

PRELIMINARY REPORT OF 050929

last update on Thu Sep 29 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 2005-09-28 00:00:00 to 2005-09-29 10:50:01

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	26	49	8	5	0
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	26	49	8	5	0
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	26	49	8	5	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	26	49	8	5	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	36	56	20	6	57
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	36	56	20	6	57
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	36	56	20	6	57
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	36	56	20	6	57

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	20050927 085034
H	20050928 081857

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	-3.469238	0.084439	-0.440491
7	P1	-3.070615	0.038968	0.399889
11	P1	-4.477932	0.159867	0.940228
15	P1	-5.819702	0.059750	-0.526794
19	P1	-3.425308	0.237956	1.055183
22	P1	-4.549389	0.024405	0.260653
26	P1	-4.636748	0.108540	0.696035
30	P1	-6.486725	0.710000	2.310093
3	P1	-15.898149	1.885928	-0.360797
7	P1	-16.527212	5.347999	-1.562038
11	P1	-20.010223	13.192572	7.247061
15	P1	-13.115599	11.190248	-3.801775
19	P1	-14.021425	0.352339	1.450466
22	P1	-17.121325	25.290144	-2.256388
26	P1	-18.142378	22.337534	-0.182234
30	P1	-18.072094	9.085892	1.293801

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.779839	0.101156	-0.234278
7	P2	-22.291983	0.333778	-1.298352
11	P2	-15.064457	3.255739	-4.950757
15	P2	-7.150002	0.122937	-0.256860
19	P2	-9.300386	0.232345	0.685720
22	P2	-17.170362	0.276754	-1.207522
26	P2	-16.324650	0.144536	0.598876
30	P2	-19.223309	0.283657	-1.196879

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.166305	0.004404	-0.023828
7	P3	-8.166305	0.004404	-0.023828
11	P3	-8.166305	0.004404	-0.023828
15	P3	-8.166305	0.004404	-0.023828
19	P3	-8.166305	0.004404	-0.023828
22	P3	-8.166305	0.004404	-0.023828
26	P3	-8.166305	0.004404	-0.023828
30	P3	-8.166305	0.004404	-0.023828

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	-3.045880	0.268441	-1.054149
7	P1	-2.984704	0.072371	0.059815
11	P1	-3.589660	0.349043	1.584388
15	P1	-3.550534	0.034880	0.331871
19	P1	-3.439324	0.085688	0.477270
22	P1	-5.366774	0.241962	0.901773
26	P1	-6.483049	1.034070	2.397268
30	P1	-5.671032	0.579373	1.648889
3	P1	-11.361058	0.540854	-0.824097
7	P1	-11.680020	21.133410	-0.981768
11	P1	-13.481240	39.274929	1.222247
15	P1	-13.040362	35.436813	-0.884169
19	P1	-15.322297	0.222978	0.160927
22	P1	-23.303652	7.116100	6.657011
26	P1	-16.639071	6.583180	-3.433746
30	P1	-19.894712	2.048299	1.078568

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.525942	0.068629	-0.409482
7	P2	-22.473875	0.374770	-1.533655
11	P2	-10.494897	1.392016	-3.258900
15	P2	-4.994782	0.051647	0.261392
19	P2	-6.761082	0.122894	0.040205
22	P2	-7.436910	0.292709	-1.410787
26	P2	-23.907656	0.041853	0.138096
30	P2	-22.032742	0.072101	-0.232665

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.009083	0.003455	-0.021976
7	P3	-8.009005	0.003461	-0.021802
11	P3	-8.008879	0.003459	-0.021589
15	P3	-8.008909	0.003467	-0.022072
19	P3	-8.009068	0.003449	-0.022055
22	P3	-8.008927	0.003451	-0.021838
26	P3	-8.009019	0.003457	-0.022179
30	P3	-8.008915	0.003471	-0.022194

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	0.000506804
	stdev	1.95171e-07
MEAN Q	mean	0.000515835
	stdev	2.19686e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.133006
	stdev	0.00102783
STDEV Q	mean	0.133297
	stdev	0.00104099



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005092[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_1PNPDE20050927_201157_00000522041_00114_18705_6811.N1	0	20
ASA_IMM_1PNPDK20050927_075833_00000682041_00107_18698_4860.N1	0	111
ASA_IMM_1PNPDK20050927_081402_00000212041_00107_18698_4855.N1	0	56
ASA_IMM_1PNPDK20050927_081423_000000162041_00107_18698_4910.N1	0	71
ASA_GM1_1PNPDK20050927_070836_000005792041_00106_18697_6635.N1	0	8
ASA_GM1_1PNPDK20050927_072000_000004532041_00106_18697_6640.N1	0	29
ASA_GM1_1PNPDK20050927_075957_000005012041_00107_18698_6639.N1	0	30
ASA_GM1_1PNPDK20050927_081001_000001262041_00107_18698_6643.N1	0	30
ASA_WSM_1PNPDE20050927_042619_000003042041_00105_18696_0855.N1	0	45

ASA_WSM_1PNPDE20050927_161253_000000852041_00112_18703_0924.N1	0	6
ASA_WSM_1PNPDE20050928_062907_000001402041_00120_18711_1053.N1	0	24
ASA_WSM_1PNPDK20050927_081451_000000672041_00107_18698_5170.N1	0	89
ASA_WSM_1PNPDK20050927_081659_000000552041_00107_18698_5171.N1	0	44
ASA_WSM_1PNPDK20050927_081855_000000552041_00107_18698_5172.N1	0	93





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

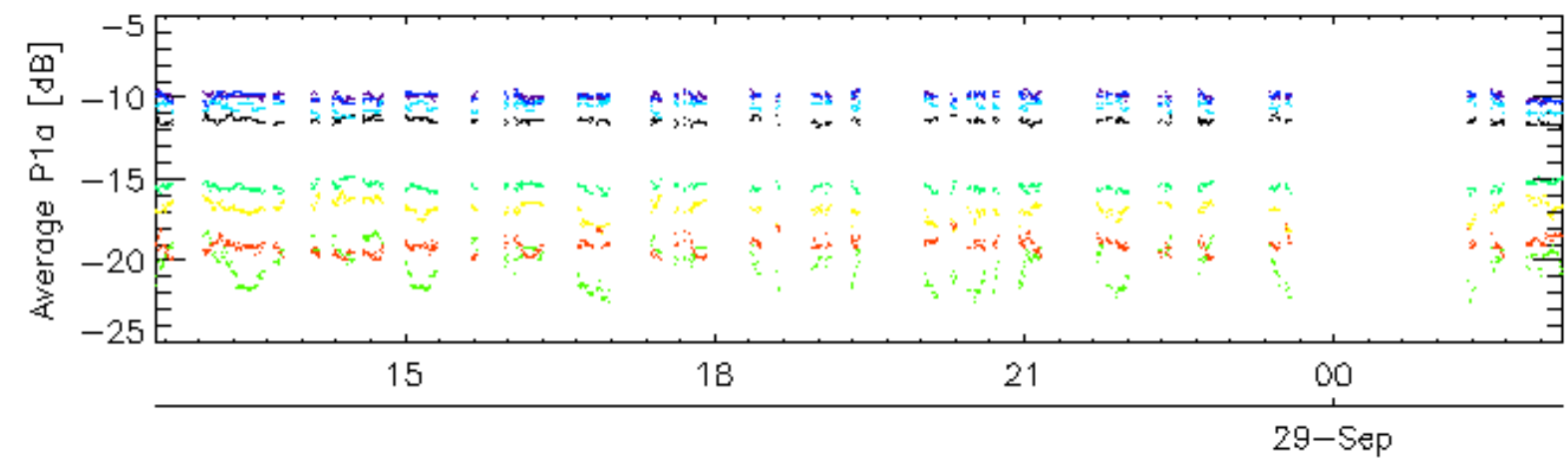
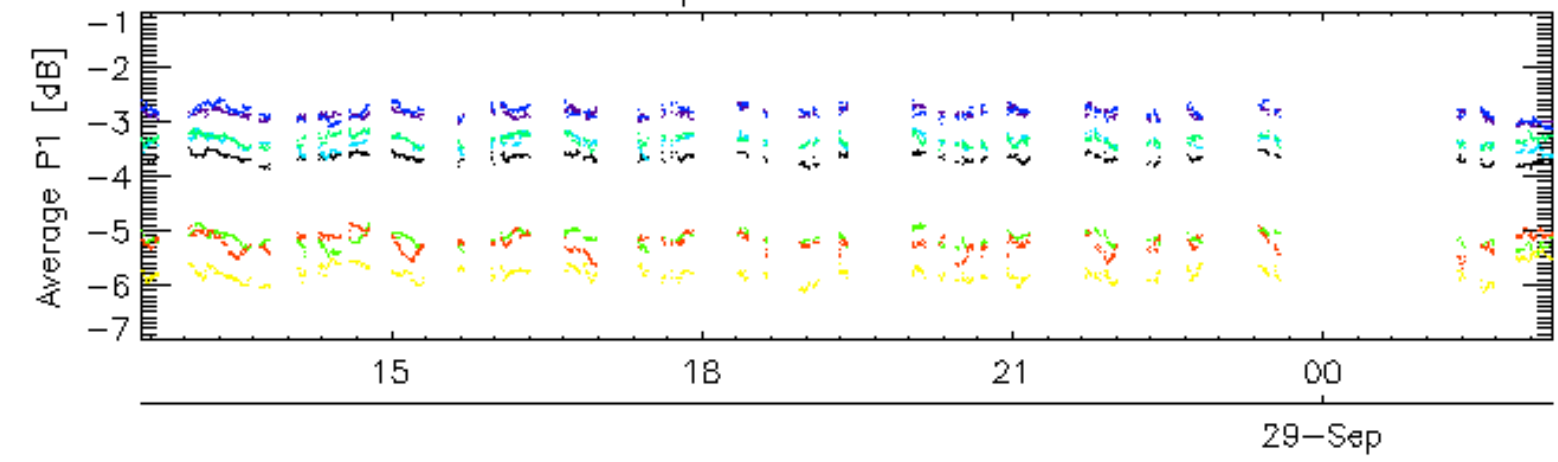
Ascending

Descending

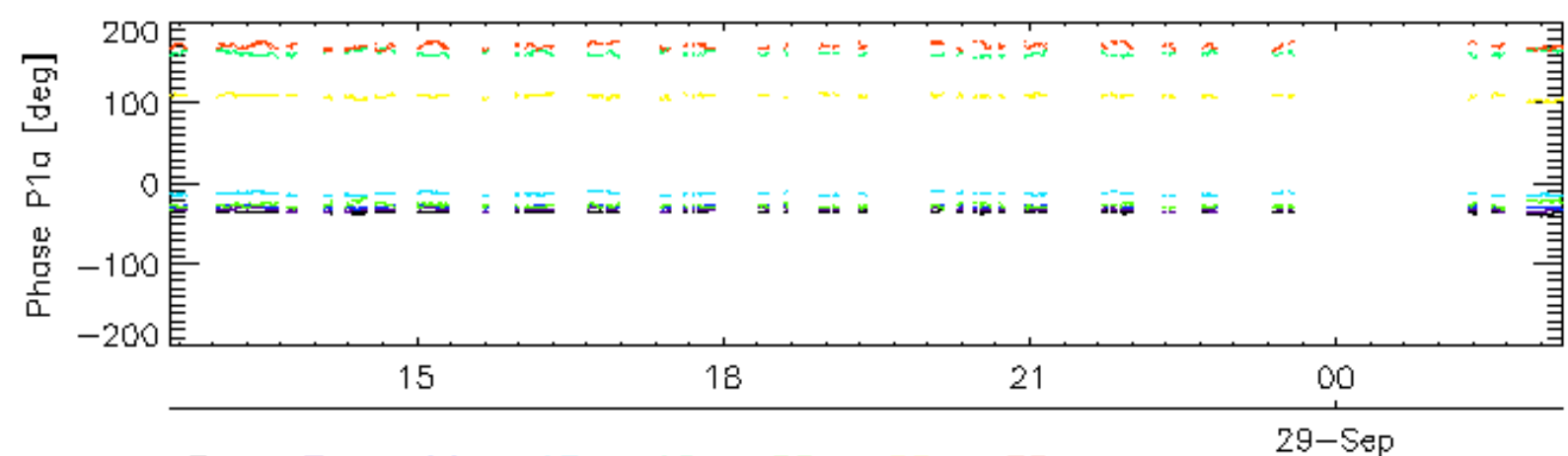
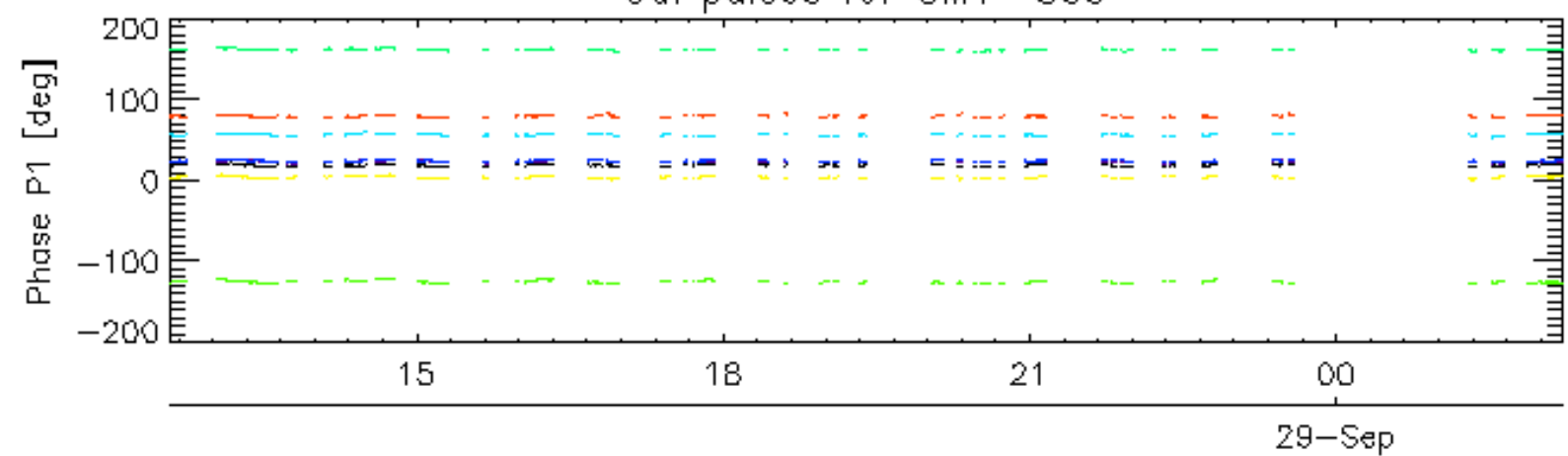
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

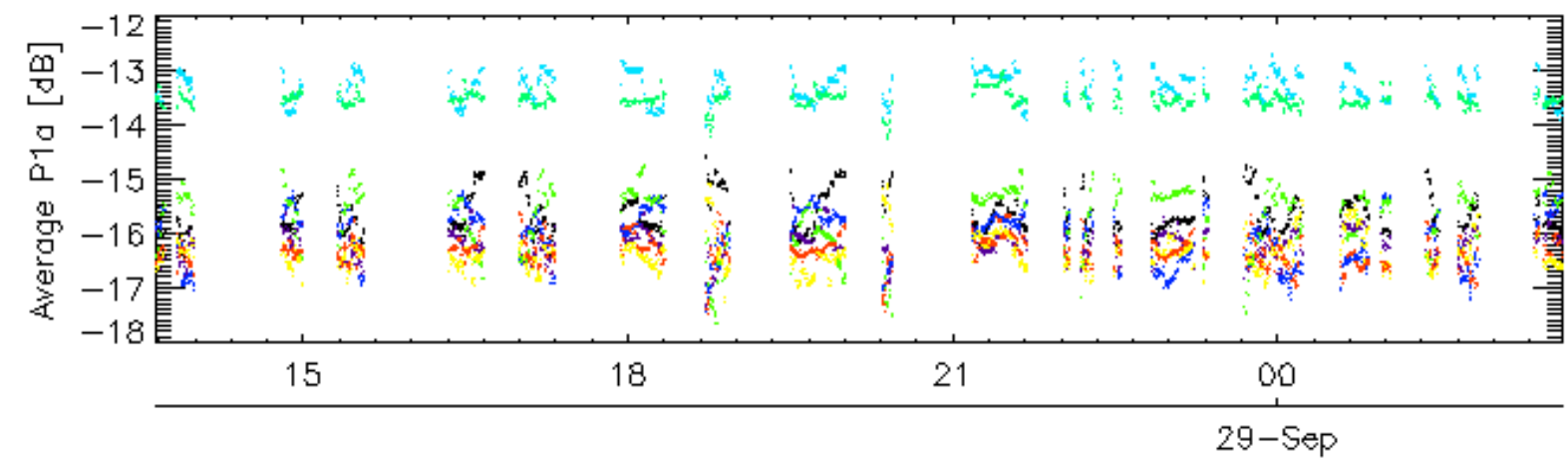
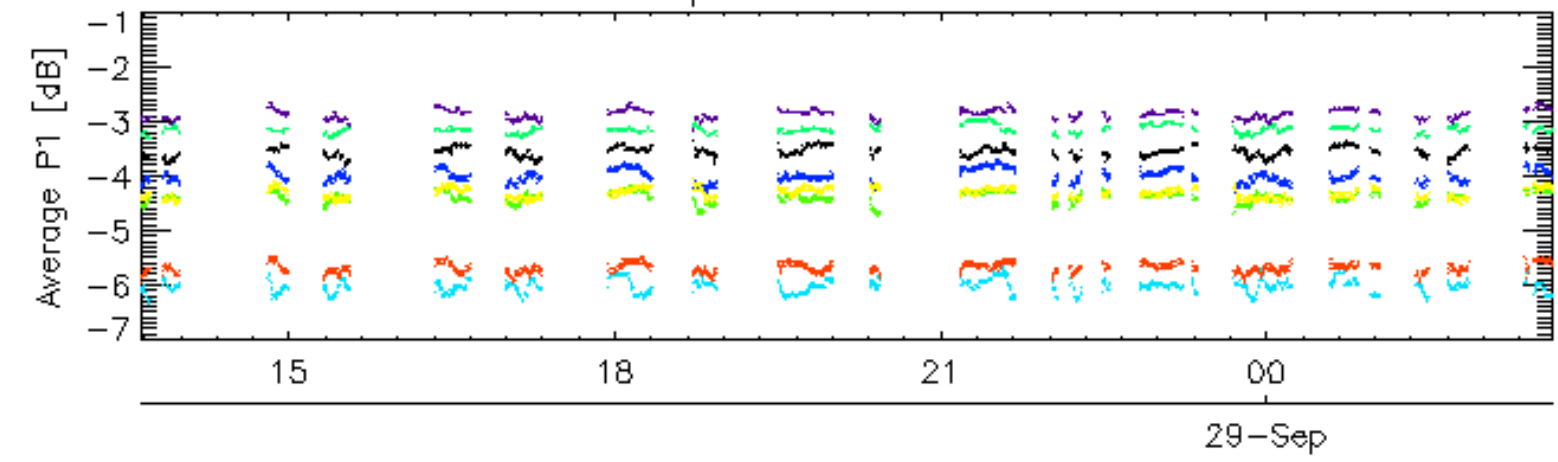


Cal pulses for GM1 SS3

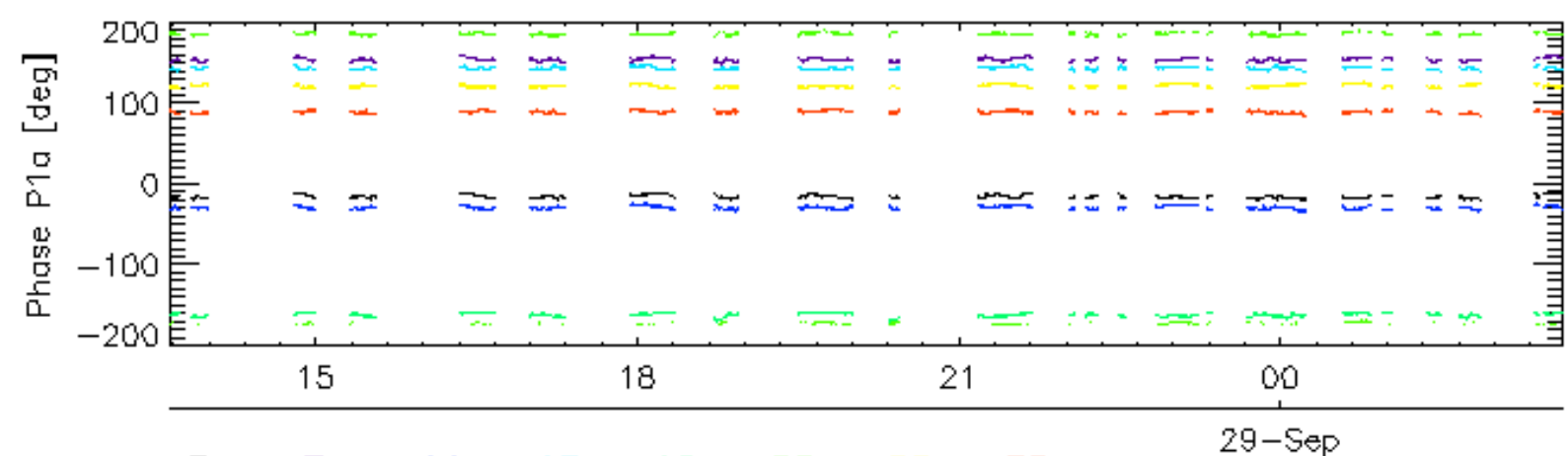
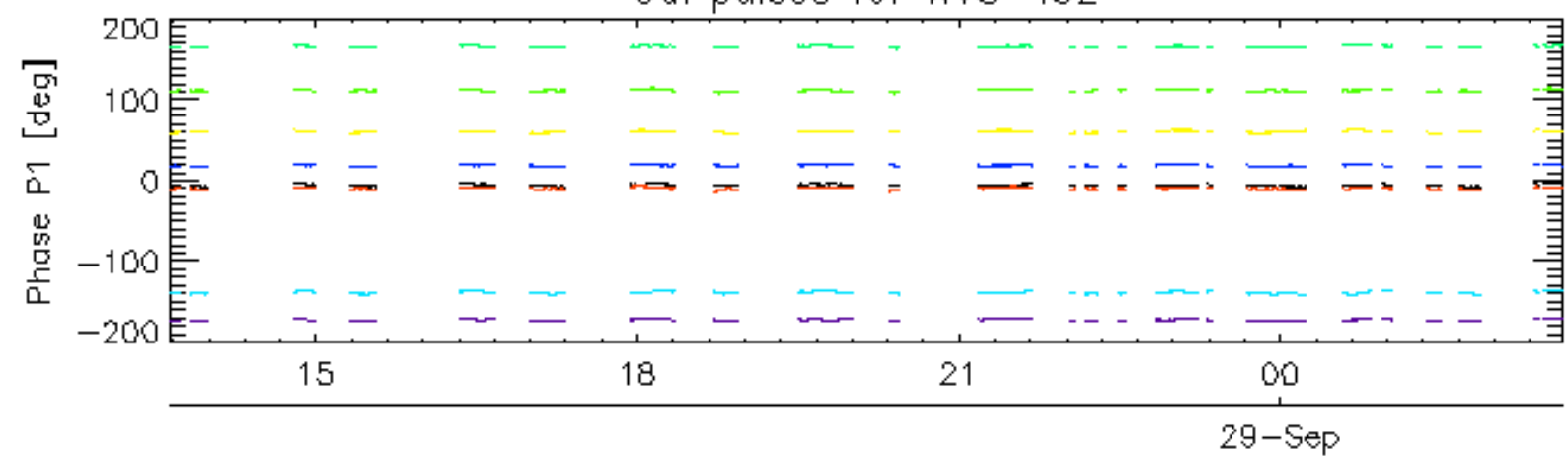


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

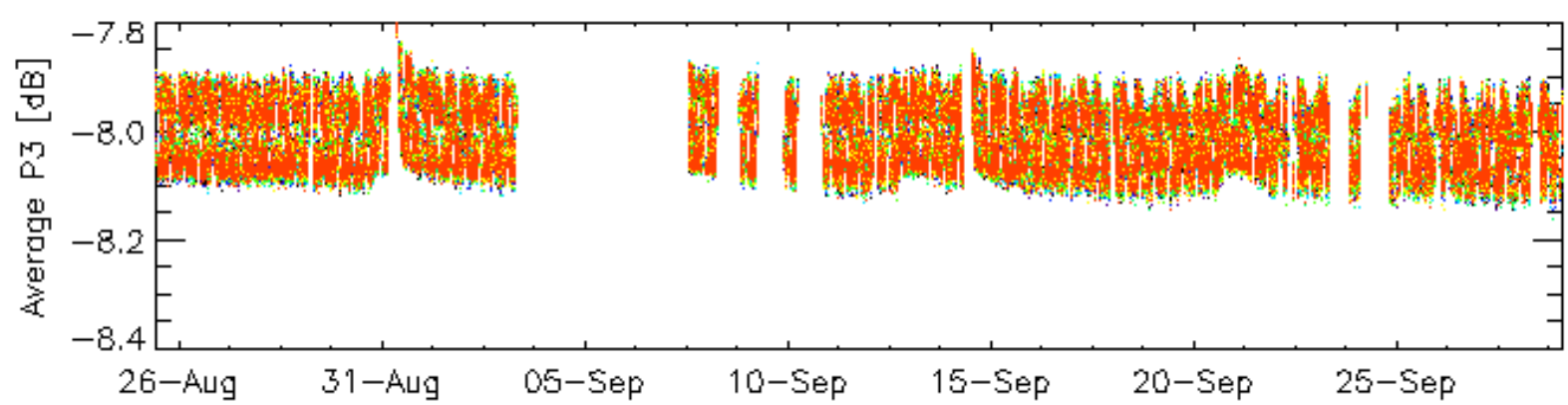
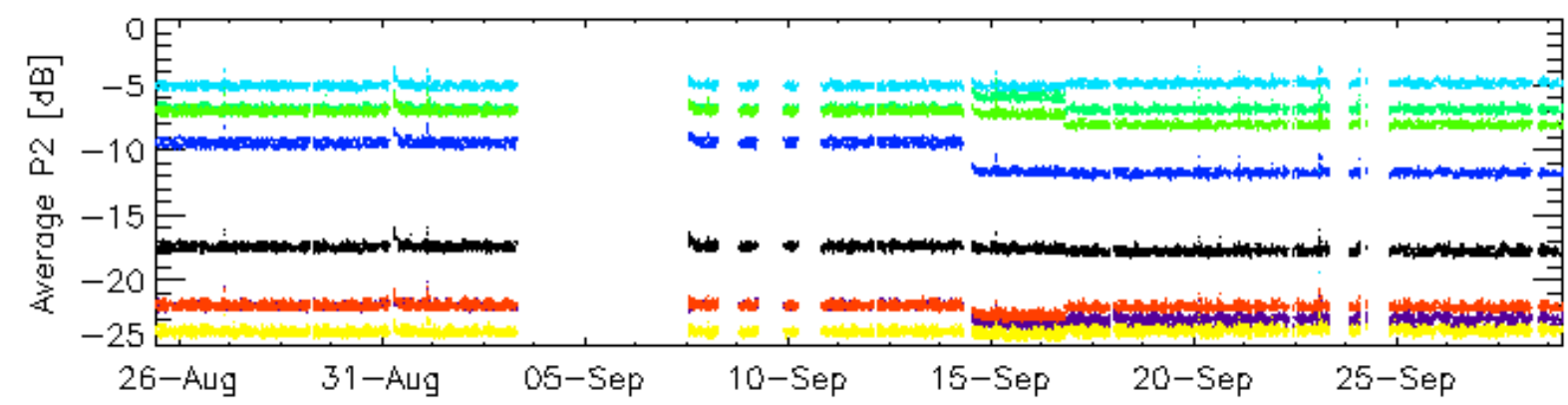
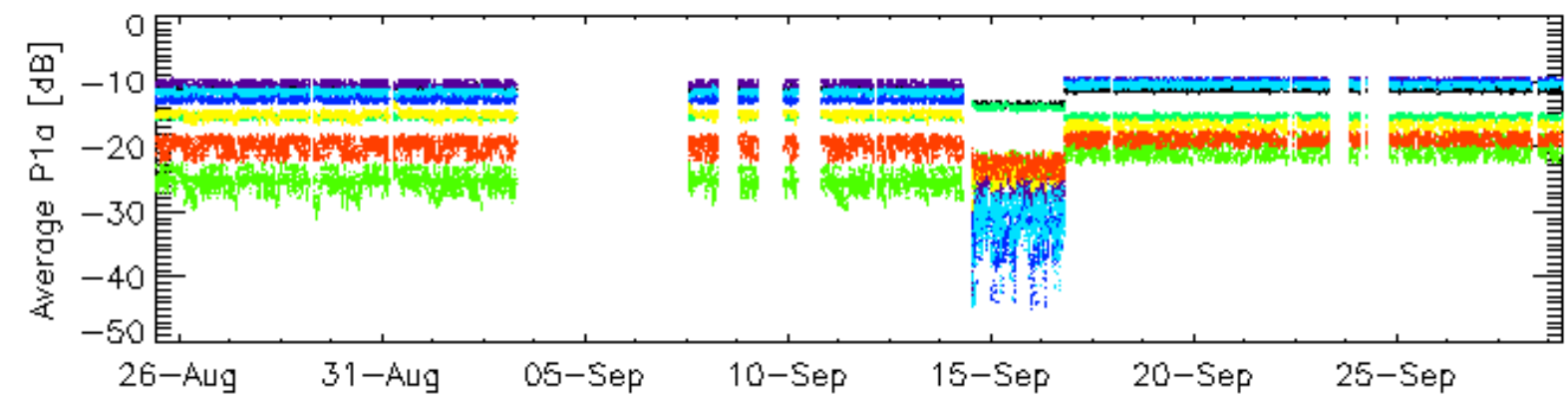
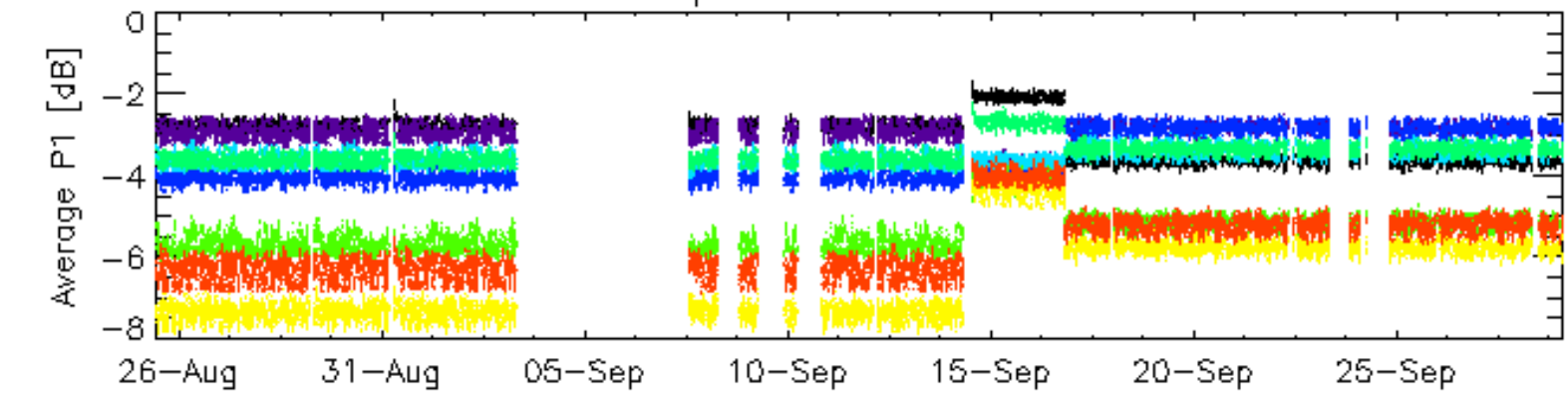


Cal pulses for WVS IS2



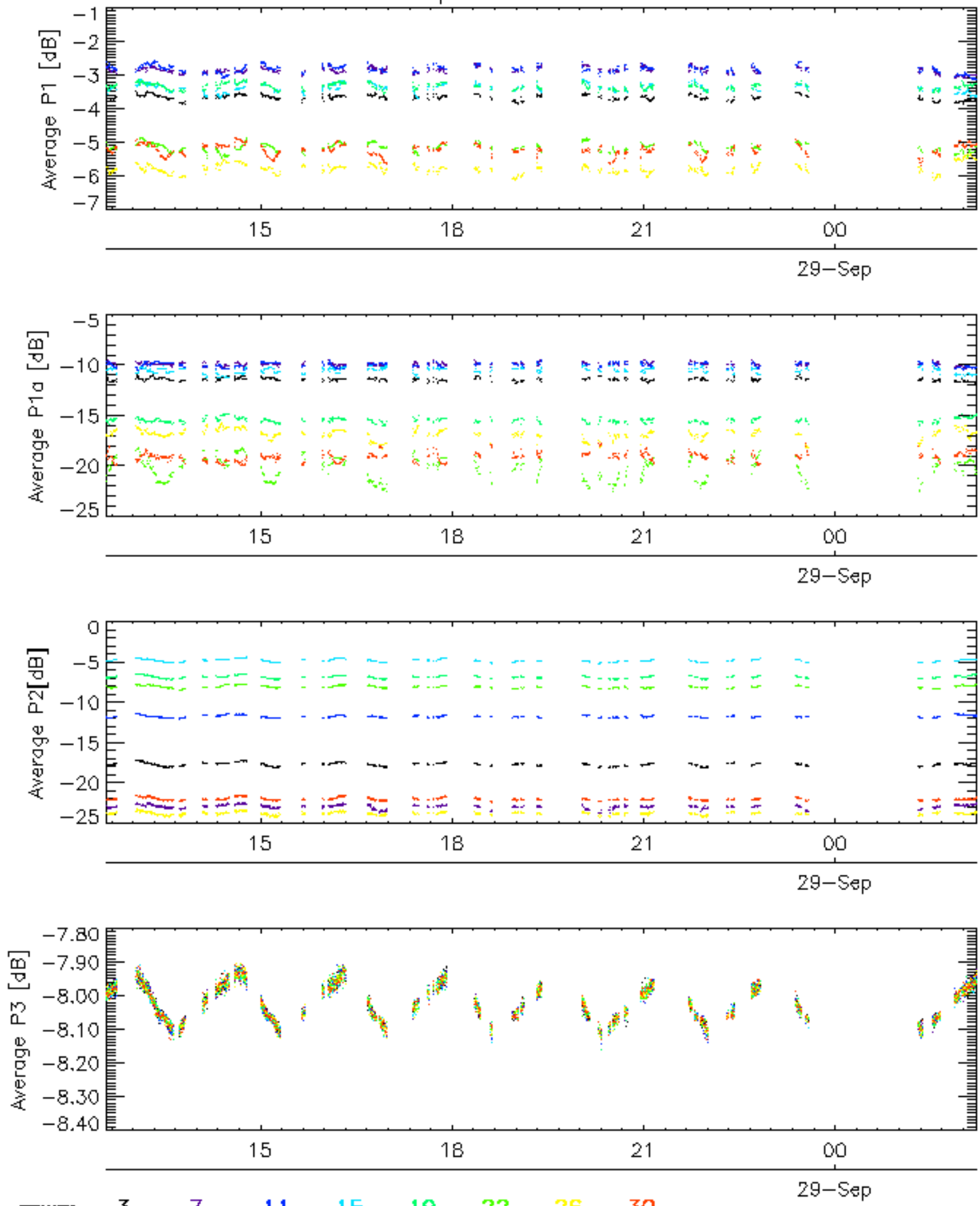
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

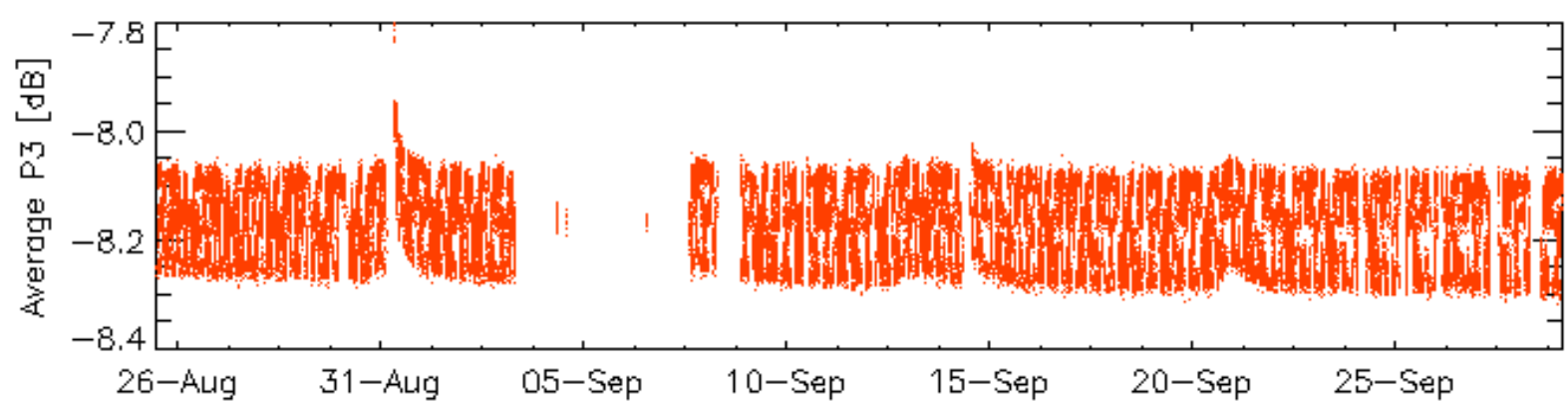
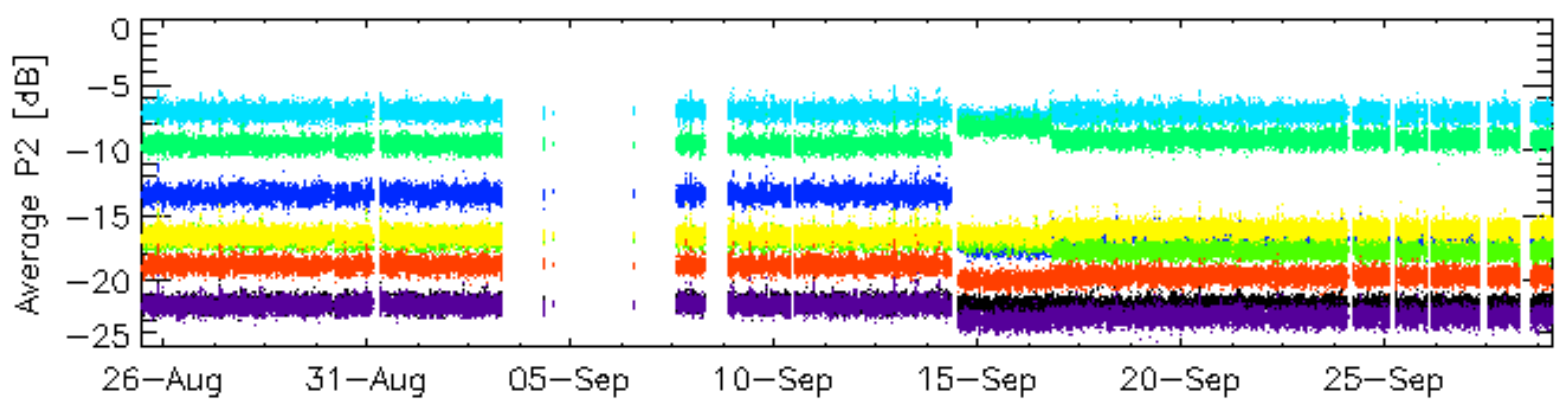
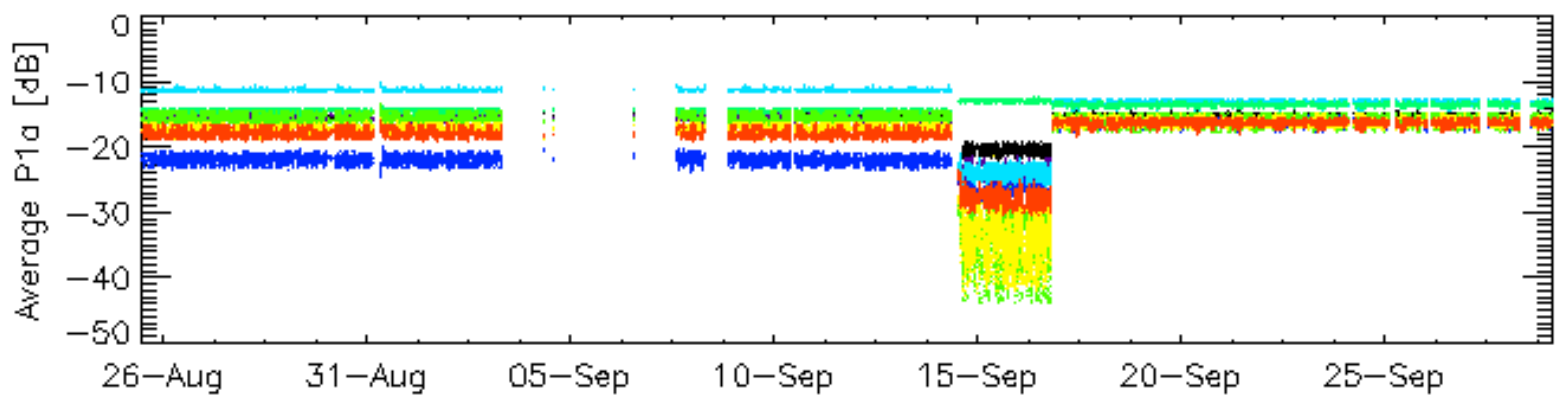
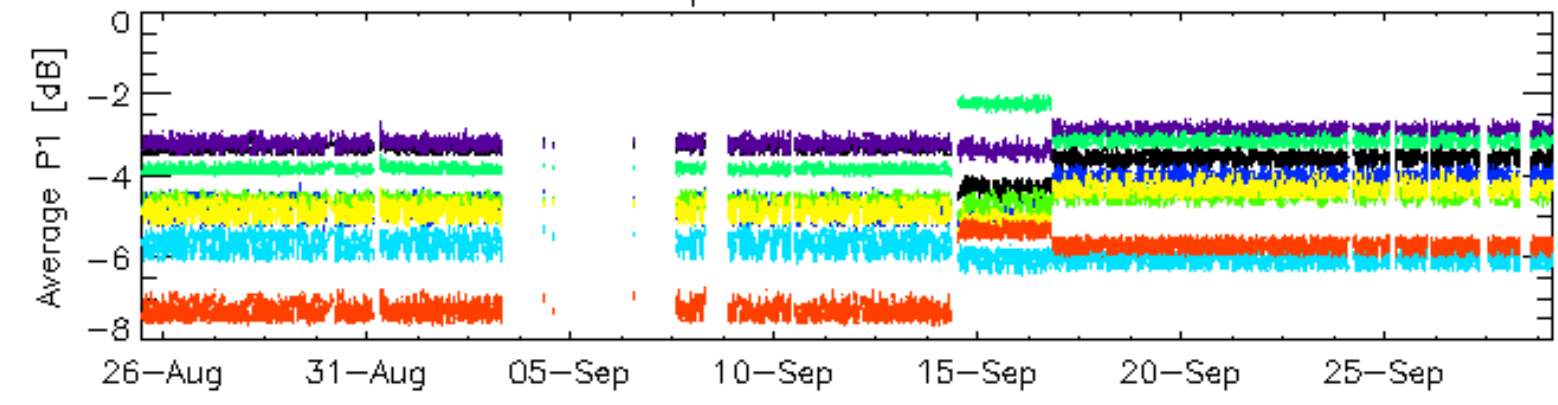


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

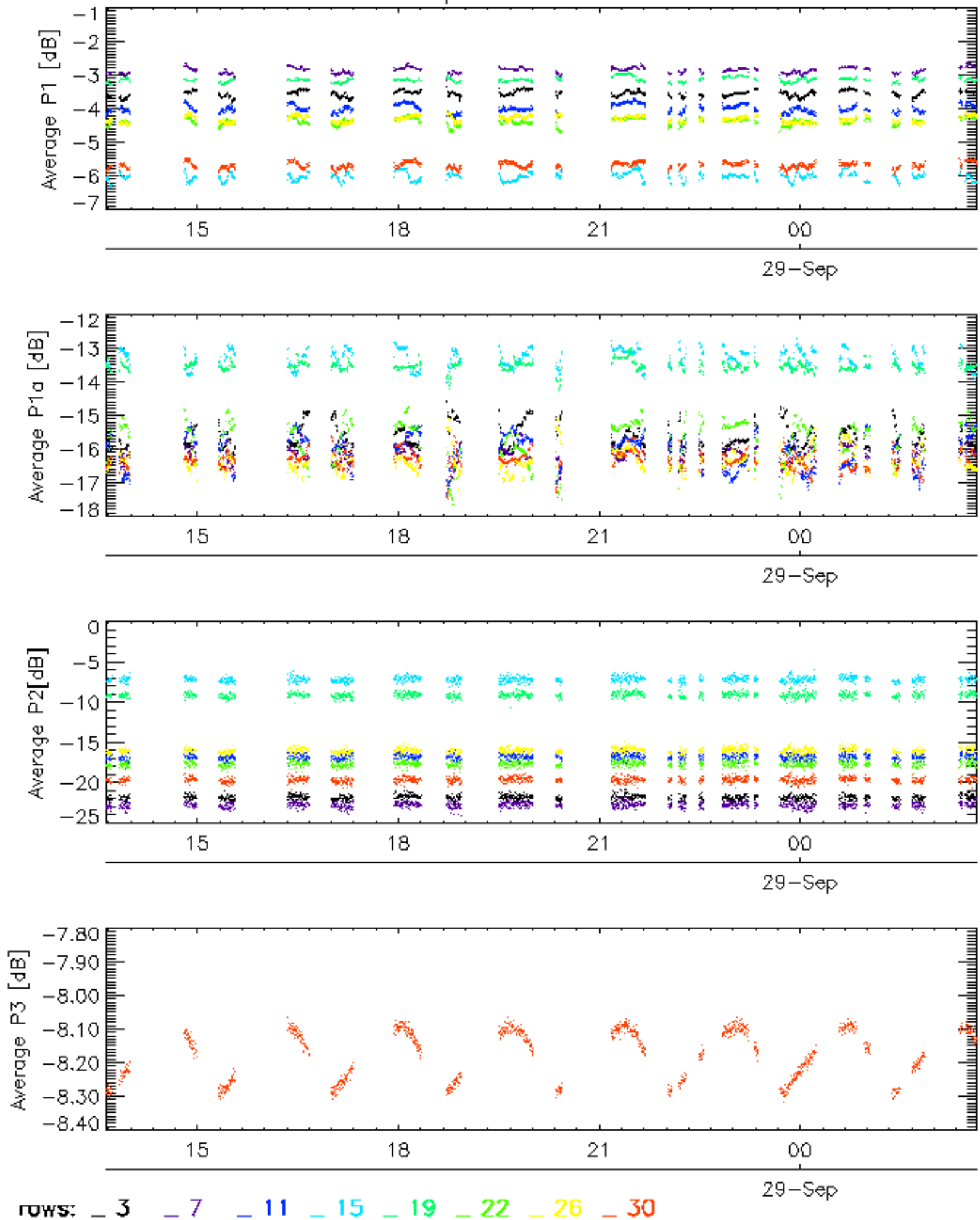


Cal pulses for WVS IS2

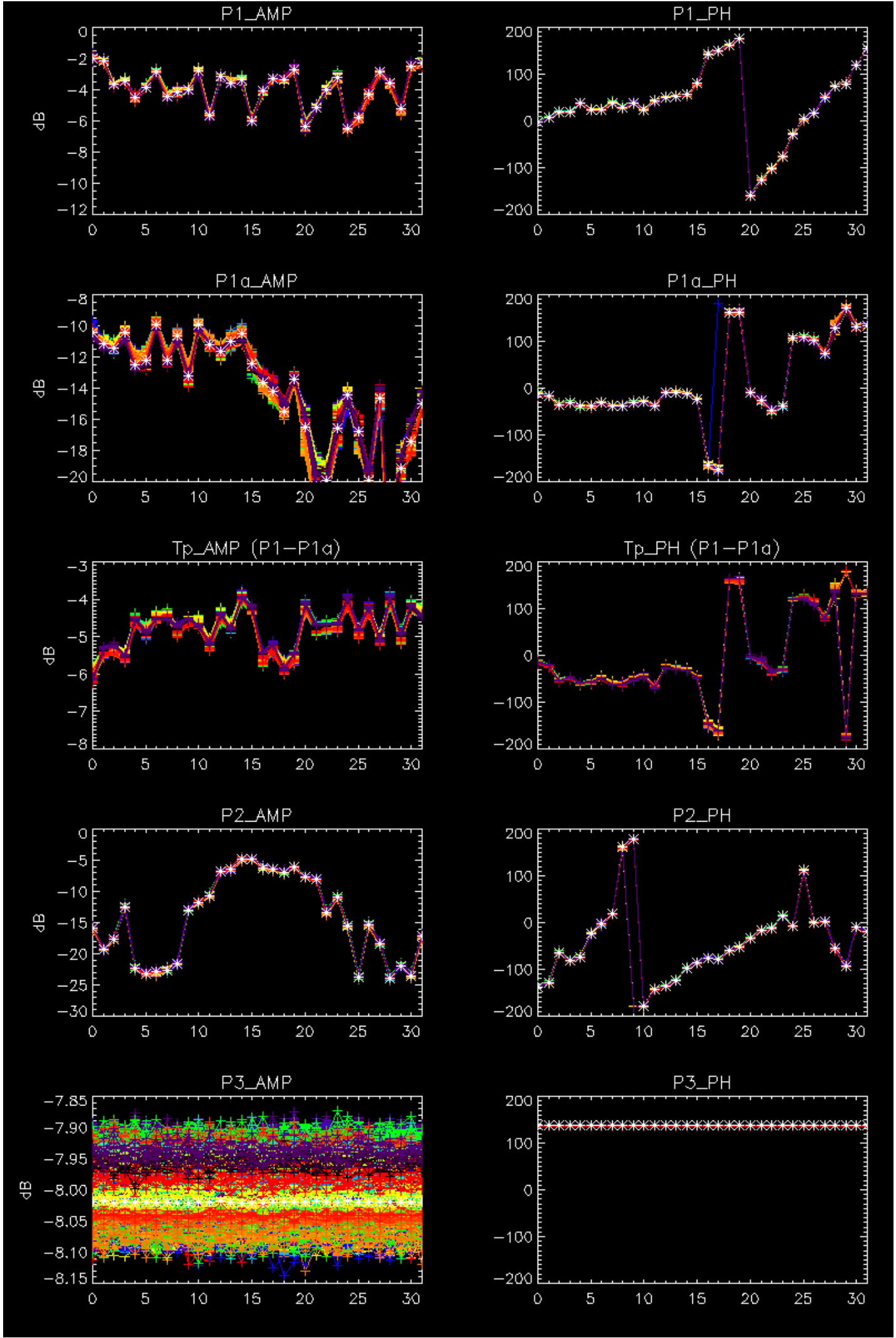


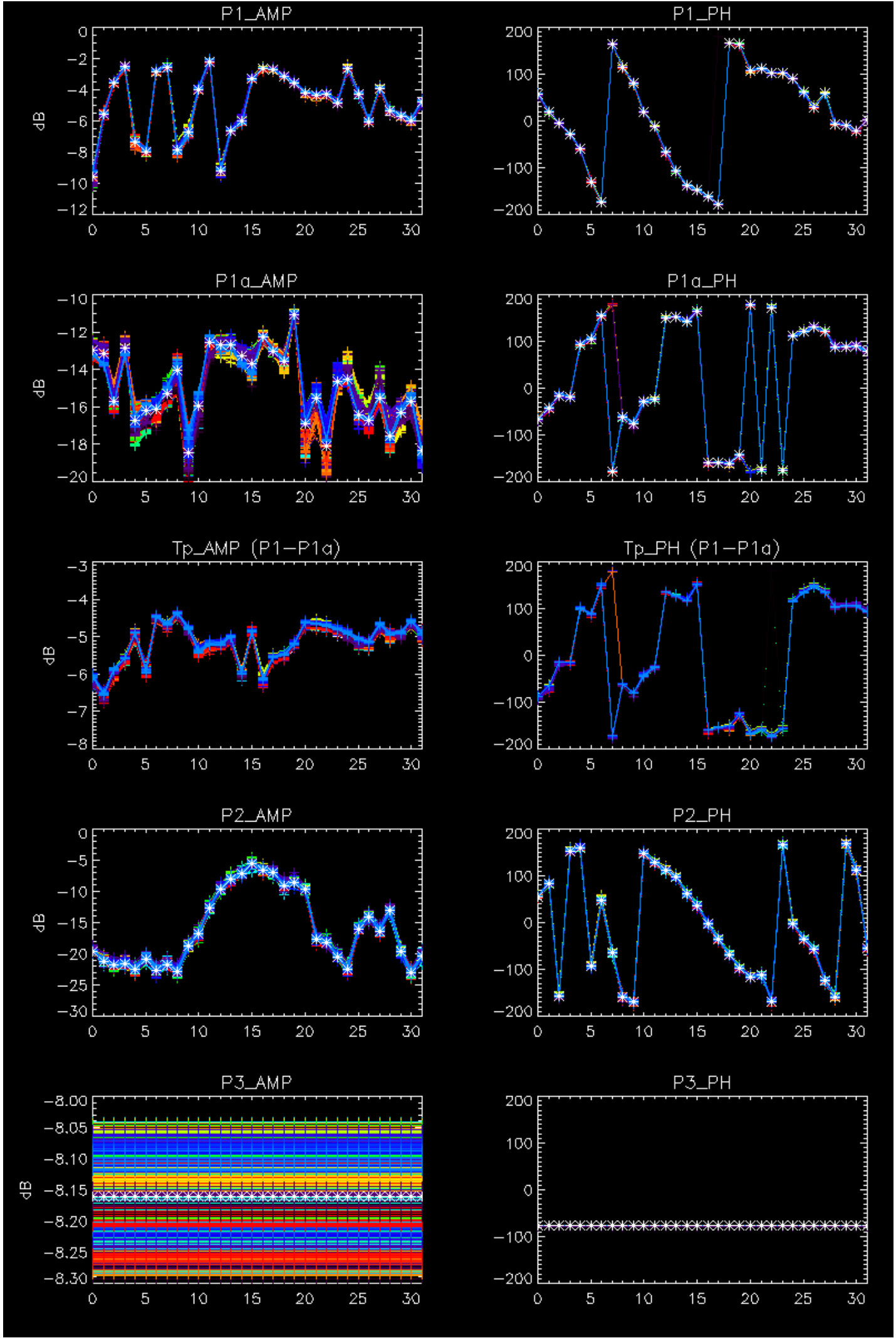
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



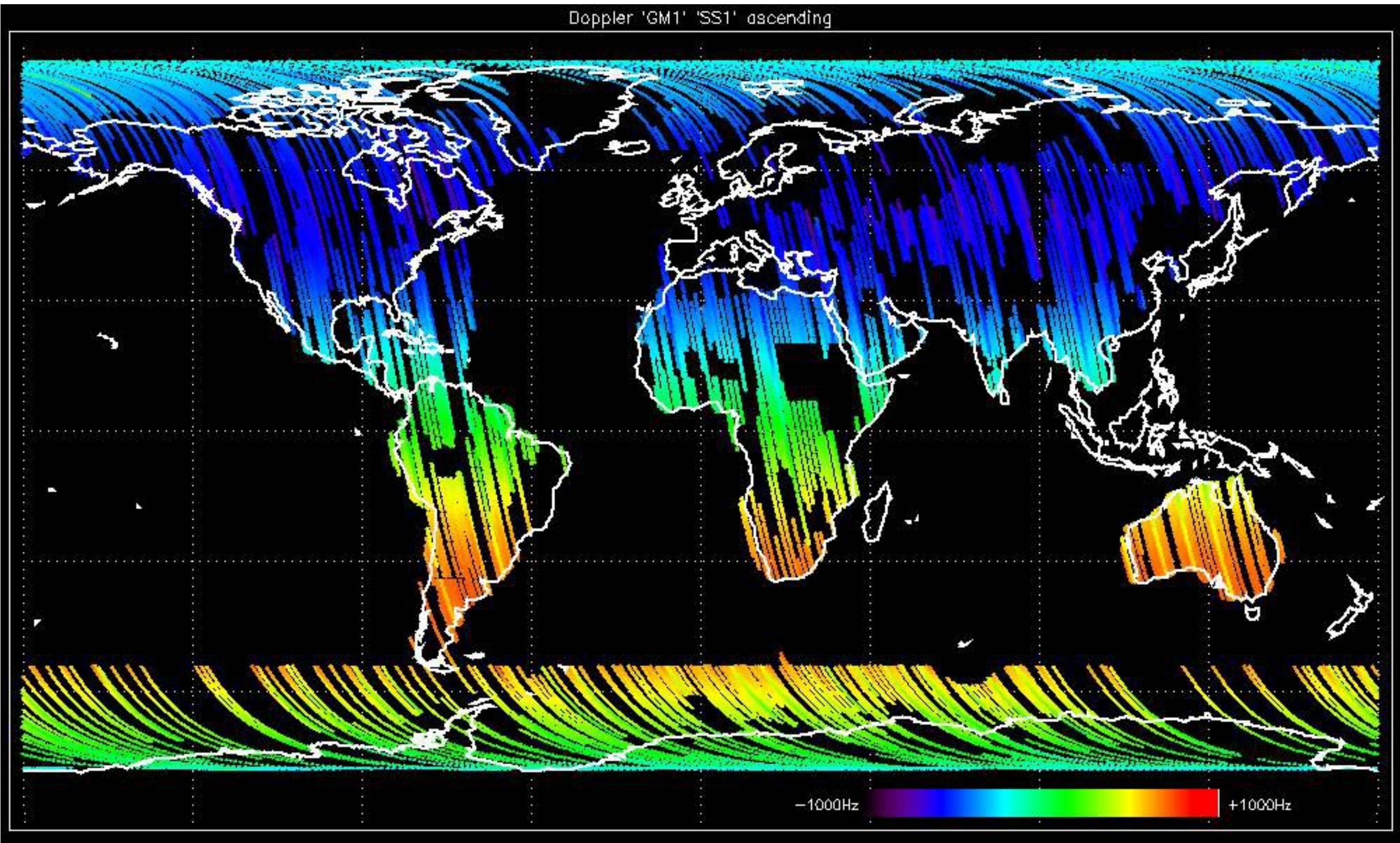
No anomalies observed.



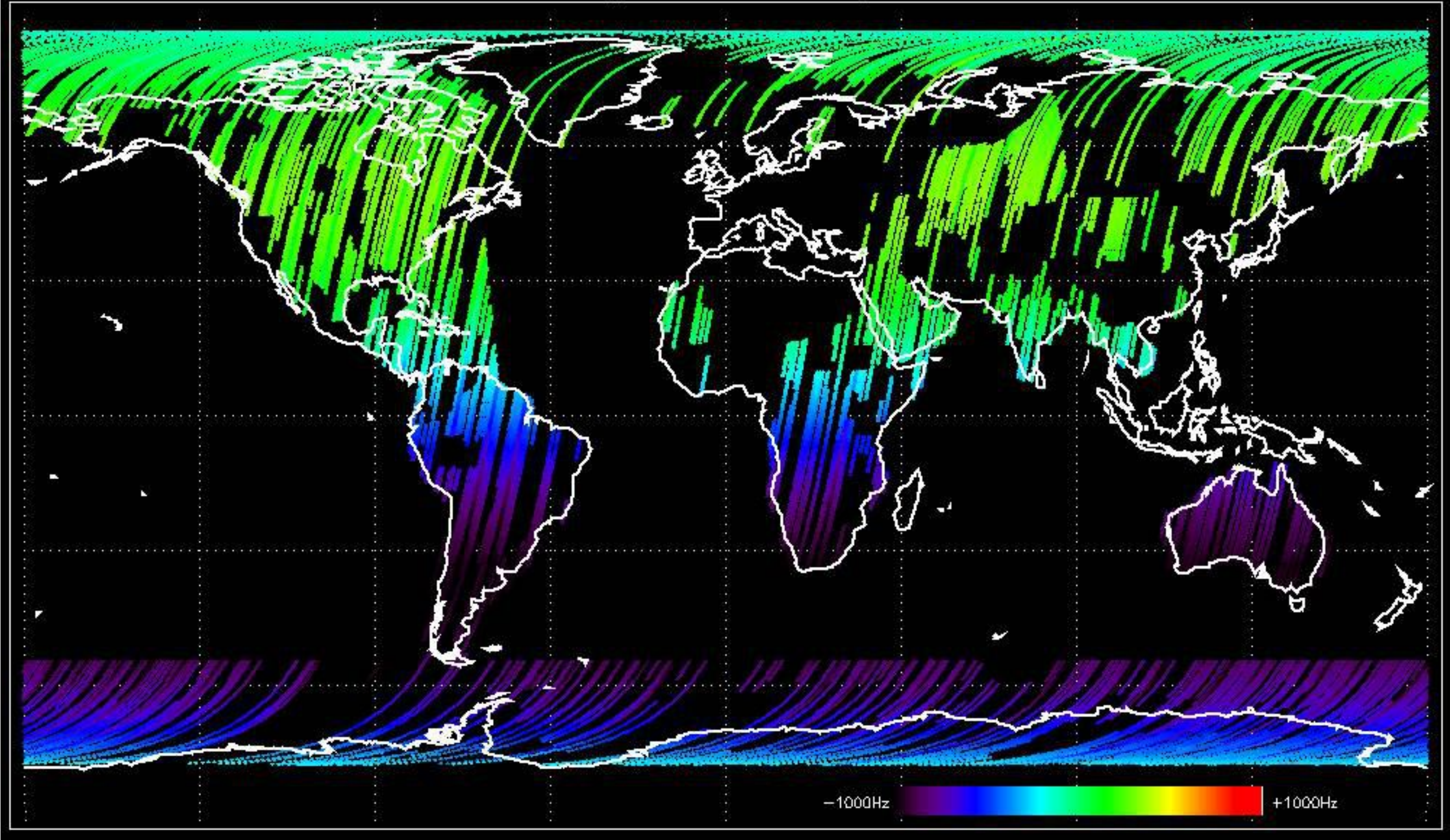


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

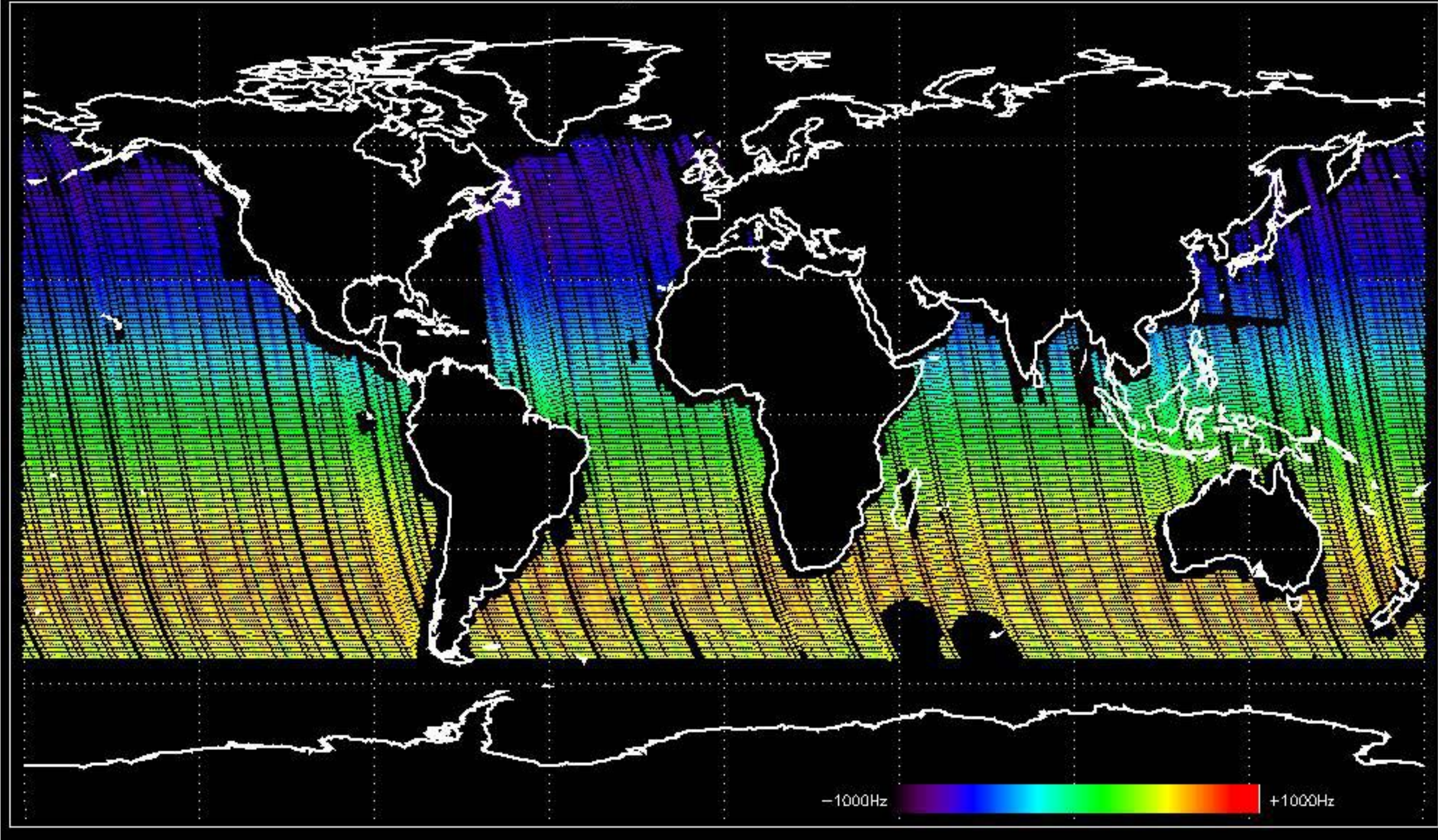
Doppler 'GM1' 'SS1' ascending



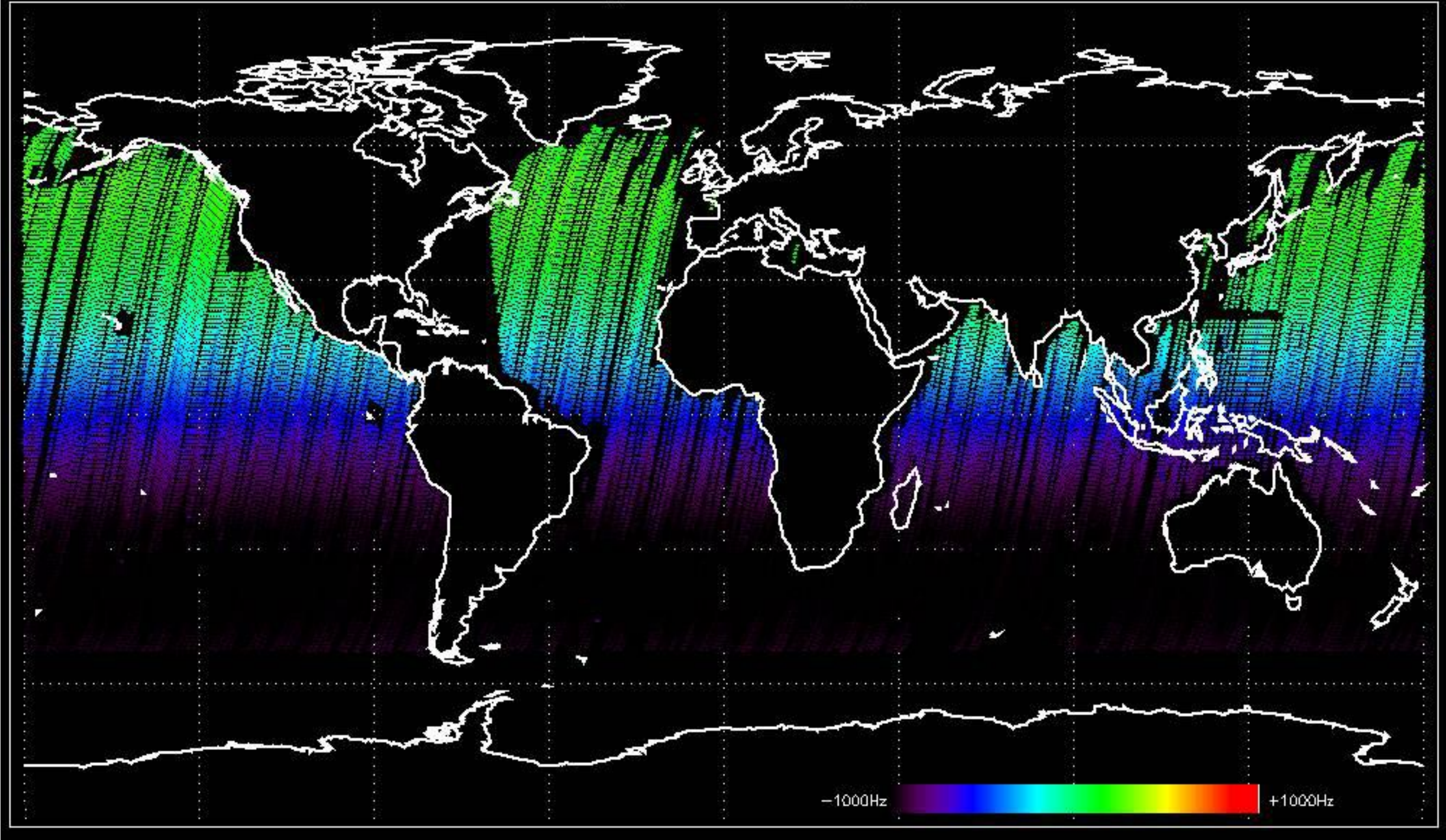
Doppler 'GM1' 'SS1' descending



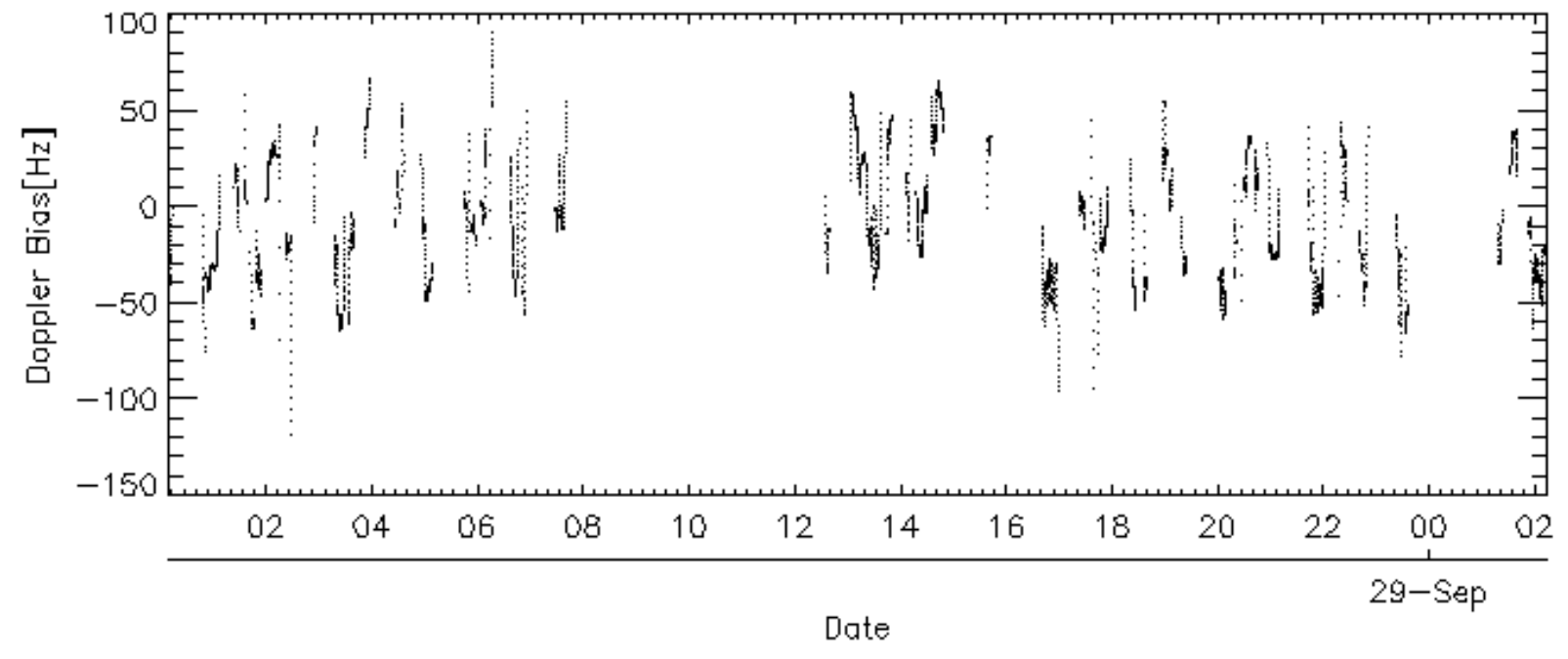
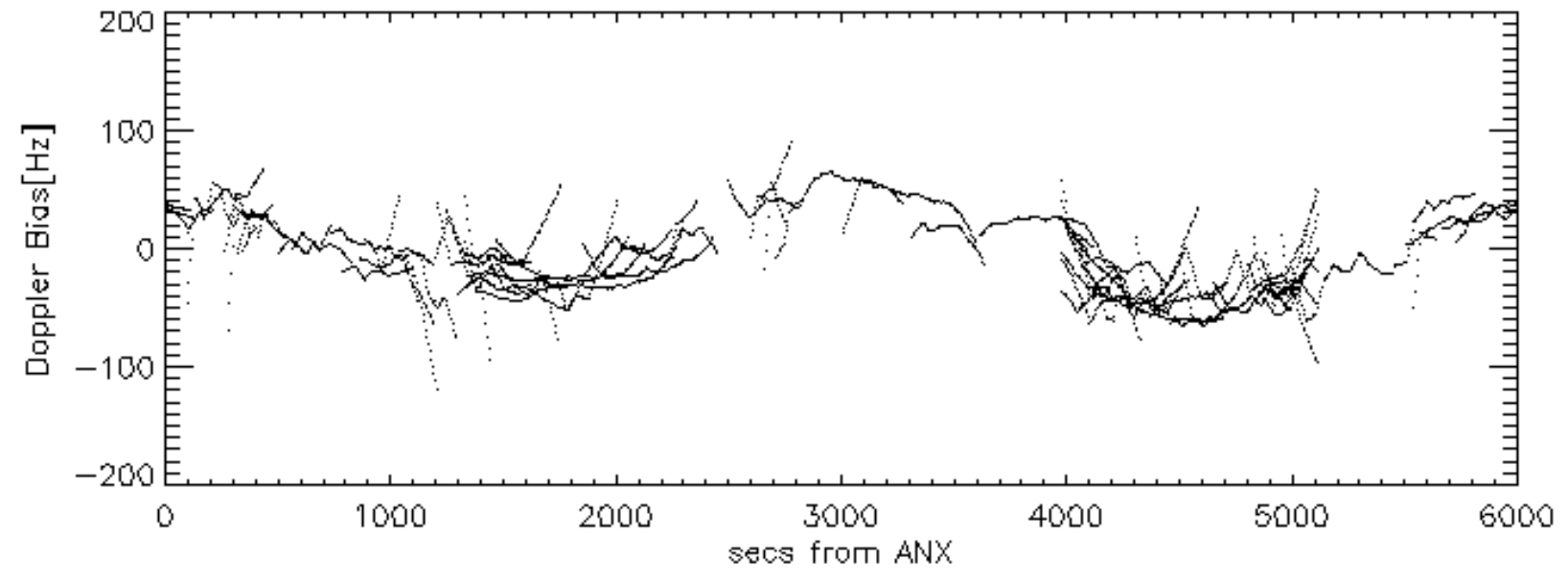
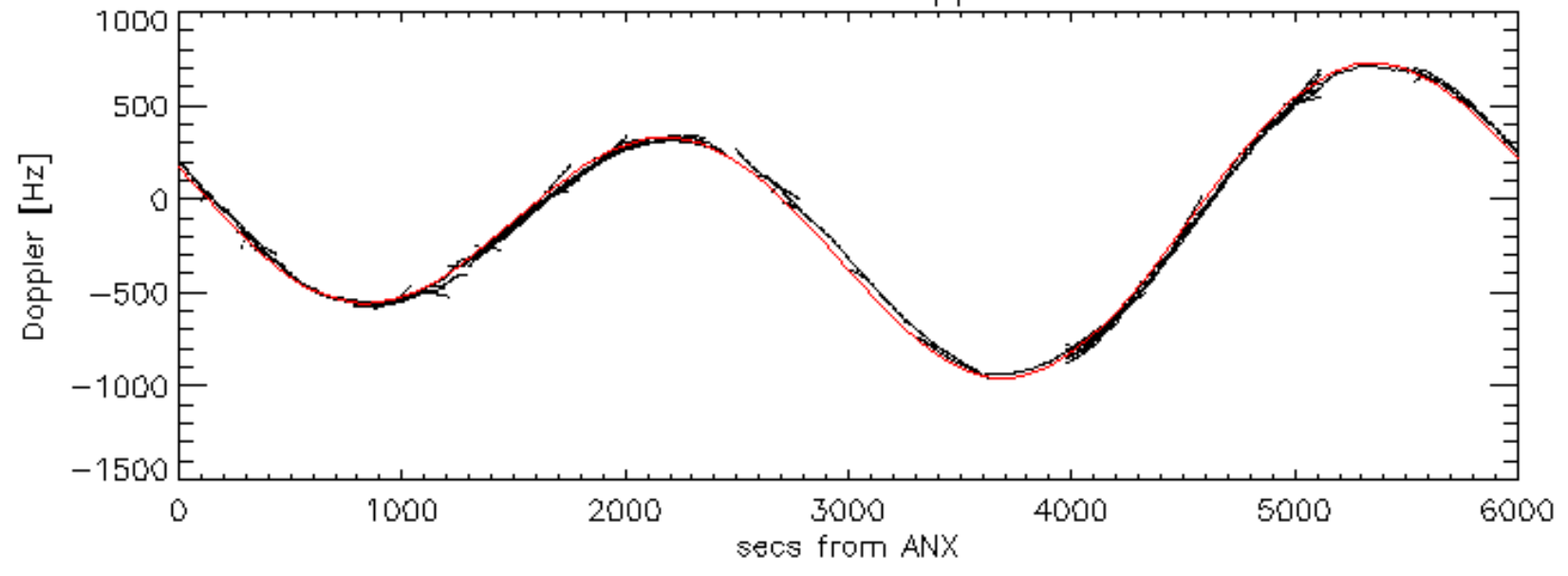
Doppler 'WVS' 'IS2' ascending

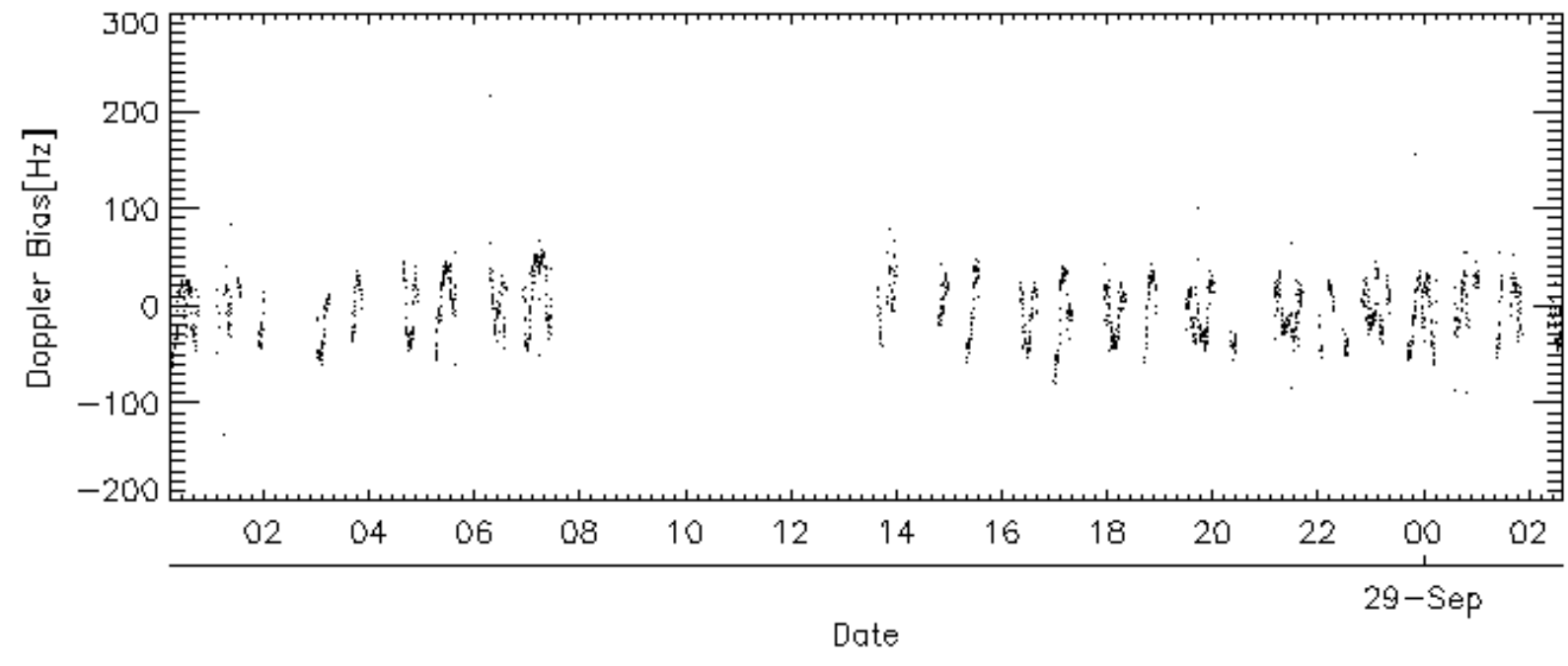
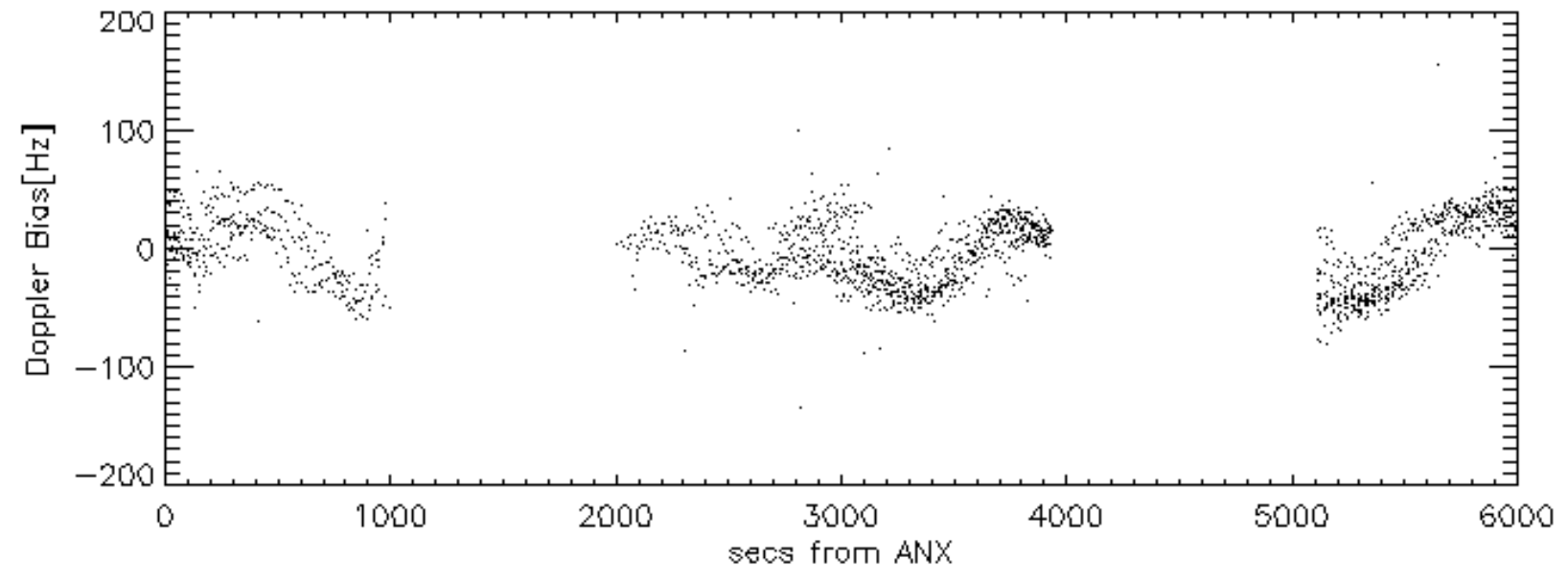
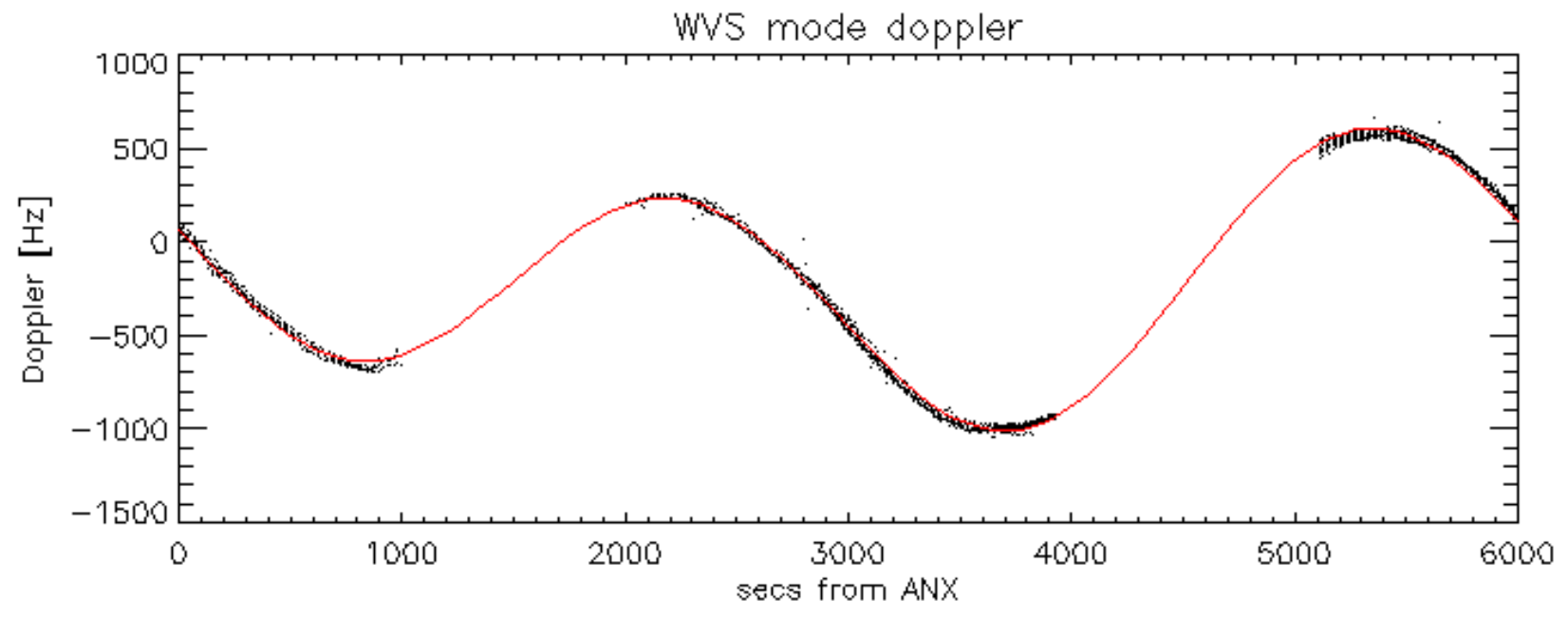


Doppler 'WVS' 'IS2' descending

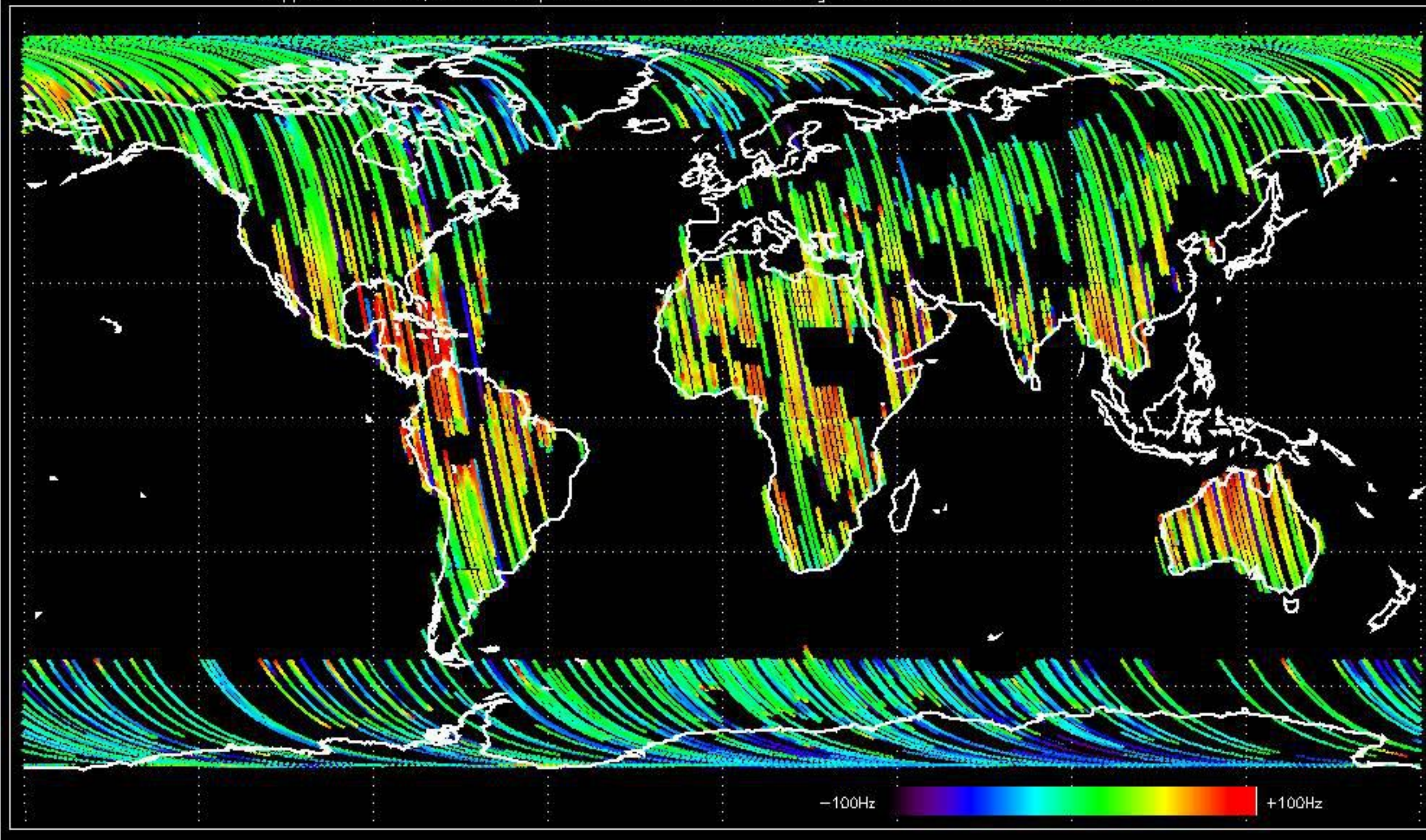


GM1 mode doppler

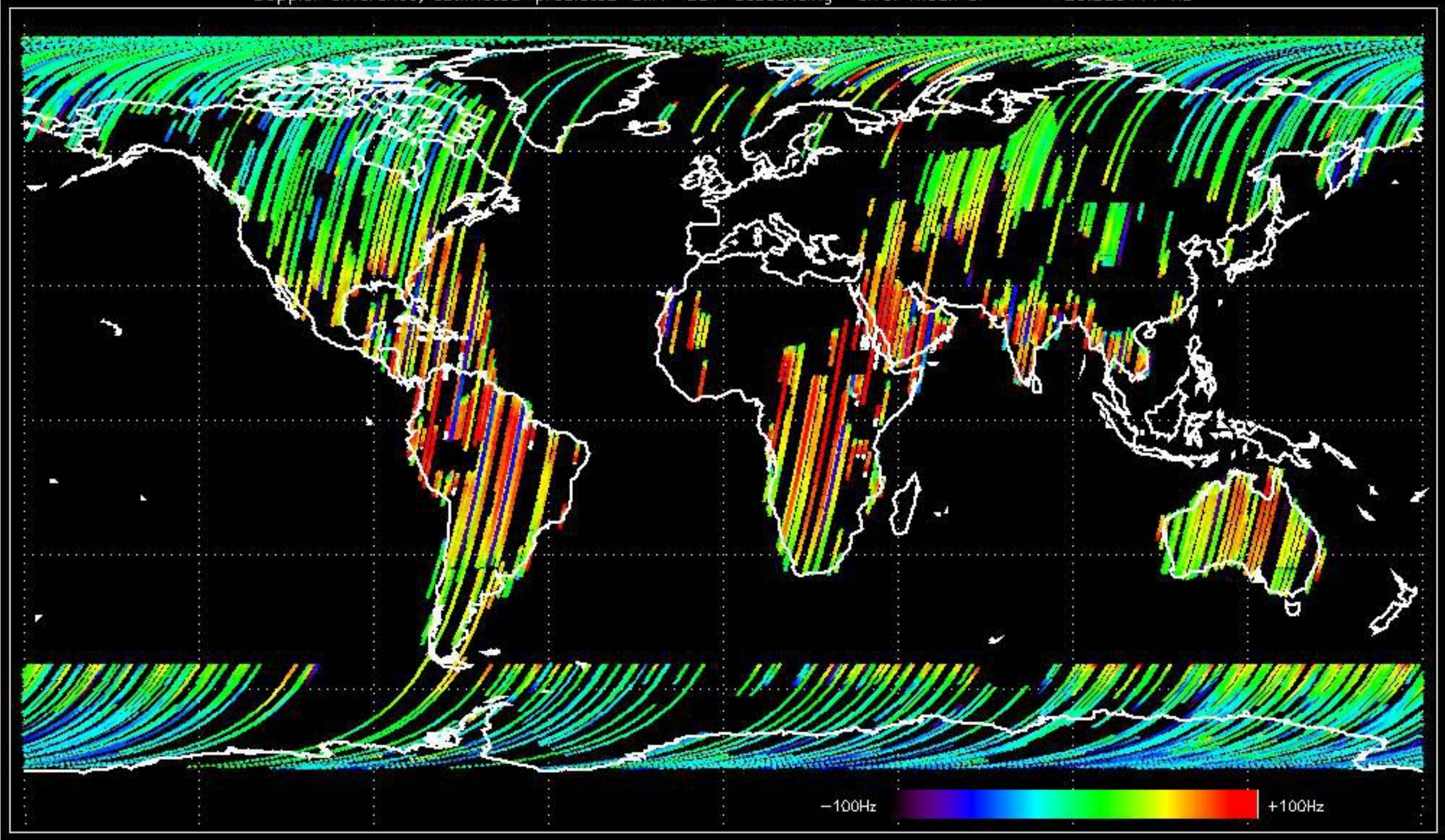




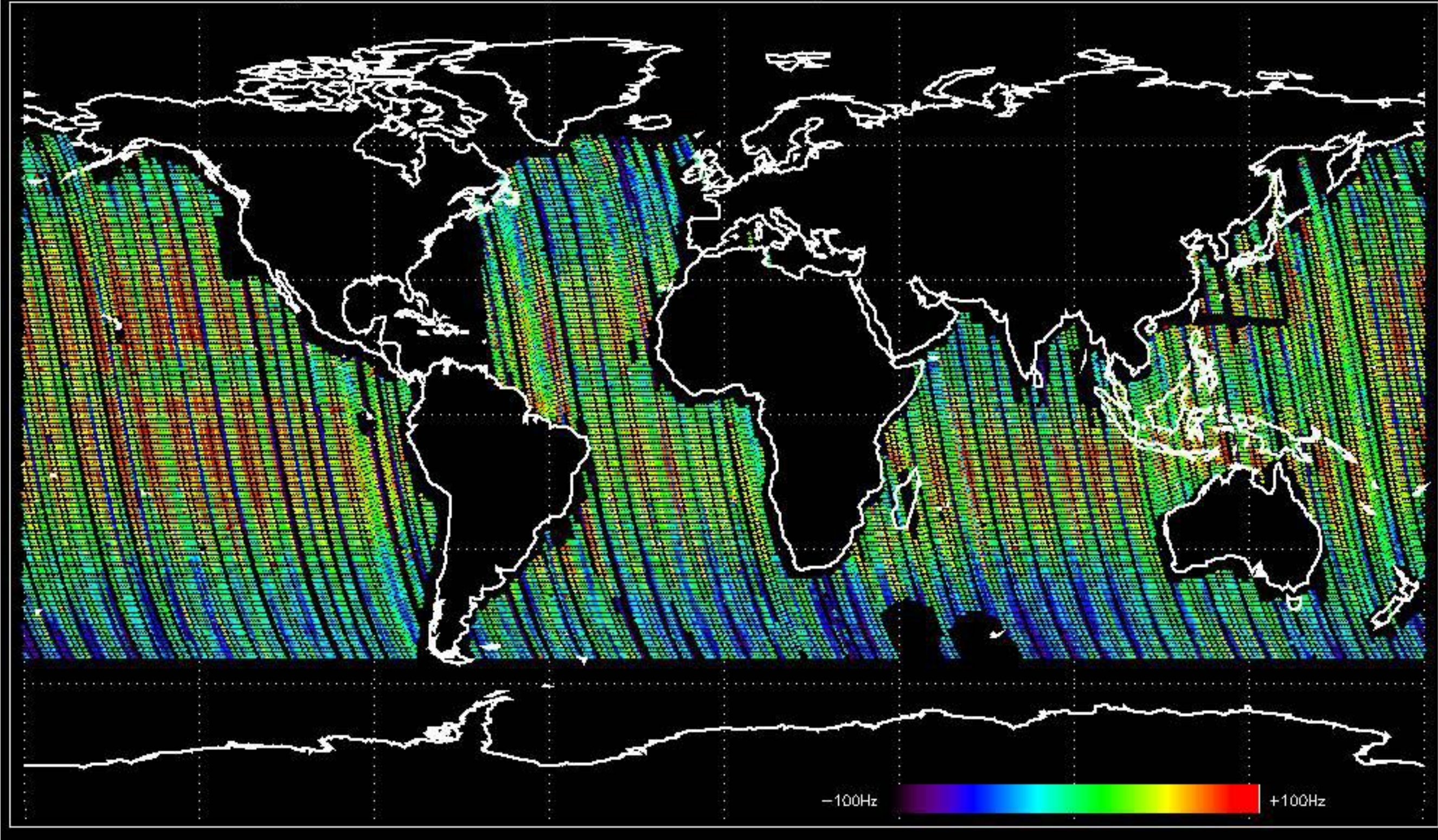
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.875759 Hz



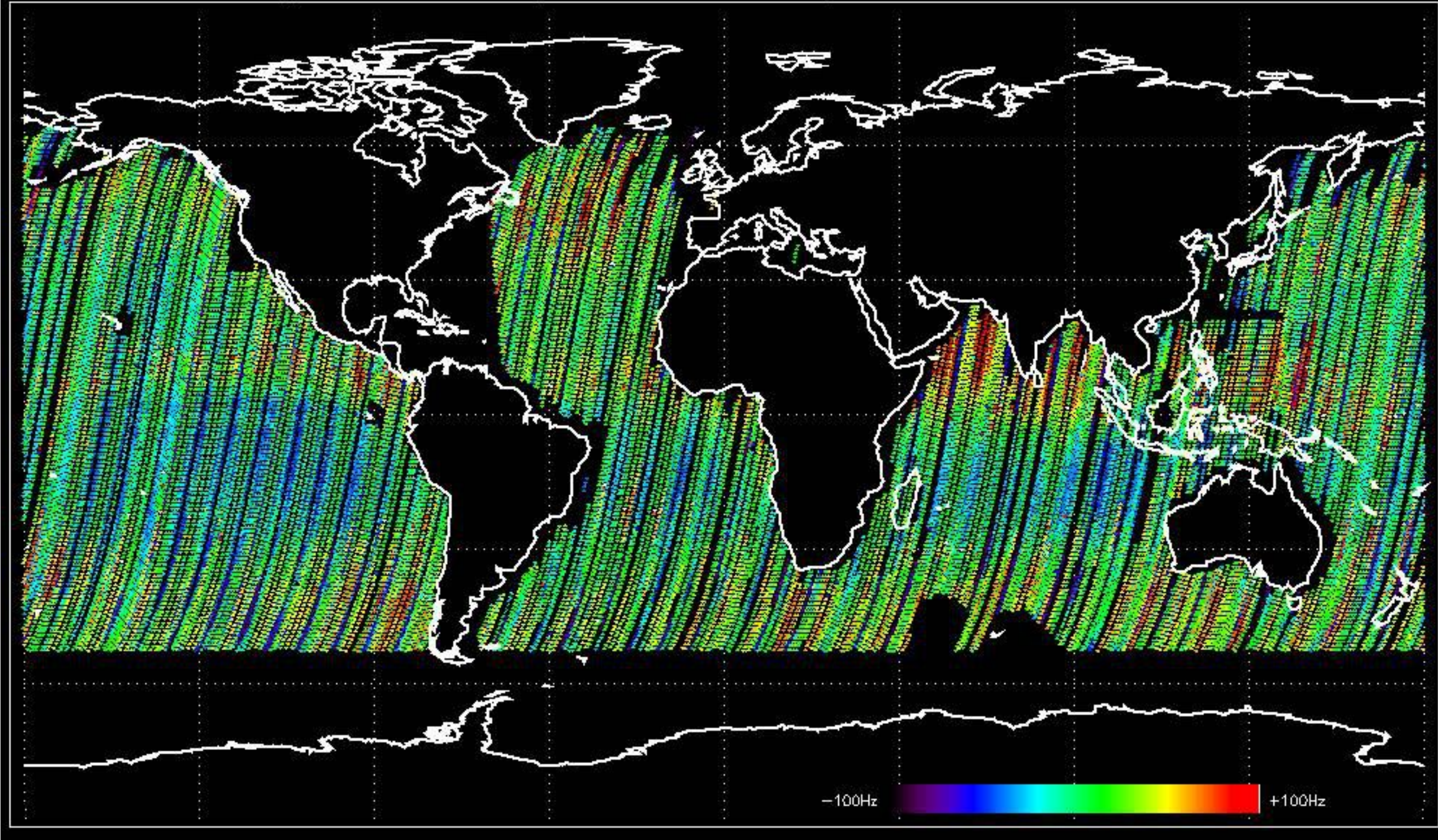
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.939111 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -29.332828 Hz

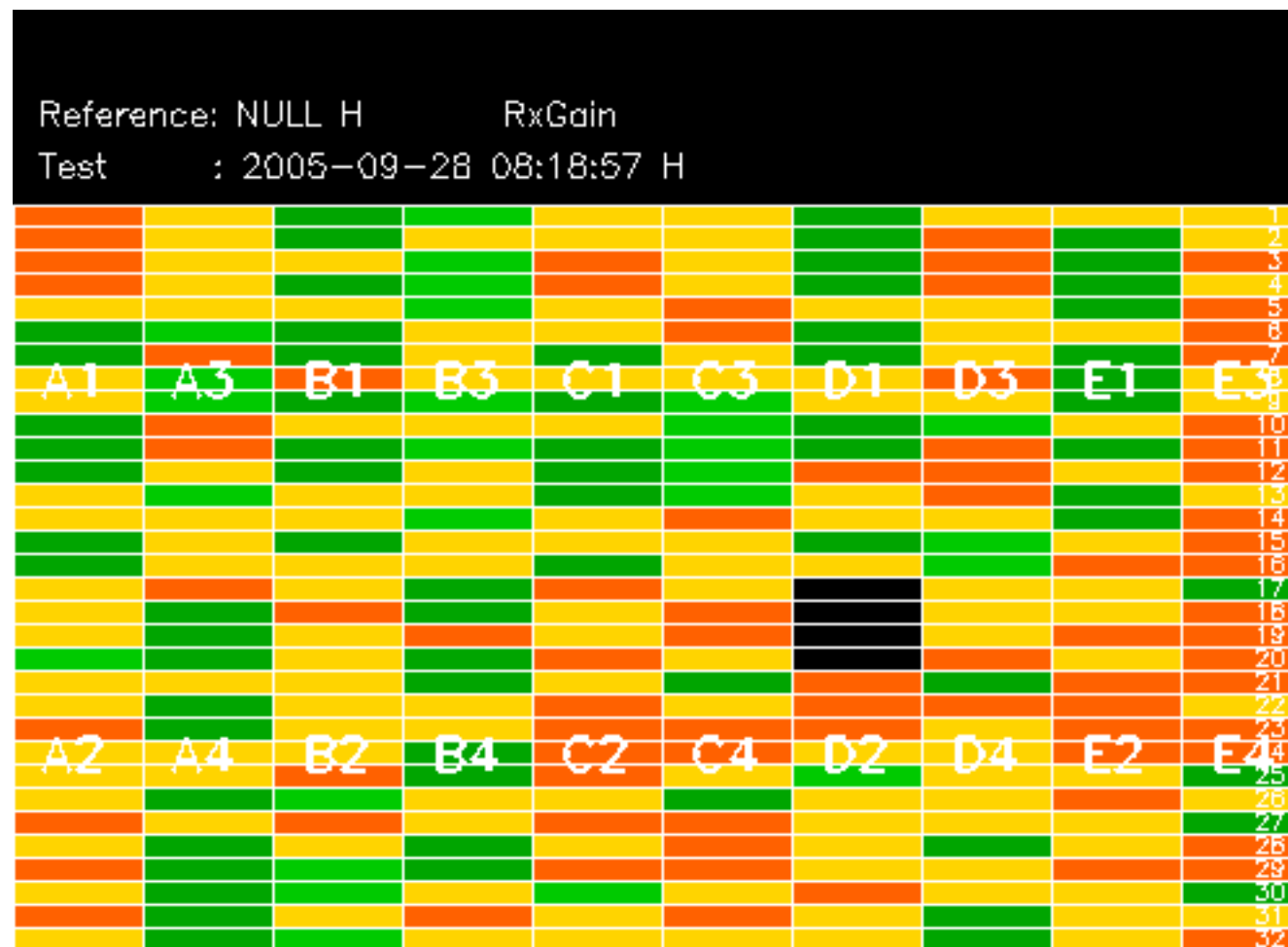


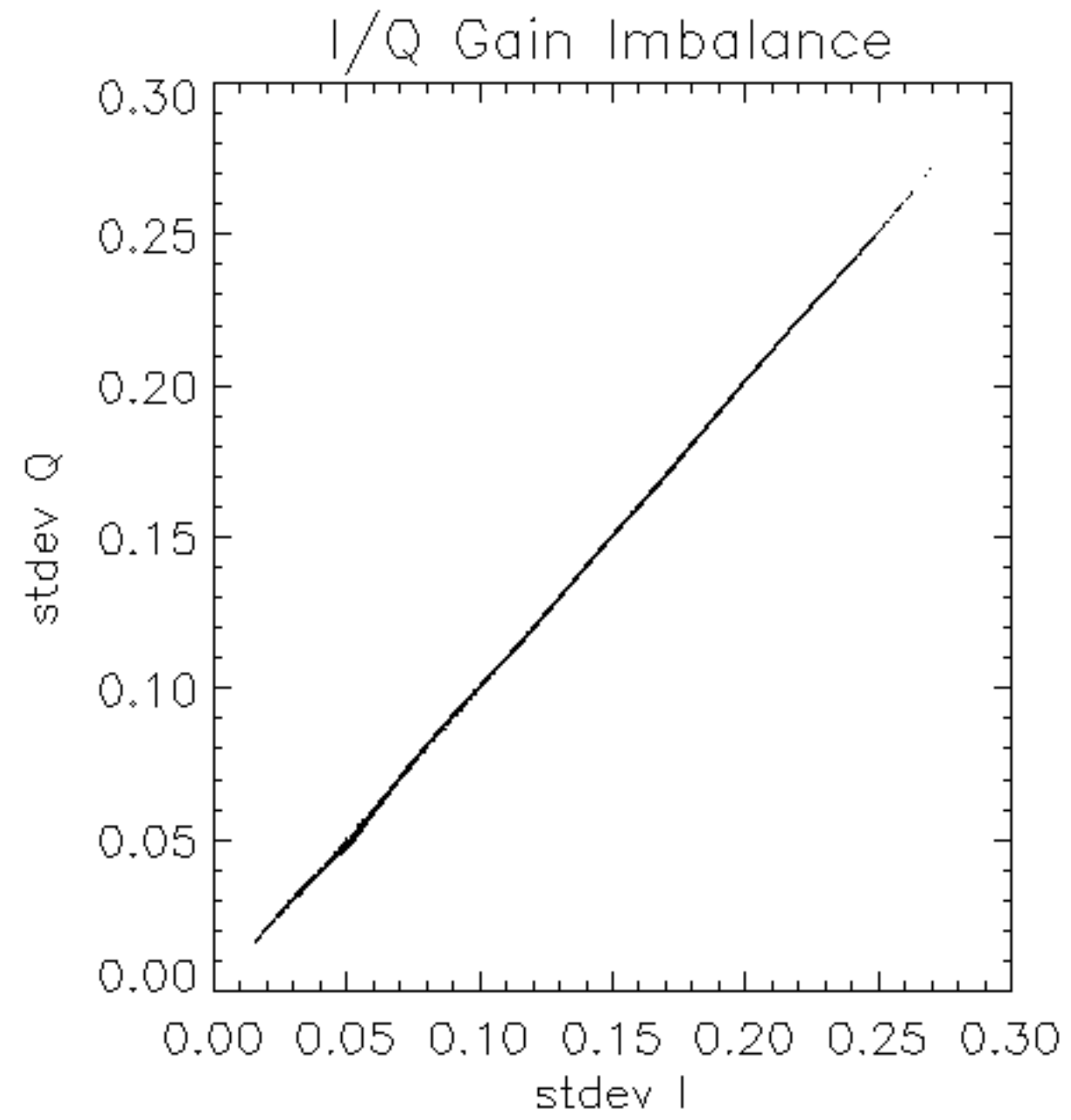
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -34.397954 Hz

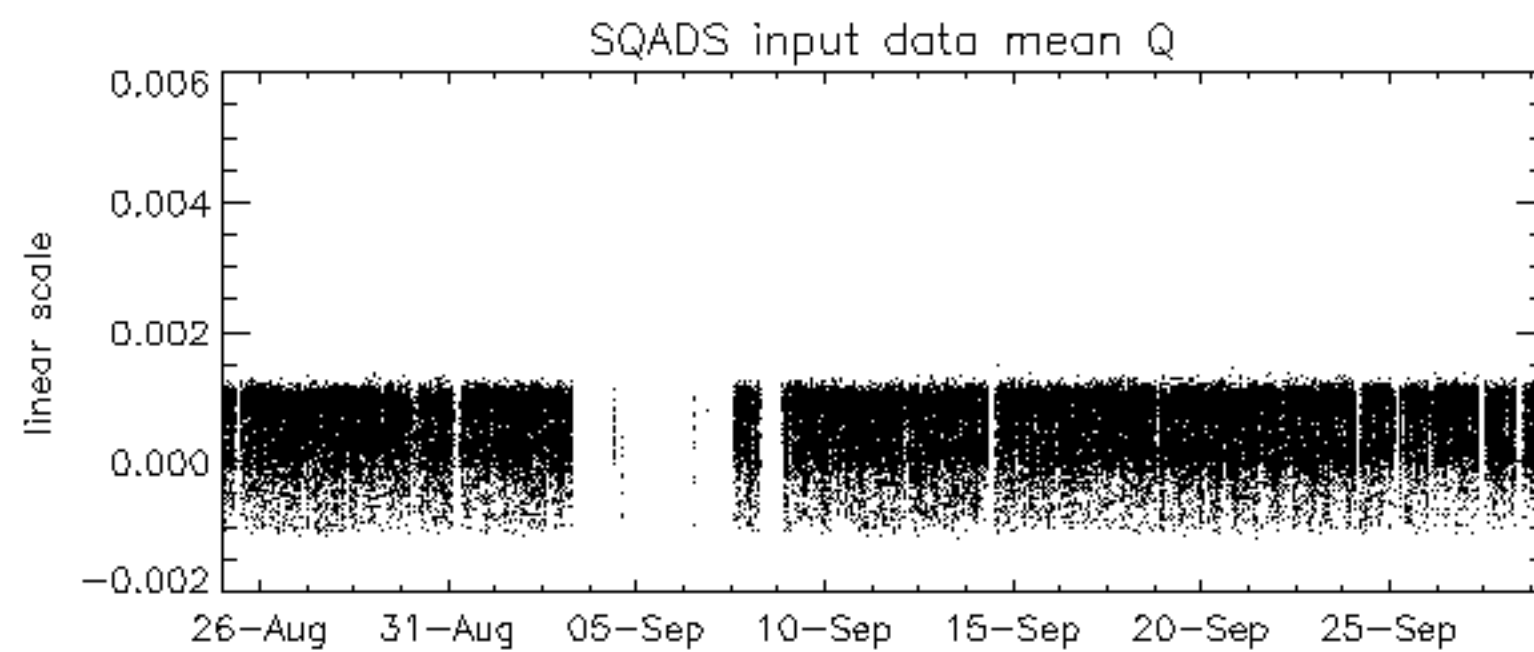
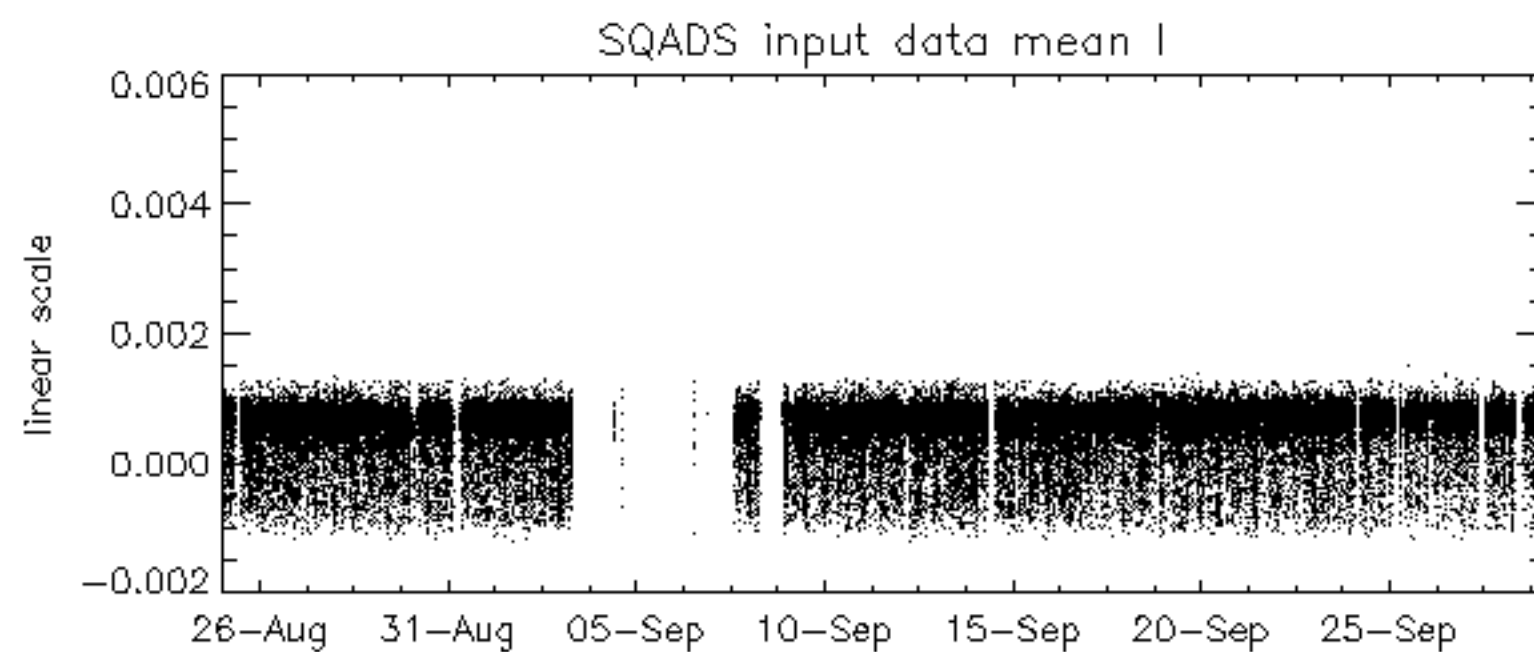
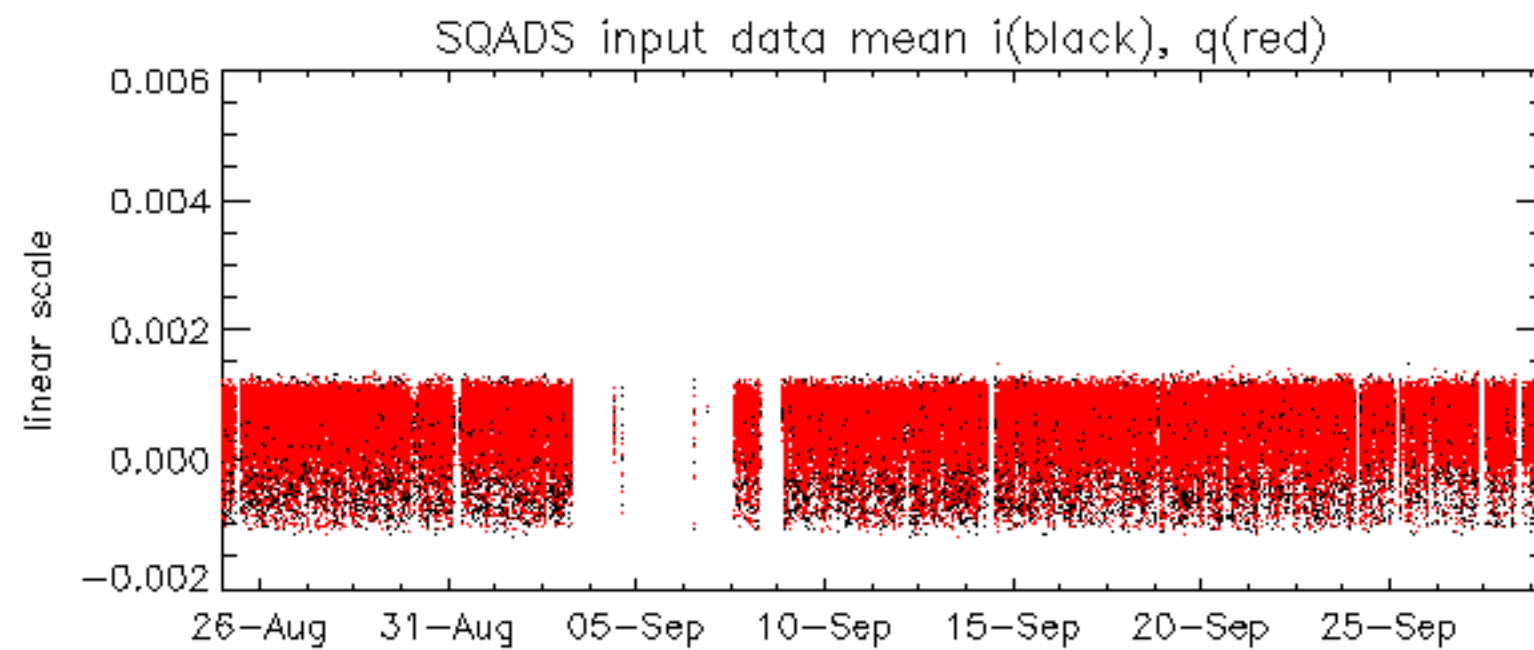


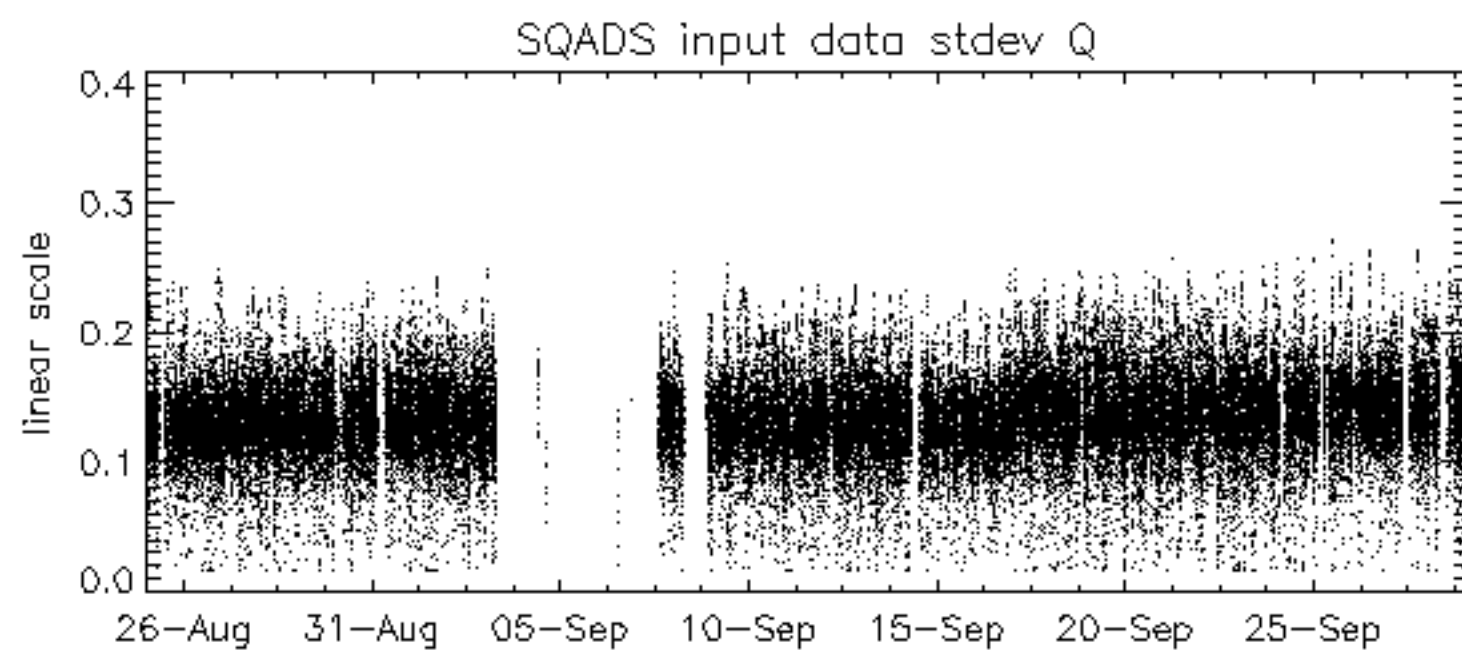
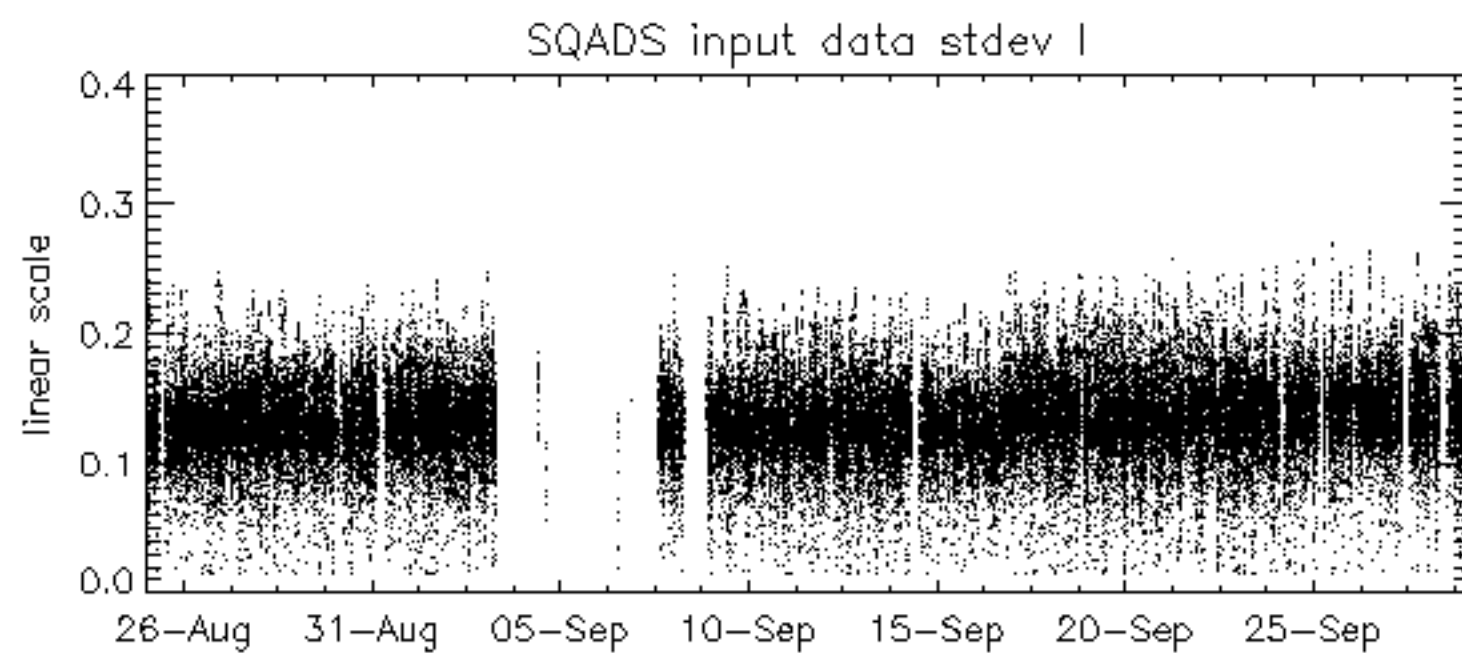
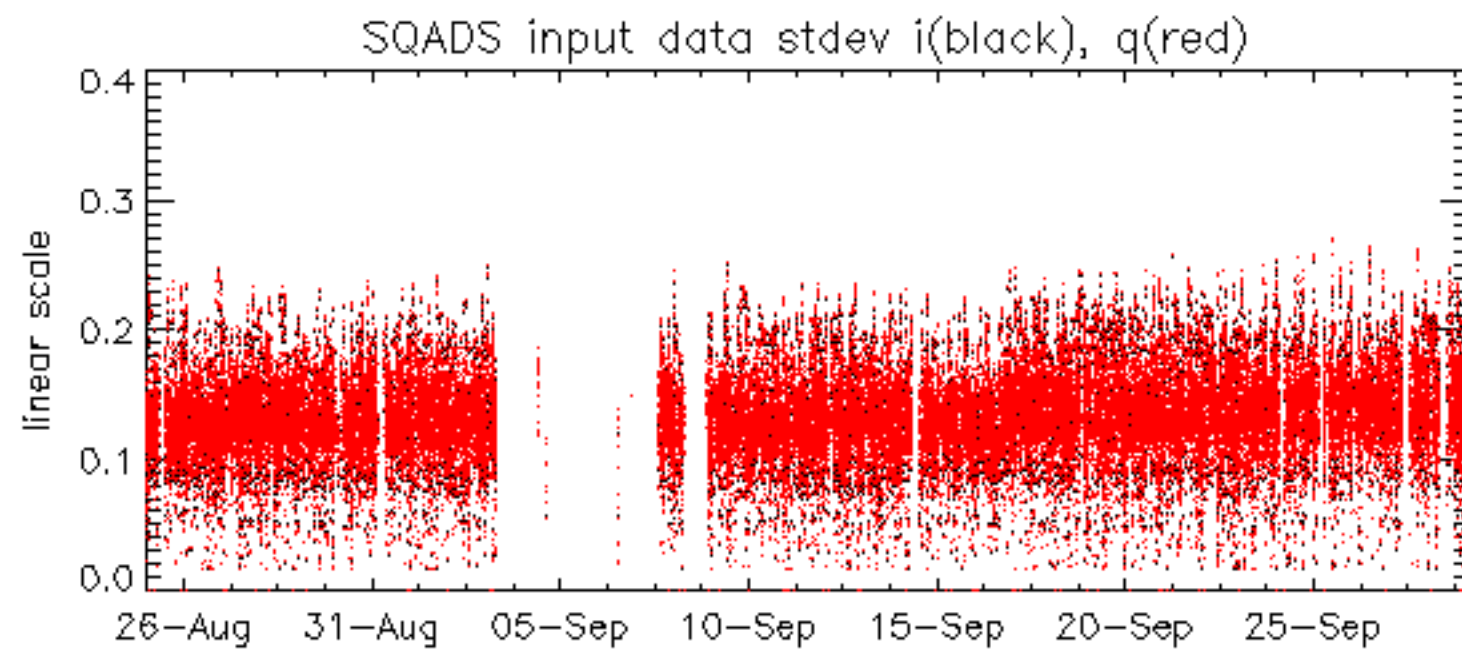
No anomalies observed on available MS products:

No anomalies observed.





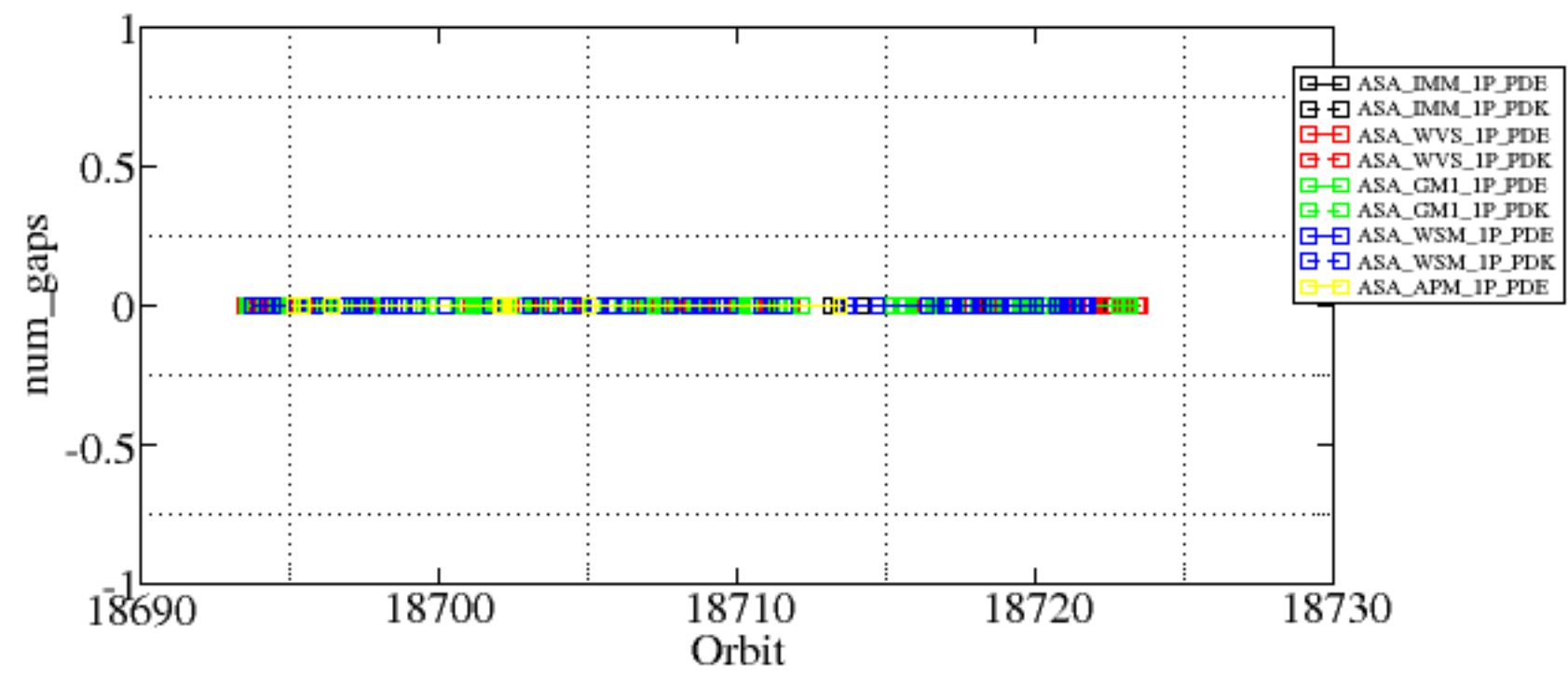


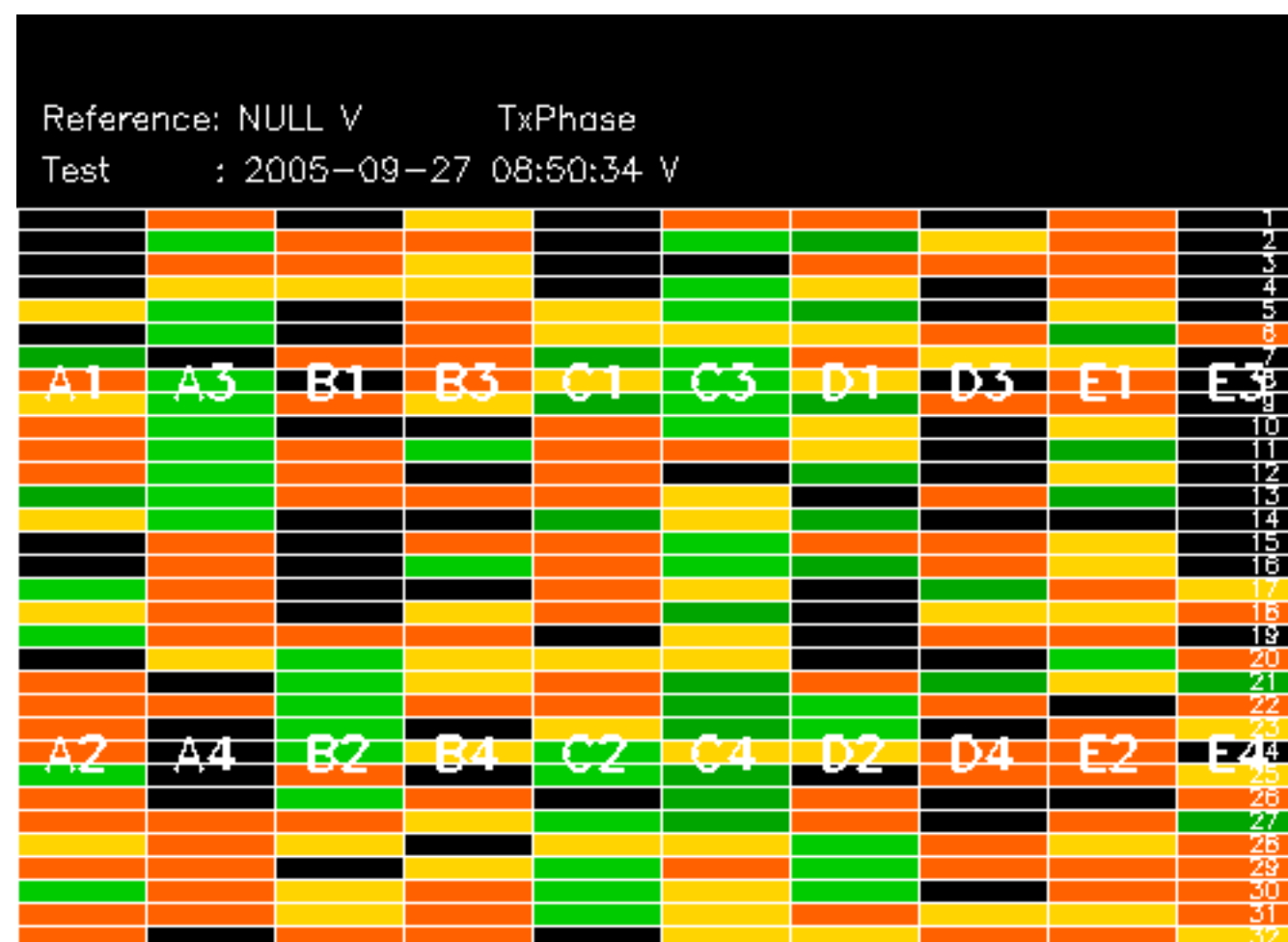


Summary of analysis for the last 3 days 2005092[789]

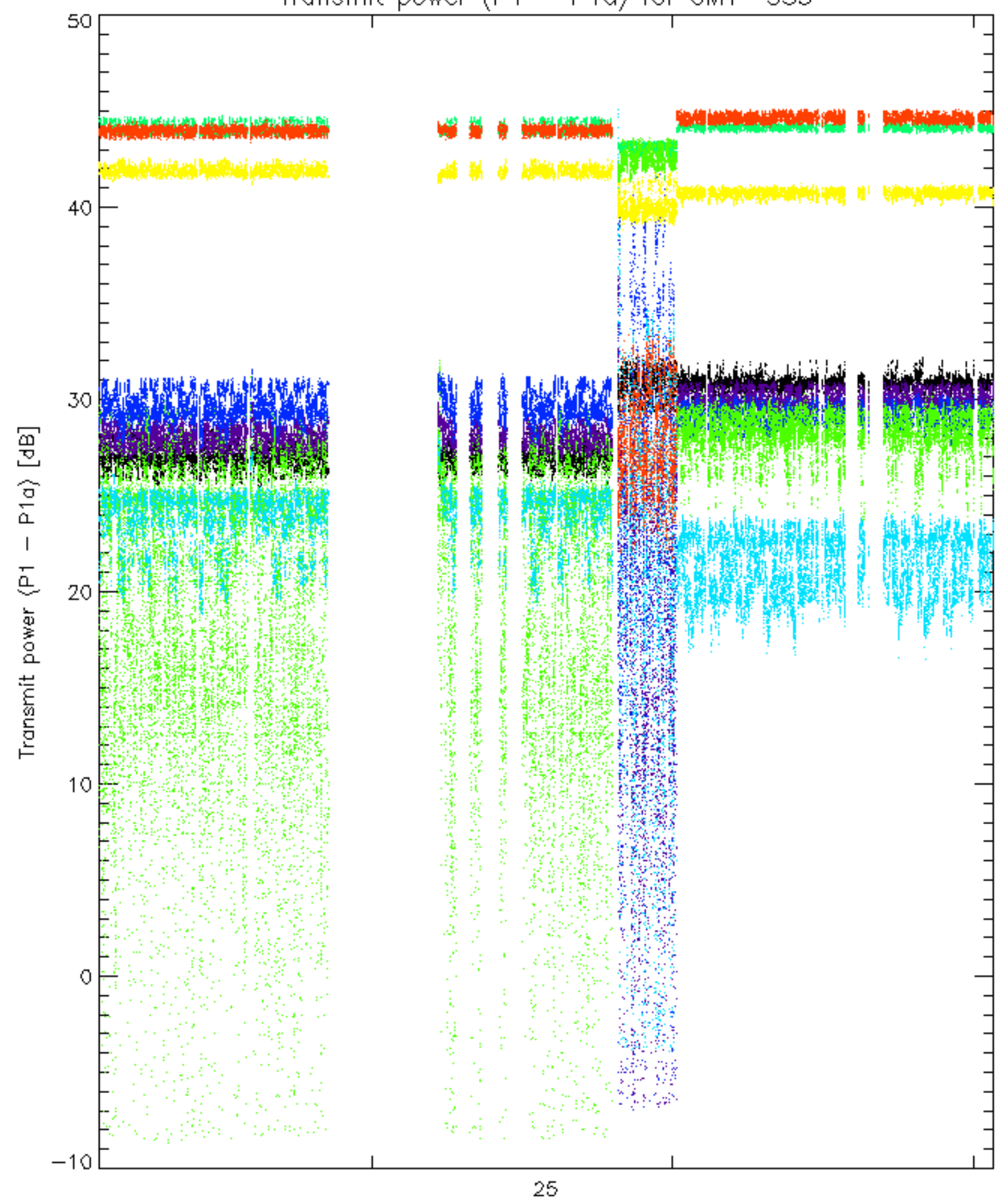
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20050927_201157_00000522041_00114_18705_6811.N1	0	20
ASA_IMM_1PNPDK20050927_075833_00000682041_00107_18698_4860.N1	0	111
ASA_IMM_1PNPDK20050927_081402_00000212041_00107_18698_4855.N1	0	56
ASA_IMM_1PNPDK20050927_081423_00000162041_00107_18698_4910.N1	0	71
ASA_GM1_1PNPDK20050927_070836_000005792041_00106_18697_6635.N1	0	8
ASA_GM1_1PNPDK20050927_072000_000004532041_00106_18697_6640.N1	0	29
ASA_GM1_1PNPDK20050927_075957_000005012041_00107_18698_6639.N1	0	30
ASA_GM1_1PNPDK20050927_081001_000001262041_00107_18698_6643.N1	0	30
ASA_WSM_1PNPDE20050927_042619_000003042041_00105_18696_0855.N1	0	45
ASA_WSM_1PNPDE20050927_161253_00000852041_00112_18703_0924.N1	0	6
ASA_WSM_1PNPDK20050928_062907_000001402041_00120_18711_1053.N1	0	24
ASA_WSM_1PNPDK20050927_081451_00000672041_00107_18698_5170.N1	0	89
ASA_WSM_1PNPDK20050927_081659_00000552041_00107_18698_5171.N1	0	44
ASA_WSM_1PNPDK20050927_081855_00000552041_00107_18698_5172.N1	0	93

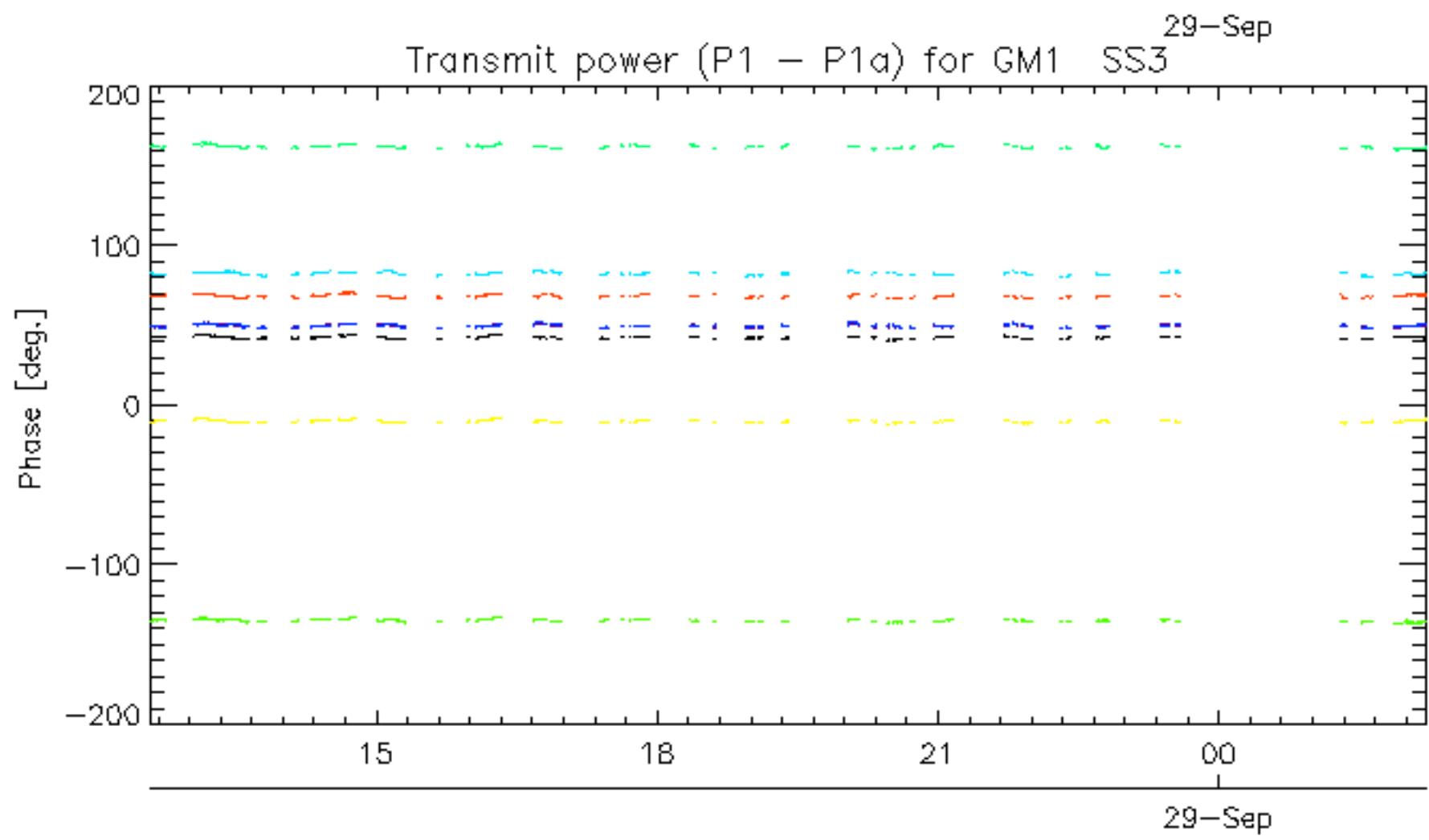
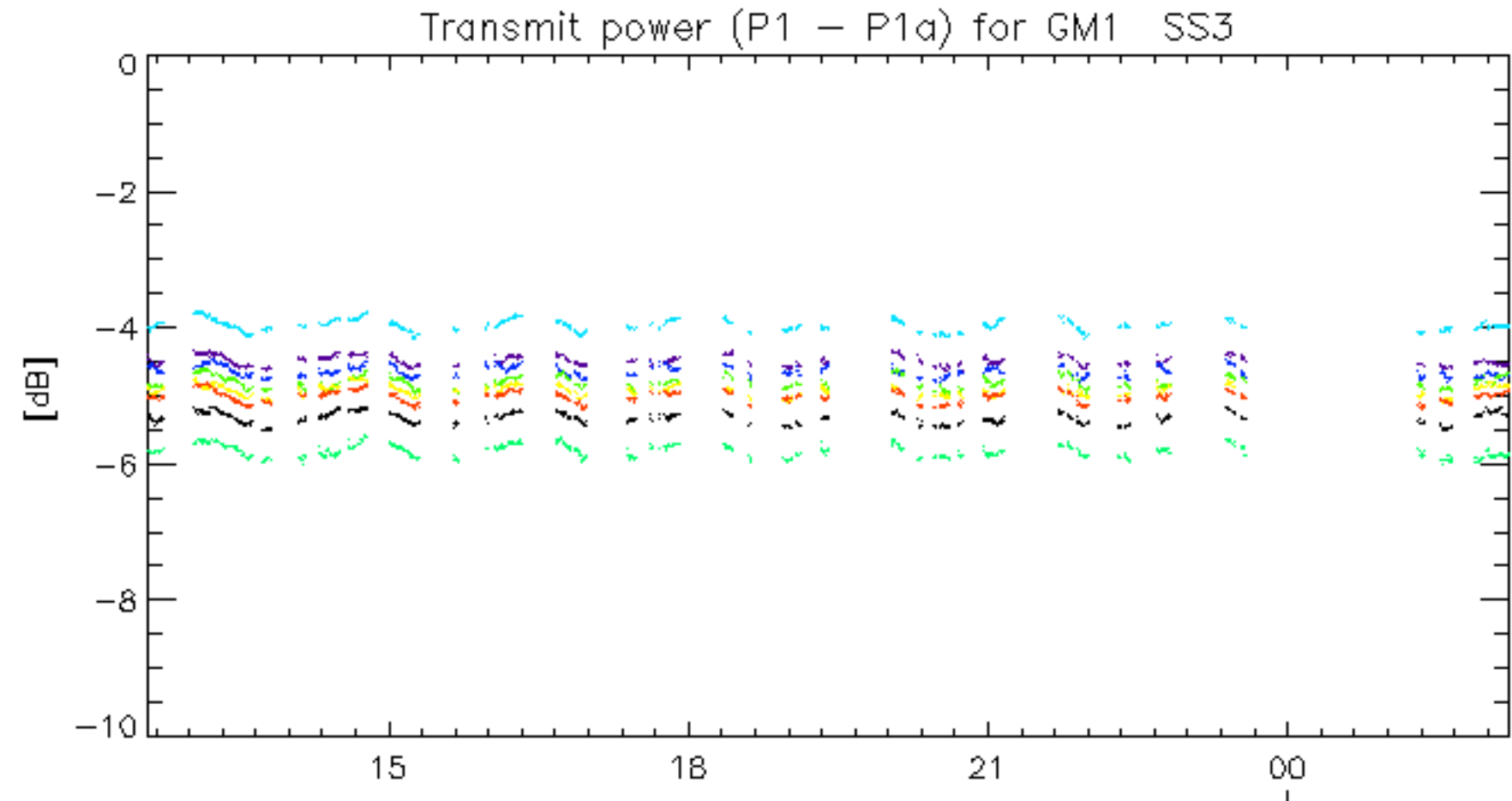




Transmit power (P1 - P1a) for GM1 SS3

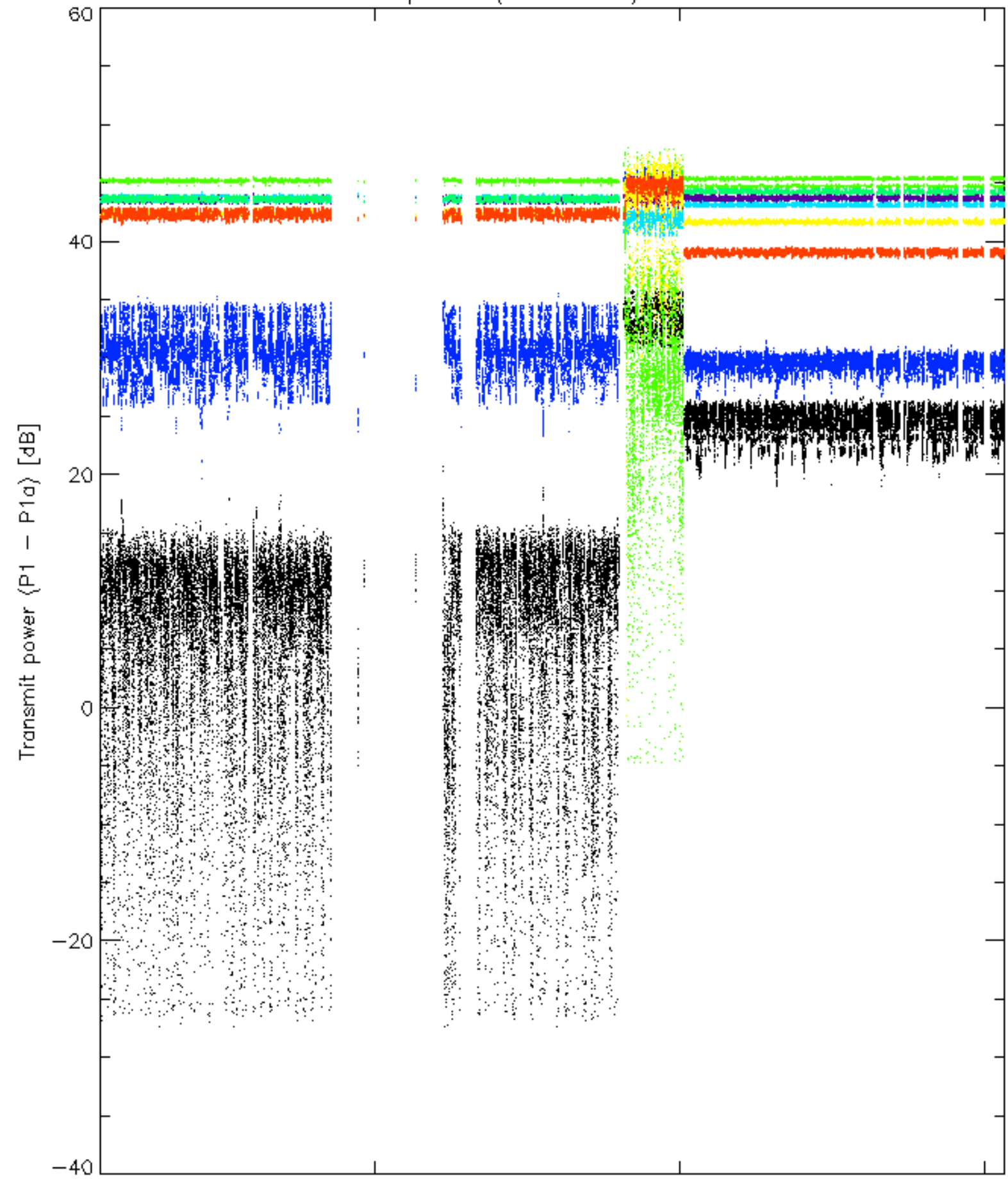


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



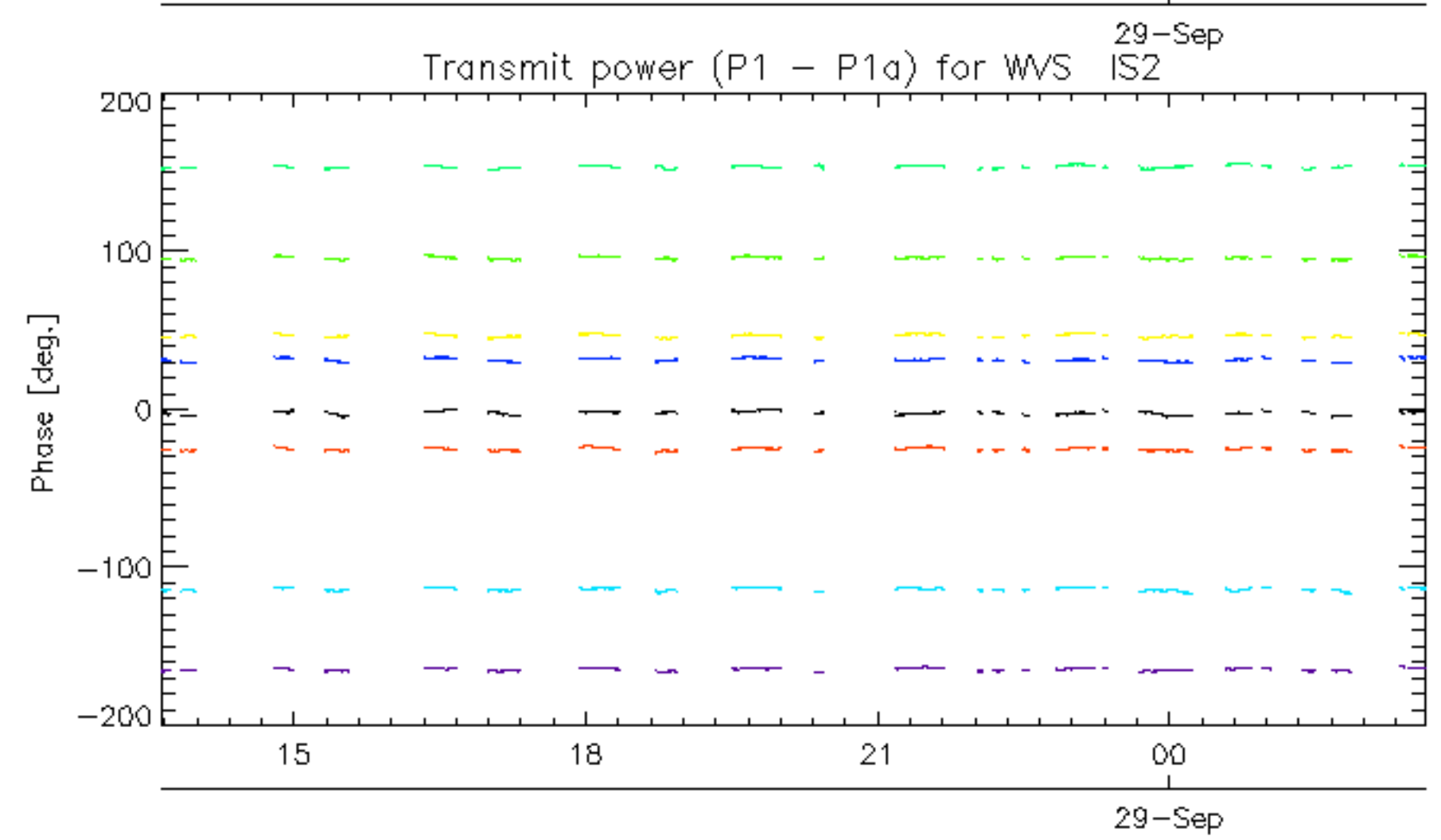
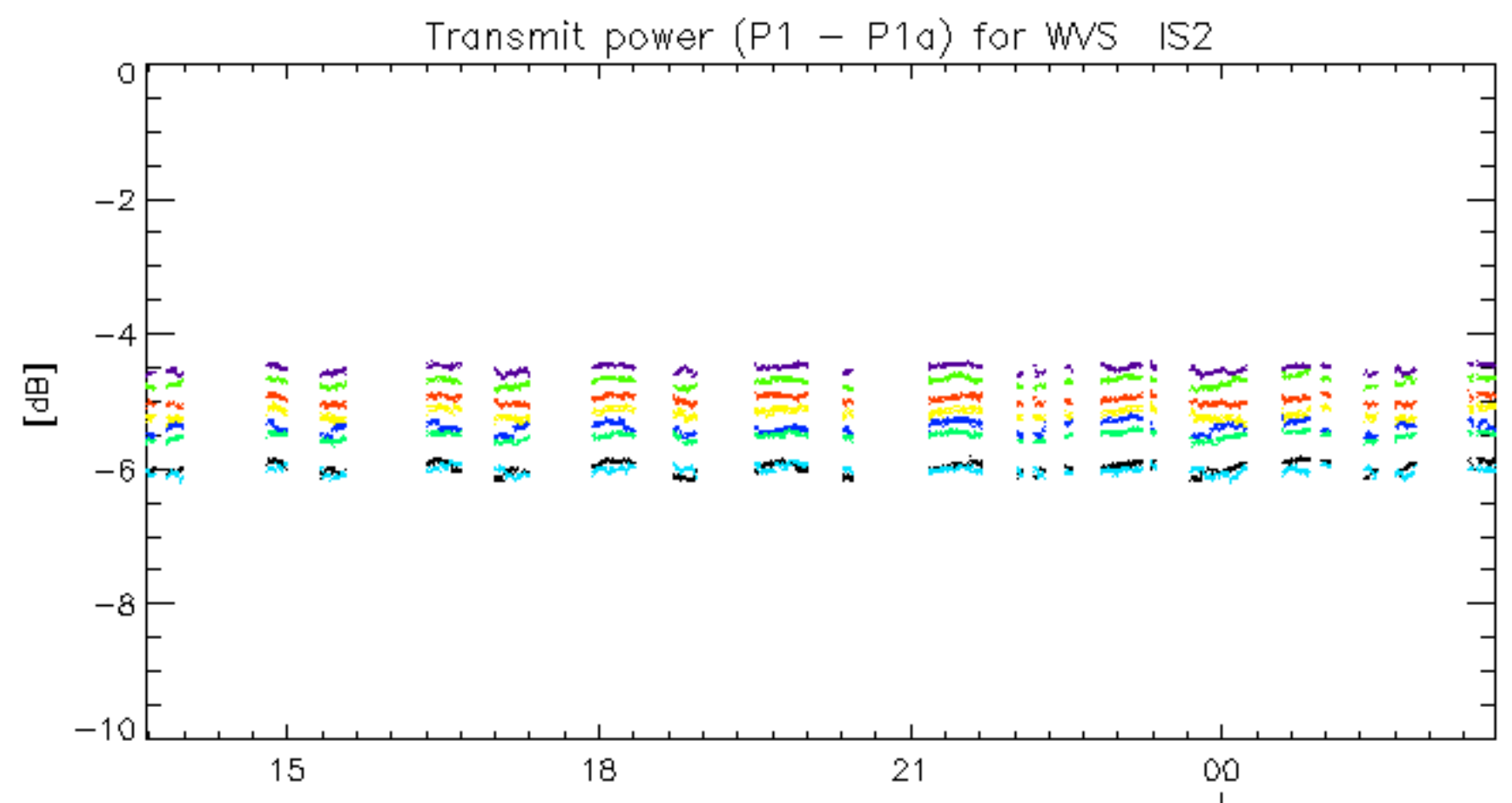
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



25

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



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

No unavailabilities during the reported period.