

PRELIMINARY REPORT OF 060901

last update on Fri Sep 1 16:39:27 GMT 2006

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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 2006-08-31 00:00:00 to 2006-09-01 16:39:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	66	18	7	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	46	66	18	7	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	66	18	7	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	66	18	7	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	27	54	37	22	54
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	27	54	37	22	54
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	27	54	37	22	54
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	27	54	37	22	54

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	20060831 100807
H	20060830 071833

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
<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	-3.941973	0.009908	0.004469
7	P1	-3.077159	0.051460	0.111757
11	P1	-4.083034	0.064325	0.086240
15	P1	-6.200571	0.094571	0.047525
19	P1	-3.468887	0.009241	-0.080111
22	P1	-4.562561	0.024640	0.013458
26	P1	-3.928667	0.018997	-0.031400
30	P1	-5.760617	0.025197	0.013832
3	P1	-16.548540	0.262993	-0.085430
7	P1	-16.852182	0.642979	0.546180
11	P1	-16.832996	0.305976	0.174894
15	P1	-12.964058	0.150285	0.120836
19	P1	-14.523658	0.052129	-0.089098
22	P1	-15.835011	0.552876	0.390558
26	P1	-15.171642	0.206086	-0.140417
30	P1	-17.008257	0.321565	0.175945

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.865818	0.084175	0.107301
7	P2	-21.859383	0.099404	-0.003091
11	P2	-15.751152	0.112773	0.034007
15	P2	-7.100304	0.097779	0.036333
19	P2	-9.114624	0.091444	0.017198
22	P2	-18.133928	0.086029	0.048637
26	P2	-16.397034	0.092783	0.005890
30	P2	-19.478052	0.090982	0.039599

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172727	0.003784	-0.003604
7	P3	-8.172727	0.003784	-0.003604
11	P3	-8.172727	0.003784	-0.003604
15	P3	-8.172727	0.003784	-0.003604
19	P3	-8.172727	0.003784	-0.003604
22	P3	-8.172727	0.003784	-0.003604
26	P3	-8.172770	0.003783	-0.003586
30	P3	-8.172770	0.003783	-0.003586

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	-3.832832	0.021312	-0.018720
7	P1	-2.496508	0.282207	0.250558
11	P1	-2.897427	0.141266	0.049778
15	P1	-3.655697	0.145889	-0.002888
19	P1	-3.430205	0.013324	-0.018295
22	P1	-5.082486	0.034160	-0.004323
26	P1	-5.871020	0.024646	-0.011515
30	P1	-5.185534	0.037688	0.035882
3	P1	-11.628826	0.067407	-0.013133
7	P1	-9.918722	0.187777	0.113847
11	P1	-10.300646	0.083914	-0.081509
15	P1	-10.822555	0.176038	-0.161092
19	P1	-15.534211	0.087778	0.003734
22	P1	-20.867241	1.732849	0.328447
26	P1	-16.083870	0.411643	0.354390
30	P1	-17.977190	0.722280	-0.016572

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.462576	0.082384	0.128108
7	P2	-22.250046	0.197552	0.160468
11	P2	-10.941556	0.056274	0.145295
15	P2	-4.877528	0.042434	0.046989
19	P2	-6.855107	0.040556	0.029492
22	P2	-8.178018	0.062202	0.049134
26	P2	-24.168112	0.127141	0.019696
30	P2	-21.968119	0.077987	0.033548

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.014428	0.003729	-0.009350
7	P3	-8.014351	0.003733	-0.009234
11	P3	-8.014426	0.003734	-0.008750
15	P3	-8.014409	0.003734	-0.008714
19	P3	-8.014500	0.003750	-0.009193
22	P3	-8.014572	0.003722	-0.008922
26	P3	-8.014452	0.003723	-0.009323
30	P3	-8.014336	0.003732	-0.008843

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	0.000554352
	stdev	1.76127e-07
MEAN Q	mean	0.000532652
	stdev	2.14812e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136534
	stdev	0.00107764
STDEV Q	mean	0.136881
	stdev	0.00109412



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006083[011]

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_1PNPDE20060830_143313_000000372050_00425_23525_4947.N1	1	0
ASA_IMM_1PNPDE20060830_144000_000000802050_00426_23526_4951.N1	1	0
ASA_IMM_1PNPDE20060830_202033_000000372050_00429_23529_4959.N1	1	0
ASA_IMM_1PNPDE20060831_003434_000001152050_00431_23531_4974.N1	1	0
ASA_WSM_1PNPDE20060830_043525_000001832050_00420_23520_0077.N1	0	36
ASA_WSM_1PNPDE20060830_180020_000001462050_00428_23528_0191.N1	0	75
ASA_WSM_1PNPDE20060831_040156_000000862050_00434_23534_0306.N1	0	67
ASA_WSM_1PNPDE20060831_112606_000001462050_00438_23538_0359.N1	0	63



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

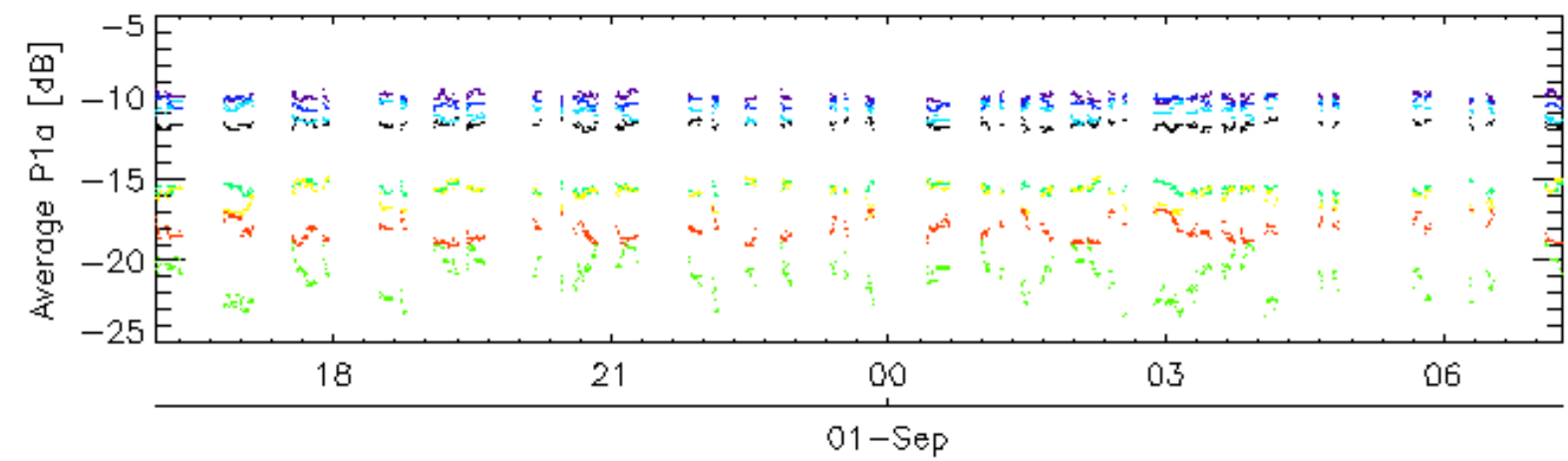
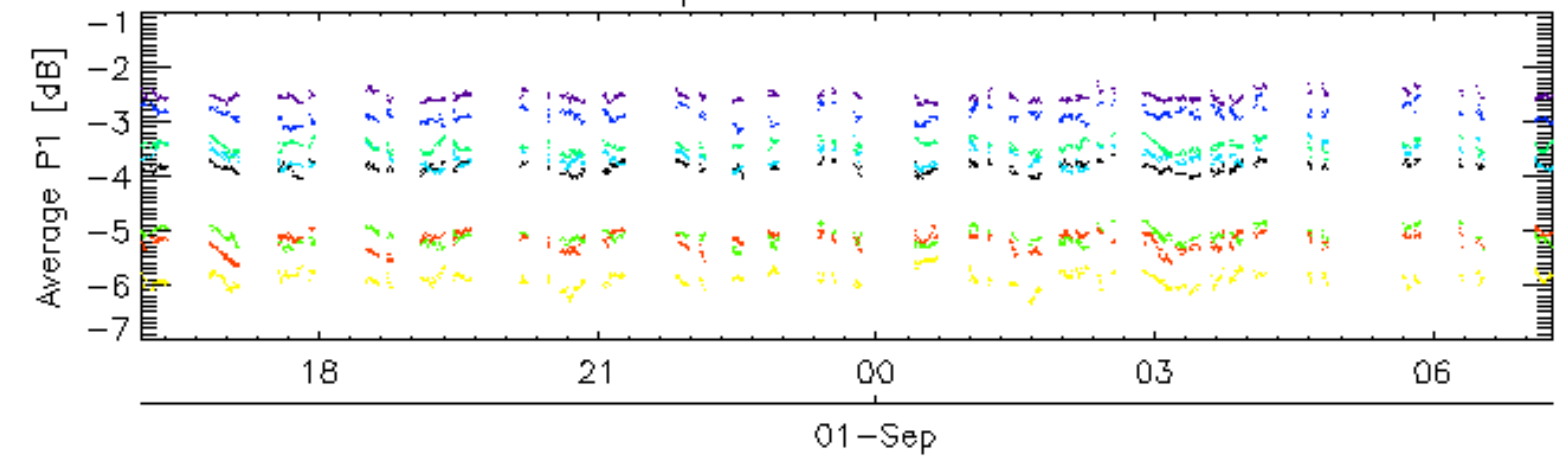
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

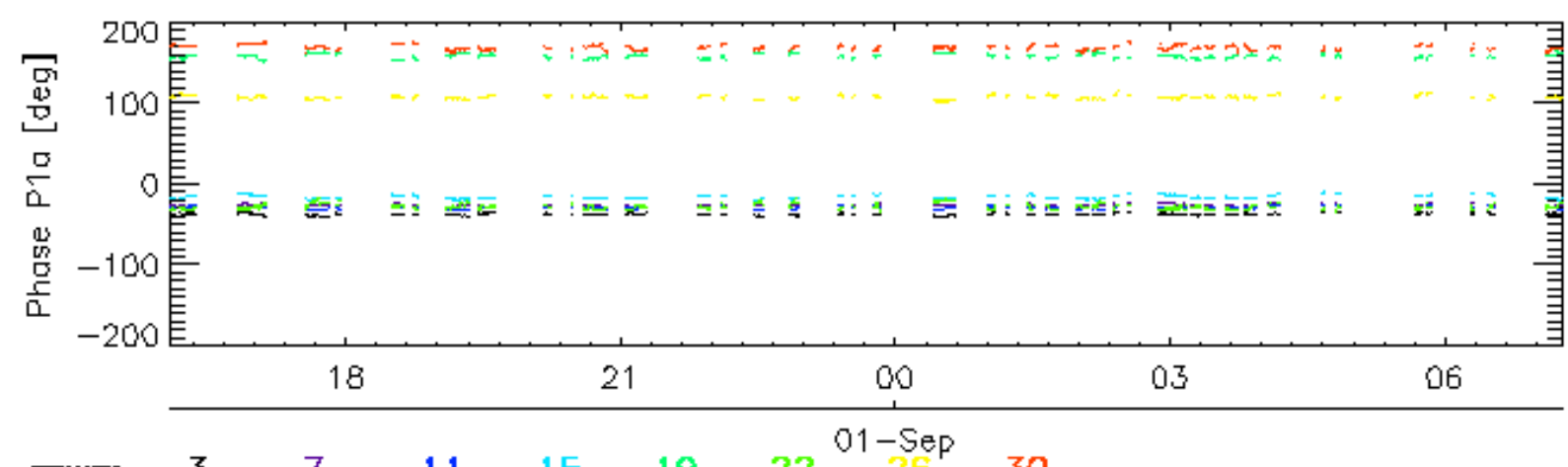
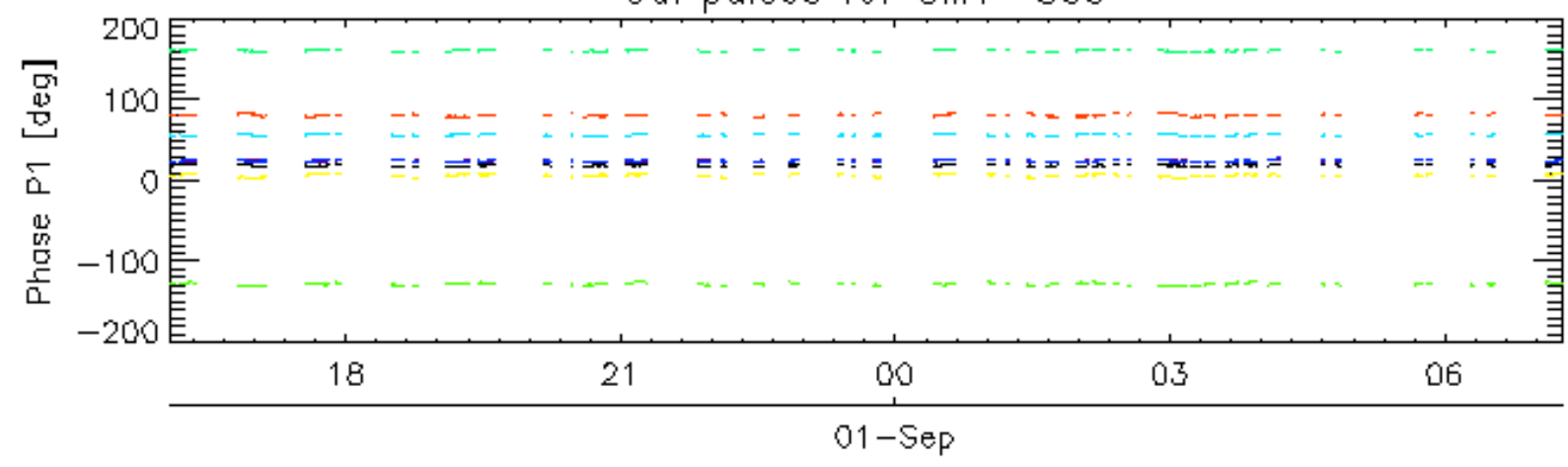
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

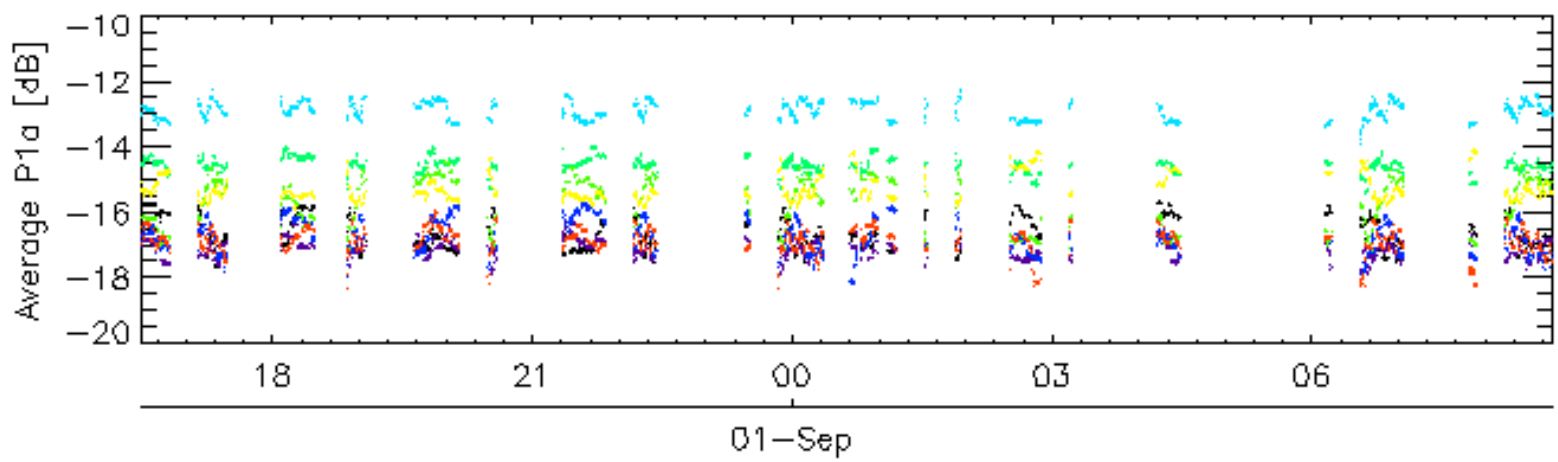
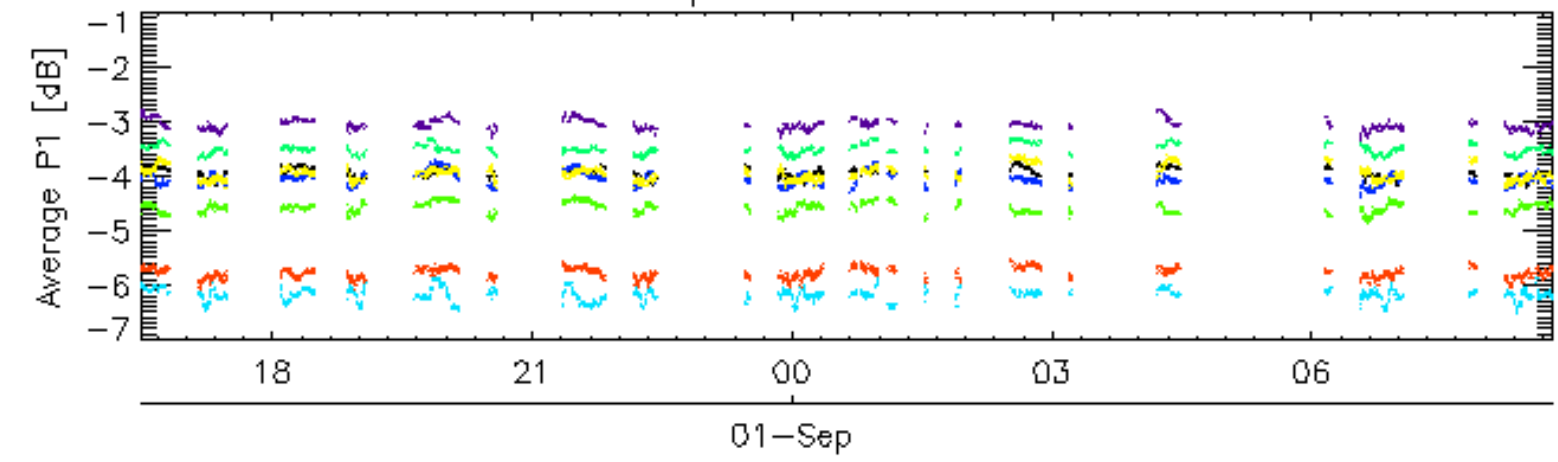


Cal pulses for GM1 SS3

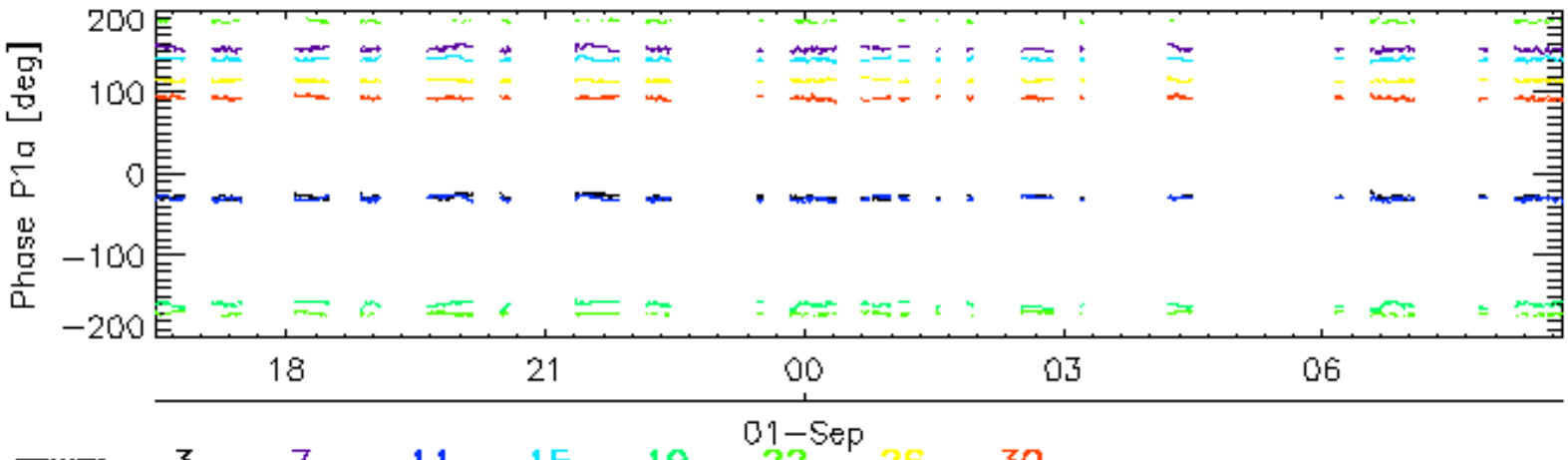
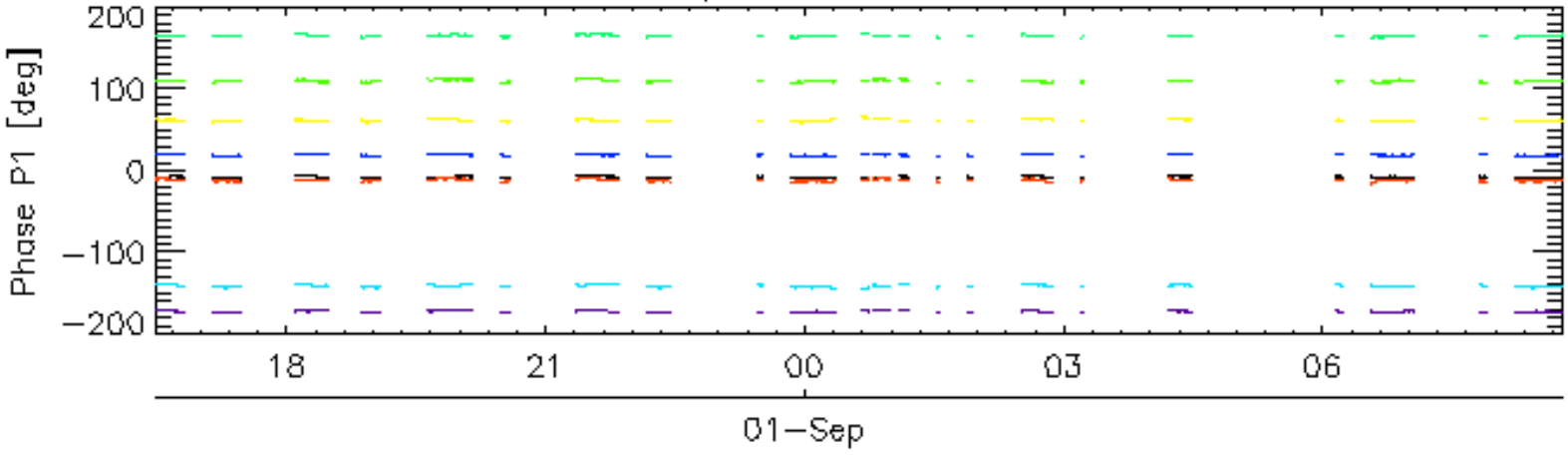


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

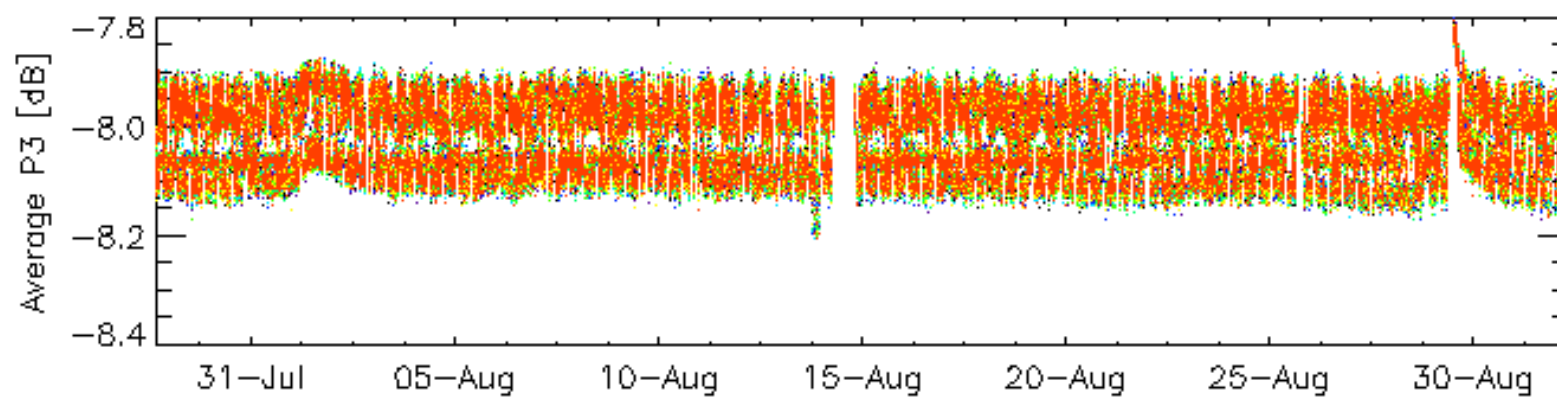
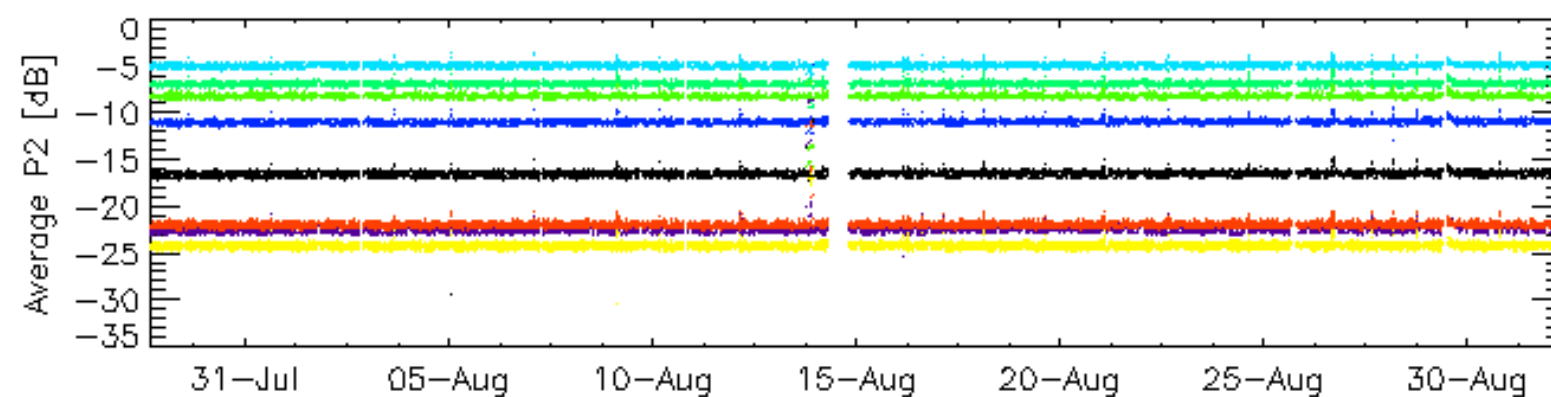
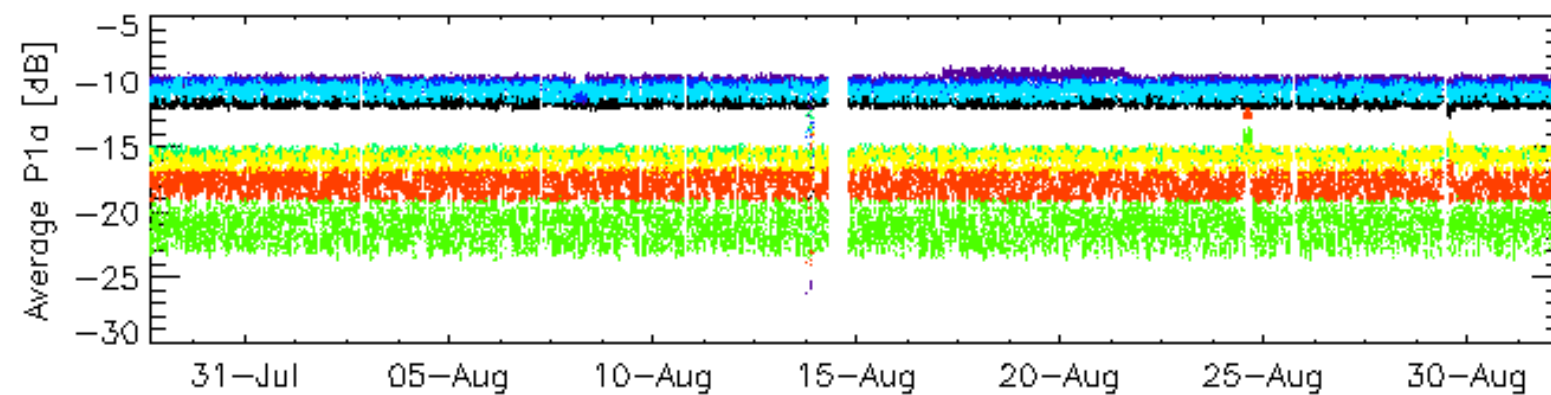
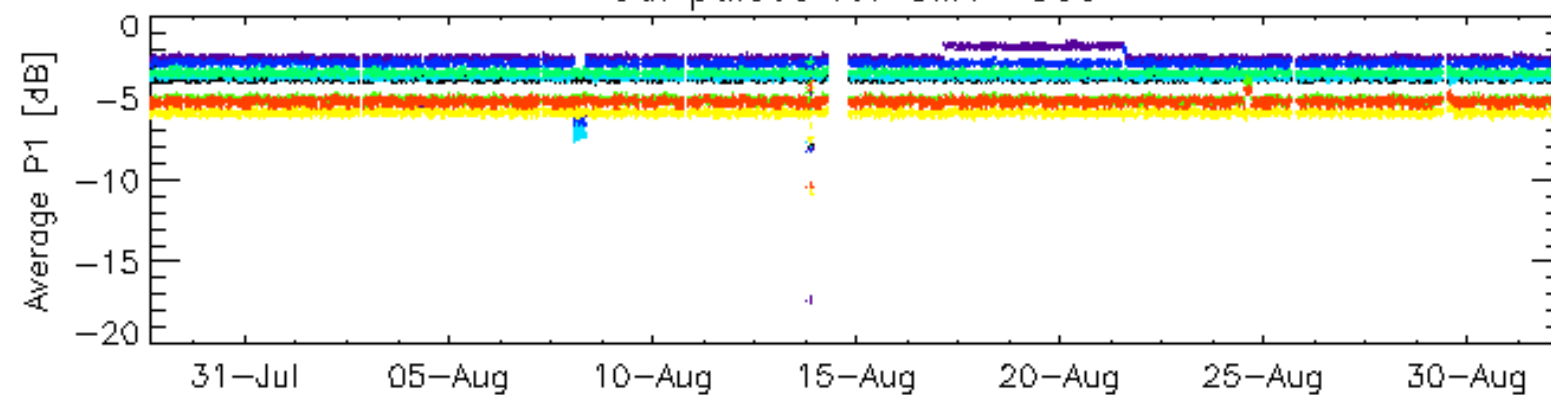


Cal pulses for WVS IS2



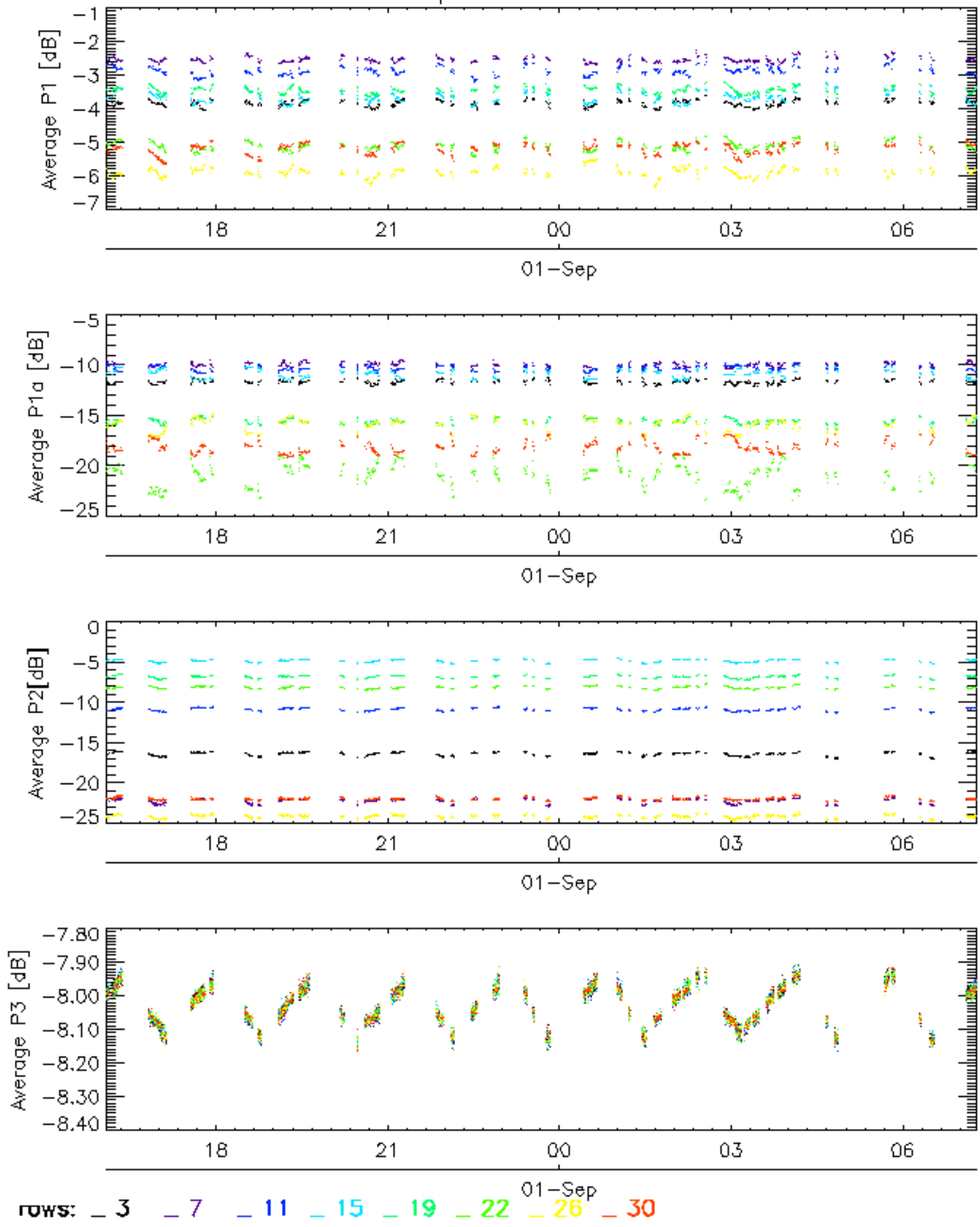
rows: 3 7 11 15 19 22 26 30

Cal pulses for GM1 SS3

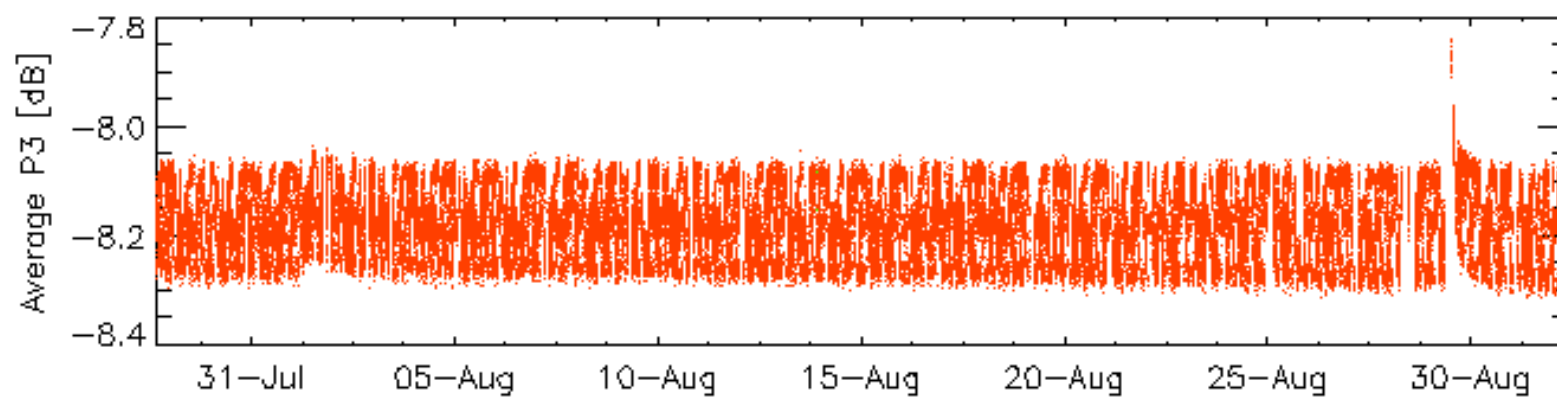
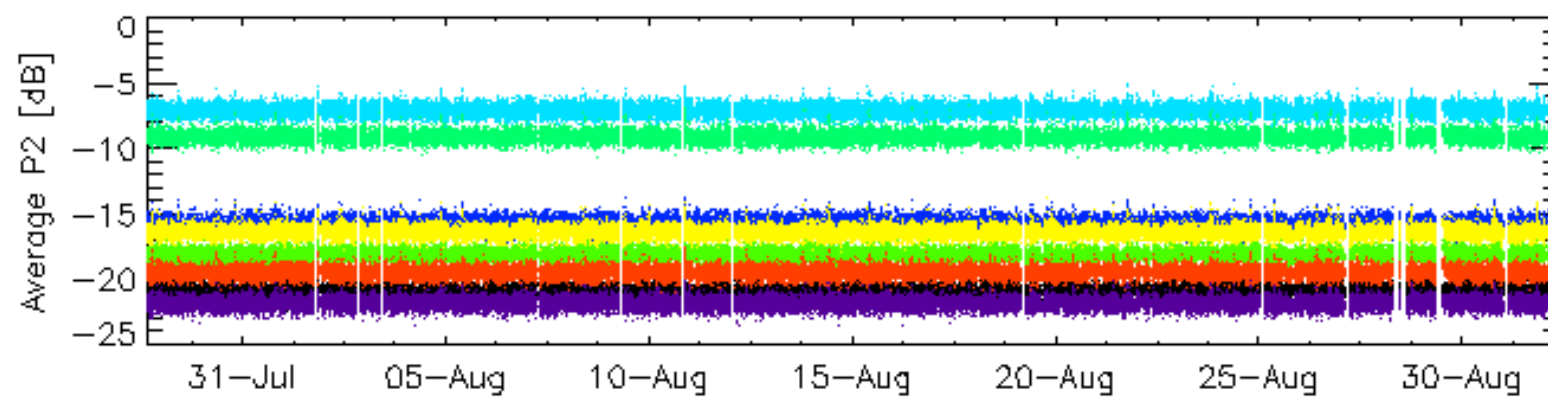
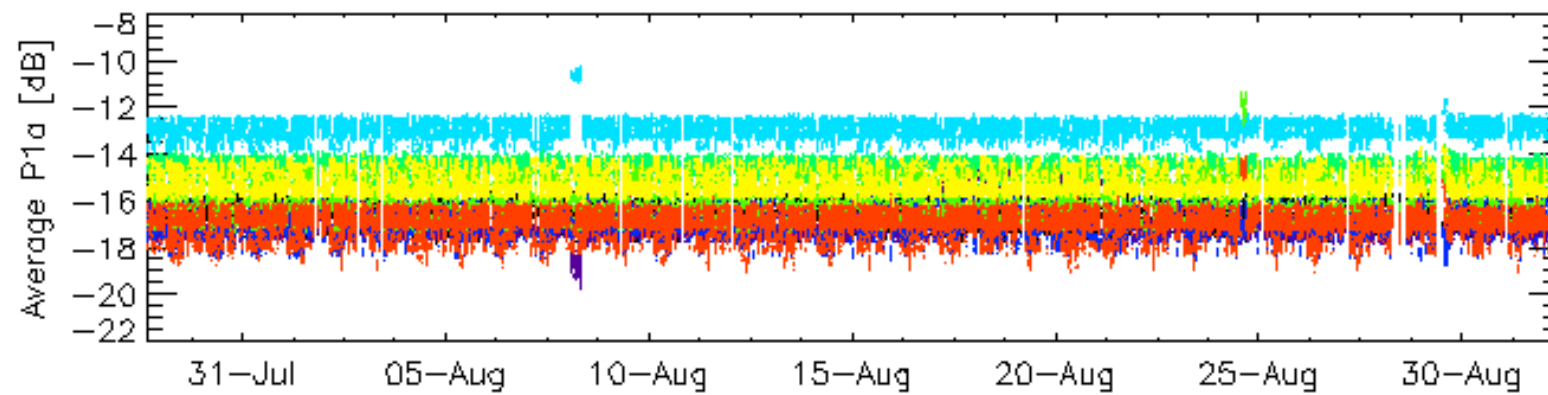
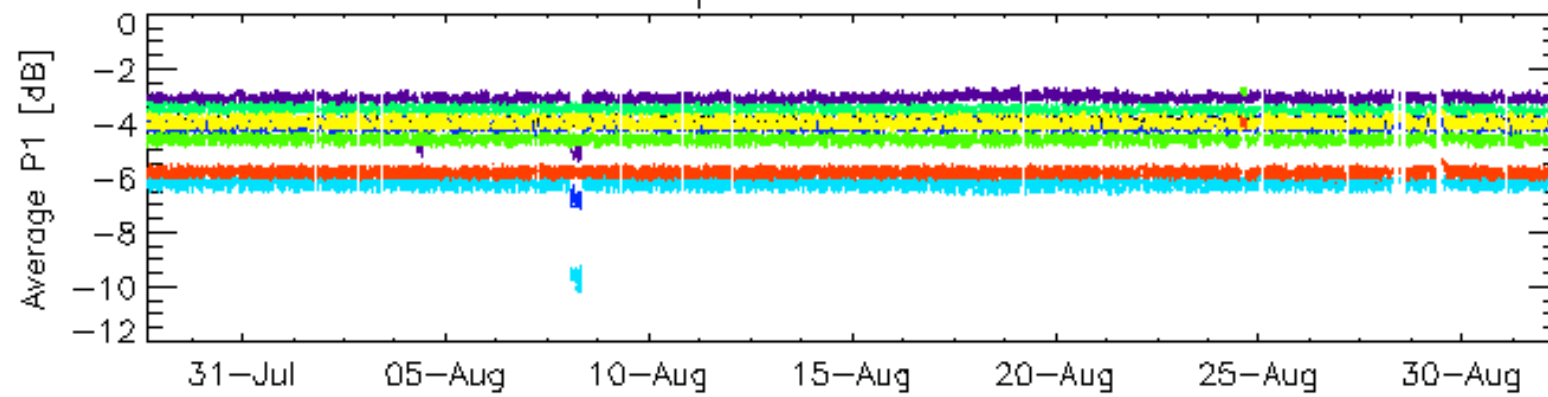


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

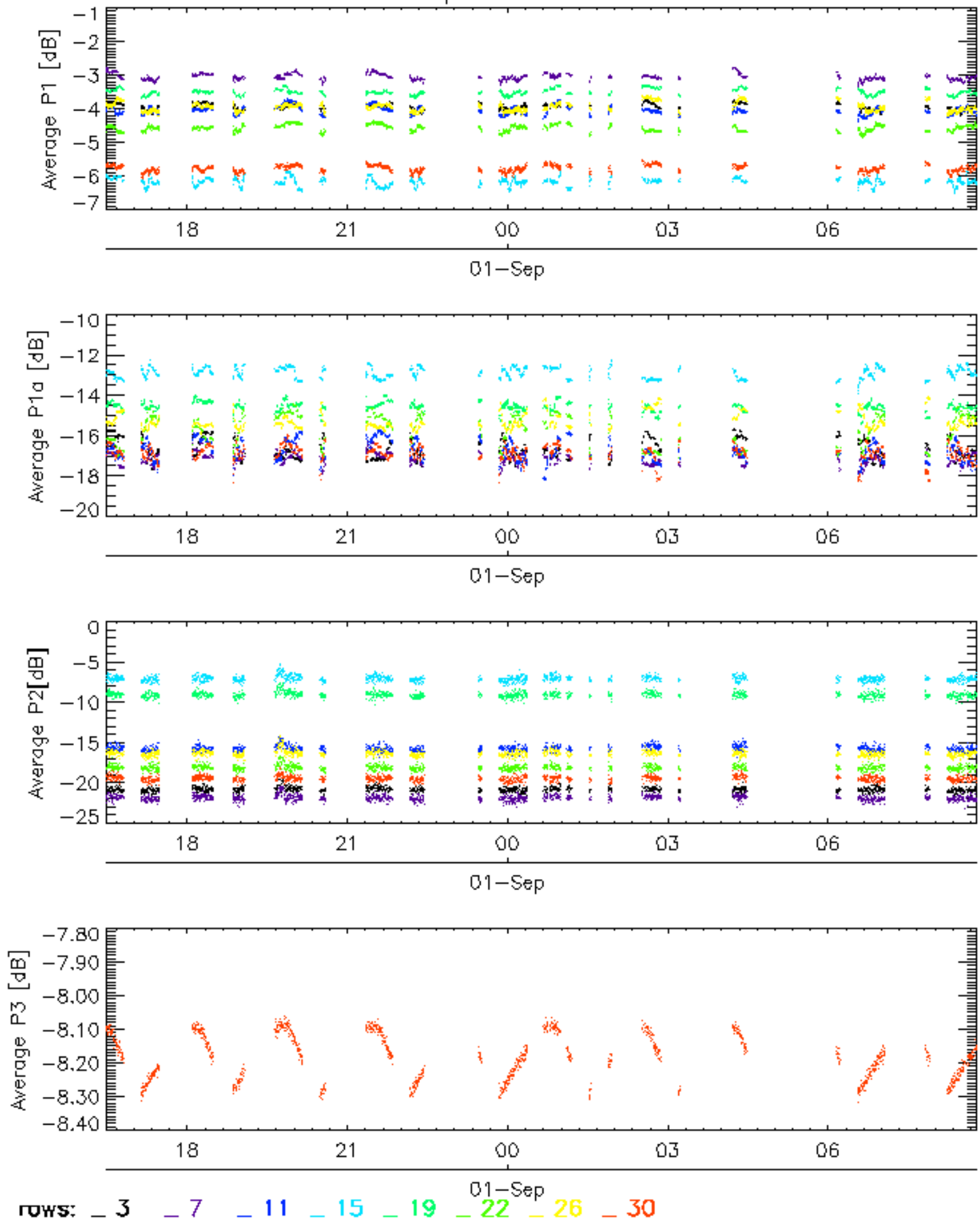


Cal pulses for WVS IS2

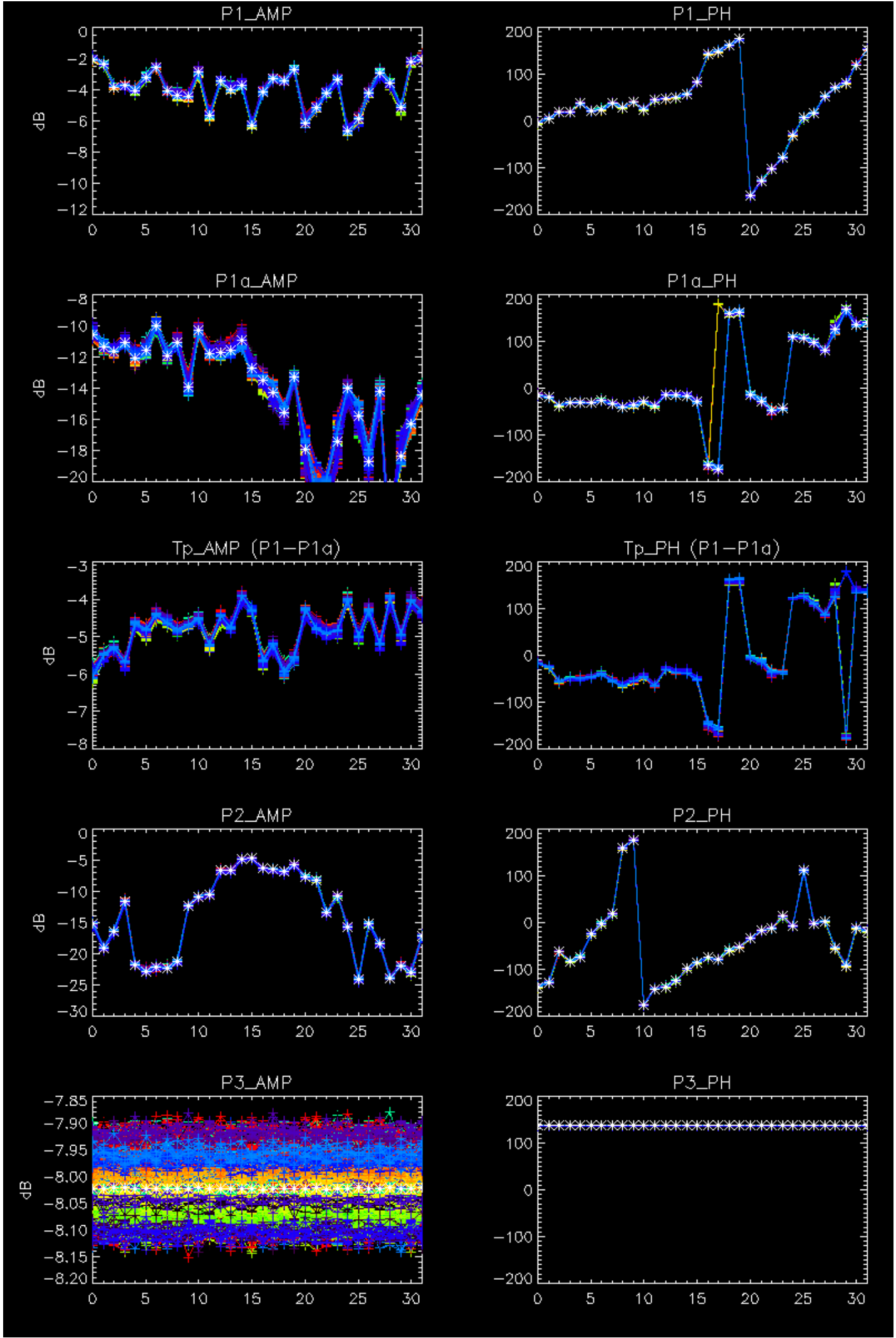


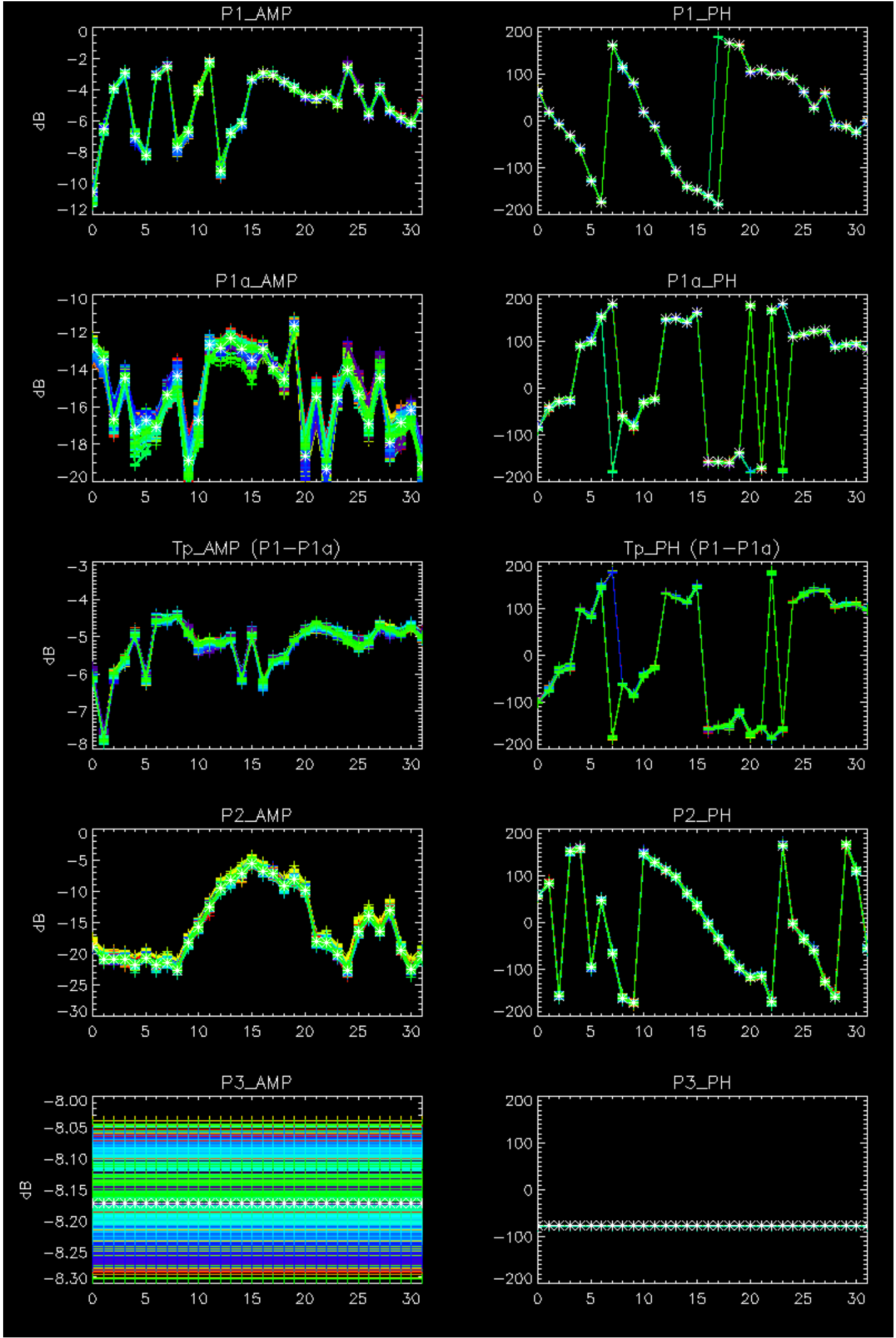
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



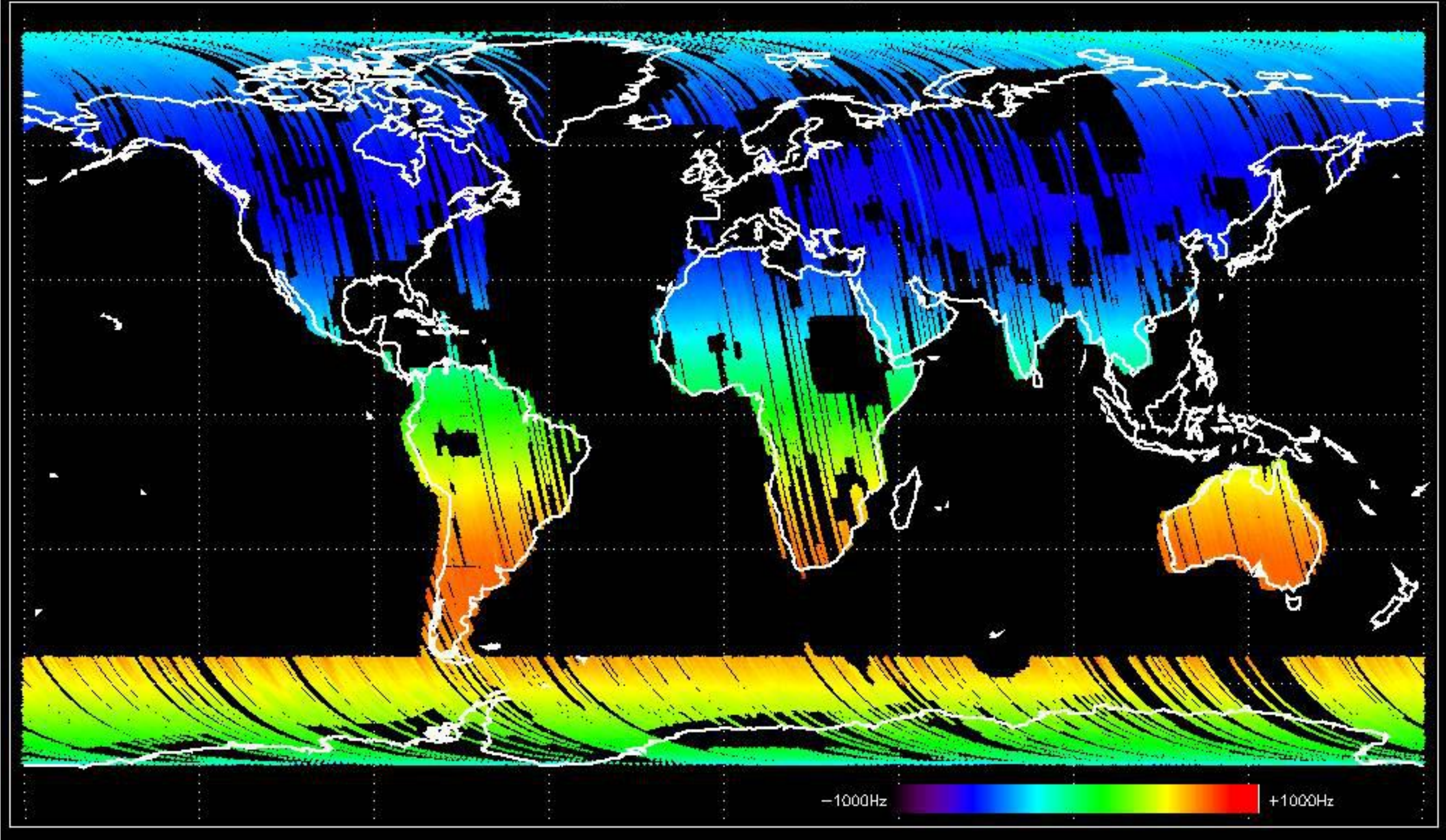
No anomalies observed.



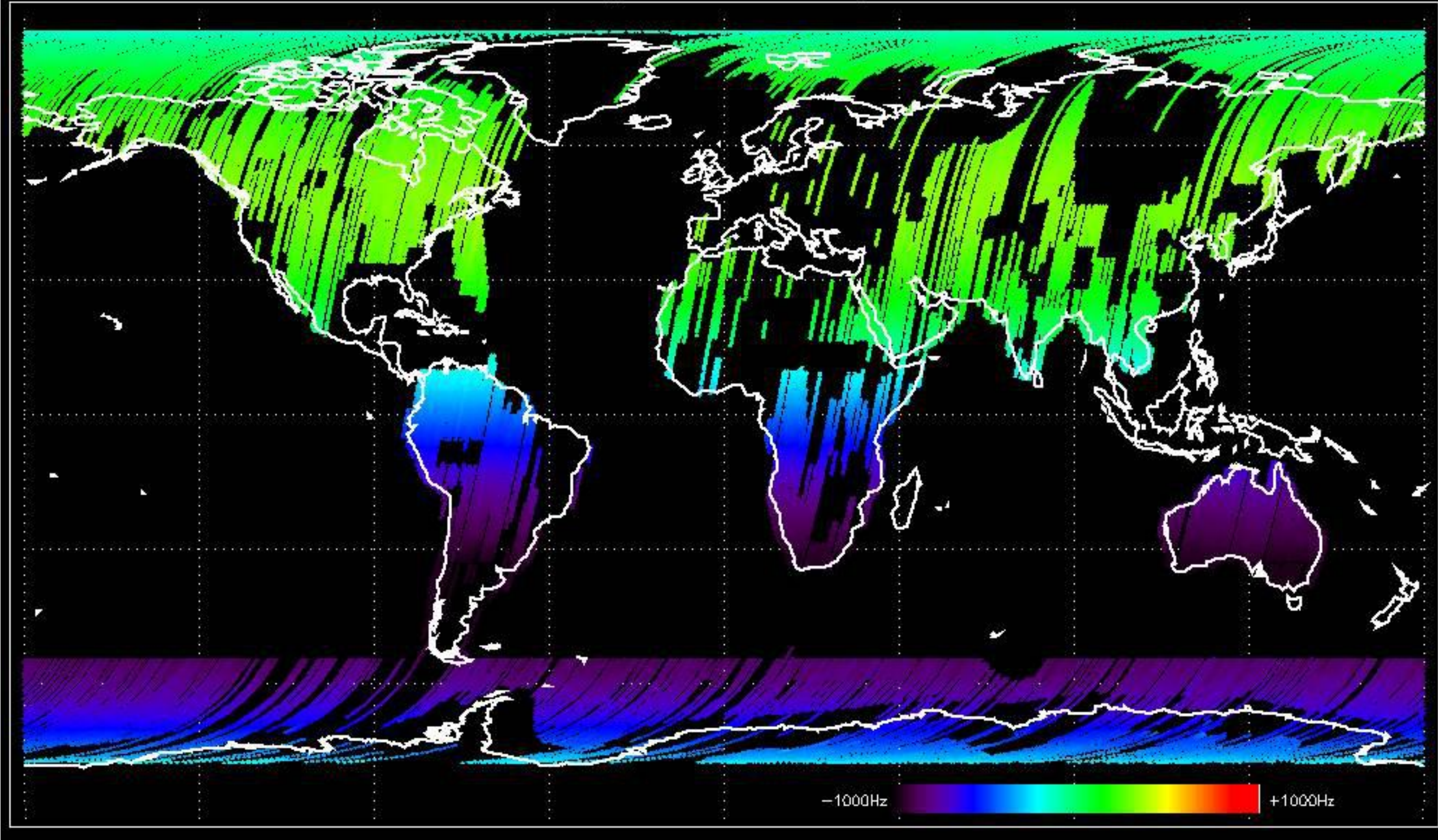


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

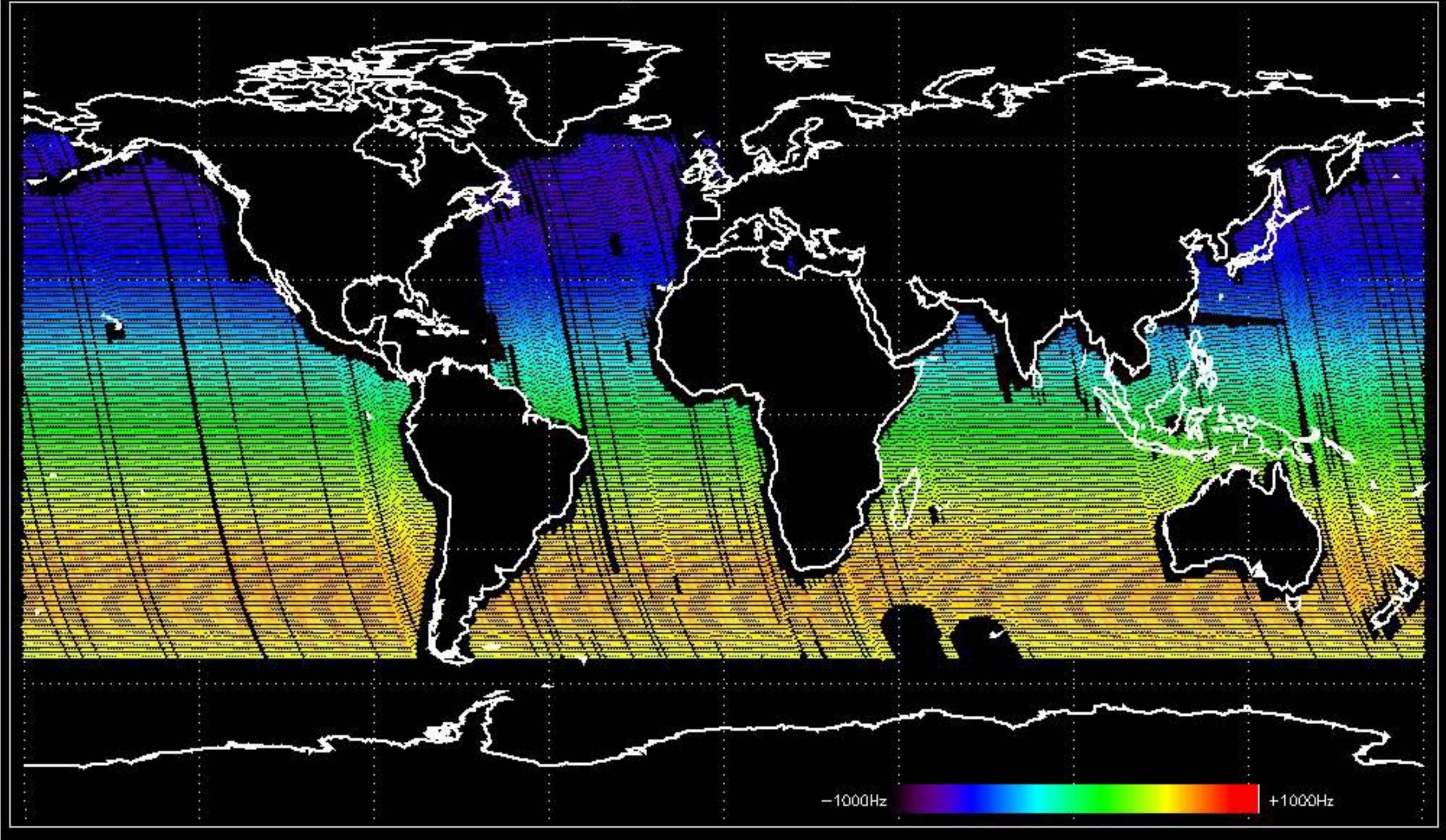
Doppler 'GM1' 'SS1' ascending



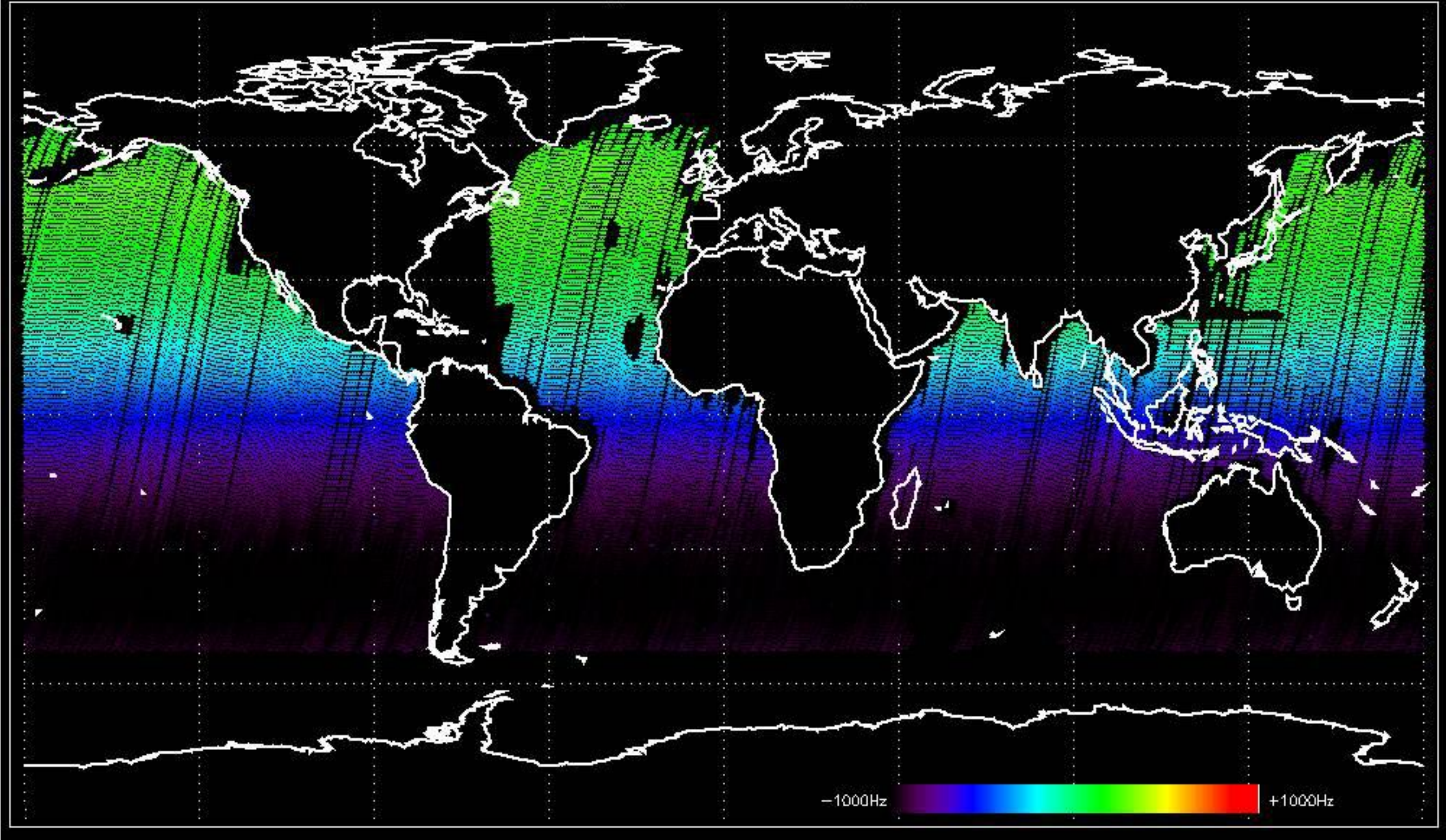
Doppler 'GM1' 'SS1' descending



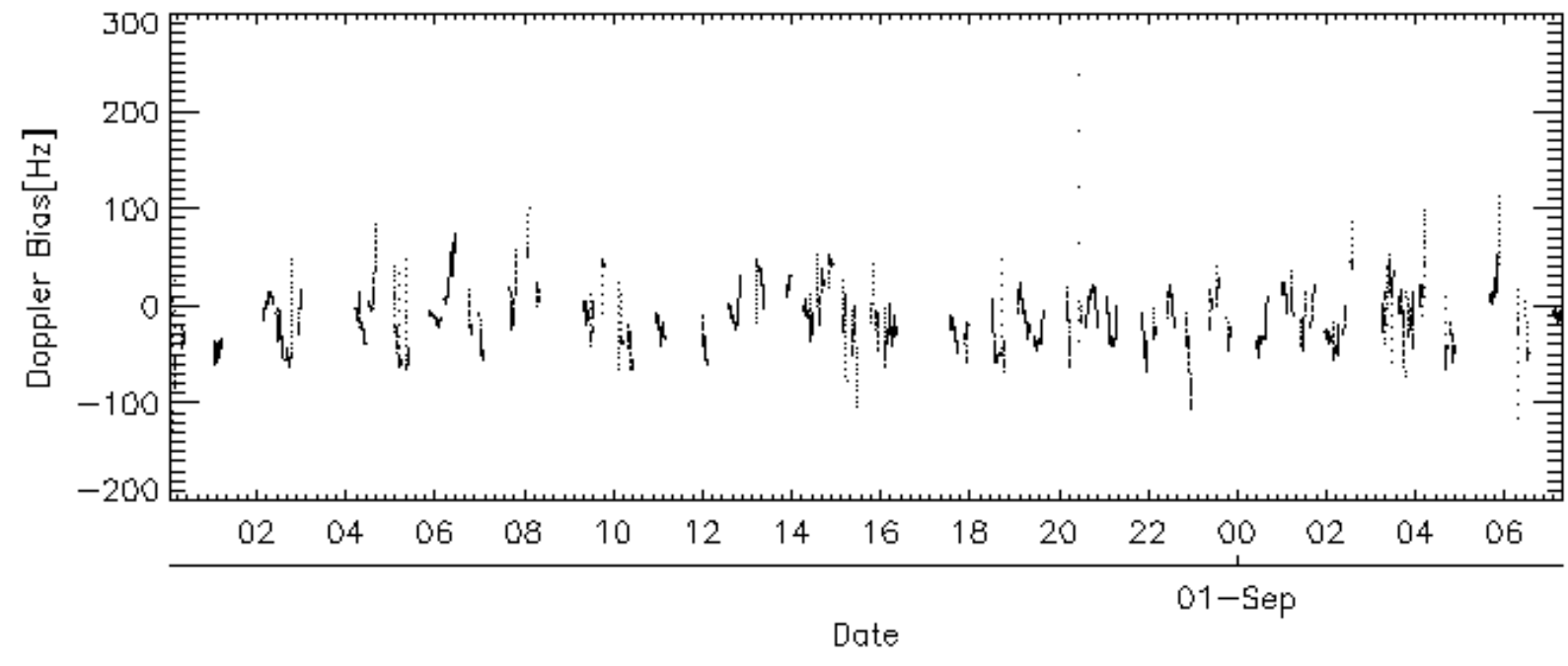
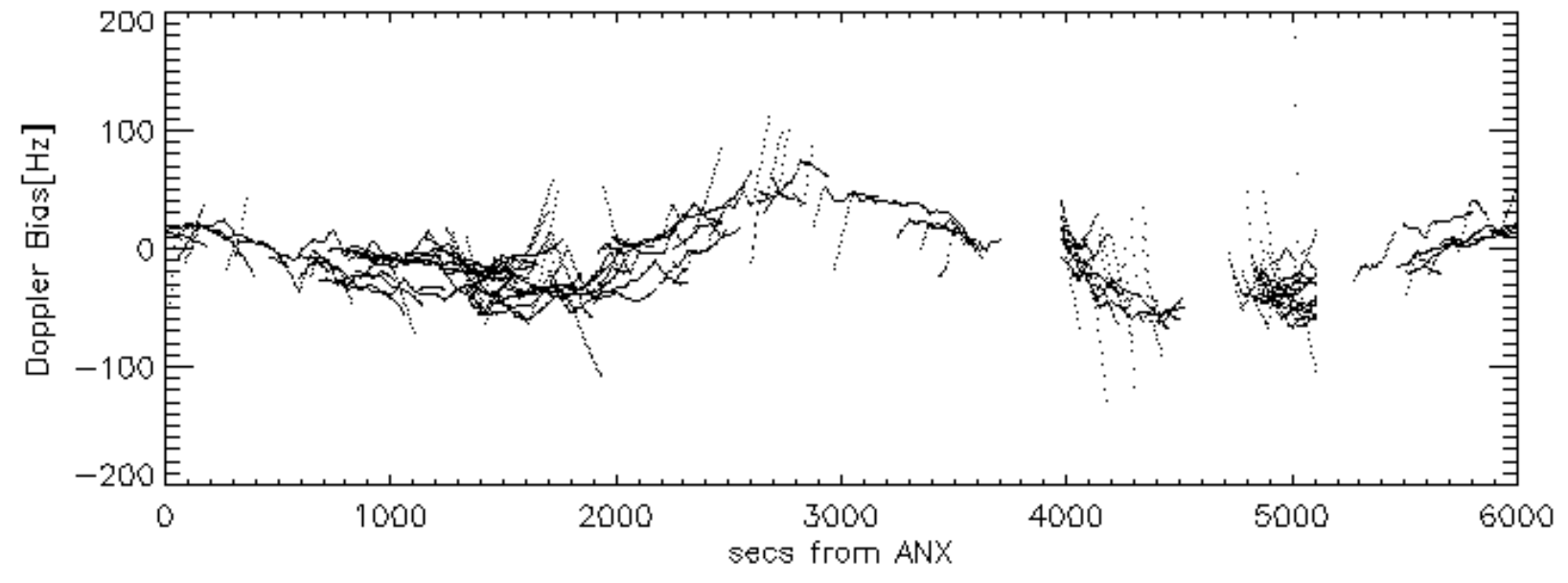
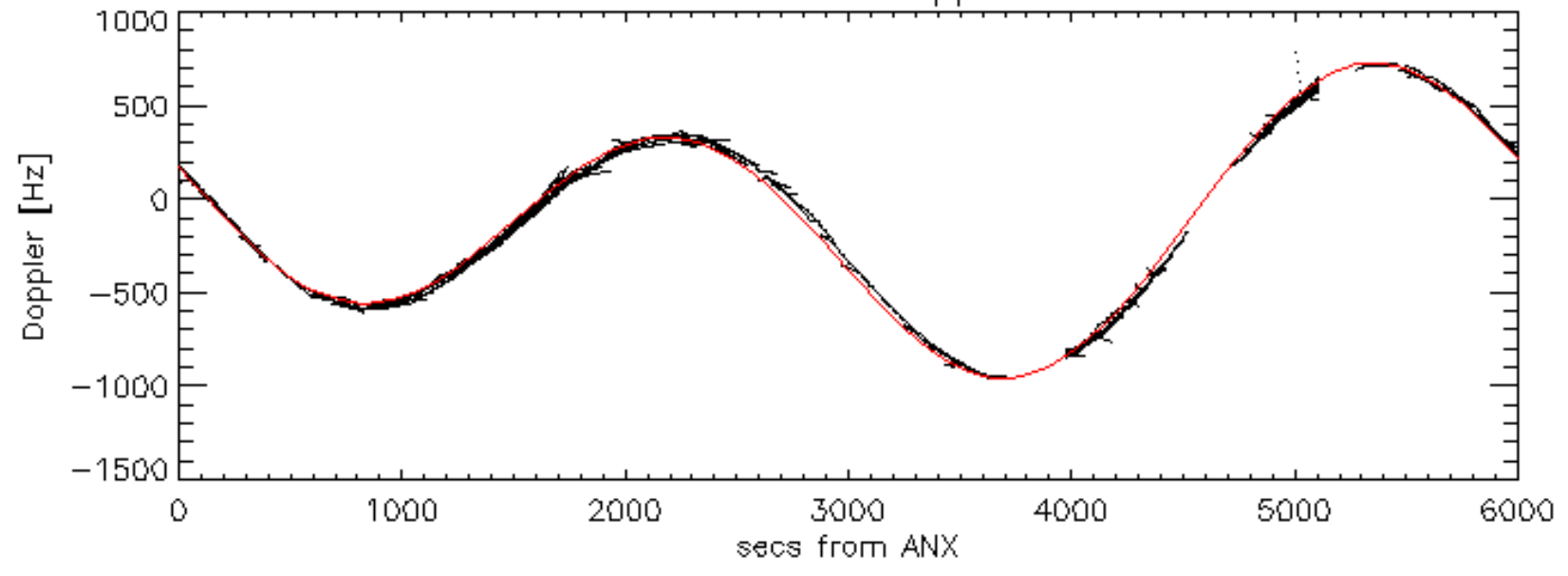
Doppler 'WVS' 'IS2' ascending

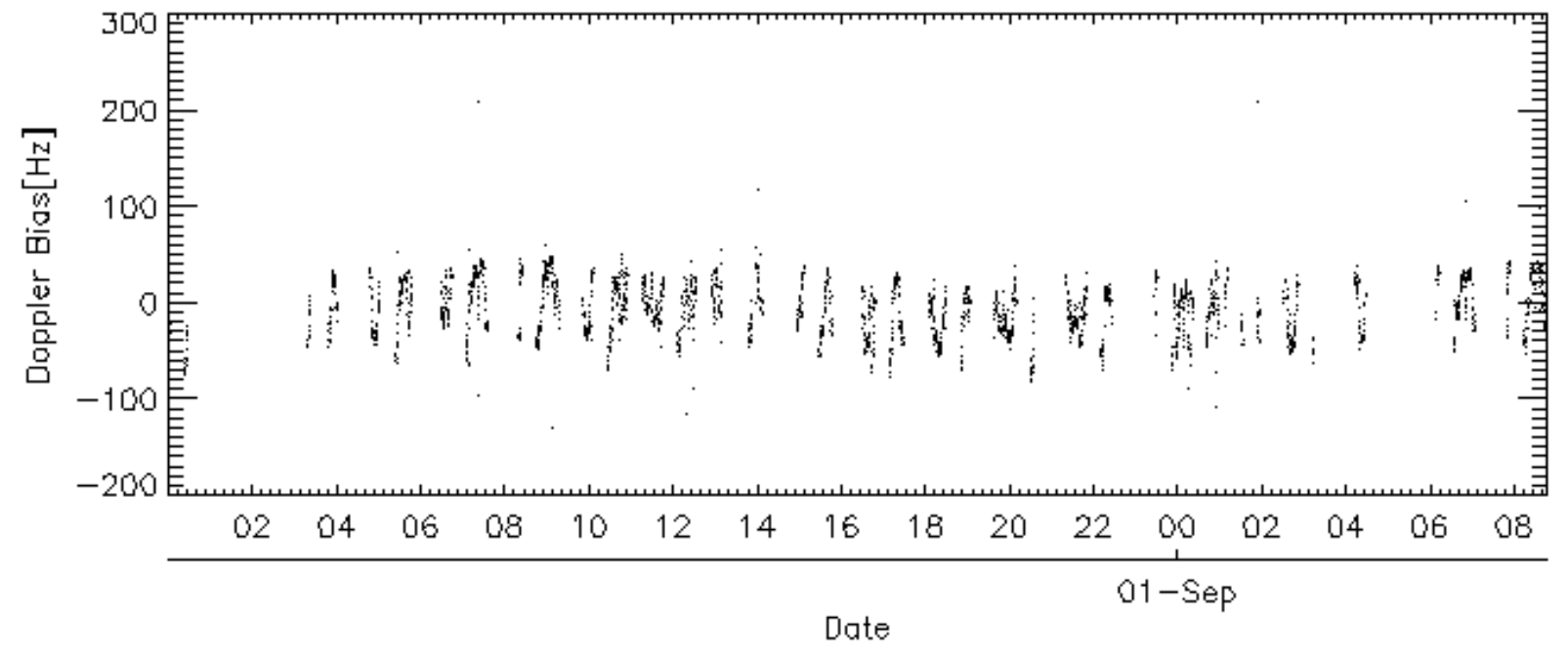
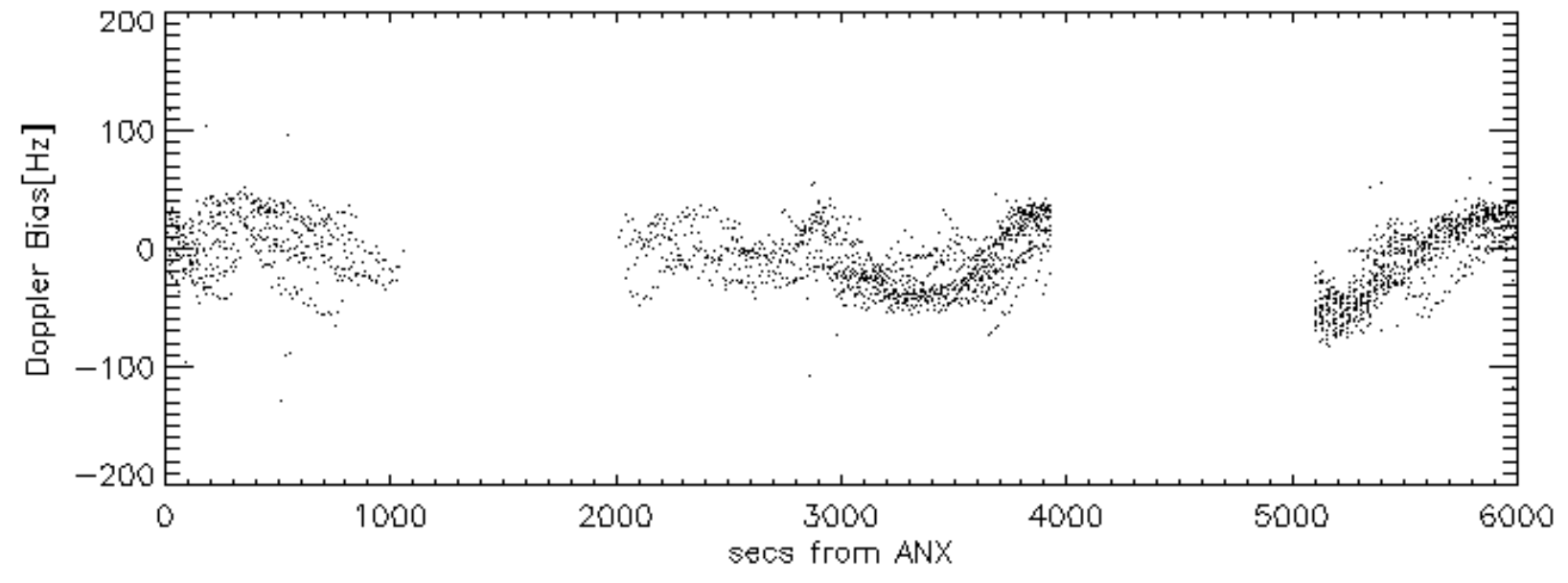
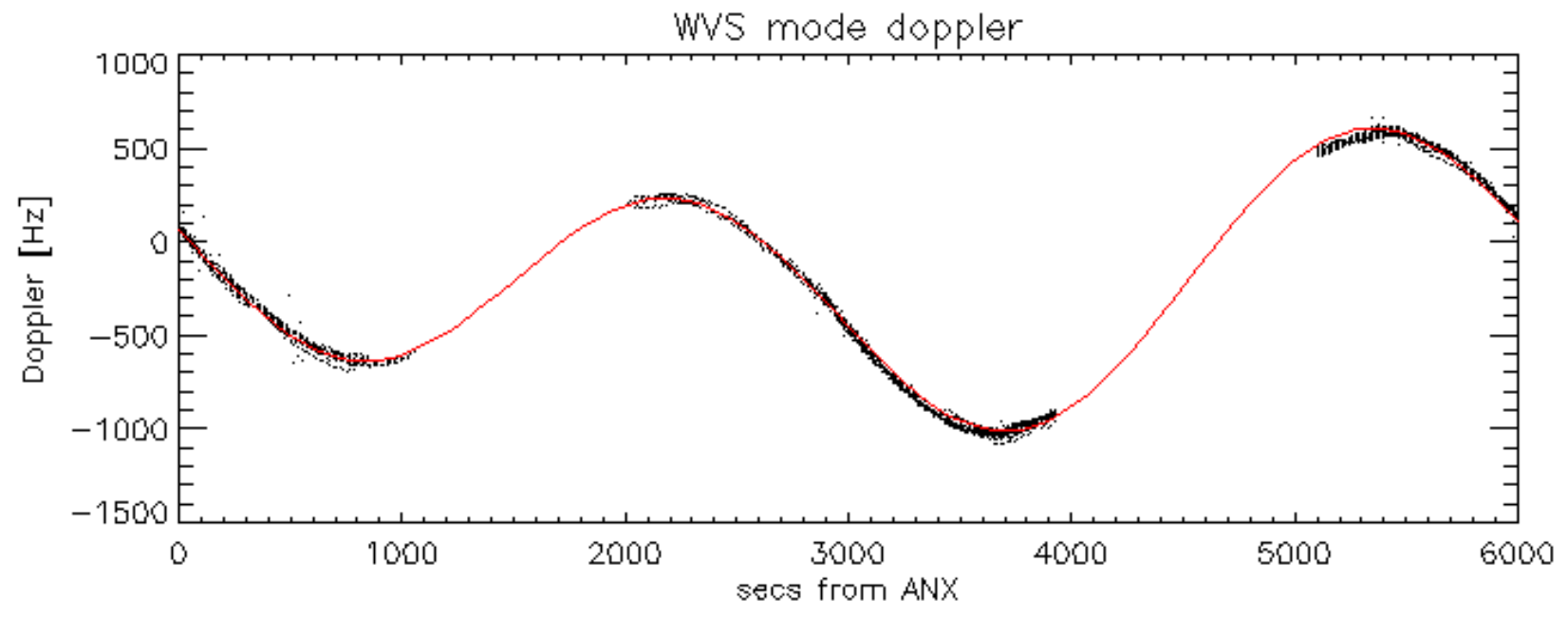


Doppler 'WVS' 'IS2' descending

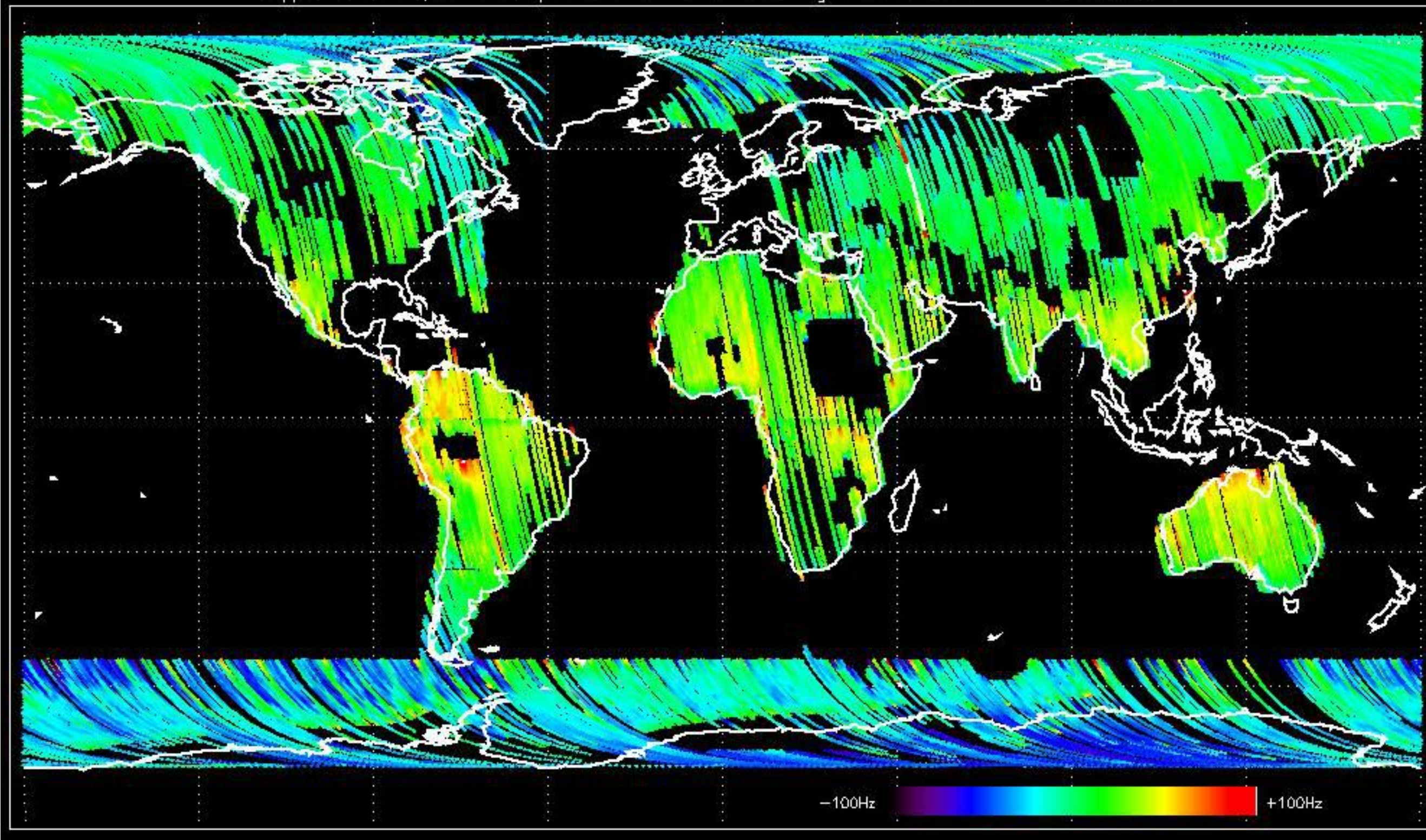


GM1 mode doppler

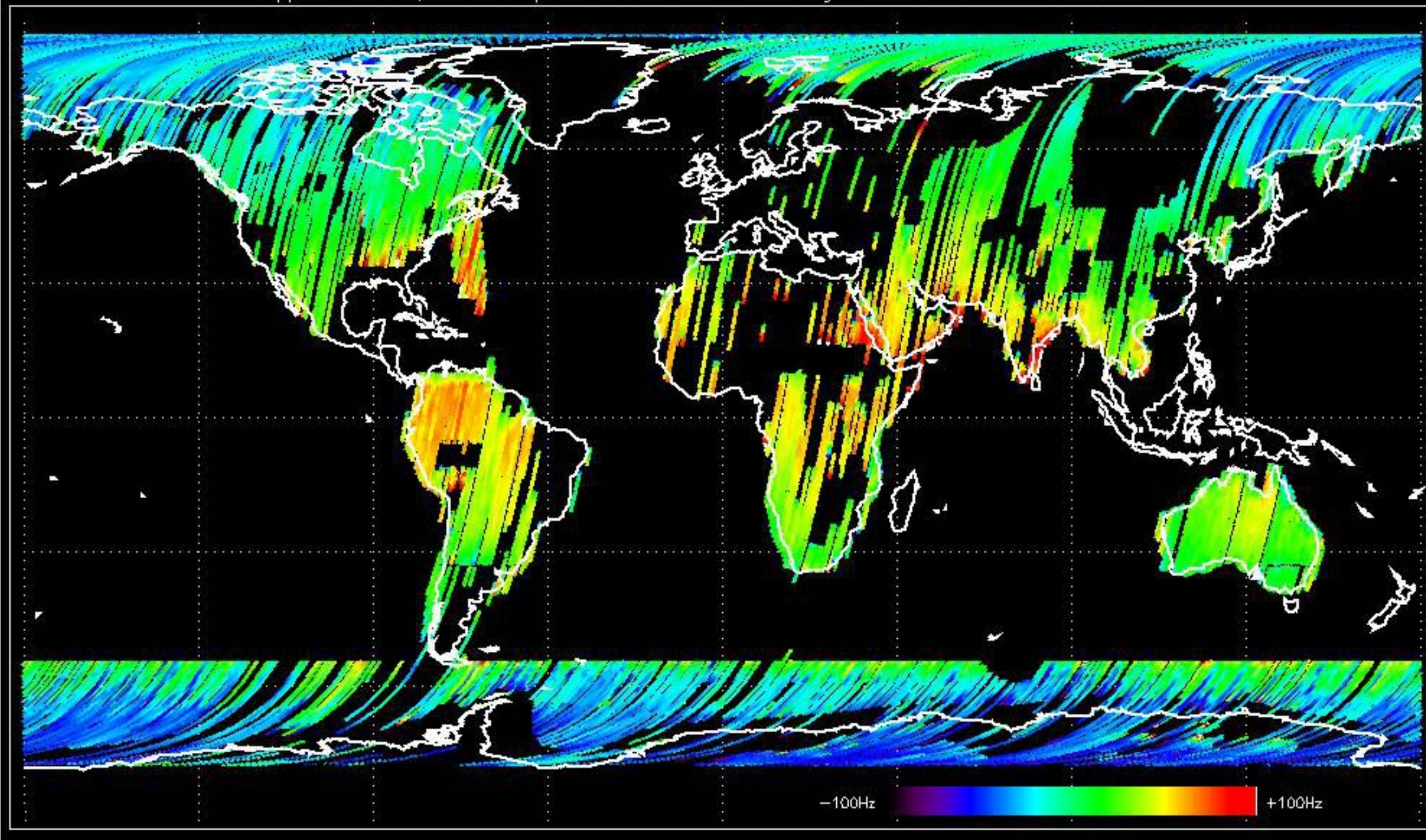




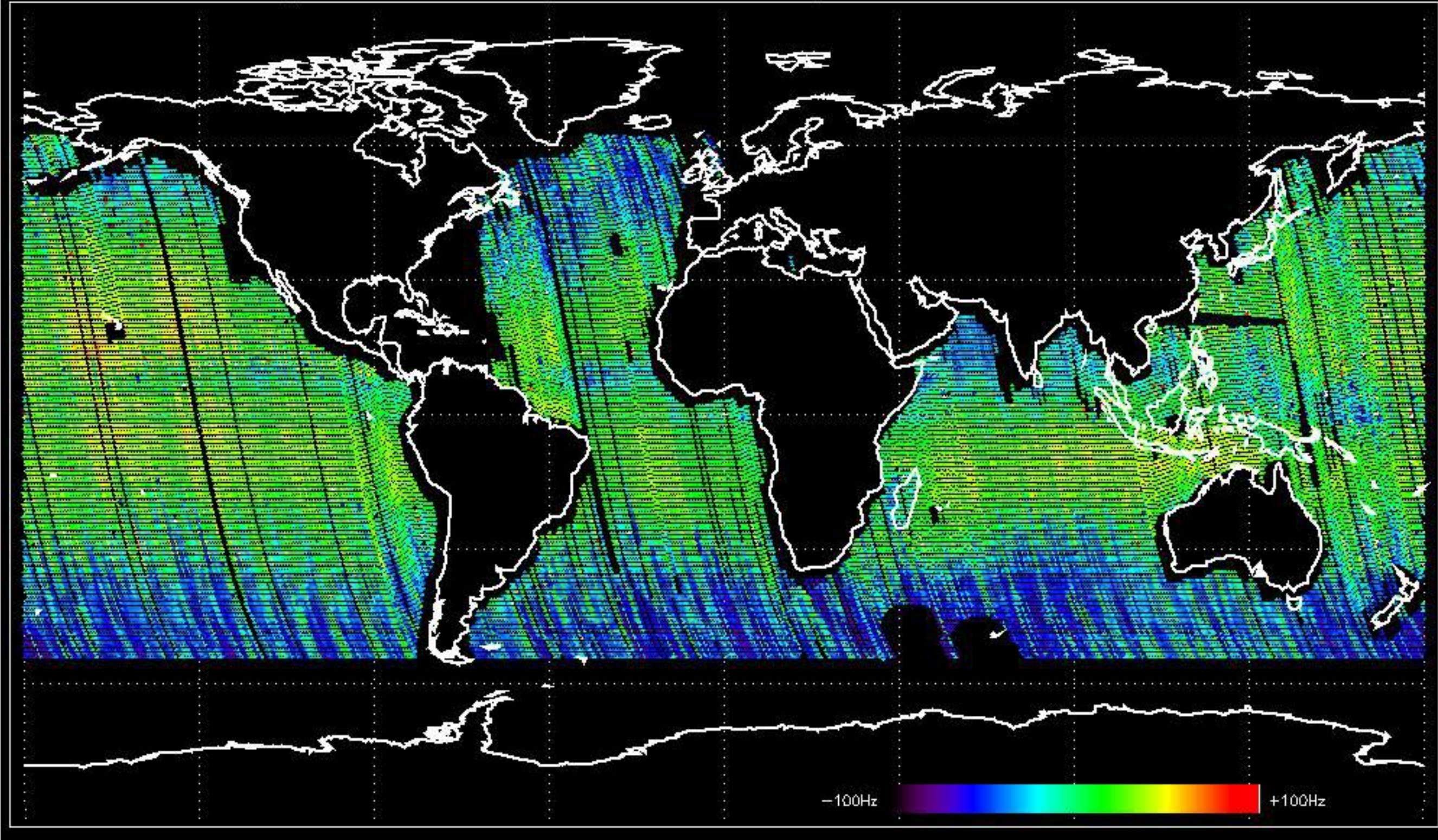
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.823399 Hz



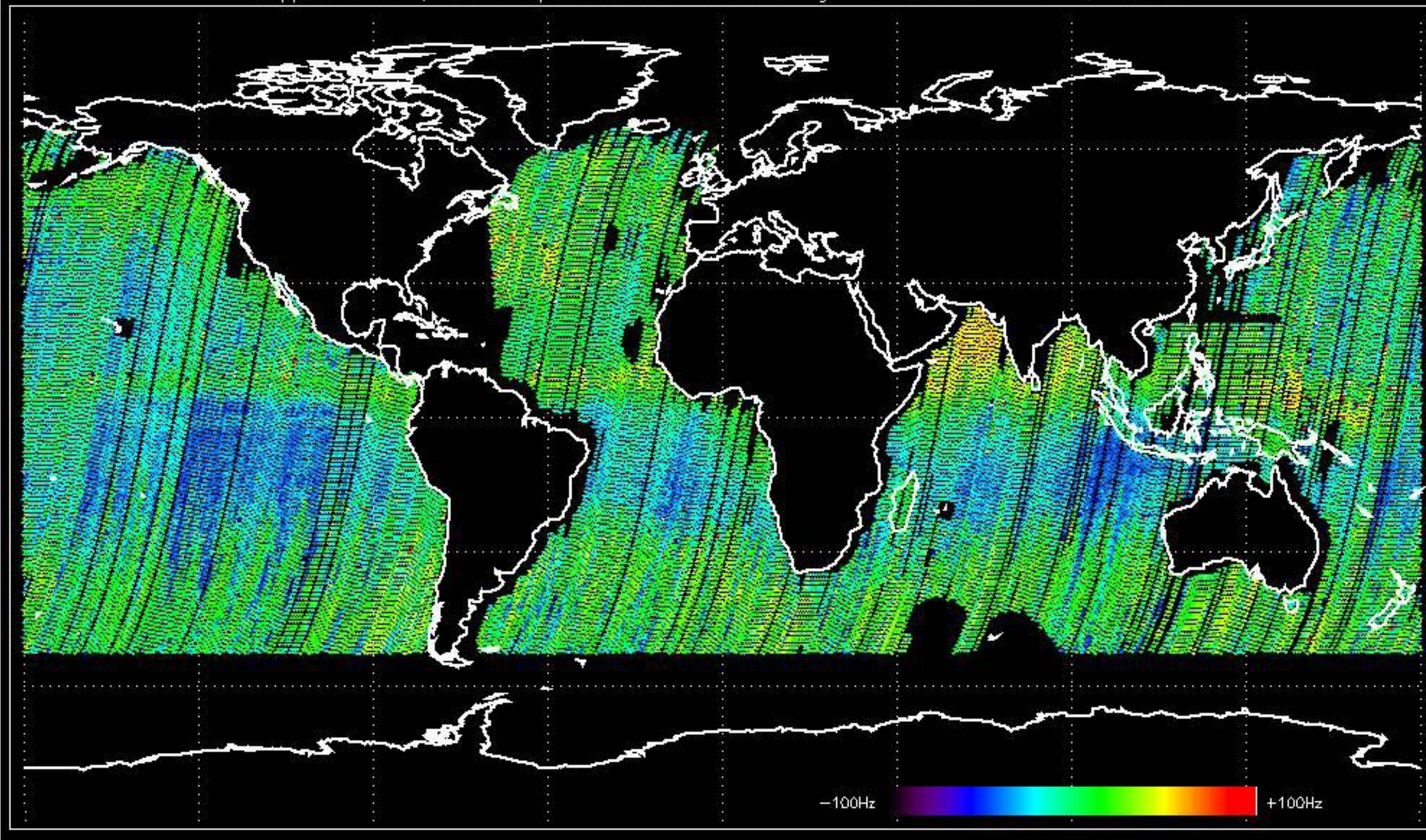
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -10.187771 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.2228175 Hz

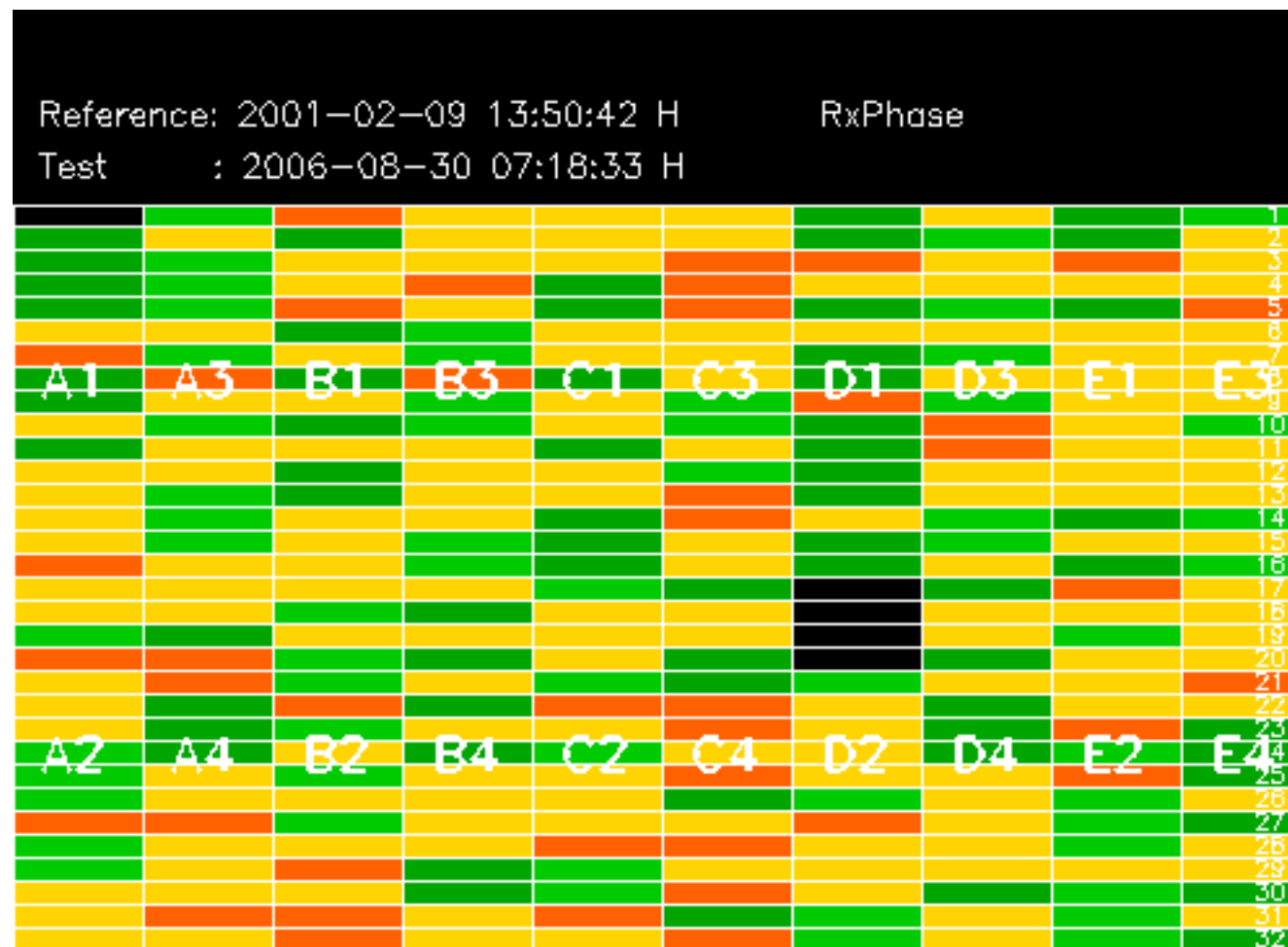


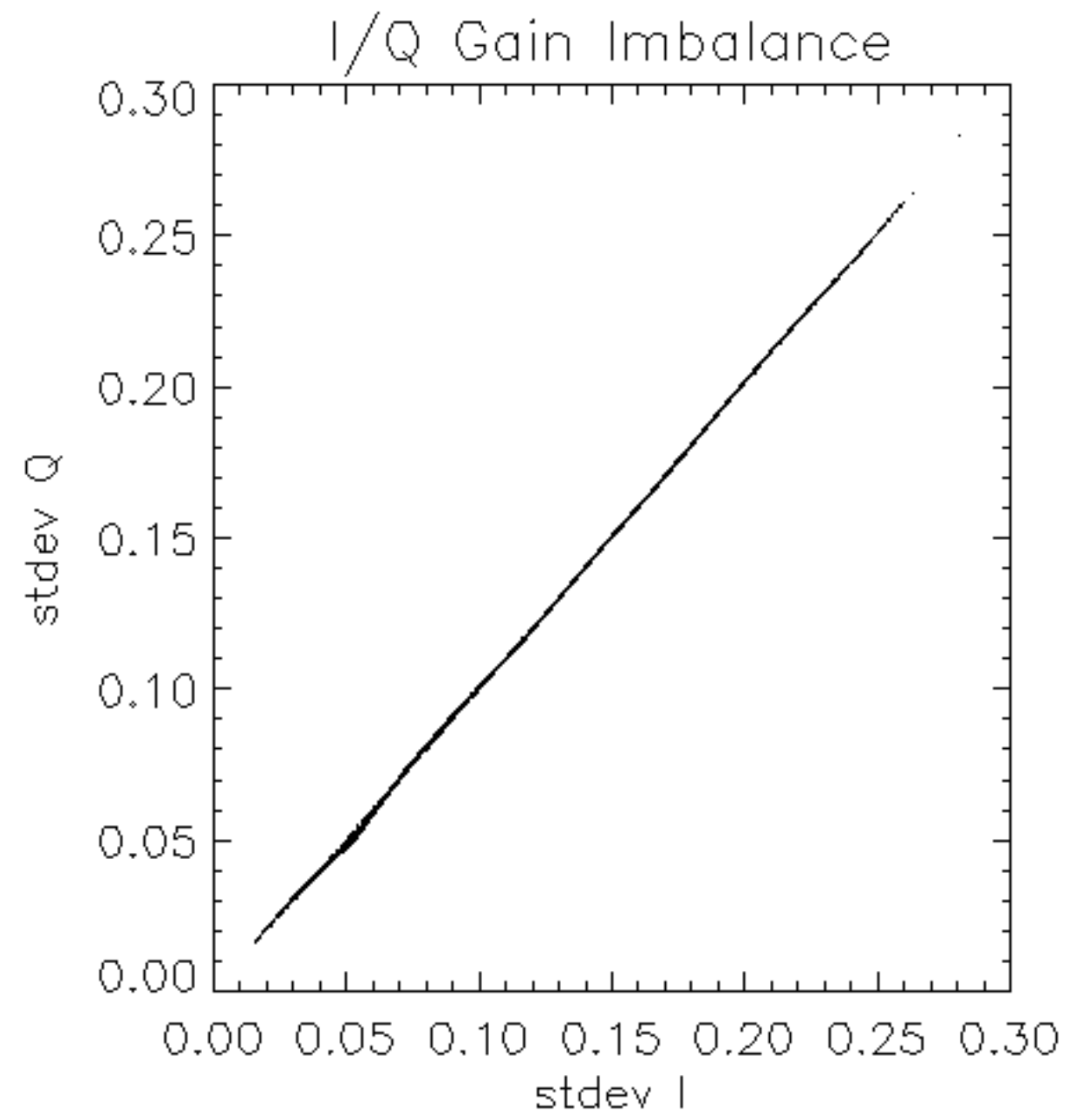
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.4447358 Hz

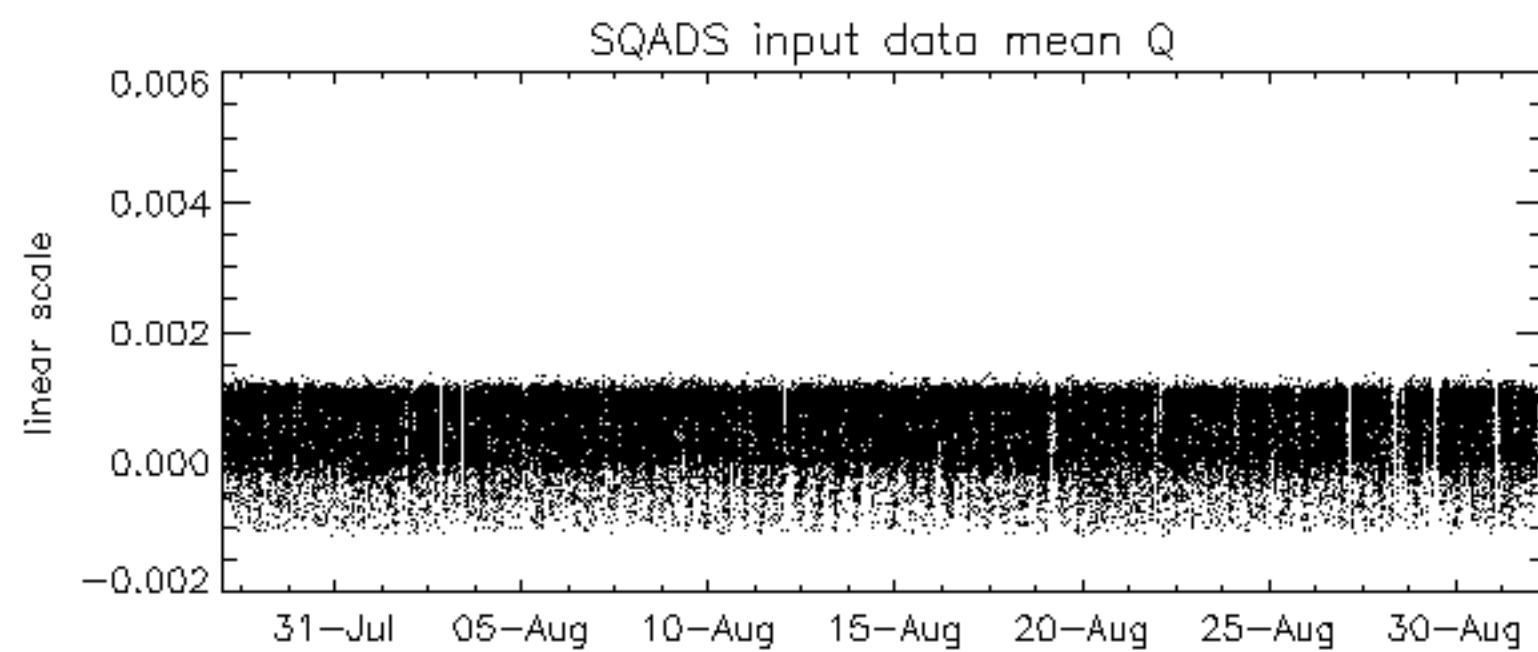
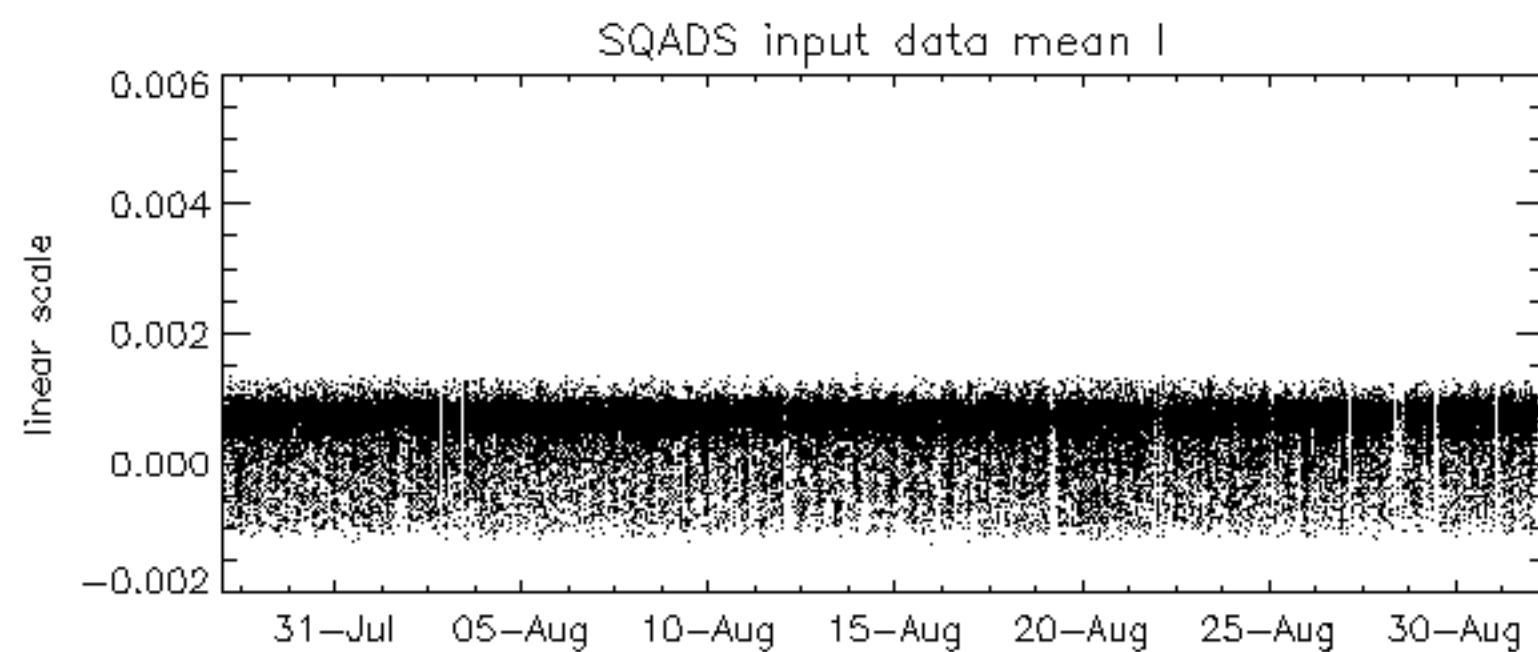
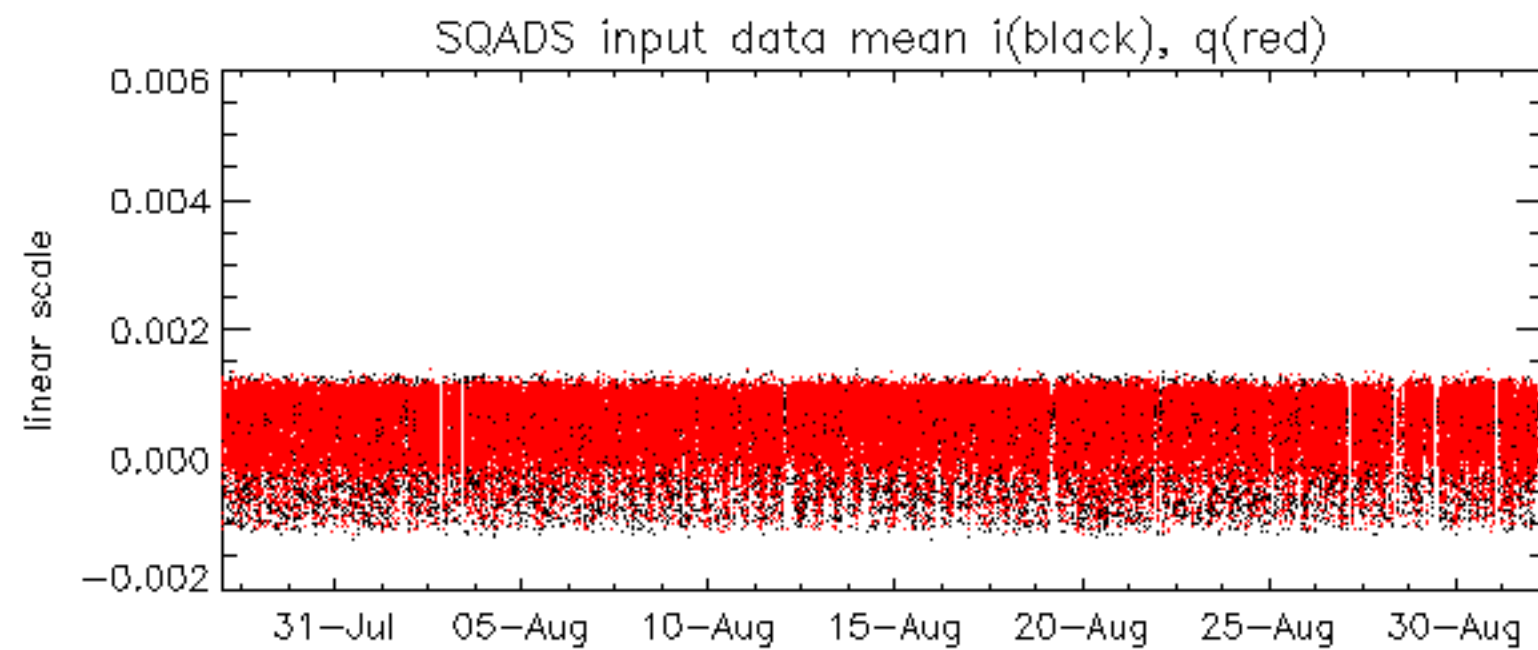


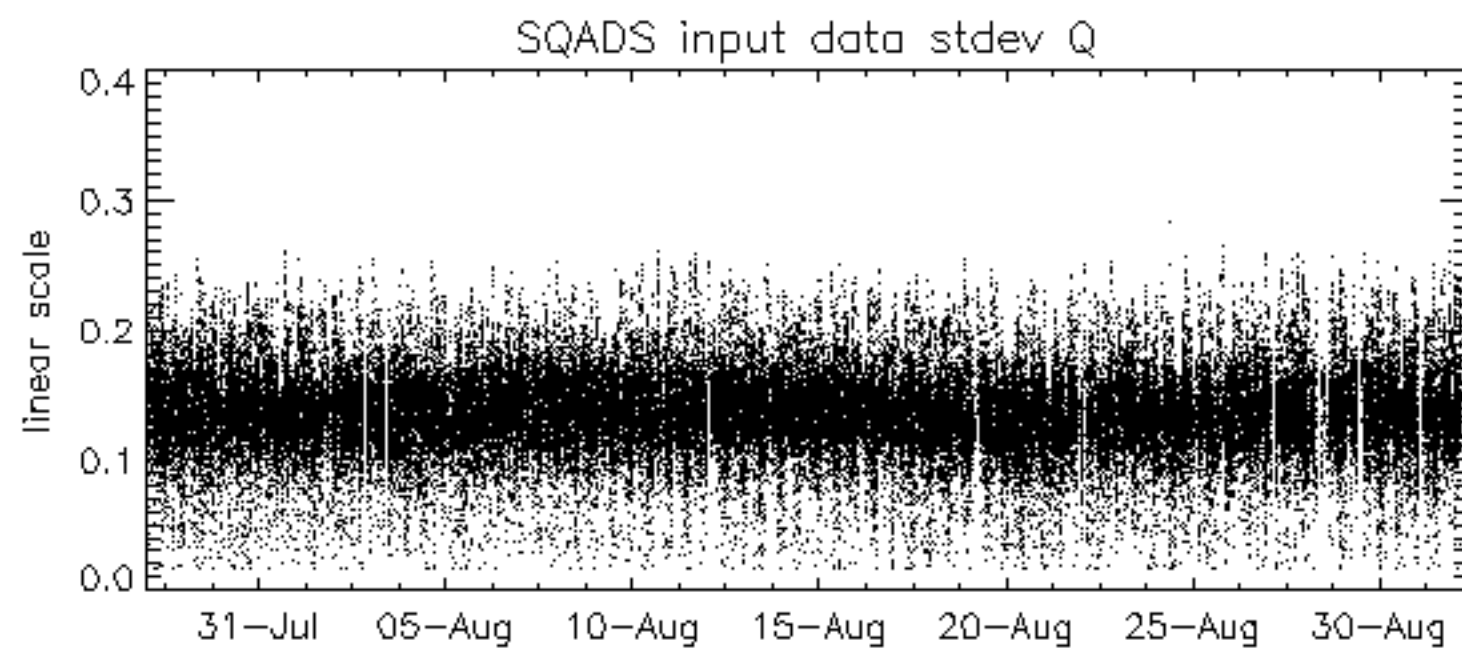
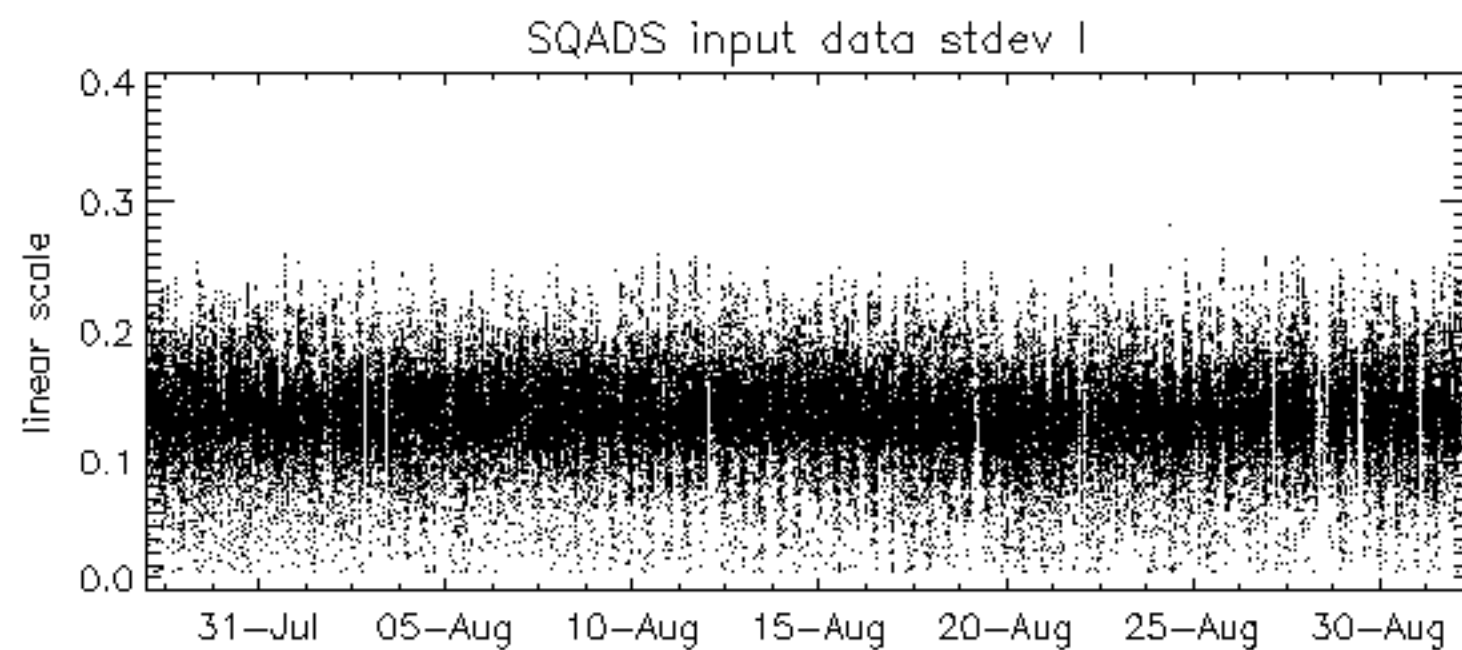
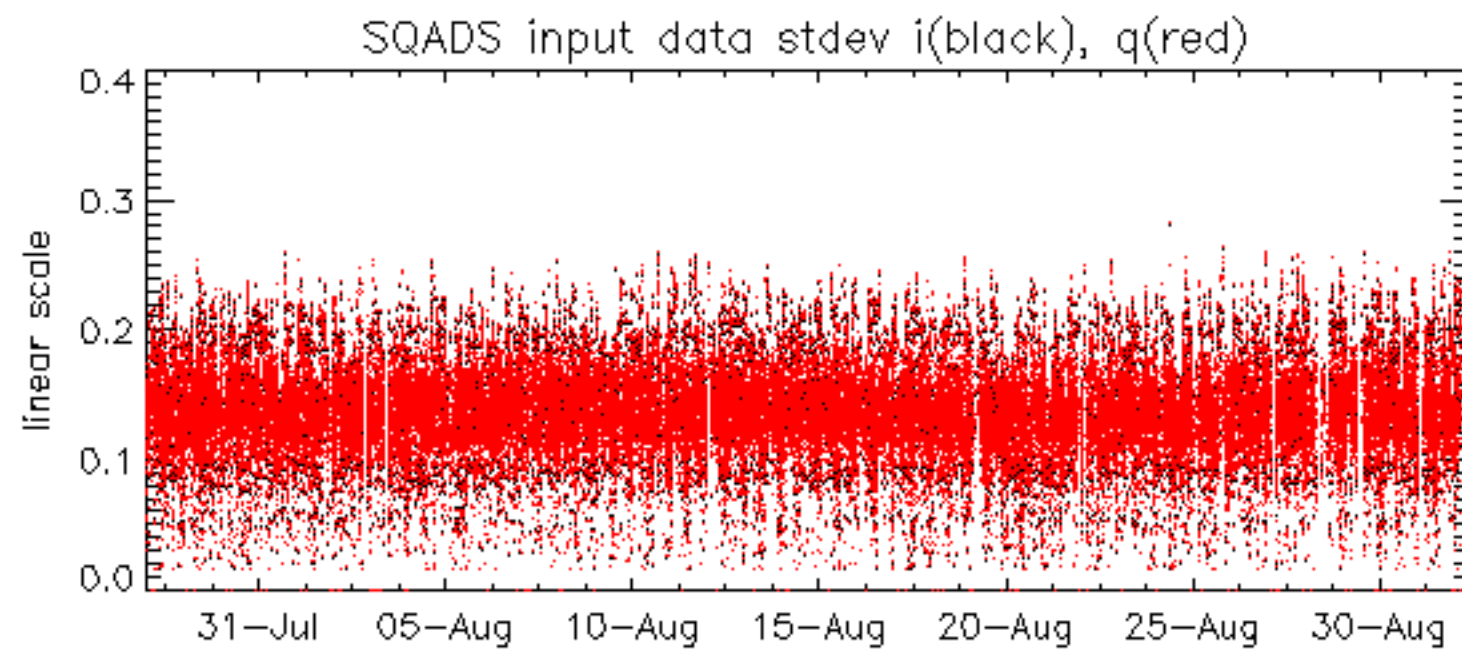
No anomalies observed on available MS products:

No anomalies observed.





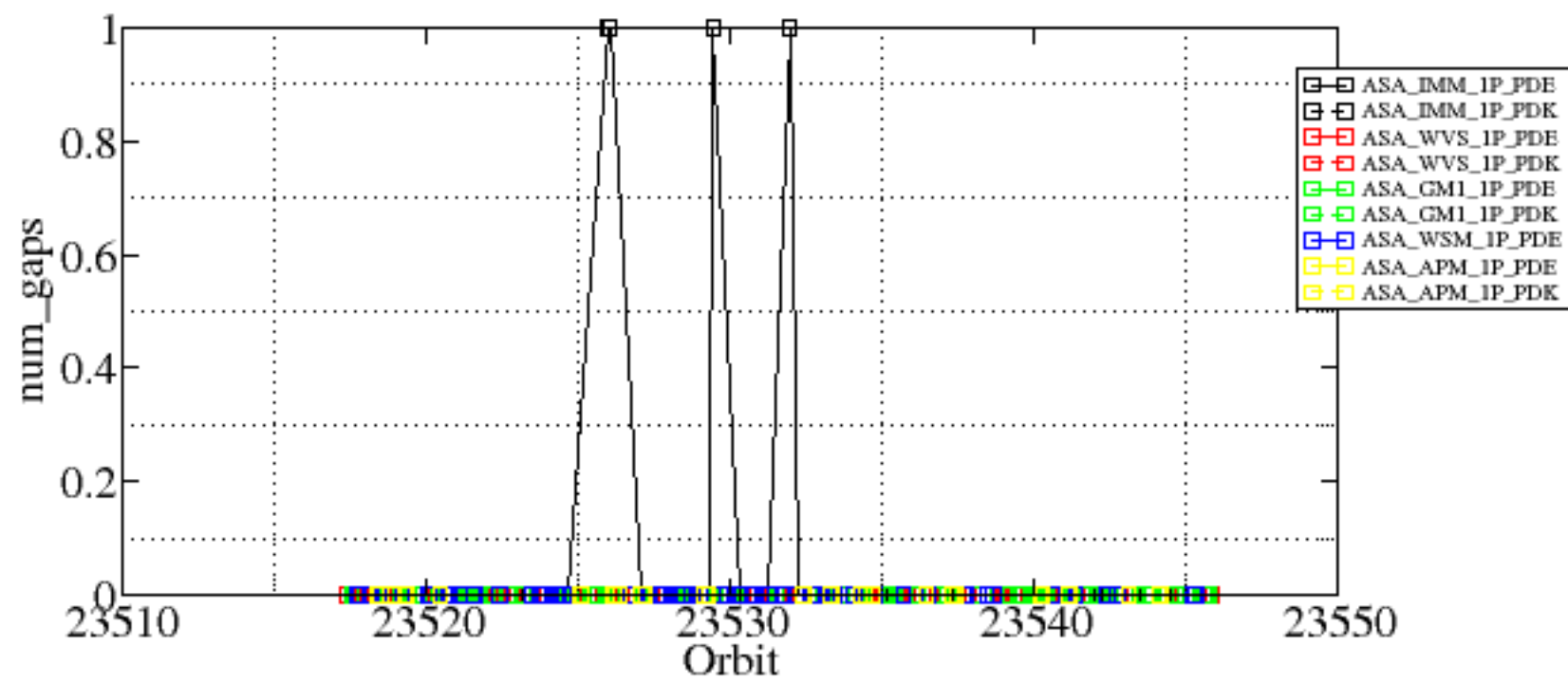


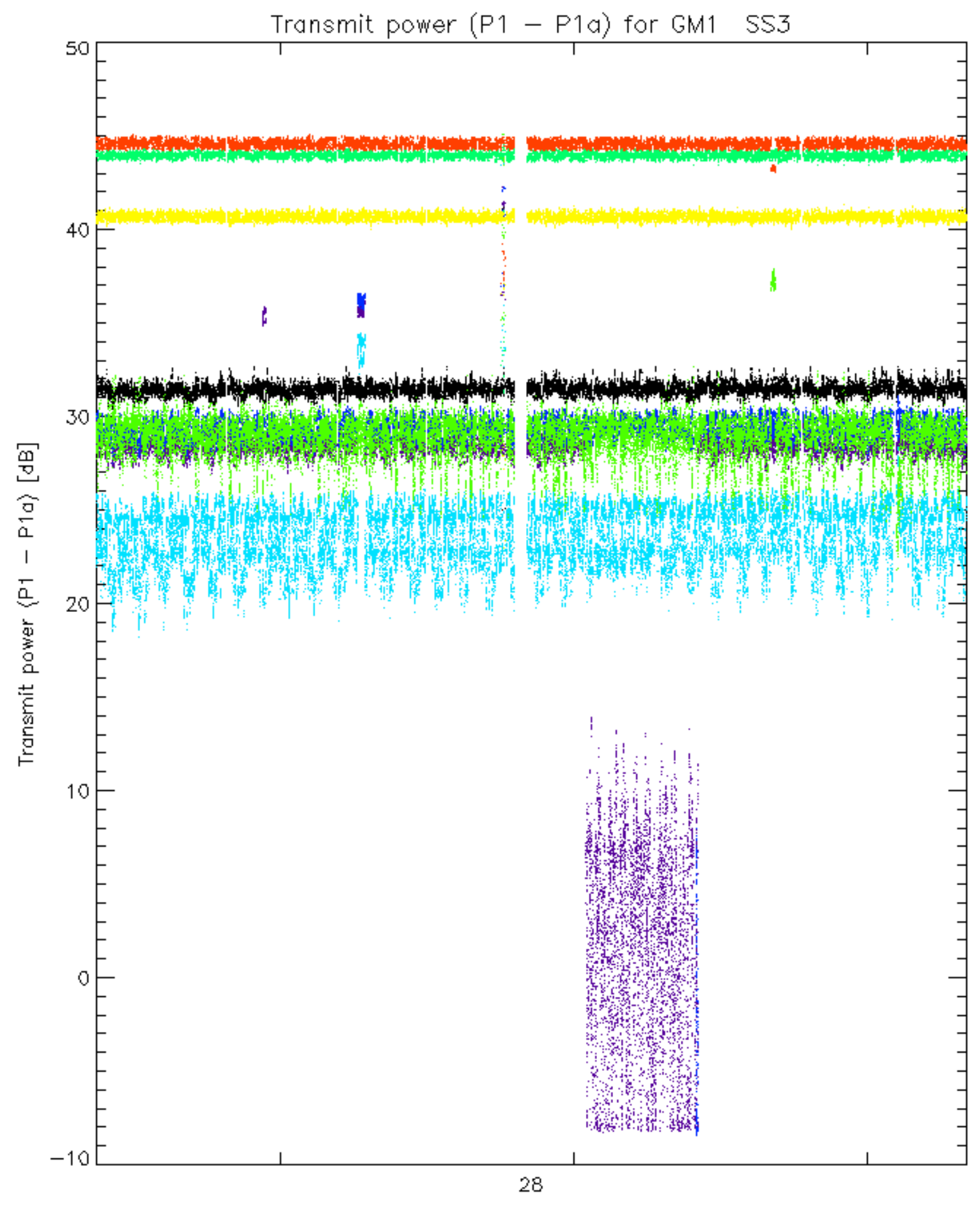


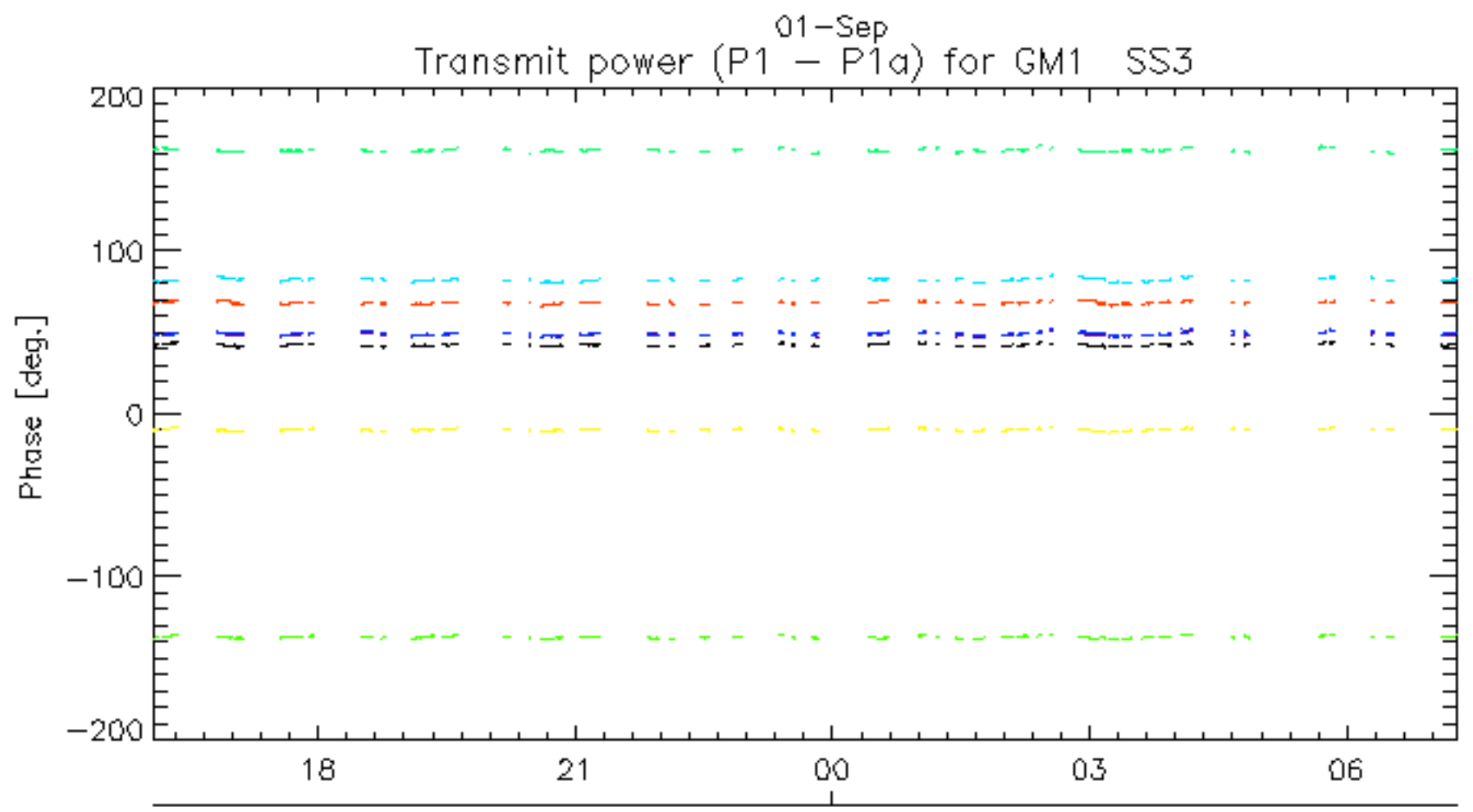
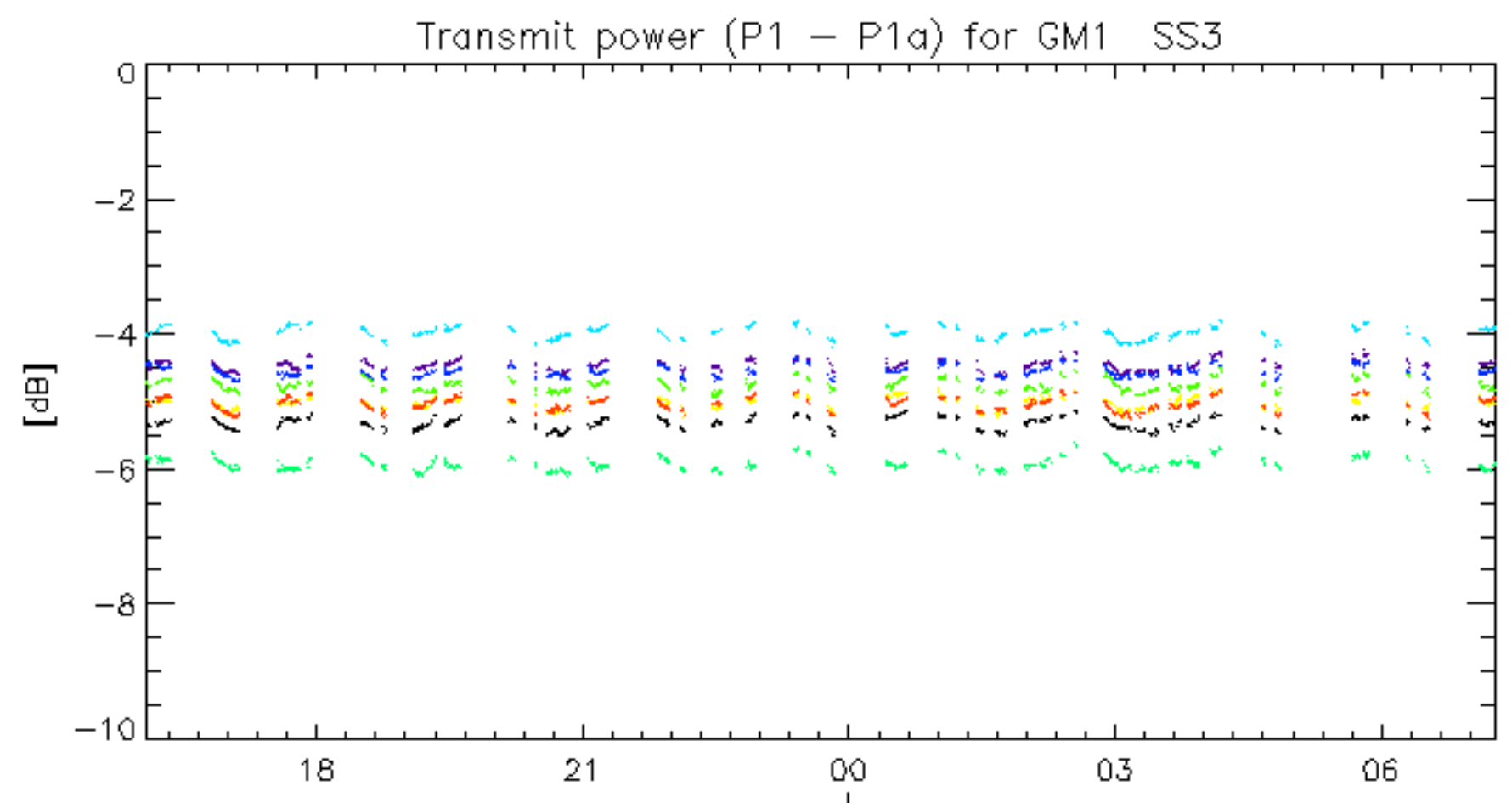
Summary of analysis for the last 3 days 2006083[011]

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

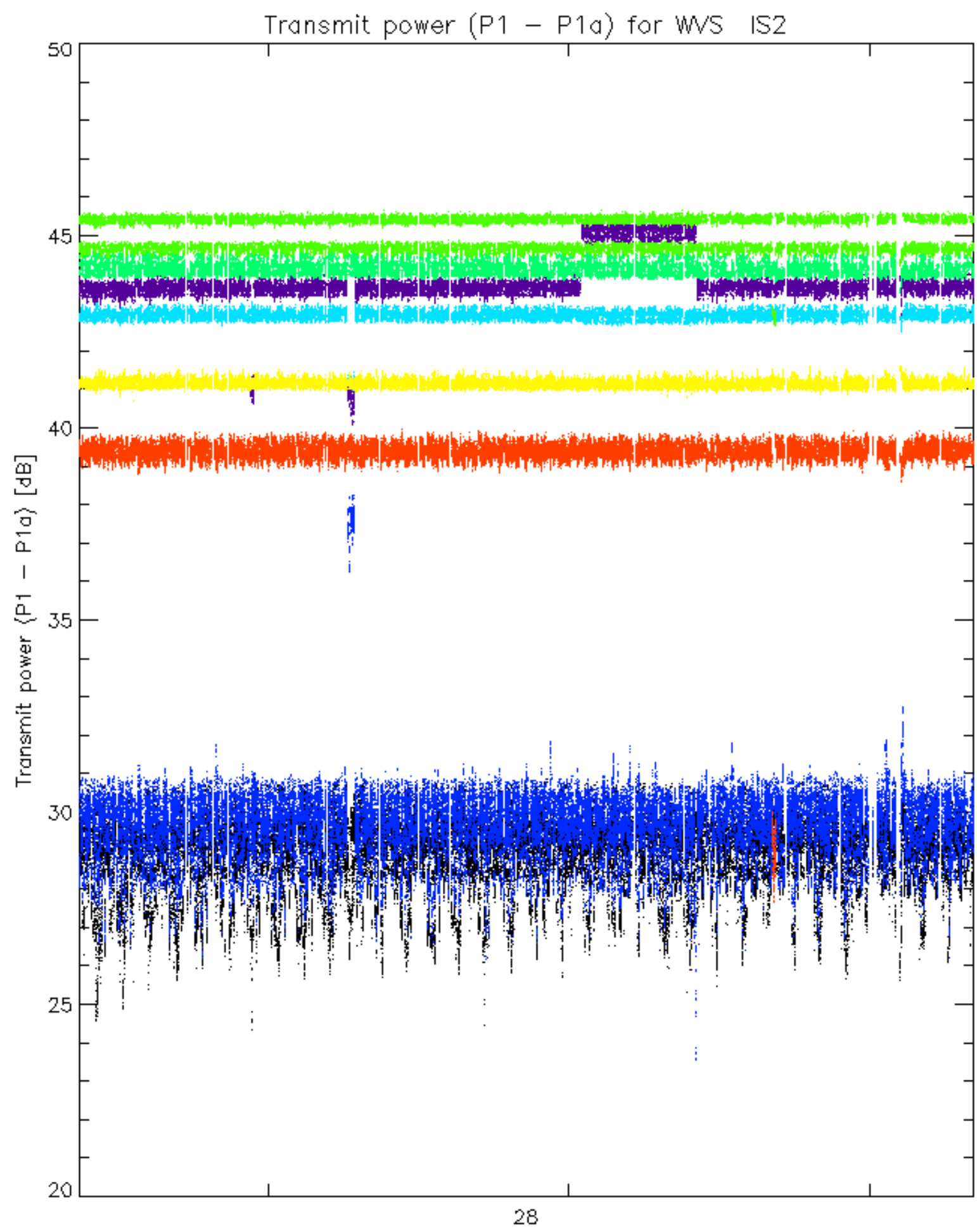
Filename	num_gaps	num_missing_lines
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ASA_WSM_1PNPDE20060830_180020_000001462050_00428_23528_0191.N1	0	75
ASA_WSM_1PNPDE20060831_040156_000000862050_00434_23534_0306.N1	0	67
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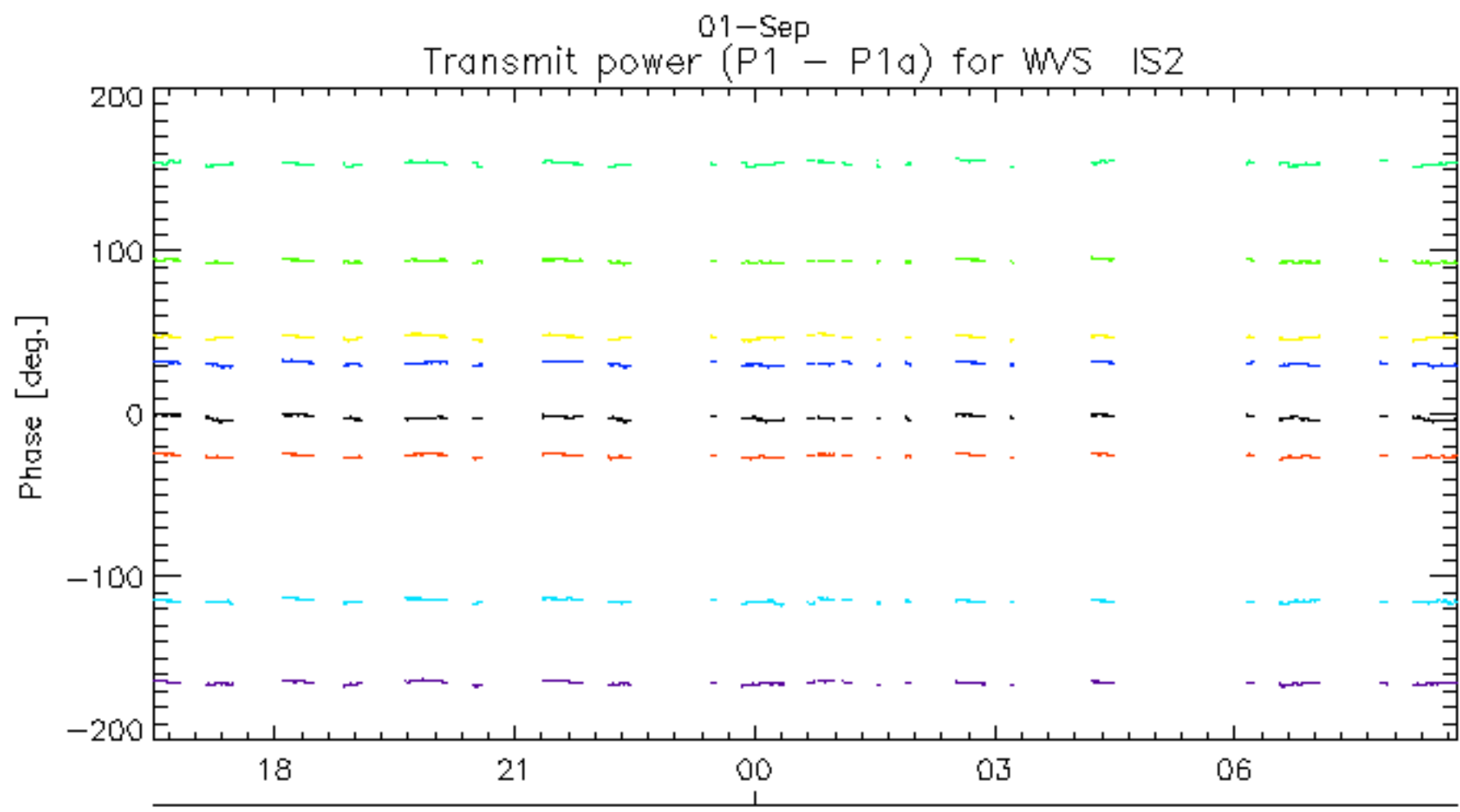
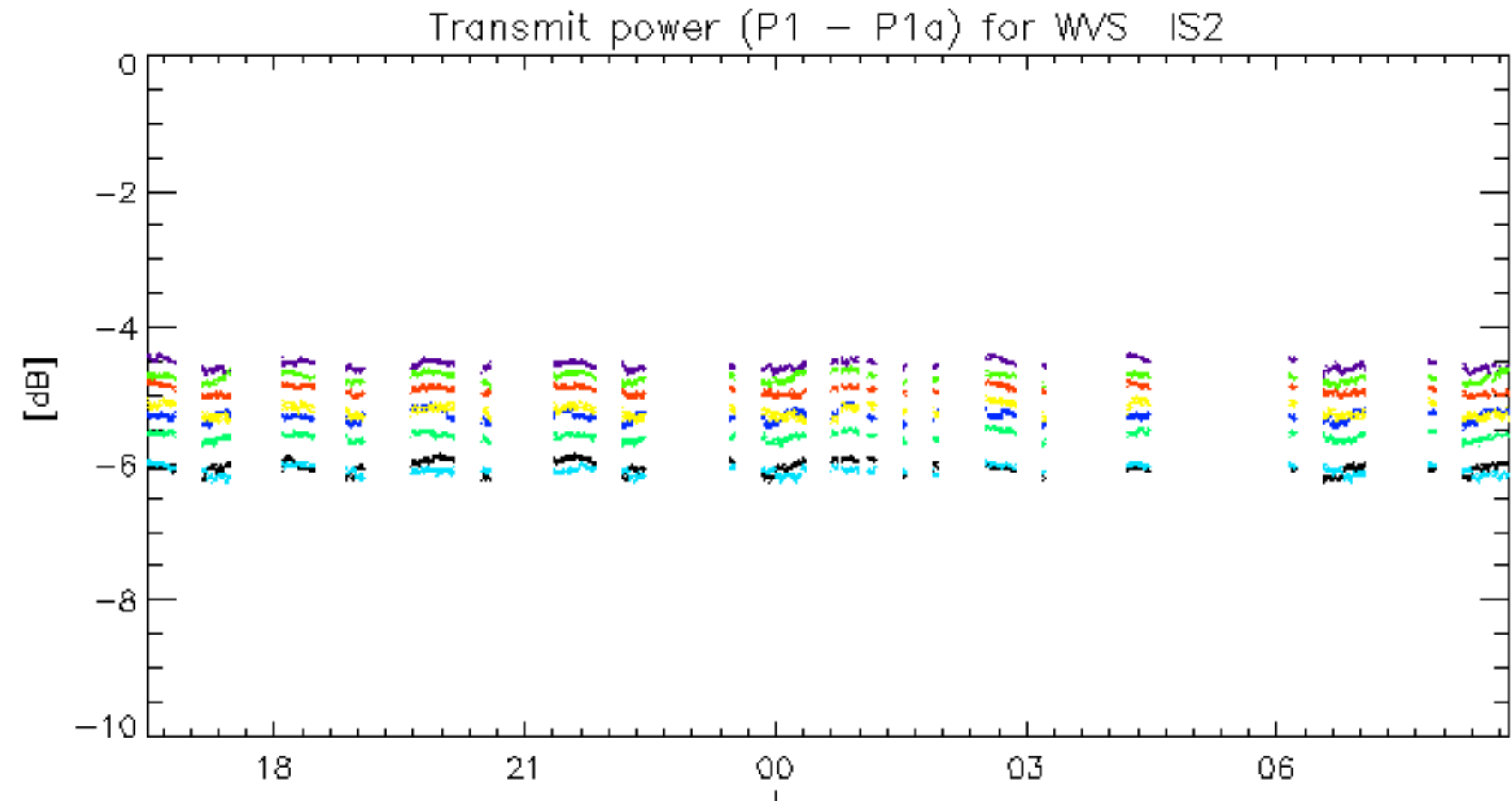






rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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

No unavailabilities during the reported period.