

PRELIMINARY REPORT OF 051014

last update on Fri Oct 14 16:42:31 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 2005-10-13 00:00:00 to 2005-10-14 16:42:31

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	21	41	11	1	13
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	15	26	5	1	1
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	36	67	16	2	14
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	21	41	11	1	13
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	15	26	5	1	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	36	67	16	2	14

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20050324_172815_20030601_000000_20051231_000000	28	46	19	5	52
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	4	17	9	2	8
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	32	63	28	7	60
ASA_XCA_AXVIEC20050803_152145_20040412_000000_20051231_000000	28	46	19	5	52
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	4	17	9	2	8
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	32	63	28	7	60

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	20051014 063530
H	20051013 070707

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
⊗	
⊗	
⊗	
⊗	

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
⊗
⊗

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

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	-3.554535	0.059536	0.027716
7	P1	-2.962780	0.033229	0.321431
11	P1	-4.219938	0.121494	0.725707
15	P1	-5.962667	0.035924	-0.302835
19	P1	-3.184611	0.134565	0.249111
22	P1	-4.483531	0.021726	0.189591
26	P1	-4.419625	0.094061	0.655282
30	P1	-5.905149	0.350924	1.063828
3	P1	-15.790071	1.776274	1.445955
7	P1	-16.712214	4.448887	1.560190
11	P1	-17.816477	11.925475	7.163533
15	P1	-13.775565	8.454670	1.282043
19	P1	-13.687528	0.193164	0.478737
22	P1	-17.217545	21.915625	4.099334
26	P1	-17.573938	20.853355	5.542657
30	P1	-17.404083	8.716584	4.124337

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.841032	0.102130	-0.126278
7	P2	-22.606724	0.215051	-0.519901
11	P2	-16.312698	1.658818	-2.324067
15	P2	-7.215491	0.115642	-0.034424
19	P2	-9.159937	0.177810	0.038366
22	P2	-17.524330	0.217204	-0.895735
26	P2	-16.171013	0.126087	0.391144

30	P2	-19.522781	0.184995	-0.525776
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P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.179398	0.005060	-0.036024
7	P3	-8.179398	0.005060	-0.036024
11	P3	-8.179398	0.005060	-0.036024
15	P3	-8.179398	0.005060	-0.036024
19	P3	-8.179398	0.005060	-0.036024
22	P3	-8.179398	0.005060	-0.036024
26	P3	-8.179398	0.005060	-0.036024
30	P3	-8.179398	0.005060	-0.036024

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<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	-3.419487	0.243912	-1.086791
7	P1	-2.921750	0.063744	0.355858
11	P1	-3.092775	0.234360	1.139702
15	P1	-3.442826	0.029446	0.258399
19	P1	-3.334197	0.055244	-0.010609
22	P1	-5.147496	0.139257	0.089223
26	P1	-5.873533	0.505933	0.623762
30	P1	-5.258036	0.299334	0.359825
3	P1	-11.507655	0.397845	0.344842
7	P1	-11.256786	19.033188	5.343199
11	P1	-12.136316	37.524517	8.789409

15	P1	-12.361221	32.370785	7.182843
19	P1	-15.339785	0.210360	-0.448590
22	P1	-21.307829	4.589901	4.306966
26	P1	-17.349556	4.632675	0.753473
30	P1	-19.321699	1.754788	2.238599

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.652021	0.054047	-0.267687
7	P2	-22.910160	0.227151	-0.697990
11	P2	-11.428205	0.672879	-1.640011
15	P2	-4.924541	0.044734	0.175177
19	P2	-6.804740	0.106029	-0.369059
22	P2	-7.886375	0.193586	-1.020673
26	P2	-23.876045	0.042625	0.096975
30	P2	-22.081808	0.054824	0.079662

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.022367	0.002889	-0.038089
7	P3	-8.022433	0.002897	-0.038461
11	P3	-8.022244	0.002900	-0.038777
15	P3	-8.022327	0.002893	-0.038491
19	P3	-8.022513	0.002899	-0.038127
22	P3	-8.022275	0.002900	-0.038542
26	P3	-8.022592	0.002895	-0.038410
30	P3	-8.022366	0.002903	-0.038194

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	0.000538891
	stdev	1.81029e-07
MEAN Q	mean	0.000529158
	stdev	2.18487e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135847
	stdev	0.00110529
STDEV Q	mean	0.136173
	stdev	0.00112097



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005101[234]

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_1PNPDK20051013_125413_000001212041_00339_18930_5617.N1	1	0
ASA_WSM_1PNPDE20051013_224734_000000912041_00345_18936_3834.N1	0	40
ASA_WSM_1PNPDE20051014_011413_000003542041_00346_18937_3867.N1	0	23





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)

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

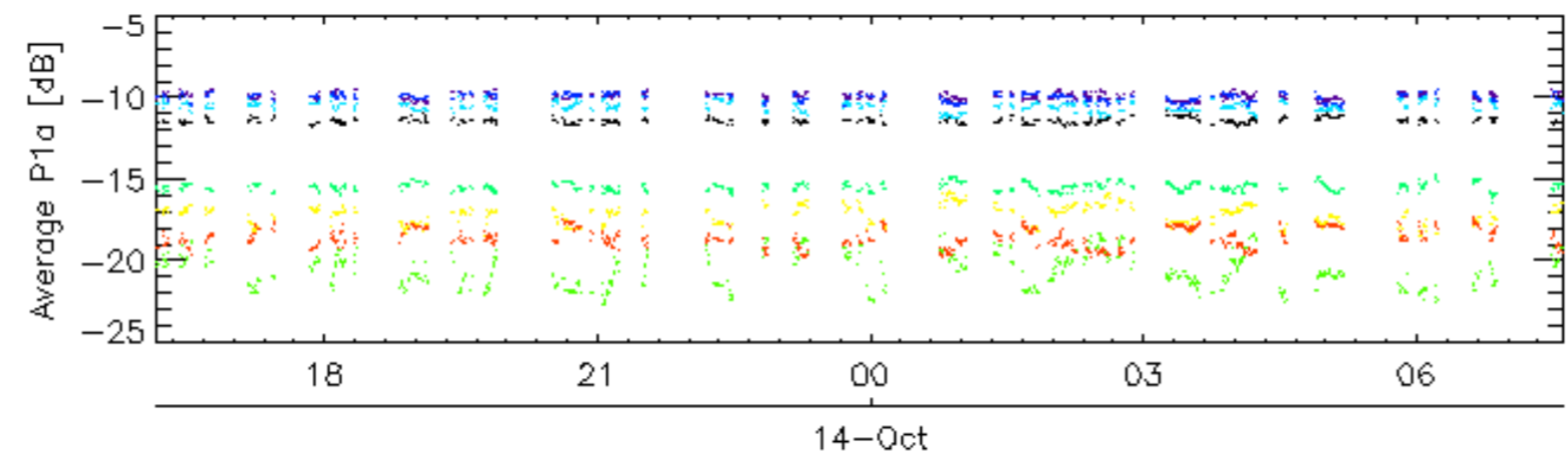
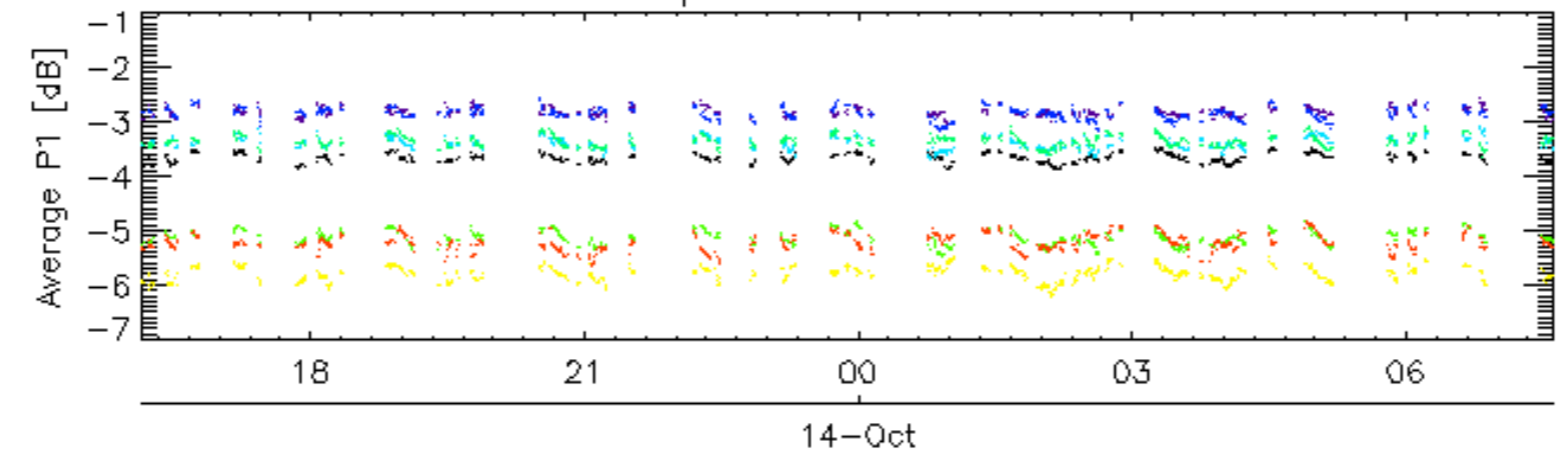
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

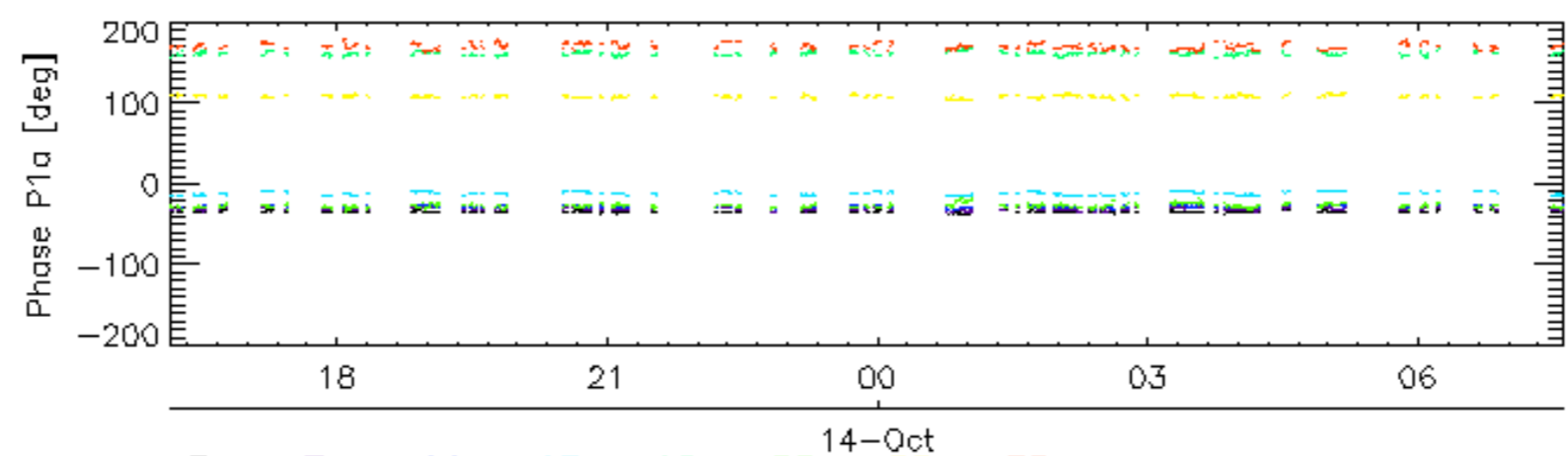
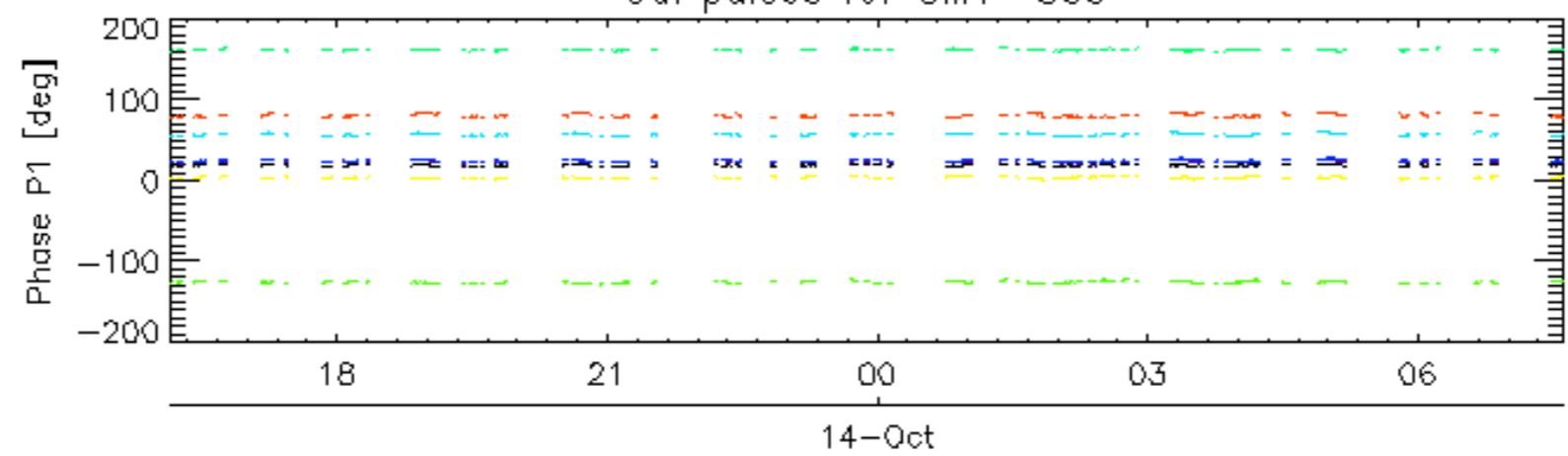
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

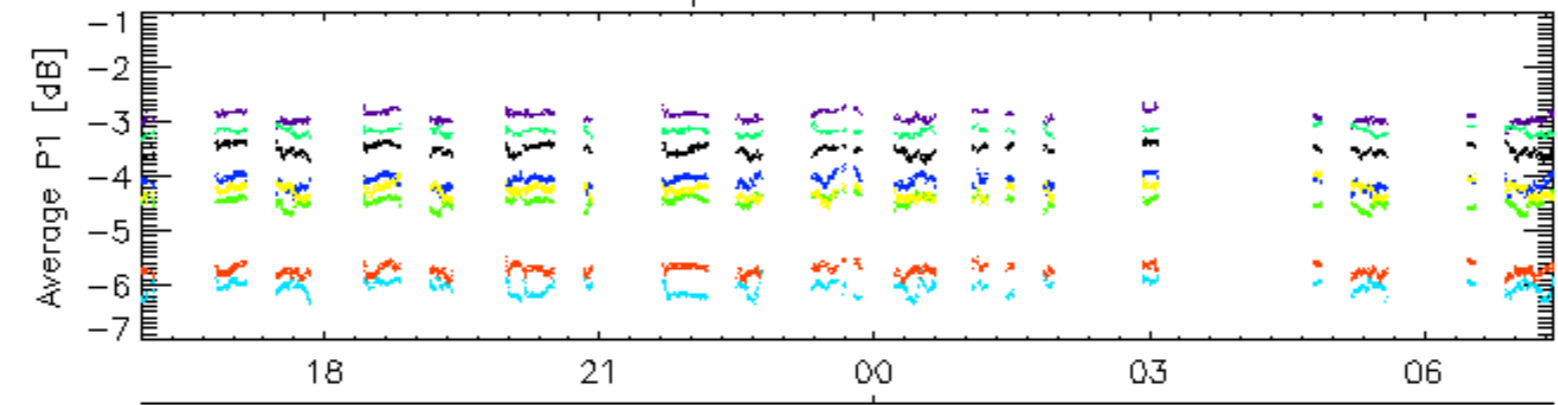


Cal pulses for GM1 SS3

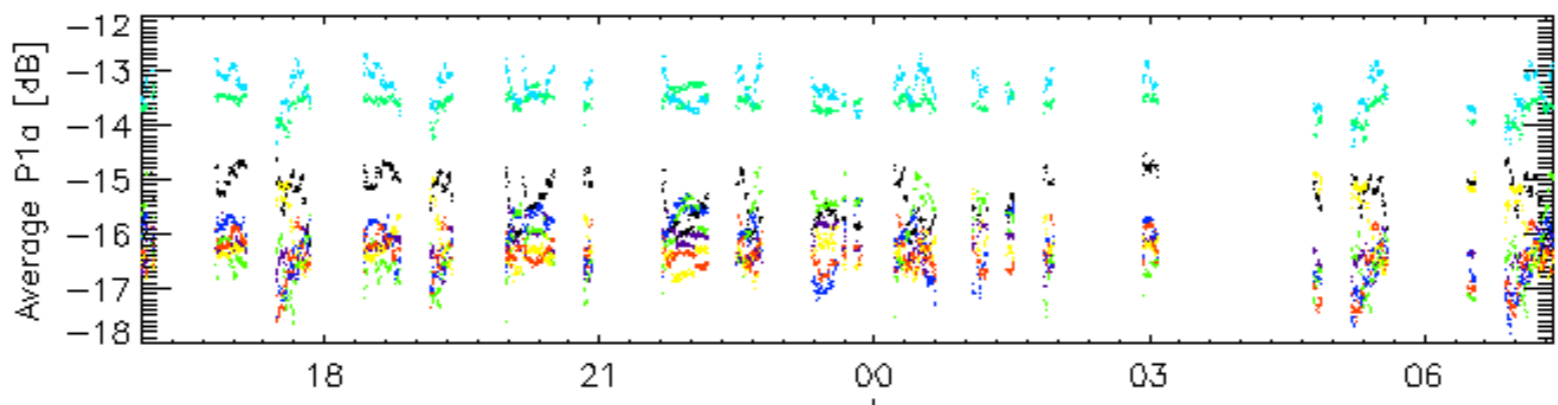


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

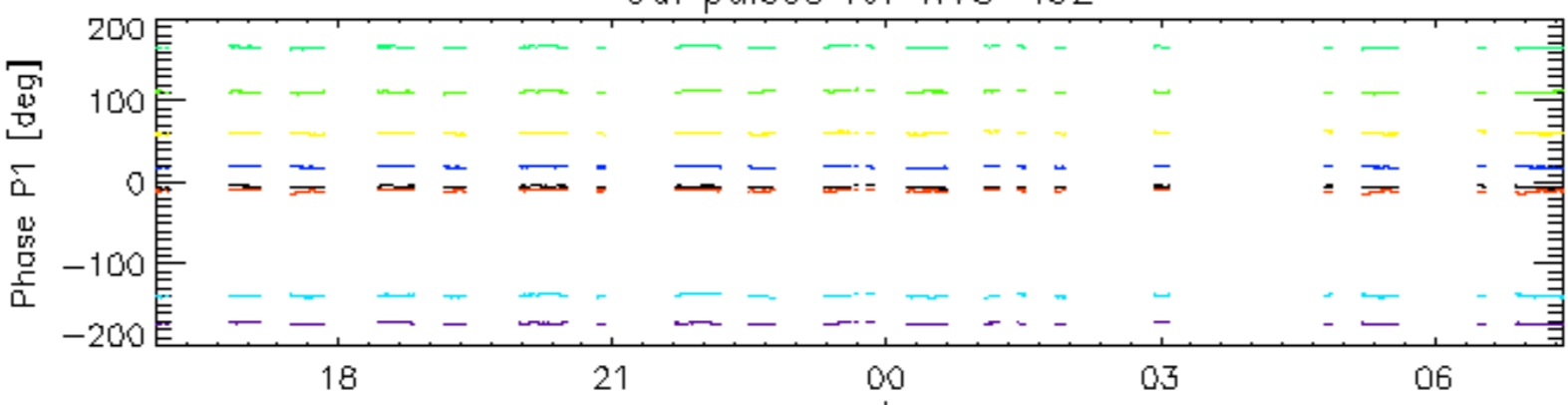


14-Oct

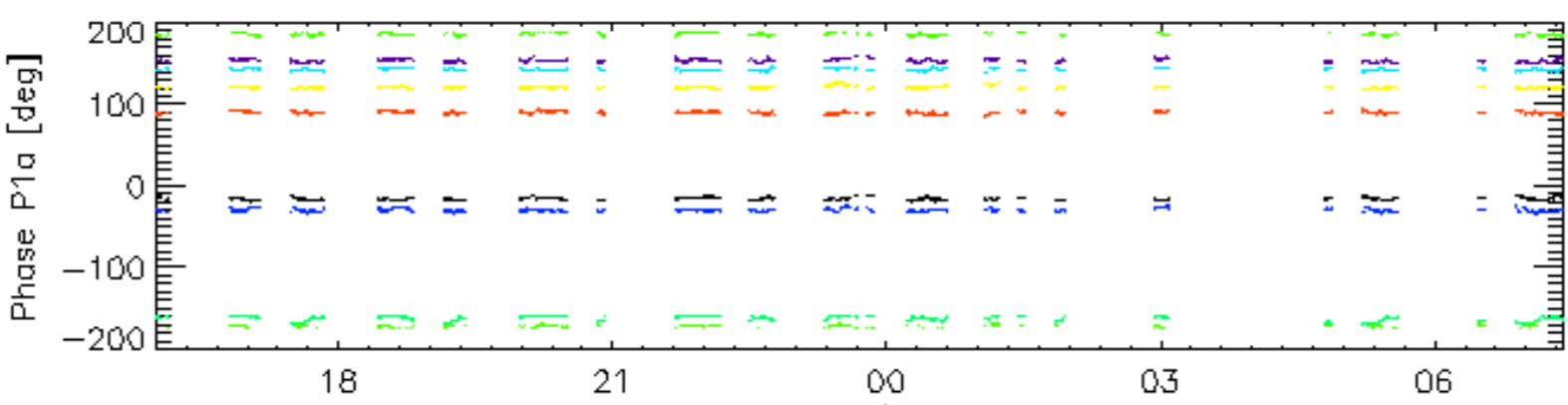


14-Oct

Cal pulses for WVS IS2

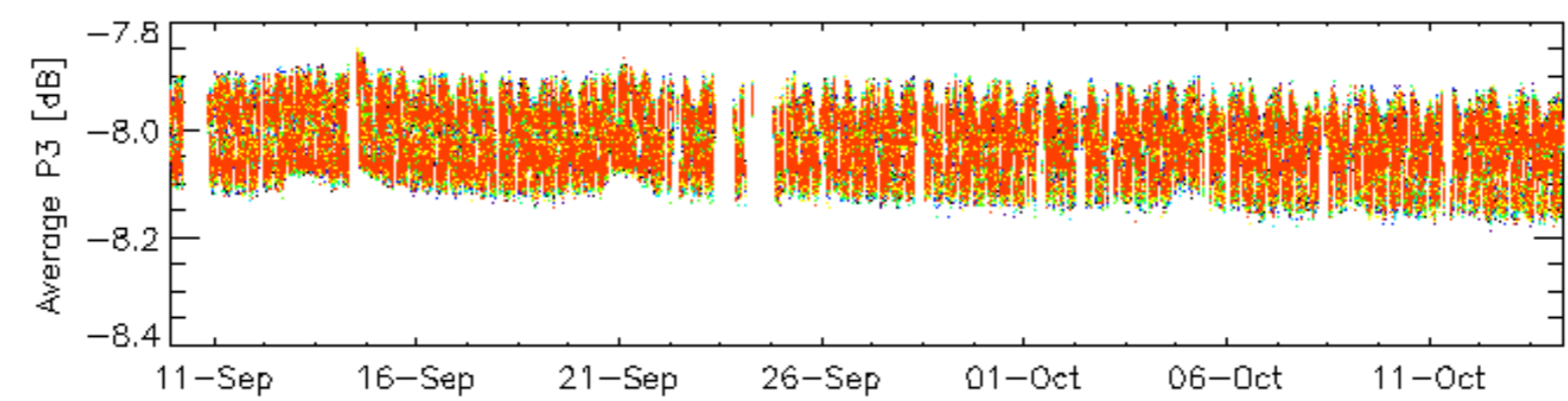
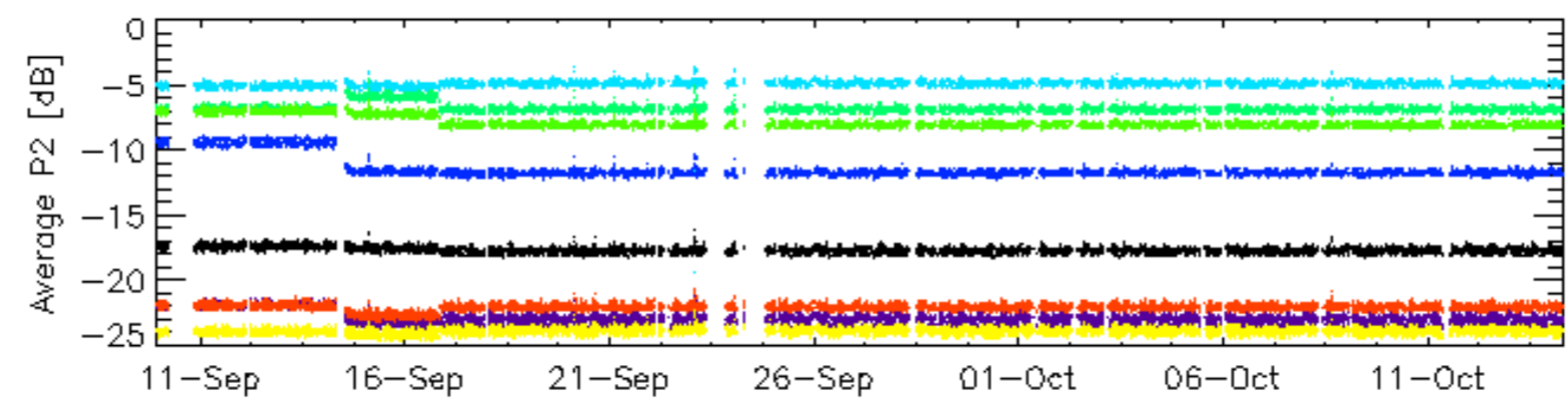
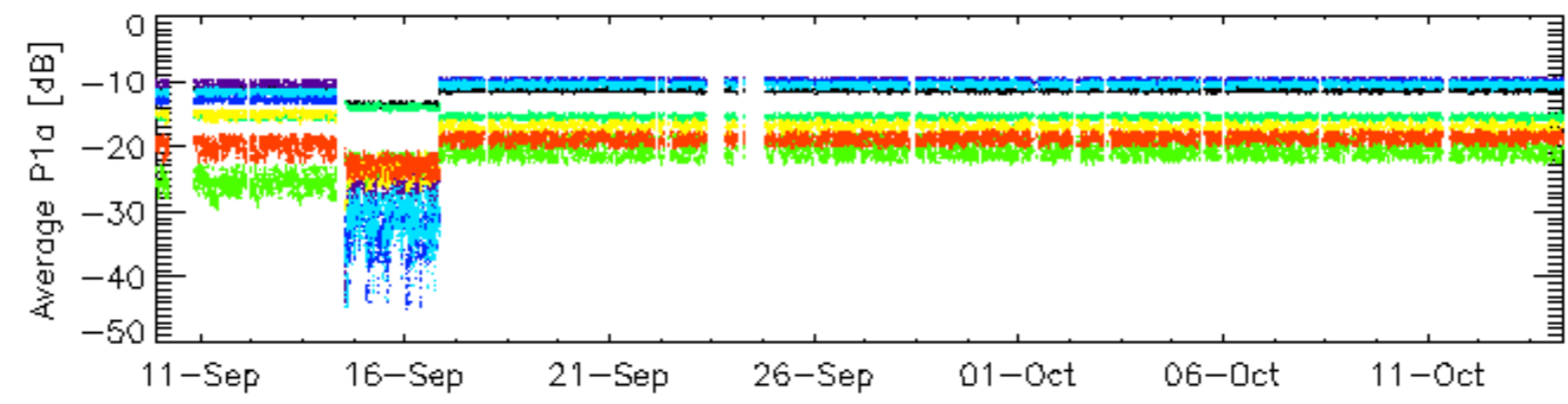
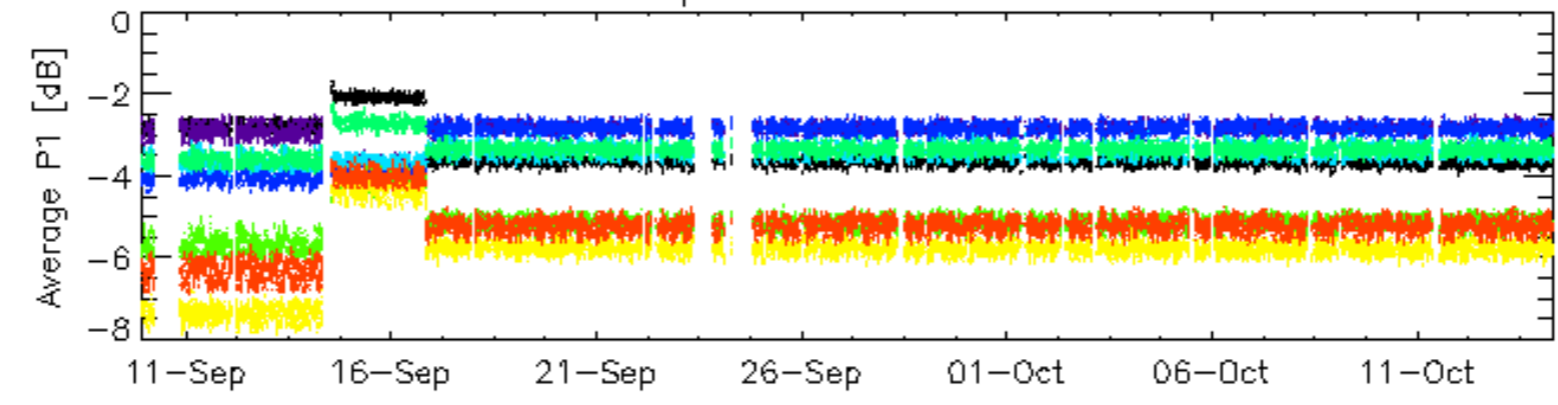


14-Oct



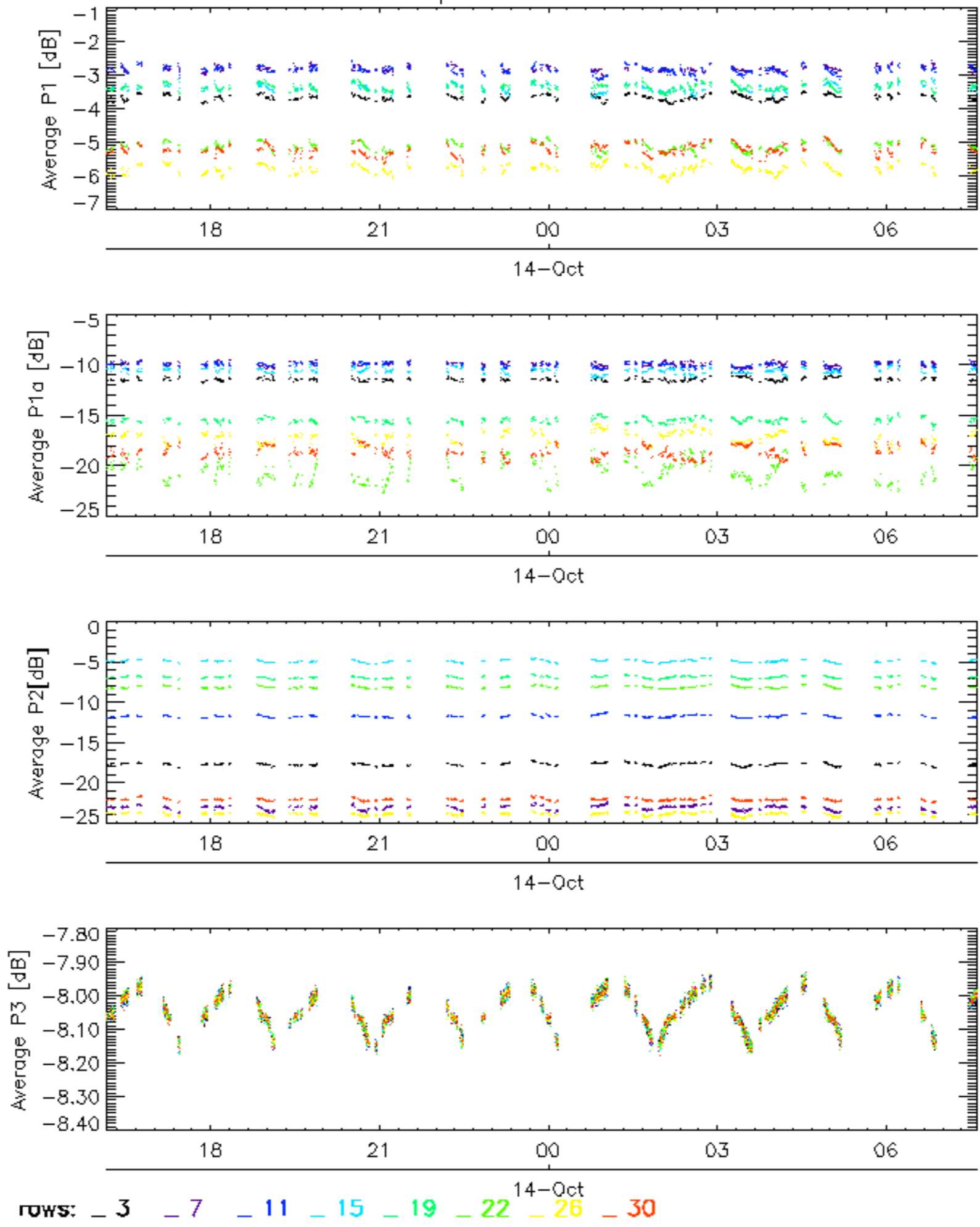
rows: **3** **7** **11** **15** **19** **22** **26** **30** 14-Oct

Cal pulses for GM1 SS3

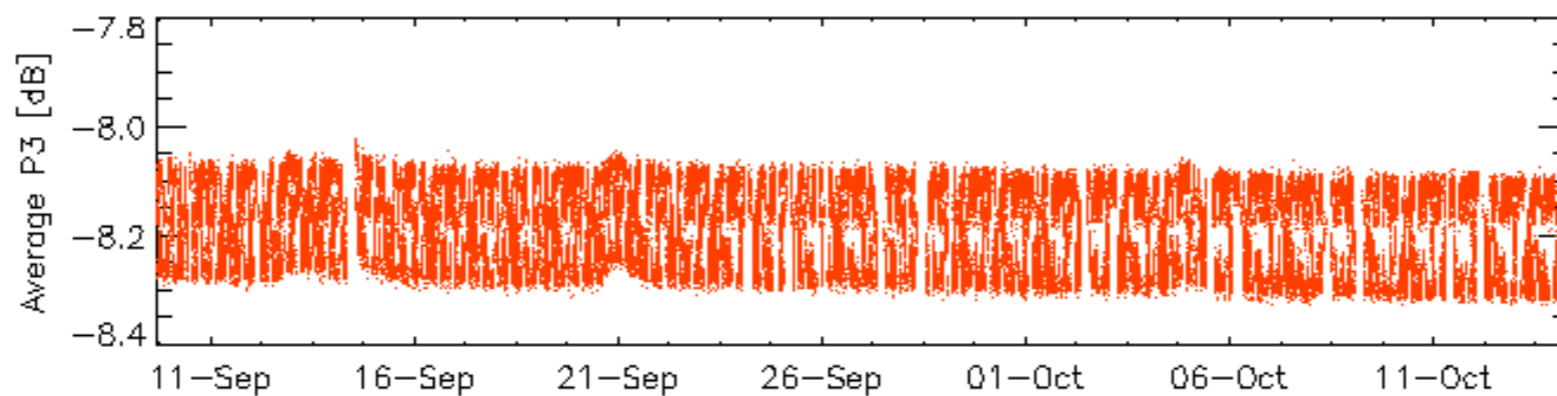
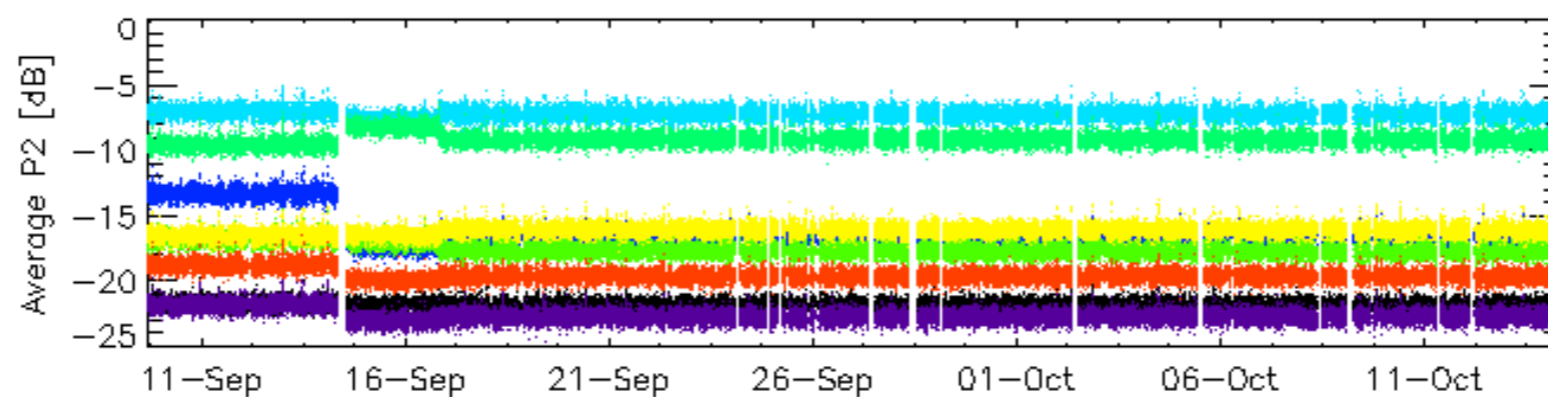
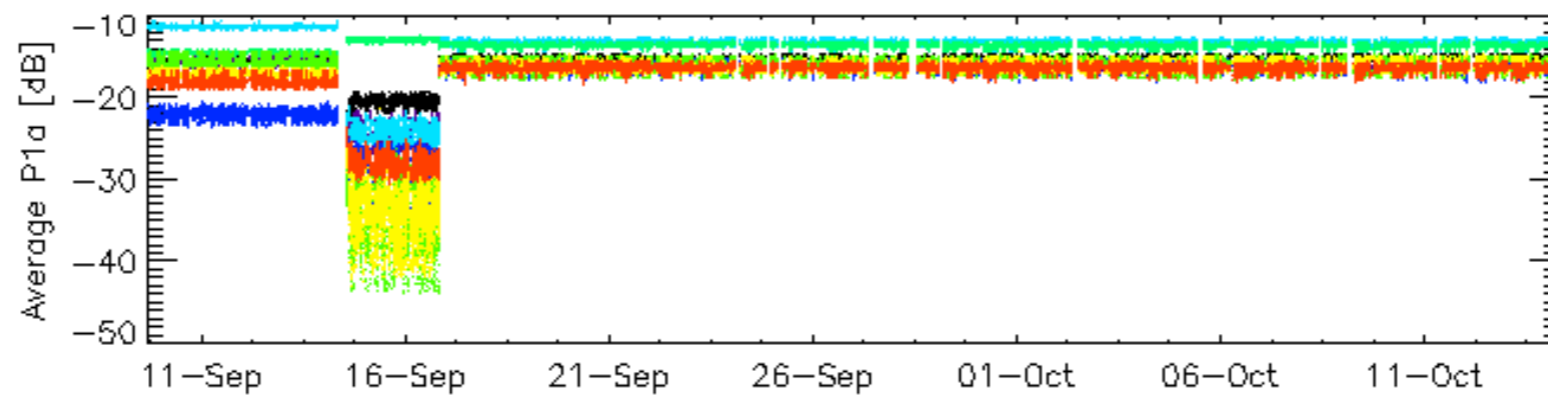
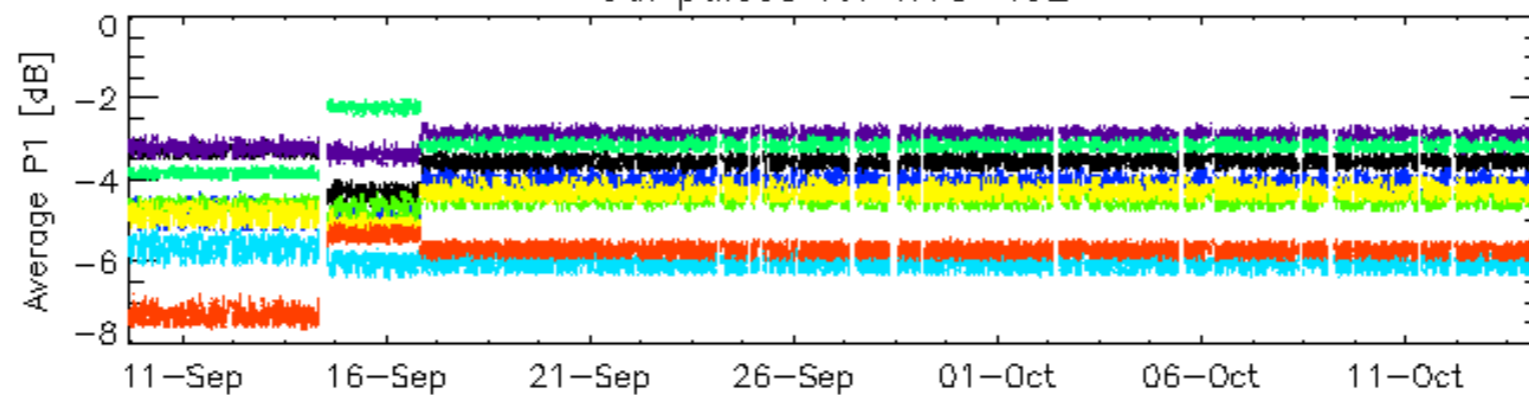


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

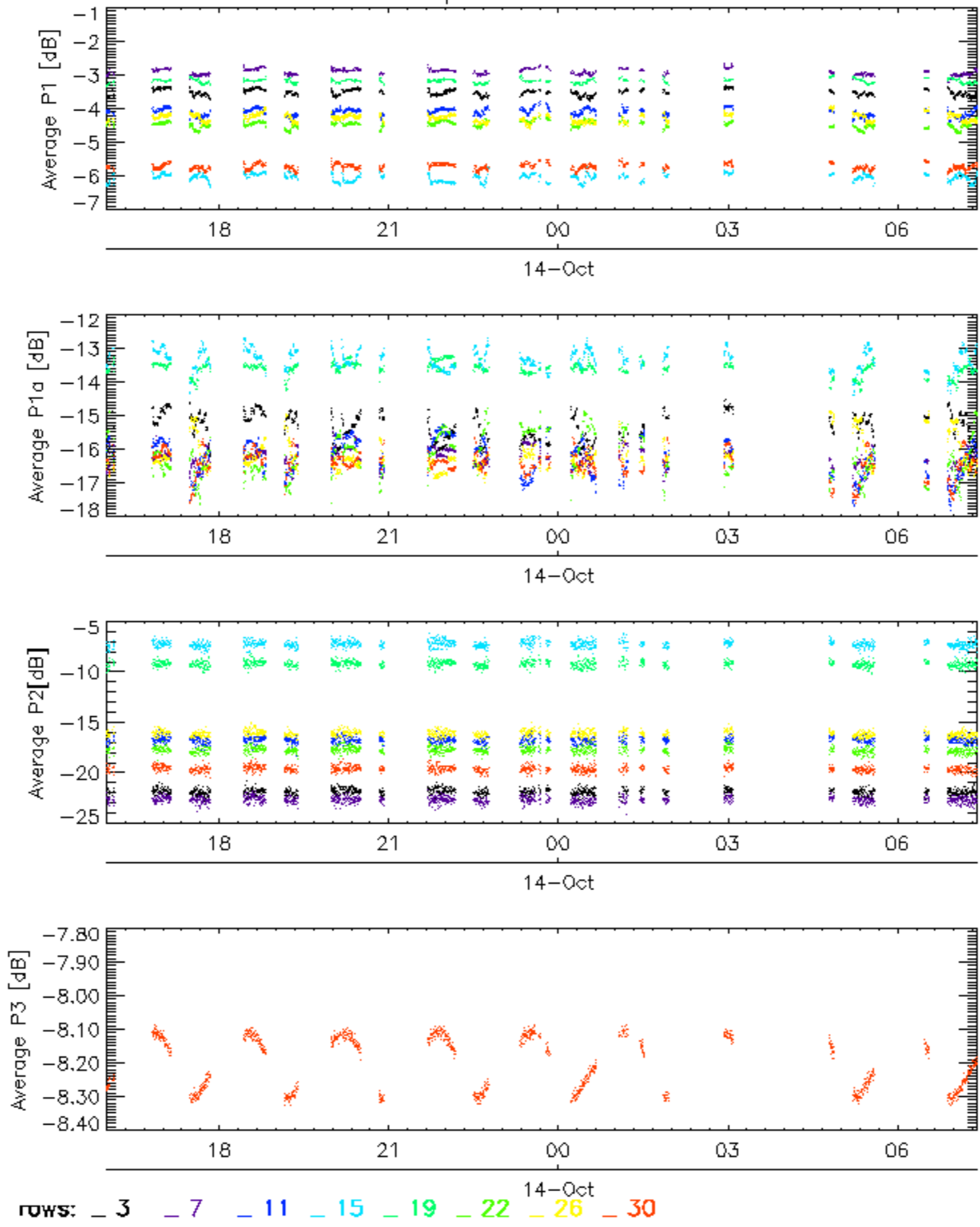


Cal pulses for WVS IS2



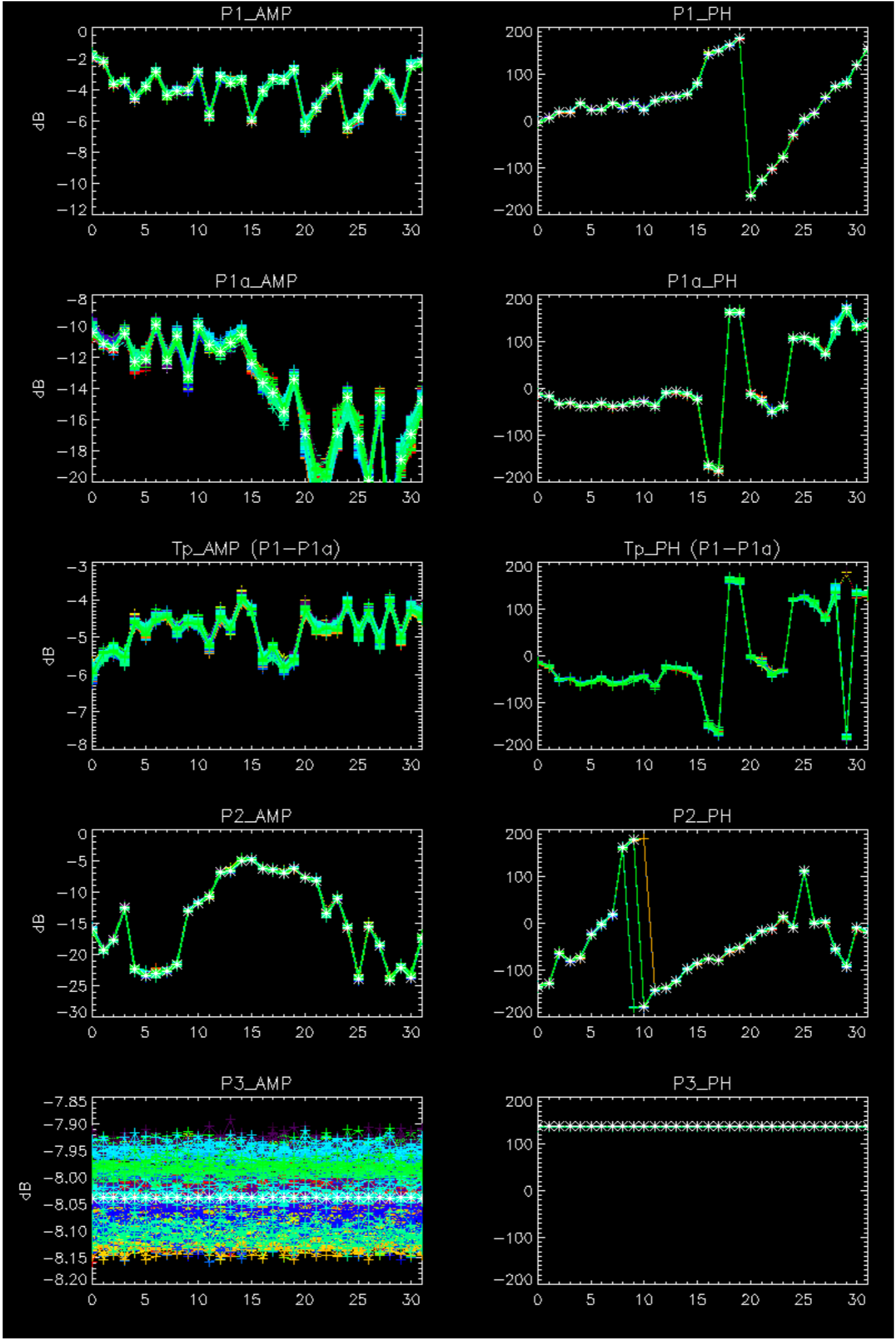
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

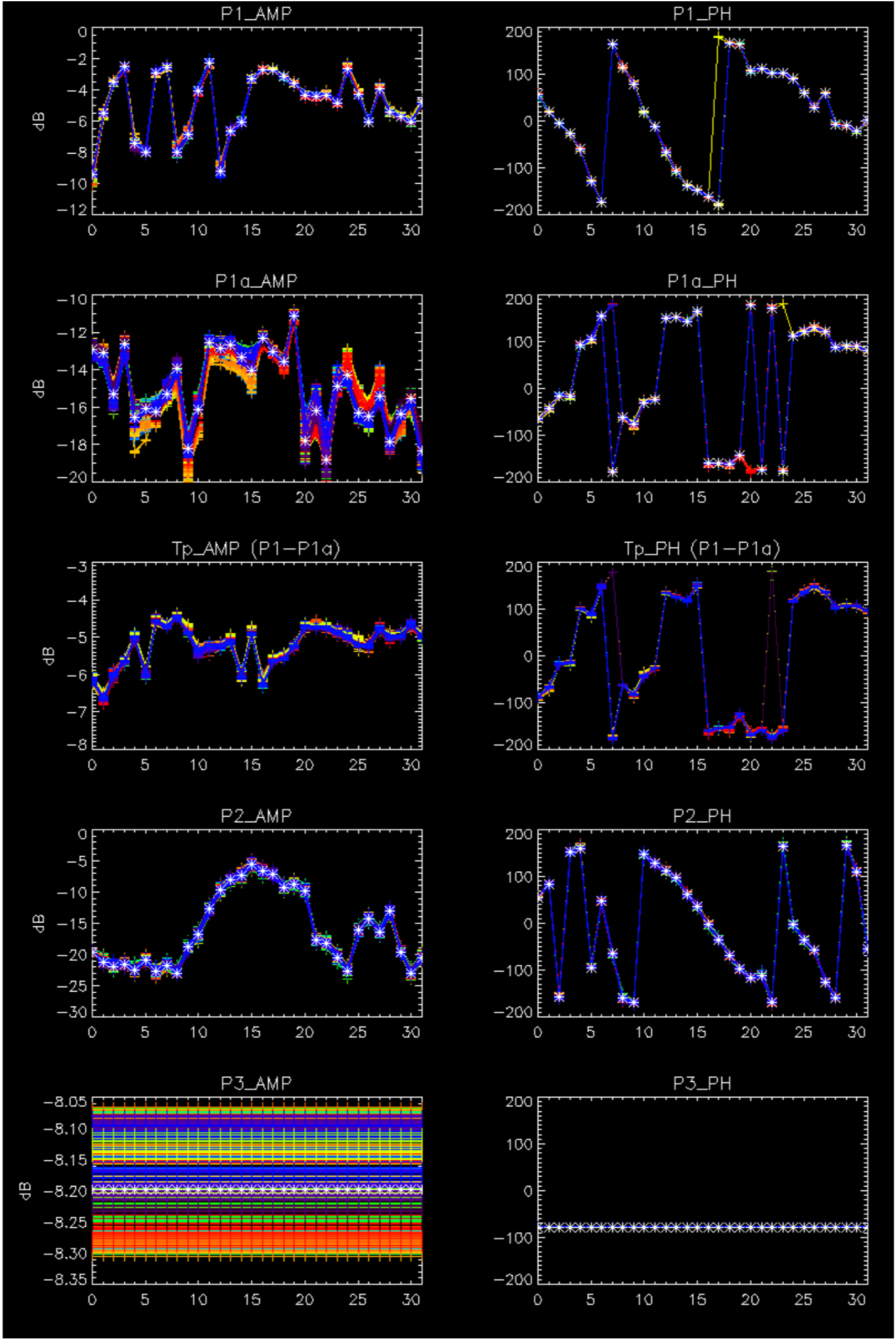
Cal pulses for WVS IS2



No anomalies observed on available browse products

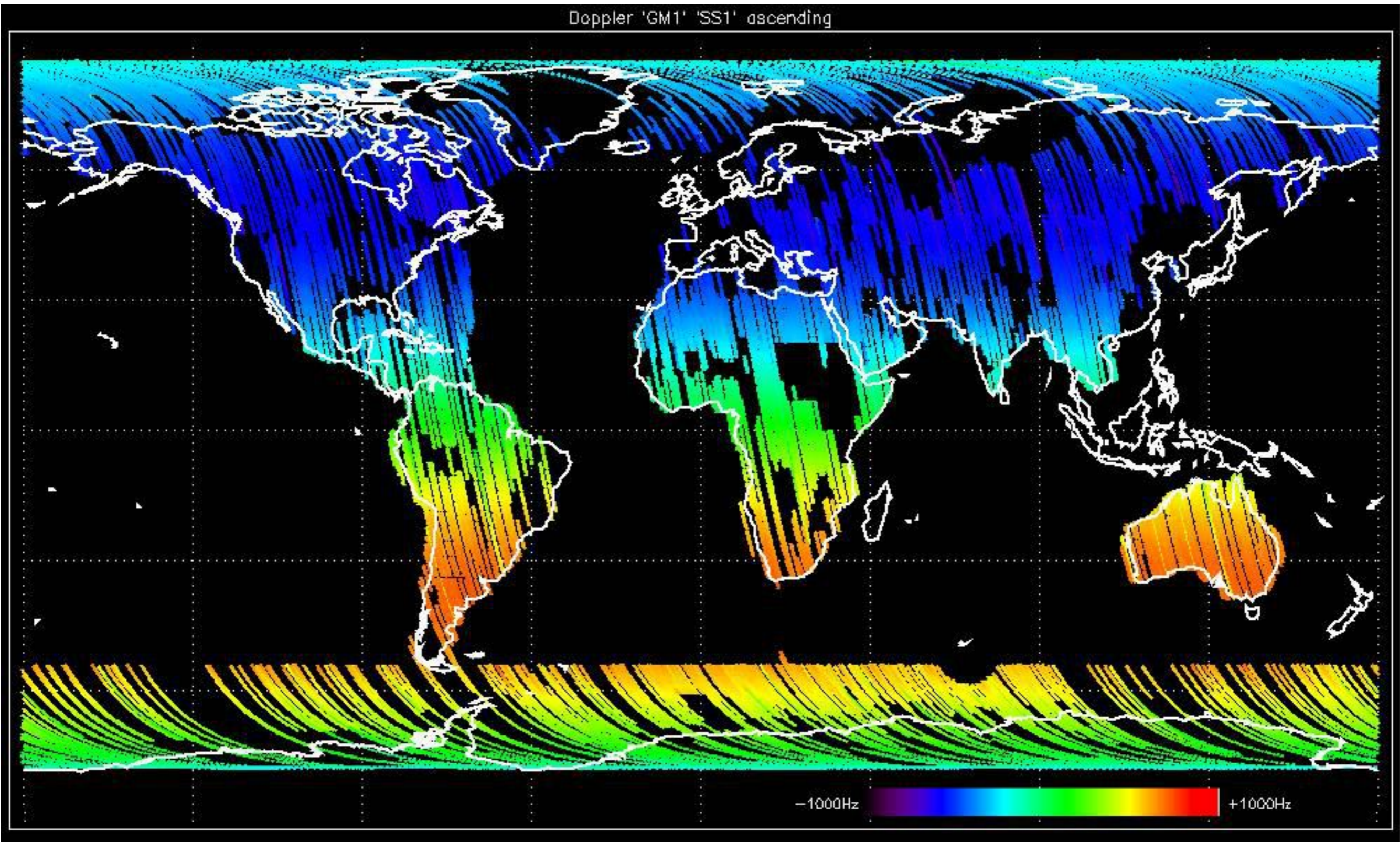
No anomalies observed.



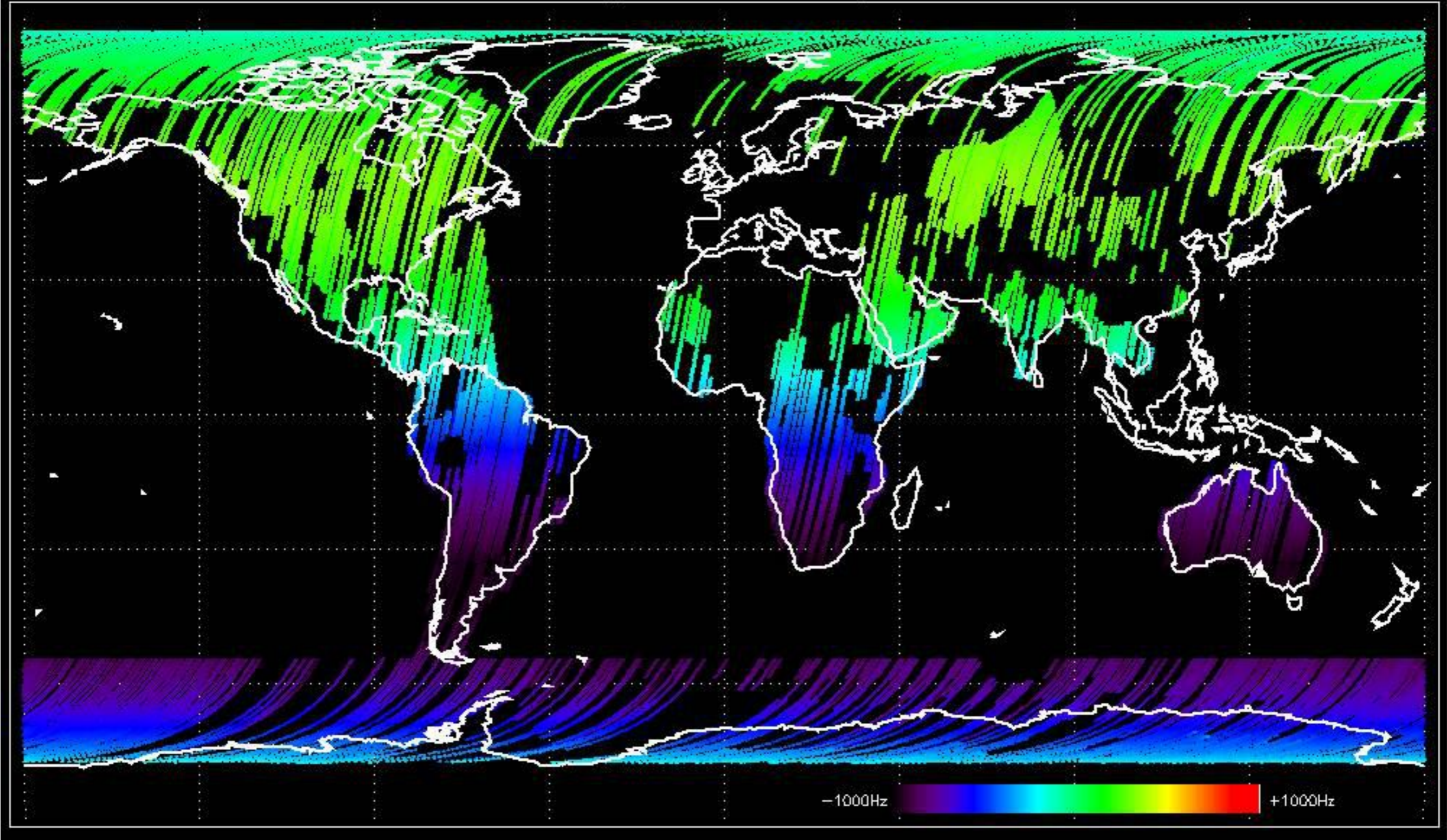


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

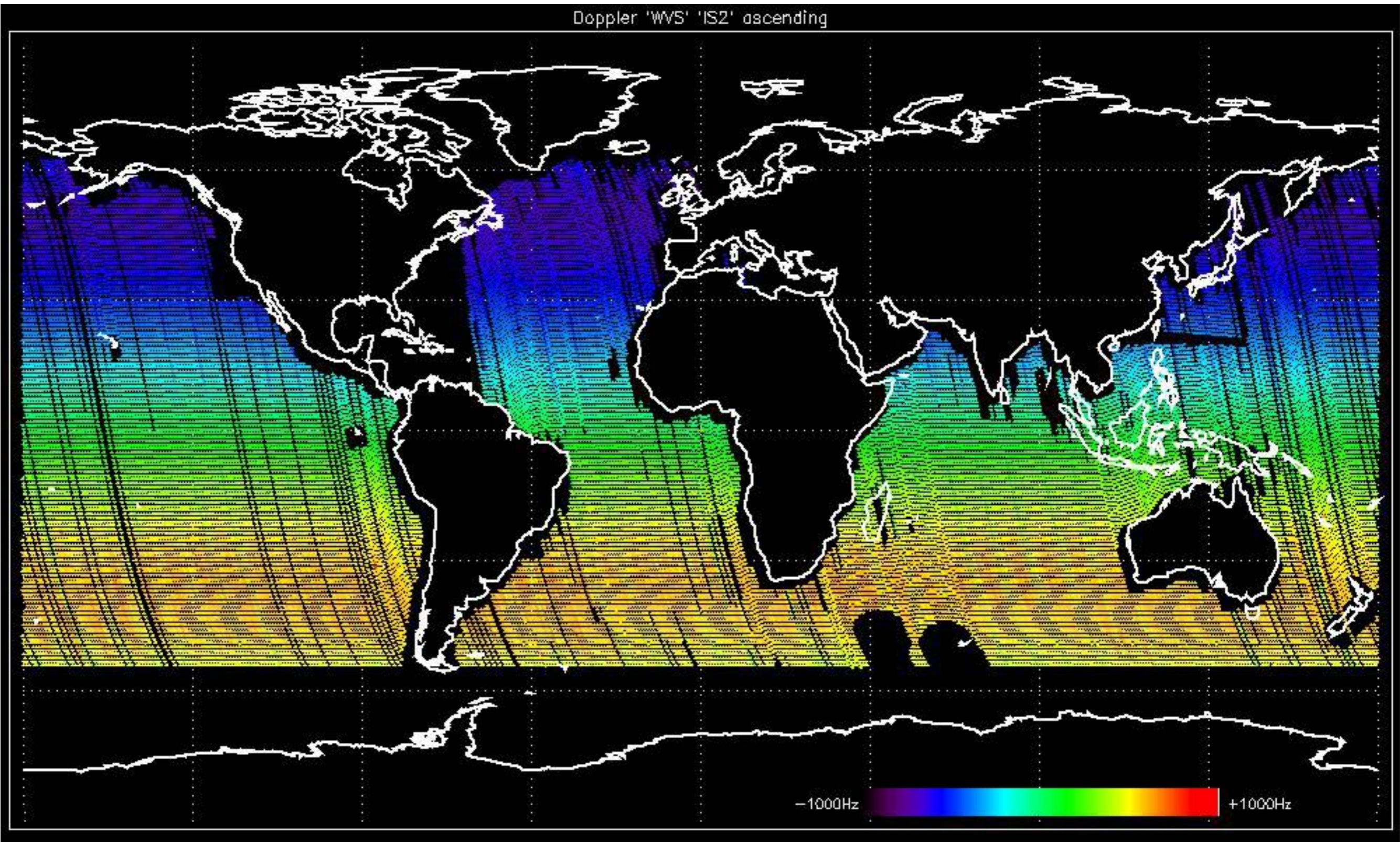
Doppler 'GM1' 'SS1' ascending



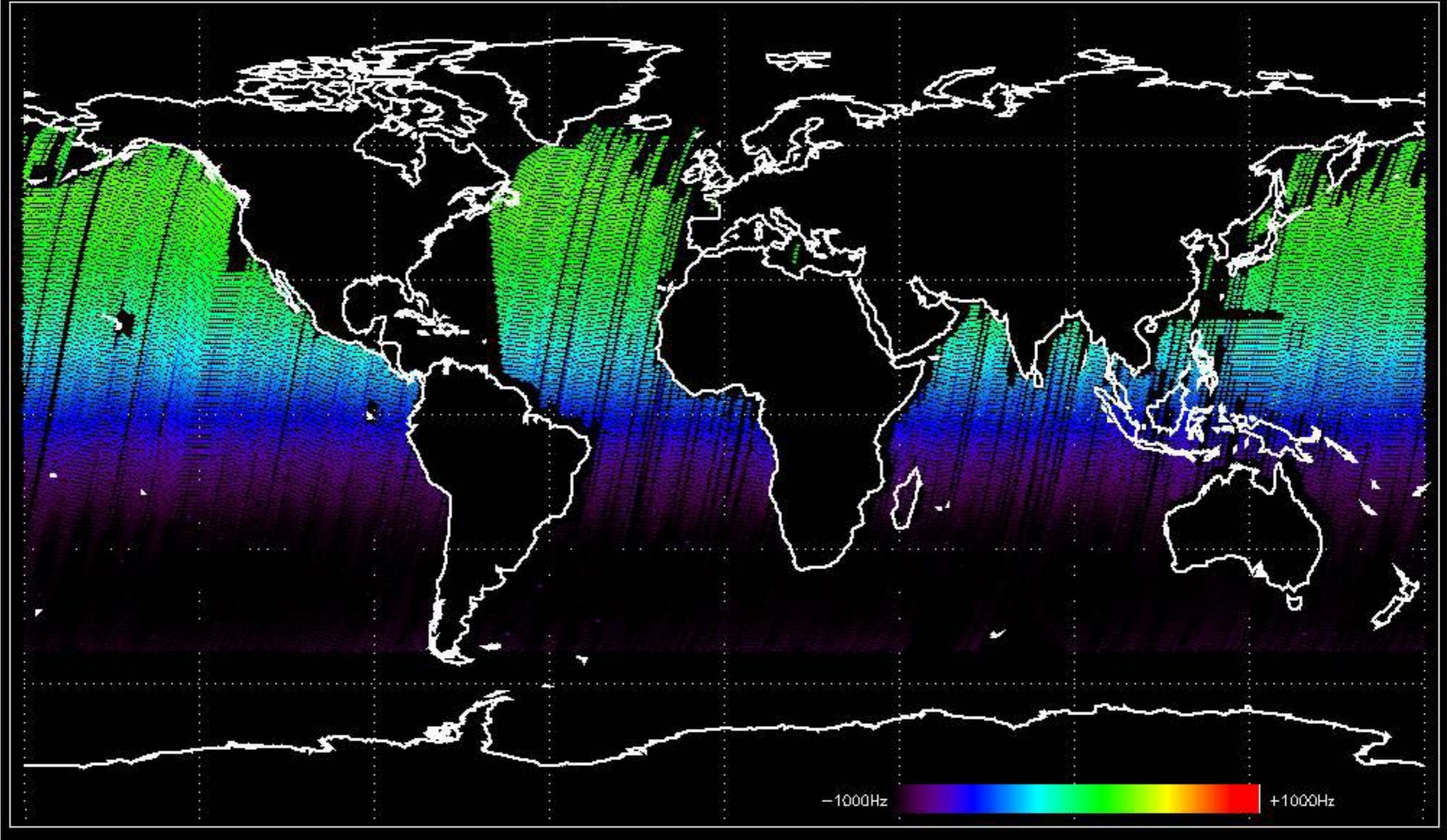
Doppler 'GM1' 'SS1' descending



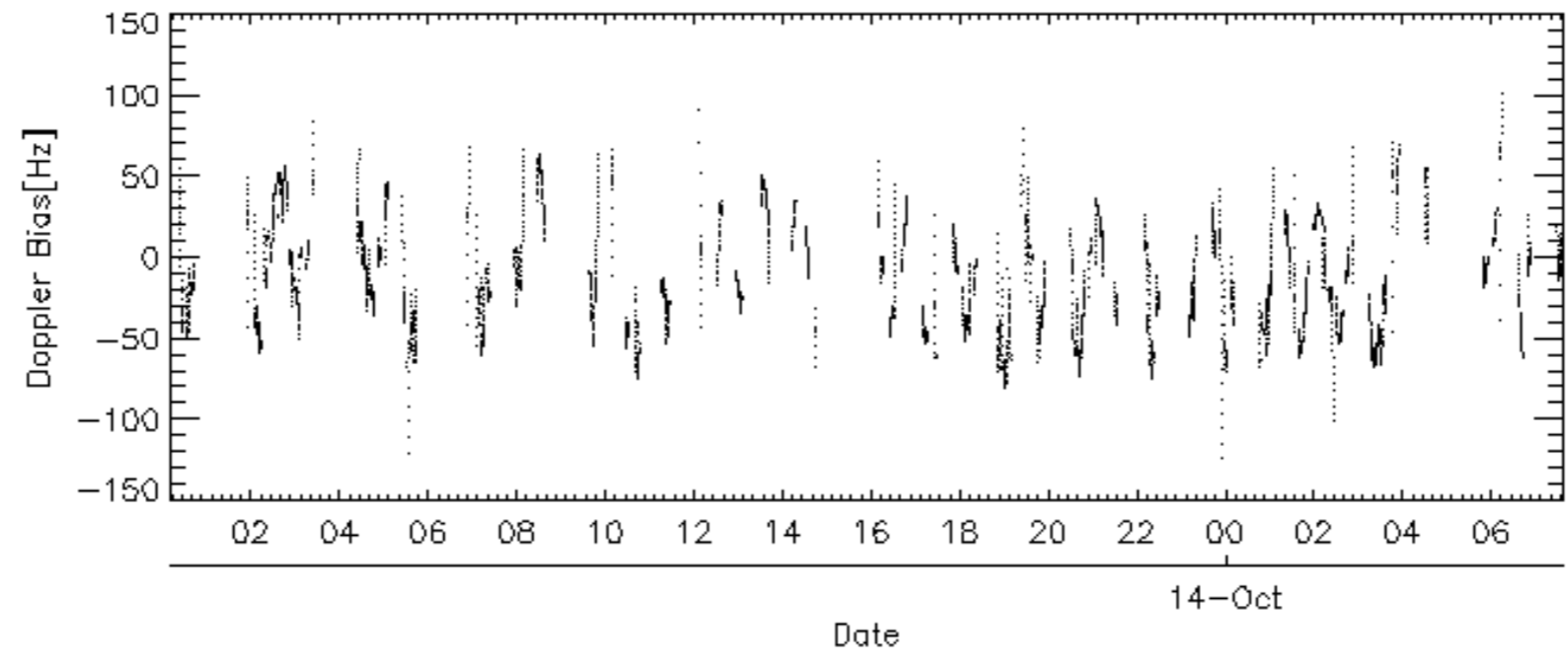
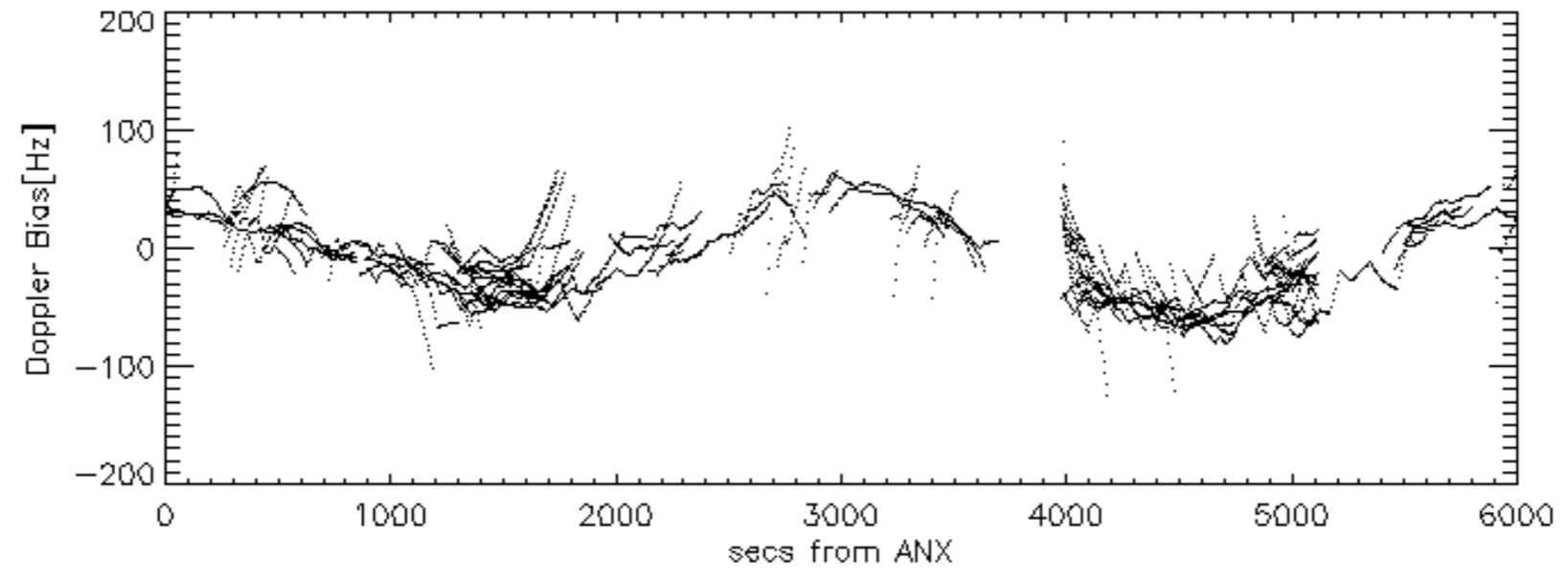
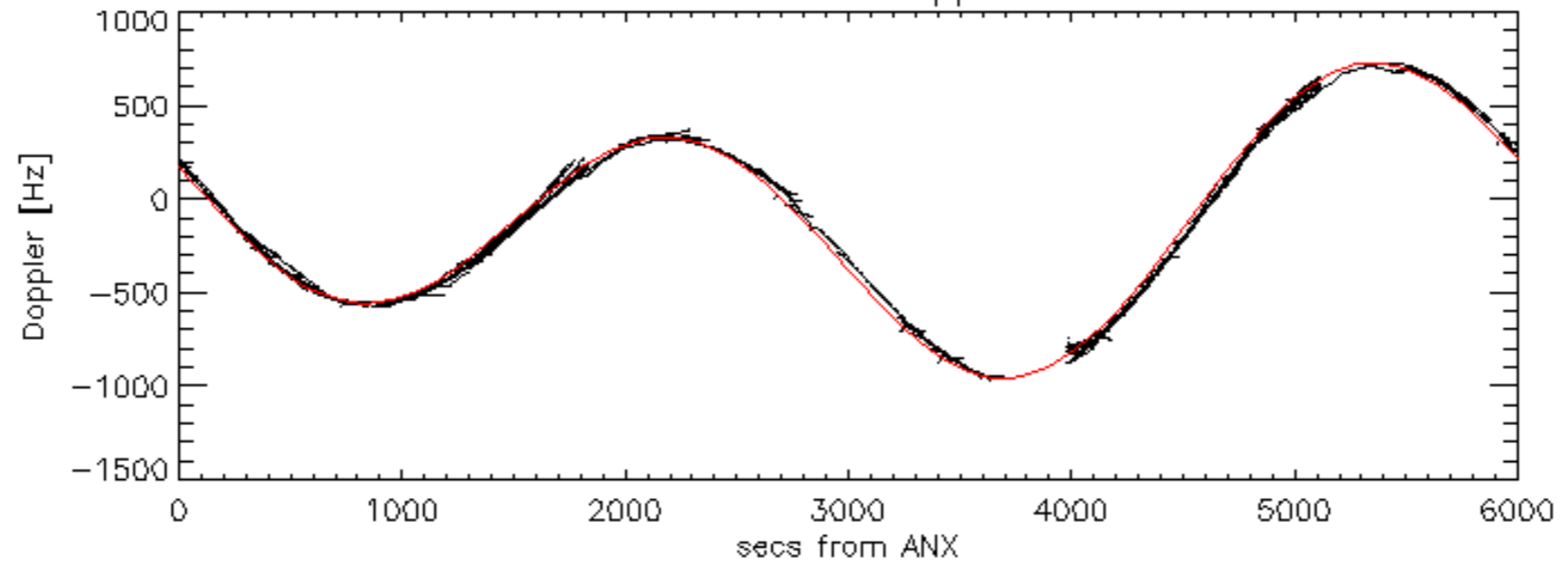
Doppler 'WVS' 'IS2' ascending

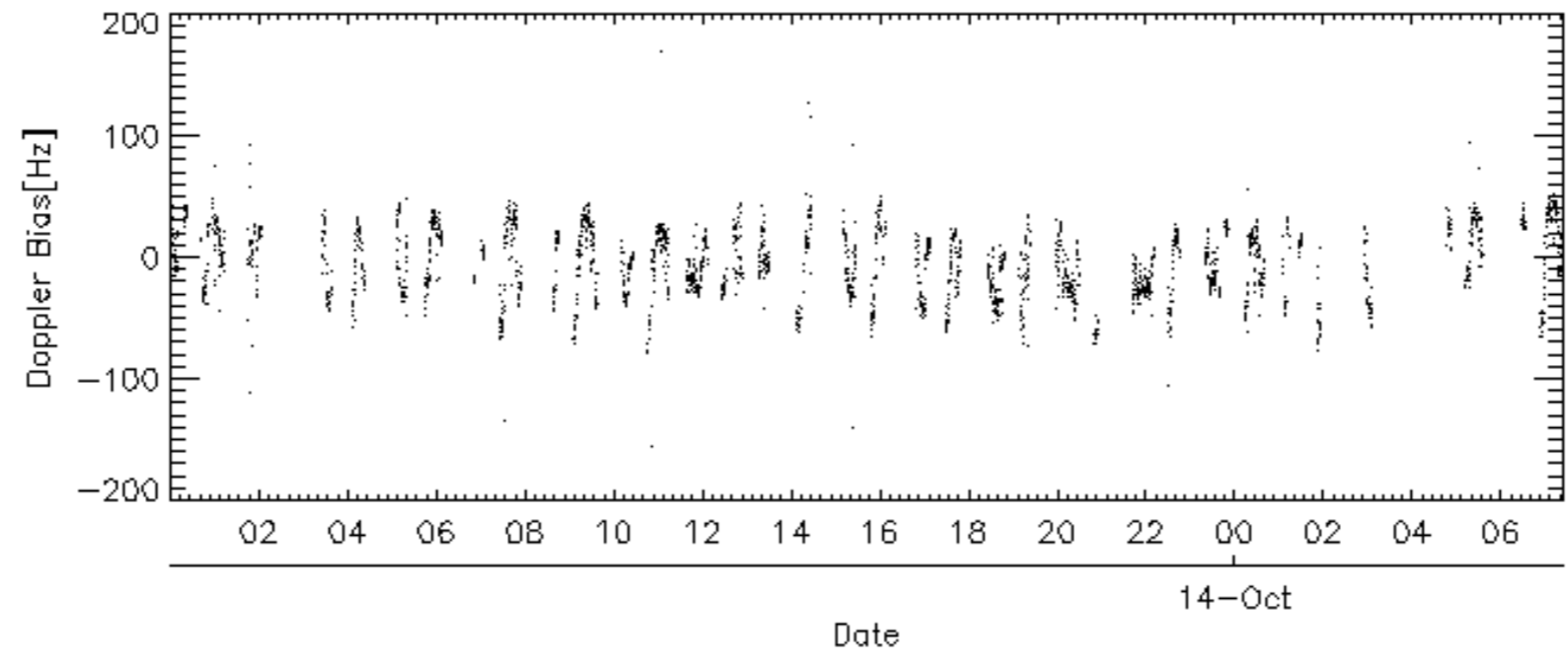
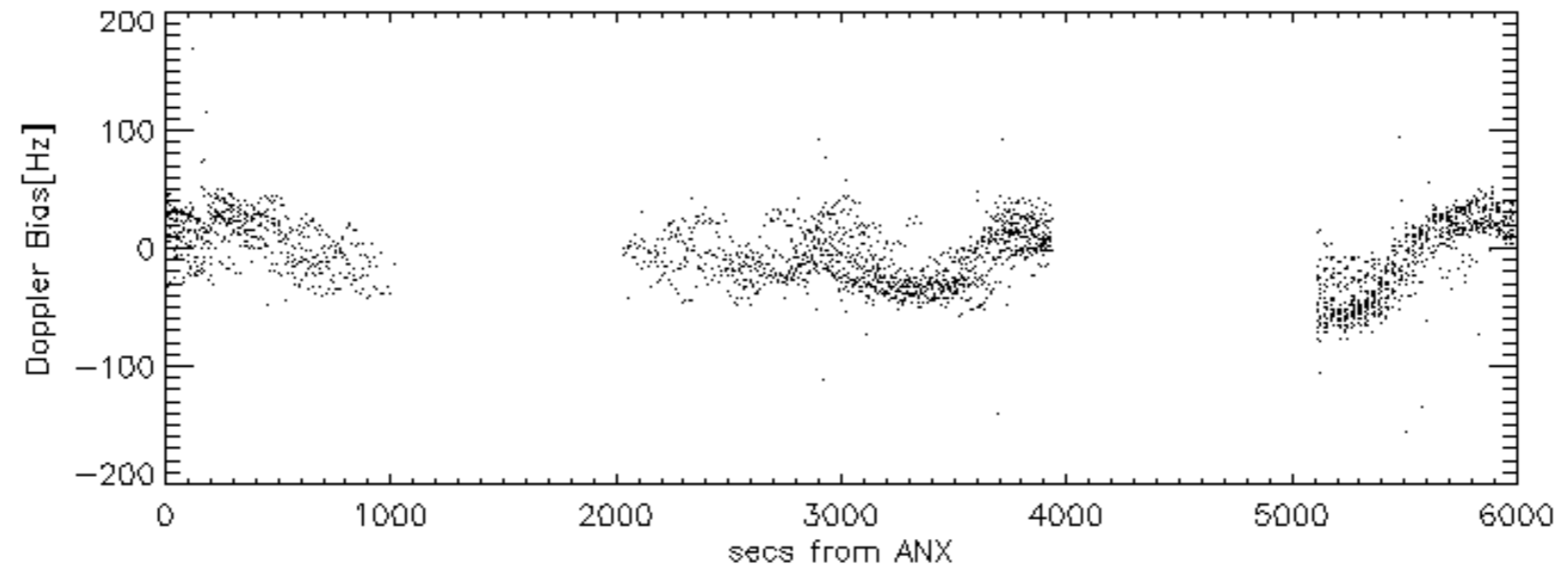
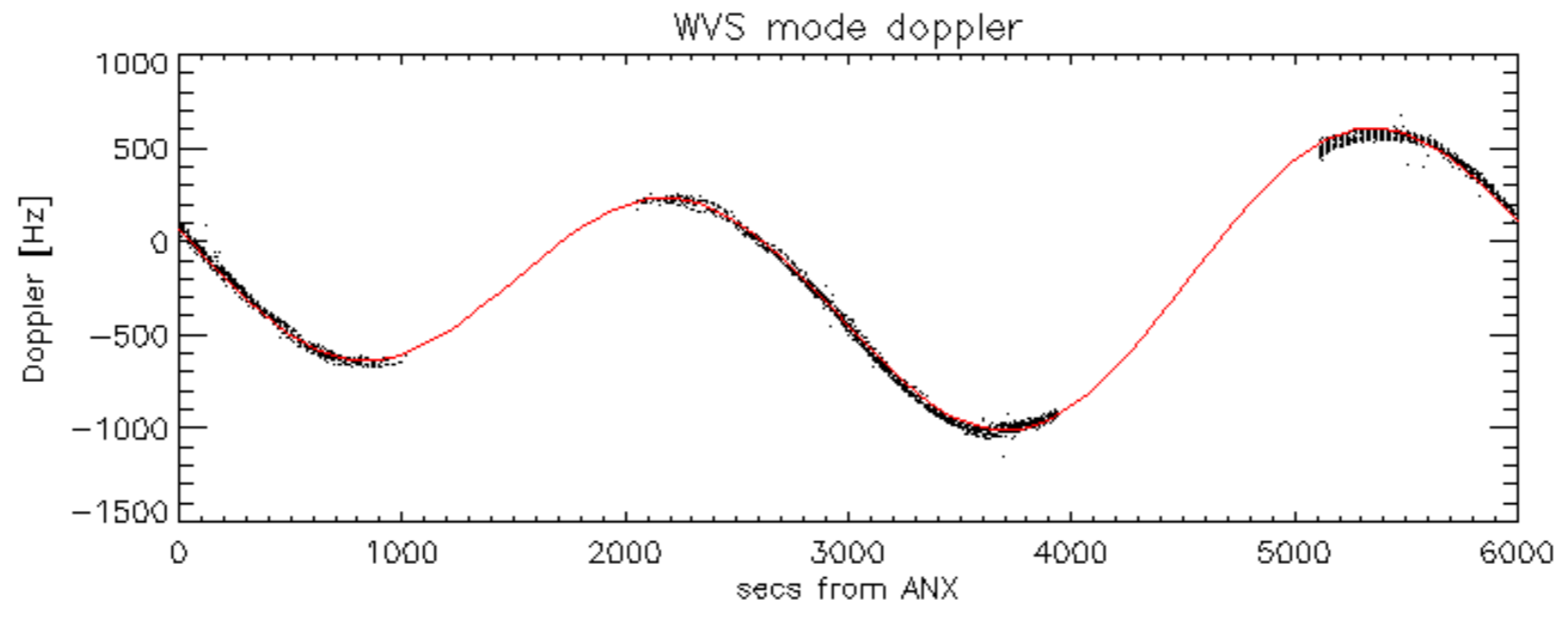


Doppler 'WVS' 'IS2' descending

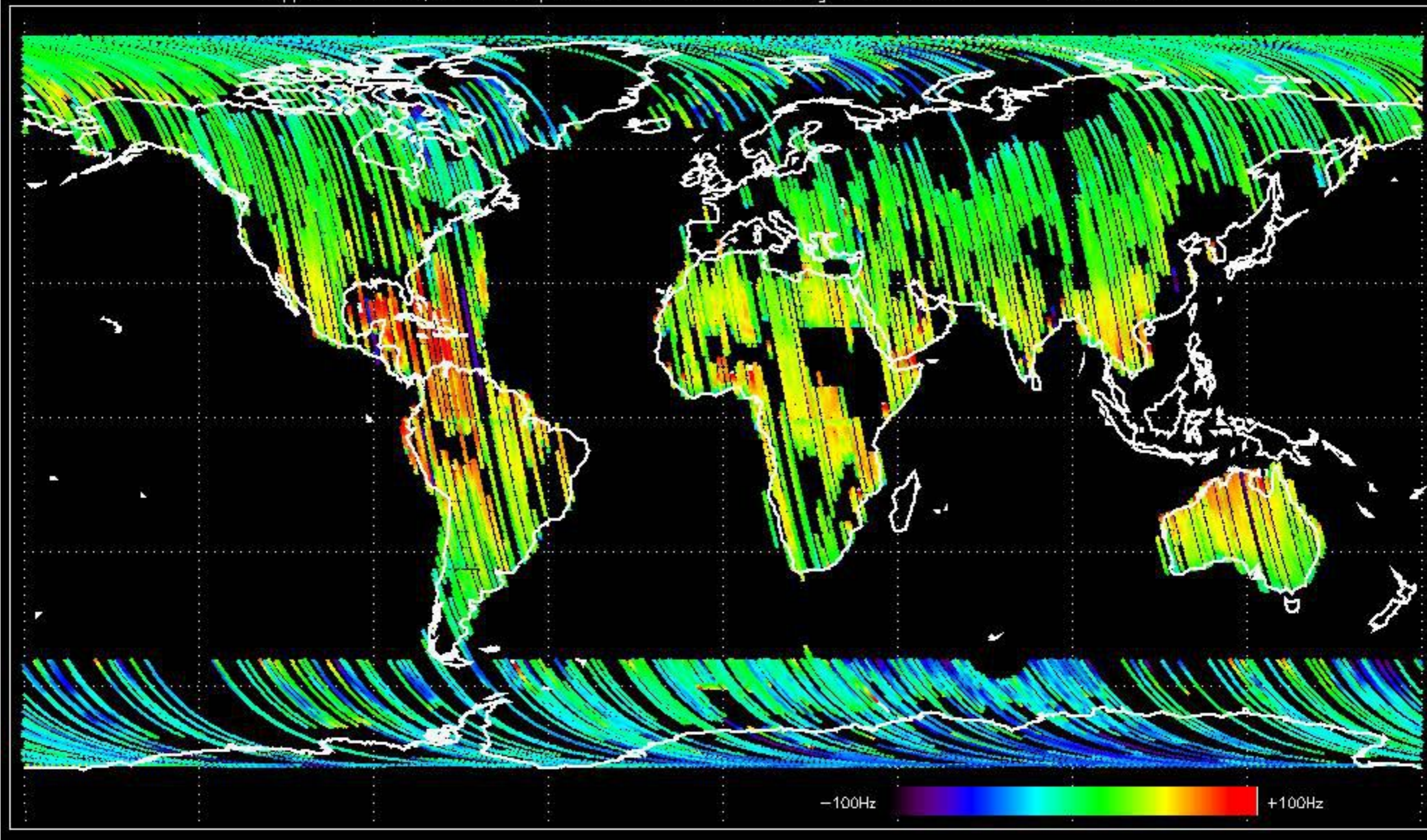


GM1 mode doppler

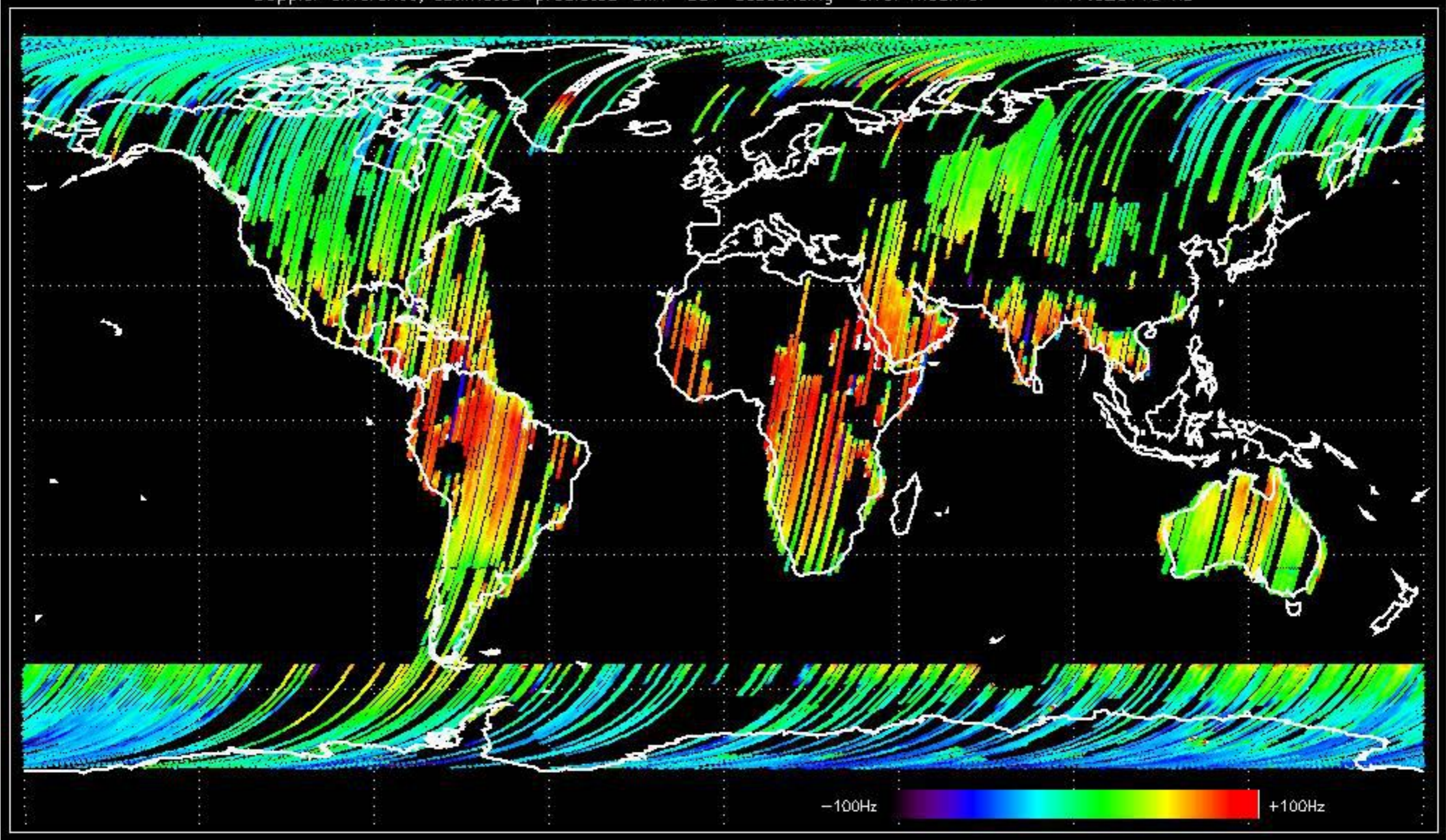




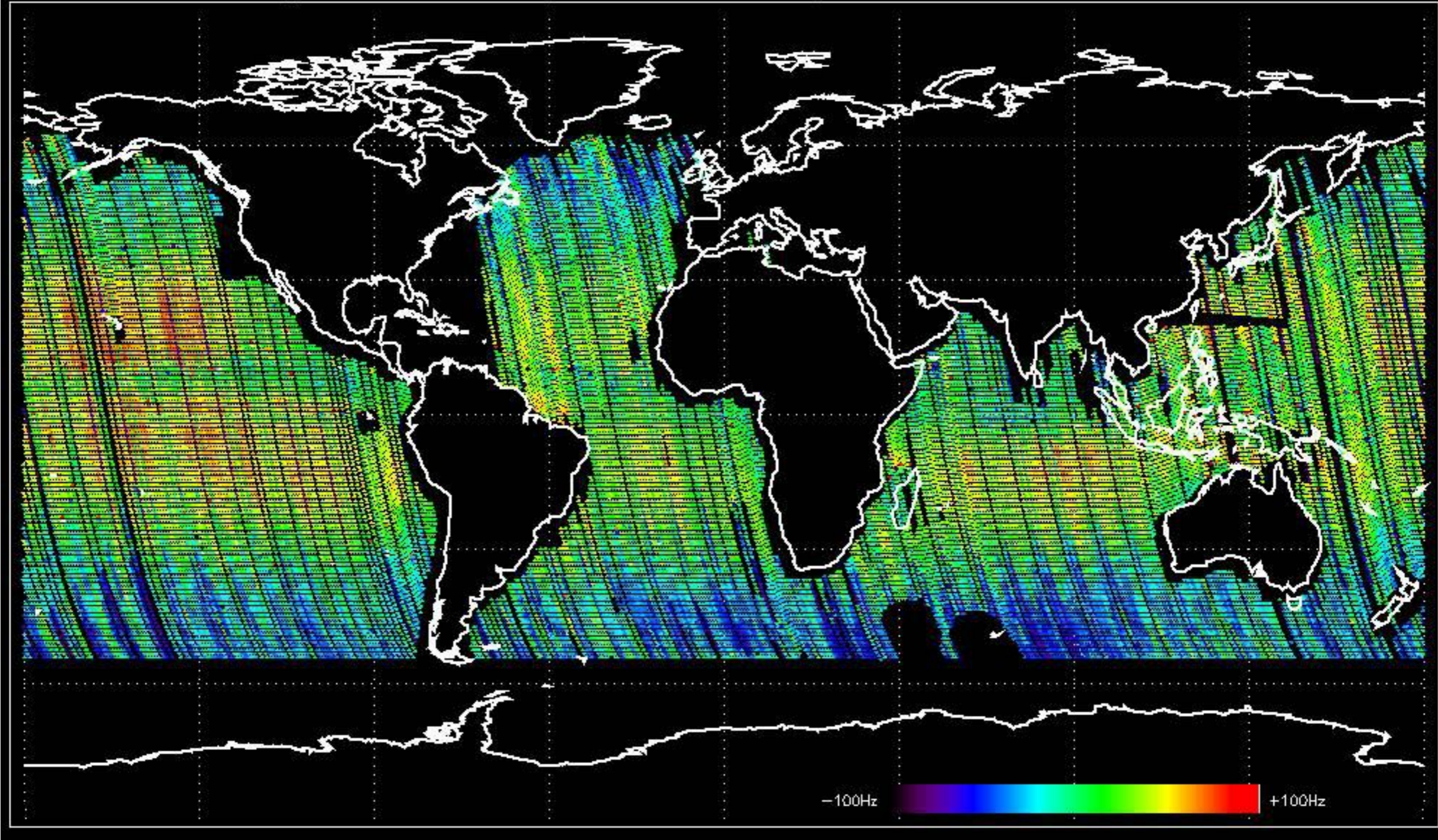
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.333624 Hz



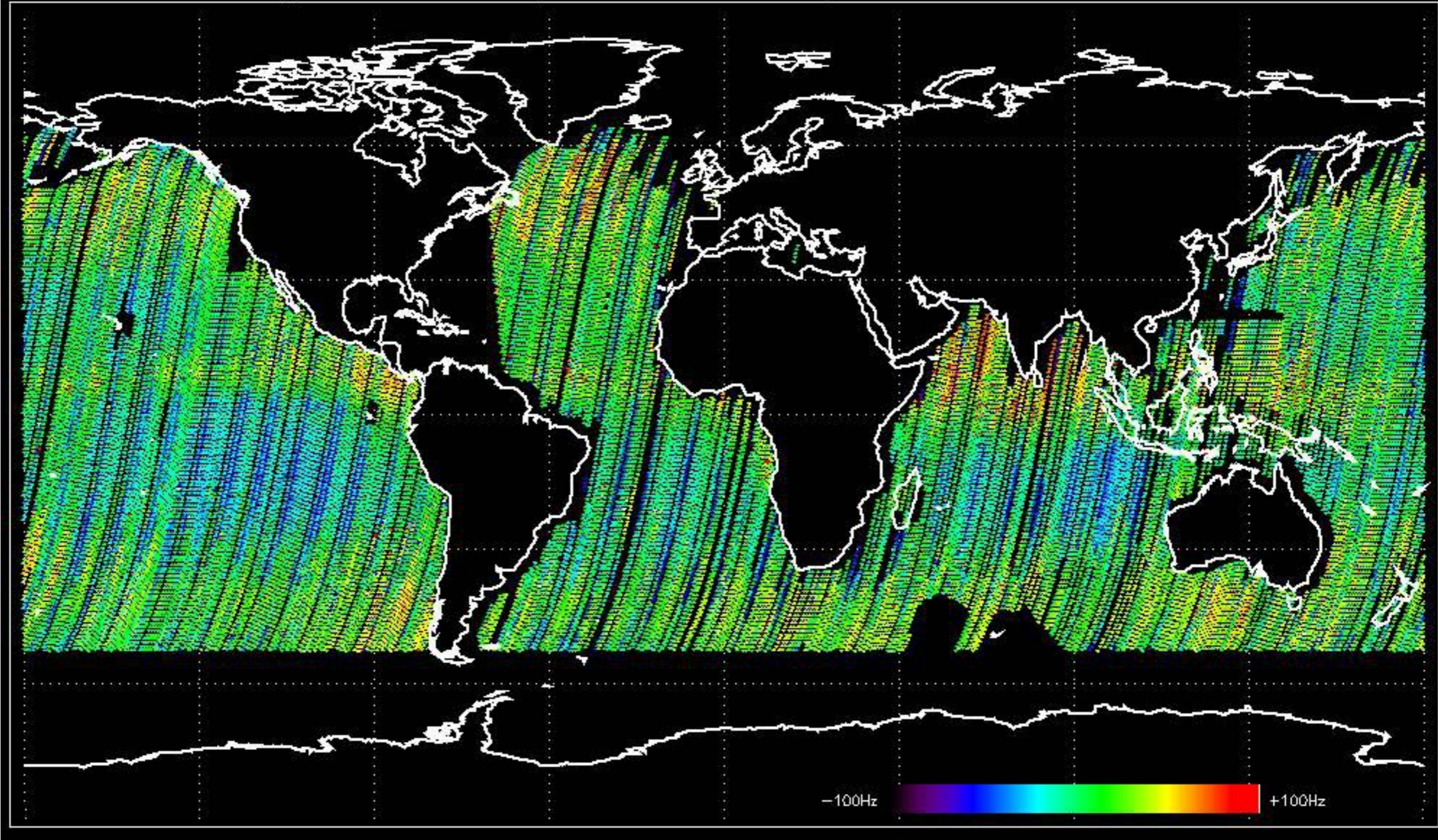
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.620115 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.458369 Hz

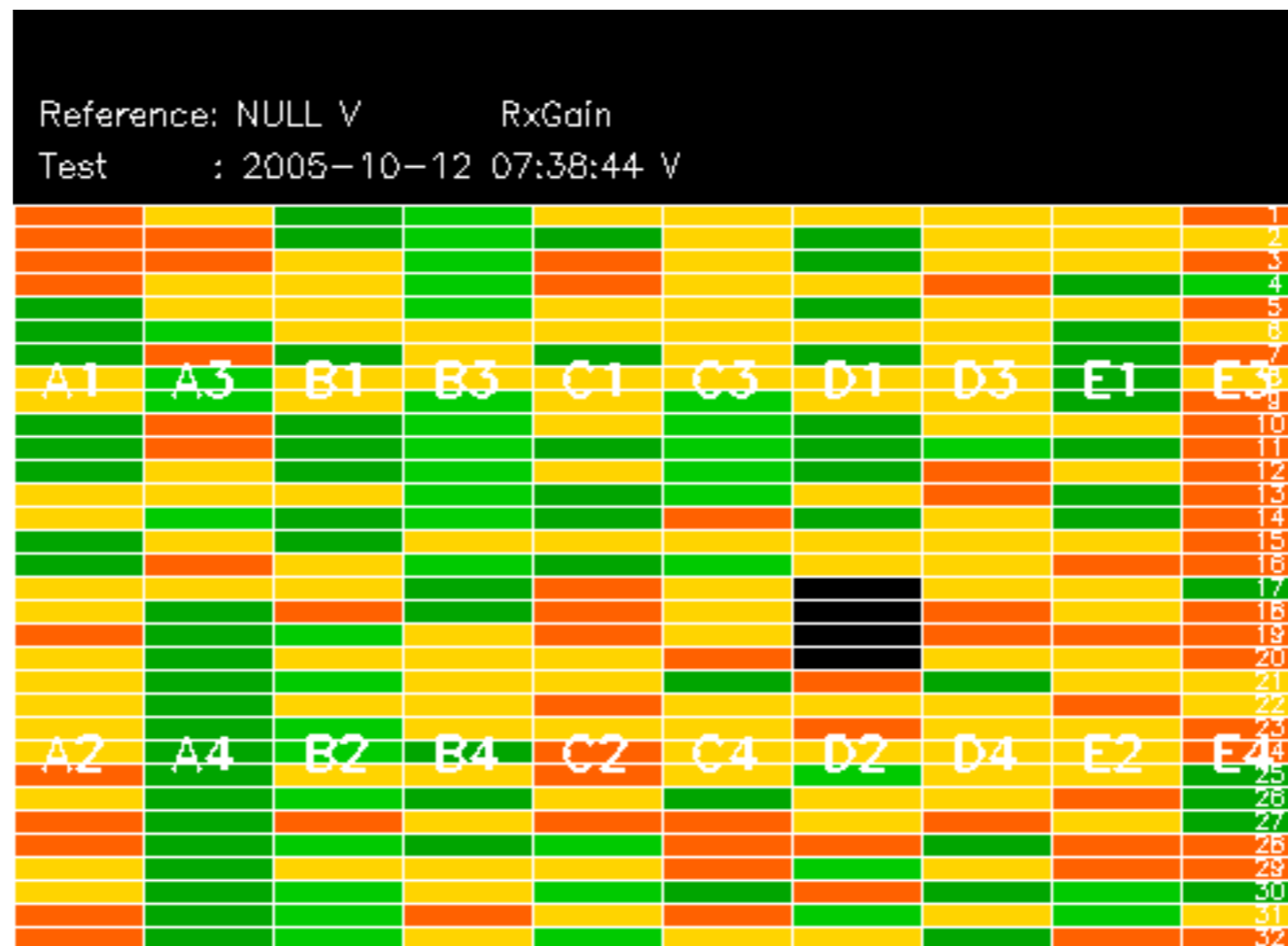


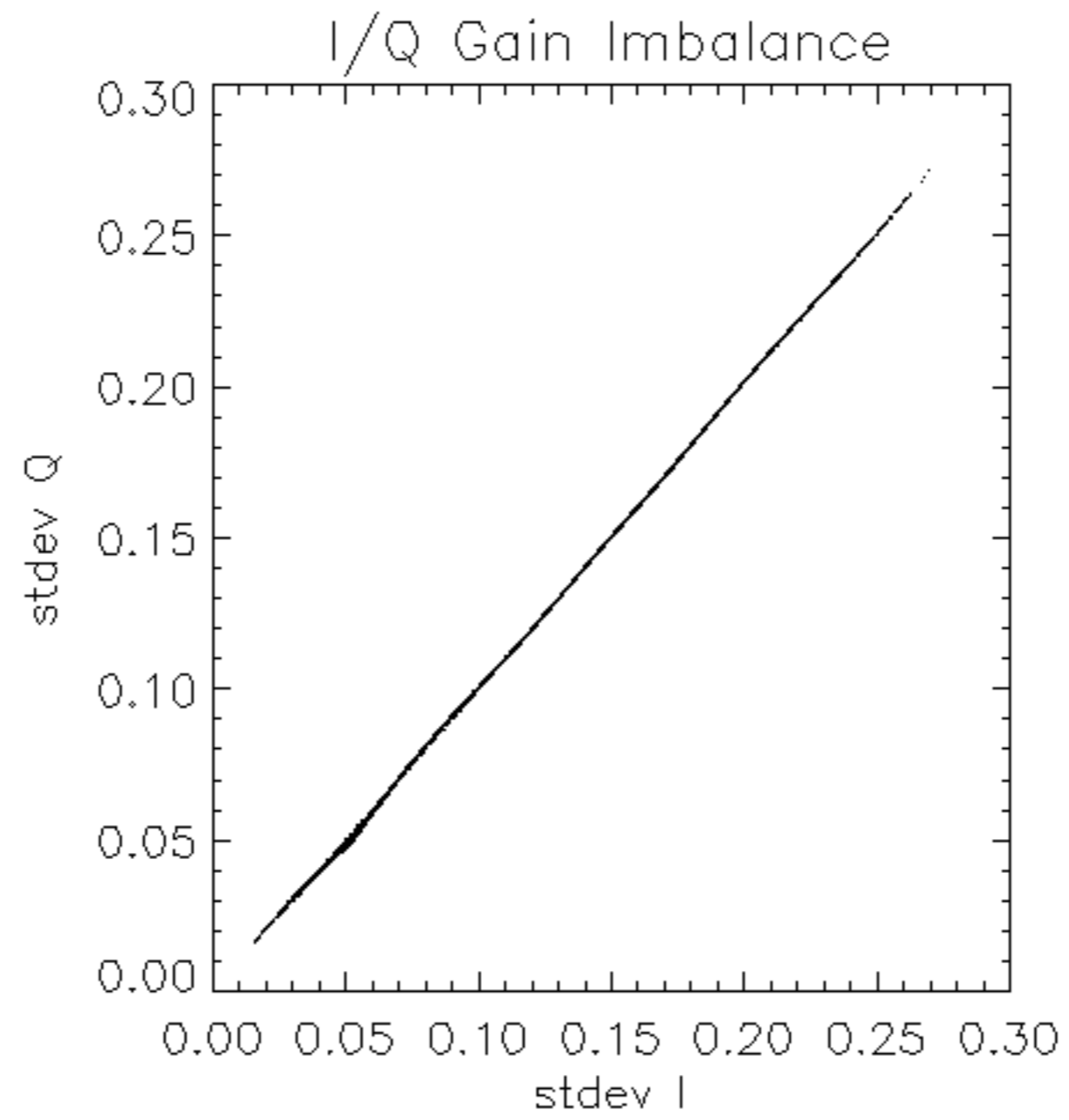
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -18.278497 Hz

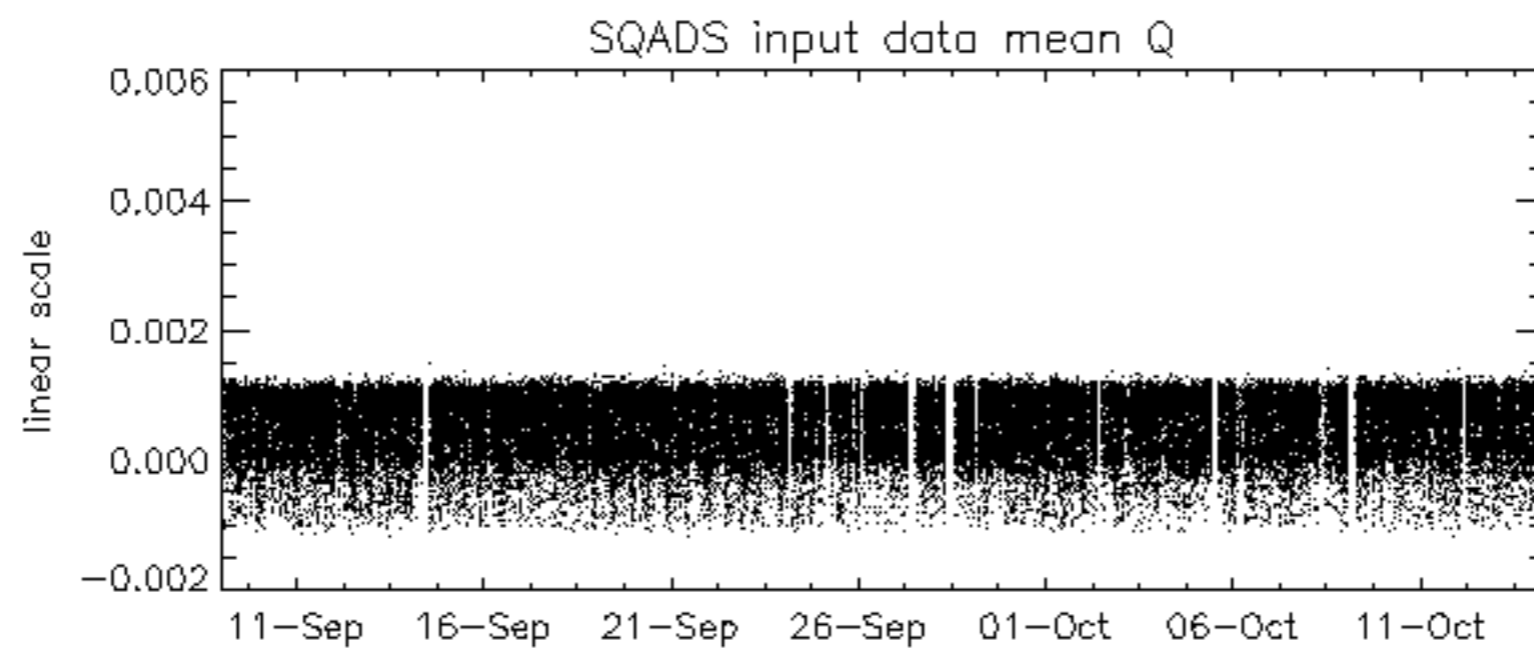
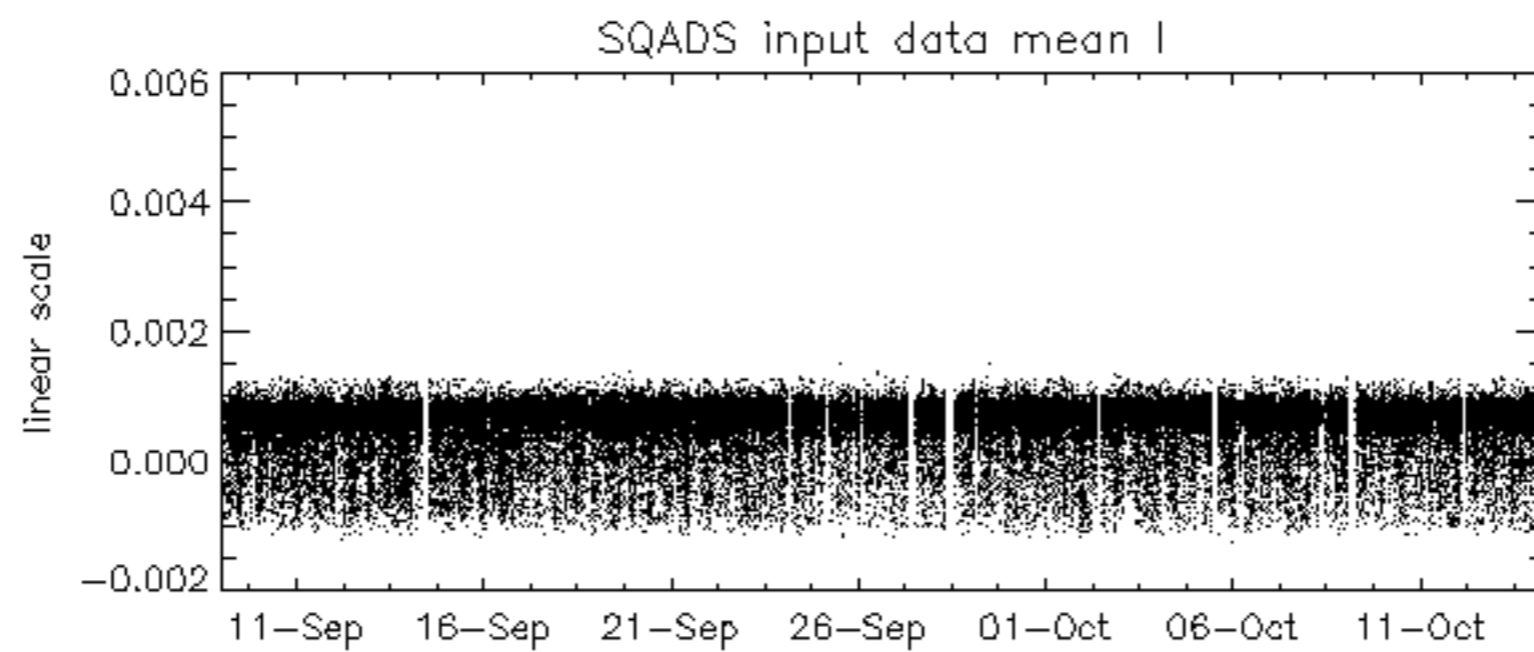
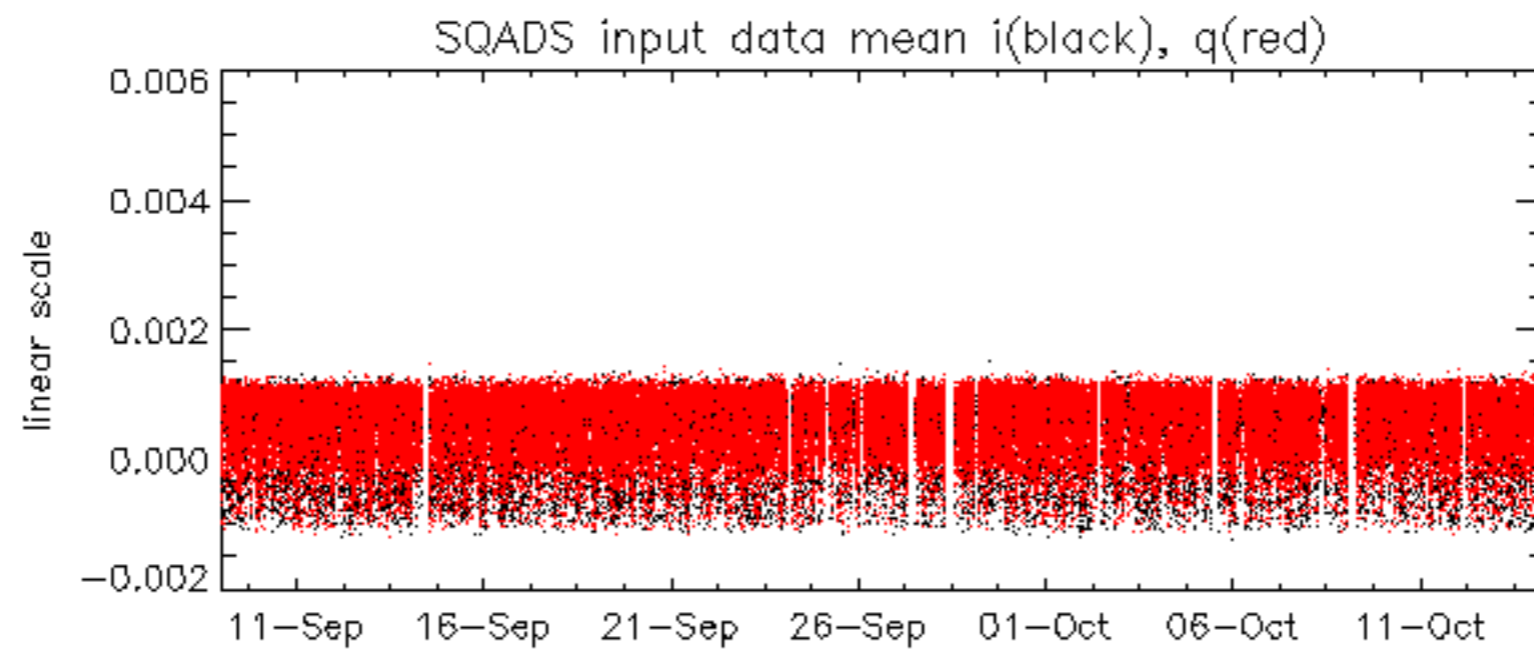


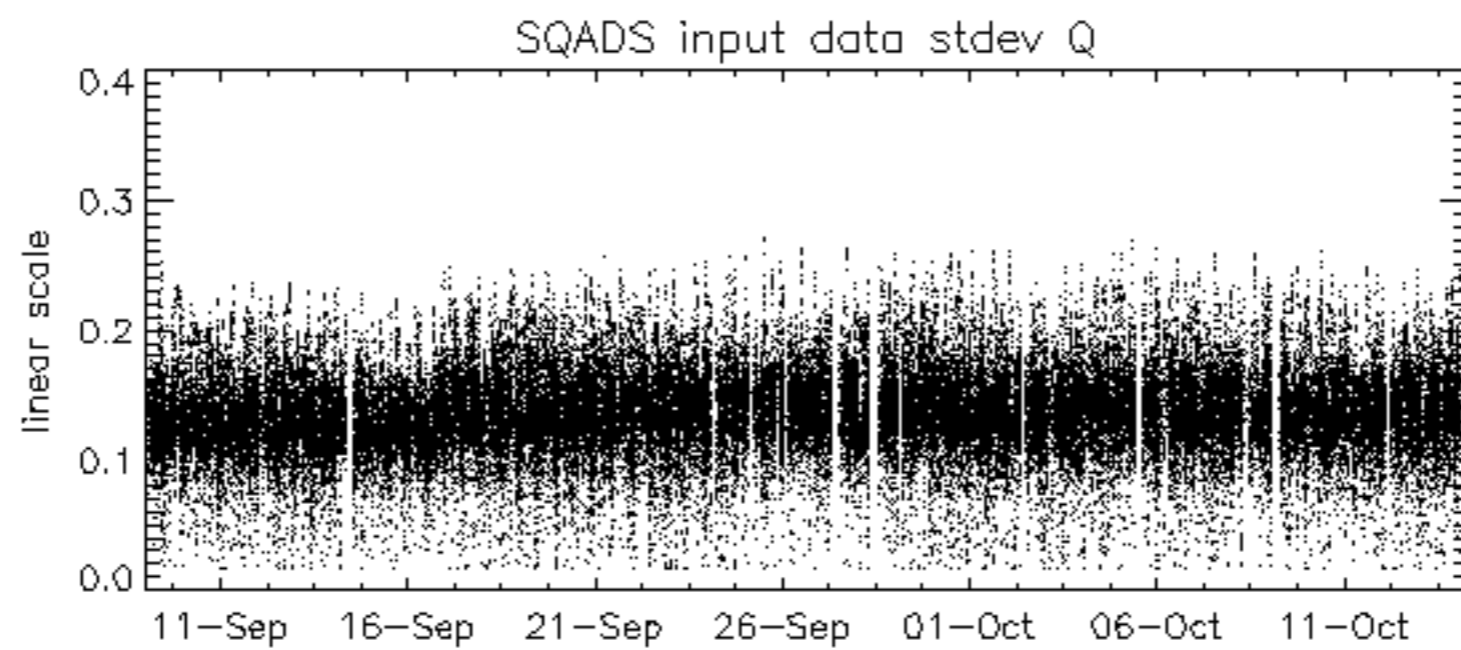
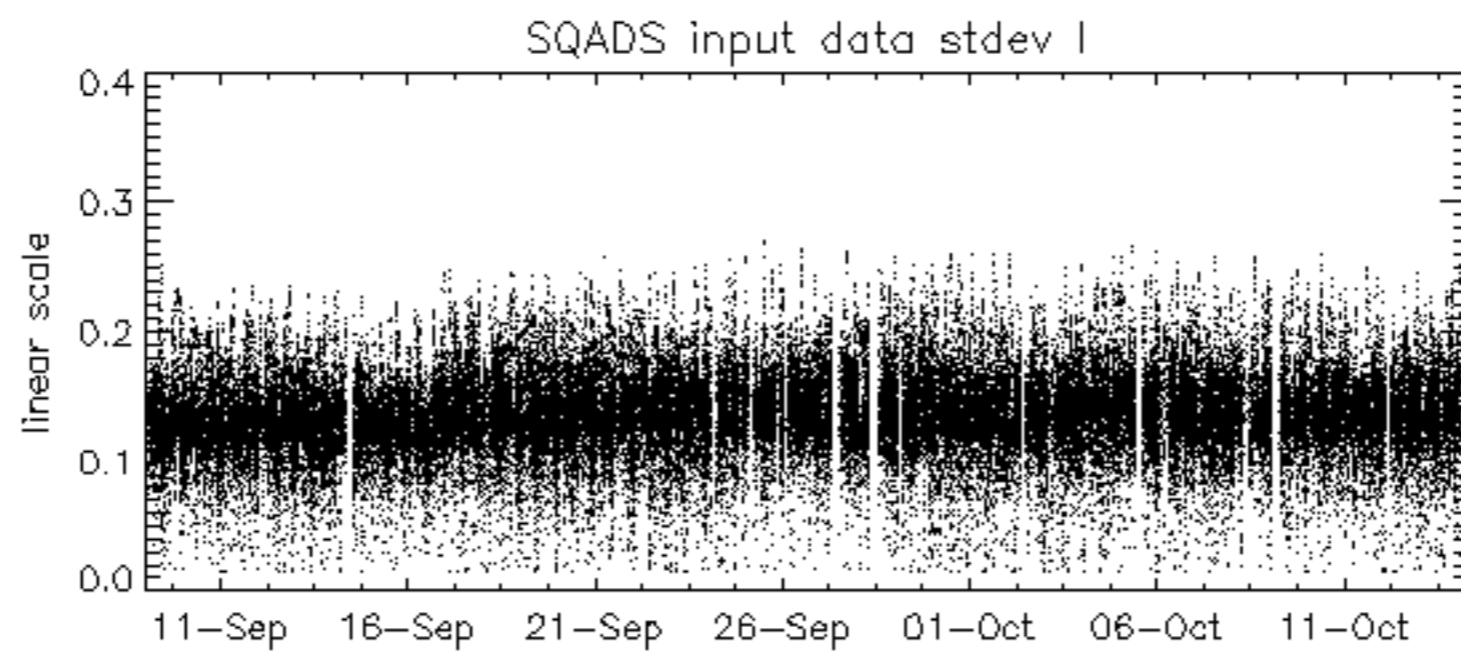
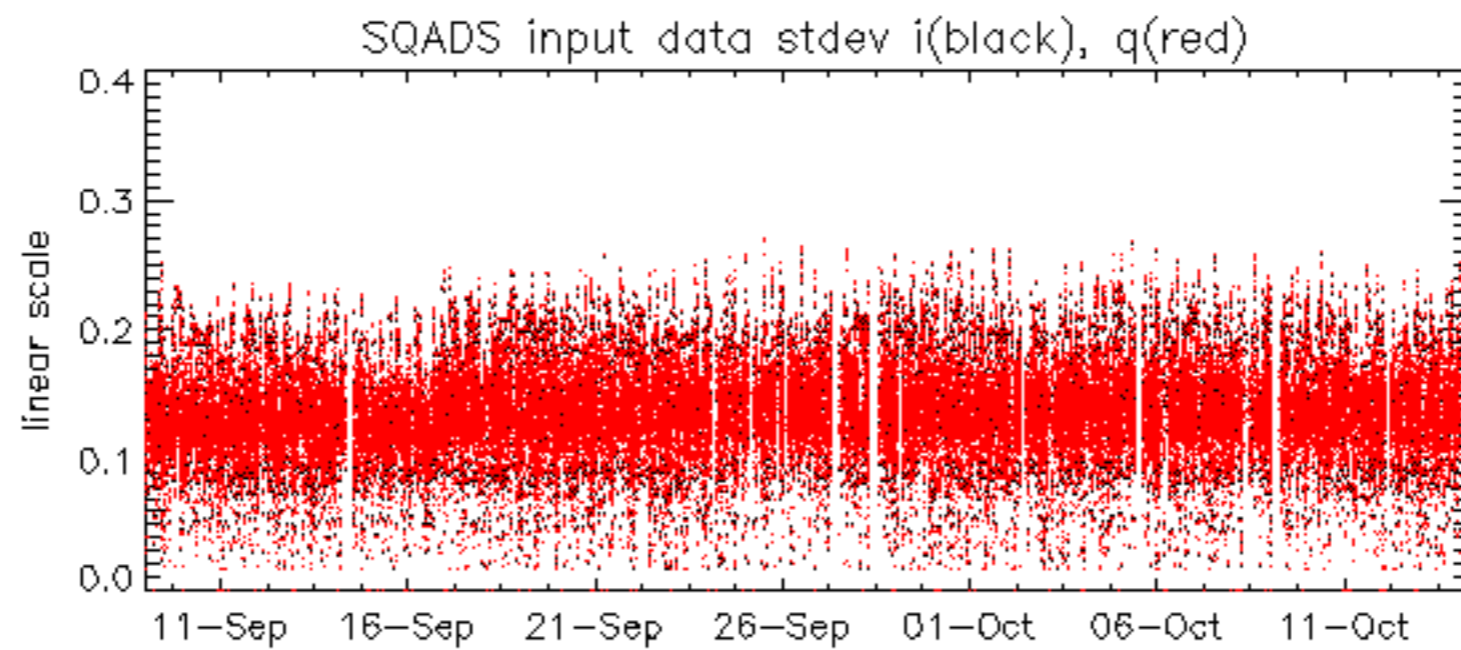
No anomalies observed on available MS products:

No anomalies observed.





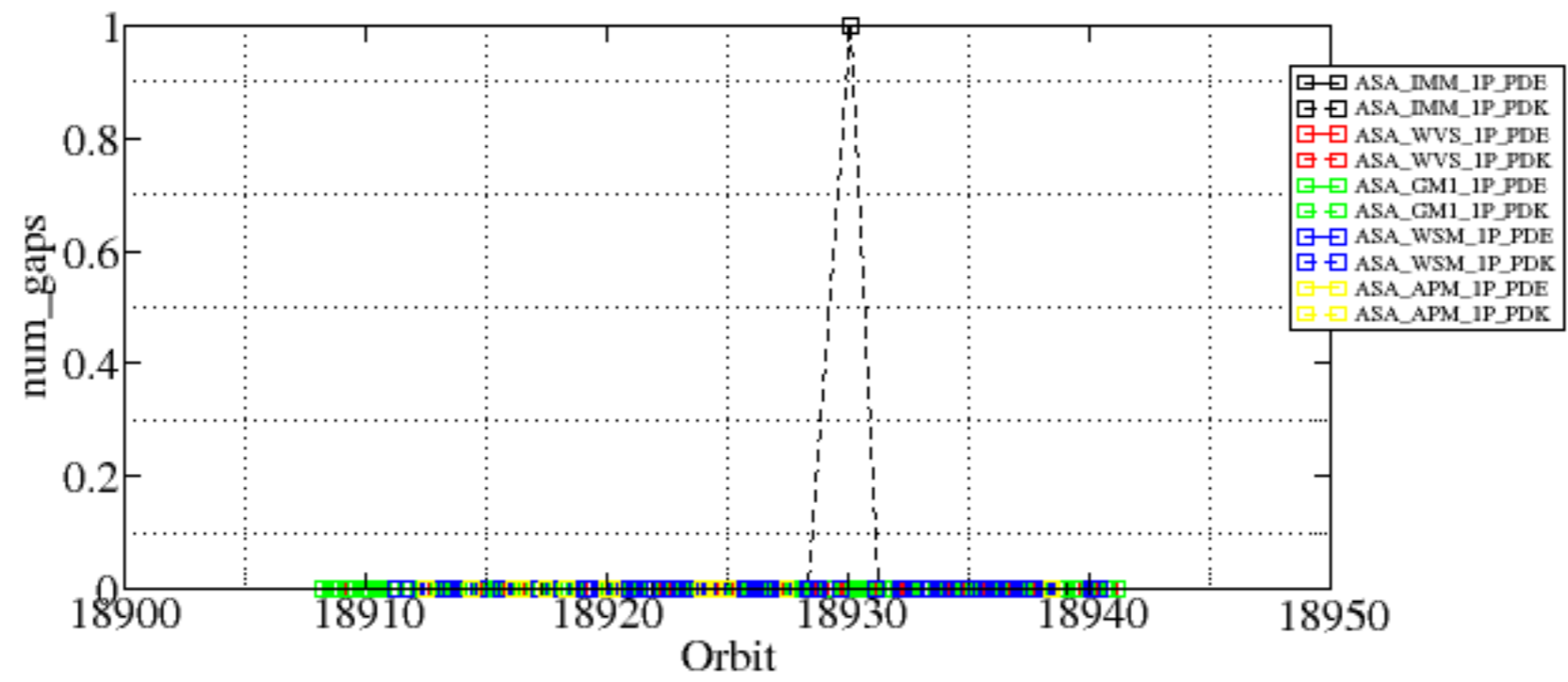


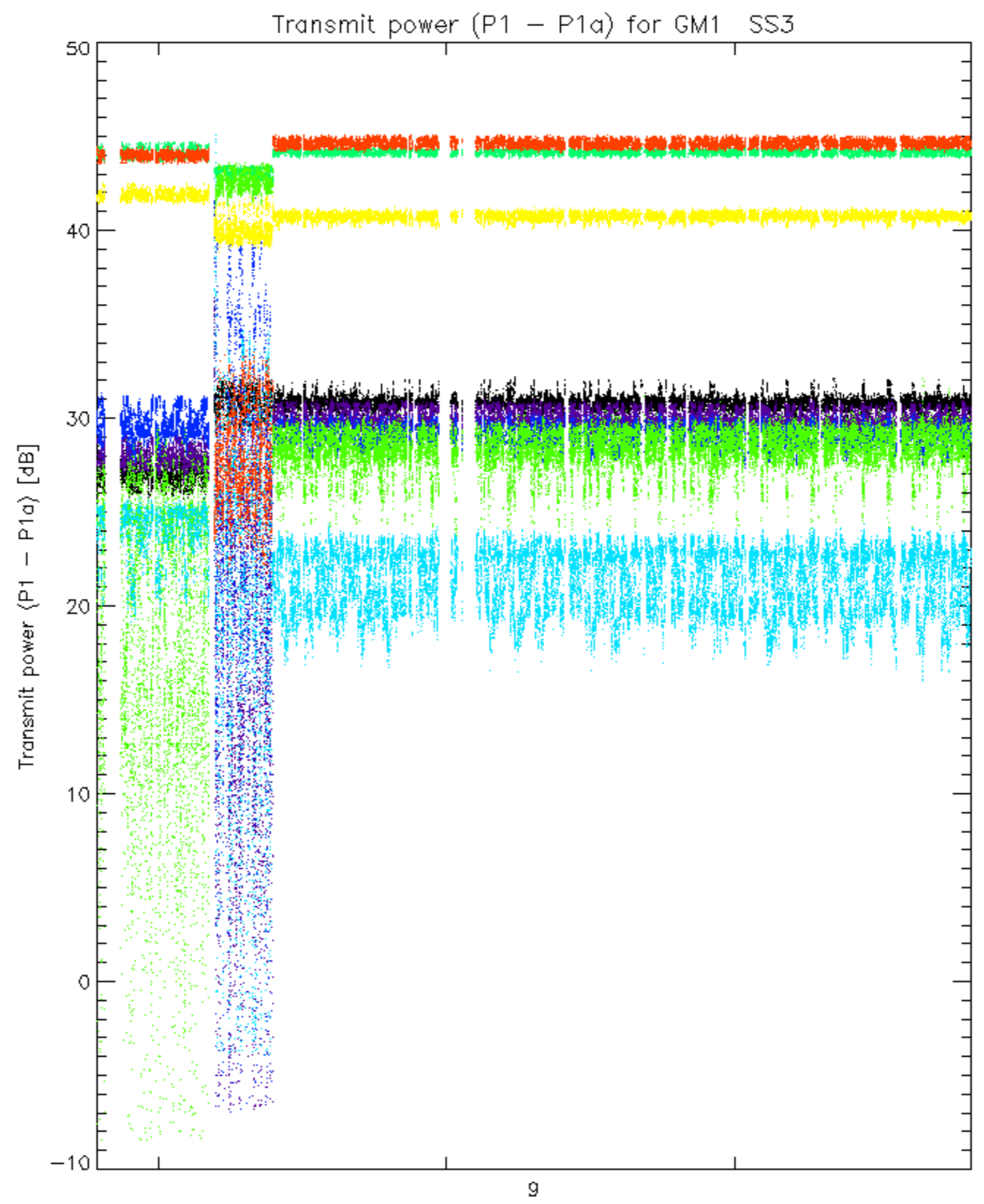


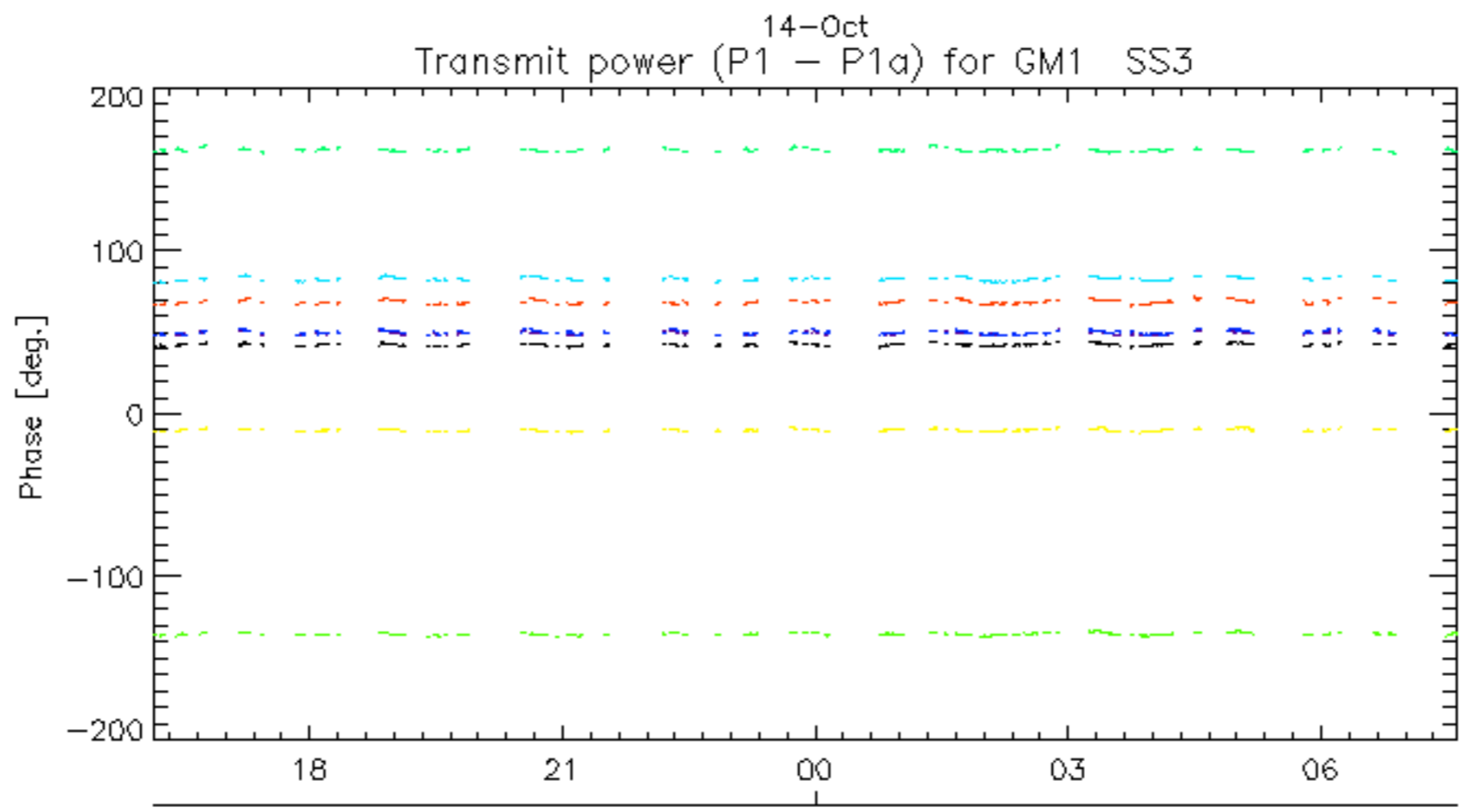
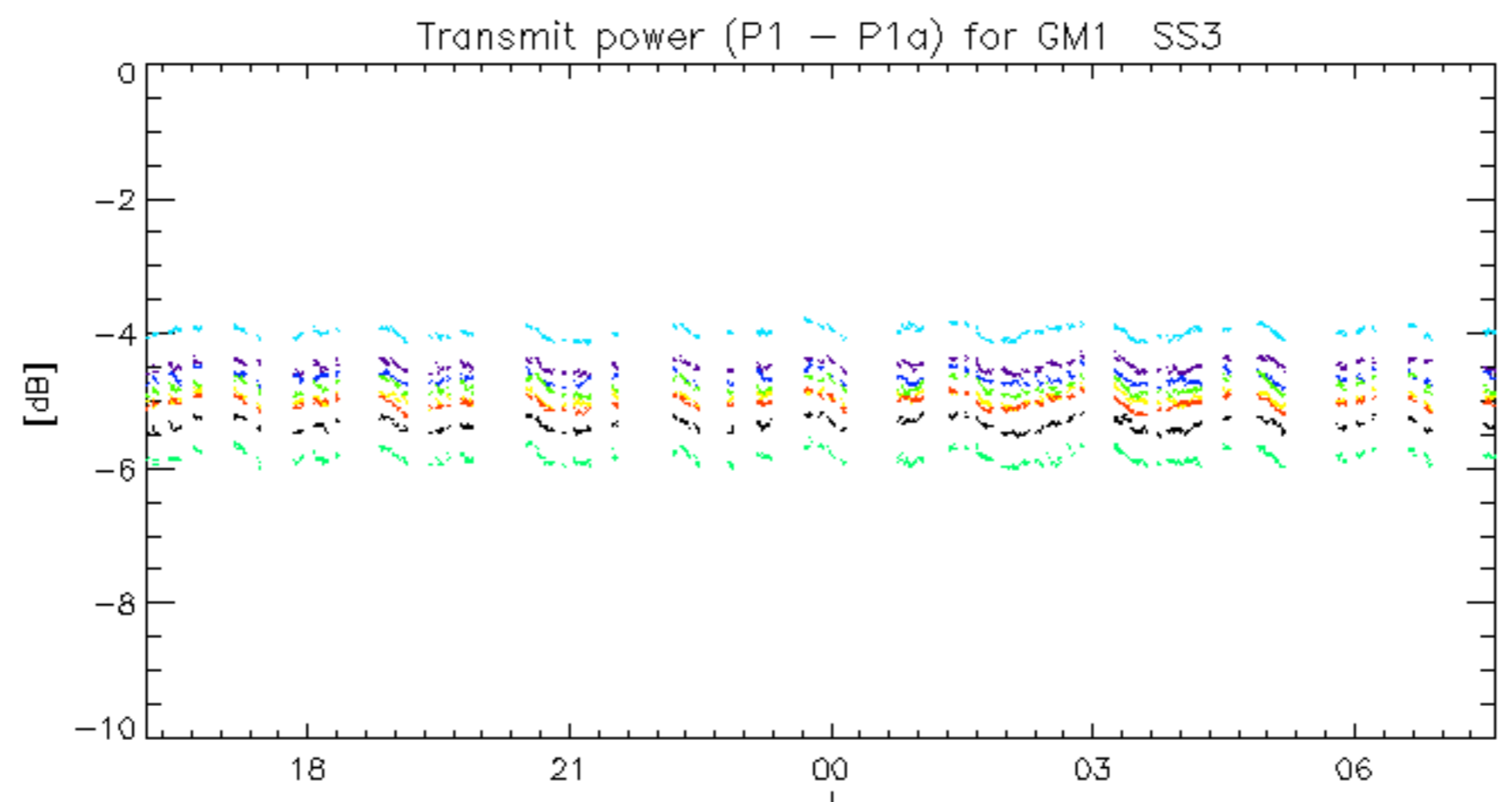
Summary of analysis for the last 3 days 2005101[234]

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

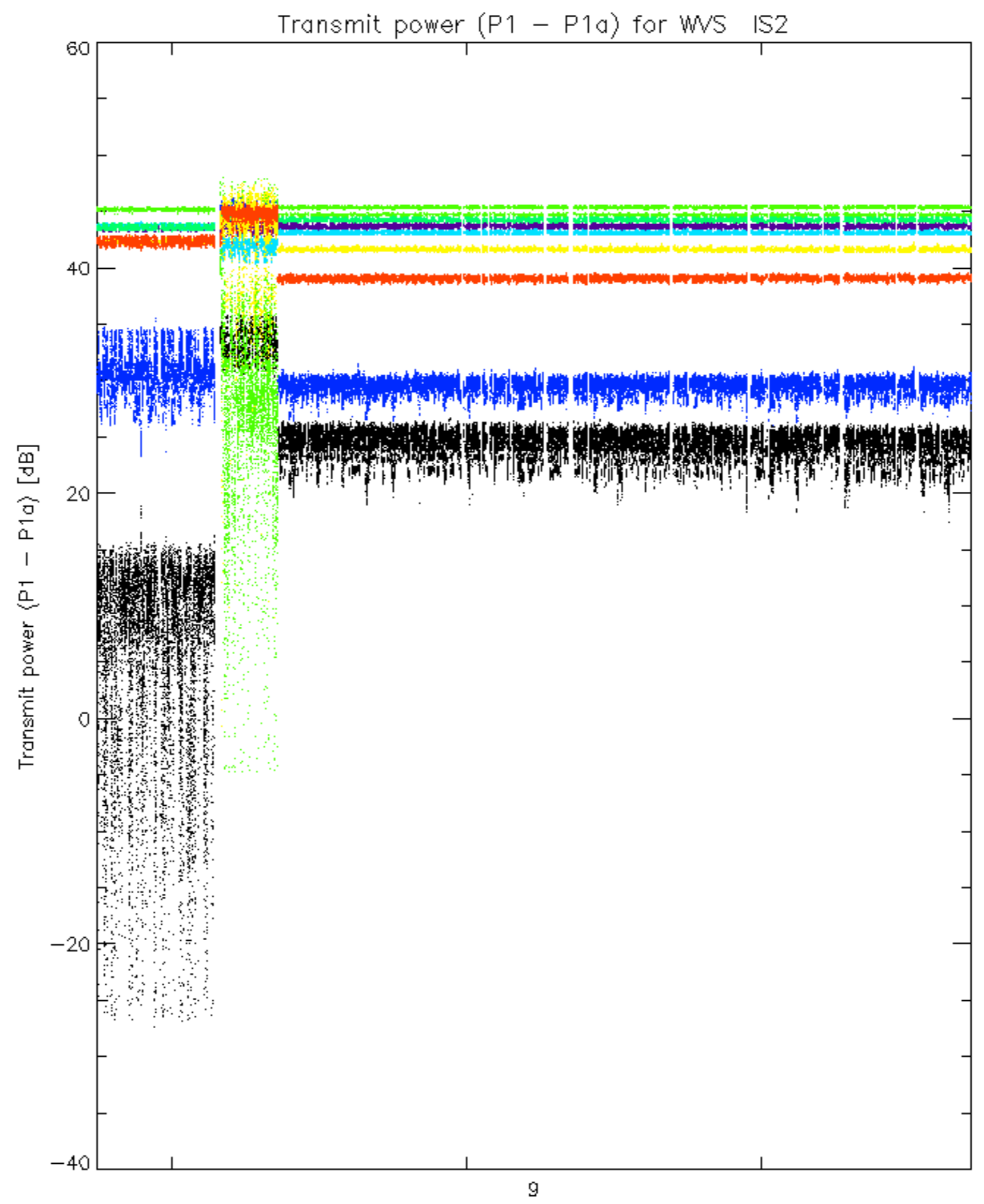
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20051013_125413_000001212041_00339_18930_5617.N1	1	0
ASA_WSM_1PNPDE20051013_224734_000000912041_00345_18936_3834.N1	0	40
ASA_WSM_1PNPDE20051014_011413_000003542041_00346_18937_3867.N1	0	23



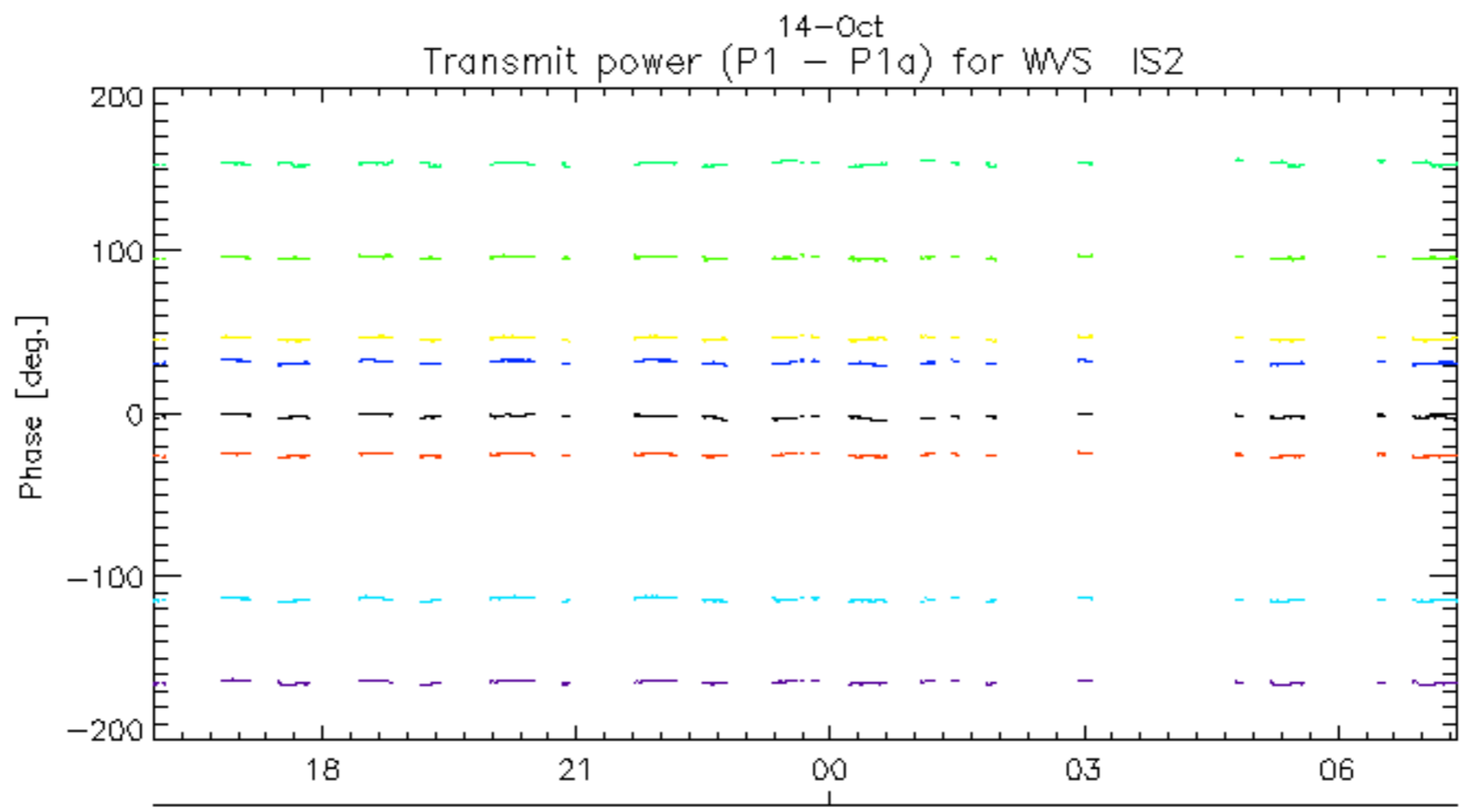
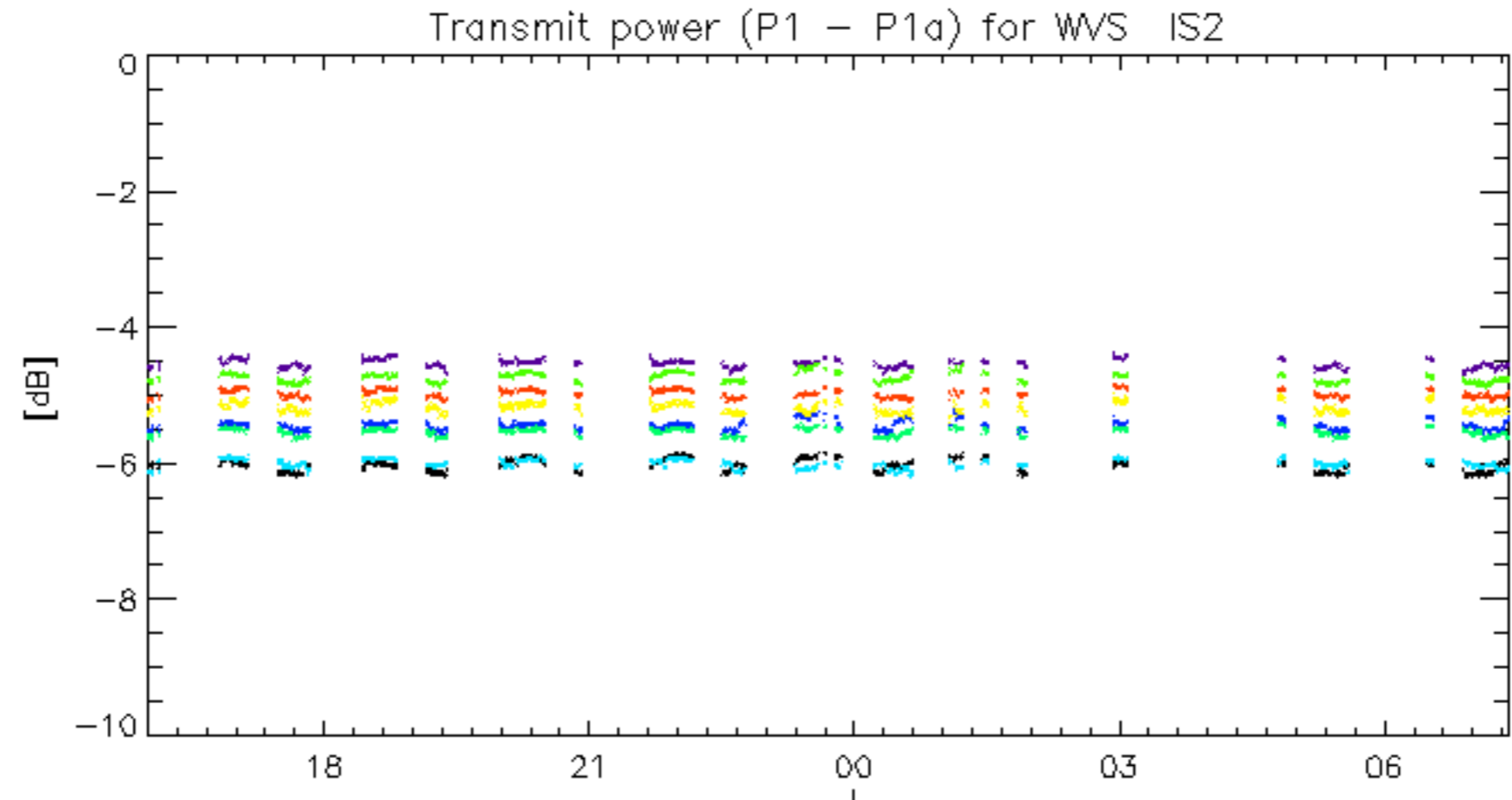




14-Oct
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.