

PRELIMINARY REPORT OF 051019

last update on Wed Oct 19 16:41:39 GMT 2005

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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 2005-10-18 00:00:00 to 2005-10-19 16:41:40

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	75	3	2	15
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	45	75	3	2	15
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	75	3	2	15
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	75	3	2	15

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	24	43	27	14	58
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	24	43	27	14	58
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	24	43	27	14	58
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	24	43	27	14	58

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	20051018 042902
H	20051019 071837

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
<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

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	-3.587816	0.047220	0.309913
7	P1	-2.921590	0.024106	0.119883
11	P1	-4.120642	0.068565	0.270988
15	P1	-6.019120	0.016069	-0.048991
19	P1	-3.088395	0.061068	-0.384981
22	P1	-4.458501	0.017900	0.050336
26	P1	-4.336522	0.063154	0.347467
30	P1	-5.675881	0.017786	-0.184382
3	P1	-15.752066	1.731870	2.001503
7	P1	-16.798973	4.176587	2.852251
11	P1	-16.972803	8.964546	4.111251
15	P1	-14.058184	7.402168	4.007701
19	P1	-13.554195	0.065979	-0.351184
22	P1	-17.303572	21.235279	6.491026
26	P1	-17.401064	21.040550	6.940516
30	P1	-17.161928	8.644107	4.216186

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.872471	0.098008	0.025000
7	P2	-22.729580	0.113510	0.188924
11	P2	-16.808647	0.139252	0.337615
15	P2	-7.241575	0.111846	0.112118
19	P2	-9.106063	0.145958	-0.385186
22	P2	-17.664829	0.126714	-0.340587
26	P2	-16.114725	0.104609	0.076833
30	P2	-19.642509	0.096282	0.105311

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.184663	0.005339	-0.039473
7	P3	-8.184663	0.005339	-0.039473
11	P3	-8.184663	0.005339	-0.039473
15	P3	-8.184663	0.005339	-0.039473
19	P3	-8.184663	0.005339	-0.039473
22	P3	-8.184663	0.005339	-0.039473
26	P3	-8.184663	0.005339	-0.039473
30	P3	-8.184663	0.005339	-0.039473

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	-3.547495	0.169380	-0.640287
7	P1	-2.897730	0.057516	0.374438
11	P1	-2.923992	0.084082	0.411098
15	P1	-3.405986	0.022324	0.110335
19	P1	-3.302475	0.037469	-0.271258
22	P1	-5.077280	0.085300	-0.368760
26	P1	-5.673090	0.151371	-0.615380
30	P1	-5.123841	0.121924	-0.500970
3	P1	-11.552884	0.335330	0.814741
7	P1	-11.053719	16.884556	6.287913
11	P1	-11.628970	34.882446	8.971555
15	P1	-12.063786	29.297737	8.274573
19	P1	-15.355842	0.196698	-0.598971
22	P1	-20.612532	1.606263	0.902928

26	P1	-17.566309	3.549672	2.623232
30	P1	-19.119478	1.512061	1.955377

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.695980	0.040891	-0.032425
7	P2	-23.058607	0.092697	0.062424
11	P2	-11.744117	0.030045	-0.030896
15	P2	-4.901688	0.041155	0.045268
19	P2	-6.821132	0.095532	-0.430761
22	P2	-8.041949	0.071576	-0.382062
26	P2	-23.866615	0.043330	0.024745
30	P2	-22.096090	0.050208	0.207919

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.027292	0.002846	-0.039003
7	P3	-8.027364	0.002852	-0.038997
11	P3	-8.027264	0.002859	-0.039530
15	P3	-8.027352	0.002847	-0.039111
19	P3	-8.027418	0.002853	-0.038831
22	P3	-8.027264	0.002857	-0.039254
26	P3	-8.027515	0.002854	-0.039152
30	P3	-8.027350	0.002856	-0.039105

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	0.000551529
	stdev	1.74867e-07
MEAN Q	mean	0.000536643
	stdev	2.16489e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137009
	stdev	0.00111116
STDEV Q	mean	0.137345
	stdev	0.00112724



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[789]

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_WSM_1PNPDE20051017_011919_000003912041_00389_18980_4497.N1	0	68
ASA_WSM_1PNPDE20051017_035606_000001472041_00391_18982_4517.N1	0	41
ASA_WSM_1PNPDE20051018_022852_000002392041_00404_18995_4709.N1	0	49
ASA_WSM_1PNPDK20051018_103117_000001842041_00409_19000_7408.N1	0	3



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

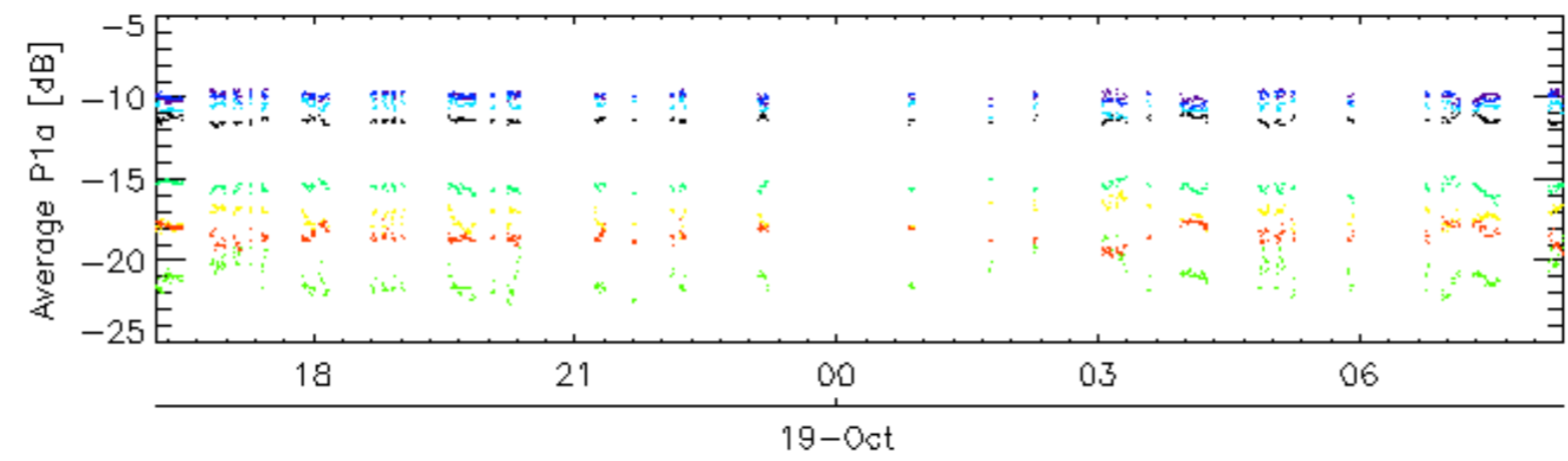
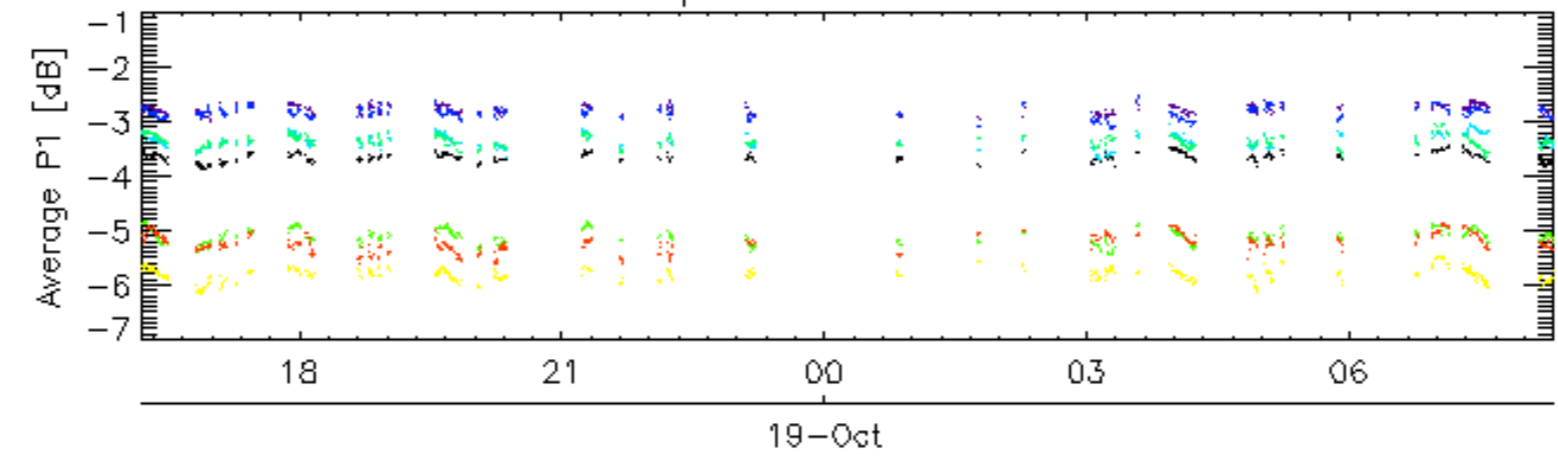
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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Acsending
<input type="checkbox"/>
Descending

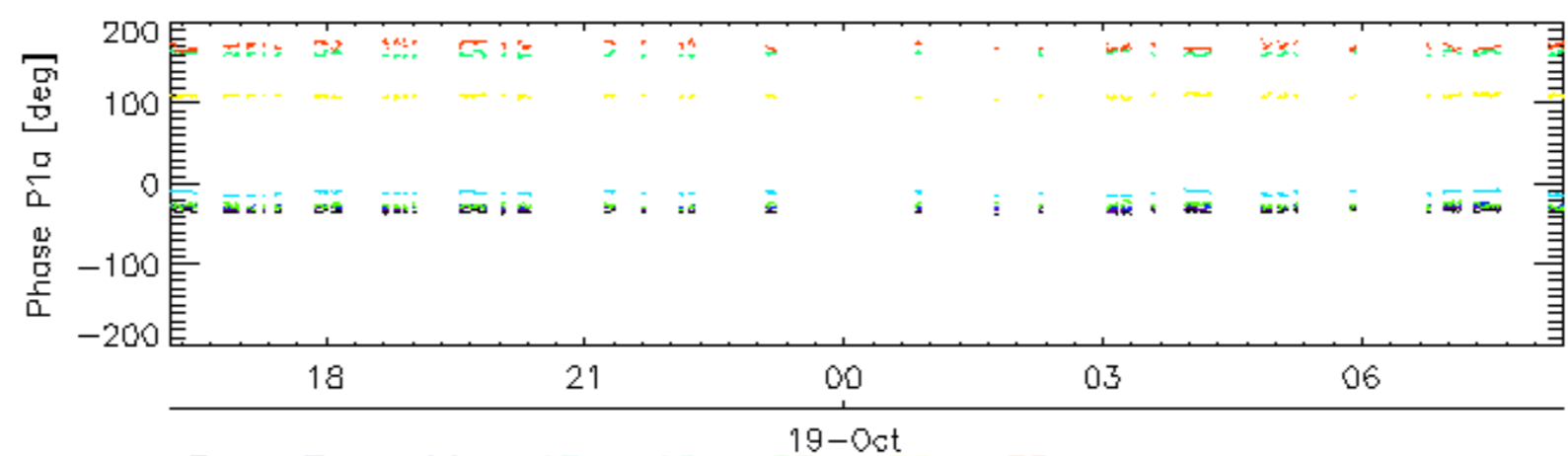
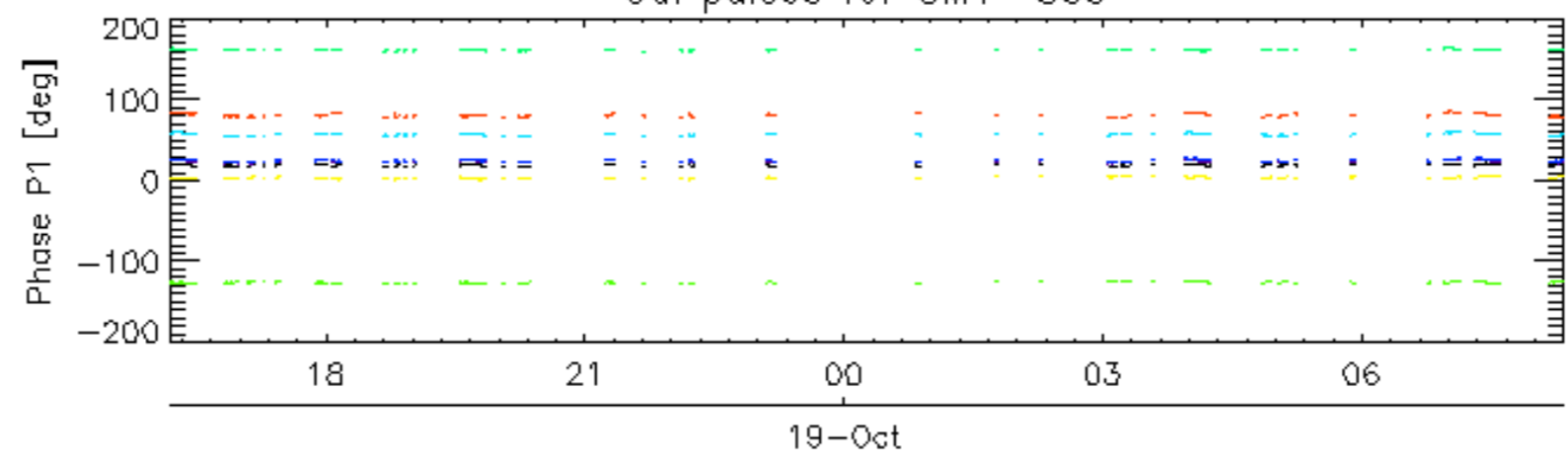
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

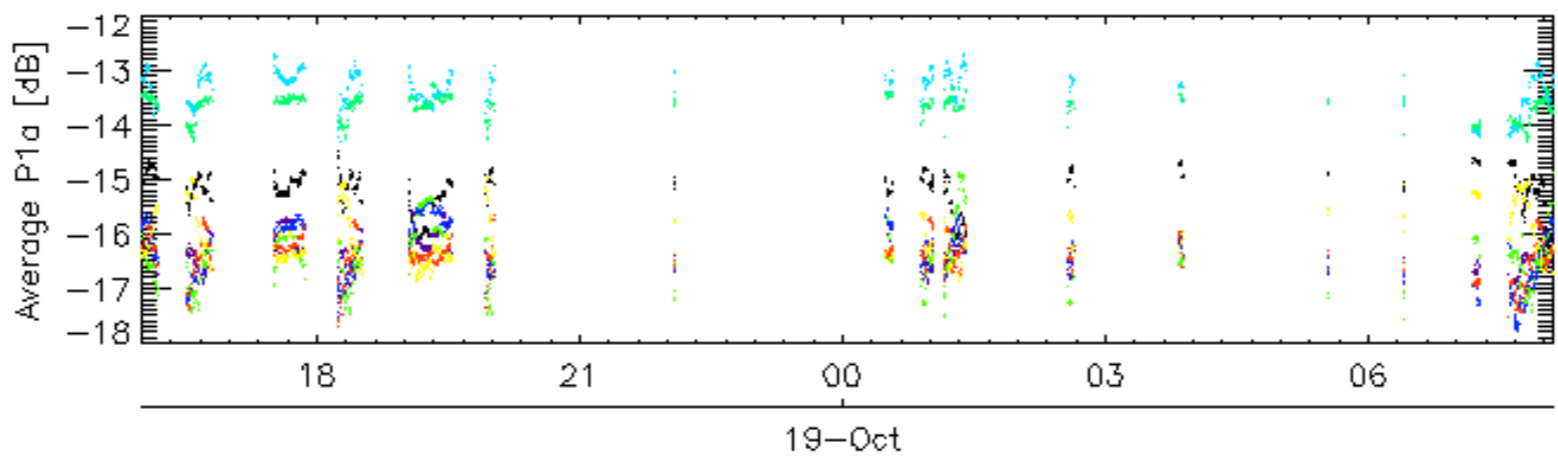
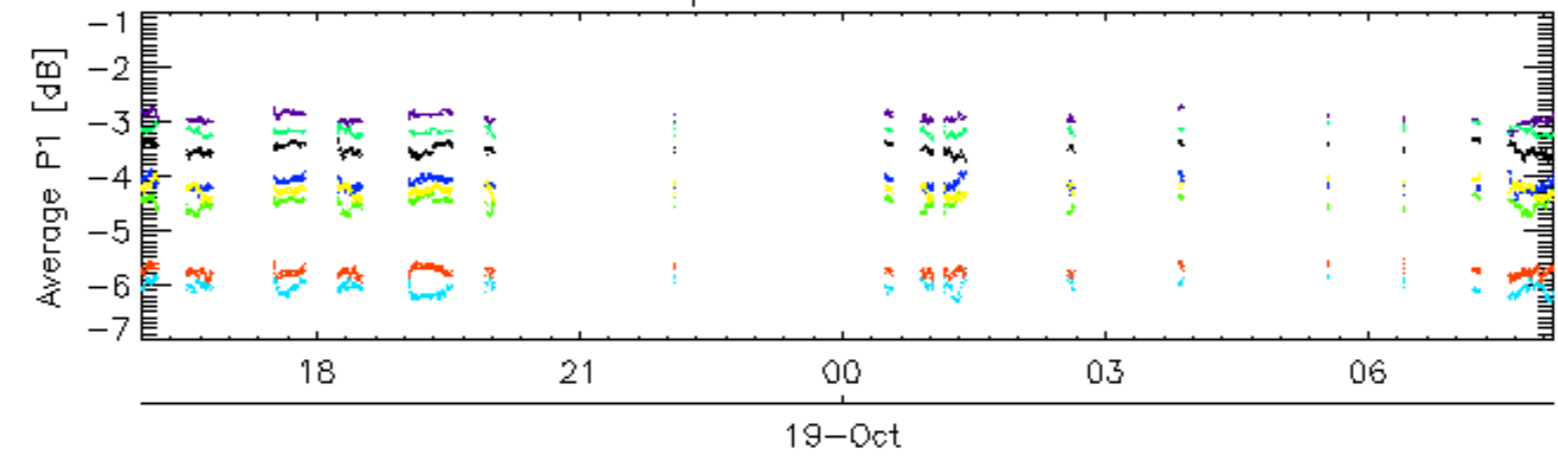


Cal pulses for GM1 SS3

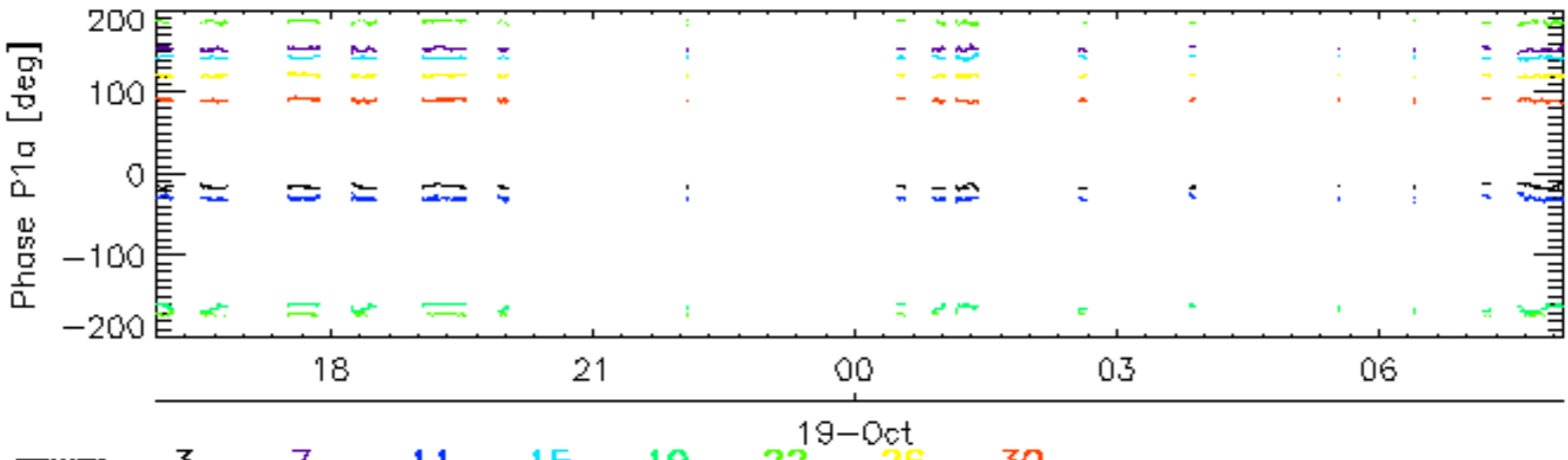
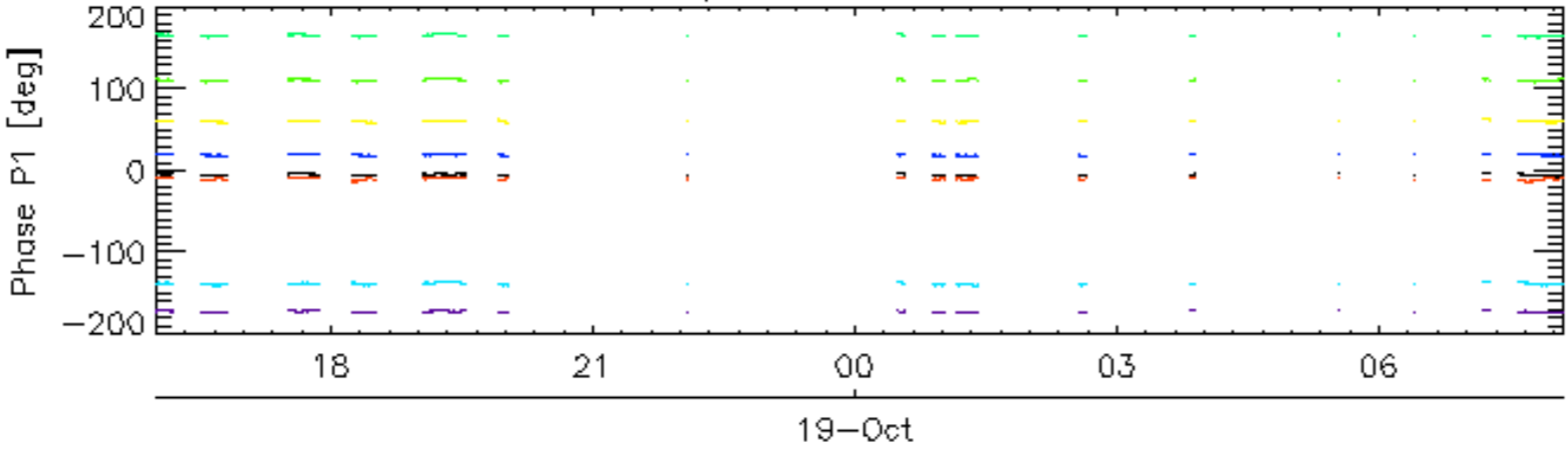


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

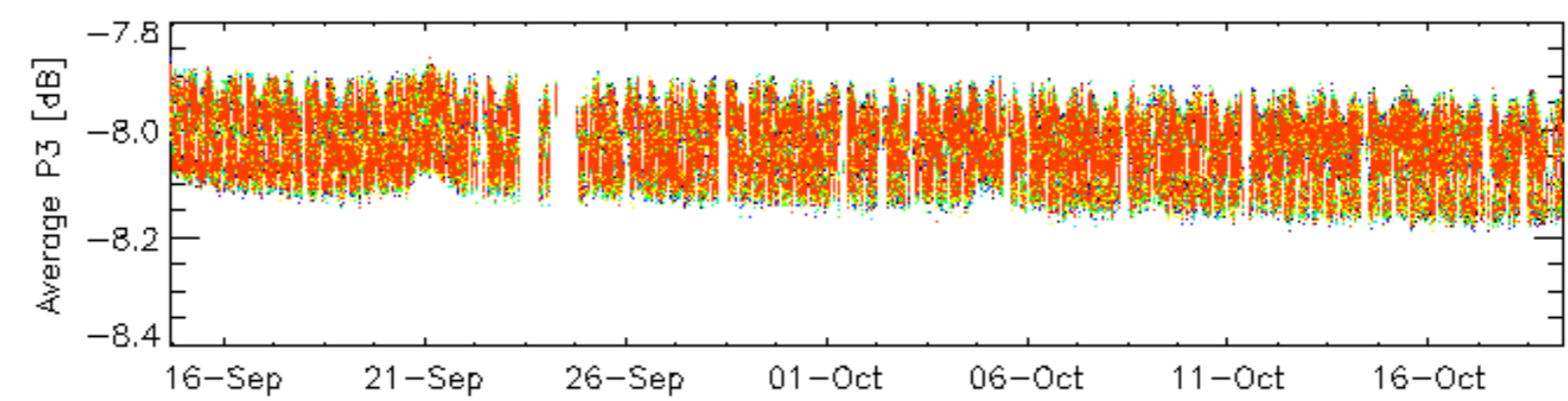
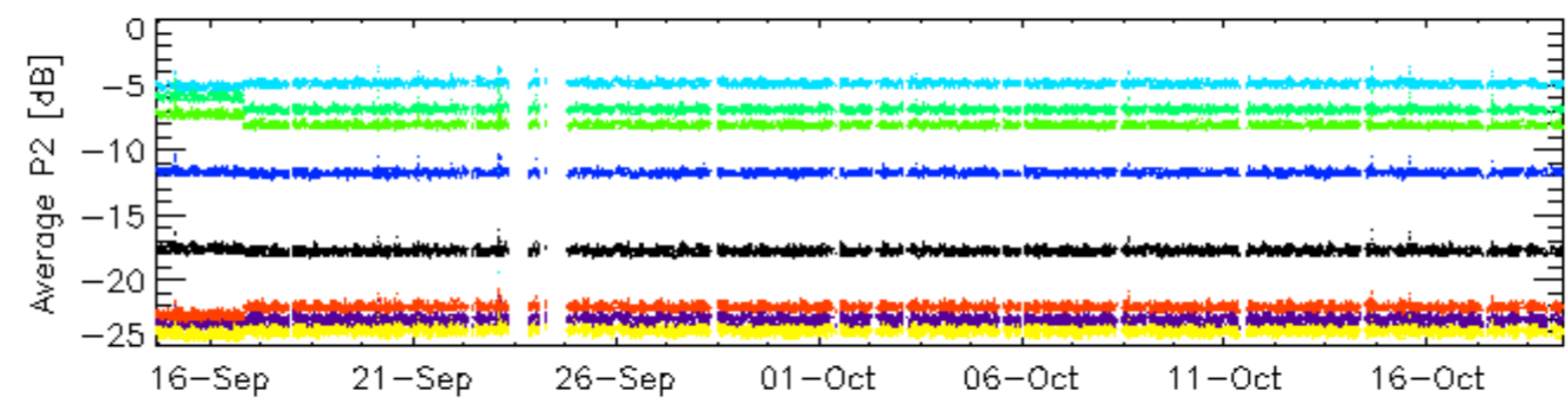
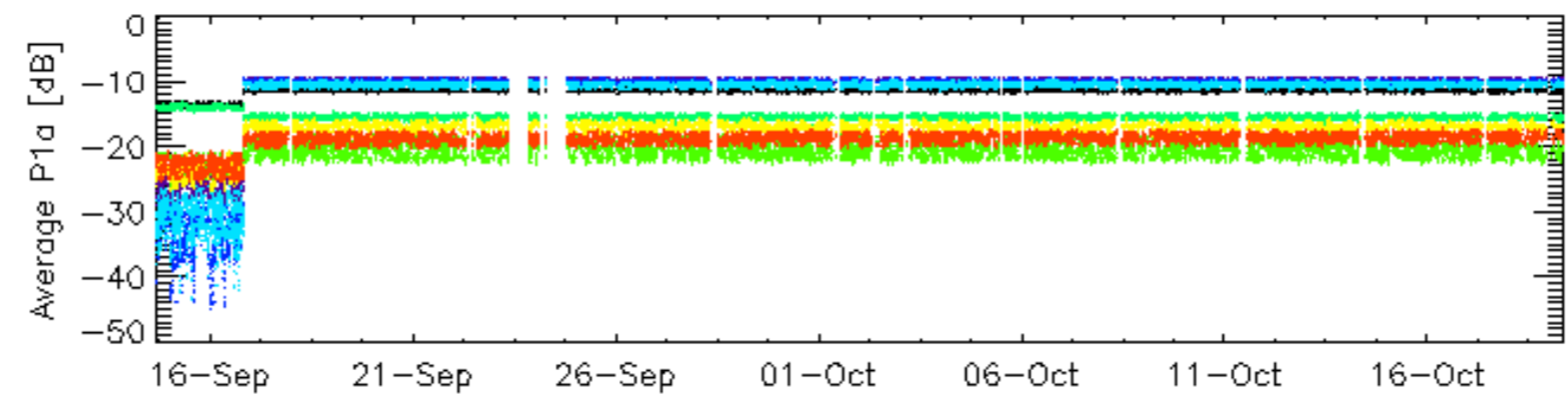
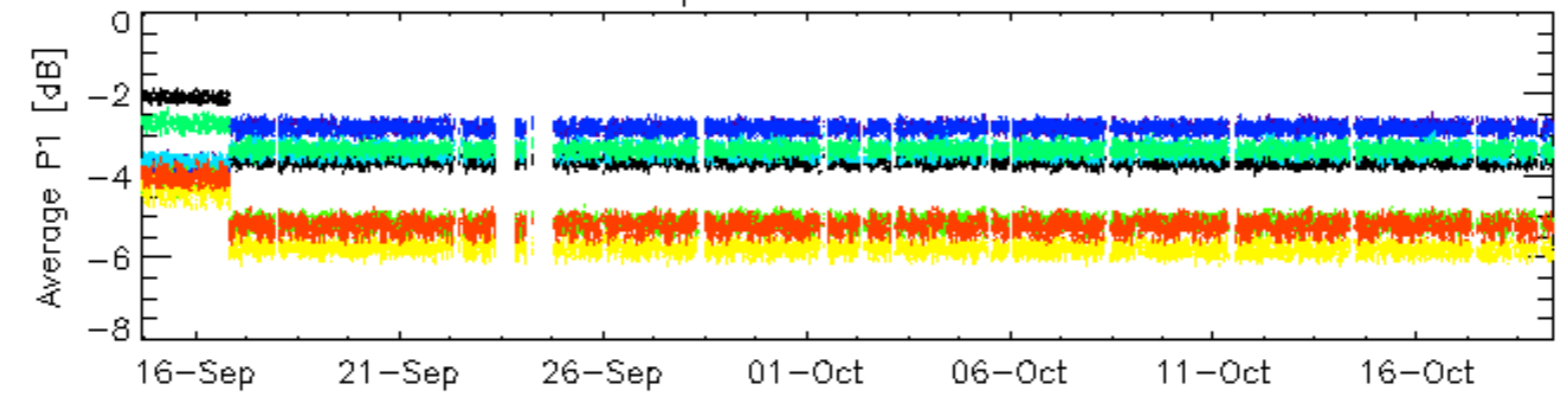


Cal pulses for WVS IS2



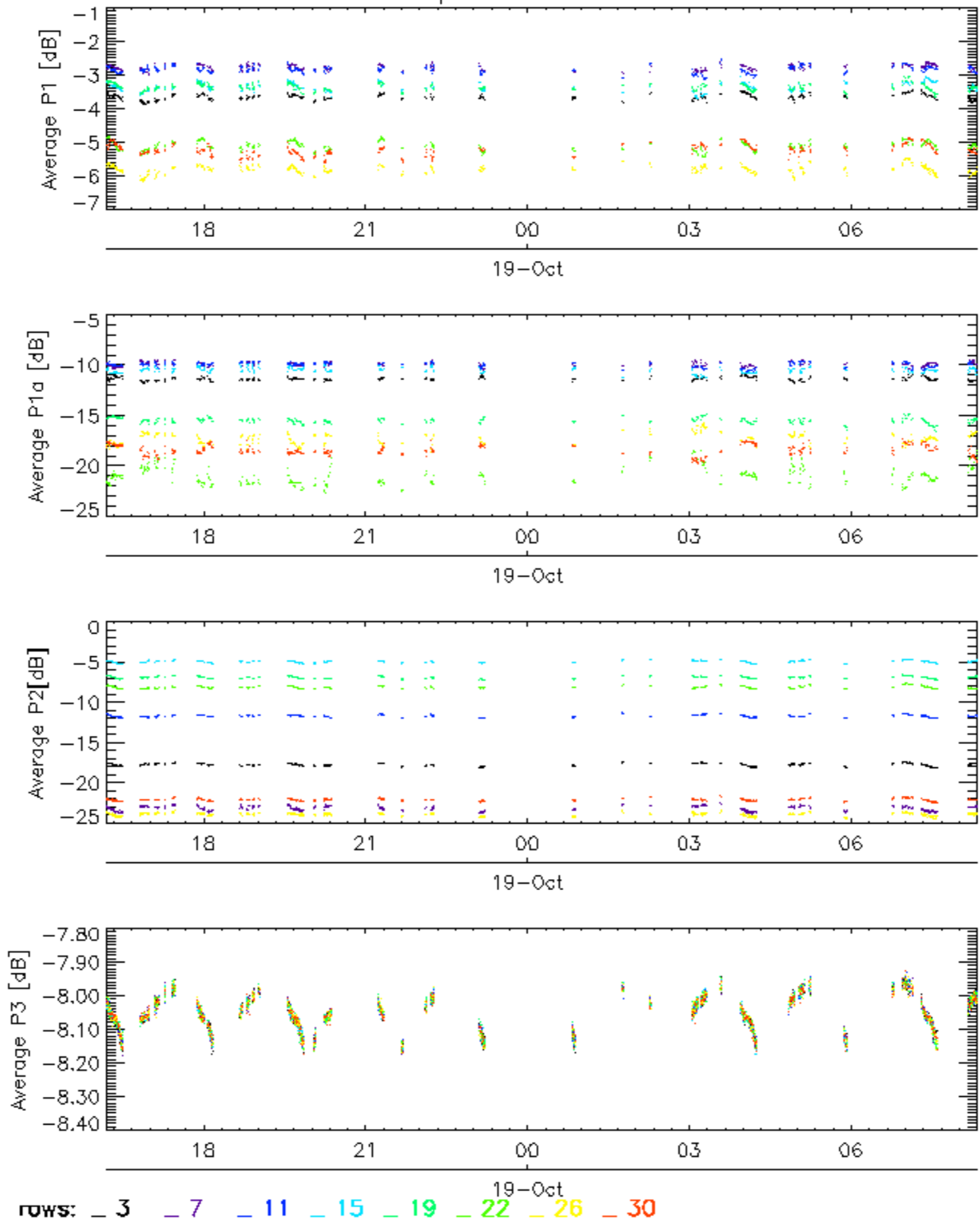
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

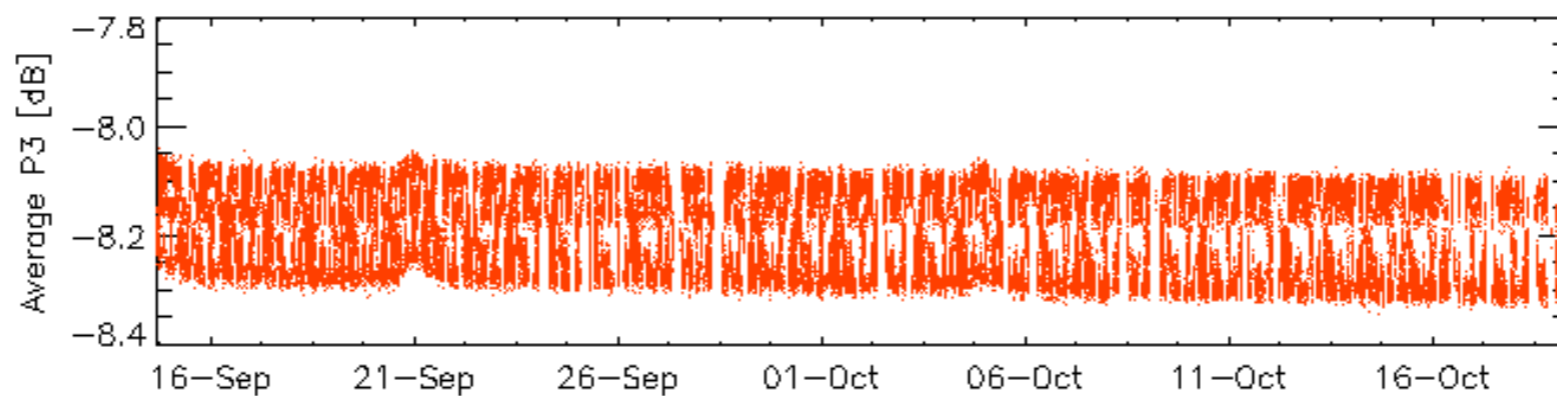
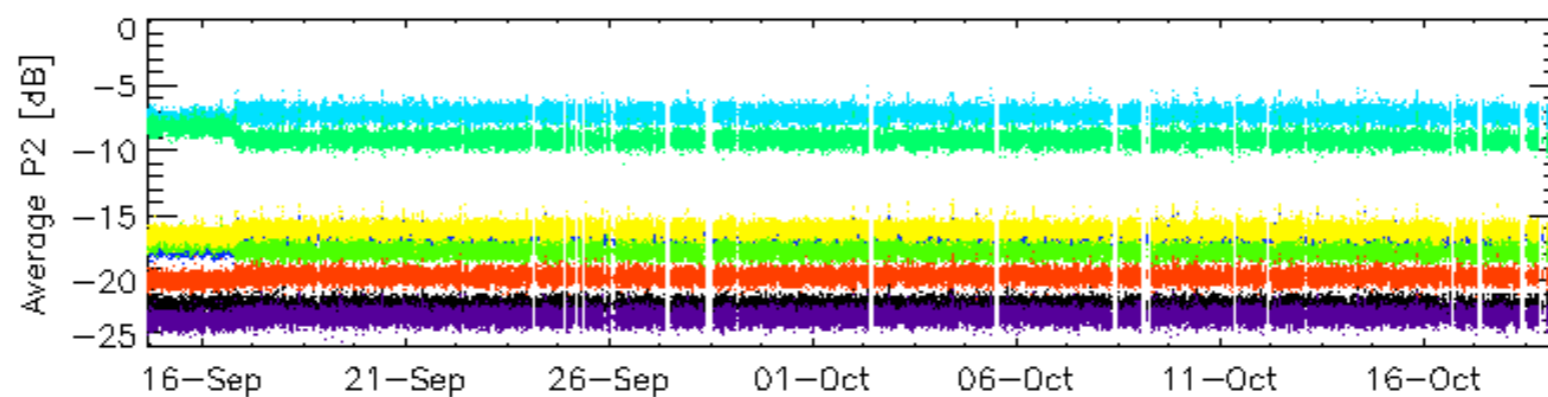
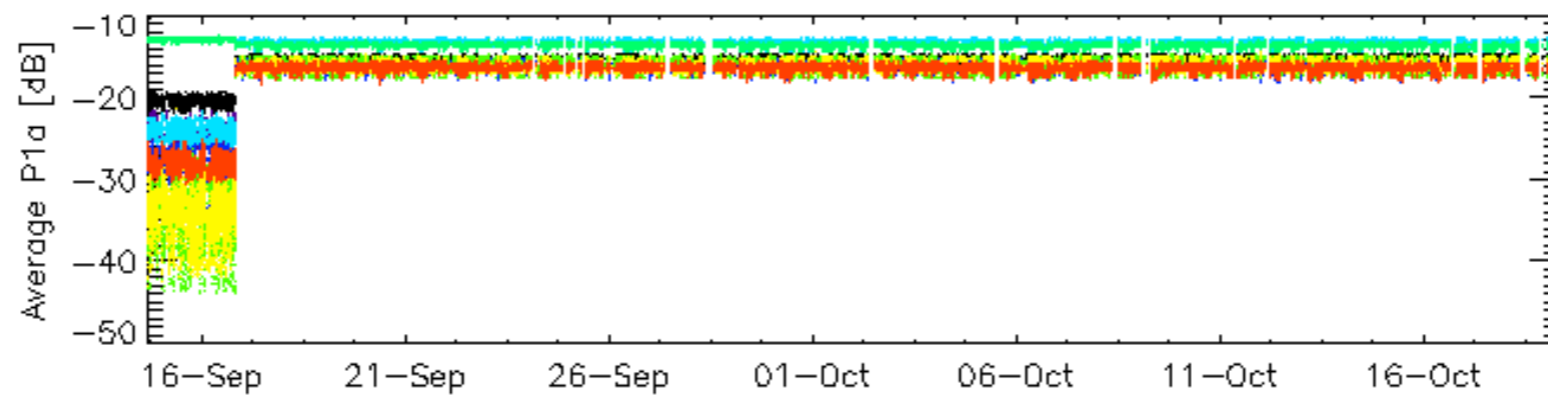
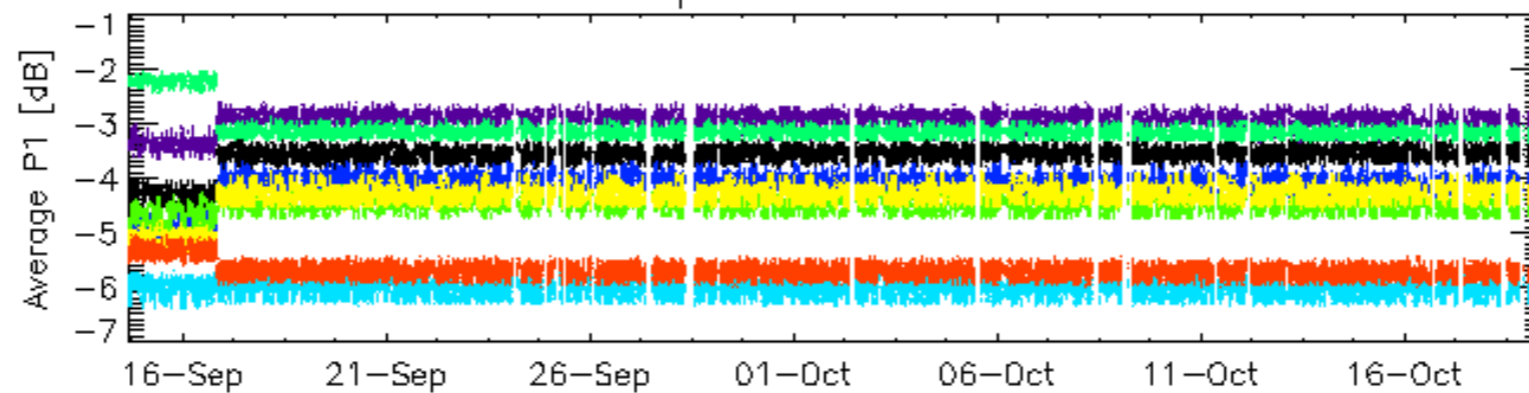


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

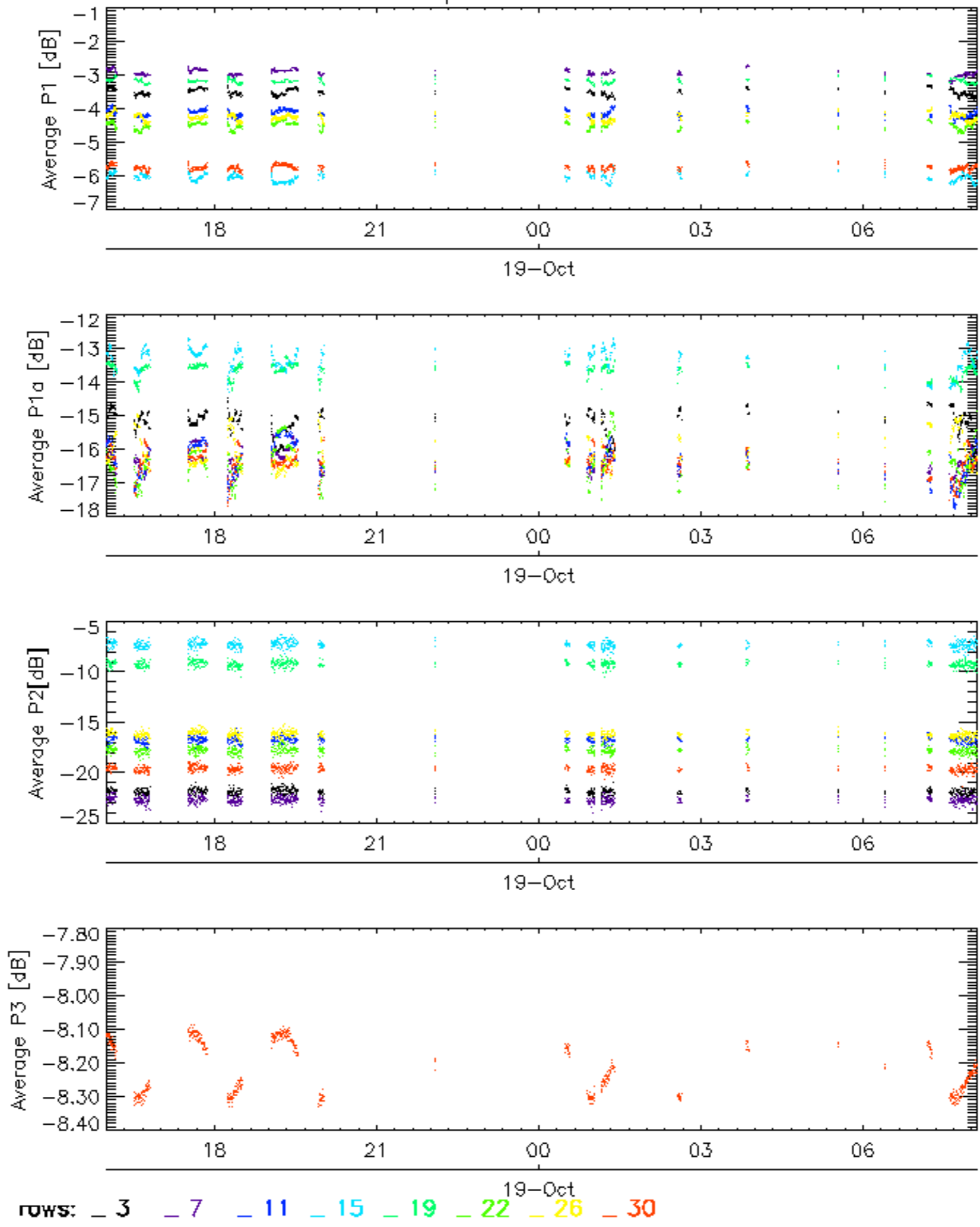


Cal pulses for WVS IS2



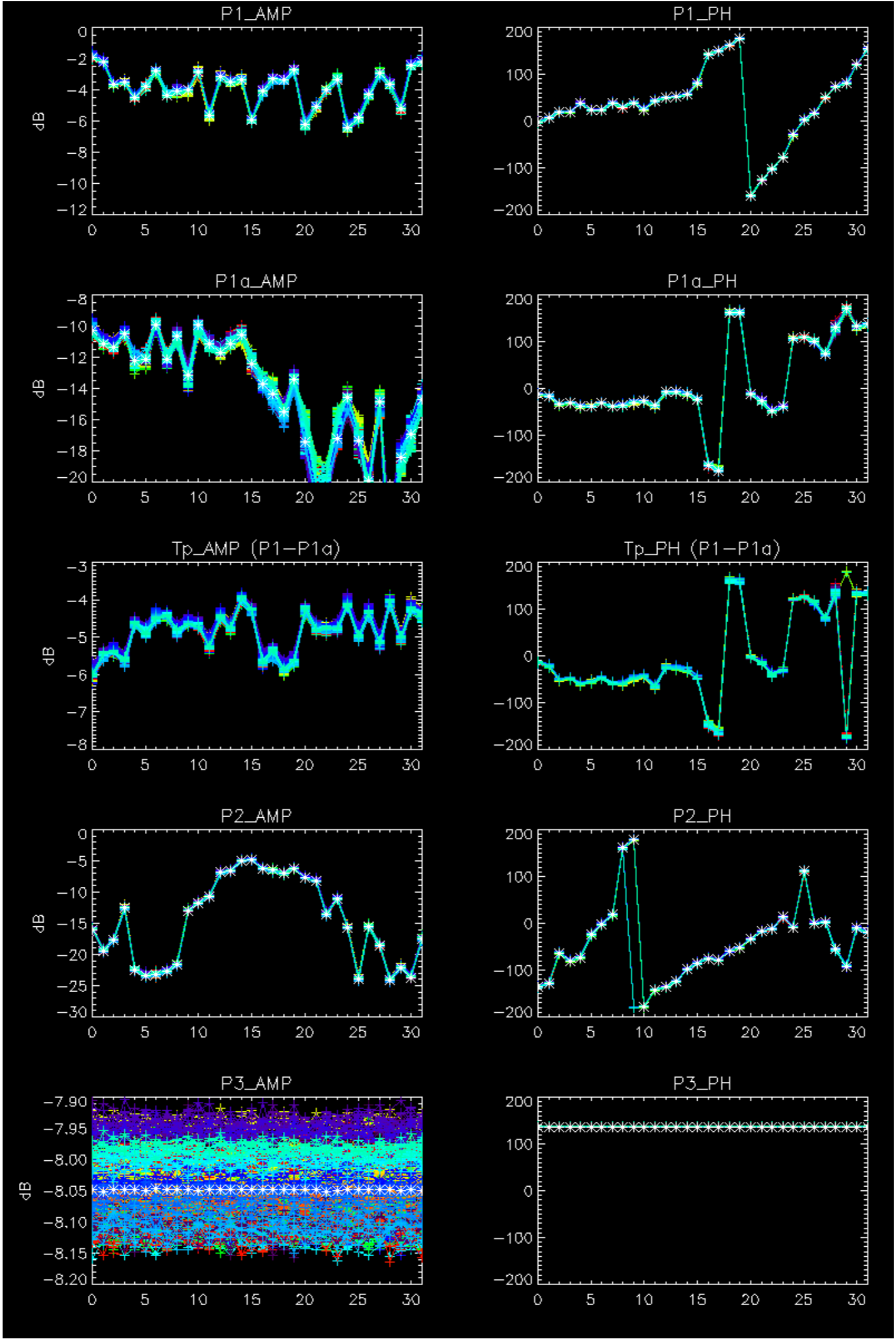
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

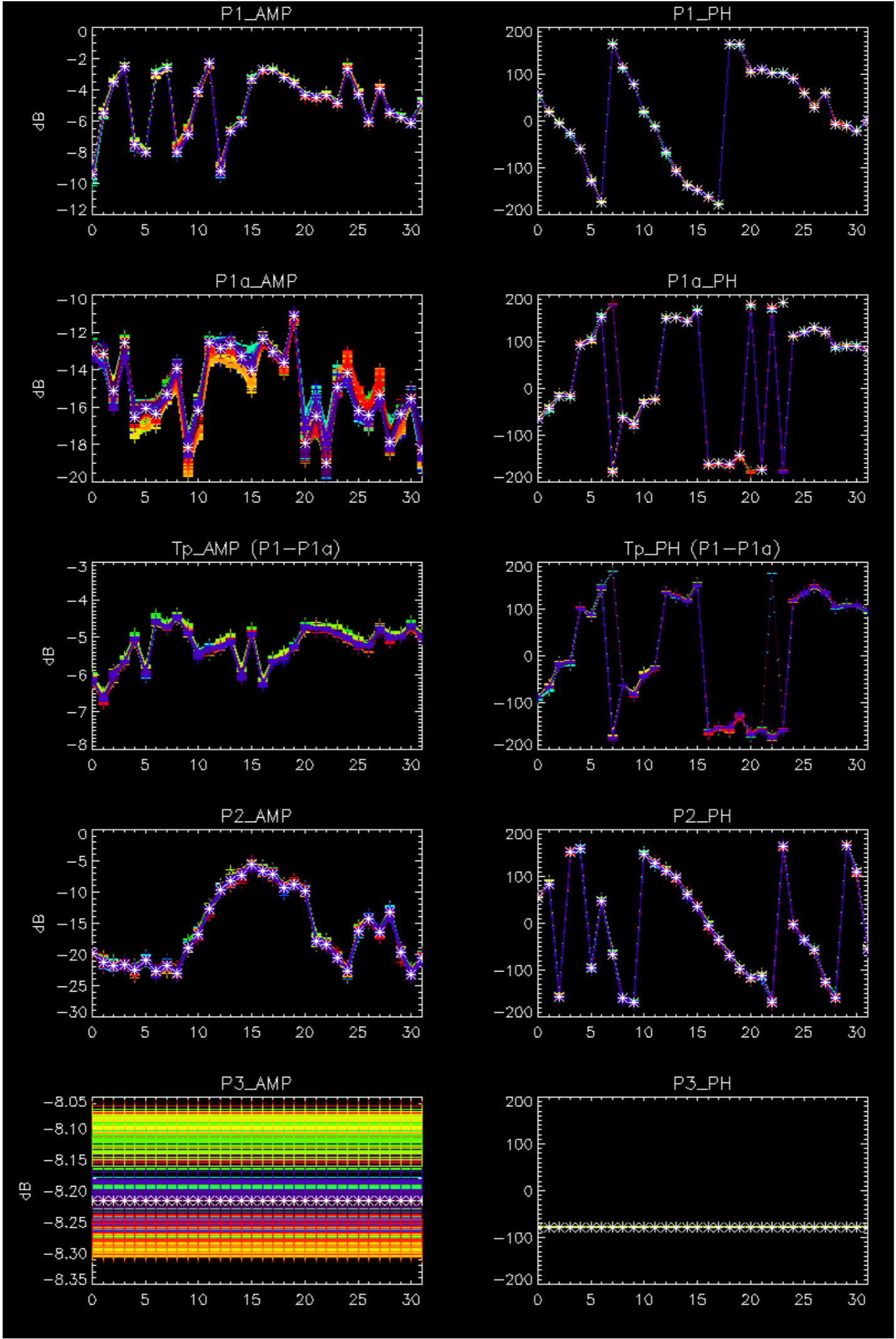
Cal pulses for WVS IS2



No anomalies observed on available browse products

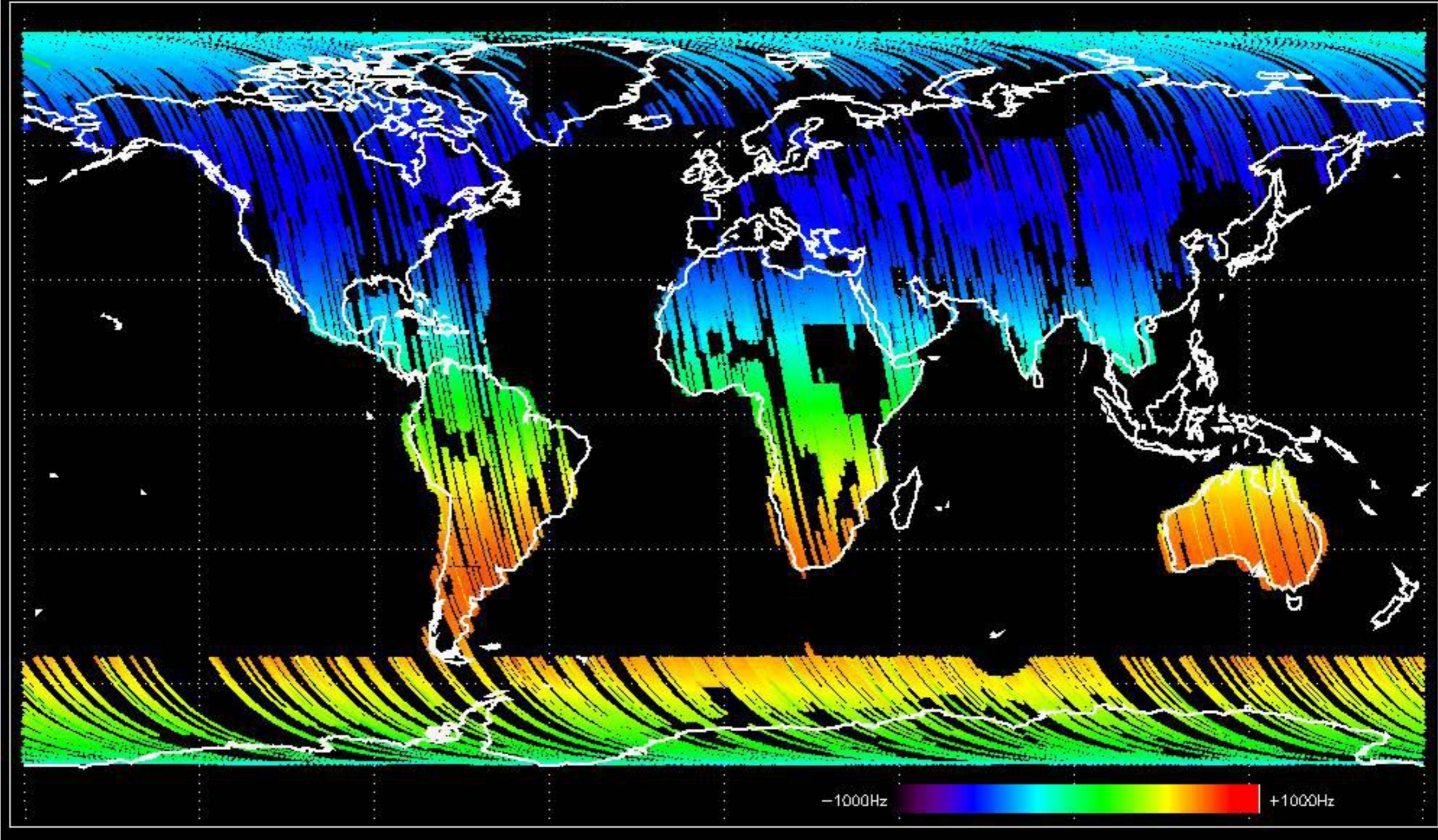
No anomalies observed.



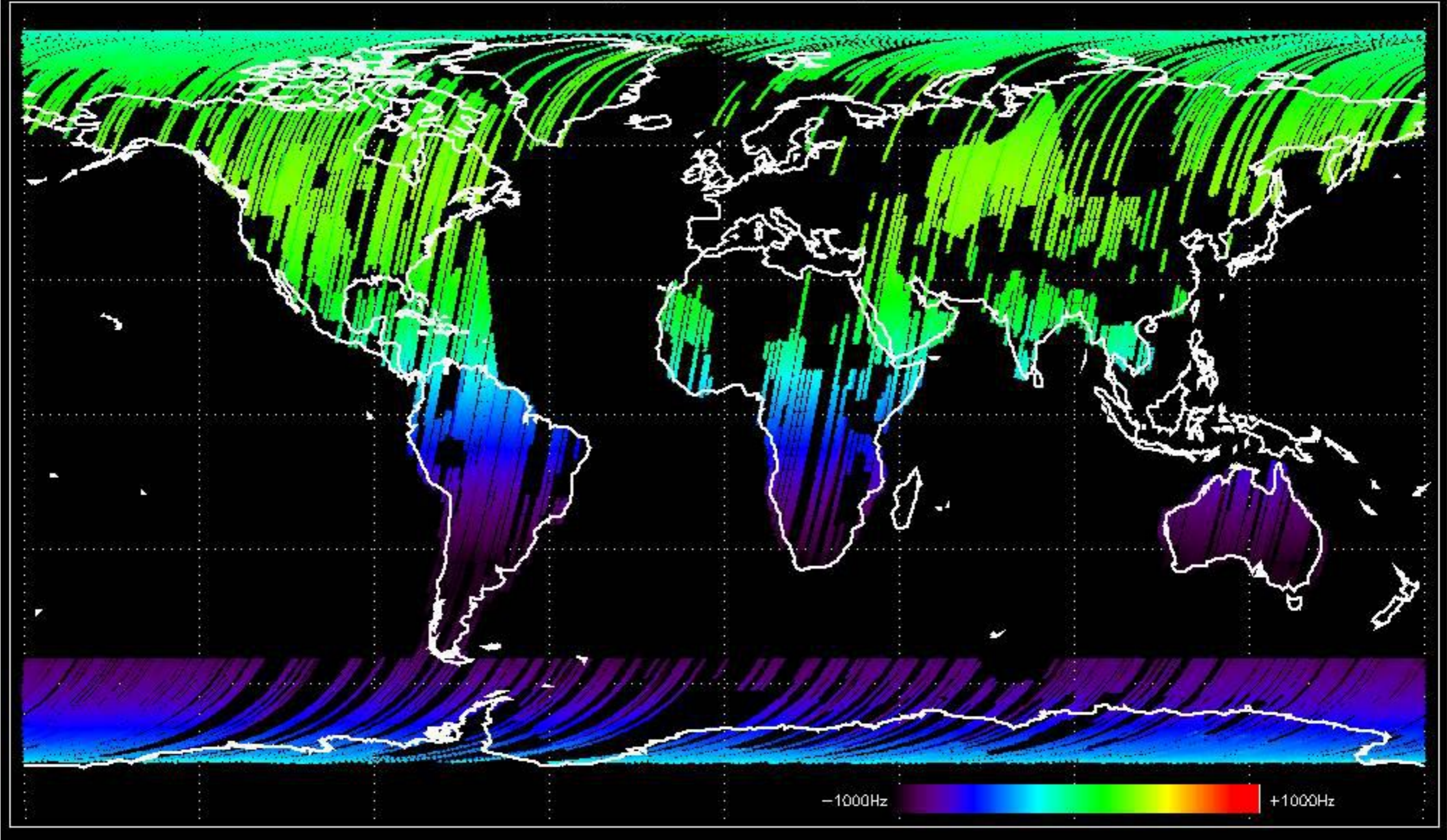


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

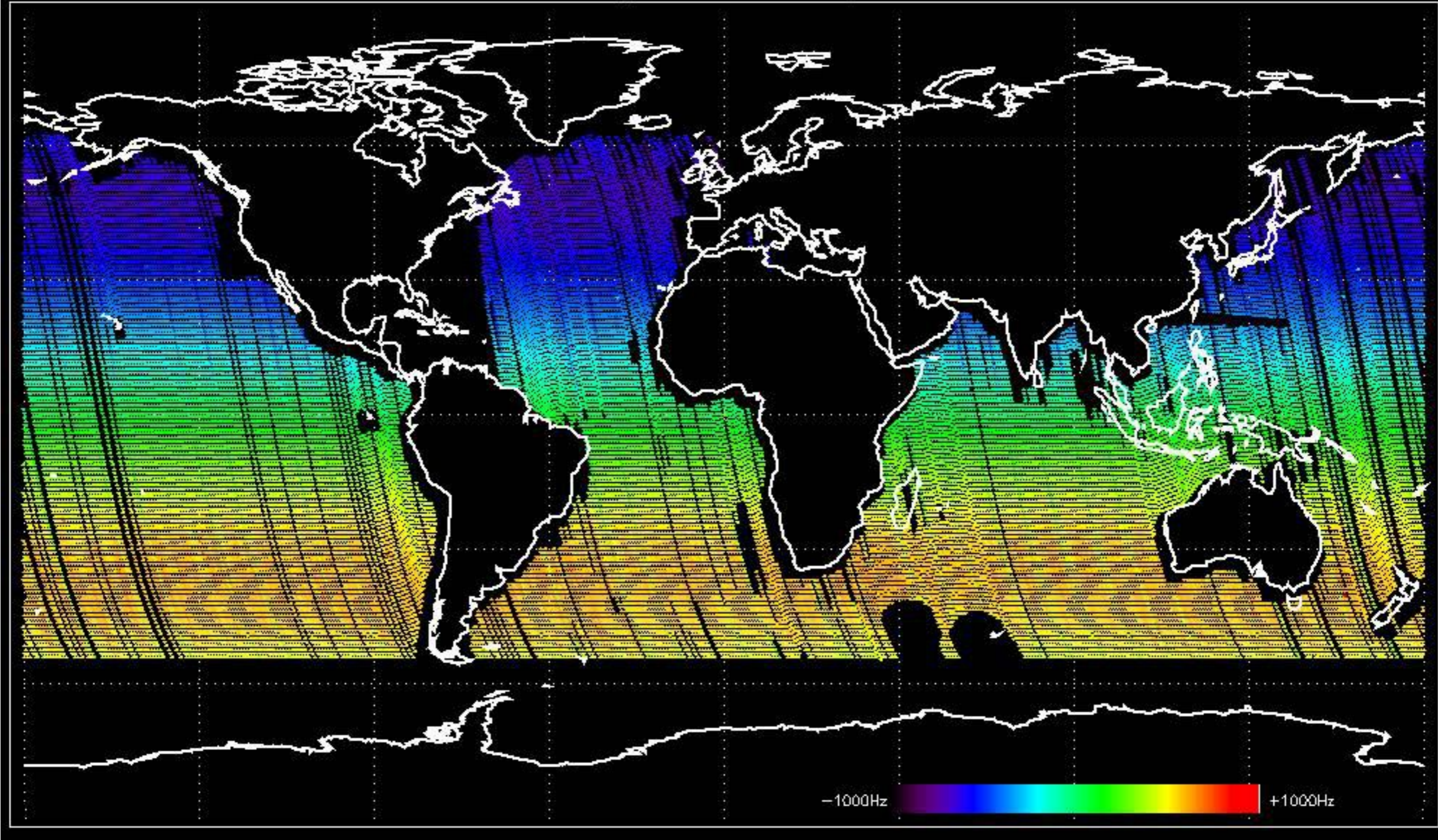
Doppler 'GM1' 'SS1' ascending



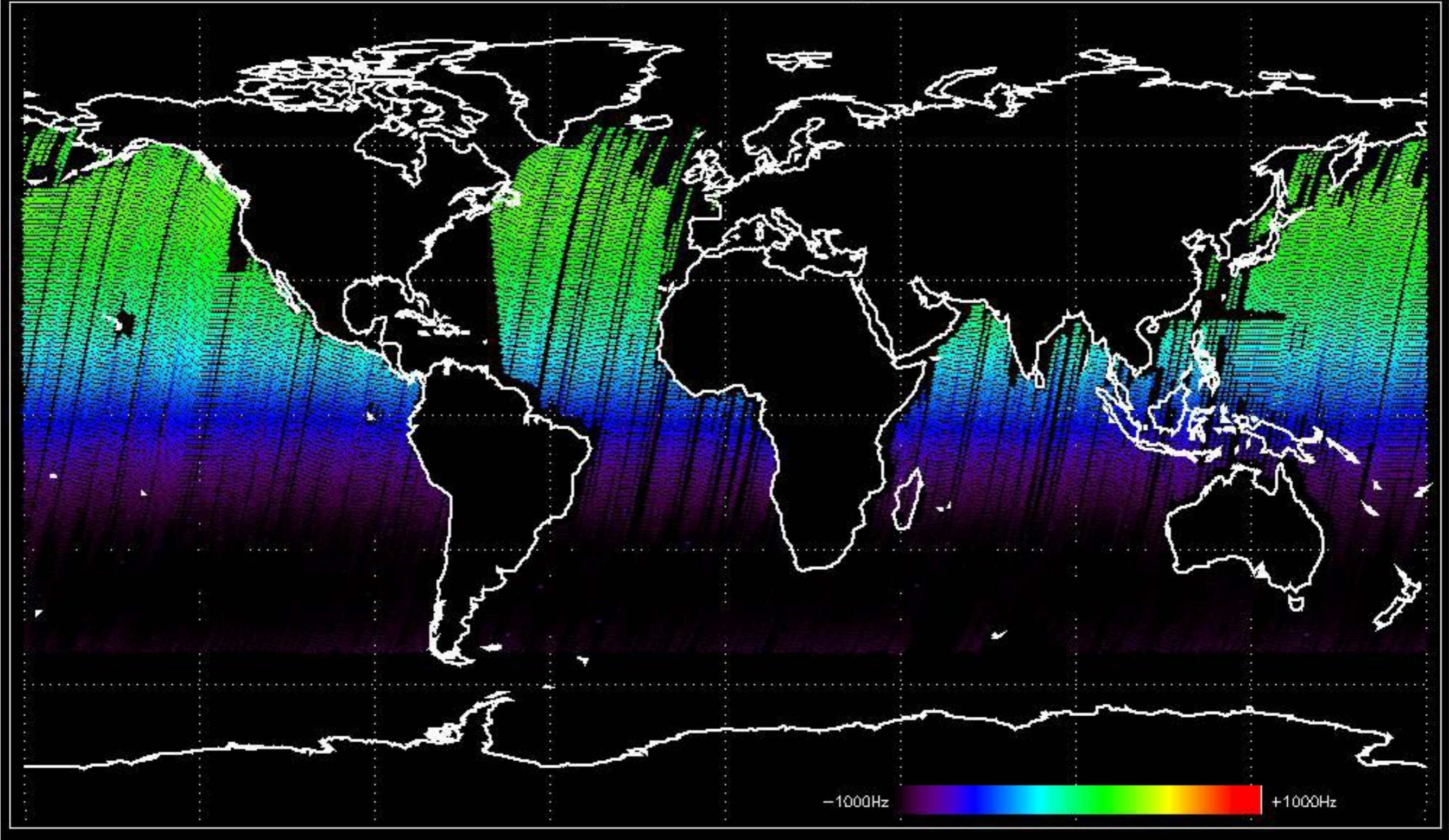
Doppler 'GM1' 'SS1' descending



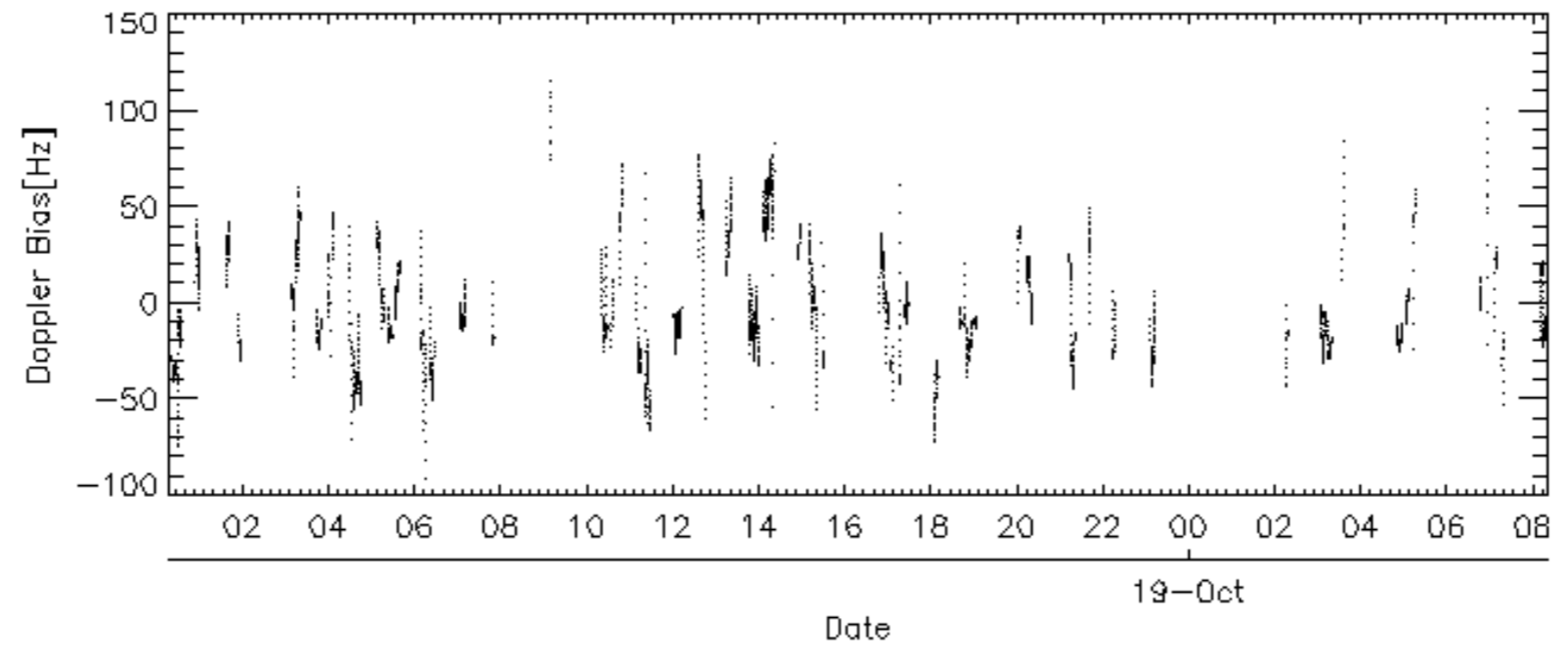
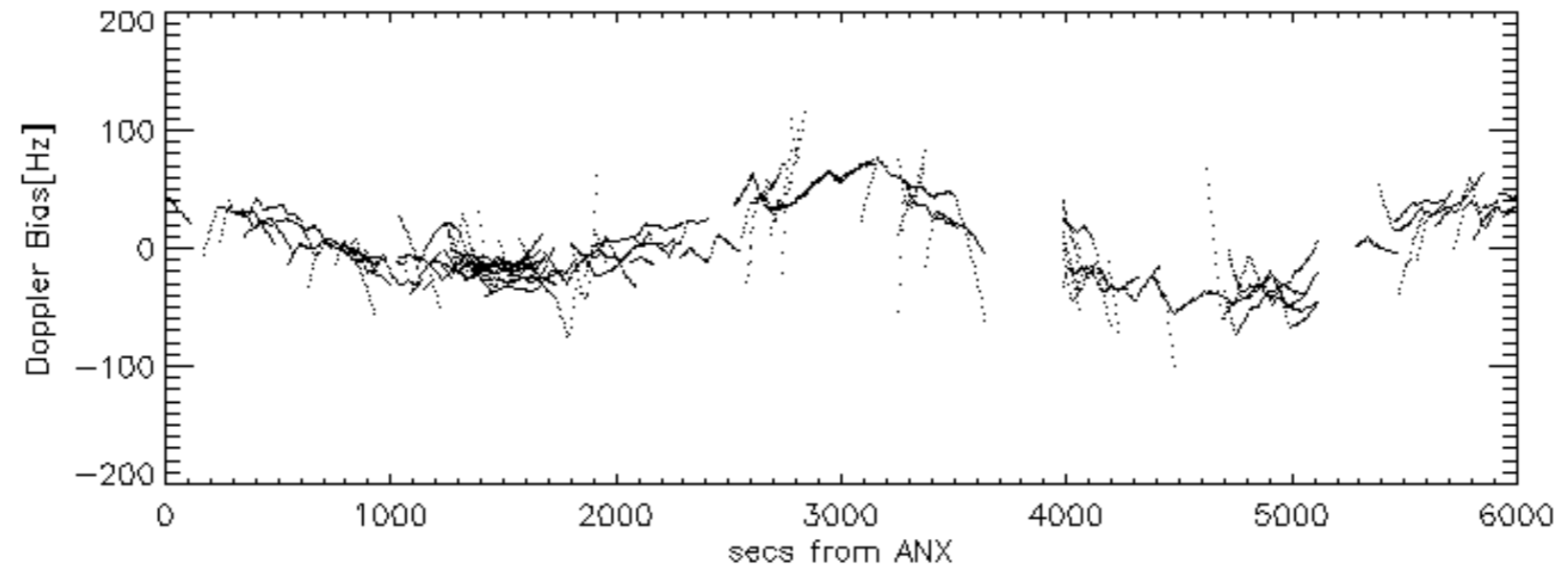
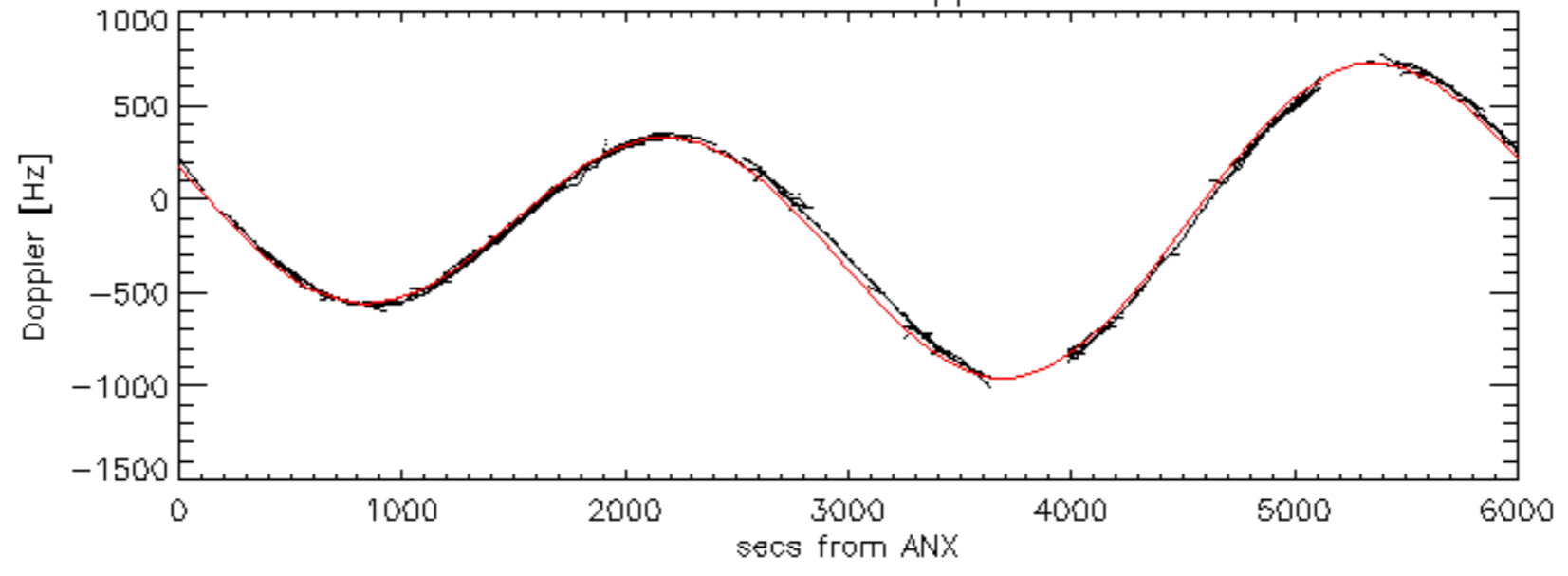
Doppler 'WVS' 'IS2' ascending

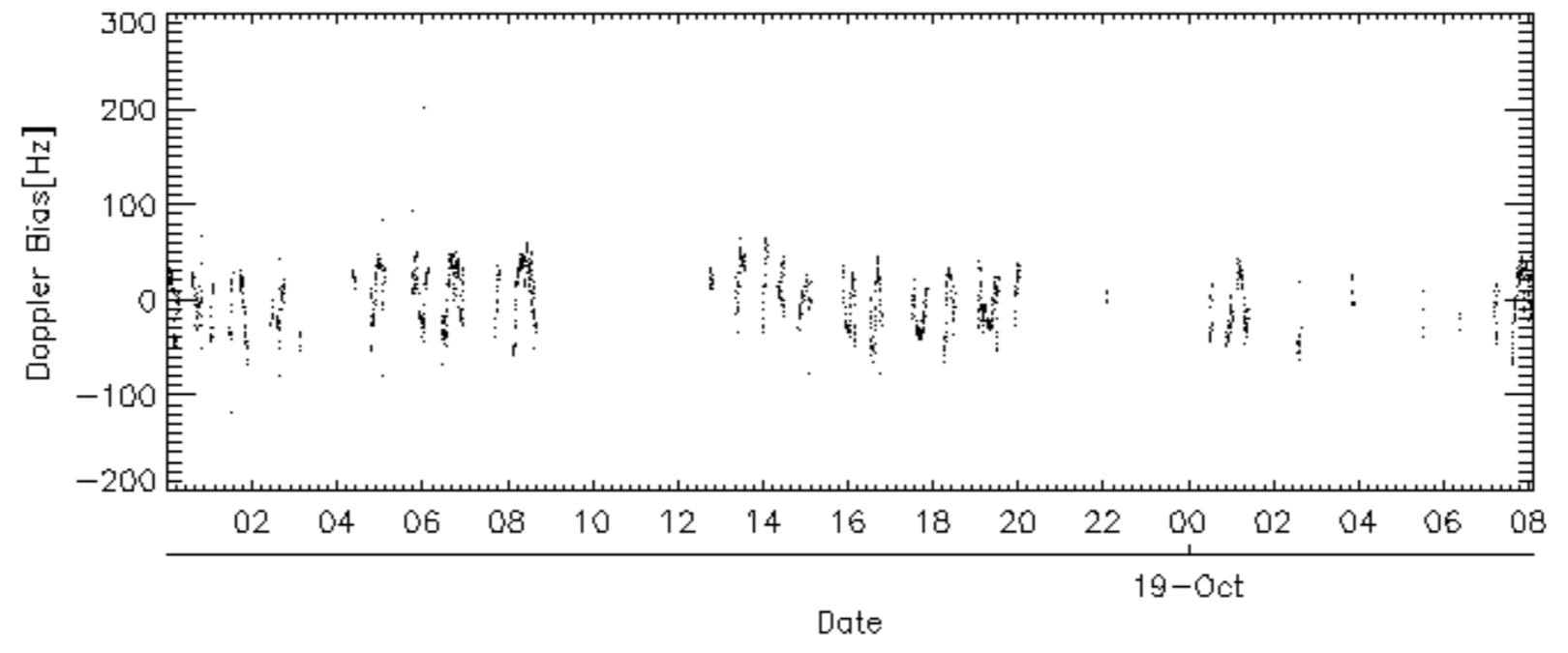
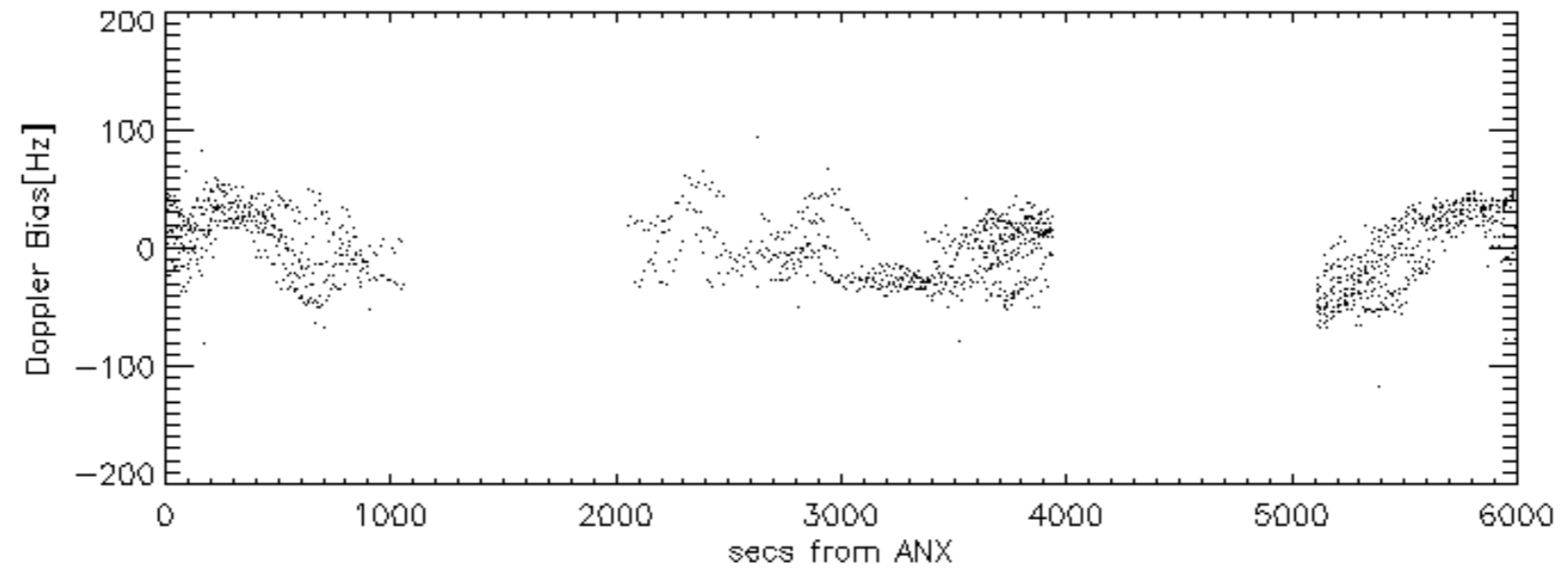
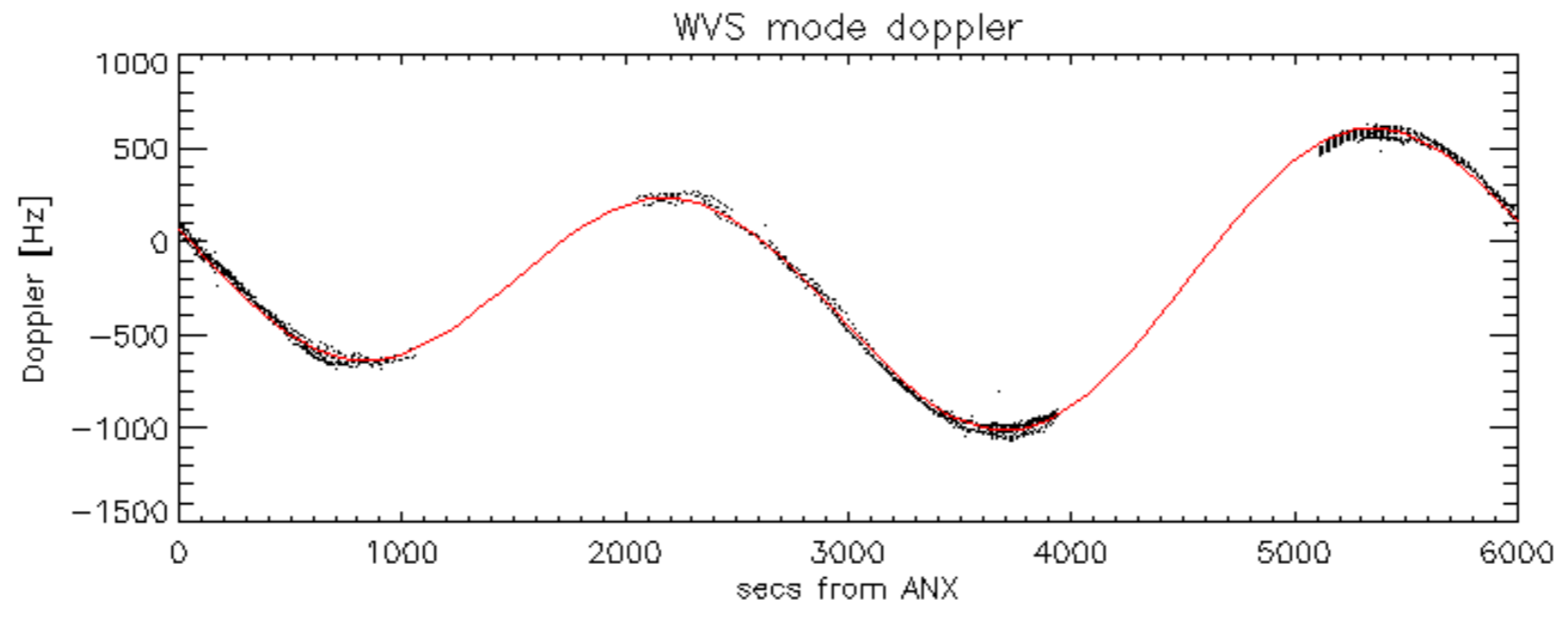


Doppler 'WVS' 'IS2' descending

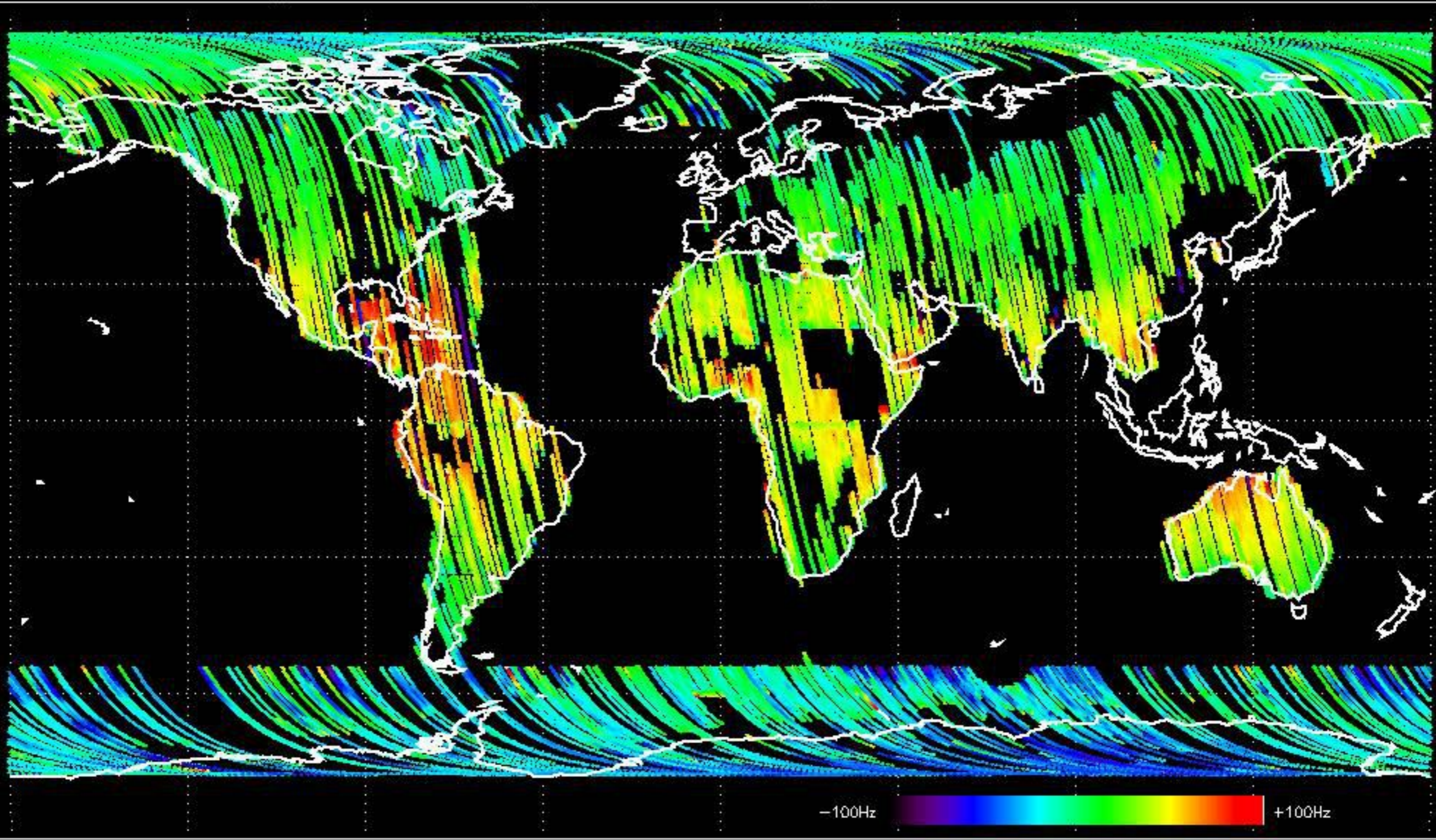


GM1 mode doppler

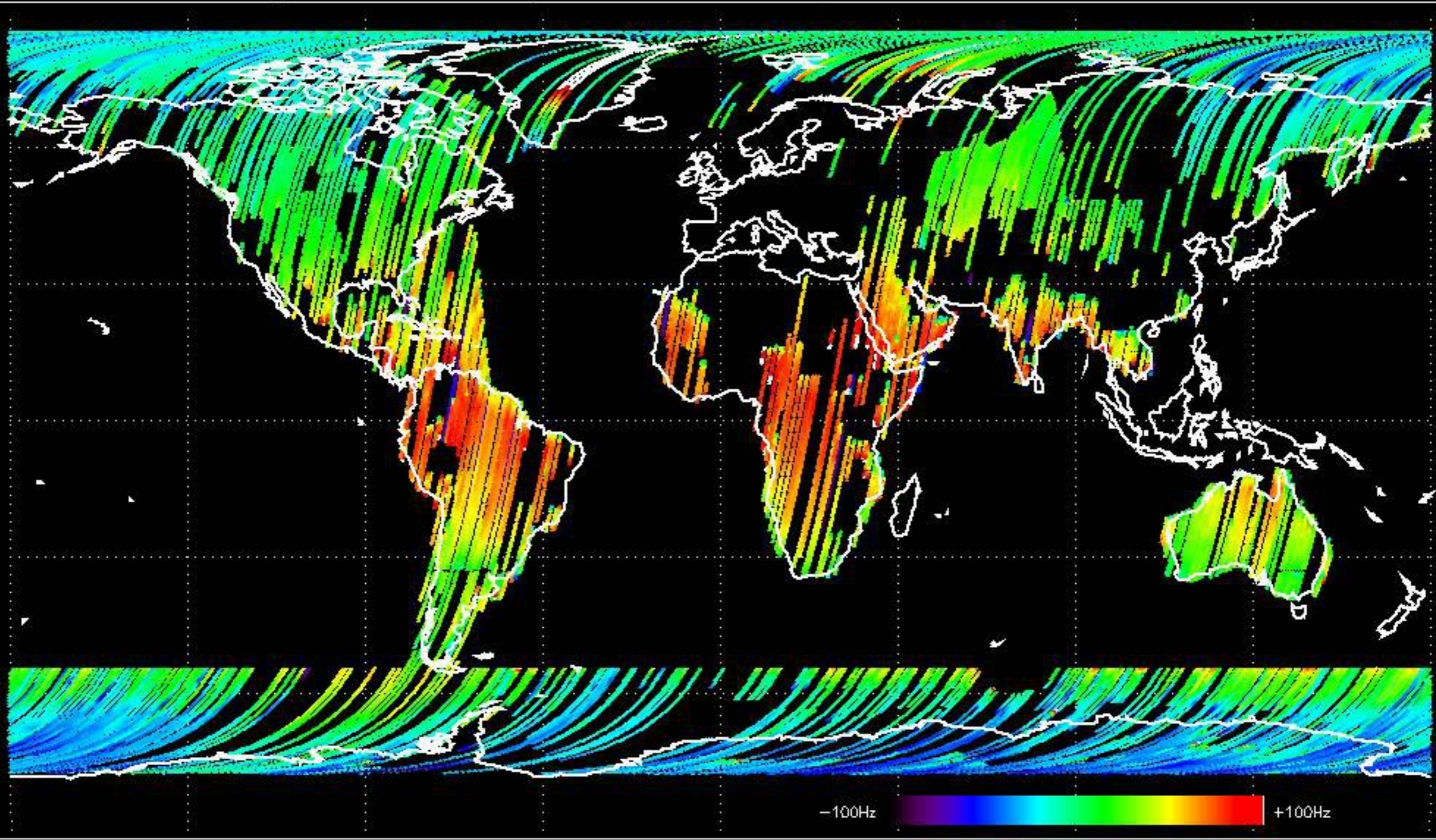




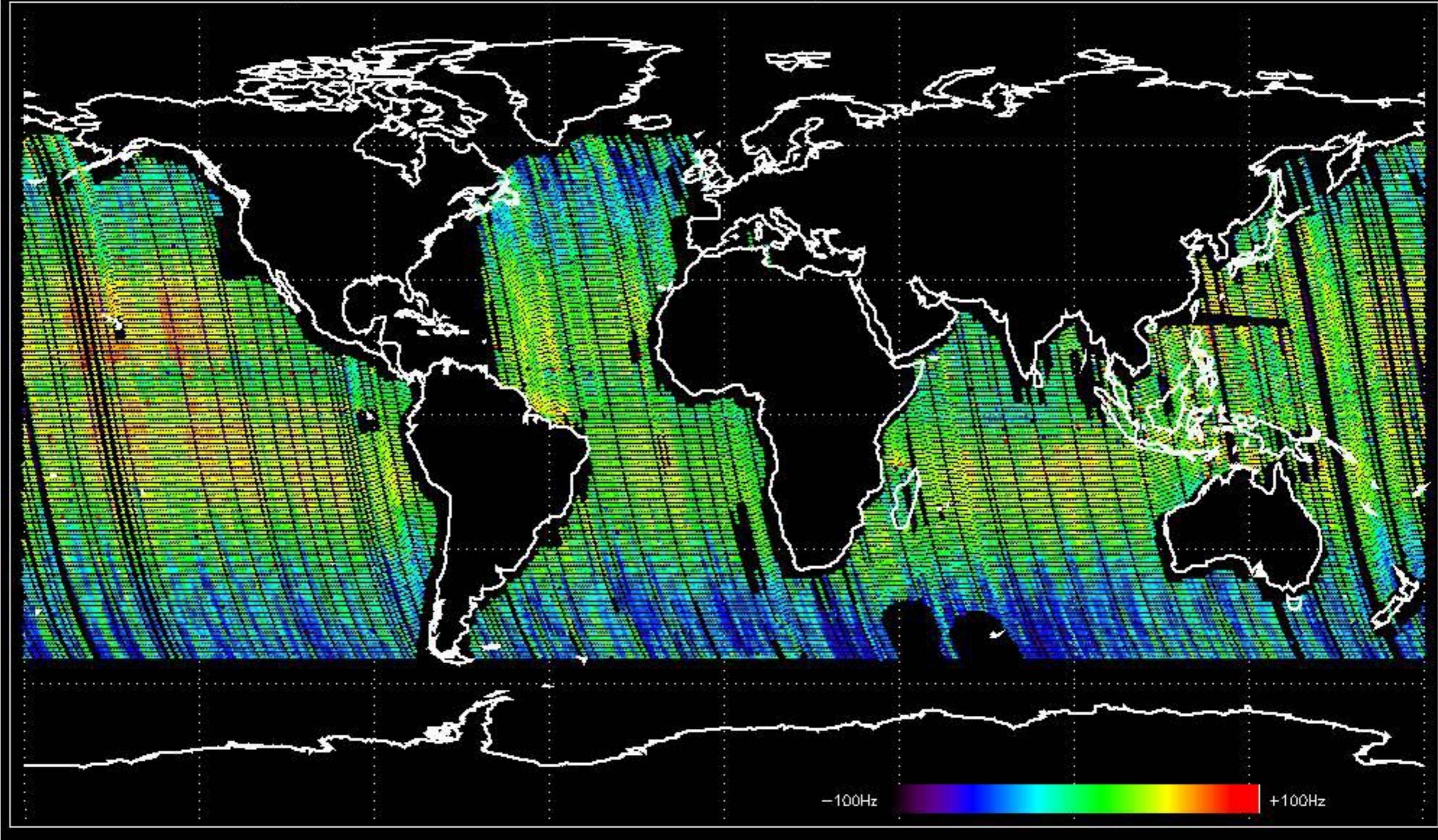
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.497293 Hz



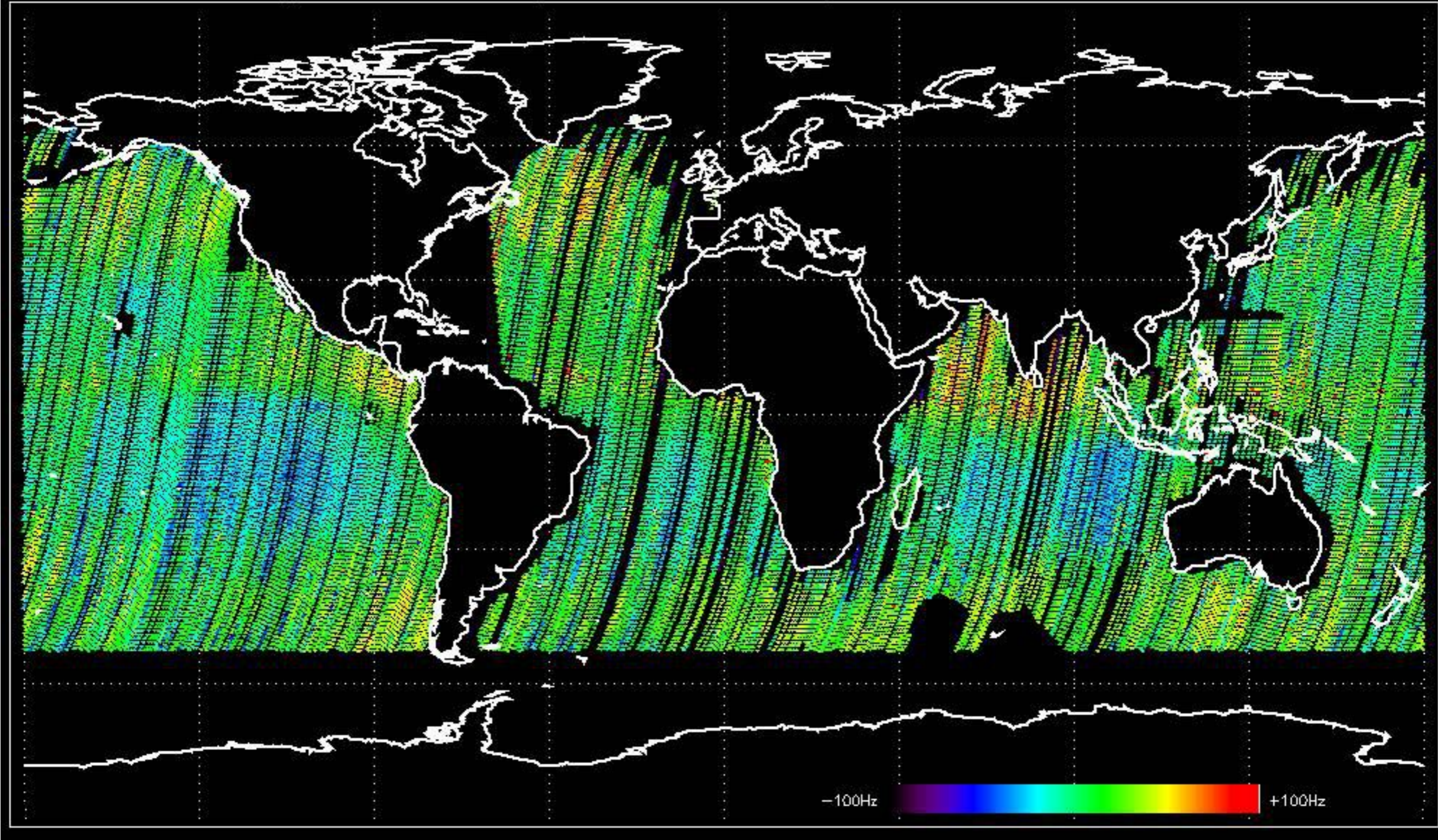
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.961805 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.5420792 Hz

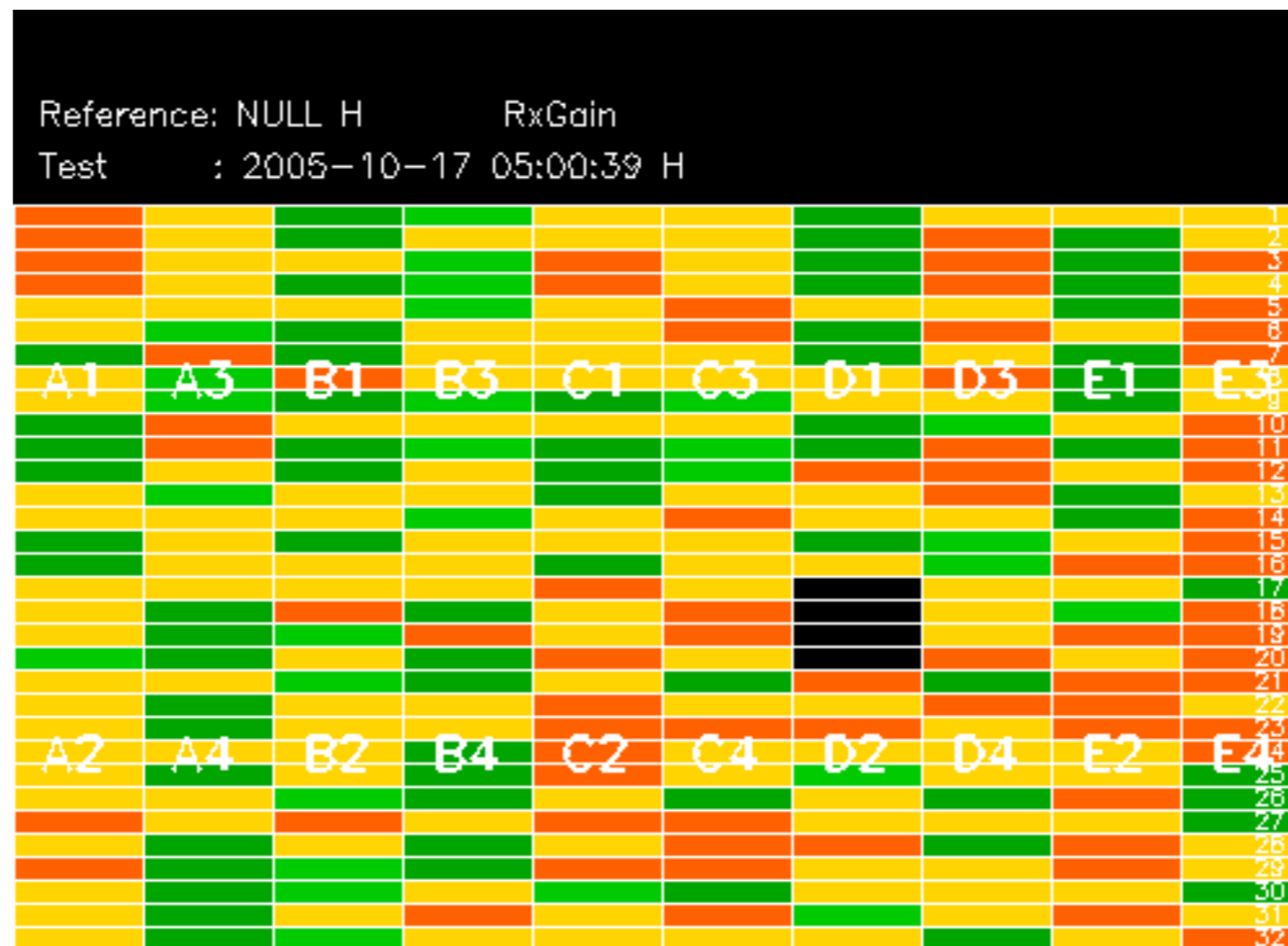


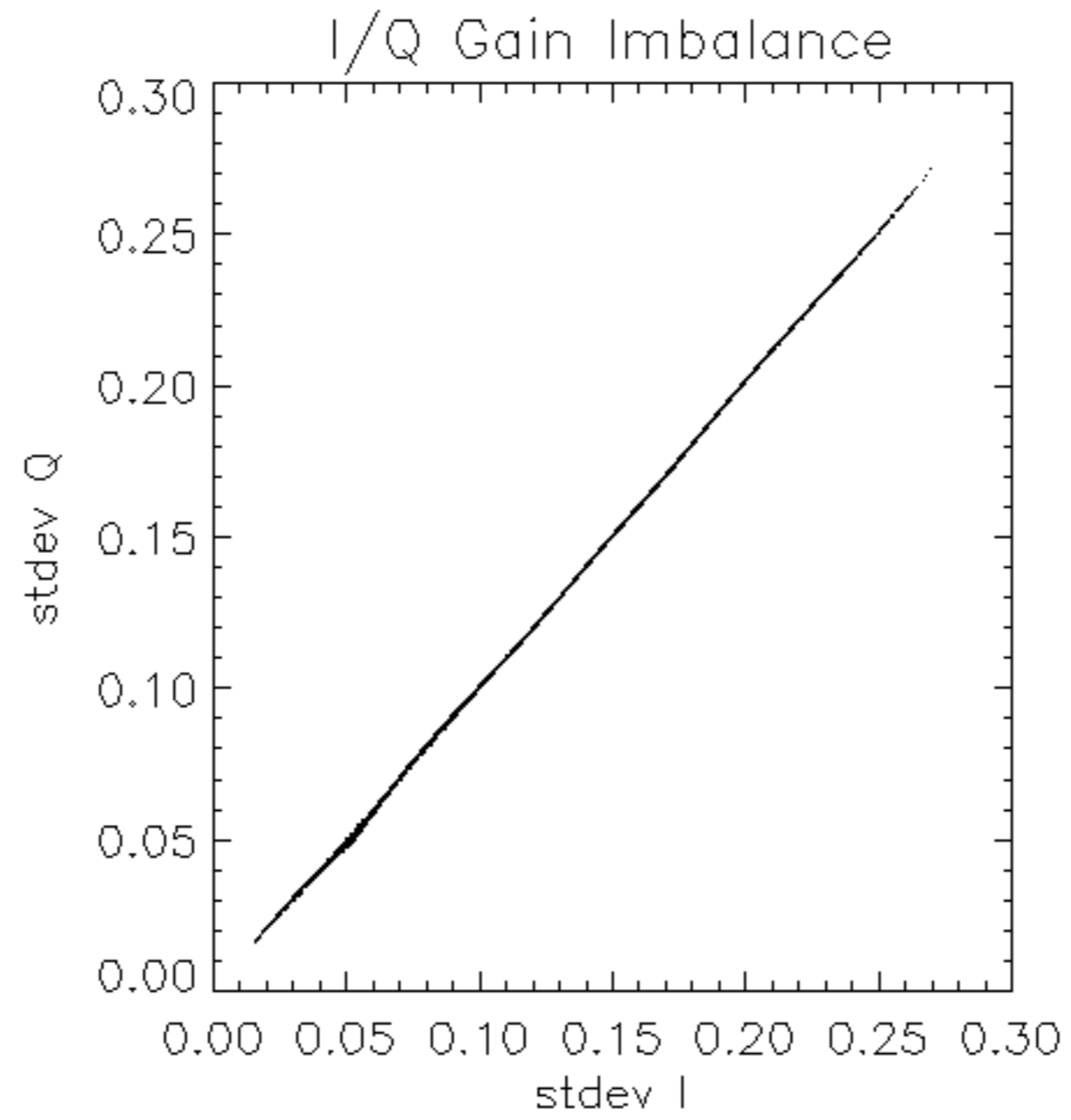
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.129858 Hz

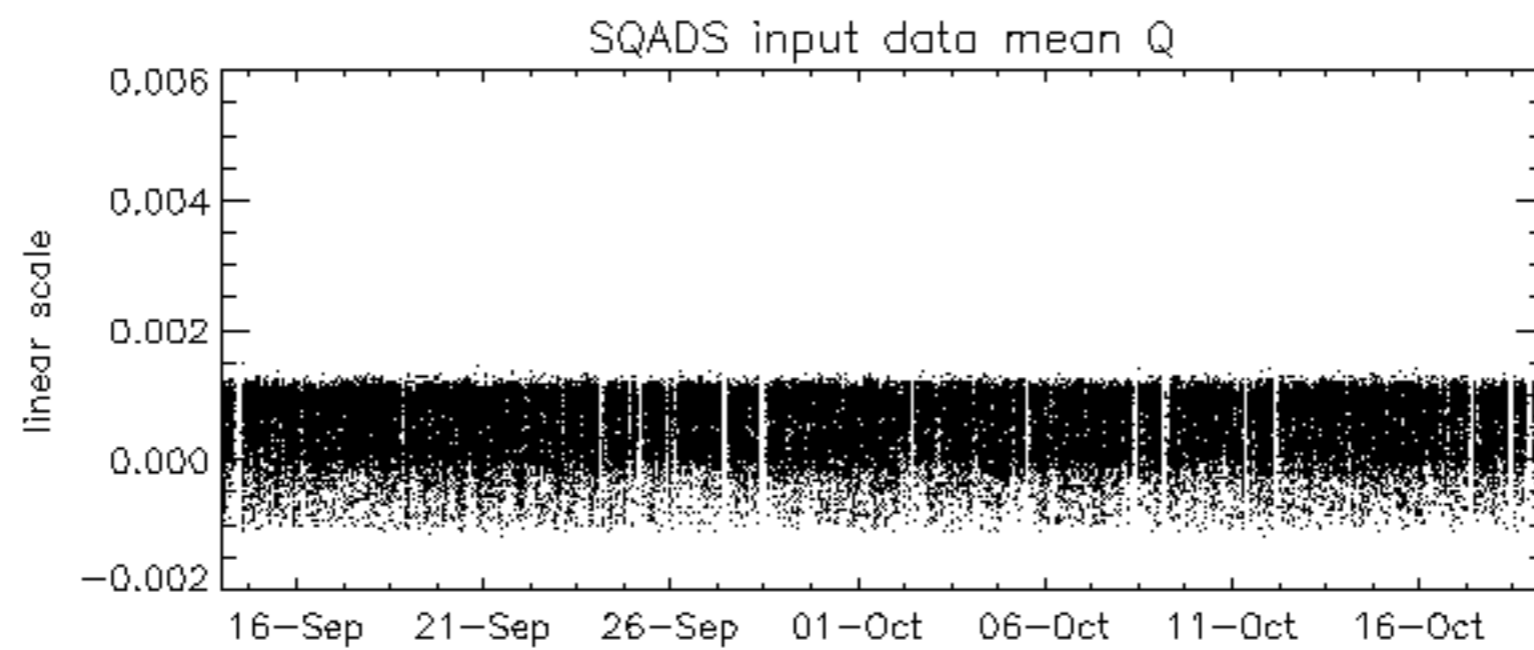
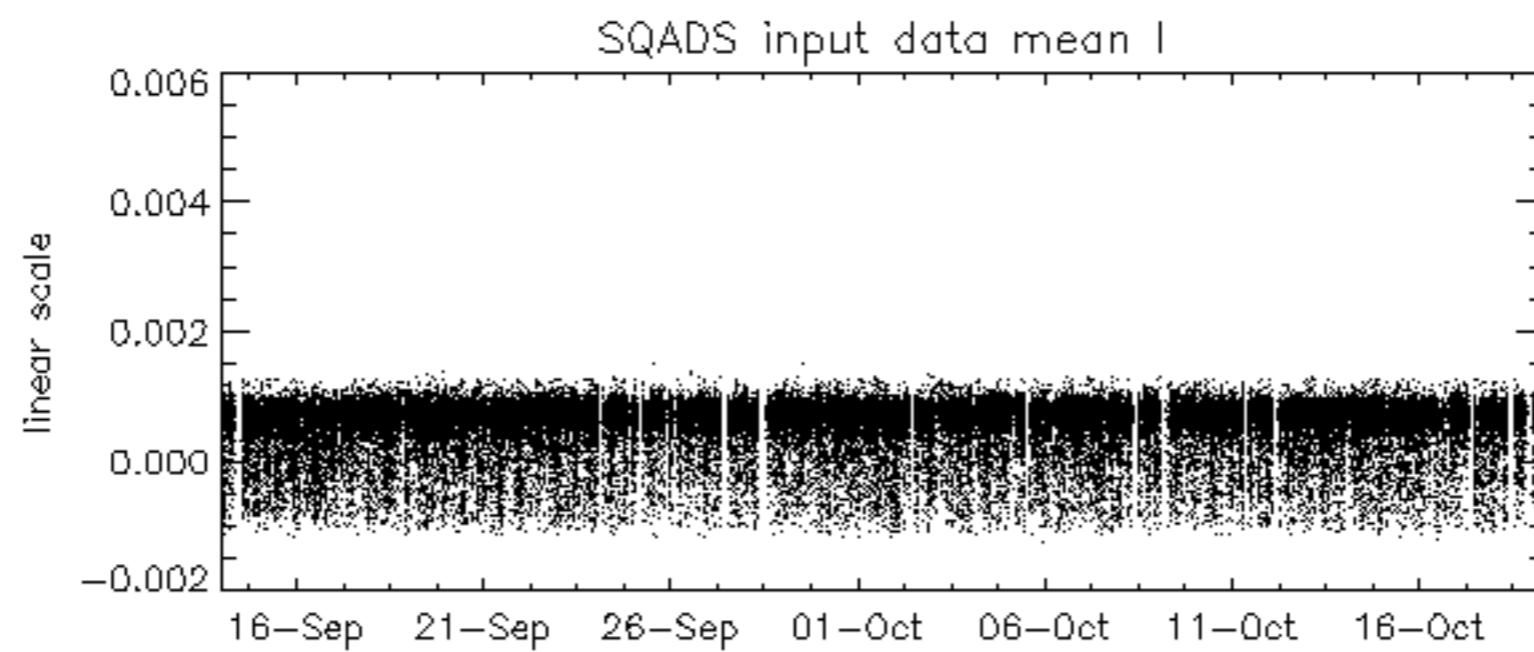
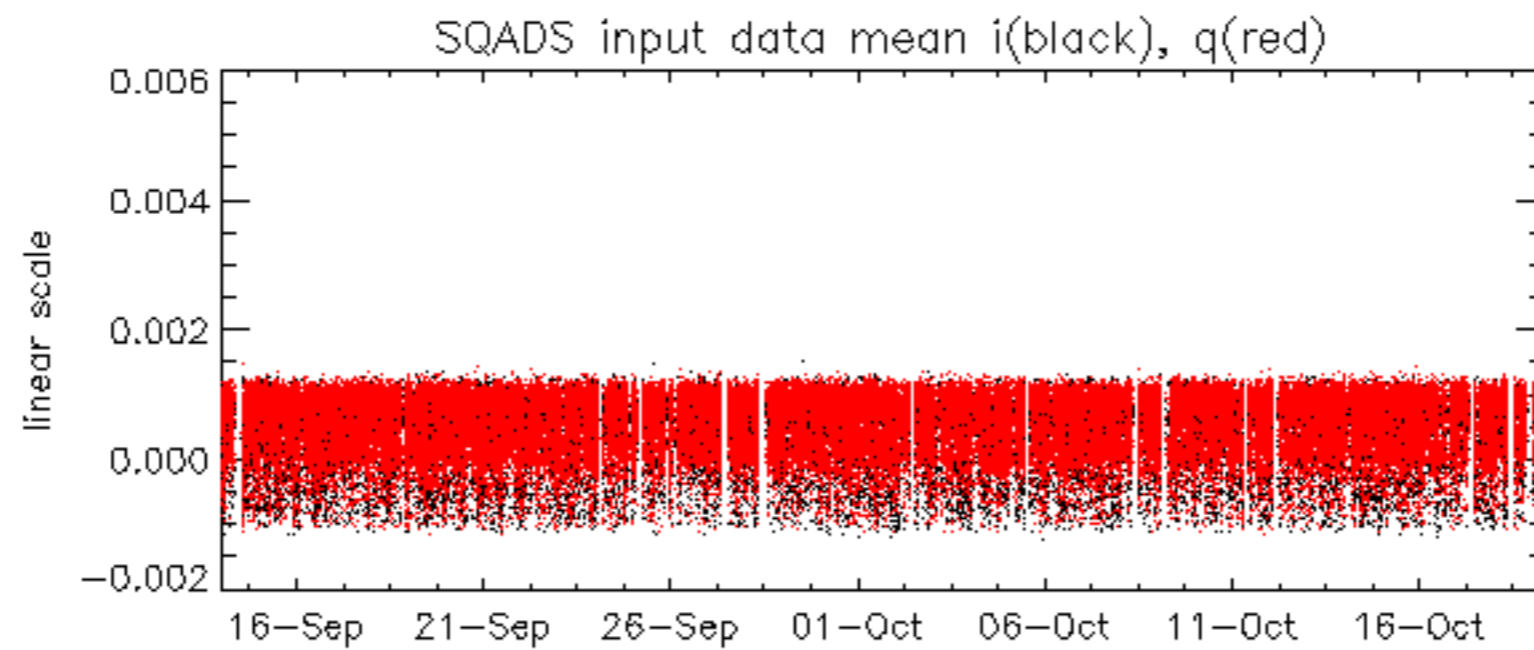


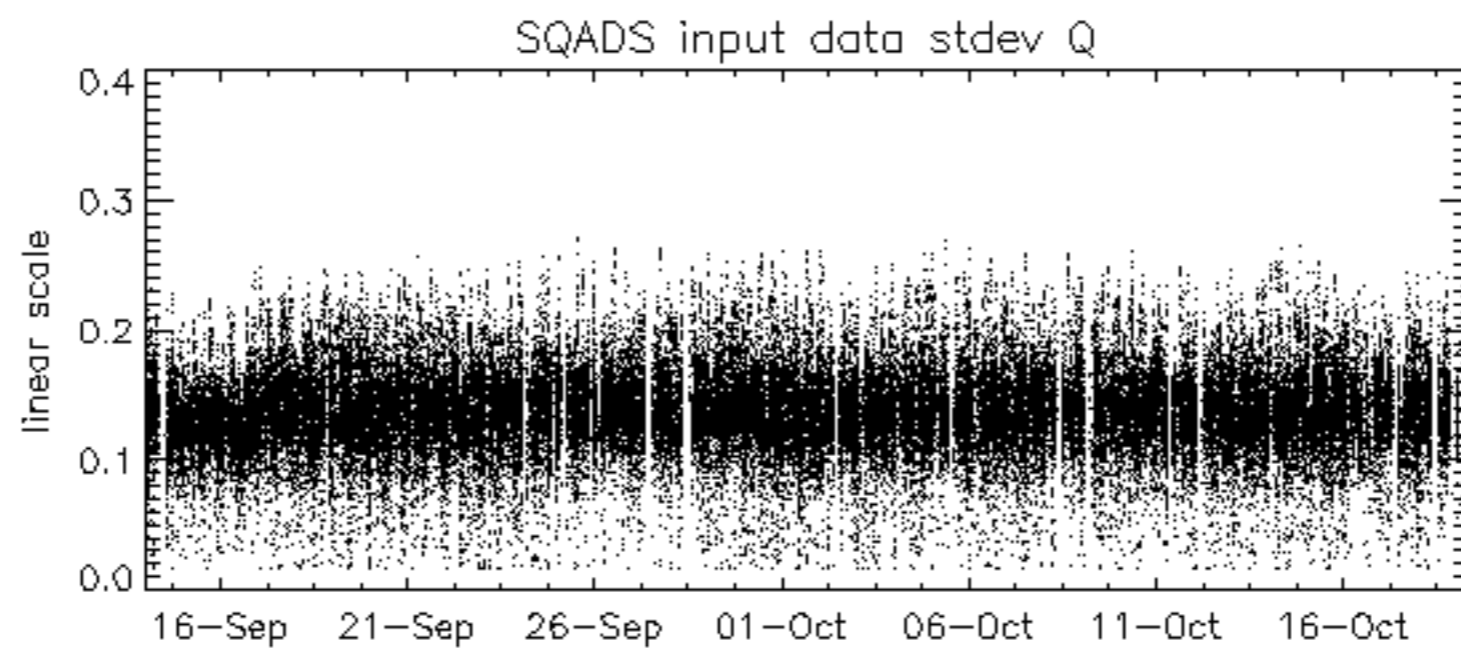
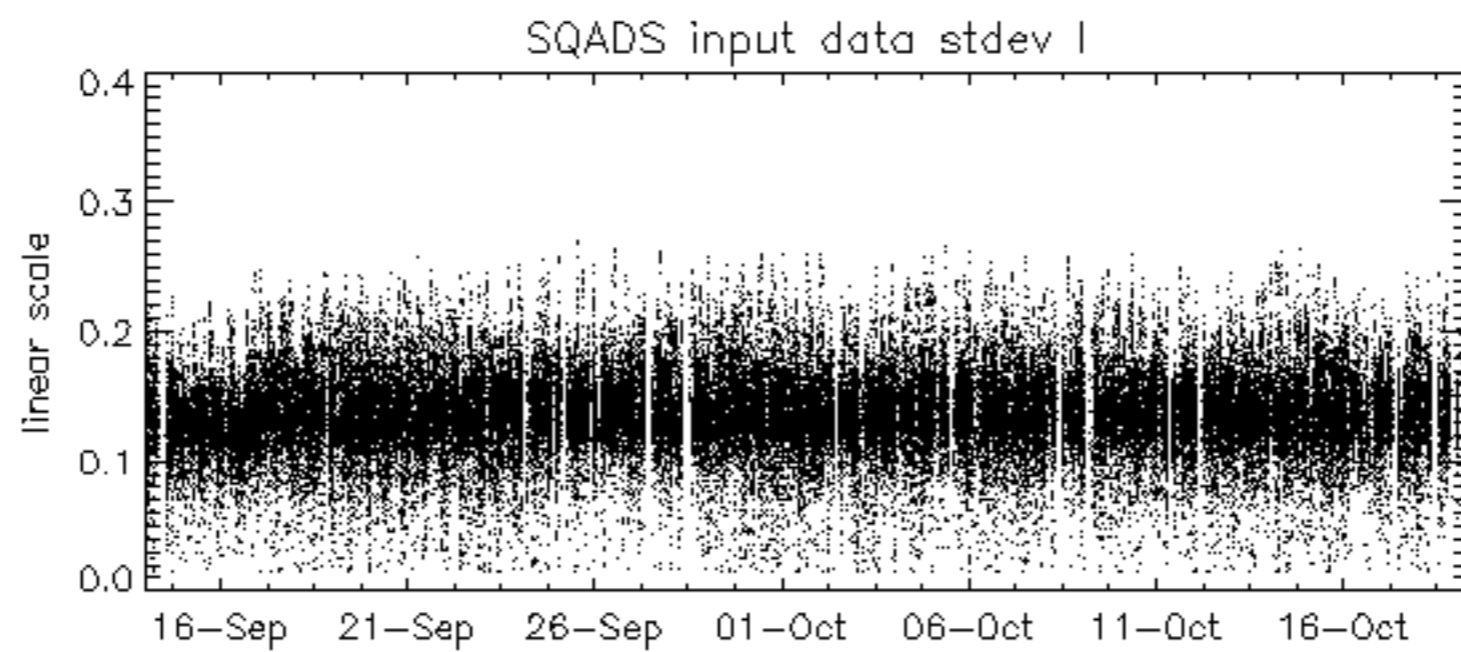
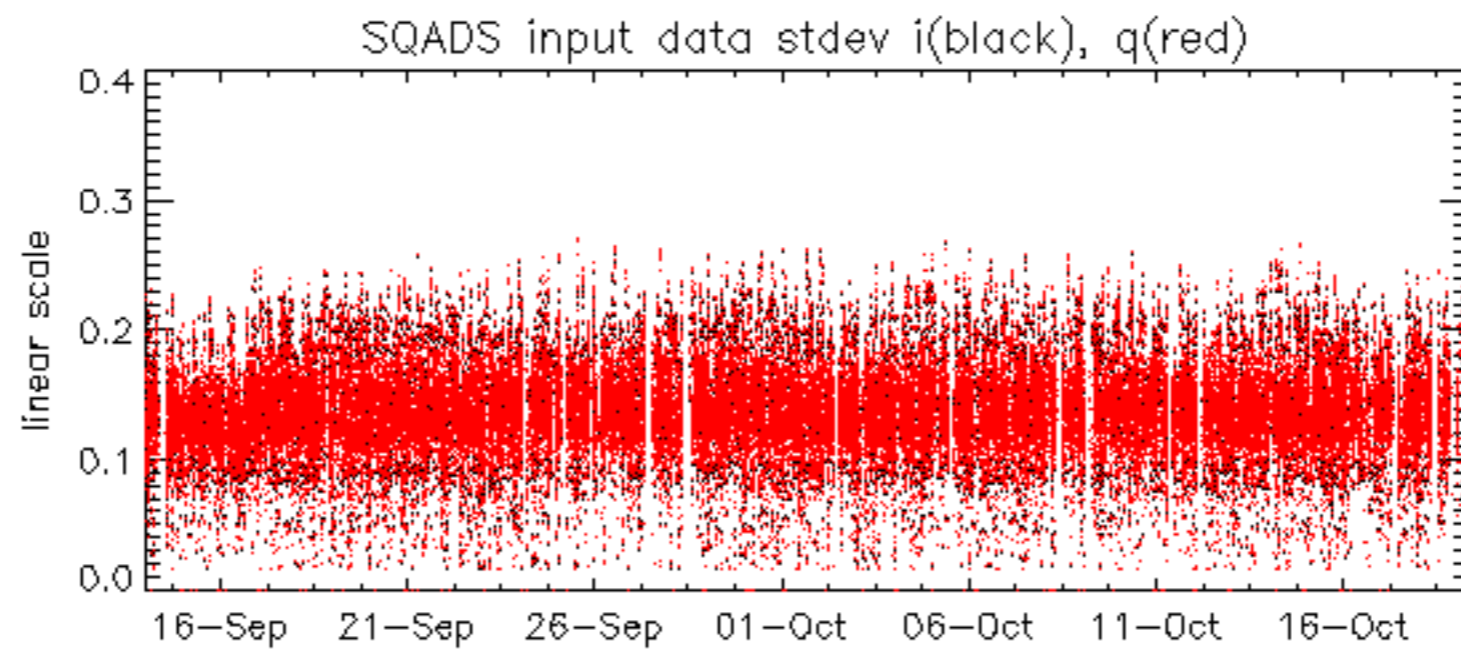
No anomalies observed on available MS products:

No anomalies observed.





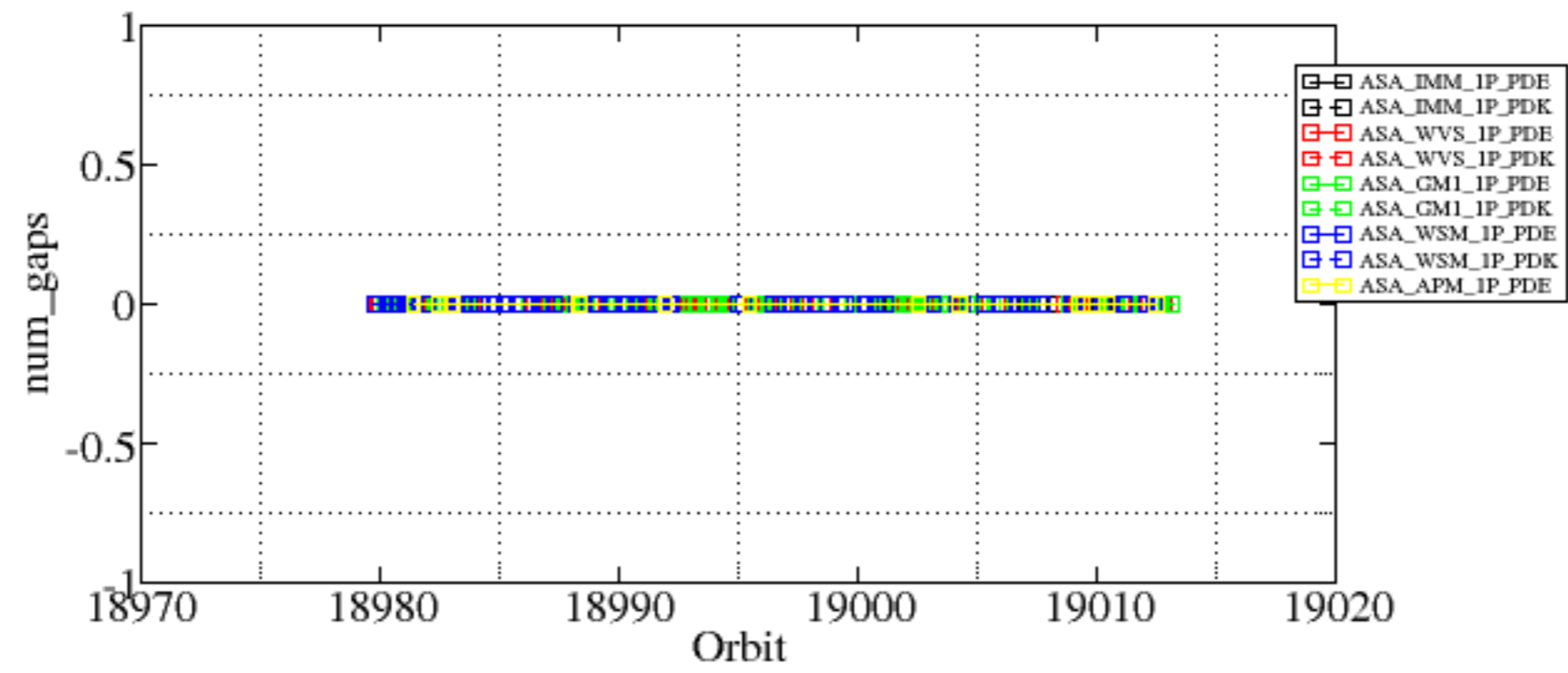


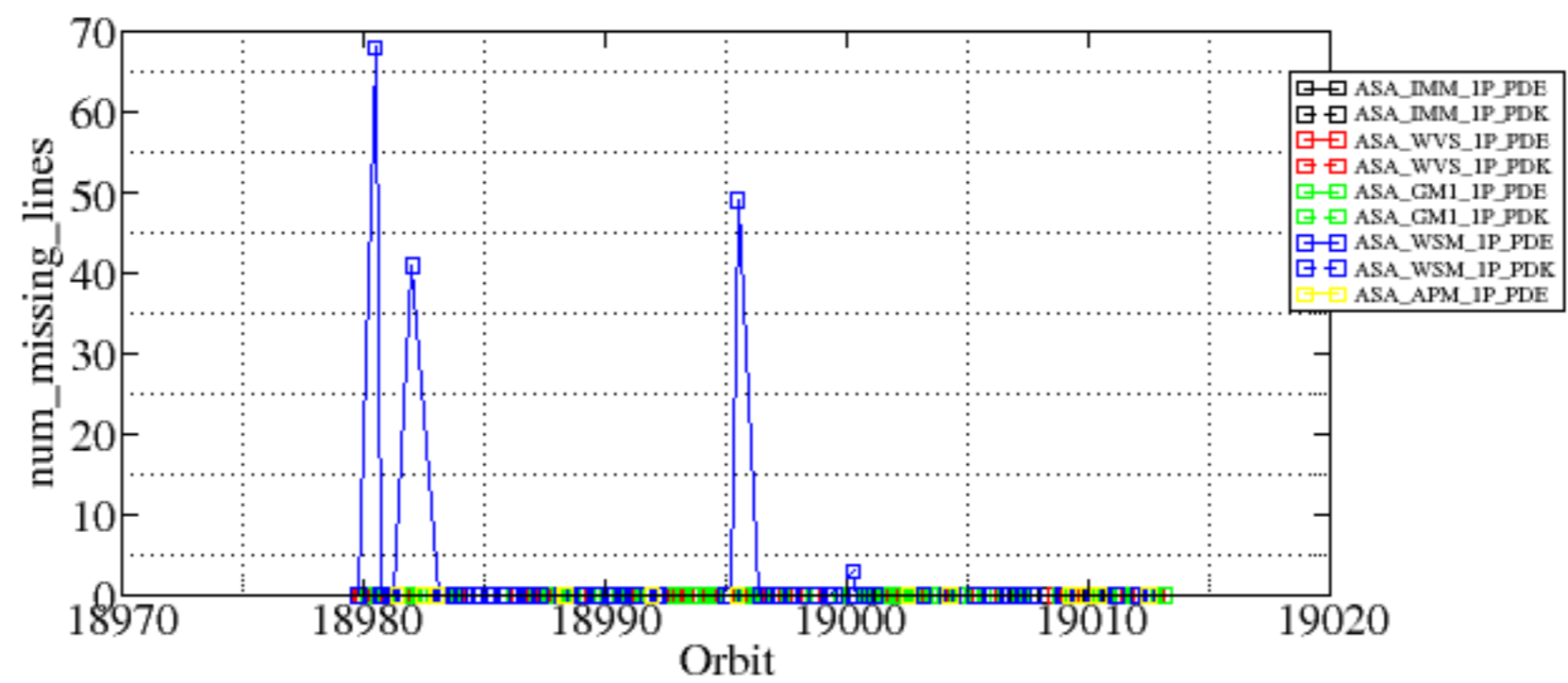


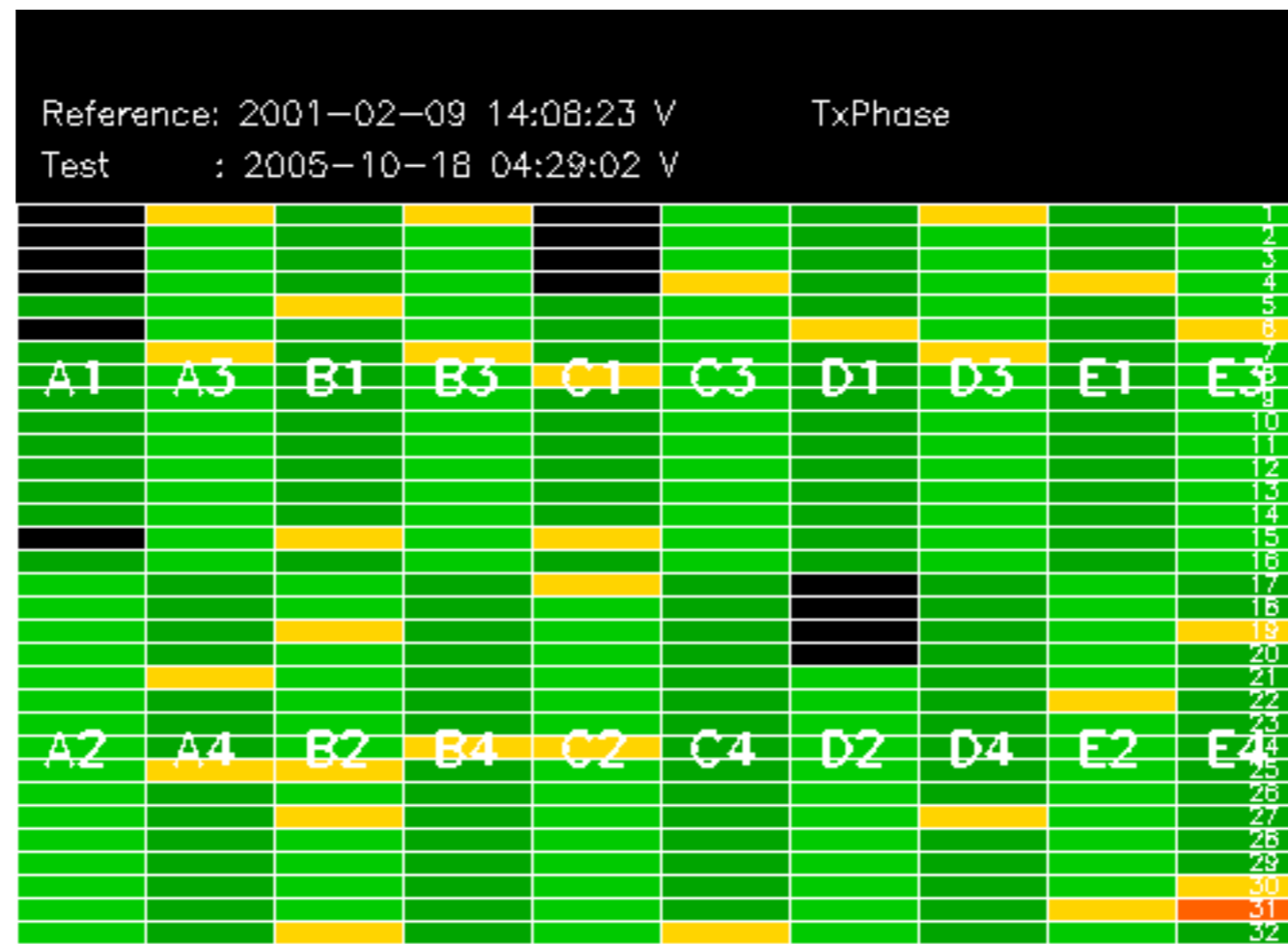
Summary of analysis for the last 3 days 2005101[789]

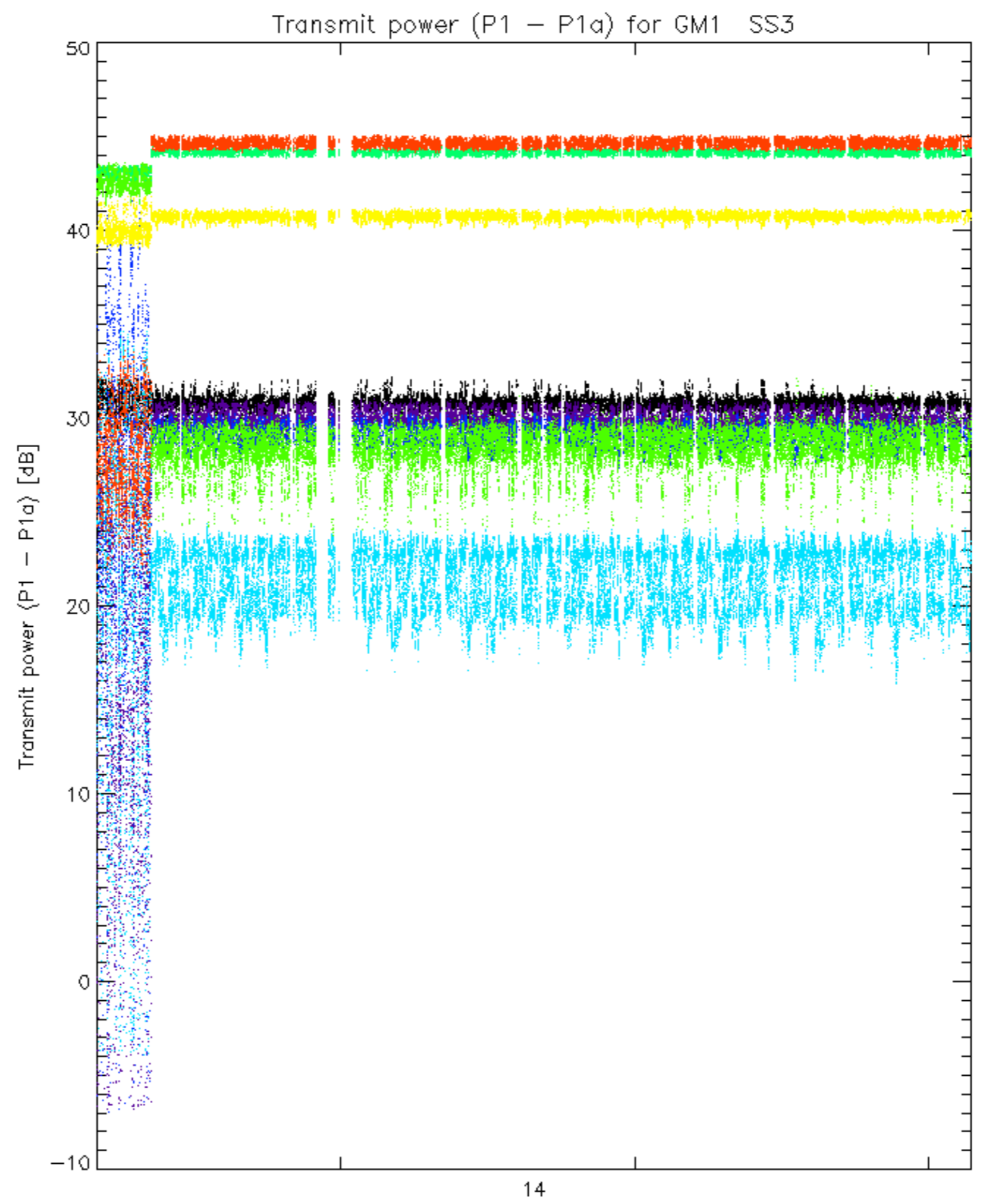
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20051017_011919_000003912041_00389_18980_4497.N1	0	68
ASA_WSM_1PNPDE20051017_035606_000001472041_00391_18982_4517.N1	0	41
ASA_WSM_1PNPDE20051018_022852_000002392041_00404_18995_4709.N1	0	49
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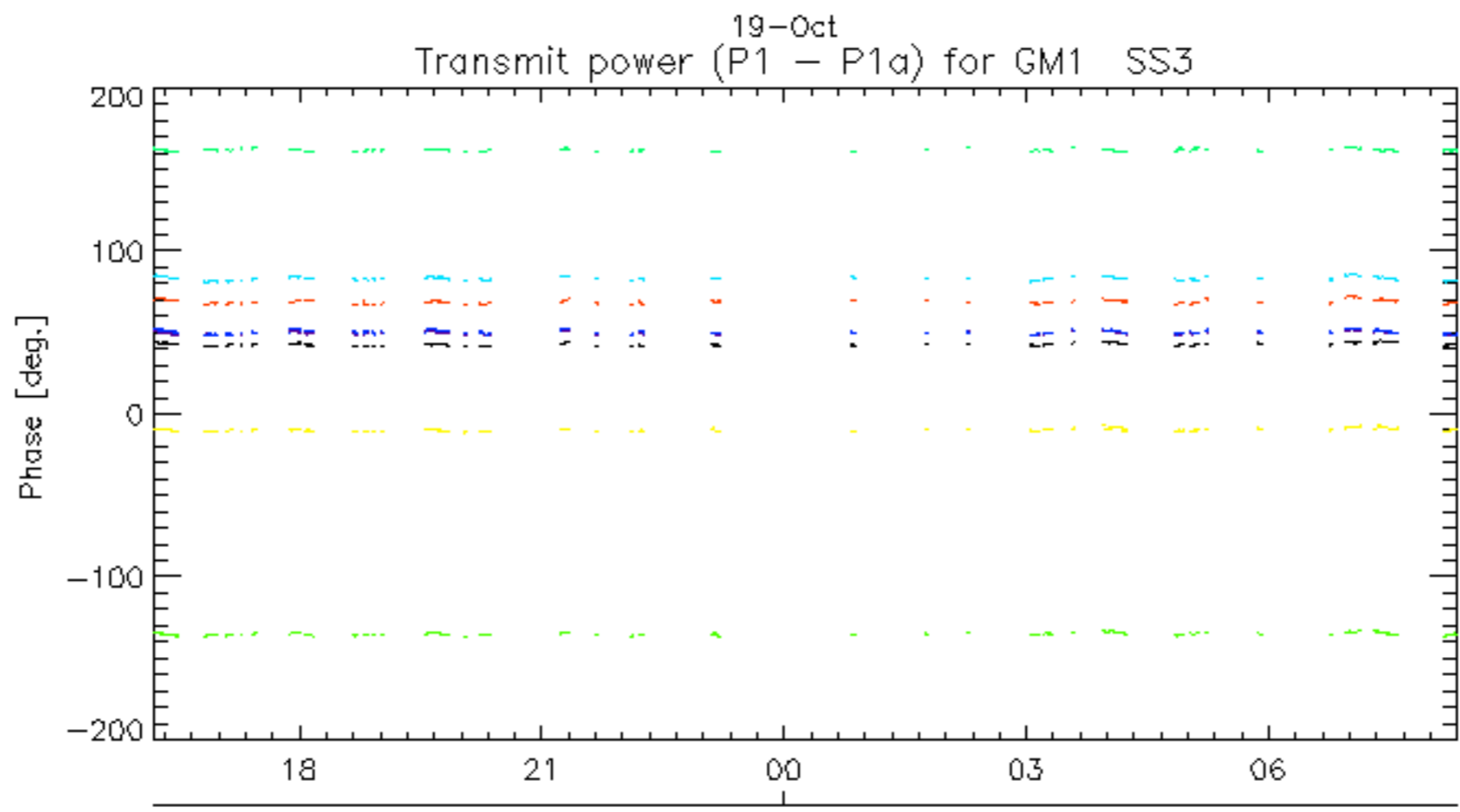
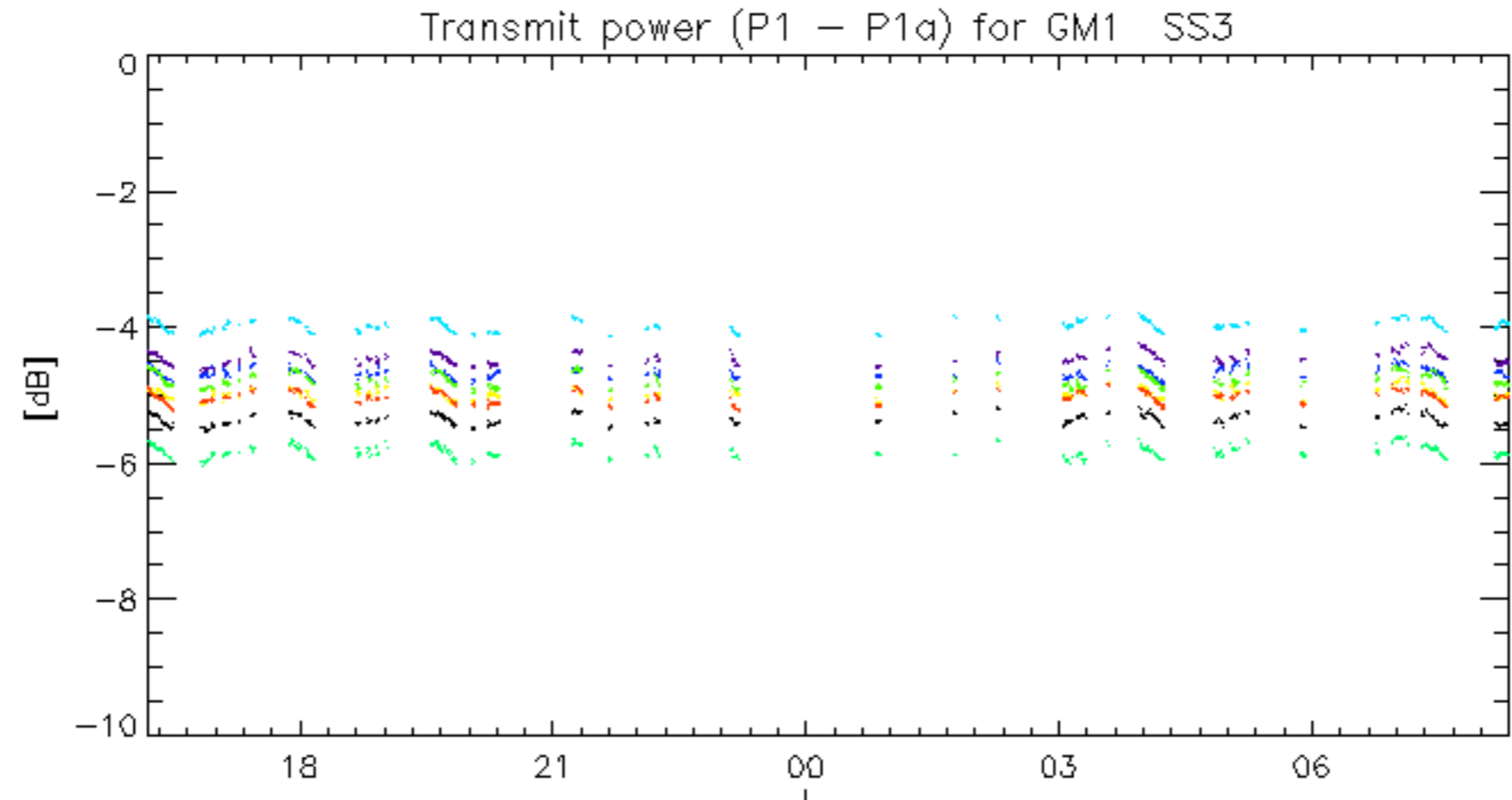




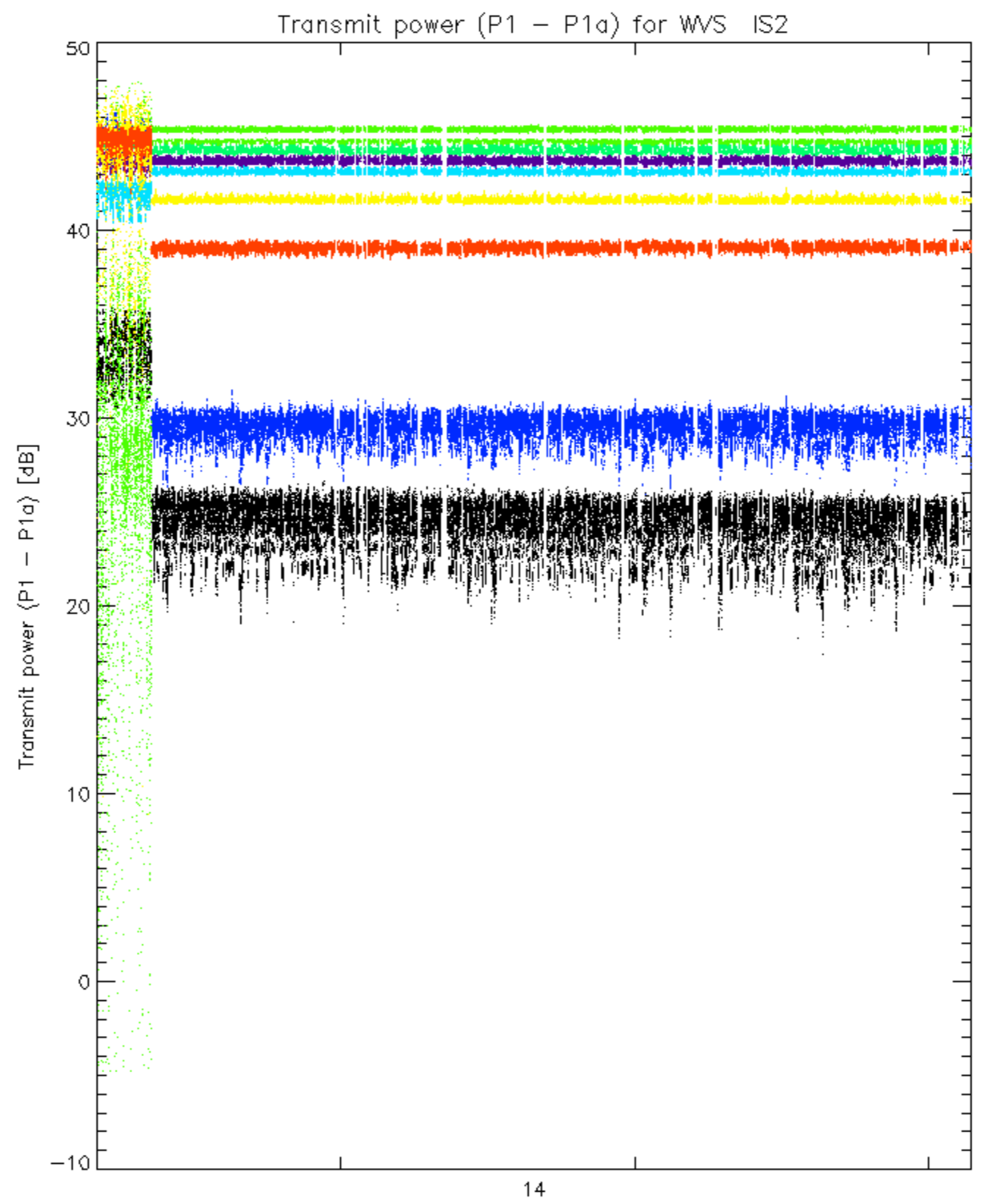




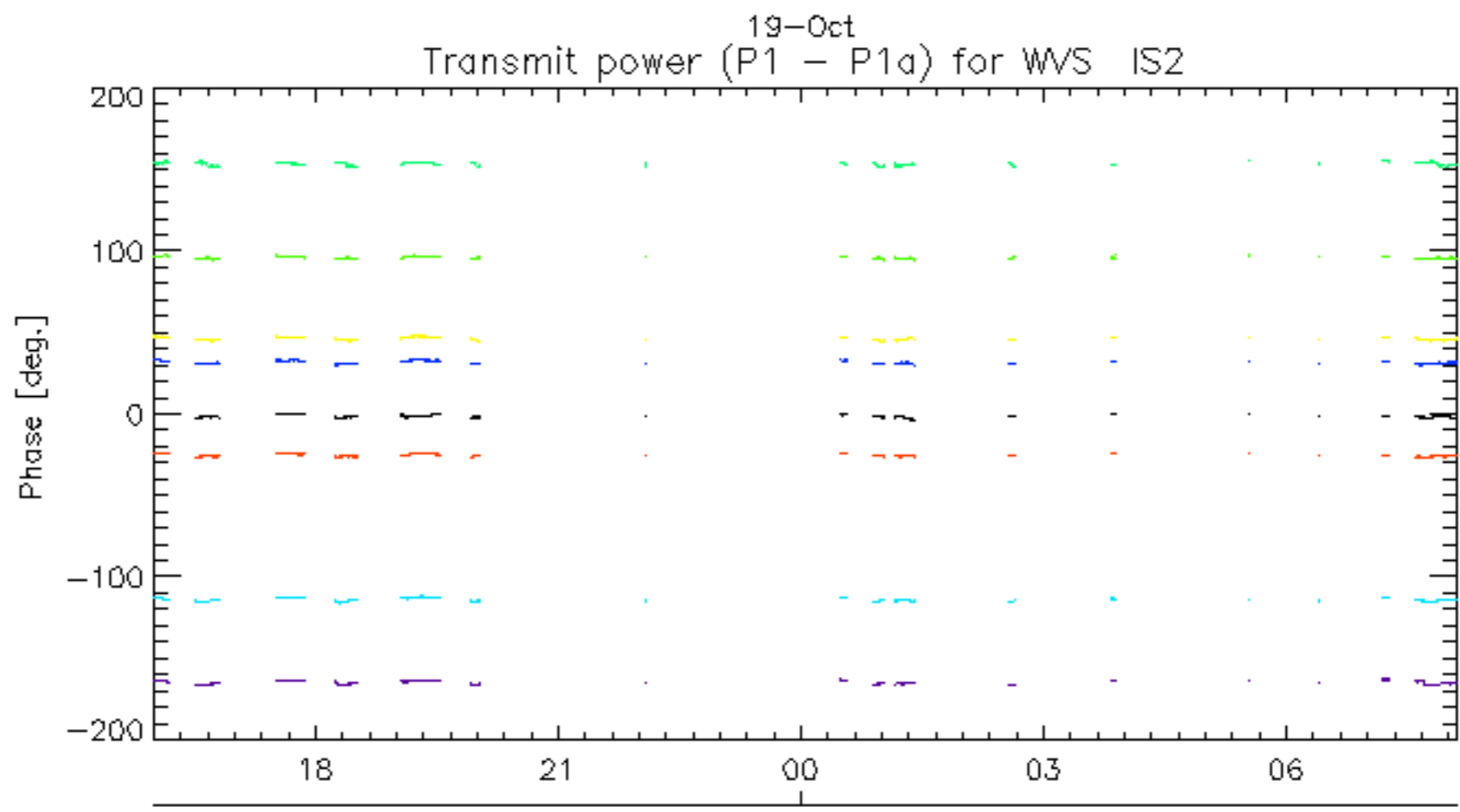
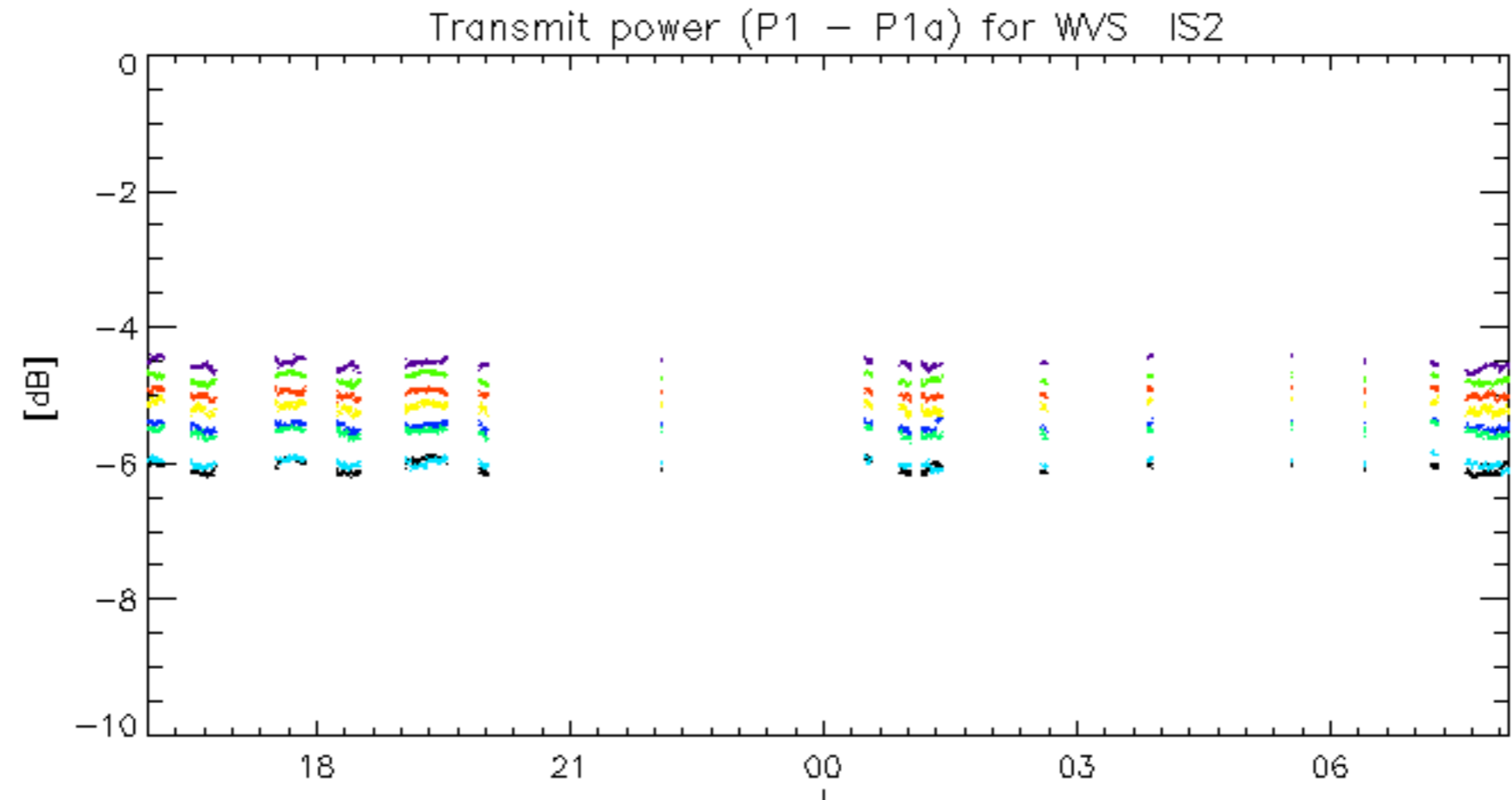
rows: 3 7 11 15 19 22 26 30



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



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



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

No unavailabilities during the reported period.