

PRELIMINARY REPORT OF 060610

last update on Sat Jun 10 16:46:04 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 2006-06-09 00:00:00 to 2006-06-10 16:46:04

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	70	10	0	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	70	10	0	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	70	10	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	70	10	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	44	37	22	61
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	39	44	37	22	61
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	39	44	37	22	61
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	44	37	22	61

2.3 - Browse Visual Inspection

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	20060609 033420
H	20060608 040557

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
☒	☒
☒	☒
☒	☒
☒	☒

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	-3.947032	0.017795	0.050189
7	P1	-3.120328	0.016730	-0.047660
11	P1	-4.107780	0.018580	0.012918
15	P1	-6.138988	0.019843	-0.015540
19	P1	-3.332533	0.008393	-0.052840
22	P1	-4.514956	0.011505	0.016636
26	P1	-3.979395	0.017564	0.025524
30	P1	-5.747542	0.008628	0.004647
3	P1	-16.538612	0.261525	0.085507
7	P1	-17.184975	0.148804	-0.132790
11	P1	-16.936304	0.308114	-0.026928
15	P1	-13.208813	0.214803	0.042453
19	P1	-14.289504	0.049592	-0.113900
22	P1	-16.167280	0.375357	0.015303
26	P1	-15.249521	0.237243	0.081567
30	P1	-17.068142	0.391183	-0.225647

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.180666	0.079797	0.125120
7	P2	-22.061016	0.095887	0.115907
11	P2	-15.911003	0.109653	0.120012
15	P2	-7.161335	0.091681	0.015071
19	P2	-9.167436	0.084165	-0.015079
22	P2	-18.138884	0.082211	-0.076050
26	P2	-16.382284	0.086909	-0.053167
30	P2	-19.568464	0.085095	0.047437

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185450	0.003944	0.009769
7	P3	-8.185450	0.003944	0.009769
11	P3	-8.185450	0.003944	0.009769
15	P3	-8.185450	0.003944	0.009769
19	P3	-8.185450	0.003944	0.009769
22	P3	-8.185450	0.003944	0.009769
26	P3	-8.185450	0.003944	0.009769
30	P3	-8.185450	0.003944	0.009769

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	-3.784901	0.064013	-0.061202
7	P1	-2.598766	0.031527	0.024244
11	P1	-2.864202	0.023396	-0.000373
15	P1	-3.502158	0.049521	-0.043223
19	P1	-3.401191	0.014262	-0.021372
22	P1	-5.084270	0.019819	-0.002810
26	P1	-5.844215	0.015497	-0.016515
30	P1	-5.189504	0.026745	0.011525
3	P1	-11.614553	0.081561	-0.019104
7	P1	-9.967916	0.053277	-0.014221
11	P1	-10.207870	0.086170	-0.068038
15	P1	-10.635241	0.150651	-0.161297
19	P1	-15.519885	0.075922	-0.045756
22	P1	-20.904995	1.209299	-0.071119
26	P1	-16.483255	0.344426	0.041596
30	P1	-17.967470	0.384657	0.227665

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.871325	0.068350	0.113091
7	P2	-22.505861	0.126379	0.037074
11	P2	-11.171781	0.046080	0.062919
15	P2	-4.911184	0.046907	-0.021537
19	P2	-6.879186	0.051226	-0.017441
22	P2	-8.201253	0.041710	-0.030558
26	P2	-24.117628	0.066098	-0.081260
30	P2	-22.065613	0.053681	-0.006341

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.019164	0.004695	0.003365
7	P3	-8.019349	0.004693	0.003375
11	P3	-8.019266	0.004686	0.003768
15	P3	-8.019127	0.004695	0.003182
19	P3	-8.019291	0.004696	0.003557
22	P3	-8.019320	0.004684	0.003327
26	P3	-8.019263	0.004682	0.003010
30	P3	-8.019234	0.004681	0.003199

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	0.000530152
	stdev	1.91121e-07
MEAN Q	mean	0.000508435
	stdev	2.29969e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.134035
	stdev	0.00119351
STDEV Q	mean	0.134375
	stdev	0.00121024



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006060[890]

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_1PNPDE20060609_004236_000001742048_00245_22343_6867.N1	1	0
ASA_IMM_1PNPDE20060609_014059_000000342048_00246_22344_6911.N1	1	0
ASA_IMM_1PNPDE20060609_014059_000000342048_00246_22344_6912.N1	1	0
ASA_WSM_1PNPDE20060608_230846_000001032048_00245_22343_3362.N1	0	60
ASA_WSM_1PNPDE20060609_041103_000001702048_00248_22346_3394.N1	0	65







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)



Ascending



Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler



Ascending



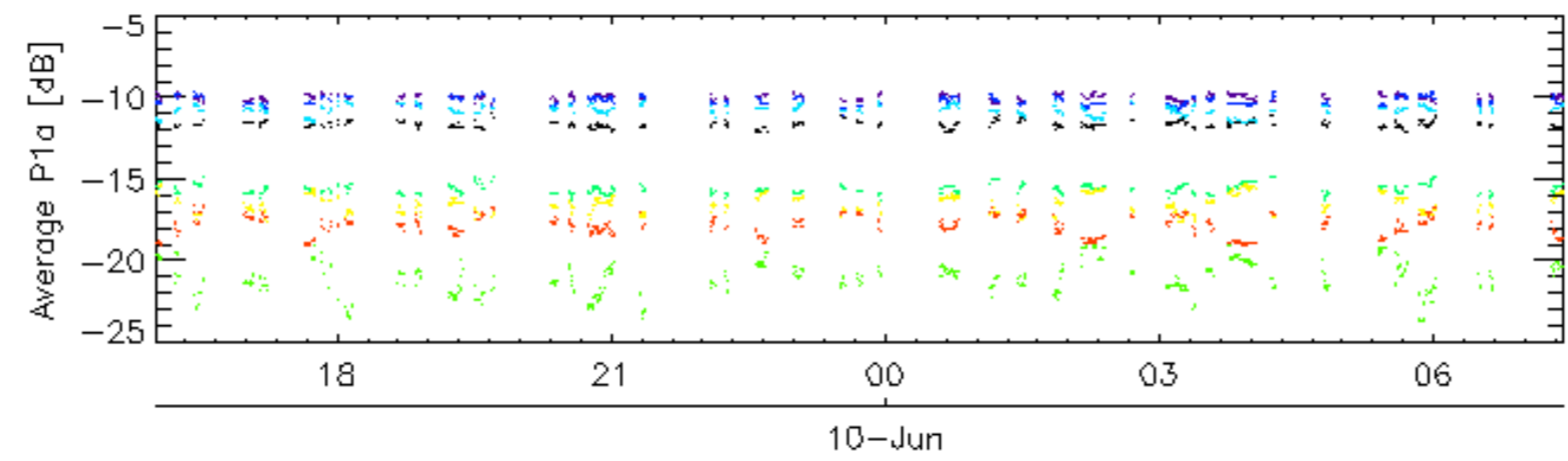
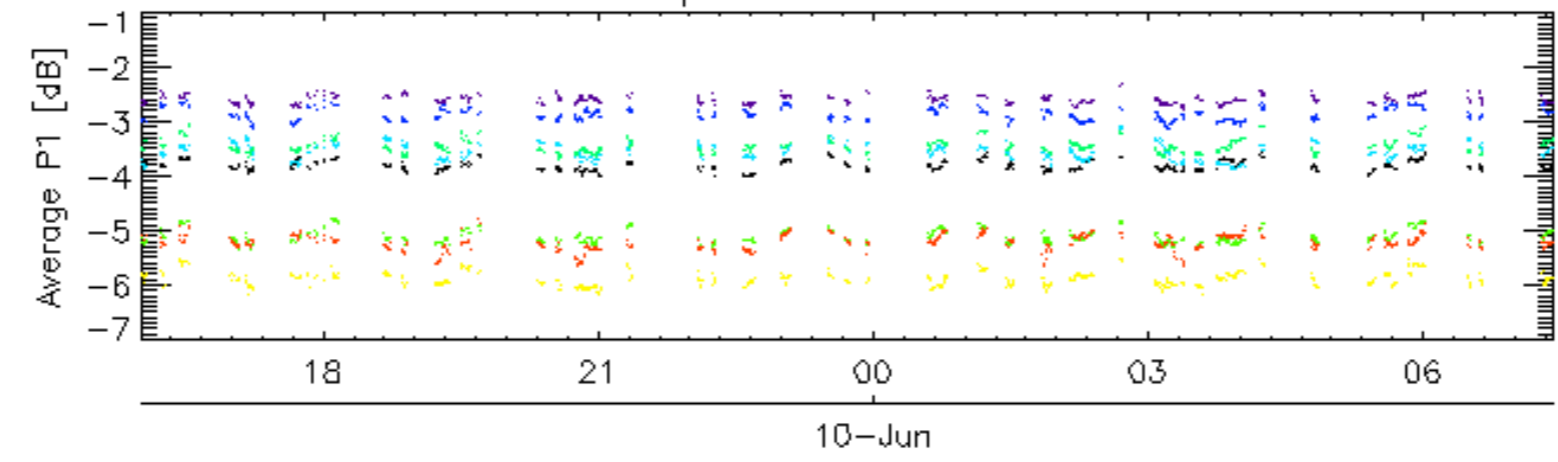
Descending

7.6 - Doppler evolution versus ANX for GM1

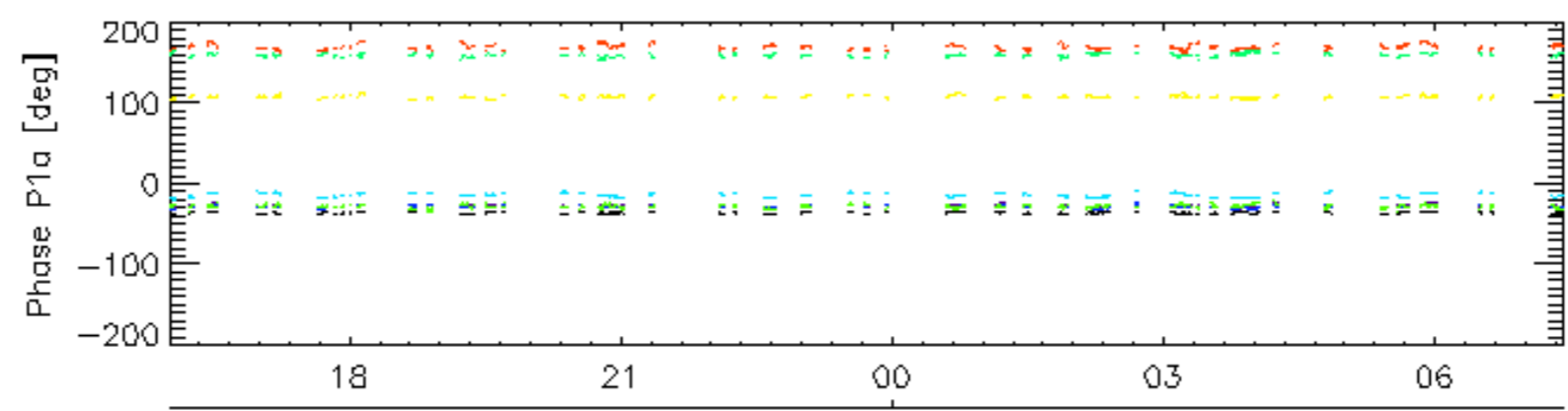
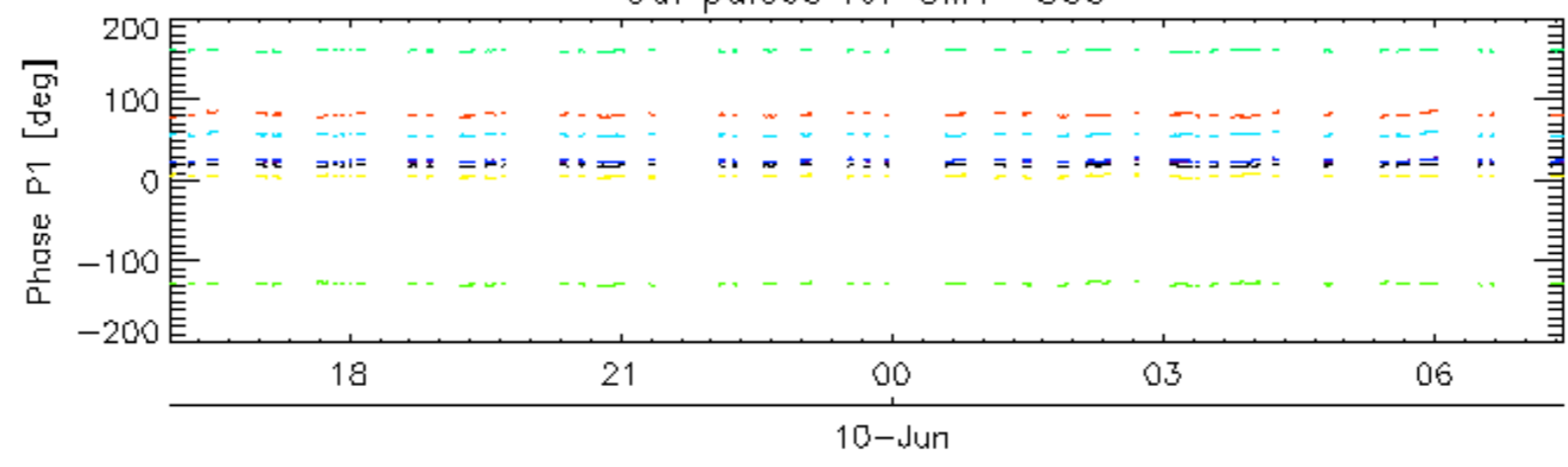
Evolution Doppler error versus ANX



Cal pulses for GM1 SS3

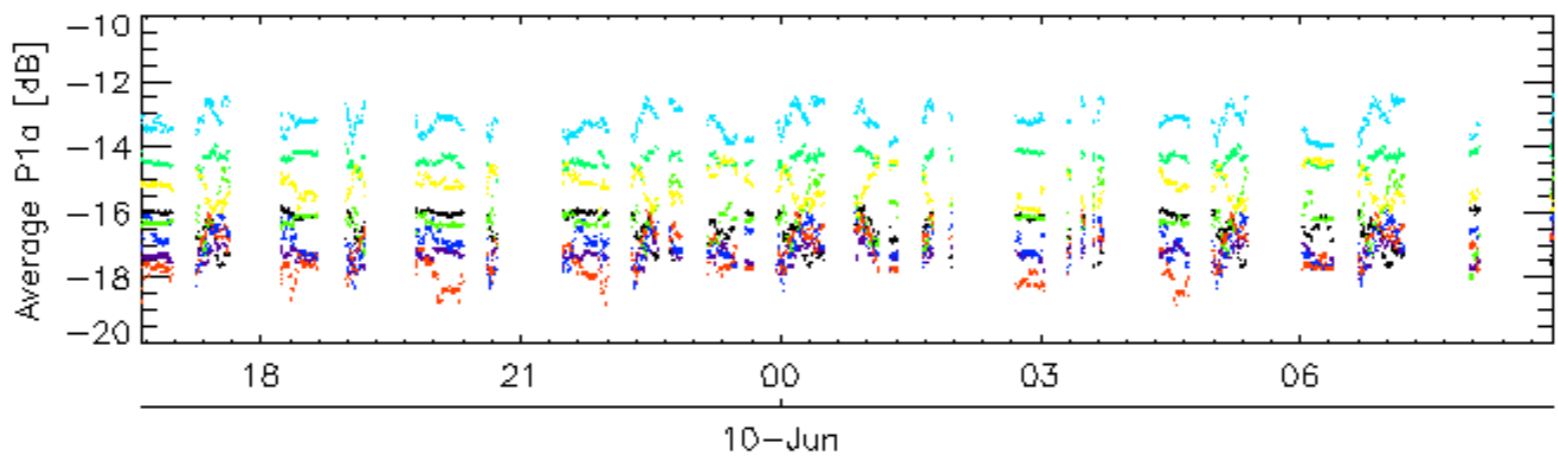
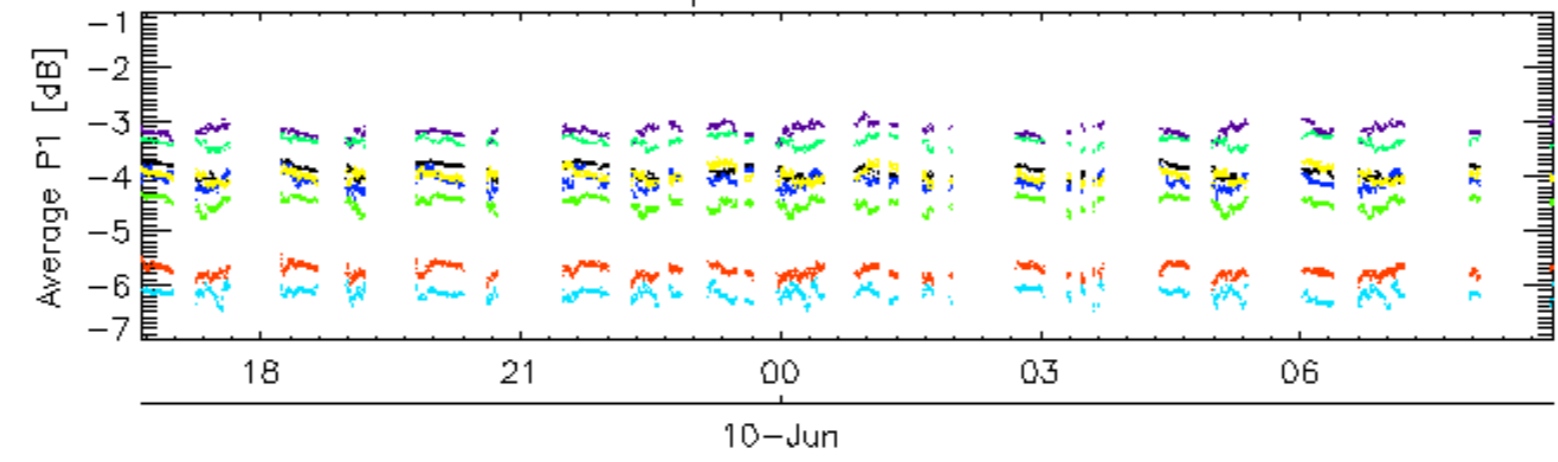


Cal pulses for GM1 SS3

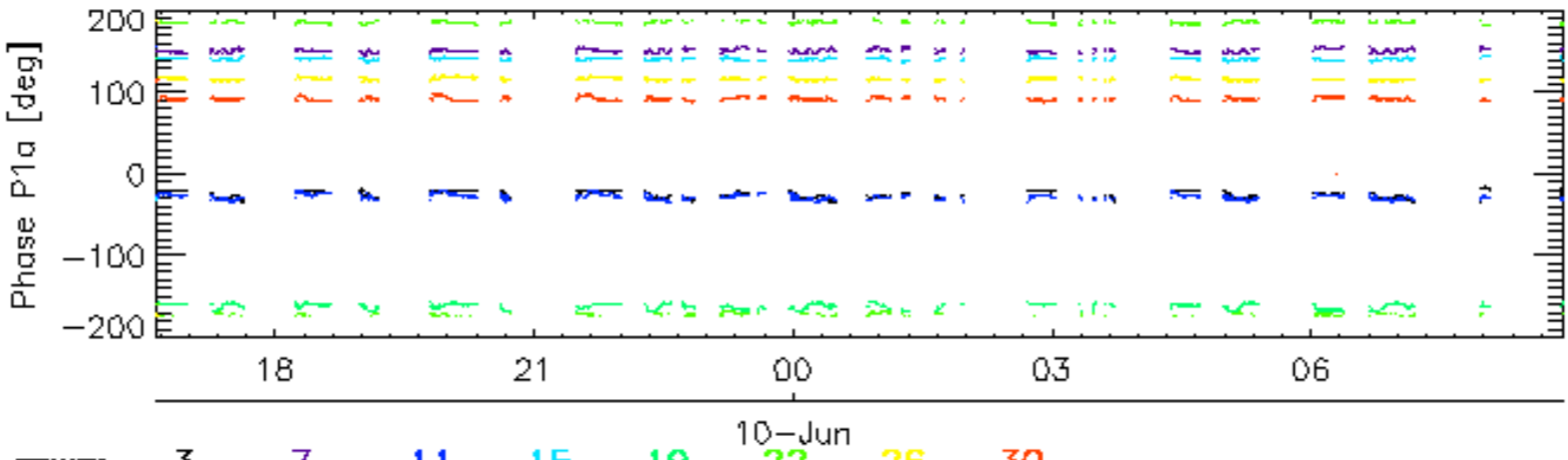
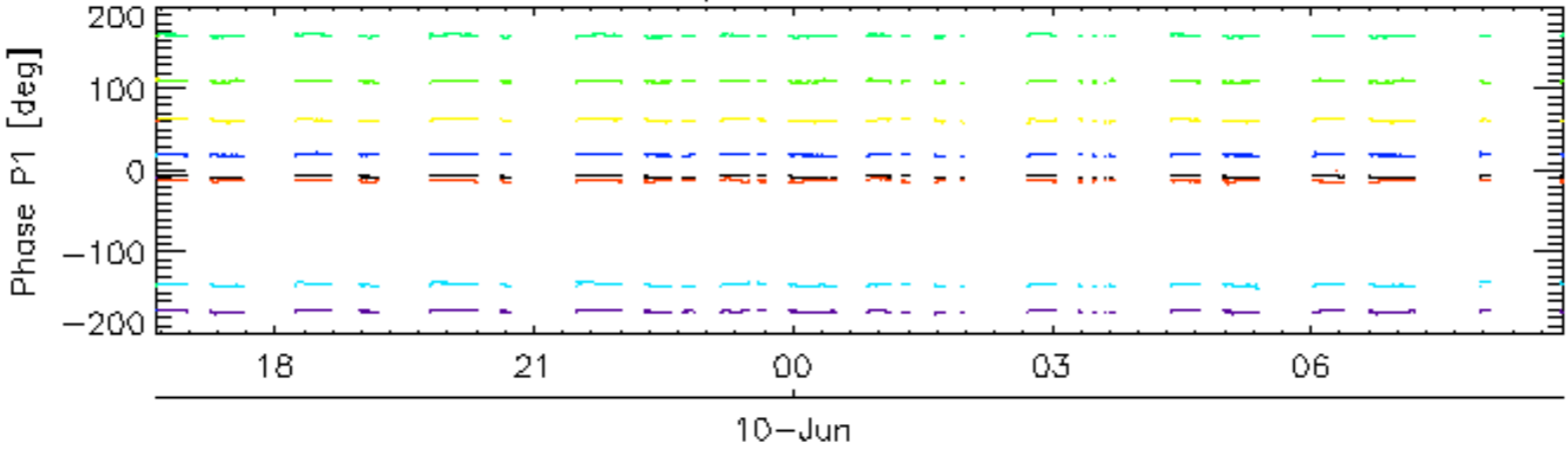


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

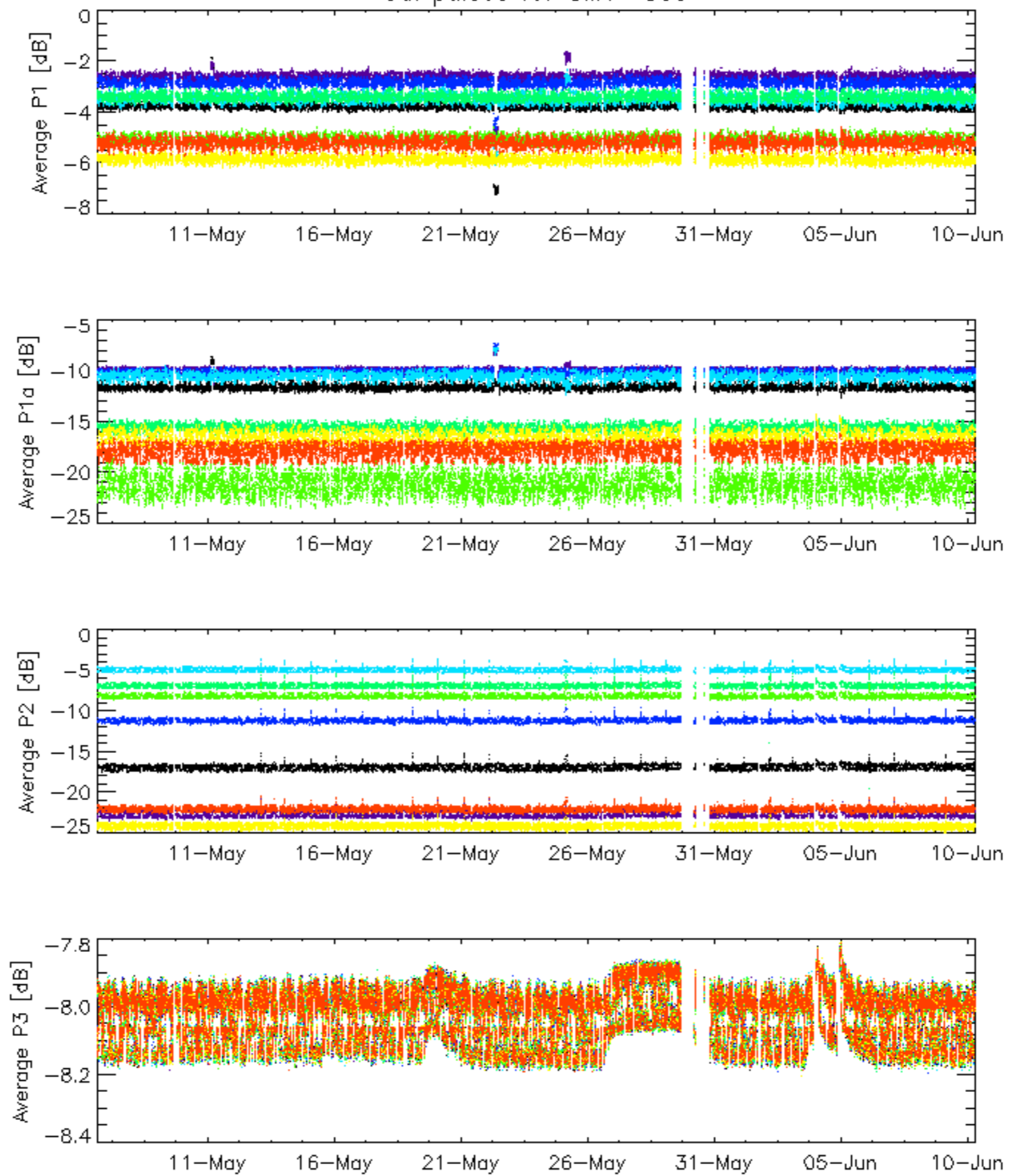


Cal pulses for WVS IS2



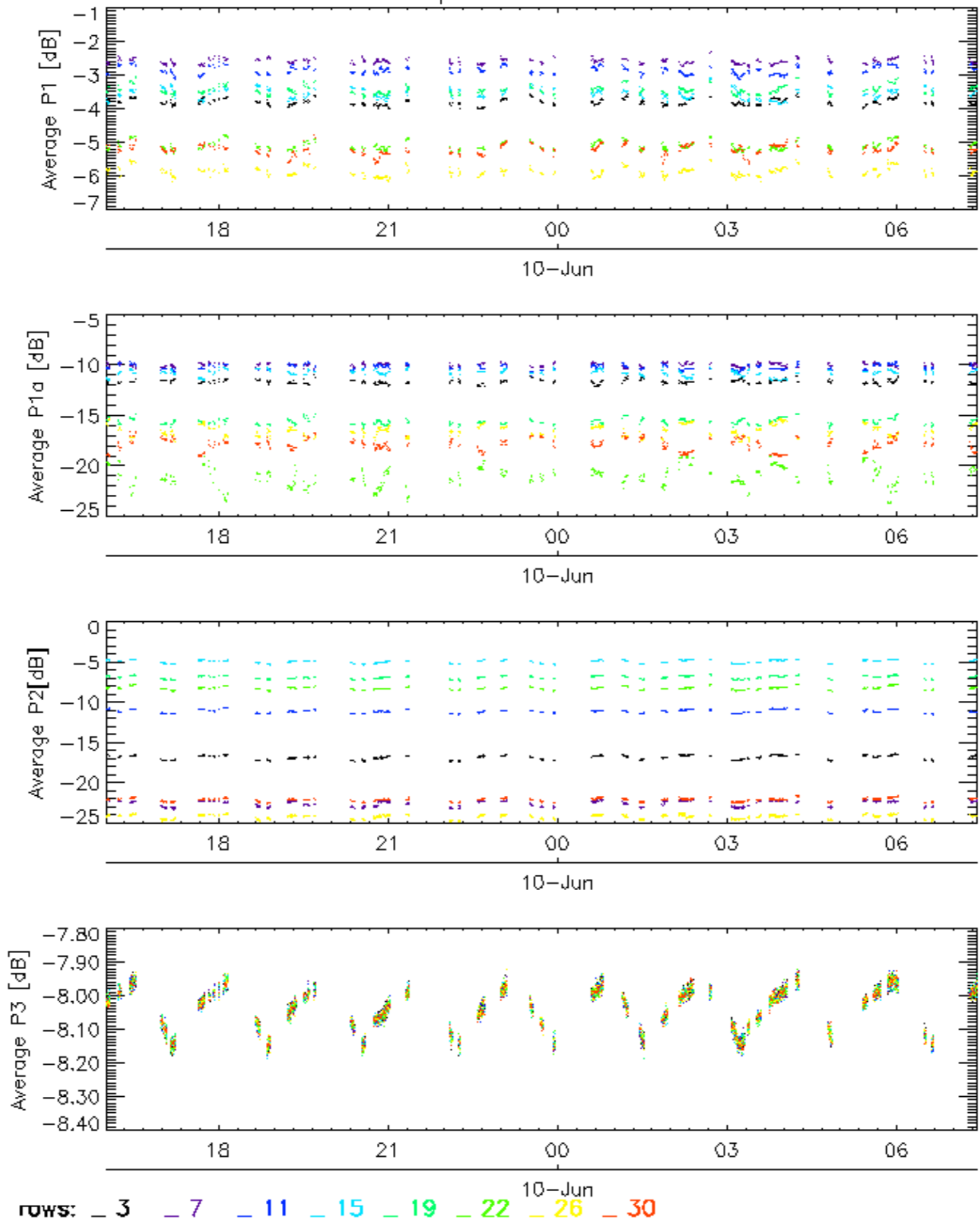
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

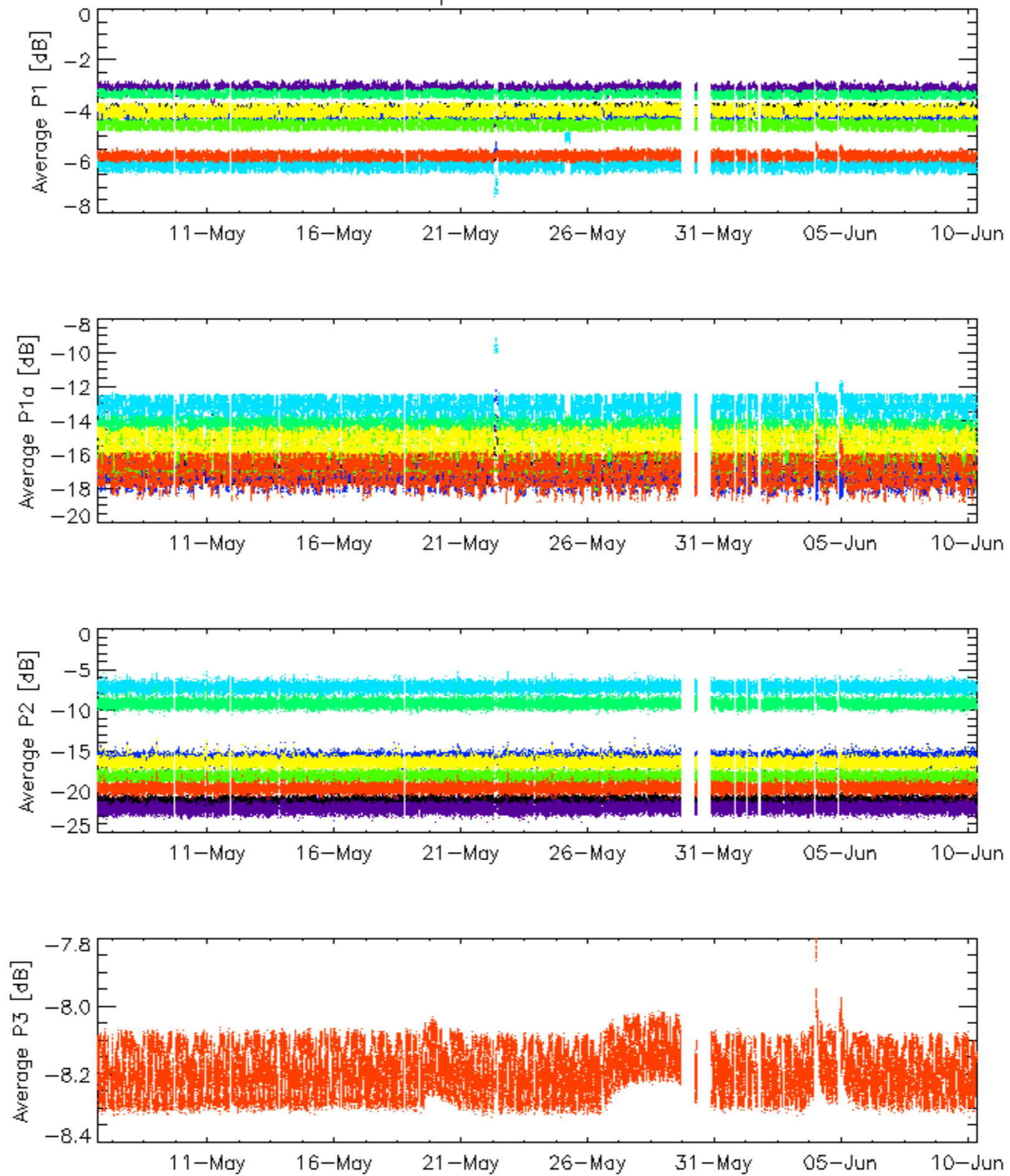


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

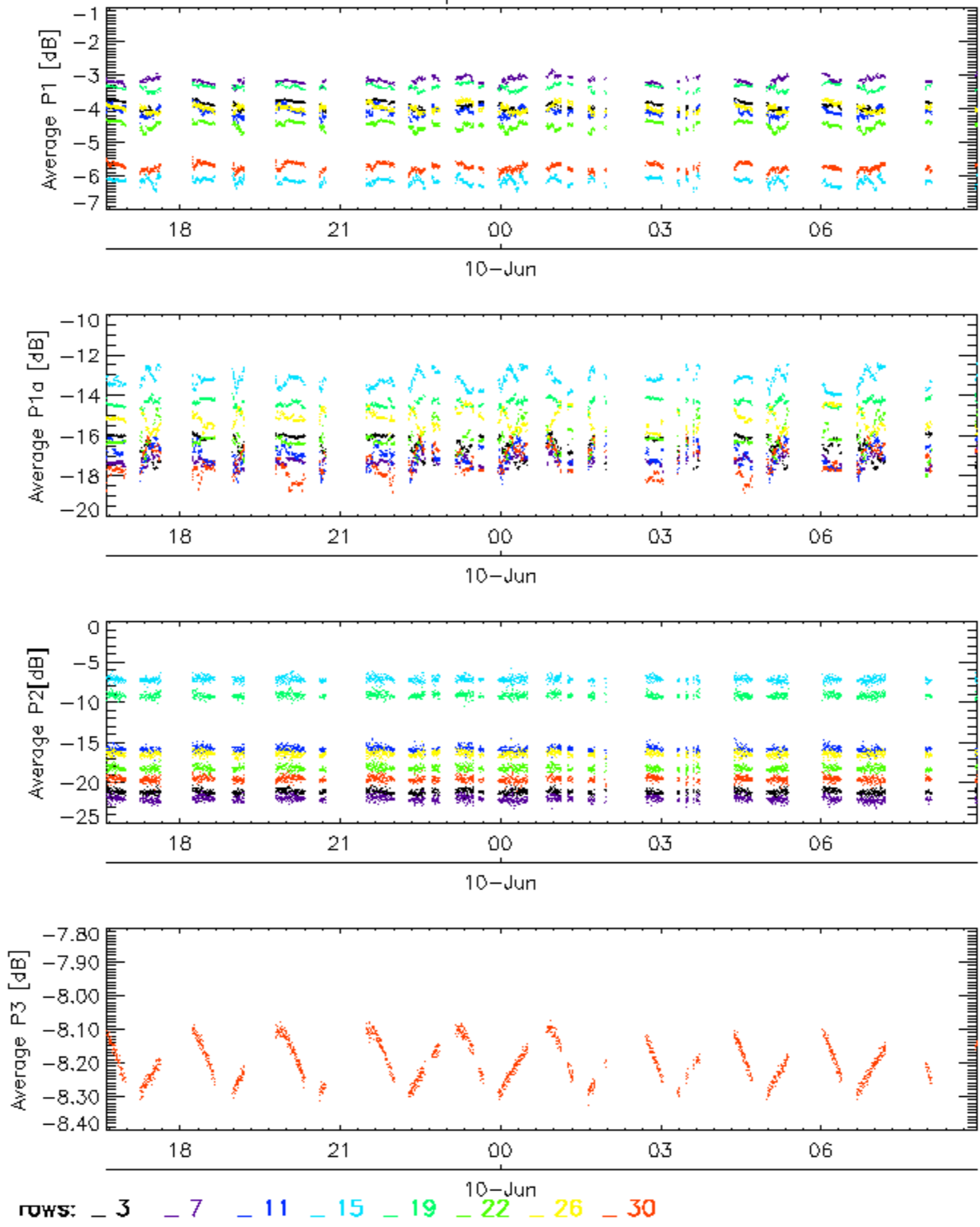


Cal pulses for WVS IS2



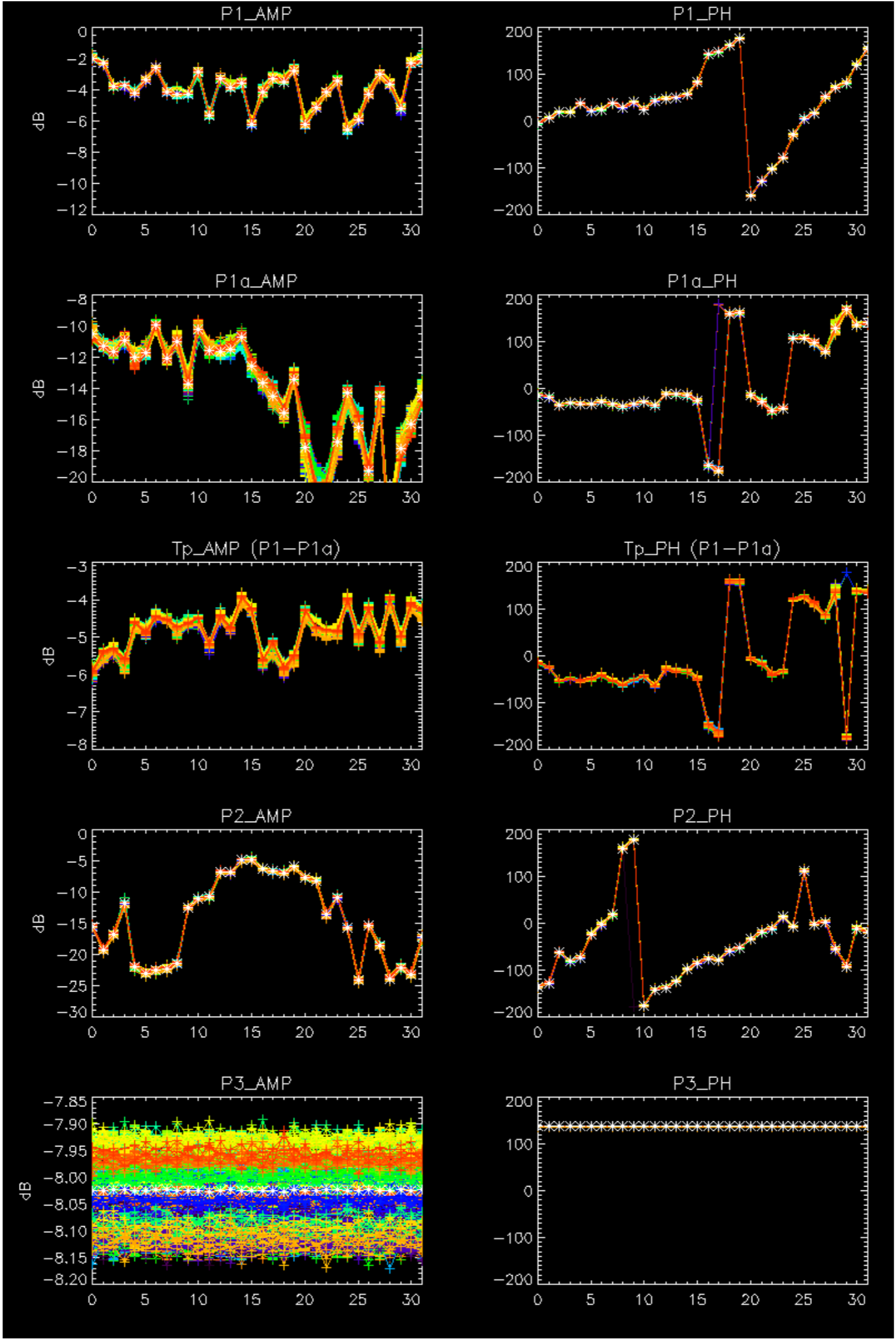
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

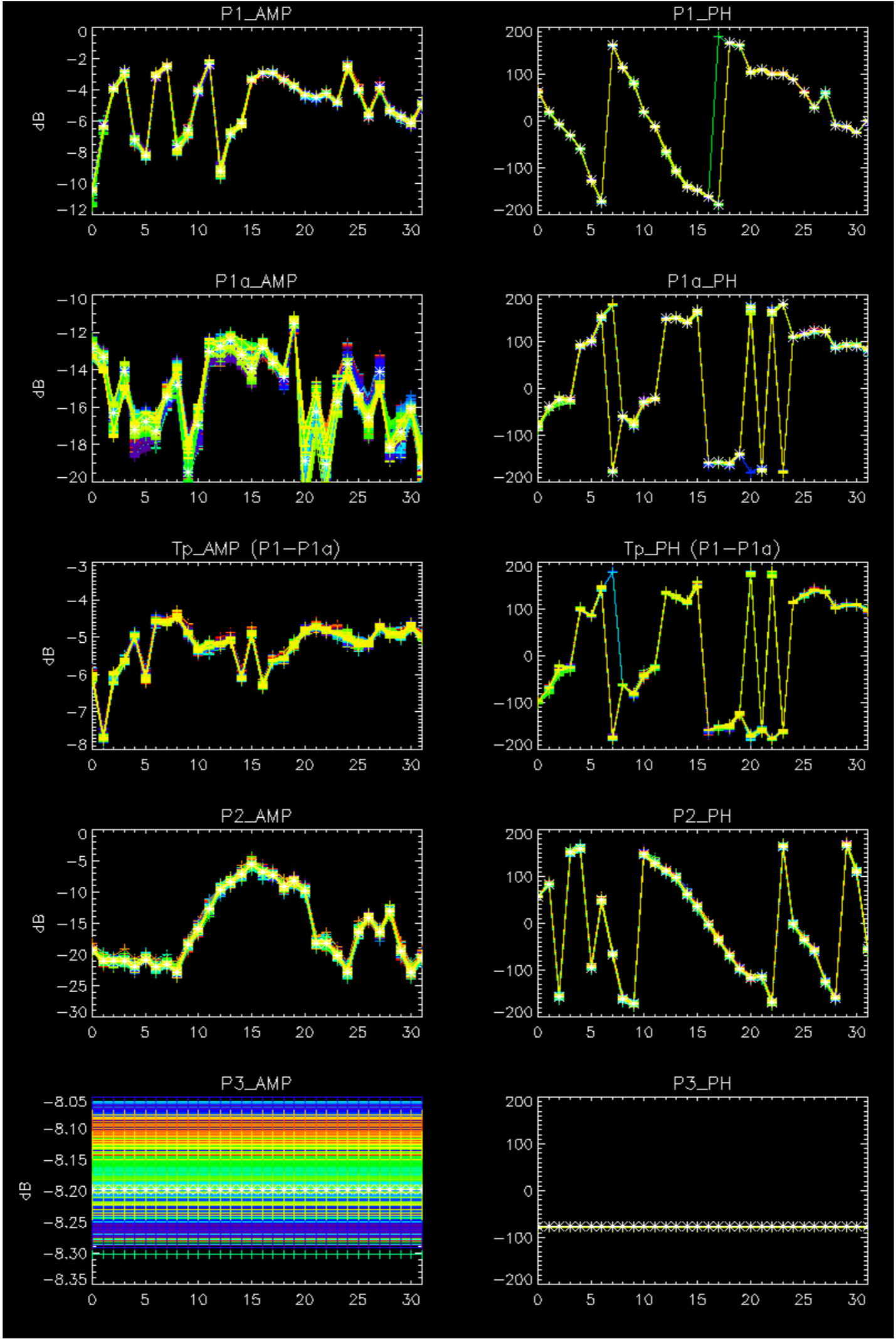
Cal pulses for WVS IS2



rows: 3 7 11 15 19 22 26 30

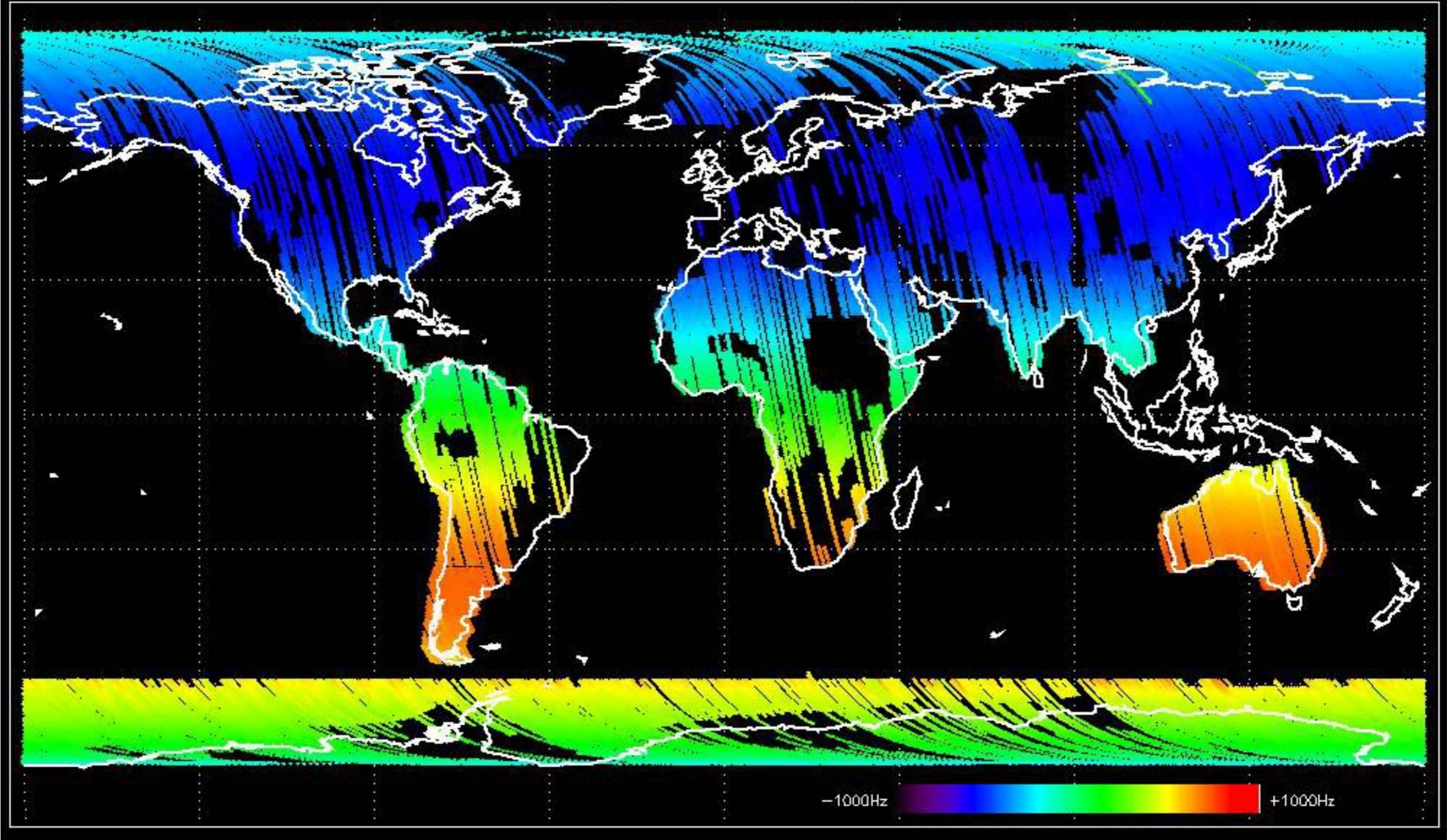
No anomalies observed.



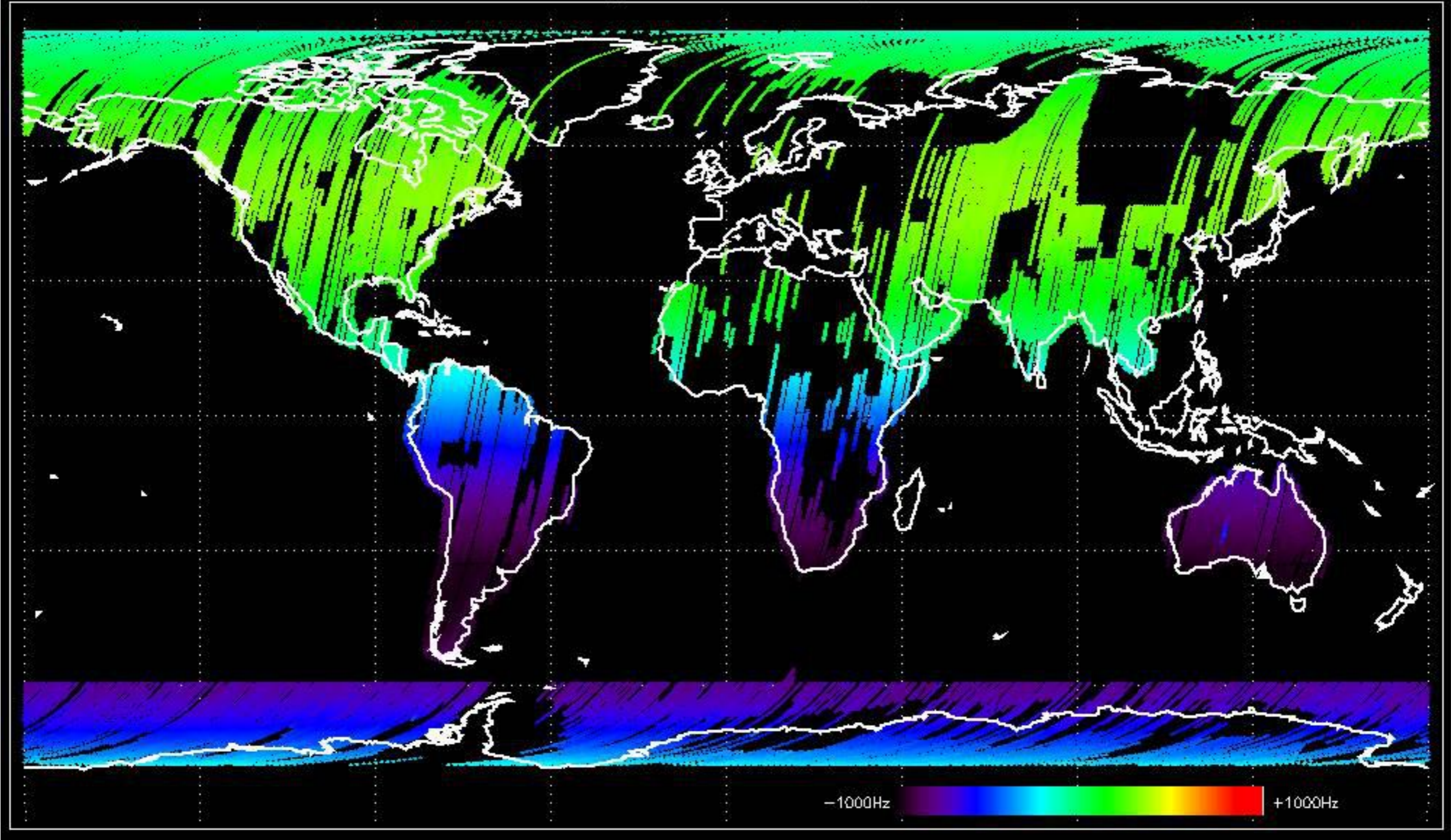


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

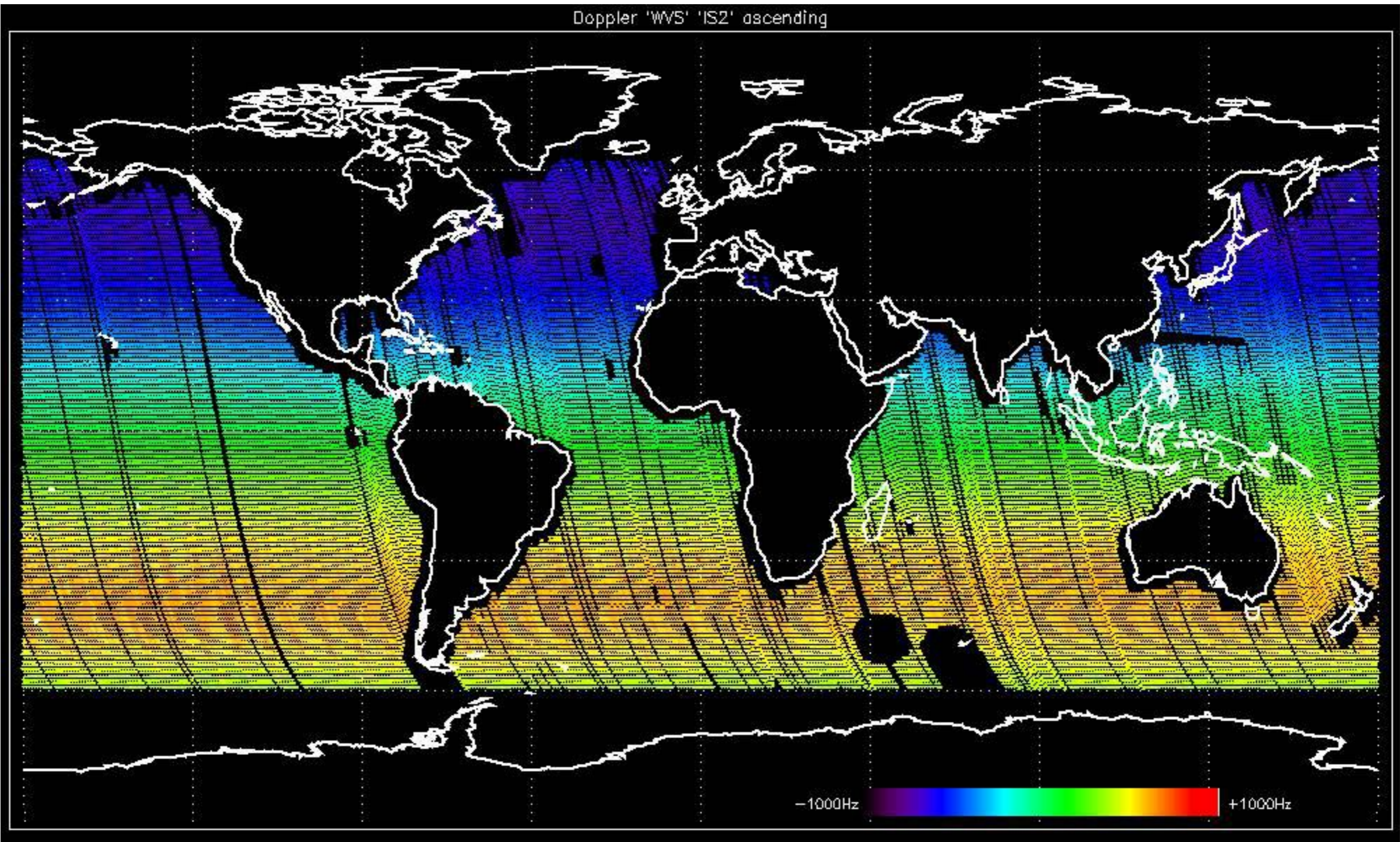
Doppler 'GM1' 'SS1' ascending



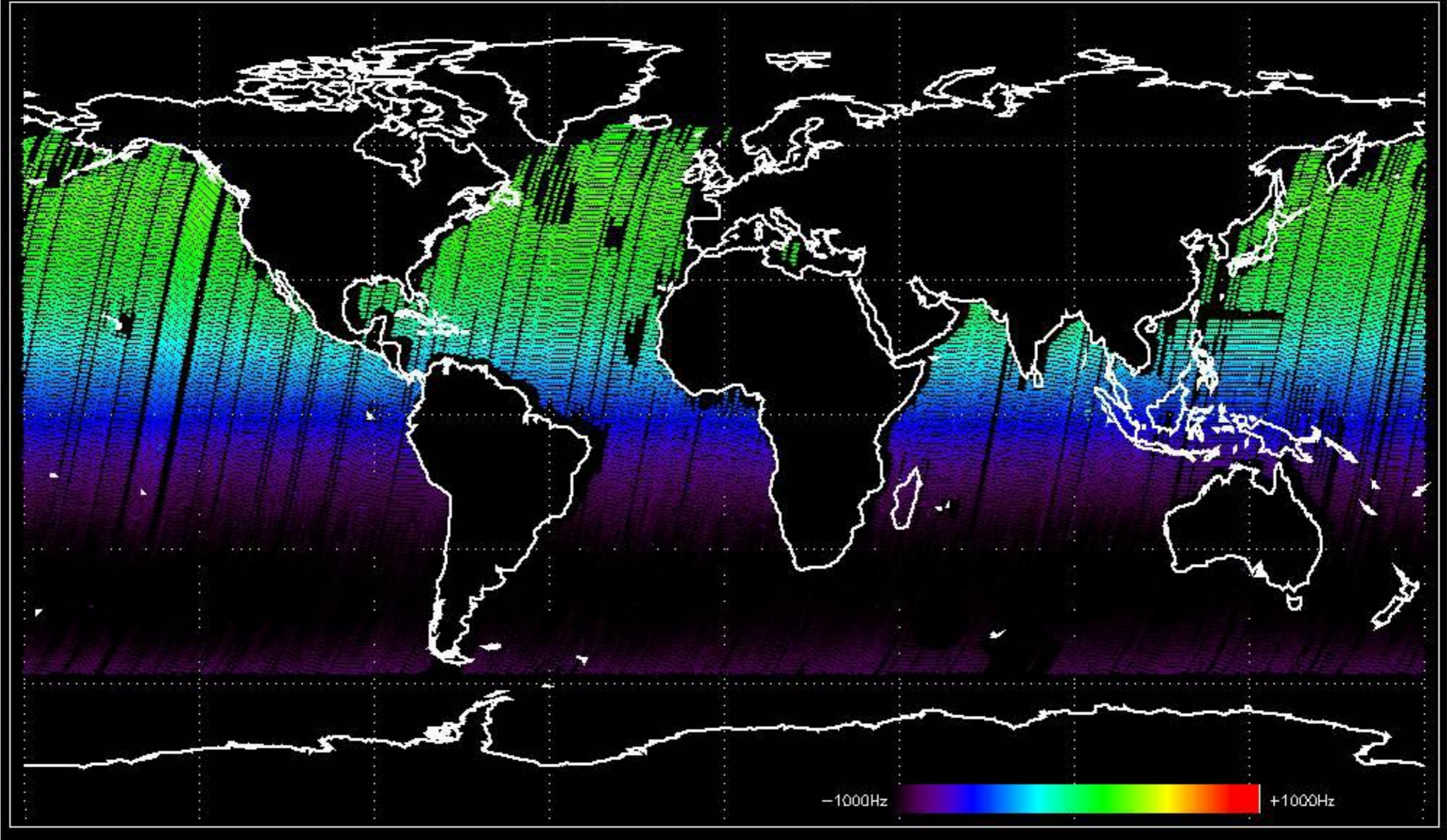
Doppler 'GM1' 'SS1' descending



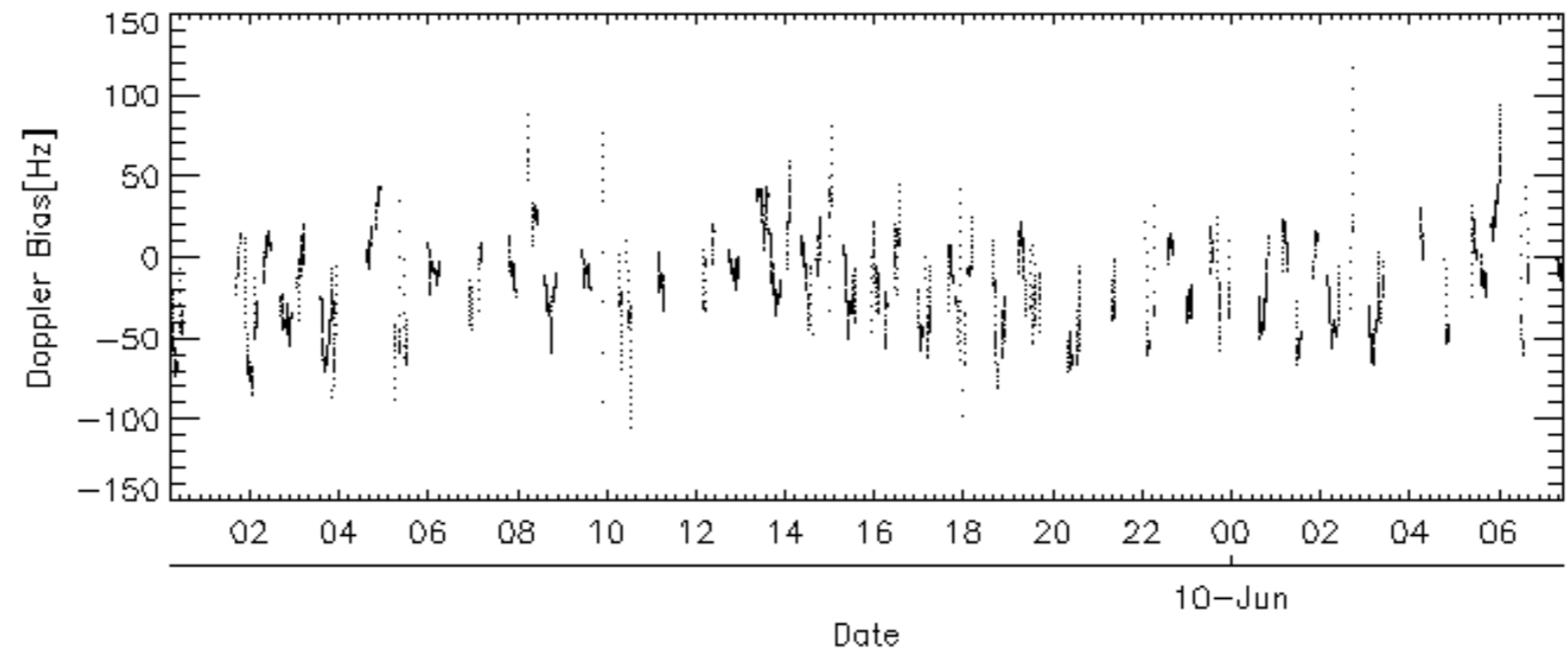
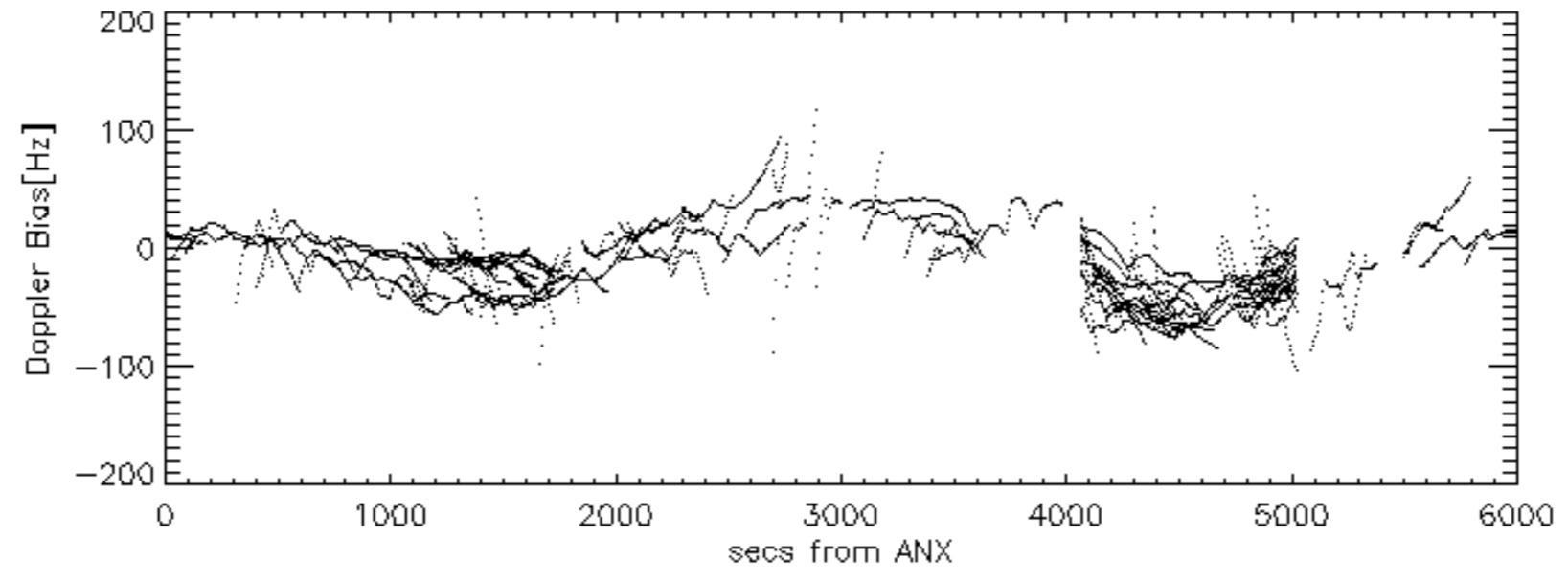
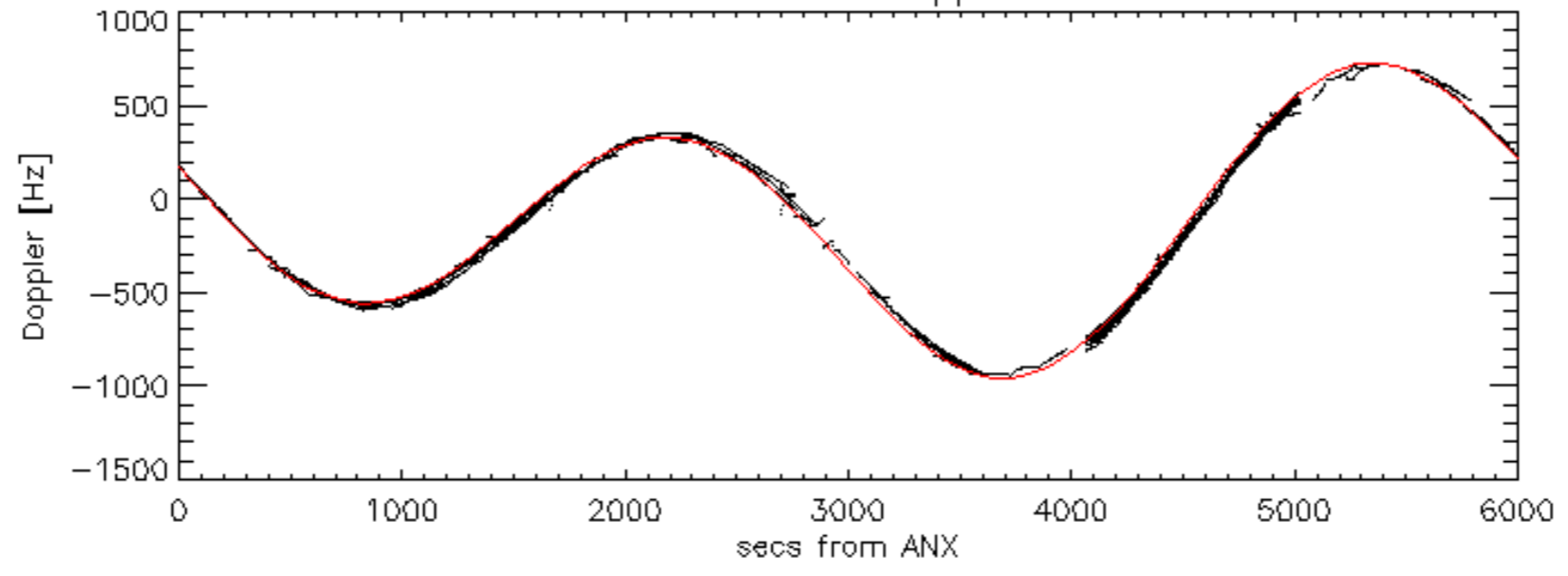
Doppler 'WVS' 'IS2' ascending

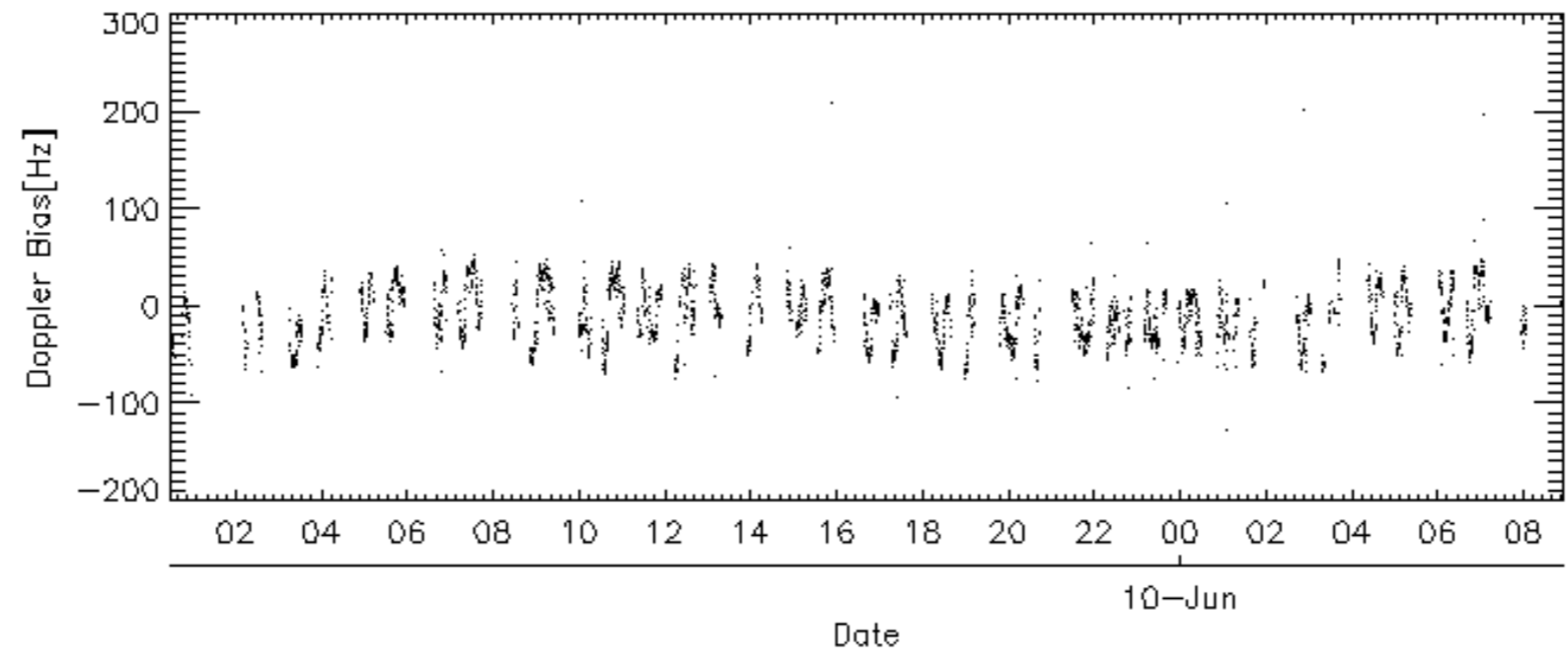
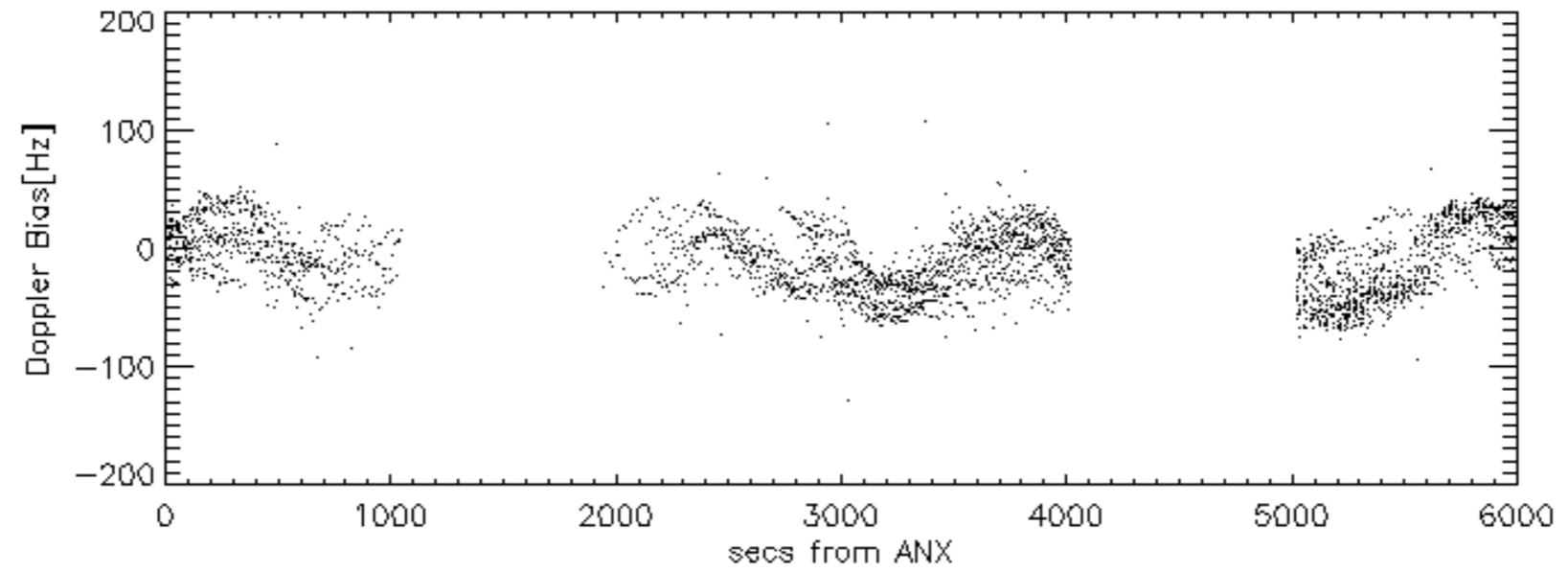
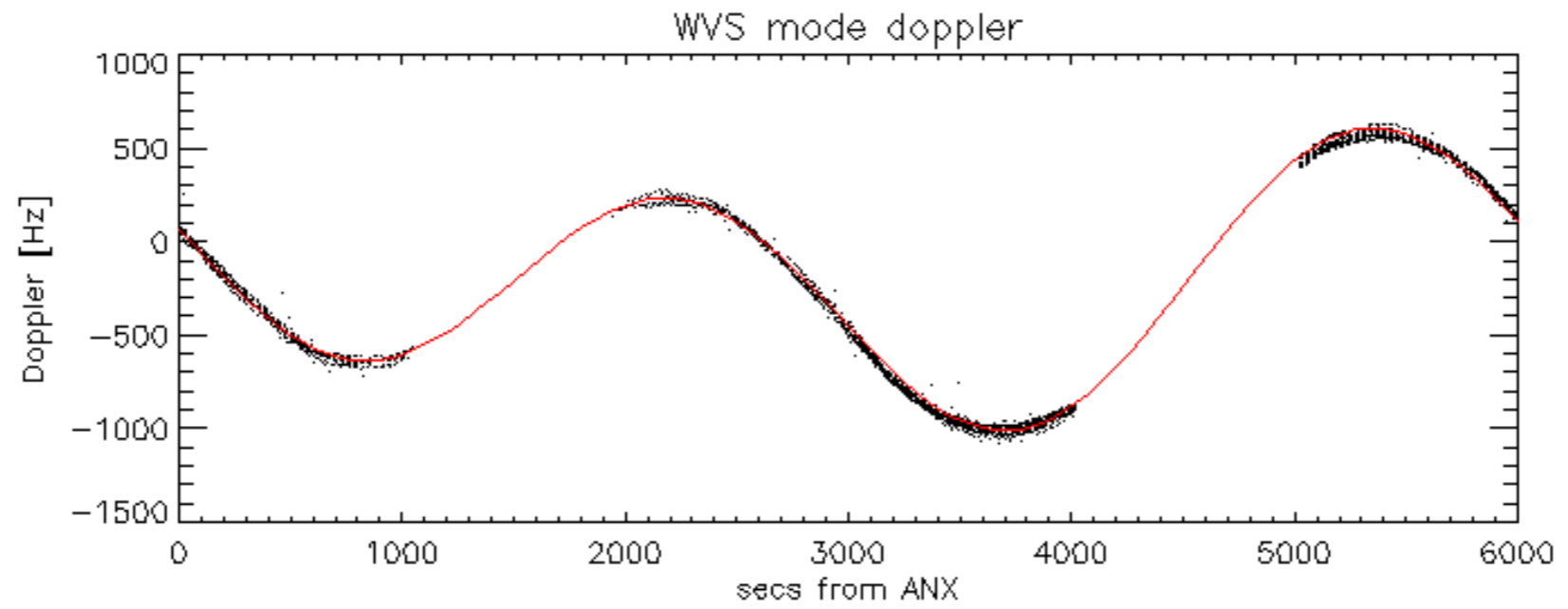


Doppler 'WVS' 'IS2' descending

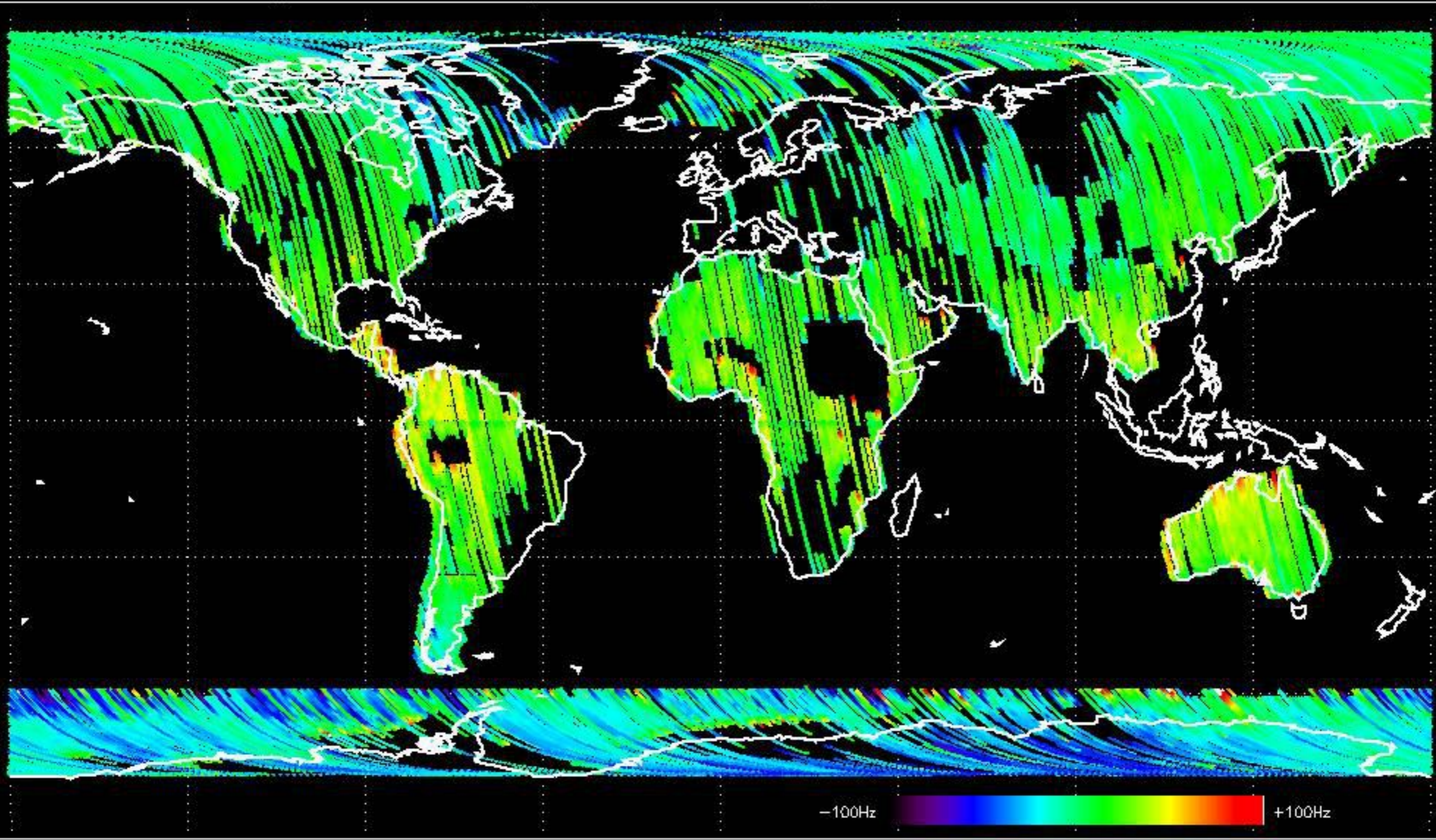


GM1 mode doppler

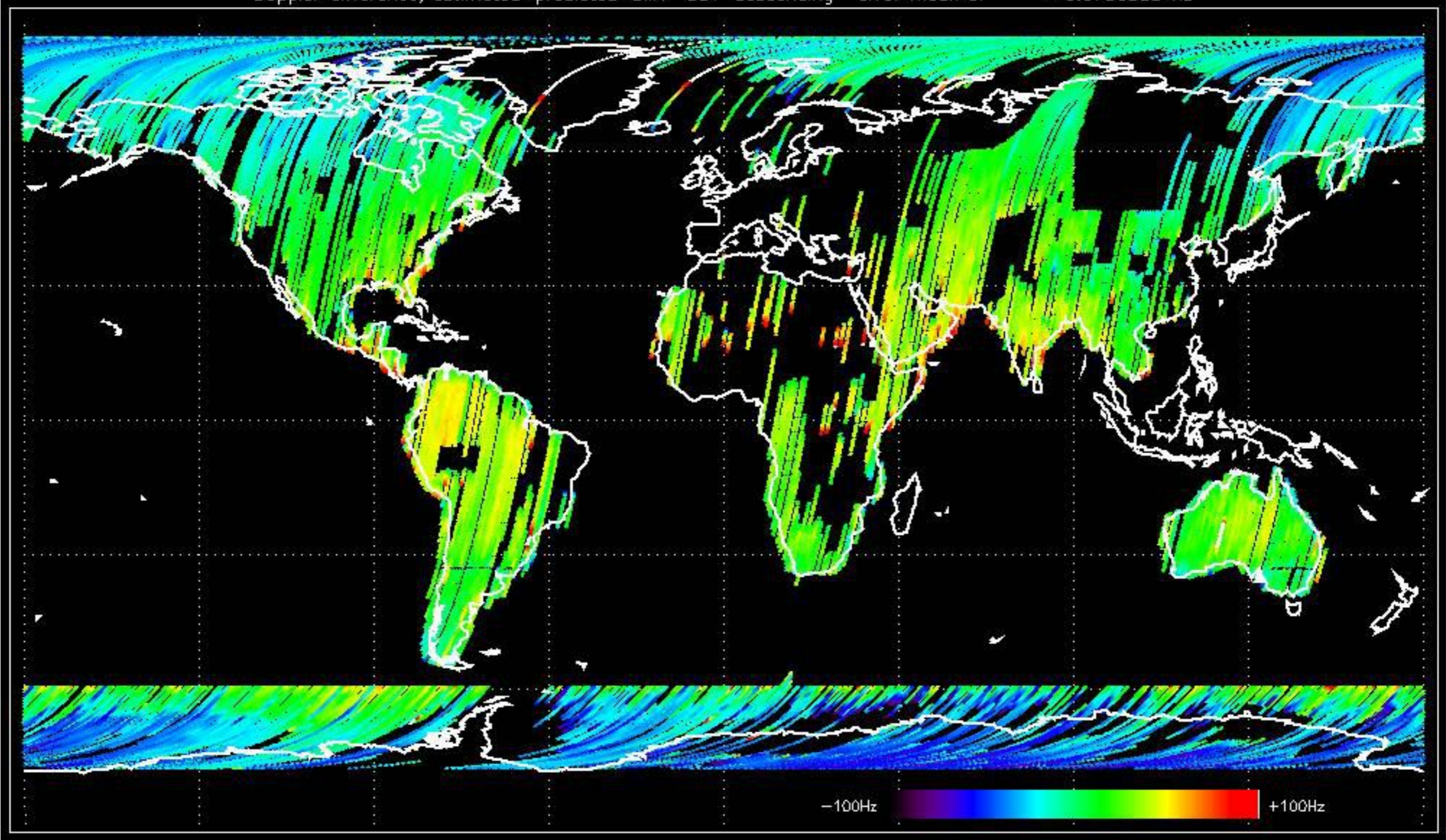




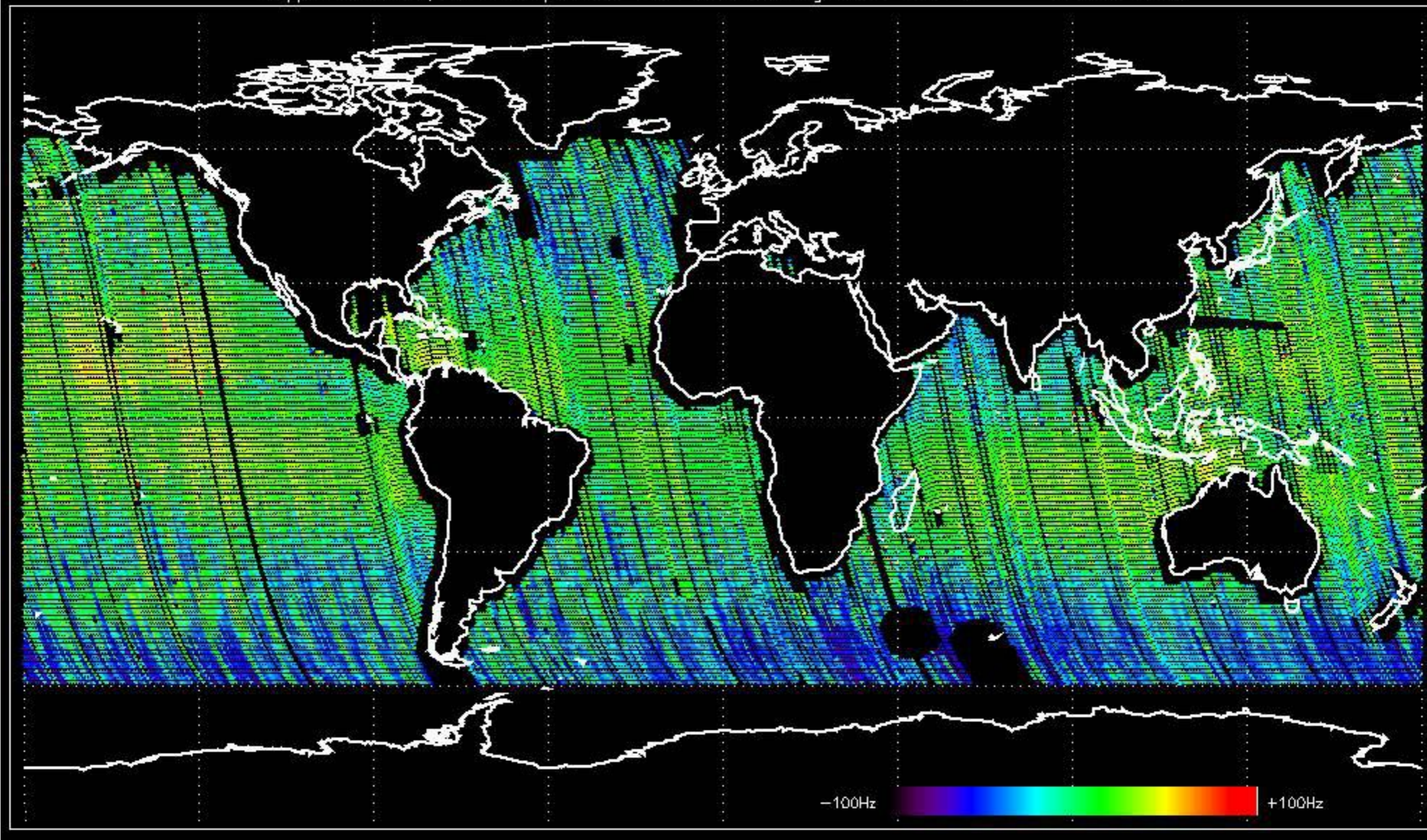
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -16.832719 Hz



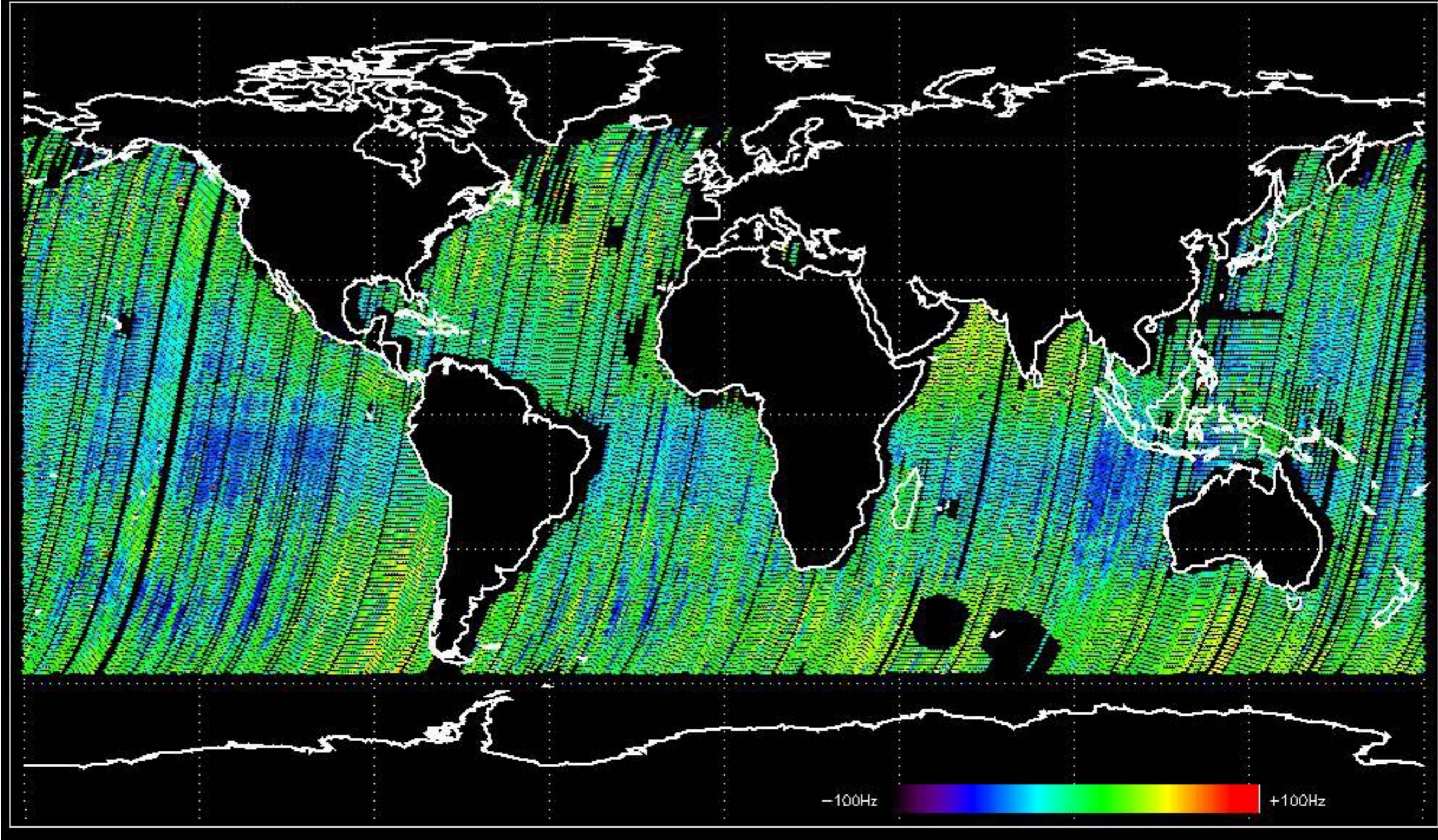
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.6786888 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.4538622 Hz

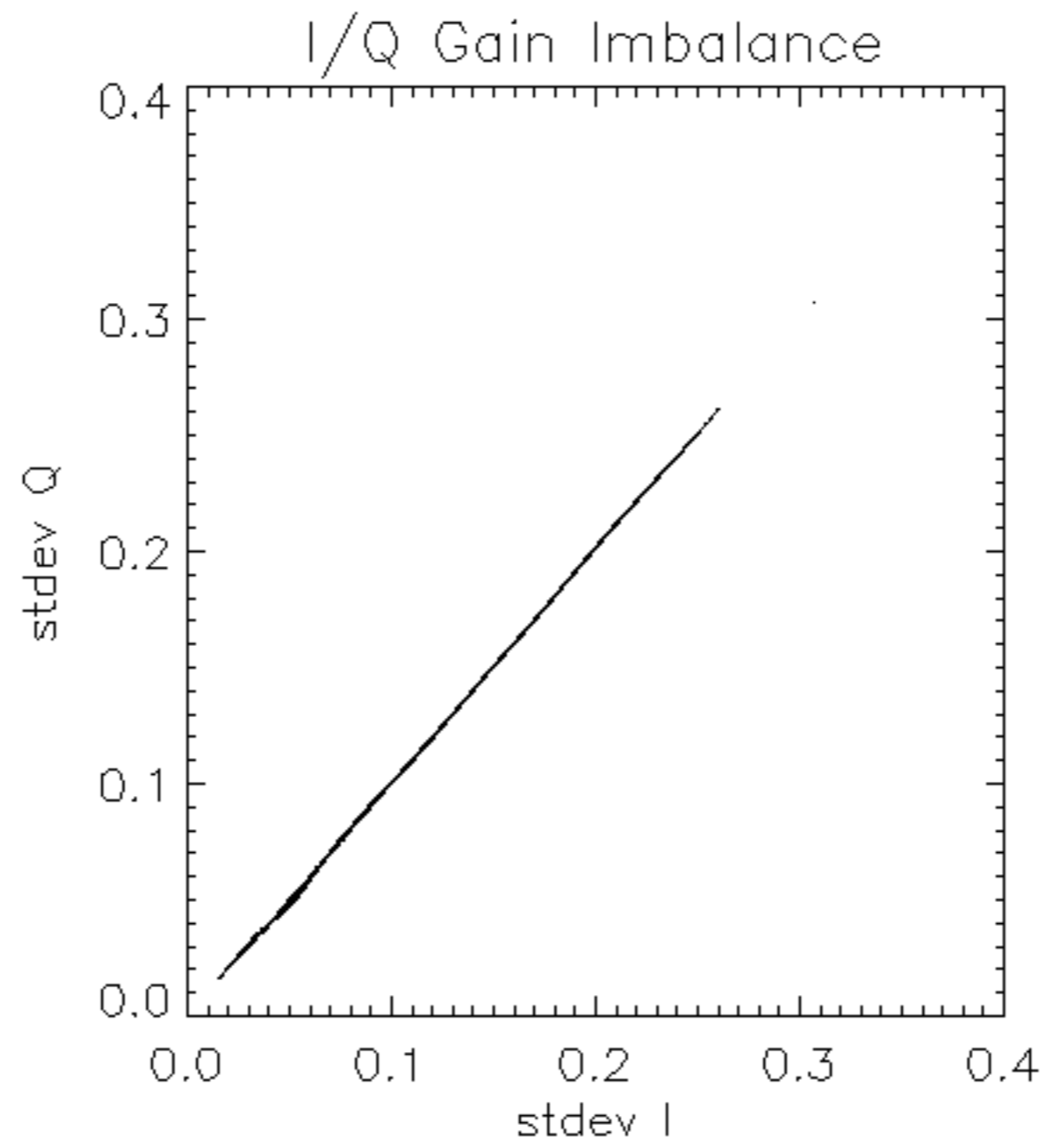


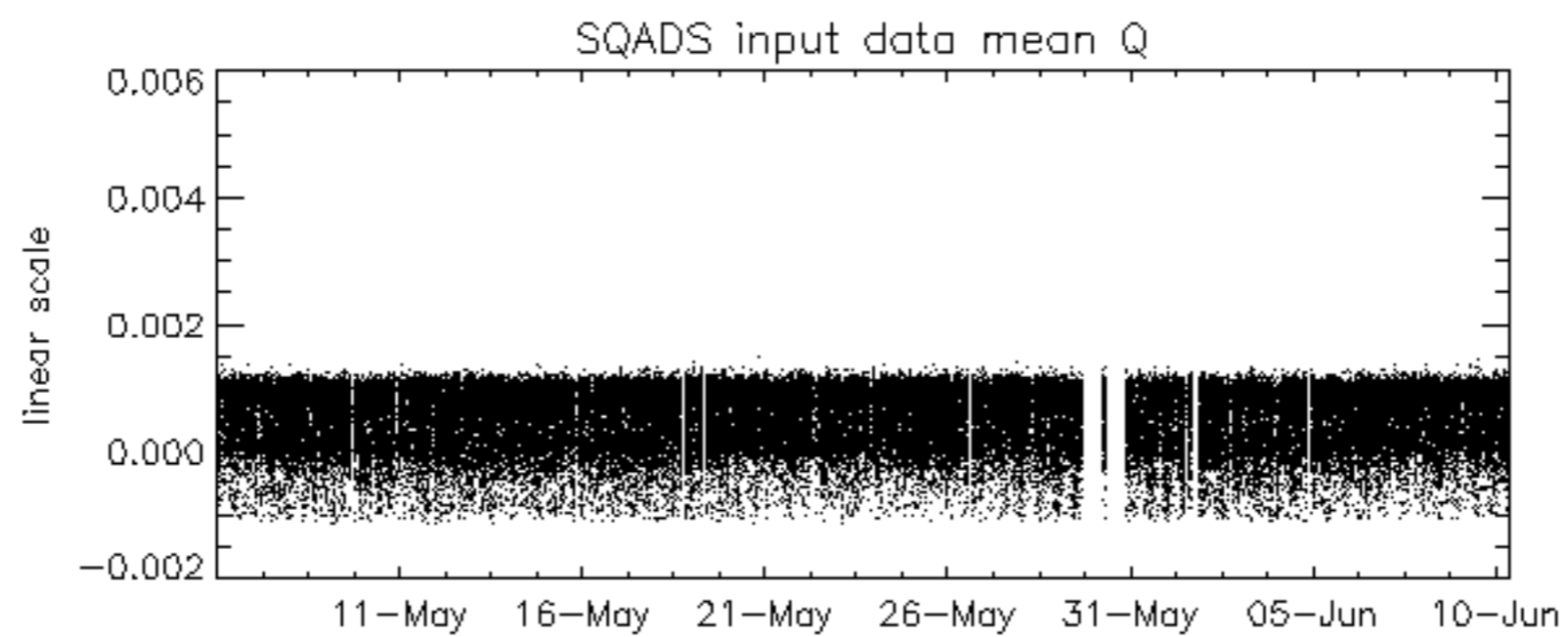
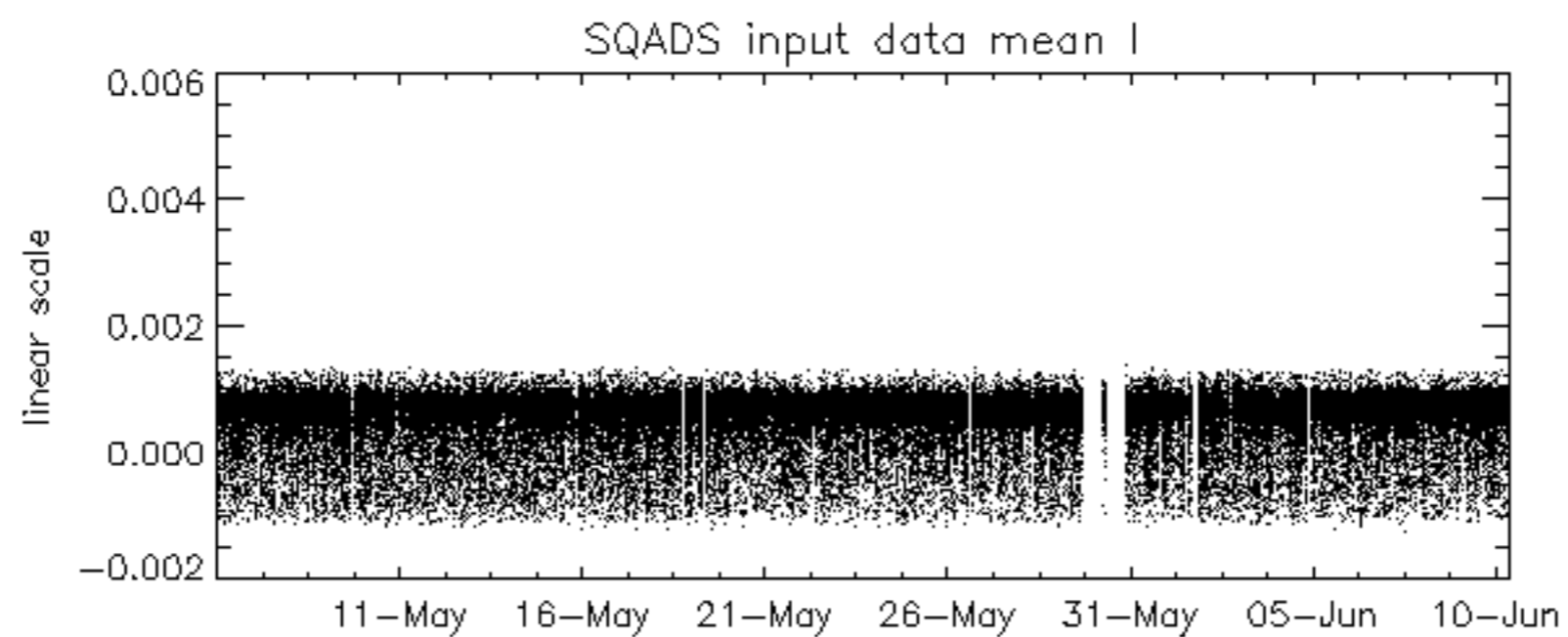
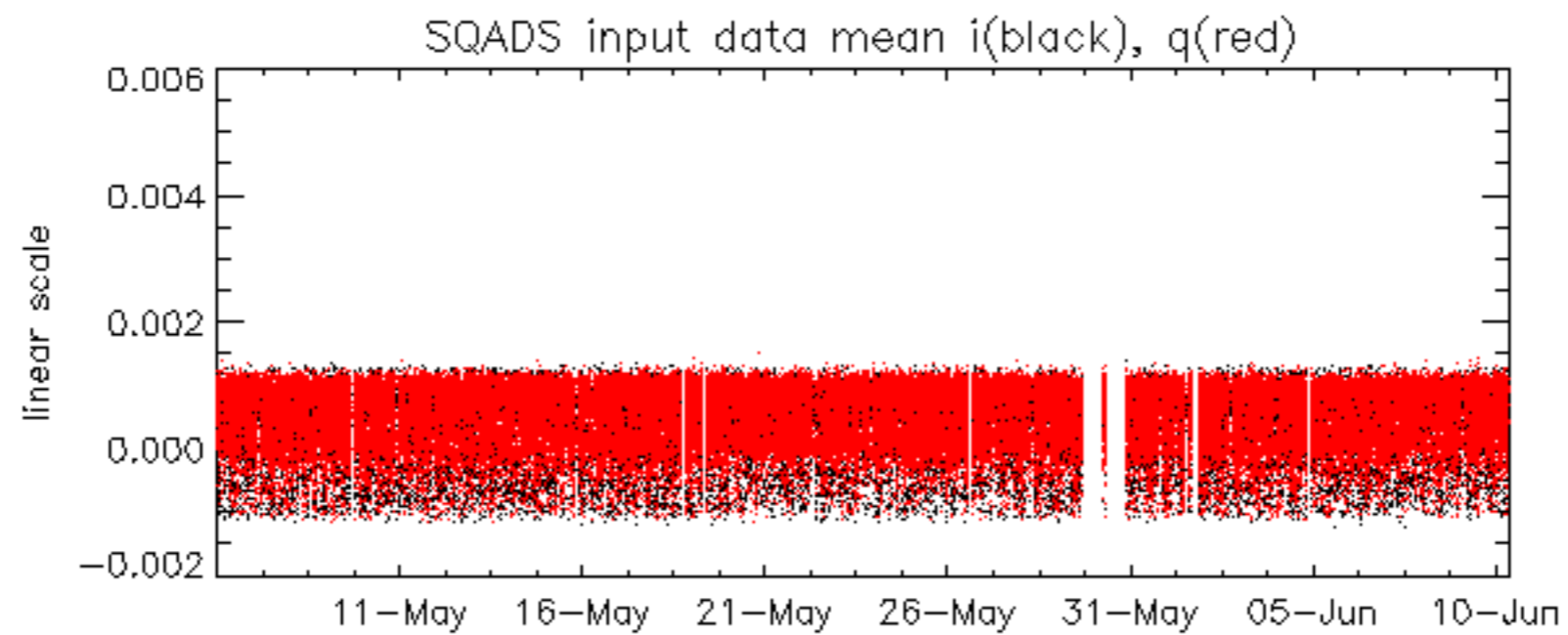
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.963905 Hz

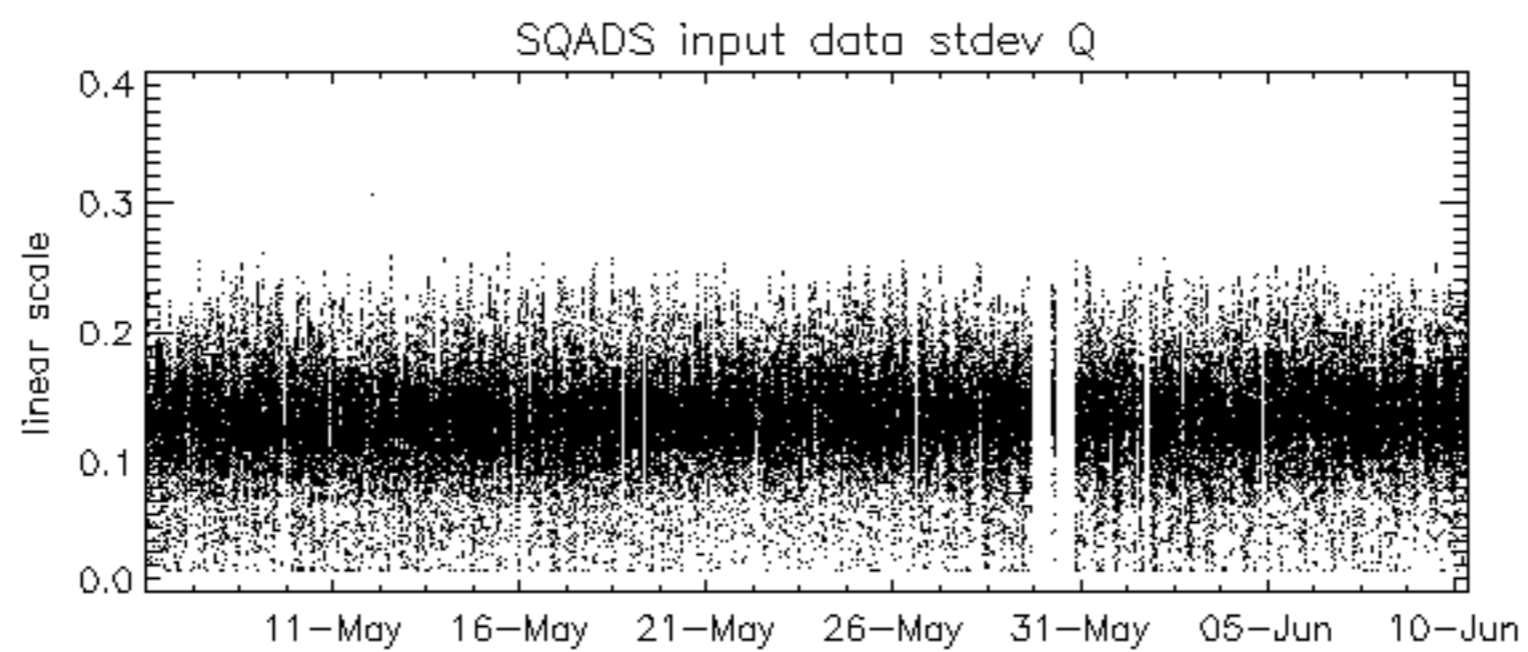
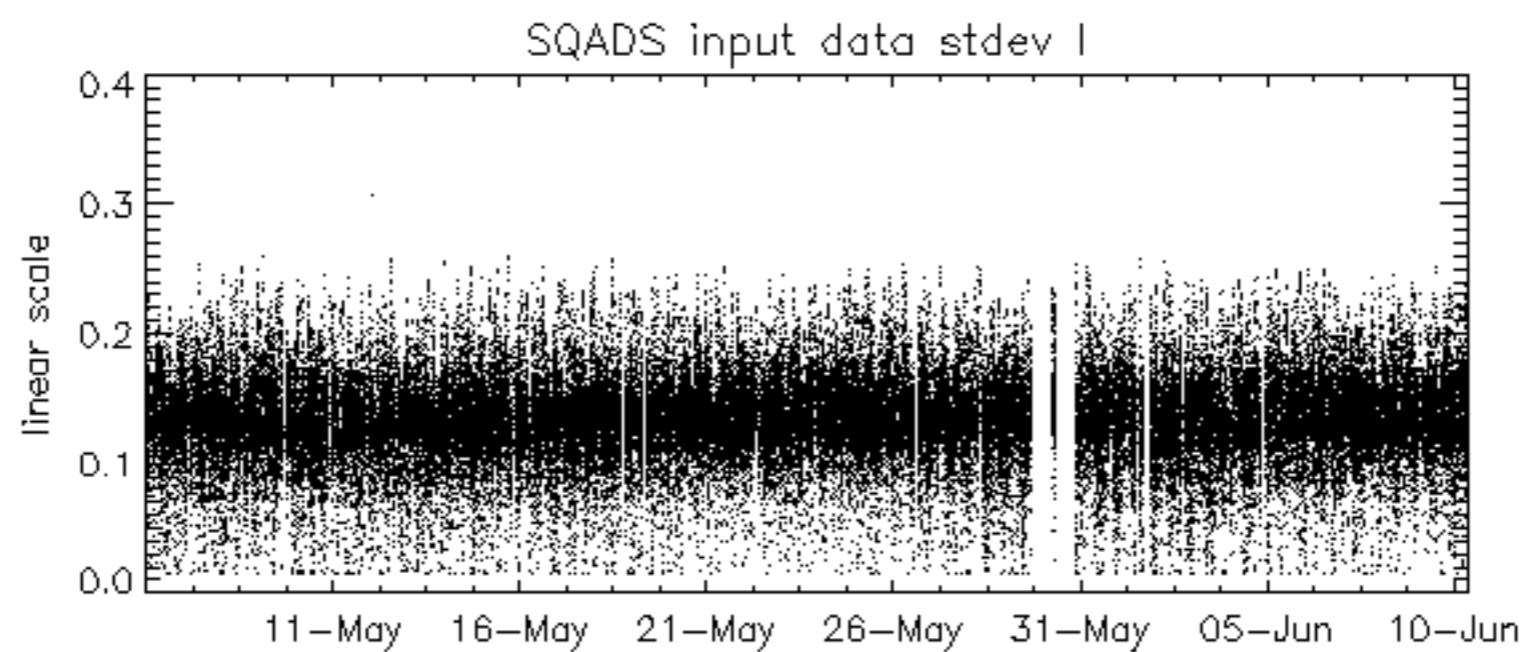
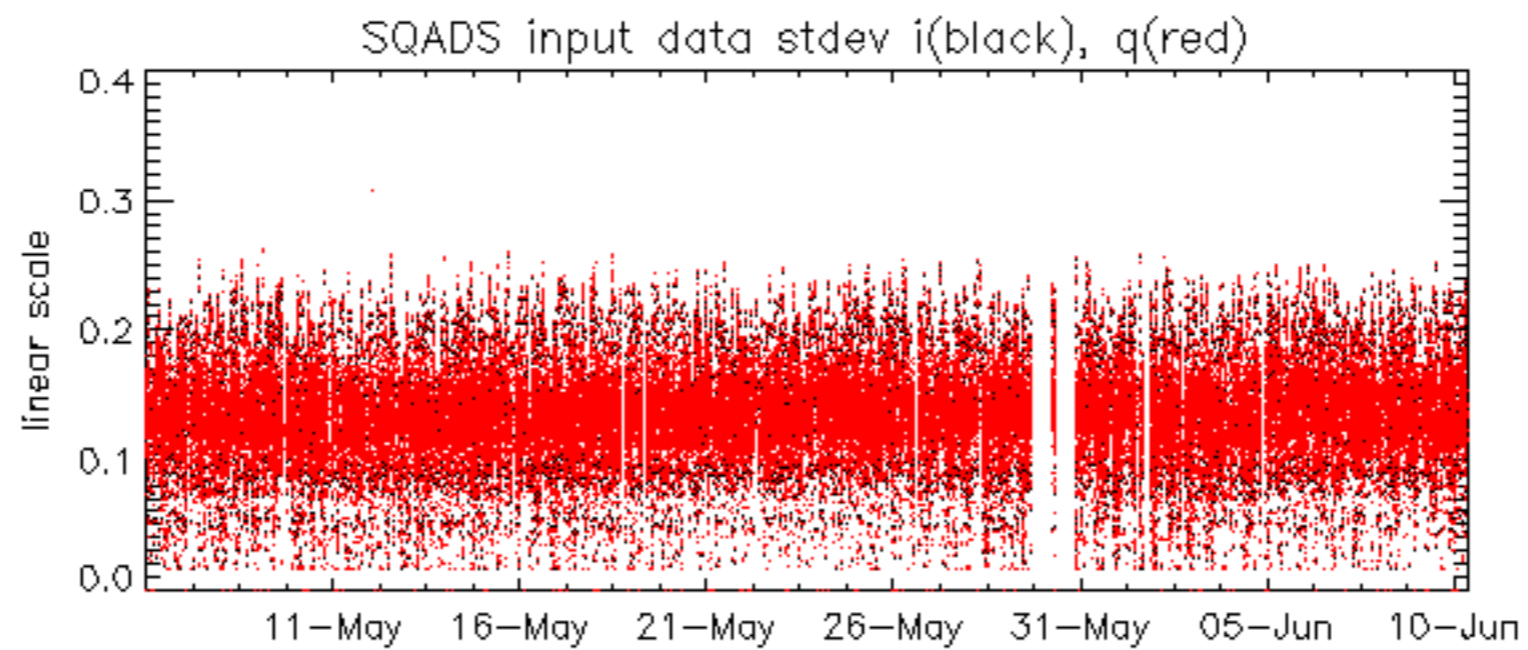


No anomalies observed on available MS products:

No anomalies observed.



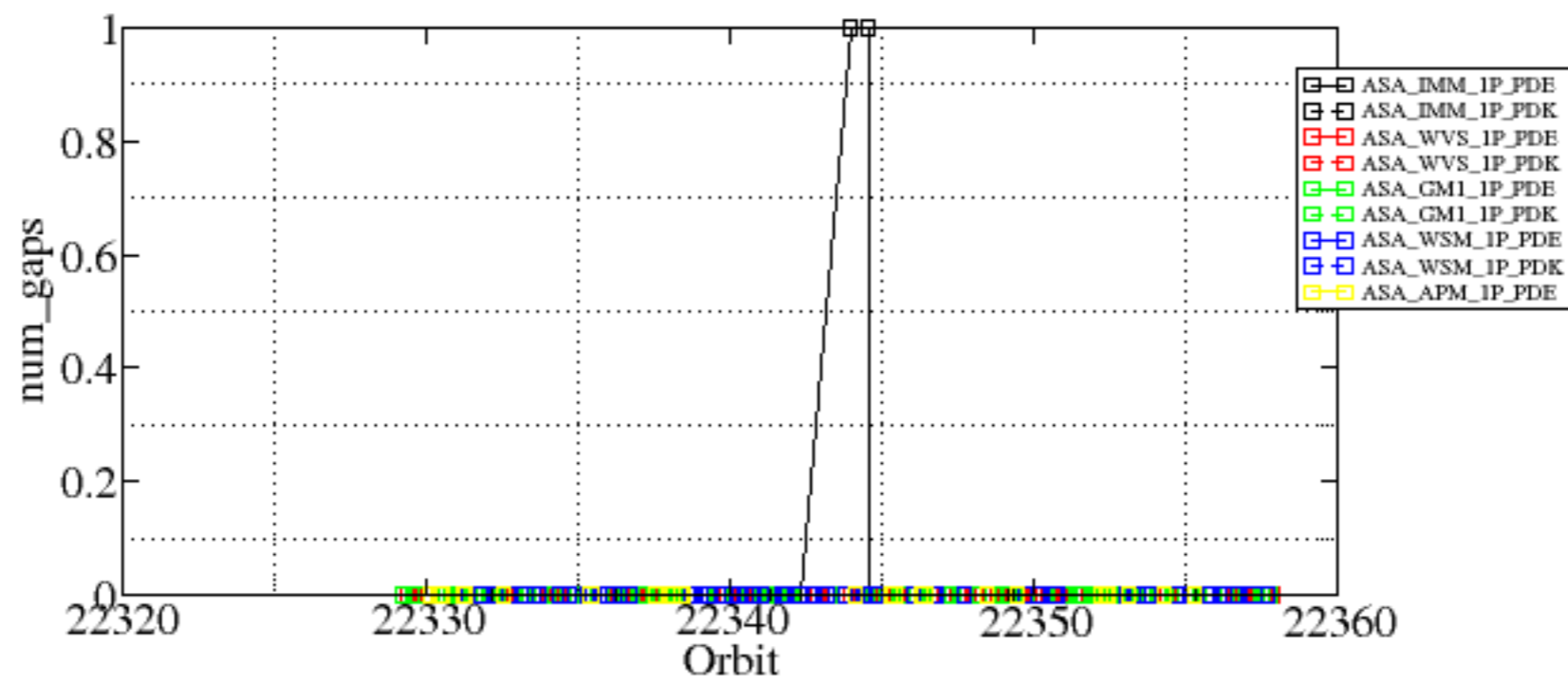


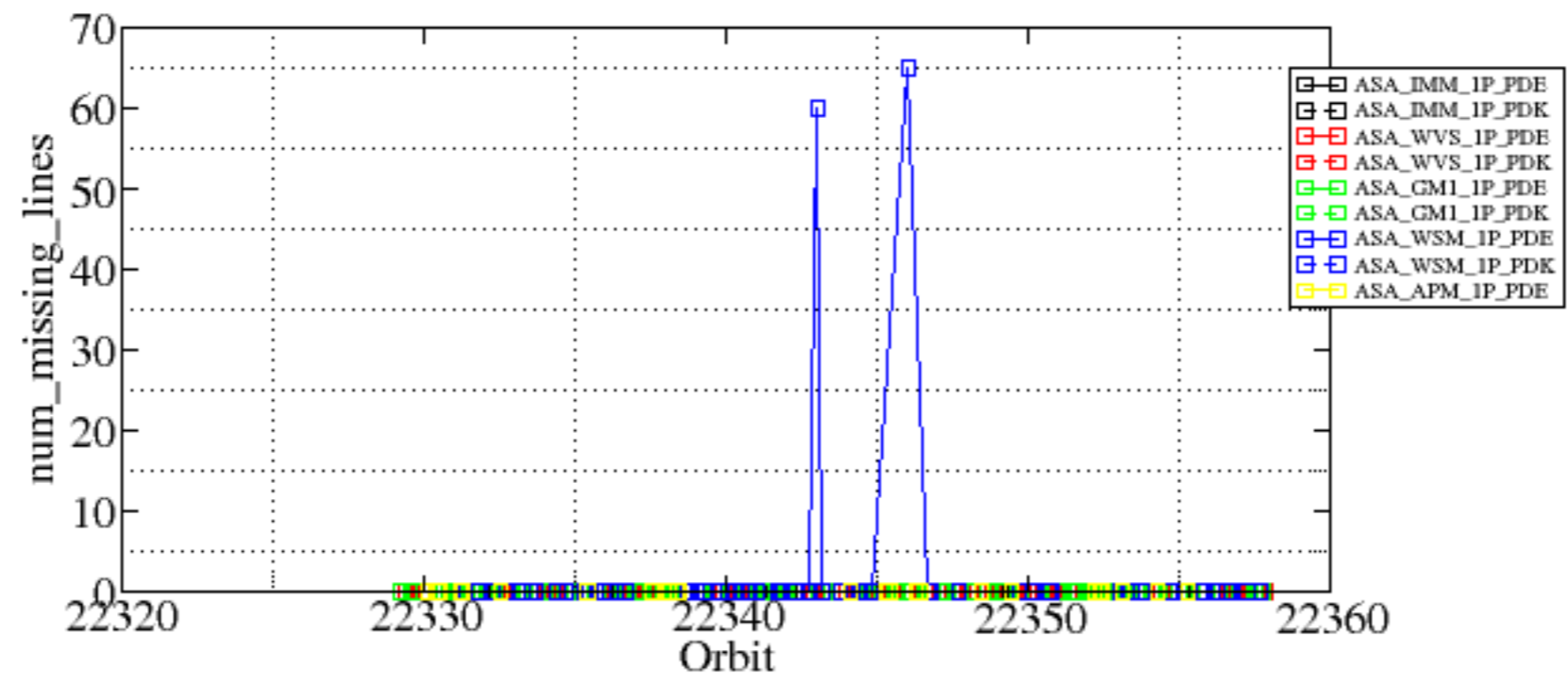


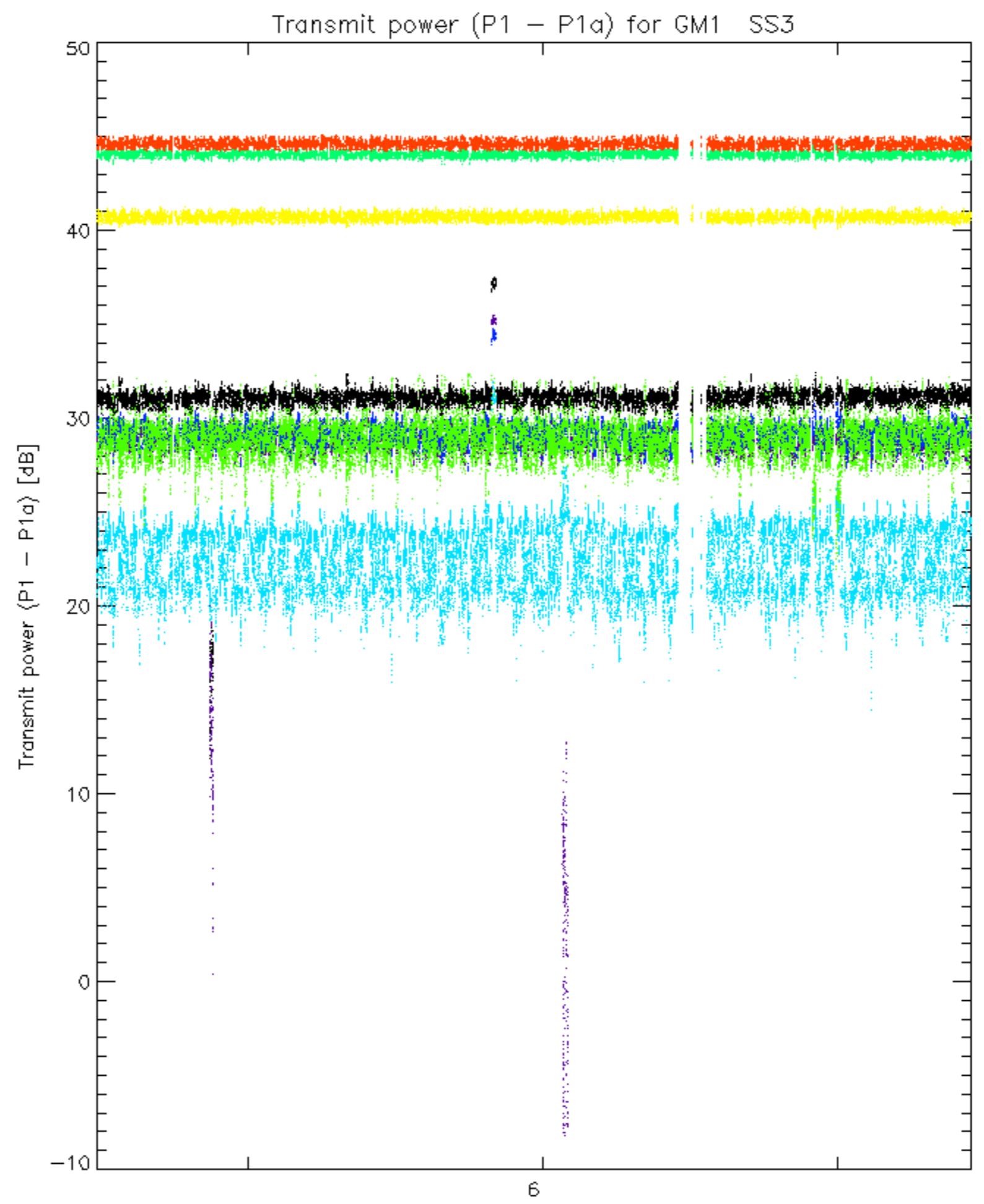
Summary of analysis for the last 3 days 2006060[890]

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

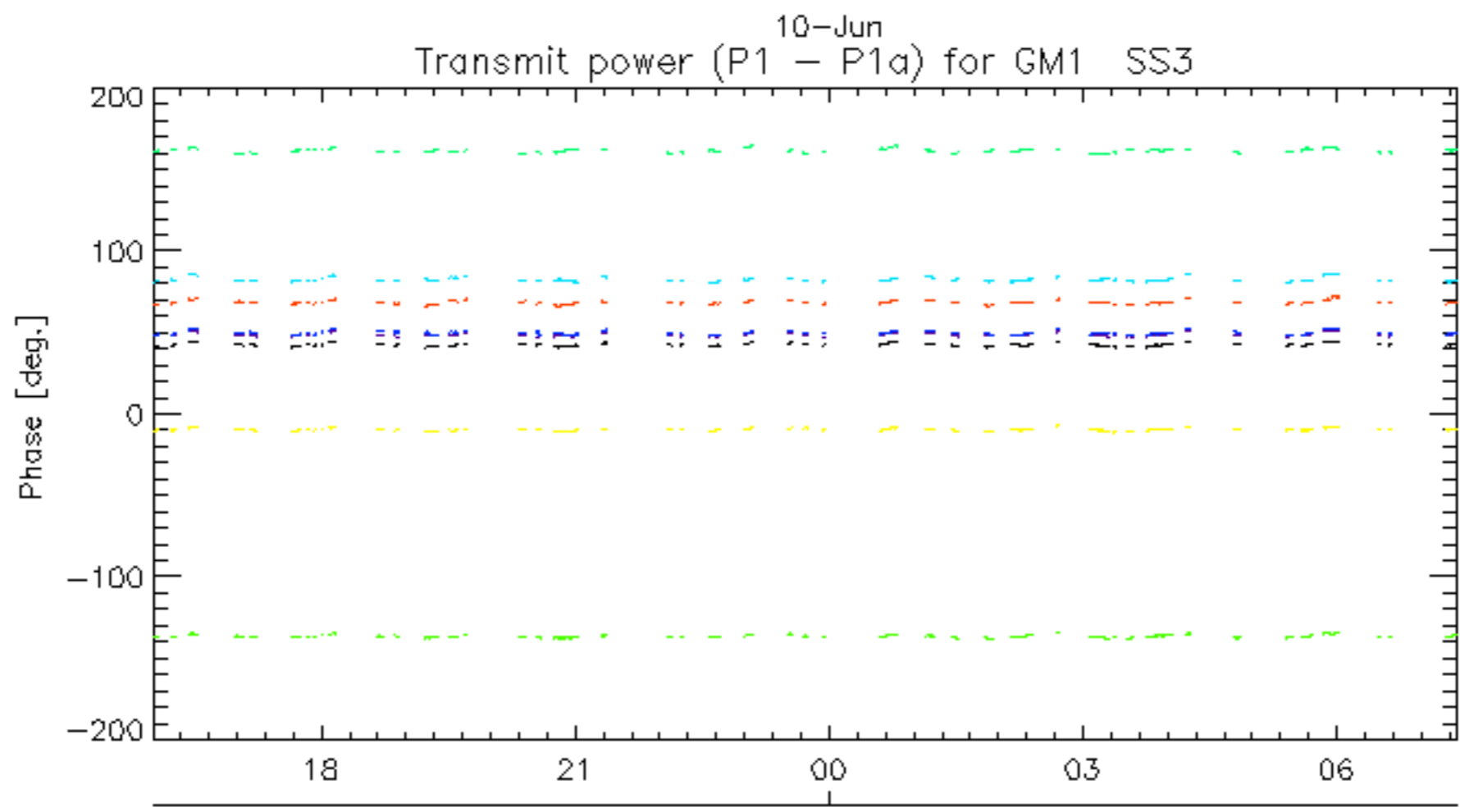
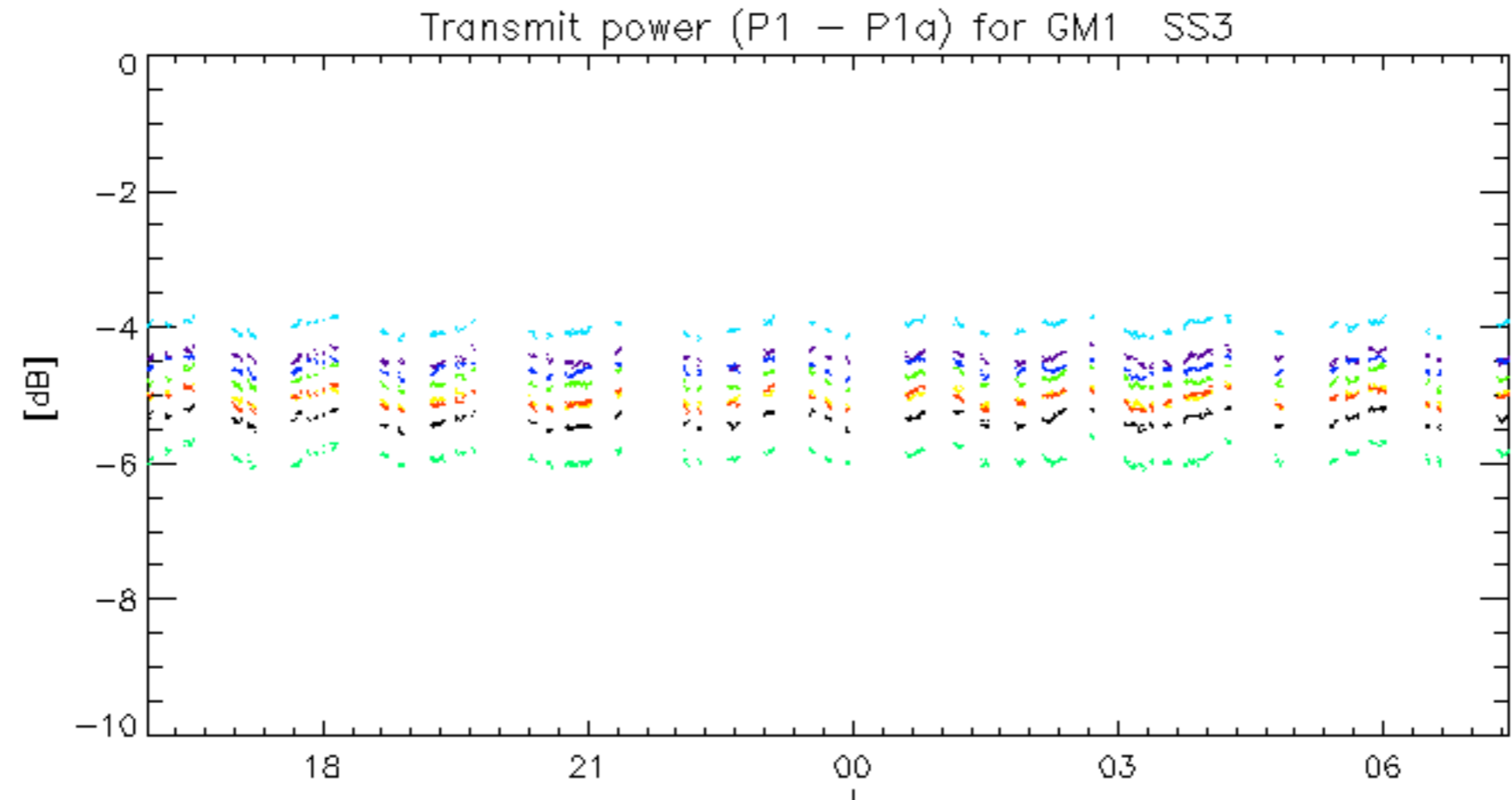
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060609_004236_000001742048_00245_22343_6867.N1	1	0
ASA_IMM_1PNPDE20060609_014059_000000342048_00246_22344_6911.N1	1	0
ASA_IMM_1PNPDE20060609_014059_000000342048_00246_22344_6912.N1	1	0
ASA_WSM_1PNPDE20060608_230846_000001032048_00245_22343_3362.N1	0	60
ASA_WSM_1PNPDE20060609_041103_000001702048_00248_22346_3394.N1	0	65



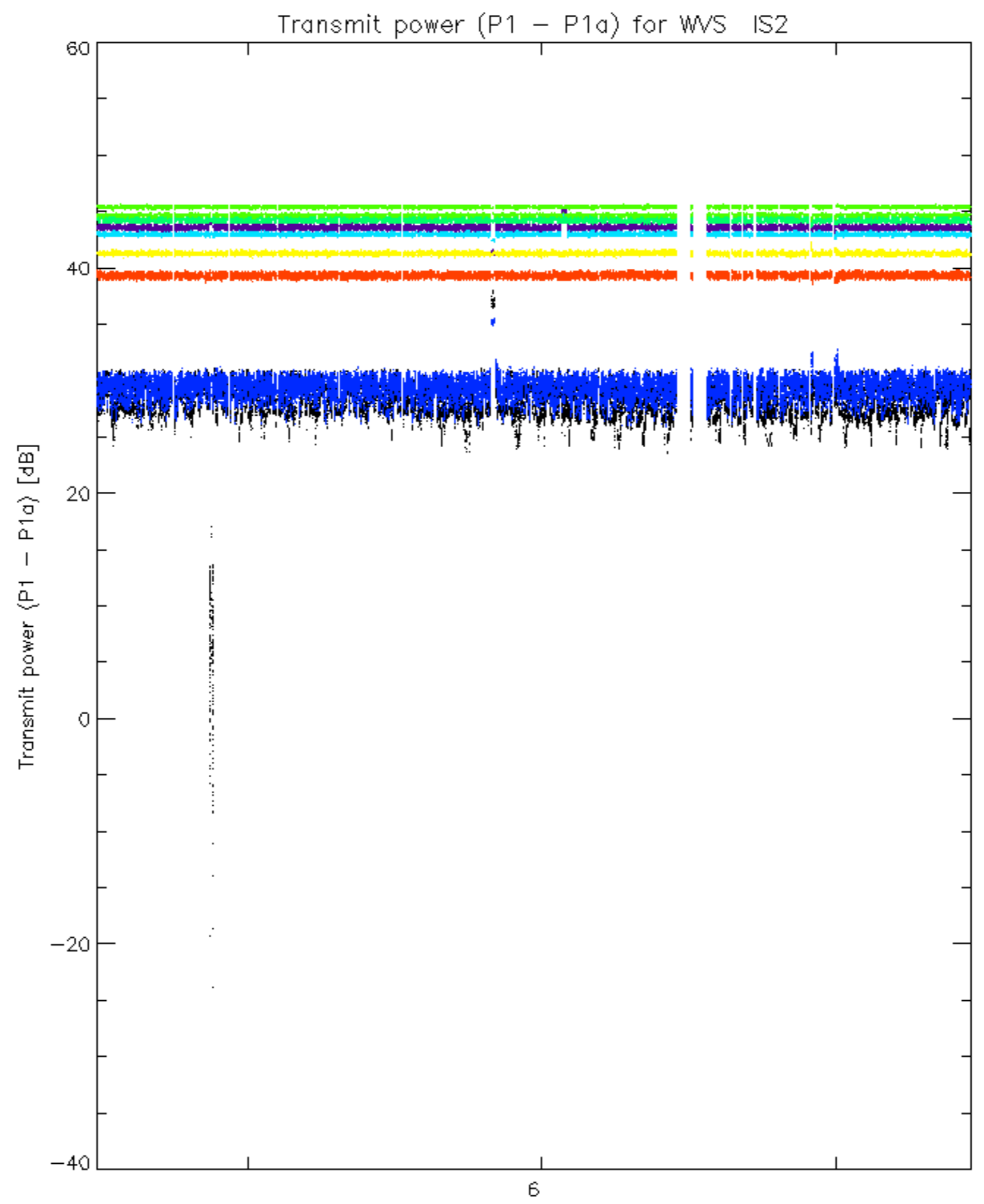




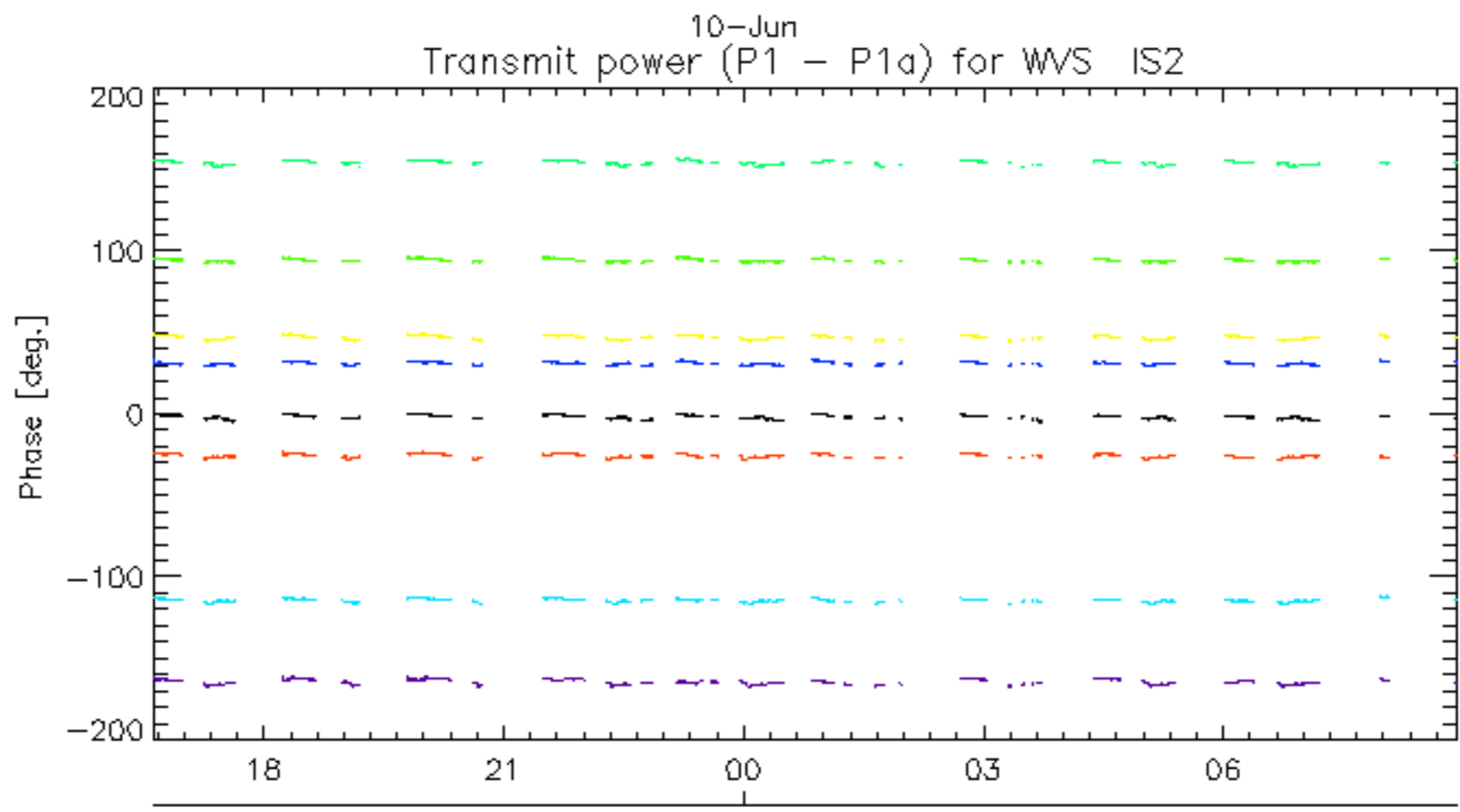
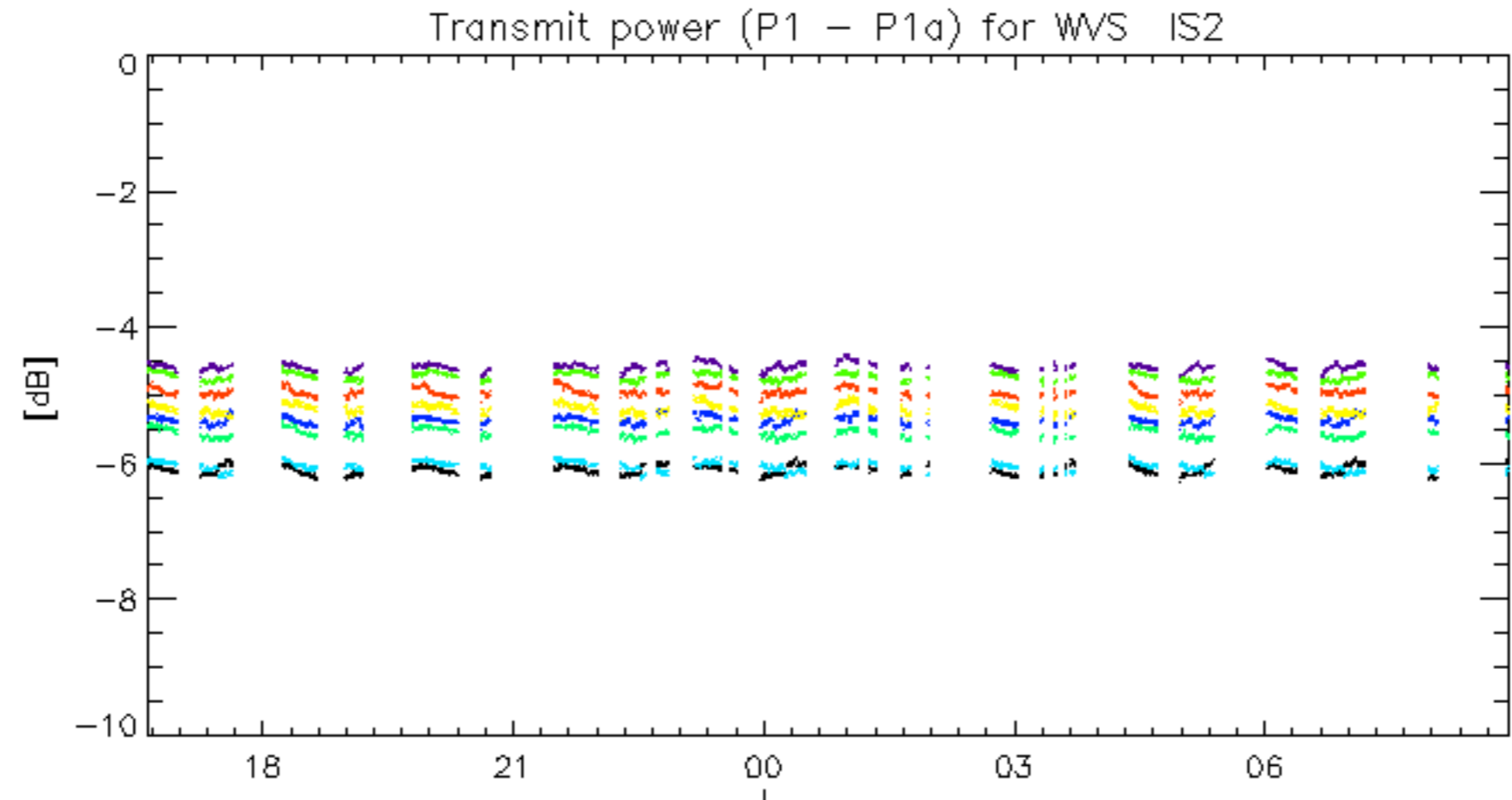
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



10-Jun
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.