

PRELIMINARY REPORT OF 060626

last update on Mon Jun 26 16:47:38 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 2006-06-25 00:00:00 to 2006-06-26 16:47:38

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	67	14	0	14
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	67	14	0	14
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	67	14	0	14
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	67	14	0	14

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	44	38	19	51
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	33	44	38	19	51
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	33	44	38	19	51
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	33	44	38	19	51

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	20060624 204907
H	20060625 183654

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	-3.941487	0.046270	-0.046020
7	P1	-3.136697	0.012884	-0.021812
11	P1	-4.103251	0.016573	-0.004757
15	P1	-6.151146	0.019424	-0.068794
19	P1	-3.357678	0.008554	-0.057522
22	P1	-4.520390	0.011649	-0.041720
26	P1	-3.966092	0.017021	0.029324
30	P1	-5.752670	0.008939	-0.030809
3	P1	-16.541477	0.568164	-0.143790
7	P1	-17.233376	0.136767	-0.094102
11	P1	-16.972393	0.282414	-0.086931
15	P1	-13.203499	0.197435	0.097019
19	P1	-14.353179	0.052175	-0.157335
22	P1	-16.161545	0.371441	0.051848
26	P1	-15.201594	0.227172	0.131308
30	P1	-17.150013	0.412078	-0.056536

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.119280	0.082120	0.134708
7	P2	-22.008169	0.098538	0.106328
11	P2	-15.850438	0.112253	0.109371
15	P2	-7.156552	0.095263	-0.003512
19	P2	-9.169600	0.087051	0.006863
22	P2	-18.167944	0.083847	-0.038596
26	P2	-16.407068	0.089049	-0.051941
30	P2	-19.554911	0.087992	0.002228

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185204	0.003950	-0.013989
7	P3	-8.185204	0.003950	-0.013989
11	P3	-8.185204	0.003950	-0.013989
15	P3	-8.185204	0.003950	-0.013989
19	P3	-8.185204	0.003950	-0.013989
22	P3	-8.185204	0.003950	-0.013989
26	P3	-8.185204	0.003950	-0.013989
30	P3	-8.185204	0.003950	-0.013989

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	-3.810651	0.052152	-0.101084
7	P1	-2.575707	0.012542	0.009561
11	P1	-2.856092	0.013367	0.008921
15	P1	-3.514048	0.032453	-0.083278
19	P1	-3.412847	0.014377	-0.016800
22	P1	-5.083450	0.019579	0.004575
26	P1	-5.857209	0.016042	-0.026266
30	P1	-5.191534	0.026370	-0.011978
3	P1	-11.644447	0.141535	-0.100247
7	P1	-9.977108	0.034823	-0.018523
11	P1	-10.233397	0.059279	0.002908
15	P1	-10.692629	0.135249	-0.022835
19	P1	-15.542275	0.076950	-0.016355
22	P1	-20.947538	1.164912	-0.054465

26	P1	-16.454569	0.330881	0.098725
30	P1	-17.883423	0.372237	0.093885

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.799564	0.075644	0.223582
7	P2	-22.478001	0.132217	0.116855
11	P2	-11.133786	0.049346	0.112692
15	P2	-4.921386	0.049528	-0.004415
19	P2	-6.882727	0.054166	0.015191
22	P2	-8.209692	0.043398	0.013875
26	P2	-24.154907	0.069206	-0.055748
30	P2	-22.057024	0.056931	0.056606

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.019933	0.004905	-0.005660
7	P3	-8.019959	0.004887	-0.005655
11	P3	-8.019903	0.004893	-0.006081
15	P3	-8.019880	0.004899	-0.005612
19	P3	-8.019816	0.004898	-0.005421
22	P3	-8.019998	0.004882	-0.005841
26	P3	-8.020037	0.004899	-0.005660
30	P3	-8.019926	0.004882	-0.005409

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	0.000562564
	stdev	1.69711e-07
MEAN Q	mean	0.000527120
	stdev	2.19493e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137279
	stdev	0.00116084
STDEV Q	mean	0.137637
	stdev	0.00117872



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006062[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_1PNPDE20060625_003958_000001552048_00474_22572_8683.N1	1	0
ASA_IMM_1PNPDE20060625_005615_000000362048_00475_22573_8684.N1	1	0
ASA_IMM_1PNPDE20060625_022556_000000362048_00476_22574_8697.N1	1	0
ASA_IMM_1PNPDE20060625_063915_000001102048_00478_22576_8747.N1	1	0
ASA_WSM_1PNPDE20060624_113644_000000062048_00467_22565_5356.N1	0	116

ASA_WSM_1PNPDE20060624_230552_000001102048_00474_22572_5298.N1	0	2
ASA_WSM_1PNPDE20060625_113214_000001292048_00481_22579_5331.N1	0	26
ASA_WSM_1PNPDE20060625_141258_000000912048_00483_22581_5337.N1	0	17
ASA_WSM_1PNPDE20060626_033514_000000862048_00491_22589_5429.N1	0	22



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)

✕
Ascending
✕
Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

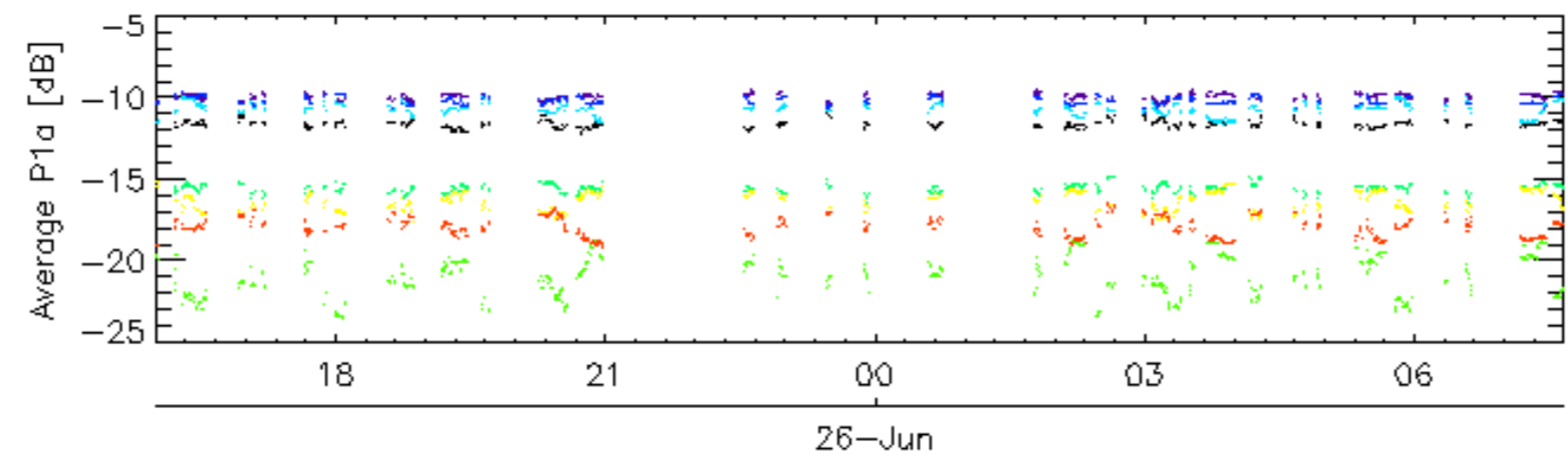
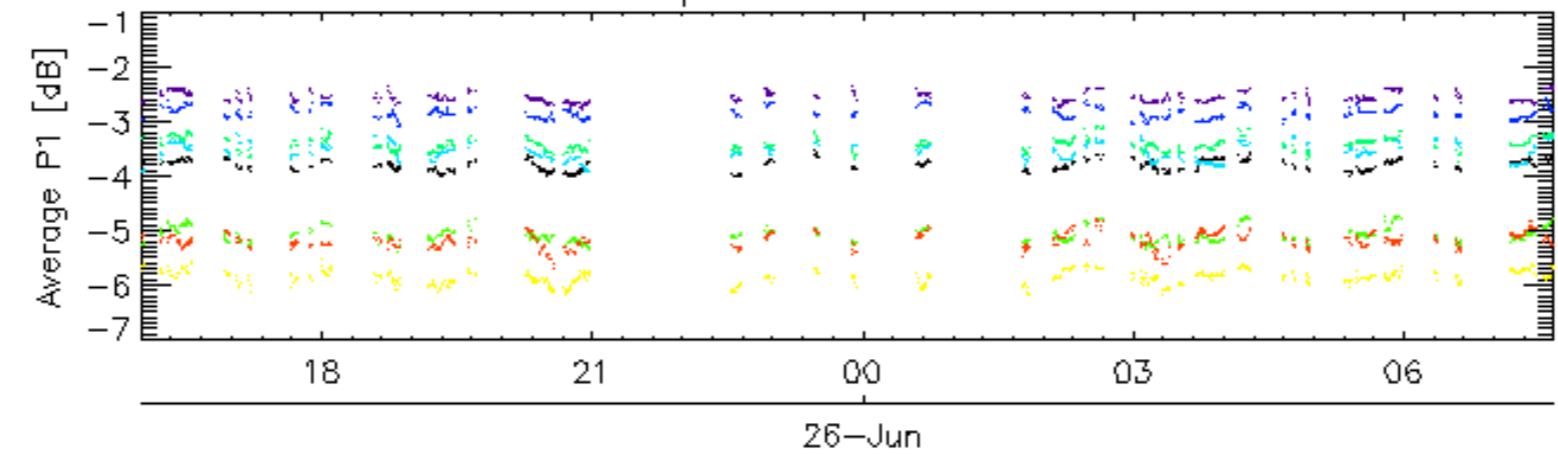
✕
Ascending
✕
Descending

7.6 - Doppler evolution versus ANX for GM1

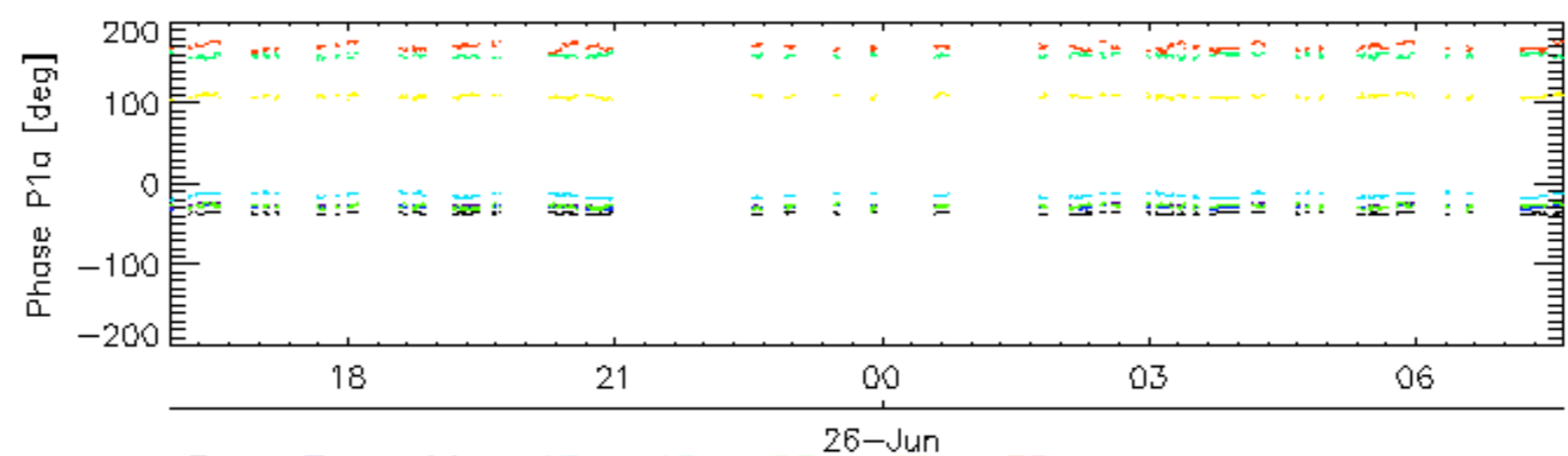
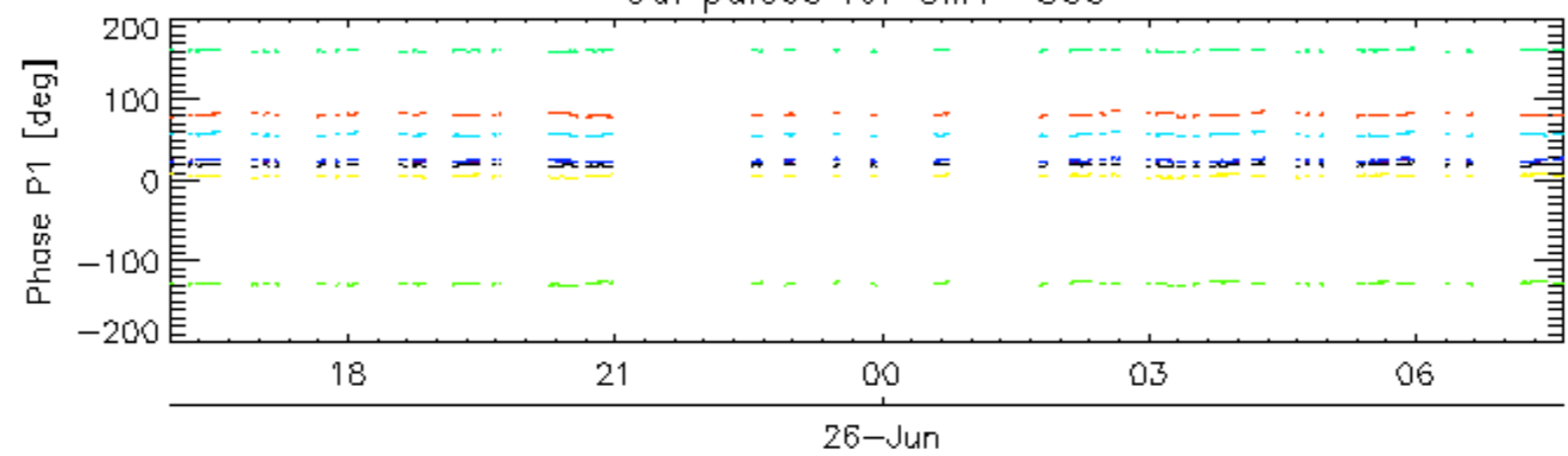
Evolution Doppler error versus ANX

✕

Cal pulses for GM1 SS3

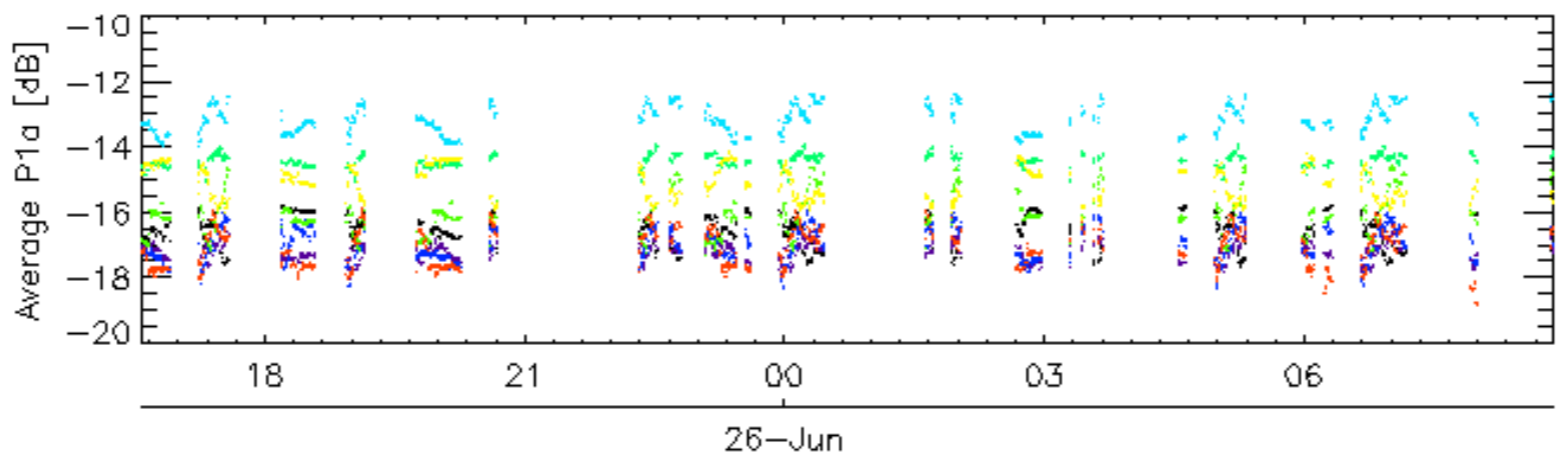
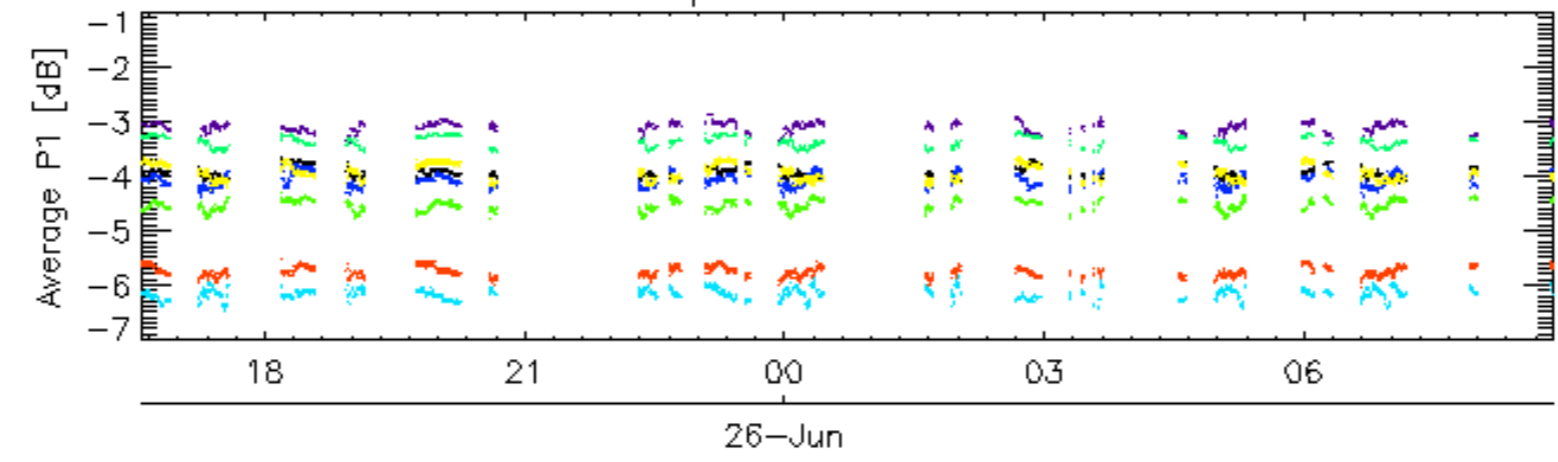


Cal pulses for GM1 SS3

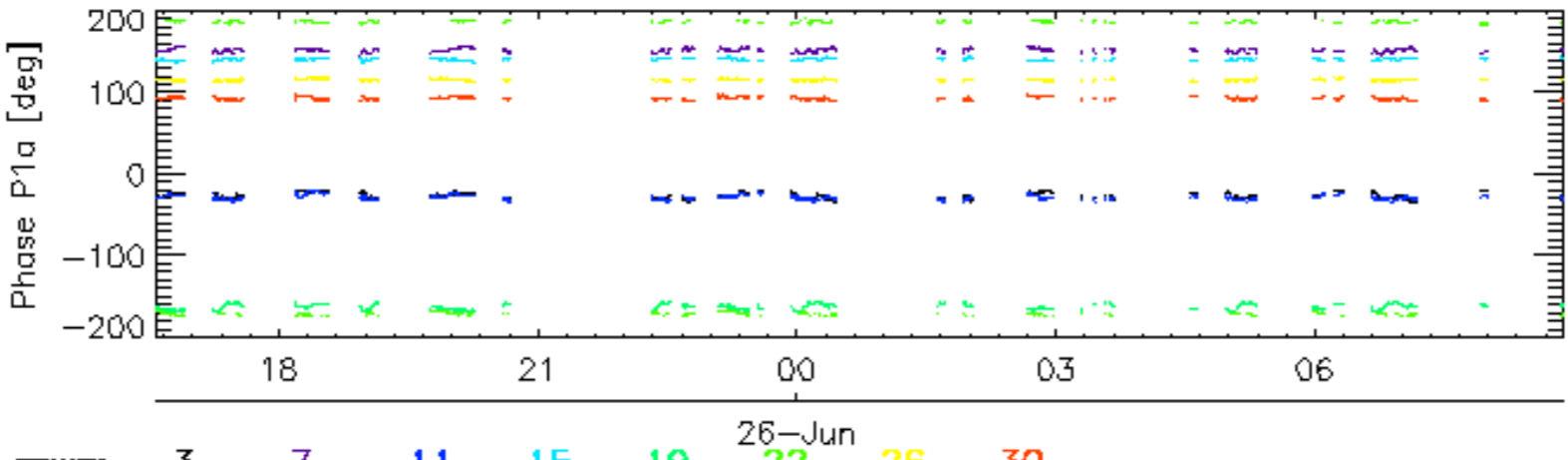
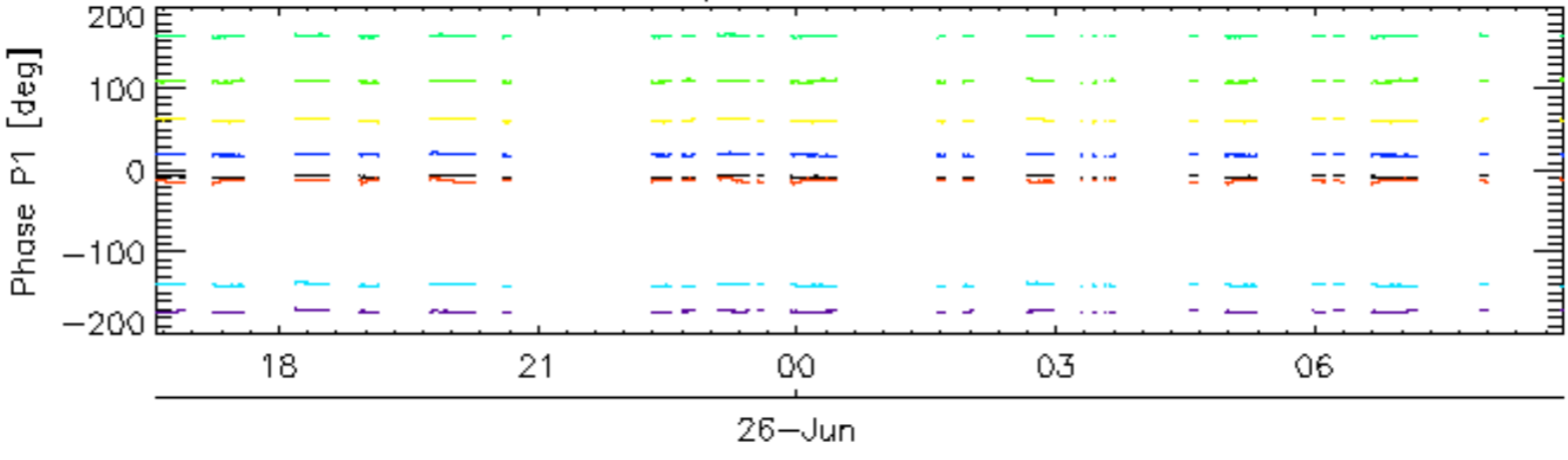


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

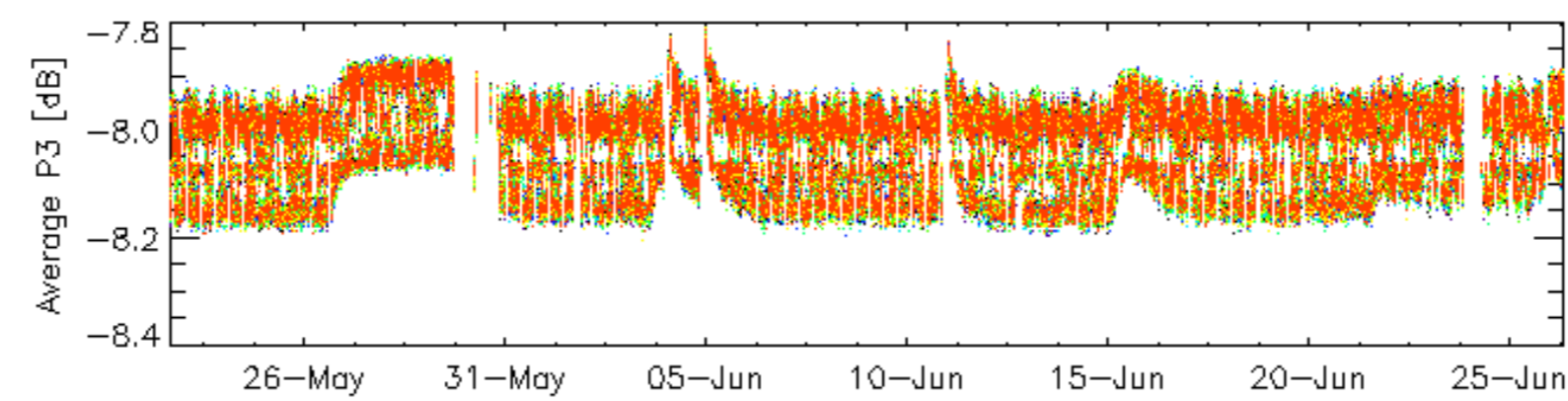
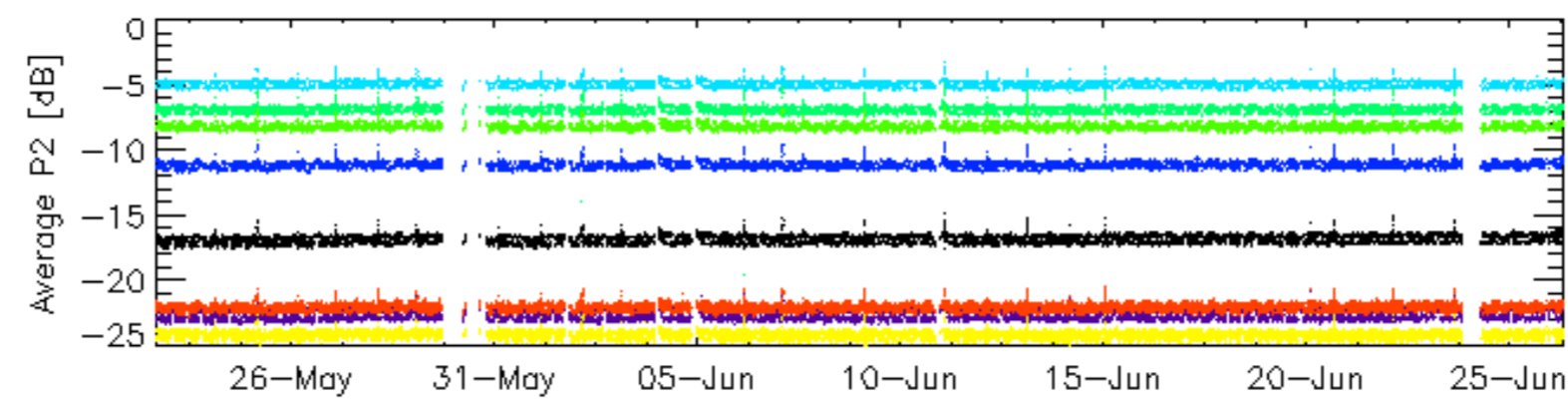
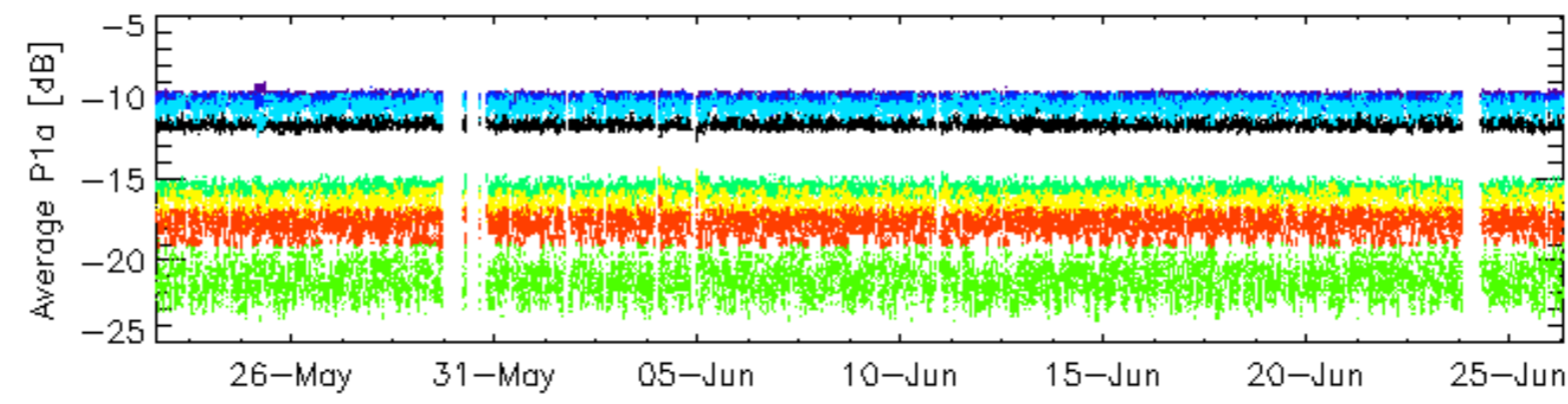
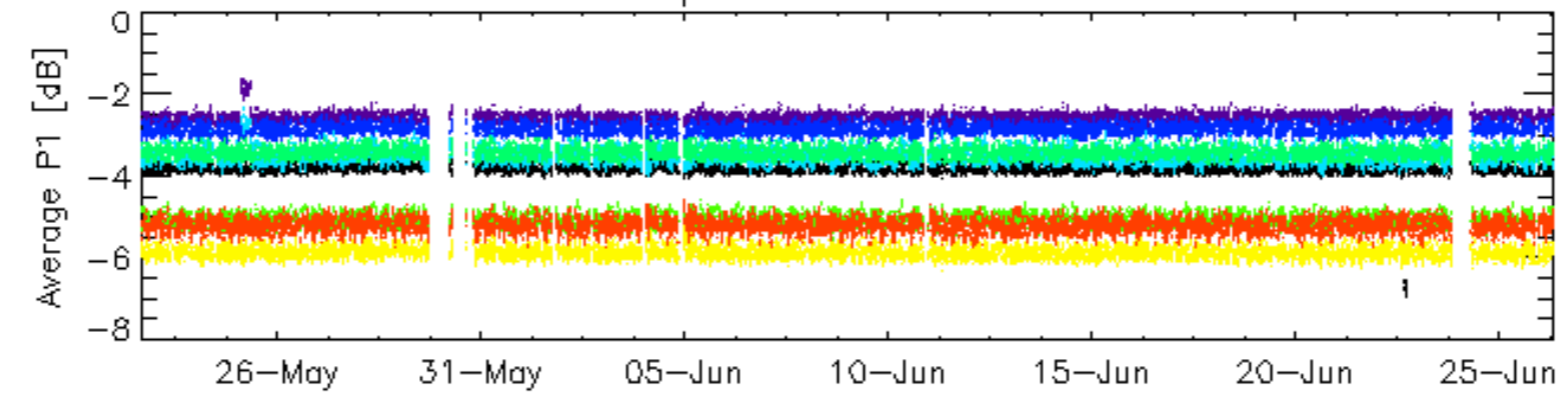


Cal pulses for WVS IS2



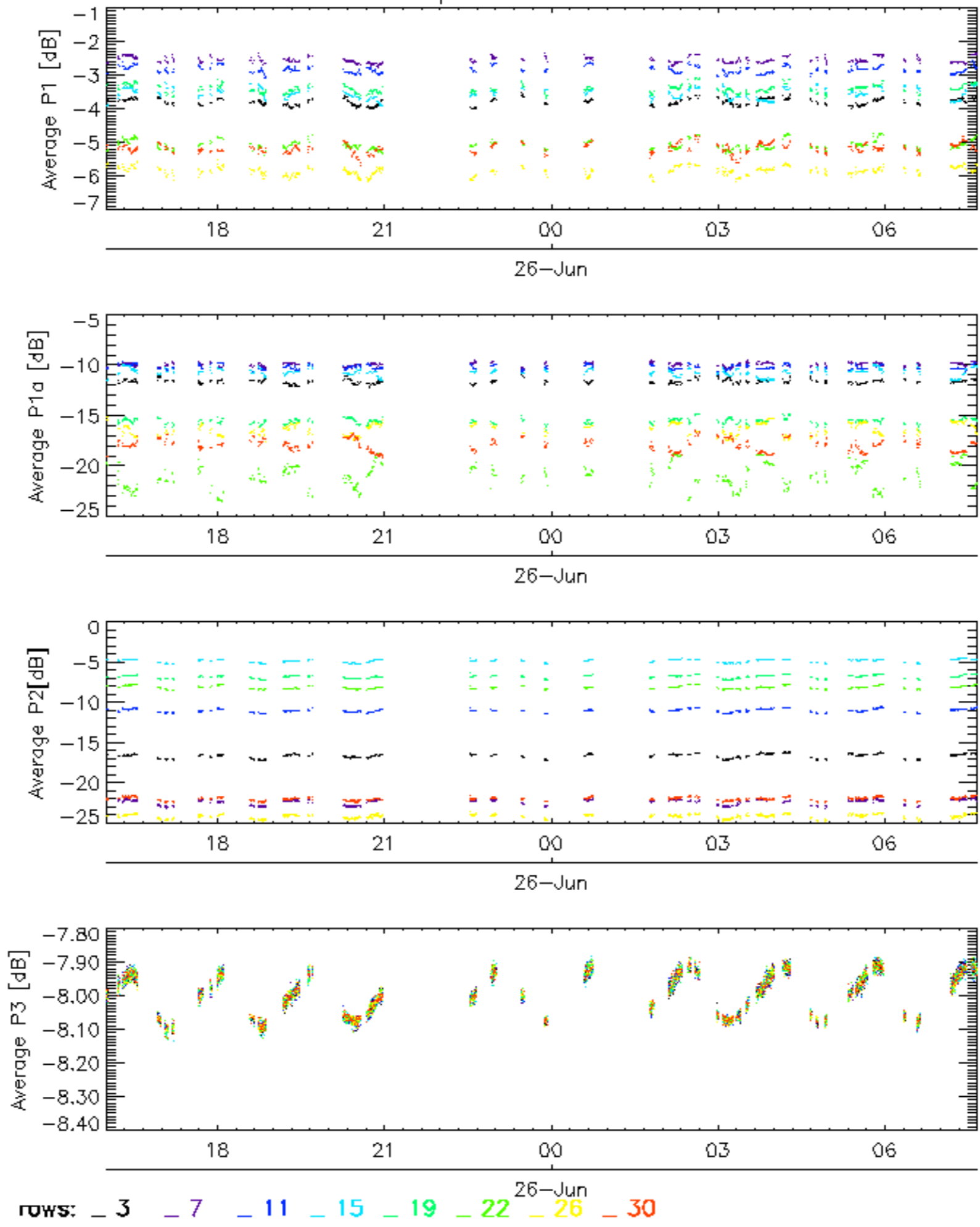
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

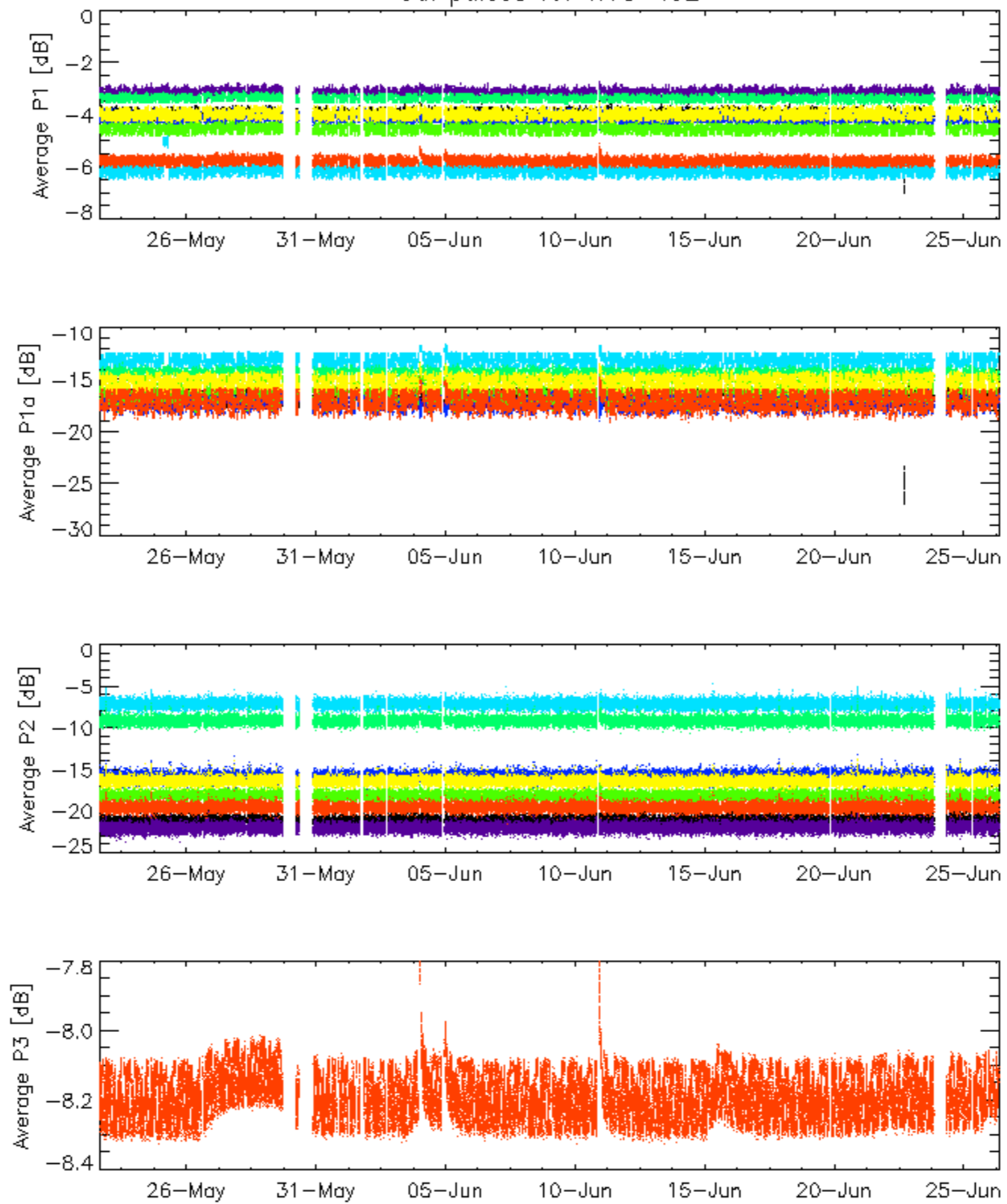


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

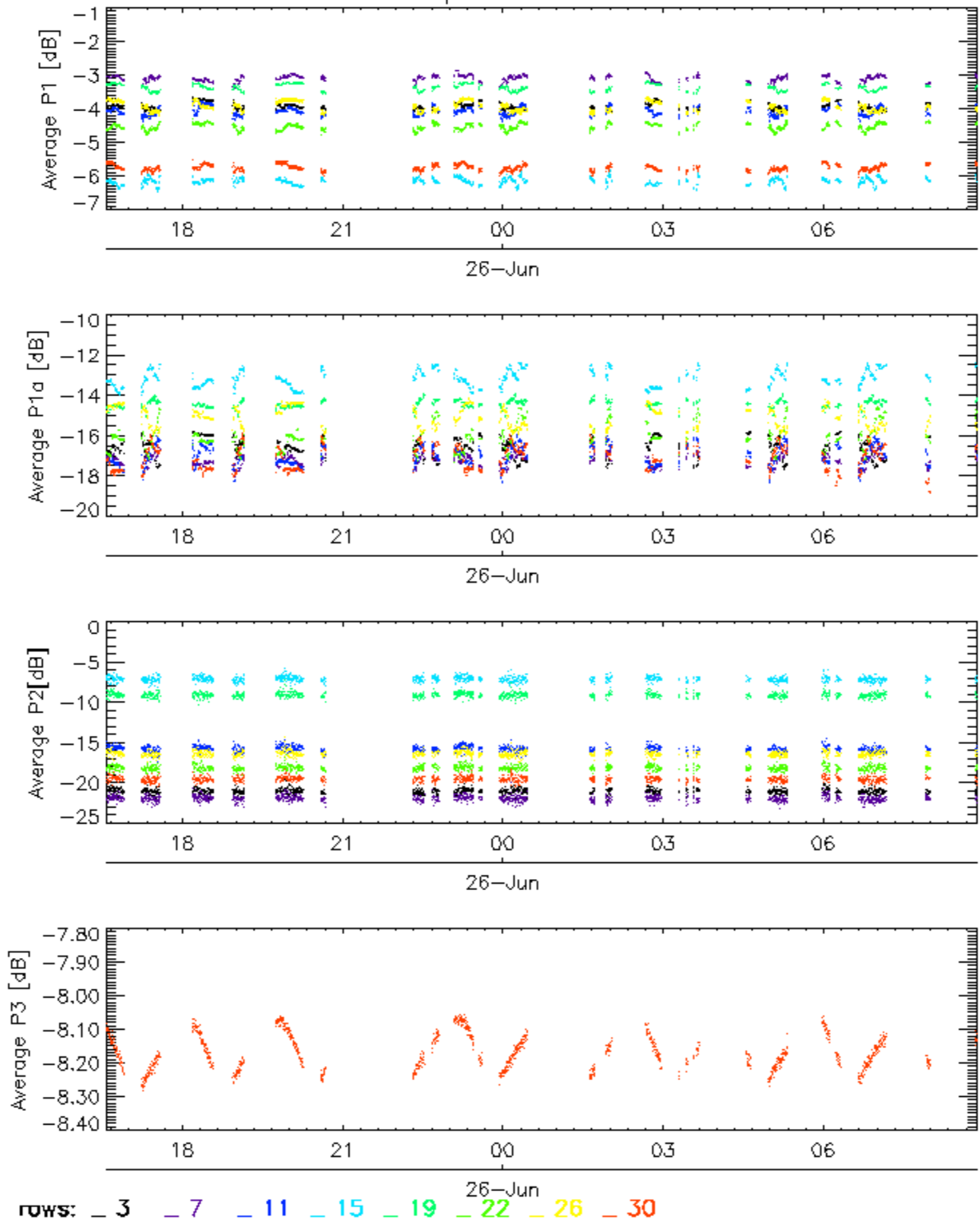


Cal pulses for WVS IS2



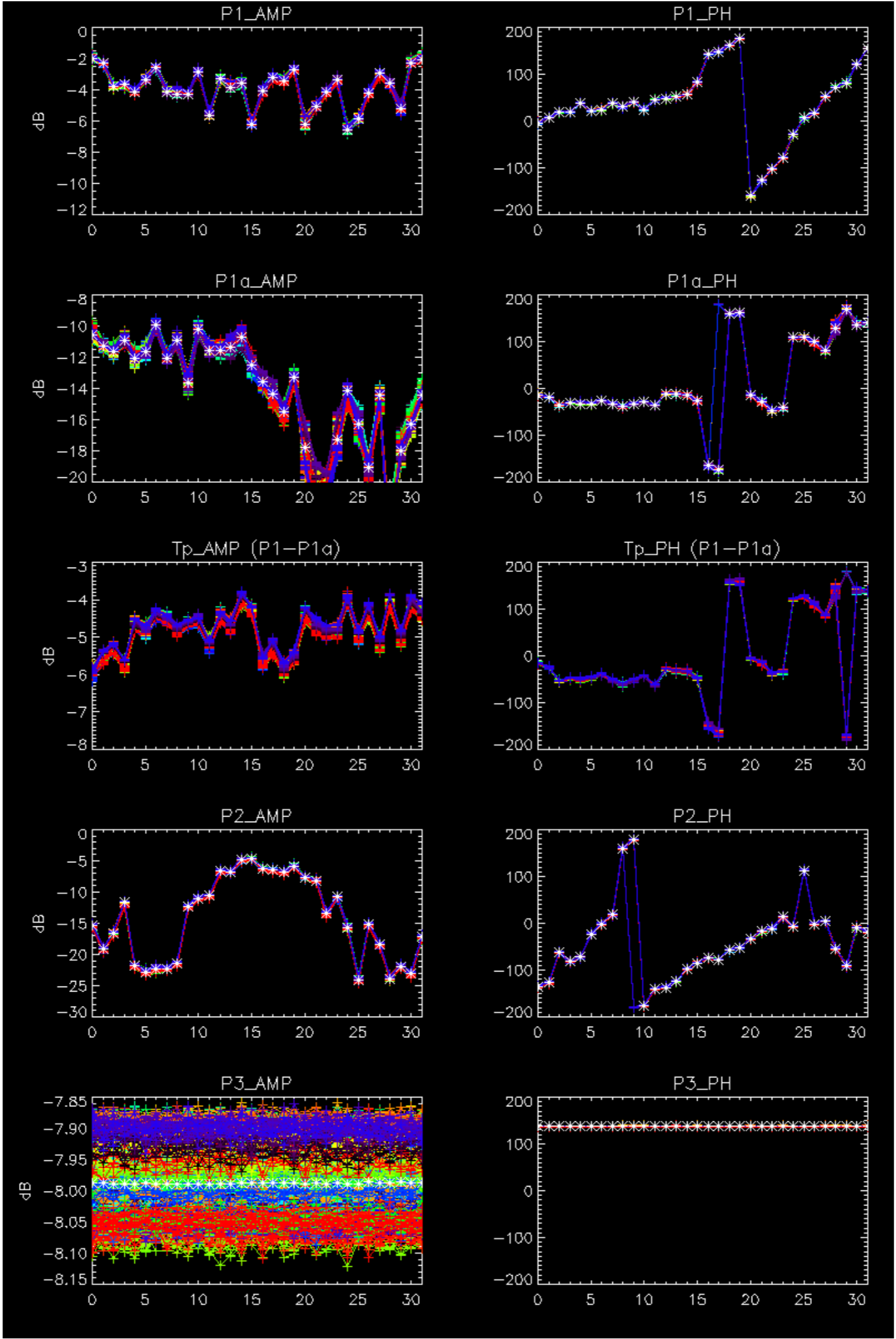
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

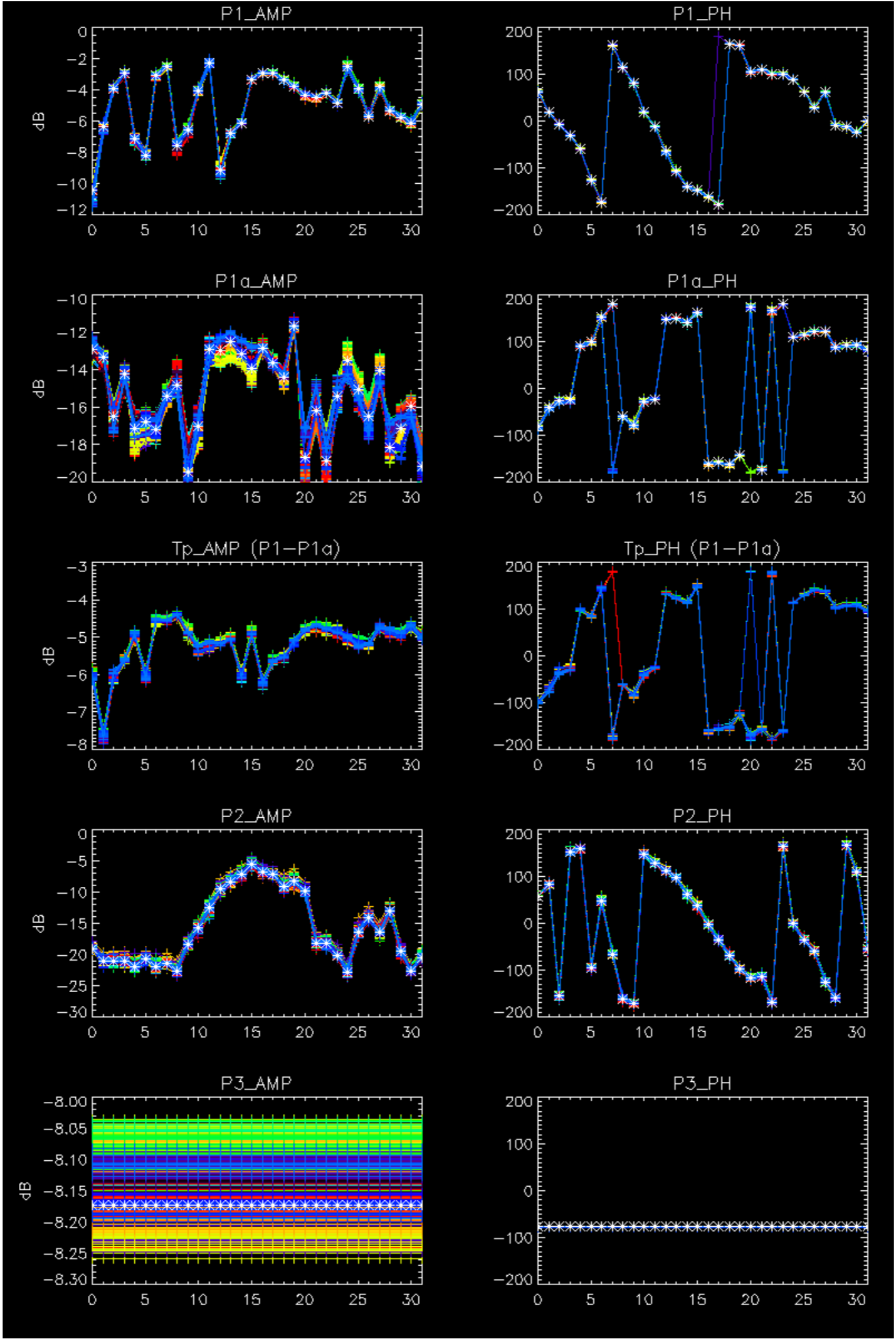
Cal pulses for WVS IS2



No anomalies observed on available browse products

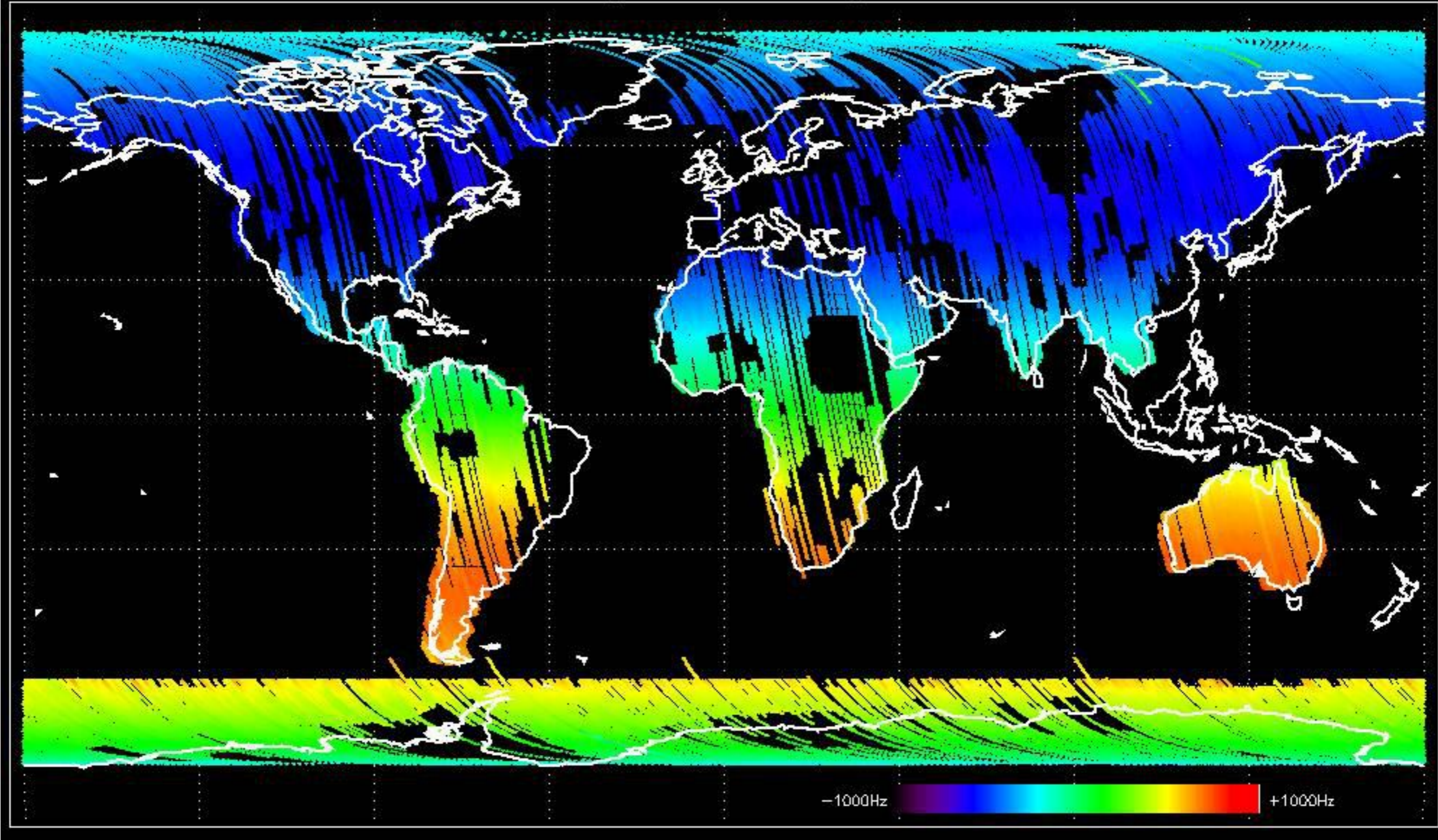
No anomalies observed.



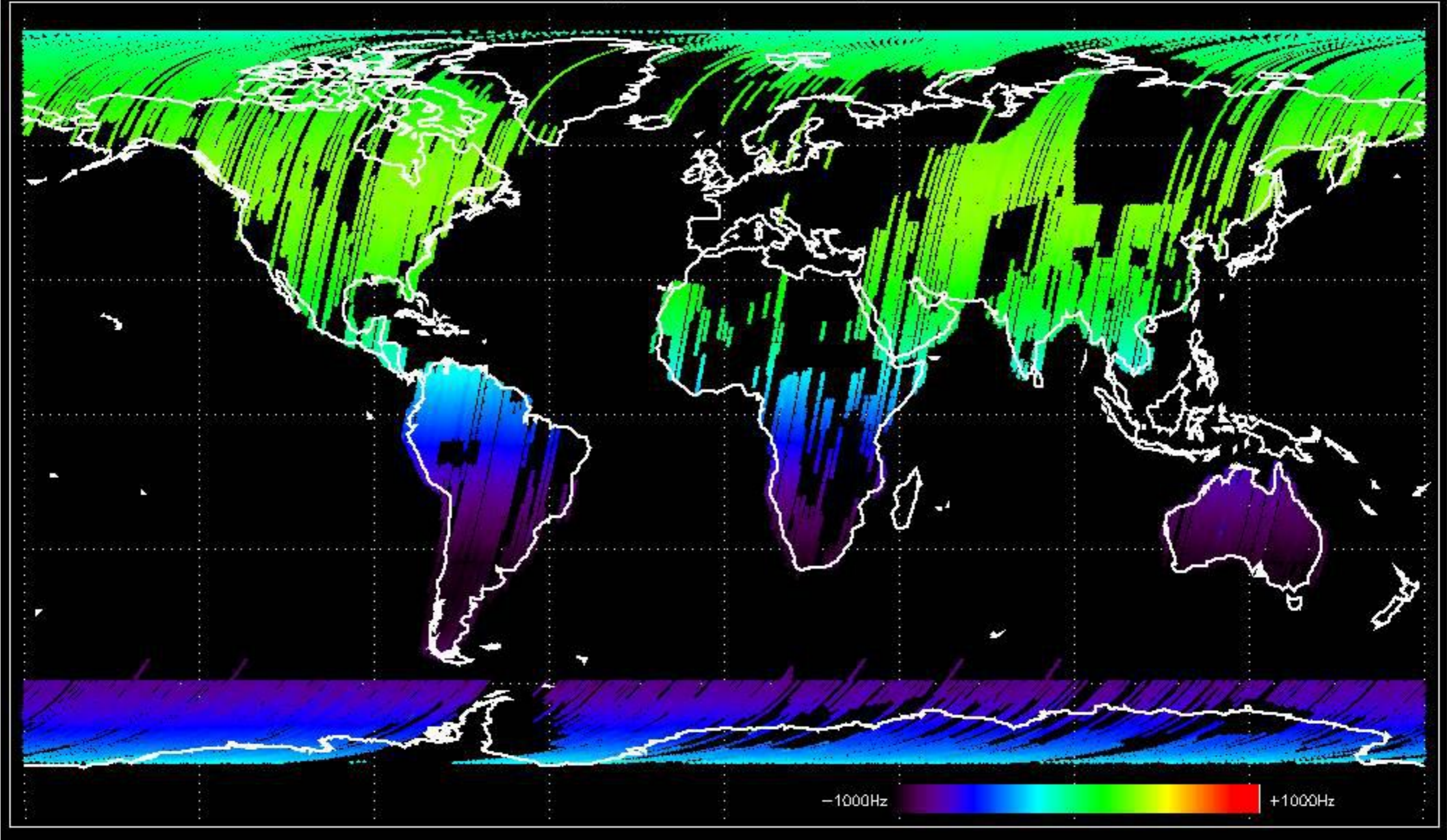


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

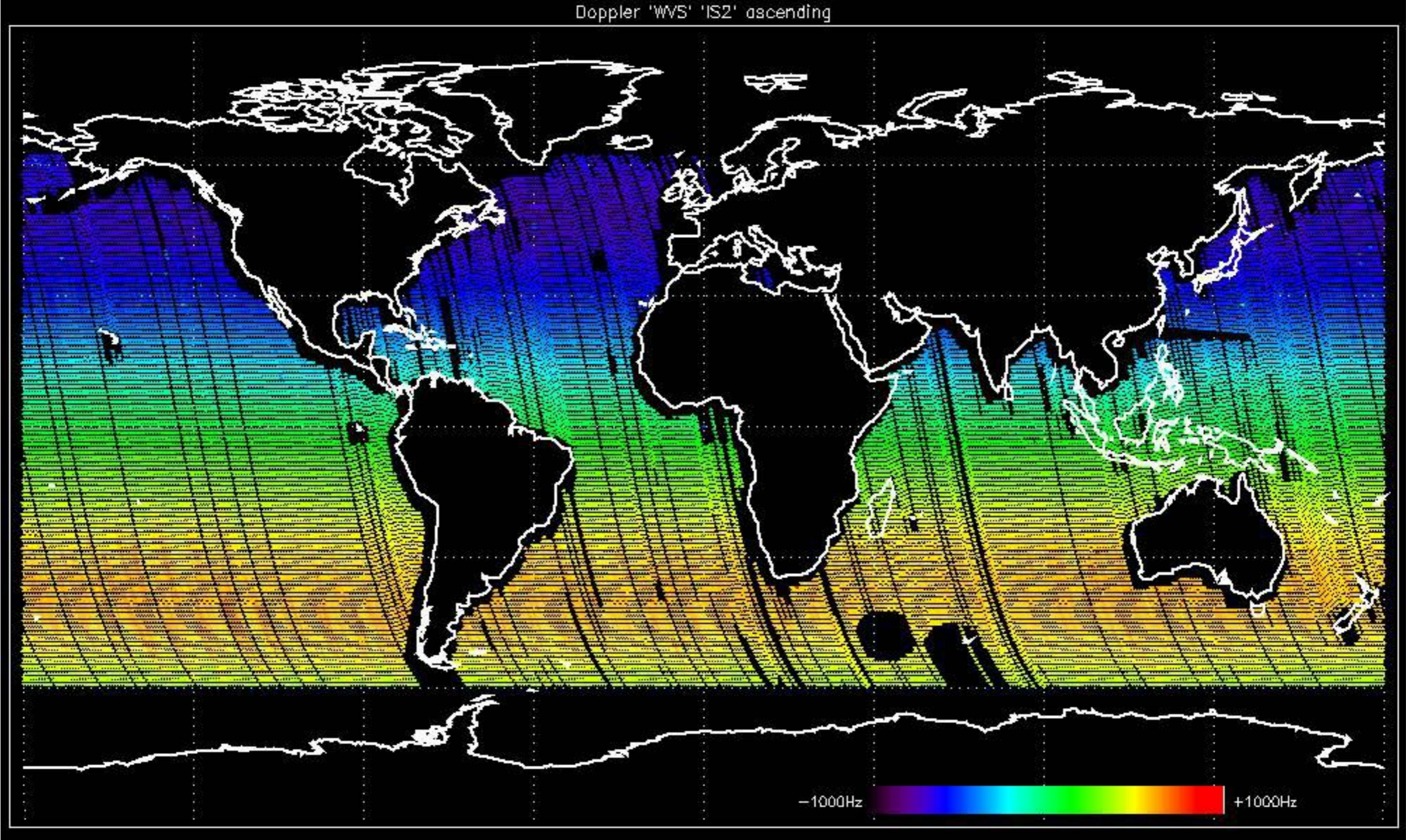
Doppler 'GM1' 'SS1' ascending



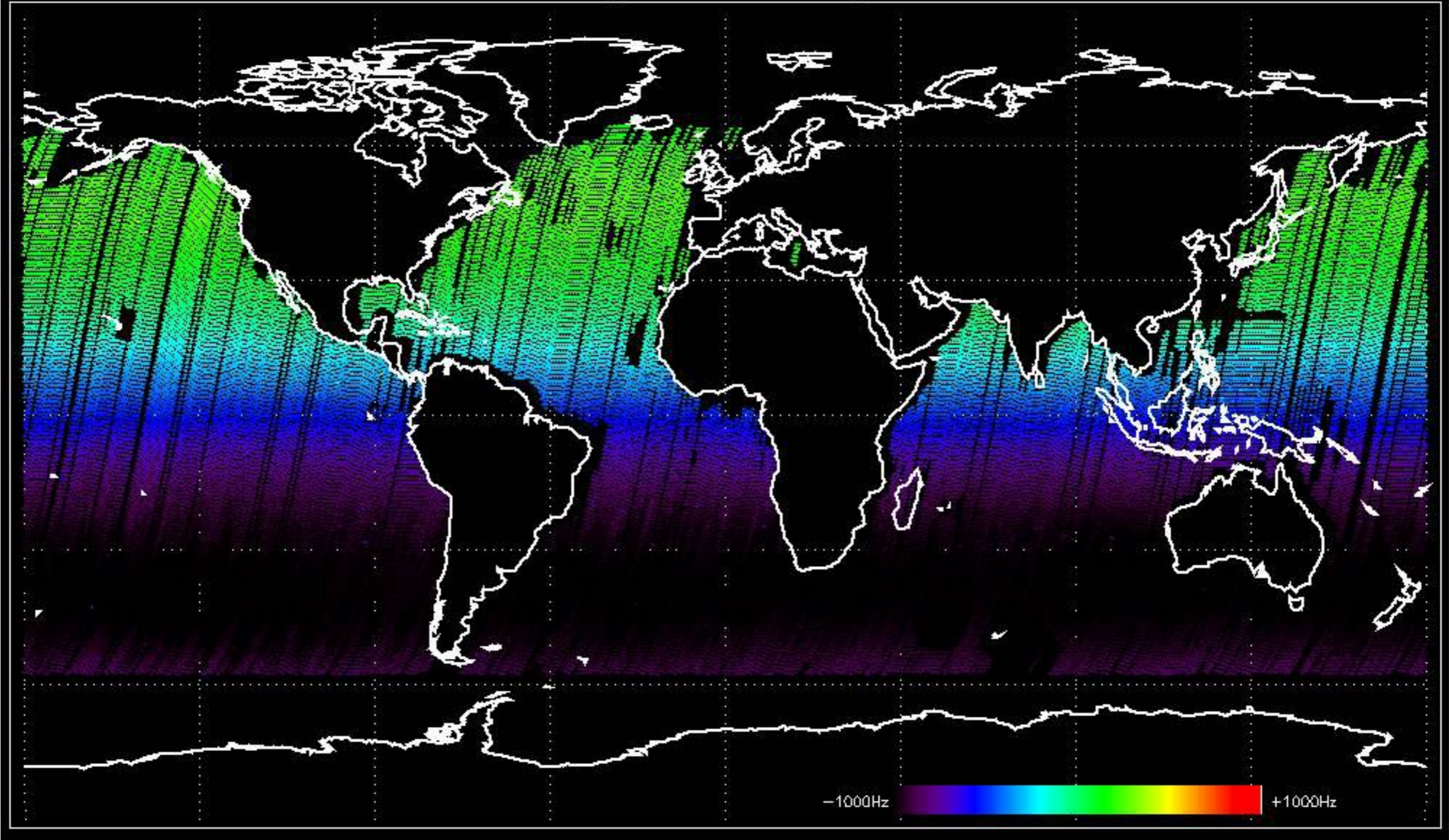
Doppler 'GM1' 'SS1' descending



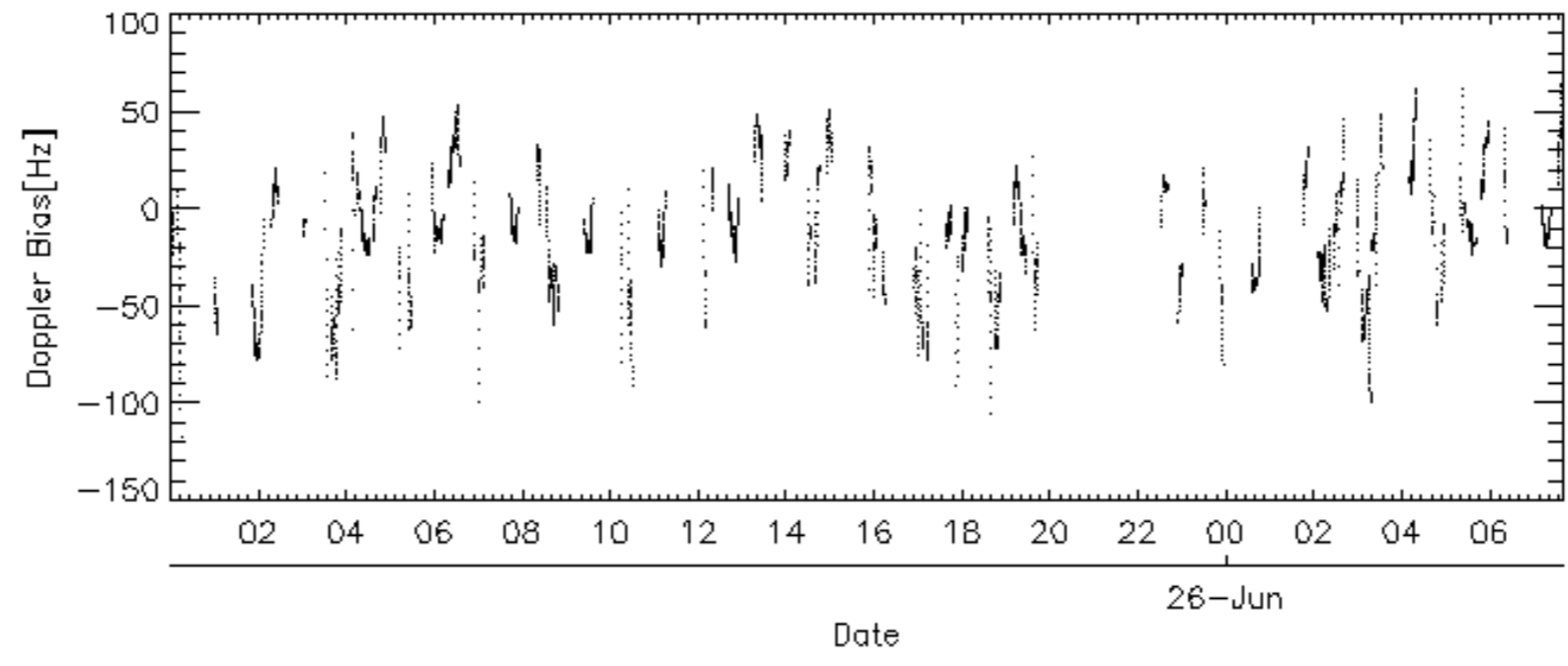
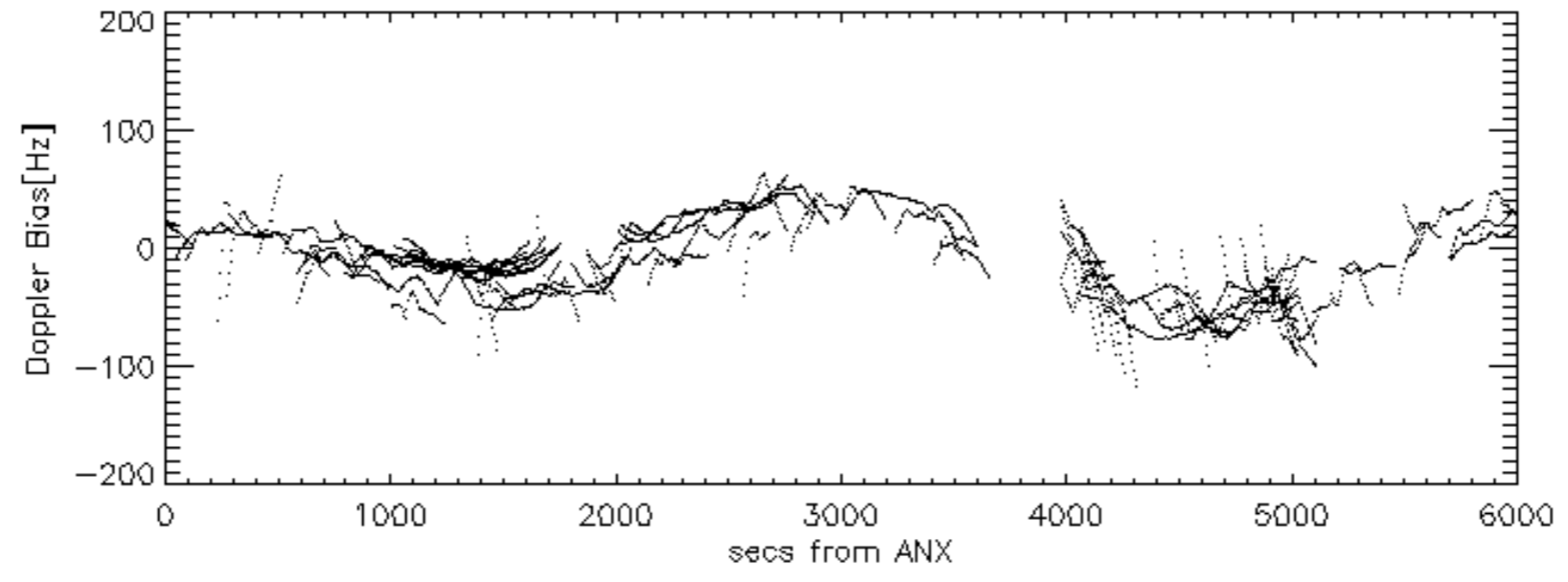
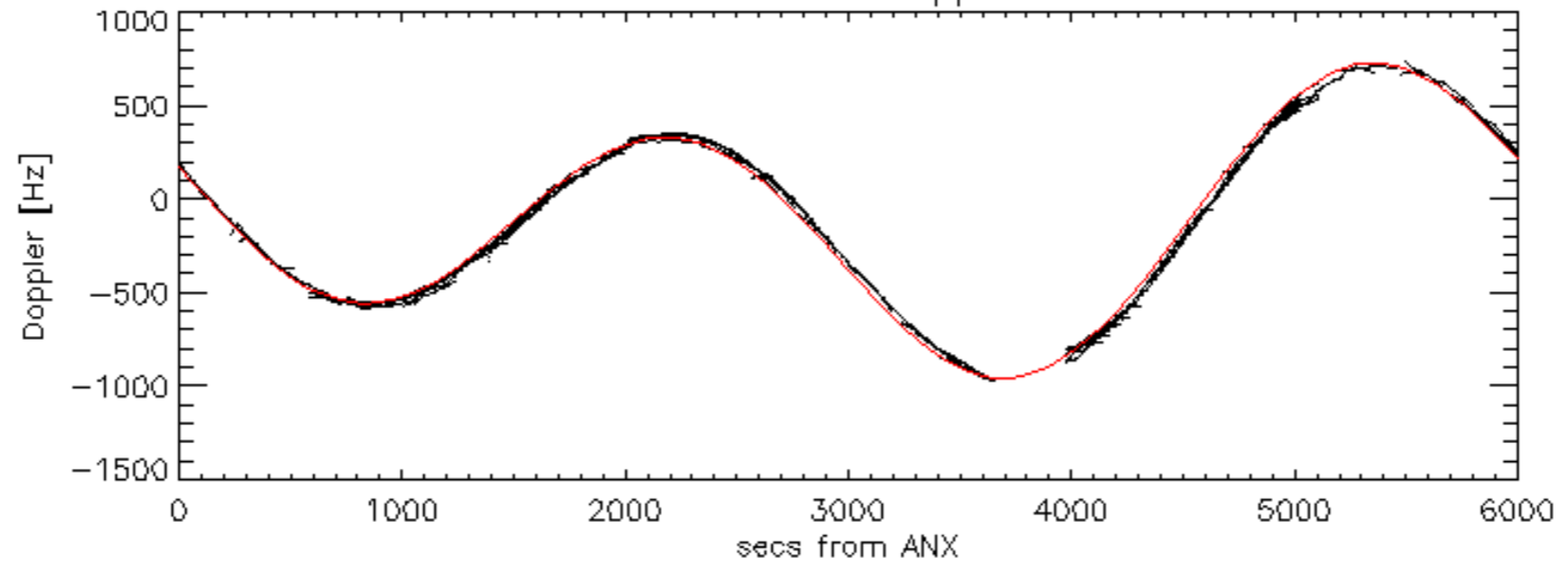
Doppler 'WVS' 'IS2' ascending

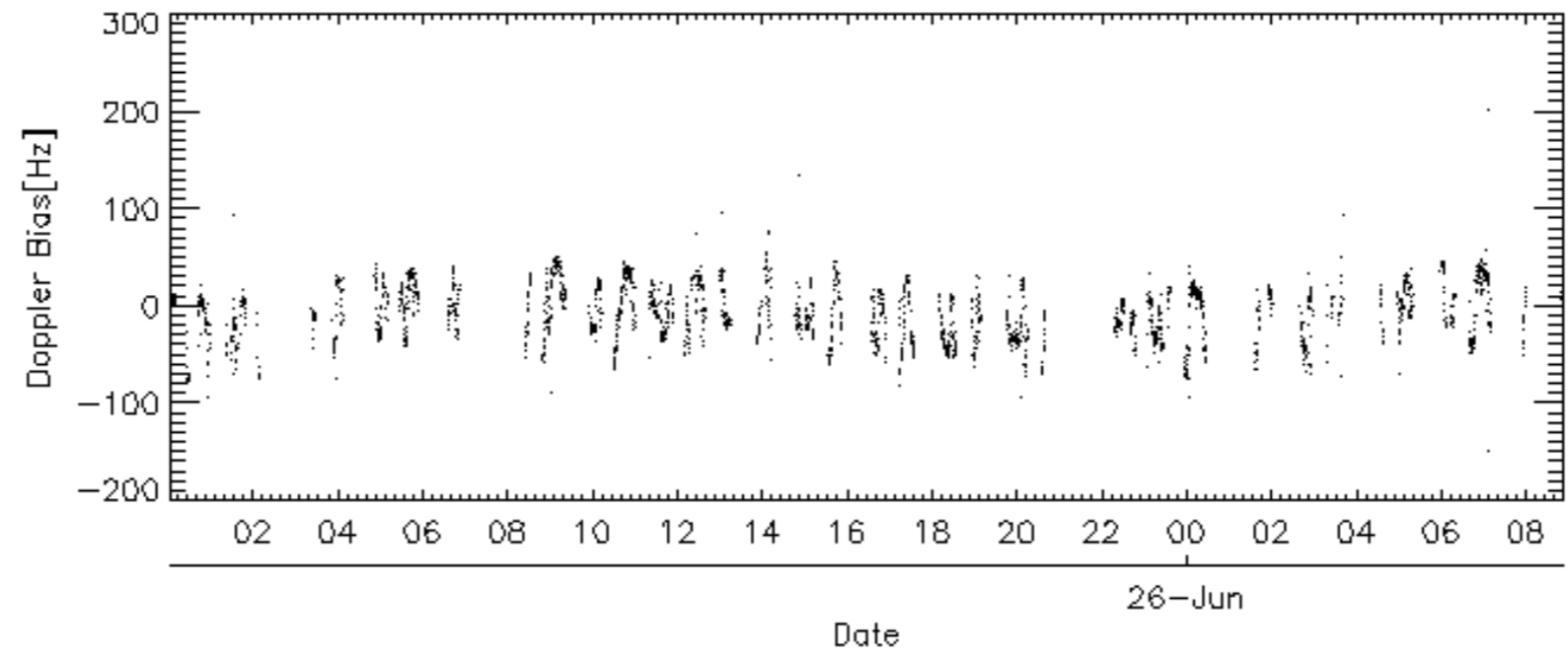
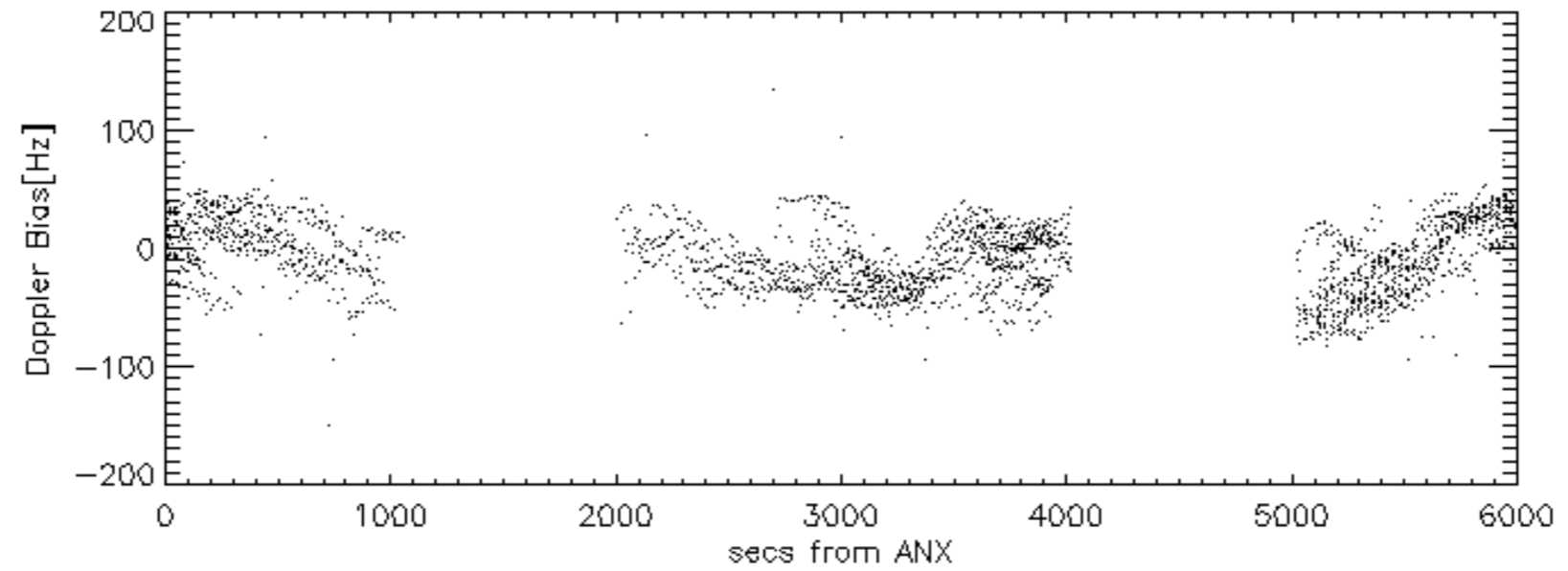
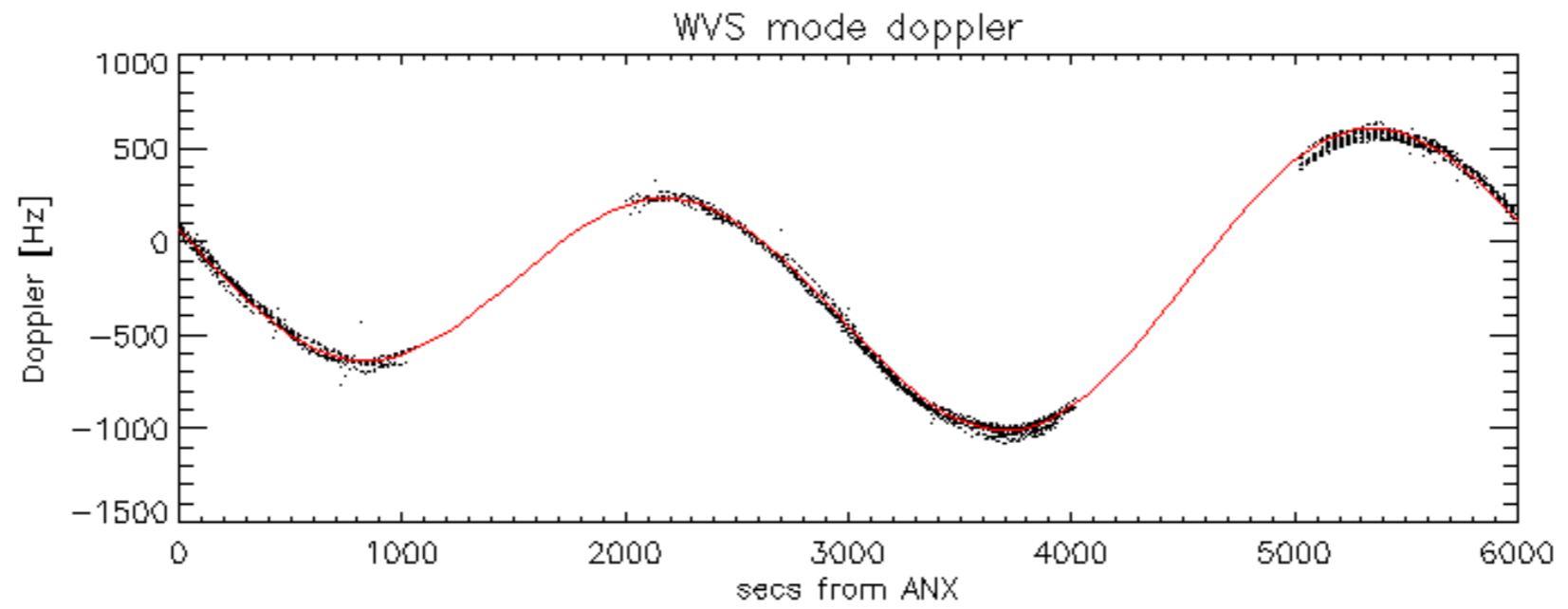


Doppler 'WVS' 'IS2' descending

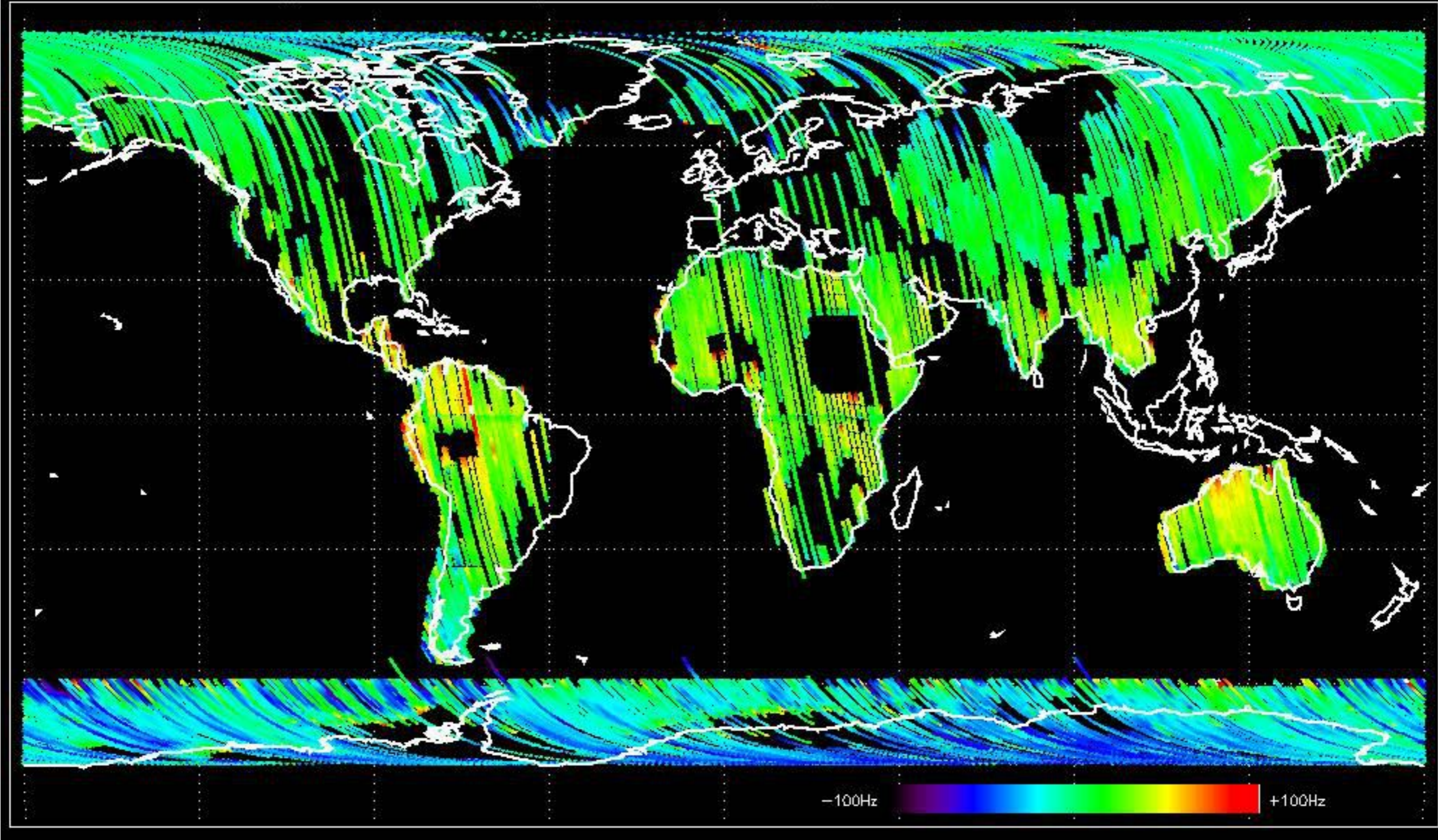


GM1 mode doppler

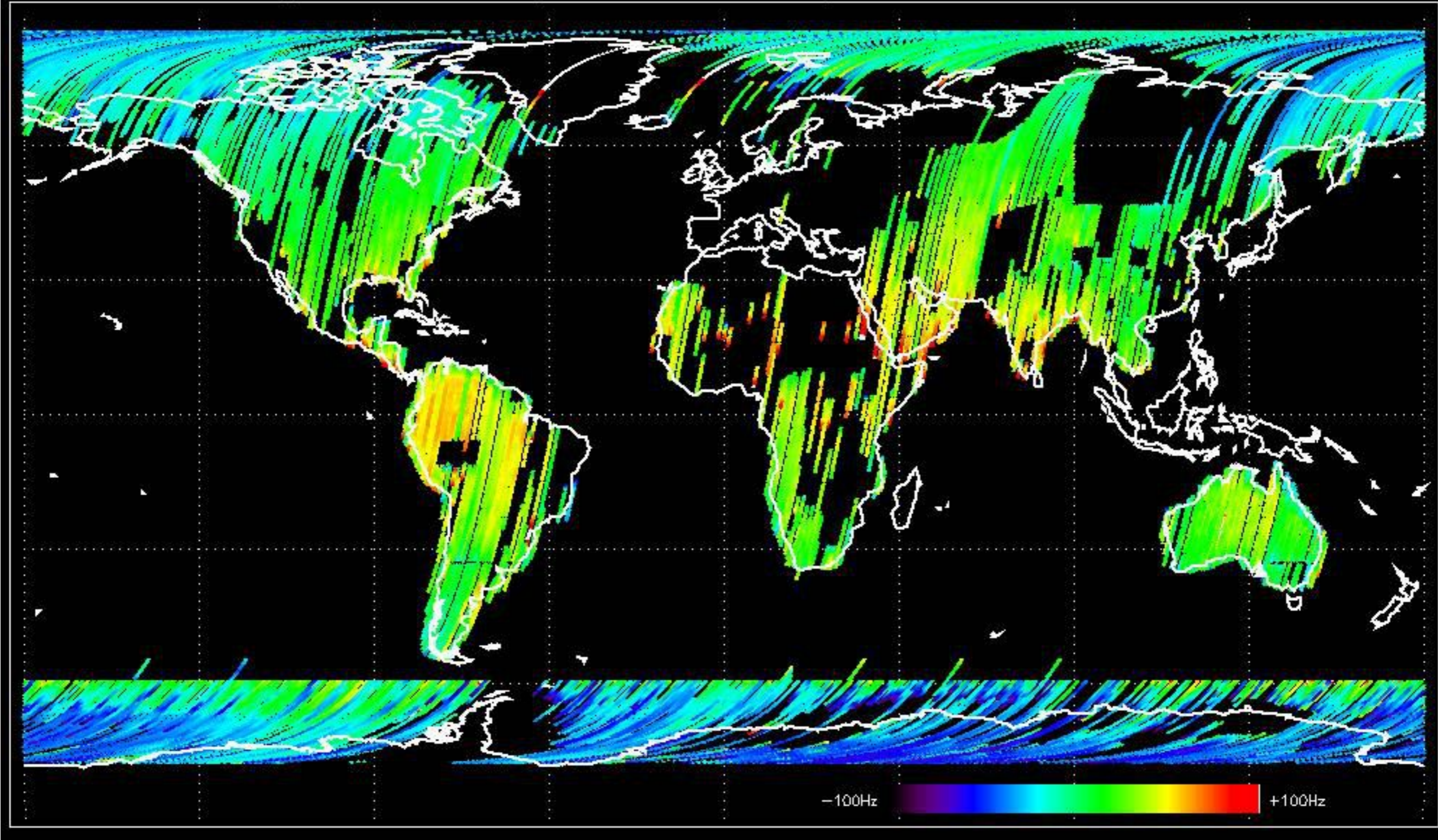




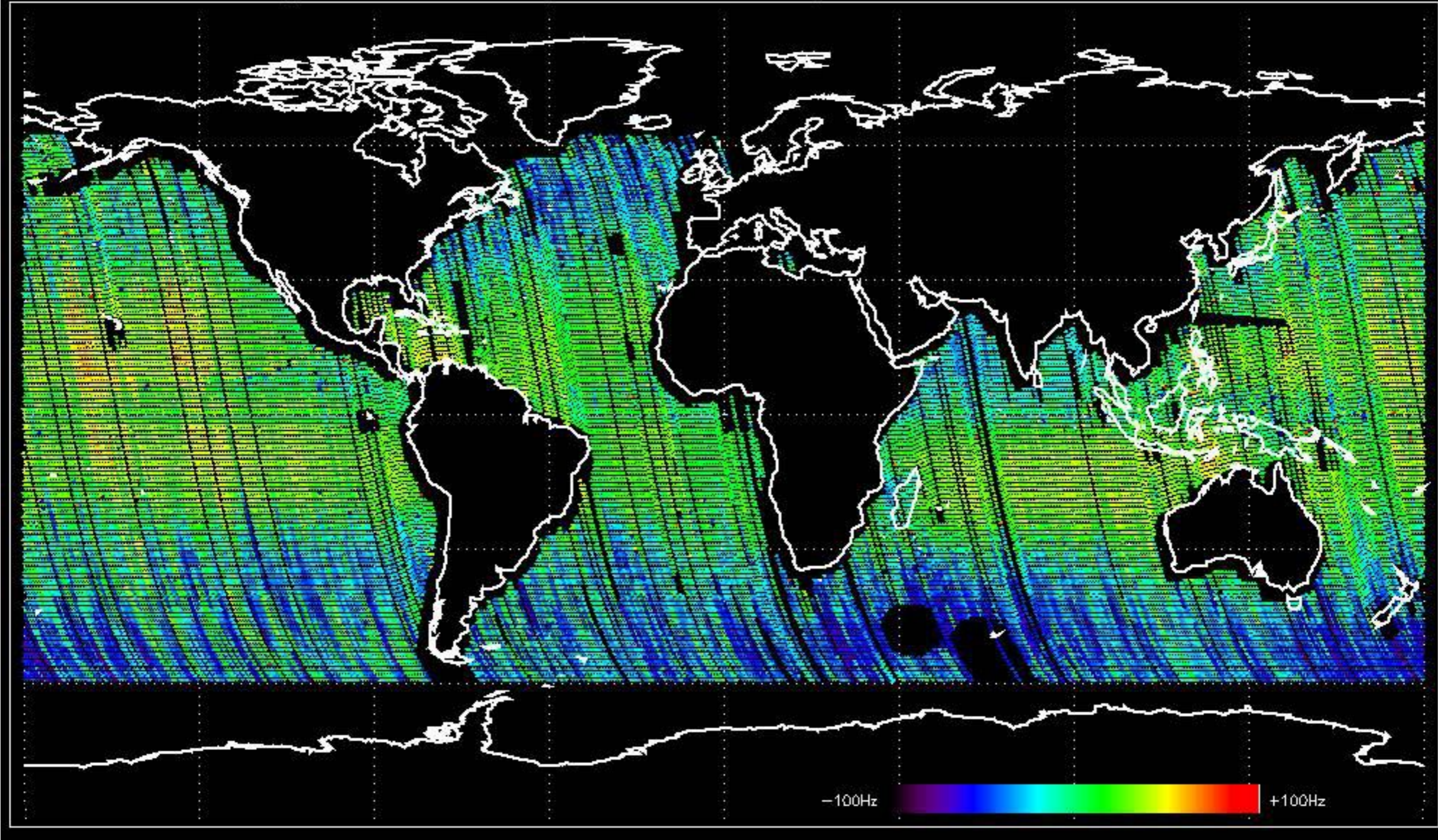
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.352461 Hz



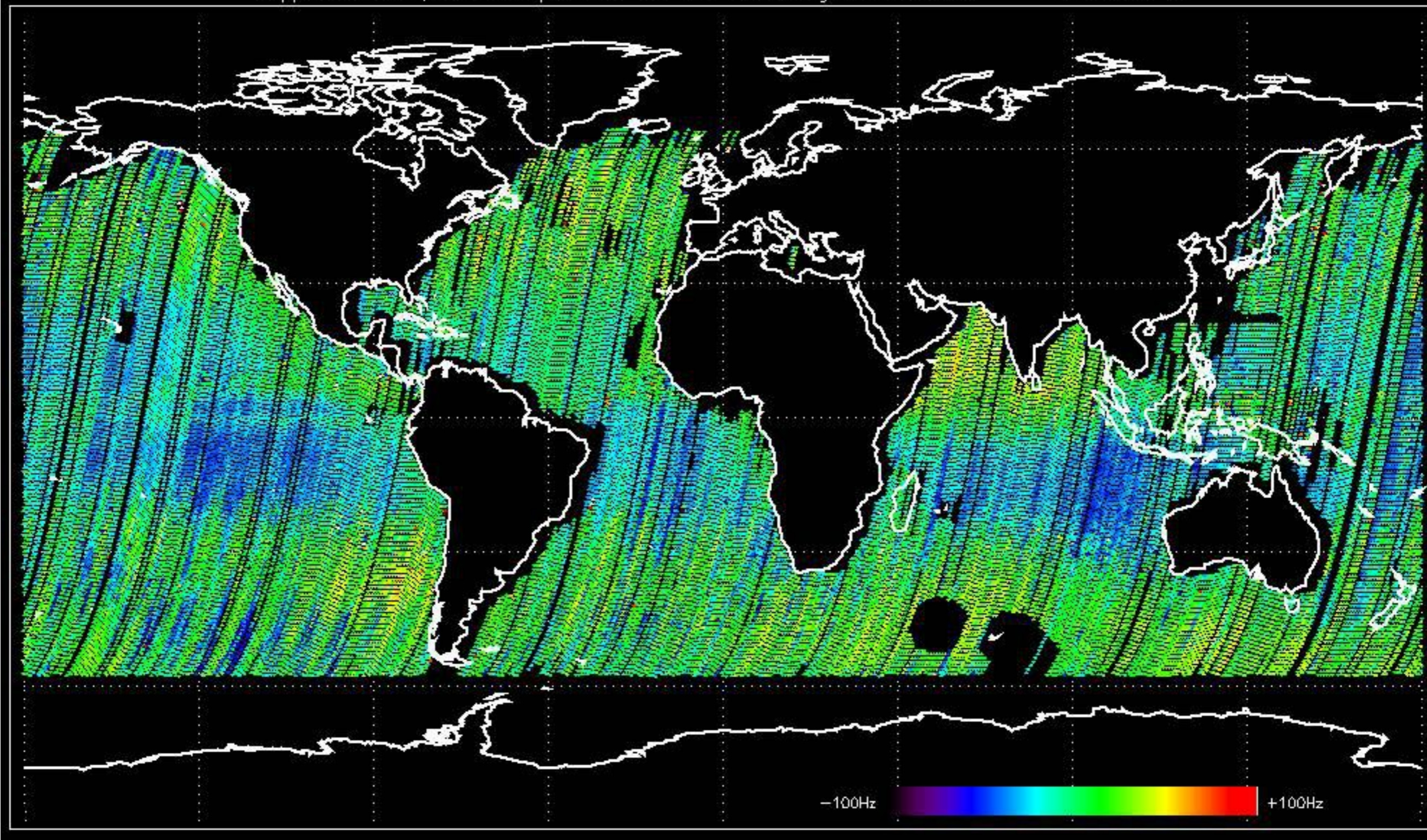
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -8.8113853 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.2378117 Hz

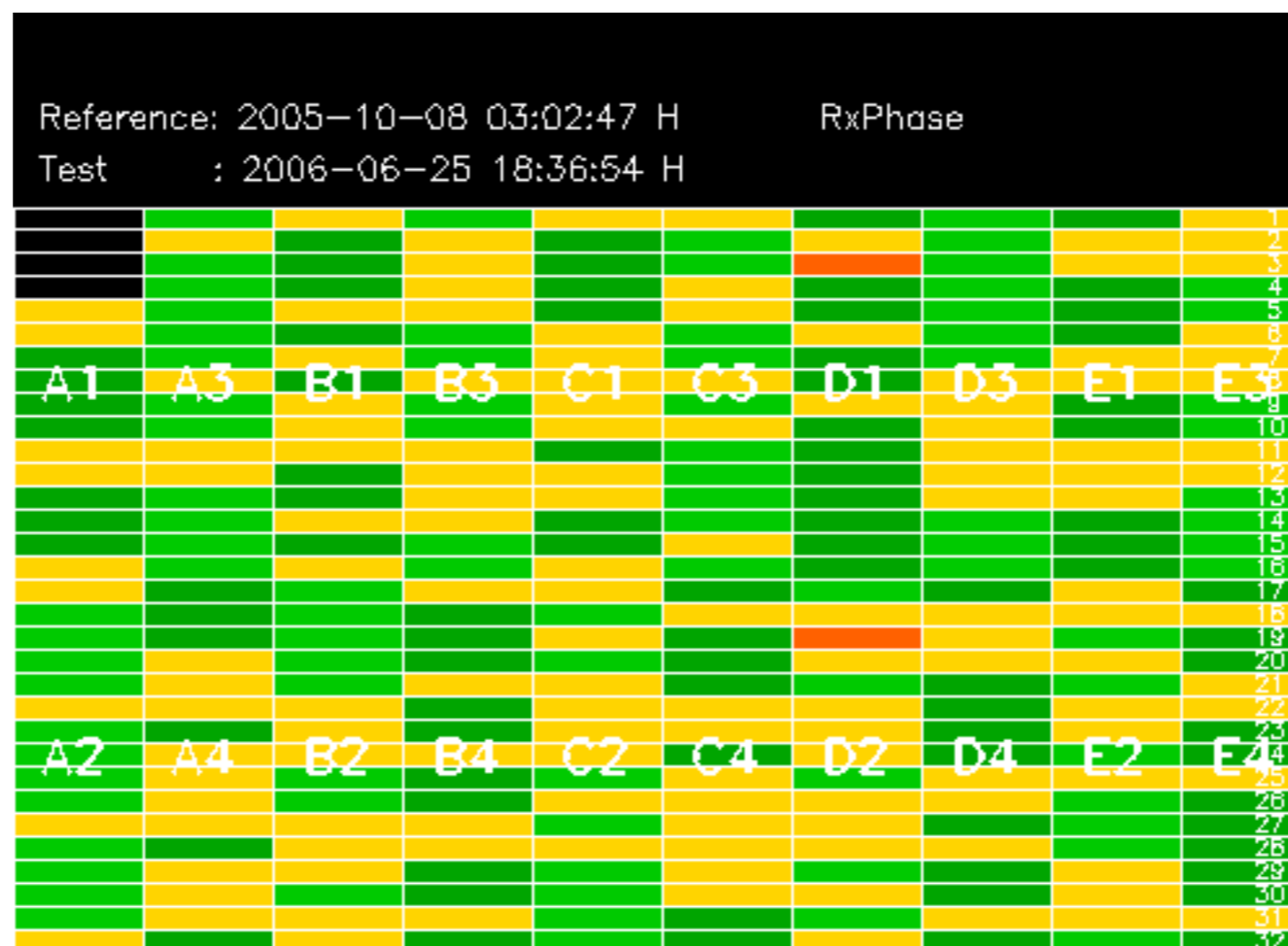


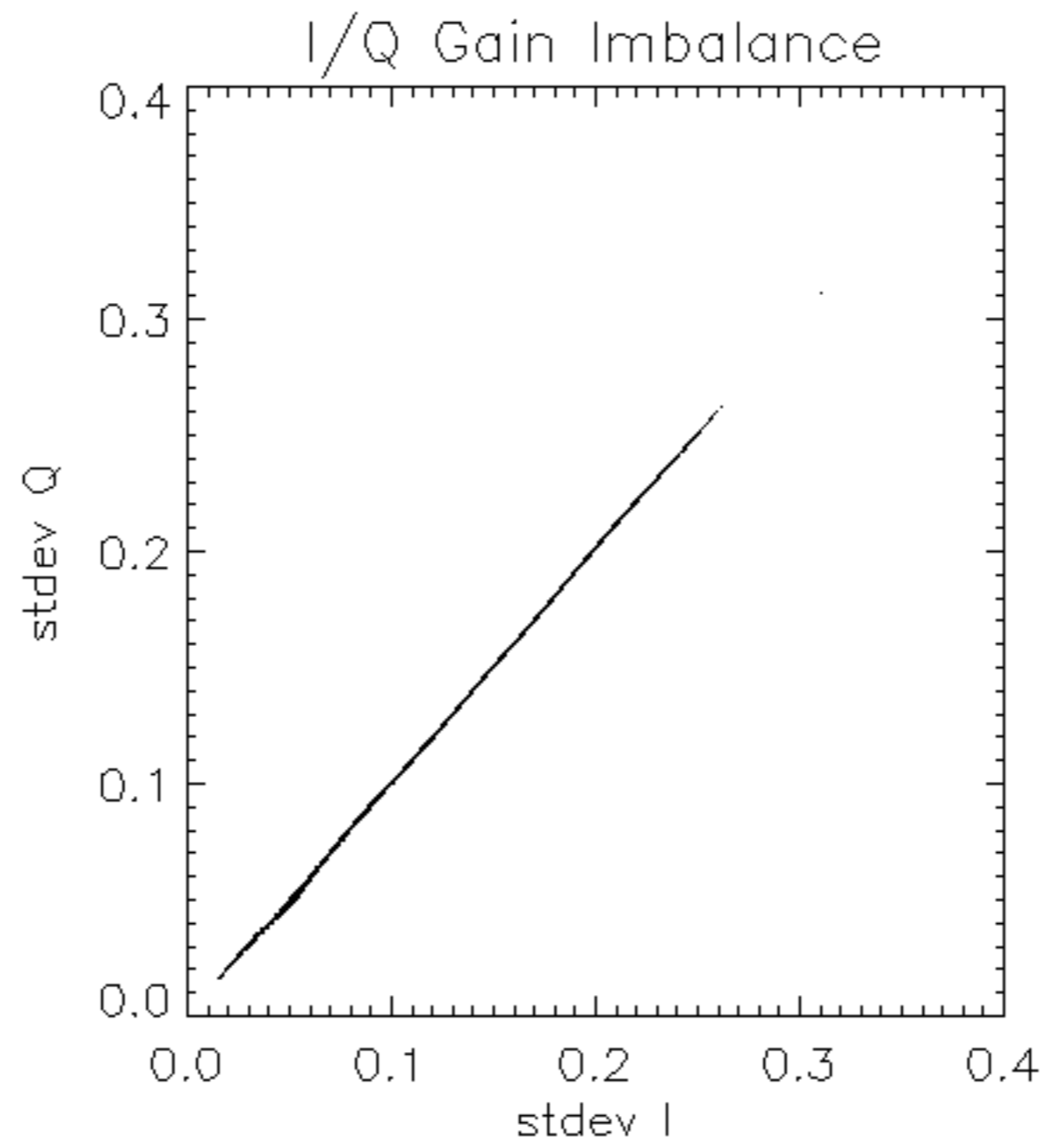
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -11.796374 Hz

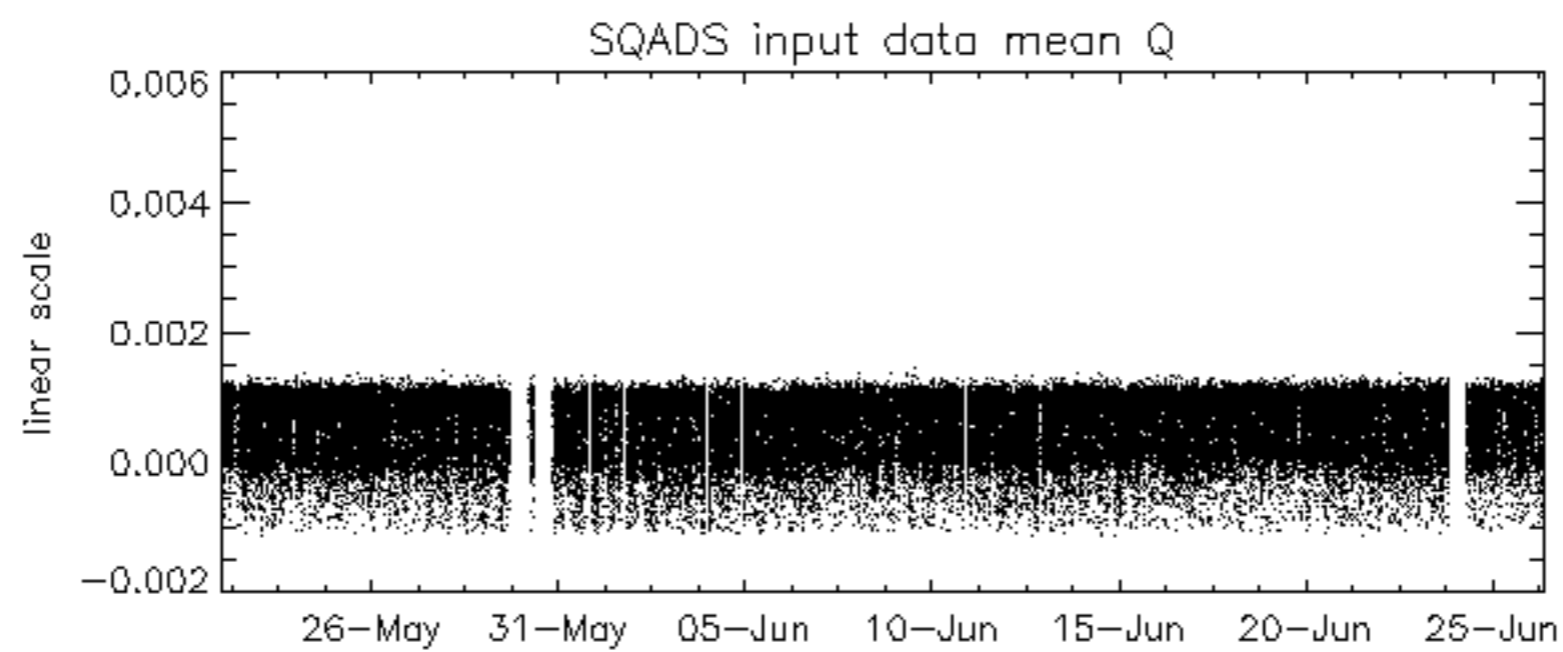
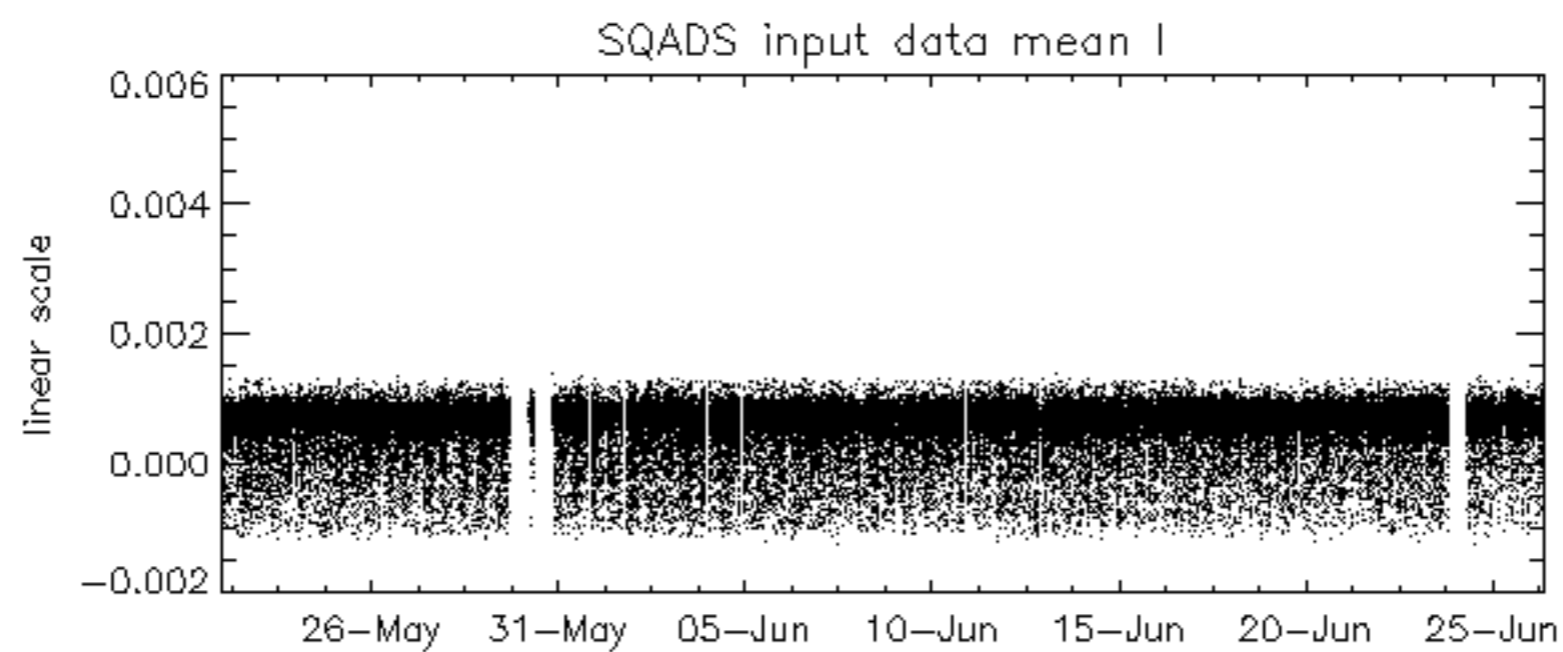
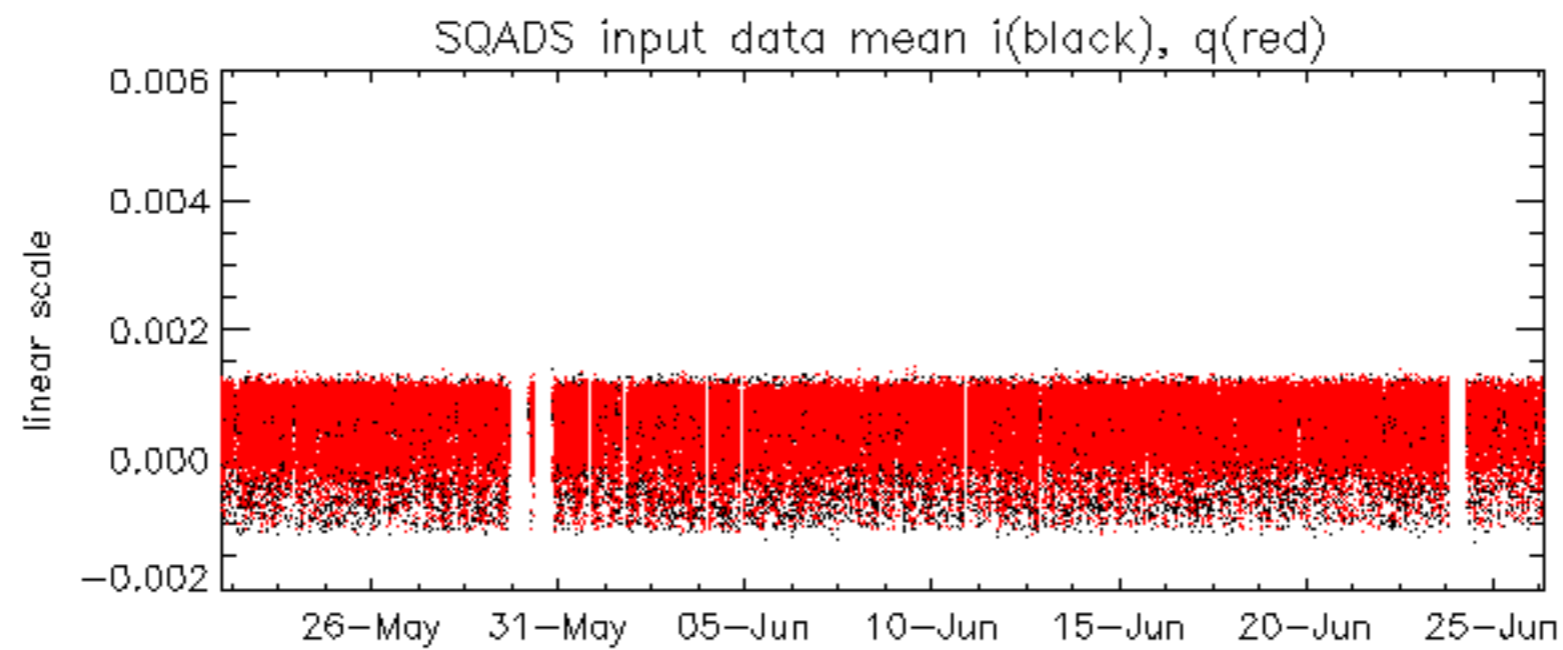


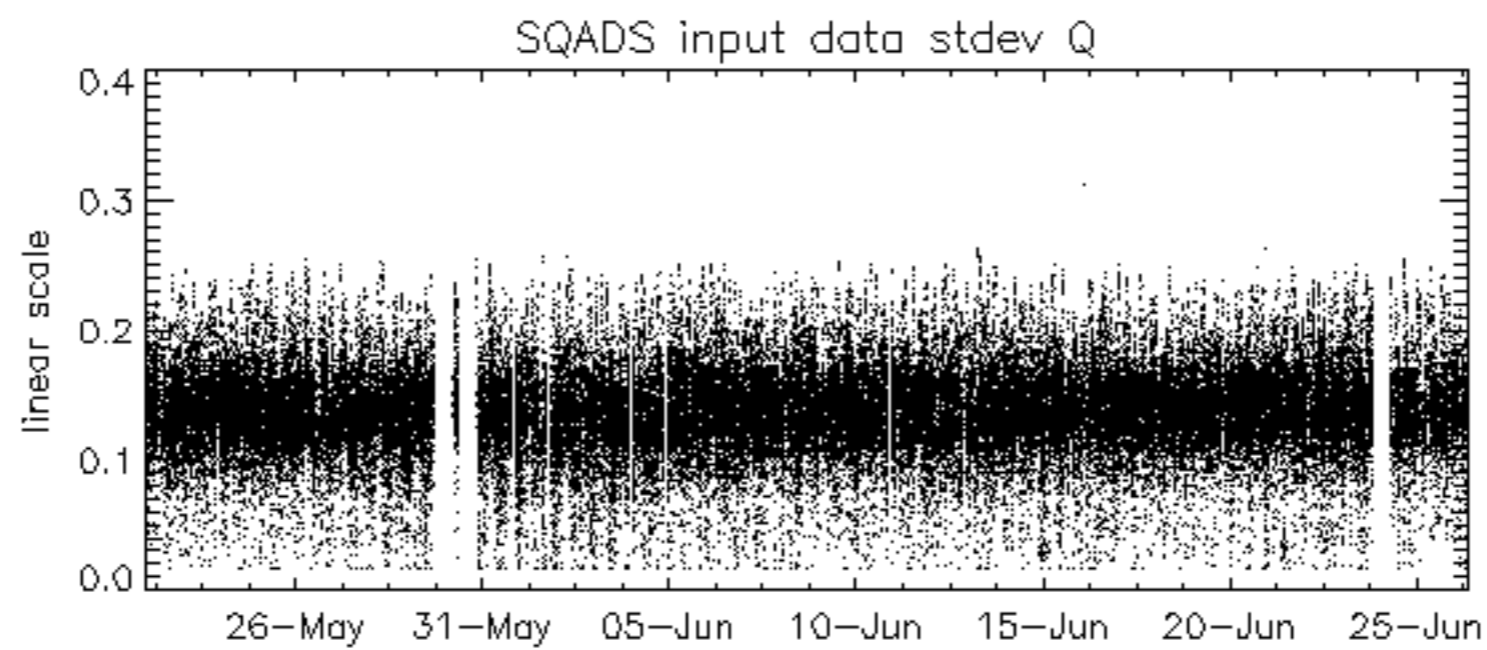
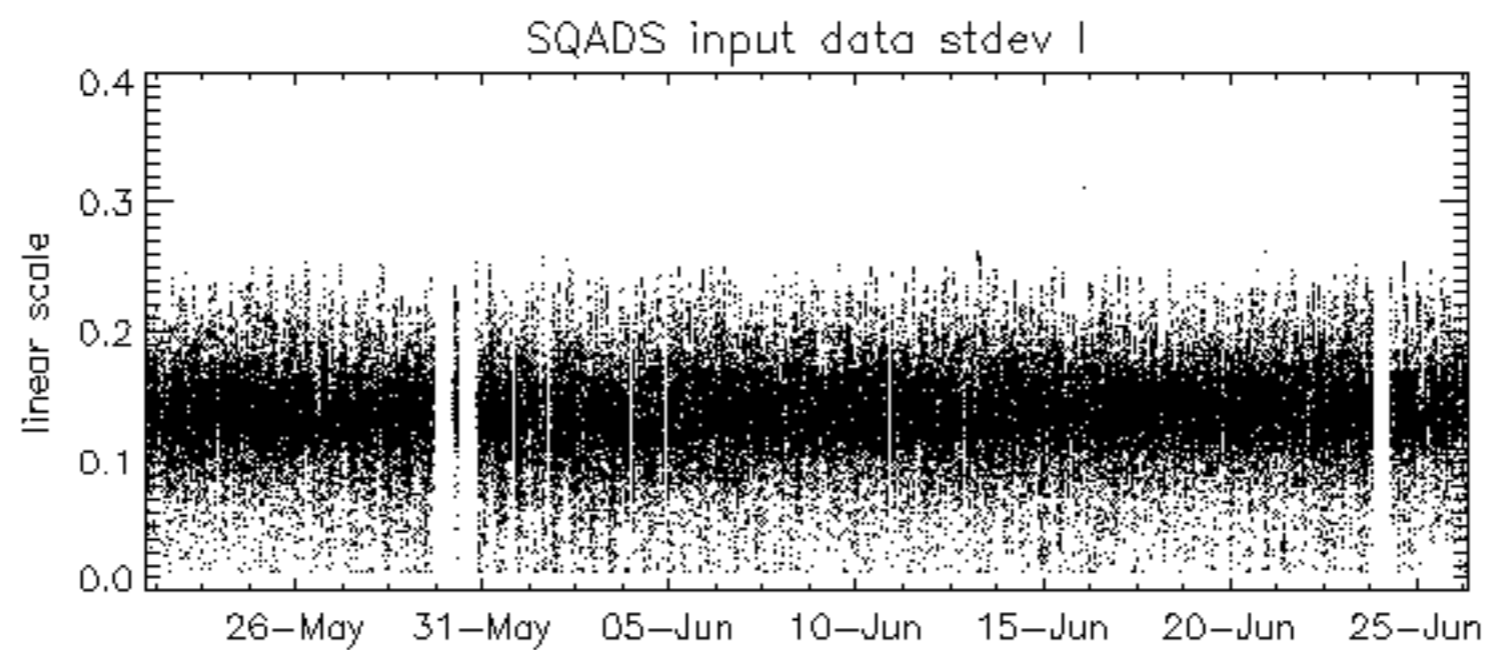
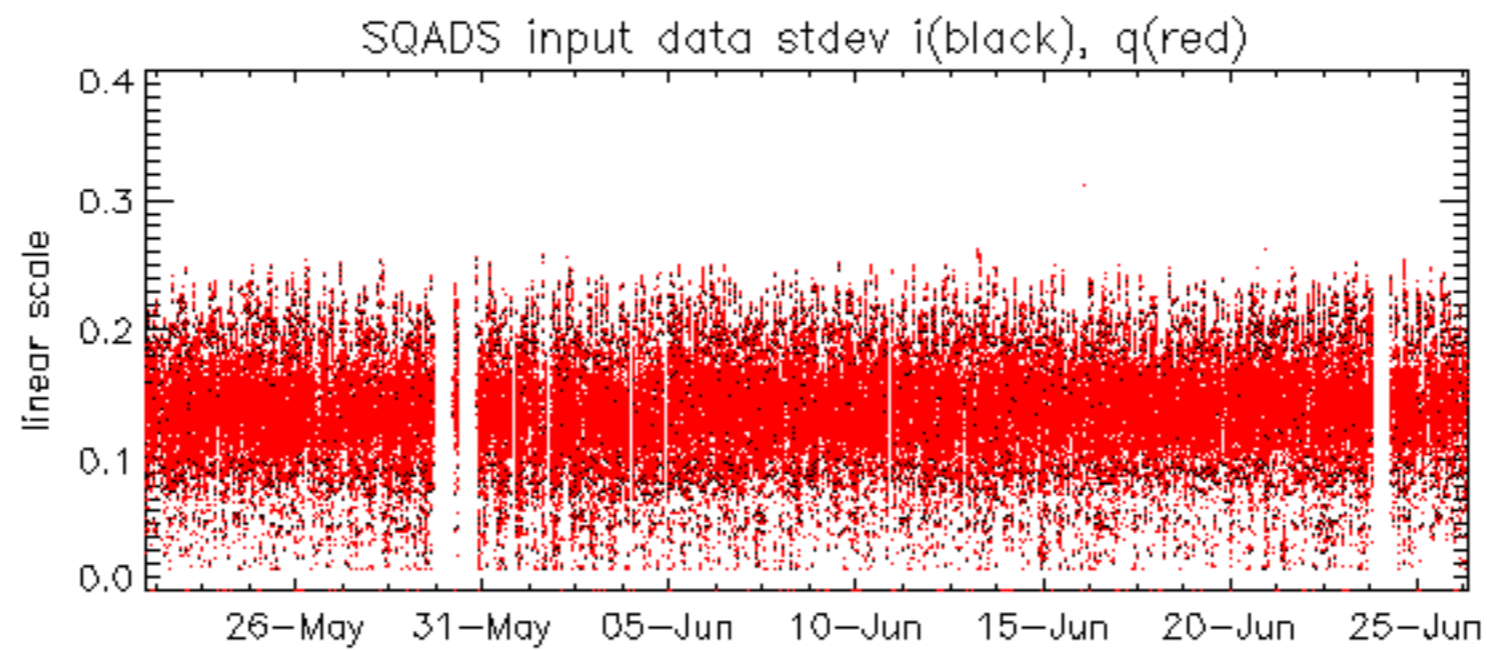
No anomalies observed on available MS products:

No anomalies observed.





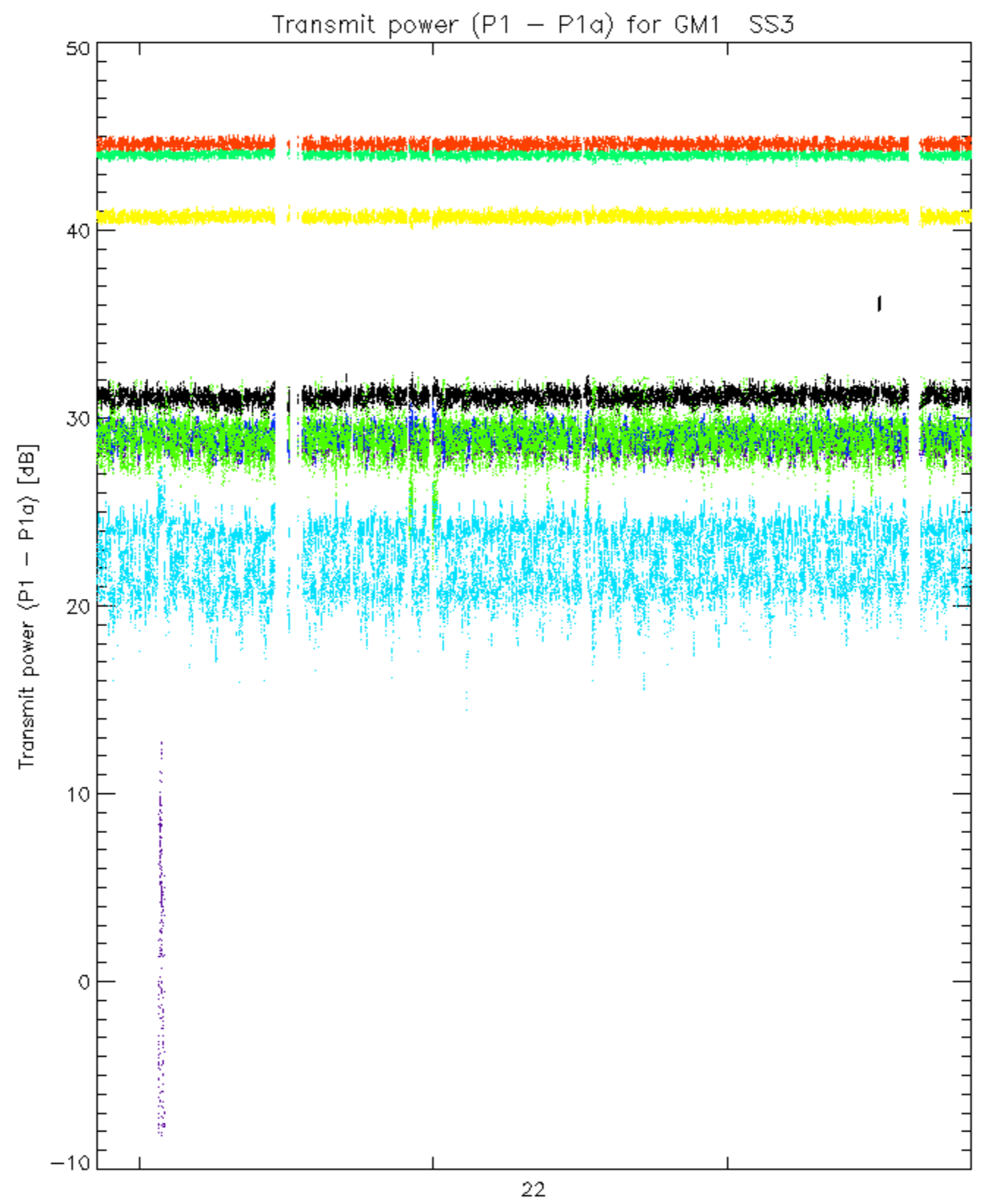




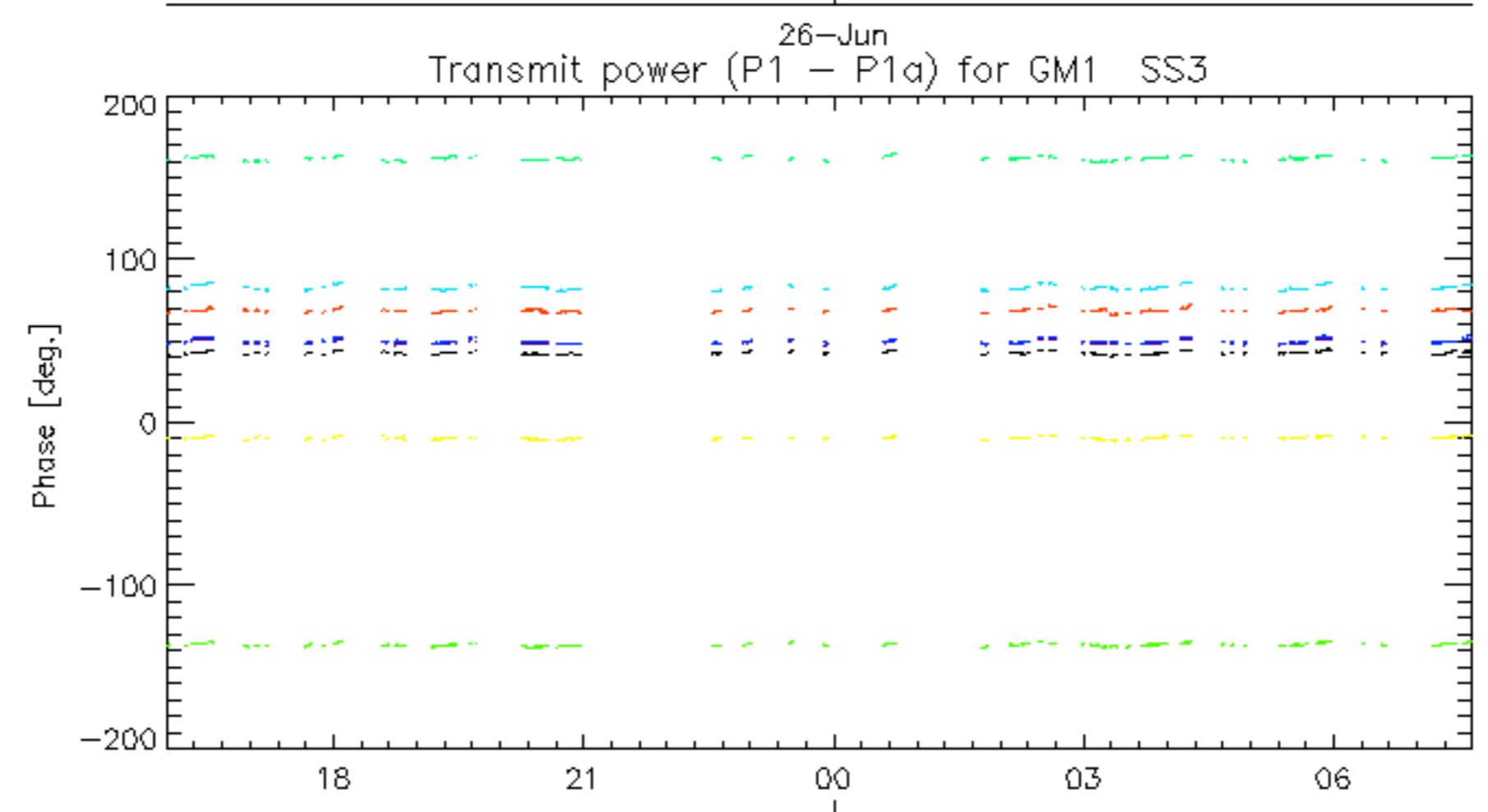
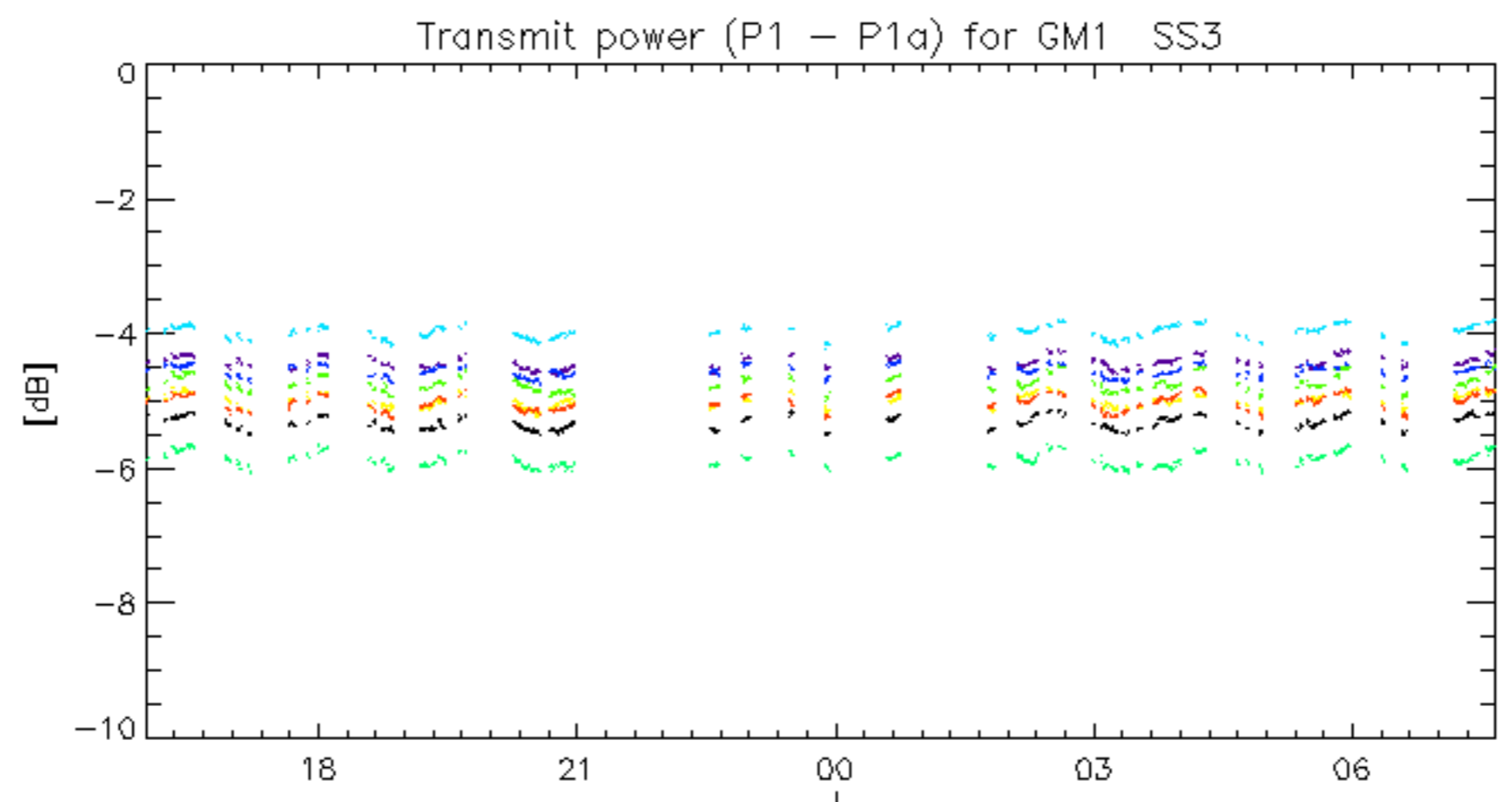
Summary of analysis for the last 3 days 2006062[456]

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

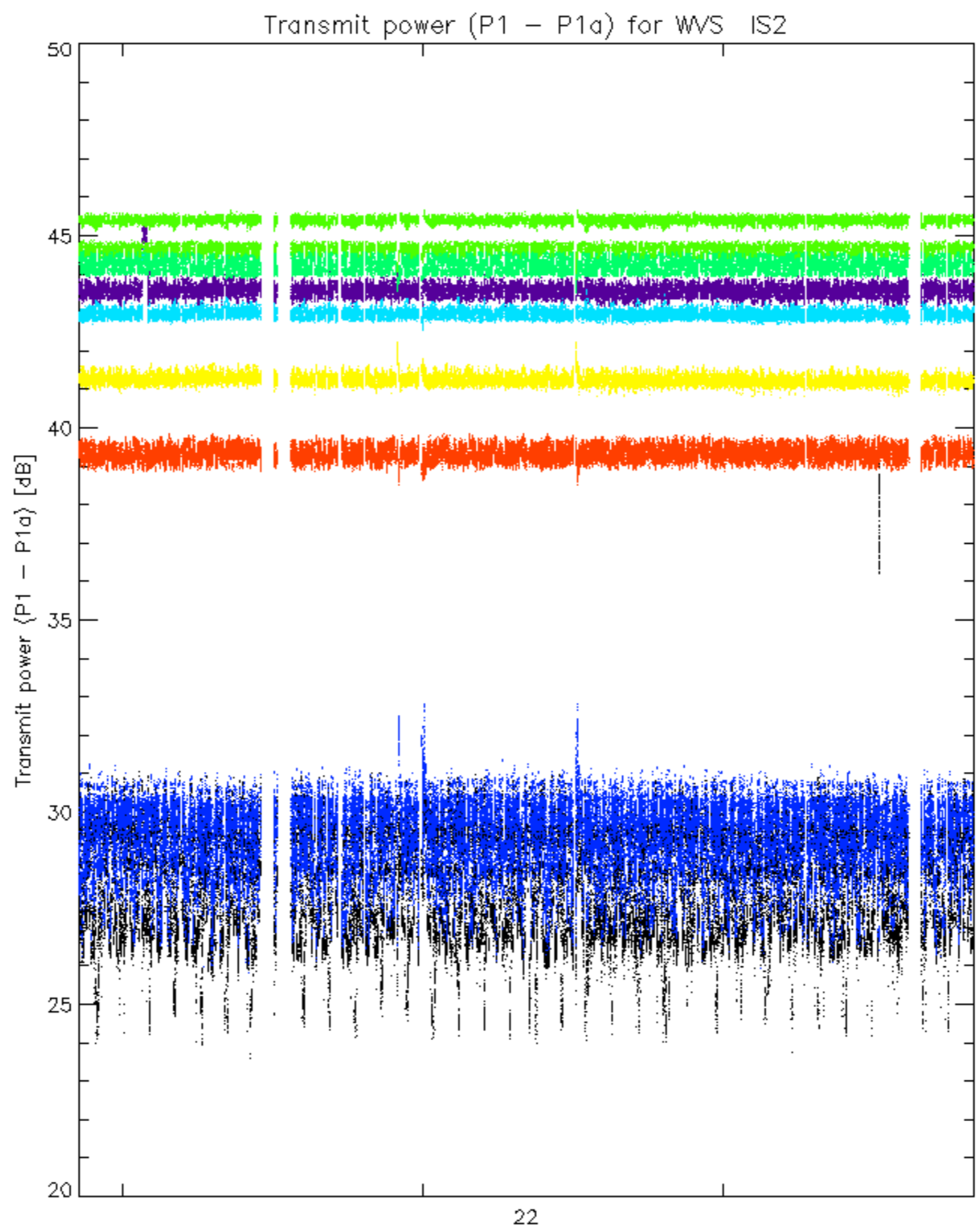
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060625_003958_000001552048_00474_22572_8683.N1	1	0
ASA_IMM_1PNPDE20060625_005615_000000362048_00475_22573_8684.N1	1	0
ASA_IMM_1PNPDE20060625_022556_000000362048_00476_22574_8697.N1	1	0
ASA_IMM_1PNPDE20060625_063915_000001102048_00478_22576_8747.N1	1	0
ASA_WSM_1PNPDE20060624_113644_000000062048_00467_22565_5356.N1	0	116
ASA_WSM_1PNPDE20060624_230552_000001102048_00474_22572_5298.N1	0	2
ASA_WSM_1PNPDE20060625_113214_000001292048_00481_22579_5331.N1	0	26
ASA_WSM_1PNPDE20060625_141258_000000912048_00483_22581_5337.N1	0	17
ASA_WSM_1PNPDE20060626_033514_000000862048_00491_22589_5429.N1	0	22



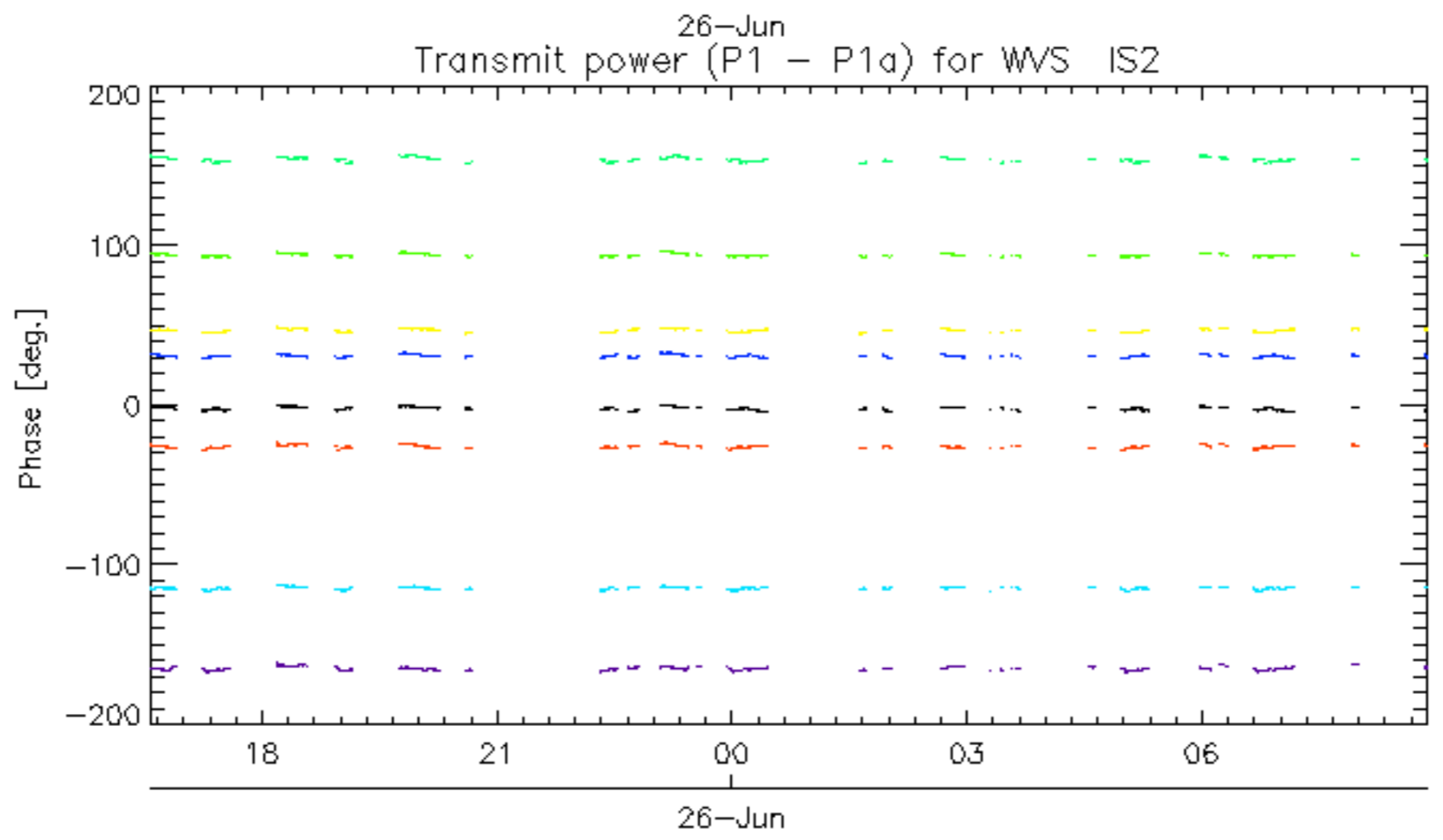
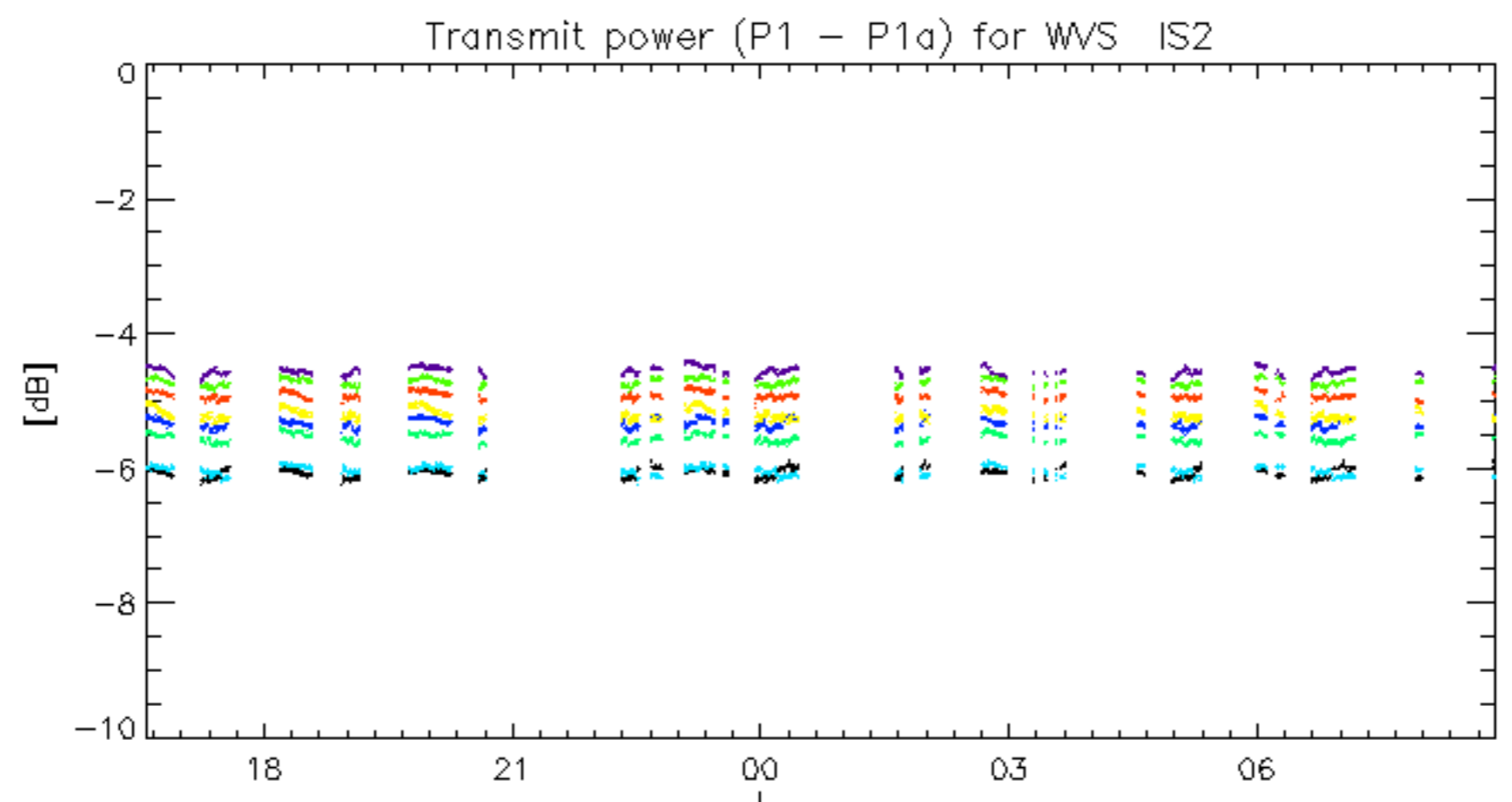
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.