

PRELIMINARY REPORT OF 051020

last update on Thu Oct 20 16:45:00 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 2005-10-19 00:00:00 to 2005-10-20 16:45:00

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	34	59	15	5	28
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	34	59	15	5	28
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	34	59	15	5	28
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	34	59	15	5	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	22	40	27	13	50
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	22	40	27	13	50
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	22	40	27	13	50
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	22	40	27	13	50

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	20051020 100812
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	-3.565046	0.031877	0.193691
7	P1	-2.909134	0.018492	0.040545
11	P1	-4.094954	0.046571	0.119642
15	P1	-6.020152	0.015722	-0.048937
19	P1	-3.116372	0.037879	-0.238022
22	P1	-4.451177	0.015422	-0.000778
26	P1	-4.310044	0.043195	0.214461
30	P1	-5.687789	0.013930	-0.127710
3	P1	-15.601262	1.069653	1.234845
7	P1	-16.569120	2.515015	1.597758
11	P1	-16.641756	5.495283	2.290216
15	P1	-13.744364	4.373610	2.312044
19	P1	-13.576431	0.054688	-0.255748
22	P1	-16.771173	12.059937	3.557442
26	P1	-16.874443	12.613894	4.184645
30	P1	-16.828053	5.167486	2.390224

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.870939	0.098276	0.018293
7	P2	-22.717512	0.110480	0.141021
11	P2	-16.787886	0.130021	0.254807
15	P2	-7.230347	0.107782	0.043723
19	P2	-9.134571	0.122834	-0.239896
22	P2	-17.686140	0.115790	-0.245872
26	P2	-16.104252	0.100501	0.003950
30	P2	-19.633718	0.093868	0.055535

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.185565	0.005394	-0.037731
7	P3	-8.185565	0.005394	-0.037731
11	P3	-8.185565	0.005394	-0.037731
15	P3	-8.185565	0.005394	-0.037731
19	P3	-8.185565	0.005394	-0.037731
22	P3	-8.185565	0.005394	-0.037731
26	P3	-8.185565	0.005394	-0.037731
30	P3	-8.185565	0.005394	-0.037731

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	-3.596232	0.101481	-0.385691
7	P1	-2.870421	0.037485	0.240837
11	P1	-2.892072	0.054579	0.242273
15	P1	-3.397691	0.020631	0.068557
19	P1	-3.323054	0.025610	-0.166175
22	P1	-5.107441	0.058022	-0.204572
26	P1	-5.717859	0.094843	-0.386140
30	P1	-5.161736	0.081406	-0.305318
3	P1	-11.485922	0.207553	0.465349
7	P1	-10.564971	9.962591	3.718951
11	P1	-10.918057	20.049856	5.229934
15	P1	-11.422070	17.257343	4.912021
19	P1	-15.400788	0.139716	-0.369019
22	P1	-20.536610	1.426547	0.475684

26	P1	-17.356337	2.206147	1.487843
30	P1	-18.989689	1.076884	1.375825

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.701828	0.040053	-0.006019
7	P2	-23.055317	0.093201	0.022821
11	P2	-11.749100	0.029186	-0.009122
15	P2	-4.896347	0.039872	0.003143
19	P2	-6.854259	0.065781	-0.268936
22	P2	-8.069732	0.051212	-0.249775
26	P2	-23.862038	0.041341	-0.025346
30	P2	-22.079739	0.041156	0.110453

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.028833	0.002836	-0.038246
7	P3	-8.028893	0.002841	-0.038126
11	P3	-8.028796	0.002847	-0.038788
15	P3	-8.028878	0.002836	-0.038415
19	P3	-8.028942	0.002846	-0.038131
22	P3	-8.028803	0.002852	-0.038628
26	P3	-8.029062	0.002851	-0.038544
30	P3	-8.028897	0.002845	-0.038346

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	0.000552198
	stdev	1.74295e-07
MEAN Q	mean	0.000536642
	stdev	2.16309e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137105
	stdev	0.00110953
STDEV Q	mean	0.137442
	stdev	0.00112565



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[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_1PNPDE20051010_155732_000002332041_00298_18889_8044.N1	1	0
ASA_IMM_1PNPDK20051010_124847_000000882041_00296_18887_5483.N1	1	0
ASA_WSM_1PNPDE20051010_041813_000001592041_00291_18882_3248.N1	0	37
ASA_WSM_1PNPDE20051018_022852_000002392041_00404_18995_4709.N1	0	49
ASA_WSM_1PNPDE20051018_183220_000001282041_00414_19005_4907.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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

<input type="checkbox"/>
Ascending
<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)

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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

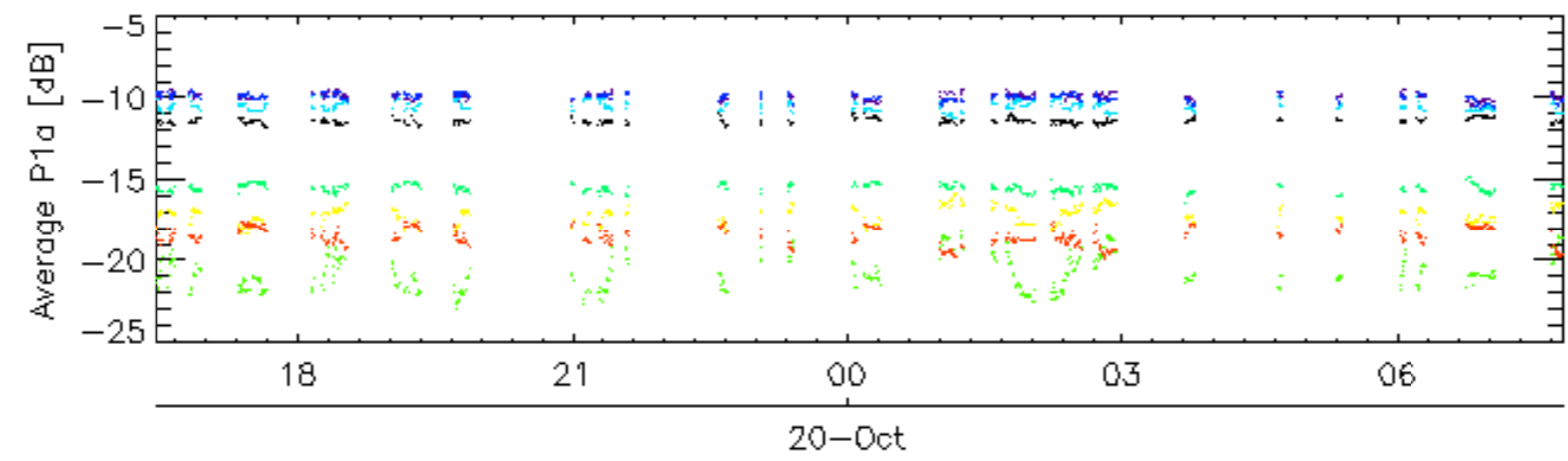
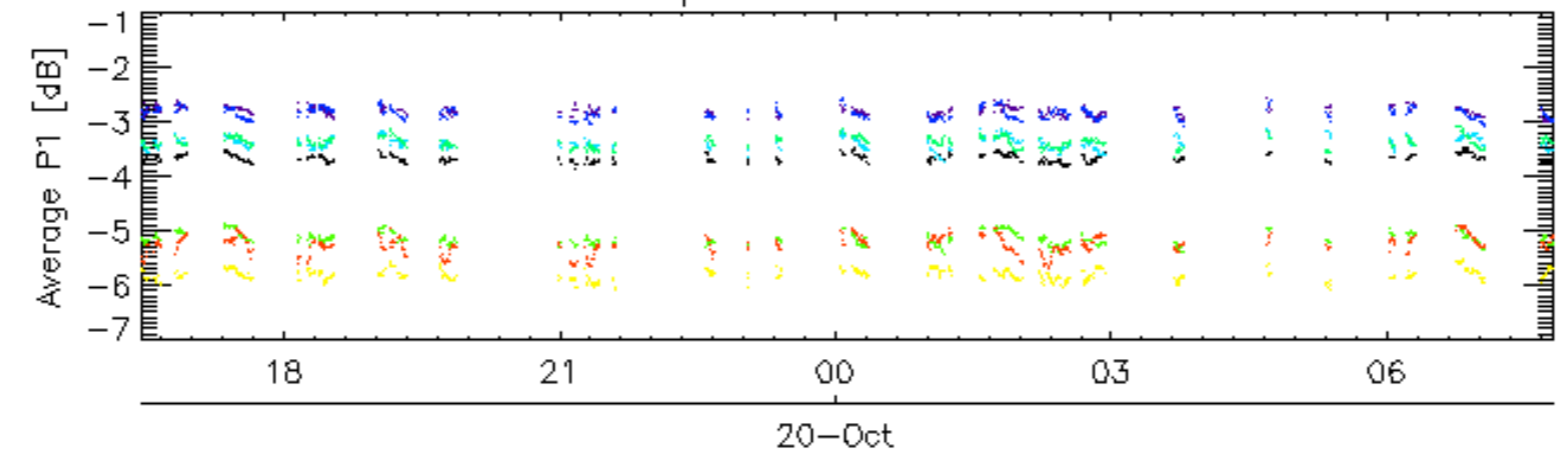
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	Ascending
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	Descending

7.6 - Doppler evolution versus ANX for GM1

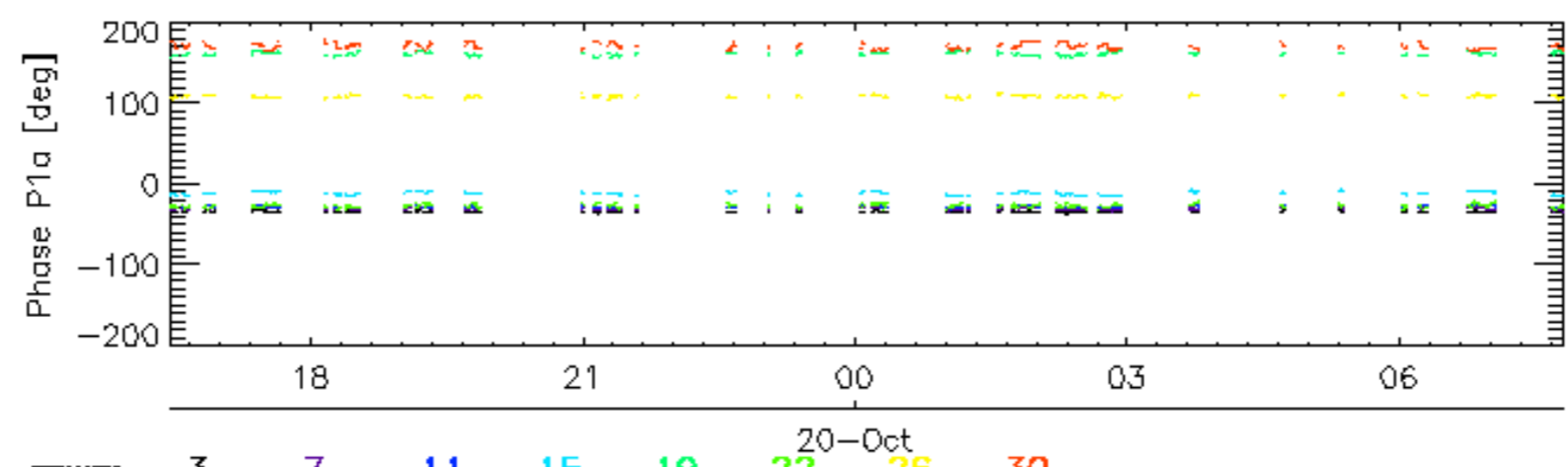
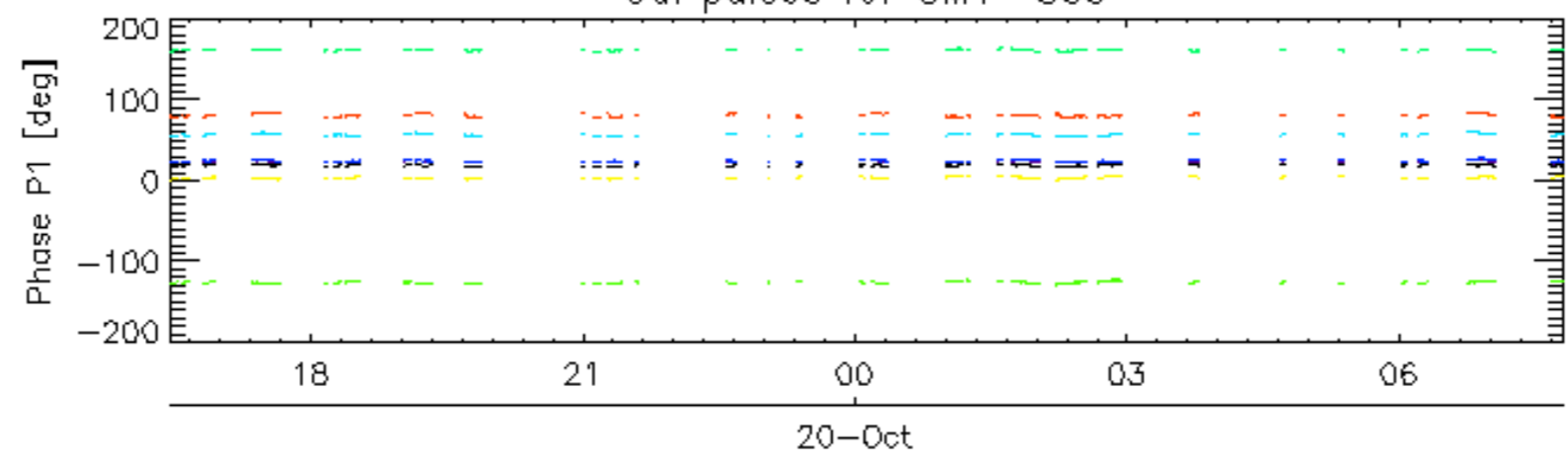
Evolution Doppler error versus ANX

<input type="checkbox"/>	
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Cal pulses for GM1 SS3

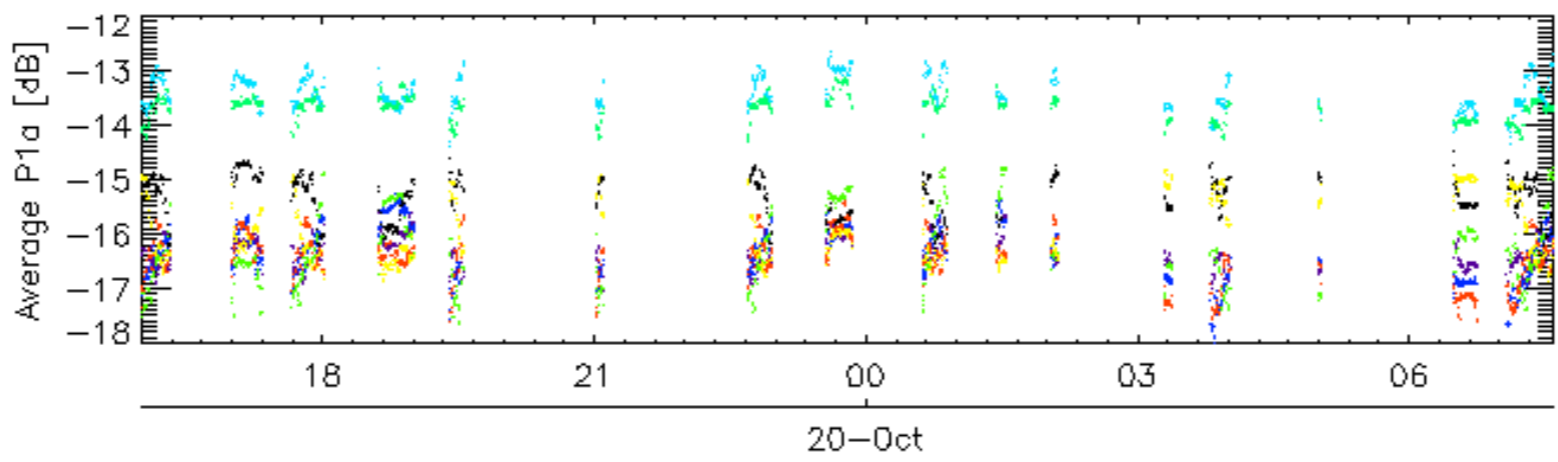
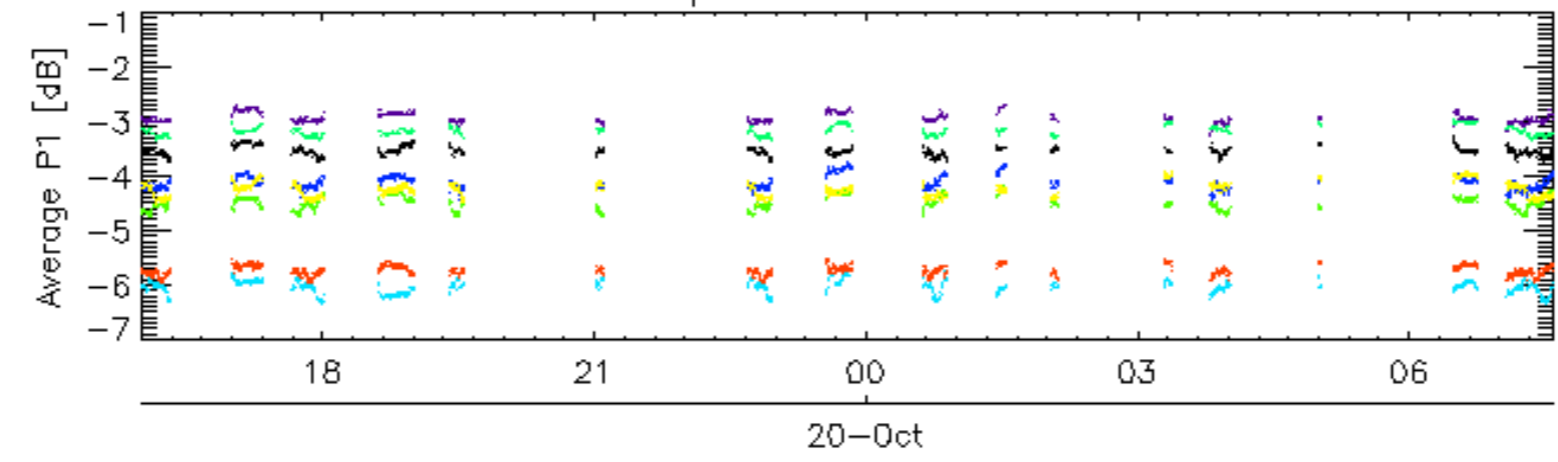


Cal pulses for GM1 SS3

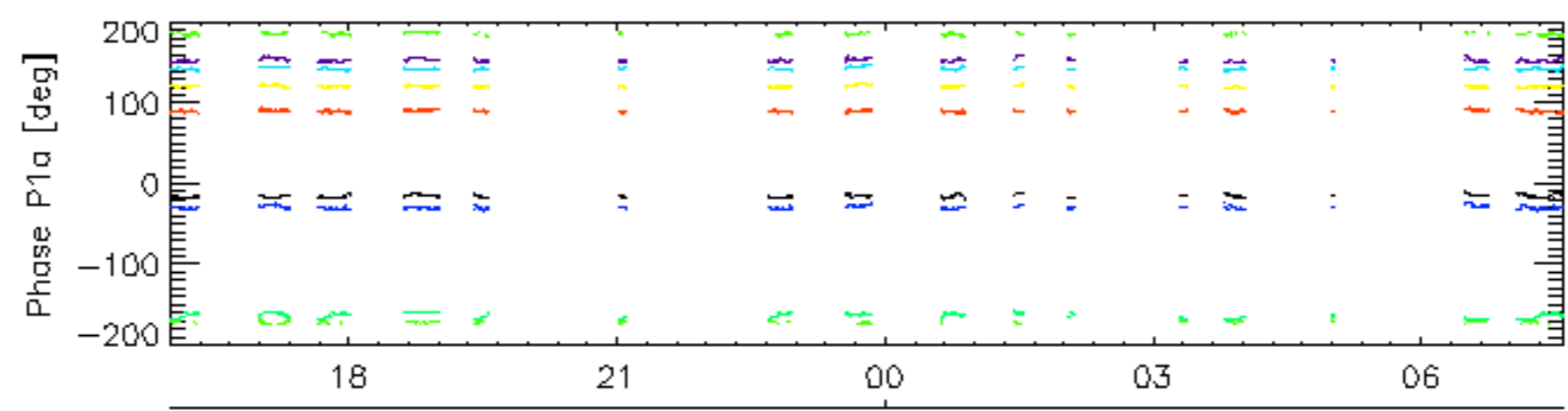
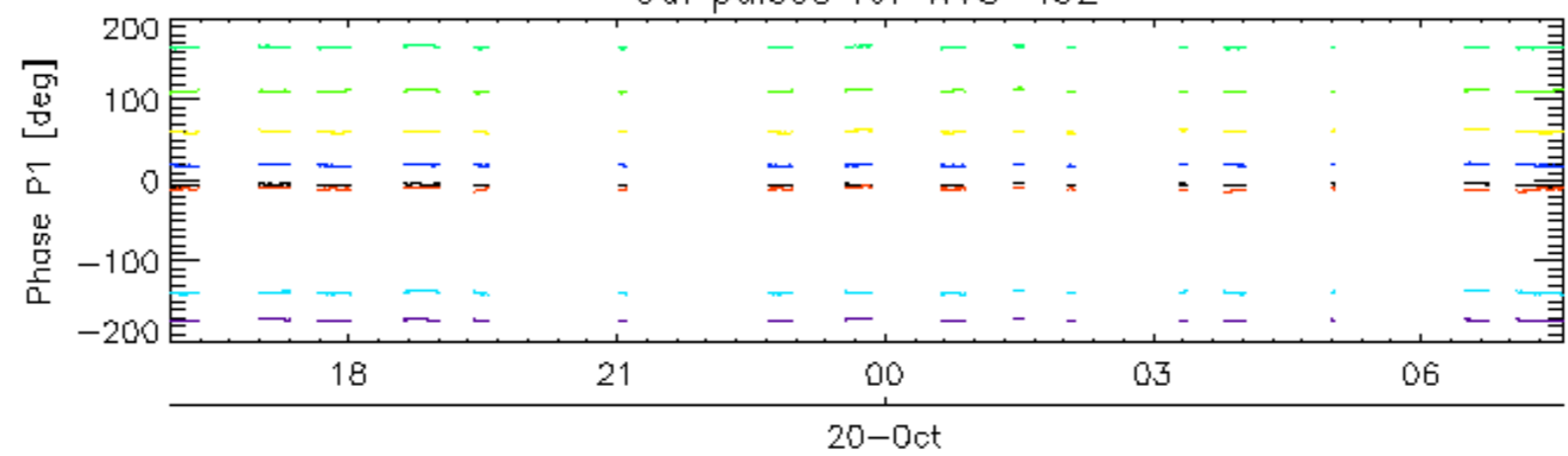


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

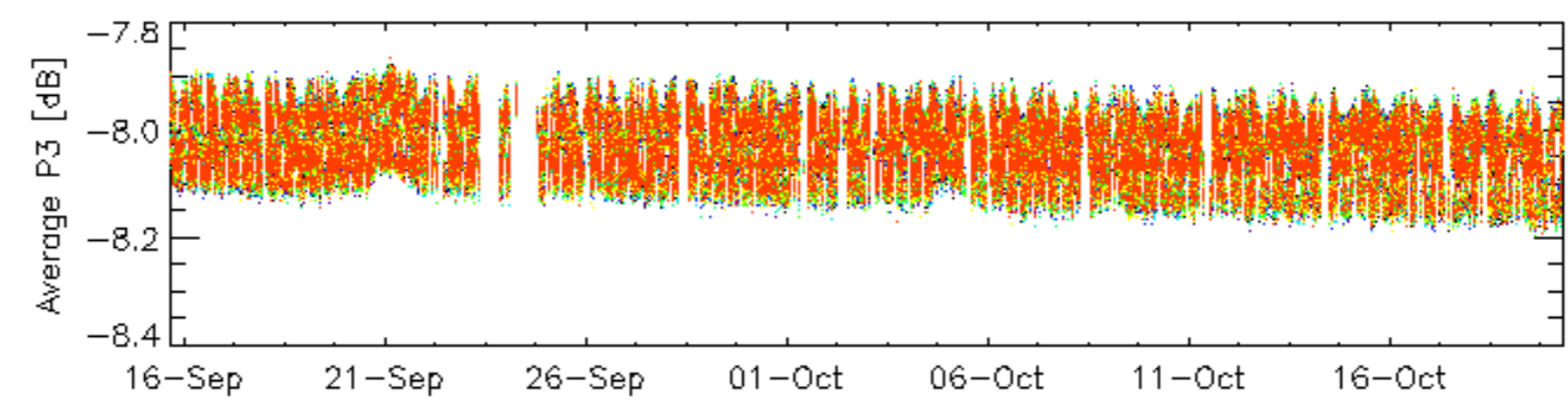
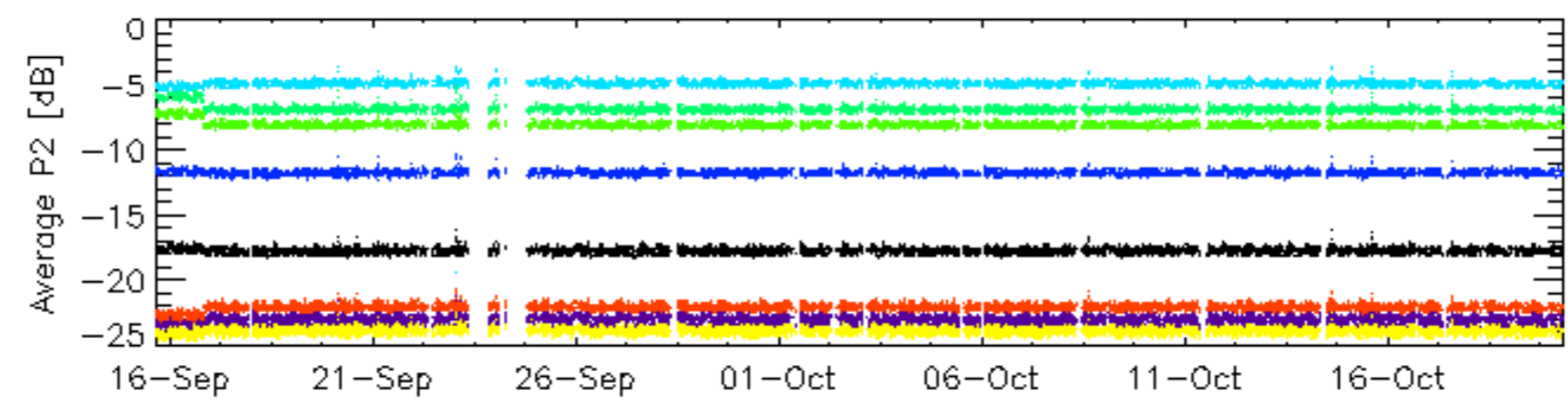
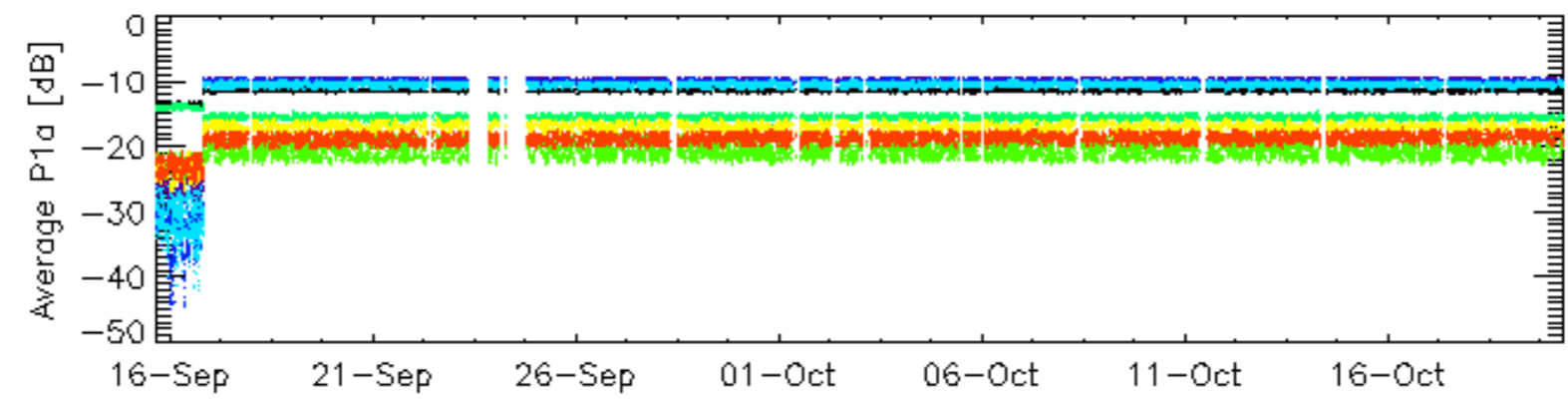
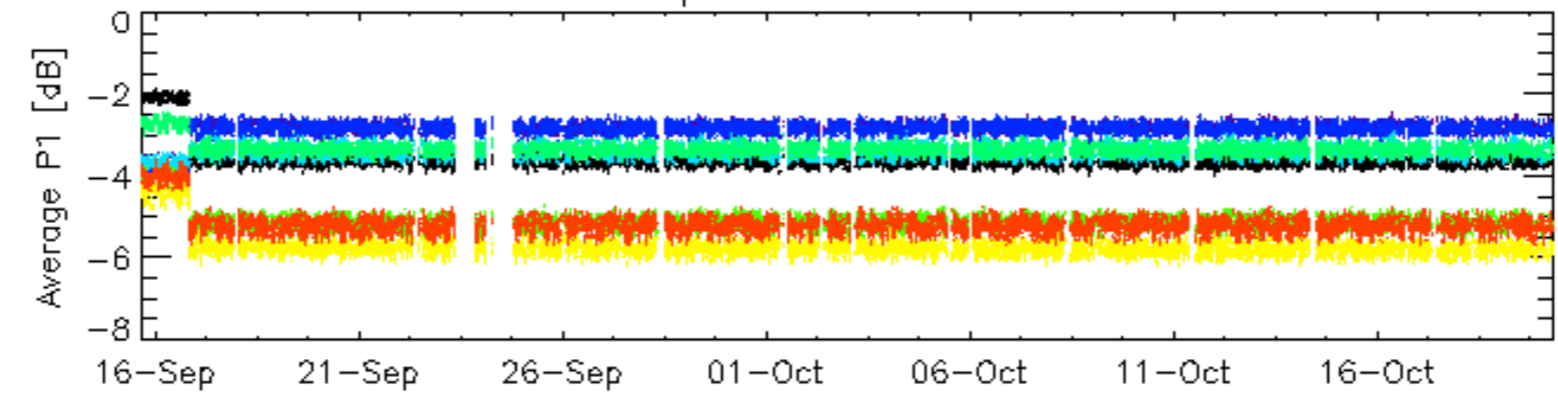


Cal pulses for WVS IS2



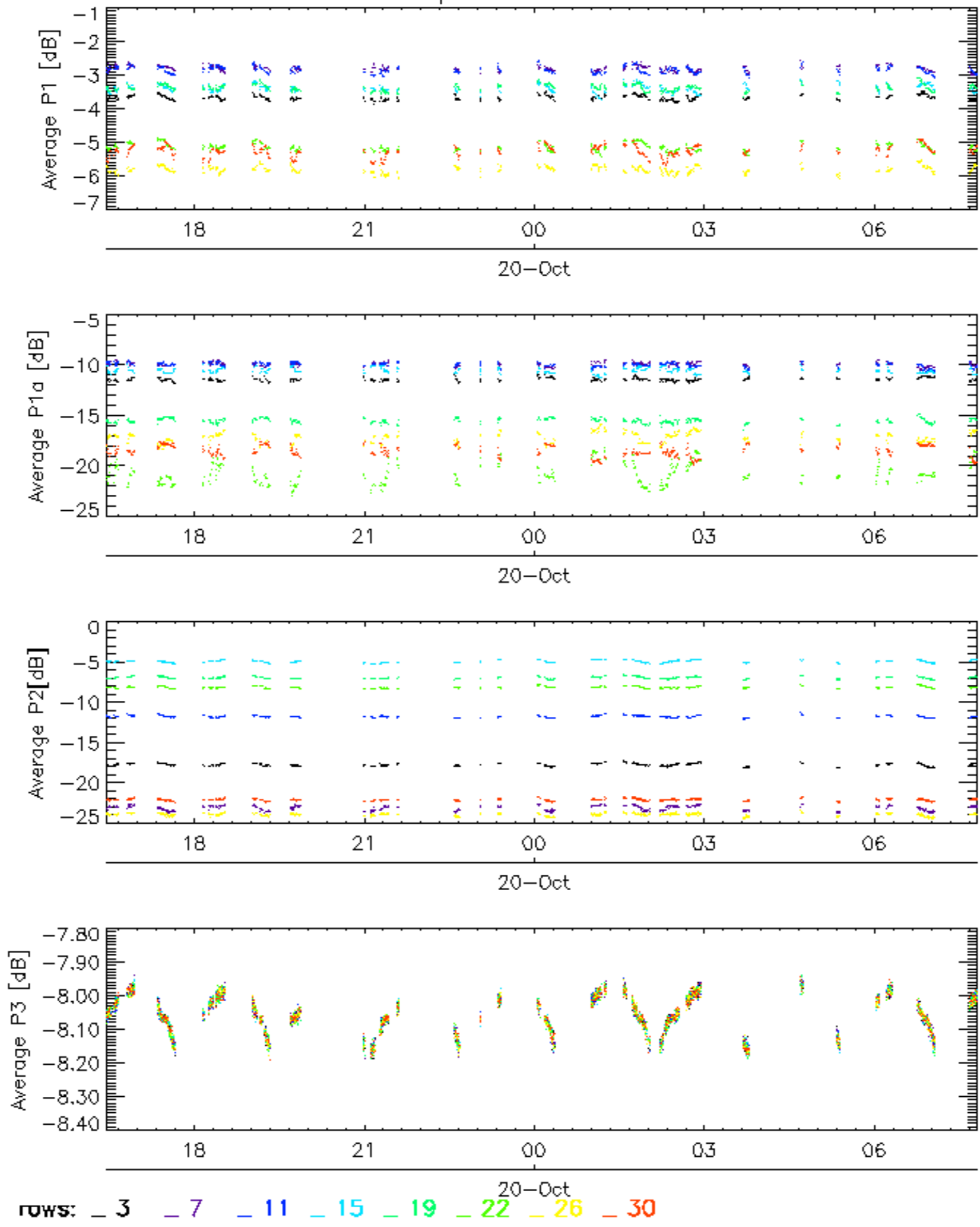
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

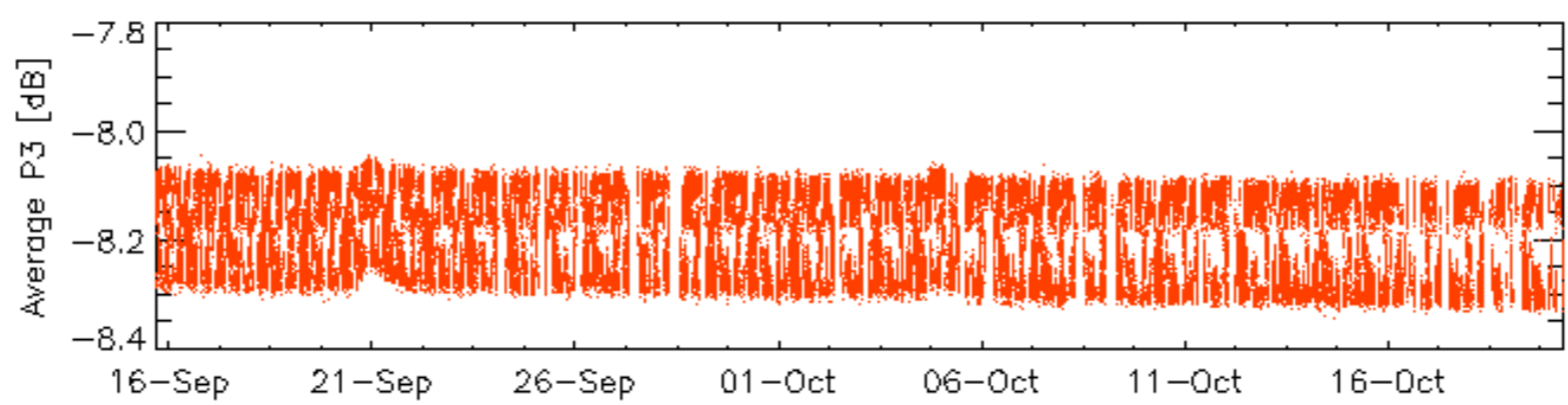
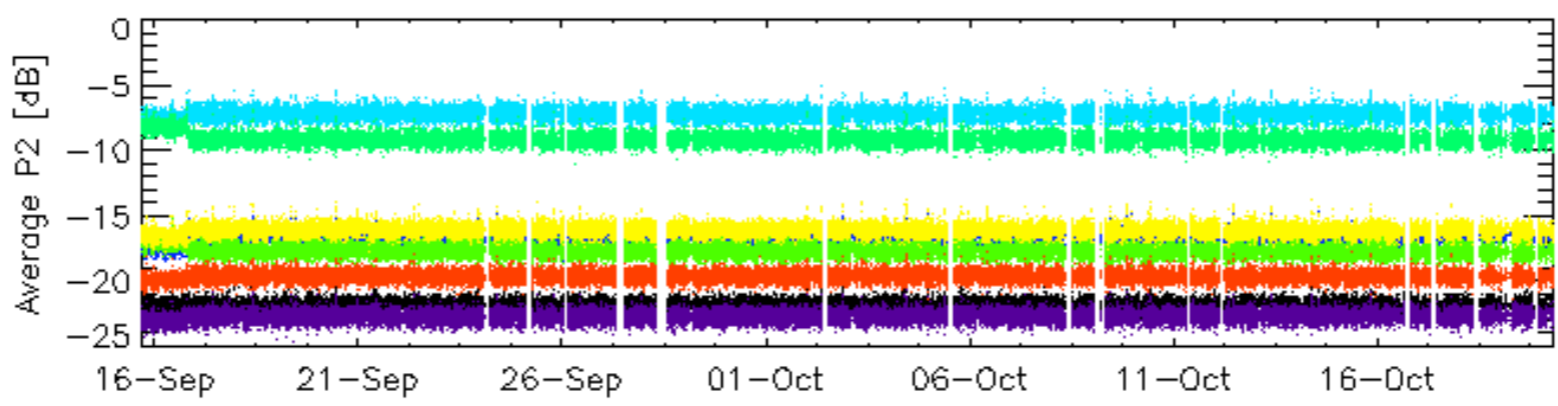
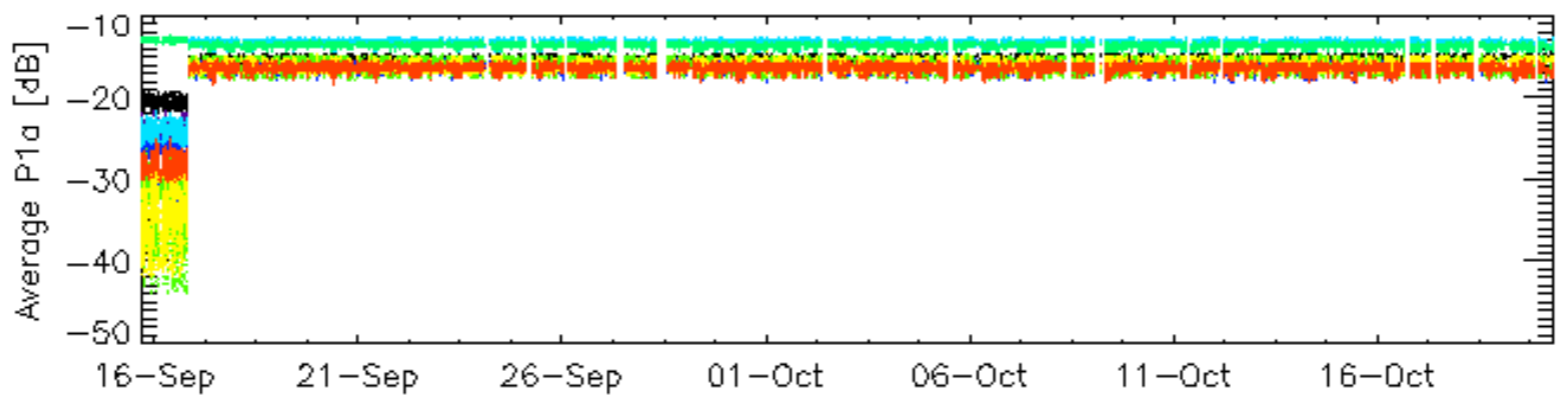
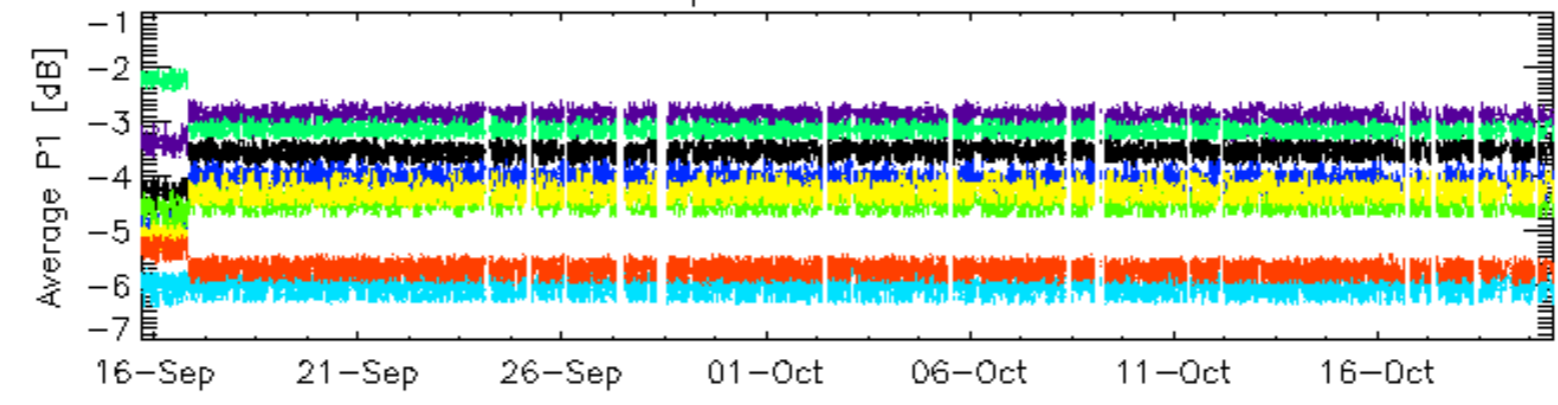


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

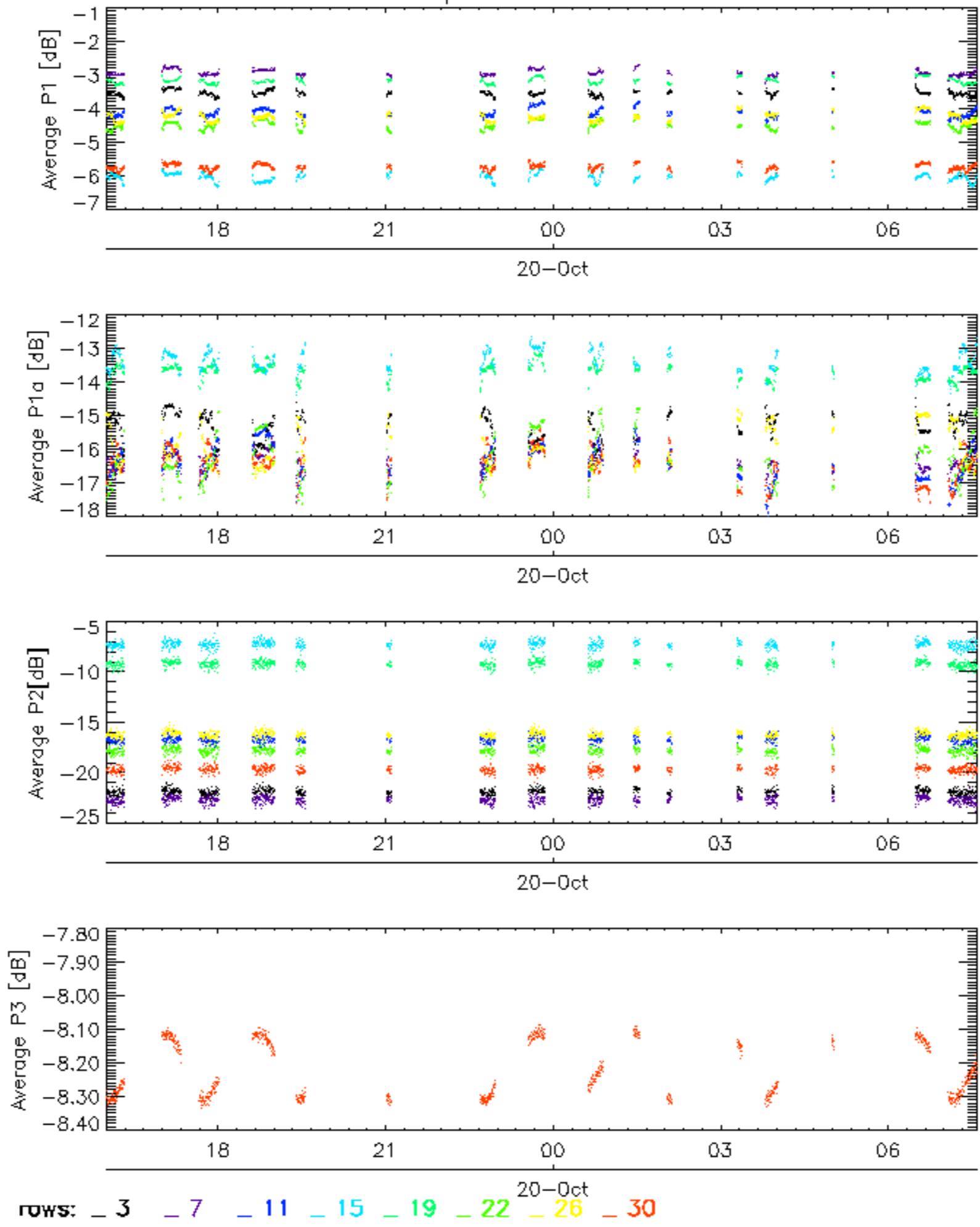


Cal pulses for WVS IS2



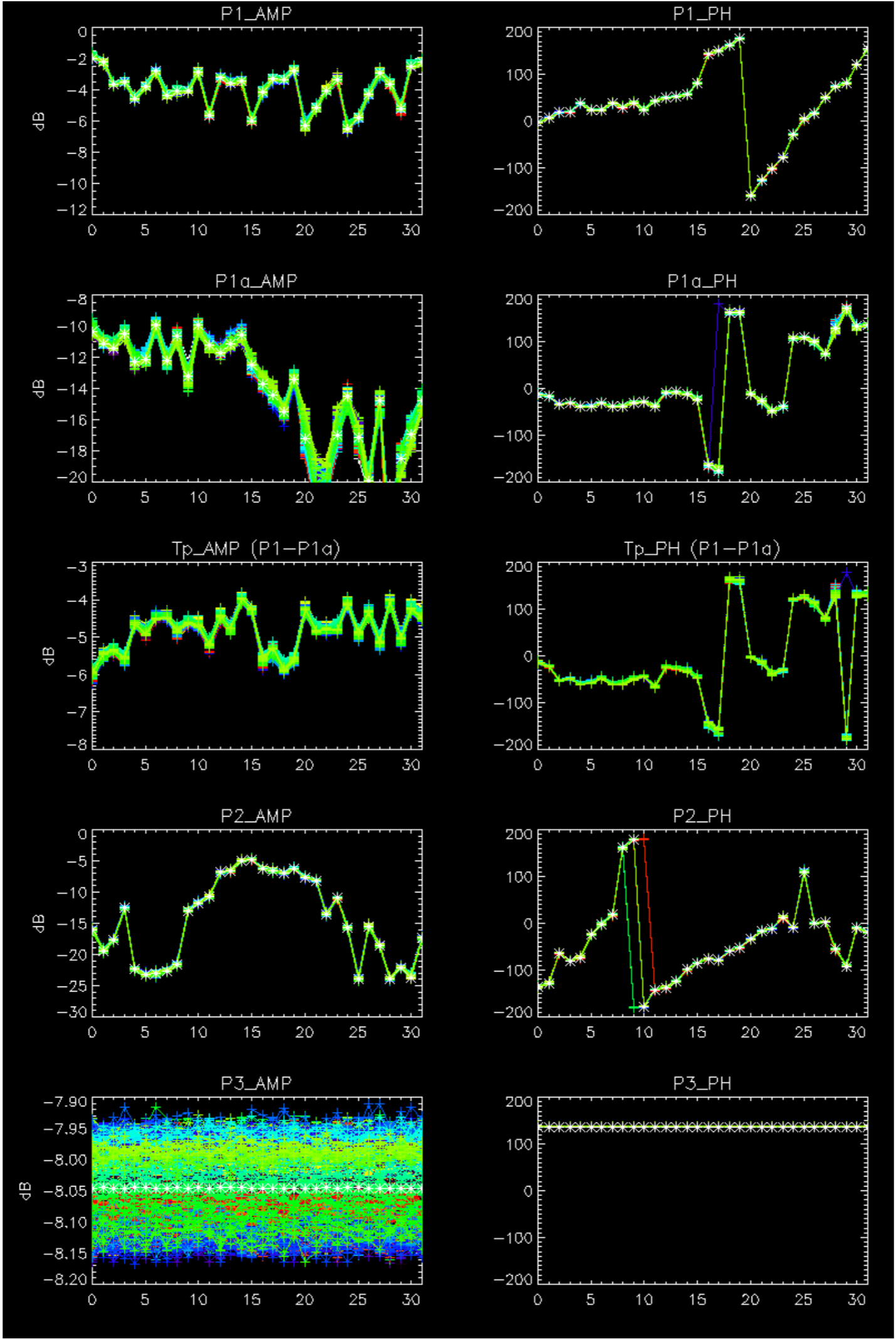
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

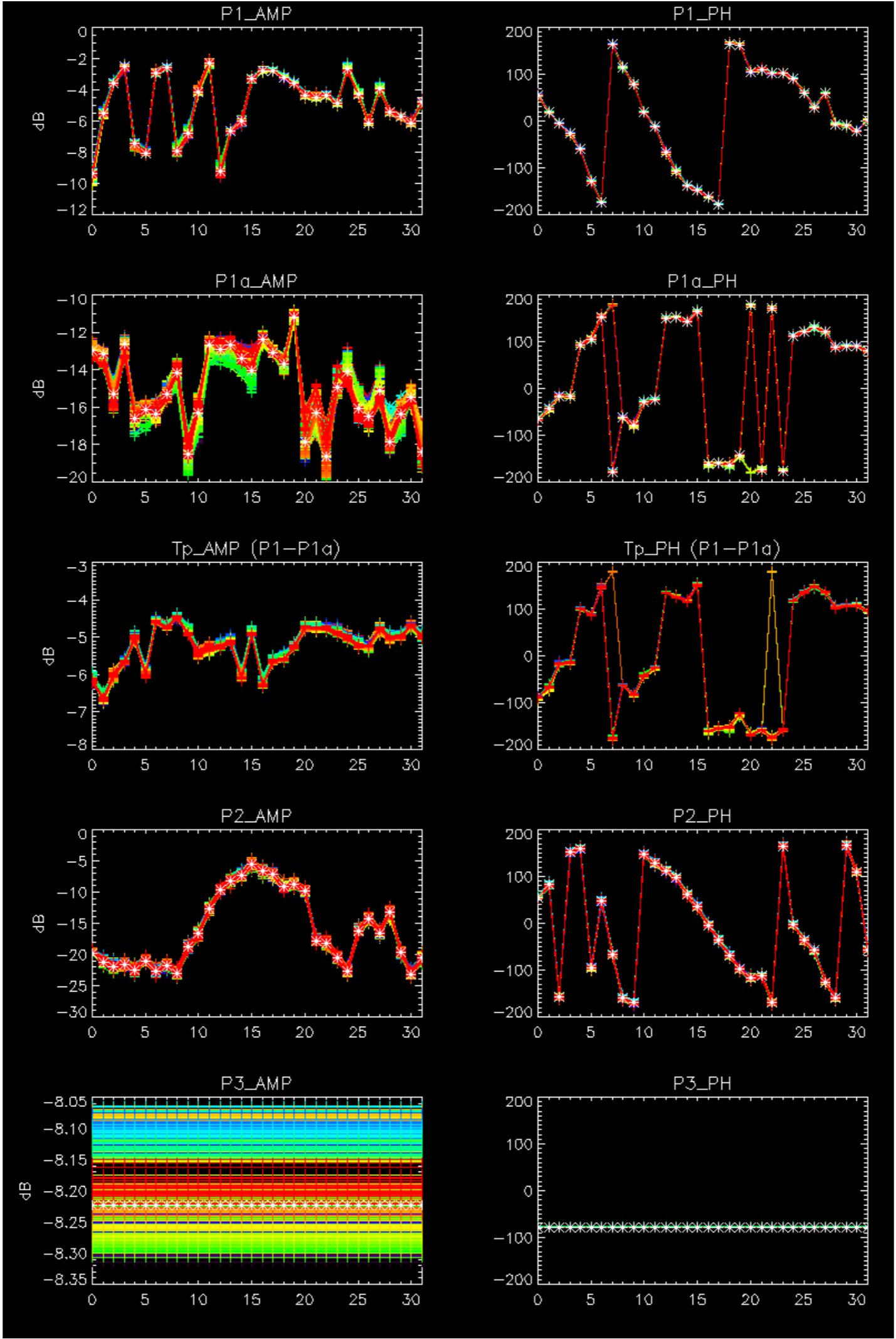
Cal pulses for WVS IS2



No anomalies observed on available browse products

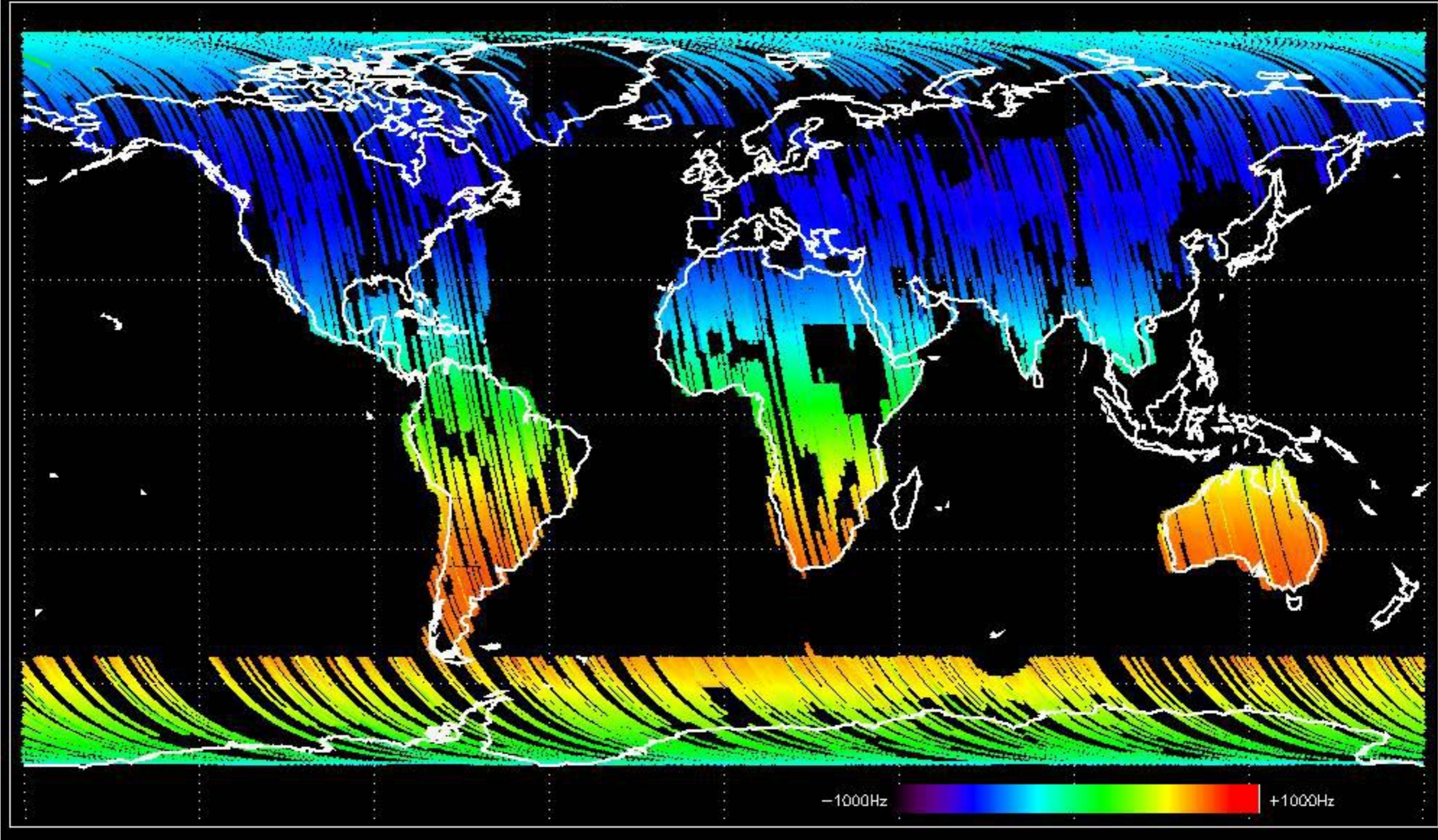
No anomalies observed.



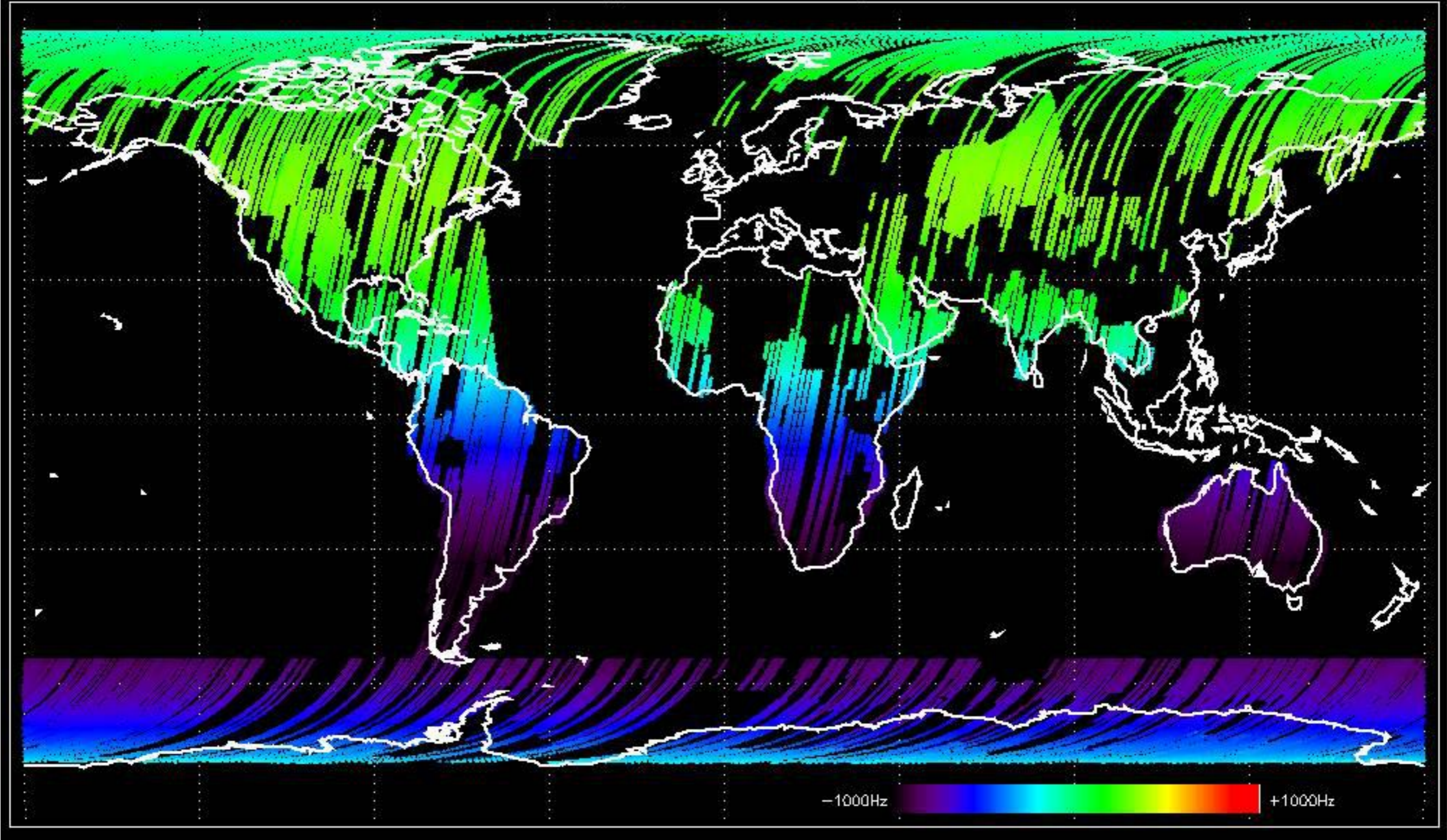


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

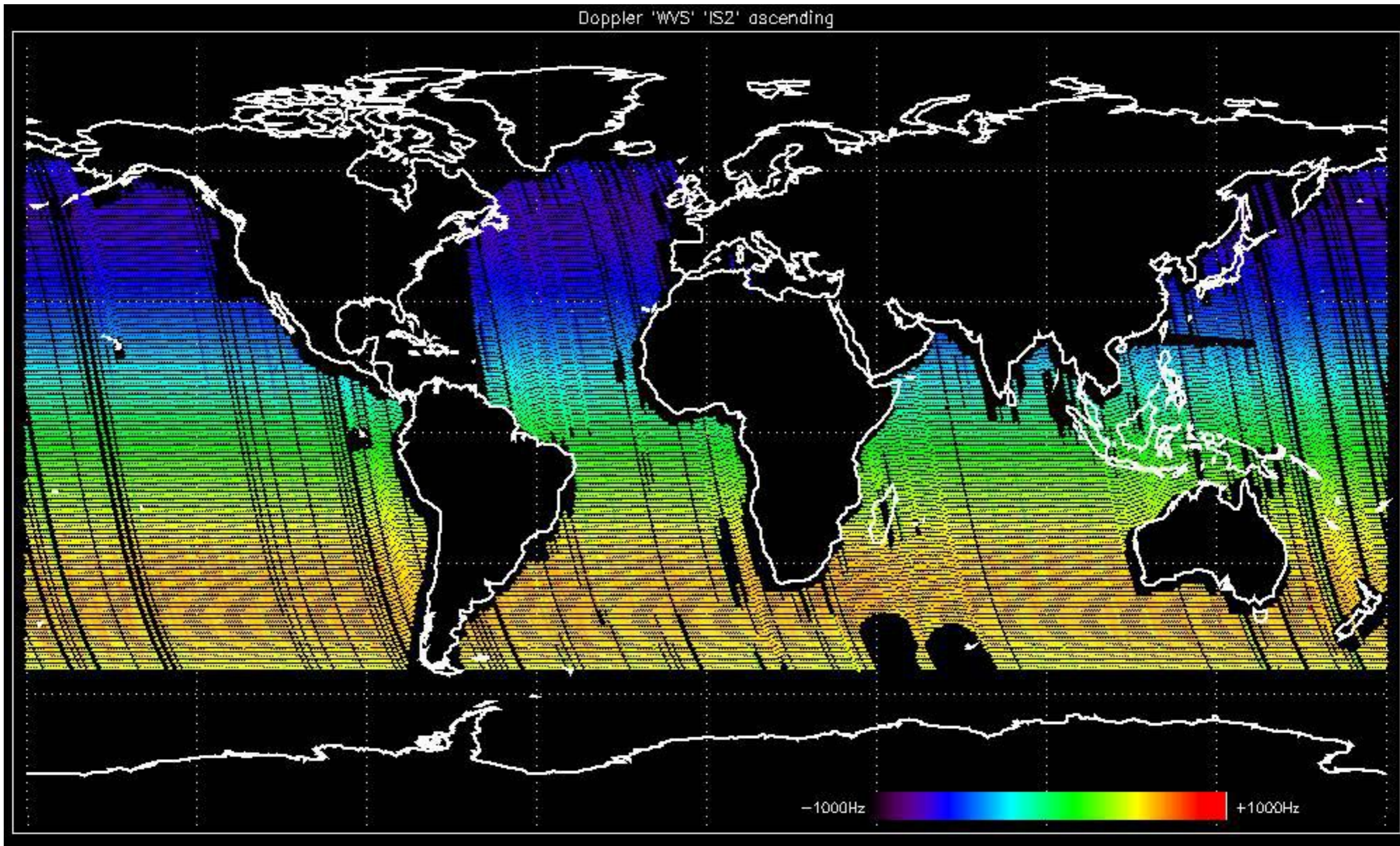
Doppler 'GM1' 'SS1' ascending



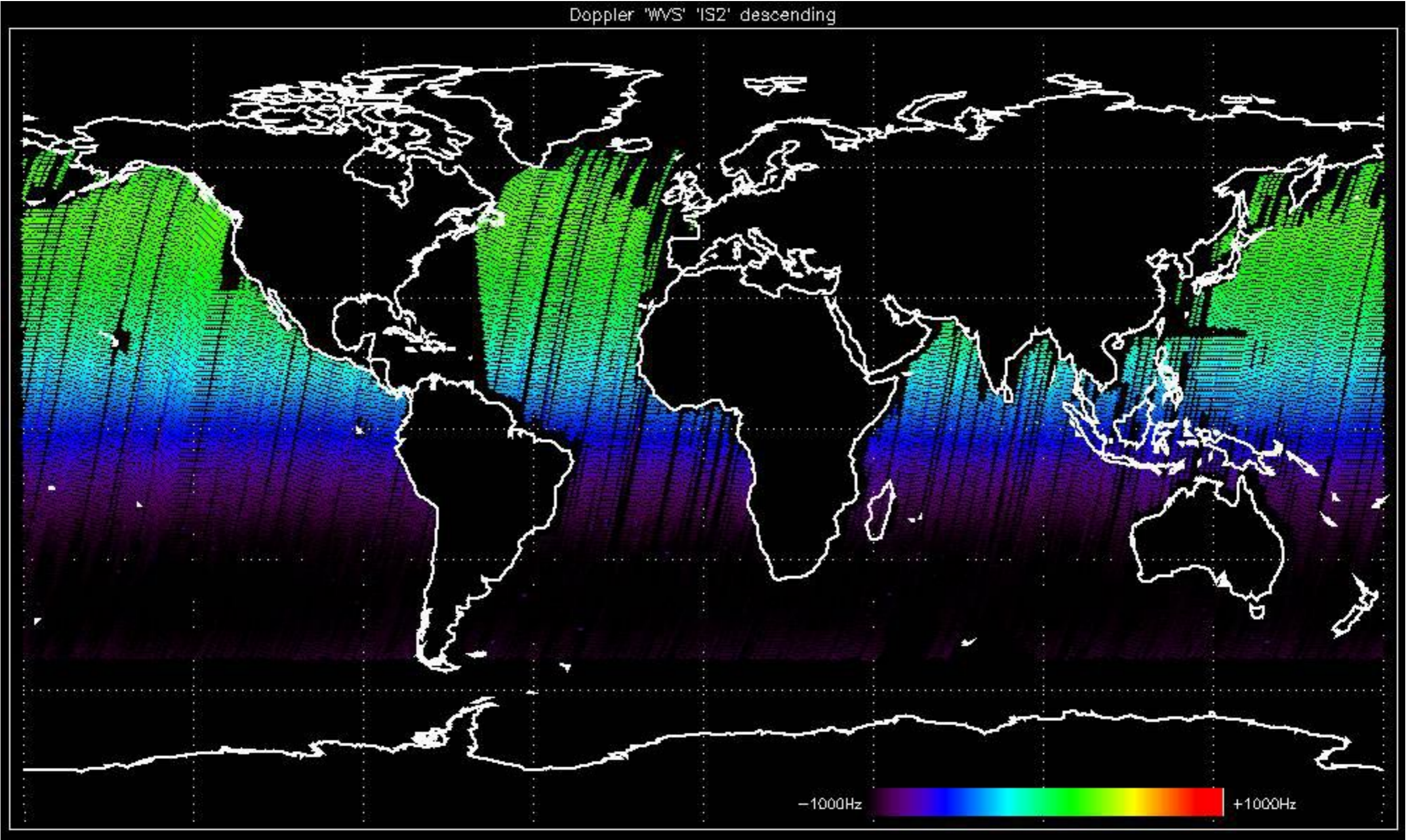
Doppler 'GM1' 'SS1' descending

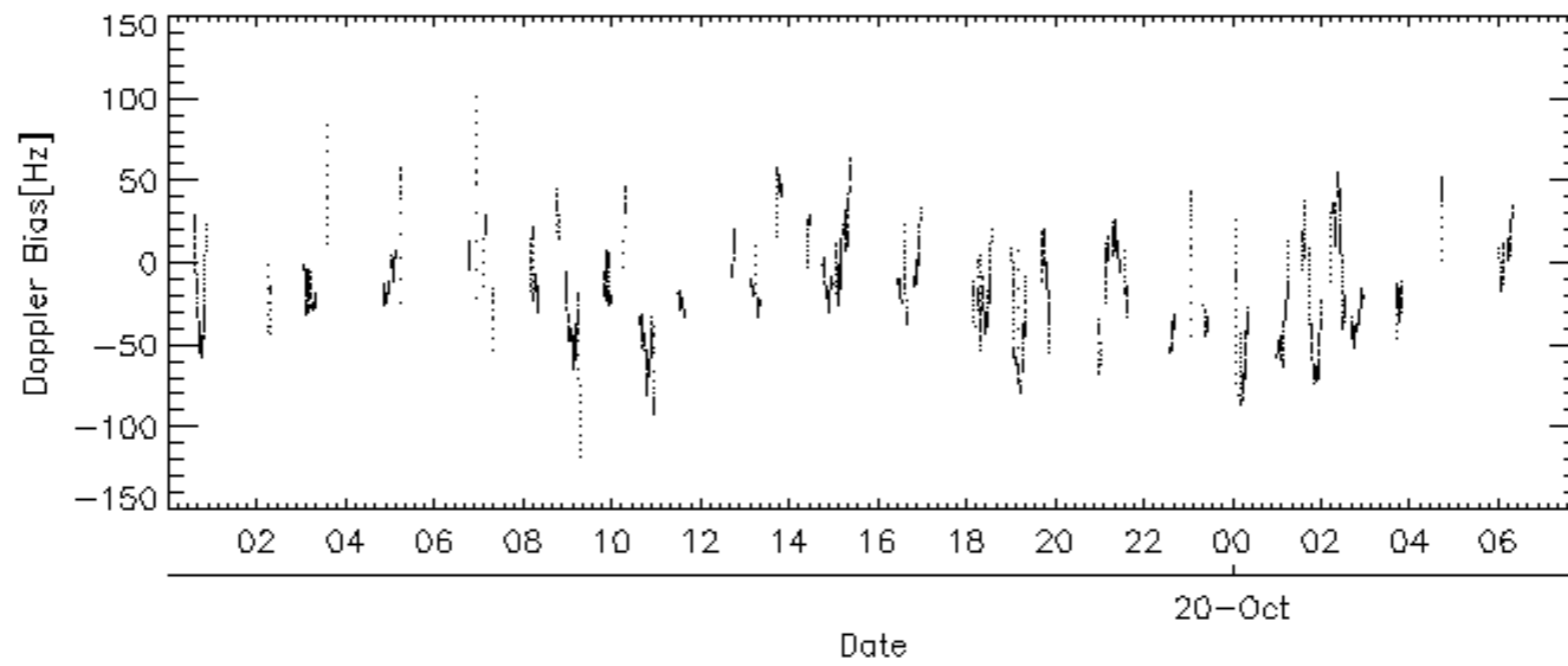
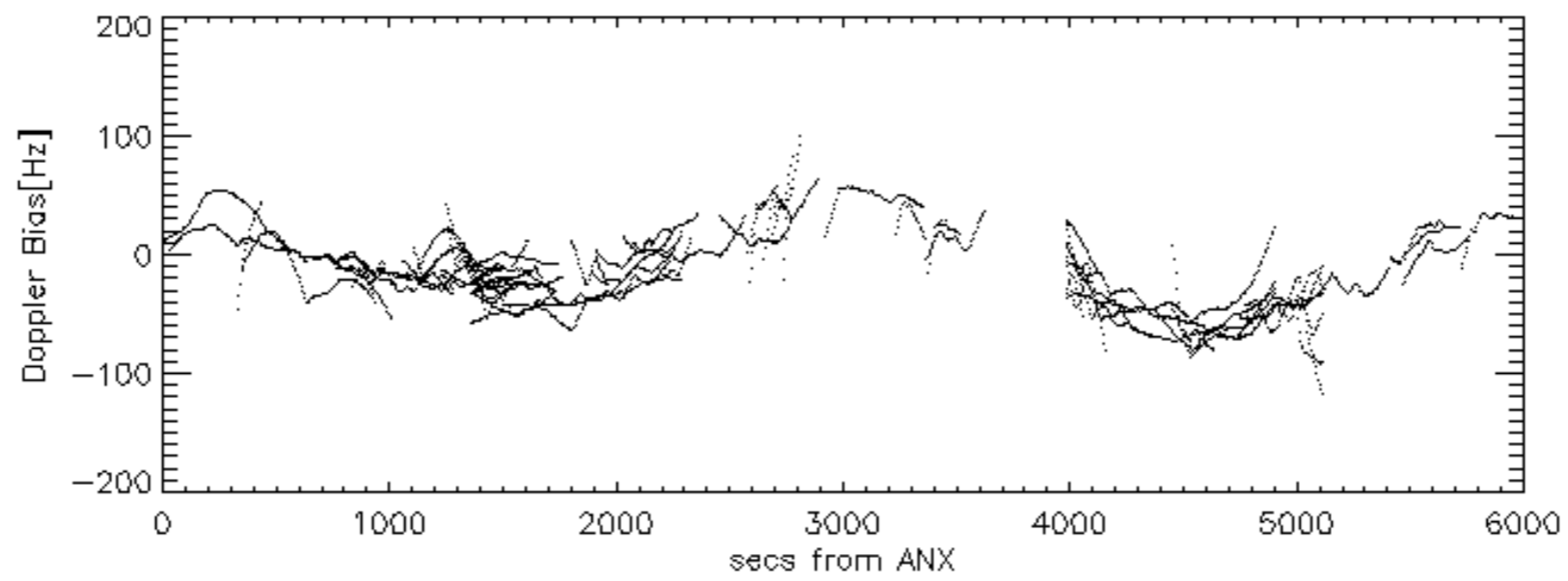
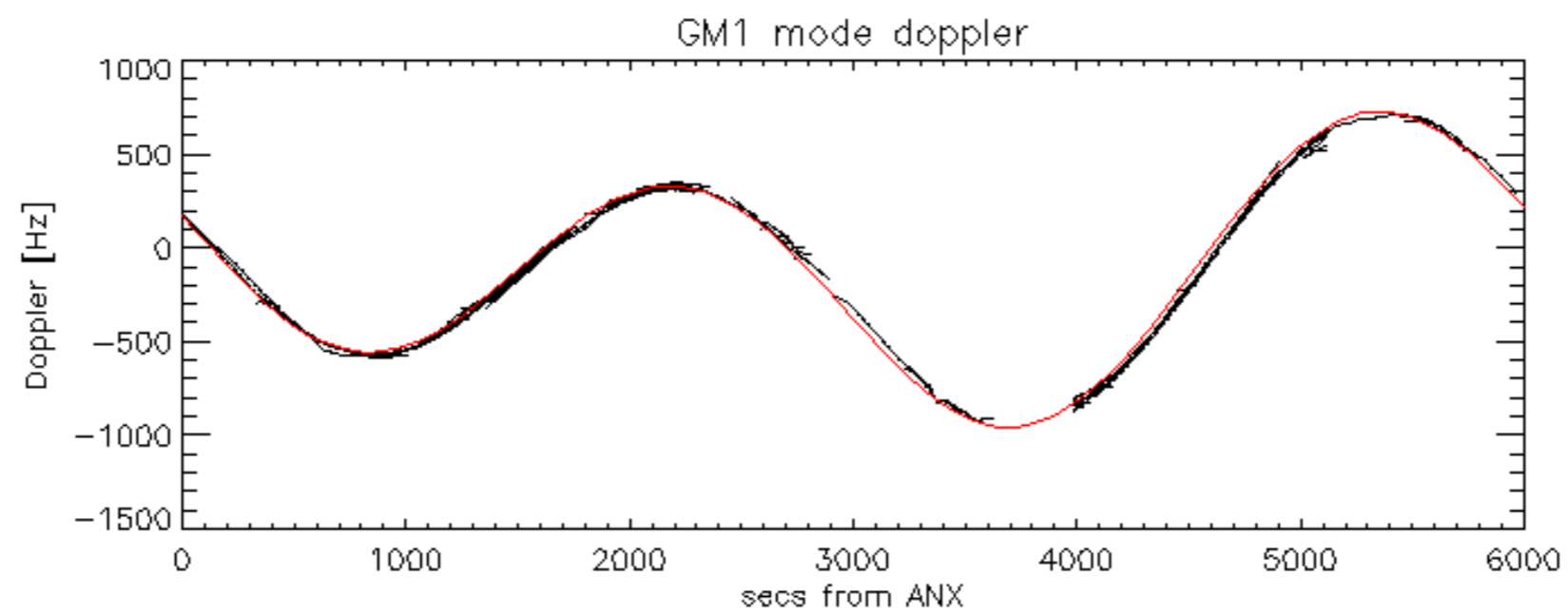


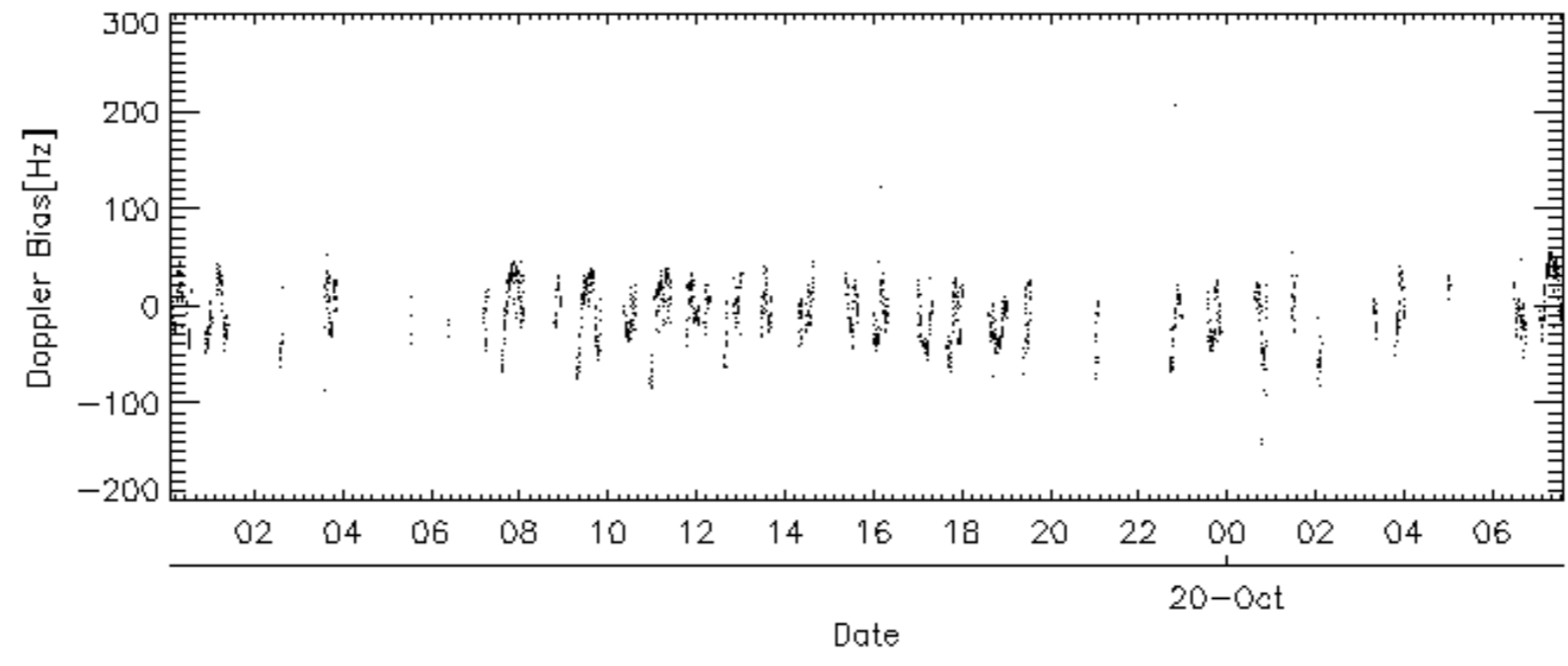
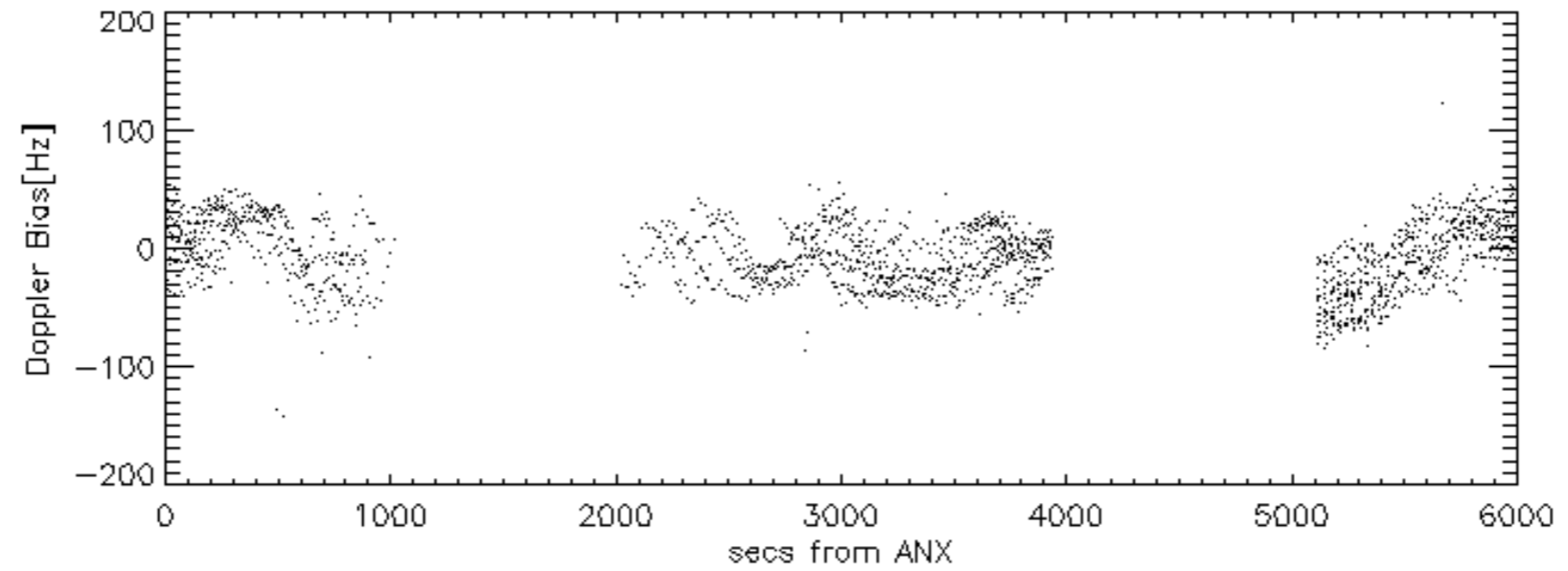
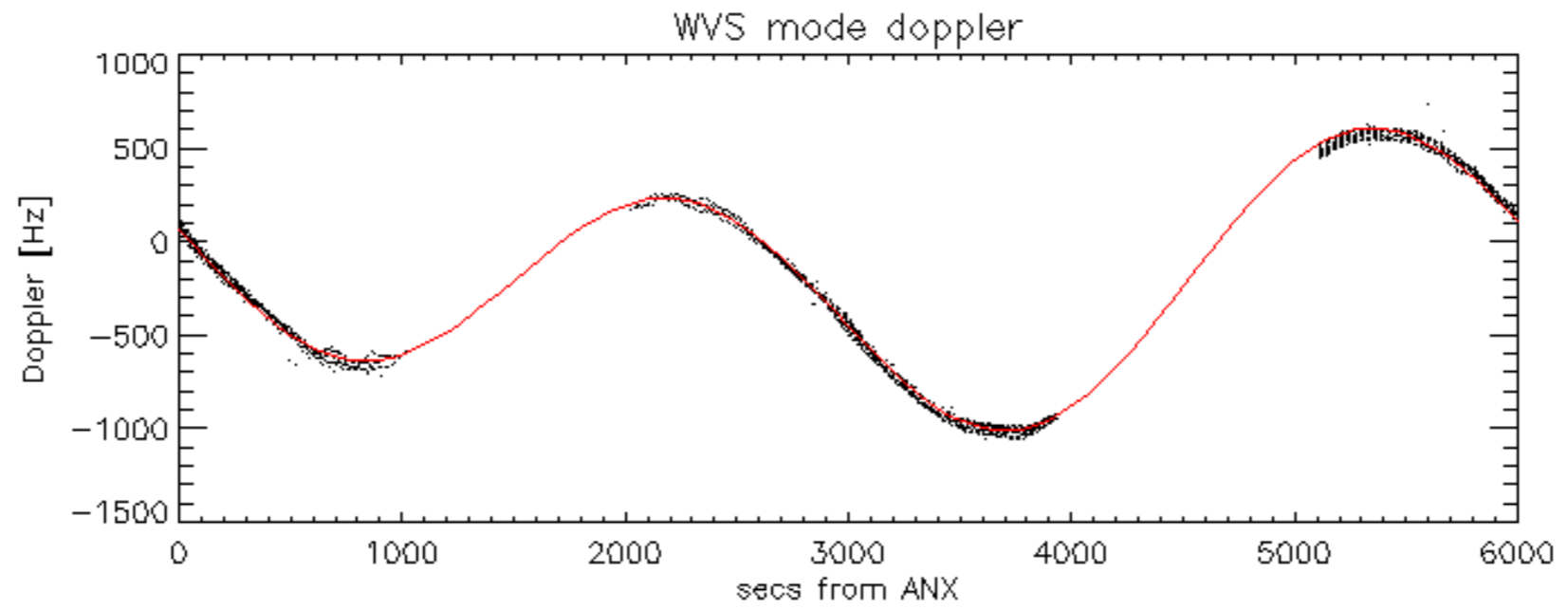
Doppler 'WVS' 'IS2' ascending



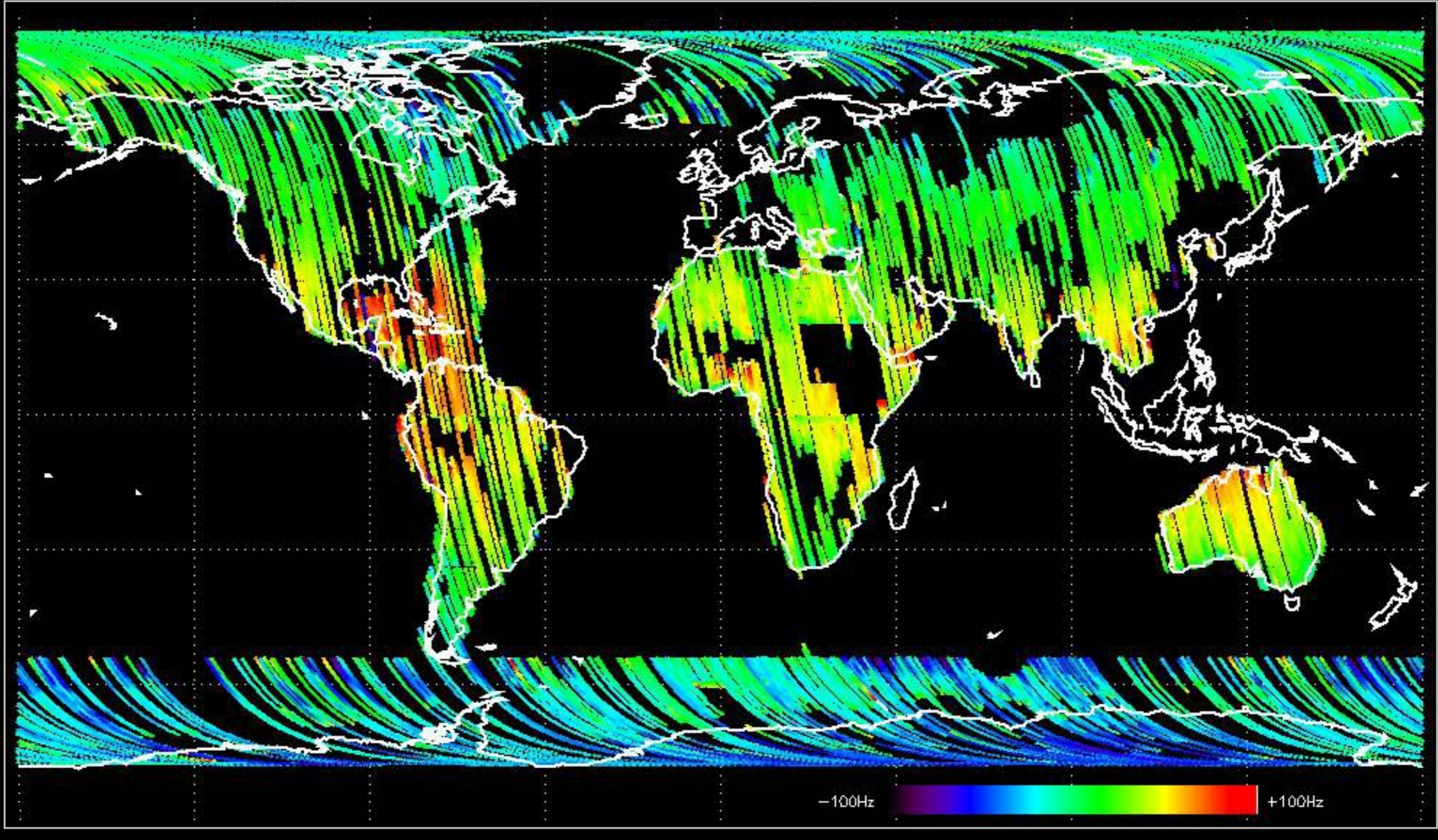
Doppler 'WVS' 'IS2' descending



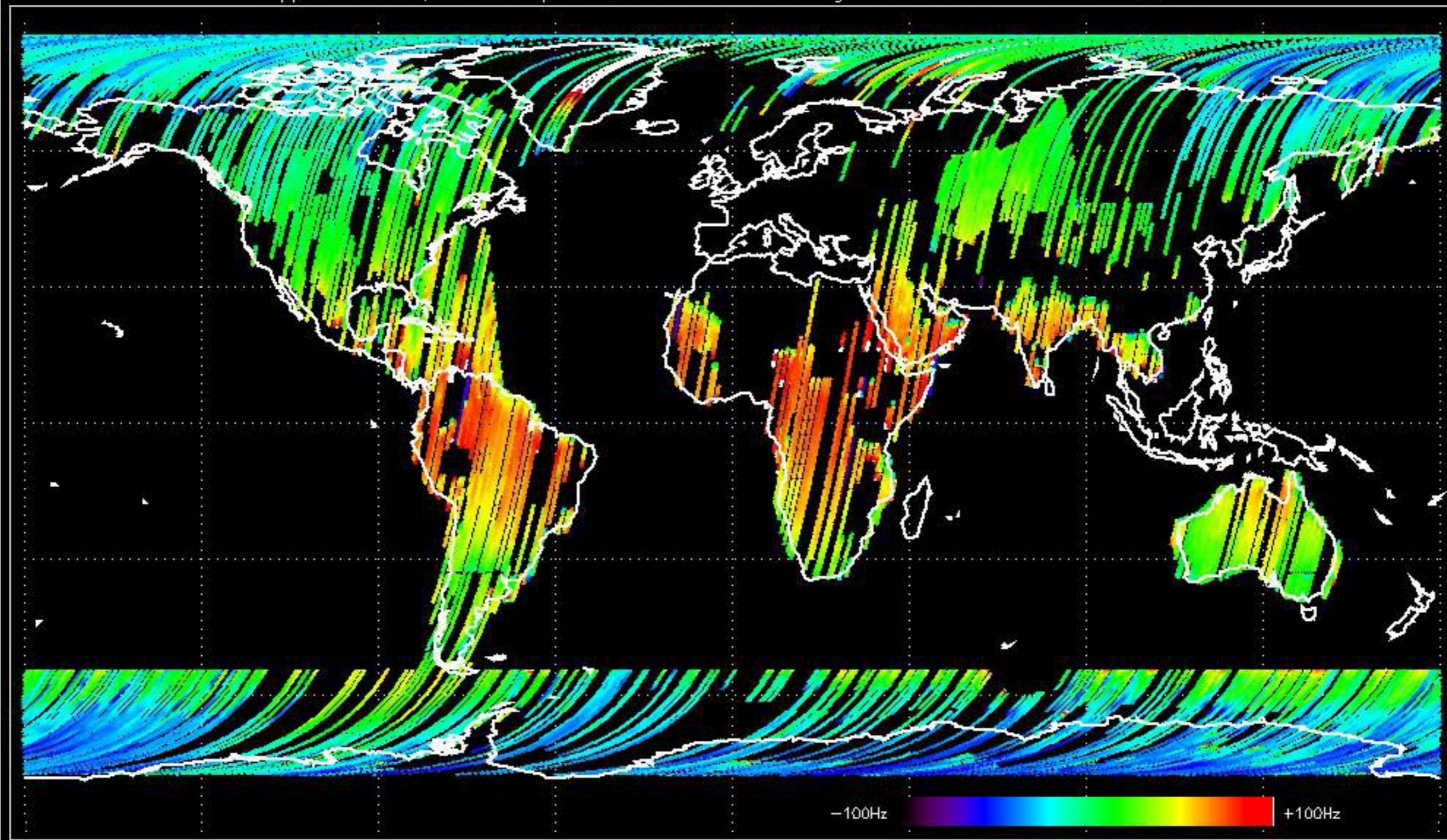




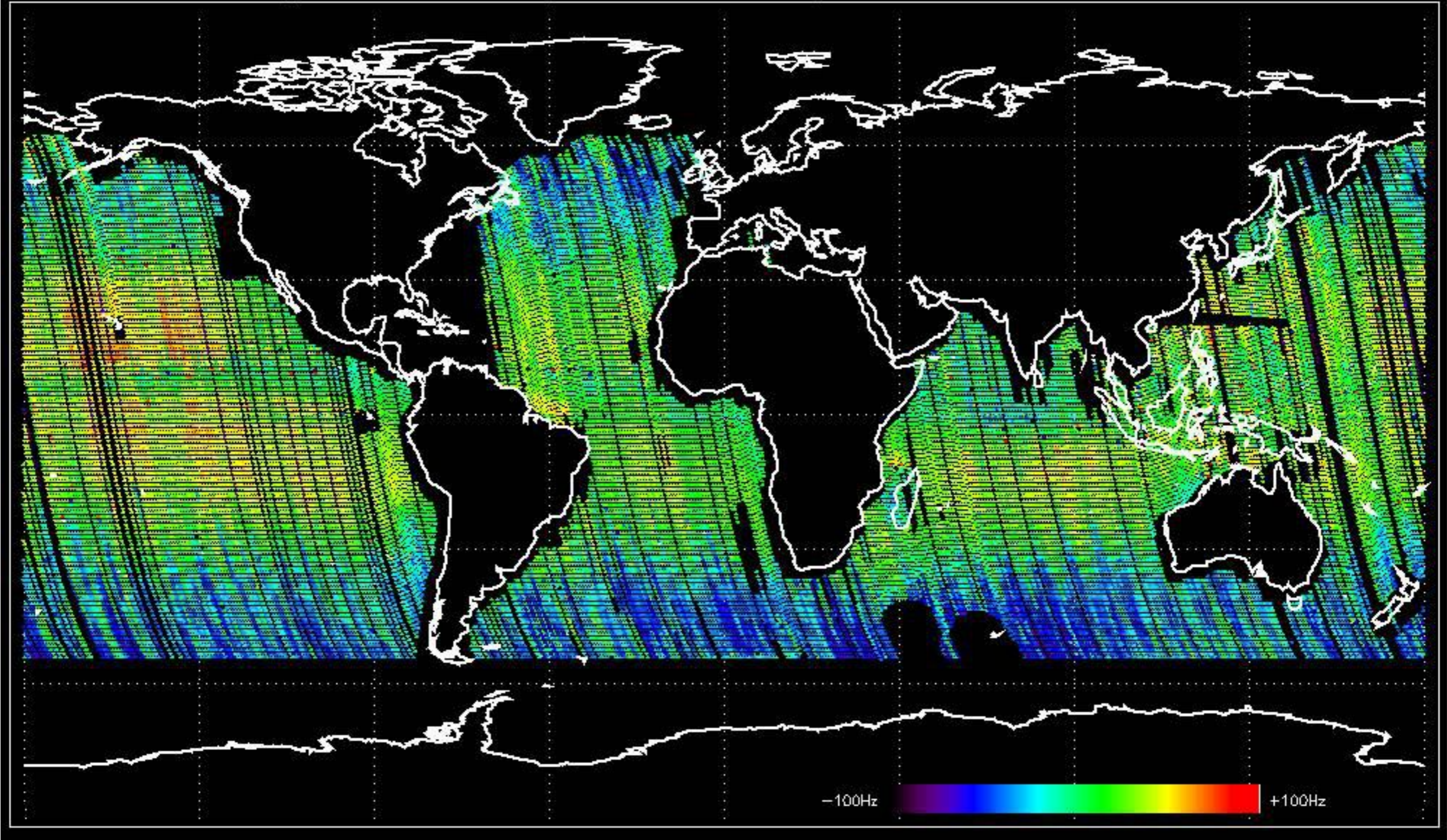
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.787927 Hz



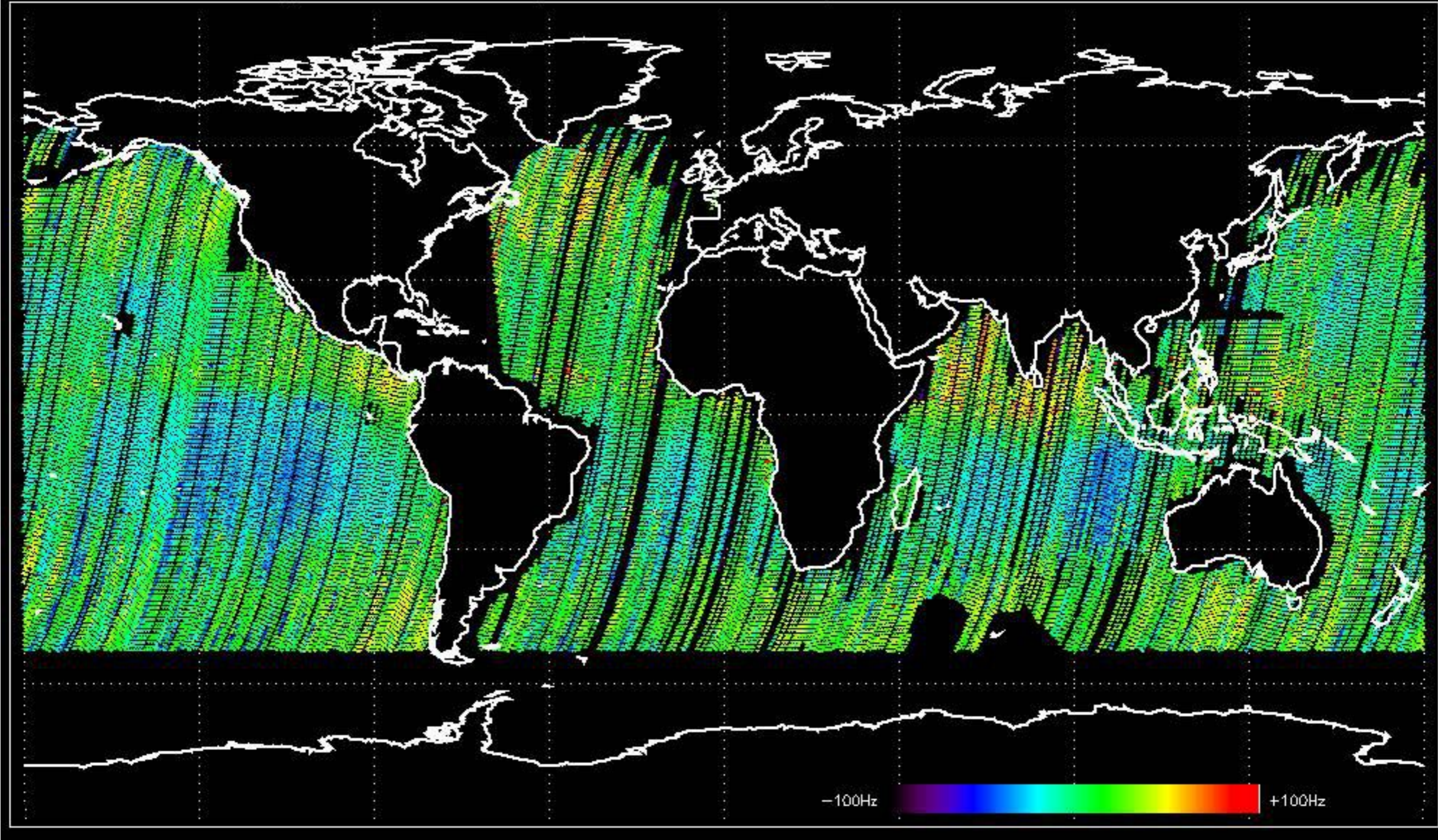
Doppler difference, estimated—predicted 'GM1' 'SS1' descending —error mean of -12.705522 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.8287828 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.584739 Hz



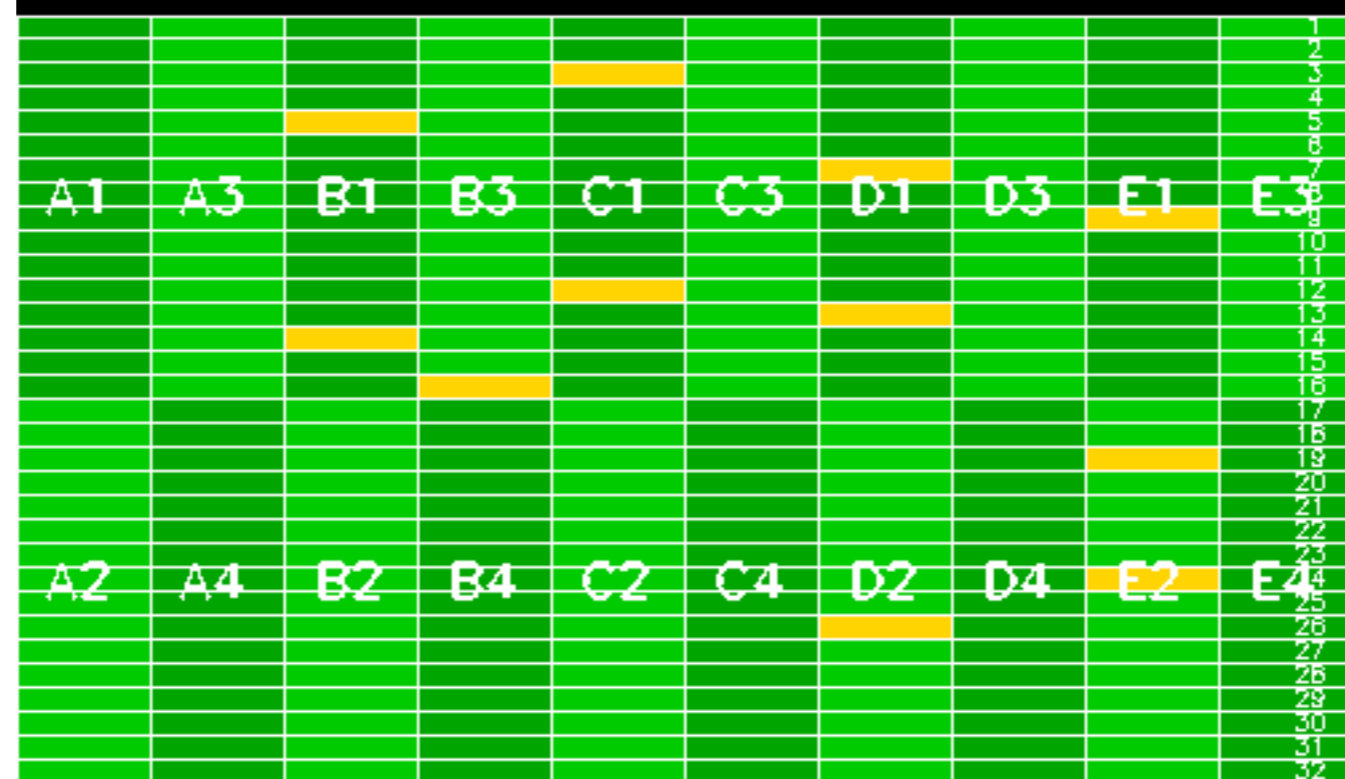
No anomalies observed on available MS products:

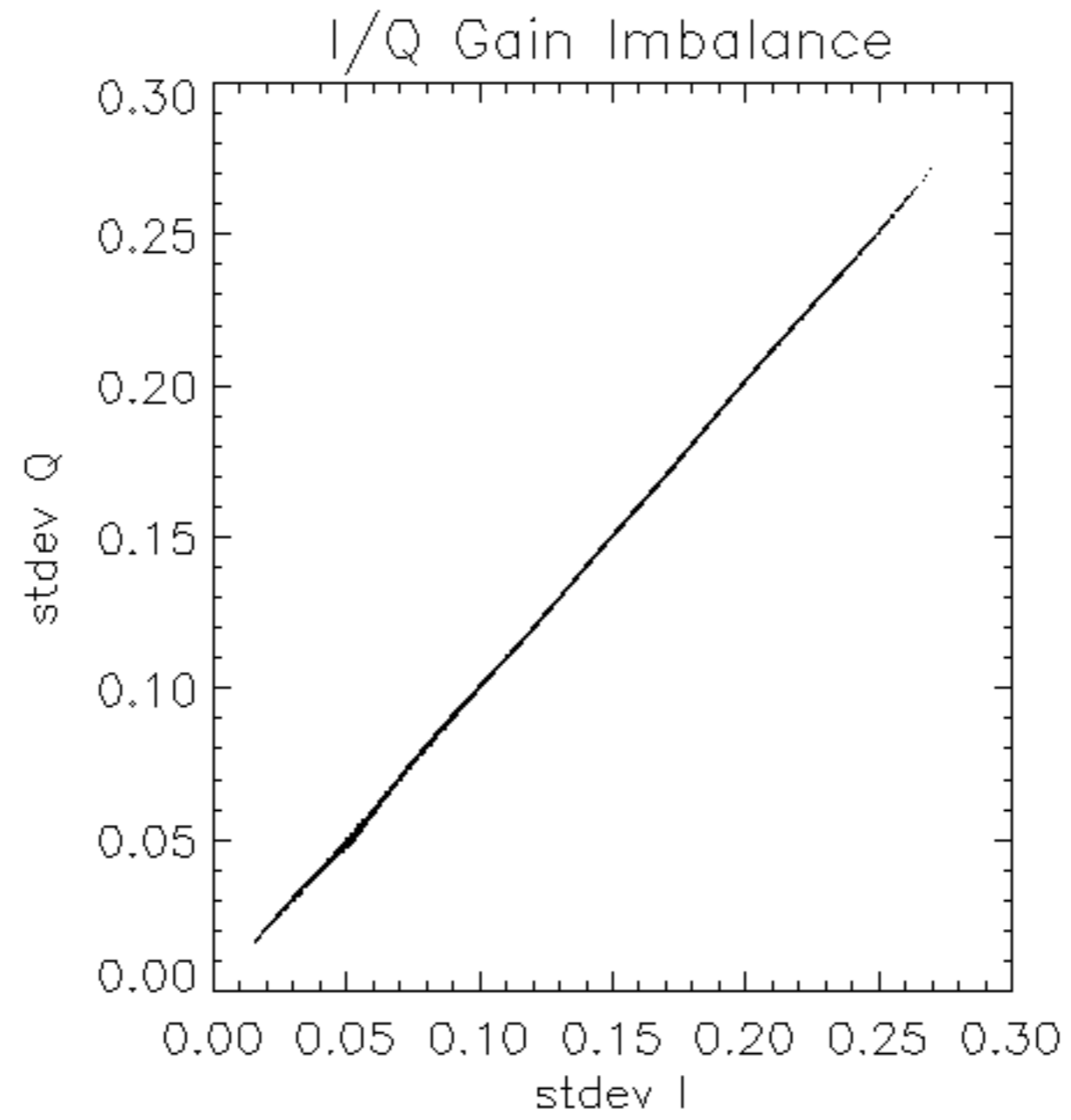
No anomalies observed.

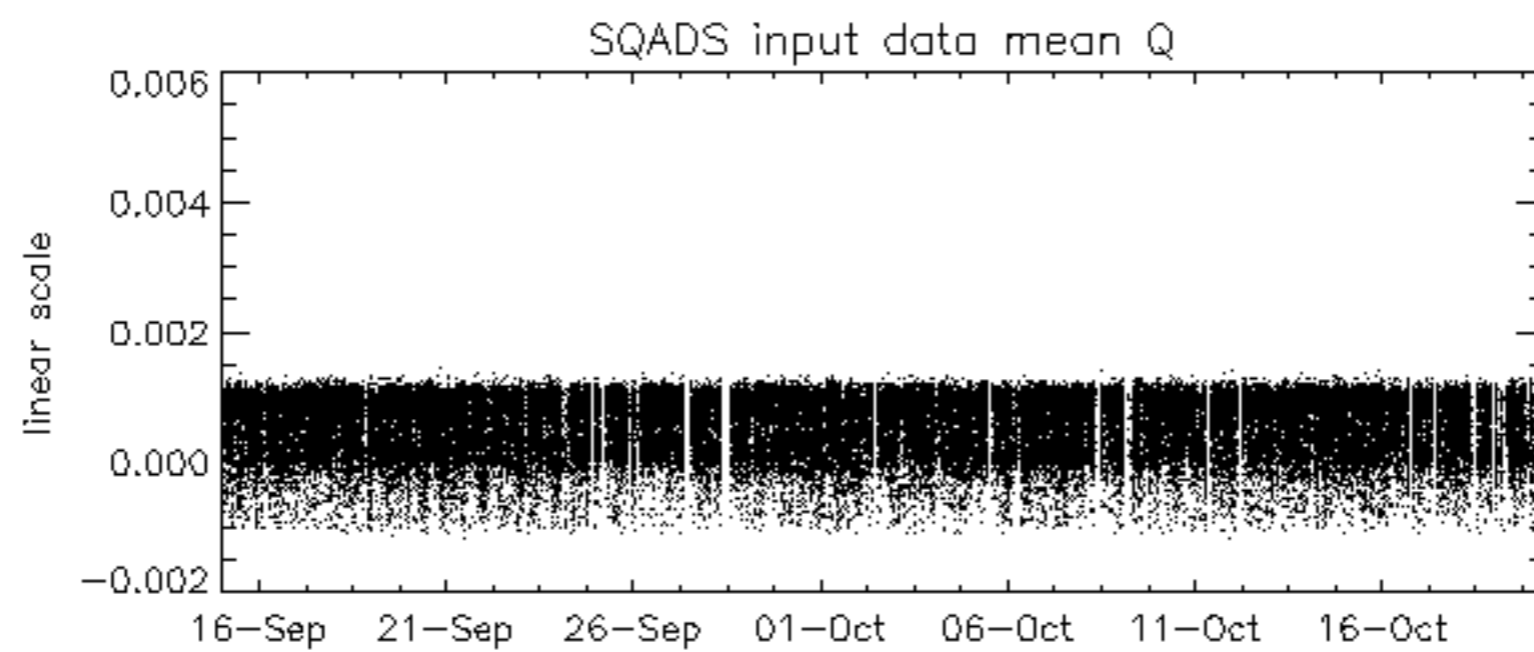
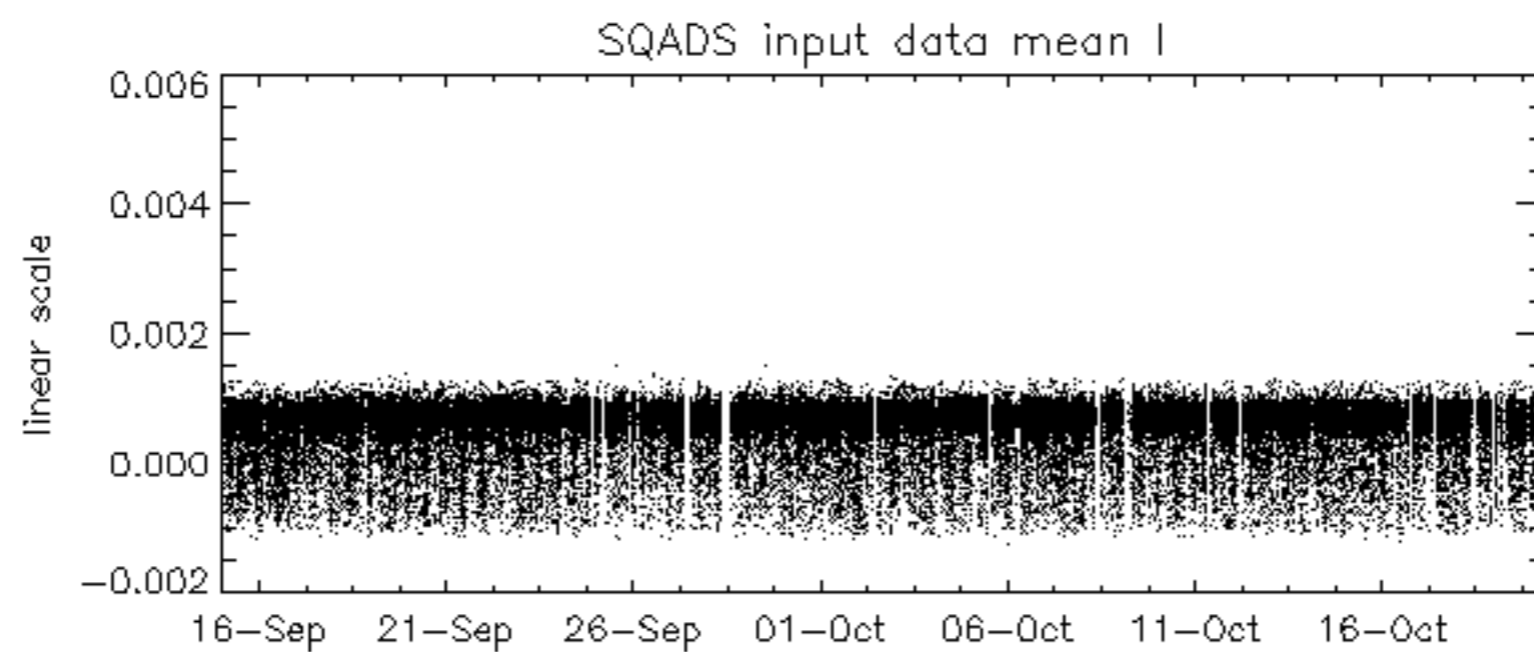
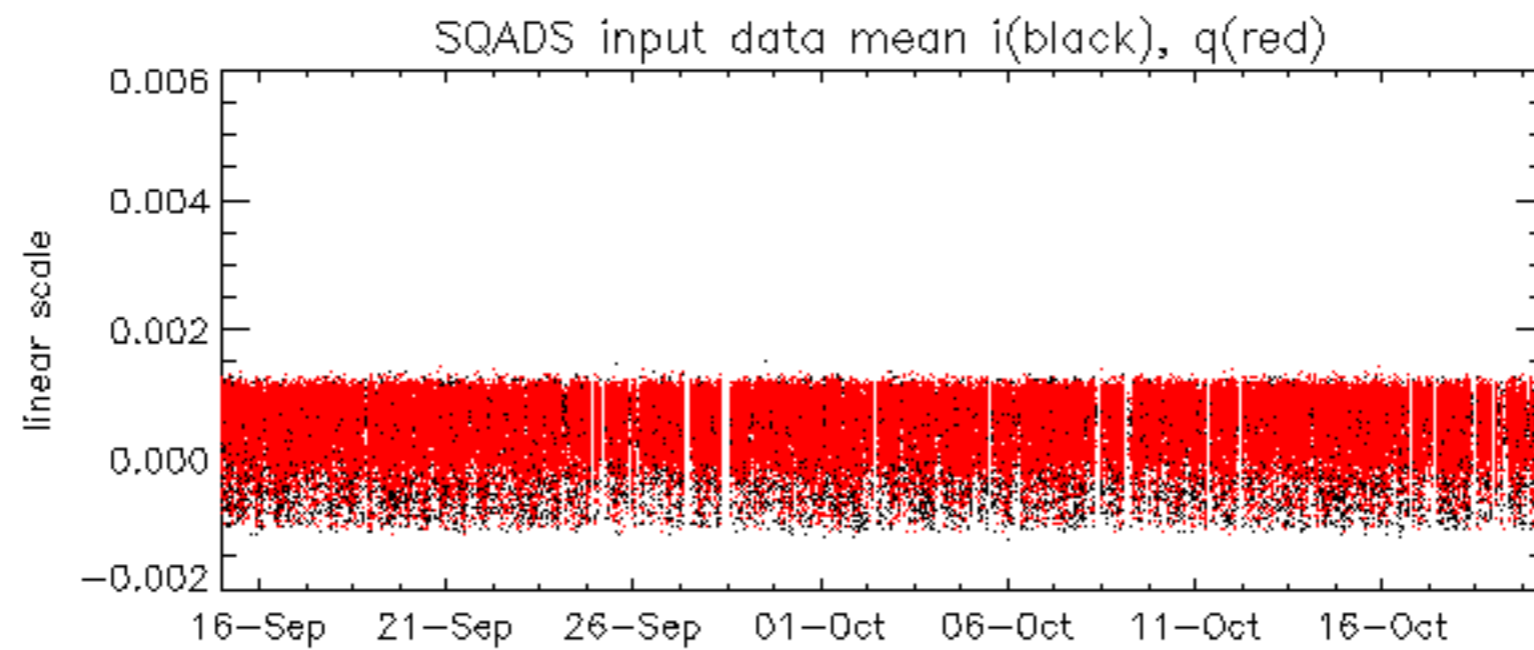
Reference: 2005-09-29 07:47:20 V

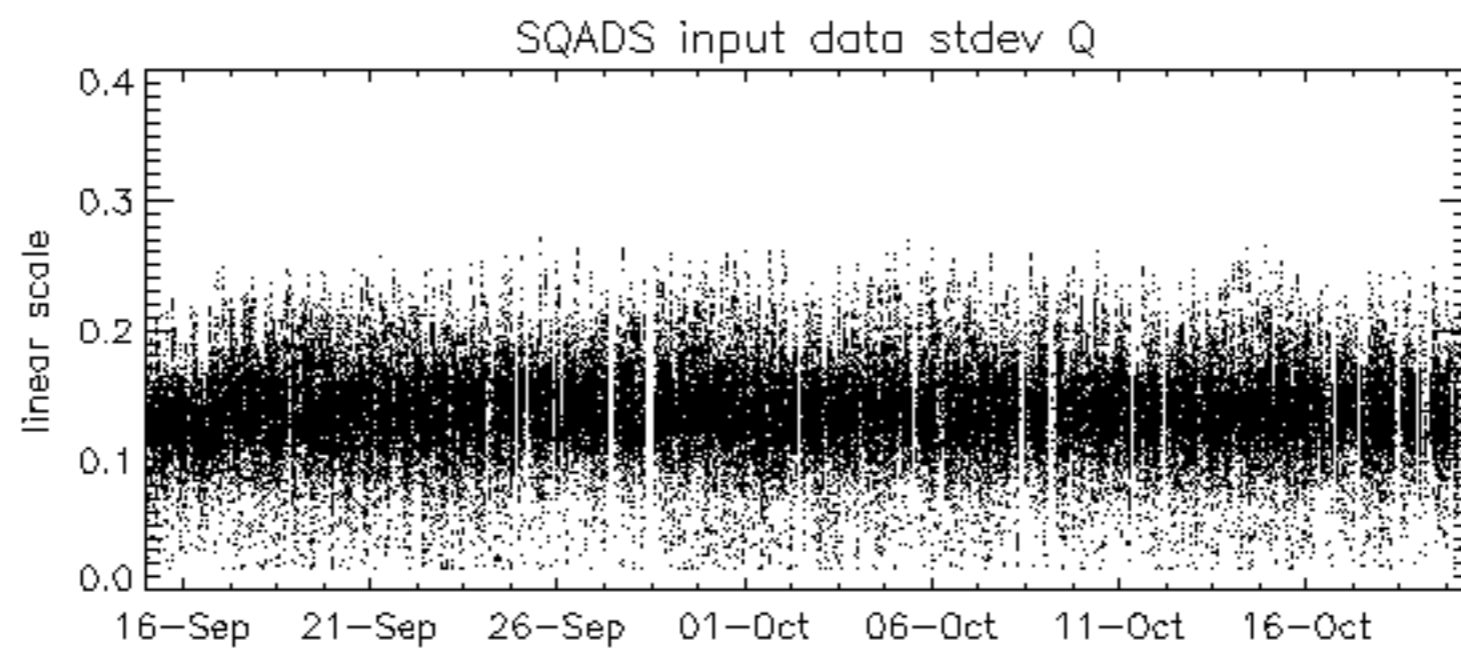
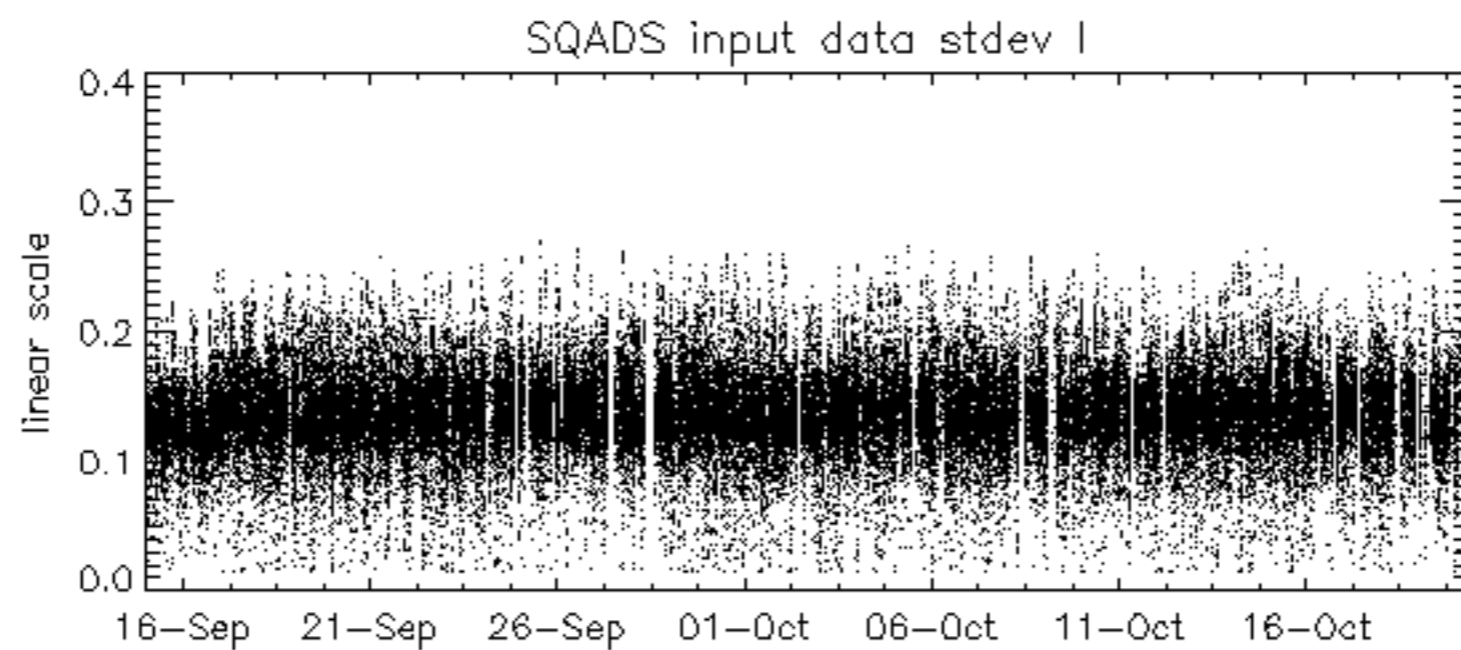
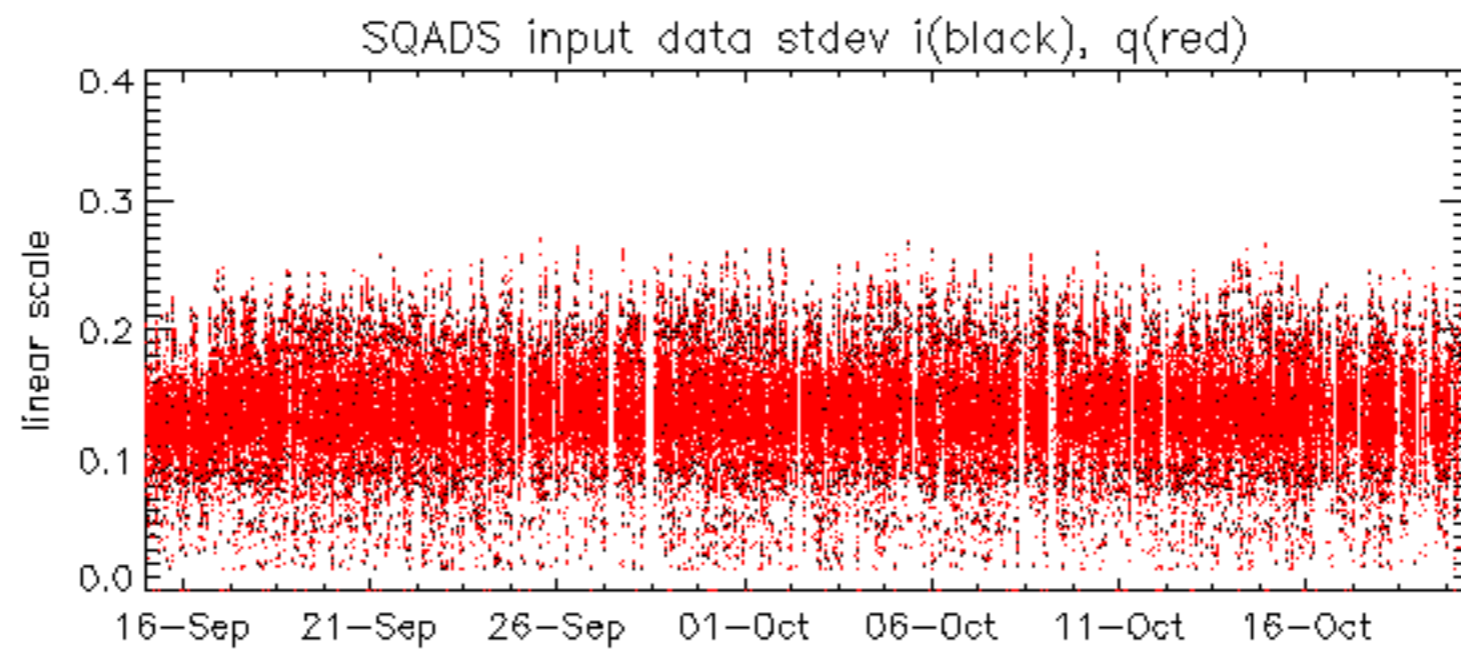
RxPhase

Test : 2005-10-18 04:29:02 V





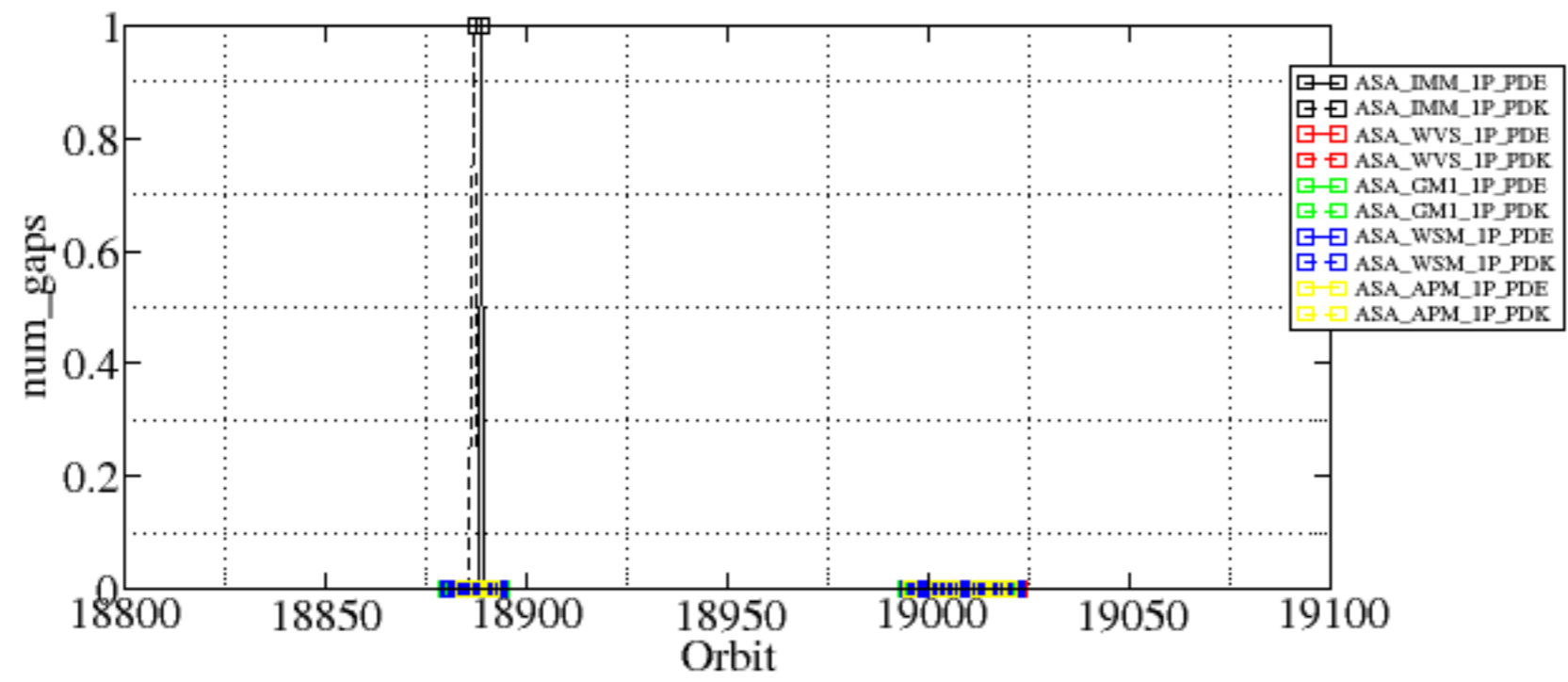


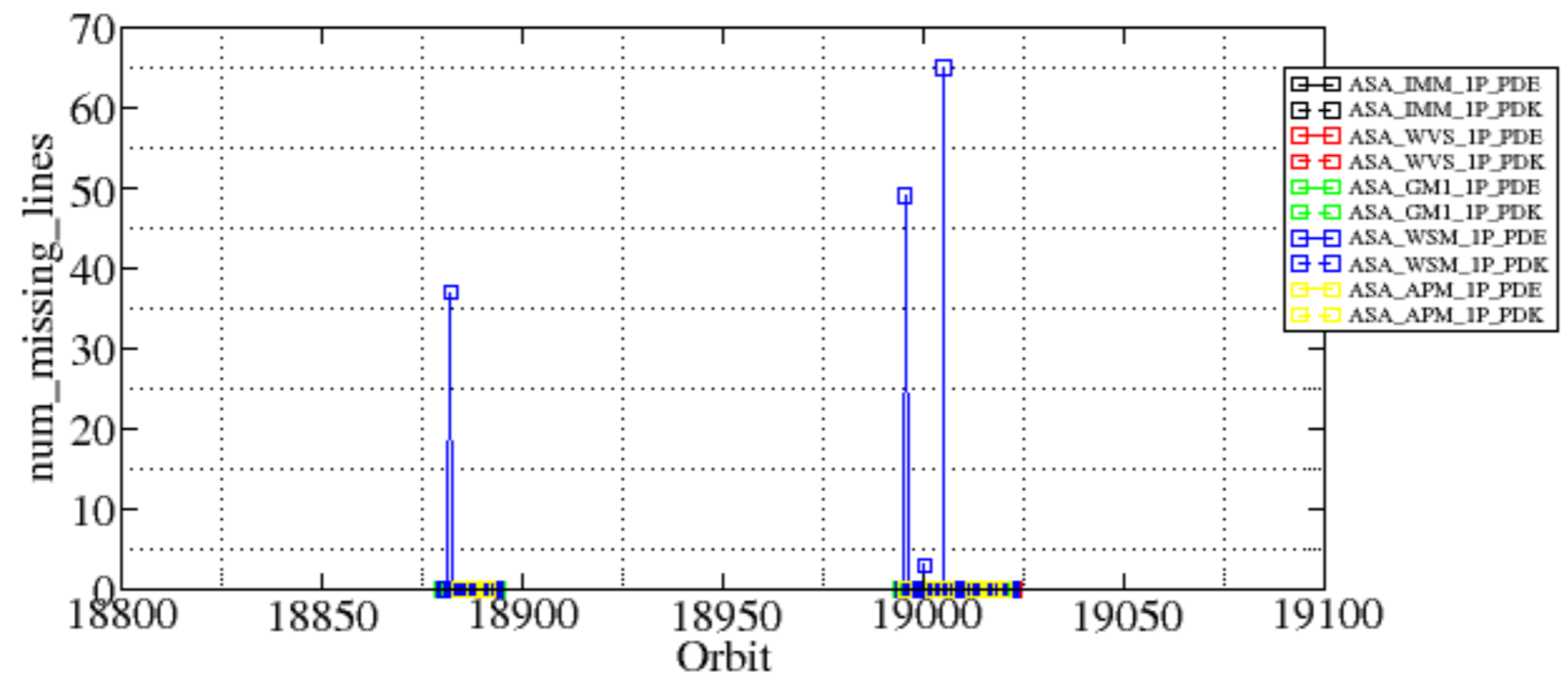


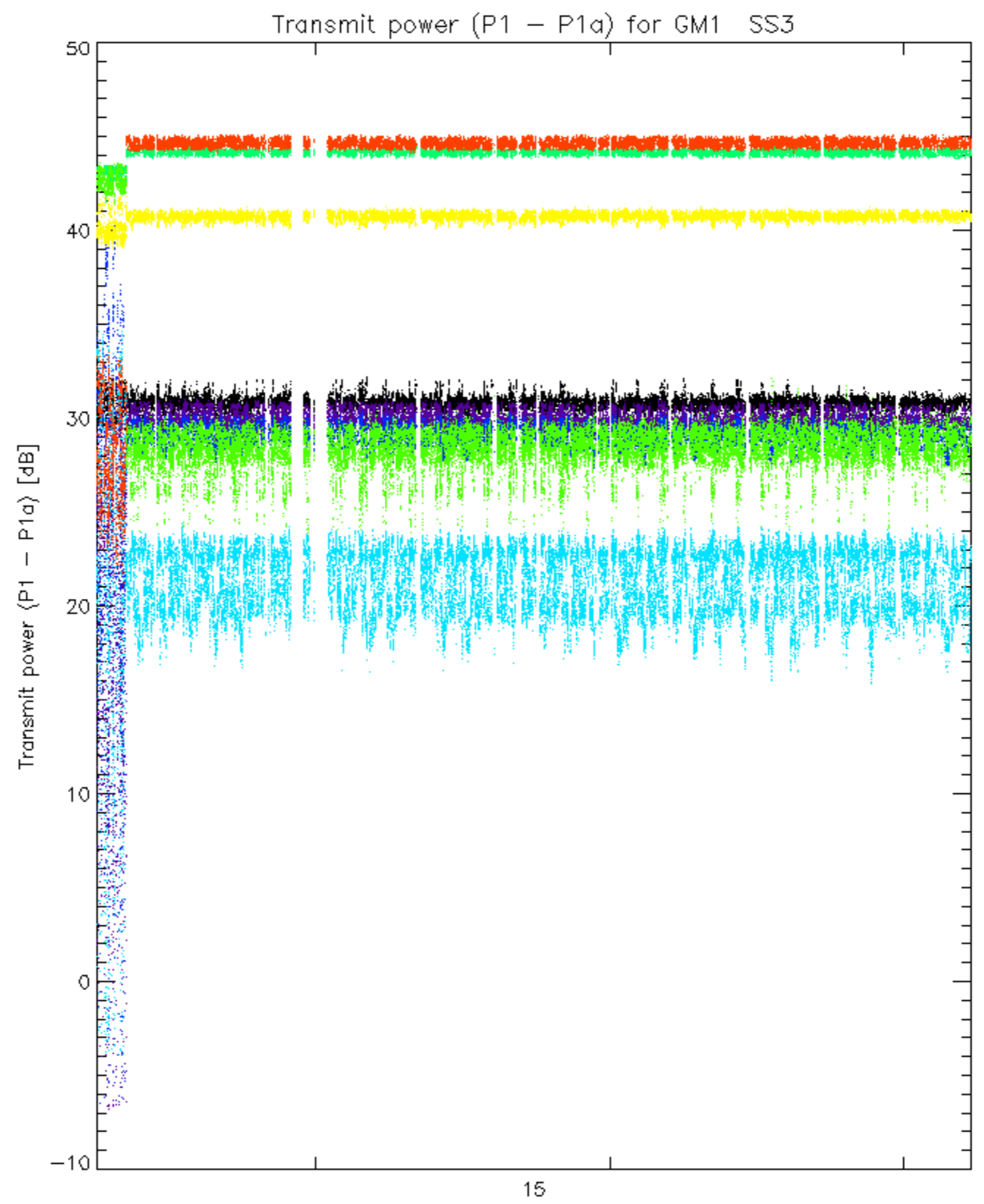
Summary of analysis for the last 3 days 2005101[890]

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

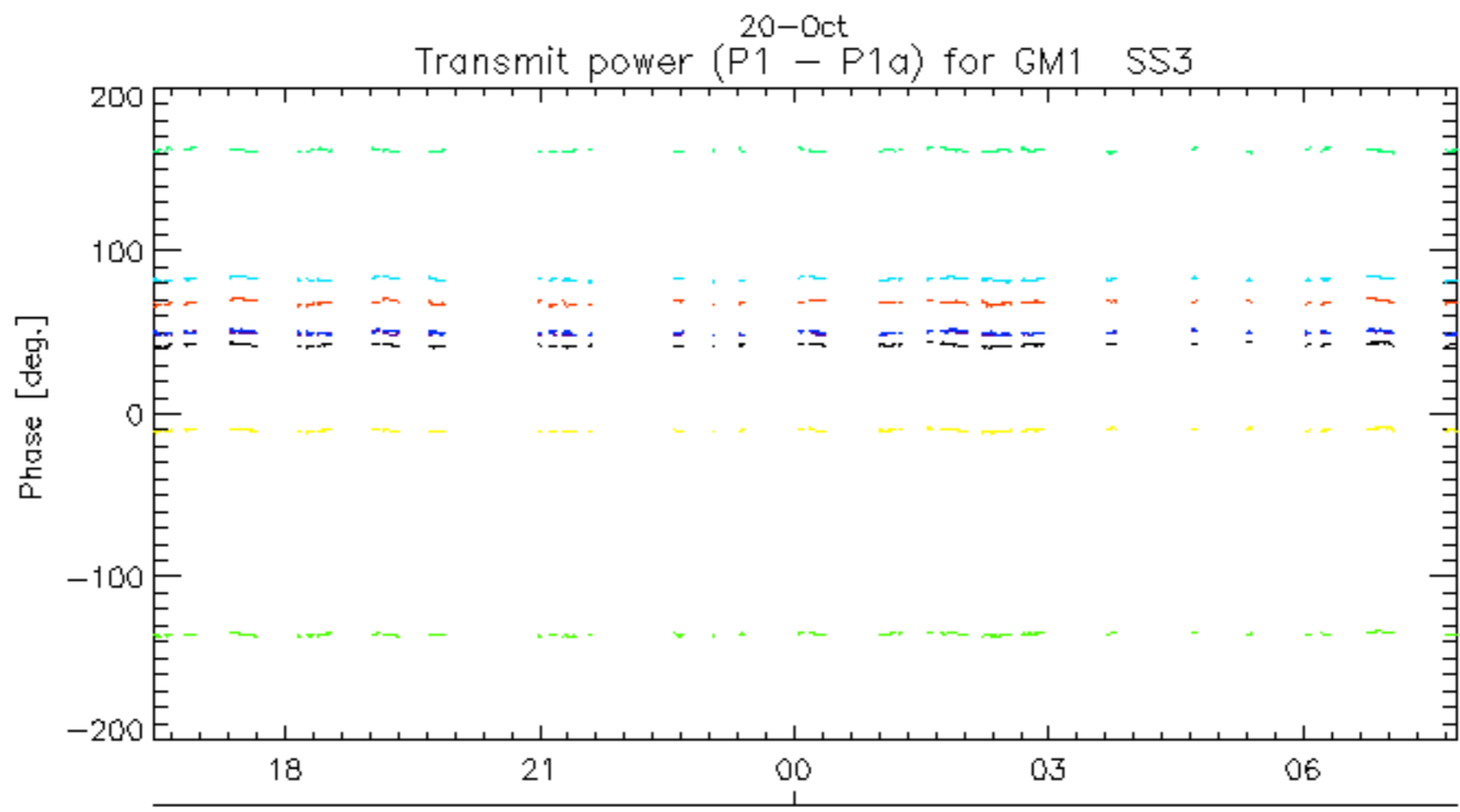
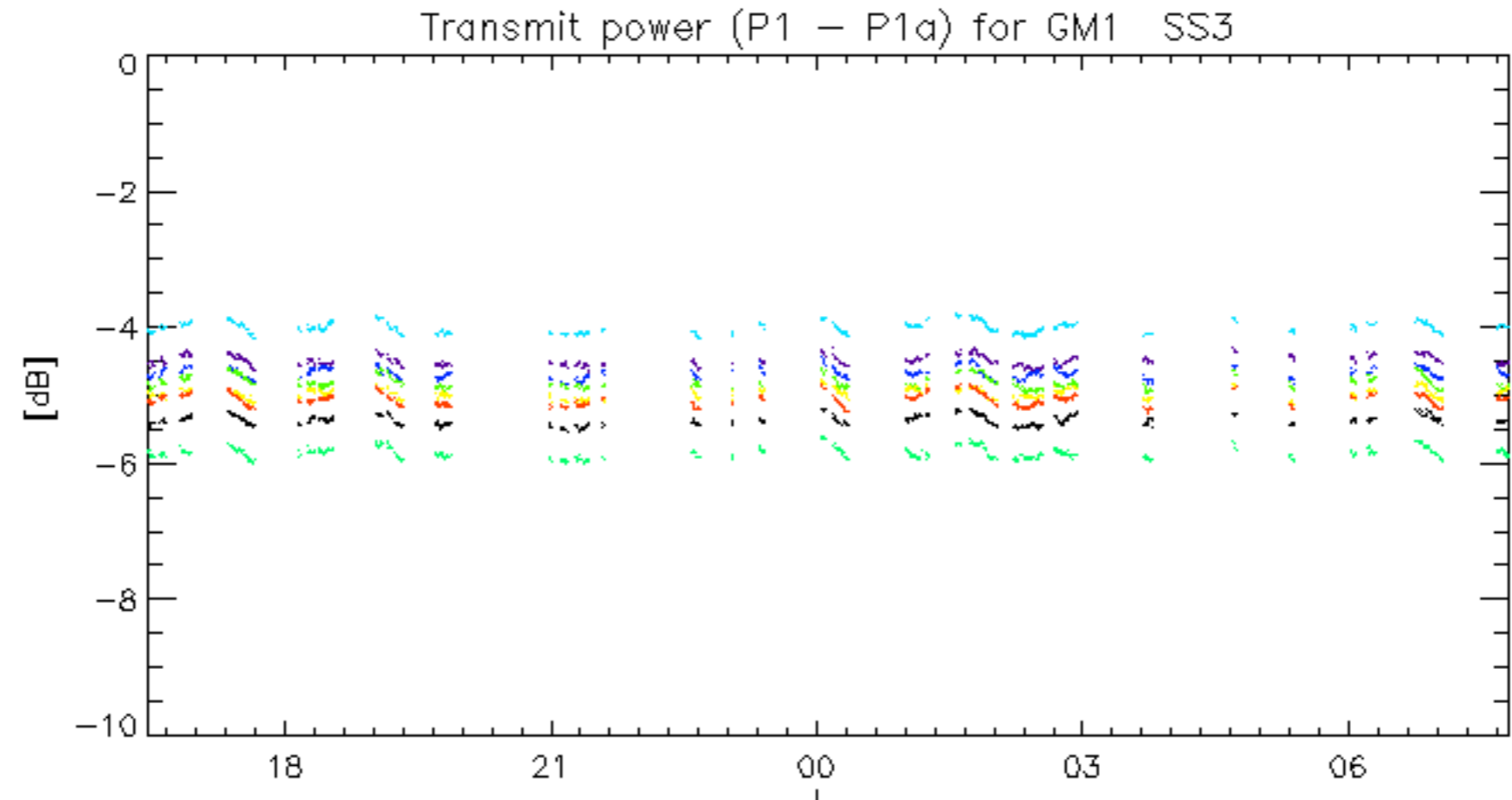
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ASA_WSM_1PNPDE20051010_041813_000001592041_00291_18882_3248.N1	0	37
ASA_WSM_1PNPDE20051018_022852_000002392041_00404_18995_4709.N1	0	49
ASA_WSM_1PNPDE20051018_183220_000001282041_00414_19005_4907.N1	0	65
ASA_WSM_1PNPDK20051018_103117_000001842041_00409_19000_7408.N1	0	3



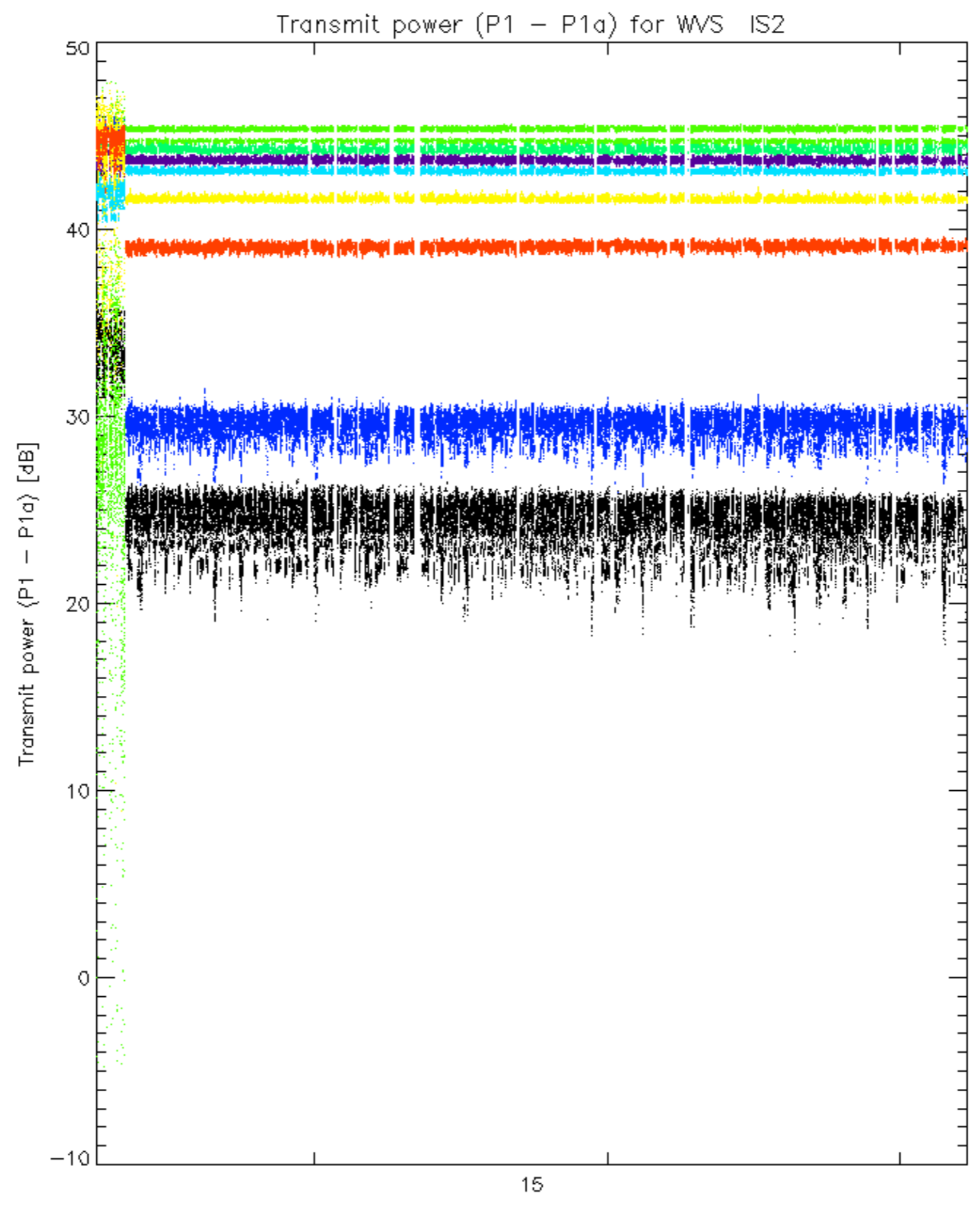




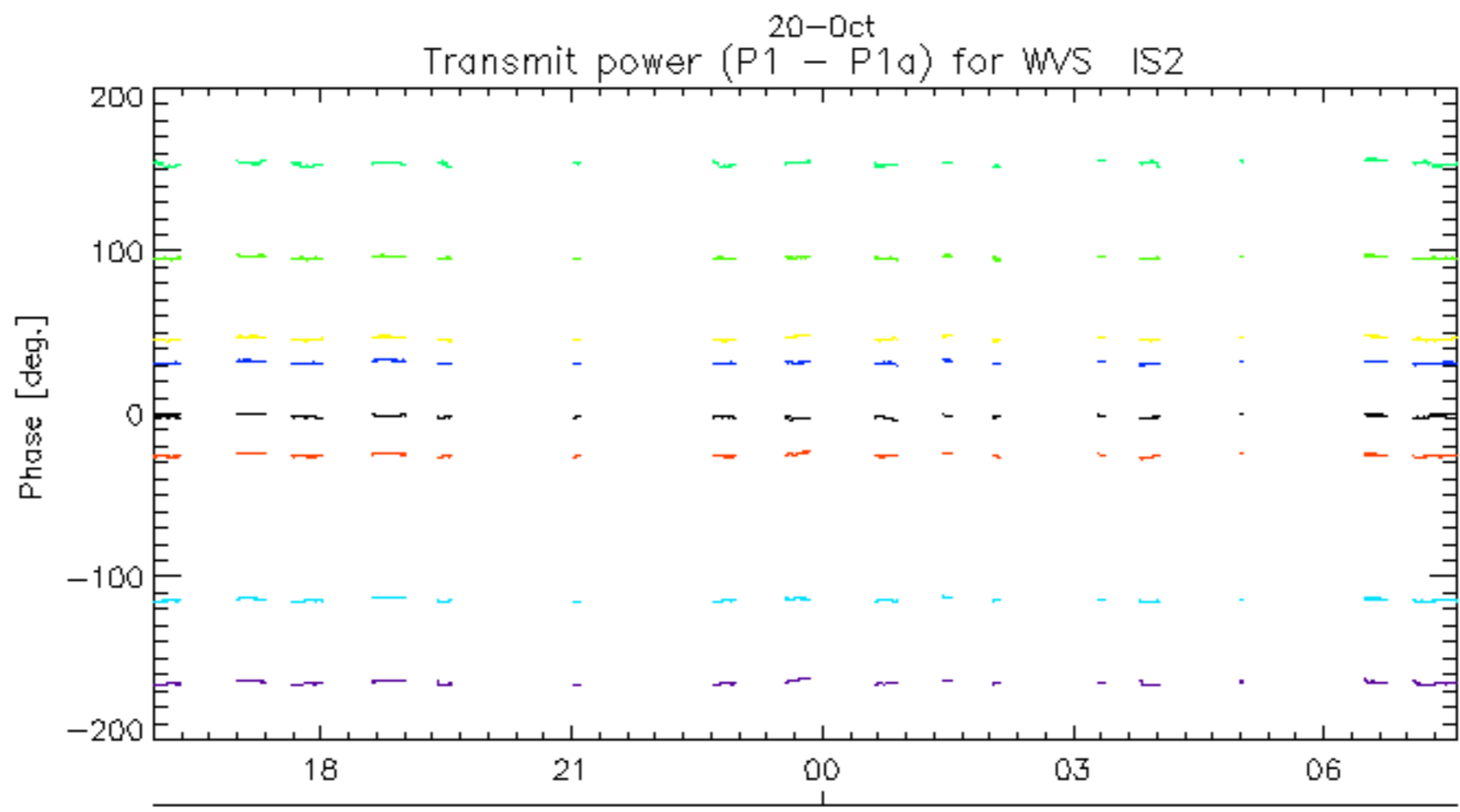
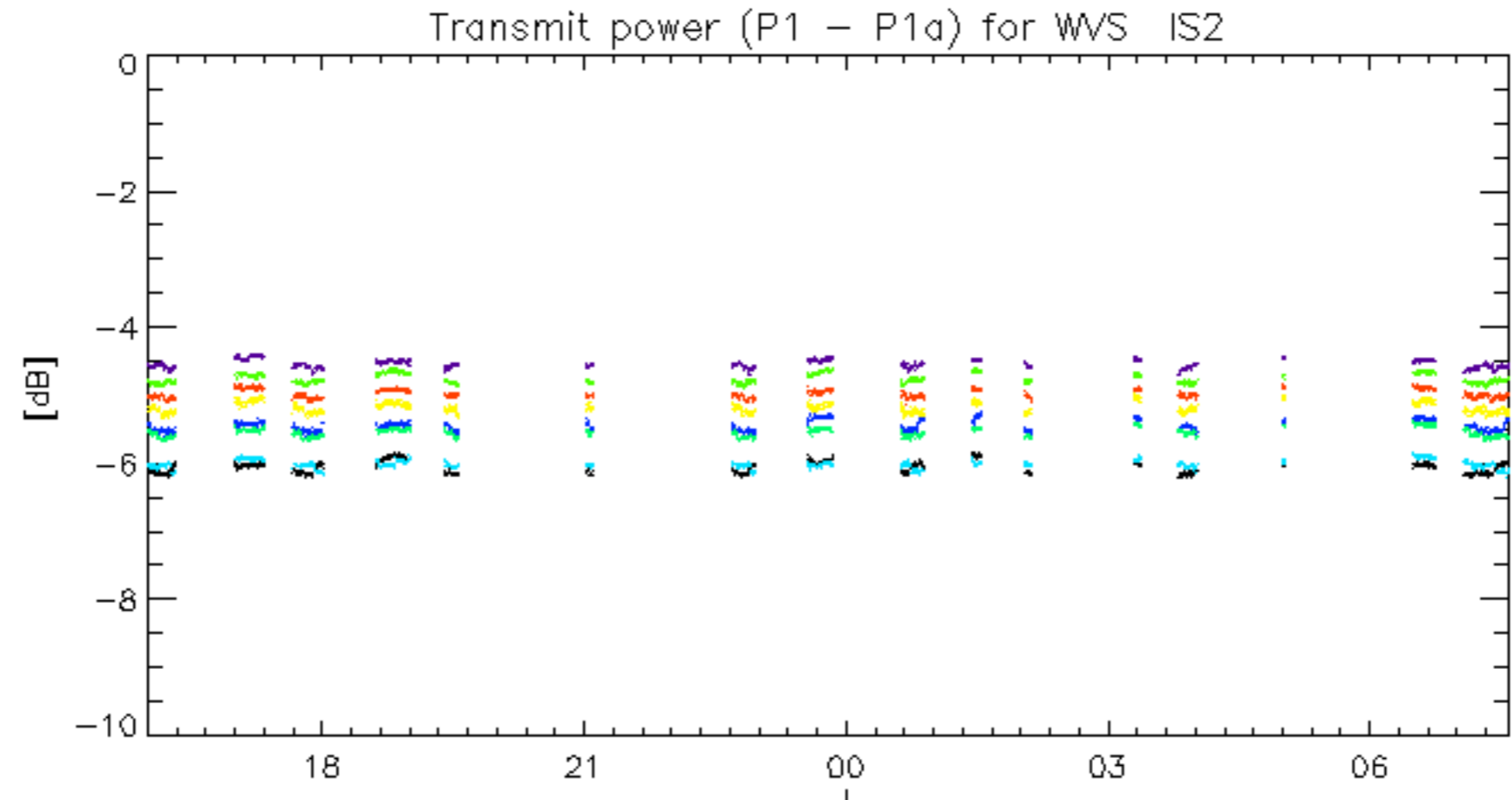
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.