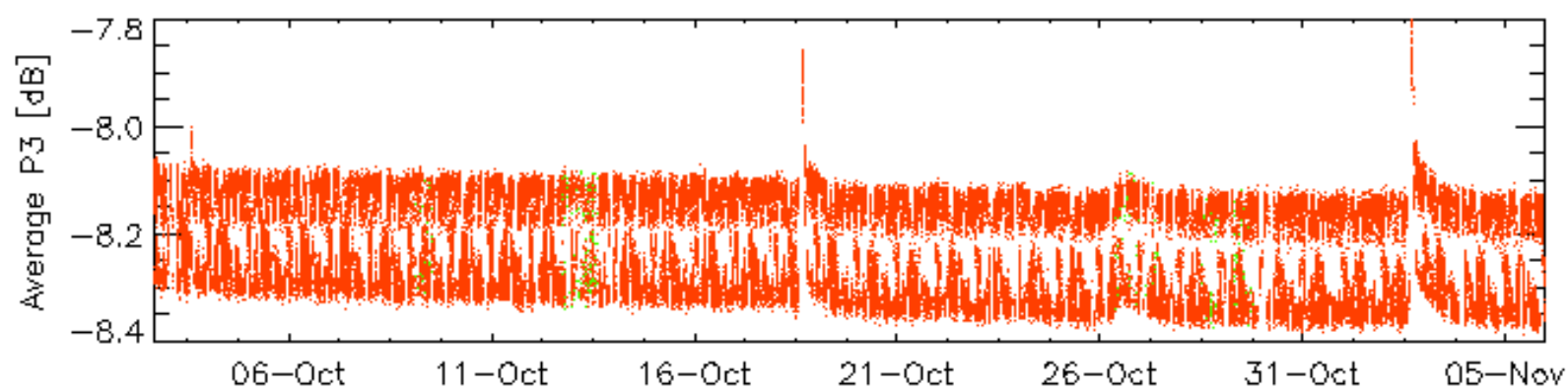
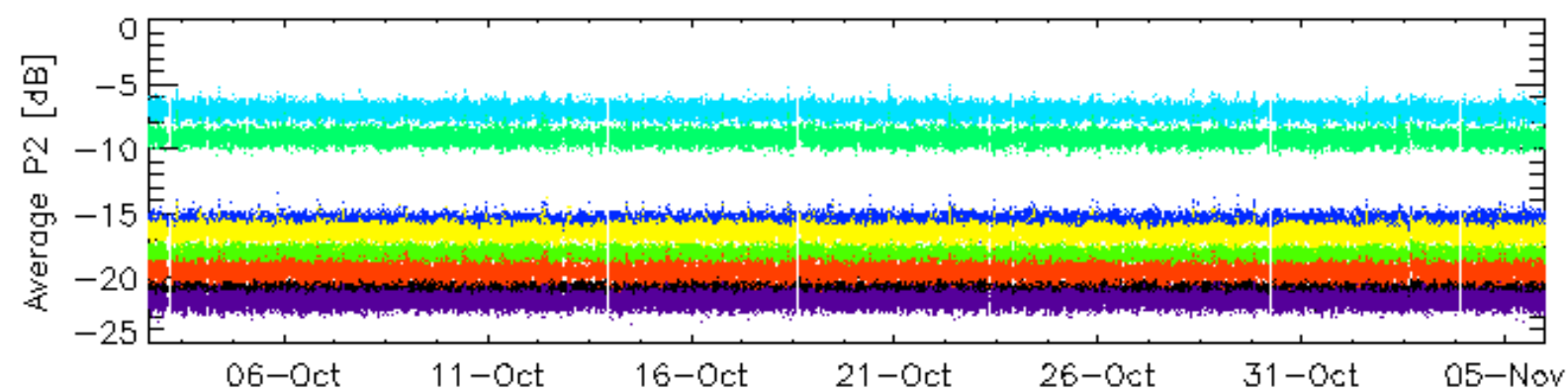
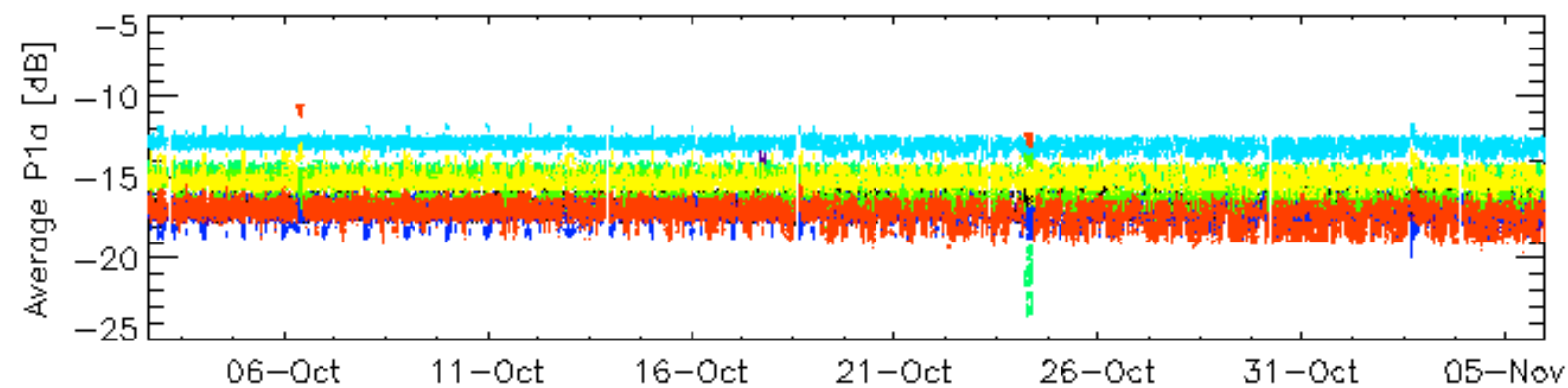
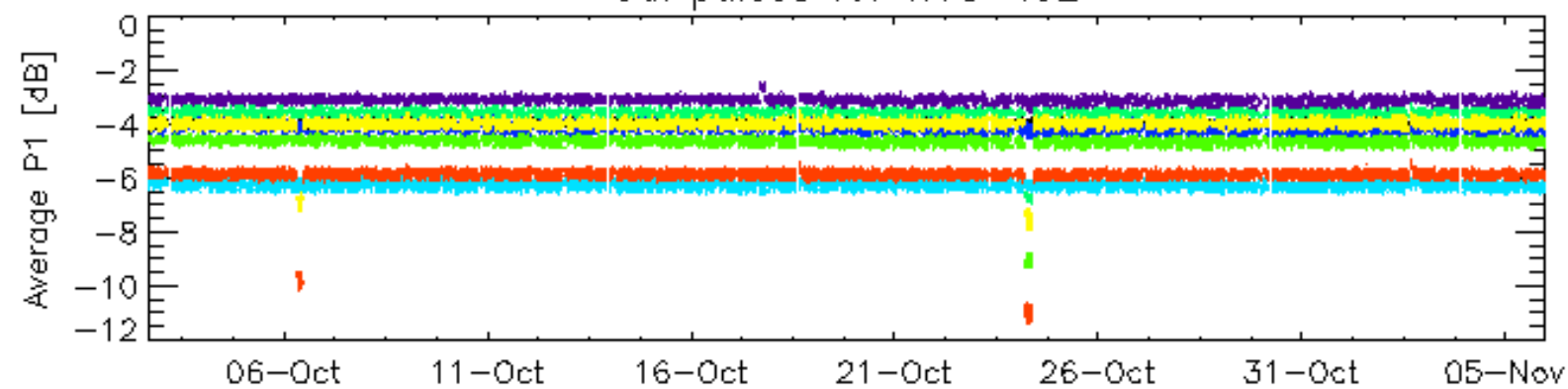


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

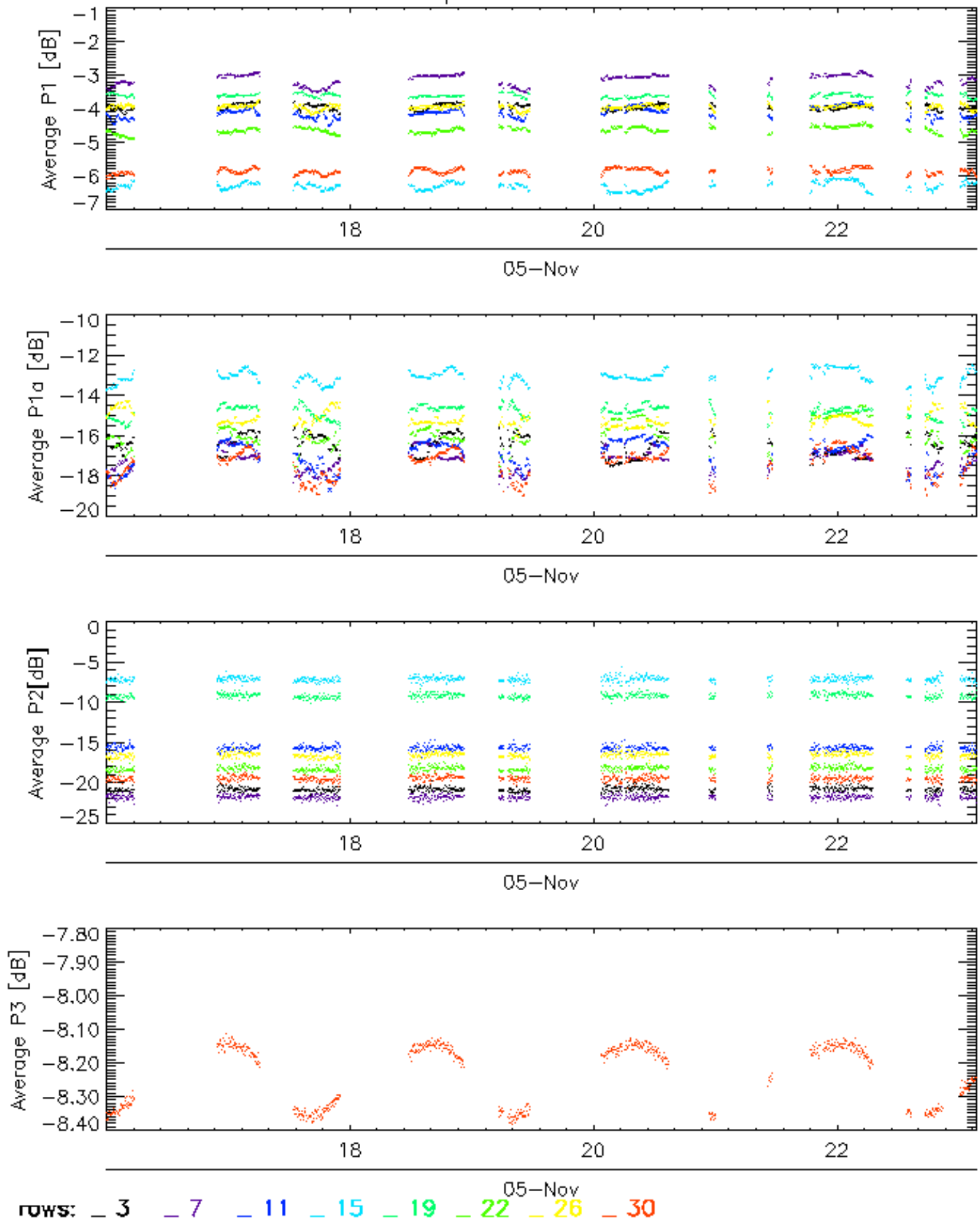


Cal pulses for WVS IS2



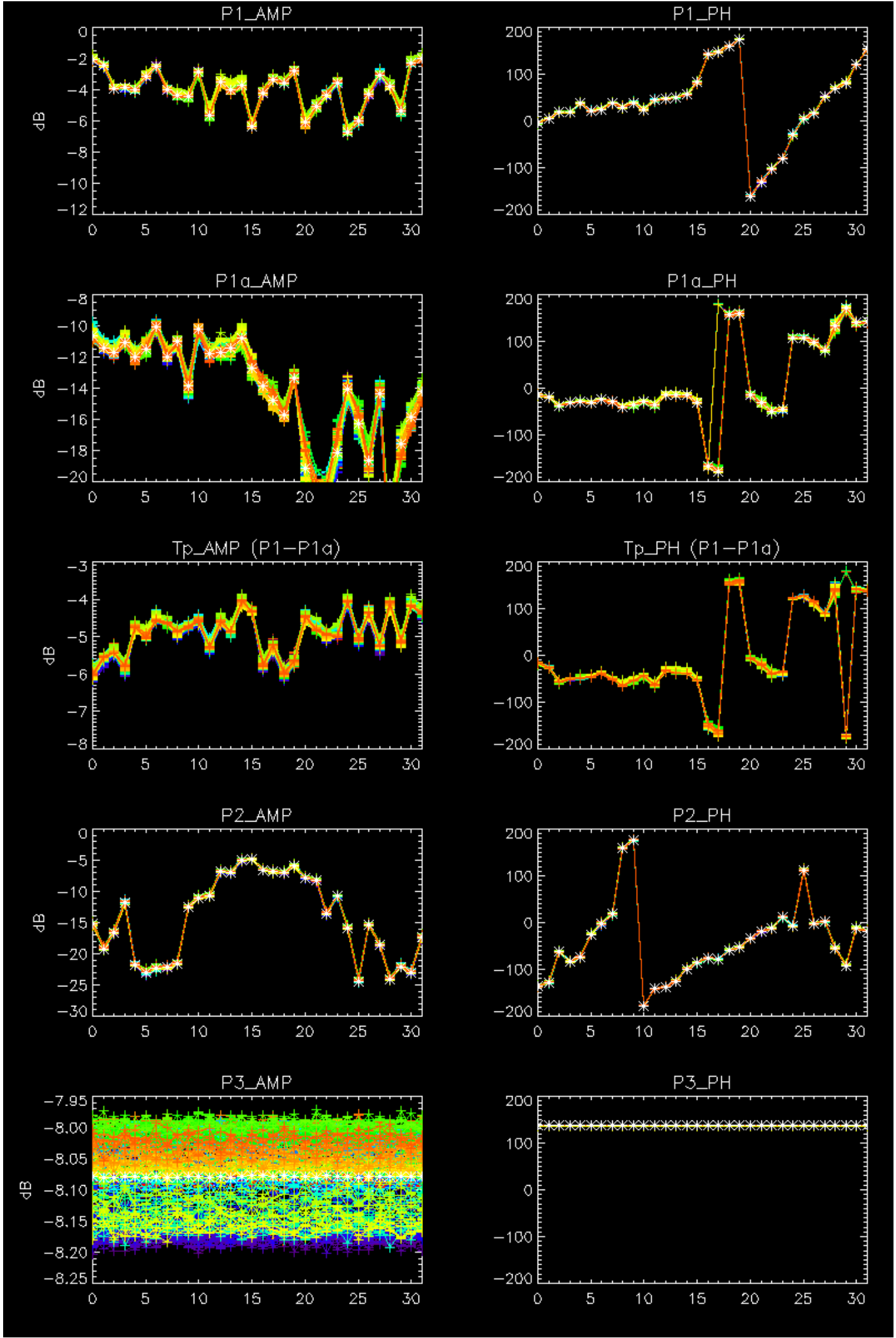
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

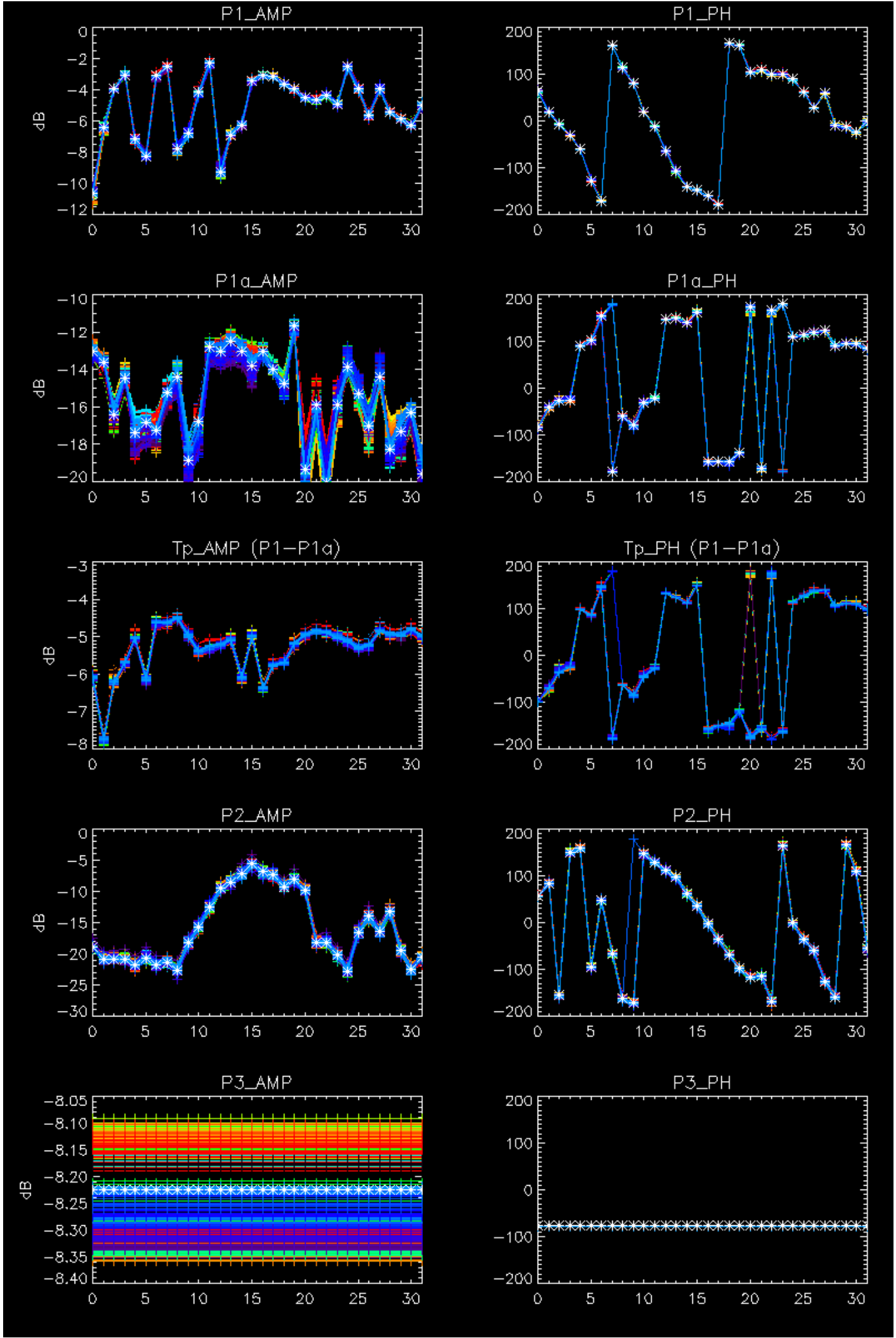
Cal pulses for WVS IS2



No anomalies observed on available browse products

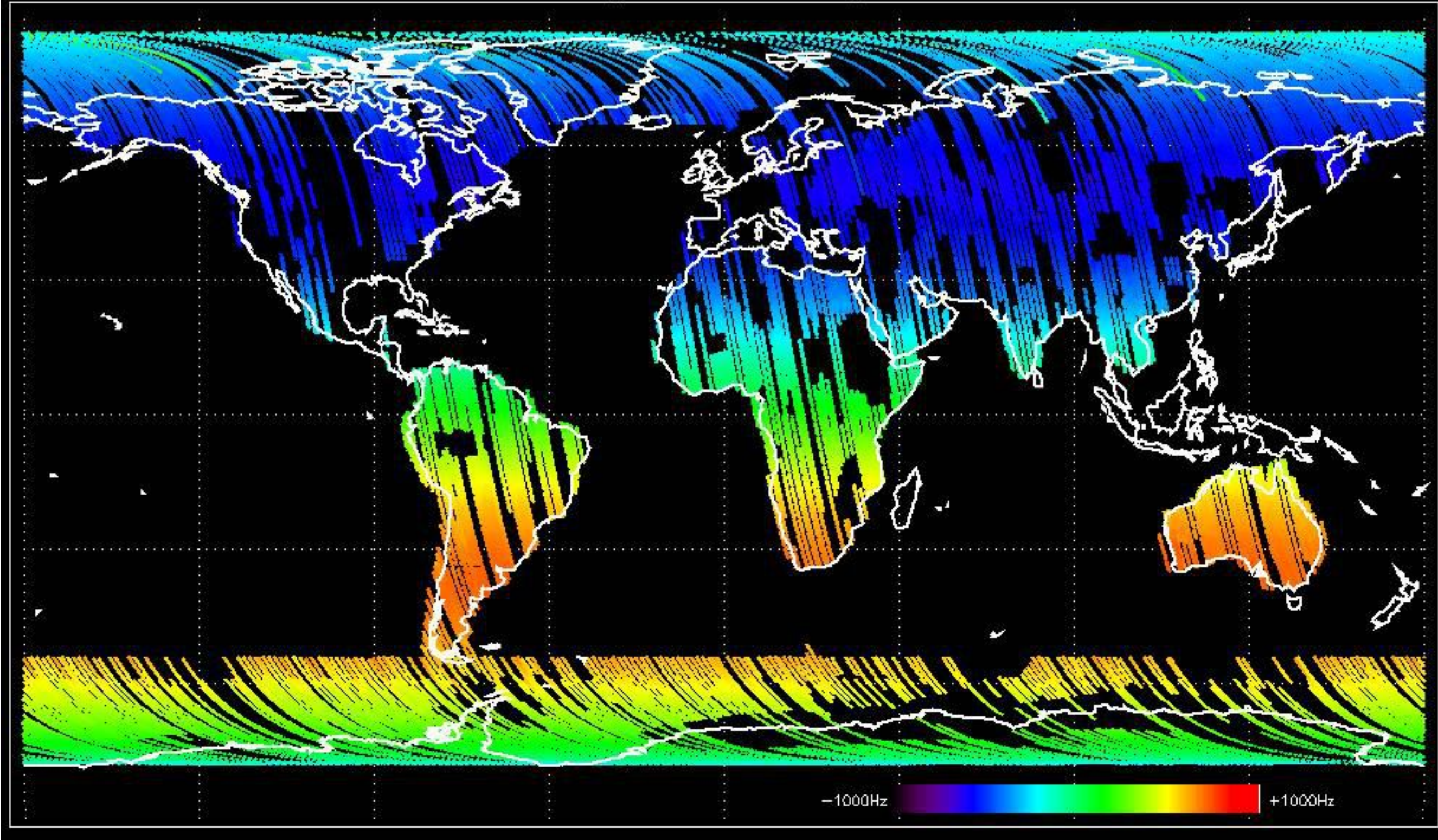
No anomalies observed.



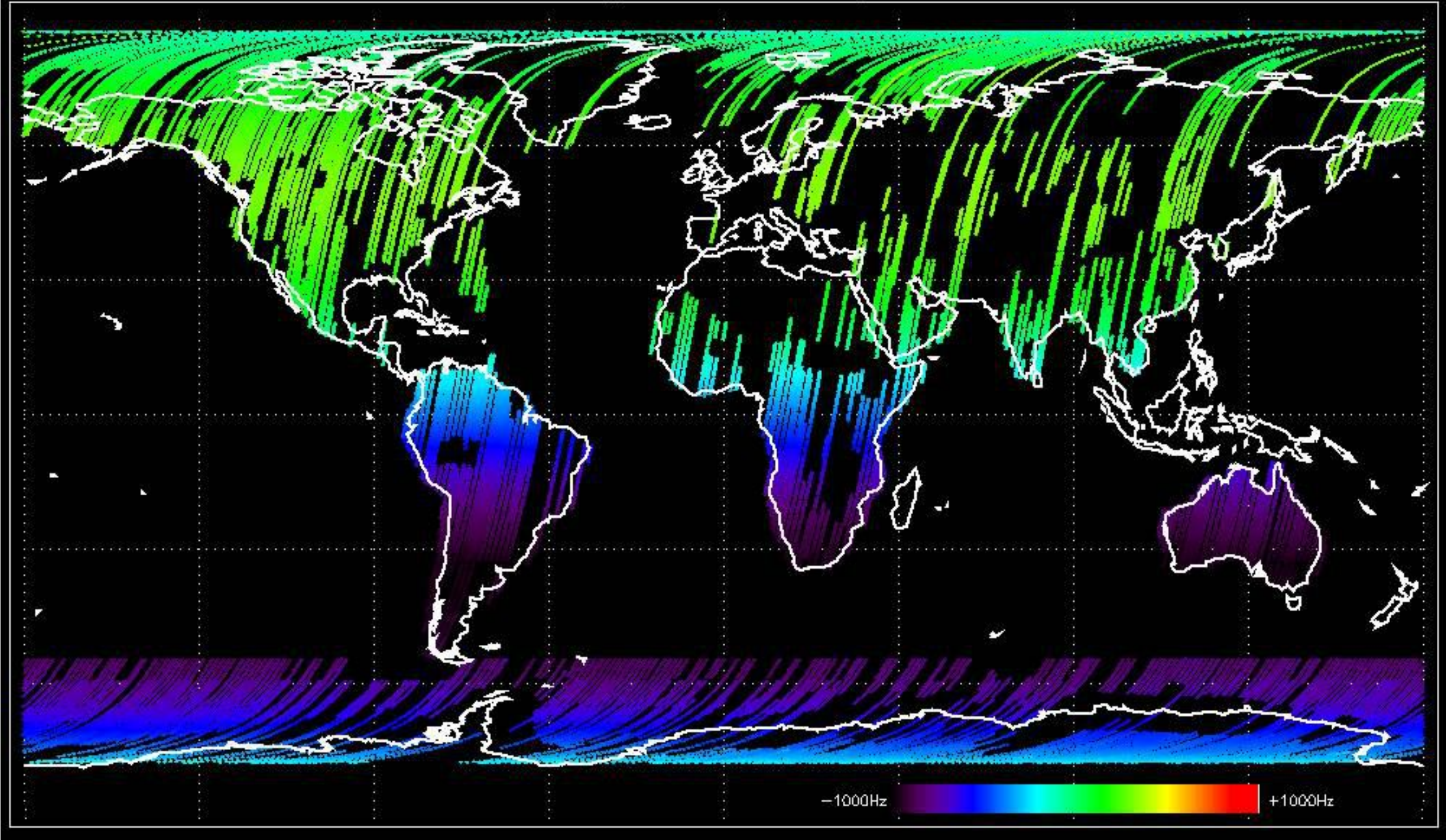


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

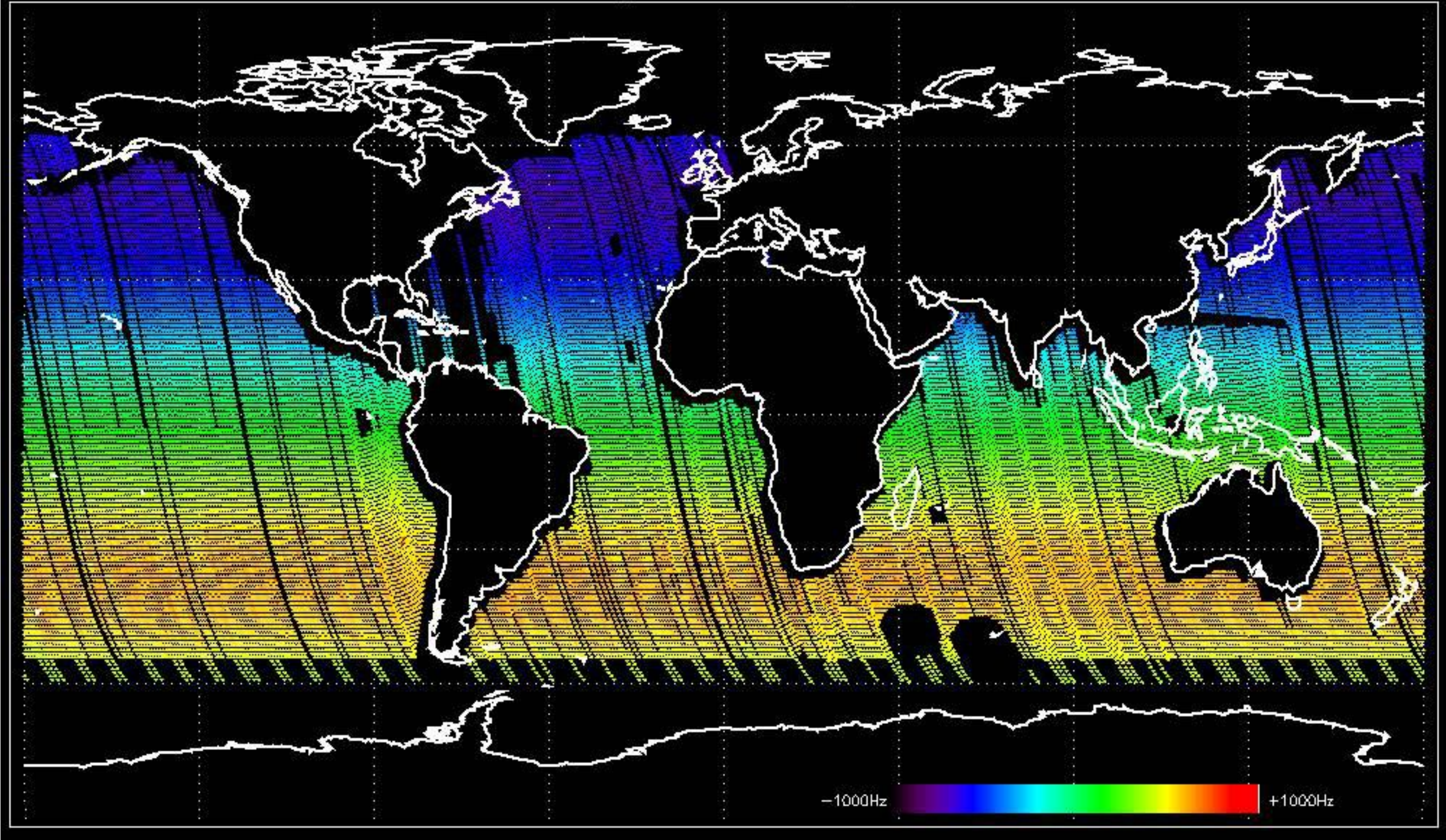
Doppler 'GM1' 'SS1' ascending



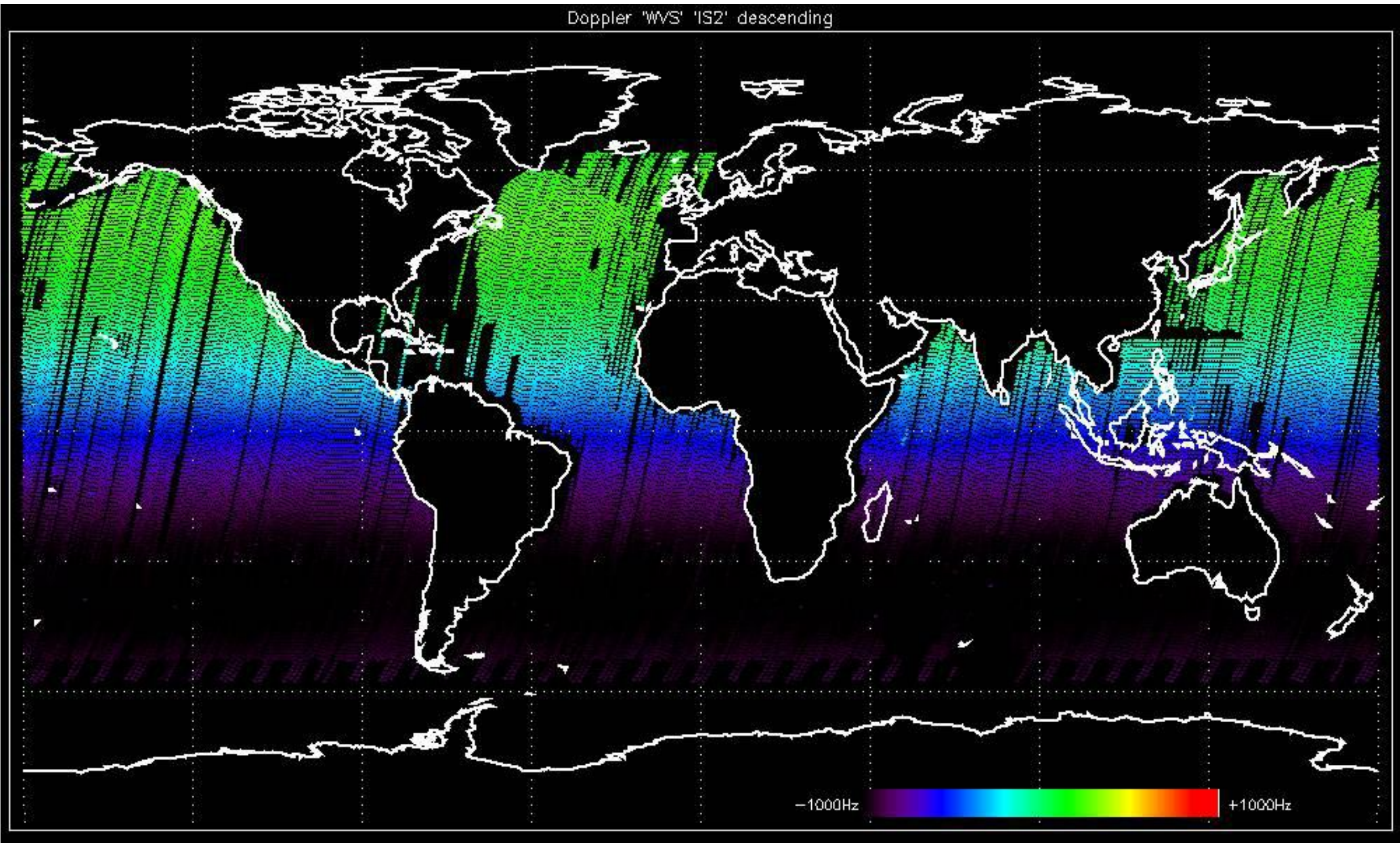
Doppler 'GM1' 'SS1' descending



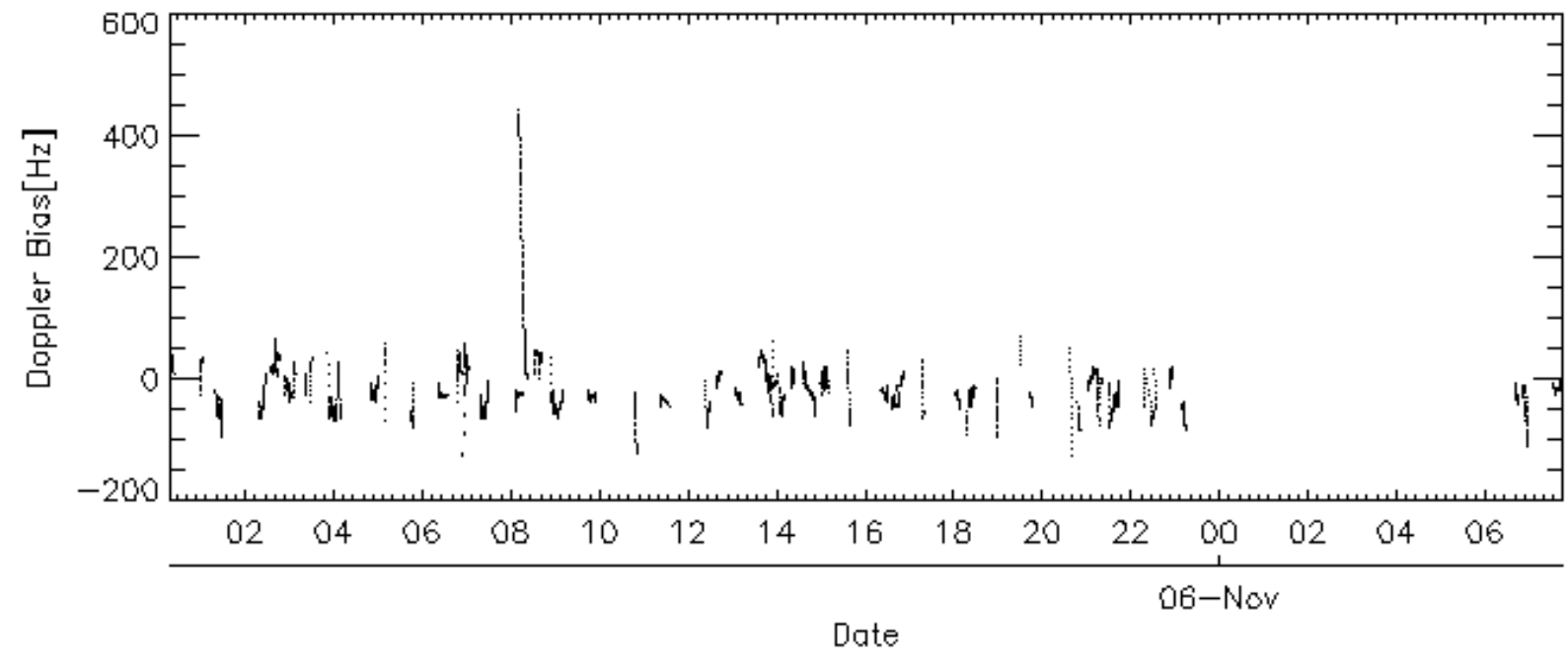
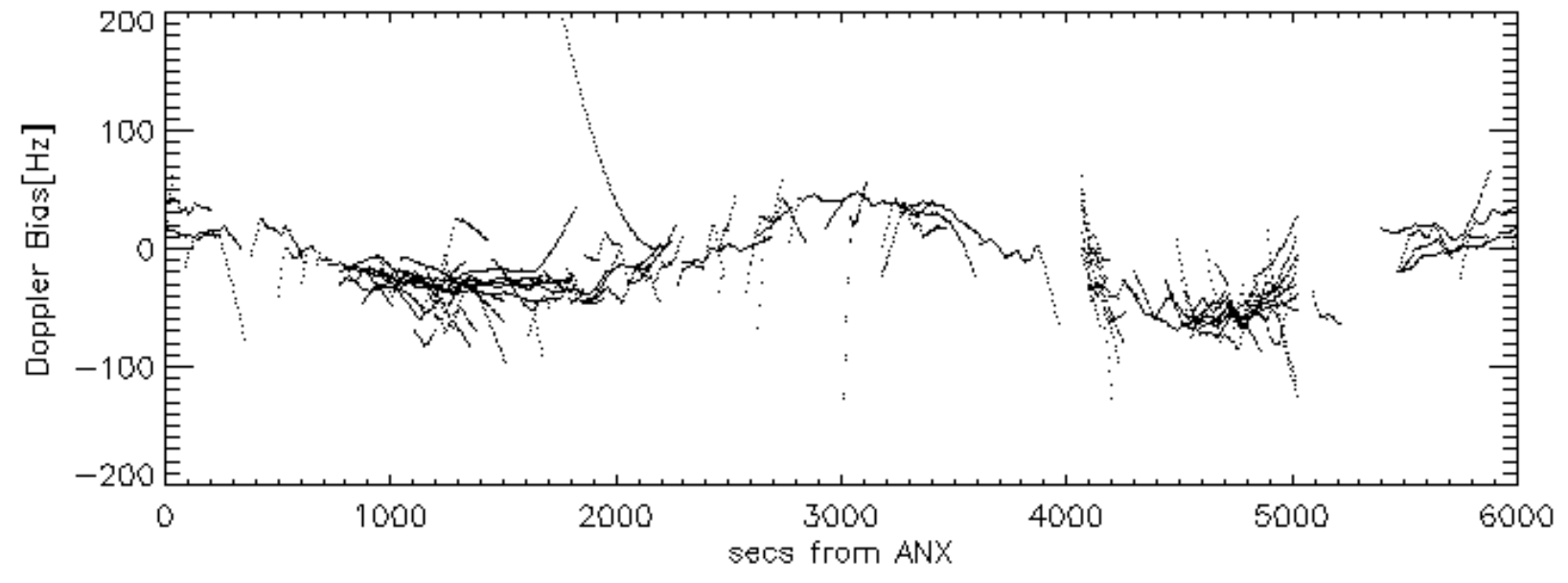
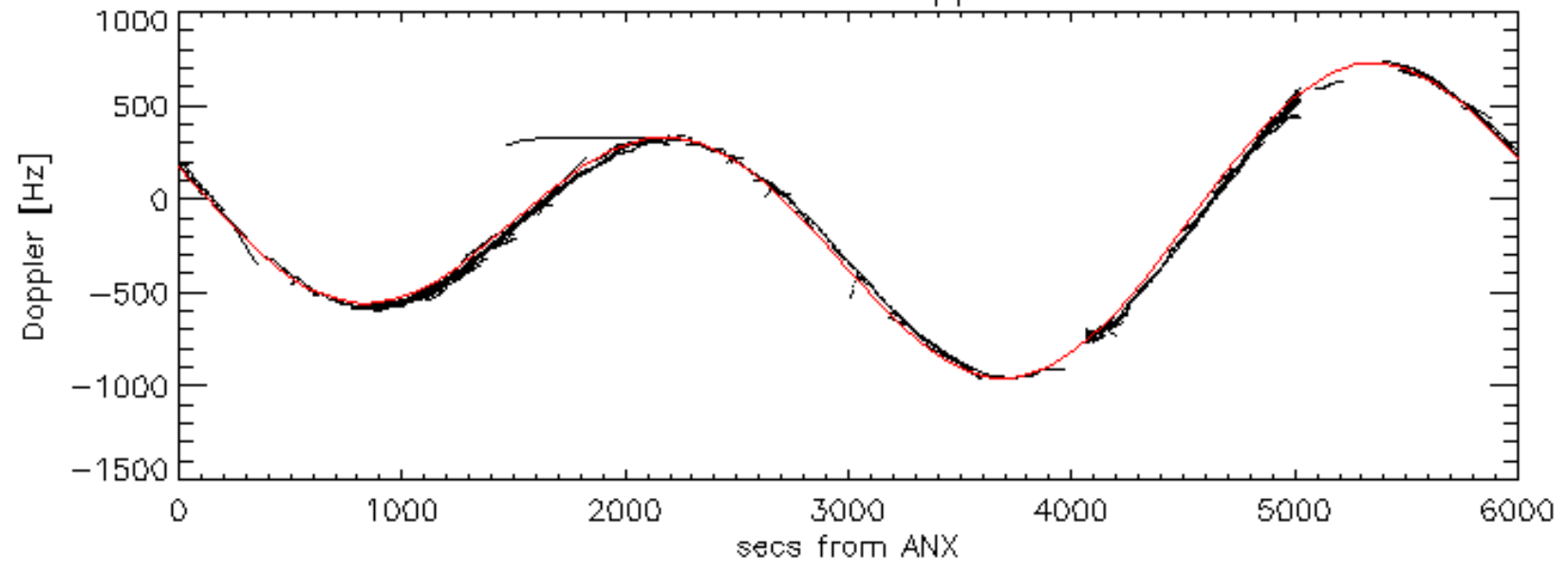
Doppler 'WVS' 'IS2' ascending

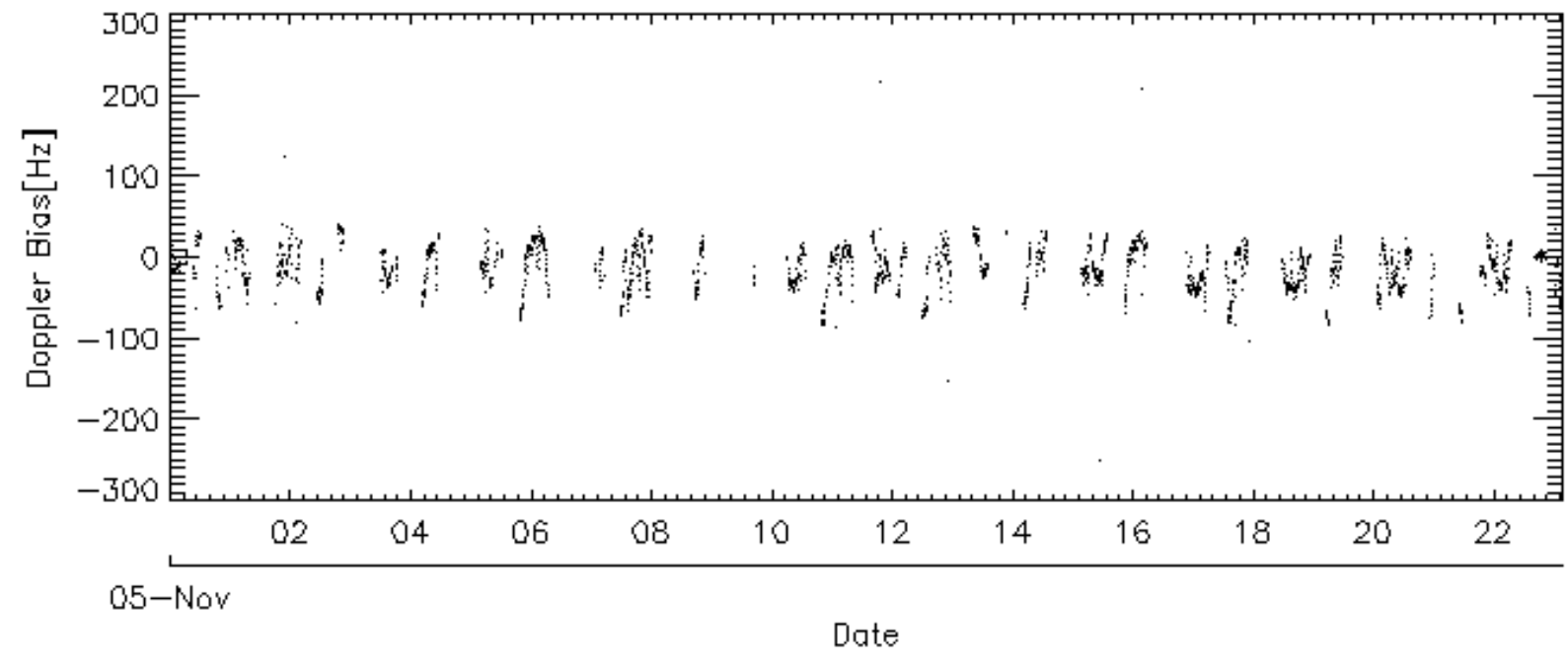
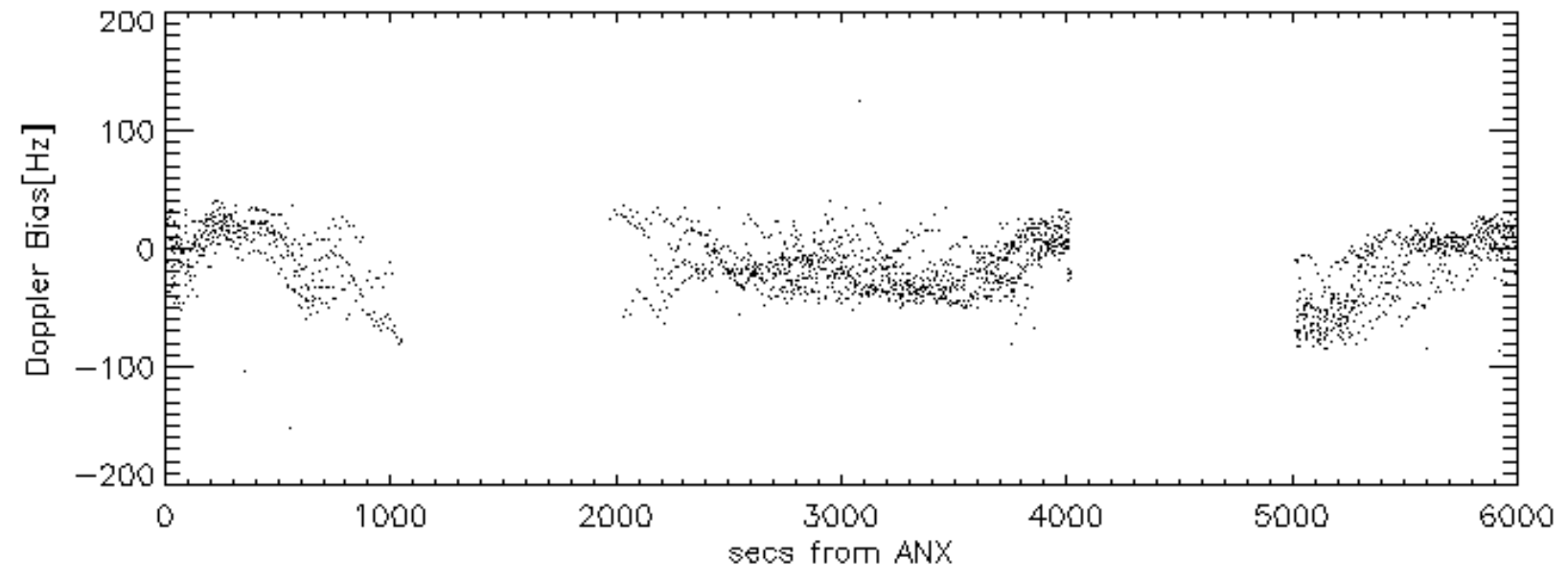
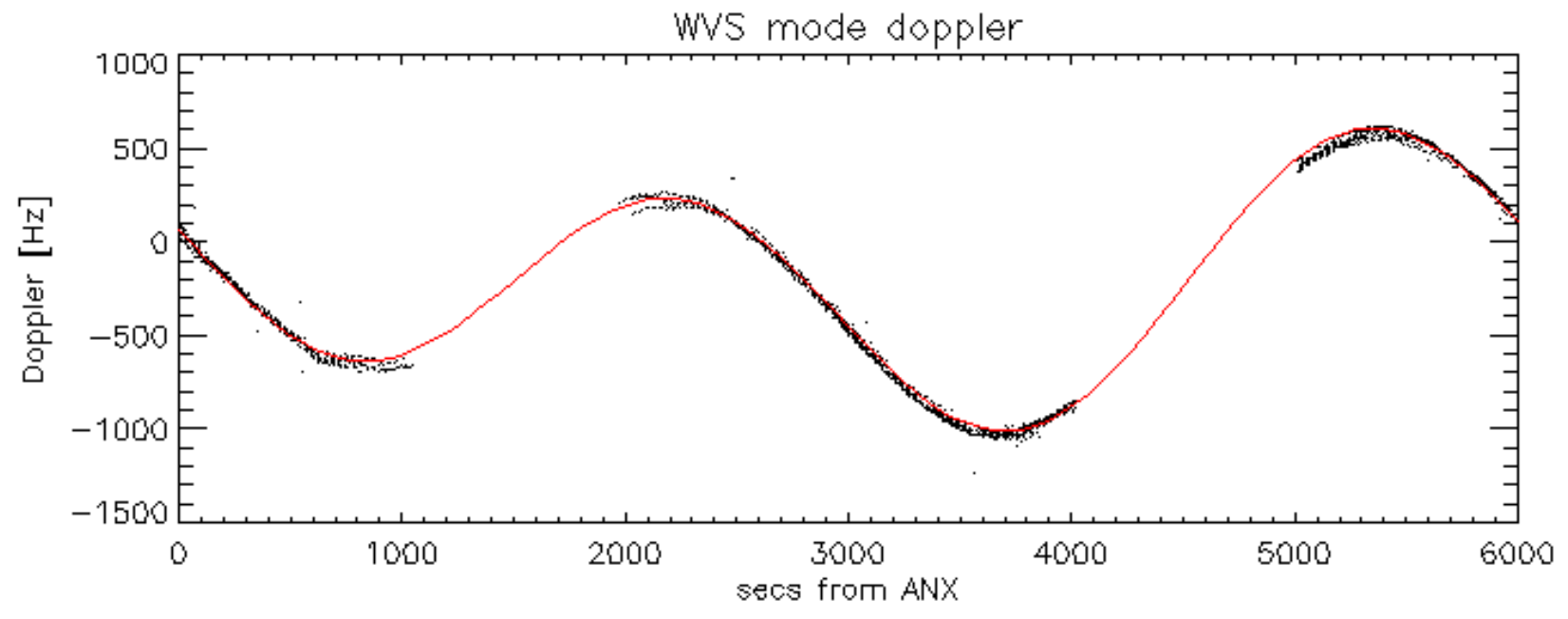


Doppler 'WVS' 'IS2' descending

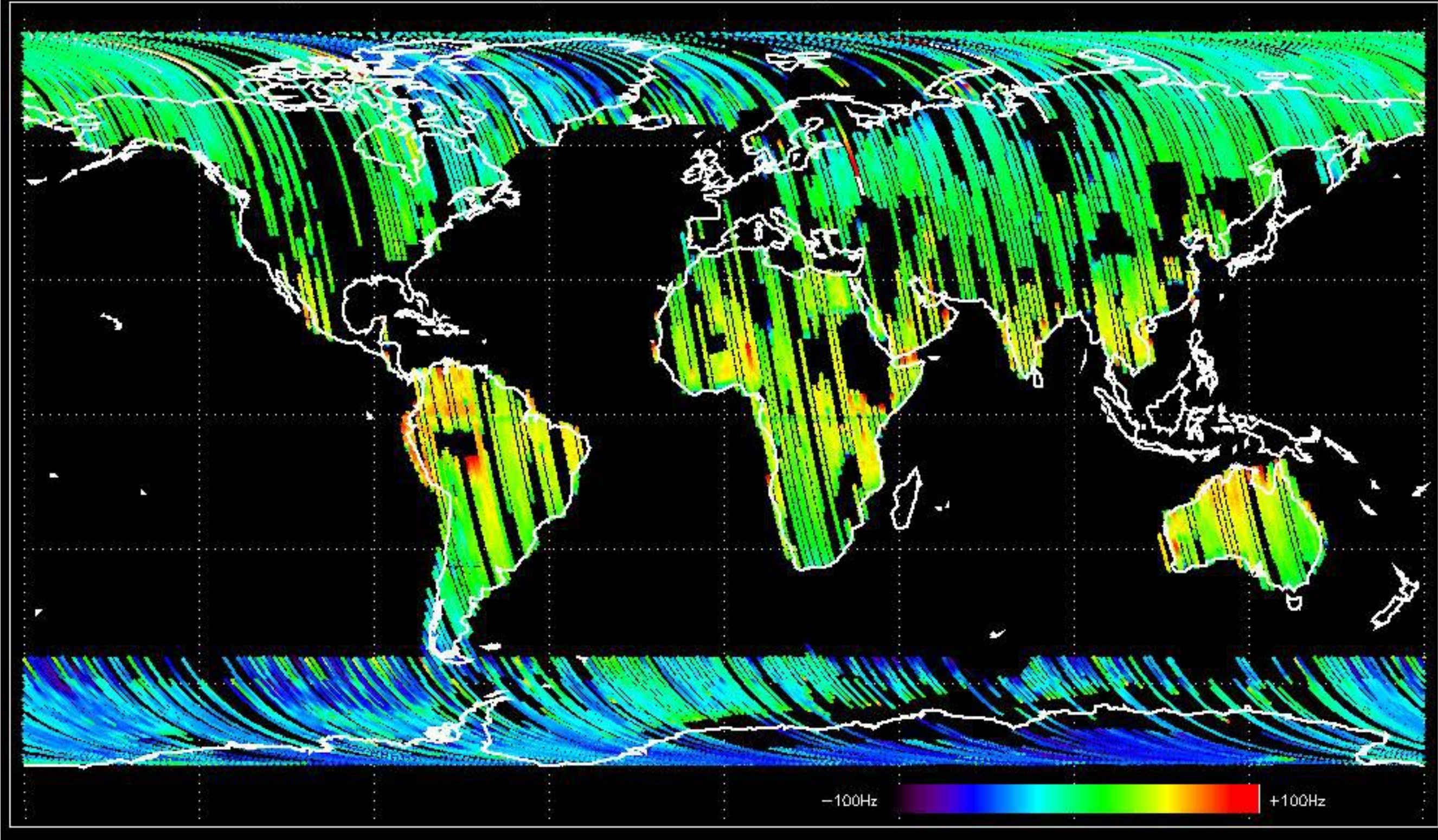


GM1 mode doppler

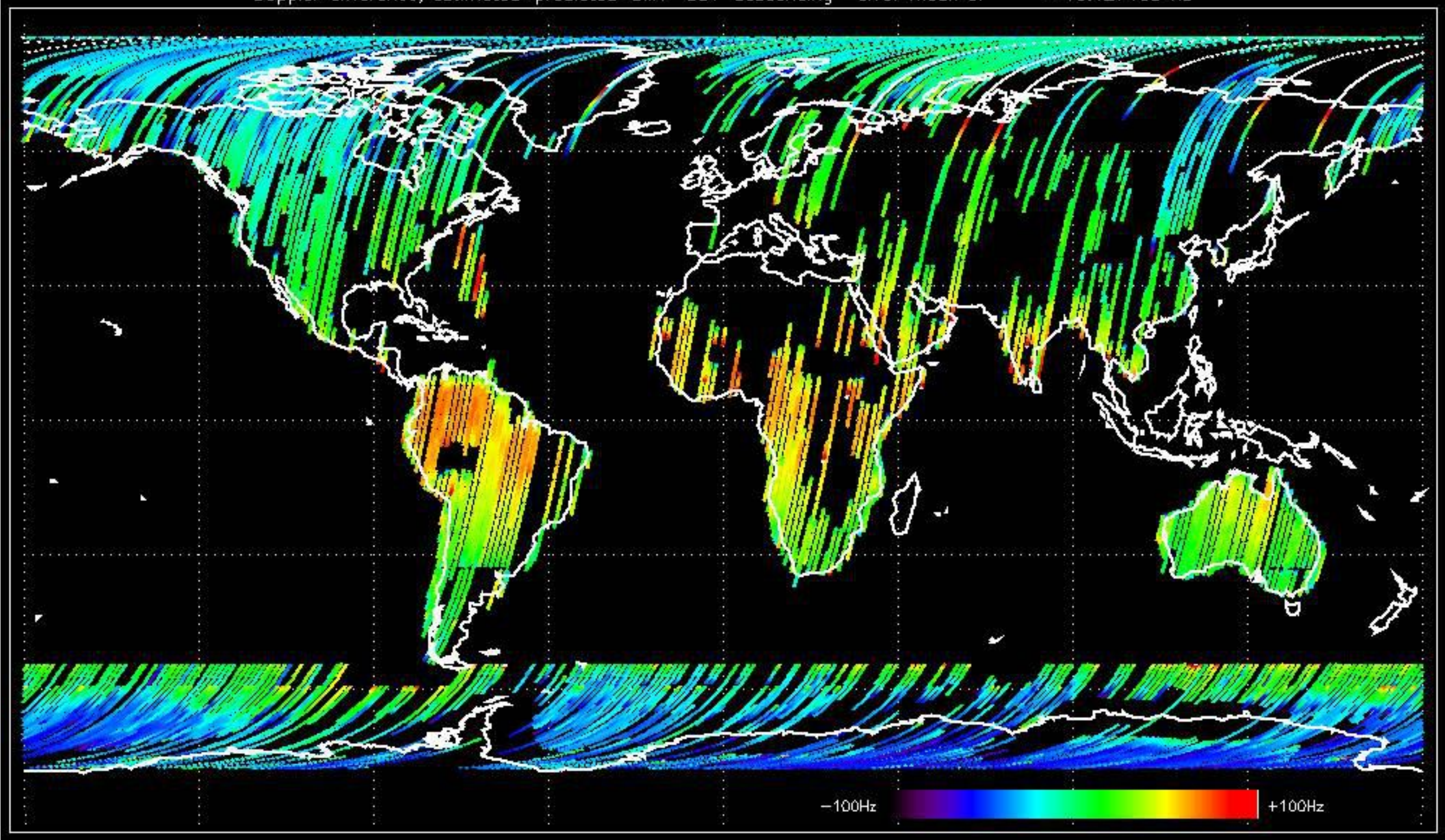




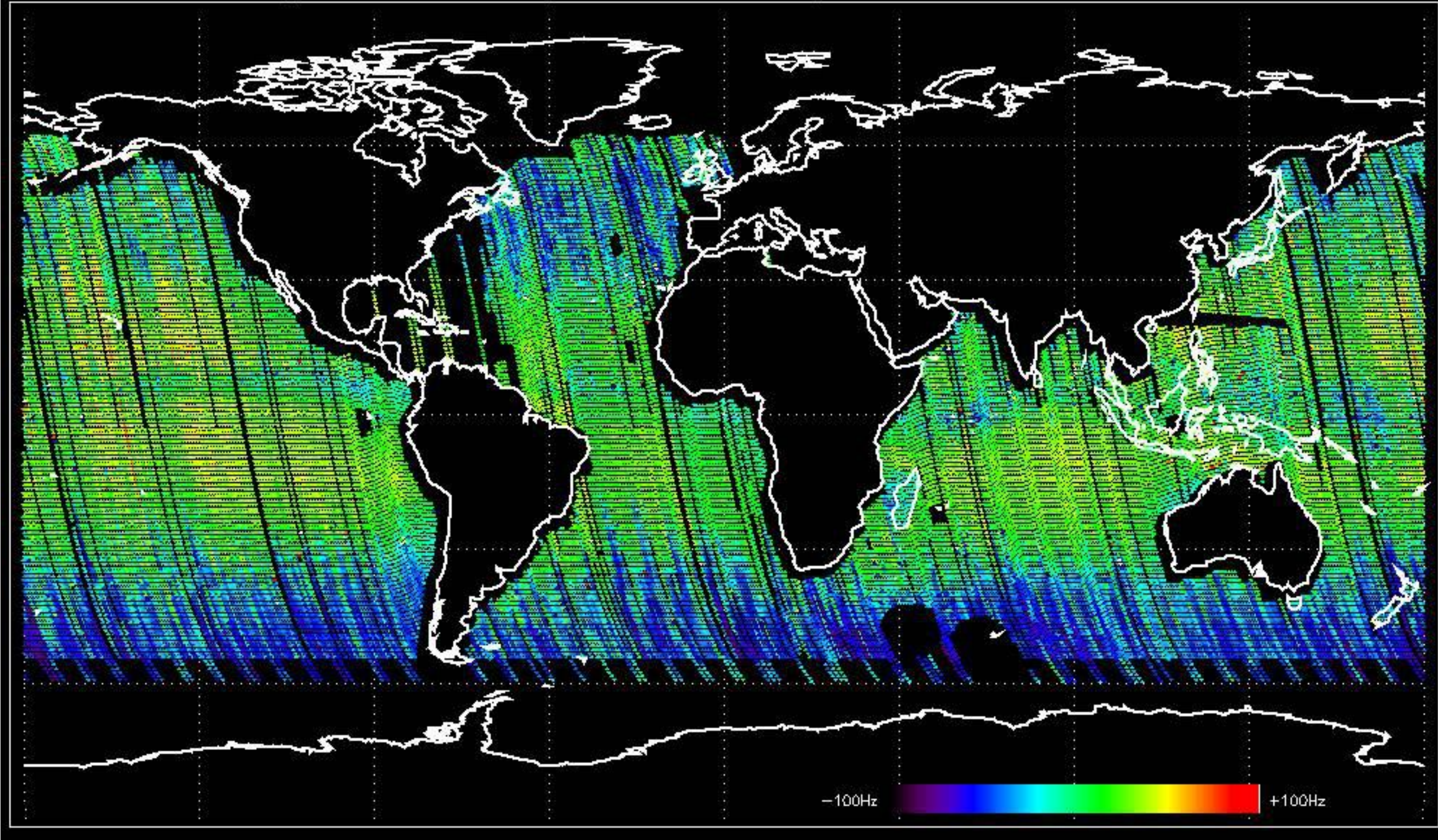
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.116200 Hz



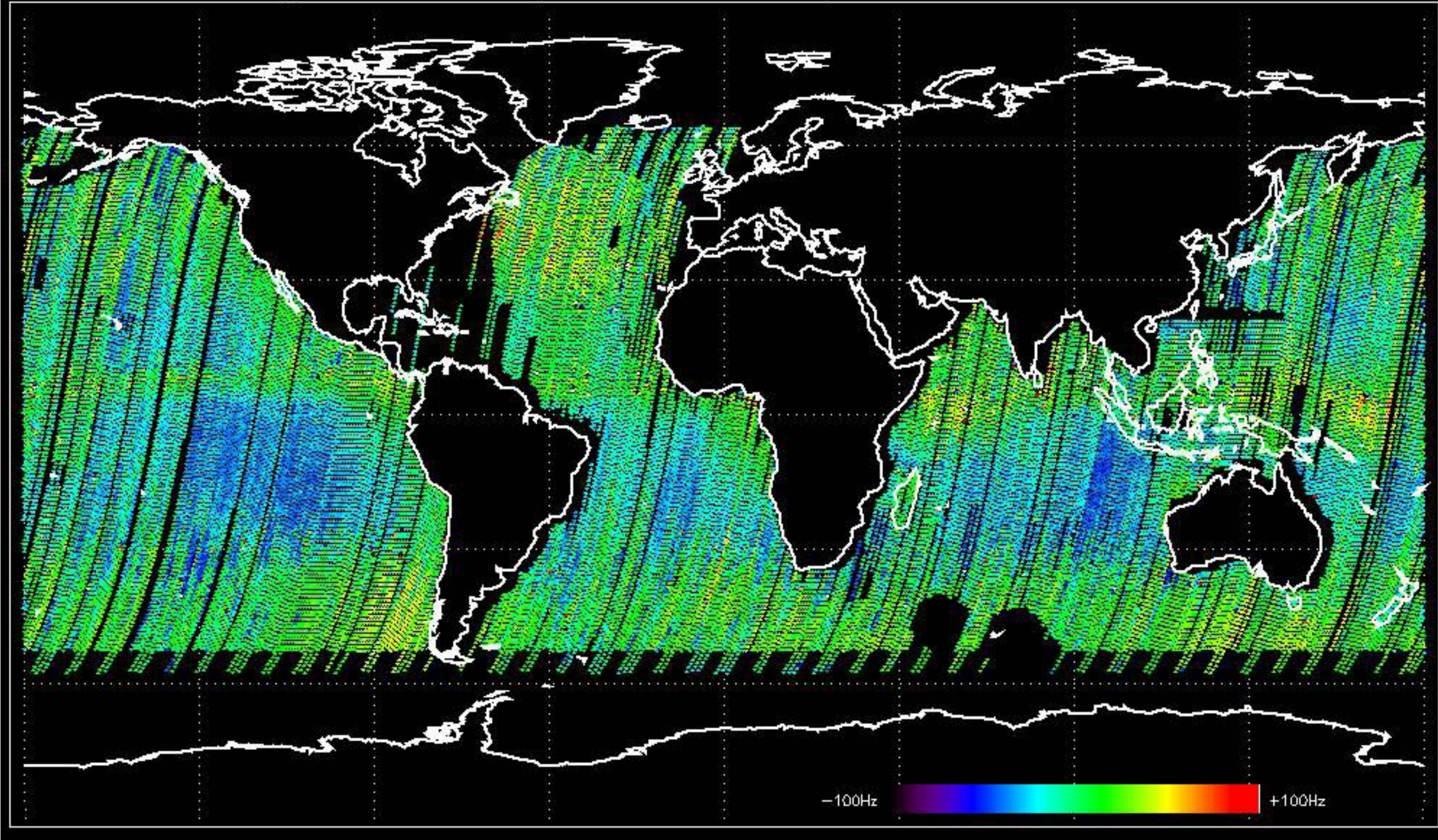
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -13.127468 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -5.2418181 Hz

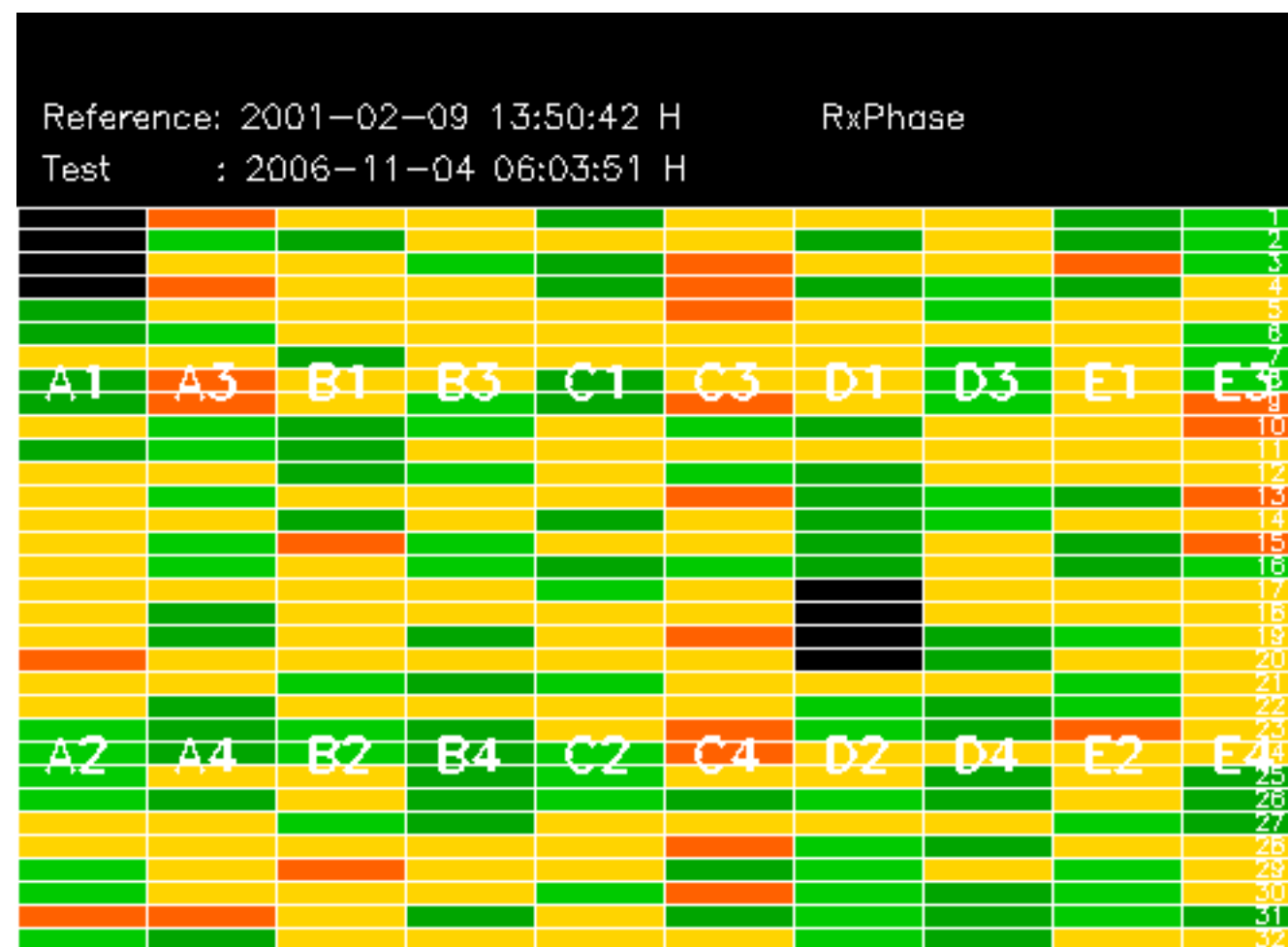


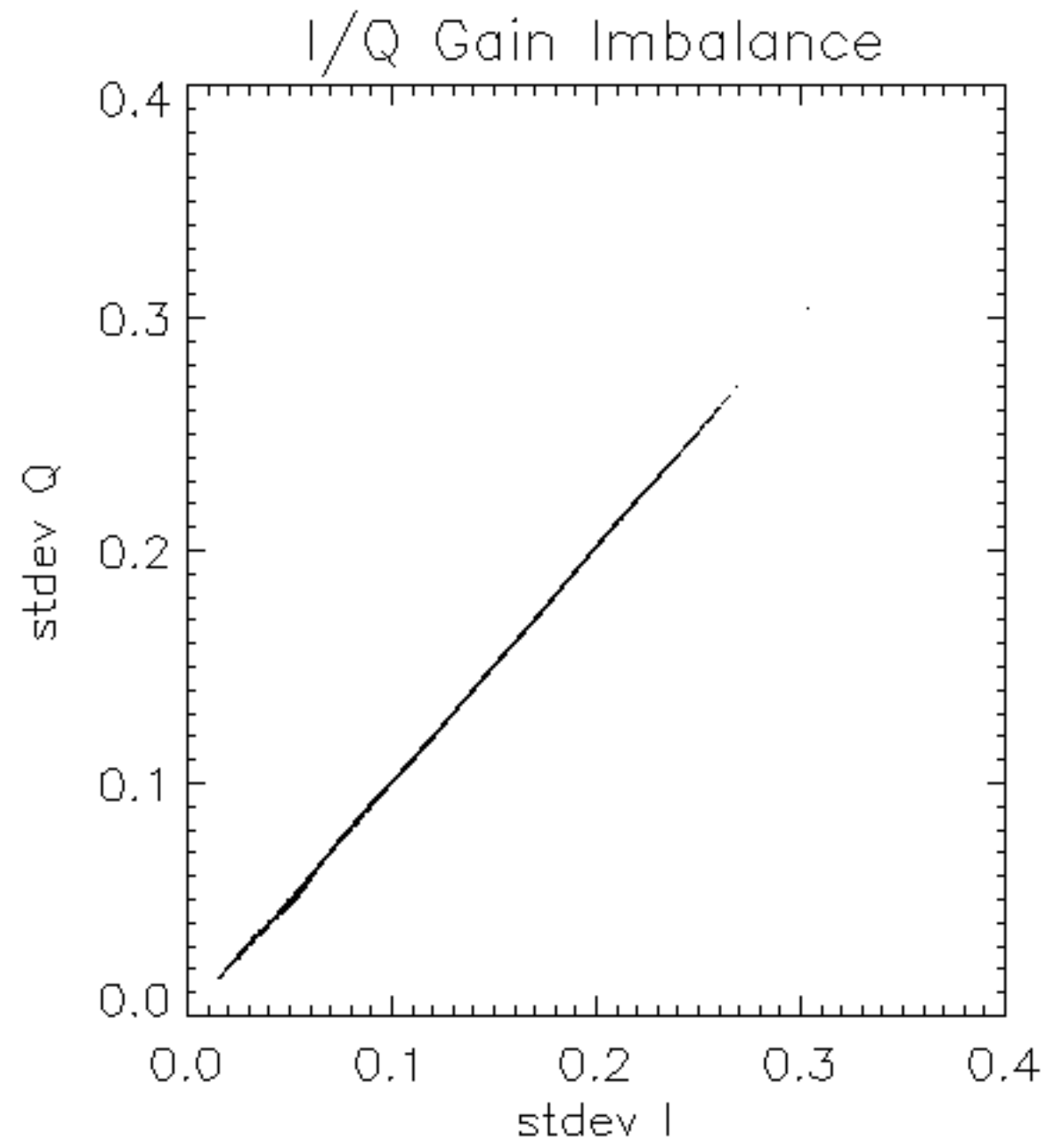
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.100158 Hz

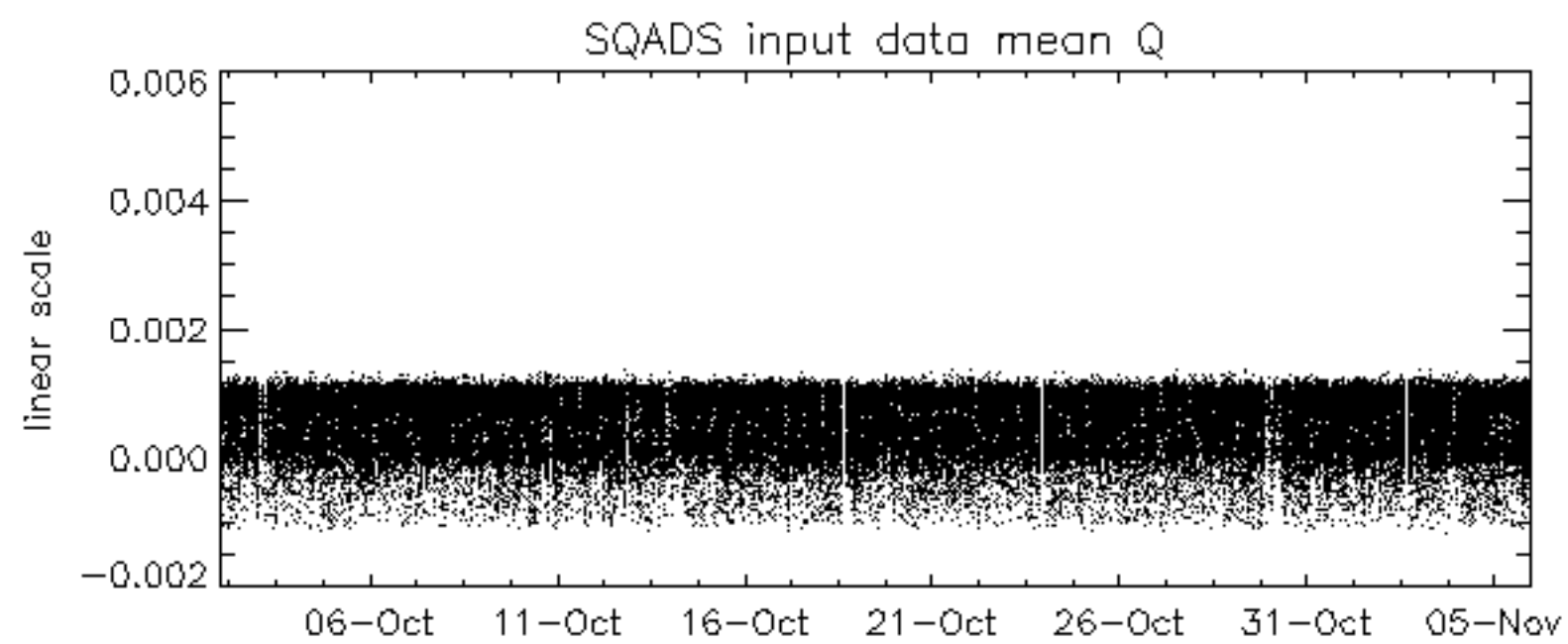
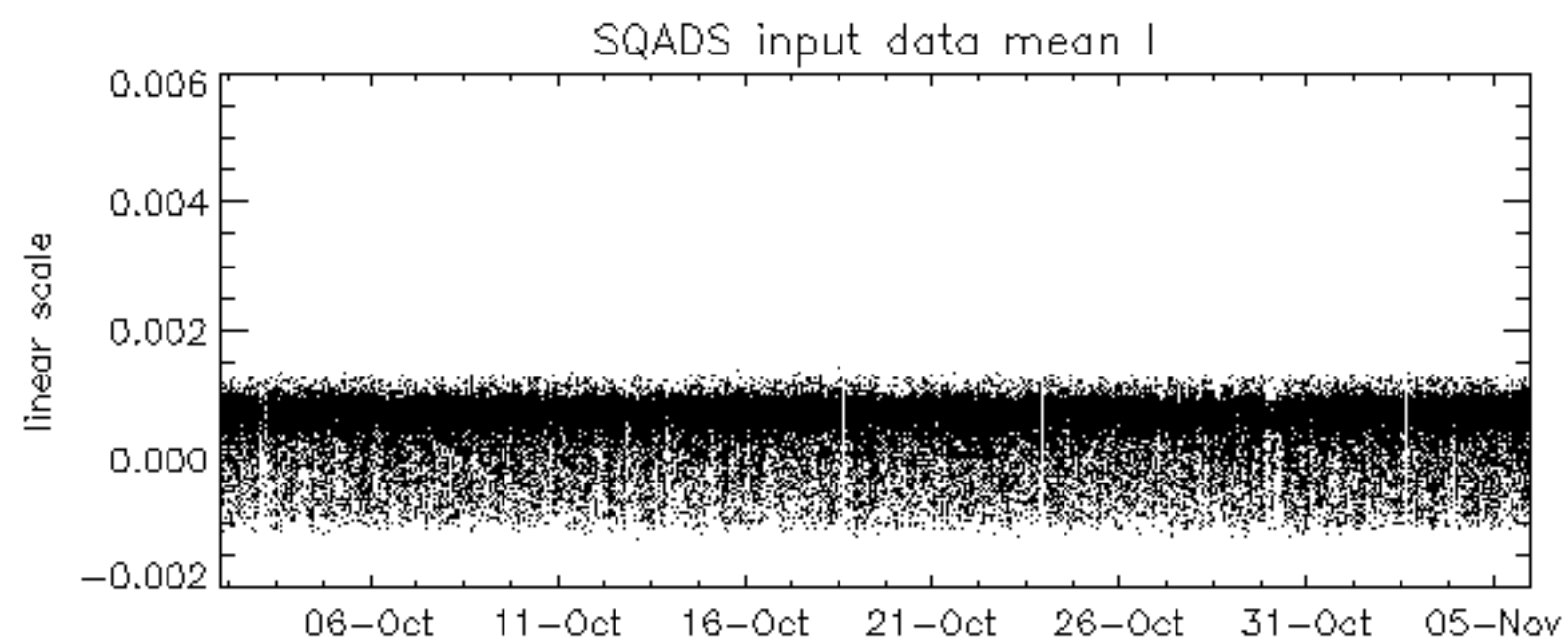
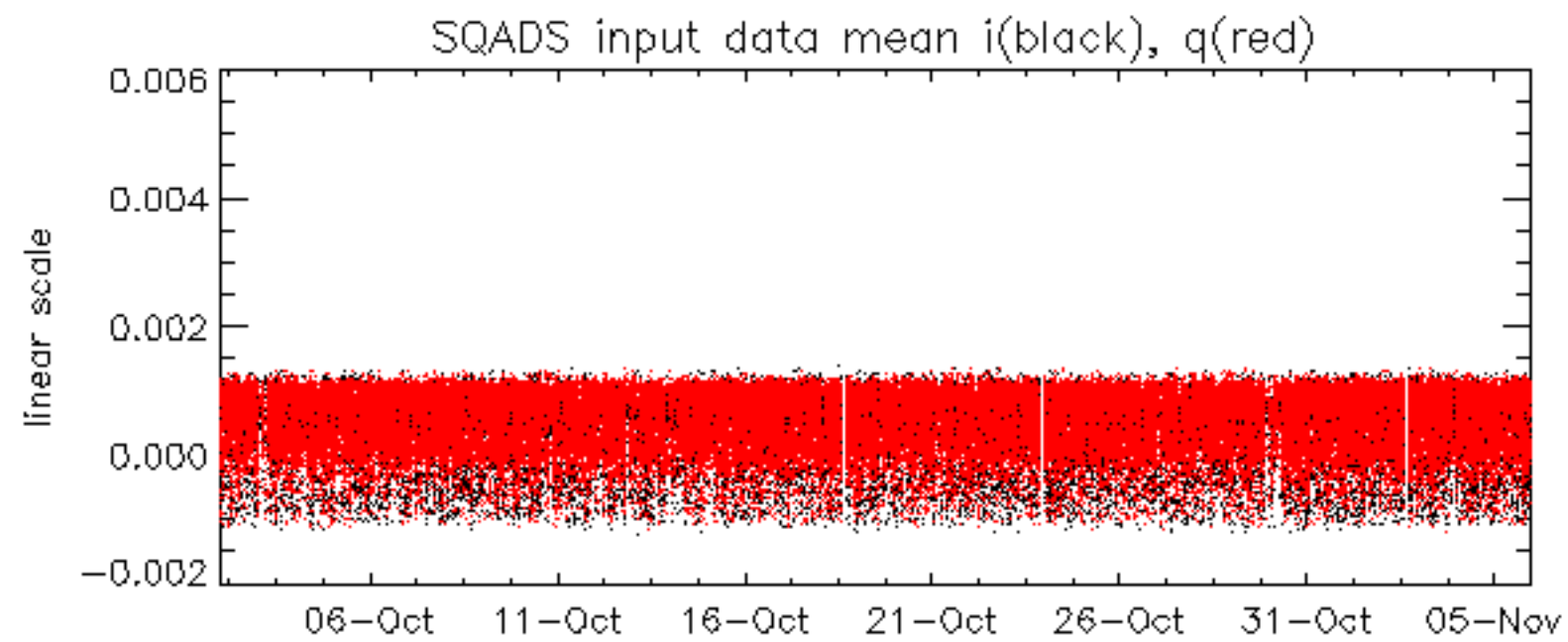


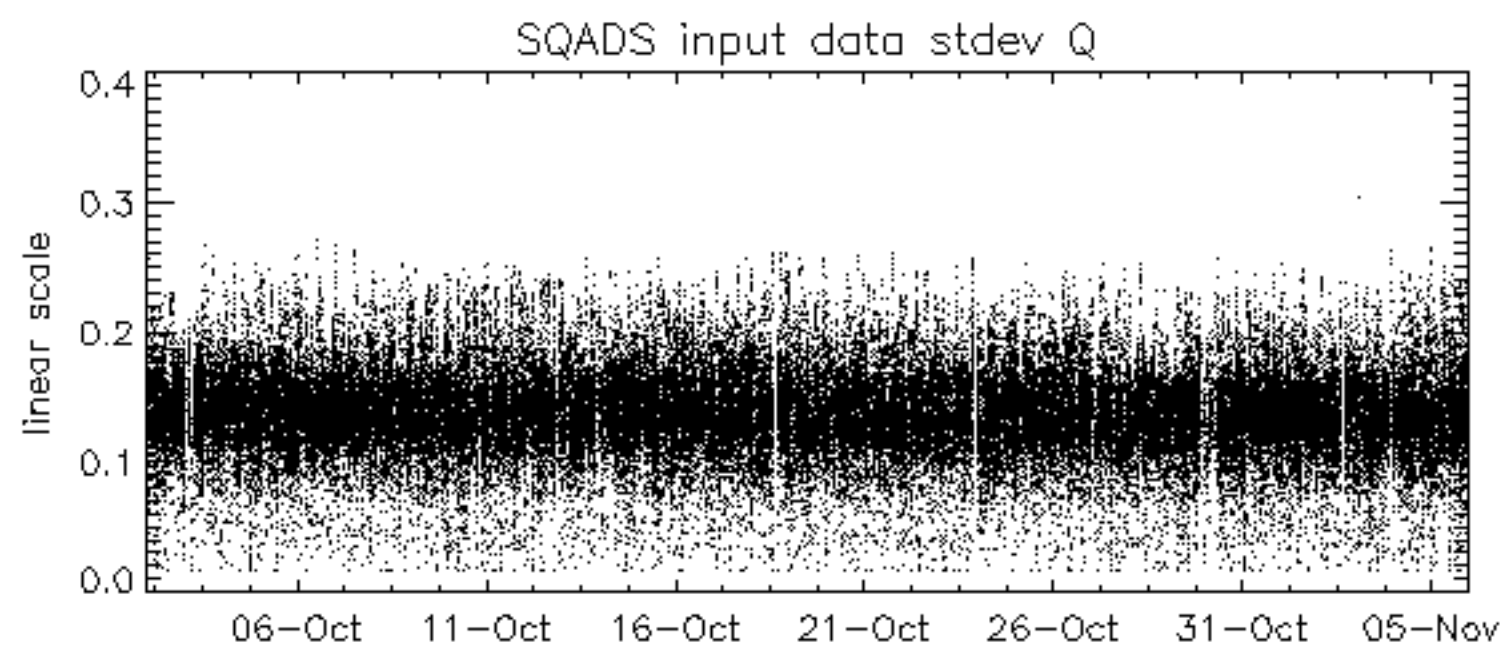
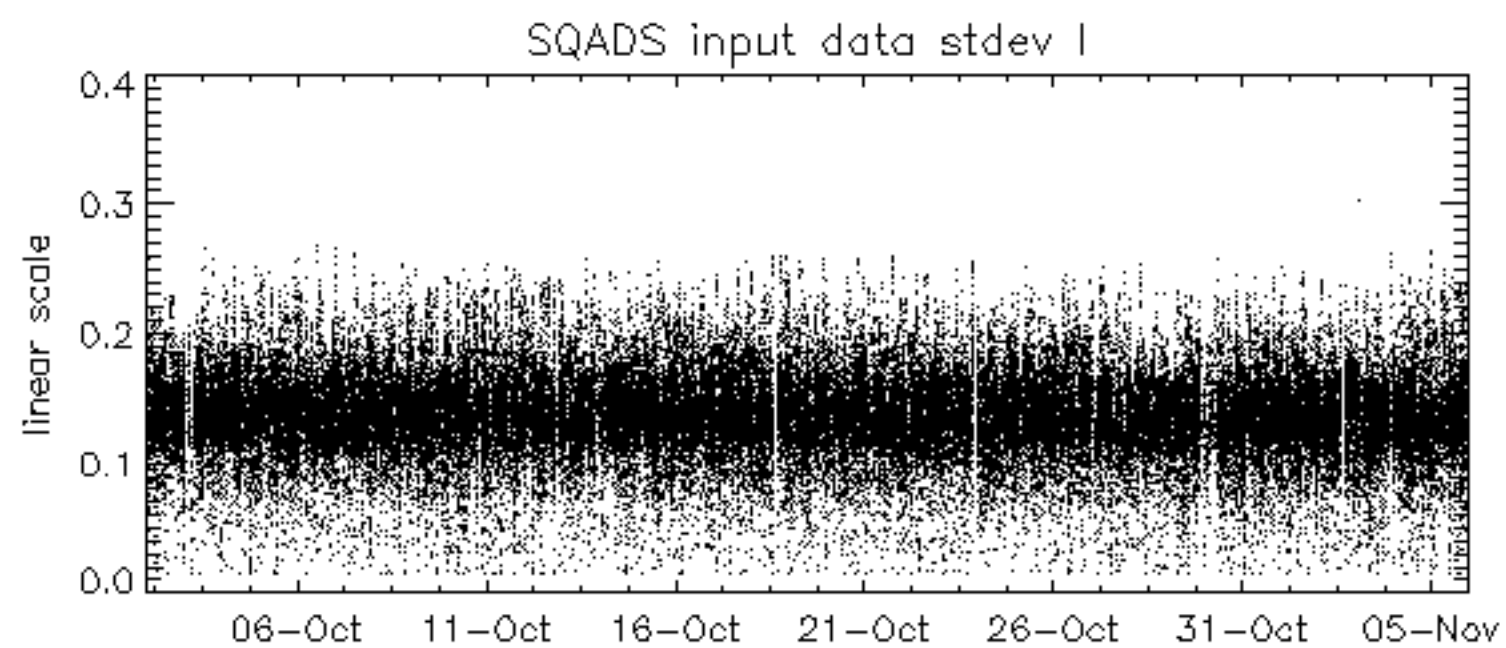
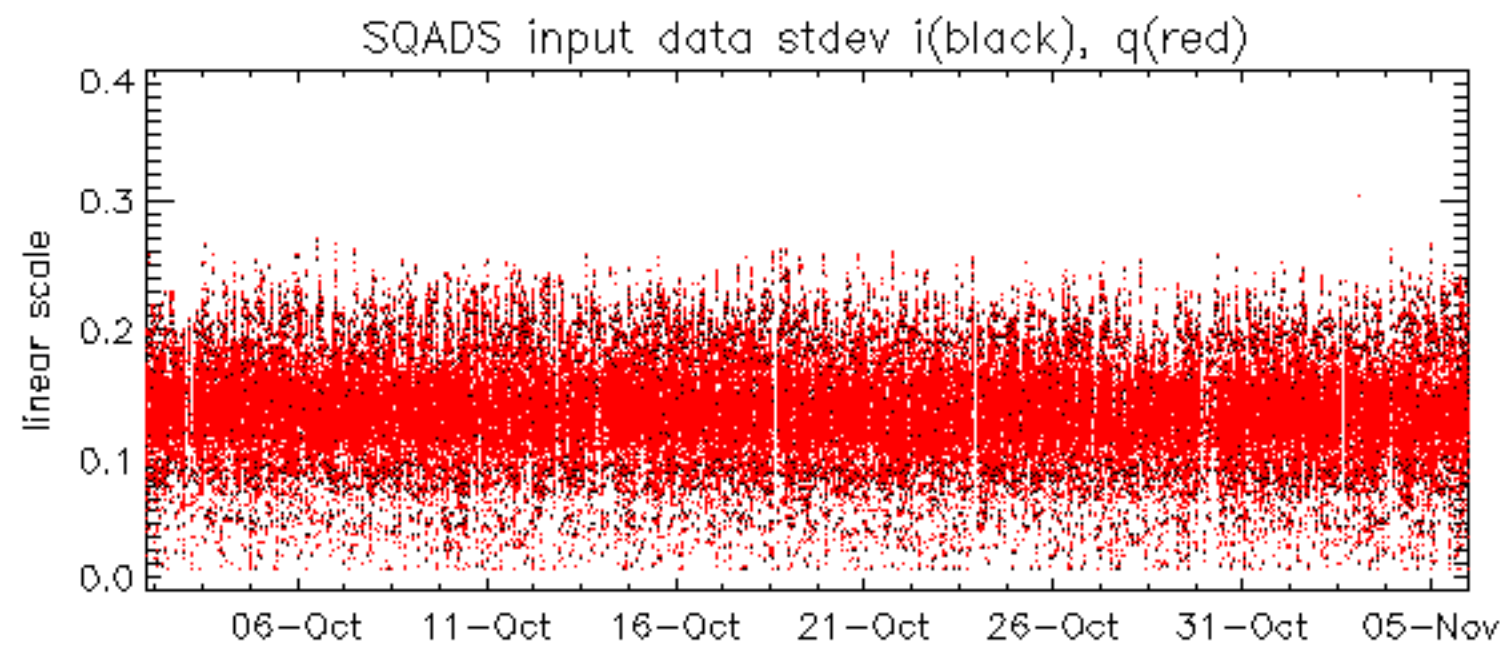
No anomalies observed on available MS products:

No anomalies observed.





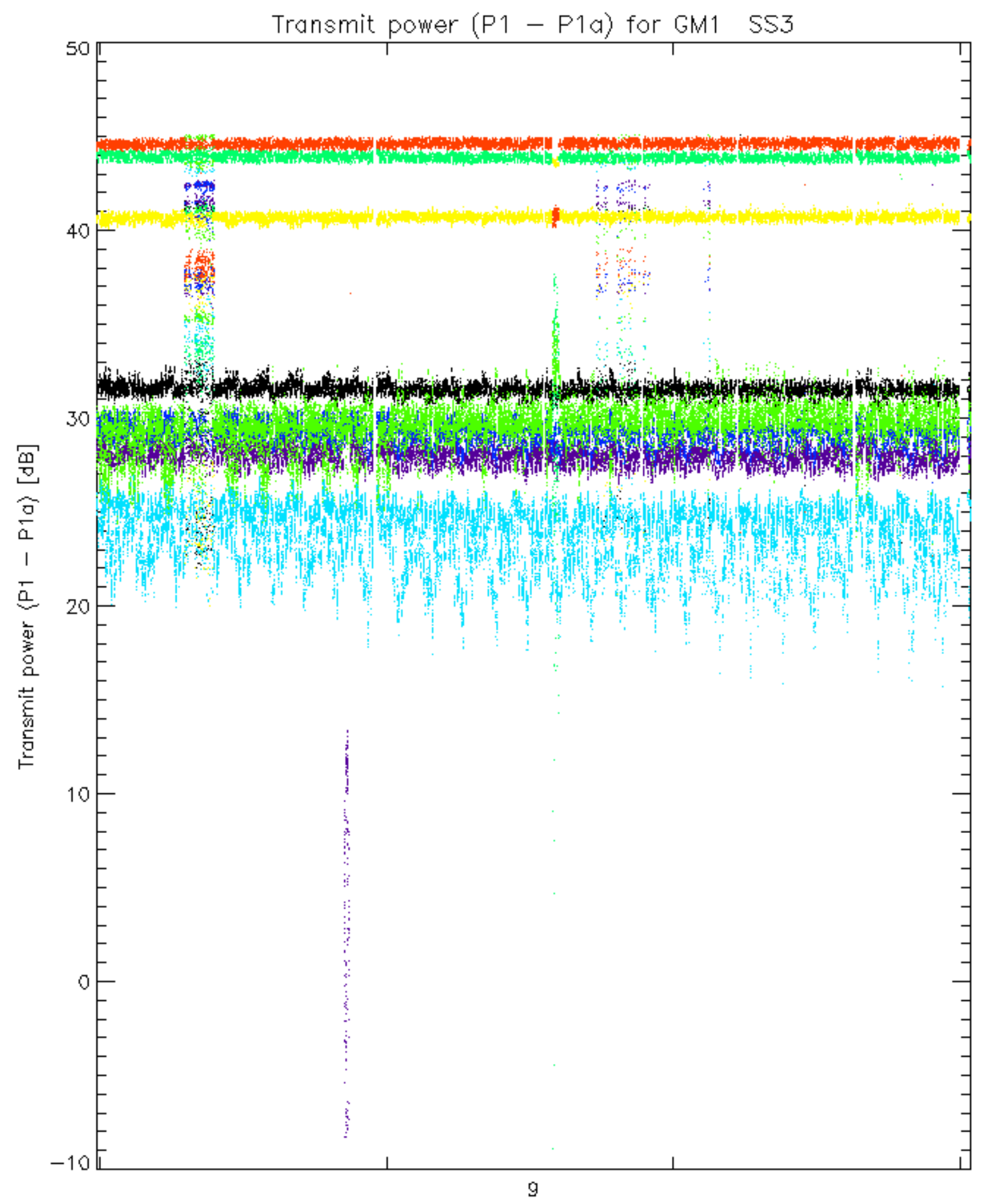




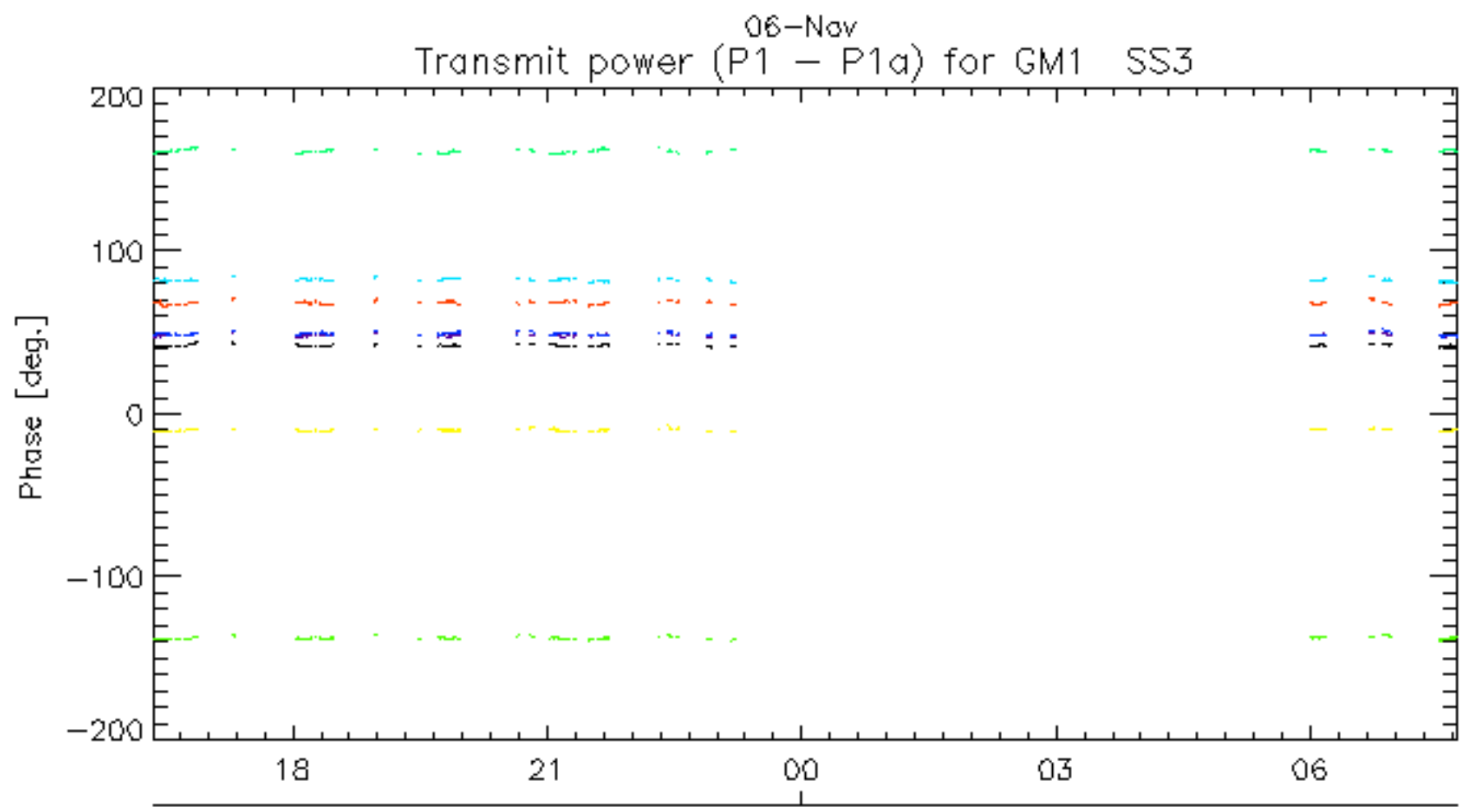
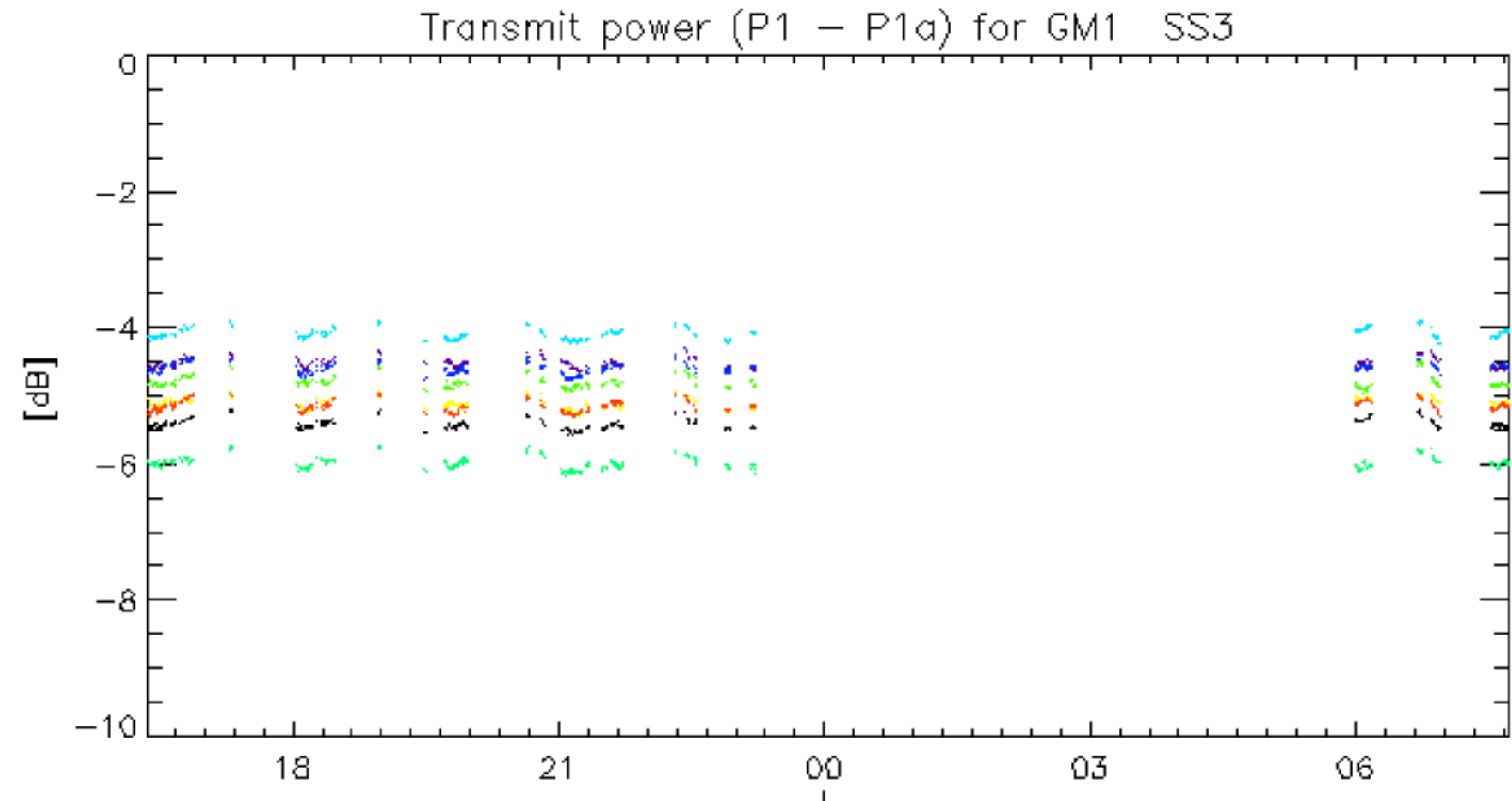
Summary of analysis for the last 3 days 2006110[456]

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

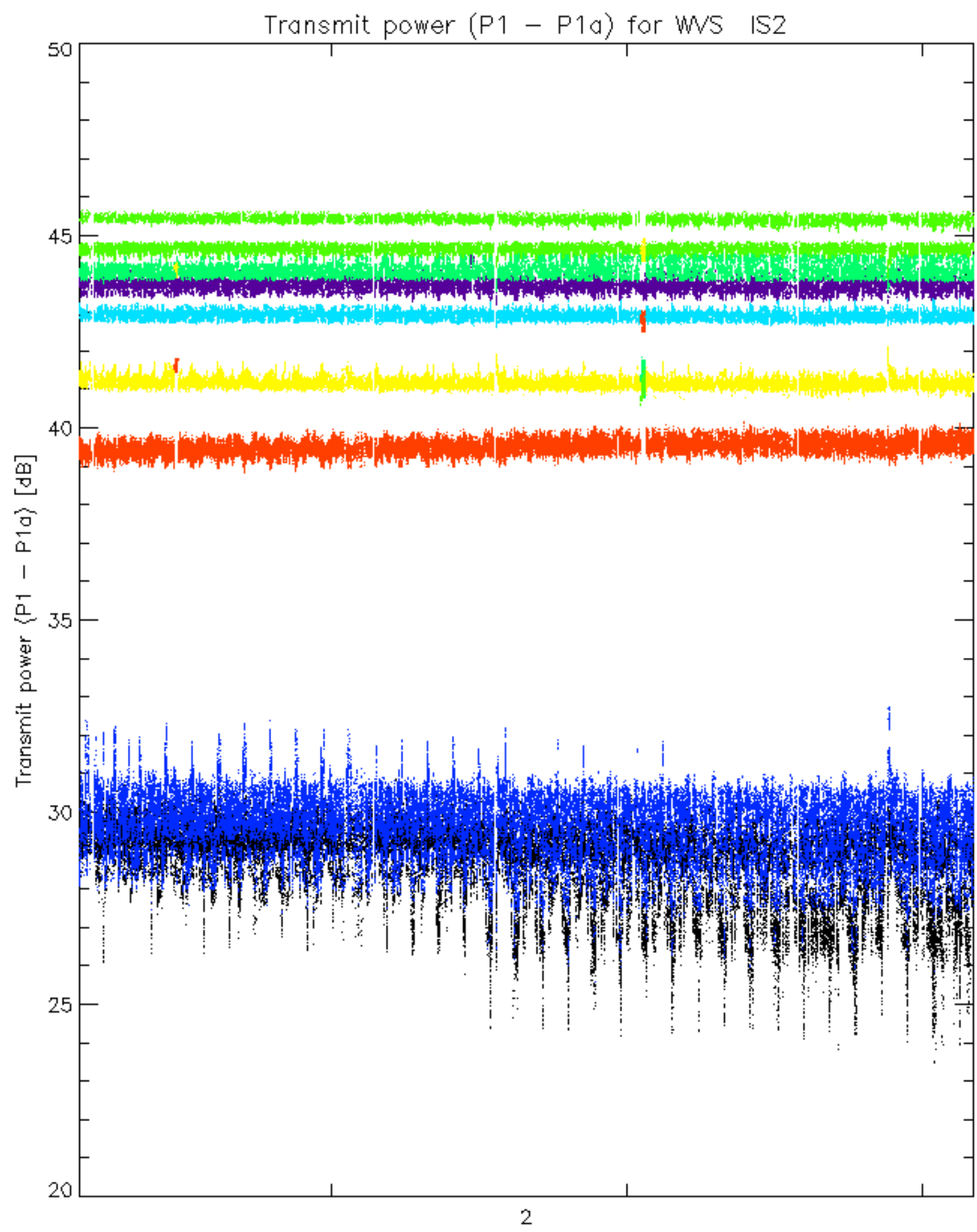
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20061104_182651_00000352052_00371_24473_3469.N1	0	16
ASA_IMM_1PNPDK20061105_201452_00000352052_00386_24488_3554.N1	0	11
ASA_GM1_1PNPDK20061104_145005_000002232052_00368_24470_7981.N1	0	15
ASA_GM1_1PNPDK20061105_153556_000001872052_00383_24485_8060.N1	0	8
ASA_WSM_1PNPDE20061104_004249_000002012052_00360_24462_0001.N1	0	29
ASA_WSM_1PNPDE20061105_001112_000002612052_00374_24476_0001.N1	0	29
ASA_WSM_1PNPDE20061105_032220_000001472052_00376_24478_0001.N1	0	1



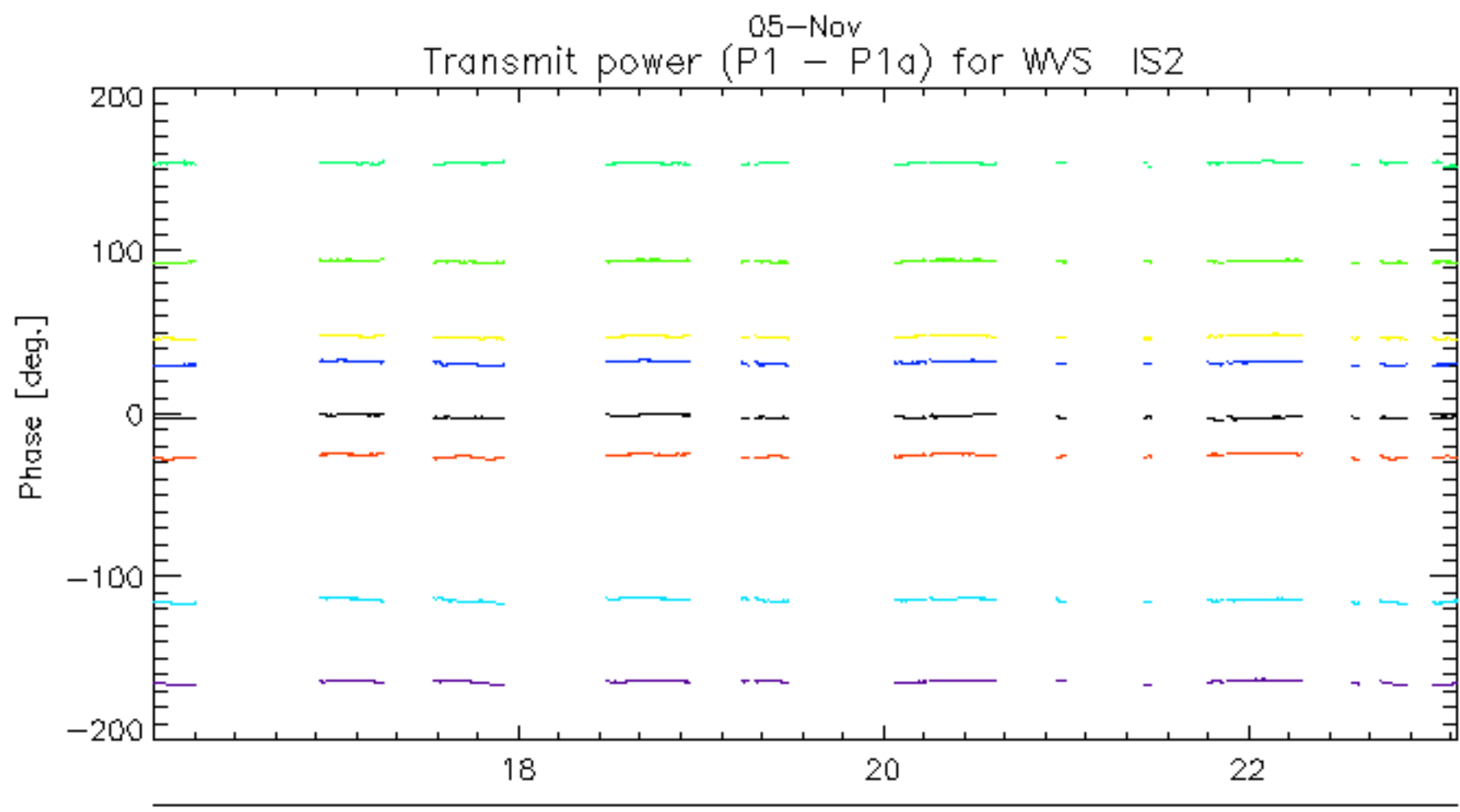
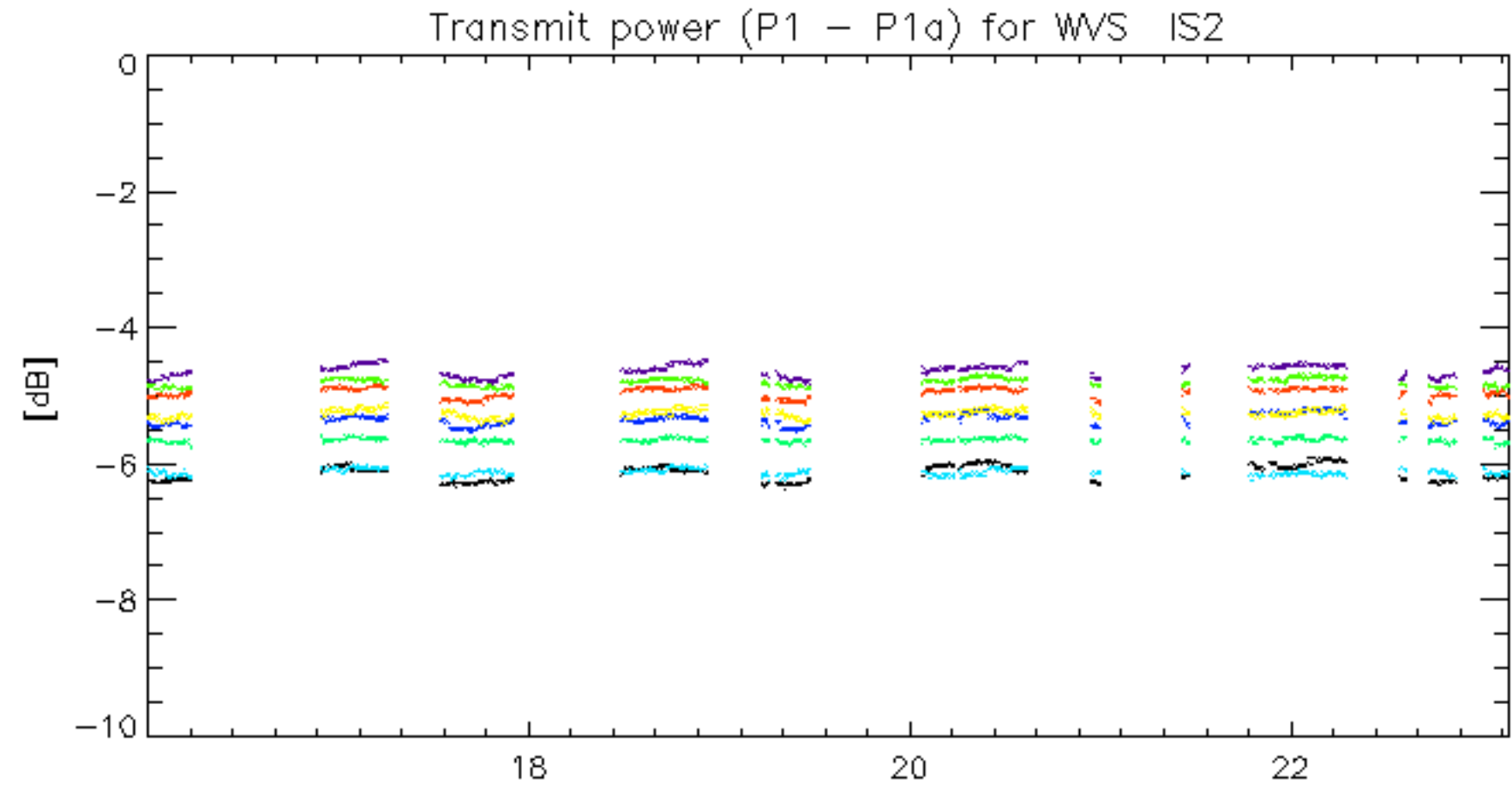
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.