

PRELIMINARY REPORT OF 051023

last update on Sun Oct 23 16:44:11 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 2005-10-22 00:00:00 to 2005-10-23 16:44:11

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	39	64	16	2	19
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	39	64	16	2	19
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	39	64	16	2	19
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	39	64	16	2	19

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	33	55	33	15	63
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	33	55	33	15	63
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	33	55	33	15	63
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	33	55	33	15	63

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	20051022 204910
H	20051021 143823

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	-3.532788	0.009014	0.030687
7	P1	-2.894385	0.010277	-0.072267
11	P1	-4.066293	0.016211	-0.091918
15	P1	-6.026402	0.015372	-0.051856
19	P1	-3.155836	0.005629	-0.042612
22	P1	-4.446437	0.013122	-0.065012
26	P1	-4.274557	0.015287	0.035575
30	P1	-5.705741	0.008707	-0.051662
3	P1	-15.402843	0.184413	0.222237
7	P1	-16.265553	0.109009	-0.135603
11	P1	-16.208635	0.280403	-0.290712
15	P1	-13.341825	0.104034	-0.048618
19	P1	-13.612946	0.038973	-0.139934
22	P1	-16.123852	0.487615	-0.258627
26	P1	-16.169386	0.240373	0.328292
30	P1	-16.395300	0.173489	-0.155770

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.866304	0.098515	0.004133
7	P2	-22.699968	0.105290	0.073830
11	P2	-16.752863	0.114788	0.137225
15	P2	-7.217782	0.101198	-0.055444
19	P2	-9.171448	0.092852	-0.053961
22	P2	-17.719908	0.099350	-0.122864
26	P2	-16.095629	0.094010	-0.116182
30	P2	-19.622822	0.090340	-0.021119

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.188906	0.005613	-0.042460
7	P3	-8.188906	0.005613	-0.042460
11	P3	-8.188906	0.005613	-0.042460
15	P3	-8.188906	0.005613	-0.042460
19	P3	-8.188906	0.005613	-0.042460
22	P3	-8.188906	0.005613	-0.042460
26	P3	-8.188906	0.005613	-0.042460
30	P3	-8.188906	0.005613	-0.042460

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	-3.660569	0.007114	-0.022568
7	P1	-2.829161	0.011957	0.067989
11	P1	-2.850968	0.013115	-0.003516
15	P1	-3.386415	0.018090	0.012456
19	P1	-3.350302	0.010501	-0.024850
22	P1	-5.144276	0.019509	0.034856
26	P1	-5.778875	0.017738	-0.059385
30	P1	-5.212912	0.026210	-0.027404
3	P1	-11.401833	0.031770	-0.024118
7	P1	-9.917896	0.040331	0.006414
11	P1	-10.011703	0.057604	-0.028039
15	P1	-10.577465	0.094846	0.050107
19	P1	-15.462109	0.068291	-0.061400
22	P1	-20.461456	1.194670	-0.222550
26	P1	-17.094732	0.392357	-0.161730
30	P1	-18.786936	0.389264	0.534890

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.705608	0.038418	0.020990
7	P2	-23.051100	0.091342	-0.064802
11	P2	-11.750270	0.027526	0.021632
15	P2	-4.891575	0.037323	-0.079207
19	P2	-6.897830	0.026471	-0.047798
22	P2	-8.107706	0.024744	-0.071123
26	P2	-23.860973	0.038509	-0.114978
30	P2	-22.058723	0.026944	-0.040878

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.032769	0.002827	-0.042661
7	P3	-8.032825	0.002835	-0.042694
11	P3	-8.032769	0.002836	-0.043137
15	P3	-8.032796	0.002835	-0.043142
19	P3	-8.032893	0.002842	-0.042884
22	P3	-8.032705	0.002848	-0.043037
26	P3	-8.032982	0.002847	-0.042768
30	P3	-8.032836	0.002845	-0.043032

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	0.000558196
	stdev	1.71951e-07
MEAN Q	mean	0.000537307
	stdev	2.16940e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137590
	stdev	0.00113054
STDEV Q	mean	0.137935
	stdev	0.00114704



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005102[123]

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_1PNPDK20051021_083359_000000382041_00451_19042_5963.N1	0	25
ASA_GM1_1PNPDK20051021_102639_000006642041_00452_19043_9092.N1	0	13
ASA_WSM_1PNPDE20051021_183647_000002932041_00457_19048_5308.N1	0	70
ASA_WSM_1PNPDE20051022_010806_000002192041_00460_19051_5377.N1	0	123
ASA_WSM_1PNPDE20051022_022829_000000422041_00461_19052_5382.N1	0	120
ASA_WSM_1PNPDE20051022_162409_000000922041_00470_19061_5477.N1	0	44
ASA_WSM_1PNPDE20051022_180625_000001292041_00471_19062_5521.N1	0	70
ASA_WSM_1PNPDE20051022_230541_000000672041_00474_19065_5561.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

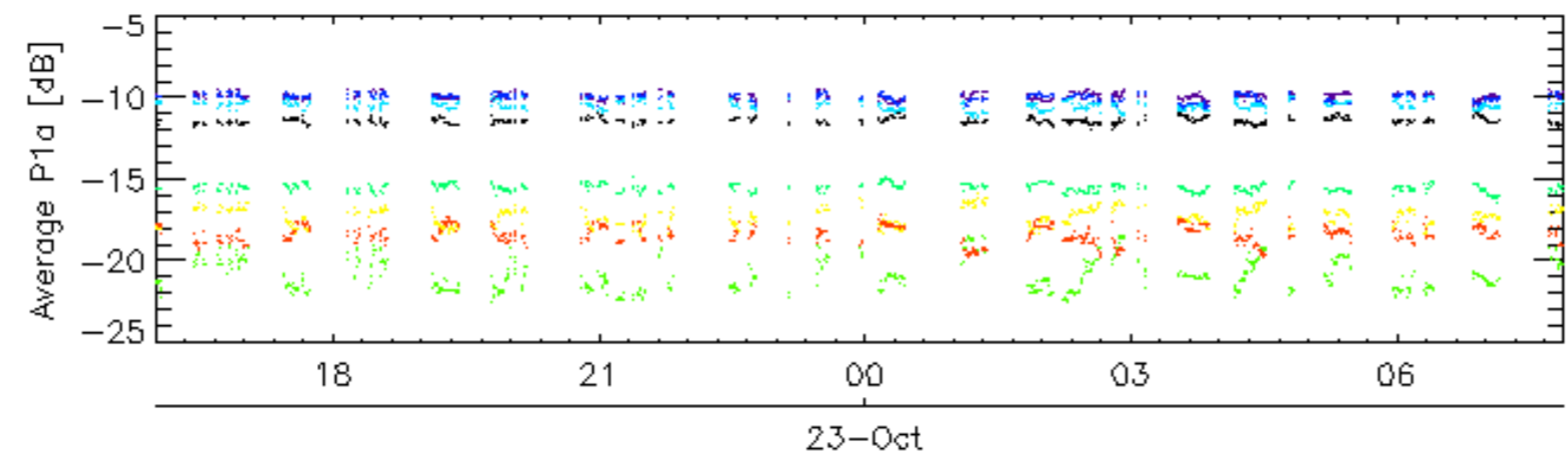
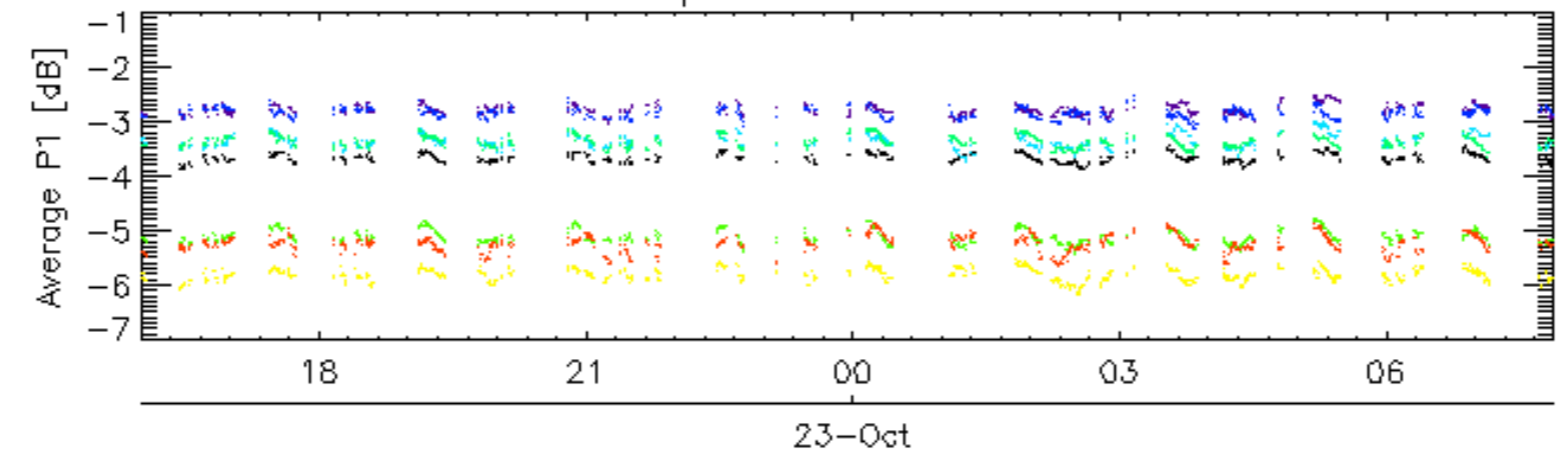
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

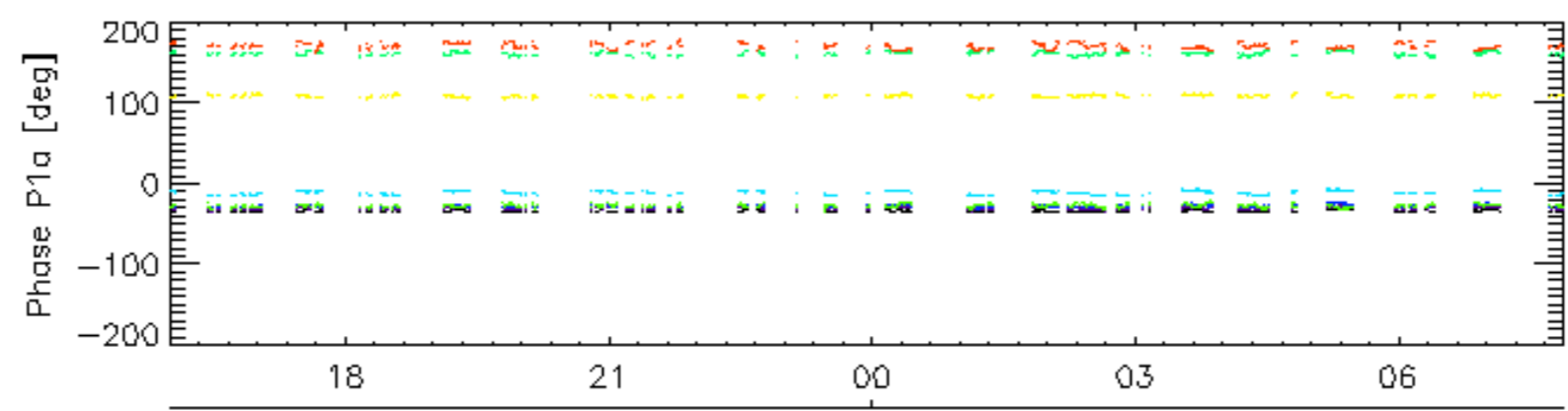
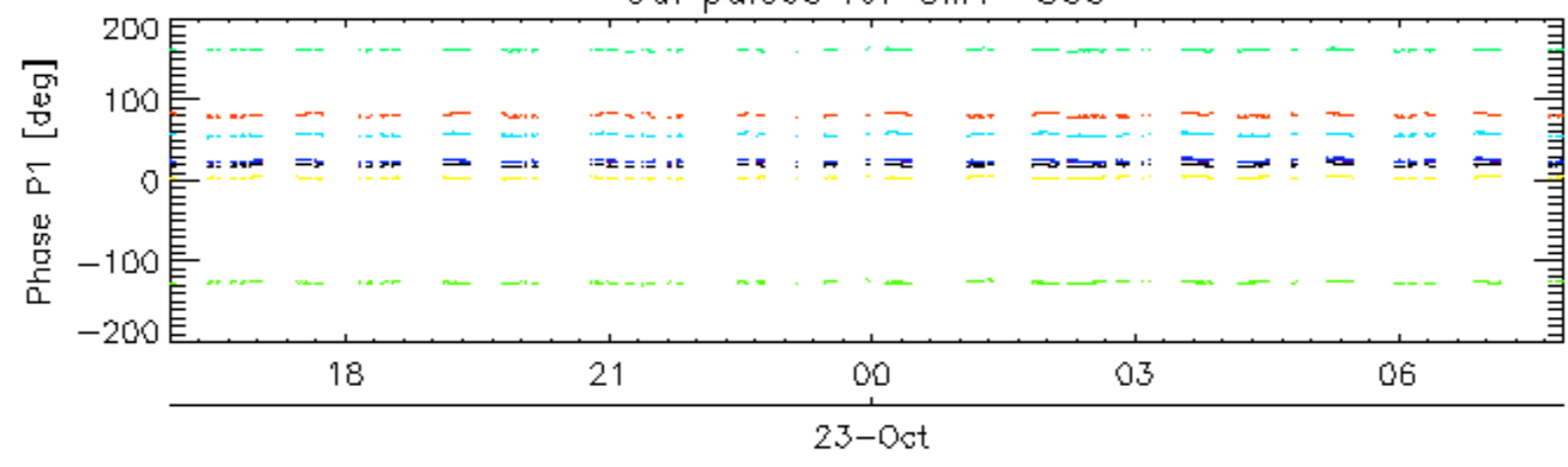
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

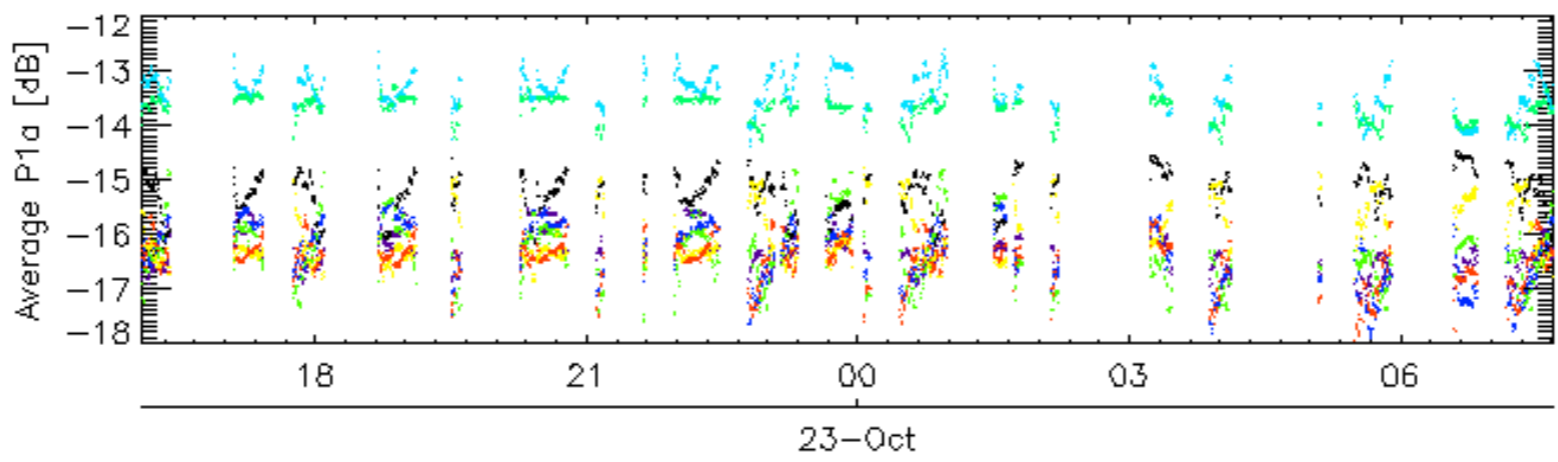
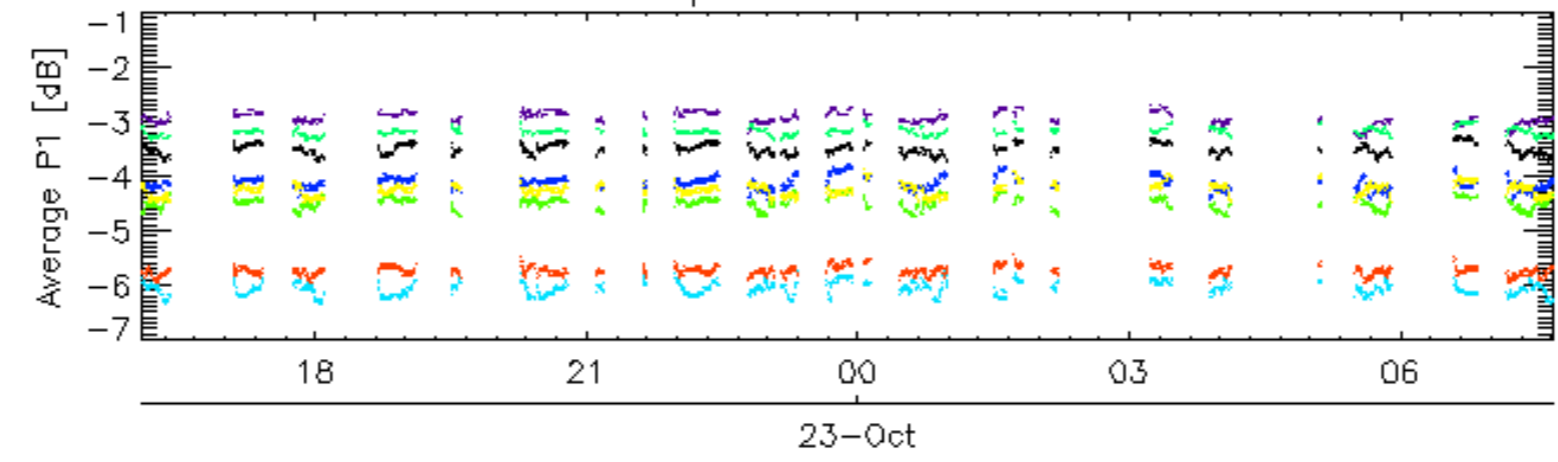


Cal pulses for GM1 SS3

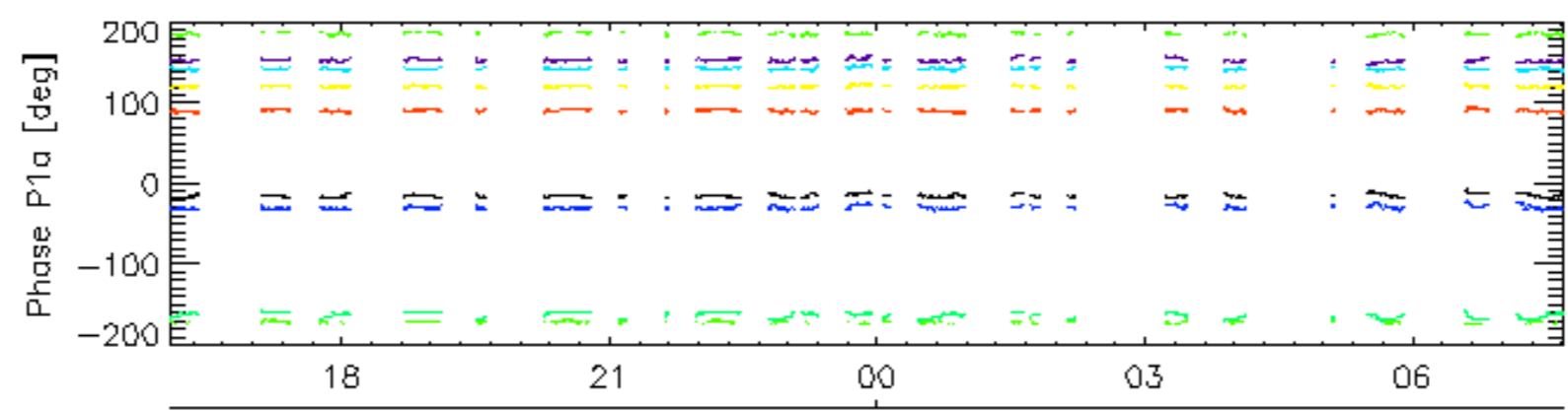
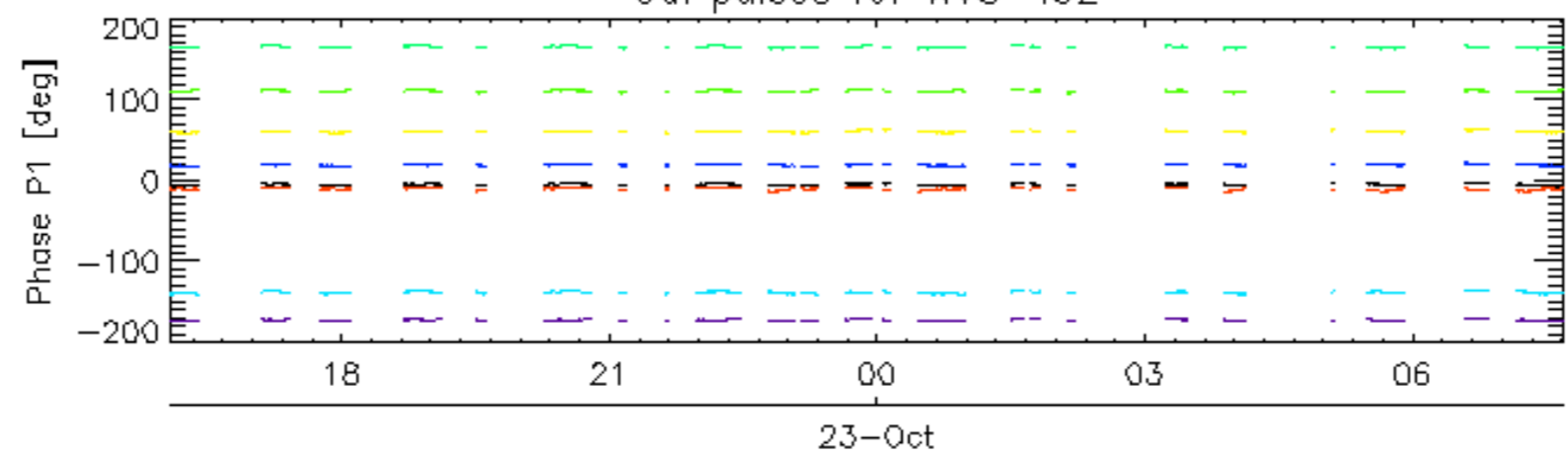


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

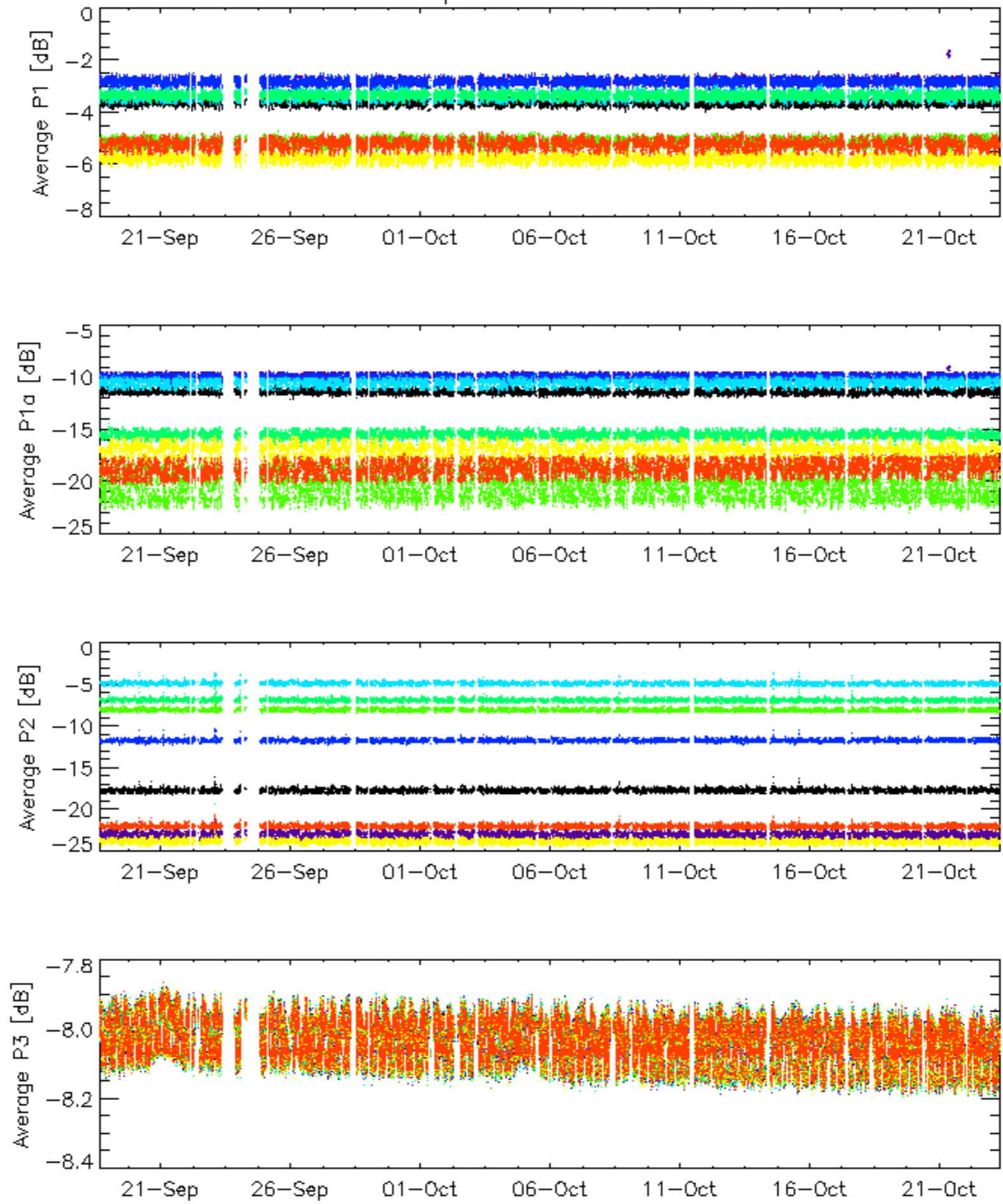


Cal pulses for WVS IS2



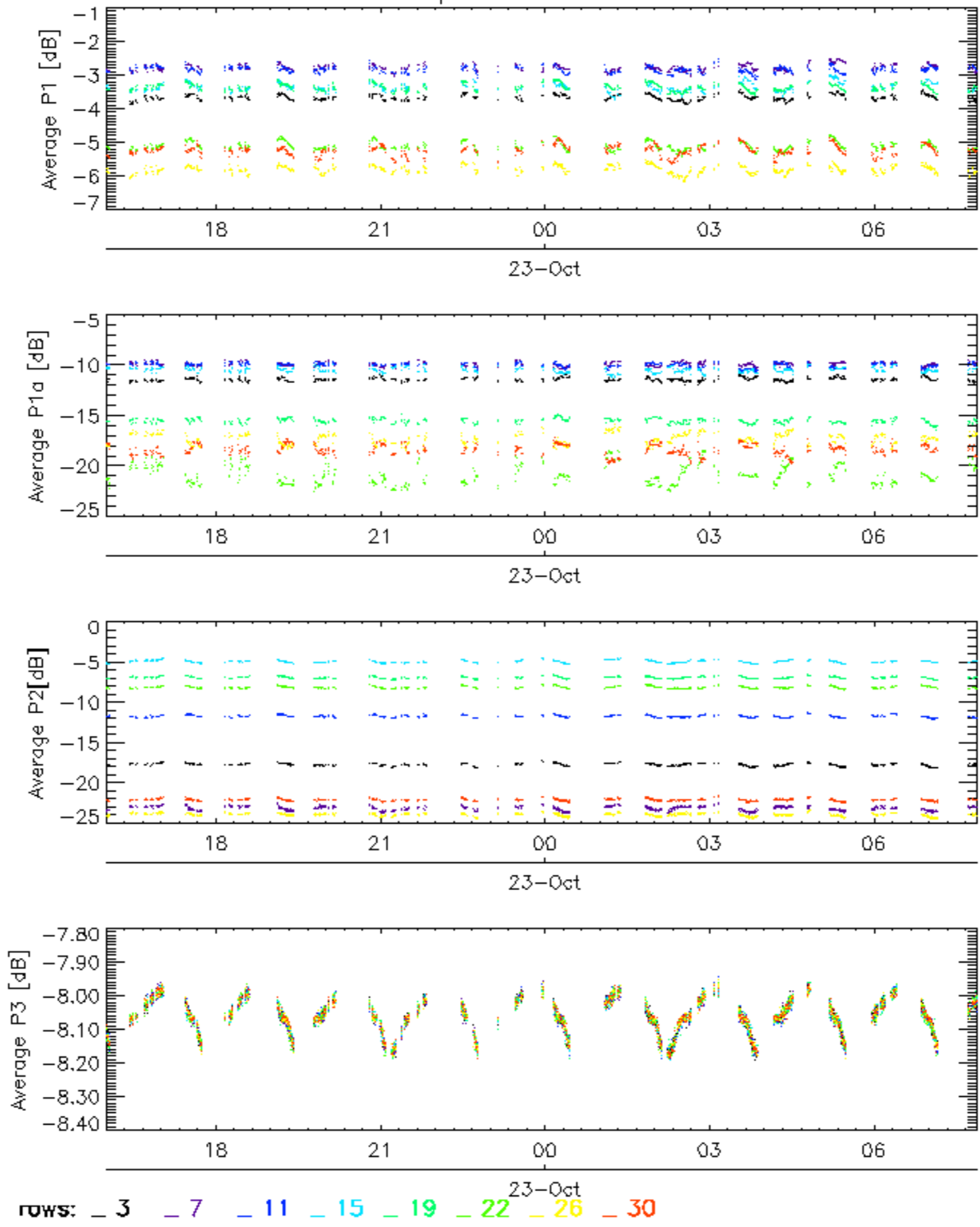
rows: **3** **7** **11** **15** **19** **22** **26** **30** 23-Oct

Cal pulses for GM1 SS3

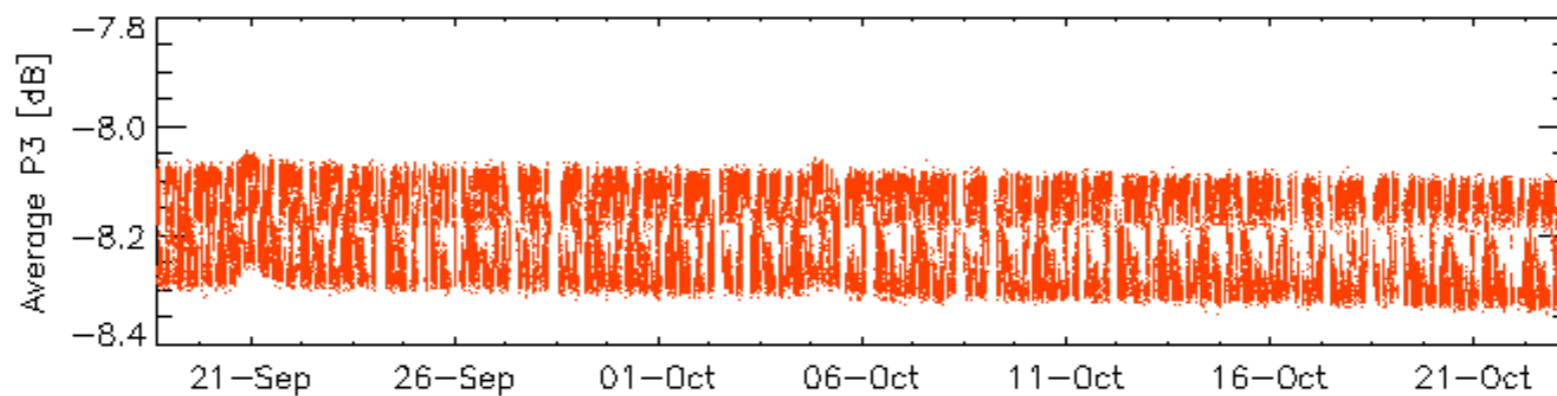
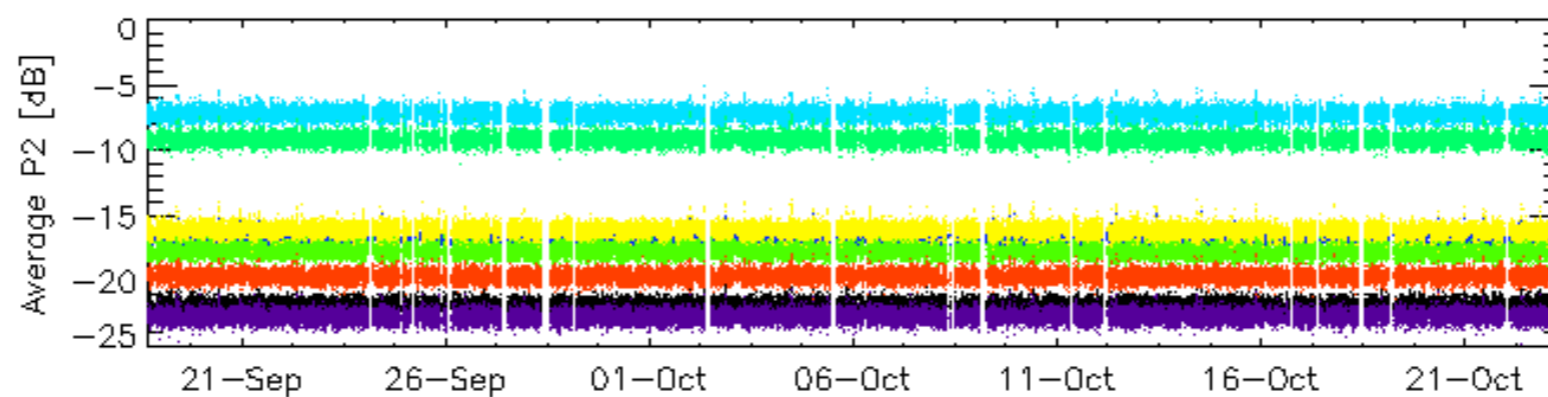
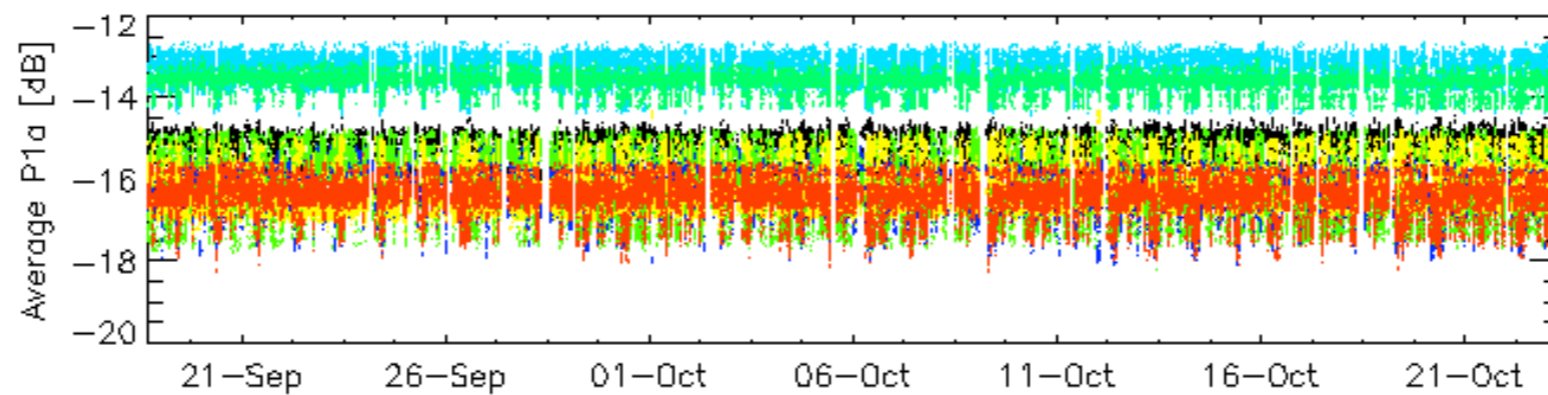
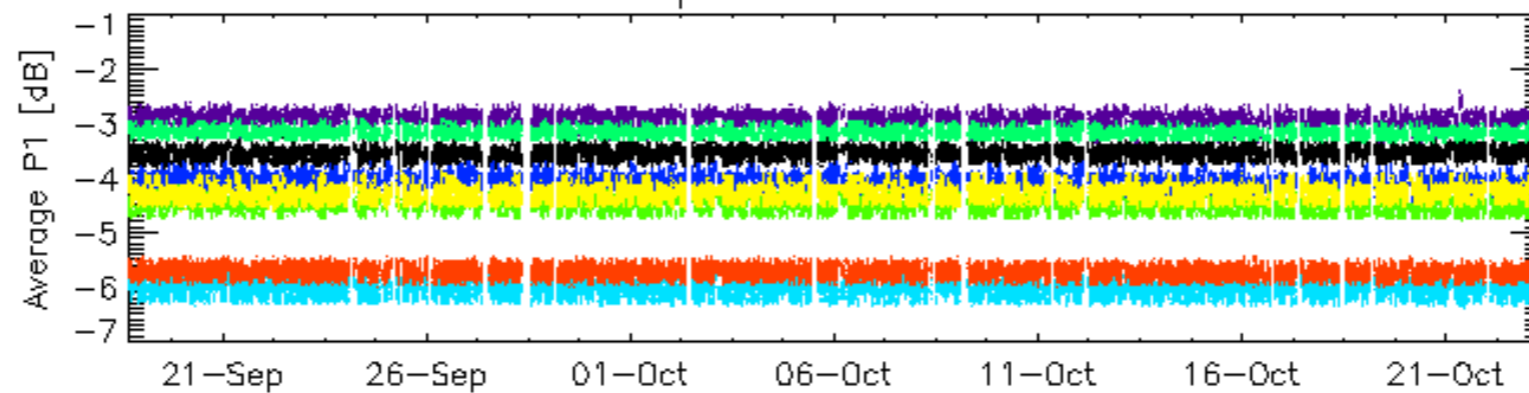


rows: [_ 3](#) [_ 7](#) [_ 11](#) [_ 15](#) [_ 19](#) [_ 22](#) [_ 26](#) [_ 30](#)

Cal pulses for GM1 SS3

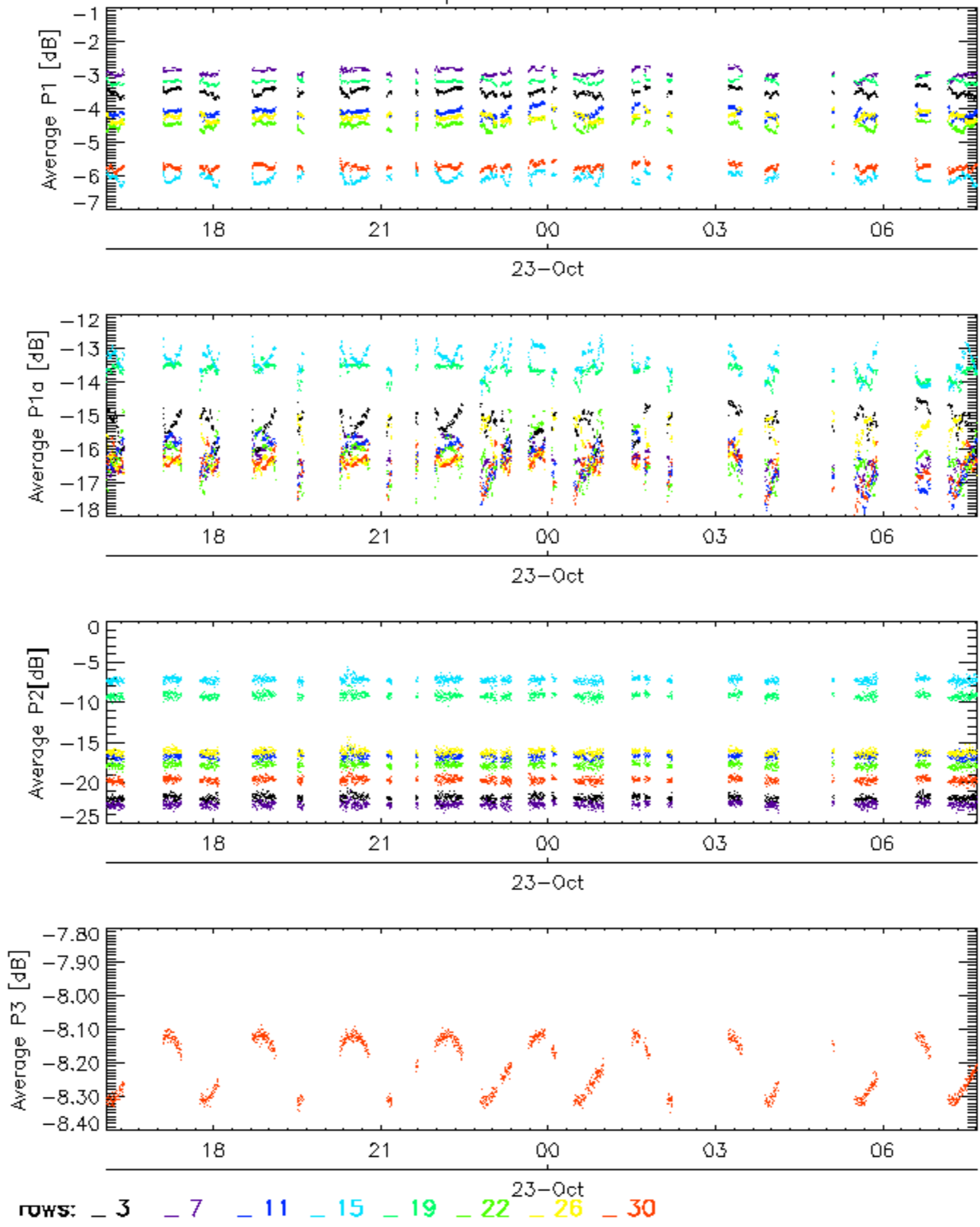


Cal pulses for WVS IS2

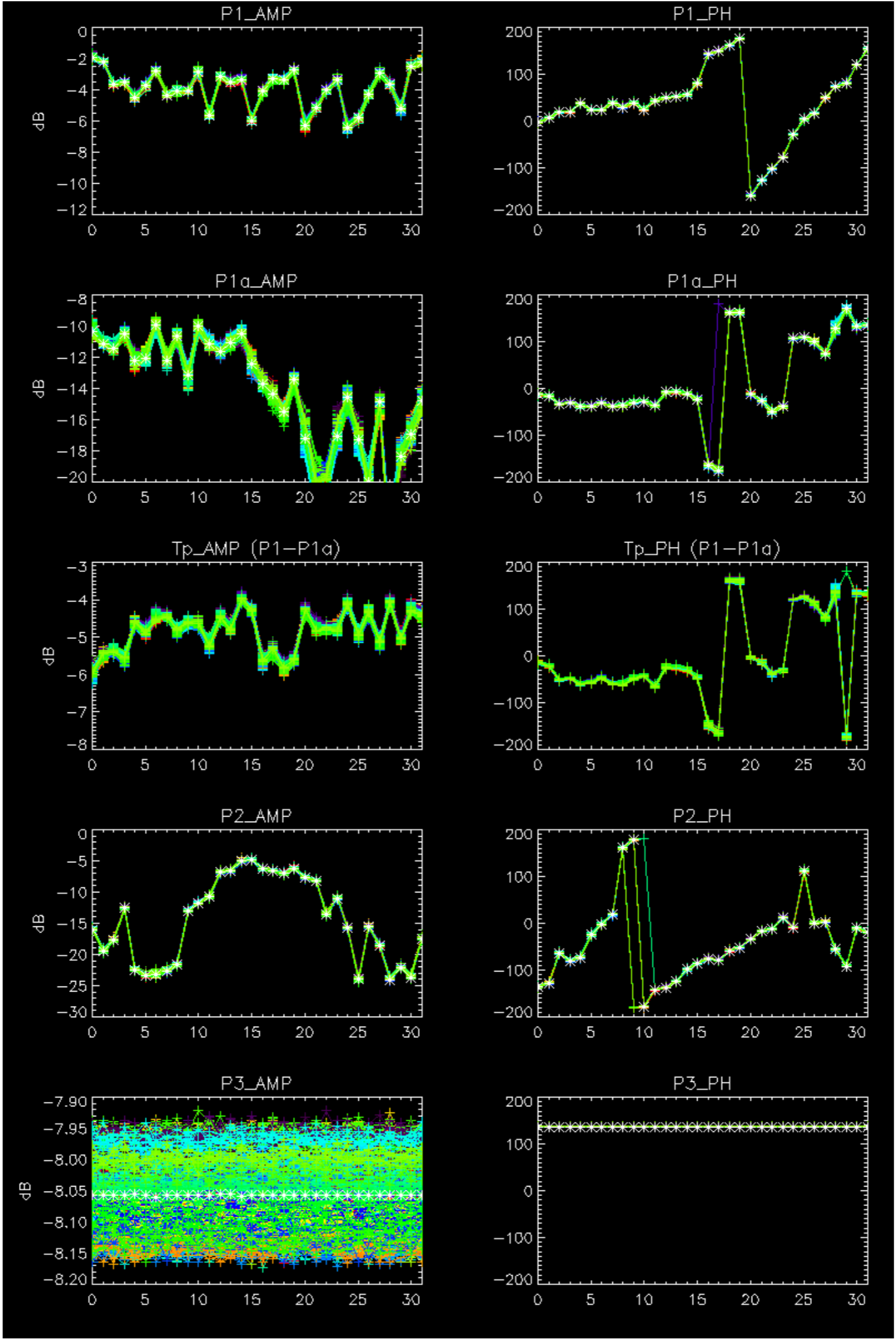


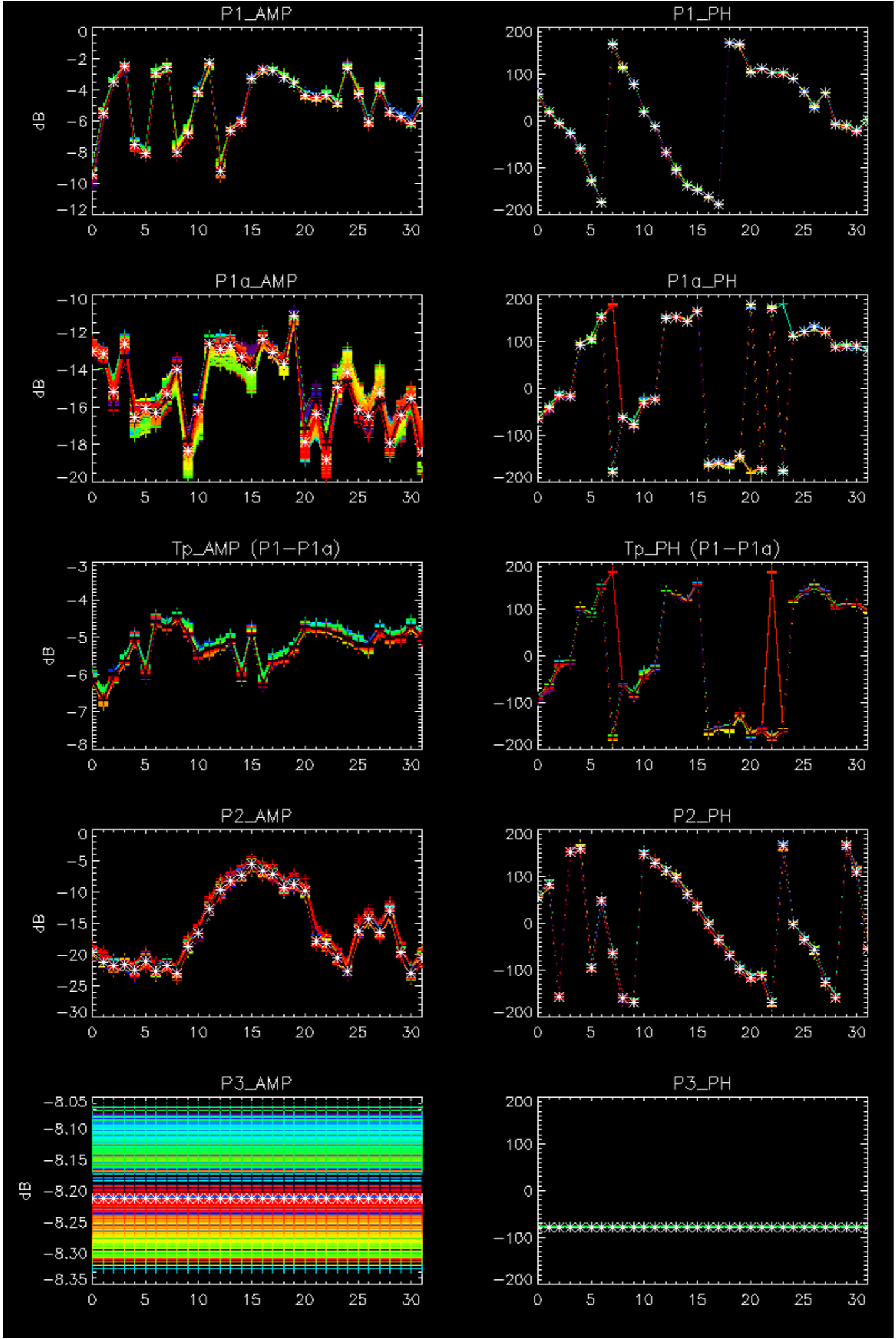
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



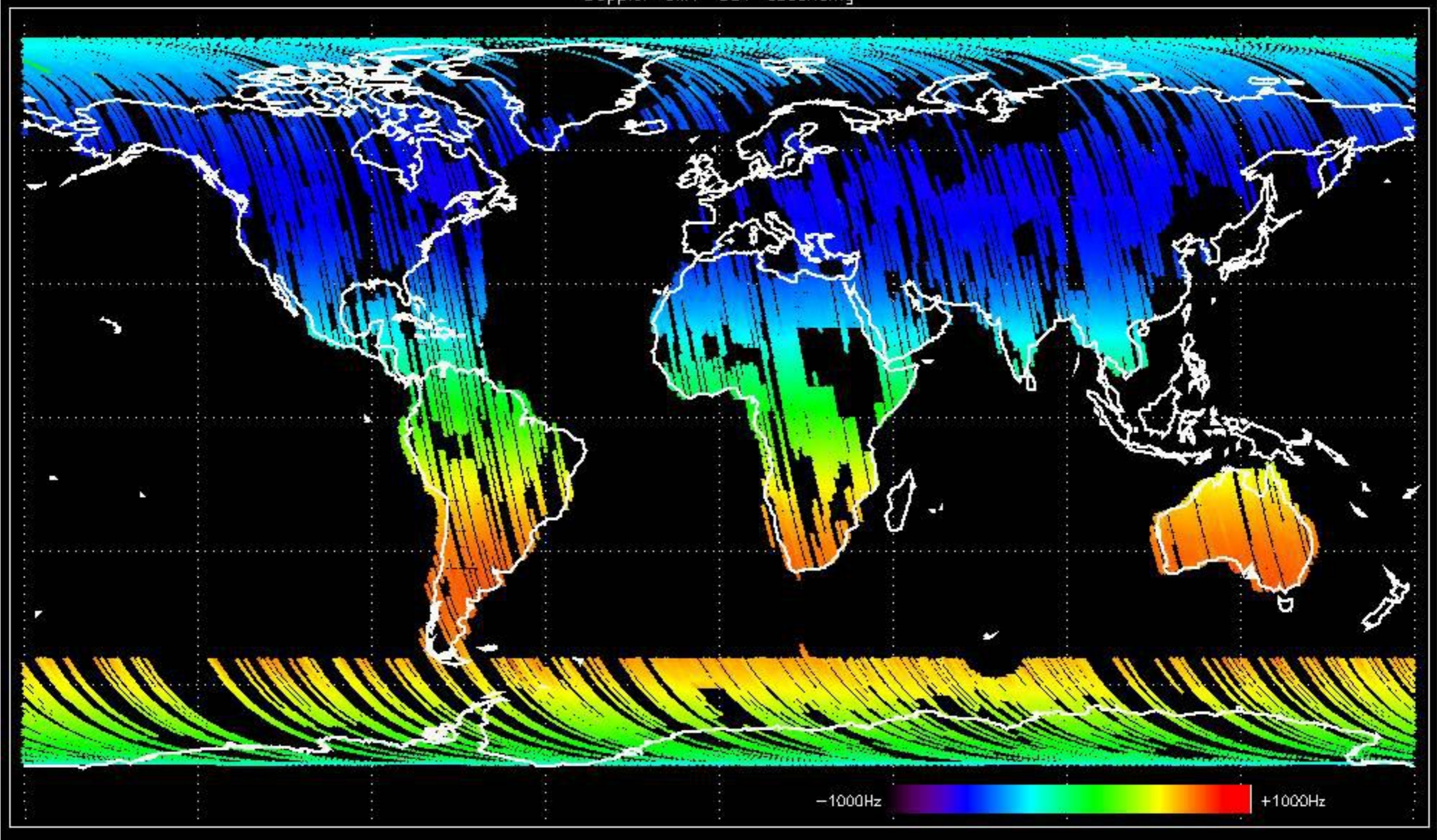
No anomalies observed.



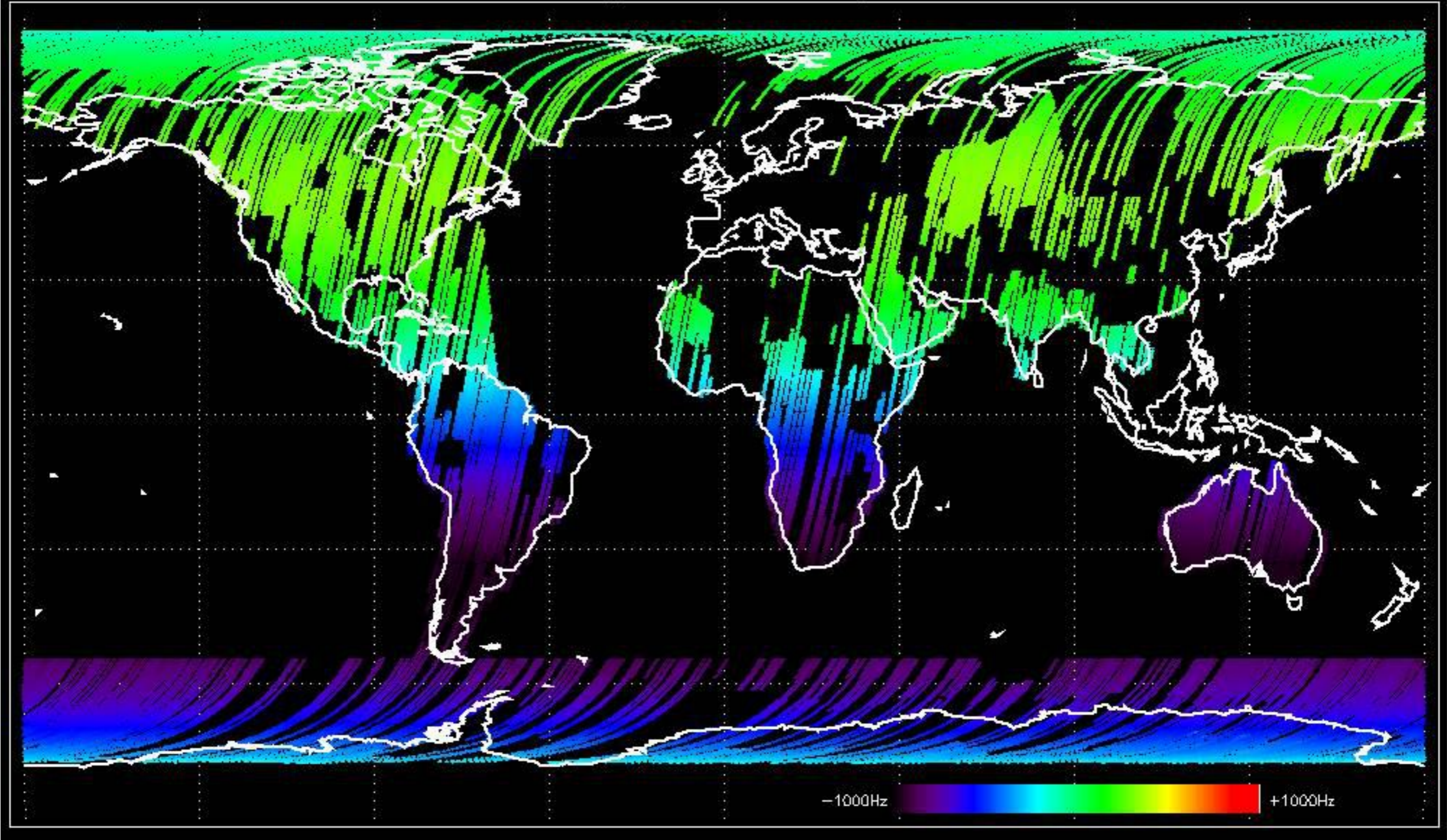


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

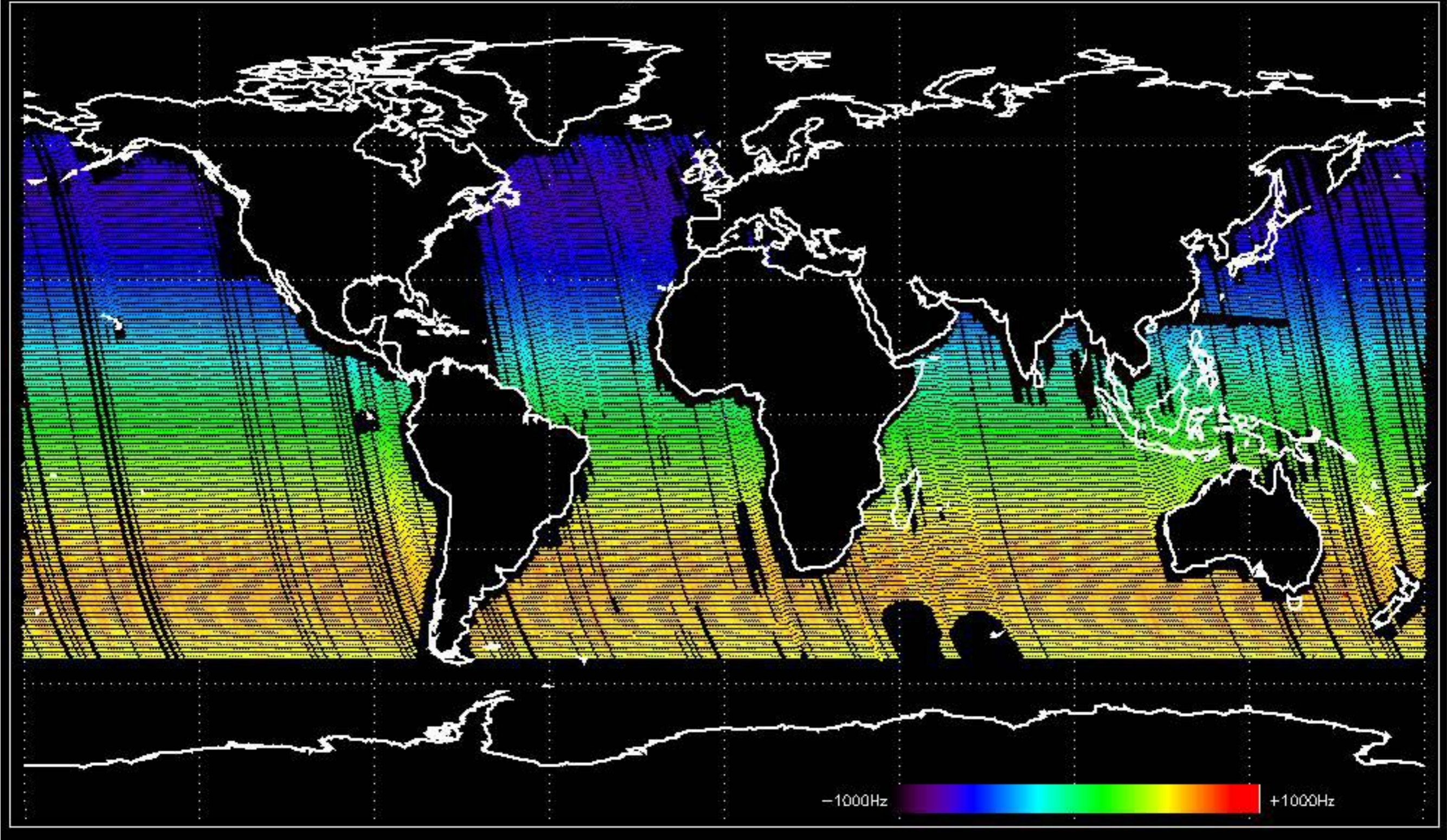
Doppler 'GM1' 'SS1' ascending



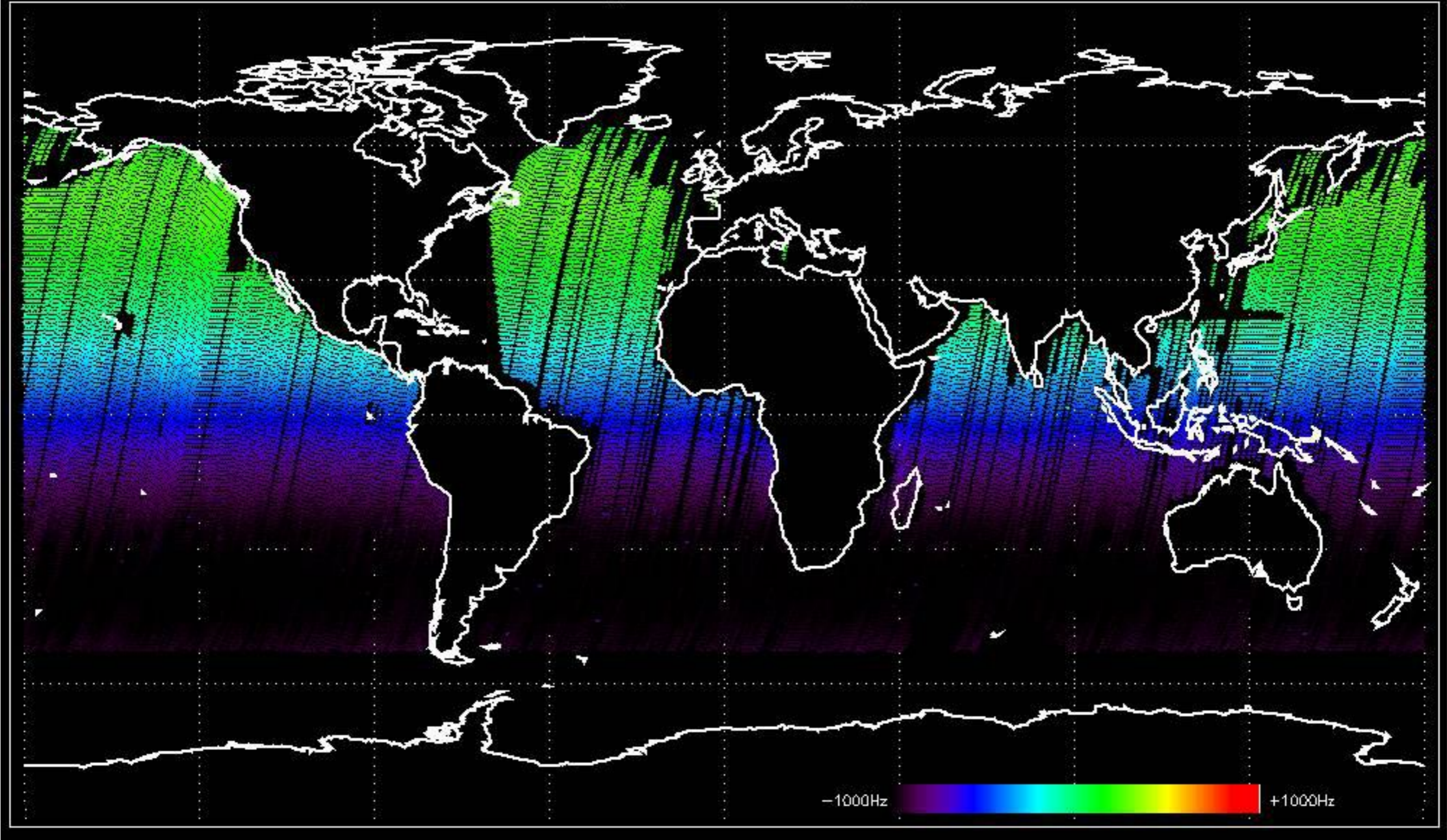
Doppler 'GM1' 'SS1' descending



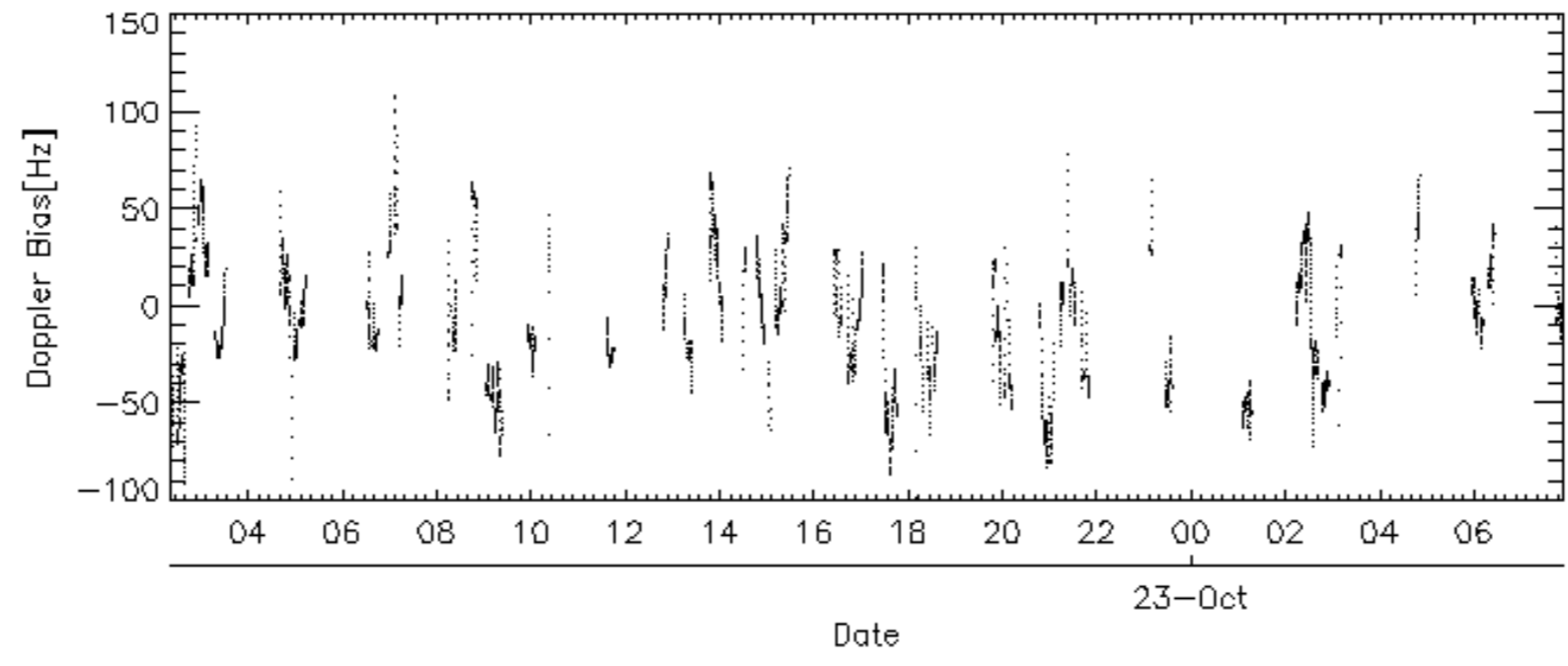
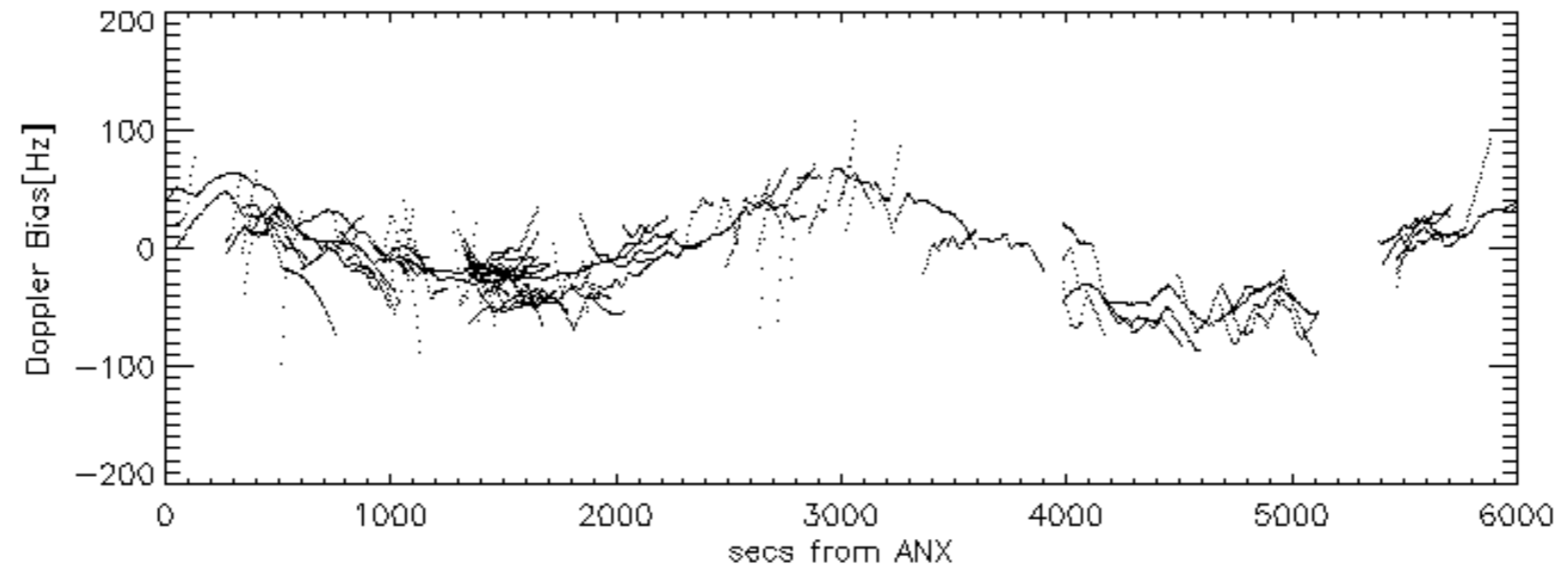
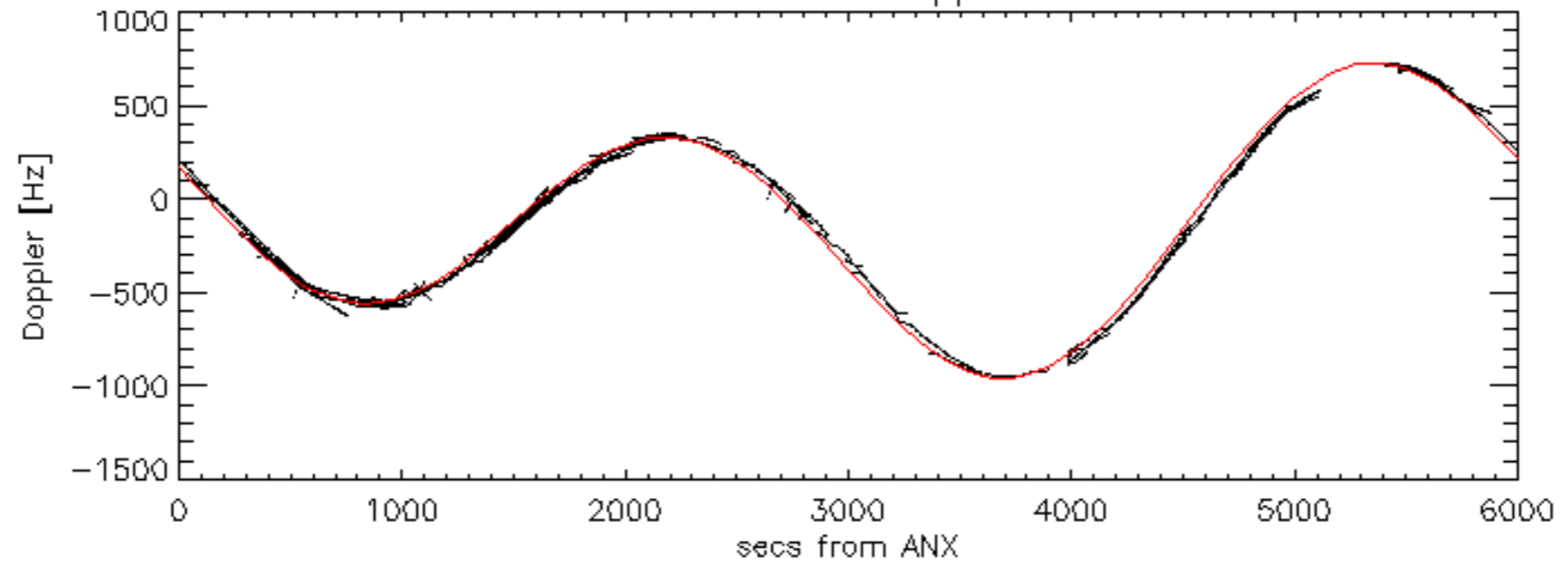
Doppler 'WVS' 'IS2' ascending

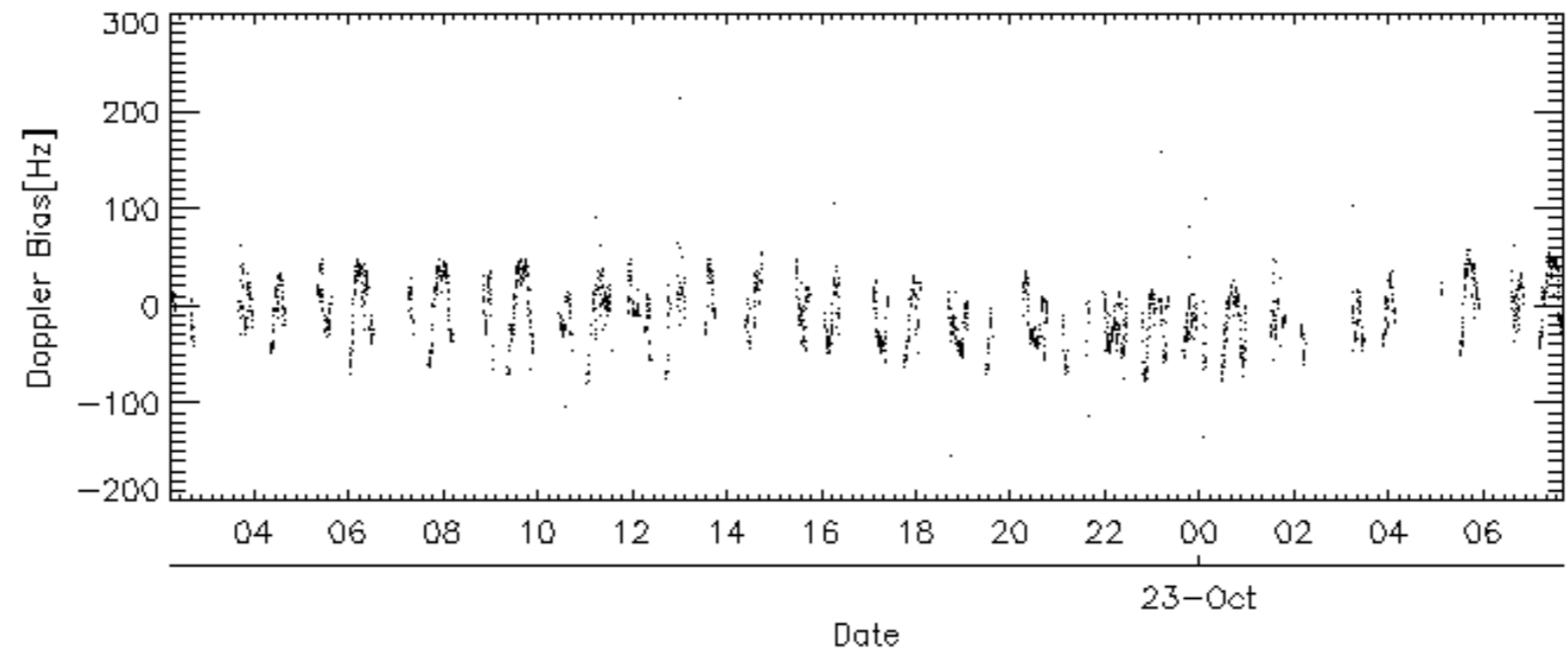
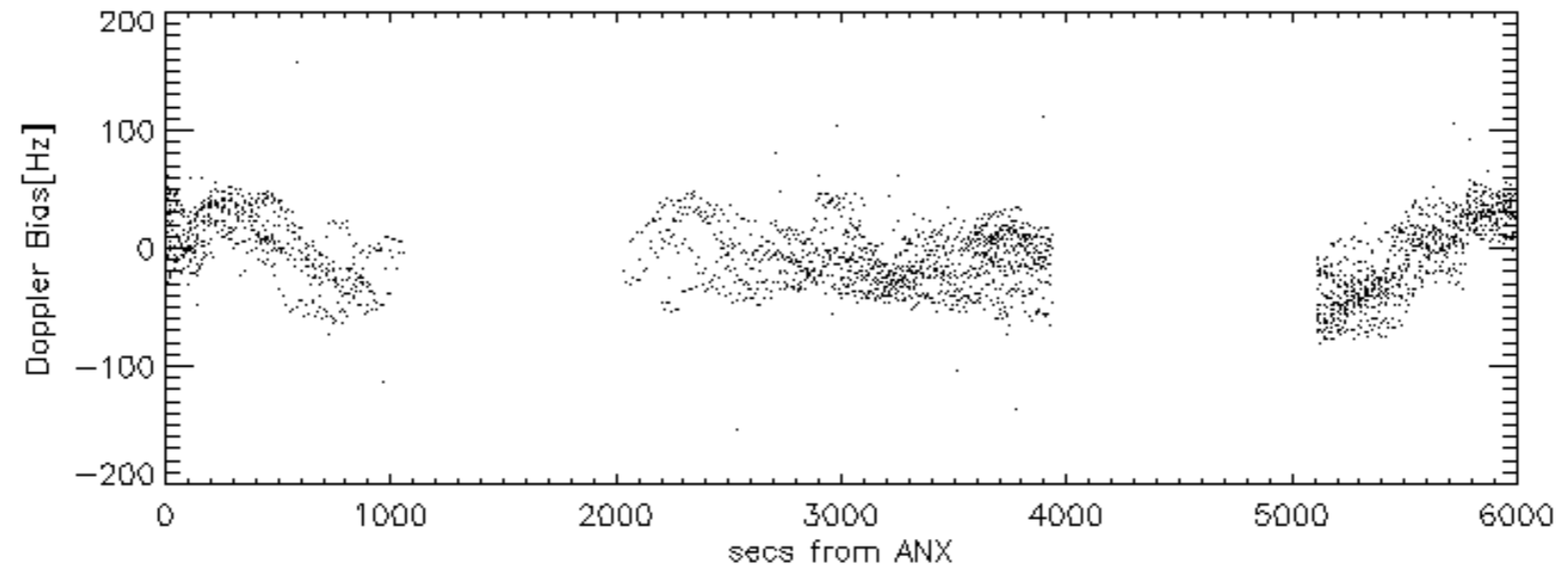
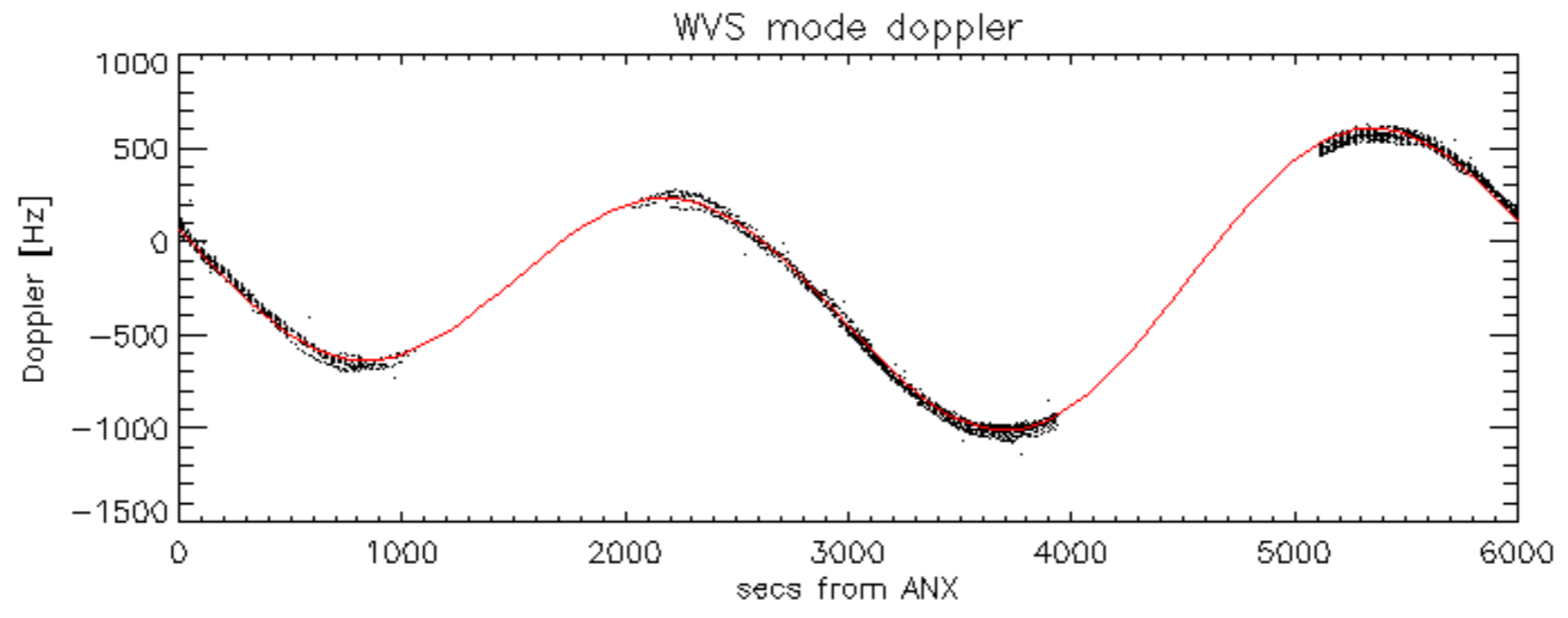


Doppler 'WVS' 'IS2' descending

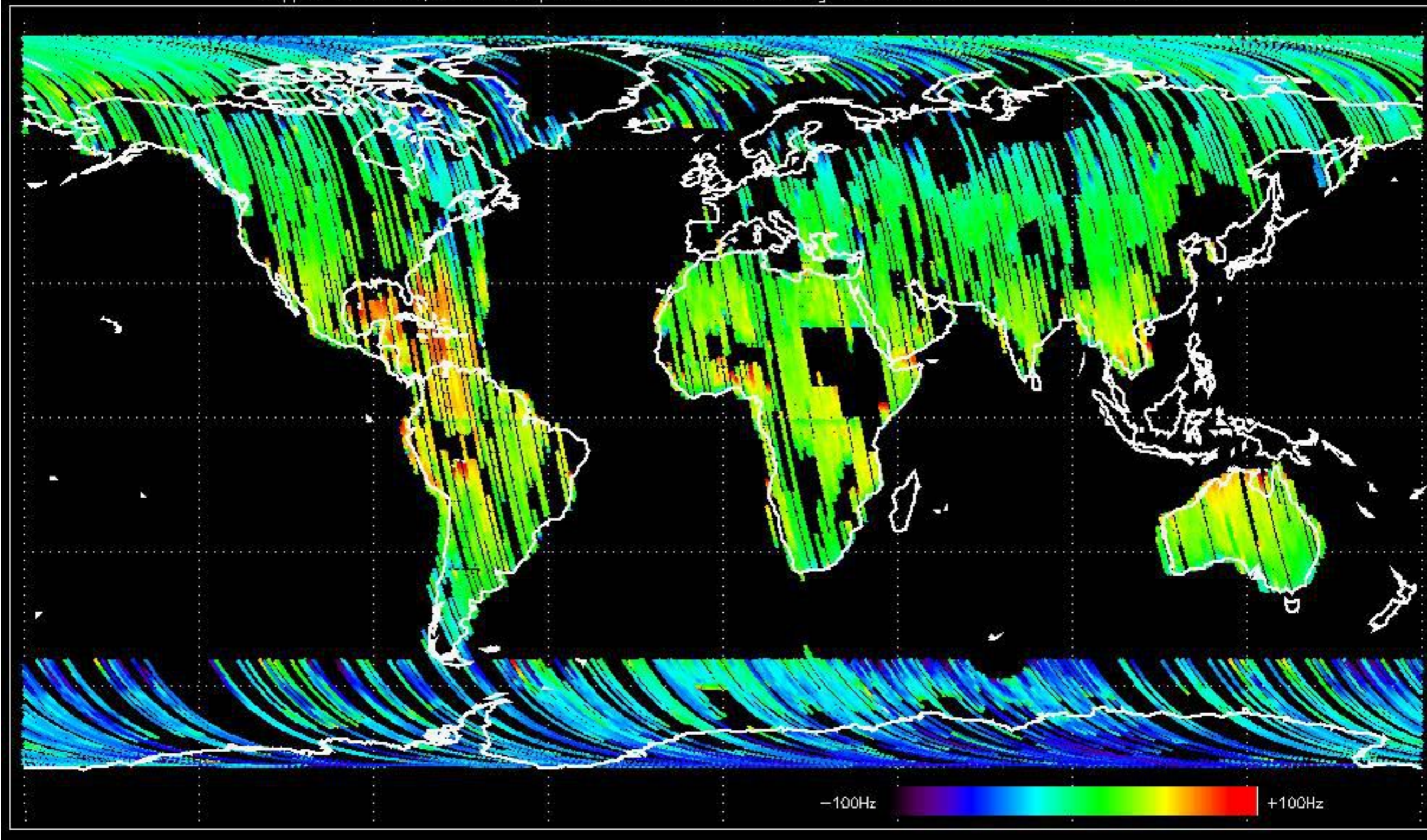


GM1 mode doppler

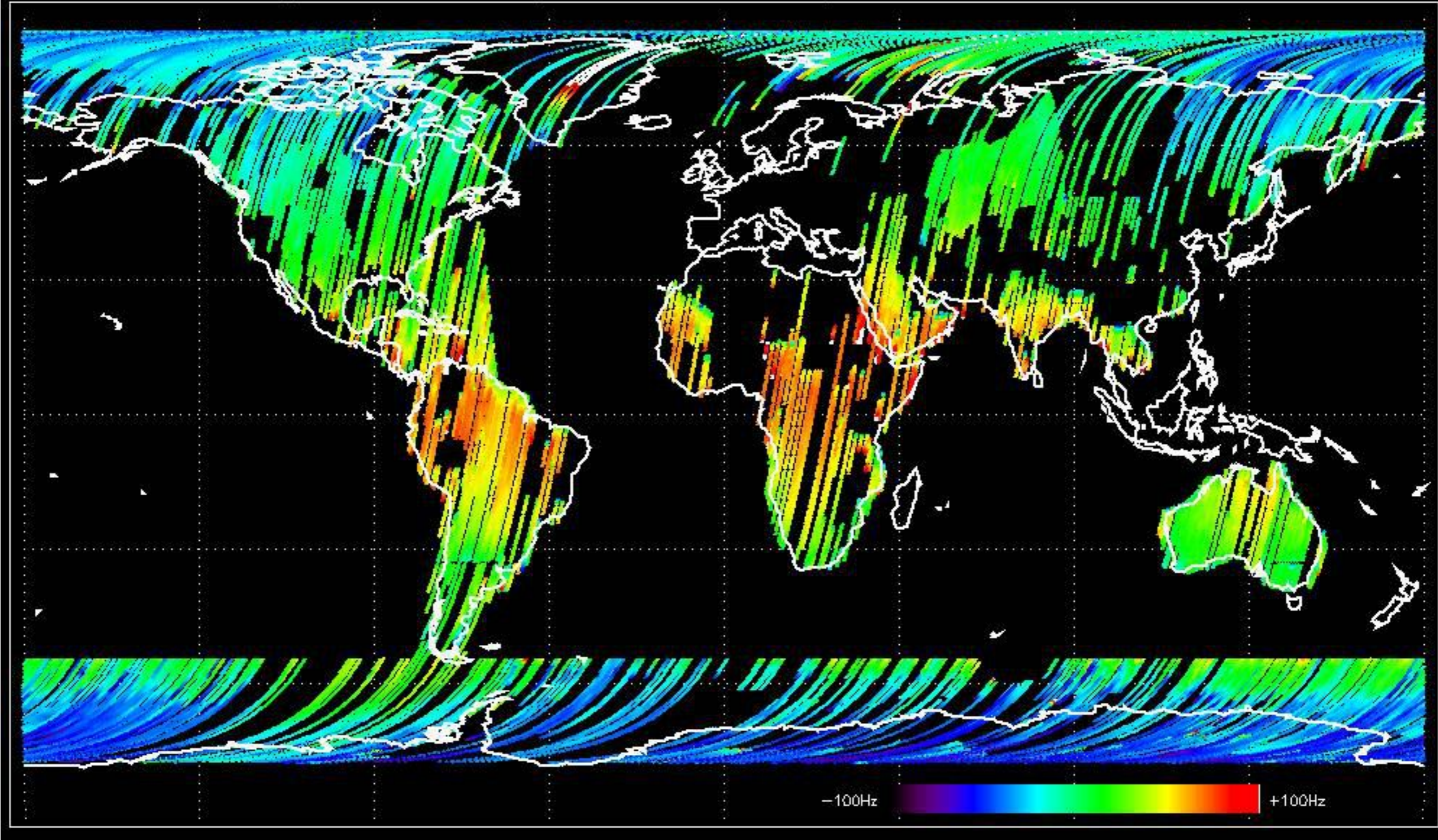




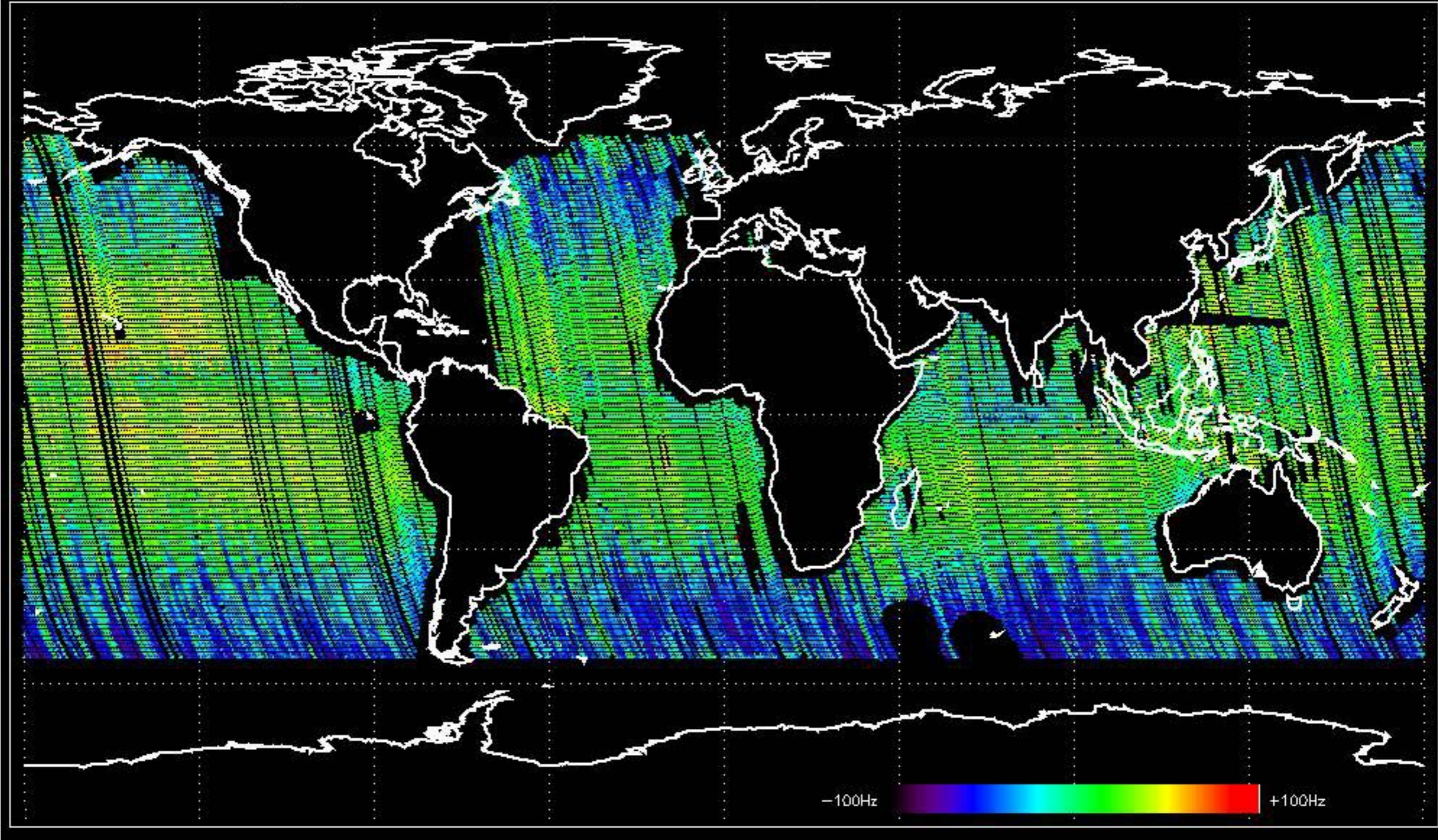
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -7.7950426 Hz



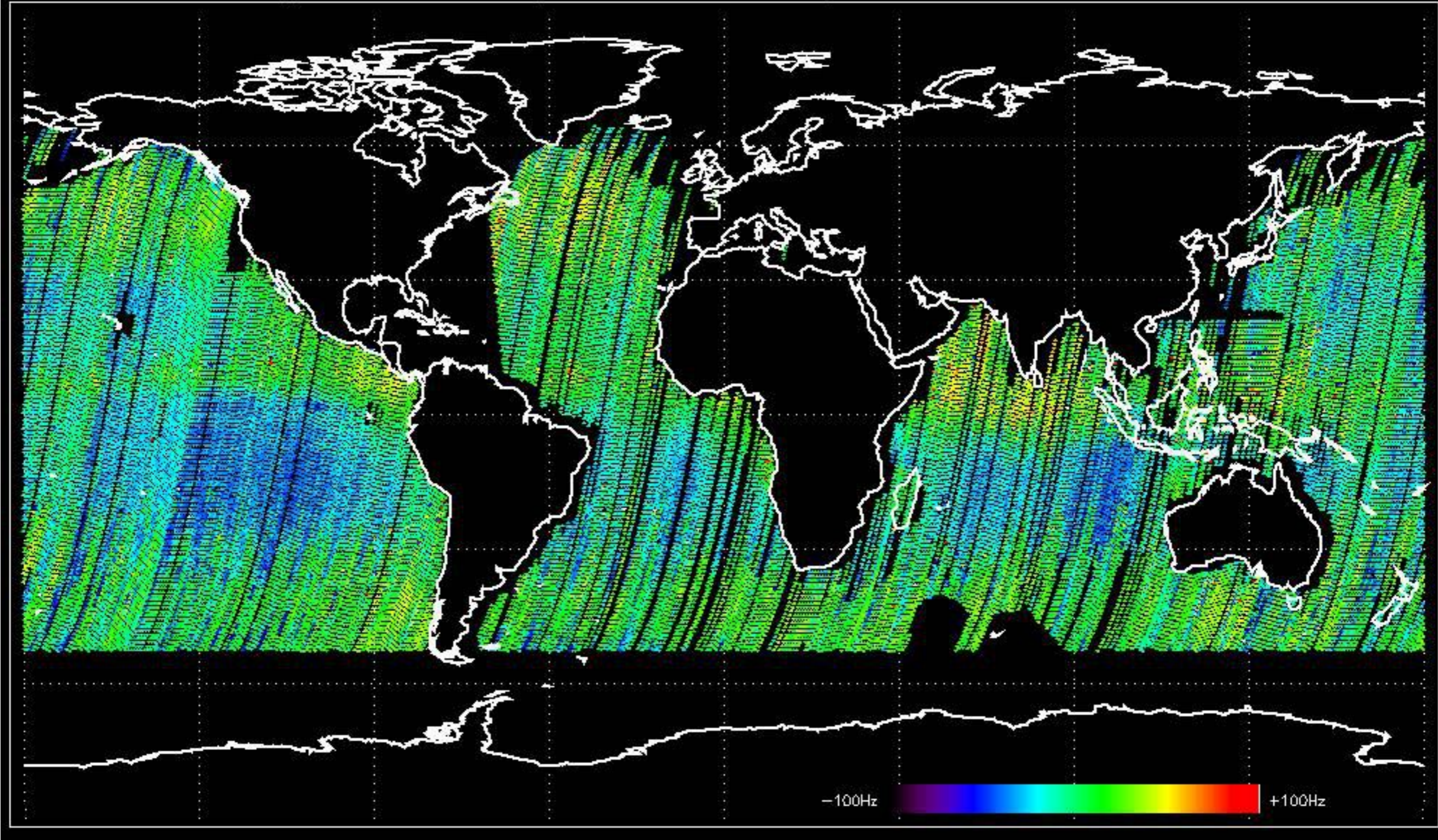
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -5.2143643 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of 0.011876934 Hz

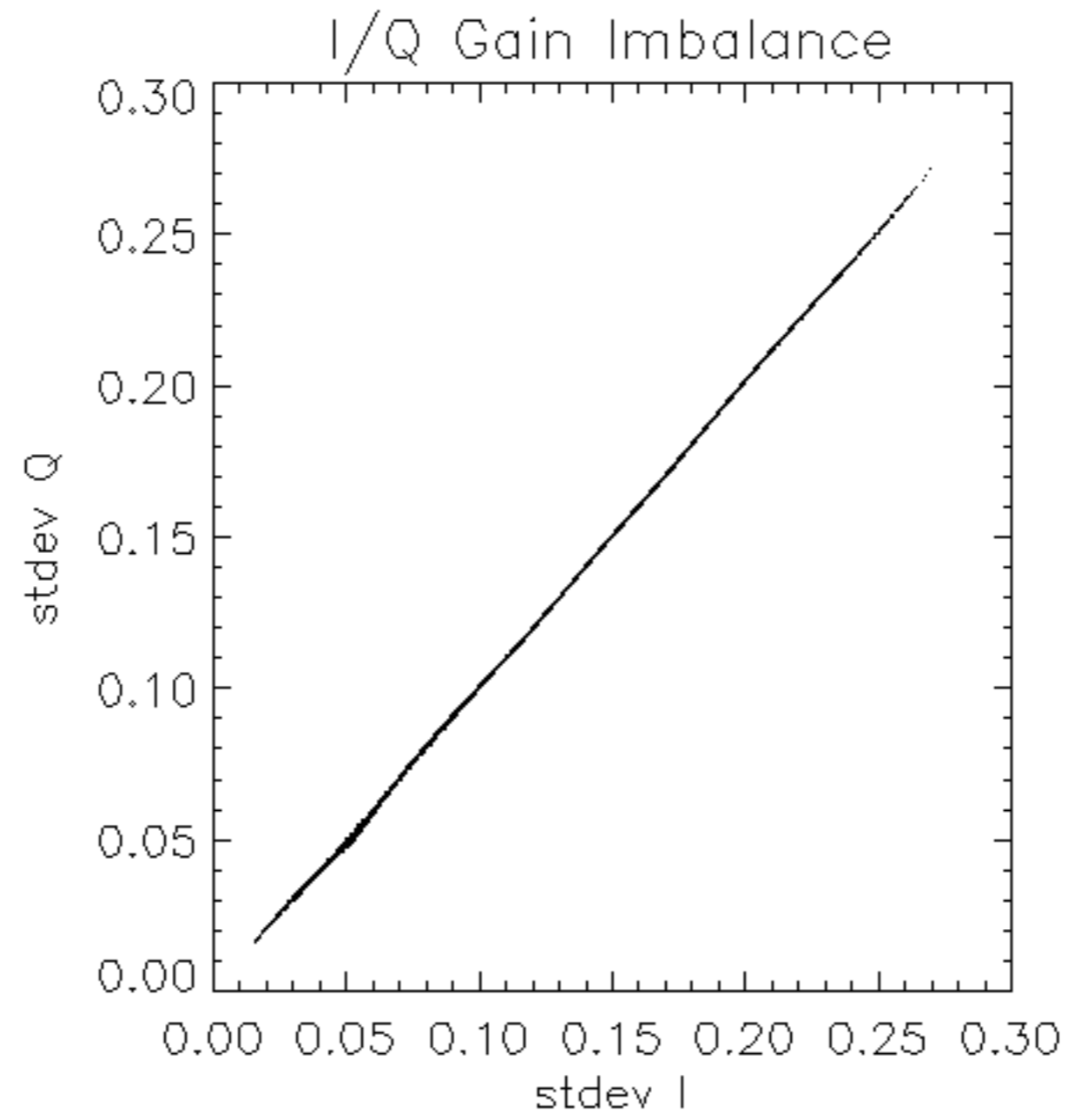


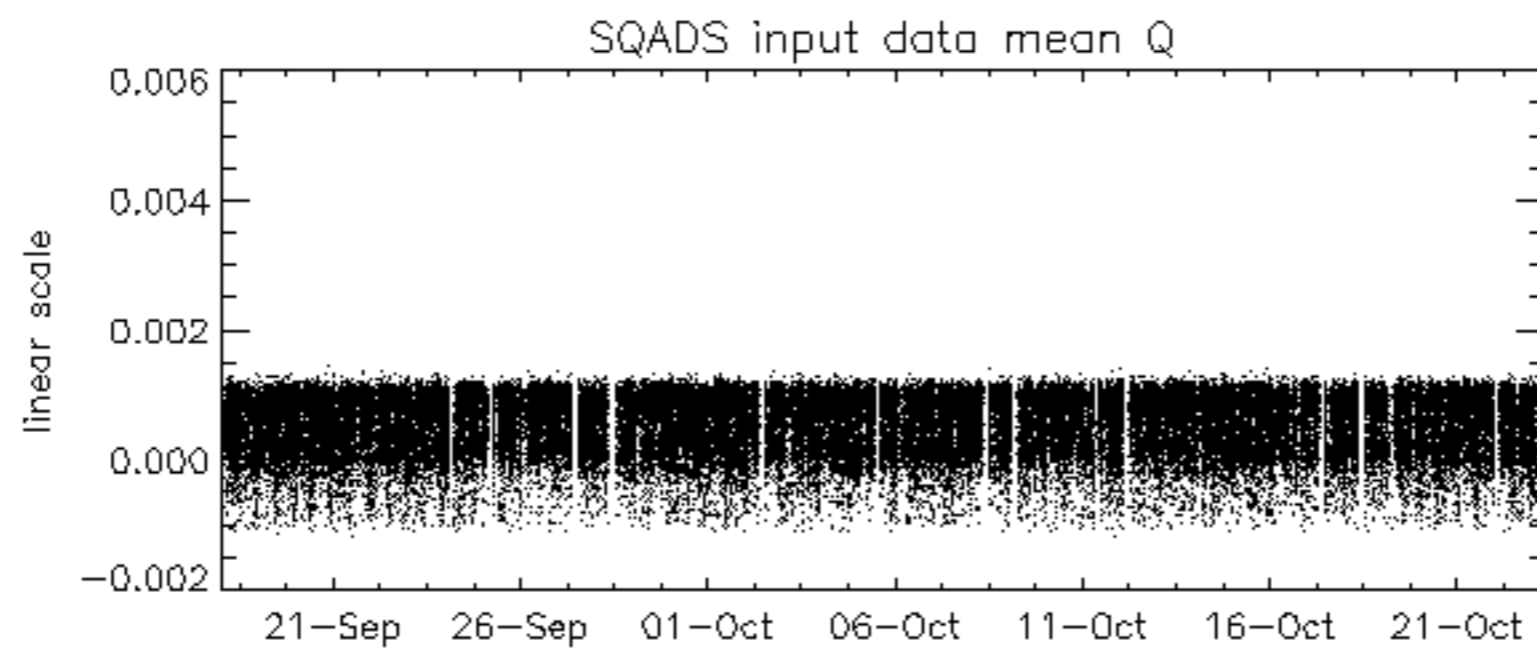
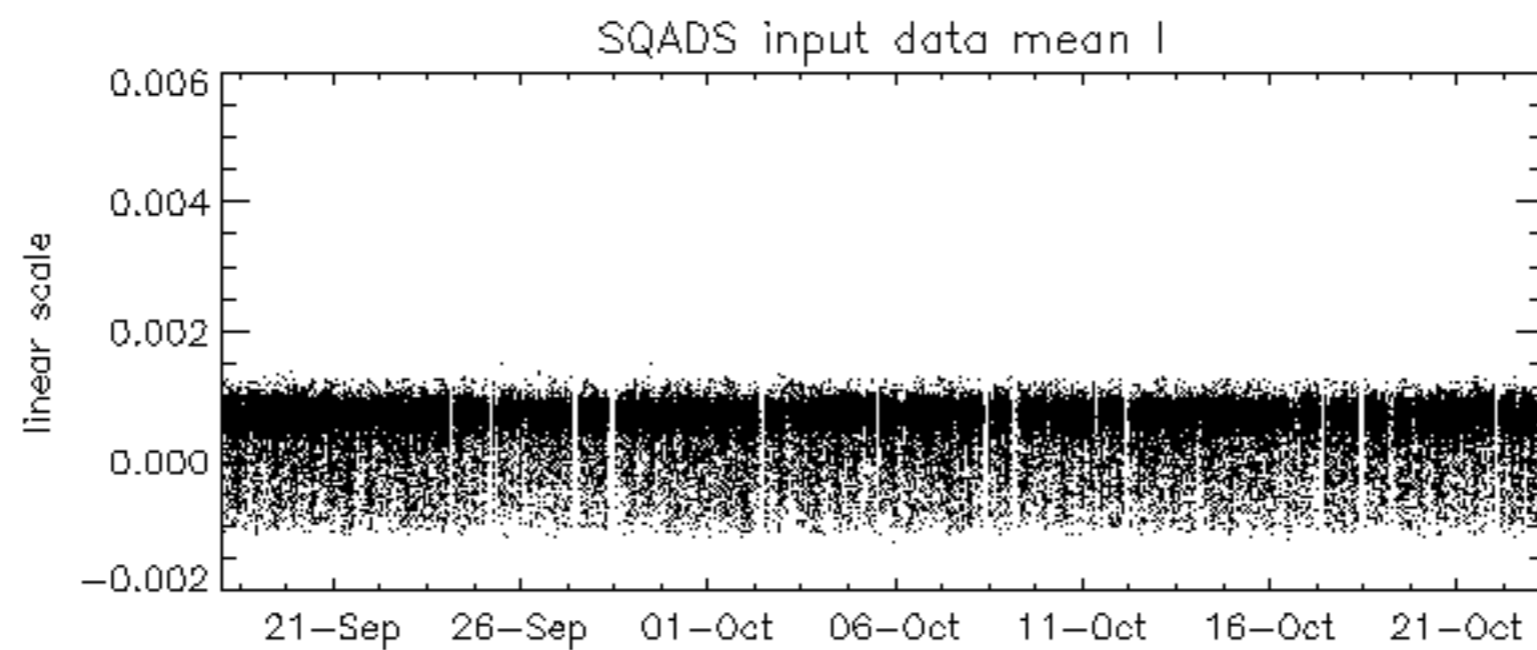
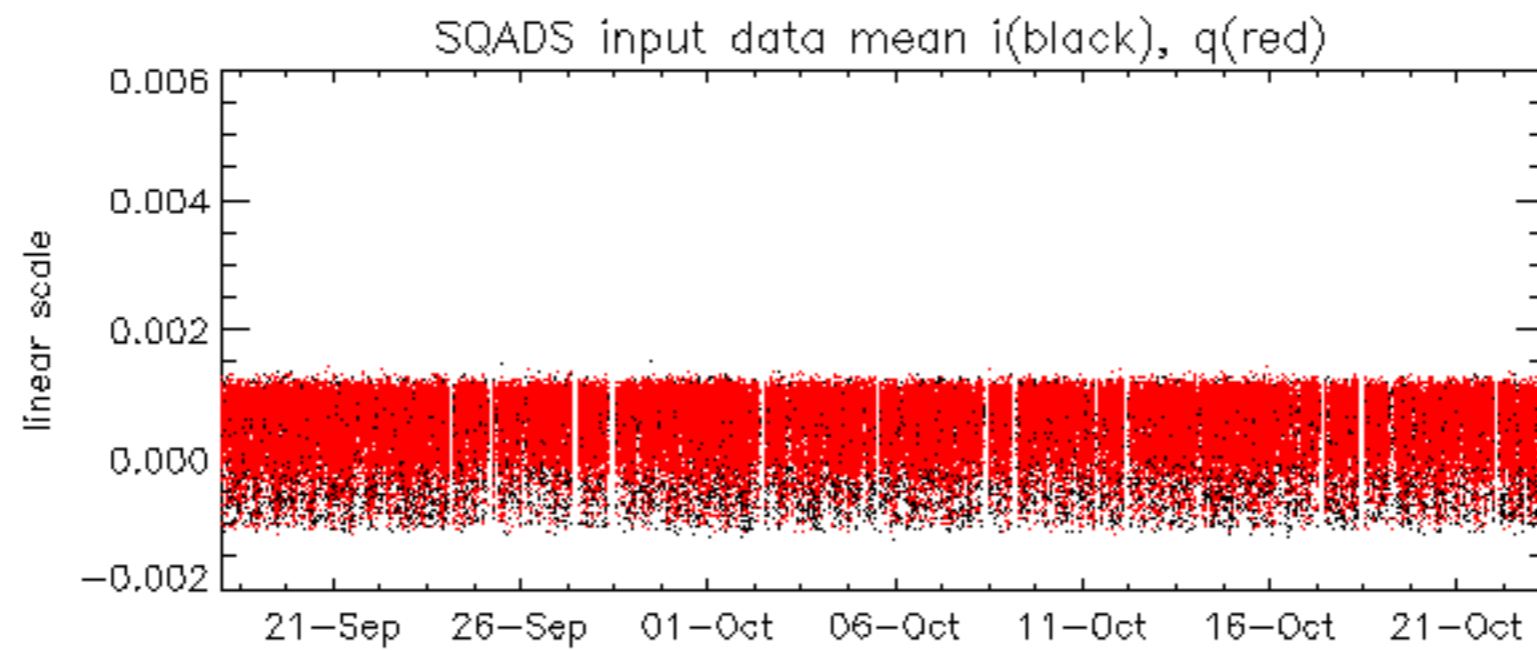
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -3.7623832 Hz

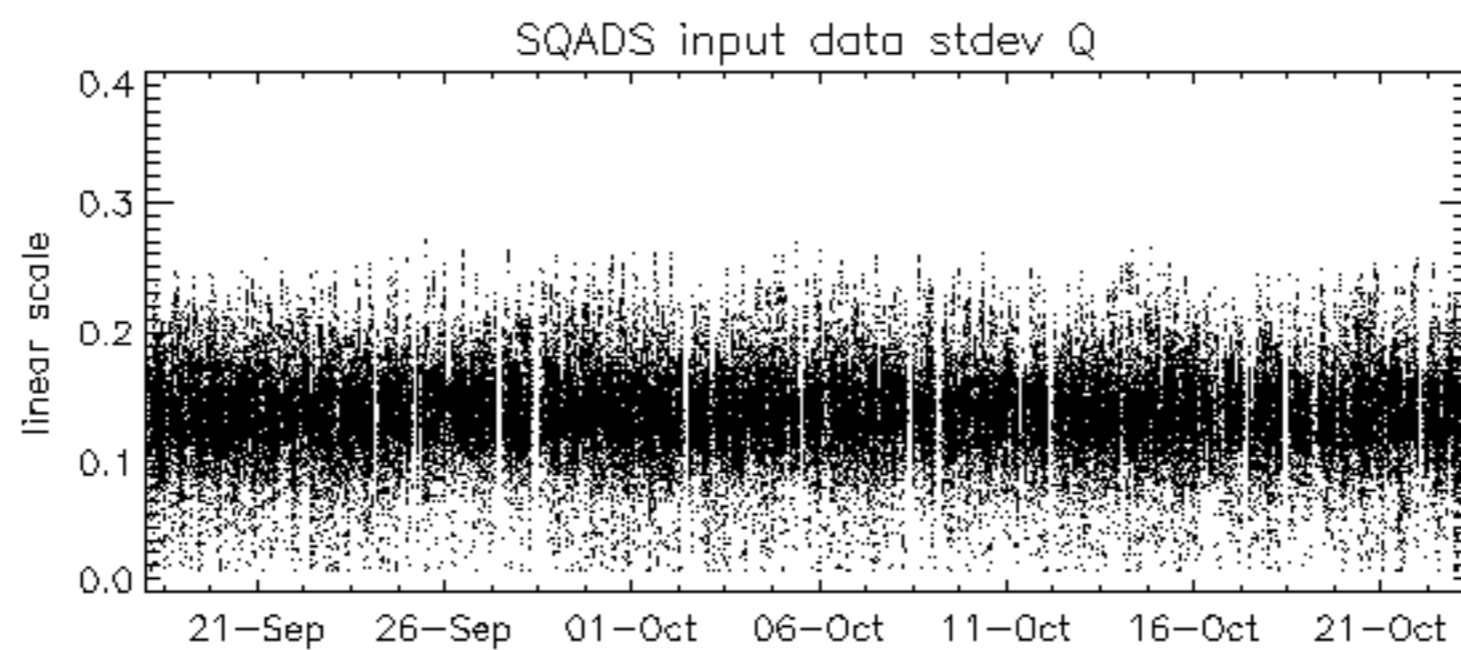
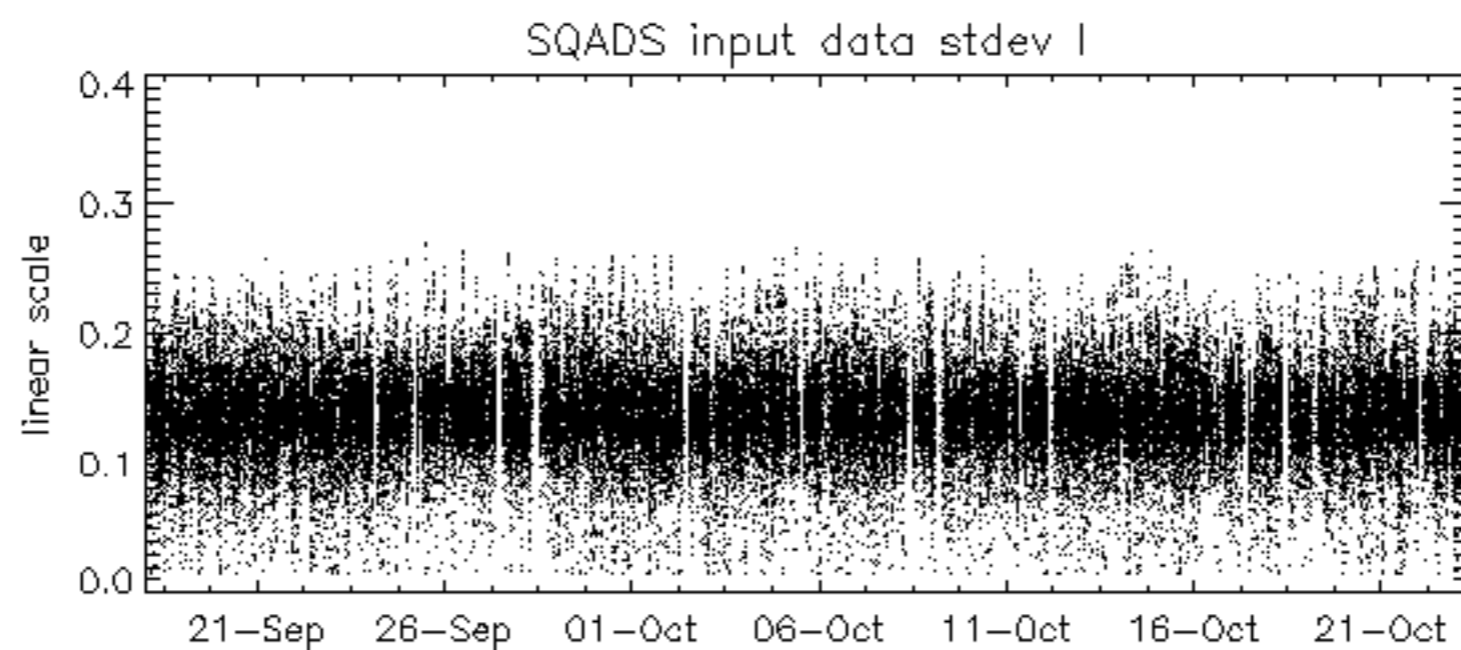
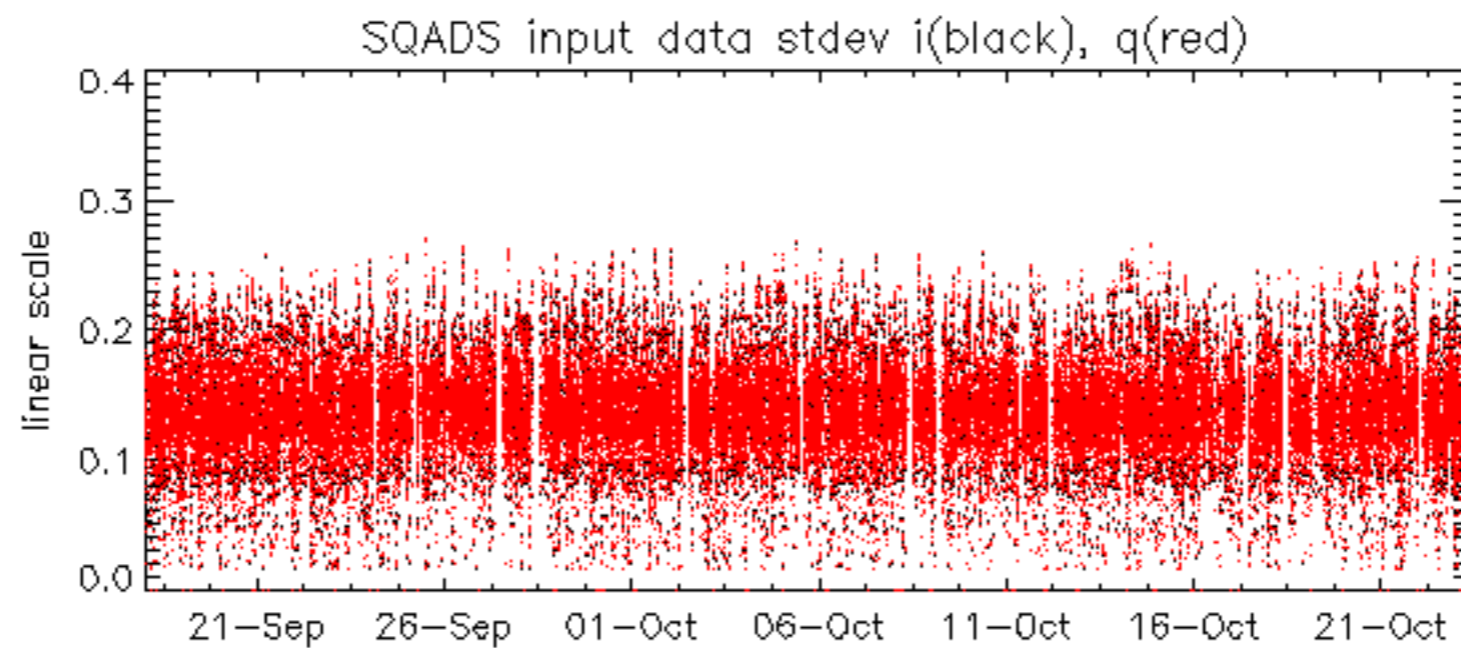


No anomalies observed on available MS products:

No anomalies observed.



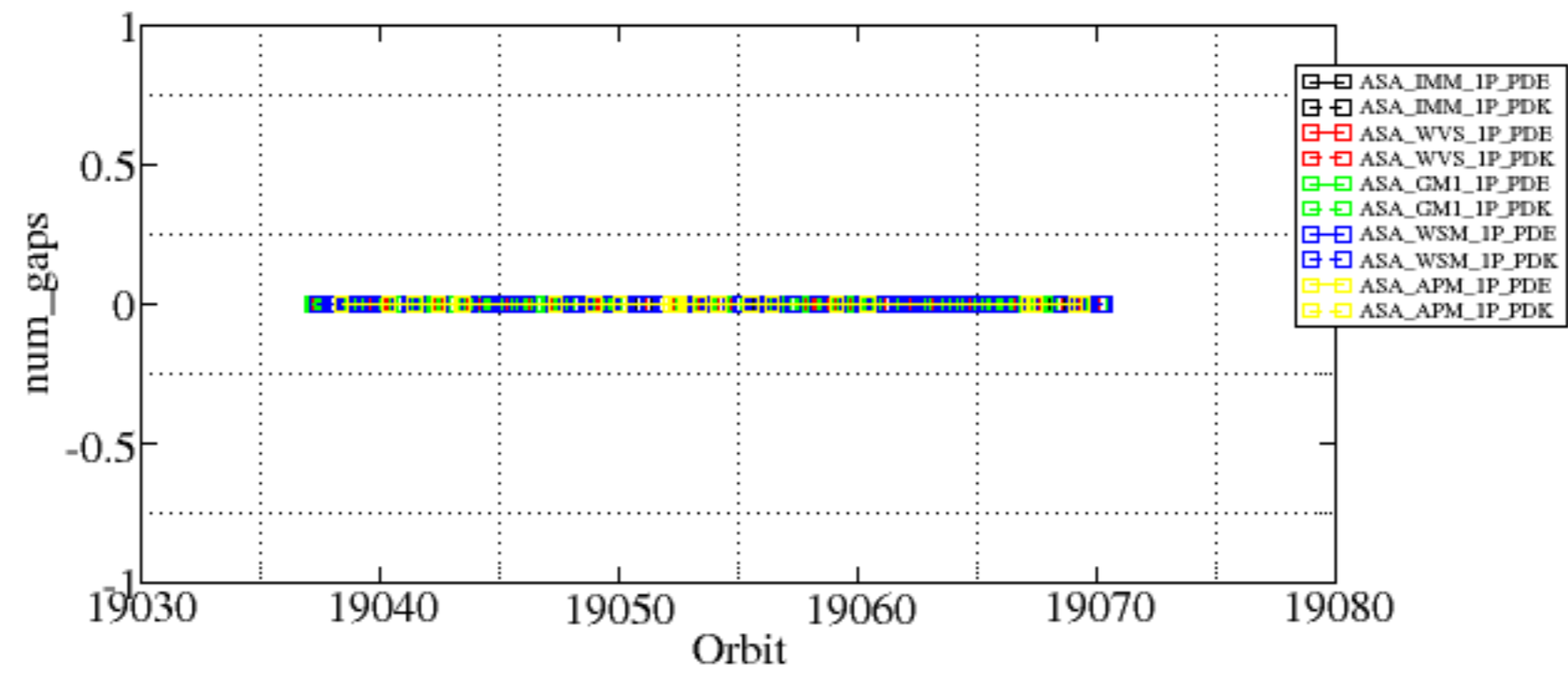


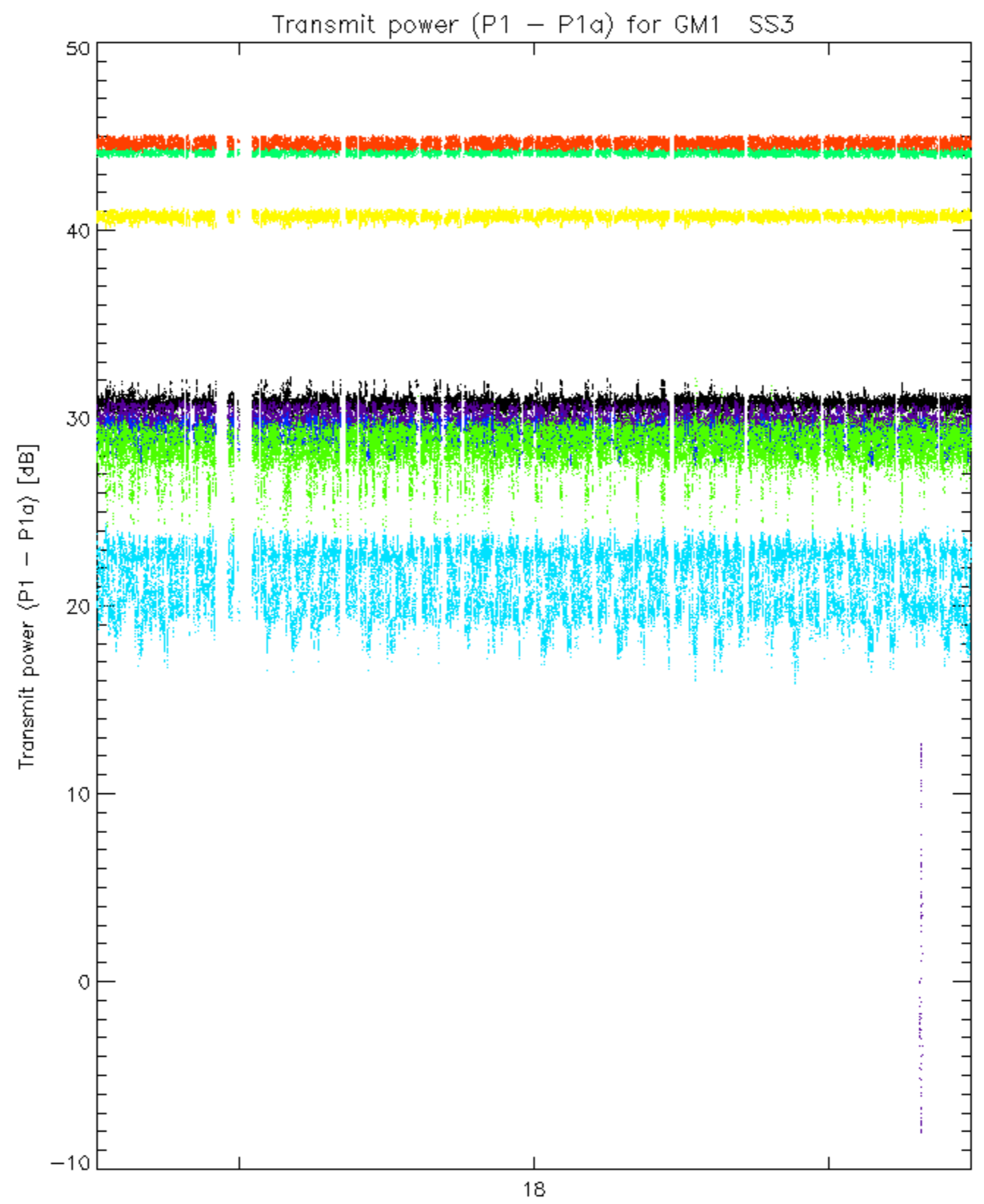


Summary of analysis for the last 3 days 2005102[123]

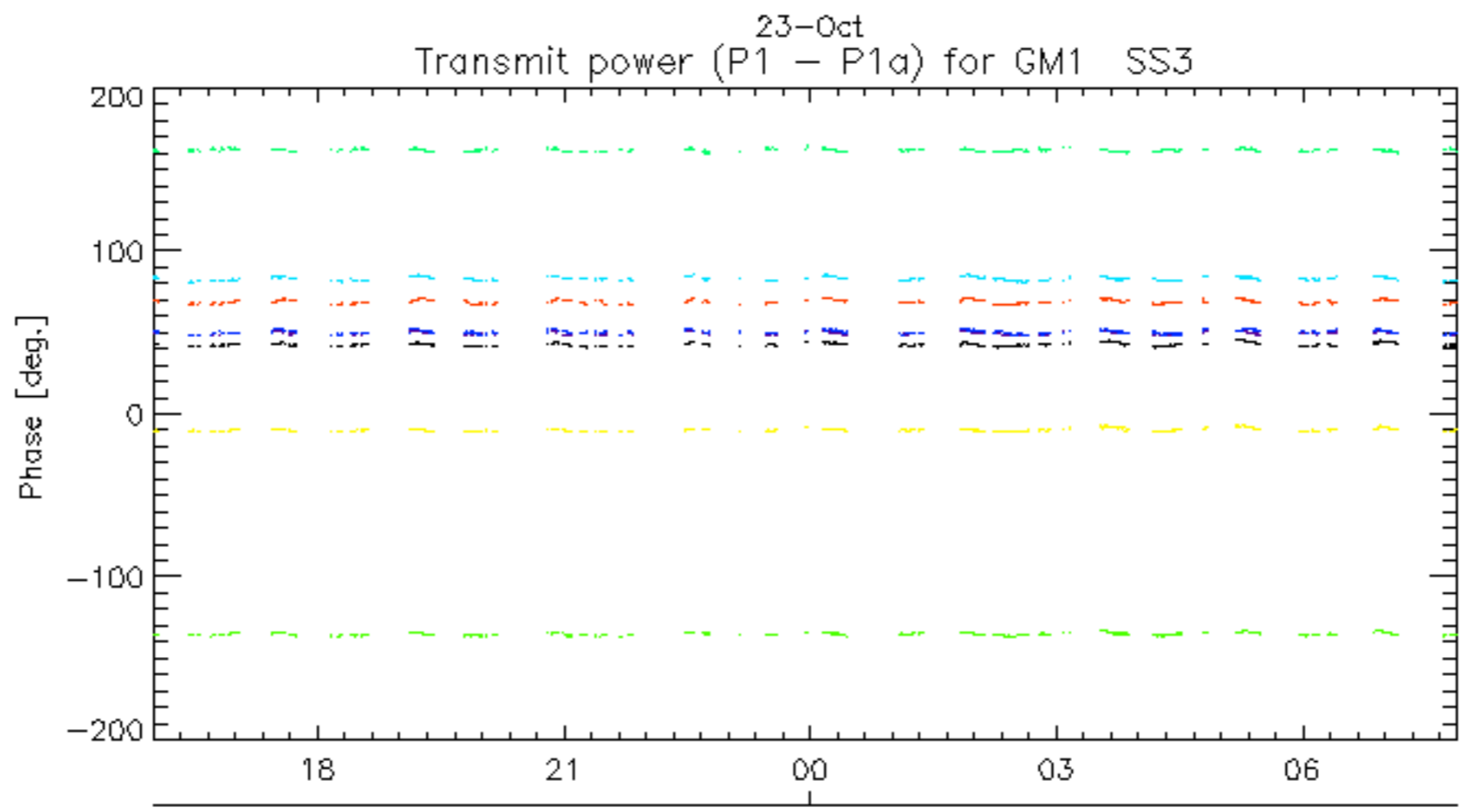
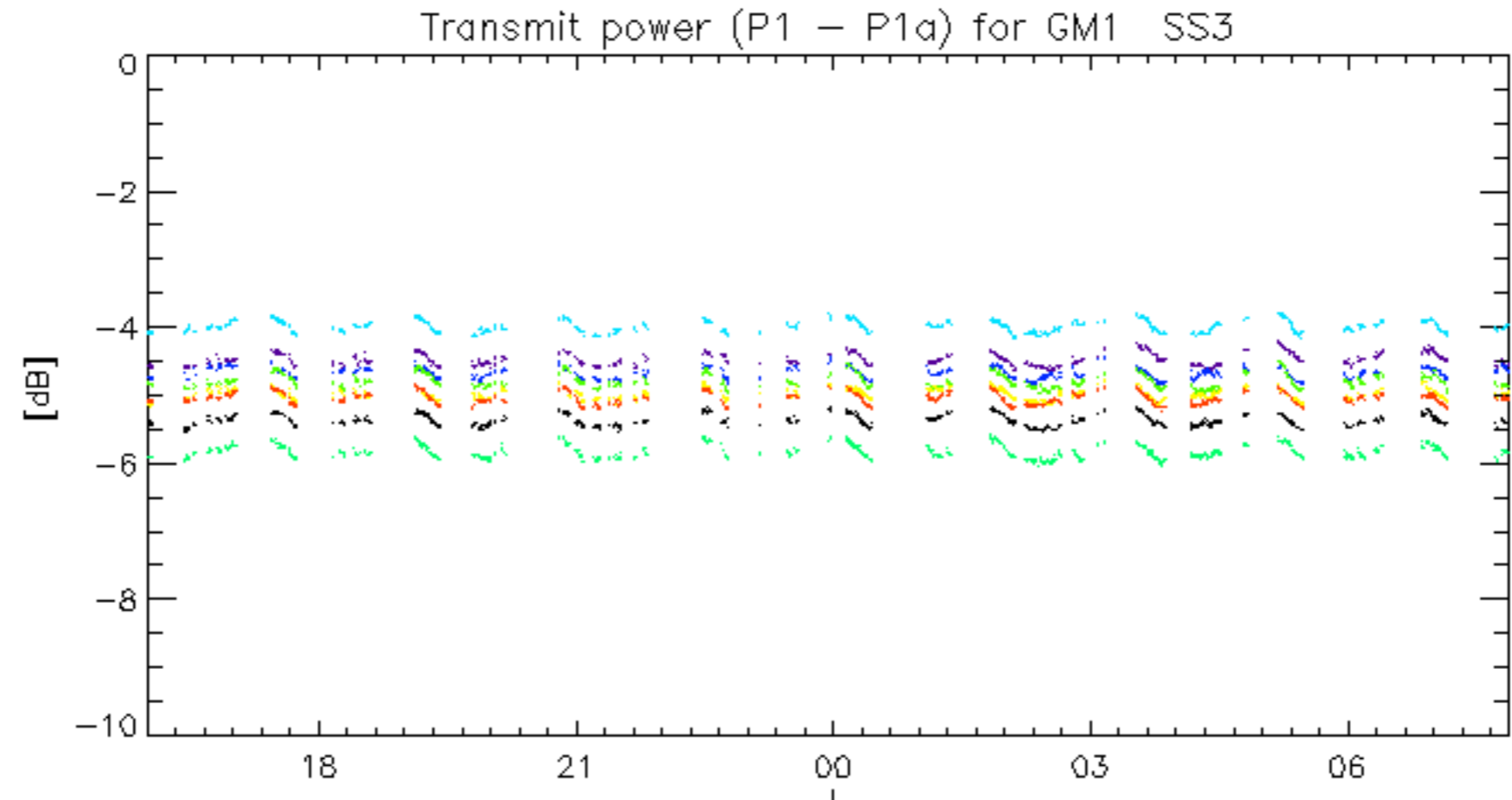
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20051021_083359_00000382041_00451_19042_5963.N1	0	25
ASA_GM1_1PNPDK20051021_102639_000006642041_00452_19043_9092.N1	0	13
ASA_WSM_1PNPDE20051021_183647_000002932041_00457_19048_5308.N1	0	70
ASA_WSM_1PNPDE20051022_010806_000002192041_00460_19051_5377.N1	0	123
ASA_WSM_1PNPDE20051022_022829_000000422041_00461_19052_5382.N1	0	120
ASA_WSM_1PNPDE20051022_162409_000000922041_00470_19061_5477.N1	0	44
ASA_WSM_1PNPDE20051022_180625_000001292041_00471_19062_5521.N1	0	70
ASA_WSM_1PNPDE20051022_230541_000000672041_00474_19065_5561.N1	0	3



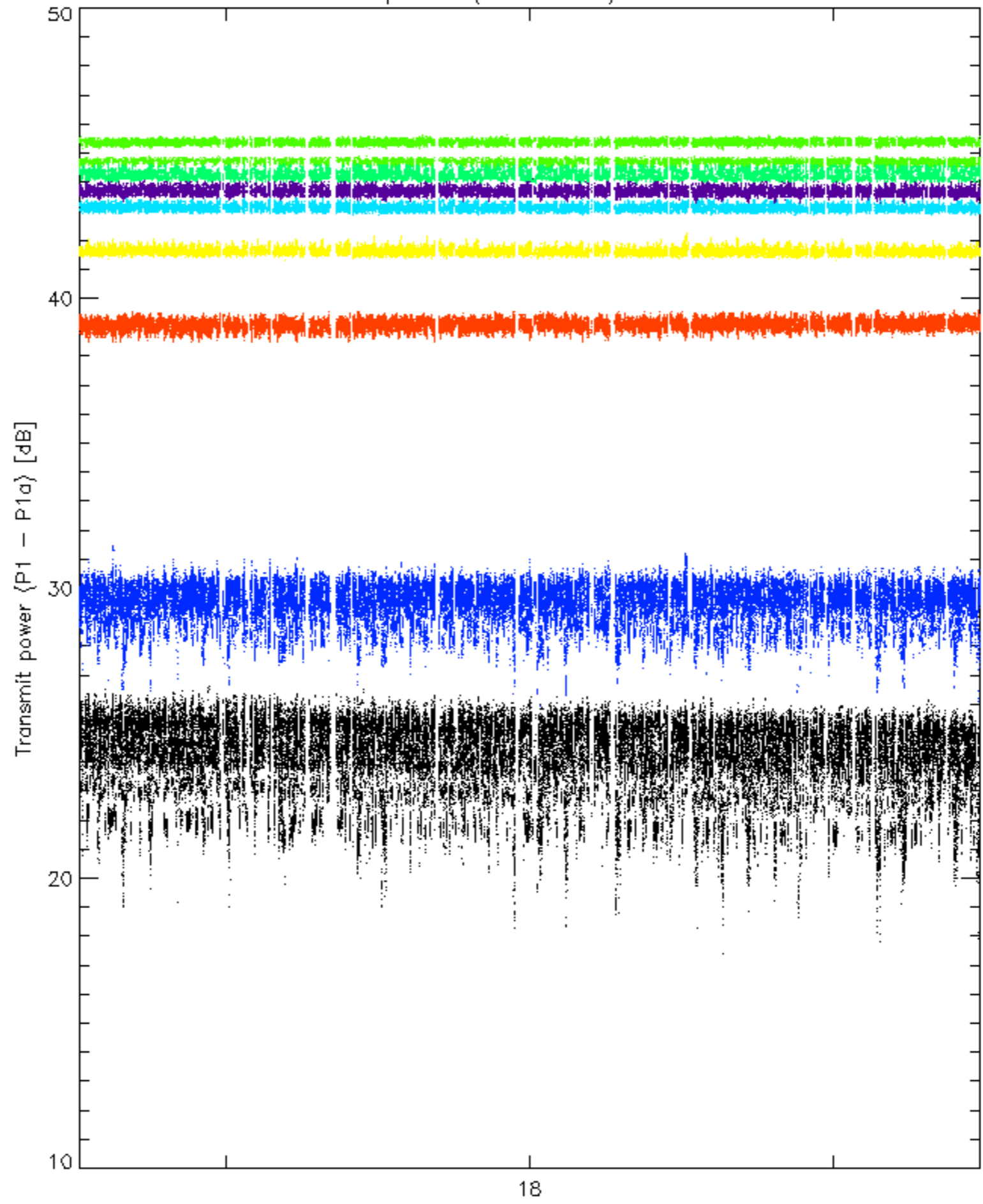


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

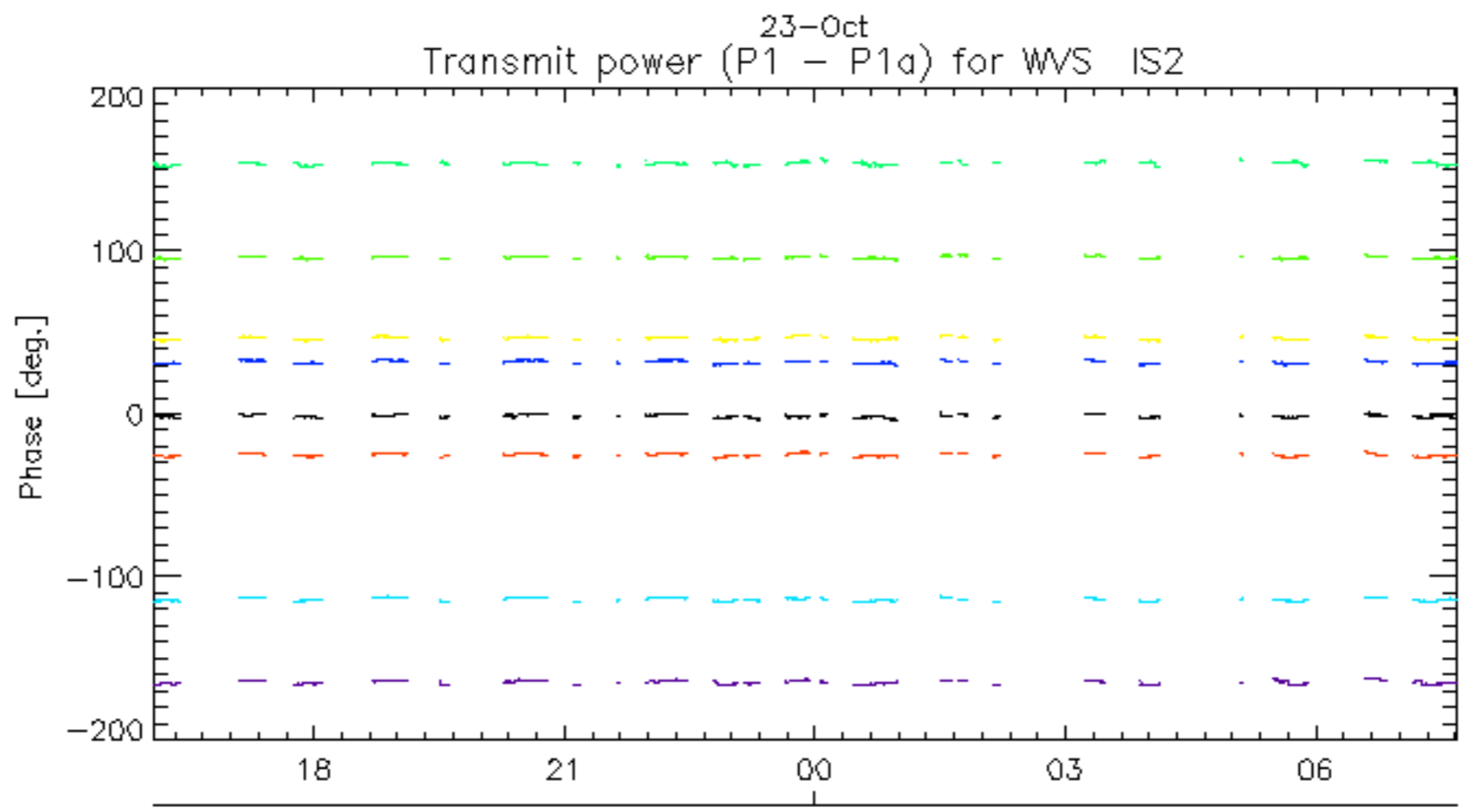
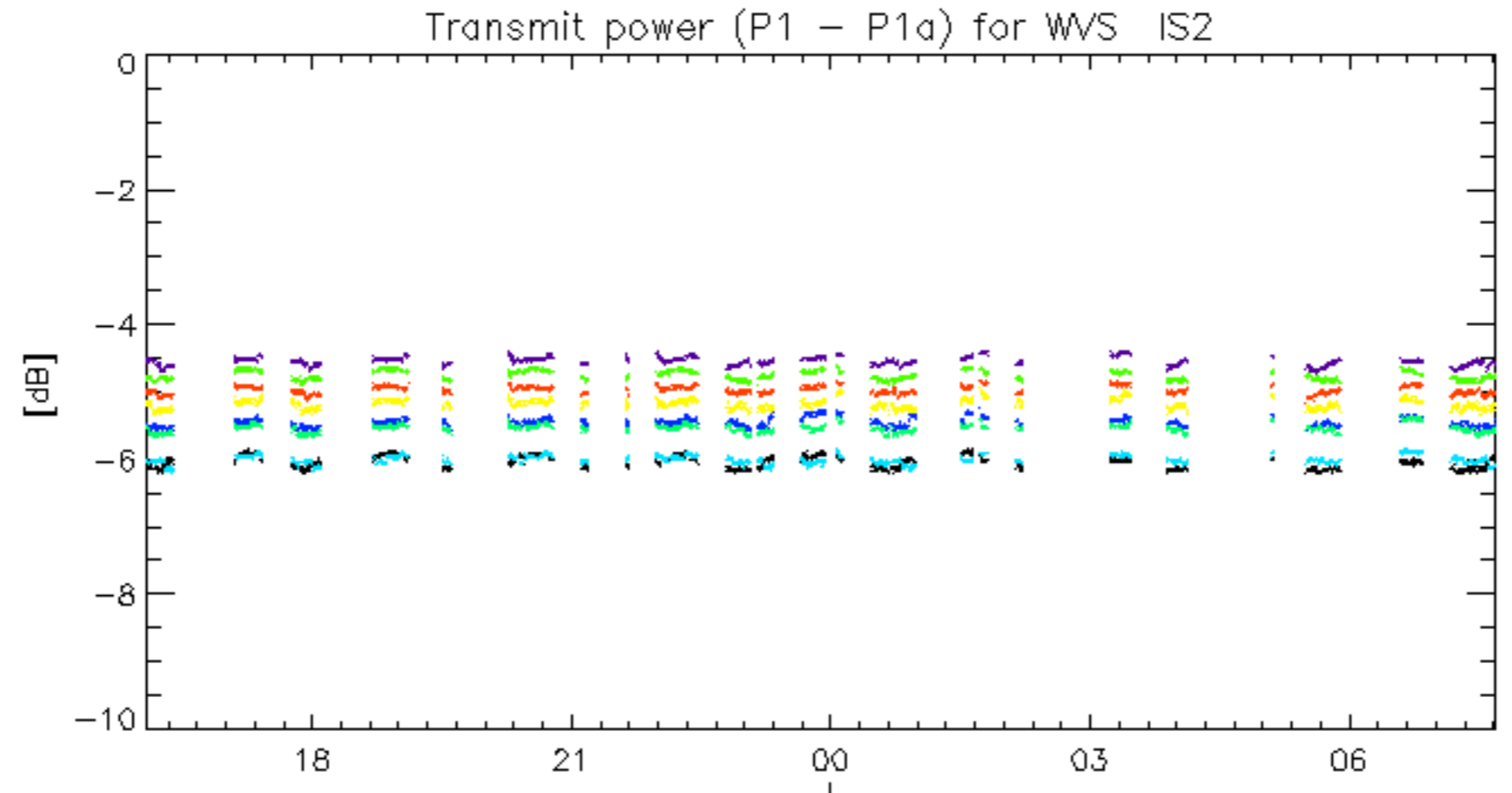


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.