

PRELIMINARY REPORT OF 070122

last update on Mon Jan 22 16:32:44 GMT 2007

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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 2007-01-21 00:00:00 to 2007-01-22 16:32:44

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	8	25	3	0	1
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	8	25	3	0	1
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	8	25	3	0	1
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	8	25	3	0	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	46	46	35	12	51
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	46	46	35	12	51
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	46	35	12	51
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	46	46	35	12	51

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	20070120 204859
H	20070121 183646

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
<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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-16.525043	0.252237	0.109830
7	P1a	-17.249033	0.177846	0.003823
11	P1a	-17.267218	0.435135	-0.021417
15	P1a	-13.033128	0.122382	0.019214
19	P1a	-15.100034	0.110807	-0.082188
22	P1a	-15.782960	0.543785	0.062597
26	P1a	-15.027765	0.181451	-0.005608
30	P1a	-17.524893	0.492746	-0.018348

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.964745	0.007078	0.026157
7	P1	-3.126785	0.043842	0.054903
11	P1	-4.114726	0.025190	0.019019
15	P1	-6.339251	0.016772	-0.013492
19	P1	-3.691697	0.006046	-0.028738
22	P1	-4.682253	0.016517	-0.004002
26	P1	-3.950561	0.009796	0.034105
30	P1	-5.918606	0.008438	0.009819
3	P1a	-16.525043	0.252237	0.109830
7	P1a	-17.249033	0.177846	0.003823
11	P1a	-17.267218	0.435135	-0.021417
15	P1a	-13.033128	0.122382	0.019214
19	P1a	-15.100034	0.110807	-0.082188
22	P1a	-15.782960	0.543785	0.062597
26	P1a	-15.027765	0.181451	-0.005608
30	P1a	-17.524893	0.492746	-0.018348

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.777590	0.089201	0.085883
7	P2	-21.661358	0.088316	0.065536
11	P2	-15.530965	0.099482	0.069995

15	P2	-7.089667	0.102215	0.046685
19	P2	-9.167854	0.096036	0.052808
22	P2	-18.218805	0.087774	0.040900
26	P2	-16.590141	0.100920	0.048038
30	P2	-19.431046	0.082847	0.068351

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.237499	0.008067	0.018793
7	P3	-8.237499	0.008067	0.018793
11	P3	-8.237499	0.008067	0.018793
15	P3	-8.237499	0.008067	0.018793
19	P3	-8.237499	0.008067	0.018793
22	P3	-8.237499	0.008067	0.018793
26	P3	-8.237520	0.008067	0.018960
30	P3	-8.237520	0.008067	0.018960

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.725010	0.072912	-0.025980
7	P1a	-10.032802	0.084620	0.044316
11	P1a	-10.366601	0.087355	-0.062318
15	P1a	-10.747528	0.159642	-0.075279
19	P1a	-15.751103	0.100108	-0.032621
22	P1a	-21.504168	1.482146	0.403715
26	P1a	-15.944201	0.313122	0.356343
30	P1a	-17.957487	0.381513	-0.318294

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.921157	0.012868	-0.012780
7	P1	-2.466901	0.060838	0.059187
11	P1	-2.828020	0.014981	0.002823
15	P1	-3.719970	0.031959	-0.092613
19	P1	-3.553420	0.018585	-0.026040
22	P1	-5.004088	0.022259	-0.021228
26	P1	-6.043824	0.023662	-0.004754
30	P1	-5.349004	0.035584	0.013105
3	P1a	-11.725010	0.072912	-0.025980
7	P1a	-10.032802	0.084620	0.044316
11	P1a	-10.366601	0.087355	-0.062318
15	P1a	-10.747528	0.159642	-0.075279
19	P1a	-15.751103	0.100108	-0.032621
22	P1a	-21.504168	1.482146	0.403715
26	P1a	-15.944201	0.313122	0.356343
30	P1a	-17.957487	0.381513	-0.318294

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.411926	0.090207	0.155577
7	P2	-22.178661	0.211512	0.095323
11	P2	-10.822493	0.083074	0.120602
15	P2	-4.950882	0.188640	0.091772
19	P2	-6.938941	0.190378	0.068910
22	P2	-8.229417	0.115598	0.046592
26	P2	-24.344179	0.143698	0.037887
30	P2	-21.893496	0.127584	0.108730

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.086809	0.002756	0.031955
7	P3	-8.086552	0.002743	0.031468
11	P3	-8.086680	0.002757	0.032214
15	P3	-8.086557	0.002745	0.031826
19	P3	-8.086637	0.002757	0.032186
22	P3	-8.086582	0.002750	0.031291
26	P3	-8.086905	0.002751	0.032035
30	P3	-8.086651	0.002744	0.031914

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	0.000572710
	stdev	1.61895e-07
MEAN Q	mean	0.000512579
	stdev	2.10071e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140467
	stdev	0.00115044
STDEV Q	mean	0.140865
	stdev	0.00117004



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007012[012]

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_1PNPDE20070120_015157_000000532054_00461_25565_3990.N1	1	0
ASA_IMM_1PNPDE20070121_230117_000002812054_00488_25592_6348.N1	1	17
ASA_GM1_1PNPDK20070120_131030_000008632054_00468_25572_5436.N1	0	17





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

<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

<input type="checkbox"/>

Ascending

<input type="checkbox"/>

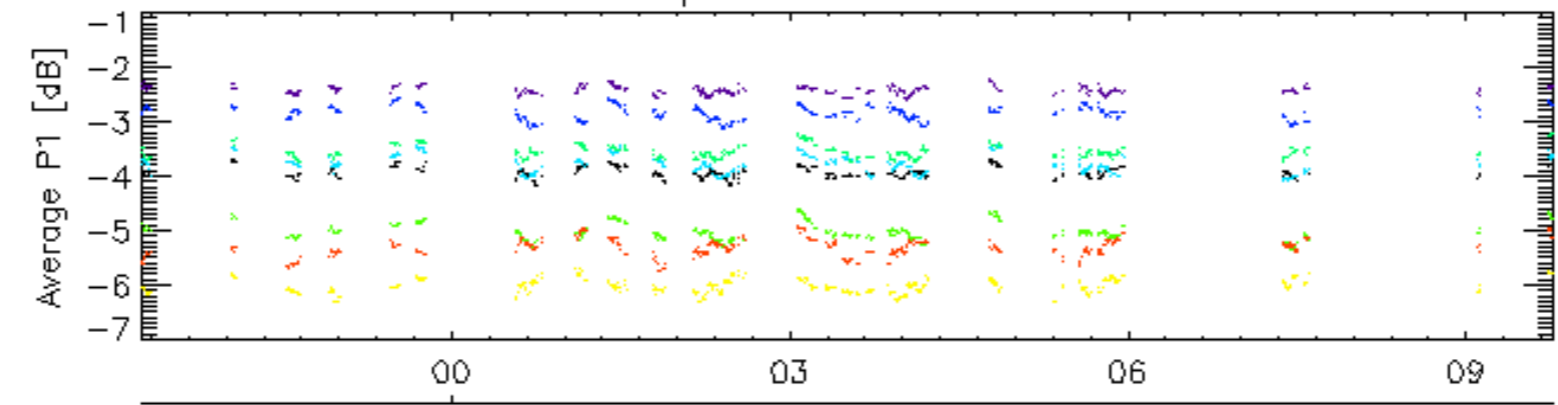
Descending

7.6 - Doppler evolution versus ANX for GM1

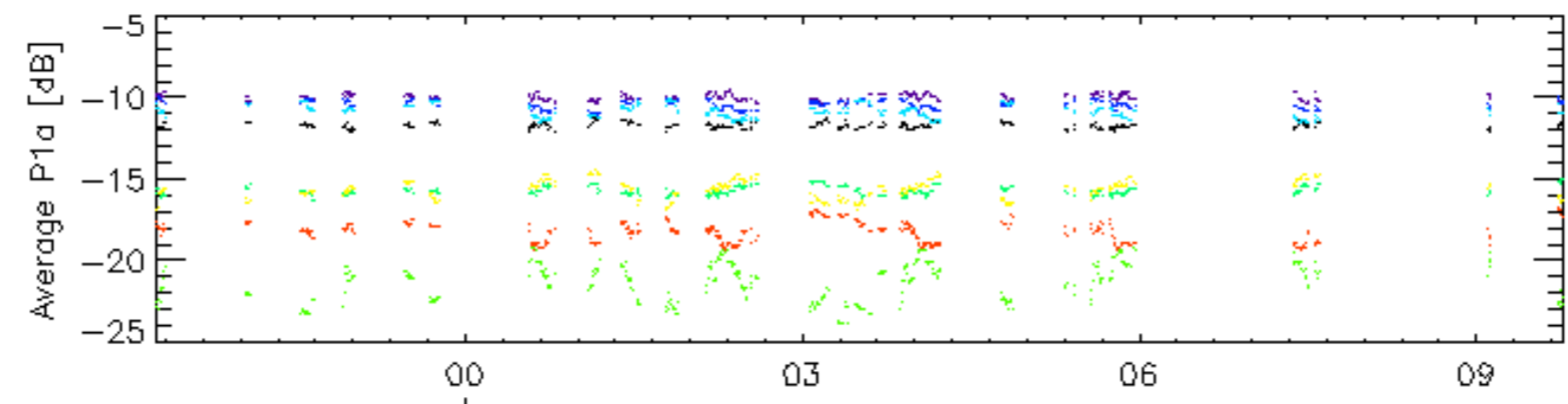
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

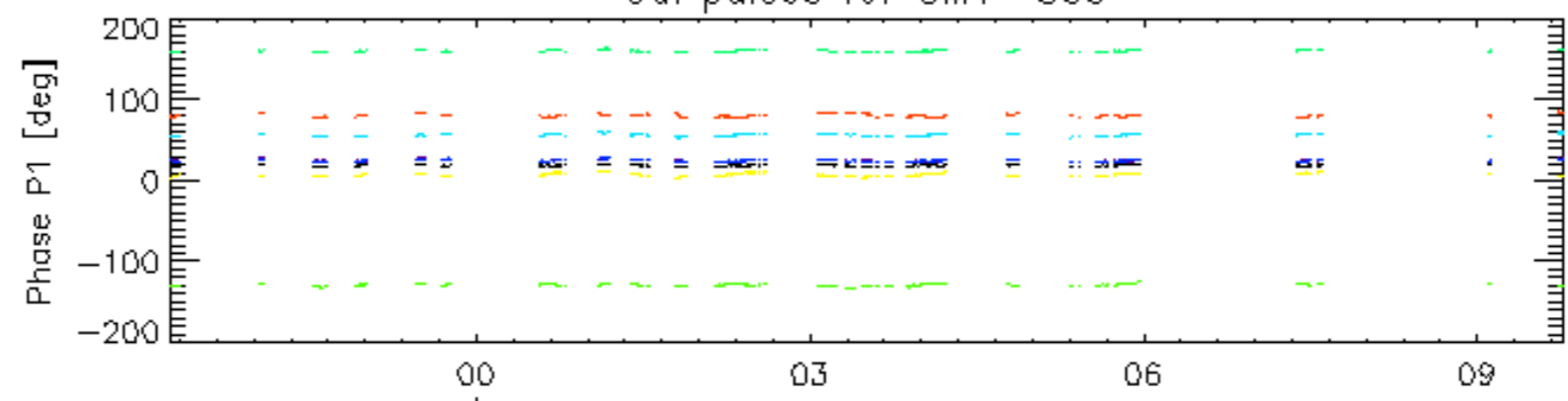


22-Jan

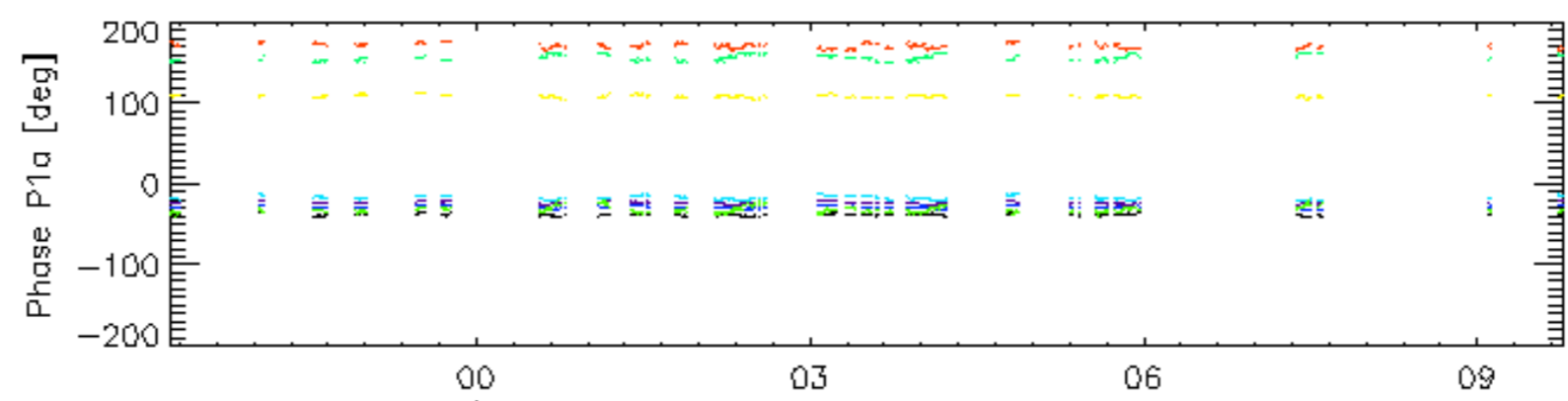


22-Jan

Cal pulses for GM1 SS3

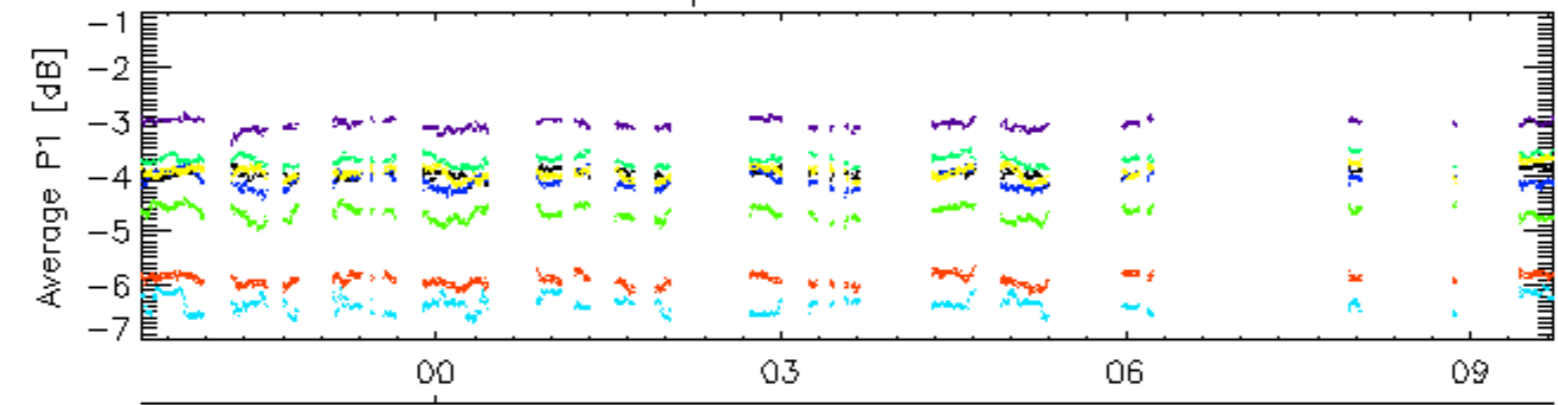


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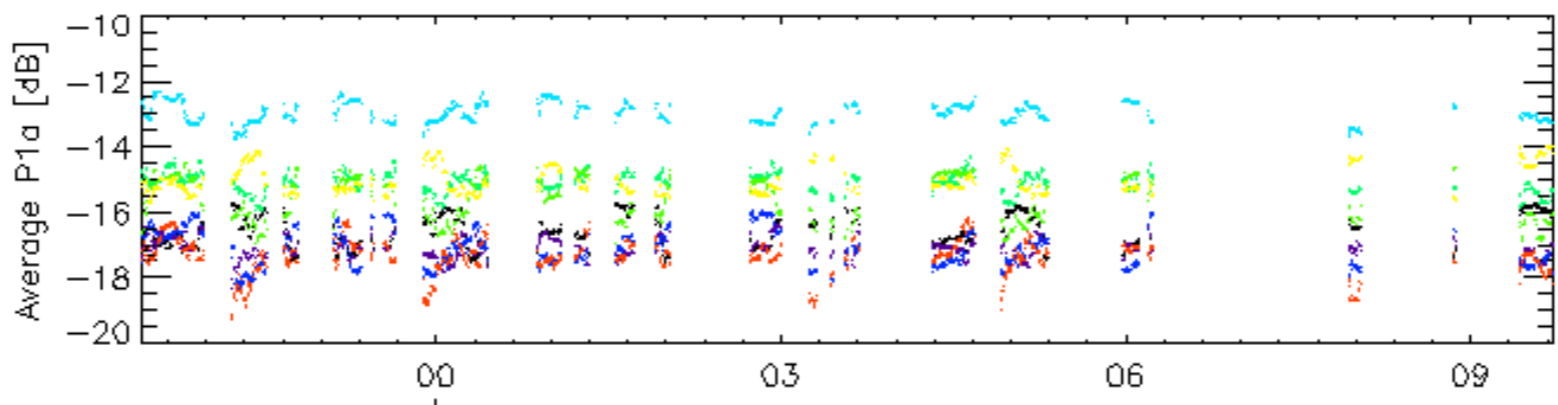


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

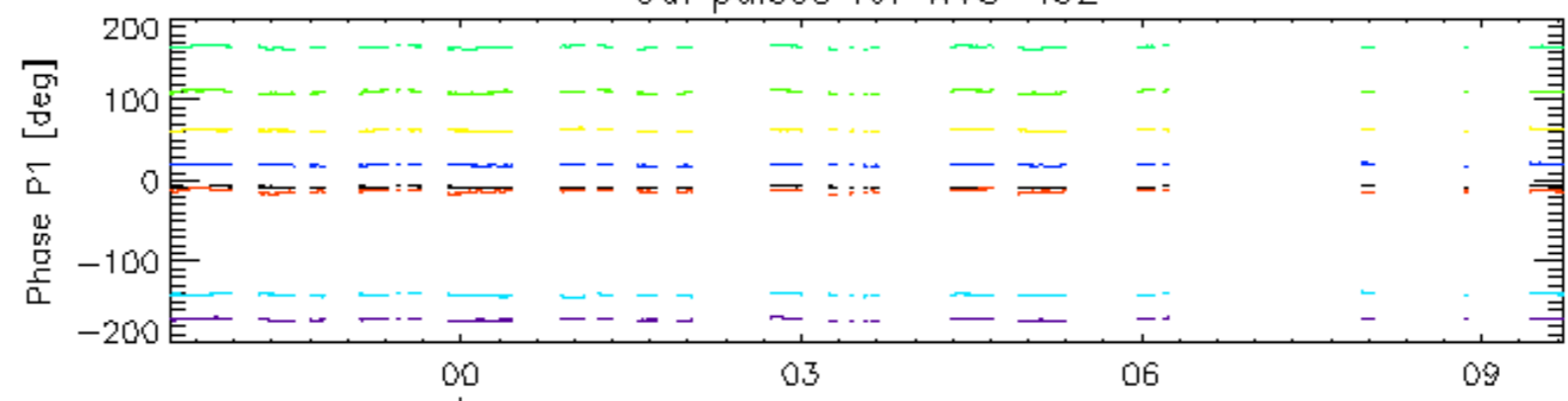


22-Jan

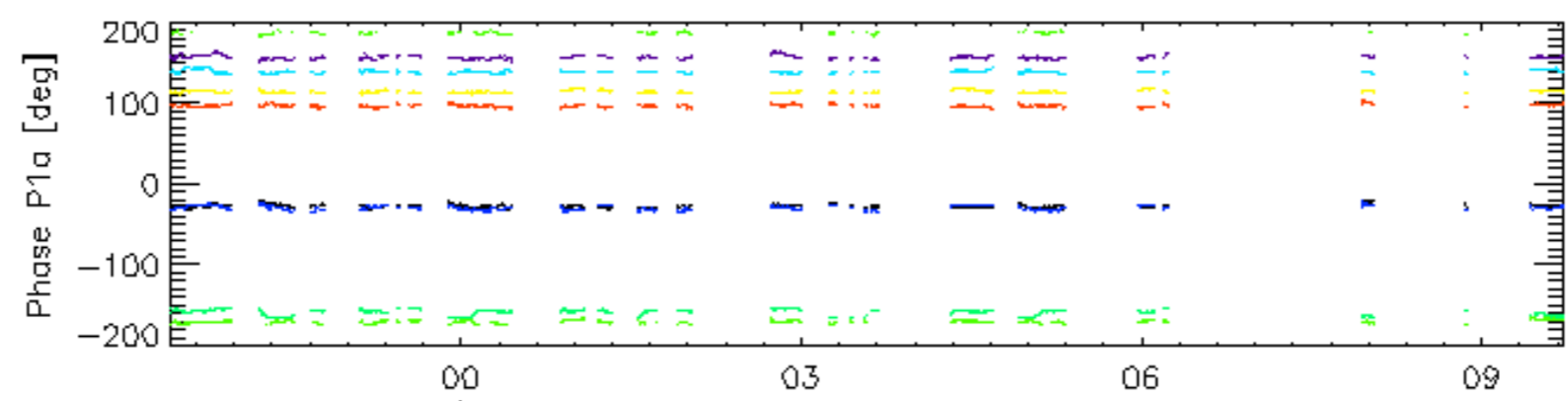


22-Jan

Cal pulses for WVS IS2

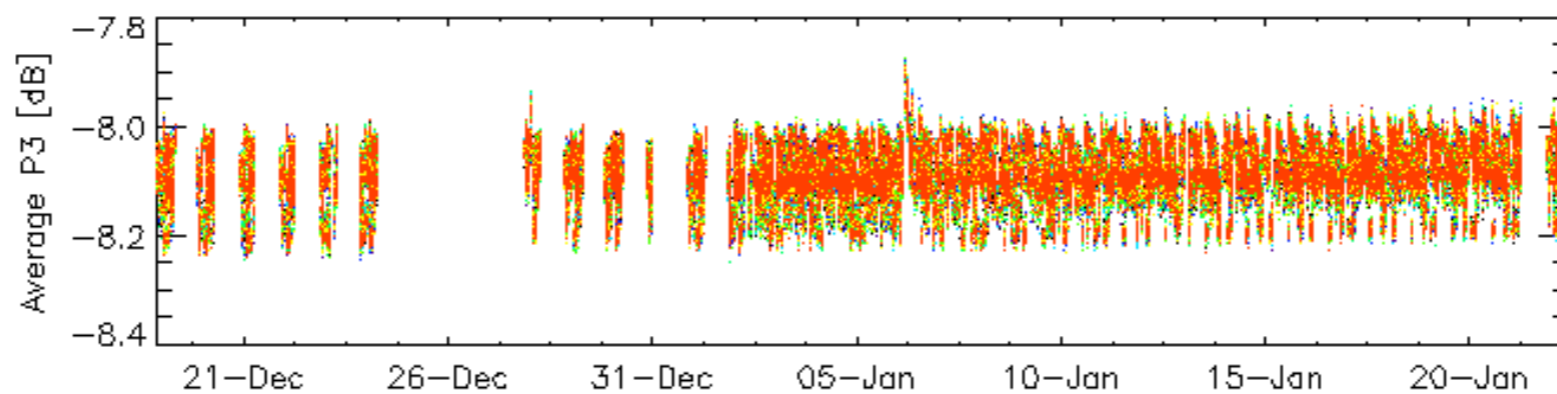
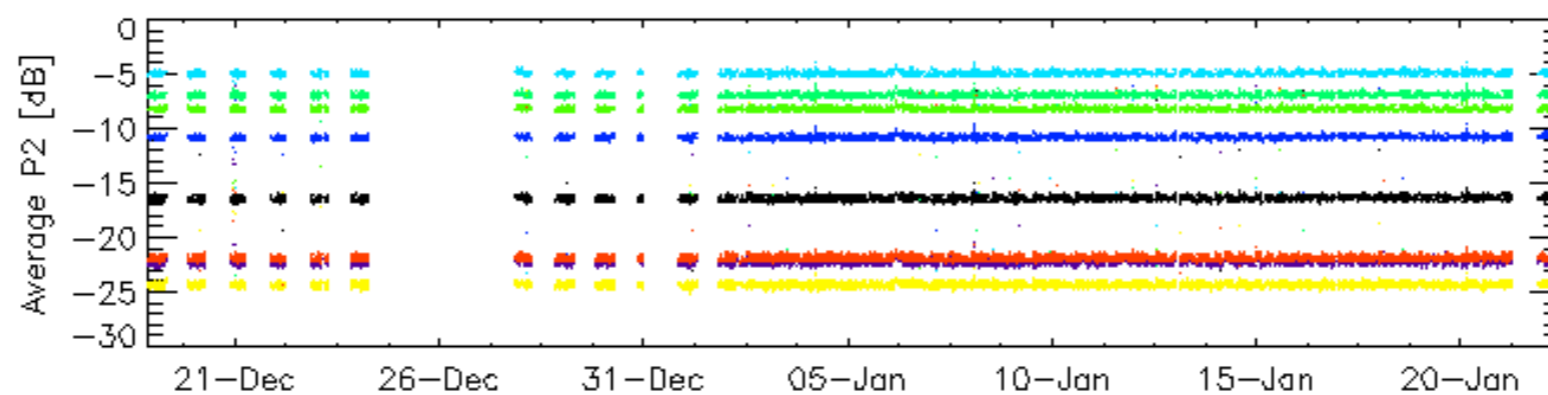
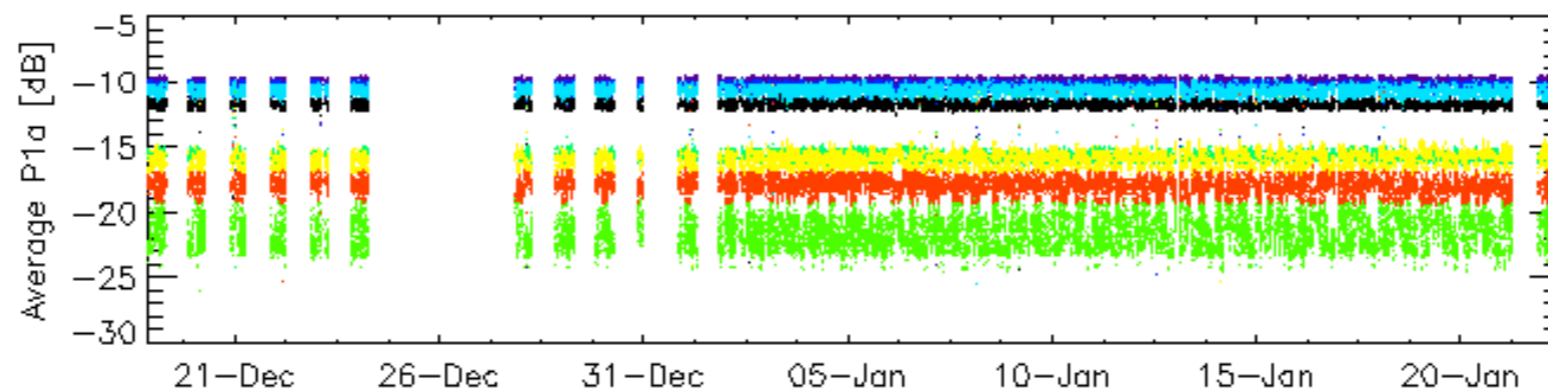
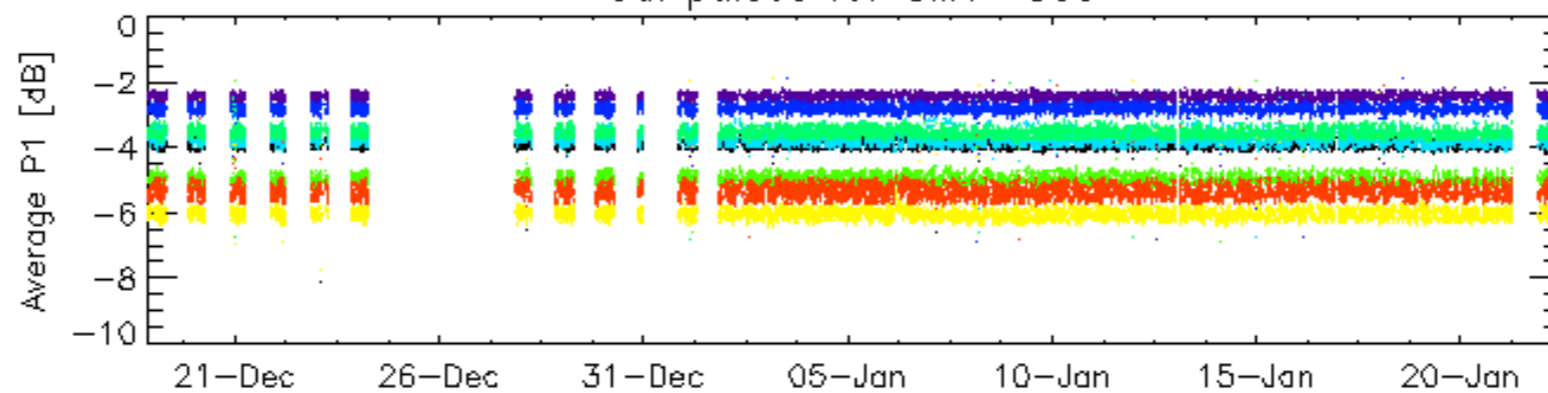


22-Jan



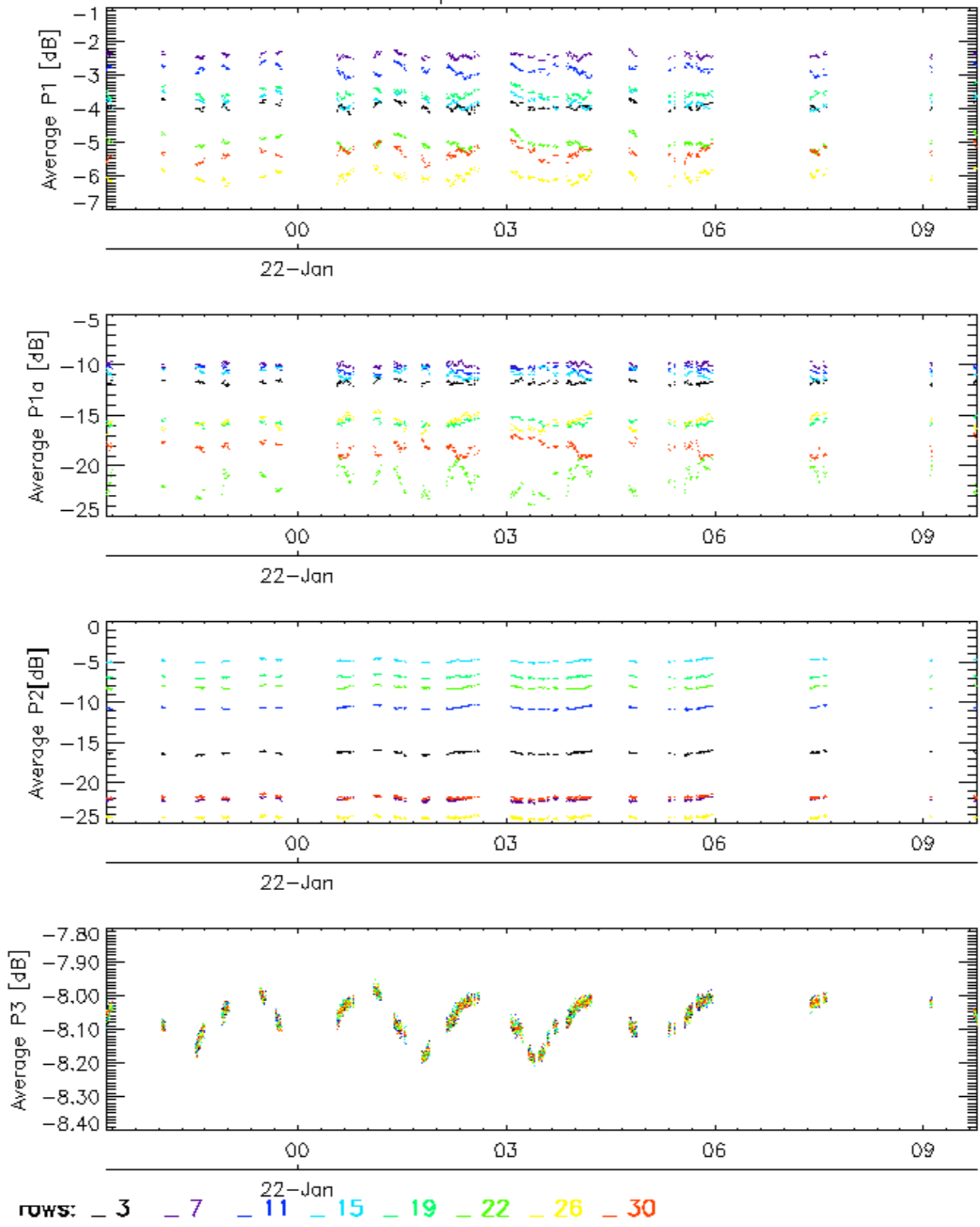
rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for GM1 SS3

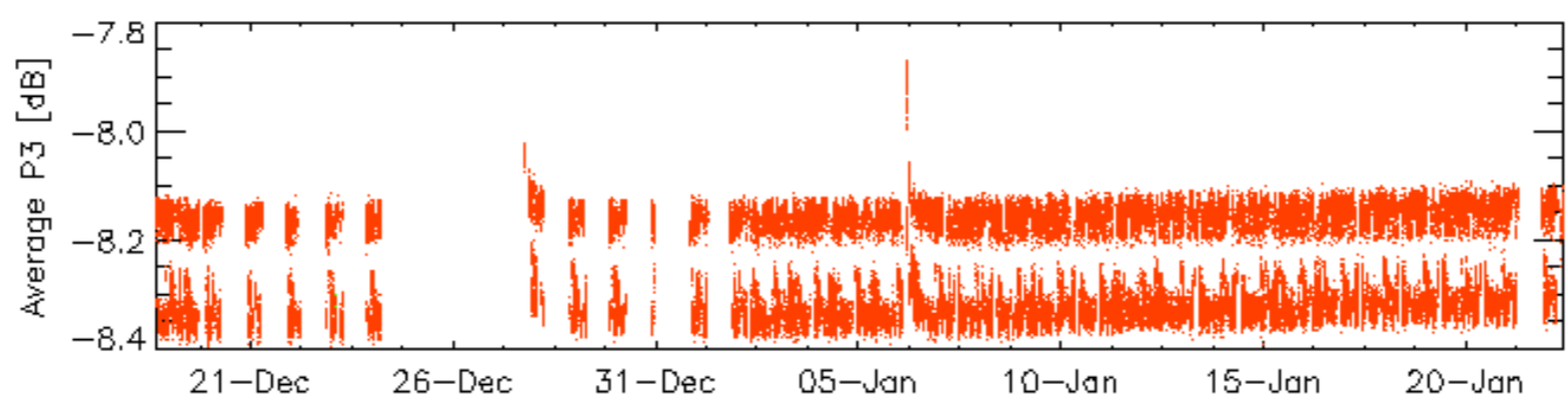
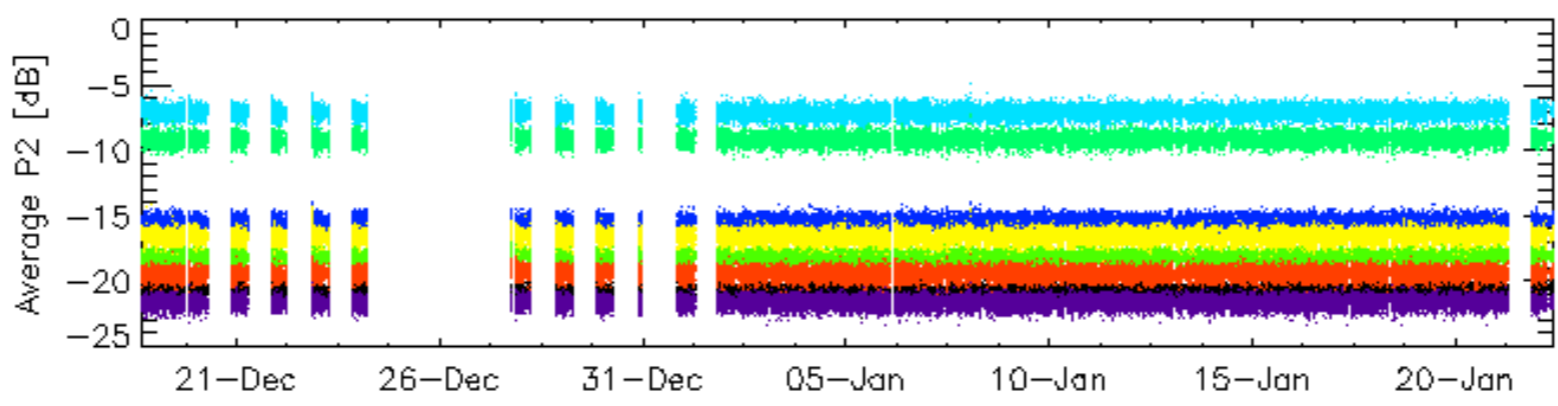
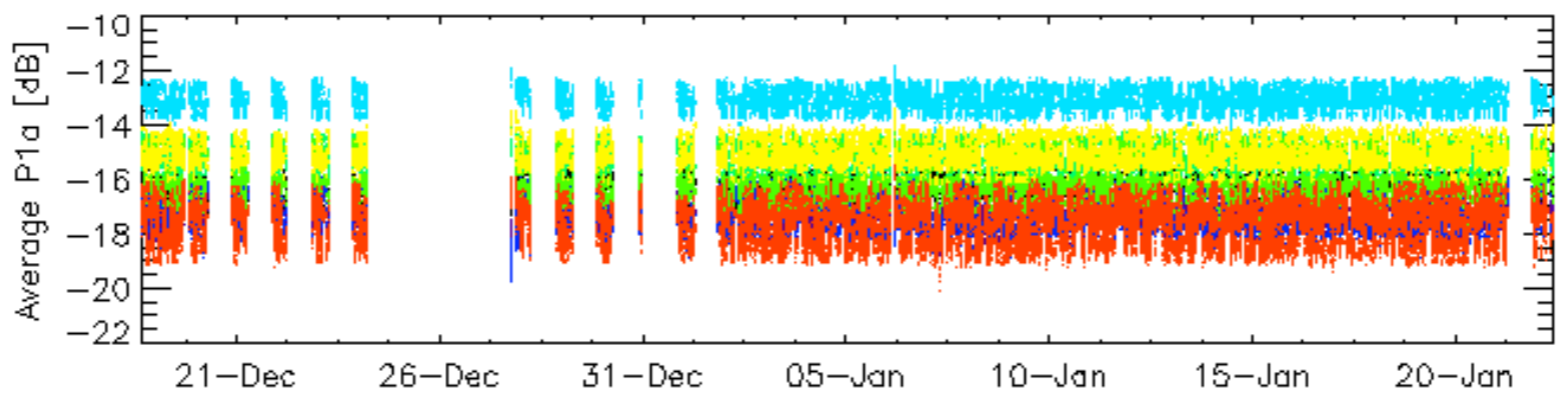
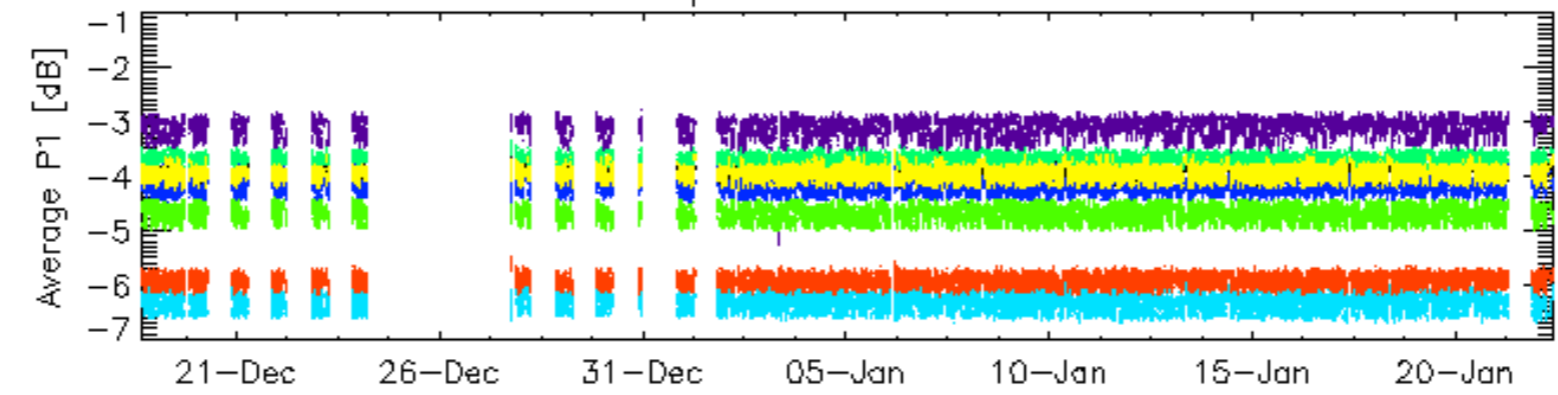


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

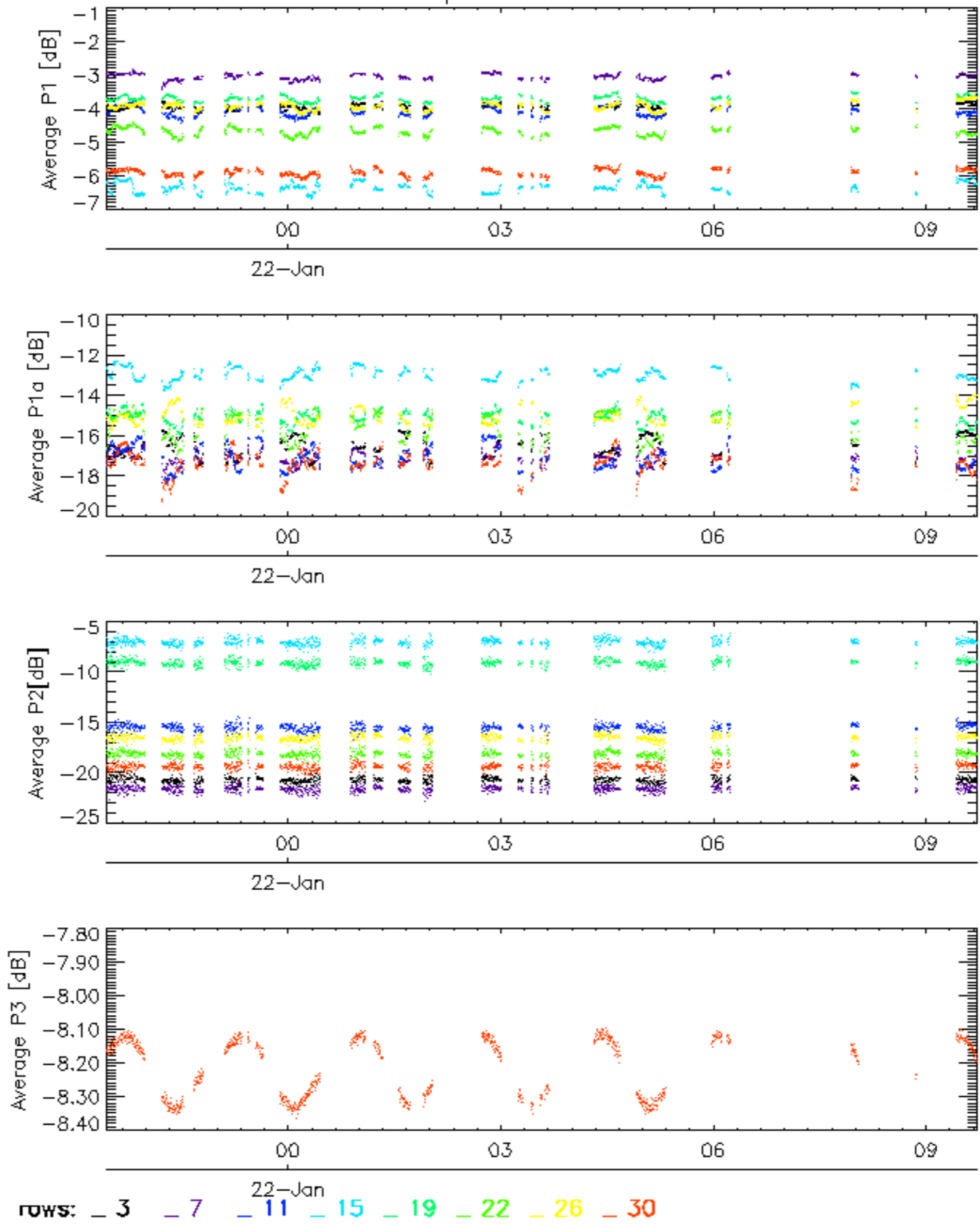


Cal pulses for WVS IS2



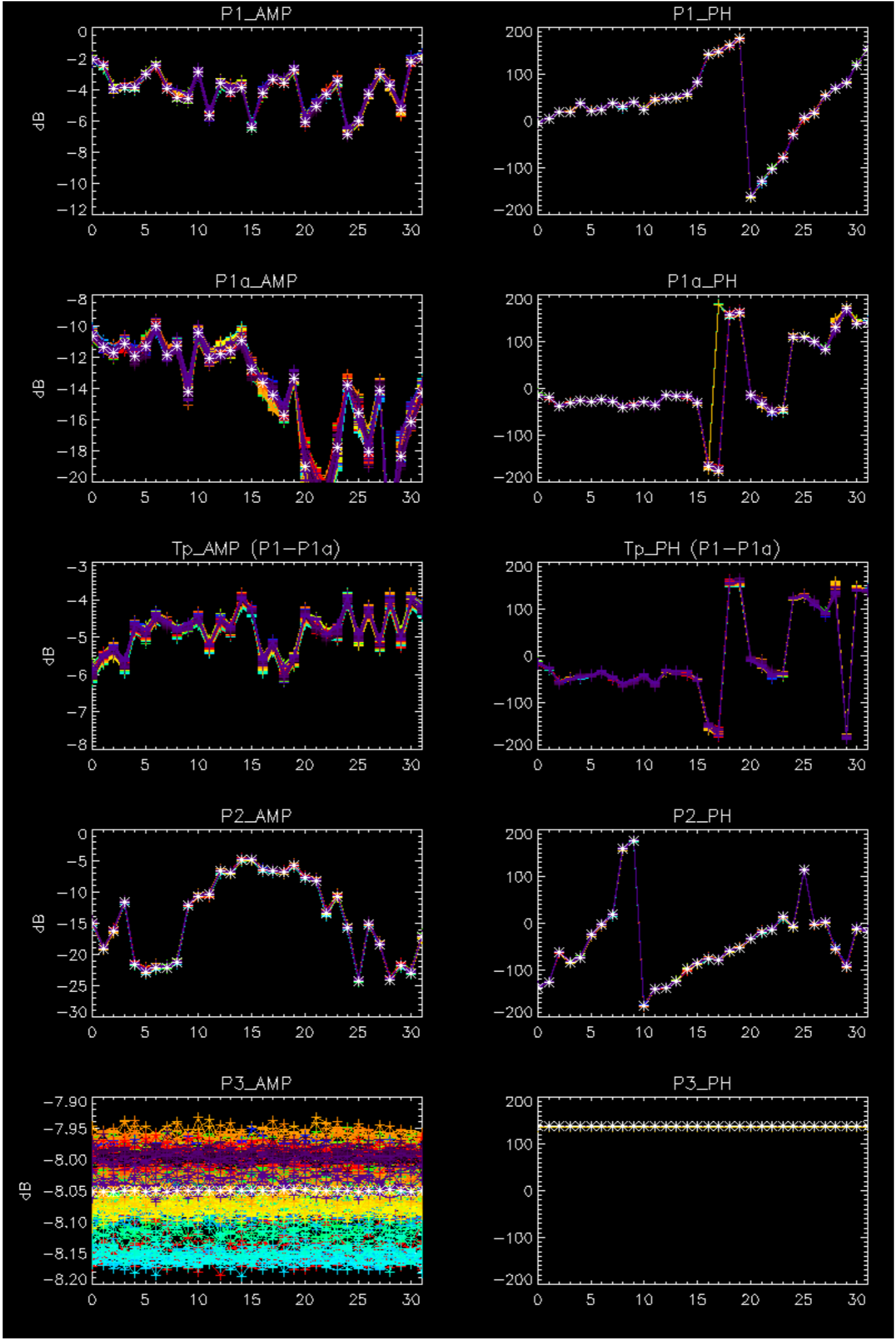
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

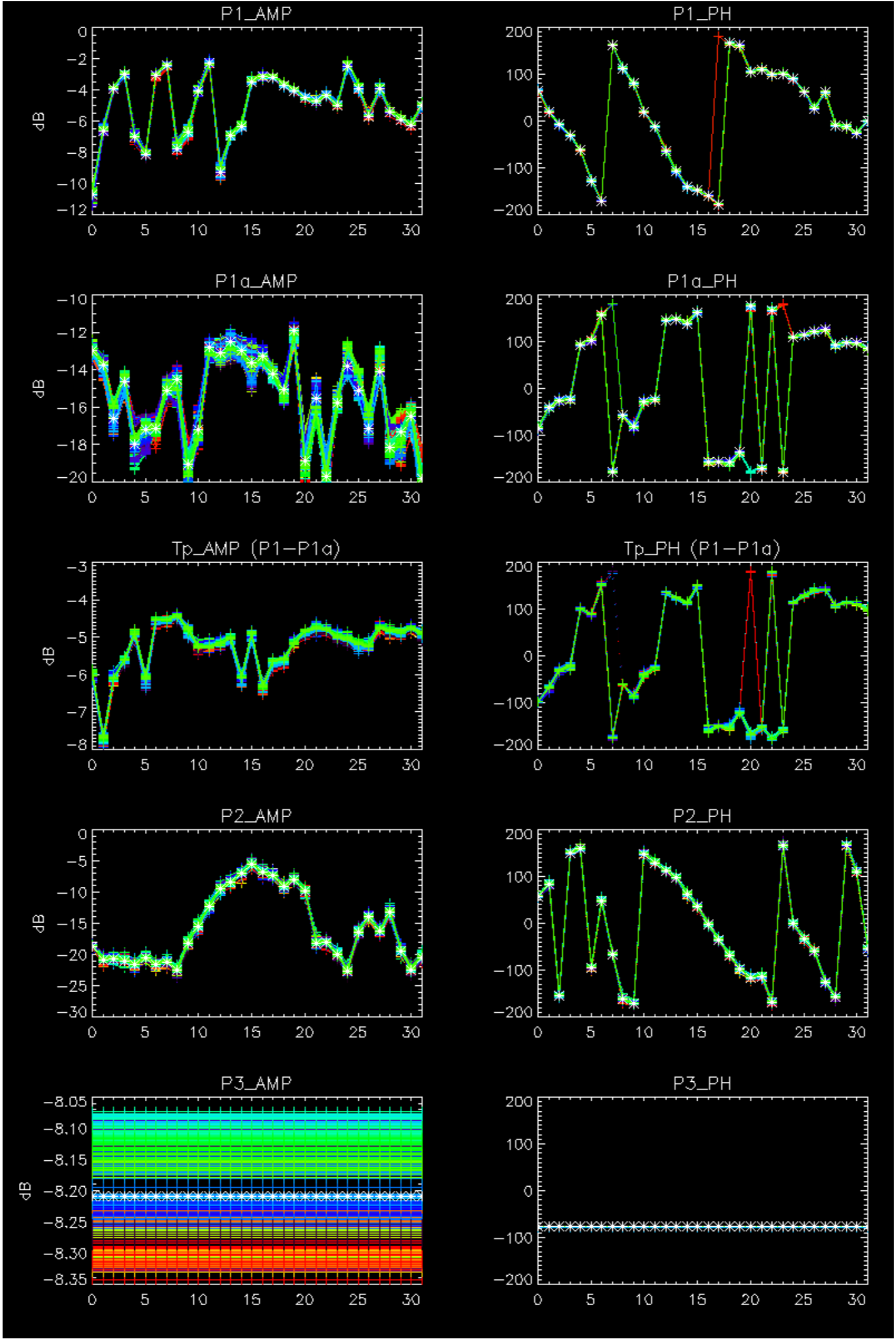
Cal pulses for WVS IS2



No anomalies observed on available browse products

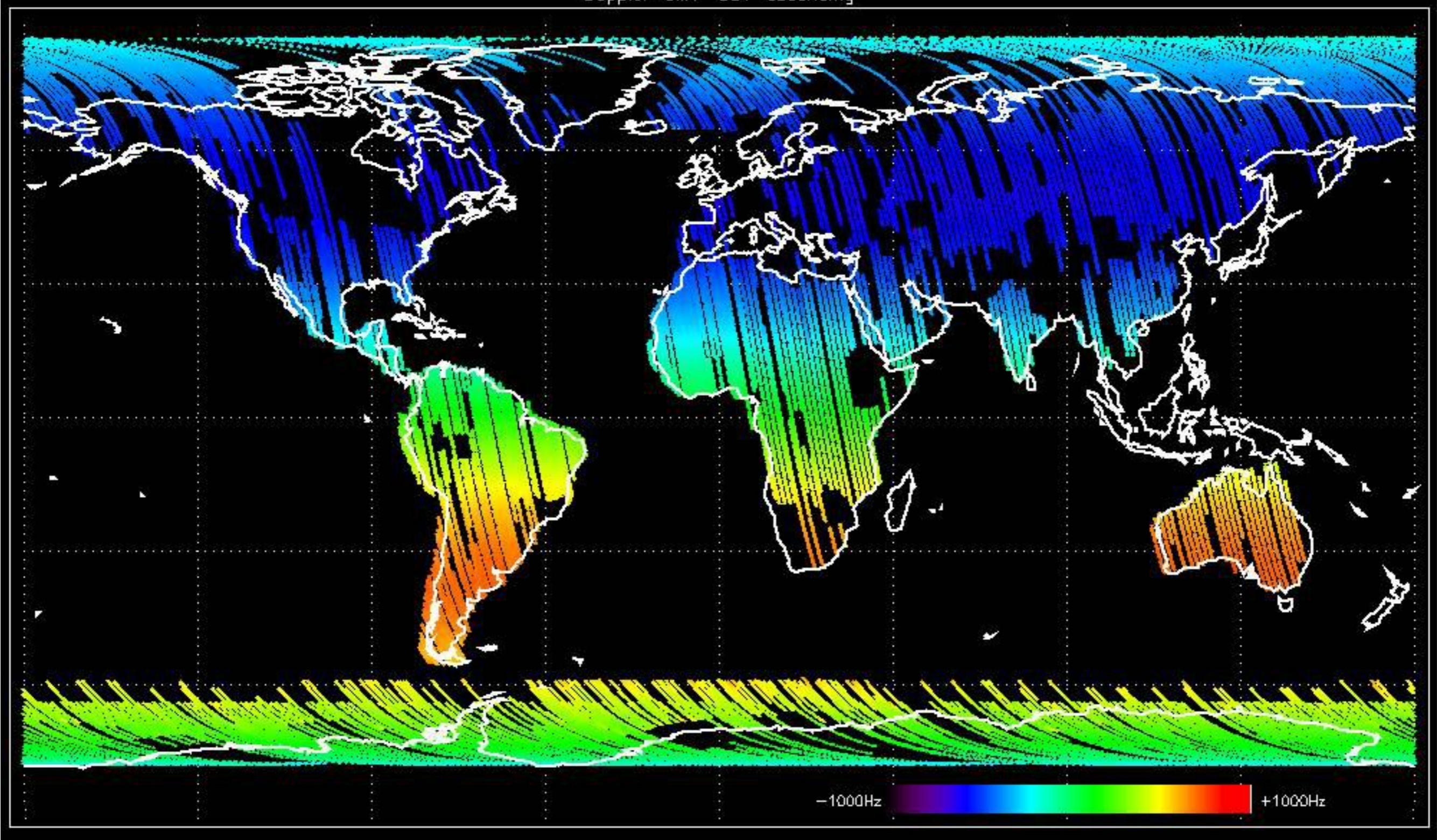
No anomalies observed.



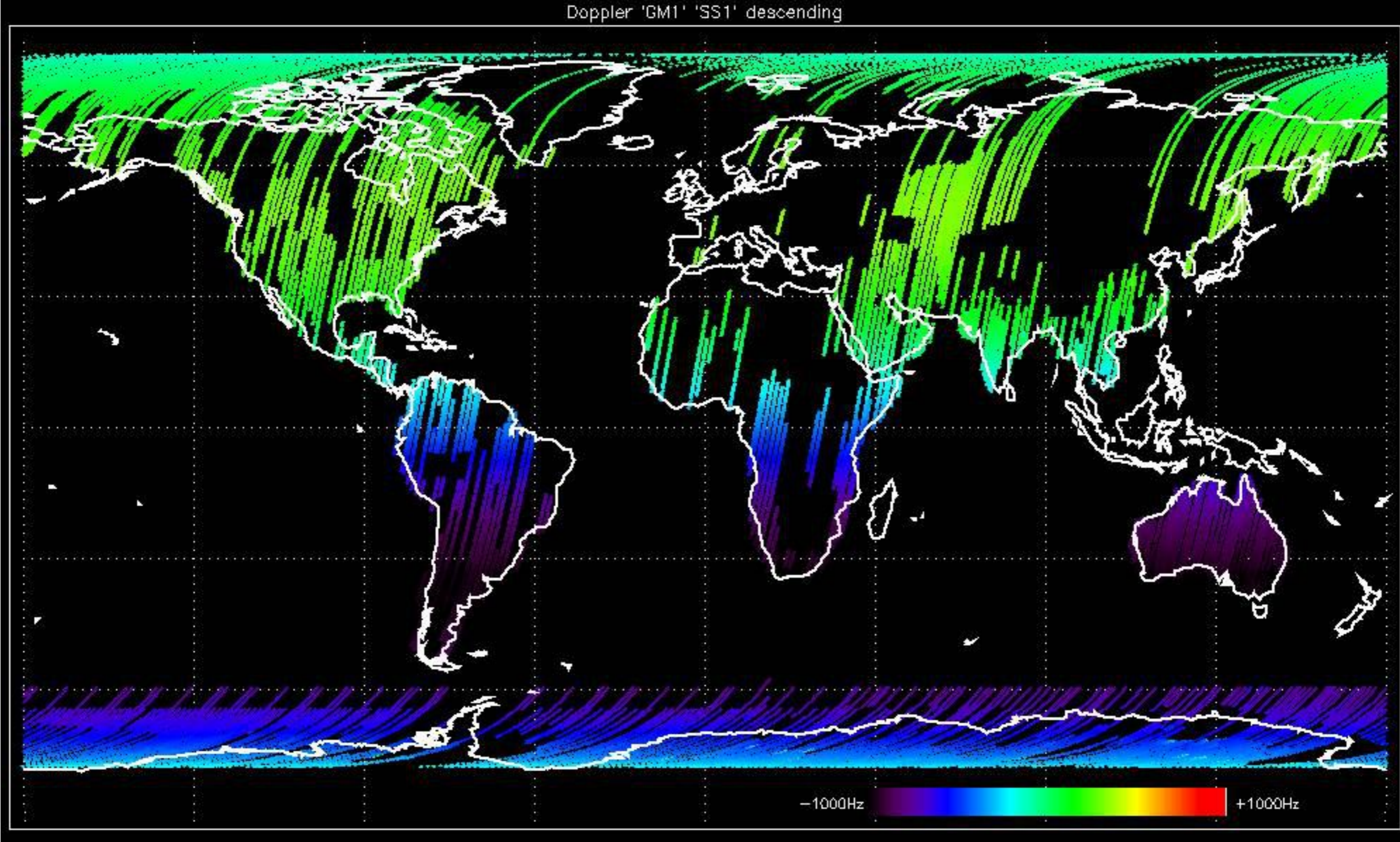


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

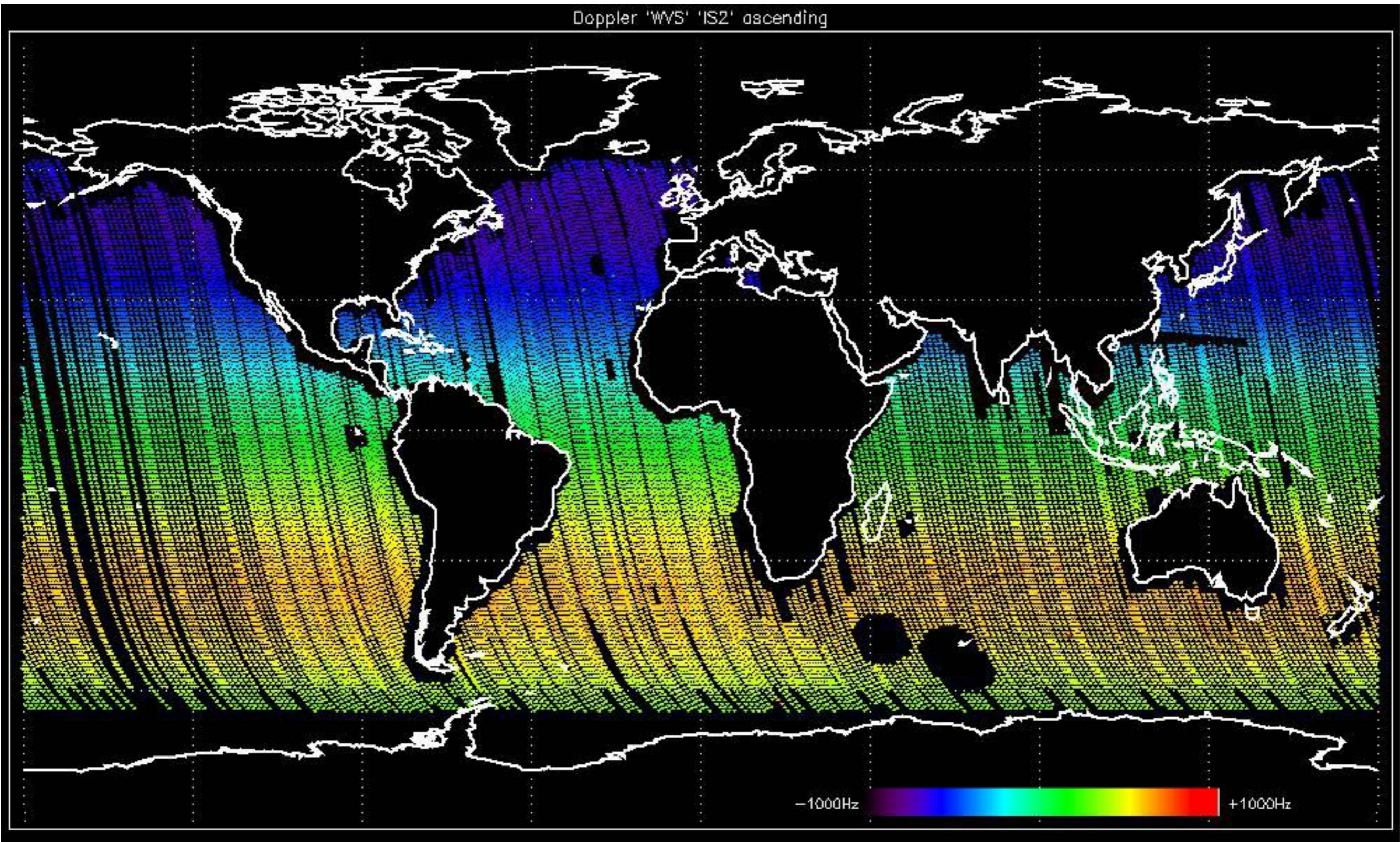
Doppler 'GM1' 'SS1' ascending



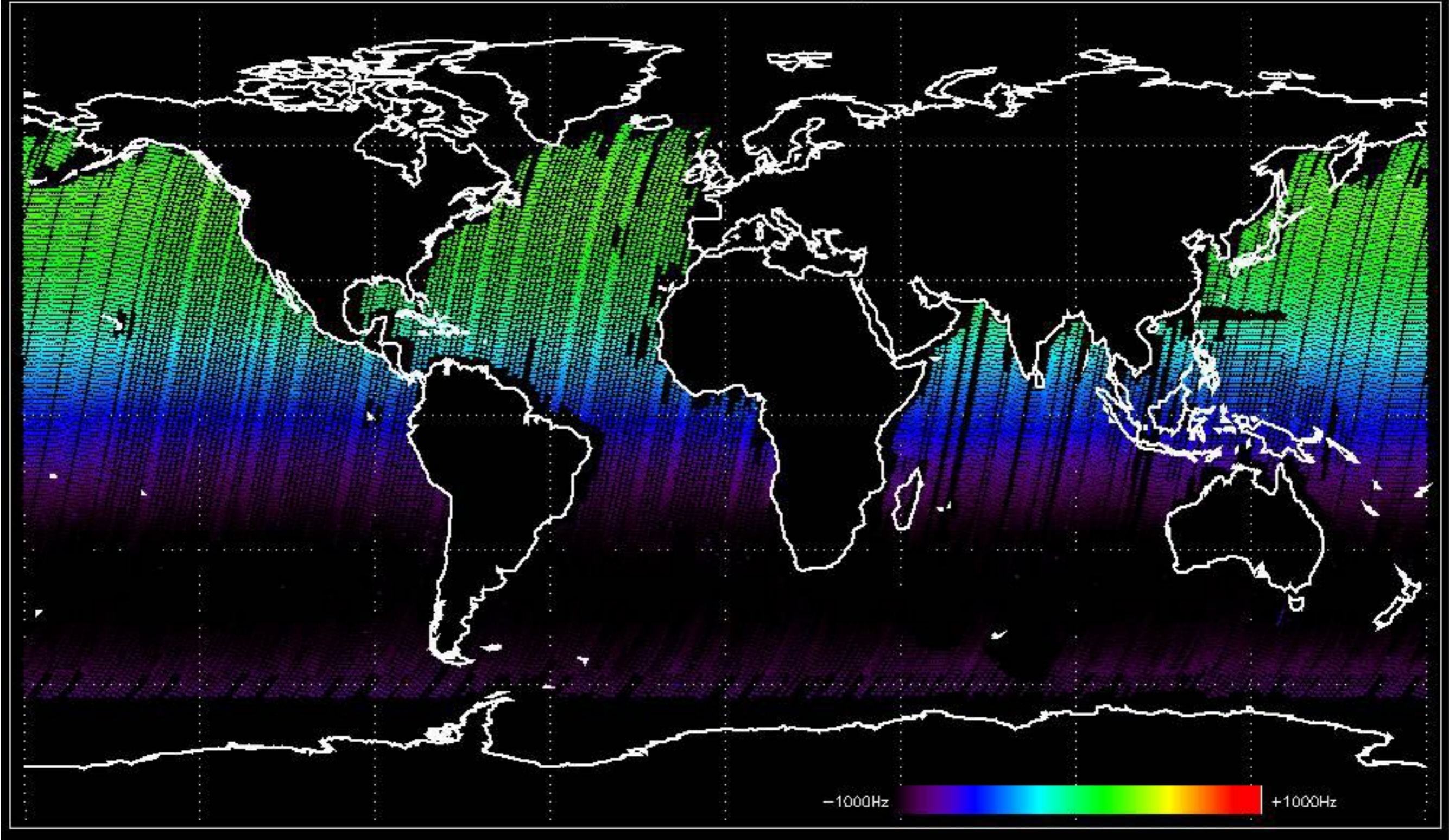
Doppler 'GM1' 'SS1' descending

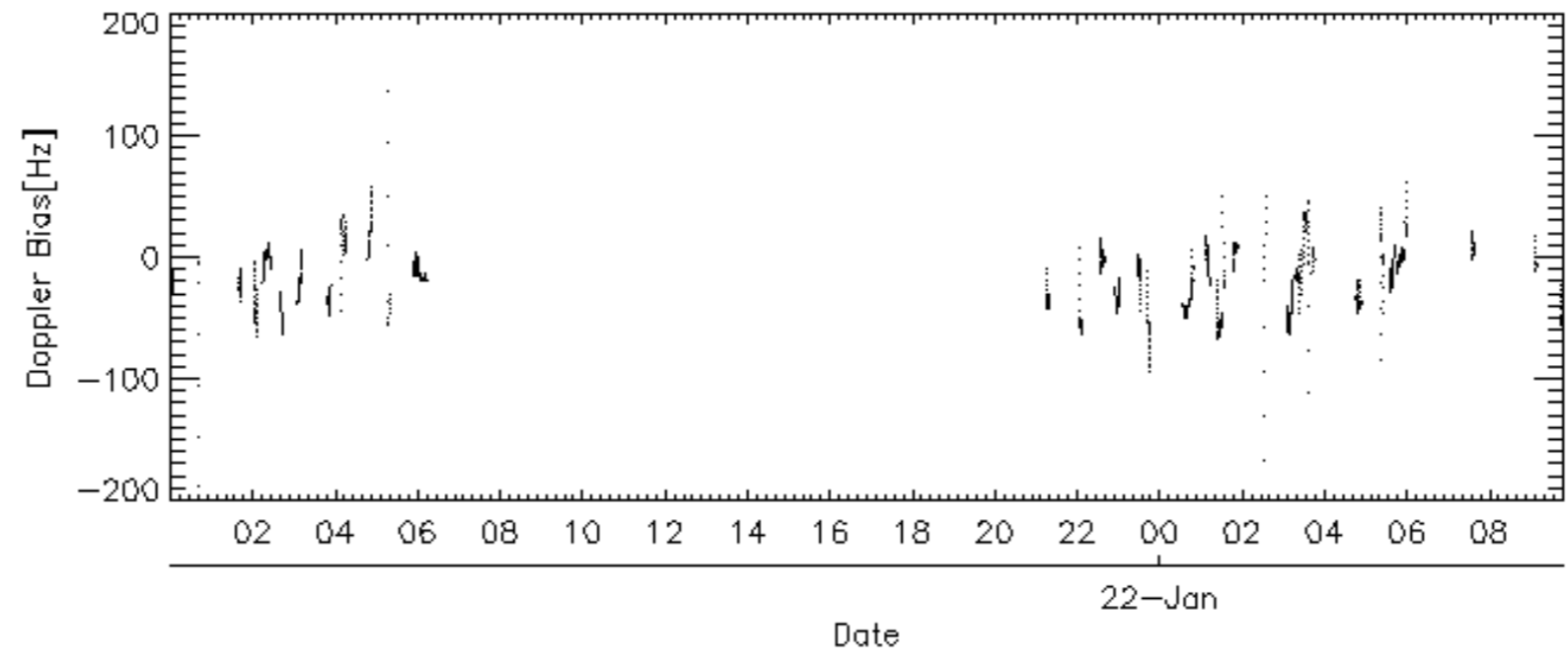
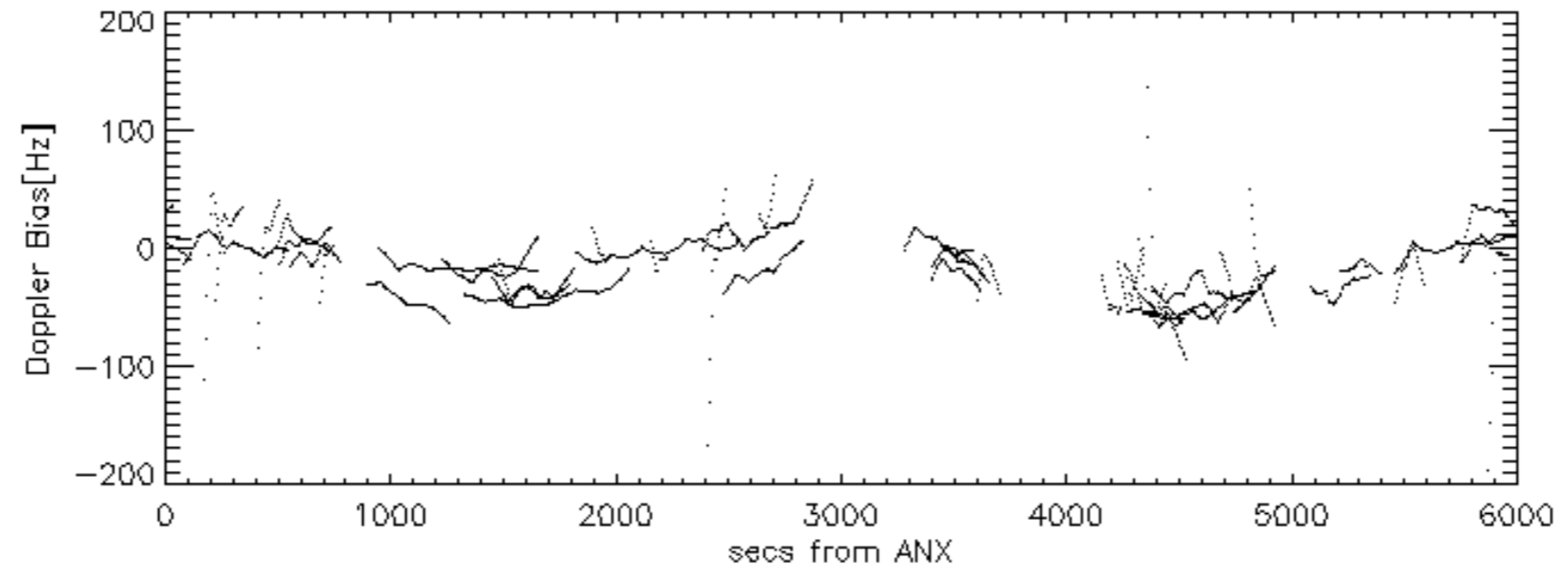
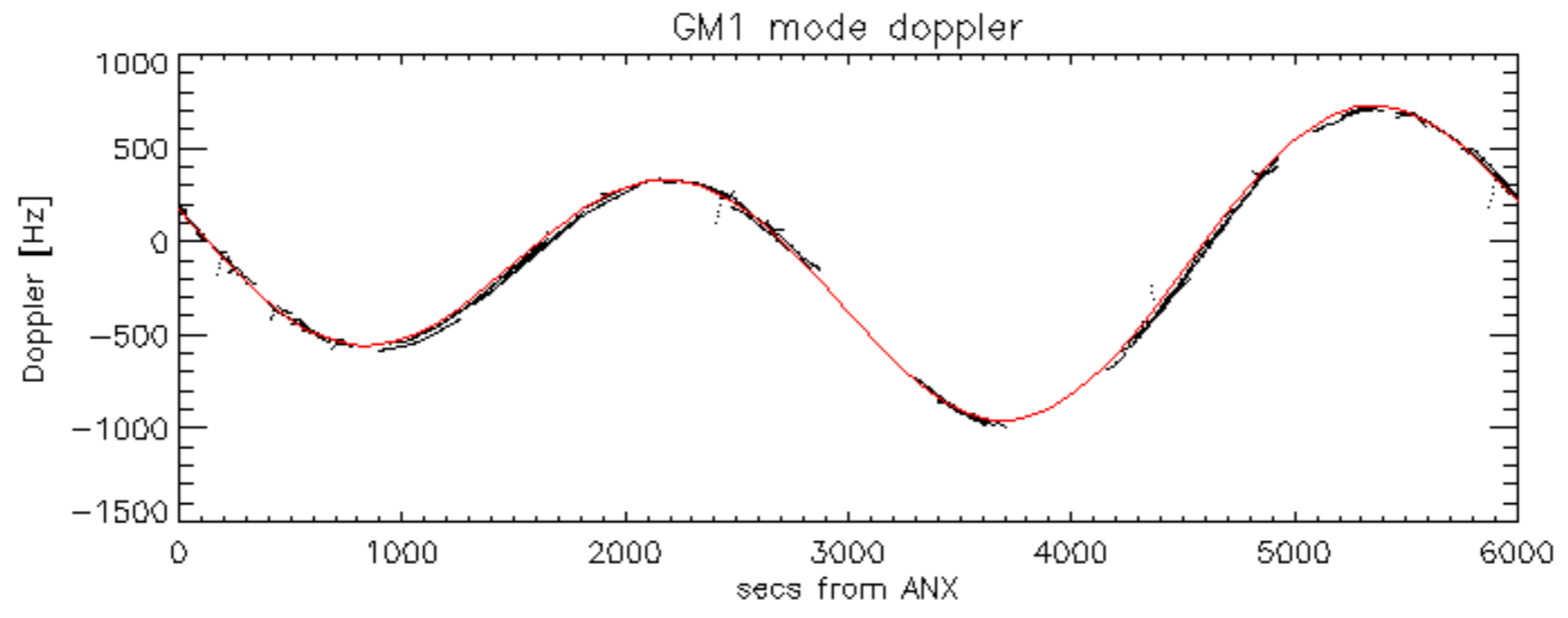


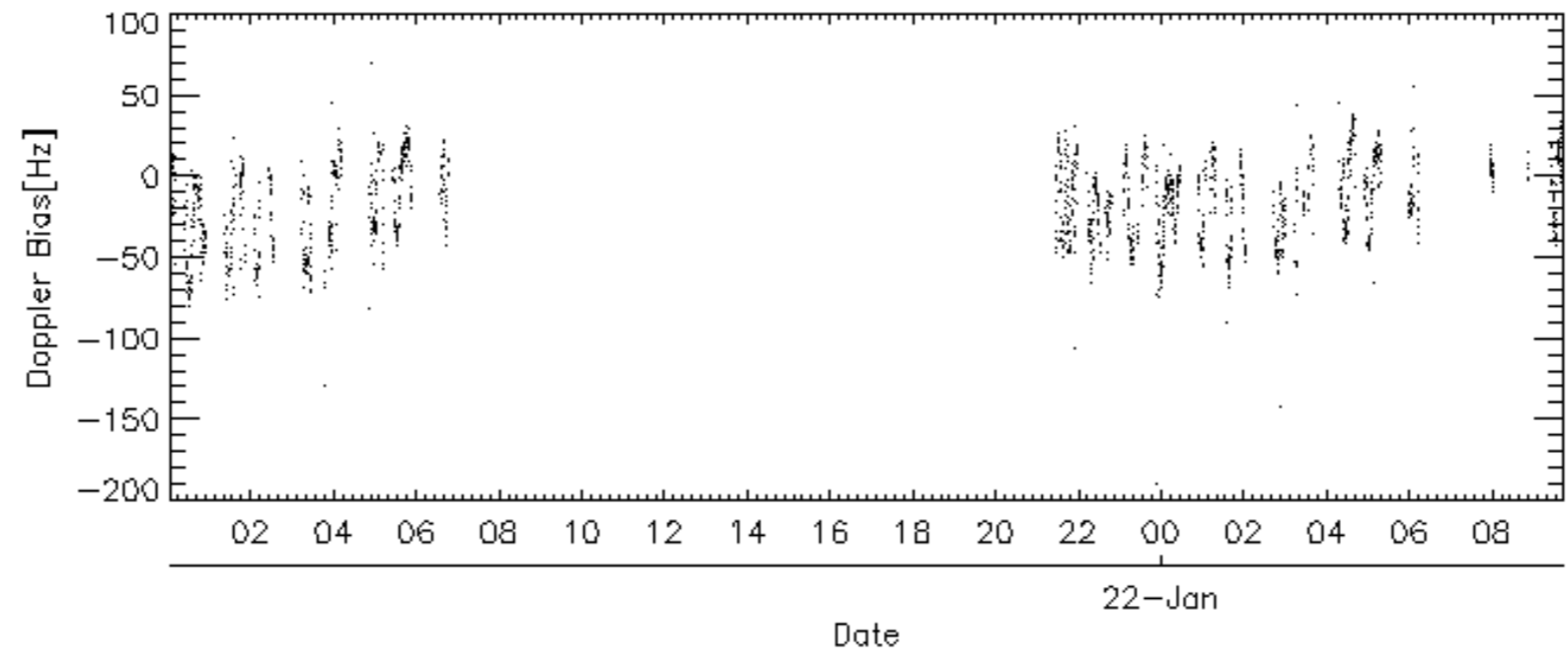
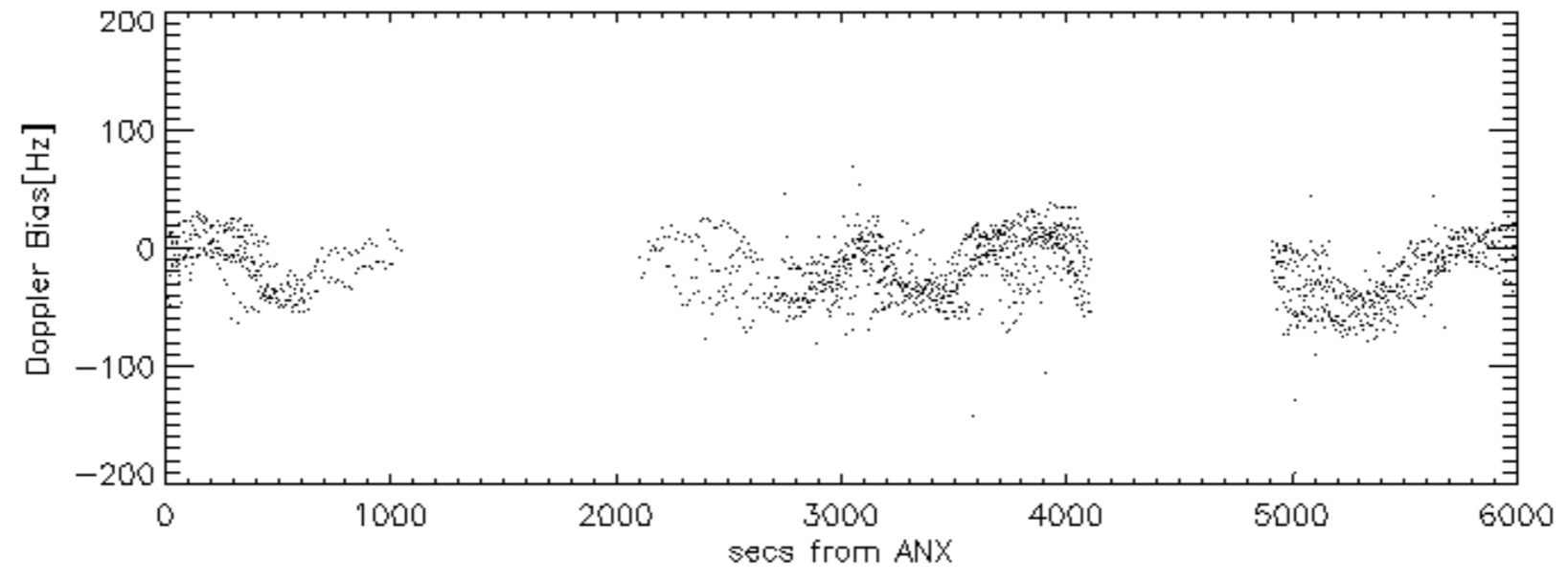
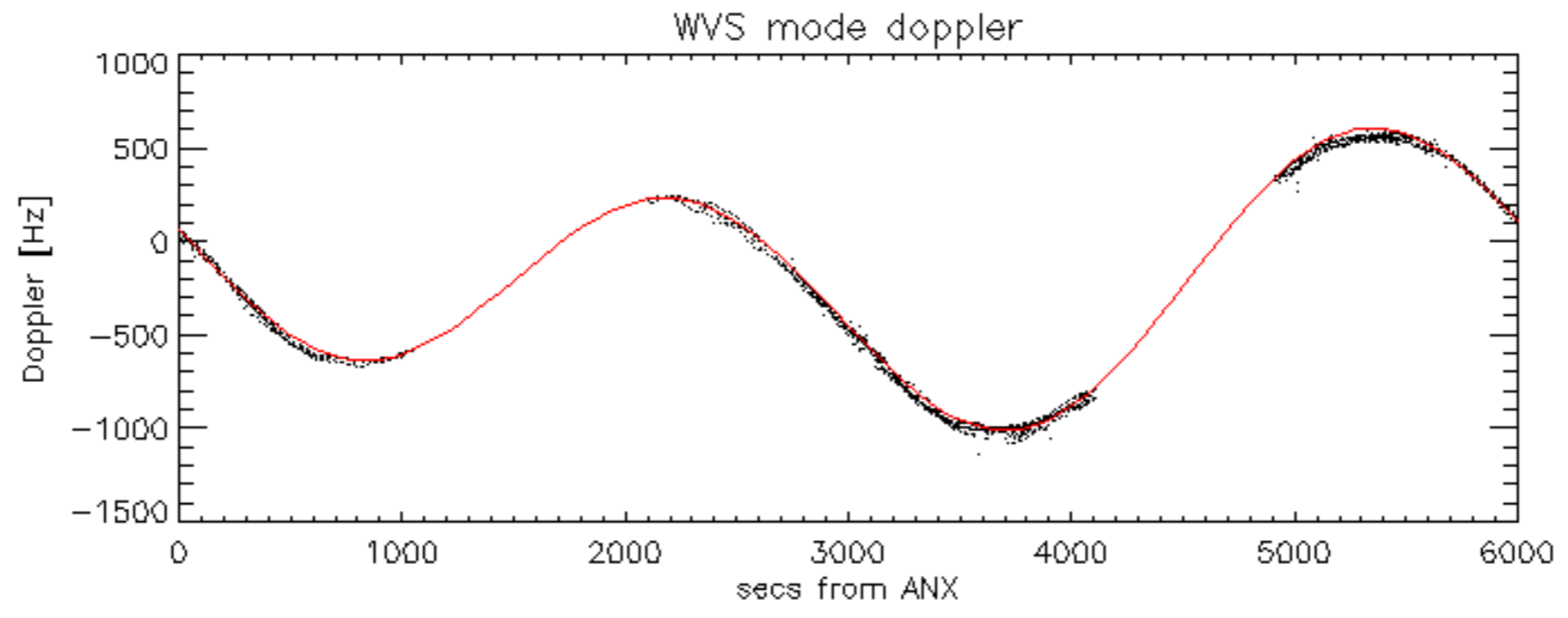
Doppler 'WVS' 'IS2' ascending



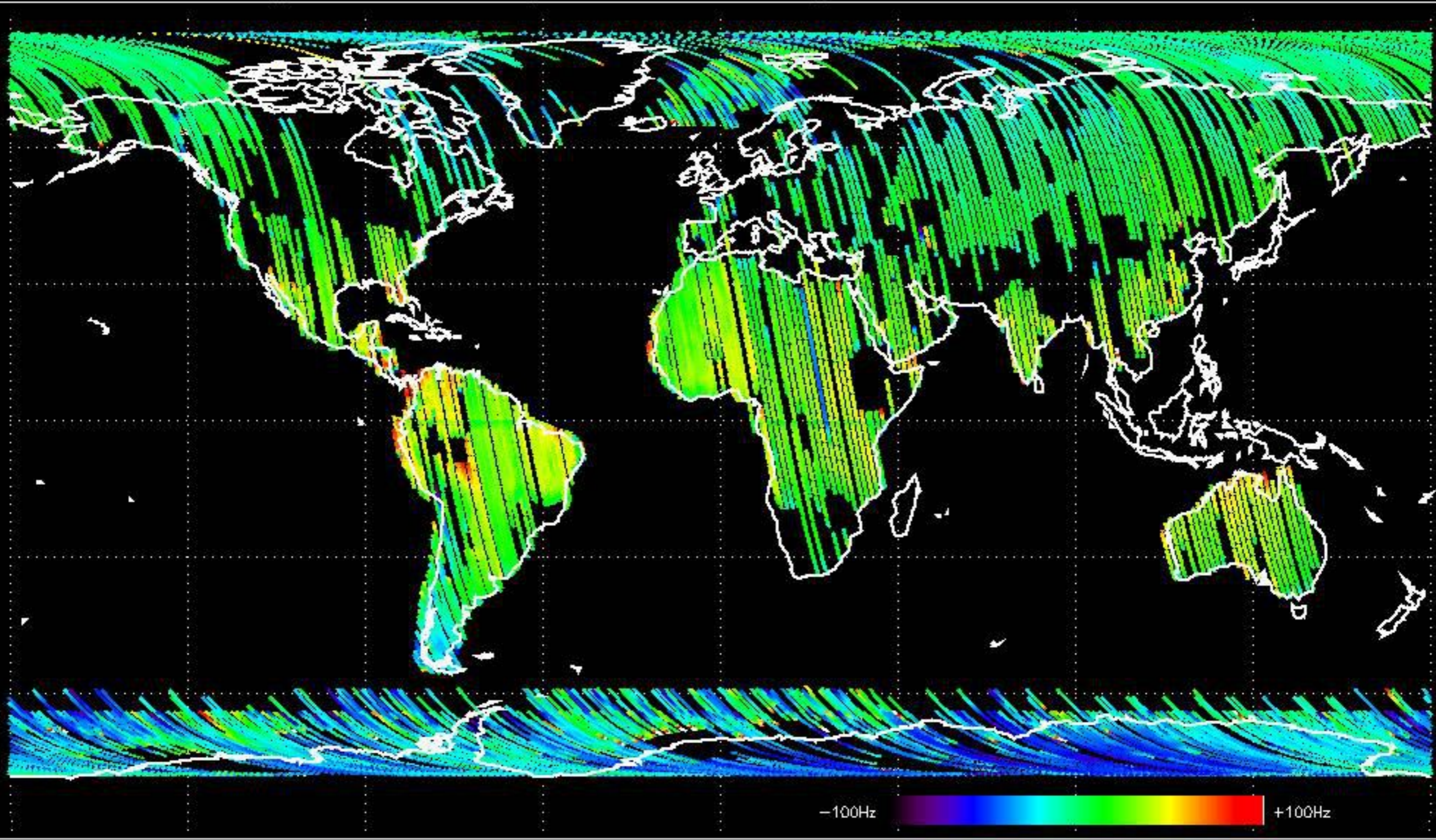
Doppler 'WVS' 'IS2' descending



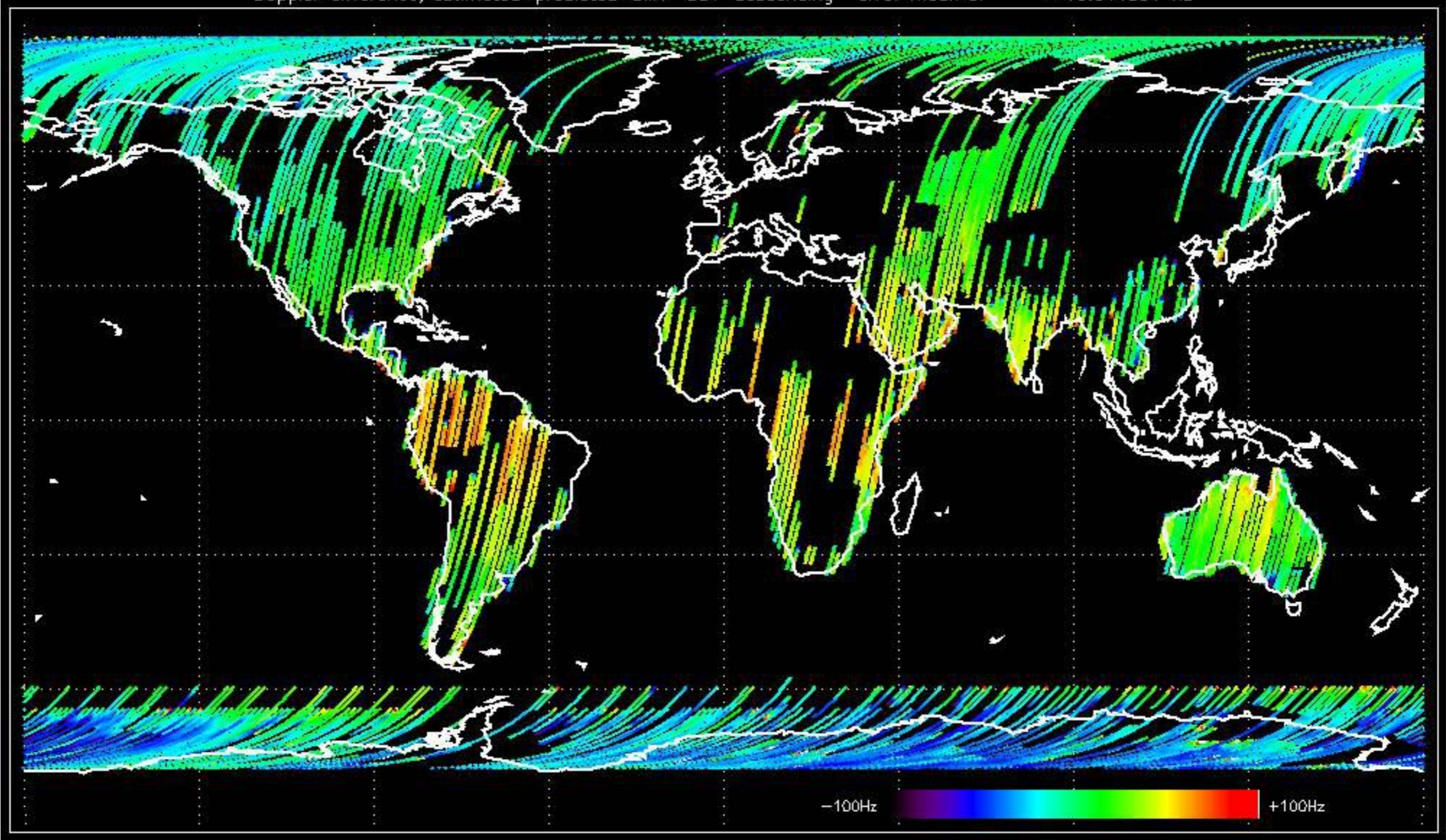




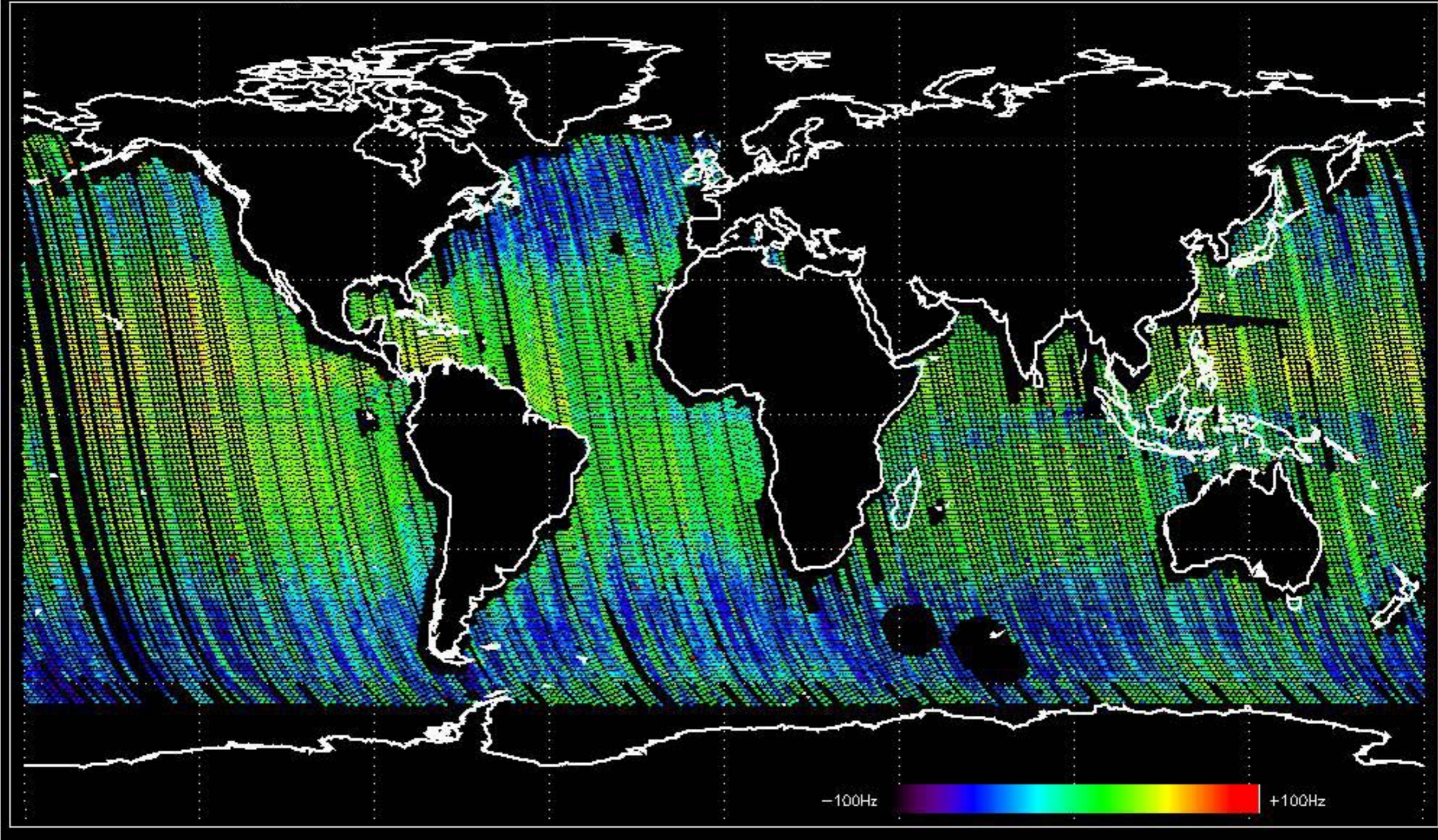
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.125089 Hz



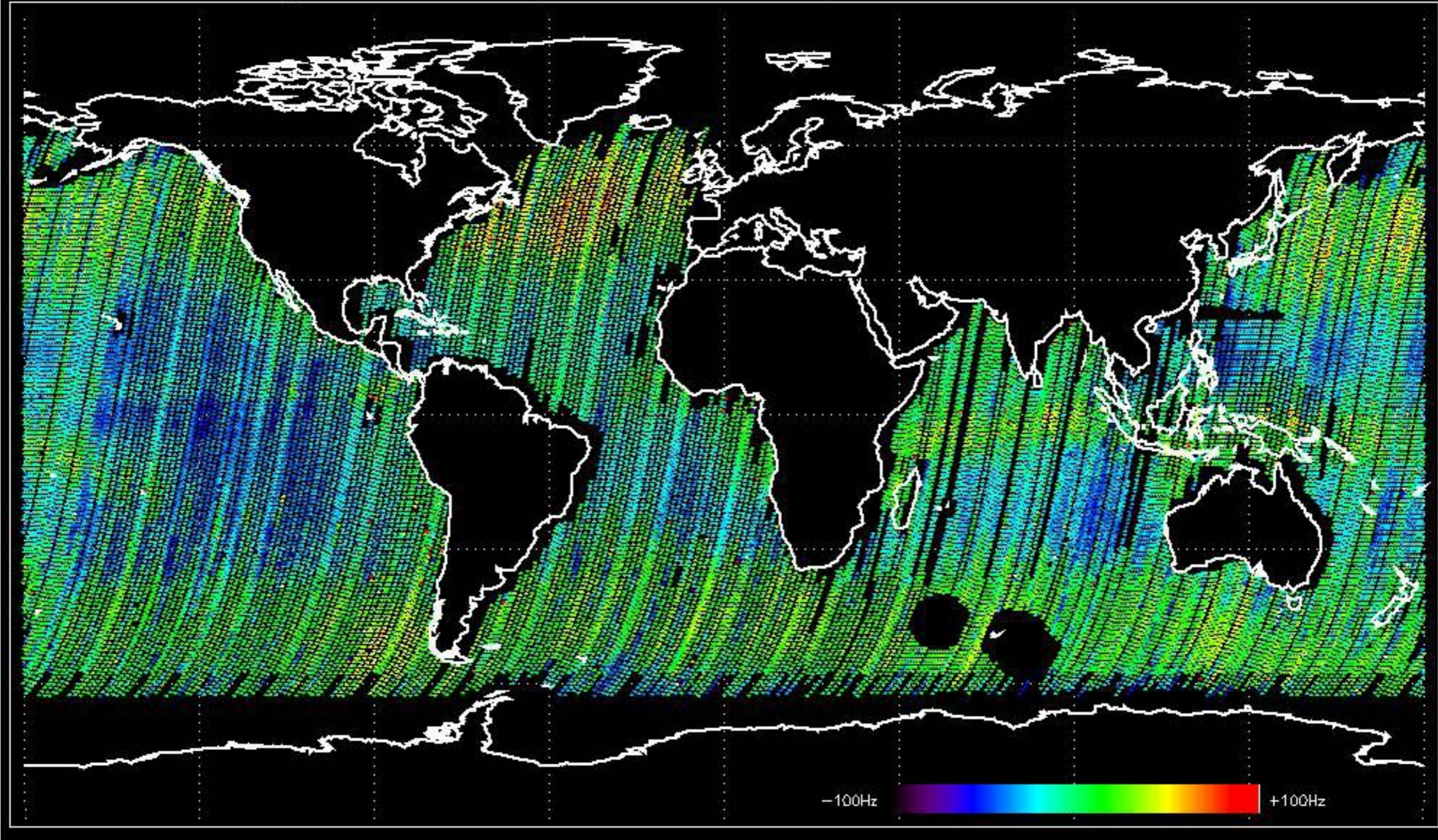
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.614091 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -12.041893 Hz

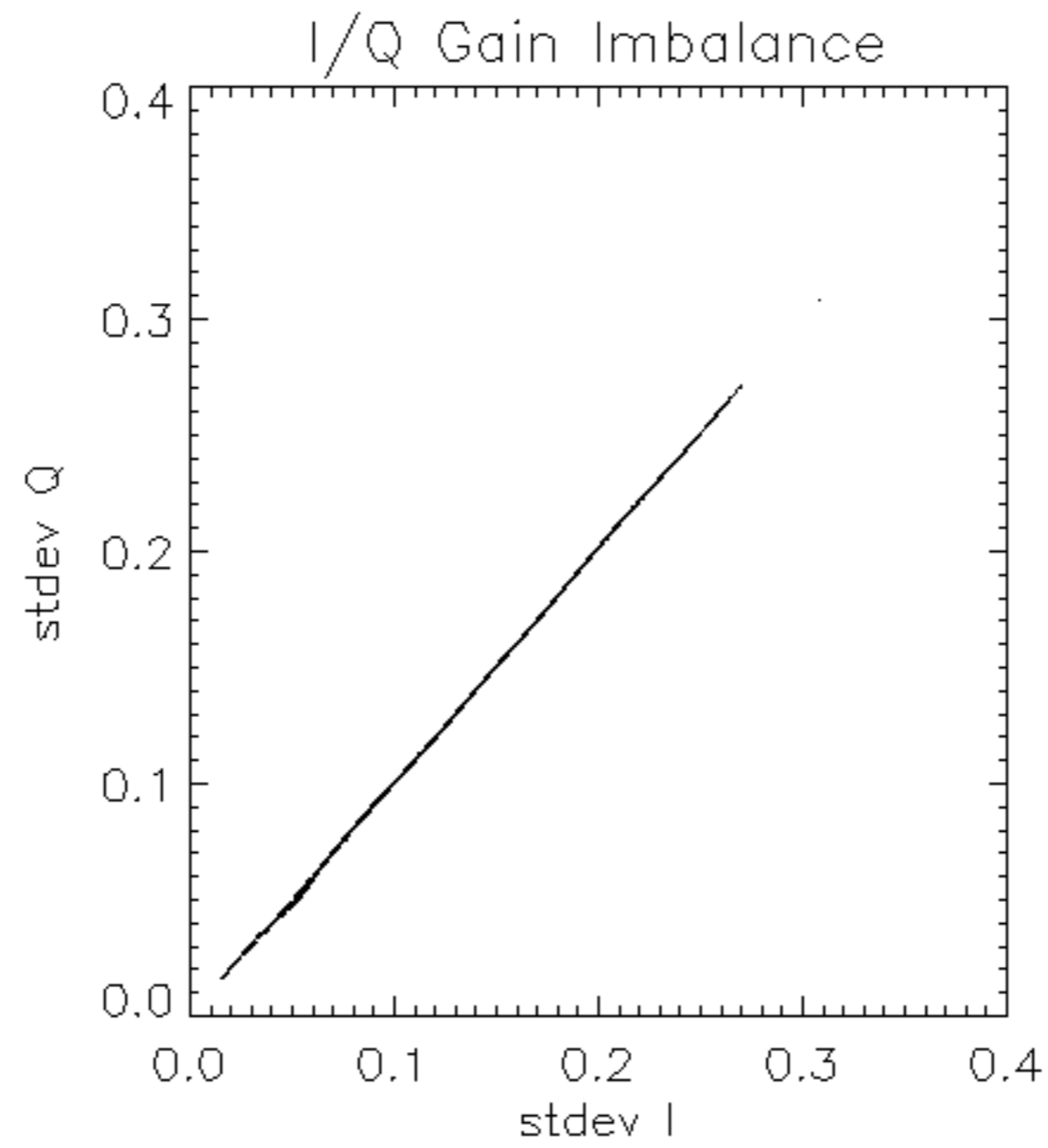


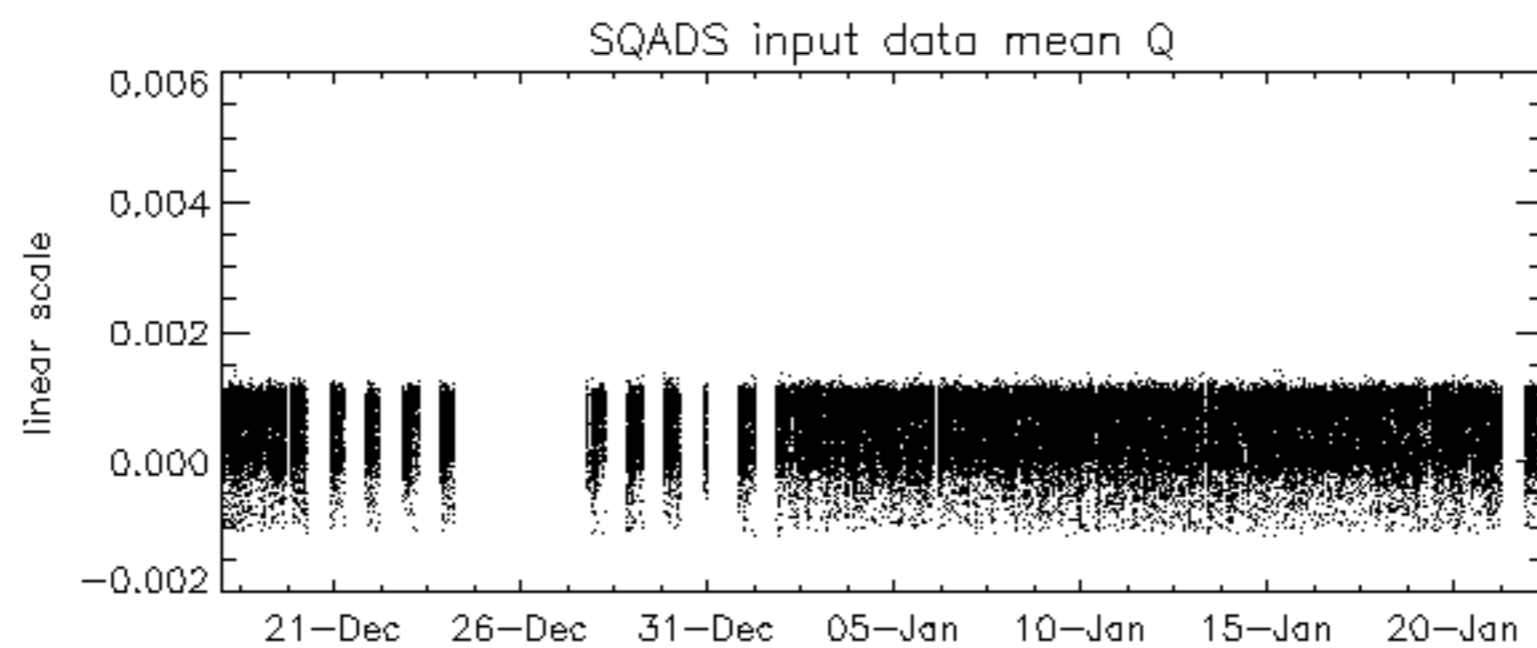
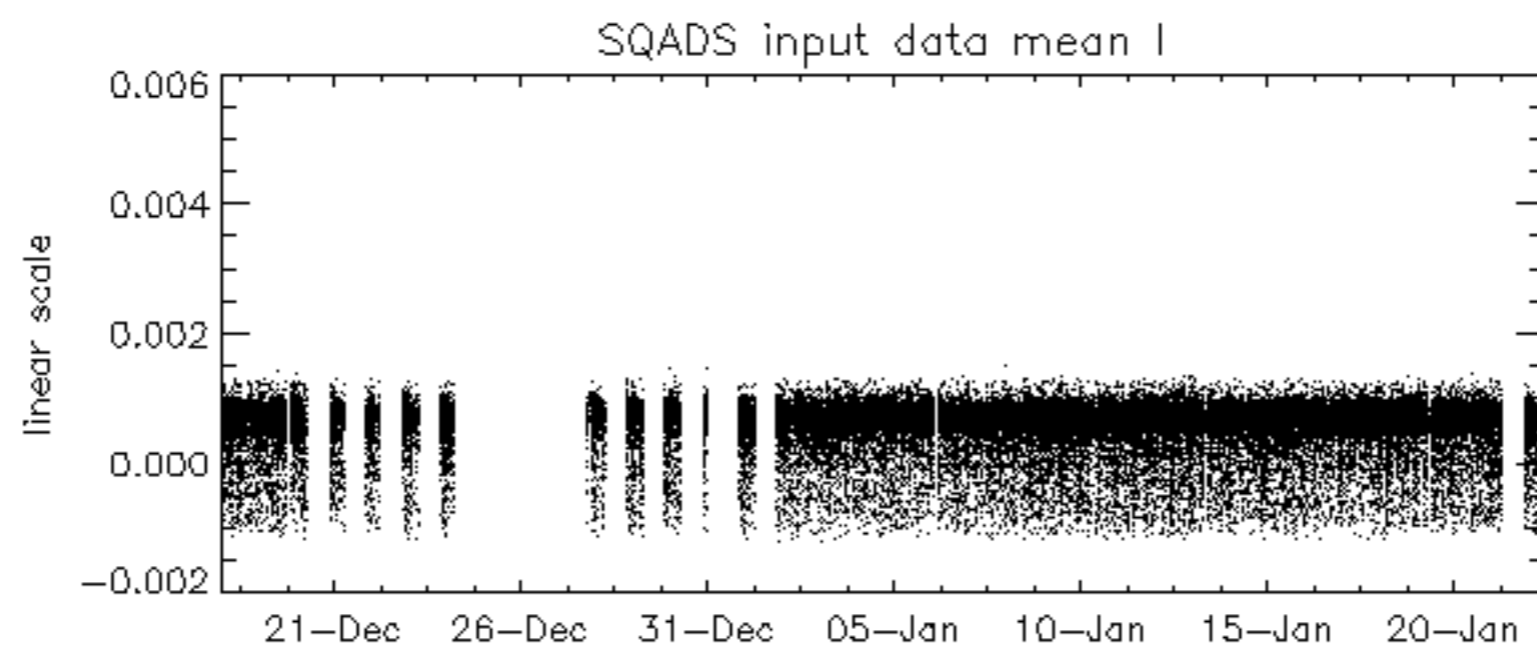
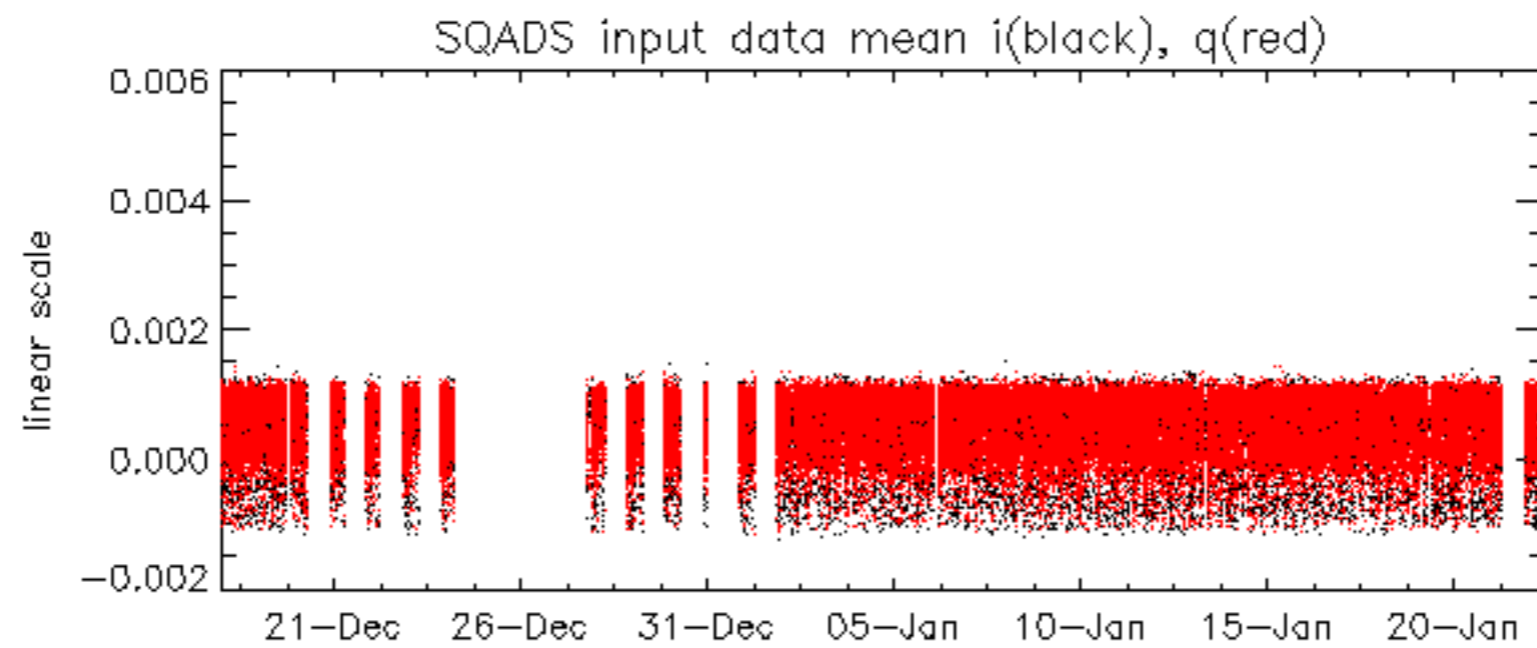
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.427420 Hz

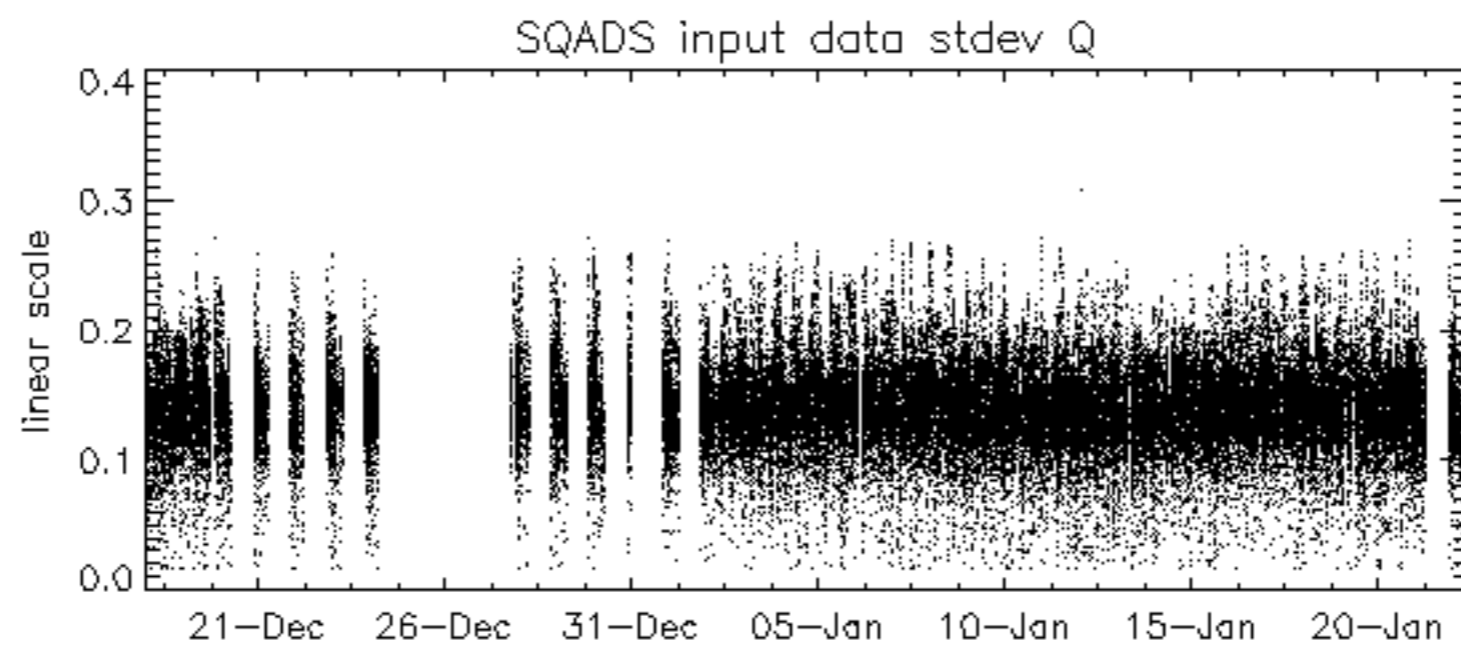
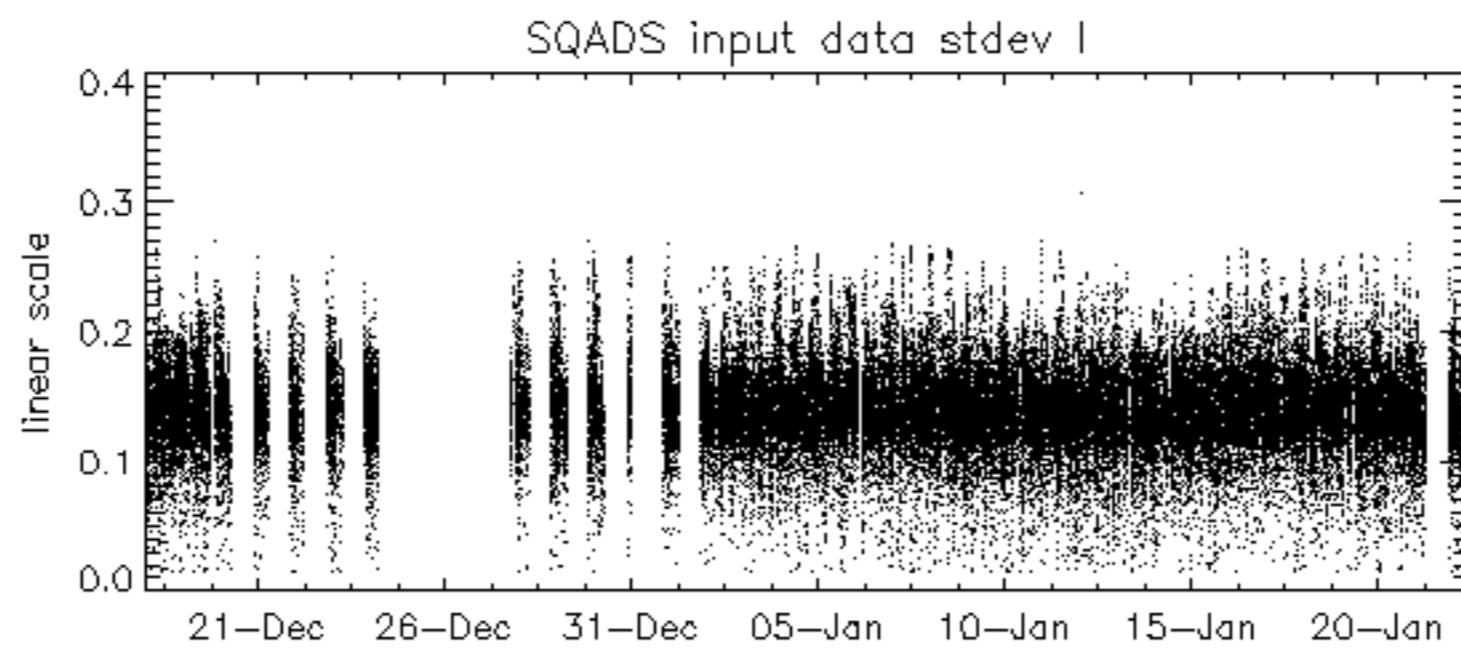
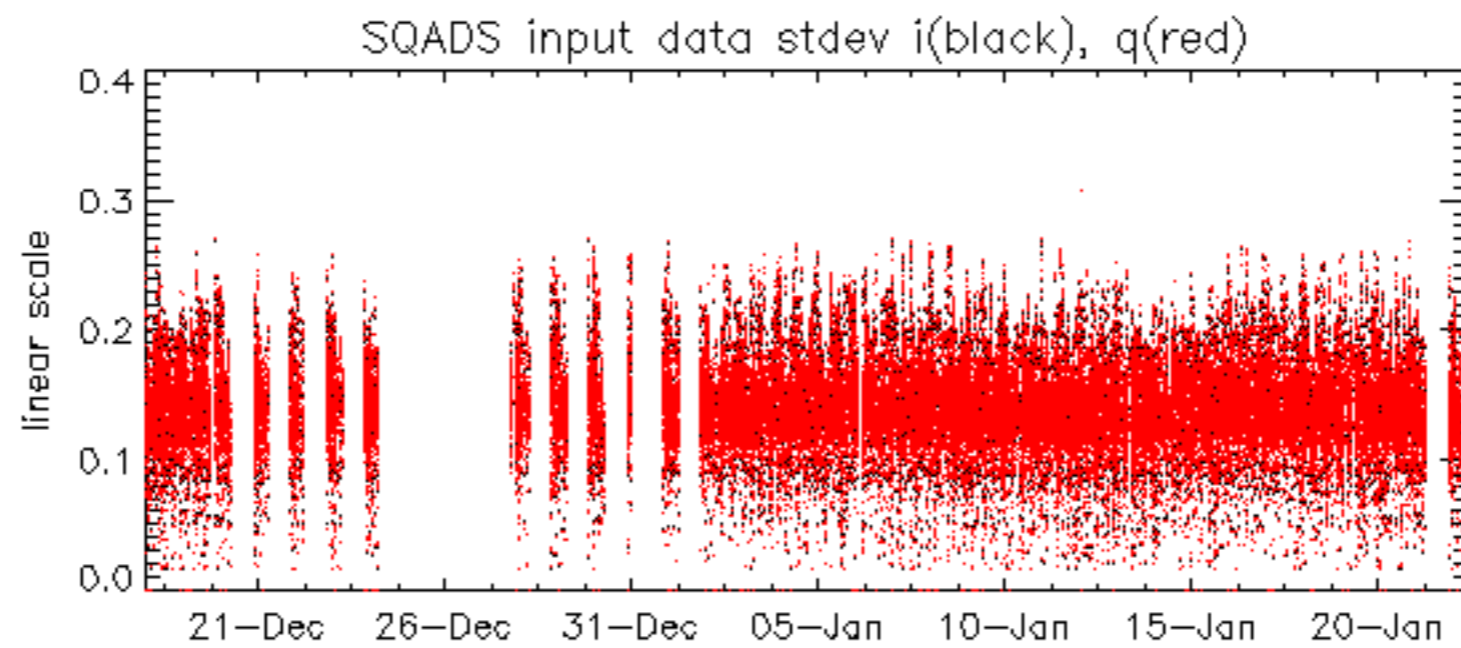


No anomalies observed on available MS products:

No anomalies observed.



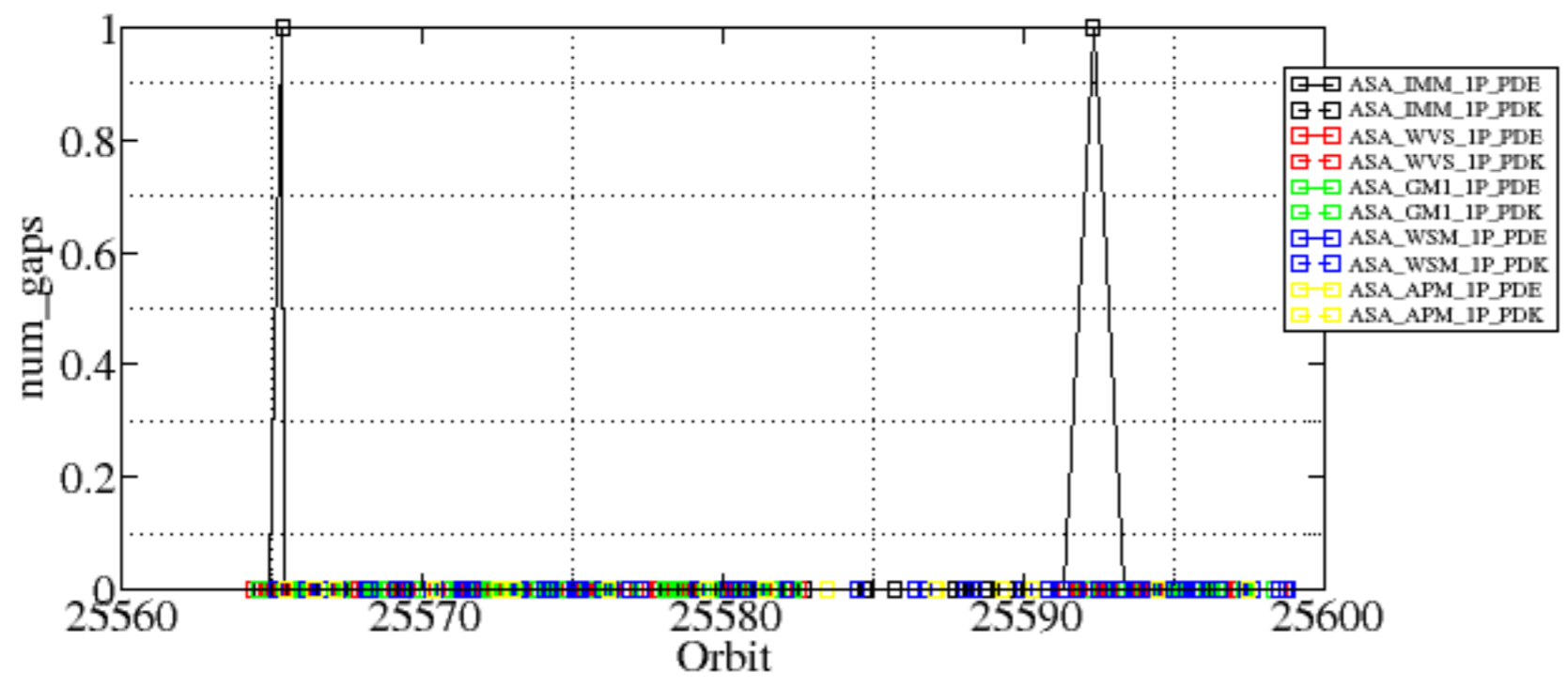


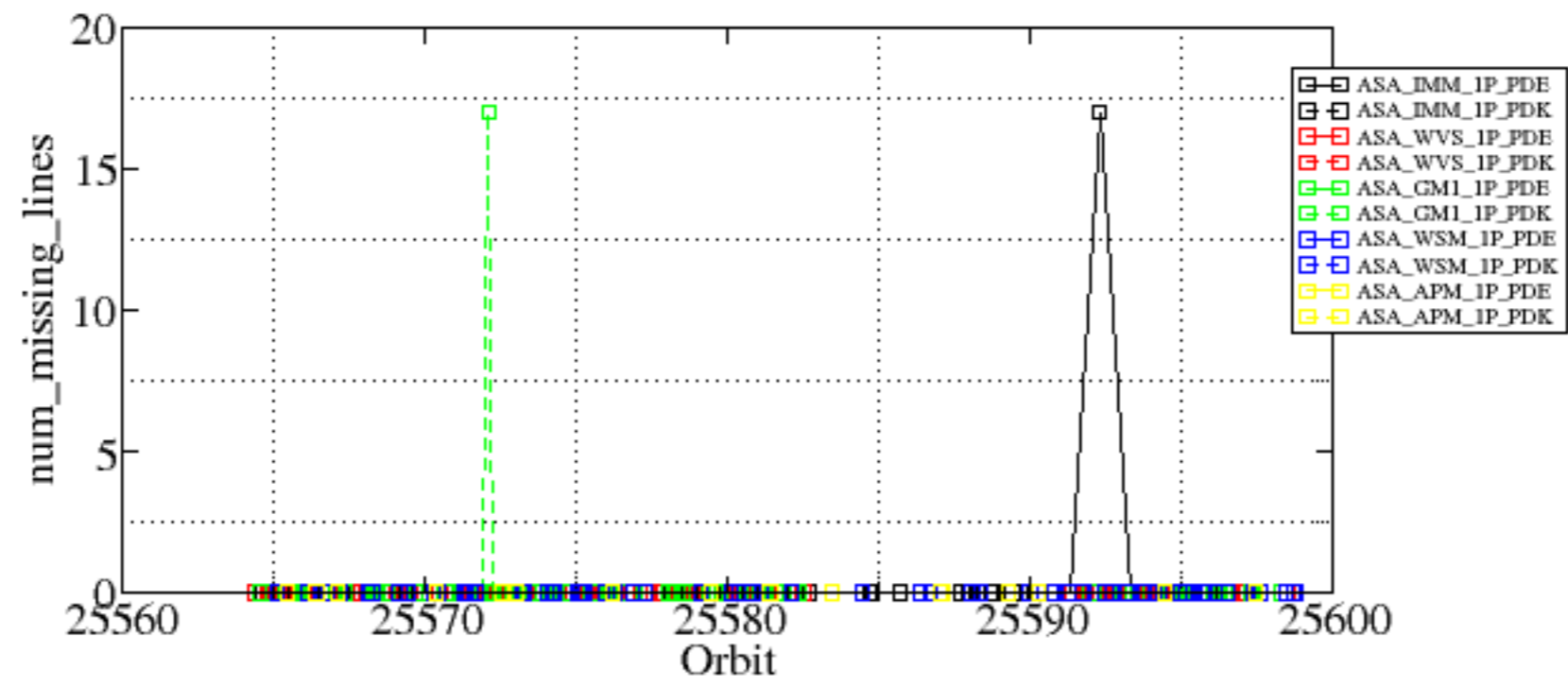


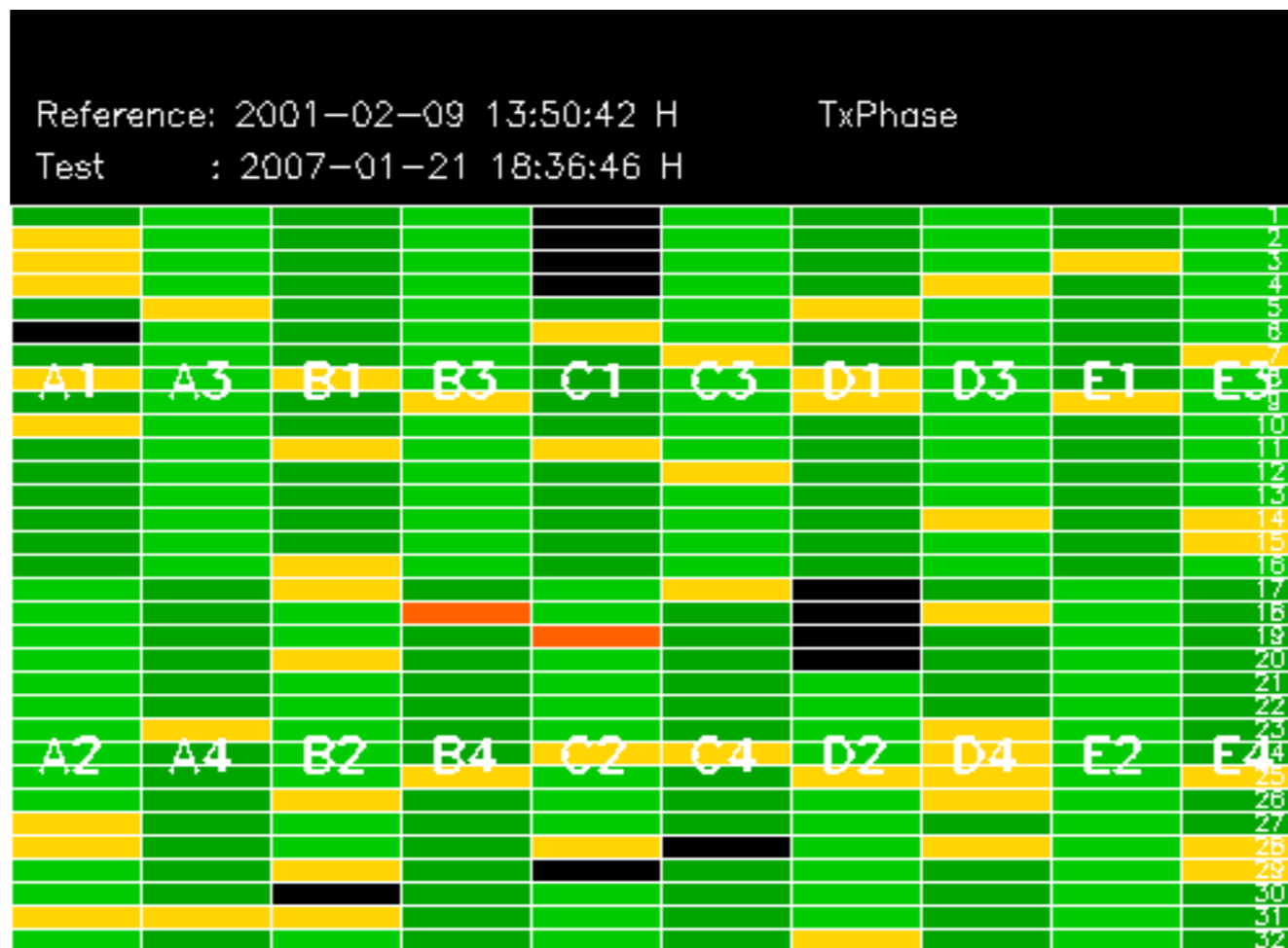
Summary of analysis for the last 3 days 2007012[012]

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

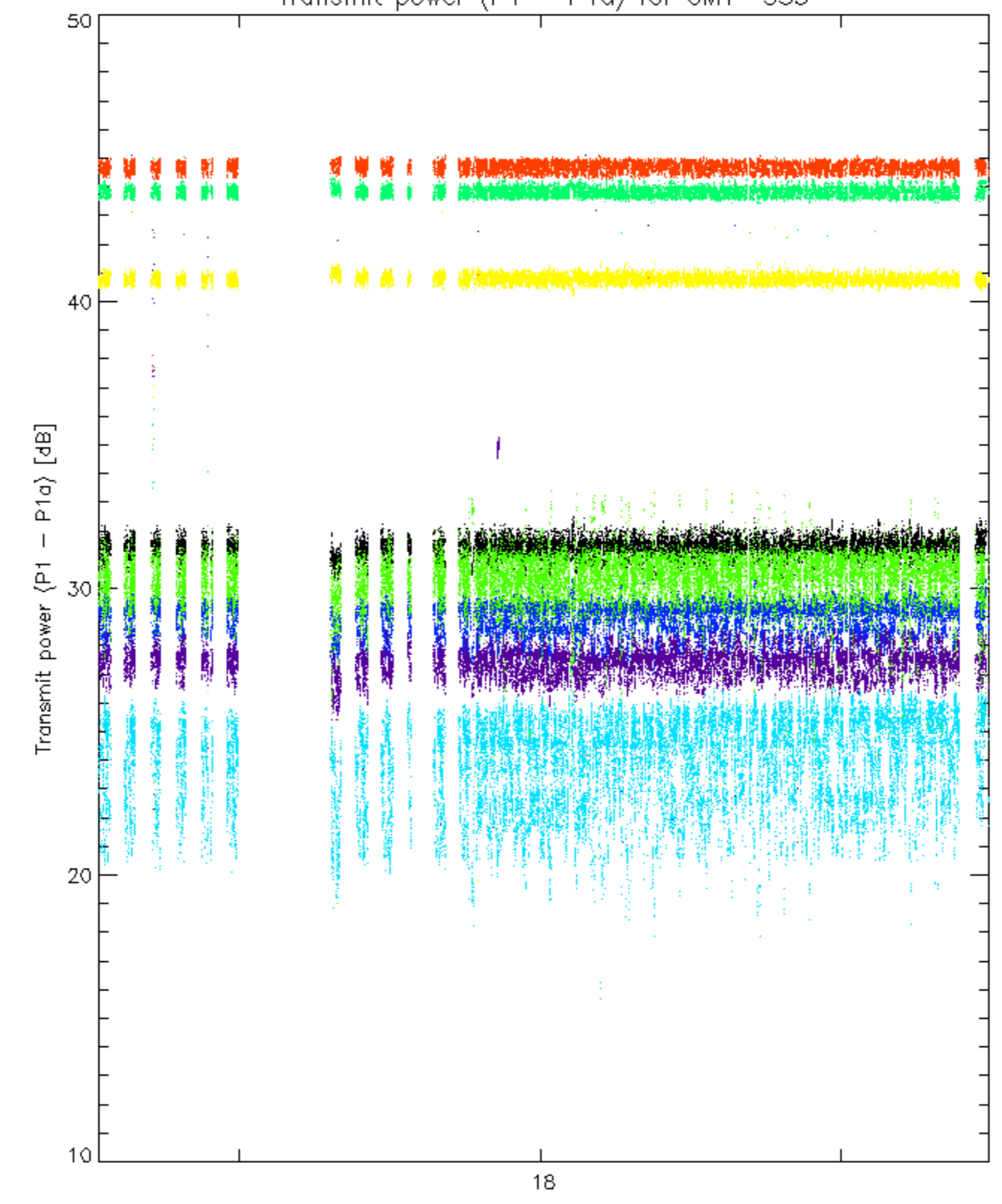
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070120_015157_00000532054_00461_25565_3990.N1	1	0
ASA_IMM_1PNPDE20070121_230117_000002812054_00488_25592_6348.N1	1	17
ASA_GM1_1PNPDK20070120_131030_000008632054_00468_25572_5436.N1	0	17



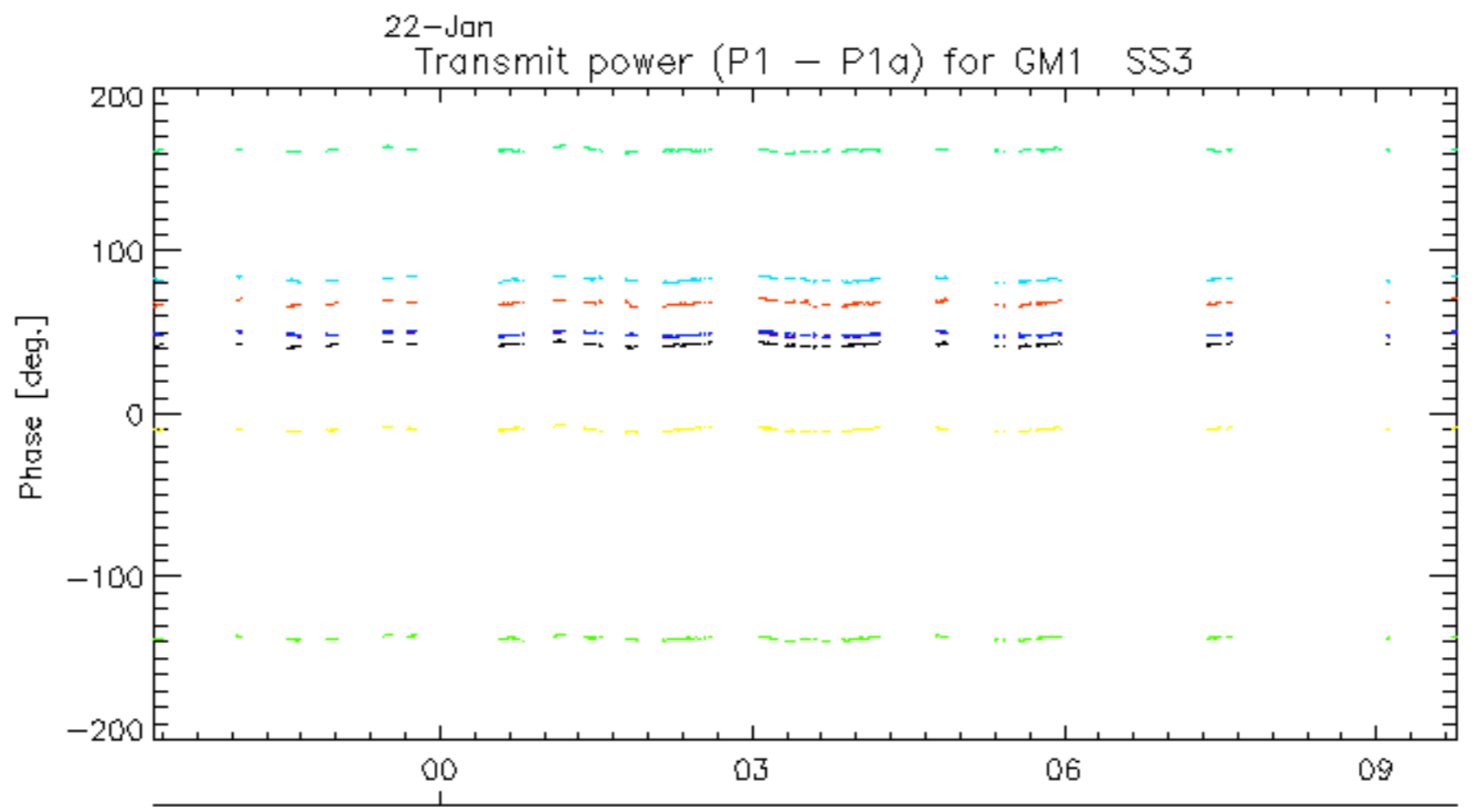
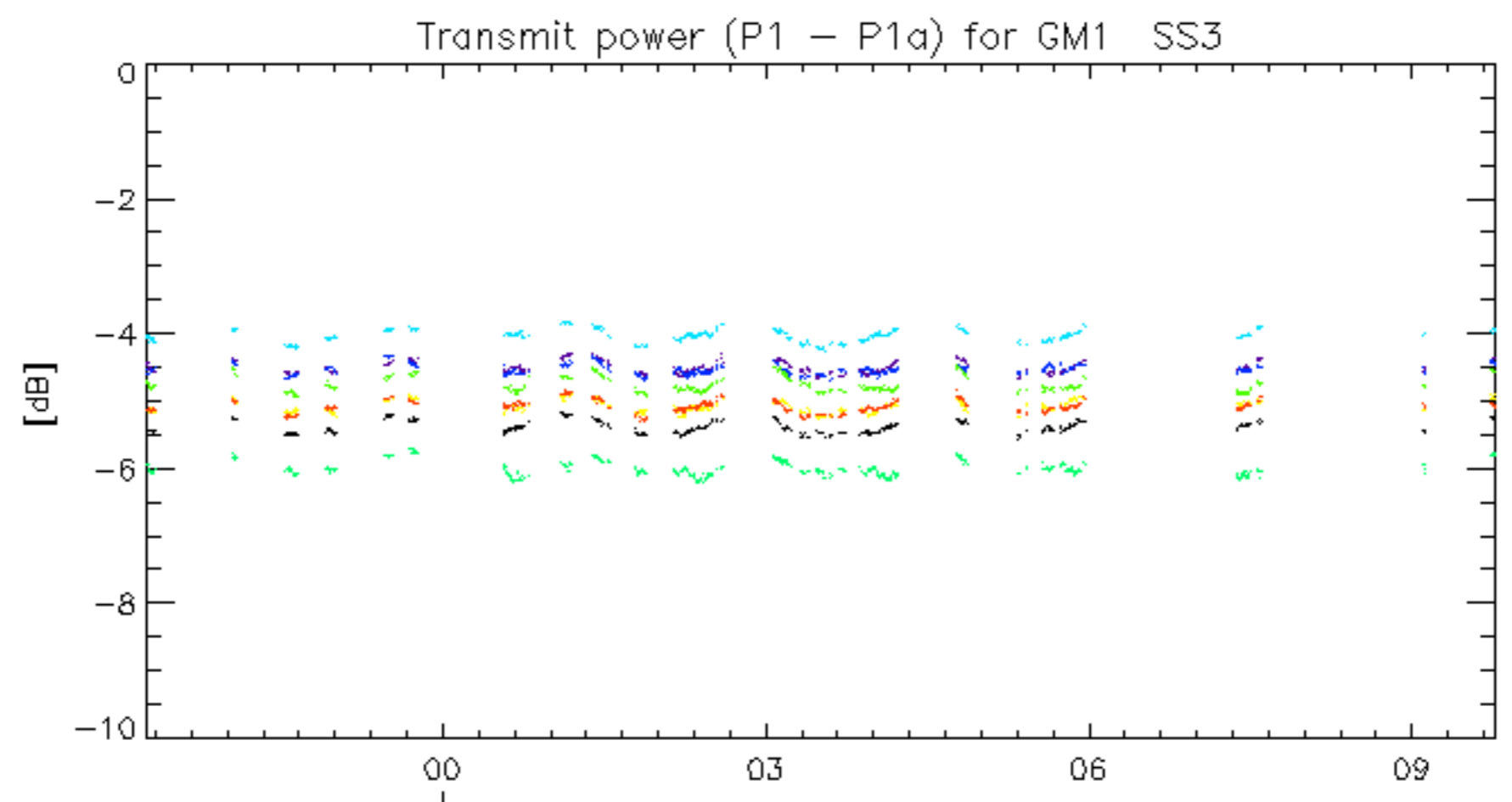




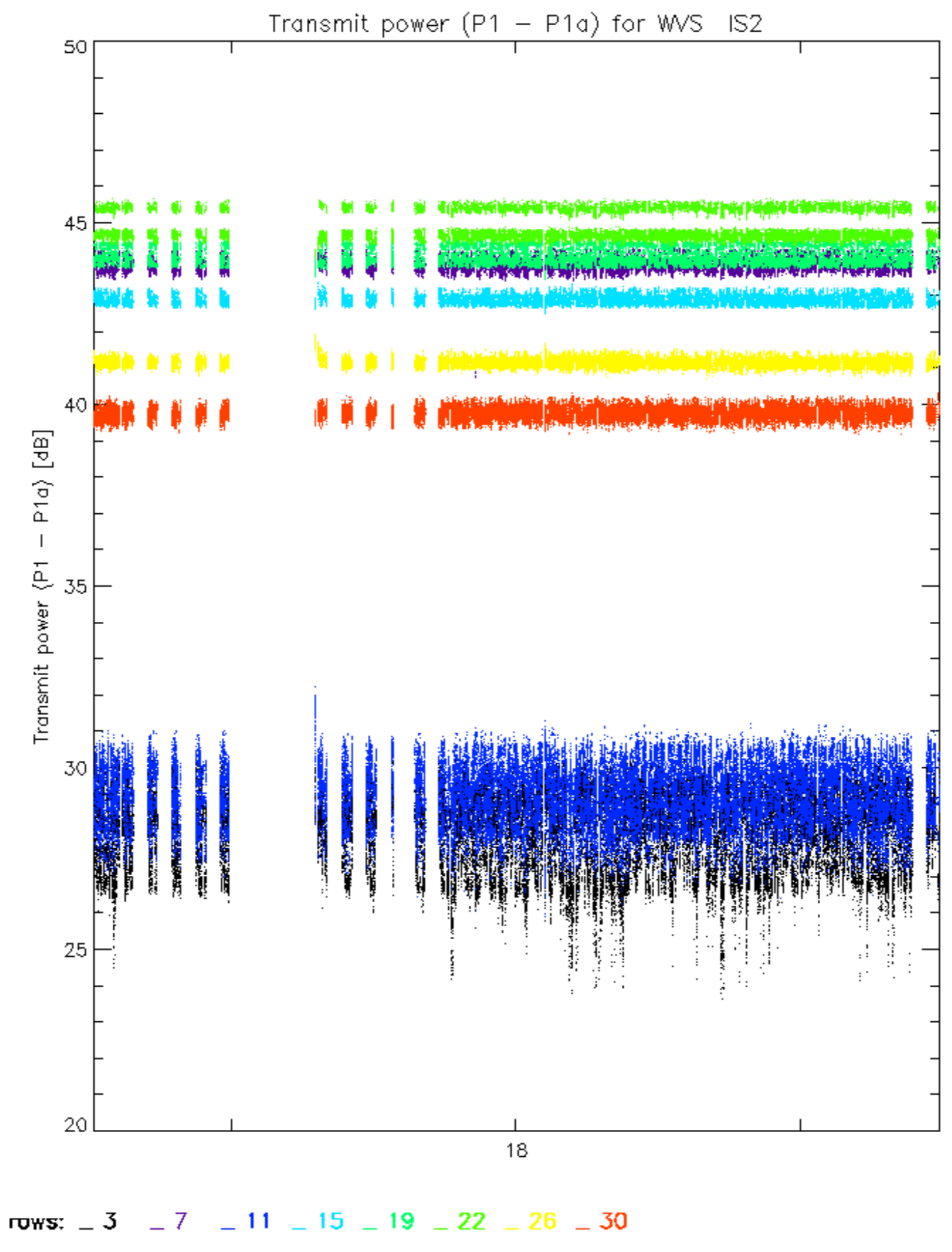
Transmit power (P1 - P1a) for GM1 SS3

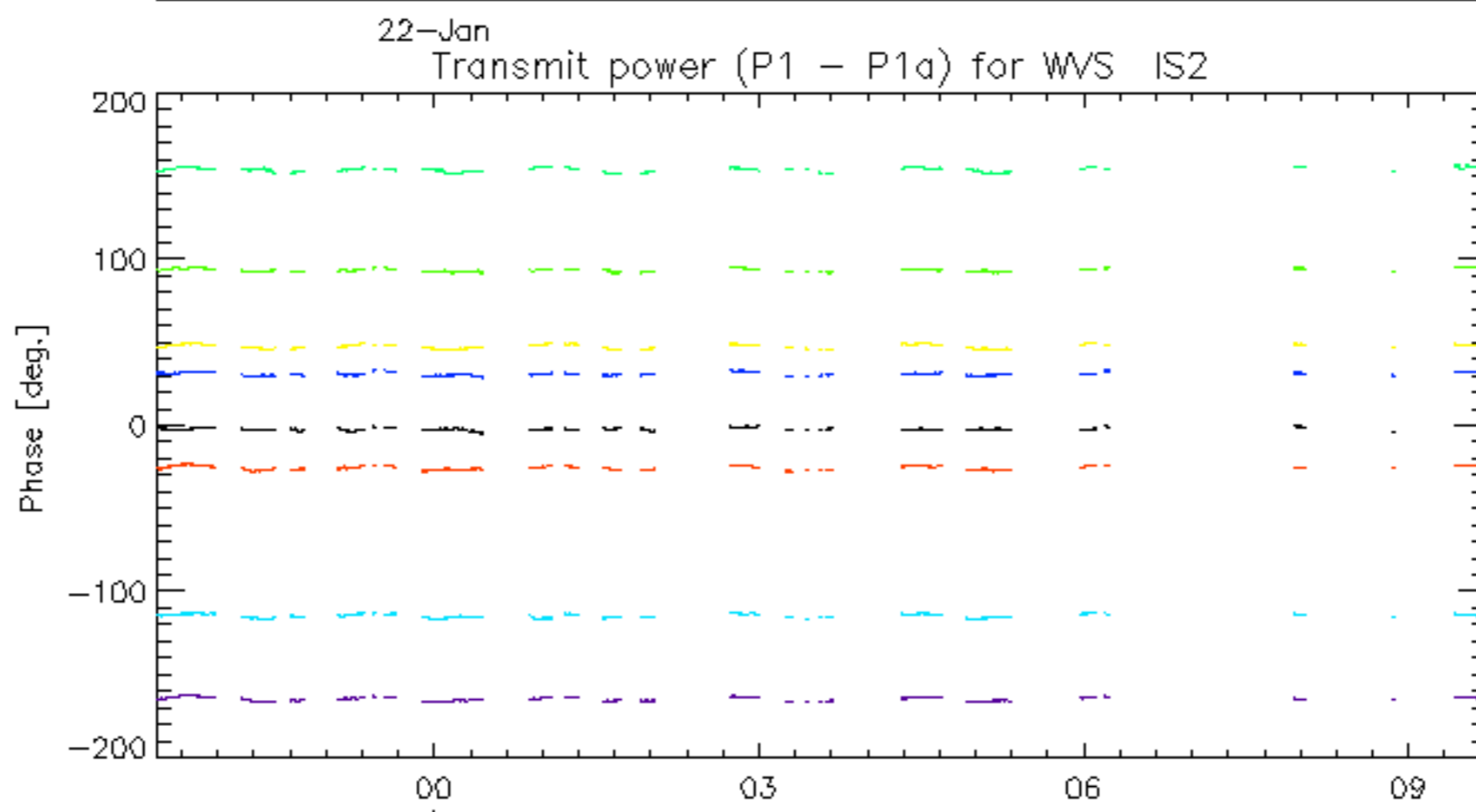
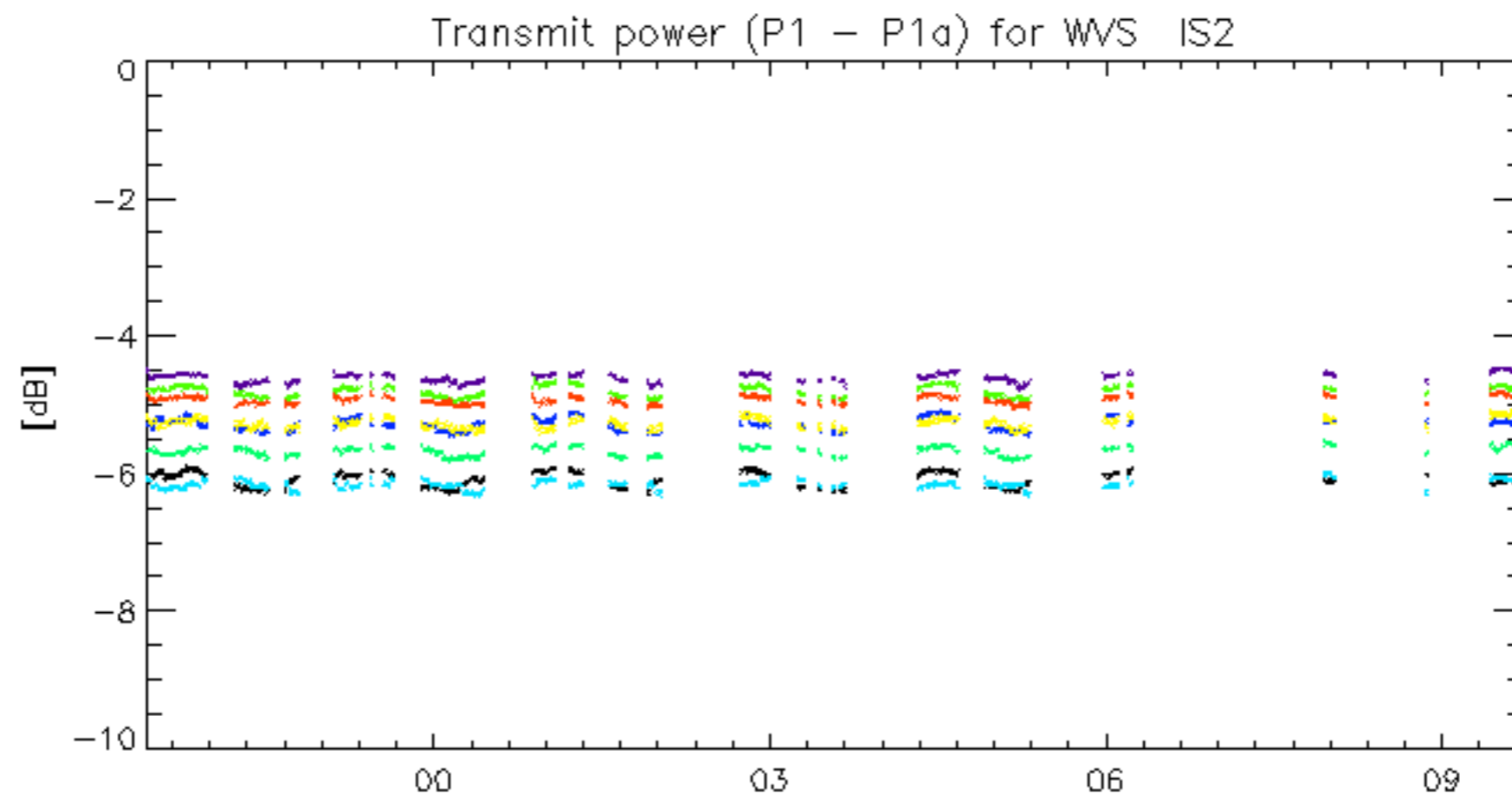


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.