

PRELIMINARY REPORT OF 070110

last update on Wed Jan 10 16:25:15 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 2007-01-09 00:00:00 to 2007-01-10 16:25:16

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	39	52	2	0	0
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	39	52	2	0	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	39	52	2	0	0
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	39	52	2	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	44	47	37	10	54
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	44	47	37	10	54
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	47	37	10	54
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	44	47	37	10	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	20070110 073836
H	20070109 081014

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	-3.965351	0.007682	0.002376
7	P1	-3.152363	0.050947	0.019862
11	P1	-4.124880	0.025258	0.016879
15	P1	-6.336209	0.015782	0.013430
19	P1	-3.677305	0.005643	-0.032358
22	P1	-4.674744	0.015394	-0.026615
26	P1	-3.958146	0.009651	0.013098
30	P1	-5.915909	0.008559	-0.019799
3	P1	-16.521393	0.258754	0.018261
7	P1	-17.292511	0.197673	0.103866
11	P1	-17.268181	0.471096	-0.095009
15	P1	-13.057444	0.131294	0.079450
19	P1	-15.065147	0.109695	-0.106306
22	P1	-15.849260	0.547733	0.121049
26	P1	-15.032596	0.188834	0.053656
30	P1	-17.569019	0.501976	0.059782

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.804993	0.091621	0.039047
7	P2	-21.690163	0.091051	0.076420
11	P2	-15.547577	0.101462	0.043821
15	P2	-7.108719	0.106030	0.052299
19	P2	-9.191112	0.100050	0.064403
22	P2	-18.238842	0.093874	0.038825
26	P2	-16.607218	0.105191	0.036920
30	P2	-19.449423	0.087513	0.053339

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.243423	0.008707	0.013287
7	P3	-8.243423	0.008707	0.013287
11	P3	-8.243423	0.008707	0.013287
15	P3	-8.243423	0.008707	0.013287
19	P3	-8.243423	0.008707	0.013287
22	P3	-8.243423	0.008707	0.013287
26	P3	-8.243448	0.008707	0.013305
30	P3	-8.243448	0.008707	0.013305

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	-3.923243	0.014897	0.022356
7	P1	-2.460490	0.017145	0.048206
11	P1	-2.840919	0.018292	0.060402
15	P1	-3.703760	0.033351	0.014331
19	P1	-3.551026	0.020231	0.012840
22	P1	-5.013582	0.024218	0.069382
26	P1	-6.041476	0.028725	0.001266
30	P1	-5.350002	0.038152	-0.007806
3	P1	-11.734413	0.086273	0.071691
7	P1	-10.053787	0.102644	0.072881
11	P1	-10.362126	0.098057	0.024053
15	P1	-10.736164	0.169029	0.027665
19	P1	-15.734557	0.125090	-0.019679
22	P1	-21.584265	1.435221	-0.037717

26	P1	-16.023823	0.330245	0.075409
30	P1	-17.891417	0.384405	0.029777

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.451588	0.113979	0.057489
7	P2	-22.206652	0.295523	0.046202
11	P2	-10.850360	0.101608	0.058628
15	P2	-4.977670	0.205334	0.044711
19	P2	-6.960338	0.254014	0.072202
22	P2	-8.245767	0.123794	0.056464
26	P2	-24.347954	0.178083	-0.014982
30	P2	-21.927887	0.145845	0.078929

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.091217	0.003836	0.011446
7	P3	-8.090973	0.003825	0.012475
11	P3	-8.091140	0.003842	0.012039
15	P3	-8.090894	0.003827	0.011493
19	P3	-8.091071	0.003845	0.011760
22	P3	-8.090862	0.003853	0.011807
26	P3	-8.091246	0.003842	0.011955
30	P3	-8.090995	0.003809	0.012520

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	0.000569384
	stdev	1.63281e-07
MEAN Q	mean	0.000503229
	stdev	2.12420e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140841
	stdev	0.00121662
STDEV Q	mean	0.141249
	stdev	0.00123773



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007010[890]

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_GM1_1PNPDK20070109_113903_000004162054_00309_25413_0717.N1	0	9
ASA_WSM_1PNPDE20070108_000036_000000852054_00288_25392_7771.N1	0	36
ASA_WSM_1PNPDE20070108_013811_000001412054_00289_25393_7975.N1	0	40
ASA_WSM_1PNPDE20070109_170737_000000852054_00313_25417_0437.N1	0	19





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

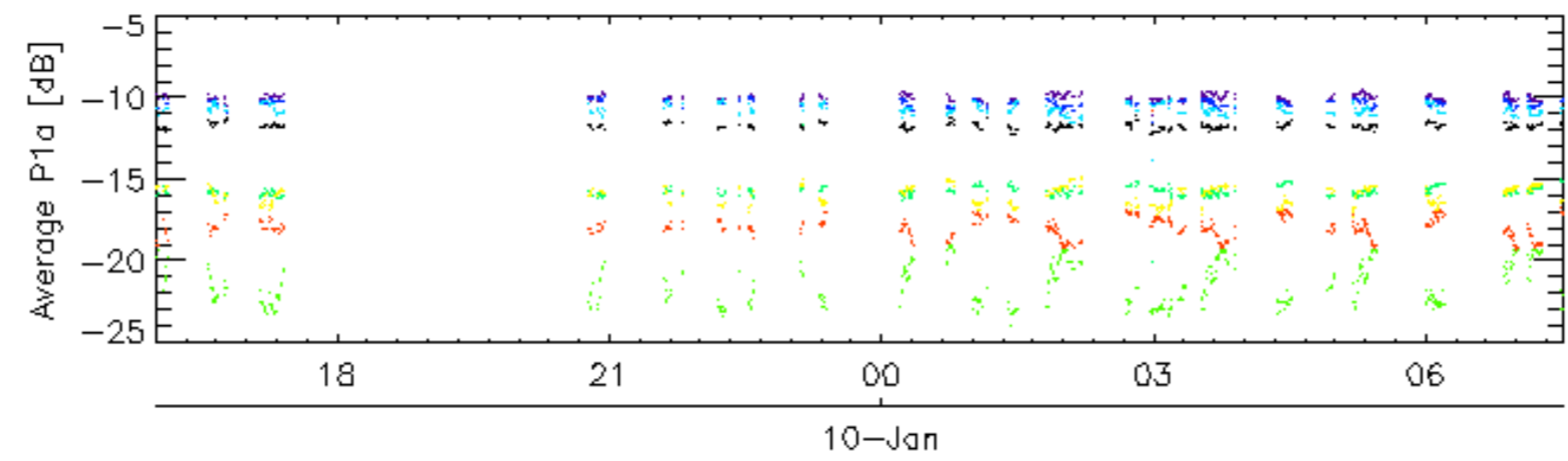
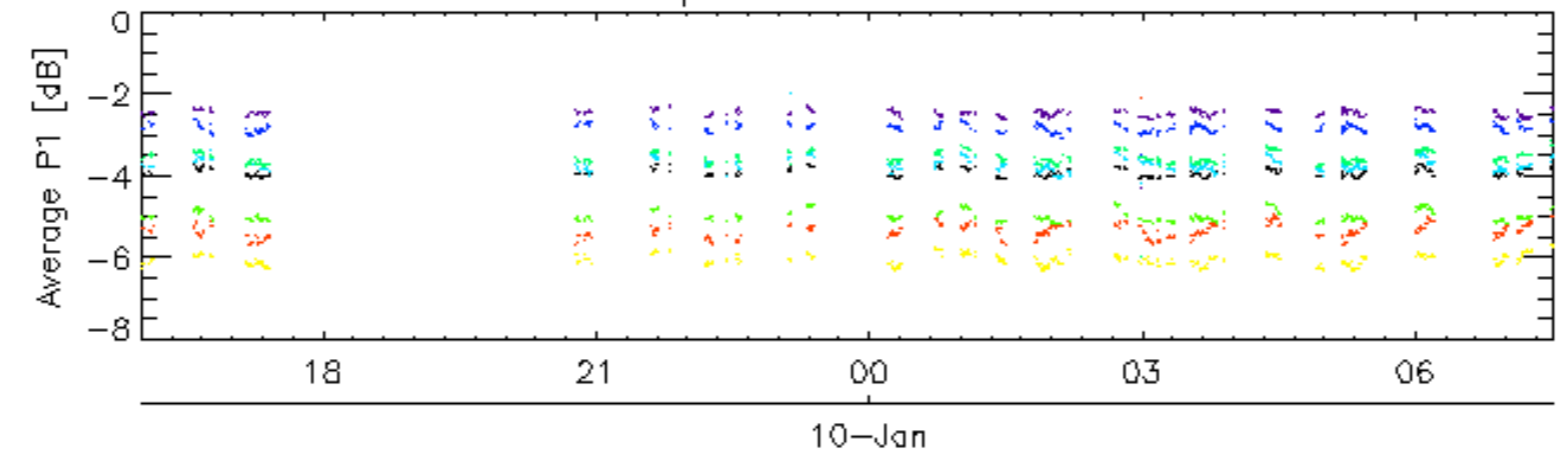
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

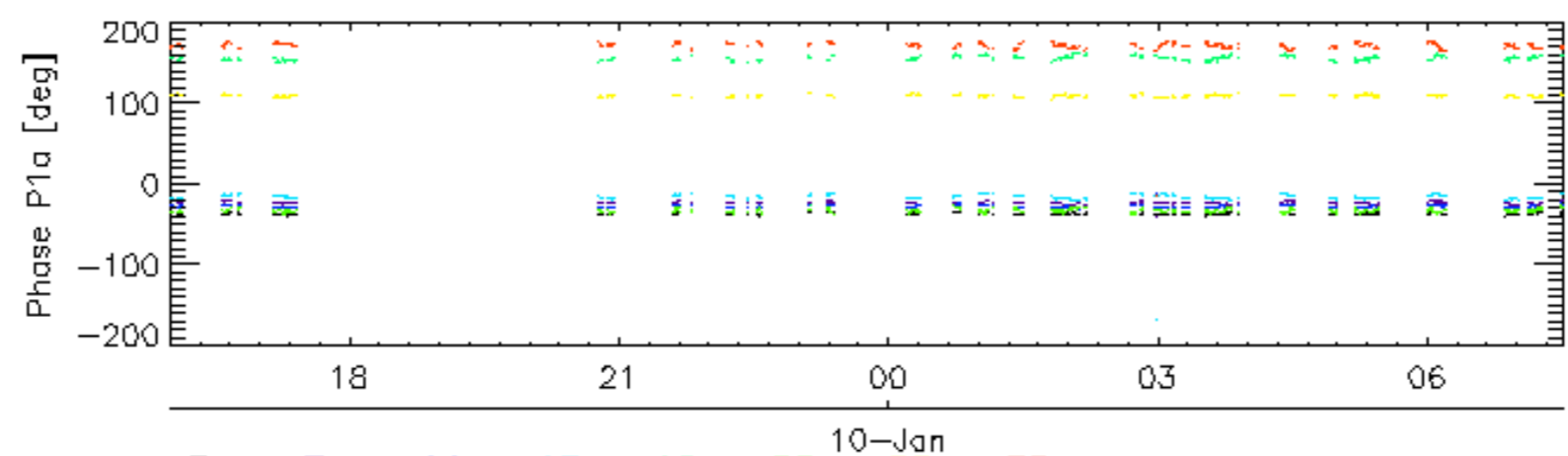
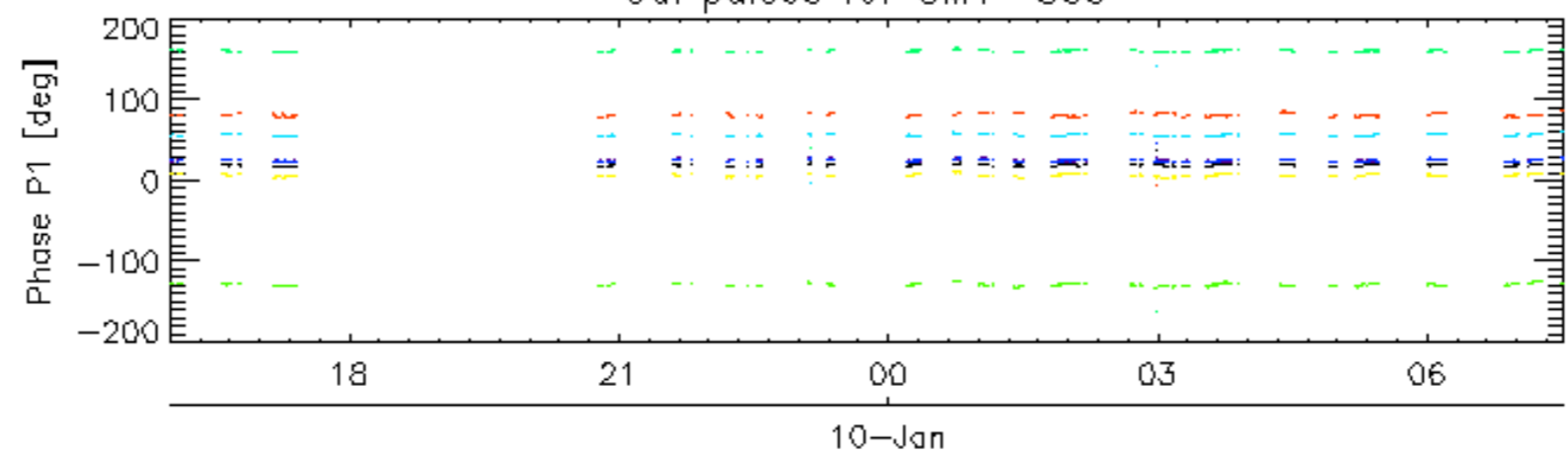
7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

<input type="checkbox"/>

Cal pulses for GM1 SS3

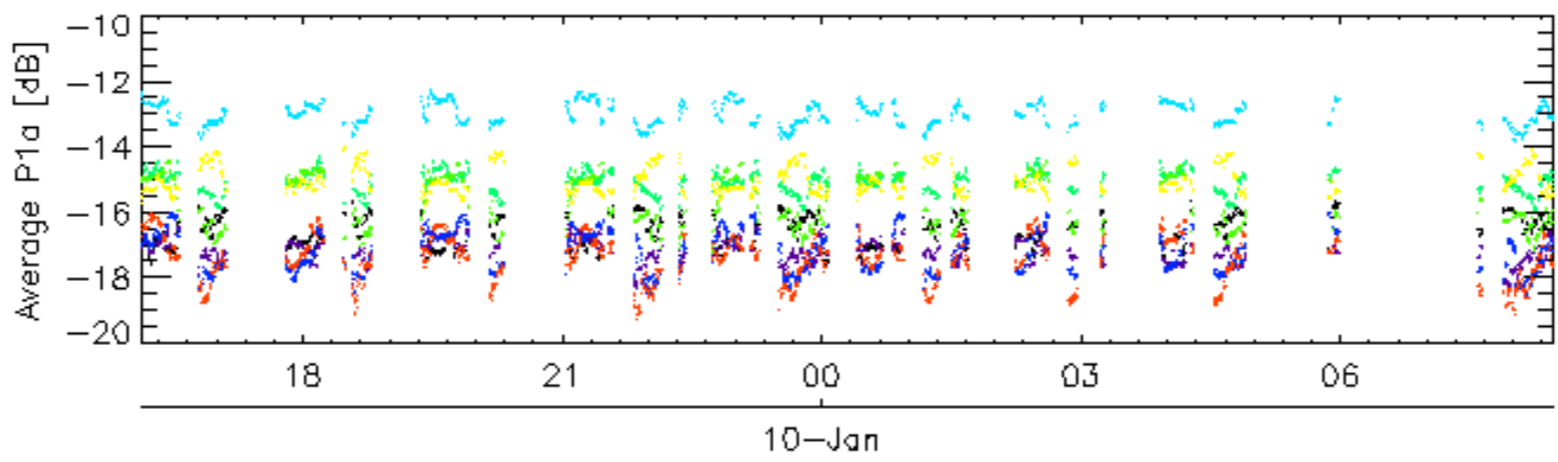
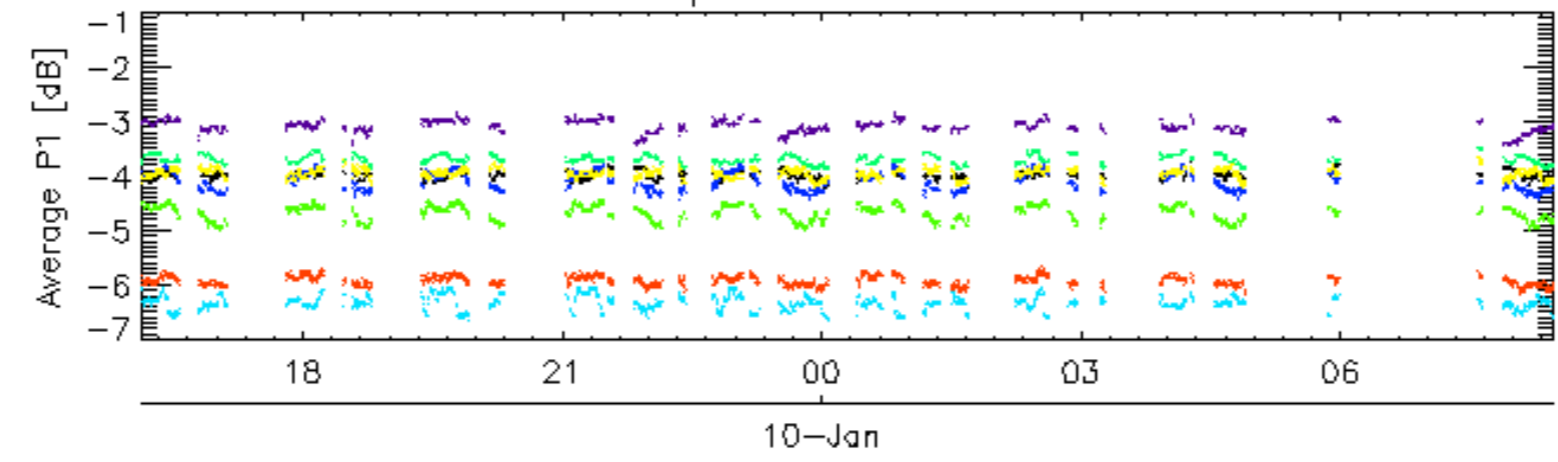


Cal pulses for GM1 SS3

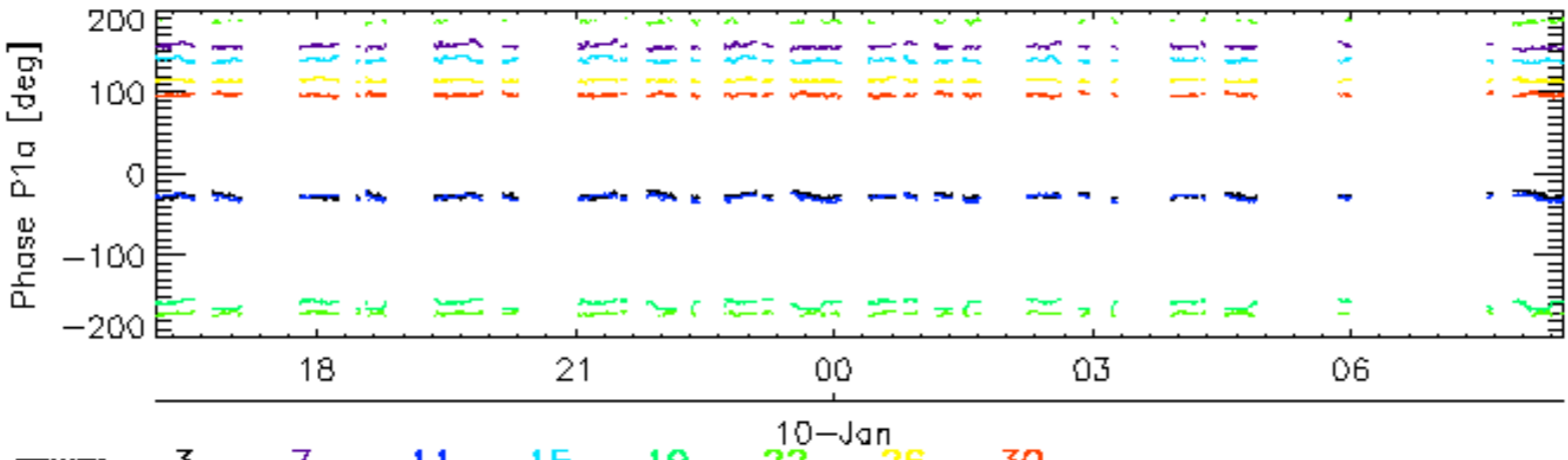
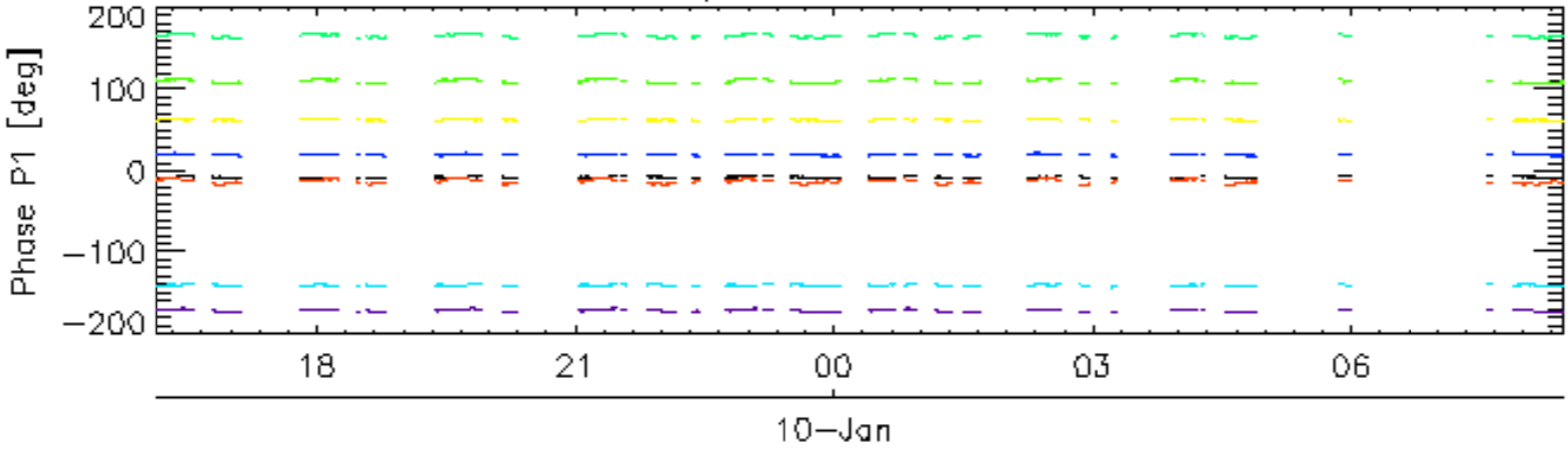


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

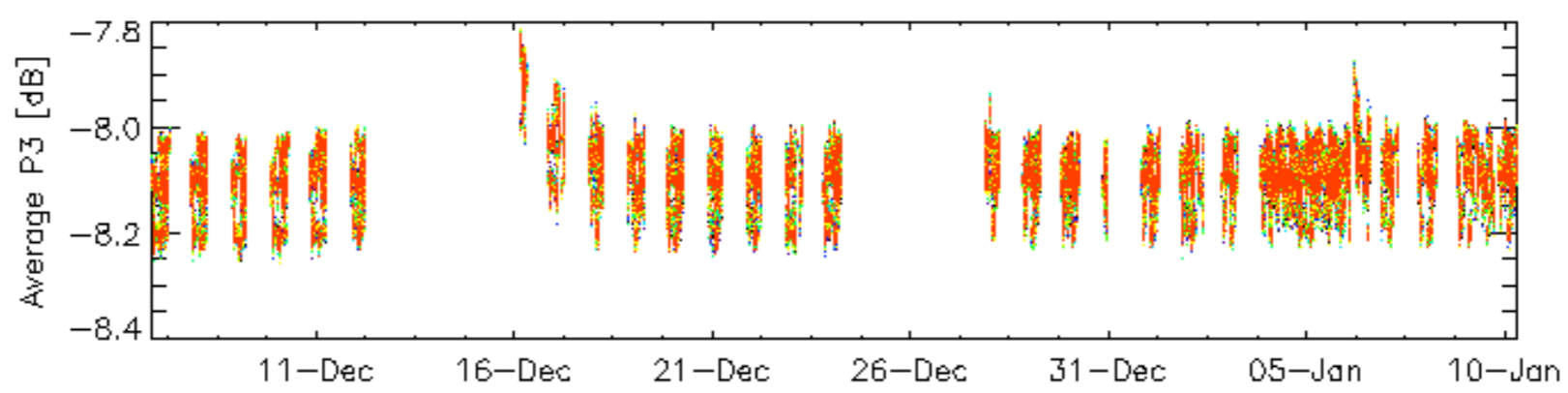
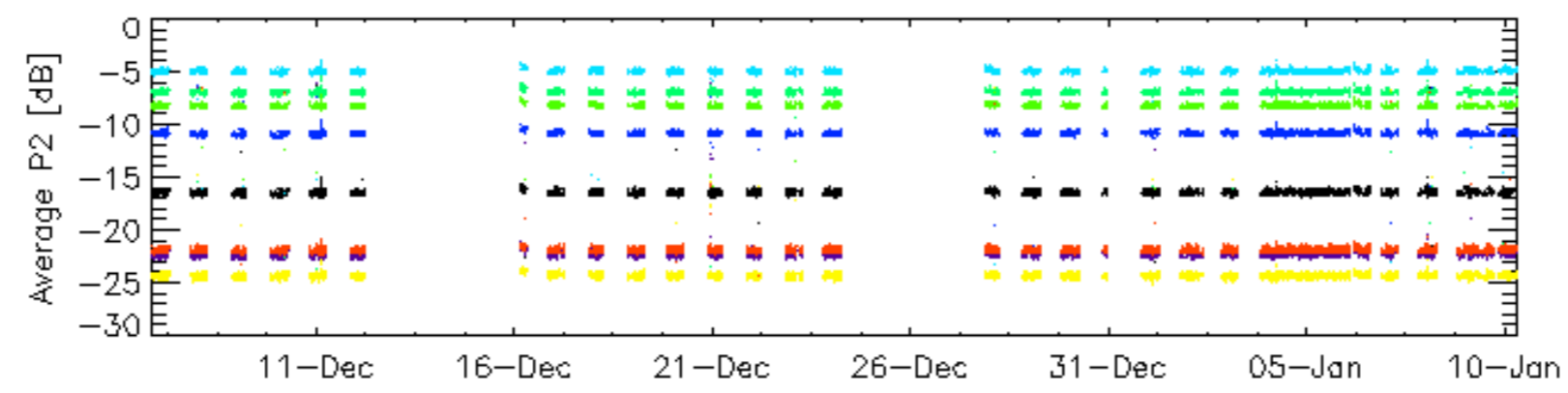
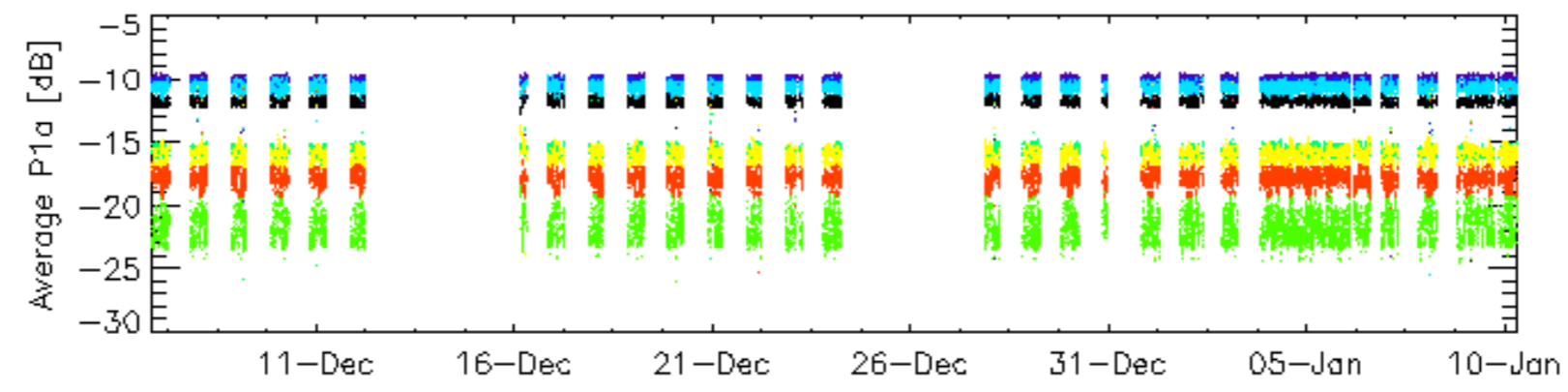
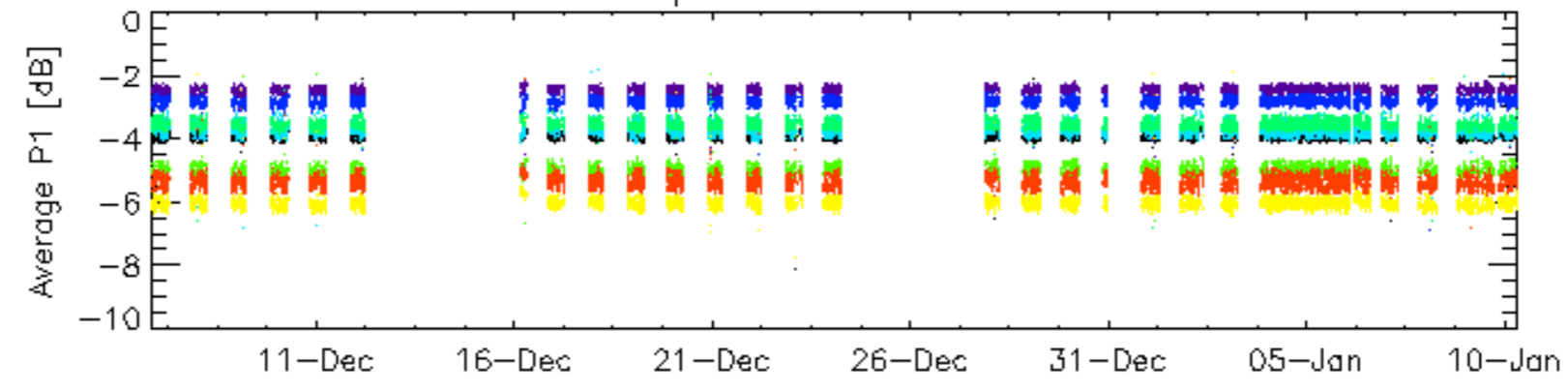


Cal pulses for WVS IS2



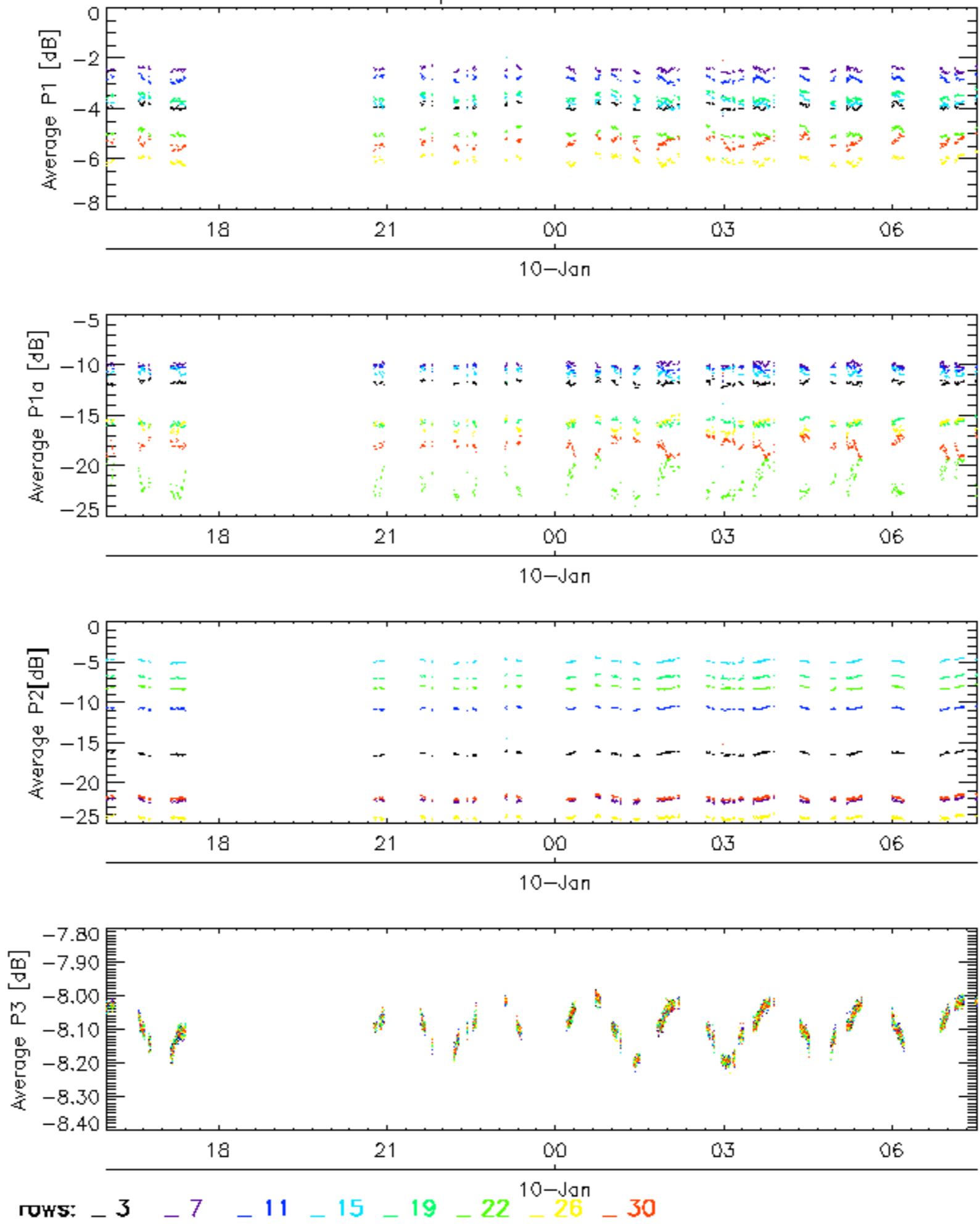
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

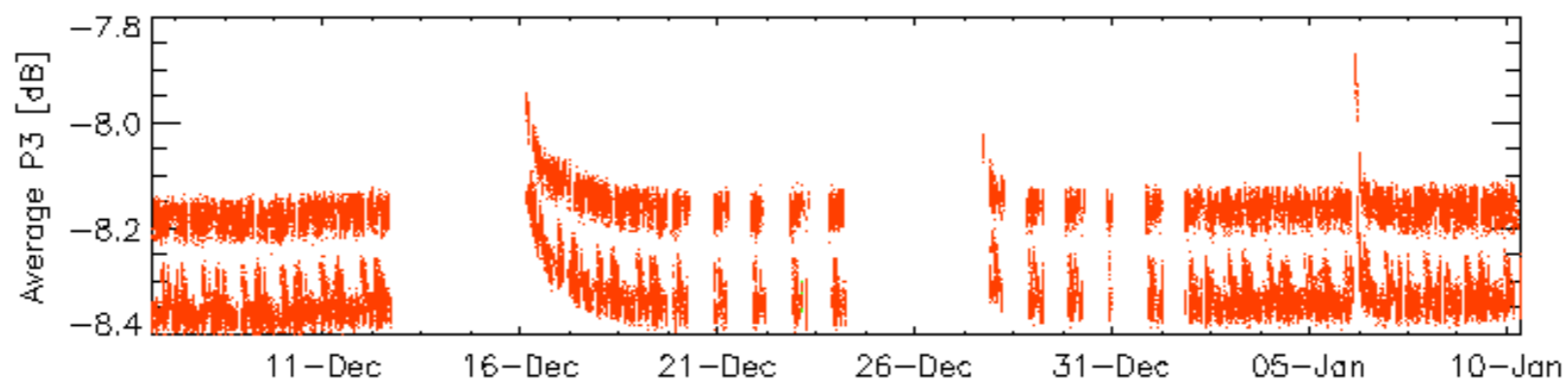
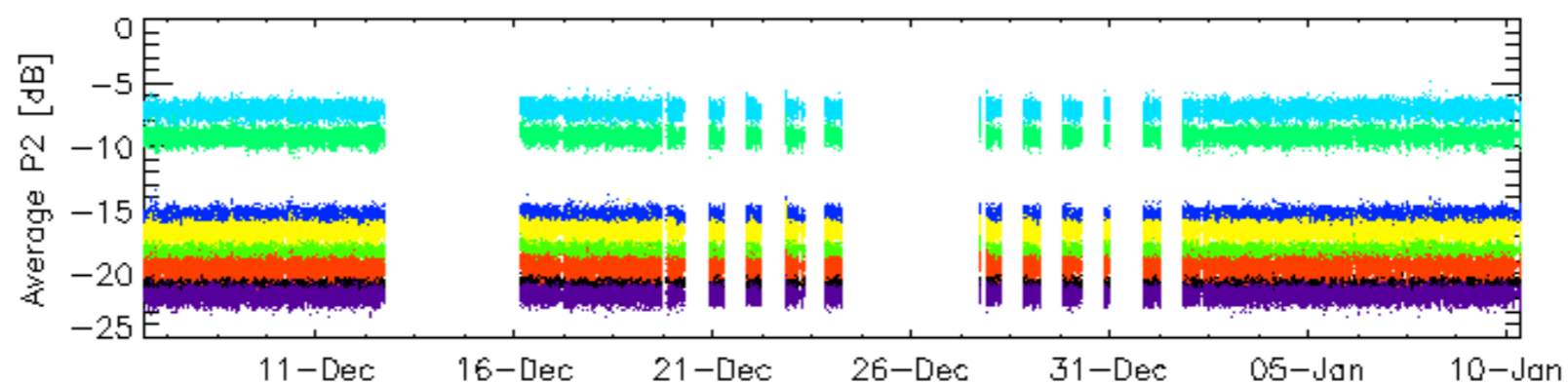
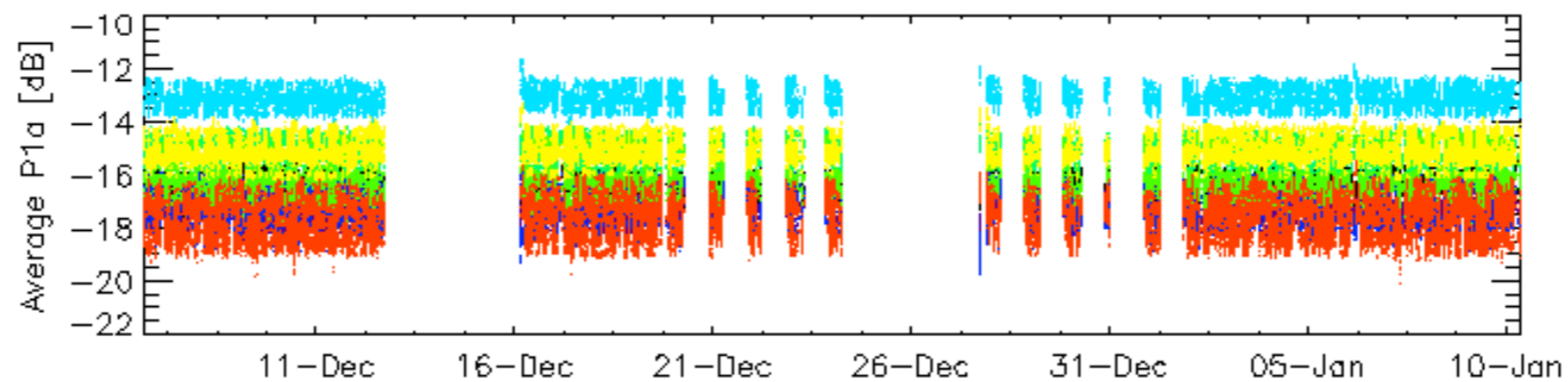
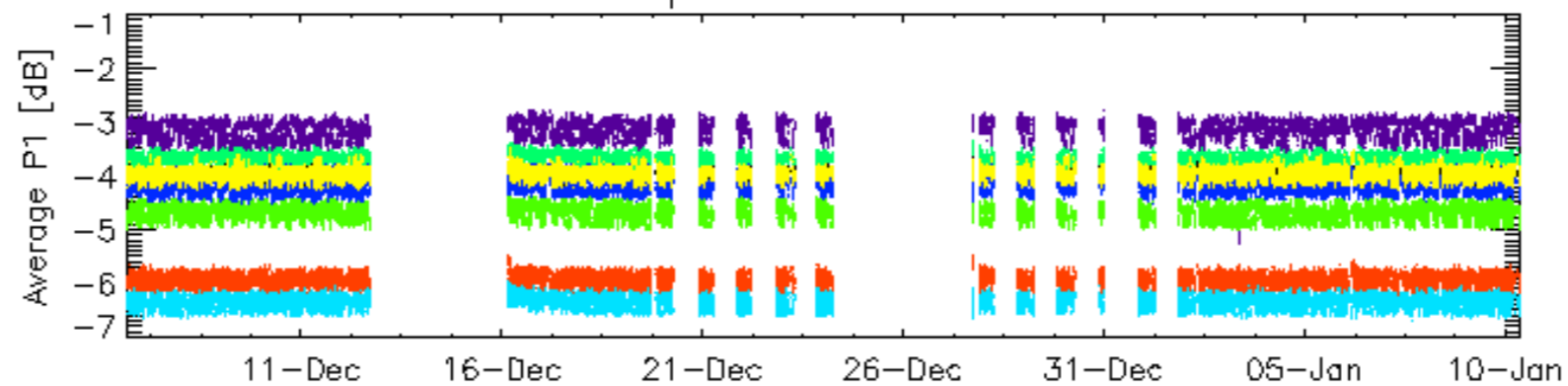


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

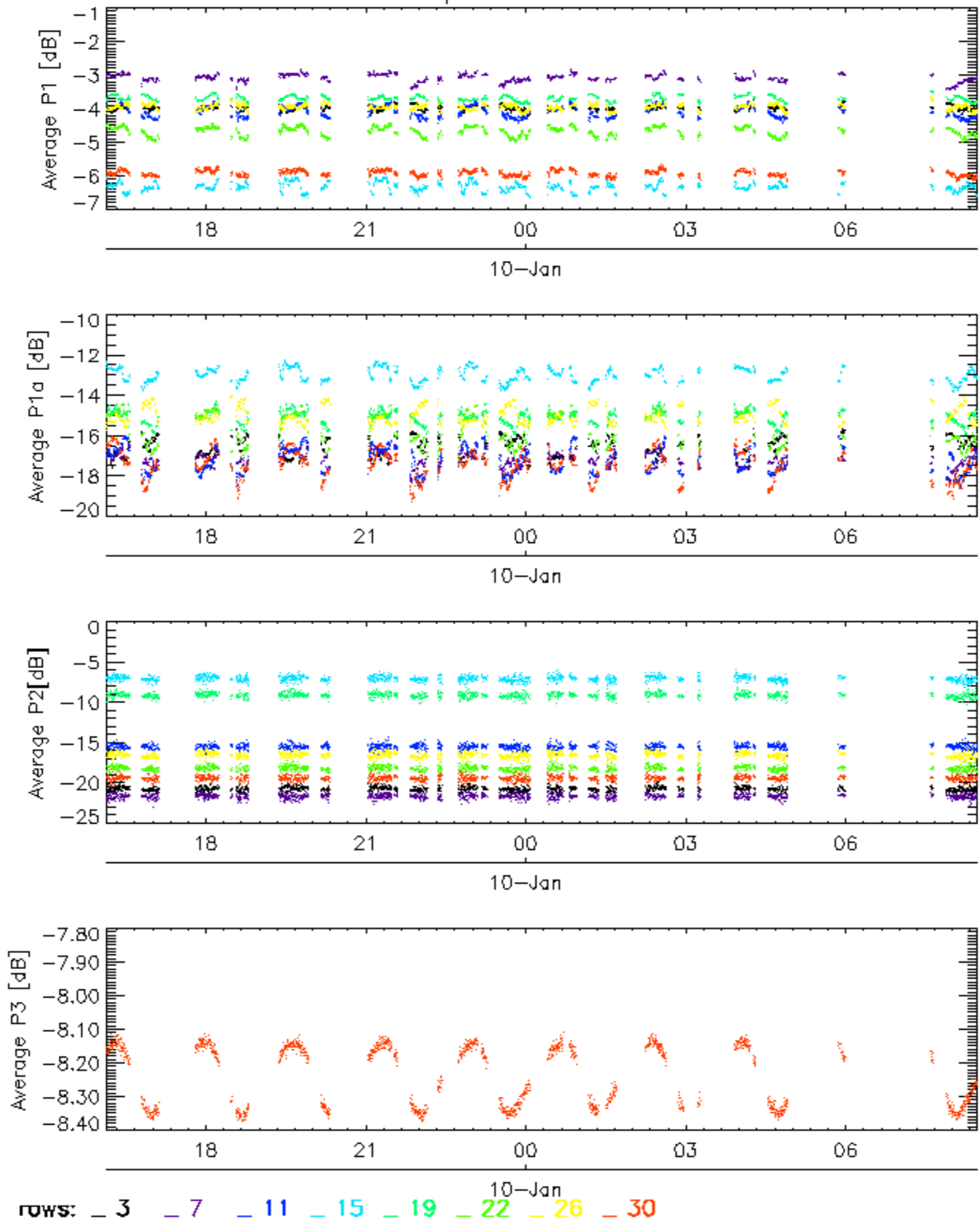


Cal pulses for WVS IS2



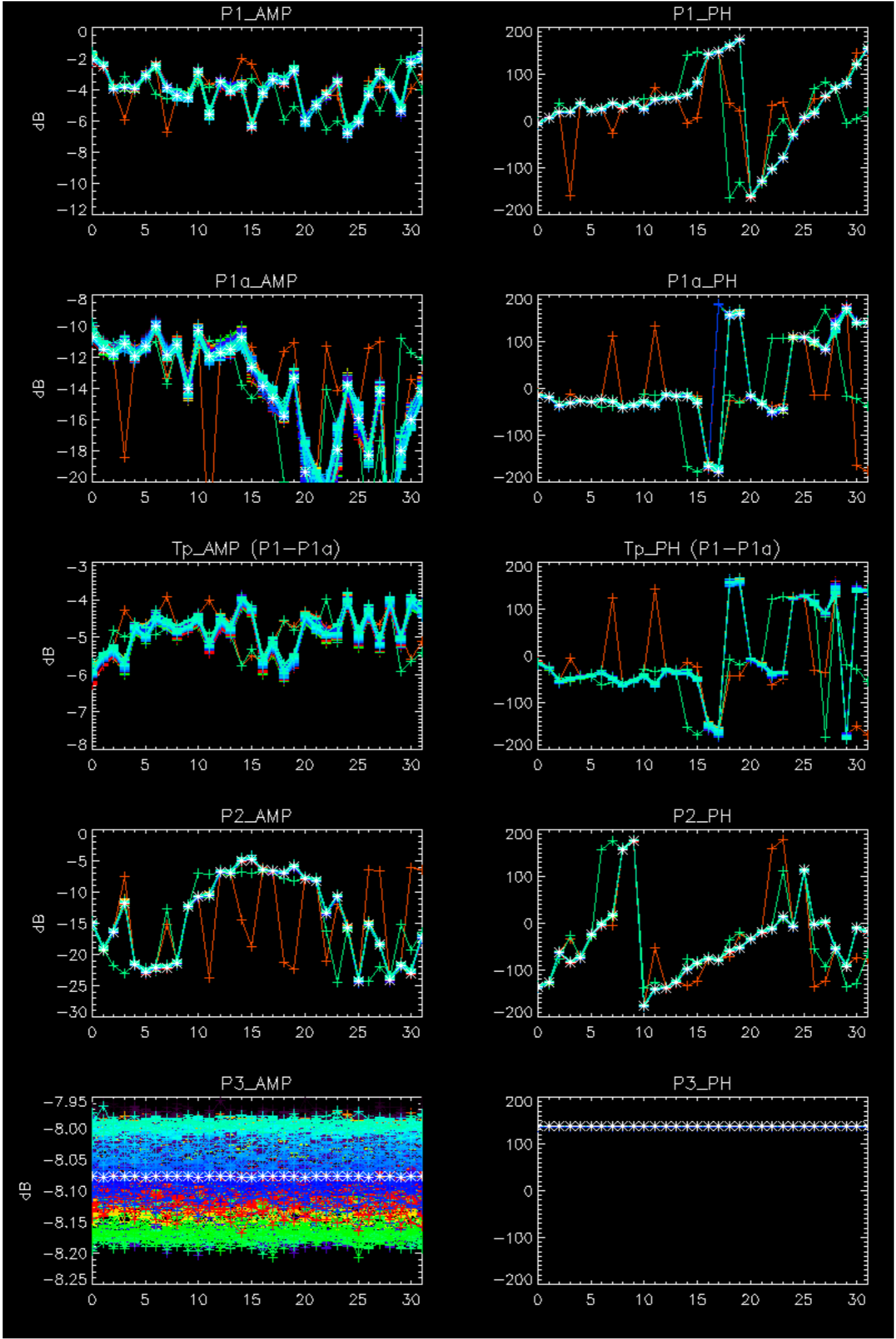
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

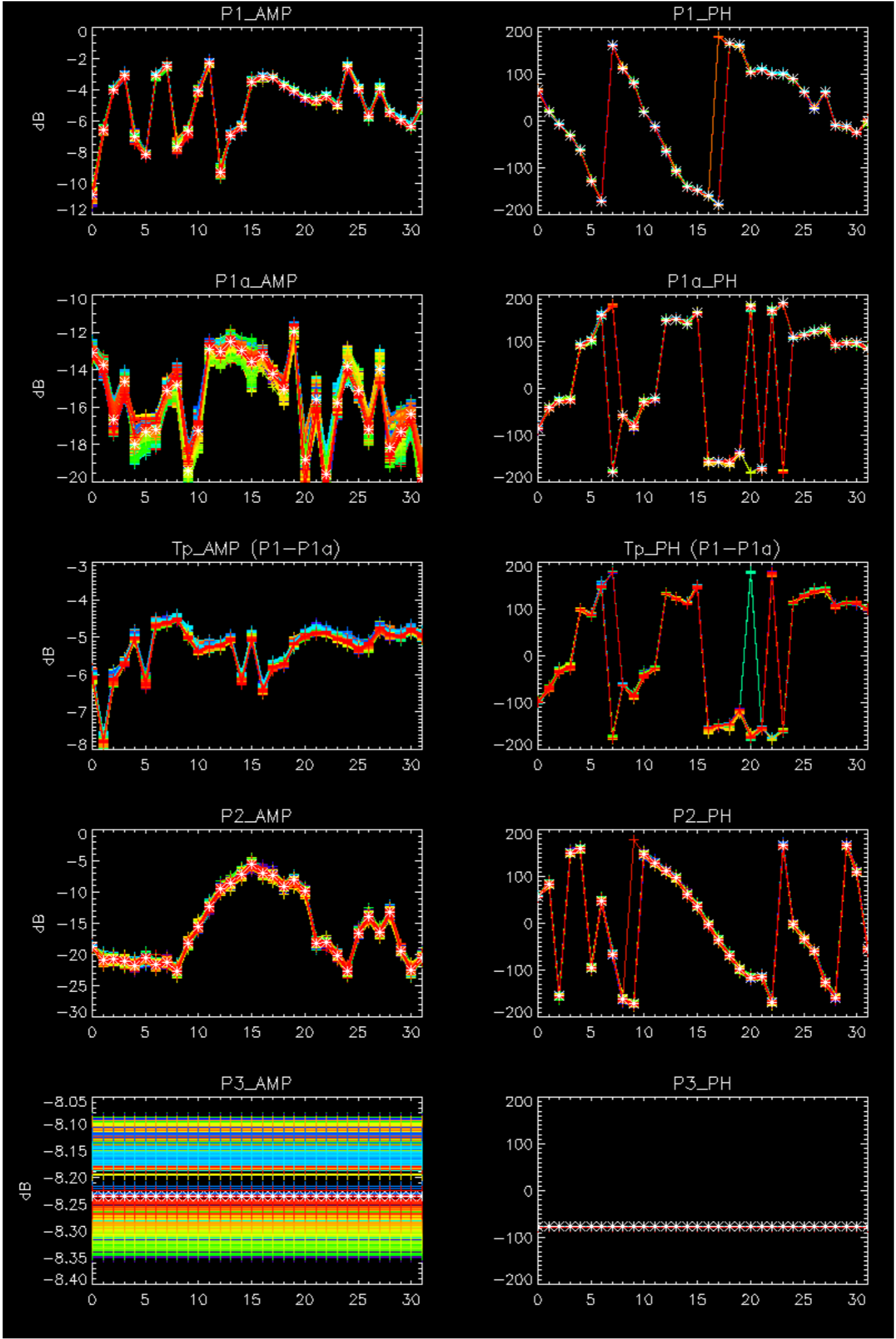
Cal pulses for WVS IS2



No anomalies observed on available browse products

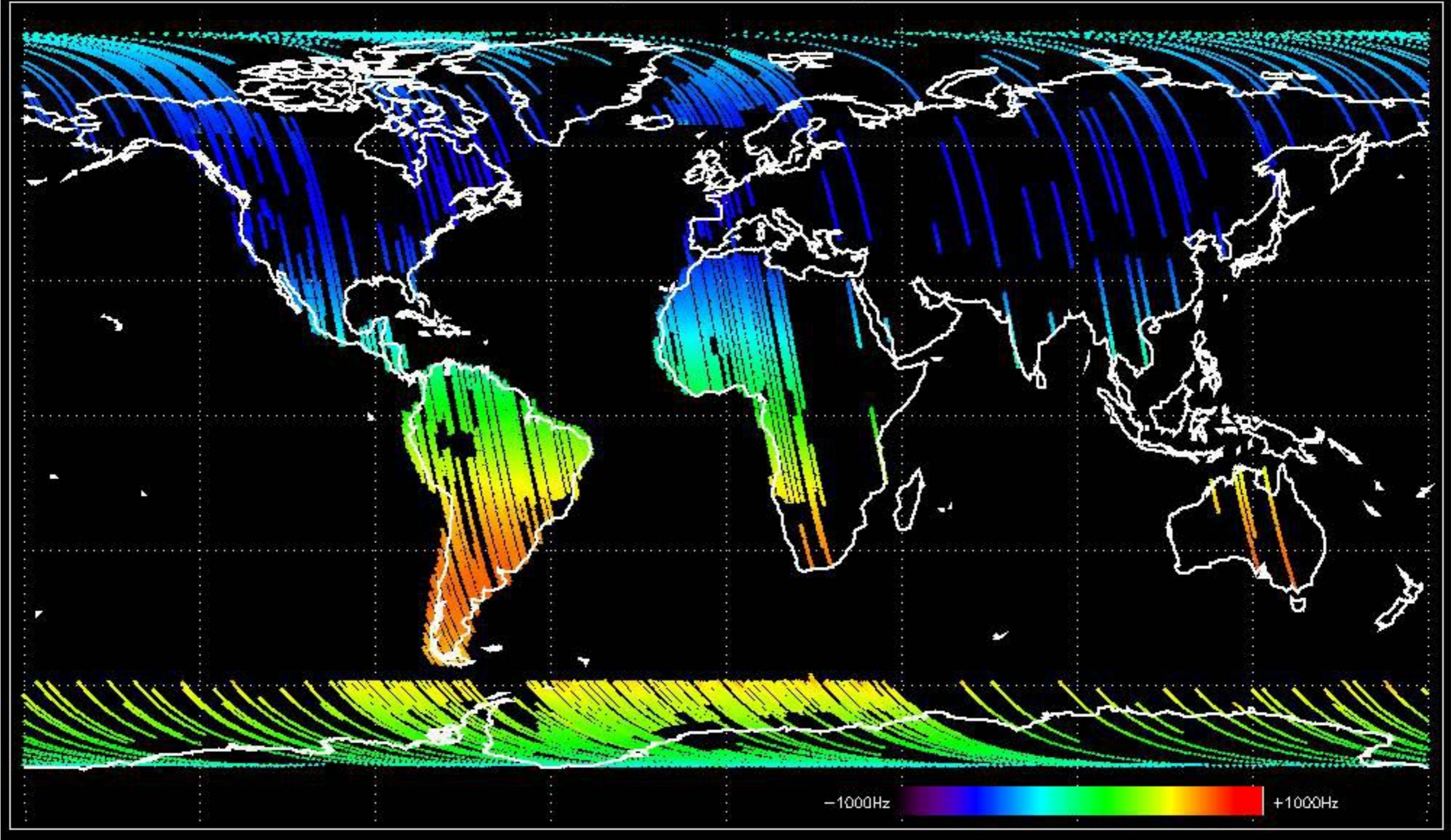
No anomalies observed.



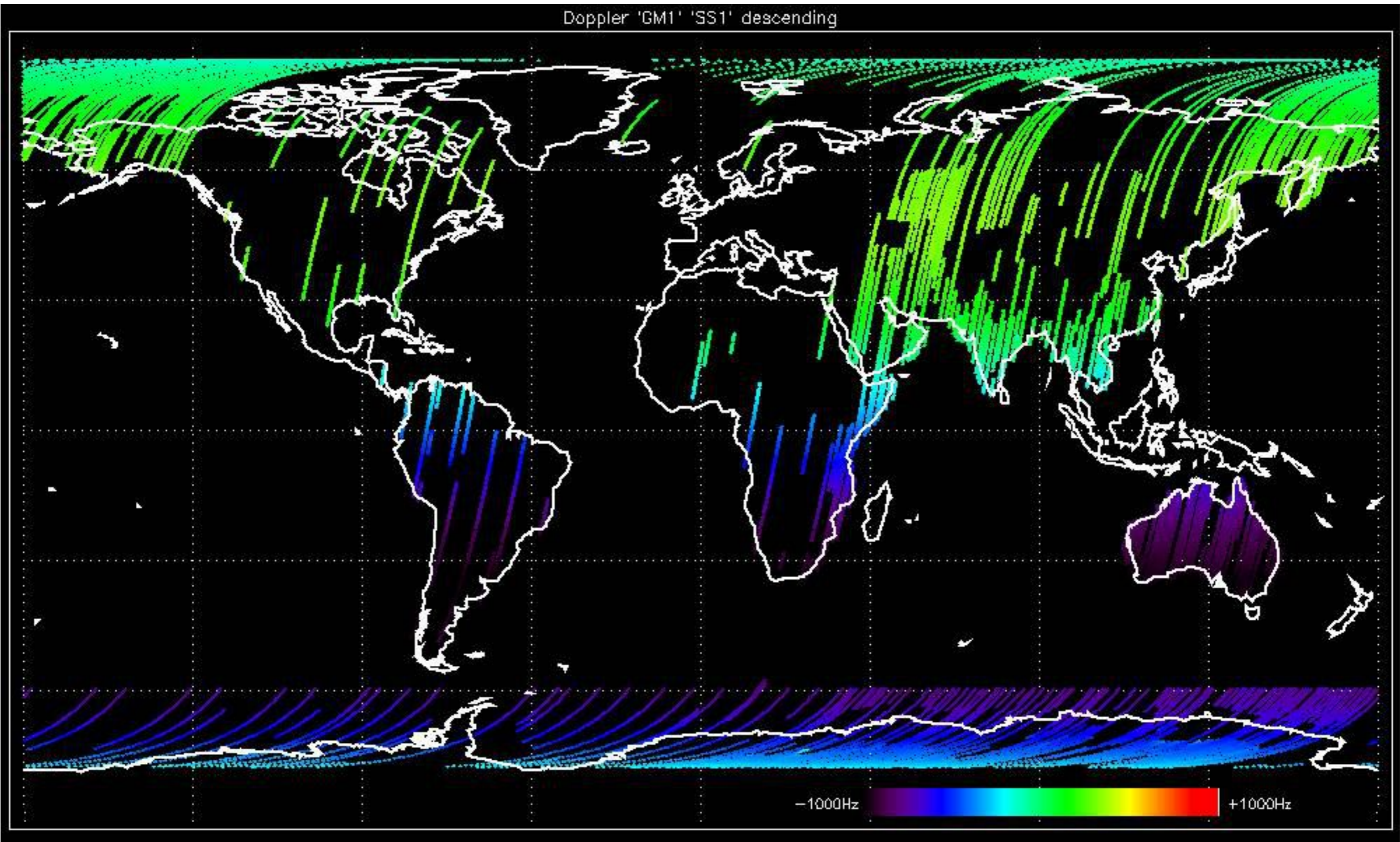


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

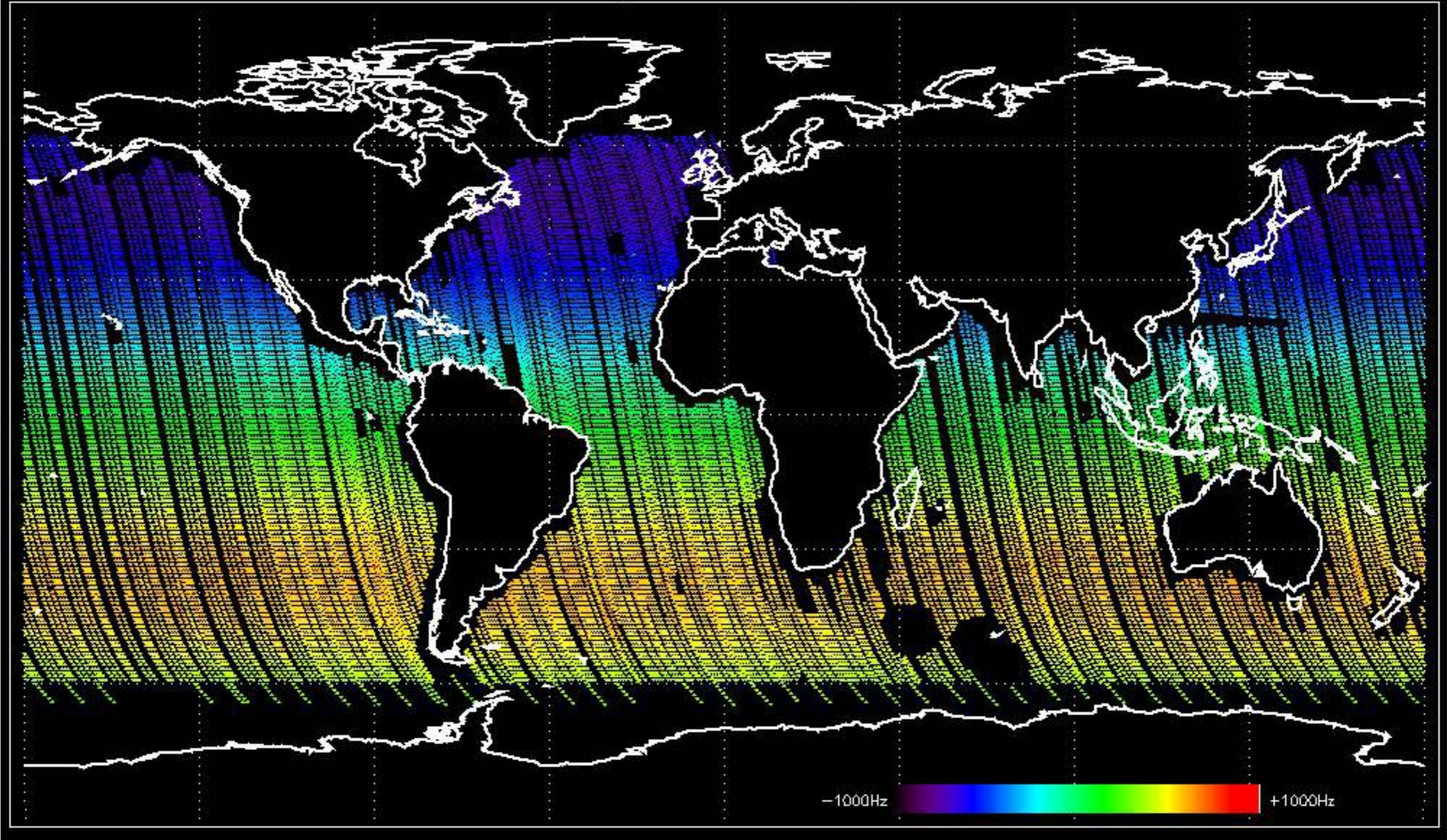
Doppler 'GM1' 'SS1' ascending



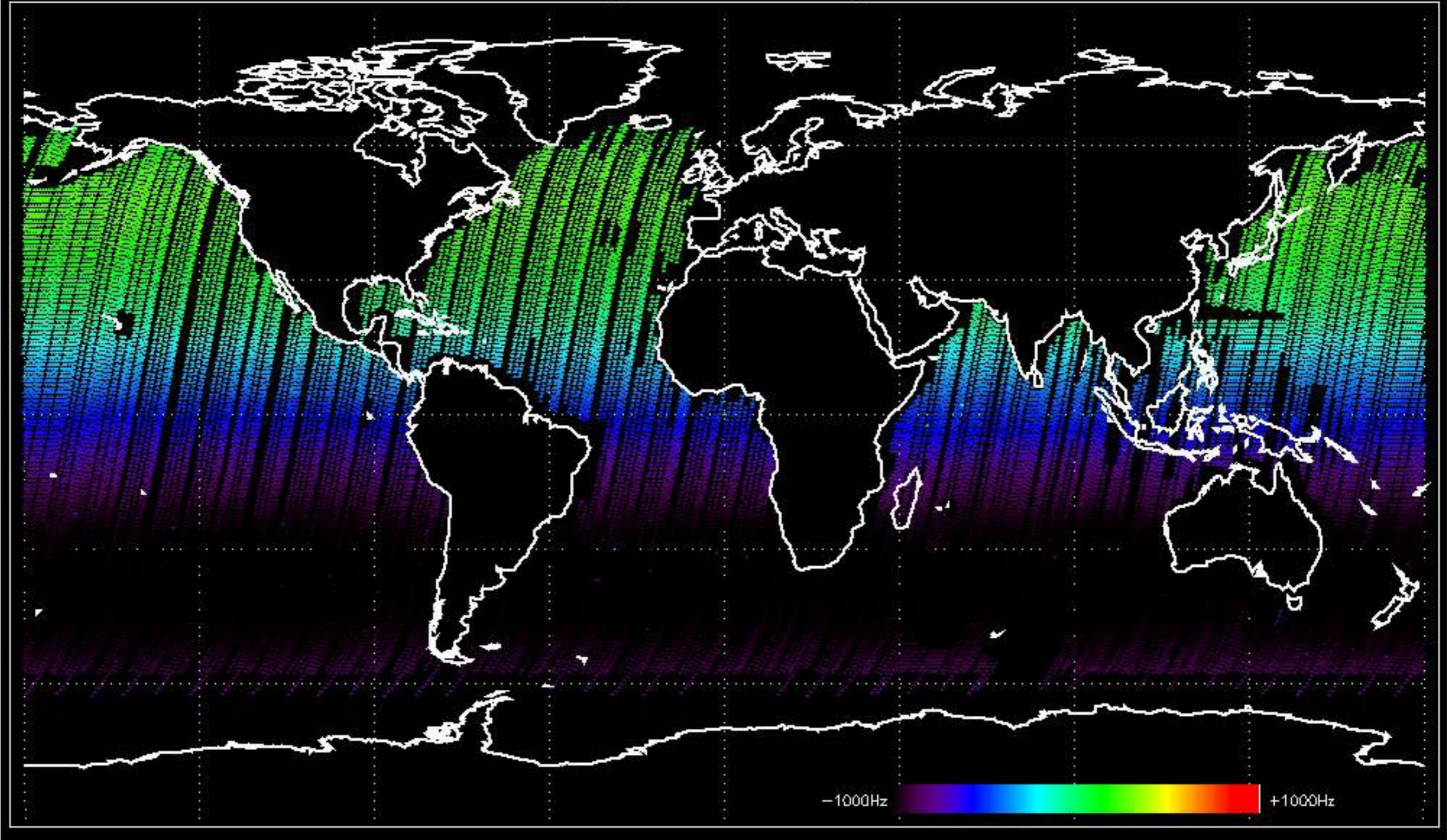
Doppler 'GM1' 'SS1' descending



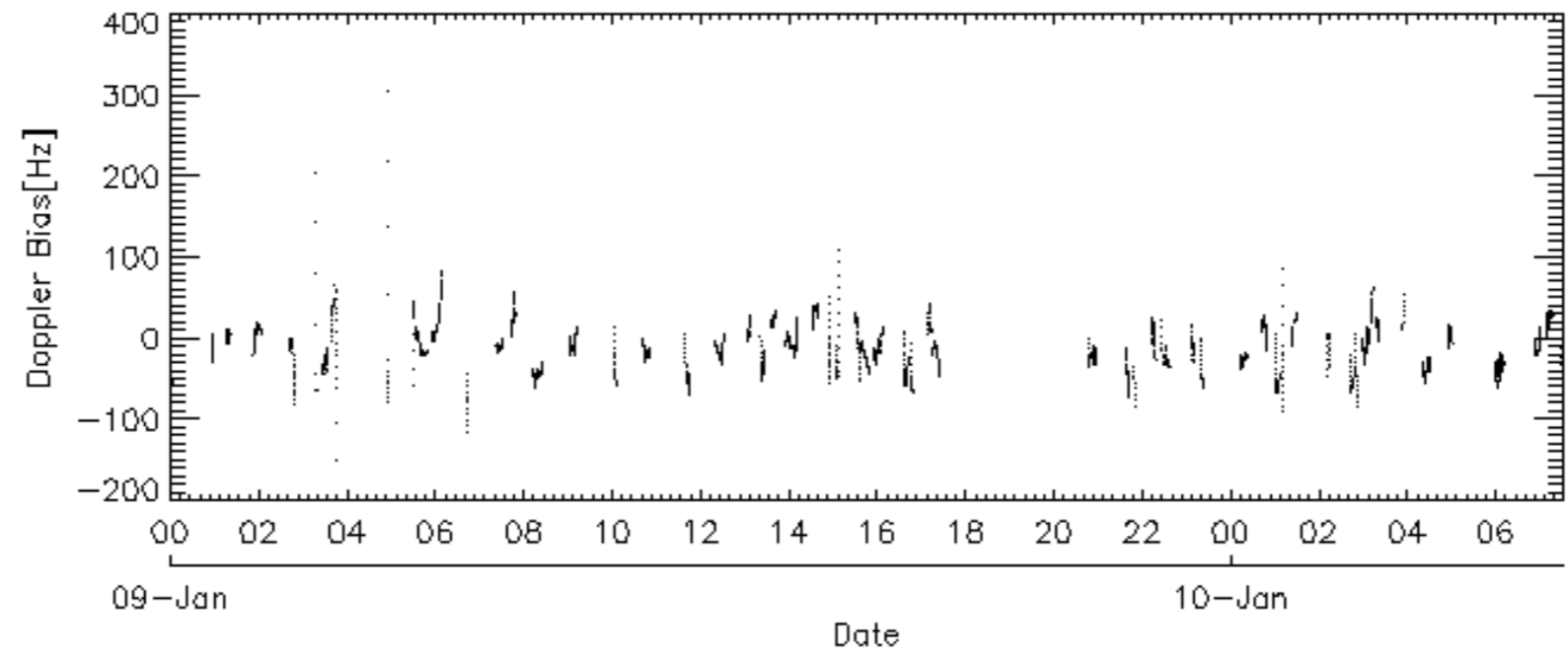
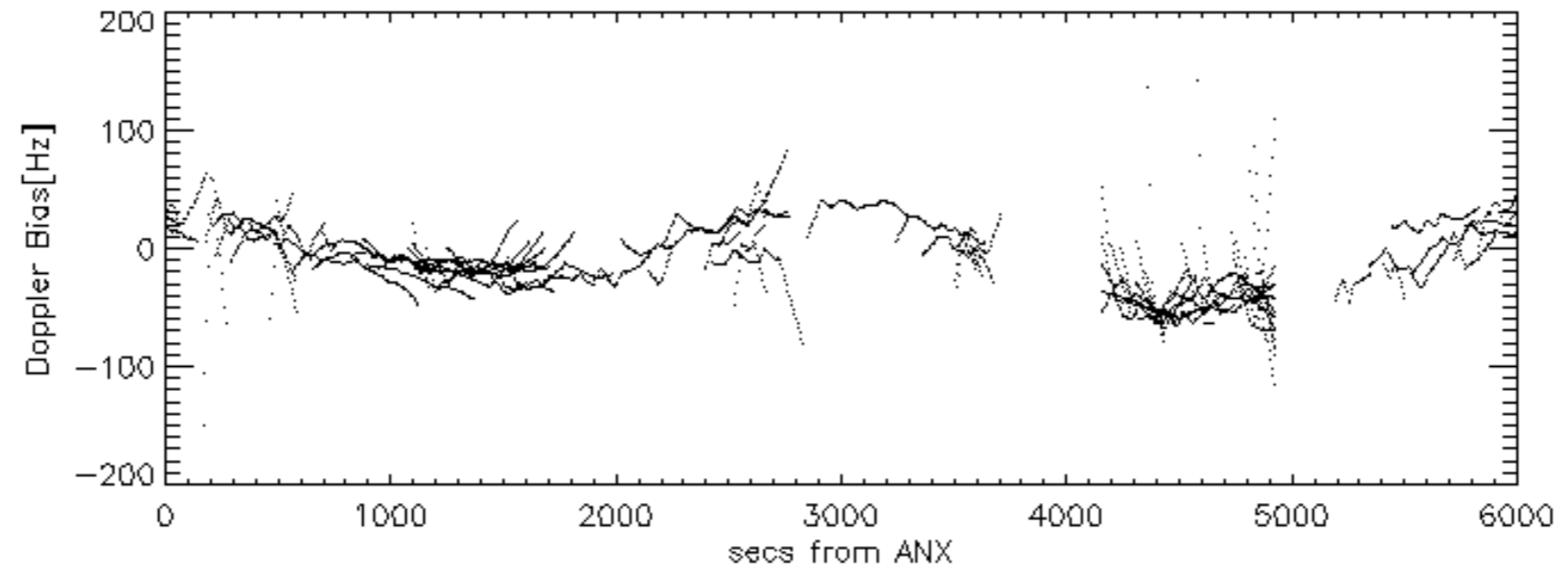
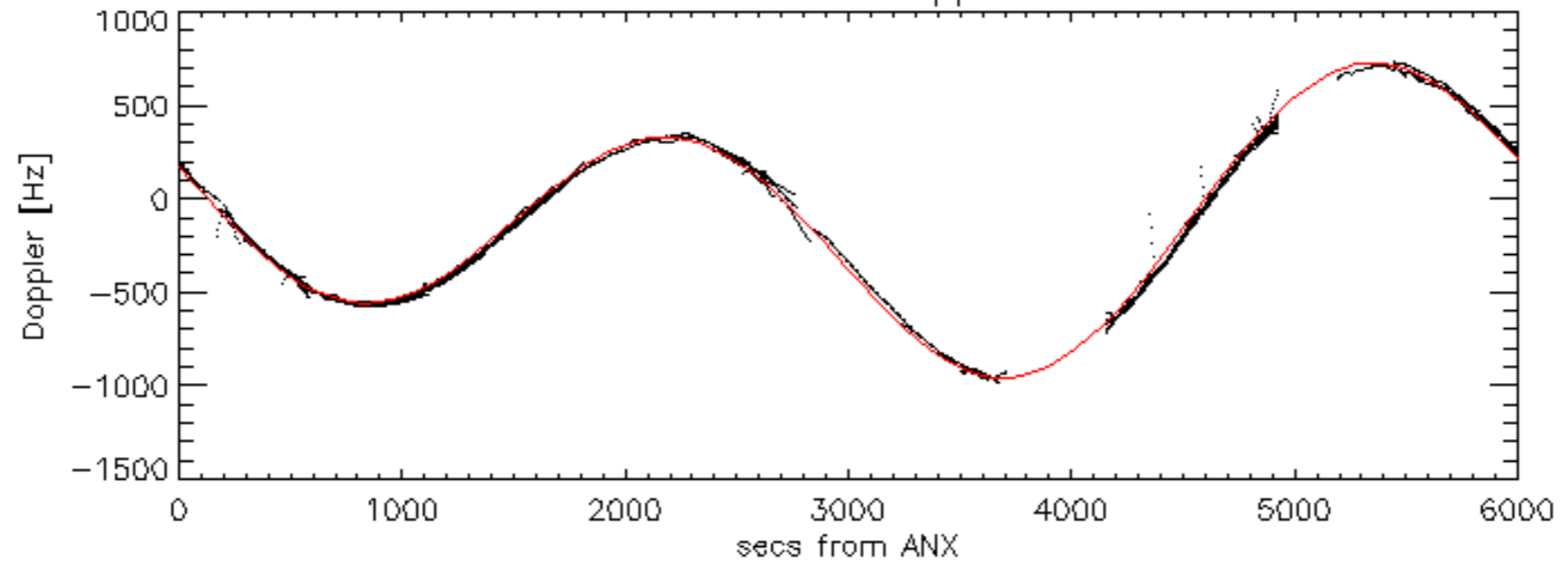
Doppler 'WVS' 'IS2' ascending

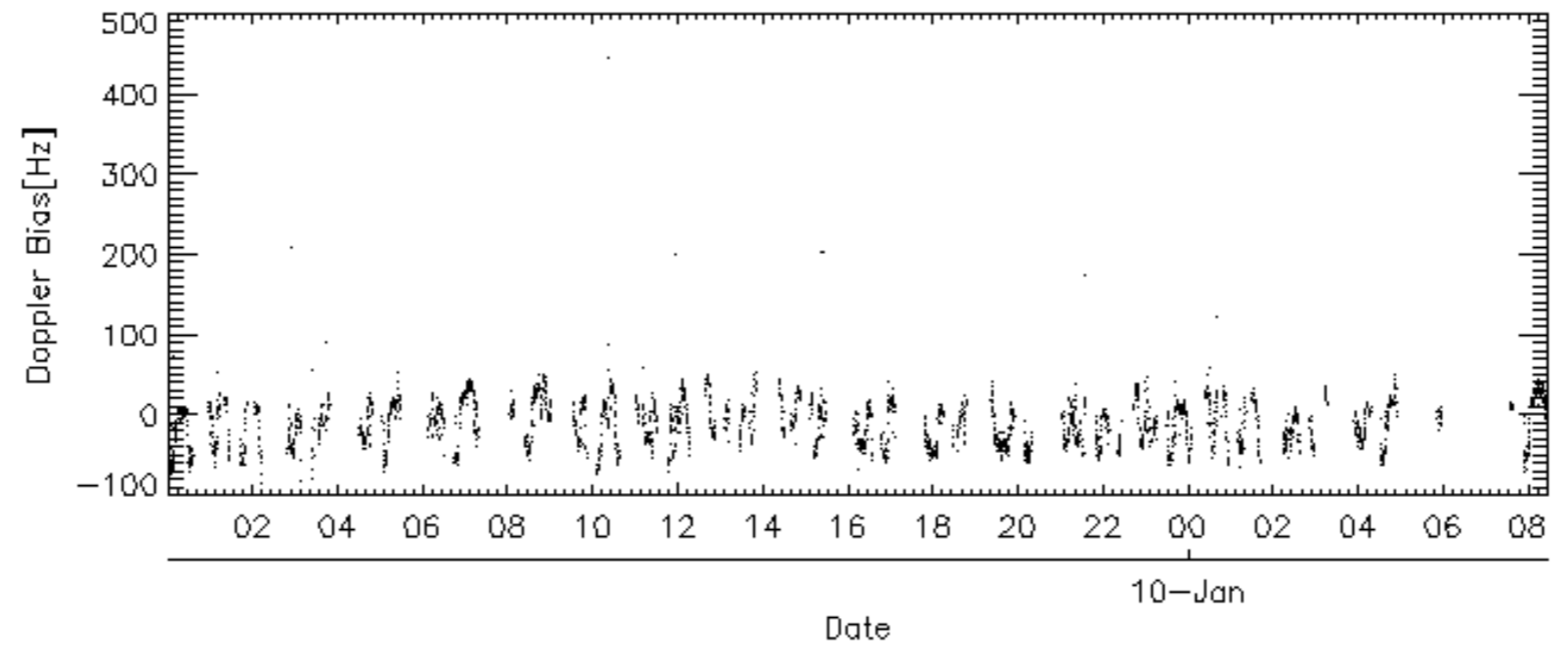
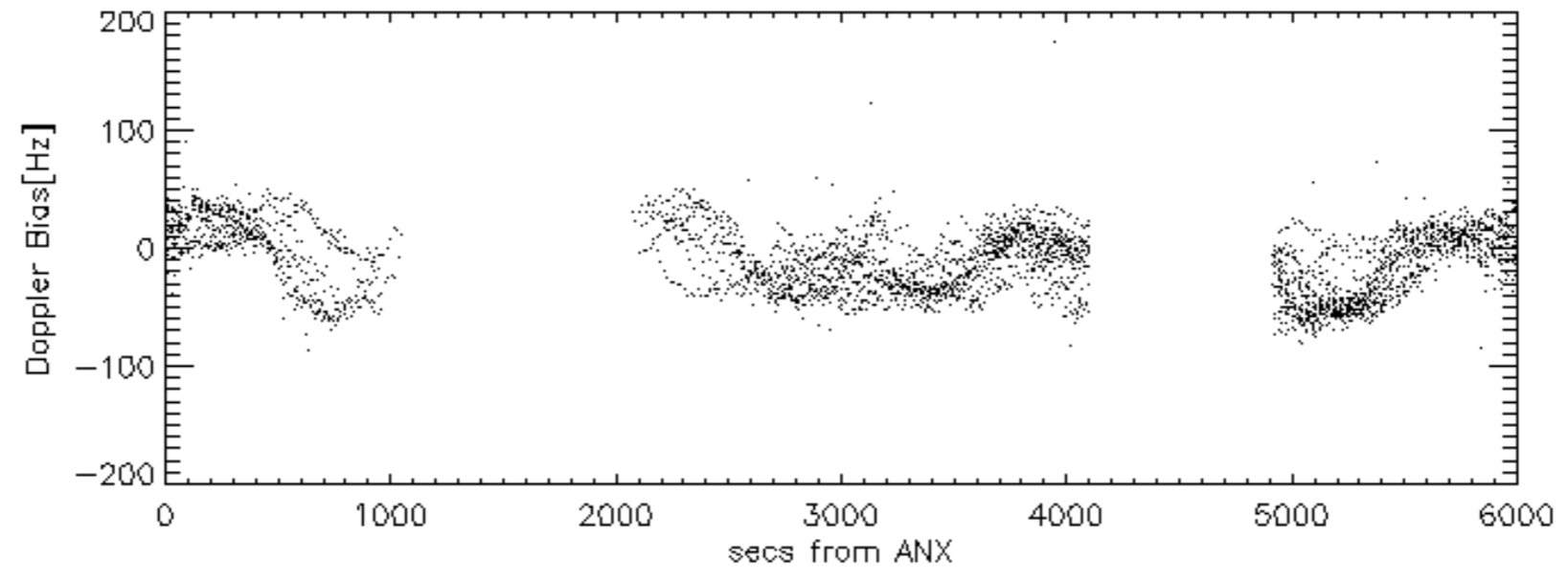
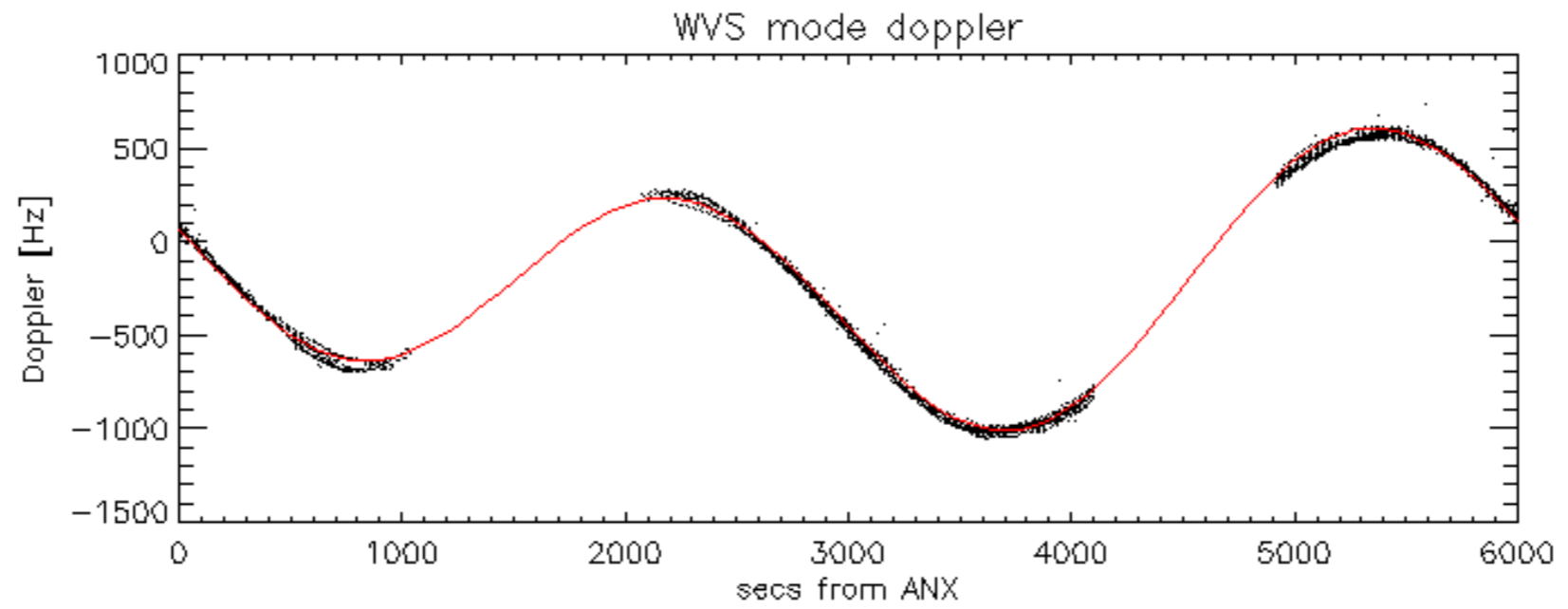


Doppler 'WVS' 'IS2' descending

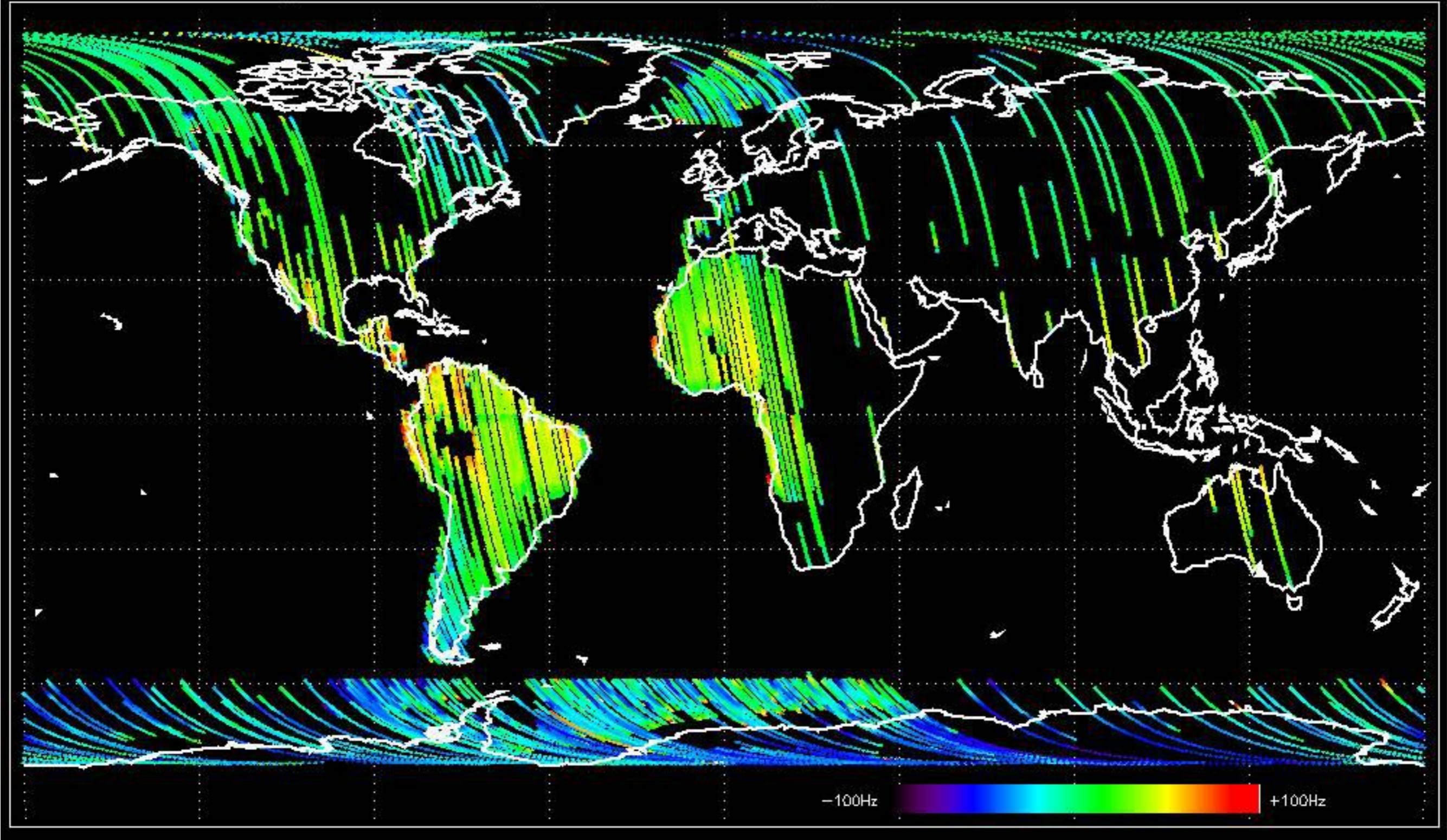


GM1 mode doppler

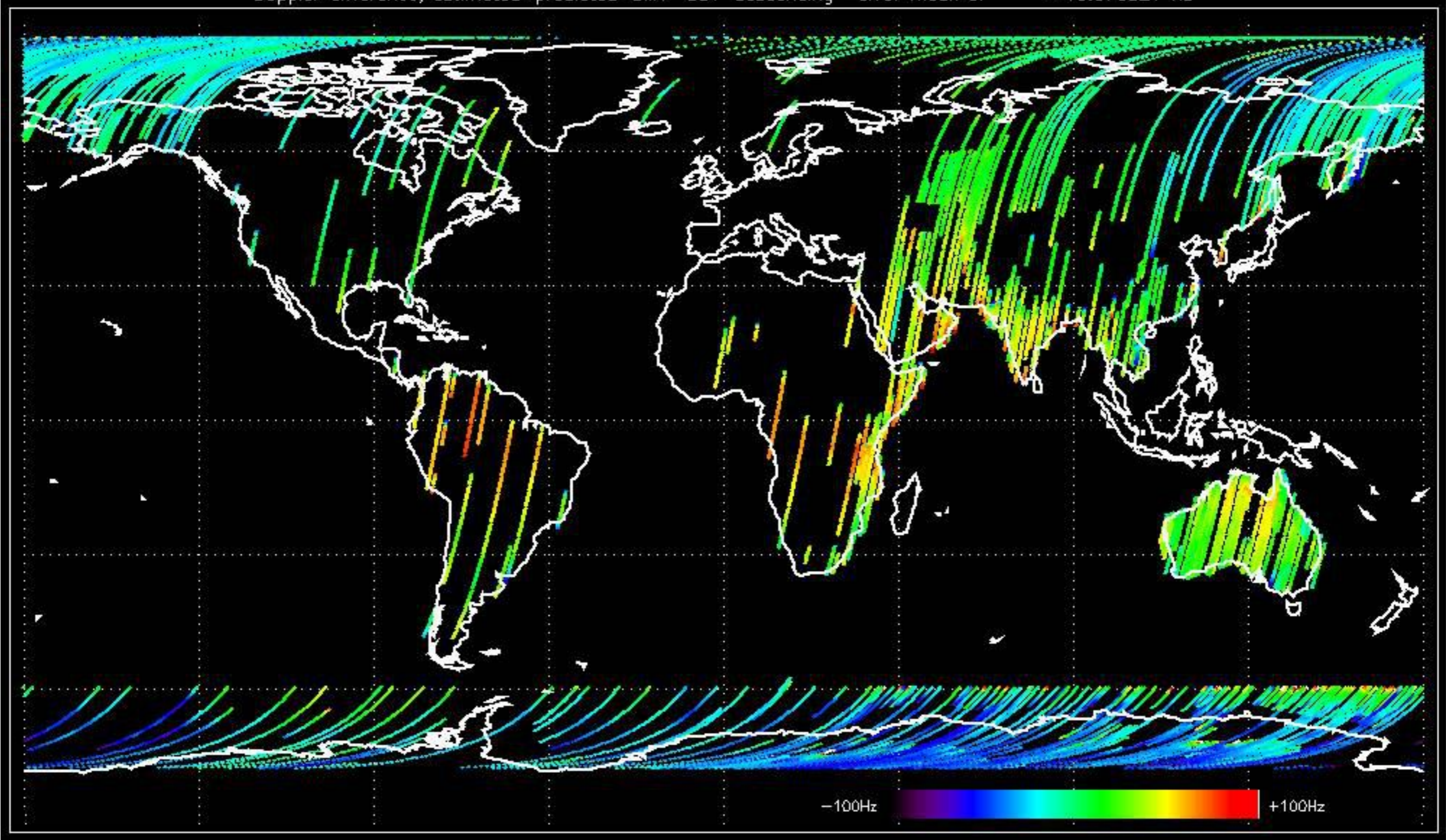




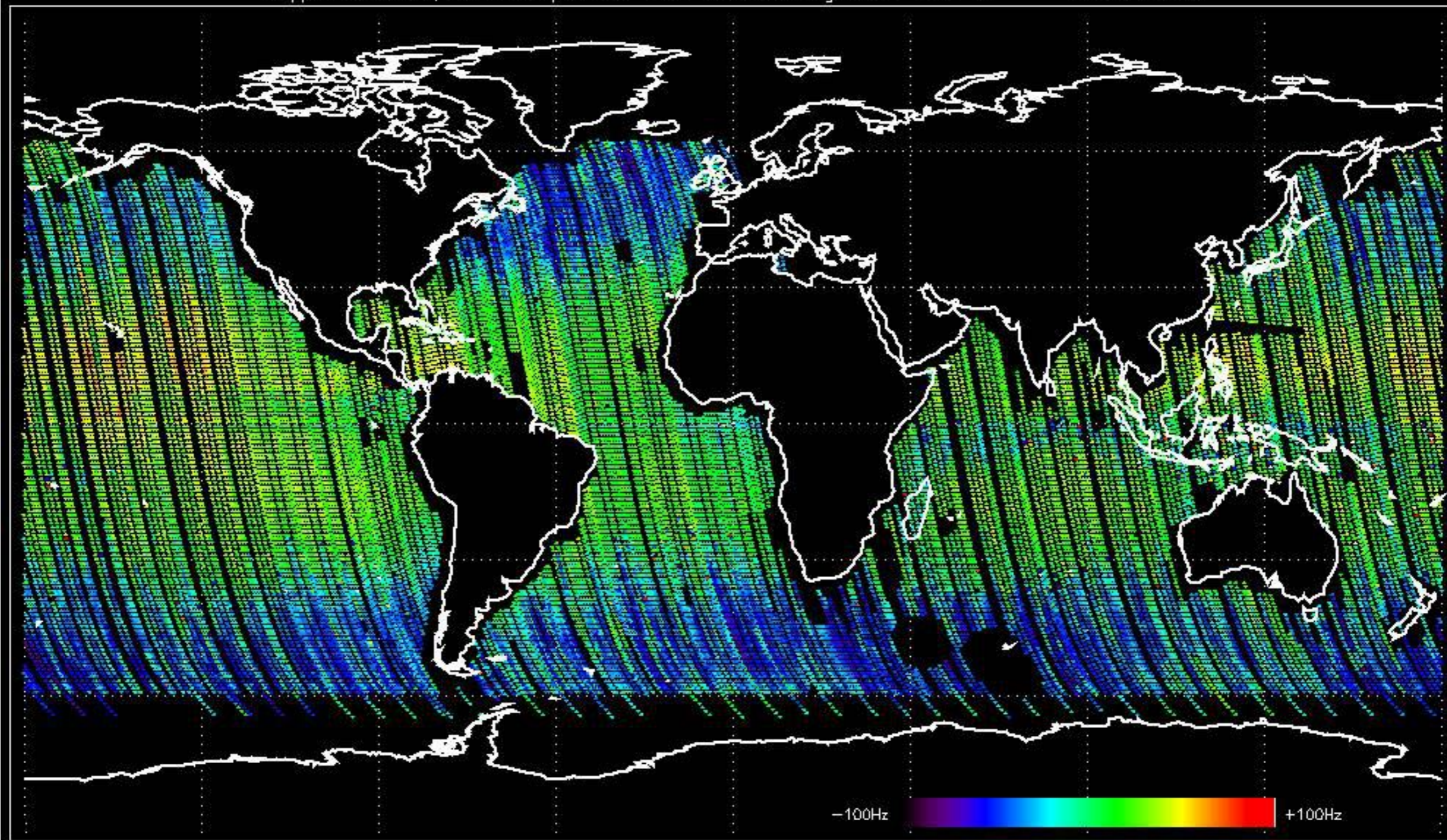
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.945798 Hz



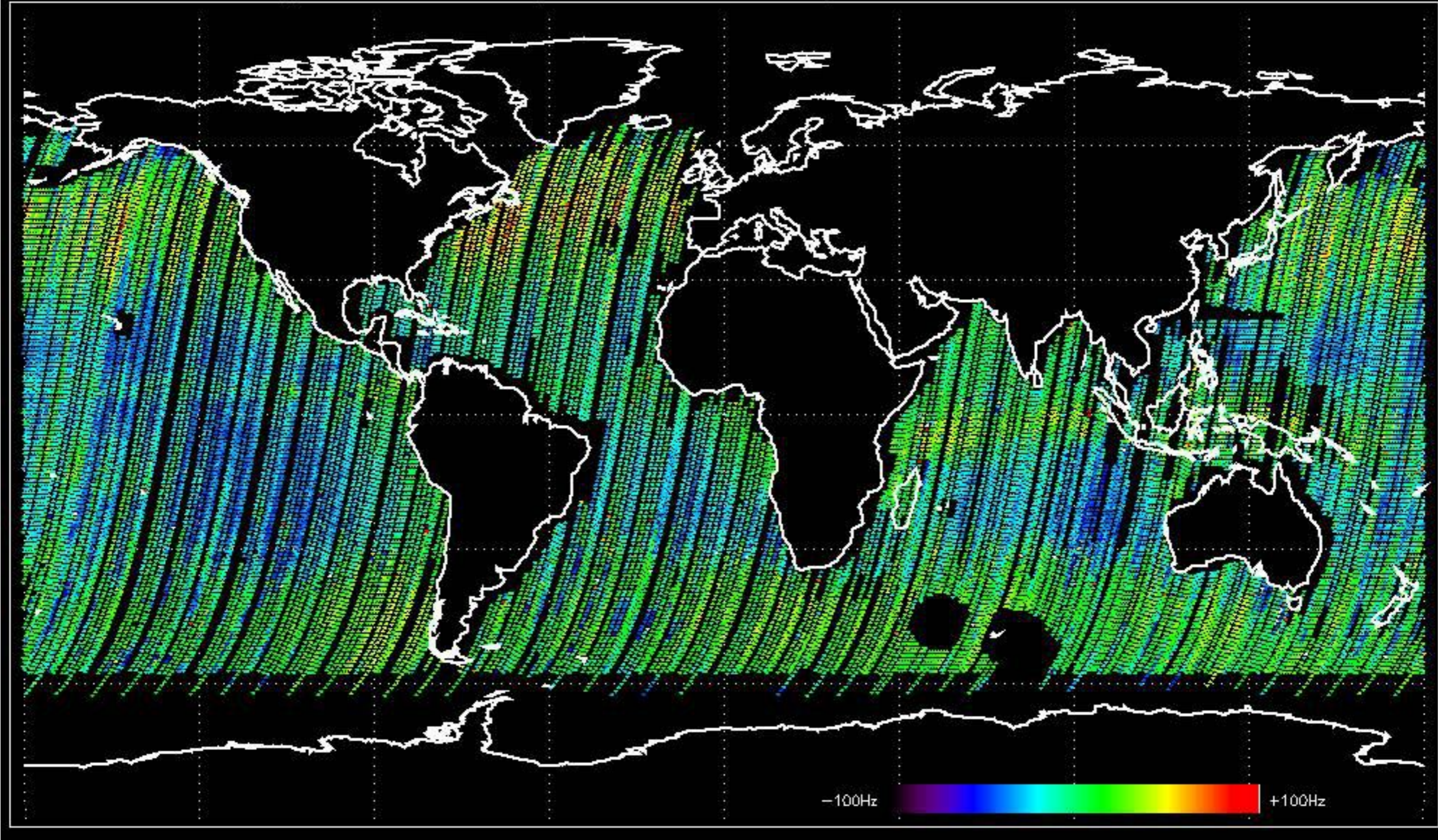
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.076821 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.483572 Hz

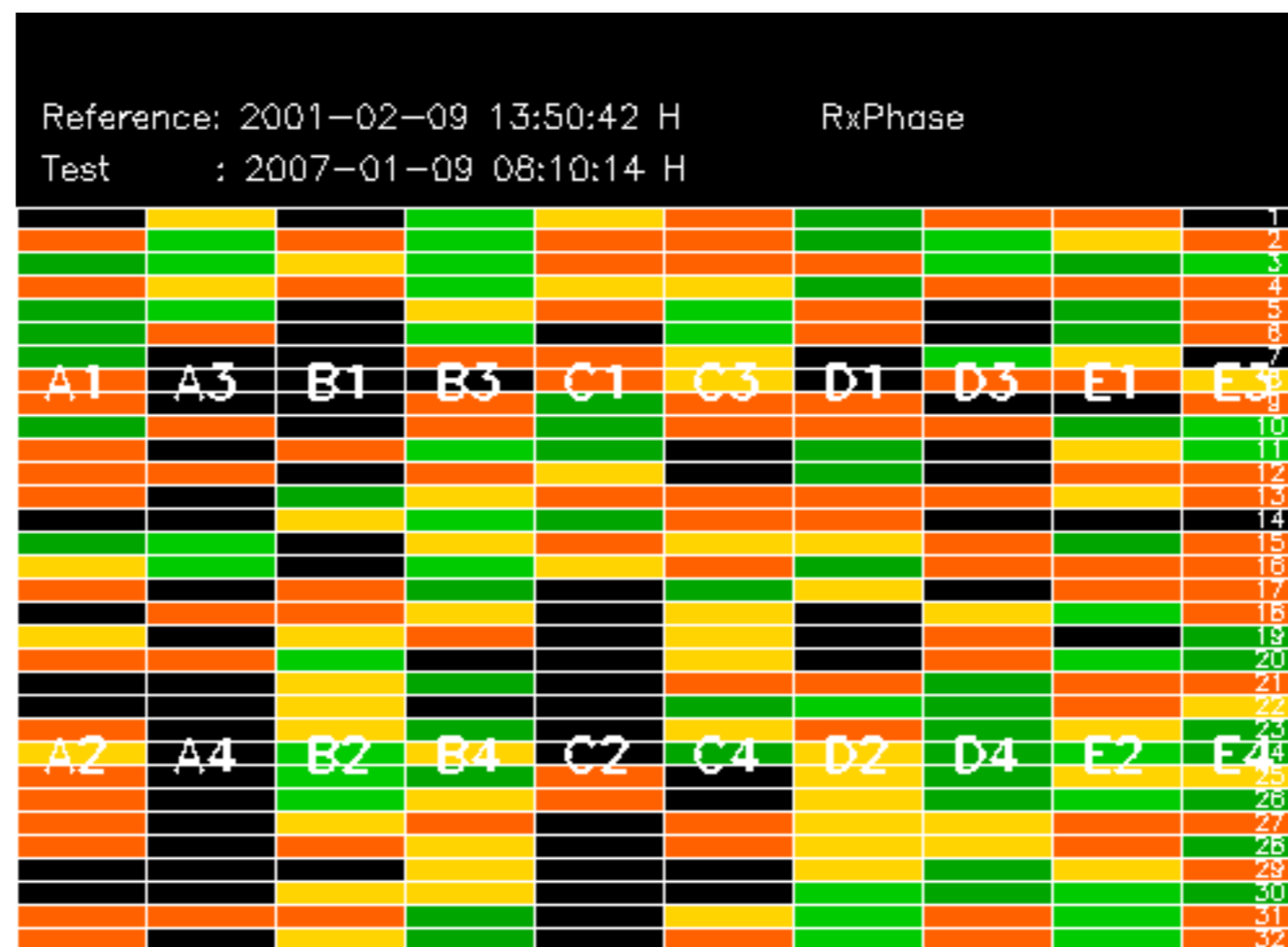


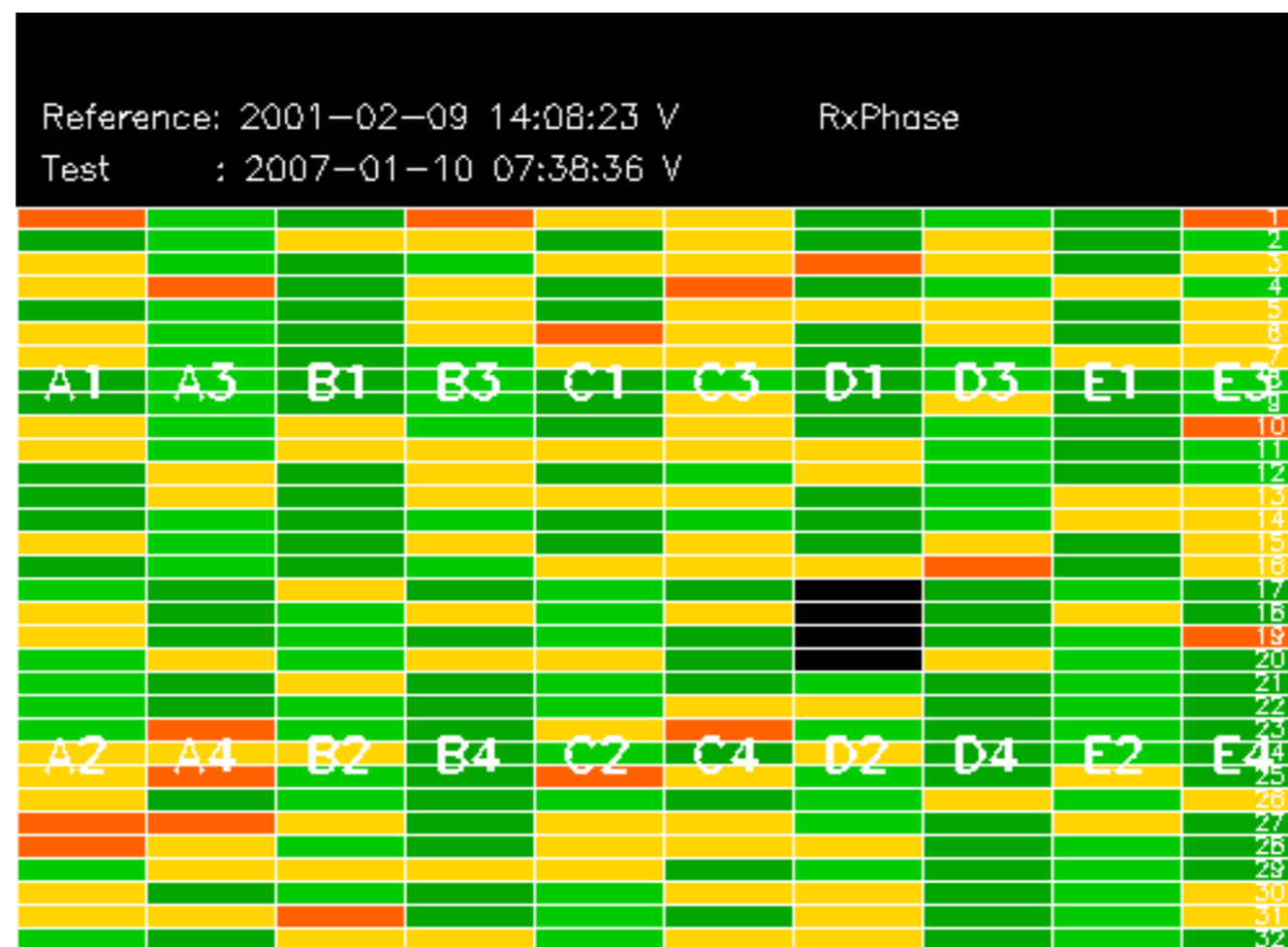
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.743623 Hz

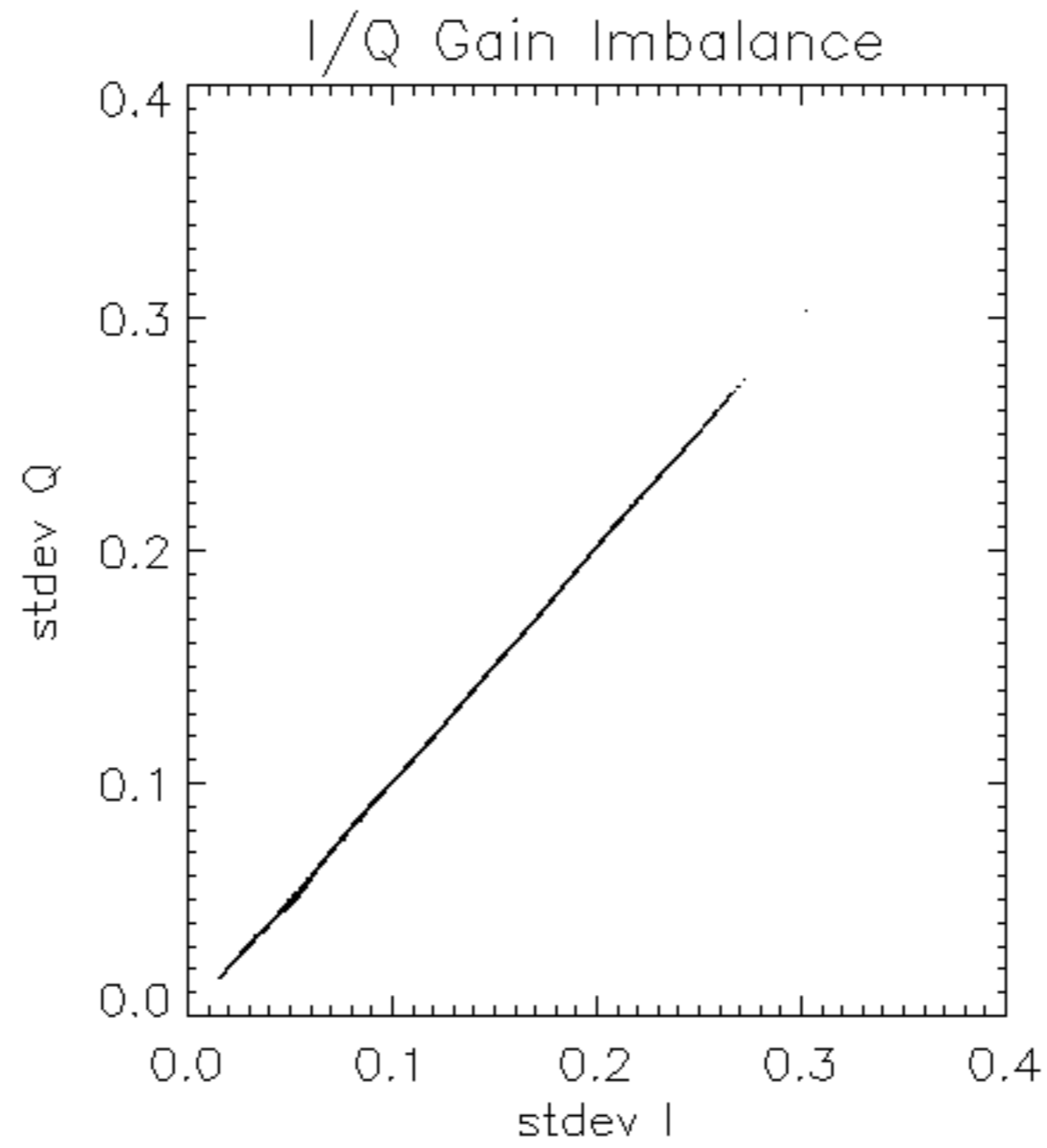


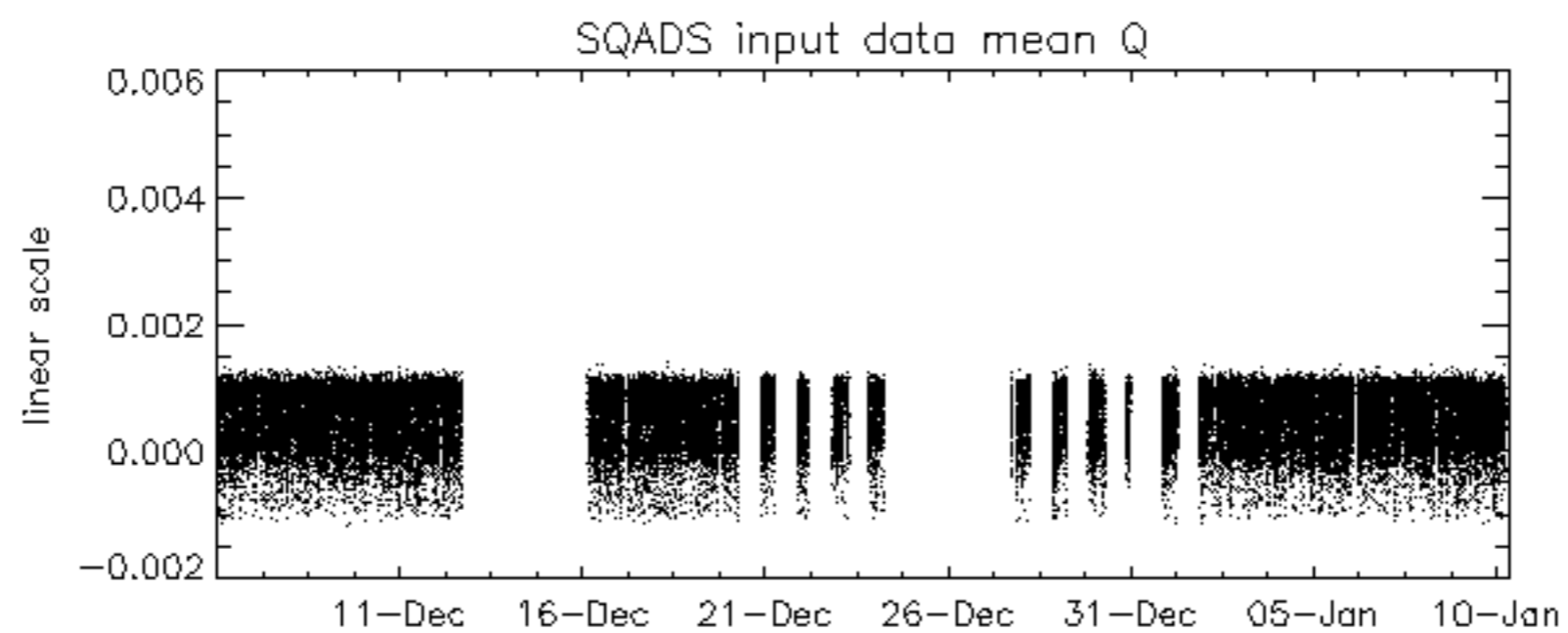
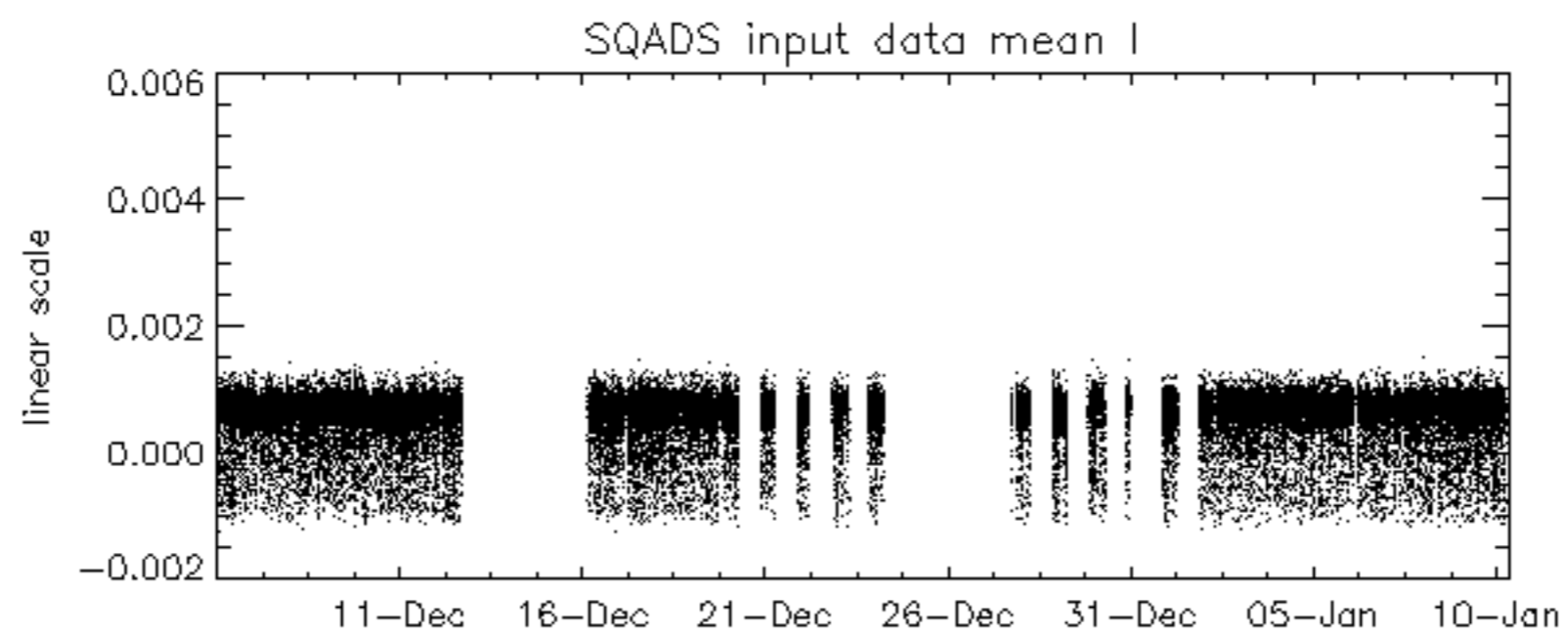
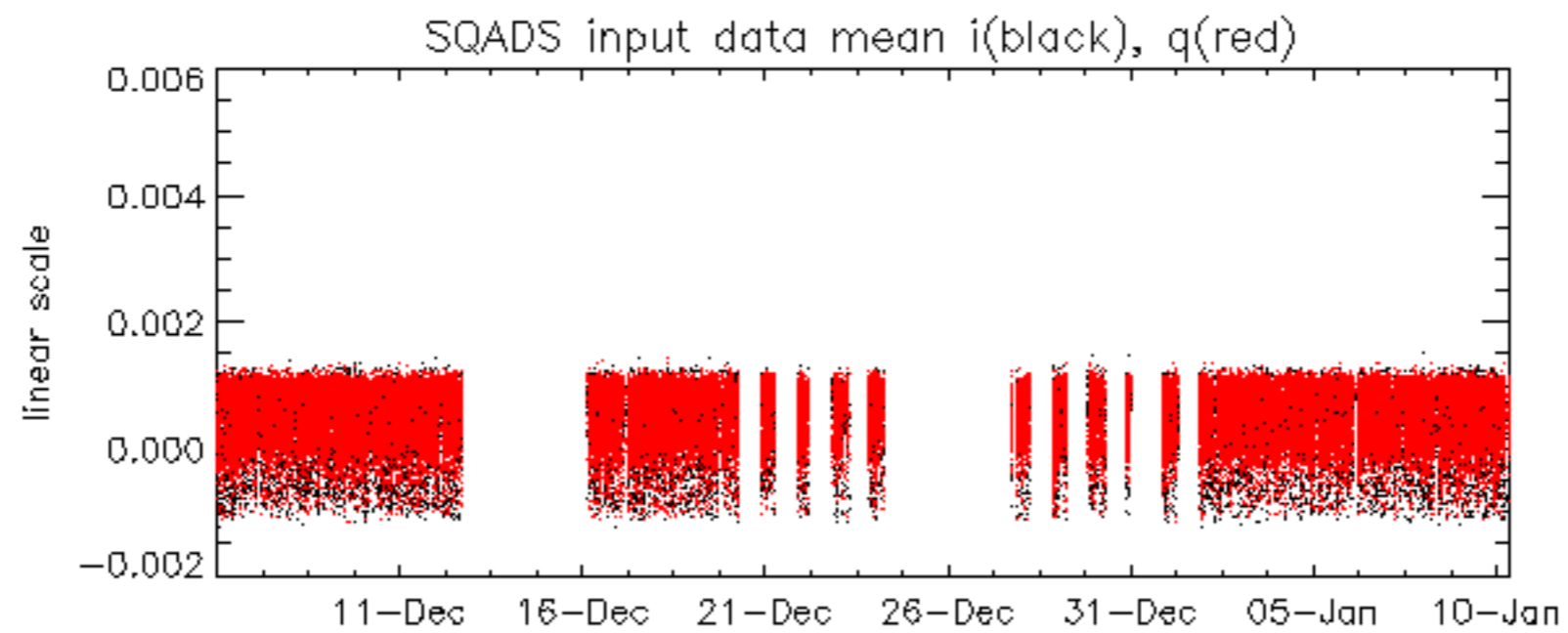
No anomalies observed on available MS products:

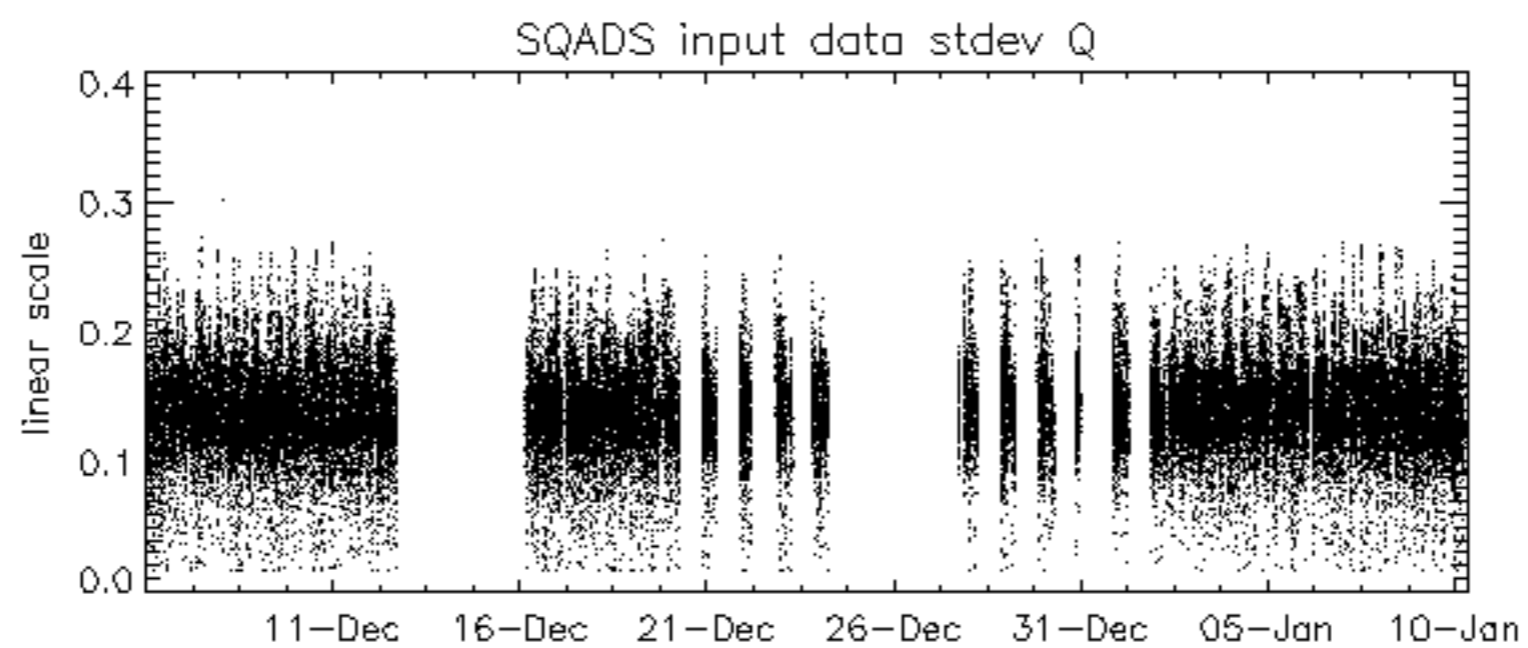
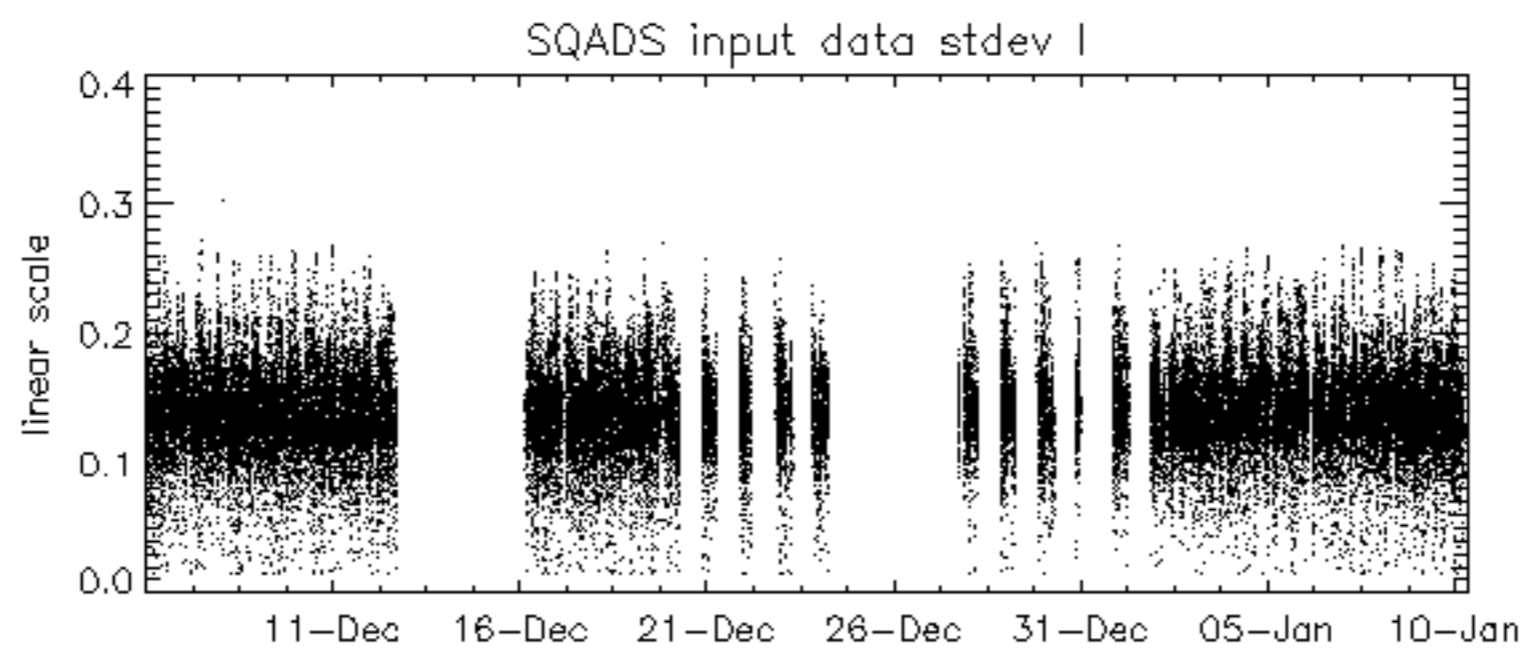
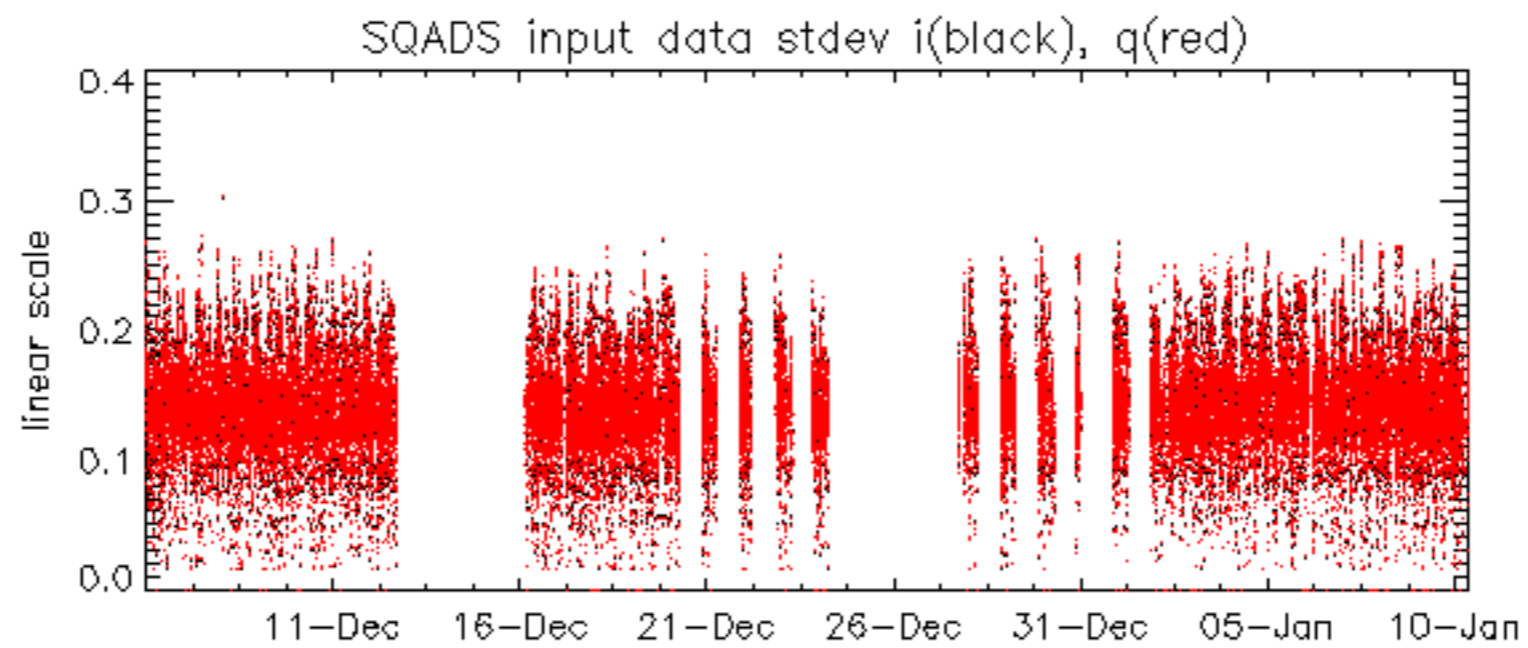
No anomalies observed.

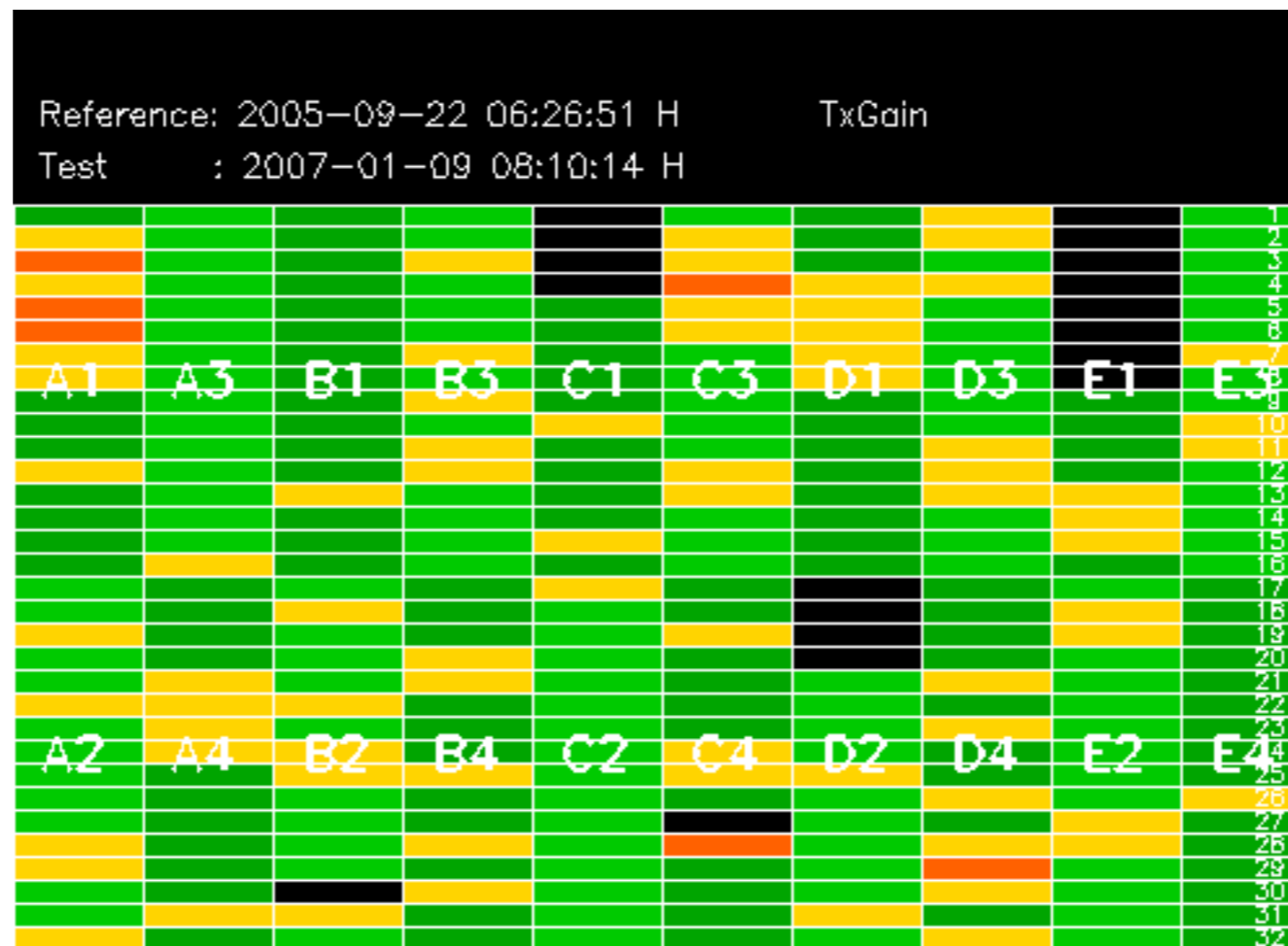








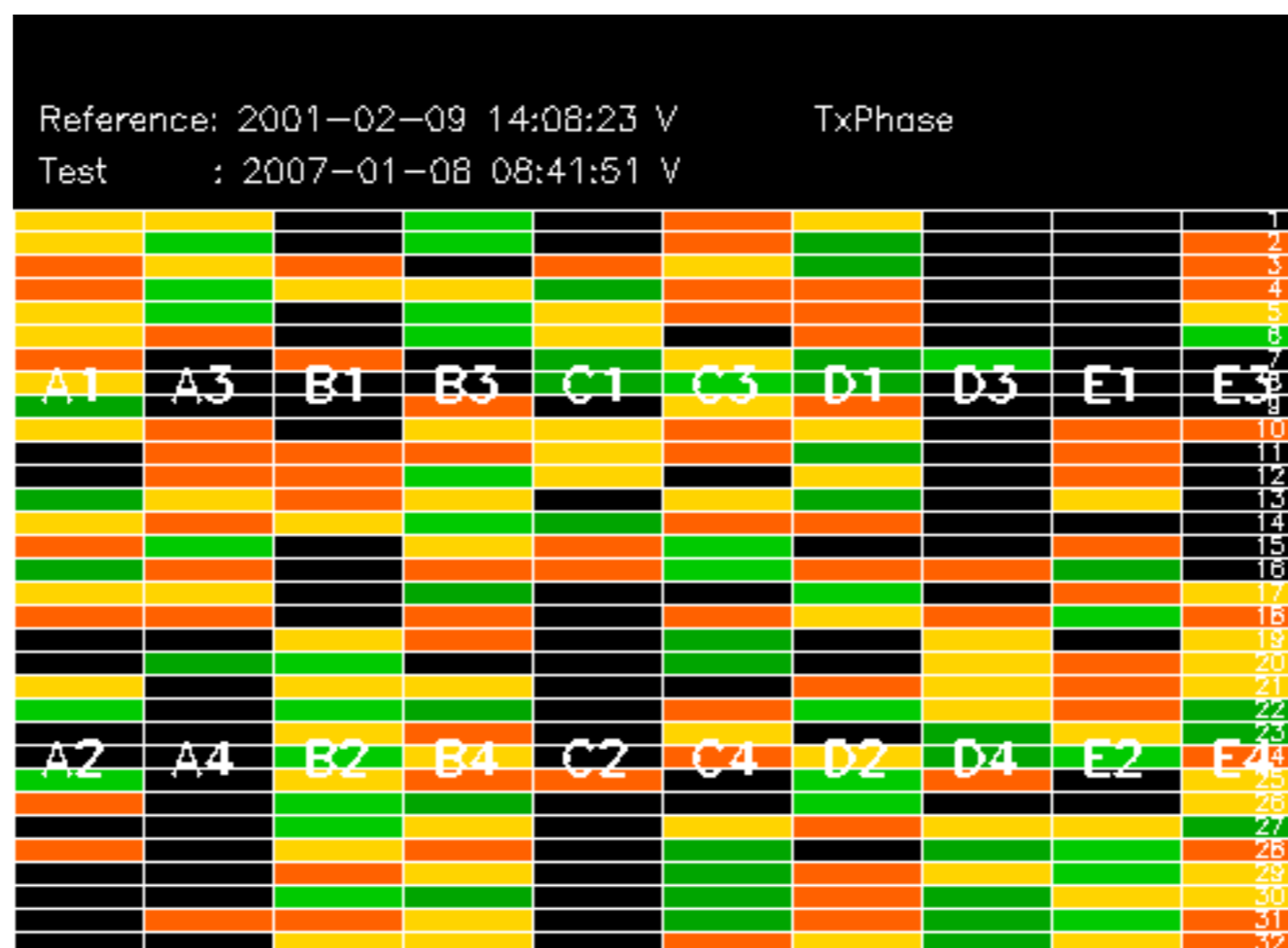




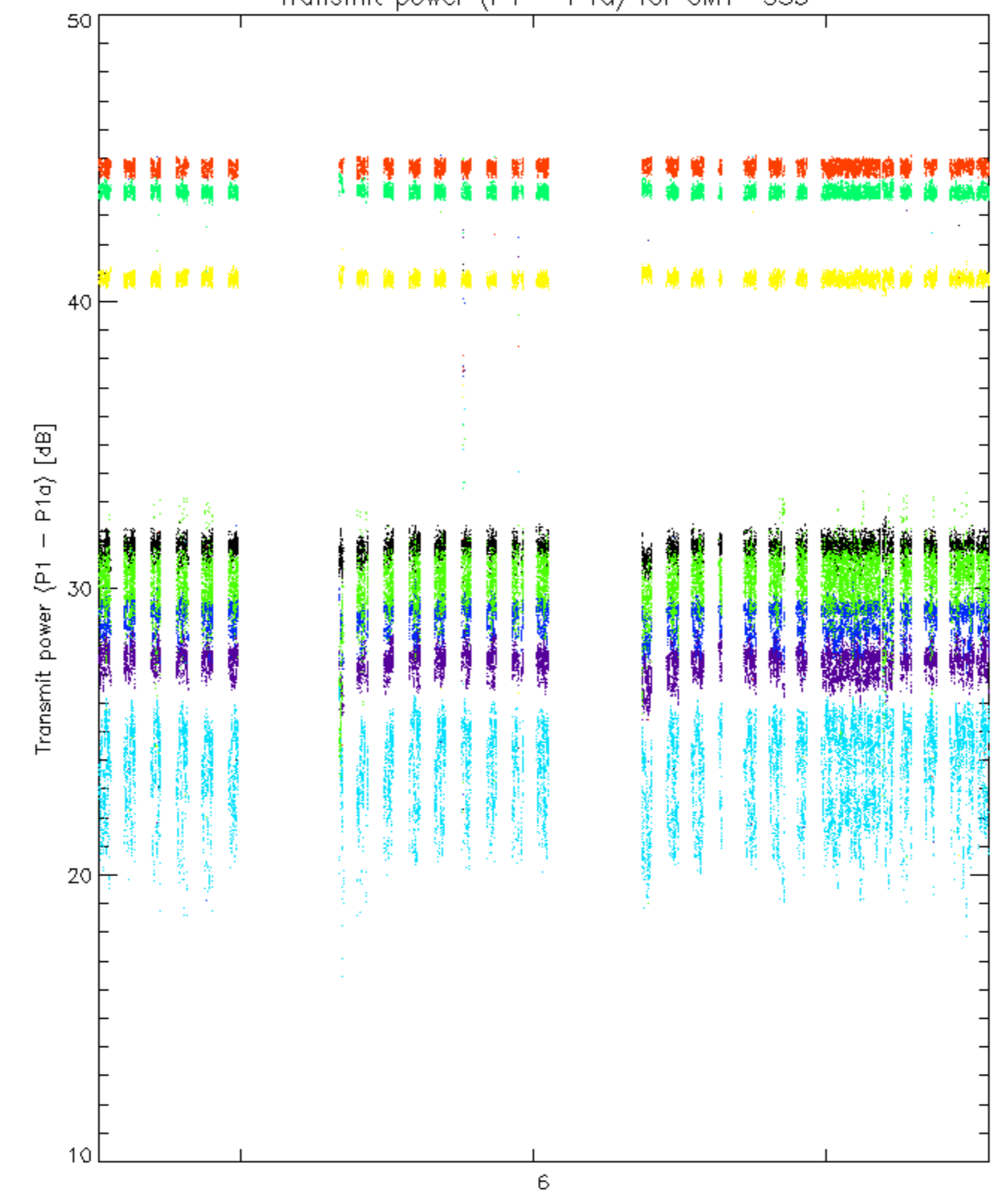
Summary of analysis for the last 3 days 2007010[890]

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

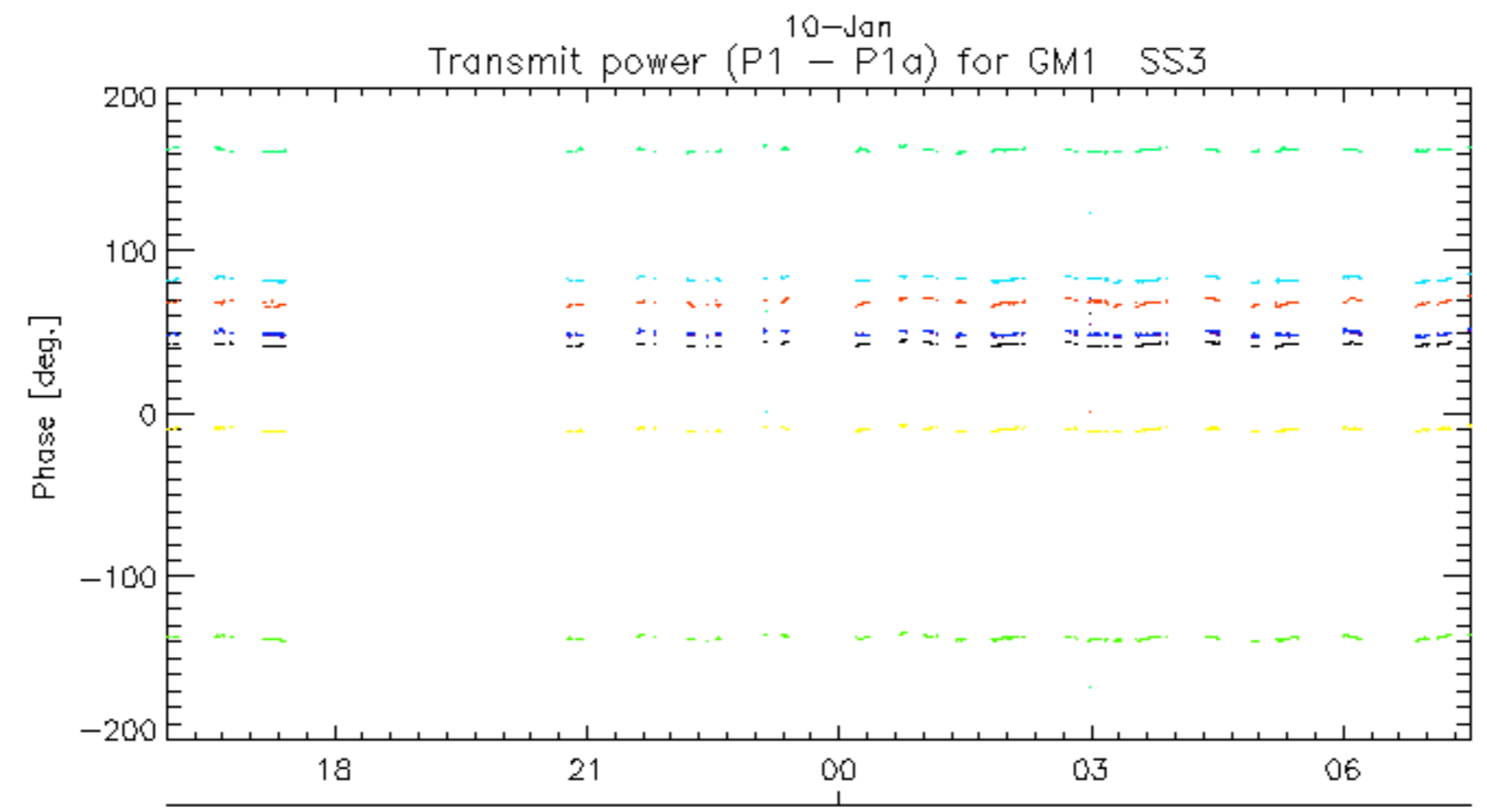
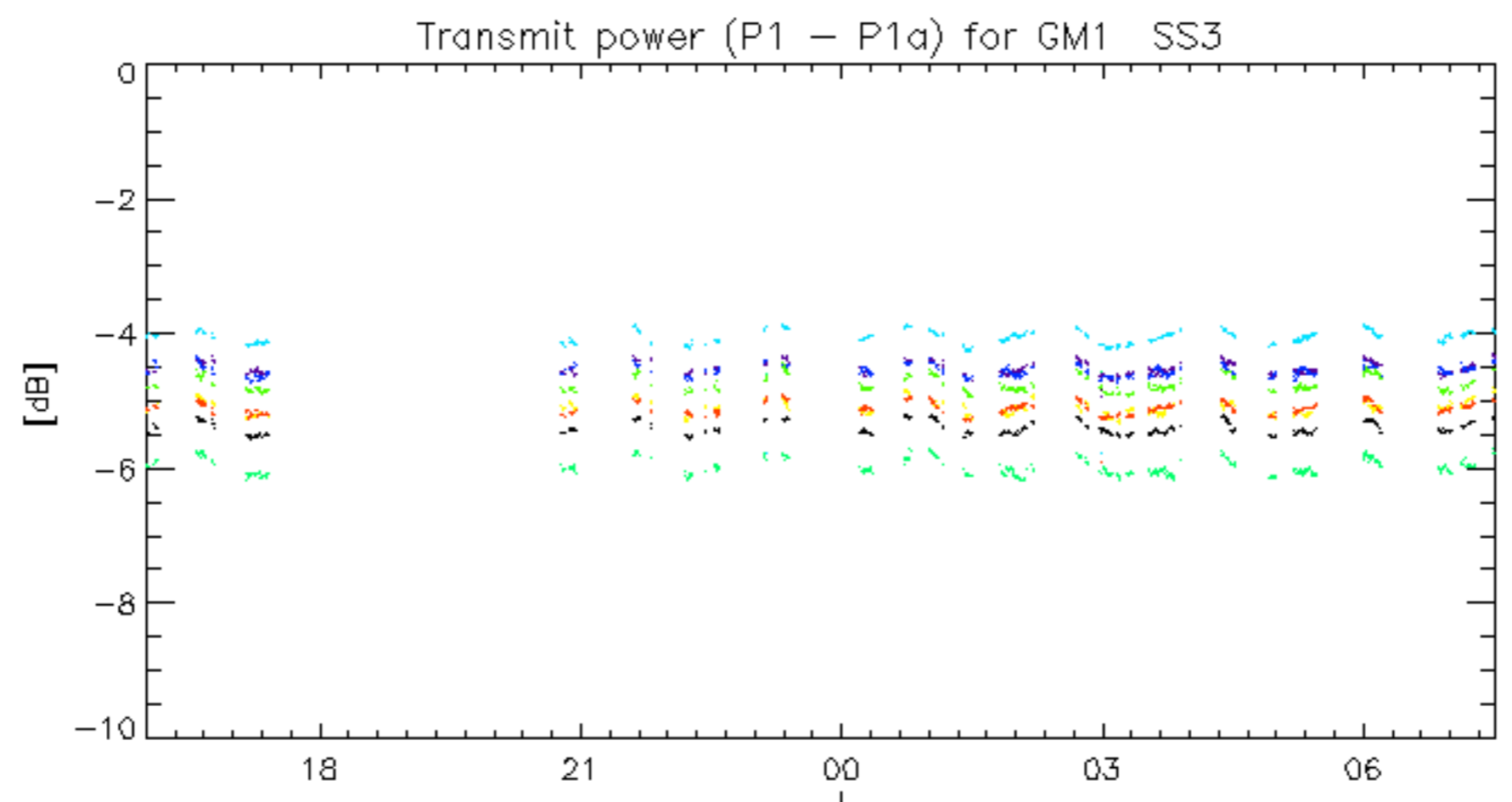
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070109_113903_000004162054_00309_25413_0717.N1	0	9
ASA_WSM_1PNPDE20070108_000036_000000852054_00288_25392_7771.N1	0	36
ASA_WSM_1PNPDE20070108_013811_000001412054_00289_25393_7975.N1	0	40
ASA_WSM_1PNPDE20070109_170737_000000852054_00313_25417_0437.N1	0	19



Transmit power (P1 - P1a) for GM1 SS3

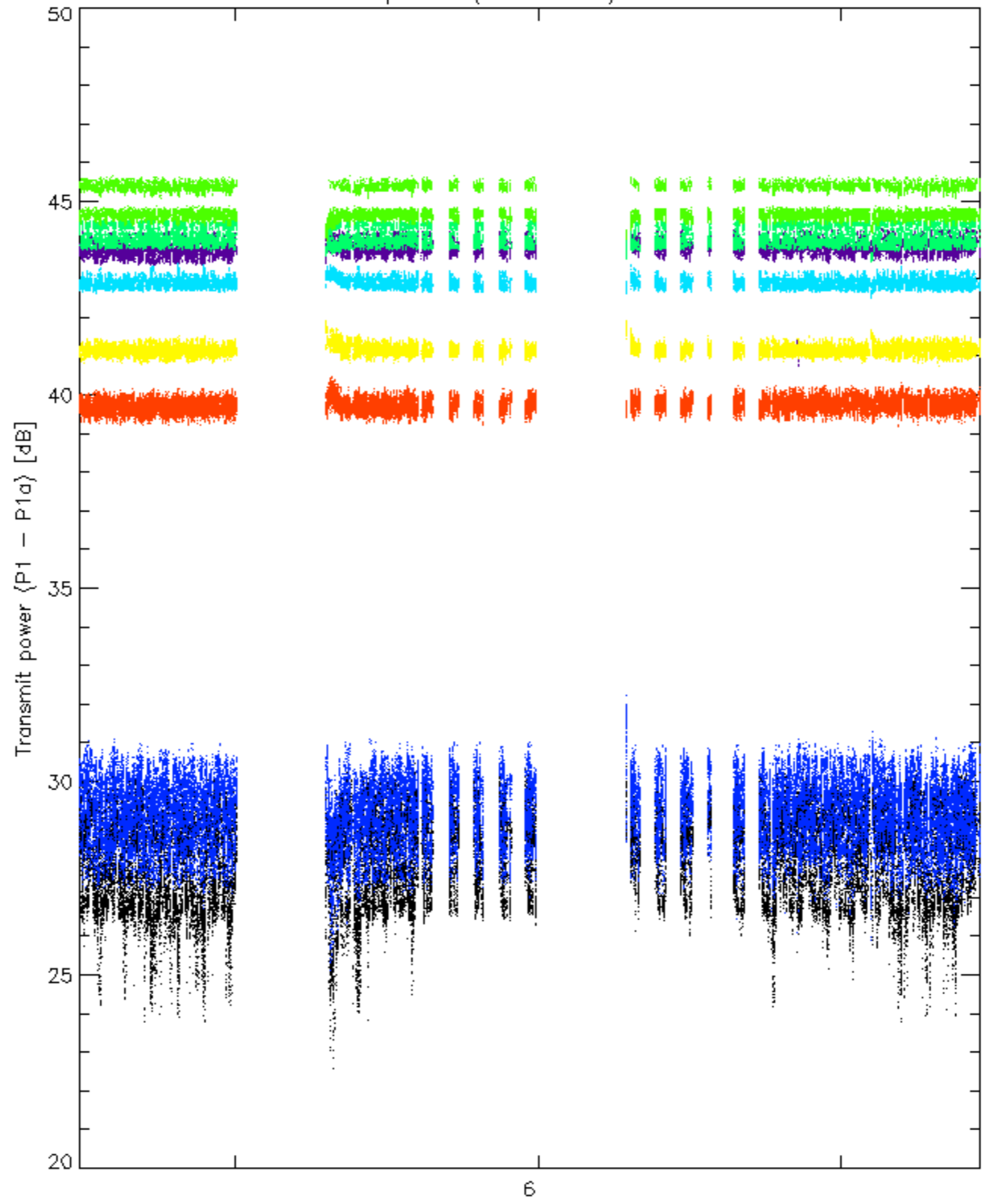


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

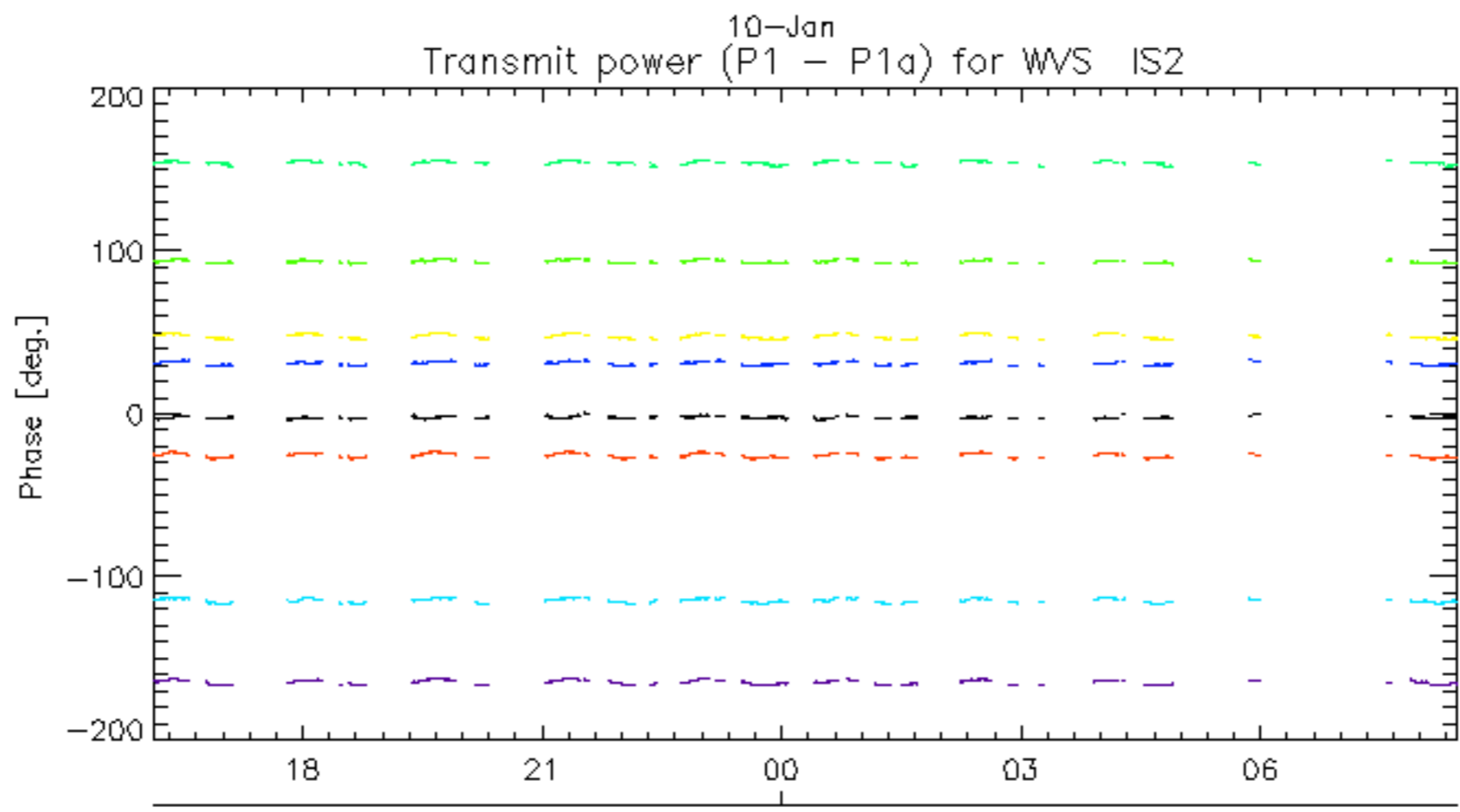
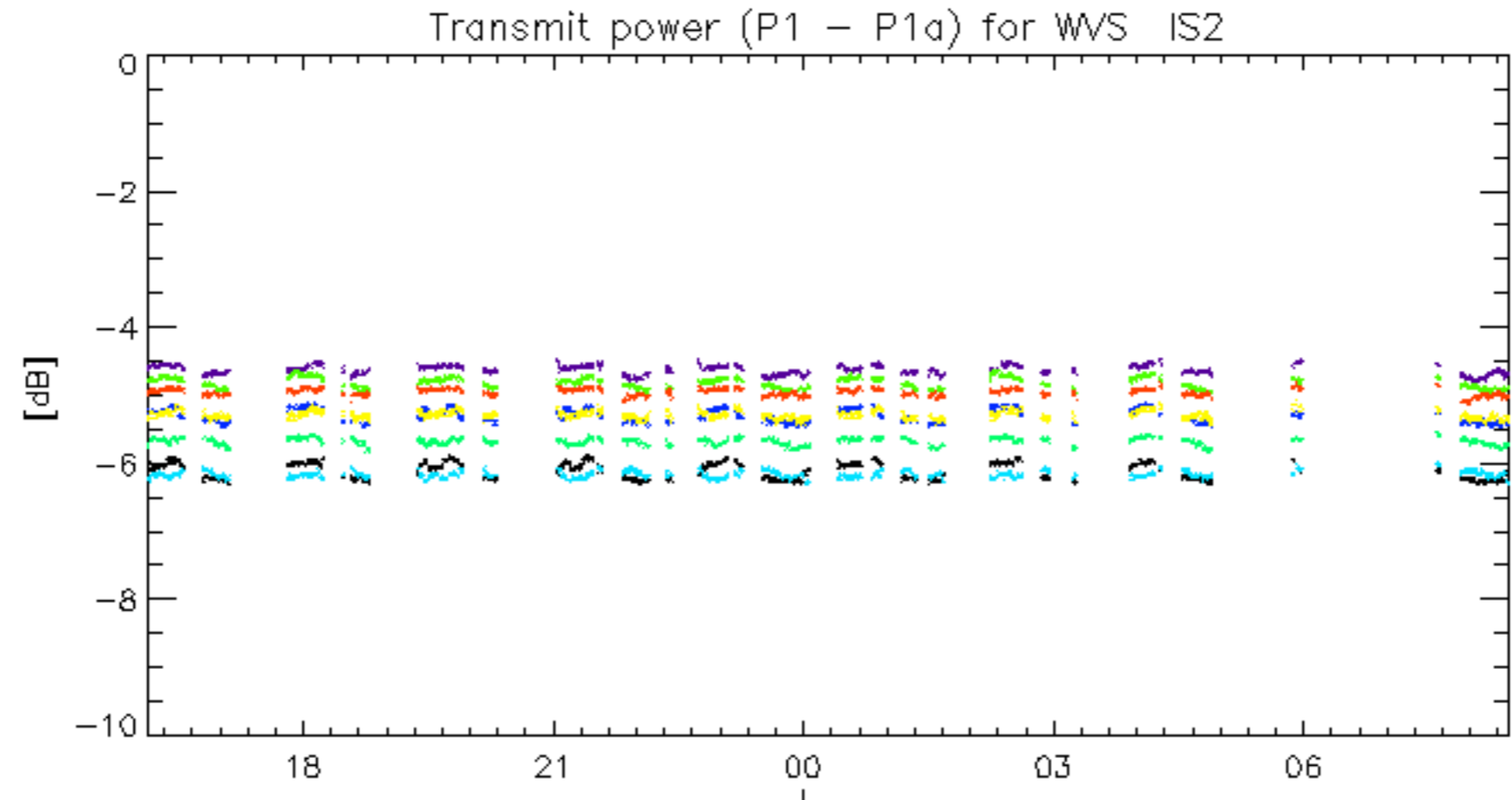


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2



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



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

No unavailabilities during the reported period.