

PRELIMINARY REPORT OF 060716

last update on Sun Jul 16 16:23:27 GMT 2006

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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 2006-07-15 00:00:00 to 2006-07-16 16:23:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	73	18	3	15
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	73	18	3	15
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	73	18	3	15
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	73	18	3	15

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	36	56	40	15	54
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	36	56	40	15	54
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	36	56	40	15	54
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	56	40	15	54

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	20060714 033425
H	20060715 030248

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
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.929754	0.013007	-0.018190
7	P1	-3.102215	0.009919	-0.006720
11	P1	-4.085760	0.013535	0.005160
15	P1	-6.173411	0.011663	-0.020588
19	P1	-3.393308	0.009362	-0.053859
22	P1	-4.543171	0.010221	-0.011709
26	P1	-3.933455	0.019793	0.027112
30	P1	-5.762678	0.007970	-0.010566
3	P1	-16.507578	0.355229	-0.070210
7	P1	-17.188961	0.099850	-0.061588
11	P1	-16.983894	0.275691	-0.058050
15	P1	-13.116334	0.154944	0.022172
19	P1	-14.437804	0.048275	-0.141830
22	P1	-16.015162	0.419275	0.048579
26	P1	-15.135964	0.239839	0.079776
30	P1	-17.095217	0.343313	-0.064913

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.997383	0.087445	0.127745
7	P2	-21.926134	0.105482	0.089902
11	P2	-15.803758	0.122168	0.048666
15	P2	-7.134052	0.101862	0.009992
19	P2	-9.135943	0.091400	-0.006941
22	P2	-18.150379	0.086303	-0.007856
26	P2	-16.397776	0.093773	-0.034923
30	P2	-19.528383	0.094077	0.035079

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.175120	0.002930	0.004383
7	P3	-8.175120	0.002930	0.004383
11	P3	-8.175120	0.002930	0.004383
15	P3	-8.175120	0.002930	0.004383
19	P3	-8.175120	0.002930	0.004383
22	P3	-8.175120	0.002930	0.004383
26	P3	-8.175120	0.002930	0.004383
30	P3	-8.175120	0.002930	0.004383

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.797297	0.032578	-0.129505
7	P1	-2.564346	0.007920	-0.001185
11	P1	-2.861146	0.014676	0.007872
15	P1	-3.566224	0.028909	-0.068431
19	P1	-3.416587	0.013461	-0.014796
22	P1	-5.093493	0.020237	0.017766
26	P1	-5.856236	0.015846	0.002454
30	P1	-5.192736	0.026622	-0.030635
3	P1	-11.582850	0.104204	-0.217213
7	P1	-9.974470	0.033658	0.017565
11	P1	-10.248304	0.058640	0.016084
15	P1	-10.759240	0.143047	-0.059507
19	P1	-15.529039	0.074870	-0.029941
22	P1	-20.913618	1.226408	-0.041556
26	P1	-16.327221	0.380594	0.176720
30	P1	-17.893559	0.412637	-0.137202

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.647310	0.071765	0.212722
7	P2	-22.415773	0.128839	0.133353
11	P2	-11.059148	0.042738	0.103517
15	P2	-4.915187	0.046347	0.046508
19	P2	-6.877733	0.042274	0.033228
22	P2	-8.197761	0.037536	0.037115
26	P2	-24.187494	0.064165	0.017641
30	P2	-22.019749	0.049899	0.063327

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.015165	0.003734	0.014223
7	P3	-8.015118	0.003734	0.015444
11	P3	-8.014971	0.003748	0.014661
15	P3	-8.015143	0.003732	0.014792
19	P3	-8.015121	0.003738	0.015089
22	P3	-8.015120	0.003733	0.014851
26	P3	-8.015088	0.003737	0.014834
30	P3	-8.015108	0.003727	0.015106

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	0.000570702
	stdev	1.63600e-07
MEAN Q	mean	0.000544510
	stdev	2.10695e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138434
	stdev	0.00108316
STDEV Q	mean	0.138795
	stdev	0.00110131



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006071[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_1PNPDE20060714_004241_000001742049_00245_22844_0772.N1	1	0
ASA_IMM_1PNPDE20060714_005914_000000452049_00246_22845_0771.N1	1	0
ASA_GM1_1PNPDK20060715_141824_000007972049_00268_22867_1061.N1	0	15
ASA_WSM_1PNPDE20060714_113456_000000852049_00252_22851_3060.N1	0	14
ASA_WSM_1PNPDE20060715_010155_000001462049_00260_22859_3155.N1	0	34
ASA_WSM_1PNPDE20060715_170157_000001472049_00270_22869_3251.N1	0	18
ASA_WSM_1PNPDE20060716_020953_000001832049_00275_22874_3293.N1	0	39
ASA_APM_1PNPDE20060714_141717_000000732049_00254_22853_0606.N1	0	17





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)

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

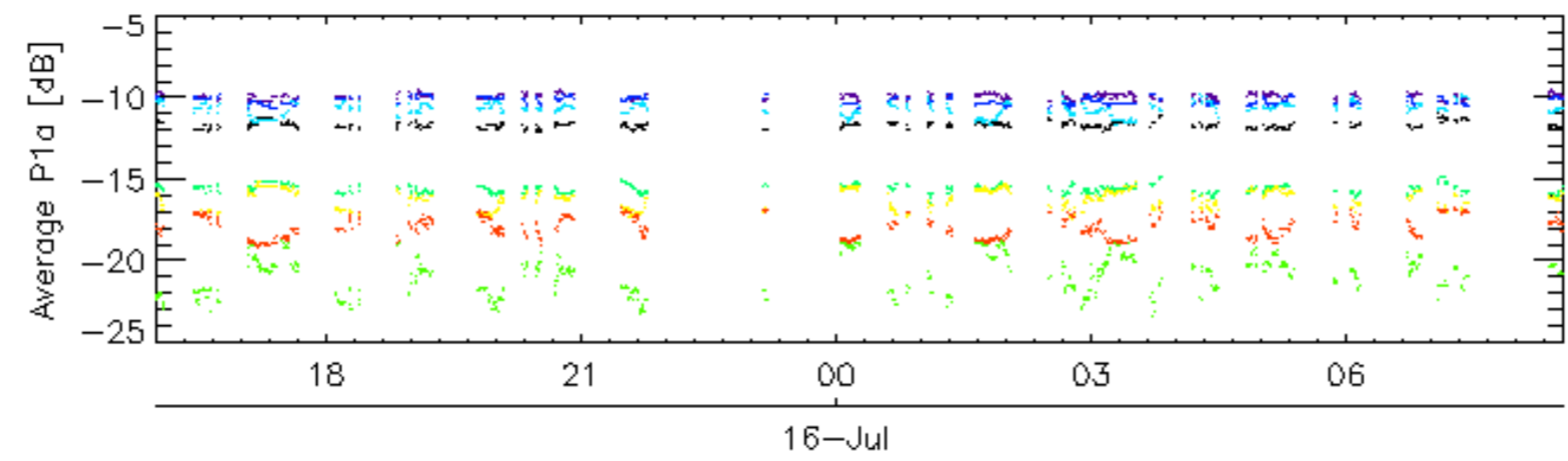
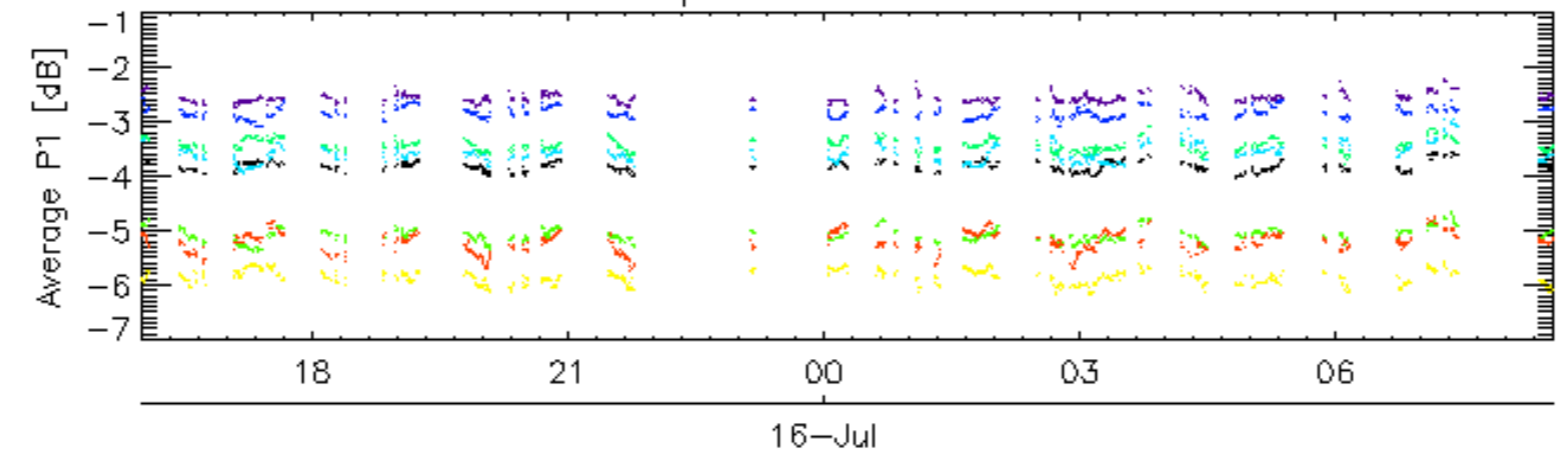
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

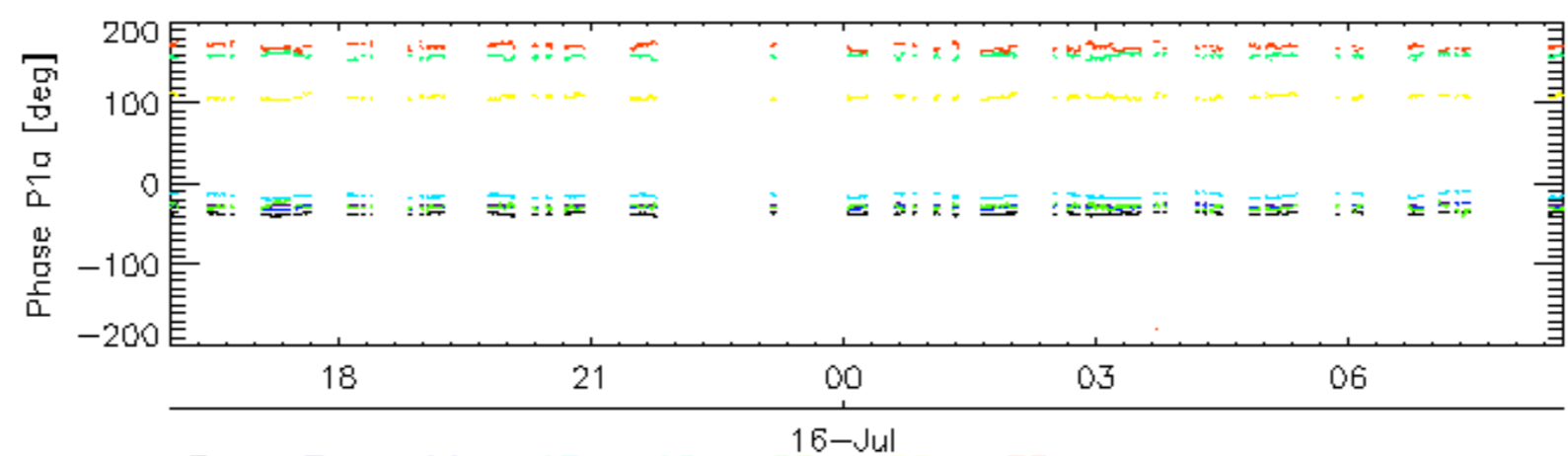
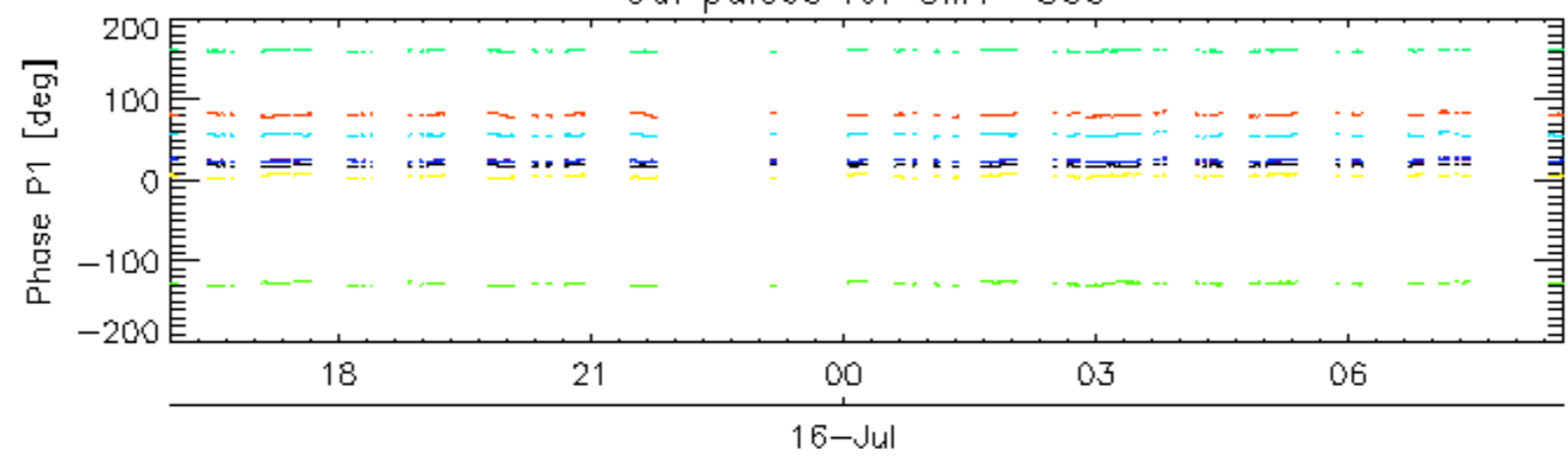
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

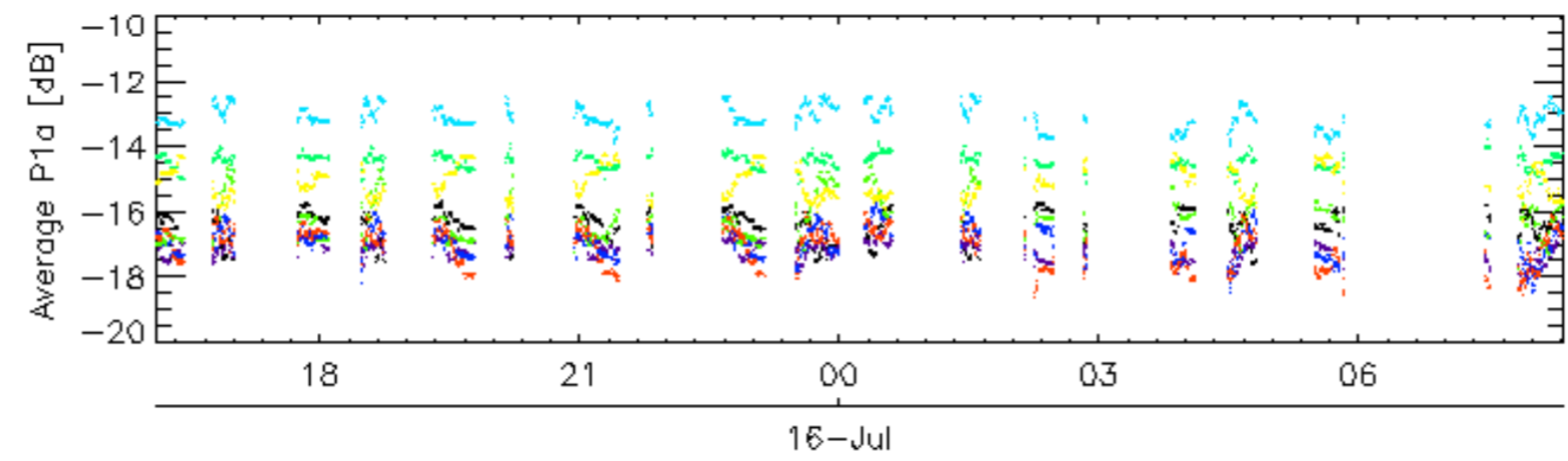
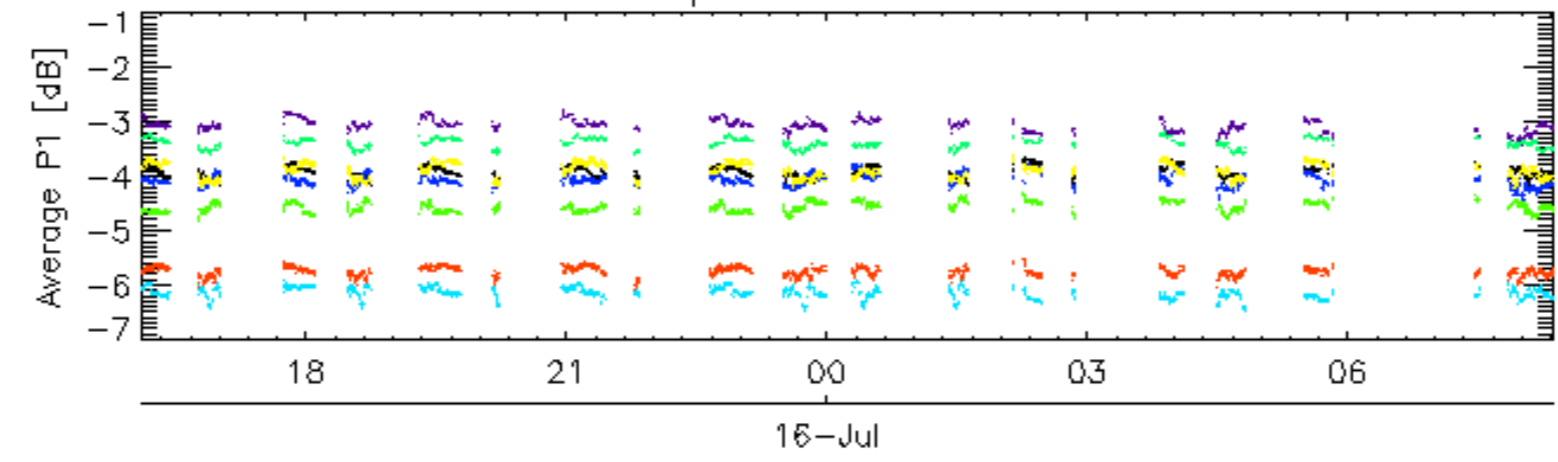


Cal pulses for GM1 SS3

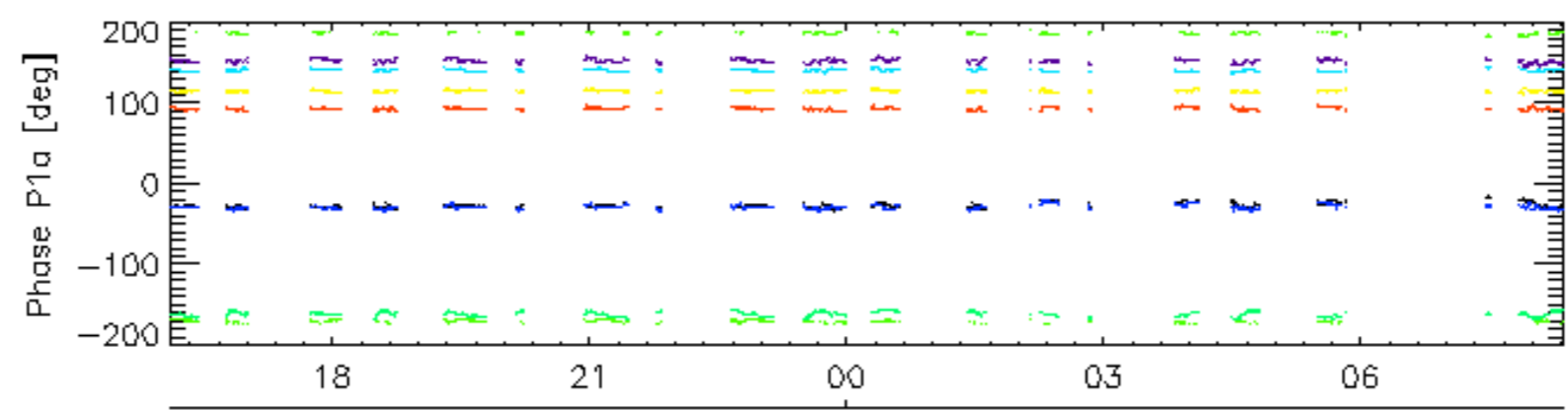
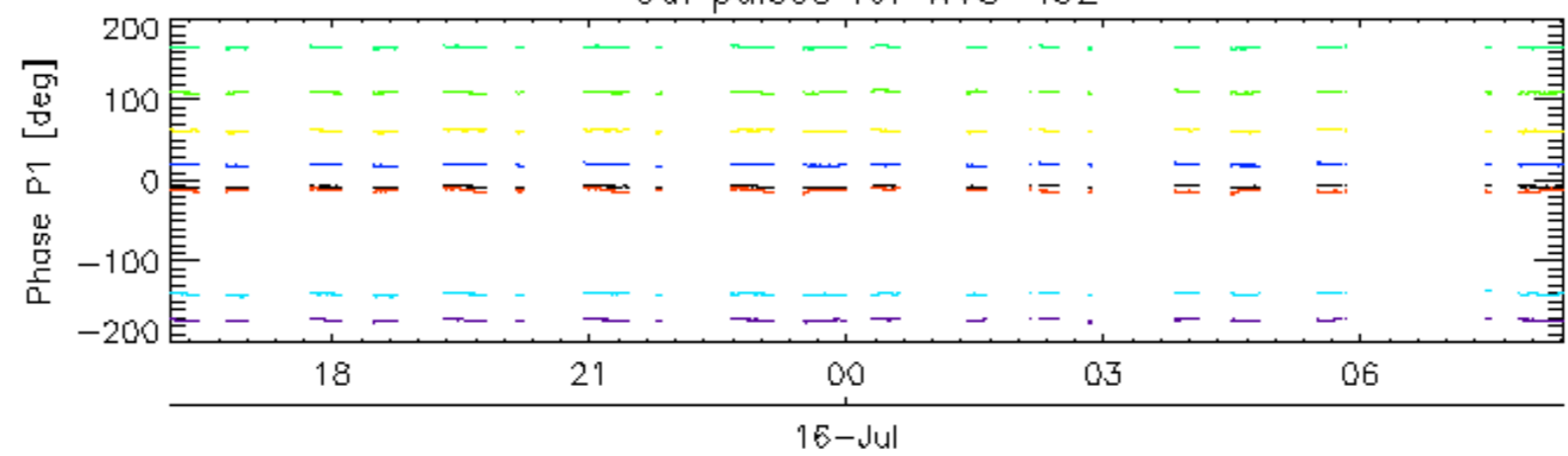


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

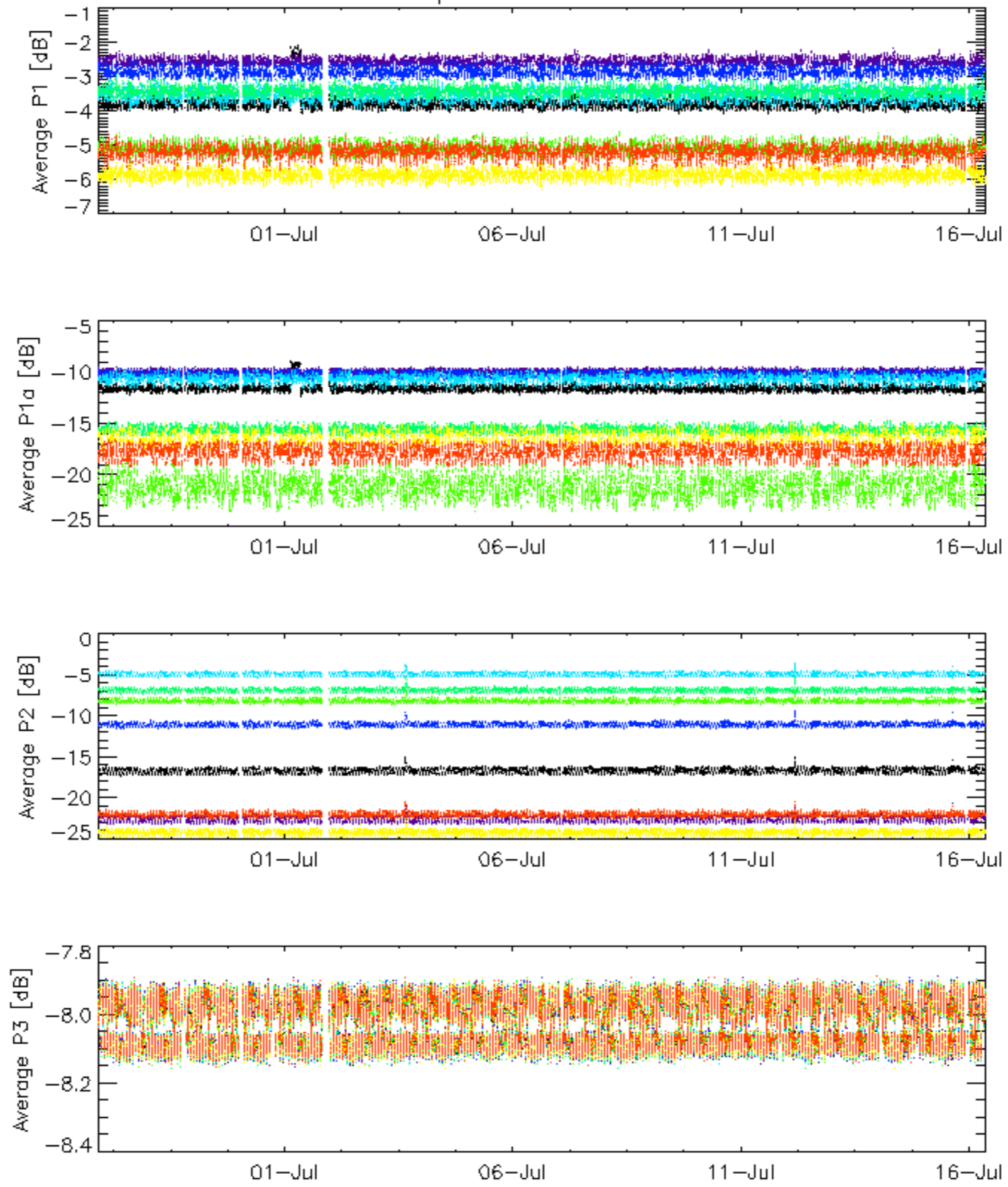


Cal pulses for WVS IS2



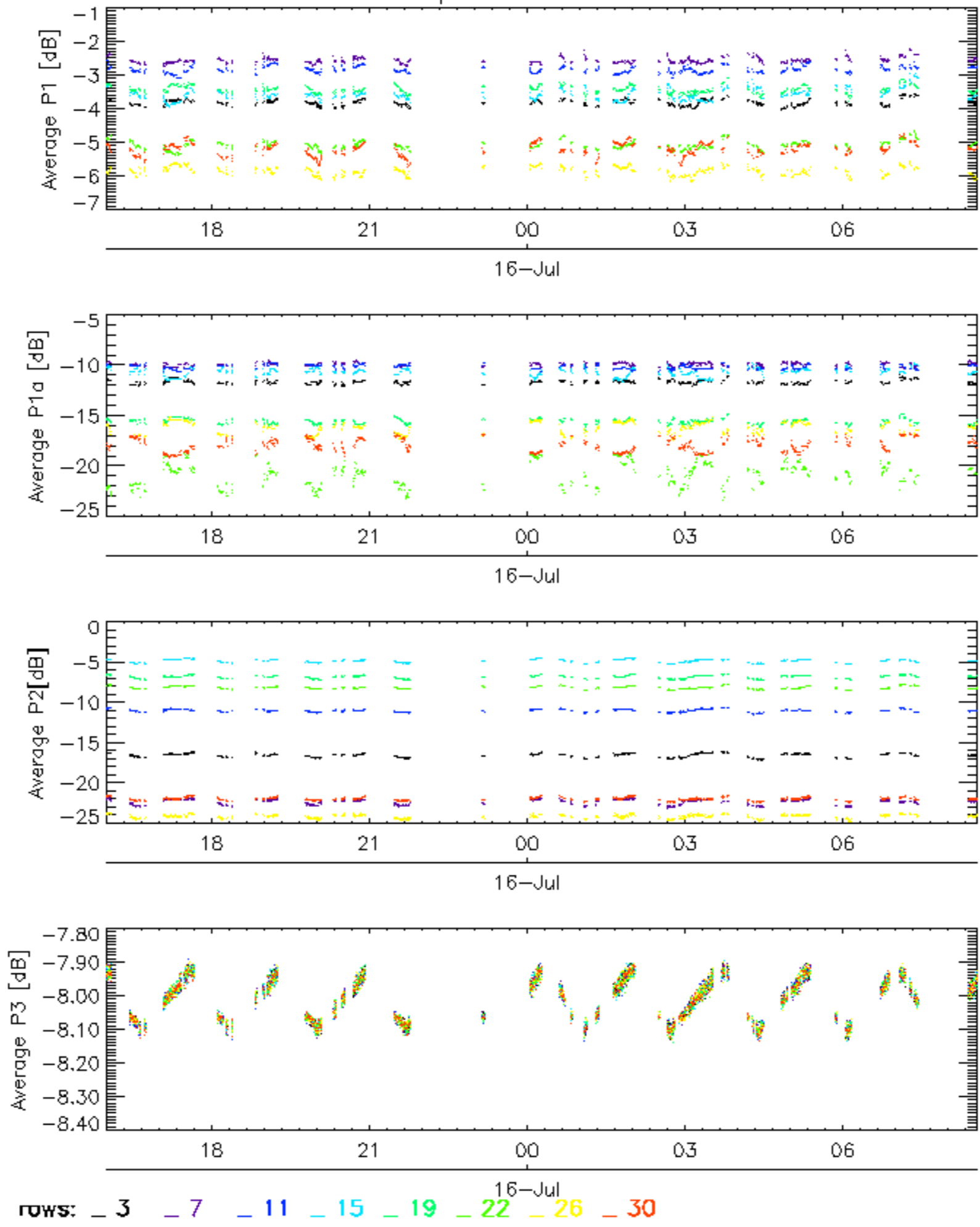
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

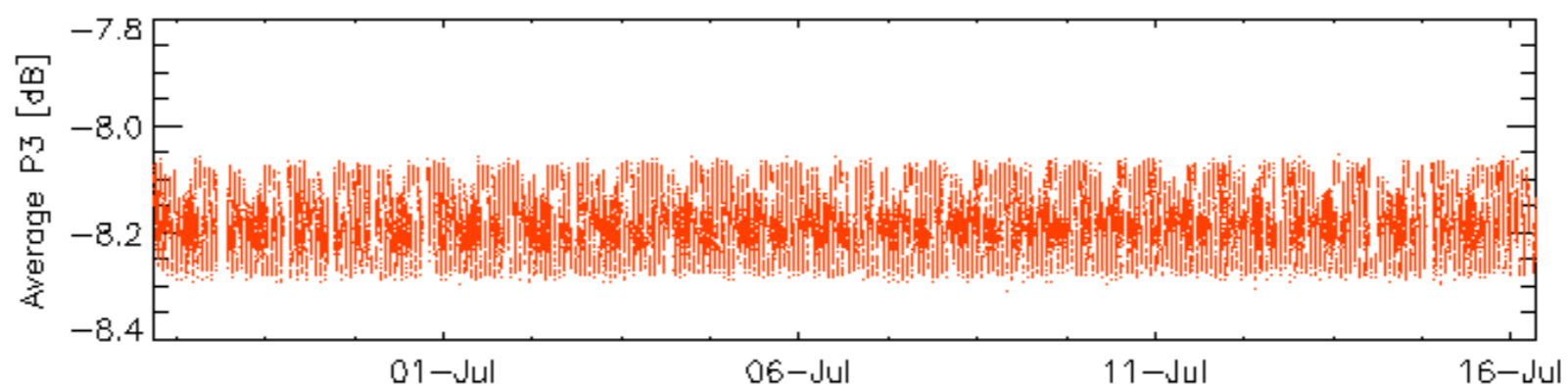
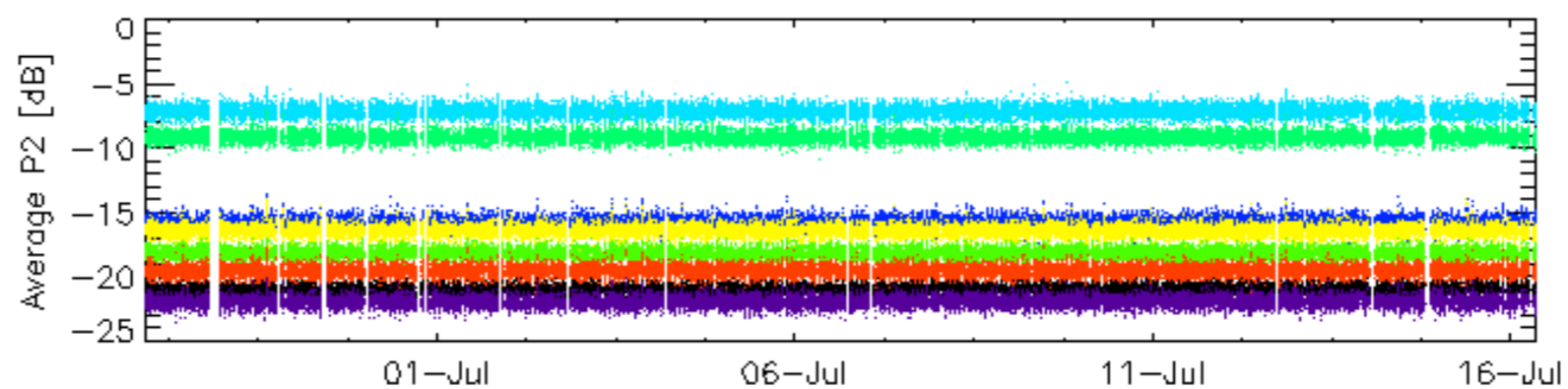
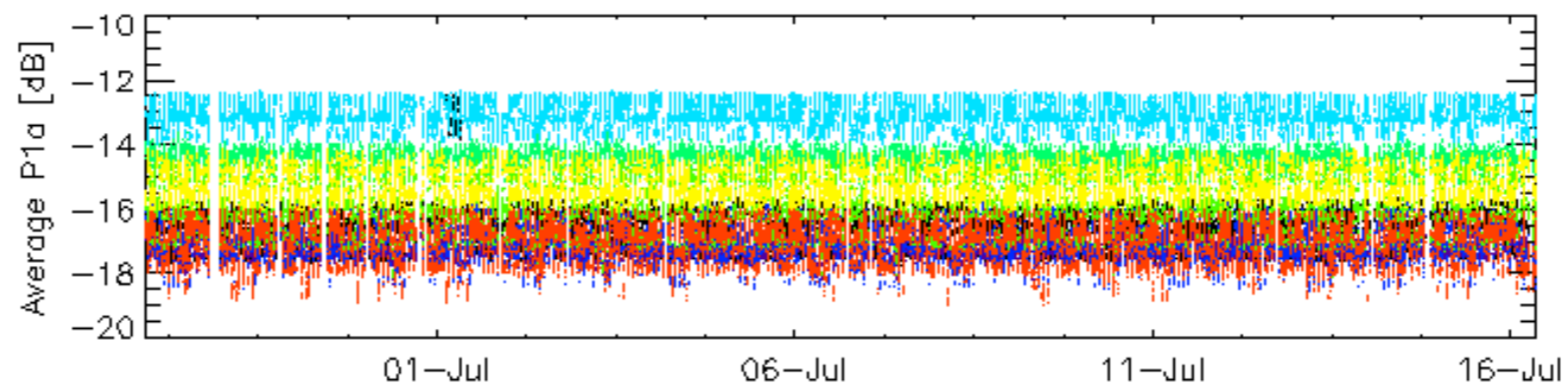
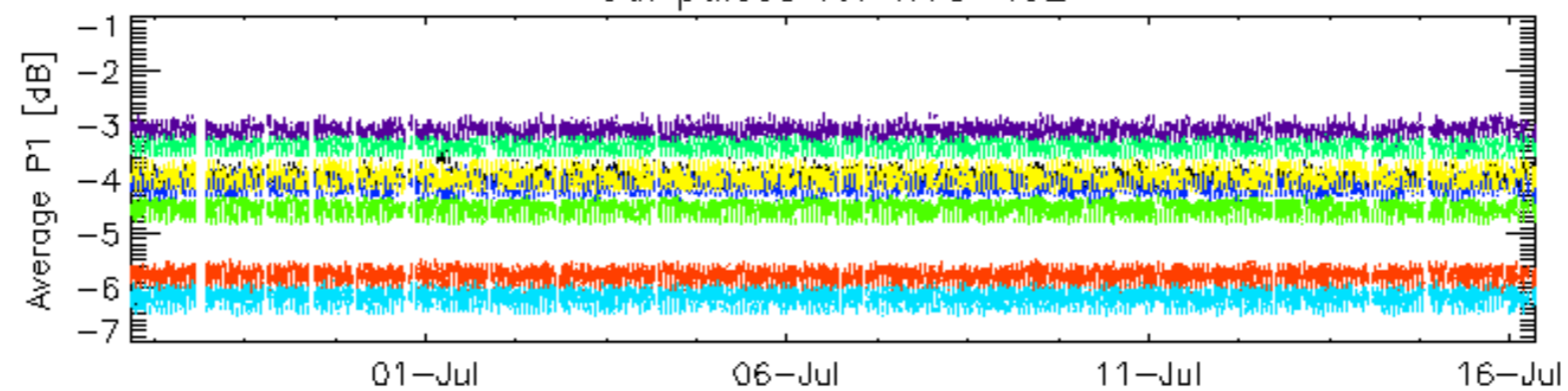


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

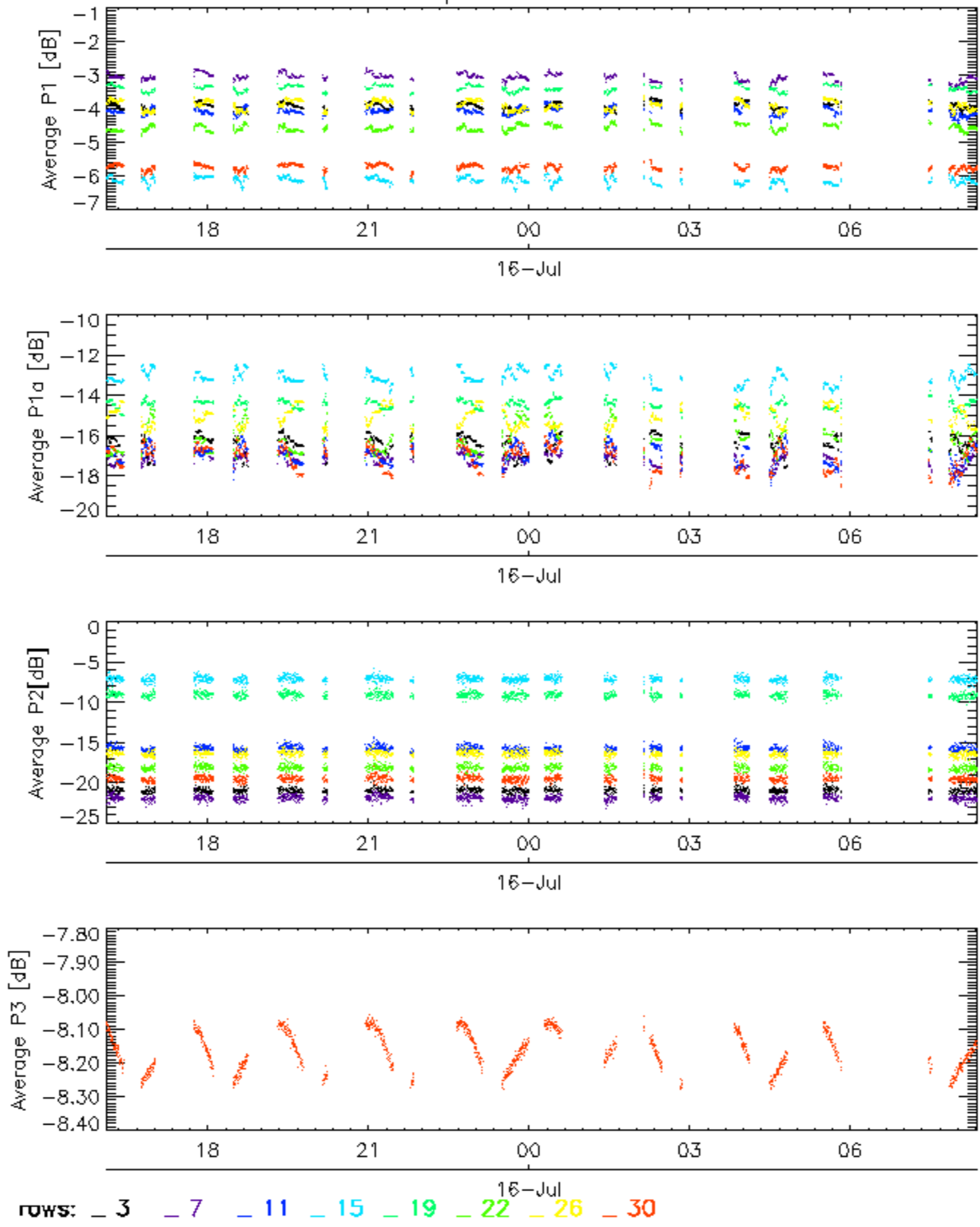


Cal pulses for WVS IS2

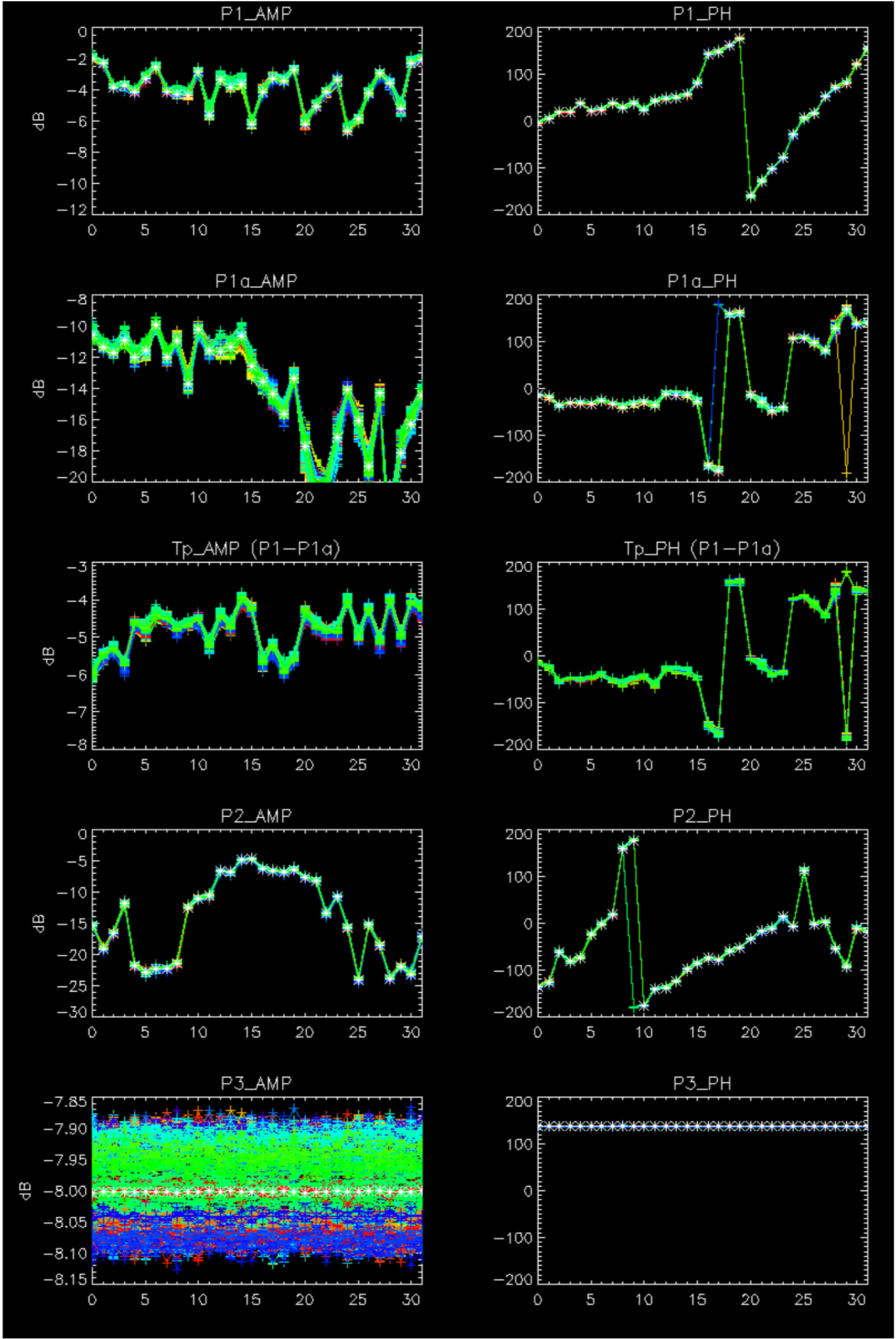


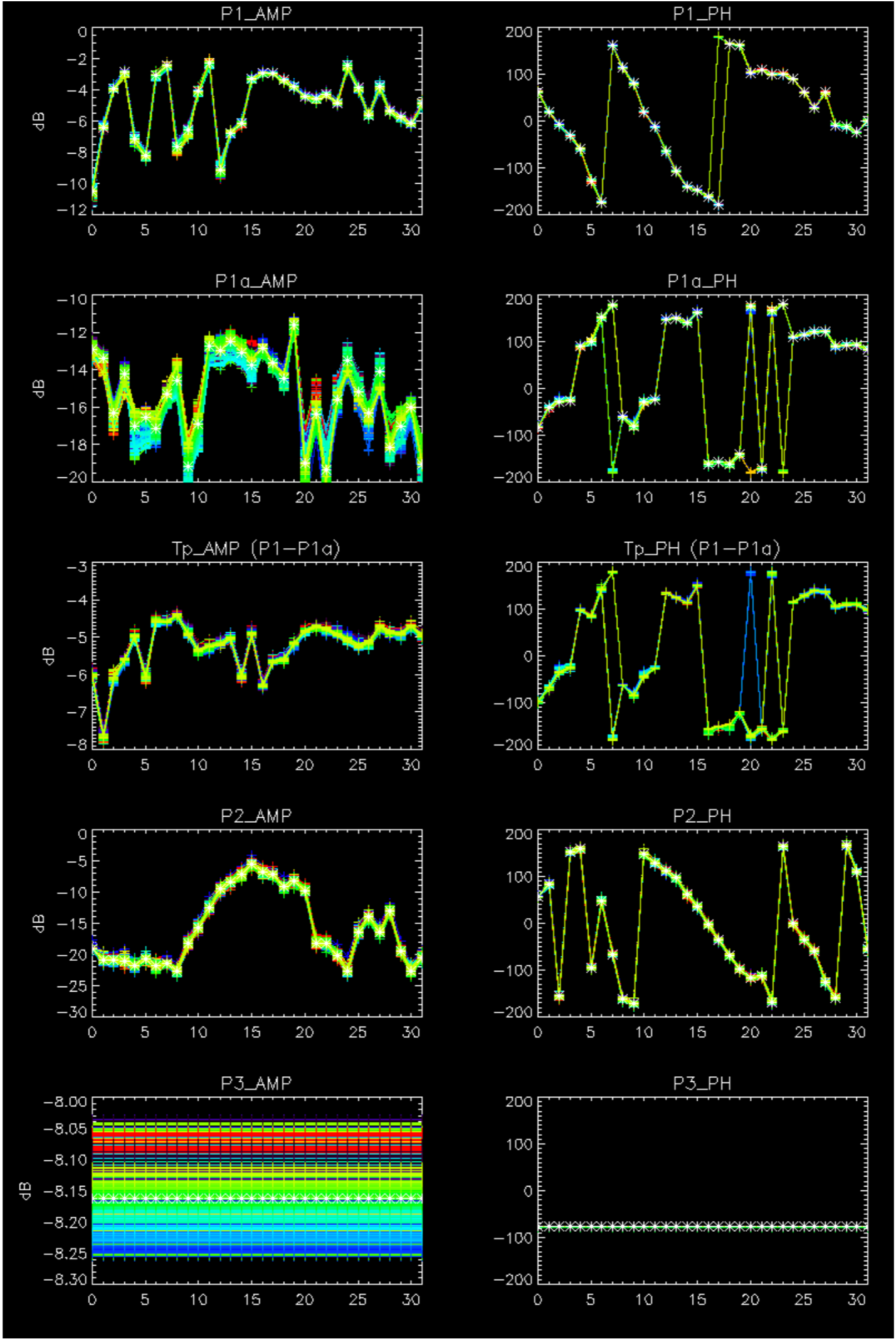
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



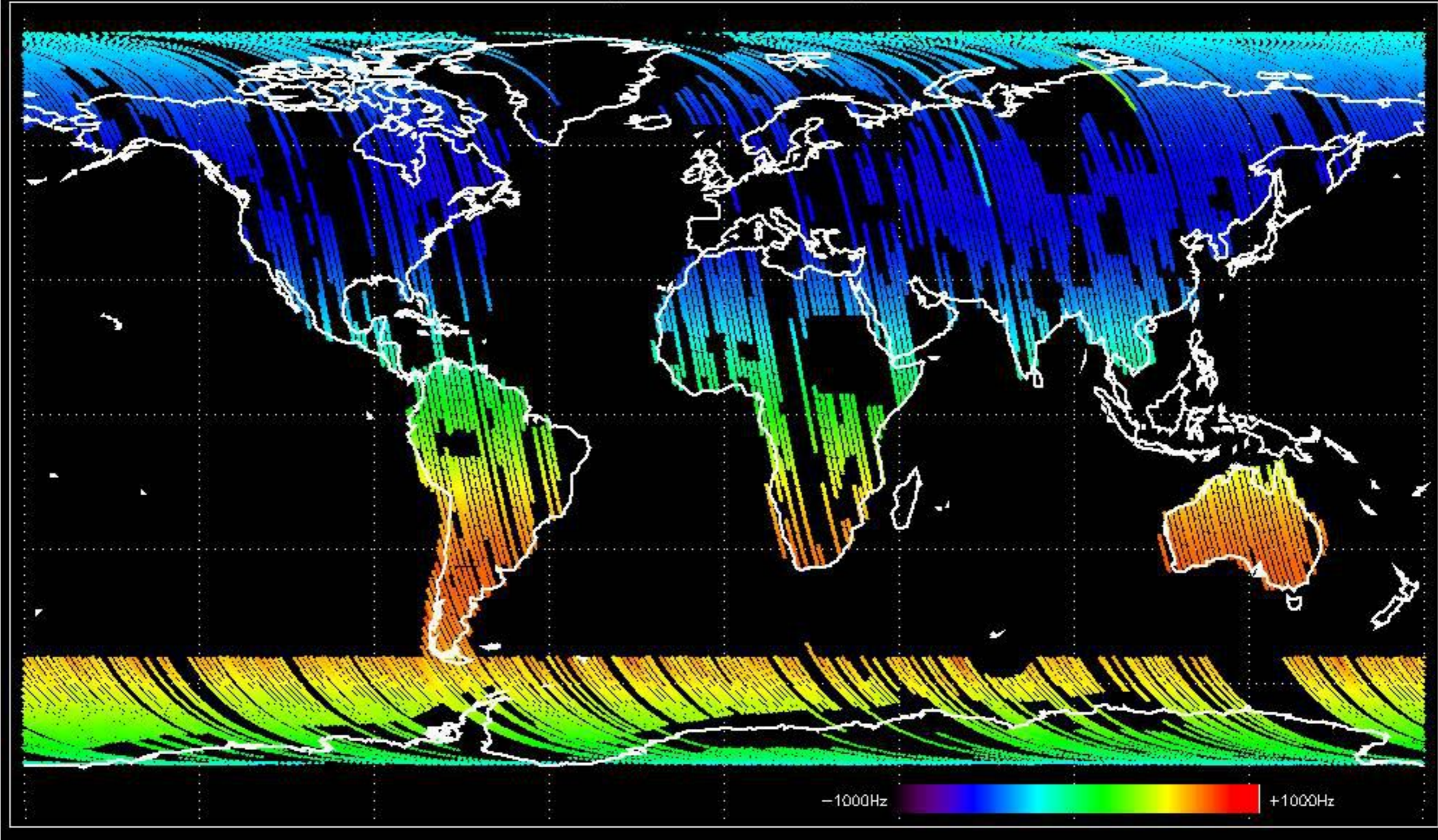
No anomalies observed.



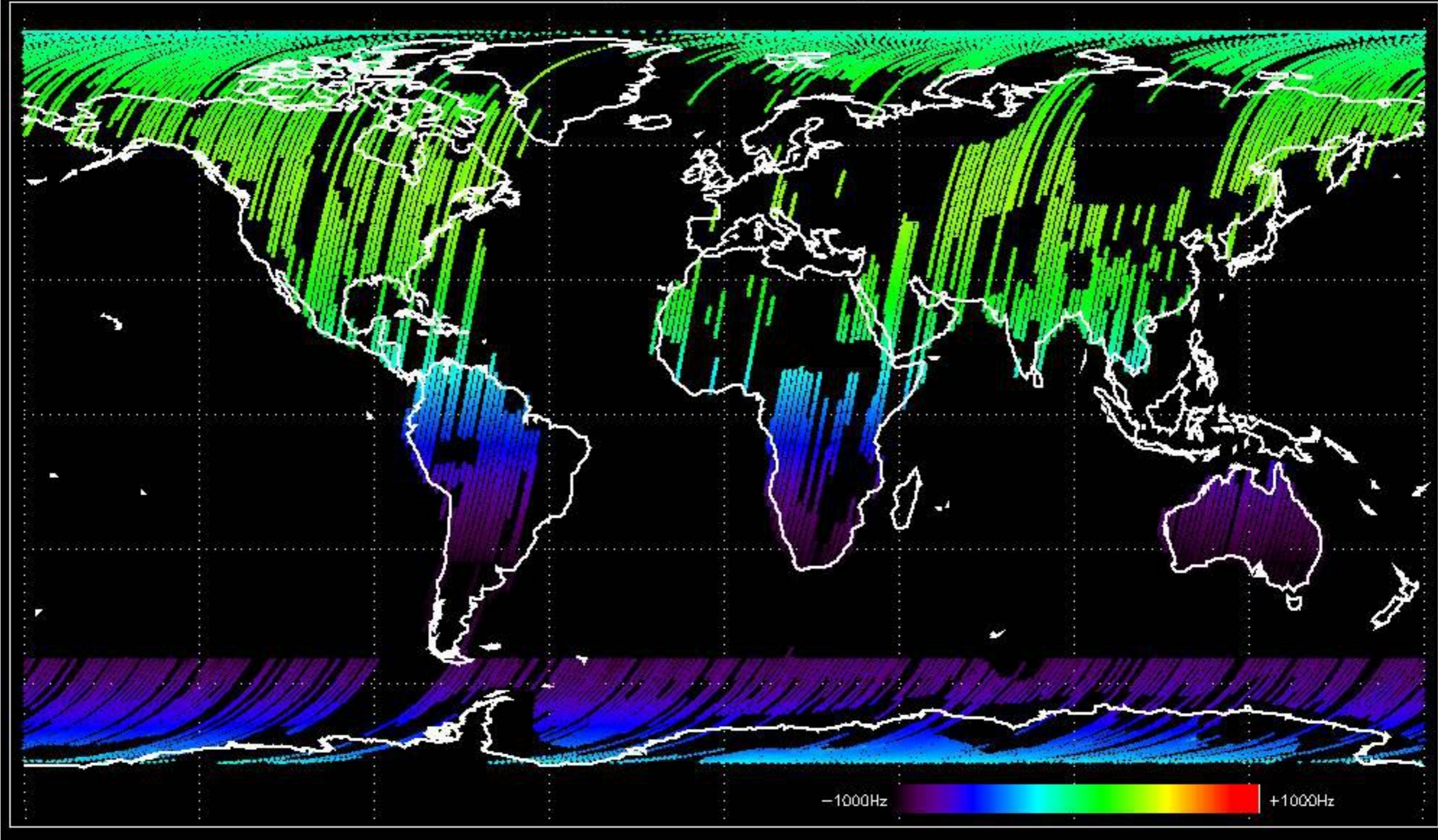


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

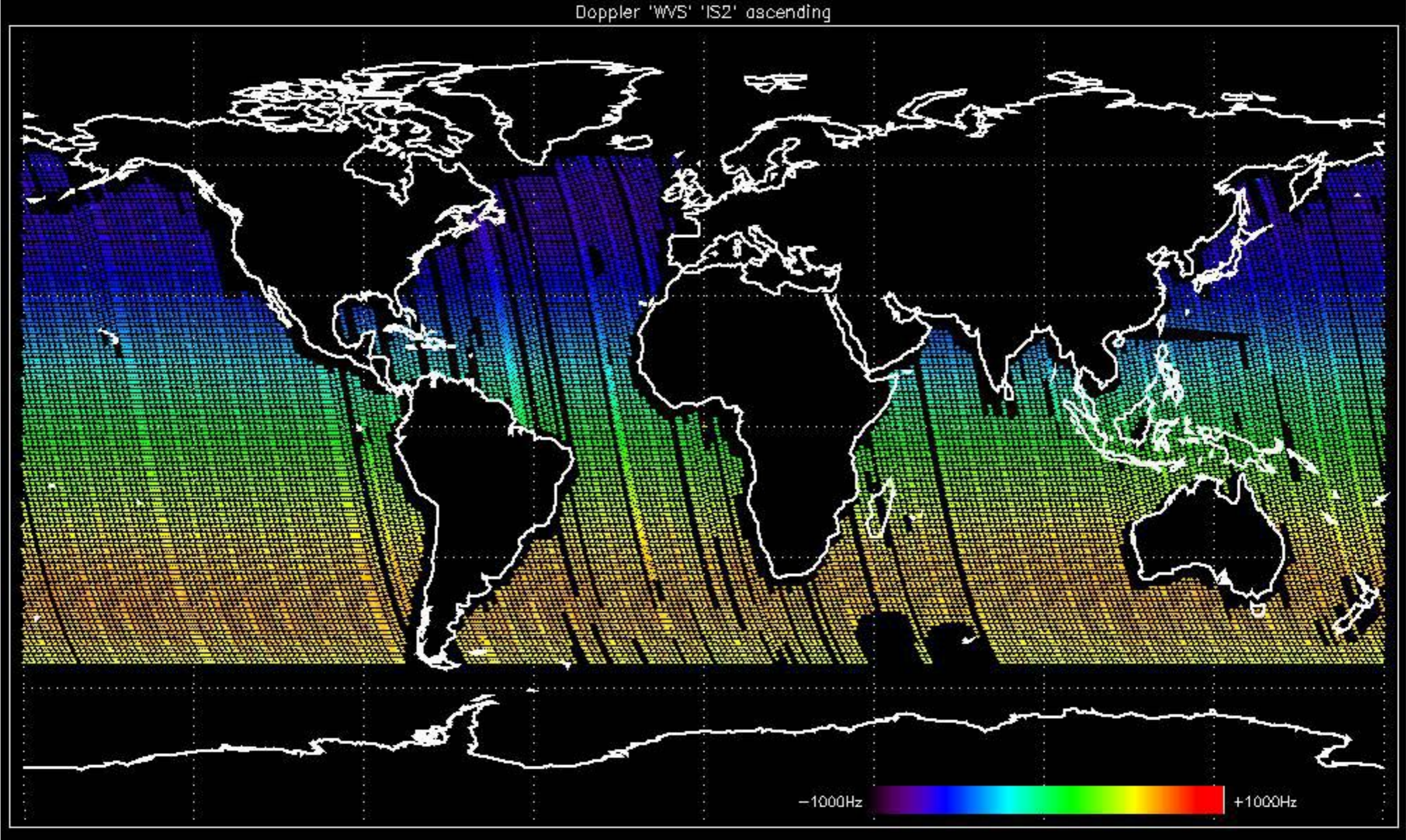
Doppler 'GM1' 'SS1' ascending



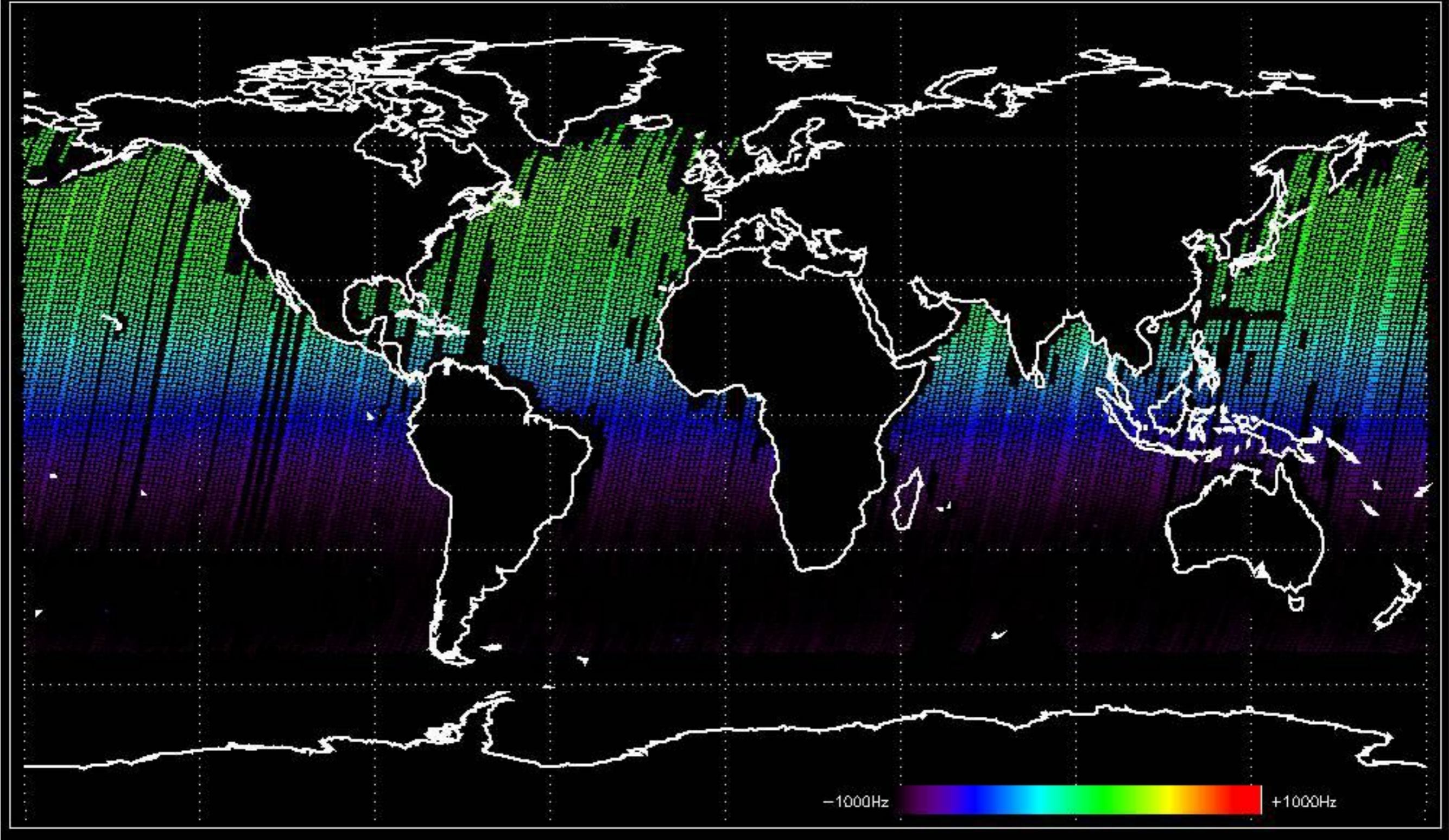
Doppler 'GM1' 'SS1' descending



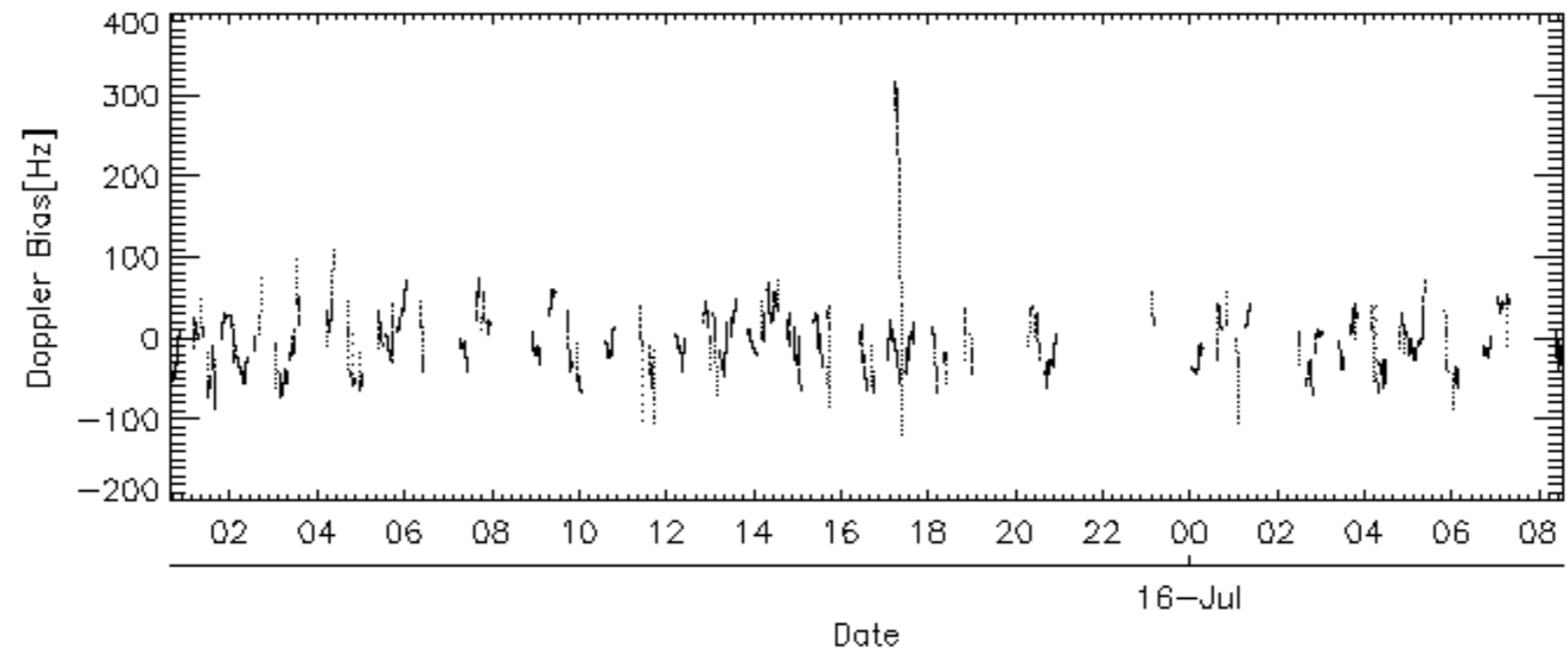
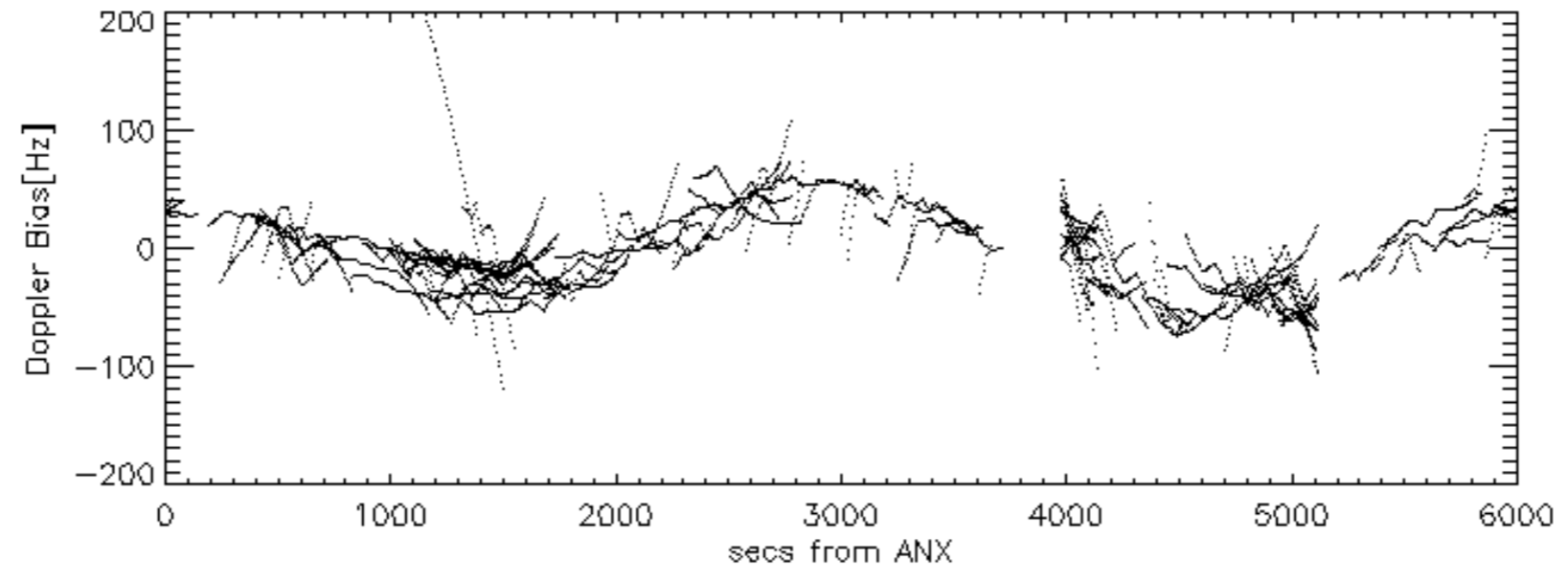
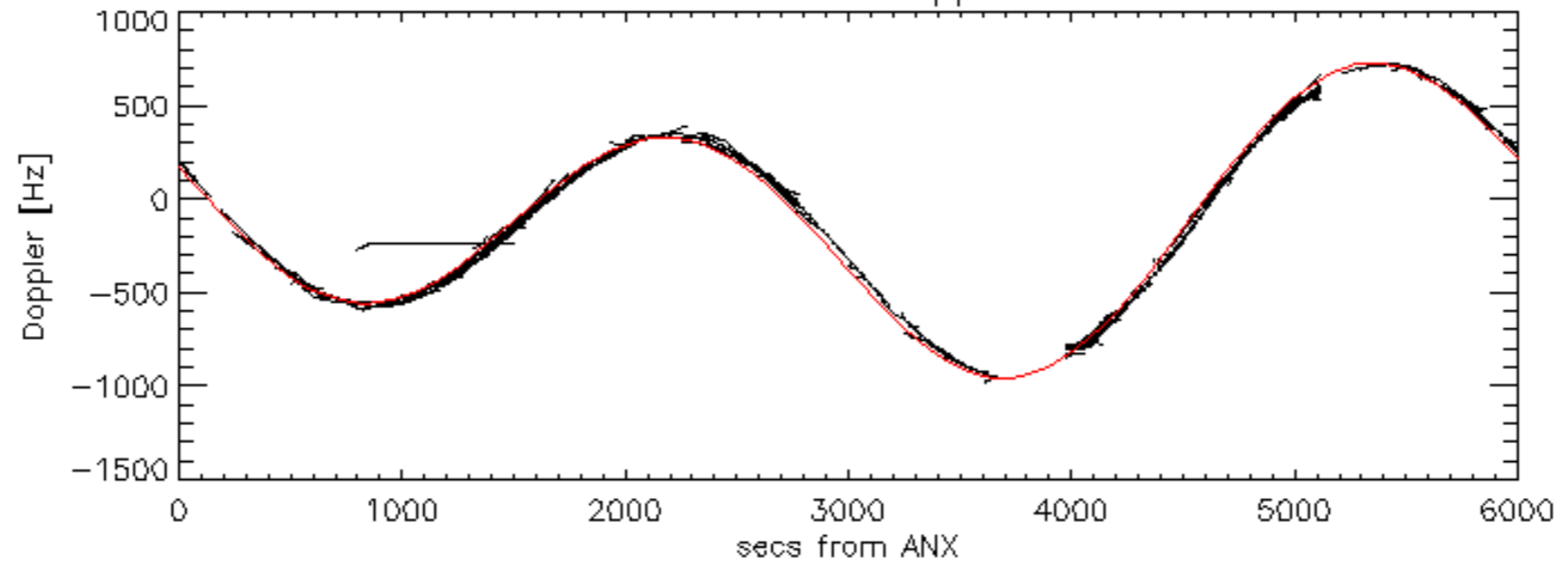
Doppler 'WVS' 'IS2' ascending

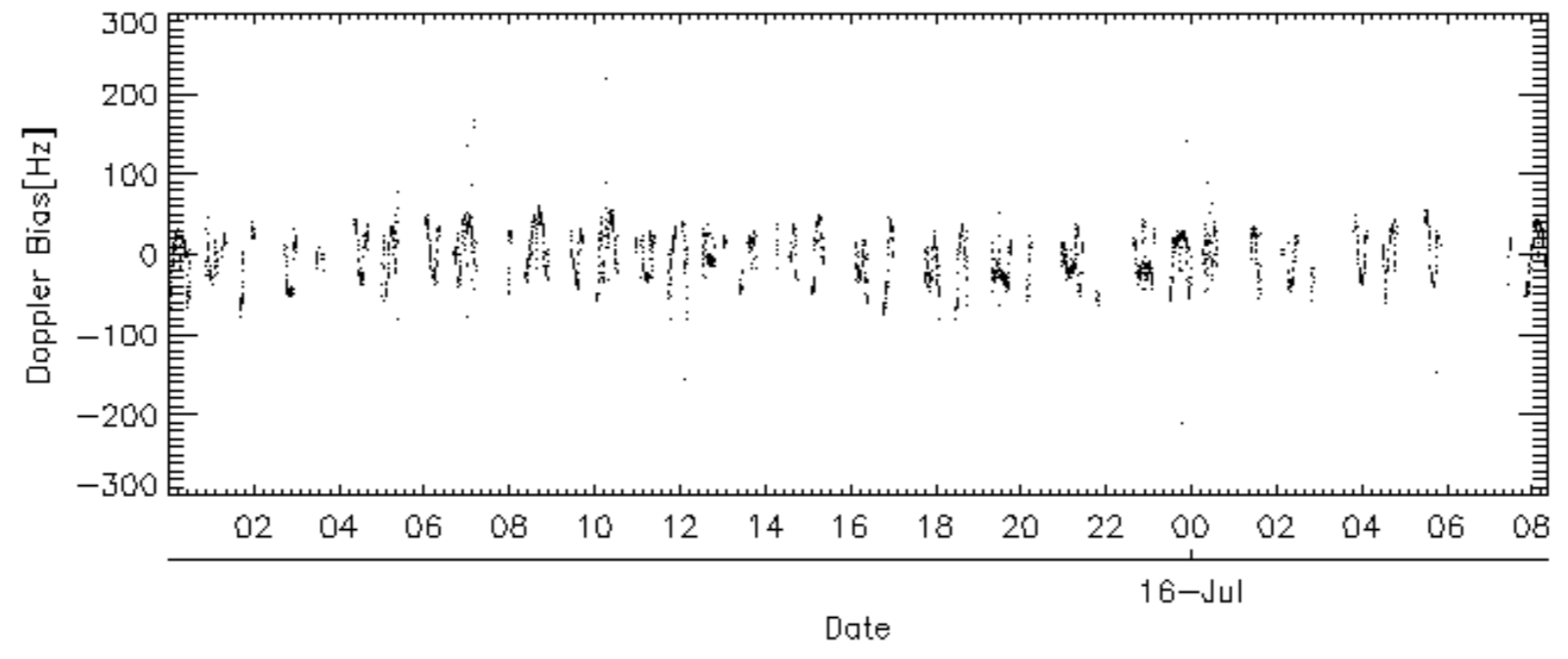
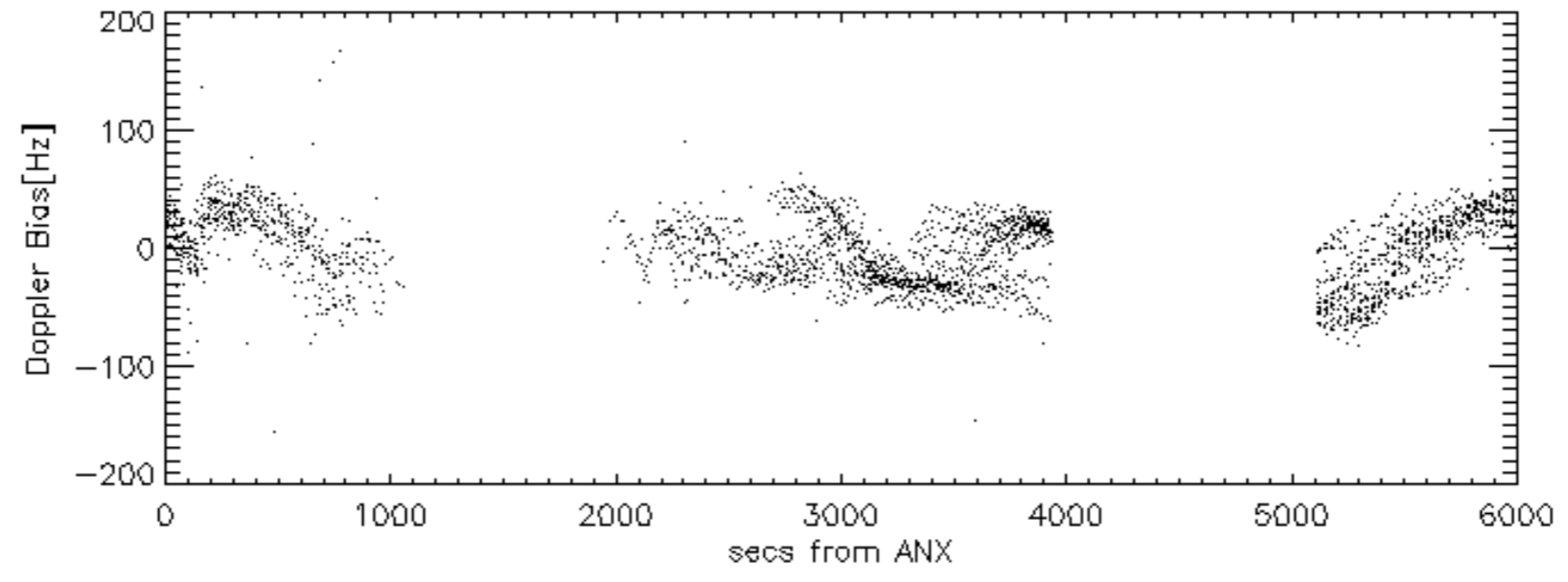
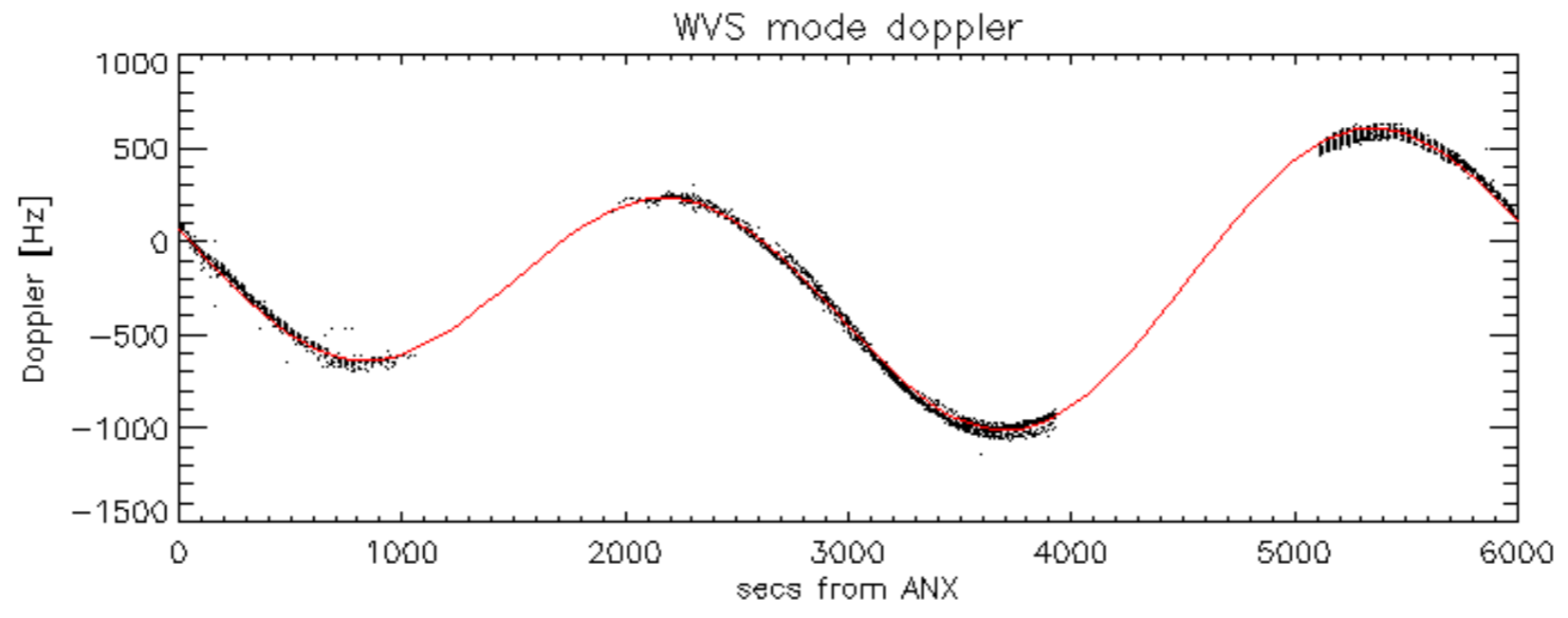


Doppler 'WVS' 'IS2' descending

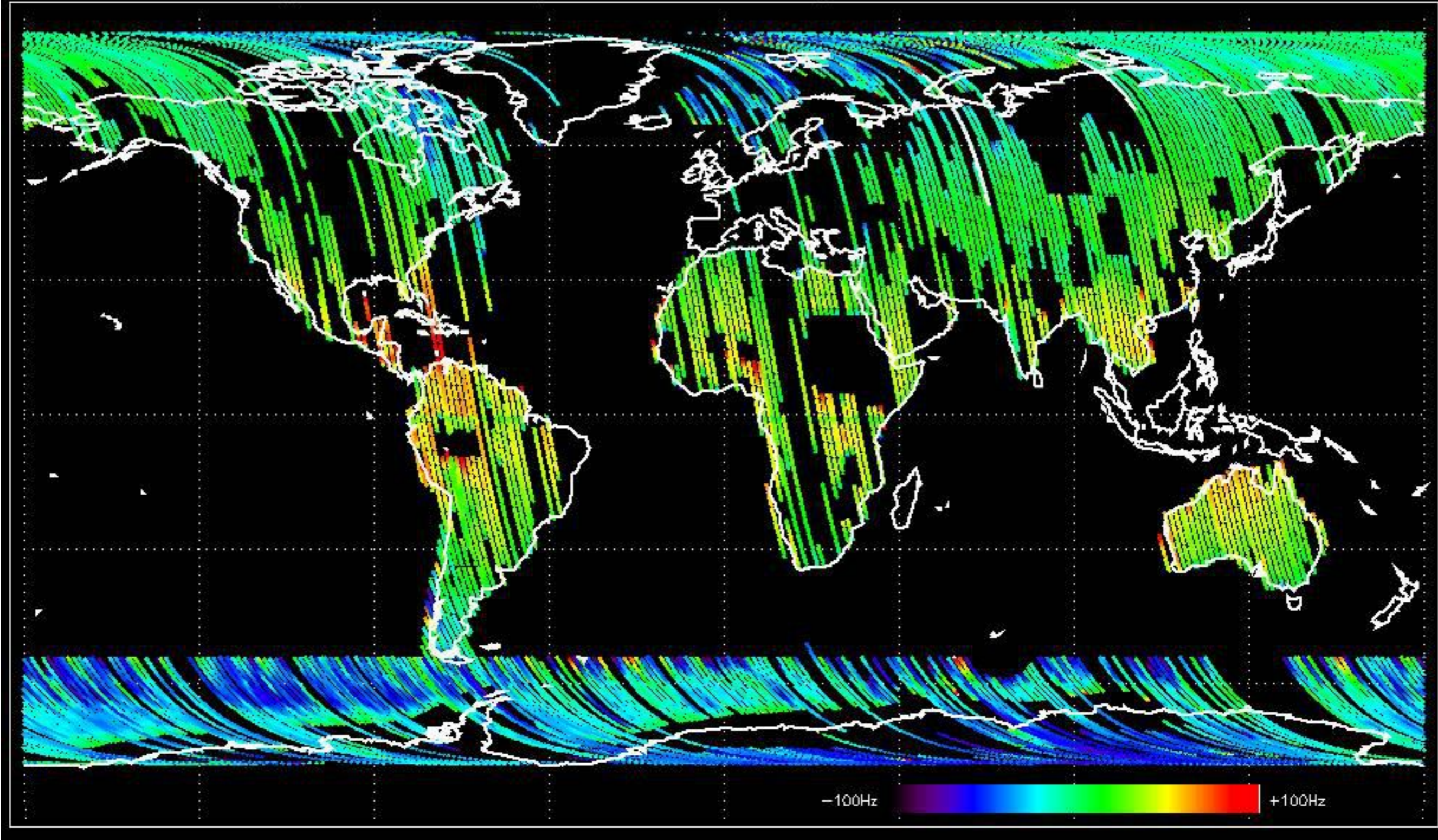


GM1 mode doppler

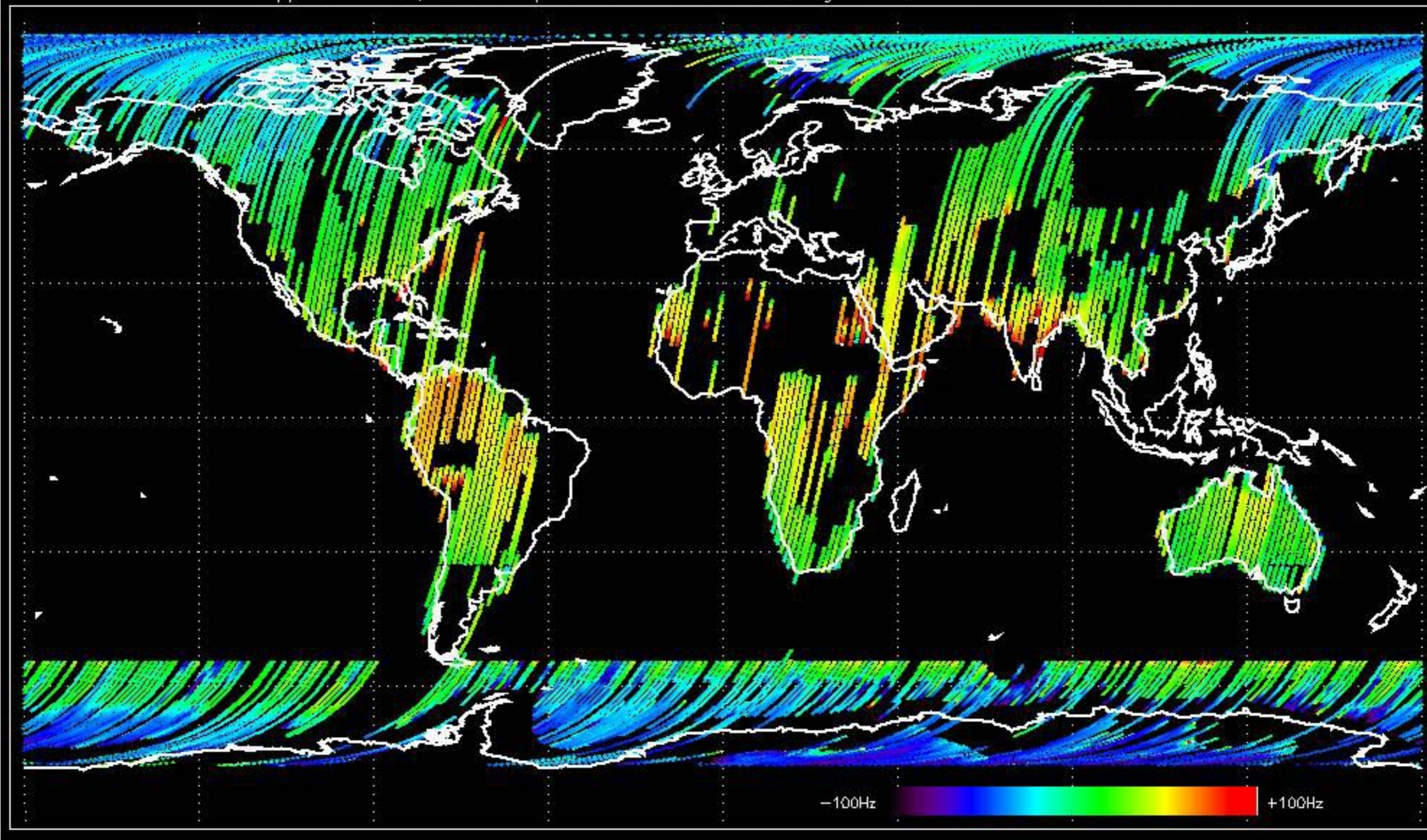




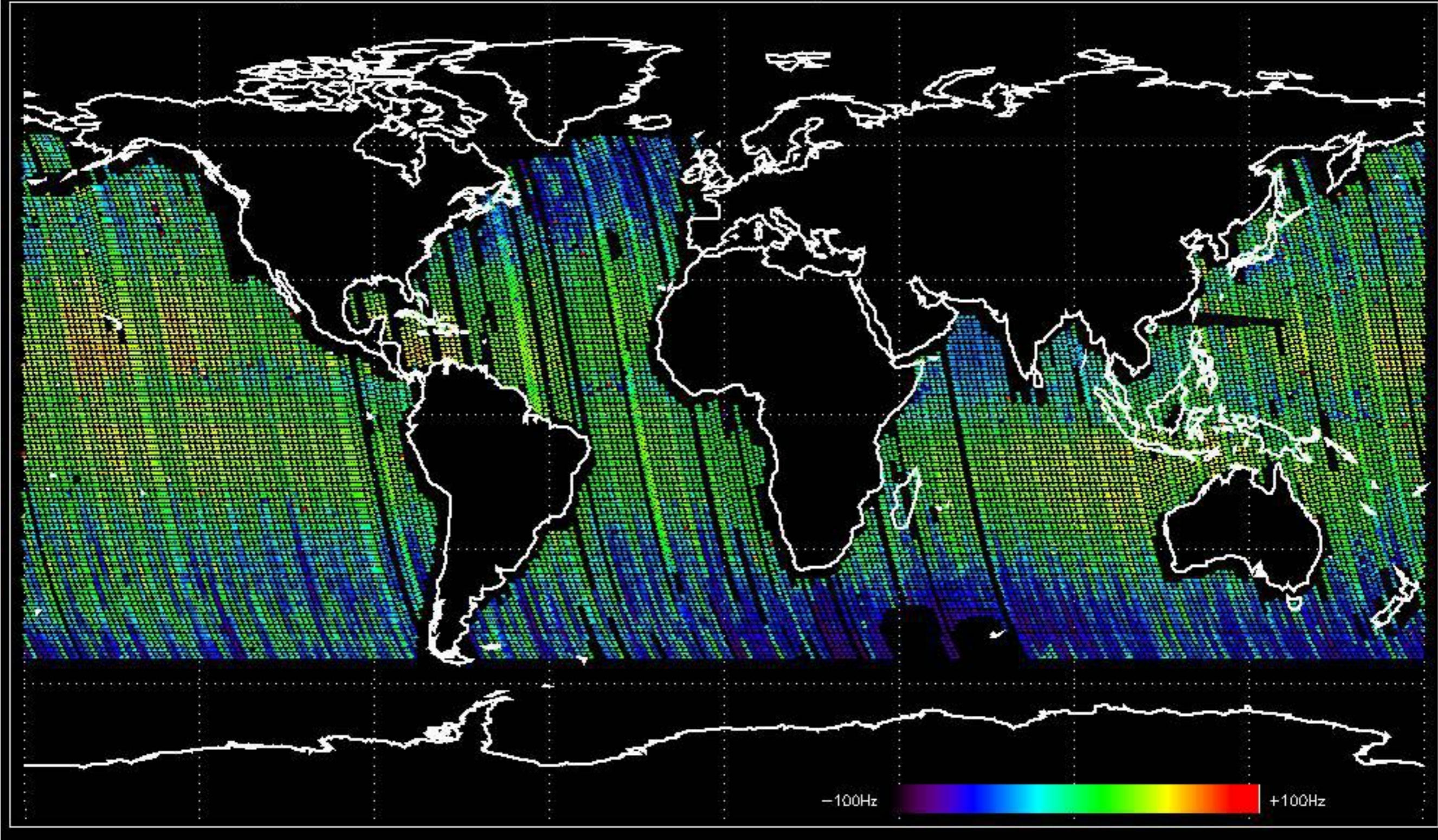
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.432807 Hz



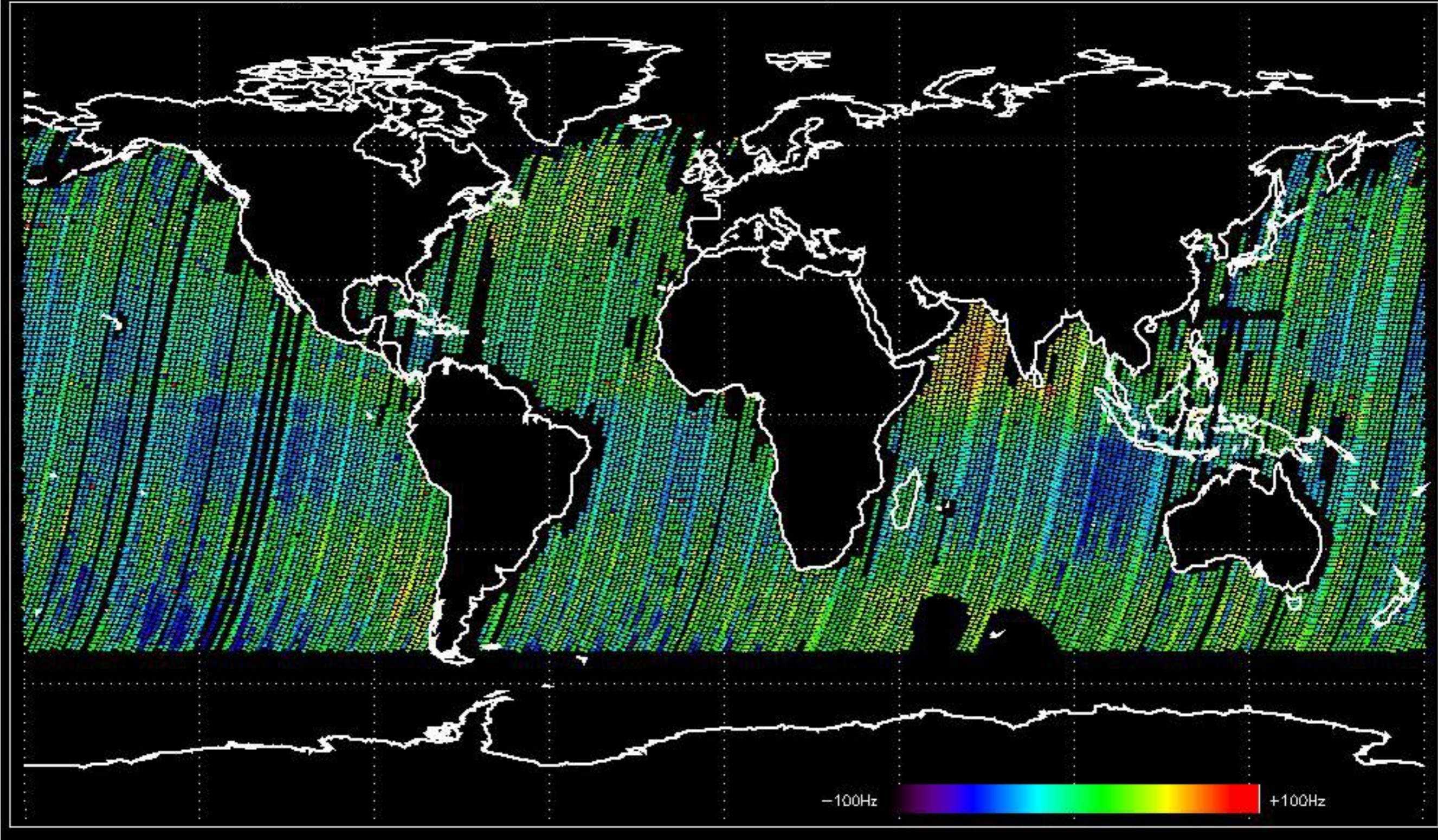
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -7.0519374 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -2.0554616 Hz

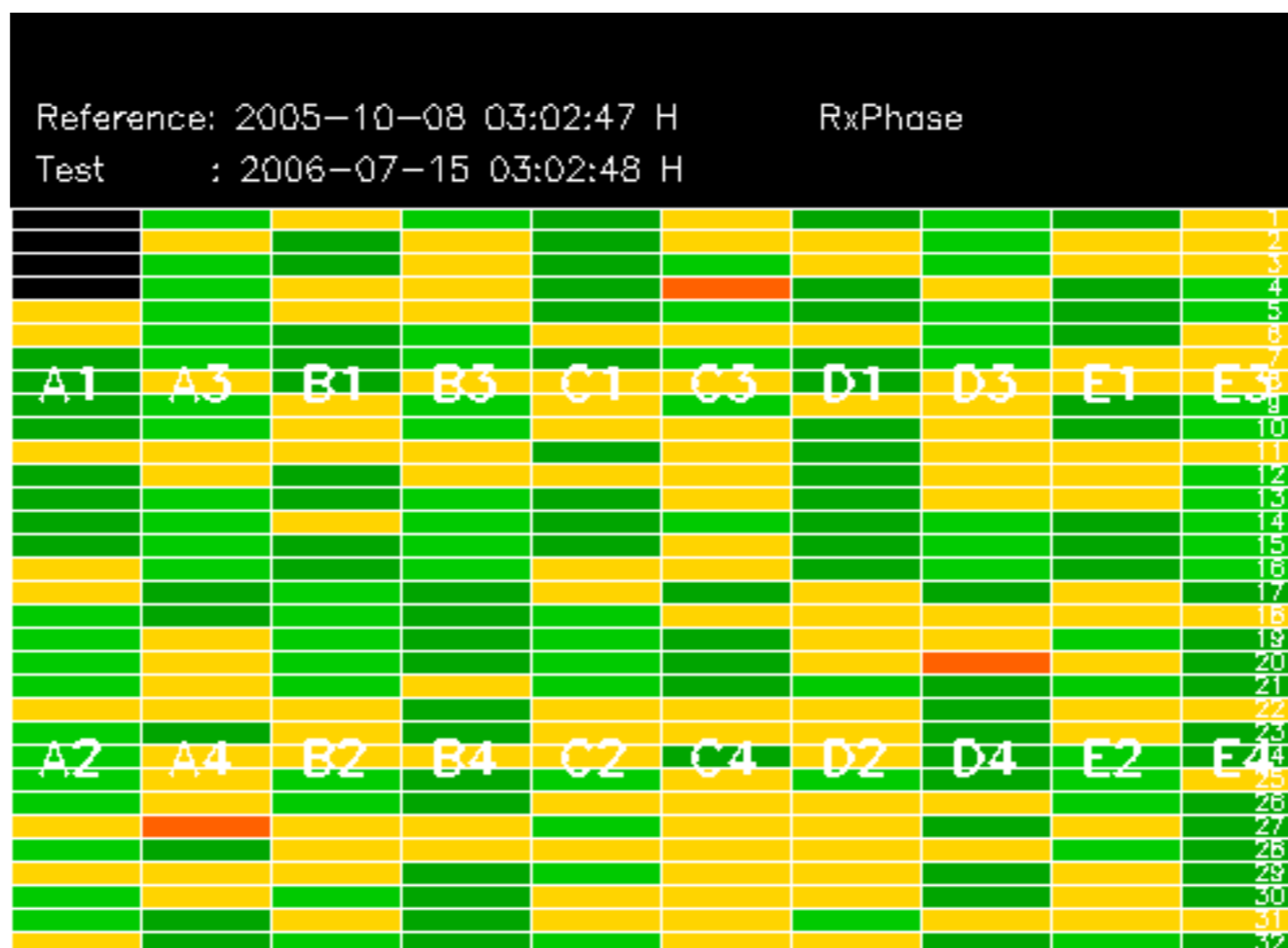


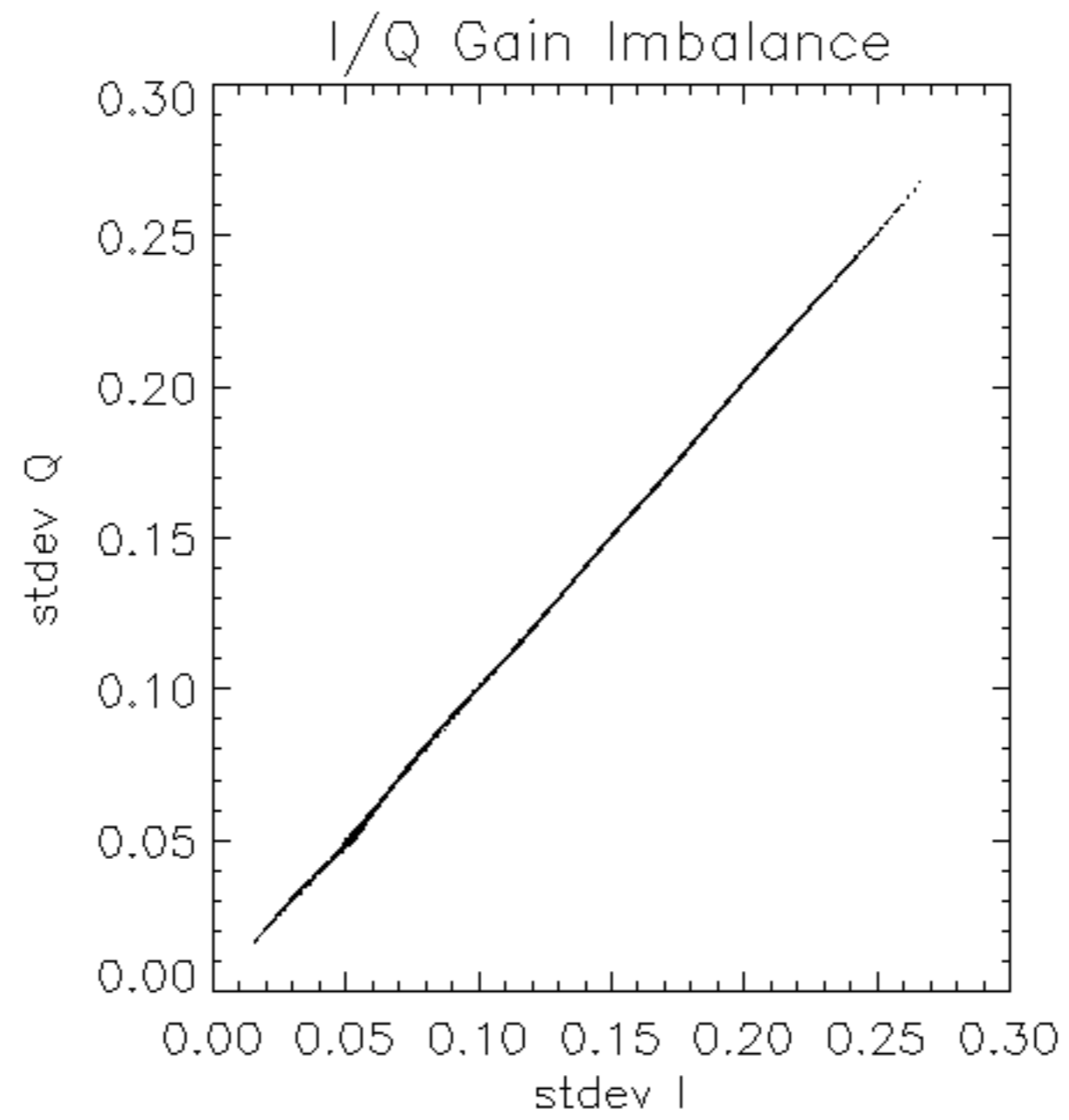
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.437009 Hz

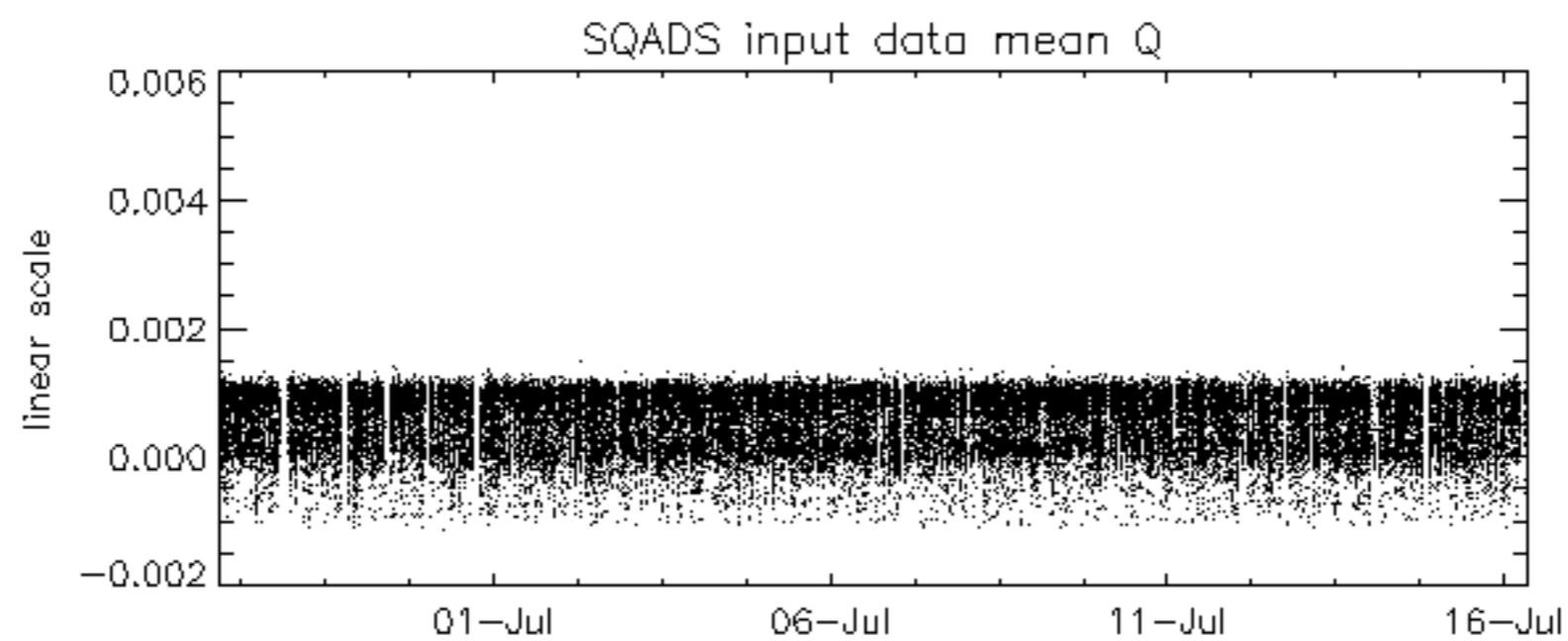
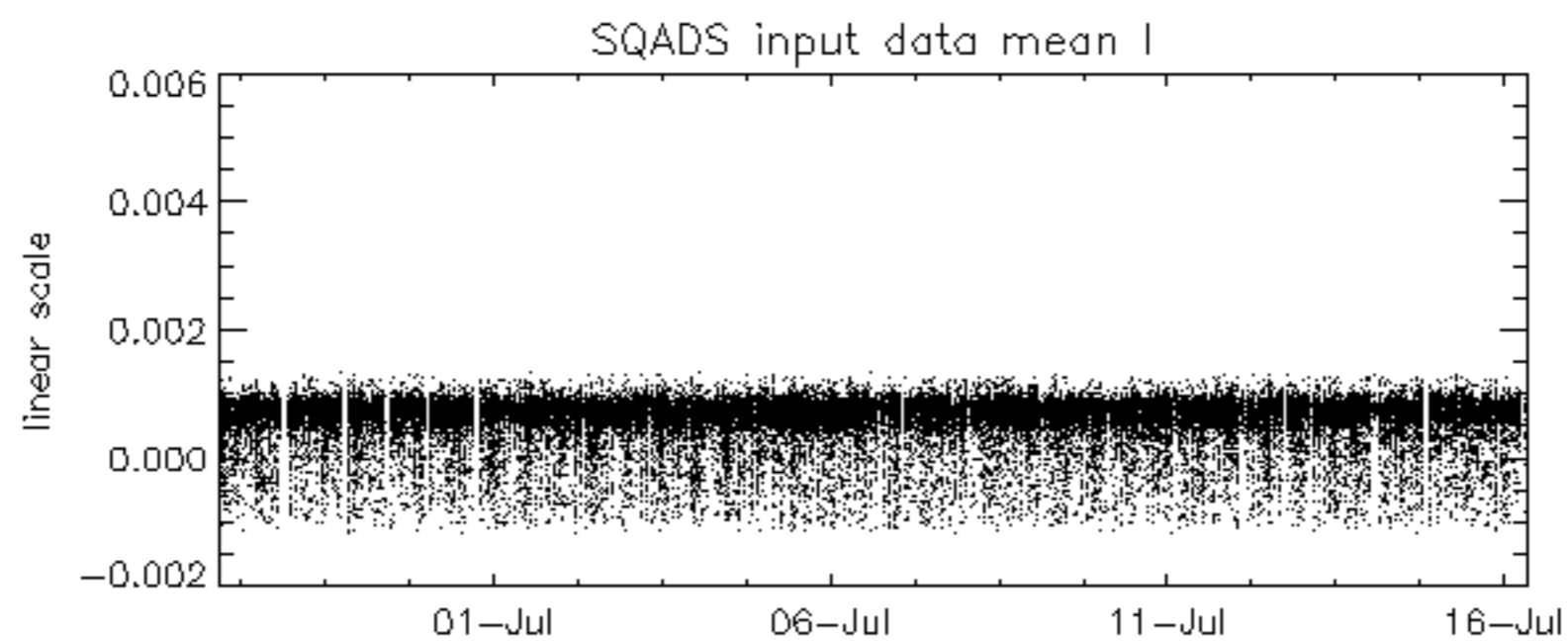
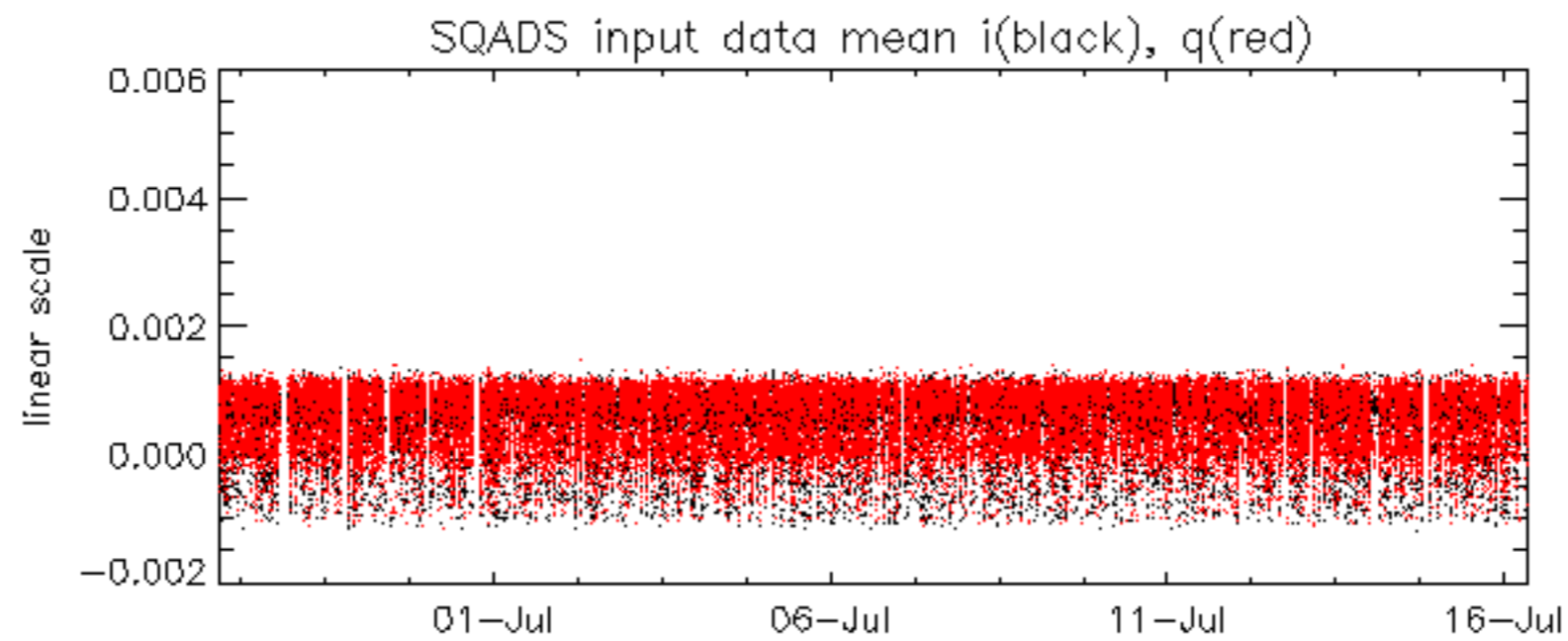


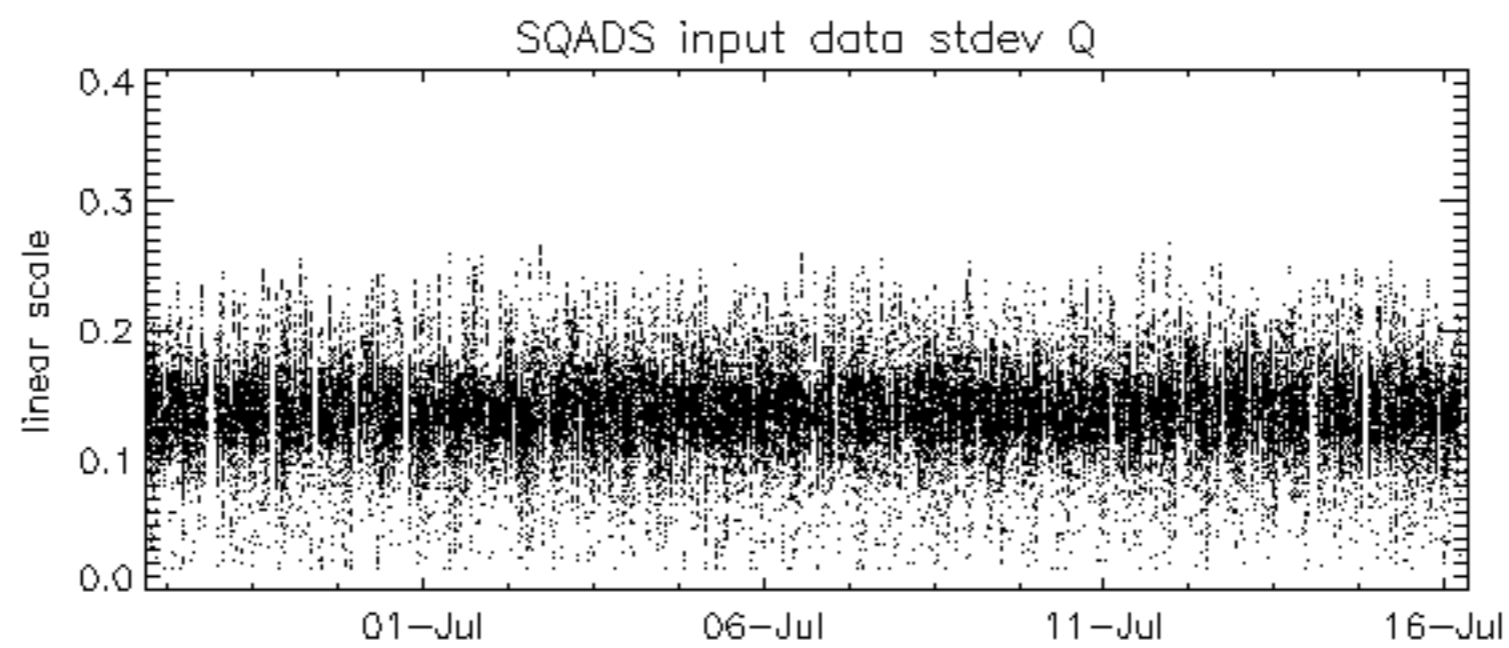
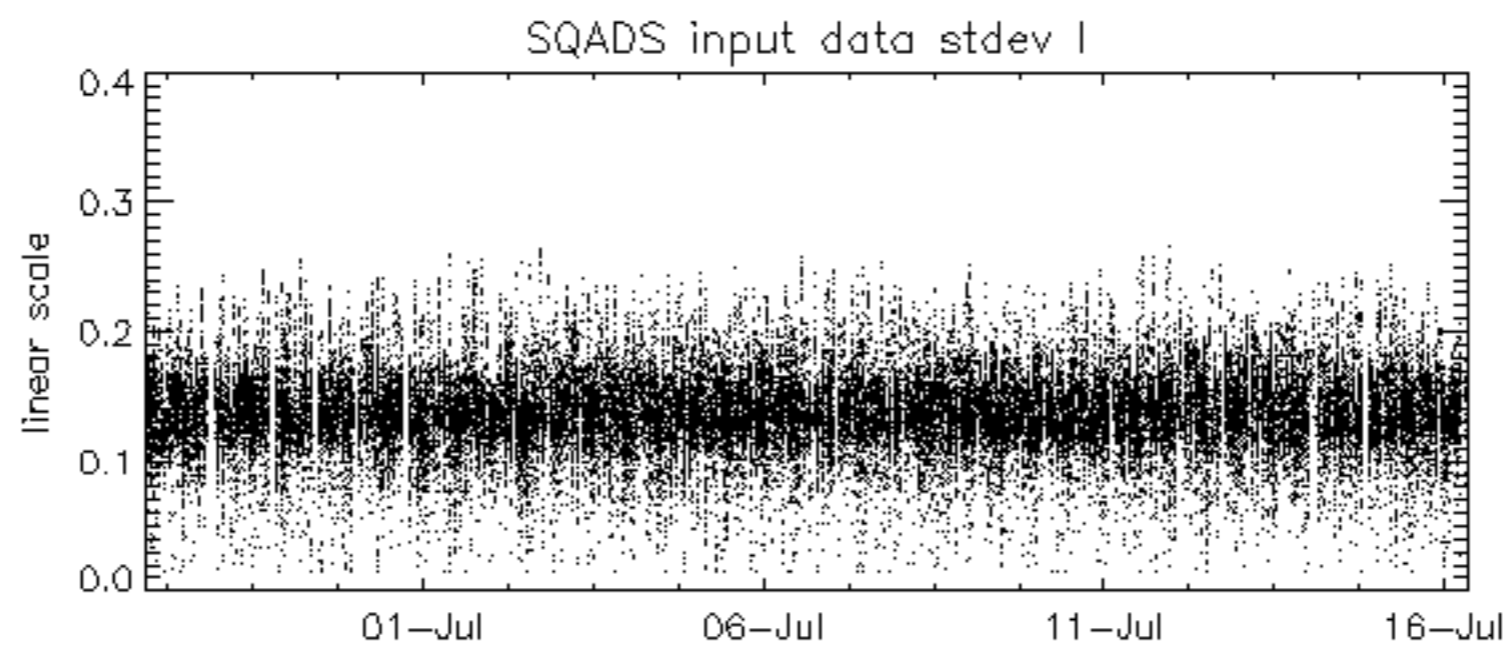
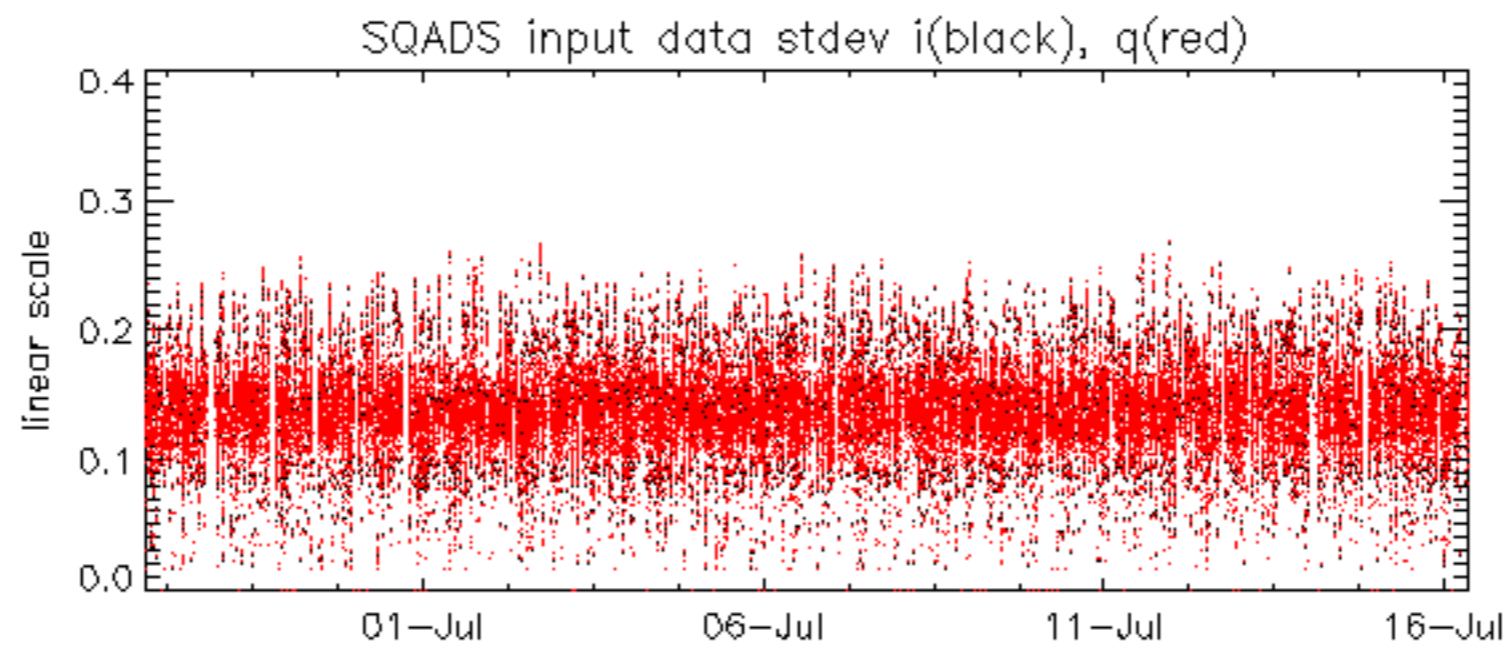
No anomalies observed on available MS products:

No anomalies observed.





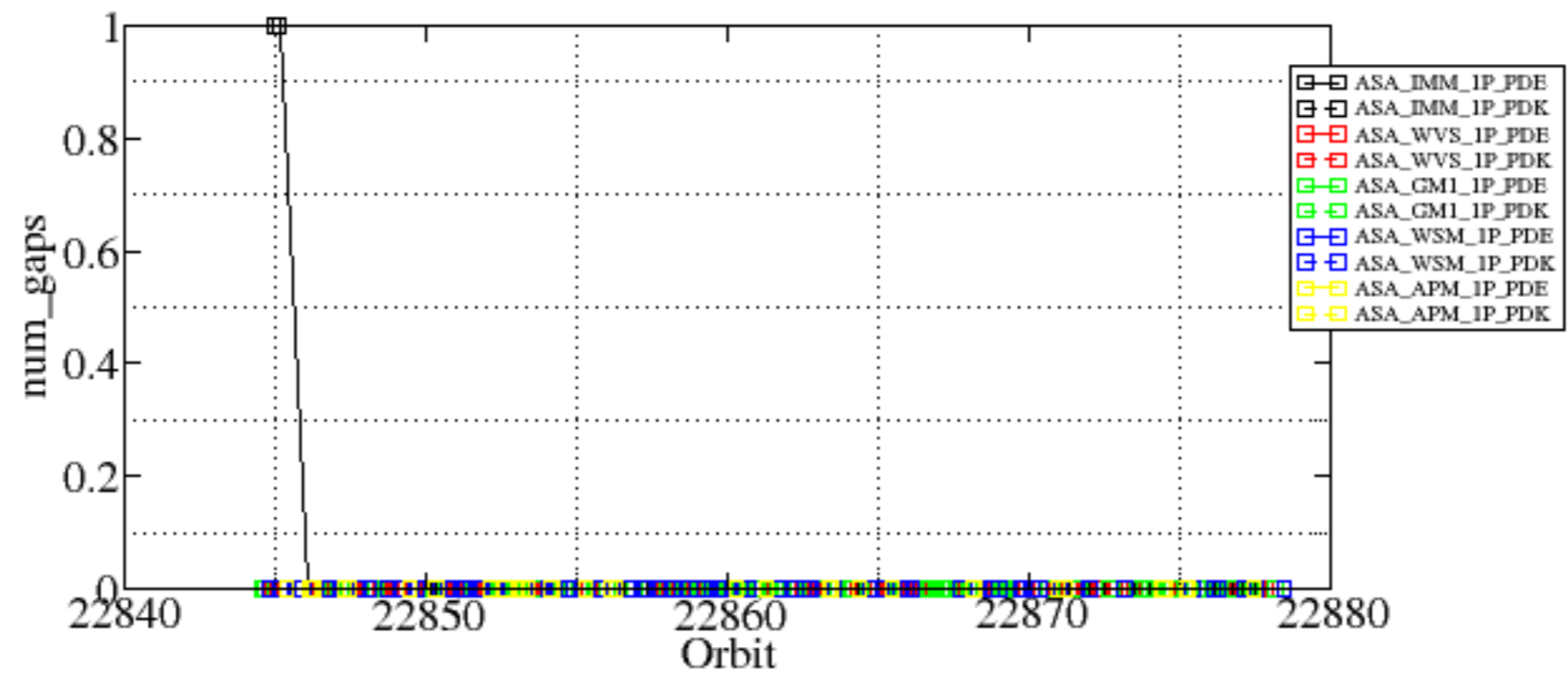




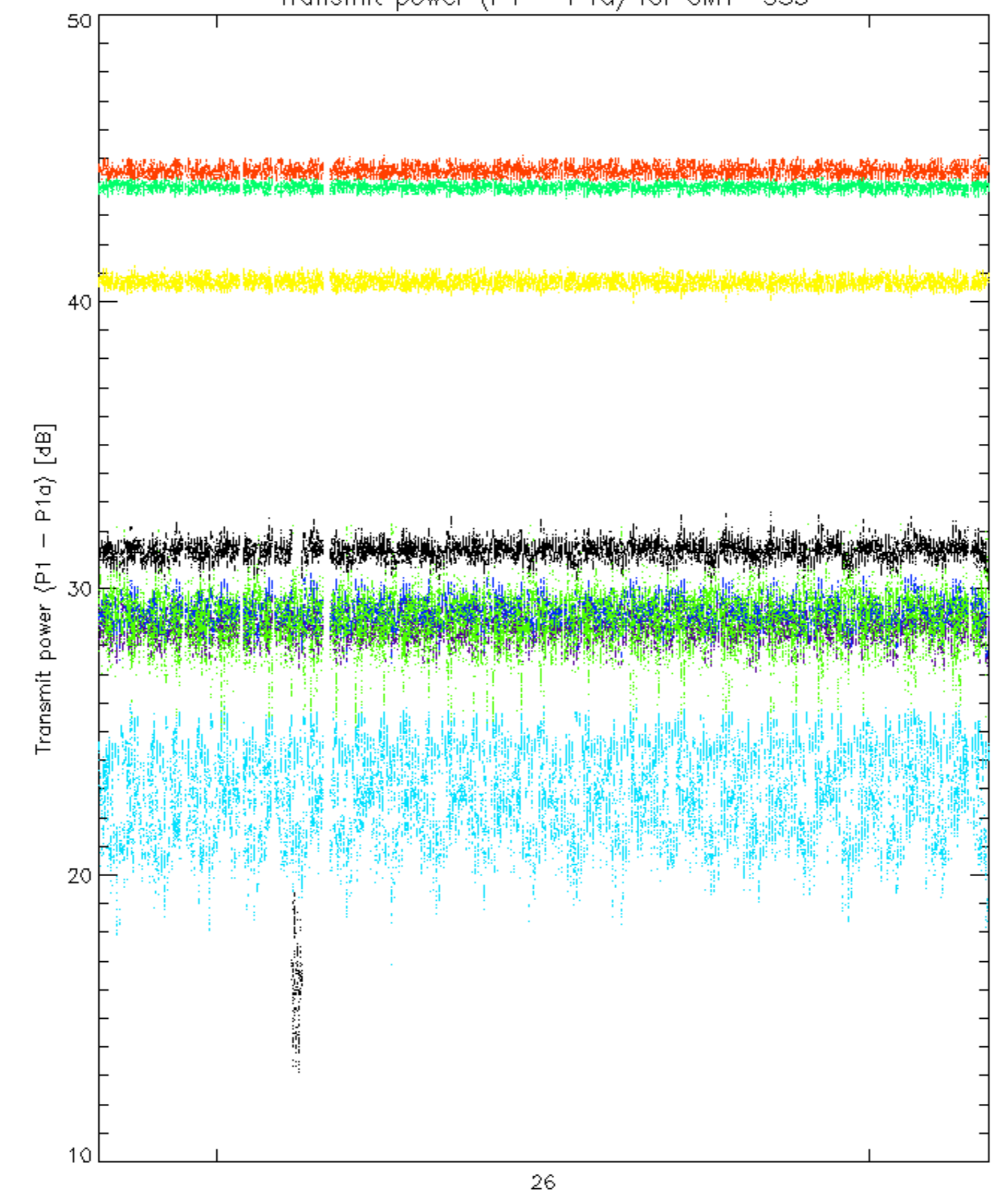
Summary of analysis for the last 3 days 2006071[456]

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

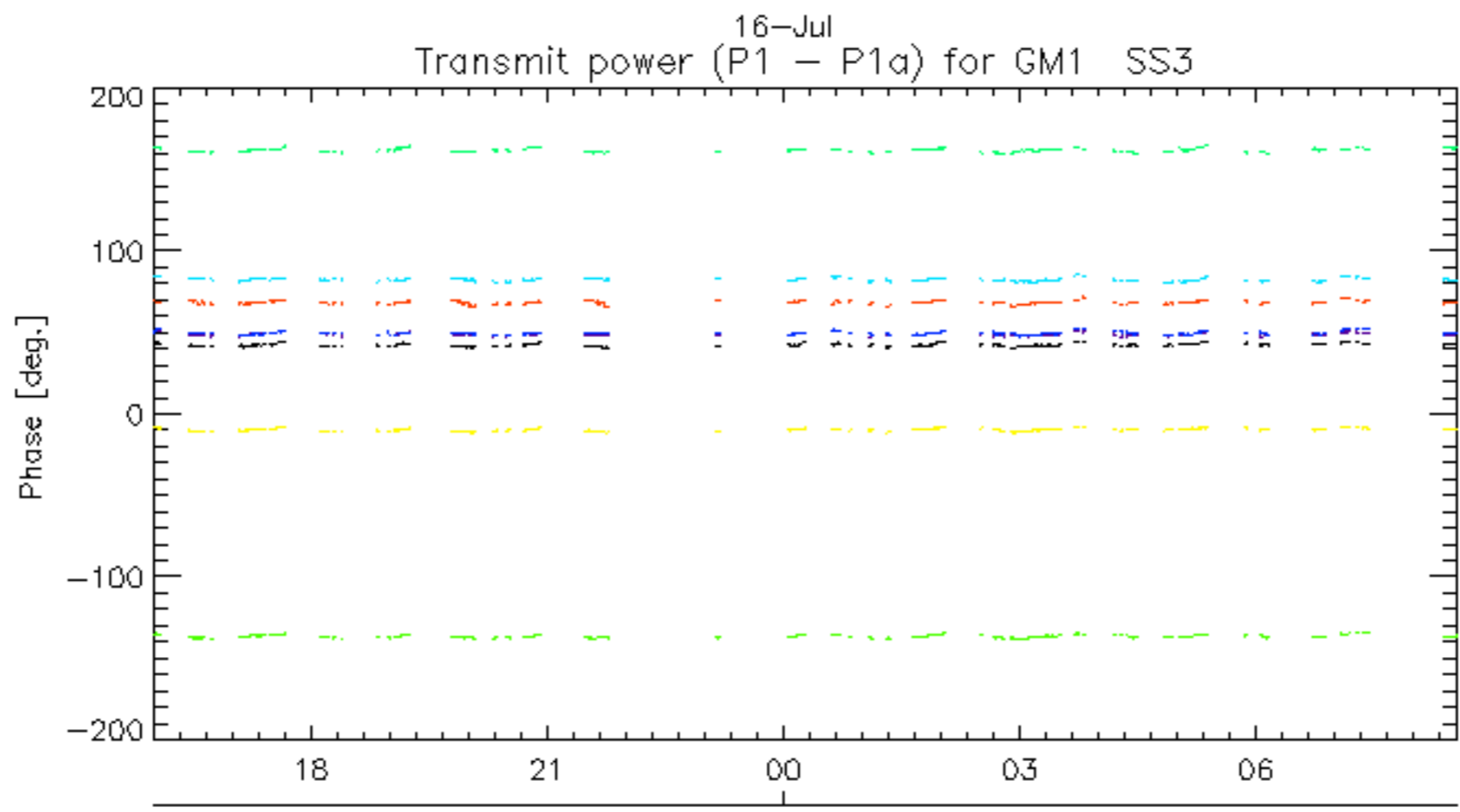
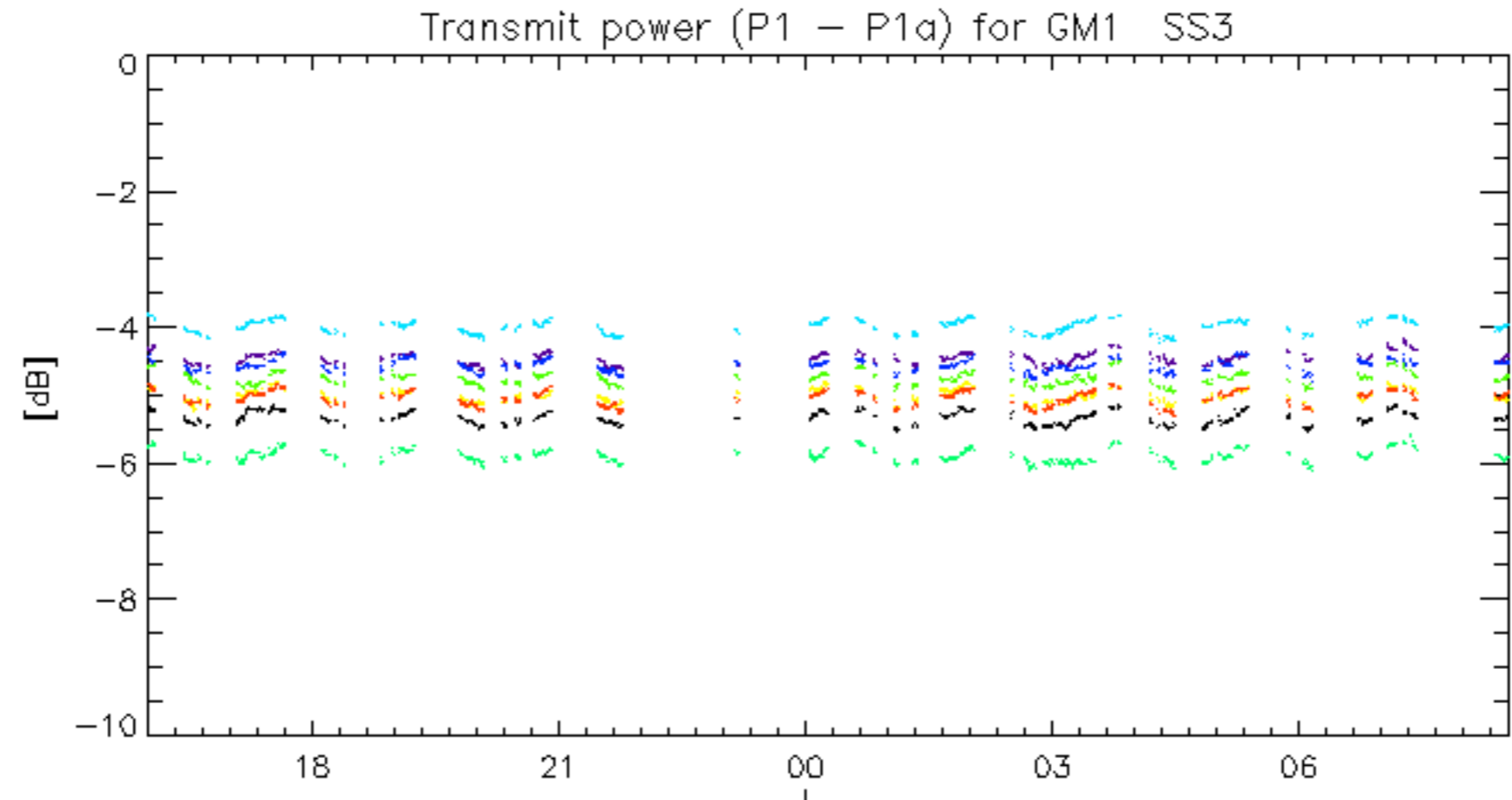
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060714_004241_000001742049_00245_22844_0772.N1	1	0
ASA_IMM_1PNPDE20060714_005914_000000452049_00246_22845_0771.N1	1	0
ASA_GM1_1PNPDK20060715_141824_000007972049_00268_22867_1061.N1	0	15
ASA_WSM_1PNPDE20060714_113456_000000852049_00252_22851_3060.N1	0	14
ASA_WSM_1PNPDE20060715_010155_000001462049_00260_22859_3155.N1	0	34
ASA_WSM_1PNPDE20060715_170157_000001472049_00270_22869_3251.N1	0	18
ASA_WSM_1PNPDE20060716_020953_000001832049_00275_22874_3293.N1	0	39
ASA_APM_1PNPDE20060714_141717_000000732049_00254_22853_0606.N1	0	17



Transmit power (P1 - P1a) for GM1 SS3

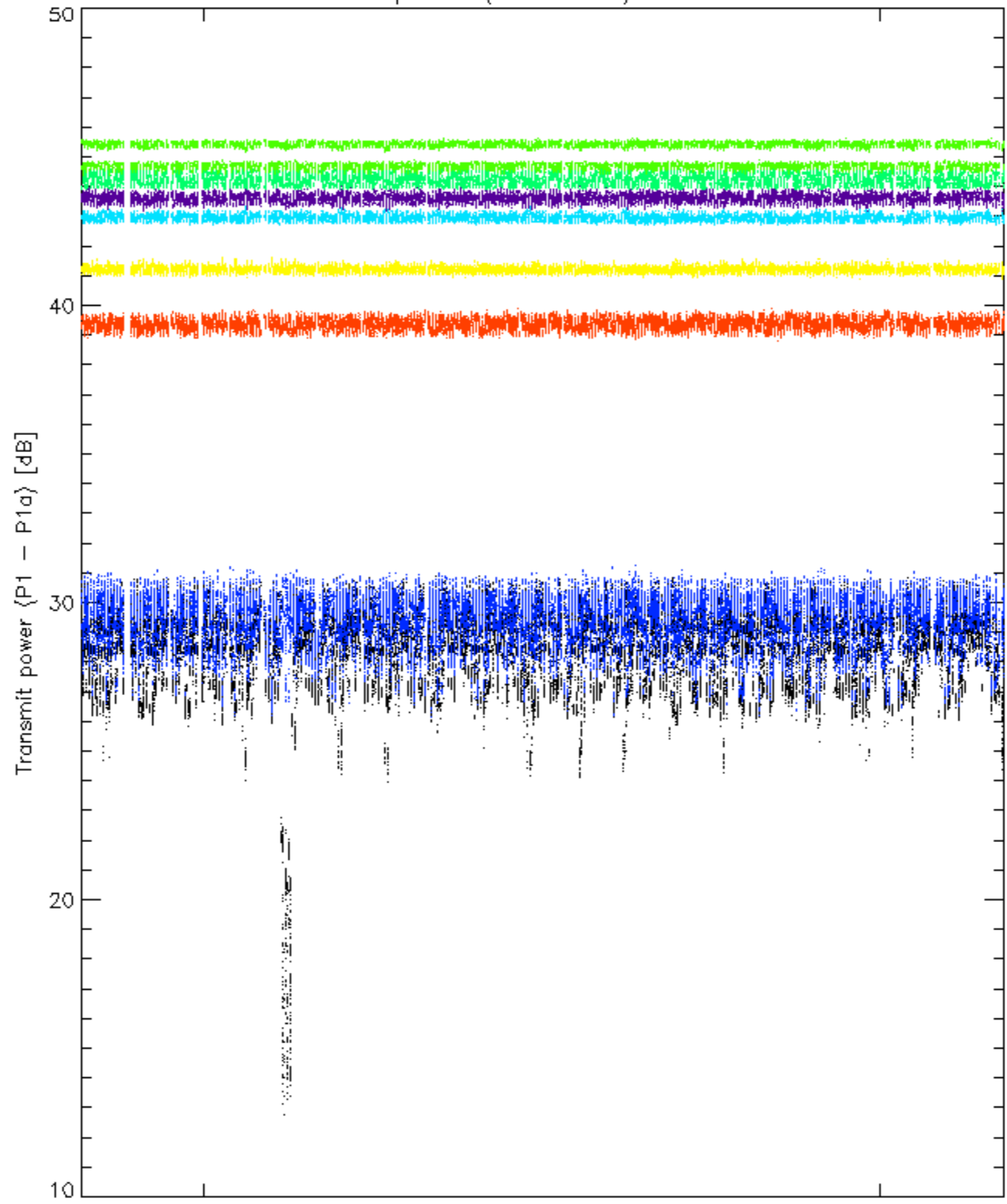


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

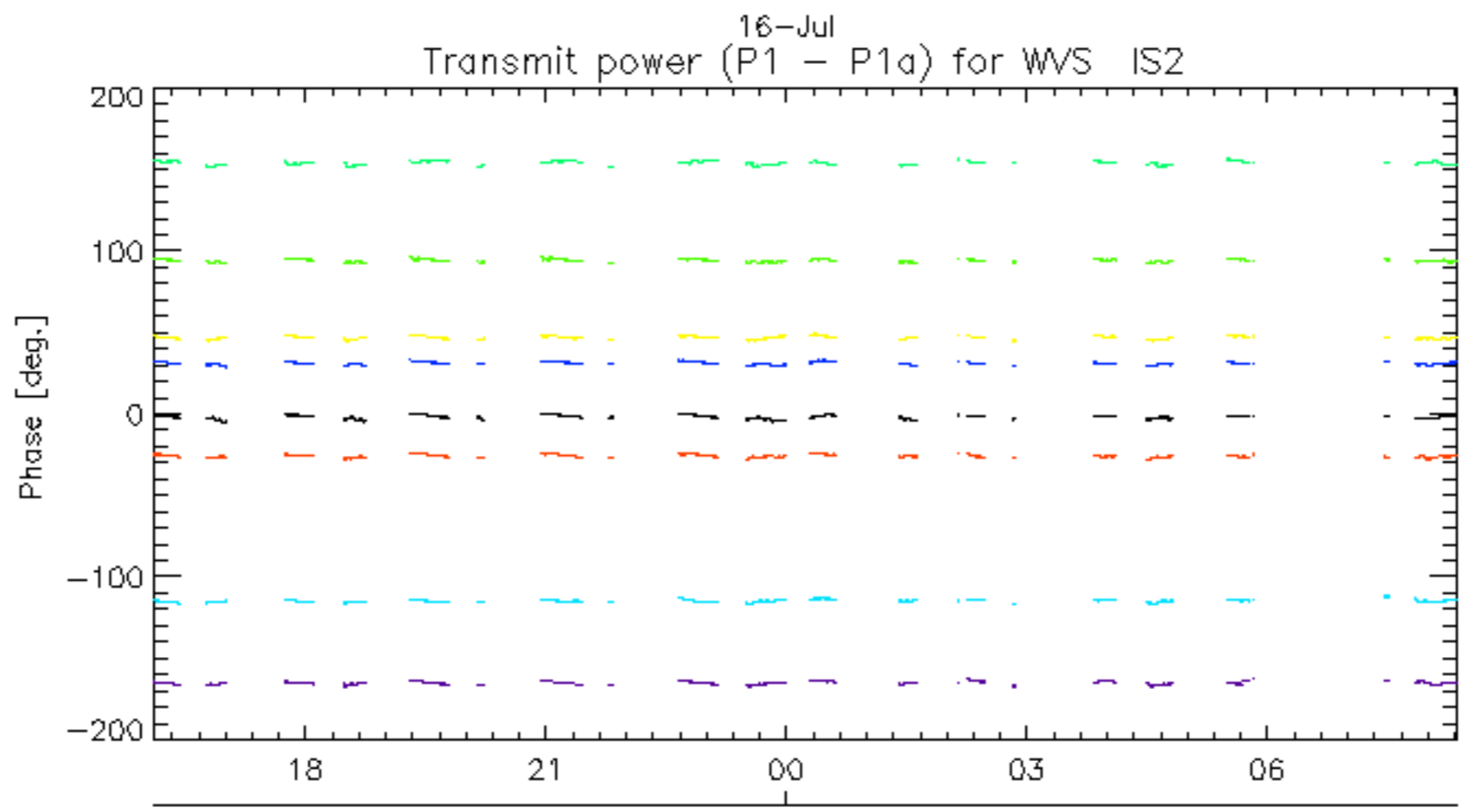
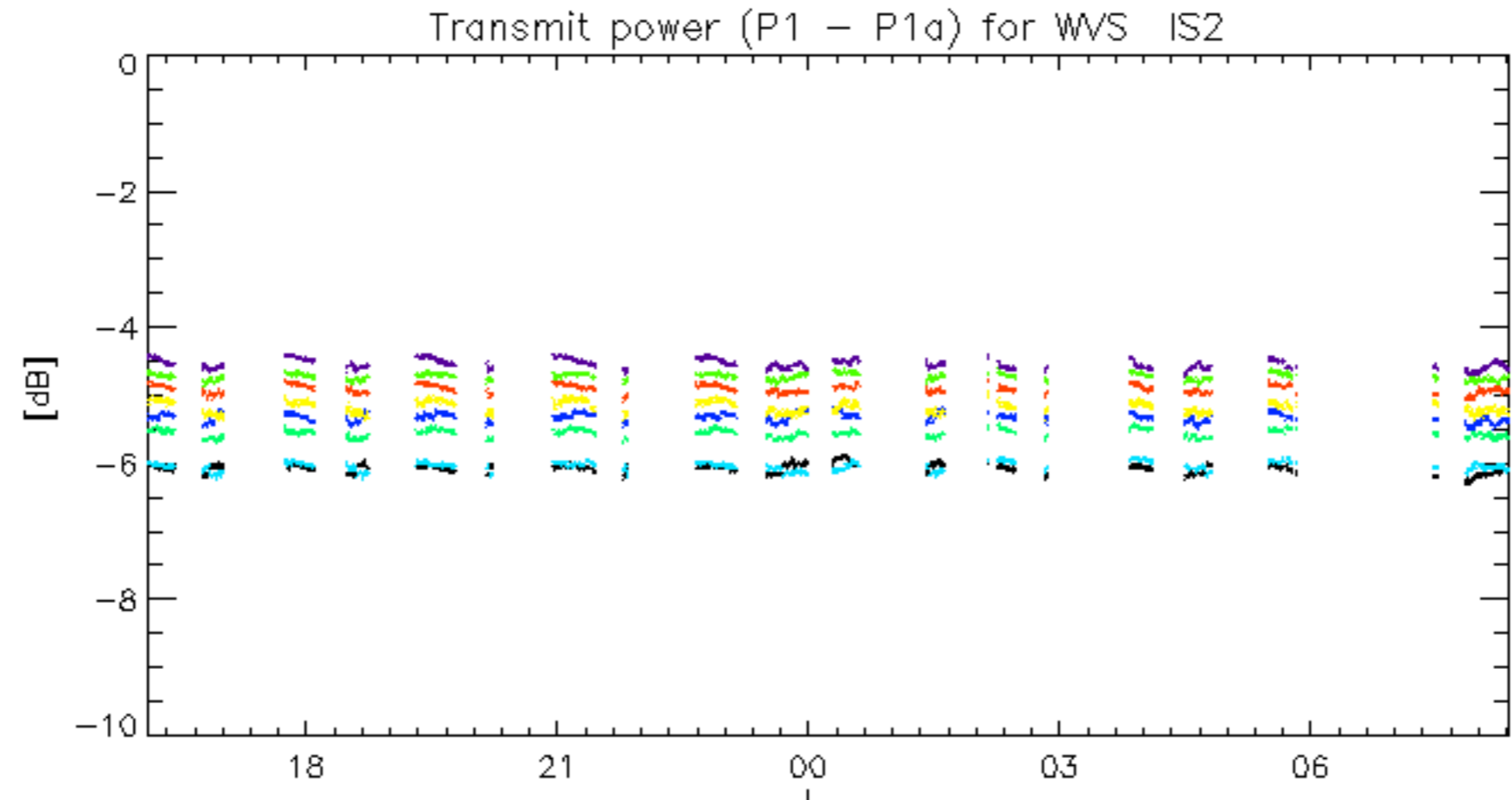


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.