

PRELIMINARY REPORT OF 070120

last update on Sat Jan 20 16:34:22 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 2007-01-19 00:00:00 to 2007-01-20 16:34:22

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	35	52	17	1	17
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	35	52	17	1	17
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	35	52	17	1	17
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	35	52	17	1	17

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	40	37	58	12	30
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	40	37	58	12	30
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	37	58	12	30
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	40	37	58	12	30

2.3 - Browse Visual Inspection

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	20070118 100802
H	20070119 143812

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
<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
<input type="checkbox"/>

P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-16.520655	0.253557	0.076682
7	P1a	-17.258879	0.181757	0.039737
11	P1a	-17.267229	0.440809	-0.055513
15	P1a	-13.037792	0.122554	0.018817
19	P1a	-15.093574	0.111603	-0.109831
22	P1a	-15.797334	0.546951	0.046927
26	P1a	-15.028340	0.182222	0.005115
30	P1a	-17.533604	0.496251	-0.024994

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.964214	0.007142	0.011258
7	P1	-3.130315	0.044104	0.040887
11	P1	-4.115570	0.025280	-0.001325
15	P1	-6.337924	0.016426	-0.018520
19	P1	-3.688430	0.006064	-0.041883
22	P1	-4.680363	0.016526	-0.026303
26	P1	-3.951963	0.009709	0.027384
30	P1	-5.918135	0.008428	-0.003325
3	P1a	-16.520655	0.253557	0.076682
7	P1a	-17.258879	0.181757	0.039737
11	P1a	-17.267229	0.440809	-0.055513
15	P1a	-13.037792	0.122554	0.018817
19	P1a	-15.093574	0.111603	-0.109831
22	P1a	-15.797334	0.546951	0.046927
26	P1a	-15.028340	0.182222	0.005115
30	P1a	-17.533604	0.496251	-0.024994

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.779663	0.089594	0.047739
7	P2	-21.664495	0.088497	0.050396
11	P2	-15.530585	0.098980	0.038425
15	P2	-7.091439	0.102441	0.028747

19	P2	-9.171656	0.096340	0.036597
22	P2	-18.220757	0.088138	0.016813
26	P2	-16.592810	0.101427	0.026138
30	P2	-19.432545	0.083100	0.051391

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.237144	0.008120	0.000554
7	P3	-8.237144	0.008120	0.000554
11	P3	-8.237144	0.008120	0.000554
15	P3	-8.237144	0.008120	0.000554
19	P3	-8.237144	0.008120	0.000554
22	P3	-8.237144	0.008120	0.000554
26	P3	-8.237163	0.008120	0.000649
30	P3	-8.237163	0.008120	0.000649

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	-11.723575	0.074171	-0.012384
7	P1a	-10.035110	0.086086	0.055374
11	P1a	-10.366109	0.088655	-0.061626
15	P1a	-10.744001	0.160317	-0.060057
19	P1a	-15.749010	0.101918	-0.046031
22	P1a	-21.507240	1.481106	0.308805
26	P1a	-15.956697	0.311071	0.277962
30	P1a	-17.947382	0.380930	-0.208685

P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P1	-3.920543	0.012972	-0.008861
7	P1	-2.468495	0.062460	0.047418
11	P1	-2.829064	0.015128	0.007995
15	P1	-3.715887	0.032147	-0.072034
19	P1	-3.552759	0.018580	-0.025961
22	P1	-5.004095	0.022228	-0.003411
26	P1	-6.043172	0.023943	-0.016071
30	P1	-5.348590	0.035649	0.006392
3	P1a	-11.723575	0.074171	-0.012384
7	P1a	-10.035110	0.086086	0.055374
11	P1a	-10.366109	0.088655	-0.061626
15	P1a	-10.744001	0.160317	-0.060057
19	P1a	-15.749010	0.101918	-0.046031
22	P1a	-21.507240	1.481106	0.308805
26	P1a	-15.956697	0.311071	0.277962
30	P1a	-17.947382	0.380930	-0.208685

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.416763	0.091751	0.129517
7	P2	-22.182686	0.216694	0.066935
11	P2	-10.825611	0.084396	0.090800
15	P2	-4.954431	0.200691	0.063264
19	P2	-6.941999	0.210870	0.060259
22	P2	-8.231668	0.118031	0.023098
26	P2	-24.343632	0.147377	0.002641
30	P2	-21.898687	0.130361	0.090364

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.086782	0.002803	0.015664
7	P3	-8.086544	0.002787	0.015545
11	P3	-8.086701	0.002806	0.015882
15	P3	-8.086552	0.002794	0.015266
19	P3	-8.086667	0.002799	0.015860
22	P3	-8.086554	0.002795	0.015085
26	P3	-8.086887	0.002798	0.015666
30	P3	-8.086600	0.002793	0.015864

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	0.000573424
	stdev	1.61656e-07
MEAN Q	mean	0.000510939
	stdev	2.11327e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140484
	stdev	0.00116157
STDEV Q	mean	0.140883
	stdev	0.00118126



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007011[890]

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_GM1_1PNPDK20070110_150643_000007062054_00326_25430_2010.N1	0	17
ASA_WSM_1PNPDE20070110_163701_000001582054_00327_25431_1812.N1	0	14
ASA_WSM_1PNPDE20070118_112601_000001642054_00438_25542_2222.N1	0	72
ASA_WSM_1PNPDE20070118_190517_000001102054_00443_25547_2397.N1	0	63
ASA_WSM_1PNPDE20070119_023247_000000852054_00447_25551_2914.N1	0	31
ASA_WSM_1PNPDK20070119_185133_000001842054_00457_25561_4540.N1	0	38





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)

Acsending

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

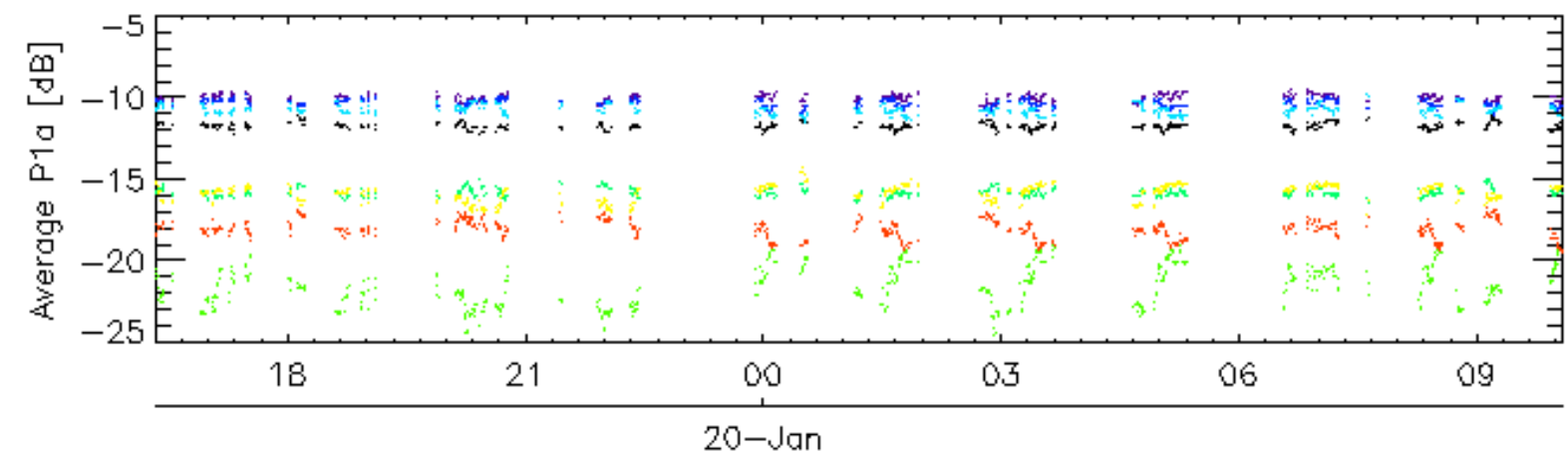
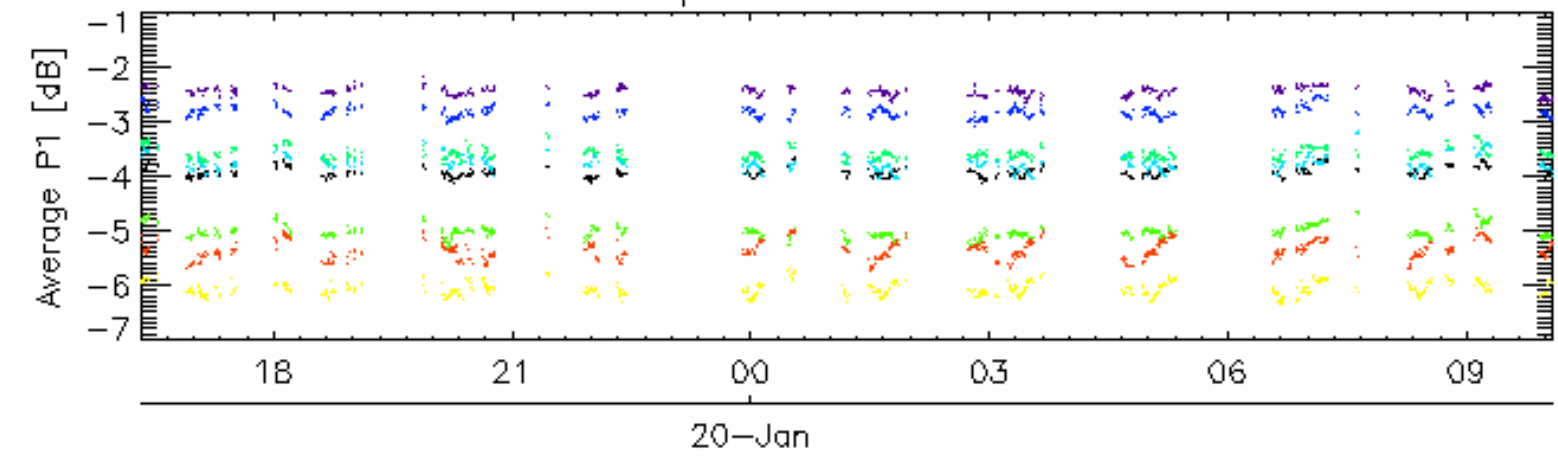
Acsending

Descending

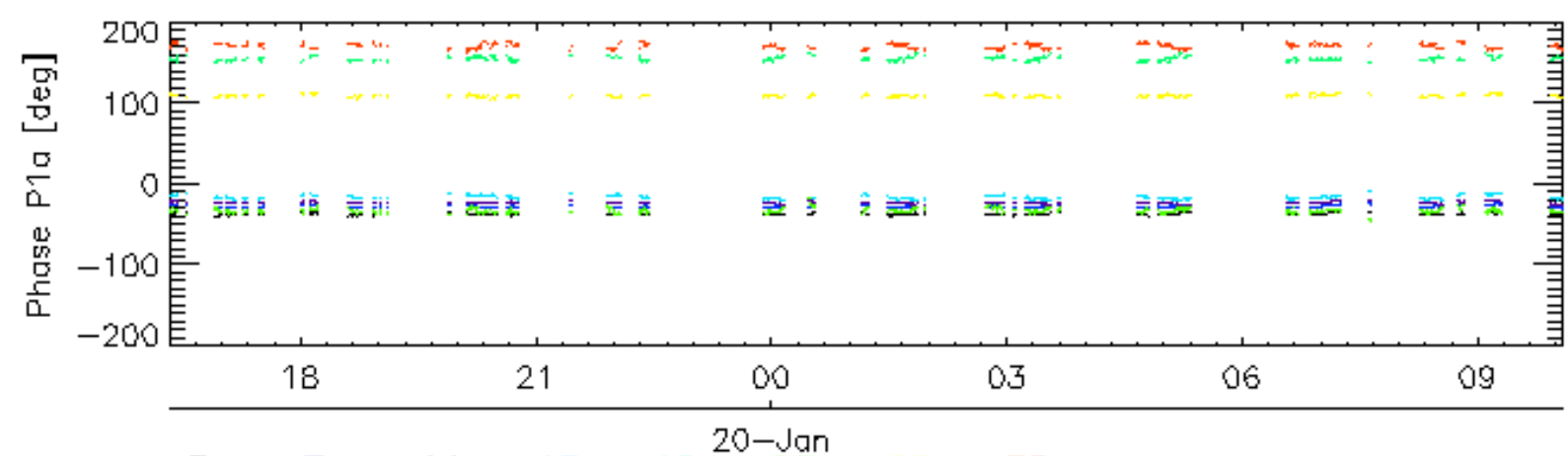
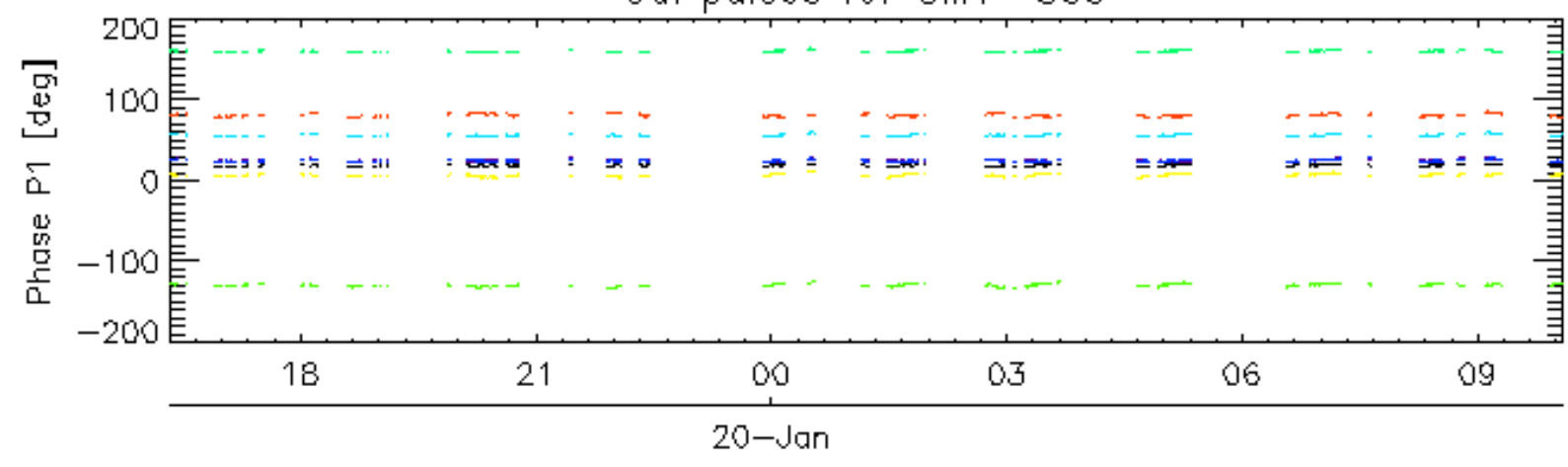
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

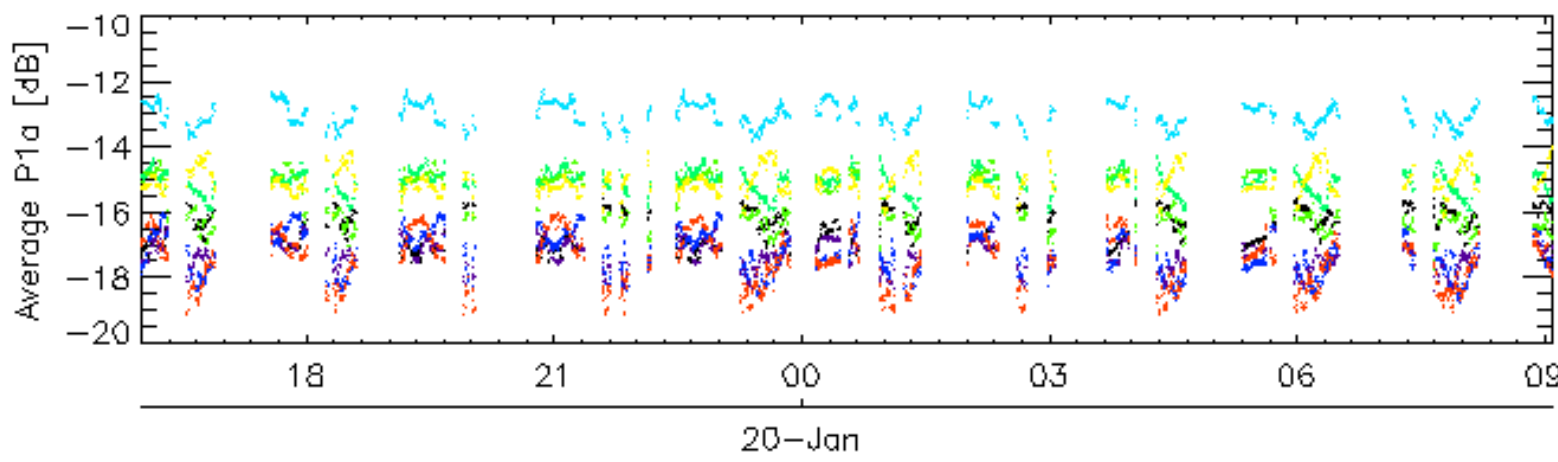
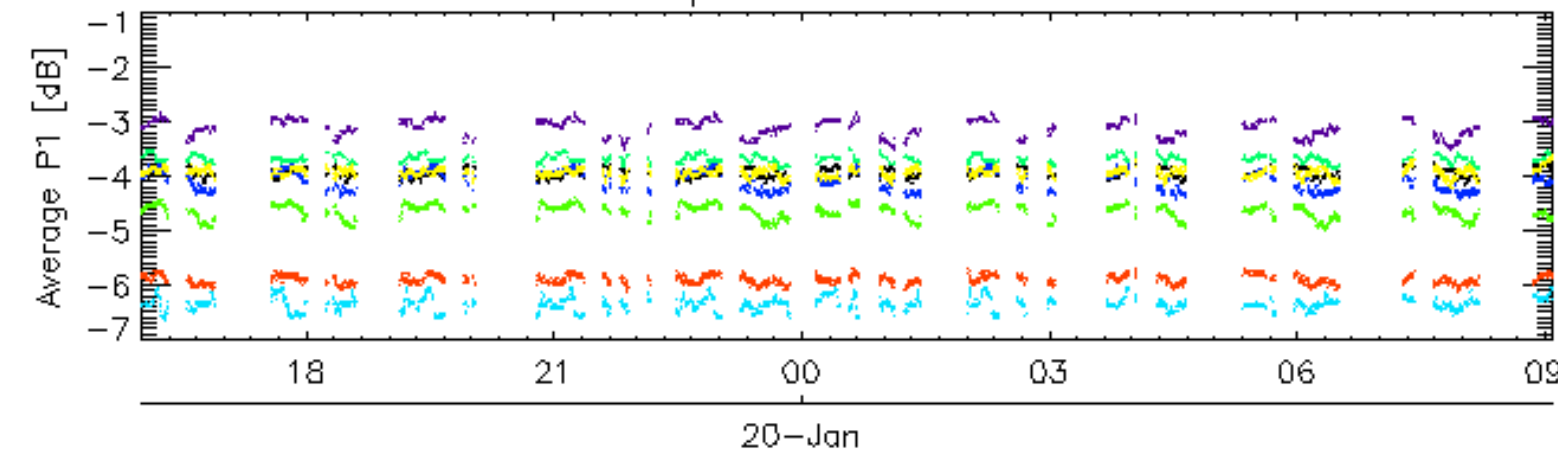


Cal pulses for GM1 SS3

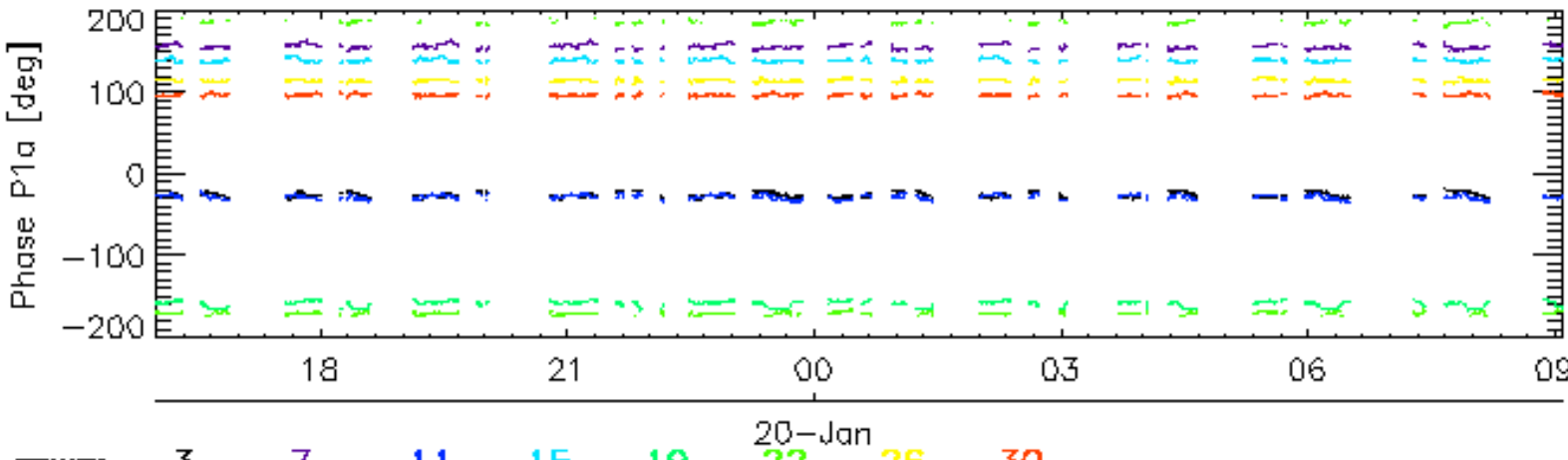
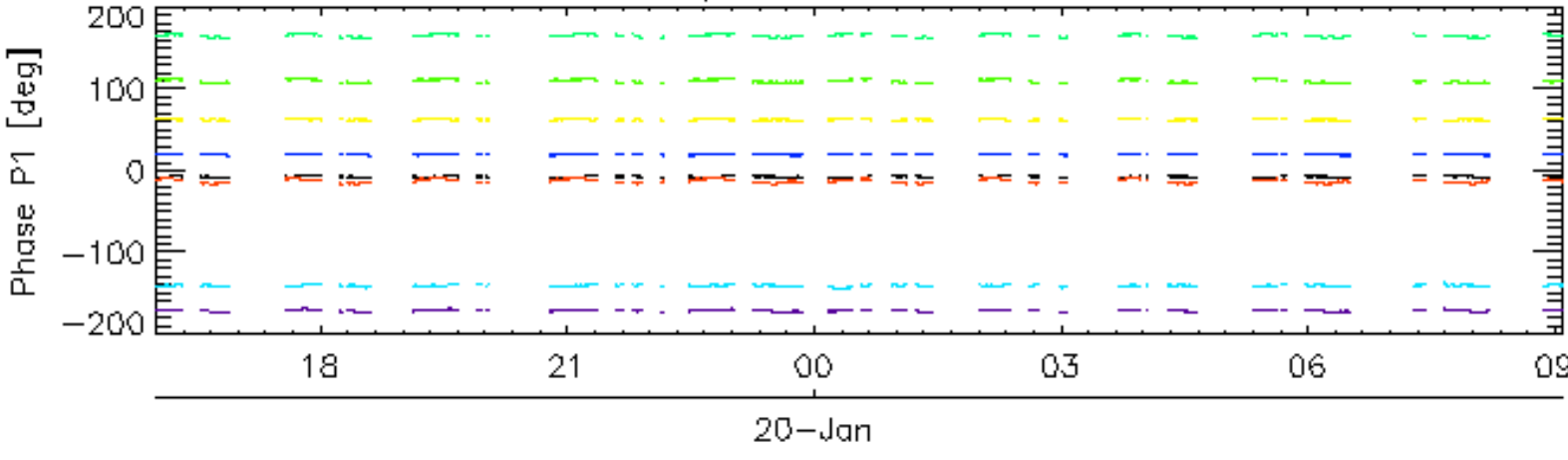


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

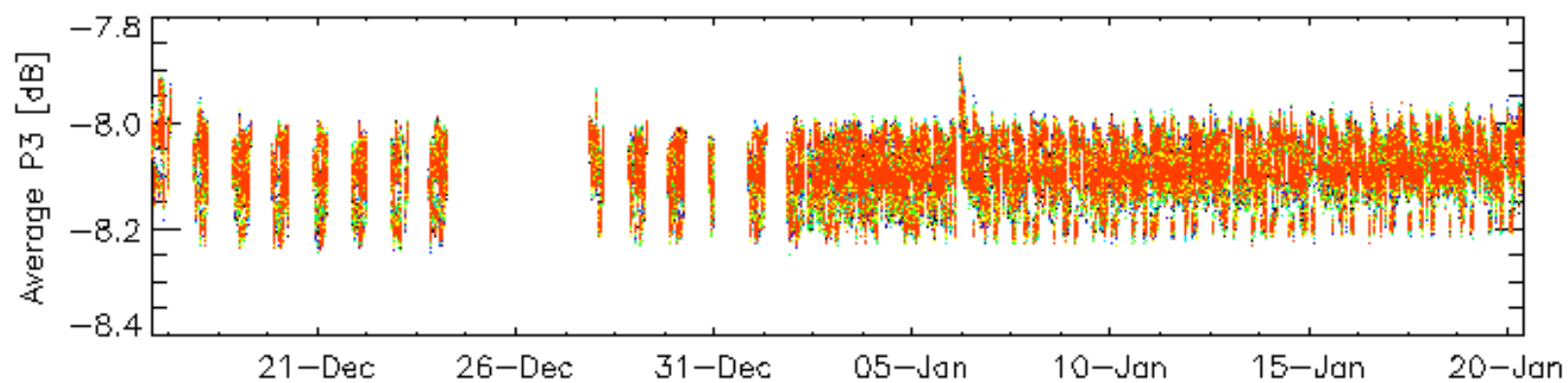
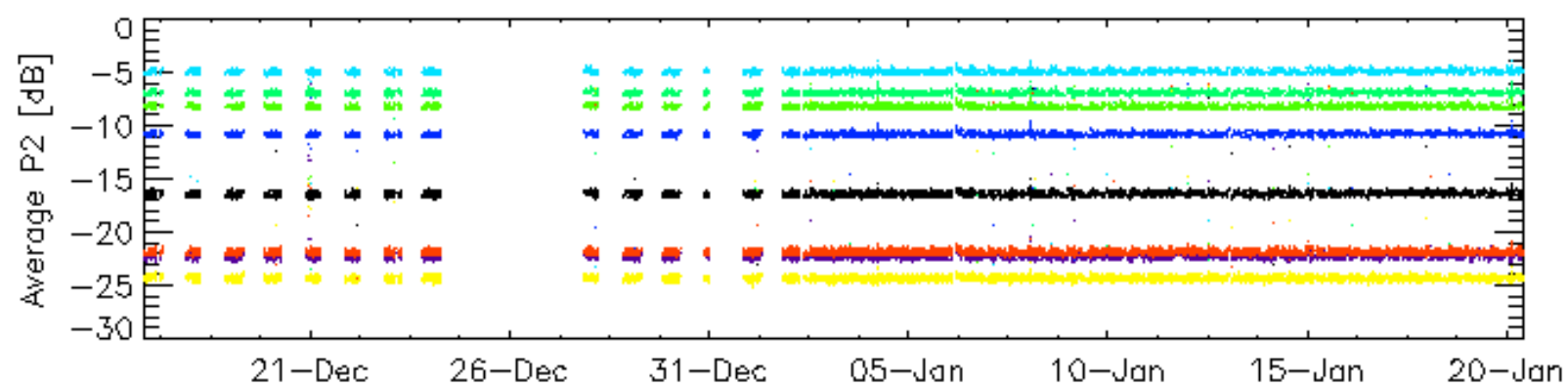
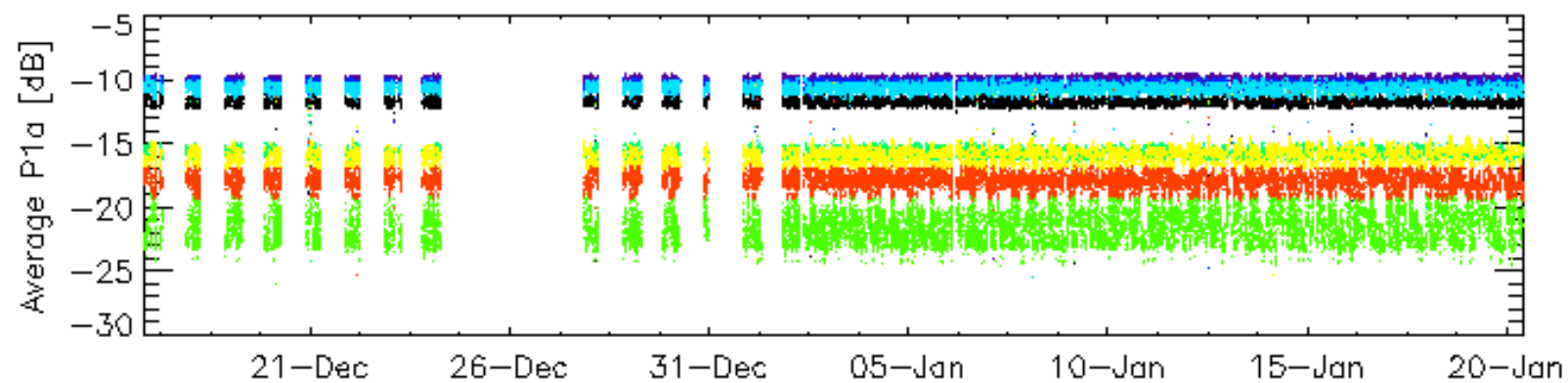
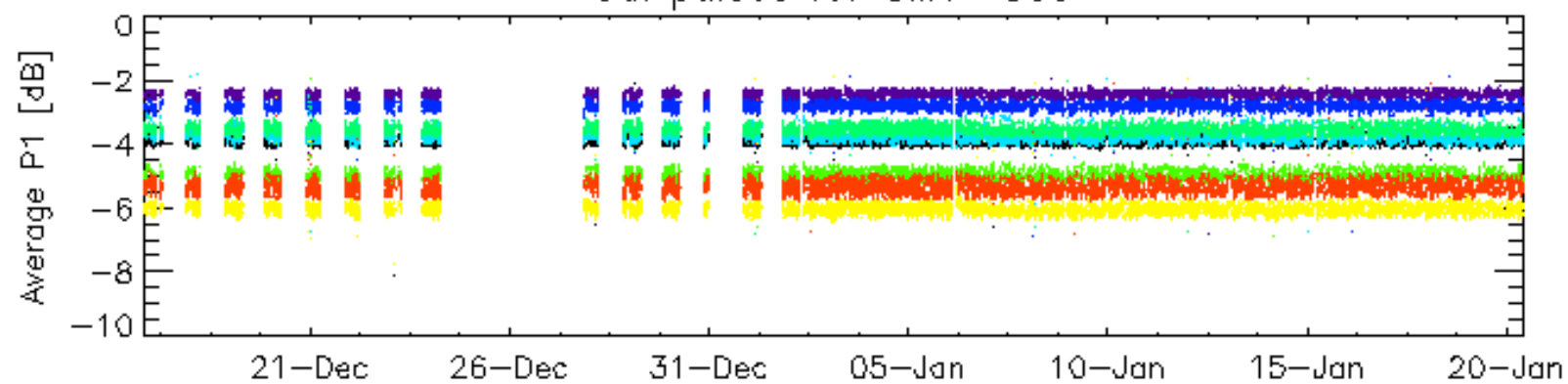


Cal pulses for WVS IS2



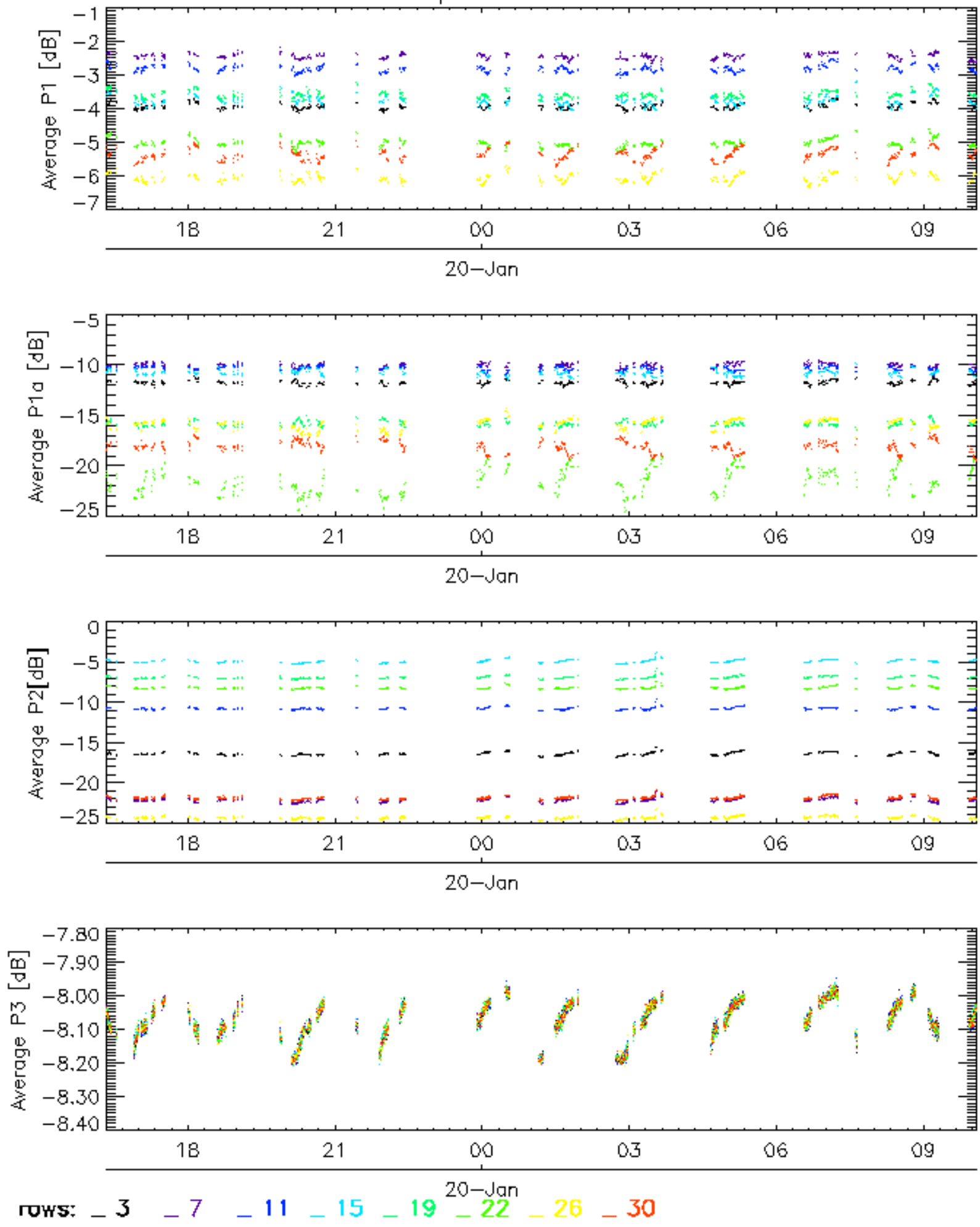
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

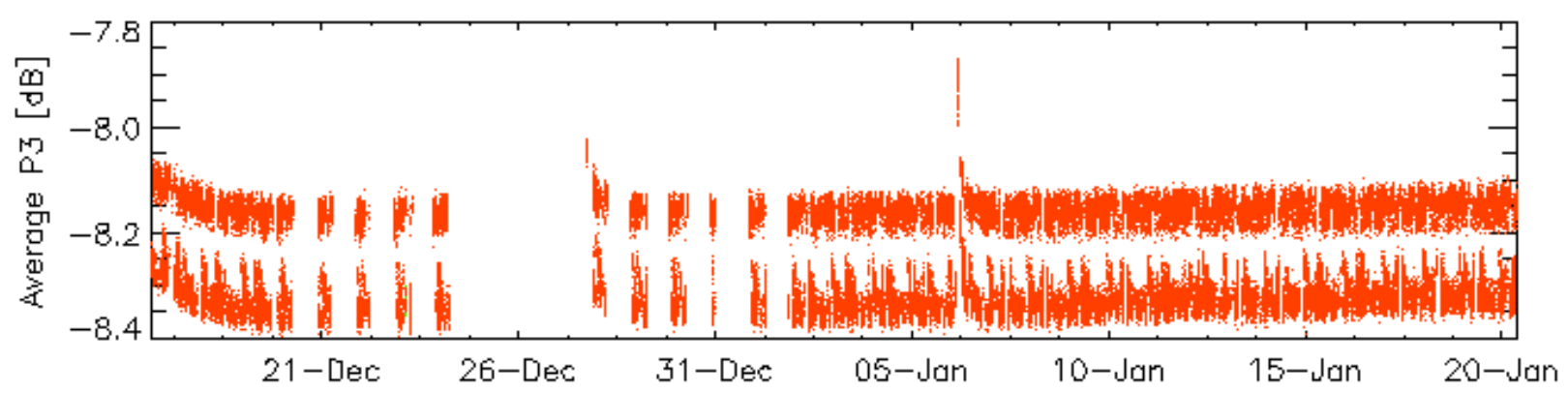
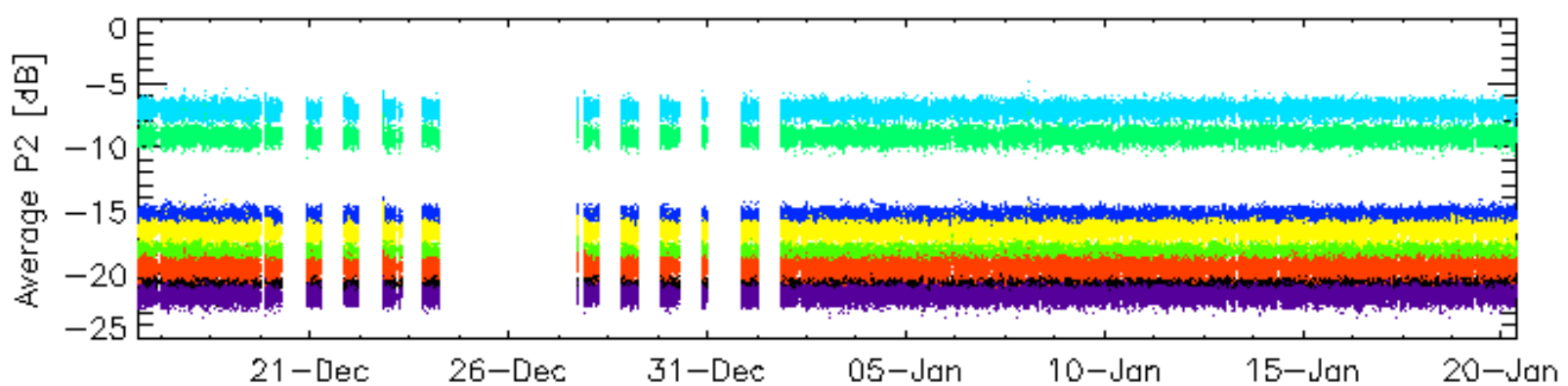
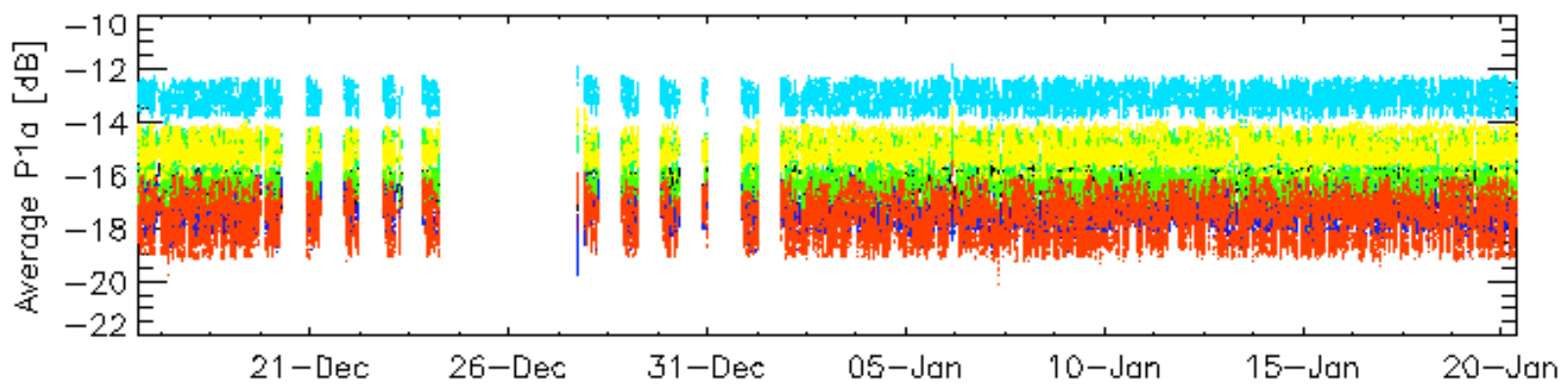
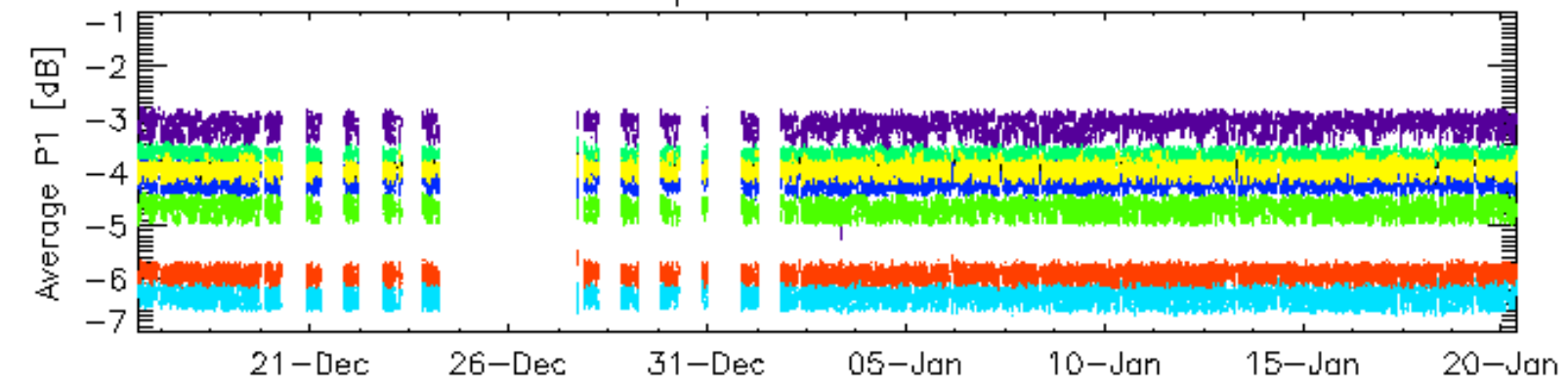


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

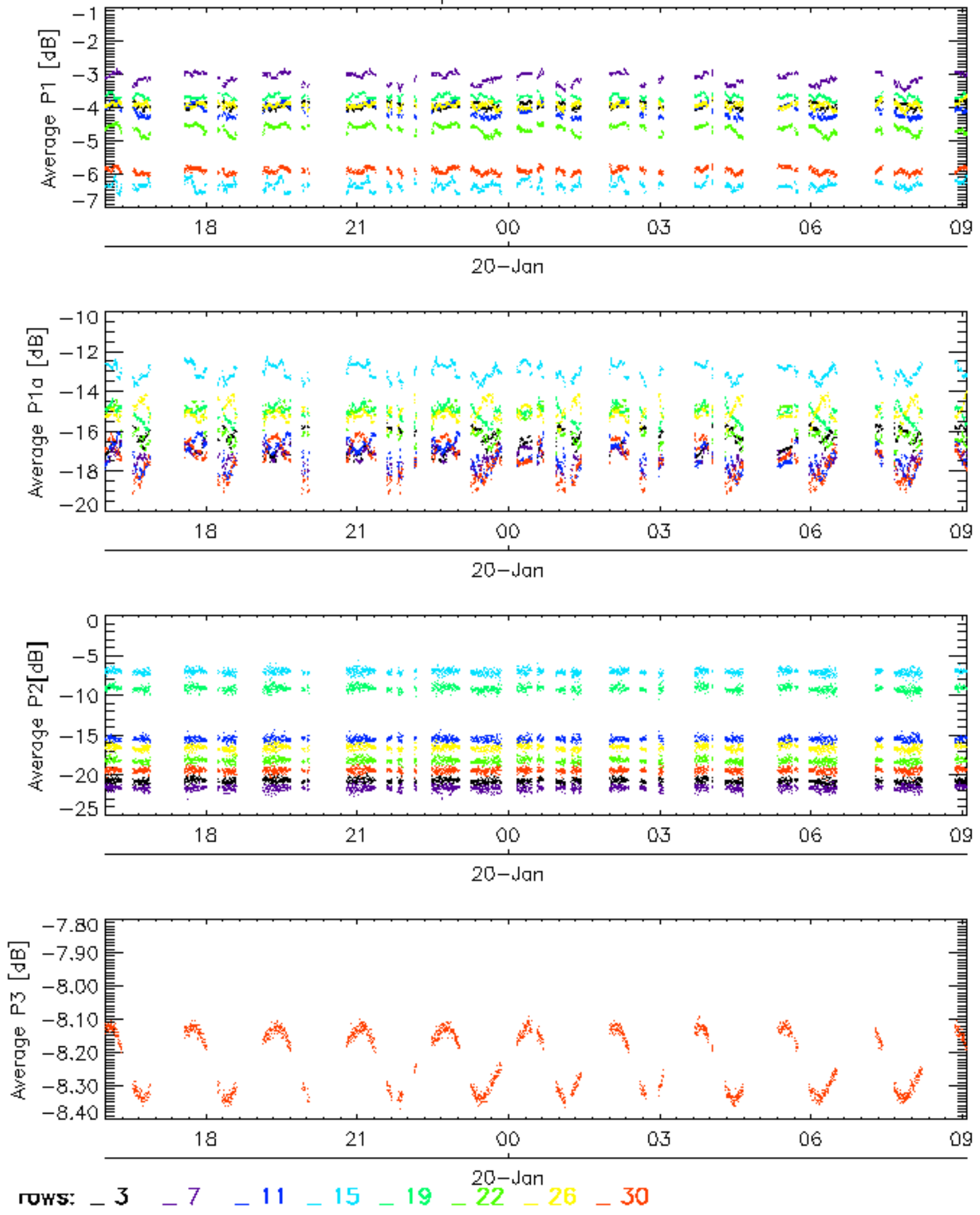


Cal pulses for WVS IS2

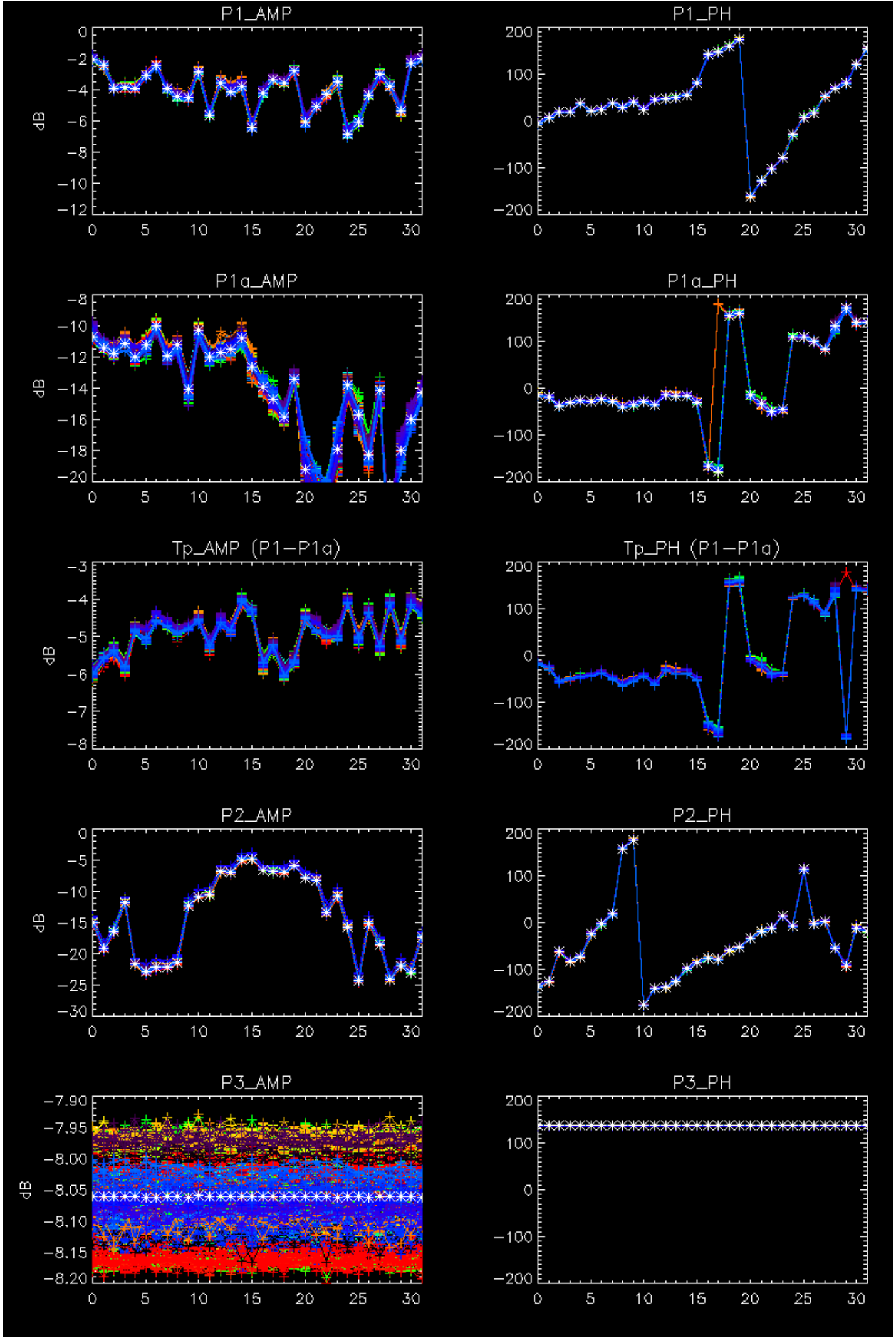


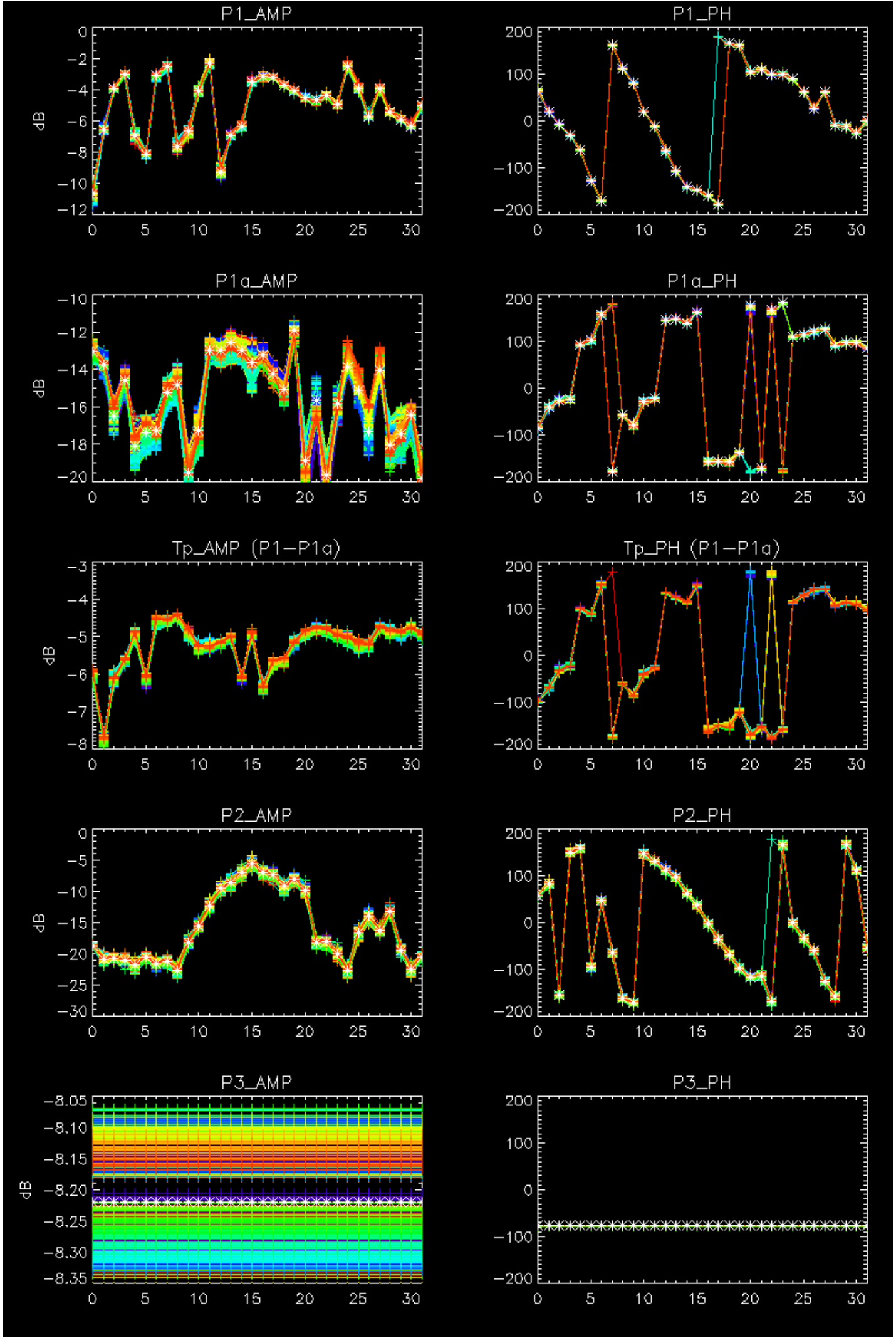
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



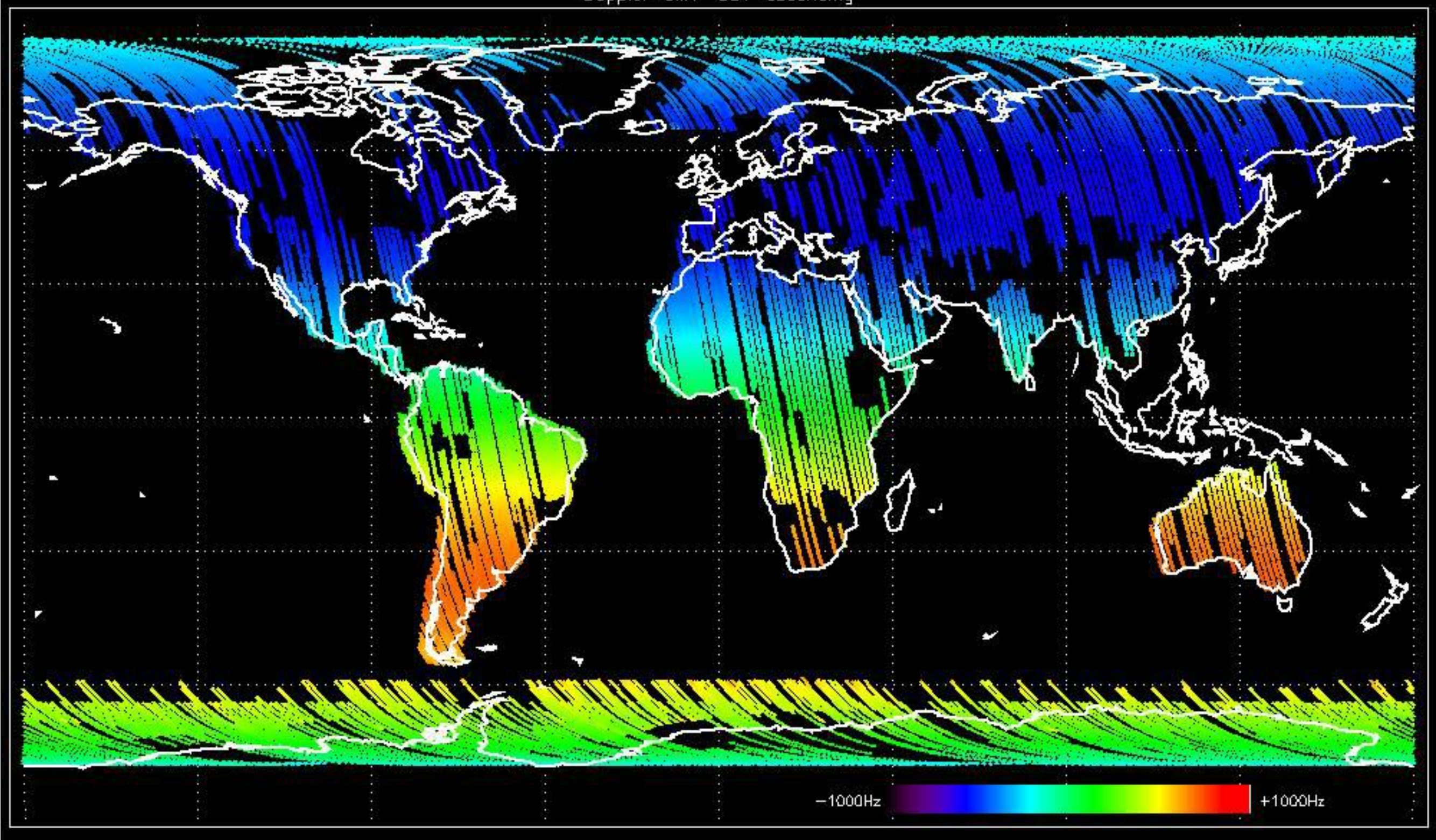
No anomalies observed.



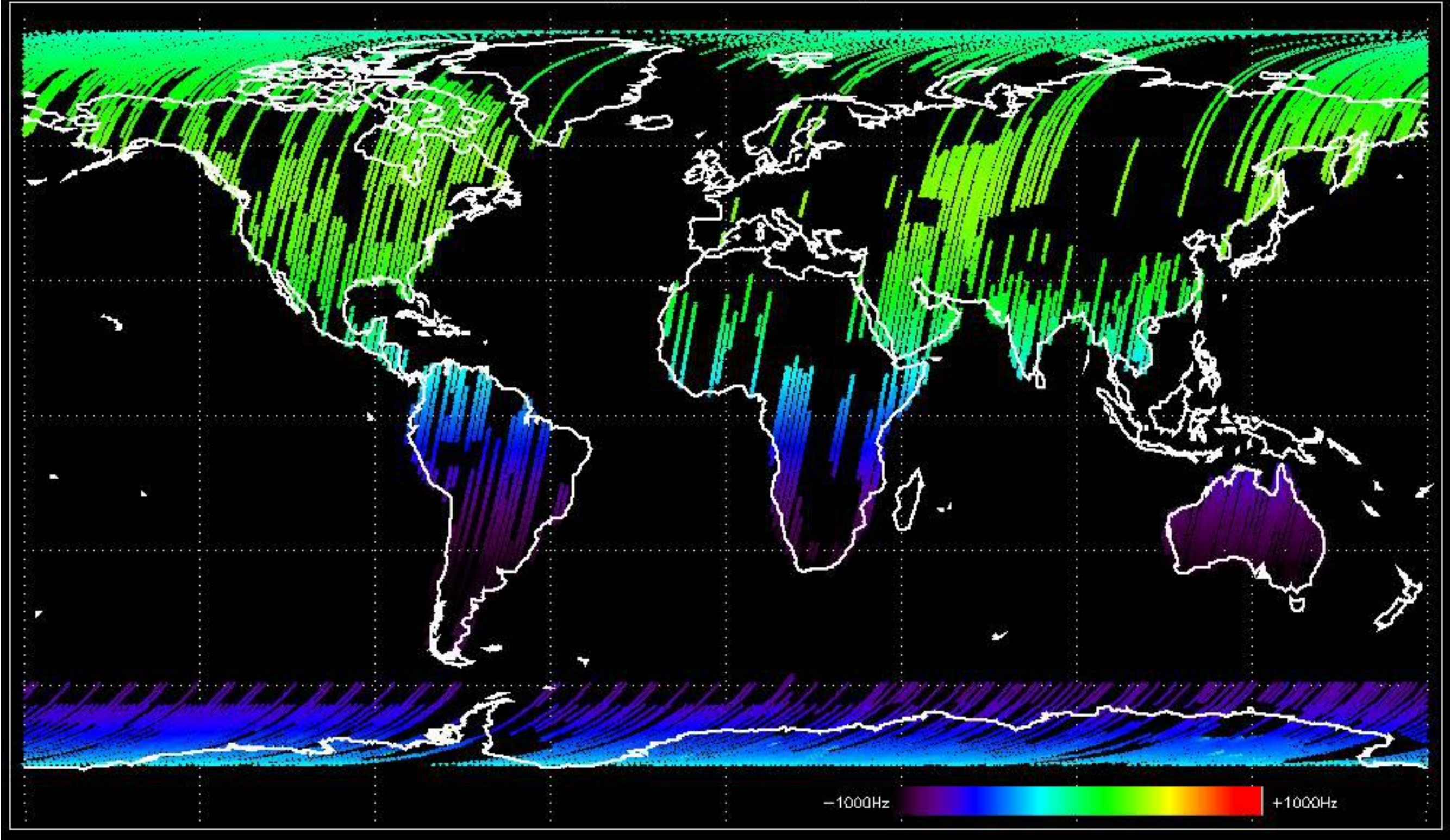


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

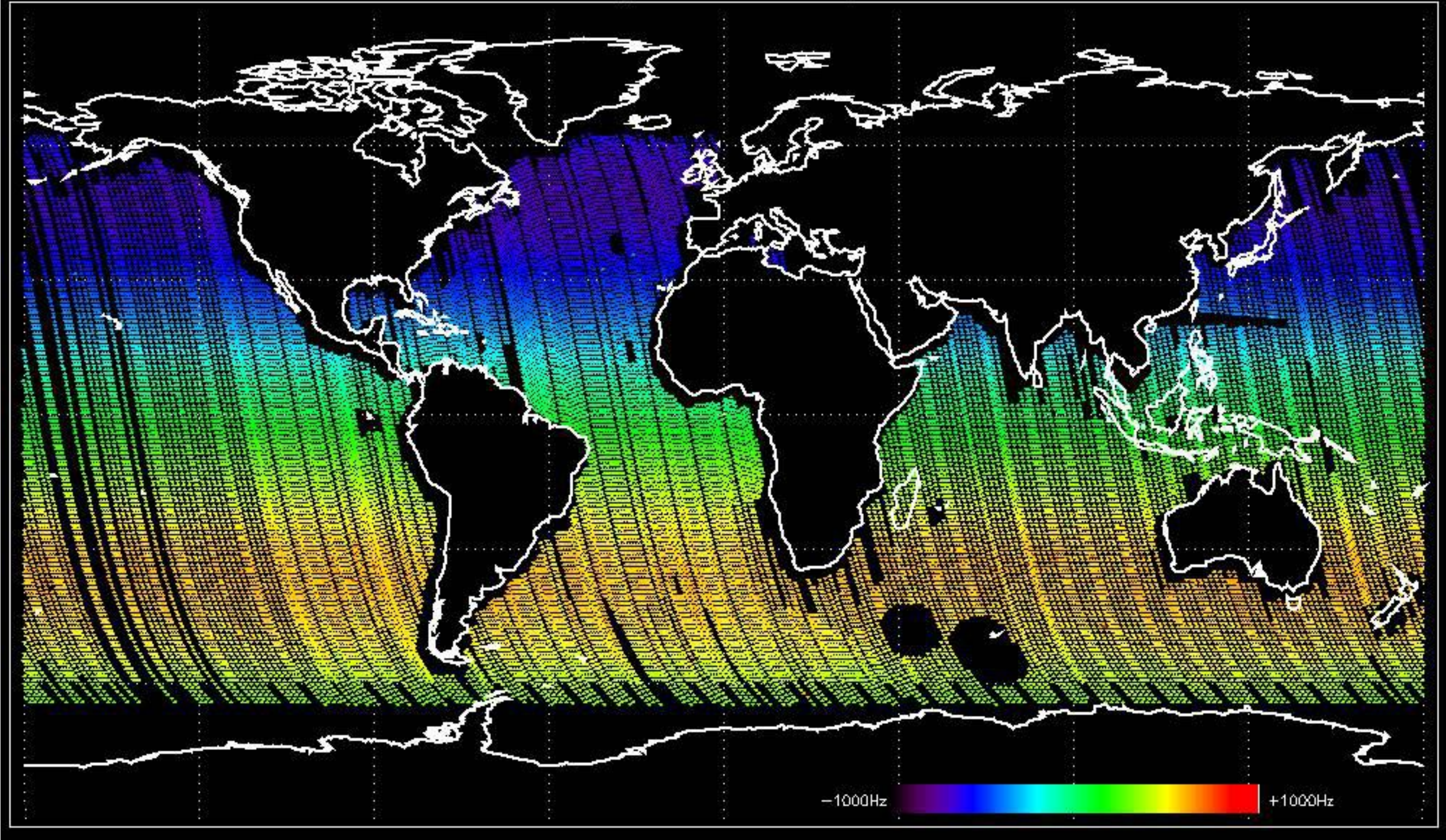
Doppler 'GM1' 'SS1' ascending



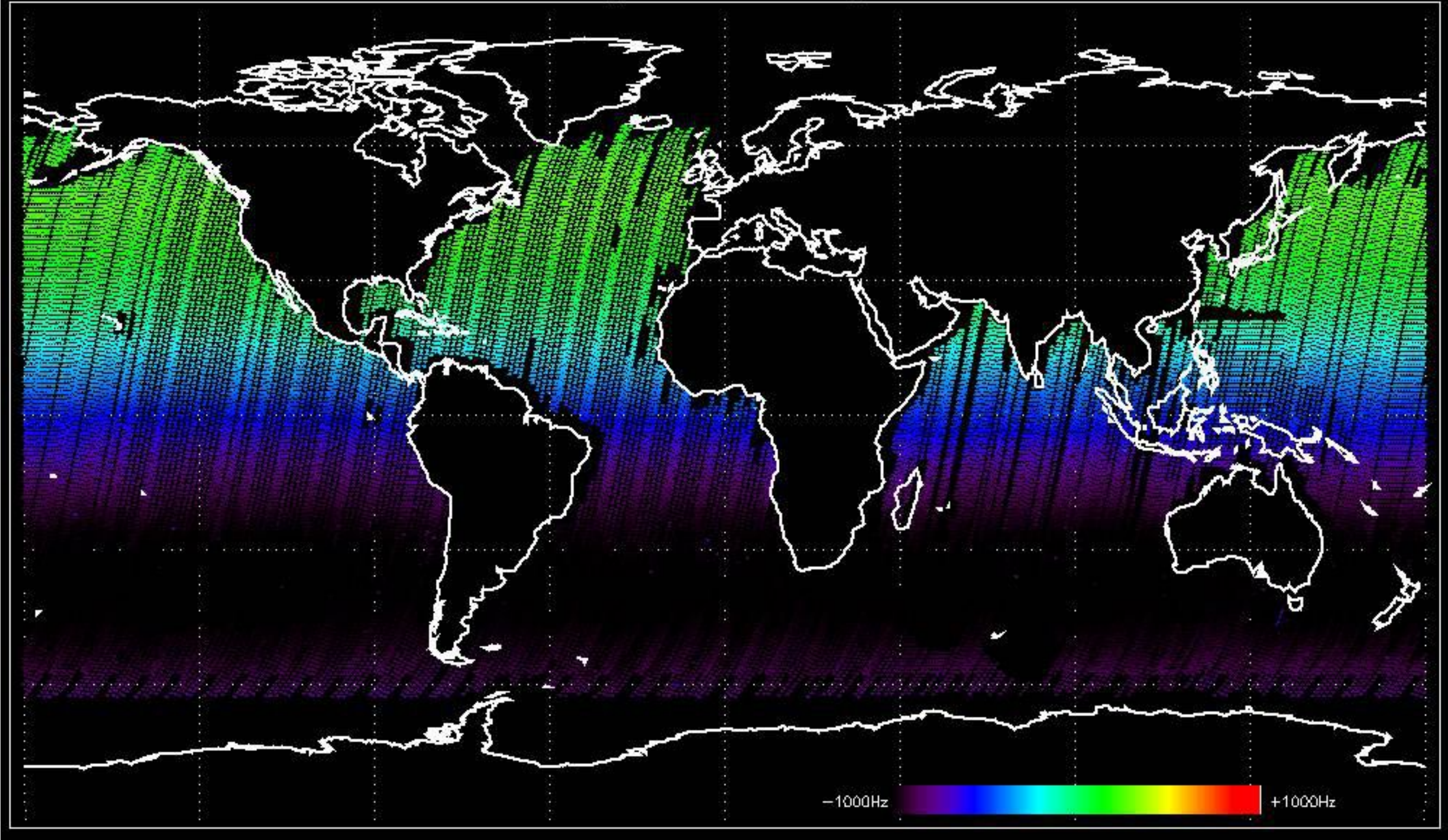
Doppler 'GM1' 'SS1' descending



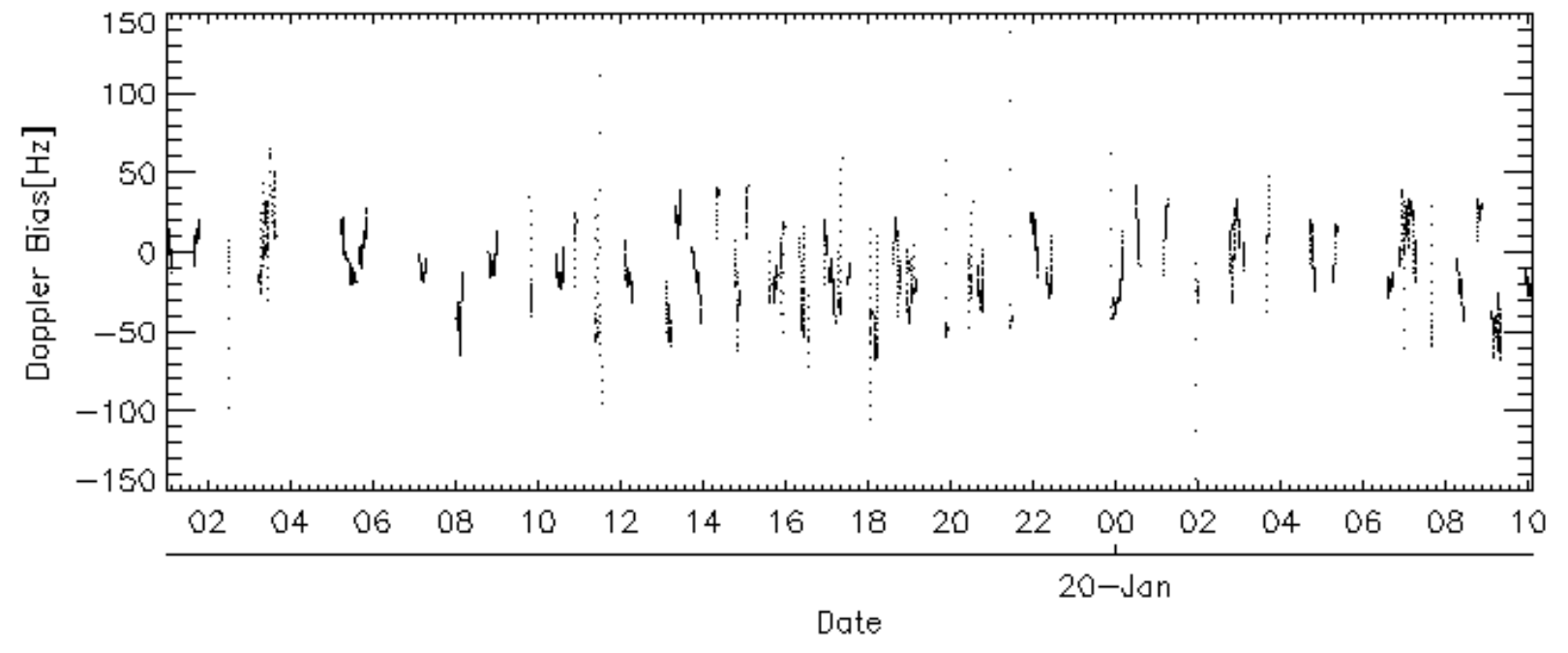
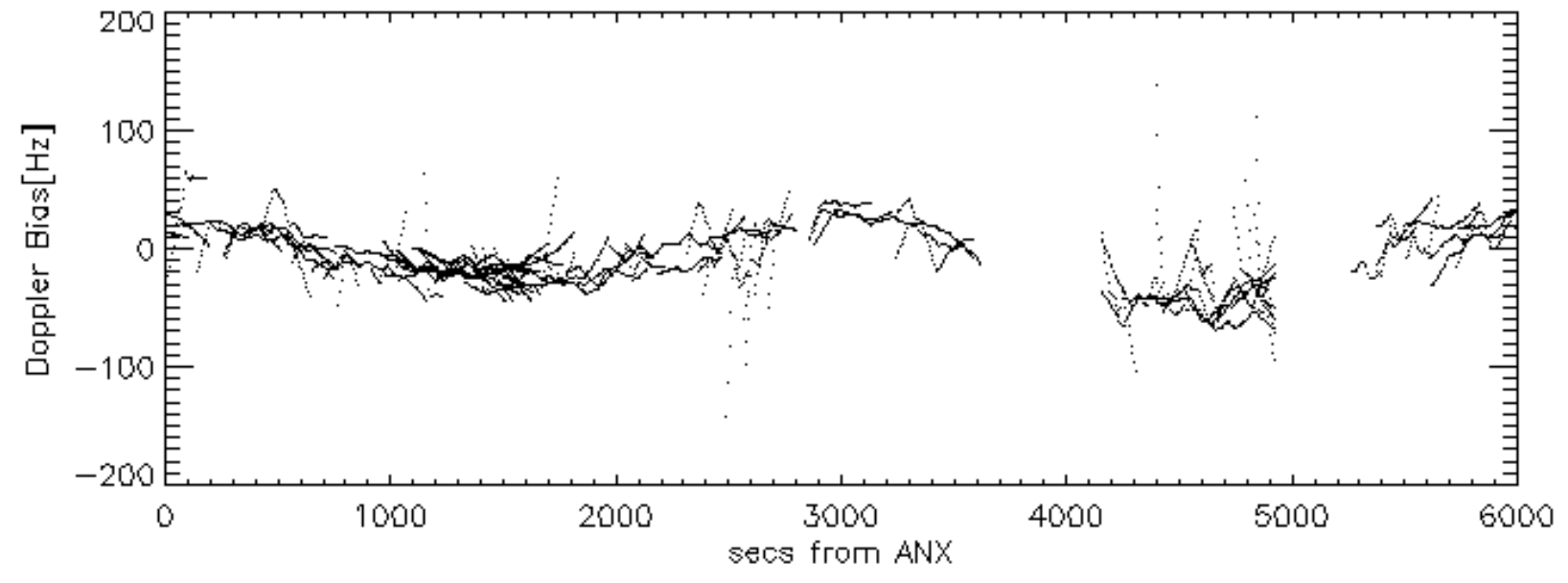
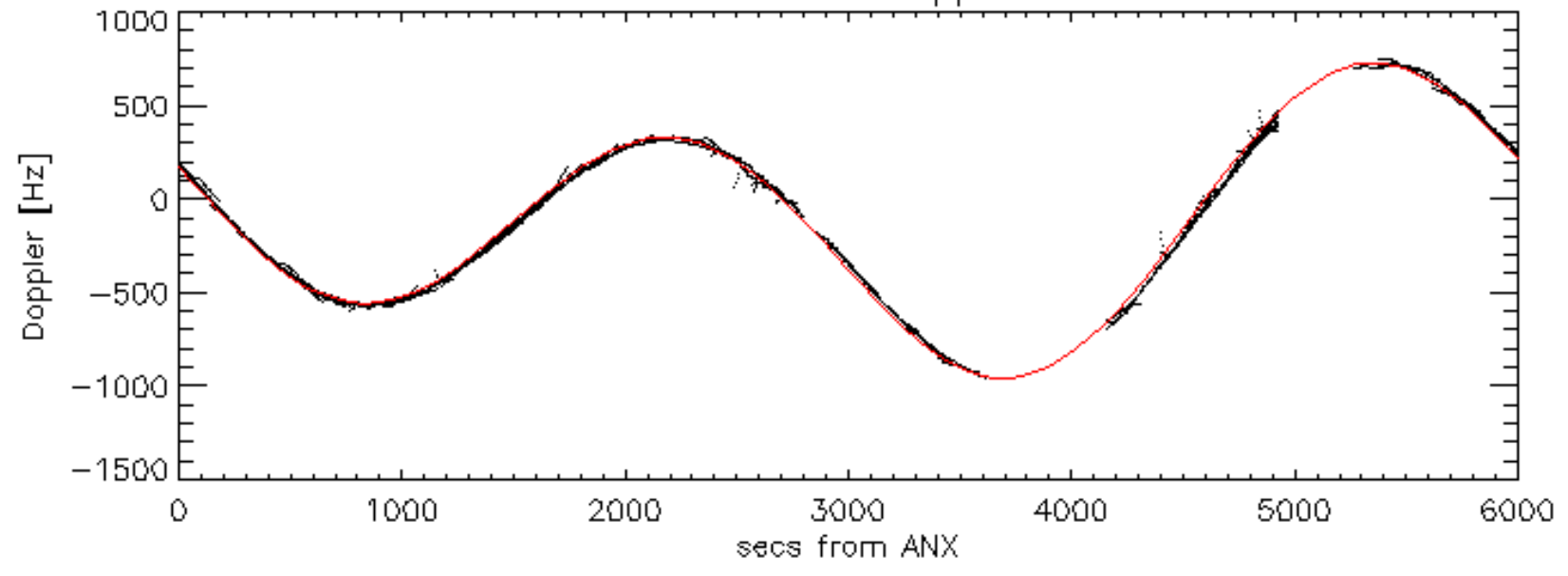
Doppler 'WVS' 'IS2' ascending

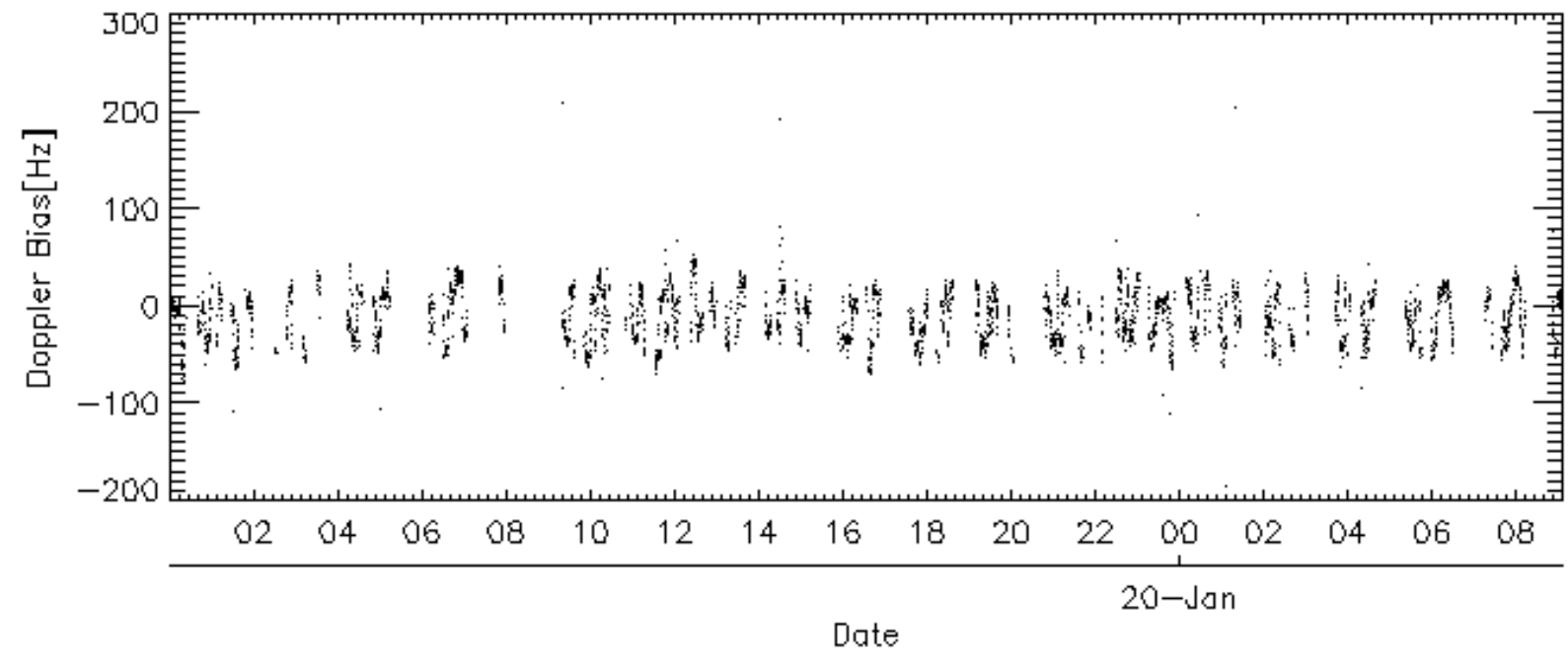
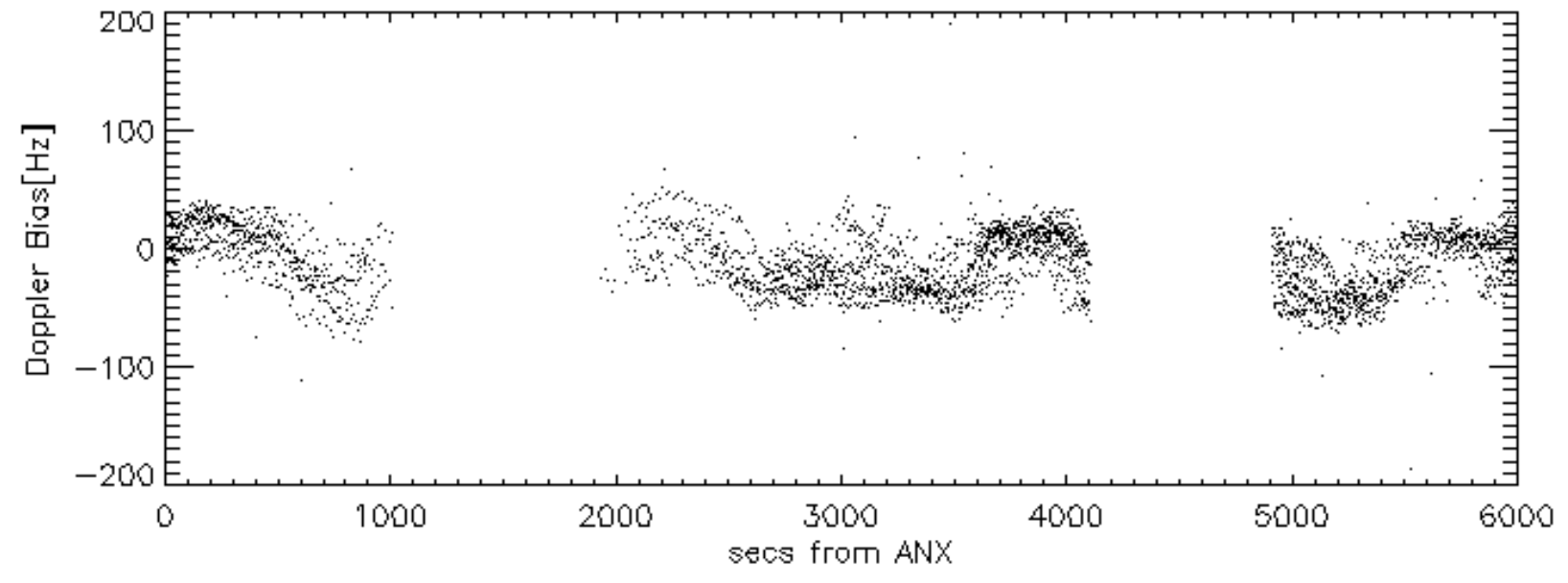
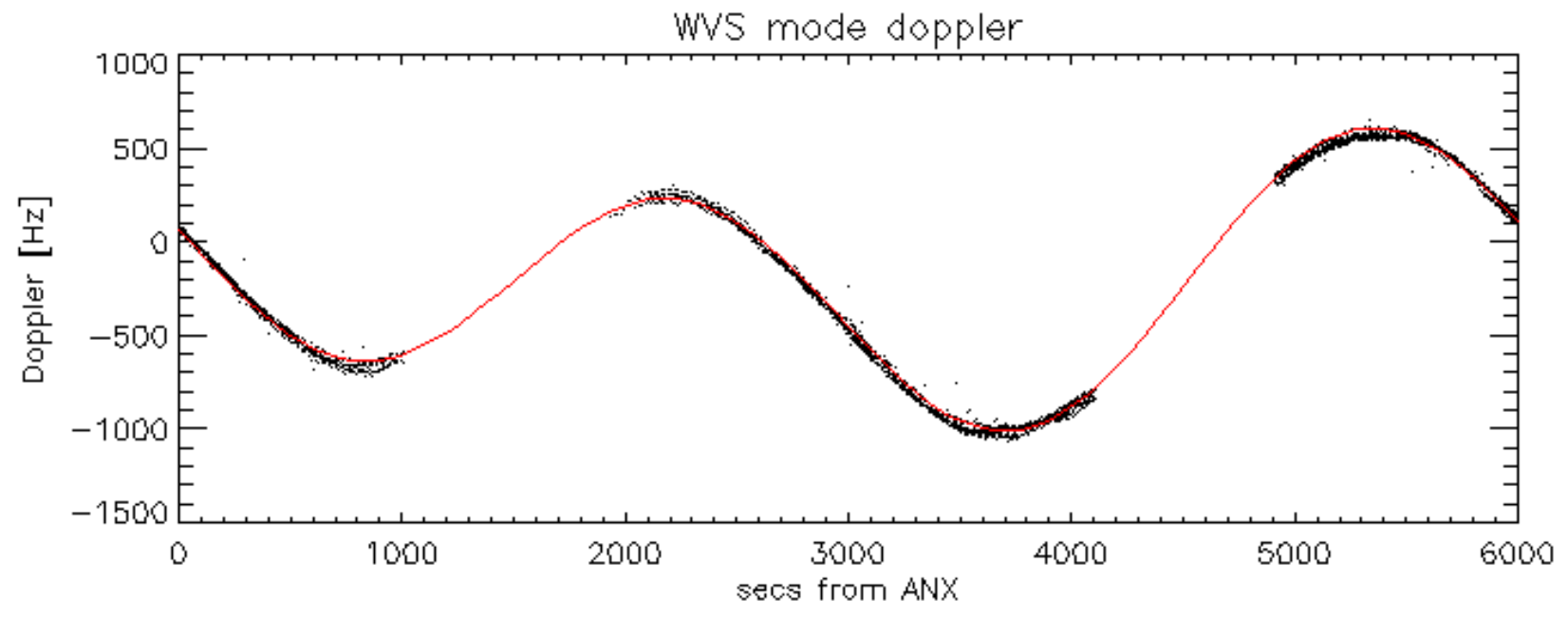


Doppler 'WVS' 'IS2' descending

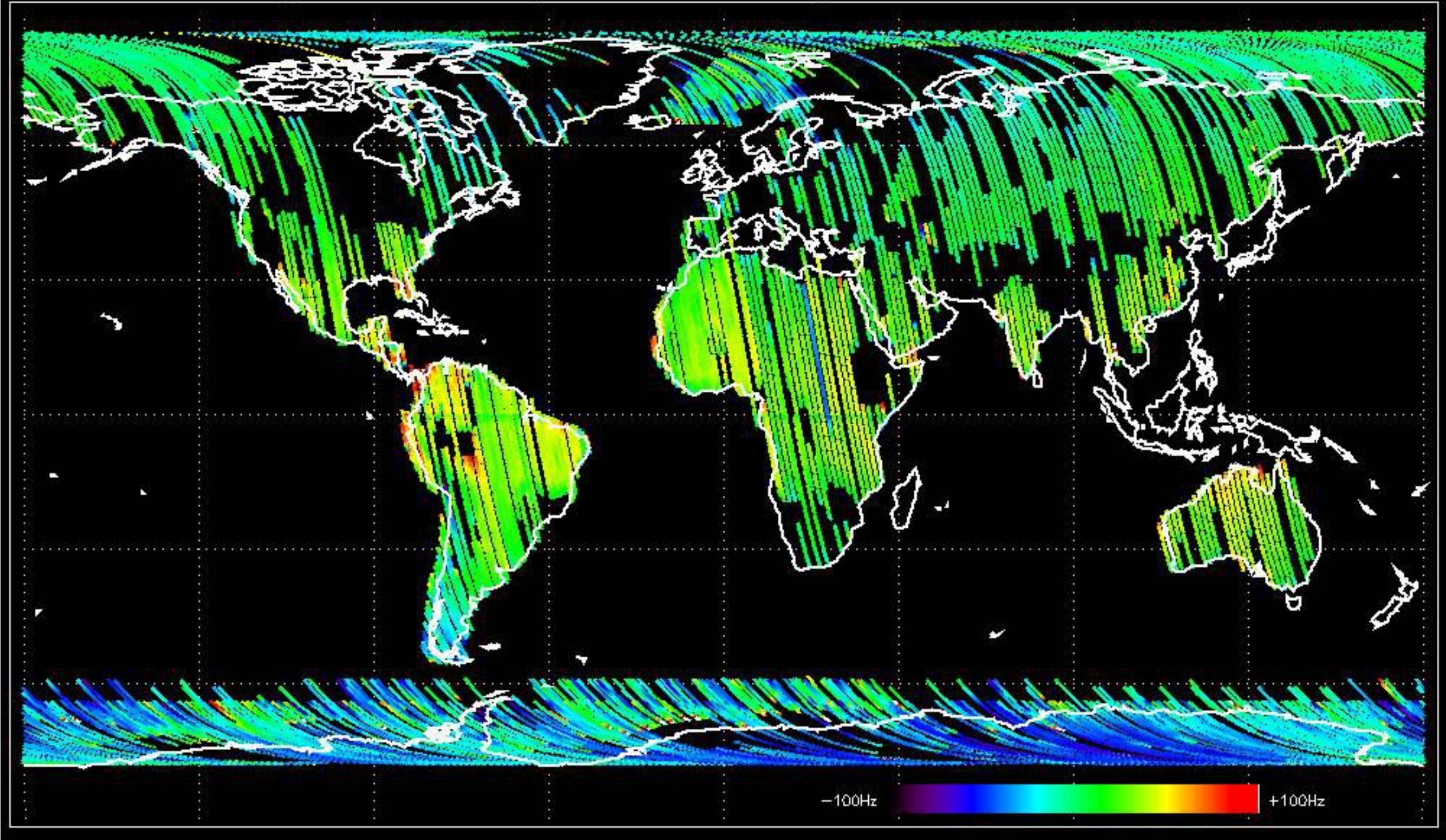


GM1 mode doppler

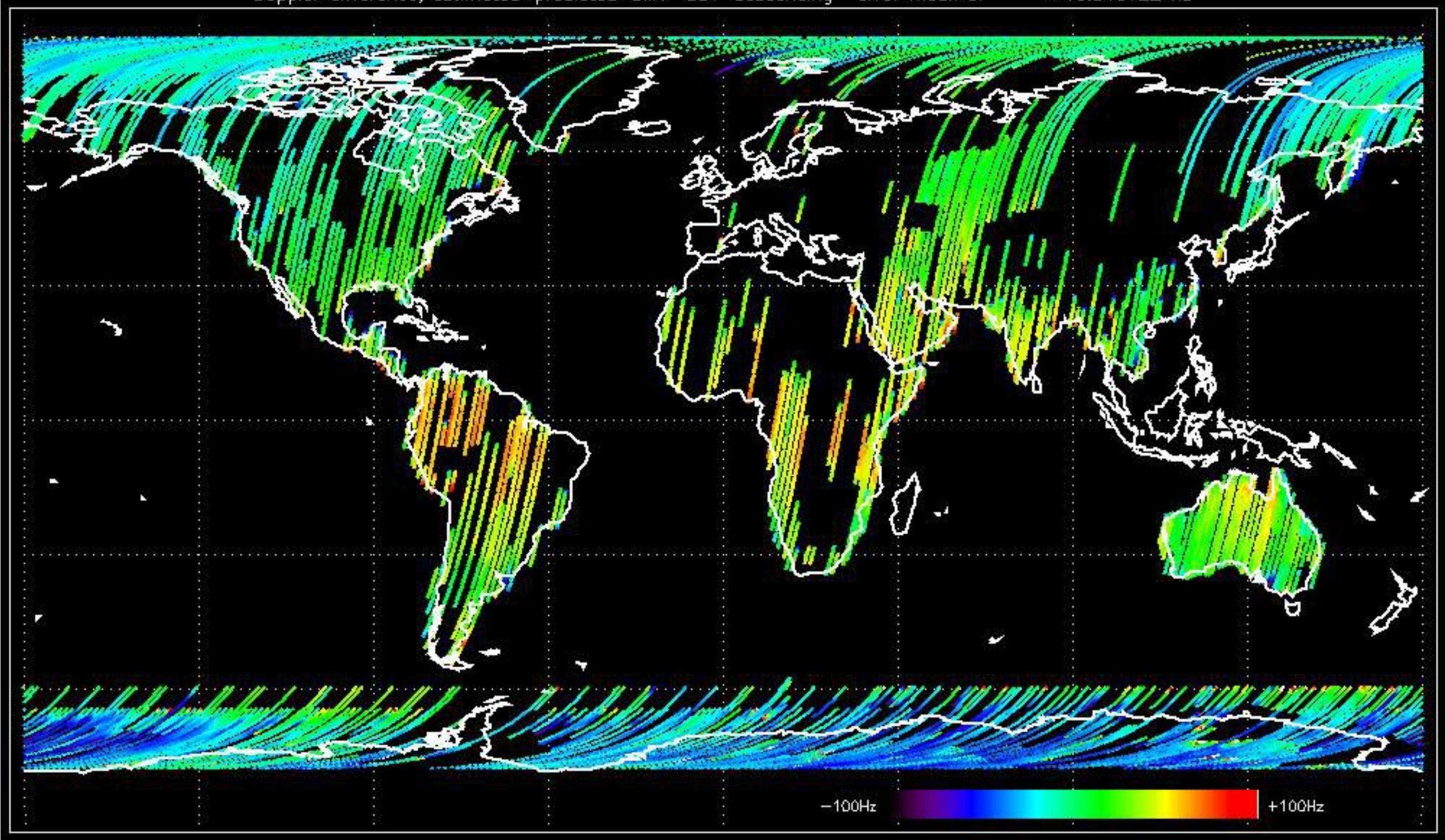




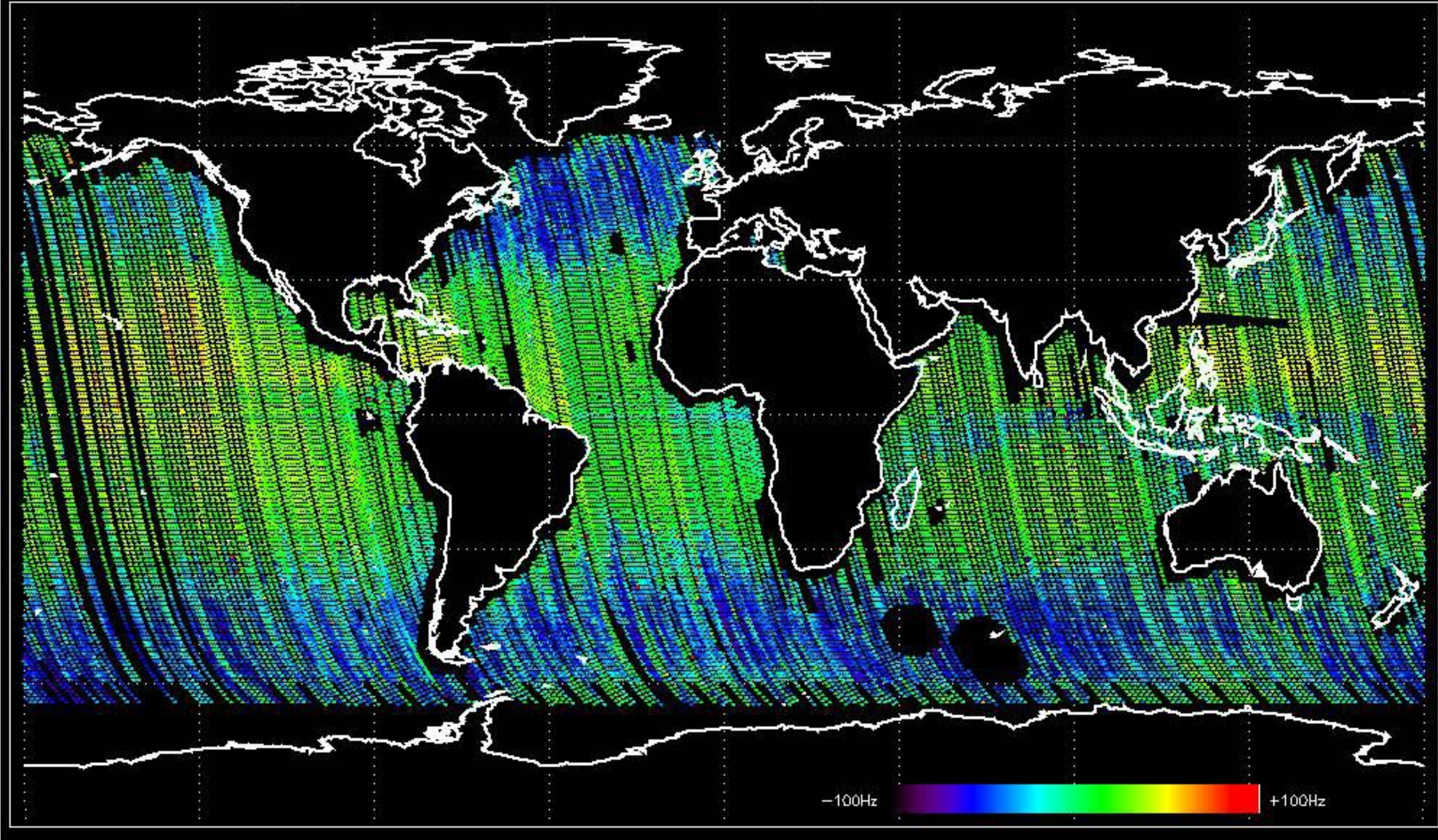
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.095399 Hz



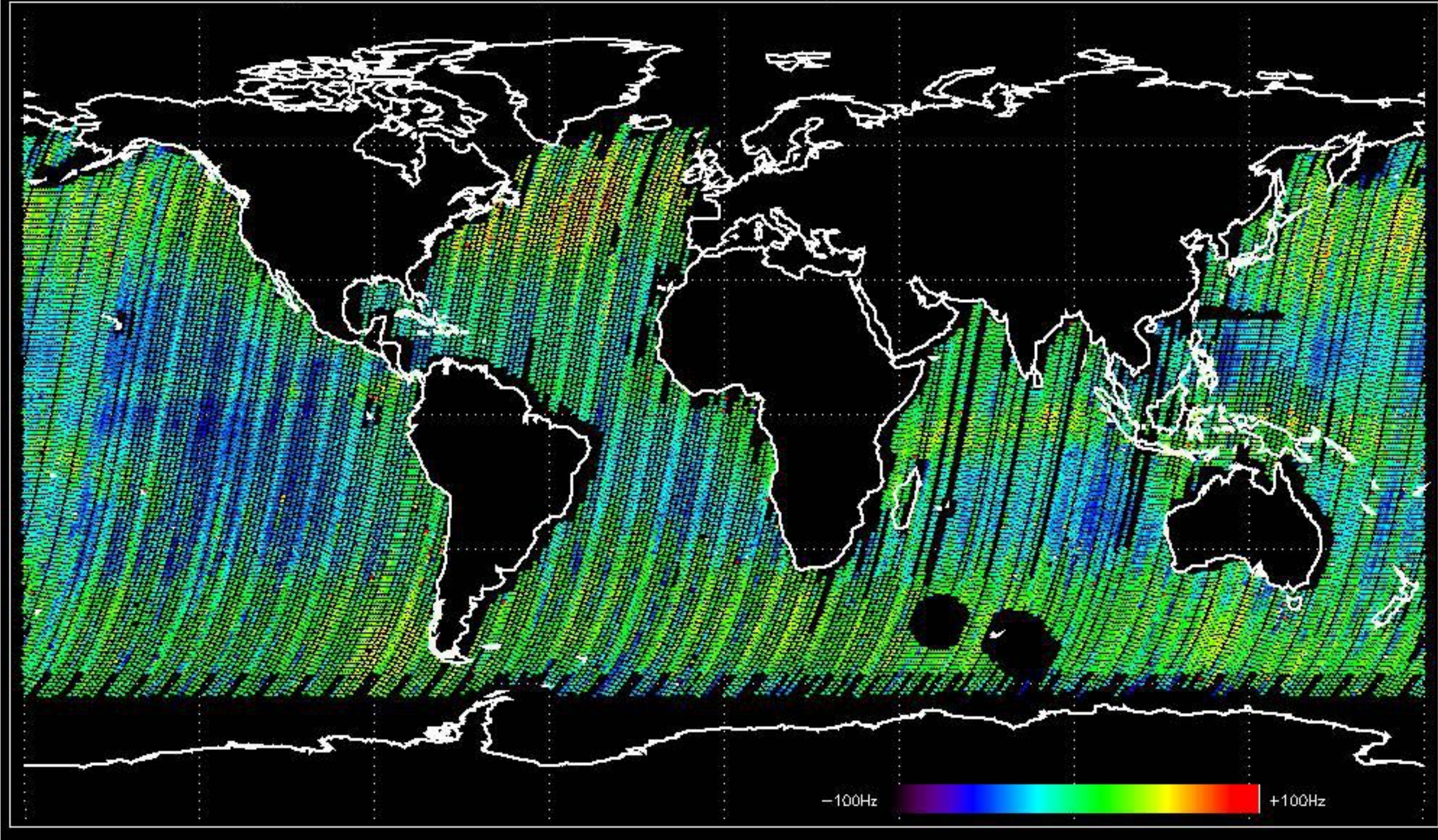
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.346122 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.735807 Hz

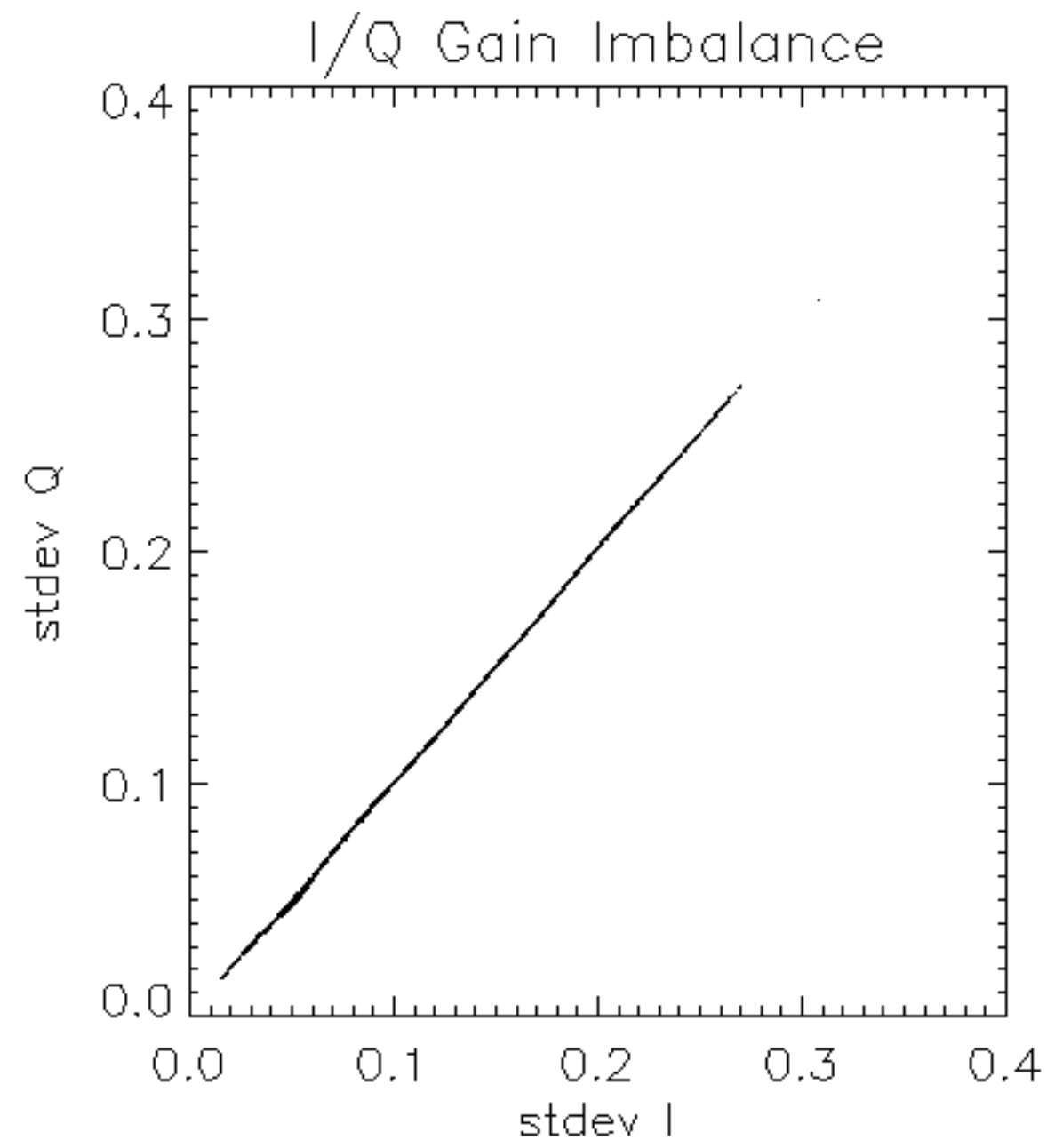


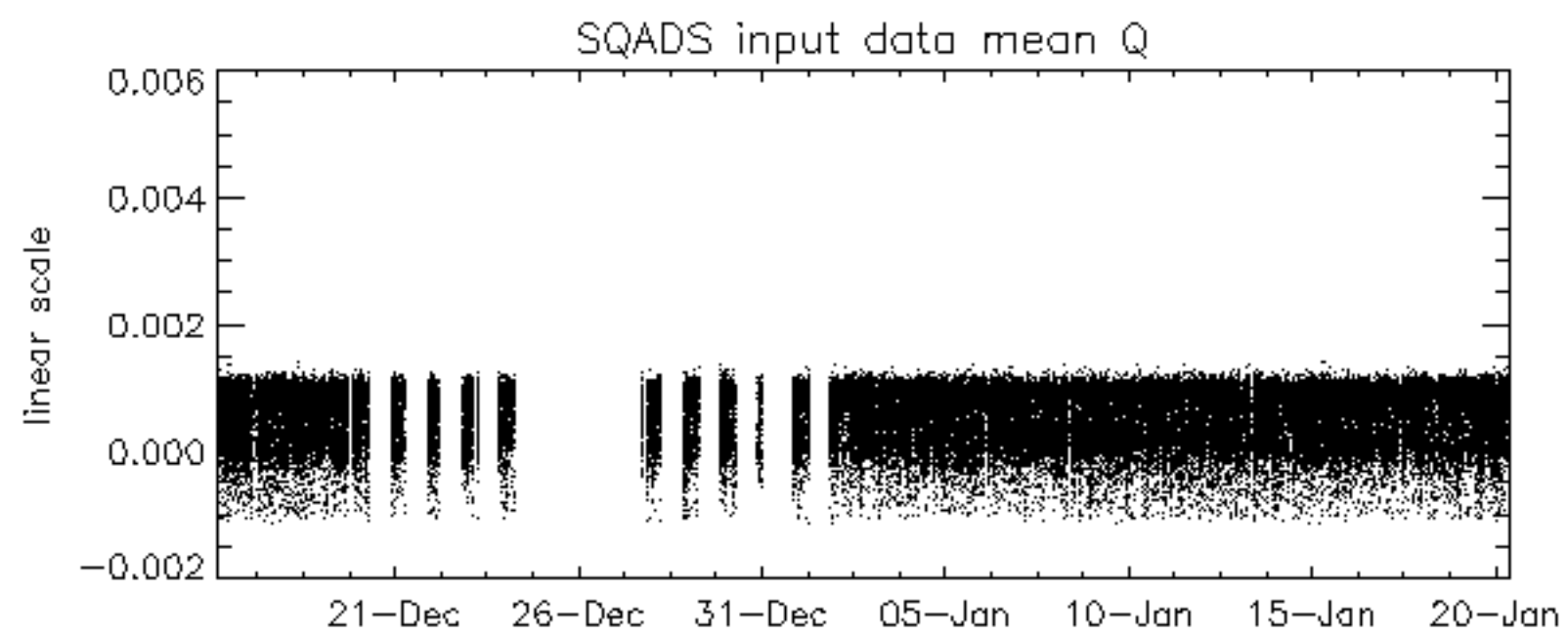
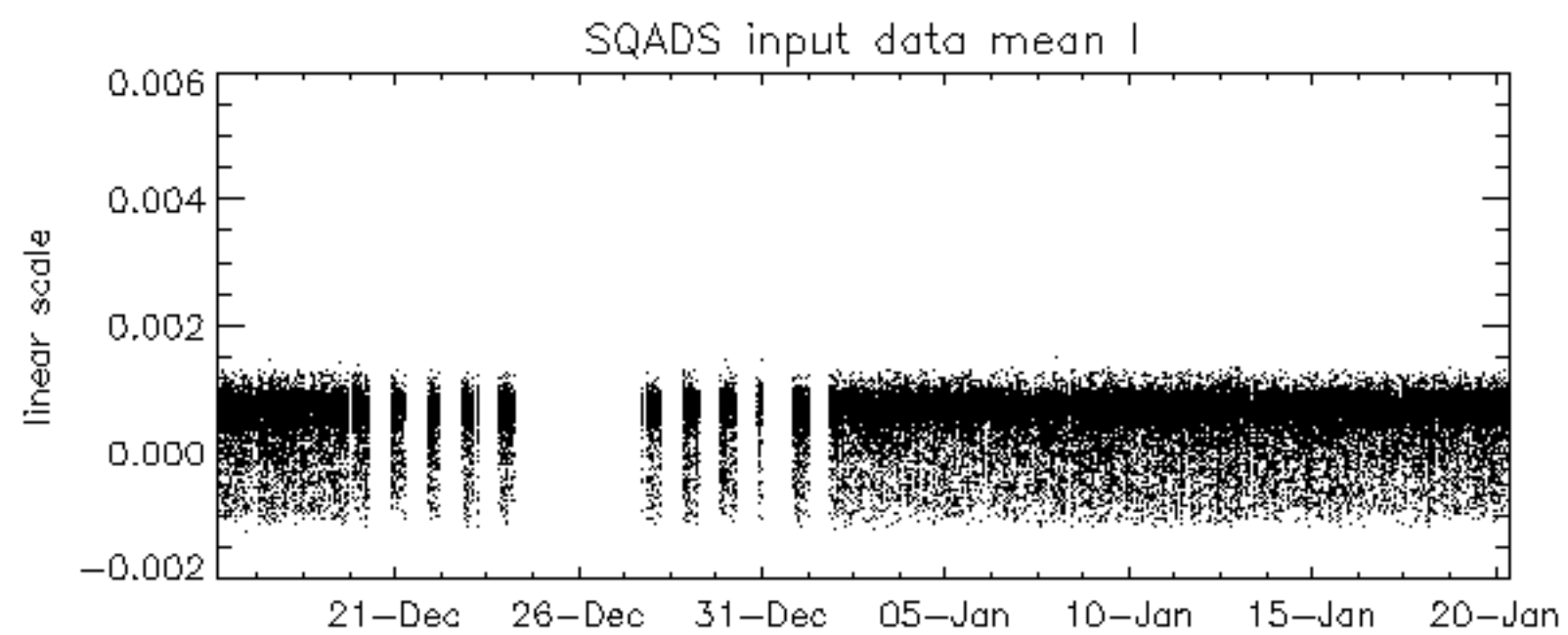
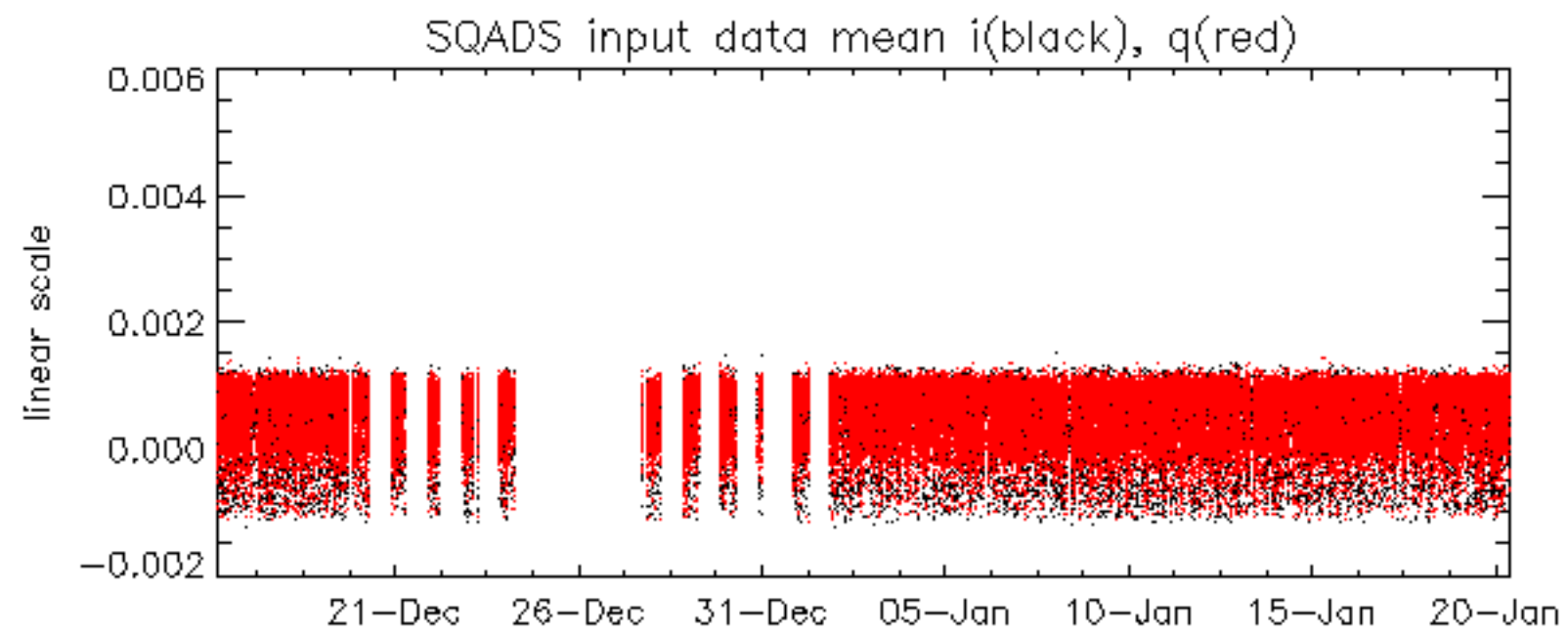
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -13.117008 Hz

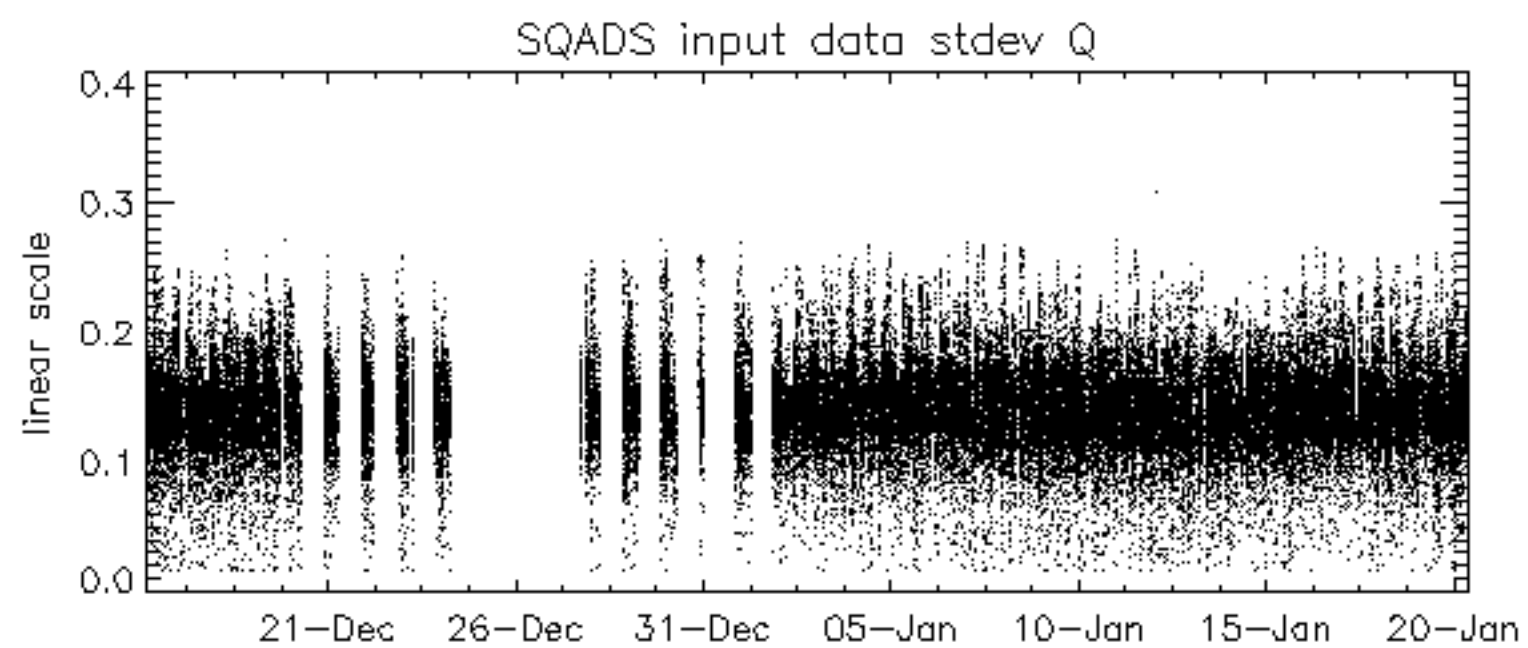
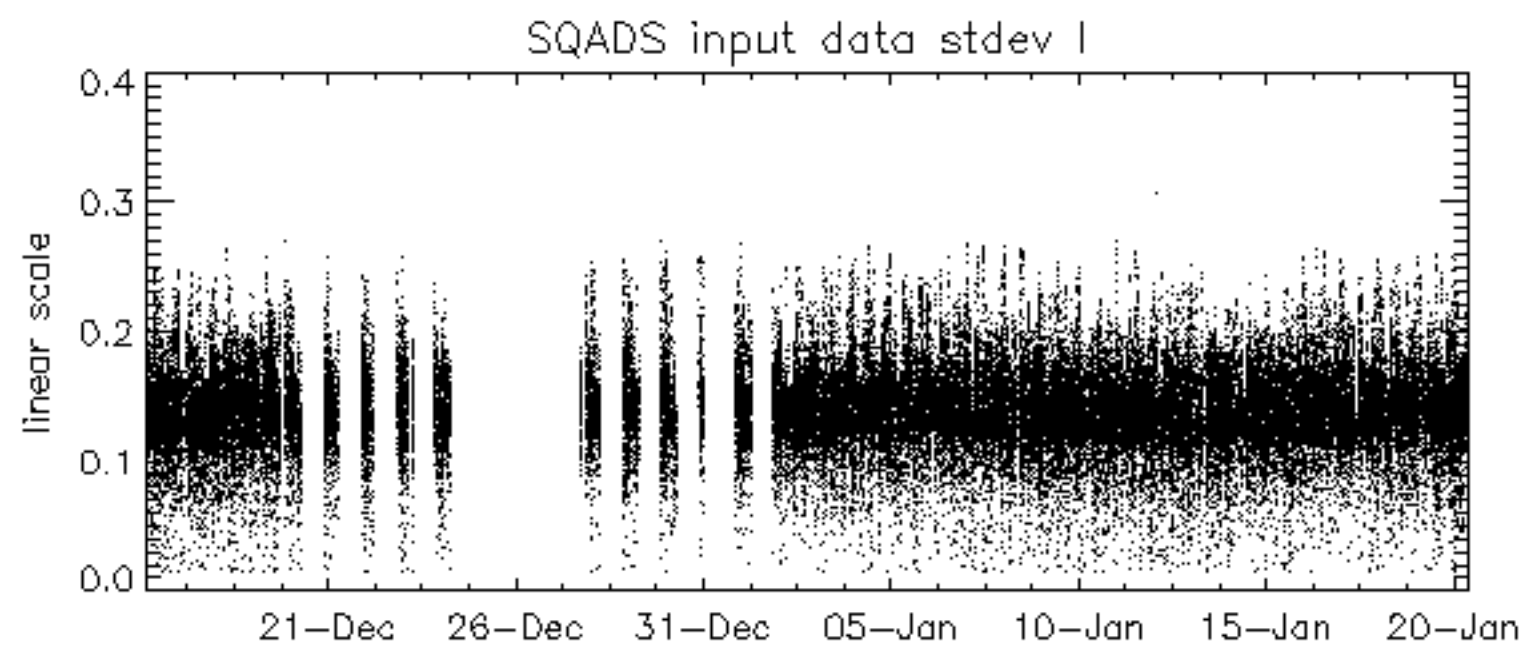
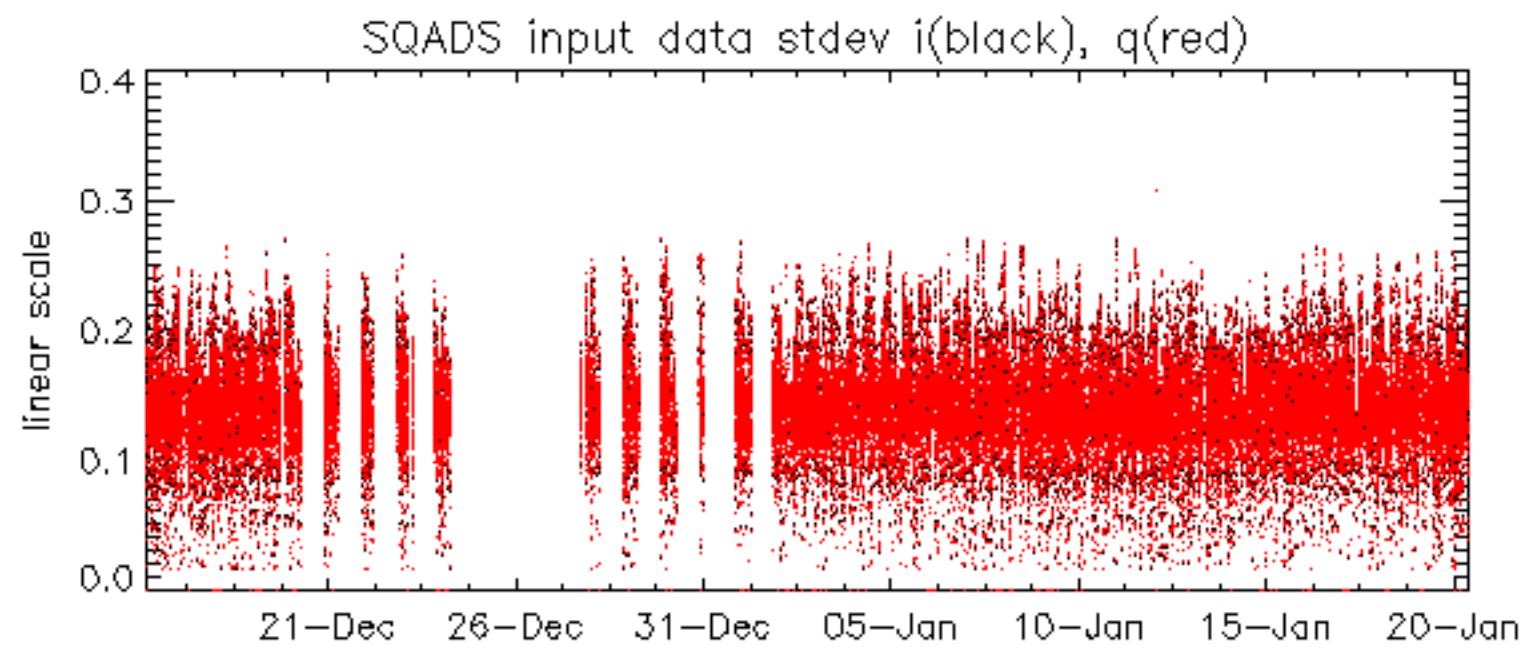


No anomalies observed on available MS products:

No anomalies observed.



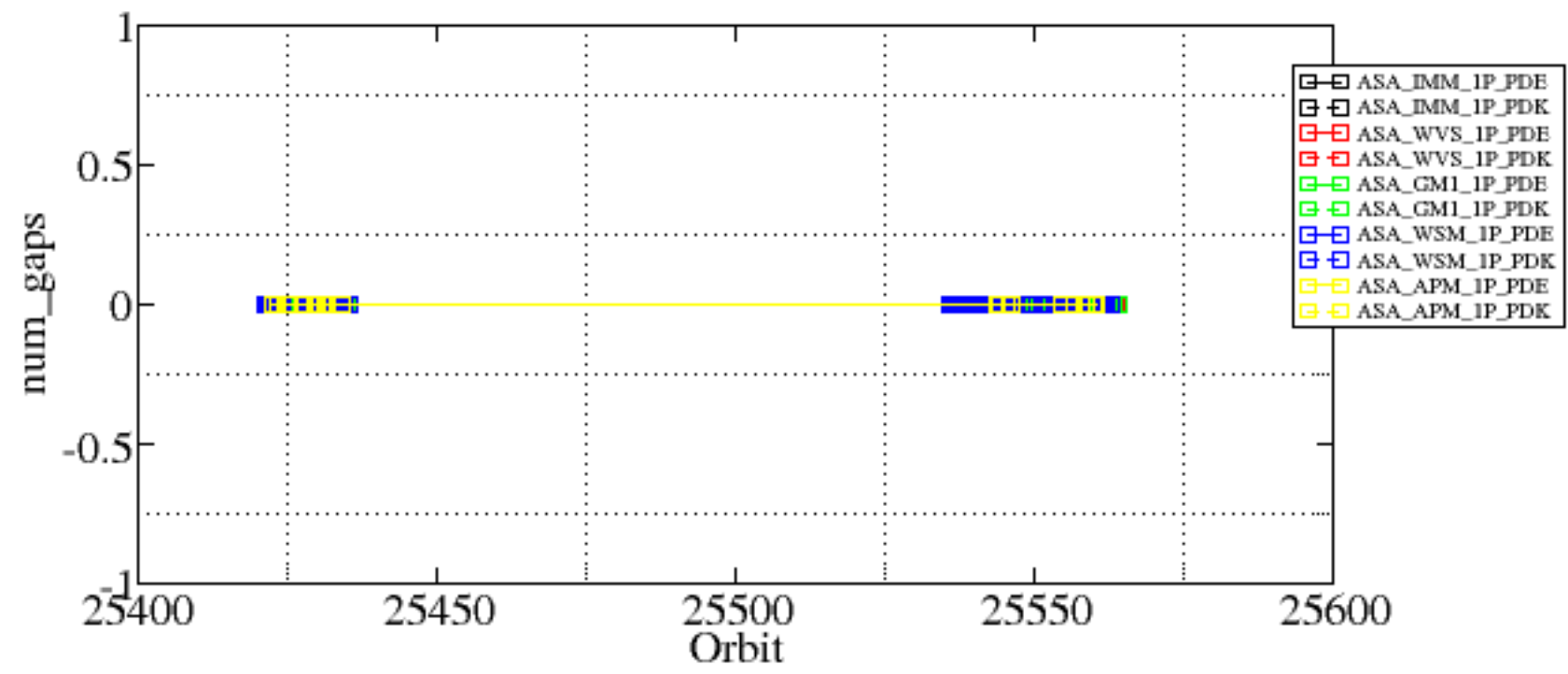


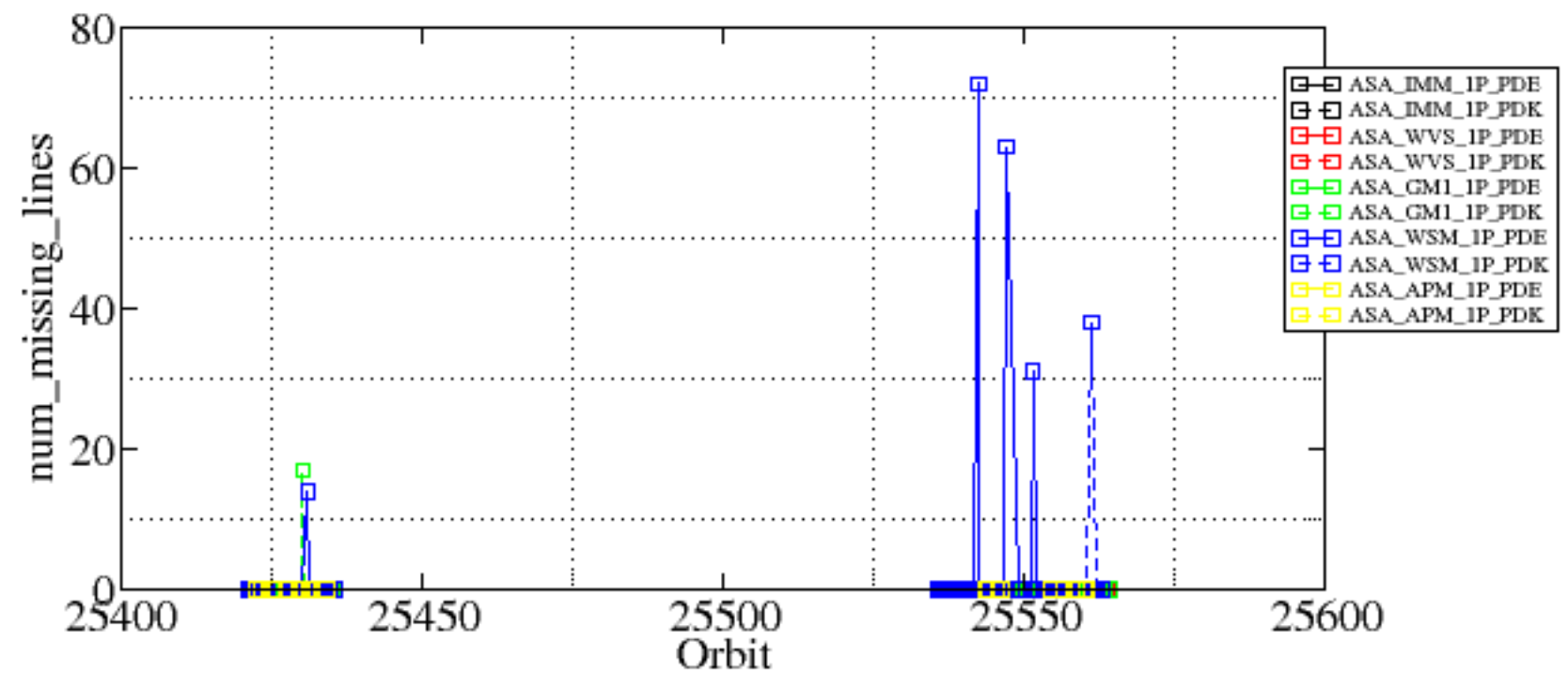


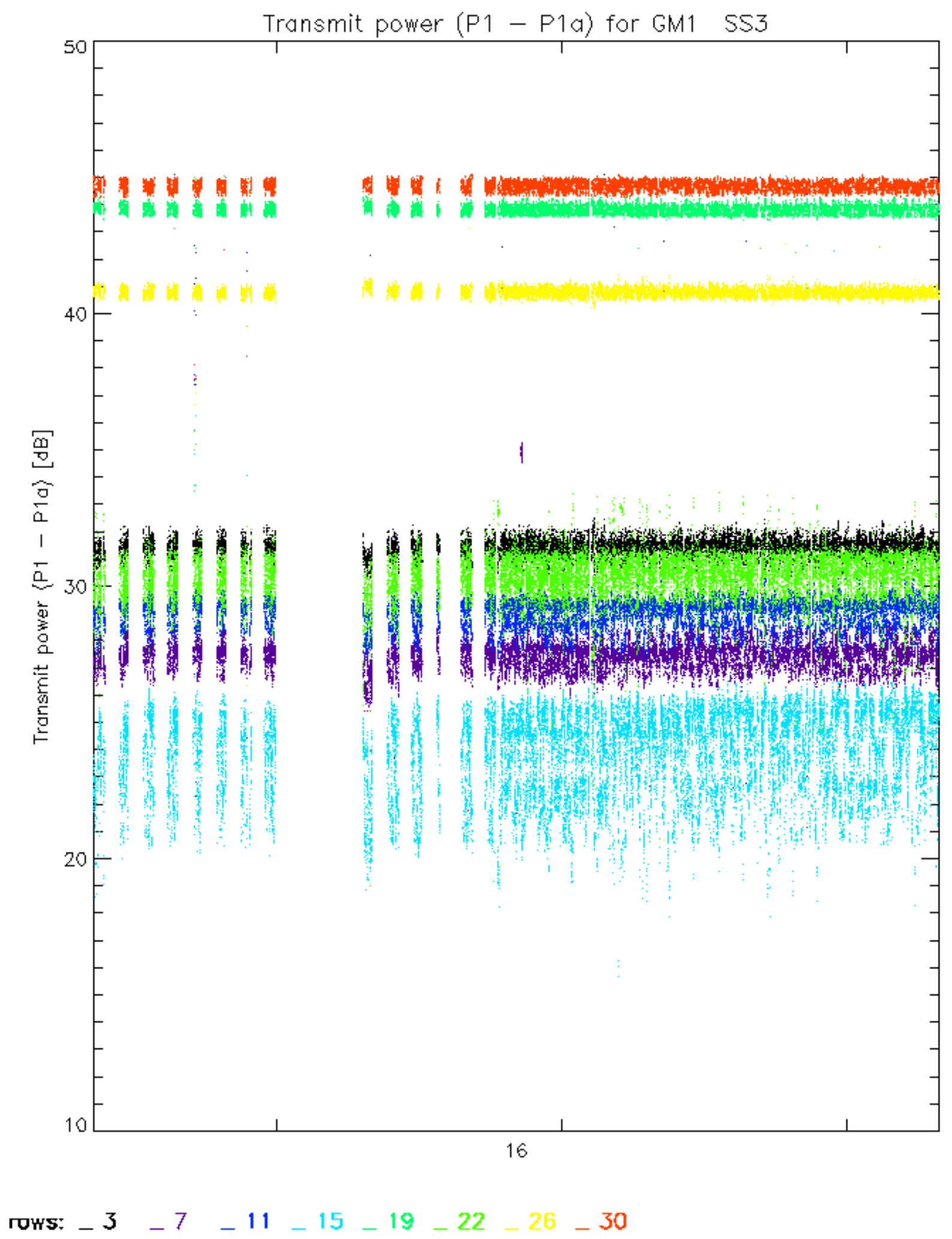
Summary of analysis for the last 3 days 2007011[890]

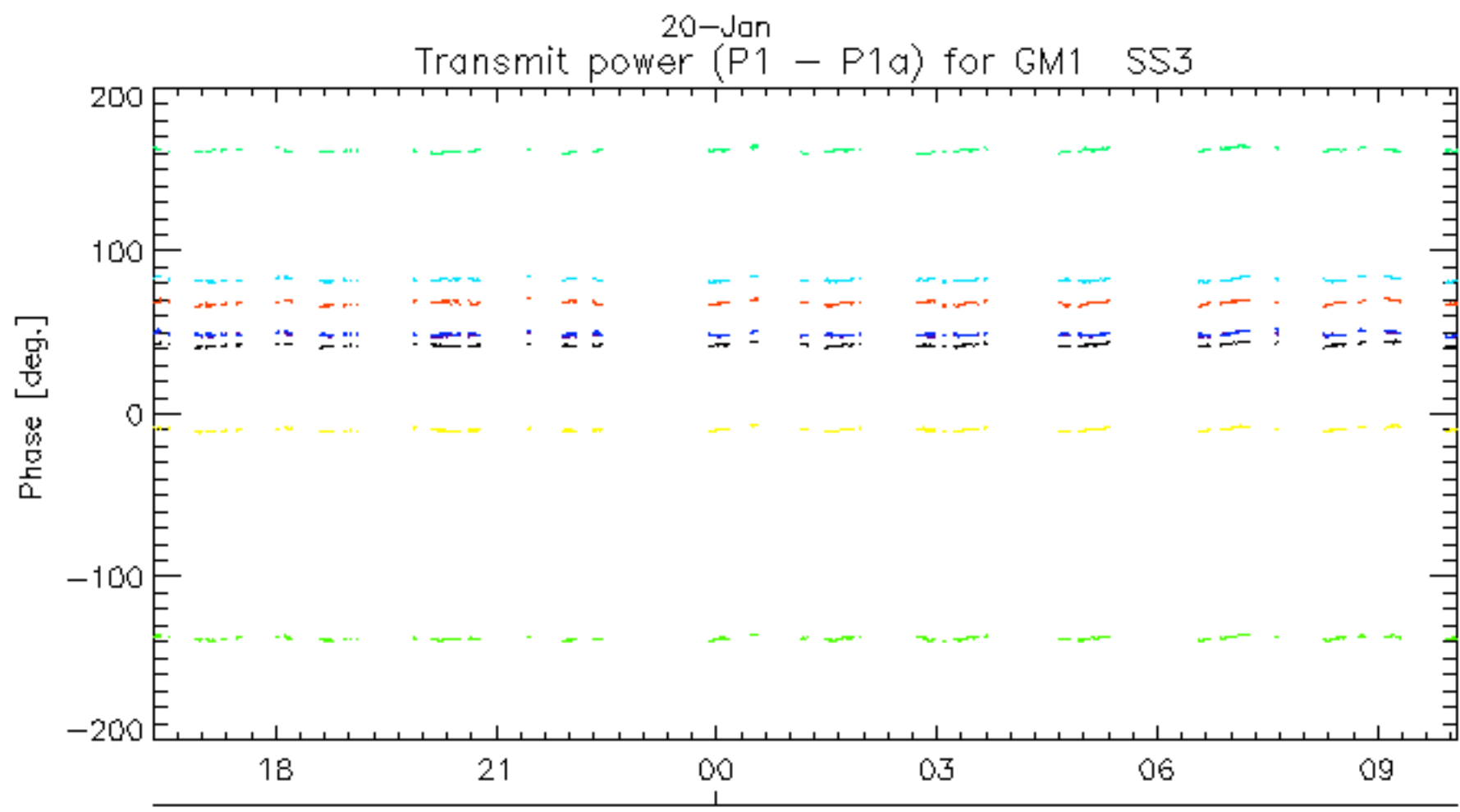
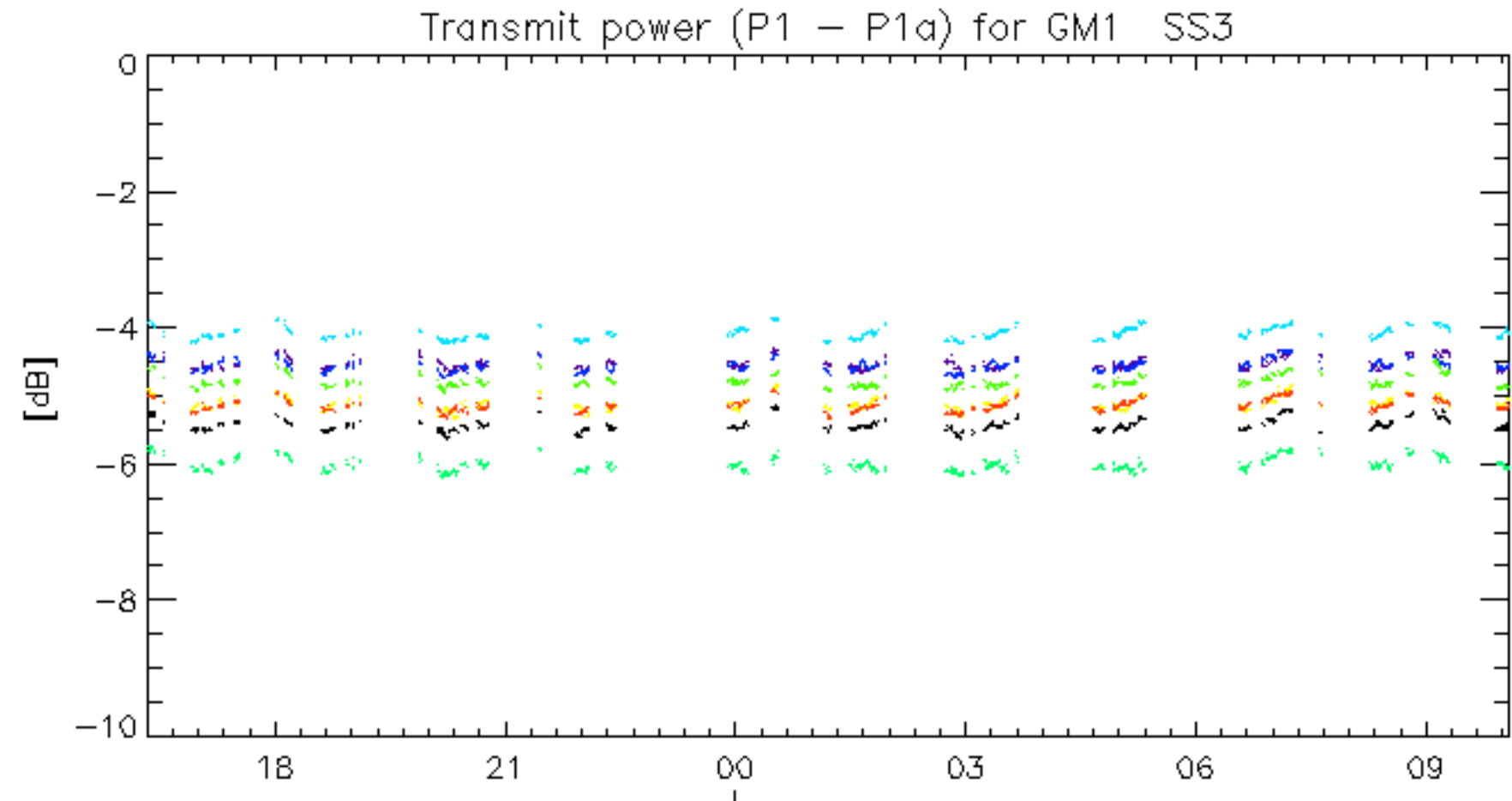
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070110_150643_000007062054_00326_25430_2010.N1	0	17
ASA_WSM_1PNPDE20070110_163701_000001582054_00327_25431_1812.N1	0	14
ASA_WSM_1PNPDE20070118_112601_000001642054_00438_25542_2222.N1	0	72
ASA_WSM_1PNPDE20070118_190517_000001102054_00443_25547_2397.N1	0	63
ASA_WSM_1PNPDE20070119_023247_000000852054_00447_25551_2914.N1	0	31
ASA_WSM_1PNPDK20070119_185133_000001842054_00457_25561_4540.N1	0	38

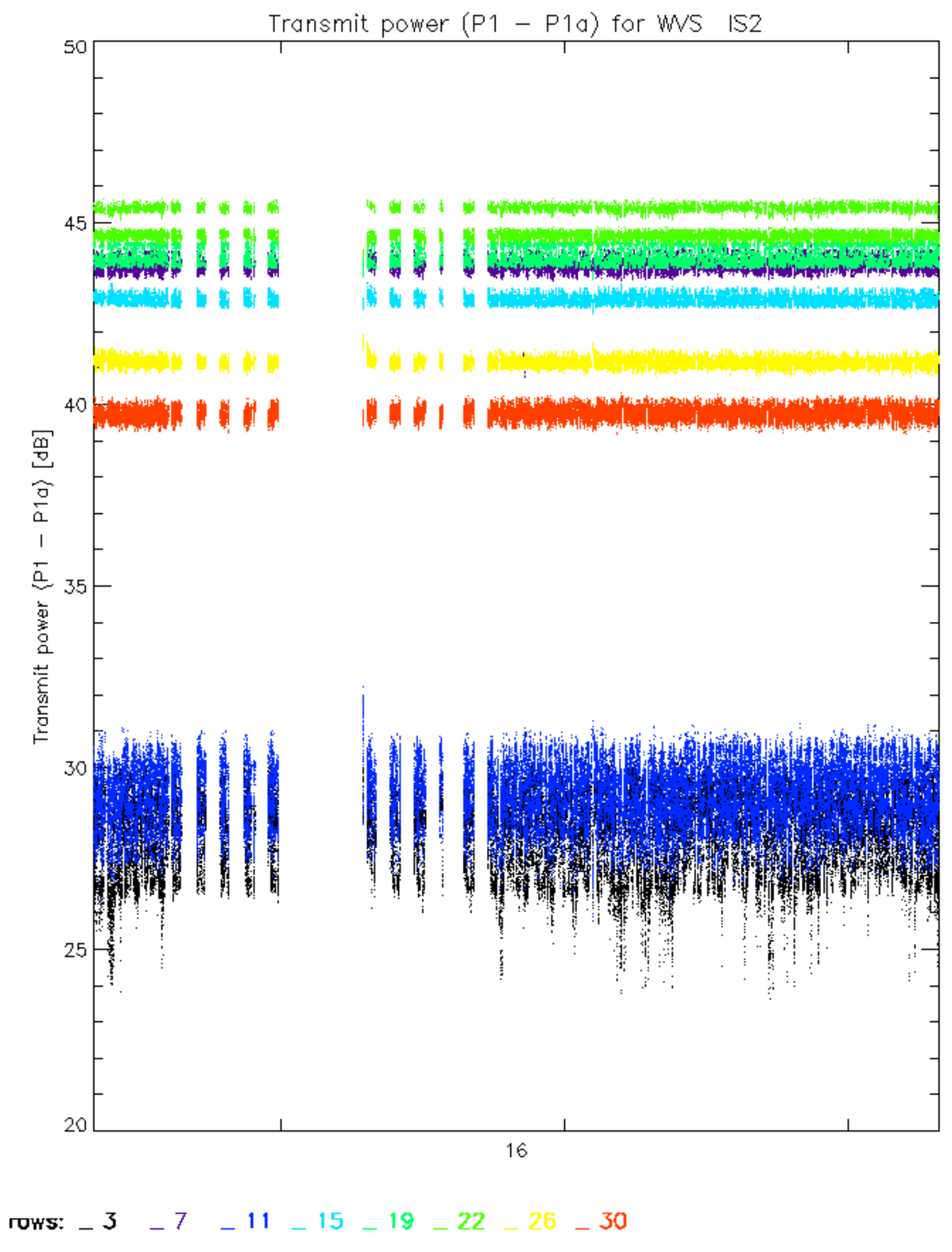


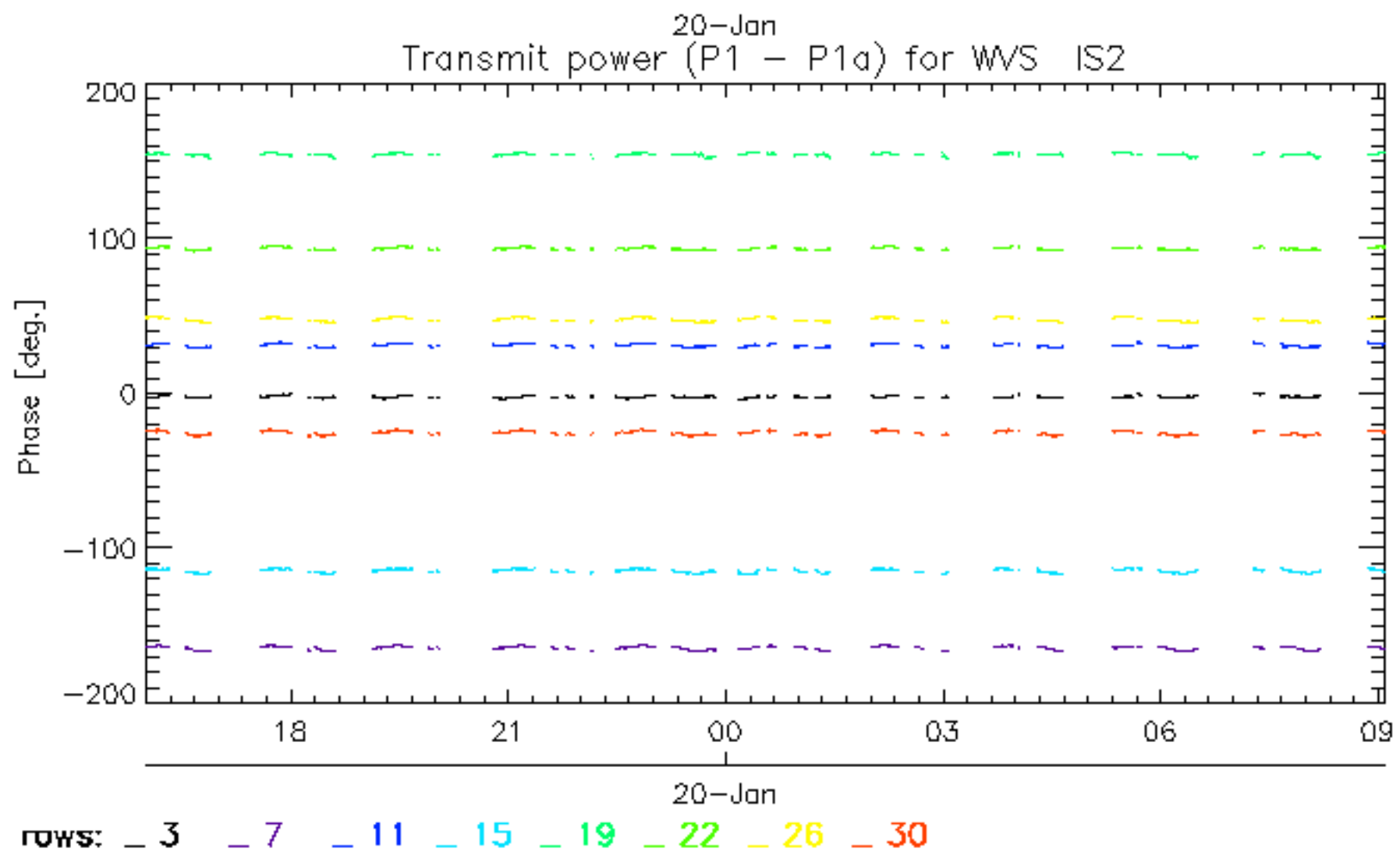
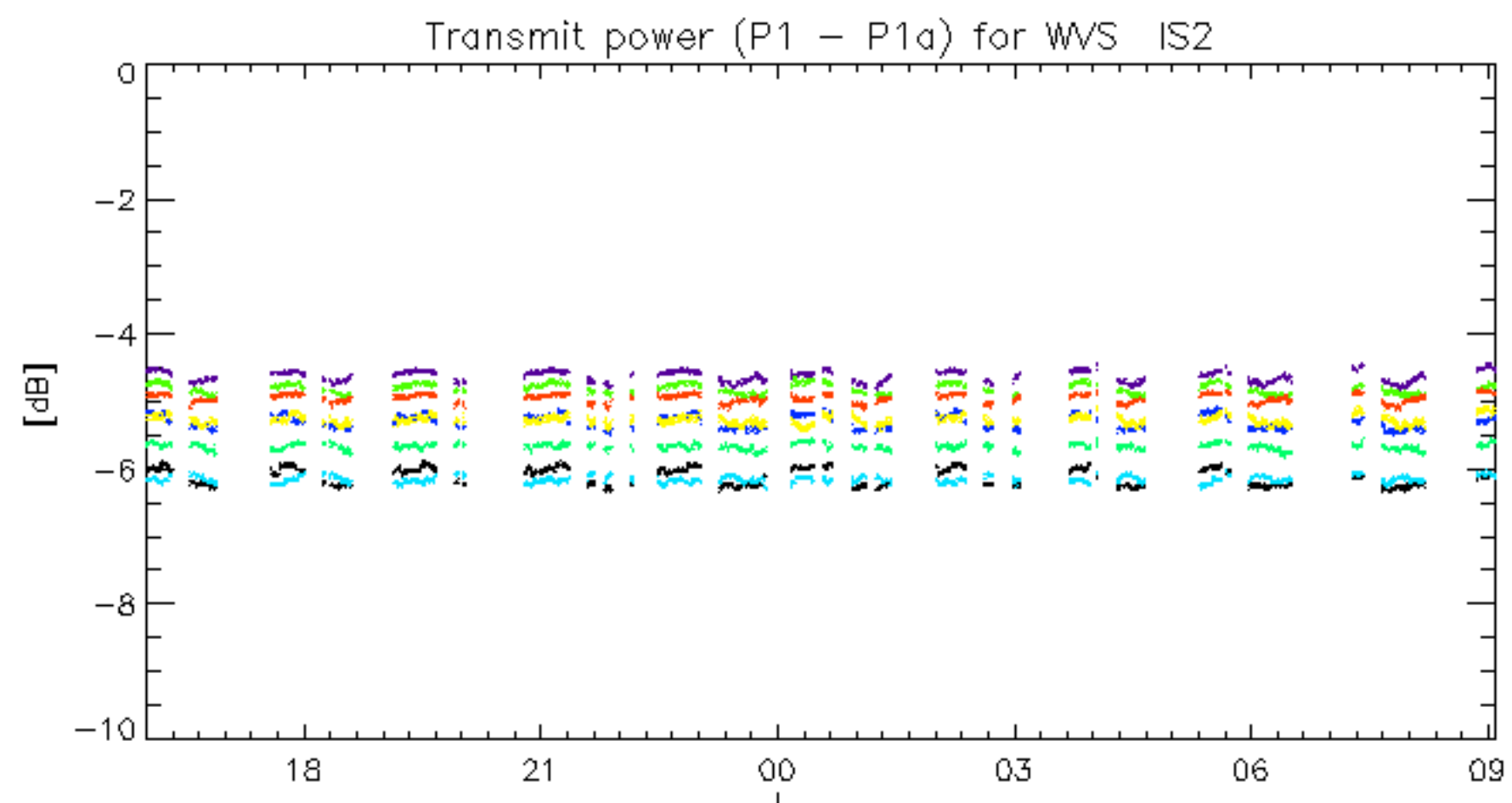






rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





No unavailabilities during the reported period.