

PRELIMINARY REPORT OF 051022

last update on Sat Oct 22 16:43:16 GMT 2005

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2005-10-21 00:00:00 to 2005-10-22 16:43:16

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	45	66	12	3	19
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	45	66	12	3	19
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	45	66	12	3	19
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	45	66	12	3	19

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	30	49	39	17	60
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	30	49	39	17	60
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	30	49	39	17	60
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	30	49	39	17	60

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	20051020 100812
H	20051021 143823

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
<input type="checkbox"/>

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	-3.533777	0.009003	0.029711
7	P1	-2.892540	0.010060	-0.067324
11	P1	-4.064306	0.015978	-0.085073
15	P1	-6.024450	0.015340	-0.053568
19	P1	-3.154450	0.005678	-0.044822
22	P1	-4.445210	0.012951	-0.055797
26	P1	-4.275520	0.015409	0.028744
30	P1	-5.704306	0.008694	-0.051604
3	P1	-15.407058	0.184593	0.204460
7	P1	-16.262373	0.107385	-0.120114
11	P1	-16.203325	0.276653	-0.259171
15	P1	-13.340537	0.103166	-0.030325
19	P1	-13.609229	0.038087	-0.122921
22	P1	-16.123180	0.489429	-0.198504
26	P1	-16.177380	0.238603	0.289591
30	P1	-16.392088	0.172679	-0.131013

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.868429	0.098512	0.011420
7	P2	-22.700714	0.105532	0.069559
11	P2	-16.756990	0.114858	0.129415
15	P2	-7.217026	0.101494	-0.053115
19	P2	-9.170515	0.092937	-0.051299
22	P2	-17.716707	0.099393	-0.116467
26	P2	-16.092022	0.093590	-0.108648
30	P2	-19.622173	0.090471	-0.018025

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.187846	0.005542	-0.039731
7	P3	-8.187846	0.005542	-0.039731
11	P3	-8.187846	0.005542	-0.039731
15	P3	-8.187846	0.005542	-0.039731
19	P3	-8.187846	0.005542	-0.039731
22	P3	-8.187846	0.005542	-0.039731
26	P3	-8.187846	0.005542	-0.039731
30	P3	-8.187846	0.005542	-0.039731

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	-3.660085	0.007123	-0.022699
7	P1	-2.831673	0.011969	0.063659
11	P1	-2.851104	0.013467	-0.002691
15	P1	-3.387656	0.017994	0.004278
19	P1	-3.348980	0.010391	-0.023376
22	P1	-5.146362	0.019650	0.030102
26	P1	-5.776409	0.017814	-0.061678
30	P1	-5.211653	0.026180	-0.029949
3	P1	-11.400534	0.031693	-0.026238
7	P1	-9.920002	0.040833	0.013357
11	P1	-10.010743	0.057926	-0.020951
15	P1	-10.580710	0.095999	0.047126
19	P1	-15.457002	0.067911	-0.058028
22	P1	-20.450384	1.196791	-0.159931
26	P1	-17.088490	0.395628	-0.129258
30	P1	-18.802891	0.388863	0.488328

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.705633	0.038802	0.029630
7	P2	-23.047213	0.092125	-0.041143
11	P2	-11.751267	0.027994	0.024014
15	P2	-4.888659	0.037485	-0.068918
19	P2	-6.895968	0.026991	-0.044459
22	P2	-8.104822	0.024807	-0.067756
26	P2	-23.856934	0.038410	-0.100376
30	P2	-22.056801	0.027205	-0.032984

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.031296	0.002824	-0.040132
7	P3	-8.031349	0.002828	-0.040043
11	P3	-8.031294	0.002837	-0.040592
15	P3	-8.031322	0.002826	-0.040373
19	P3	-8.031403	0.002836	-0.040042
22	P3	-8.031256	0.002843	-0.040545
26	P3	-8.031532	0.002842	-0.040295
30	P3	-8.031376	0.002840	-0.040454

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	0.000559815
	stdev	1.70848e-07
MEAN Q	mean	0.000538145
	stdev	2.16174e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137766
	stdev	0.00112942
STDEV Q	mean	0.138111
	stdev	0.00114604



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005102[012]

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







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)


Acsending

Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler


Acsending

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)



Ascending



Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler



Ascending



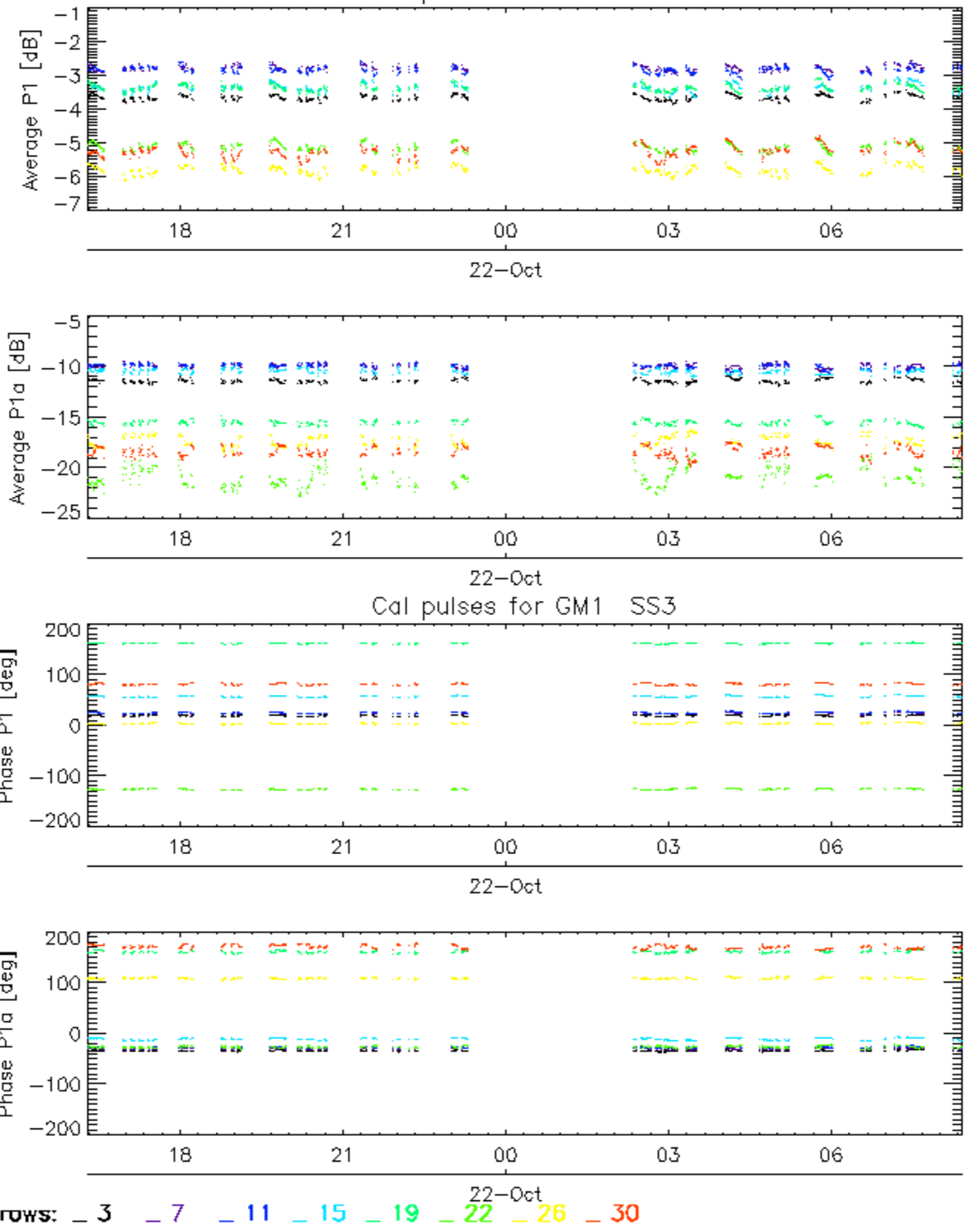
Descending

7.6 - Doppler evolution versus ANX for GM1

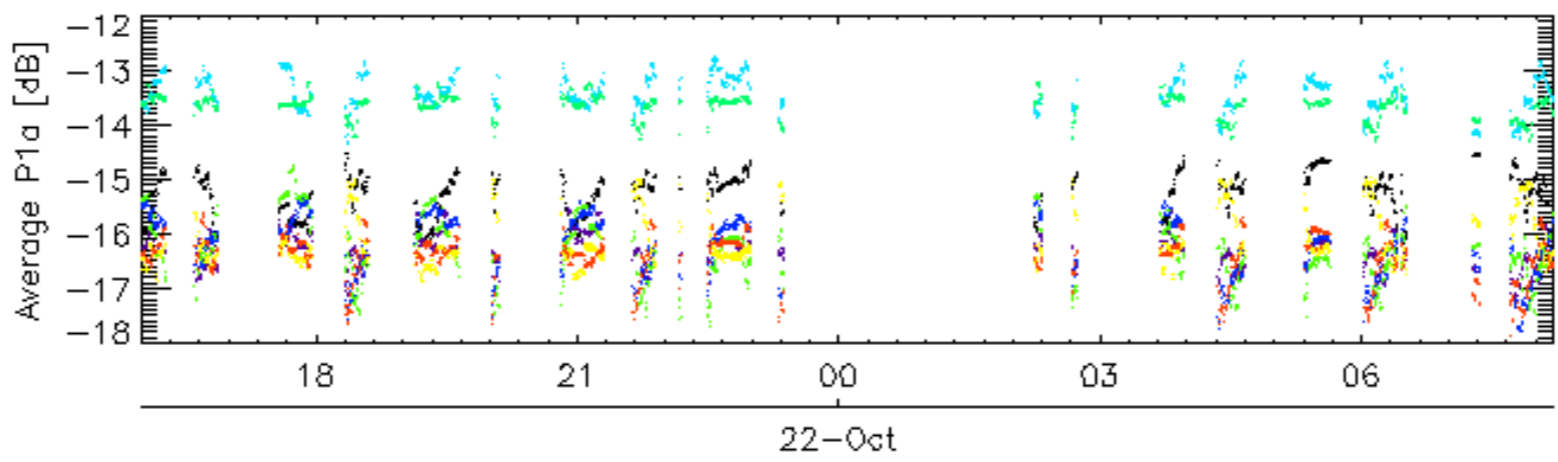
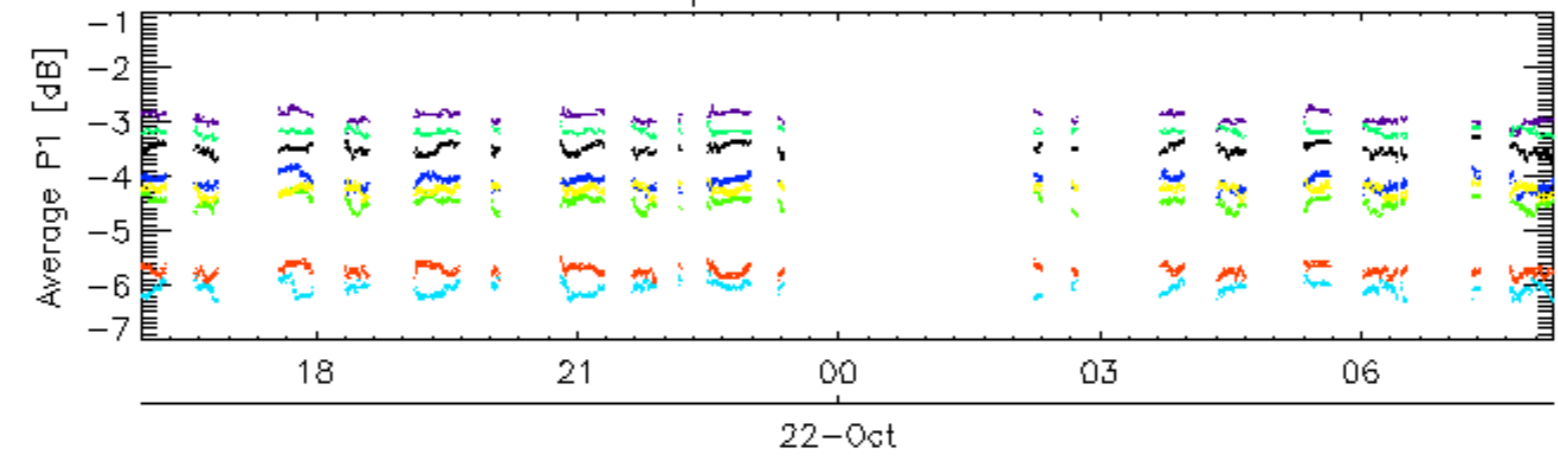
Evolution Doppler error versus ANX



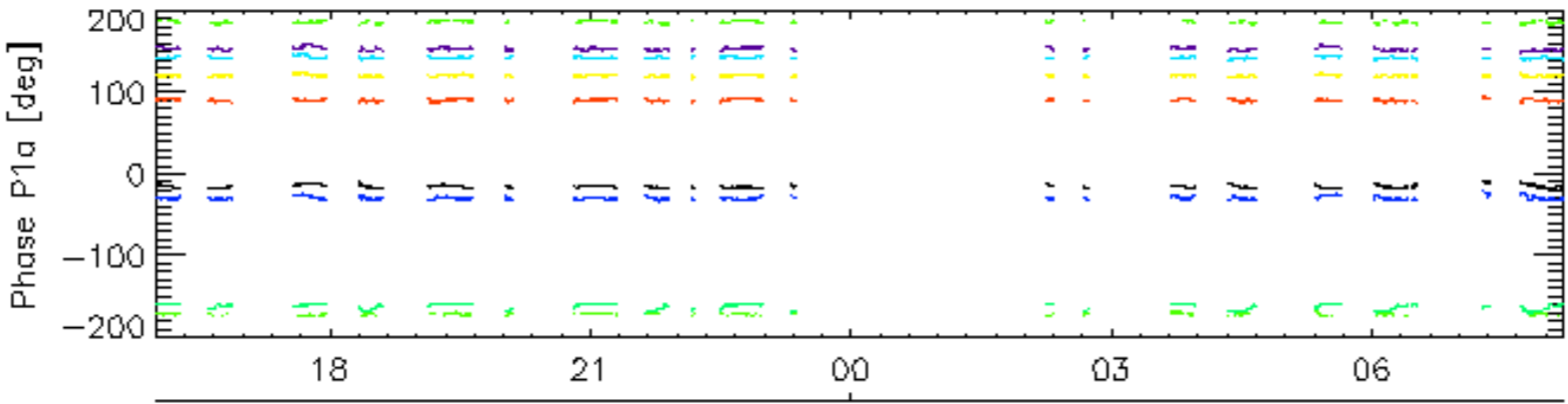
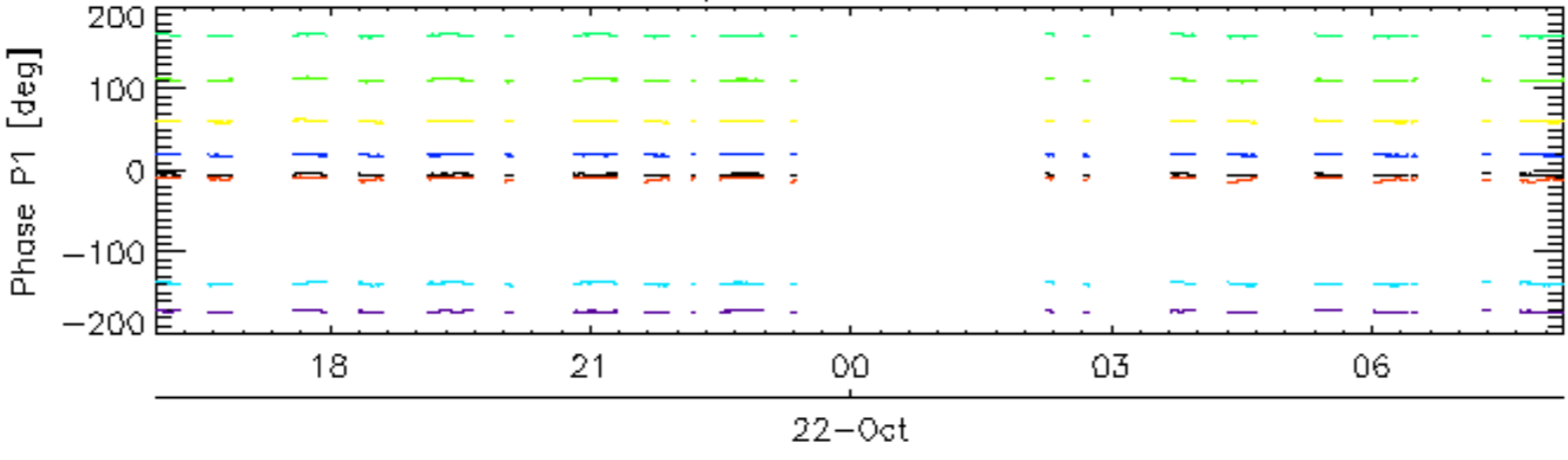
Cal pulses for GM1 SS3



Cal pulses for WVS IS2

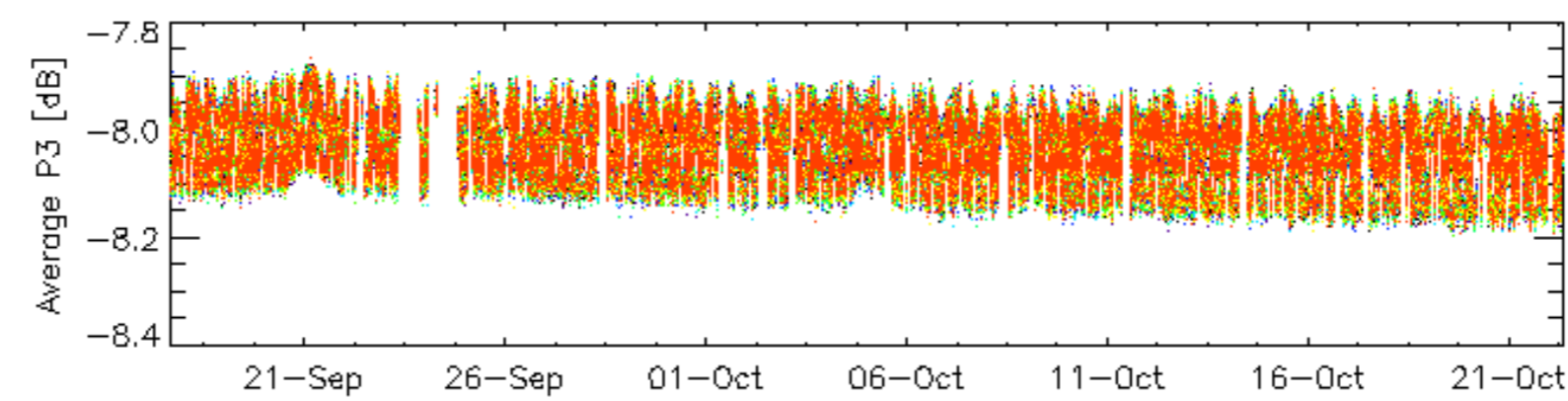
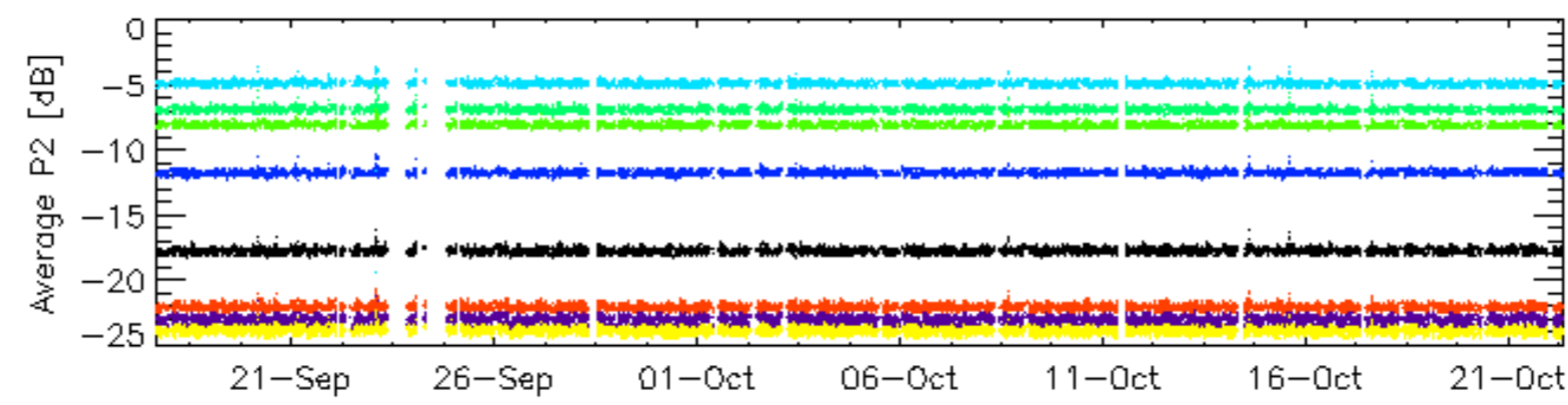
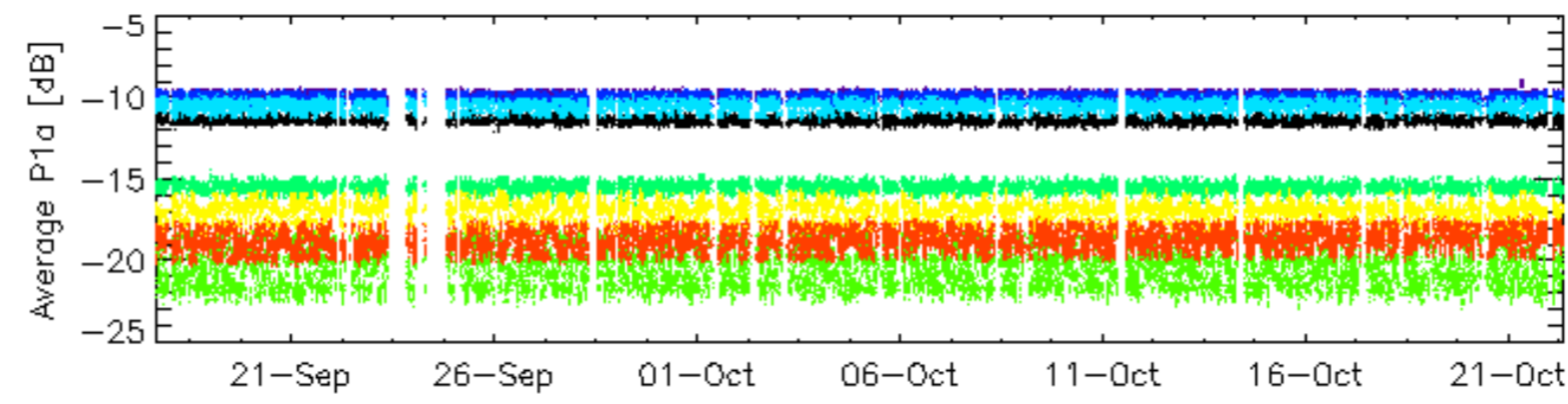
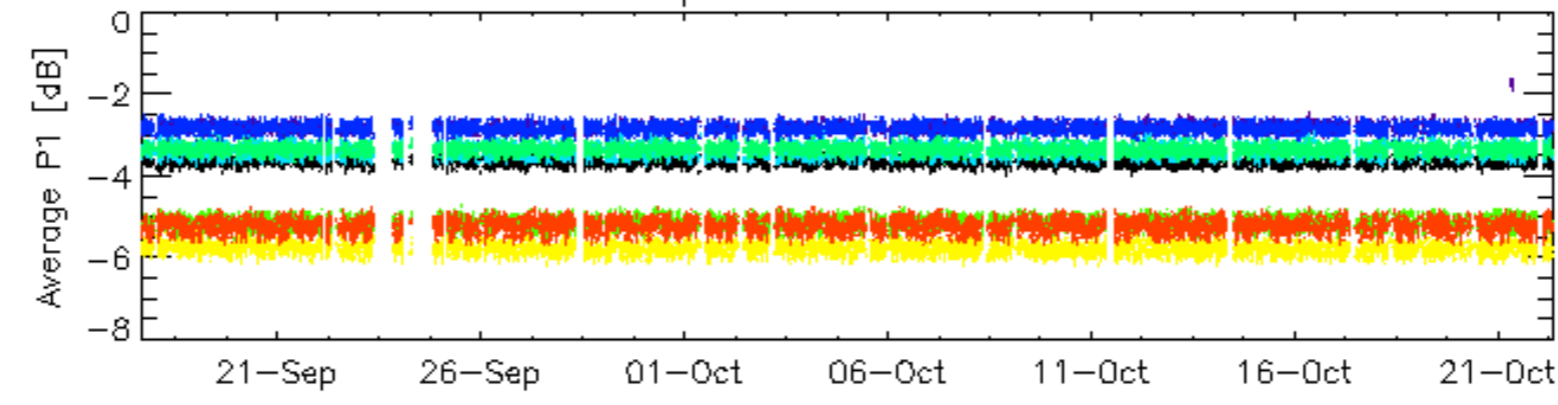


Cal pulses for WVS IS2



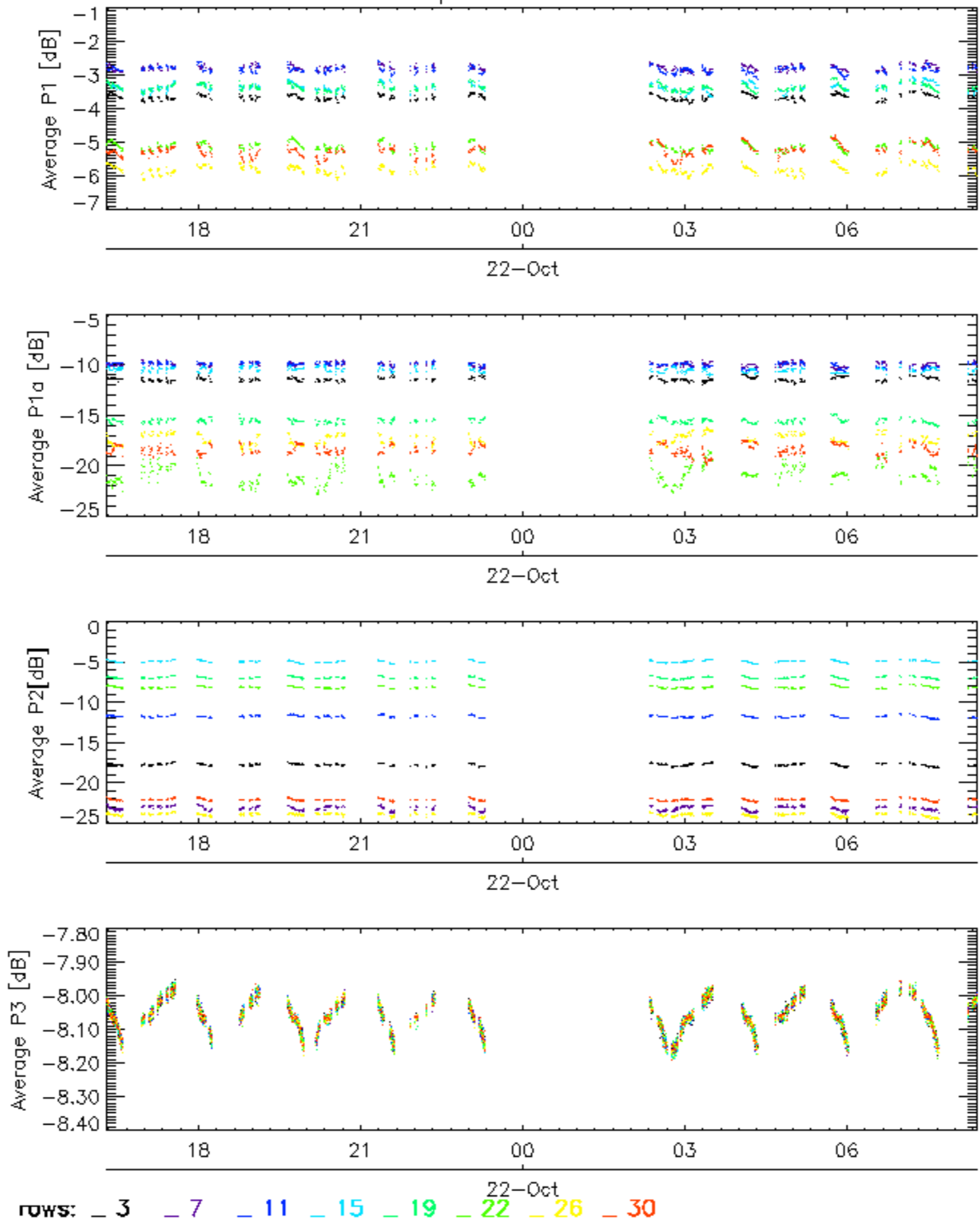
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

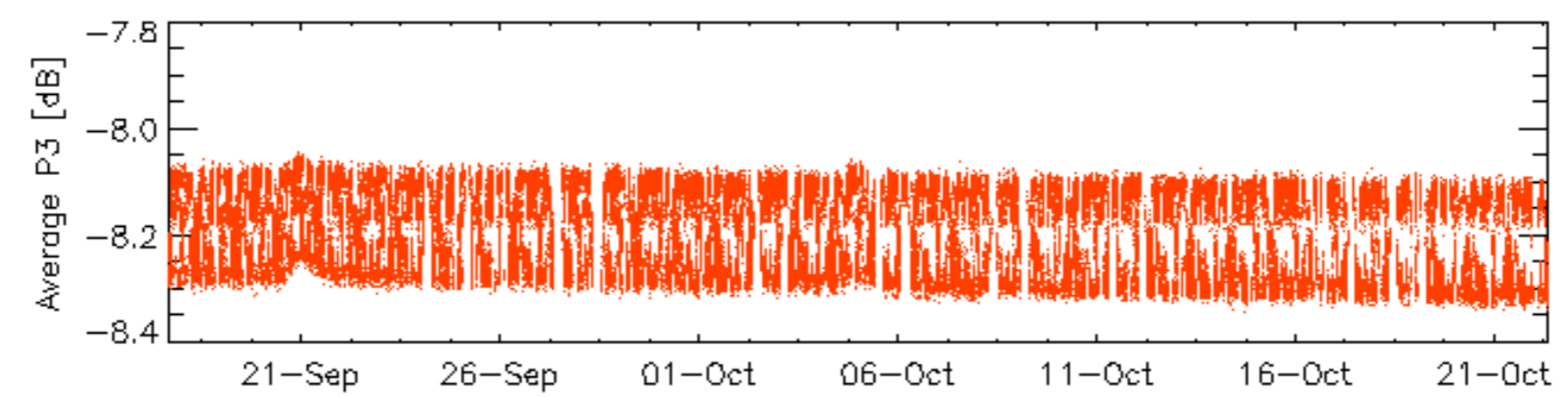
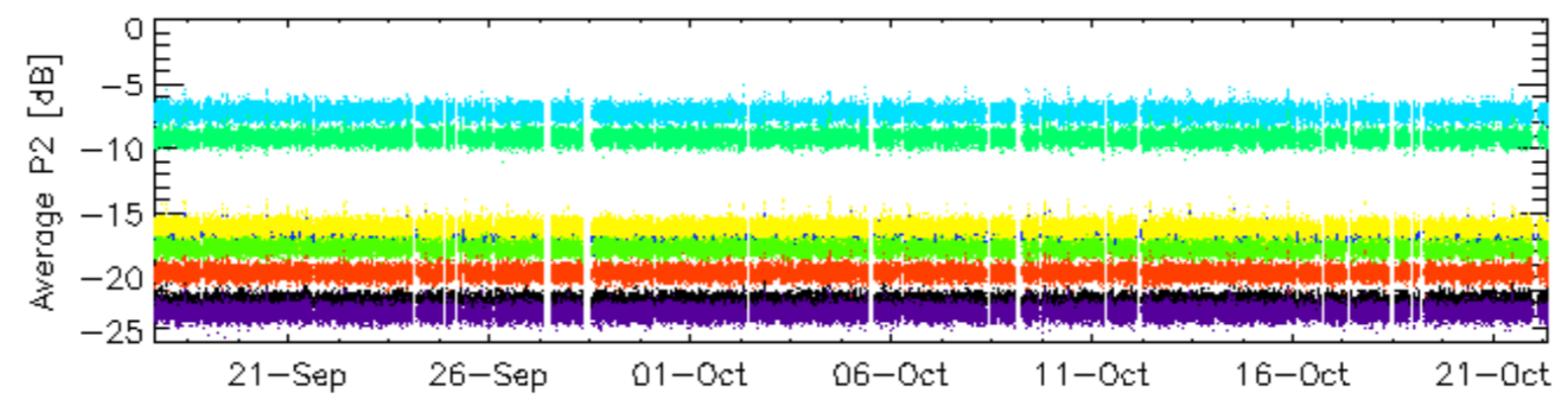
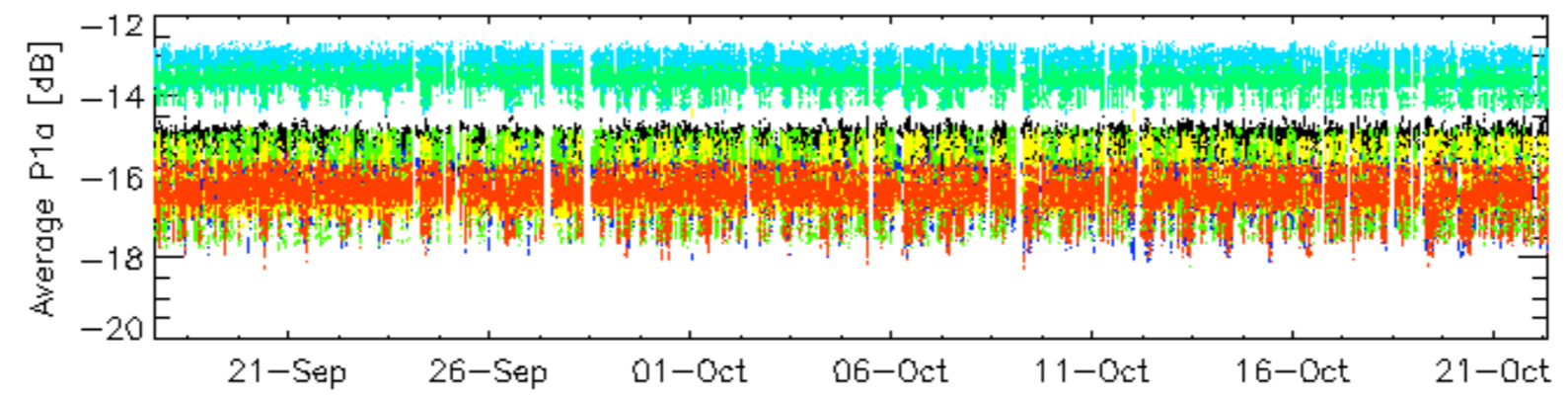
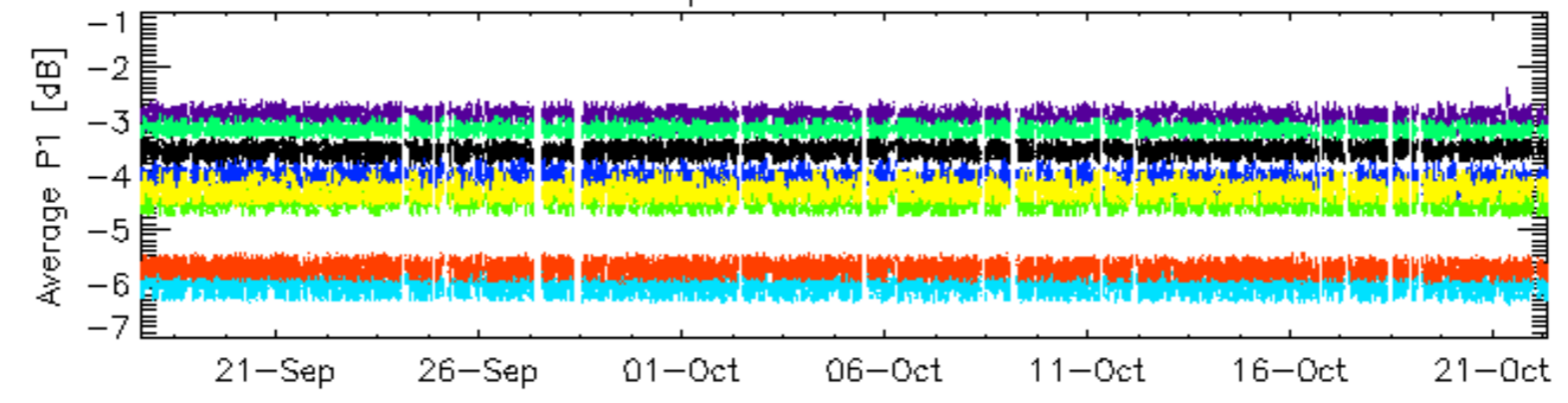


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

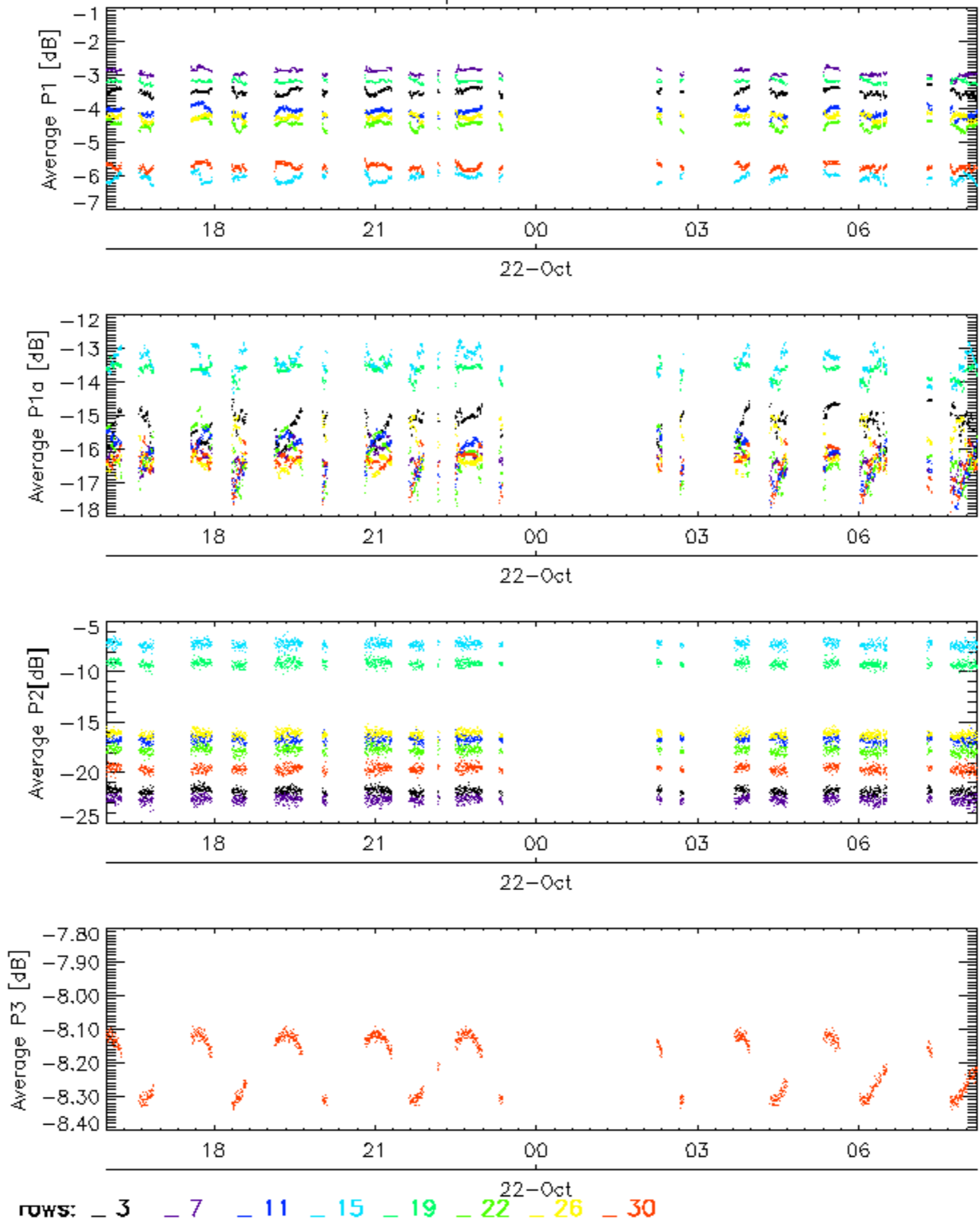


Cal pulses for WVS IS2

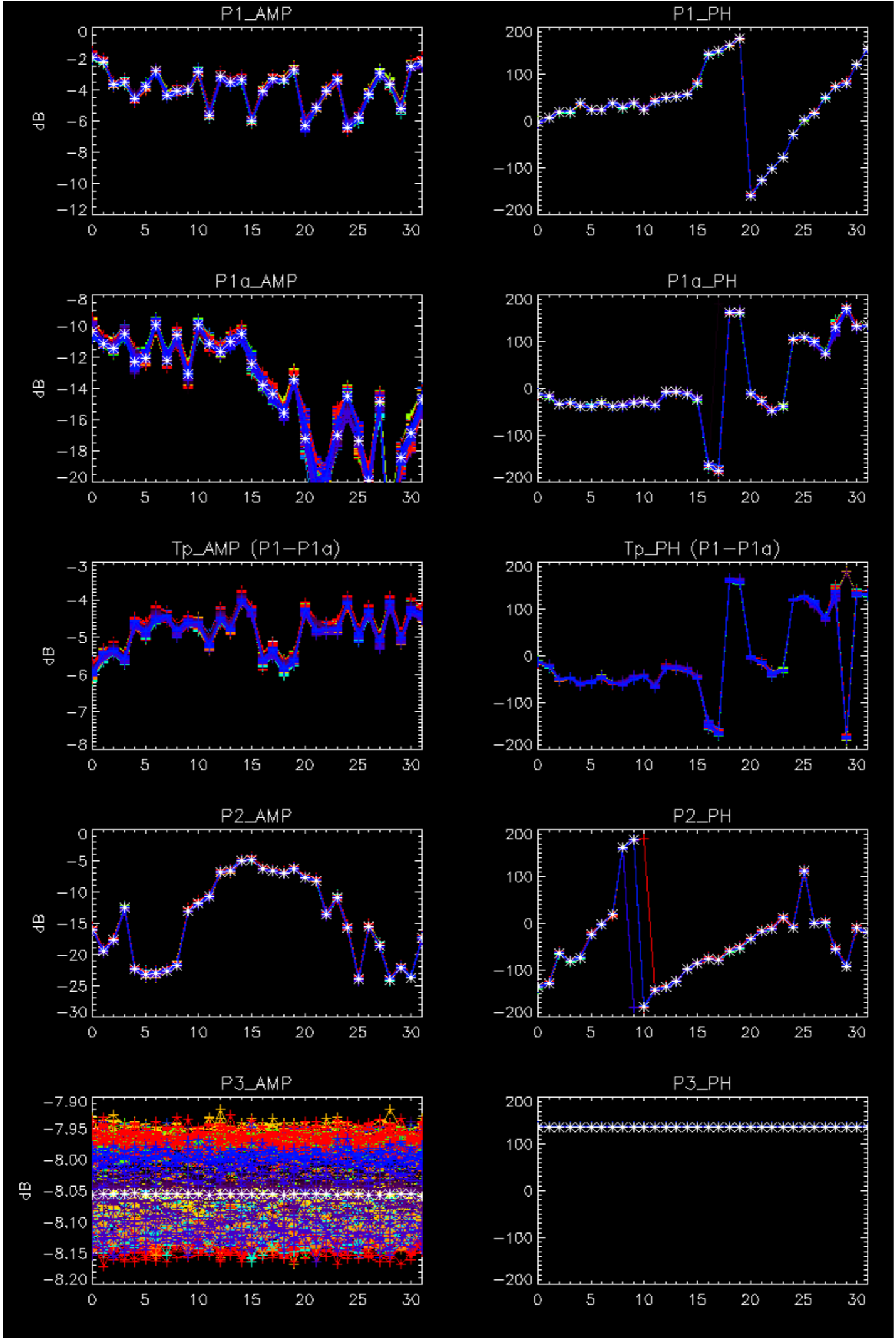


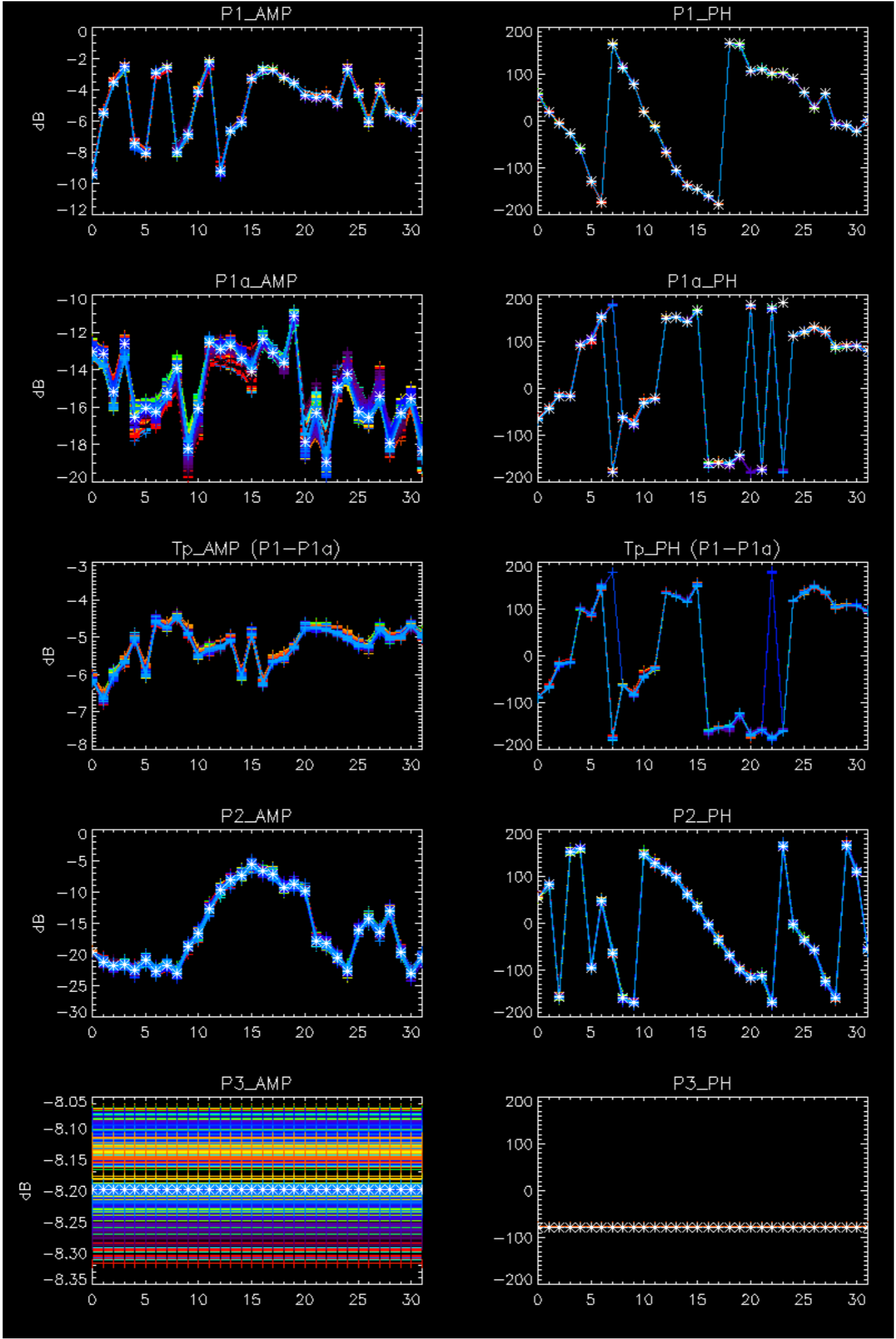
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Cal pulses for WVS IS2



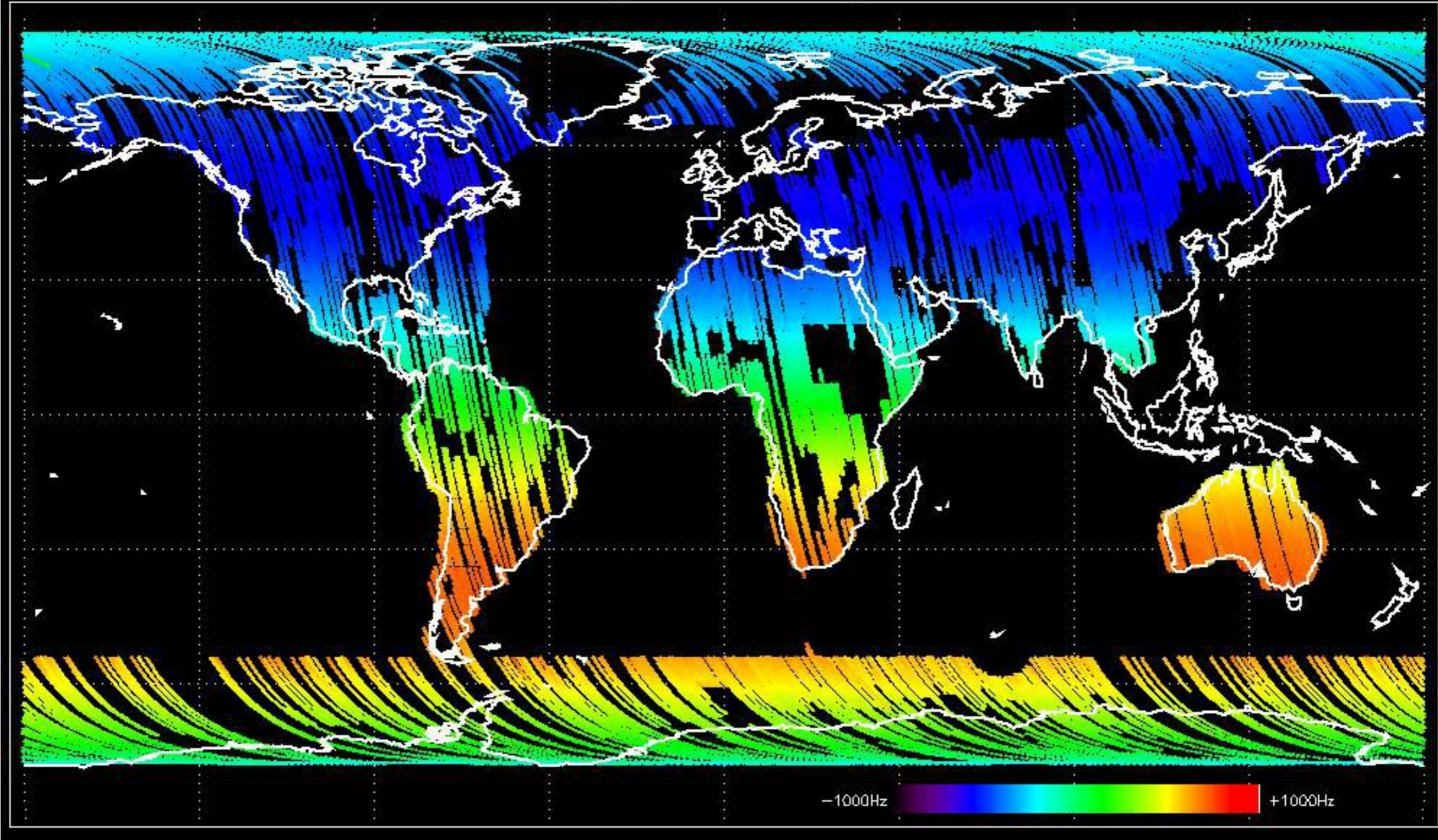
No anomalies observed.



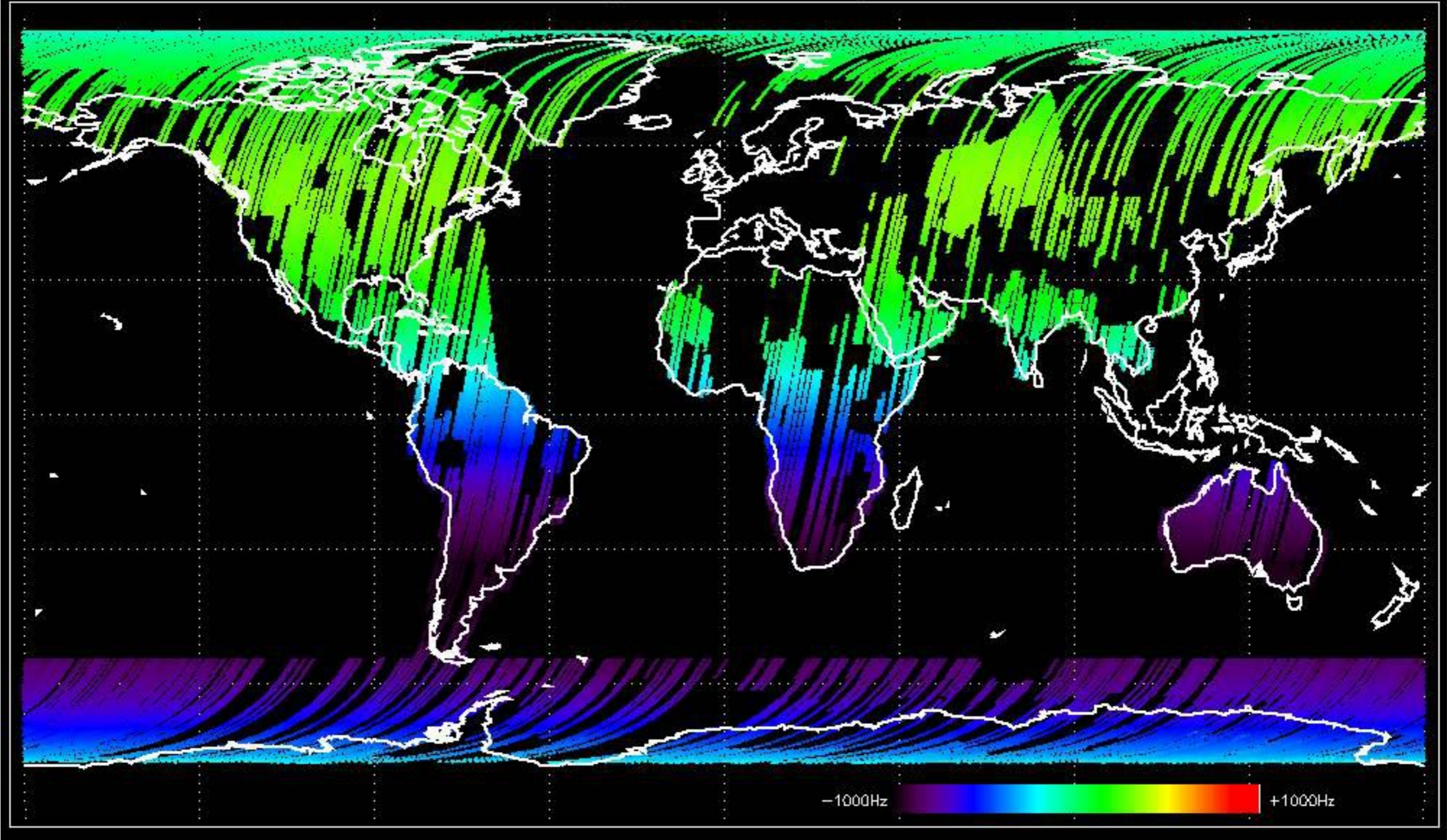


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

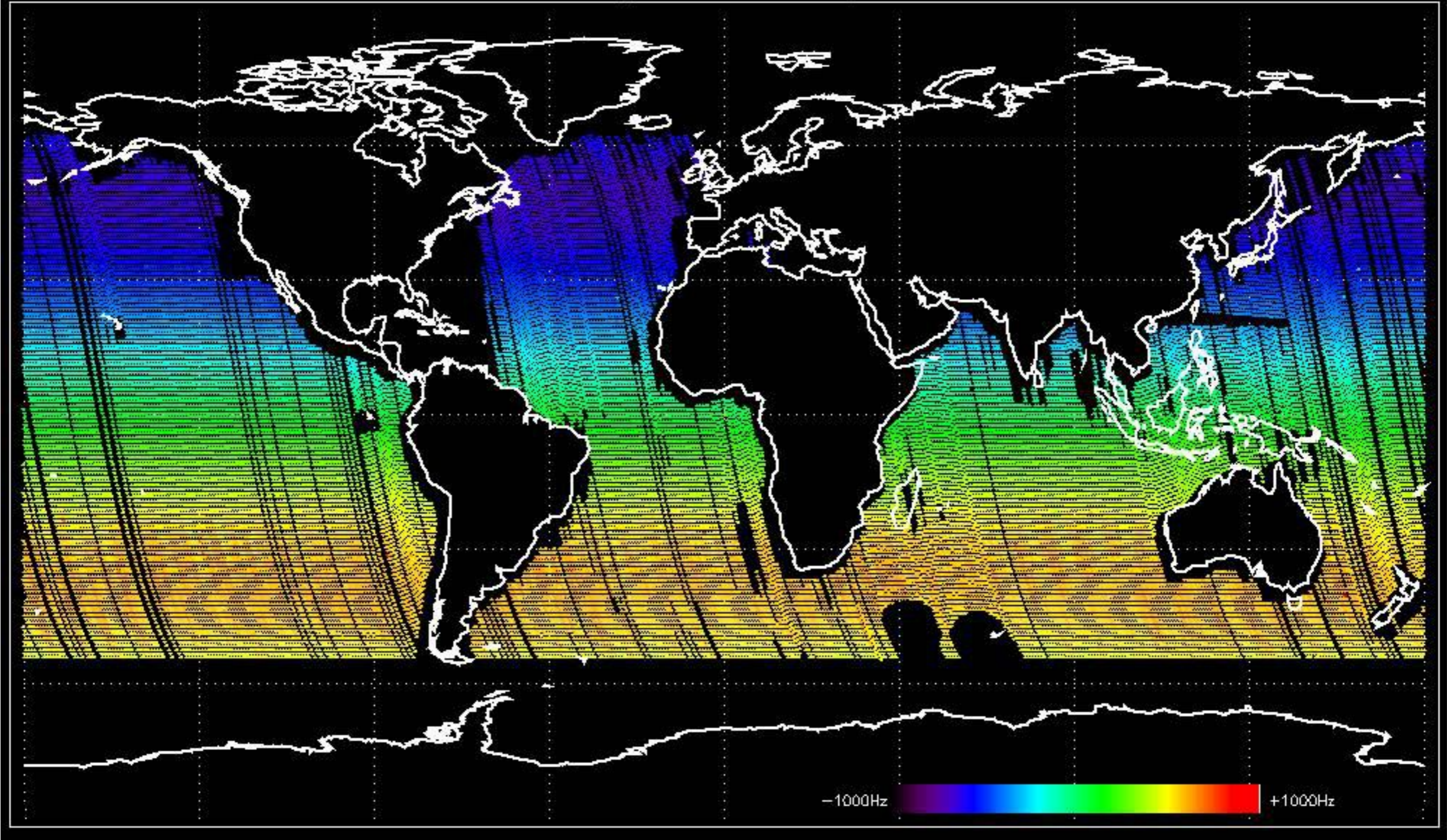
Doppler 'GM1' 'SS1' ascending



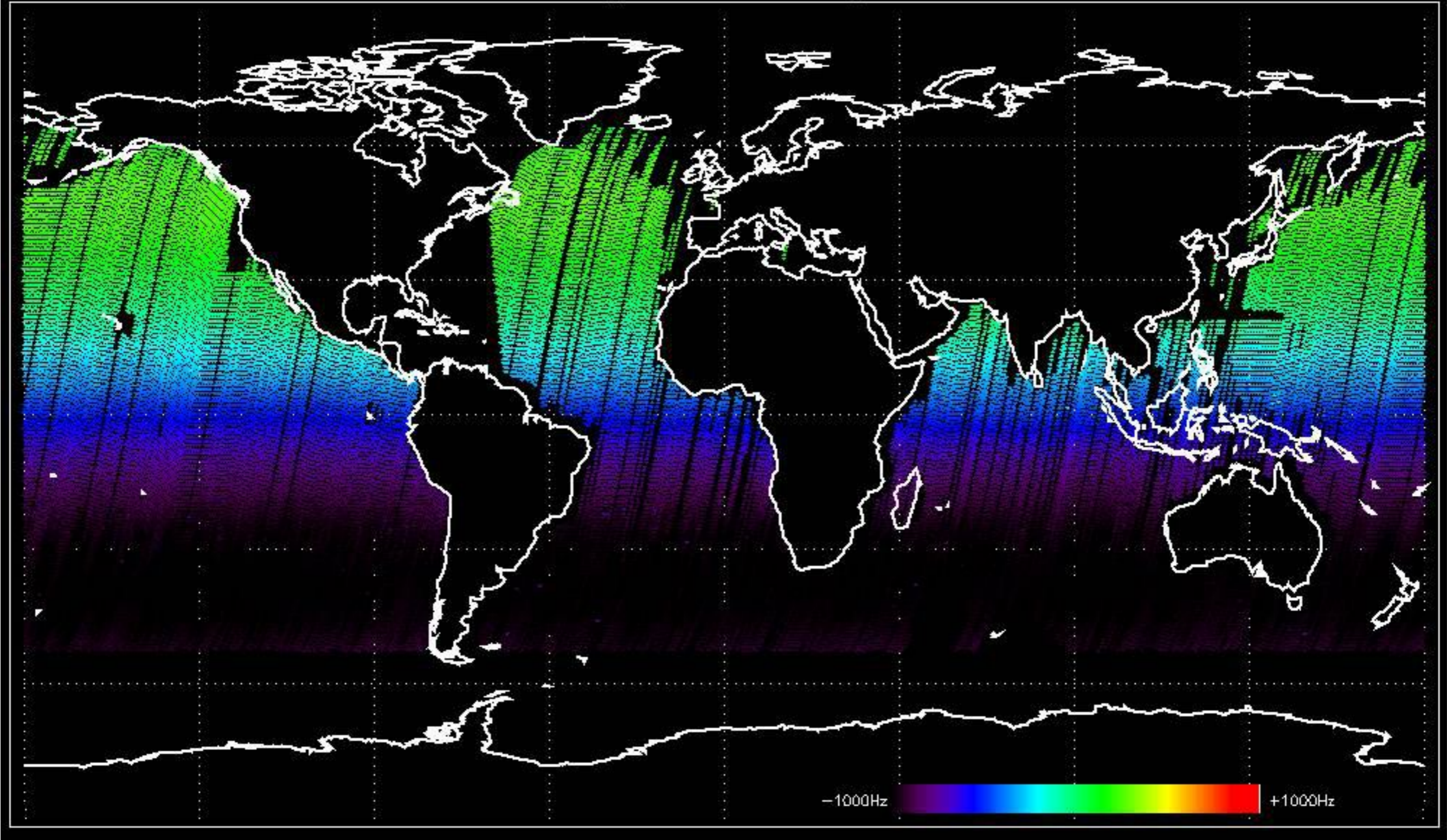
Doppler 'GM1' 'SS1' descending



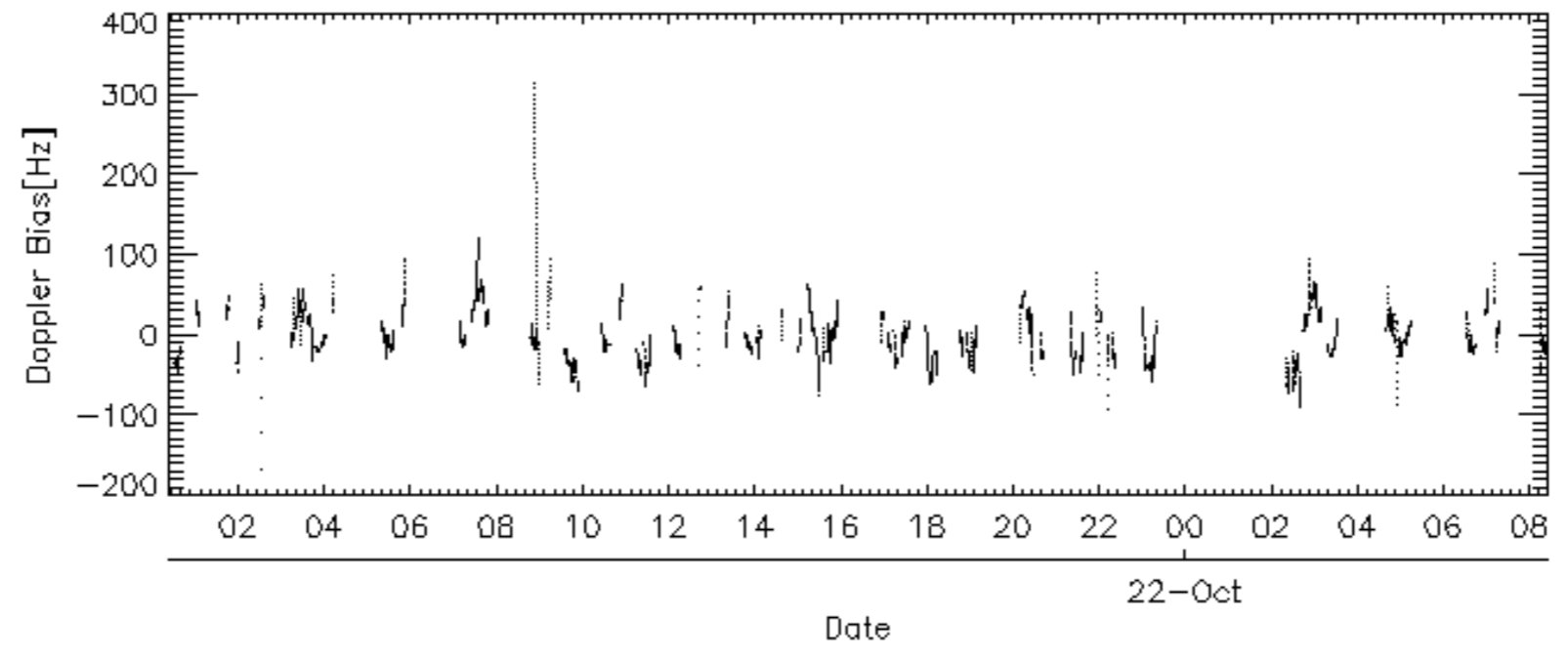
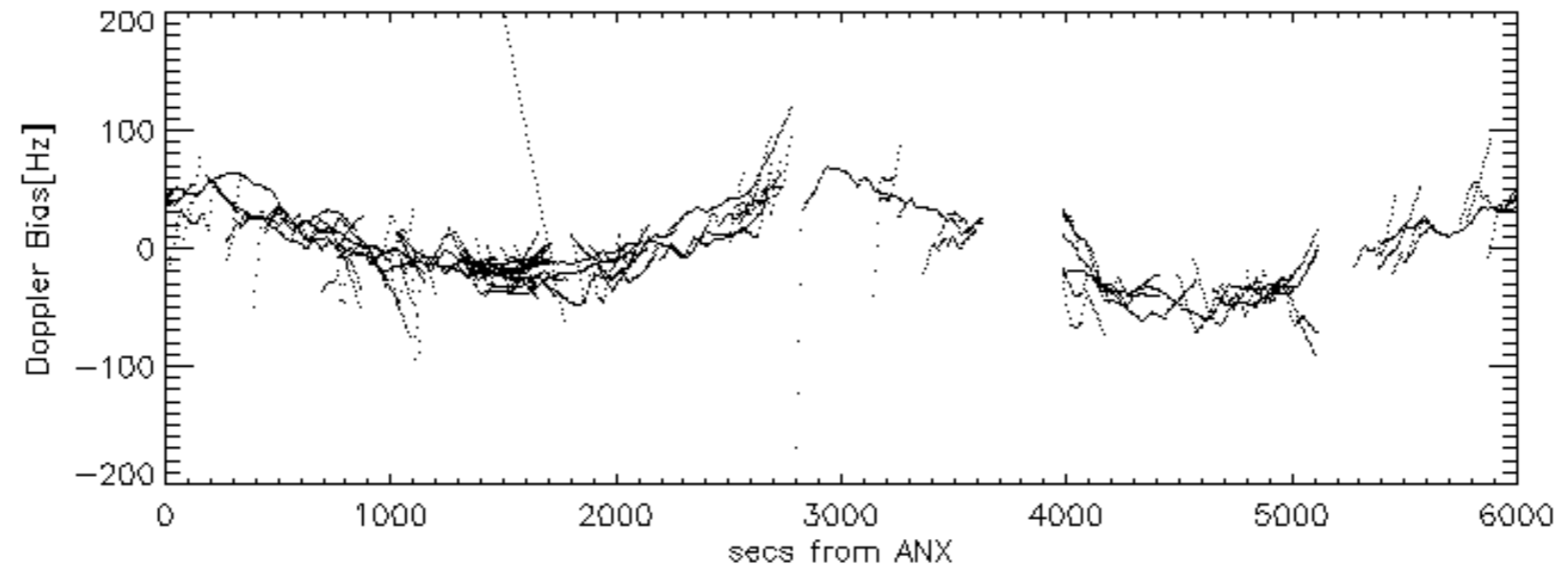
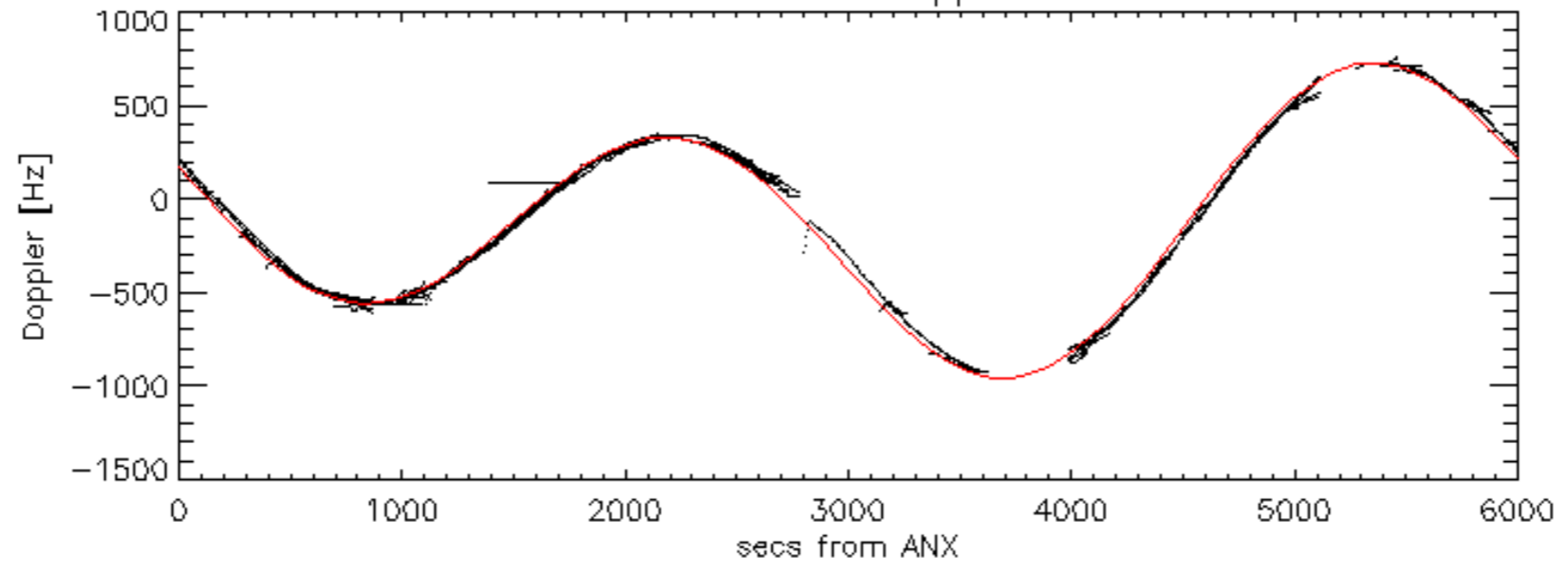
Doppler 'WVS' 'IS2' ascending

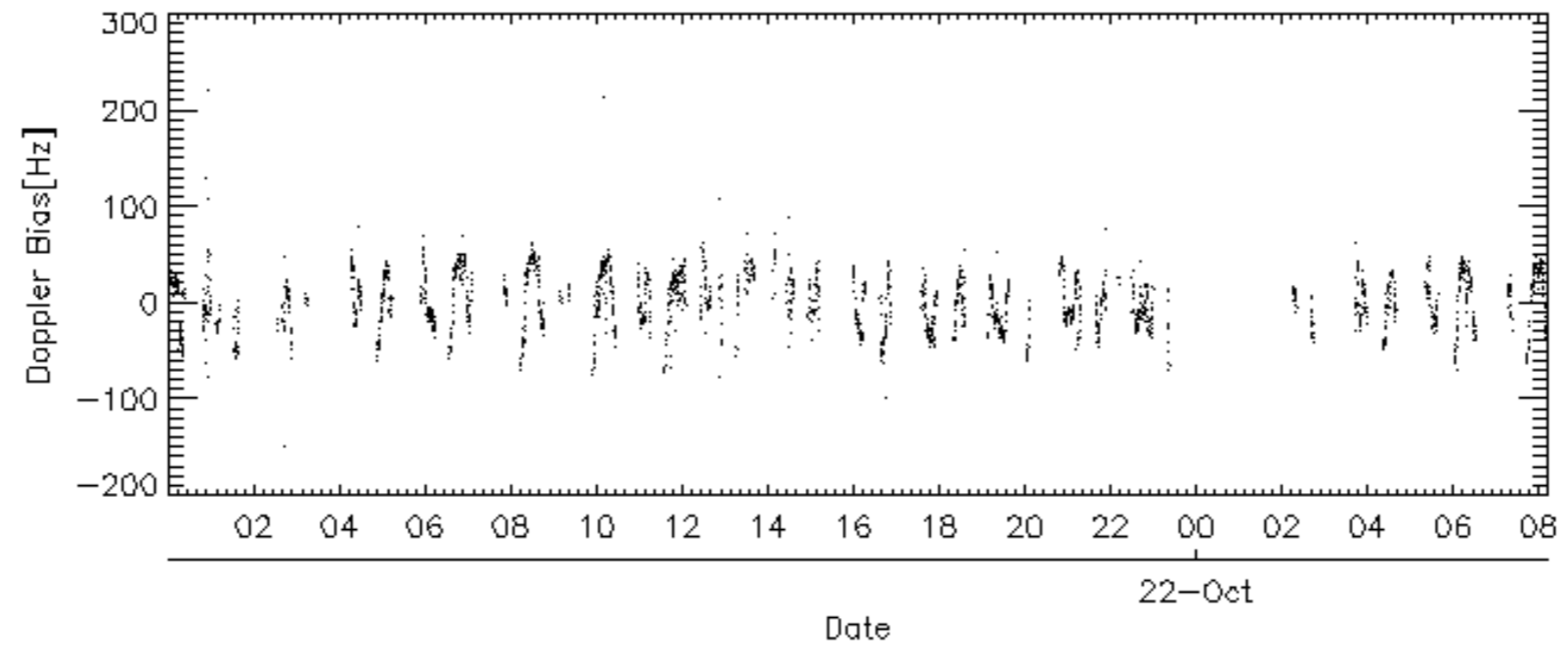
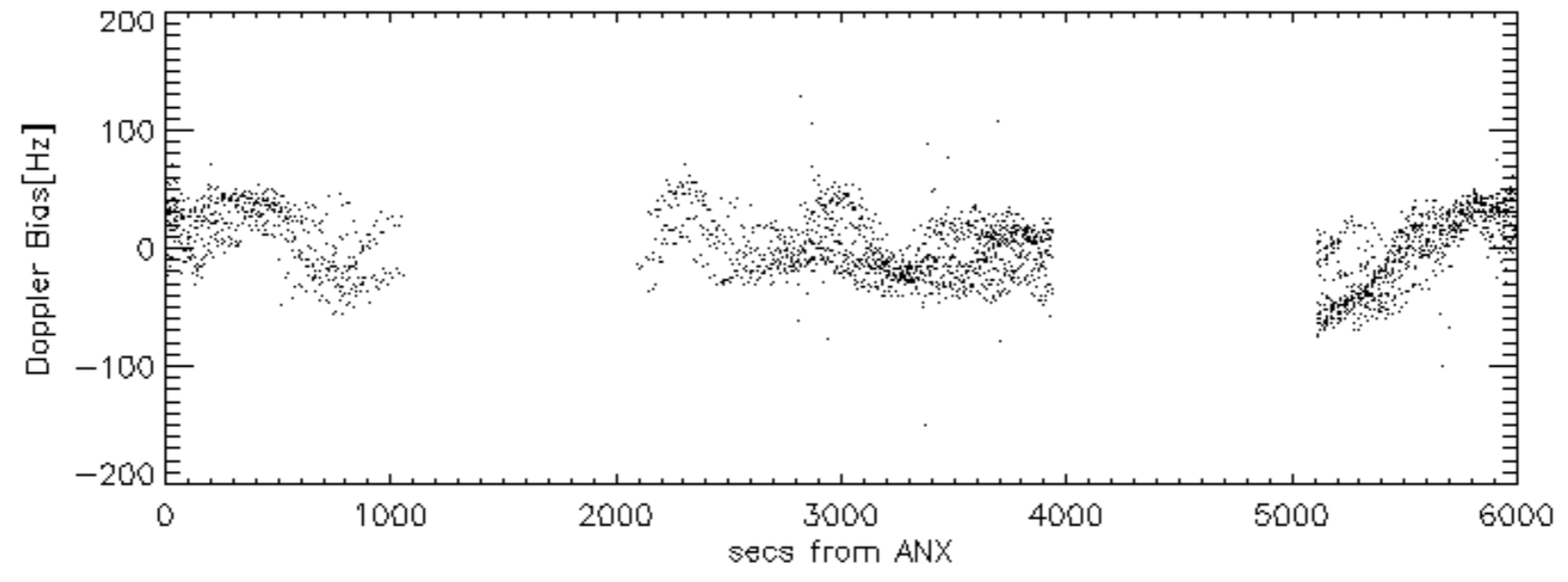
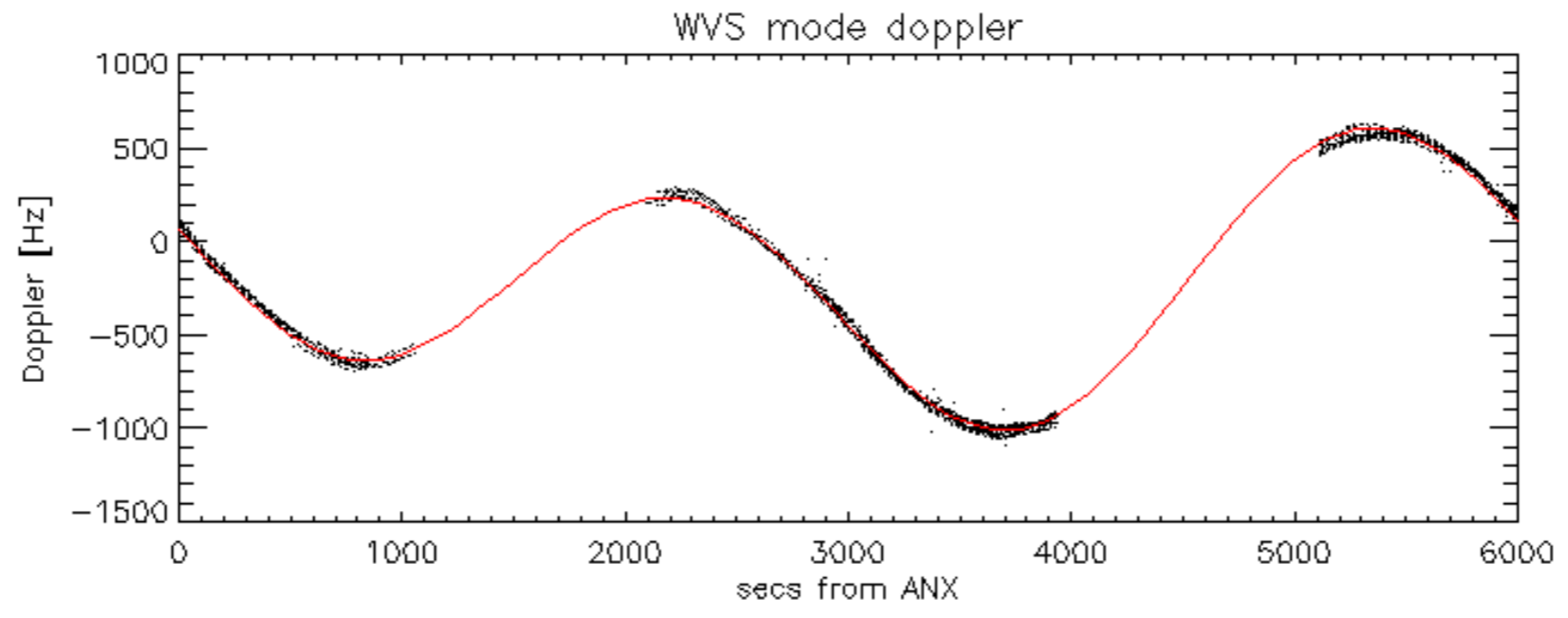


Doppler 'WVS' 'IS2' descending

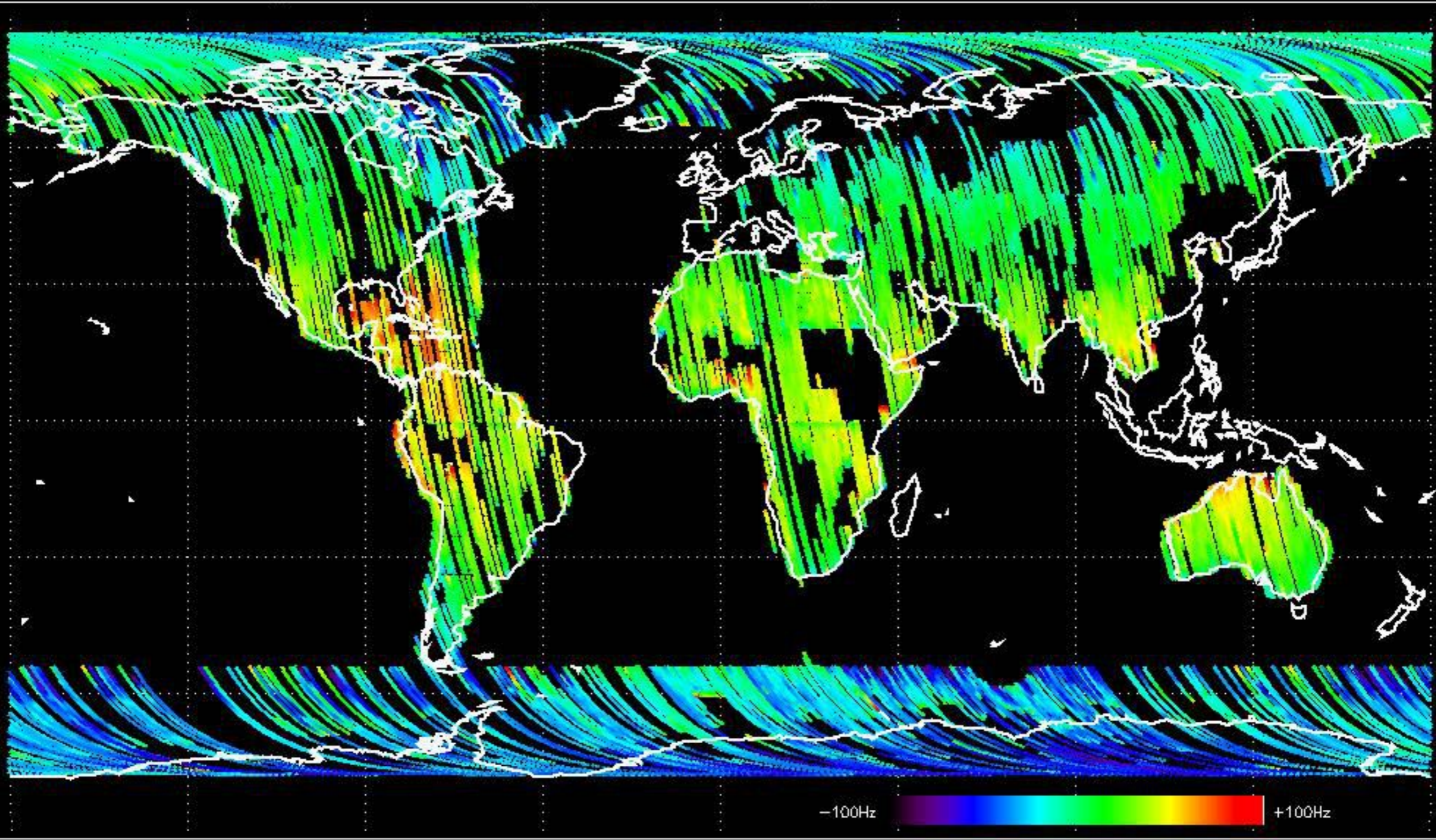


GM1 mode doppler

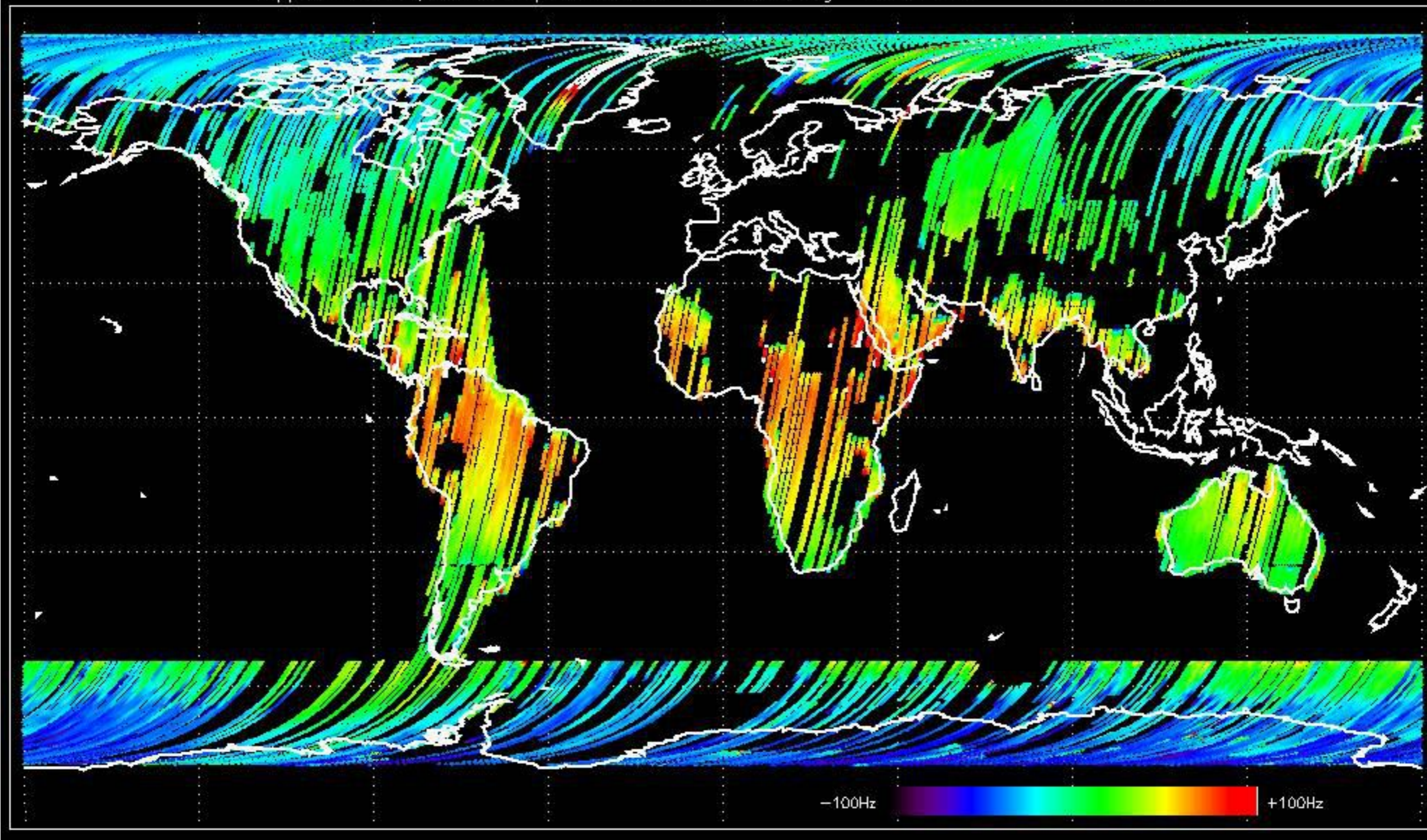




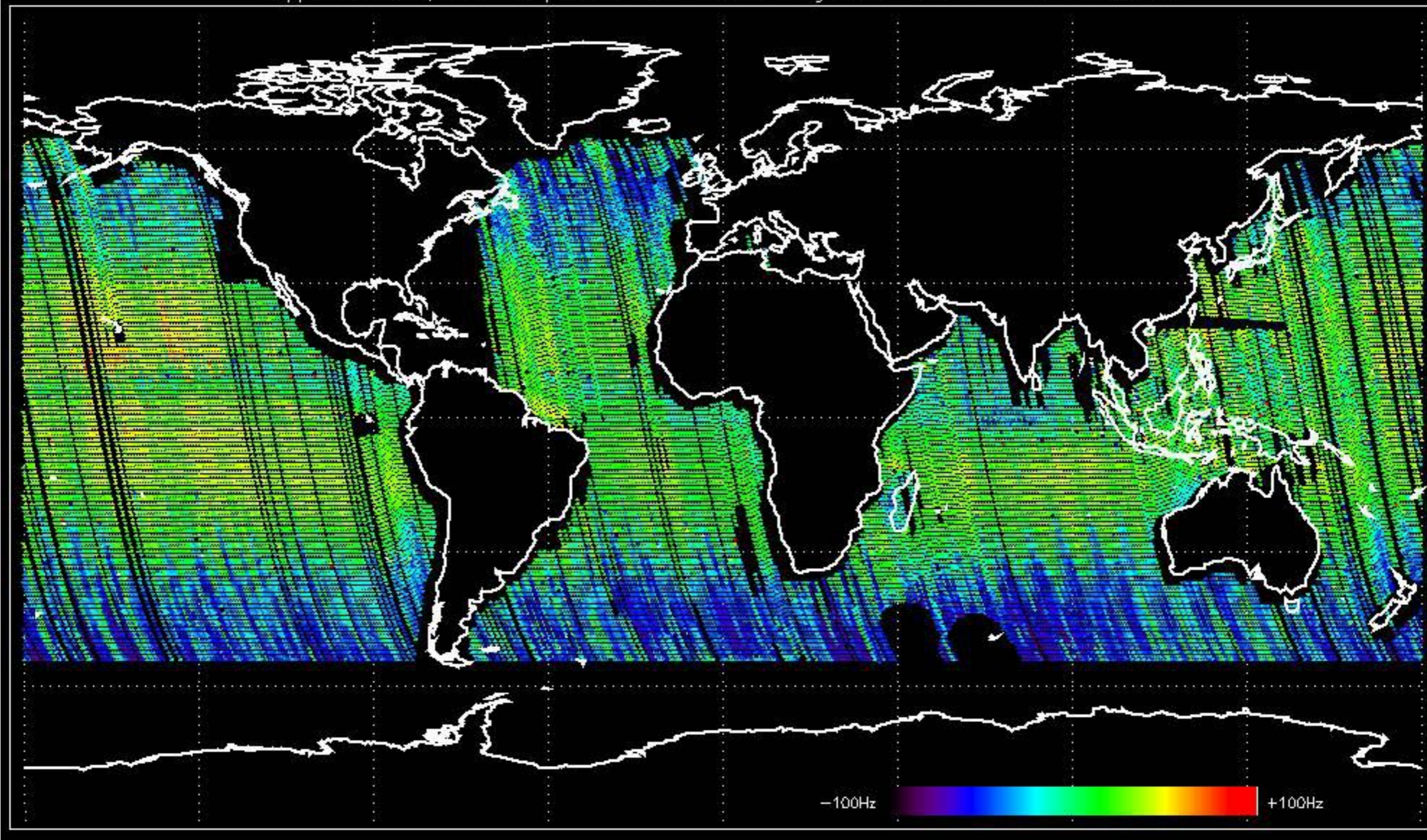
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -7.8918149 Hz



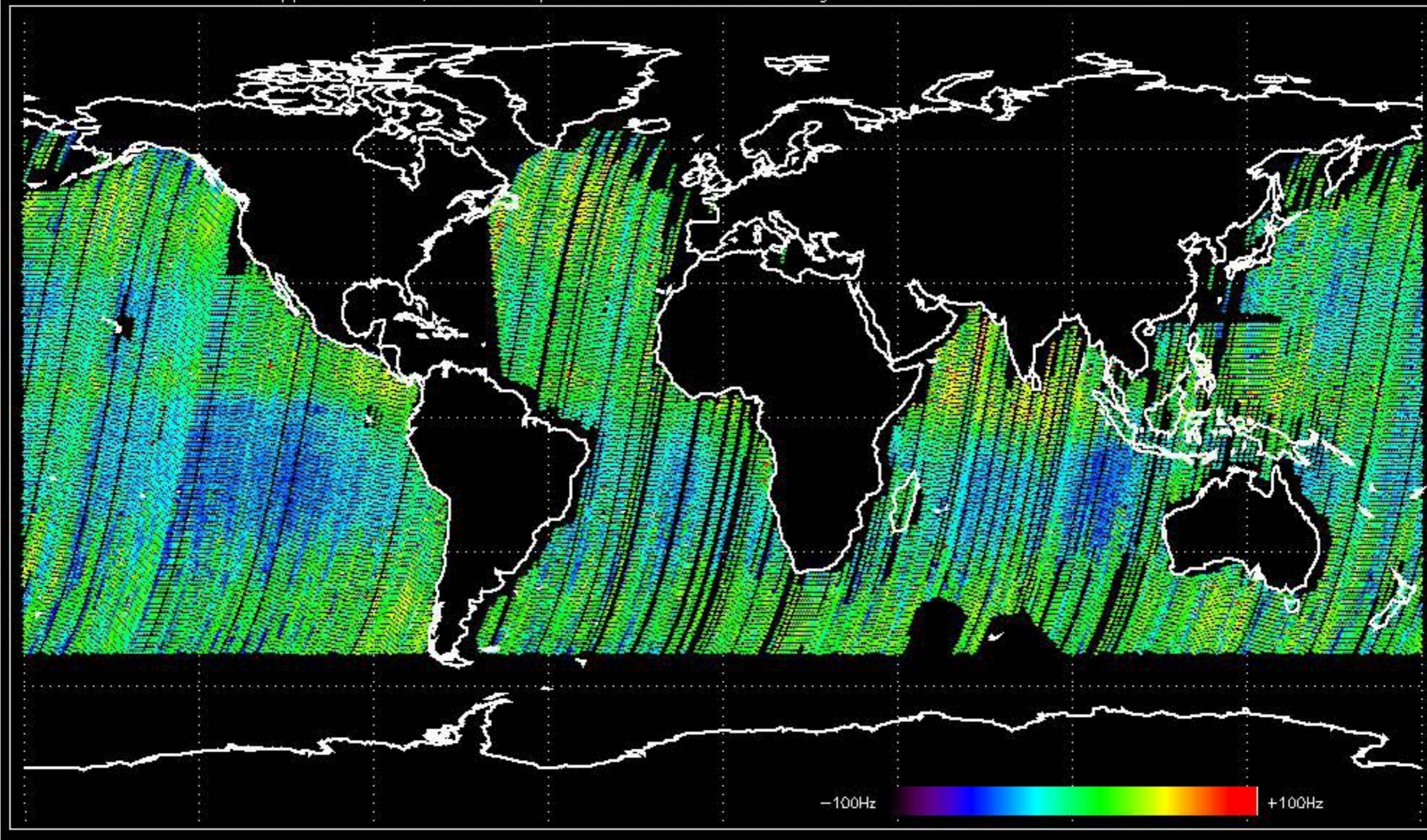
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.8730009 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of 0.044778153 Hz

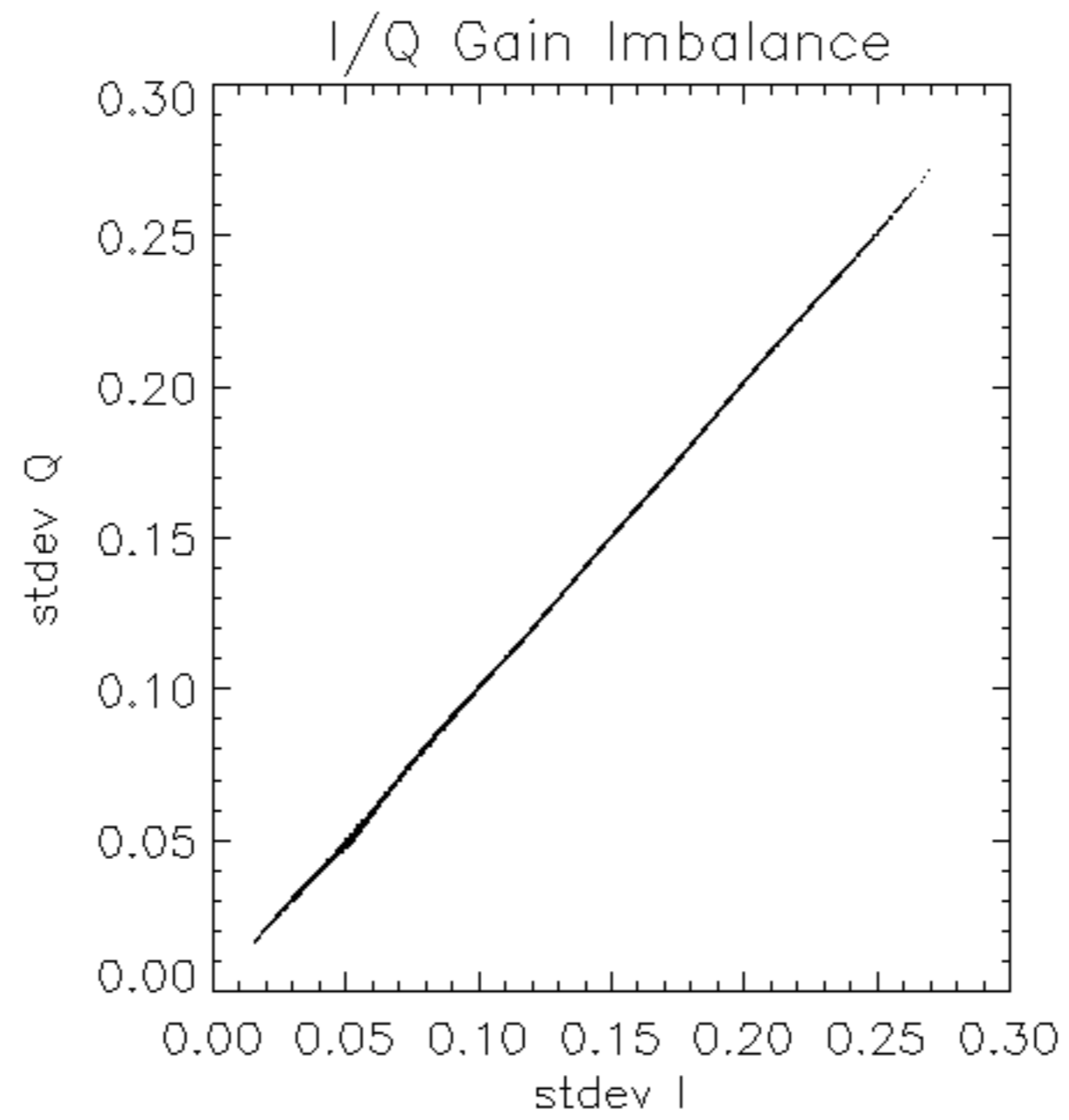


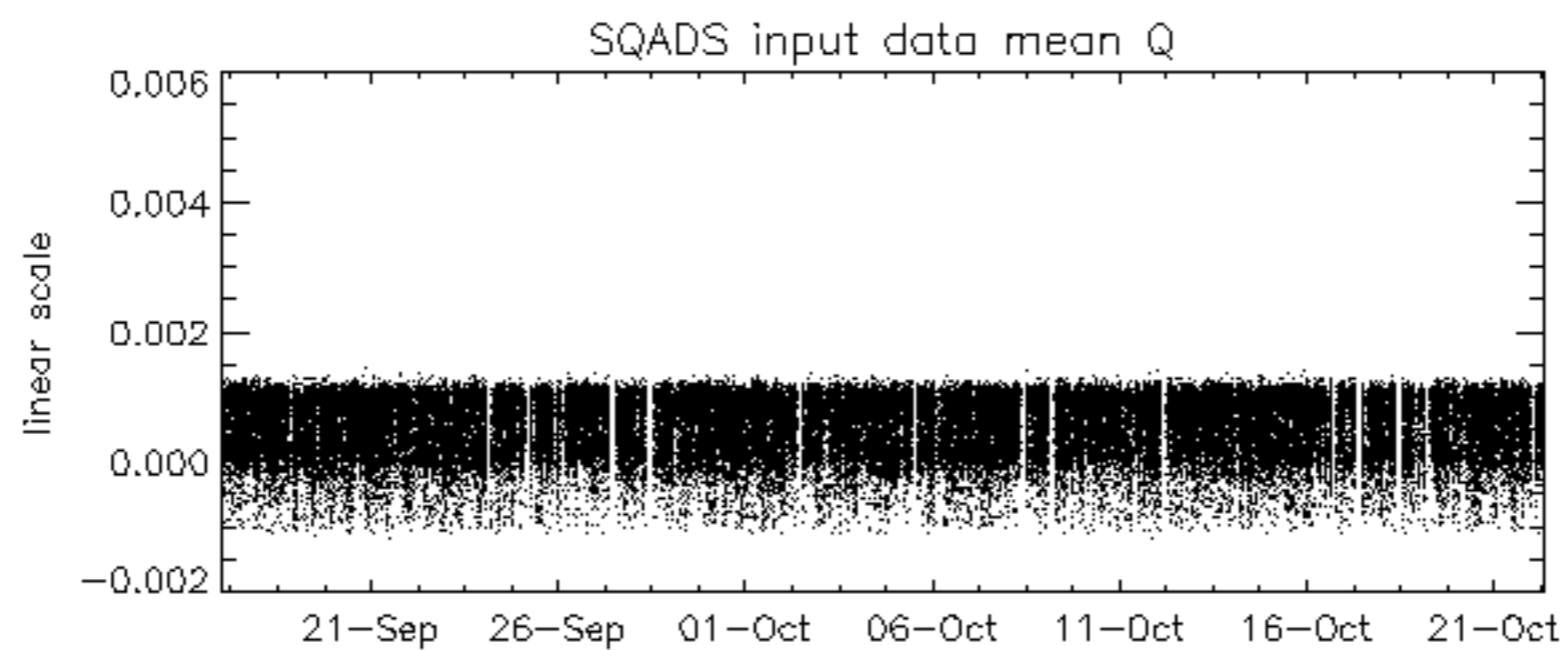
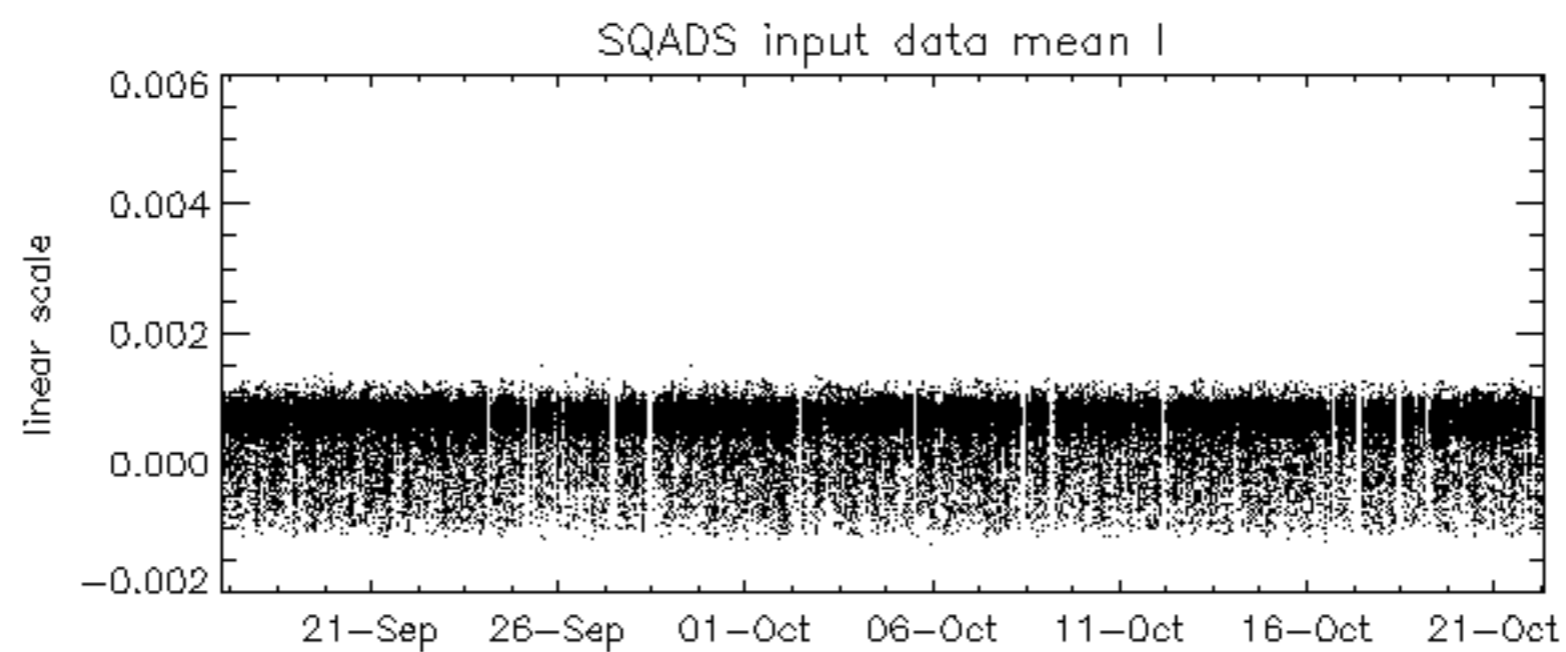
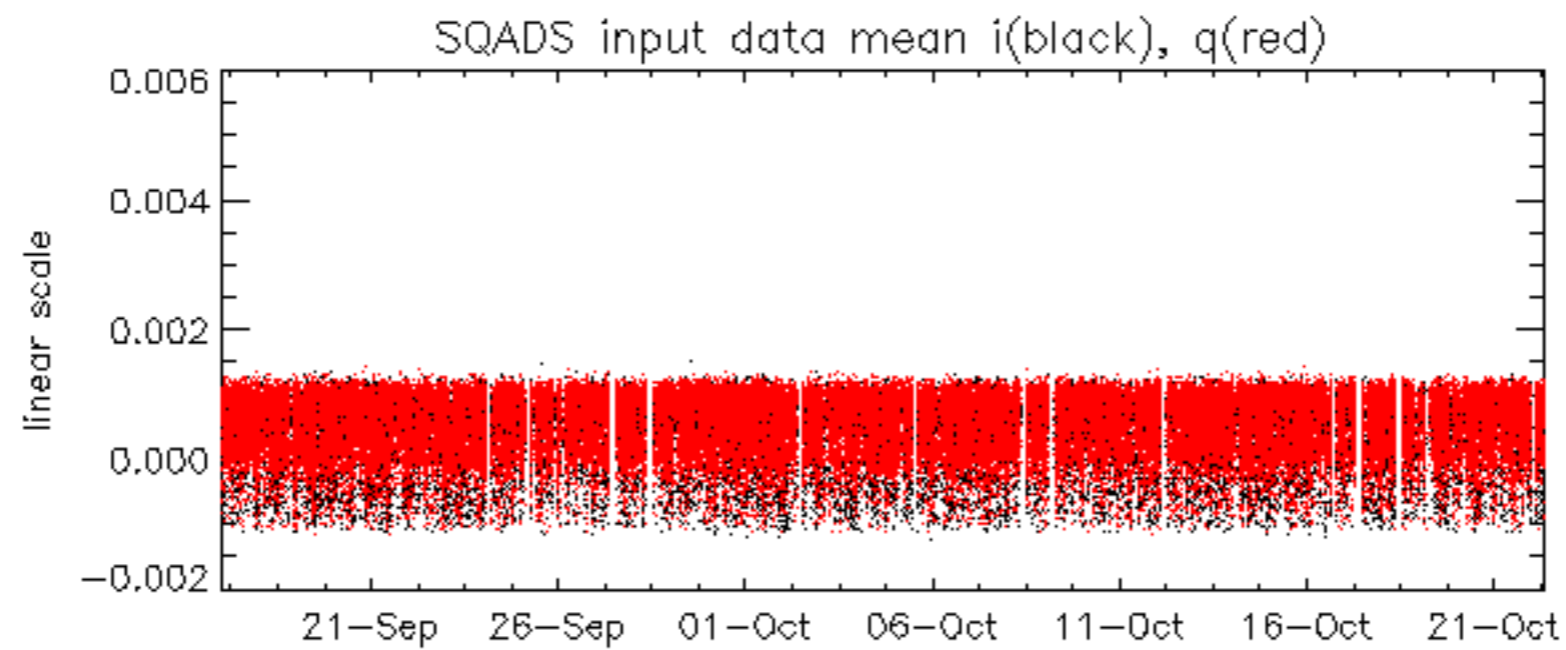
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -3.7232554 Hz

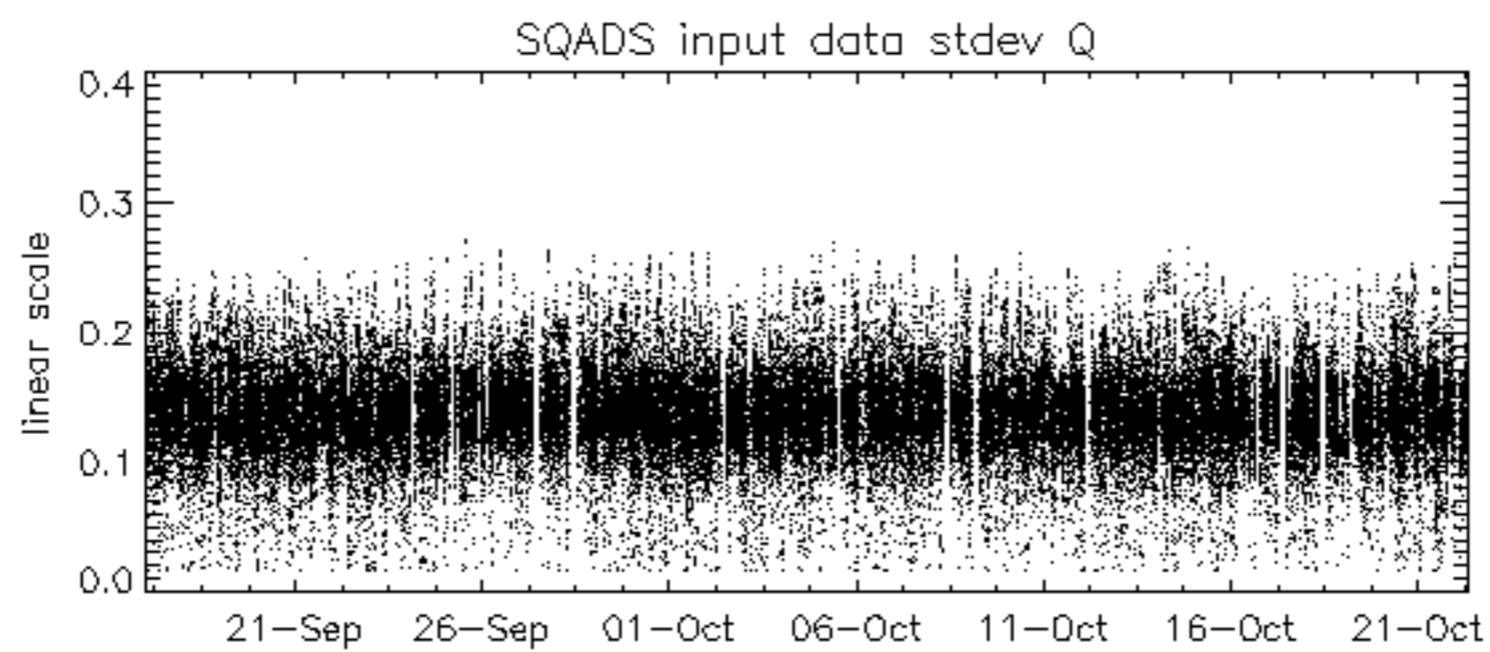
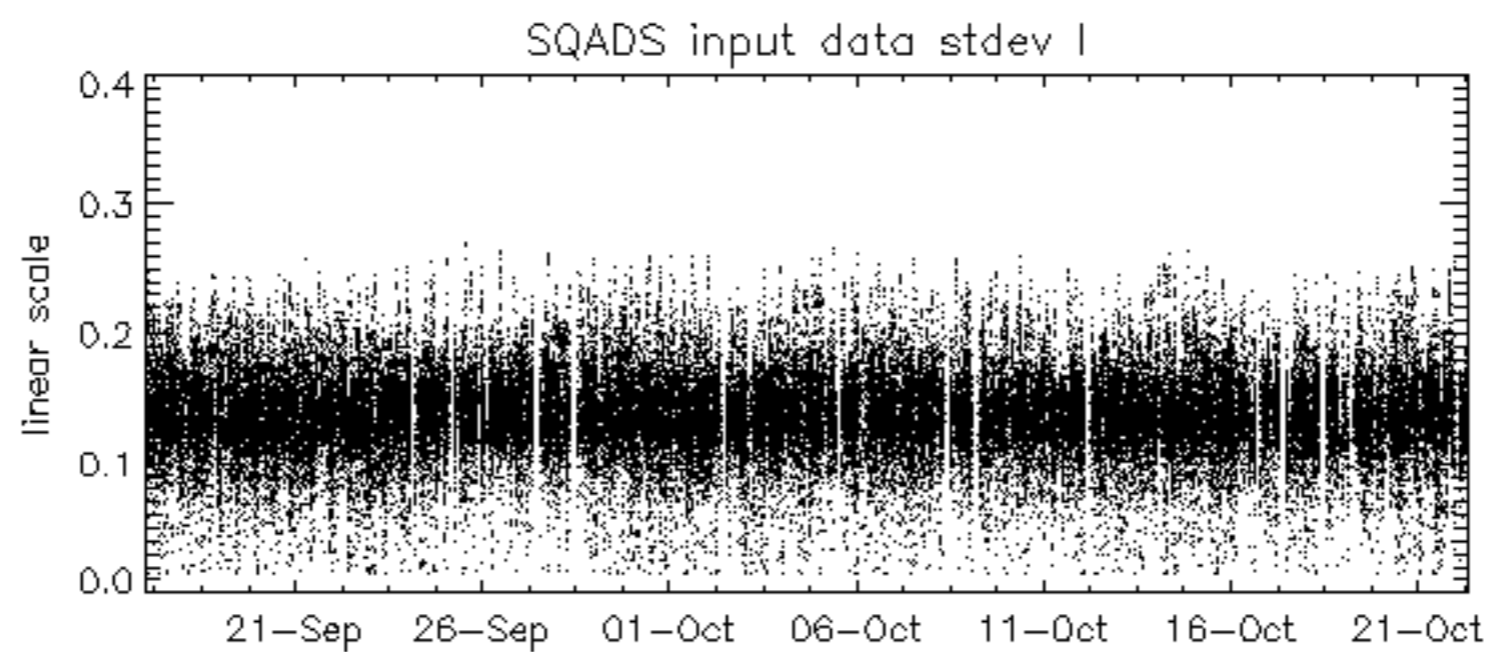
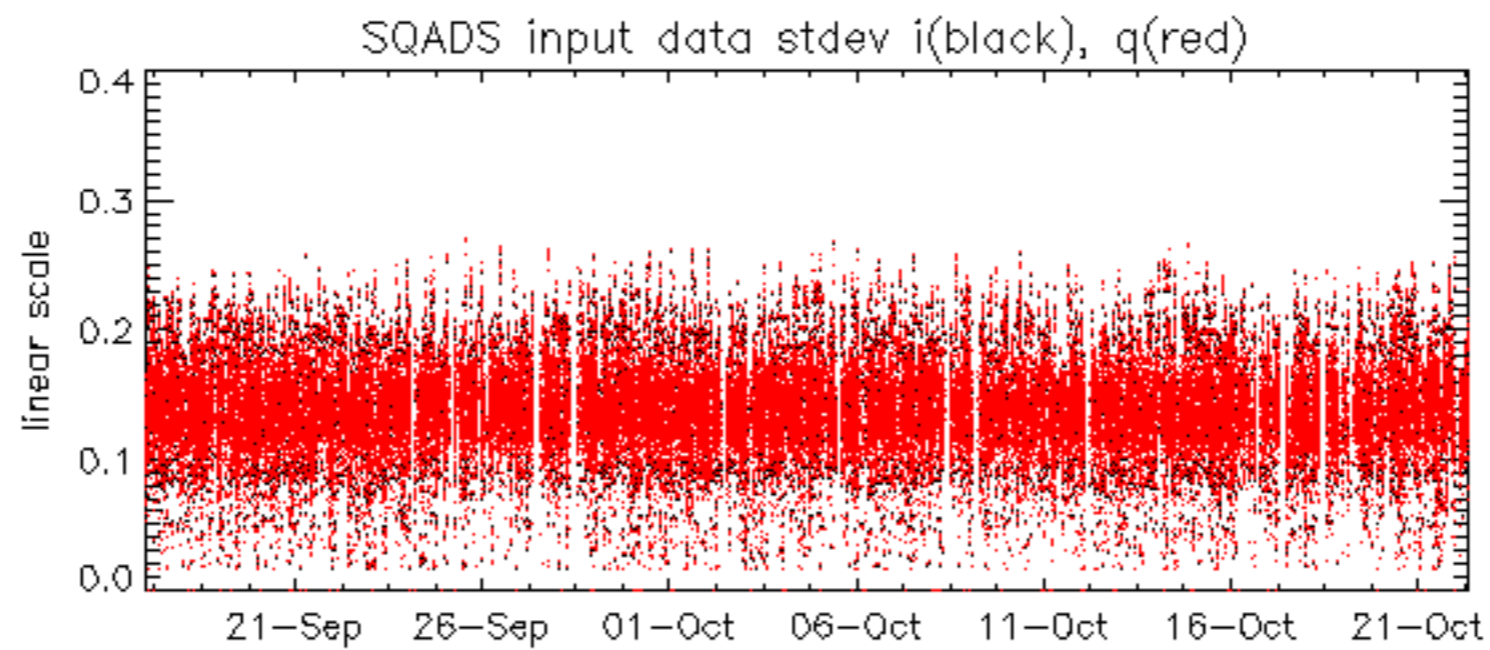


No anomalies observed on available MS products:

No anomalies observed.



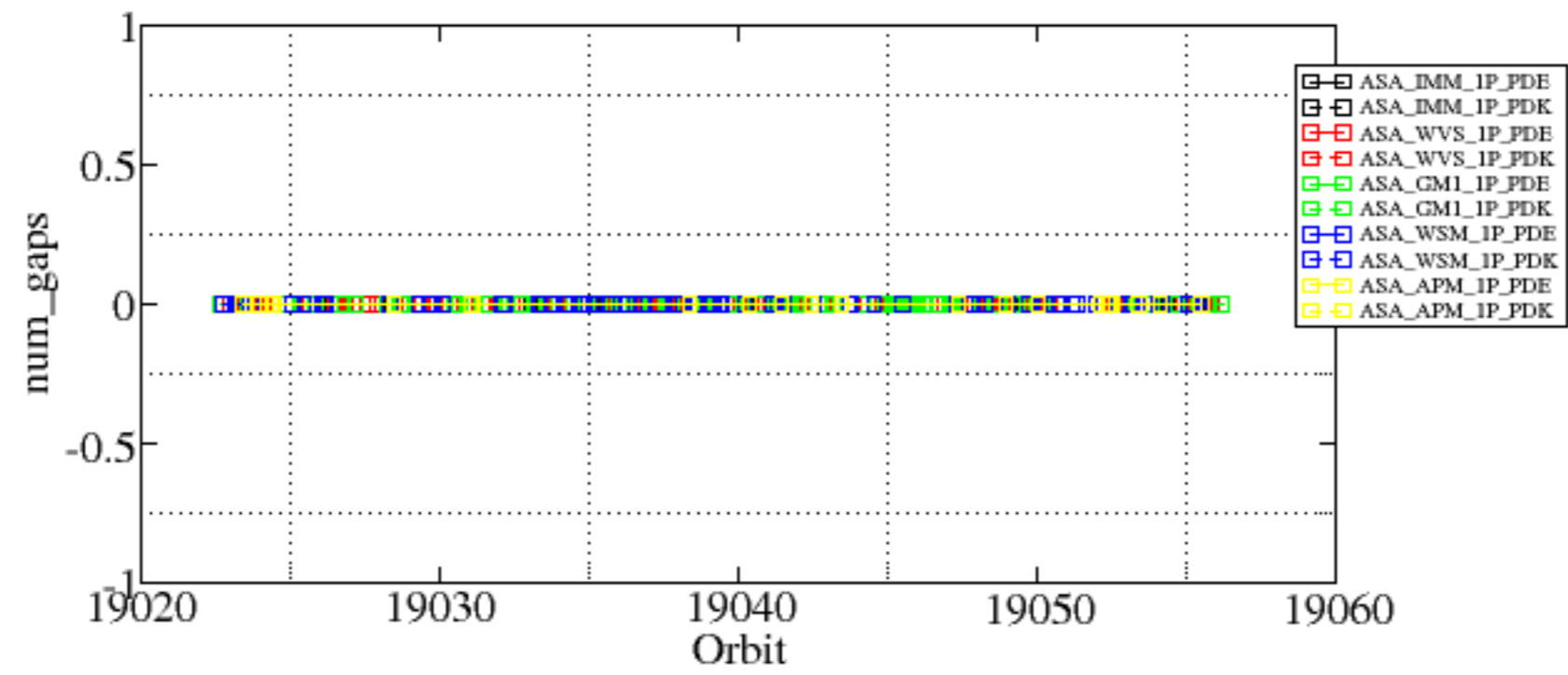


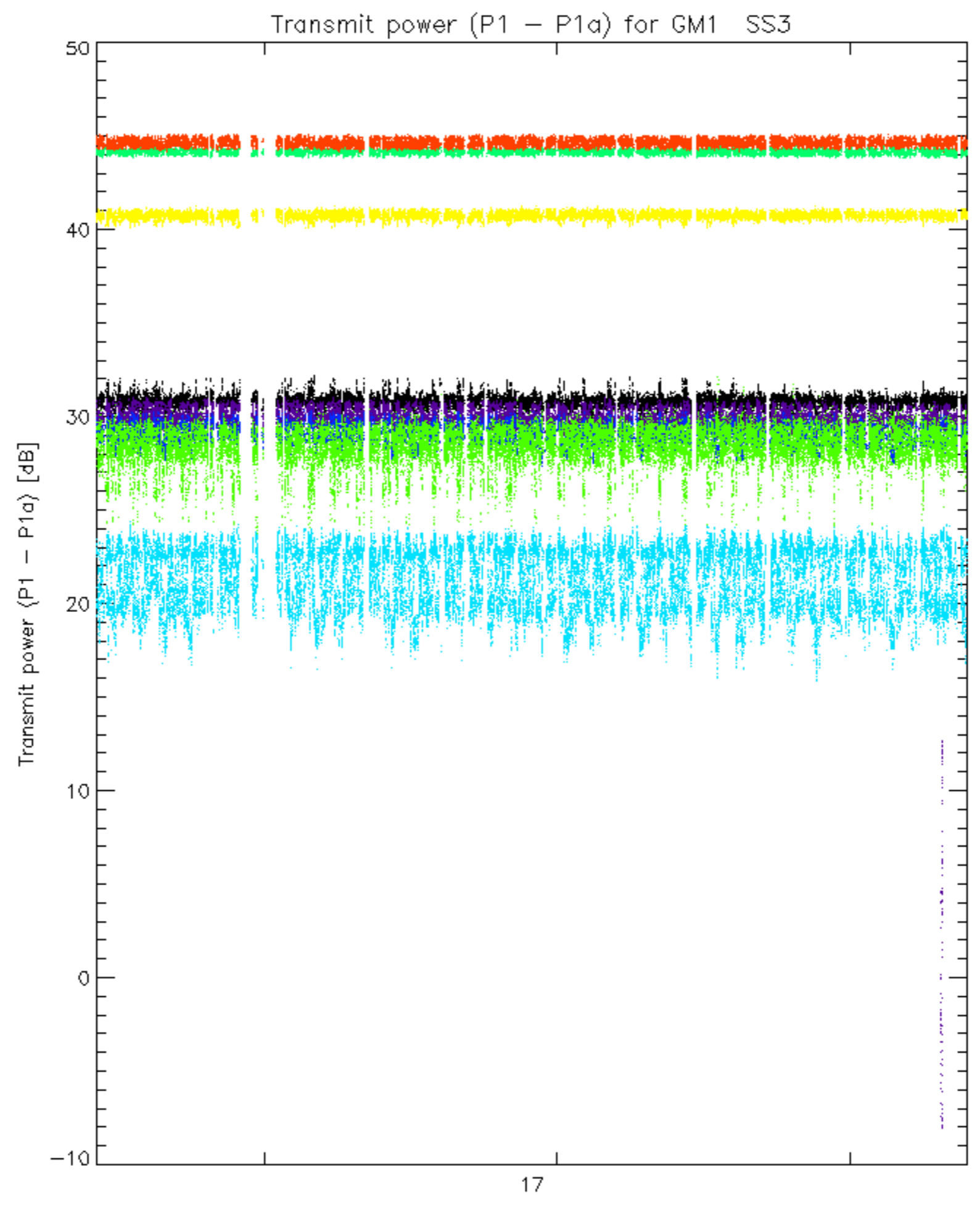


Summary of analysis for the last 3 days 2005102[012]

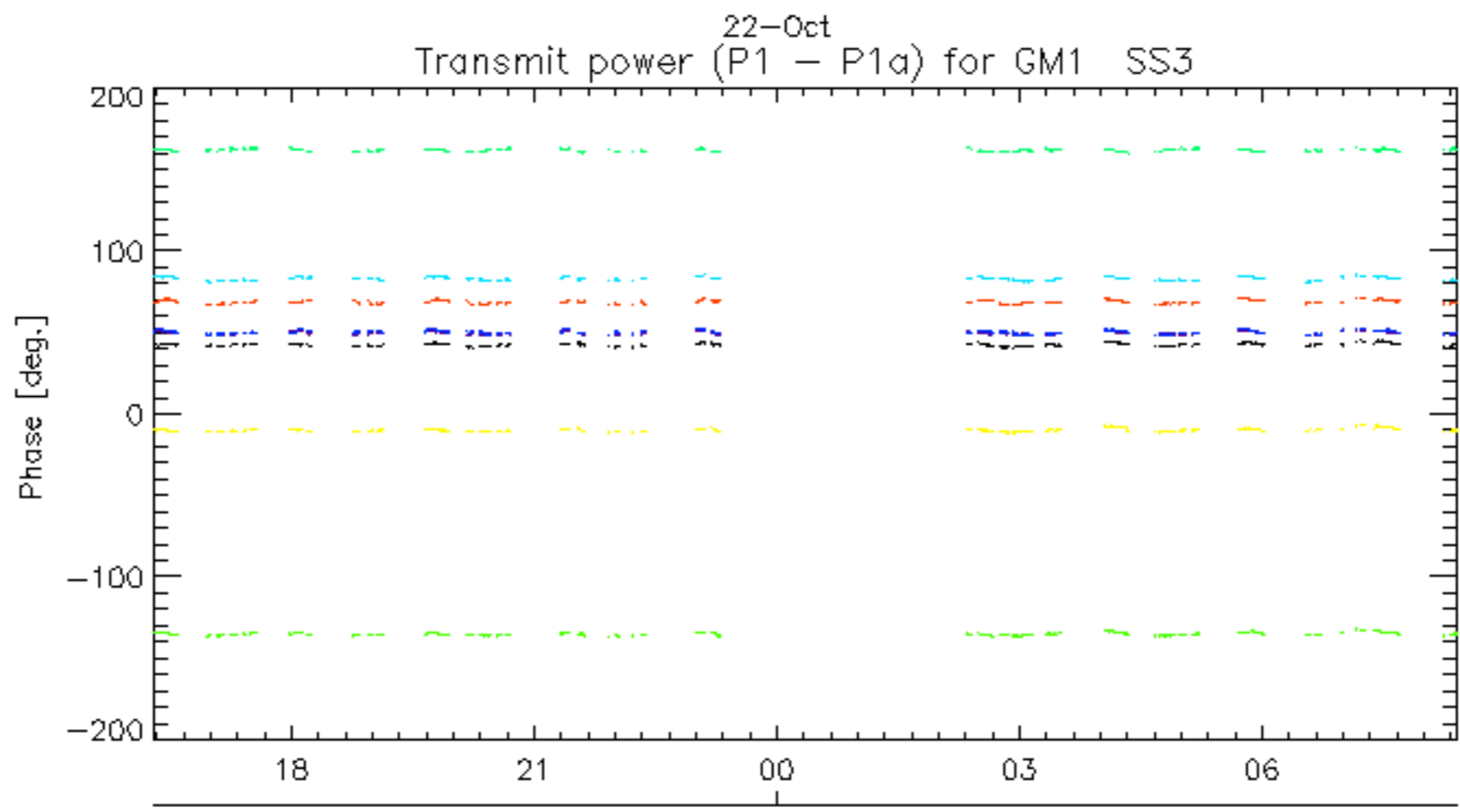
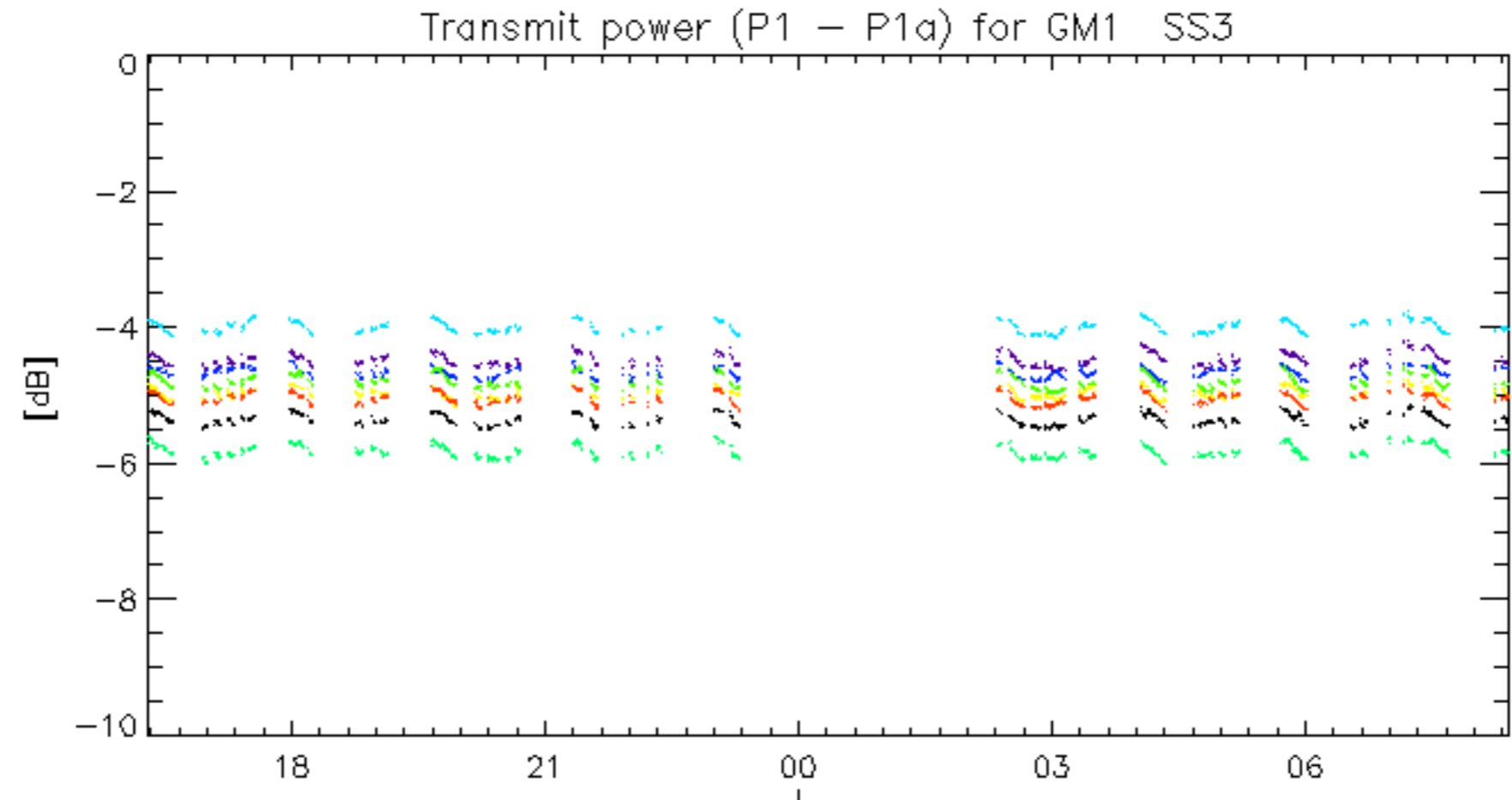
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

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_00000422041_00461_19052_5382.N1	0	120

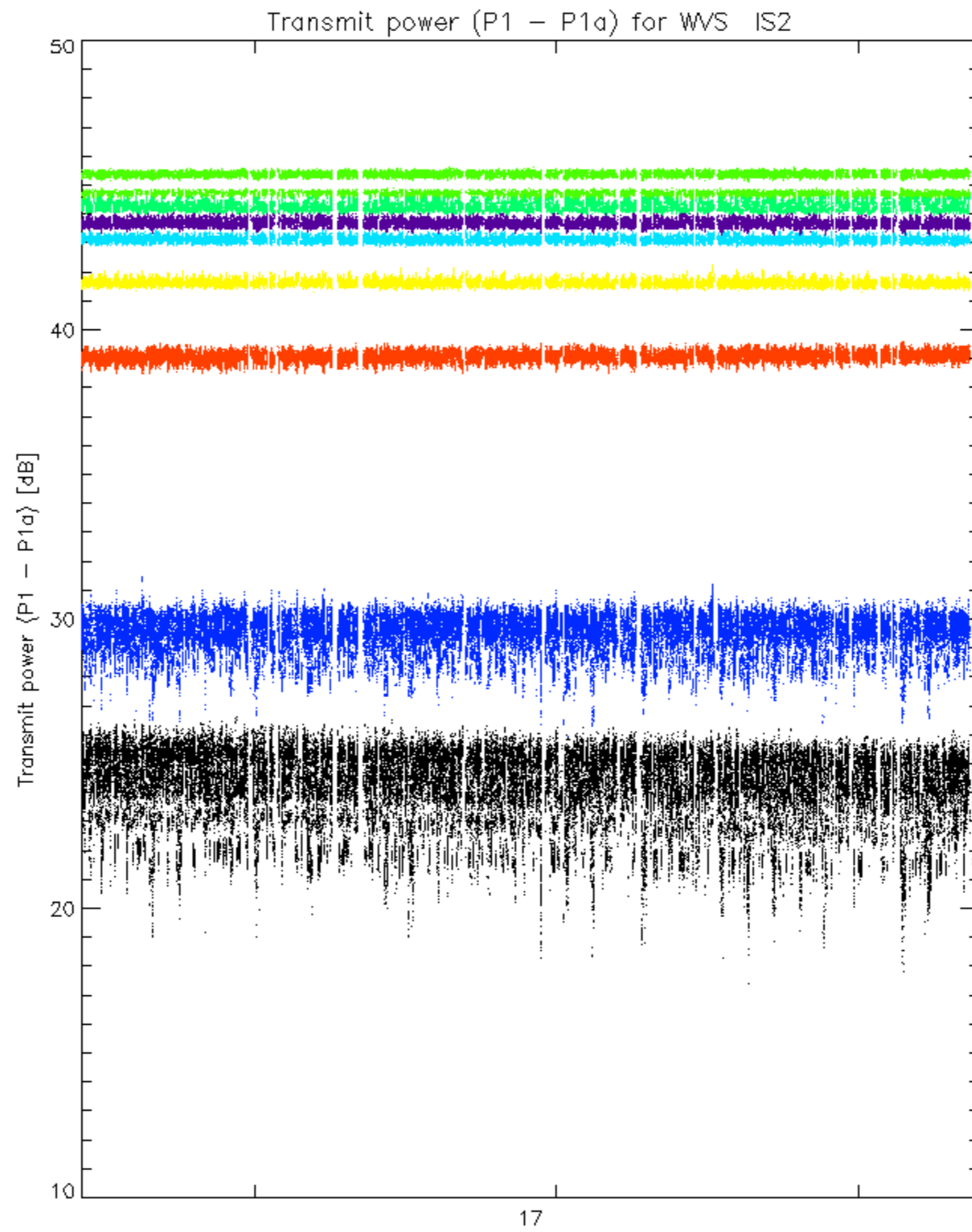




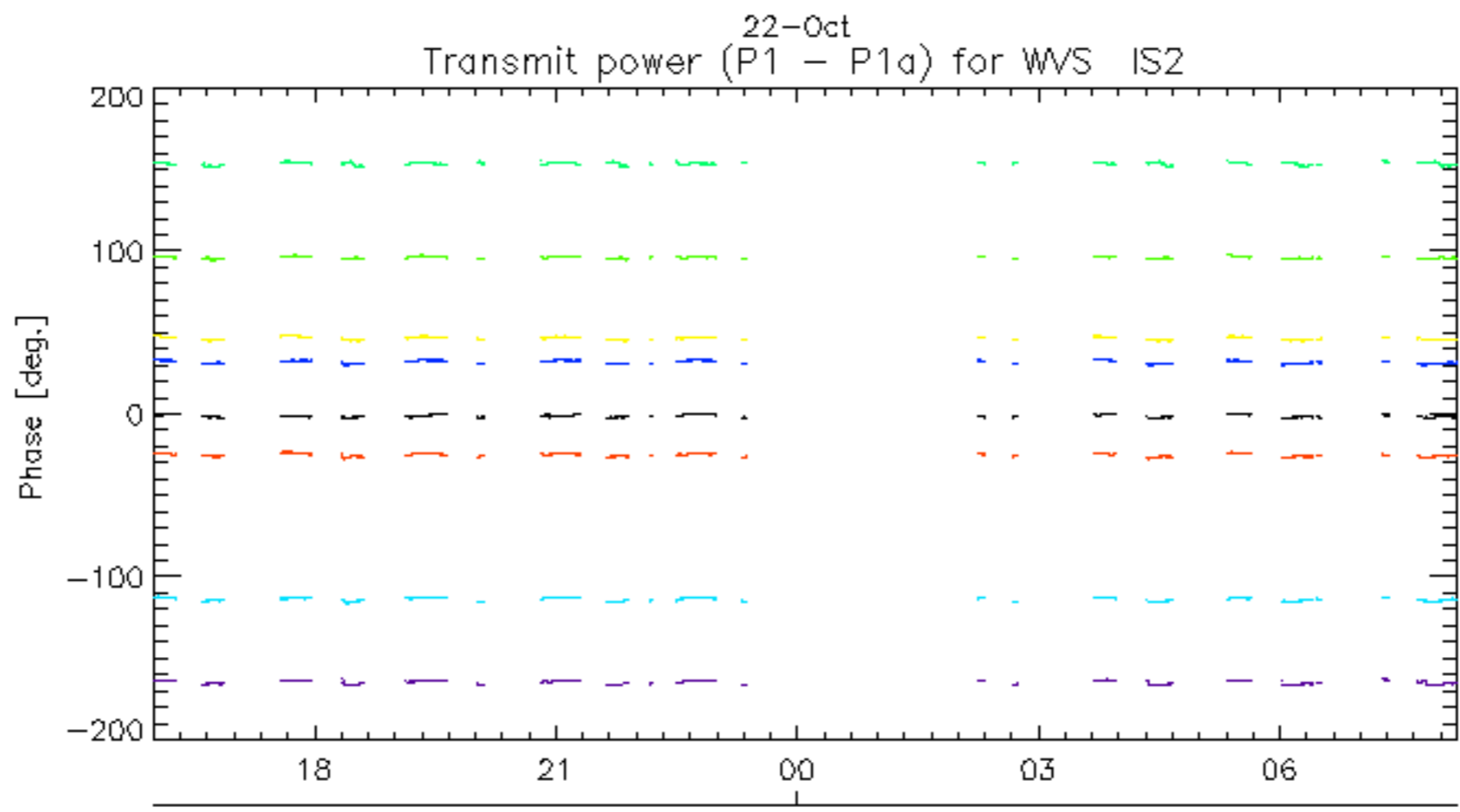
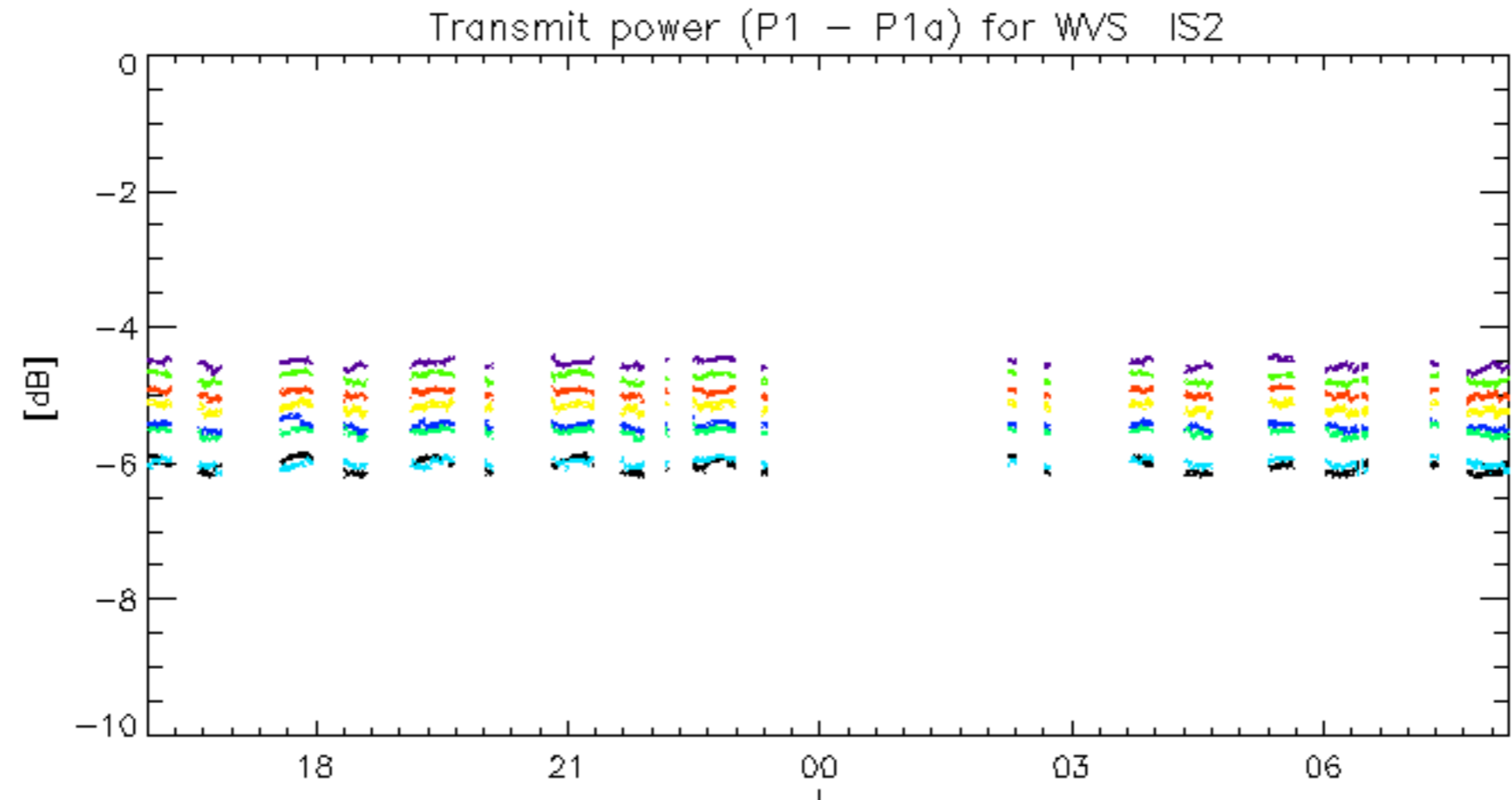
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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.