

PRELIMINARY REPORT OF 061017

last update on Tue Oct 17 16:55:33 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 2006-10-16 00:00:00 to 2006-10-17 16:55:33

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	76	4	9	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	45	76	4	9	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	45	76	4	9	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	45	76	4	9	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	29	48	9	2	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	29	48	9	2	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	29	48	9	2	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	29	48	9	2	0

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	20061017 085033
H	20061016 092210

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.949934	0.010201	-0.007756
7	P1	-3.075985	0.010404	-0.001843
11	P1	-4.085041	0.022579	-0.018762
15	P1	-6.203489	0.015663	-0.024495
19	P1	-3.552361	0.007936	-0.041022
22	P1	-4.603063	0.010622	0.009185
26	P1	-3.988578	0.057022	-0.037592
30	P1	-5.843110	0.088972	-0.052398
3	P1	-16.635916	0.217656	-0.082302
7	P1	-17.109924	0.104352	0.032000
11	P1	-16.943792	0.386248	-0.303042
15	P1	-12.847265	0.098311	0.056814
19	P1	-14.668973	0.052994	-0.051946
22	P1	-15.617243	0.470735	0.345031
26	P1	-15.144596	0.249773	0.213880
30	P1	-16.957369	0.440242	0.090882

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.821148	0.086724	-0.008429
7	P2	-21.787897	0.097455	0.092192
11	P2	-15.735304	0.109185	0.027001
15	P2	-7.077021	0.106741	0.065291
19	P2	-9.126451	0.097755	0.035212
22	P2	-18.136955	0.093480	0.012181
26	P2	-16.425312	0.101293	0.039476
30	P2	-19.469063	0.093134	0.024733

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.198448	0.006431	-0.005388
7	P3	-8.198448	0.006431	-0.005388
11	P3	-8.198448	0.006431	-0.005388
15	P3	-8.198448	0.006431	-0.005388
19	P3	-8.198448	0.006431	-0.005388
22	P3	-8.198448	0.006431	-0.005388
26	P3	-8.198261	0.006440	-0.004931
30	P3	-8.198261	0.006440	-0.004931

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

✕

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	-3.905260	0.139630	-0.128259
7	P1	-2.621361	0.844666	-0.309480
11	P1	-2.921647	0.109924	-0.104368
15	P1	-3.707623	0.104127	-0.132243
19	P1	-3.465341	0.033831	-0.005047
22	P1	-5.086338	0.035531	0.062207
26	P1	-5.915036	0.157040	-0.061580
30	P1	-5.235811	0.160381	-0.045949
3	P1	-11.731420	0.362185	-0.255736
7	P1	-10.138432	1.099630	-0.435323
11	P1	-10.447431	0.323309	-0.276488
15	P1	-10.945558	0.447239	-0.359540
19	P1	-15.557033	0.299412	0.069955
22	P1	-20.952972	1.393777	0.013477

26	P1	-15.811506	0.440965	0.315844
30	P1	-18.083944	0.510132	0.067350

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.343529	0.211023	0.188155
7	P2	-22.007504	1.187043	0.568127
11	P2	-10.844311	0.186284	0.203865
15	P2	-4.859362	0.035173	0.027122
19	P2	-6.837869	0.058497	0.048317
22	P2	-8.200890	0.371792	-0.130101
26	P2	-24.110971	0.874806	0.329495
30	P2	-21.893854	0.450952	0.281203

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.047411	0.003207	0.000569
7	P3	-8.047332	0.003196	0.000591
11	P3	-8.047304	0.003197	0.001073
15	P3	-8.047451	0.003204	0.000489
19	P3	-8.047412	0.003195	0.000641
22	P3	-8.047334	0.003197	0.001079
26	P3	-8.047140	0.003191	0.001874
30	P3	-8.047063	0.003186	0.001651

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	0.000568239
	stdev	1.62262e-07
MEAN Q	mean	0.000526490
	stdev	2.13352e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138892
	stdev	0.00112461
STDEV Q	mean	0.139266
	stdev	0.00114309



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006101[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_1PNPDE20061016_002901_000000512052_00088_24190_7082.N1	1	0
ASA_GM1_1PNPDK20061015_114354_000004832052_00080_24182_6585.N1	0	74
ASA_GM1_1PNPDK20061016_101226_000002832052_00094_24196_6655.N1	0	15
ASA_GM1_1PNPDK20061016_101852_000003802052_00094_24196_6652.N1	0	6





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)	
	
	Ascending
	
	Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler	
	
	Ascending
	
	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

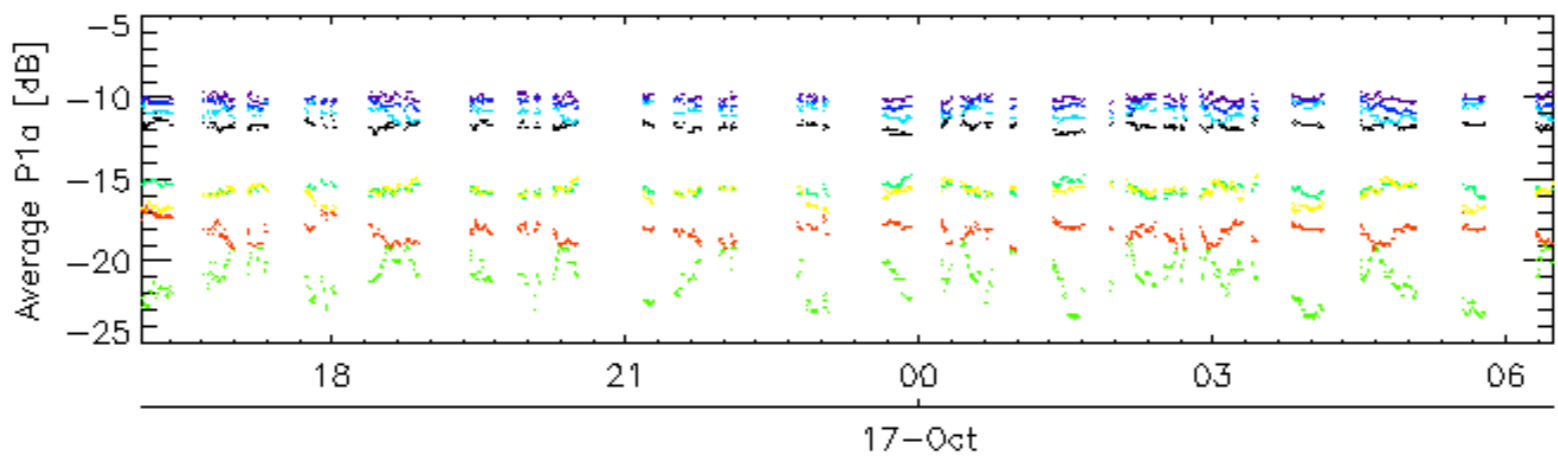
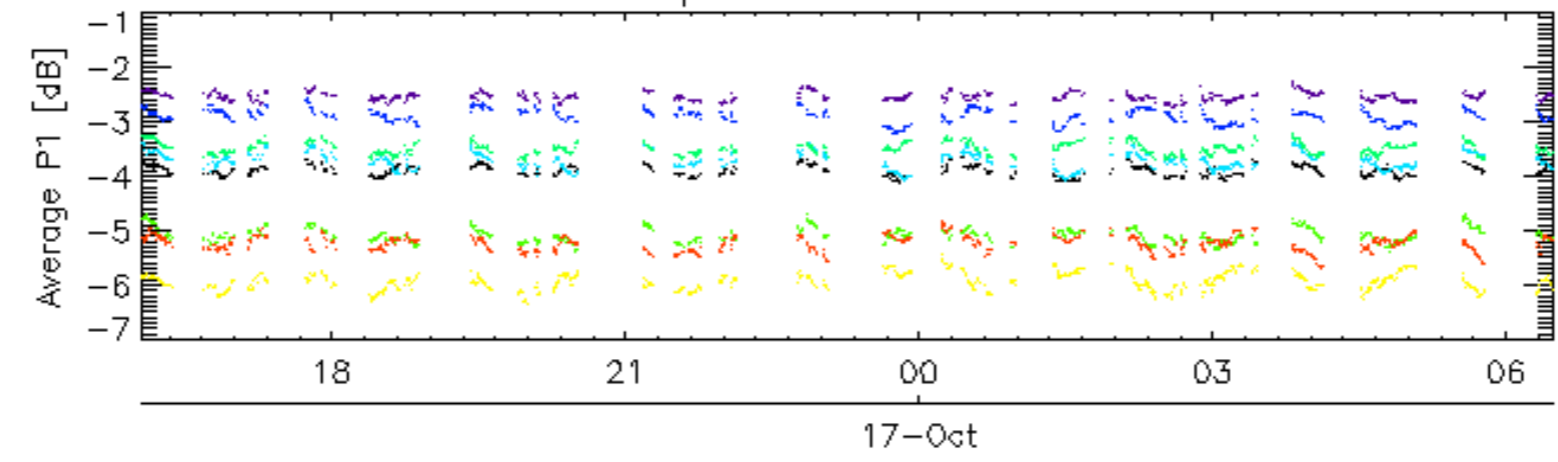
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

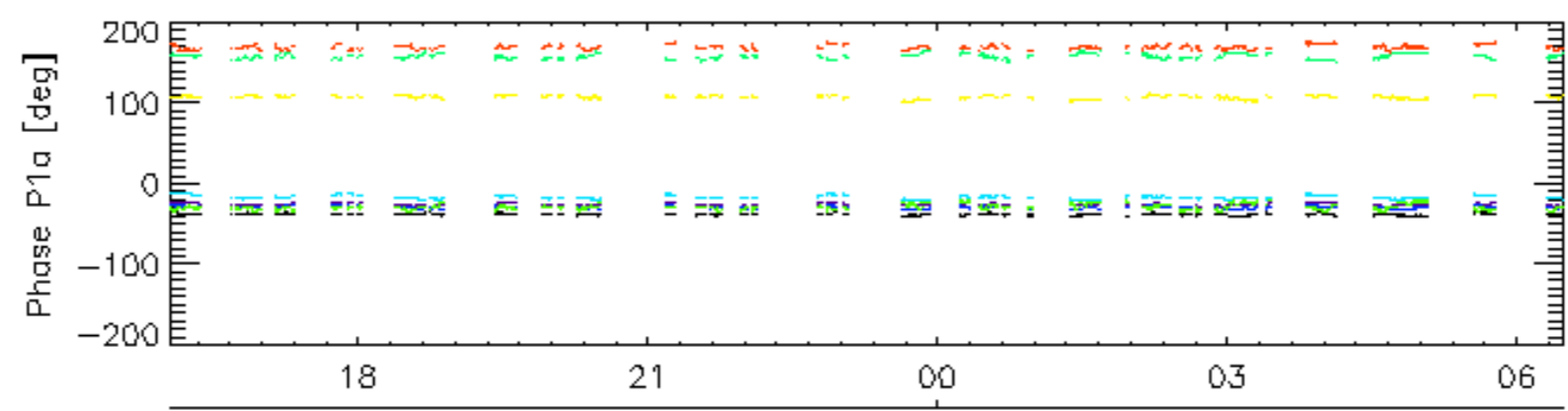
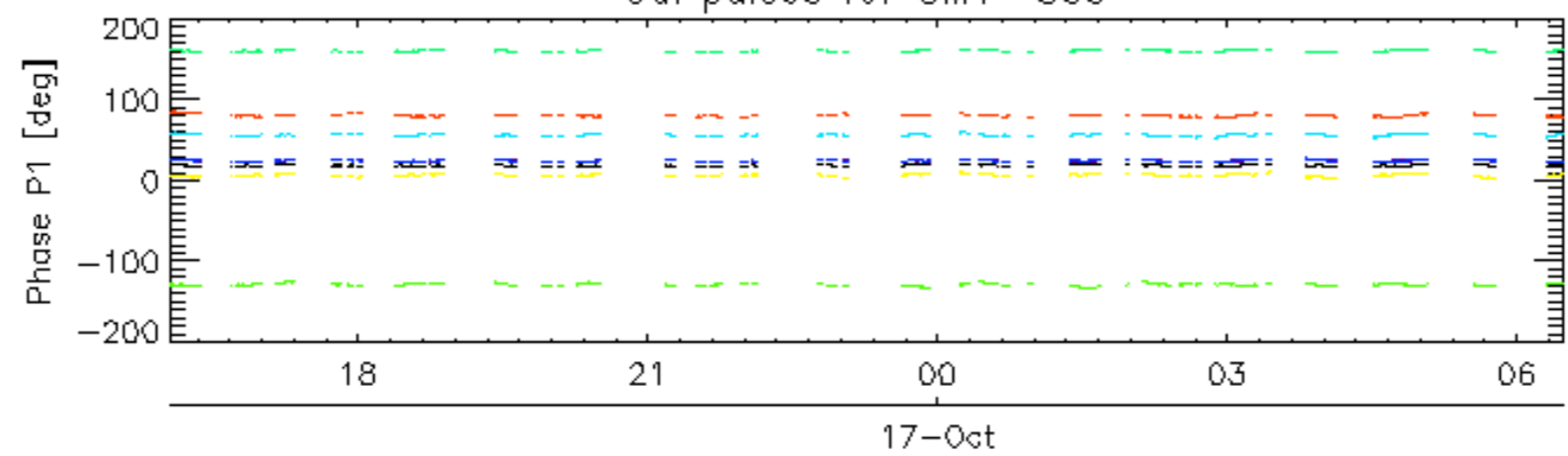
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

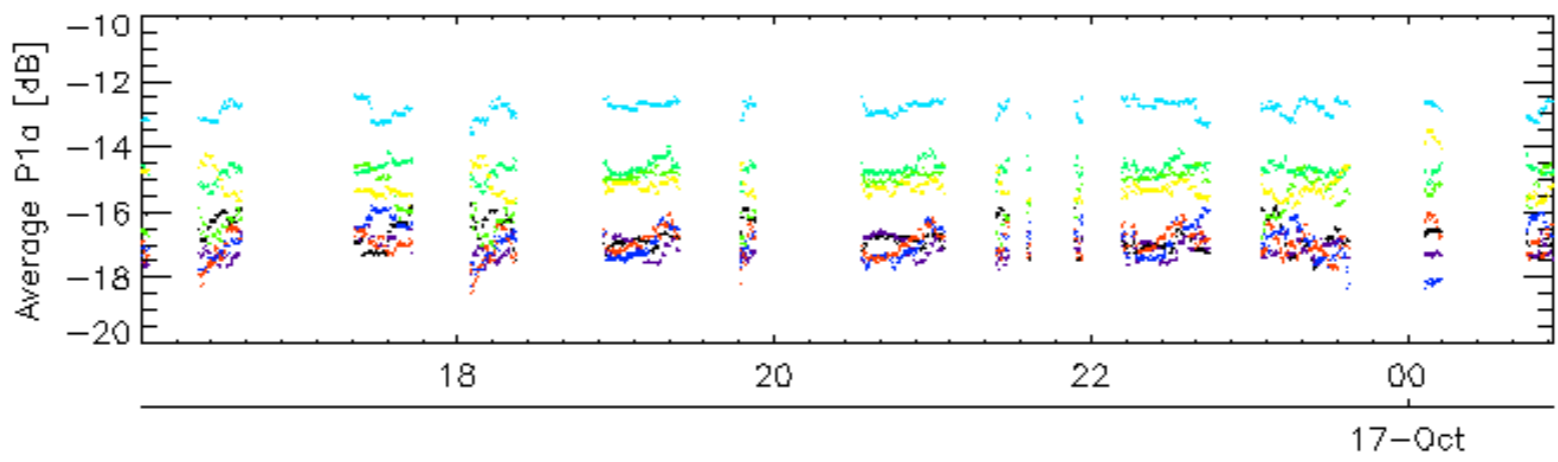
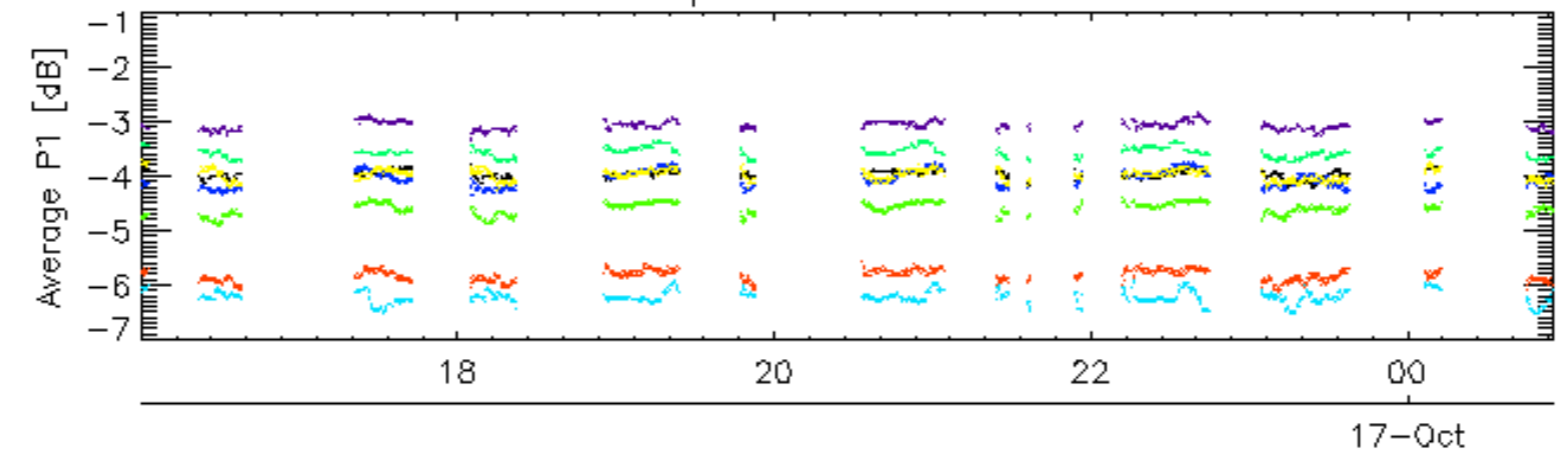


Cal pulses for GM1 SS3

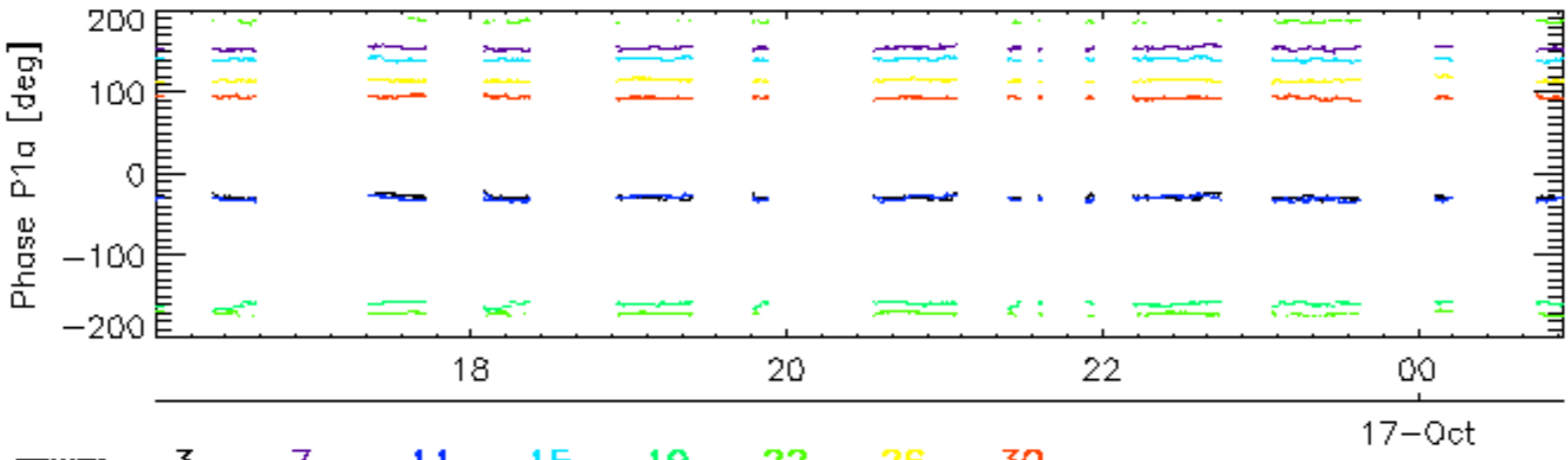
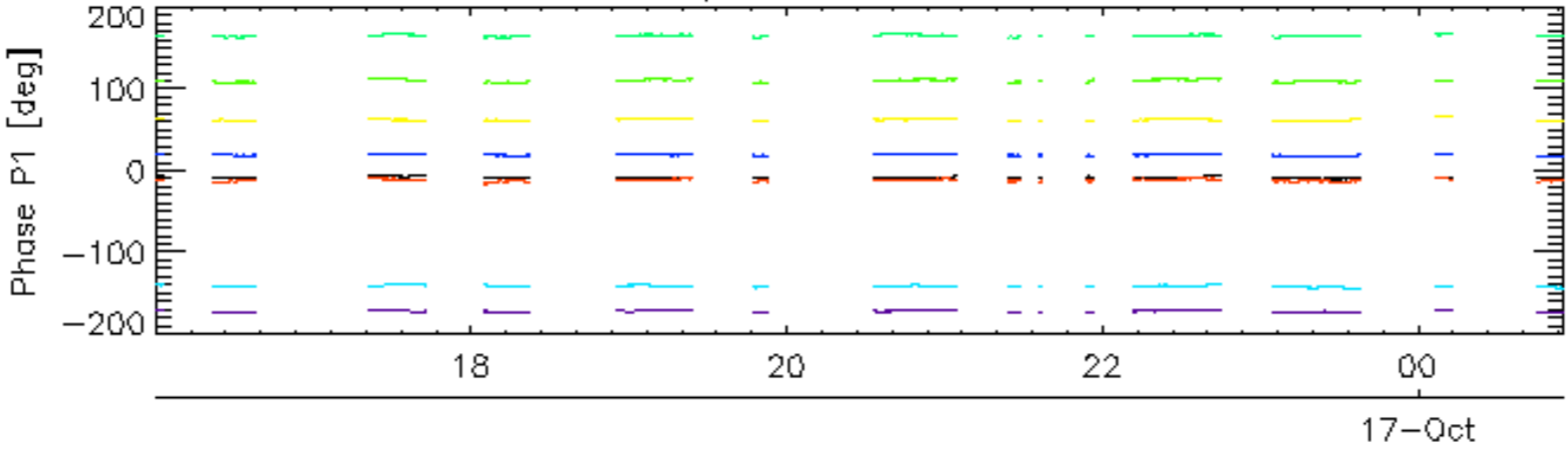


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30 17-Oct

Cal pulses for WVS IS2

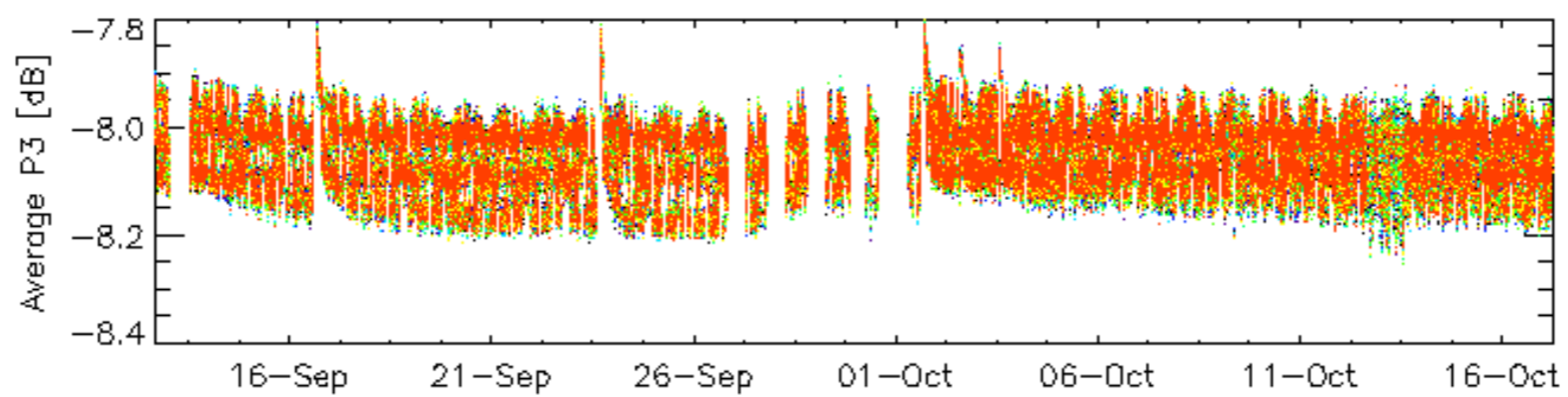
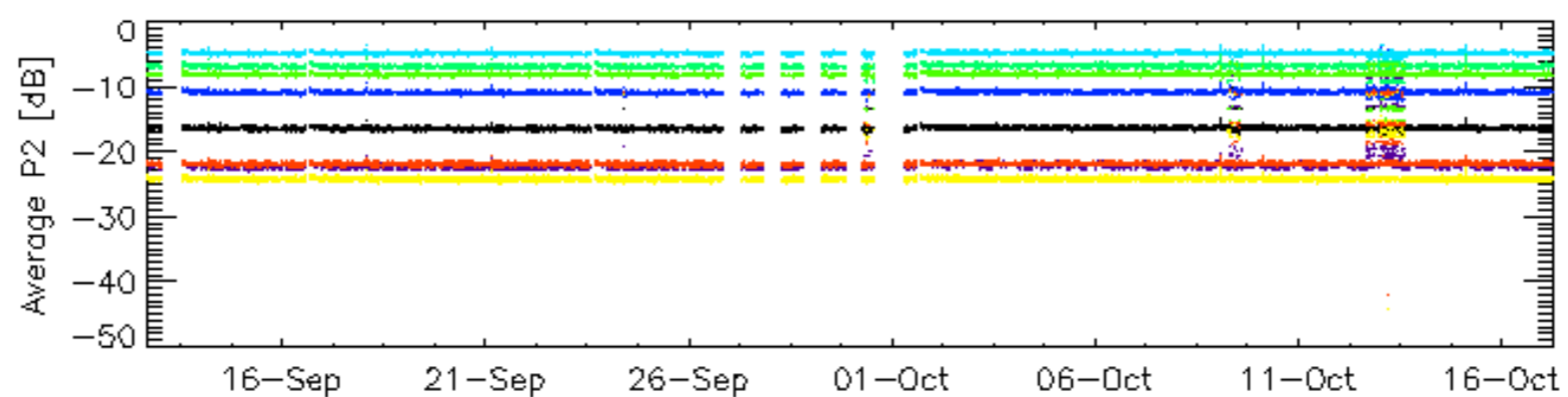
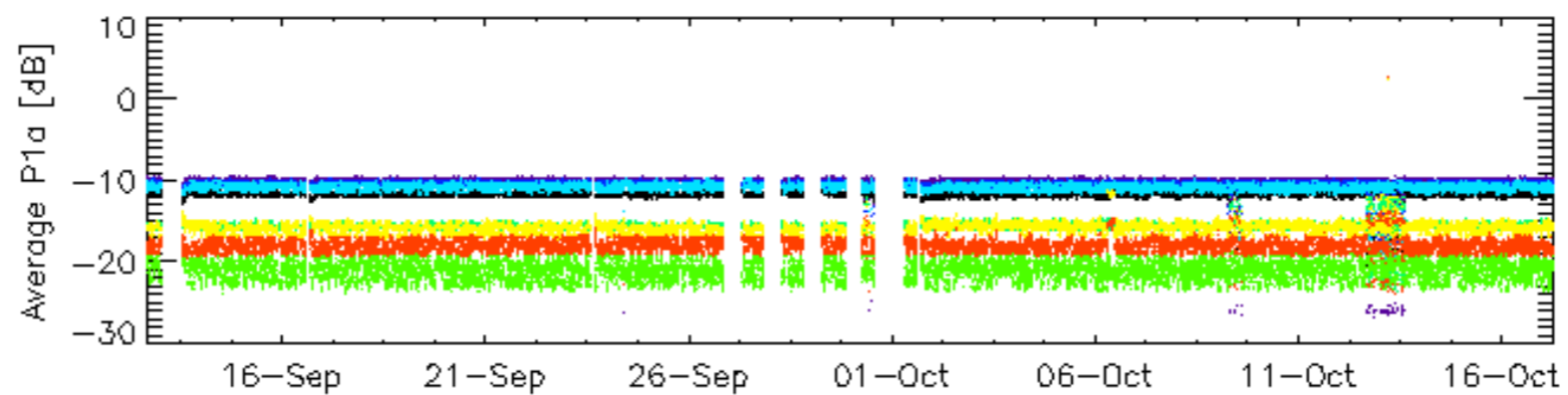
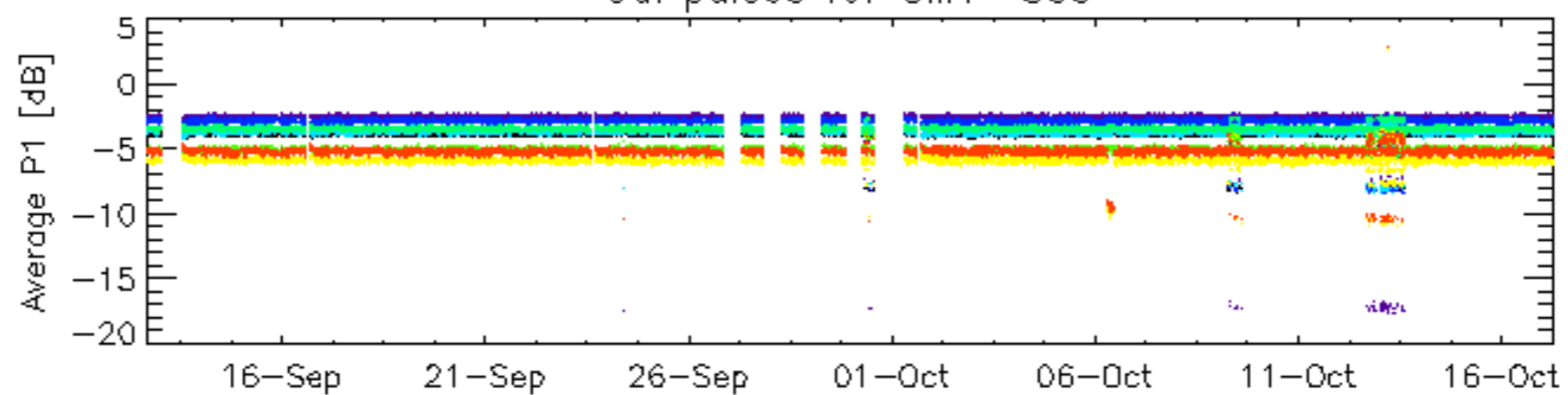


Cal pulses for WVS IS2



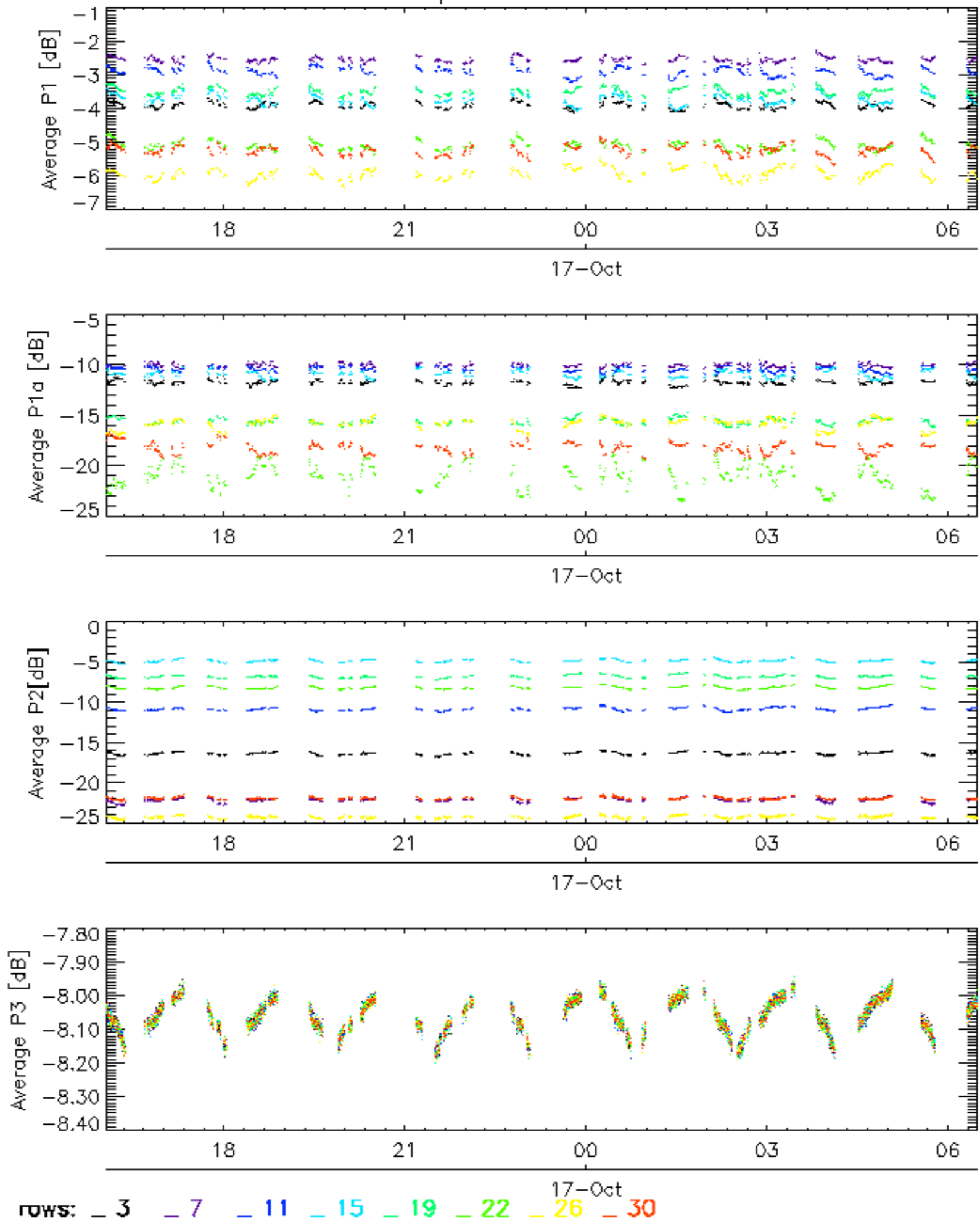
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

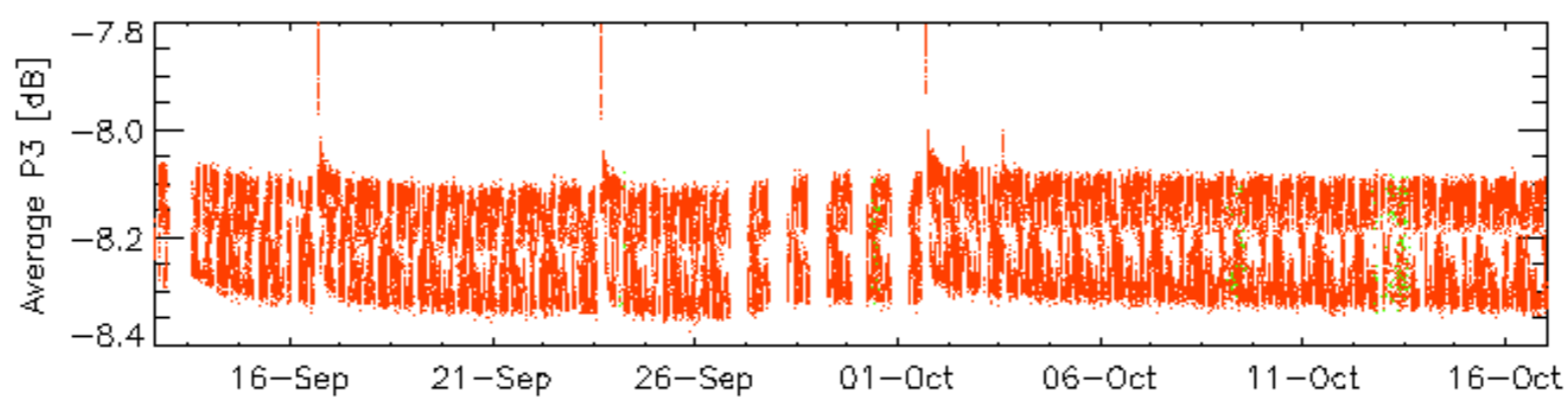
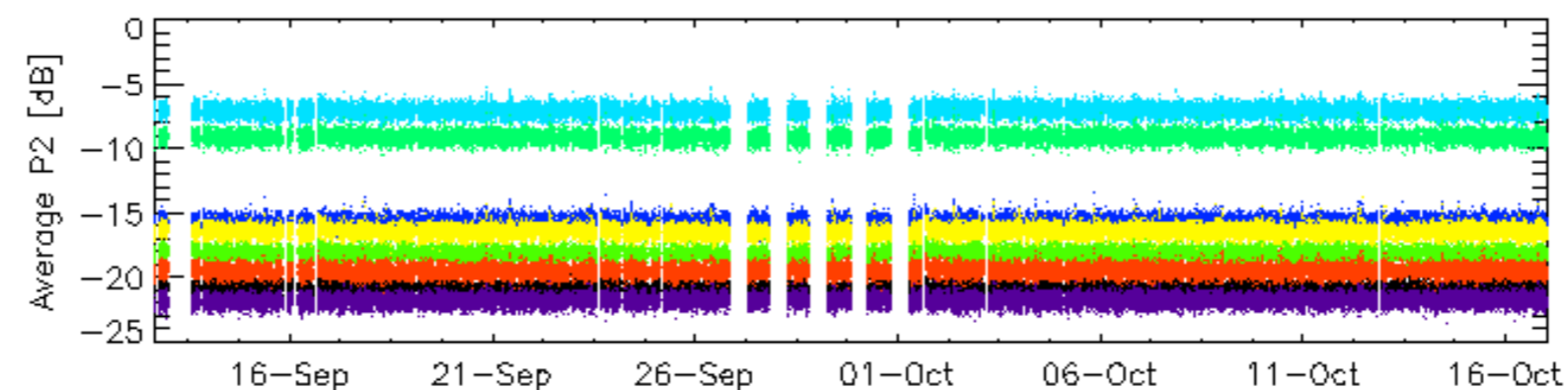
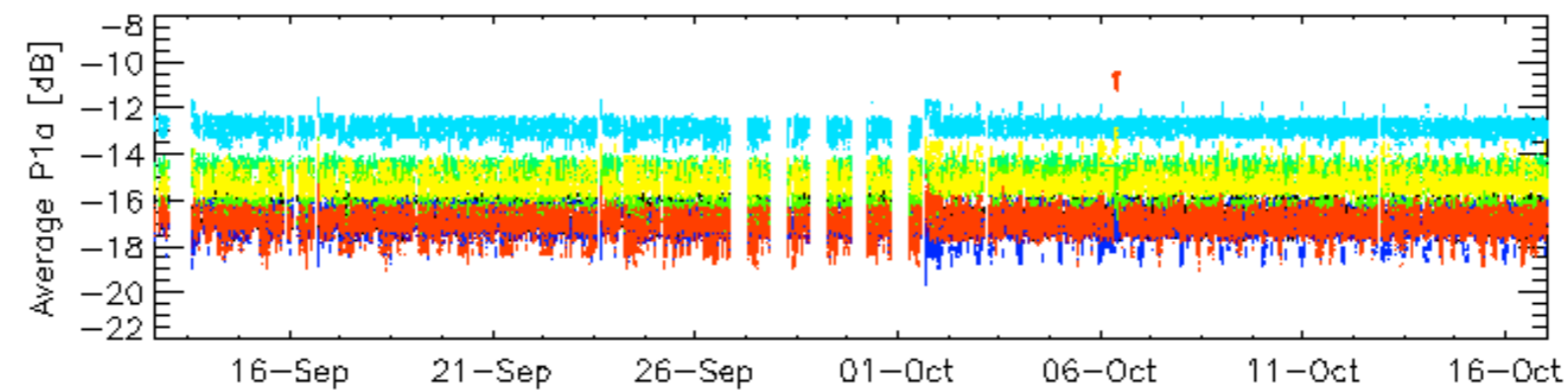
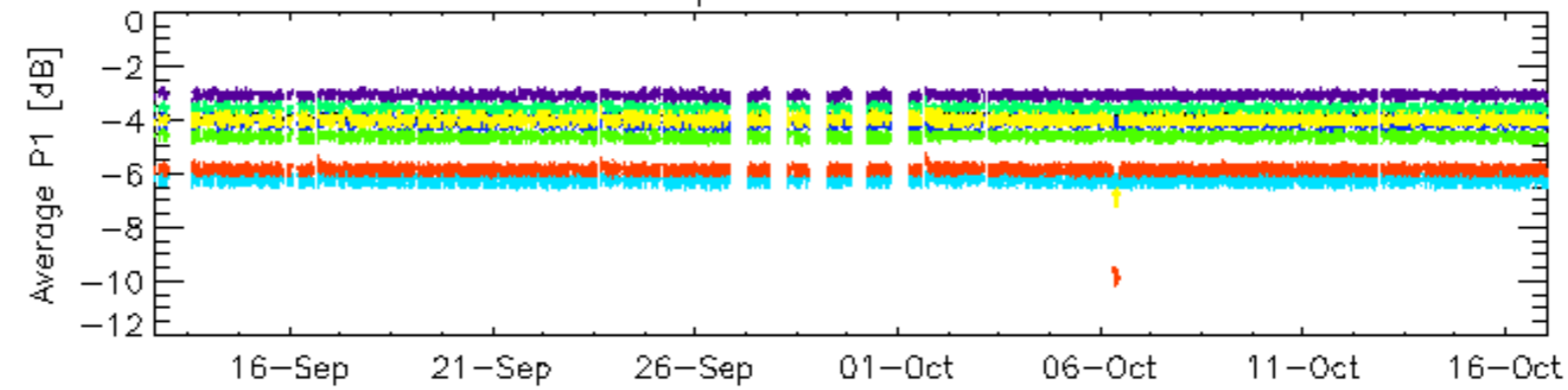


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

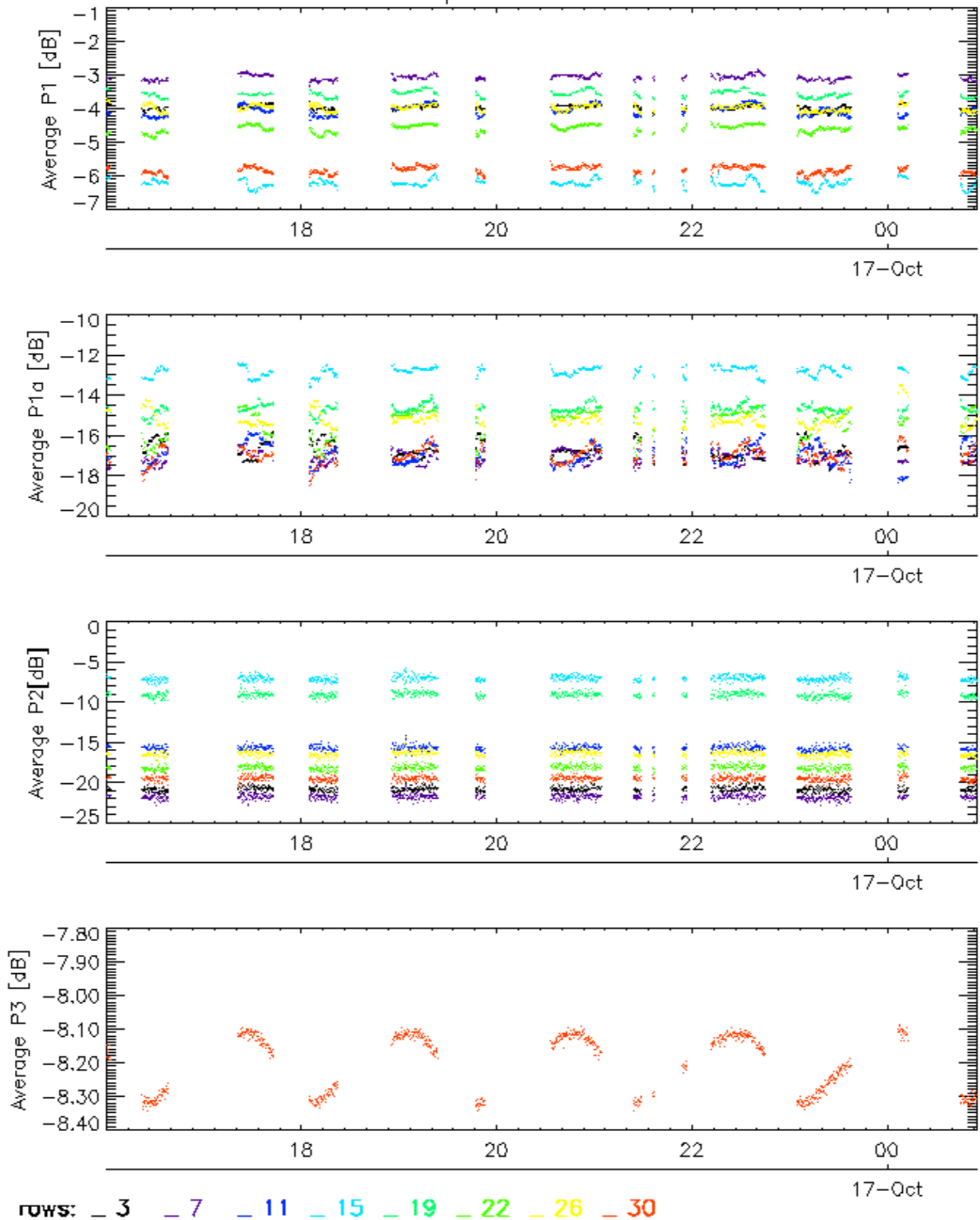


Cal pulses for WVS IS2



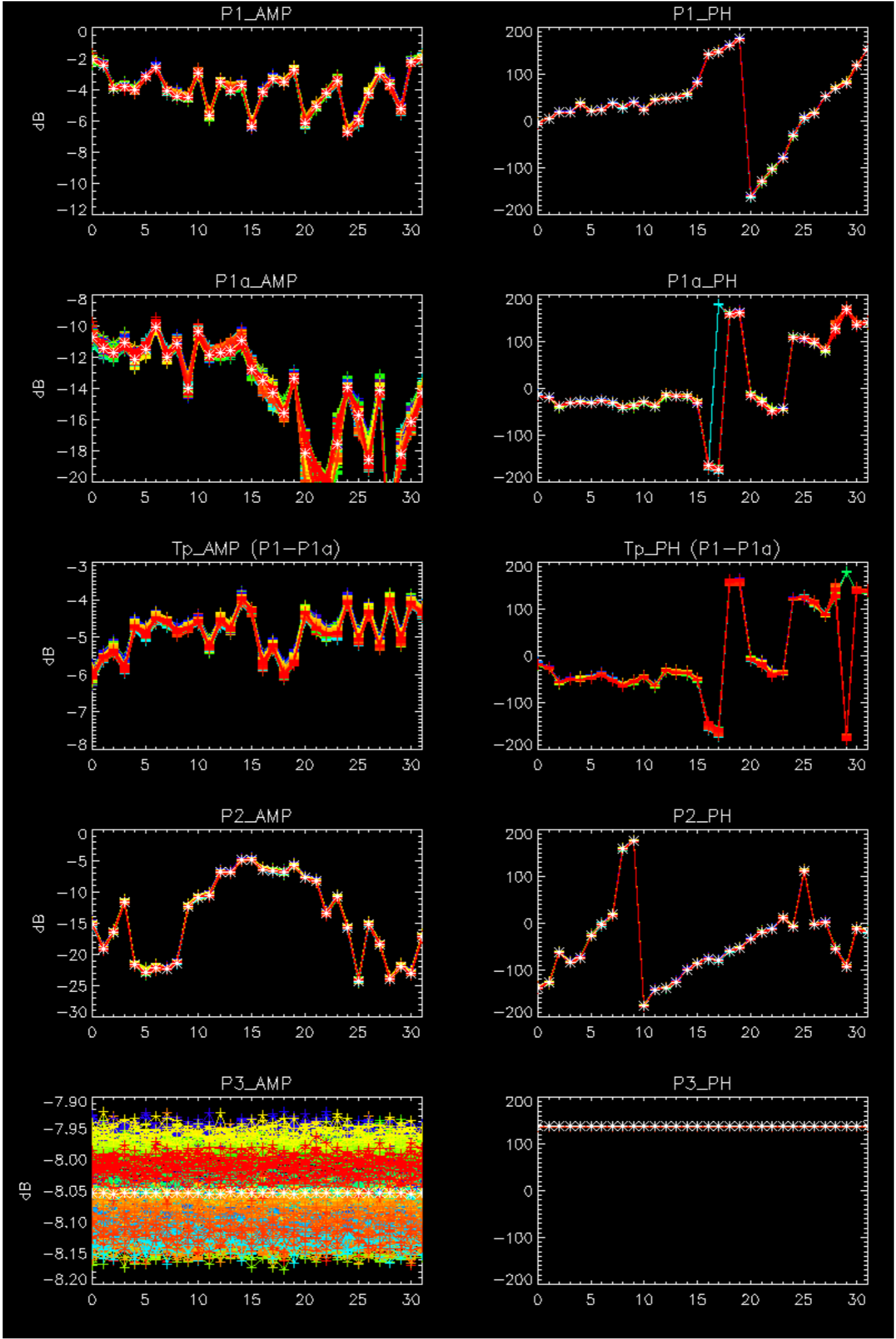
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

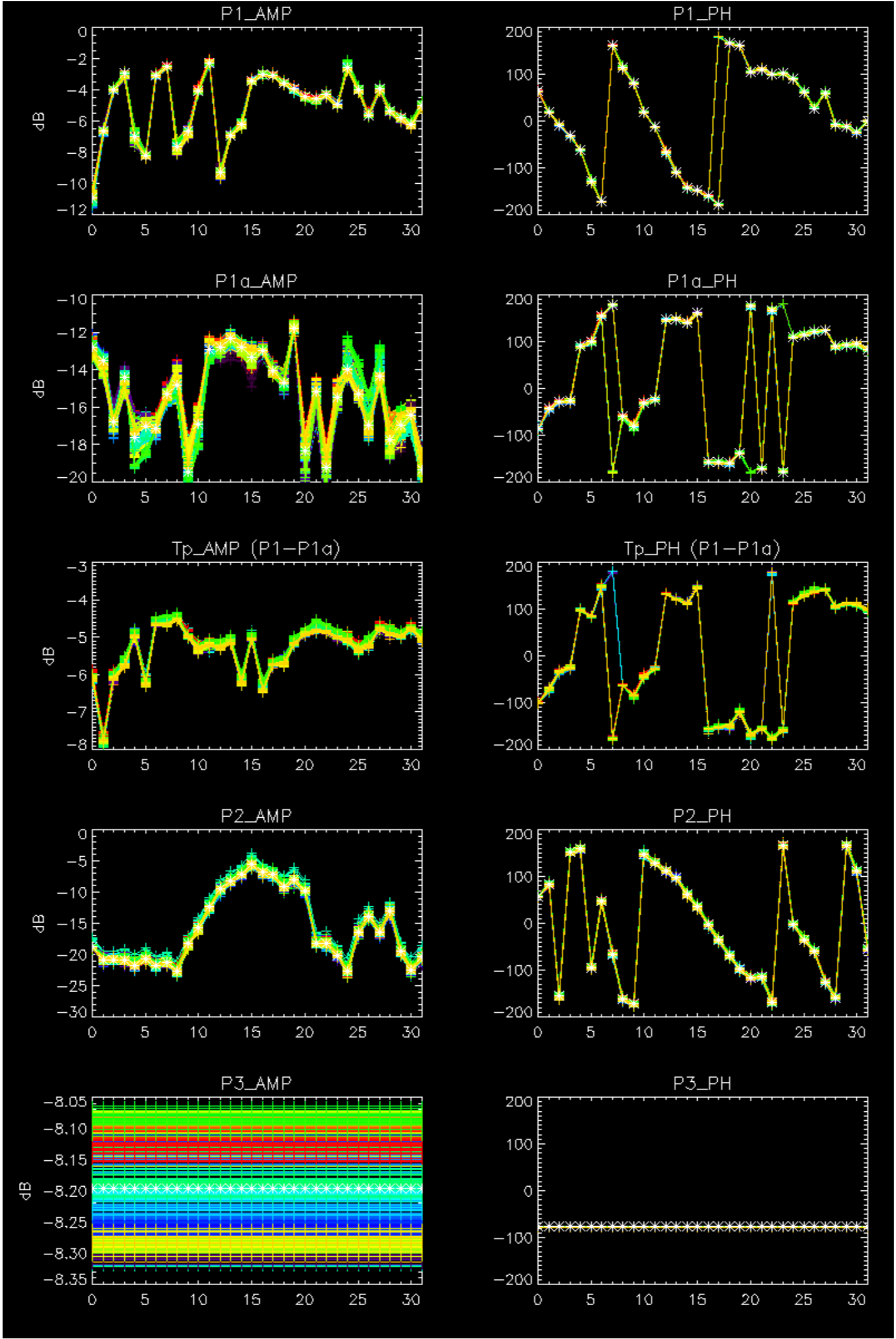
Cal pulses for WVS IS2



No anomalies observed on available browse products

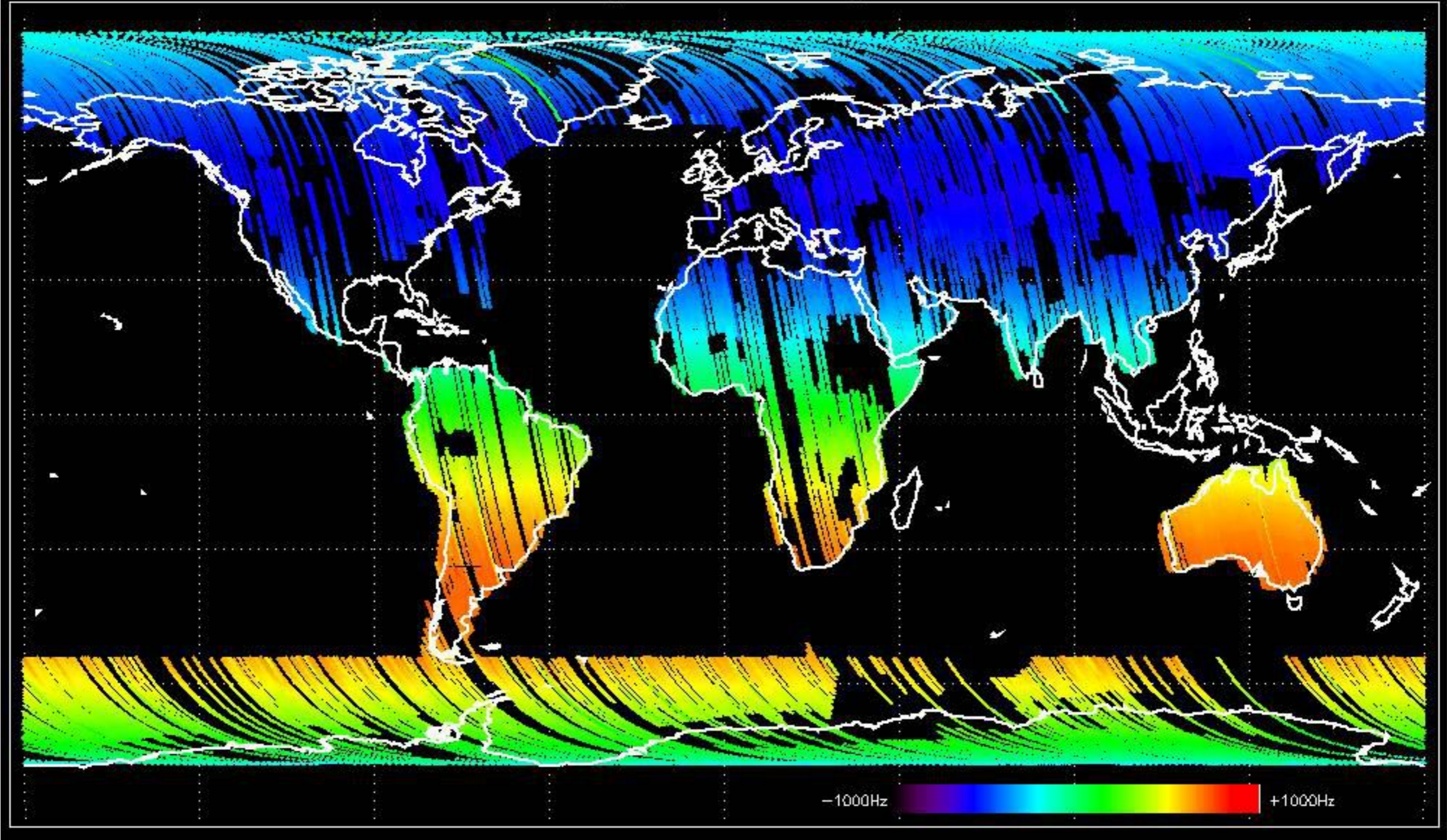
No anomalies observed.



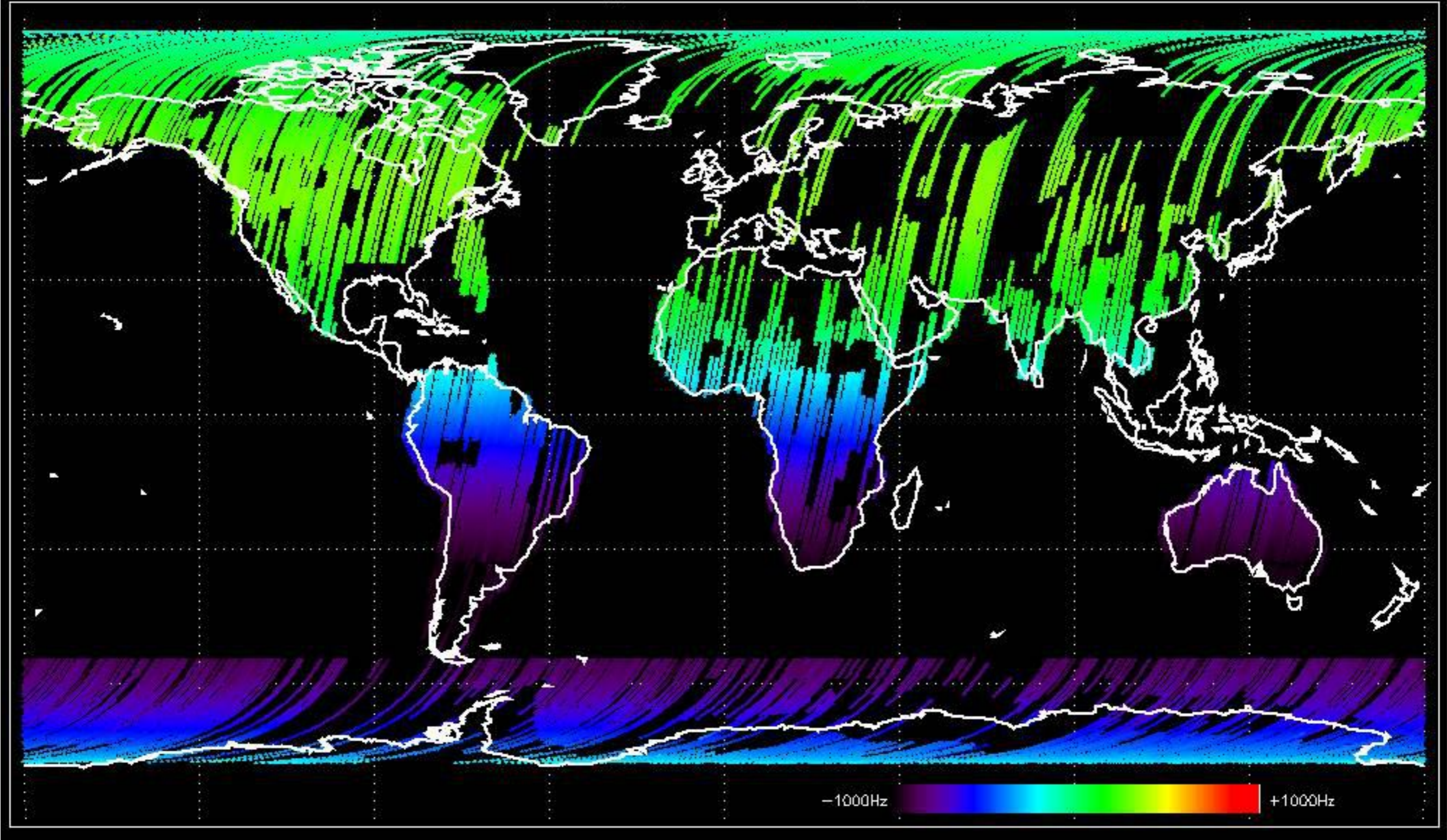


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

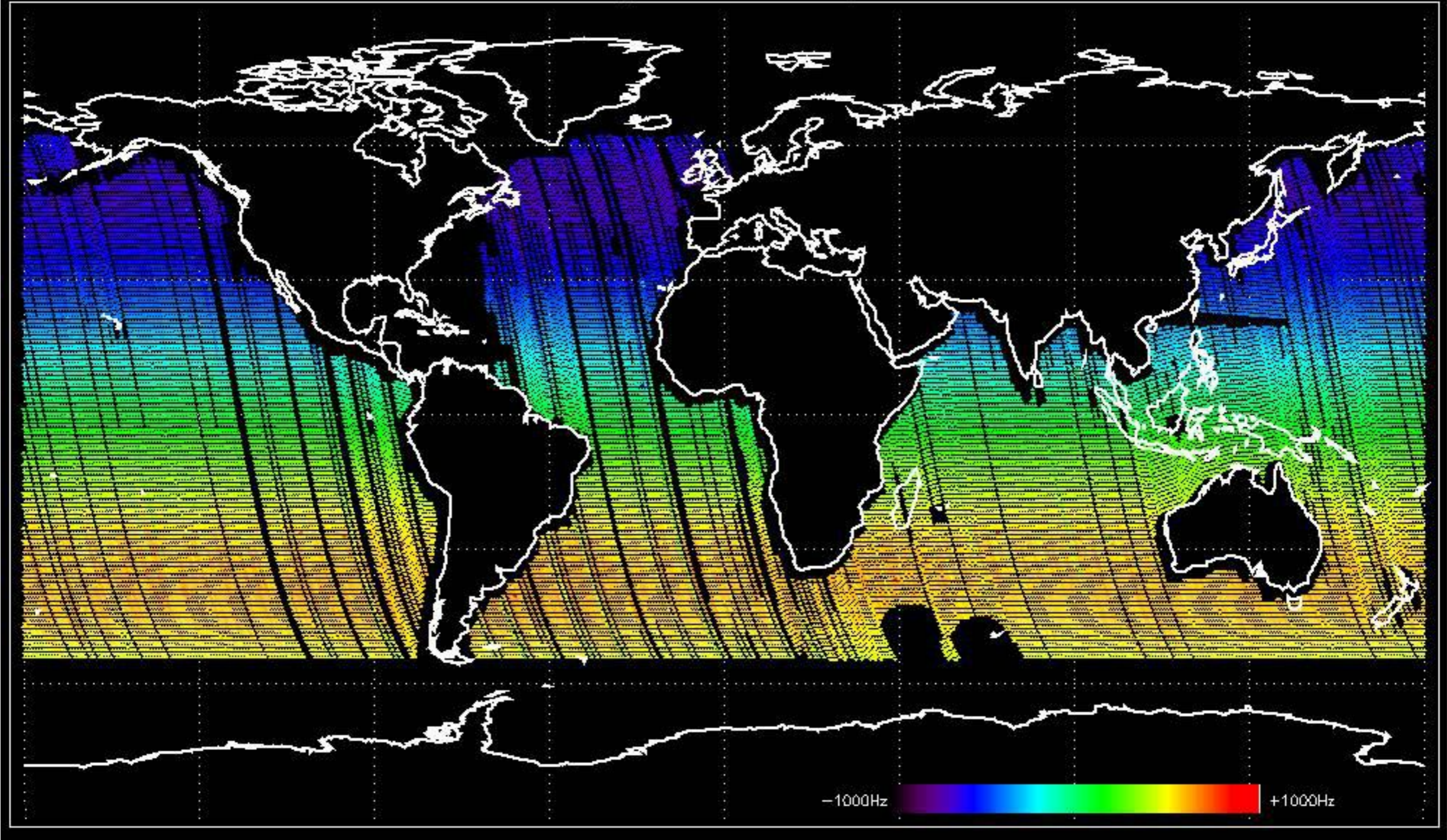
Doppler 'GM1' 'SS1' ascending



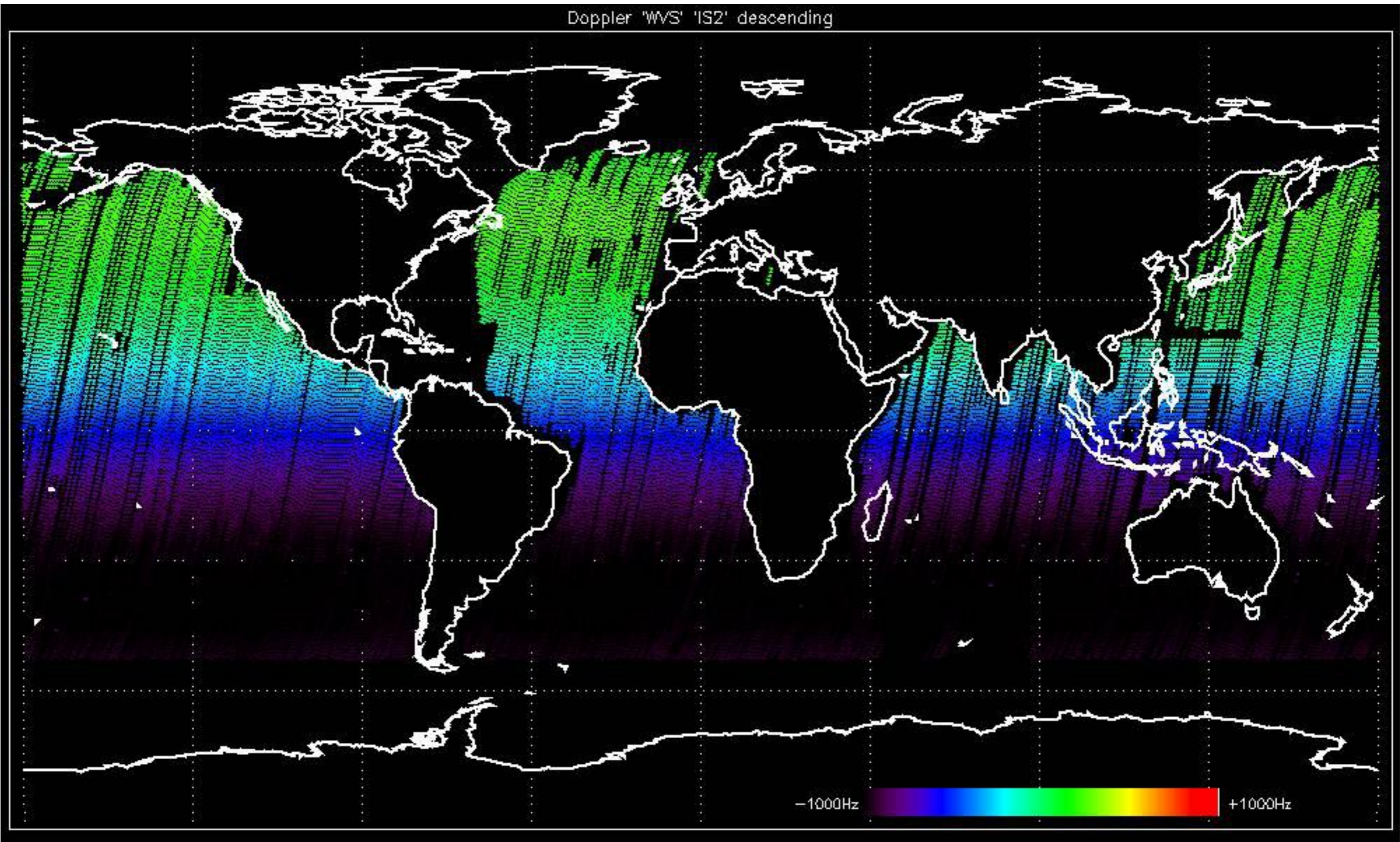
Doppler 'GM1' 'SS1' descending



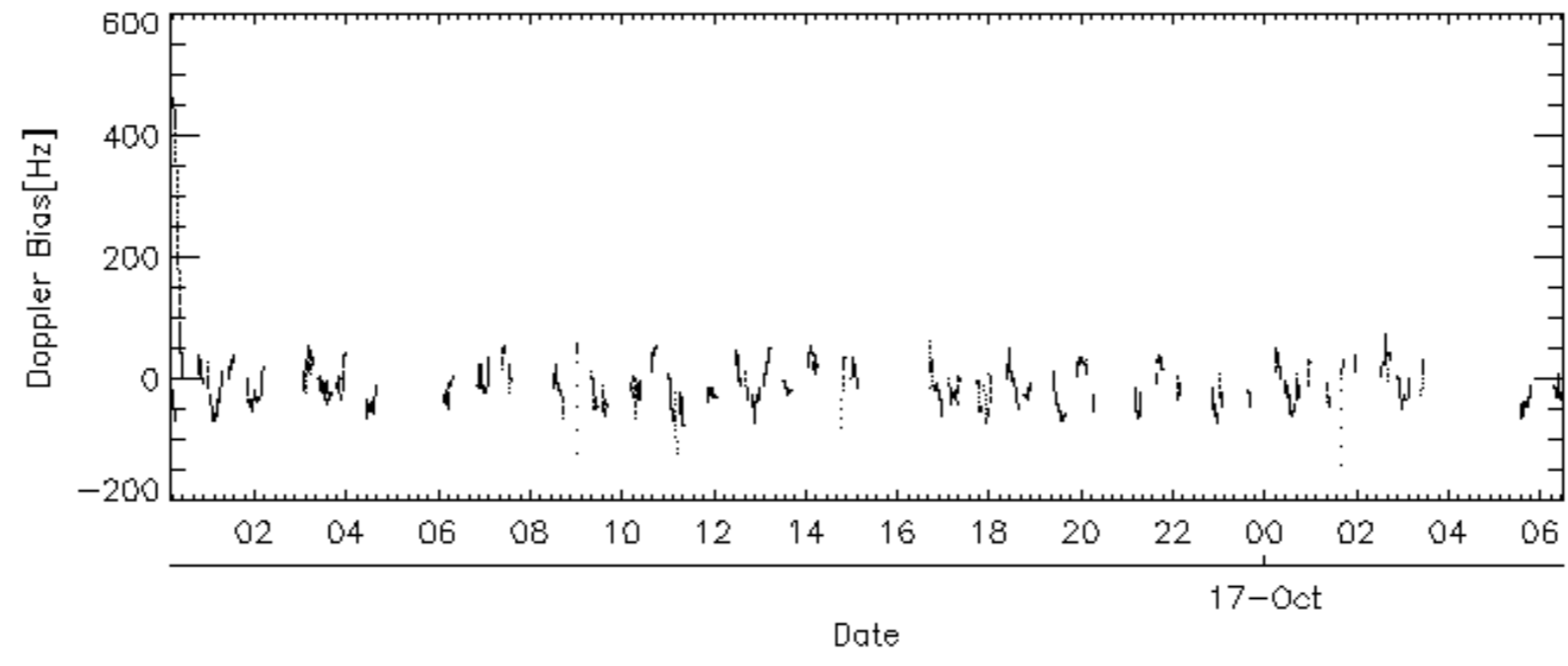
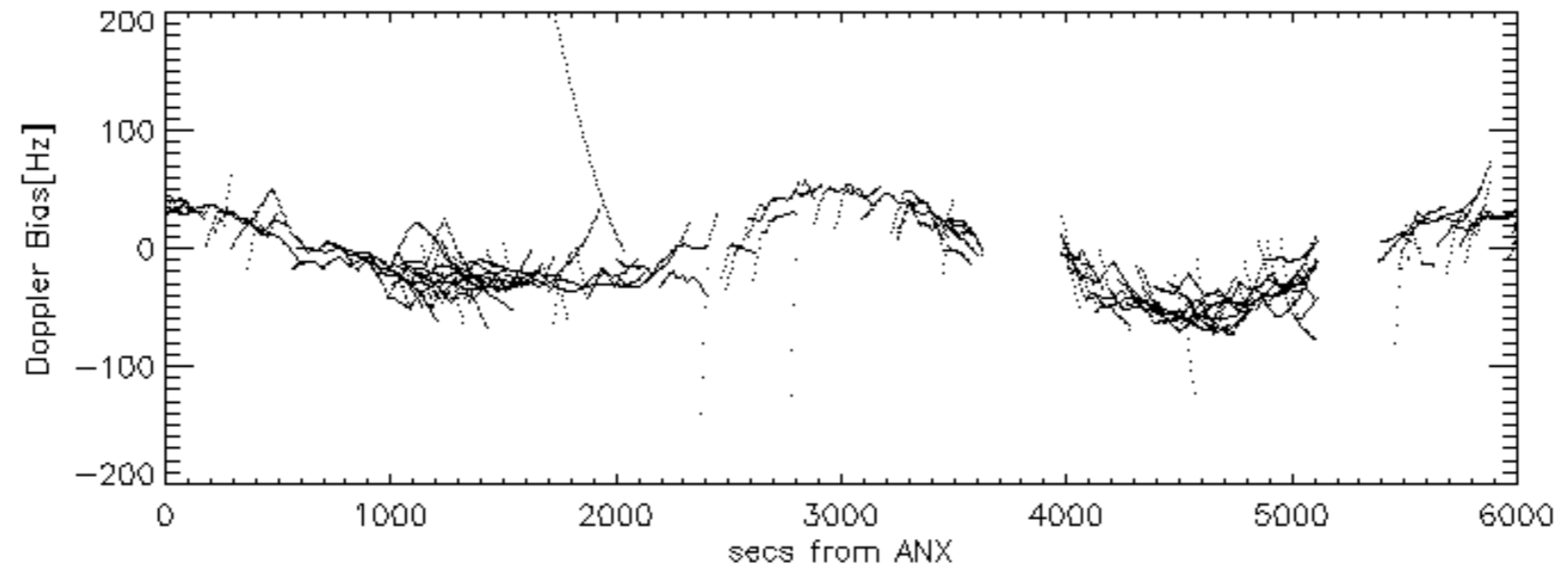
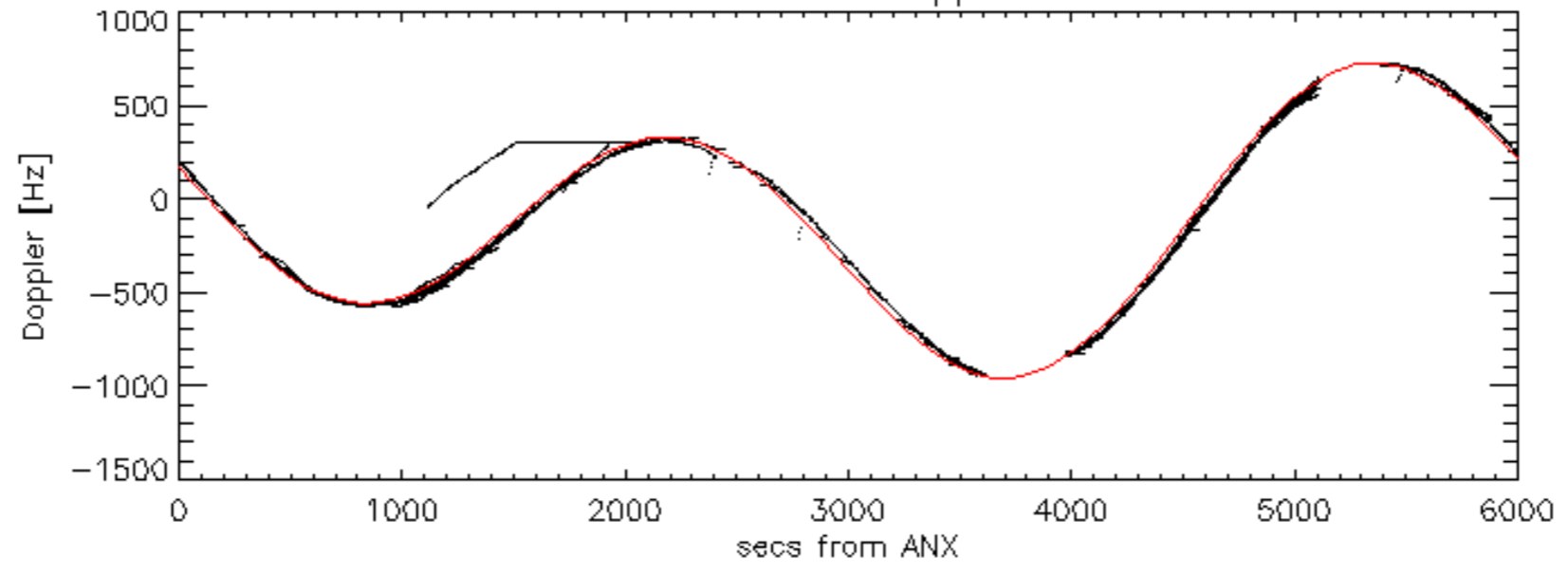
Doppler 'WVS' 'IS2' ascending

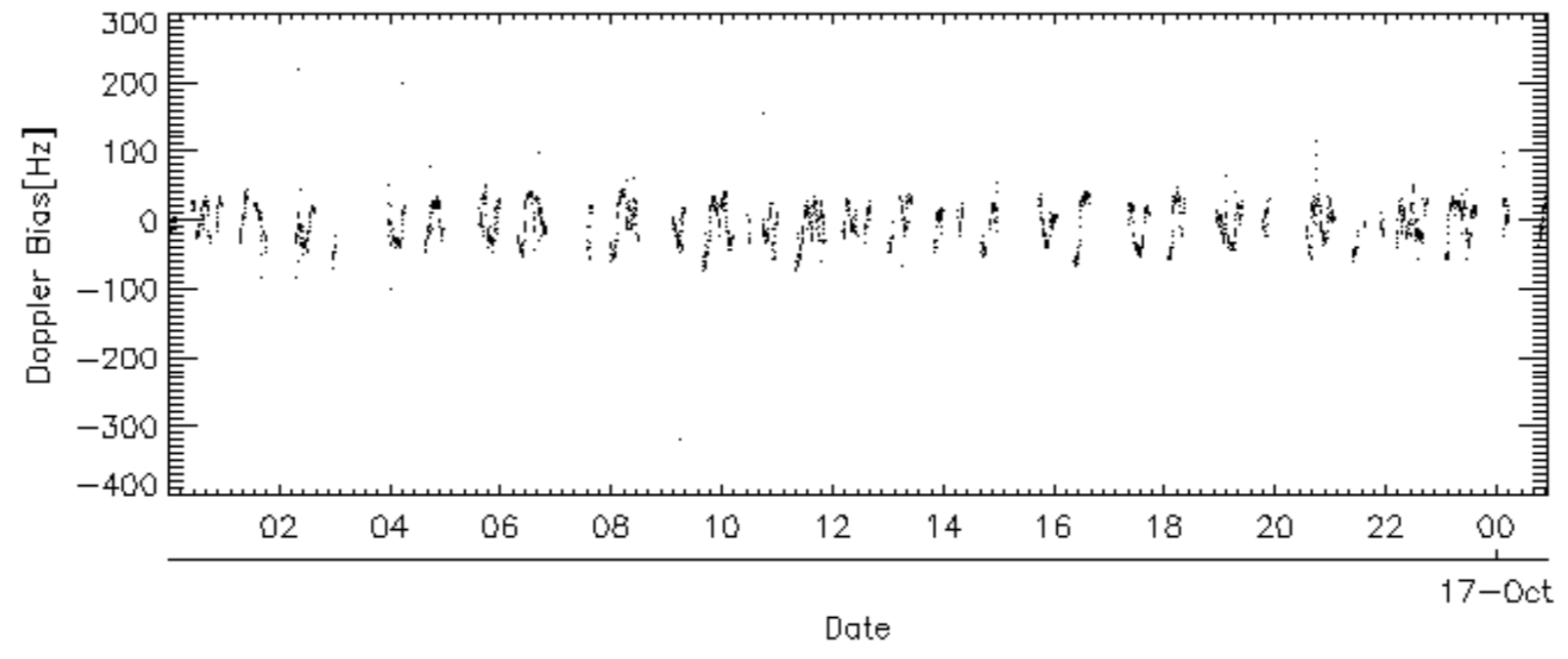
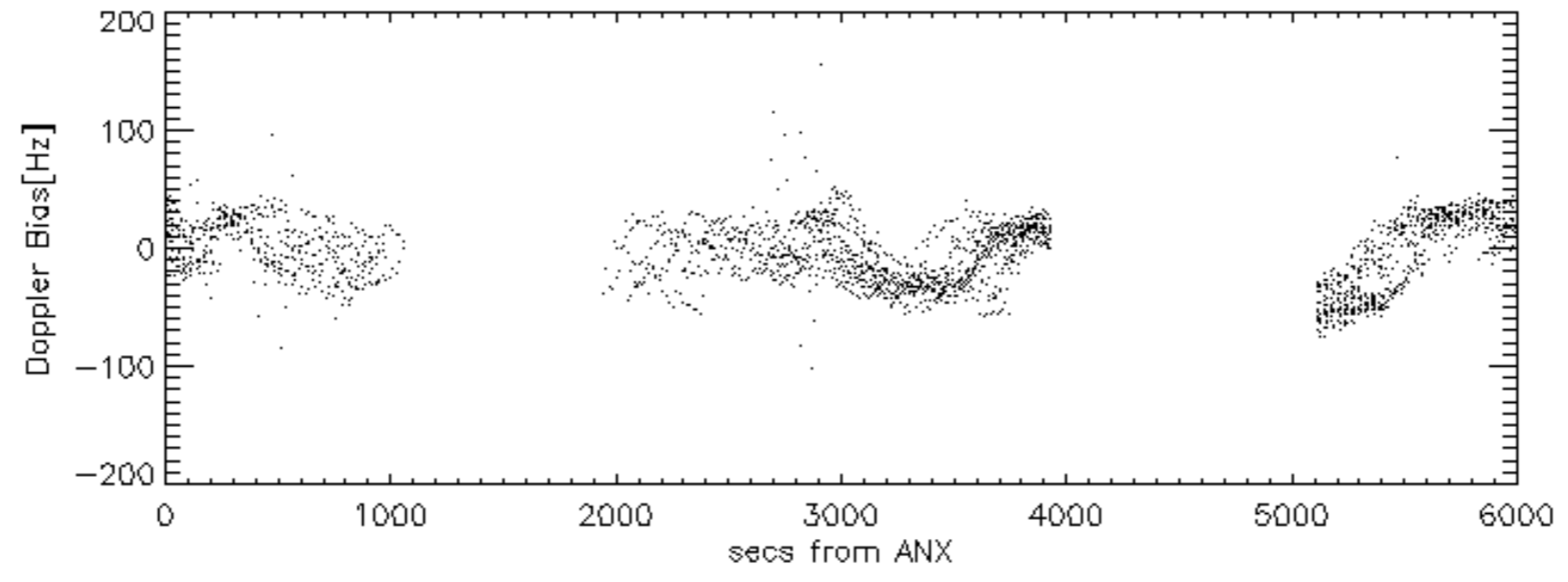
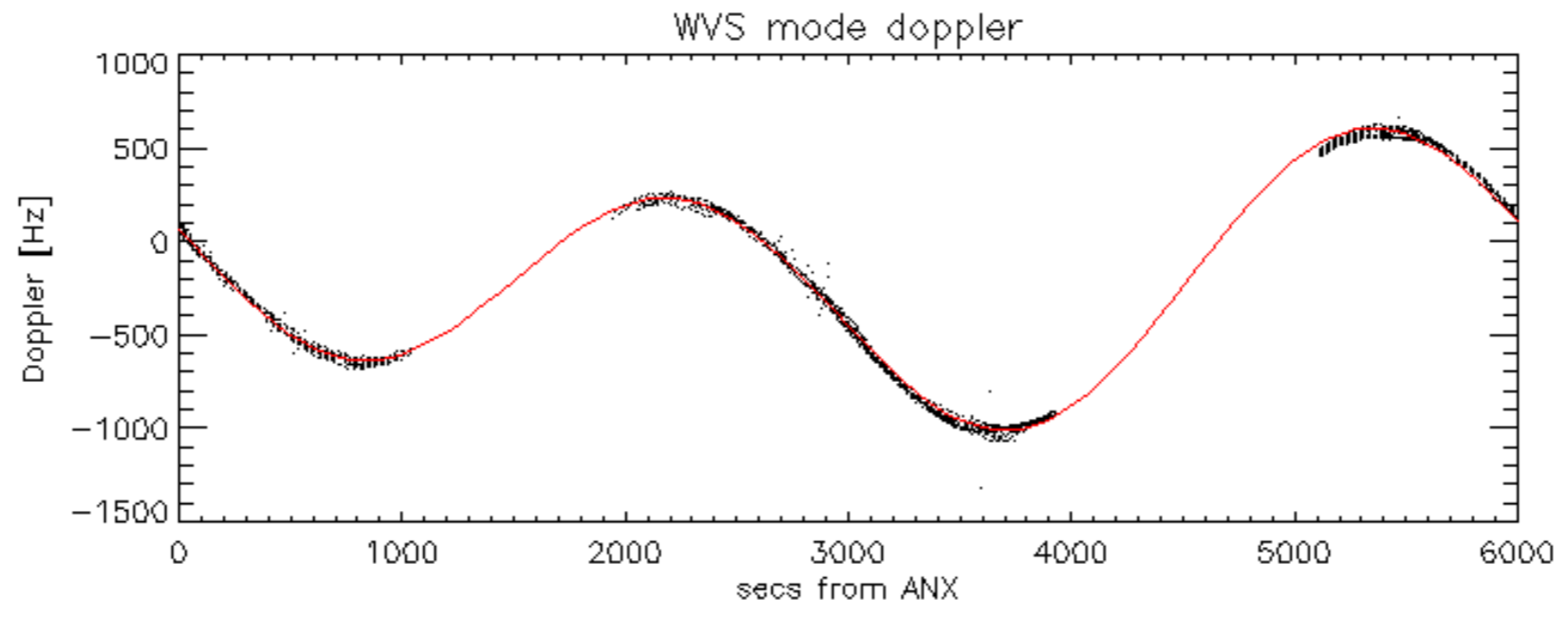


Doppler 'WVS' 'IS2' descending

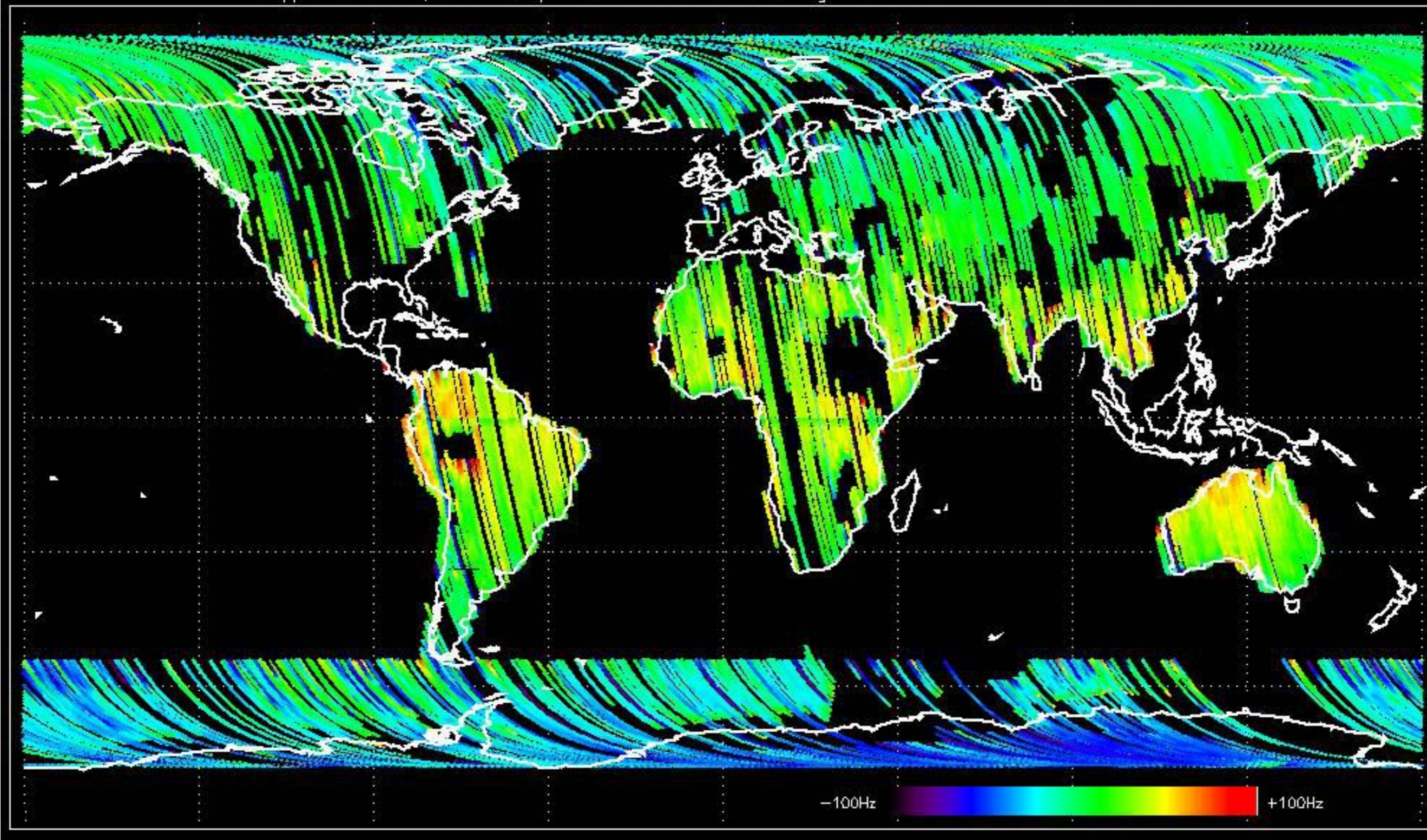


GM1 mode doppler

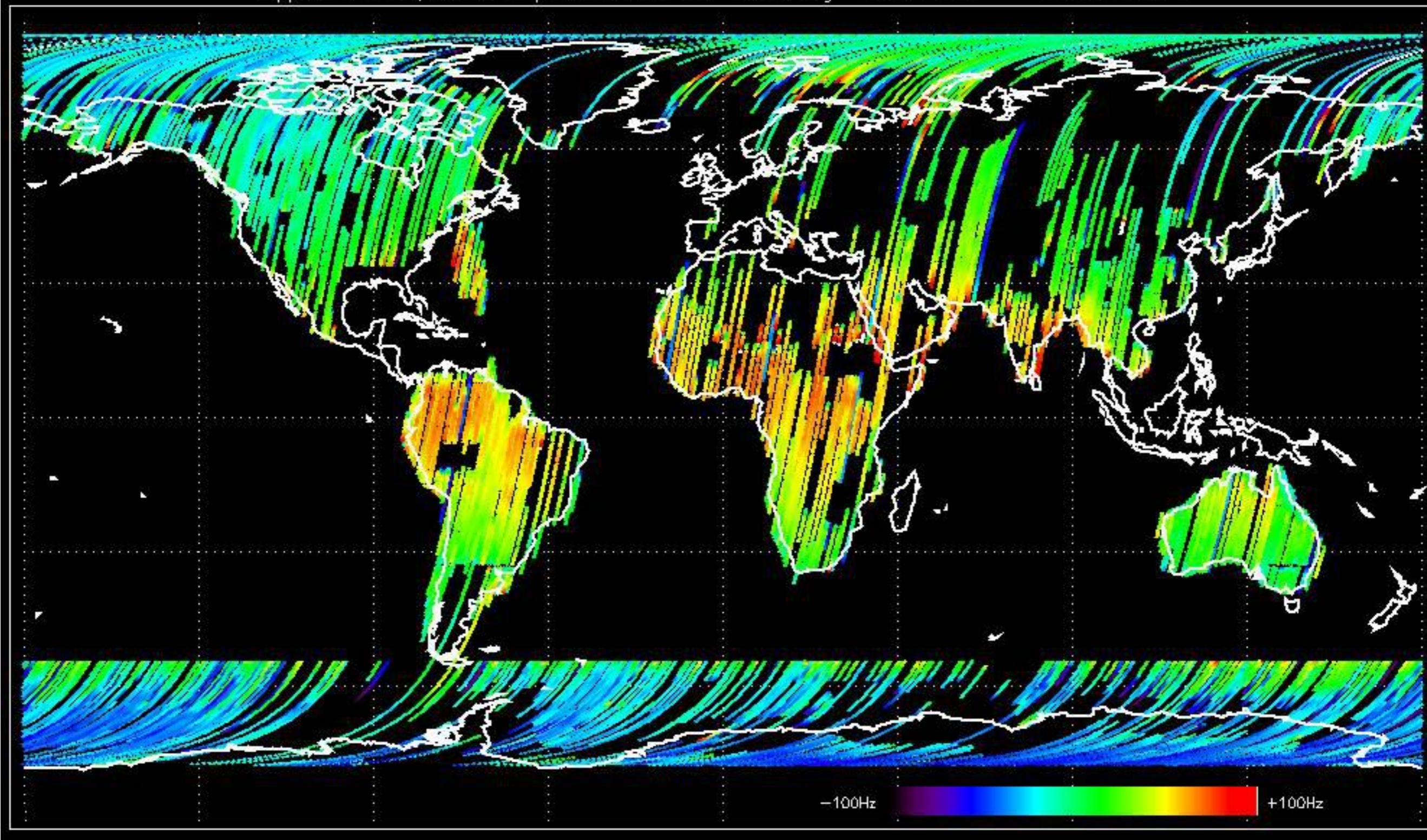




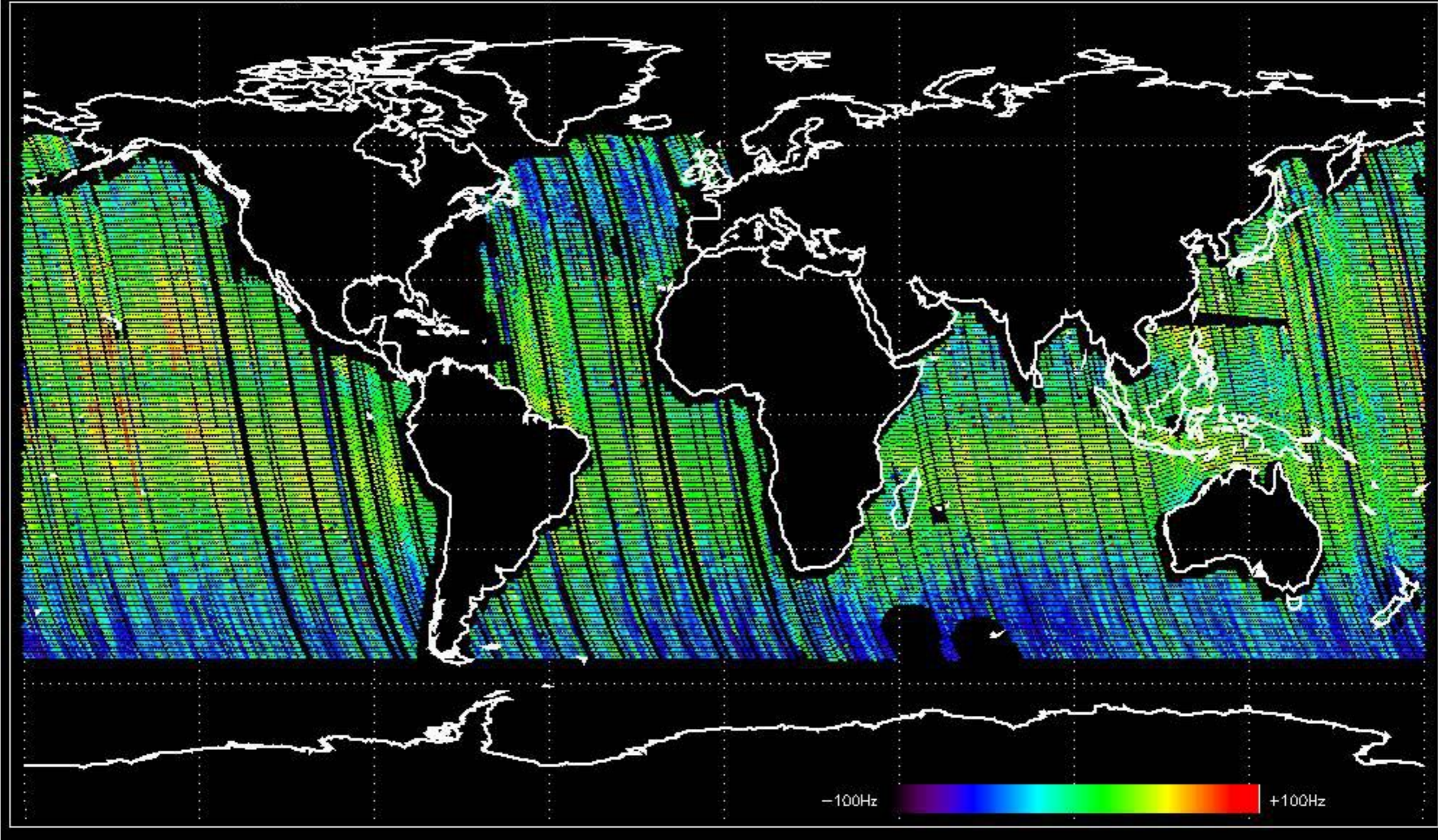
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -20.048719 Hz



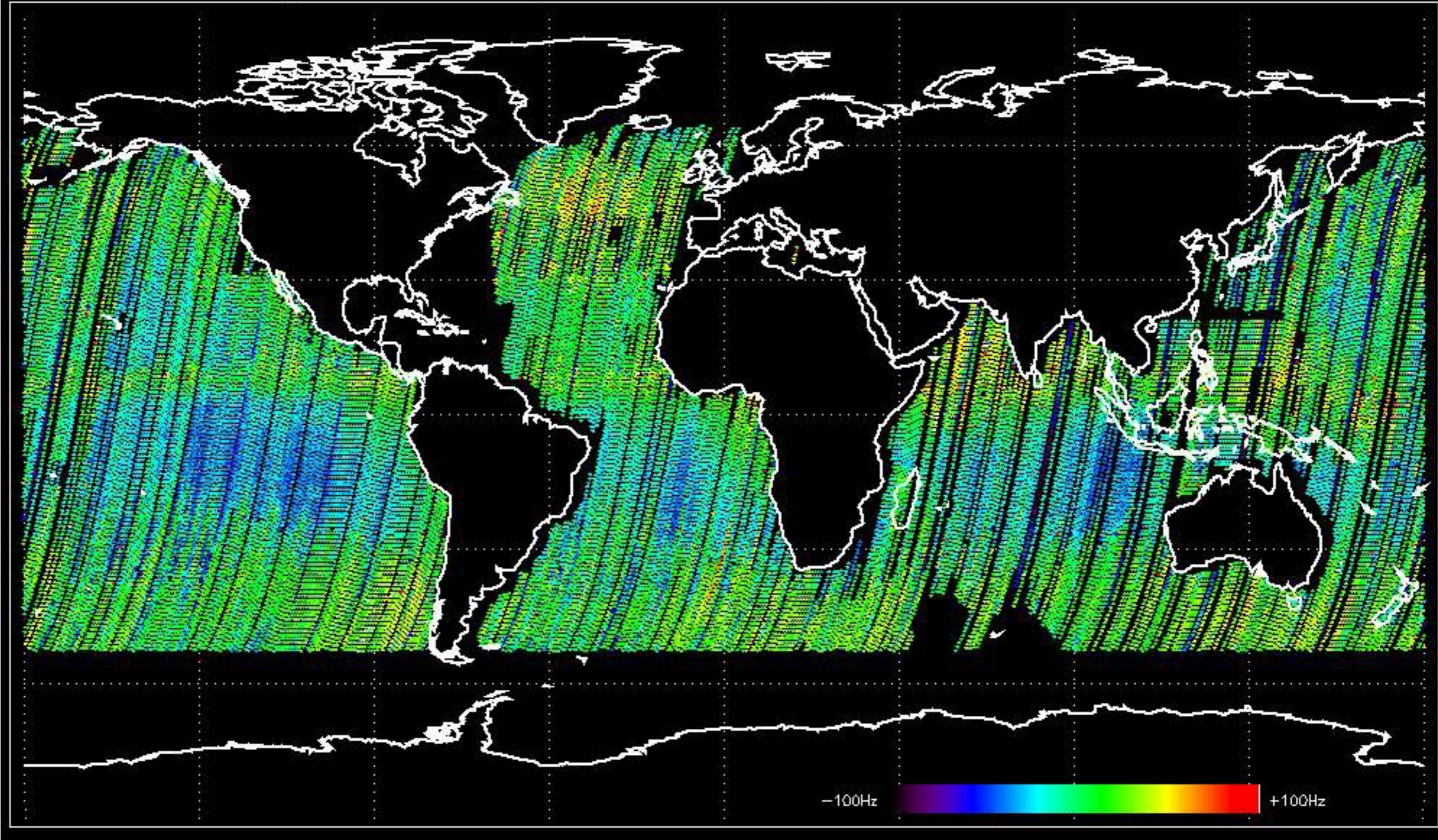
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.007469 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.3483842 Hz



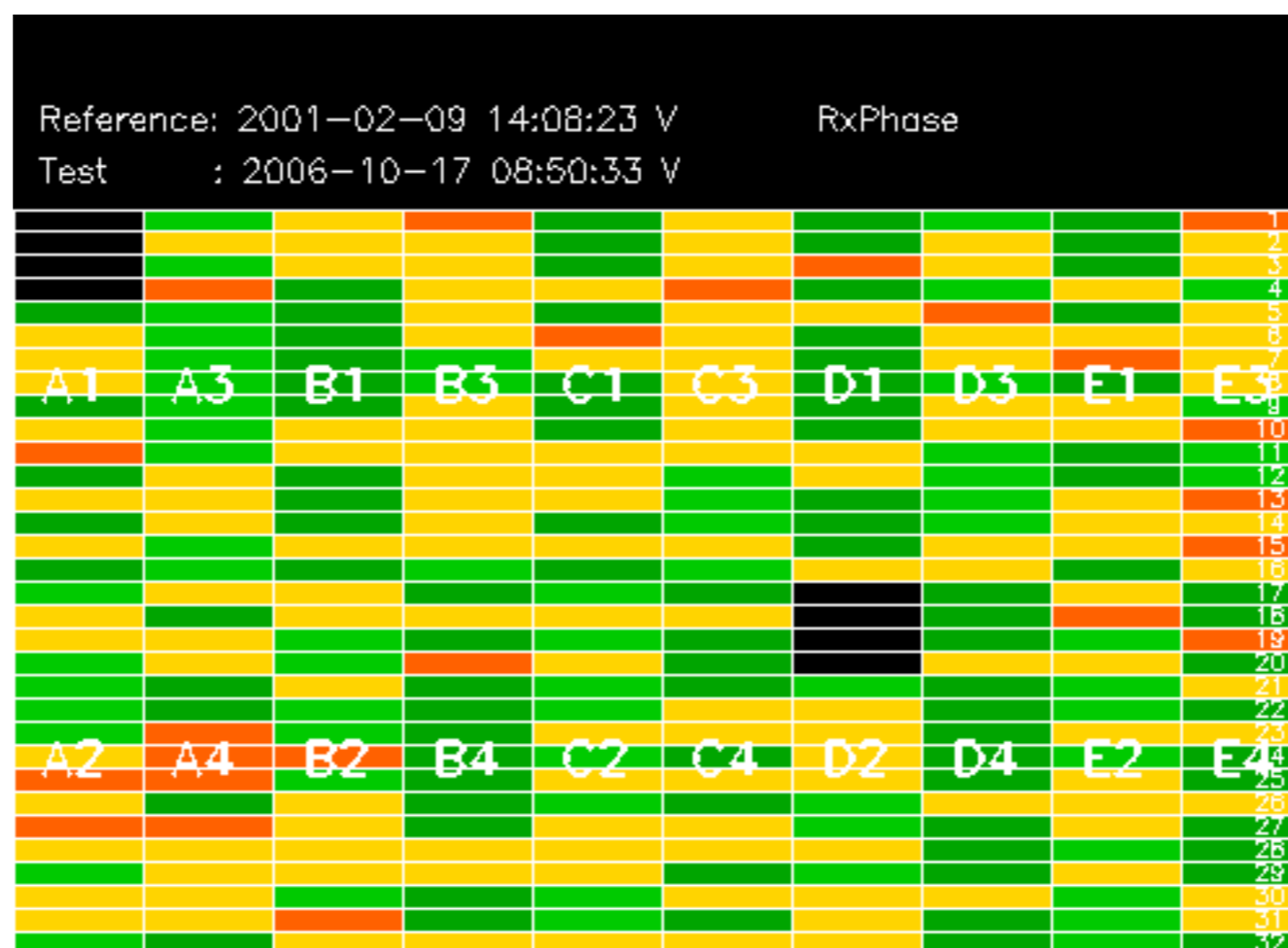
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.983614 Hz

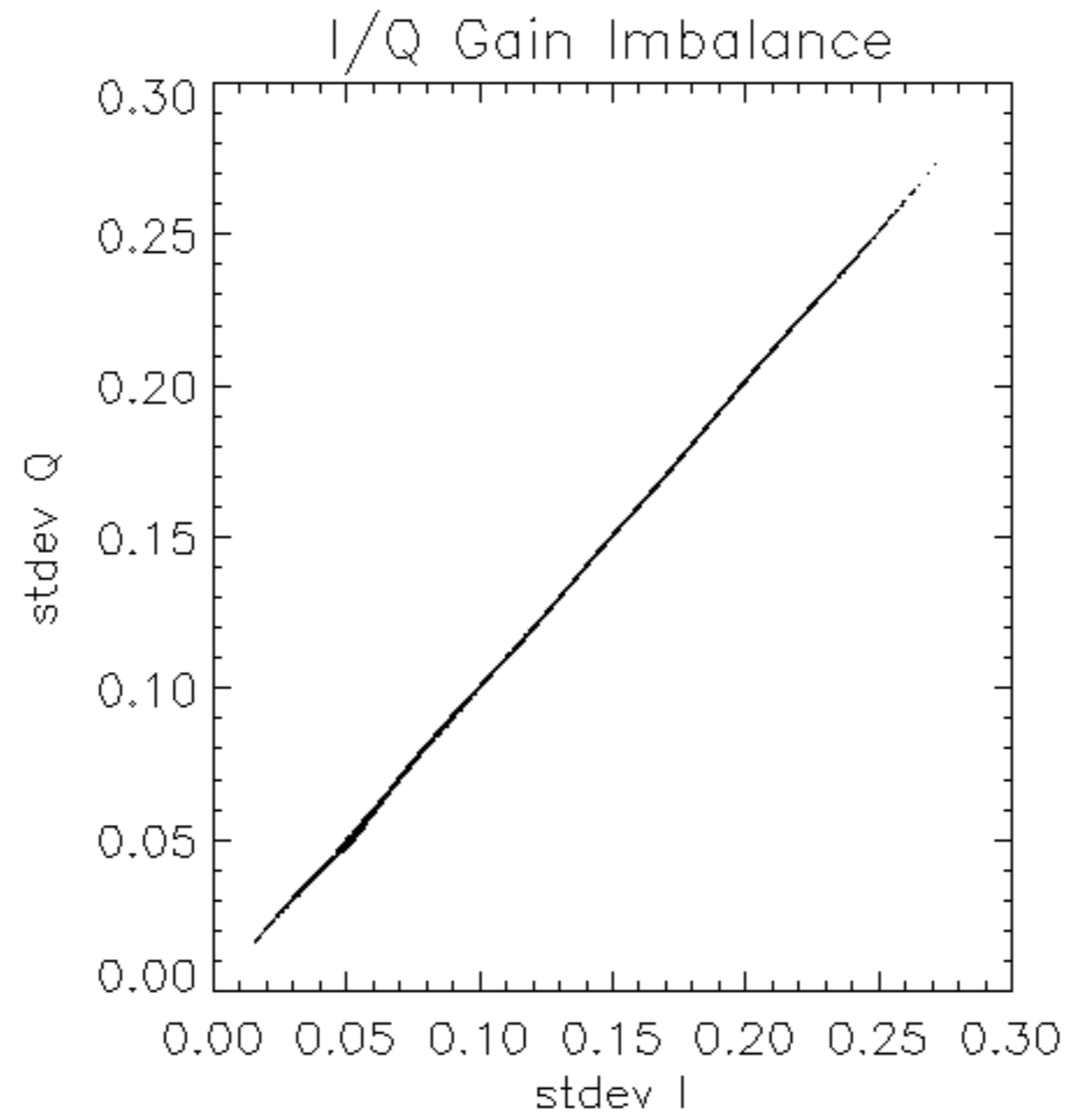


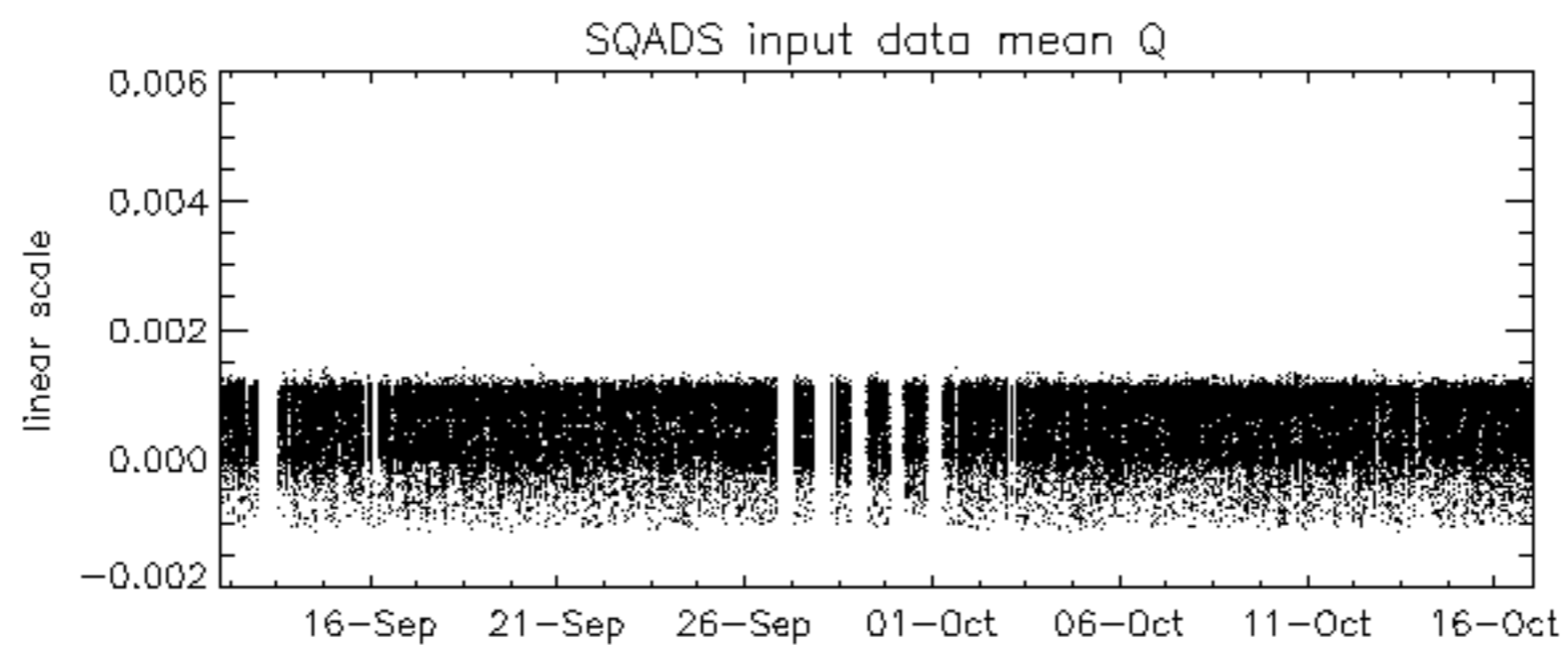
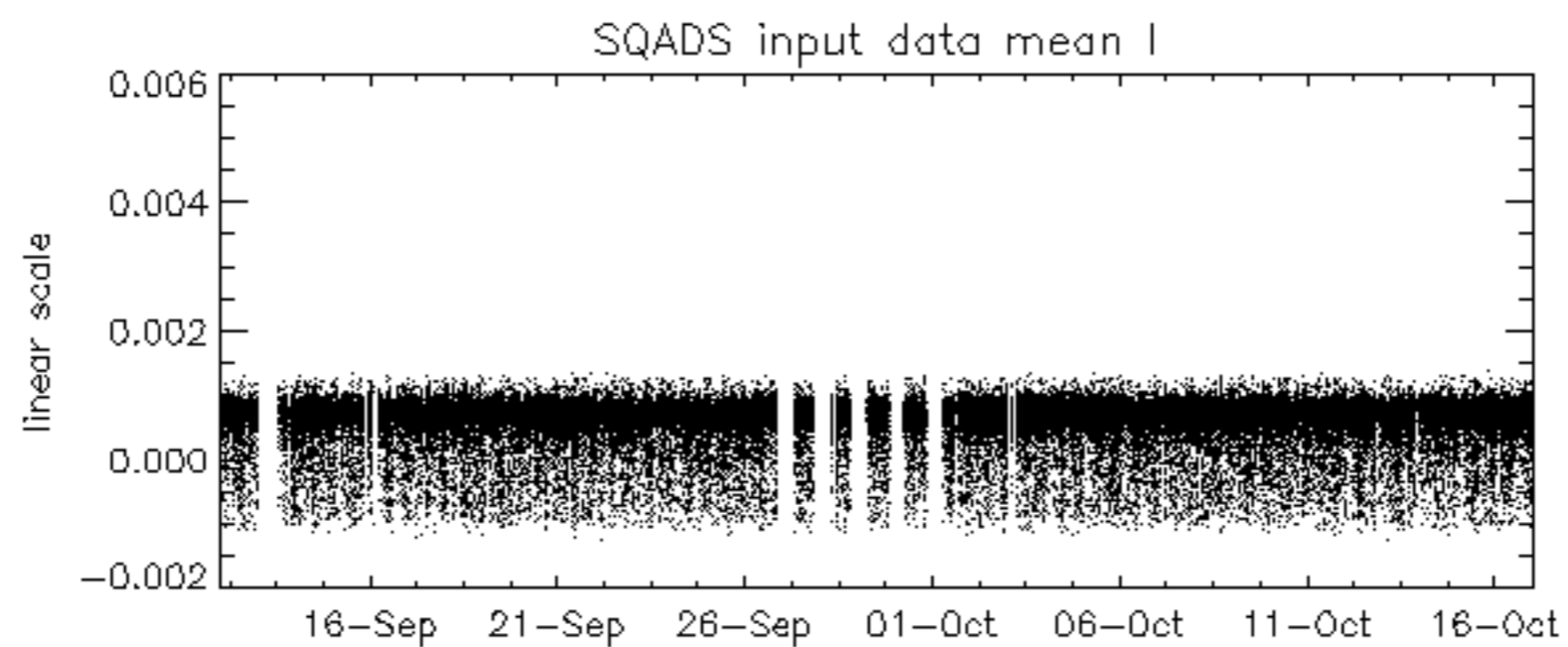
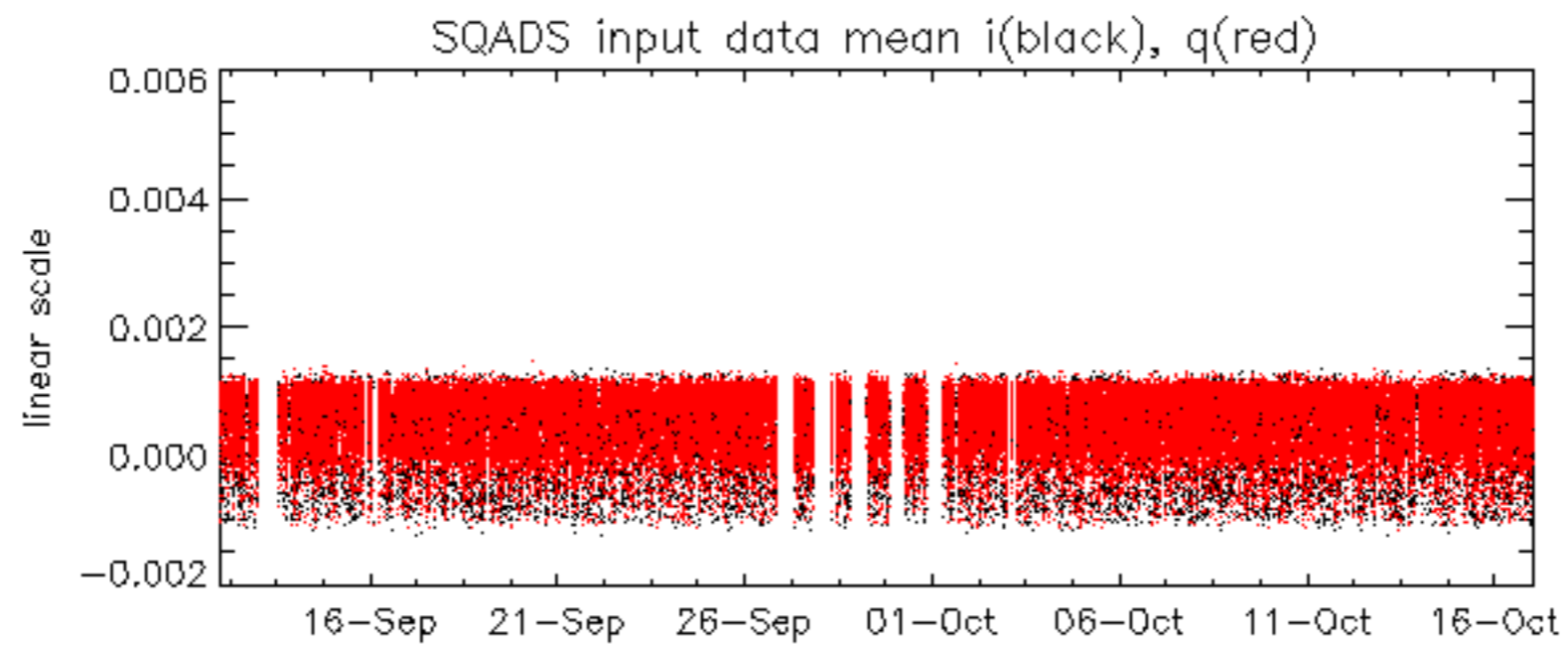
No anomalies observed on available MS products:

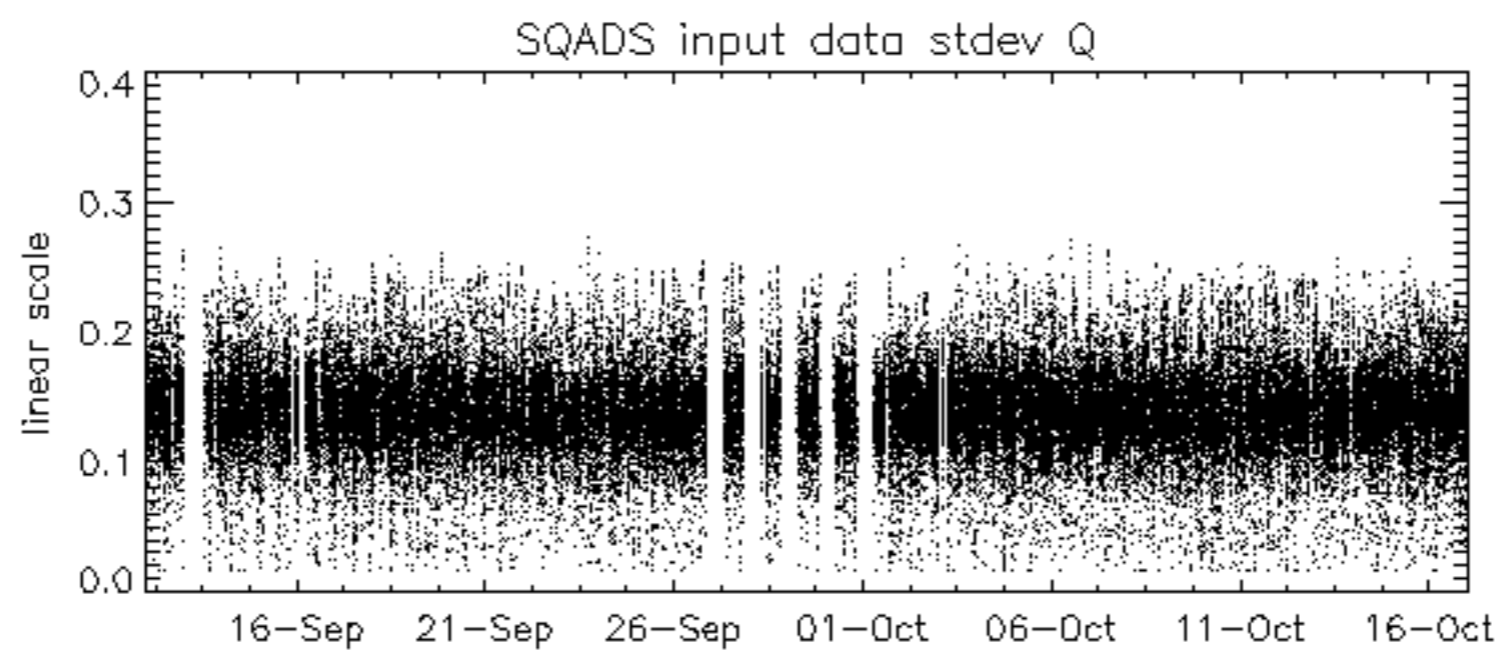
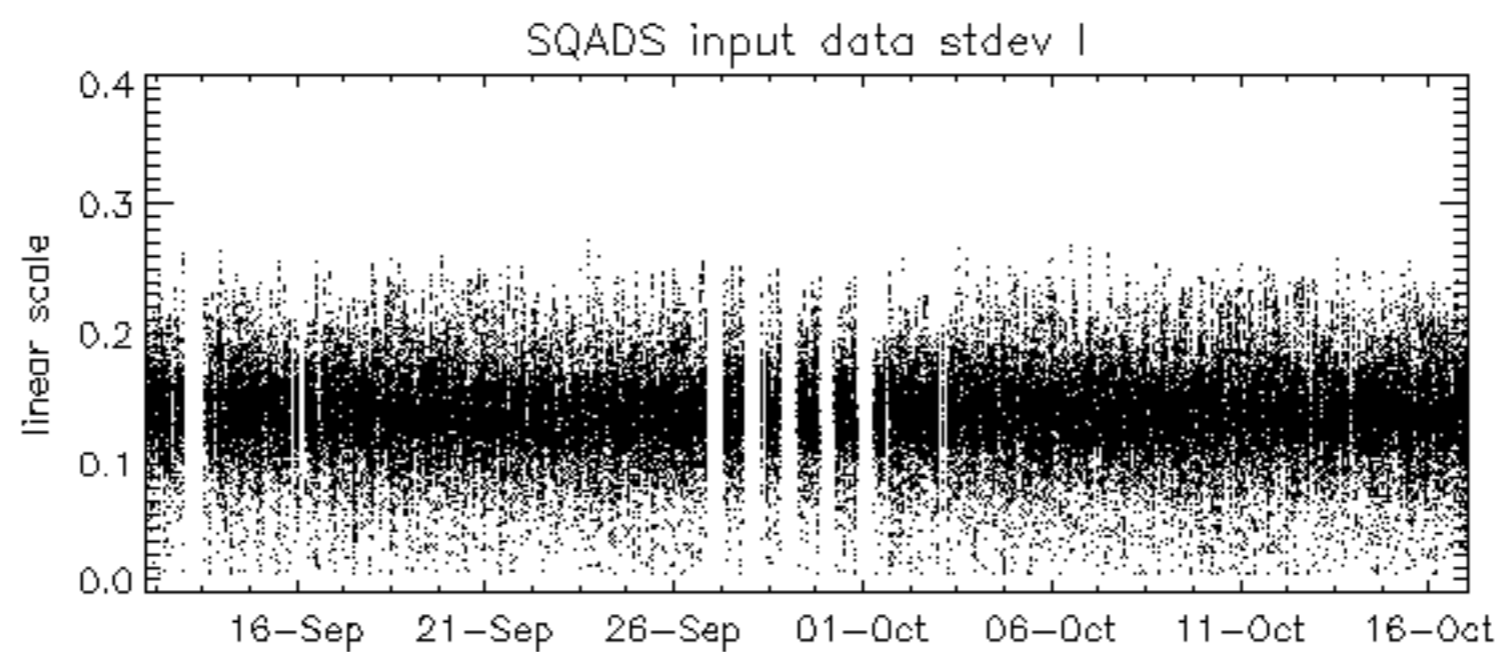
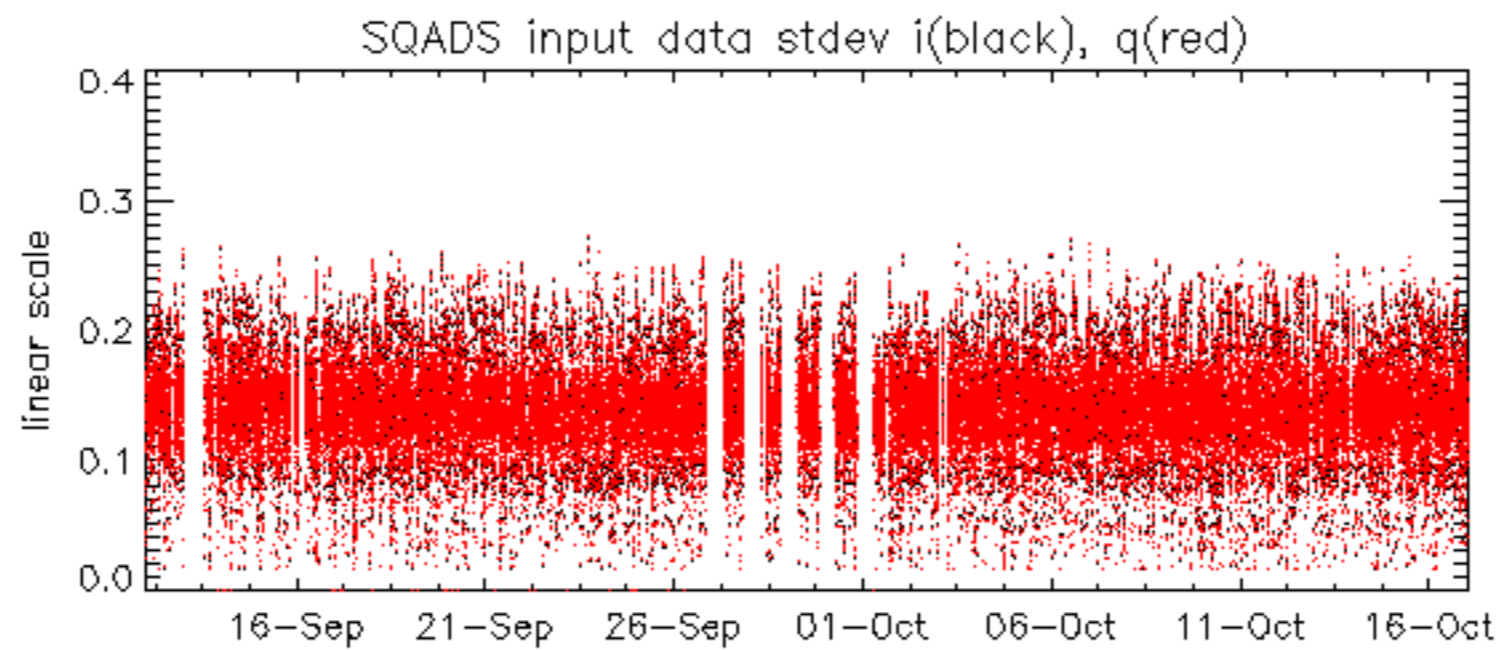
No anomalies observed.



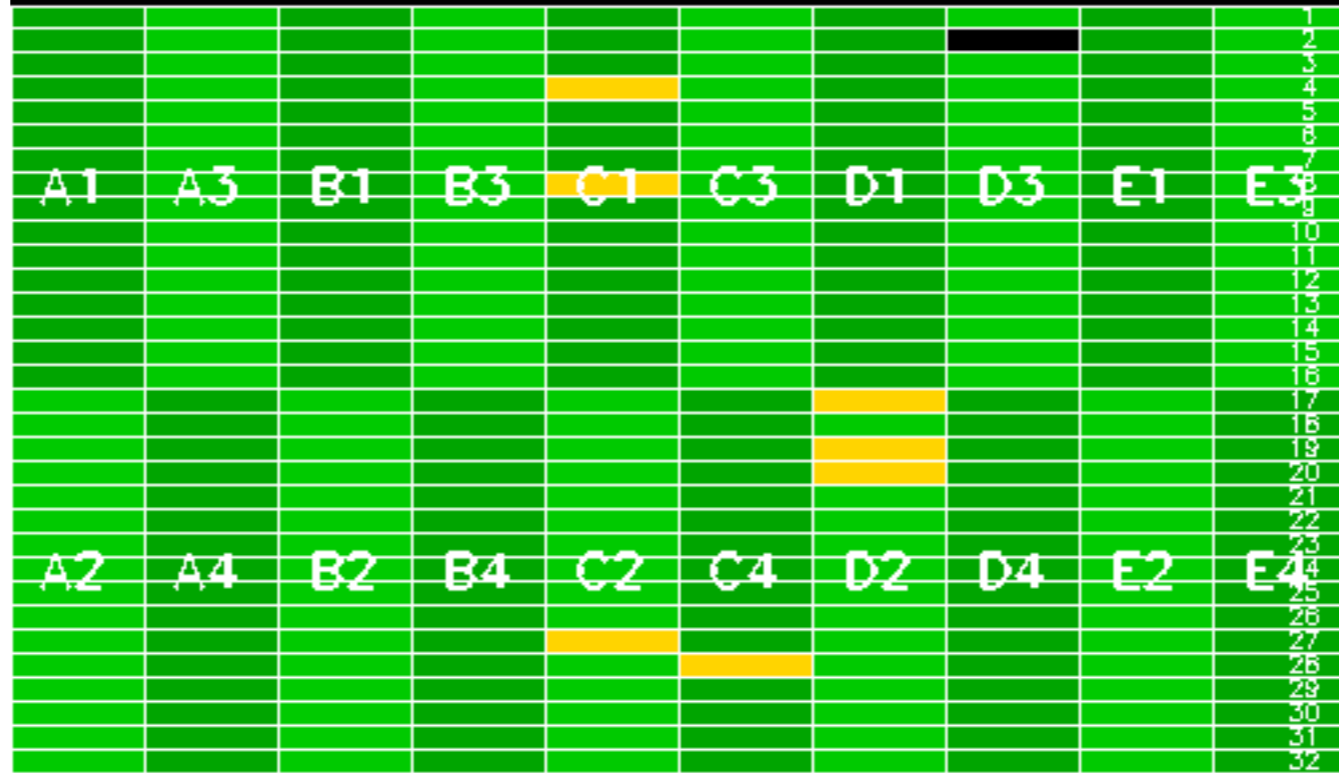








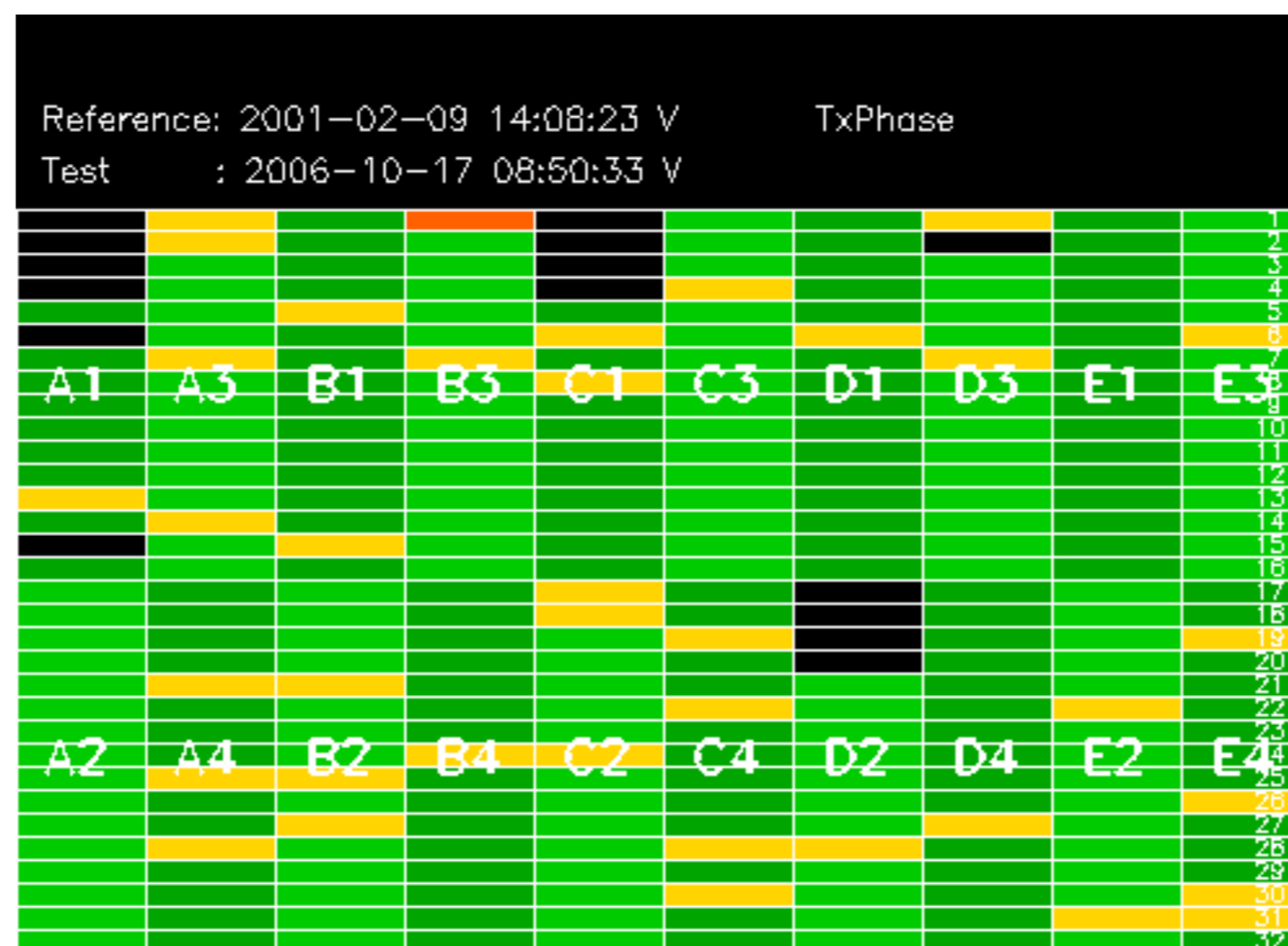
Reference: 2005-09-29 07:47:20 V TxGain
 Test : 2006-10-17 08:50:33 V



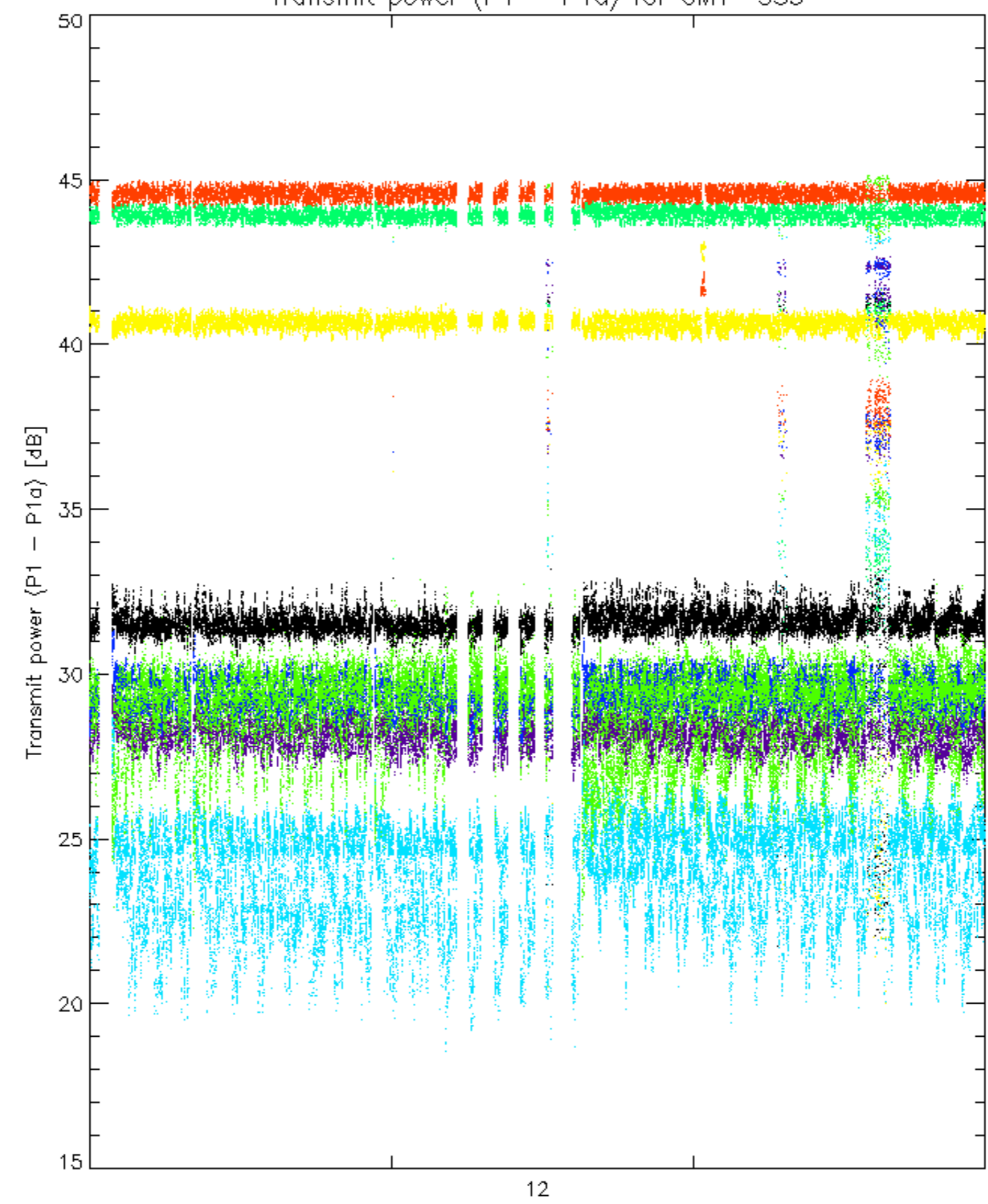
Summary of analysis for the last 3 days 2006101[567]

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

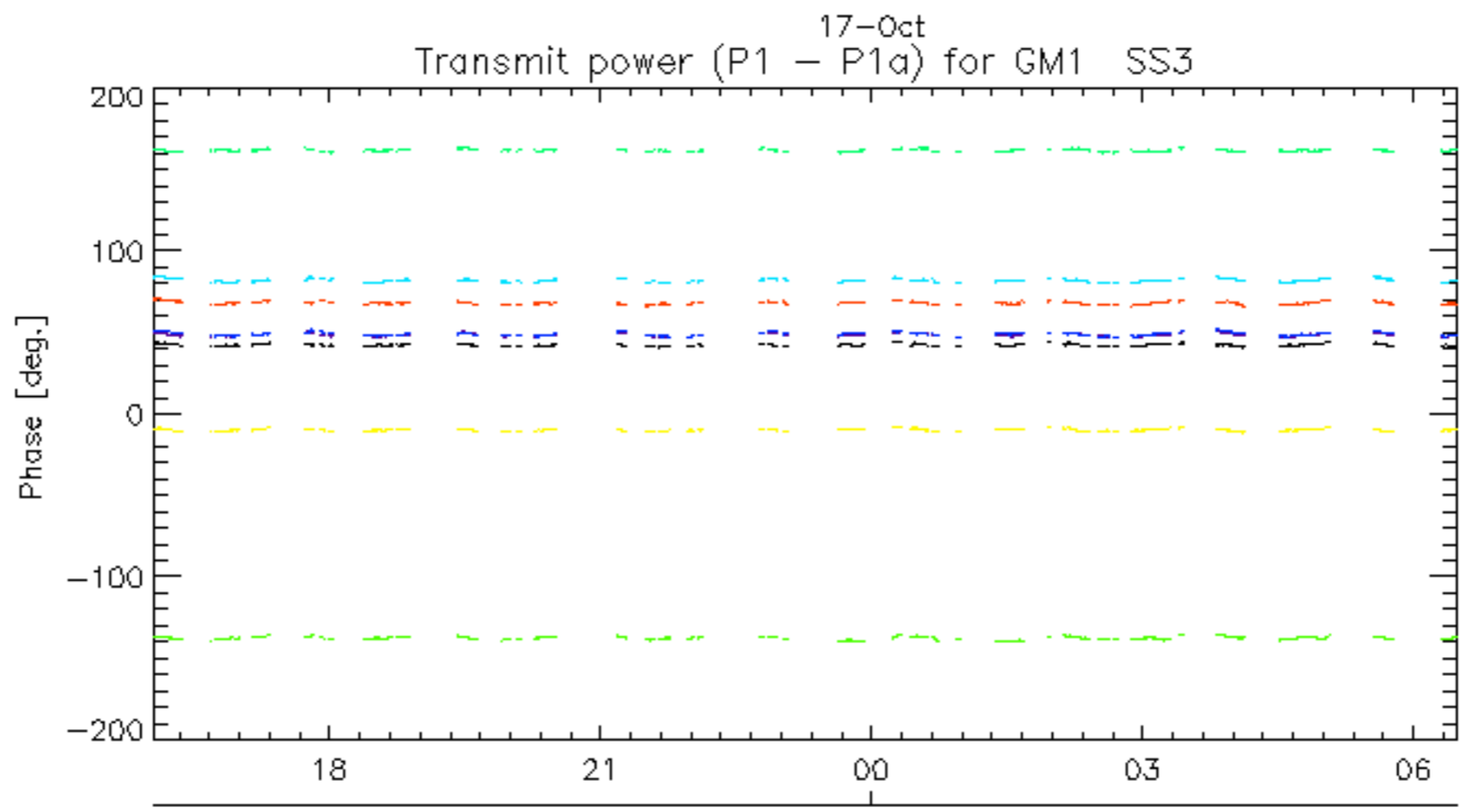
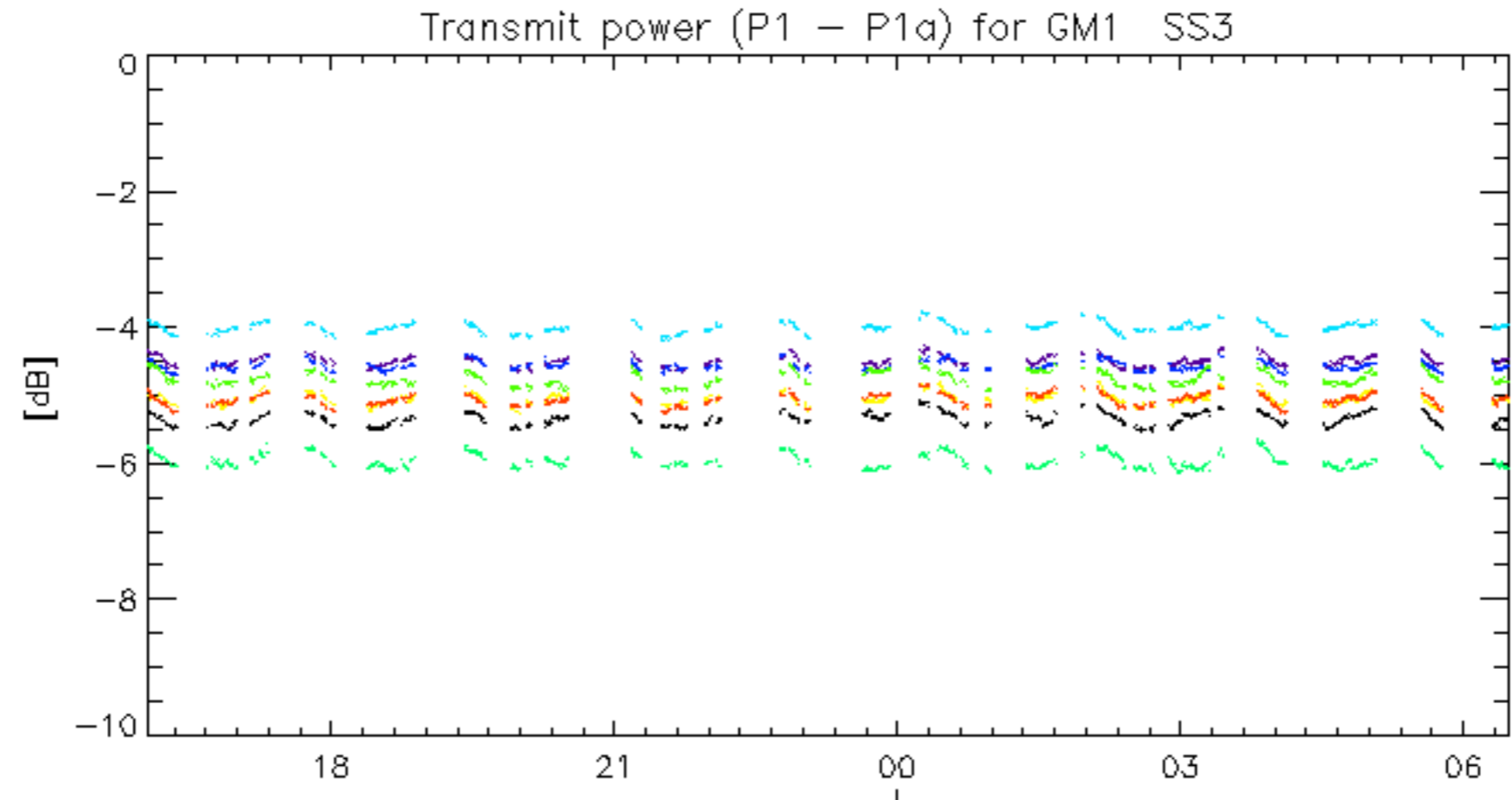
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20061016_002901_000000512052_00088_24190_7082.N1	1	0
ASA_GM1_1PNPDK20061015_114354_000004832052_00080_24182_6585.N1	0	74
ASA_GM1_1PNPDK20061016_101226_000002832052_00094_24196_6655.N1	0	15
ASA_GM1_1PNPDK20061016_101852_000003802052_00094_24196_6652.N1	0	6



Transmit power (P1 - P1a) for GM1 SS3

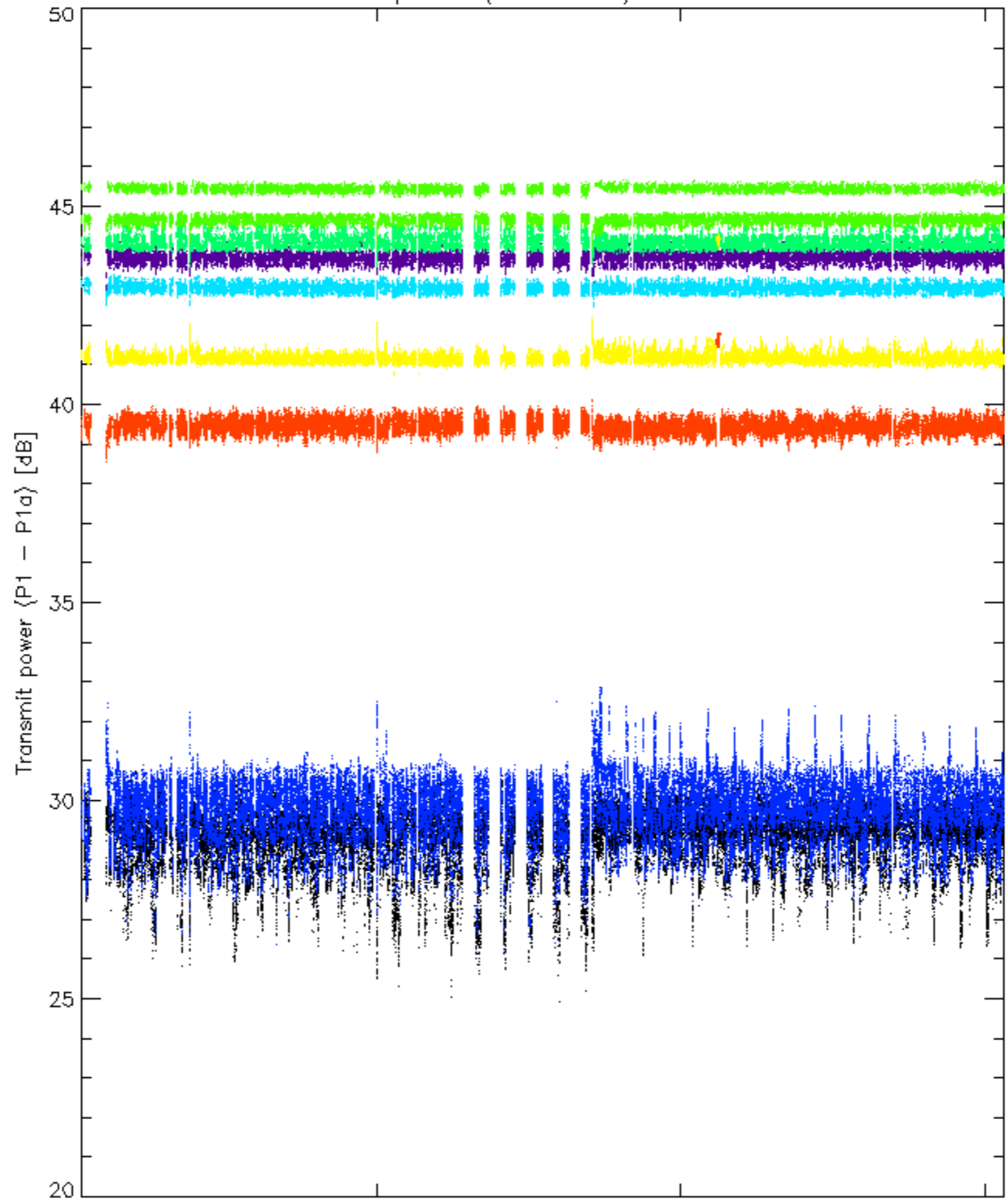


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



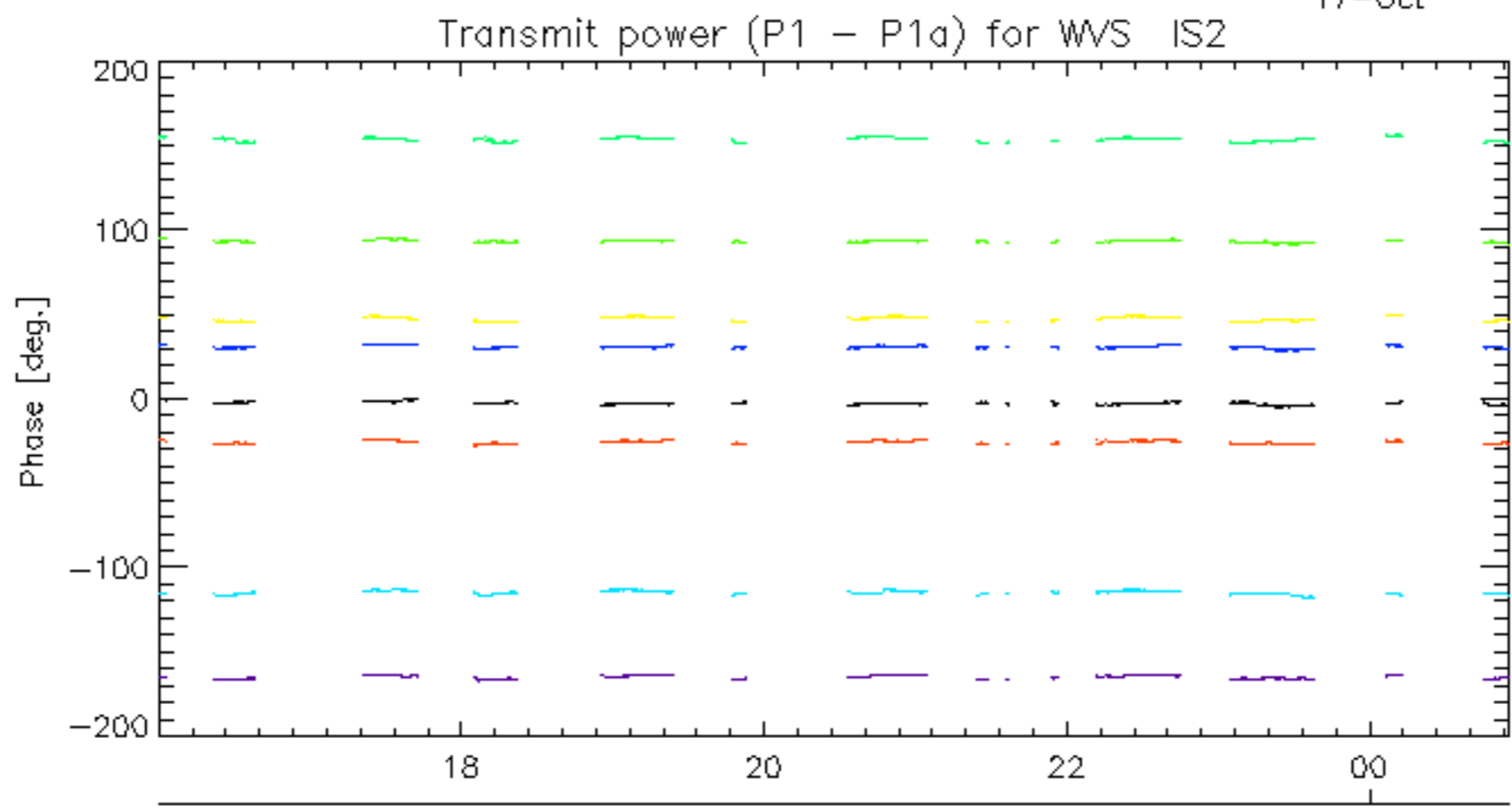
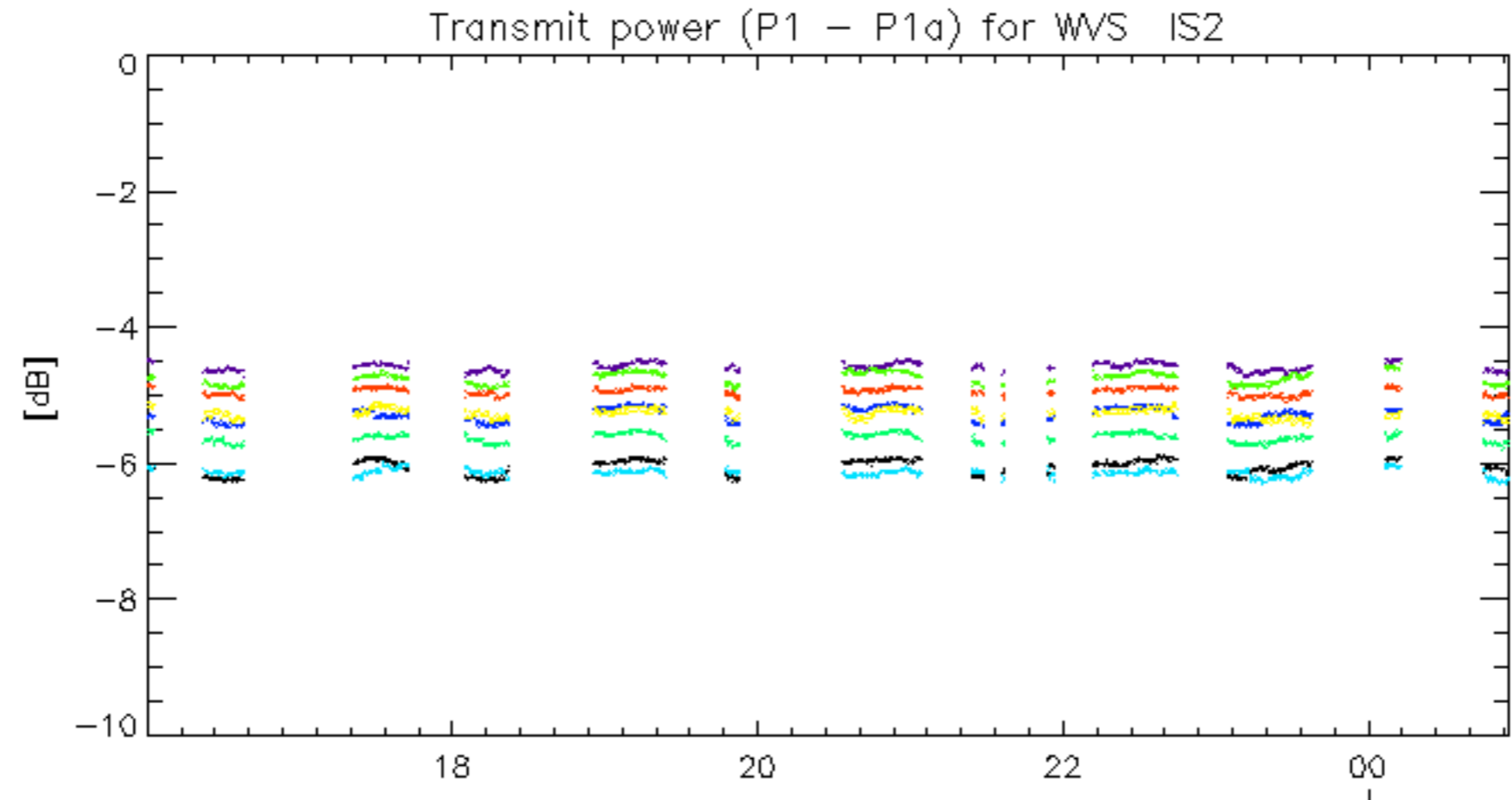
17-Oct
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



12

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



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

No unavailabilities during the reported period.