

PRELIMINARY REPORT OF 051009

last update on Sun Oct 9 16:39:03 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 2005-10-08 00:00:00 to 2005-10-09 16:39:03

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	42	71	10	1	39
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	42	71	10	1	39
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	42	71	10	1	39
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	42	71	10	1	39

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	39	54	32	16	38
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	39	54	32	16	38
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	39	54	32	16	38
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	39	54	32	16	38

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	20051007 033424
H	20051008 030247

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.543987	0.068720	-0.080075
7	P1	-2.982135	0.036942	0.442708
11	P1	-4.268427	0.142387	1.004141
15	P1	-5.936338	0.042163	-0.427654
19	P1	-3.220736	0.167546	0.517965
22	P1	-4.495756	0.023417	0.269954
26	P1	-4.465169	0.105918	0.847474
30	P1	-6.003253	0.466303	1.664733
3	P1	-15.839490	1.917273	1.419543
7	P1	-16.720257	4.944760	1.286959
11	P1	-18.251387	13.400480	9.255197
15	P1	-13.717053	9.609884	0.461458
19	P1	-13.737740	0.242256	0.871777
22	P1	-17.294737	24.156658	3.726710
26	P1	-17.785234	22.641197	5.646152
30	P1	-17.577356	9.463920	4.641735

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.829168	0.103098	-0.205105
7	P2	-22.555590	0.254089	-0.879583
11	P2	-16.102722	2.181823	-3.627121
15	P2	-7.204975	0.118496	-0.102490
19	P2	-9.177054	0.194286	0.205009
22	P2	-17.454721	0.243795	-1.198444
26	P2	-16.196005	0.133141	0.573148
30	P2	-19.471731	0.215122	-0.816821

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.175439	0.004847	-0.034236
7	P3	-8.175439	0.004847	-0.034236
11	P3	-8.175439	0.004847	-0.034236
15	P3	-8.175439	0.004847	-0.034236
19	P3	-8.175439	0.004847	-0.034236
22	P3	-8.175439	0.004847	-0.034236
26	P3	-8.175439	0.004847	-0.034236
30	P3	-8.175439	0.004847	-0.034236

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	-3.347598	0.277892	-1.385299
7	P1	-2.941466	0.069747	0.391434
11	P1	-3.178224	0.288957	1.564456
15	P1	-3.464102	0.032688	0.352318
19	P1	-3.343349	0.064811	0.100135
22	P1	-5.175937	0.170954	0.289454
26	P1	-5.950899	0.654471	1.186296
30	P1	-5.309894	0.377233	0.734002
3	P1	-11.503249	0.455040	0.223771
7	P1	-11.458083	21.167694	5.508123
11	P1	-12.525821	41.468910	9.689118
15	P1	-12.642132	35.937946	7.503002
19	P1	-15.321014	0.224819	-0.421999
22	P1	-21.643320	5.488811	5.959303
26	P1	-17.291172	5.412046	0.032978
30	P1	-19.458975	1.920181	2.556042

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.629738	0.061098	-0.414382
7	P2	-22.843634	0.278470	-1.087287
11	P2	-11.280351	0.909054	-2.472690
15	P2	-4.932669	0.047290	0.244441
19	P2	-6.787853	0.115696	-0.400448
22	P2	-7.804370	0.238710	-1.388069
26	P2	-23.879385	0.043200	0.147910
30	P2	-22.076578	0.060319	0.034693

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.018426	0.002921	-0.037919
7	P3	-8.018454	0.002919	-0.038216
11	P3	-8.018231	0.002924	-0.038417
15	P3	-8.018317	0.002924	-0.038376
19	P3	-8.018547	0.002924	-0.038035
22	P3	-8.018271	0.002925	-0.038253
26	P3	-8.018565	0.002921	-0.038391
30	P3	-8.018336	0.002934	-0.037900

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	0.000532509
	stdev	1.84221e-07
MEAN Q	mean	0.000523911
	stdev	2.18578e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135412
	stdev	0.00110672
STDEV Q	mean	0.135733
	stdev	0.00112224



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005100[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_IMM_1PNPDE20051007_155150_00000772041_00255_18846_7711.N1	1	0
ASA_IMM_1PNPDK20051007_124322_00000532041_00253_18844_5323.N1	1	0
ASA_GM1_1PNPDK20051008_135751_000010812041_00268_18859_7798.N1	0	31
ASA_WSM_1PNPDE20051007_013227_000002392041_00246_18837_2779.N1	0	55
ASA_WSM_1PNPDE20051008_170158_000002382041_00270_18861_2998.N1	0	15
ASA_WSM_1PNPDK20051008_134137_000000912041_00268_18859_6455.N1	0	60
ASA_WSM_1PNPDK20051008_134139_000000852041_00268_18859_6504.N1	0	60
ASA_APM_1PNPDE20051007_141715_000000822041_00254_18845_1696.N1	0	21



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

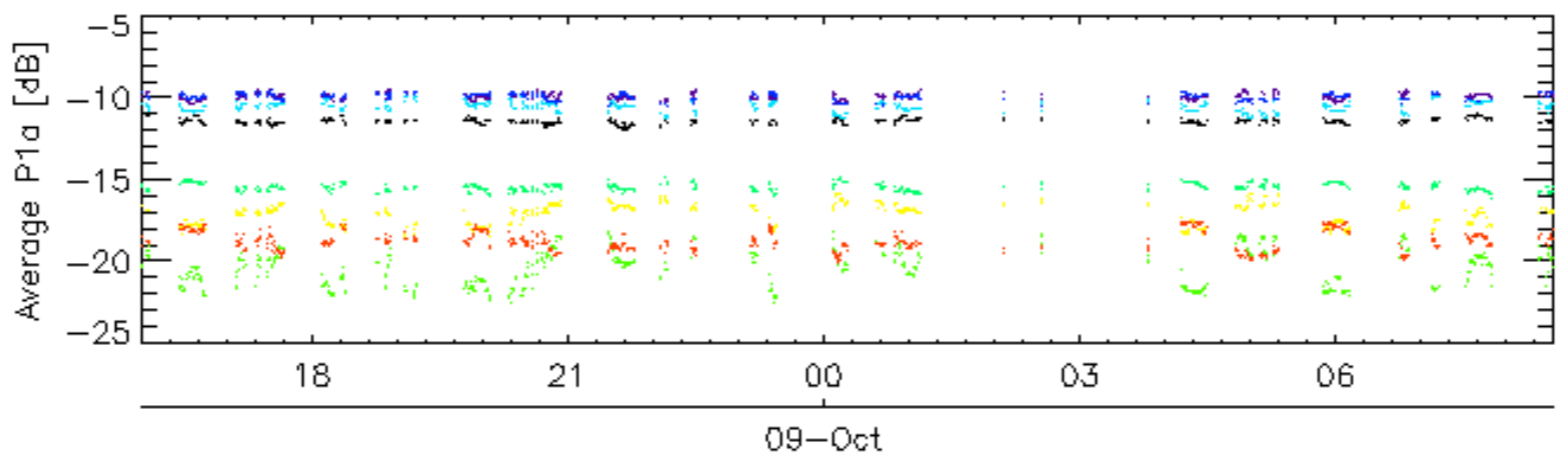
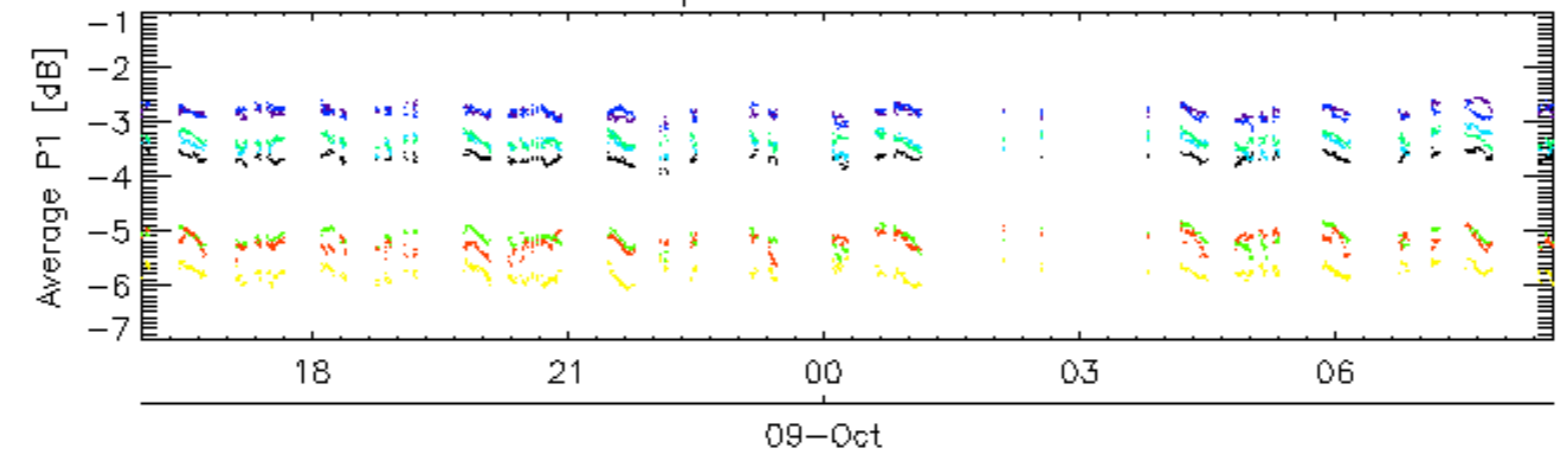
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

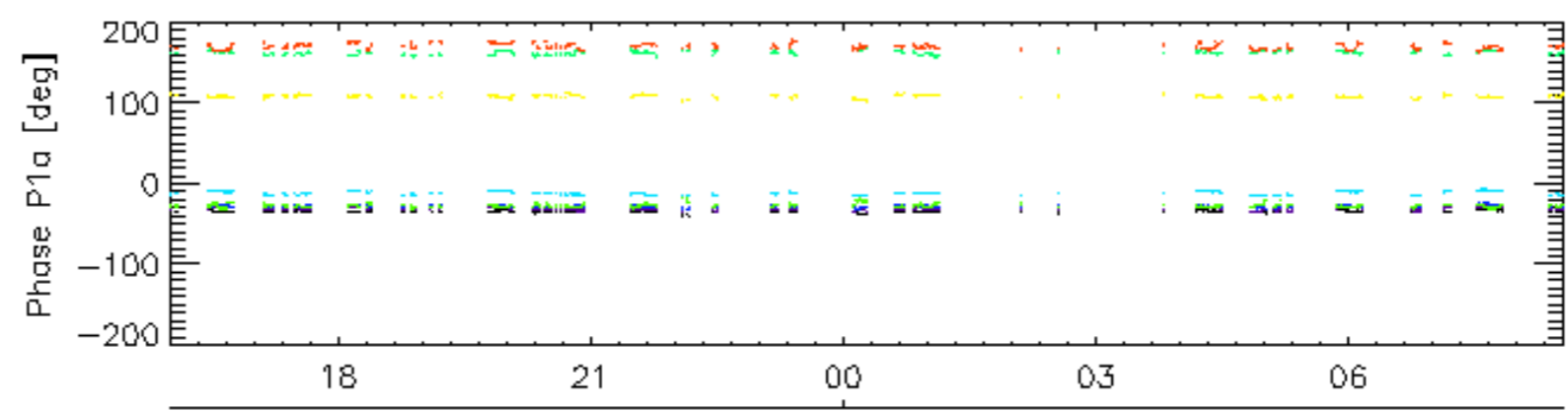
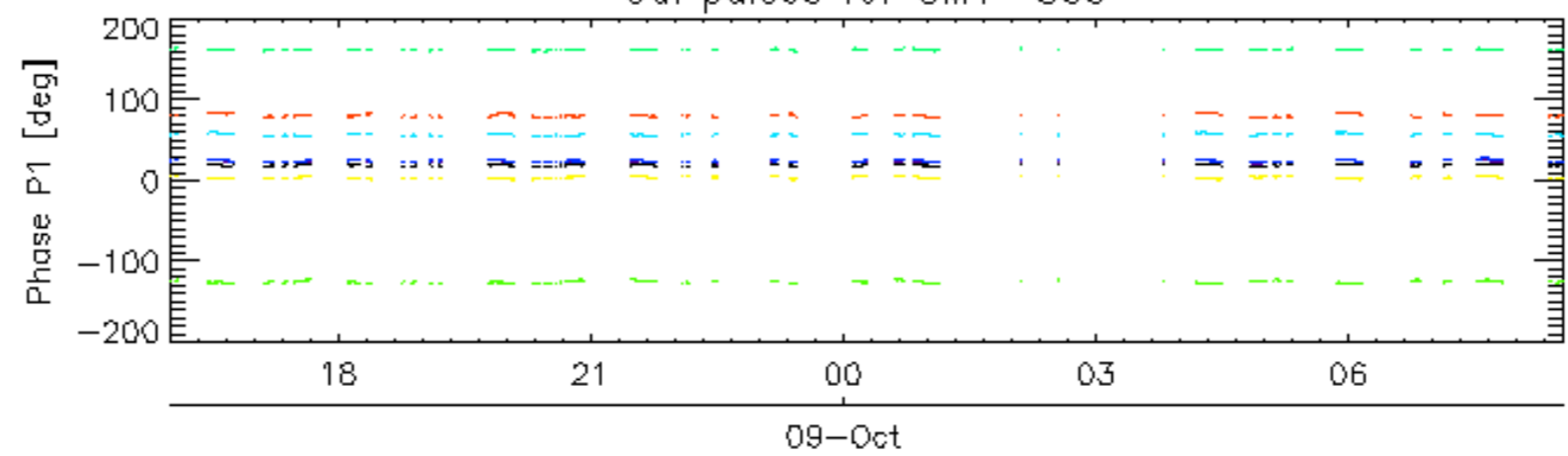
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

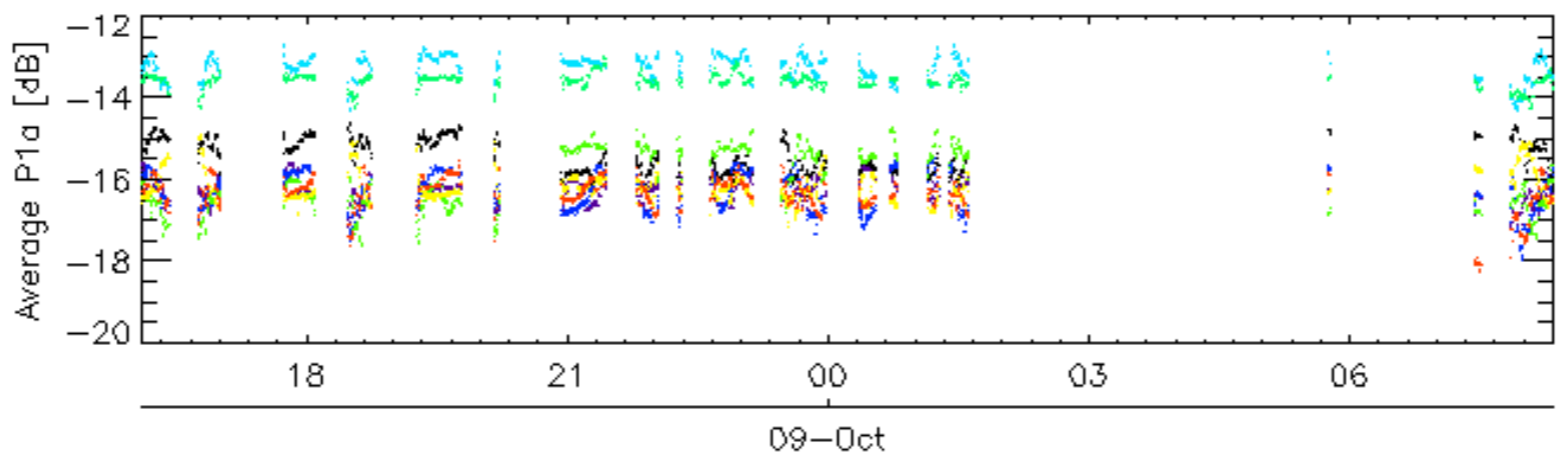
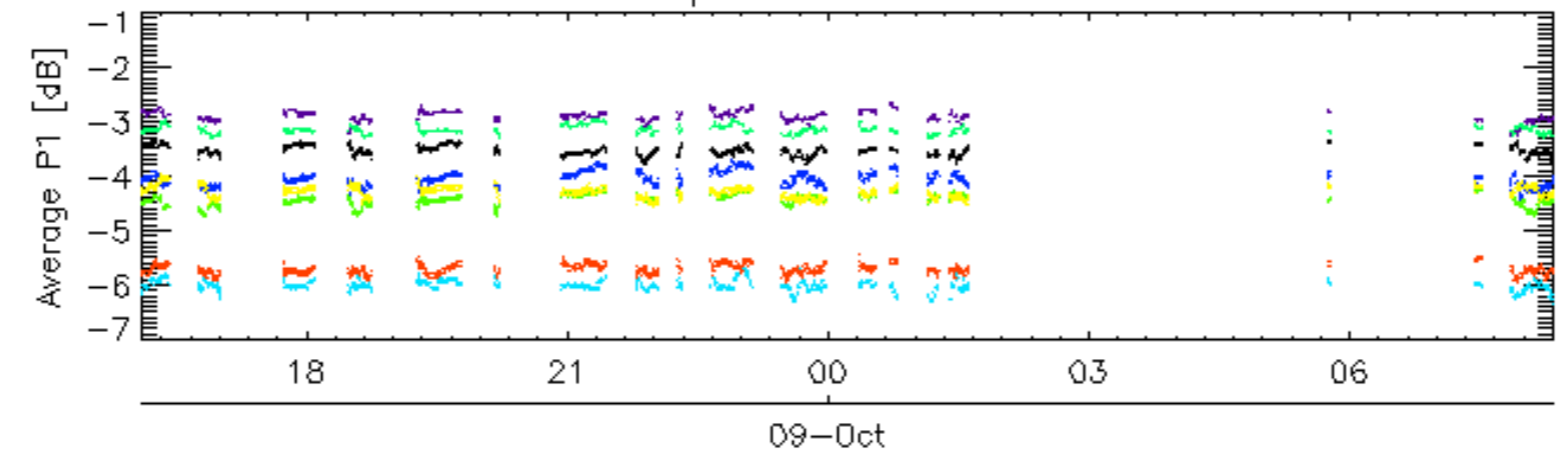


Cal pulses for GM1 SS3

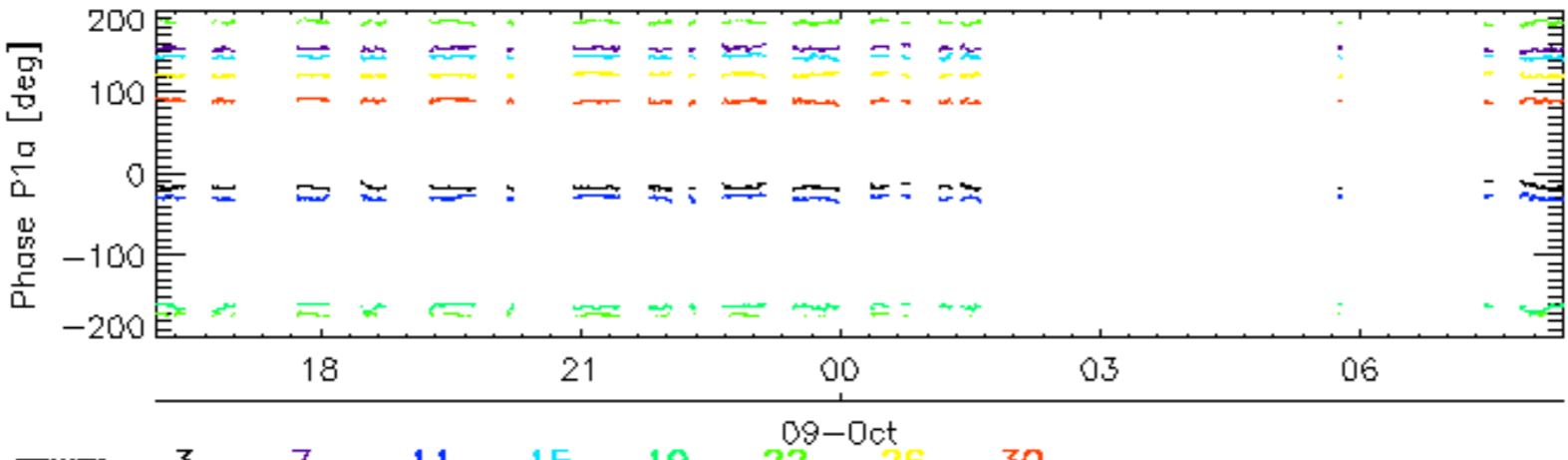
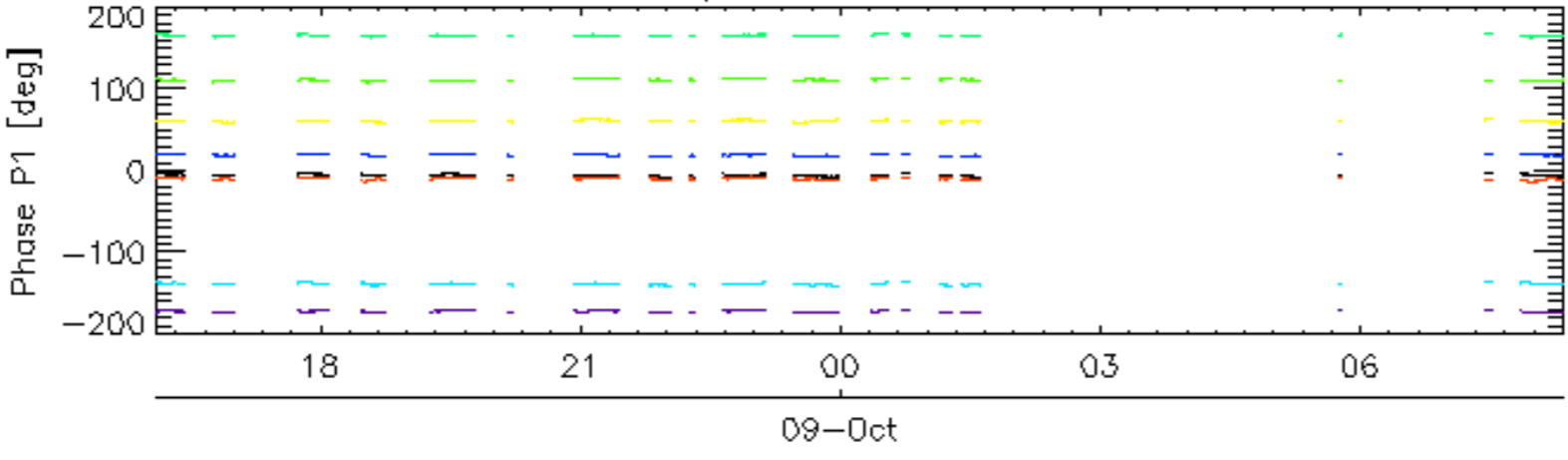


rows: **- 3** **- 7** **- 11** **- 15** **- 19** **- 22** **- 26** **- 30**

Cal pulses for WVS IS2

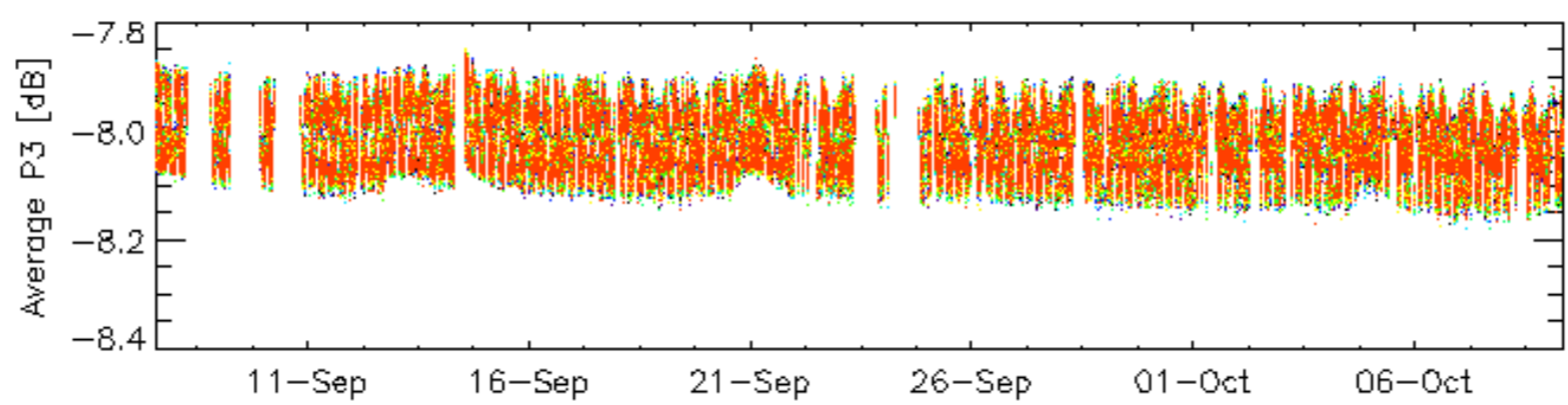
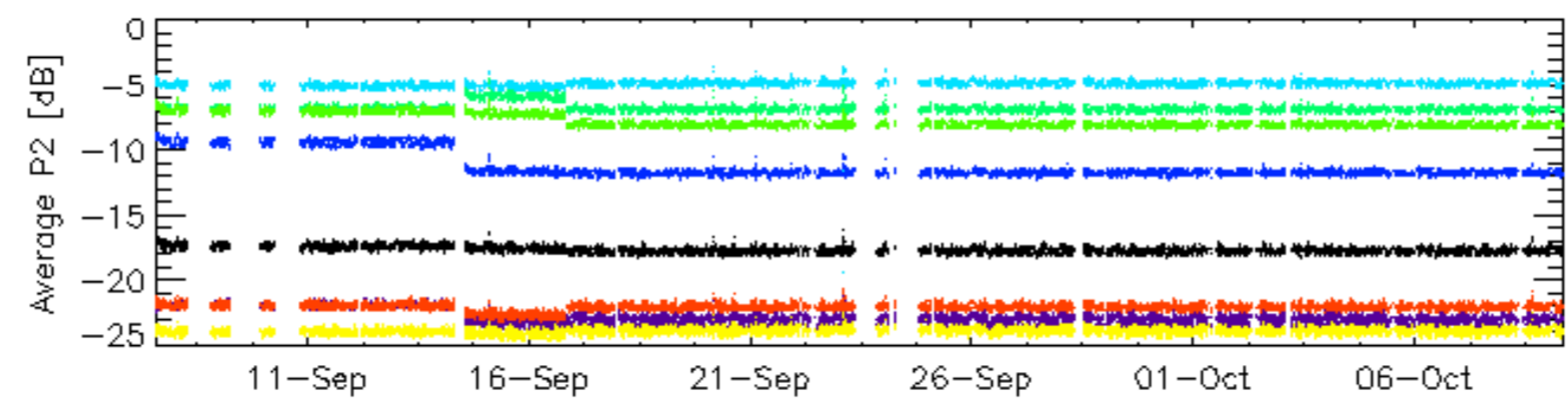
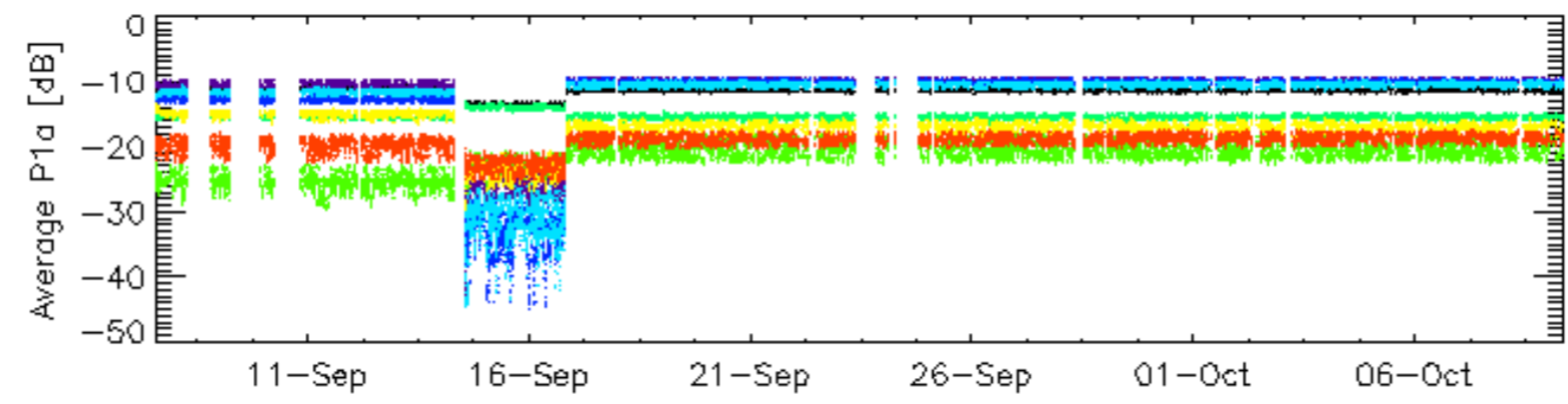
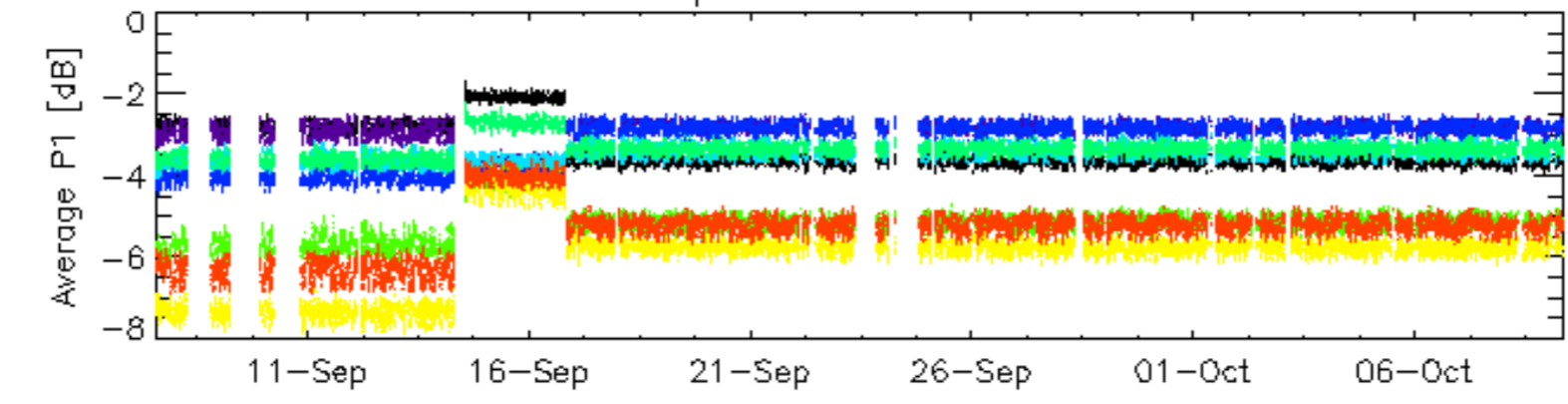


Cal pulses for WVS IS2



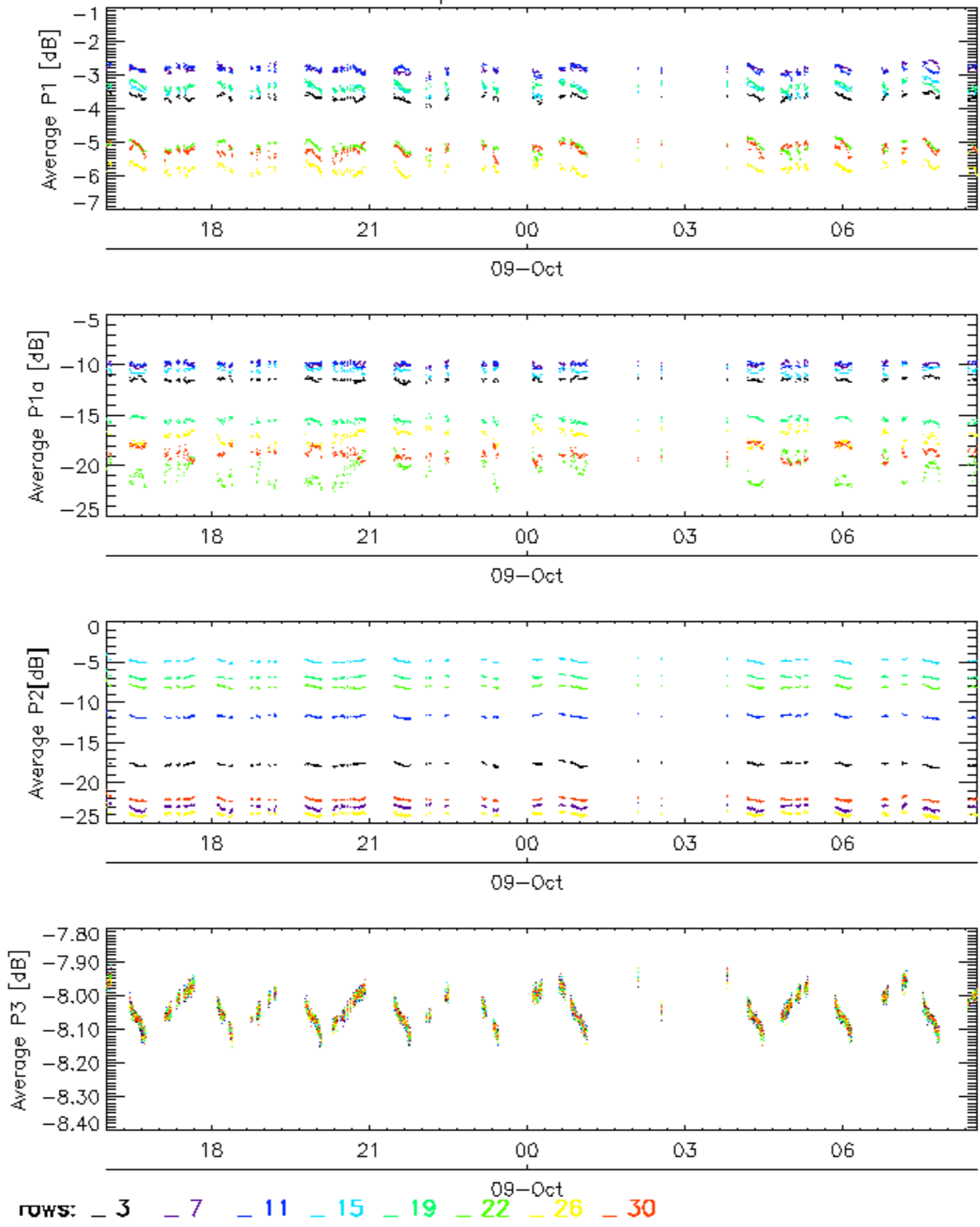
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

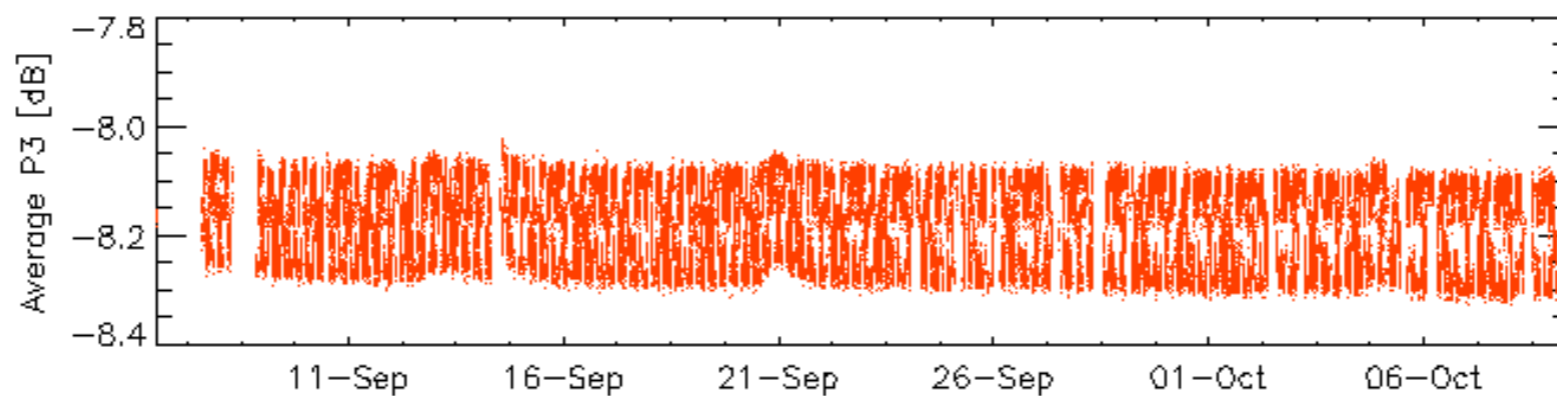
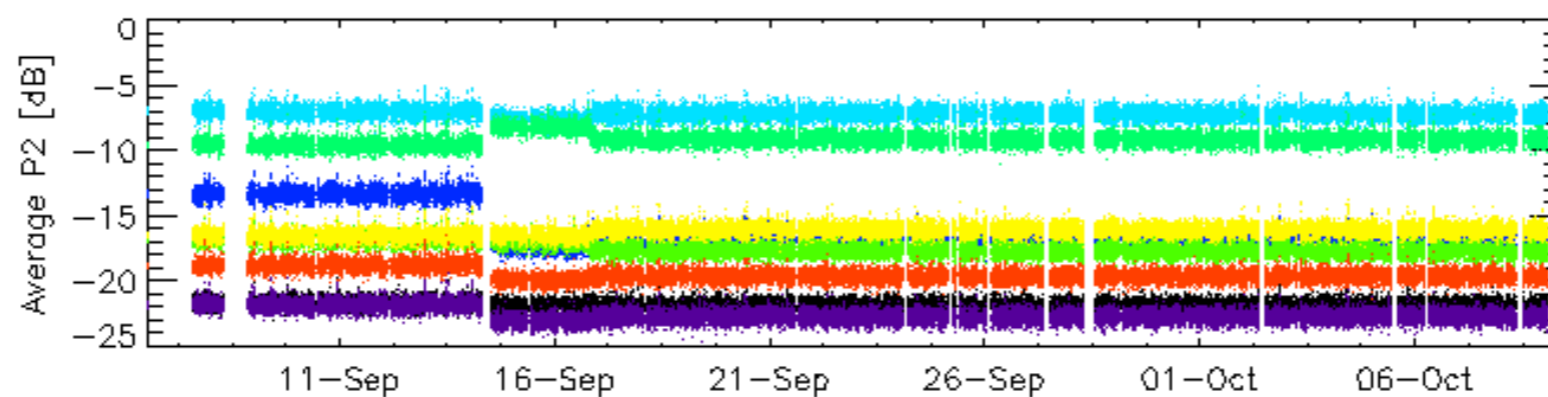
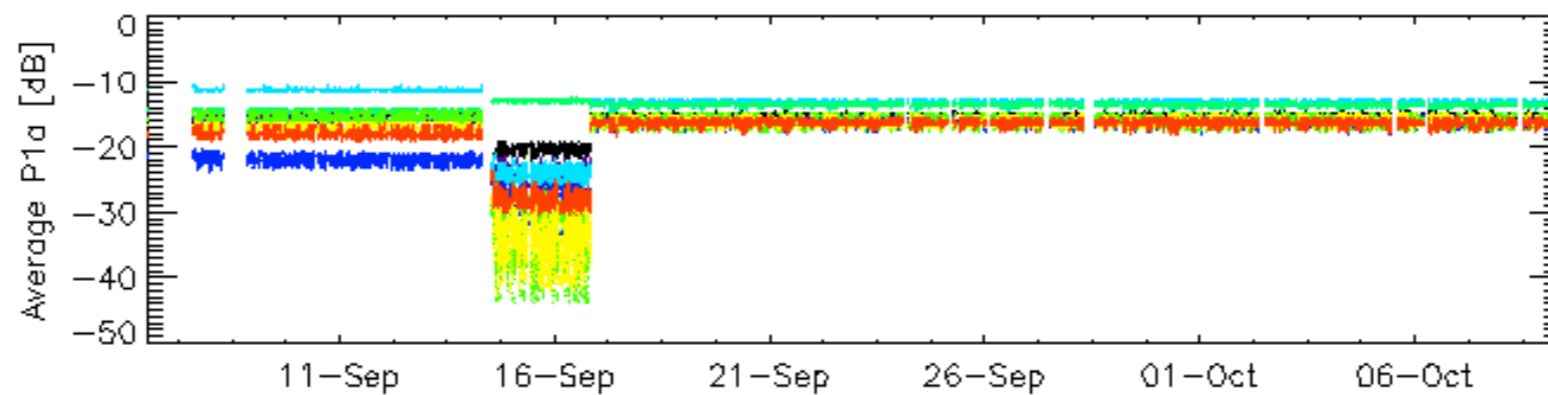
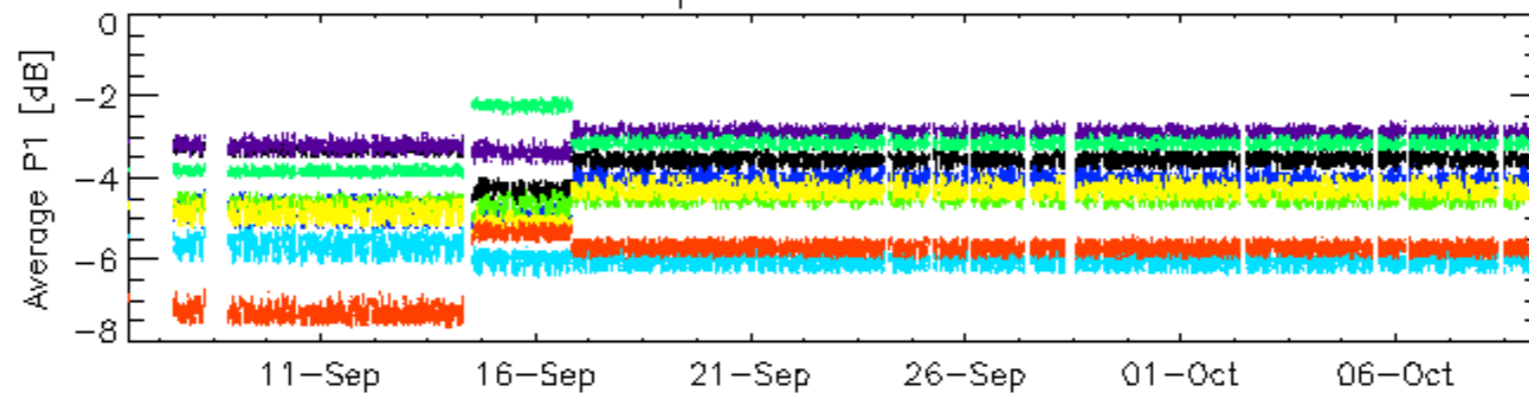


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

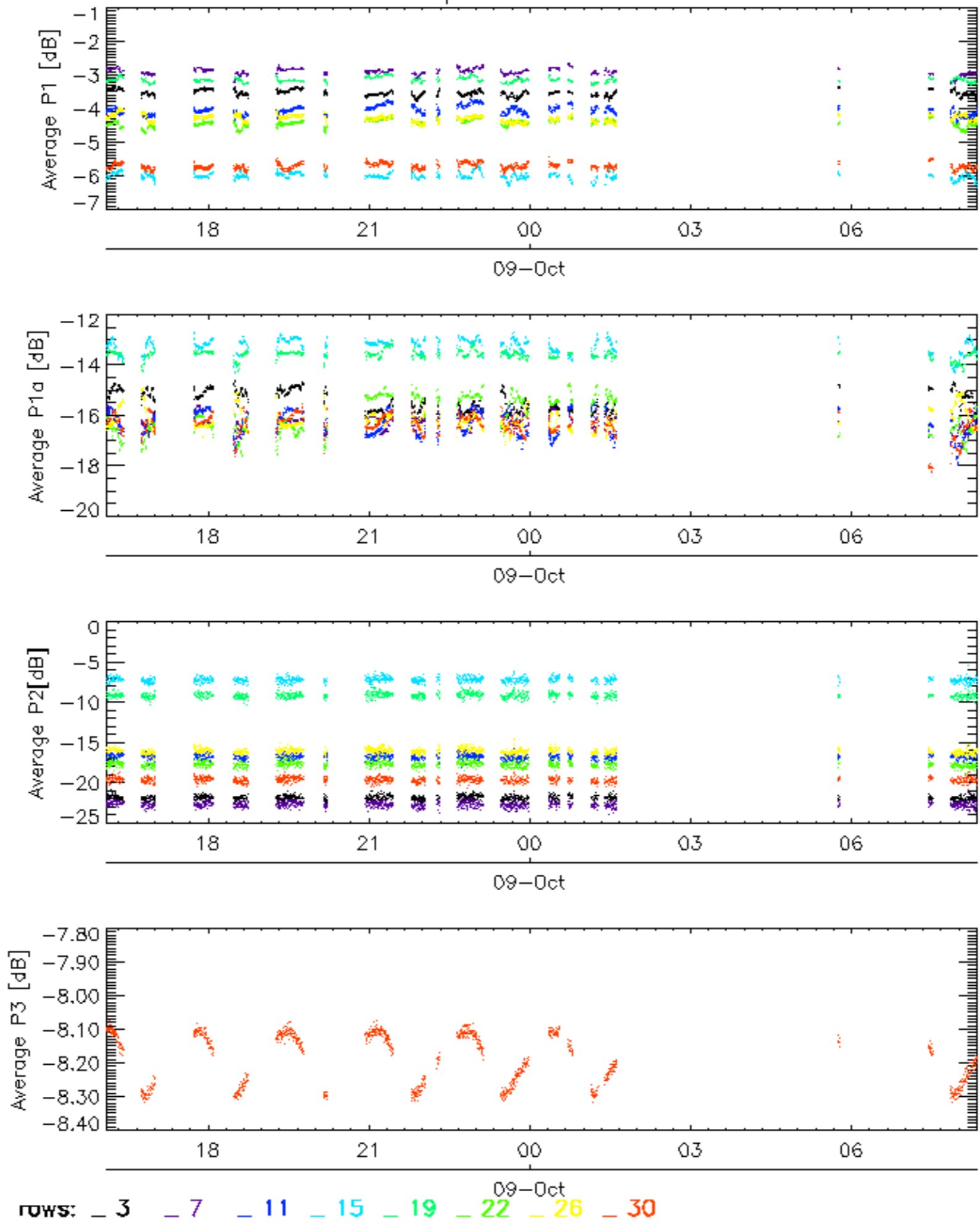


Cal pulses for WVS IS2

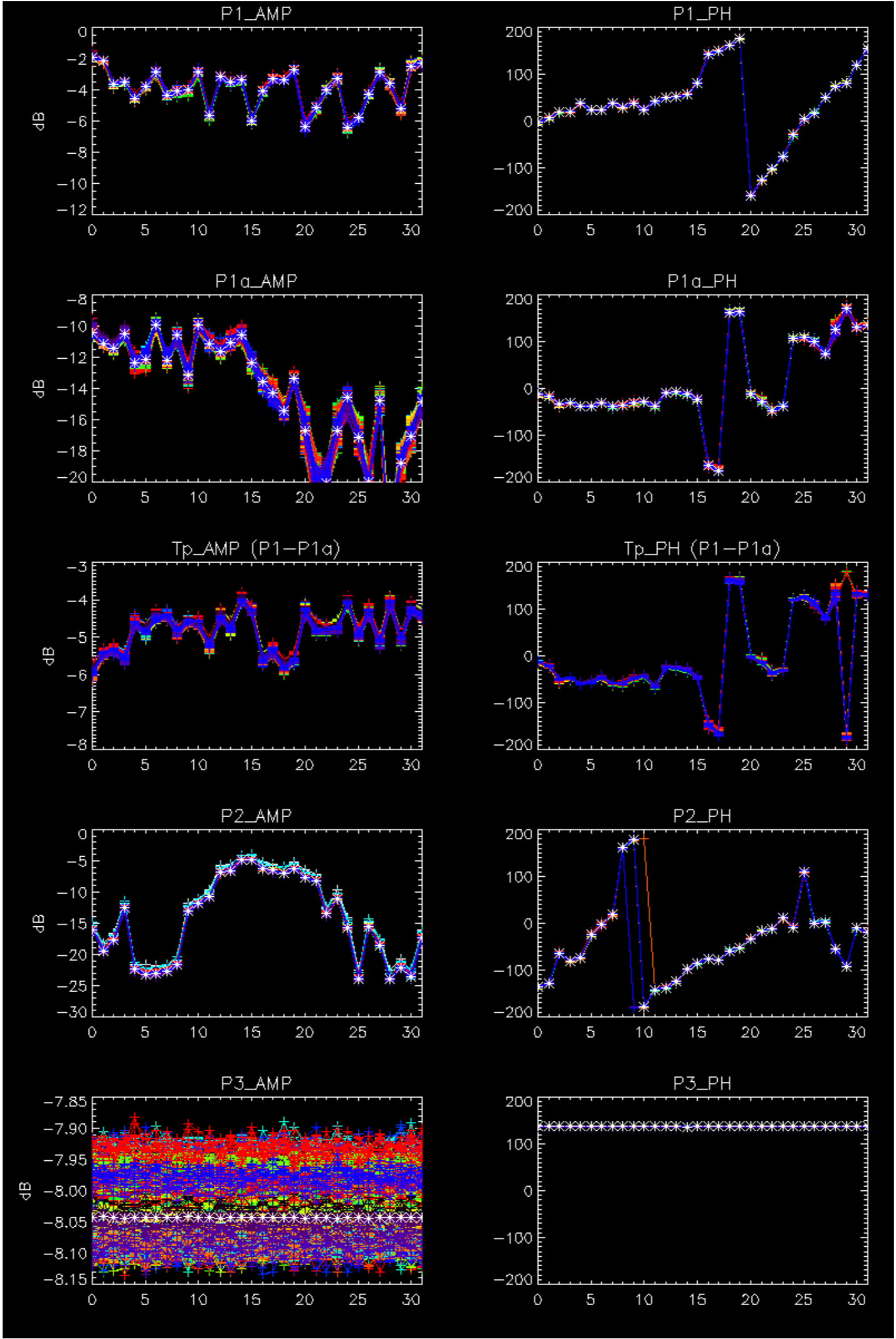


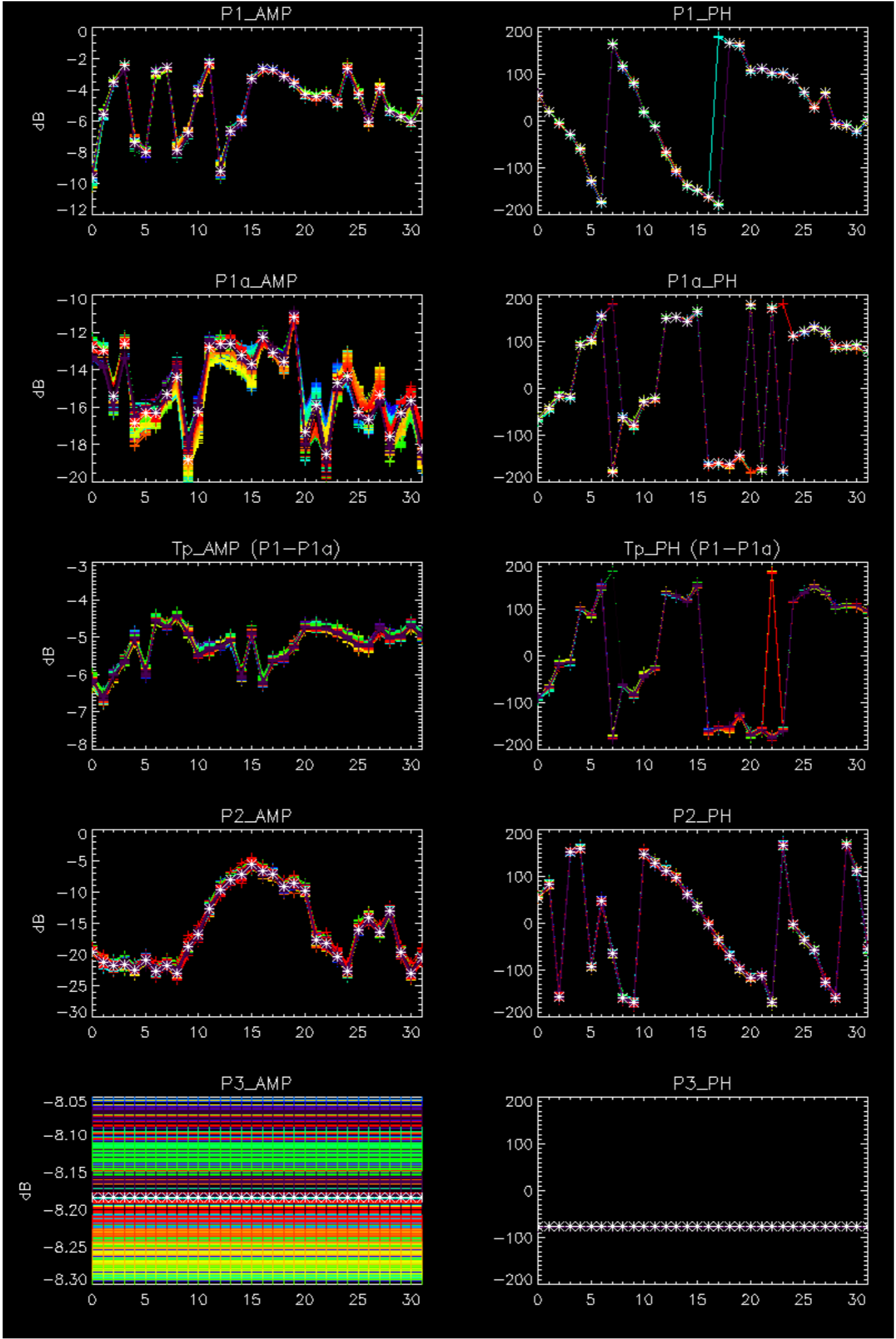
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



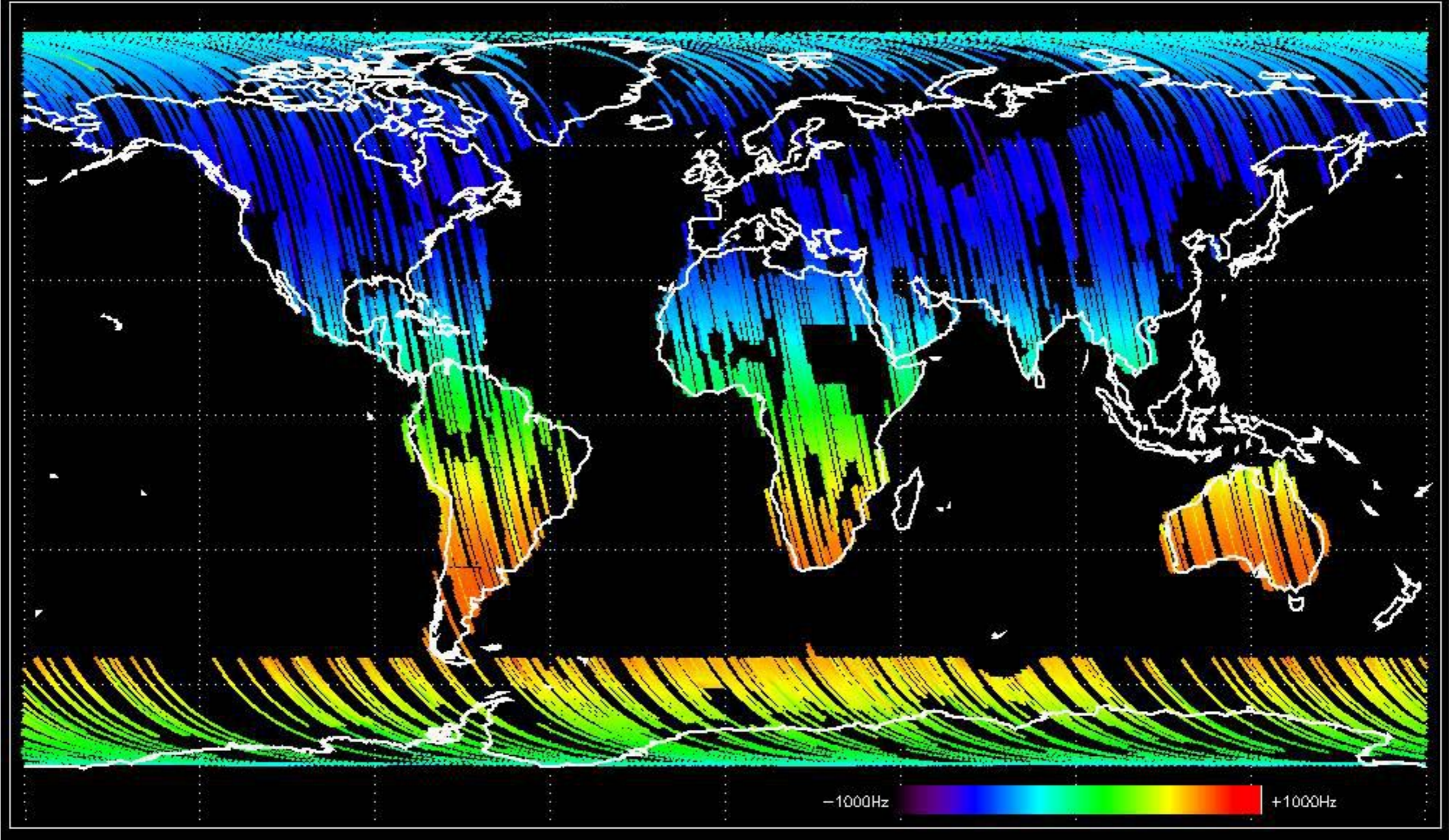
No anomalies observed.



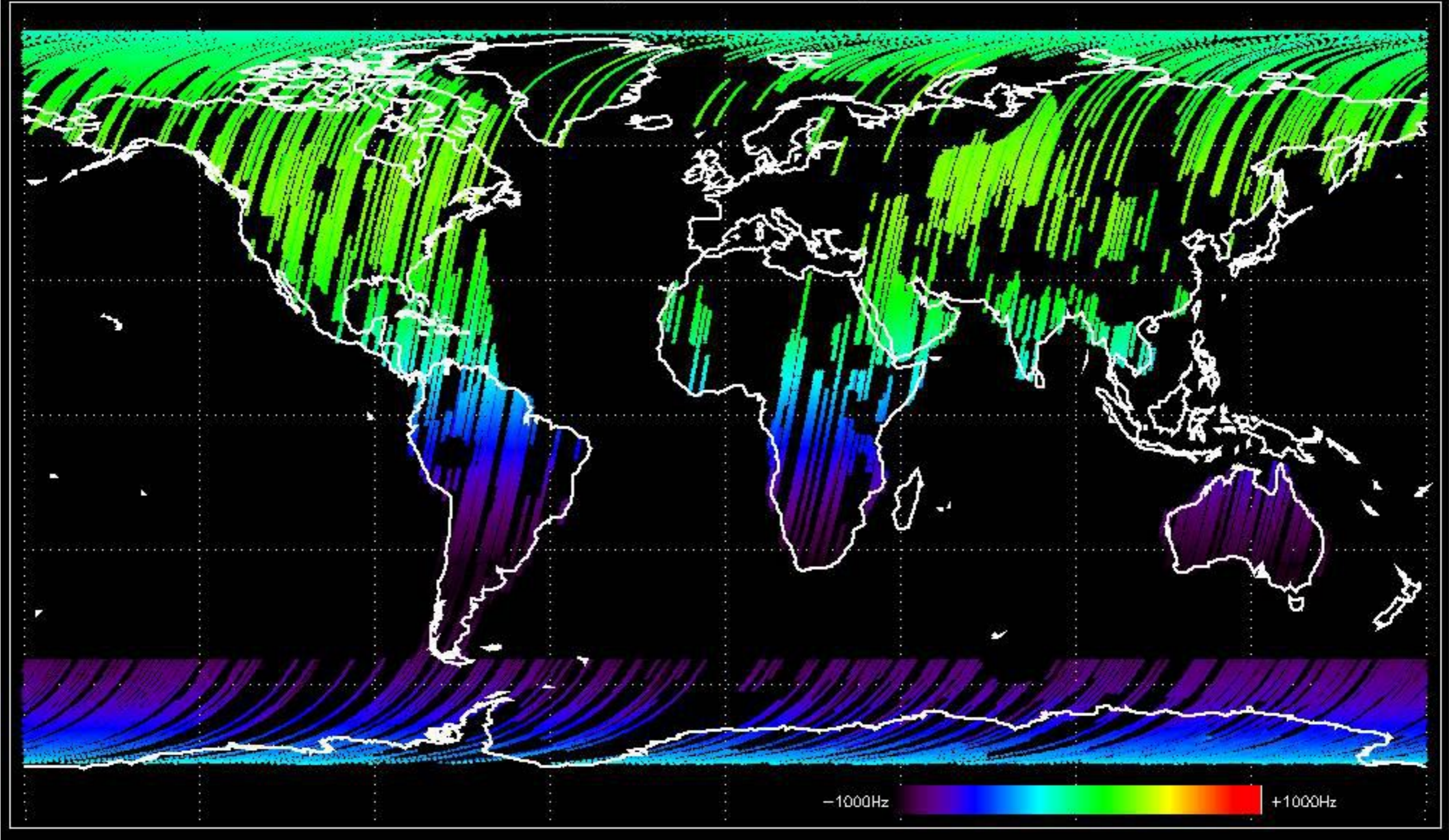


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

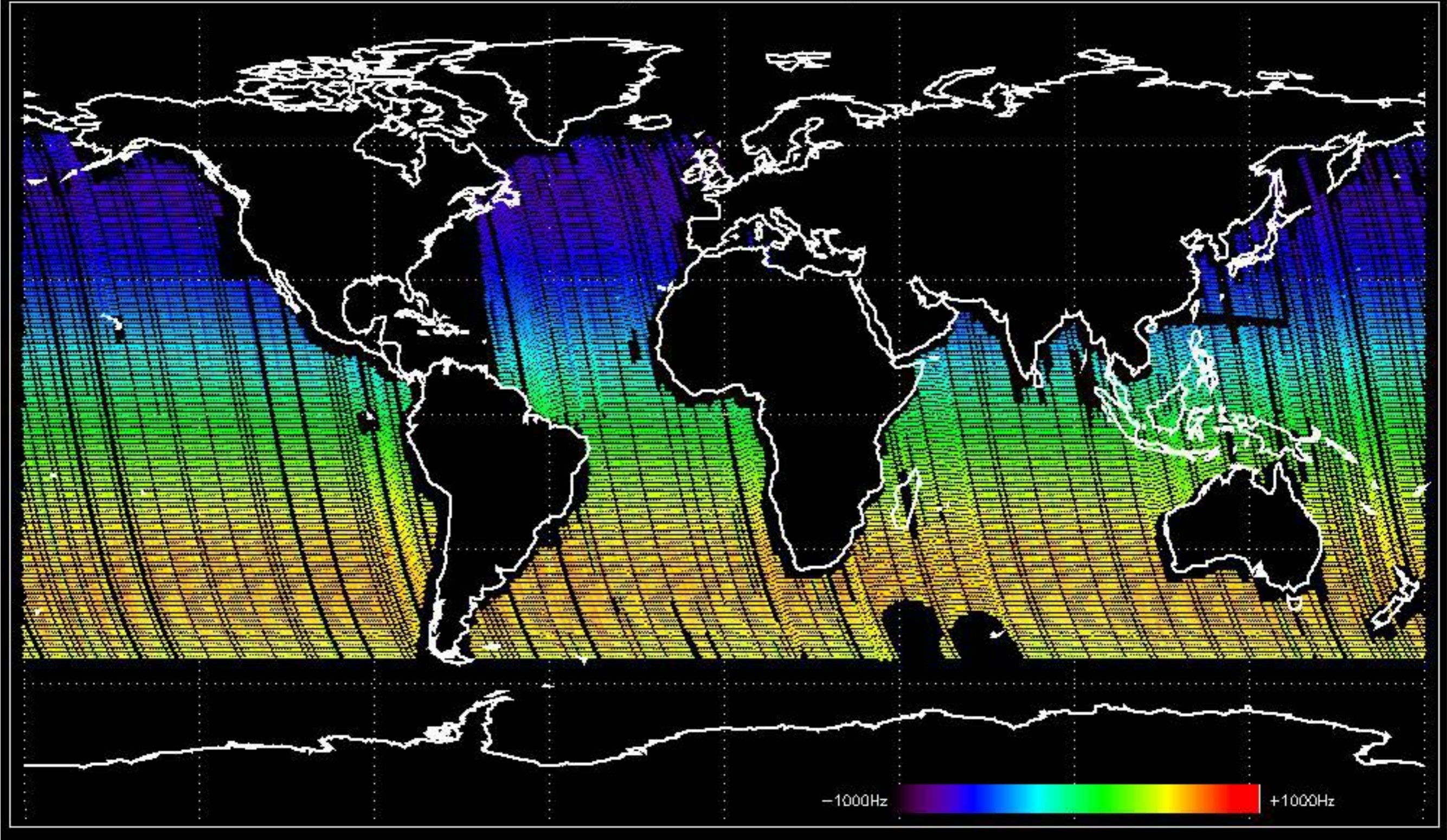
Doppler 'GM1' 'SS1' ascending



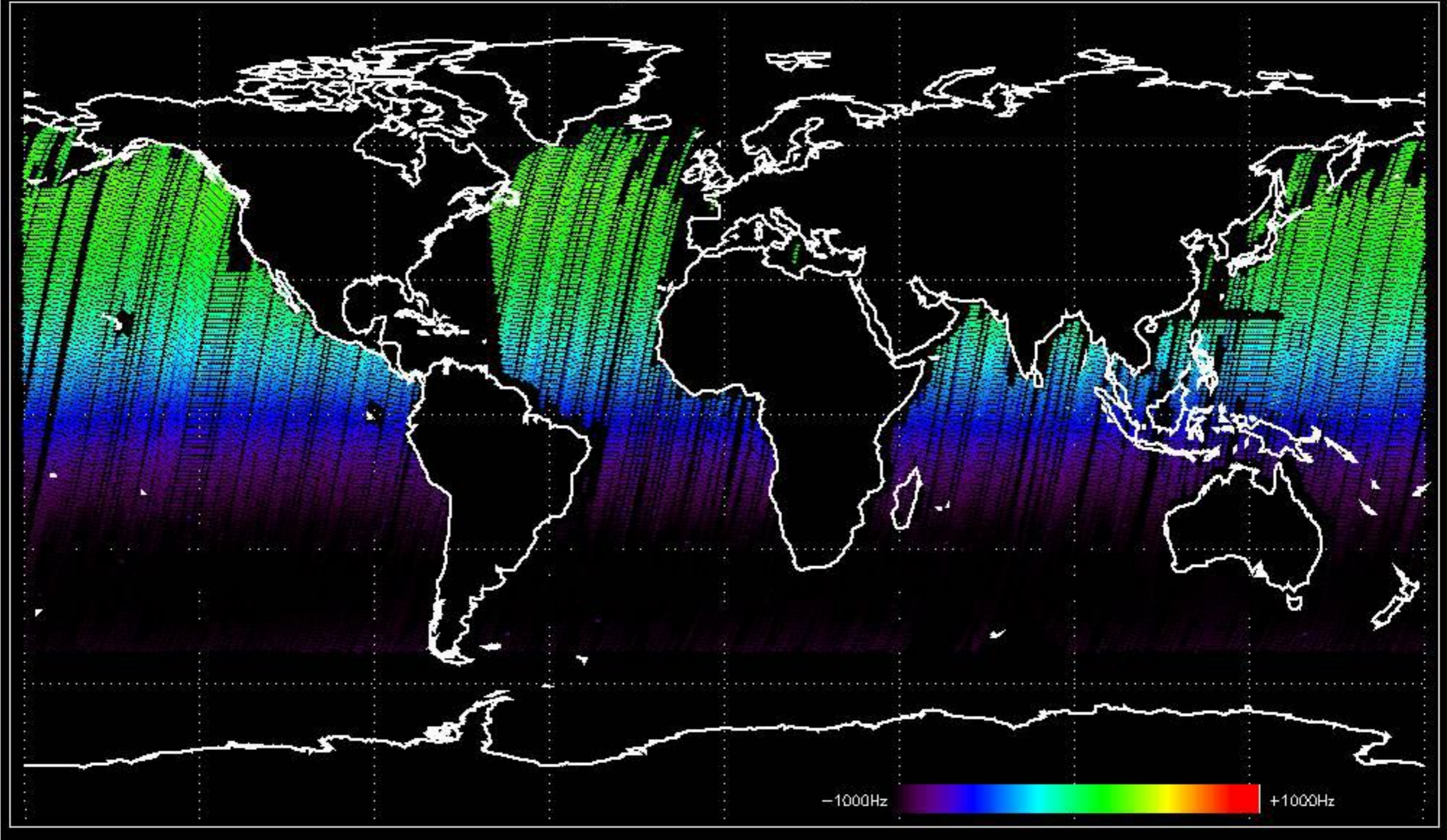
Doppler 'GM1' 'SS1' descending



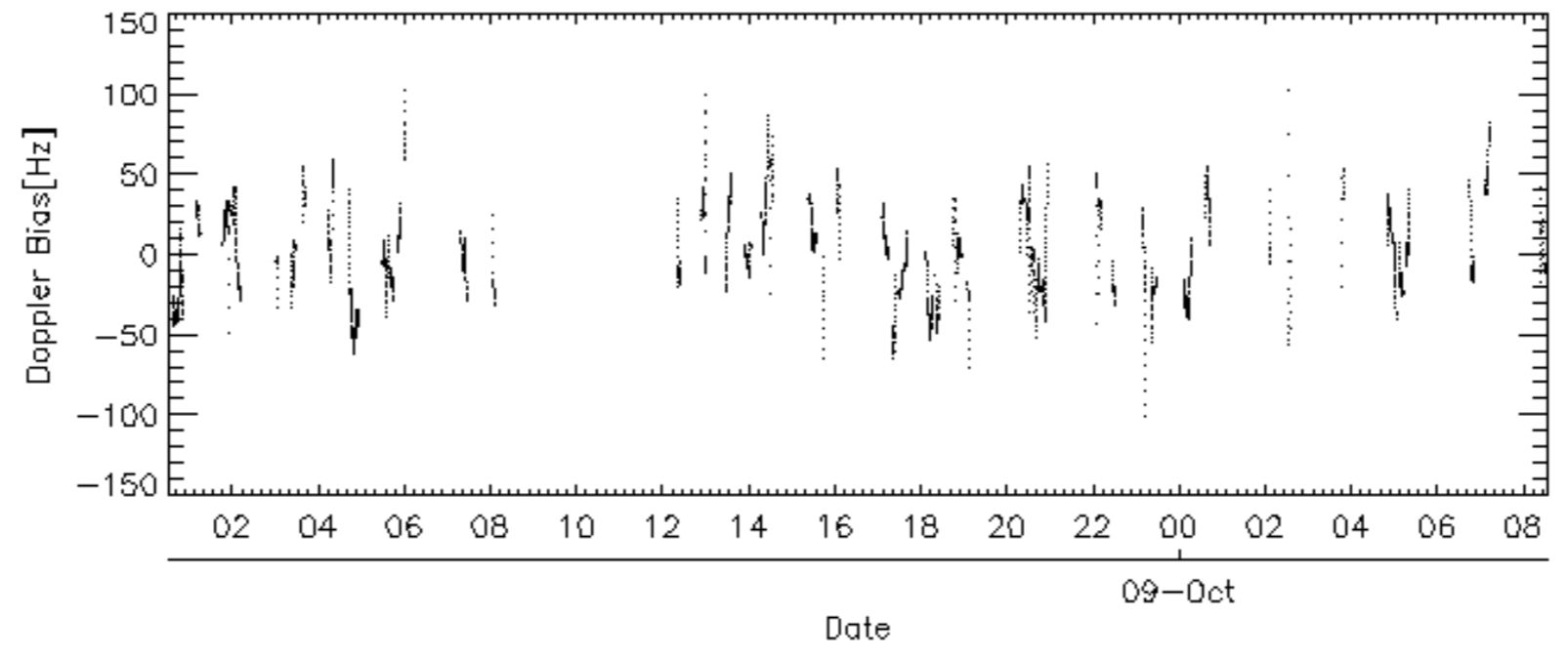
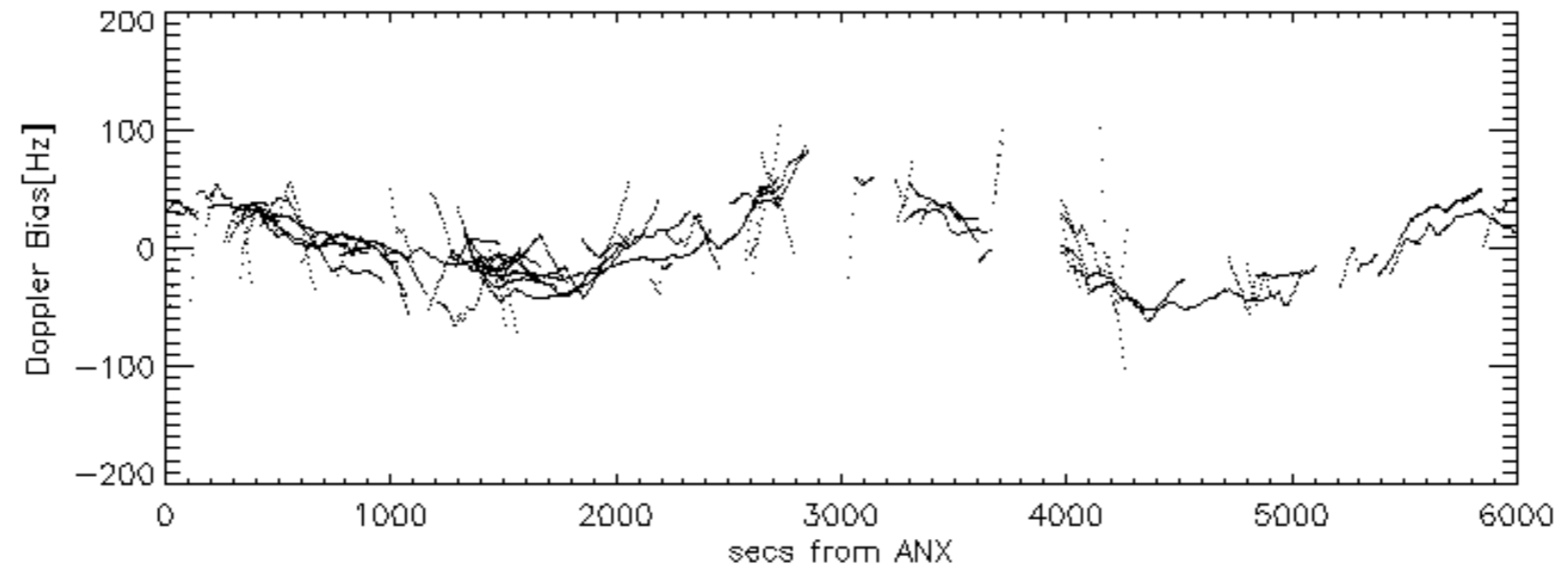
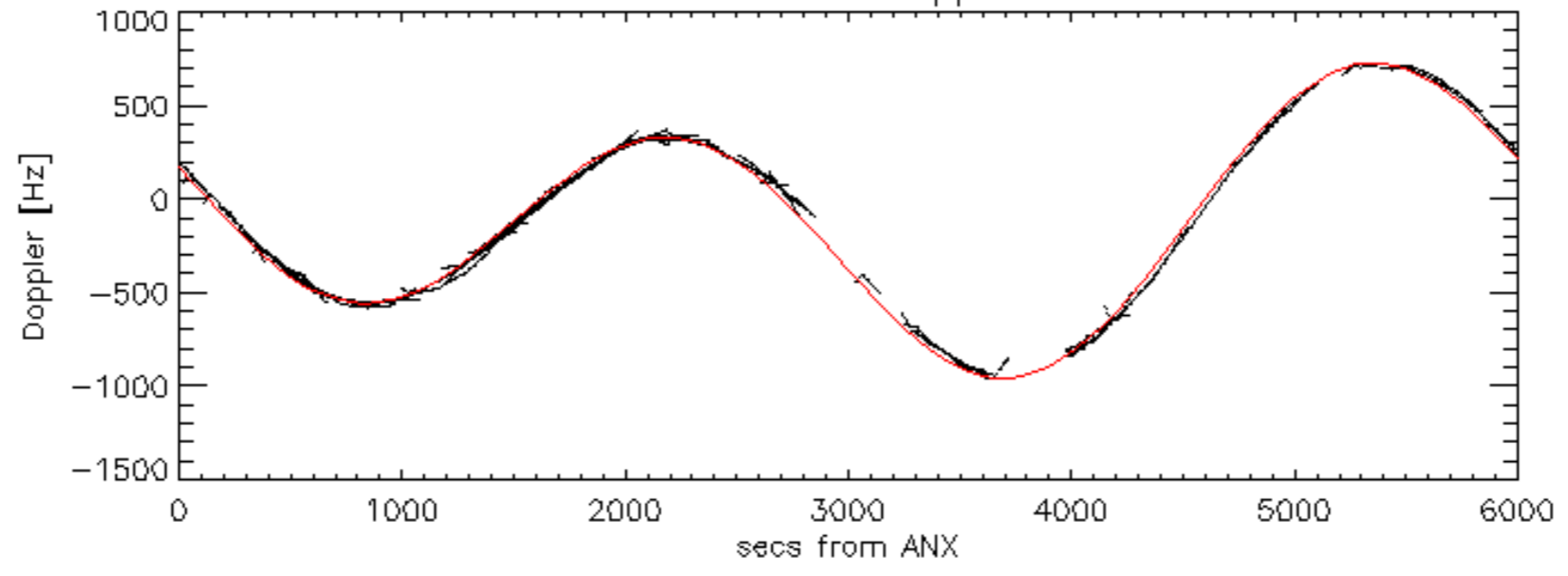
Doppler 'WVS' 'IS2' ascending

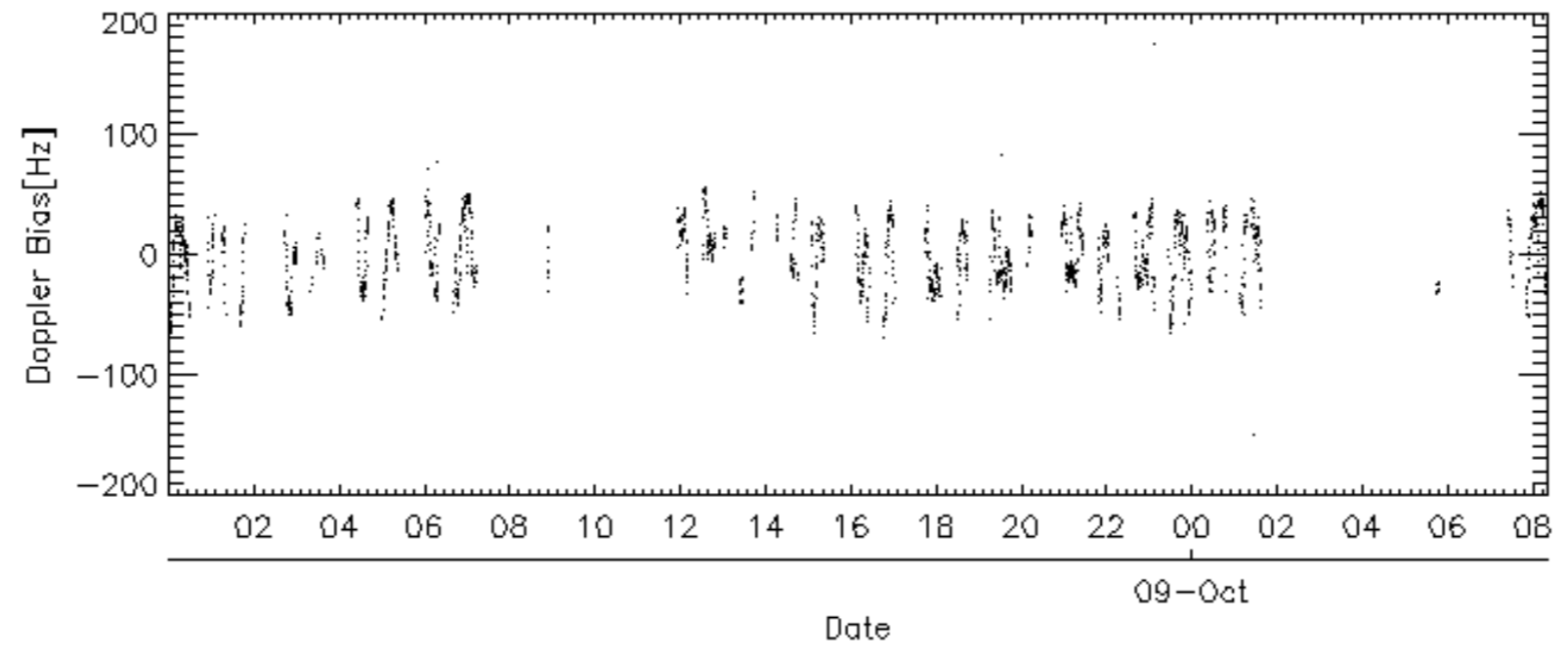
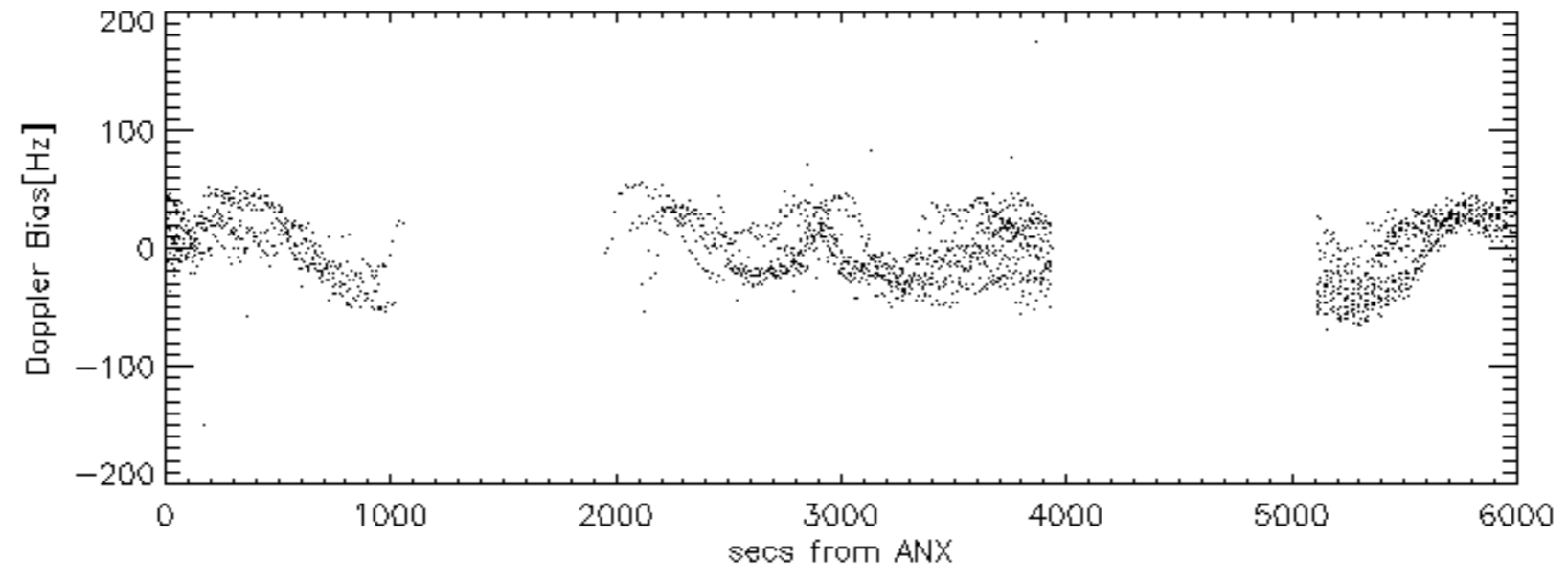
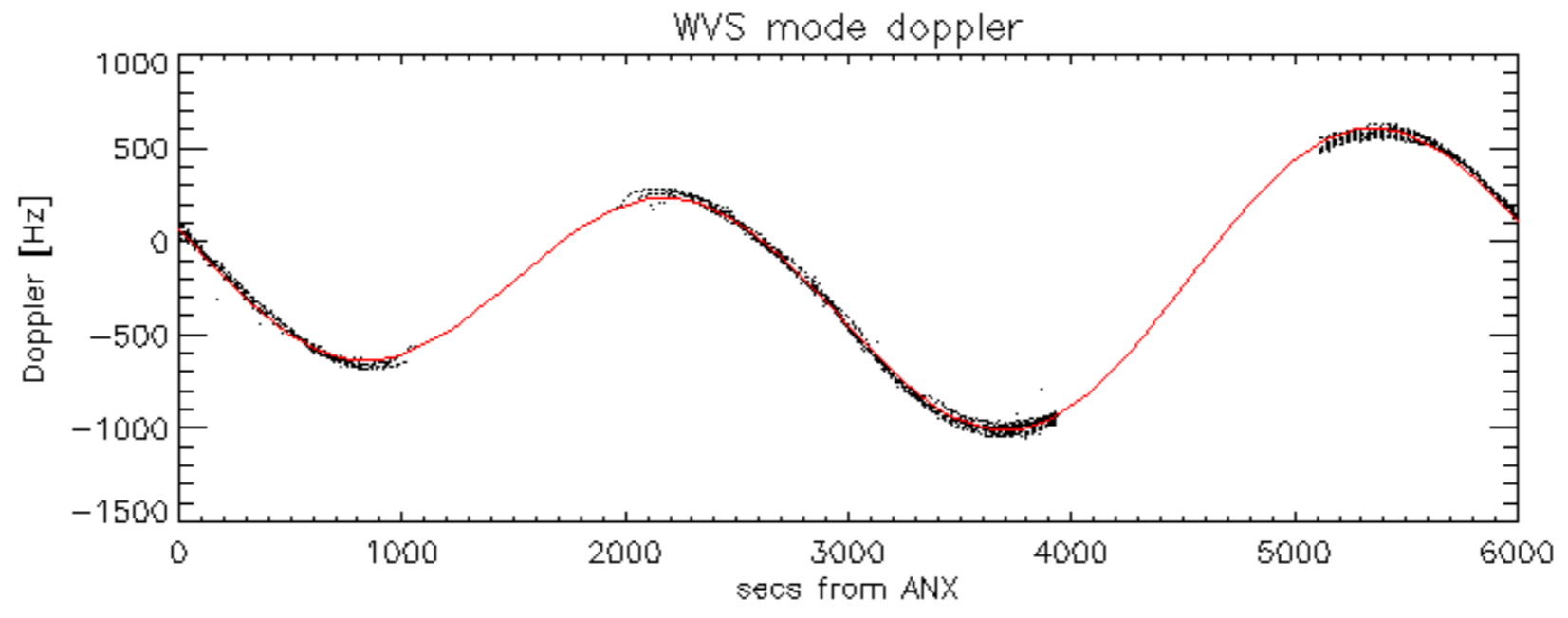


Doppler 'WVS' 'IS2' descending

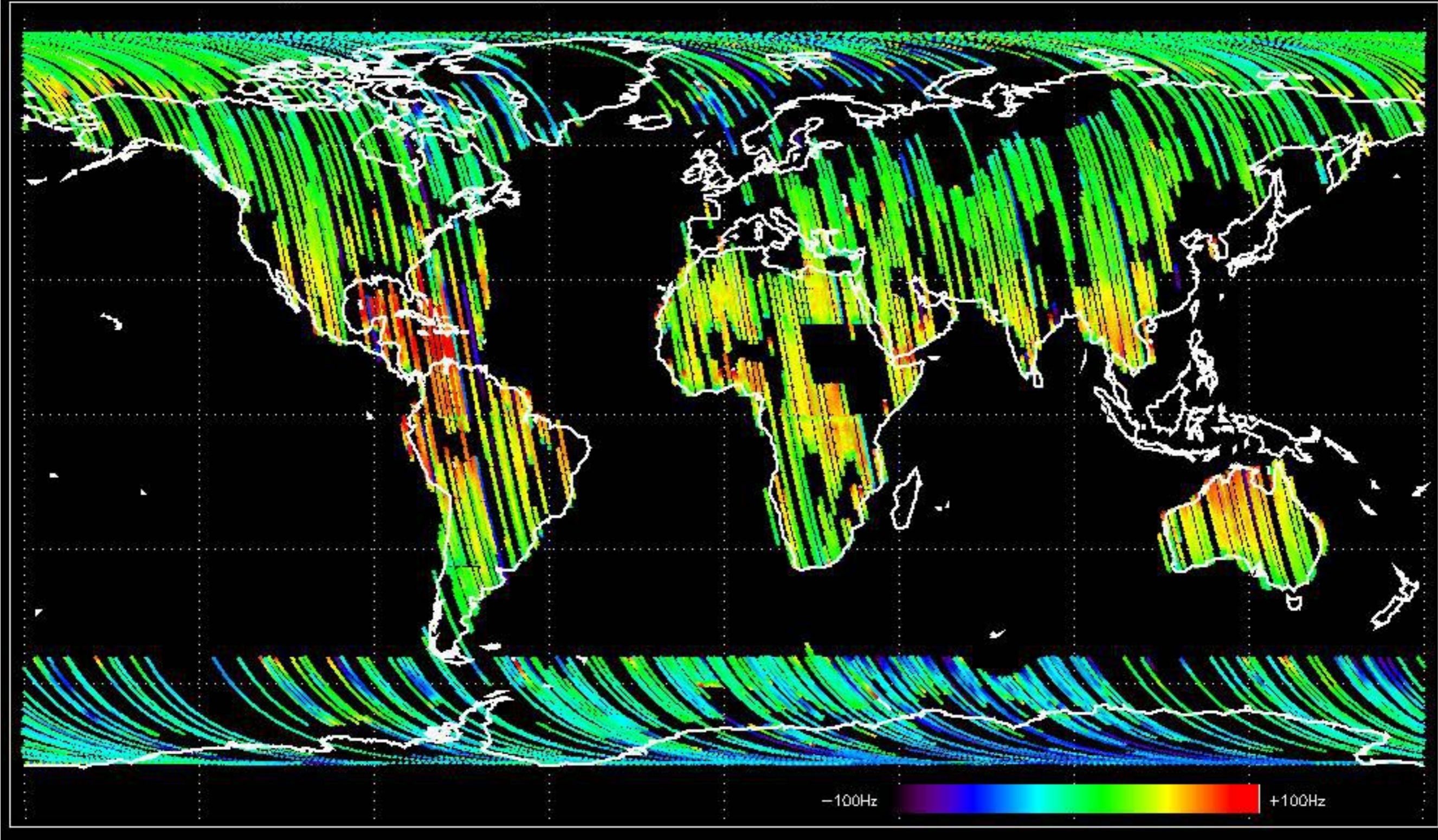


GM1 mode doppler

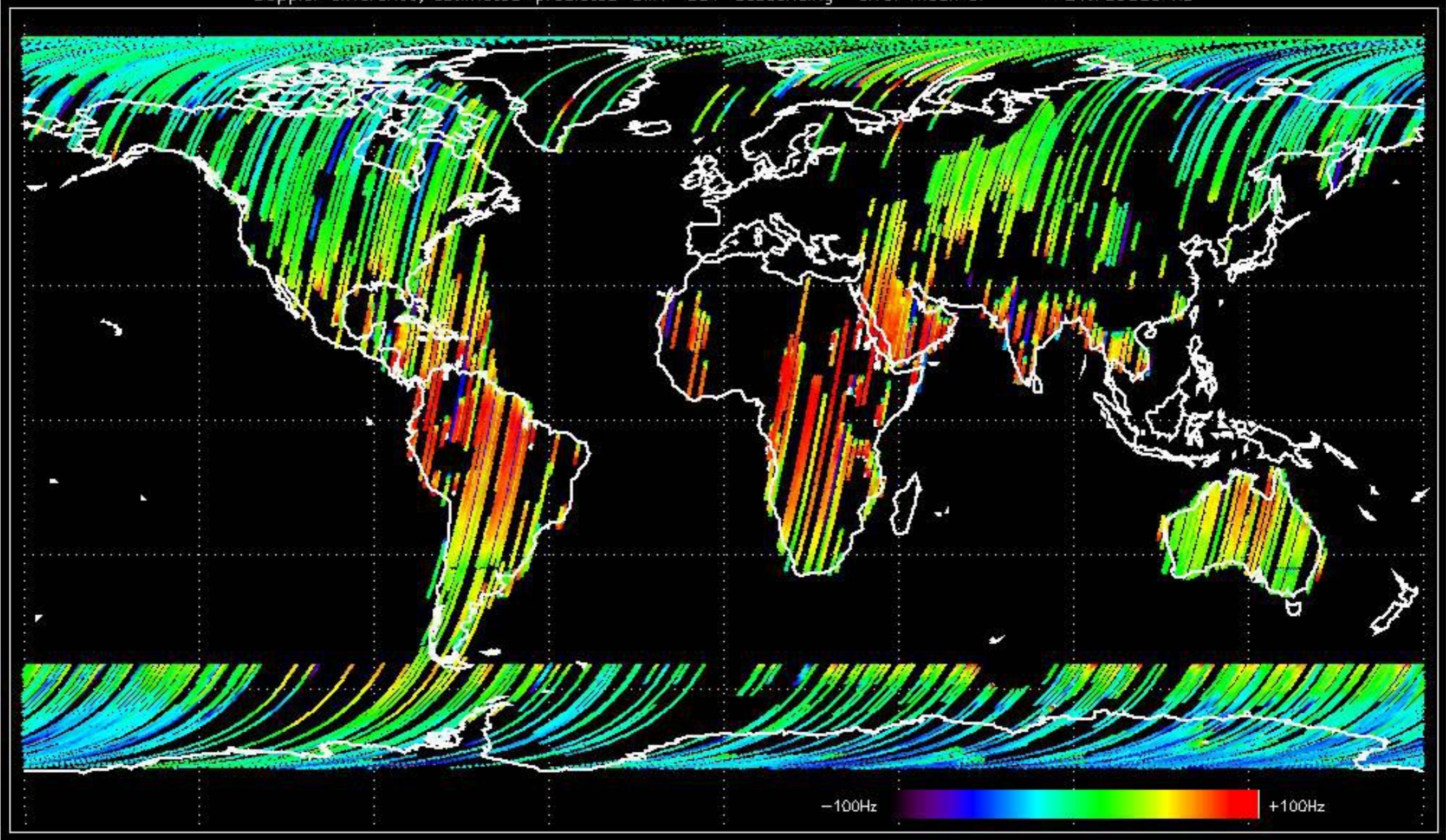




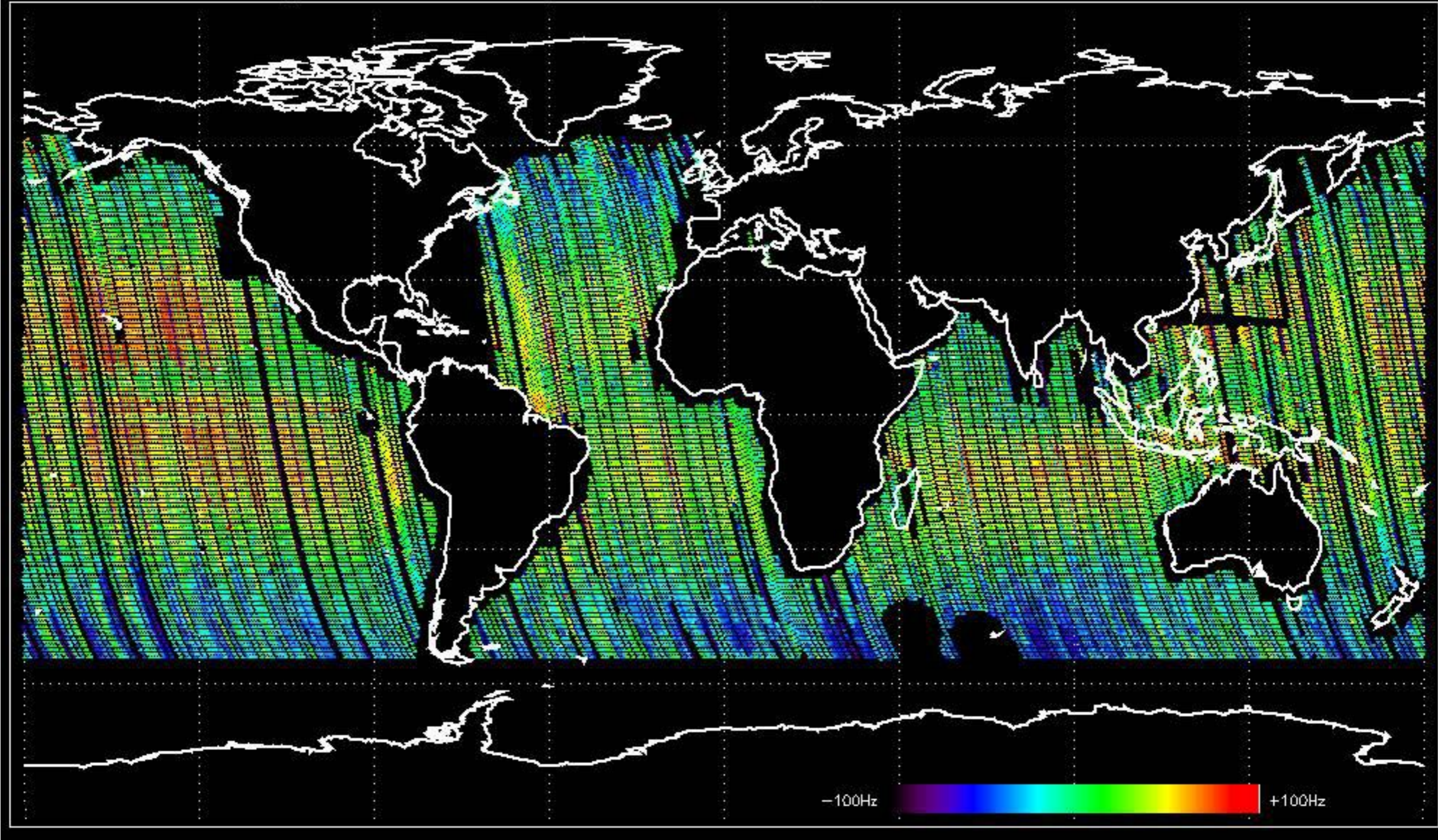
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -23.339301 Hz



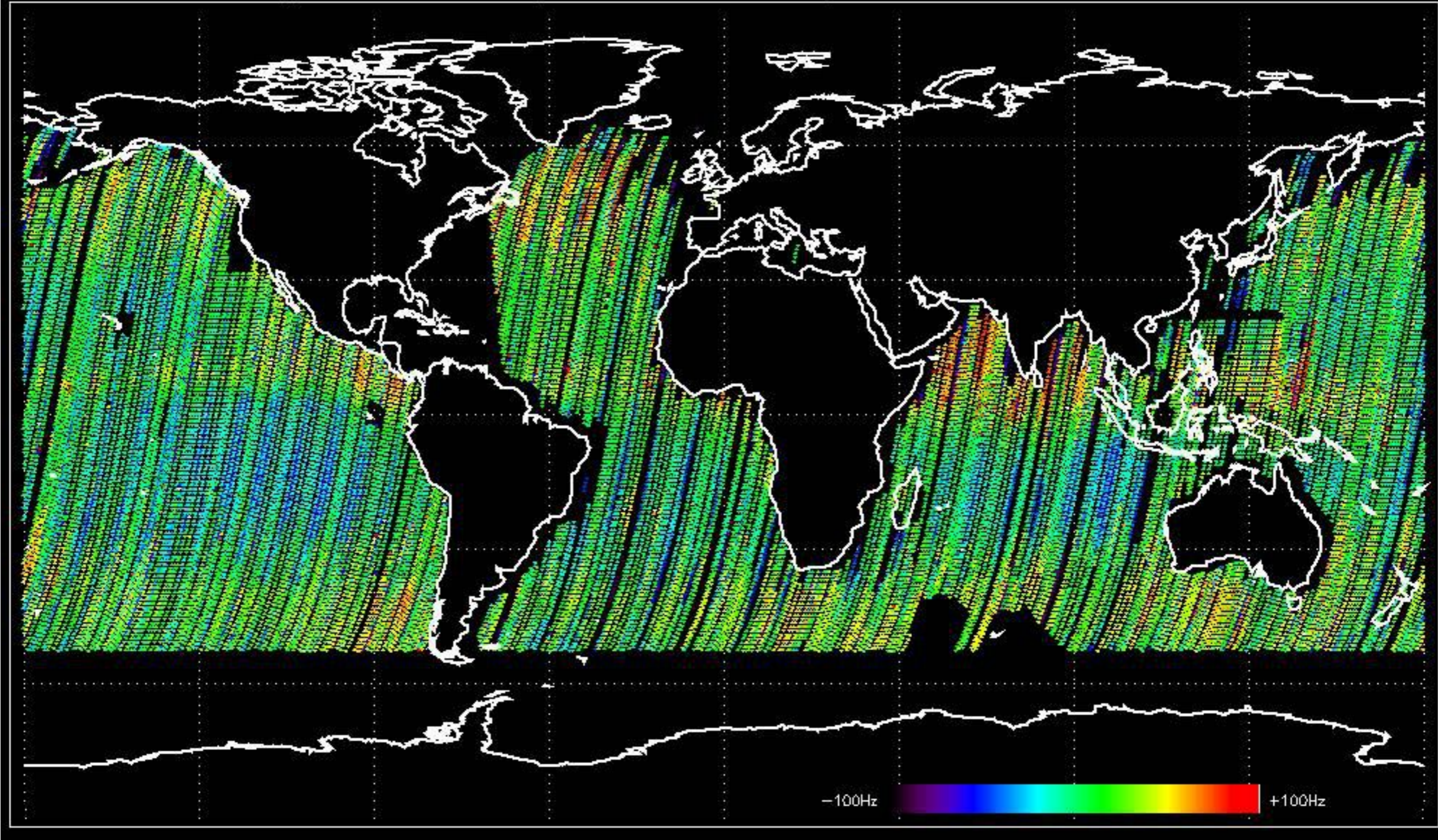
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -21.739830 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -18.539948 Hz

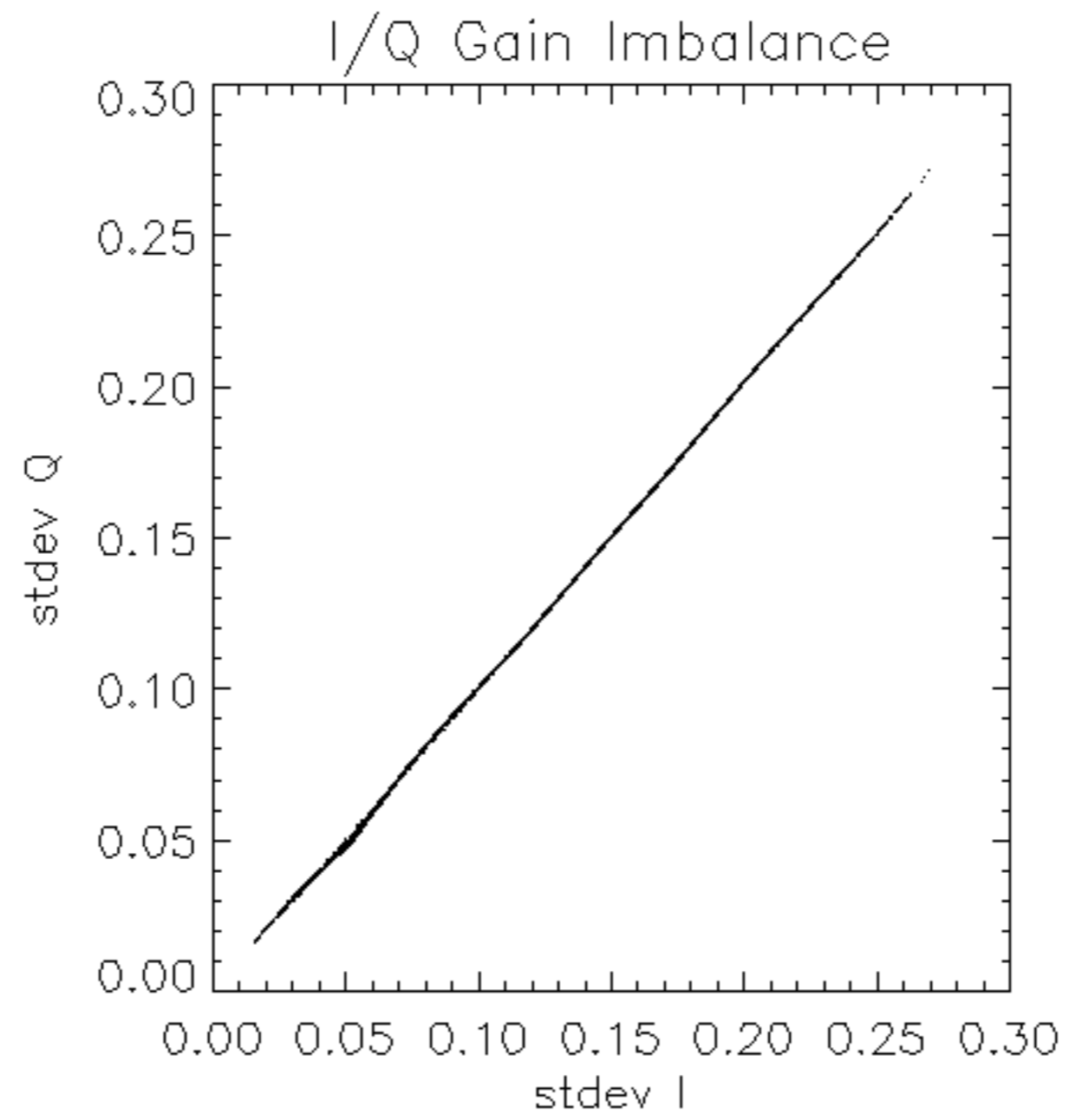


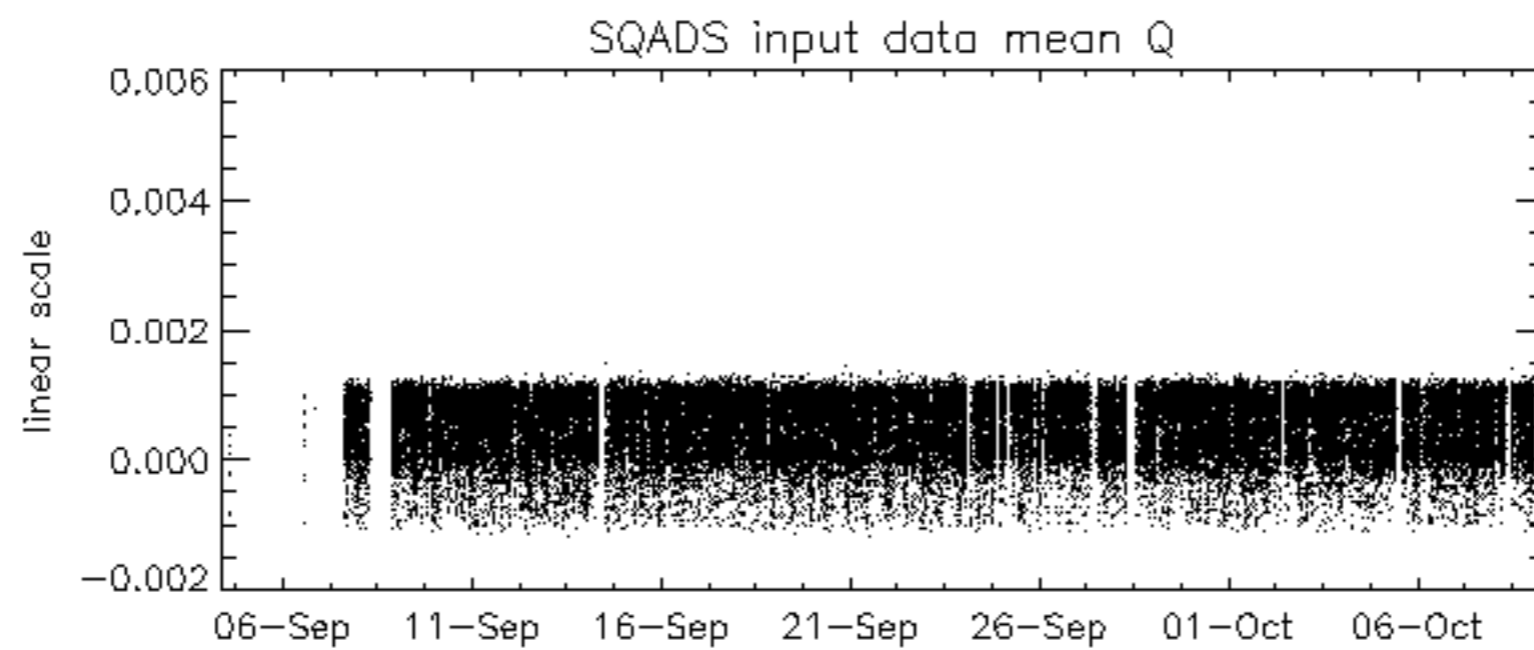
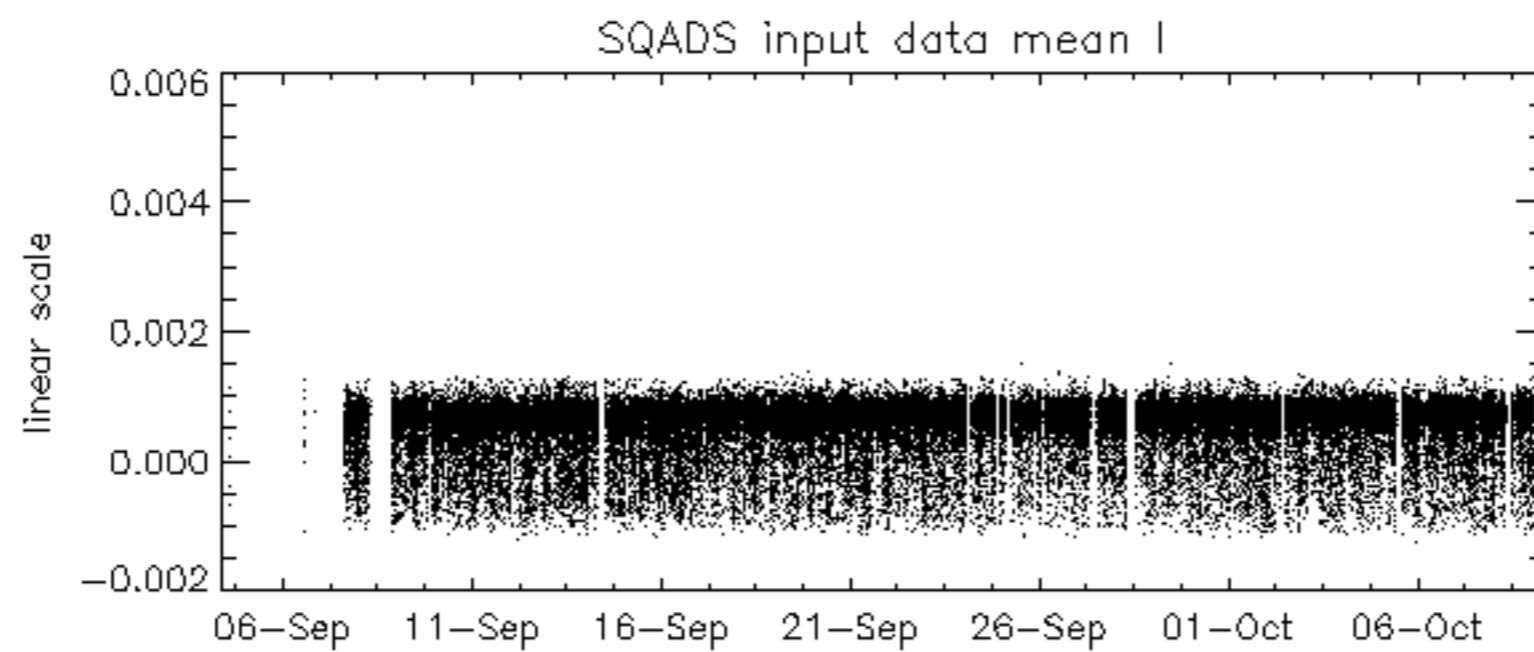
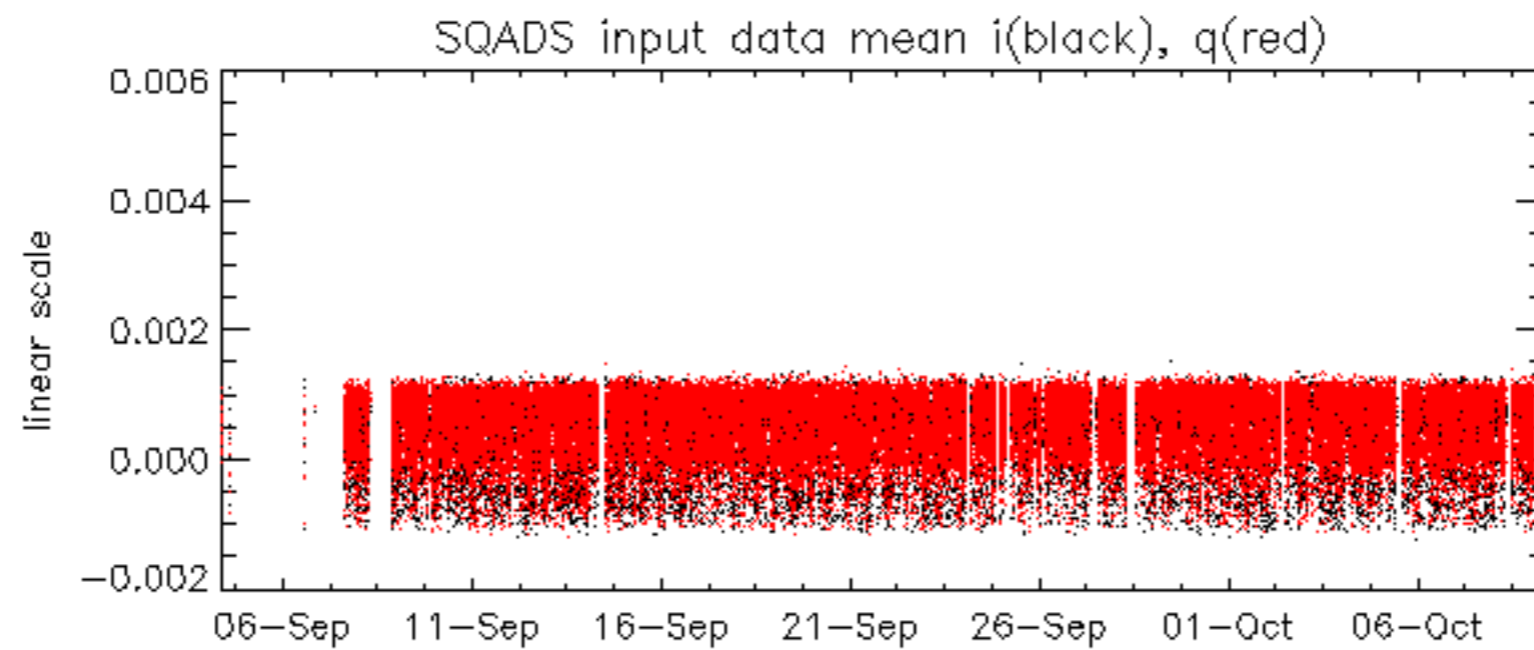
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -22.910254 Hz

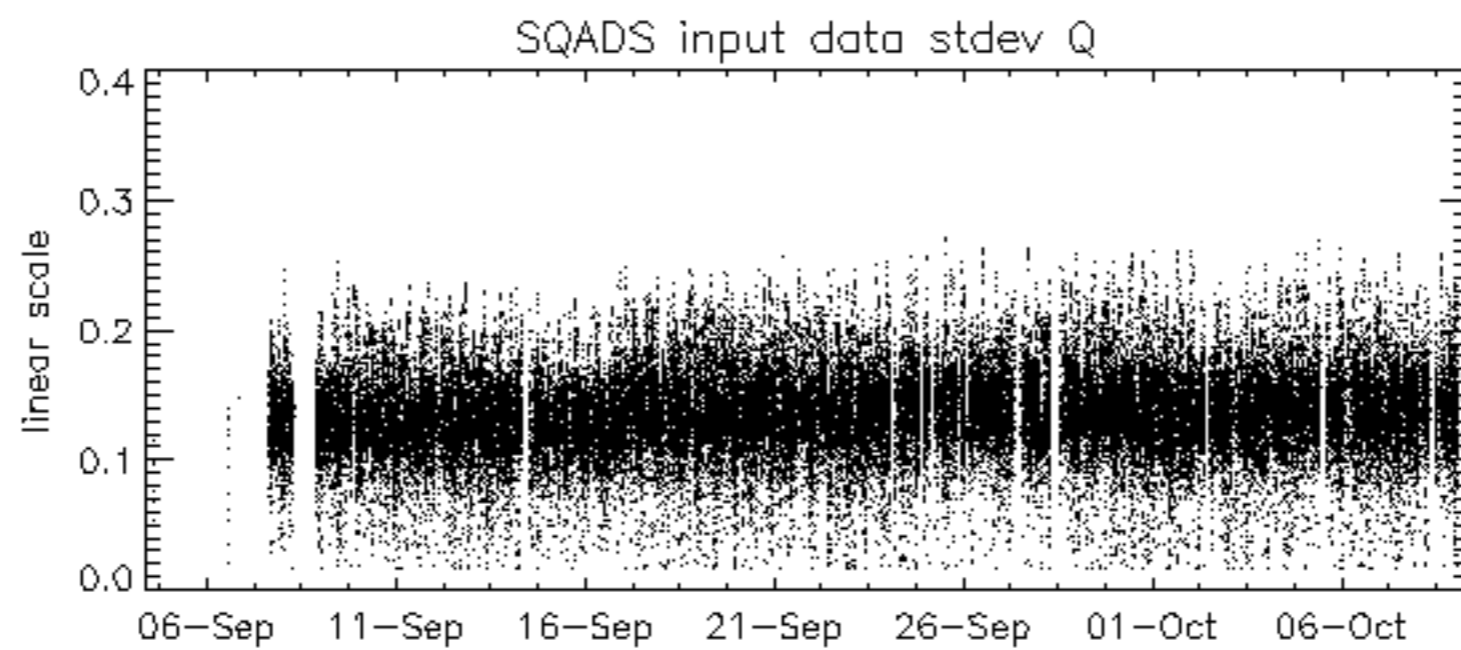
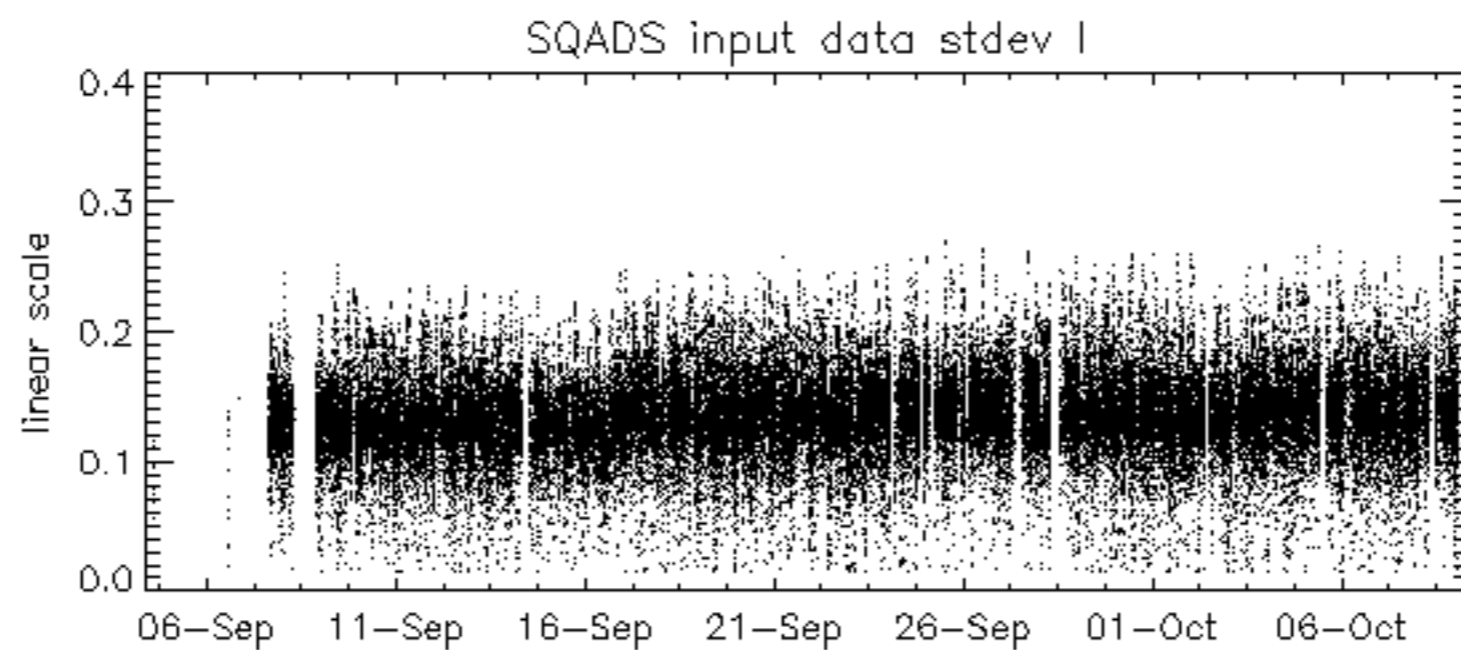
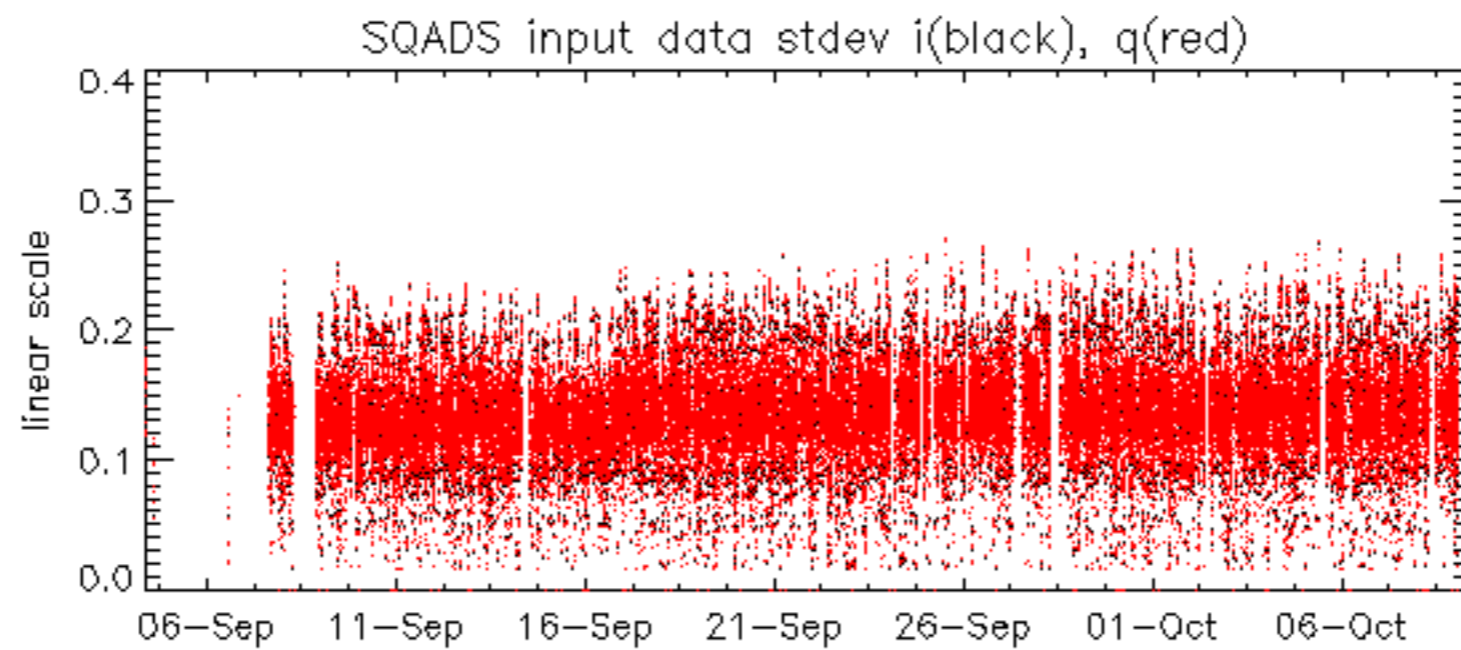


No anomalies observed on available MS products:

No anomalies observed.



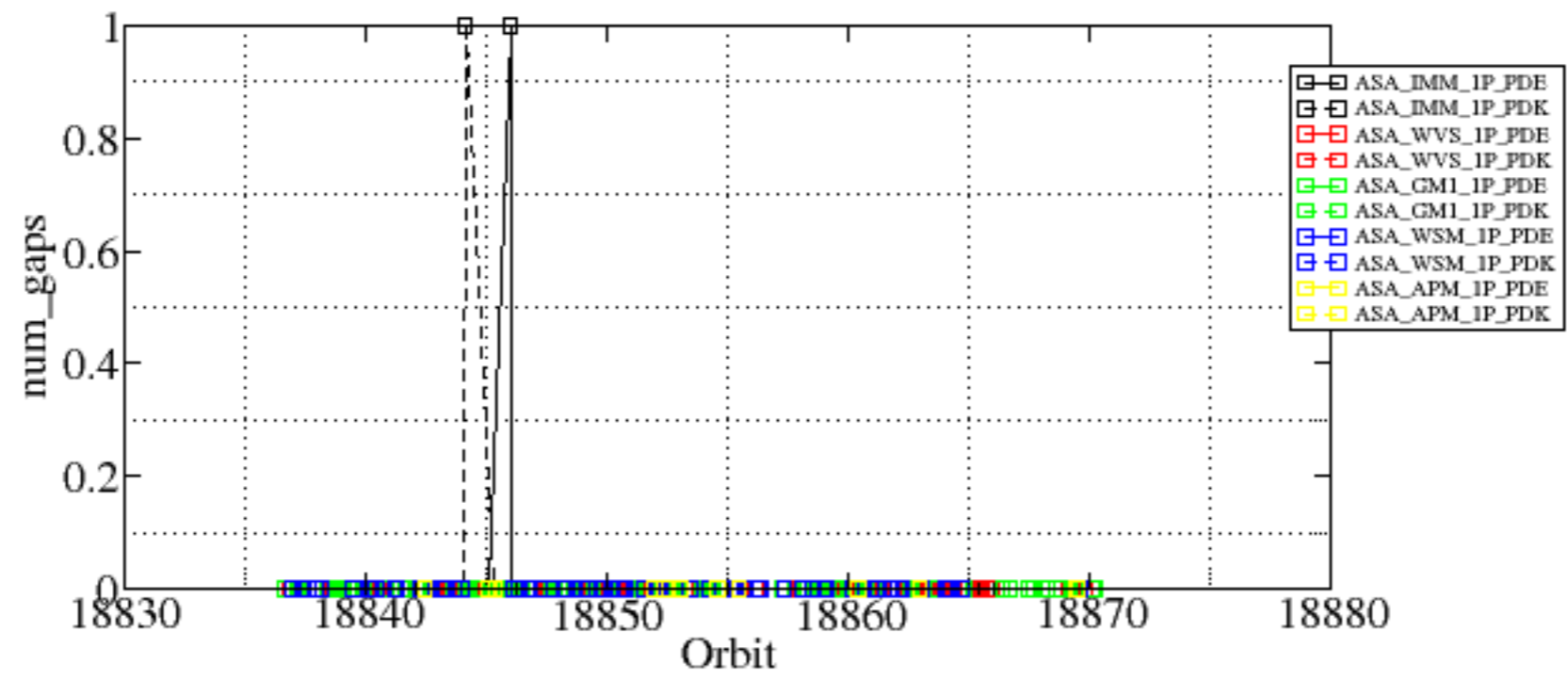


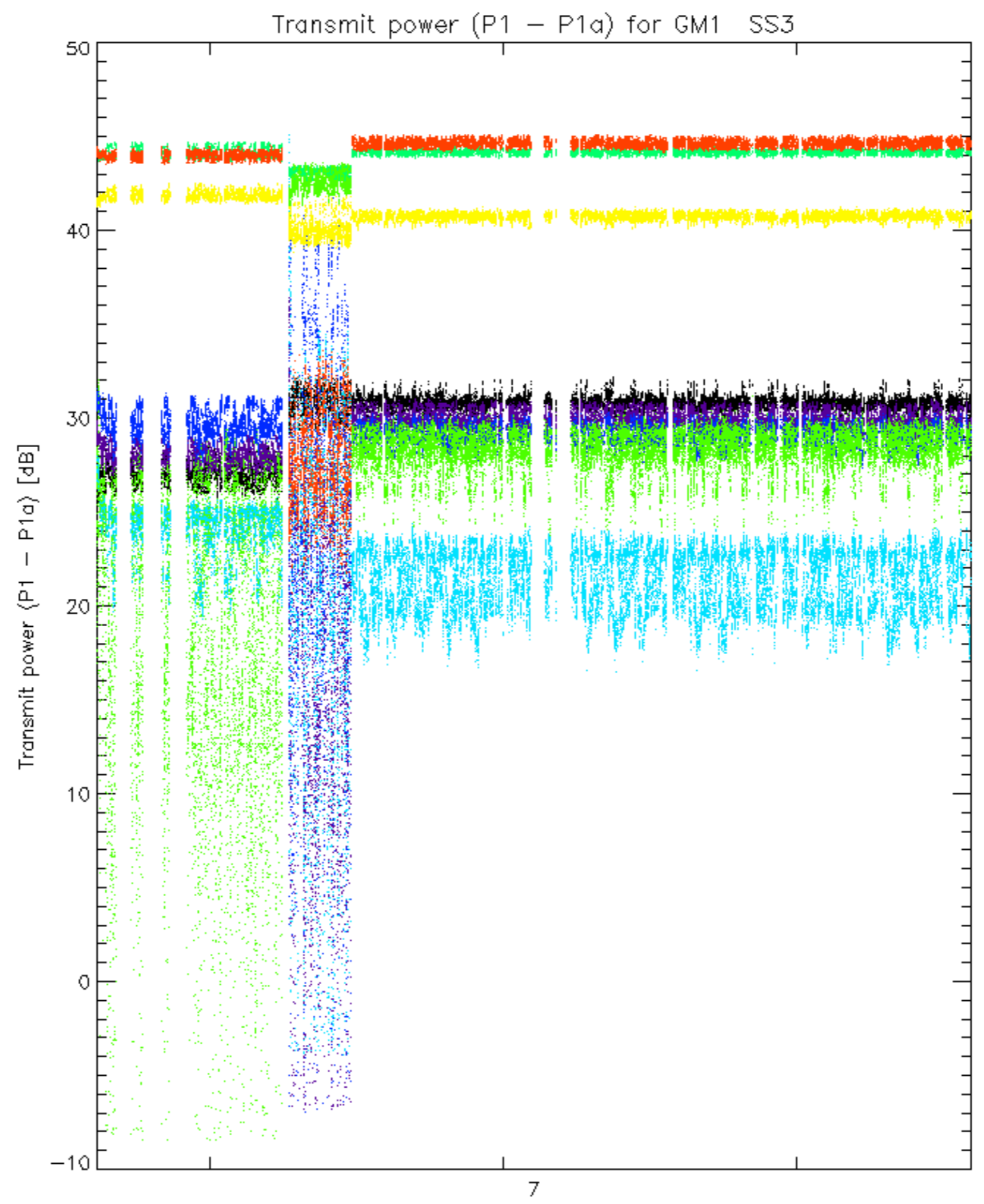


Summary of analysis for the last 3 days 2005100[789]

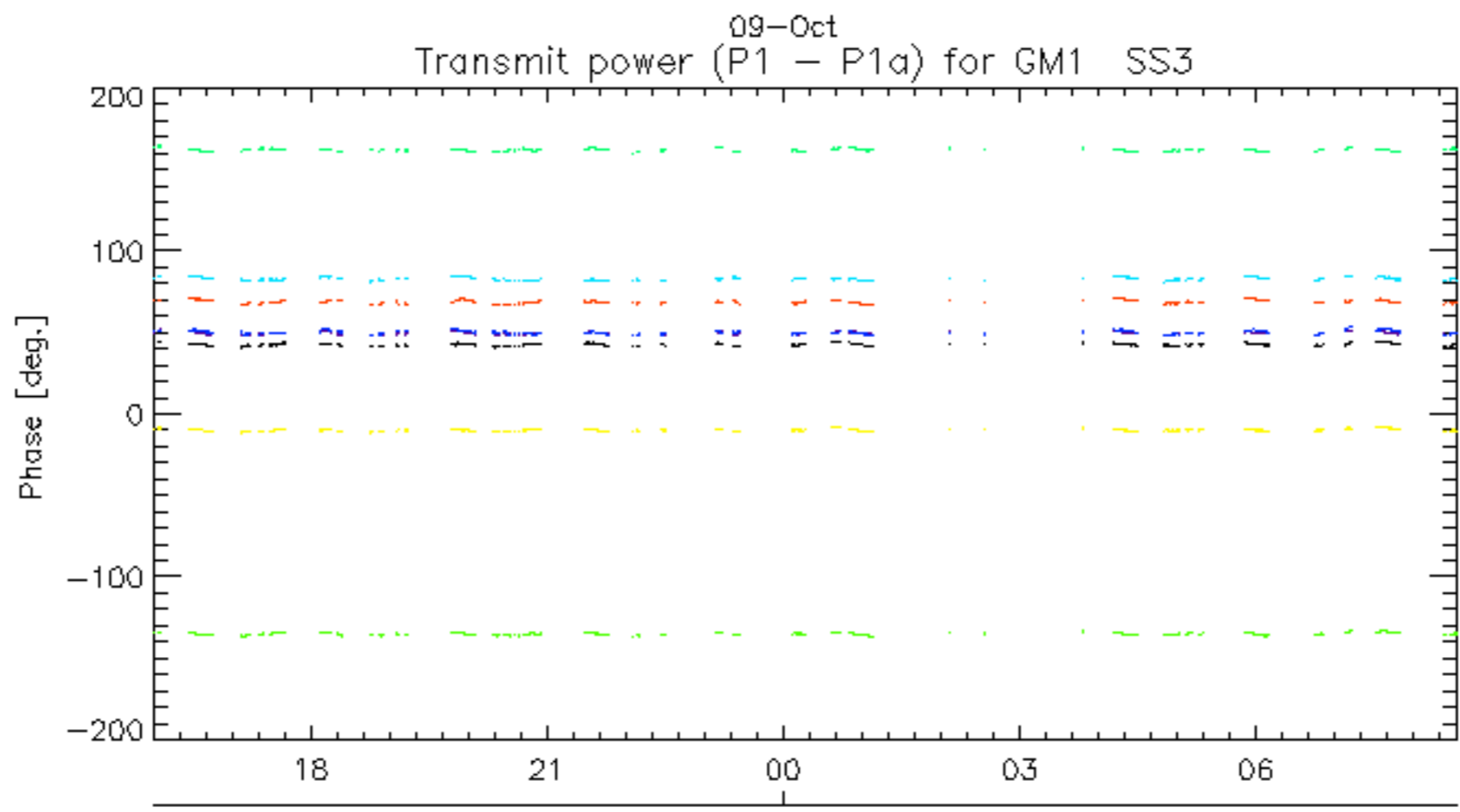
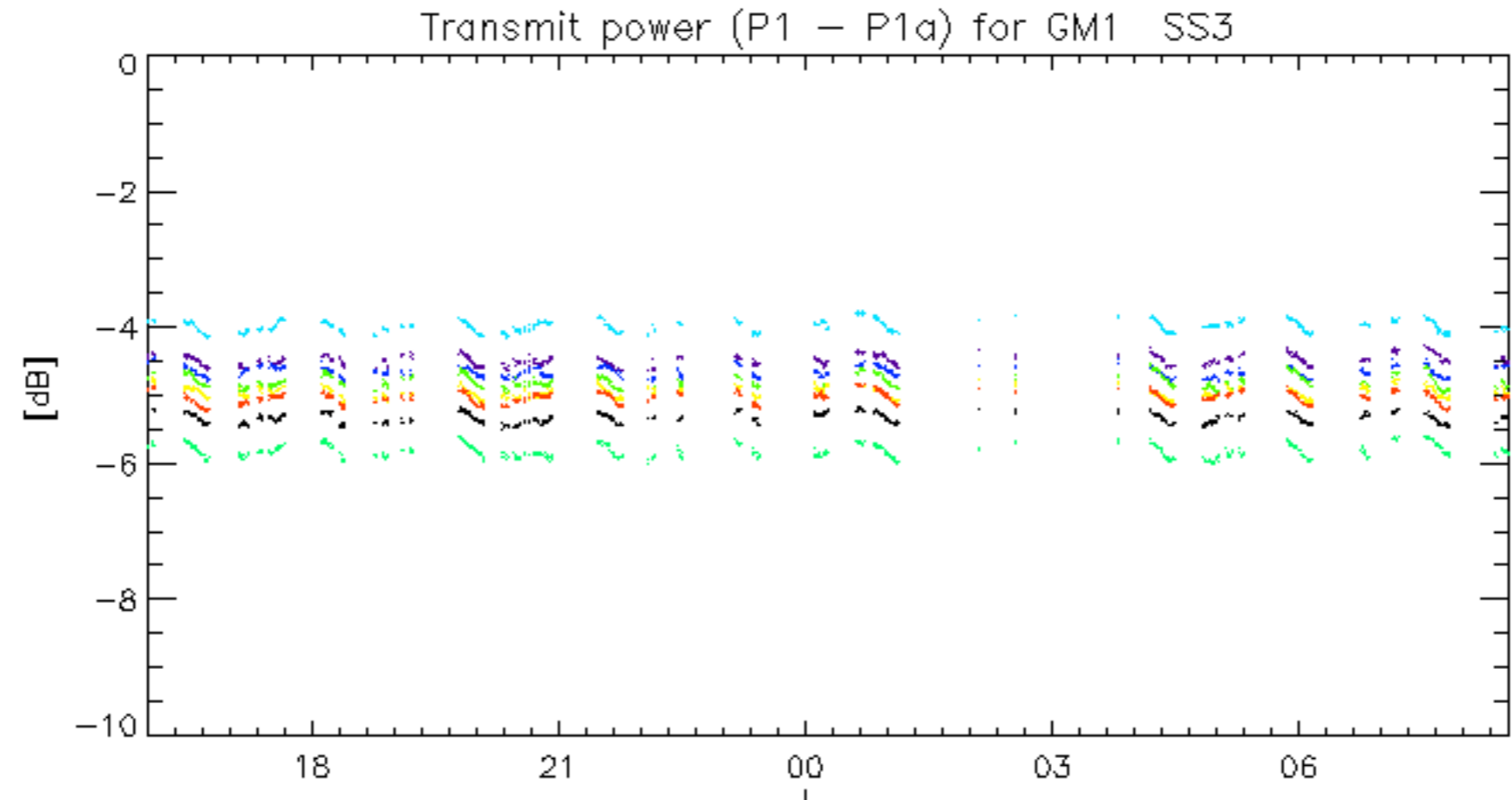
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051007_155150_00000772041_00255_18846_7711.N1	1	0
ASA_IMM_1PNPDK20051007_124322_00000532041_00253_18844_5323.N1	1	0
ASA_GM1_1PNPDK20051008_135751_000010812041_00268_18859_7798.N1	0	31
ASA_WSM_1PNPDE20051007_013227_000002392041_00246_18837_2779.N1	0	55
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ASA_WSM_1PNPDK20051008_134139_00000852041_00268_18859_6504.N1	0	60
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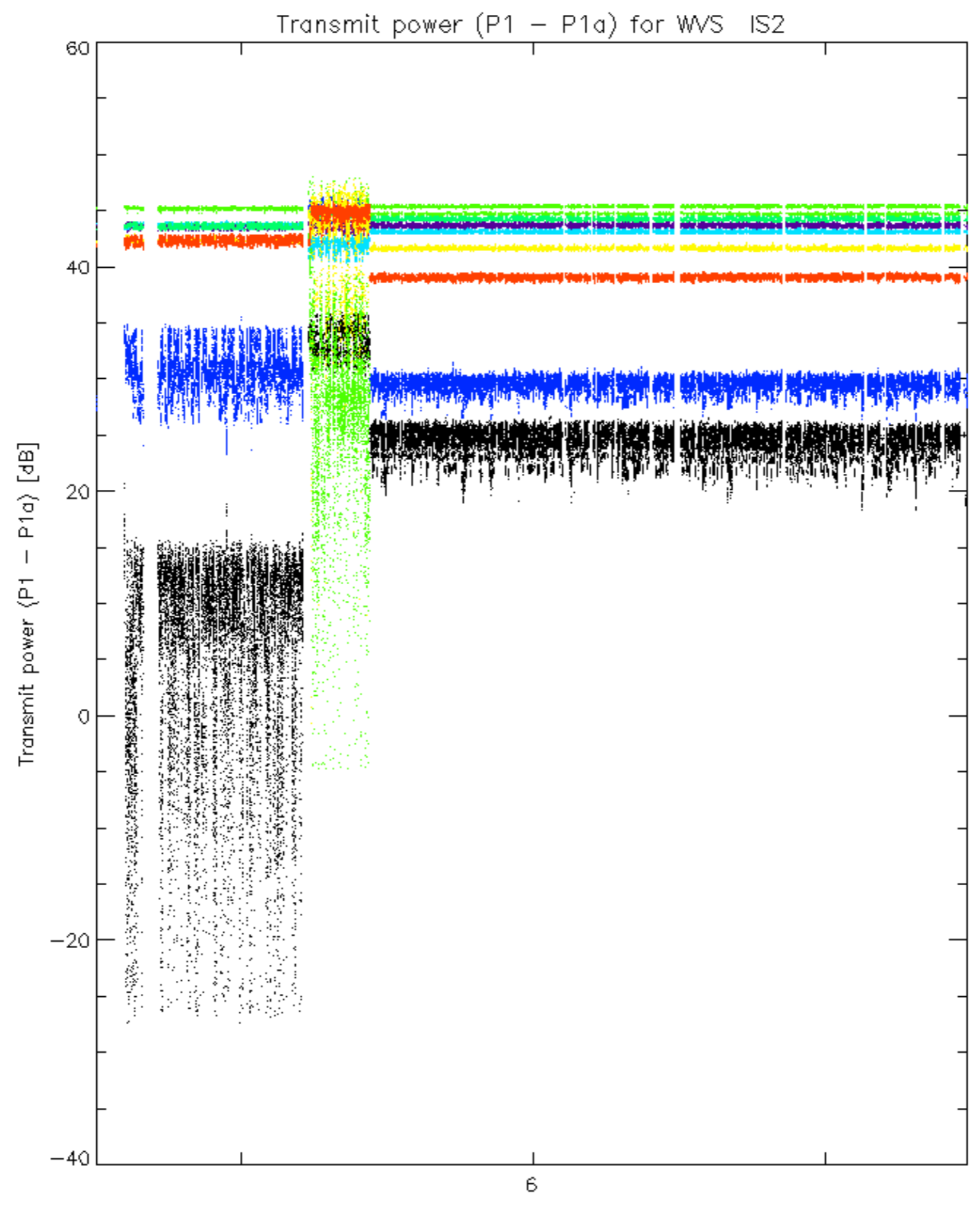


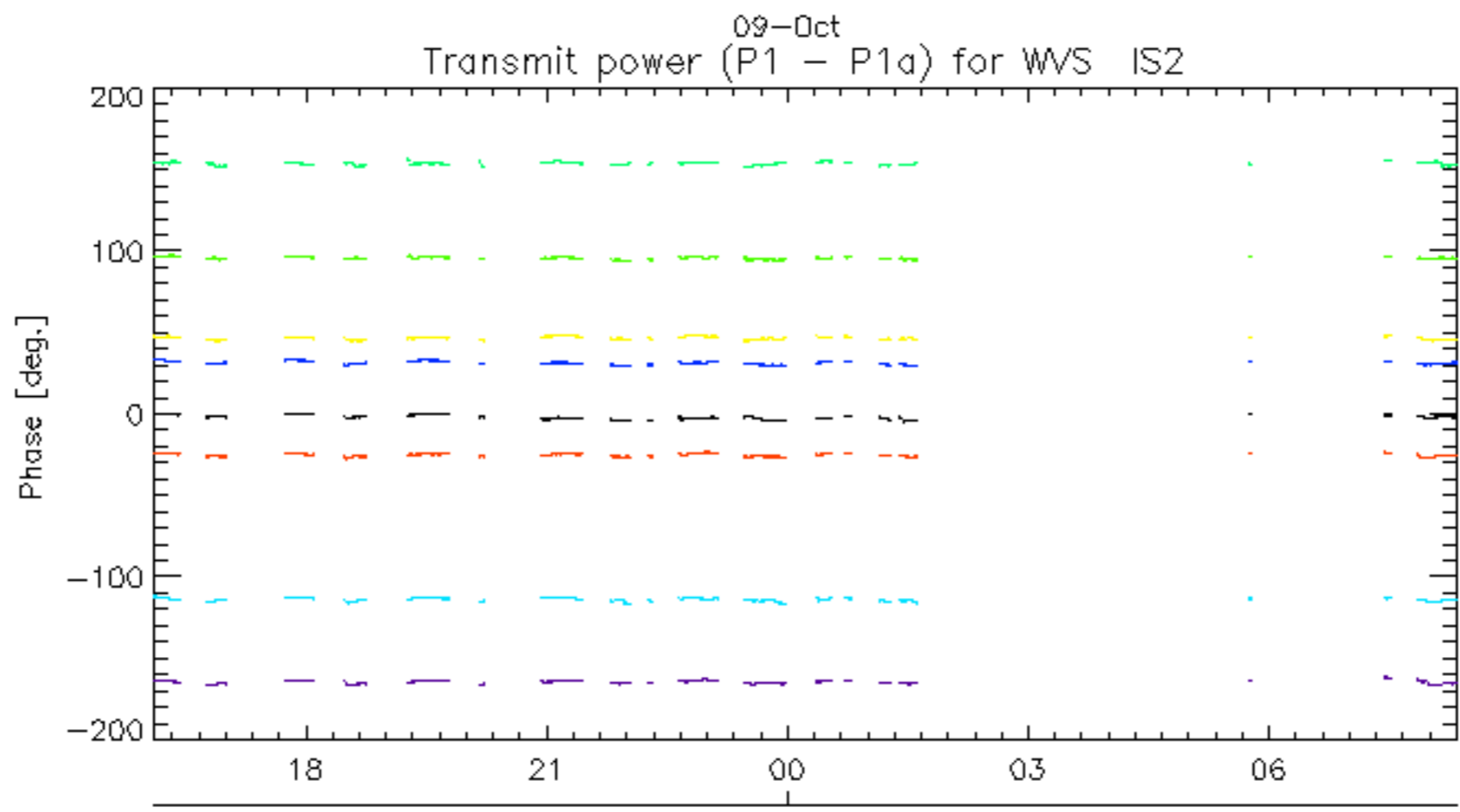
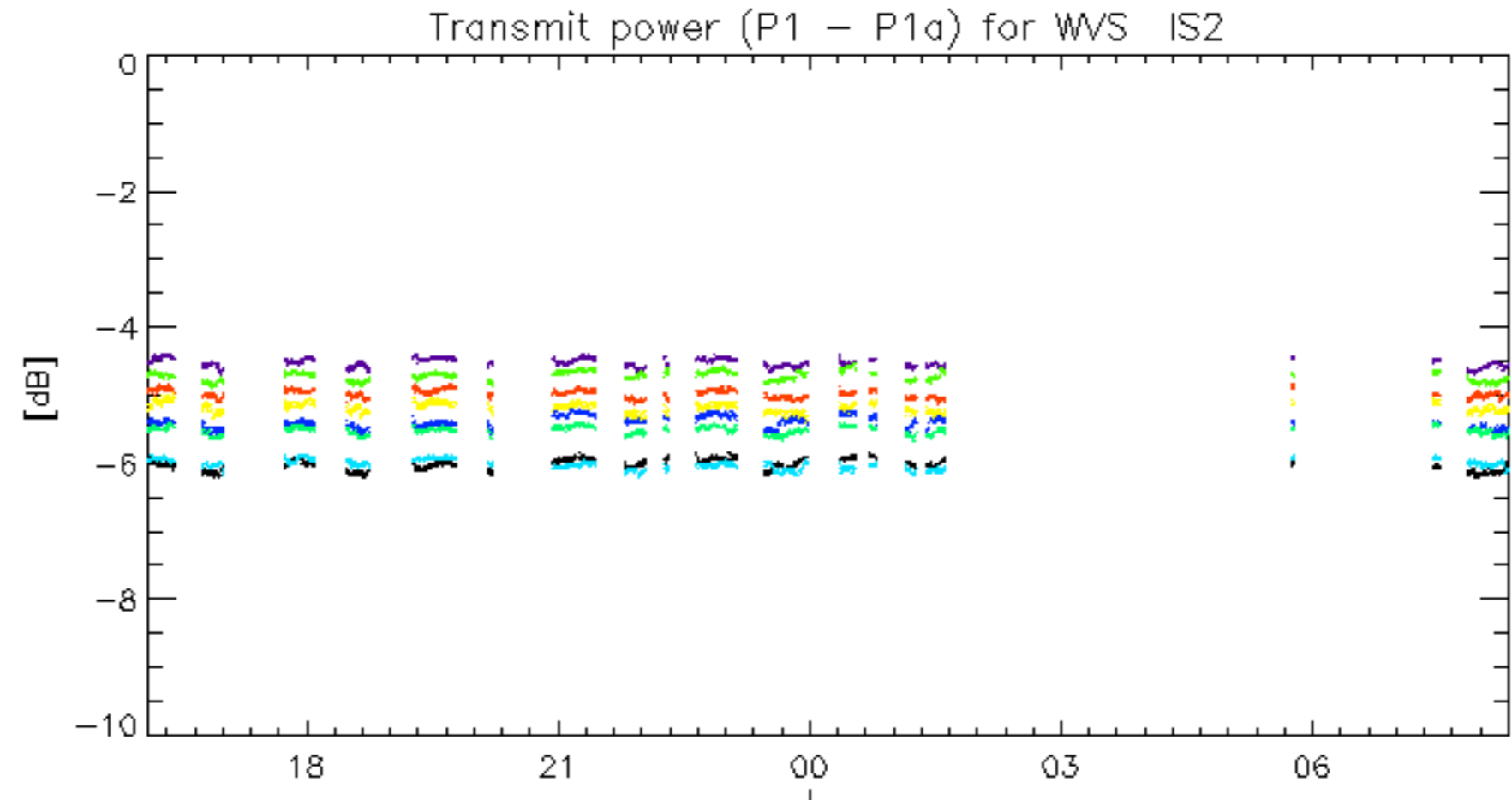


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No unavailabilities during the reported period.