

PRELIMINARY REPORT OF 050818

last update on Thu Aug 18 10:50:01 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 2005-08-17 00:00:00 to 2005-08-18 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	27	53	15	4	1
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	27	53	15	4	1
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	27	53	15	4	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	27	53	15	4	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	37	53	27	8	65
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	37	53	27	8	65
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	37	53	27	8	65
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	37	53	27	8	65

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	20050817 170204
H	20050818 062652

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	-3.314153	0.025497	0.017111
7	P1	-3.159917	0.026040	-0.056153
11	P1	-4.714220	0.032862	-0.028662
15	P1	-5.596853	0.050111	-0.068823
19	P1	-3.800705	0.004202	-0.044732
22	P1	-4.637455	0.089083	0.041915
26	P1	-4.847021	0.117662	0.054459
30	P1	-7.246237	0.119844	0.015874
3	P1	-15.547861	0.076940	0.051901
7	P1	-15.528892	0.143191	-0.078917
11	P1	-21.762243	0.271893	-0.174735
15	P1	-11.293353	0.065655	-0.009706
19	P1	-14.495023	0.036251	-0.060107
22	P1	-15.672128	0.345579	0.221696
26	P1	-17.329370	0.194348	0.161310
30	P1	-17.778652	0.399207	-0.185738

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.805056	0.083867	0.117880
7	P2	-21.958643	0.100180	0.154772
11	P2	-13.547016	0.106430	0.200807
15	P2	-7.065129	0.090485	0.043148
19	P2	-9.590250	0.093704	0.003151
22	P2	-16.833012	0.095885	0.053201
26	P2	-16.509184	0.096798	0.002106
30	P2	-18.799324	0.085216	-0.019058

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.156379	0.002705	-0.001390
7	P3	-8.156379	0.002705	-0.001390
11	P3	-8.156379	0.002705	-0.001390
15	P3	-8.156379	0.002705	-0.001390
19	P3	-8.156379	0.002705	-0.001390
22	P3	-8.156379	0.002705	-0.001390
26	P3	-8.156379	0.002705	-0.001390
30	P3	-8.156379	0.002705	-0.001390

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	-2.802688	0.085839	-0.031297
7	P1	-2.971869	0.055476	-0.034515
11	P1	-4.017620	0.016555	-0.057373
15	P1	-3.616437	0.057040	-0.078617
19	P1	-3.631371	0.015409	0.002962
22	P1	-5.695424	0.096019	-0.018496
26	P1	-7.392781	0.160379	0.061911
30	P1	-6.321881	0.097806	0.070274
3	P1	-10.899649	0.051877	-0.170578
7	P1	-10.475721	0.164231	-0.058763
11	P1	-12.645588	0.102645	-0.030854
15	P1	-11.601764	0.096061	-0.010531
19	P1	-15.497717	0.065799	0.090403
22	P1	-25.582981	2.770760	0.219161
26	P1	-15.285463	0.306821	0.168413
30	P1	-20.064936	1.296029	-0.134534

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.531466	0.046810	0.165813
7	P2	-22.017054	0.038456	0.055108
11	P2	-9.583971	0.065228	0.182505
15	P2	-5.101380	0.041883	0.038567
19	P2	-6.879092	0.062602	0.060363
22	P2	-7.052231	0.039380	0.050090
26	P2	-23.963579	0.037265	0.020091
30	P2	-21.943895	0.043657	0.023843

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-7.997532	0.004261	-0.001073
7	P3	-7.997401	0.004254	-0.001371
11	P3	-7.997424	0.004260	-0.001515
15	P3	-7.997303	0.004261	-0.001334
19	P3	-7.997414	0.004259	-0.001213
22	P3	-7.997405	0.004256	-0.001171
26	P3	-7.997300	0.004250	-0.000740
30	P3	-7.997338	0.004245	-0.001296

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	0.000457190
	stdev	2.22297e-07
MEAN Q	mean	0.000485150
	stdev	2.35262e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.127943
	stdev	0.00100124
STDEV Q	mean	0.128199
	stdev	0.00101146



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005081[678]

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_1PNPDE20050816_153613_000000372040_00011_18101_2662.N1	1	0
ASA_IMM_1PNPDE20050817_155429_000000472040_00026_18116_2718.N1	1	0
ASA_IMM_1PNPDK20050817_124606_000000692040_00024_18114_1883.N1	1	0
ASA_GM1_1PNPDE20050816_215256_000004472040_00015_18105_2053.N1	0	14
ASA_WSM_1PNPDE20050818_010644_000002792040_00031_18121_4939.N1	0	50
ASA_WSM_1PNPDE20050818_020201_000001472040_00032_18122_4942.N1	0	66





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

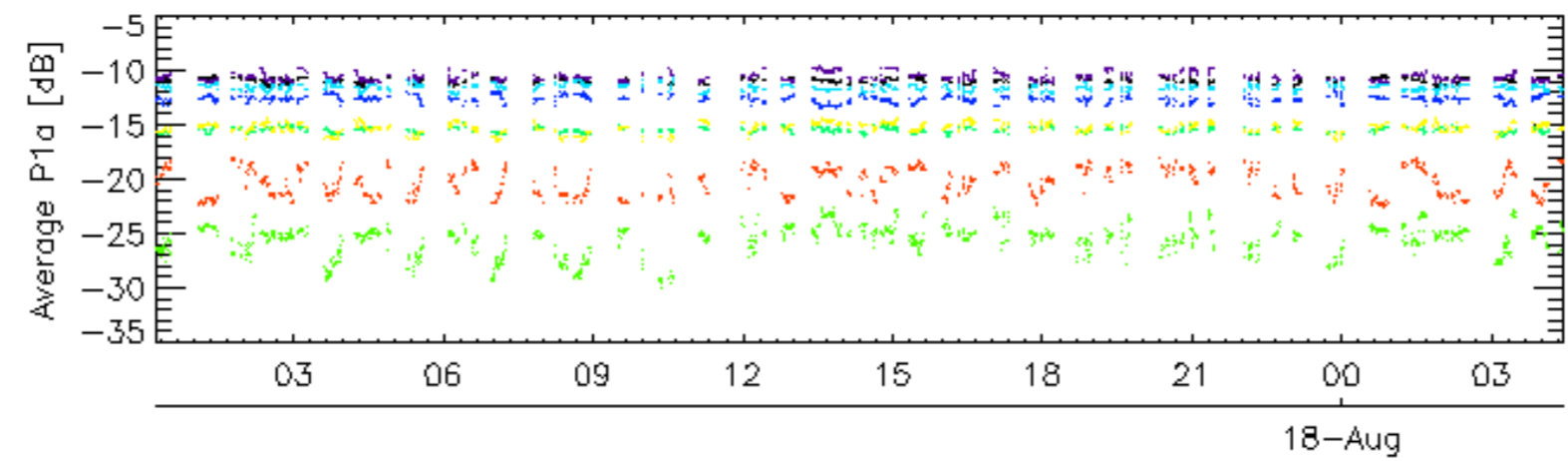
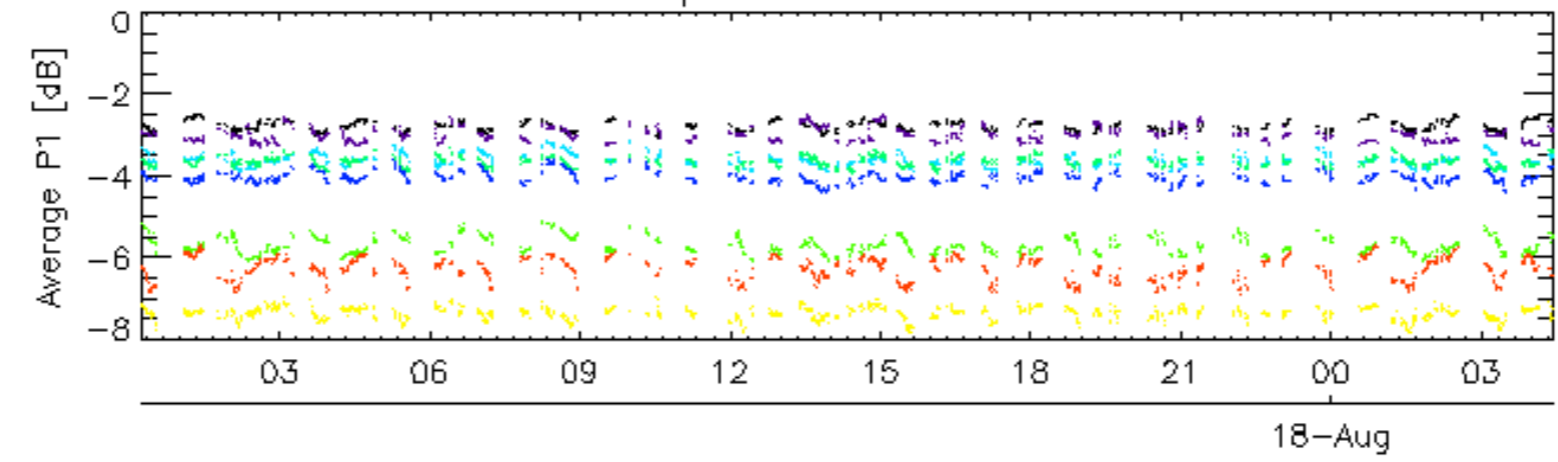
7.5 - Absolute Doppler for GM1

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

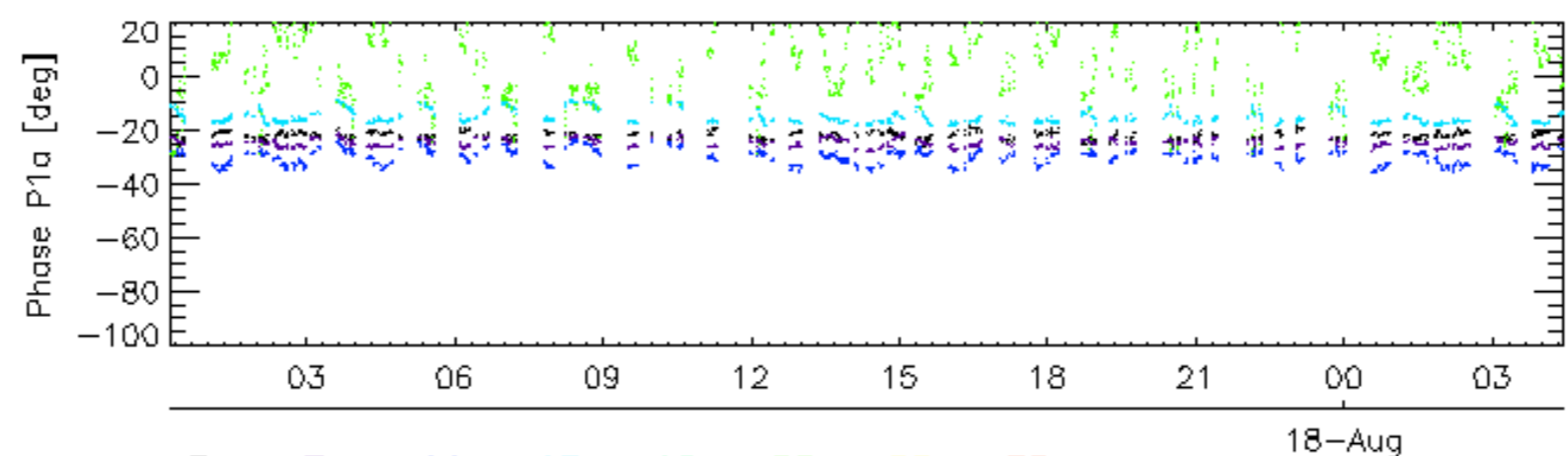
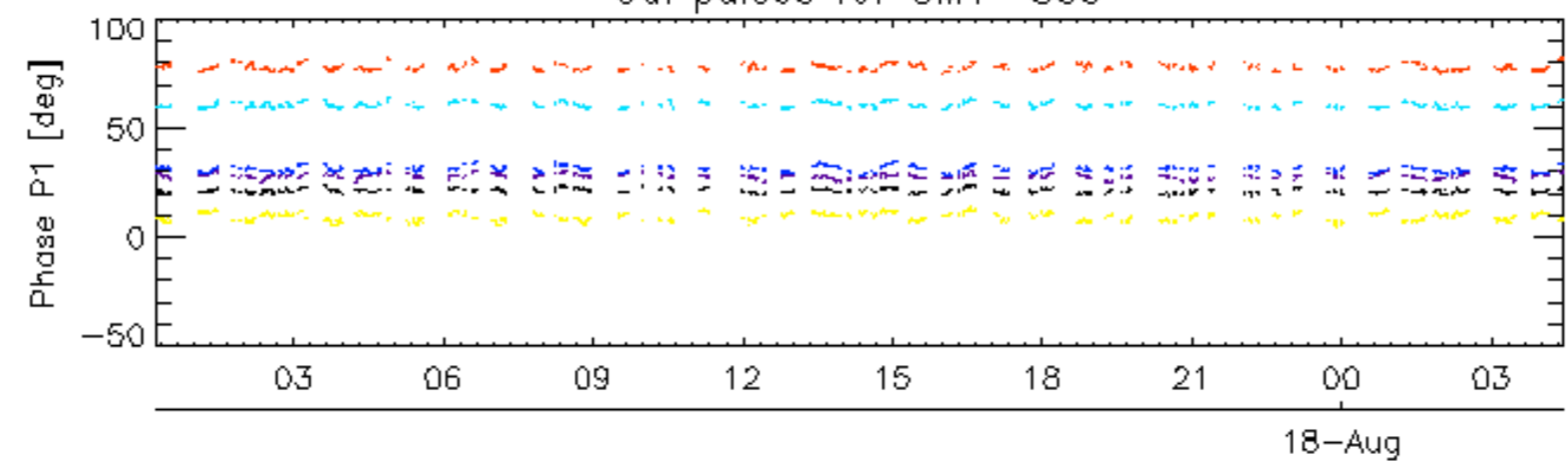
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
<input type="checkbox"/>

Cal pulses for GM1 SS3

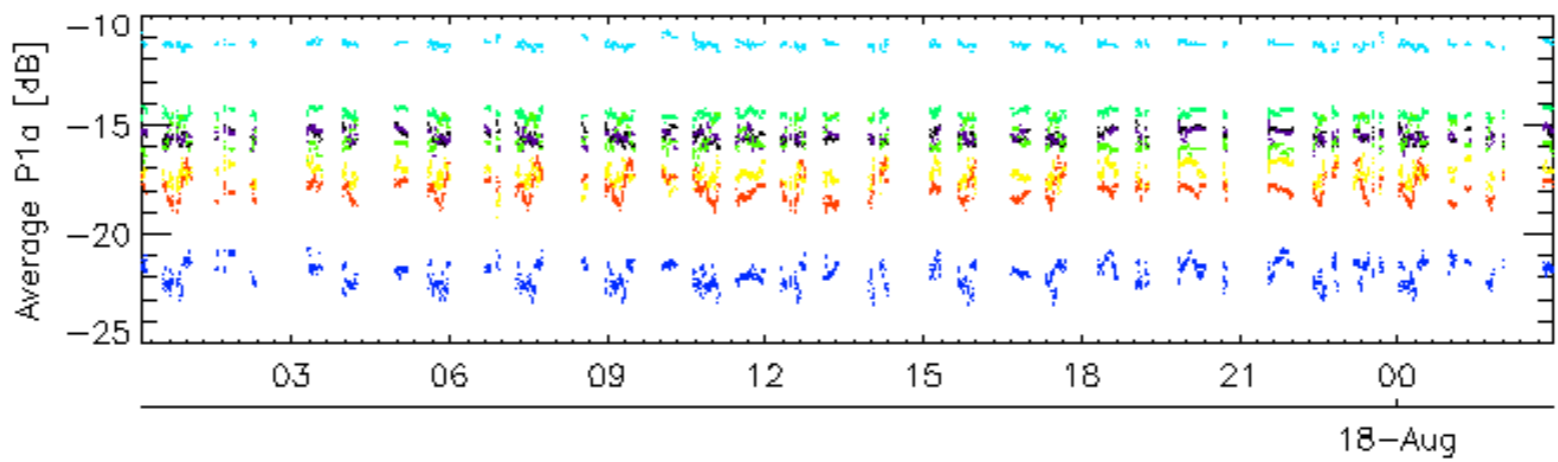
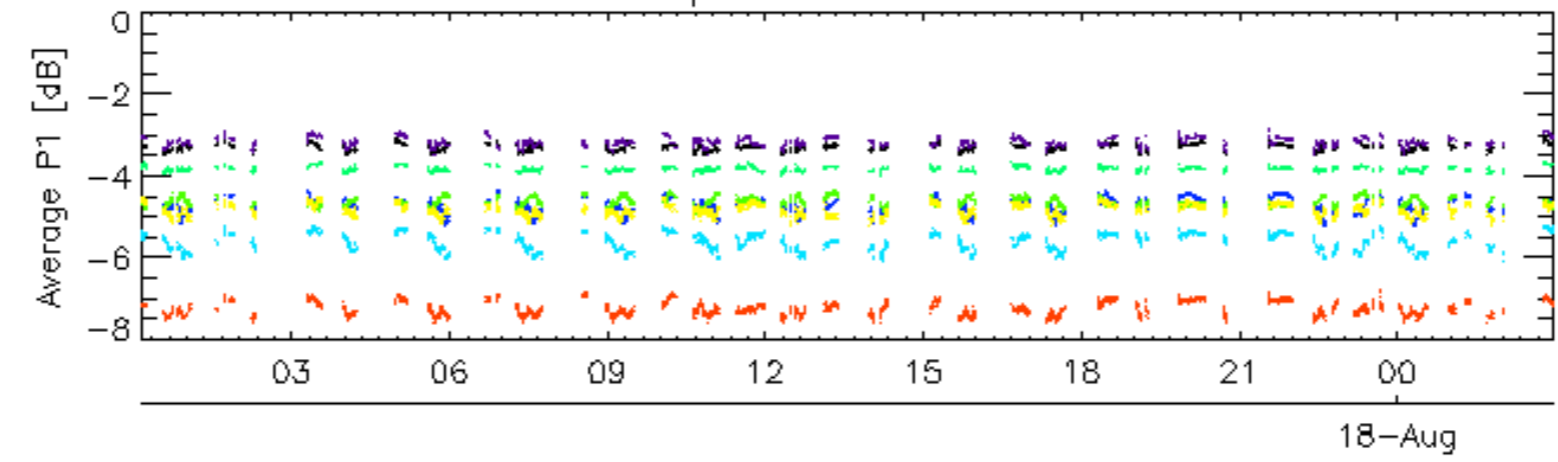


Cal pulses for GM1 SS3

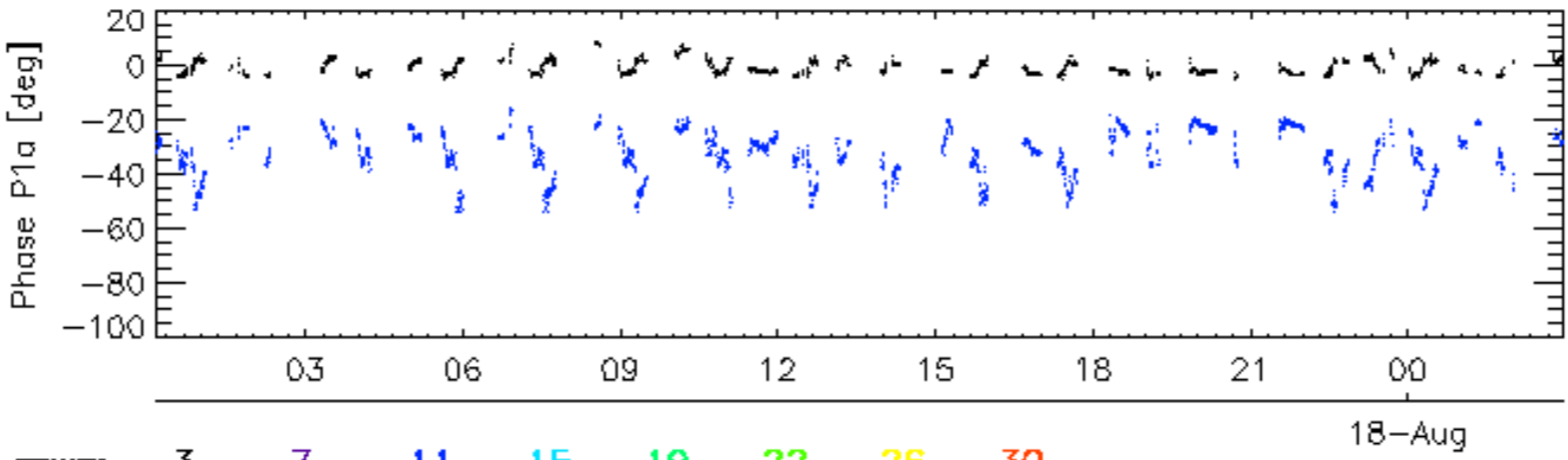
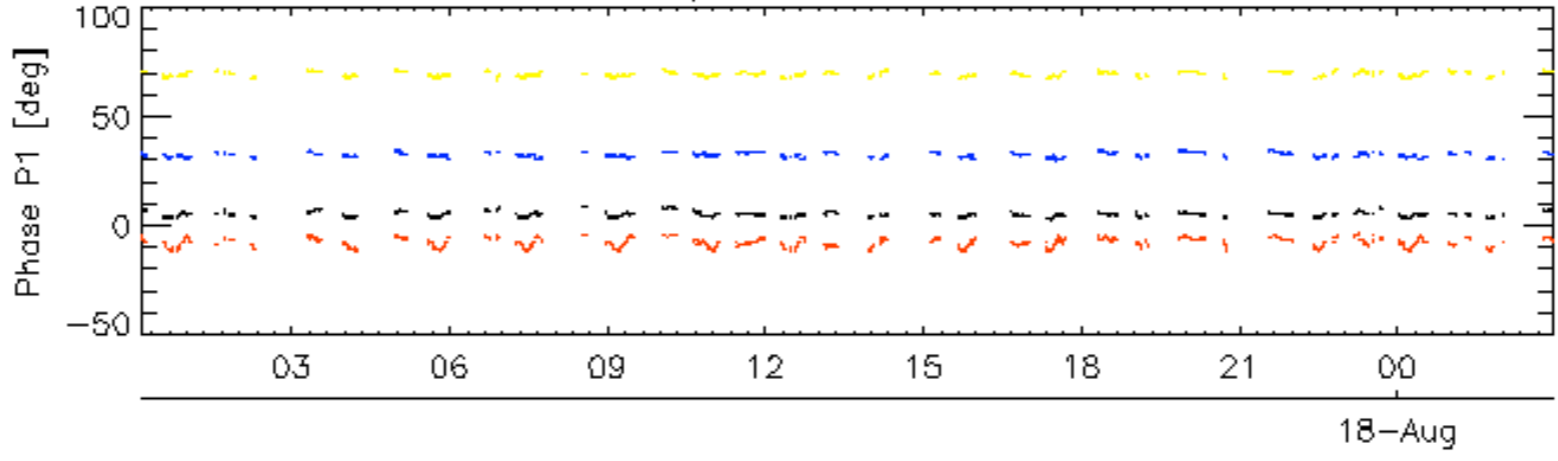


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

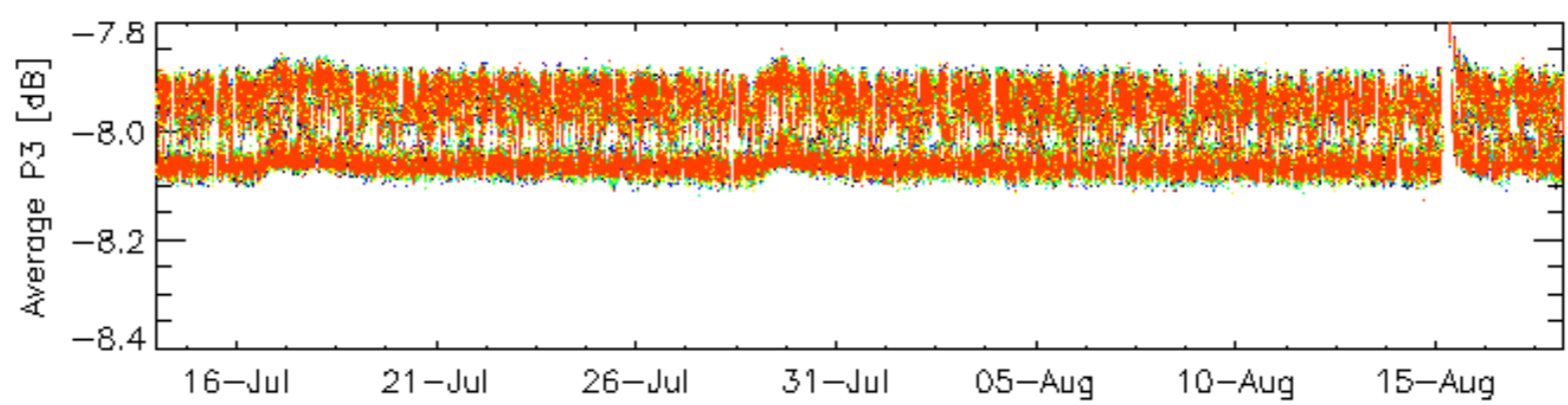
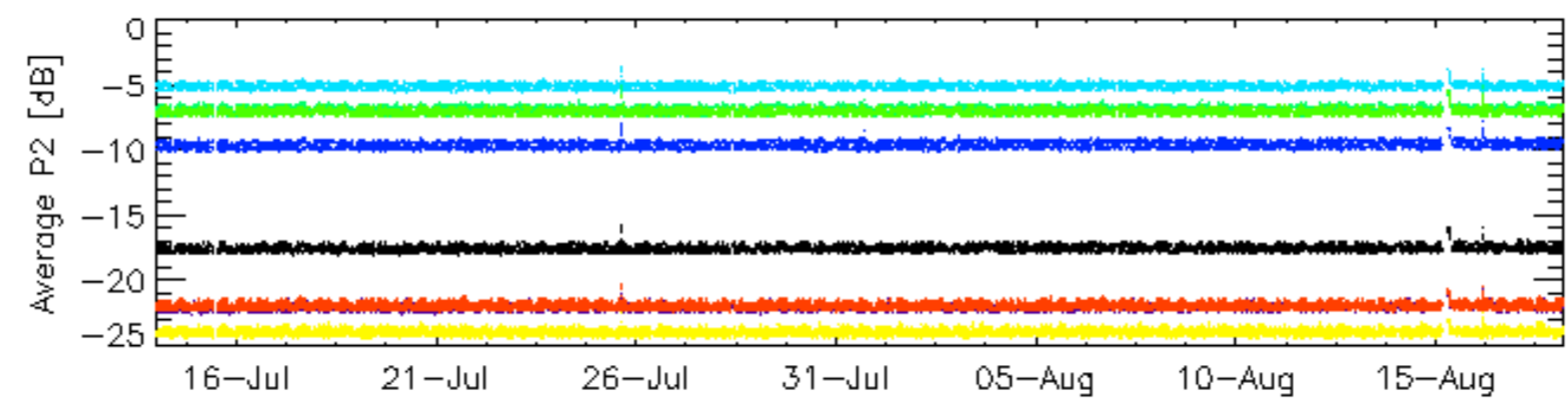
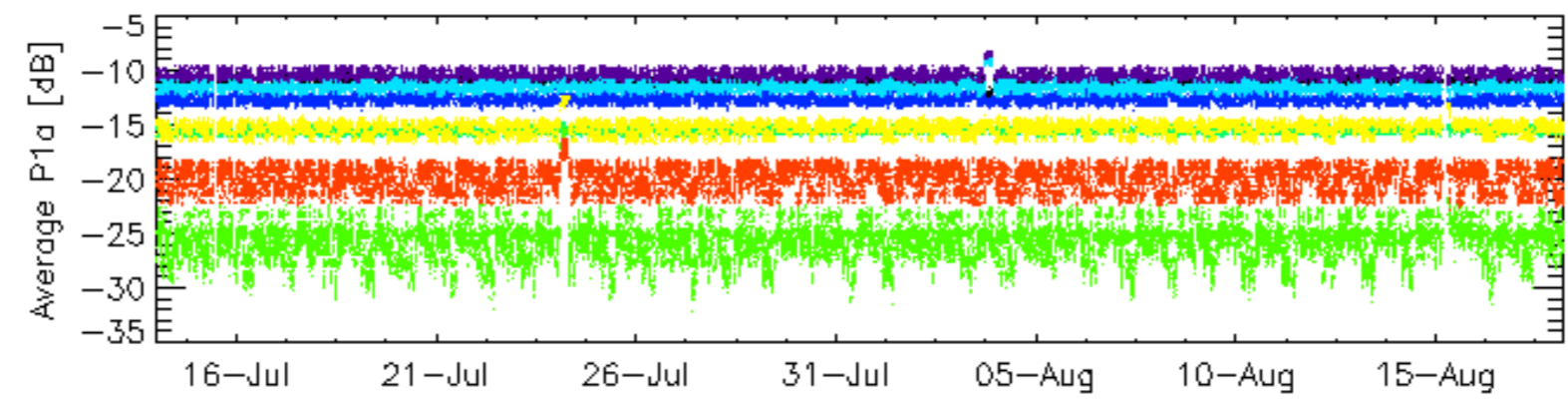
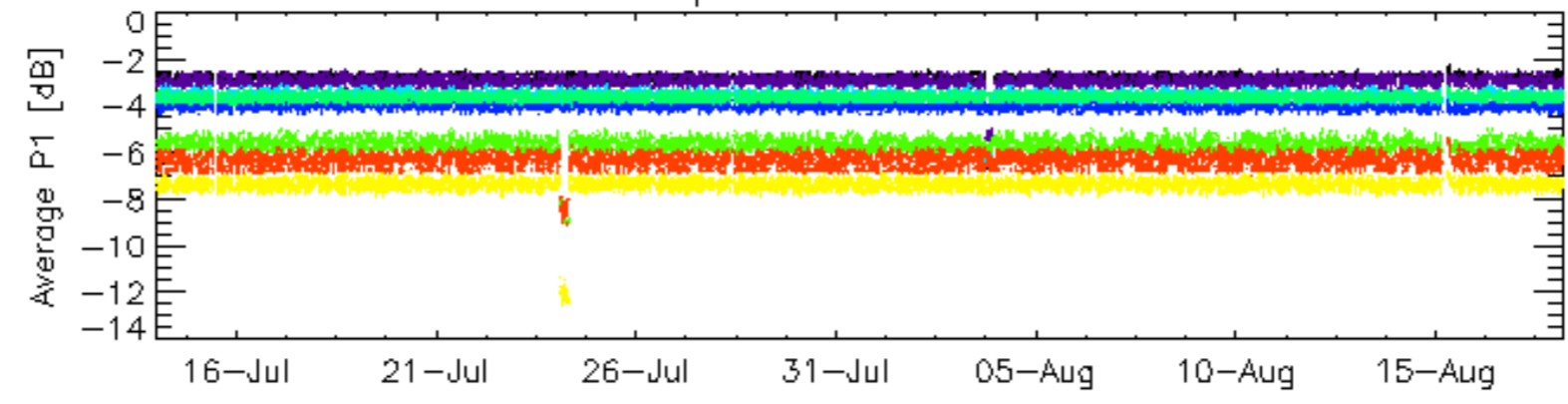


Cal pulses for WVS IS2



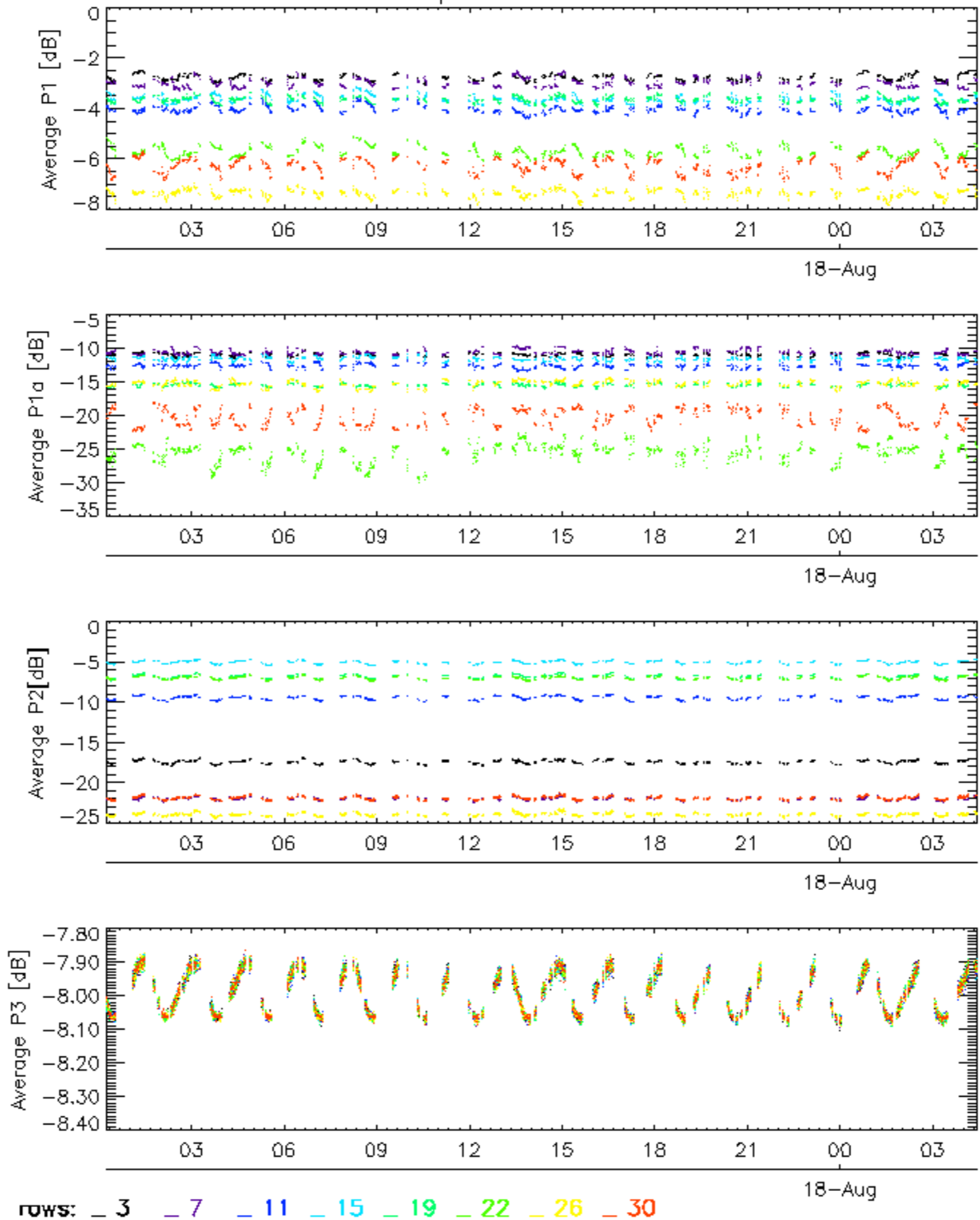
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

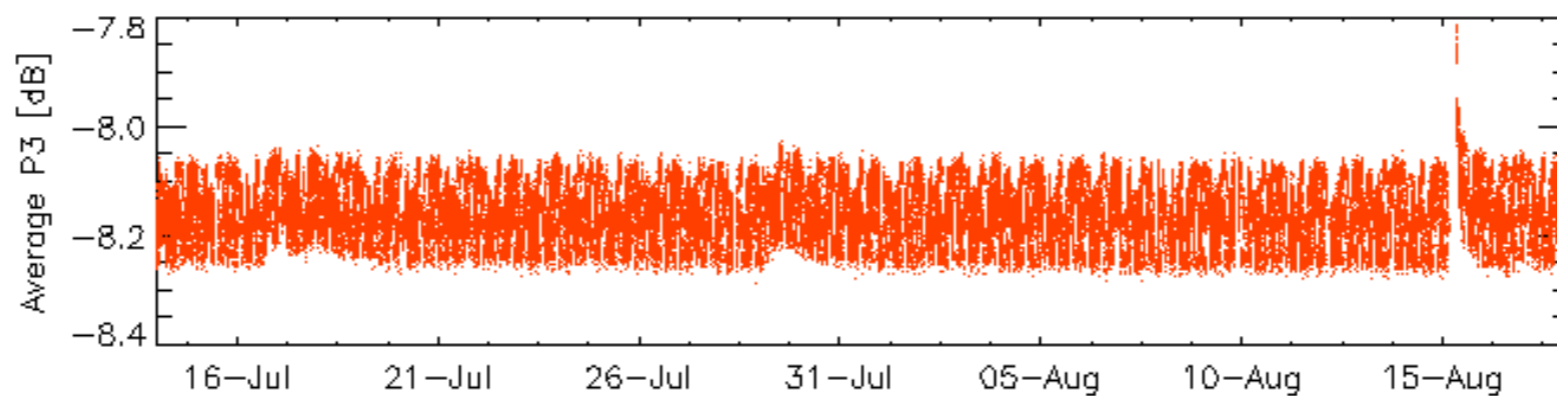
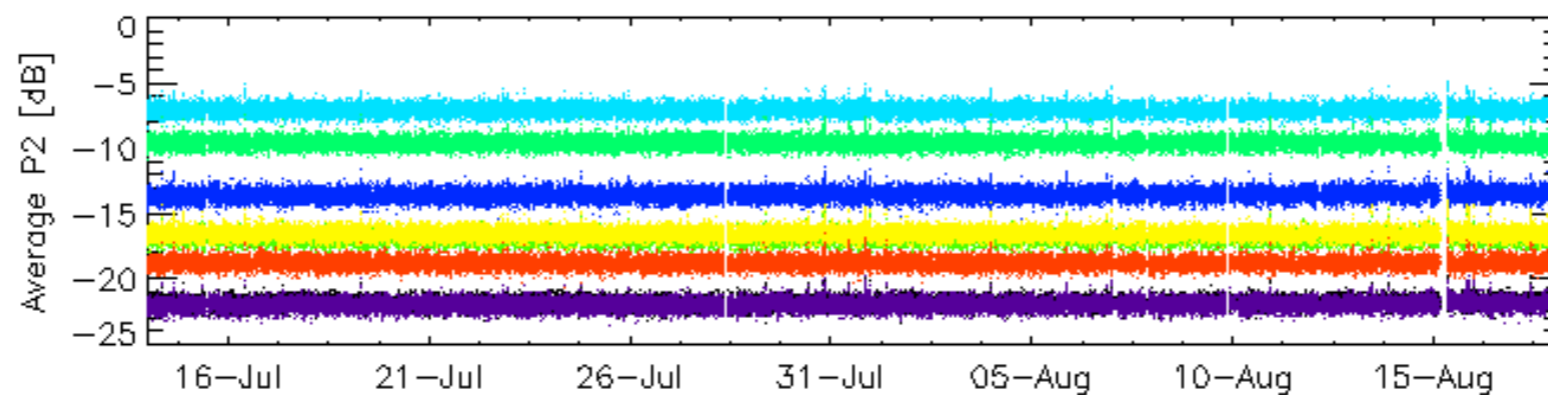
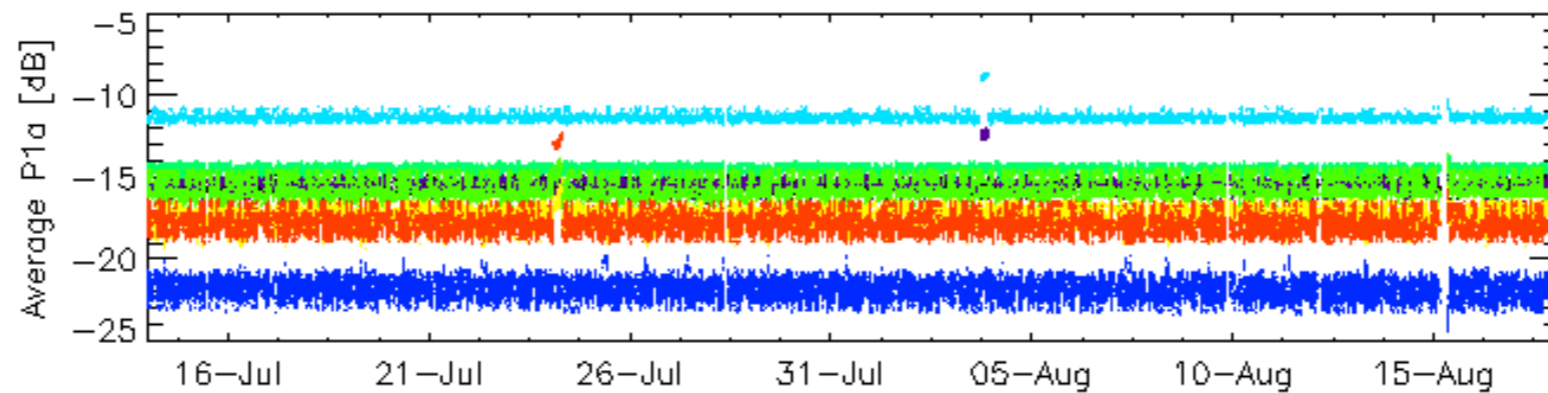
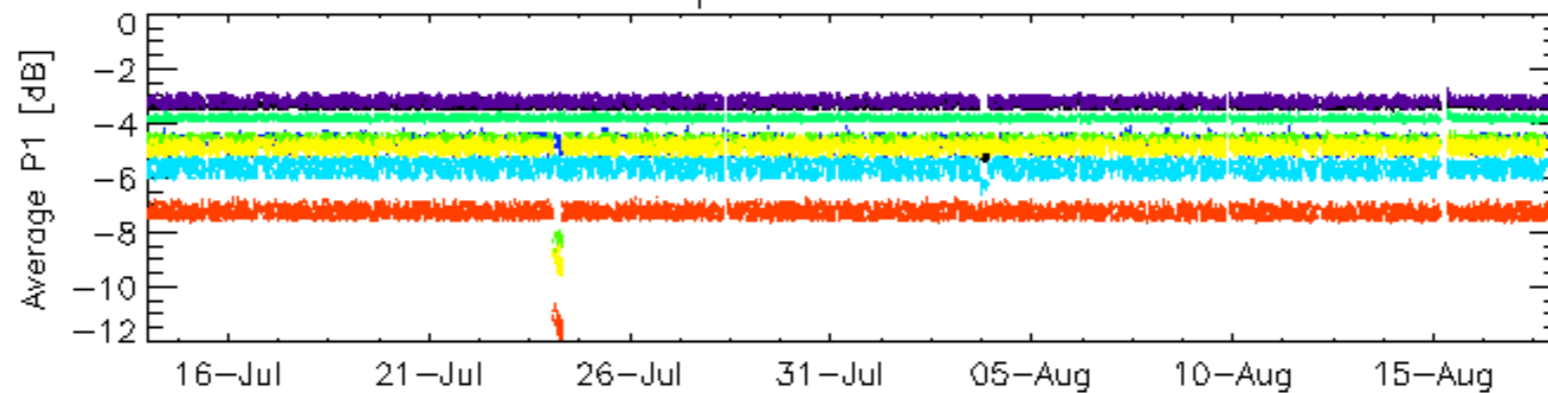


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

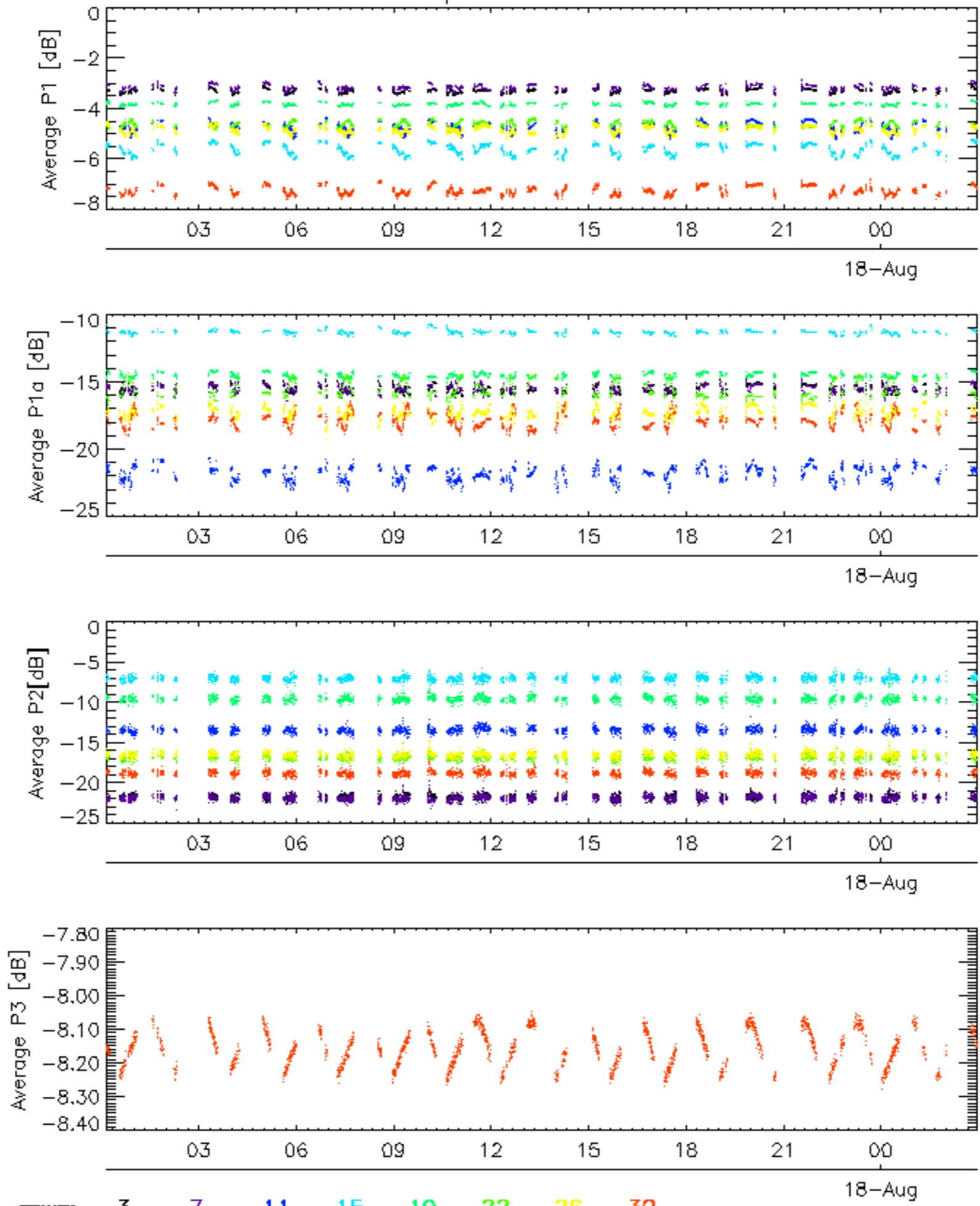


Cal pulses for WVS IS2

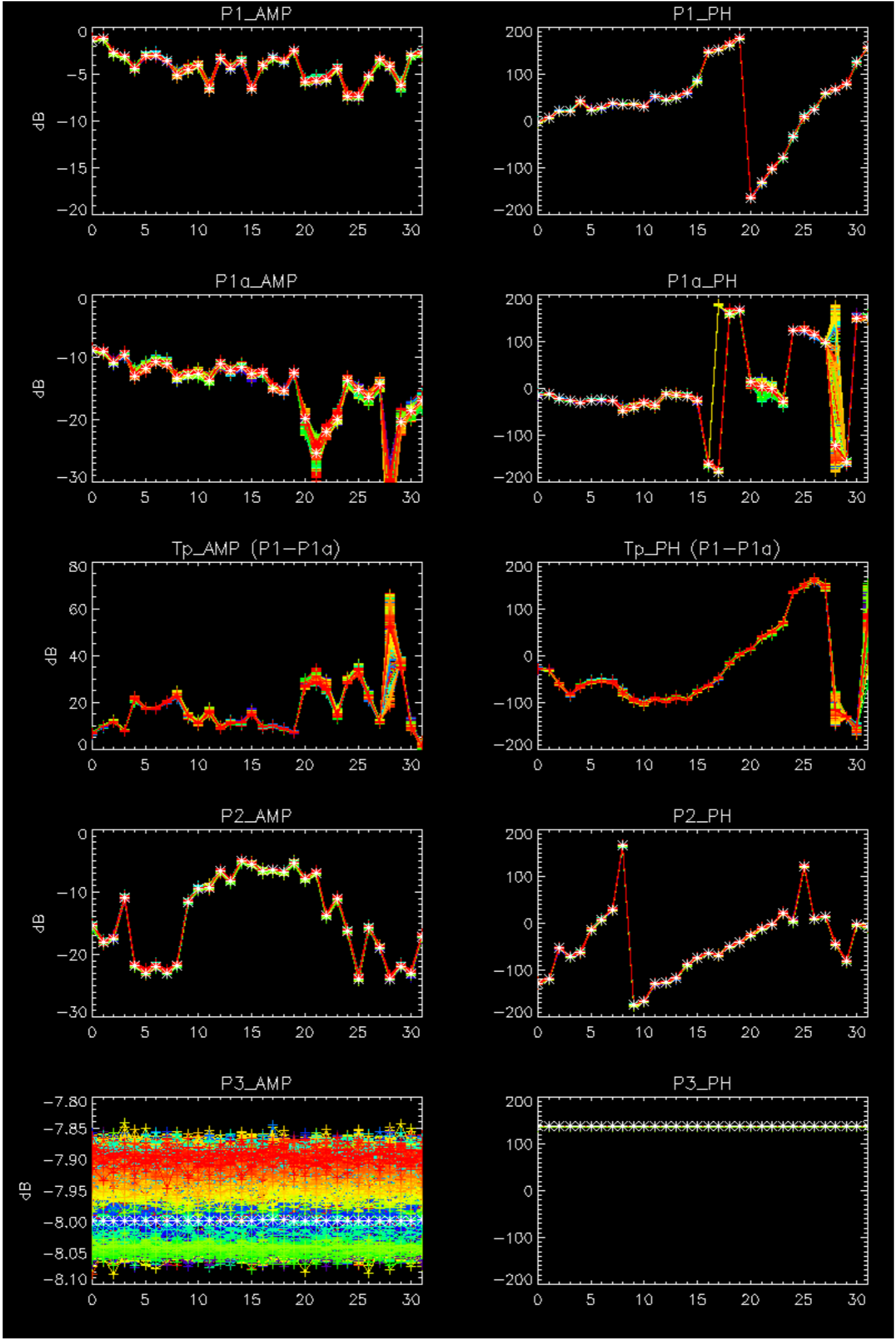


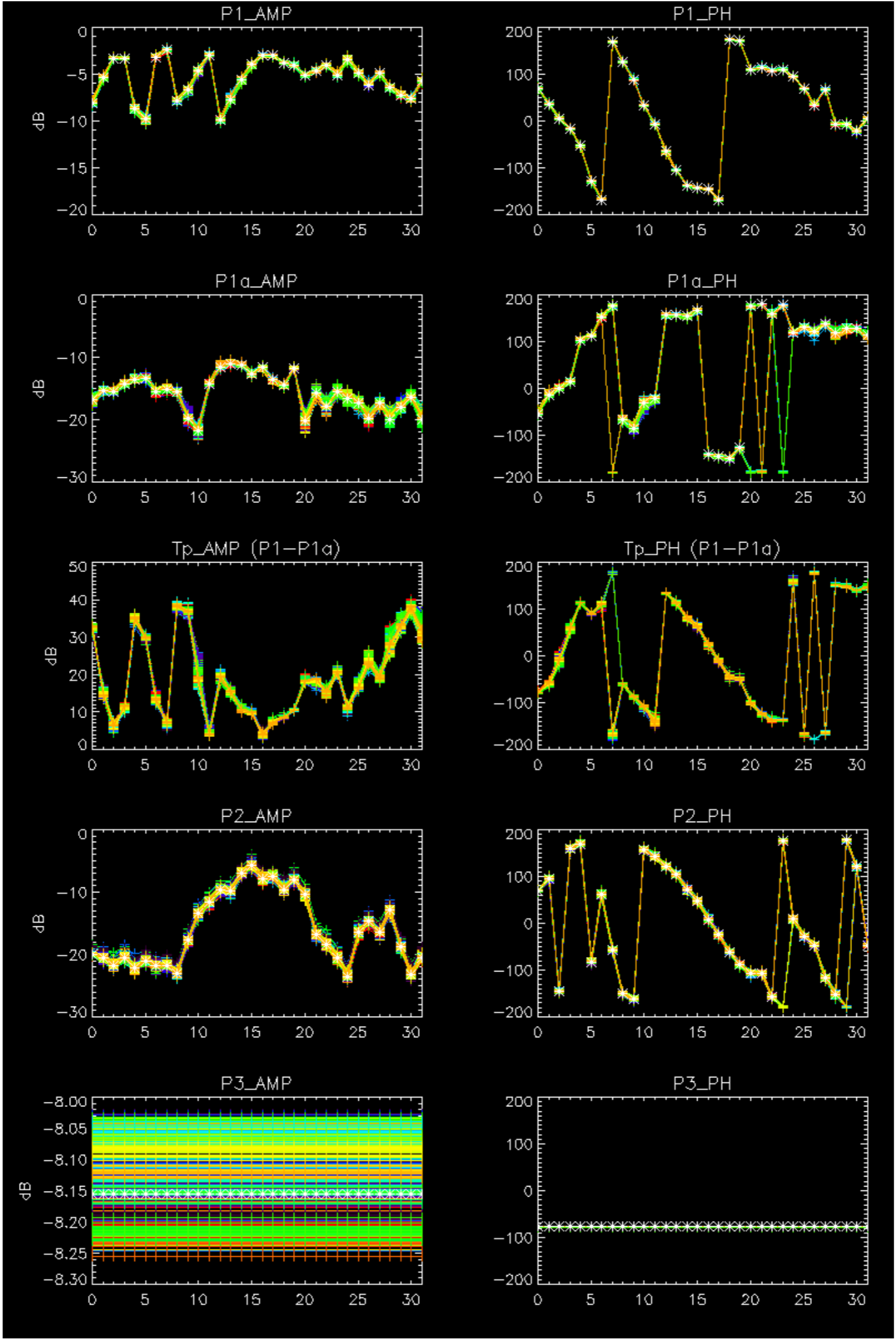
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



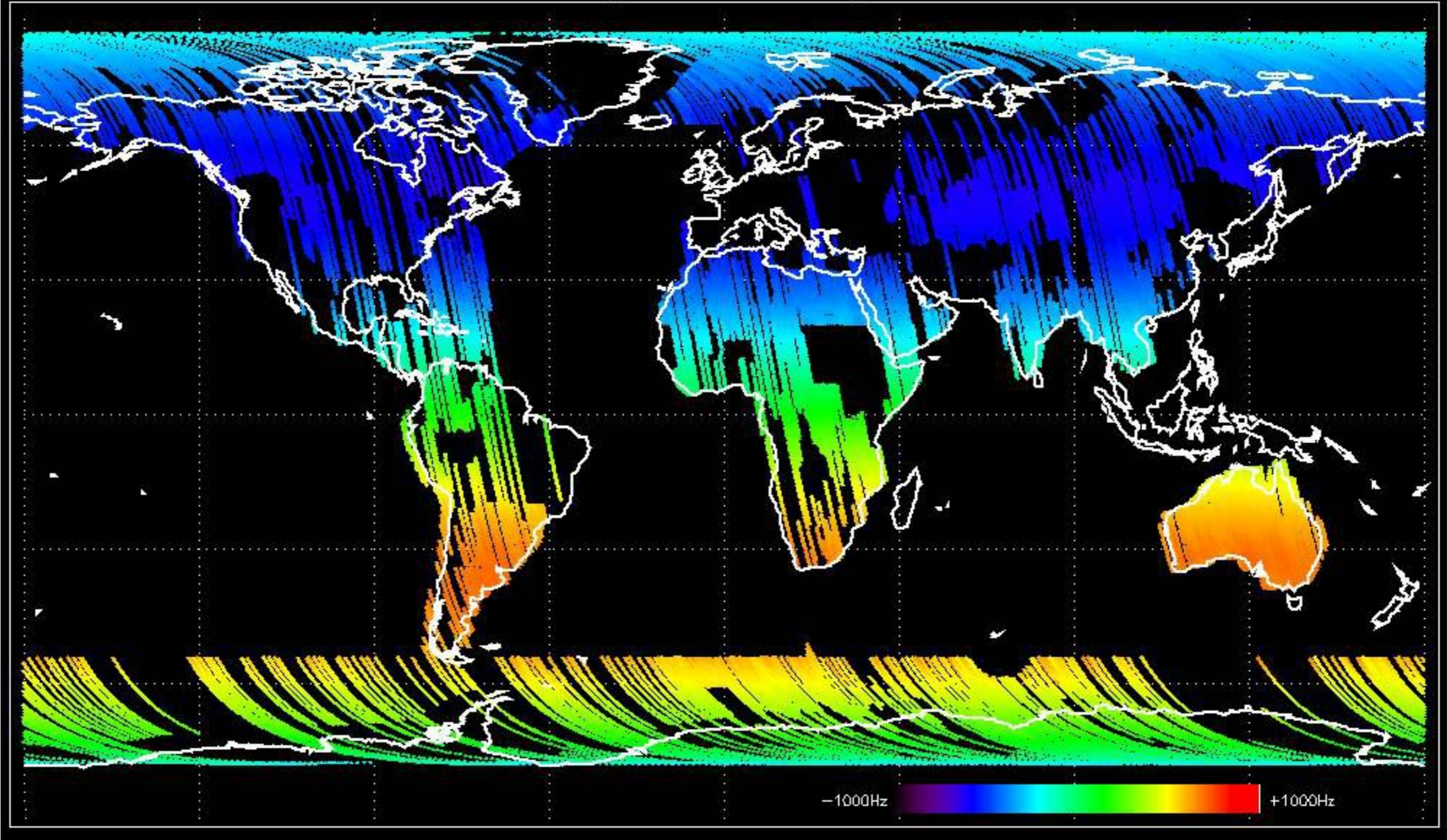
No anomalies observed.



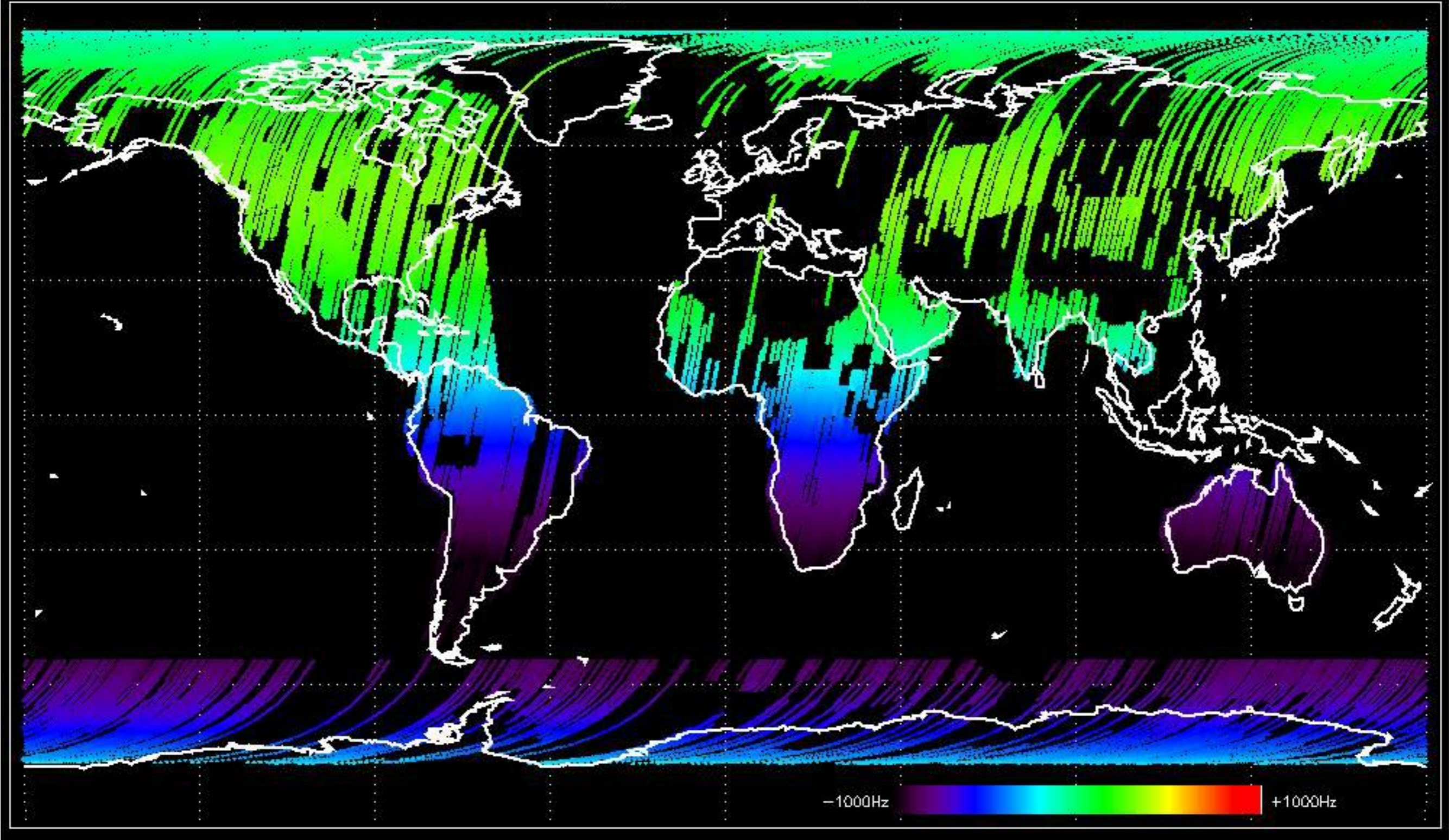


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

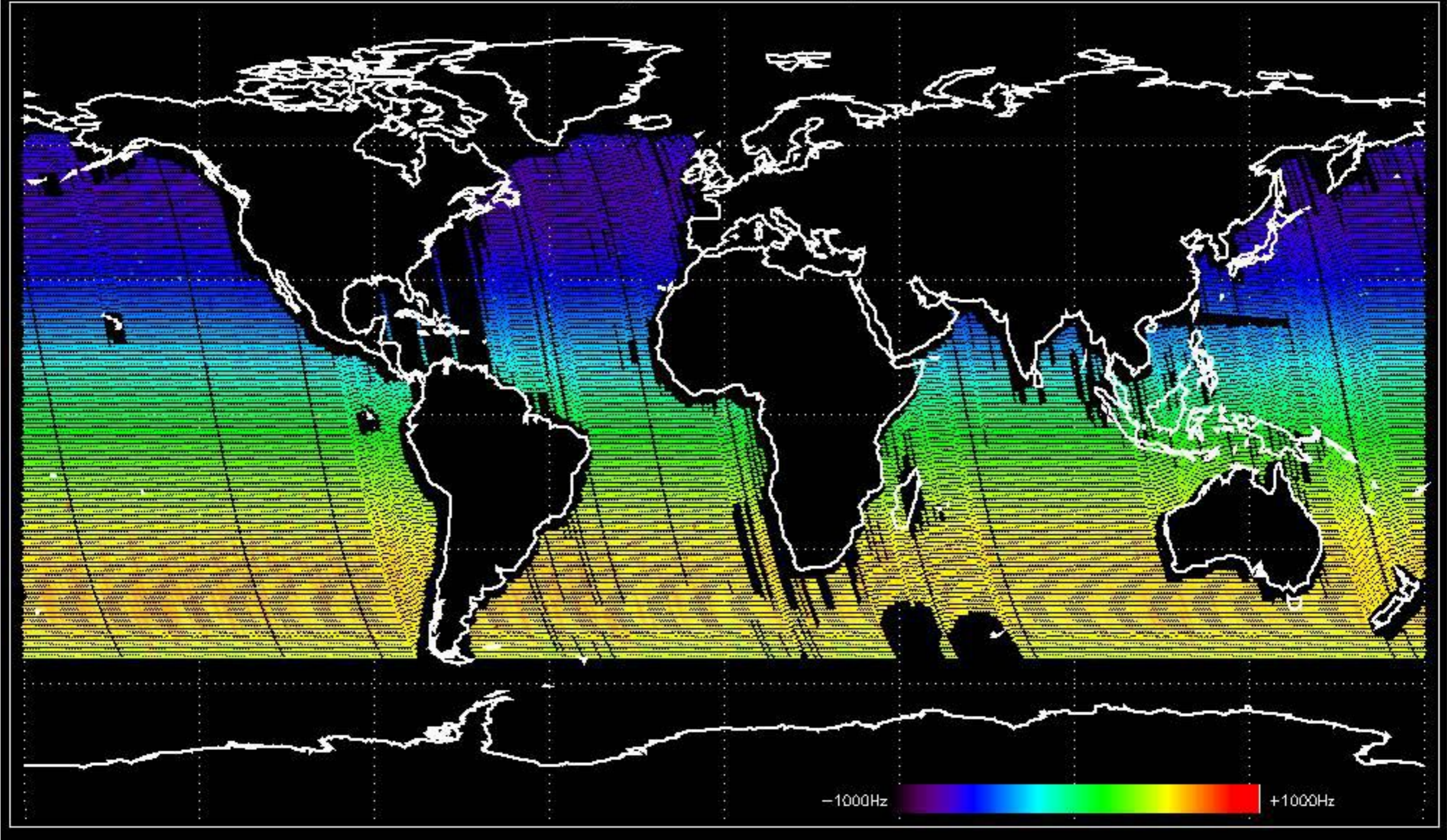
Doppler 'GM1' 'SS1' ascending



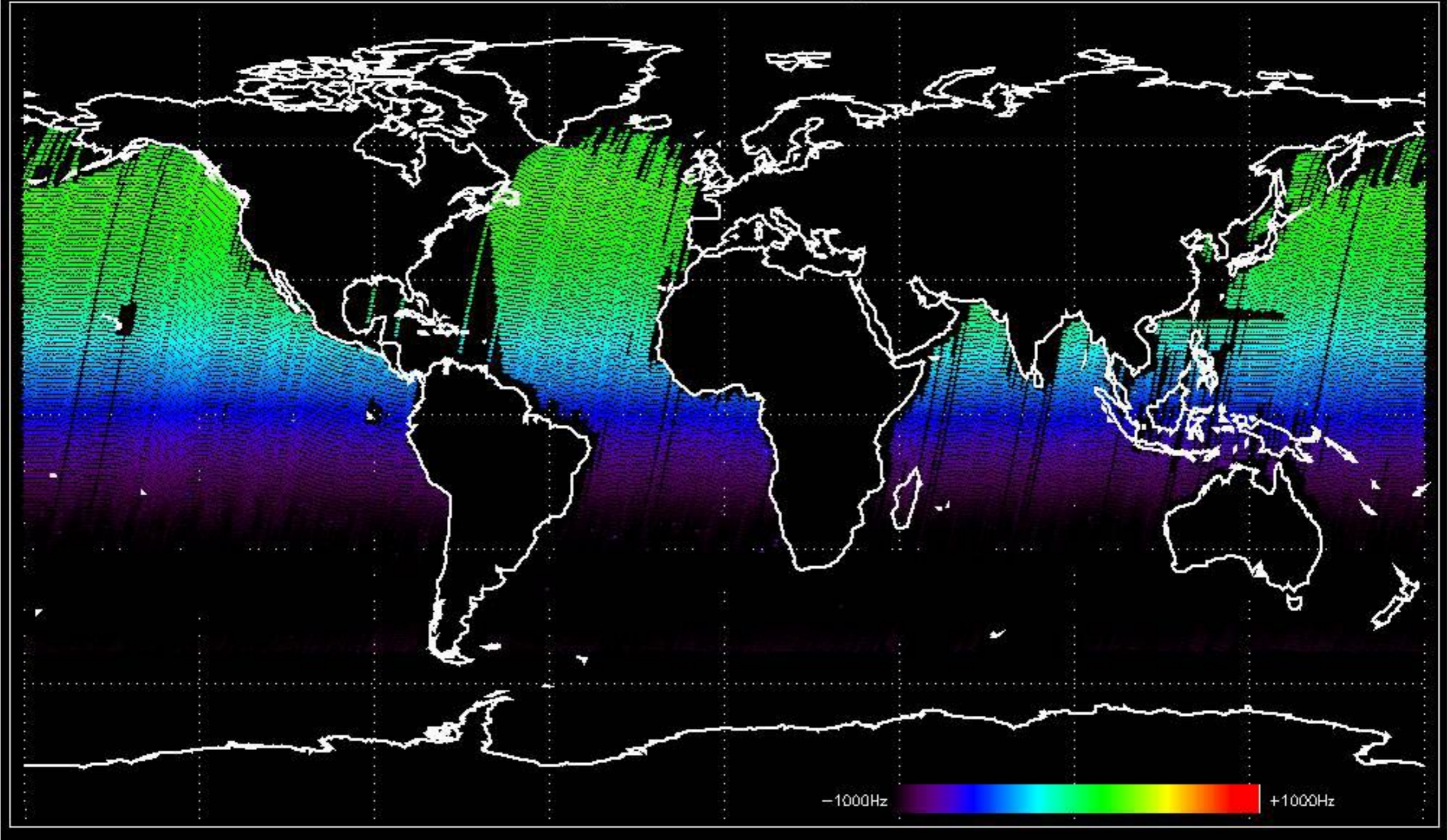
Doppler 'GM1' 'SS1' descending



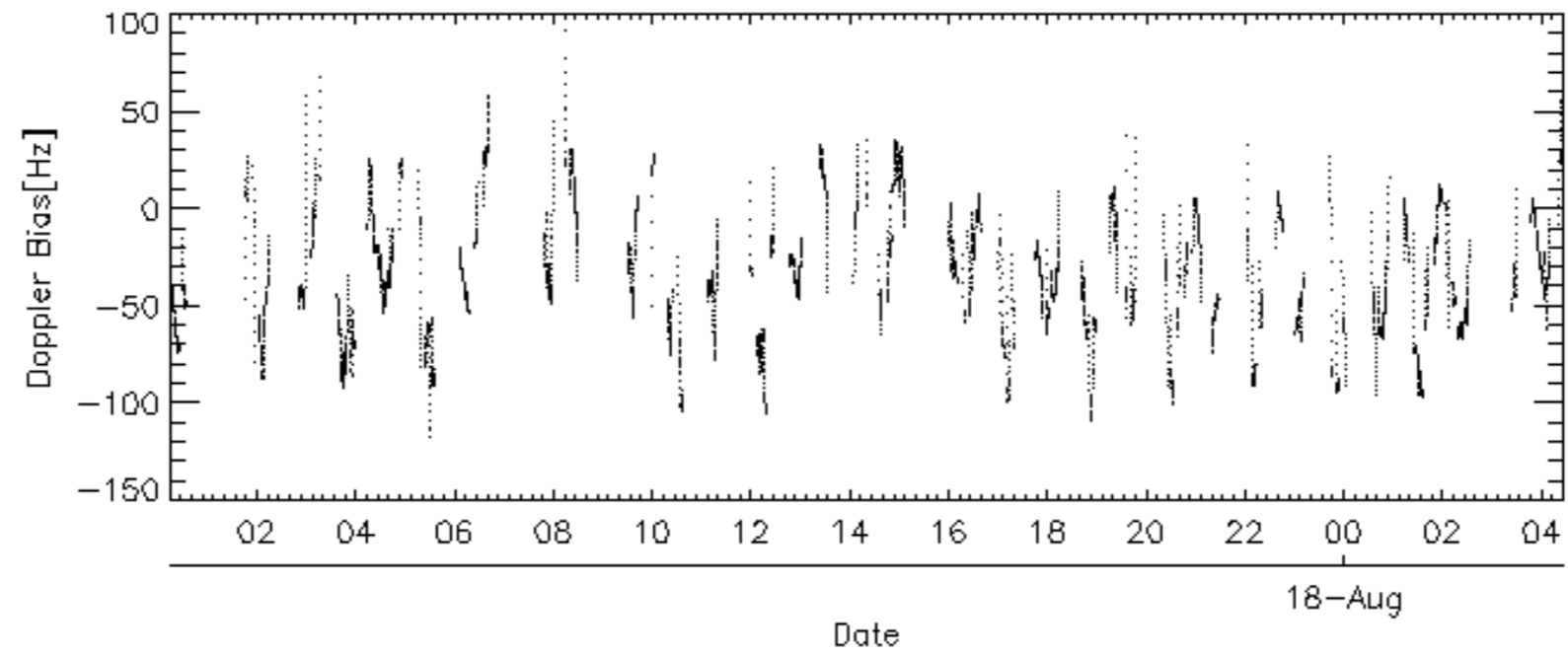
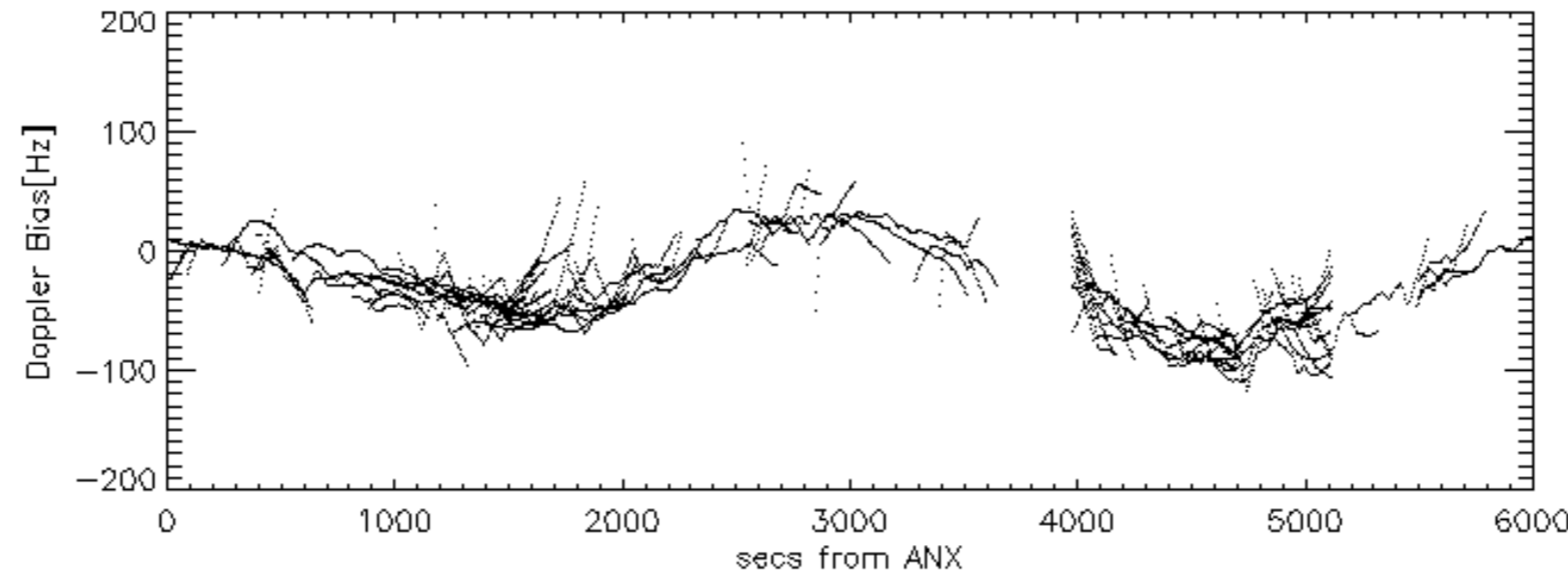
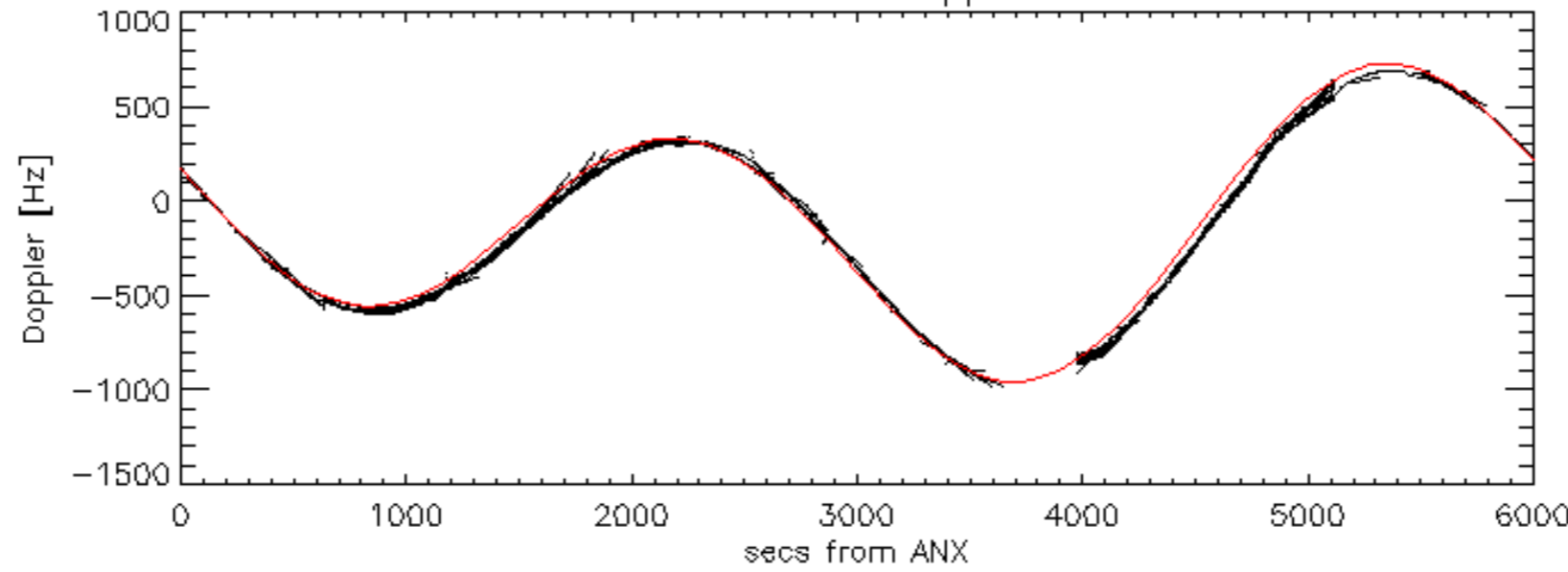
Doppler 'WVS' 'IS2' ascending

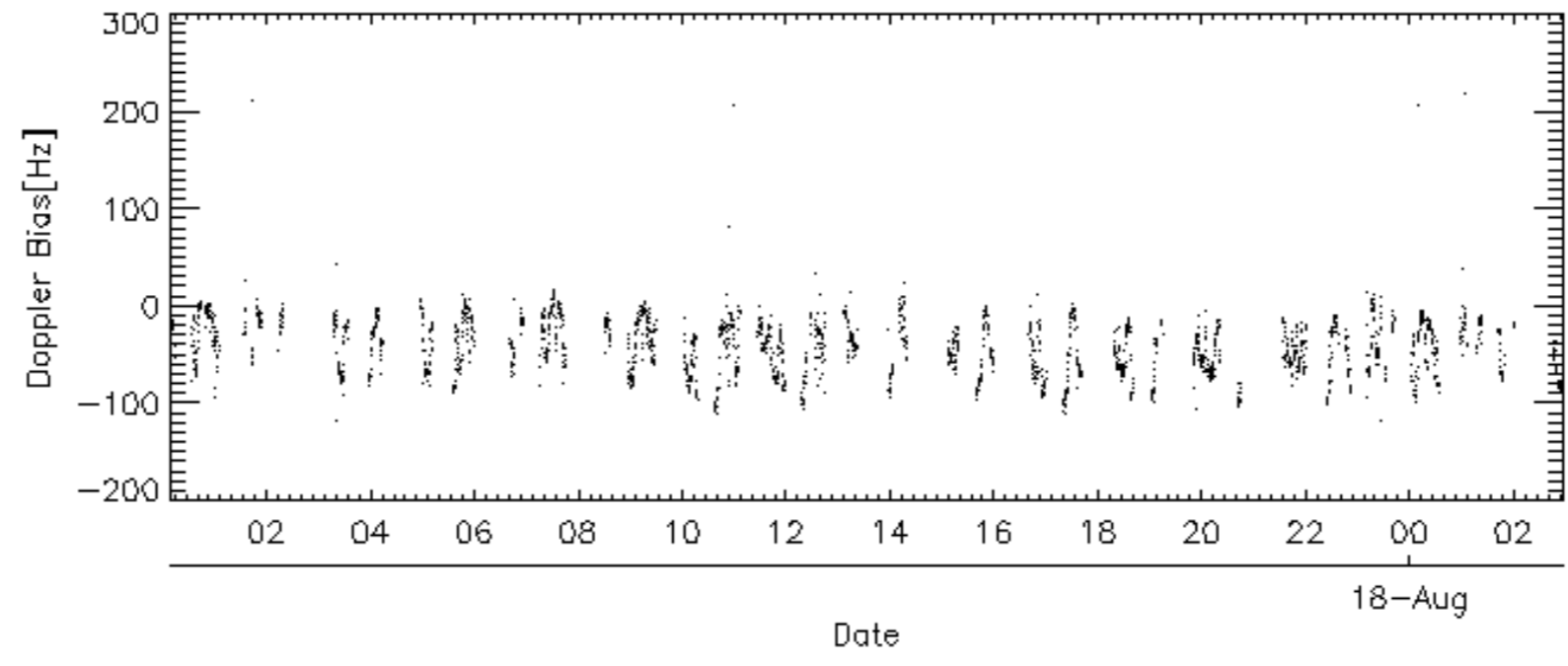
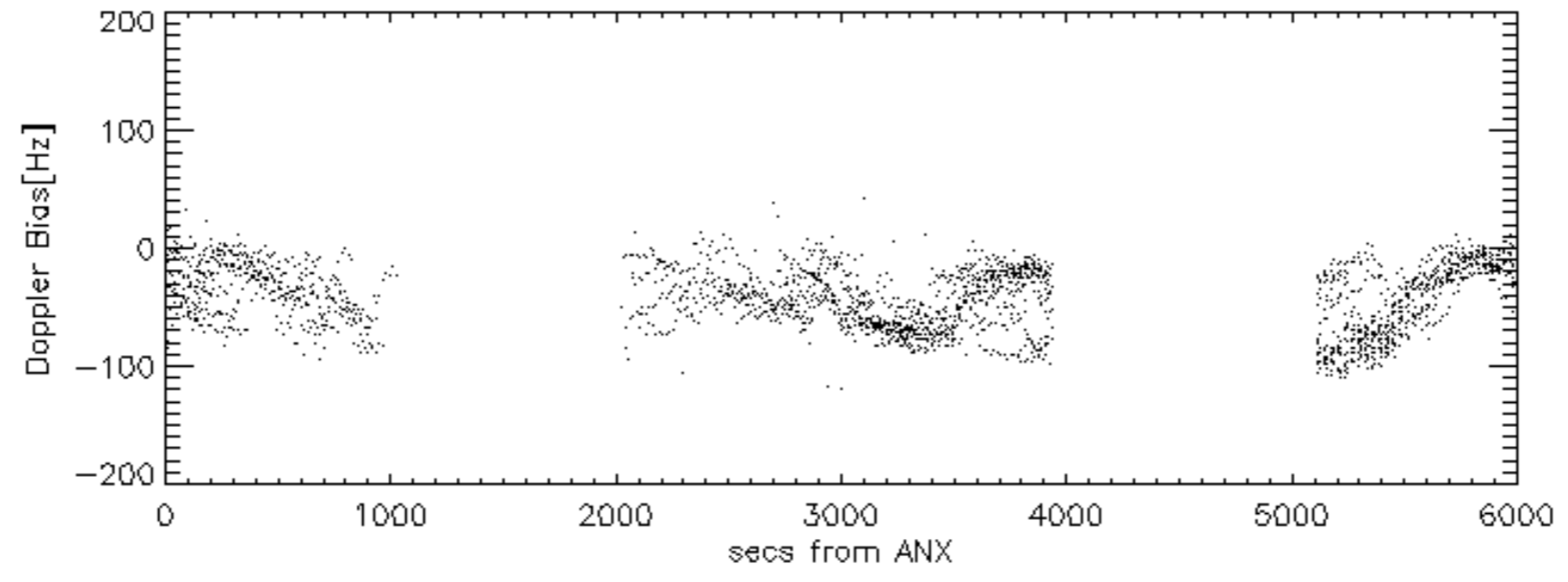
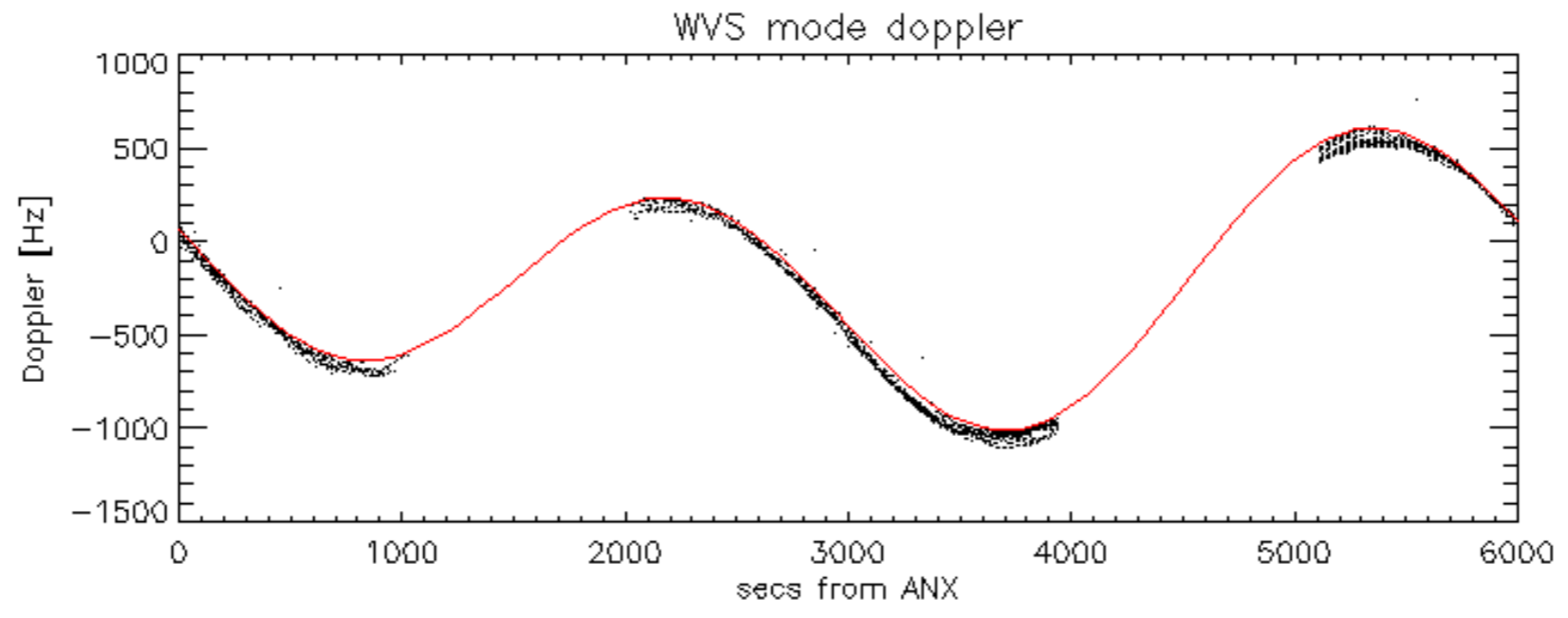


Doppler 'WVS' 'IS2' descending

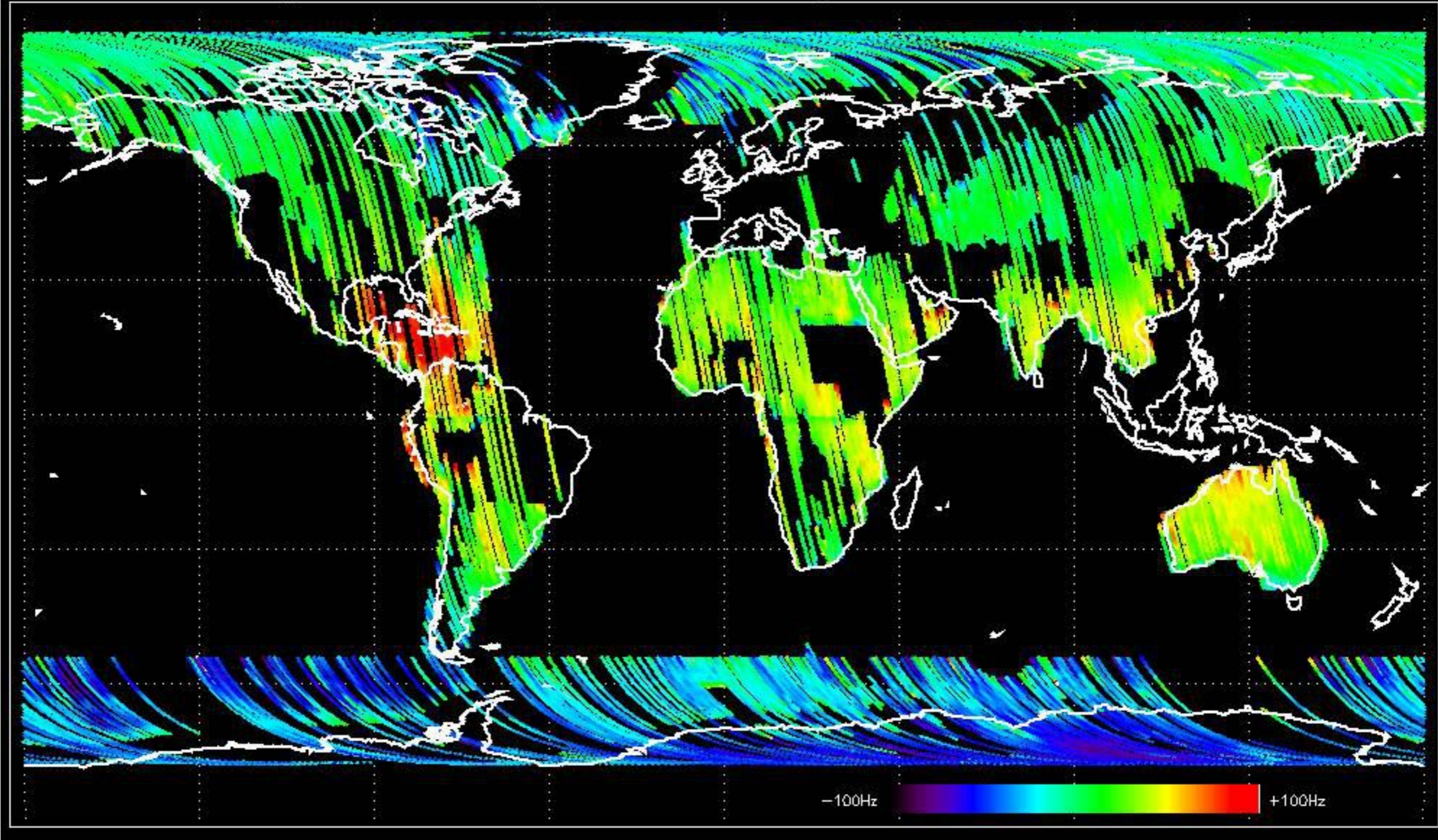


GM1 mode doppler

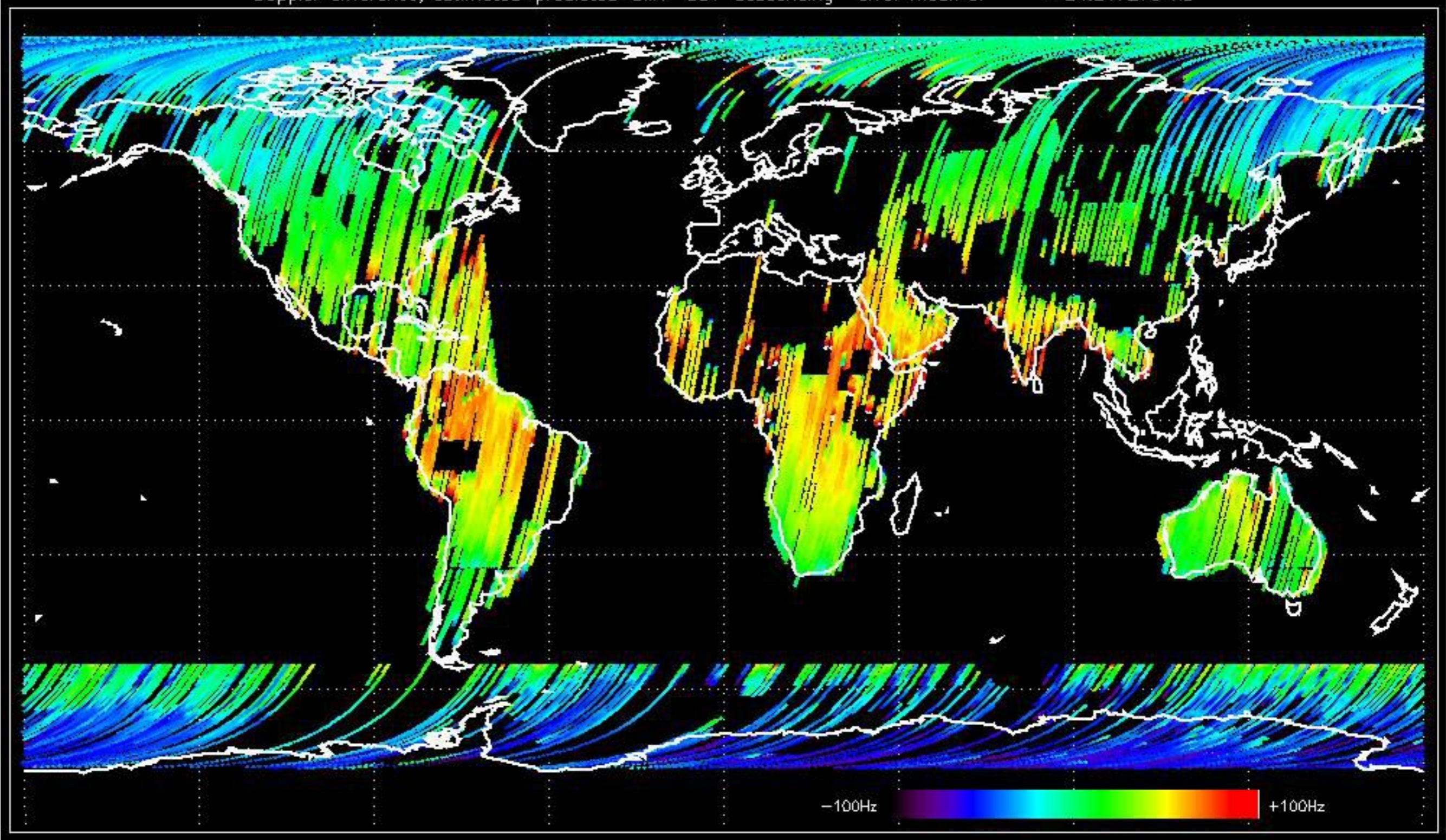




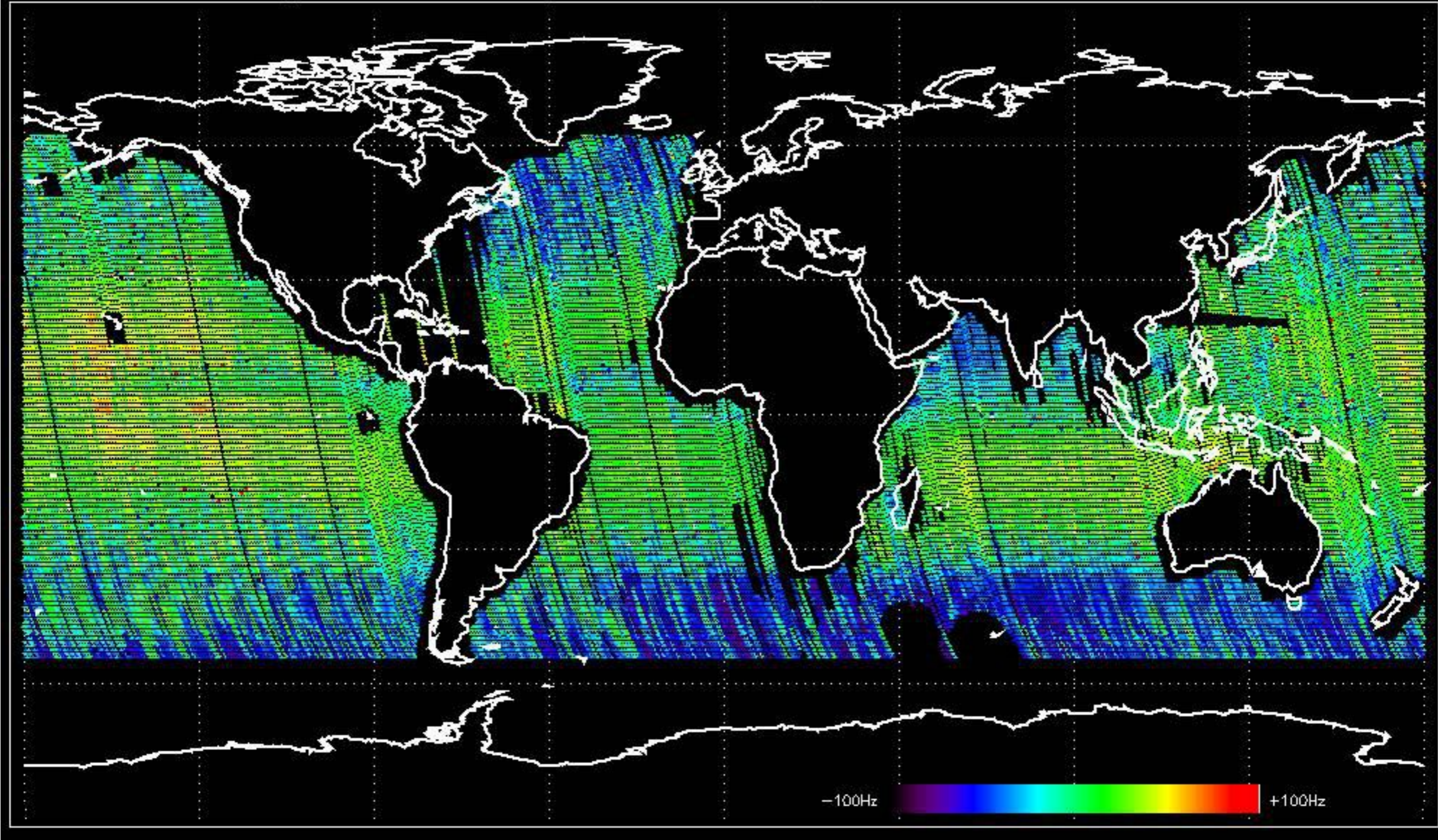
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.793296 Hz



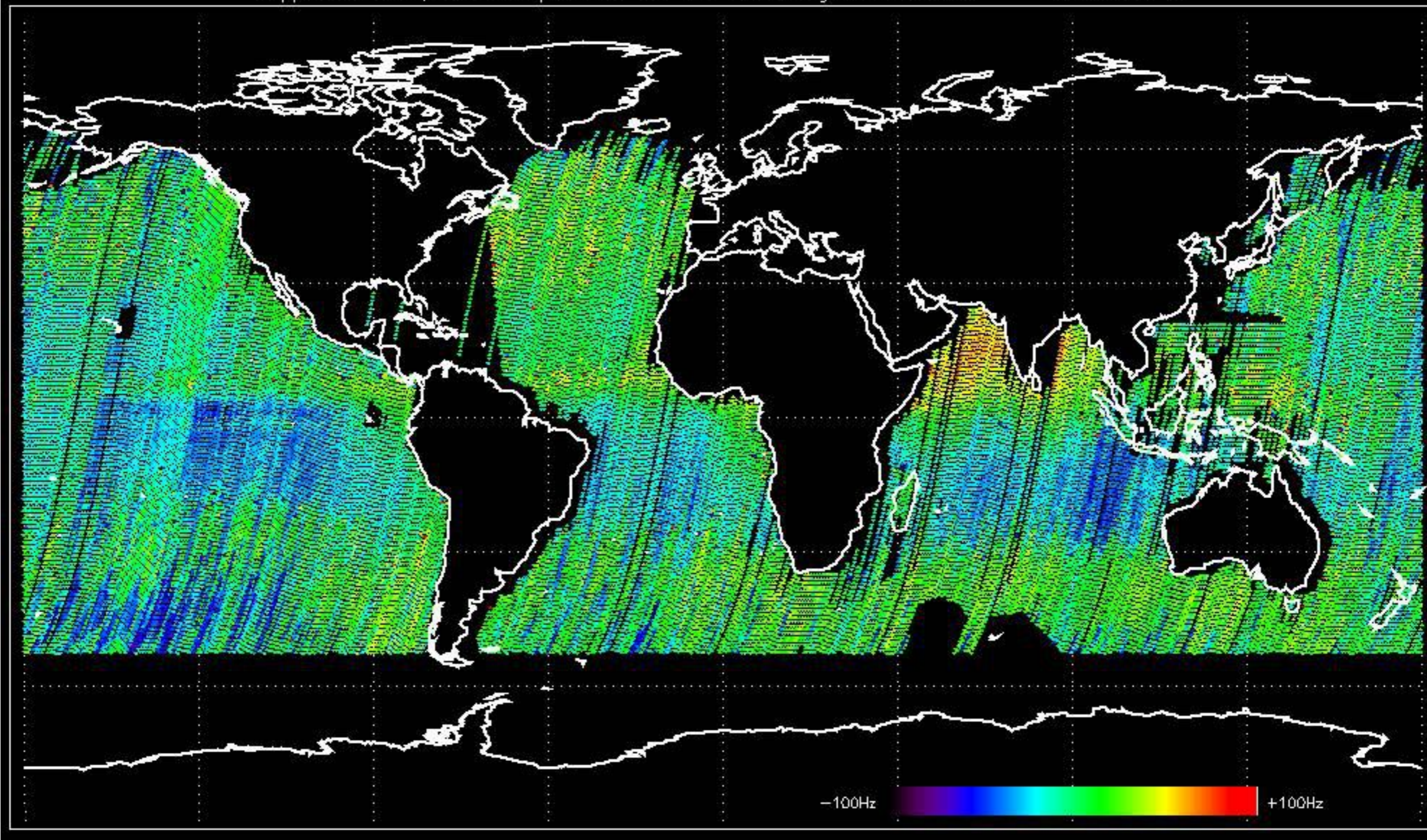
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -24.247275 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.888415 Hz

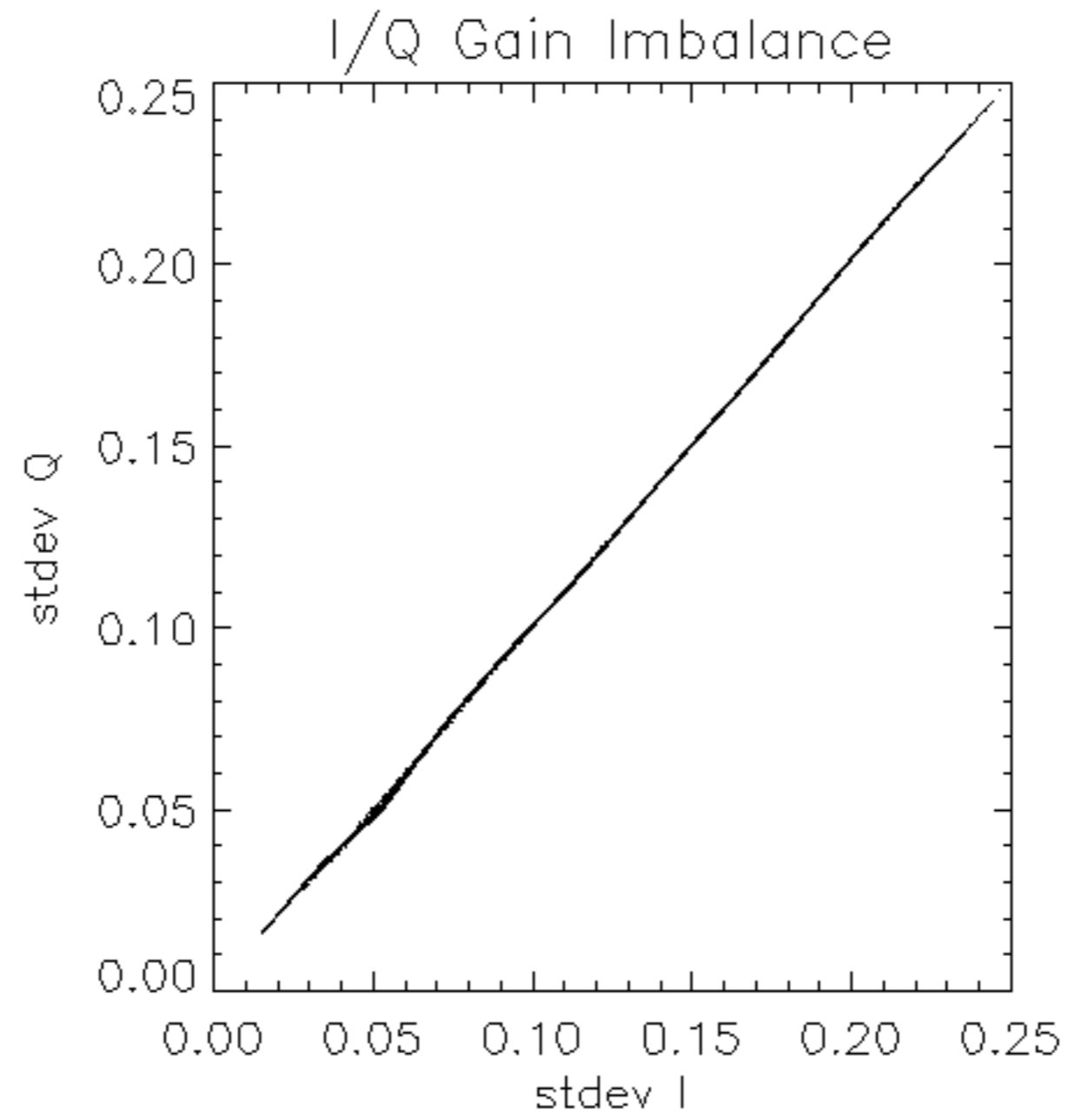


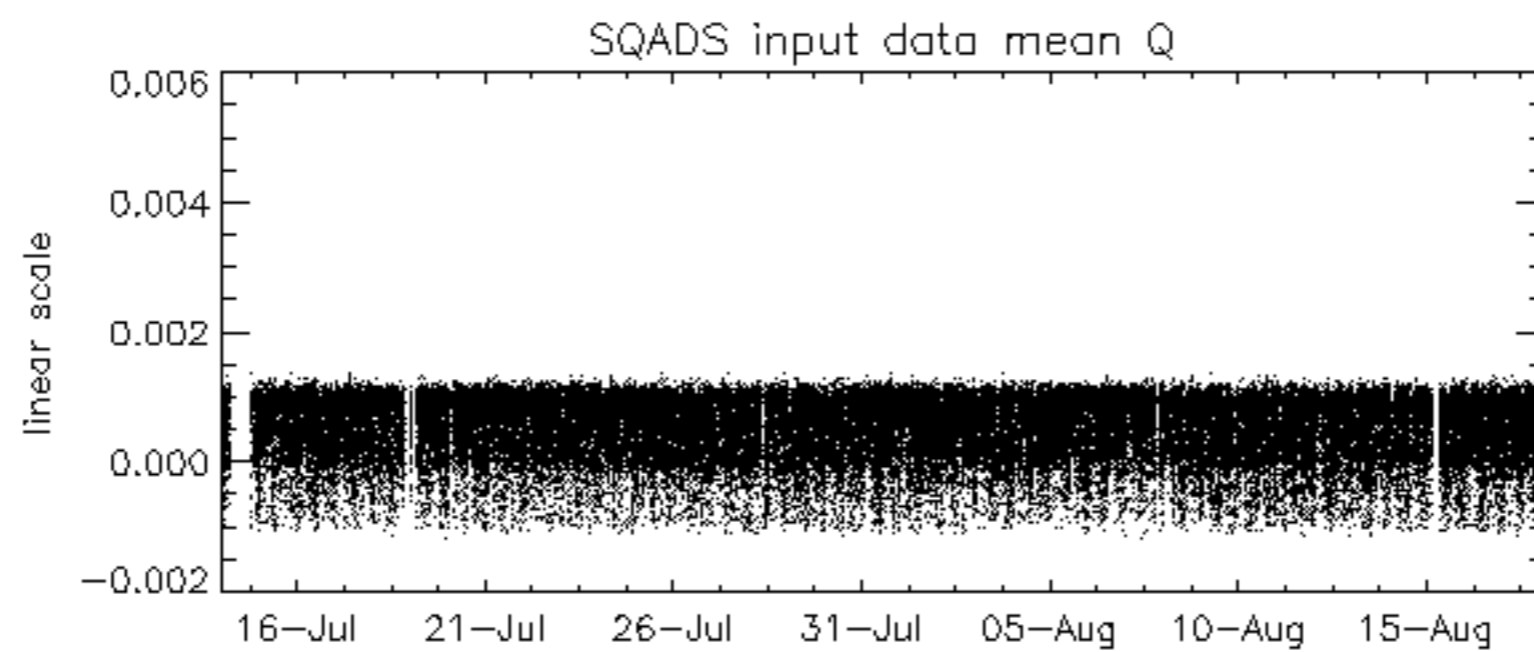
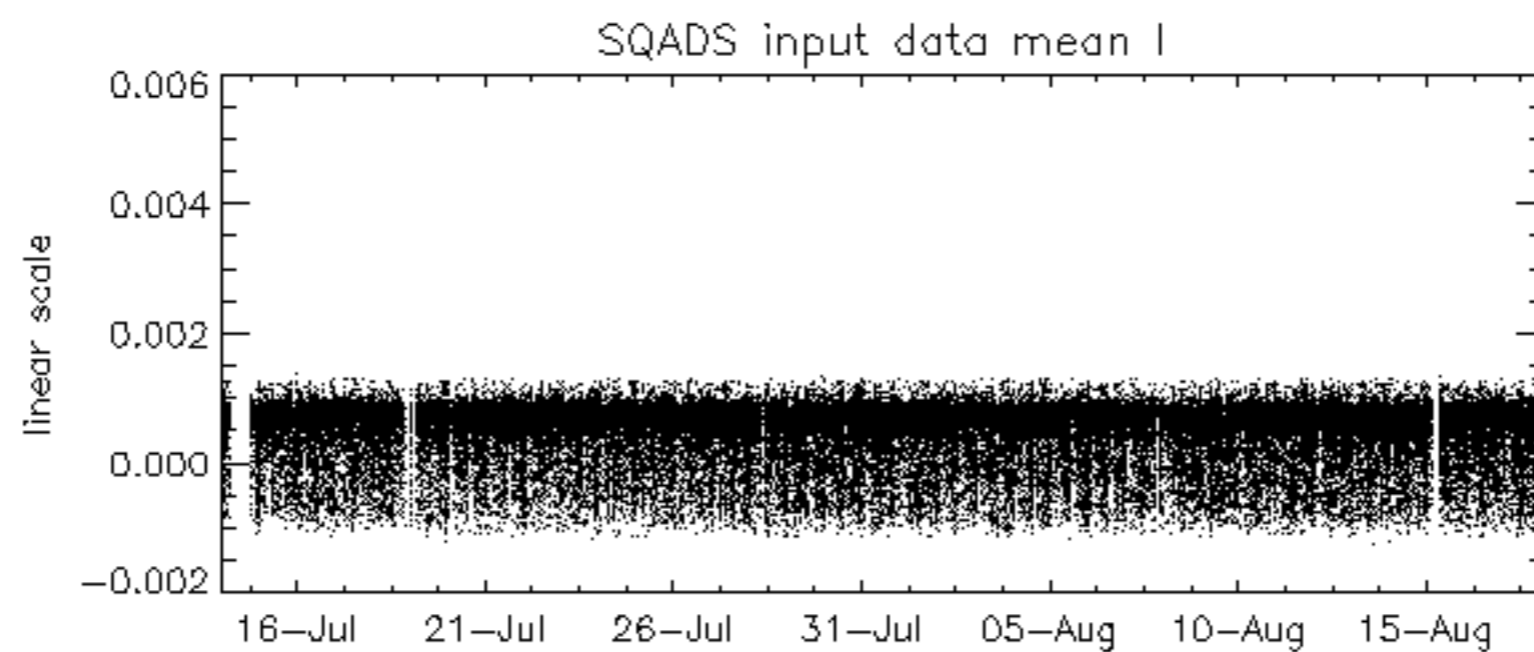
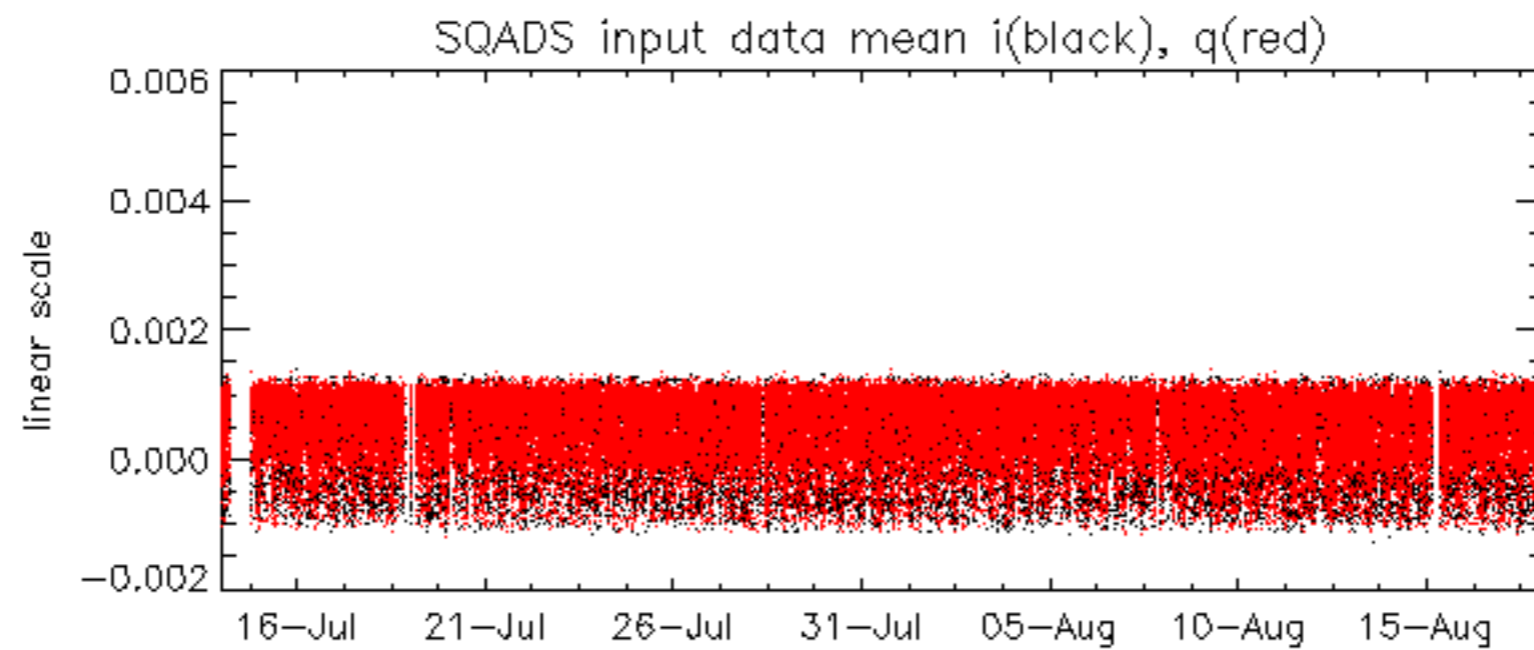
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.671384 Hz

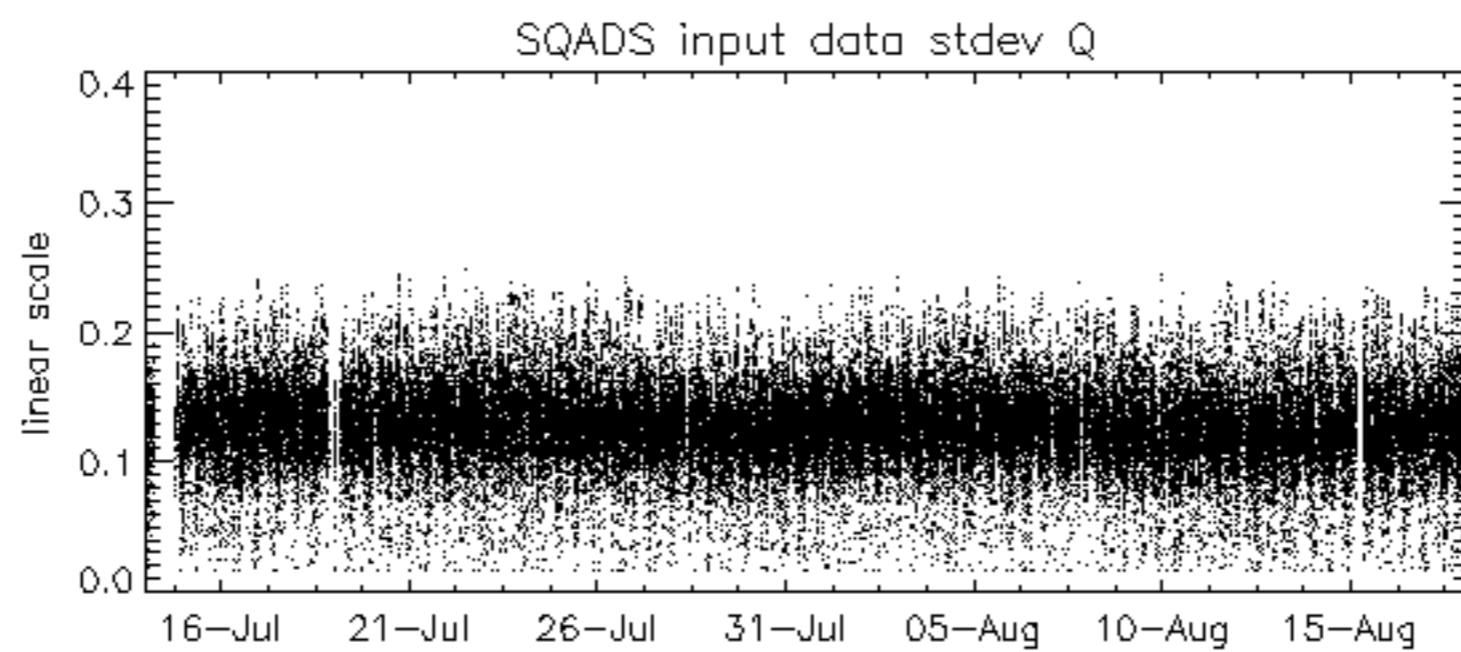
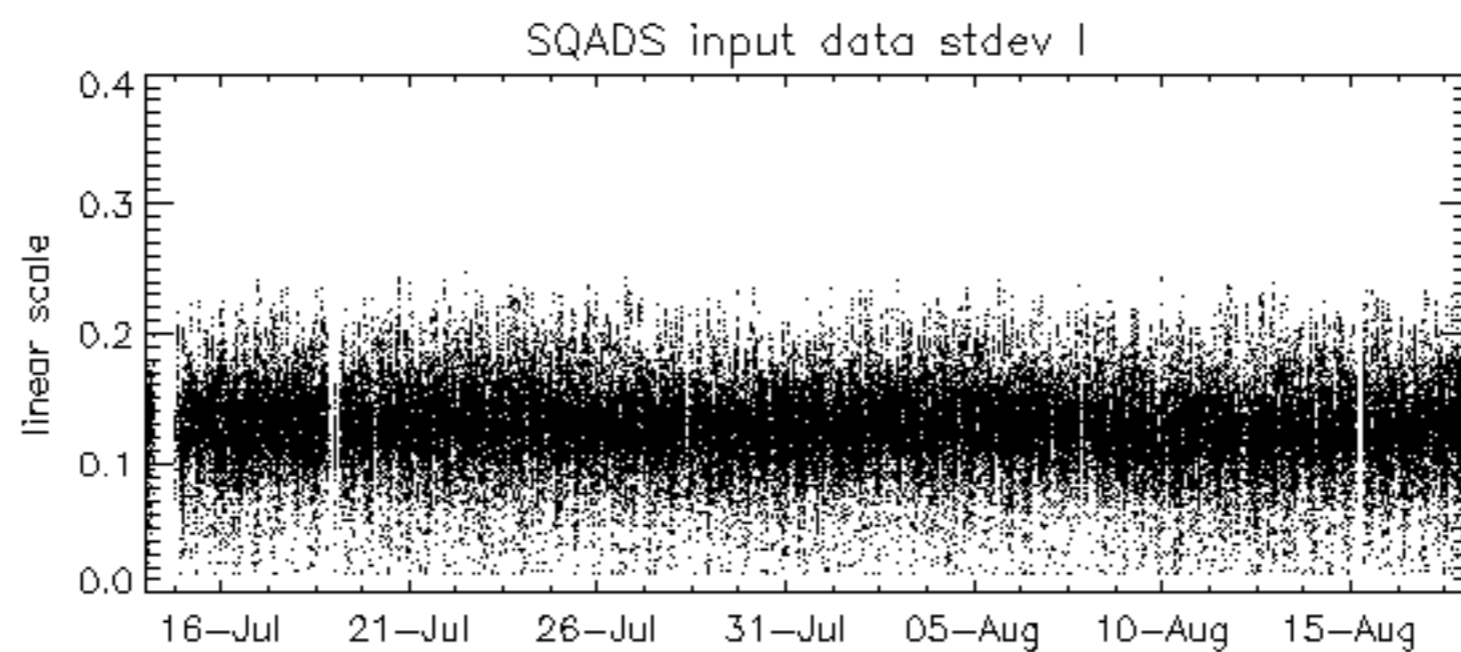
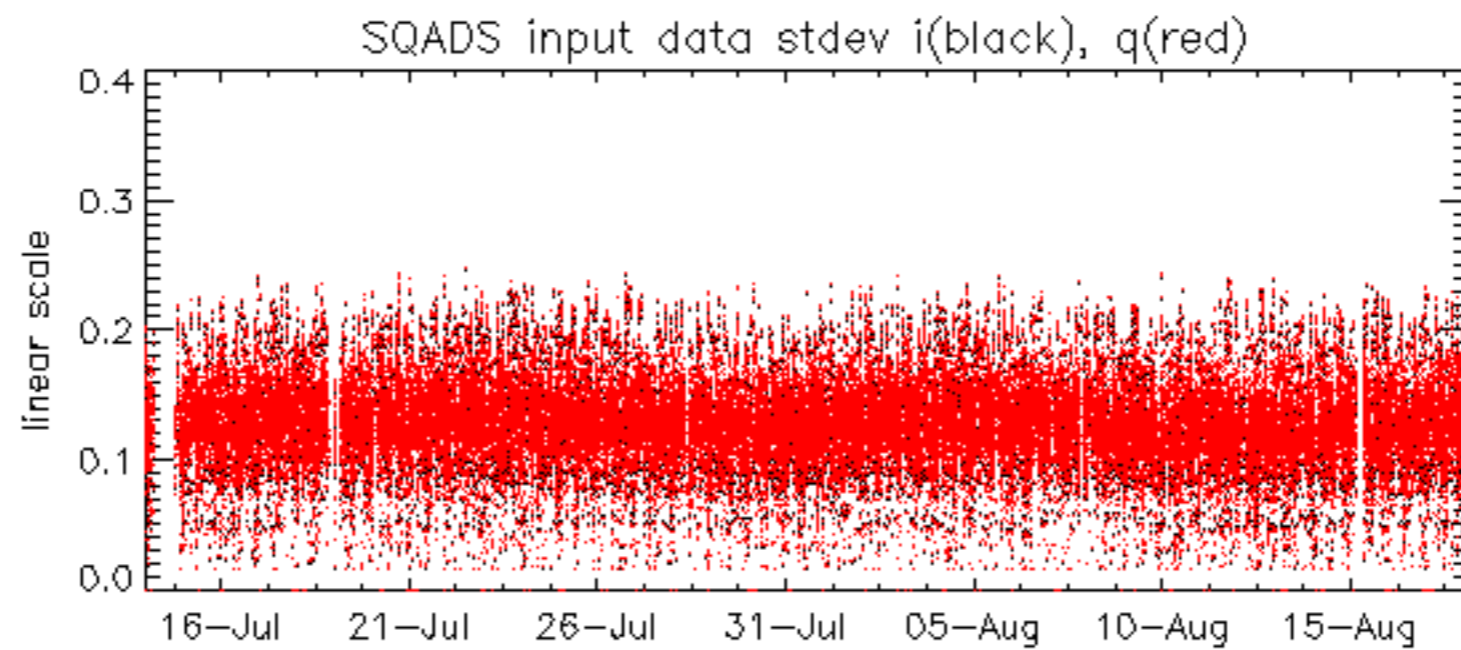


No anomalies observed on available MS products:

No anomalies observed.



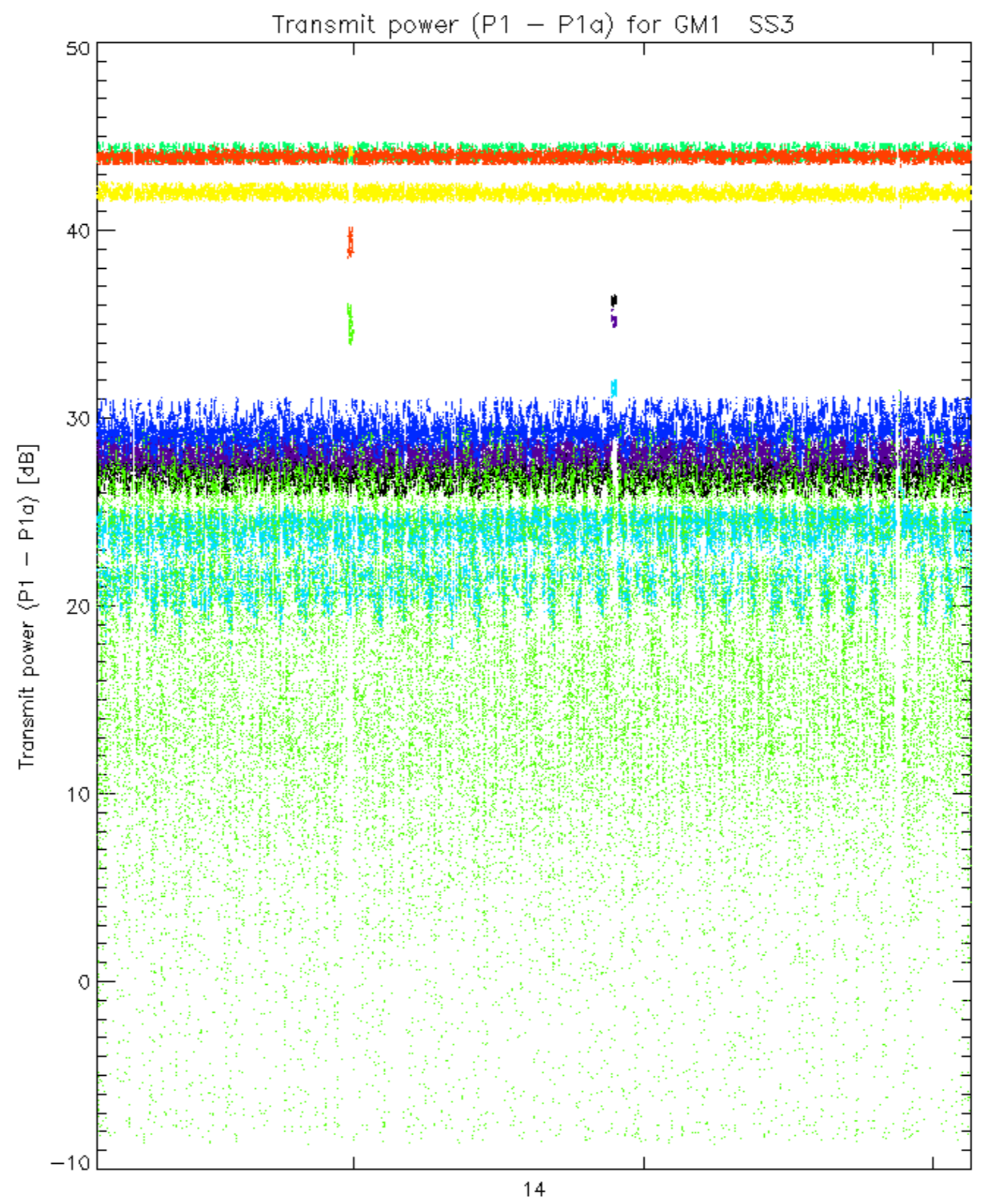




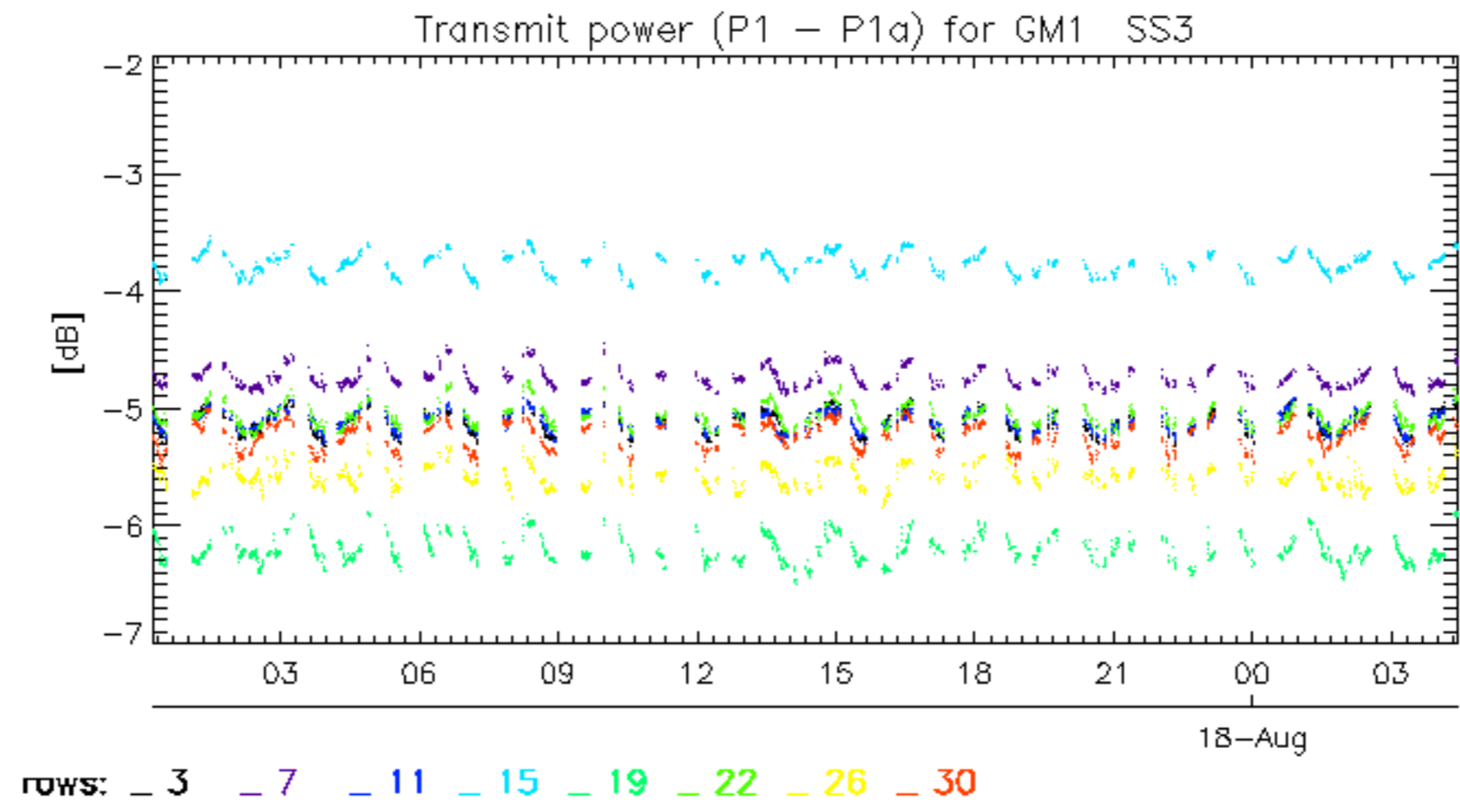
Summary of analysis for the last 3 days 2005081[678]

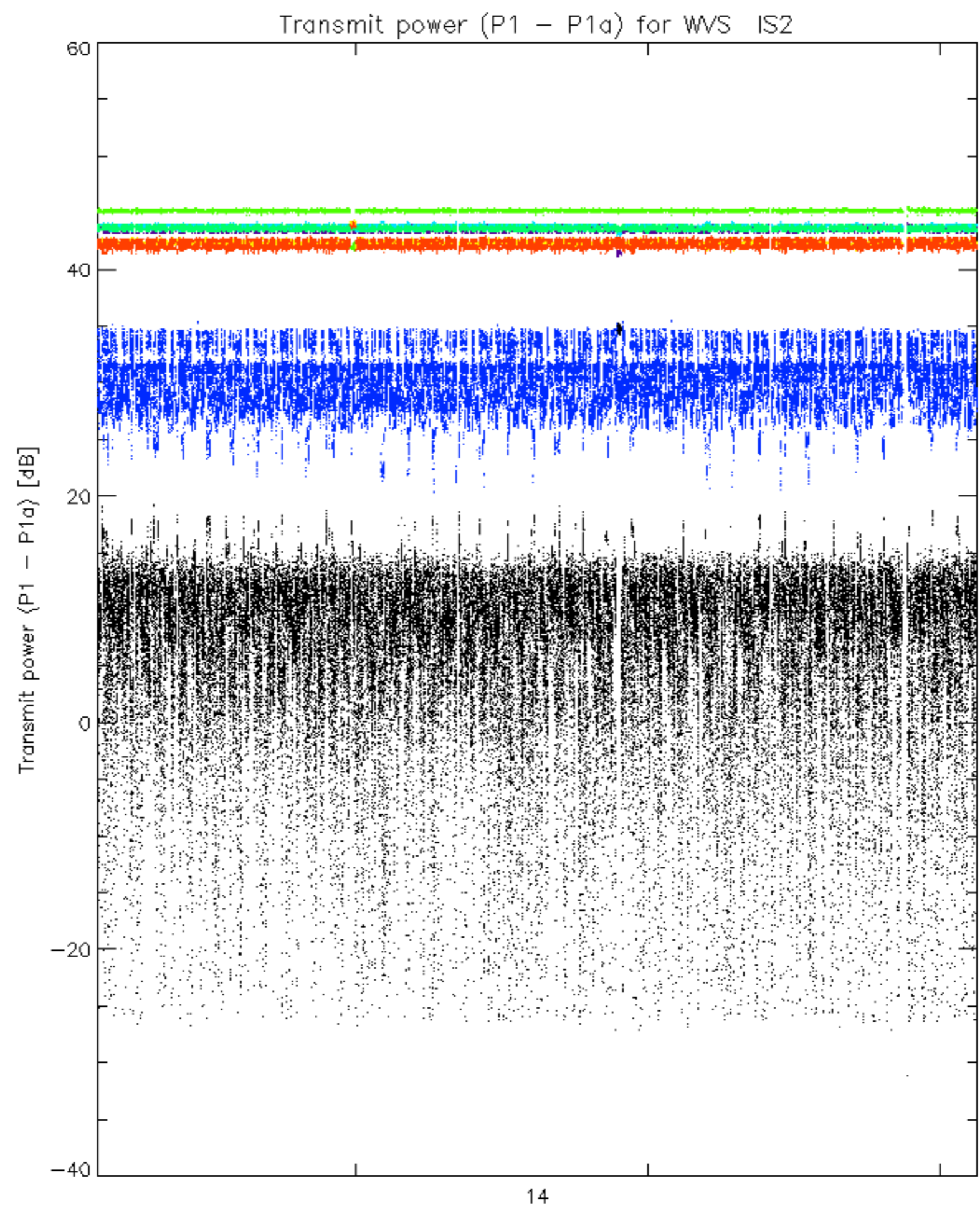
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050816_153613_000000372040_00011_18101_2662.N1	1	0
ASA_IMM_1PNPDE20050817_155429_000000472040_00026_18116_2718.N1	1	0
ASA_IMM_1PNPDK20050817_124606_000000692040_00024_18114_1883.N1	1	0
ASA_GM1_1PNPDE20050816_215256_0000004472040_00015_18105_2053.N1	0	14
ASA_WSM_1PNPDE20050818_010644_0000002792040_00031_18121_4939.N1	0	50
ASA_WSM_1PNPDE20050818_020201_0000001472040_00032_18122_4942.N1	0	66

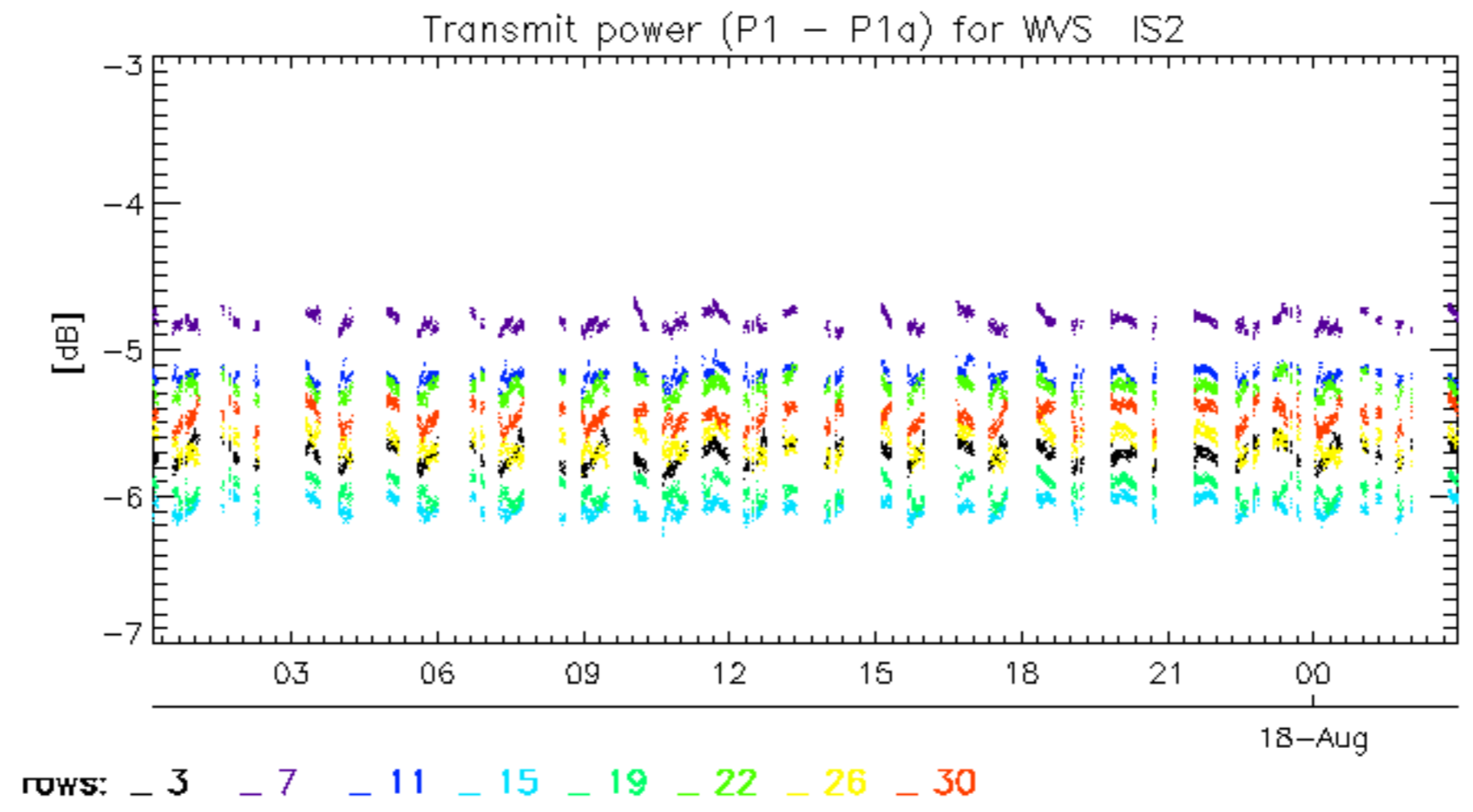


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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No unavailabilities during the reported period.