

PRELIMINARY REPORT OF 060113

last update on Fri Jan 13 16:45:43 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 2006-01-12 00:00:00 to 2006-01-13 16:45:43

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	0	9	0	2
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	0	9	0	2
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	0	9	0	2
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	0	9	0	2

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	55	29	8	81
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	55	29	8	81
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	55	29	8	81
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	55	29	8	81

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	20060112 074708
H	20060113 071531

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	-3.992319	0.079951	-0.279740
7	P1	-2.949330	0.050048	-0.230729
11	P1	-4.120060	0.037760	0.090377
15	P1	-5.879582	0.495982	-0.921078
19	P1	-3.199652	0.023688	-0.203899
22	P1	-4.478382	0.021554	-0.037384
26	P1	-4.255858	0.026573	0.183663
30	P1	-5.746226	0.017229	-0.109029
3	P1	-16.750921	1.009907	-1.191379
7	P1	-16.321722	0.924420	-1.301587
11	P1	-16.537964	0.411734	-0.280524
15	P1	-13.162268	0.402847	-0.490751
19	P1	-13.788479	0.163819	-0.431407
22	P1	-15.984315	0.575633	0.168247
26	P1	-15.627168	0.513772	-0.720609
30	P1	-16.415228	0.986020	-0.949732

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.689554	0.103359	0.213333
7	P2	-22.515060	0.100221	0.083604
11	P2	-16.376537	0.111271	0.219403
15	P2	-7.243896	0.103082	0.078469
19	P2	-9.198720	0.100342	0.069264
22	P2	-17.930054	0.101142	-0.029915
26	P2	-16.262663	0.110682	0.188478
30	P2	-19.692949	0.094623	0.162714

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.225183	0.007805	0.037424
7	P3	-8.225183	0.007805	0.037424
11	P3	-8.225183	0.007805	0.037424
15	P3	-8.225183	0.007805	0.037424
19	P3	-8.225183	0.007805	0.037424
22	P3	-8.225183	0.007805	0.037424
26	P3	-8.225183	0.007805	0.037424
30	P3	-8.225183	0.007805	0.037424

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1

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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	-3.714940	0.008542	-0.013847
7	P1	-2.761695	0.007844	0.018550
11	P1	-2.869487	0.010098	0.030776
15	P1	-3.434921	0.017784	-0.065792
19	P1	-3.386194	0.014054	0.041363
22	P1	-5.120651	0.020434	0.009124
26	P1	-5.850919	0.015475	0.000994
30	P1	-5.268272	0.032283	0.066954
3	P1	-11.499719	0.035057	-0.040647
7	P1	-9.945877	0.048446	0.077156
11	P1	-10.058762	0.052582	-0.004313
15	P1	-10.581083	0.077340	-0.120858
19	P1	-15.505353	0.068407	0.106339
22	P1	-20.807621	1.046827	0.500479

26	P1	-17.008183	0.319221	0.521932
30	P1	-18.156267	0.282938	0.016421

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.522629	0.032913	0.251183
7	P2	-22.969328	0.060055	0.309953
11	P2	-11.507798	0.021208	0.214489
15	P2	-4.960133	0.023906	0.133951
19	P2	-6.953776	0.022706	0.102466
22	P2	-8.203147	0.022673	0.053898
26	P2	-24.014688	0.029024	0.152729
30	P2	-22.121210	0.018006	0.088958

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.069024	0.002591	0.043189
7	P3	-8.069036	0.002594	0.043826
11	P3	-8.069178	0.002593	0.043476
15	P3	-8.069106	0.002584	0.043576
19	P3	-8.069117	0.002589	0.043335
22	P3	-8.068876	0.002582	0.043862
26	P3	-8.068897	0.002574	0.043906
30	P3	-8.068928	0.002588	0.042846

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	0.000523588
	stdev	1.90686e-07
MEAN Q	mean	0.000504150
	stdev	2.25469e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.135482
	stdev	0.00119314
STDEV Q	mean	0.135812
	stdev	0.00121037



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006011[123]

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_1PNPDE20060113_042639_000000522044_00147_20241_0106.N1	1	0
ASA_WSM_1PNPDE20060112_150453_000001282044_00140_20234_0188.N1	0	19
ASA_WSM_1PNPDE20060112_182736_000002982044_00142_20236_0208.N1	0	15





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

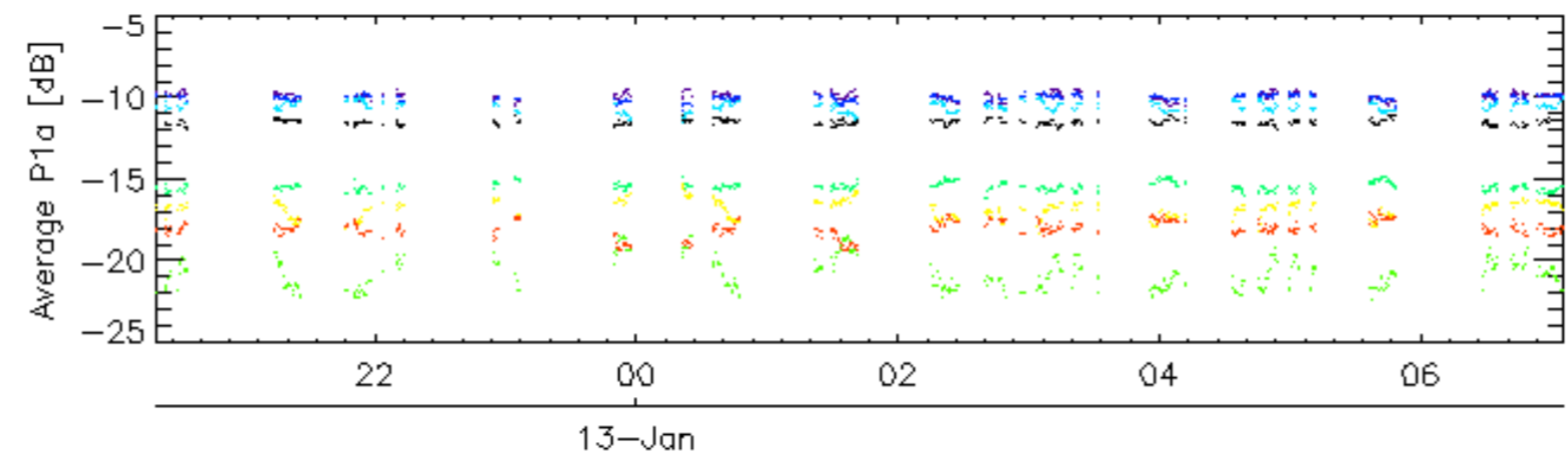
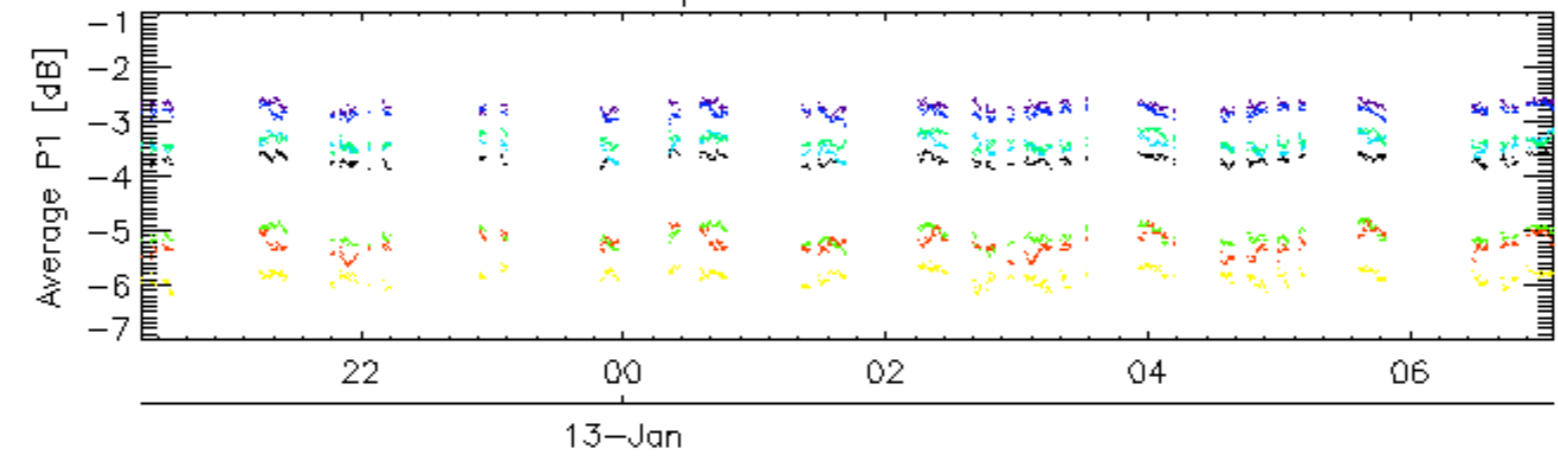
7.5 - Absolute Doppler for GM1

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

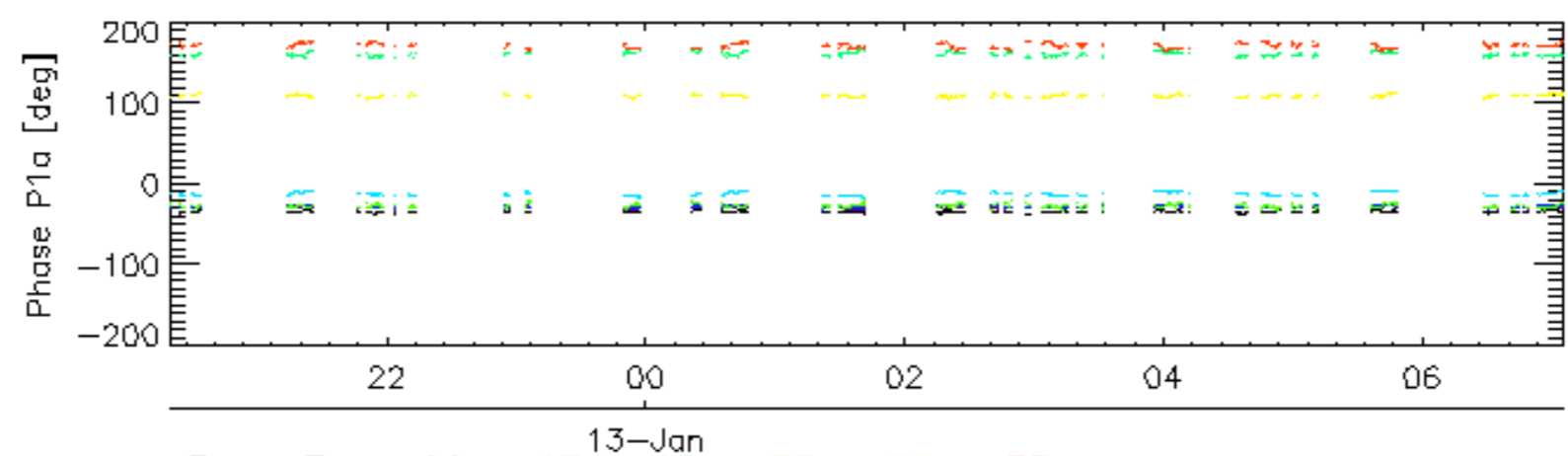
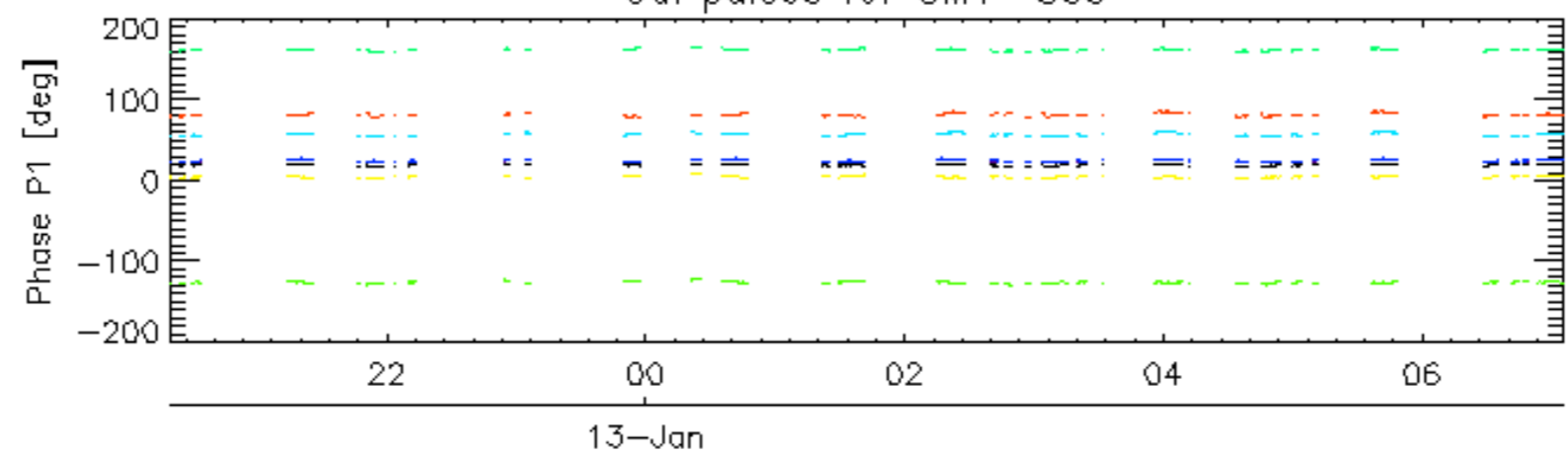
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

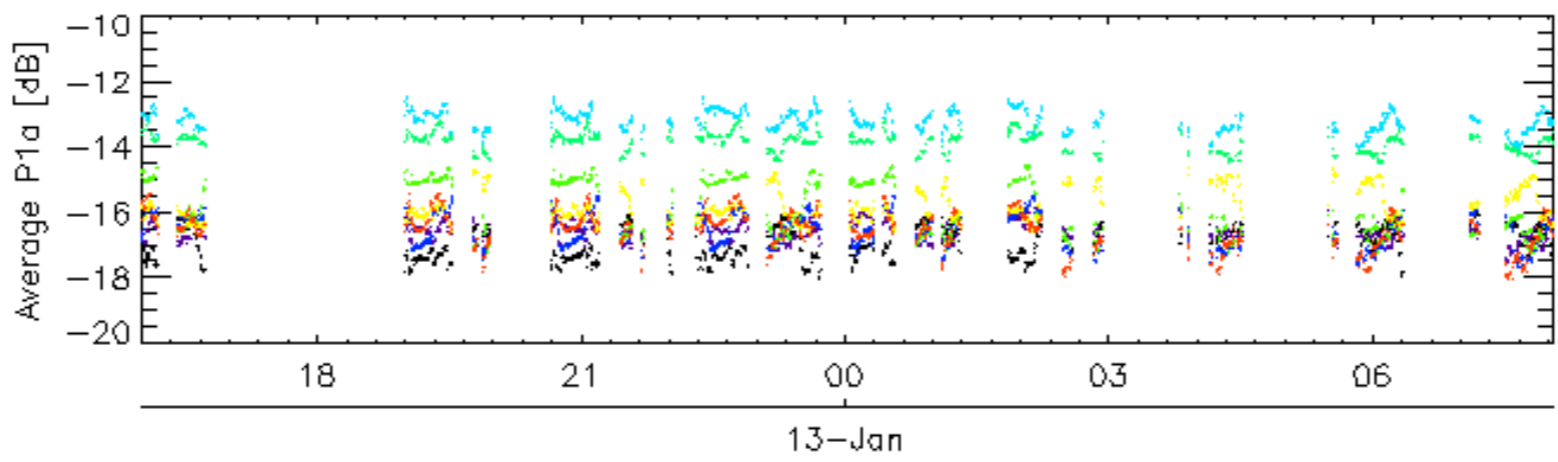
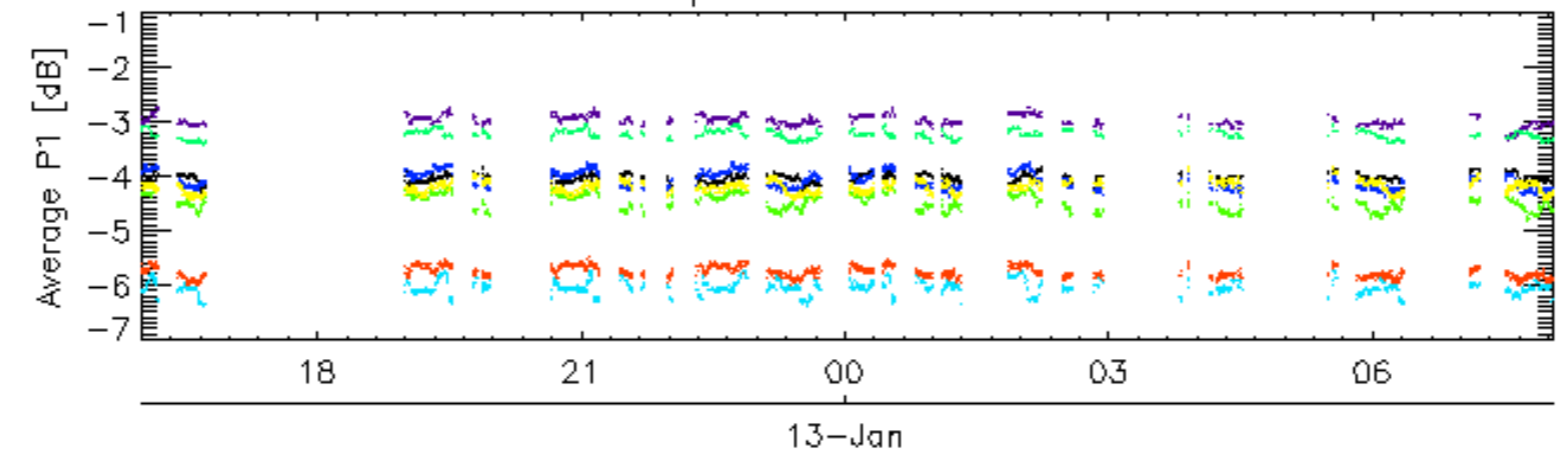


Cal pulses for GM1 SS3

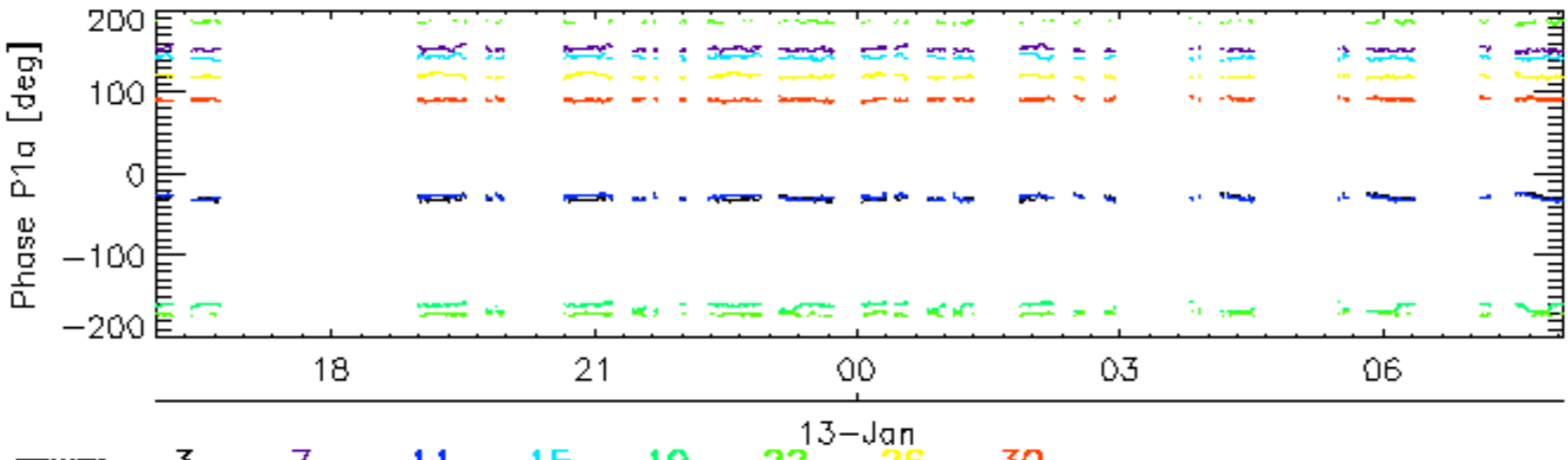
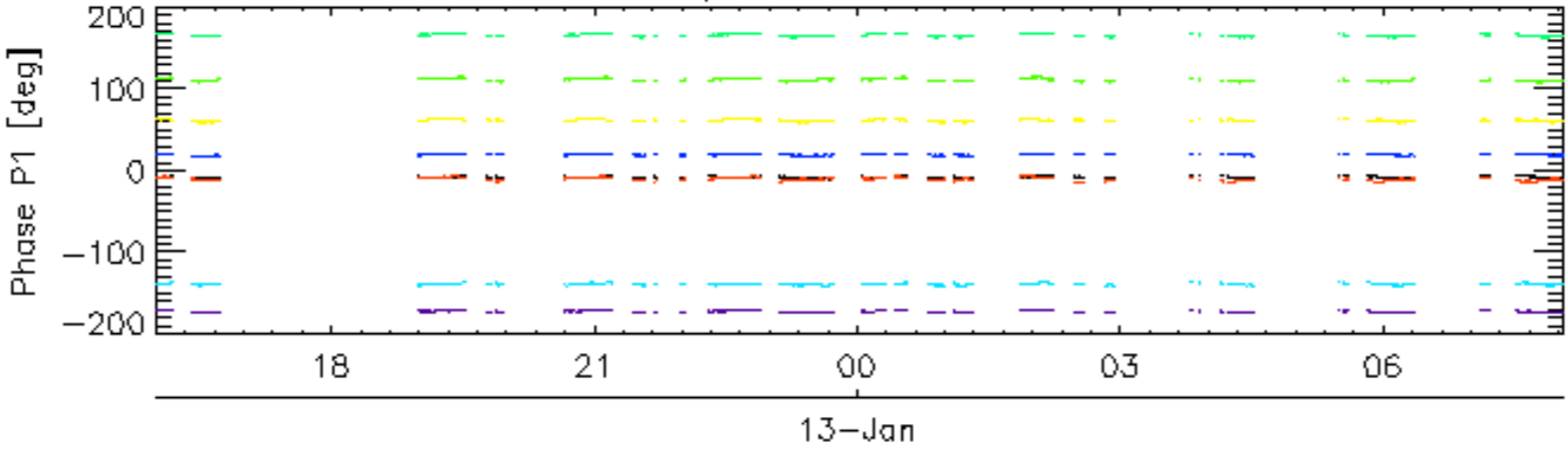


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

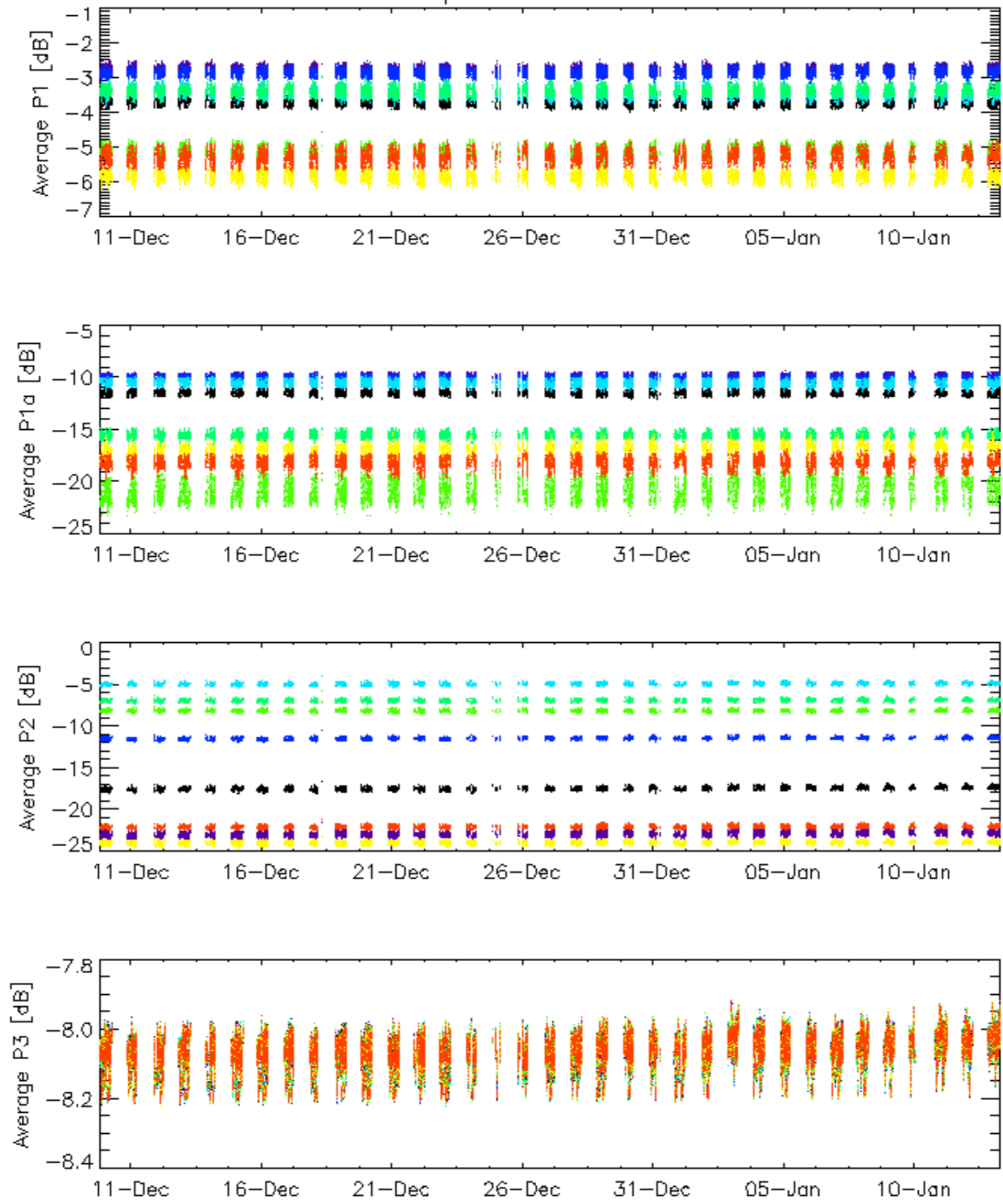


Cal pulses for WVS IS2



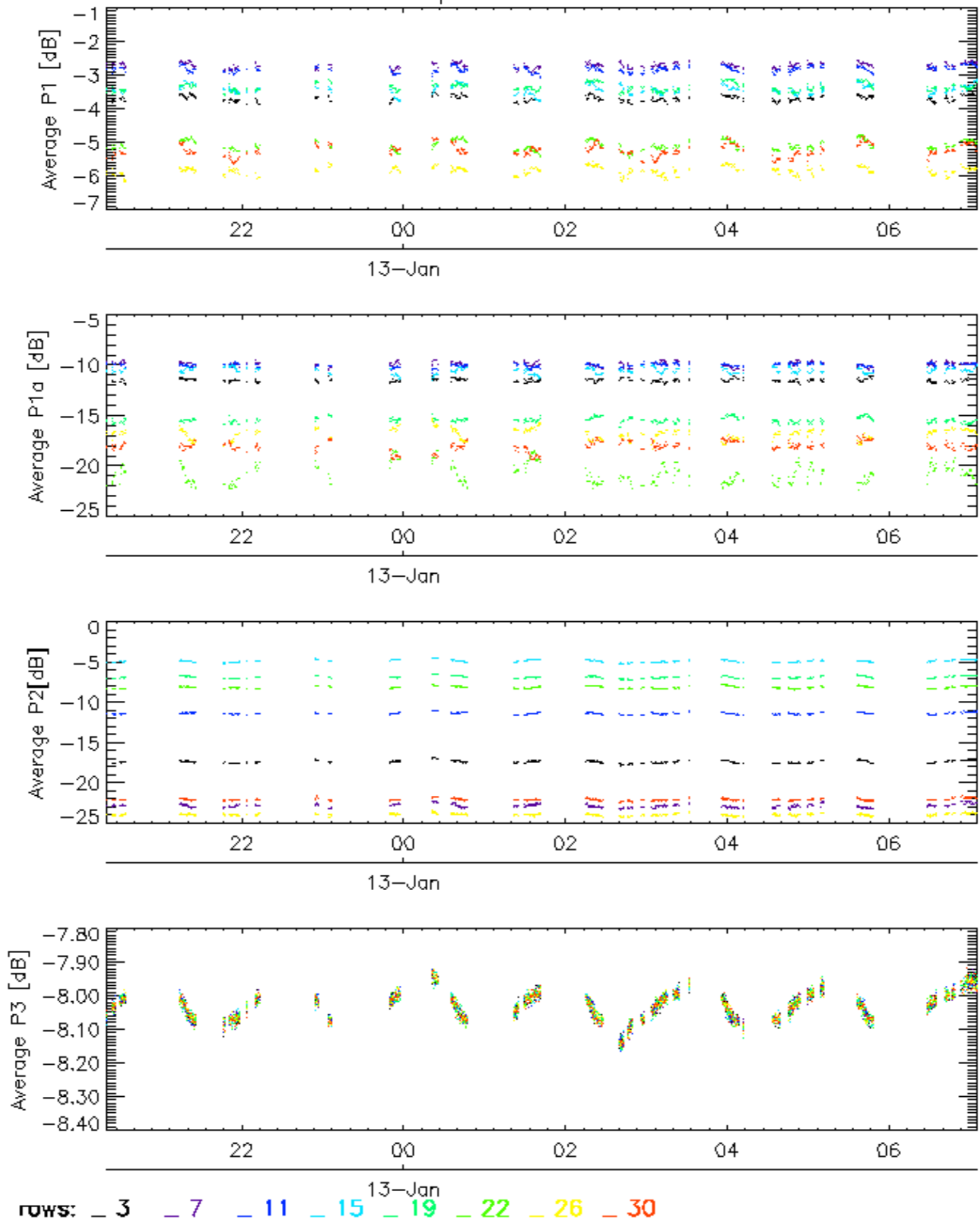
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

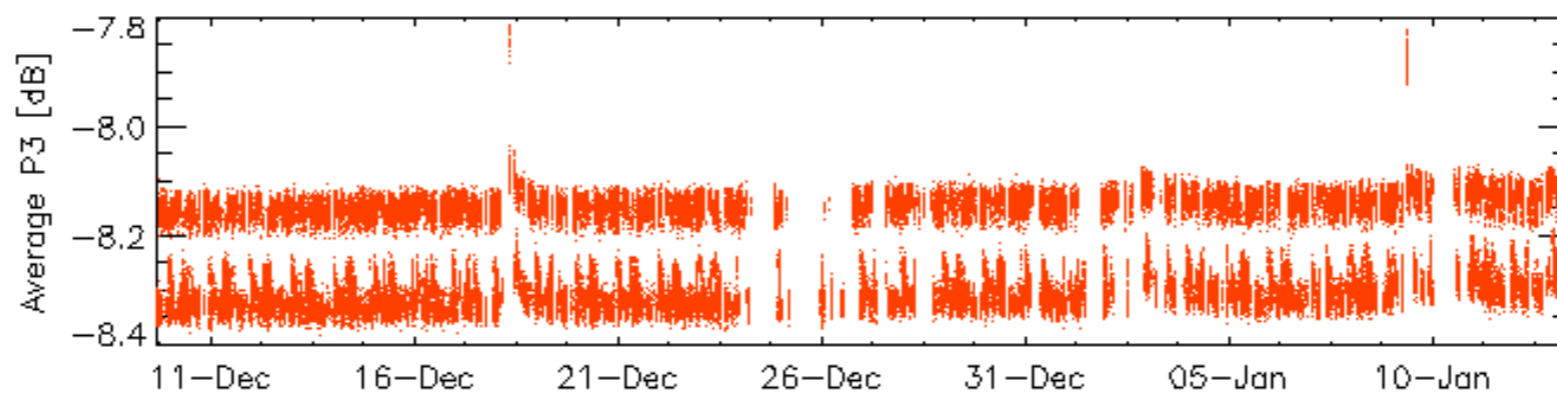
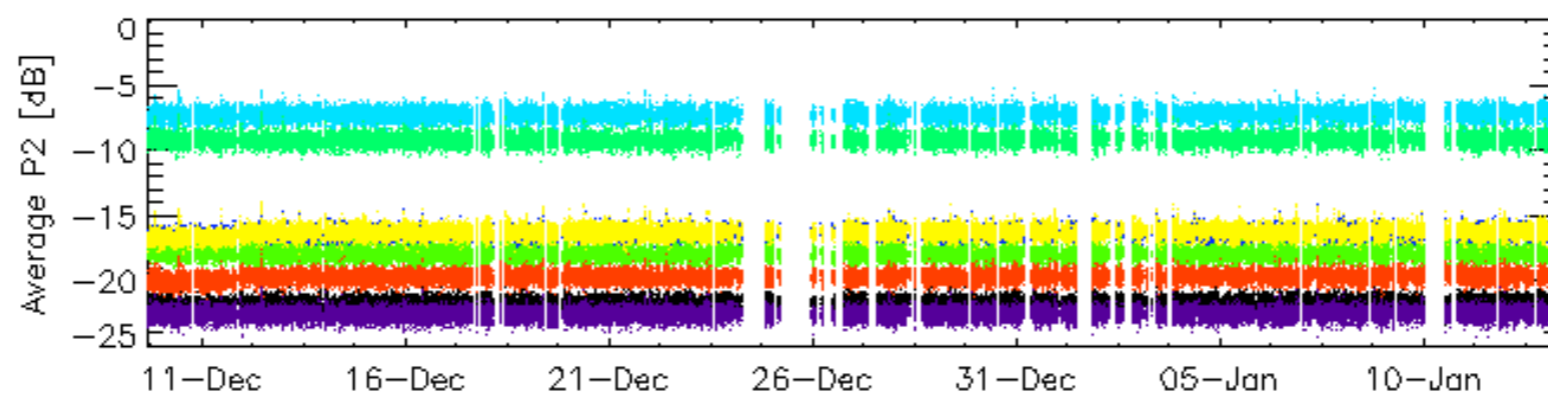
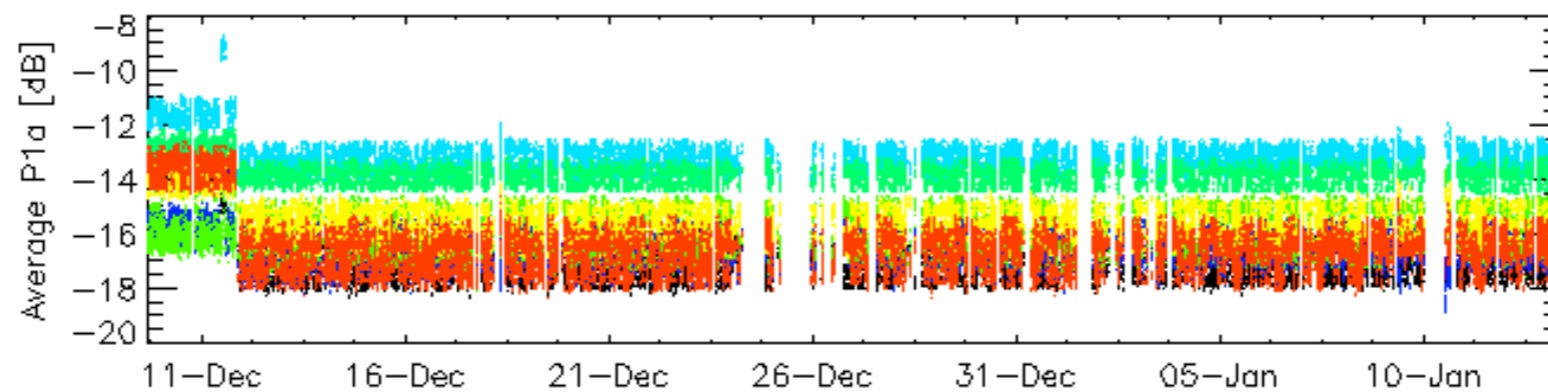
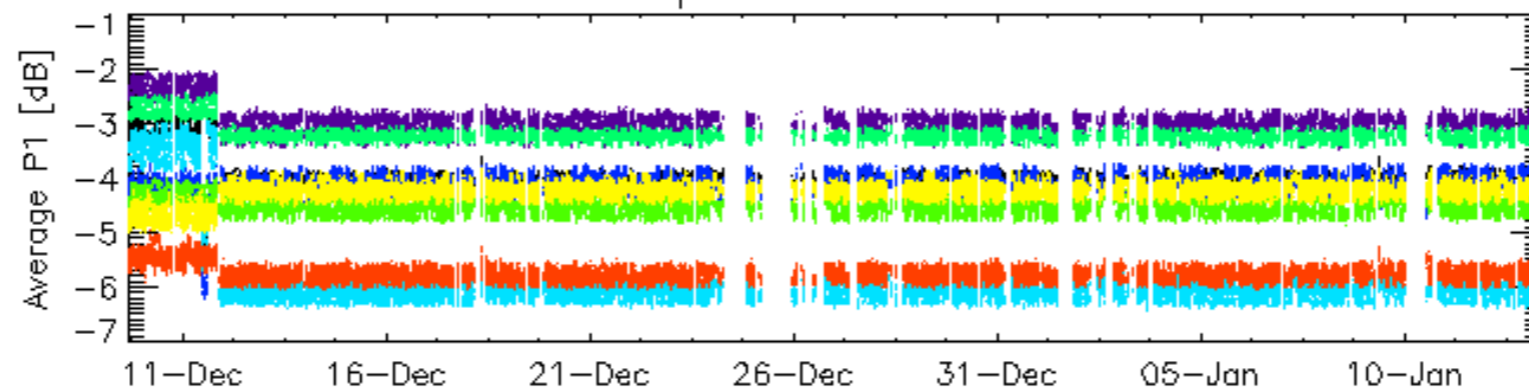


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

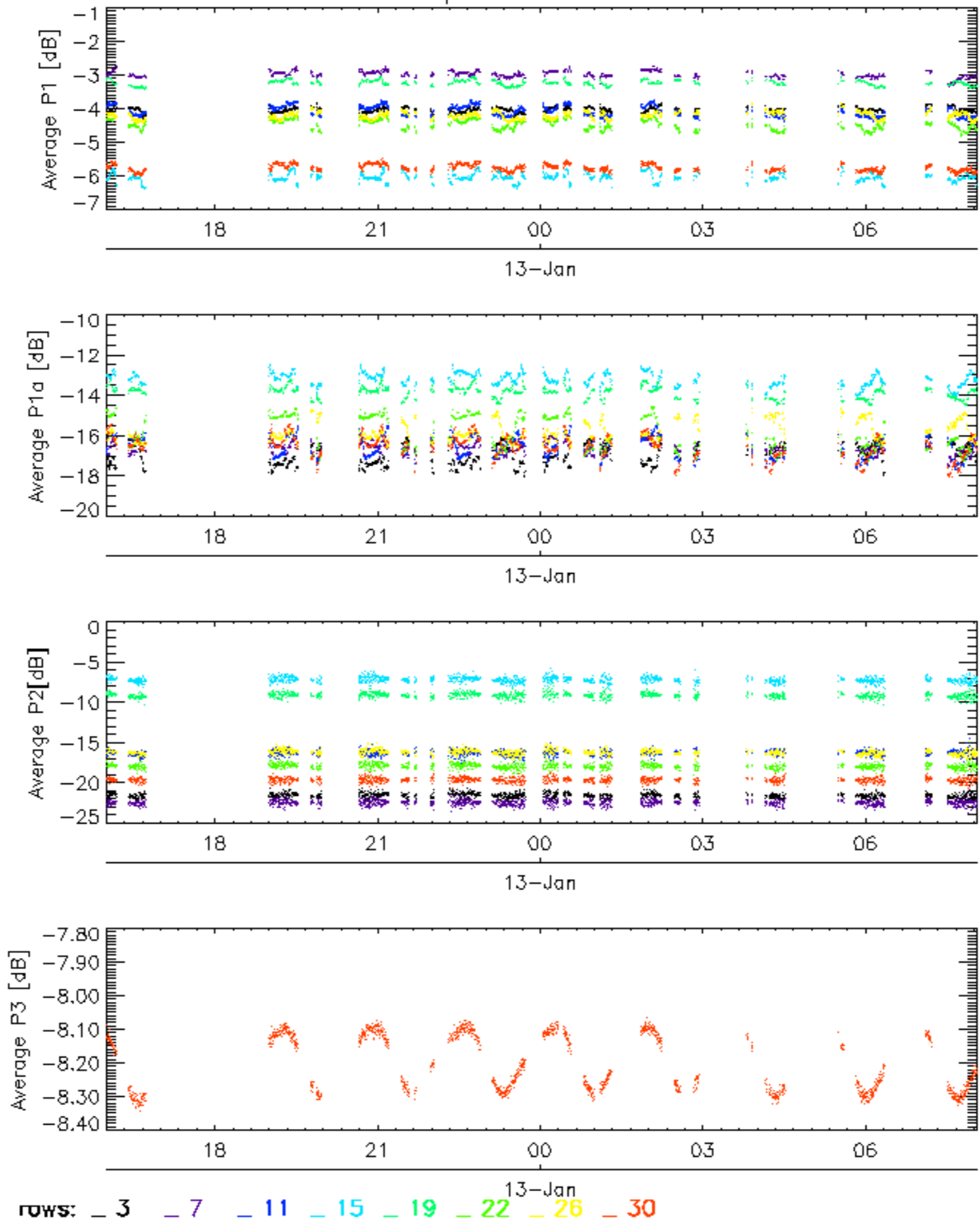


Cal pulses for WVS IS2



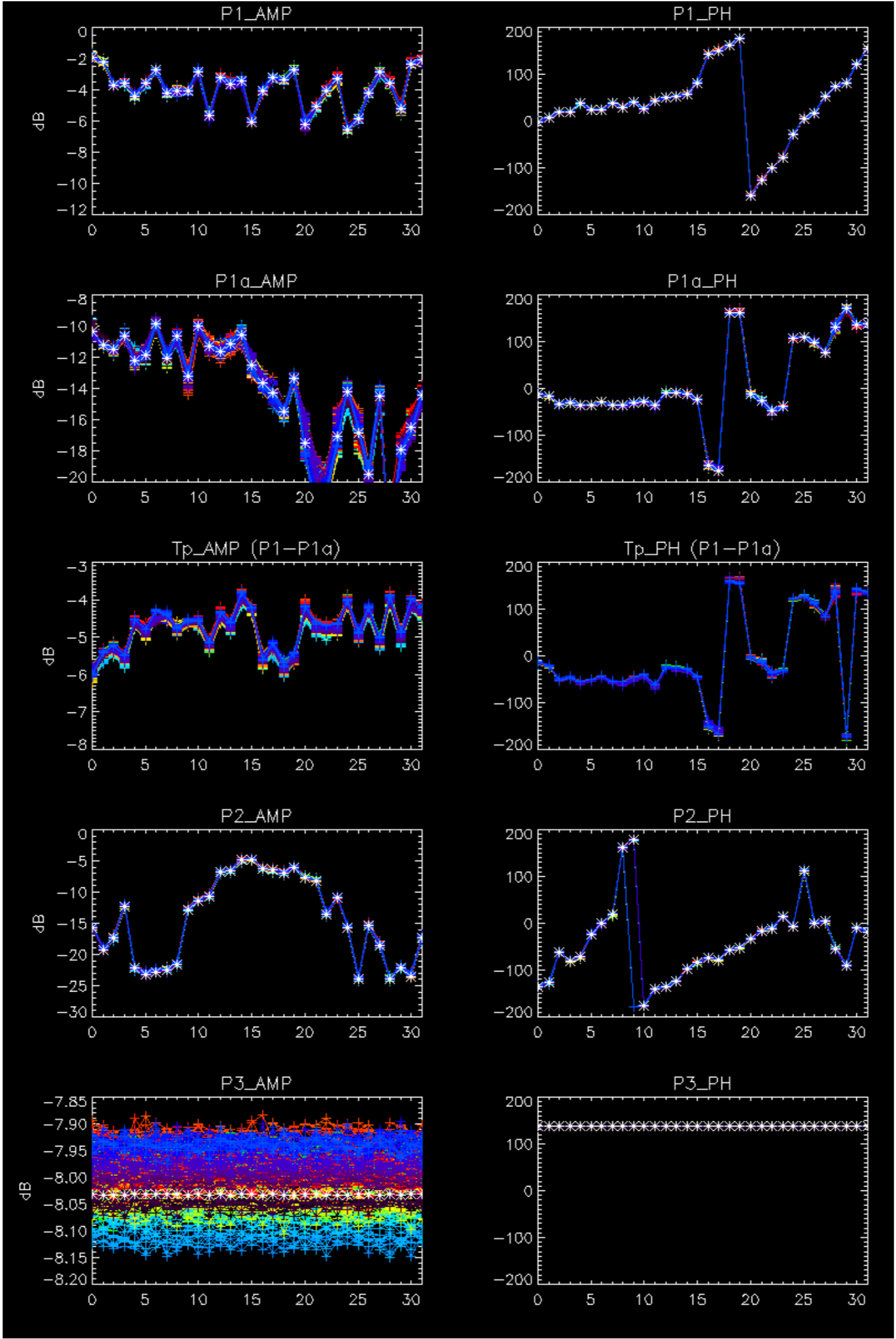
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

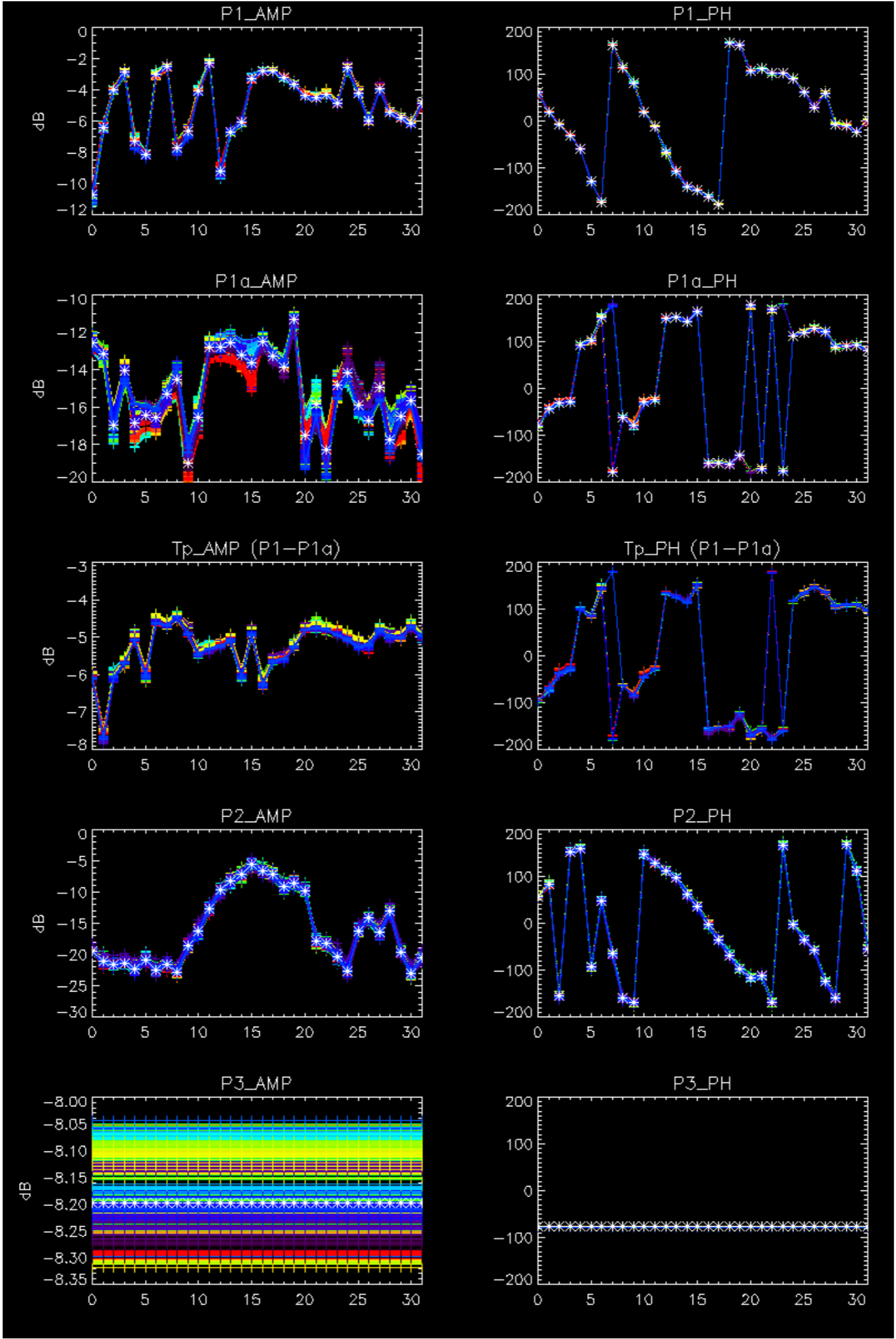
Cal pulses for WVS IS2



No anomalies observed on available browse products

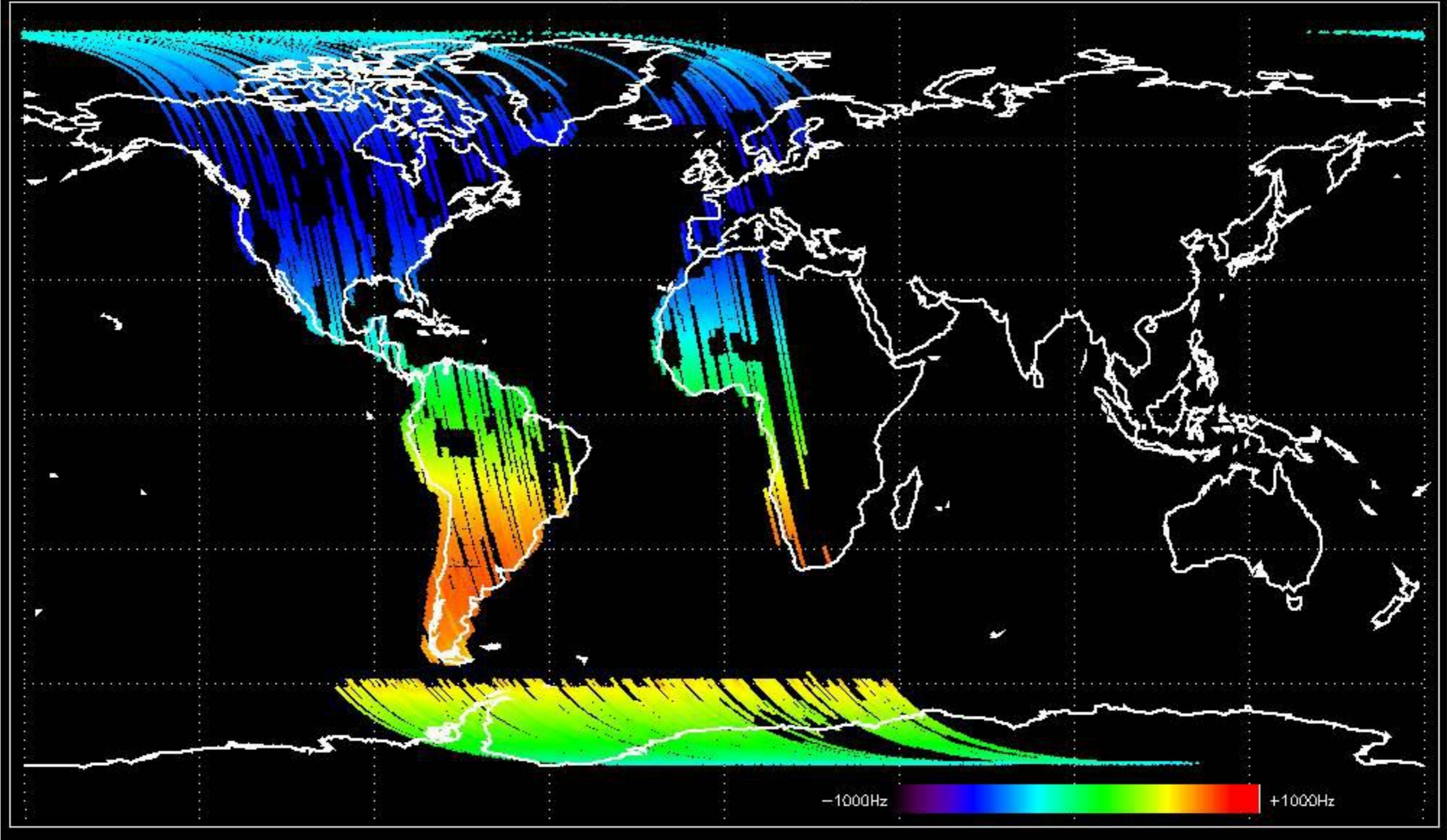
No anomalies observed.



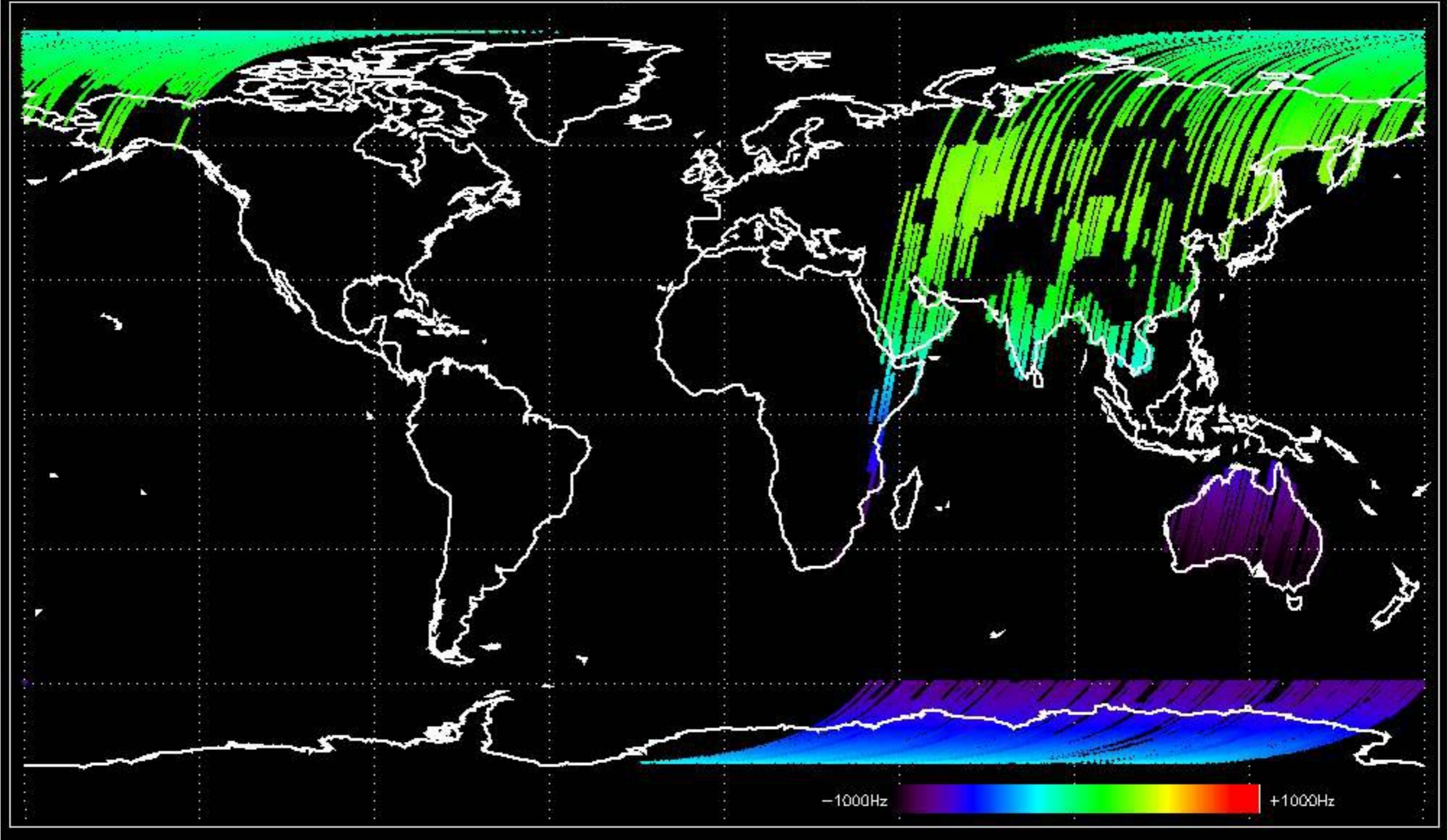


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

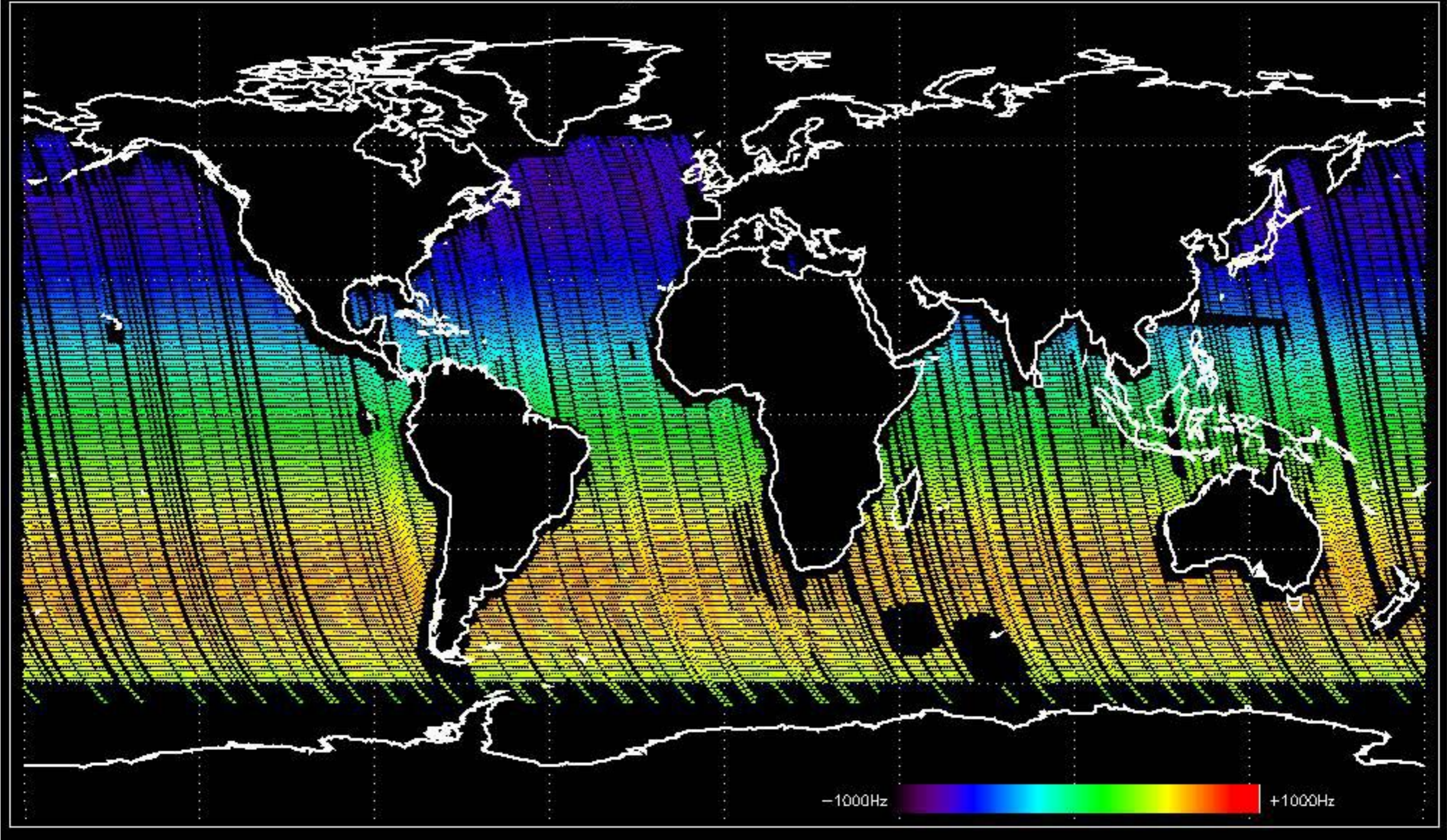
Doppler 'GM1' 'SS1' ascending



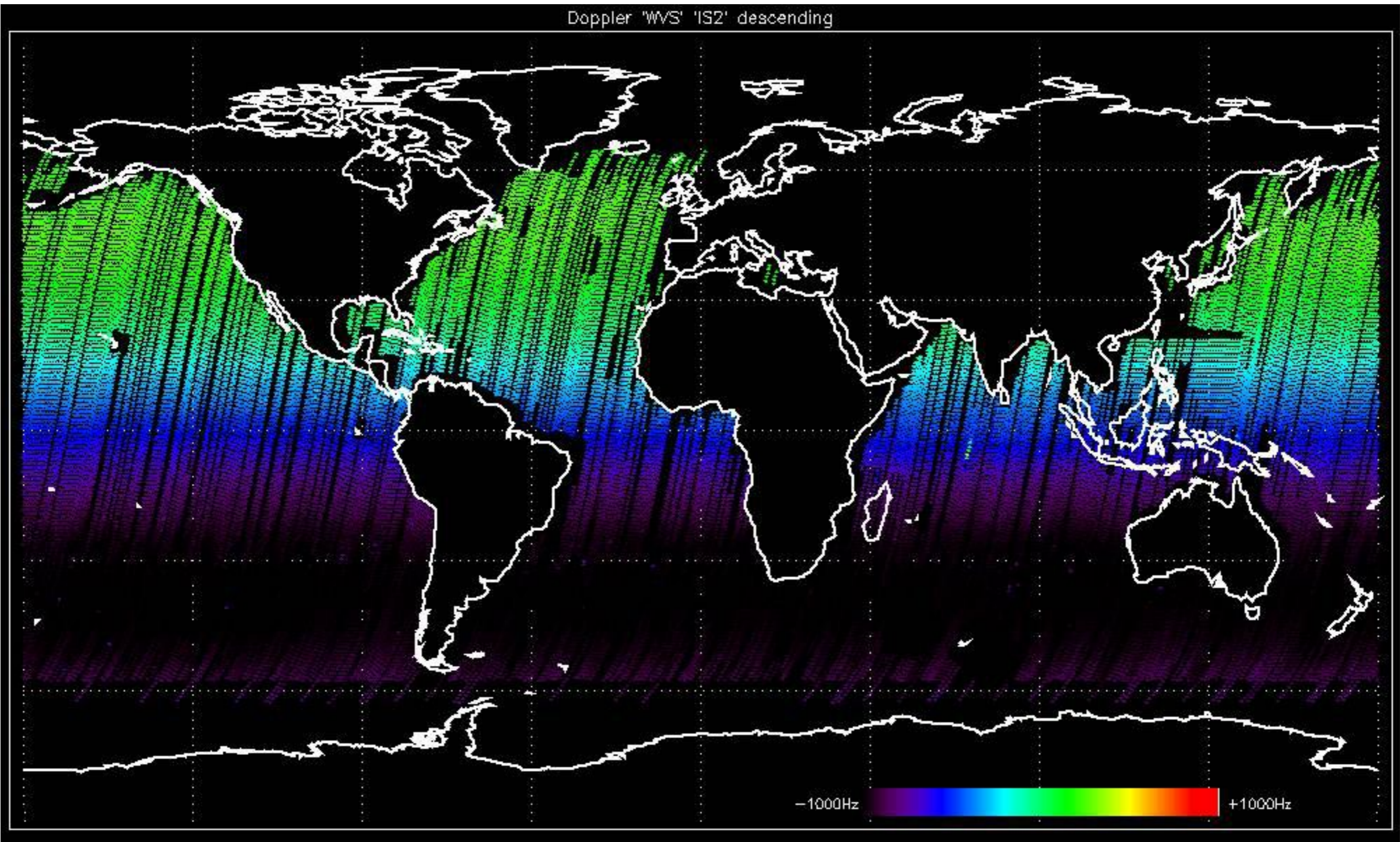
Doppler 'GM1' 'SS1' descending



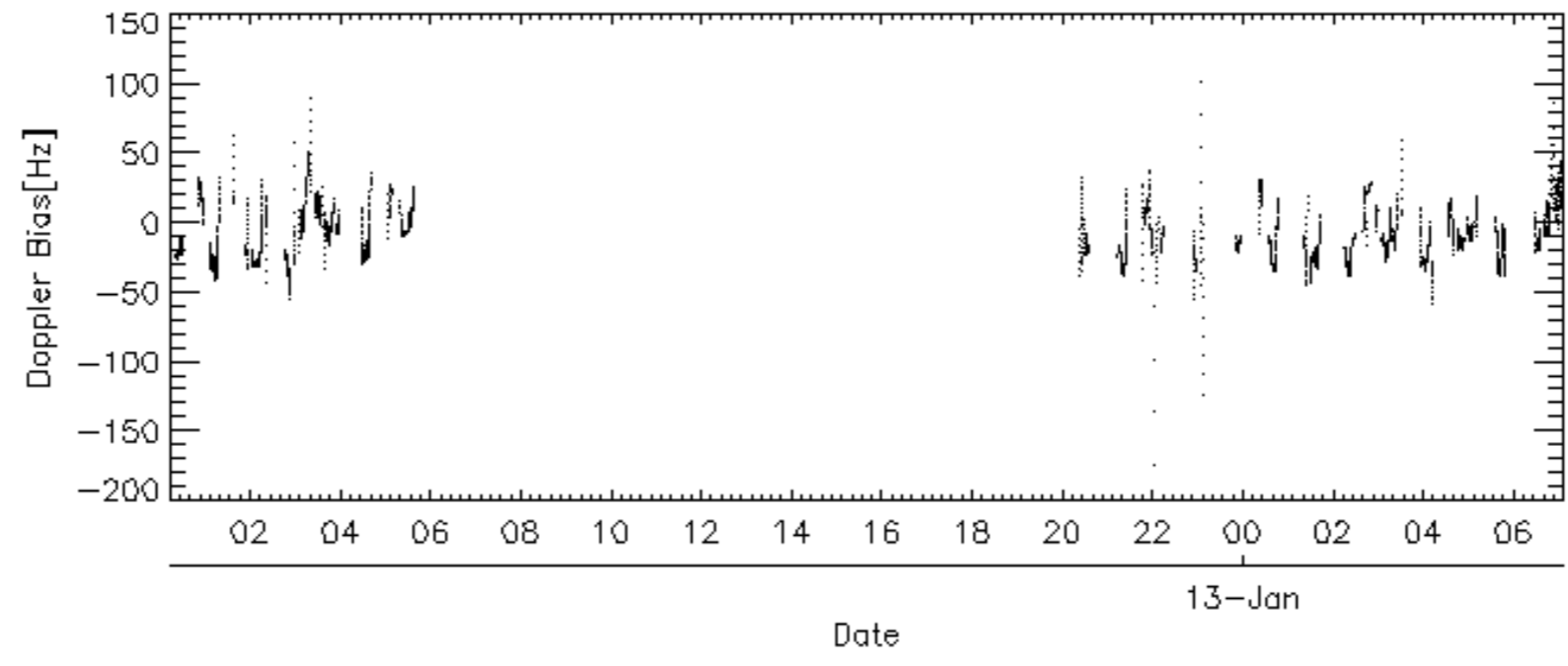
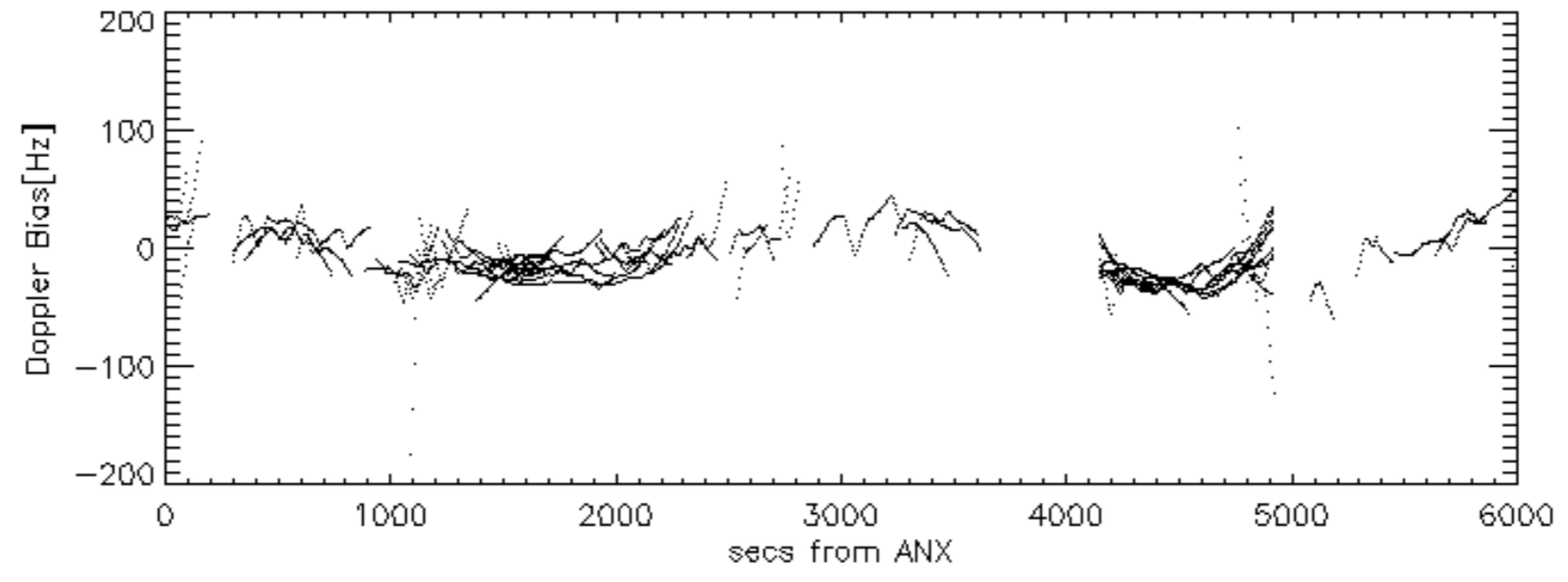
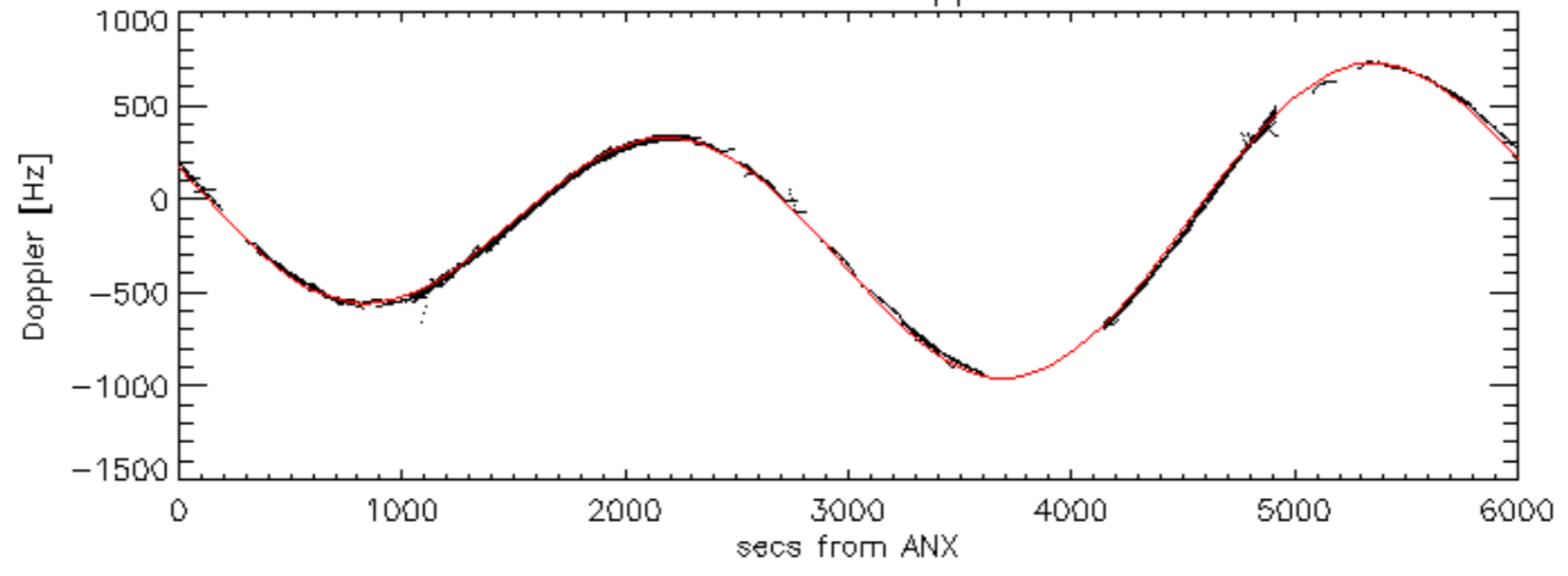
Doppler 'WVS' 'IS2' ascending

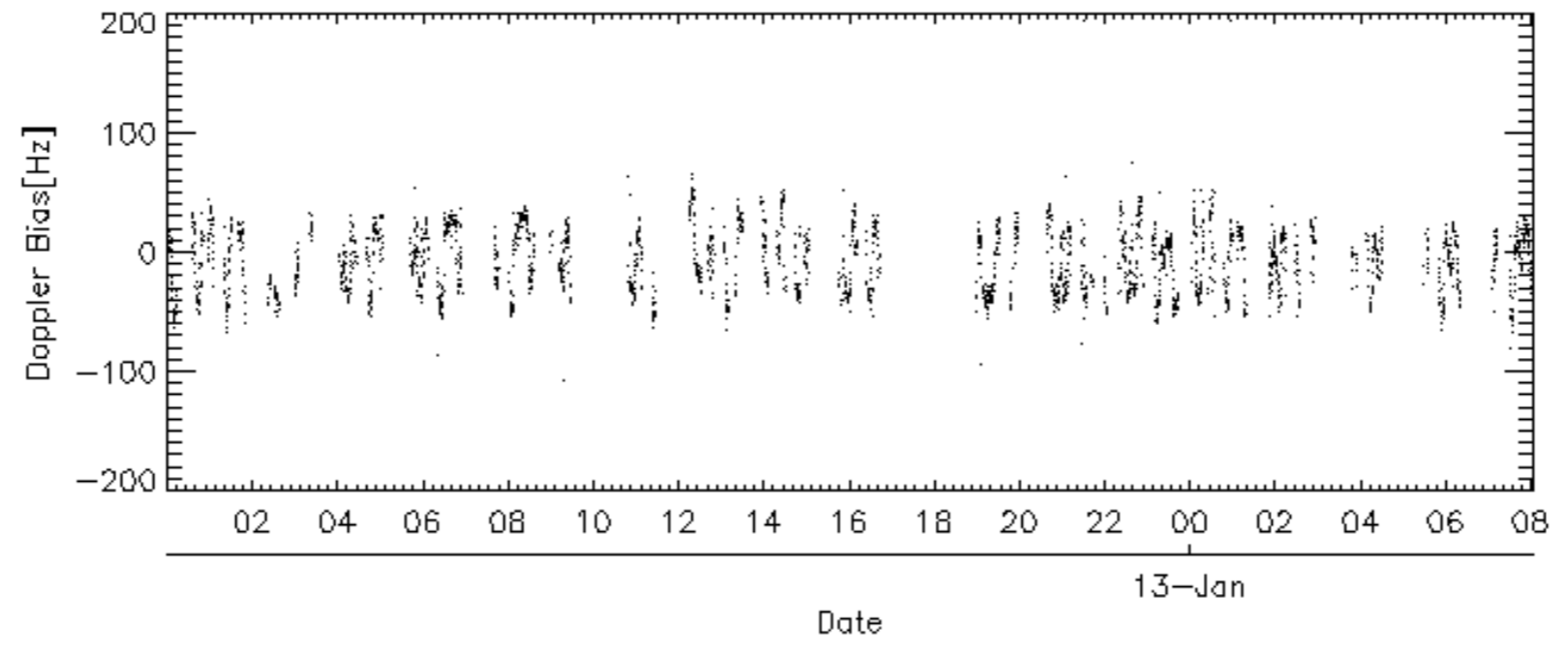
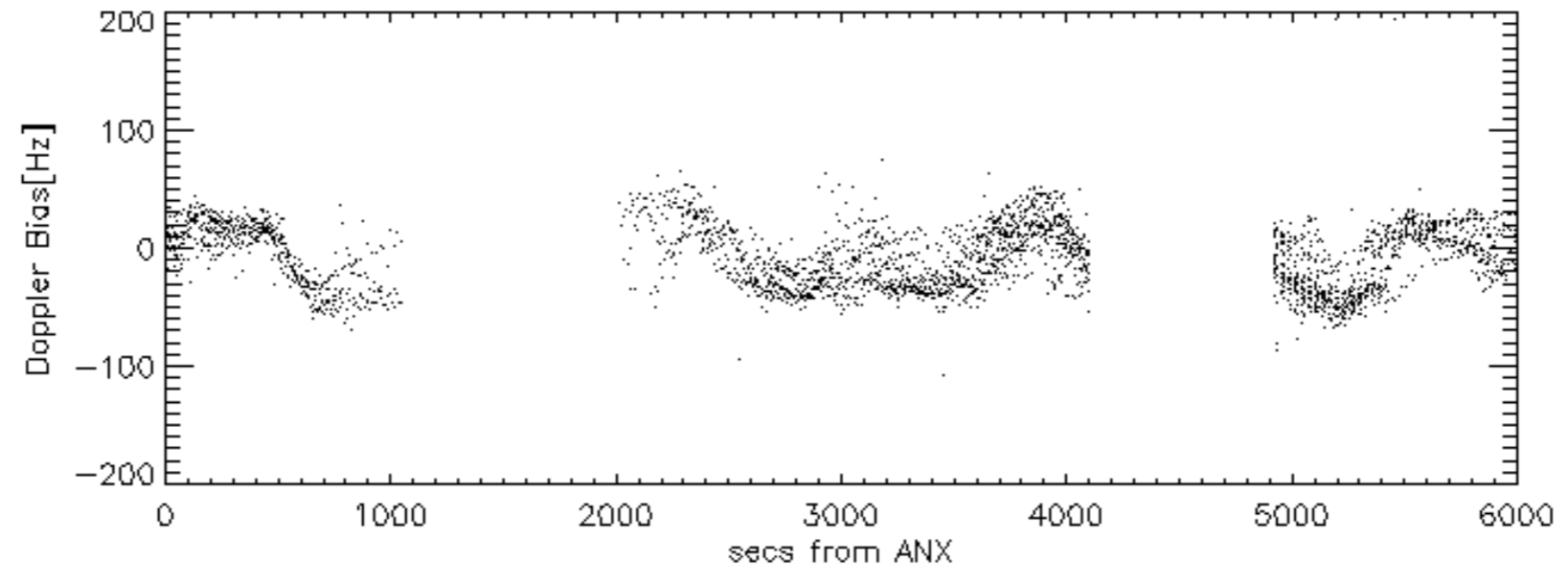
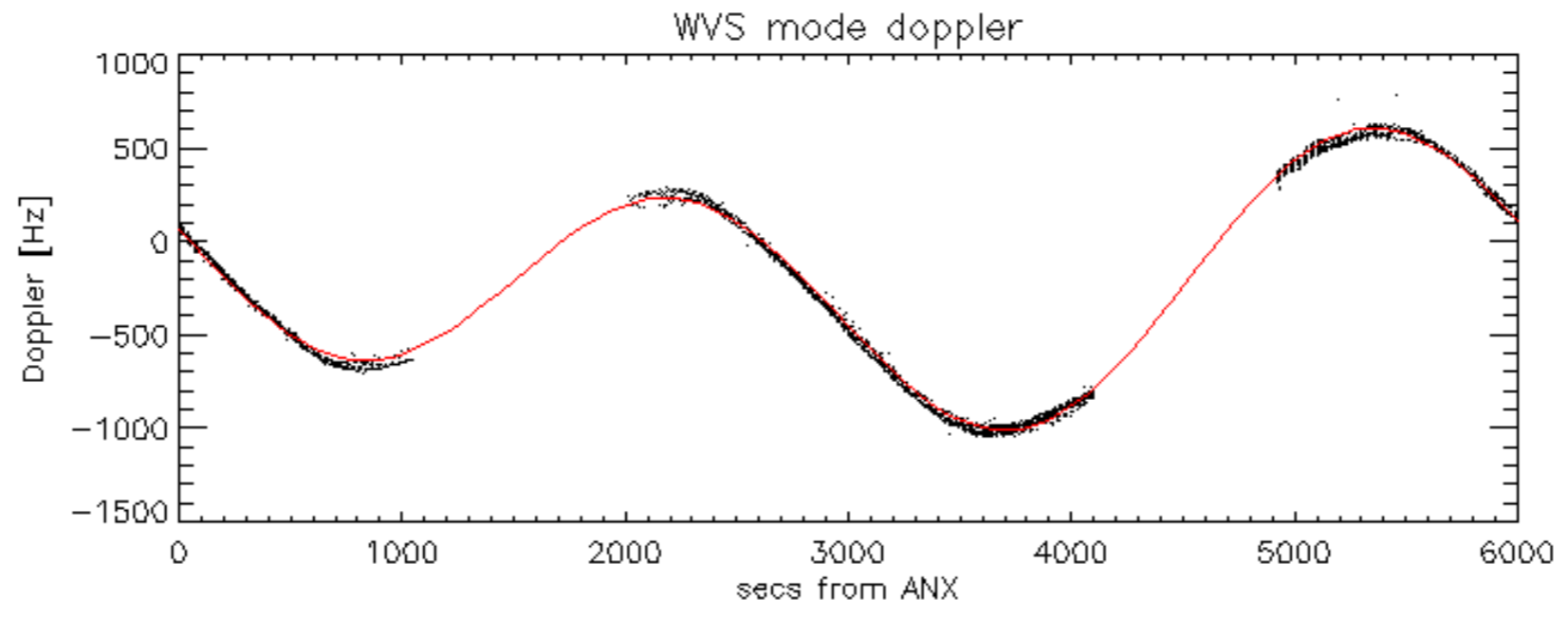


Doppler 'WVS' 'IS2' descending

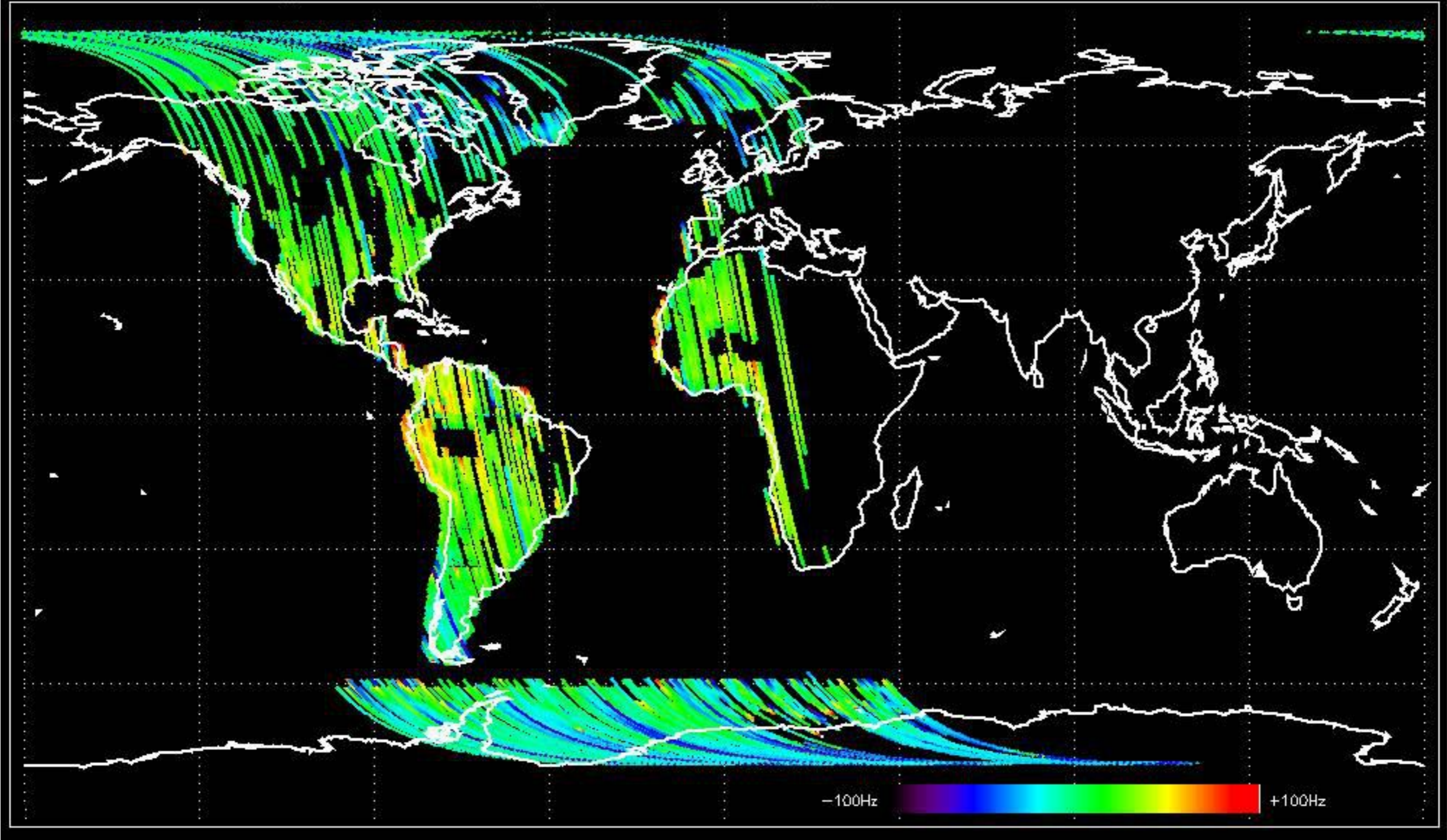


GM1 mode doppler

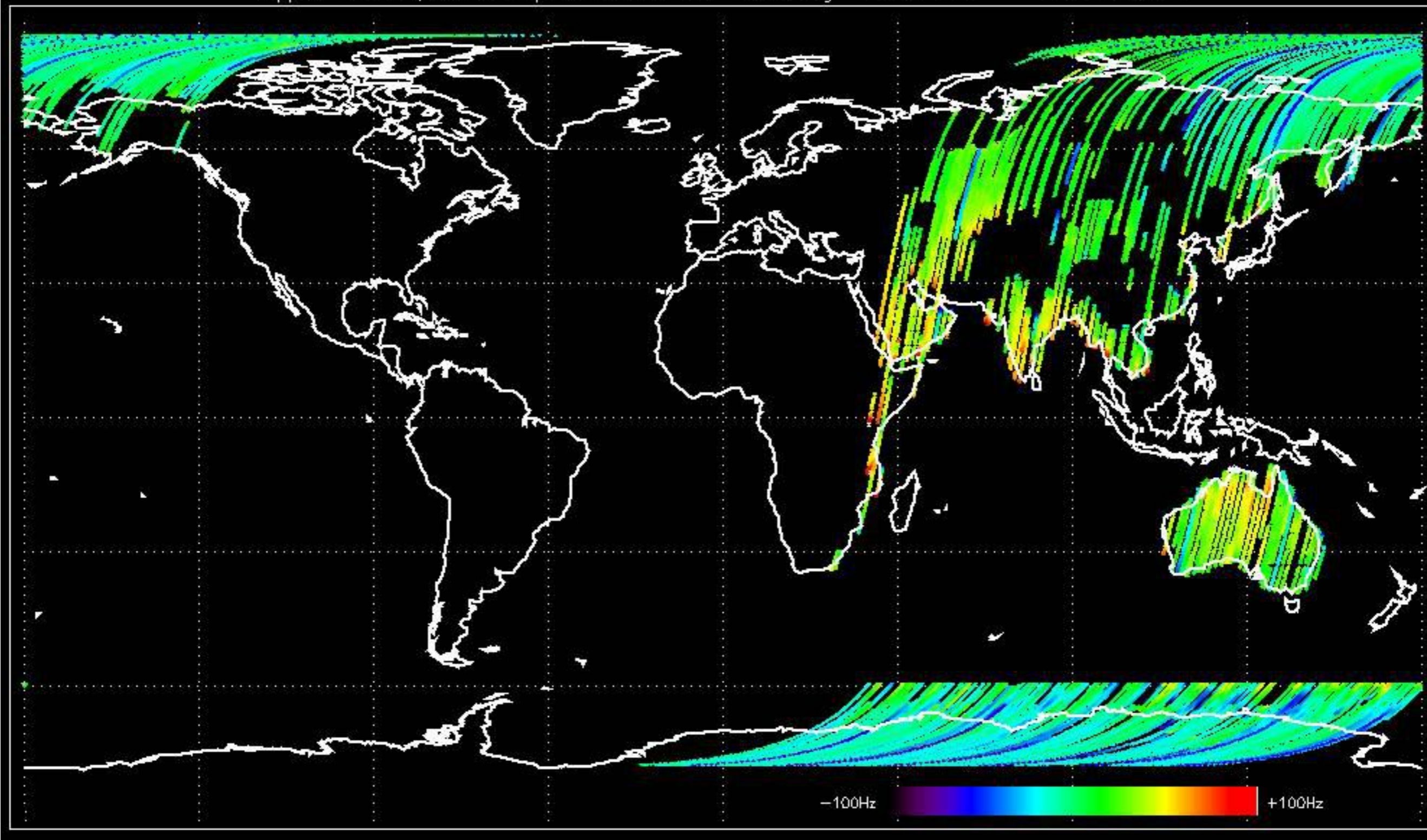




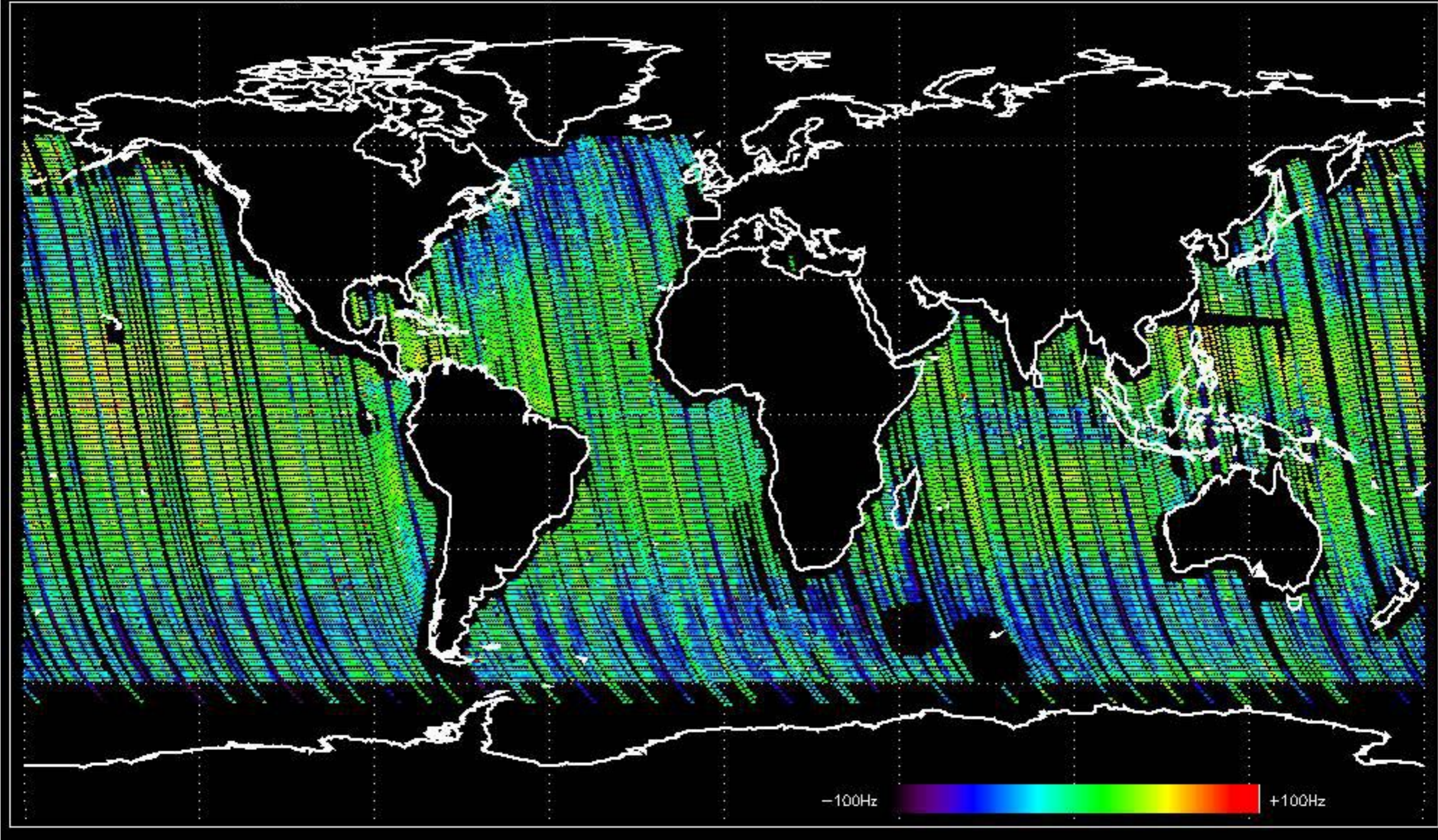
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.899209 Hz



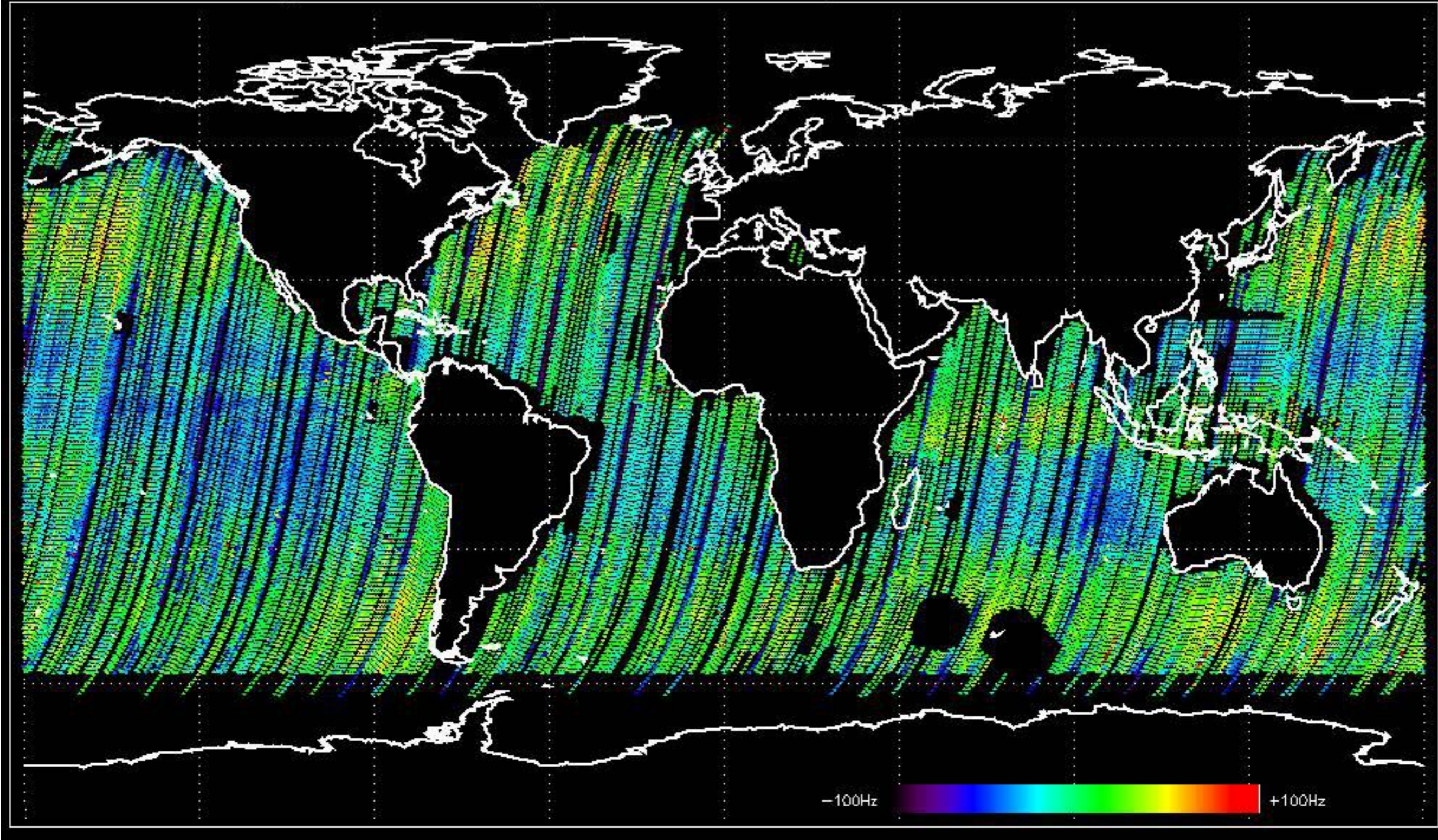
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.878888 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.9365673 Hz

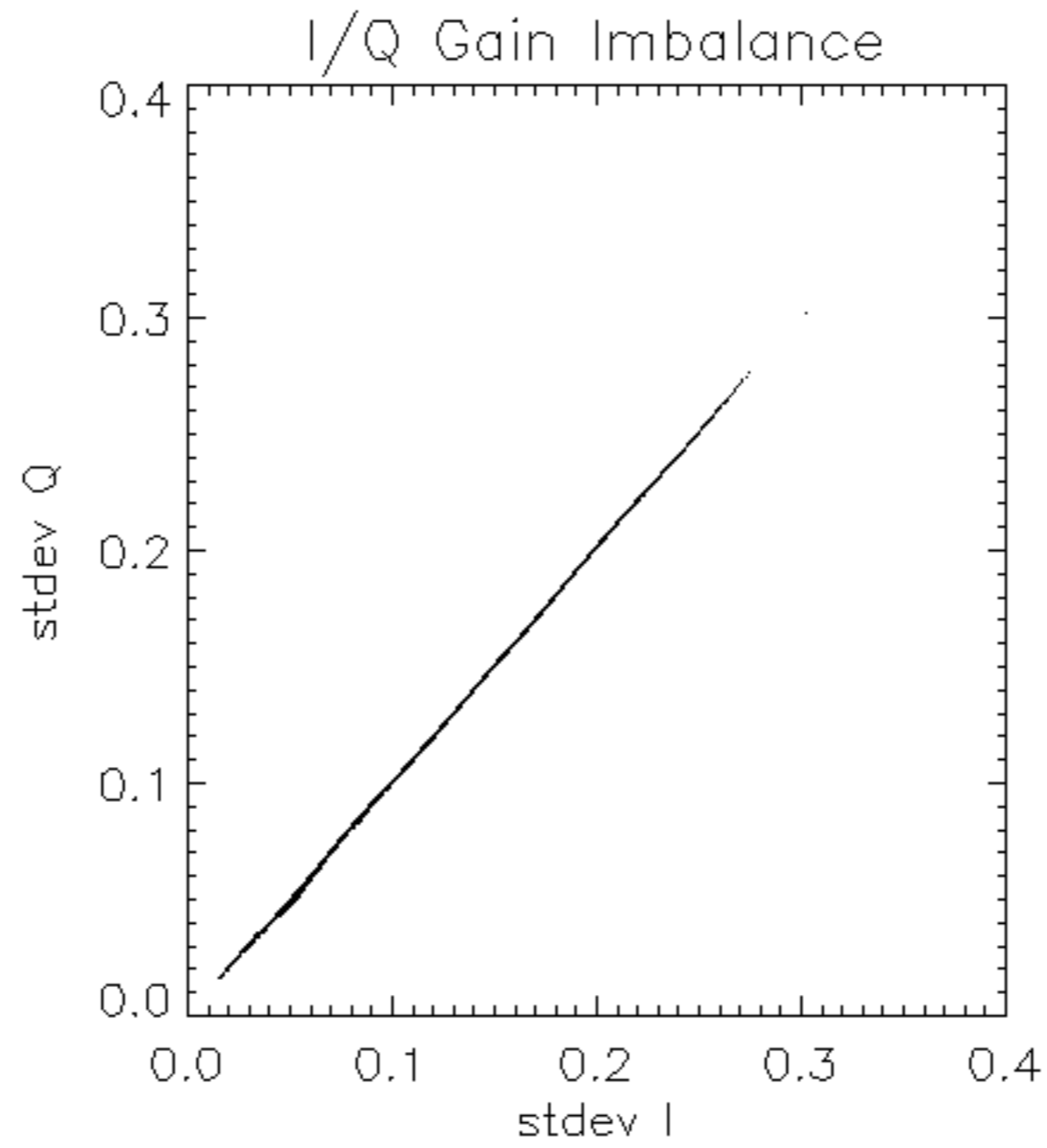


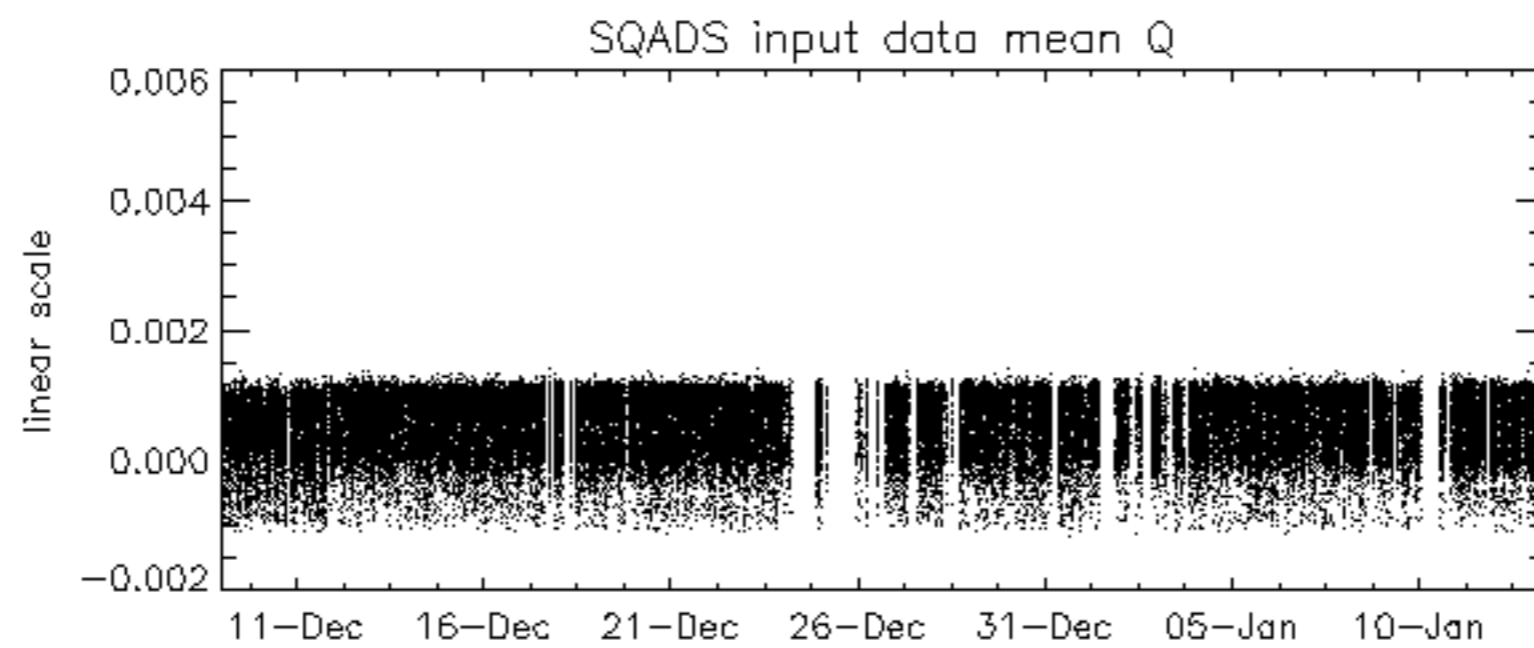
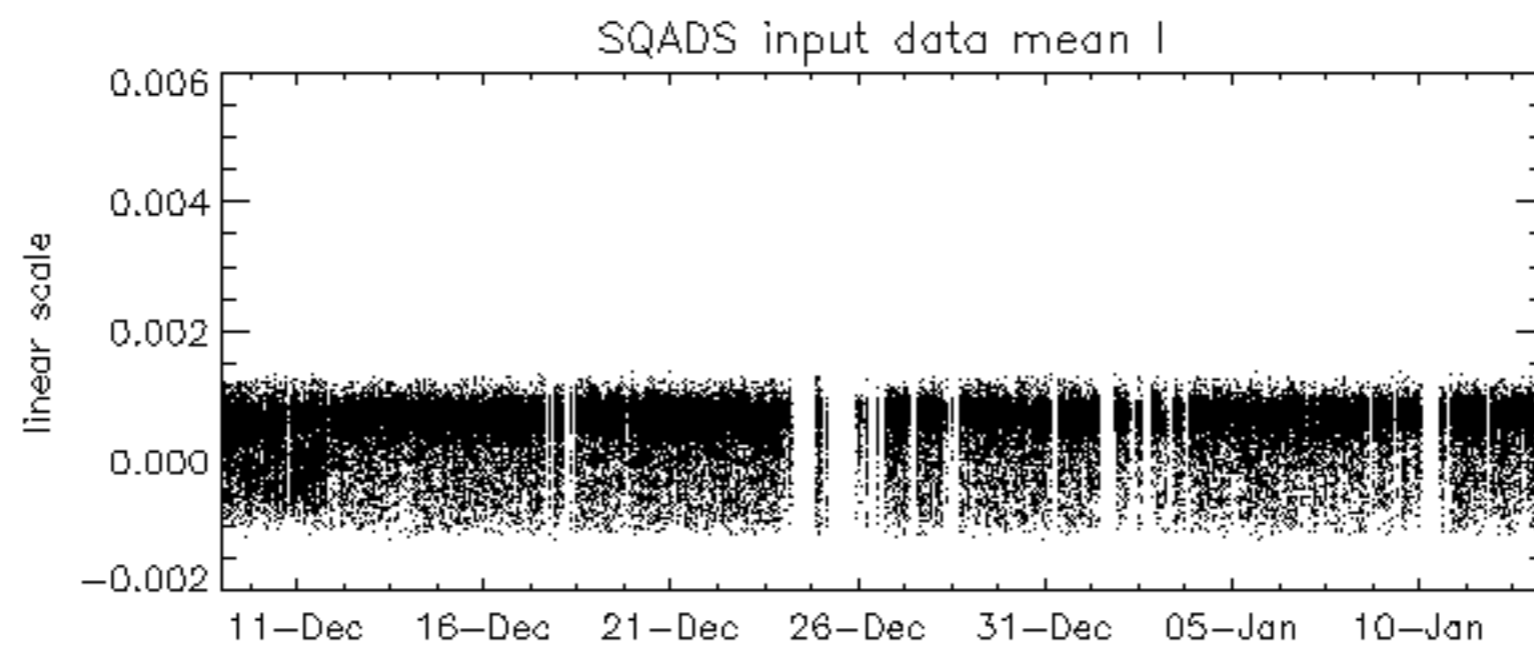
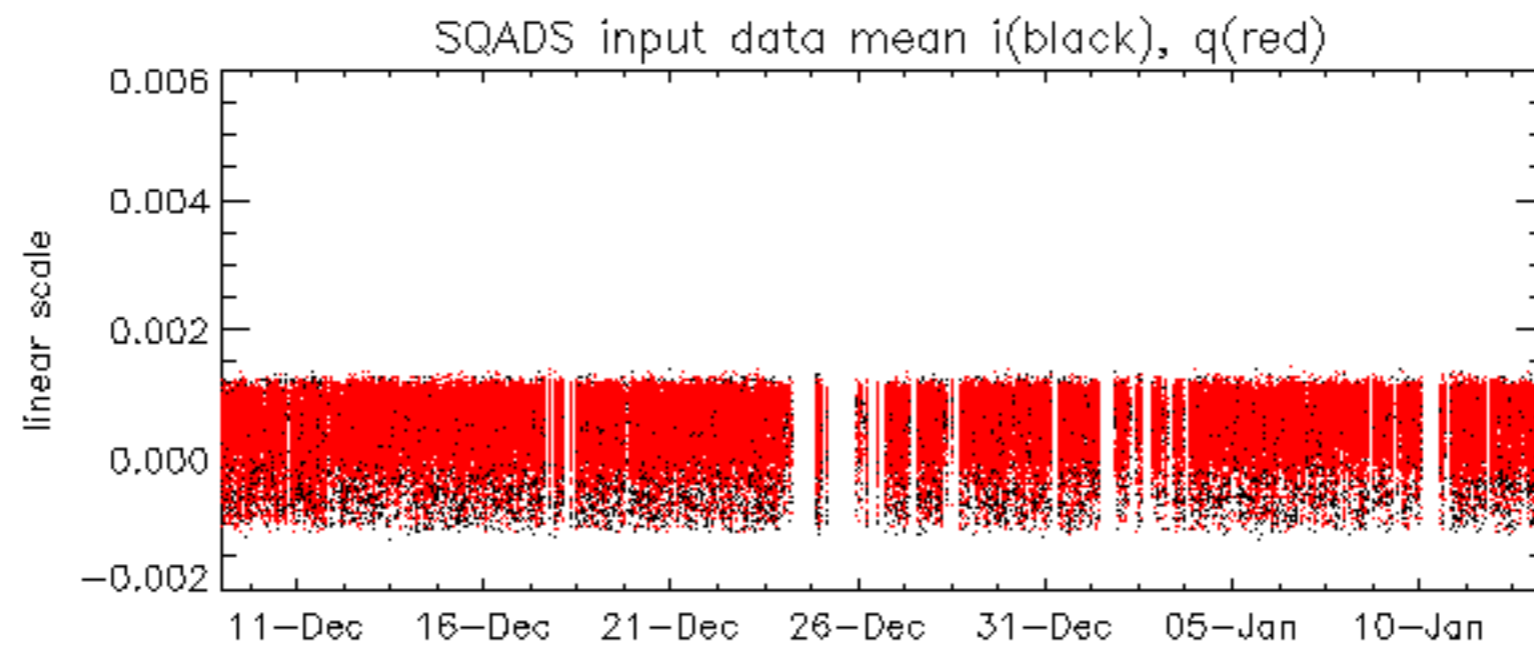
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.876803 Hz

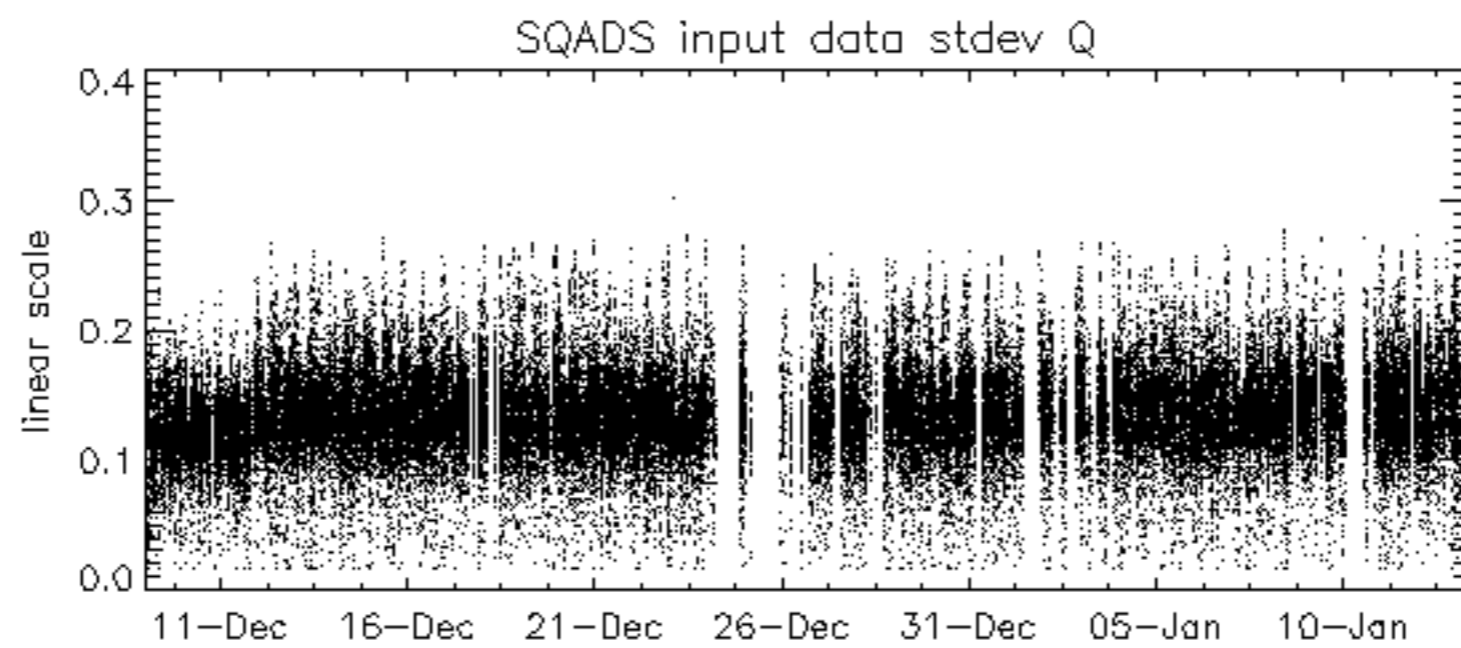
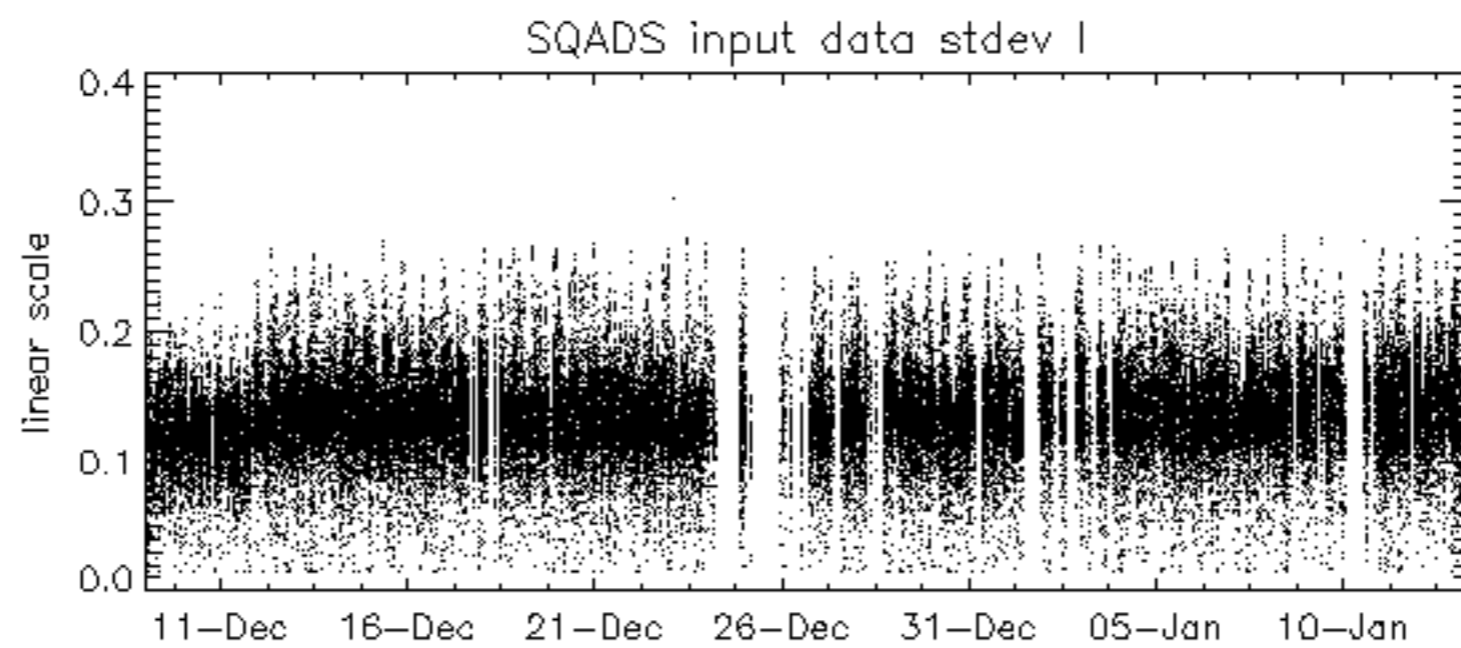
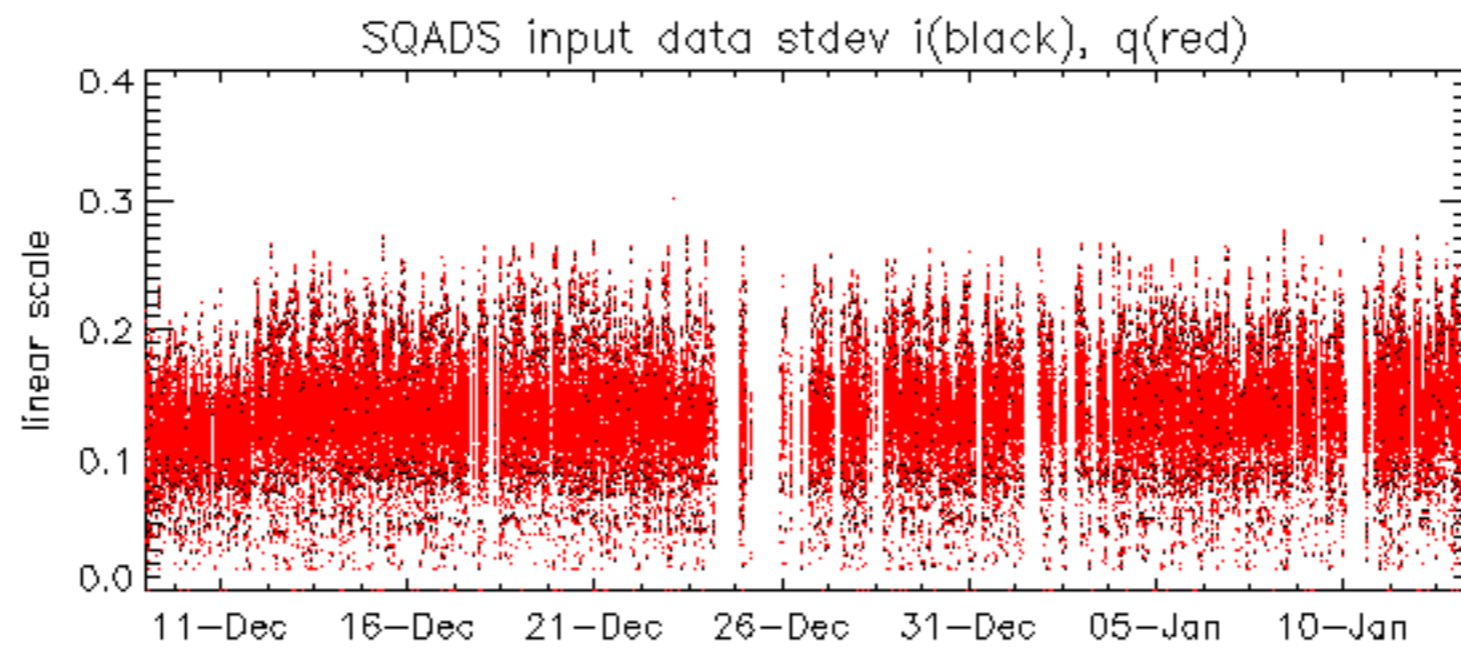


No anomalies observed on available MS products:

No anomalies observed.



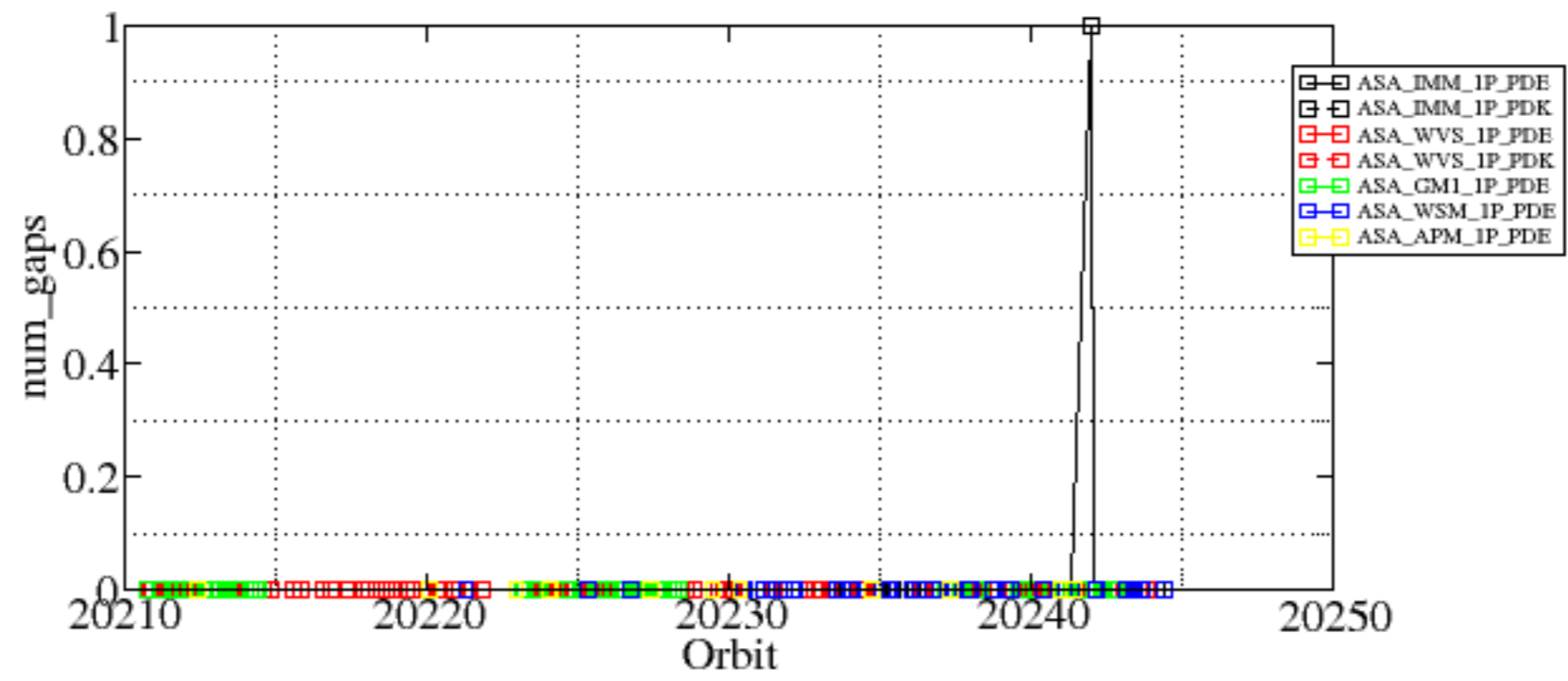


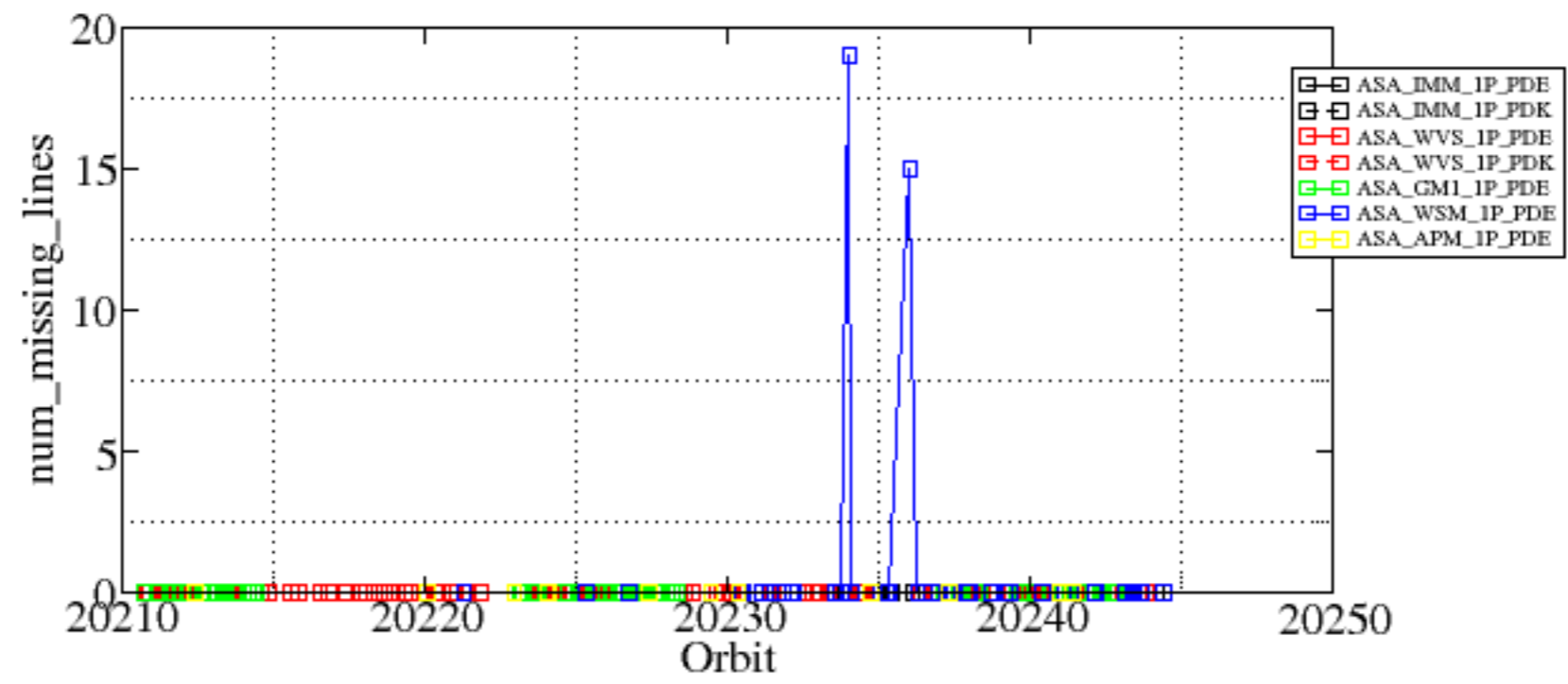


Summary of analysis for the last 3 days 2006011[123]

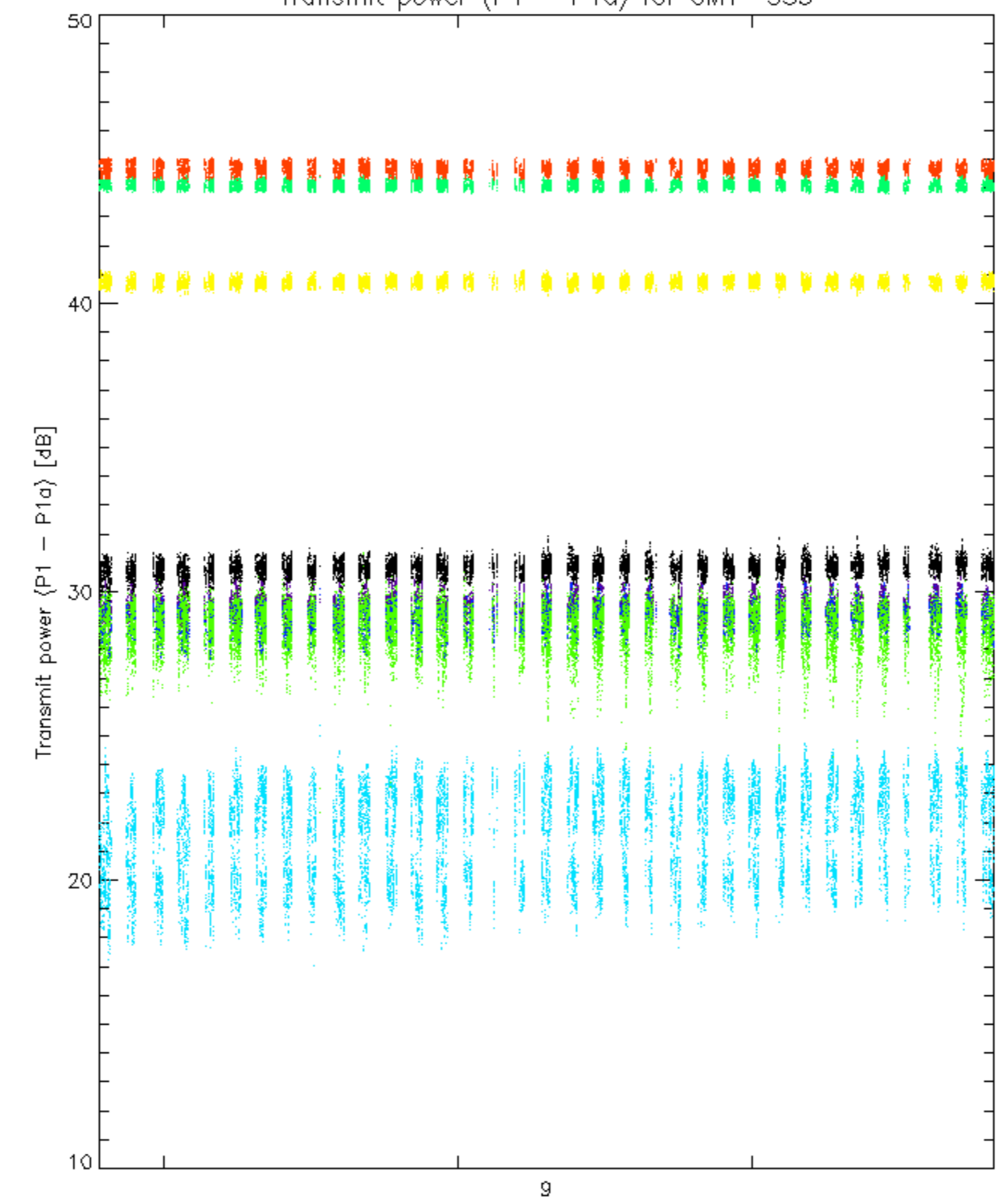
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060113_042639_00000522044_00147_20241_0106.N1	1	0
ASA_WSM_1PNPDE20060112_150453_000001282044_00140_20234_0188.N1	0	19
ASA_WSM_1PNPDE20060112_182736_000002982044_00142_20236_0208.N1	0	15

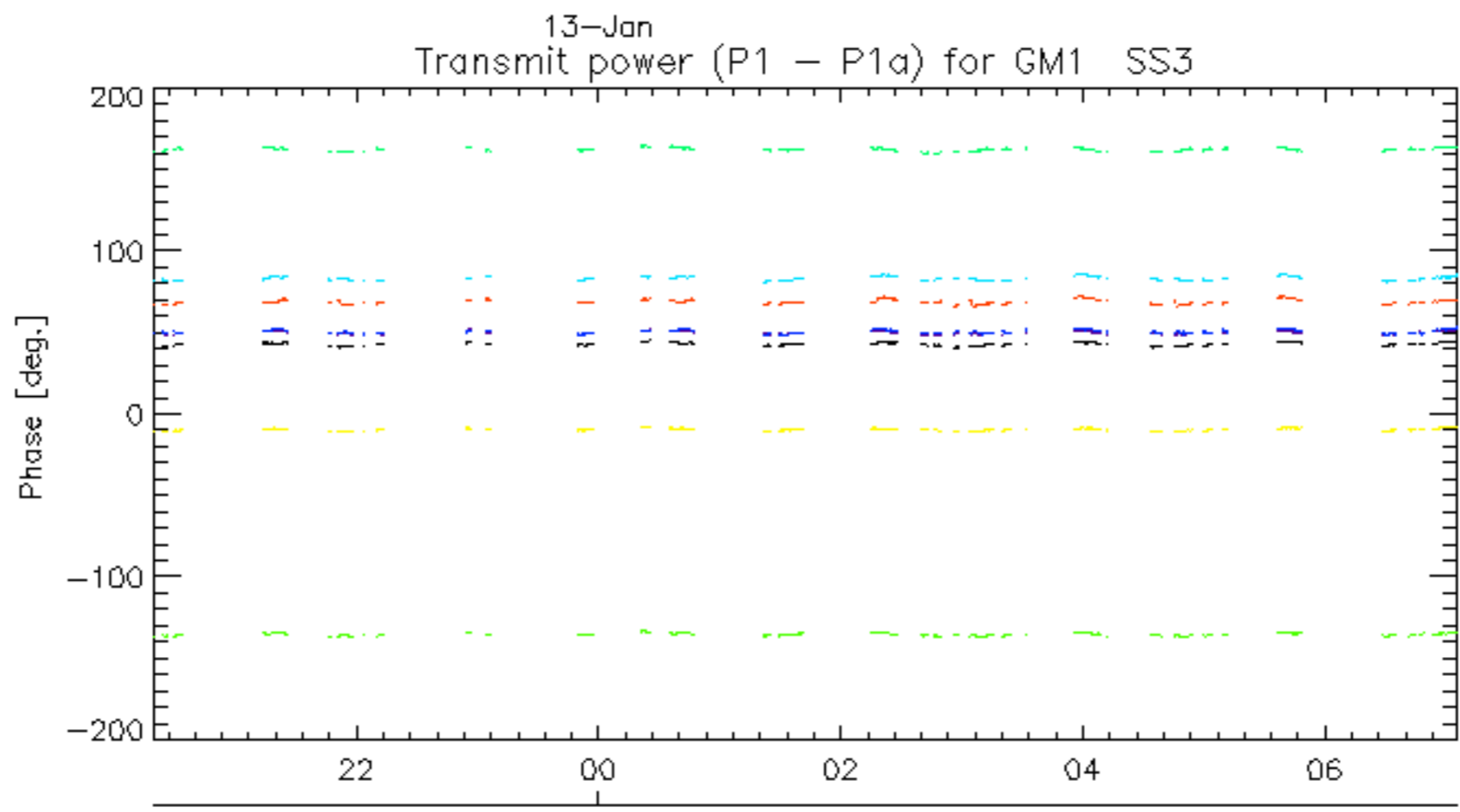
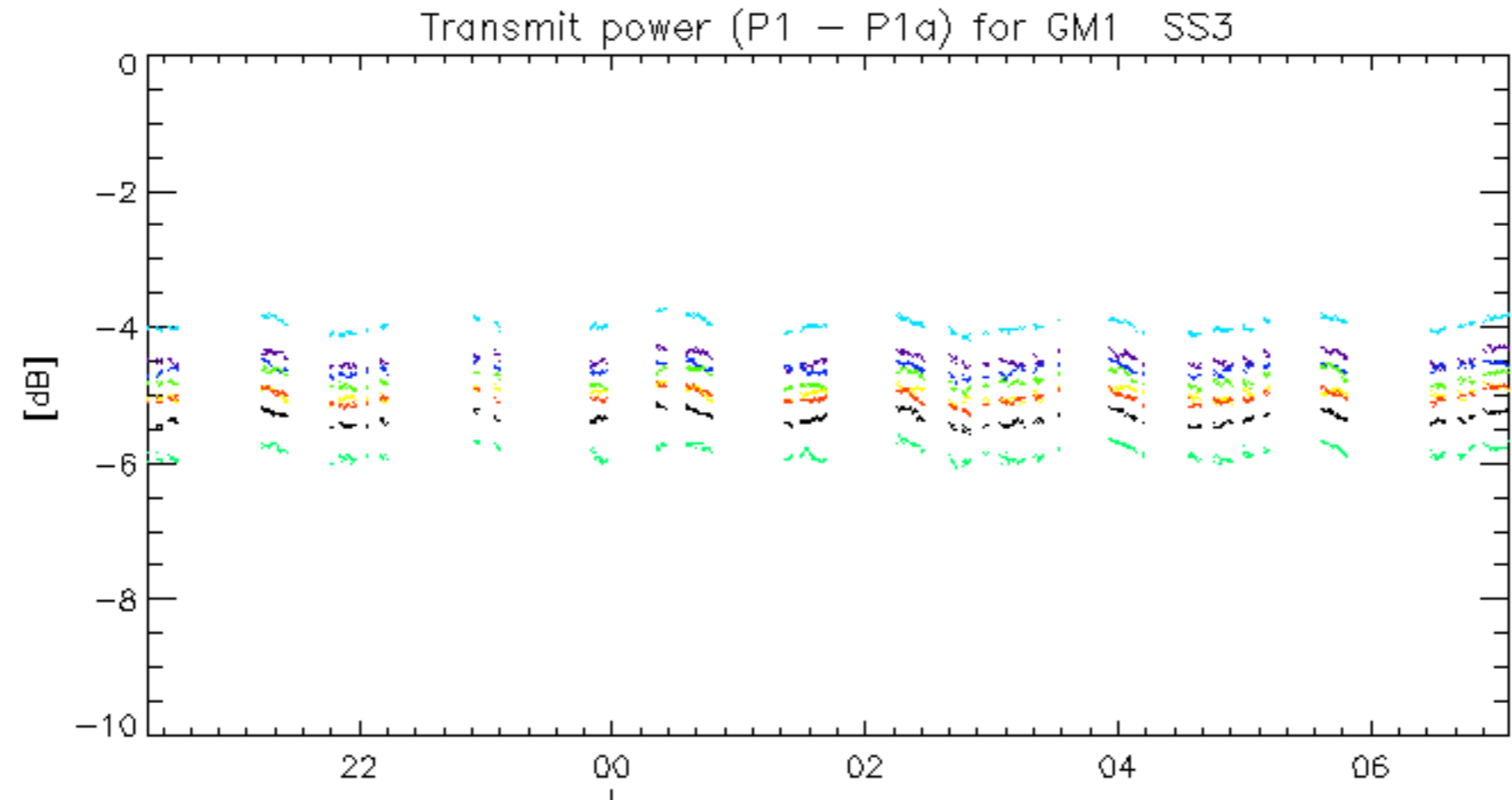




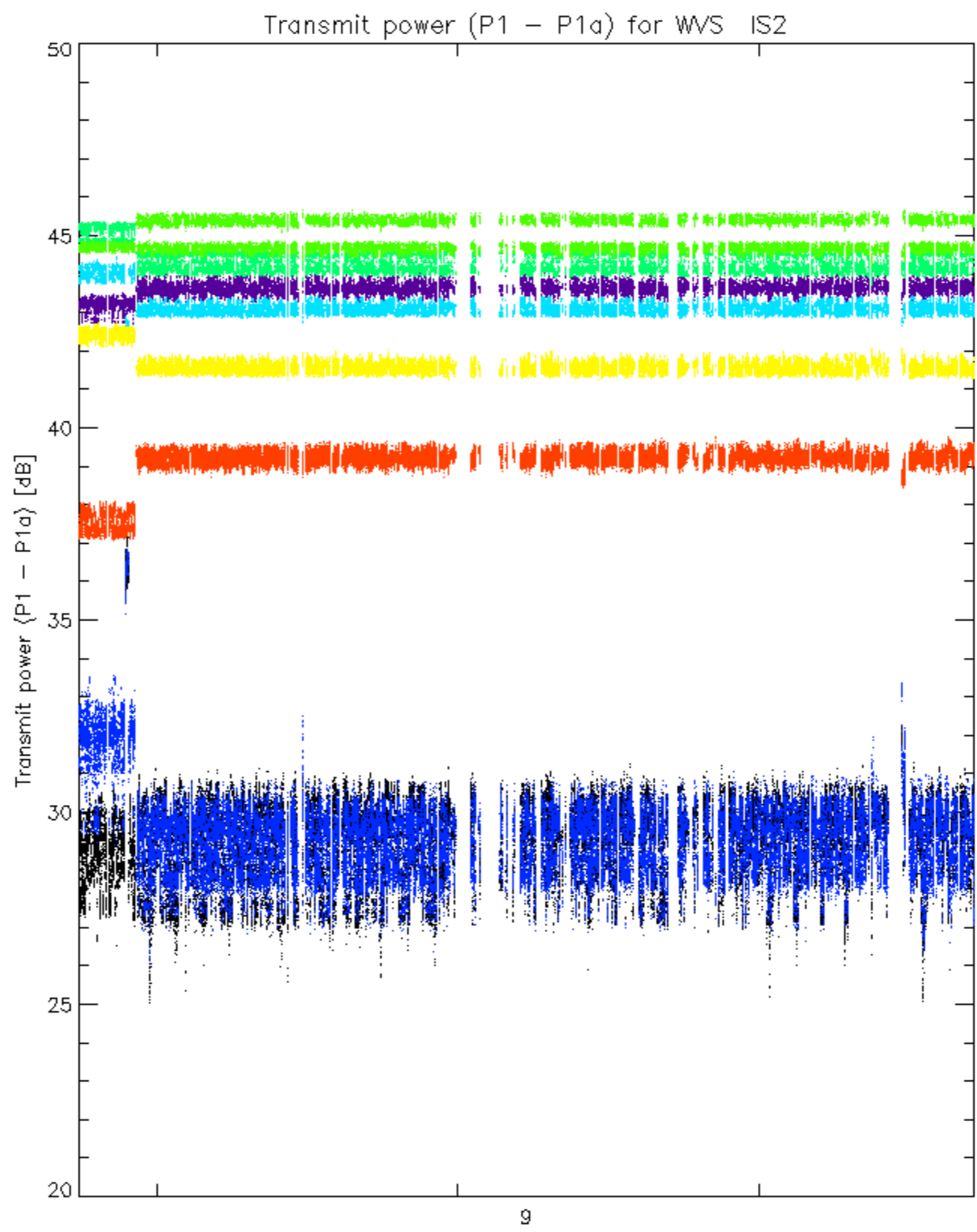
Transmit power (P1 - P1a) for GM1 SS3



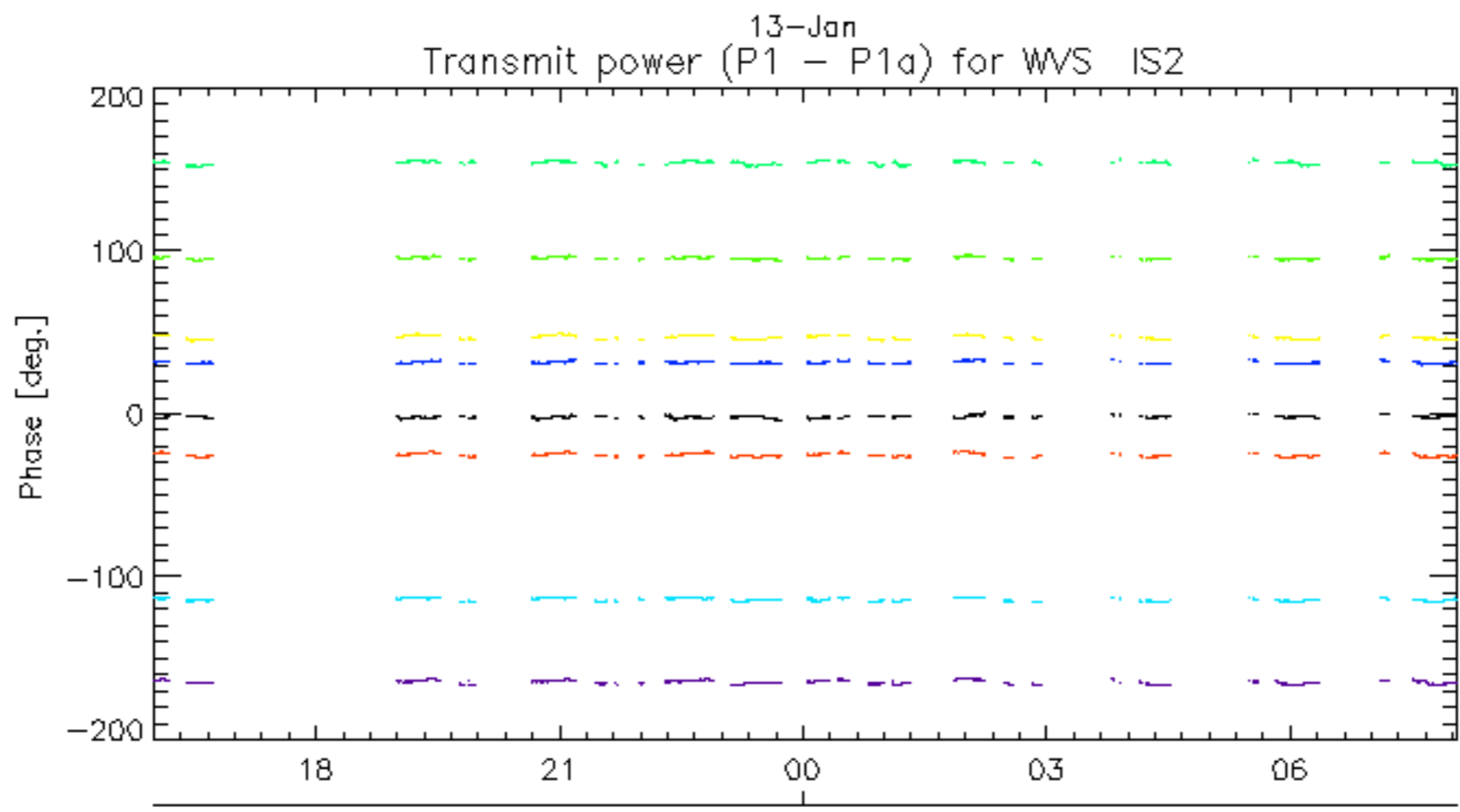
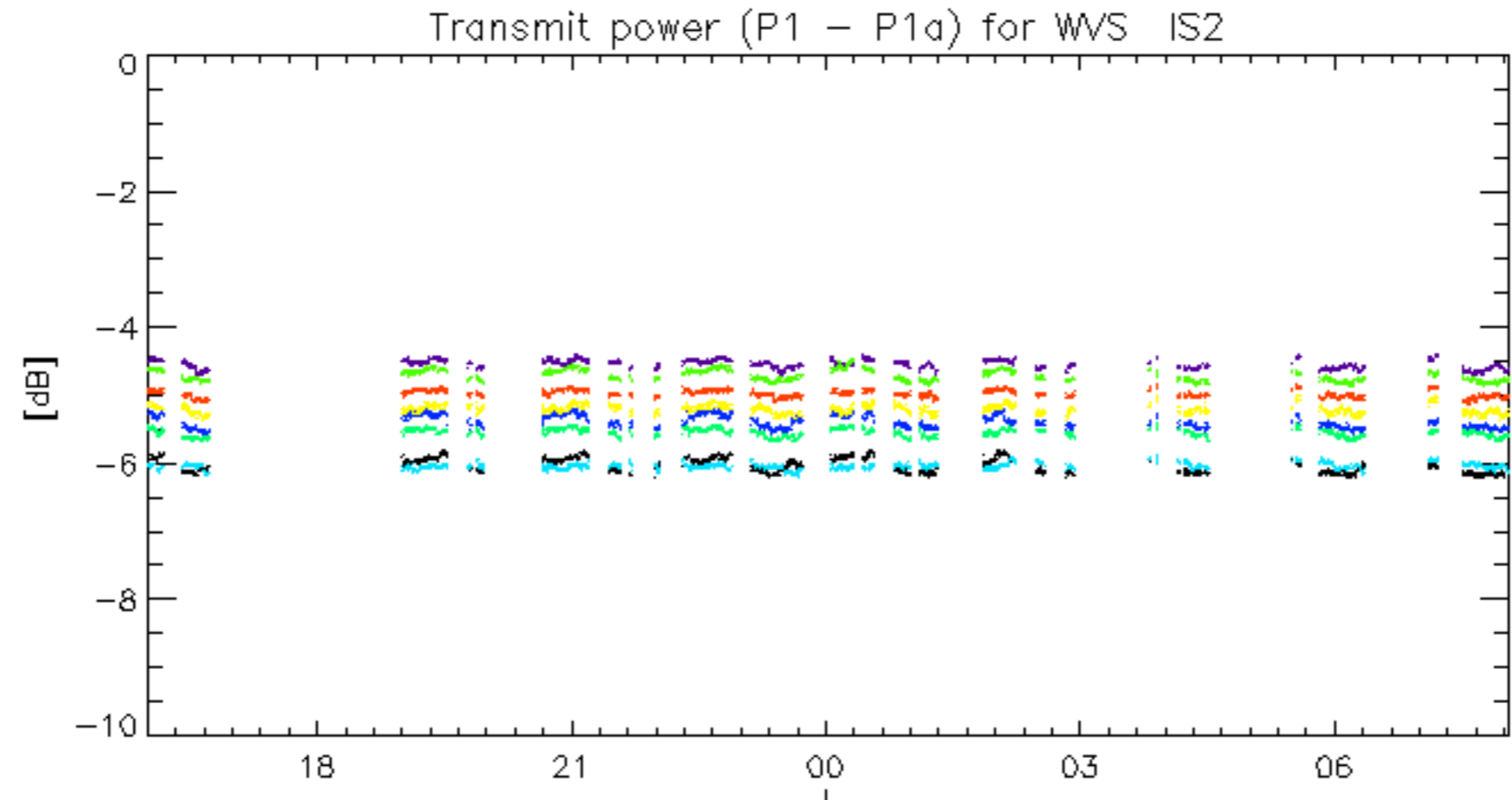
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.