

PRELIMINARY REPORT OF 060515

last update on Mon May 15 16:38:42 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 2006-05-14 00:00:00 to 2006-05-15 16:38:42

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	37	65	13	0	20
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	37	65	13	0	20
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	37	65	13	0	20
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	37	65	13	0	20

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	56	58	16	31
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	56	58	16	31
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	56	58	16	31
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	56	58	16	31

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	20060514 053210
H	20060513 060347

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	-3.970655	0.011750	0.005704
7	P1	-3.065919	0.013569	-0.092350
11	P1	-4.094916	0.015646	-0.050636
15	P1	-6.108332	0.012253	-0.090216
19	P1	-3.309722	0.007824	-0.013136
22	P1	-4.521416	0.011064	-0.022147
26	P1	-4.027421	0.020341	0.099771
30	P1	-5.738969	0.020008	-0.034684
3	P1	-16.657518	0.308835	0.147800
7	P1	-17.007774	0.149132	-0.294633
11	P1	-16.788982	0.322012	-0.427307
15	P1	-13.124901	0.142285	-0.264120
19	P1	-14.172183	0.049452	-0.245845
22	P1	-16.080887	0.455552	-0.251127
26	P1	-15.399576	0.270918	0.396557
30	P1	-16.830698	0.329358	-0.489588

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.275928	0.085169	0.110097
7	P2	-22.171778	0.100299	0.137361
11	P2	-16.014856	0.111676	0.150662
15	P2	-7.164540	0.095695	-0.027505
19	P2	-9.154573	0.088777	-0.033350
22	P2	-18.068857	0.087565	-0.132282
26	P2	-16.322645	0.092924	-0.117418
30	P2	-19.601355	0.086861	0.000186

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.189823	0.004295	-0.015319
7	P3	-8.189823	0.004295	-0.015319
11	P3	-8.189823	0.004295	-0.015319
15	P3	-8.189823	0.004295	-0.015319
19	P3	-8.189823	0.004295	-0.015319
22	P3	-8.189823	0.004295	-0.015319
26	P3	-8.189841	0.004296	-0.015295
30	P3	-8.189841	0.004296	-0.015295

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	-3.744396	0.038536	0.020385
7	P1	-2.649485	0.101304	0.119316
11	P1	-2.877429	0.031249	0.057574
15	P1	-3.508199	0.029584	0.051378
19	P1	-3.384701	0.013910	-0.016888
22	P1	-5.112090	0.022468	0.061964
26	P1	-5.819425	0.022750	-0.046889
30	P1	-5.182275	0.044909	-0.012184
3	P1	-11.592071	0.136032	0.013803
7	P1	-9.980691	0.156558	0.009713
11	P1	-10.220866	0.083484	0.078346
15	P1	-10.667083	0.129009	0.157465
19	P1	-15.462277	0.088636	-0.086655
22	P1	-20.731850	1.290612	-0.467633

26	P1	-16.414846	0.407003	-0.242805
30	P1	-18.200470	0.488096	0.425727

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.943319	0.069870	0.079956
7	P2	-22.509995	0.177629	-0.067585
11	P2	-11.191869	0.050376	-0.008644
15	P2	-4.875720	0.042940	-0.073517
19	P2	-6.862648	0.042203	-0.044156
22	P2	-8.161730	0.054296	-0.077617
26	P2	-24.060080	0.125080	-0.104601
30	P2	-22.051735	0.086198	-0.022772

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.023895	0.003803	-0.005032
7	P3	-8.023943	0.003822	-0.005612
11	P3	-8.024061	0.003797	-0.005172
15	P3	-8.023757	0.003819	-0.004802
19	P3	-8.024012	0.003816	-0.005177
22	P3	-8.023964	0.003813	-0.005218
26	P3	-8.023787	0.003802	-0.004895
30	P3	-8.023875	0.003806	-0.004909

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	0.000540499
	stdev	1.88107e-07
MEAN Q	mean	0.000512486
	stdev	2.27671e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135411
	stdev	0.00119044
STDEV Q	mean	0.135762
	stdev	0.00120746



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006051[345]

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_1PNPDE20060513_182646_000000352047_00371_21968_4970.N1	0	15
ASA_IMM_1PNPDK20060514_125915_000001272047_00382_21979_1748.N1	1	0
ASA_WSM_1PNPDE20060514_014737_000000862047_00375_21972_9156.N1	0	45
ASA_WSM_1PNPDK20060513_052729_000000122047_00363_21960_4998.N1	0	472
ASA_WSM_1PNPDK20060513_103058_000001292047_00366_21963_4958.N1	0	15



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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Acsending
<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

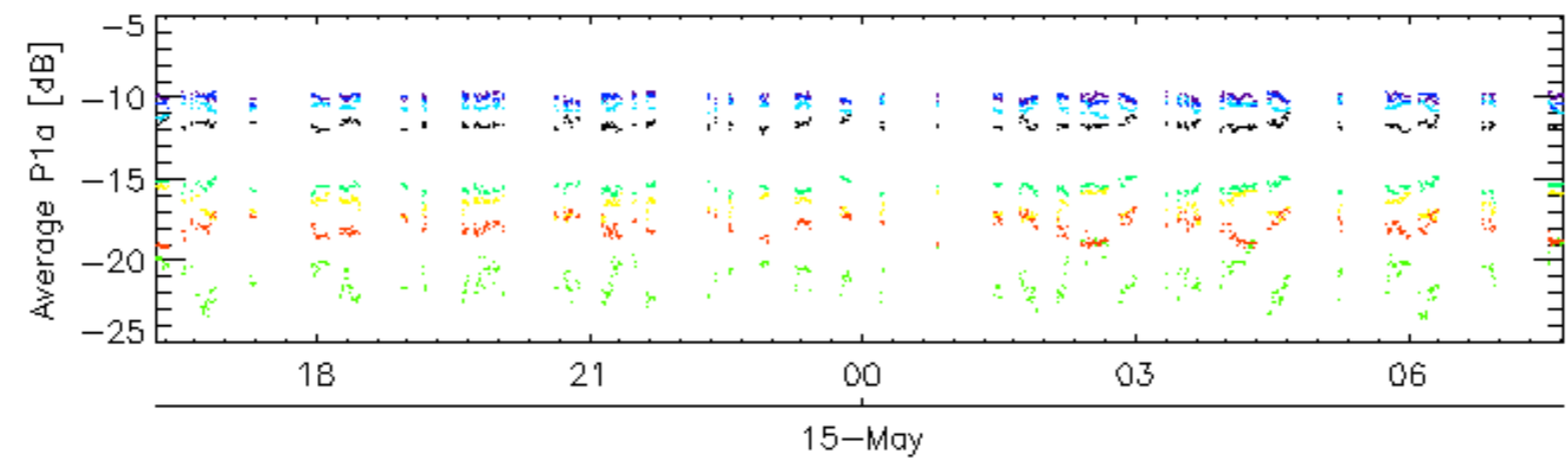
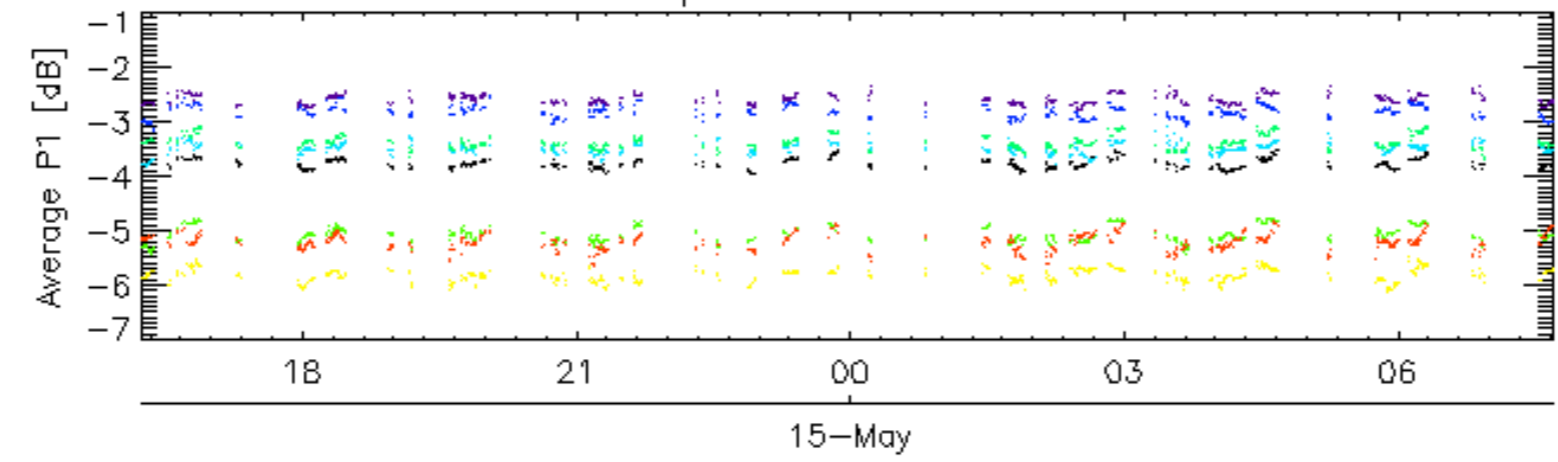
<input type="checkbox"/>	
	Ascending
<input type="checkbox"/>	
	Descending

7.6 - Doppler evolution versus ANX for GM1

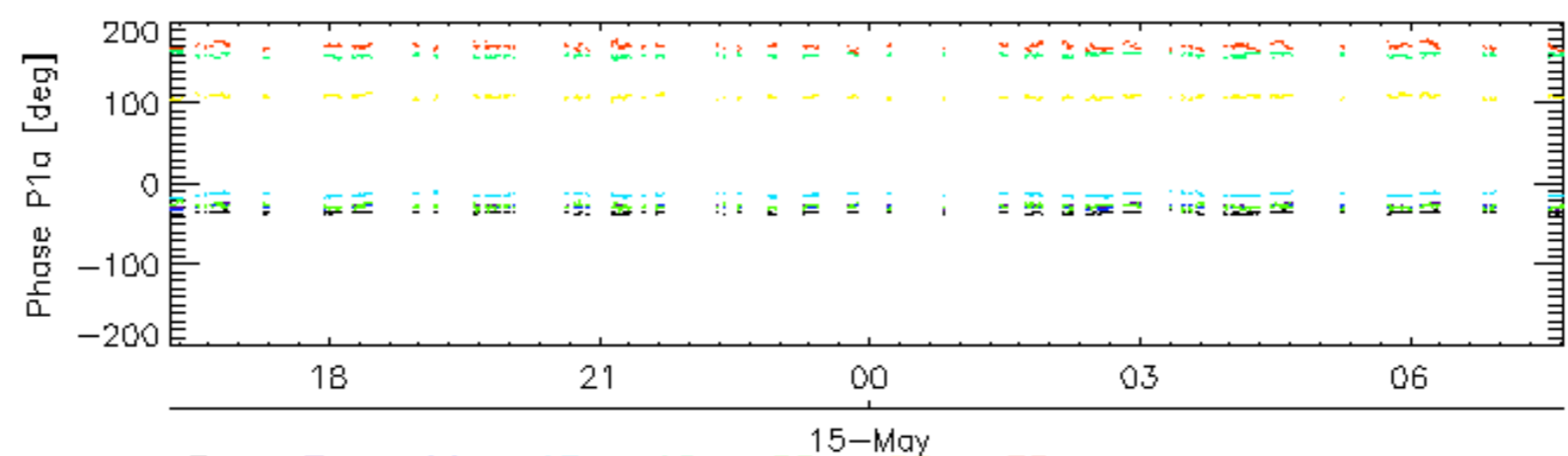
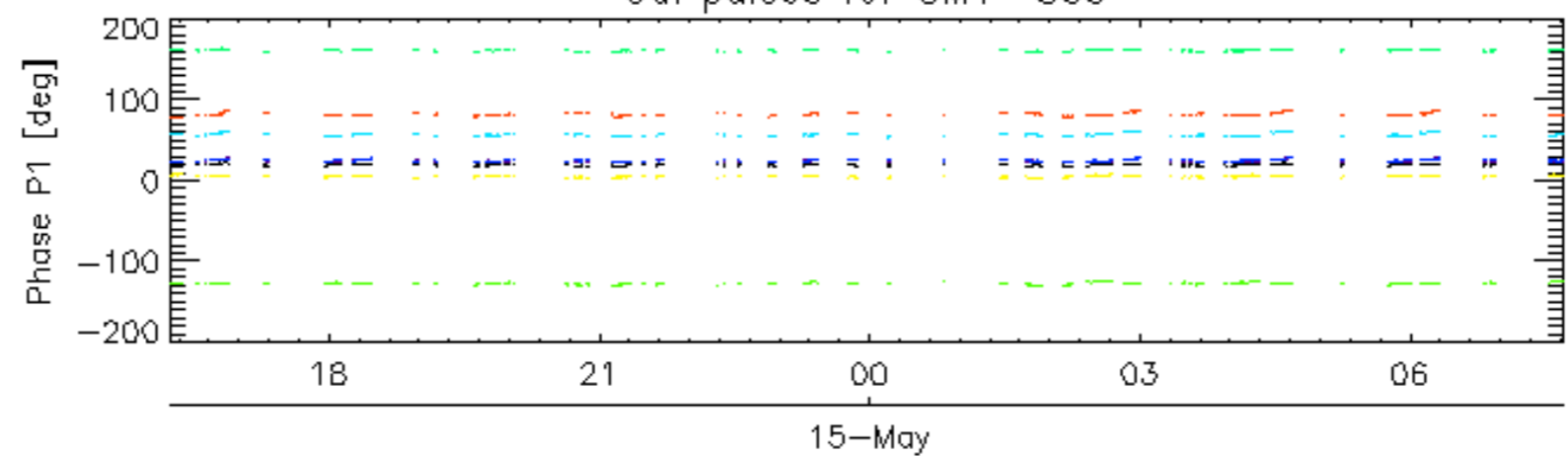
Evolution Doppler error versus ANX

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

Cal pulses for GM1 SS3

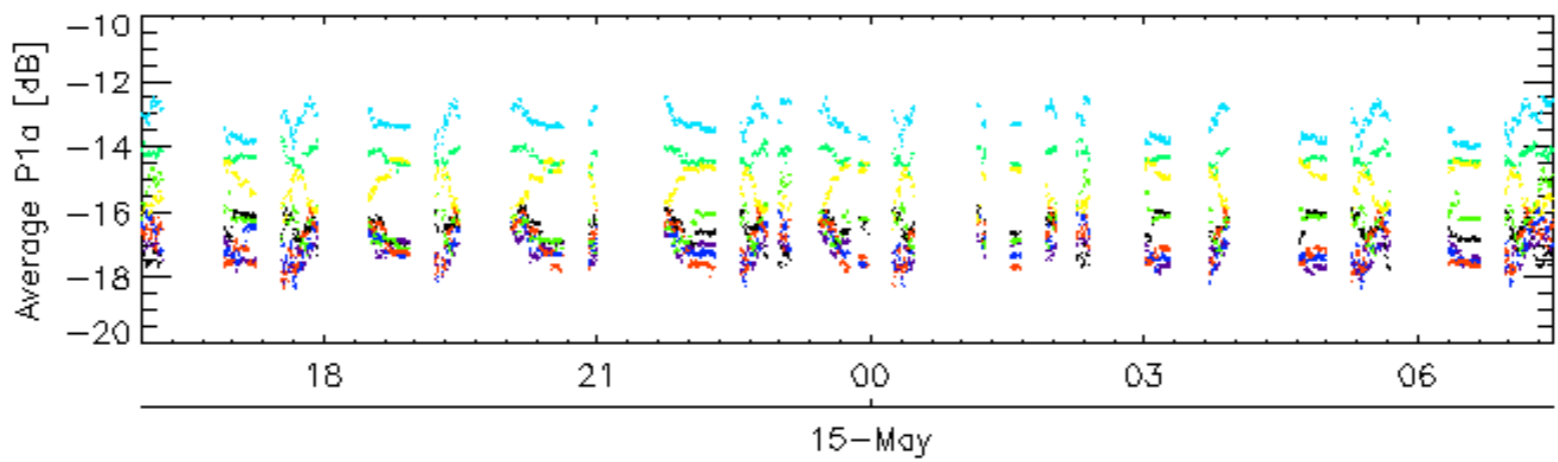
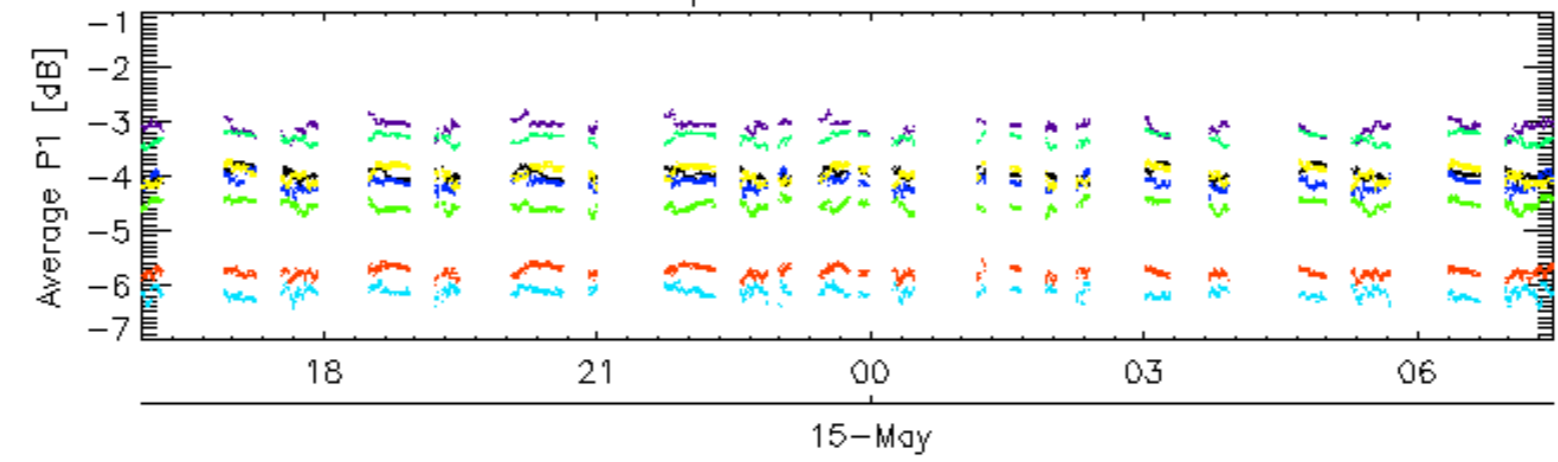


Cal pulses for GM1 SS3

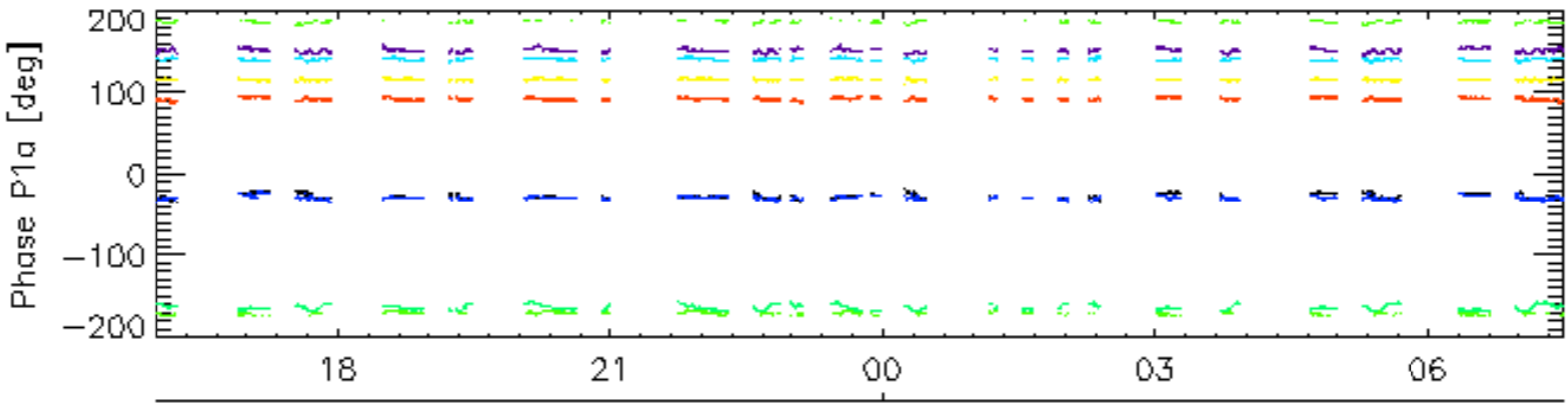
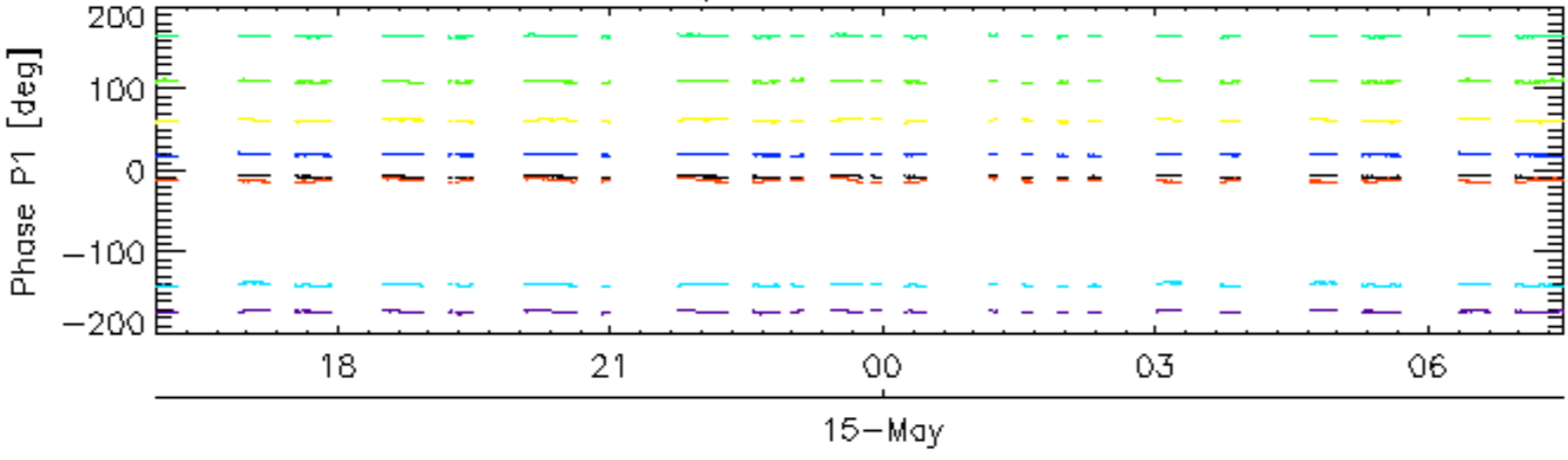


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 ^{15-May} _ 26 _ 30

Cal pulses for WVS IS2

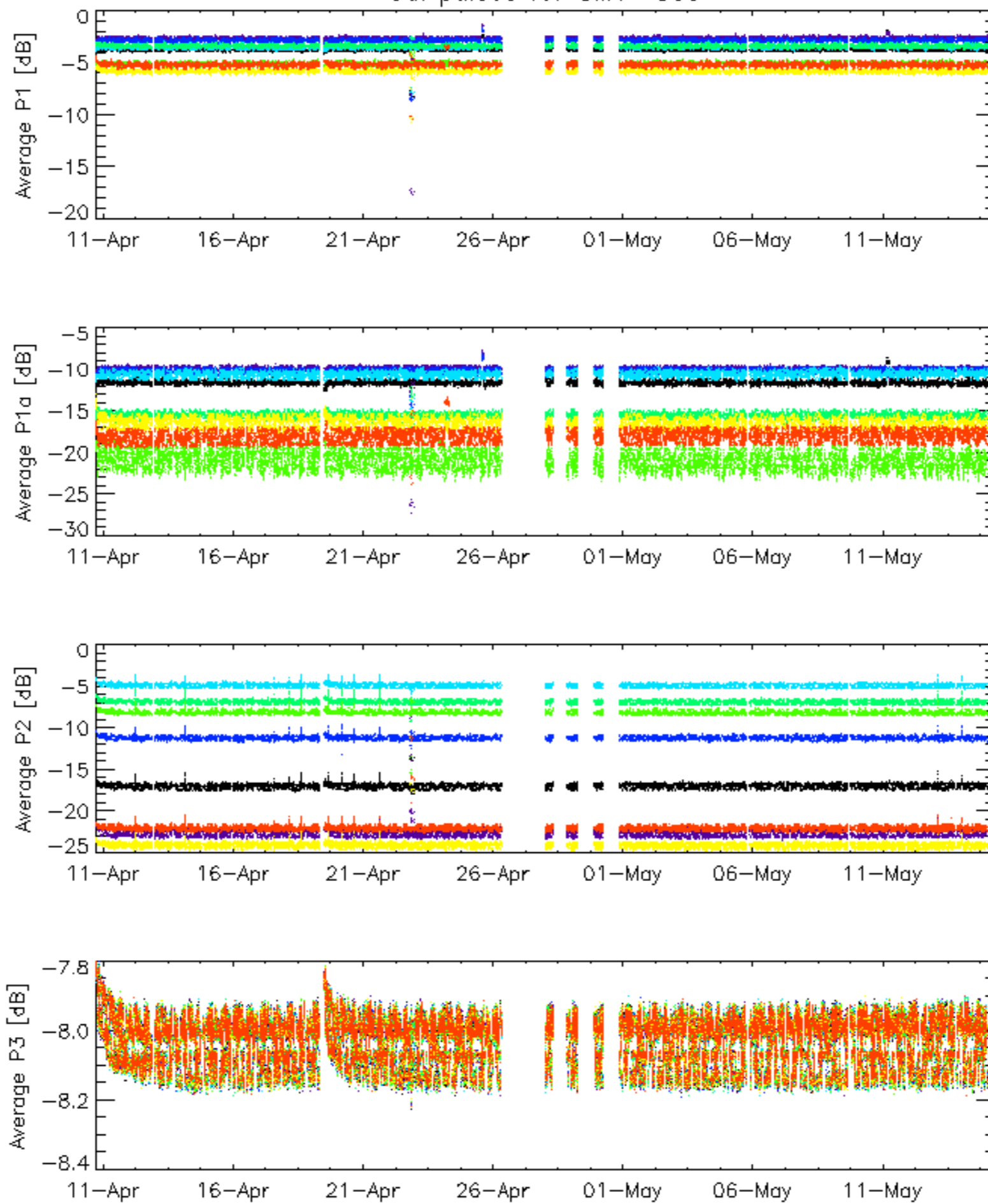


Cal pulses for WVS IS2



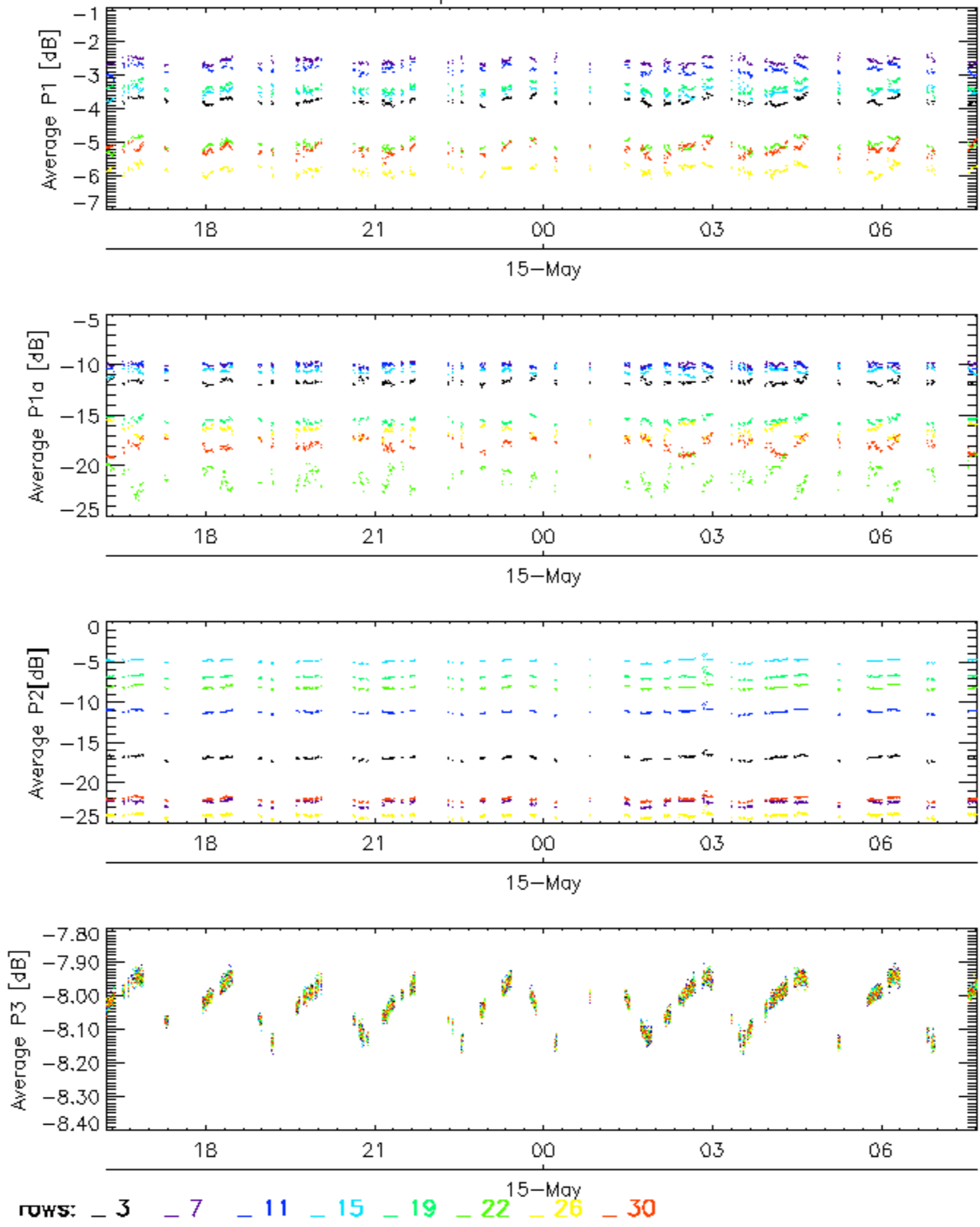
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

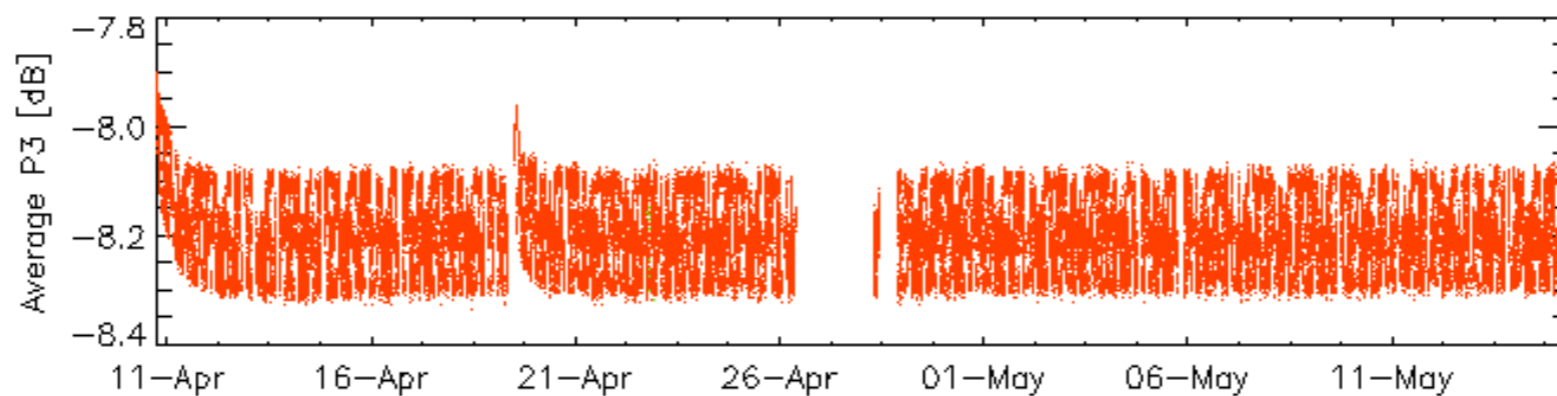
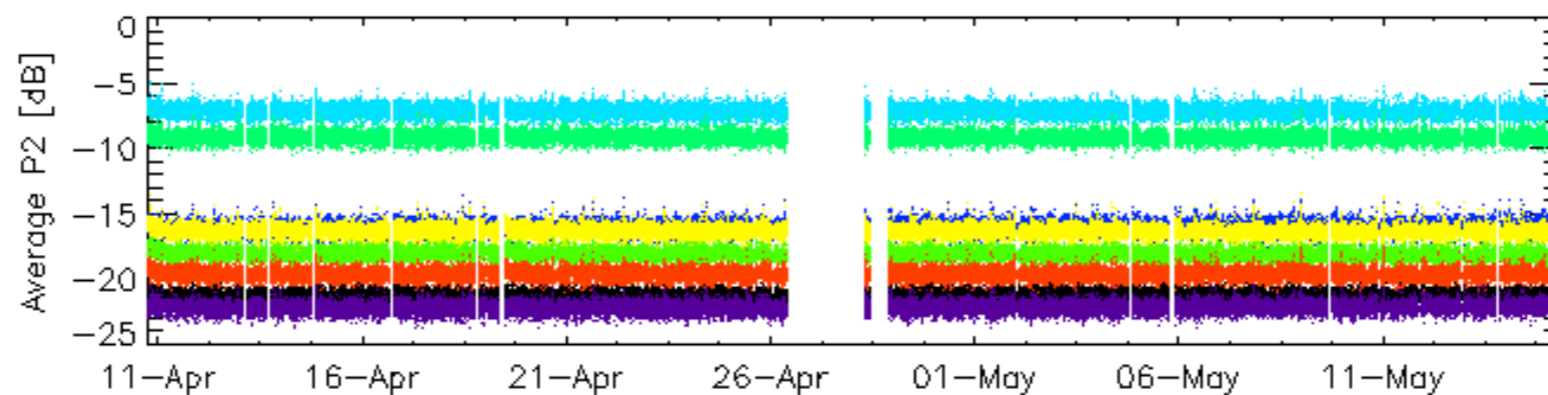
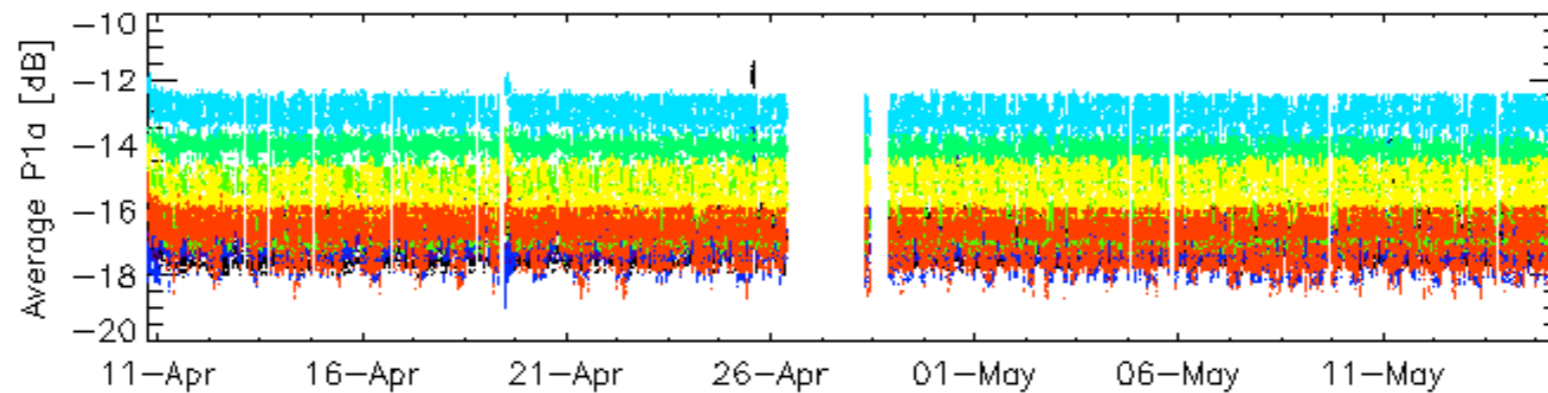
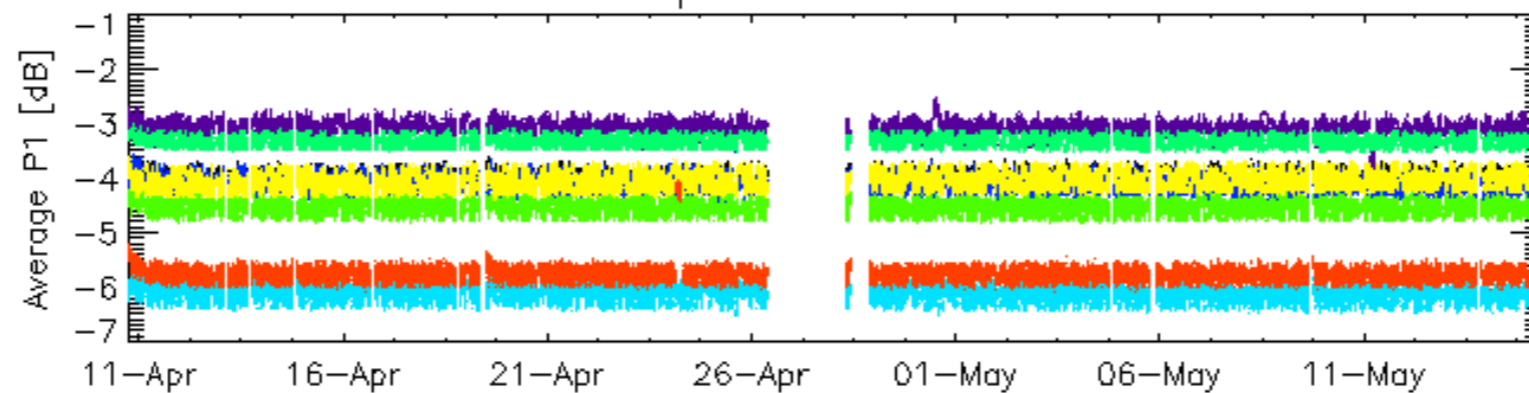


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

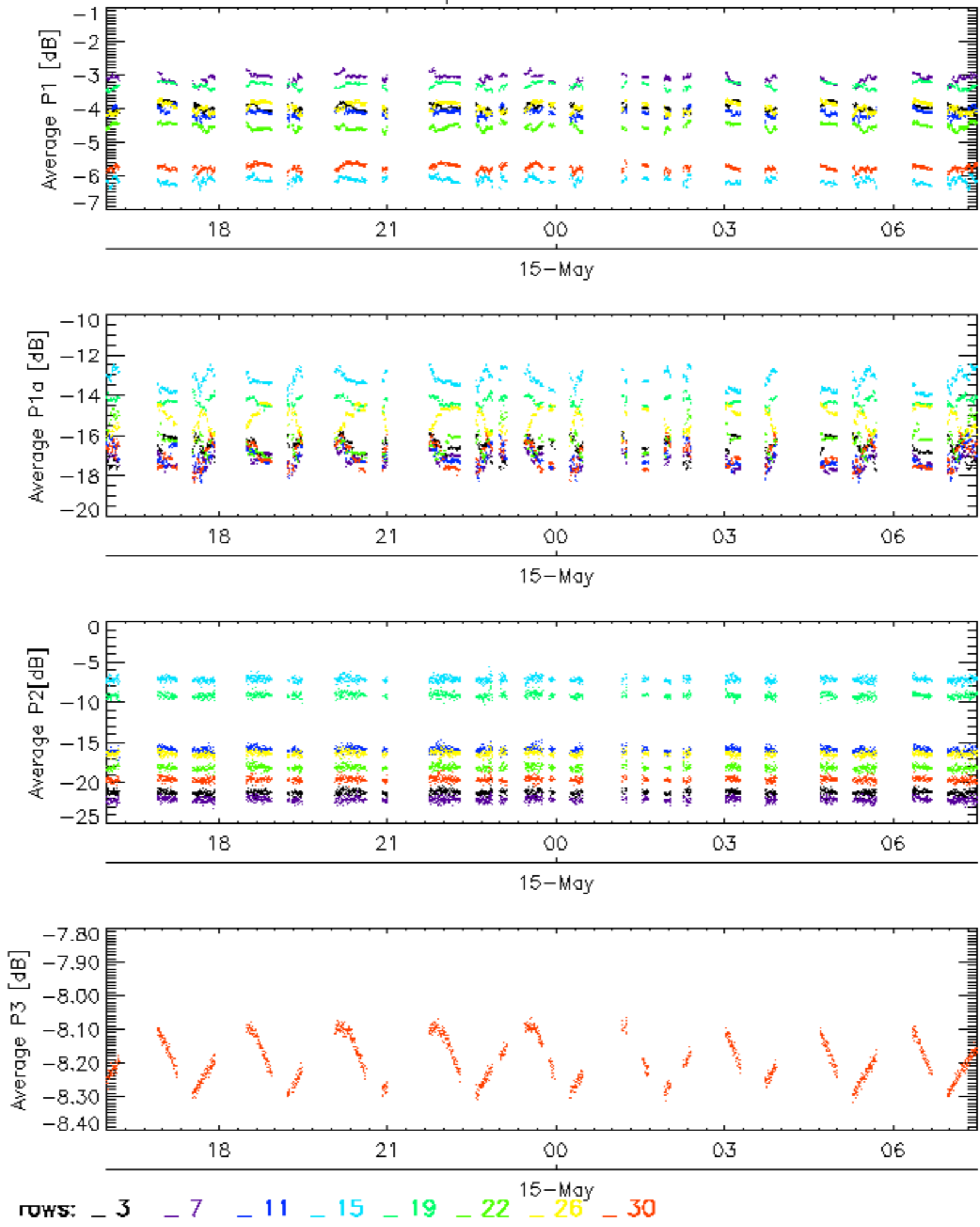


Cal pulses for WVS IS2



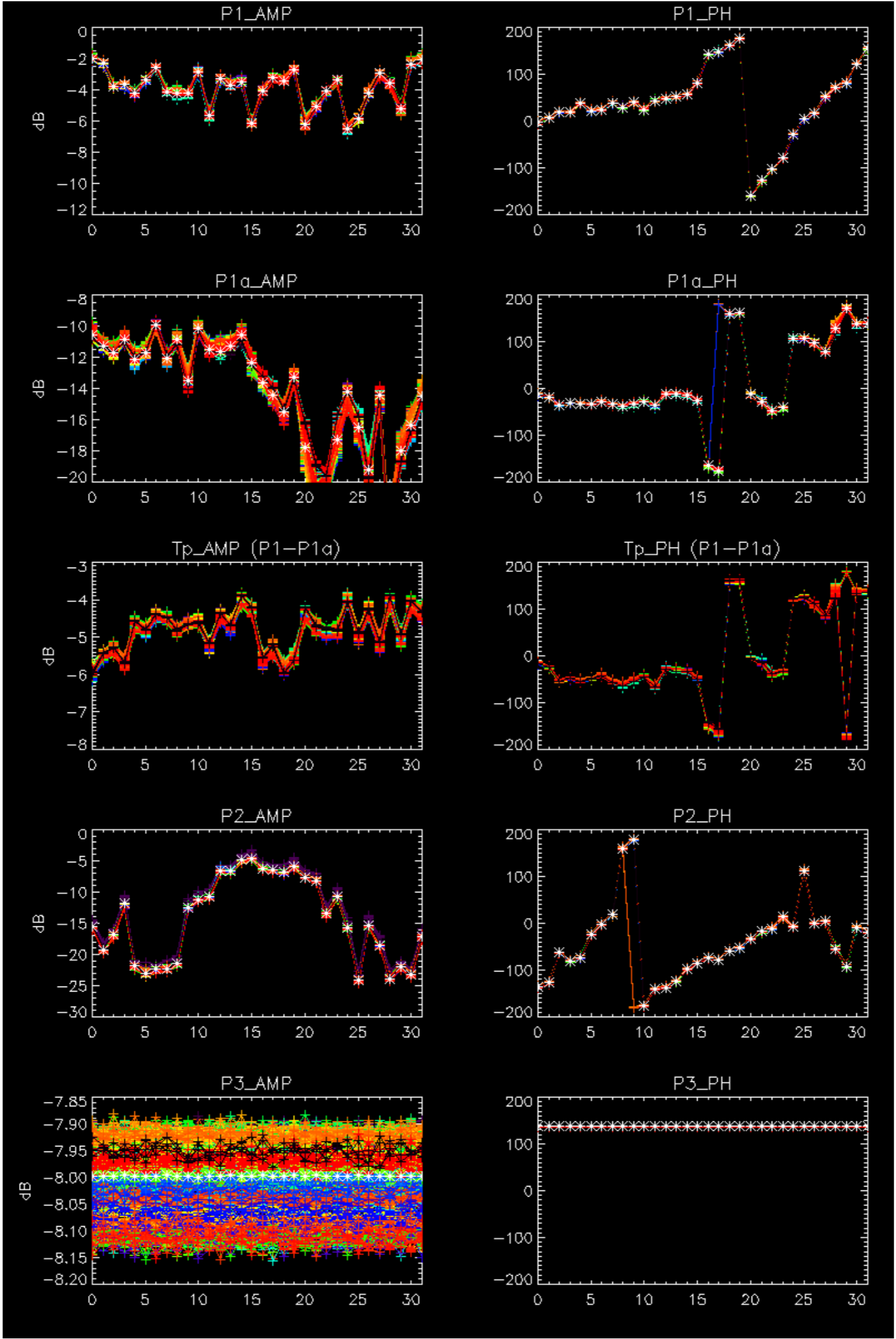
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

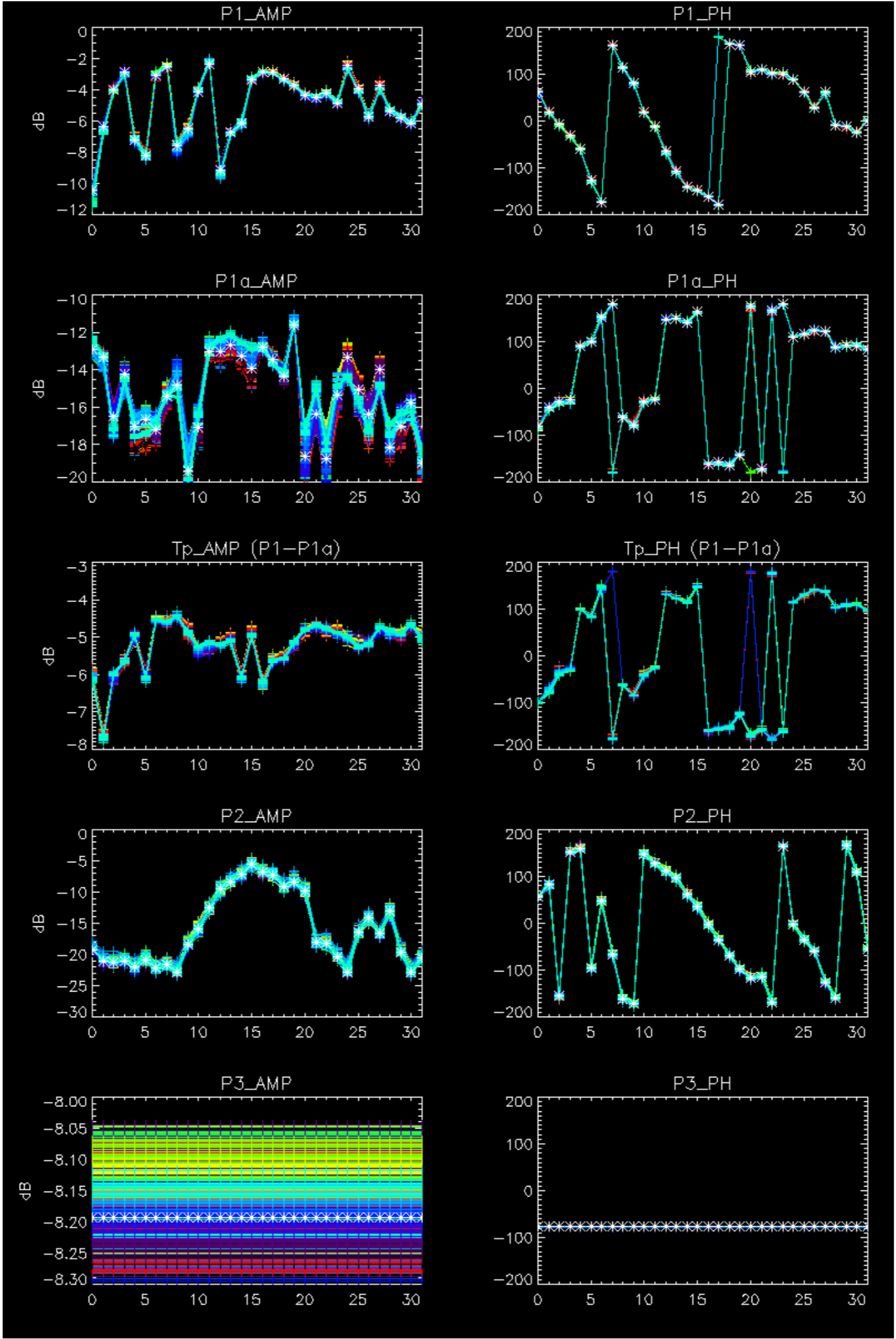
Cal pulses for WVS IS2



No anomalies observed on available browse products

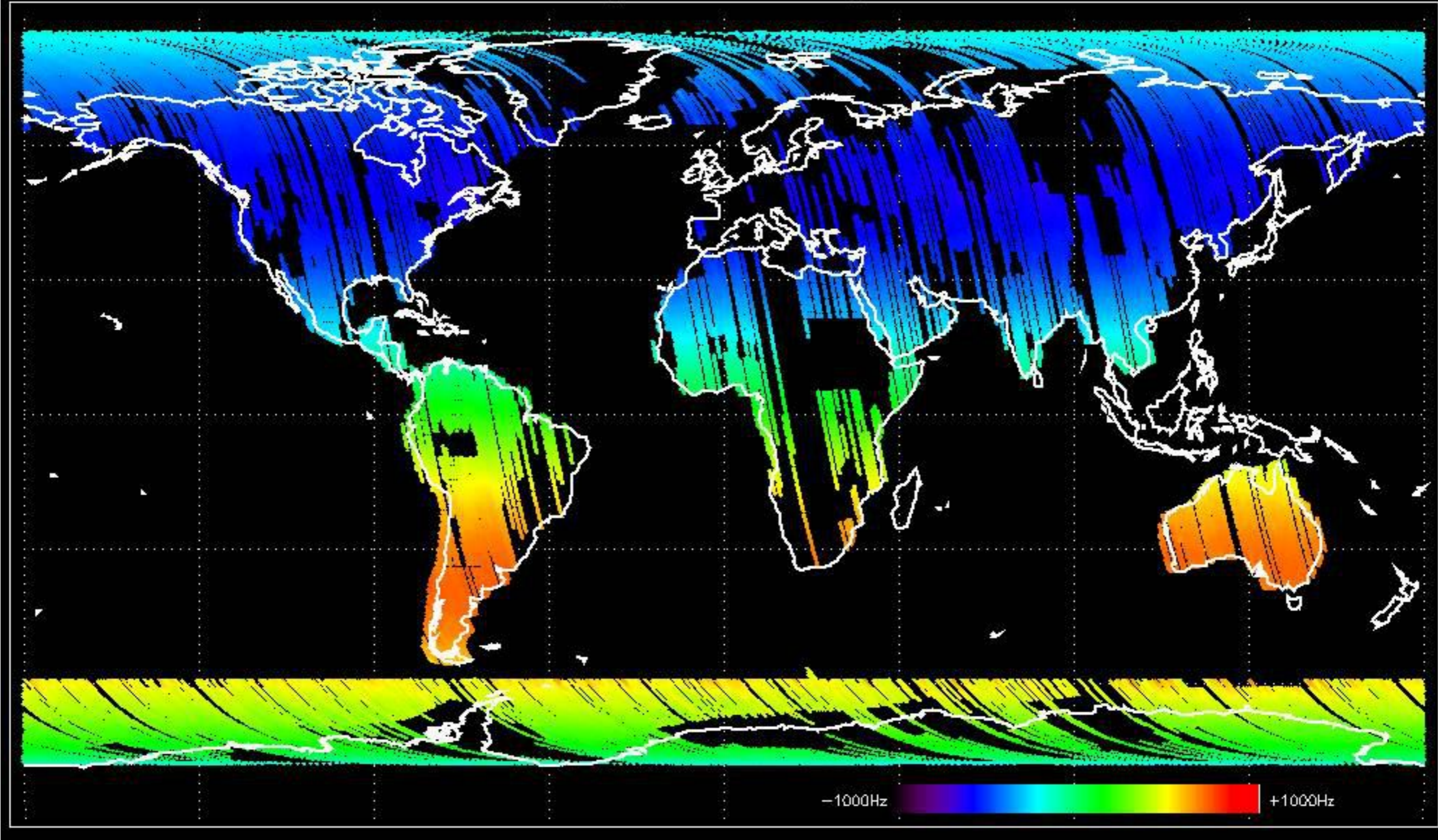
No anomalies observed.



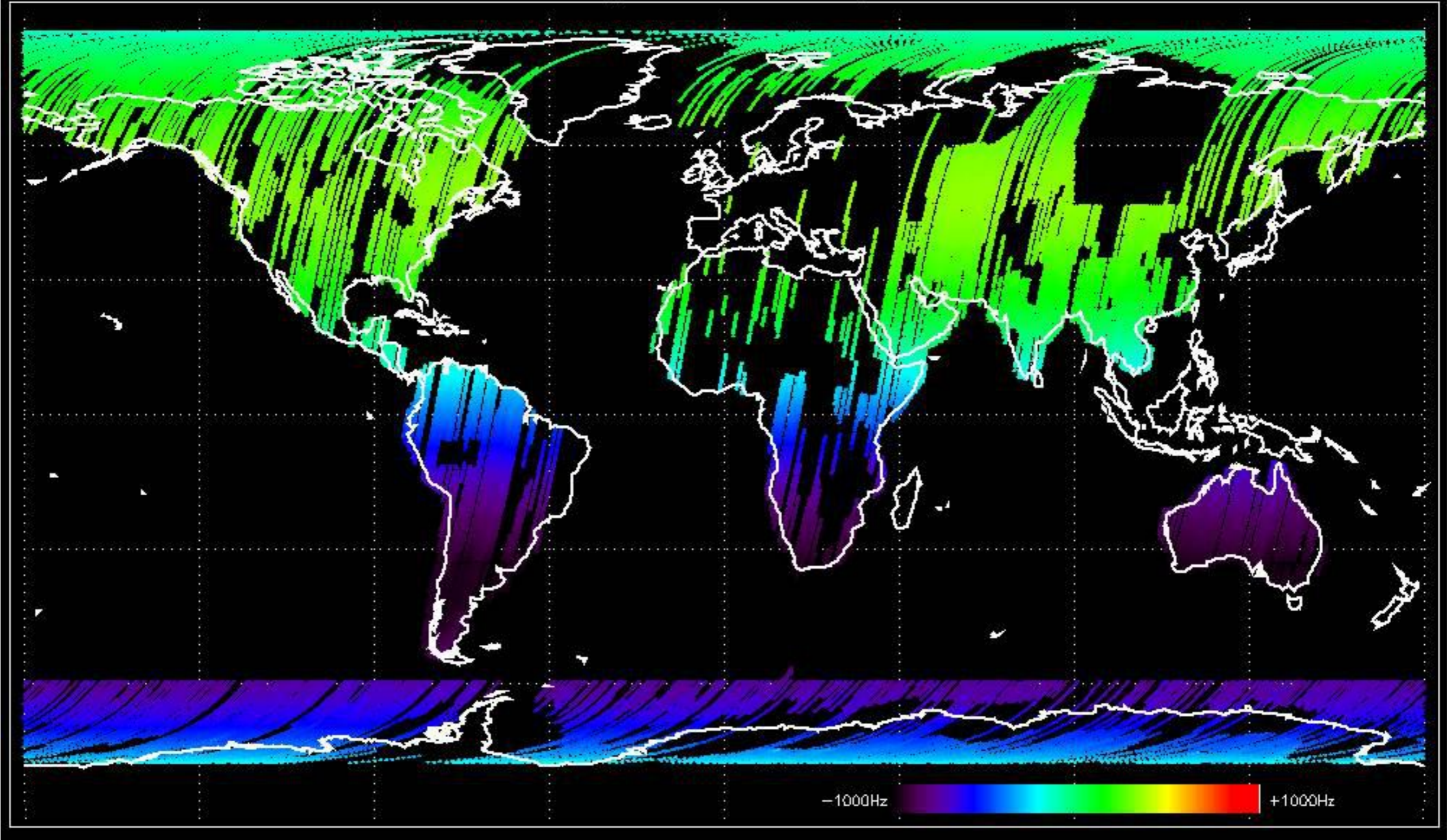


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

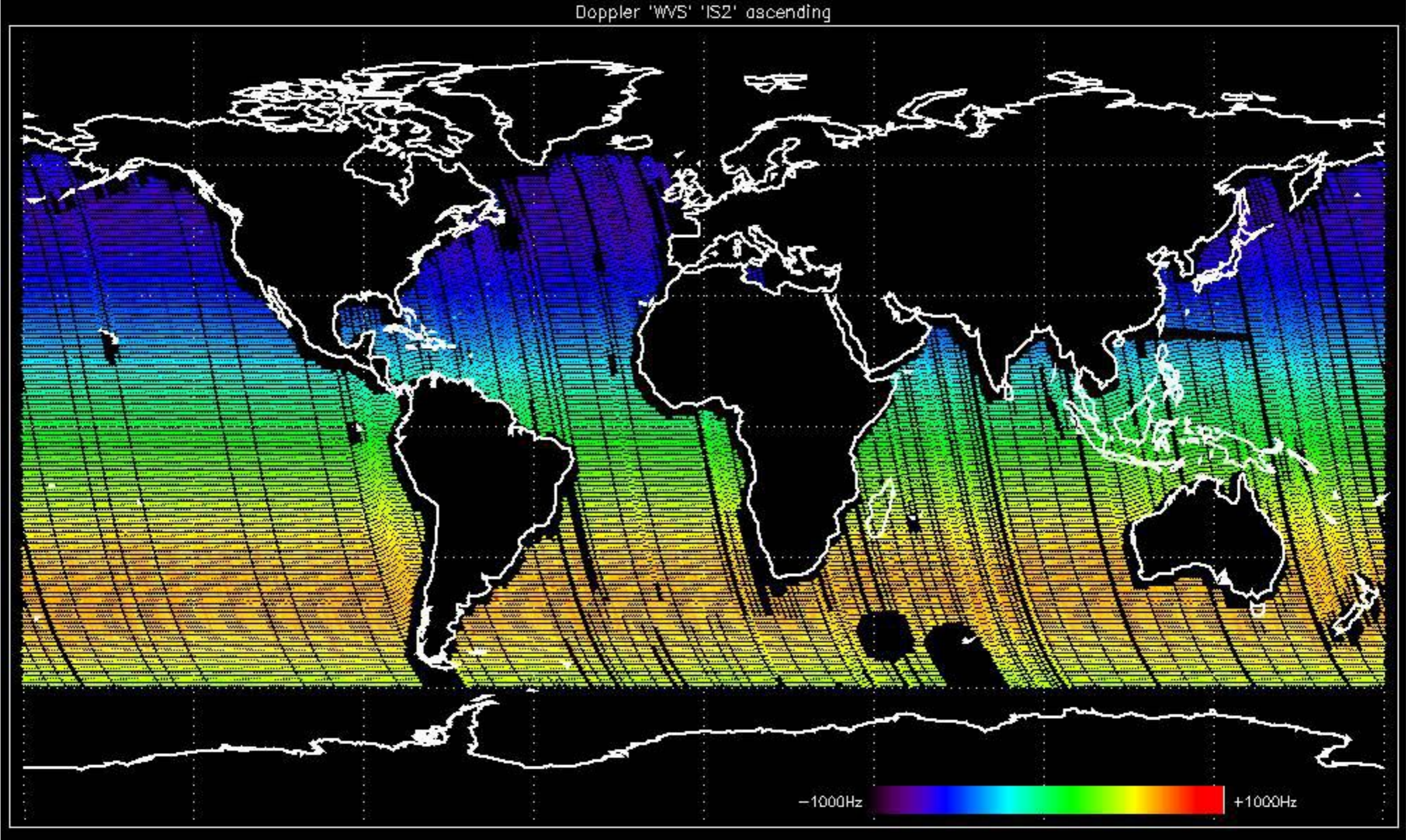
Doppler 'GM1' 'SS1' ascending



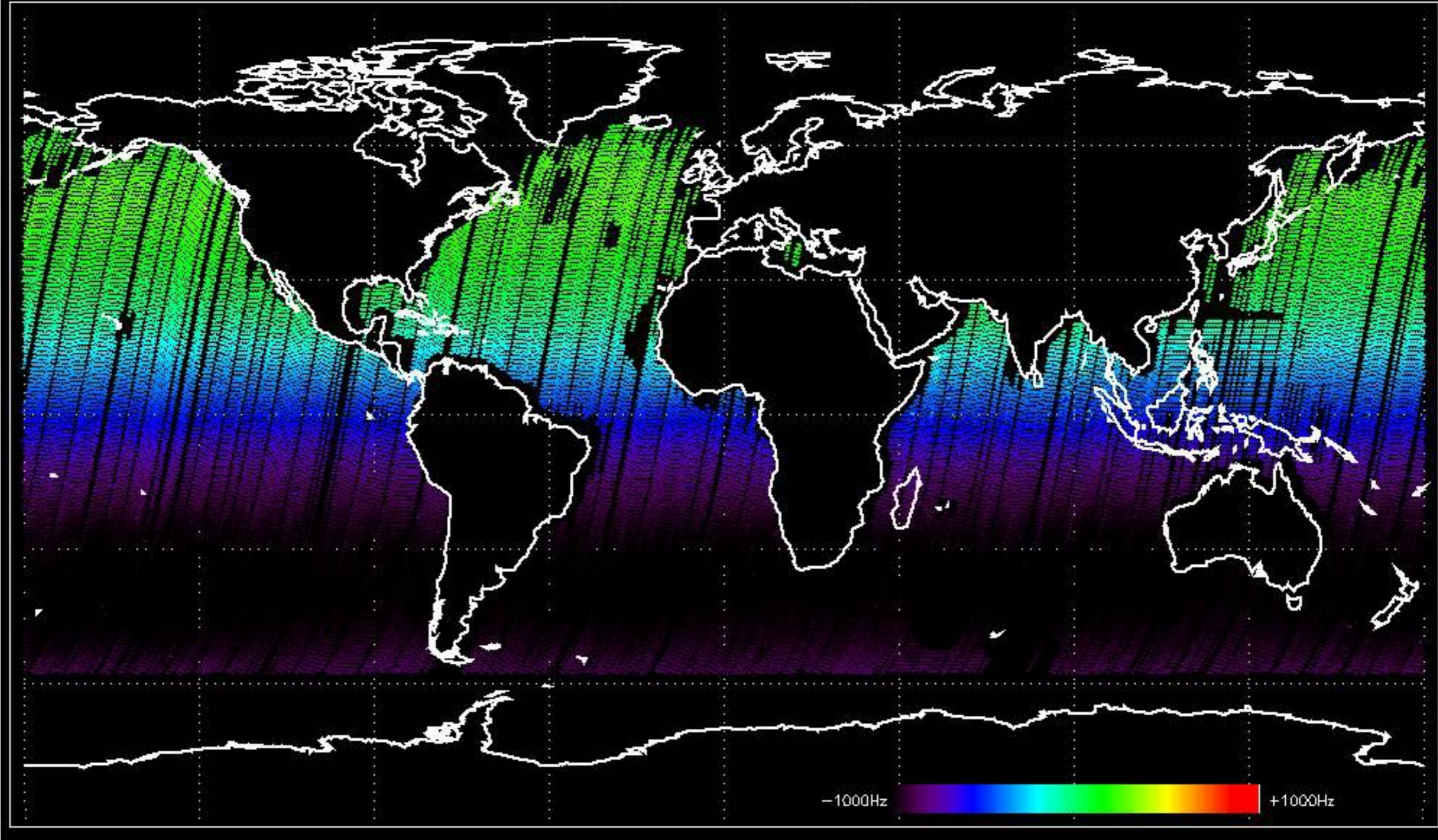
Doppler 'GM1' 'SS1' descending



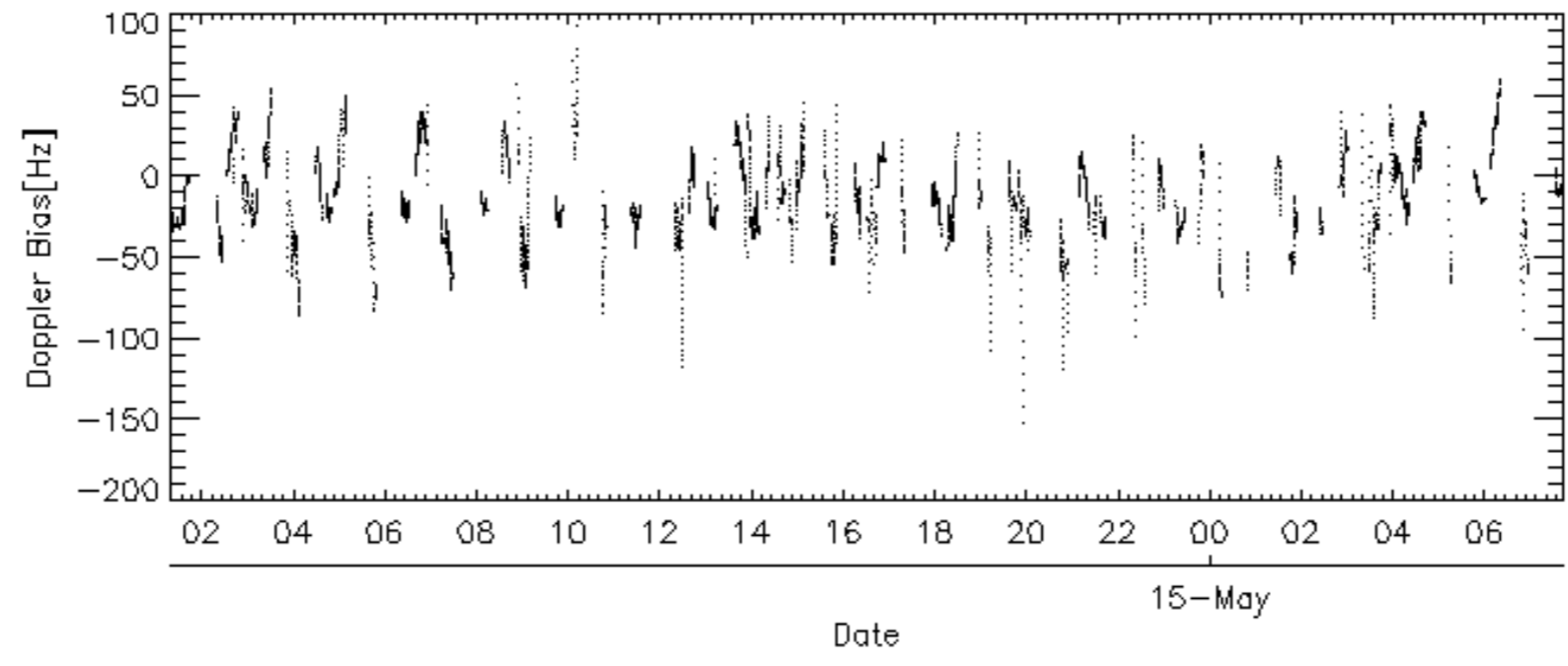
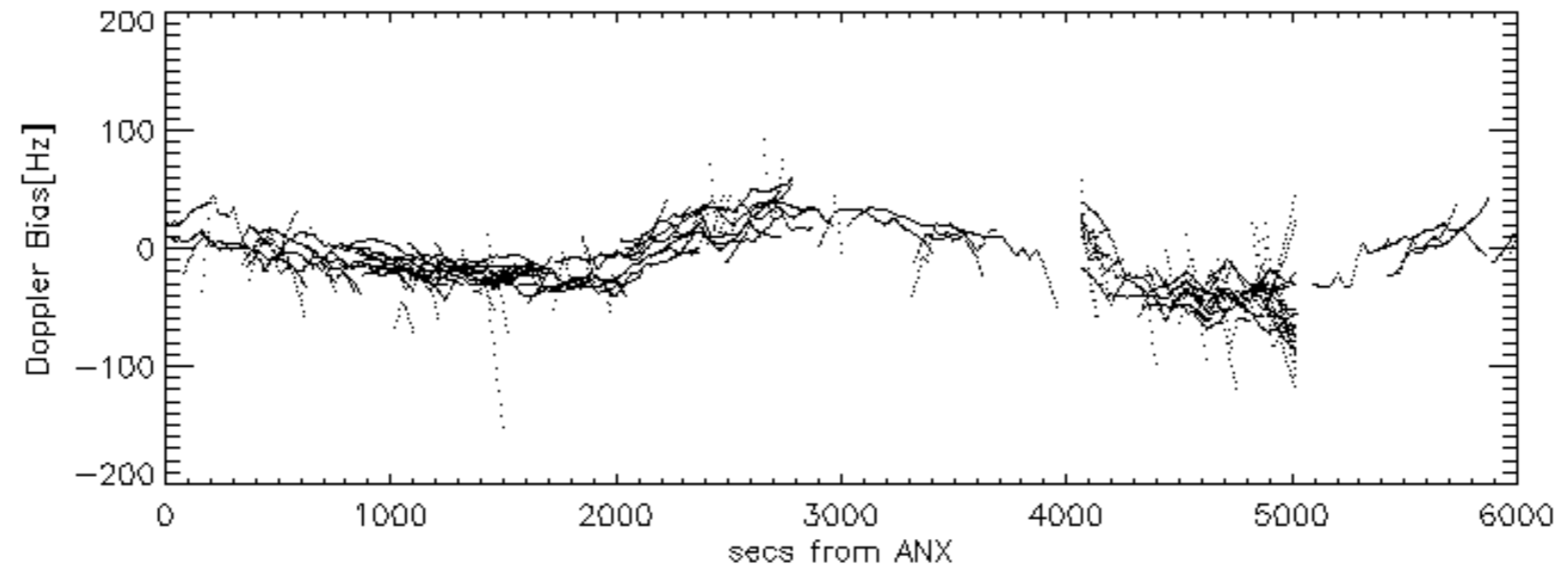
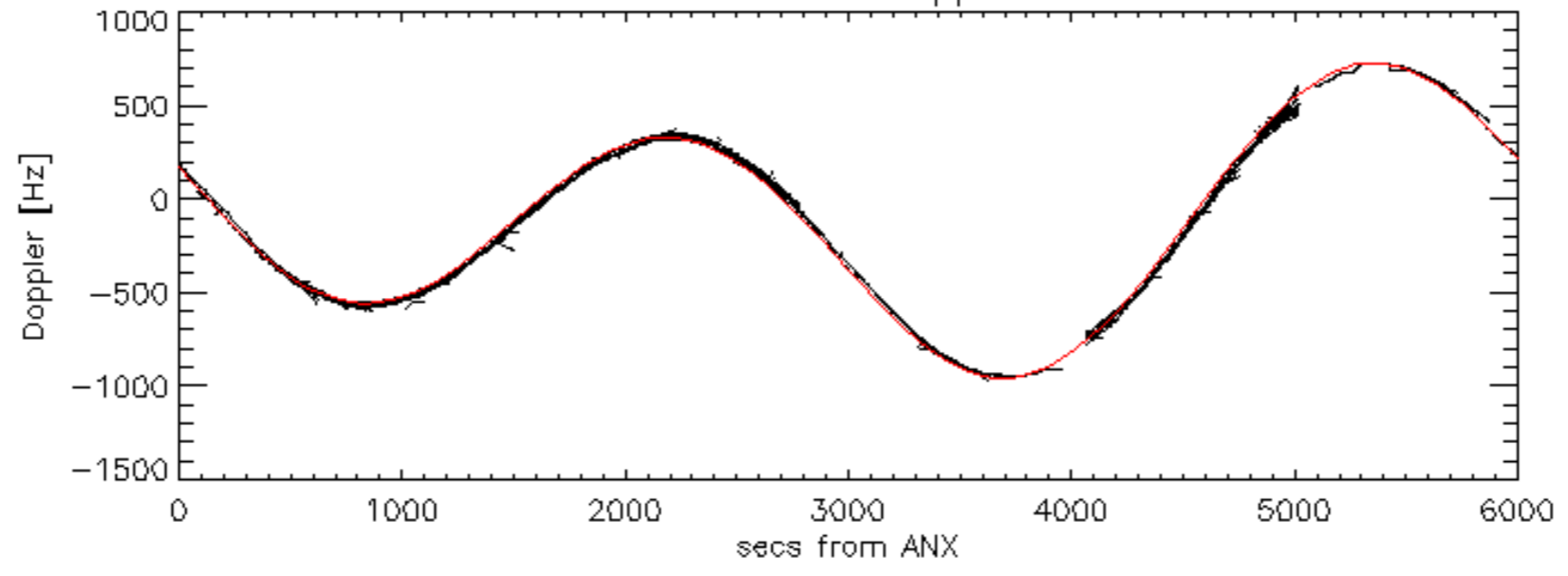
Doppler 'WVS' 'IS2' ascending

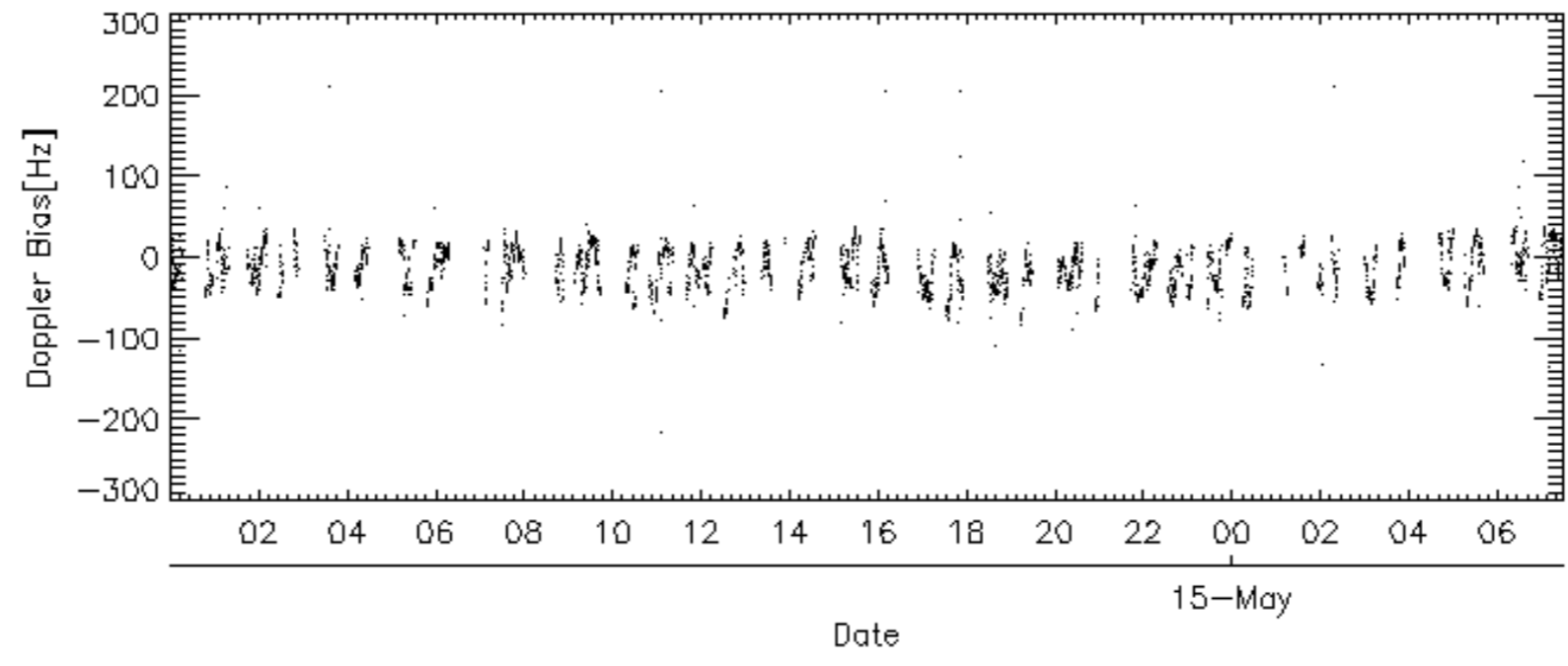
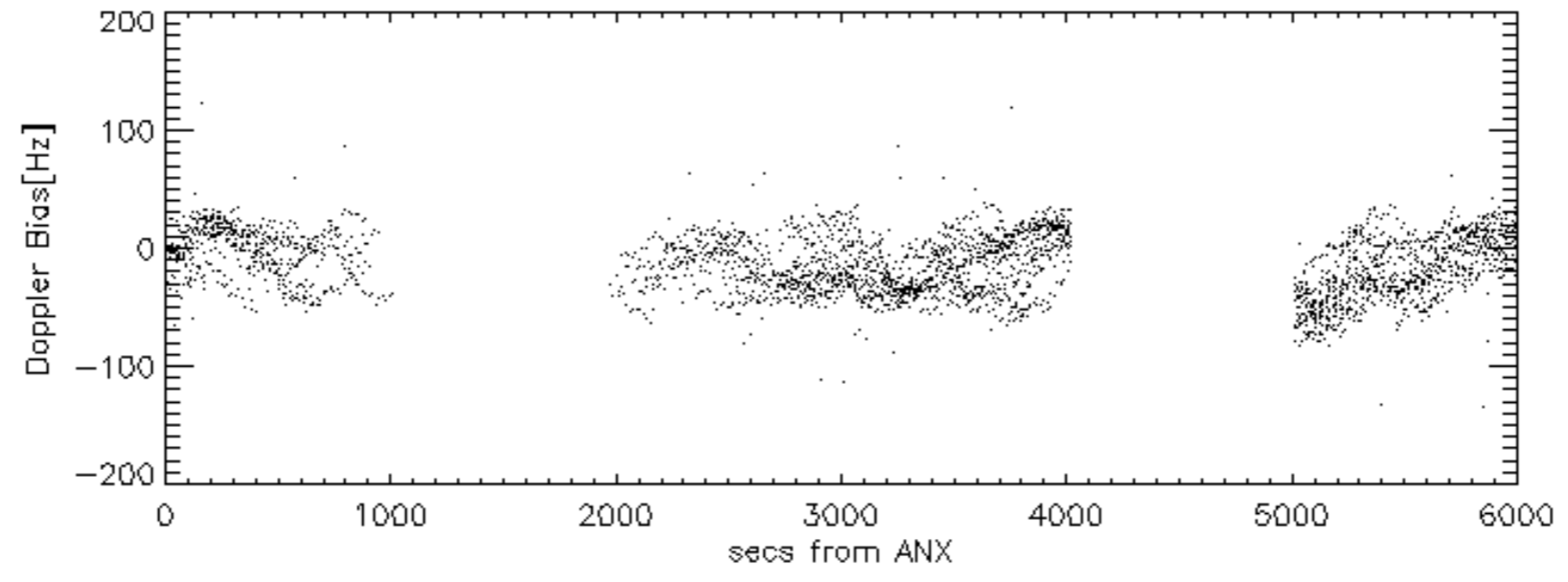
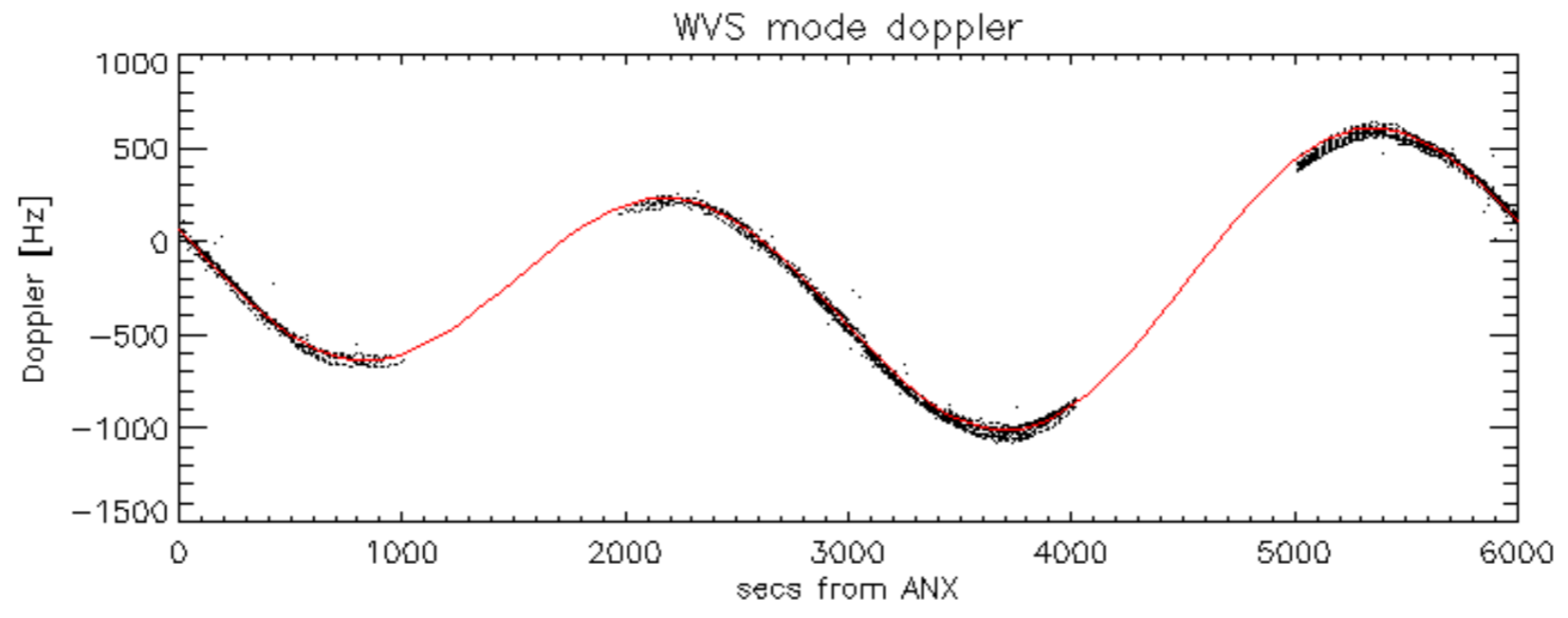


Doppler 'WVS' 'IS2' descending

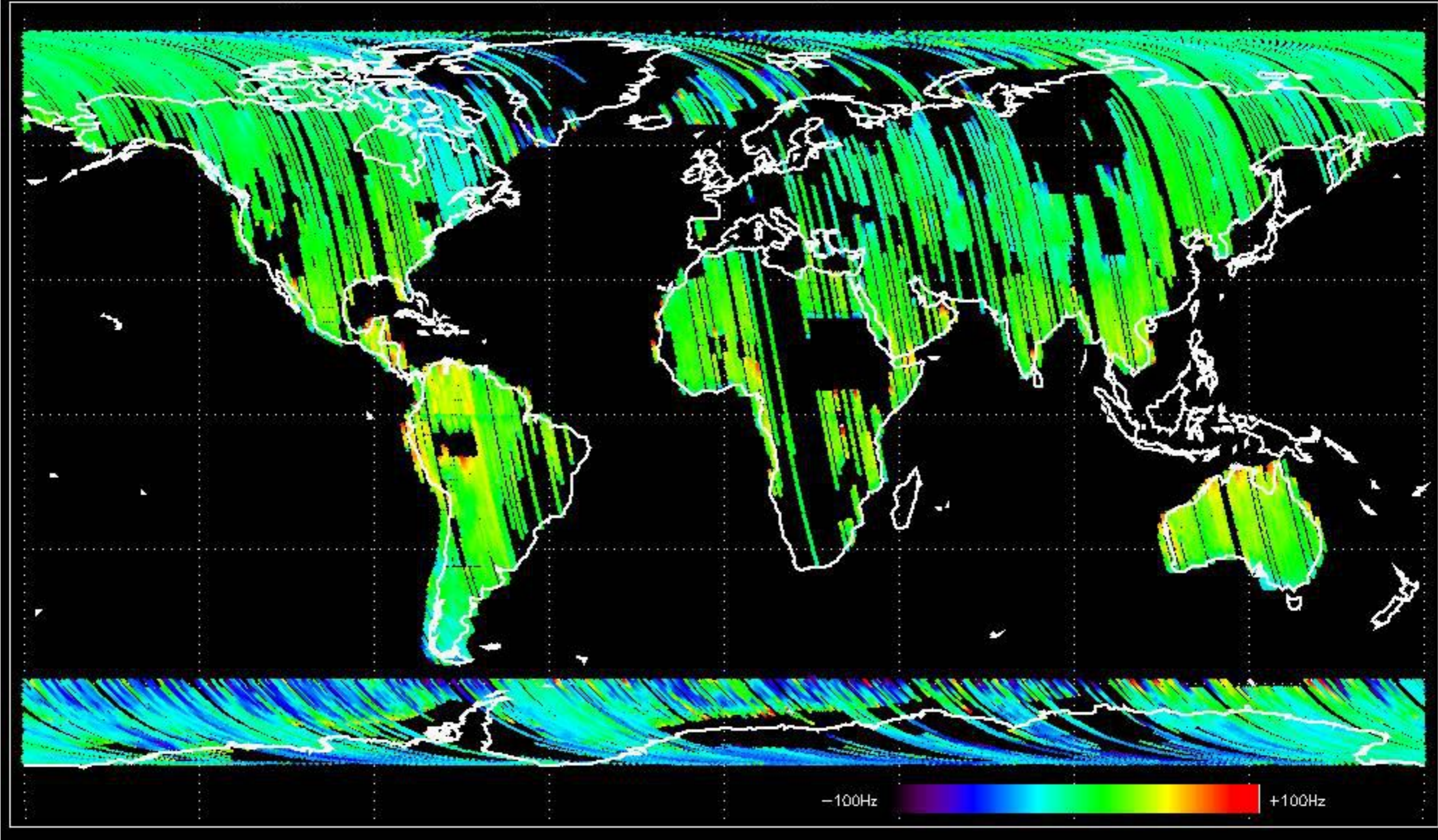


GM1 mode doppler

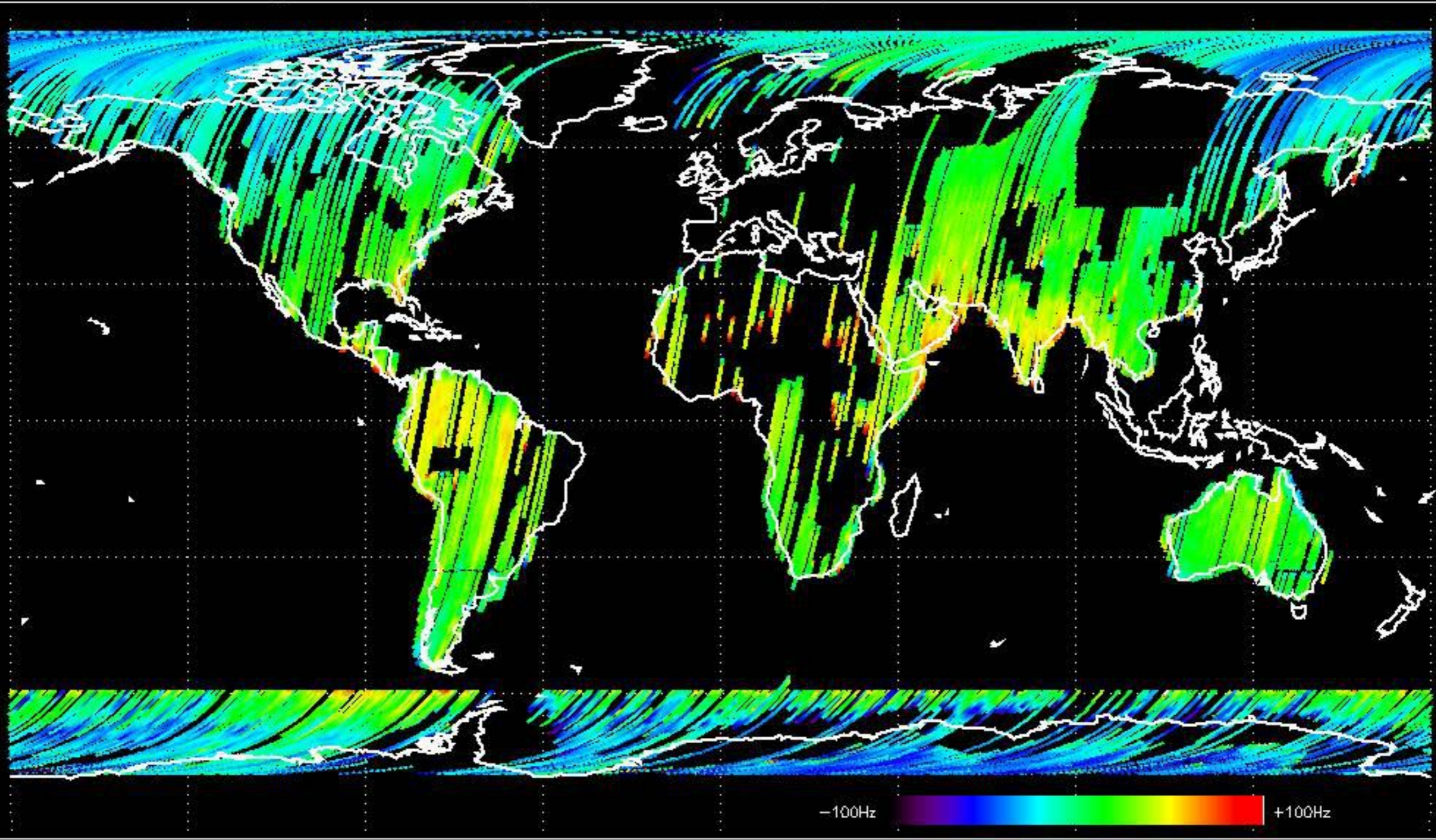




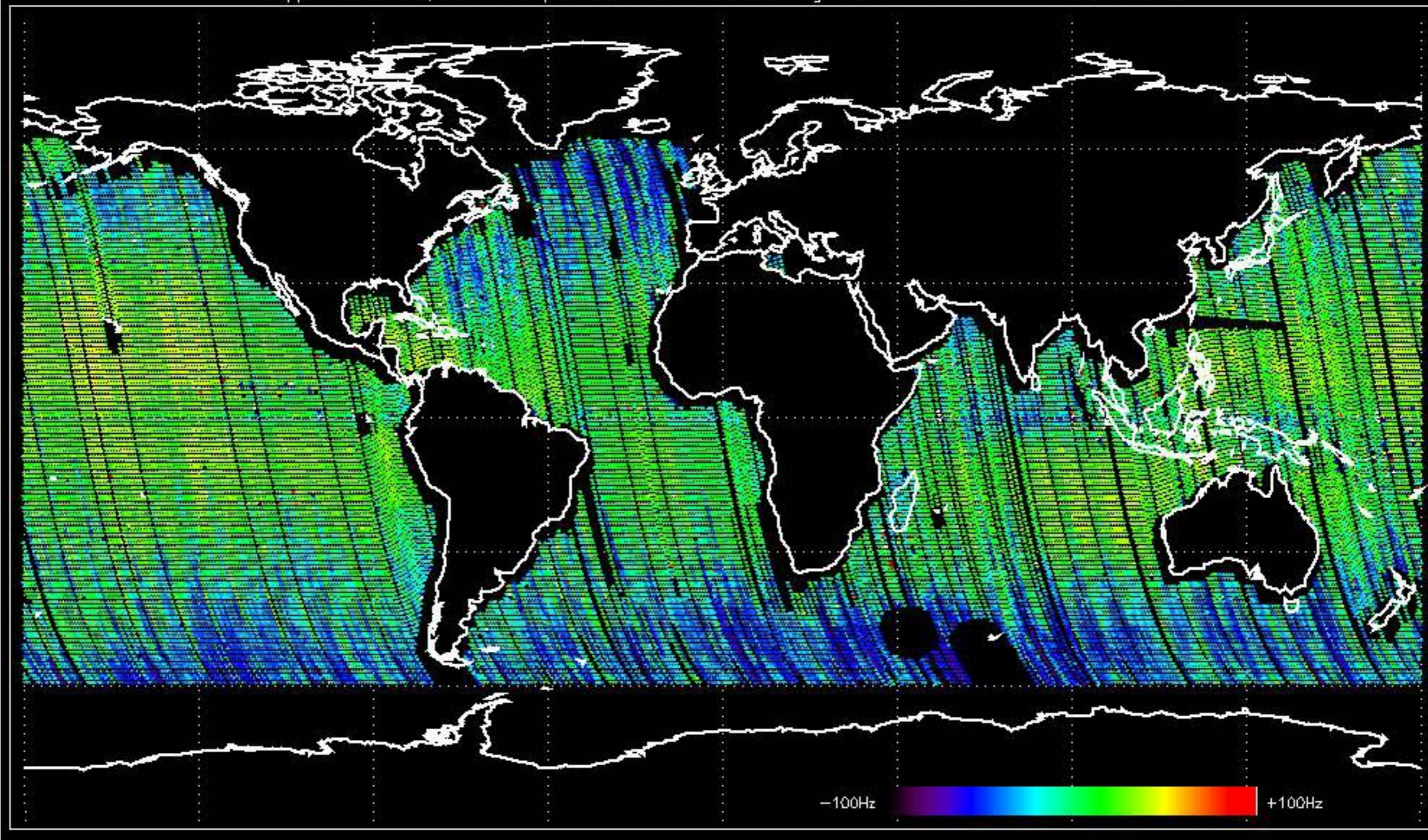
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -14.188090 Hz



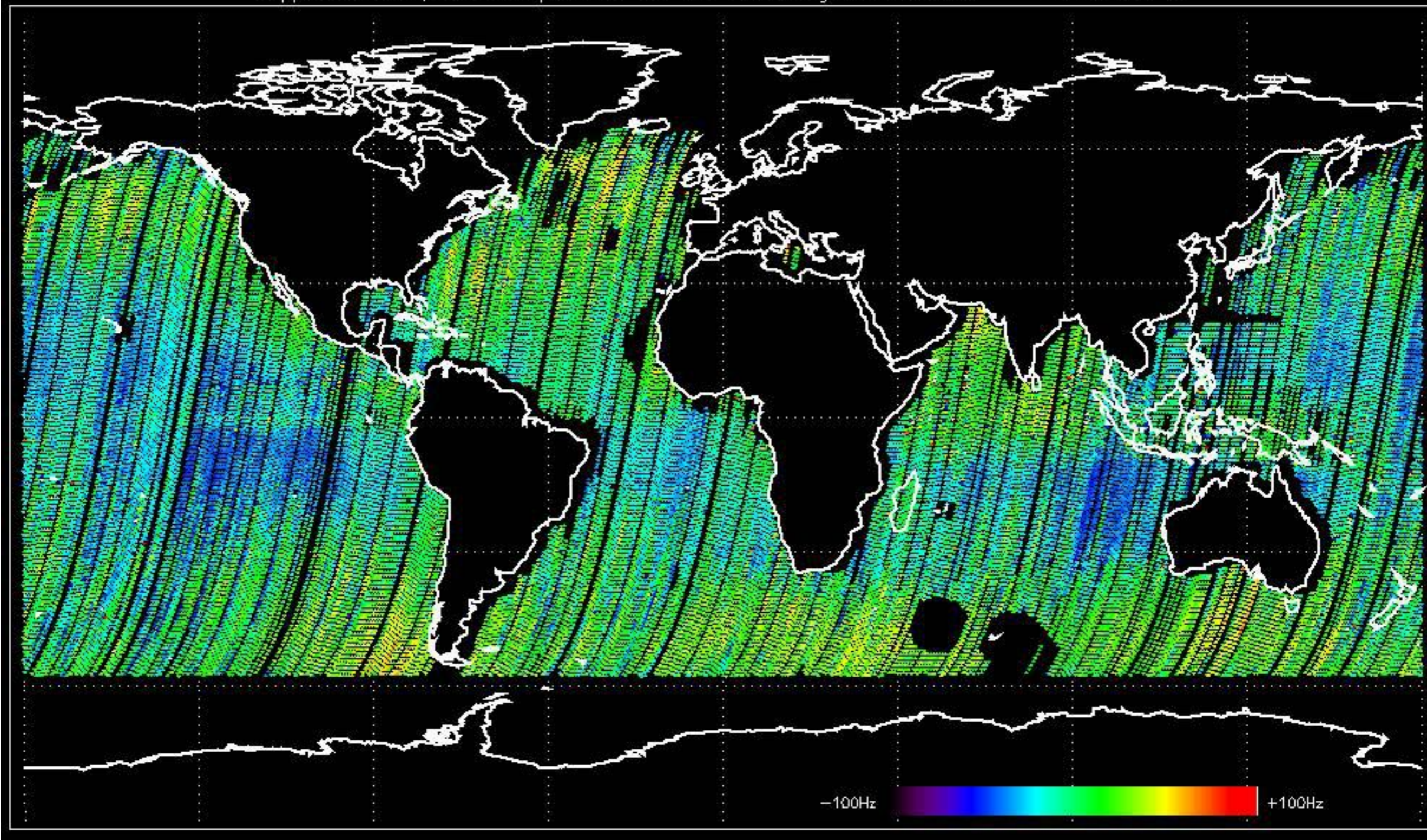
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -3.9994998 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.5131922 Hz

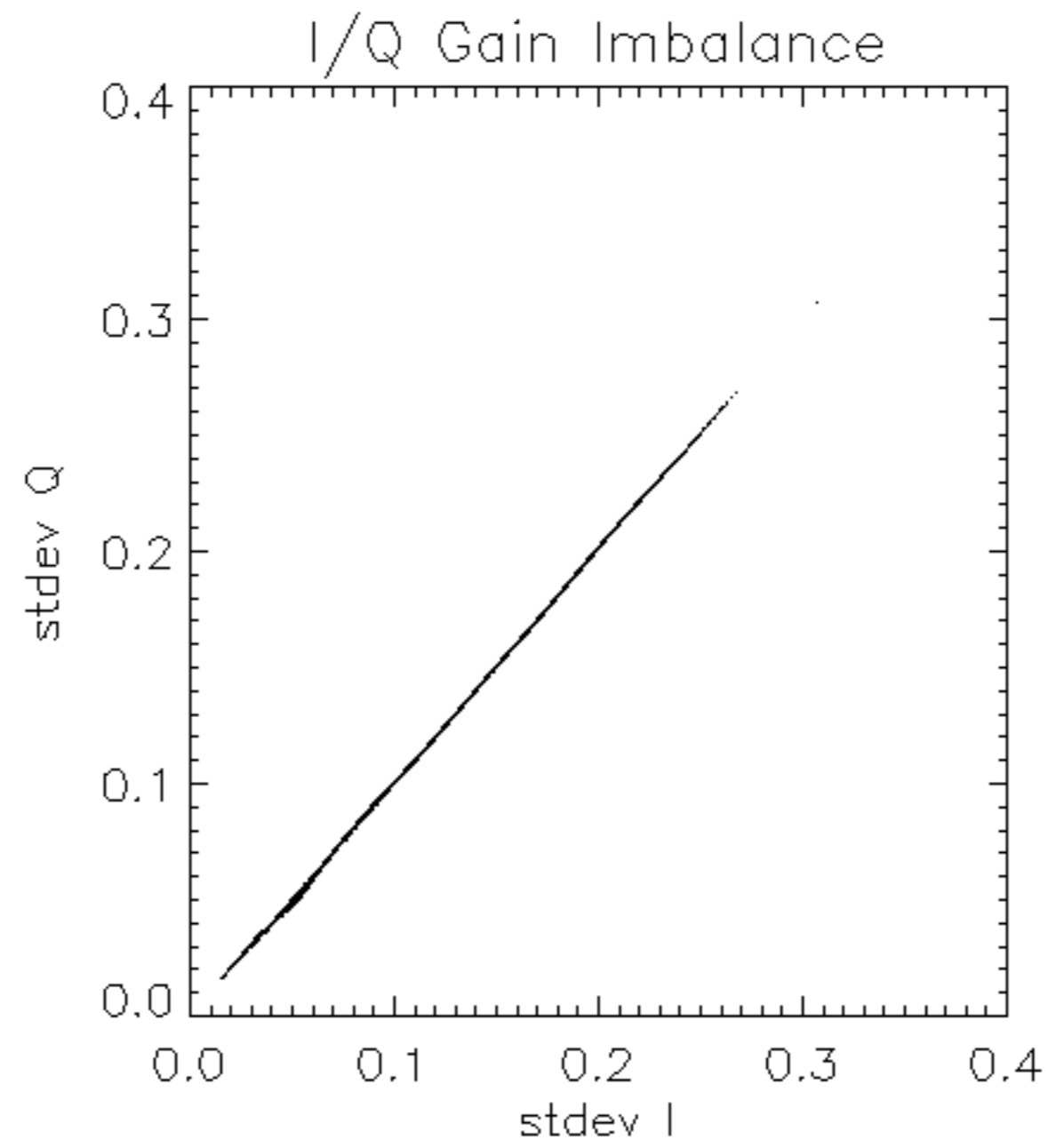


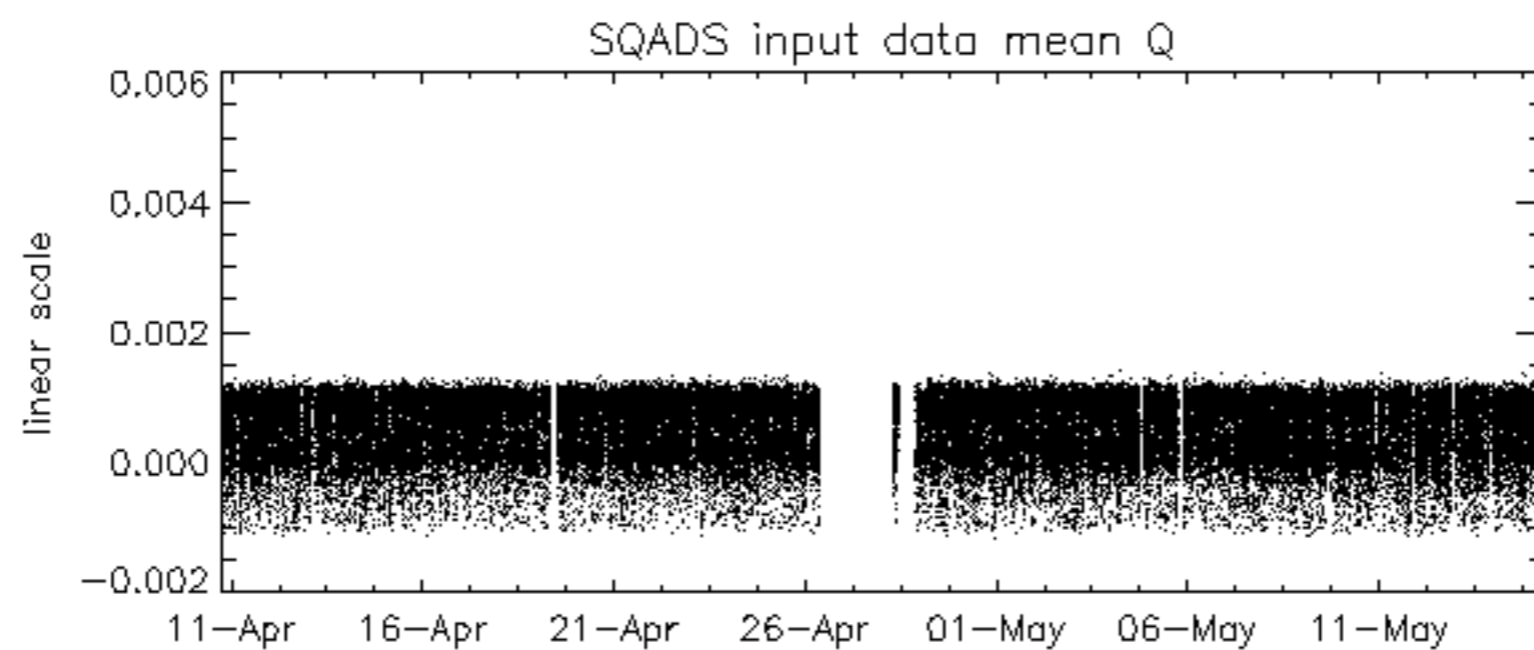
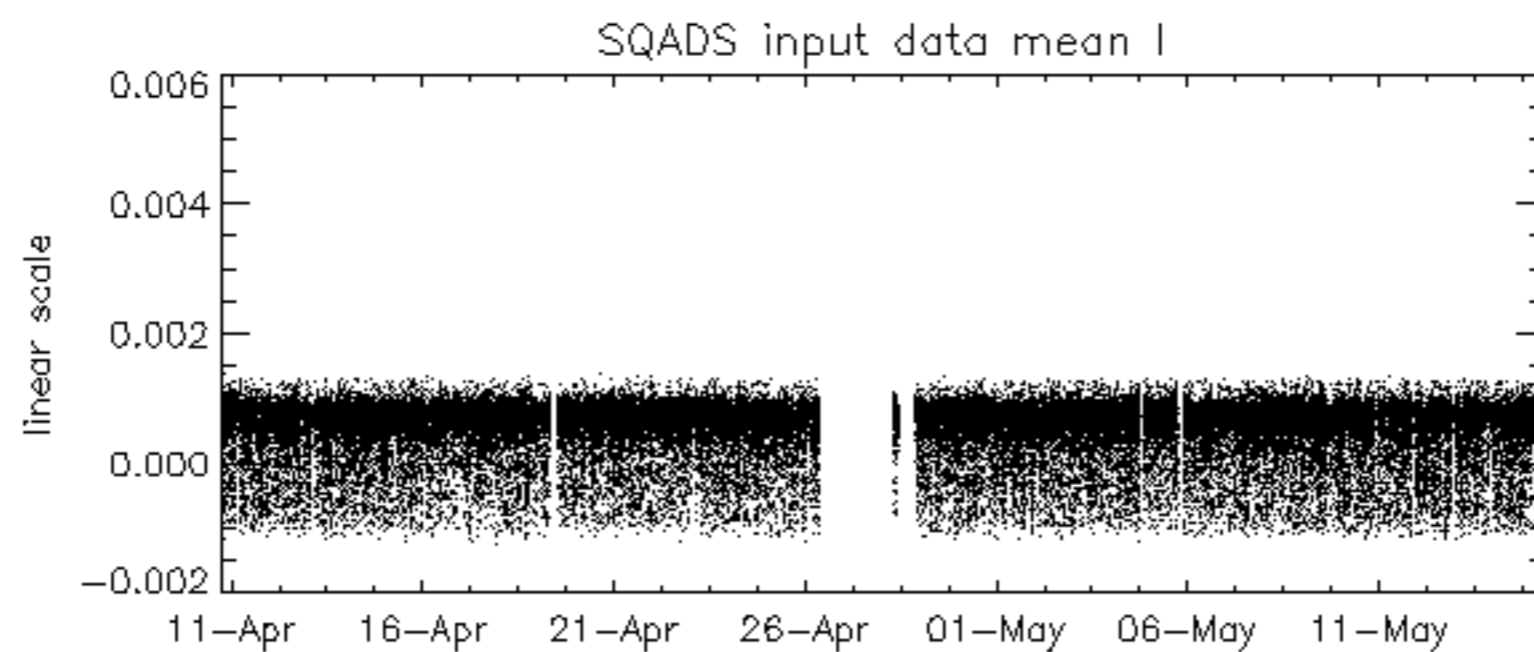
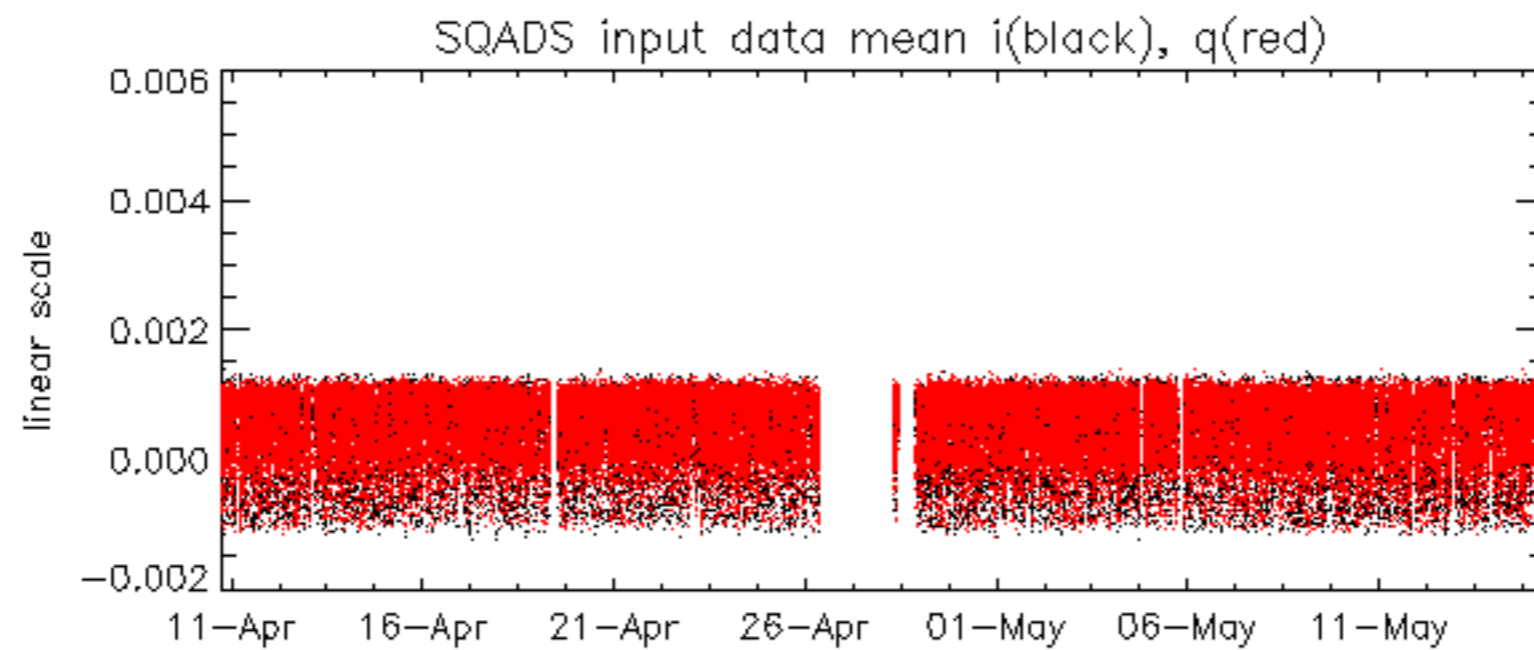
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.472380 Hz

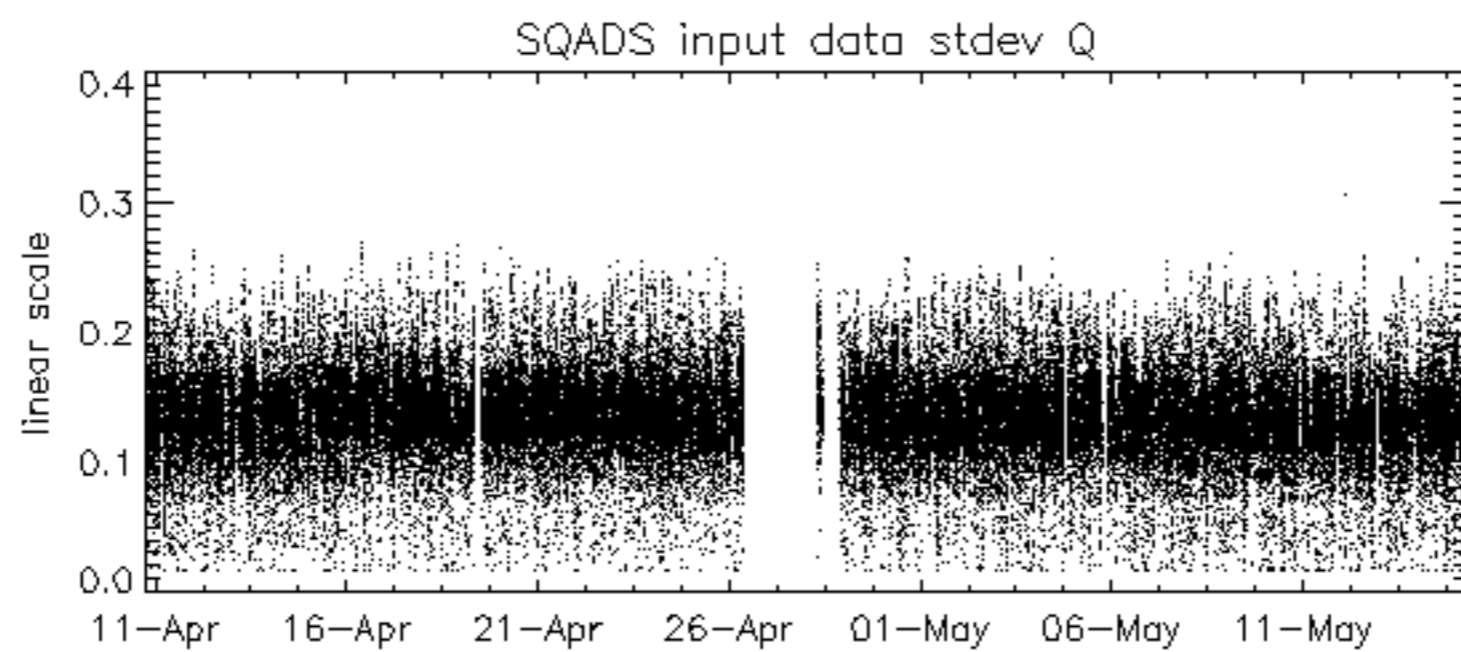
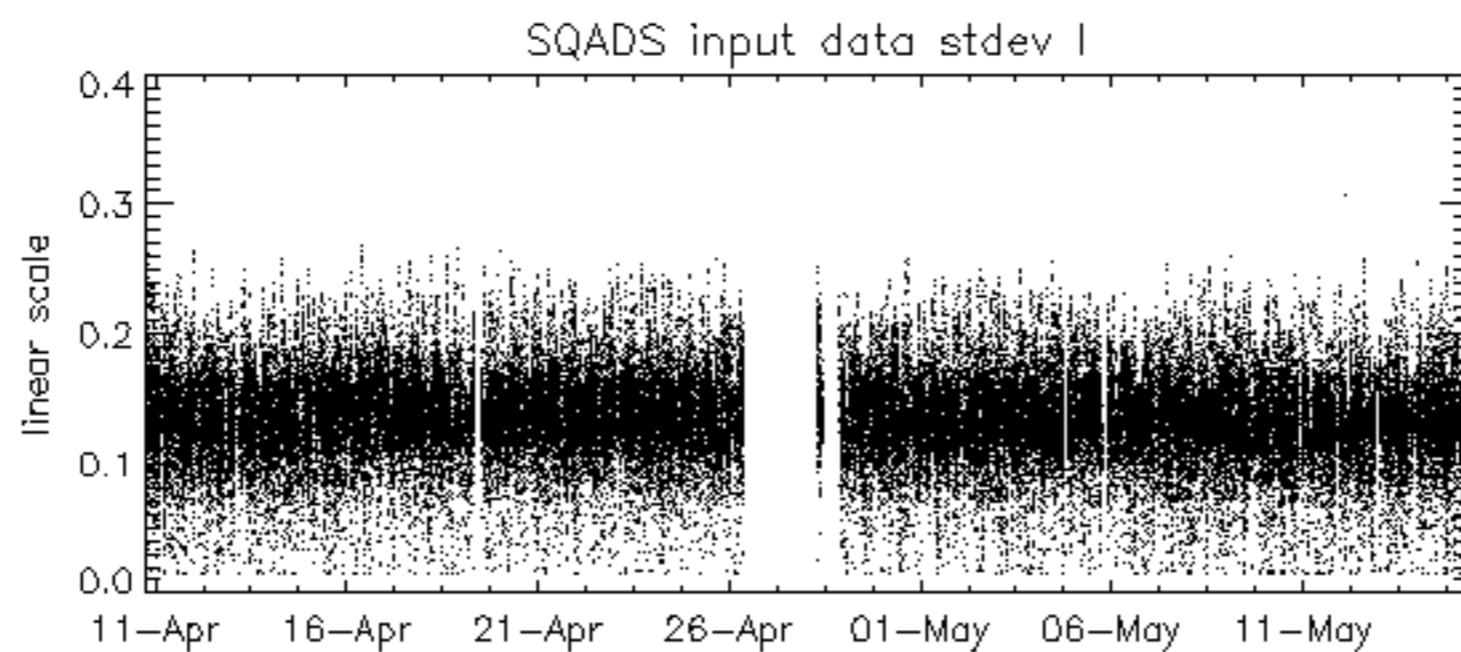
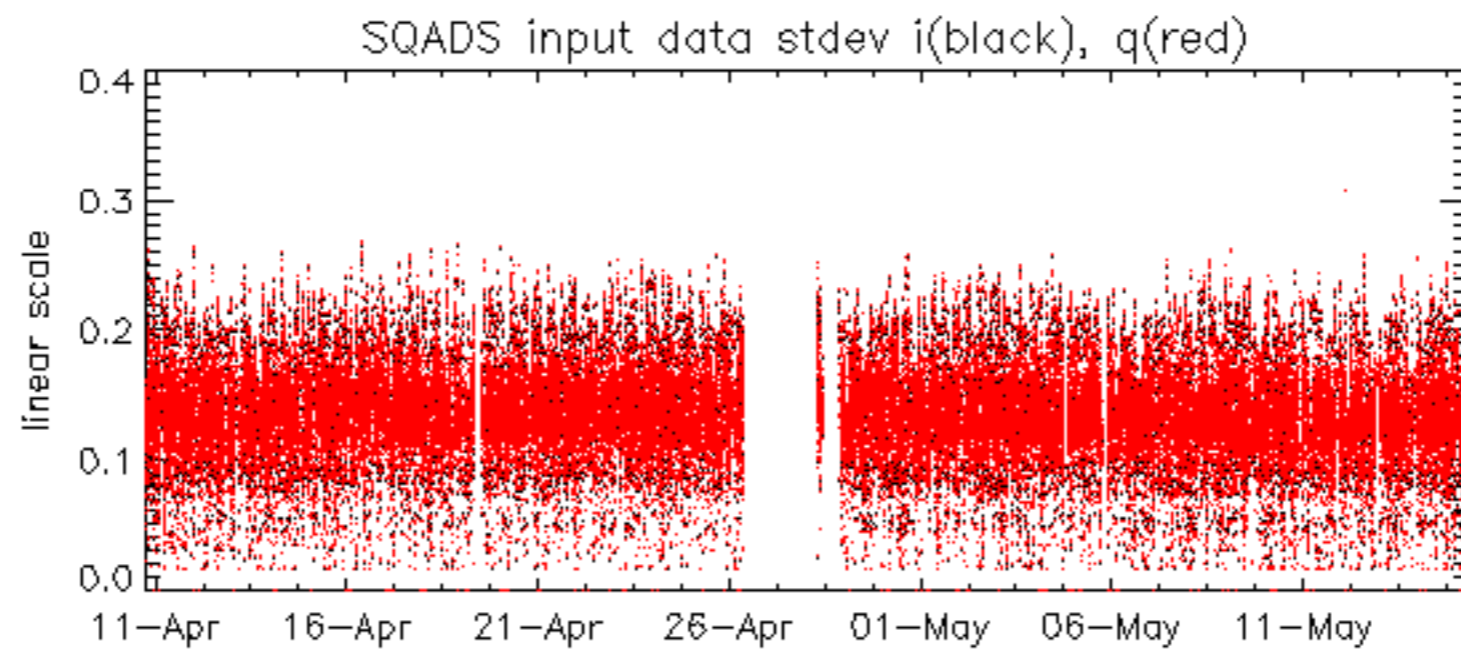


No anomalies observed on available MS products:

No anomalies observed.



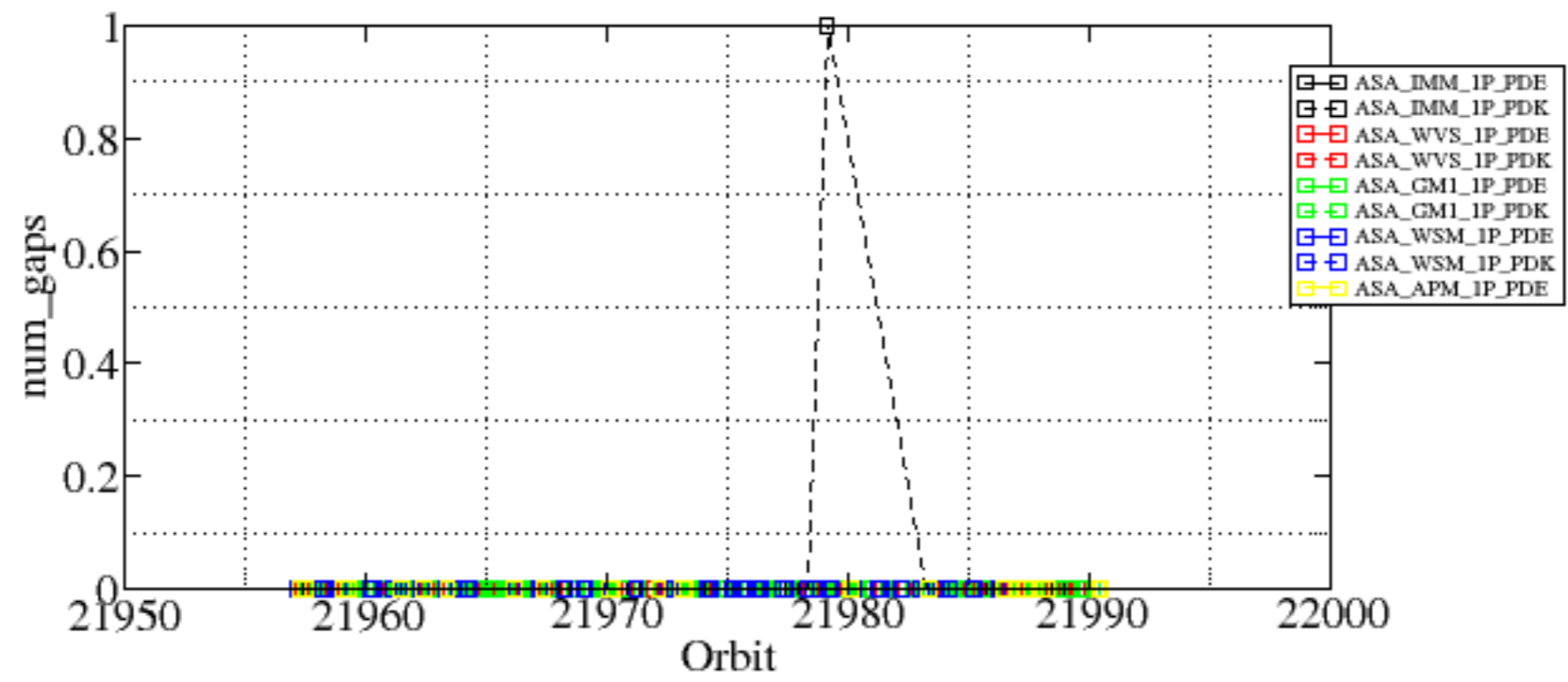


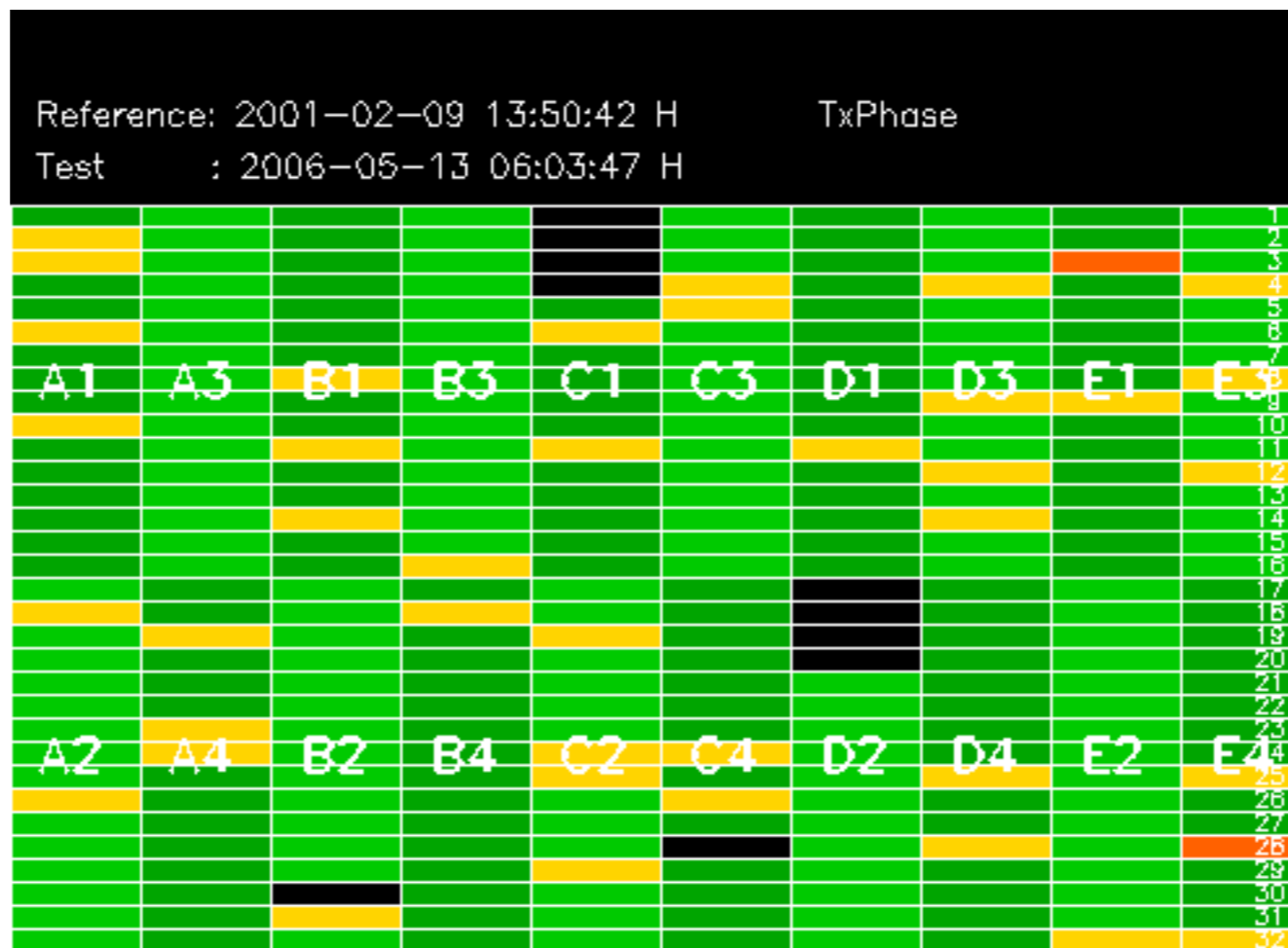


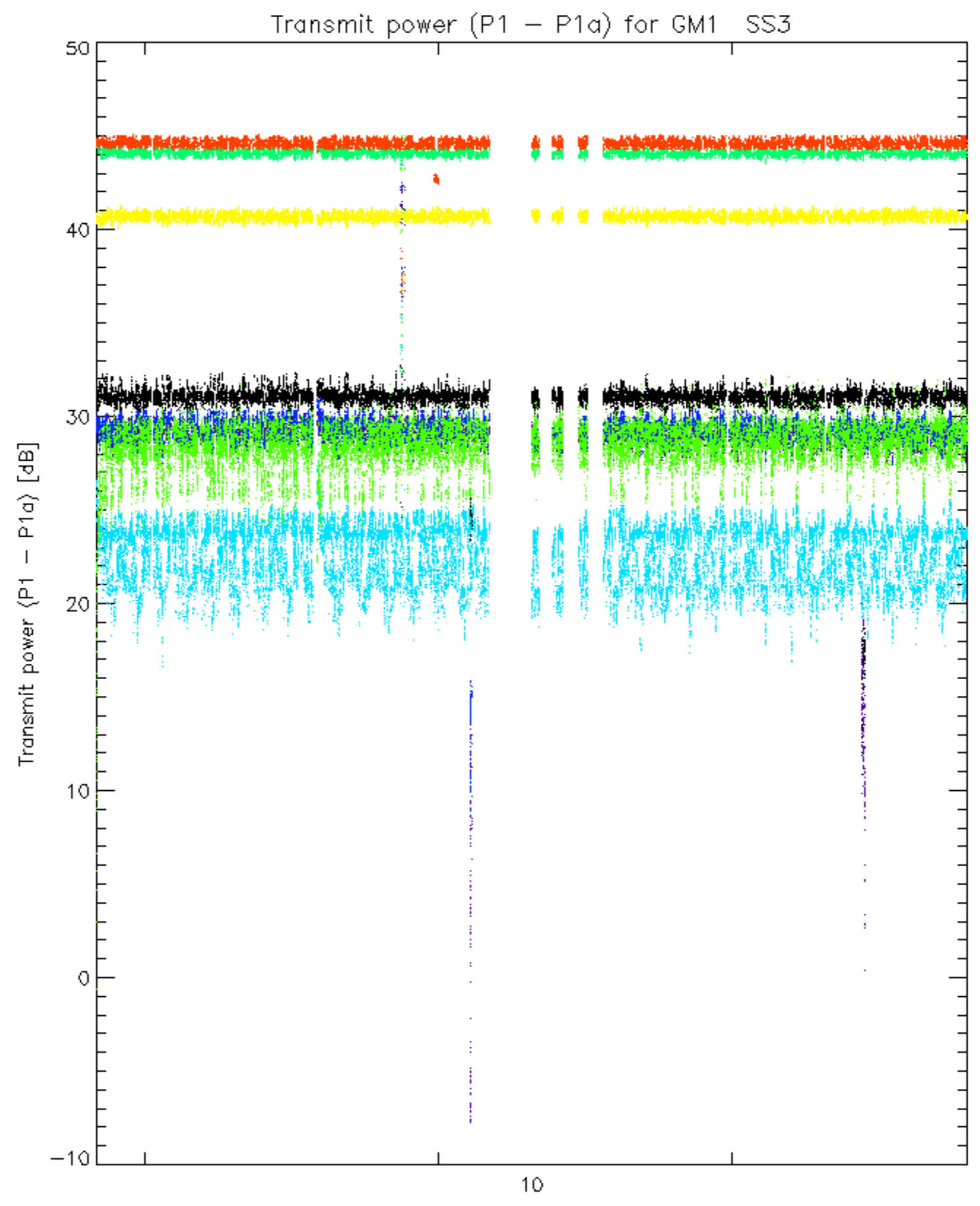
Summary of analysis for the last 3 days 2006051[345]

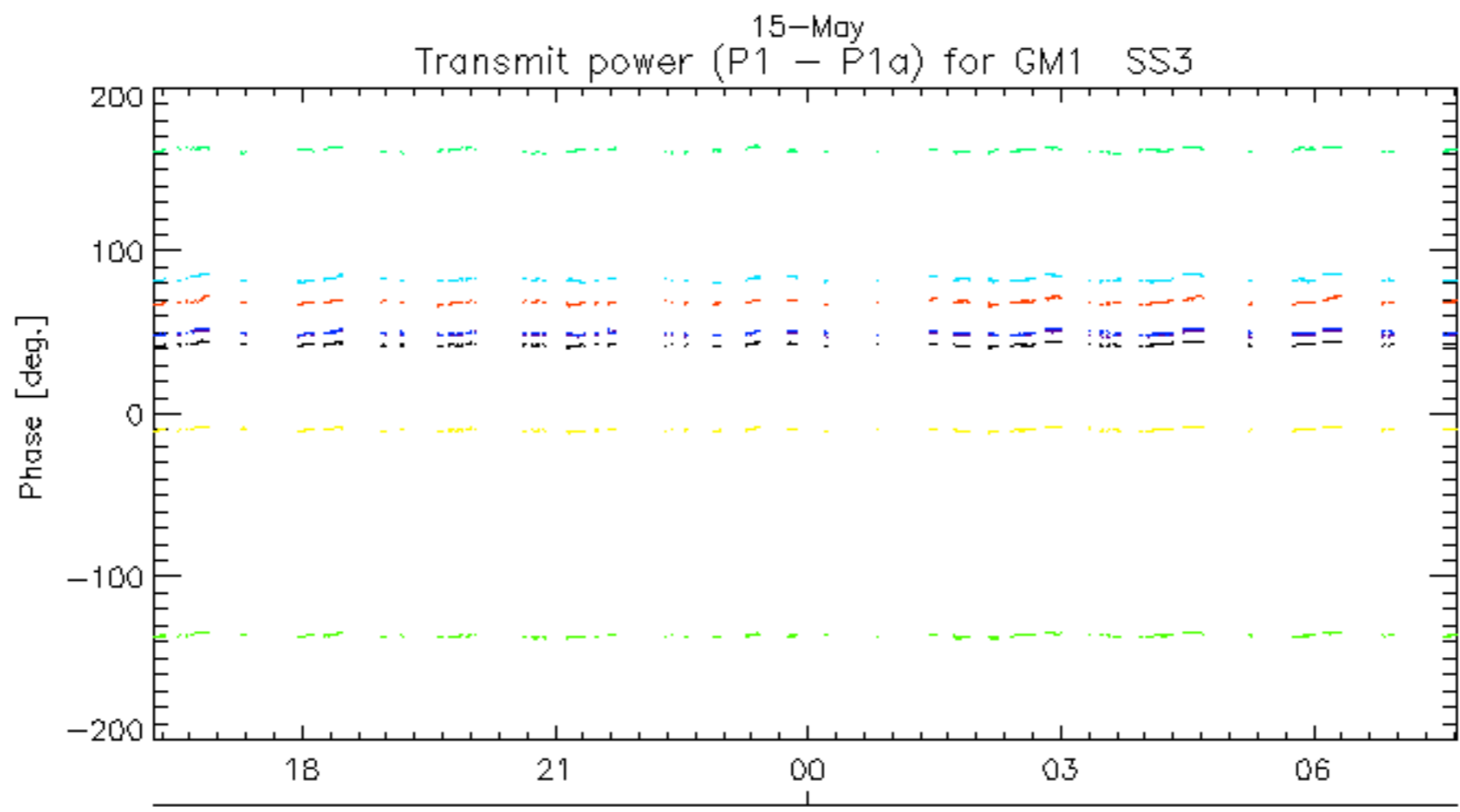
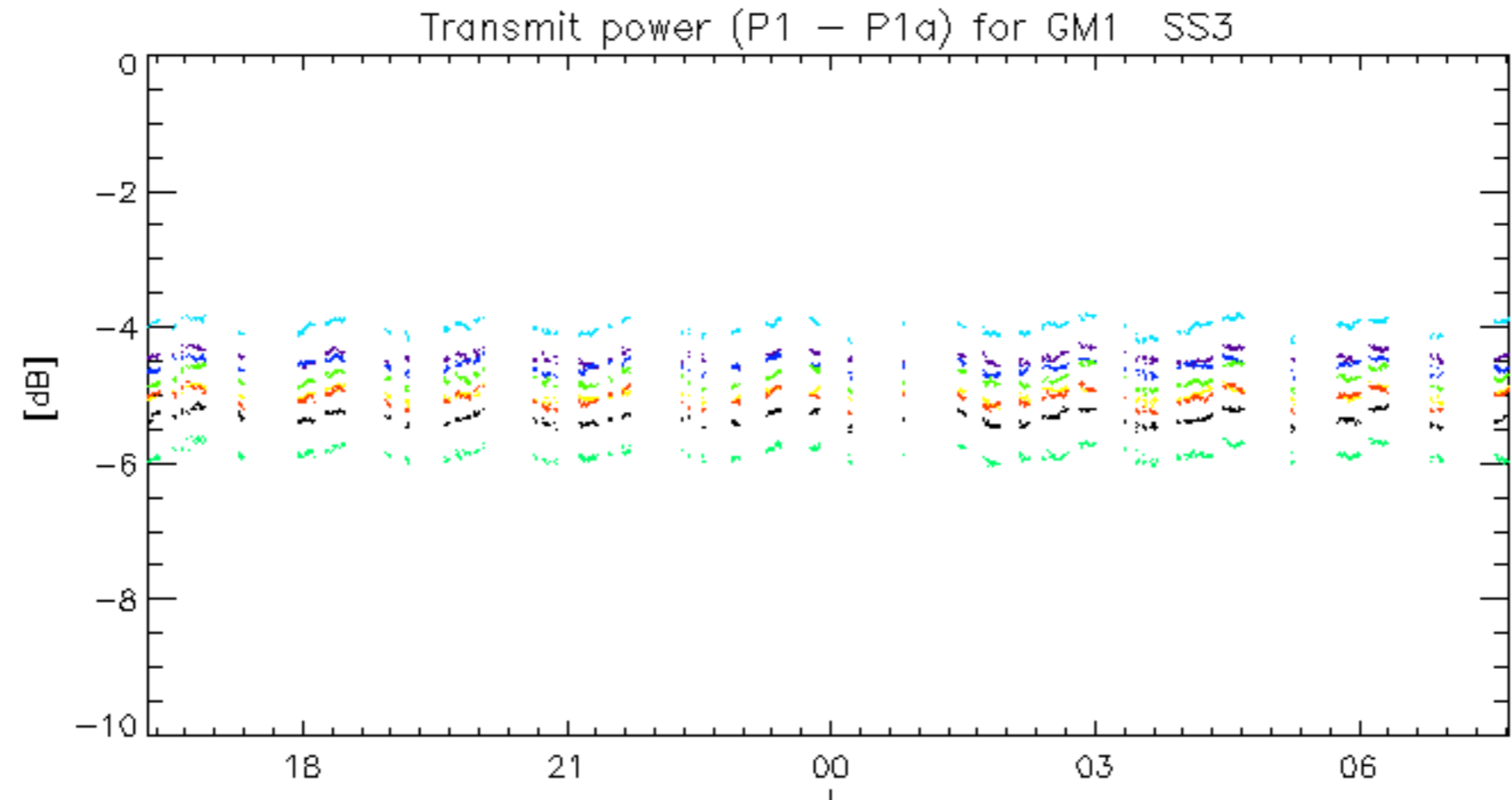
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060513_182646_00000352047_00371_21968_4970.N1	0	15
ASA_IMM_1PNPDK20060514_125915_000001272047_00382_21979_1748.N1	1	0
ASA_WSM_1PNPDE20060514_014737_000000862047_00375_21972_9156.N1	0	45
ASA_WSM_1PNPDK20060513_052729_000000122047_00363_21960_4998.N1	0	472
ASA_WSM_1PNPDK20060513_103058_000001292047_00366_21963_4958.N1	0	15
ASA_APM_1PNPDE20060513_004223_000000562047_00360_21957_2192.N1	0	19

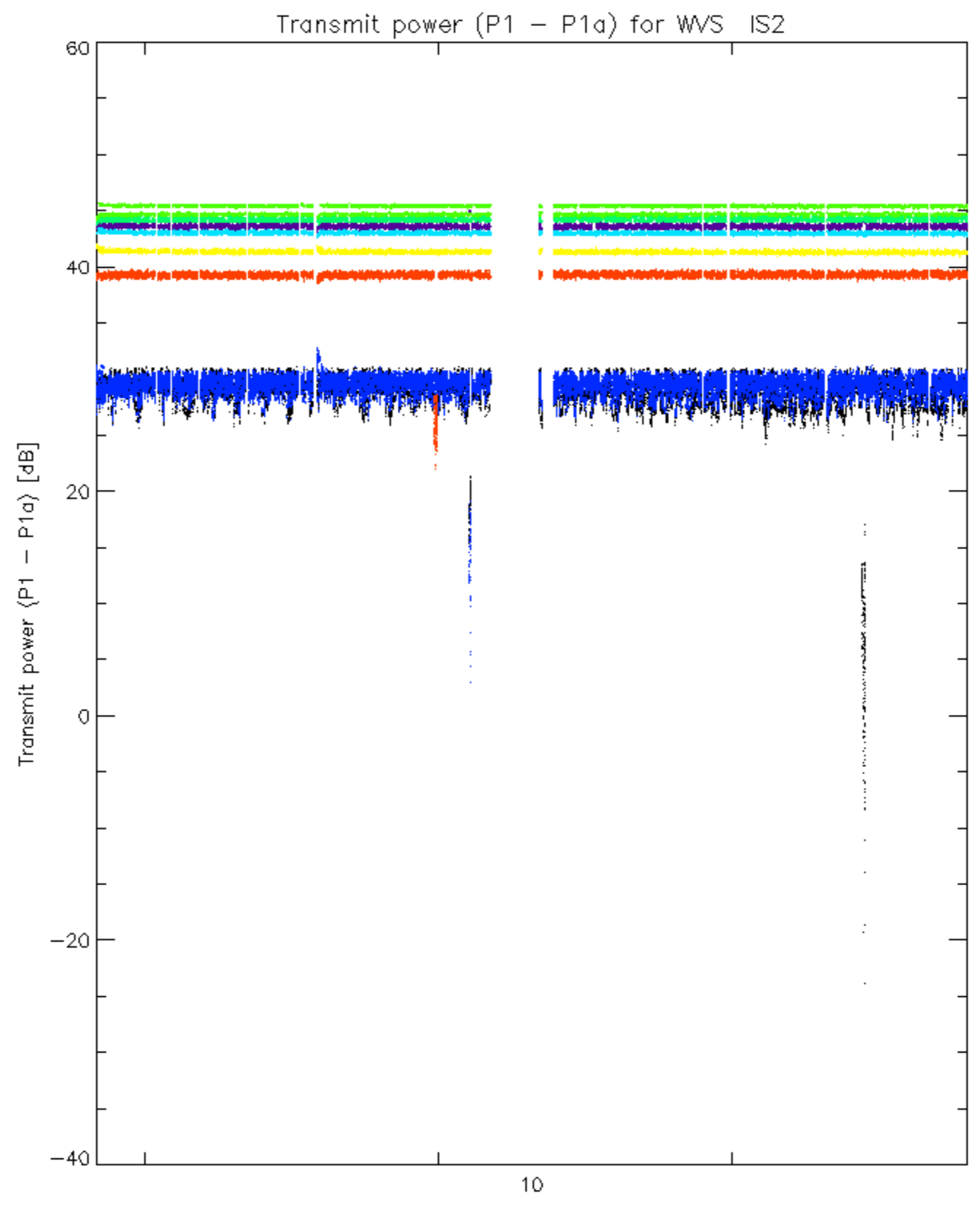




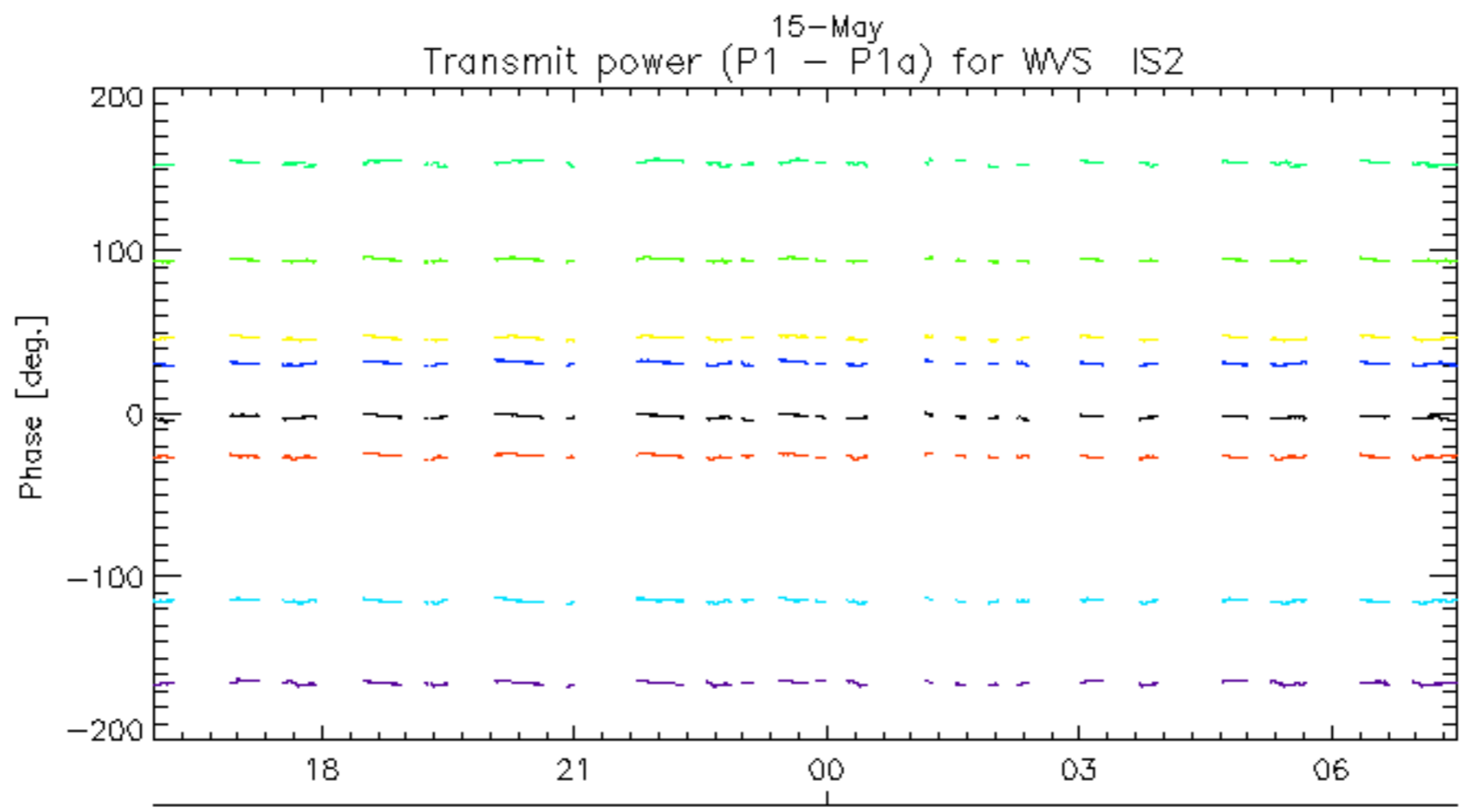
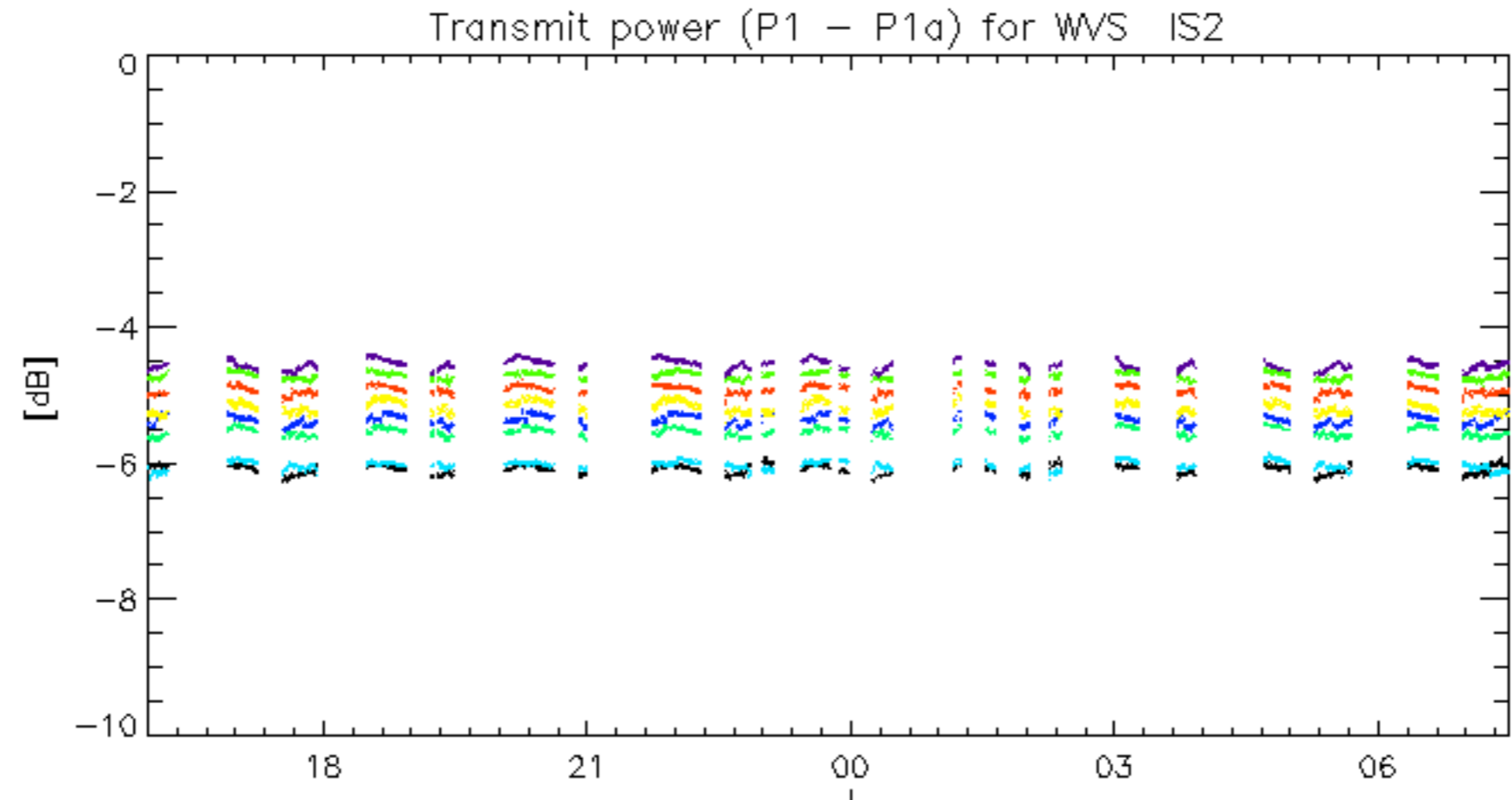




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.