

PRELIMINARY REPORT OF 051213

last update on Tue Dec 13 16:46:23 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 2005-12-12 00:00:00 to 2005-12-13 16:46:23

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	41	0	13	0	26
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	41	0	13	0	26
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	41	0	13	0	26
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	41	0	13	0	26

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	49	29	15	54
ASA_XCA_AXVIEC20051013_152531_20050916_195733_20061231_000000	44	49	29	15	54
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	49	29	15	54
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	49	29	15	54

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	20051212 054047
H	20051211 061224

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
☒
☒

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	-3.537039	0.194506	0.404048
7	P1	-2.751916	0.124910	0.781419
11	P1	-4.152284	0.030770	-0.064429
15	P1	-5.116853	1.713022	3.163838
19	P1	-3.034097	0.061109	0.549394
22	P1	-4.437778	0.020801	0.183843
26	P1	-4.398497	0.059644	-0.523779
30	P1	-5.653011	0.033333	0.357004
3	P1	-15.201066	2.034600	1.639835
7	P1	-15.305041	2.610133	3.819267
11	P1	-16.310061	0.466122	0.898113
15	P1	-12.805844	1.020641	2.308381
19	P1	-13.411926	0.337301	1.263920
22	P1	-16.064608	0.624793	0.884744
26	P1	-15.132309	1.117854	2.378001
30	P1	-15.594417	2.449599	3.597643

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.873911	0.106397	-0.029529
7	P2	-22.556639	0.105117	0.032520
11	P2	-16.588608	0.120657	-0.085933
15	P2	-7.279757	0.104465	-0.062005
19	P2	-9.221747	0.101748	0.045682
22	P2	-17.860943	0.110583	0.146153
26	P2	-16.360209	0.133852	-0.478028
30	P2	-19.785698	0.119691	-0.360014

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.234863	0.007328	-0.016637
7	P3	-8.234863	0.007328	-0.016637
11	P3	-8.234863	0.007328	-0.016637
15	P3	-8.234863	0.007328	-0.016637
19	P3	-8.234863	0.007328	-0.016637
22	P3	-8.234863	0.007328	-0.016637
26	P3	-8.234863	0.007328	-0.016637
30	P3	-8.234863	0.007328	-0.016637

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	-3.695713	0.007966	-0.019042
7	P1	-2.781741	0.011311	0.029882
11	P1	-2.878091	0.014329	-0.005673
15	P1	-3.401302	0.021912	-0.016038
19	P1	-3.382728	0.013468	-0.024278
22	P1	-5.119823	0.019794	-0.014600
26	P1	-5.828116	0.016314	-0.051277
30	P1	-5.273436	0.032875	-0.015420
3	P1	-11.468407	0.042671	-0.031016
7	P1	-9.973180	0.045785	-0.001171
11	P1	-10.052493	0.060958	-0.014750
15	P1	-10.569811	0.084466	0.027680
19	P1	-15.507179	0.074524	-0.036675
22	P1	-20.941450	0.971421	-0.214781

26	P1	-17.207594	0.309935	0.048835
30	P1	-18.328709	0.318306	0.177728

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.641394	0.030182	0.058689
7	P2	-23.057467	0.061332	-0.017337
11	P2	-11.656817	0.022058	0.105981
15	P2	-4.981406	0.021796	-0.047620
19	P2	-6.960877	0.021822	-0.030567
22	P2	-8.181347	0.023669	-0.067662
26	P2	-24.046116	0.031850	-0.045519
30	P2	-22.117126	0.020107	-0.041323

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.074491	0.002464	-0.010473
7	P3	-8.074597	0.002477	-0.010665
11	P3	-8.074488	0.002461	-0.010622
15	P3	-8.074490	0.002469	-0.010572
19	P3	-8.074684	0.002475	-0.010186
22	P3	-8.074611	0.002470	-0.010462
26	P3	-8.074479	0.002448	-0.010922
30	P3	-8.074335	0.002469	-0.010213

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	0.000464751
	stdev	2.17098e-07
MEAN Q	mean	0.000483211
	stdev	2.36992e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129080
	stdev	0.00107595
STDEV Q	mean	0.129364
	stdev	0.00108794



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005121[123]

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_1PNPDE20051211_004056_000000622043_00174_19767_3704.N1	1	0
ASA_IMM_1PNPDE20051213_003723_000001162043_00202_19795_3834.N1	1	0
ASA_WSM_1PNPDE20051211_023139_000002262043_00175_19768_3714.N1	0	39
ASA_WSM_1PNPDE20051212_015902_000001842043_00189_19782_3870.N1	0	39
ASA_WSM_1PNPDE20051212_162339_000002072043_00198_19791_3936.N1	0	49



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)

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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

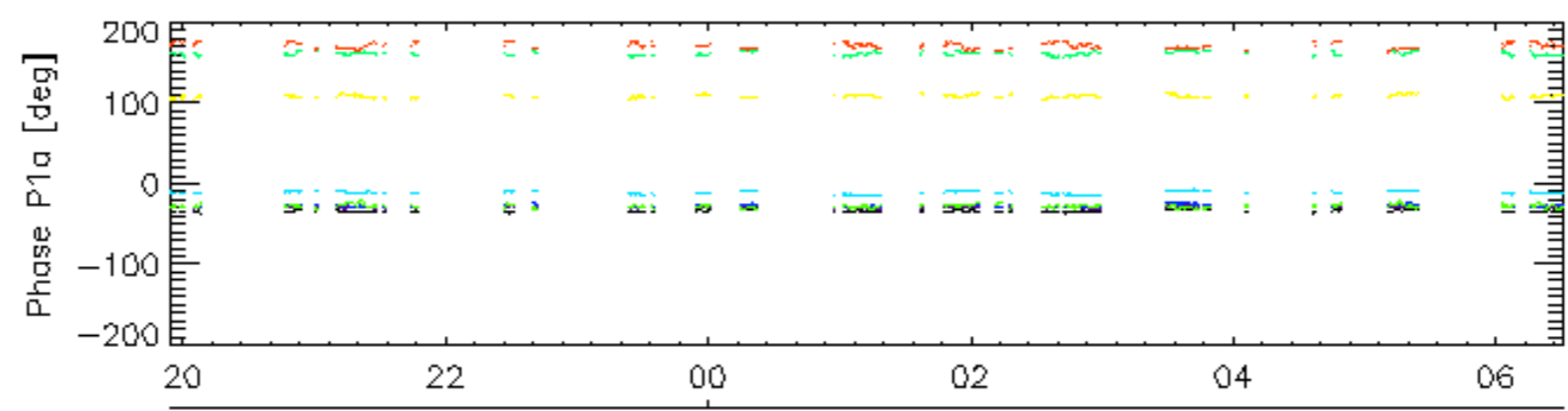
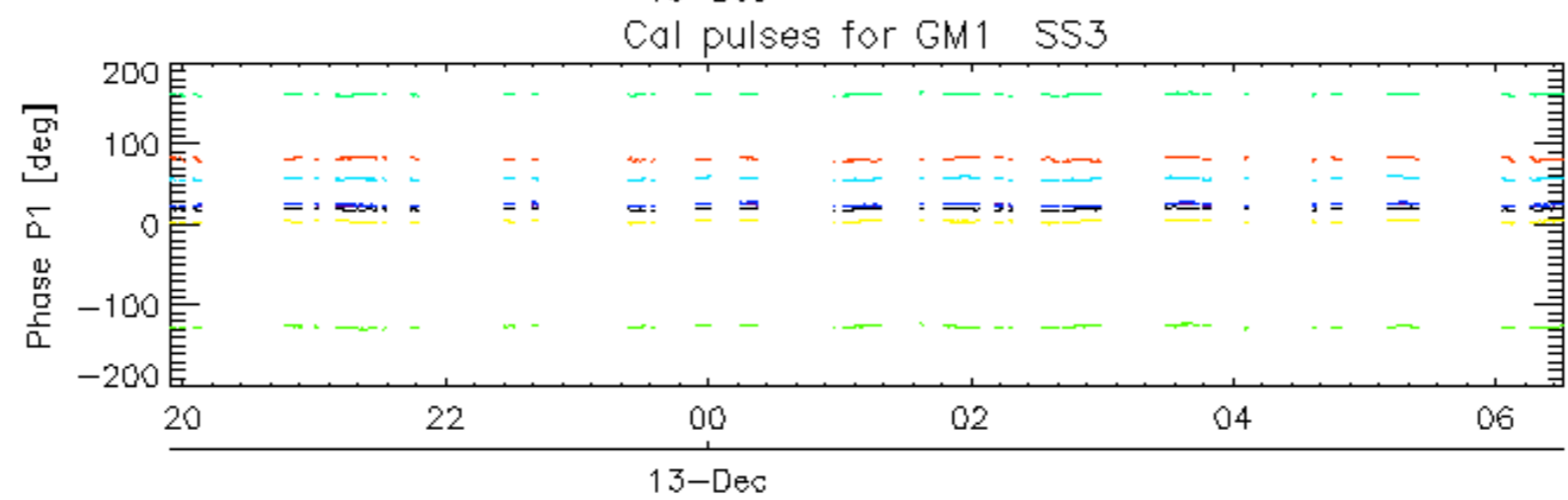
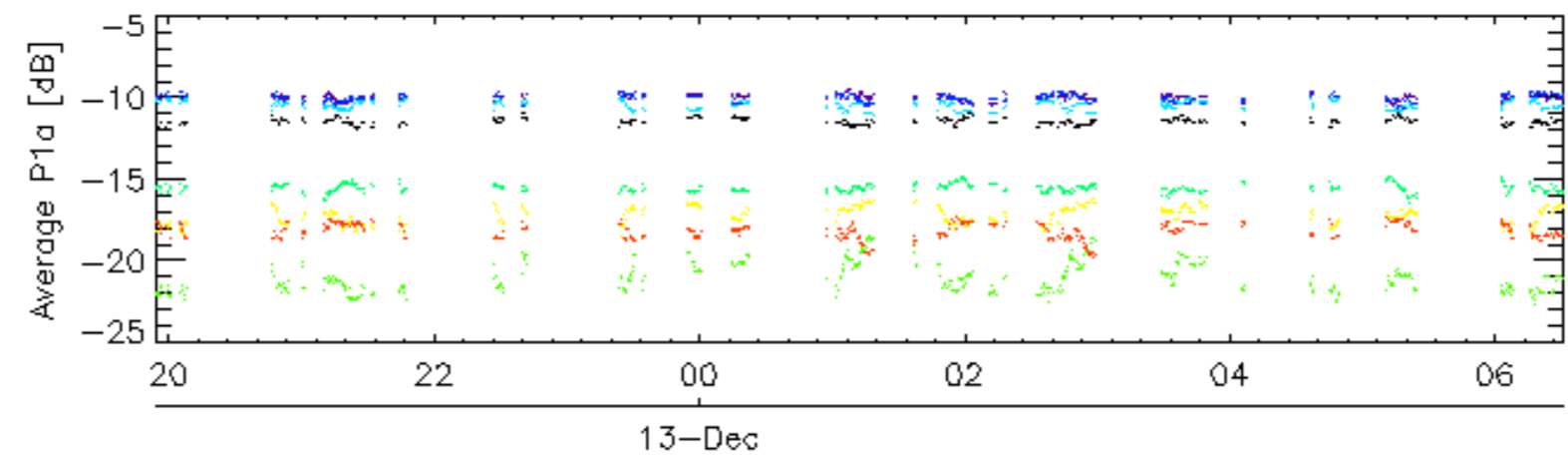
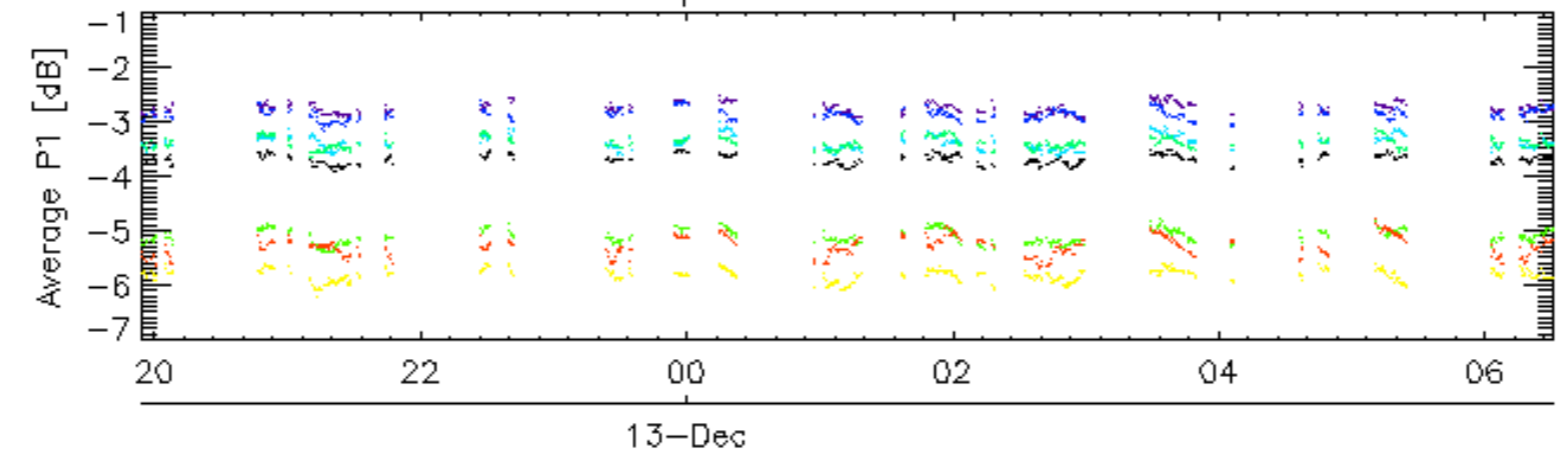
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<input type="checkbox"/>	
	Descending

7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

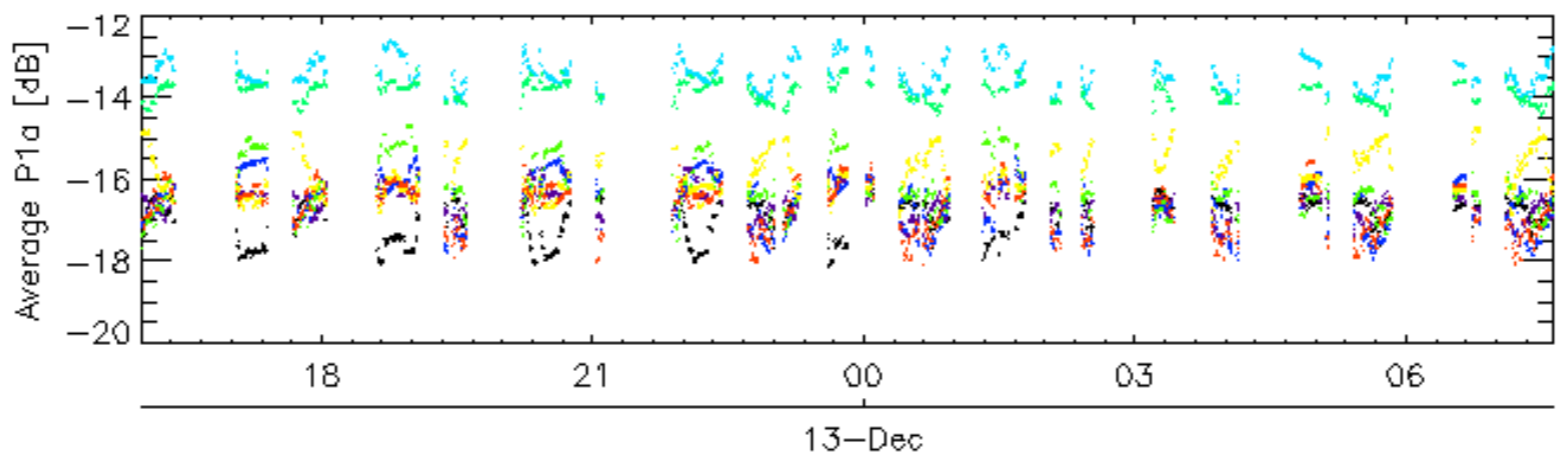
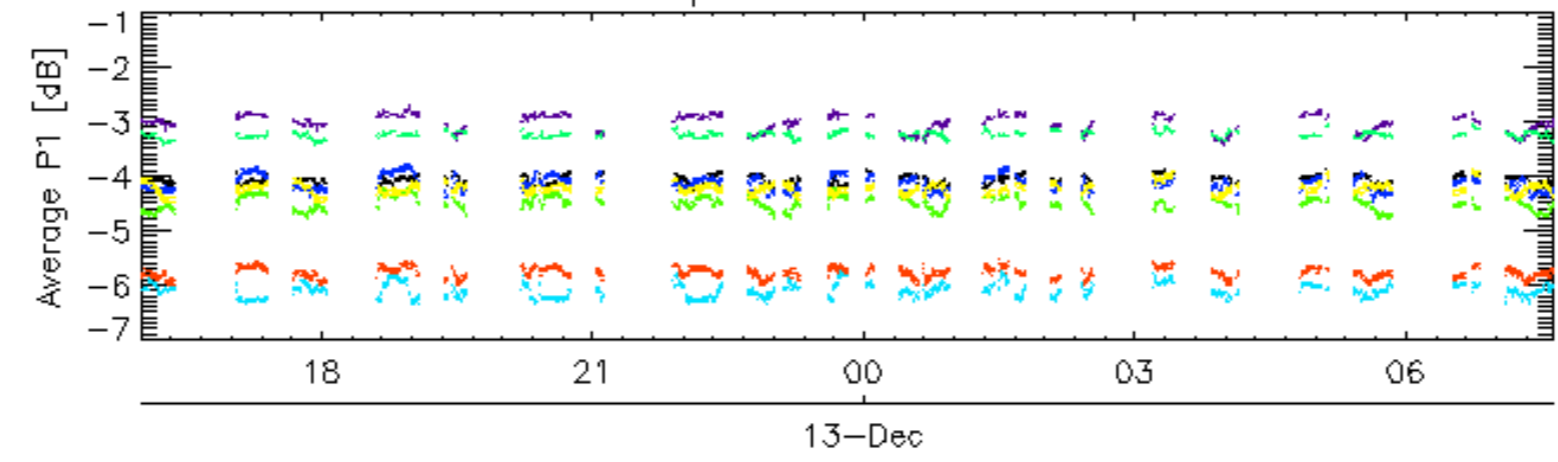
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Cal pulses for GM1 SS3

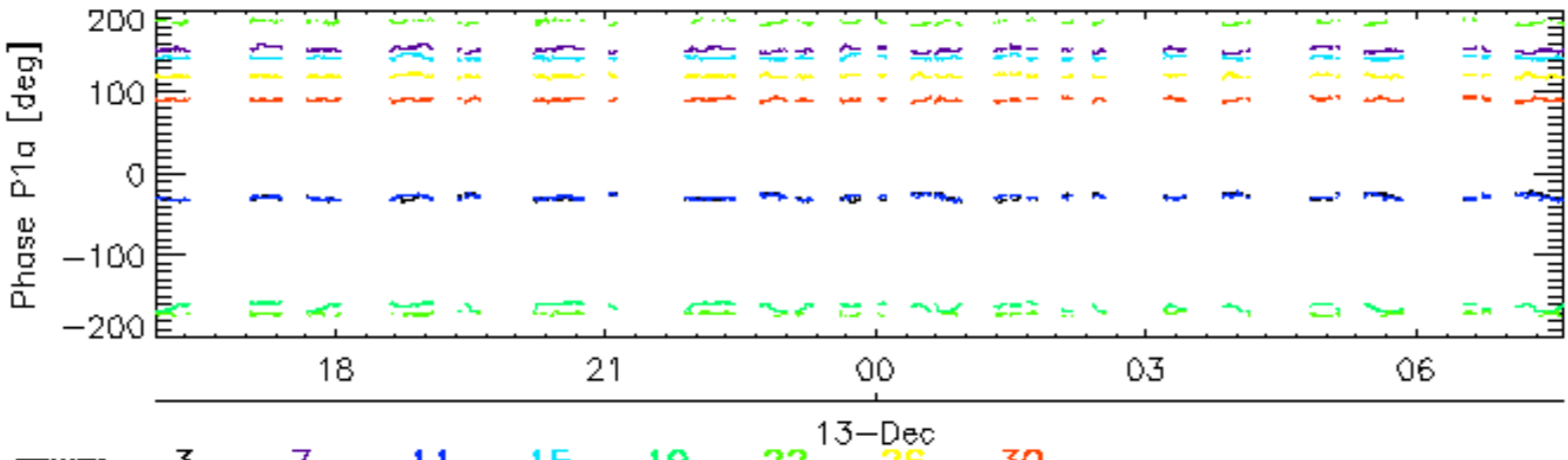
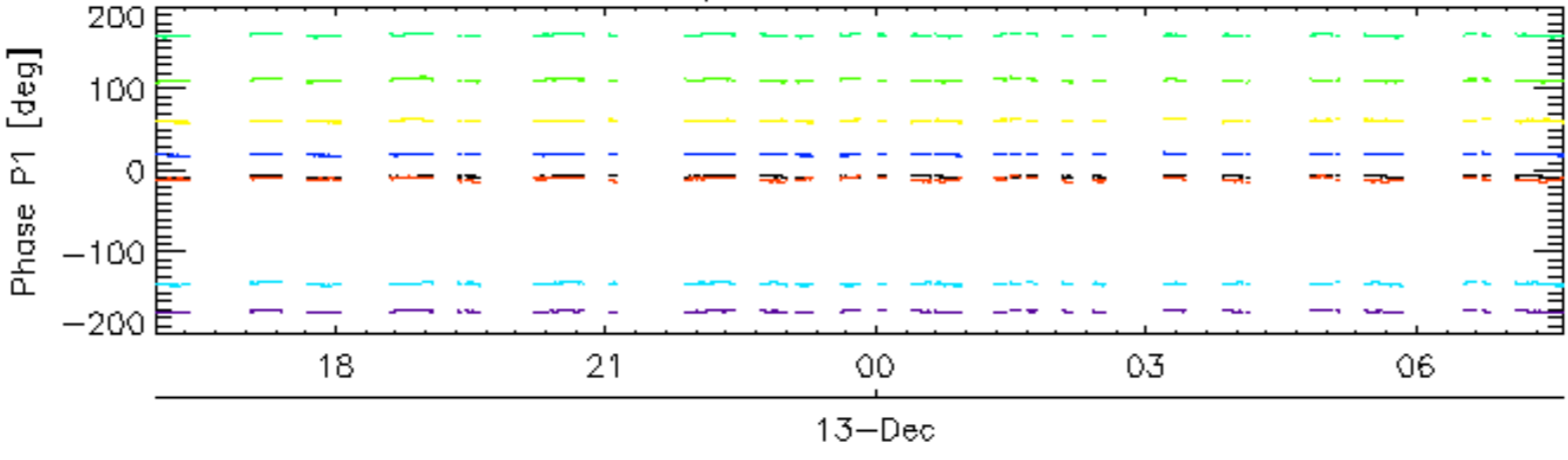


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

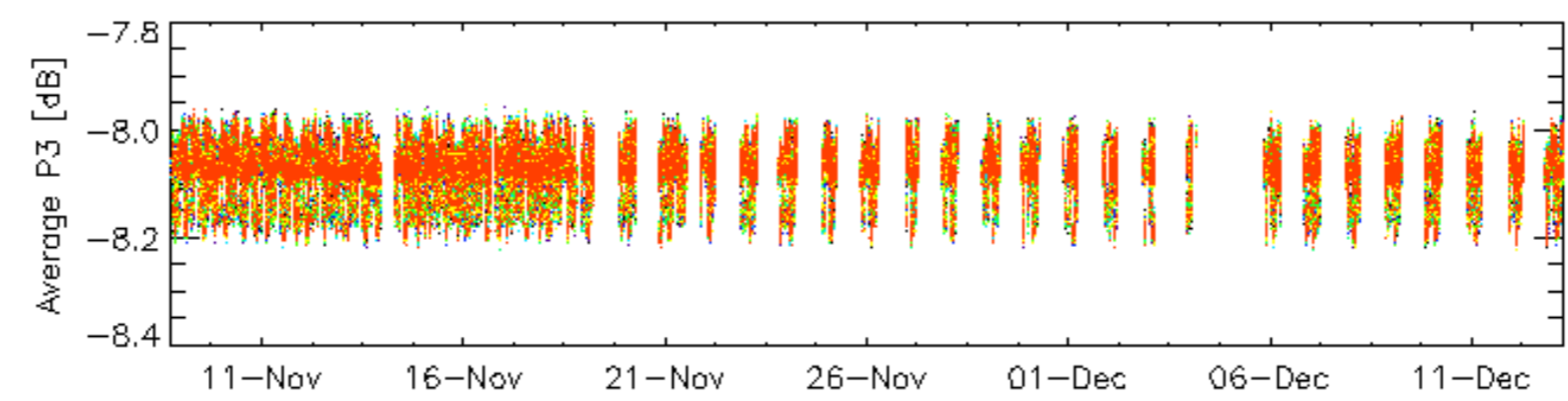
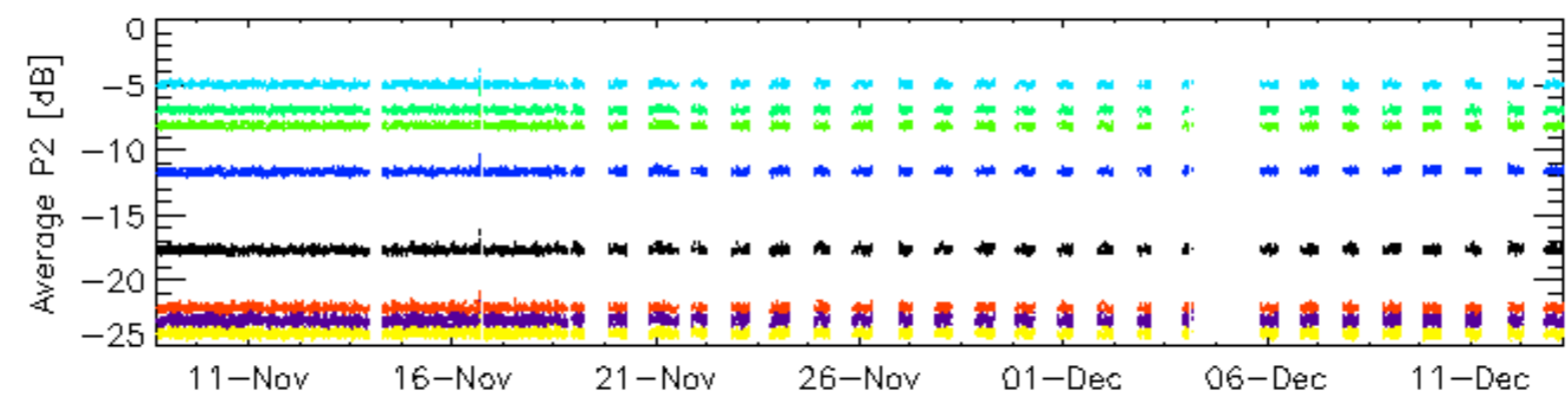
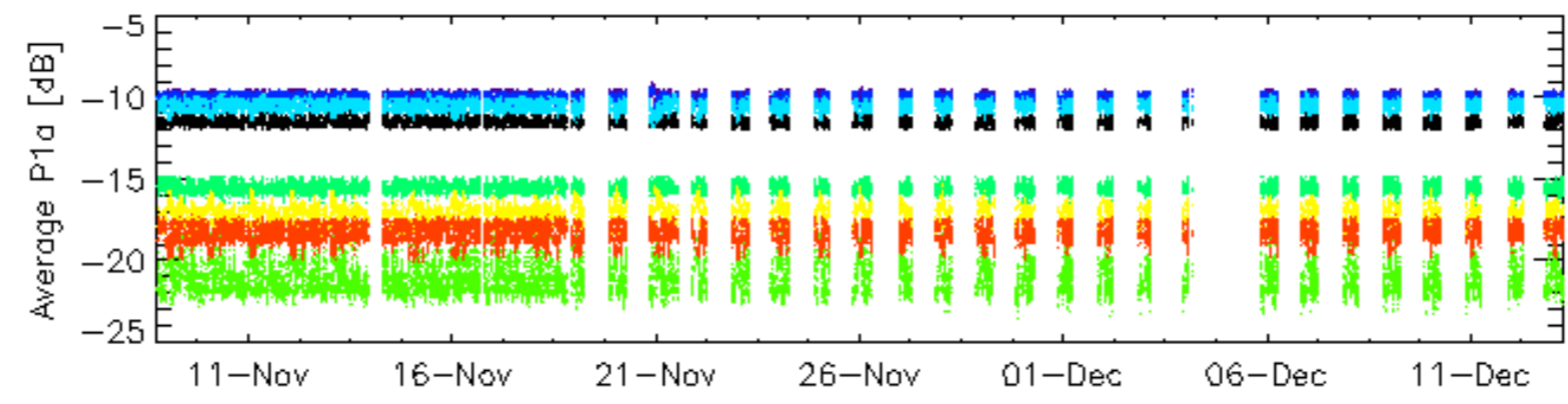
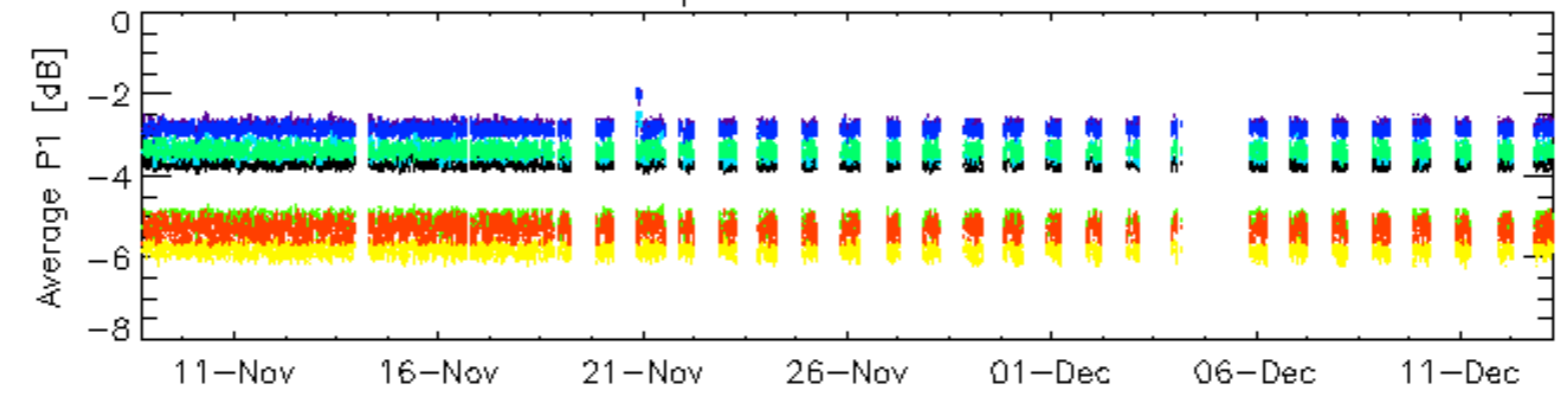


Cal pulses for WVS IS2



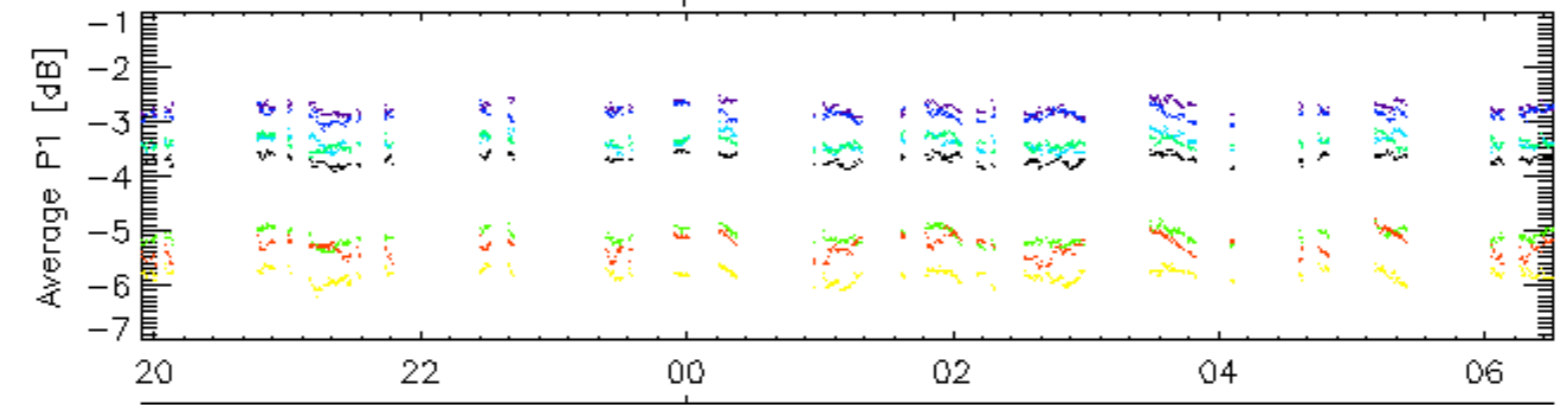
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

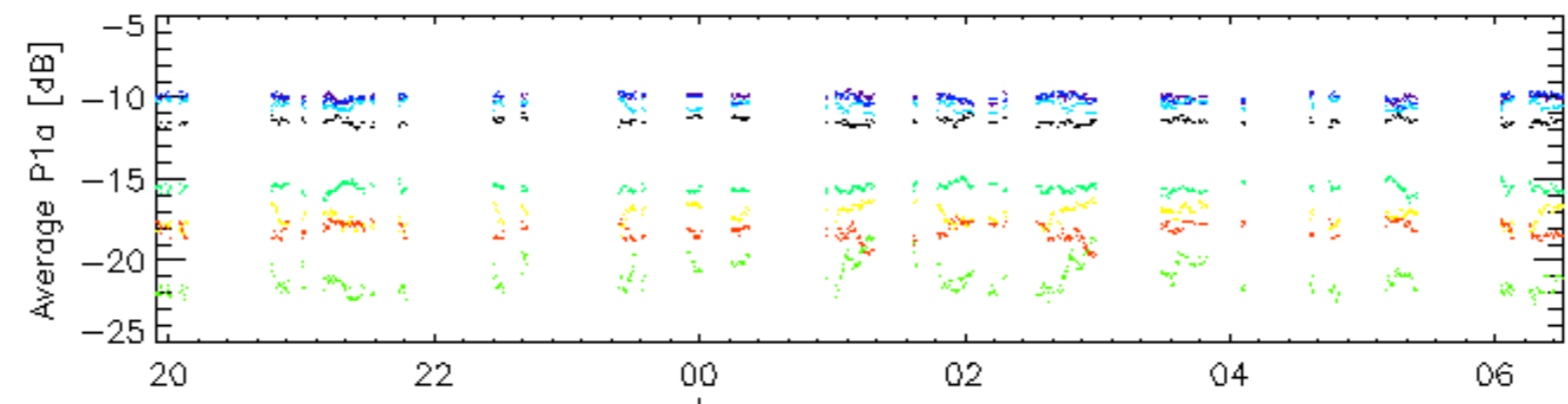


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

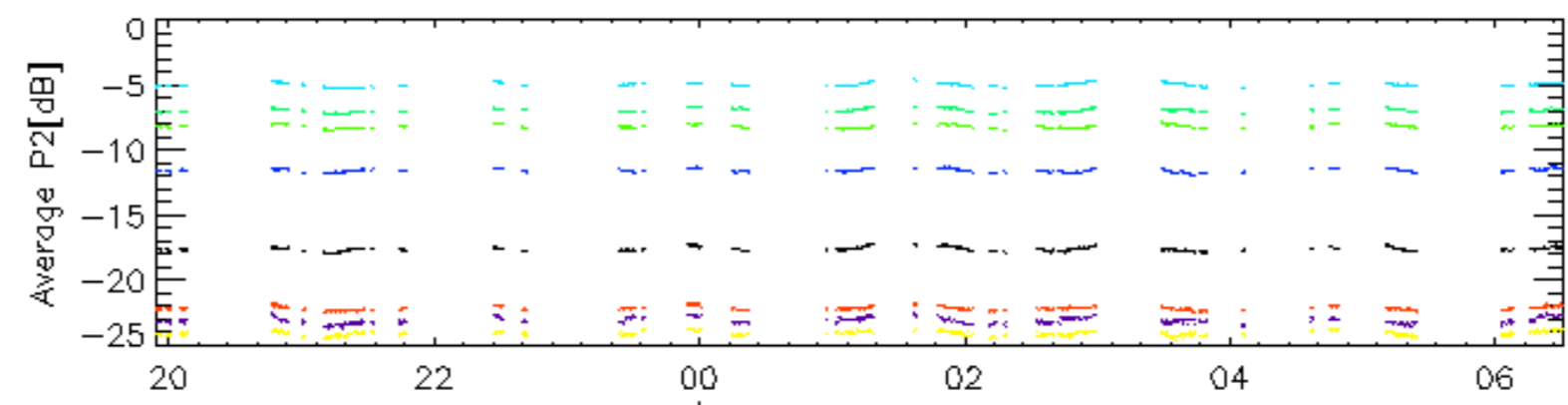
Cal pulses for GM1 SS3



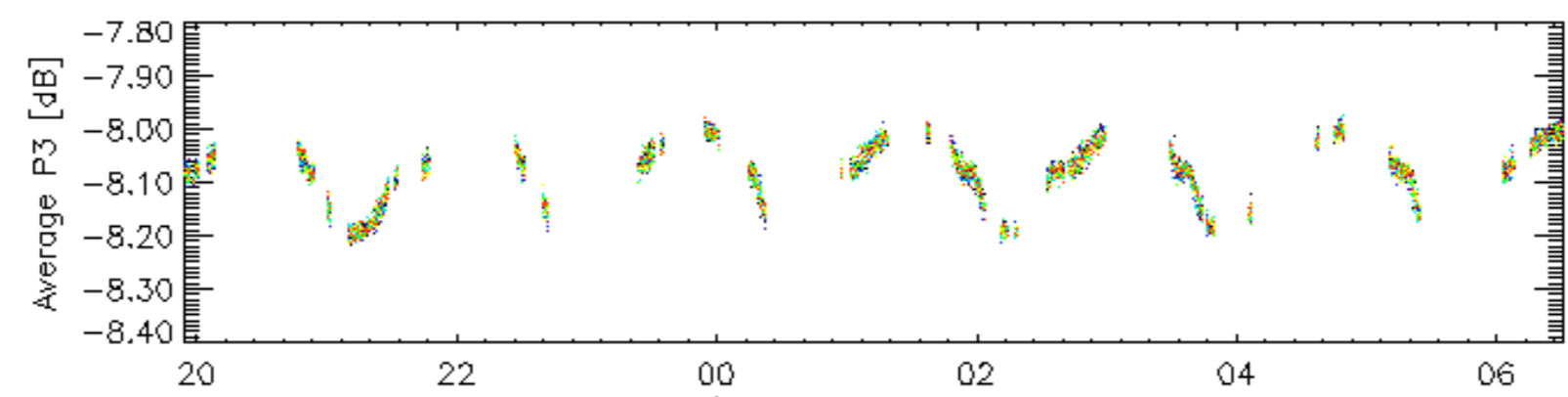
13-Dec



13-Dec



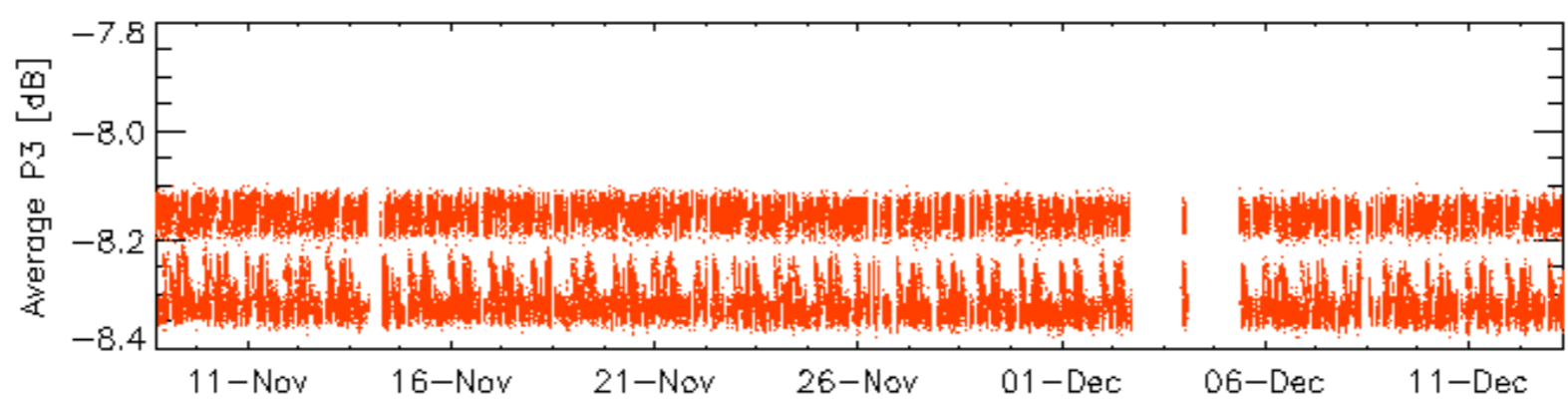
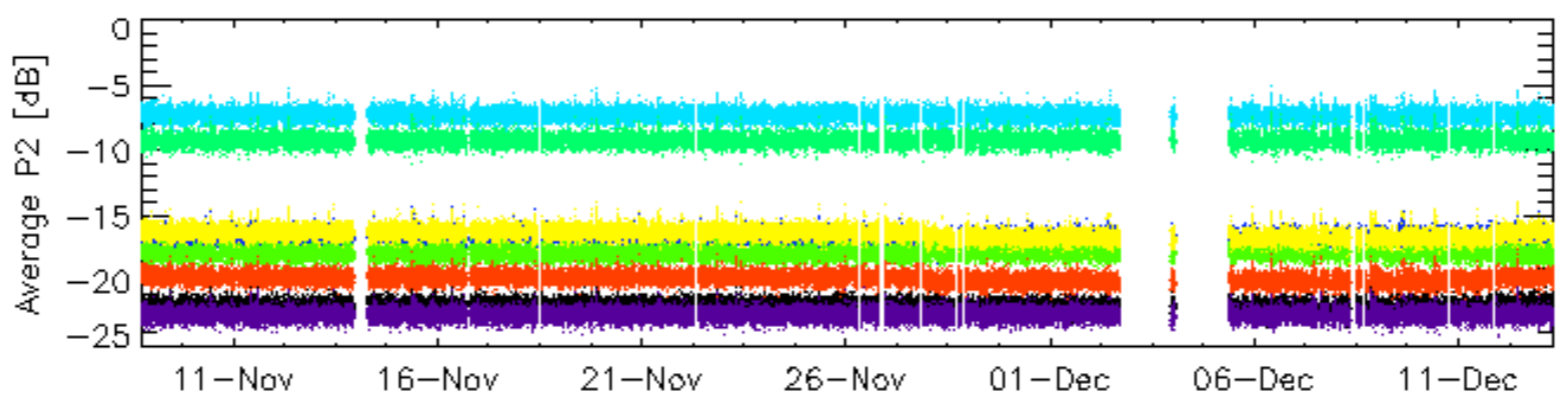
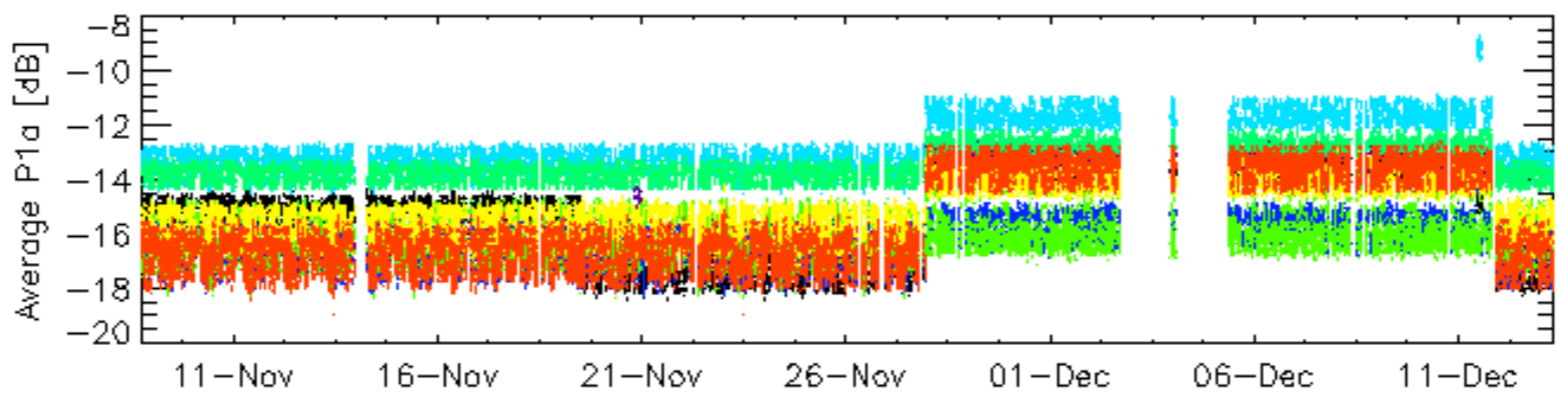
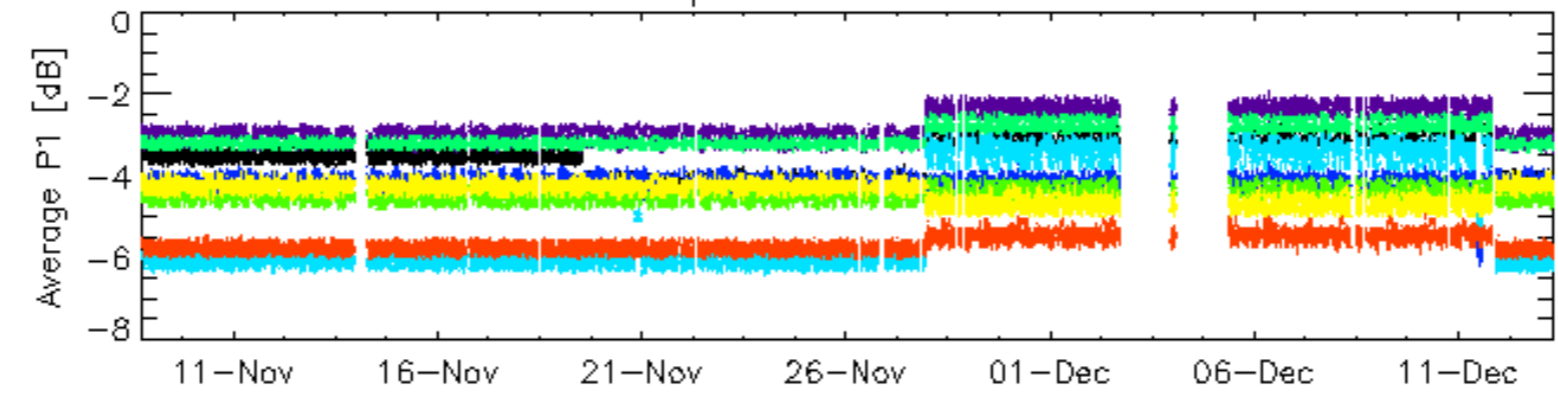
13-Dec



13-Dec

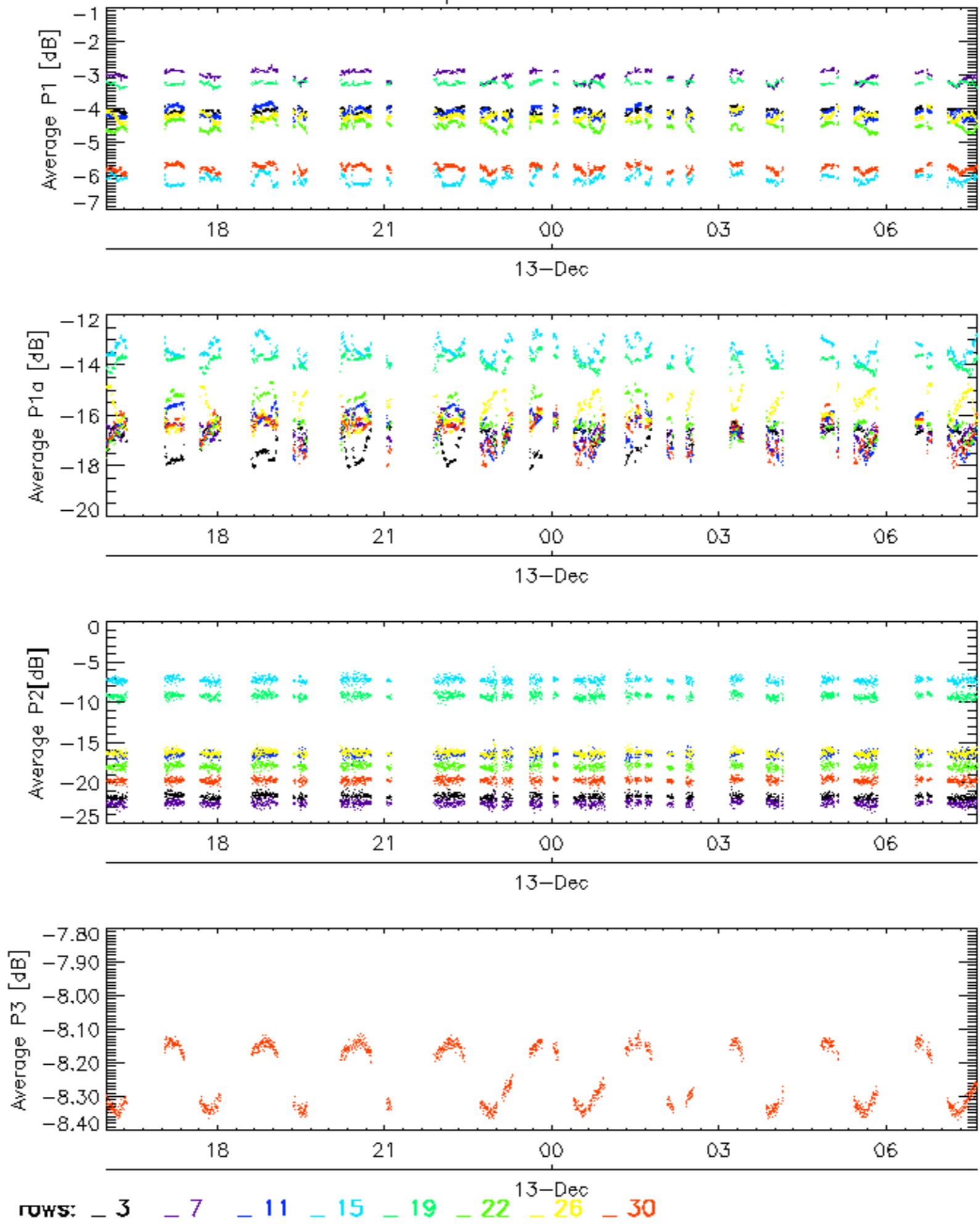
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2



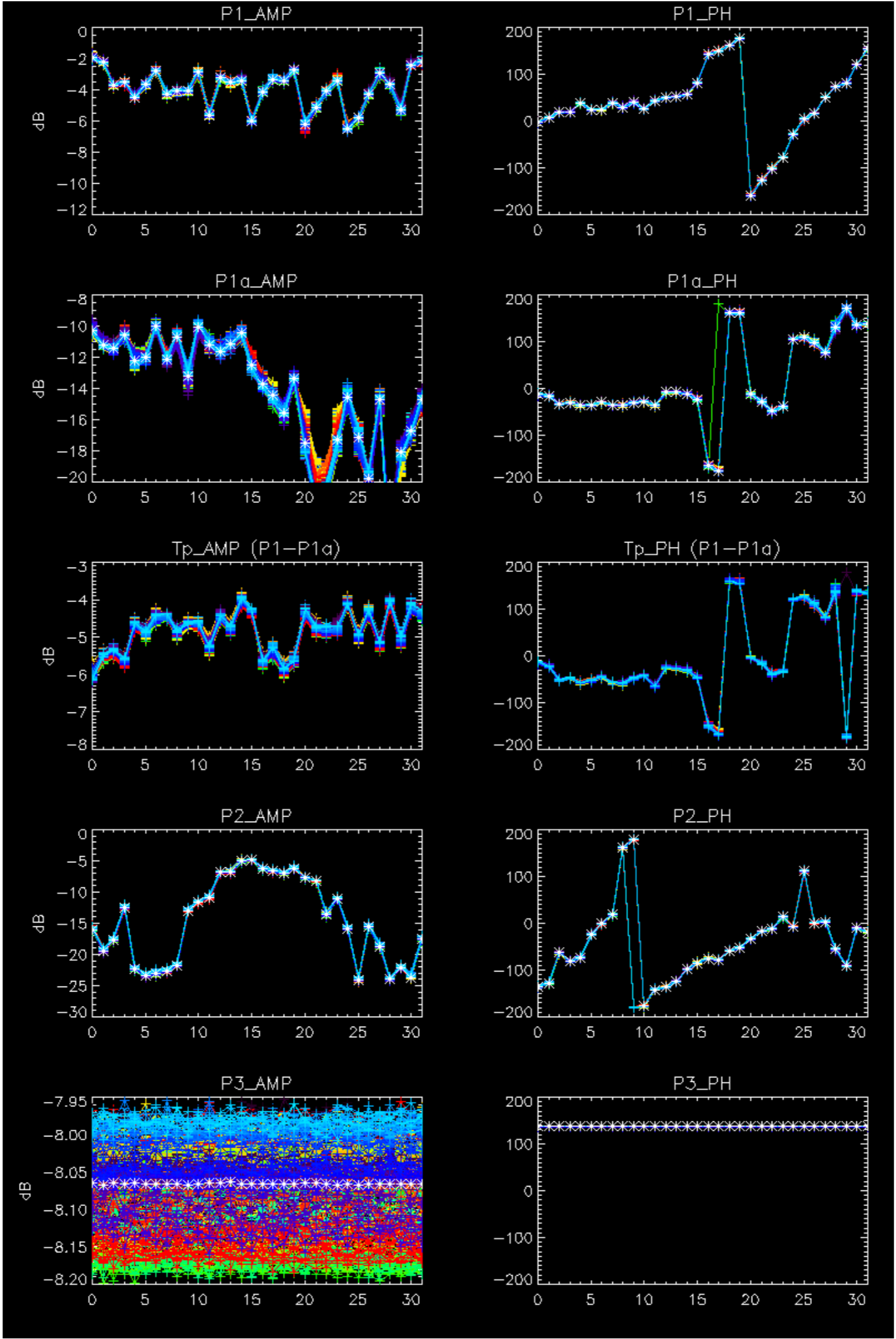
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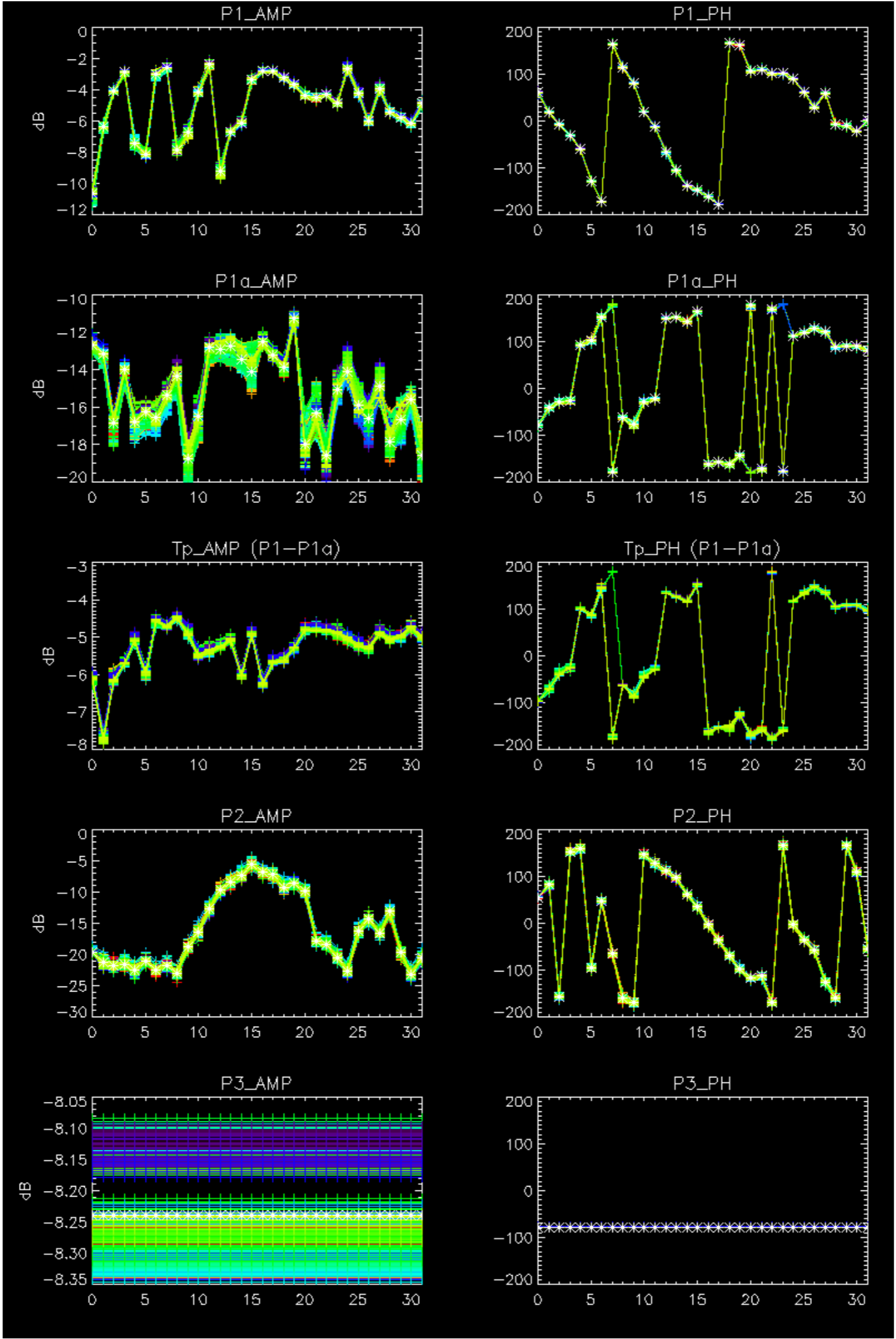
Cal pulses for WVS IS2



No anomalies observed on available browse products

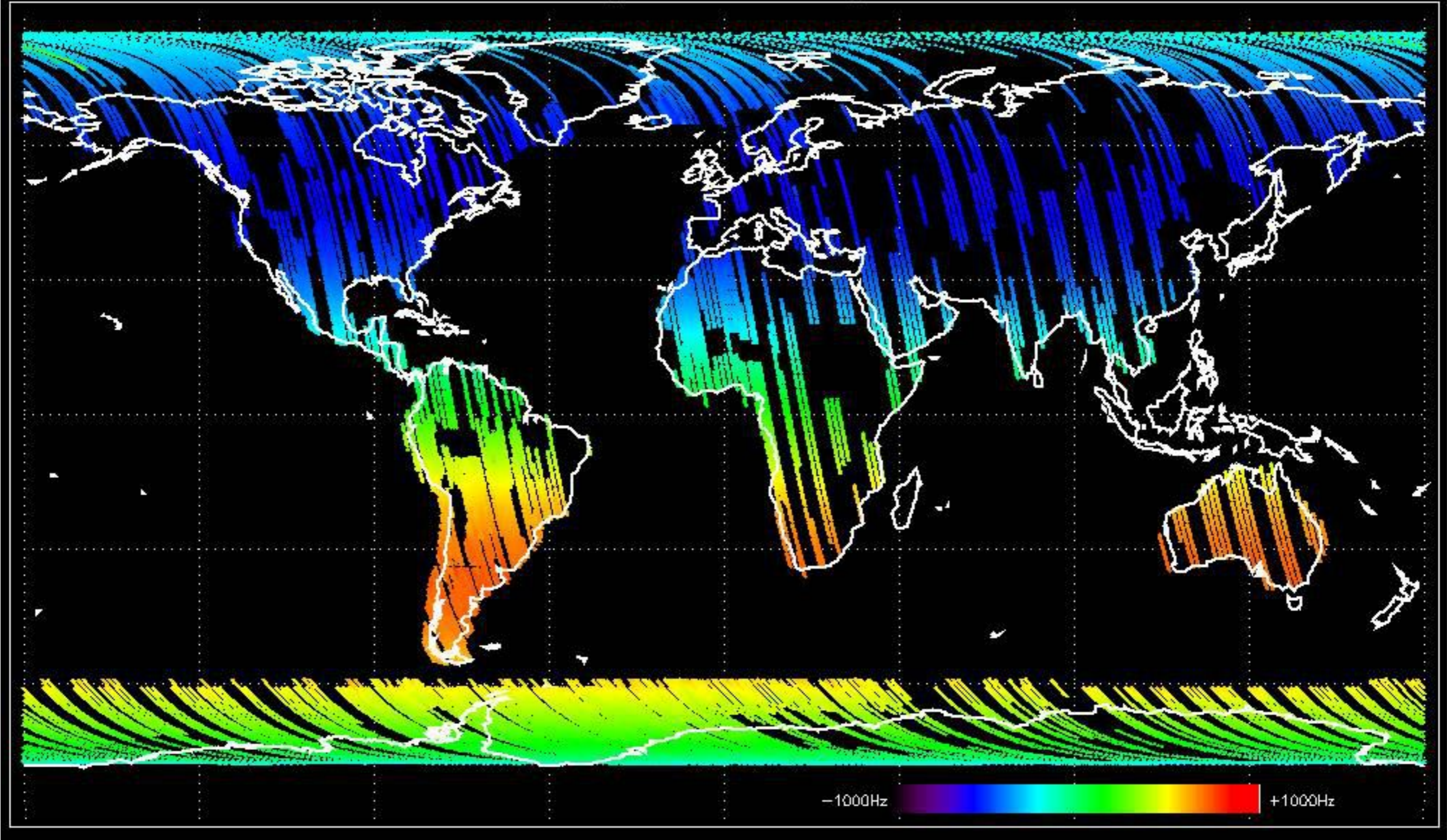
No anomalies observed.



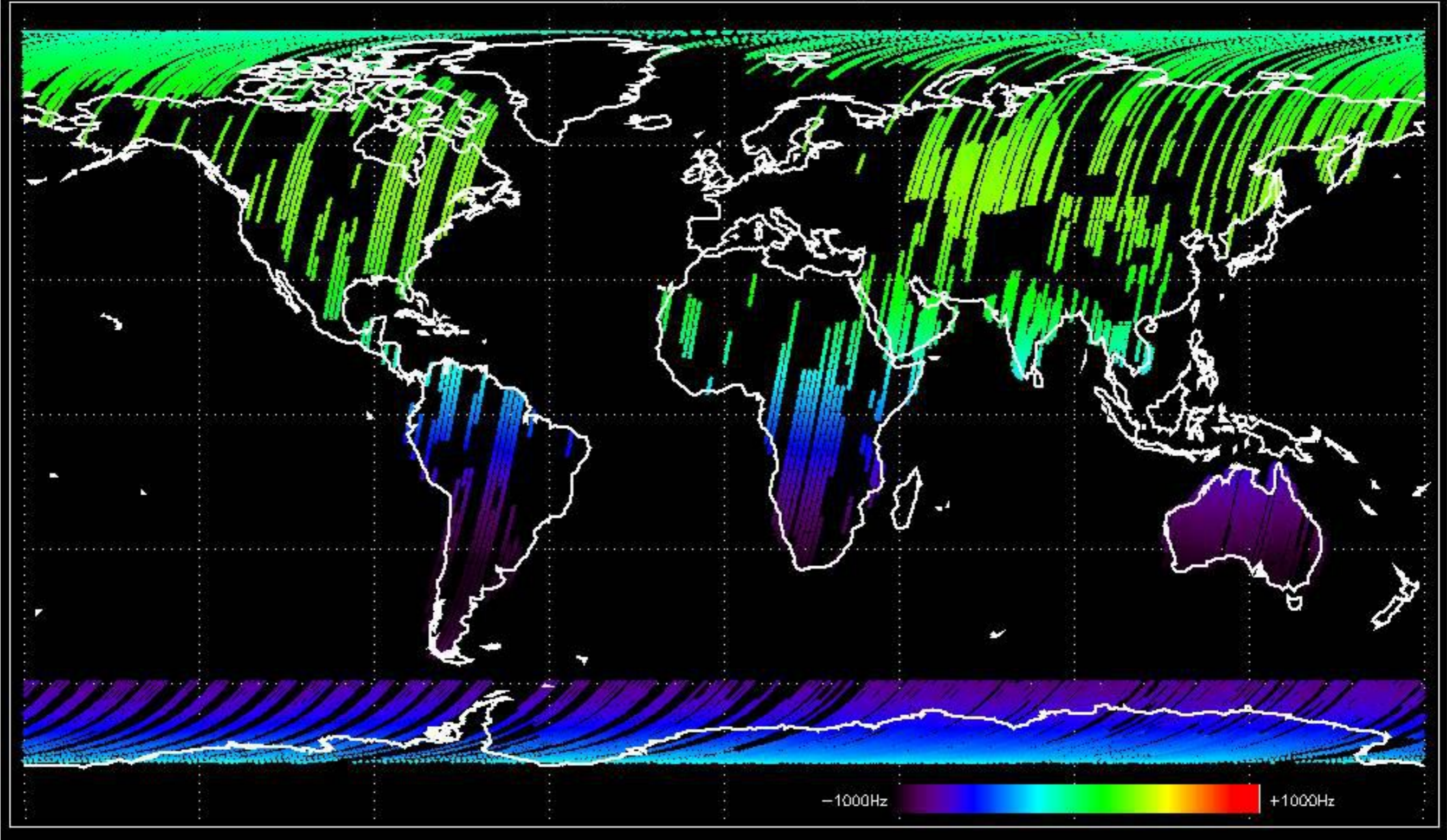


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

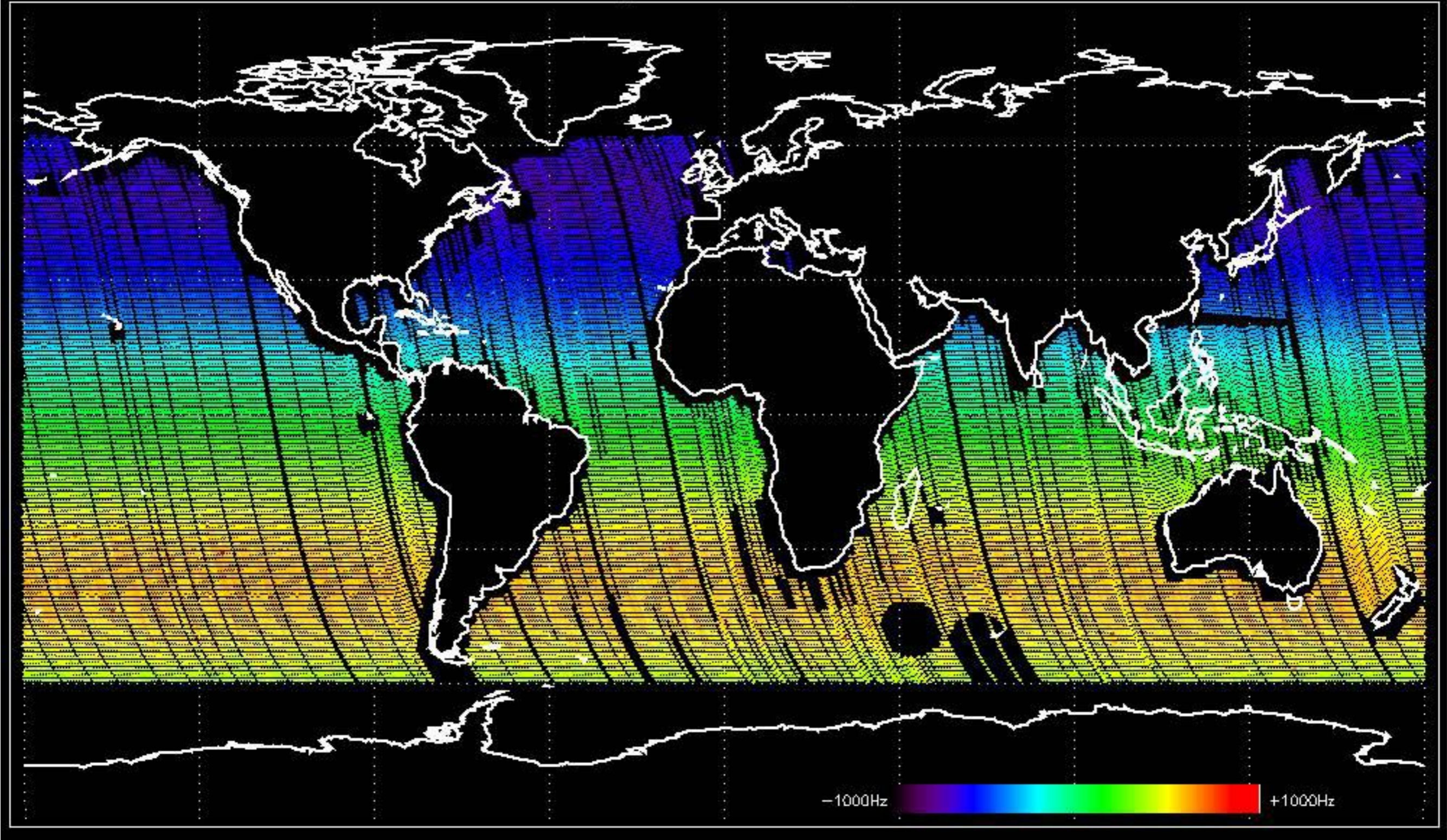
Doppler 'GM1' 'SS1' ascending



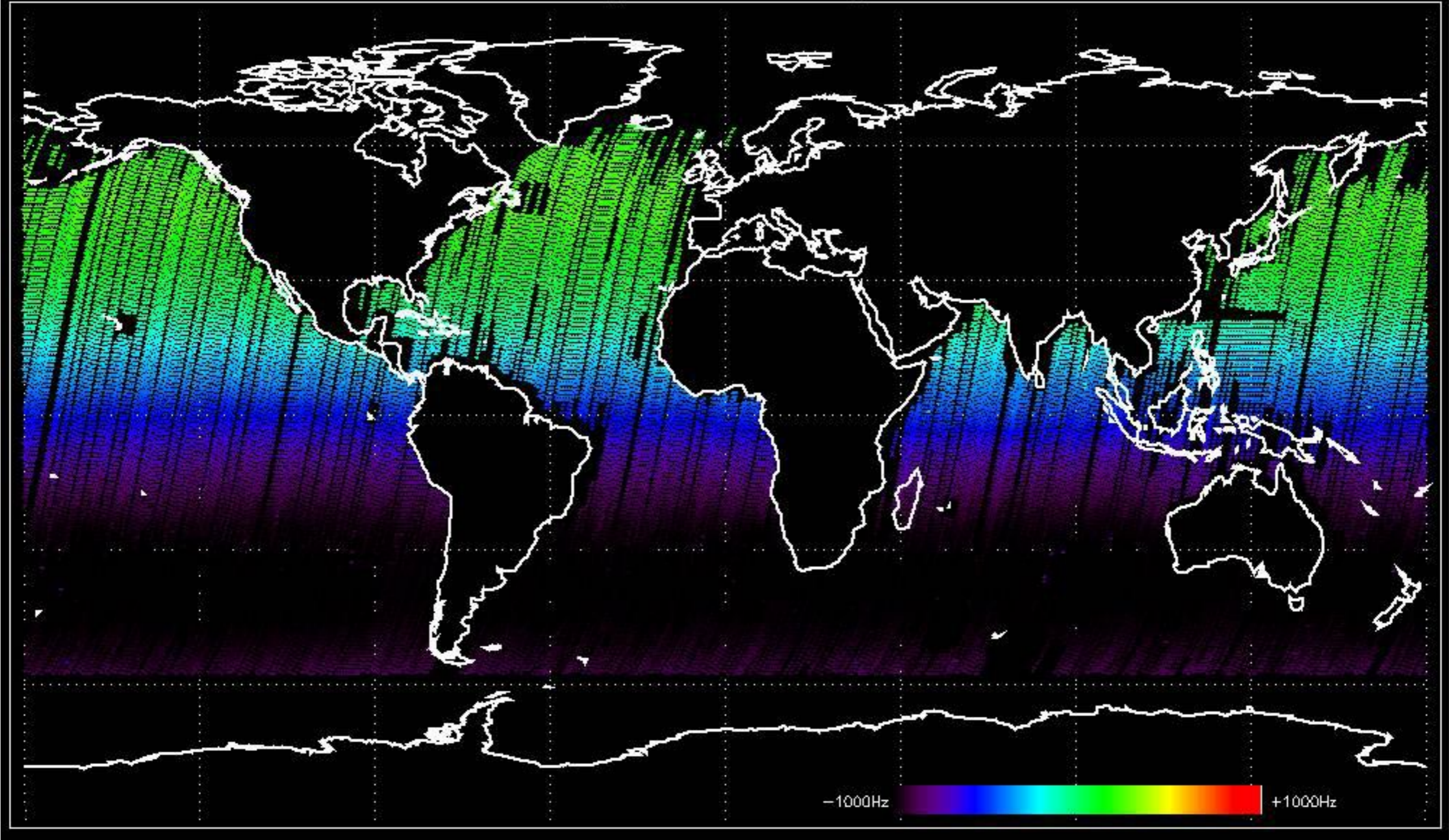
Doppler 'GM1' 'SS1' descending

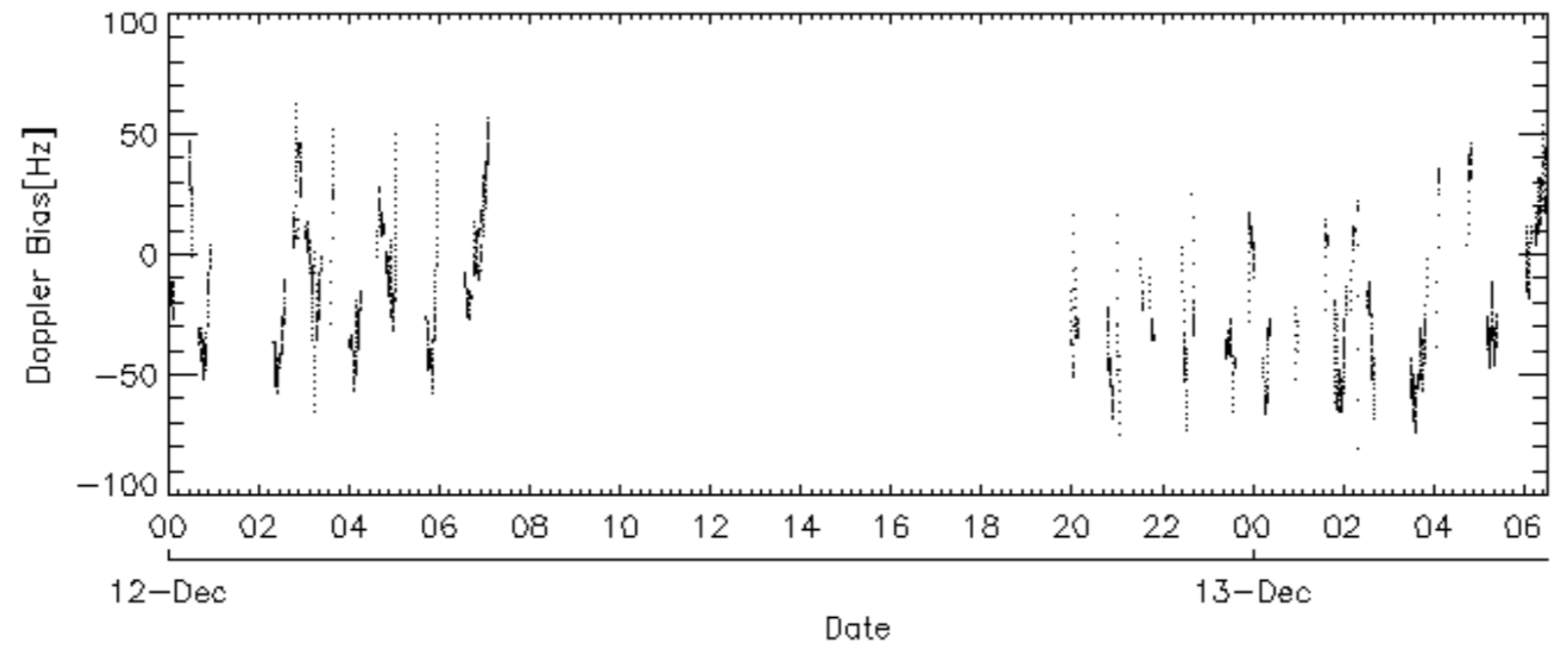
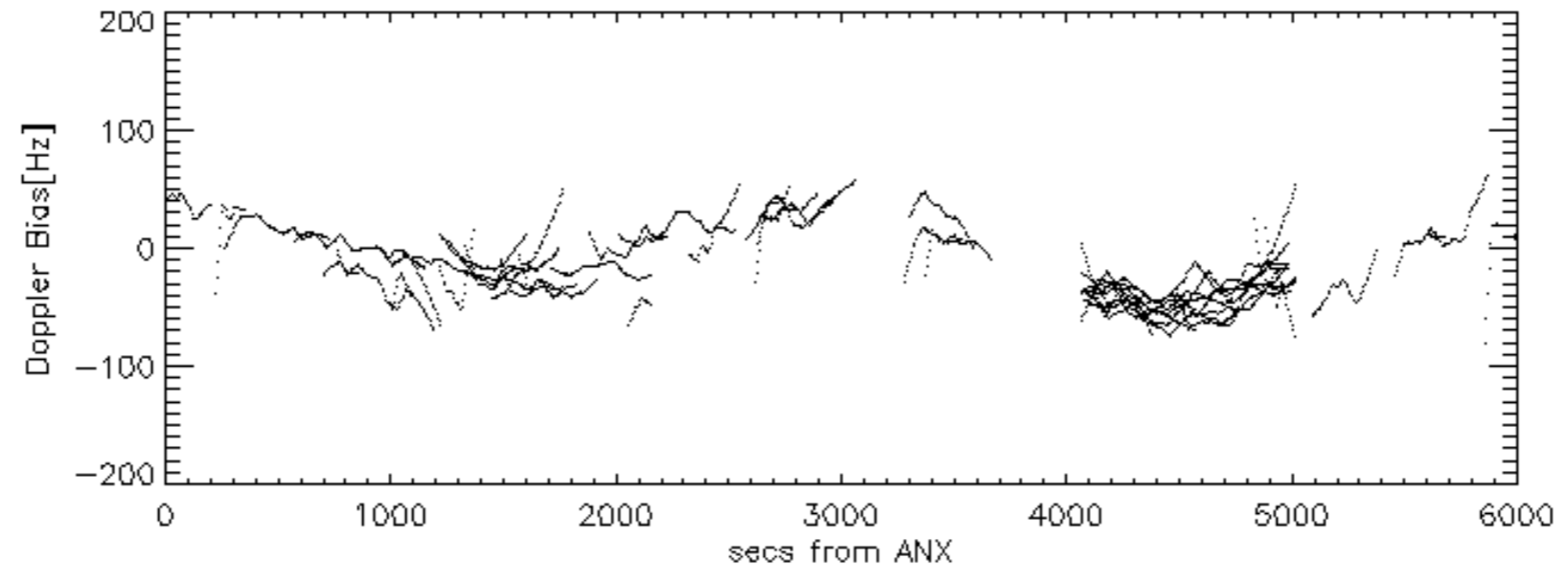
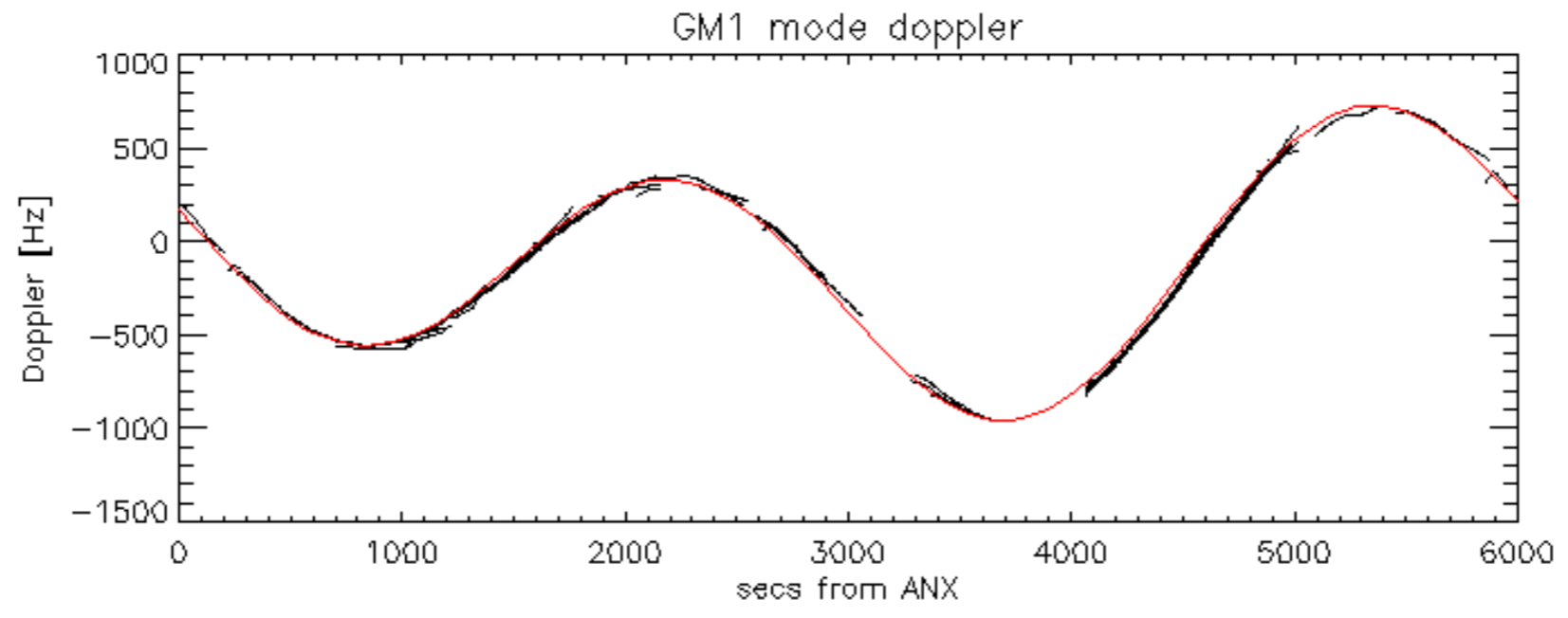


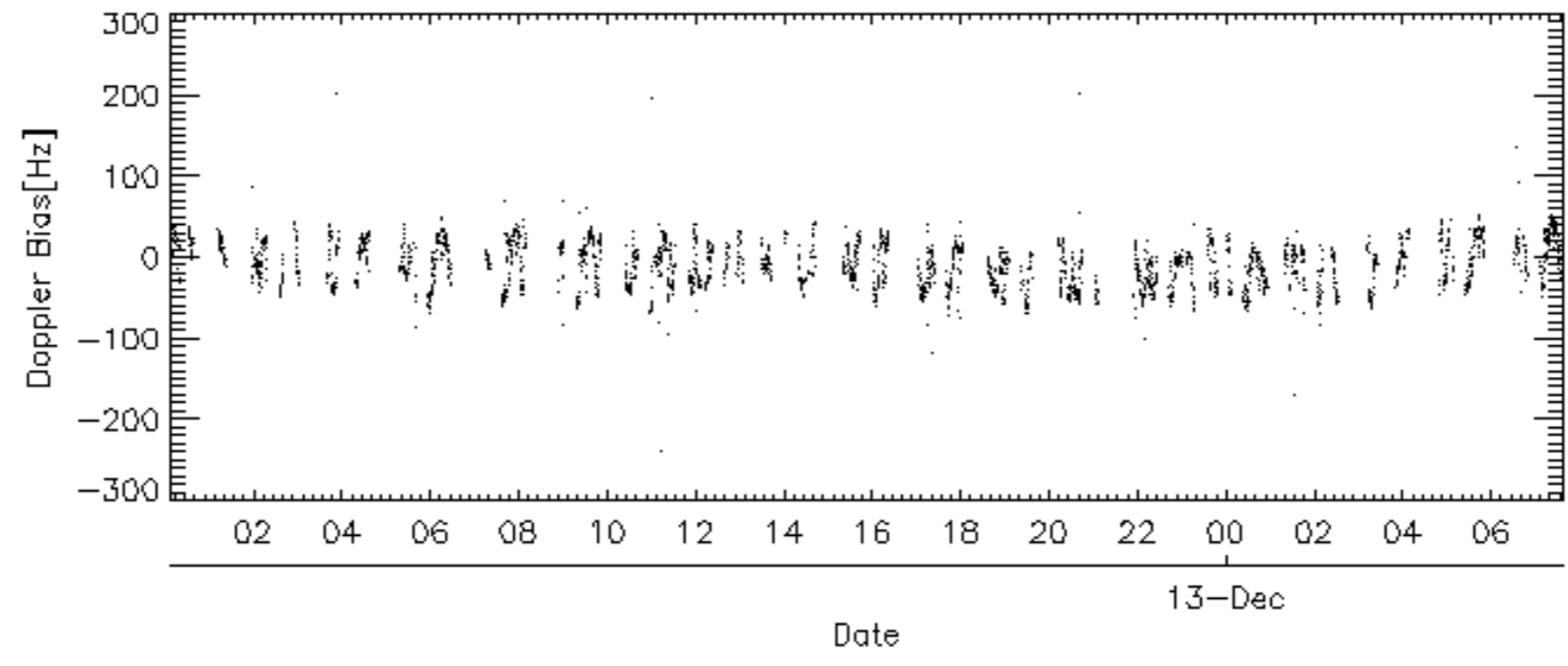
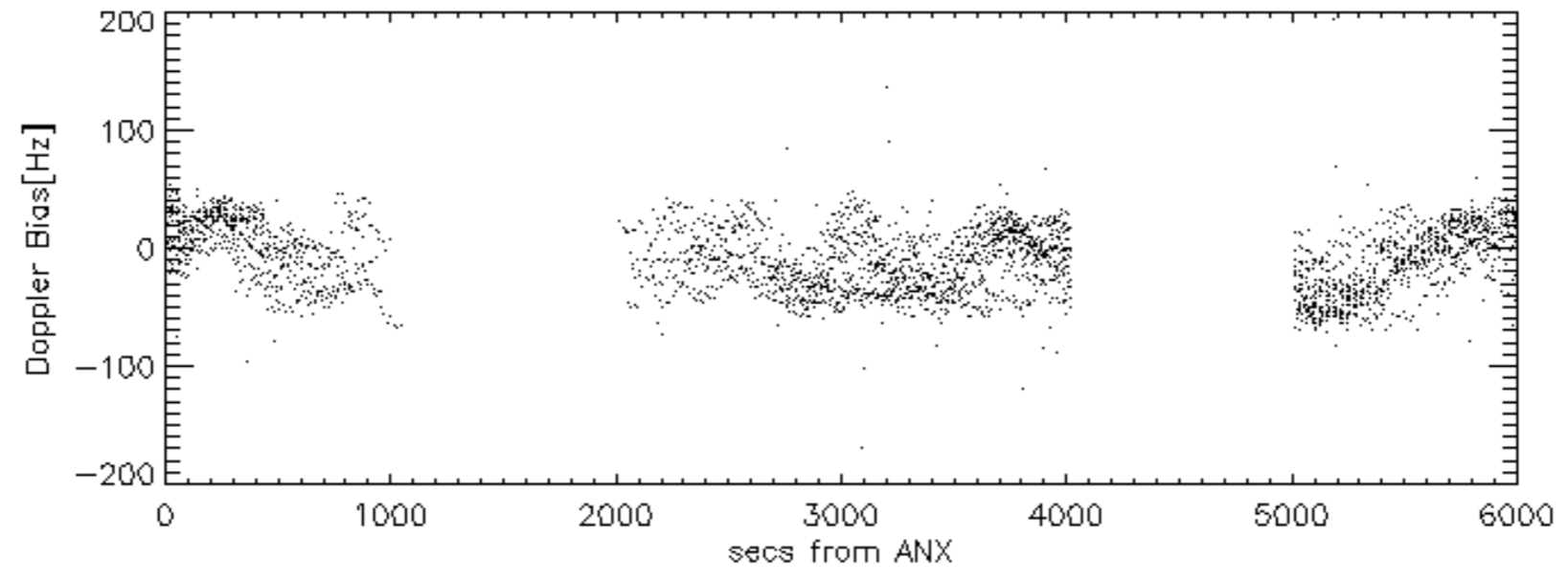
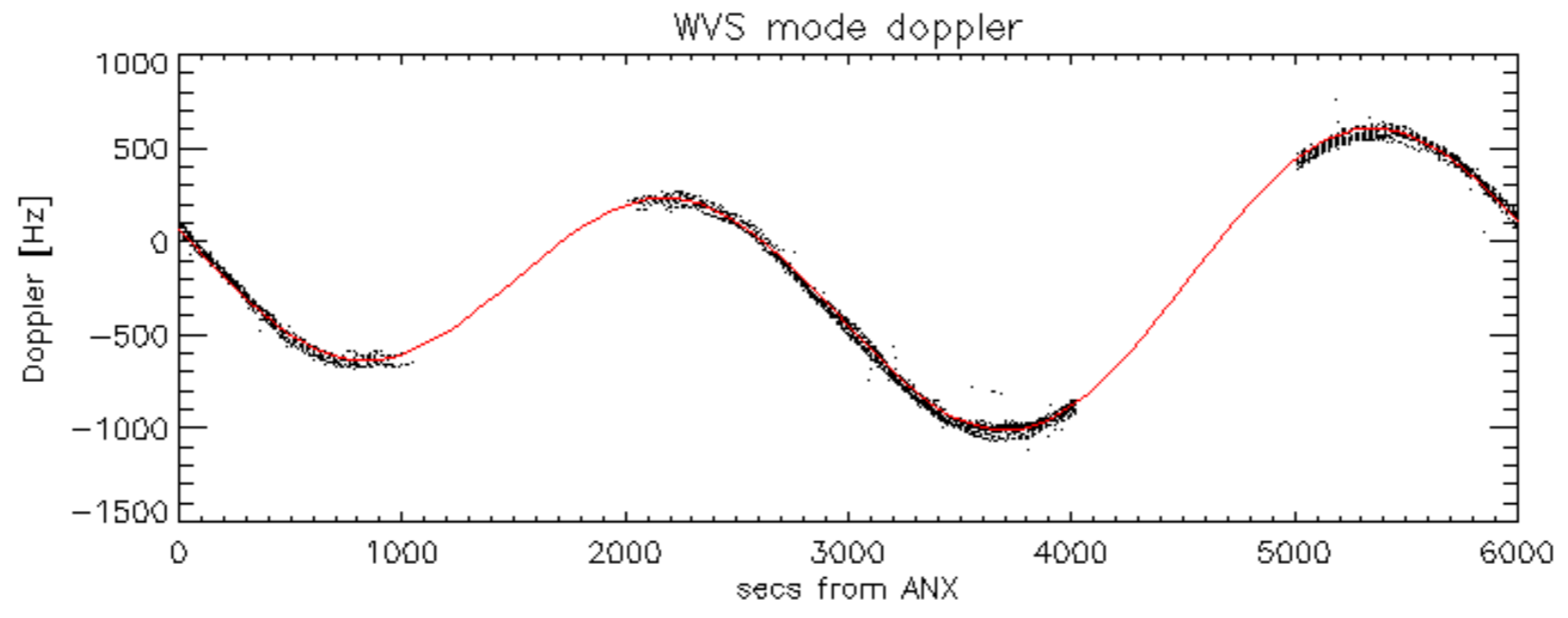
Doppler 'WVS' 'IS2' ascending



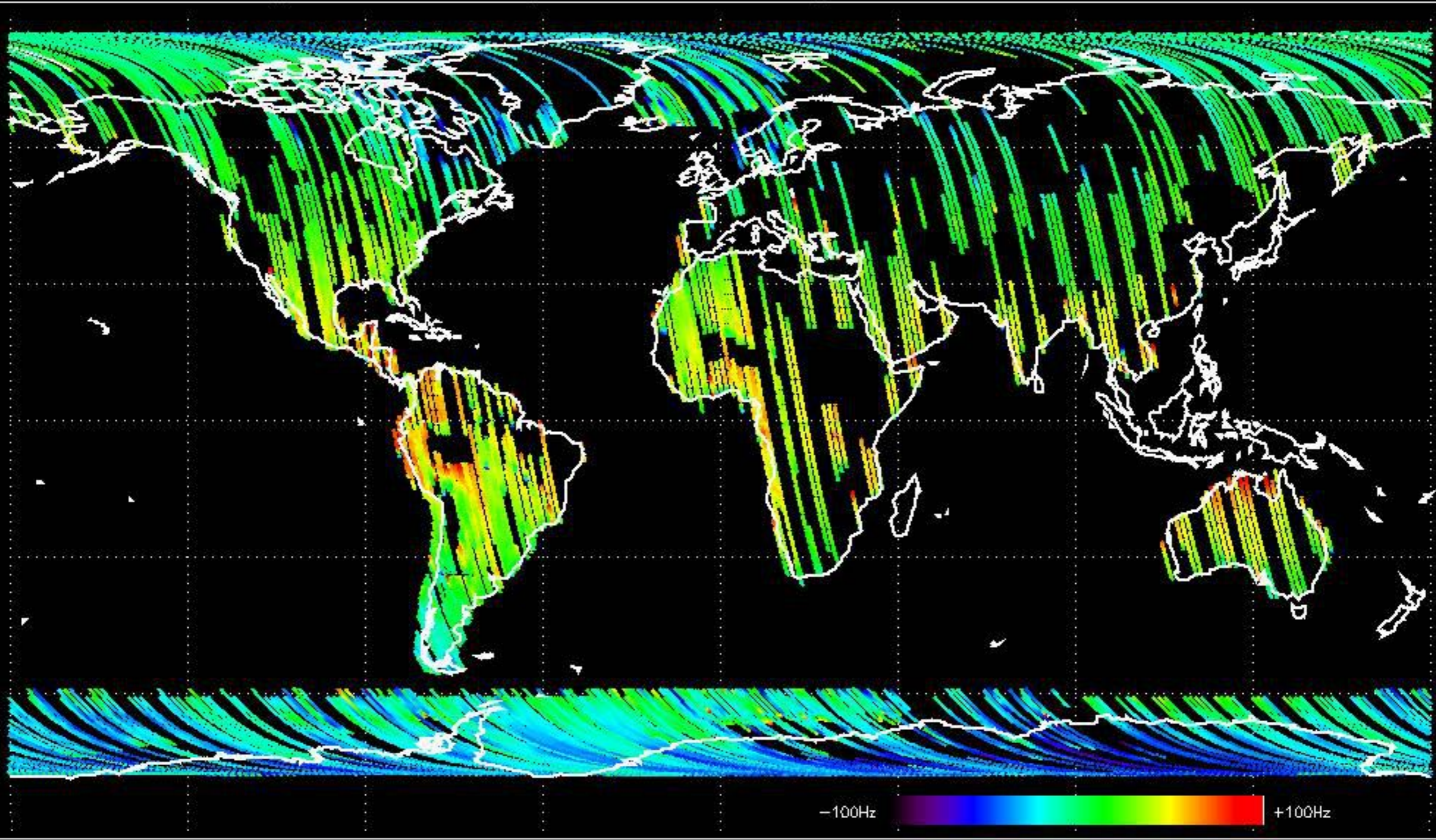
Doppler 'WVS' 'IS2' descending



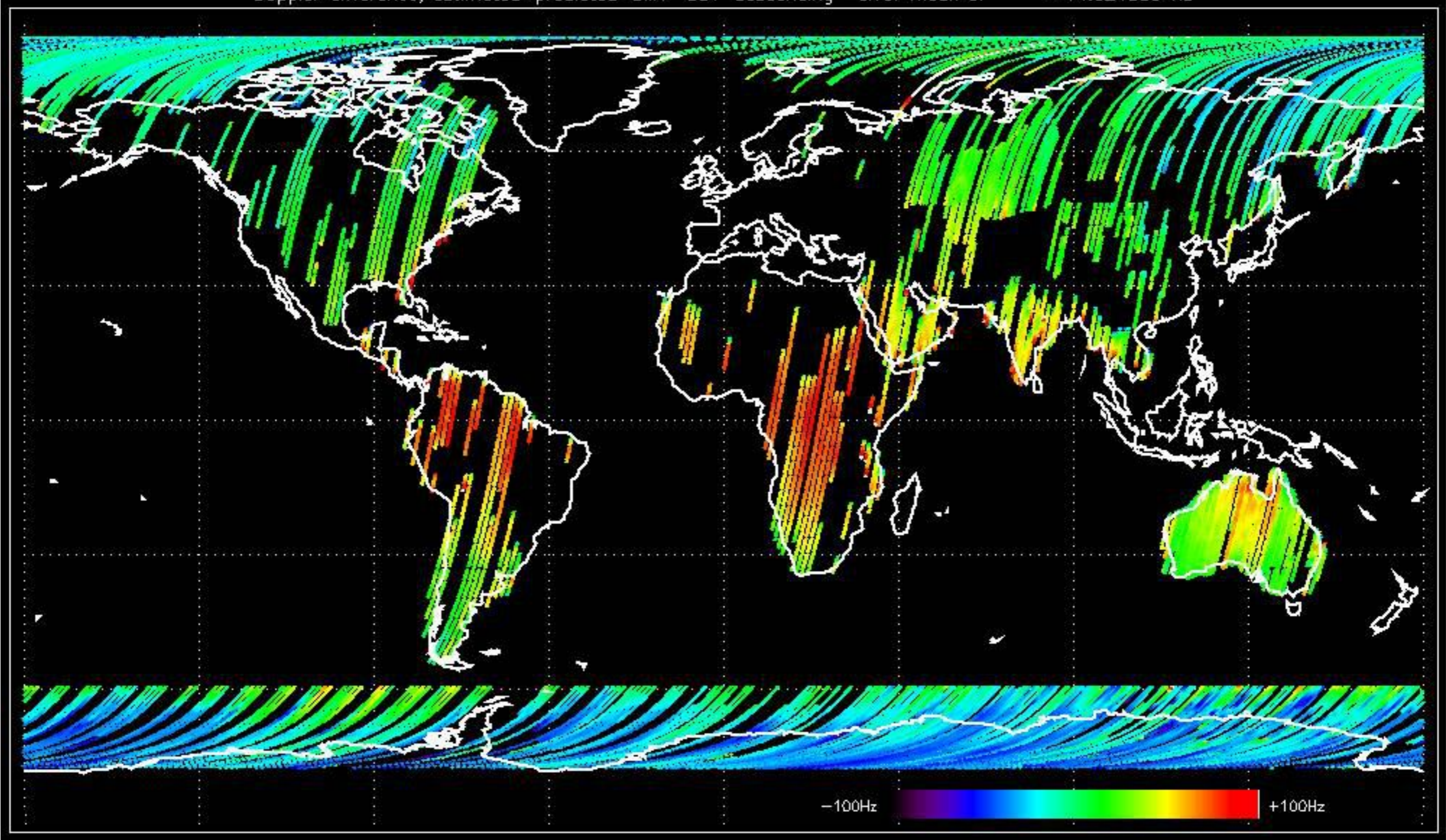




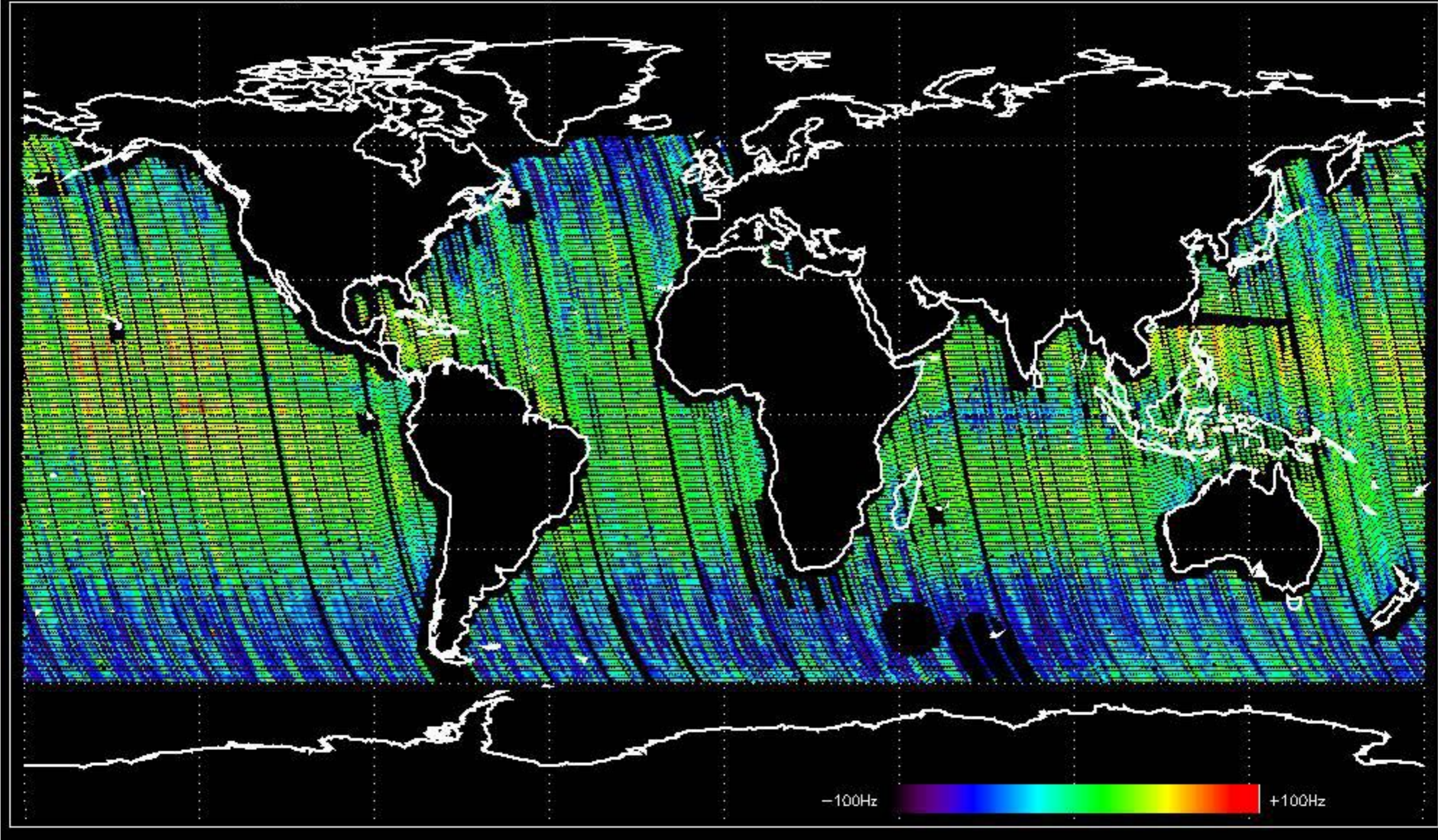
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -15.794876 Hz



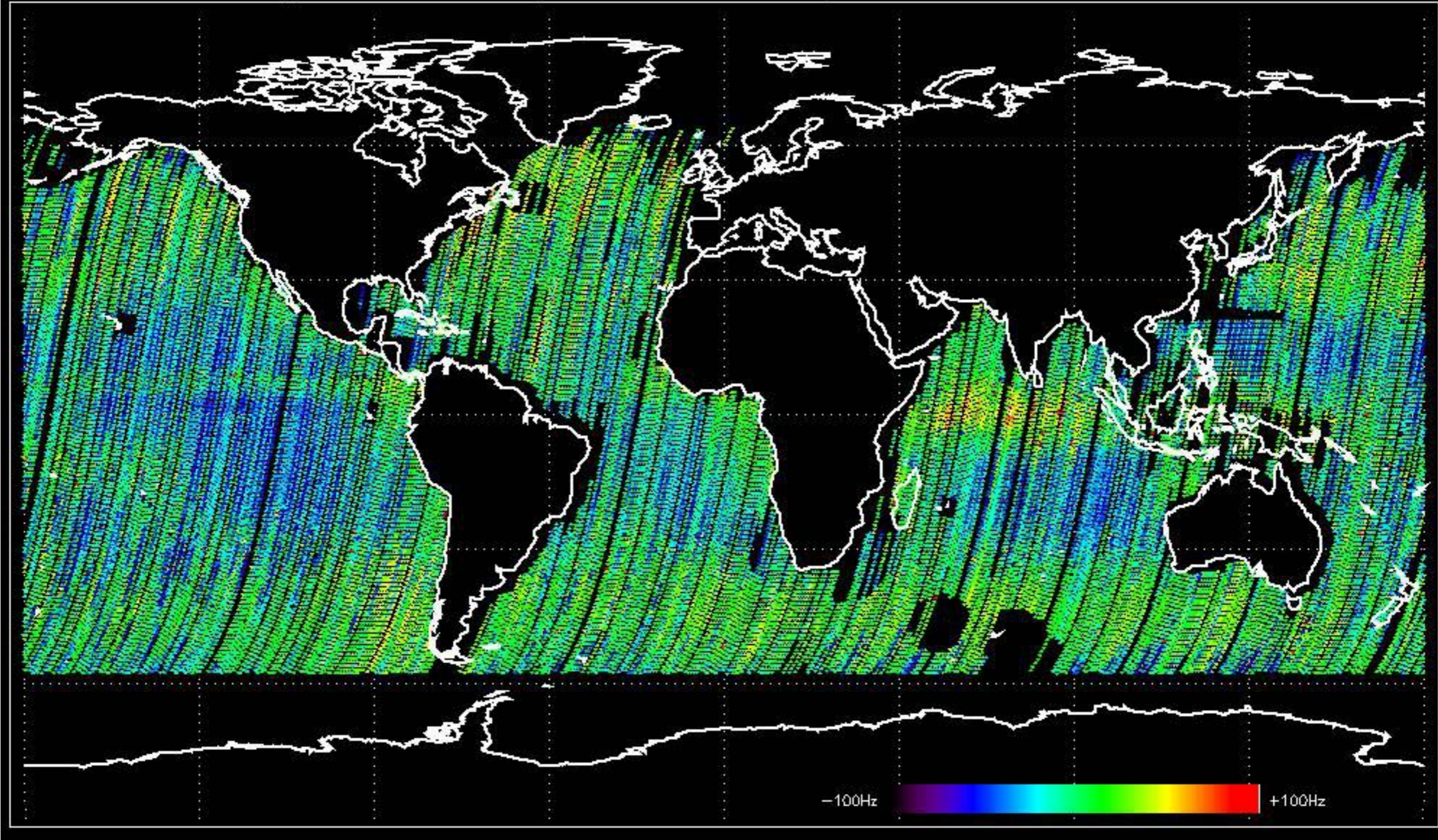
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -14.021800 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -9.4794653 Hz

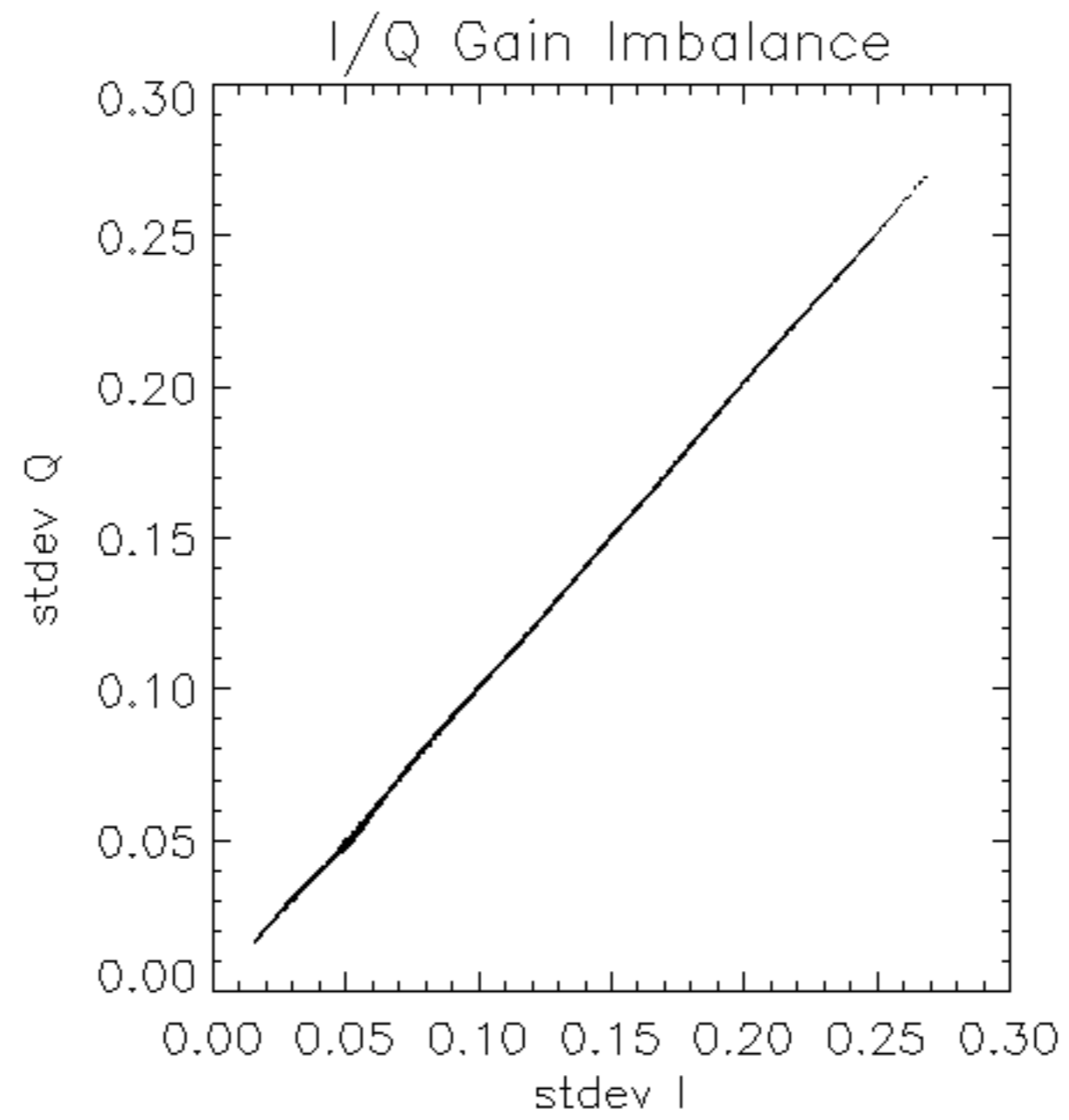


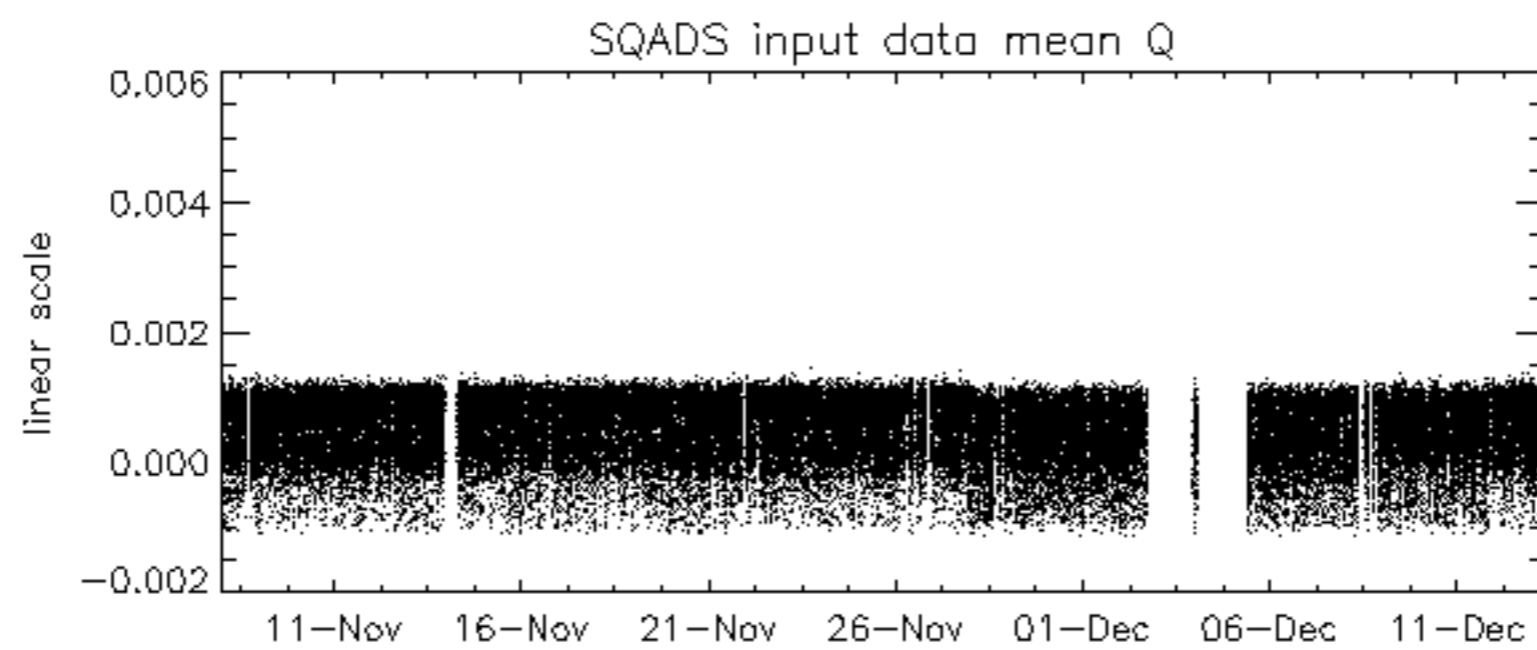
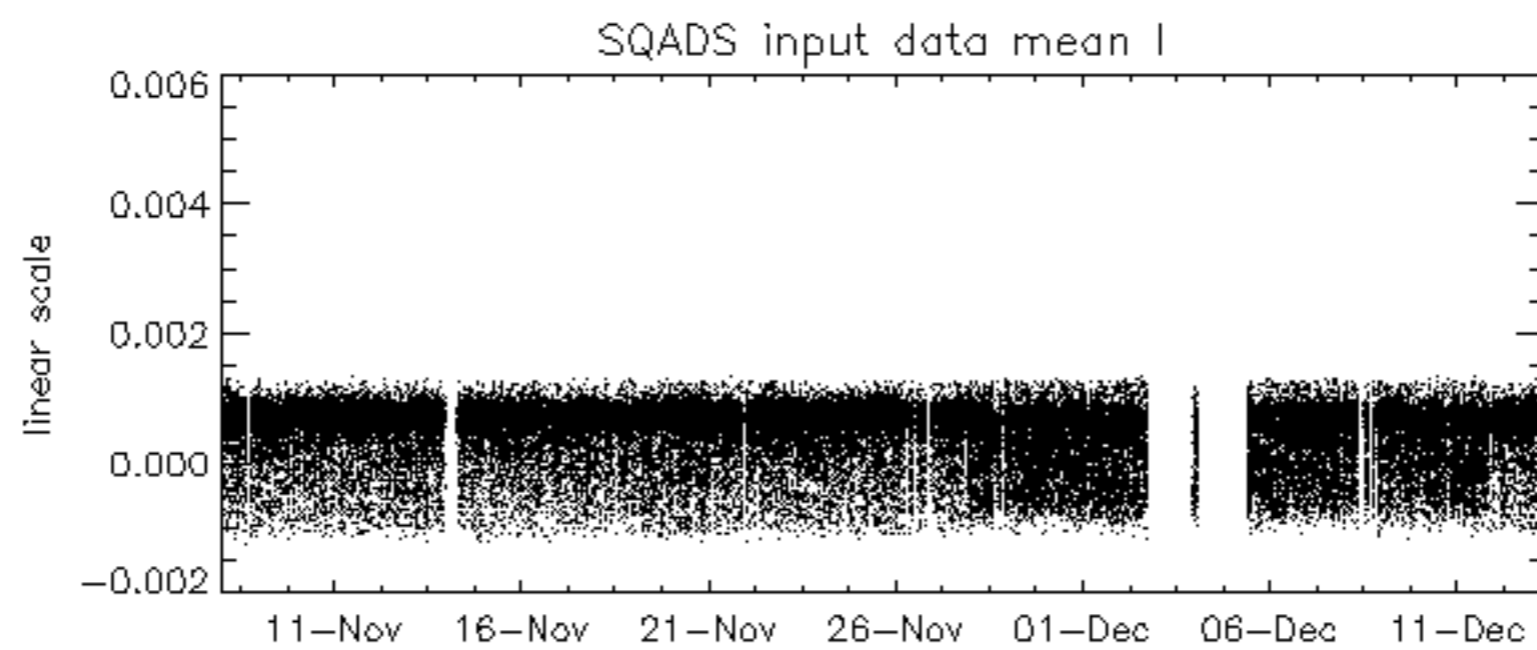
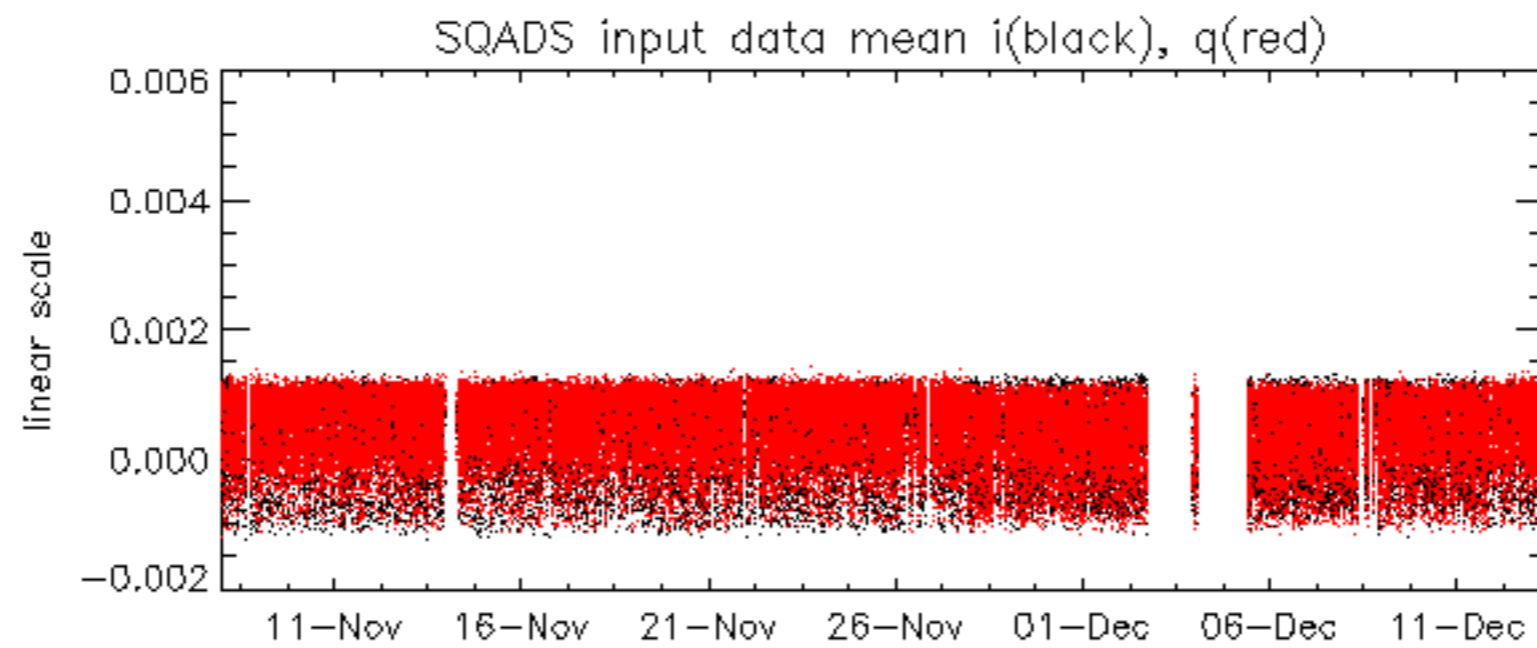
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.064773 Hz

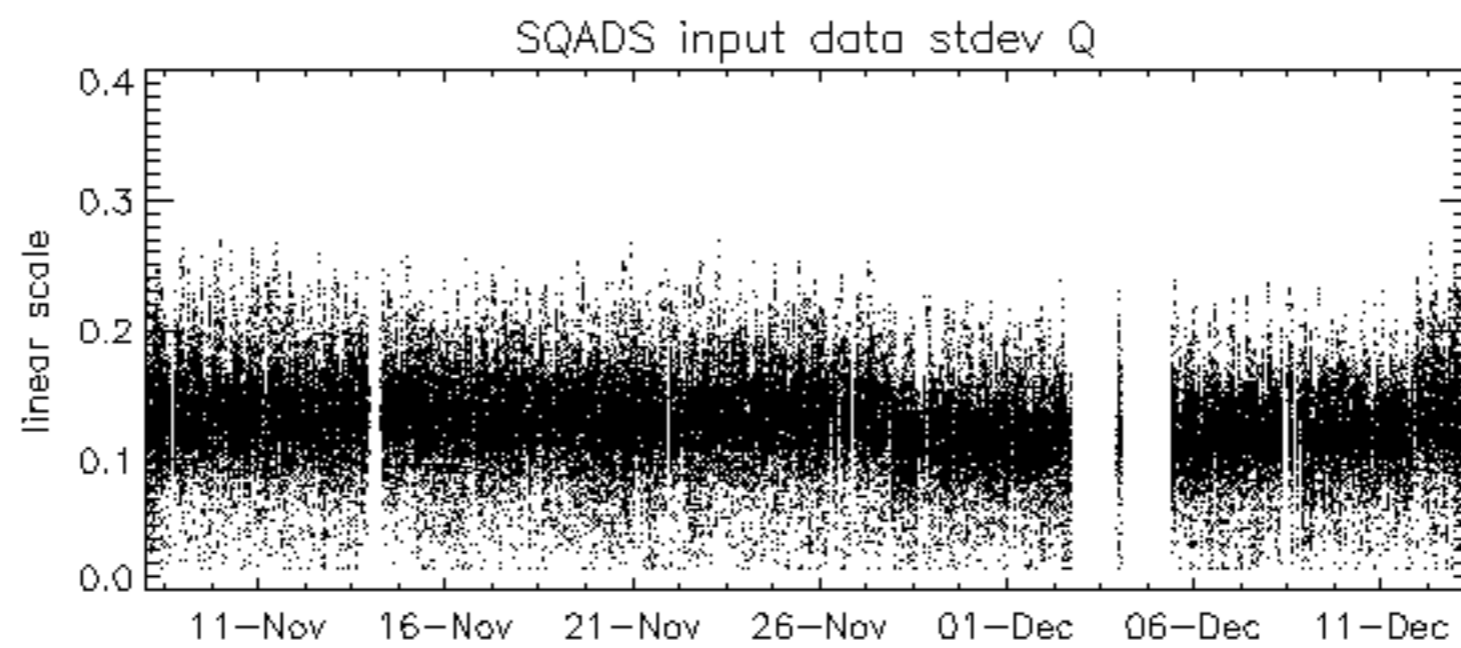
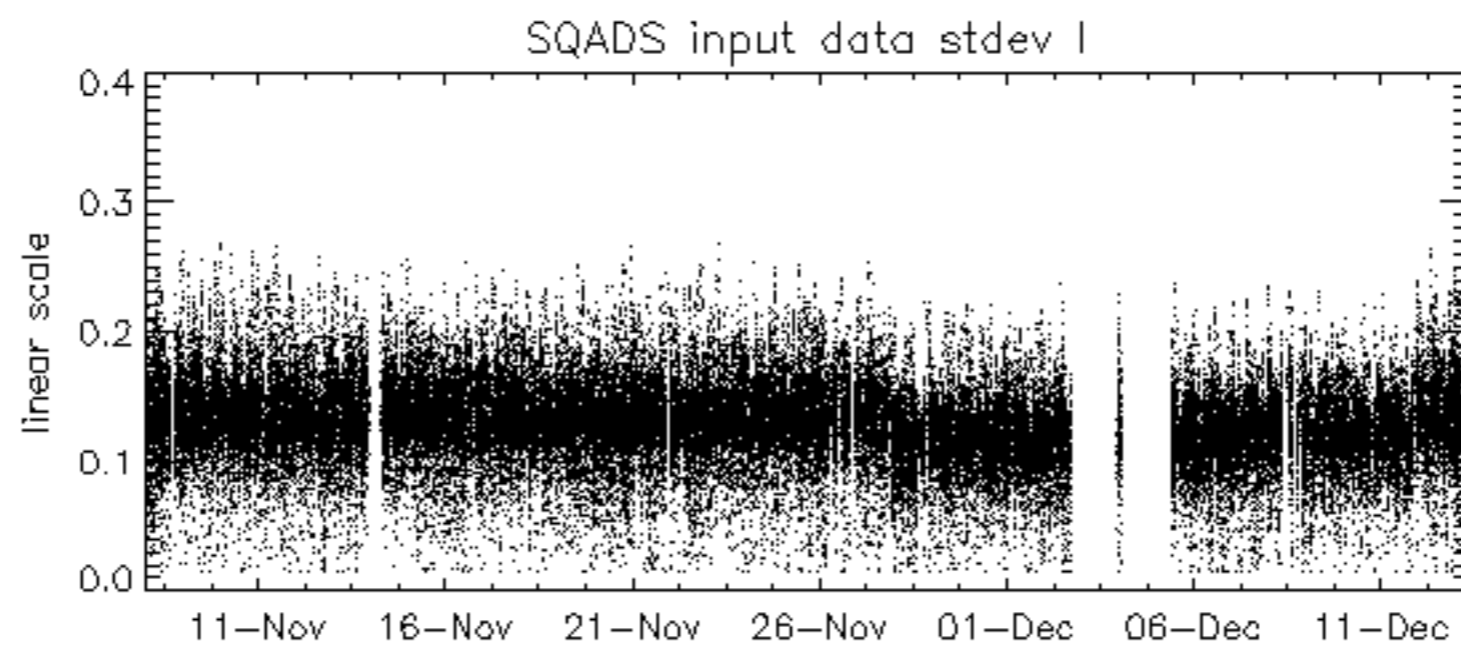
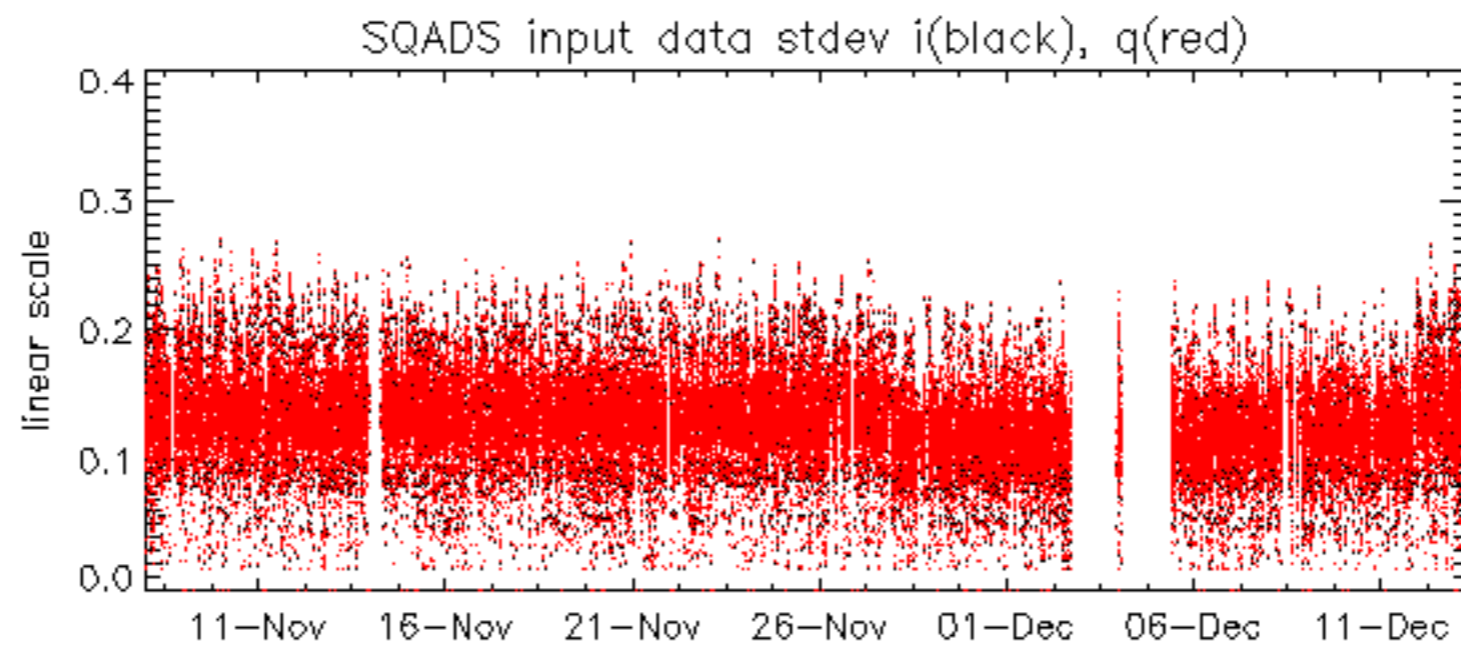


No anomalies observed on available MS products:

No anomalies observed.



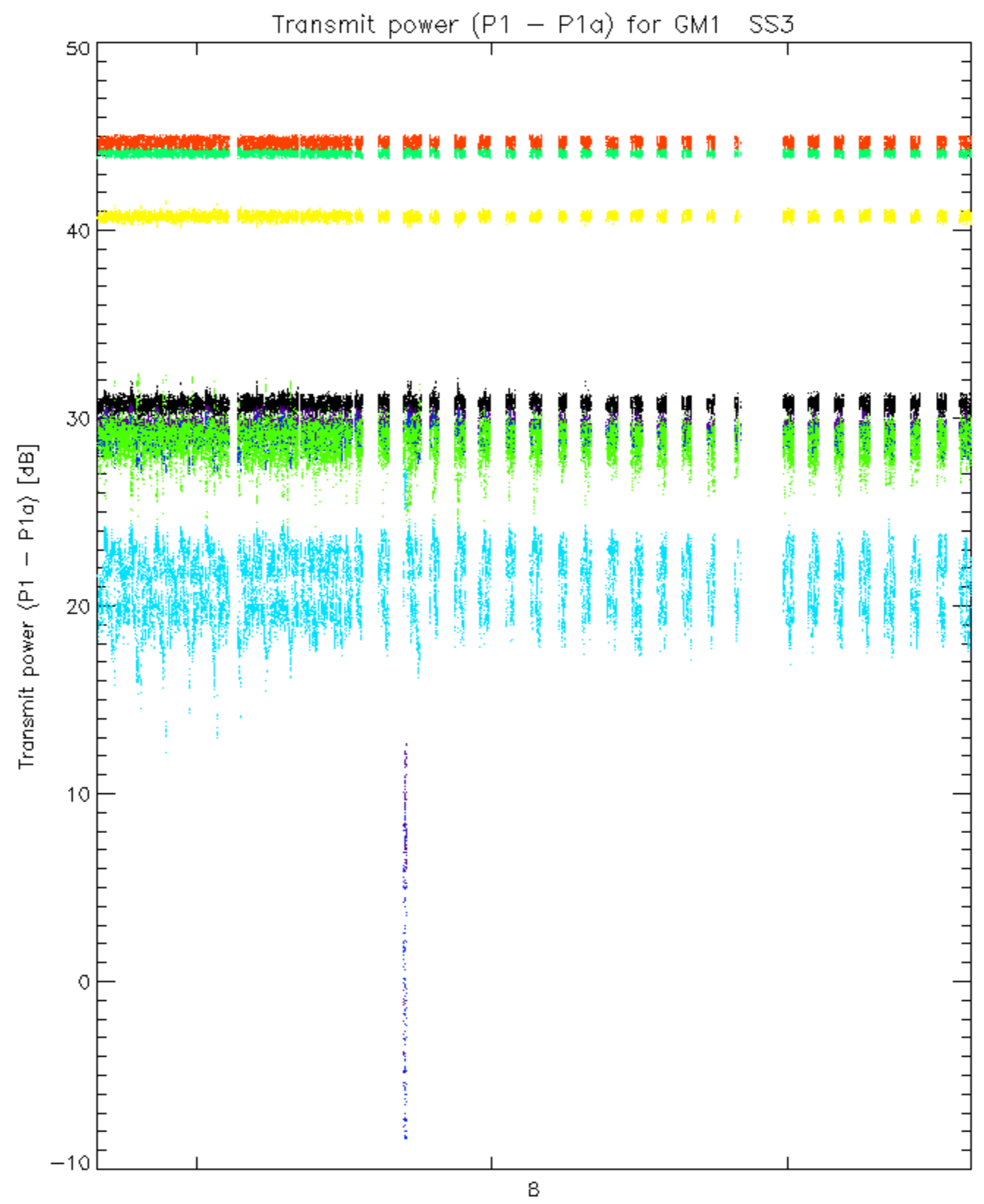




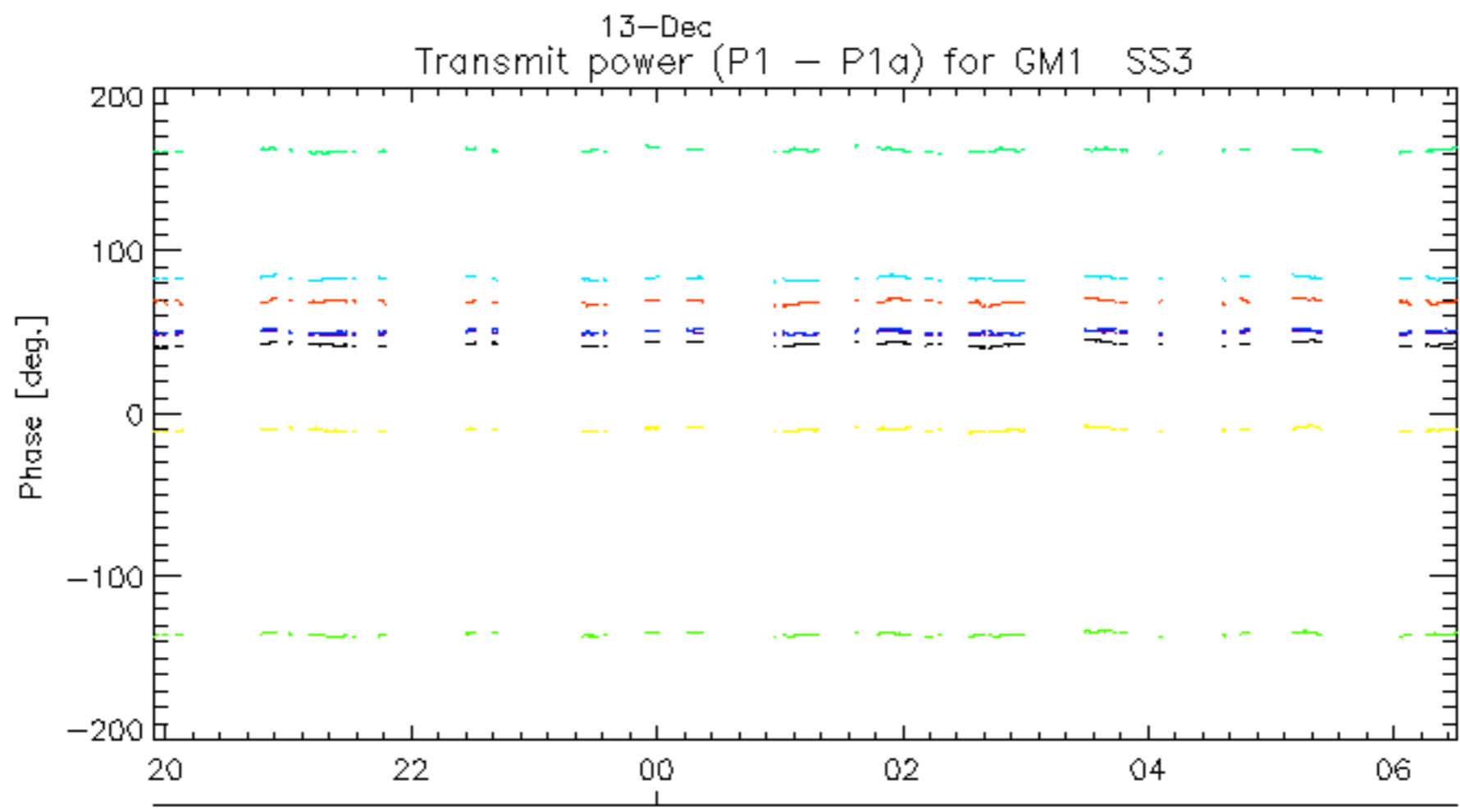
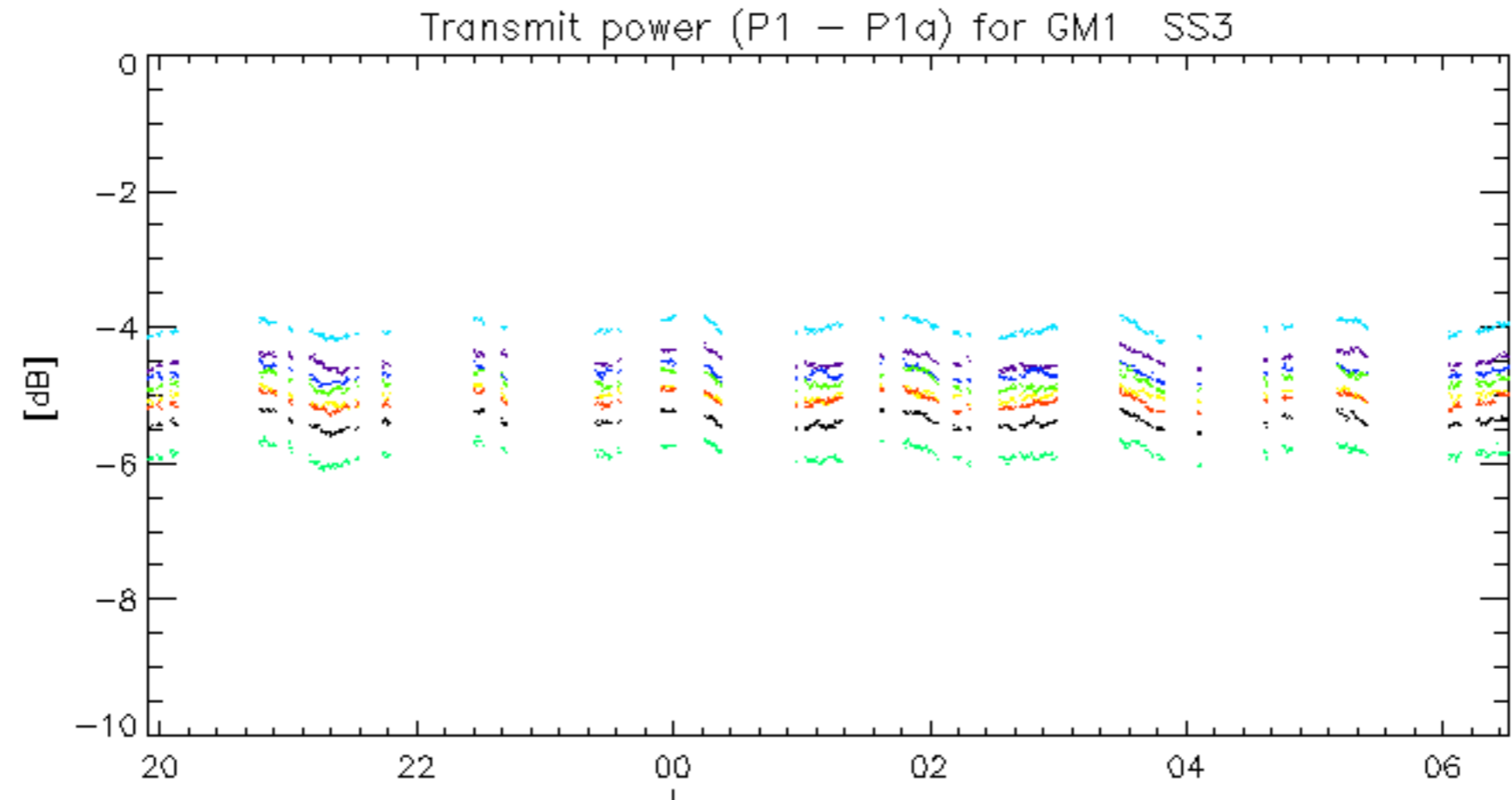
Summary of analysis for the last 3 days 2005121[123]

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

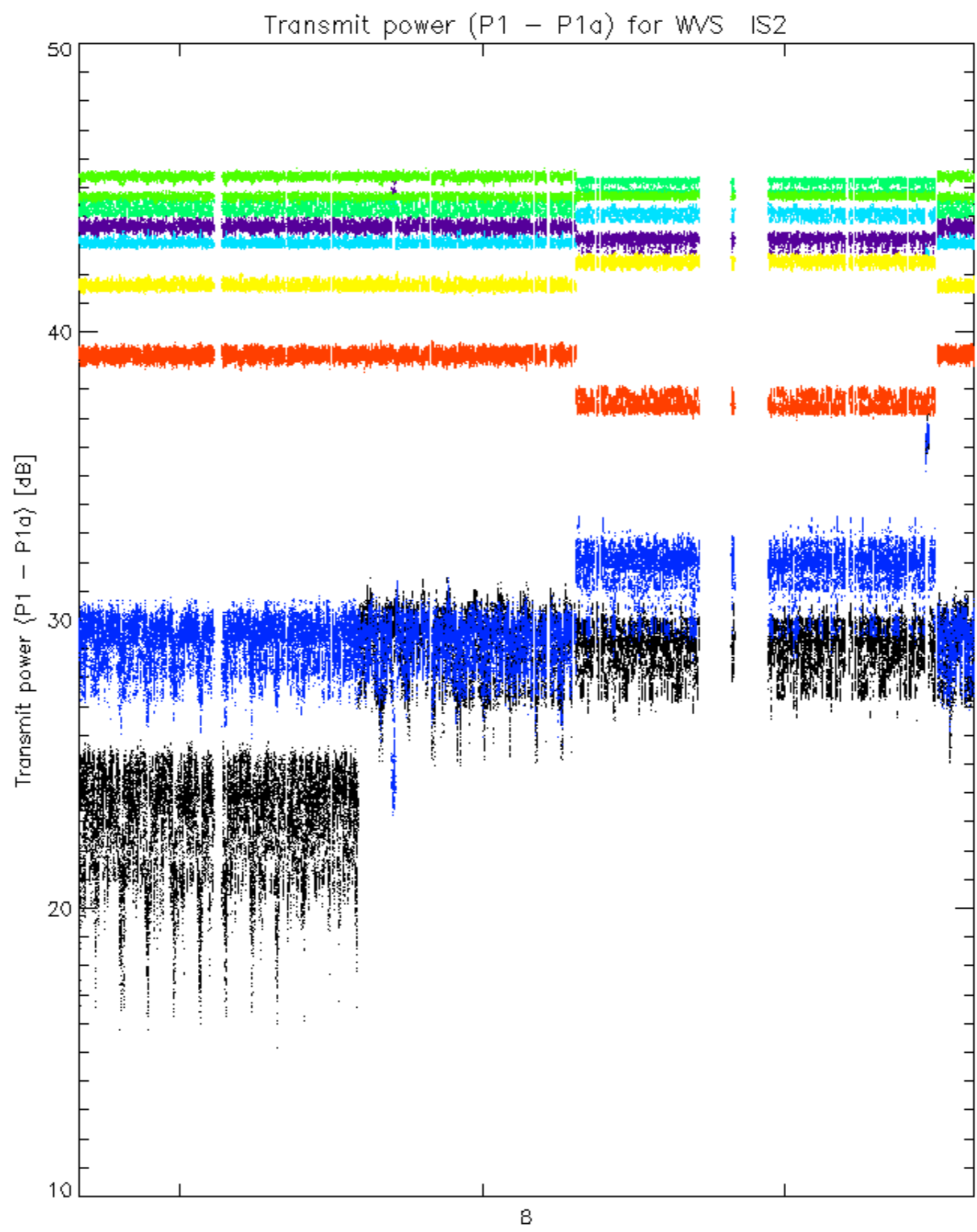
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20051211_004056_00000622043_00174_19767_3704.N1	1	0
ASA_IMM_1PNPDE20051213_003723_000001162043_00202_19795_3834.N1	1	0
ASA_WSM_1PNPDE20051211_023139_000002262043_00175_19768_3714.N1	0	39
ASA_WSM_1PNPDE20051212_015902_000001842043_00189_19782_3870.N1	0	39
ASA_WSM_1PNPDE20051212_162339_000002072043_00198_19791_3936.N1	0	49
ASA_WSM_1PNPDE20051213_012705_000001472043_00203_19796_4009.N1	0	65

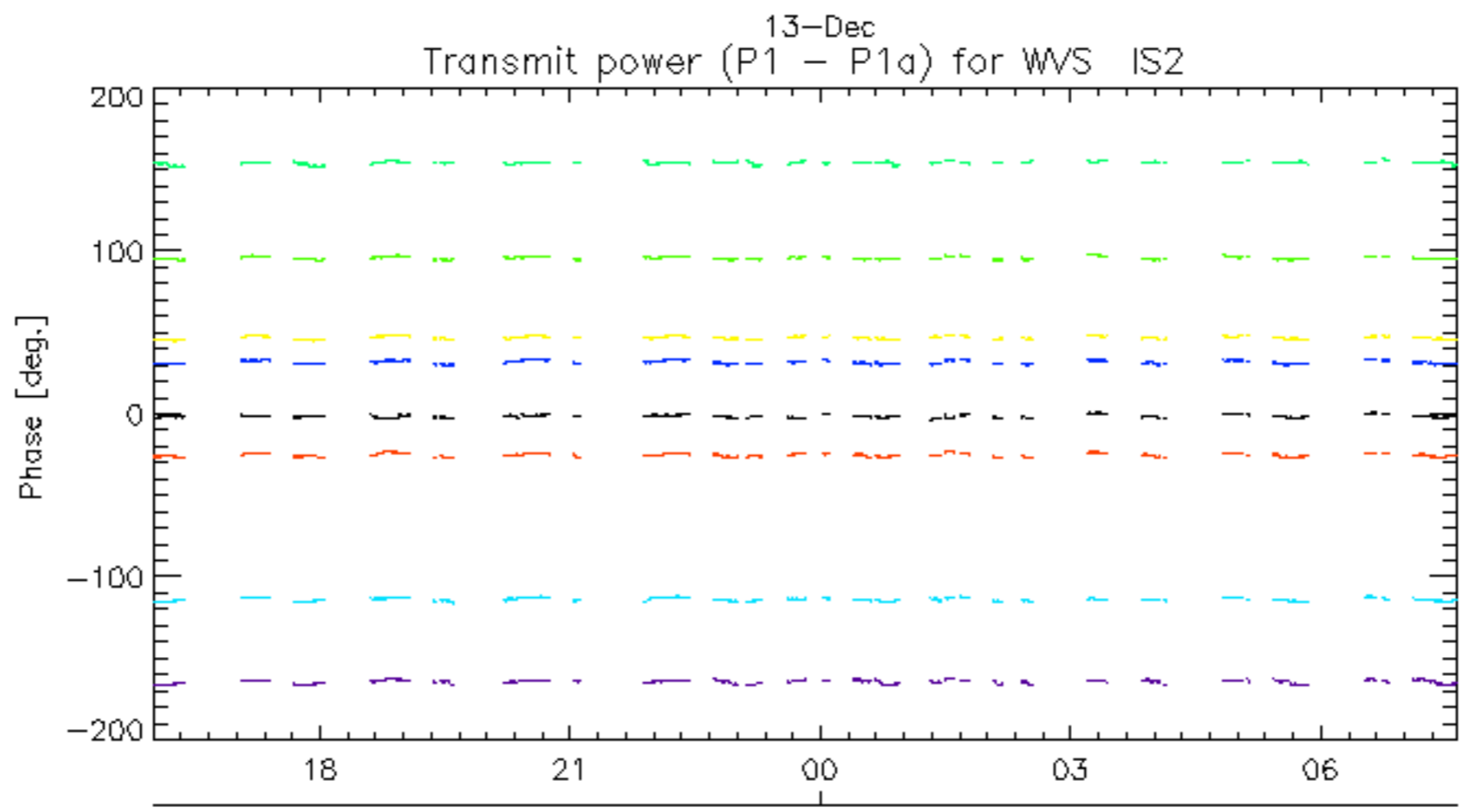
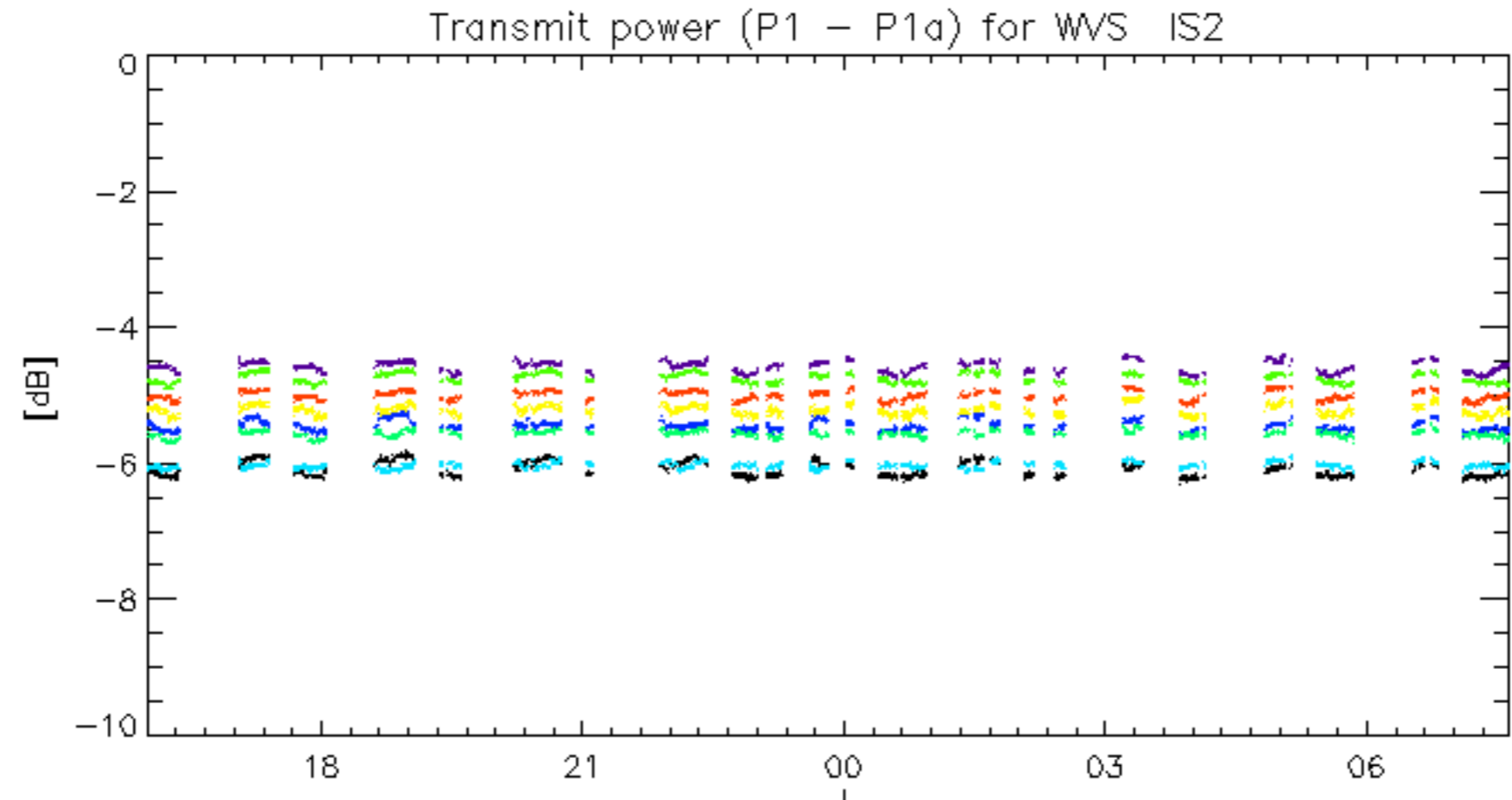


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.