

PRELIMINARY REPORT OF 051017

last update on Mon Oct 17 16:41:29 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 2005-10-16 00:00:00 to 2005-10-17 16:41:29

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	22	55	10	0	30
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	22	55	10	0	30
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	22	55	10	0	30
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	22	55	10	0	30

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	40	73	24	12	63
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	40	73	24	12	63
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	73	24	12	63
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	40	73	24	12	63

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	20051016 053216
H	20051015 060353

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
☒	☒
☒	☒
☒	☒
☒	☒

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
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☒

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
☒
☒

4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS
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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	-3.576985	0.053061	0.203216
7	P1	-2.937542	0.028078	0.202838
11	P1	-4.157766	0.090943	0.462219
15	P1	-5.998412	0.023851	-0.148911
19	P1	-3.120882	0.090488	-0.141262
22	P1	-4.467446	0.019495	0.106399
26	P1	-4.367565	0.076716	0.477207
30	P1	-5.758327	0.151215	0.314378
3	P1	-15.776919	1.809233	1.848799
7	P1	-16.782164	4.377437	2.414588
11	P1	-17.295271	10.332046	5.428205
15	P1	-13.970924	7.918167	3.010147
19	P1	-13.600492	0.115419	-0.027289
22	P1	-17.295357	21.872343	5.674764
26	P1	-17.481619	21.172600	6.507236
30	P1	-17.266460	8.802321	4.270117

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.859554	0.100652	-0.043851
7	P2	-22.683319	0.157728	-0.098554
11	P2	-16.627878	0.757721	-0.736725
15	P2	-7.230946	0.114447	0.048412
19	P2	-9.122373	0.159562	-0.234676
22	P2	-17.611040	0.168852	-0.585452
26	P2	-16.134186	0.113062	0.194506
30	P2	-19.598577	0.134403	-0.153739

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.182242	0.005268	-0.041666
7	P3	-8.182242	0.005268	-0.041666
11	P3	-8.182242	0.005268	-0.041666
15	P3	-8.182242	0.005268	-0.041666
19	P3	-8.182242	0.005268	-0.041666
22	P3	-8.182242	0.005268	-0.041666
26	P3	-8.182242	0.005268	-0.041666
30	P3	-8.182242	0.005268	-0.041666

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	-3.489730	0.210651	-0.861859
7	P1	-2.910494	0.062407	0.378792
11	P1	-2.997212	0.156297	0.754036
15	P1	-3.422832	0.026135	0.188274
19	P1	-3.313315	0.047081	-0.165343
22	P1	-5.104971	0.111174	-0.167275
26	P1	-5.751579	0.311245	-0.077178
30	P1	-5.177313	0.207198	-0.121329
3	P1	-11.539849	0.369902	0.627719
7	P1	-11.192174	18.893776	6.123736
11	P1	-11.901923	37.354115	9.169428
15	P1	-12.255179	32.192478	8.110889
19	P1	-15.344313	0.209498	-0.556871
22	P1	-20.899664	2.917686	2.442812

26	P1	-17.495214	4.206082	1.866934
30	P1	-19.203064	1.628588	2.056032

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.675608	0.047288	-0.142020
7	P2	-22.996105	0.153675	-0.280689
11	P2	-11.612273	0.321055	-0.761874
15	P2	-4.909800	0.042408	0.096876
19	P2	-6.810553	0.104175	-0.419426
22	P2	-7.973735	0.132116	-0.688596
26	P2	-23.870729	0.042946	0.056408
30	P2	-22.090153	0.052709	0.149365

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.024916	0.002903	-0.041204
7	P3	-8.024966	0.002908	-0.041444
11	P3	-8.024810	0.002917	-0.041903
15	P3	-8.024900	0.002907	-0.041548
19	P3	-8.025030	0.002911	-0.041272
22	P3	-8.024821	0.002917	-0.041536
26	P3	-8.025084	0.002910	-0.041447
30	P3	-8.024930	0.002912	-0.041324

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	0.000546216
	stdev	1.78176e-07
MEAN Q	mean	0.000533264
	stdev	2.18203e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136511
	stdev	0.00111286
STDEV Q	mean	0.136844
	stdev	0.00112865



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[567]

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_1PNPDE20051015_182654_000002262041_00371_18962_4160.N1	0	34
ASA_WSM_1PNPDE20051017_011919_000003912041_00389_18980_4497.N1	0	68
ASA_WSM_1PNPDE20051017_035606_000001472041_00391_18982_4517.N1	0	41
ASA_WSM_1PNPDK20051016_124418_000001832041_00381_18972_7198.N1	0	1
ASA_WSM_1PNPDK20051016_124420_000001282041_00381_18972_7244.N1	0	1



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

7.2 - Absolute Doppler for WVS

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

7.3 - Doppler evolution versus ANX for WVS

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

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

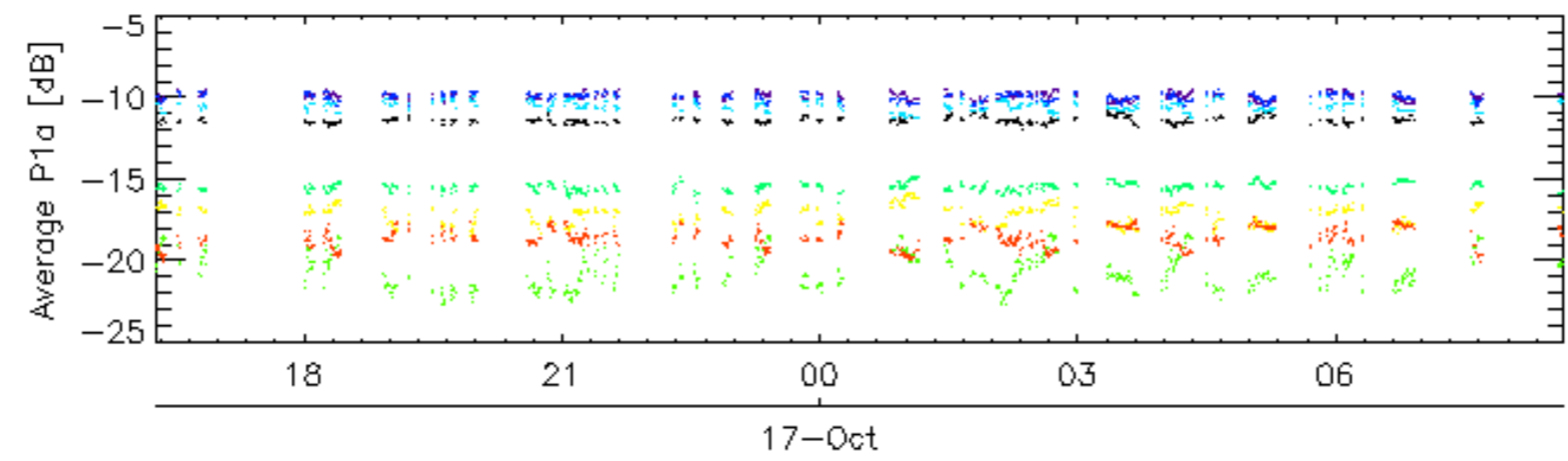
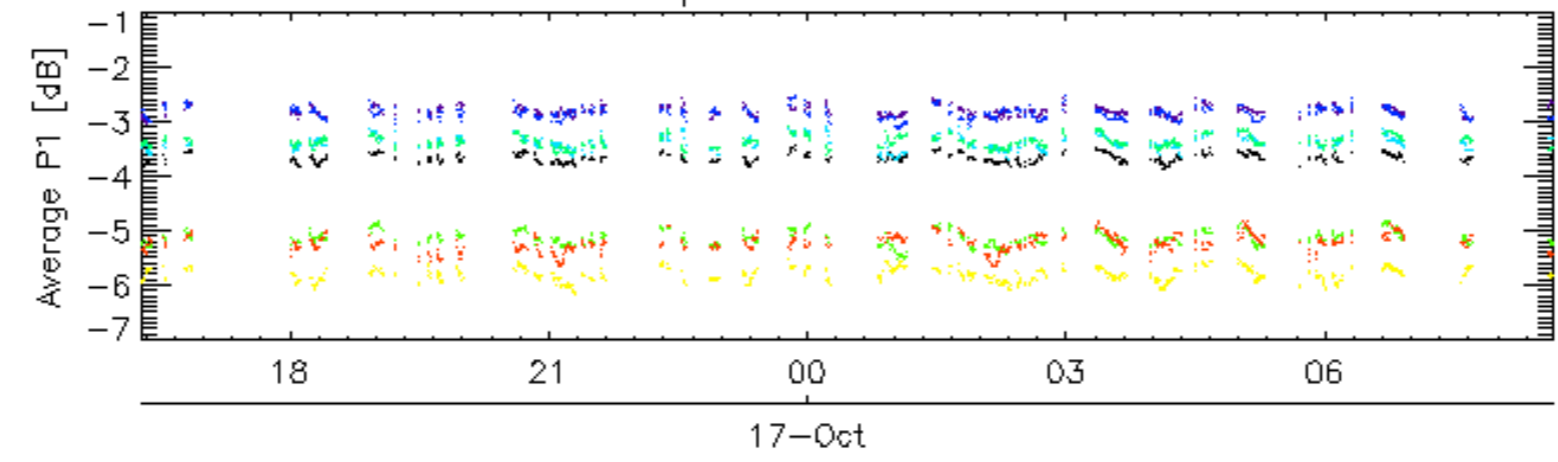
Ascending

Descending

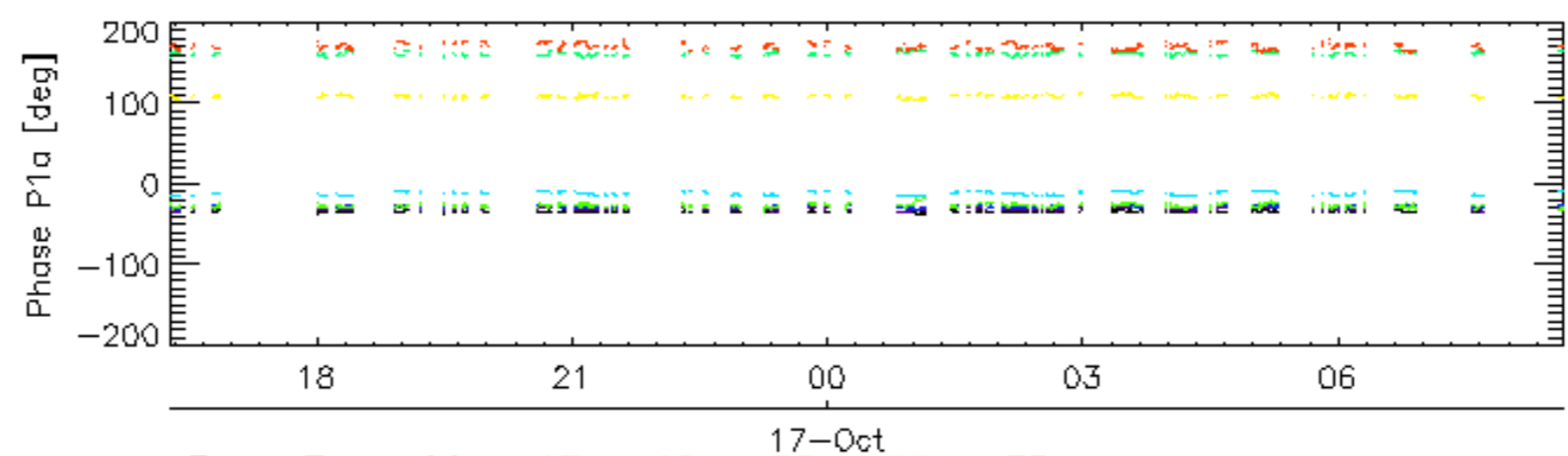
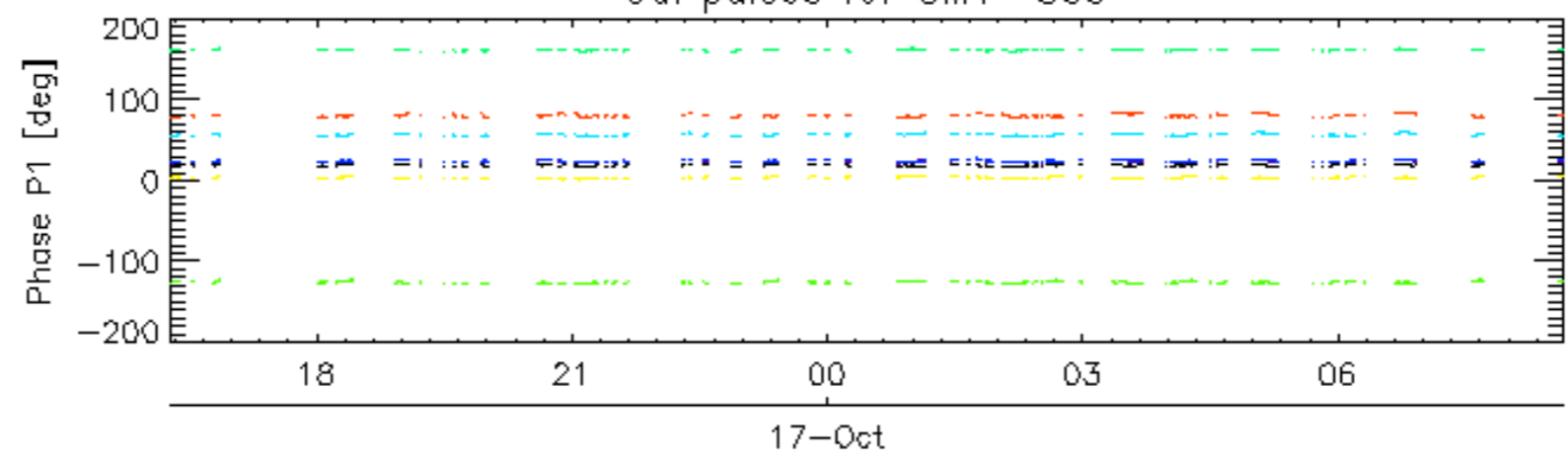
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

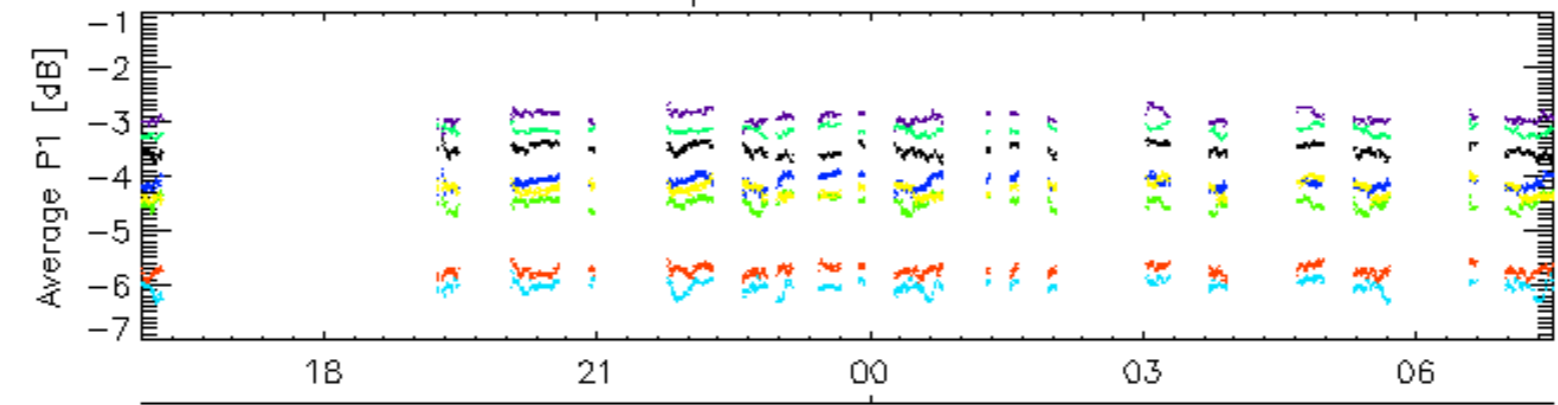


Cal pulses for GM1 SS3

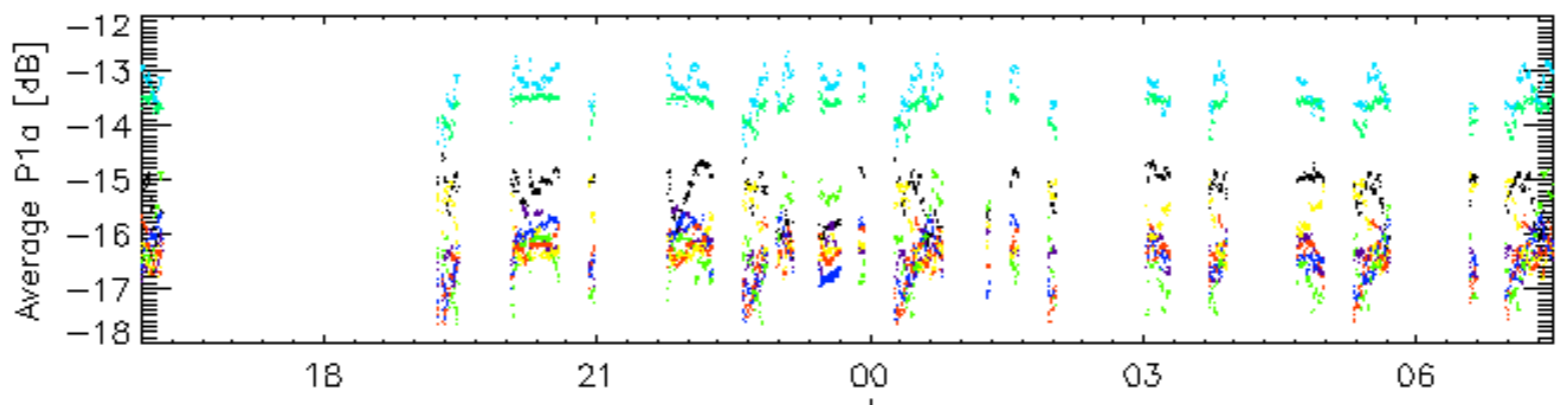


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

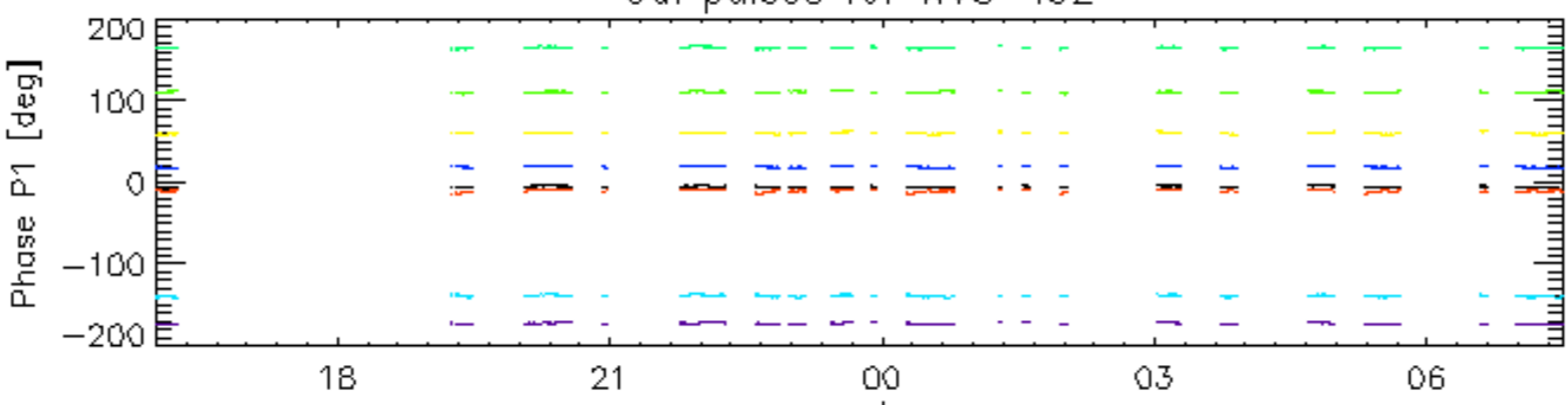


17-Oct

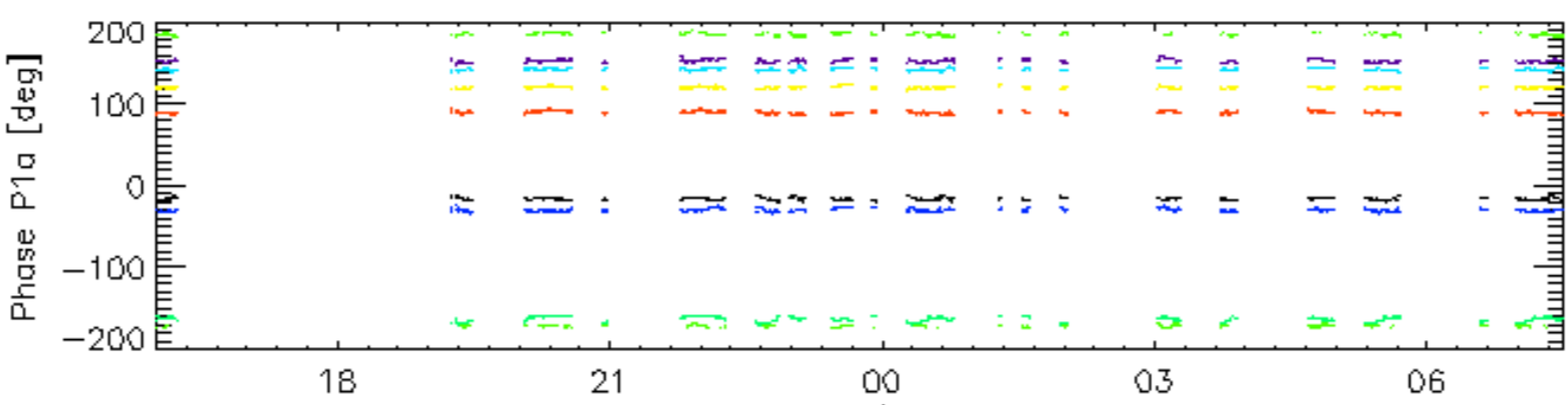


17-Oct

Cal pulses for WVS IS2

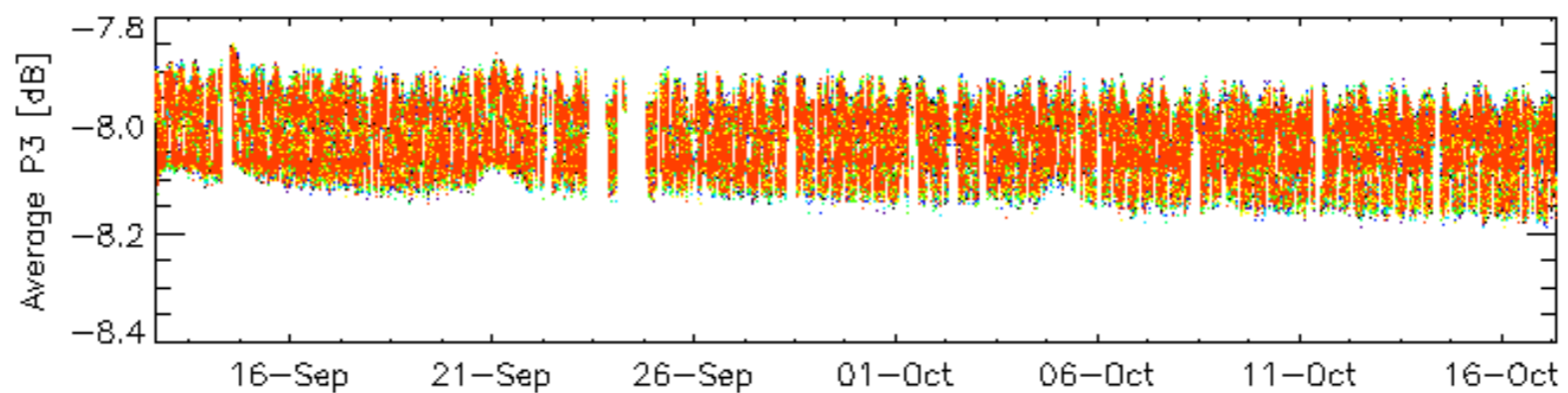
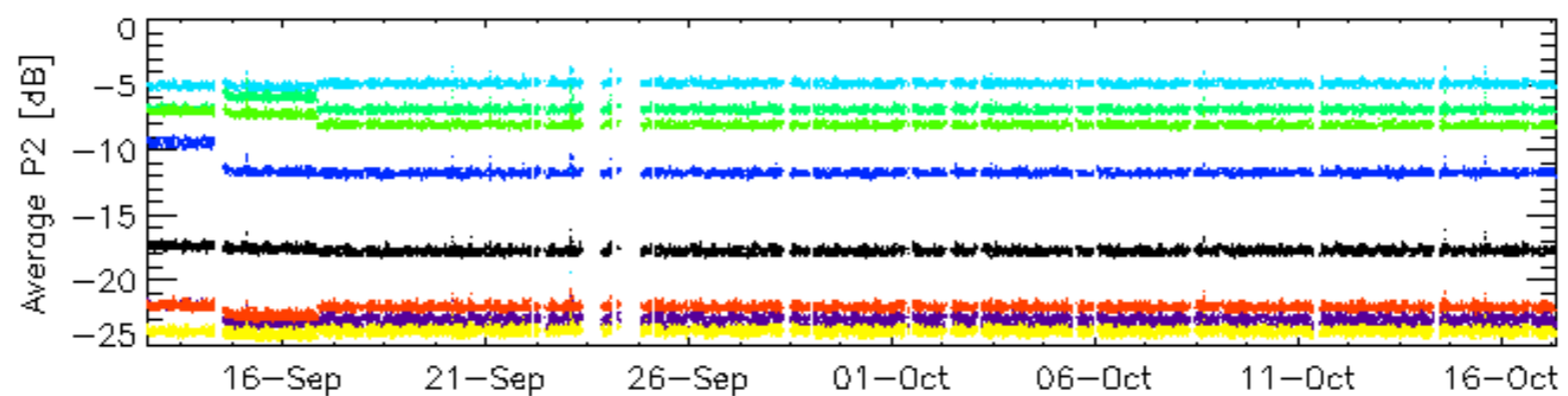
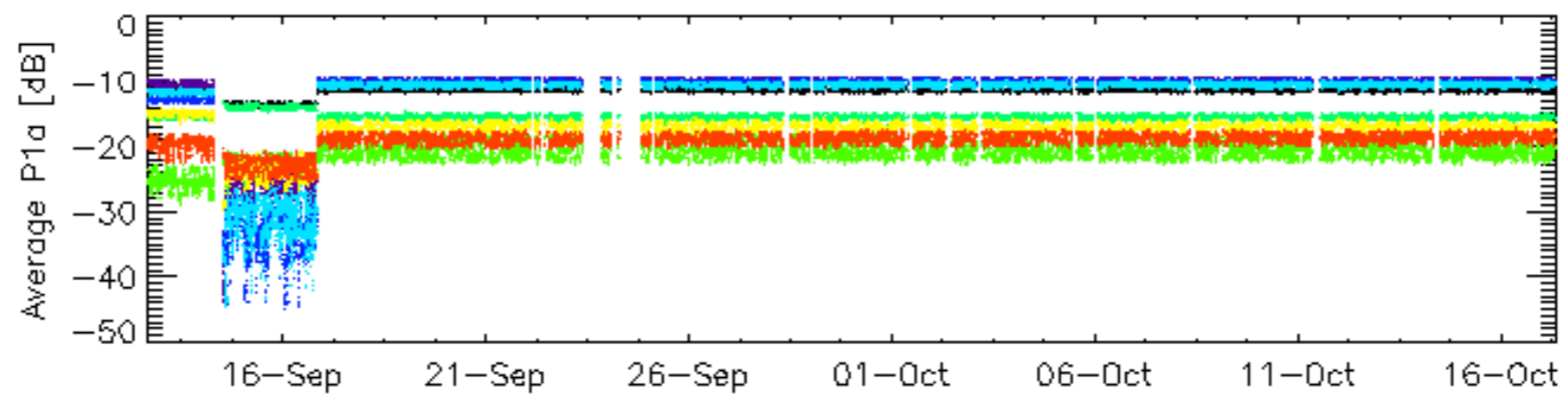
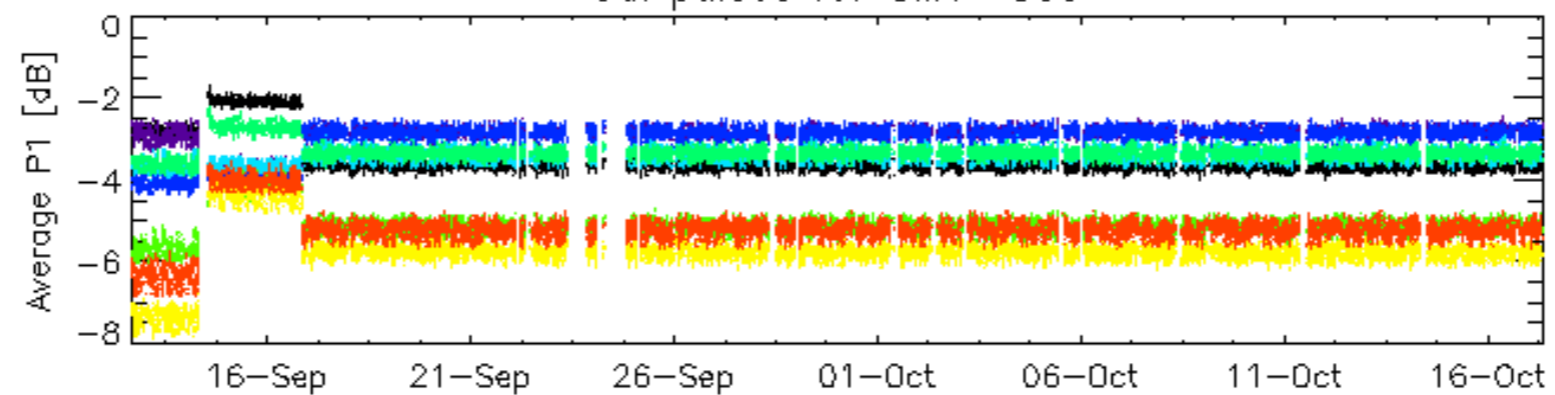


17-Oct



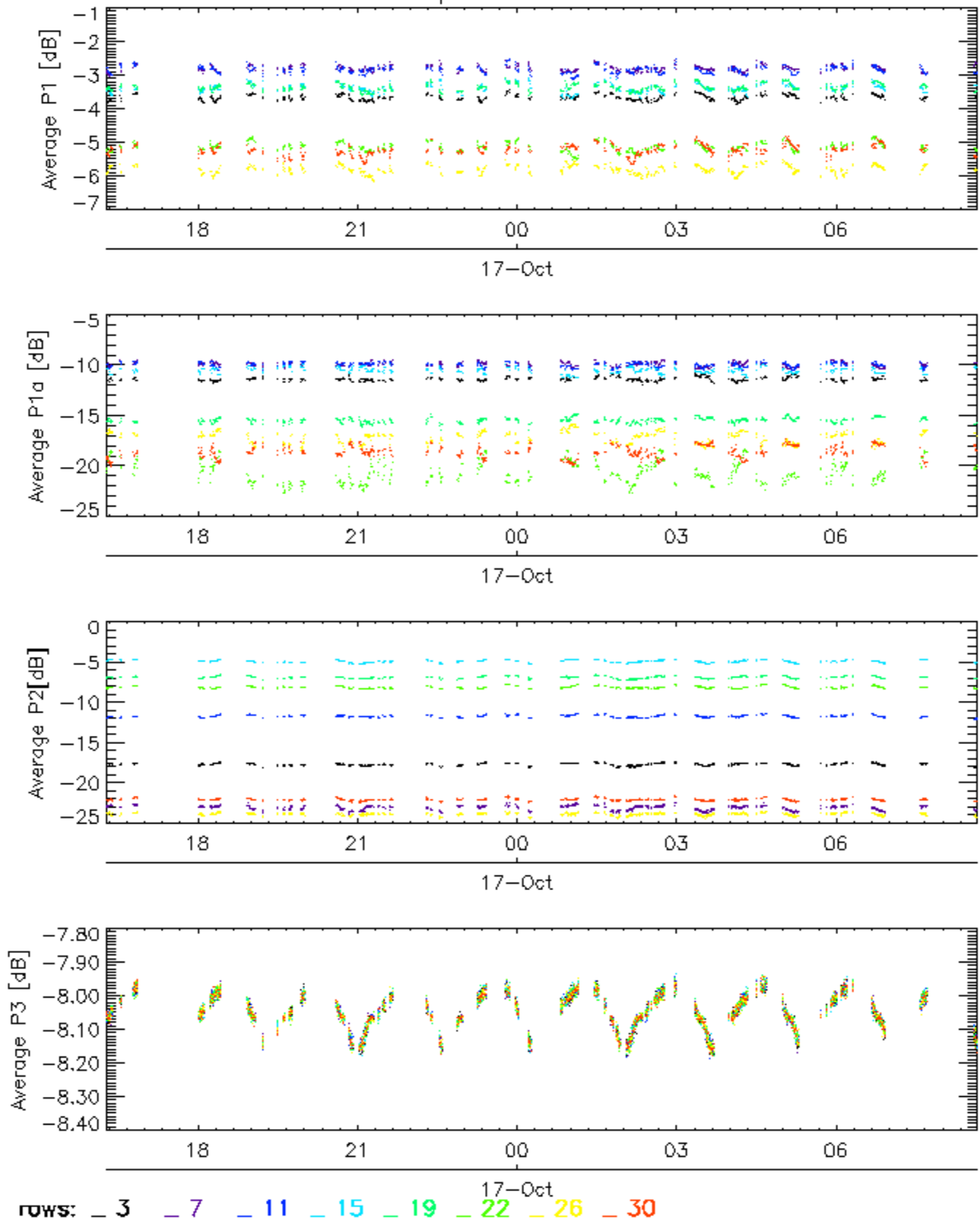
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

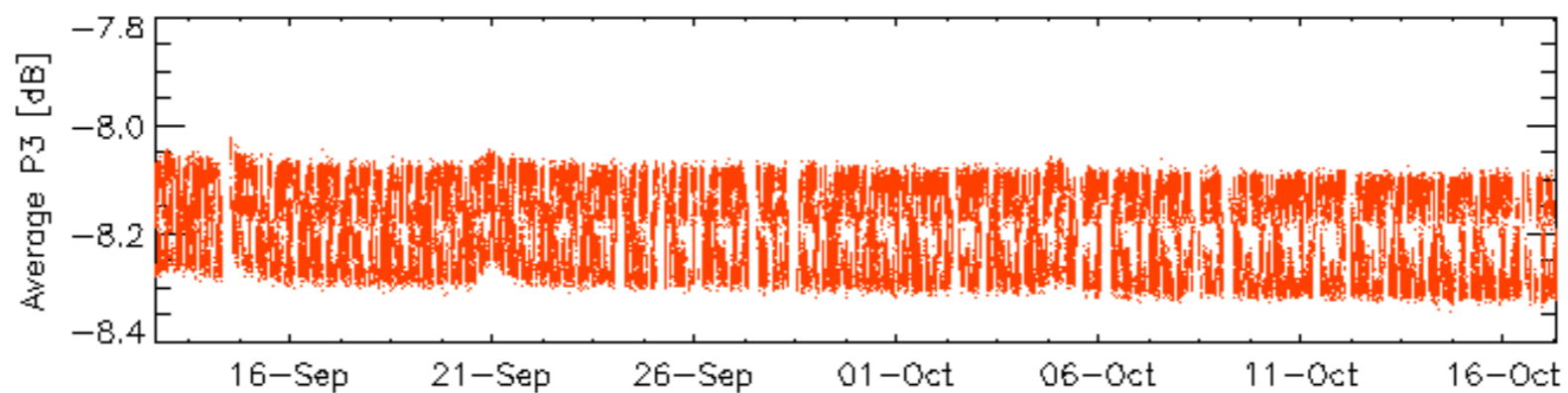
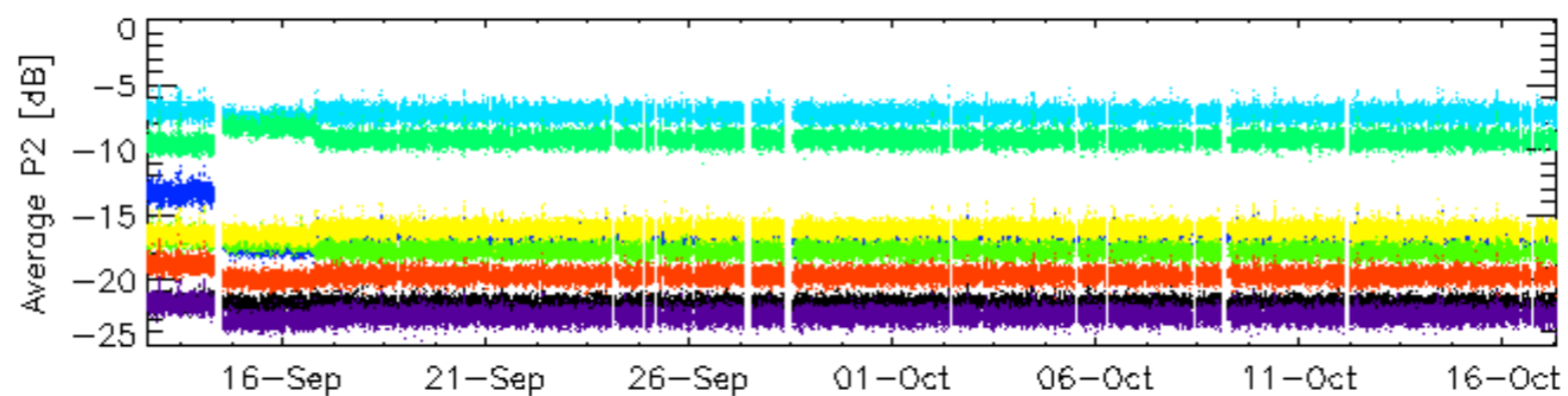
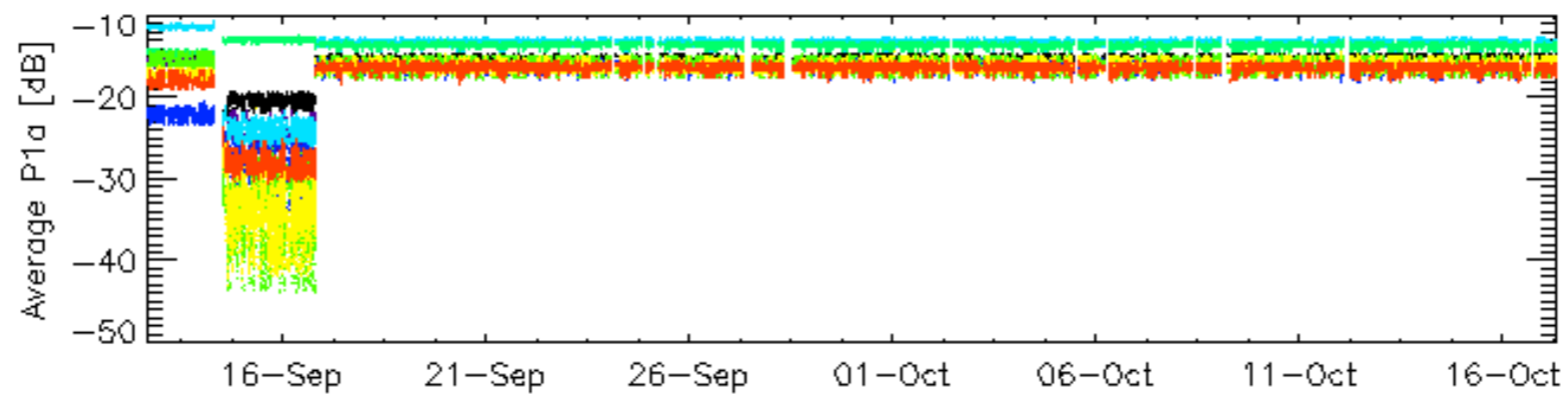
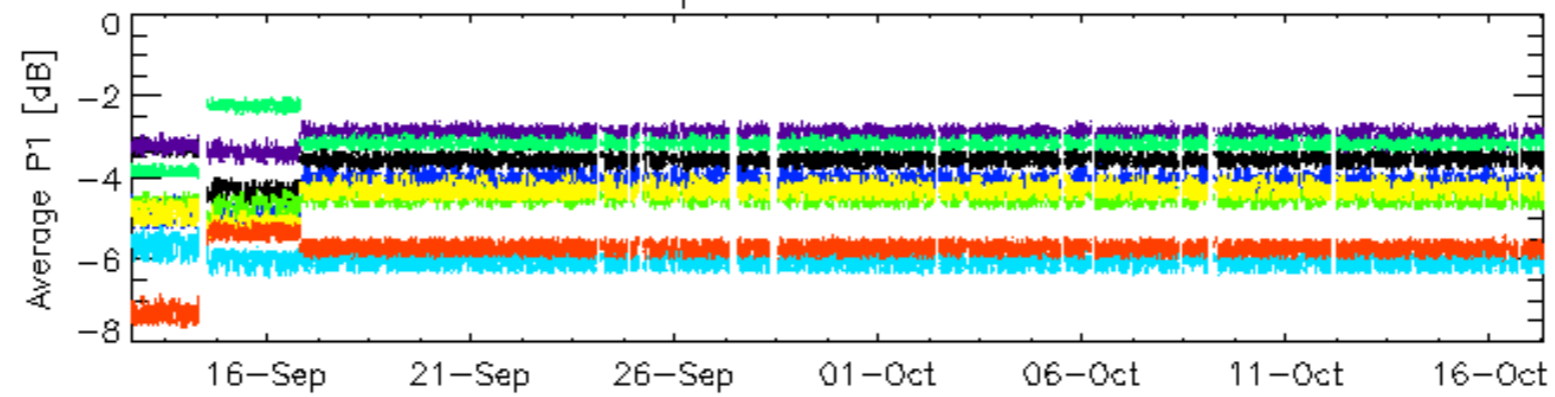


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

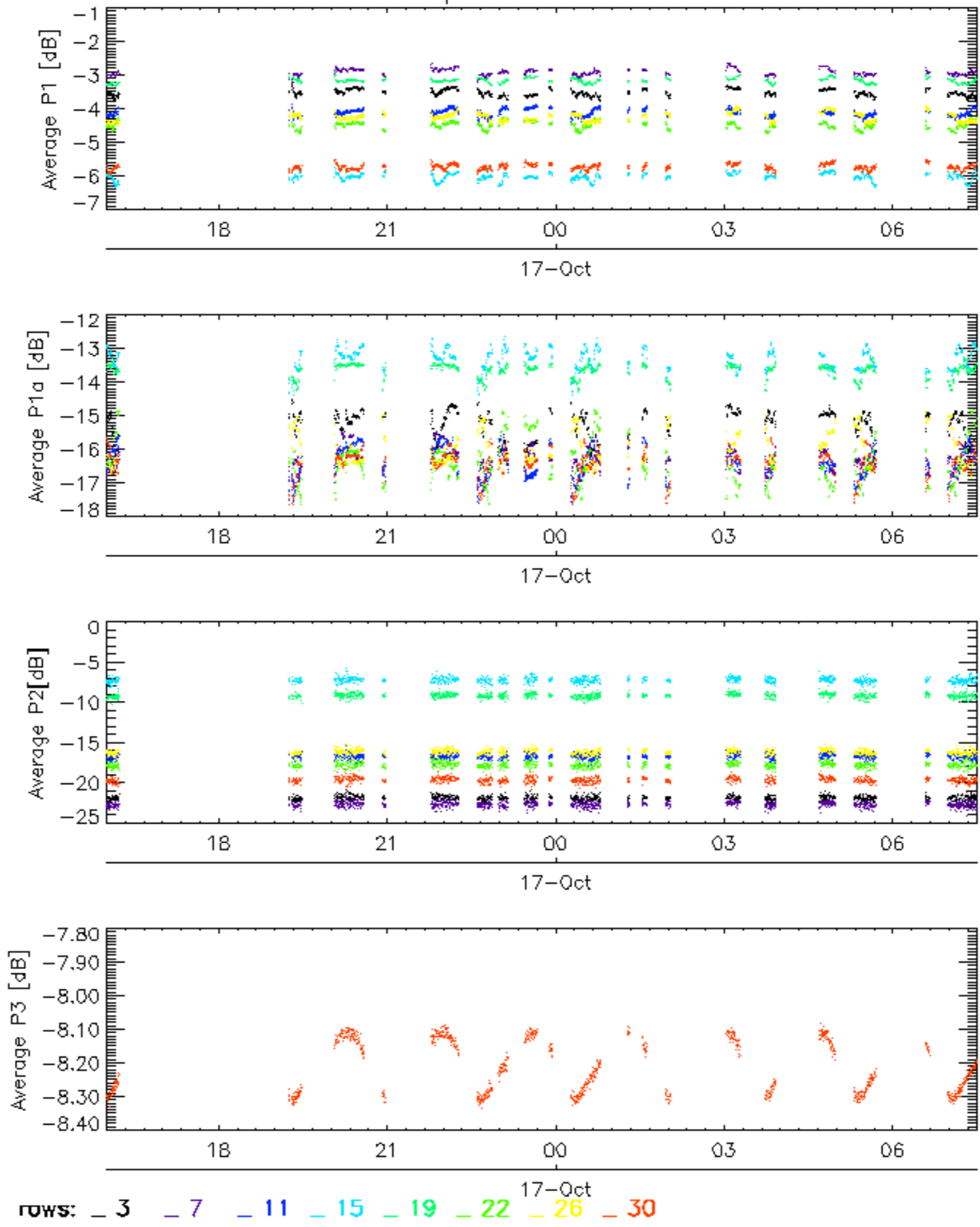


Cal pulses for WVS IS2



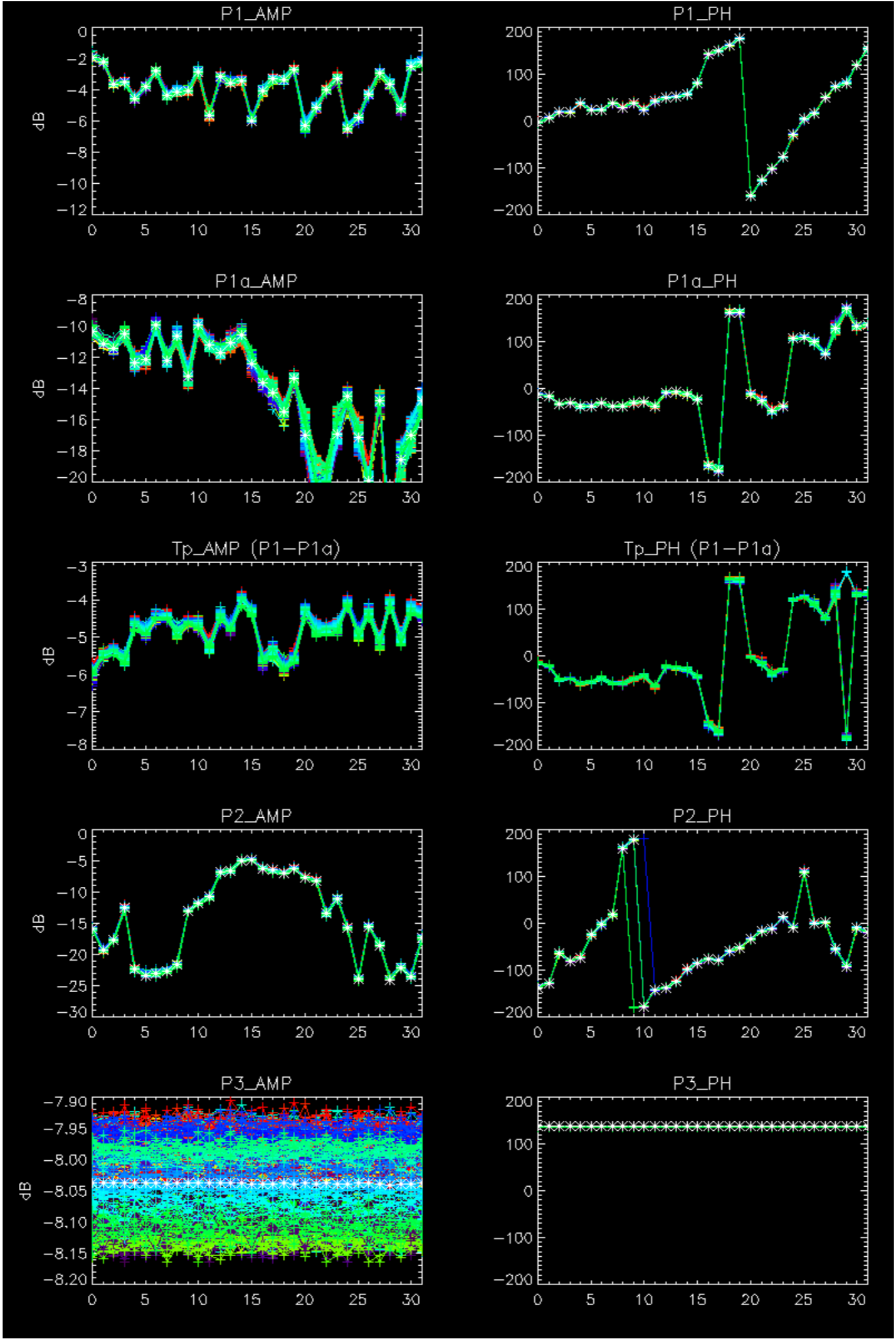
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

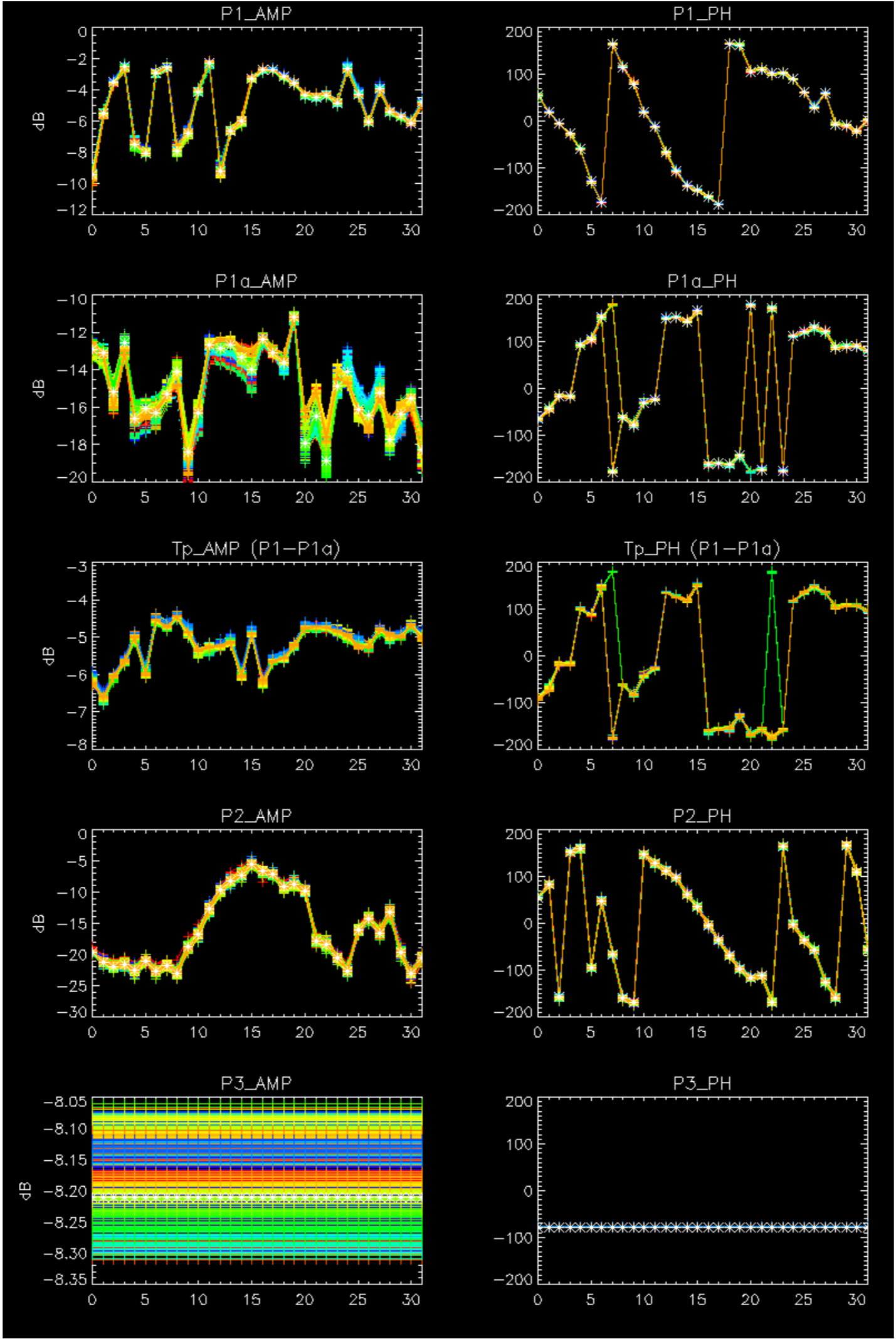
Cal pulses for WVS IS2



No anomalies observed on available browse products

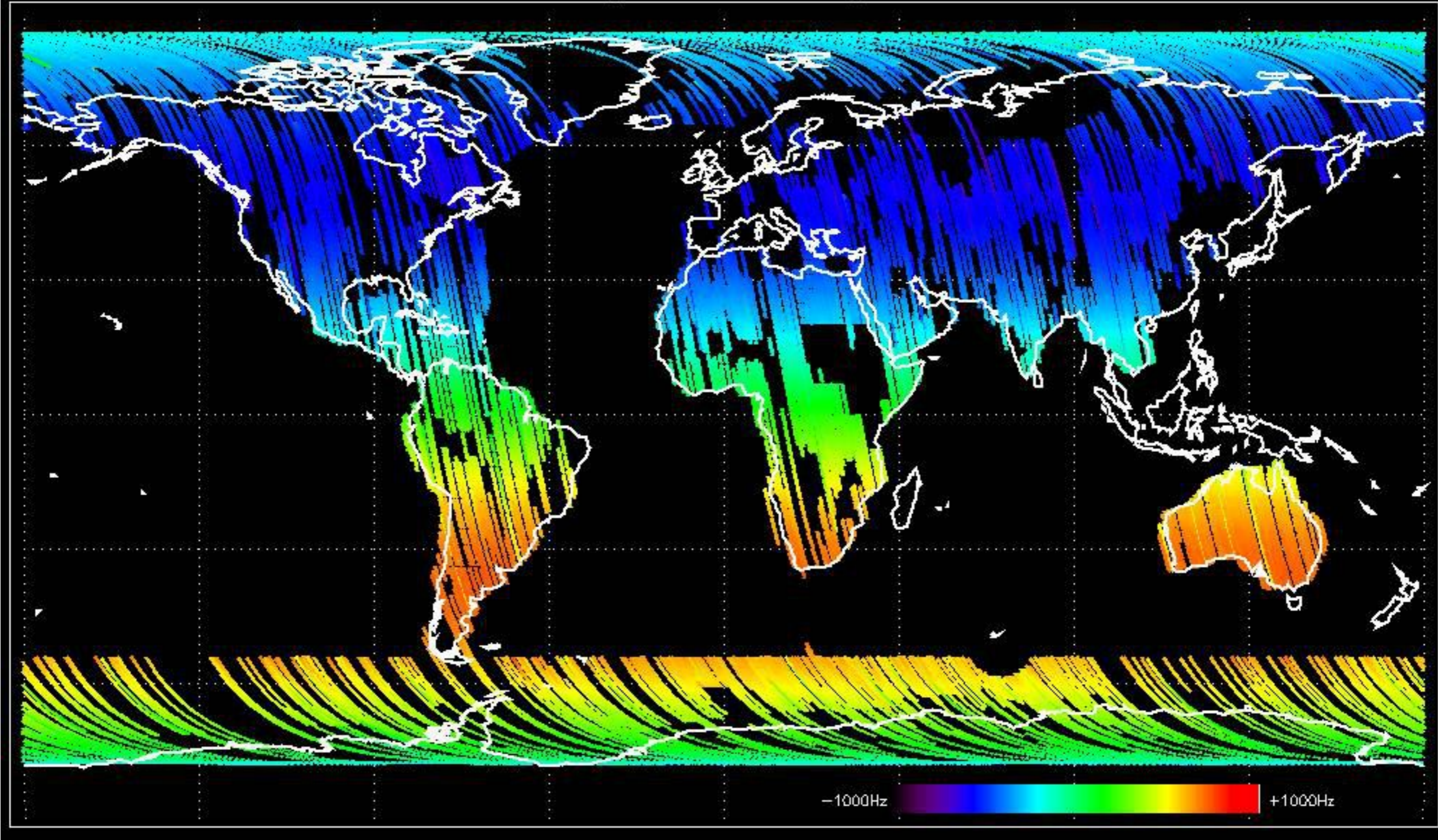
No anomalies observed.



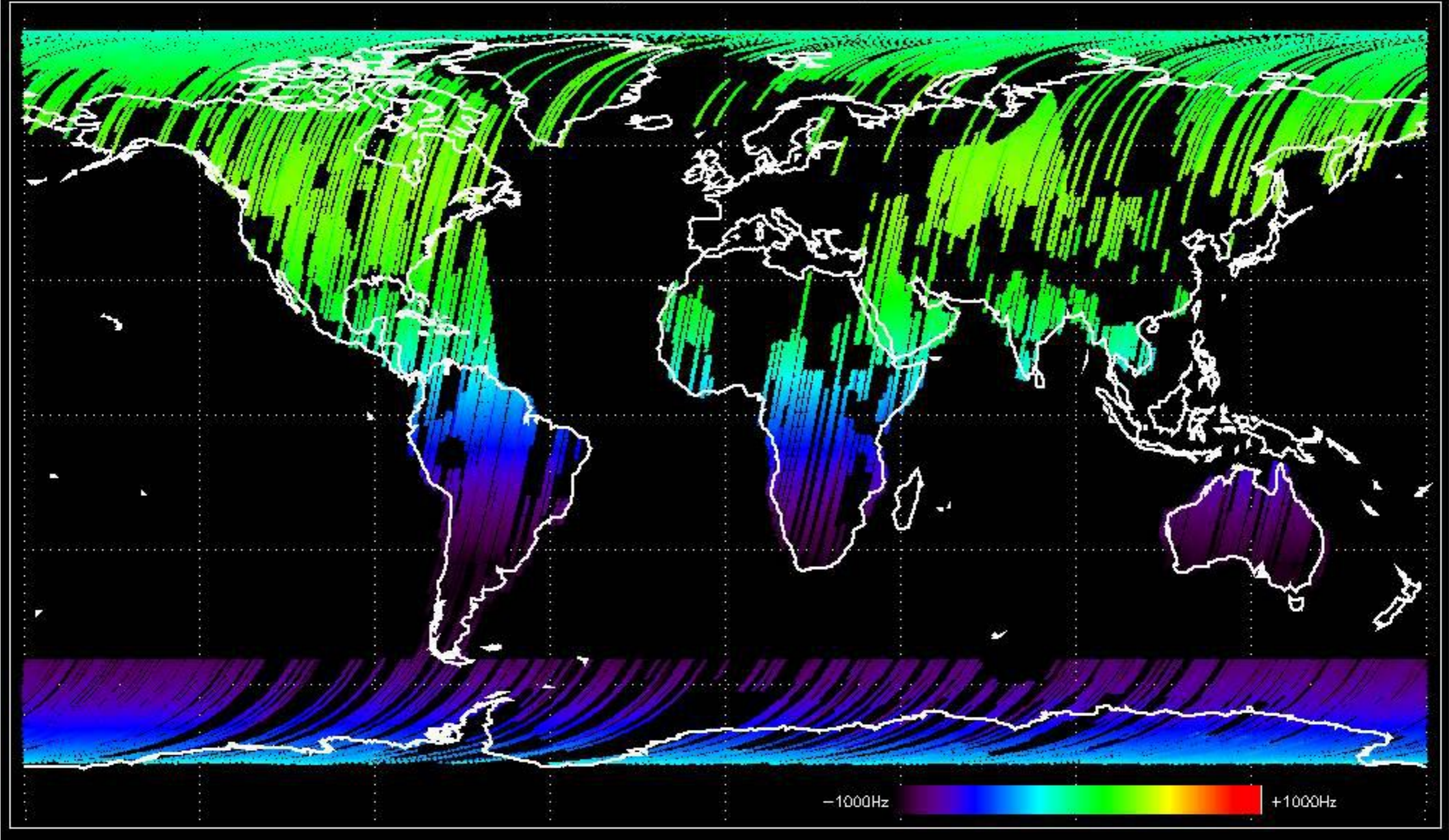


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

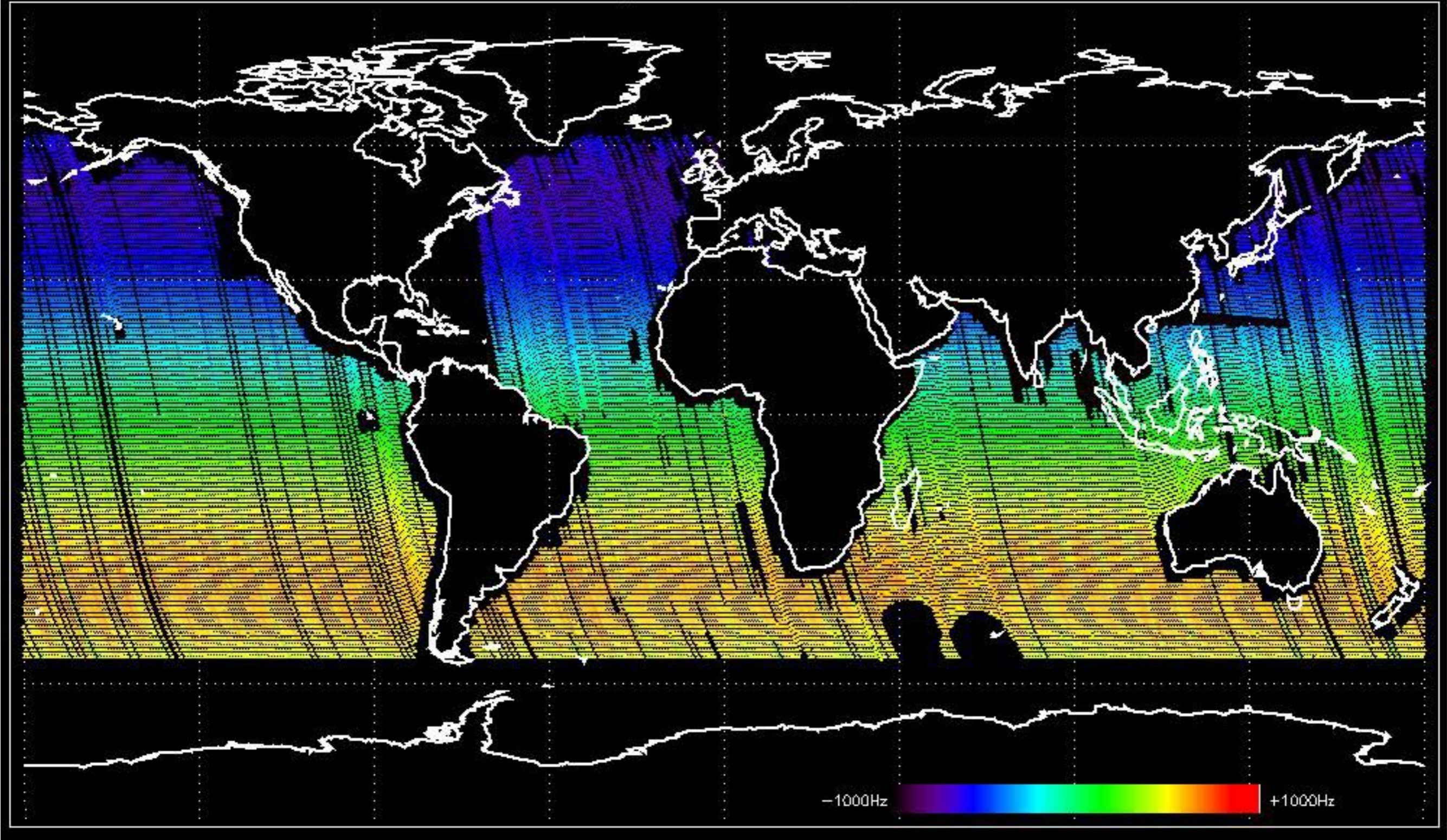
Doppler 'GM1' 'SS1' ascending



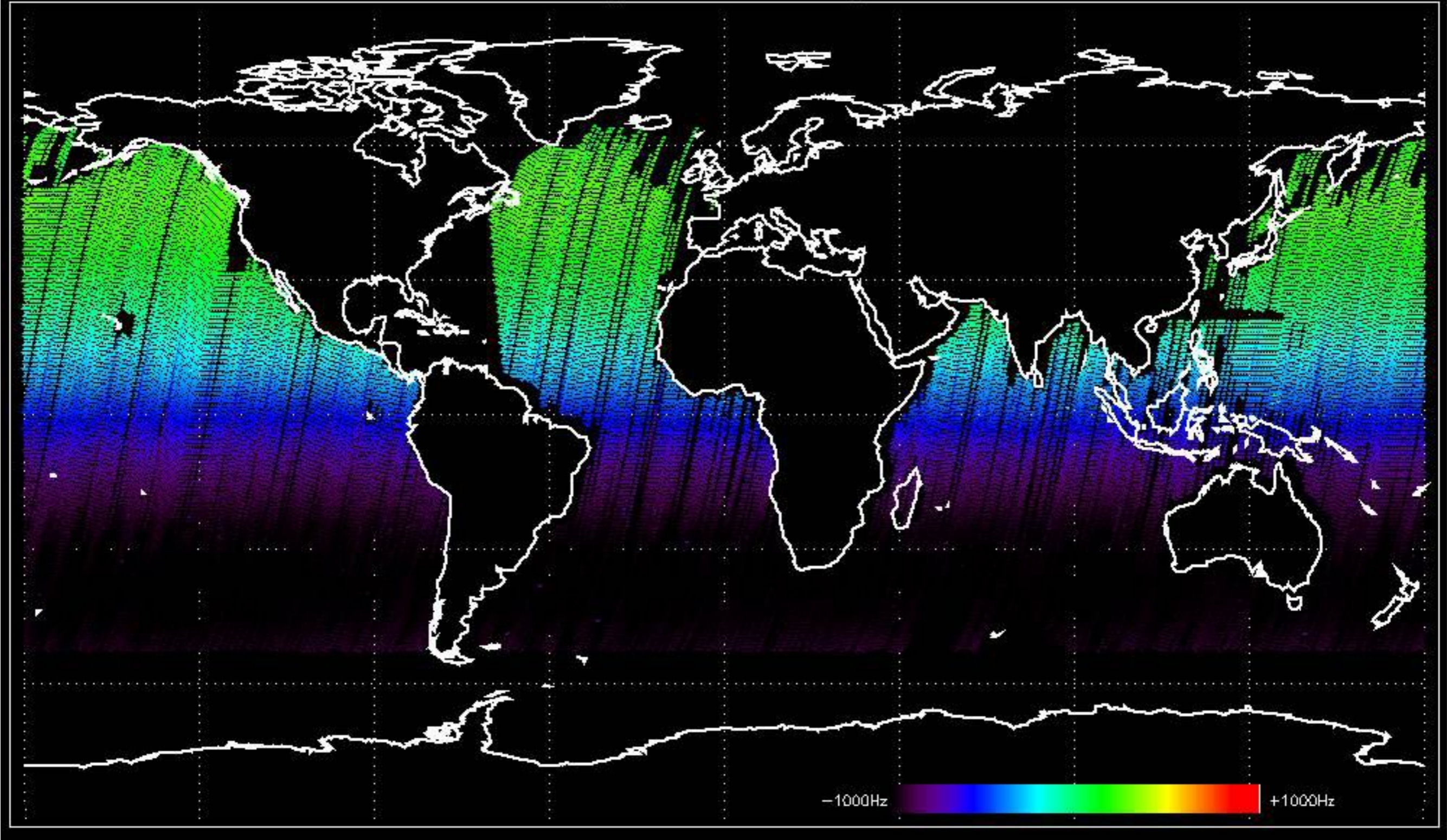
Doppler 'GM1' 'SS1' descending



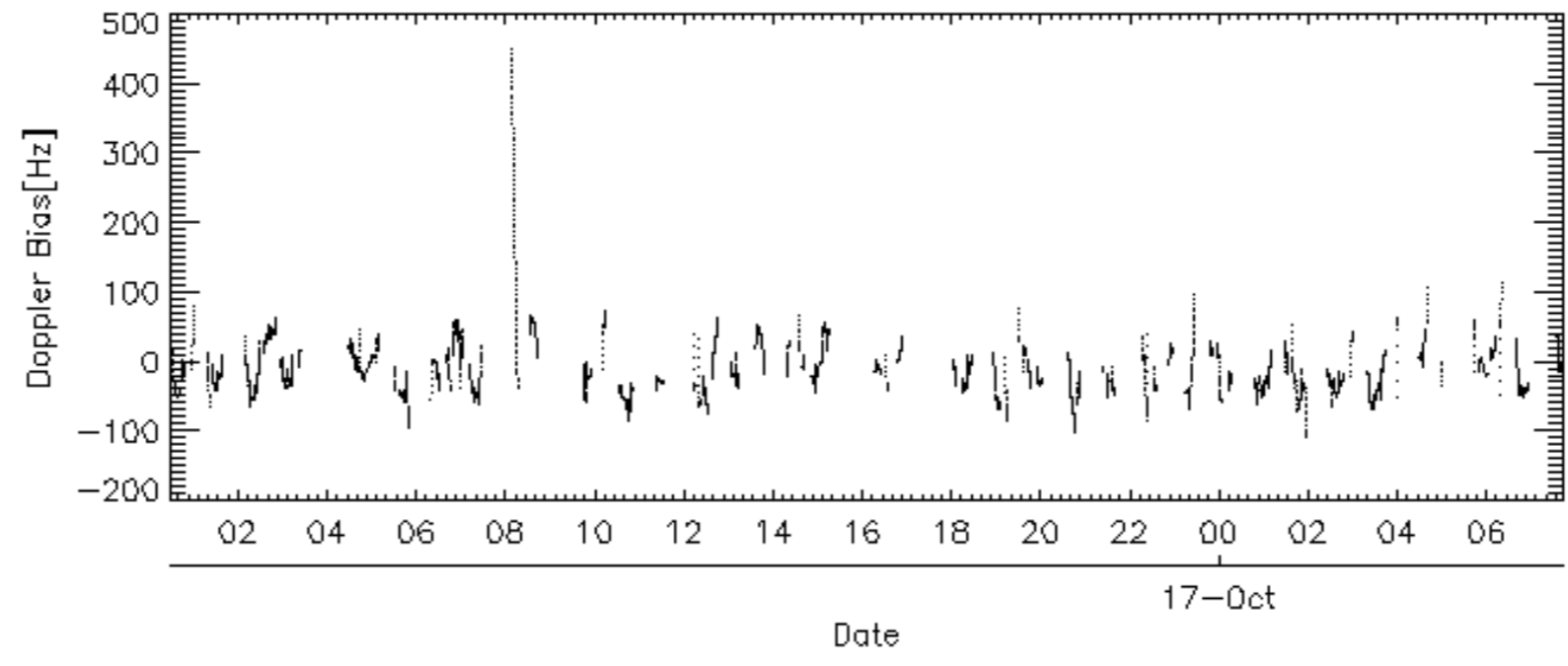
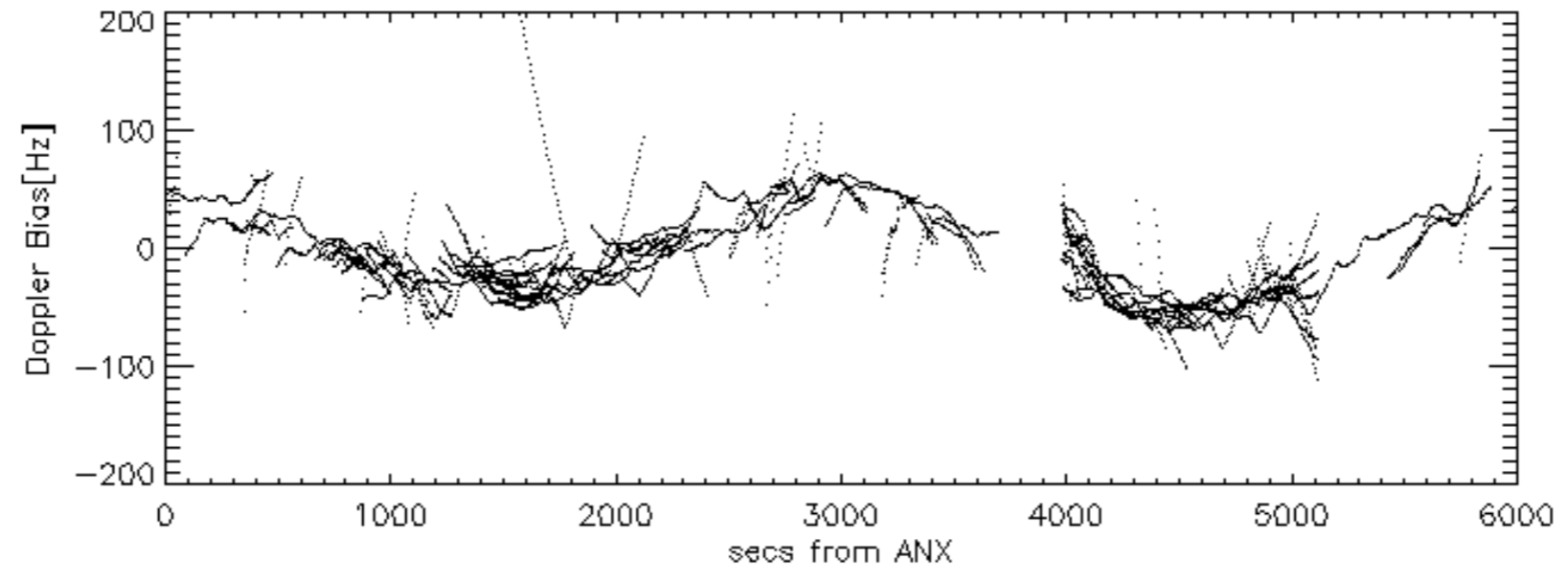
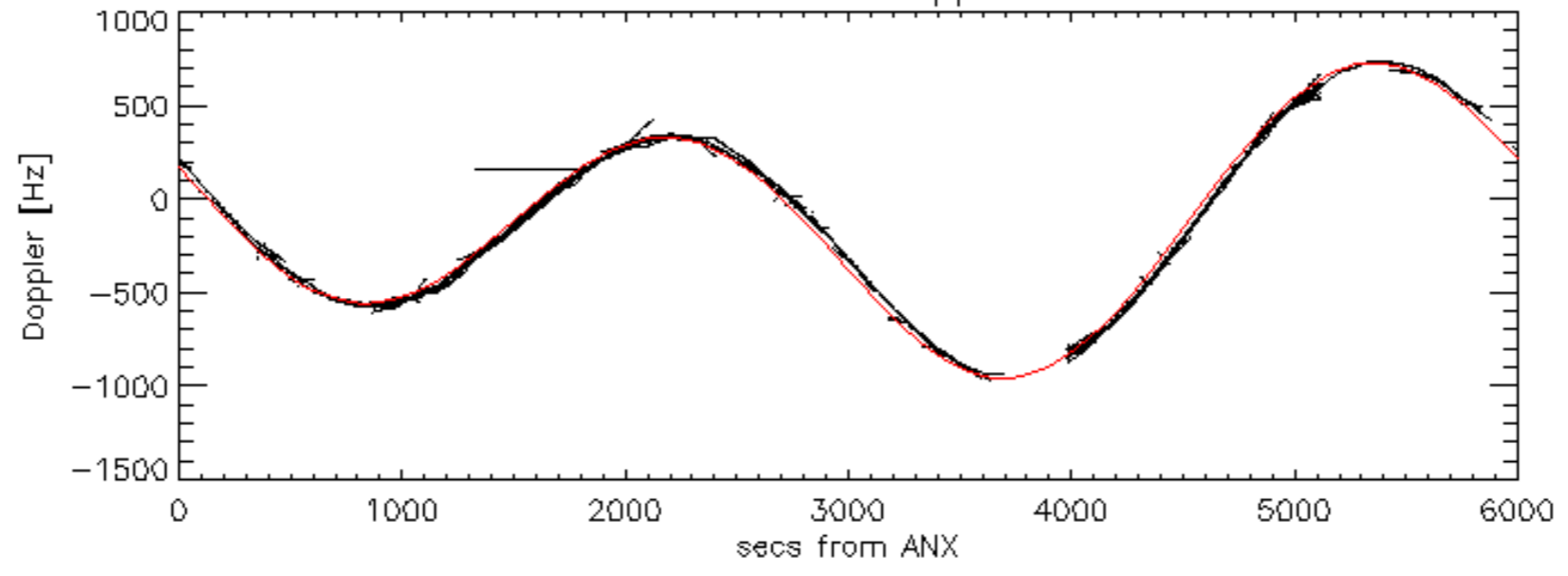
Doppler 'WVS' 'IS2' ascending

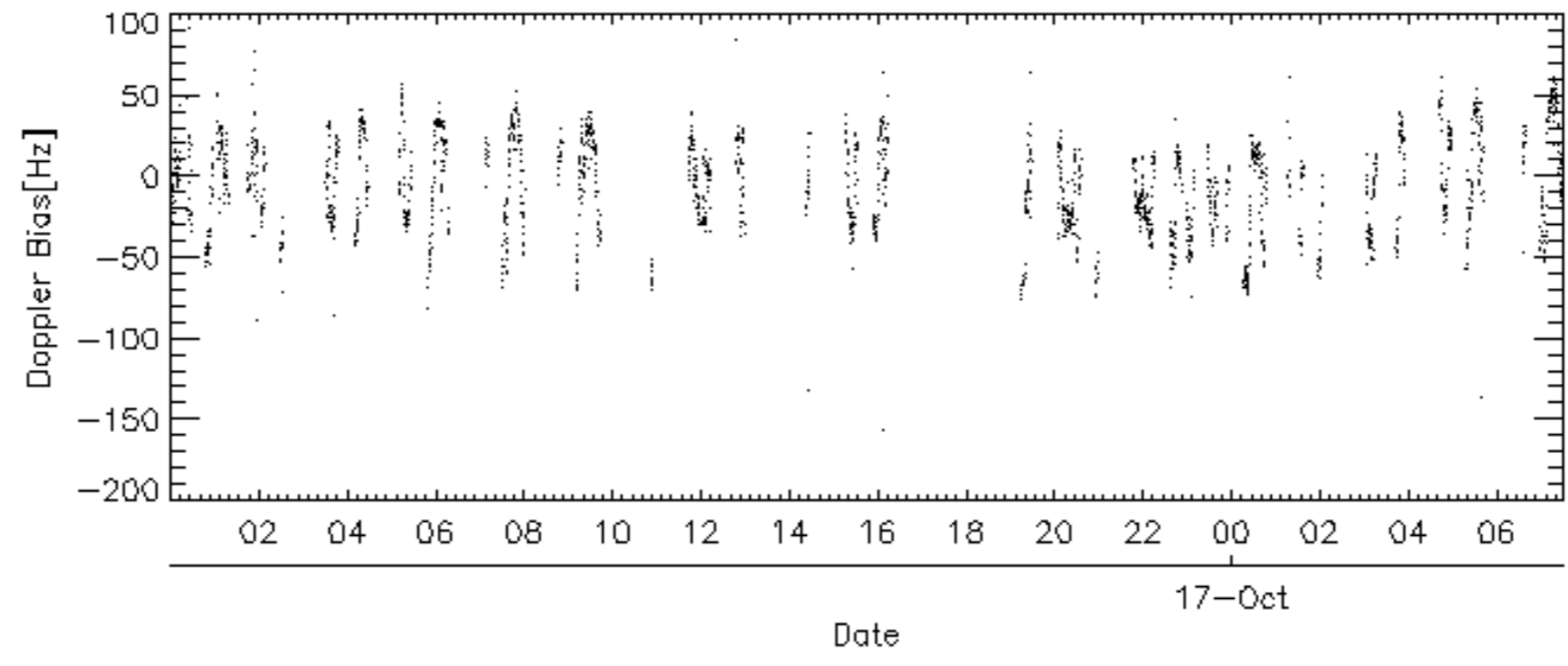
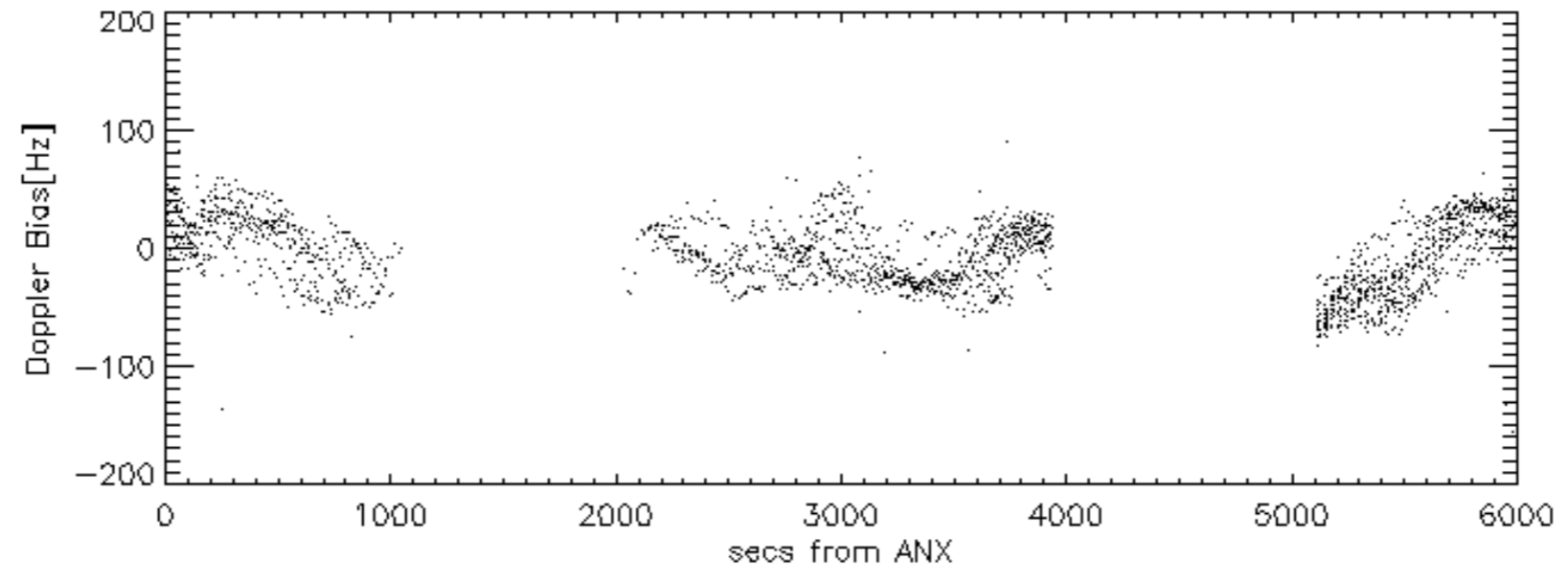
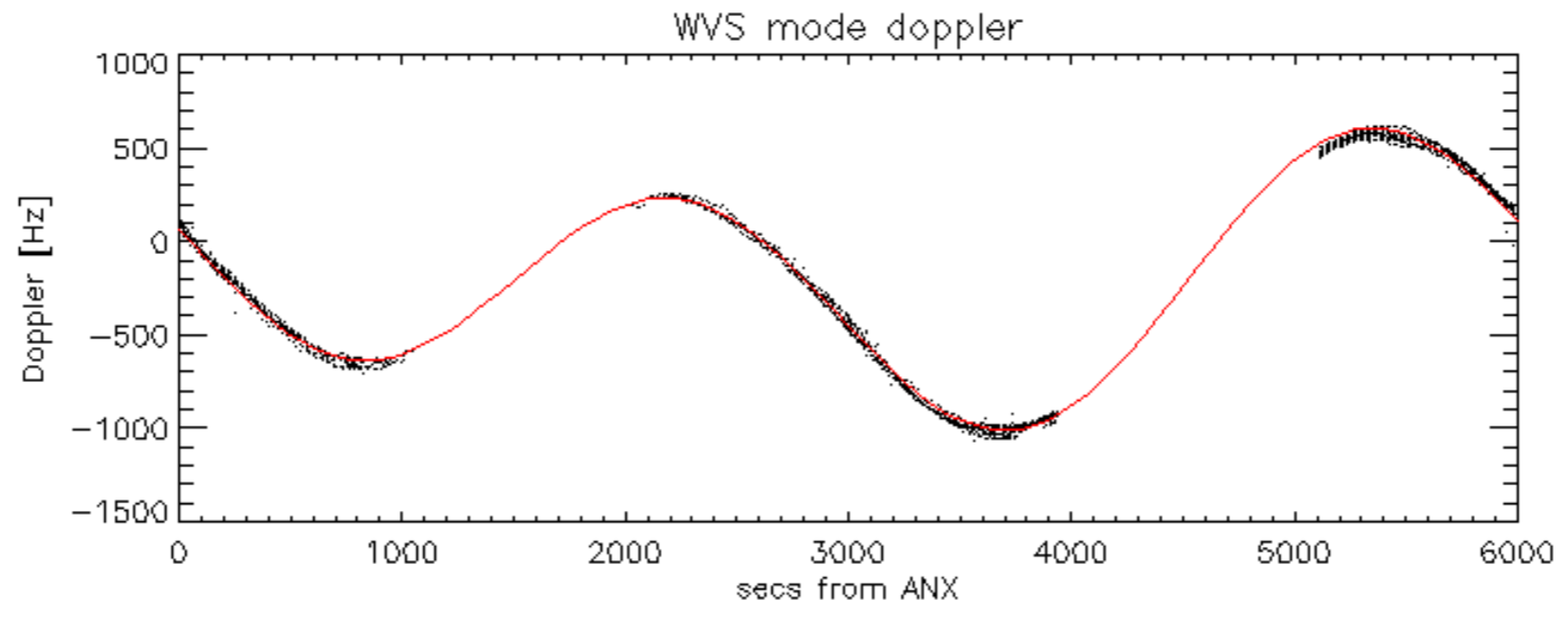


Doppler 'WVS' 'IS2' descending

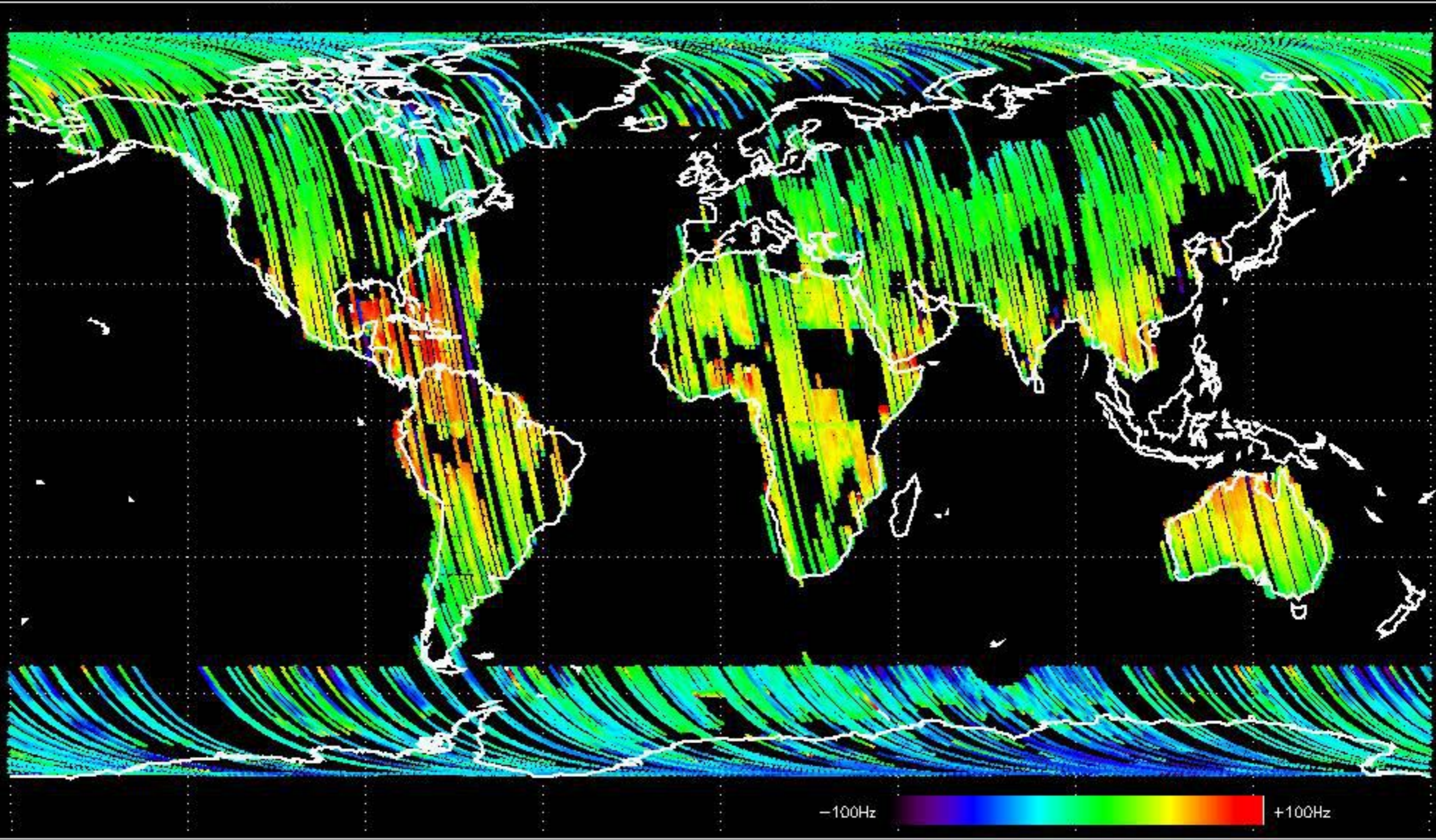


GM1 mode doppler

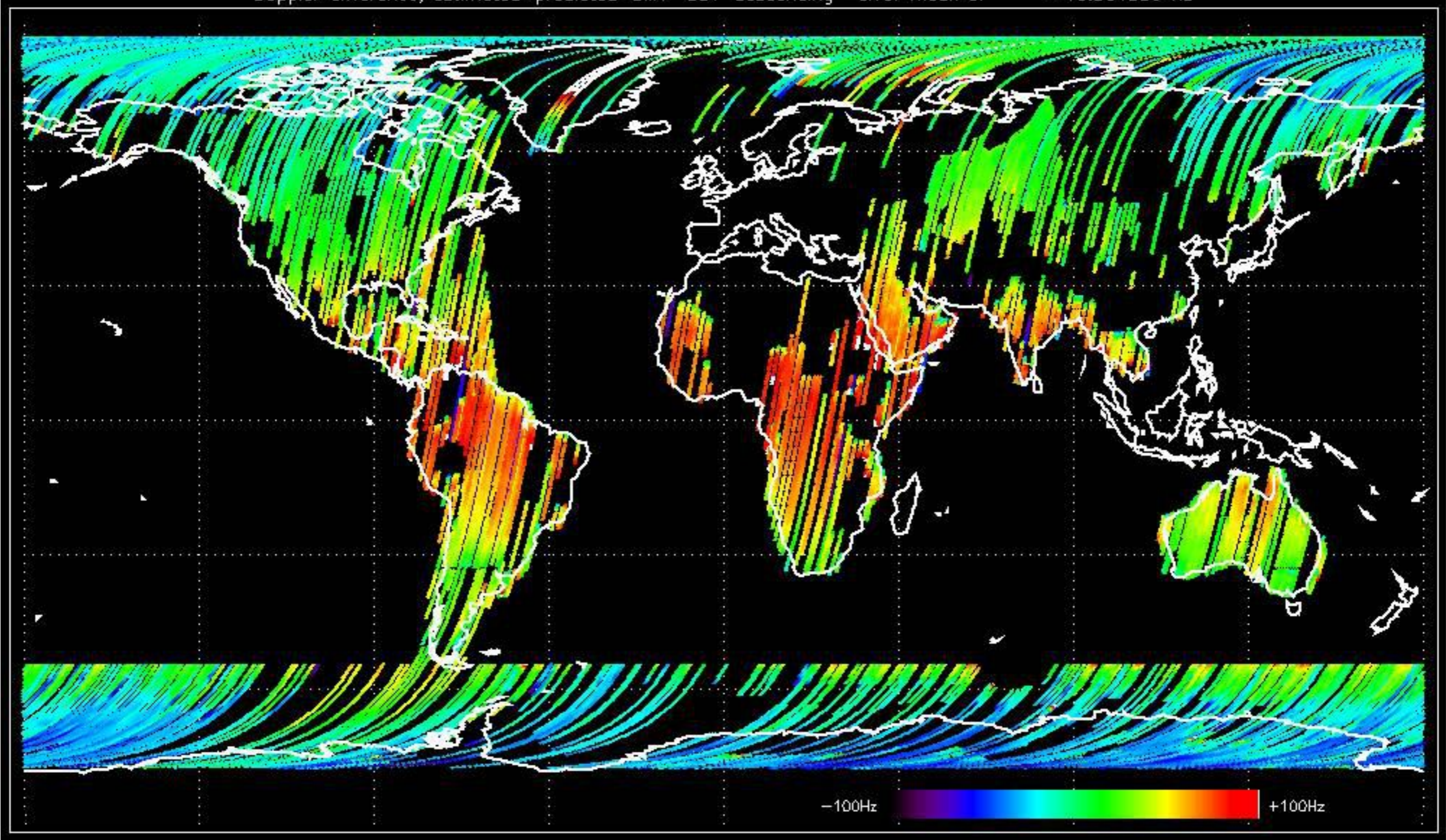




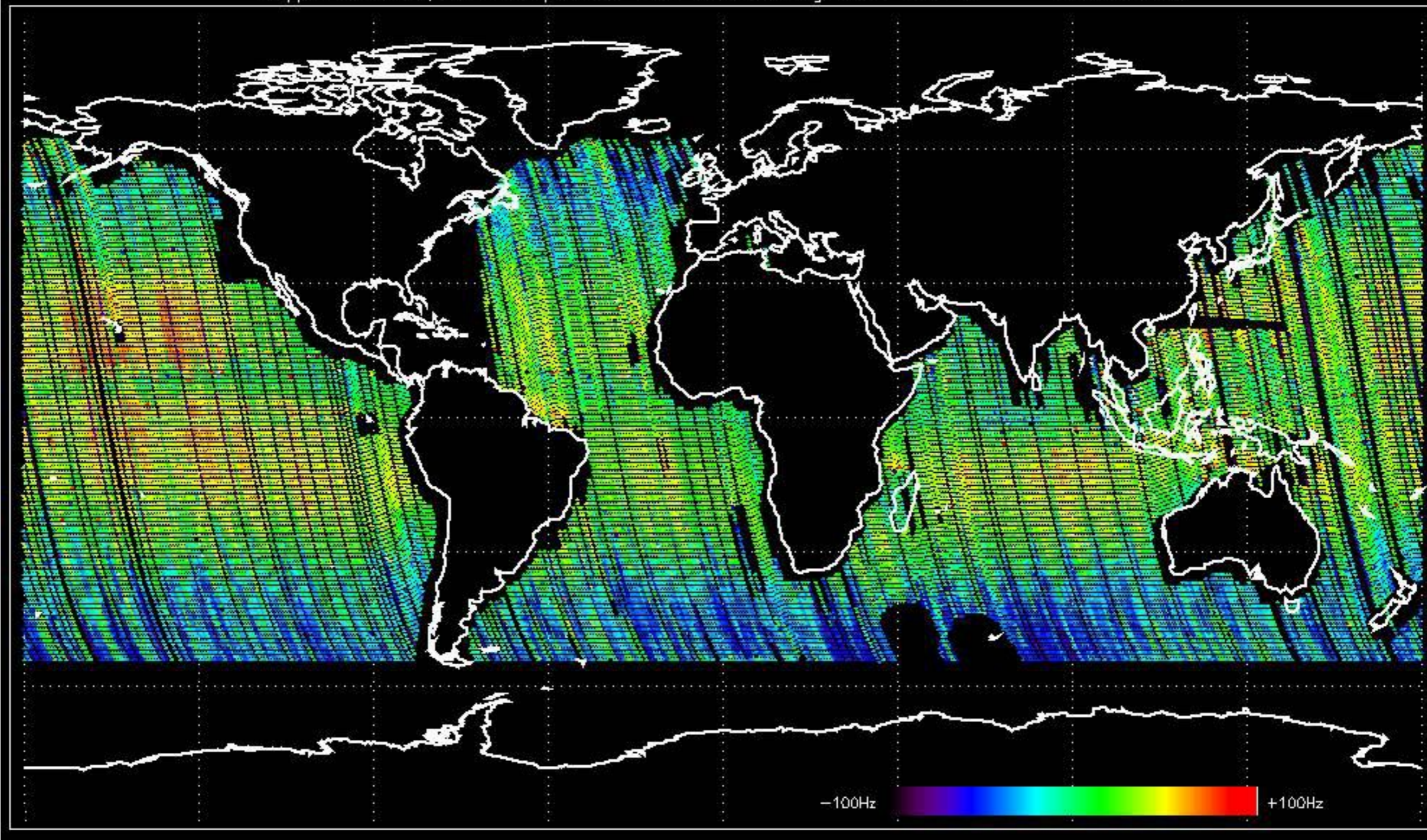
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.305842 Hz



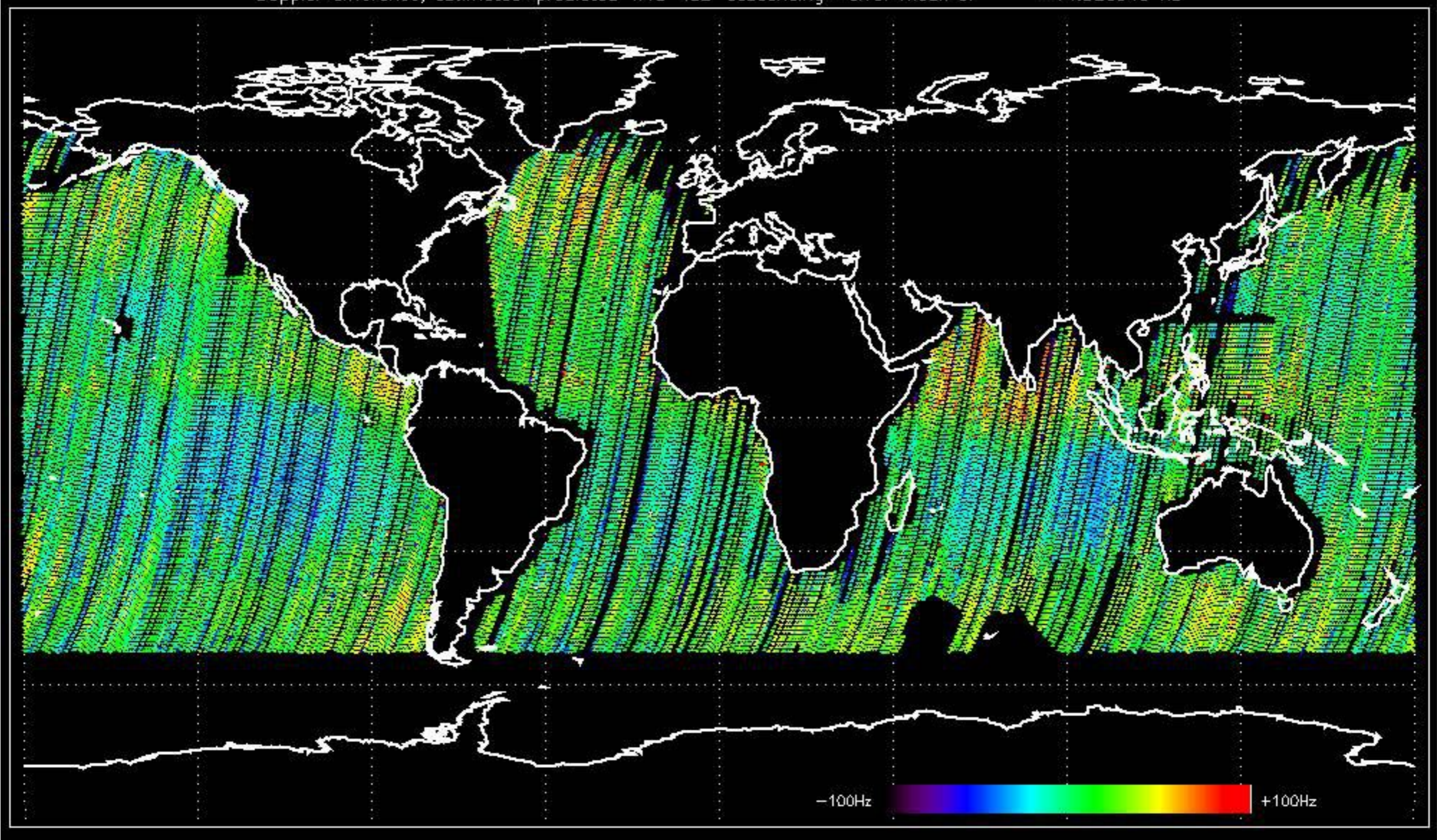
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.961356 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.326469 Hz

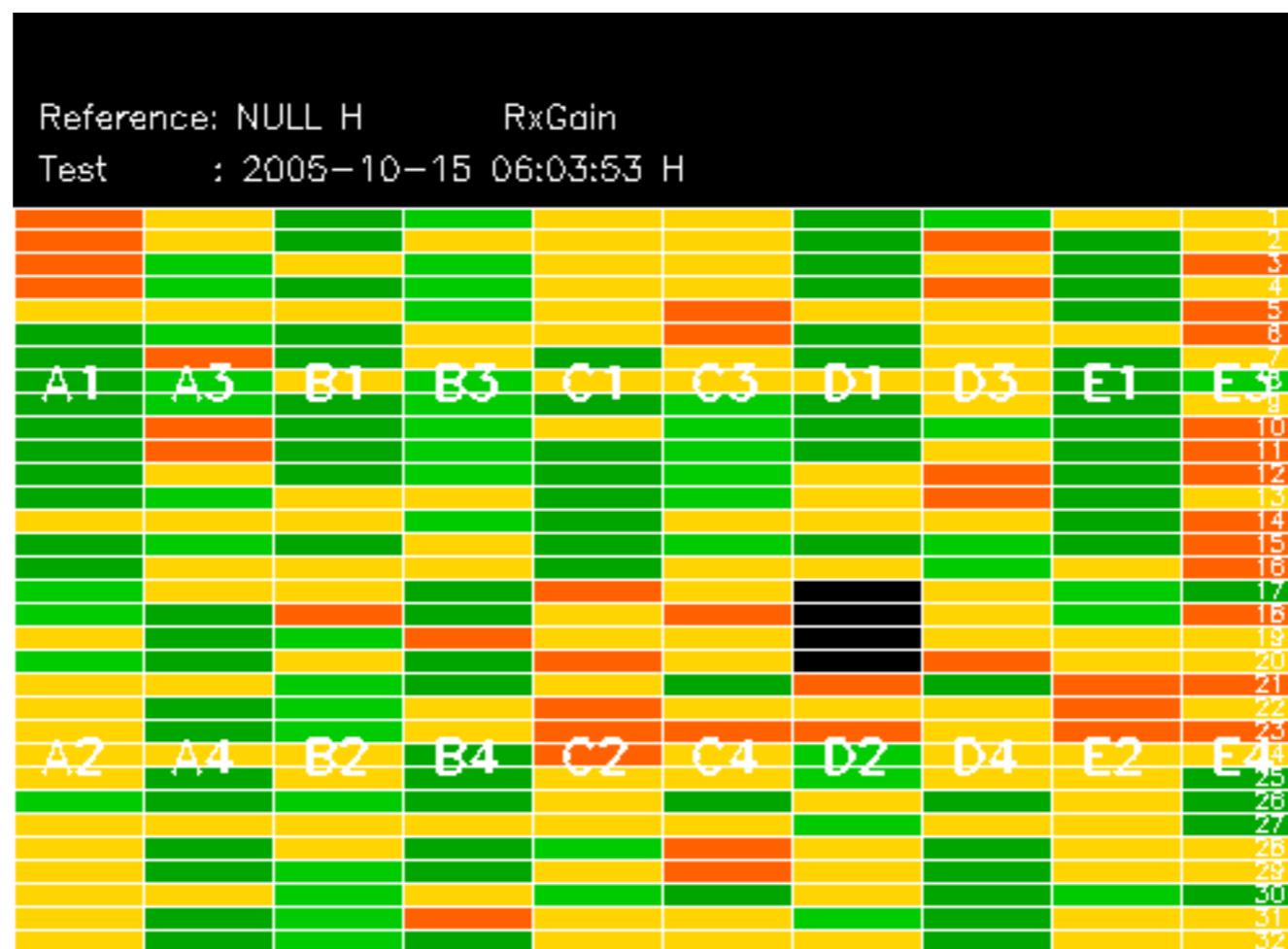


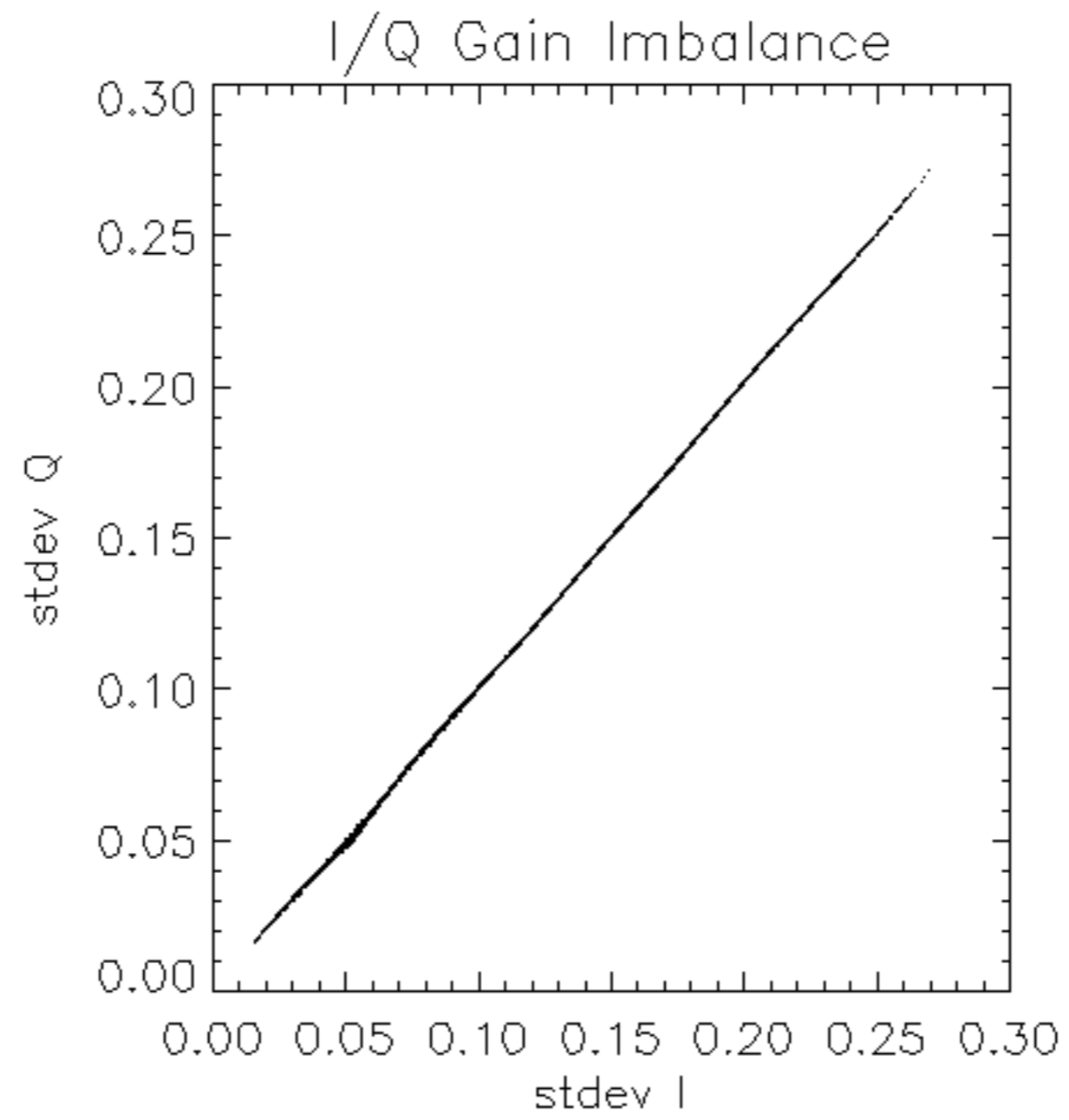
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -14.920943 Hz

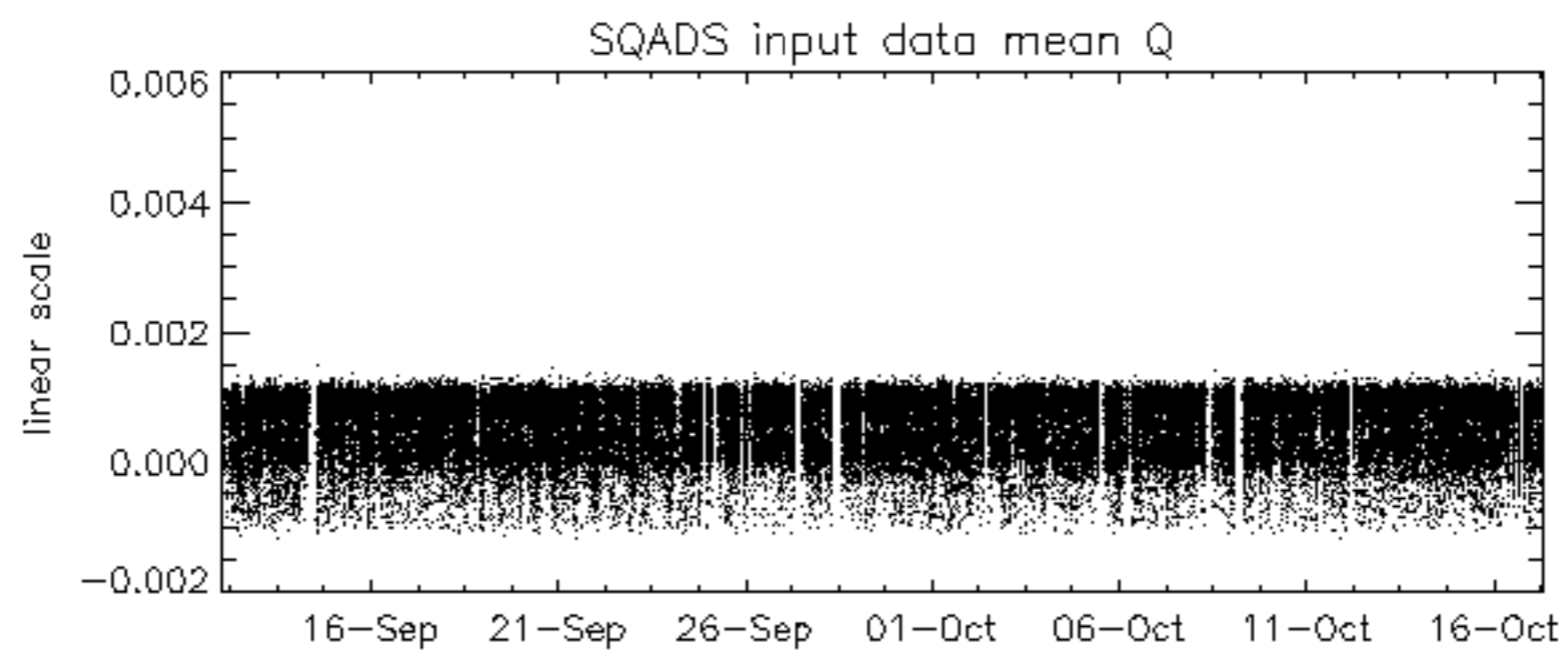
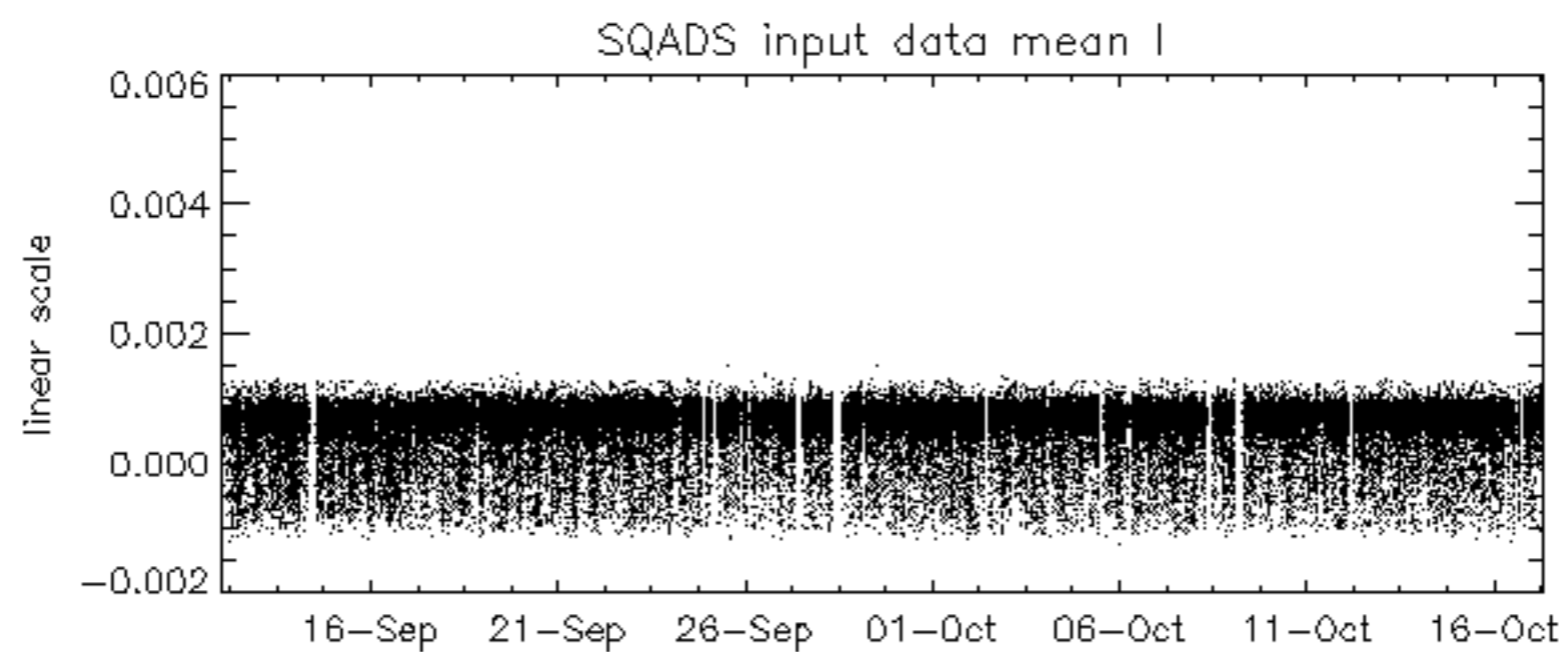
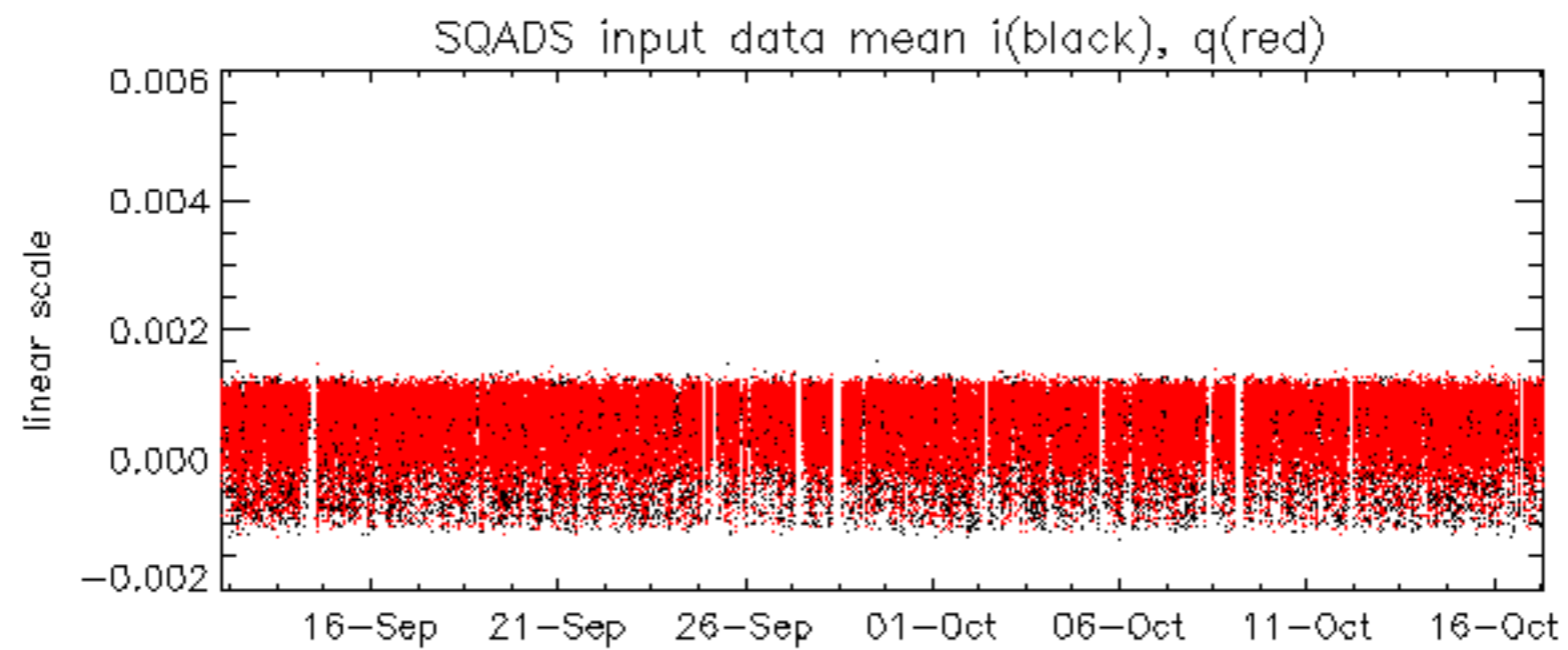


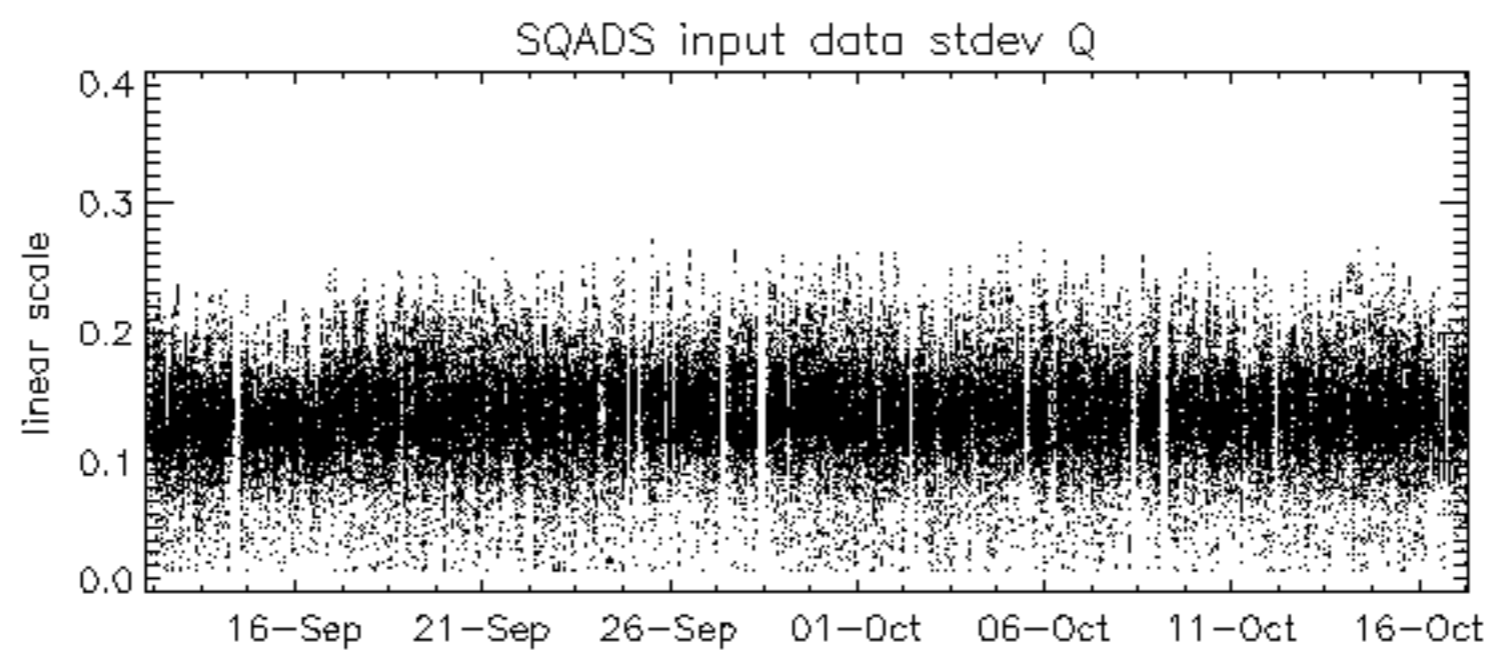
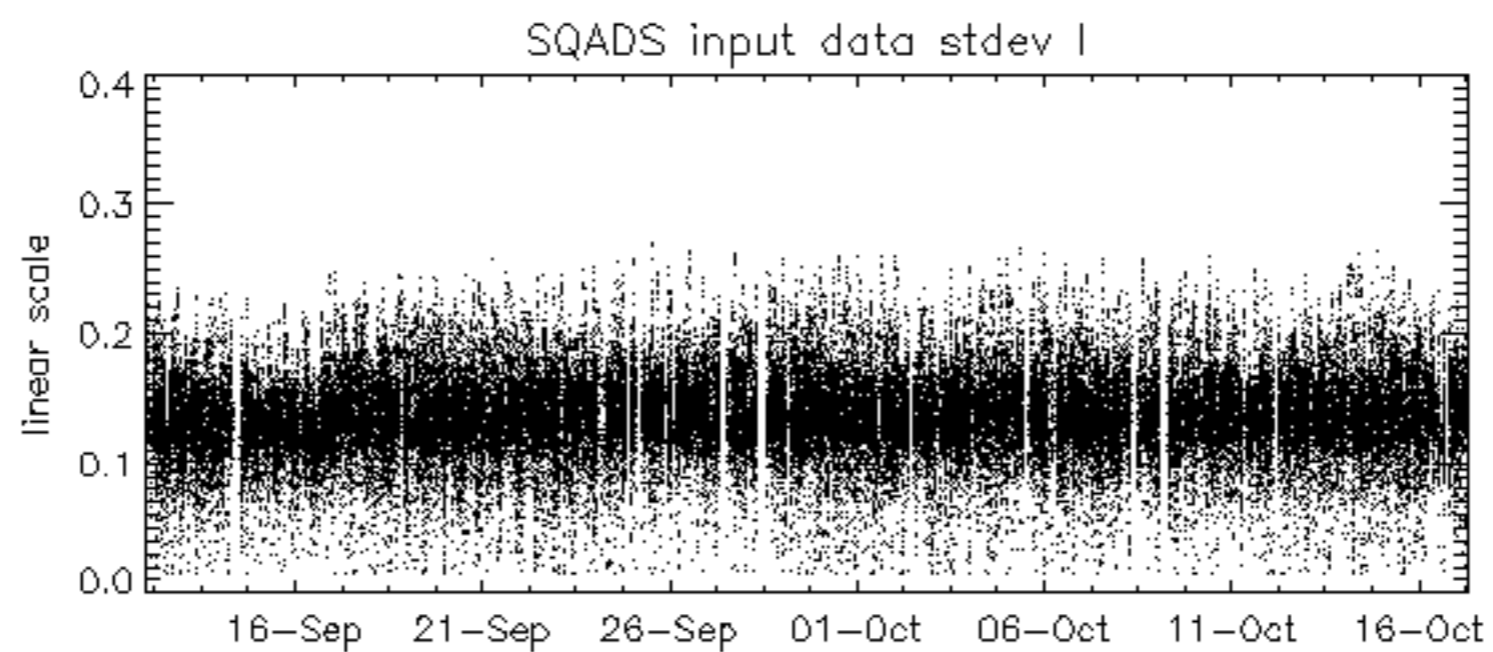
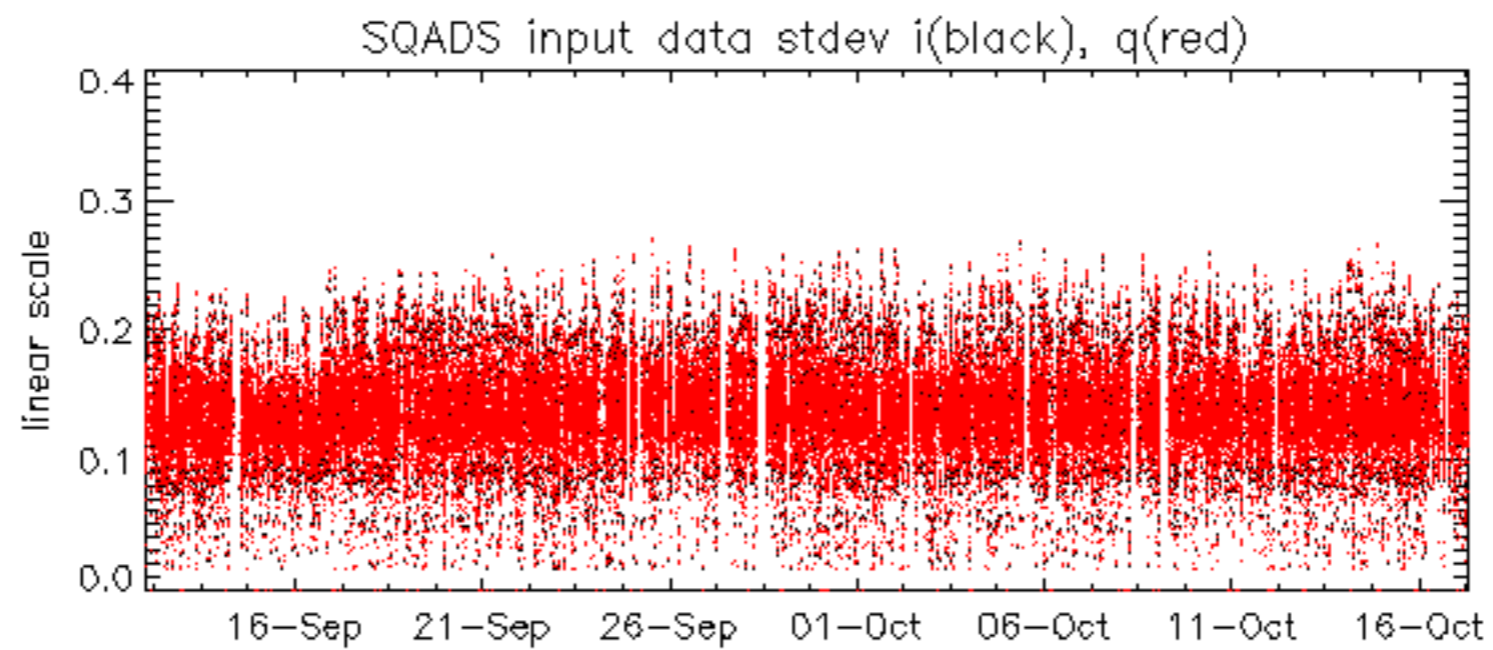
No anomalies observed on available MS products:

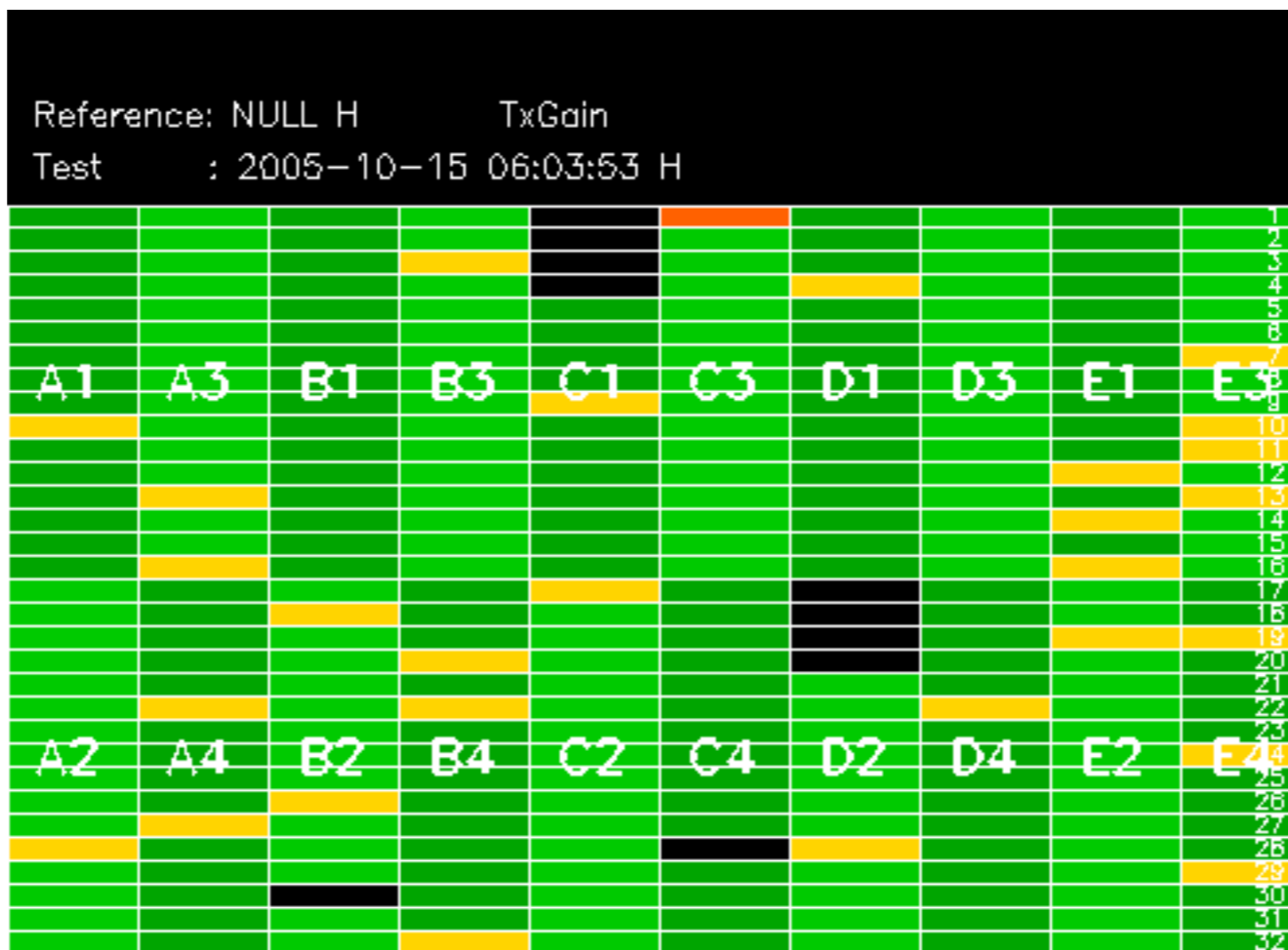
No anomalies observed.







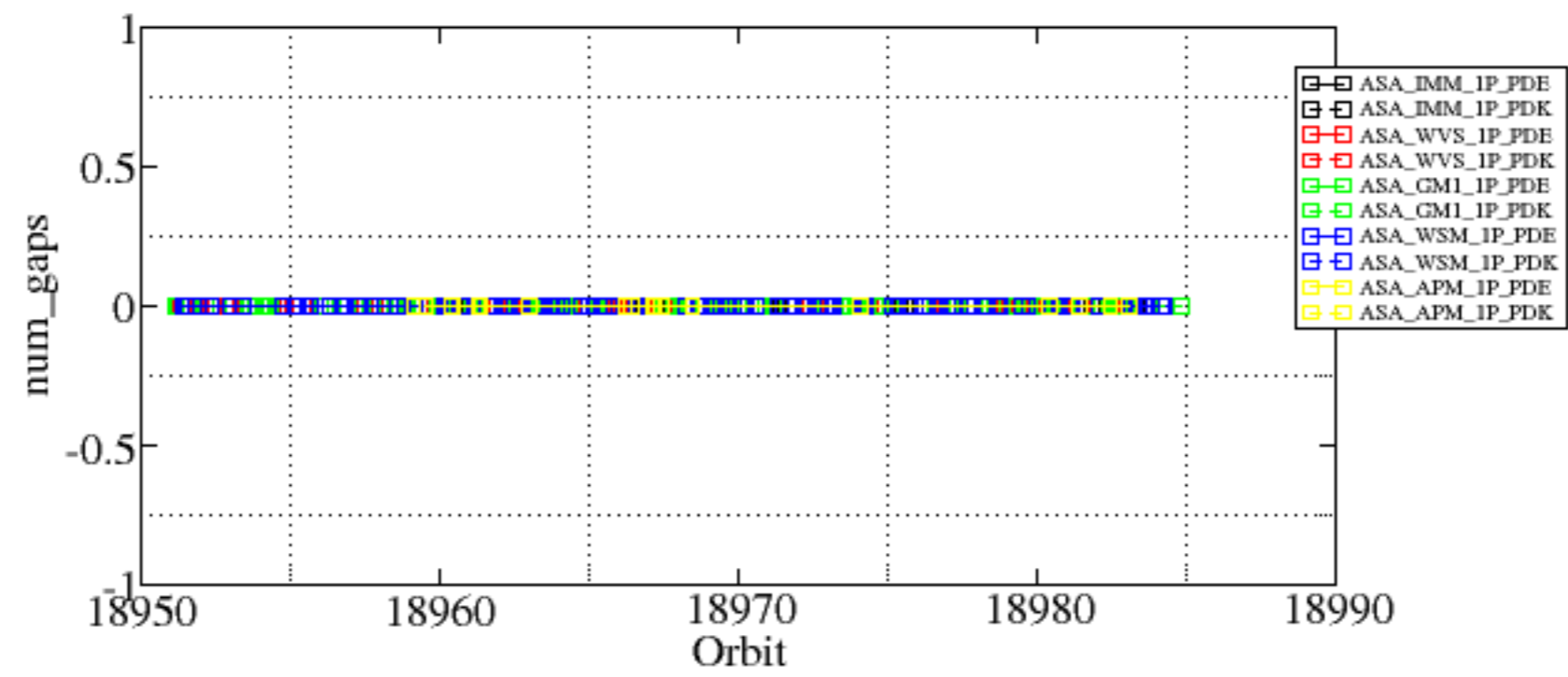


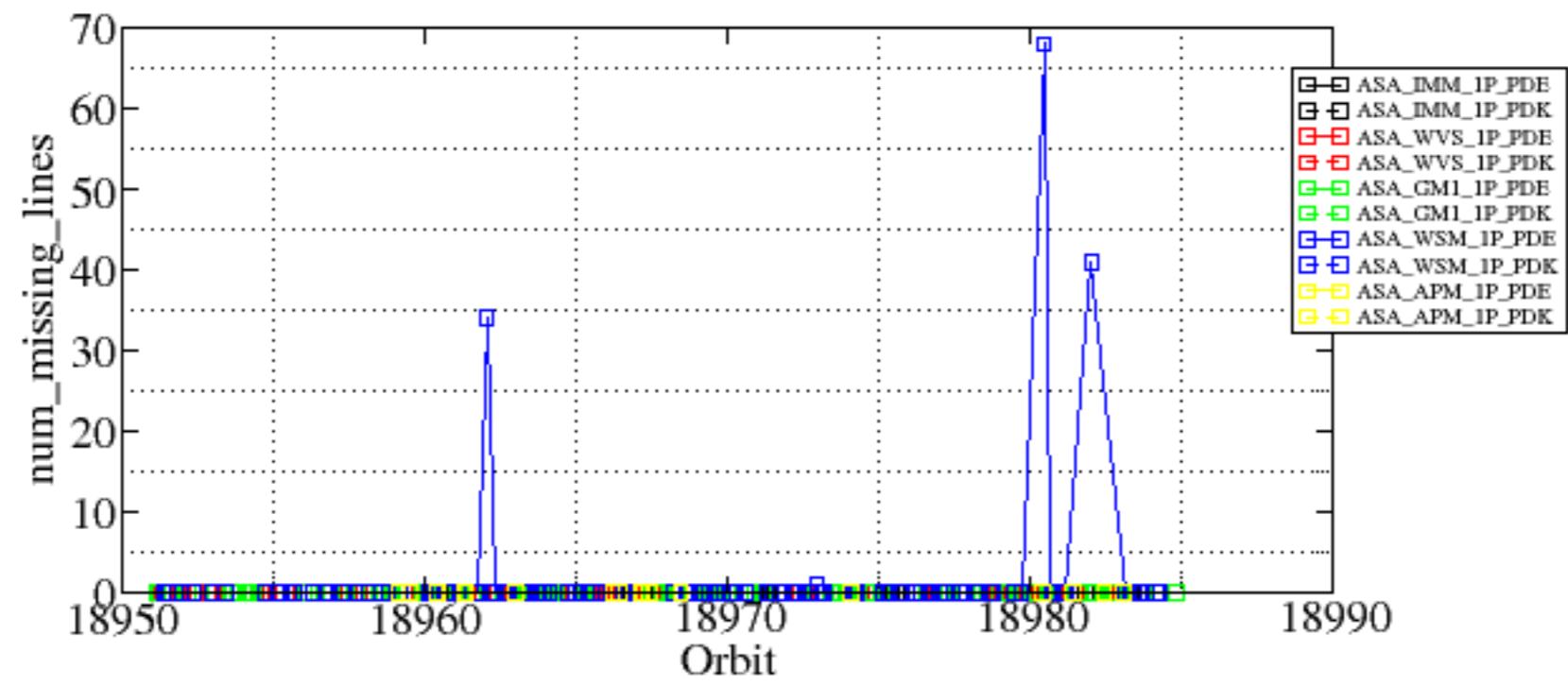


Summary of analysis for the last 3 days 2005101[567]

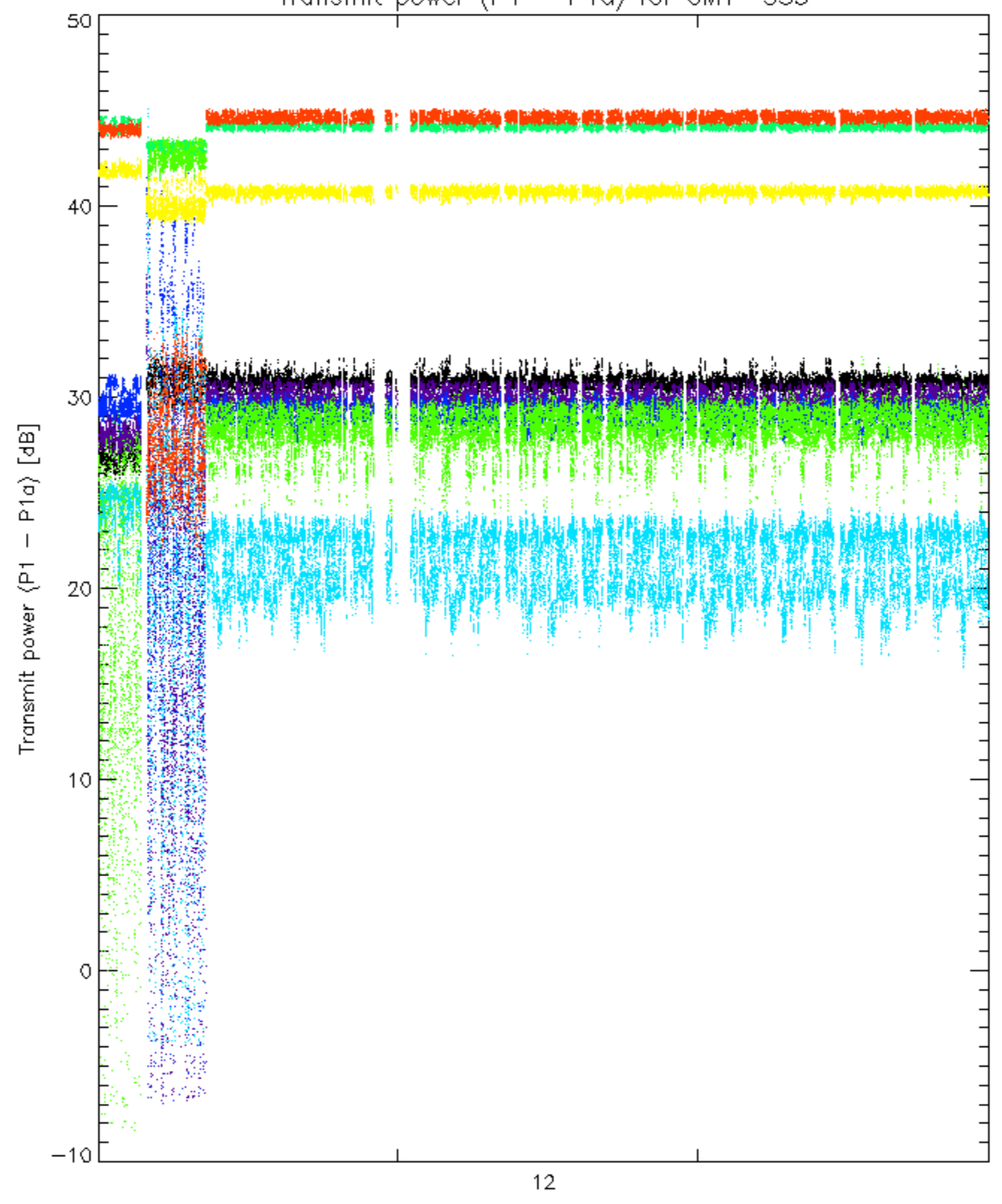
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20051015_182654_000002262041_00371_18962_4160.N1	0	34
ASA_WSM_1PNPDE20051017_011919_000003912041_00389_18980_4497.N1	0	68
ASA_WSM_1PNPDE20051017_035606_000001472041_00391_18982_4517.N1	0	41
ASA_WSM_1PNPDK20051016_124418_000001832041_00381_18972_7198.N1	0	1
ASA_WSM_1PNPDK20051016_124420_000001282041_00381_18972_7244.N1	0	1

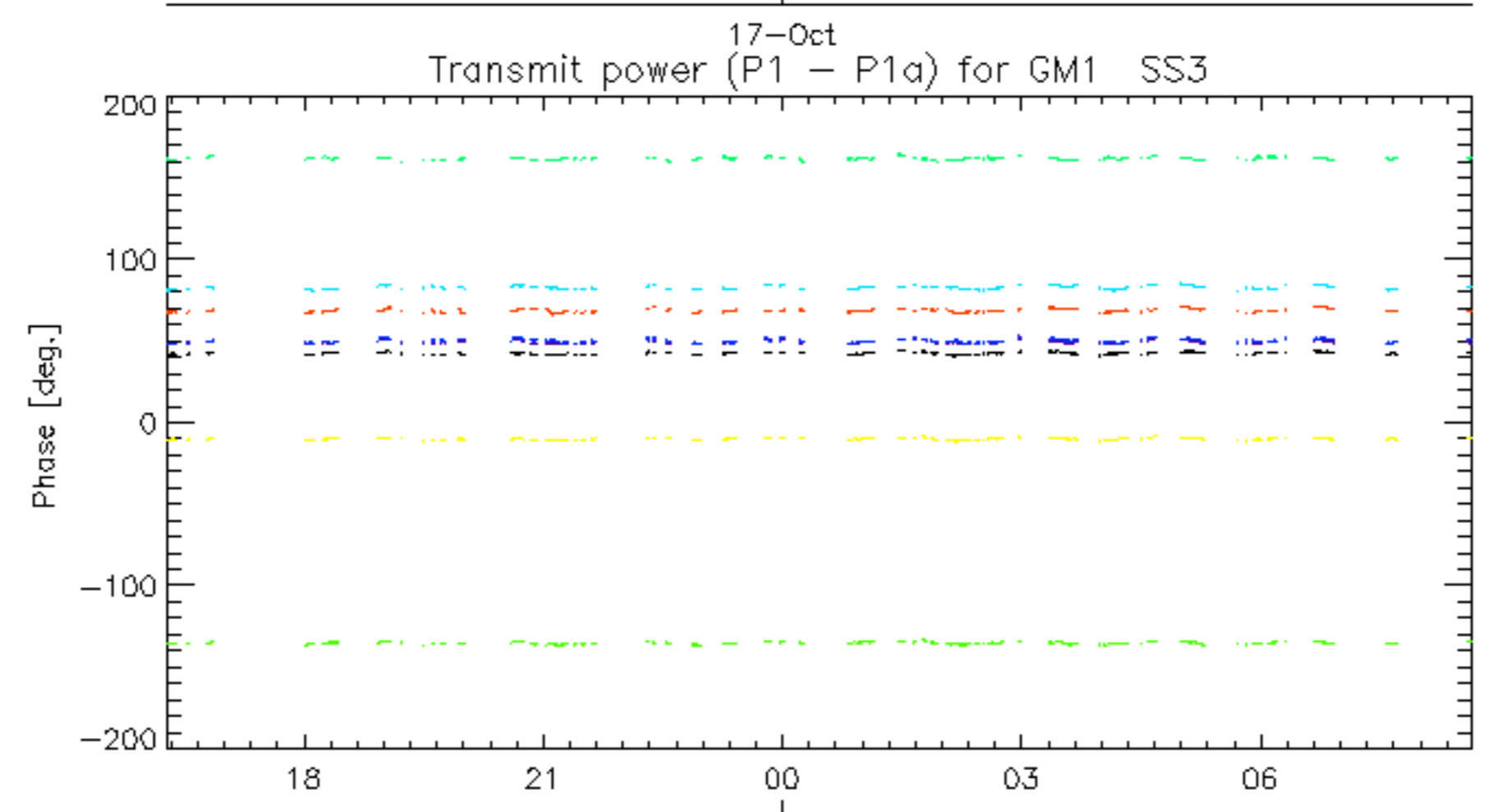
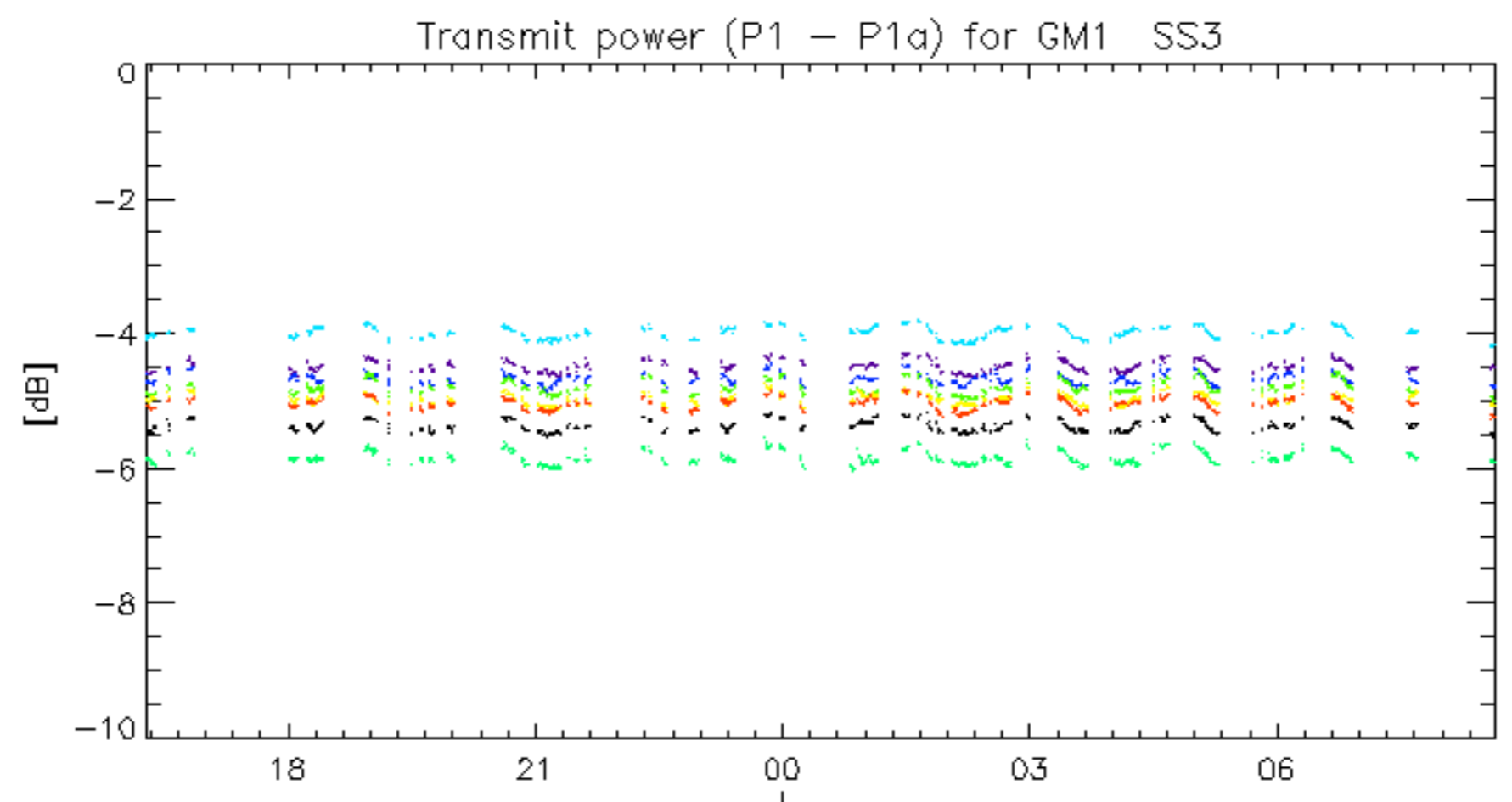




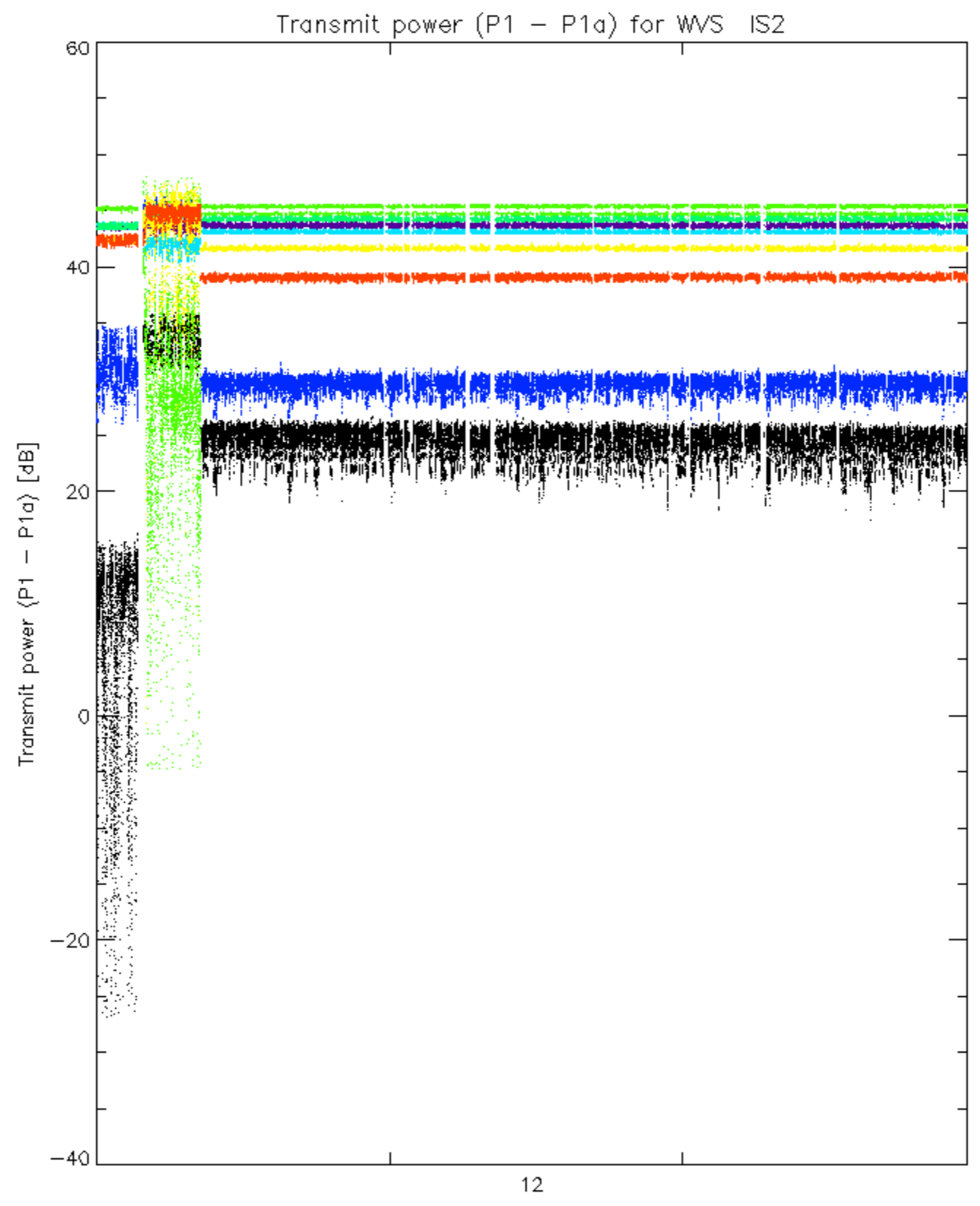
Transmit power (P1 - P1a) for GM1 SS3



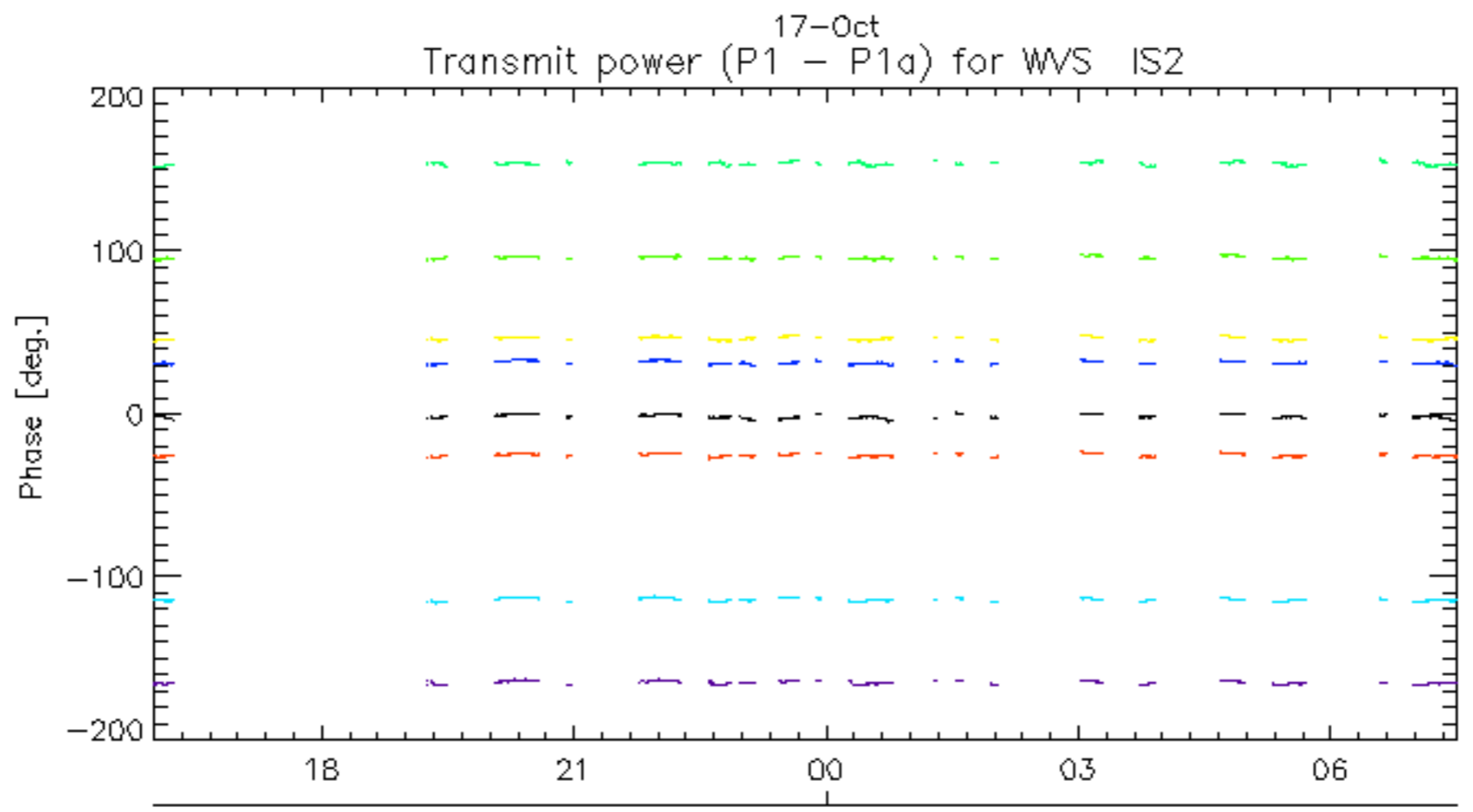
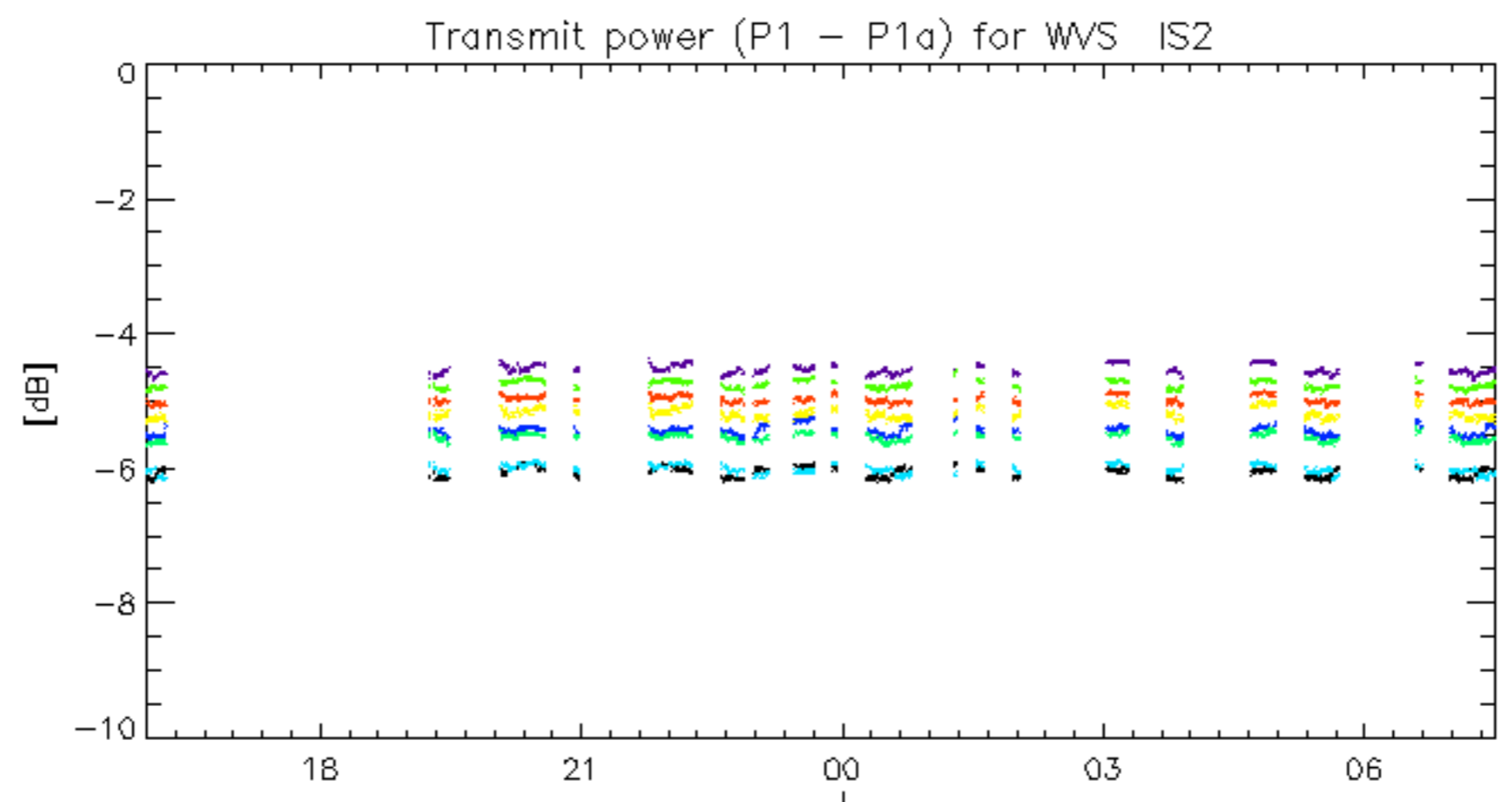
rows: 3 7 11 15 19 22 26 30



17-Oct
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.