

PRELIMINARY REPORT OF 060607

last update on Wed Jun 7 16:43:40 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 2006-06-06 00:00:00 to 2006-06-07 16:43:40

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	69	9	1	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	69	9	1	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	69	9	1	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	69	9	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	50	27	41	63
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	41	50	27	41	63
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	41	50	27	41	63
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	50	27	41	63

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	20060605 054047
H	20060606 050911

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	-3.950459	0.017544	0.057703
7	P1	-3.114965	0.016651	-0.048374
11	P1	-4.108165	0.018385	0.013109
15	P1	-6.136809	0.019833	-0.002985
19	P1	-3.327328	0.008378	-0.042011
22	P1	-4.516325	0.011398	0.027500
26	P1	-3.981111	0.018105	0.044355
30	P1	-5.747385	0.008464	0.016705
3	P1	-16.551851	0.260975	0.141107
7	P1	-17.171343	0.148532	-0.149092
11	P1	-16.934132	0.310410	-0.051869
15	P1	-13.211061	0.214532	0.019524
19	P1	-14.279237	0.048654	-0.106670
22	P1	-16.164253	0.379613	-0.014331
26	P1	-15.254386	0.243594	0.114798
30	P1	-17.048046	0.381488	-0.235963

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.192492	0.080472	0.140400
7	P2	-22.073168	0.096351	0.148454
11	P2	-15.920856	0.109697	0.140666
15	P2	-7.161193	0.091468	0.031326
19	P2	-9.165733	0.084372	-0.006022
22	P2	-18.131990	0.082198	-0.072430
26	P2	-16.375961	0.087102	-0.050317
30	P2	-19.572224	0.084895	0.072189

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185071	0.003987	0.021971
7	P3	-8.185071	0.003987	0.021971
11	P3	-8.185071	0.003987	0.021971
15	P3	-8.185071	0.003987	0.021971
19	P3	-8.185071	0.003987	0.021971
22	P3	-8.185071	0.003987	0.021971
26	P3	-8.185071	0.003987	0.021971
30	P3	-8.185071	0.003987	0.021971

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	-3.780966	0.064457	-0.069740
7	P1	-2.601707	0.031762	0.036888
11	P1	-2.865022	0.023599	0.006782
15	P1	-3.500197	0.049547	-0.023162
19	P1	-3.398185	0.014216	-0.017329
22	P1	-5.085814	0.020052	0.018217
26	P1	-5.840578	0.015617	-0.014389
30	P1	-5.186388	0.026555	0.013515
3	P1	-11.613737	0.081684	-0.029532
7	P1	-9.966827	0.054060	0.004562
11	P1	-10.205435	0.085521	-0.036405
15	P1	-10.632454	0.150063	-0.102872
19	P1	-15.512900	0.076845	-0.054386
22	P1	-20.892223	1.211994	-0.098243

26	P1	-16.478308	0.349363	0.022808
30	P1	-17.986595	0.389344	0.264736

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.880703	0.066925	0.117724
7	P2	-22.508242	0.125220	0.064242
11	P2	-11.175371	0.045113	0.065950
15	P2	-4.906403	0.046057	-0.012377
19	P2	-6.876919	0.050117	0.002415
22	P2	-8.196473	0.041023	-0.022434
26	P2	-24.111835	0.064426	-0.051389
30	P2	-22.063318	0.052535	-0.000132

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018104	0.004615	0.018862
7	P3	-8.018220	0.004614	0.018956
11	P3	-8.018131	0.004604	0.019407
15	P3	-8.018020	0.004614	0.018782
19	P3	-8.018175	0.004611	0.018939
22	P3	-8.018206	0.004602	0.018779
26	P3	-8.018165	0.004598	0.018354
30	P3	-8.018135	0.004608	0.018587

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	0.000529529
	stdev	1.92052e-07
MEAN Q	mean	0.000507724
	stdev	2.31078e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133880
	stdev	0.00120148
STDEV Q	mean	0.134220
	stdev	0.00121828



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006060[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_1PNPDE20060606_003645_000001642048_00202_22300_6709.N1	1	0
ASA_GM1_1PNPDK20060606_092117_000007552048_00208_22306_4644.N1	0	24
ASA_WSM_1PNPDE20060605_015912_000000852048_00189_22287_2669.N1	0	63
ASA_WSM_1PNPDE20060605_043830_000001282048_00191_22289_2688.N1	0	34
ASA_WSM_1PNPDE20060605_180337_000001712048_00199_22297_2784.N1	0	8

ASA_WSM_1PNPDE20060605_202223_000001292048_00200_22298_2823.N1	0	34
ASA_WSM_1PNPDE20060606_040457_000002692048_00205_22303_2880.N1	0	13
ASA_WSM_1PNPDE20060606_112905_000001292048_00209_22307_2917.N1	0	14
ASA_WSM_1PNPDE20060606_141126_000001522048_00211_22309_2967.N1	0	49
ASA_WSM_1PNPDE20060606_204401_000000862048_00214_22312_3005.N1	0	1
ASA_WSM_1PNPDE20060607_015506_000000852048_00218_22316_3054.N1	0	54



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**7.4 - Unbiased Doppler Error for GM1****Evolution of unbiased Doppler error (Real - Expected)**

Acsending

Descending

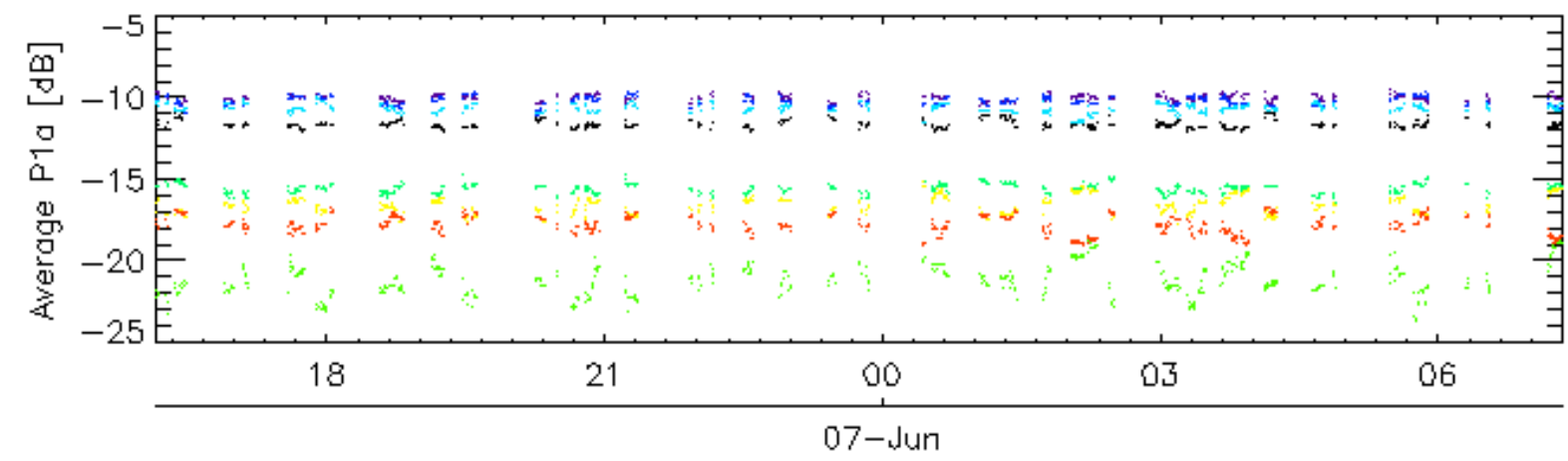
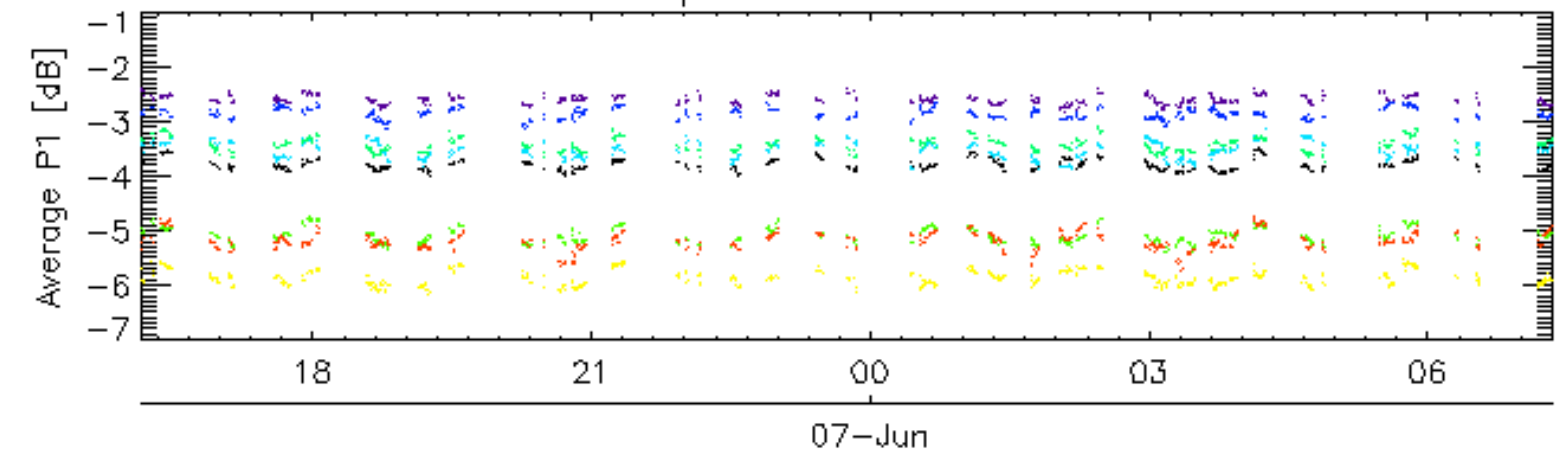
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

Acsending

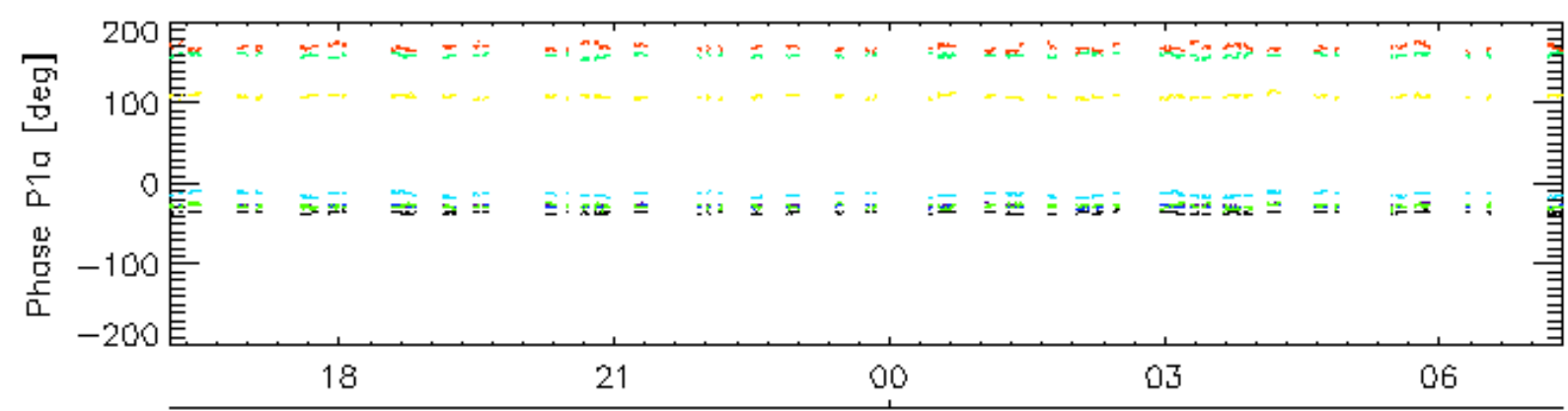
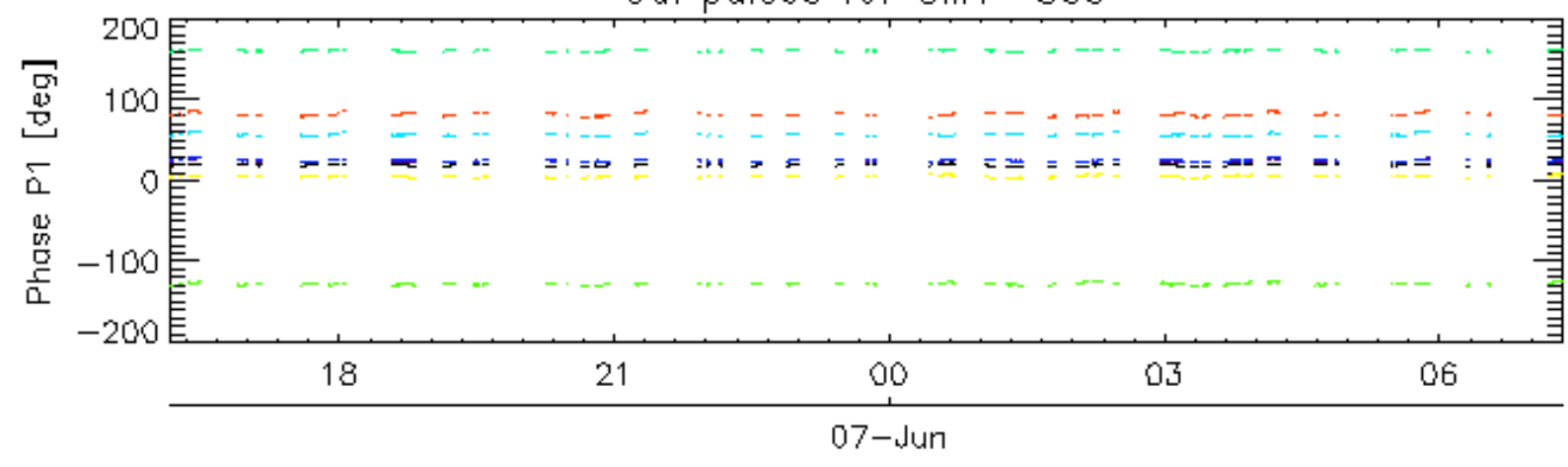
Descending

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

Cal pulses for GM1 SS3

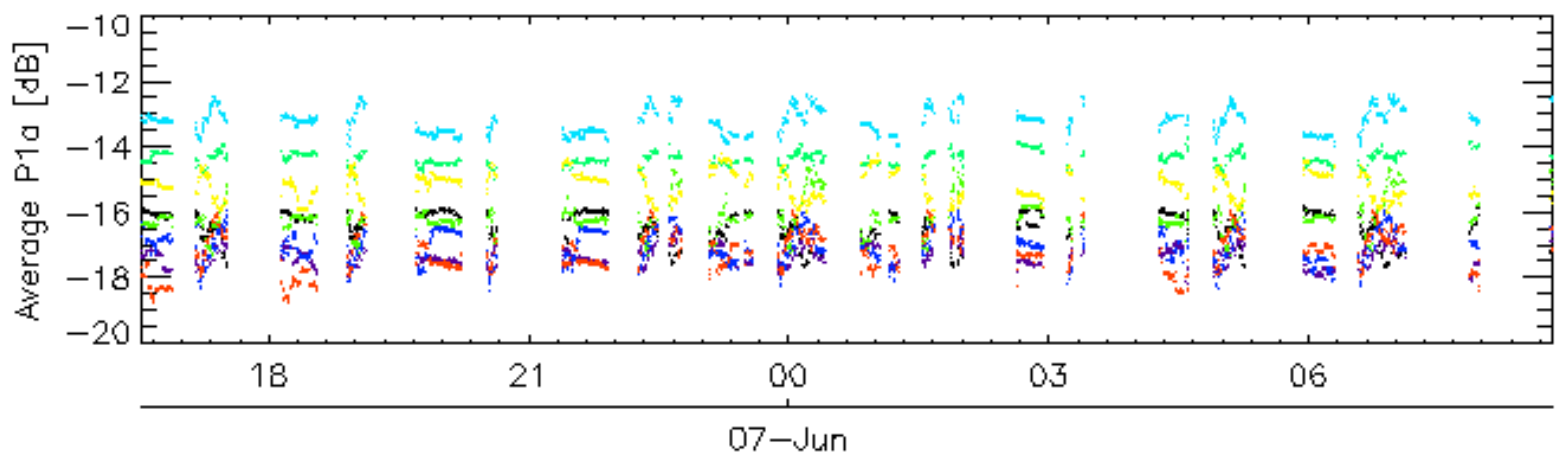
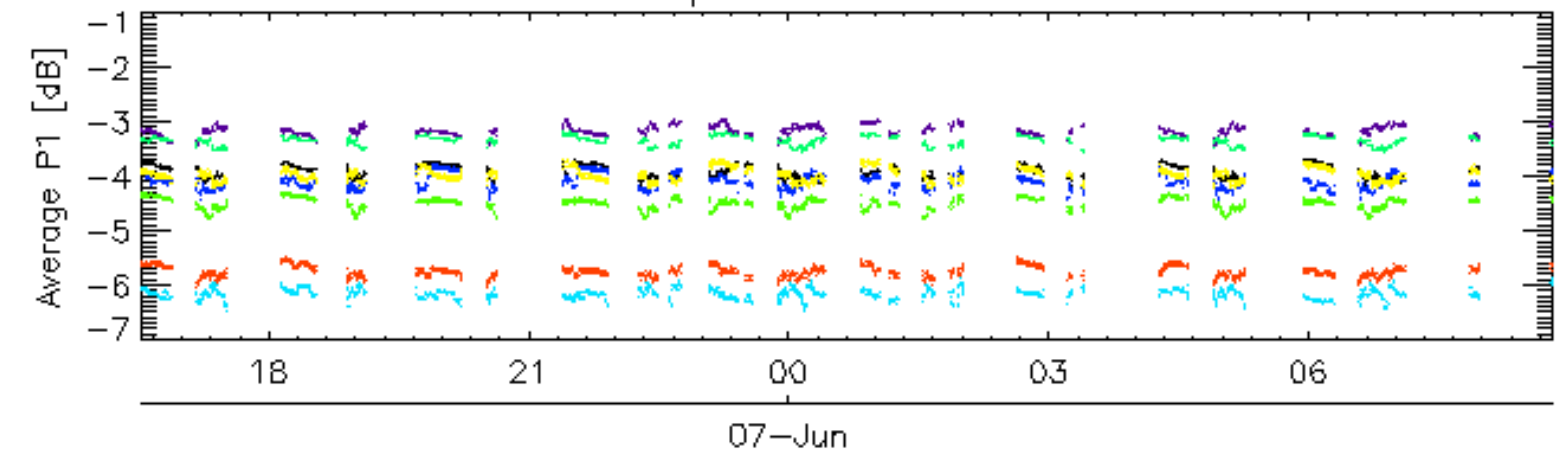


Cal pulses for GM1 SS3

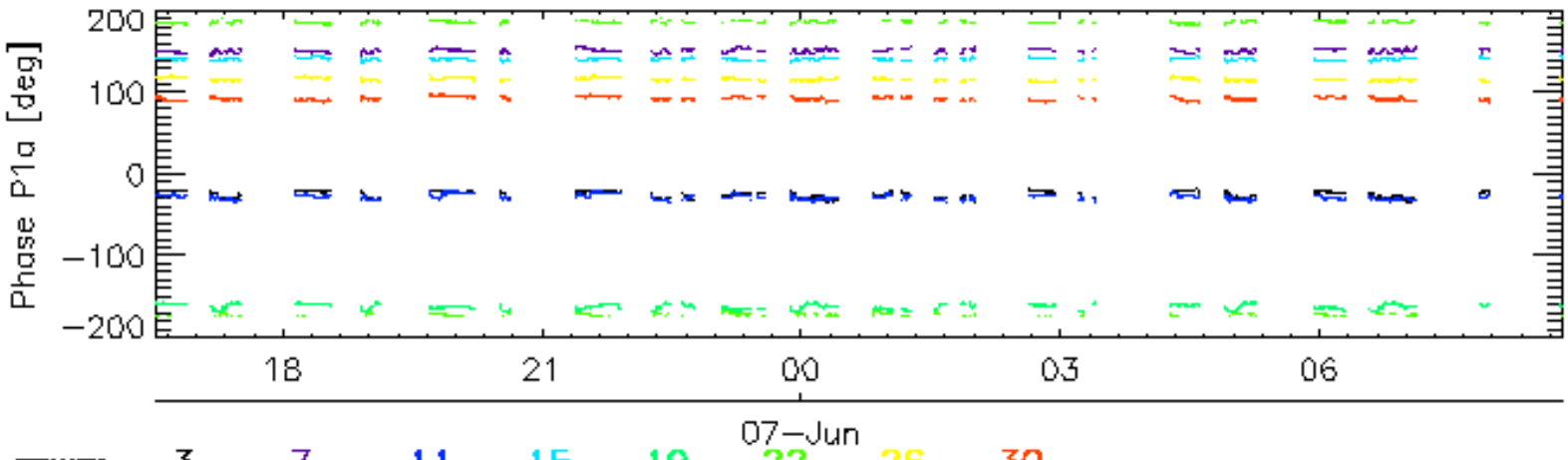
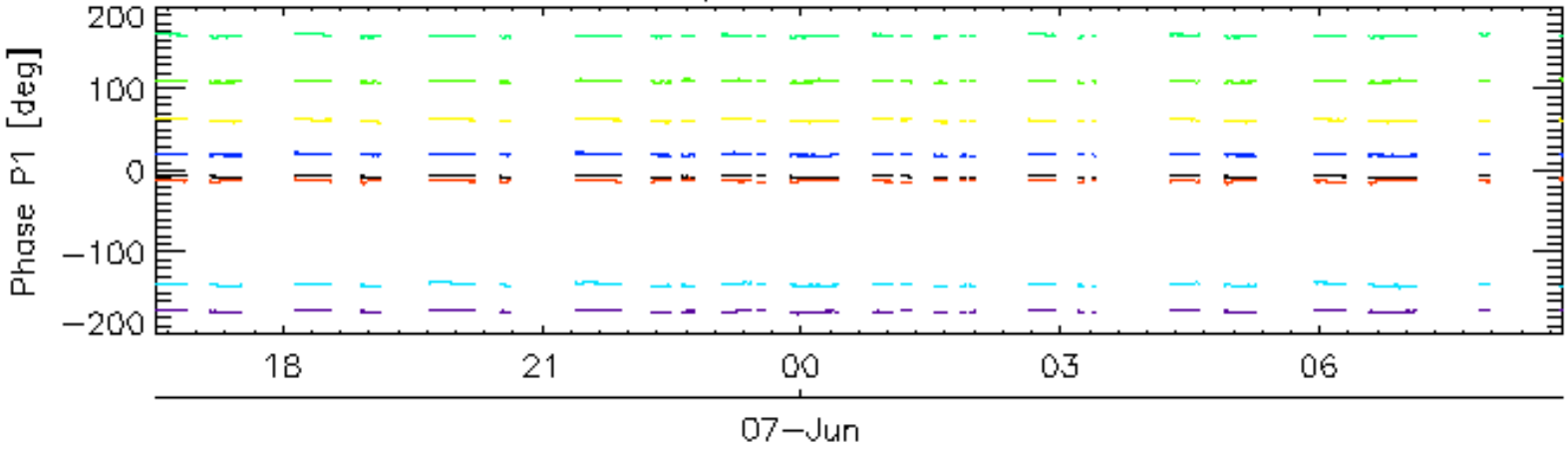


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

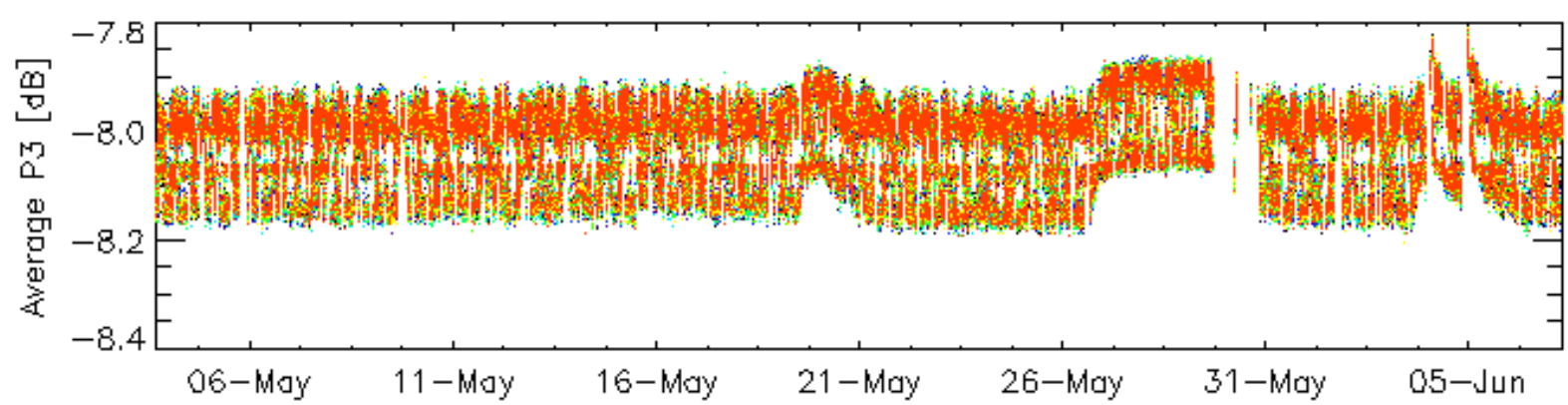
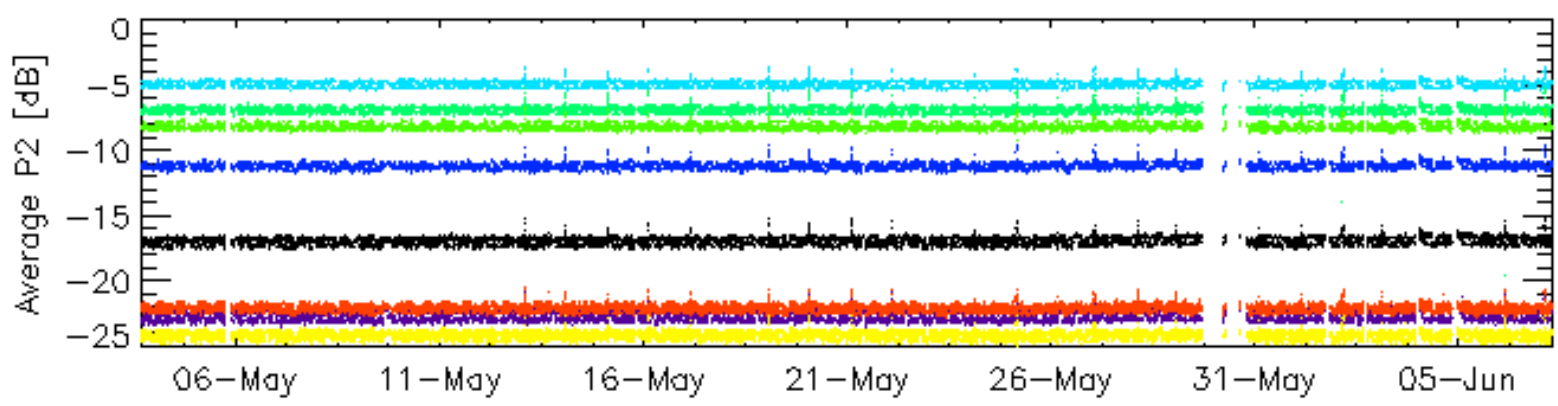
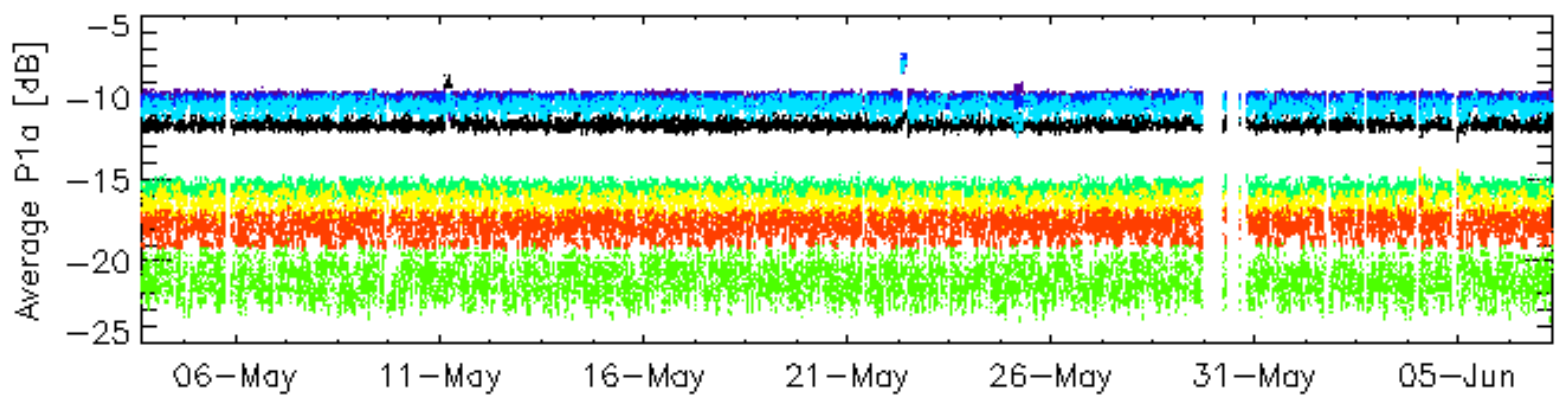
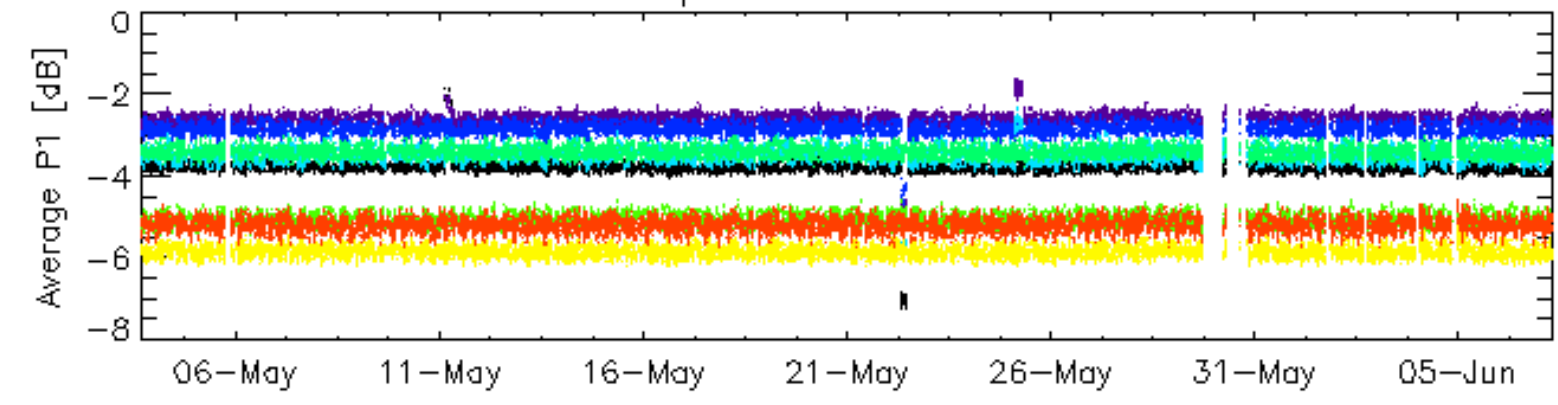


Cal pulses for WVS IS2



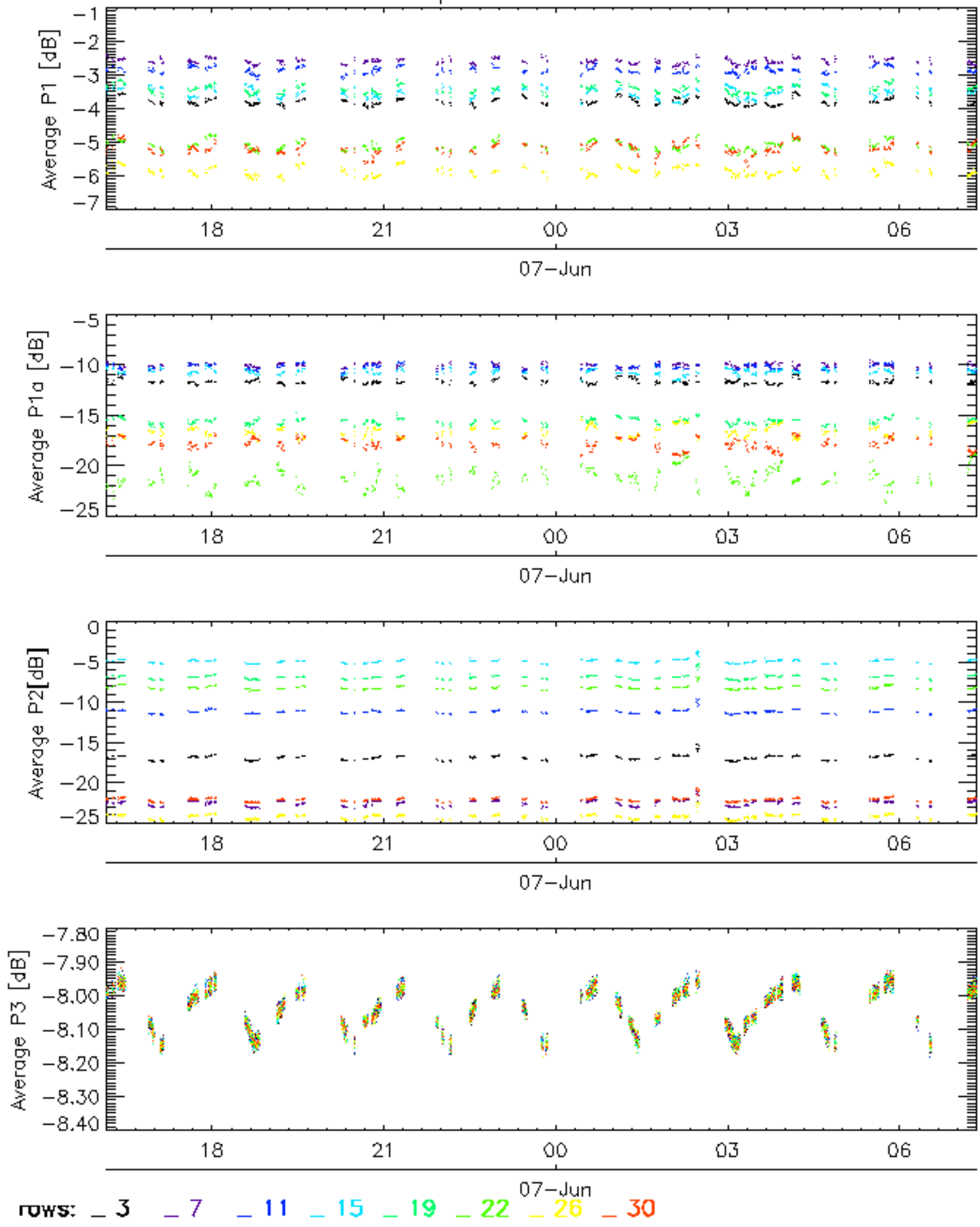
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

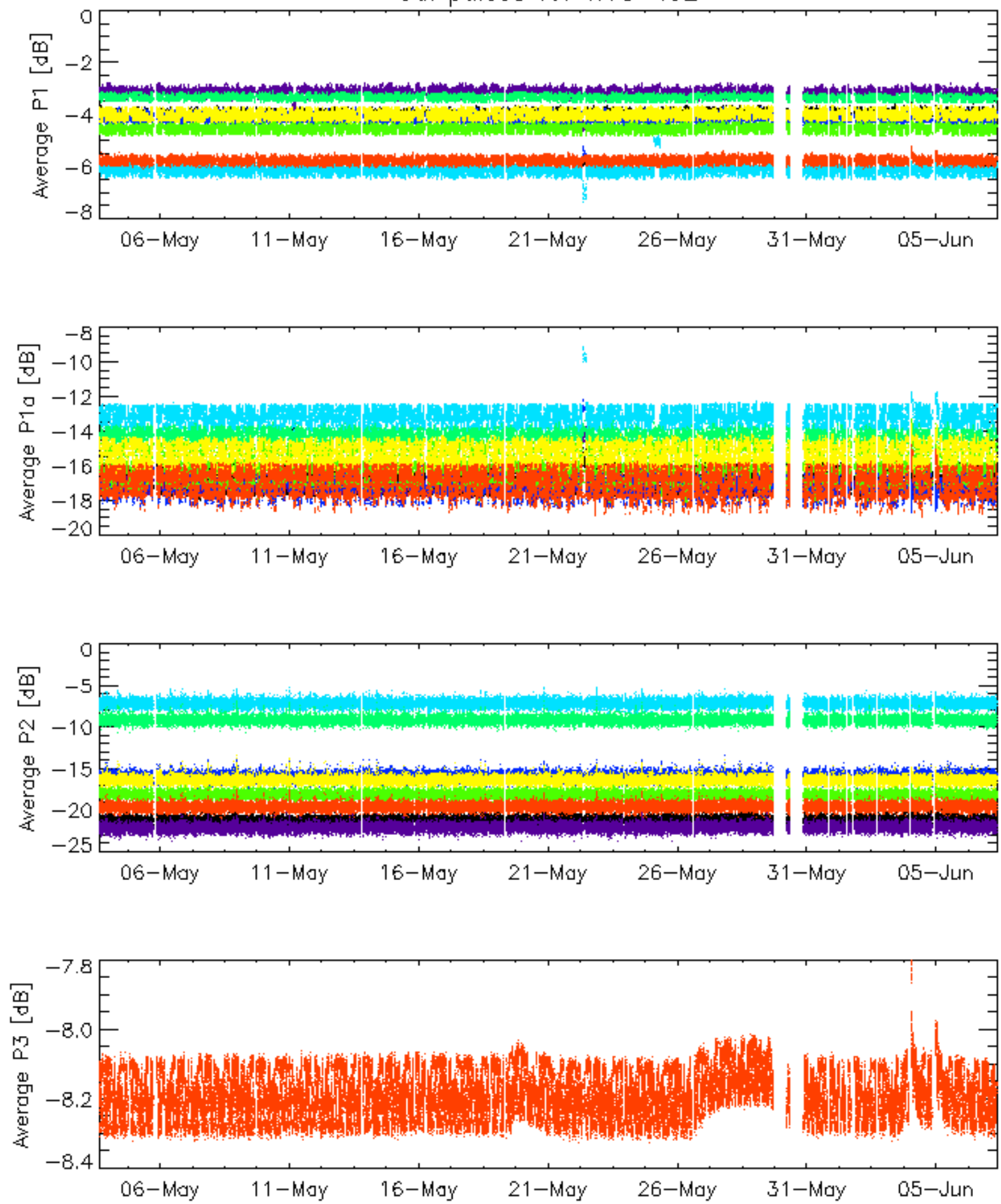


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

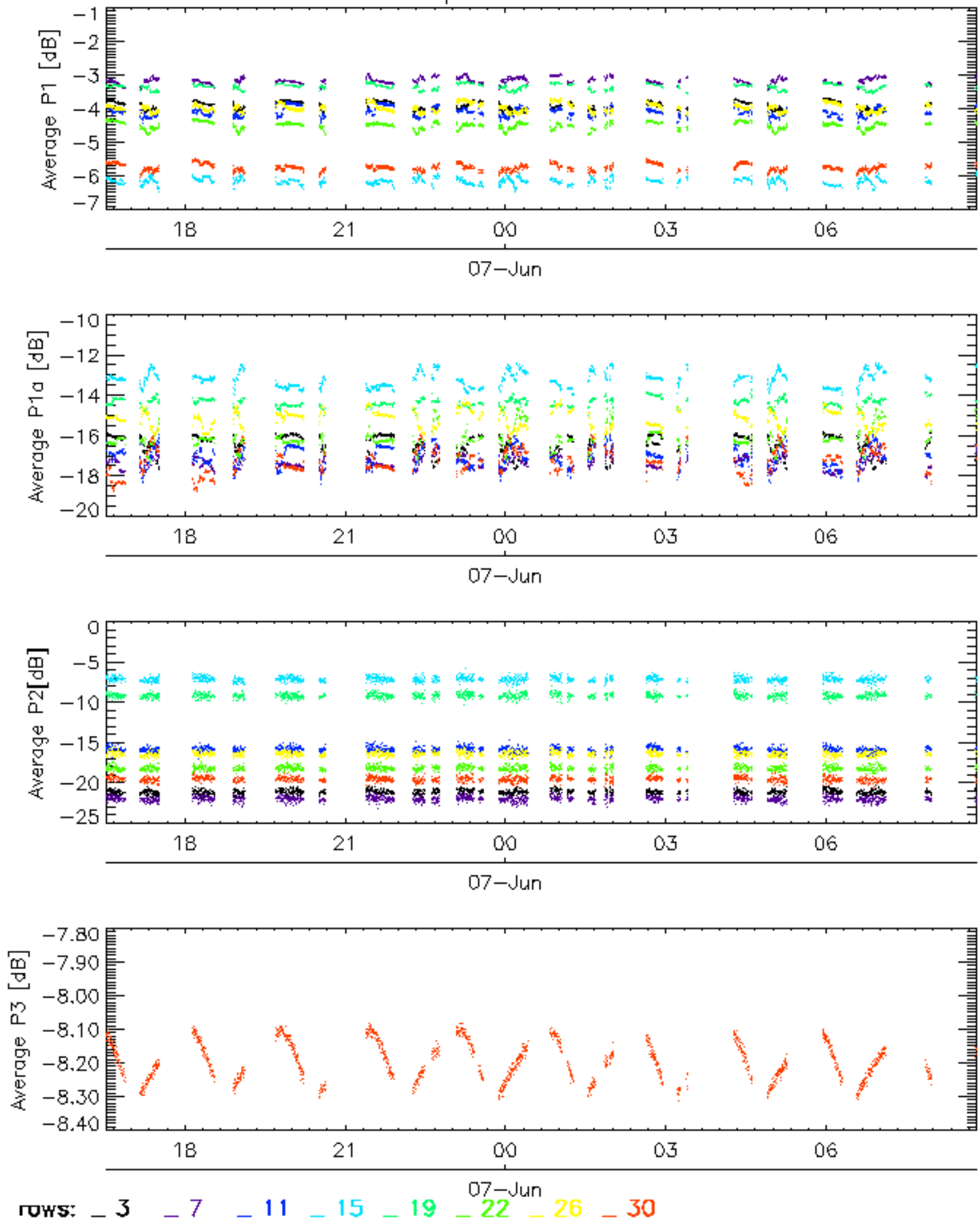


Cal pulses for WVS IS2



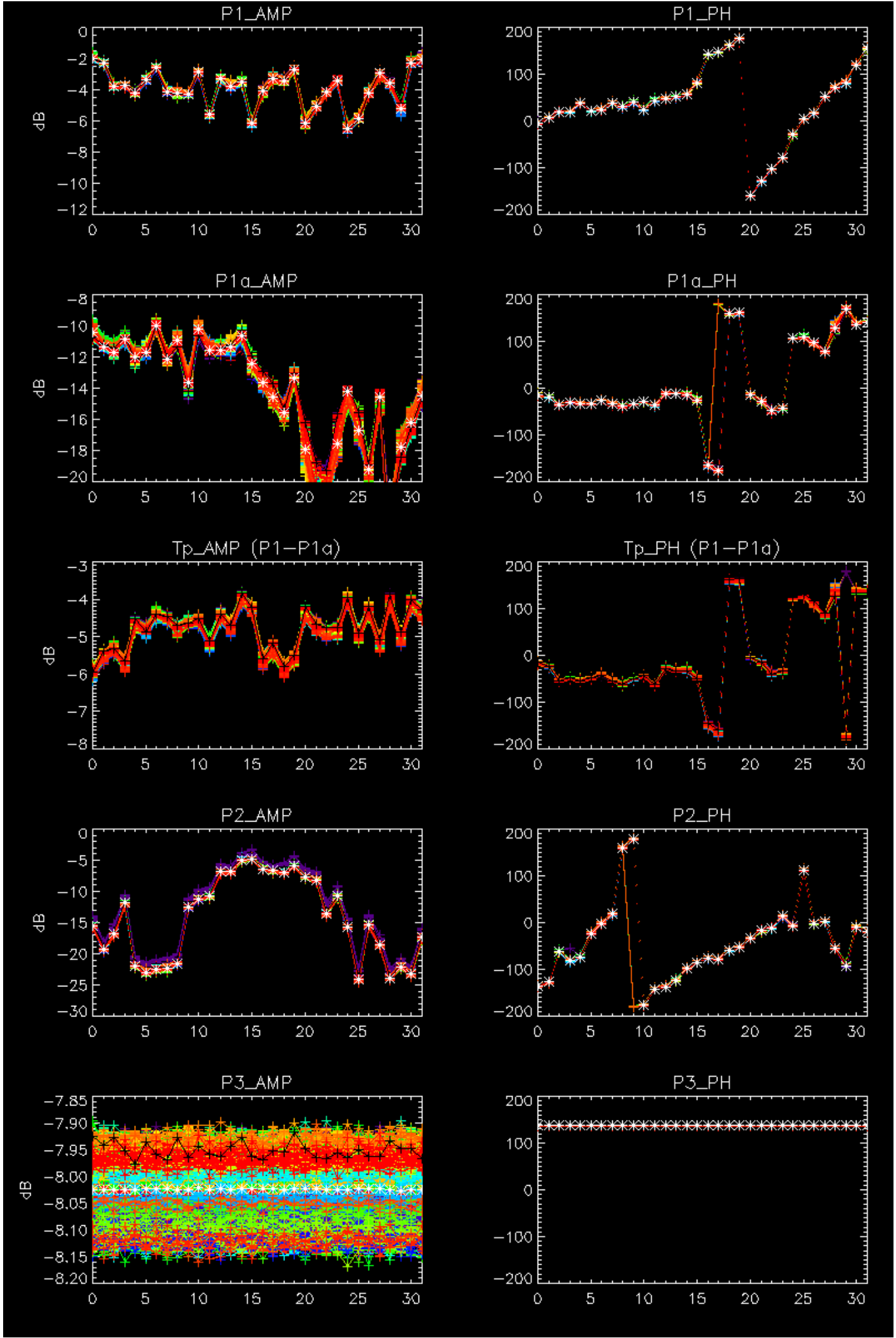
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

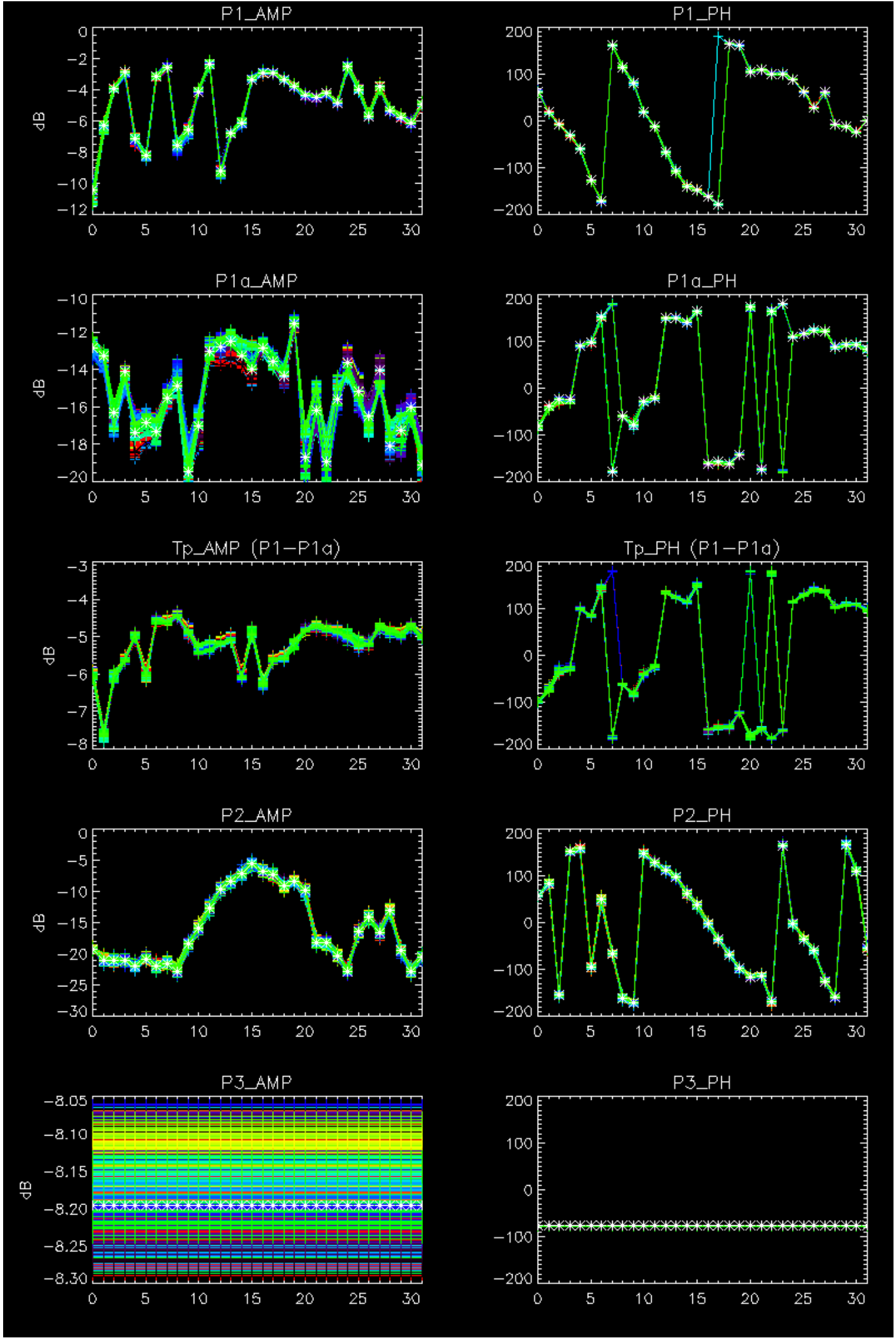
Cal pulses for WVS IS2



No anomalies observed on available browse products

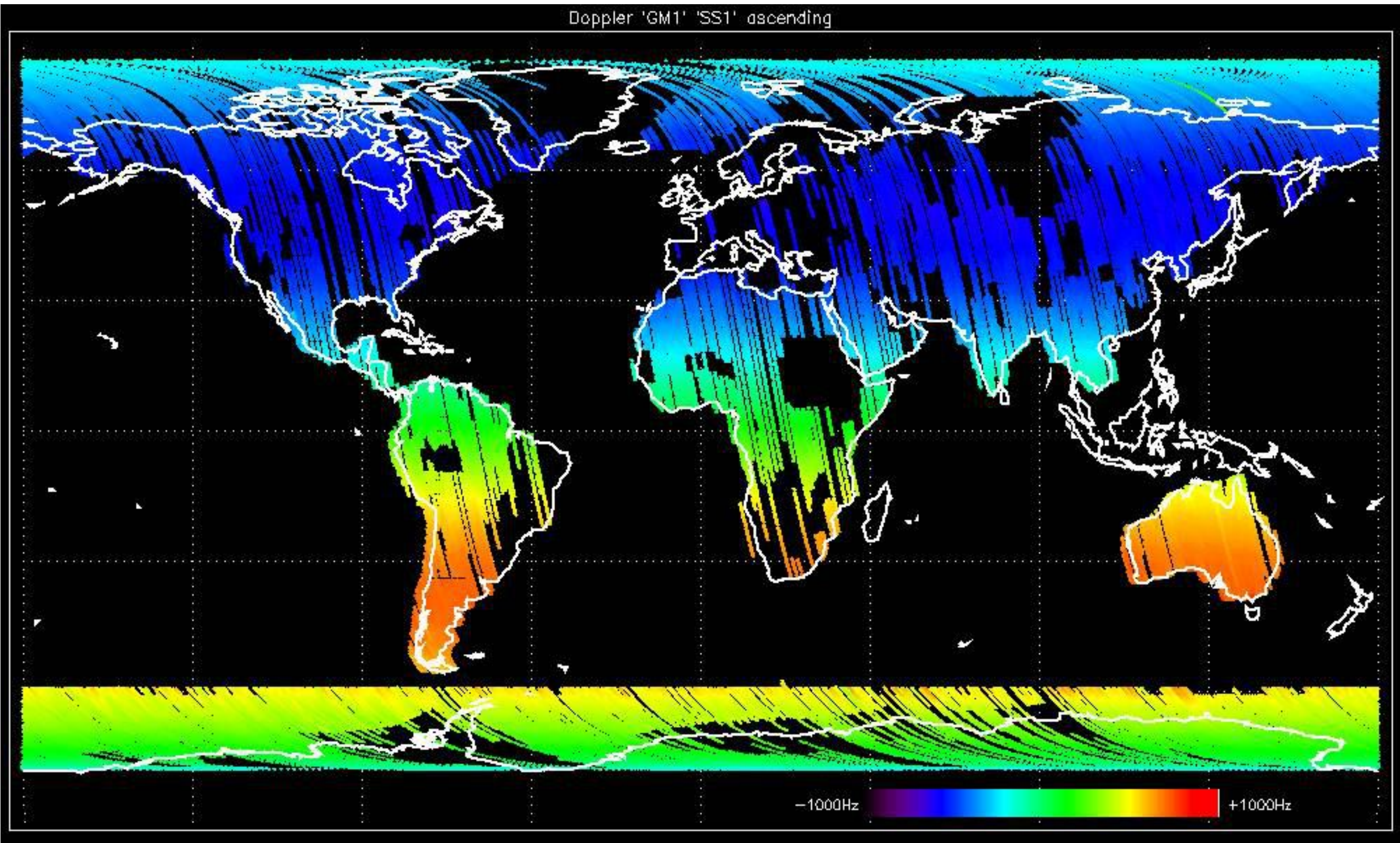
No anomalies observed.



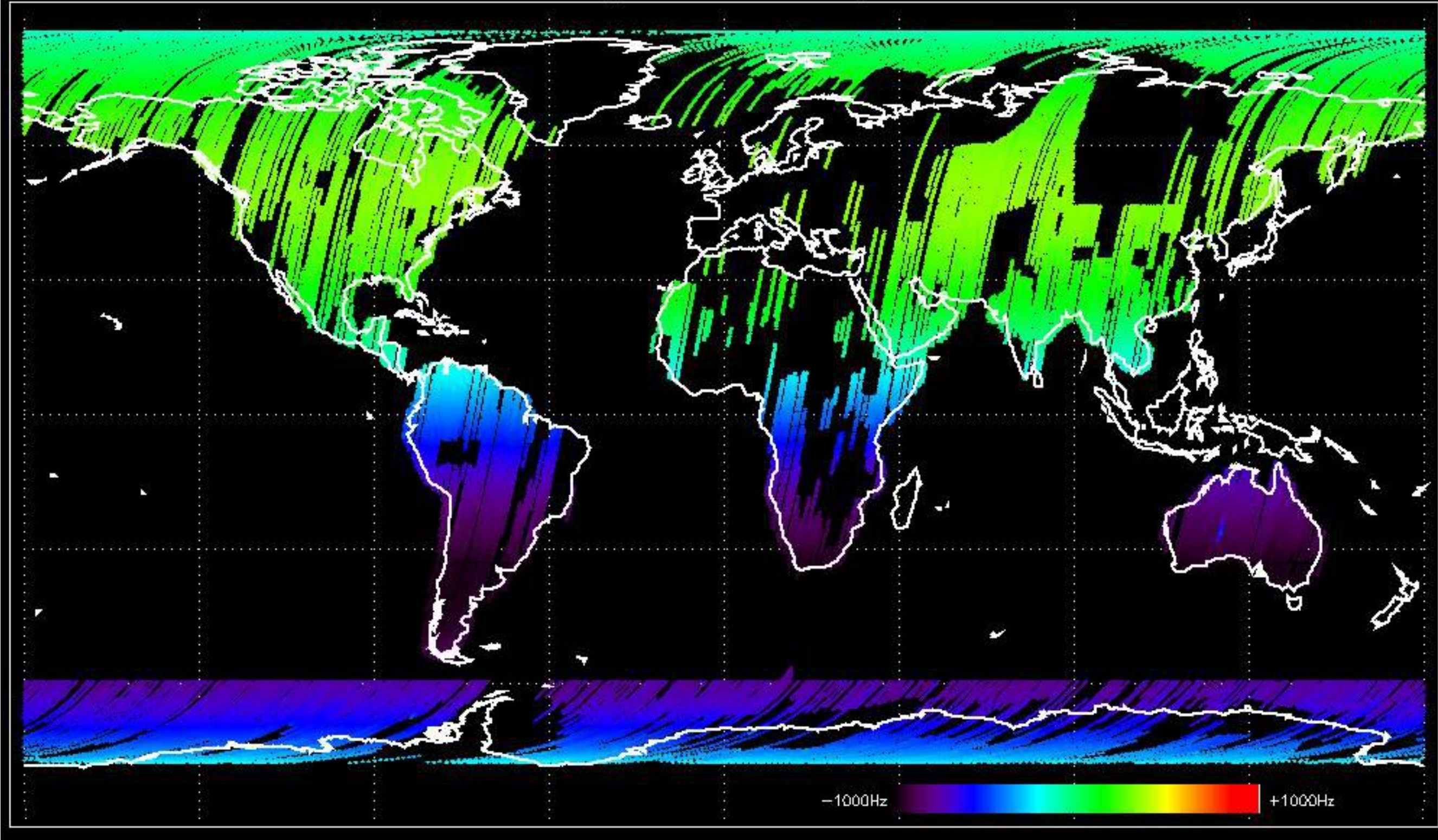


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

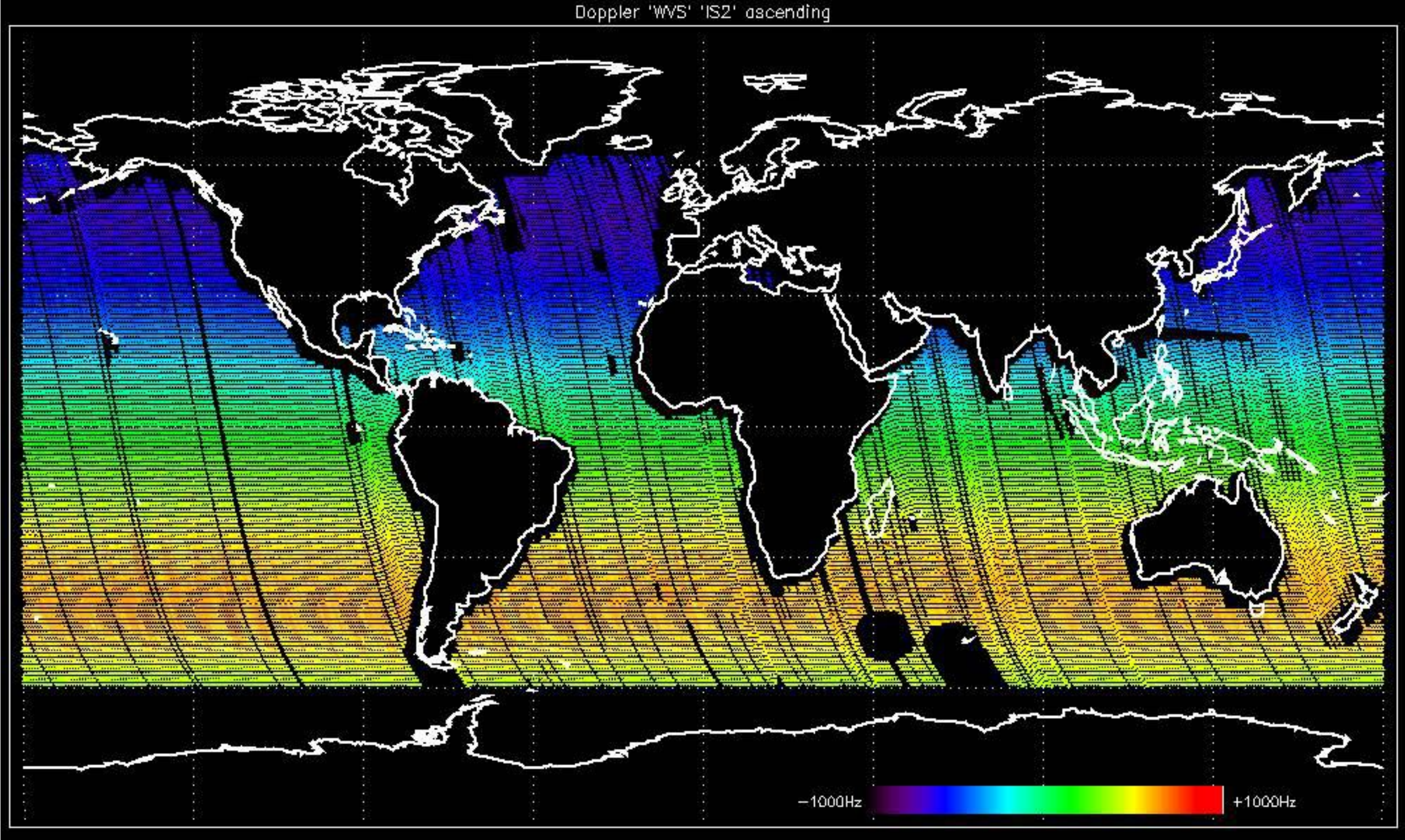
Doppler 'GM1' 'SS1' ascending



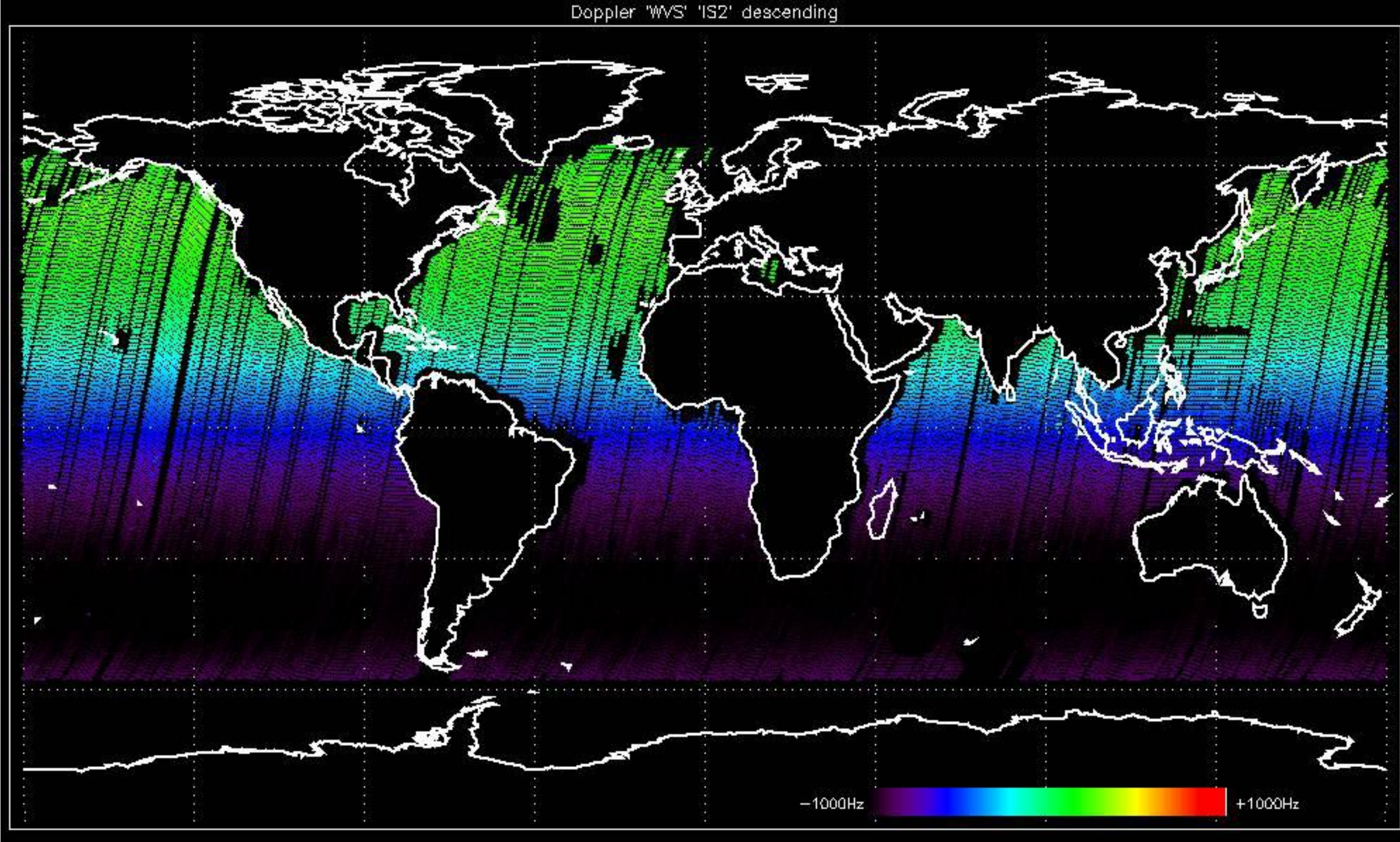
Doppler 'GM1' 'SS1' descending

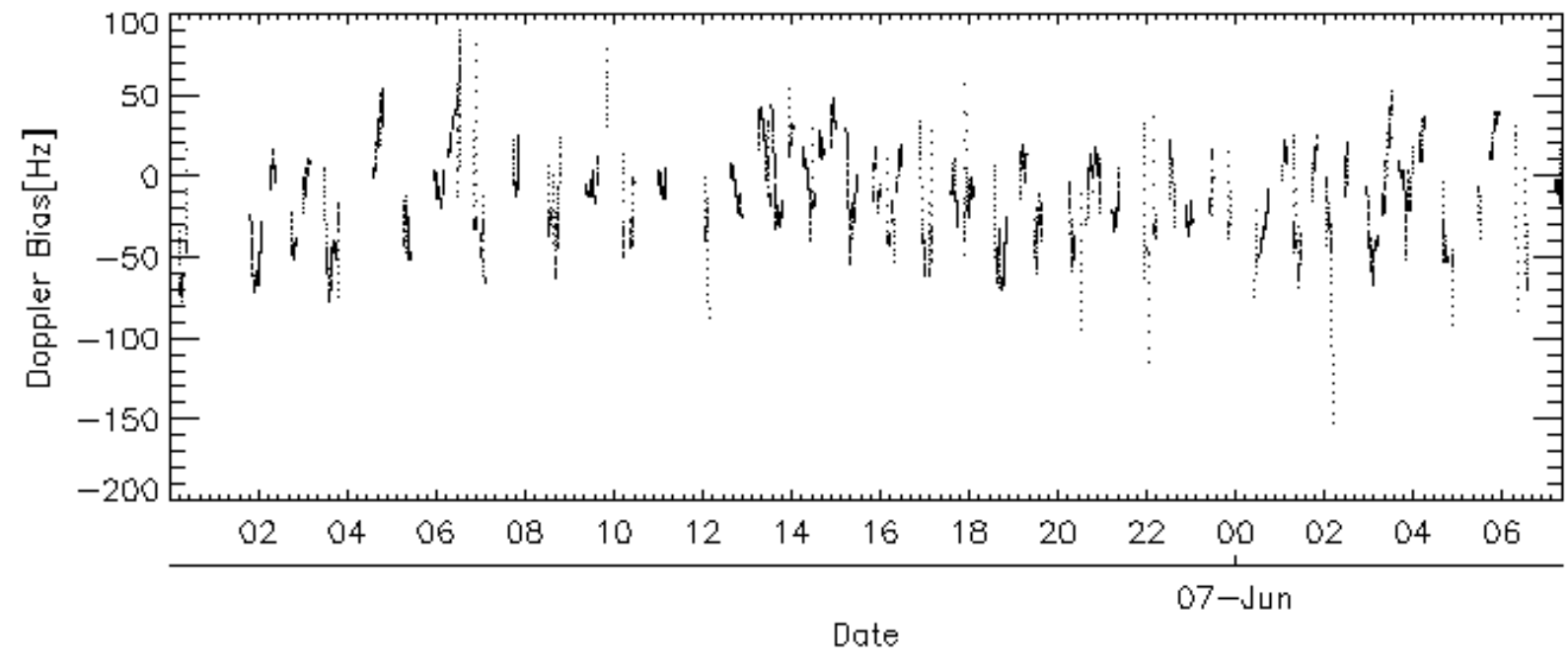
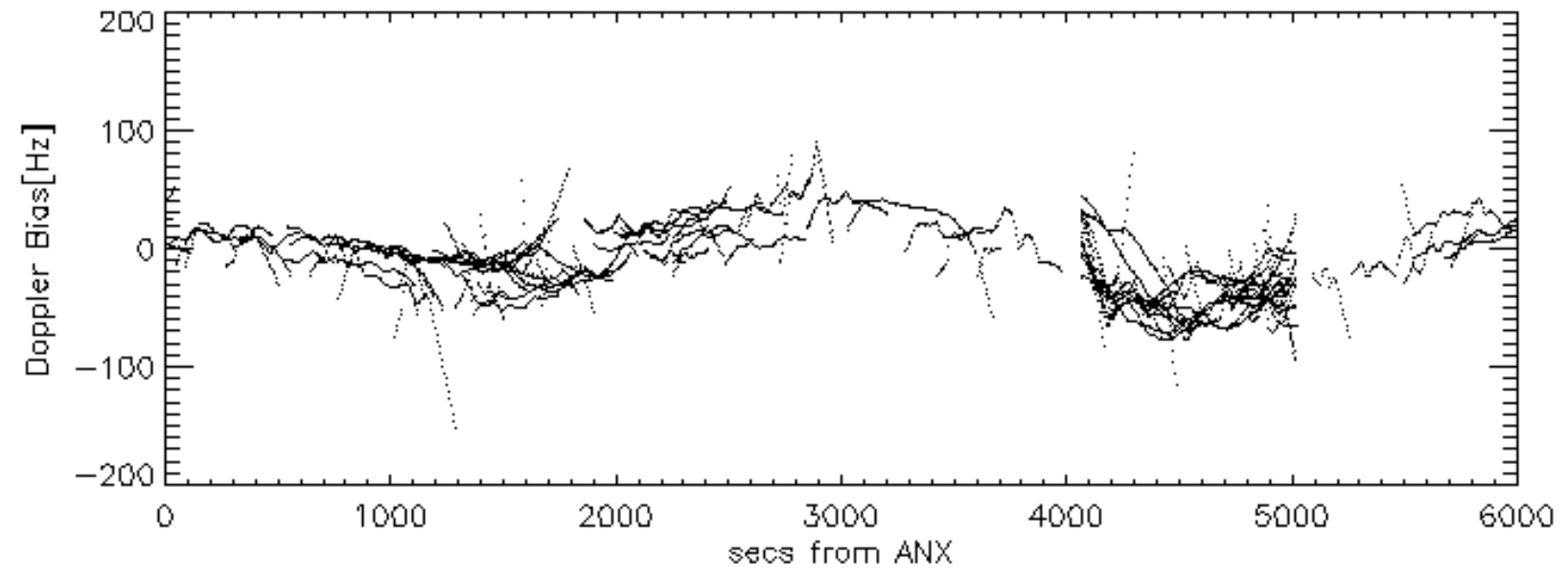
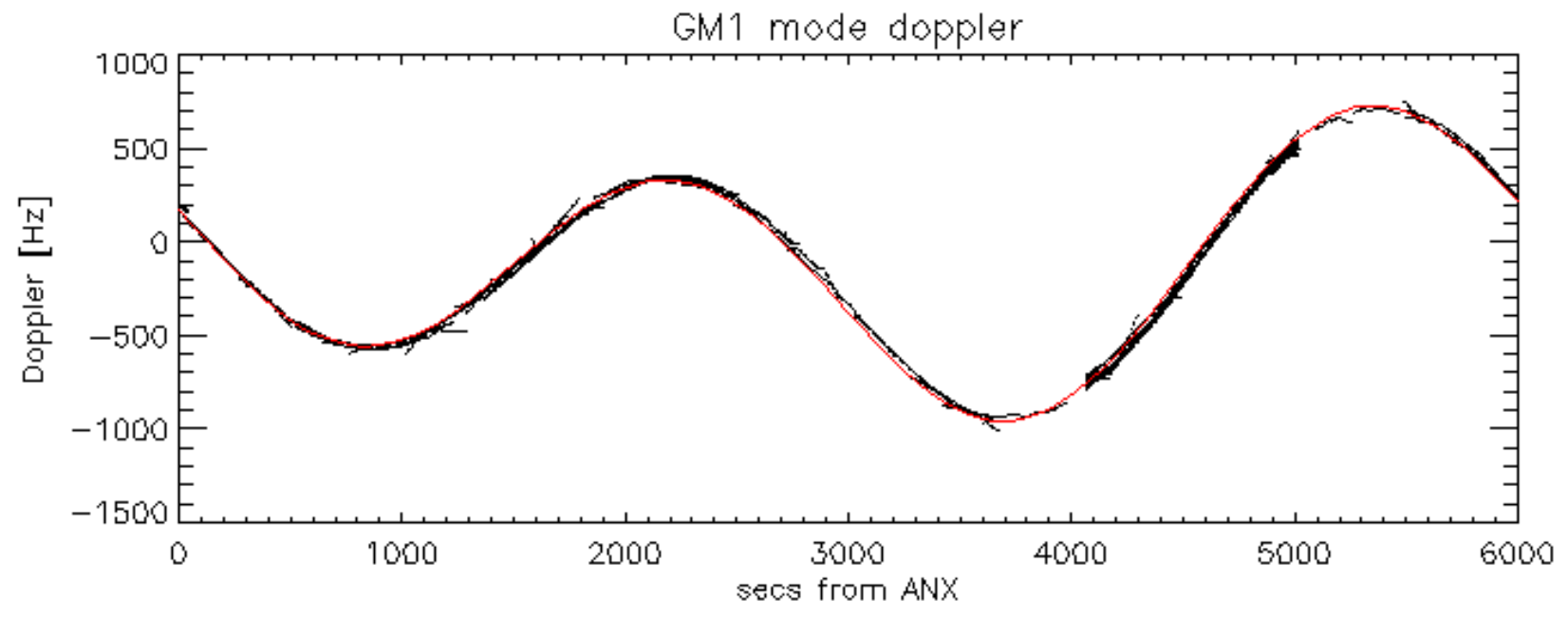


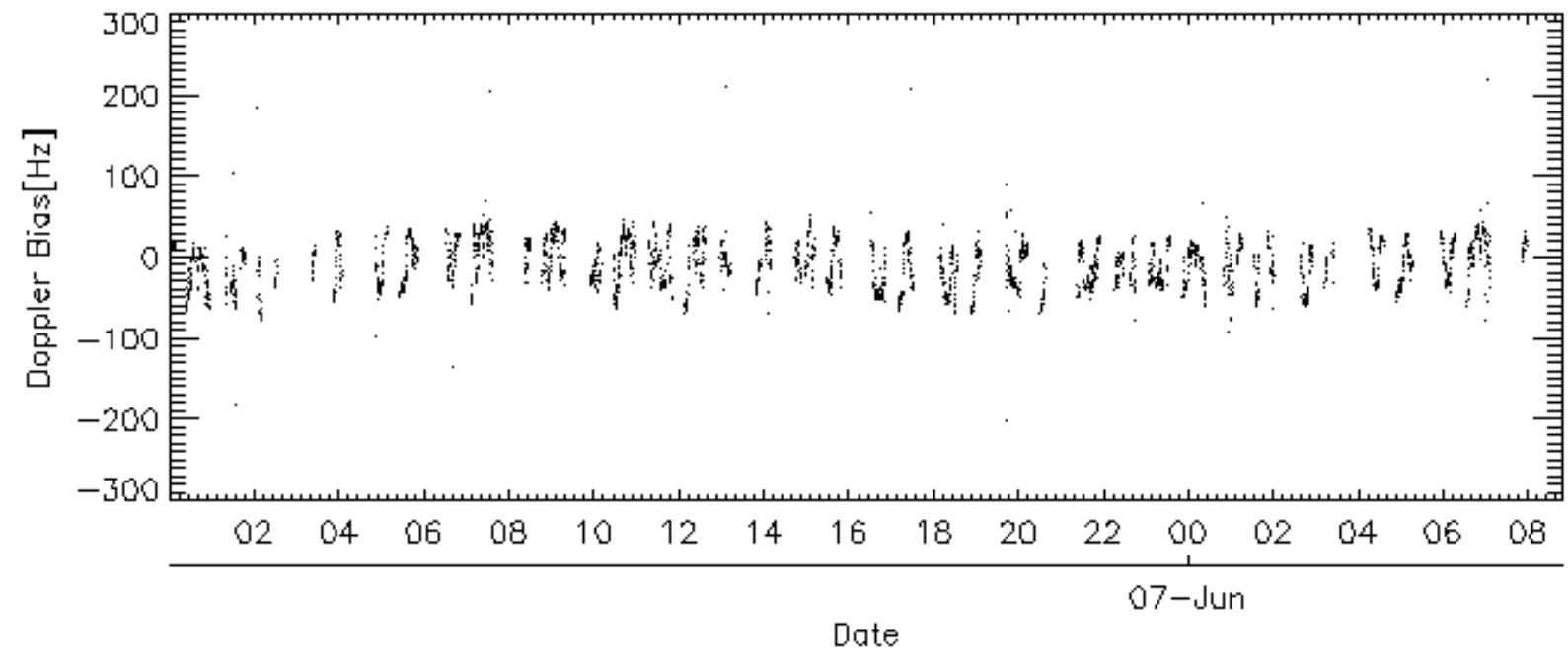
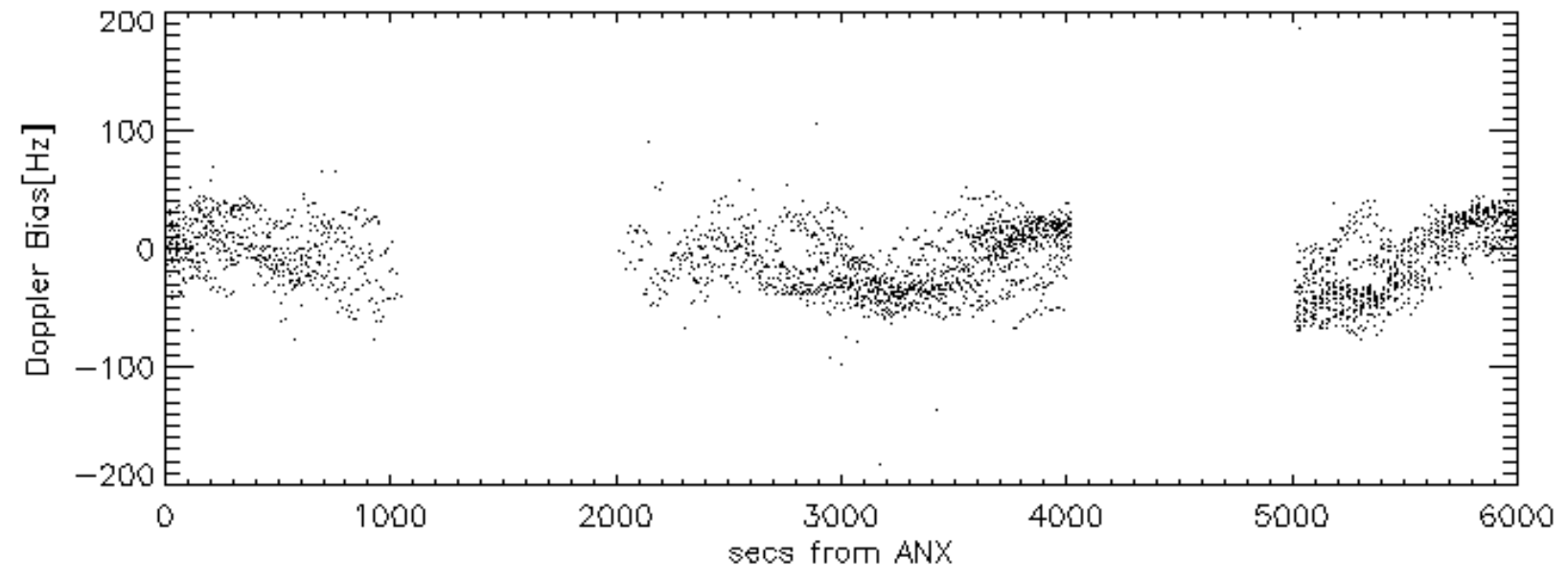
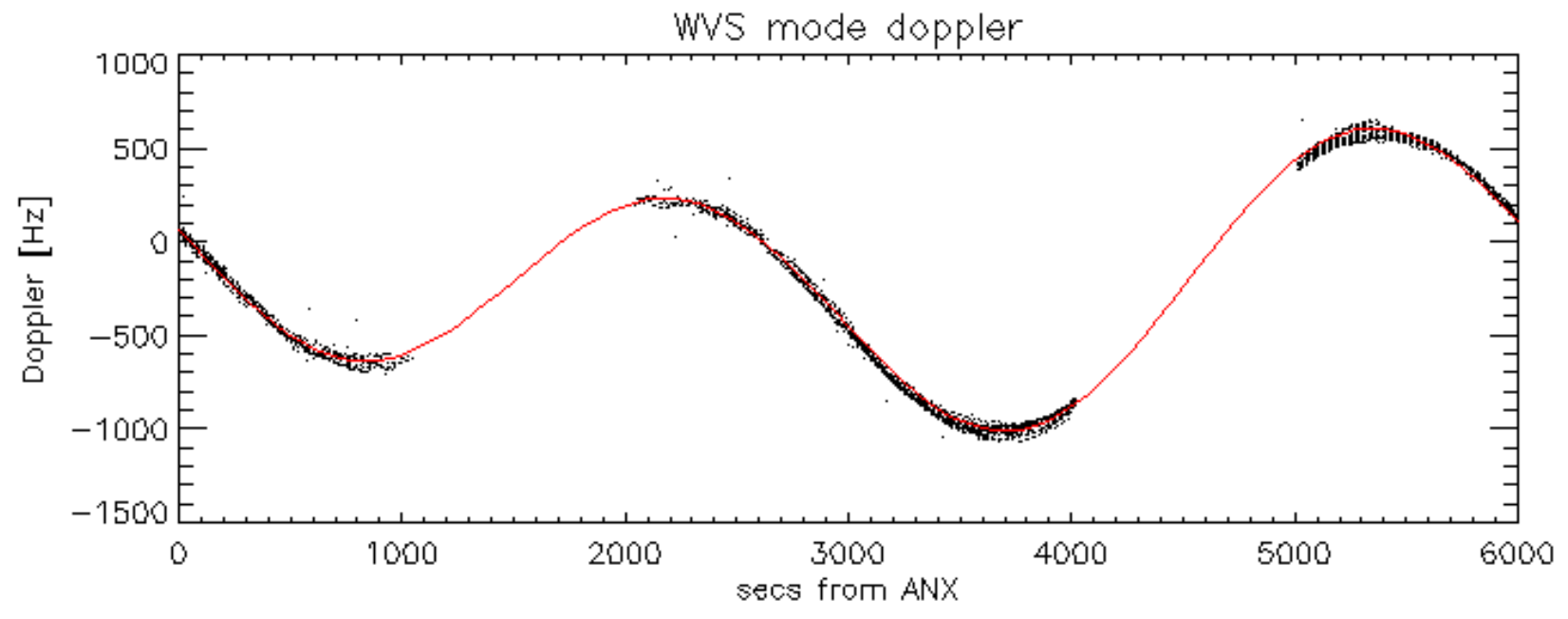
Doppler 'WVS' 'IS2' ascending



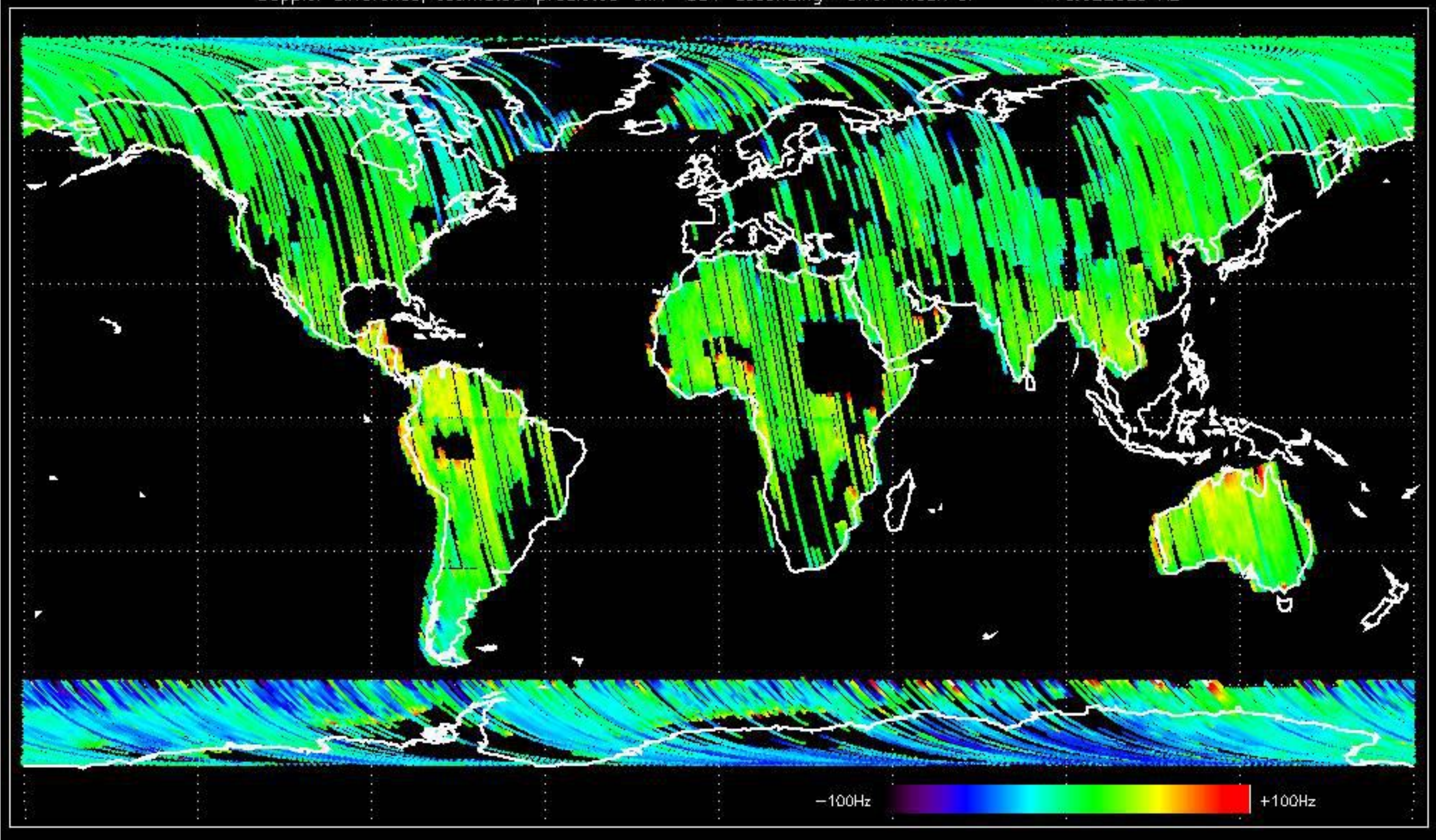
Doppler 'WVS' 'IS2' descending



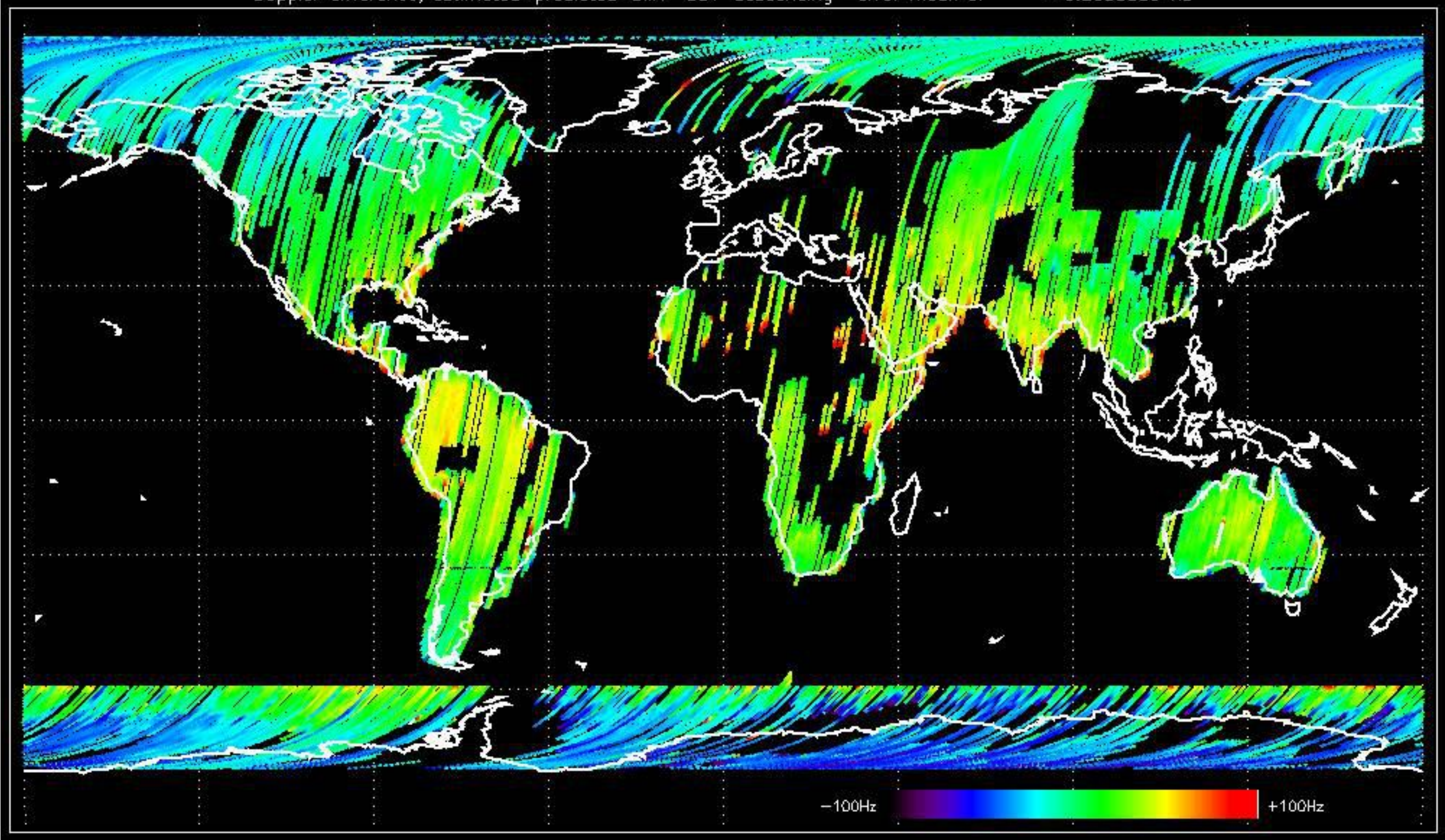




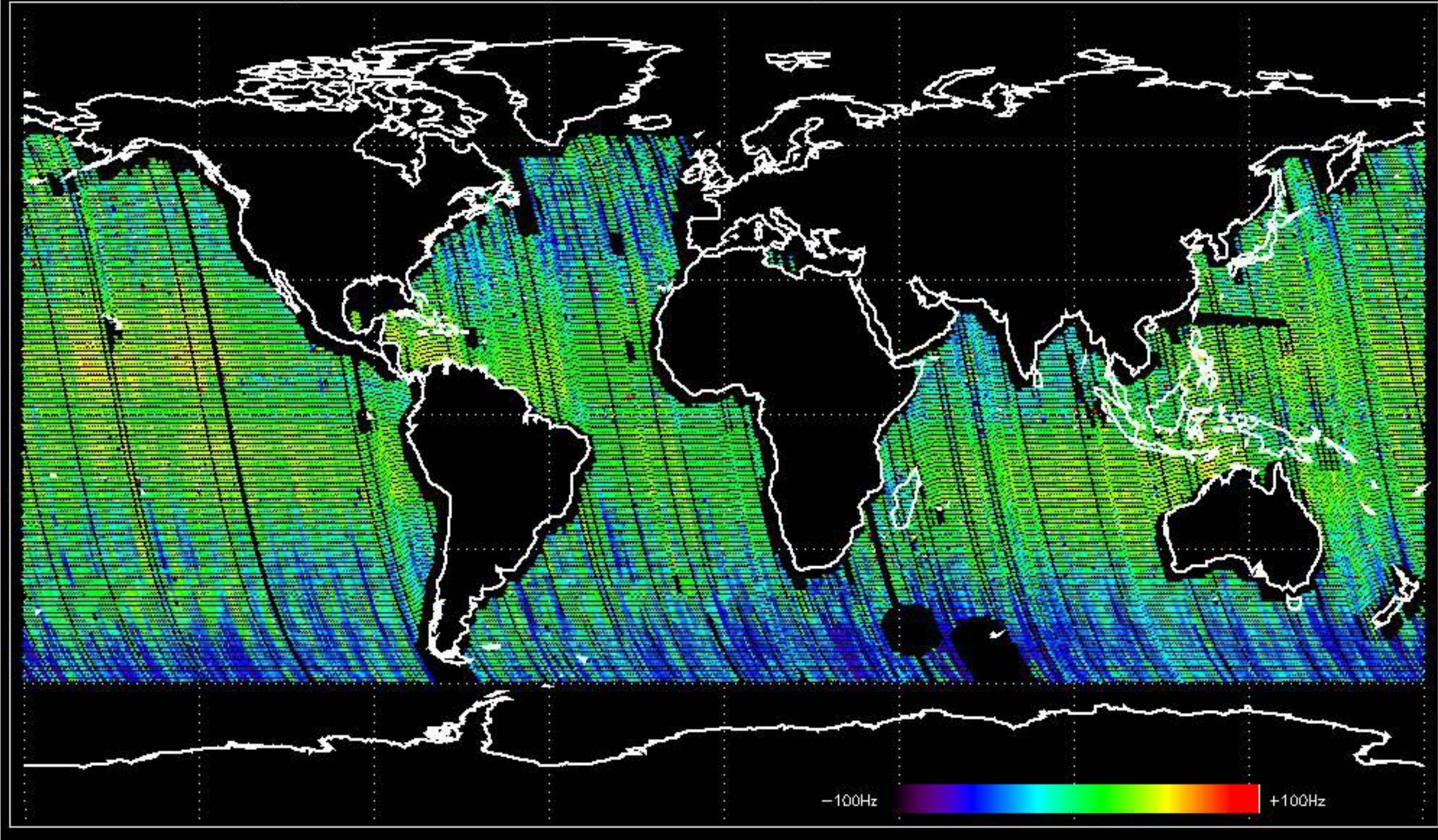
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.622029 Hz



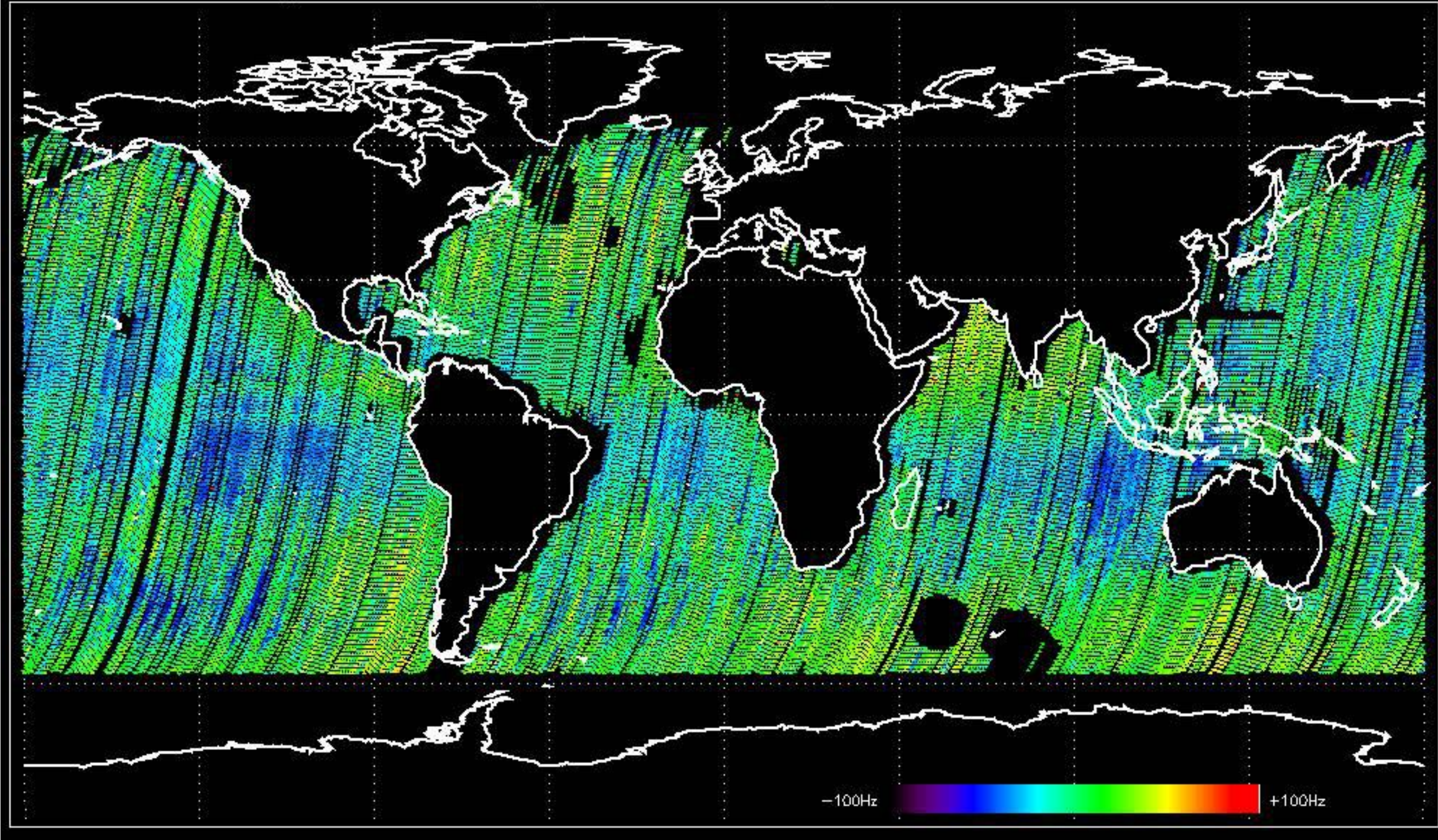
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.2088083 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.3916546 Hz

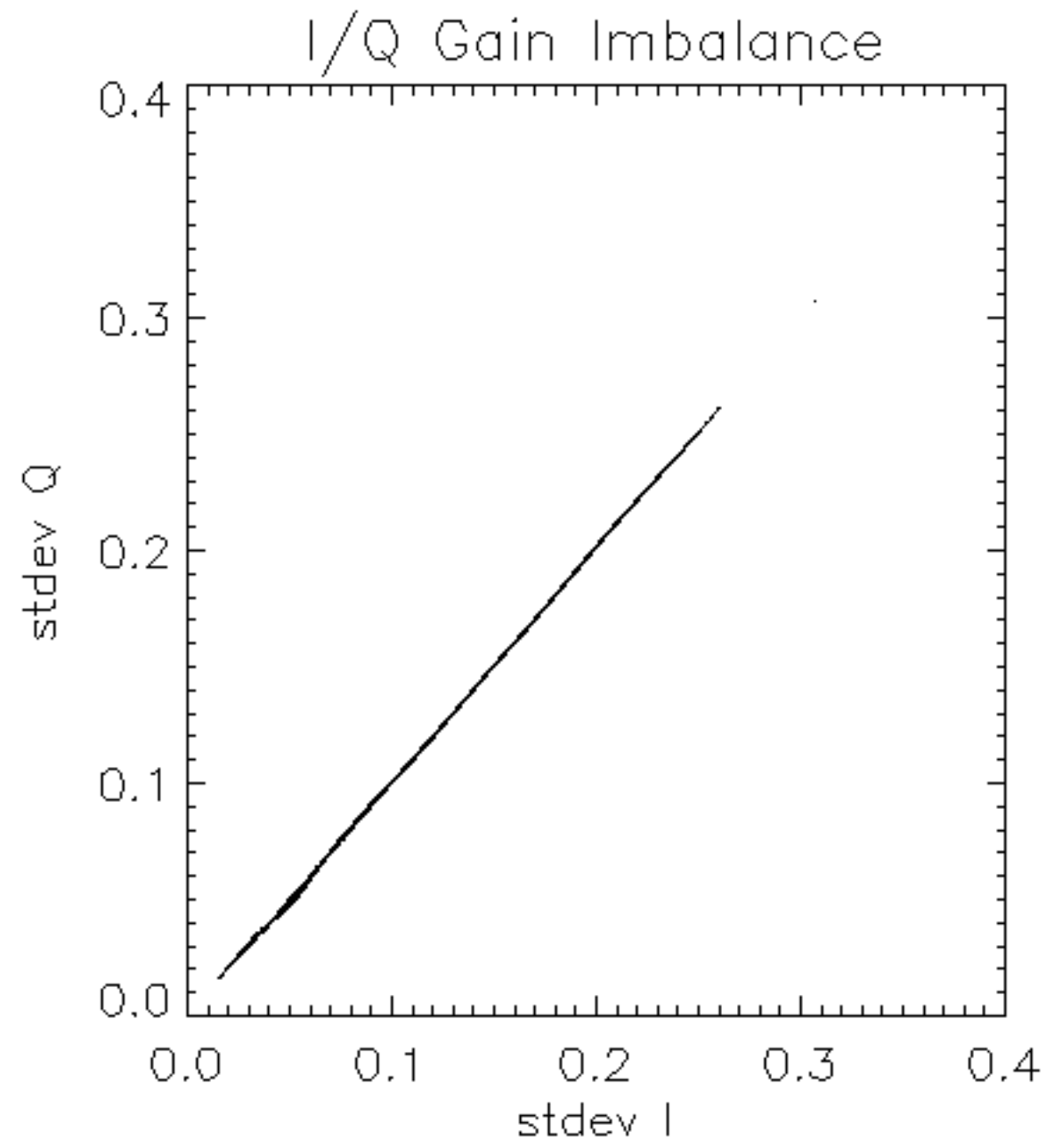


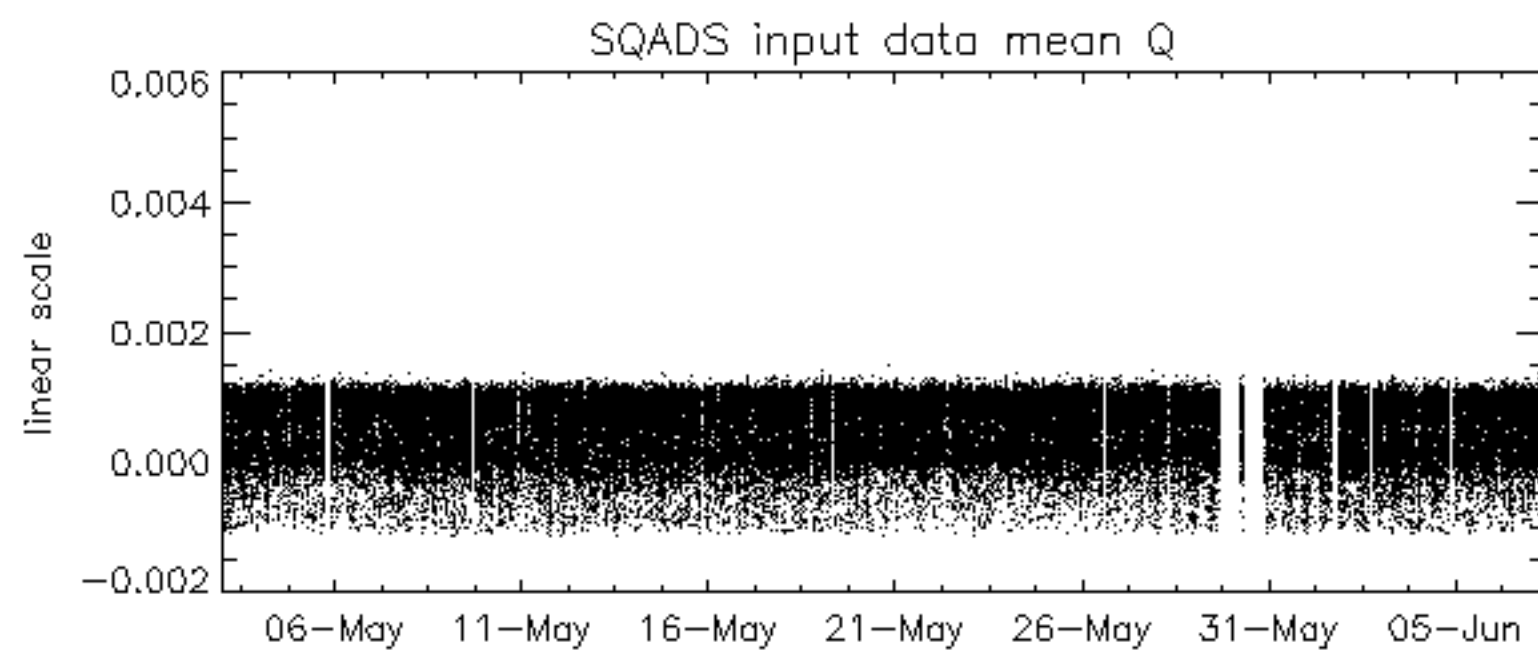
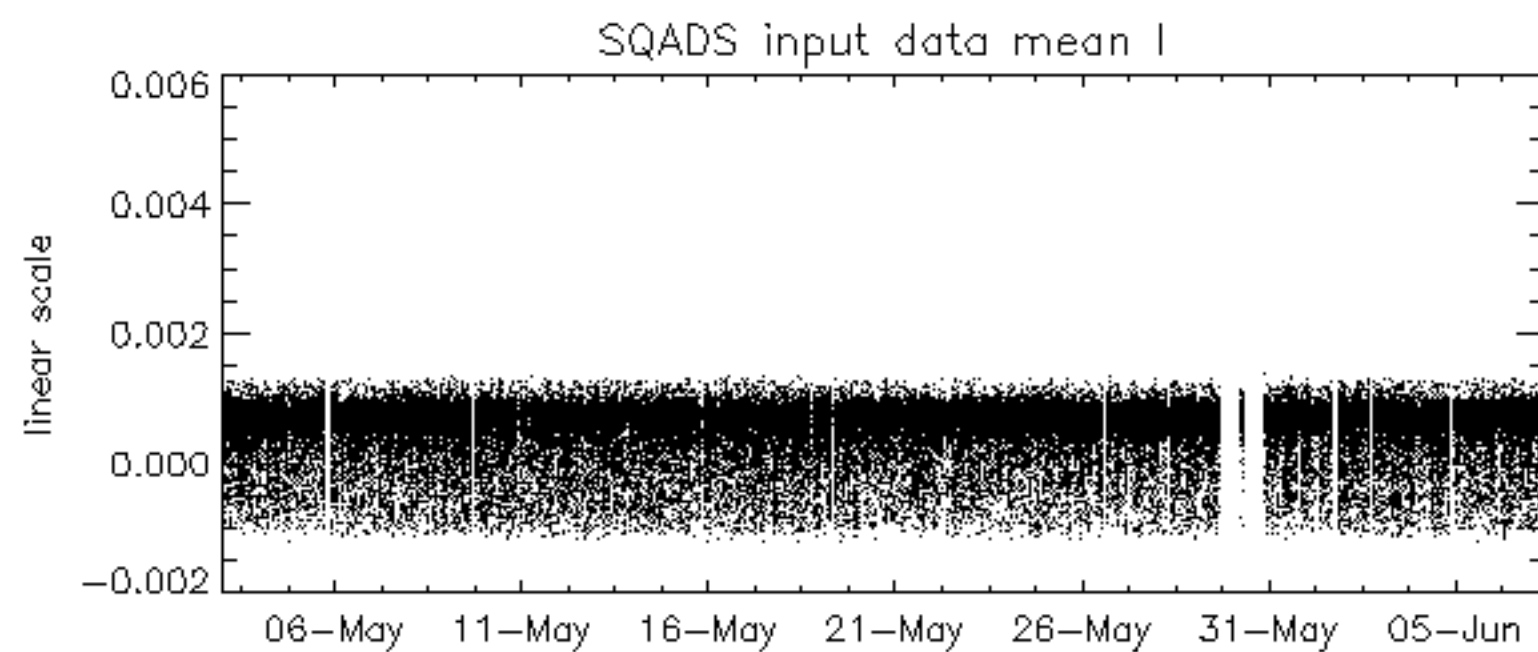
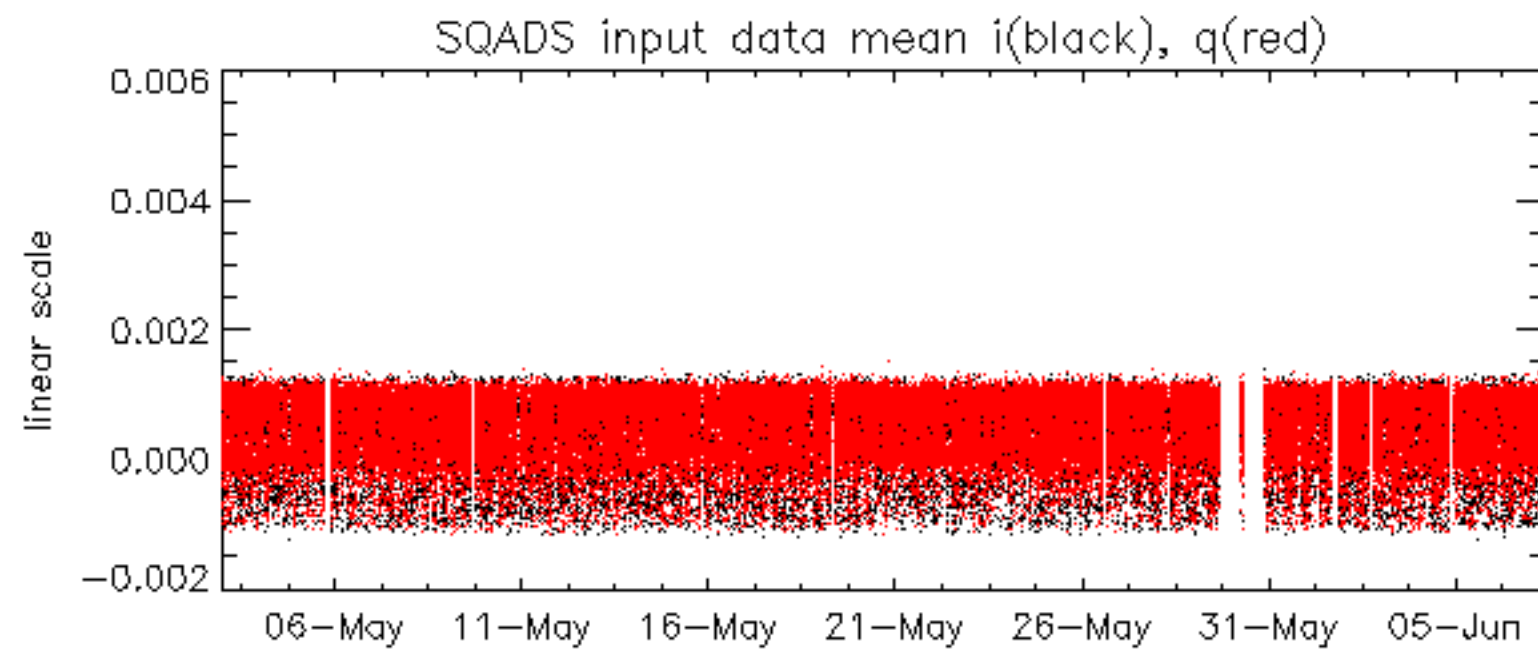
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.542253 Hz

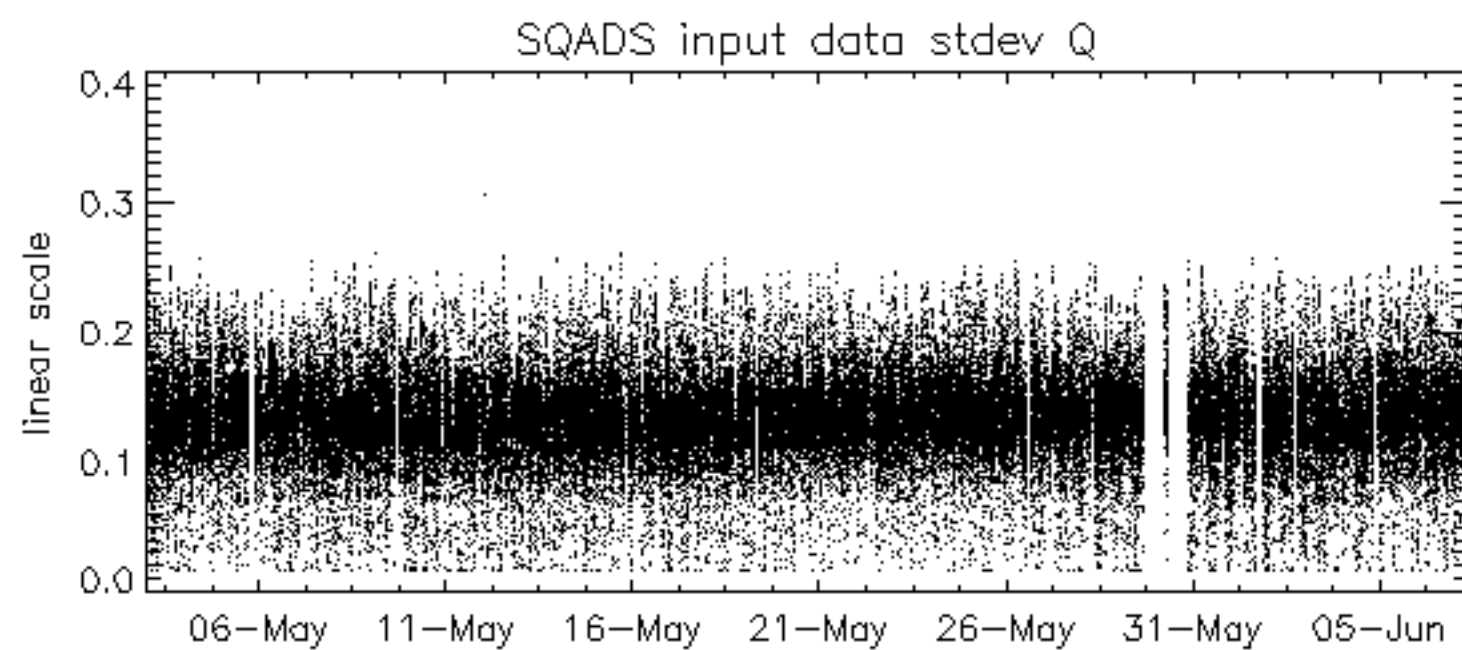
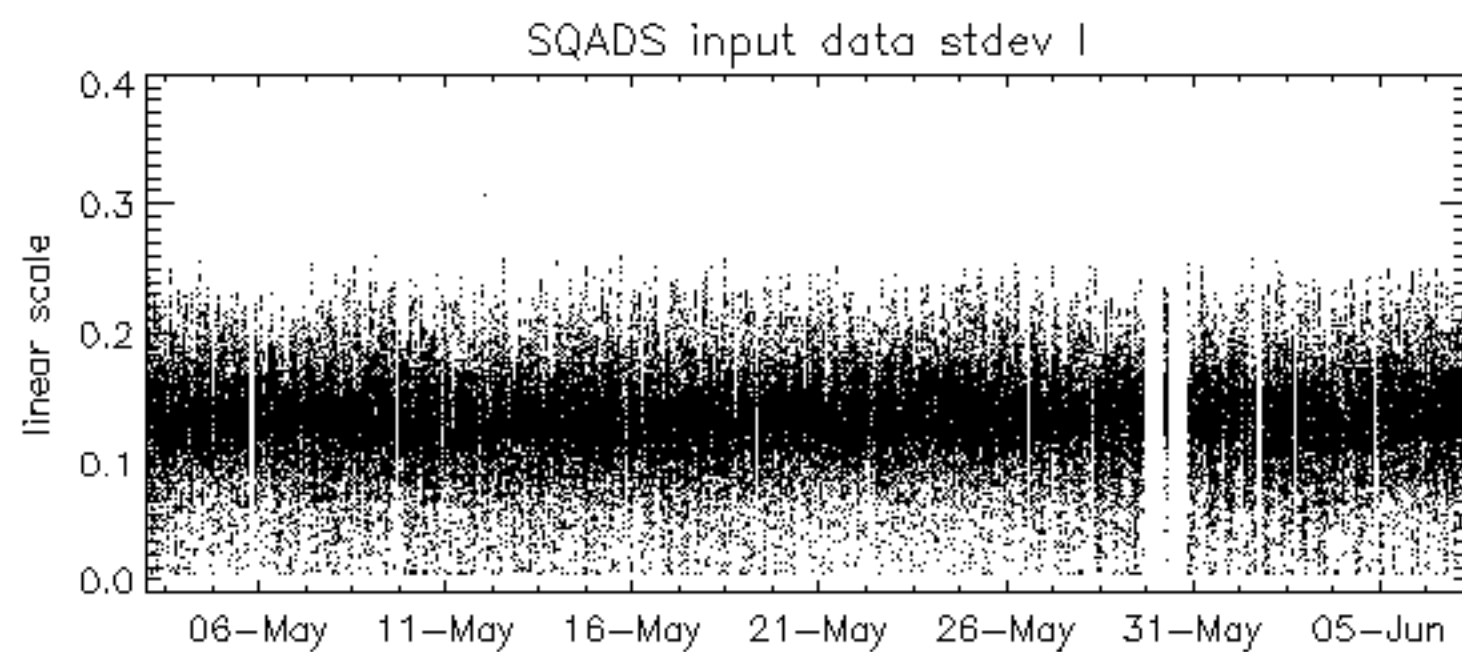
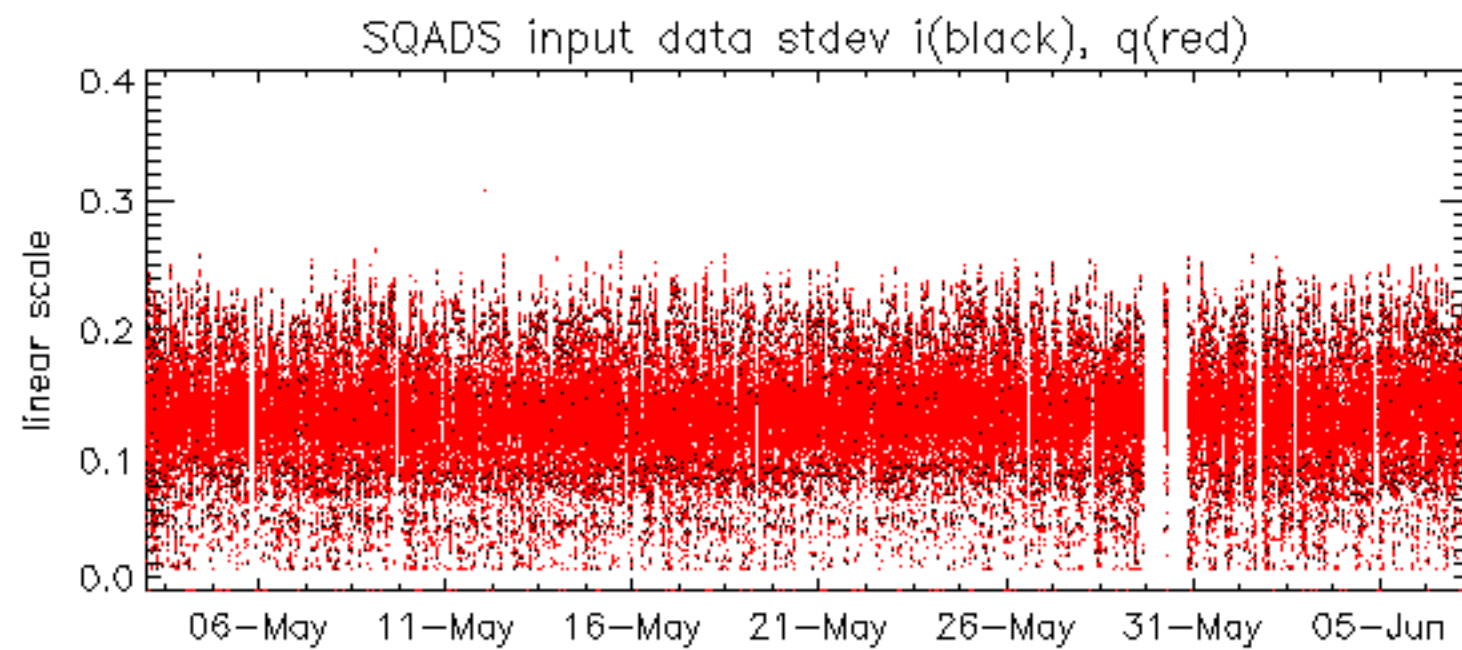


No anomalies observed on available MS products:

No anomalies observed.



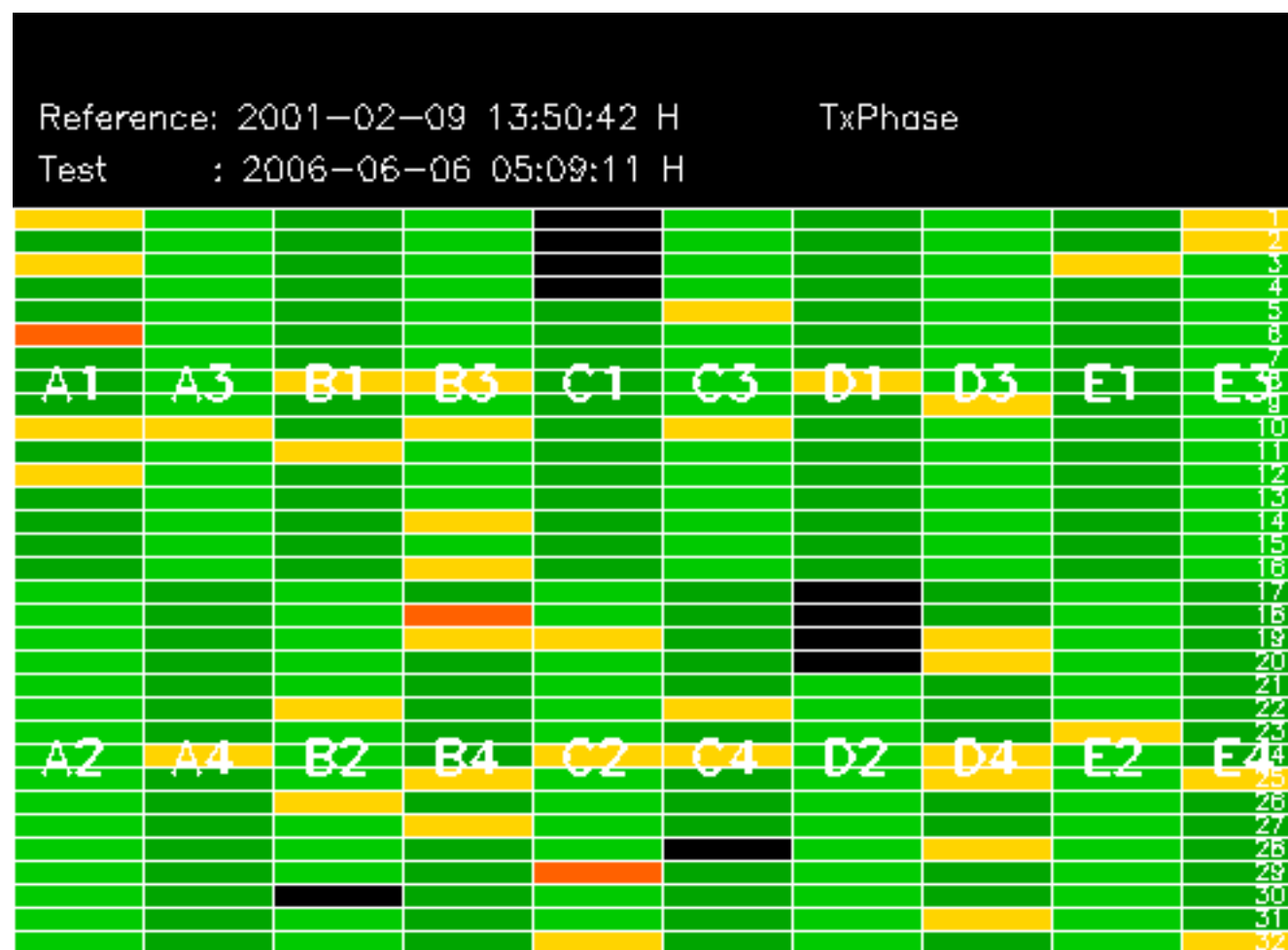


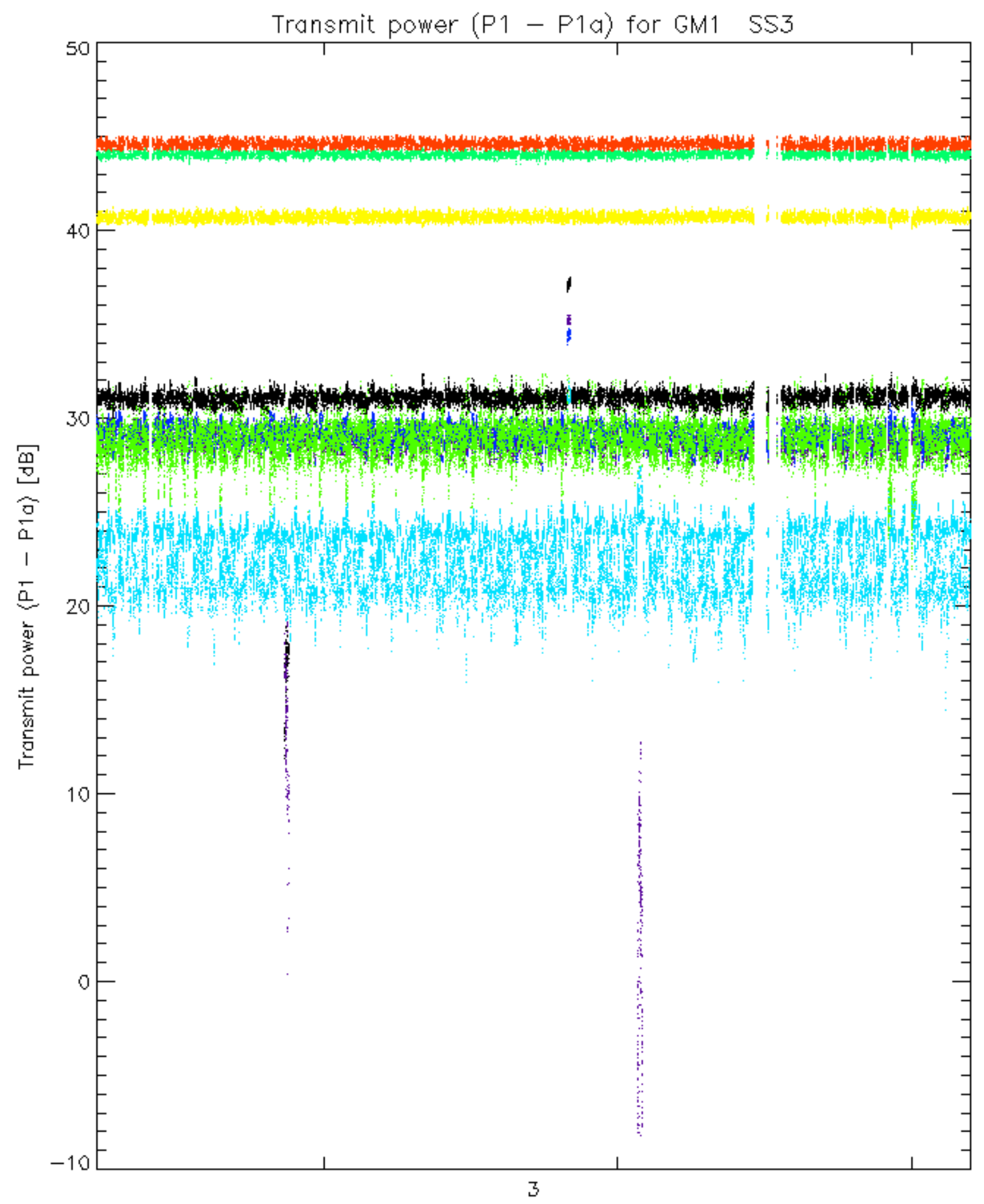


Summary of analysis for the last 3 days 2006060[567]

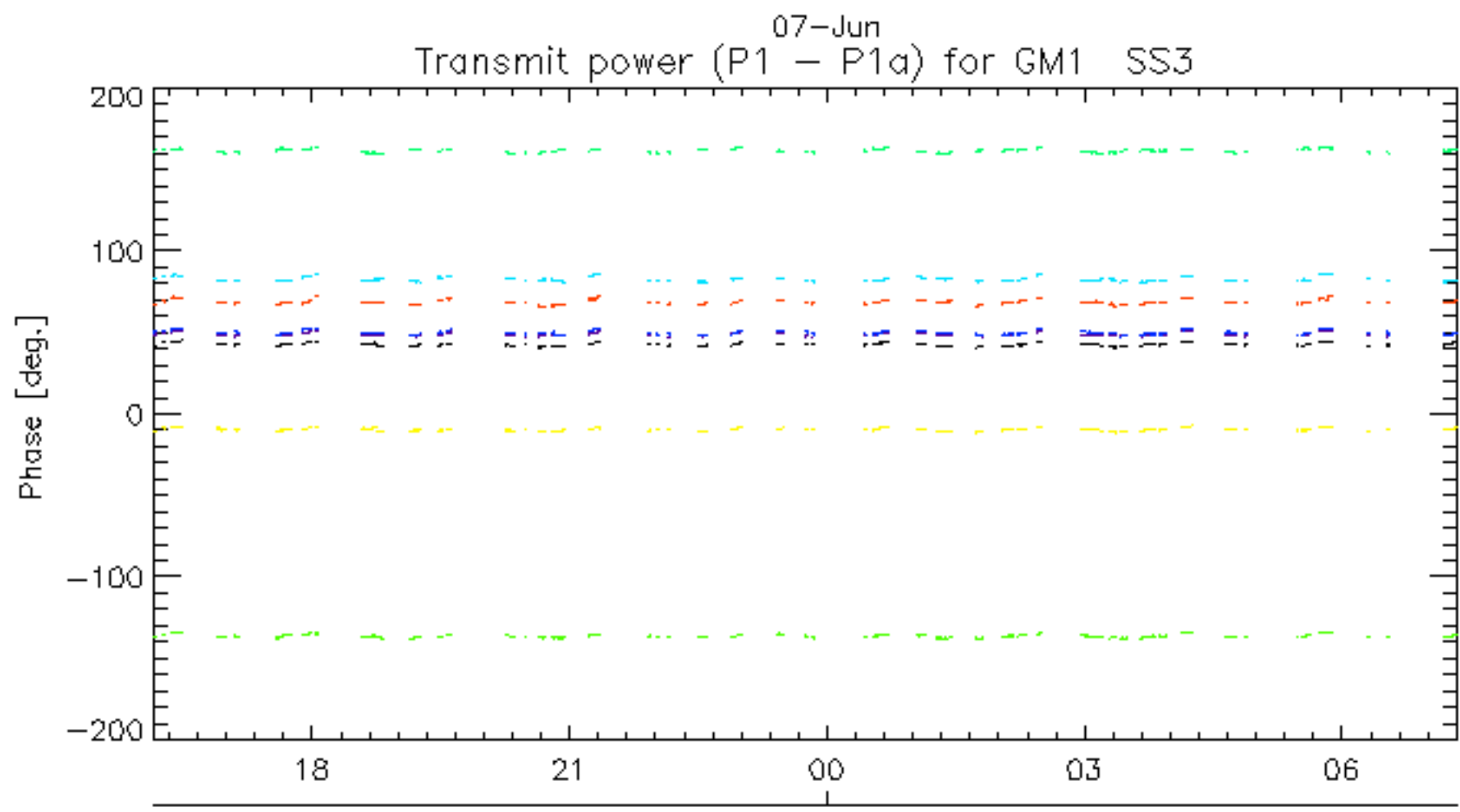
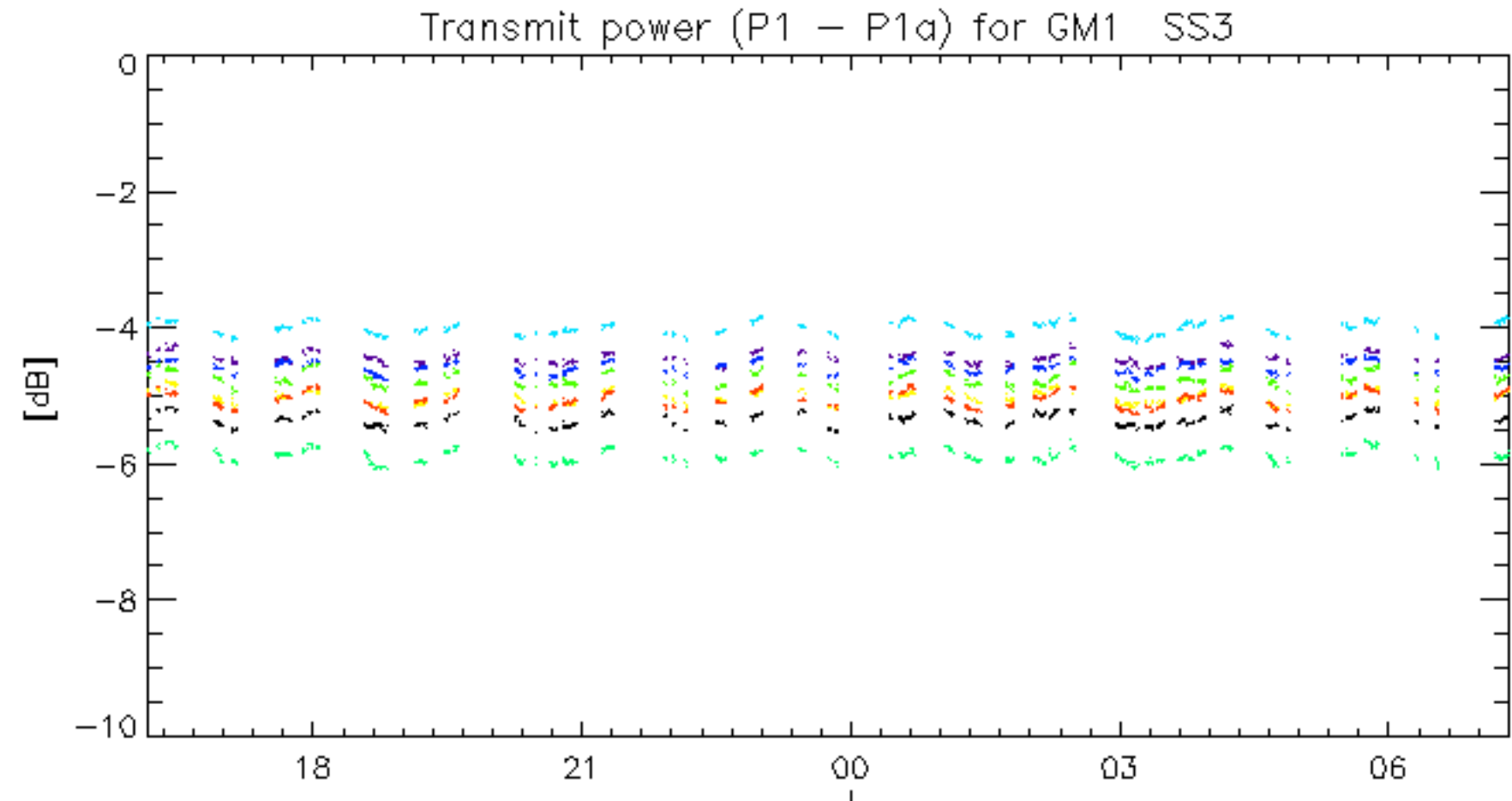
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060606_003645_000001642048_00202_22300_6709.N1	1	0
ASA_GM1_1PNPDK20060606_092117_000007552048_00208_22306_4644.N1	0	24
ASA_WSM_1PNPDE20060605_015912_000000852048_00189_22287_2669.N1	0	63
ASA_WSM_1PNPDE20060605_043830_000001282048_00191_22289_2688.N1	0	34
ASA_WSM_1PNPDE20060605_180337_000001712048_00199_22297_2784.N1	0	8
ASA_WSM_1PNPDE20060605_202223_000001292048_00200_22298_2823.N1	0	34
ASA_WSM_1PNPDE20060606_040457_000002692048_00205_22303_2880.N1	0	13
ASA_WSM_1PNPDE20060606_112905_000001292048_00209_22307_2917.N1	0	14
ASA_WSM_1PNPDE20060606_141126_000001522048_00211_22309_2967.N1	0	49
ASA_WSM_1PNPDE20060606_204401_000000862048_00214_22312_3005.N1	0	1
ASA_WSM_1PNPDE20060607_015506_000000852048_00218_22316_3054.N1	0	54

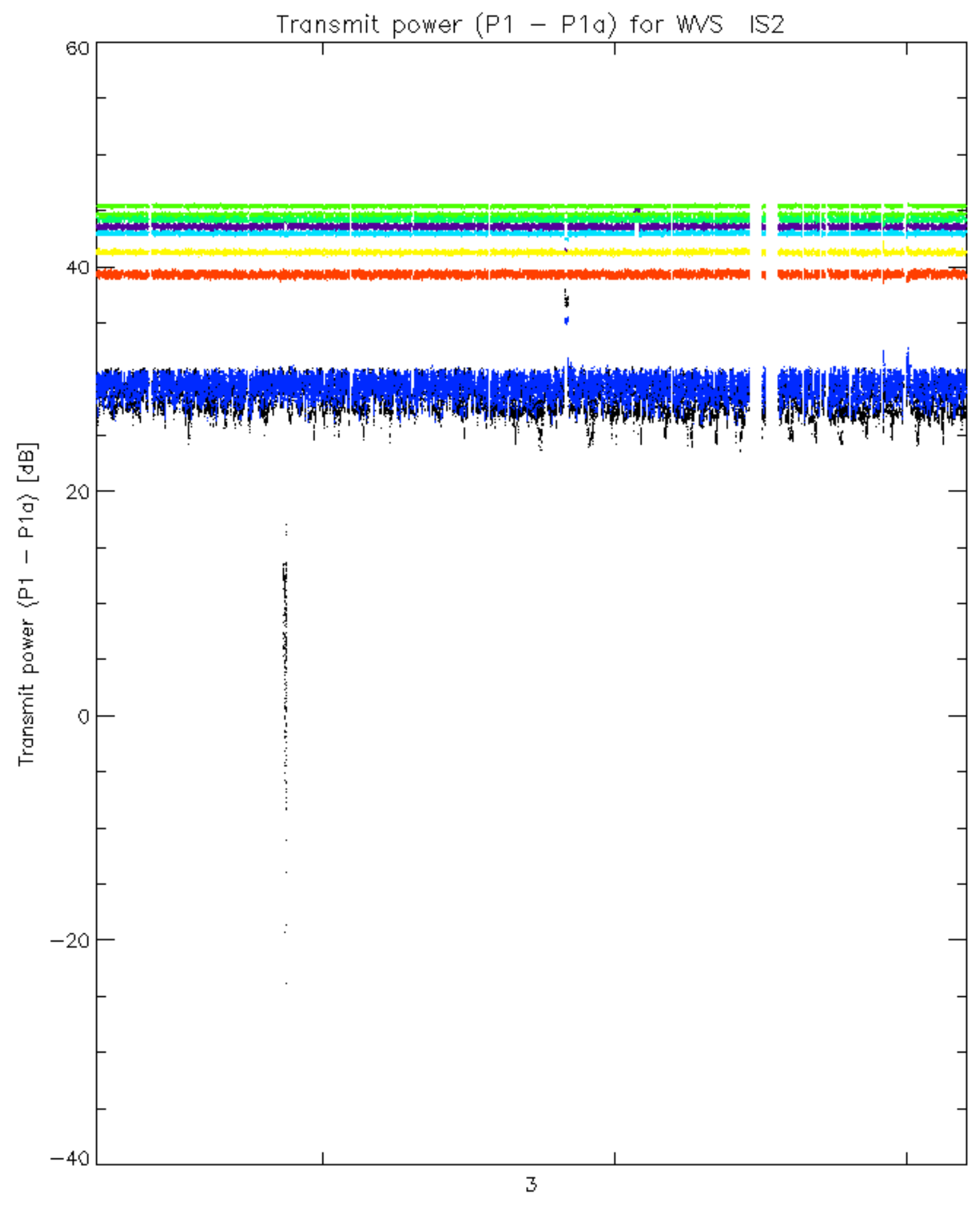




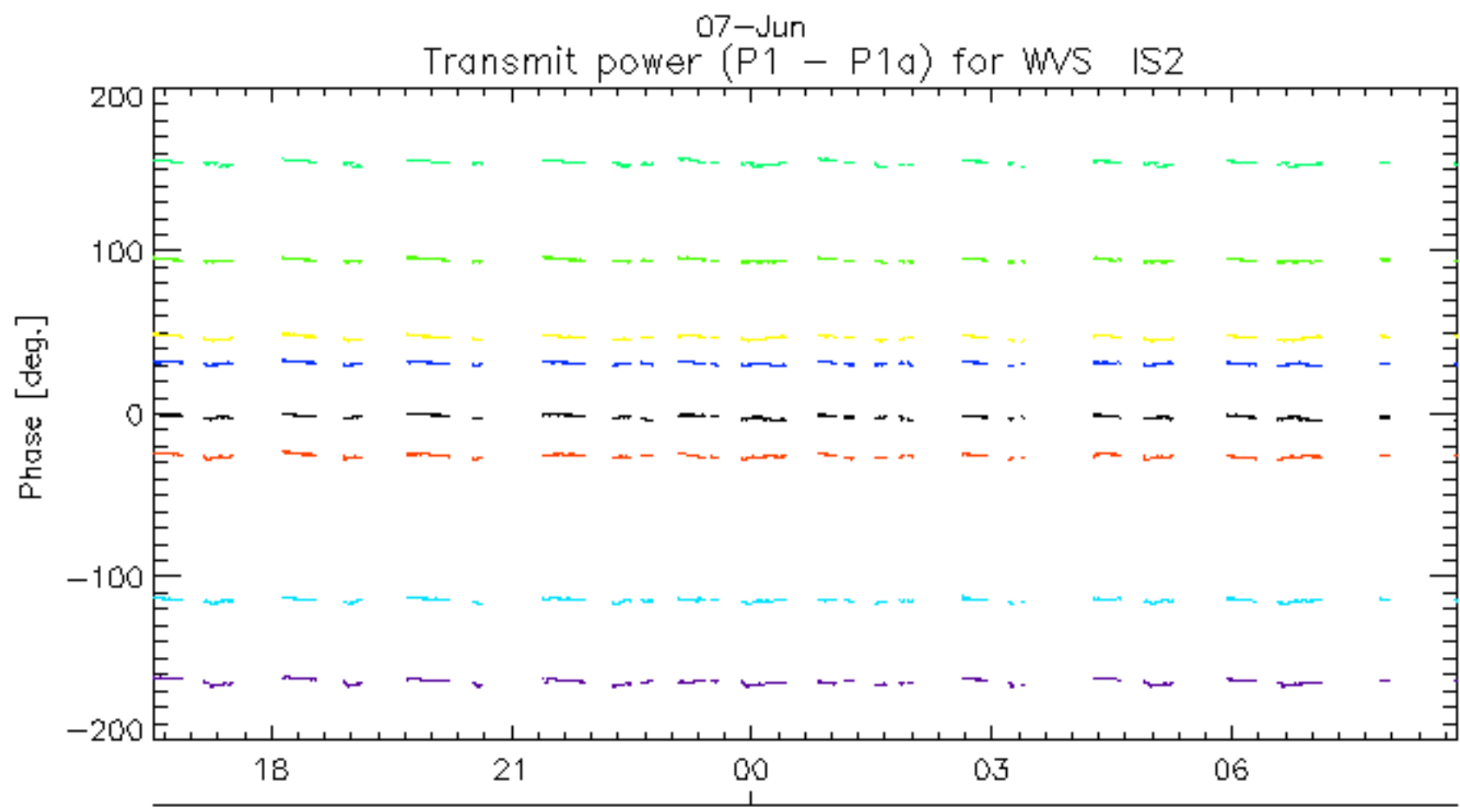
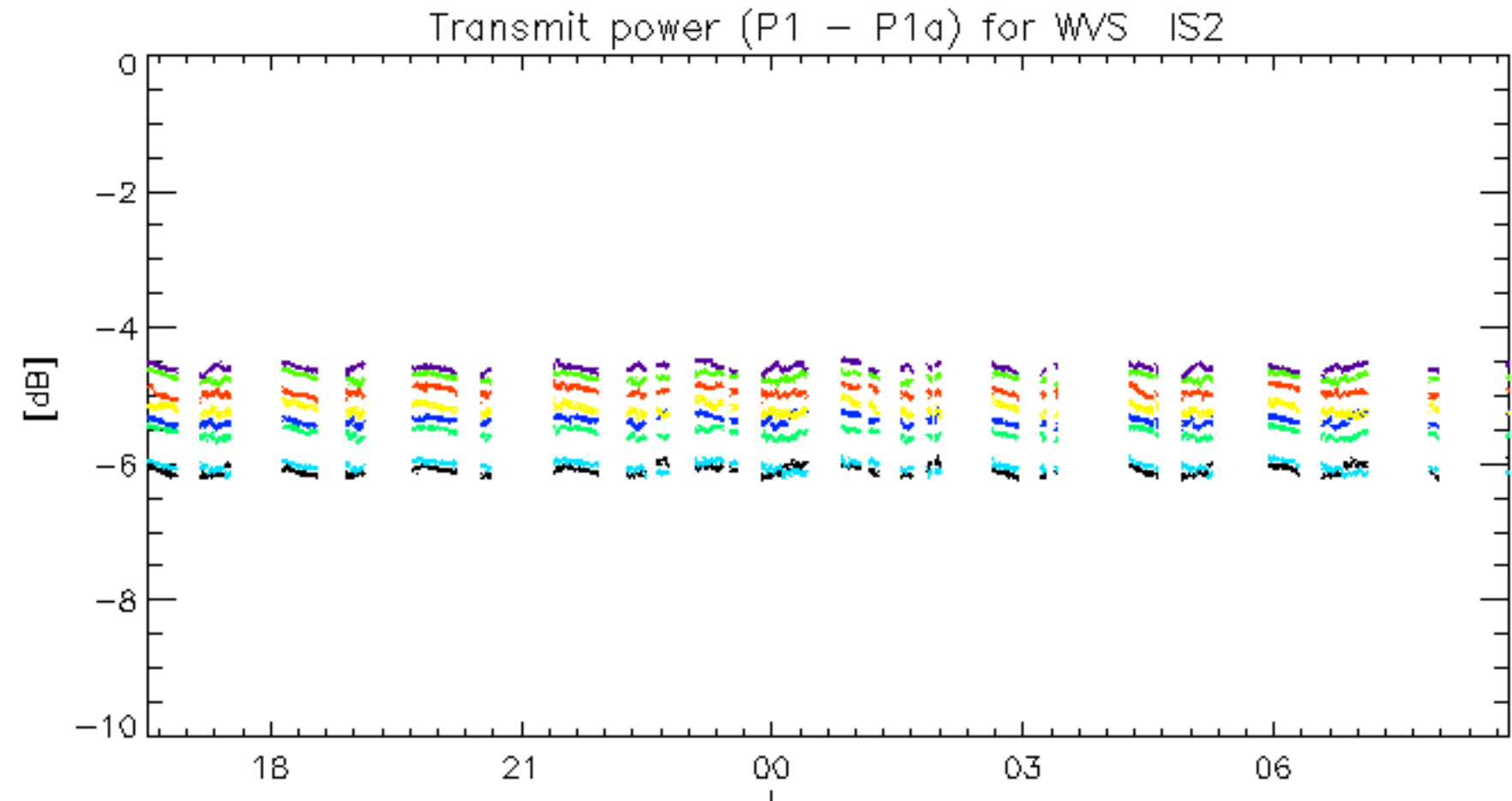
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.