

PRELIMINARY REPORT OF 051026

last update on Wed Oct 26 17:16:14 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 2005-10-25 00:00:00 to 2005-10-26 17:16:15

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	40	61	17	1	0
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	40	61	17	1	0
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	61	17	1	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	40	61	17	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	38	59	22	11	57
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	38	59	22	11	57
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	38	59	22	11	57
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	38	59	22	11	57

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	20051024 180520
H	20051025 173343

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	-3.530500	0.008807	0.036235
7	P1	-2.901987	0.011008	-0.076273
11	P1	-4.074120	0.016550	-0.093928
15	P1	-6.032922	0.015009	-0.041974
19	P1	-3.160004	0.005516	-0.039514
22	P1	-4.451809	0.013468	-0.066923
26	P1	-4.271076	0.014976	0.047241
30	P1	-5.709931	0.008757	-0.049254
3	P1	-15.386707	0.181127	0.269150
7	P1	-16.280426	0.113544	-0.156365
11	P1	-16.236721	0.293447	-0.334340
15	P1	-13.351284	0.106498	-0.085392
19	P1	-13.628160	0.042153	-0.163490
22	P1	-16.141279	0.479879	-0.336326
26	P1	-16.138929	0.251686	0.376027
30	P1	-16.417299	0.185997	-0.183021

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.864027	0.098534	0.000530
7	P2	-22.695805	0.104710	0.084610
11	P2	-16.739418	0.114047	0.153516
15	P2	-7.223290	0.101459	-0.051144
19	P2	-9.177246	0.093165	-0.061351
22	P2	-17.732620	0.099670	-0.133463
26	P2	-16.106672	0.094915	-0.124397
30	P2	-19.625259	0.090498	-0.018950

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.193086	0.005801	-0.041909
7	P3	-8.193086	0.005801	-0.041909
11	P3	-8.193086	0.005801	-0.041909
15	P3	-8.193086	0.005801	-0.041909
19	P3	-8.193086	0.005801	-0.041909
22	P3	-8.193086	0.005801	-0.041909
26	P3	-8.193086	0.005801	-0.041909
30	P3	-8.193086	0.005801	-0.041909

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	-3.662462	0.007116	-0.010290
7	P1	-2.824368	0.011933	0.079471
11	P1	-2.851571	0.012686	-0.000305
15	P1	-3.385133	0.017921	0.023250
19	P1	-3.351668	0.010784	-0.025644
22	P1	-5.141094	0.019359	0.046488
26	P1	-5.783393	0.017532	-0.050329
30	P1	-5.214354	0.026150	-0.031090
3	P1	-11.405103	0.032532	-0.015629
7	P1	-9.920926	0.040472	-0.003409
11	P1	-10.015440	0.057462	-0.028577
15	P1	-10.571892	0.092632	0.066567
19	P1	-15.466280	0.067744	-0.073744
22	P1	-20.490498	1.176509	-0.379447

26	P1	-17.106909	0.381354	-0.239969
30	P1	-18.736719	0.384695	0.590819

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.704113	0.037715	0.008421
7	P2	-23.056213	0.090104	-0.097331
11	P2	-11.747008	0.026909	0.014705
15	P2	-4.898545	0.037189	-0.092278
19	P2	-6.902929	0.025912	-0.053948
22	P2	-8.112543	0.024860	-0.072412
26	P2	-23.871429	0.038670	-0.137766
30	P2	-22.062052	0.026939	-0.051502

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.036917	0.002805	-0.042659
7	P3	-8.037032	0.002818	-0.042740
11	P3	-8.036939	0.002812	-0.042830
15	P3	-8.037023	0.002816	-0.042971
19	P3	-8.037034	0.002823	-0.042852
22	P3	-8.036975	0.002827	-0.042905
26	P3	-8.037134	0.002825	-0.042605
30	P3	-8.036983	0.002818	-0.042849

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	0.000560004
	stdev	1.70798e-07
MEAN Q	mean	0.000542262
	stdev	2.15403e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137625
	stdev	0.00111821
STDEV Q	mean	0.137970
	stdev	0.00113450



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005102[456]

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_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
ASA_WSM_1PNPDE20051024_033513_000000672041_00491_19082_5794.N1	0	50
ASA_WSM_1PNPDE20051024_184203_000003062041_00500_19091_5927.N1	0	67





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

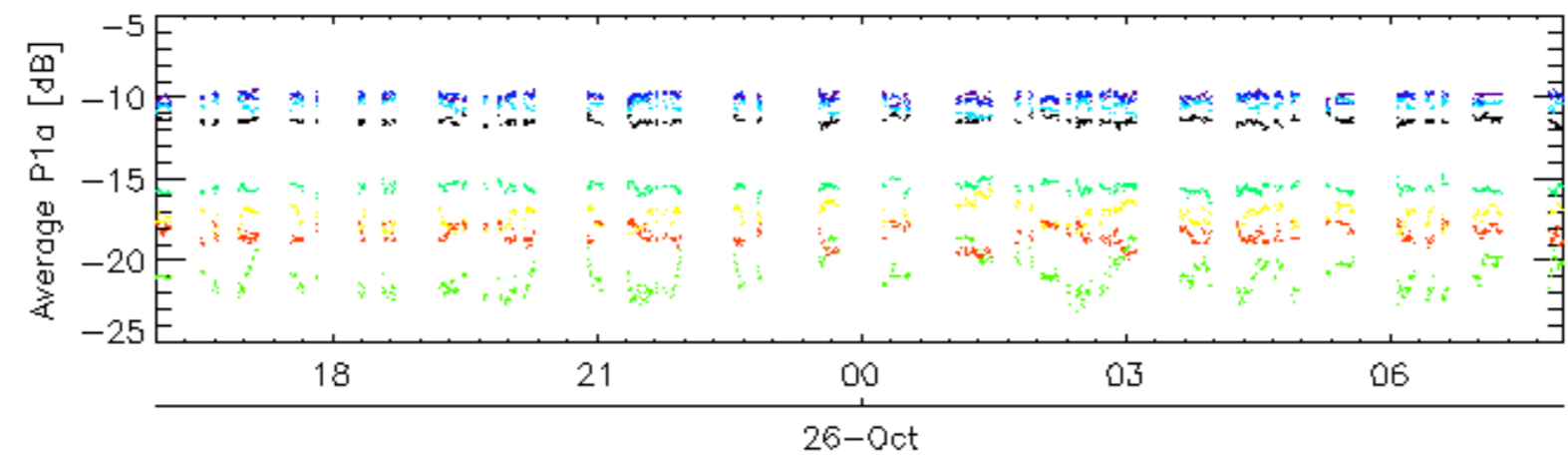
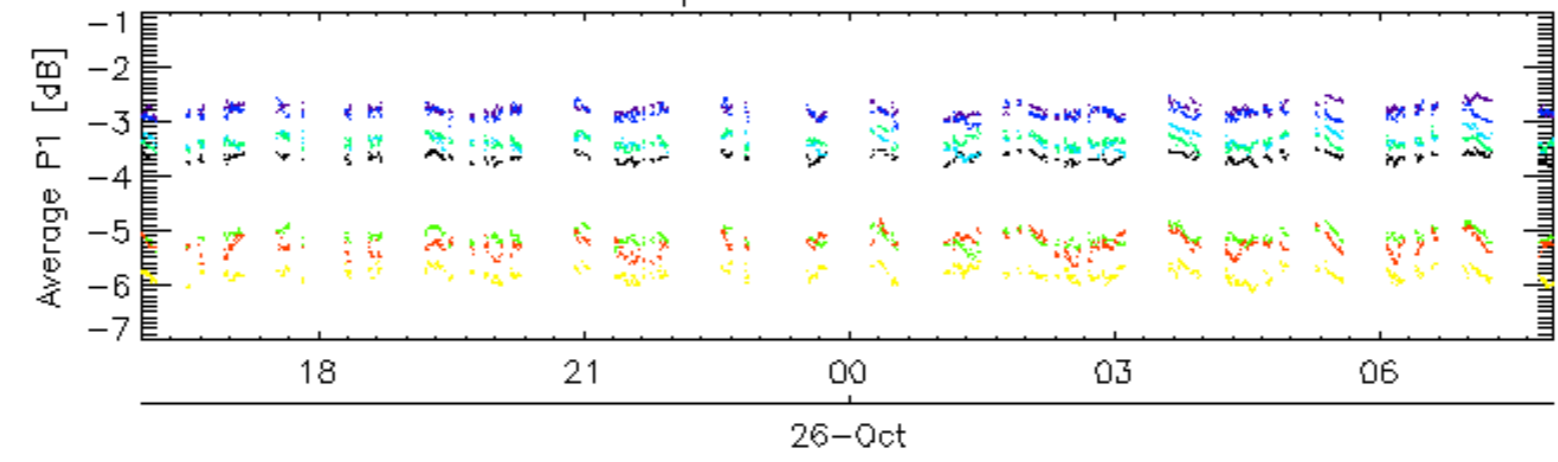
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
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Ascending
<input type="checkbox"/>
Descending

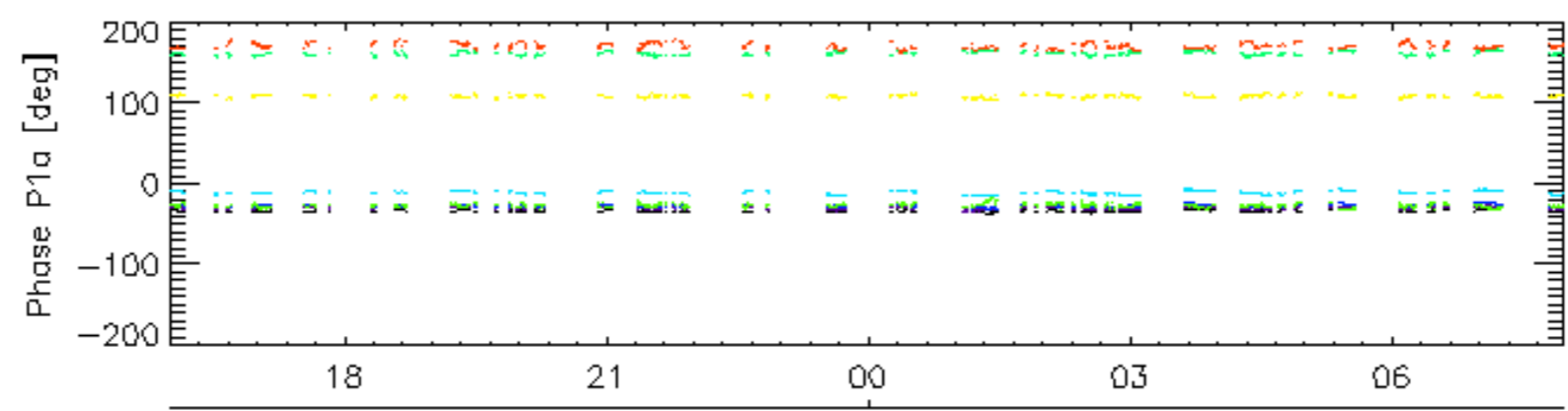
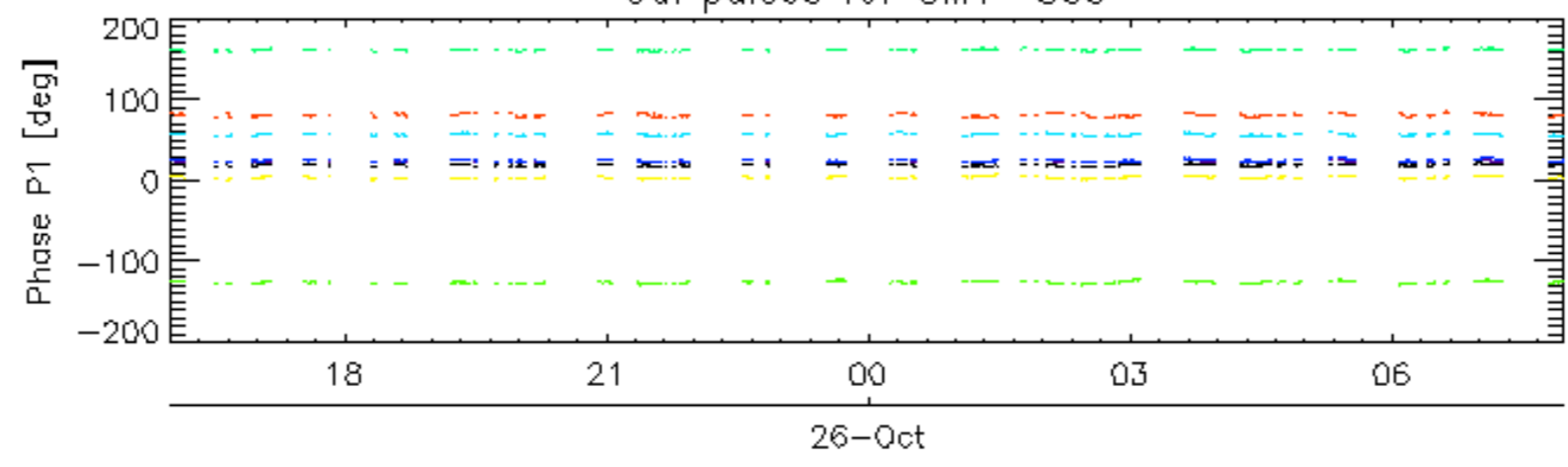
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

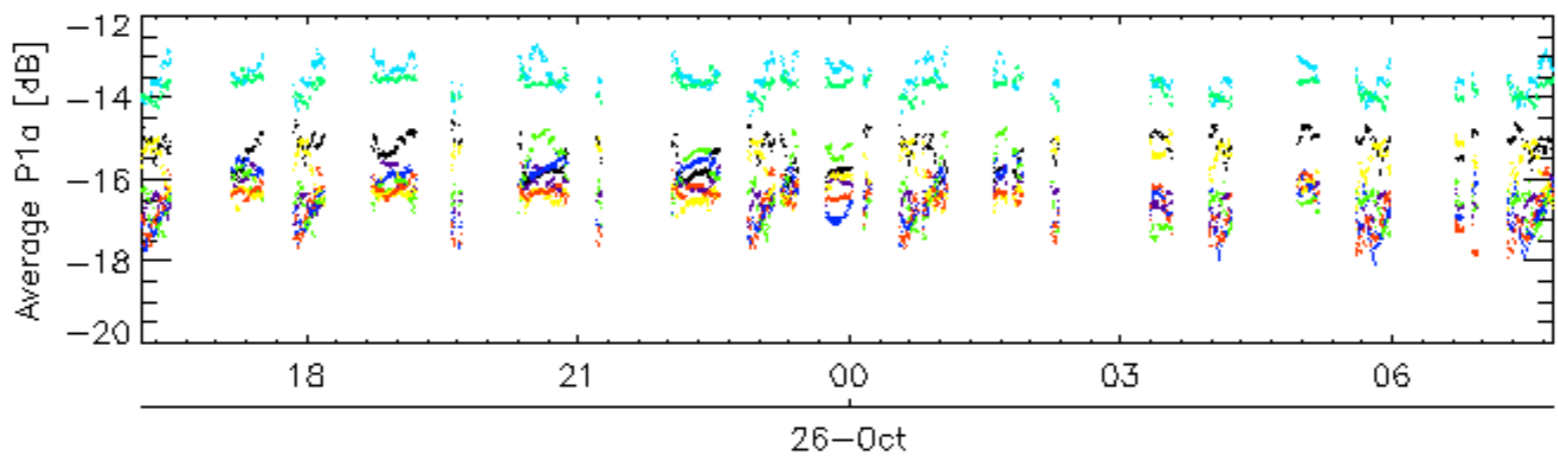
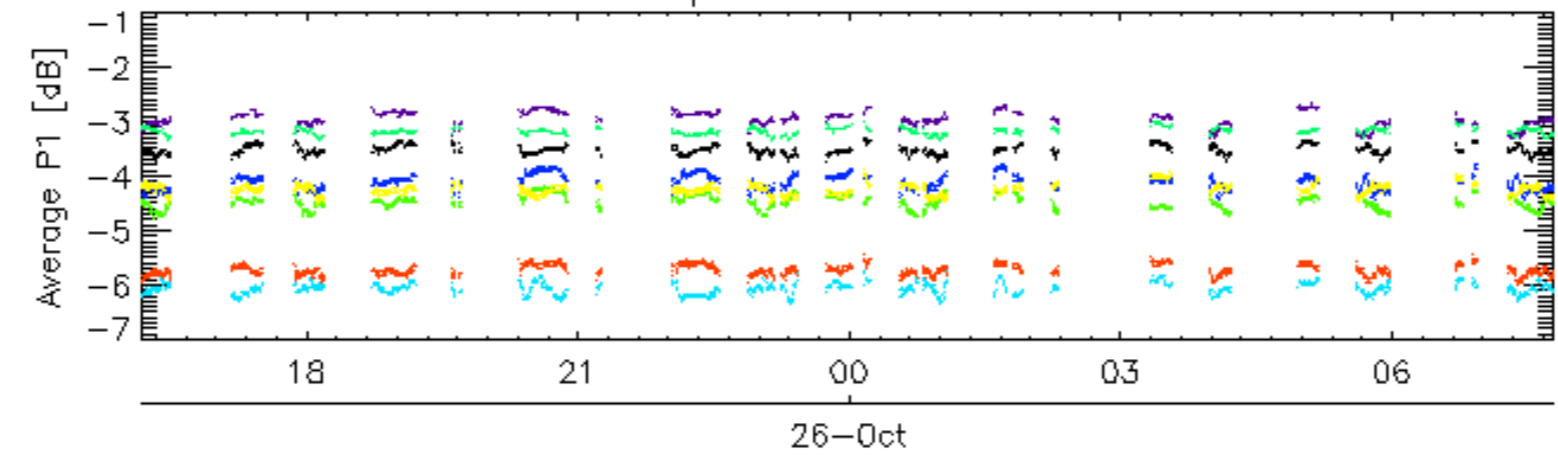


Cal pulses for GM1 SS3

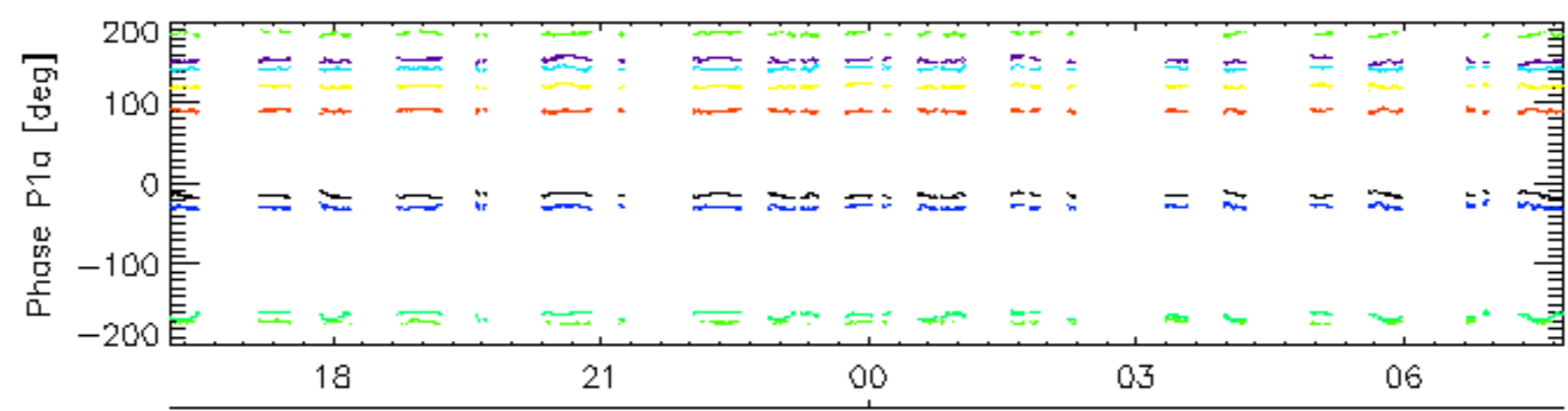
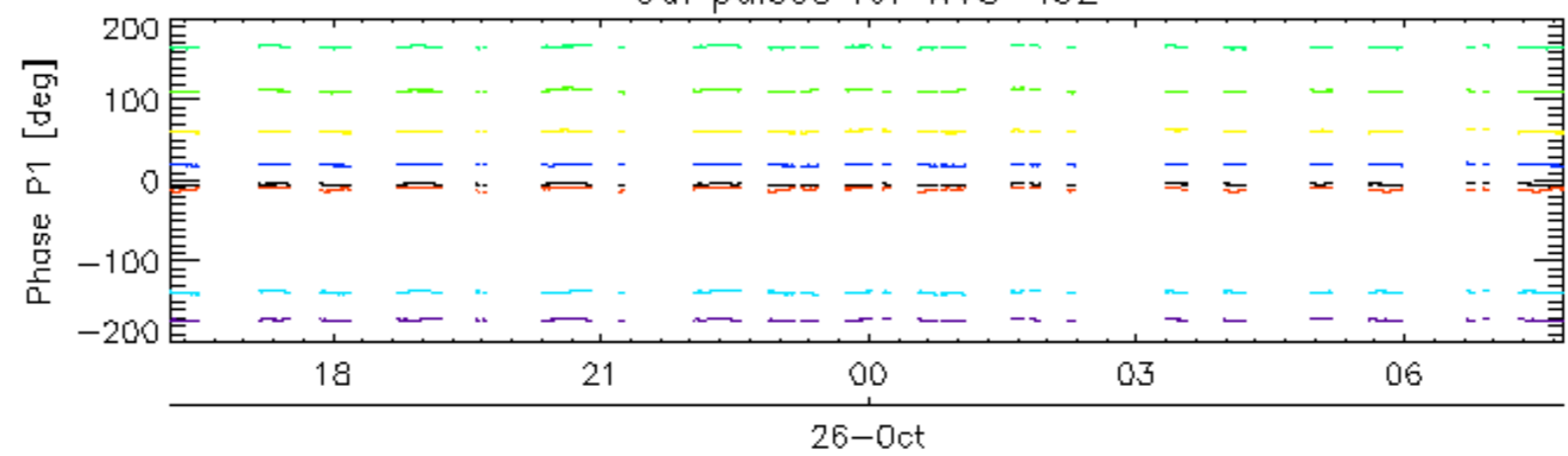


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

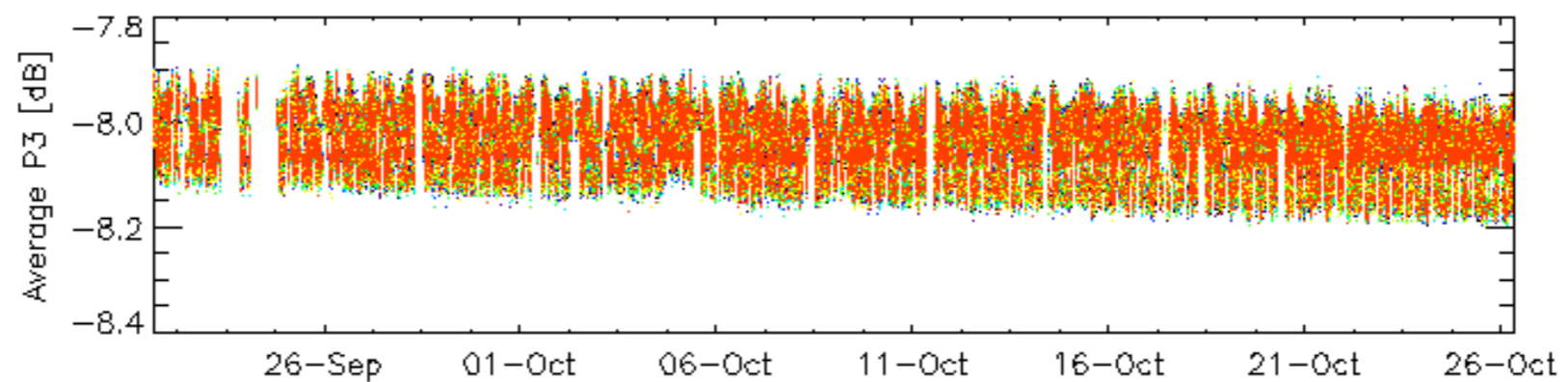
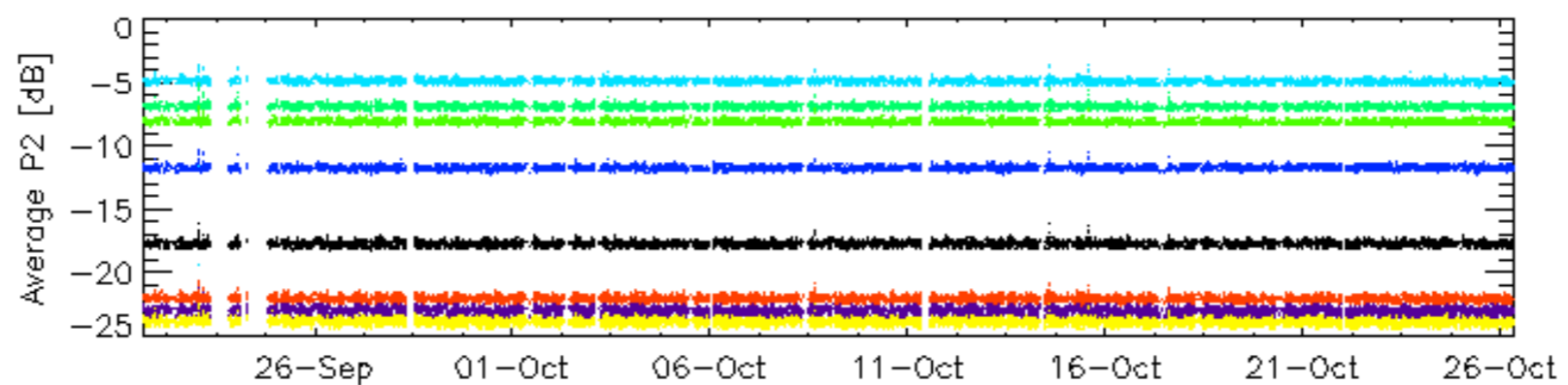
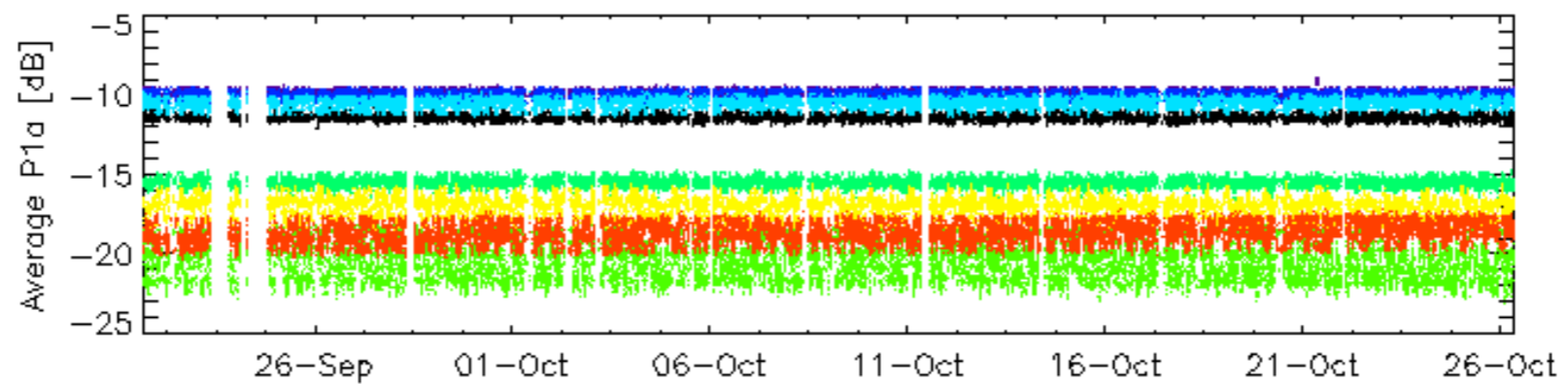
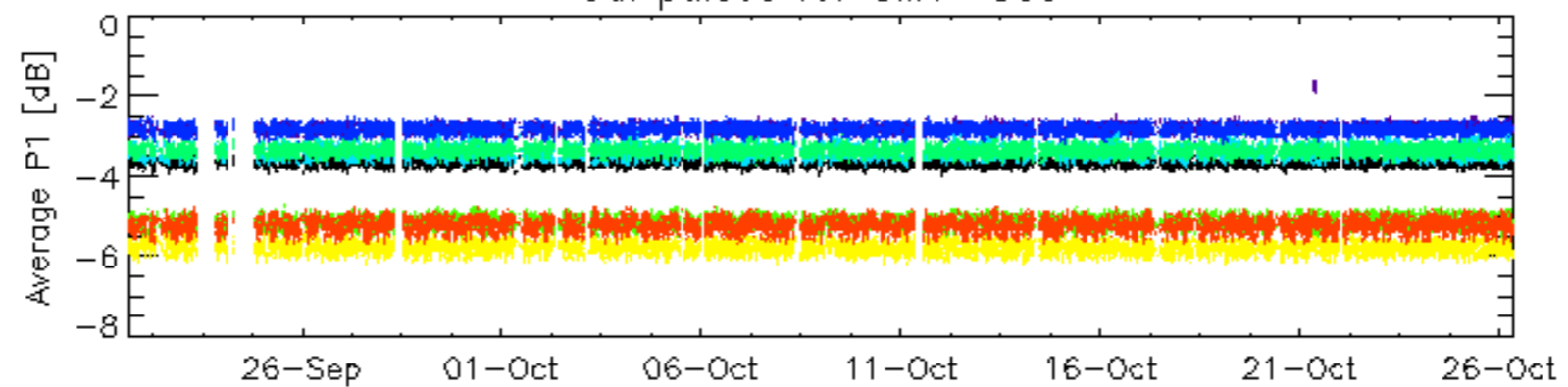


Cal pulses for WVS IS2



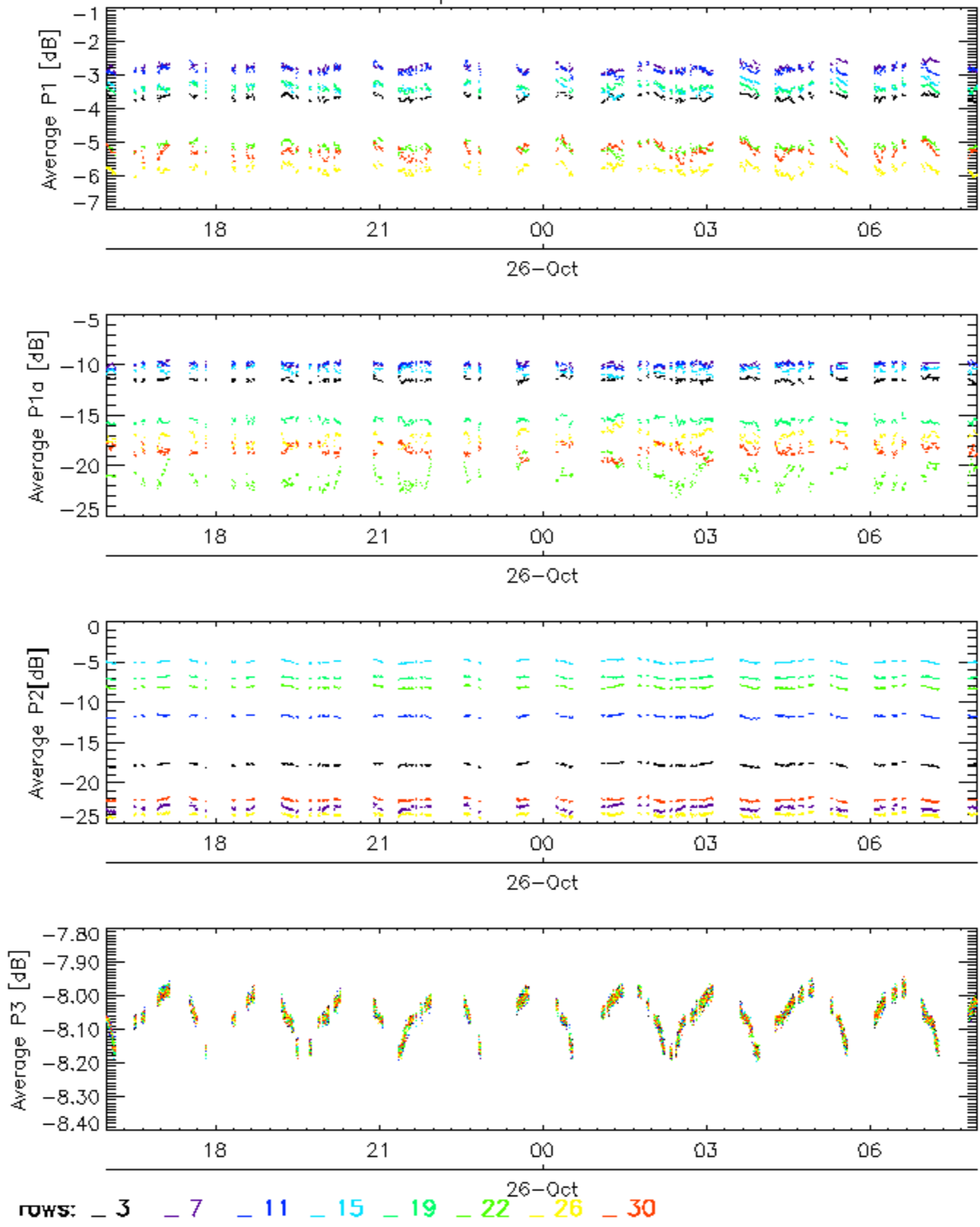
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Cal pulses for GM1 SS3

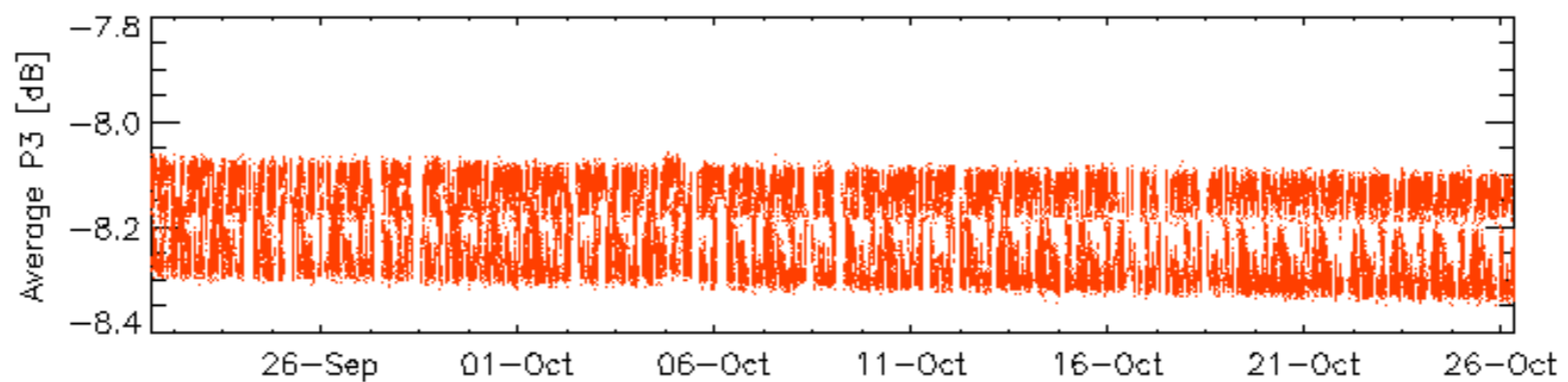
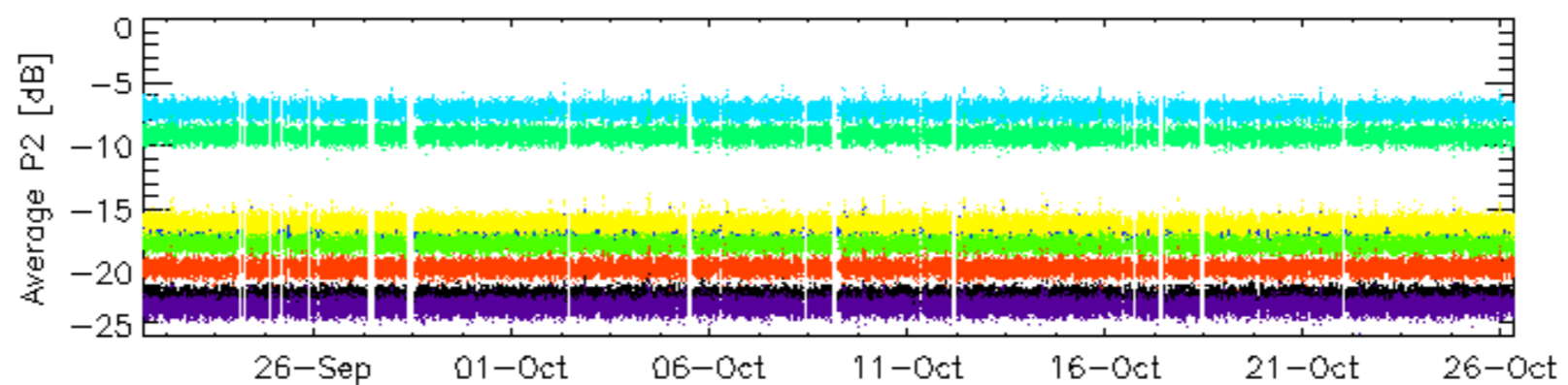
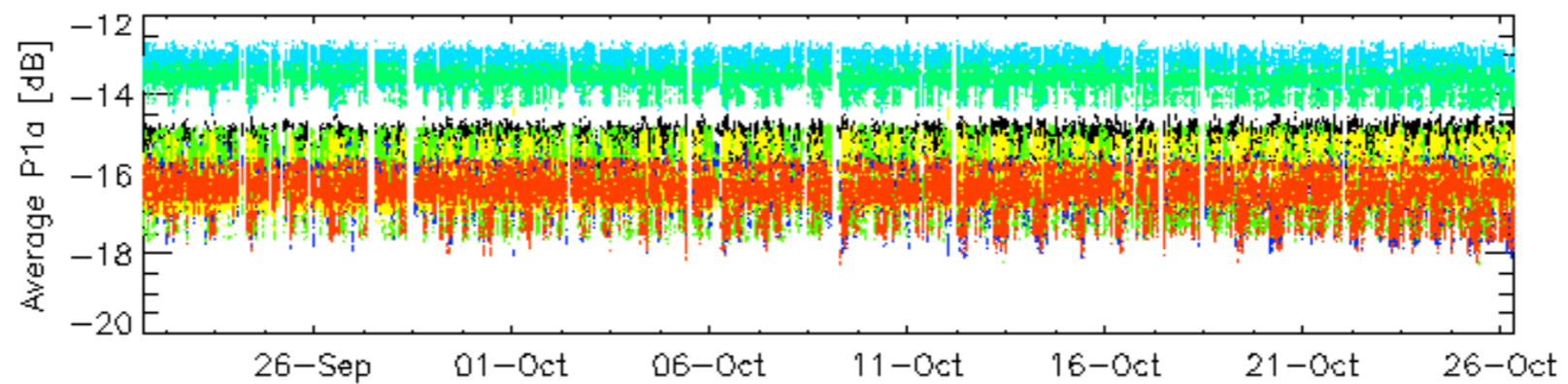
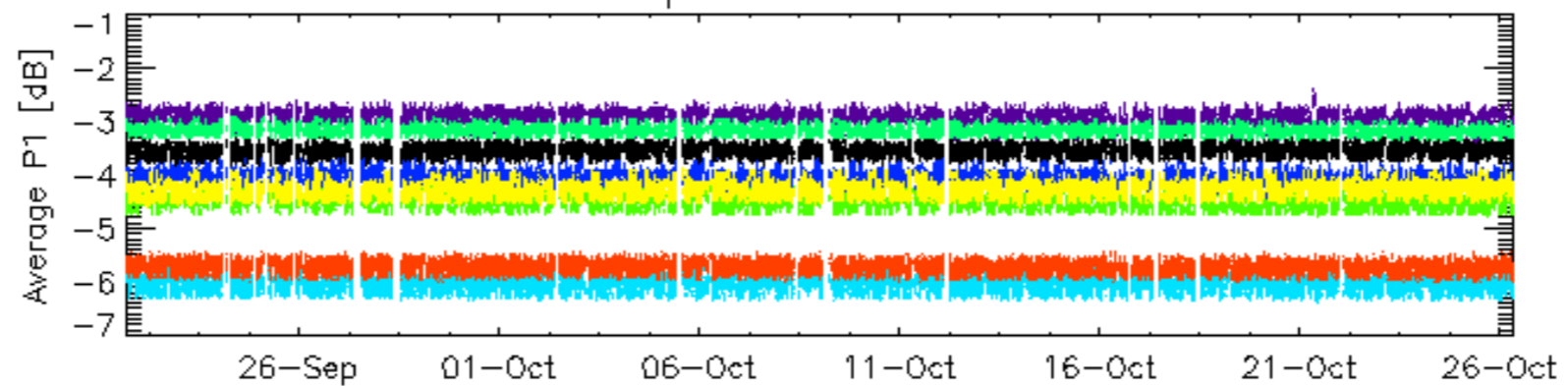


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

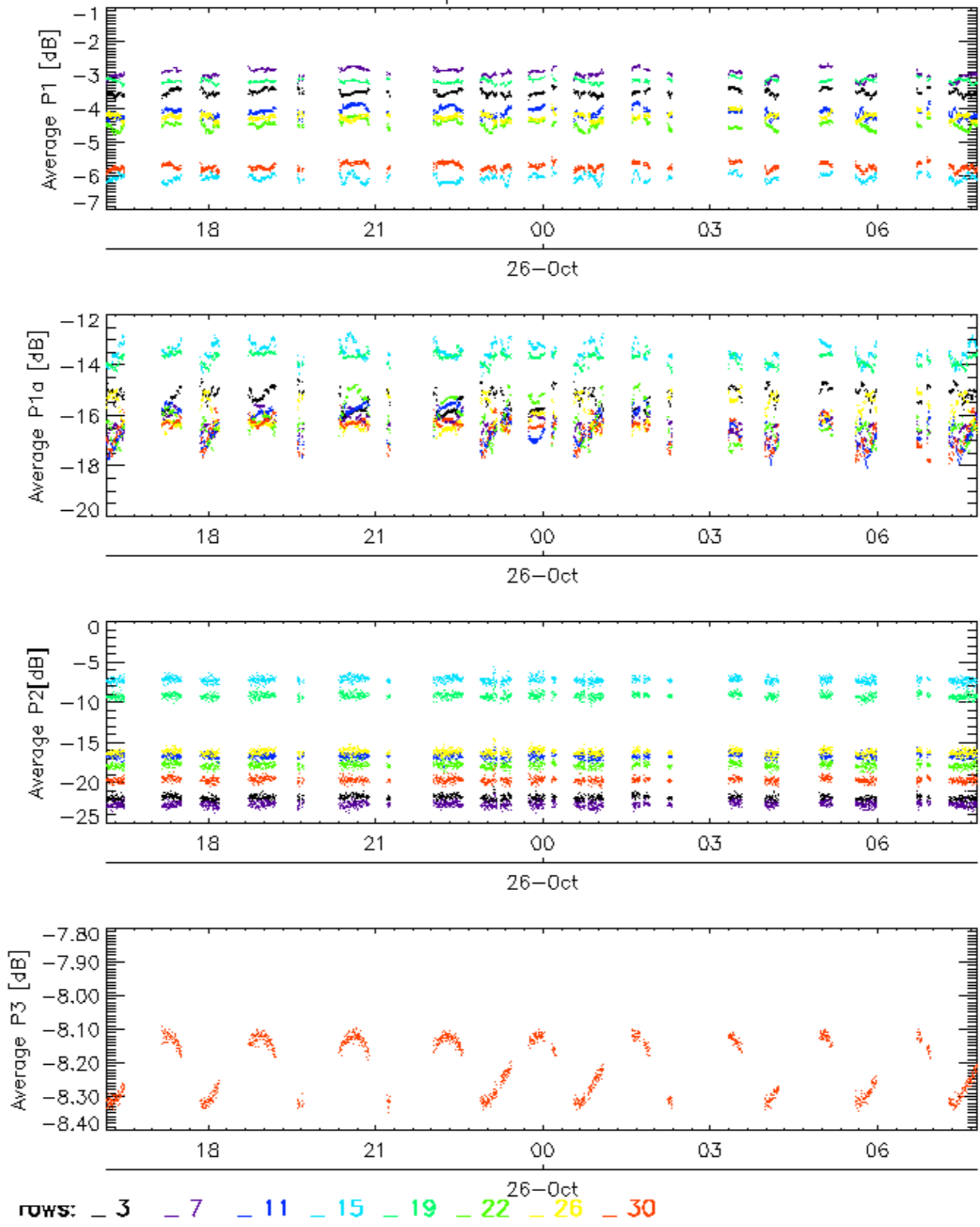


Cal pulses for WVS IS2



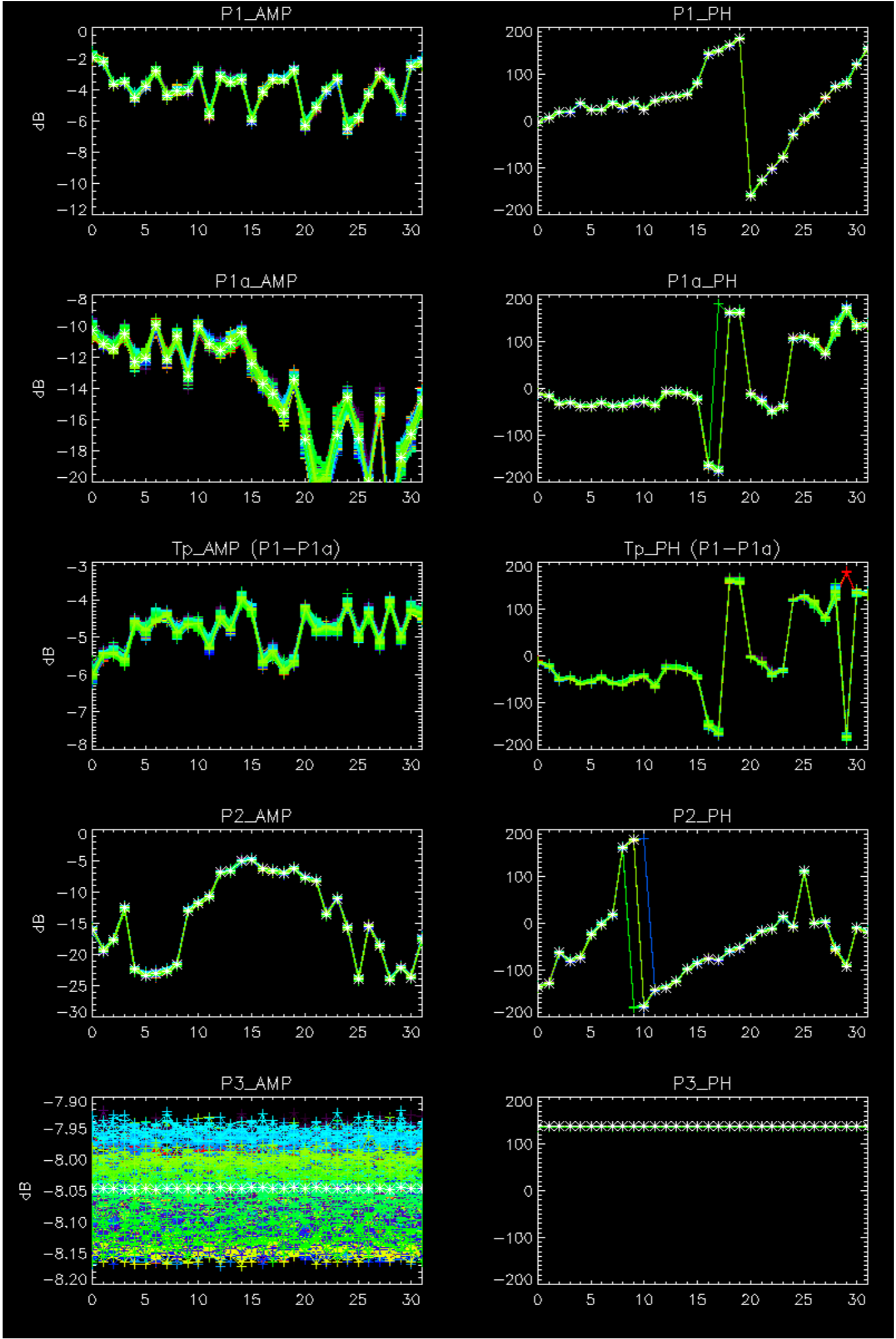
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

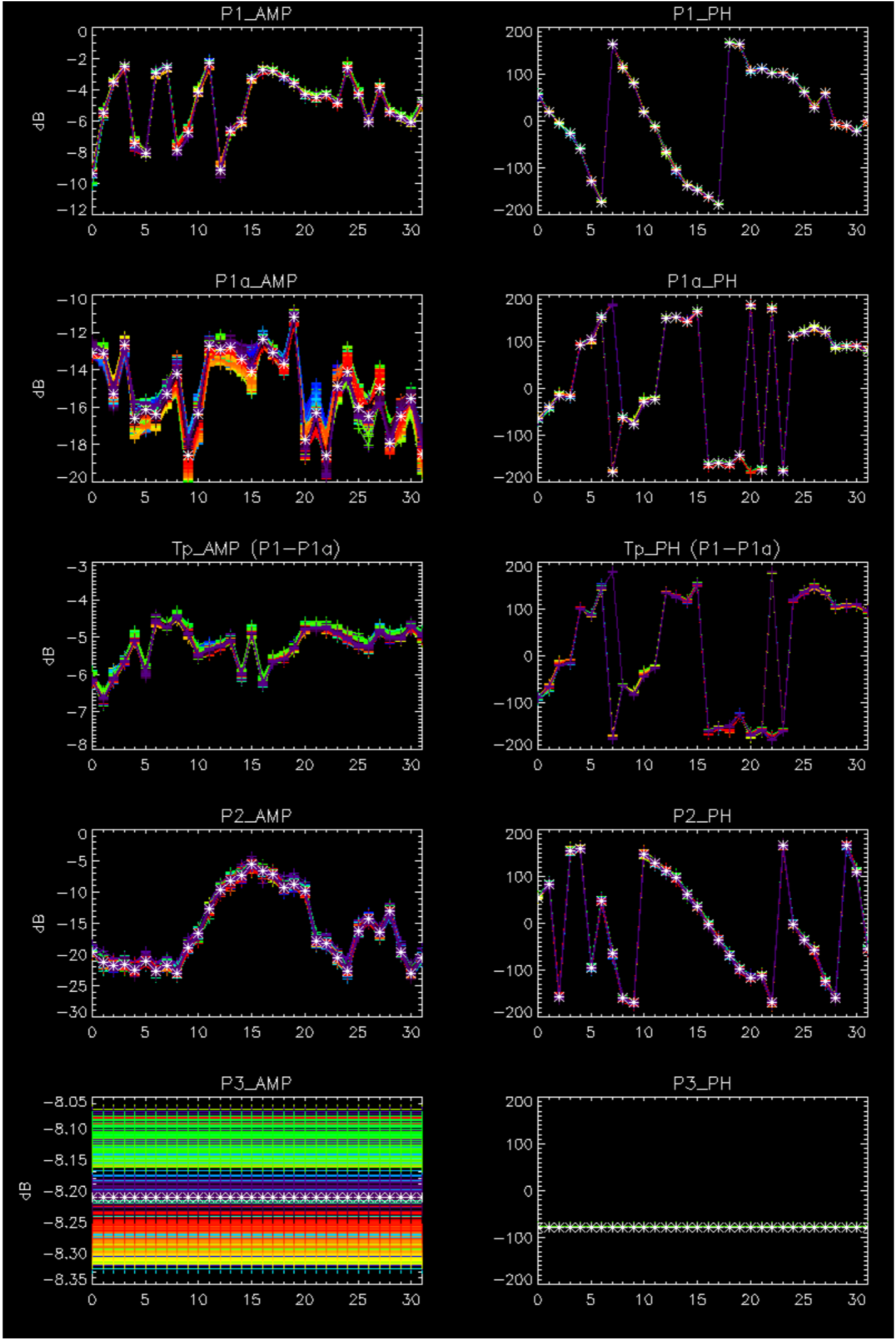
Cal pulses for WVS IS2



No anomalies observed on available browse products

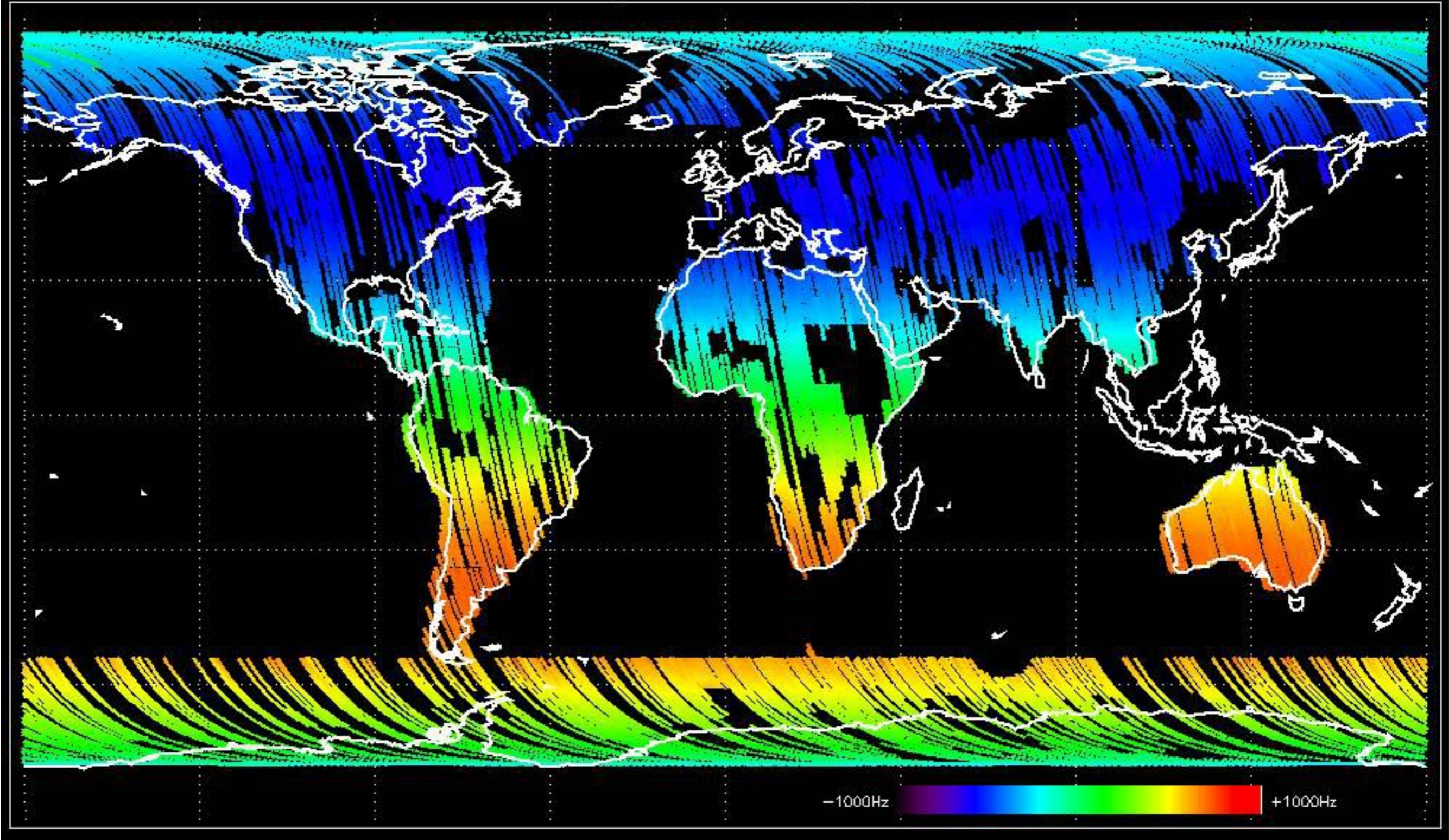
No anomalies observed.



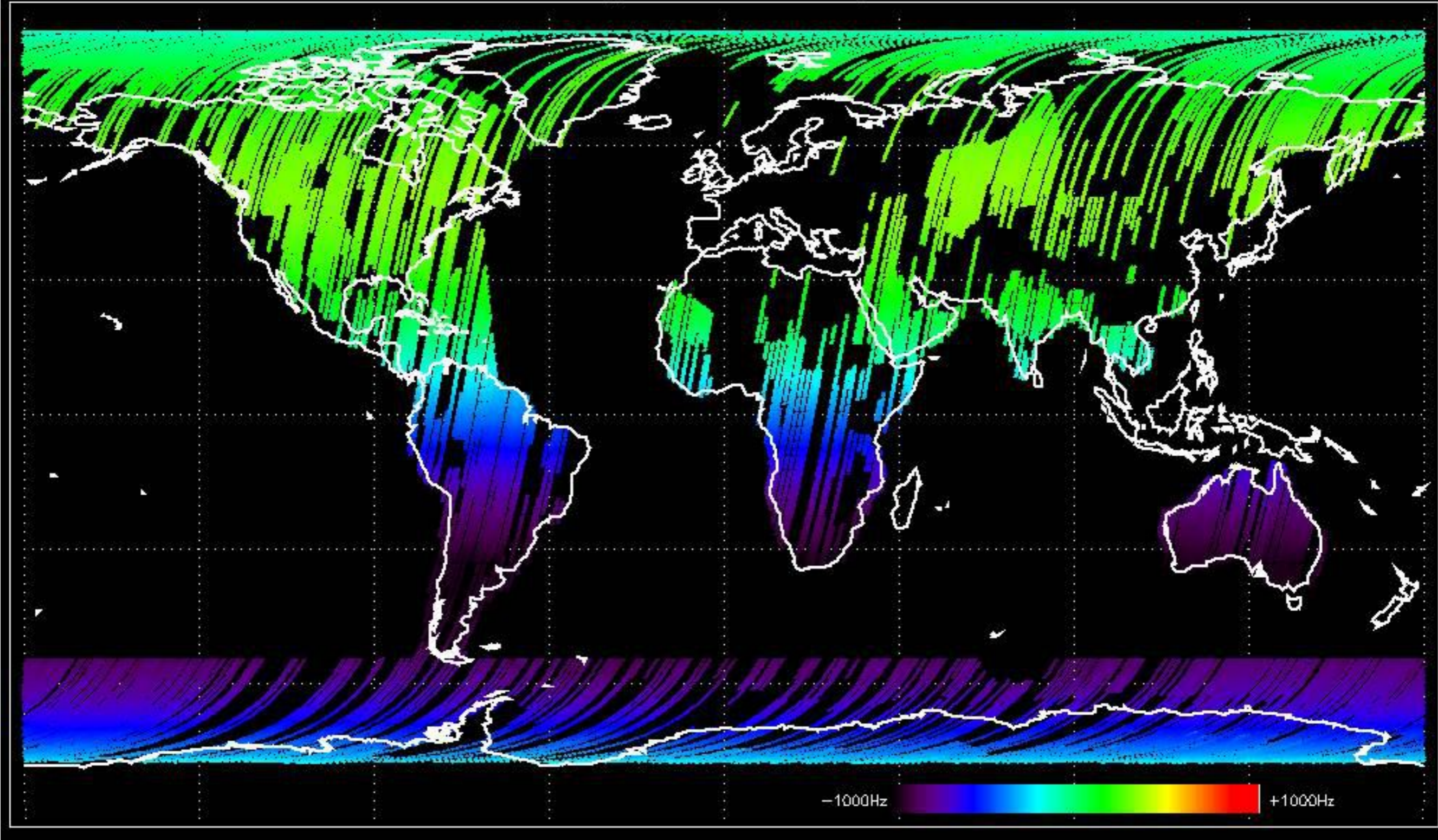


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

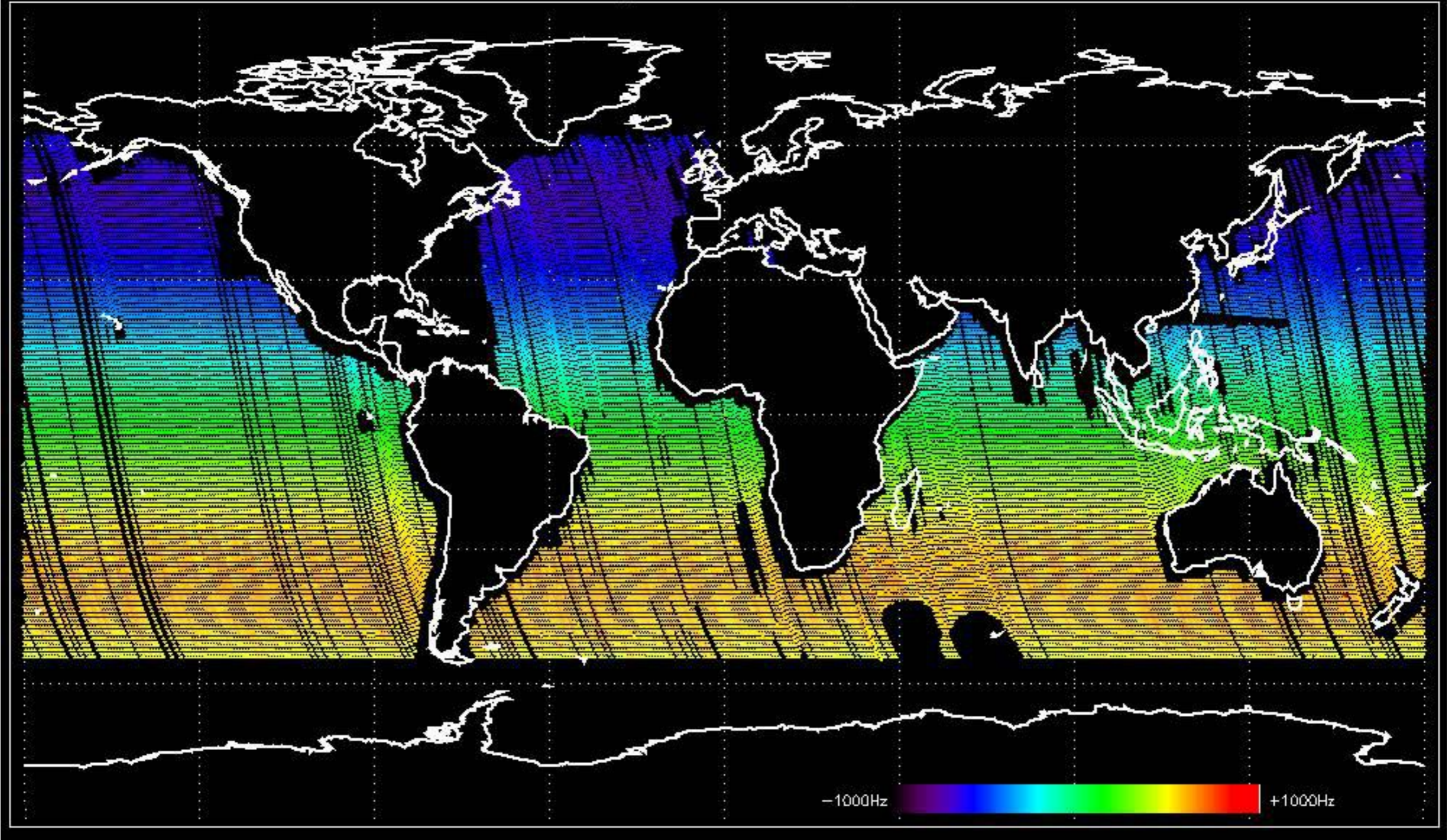
Doppler 'GM1' 'SS1' ascending



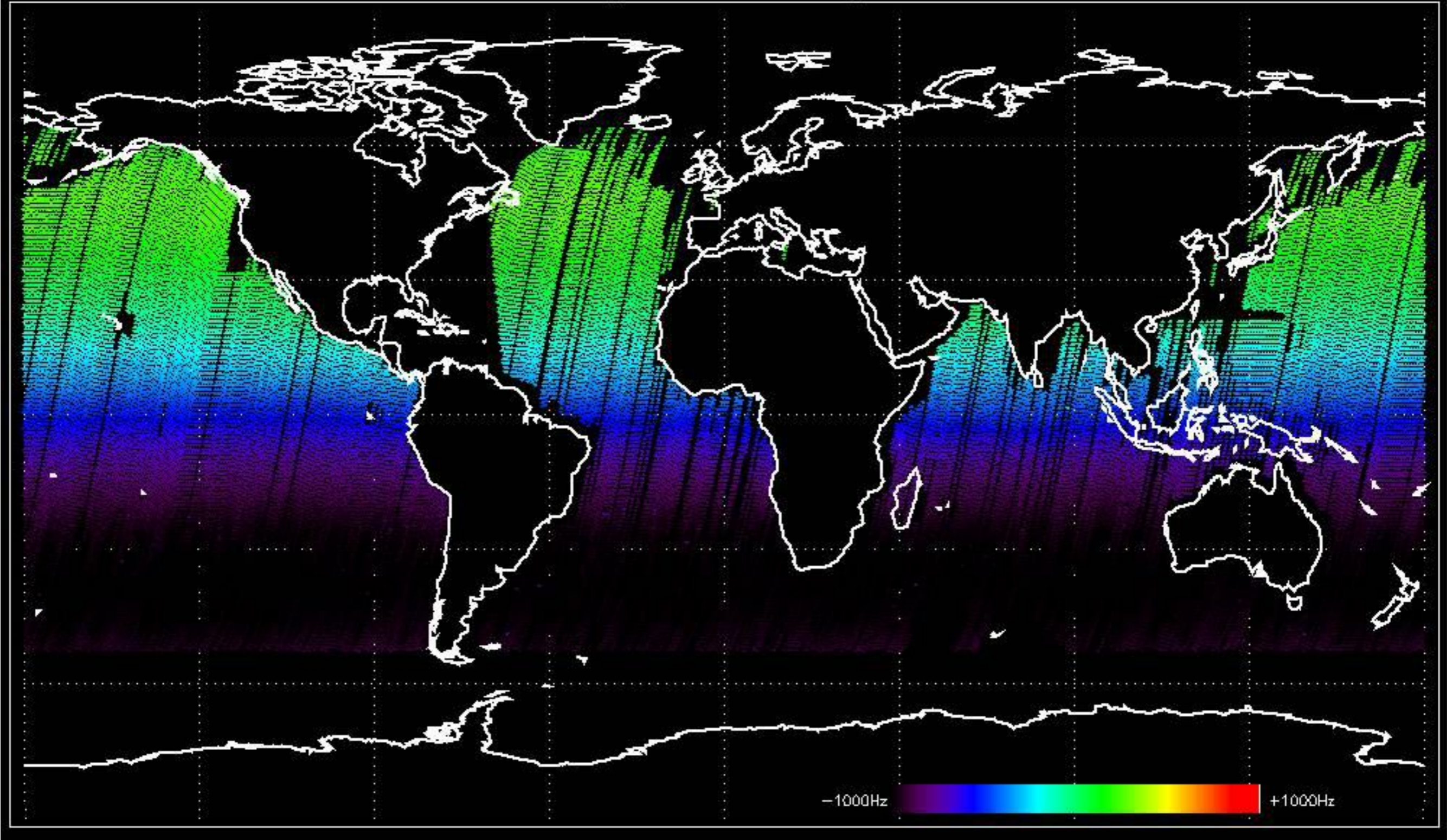
Doppler 'GM1' 'SS1' descending



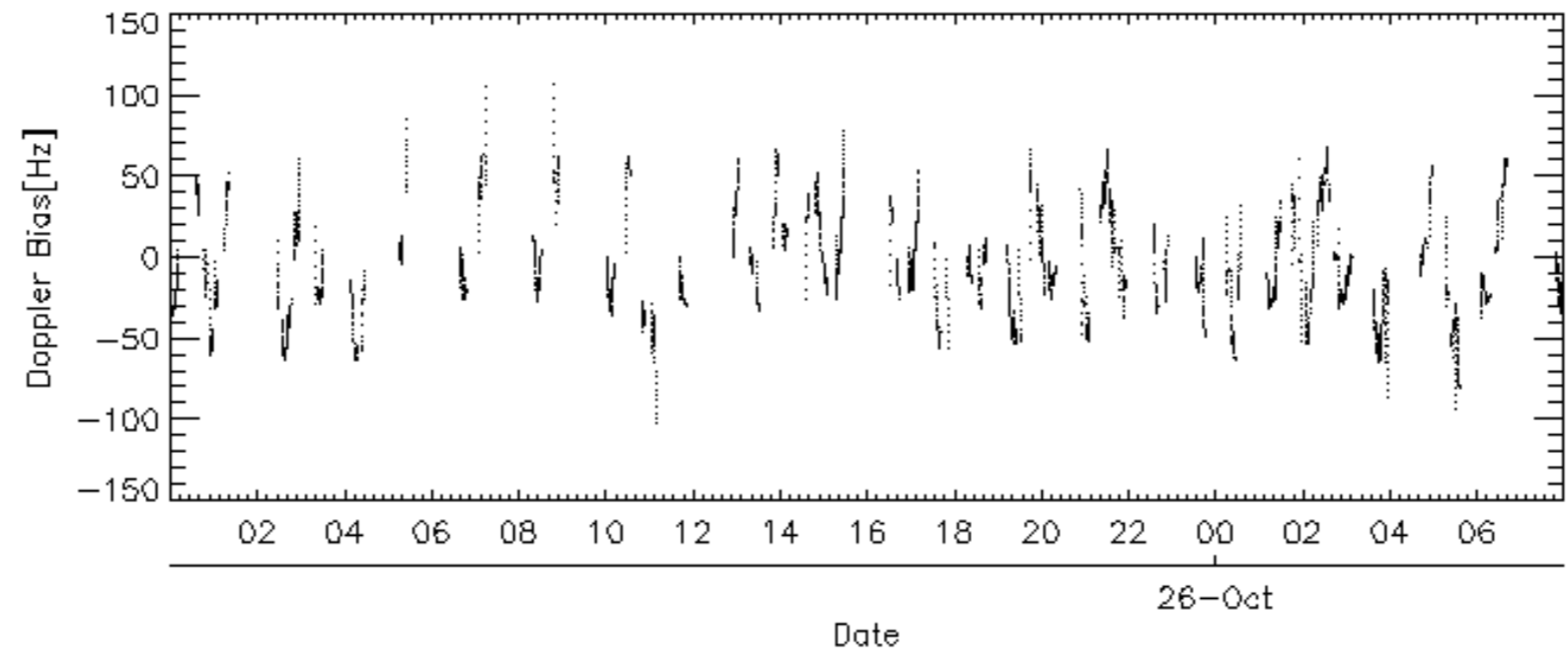
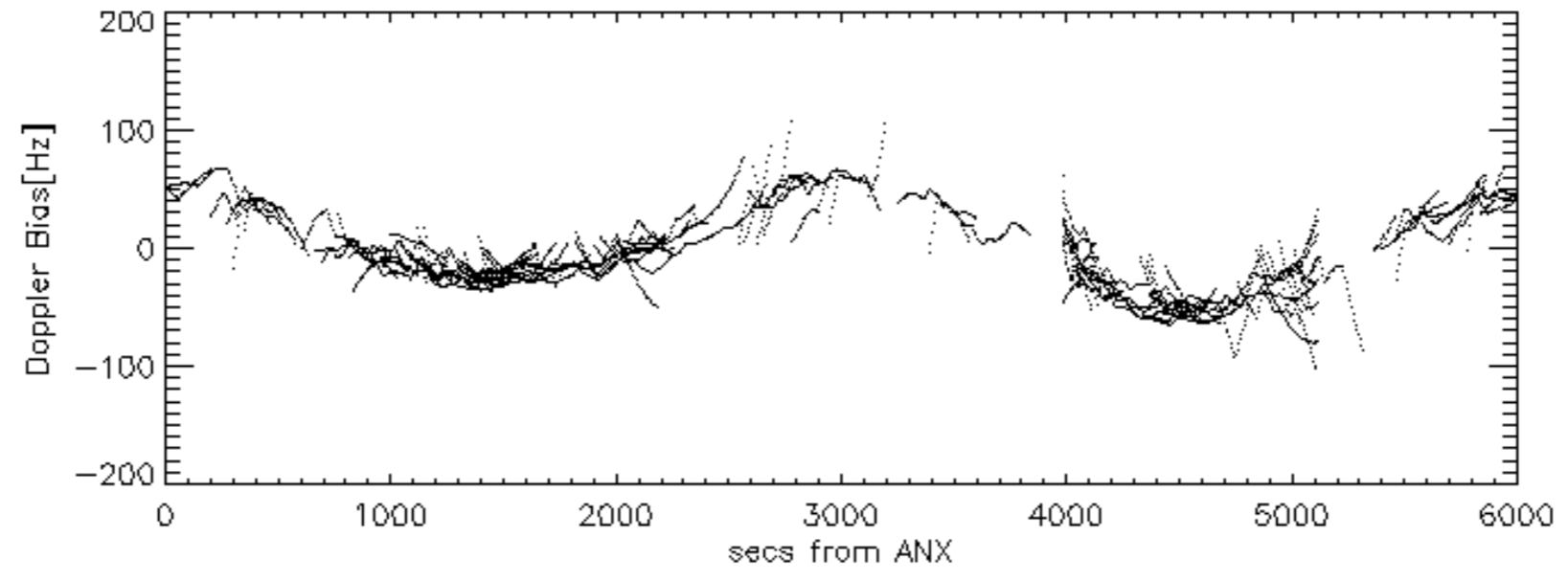
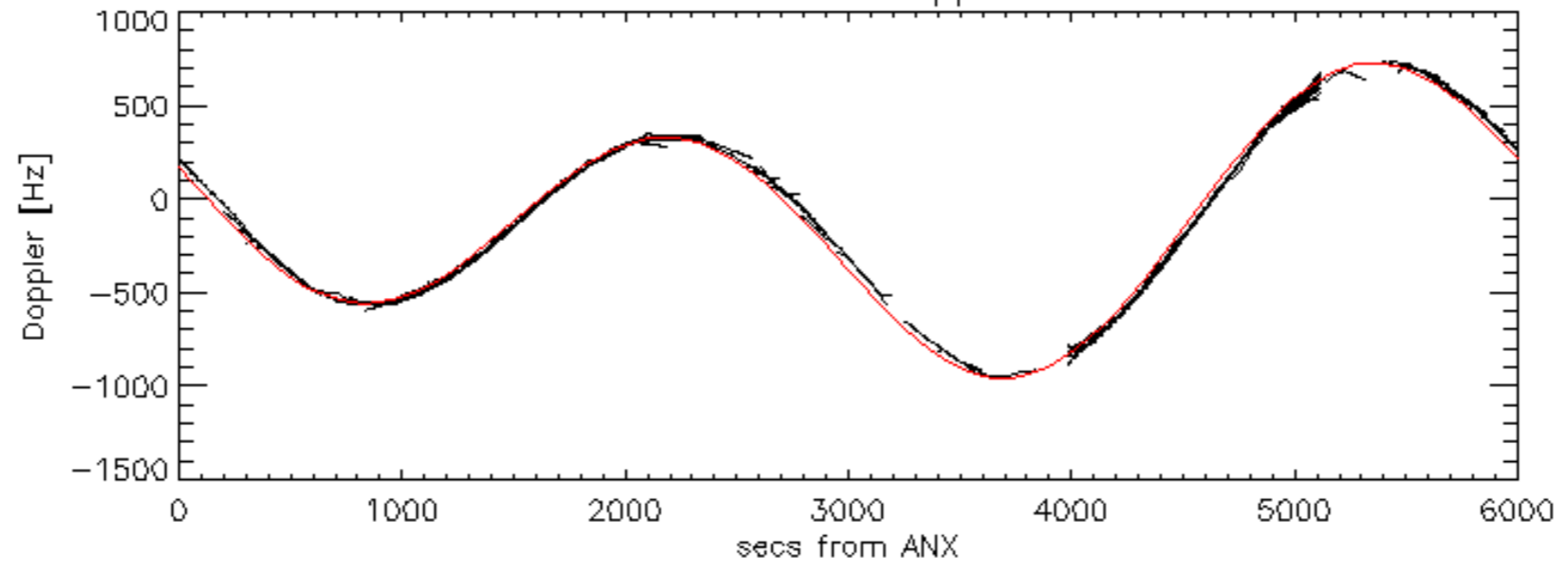
Doppler 'WVS' 'IS2' ascending

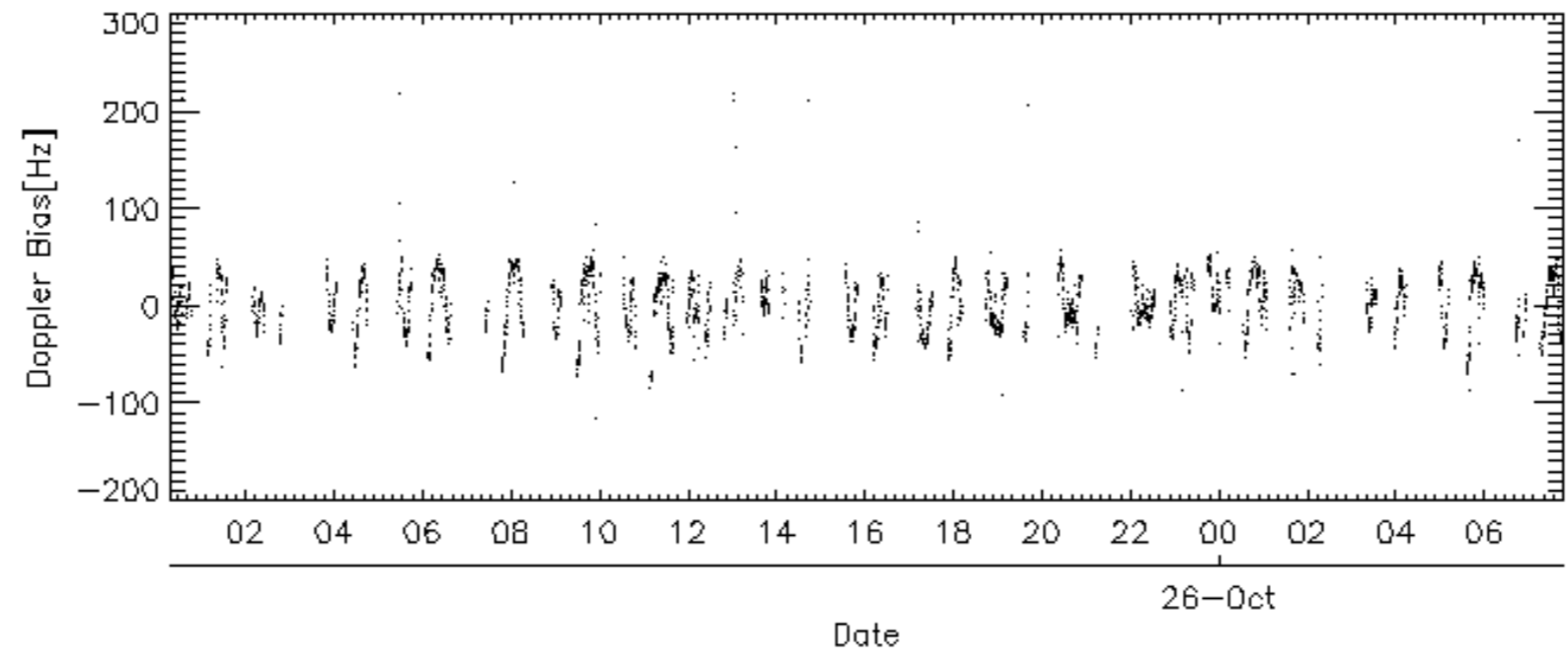
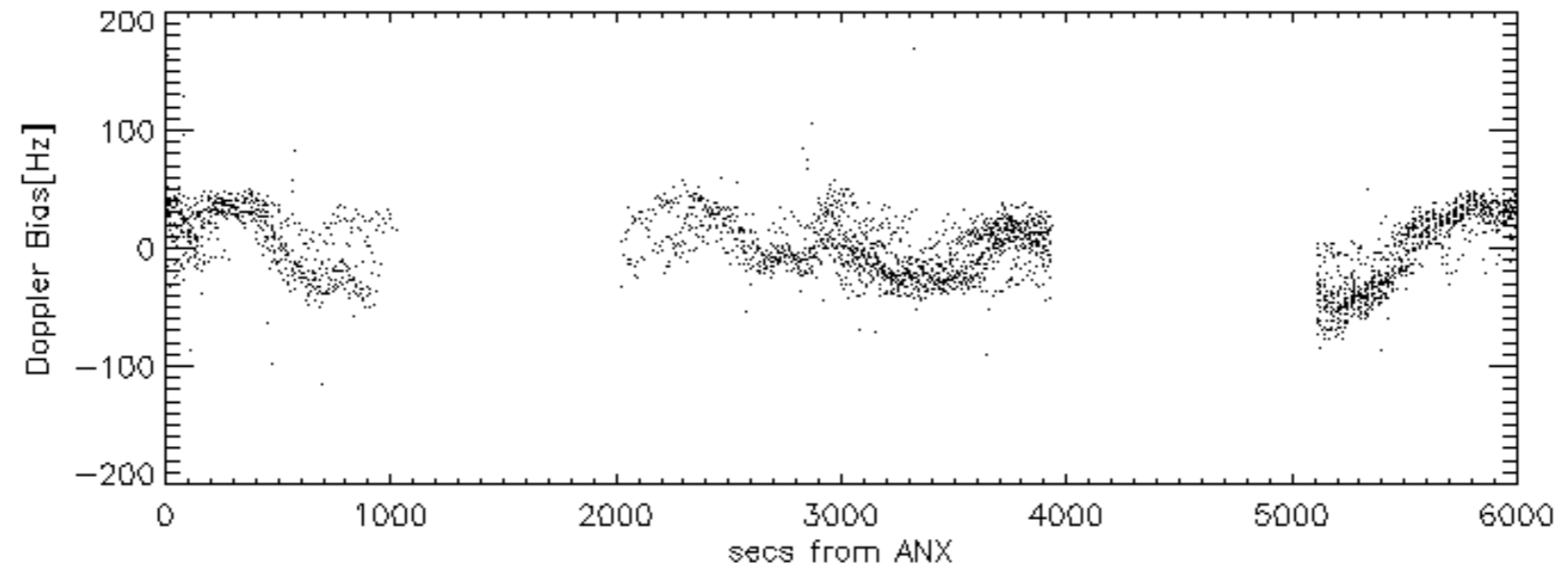
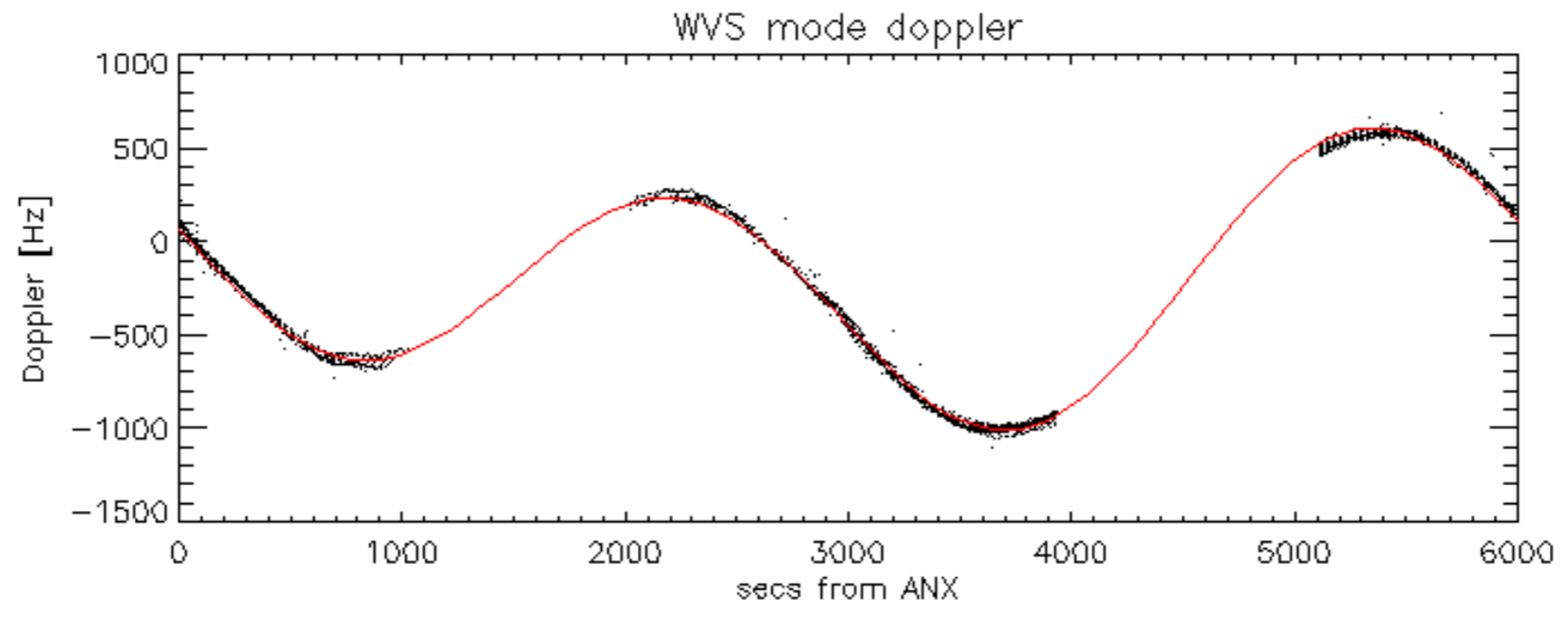


Doppler 'WVS' 'IS2' descending

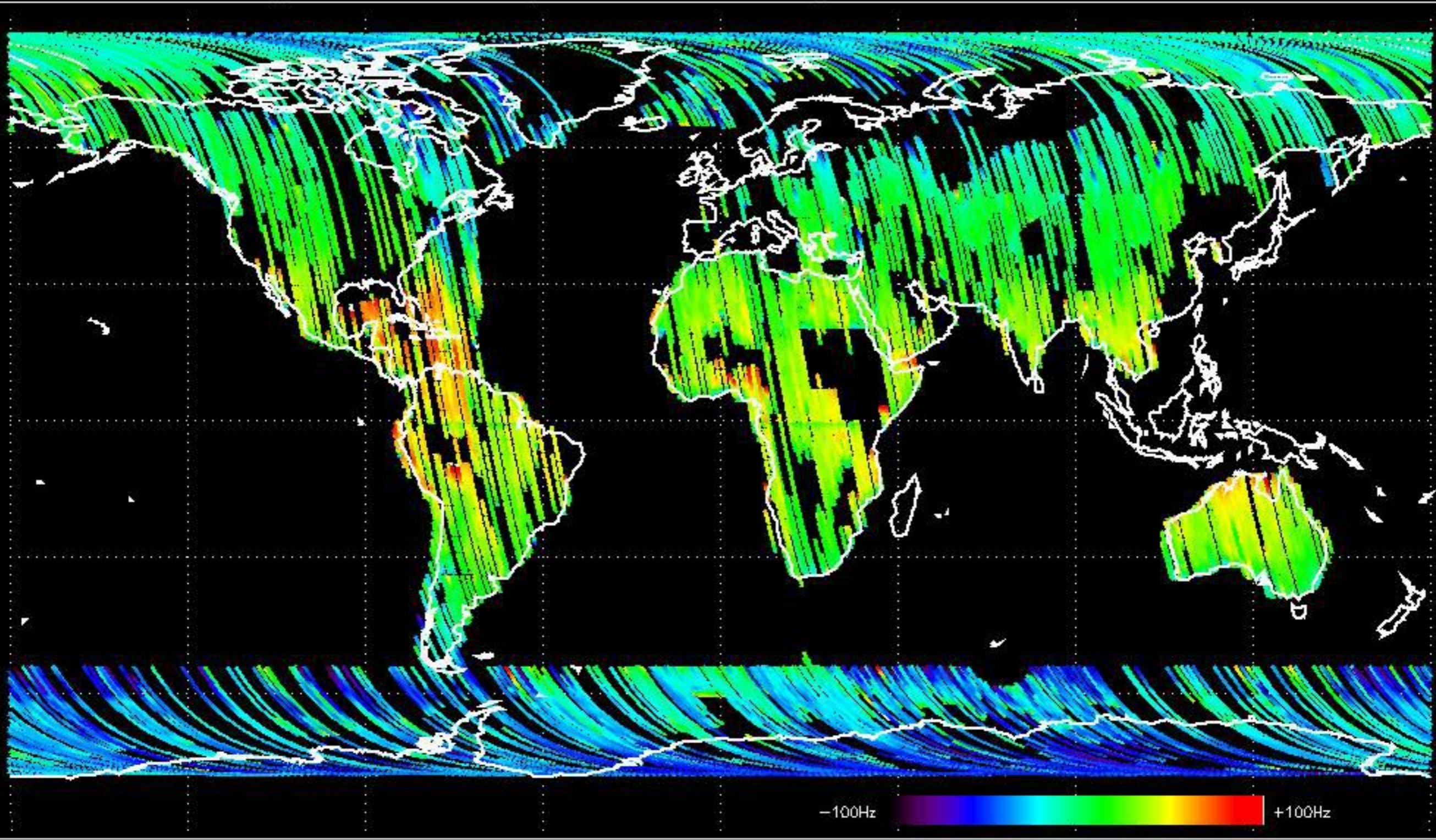


GM1 mode doppler

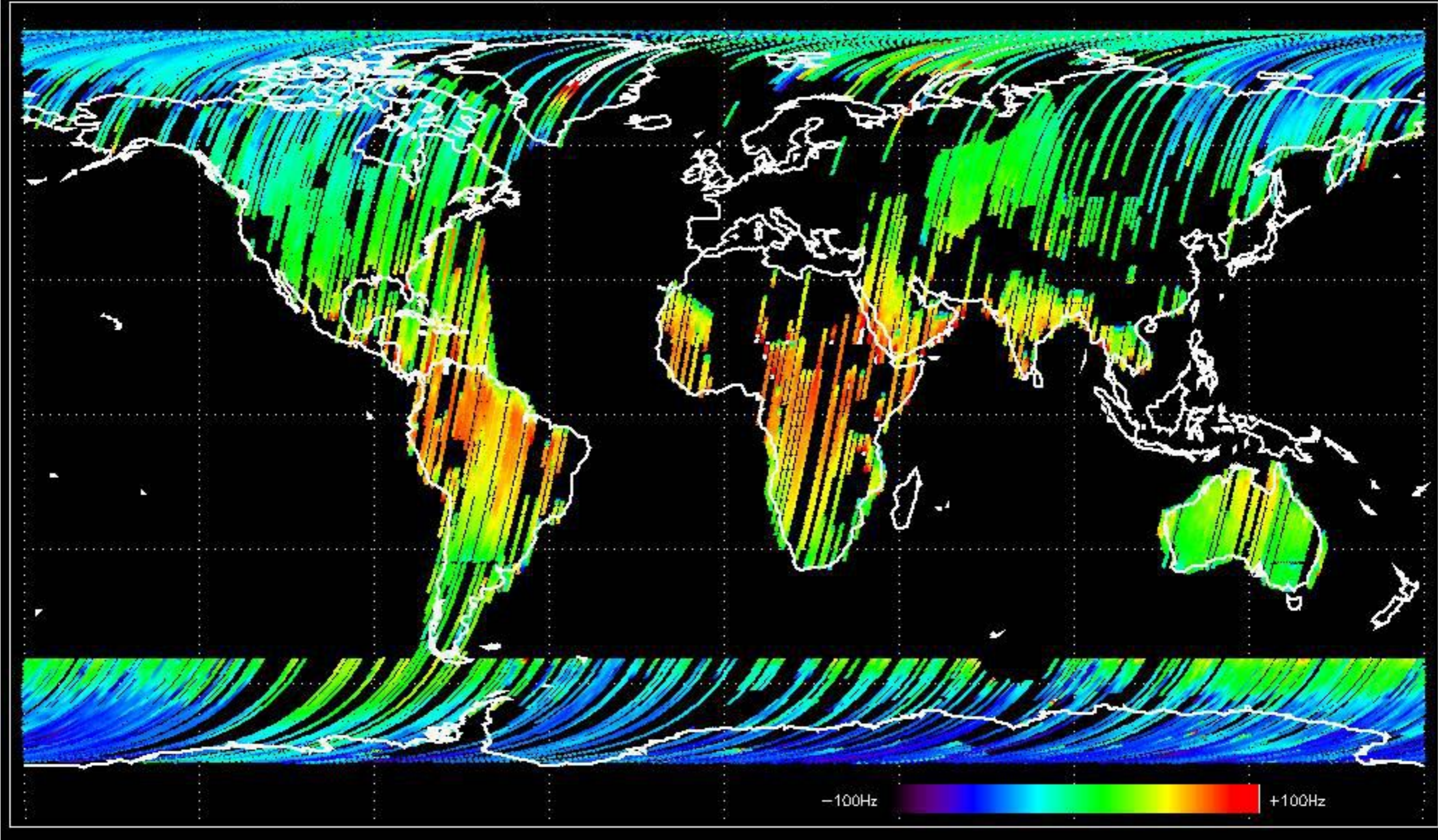




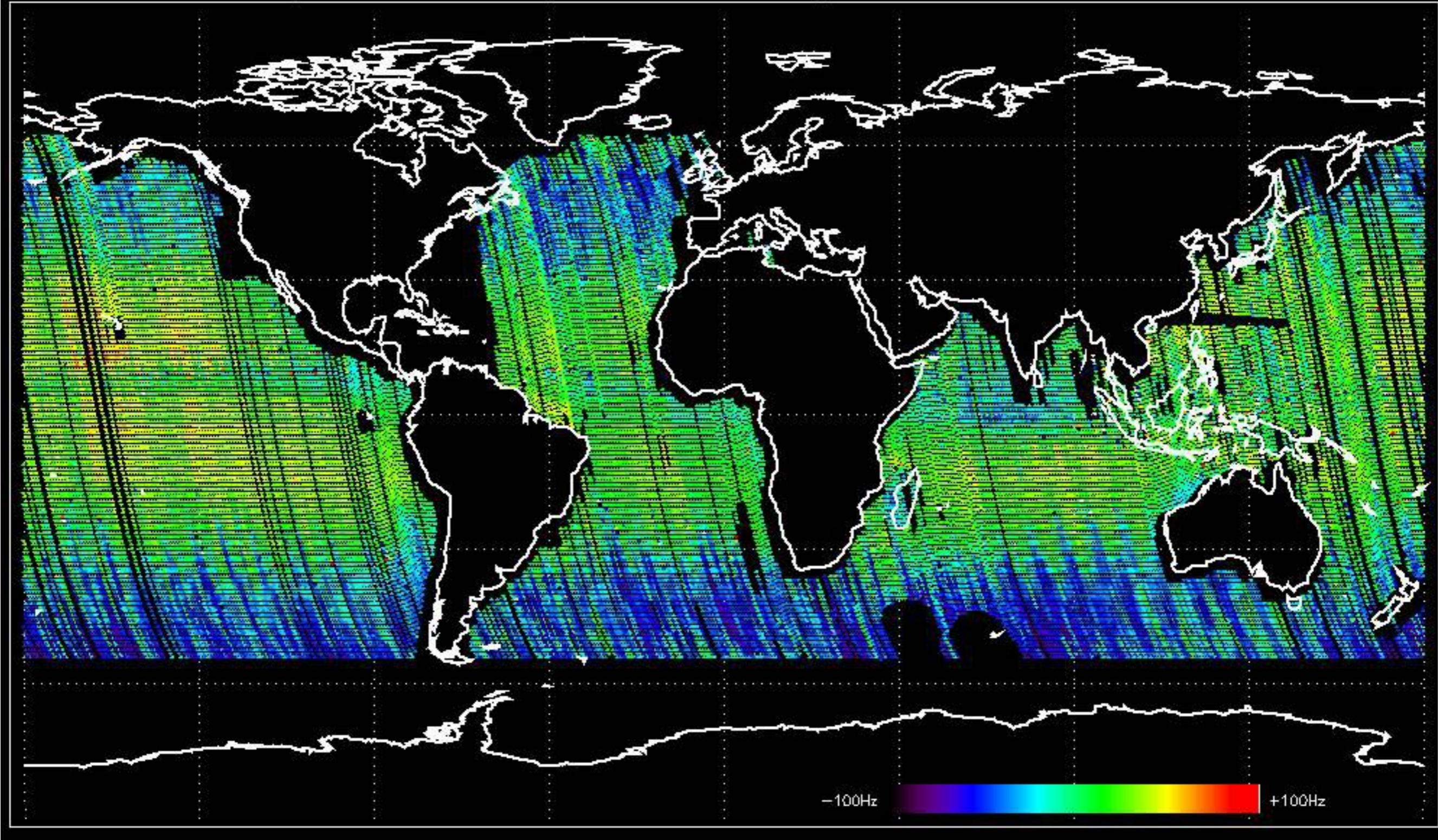
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -8.2855058 Hz



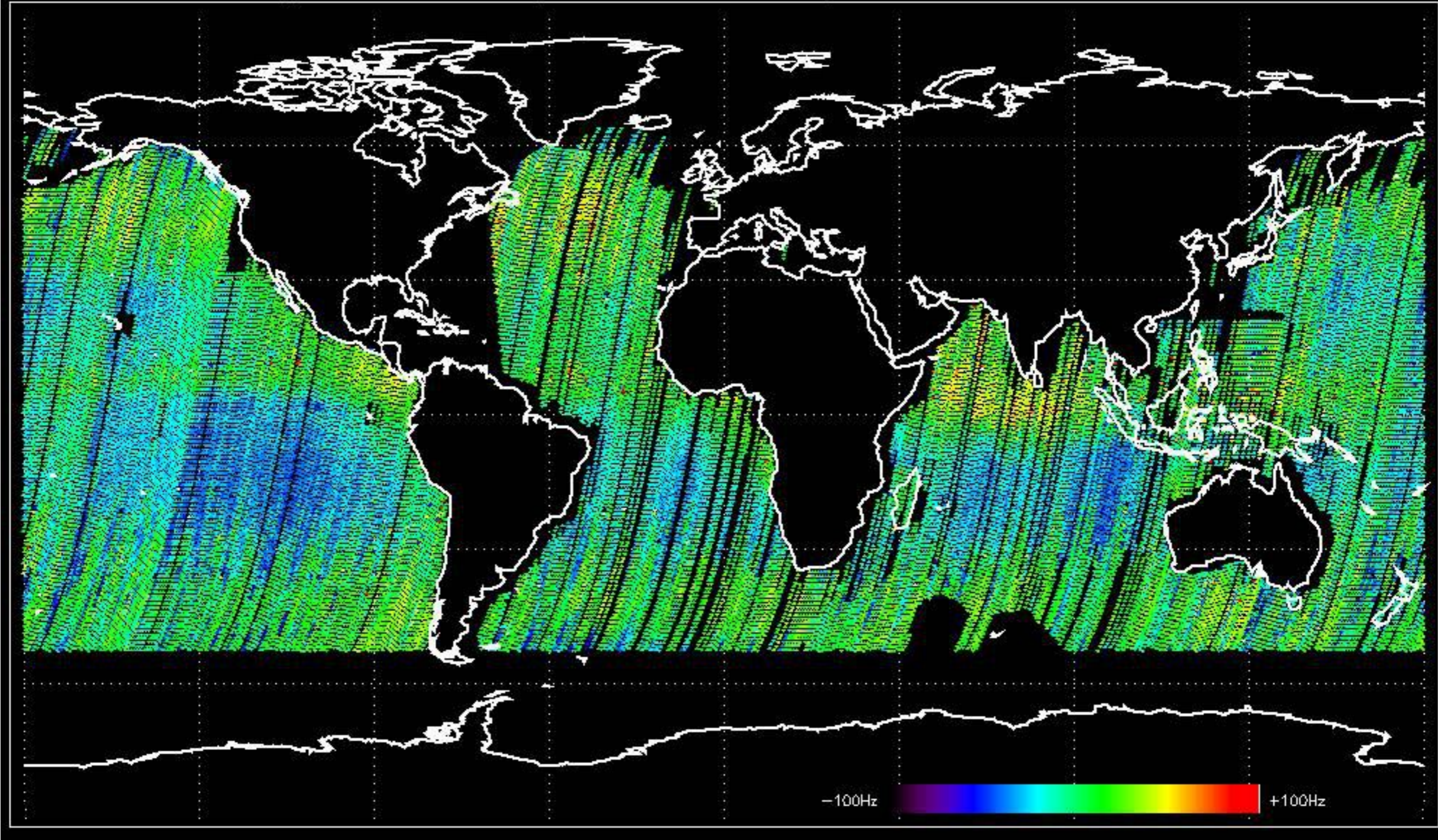
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -4.8736831 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of 0.37278460 Hz

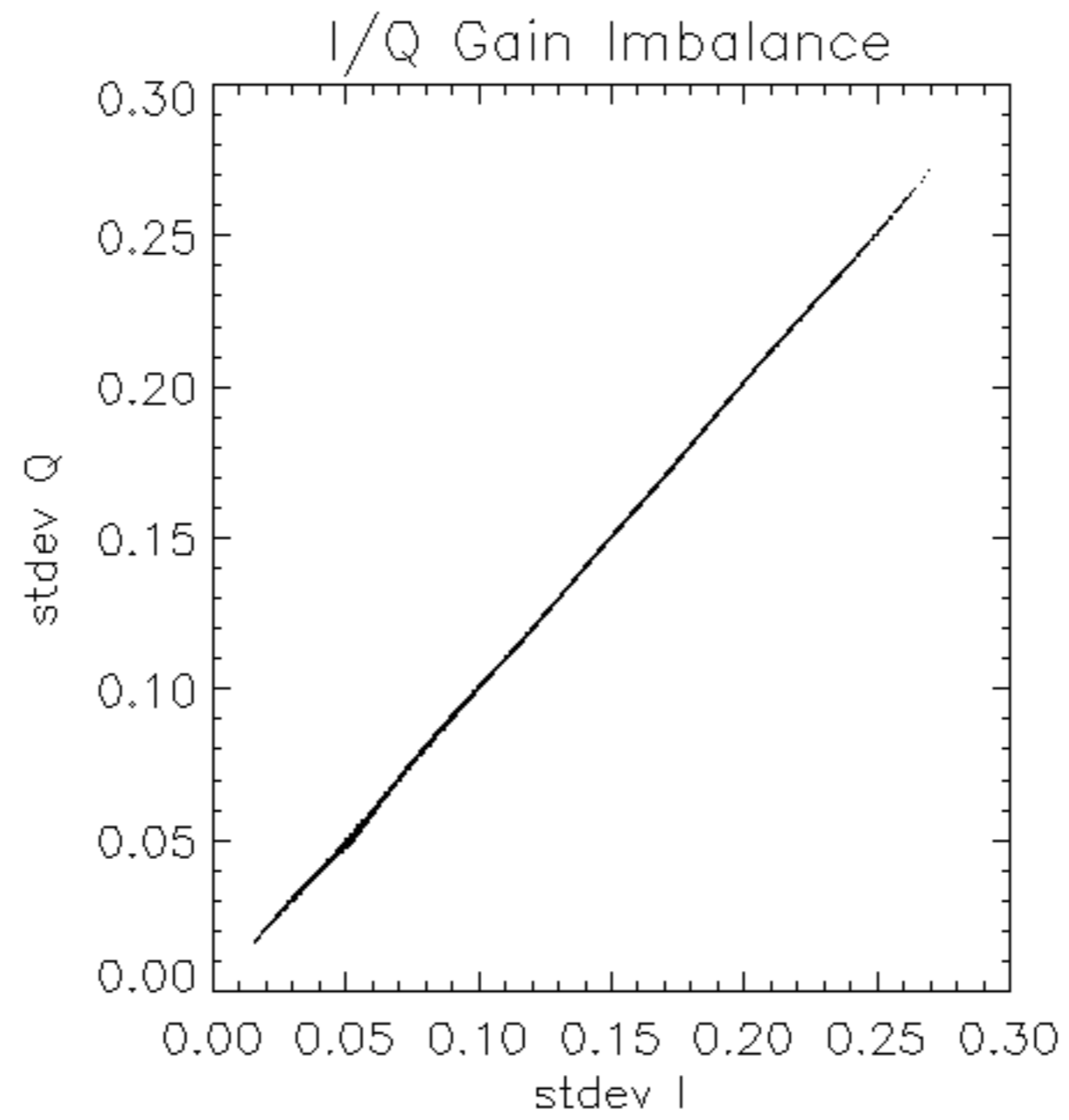


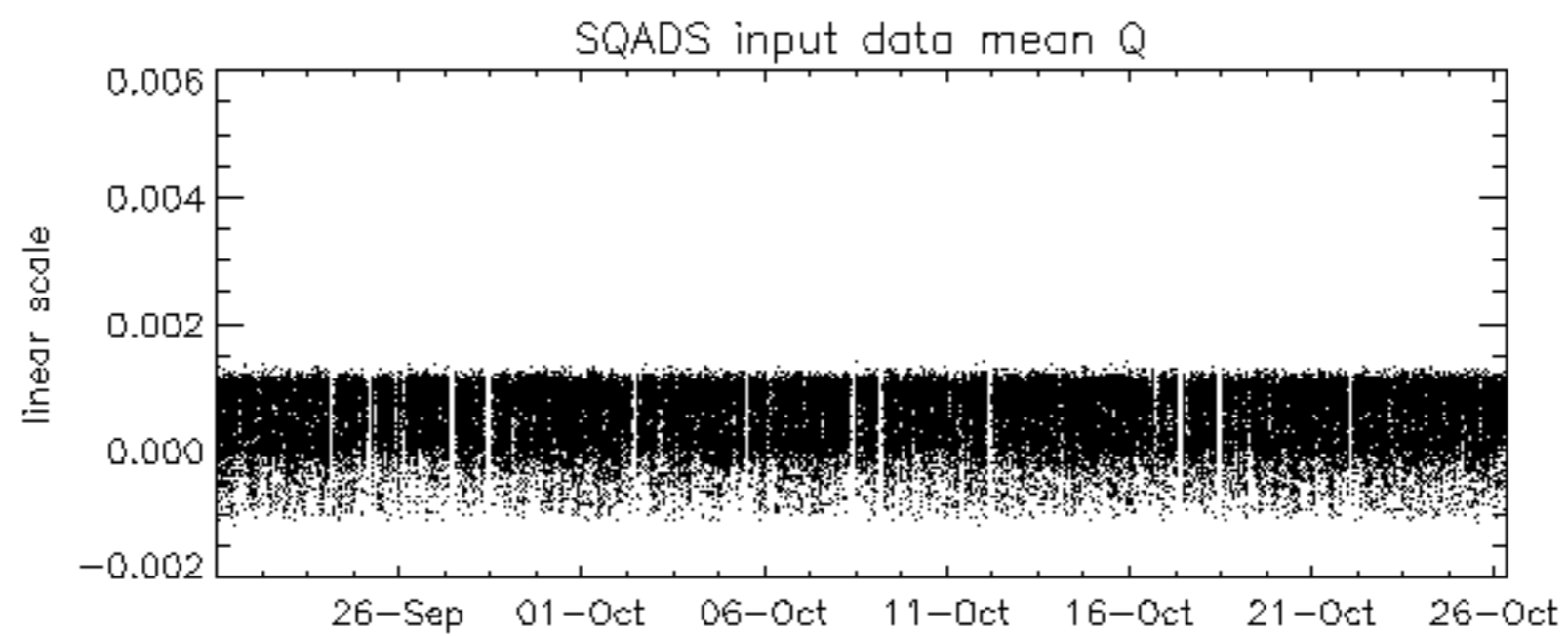
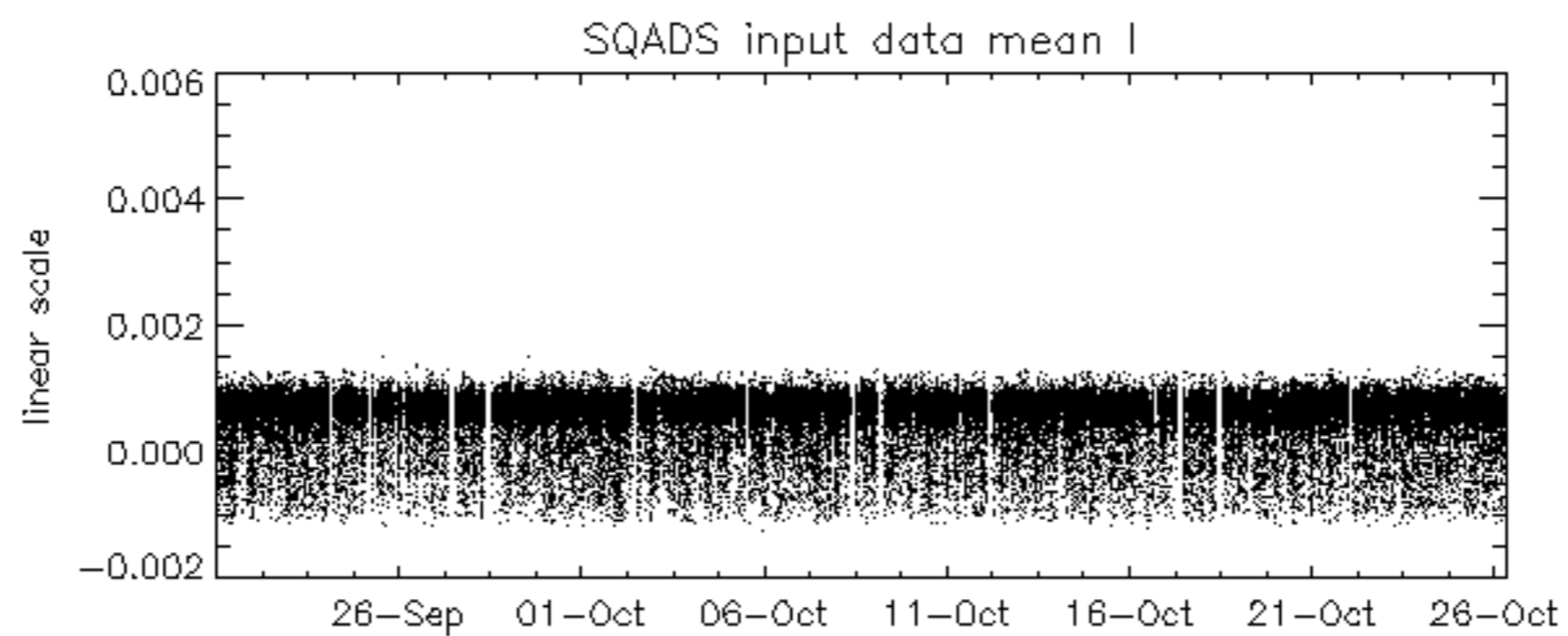
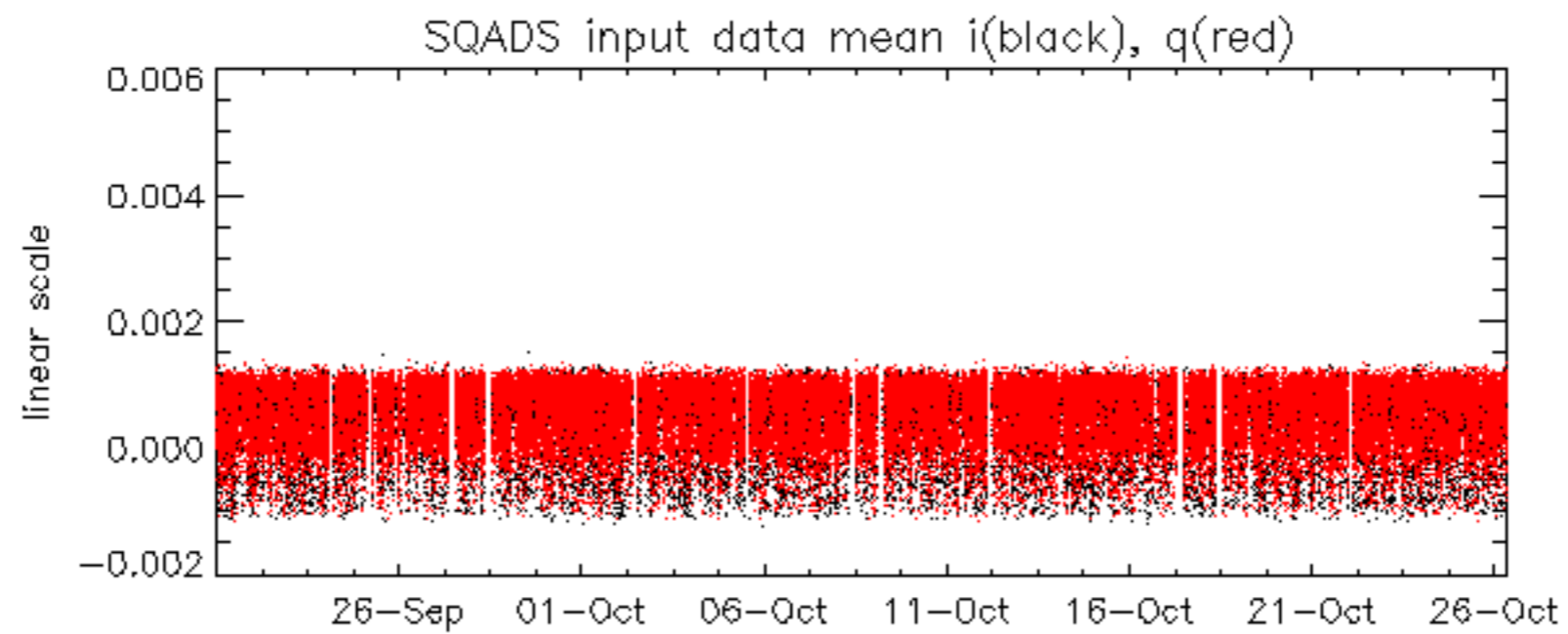
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -3.8682071 Hz

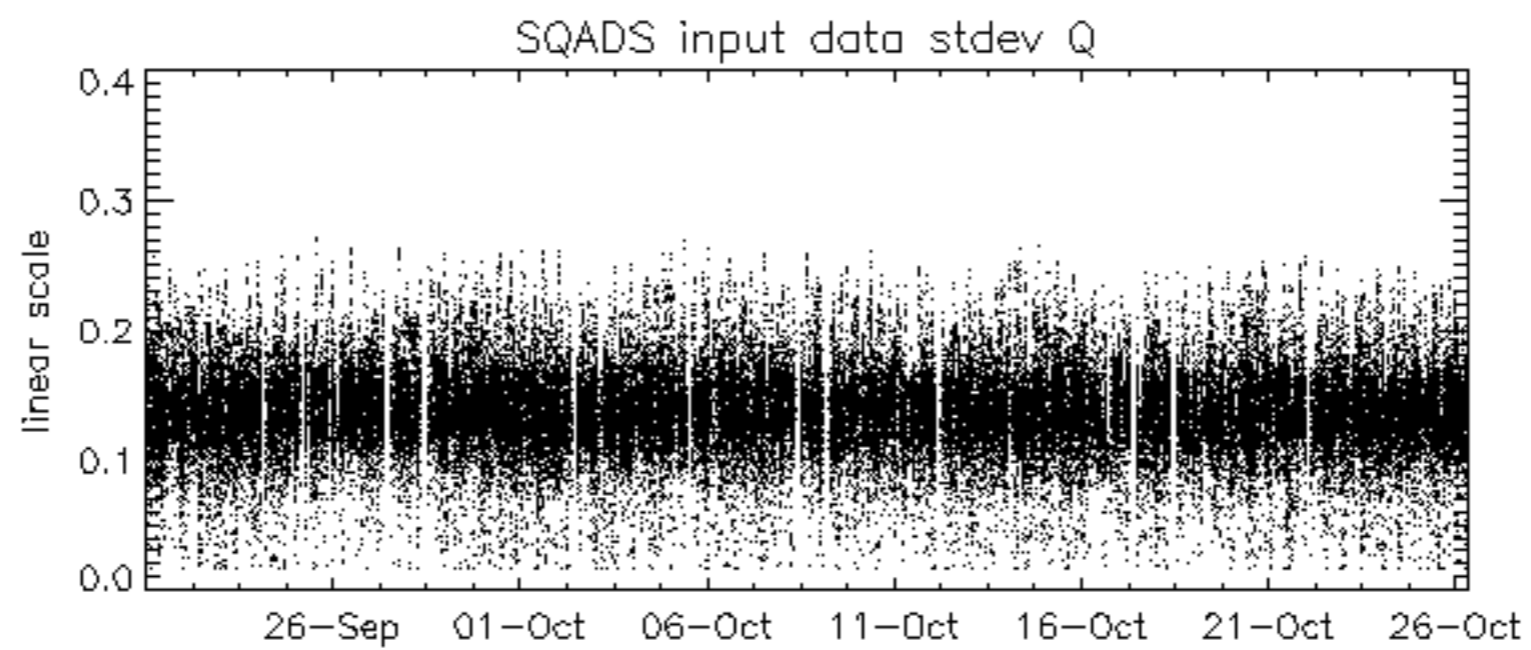
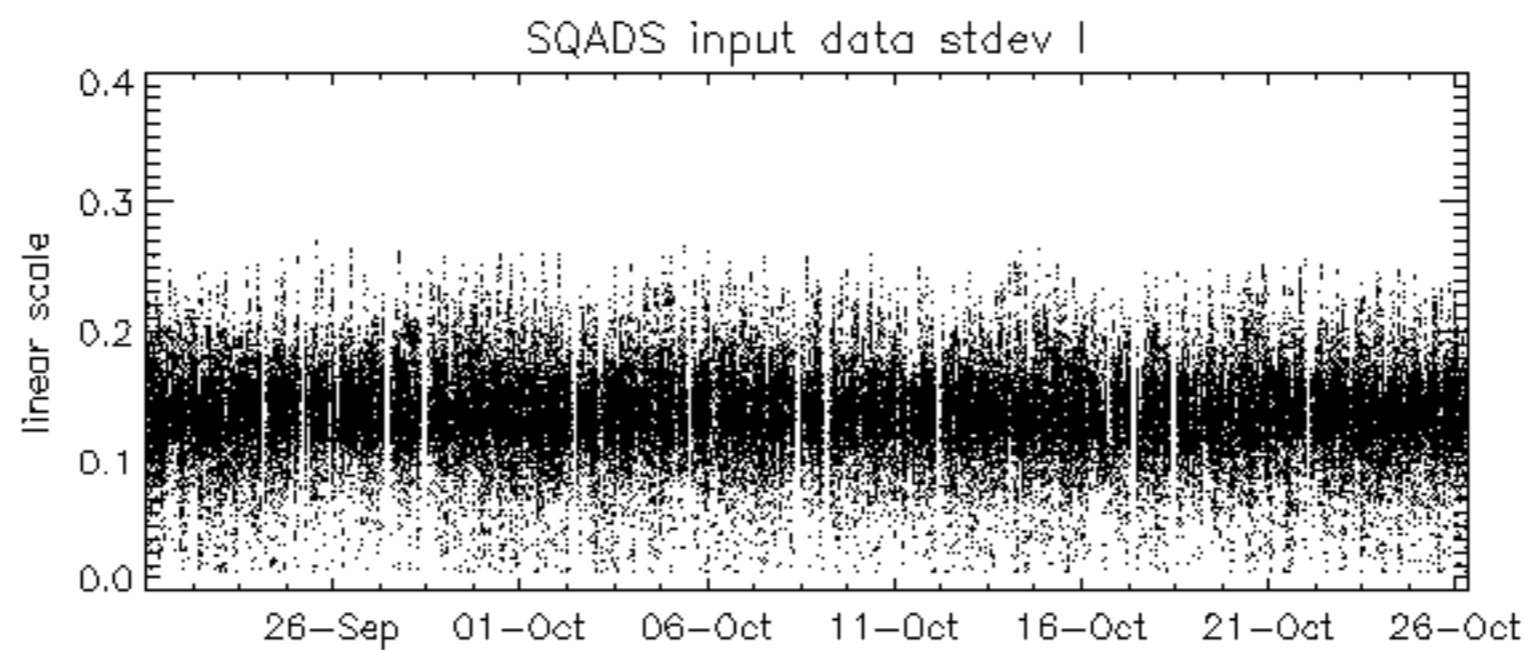
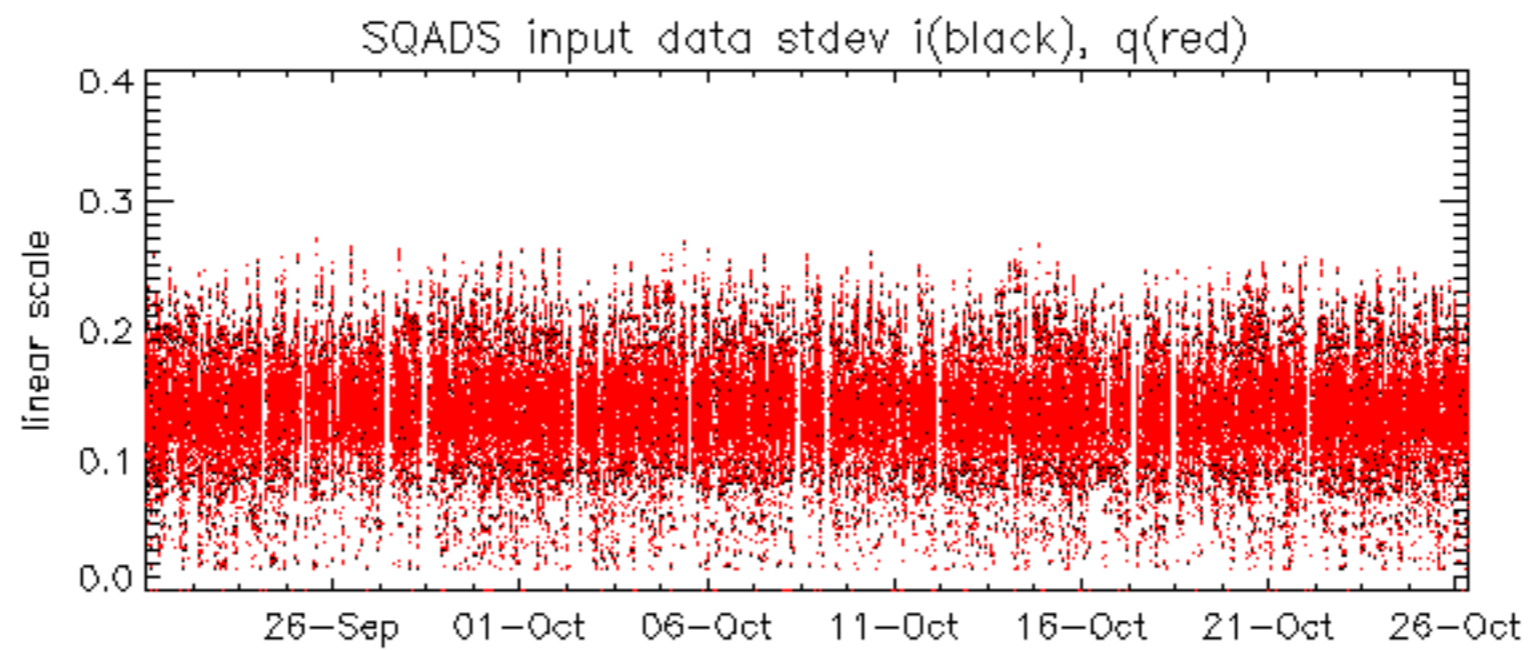


No anomalies observed on available MS products:

No anomalies observed.



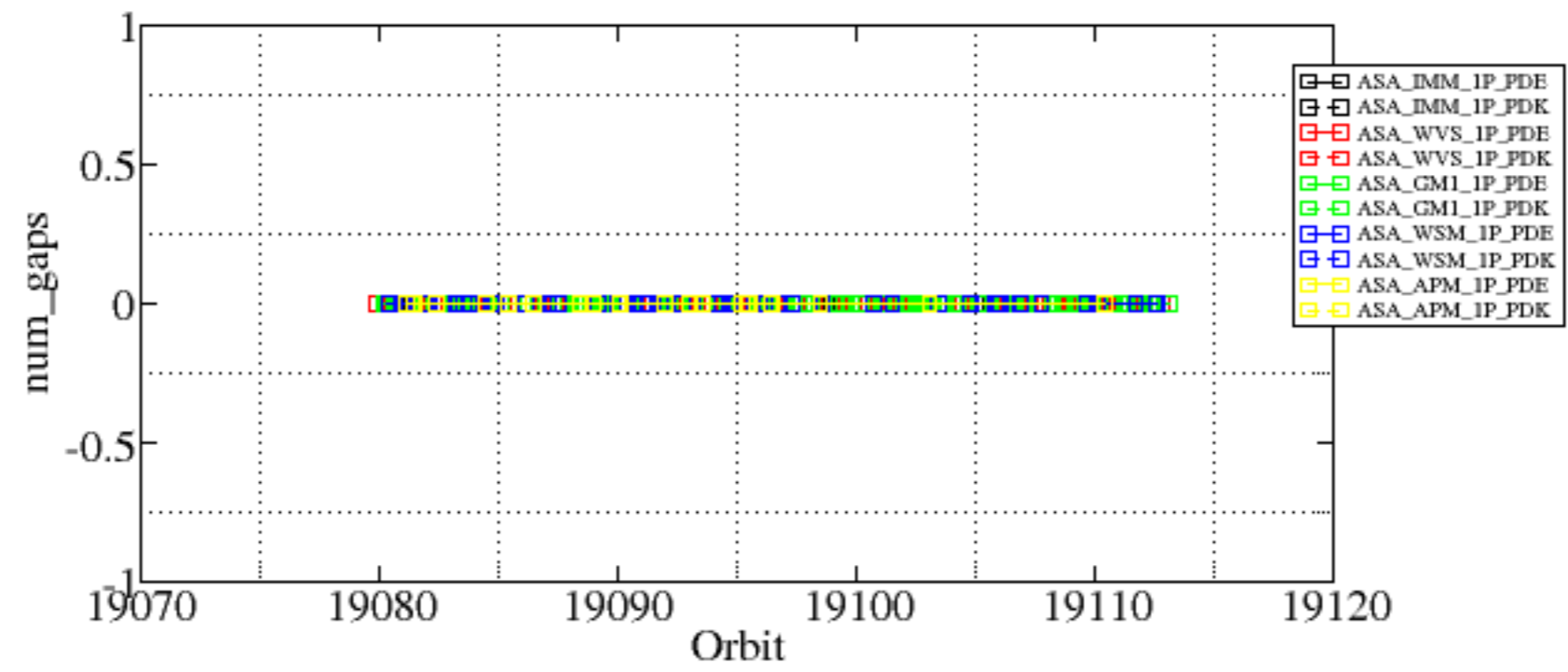


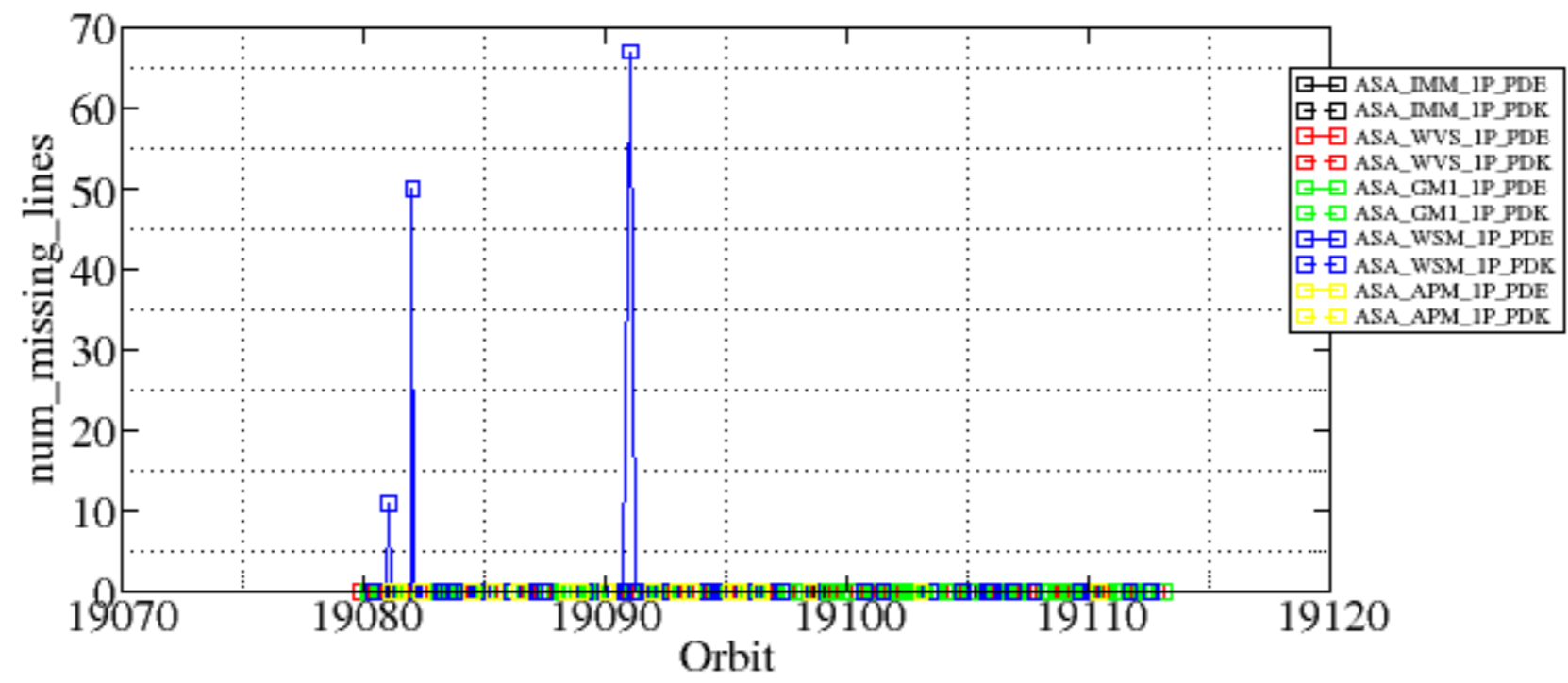


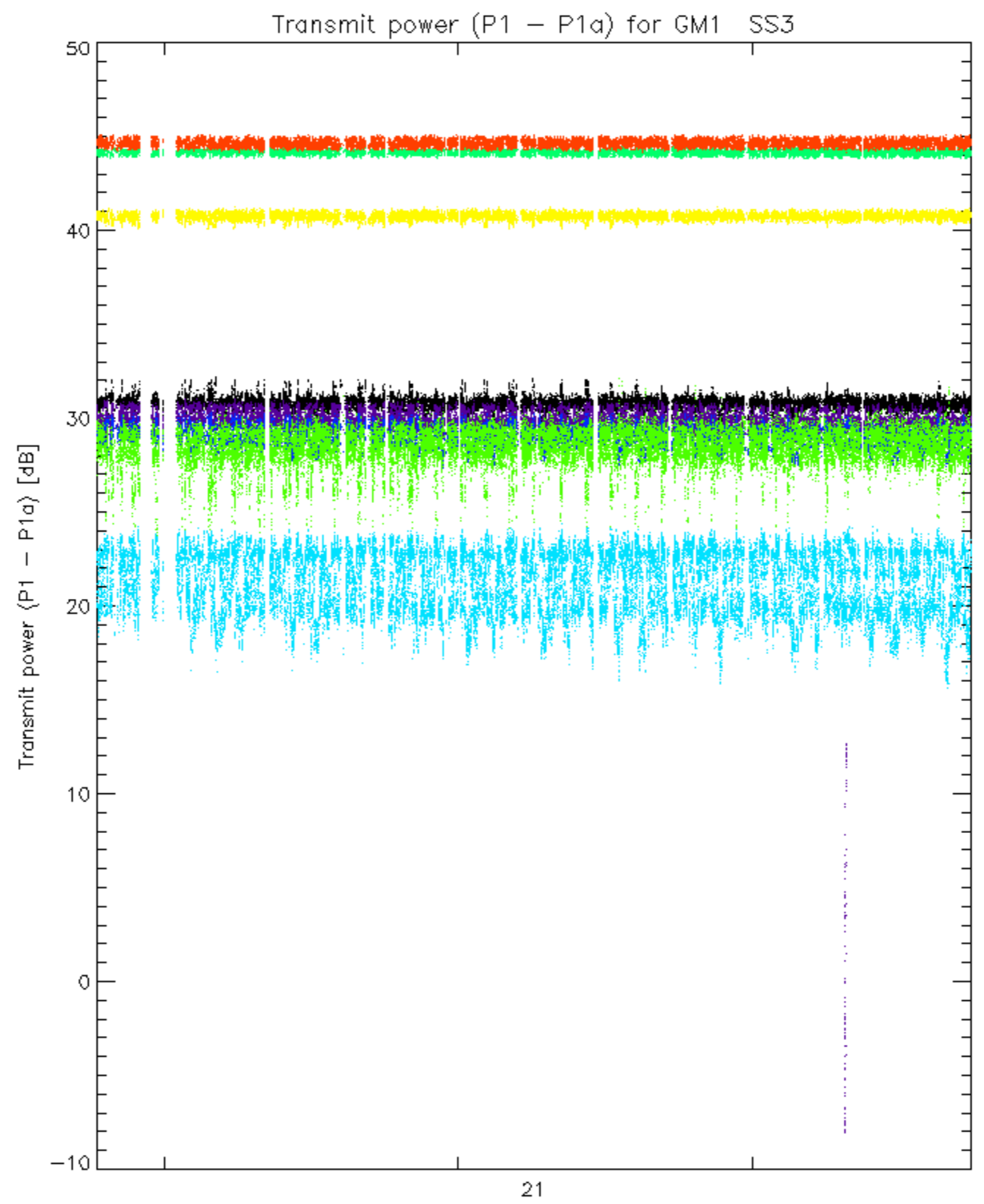
Summary of analysis for the last 3 days 2005102[456]

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

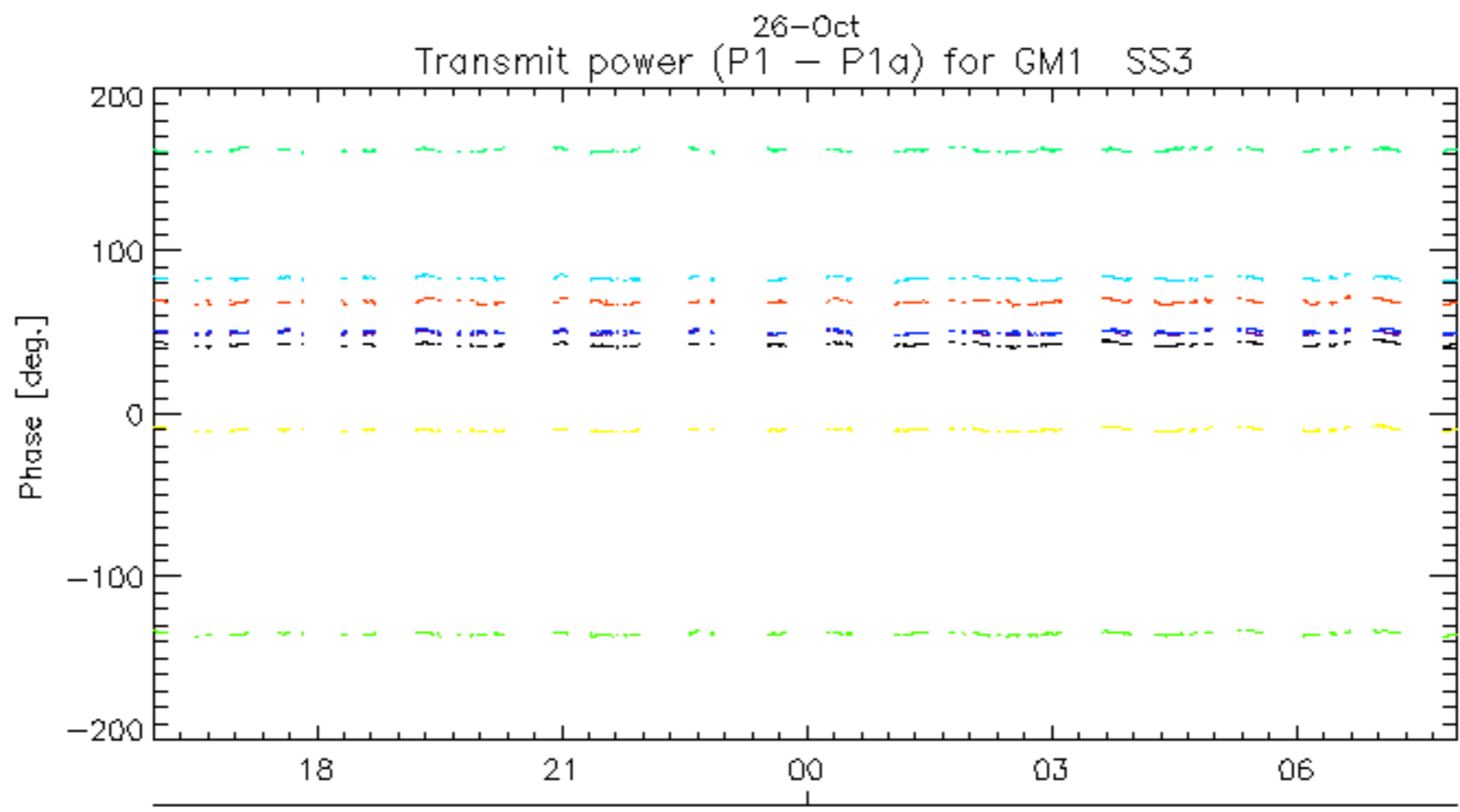
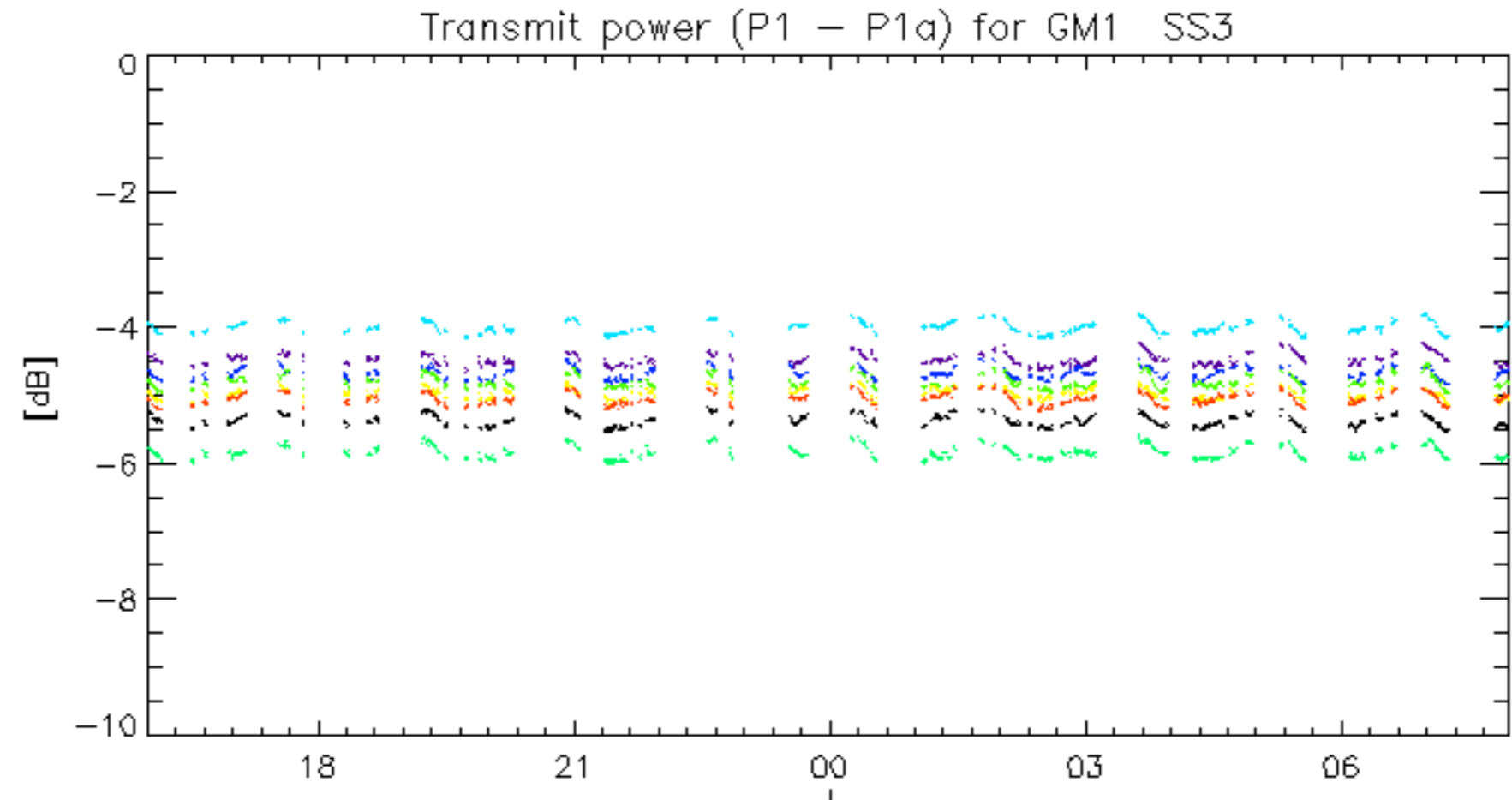
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20051024_015714_000001592041_00490_19081_5772.N1	0	11
ASA_WSM_1PNPDE20051024_033513_000000672041_00491_19082_5794.N1	0	50
ASA_WSM_1PNPDE20051024_184203_000003062041_00500_19091_5927.N1	0	67



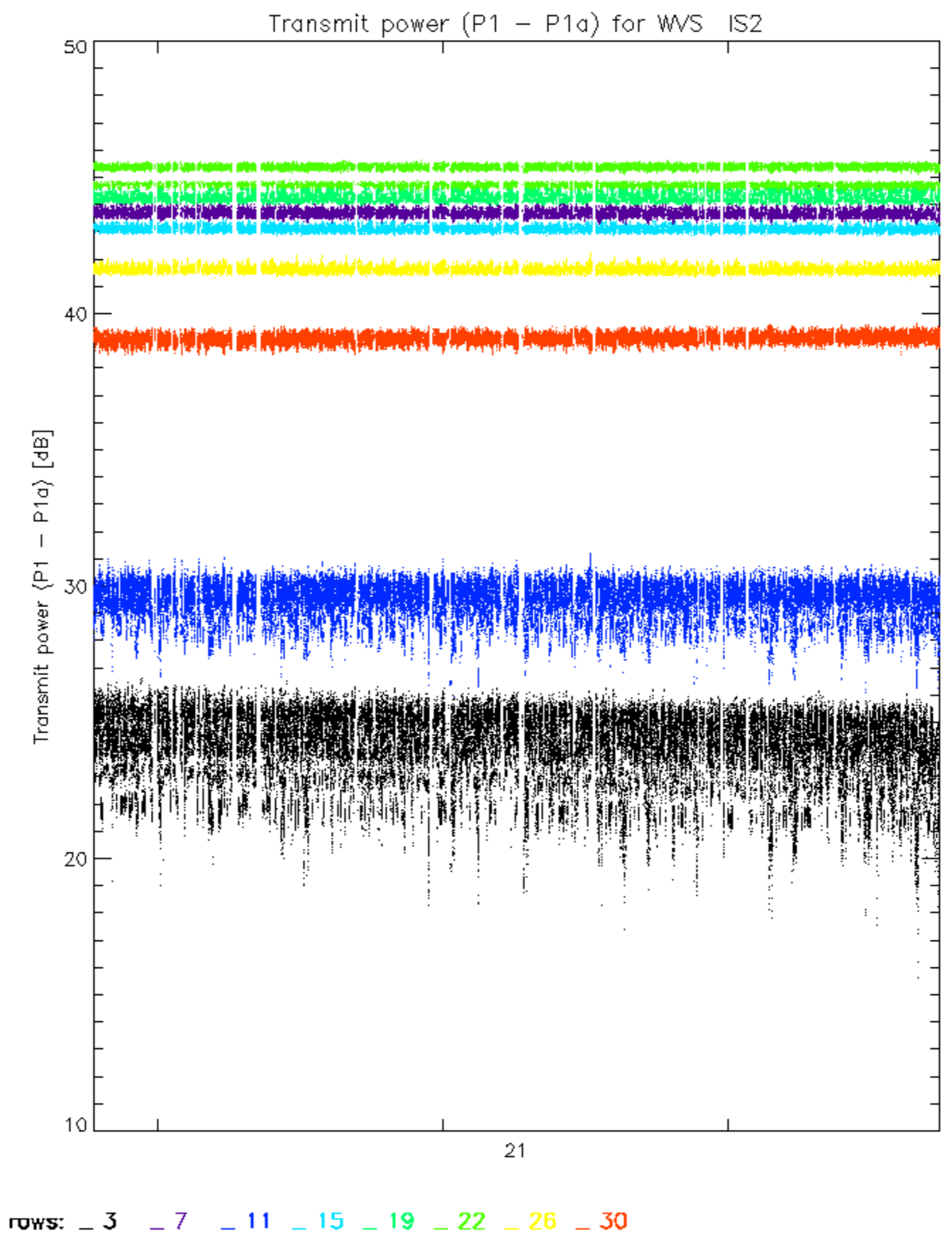


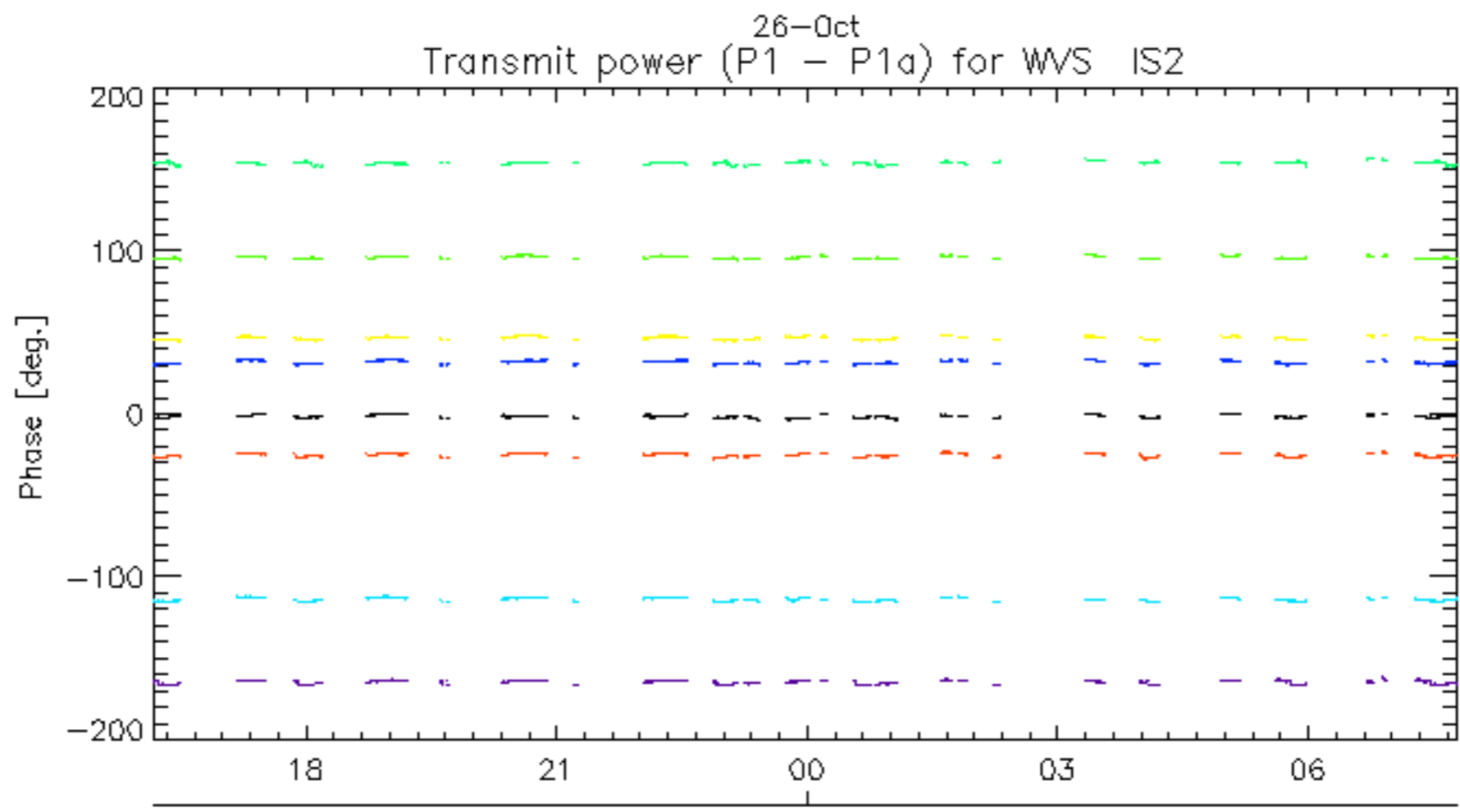
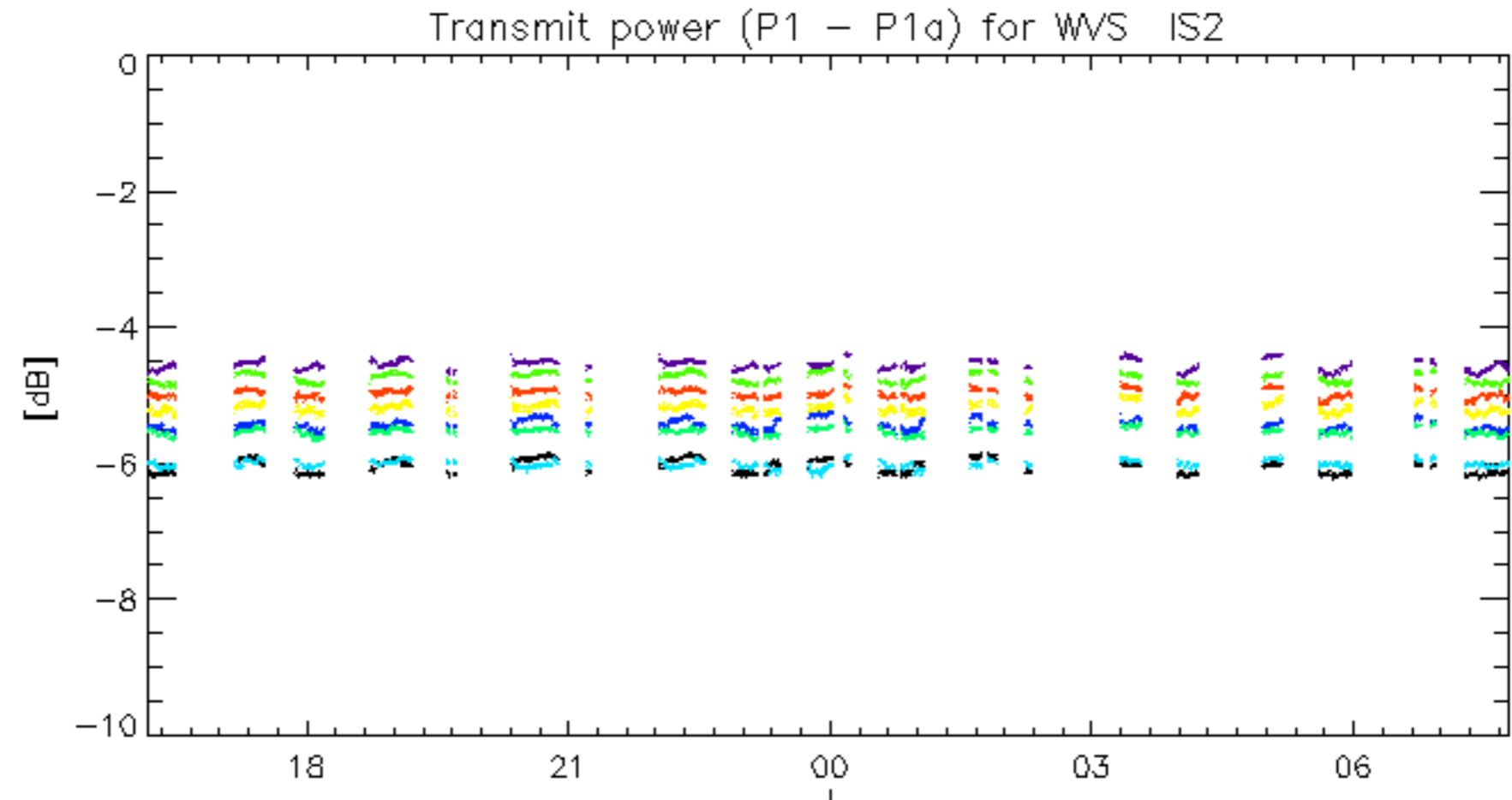


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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No unavailabilities during the reported period.