

PRELIMINARY REPORT OF 070116

last update on Tue Jan 16 16:33:33 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 2007-01-15 00:00:00 to 2007-01-16 16:33:33

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	51	76	7	3	1
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	51	76	7	3	1
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	51	76	7	3	1
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	51	76	7	3	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	40	37	50	9	44
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	40	37	50	9	44
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	37	50	9	44
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	40	37	50	9	44

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	20070116 042853
H	20070115 050030

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
<input type="checkbox"/>

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	-3.963825	0.007402	-0.013606
7	P1	-3.135233	0.047969	0.007265
11	P1	-4.116503	0.025192	-0.015634
15	P1	-6.334175	0.016556	-0.040877
19	P1	-3.684606	0.006086	-0.057569
22	P1	-4.678364	0.016388	-0.036023
26	P1	-3.953019	0.009849	0.006351
30	P1	-5.916817	0.008677	-0.024176
3	P1	-16.520815	0.252753	0.037985
7	P1	-17.266218	0.184215	0.029415
11	P1	-17.271387	0.449659	-0.075327
15	P1	-13.035673	0.126837	-0.031024
19	P1	-15.084711	0.111098	-0.110924
22	P1	-15.804339	0.551451	0.054170
26	P1	-15.027445	0.186251	-0.041828
30	P1	-17.534702	0.497430	-0.079805

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.783522	0.090133	0.003976
7	P2	-21.668585	0.088058	0.027298
11	P2	-15.531639	0.099368	0.007753
15	P2	-7.092493	0.103276	-0.001696
19	P2	-9.172477	0.096864	0.011752
22	P2	-18.221107	0.089582	-0.030355
26	P2	-16.594193	0.102243	-0.012372
30	P2	-19.433630	0.084330	0.015874

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.236649	0.008444	-0.025226
7	P3	-8.236649	0.008444	-0.025226
11	P3	-8.236649	0.008444	-0.025226
15	P3	-8.236649	0.008444	-0.025226
19	P3	-8.236649	0.008444	-0.025226
22	P3	-8.236649	0.008444	-0.025226
26	P3	-8.236670	0.008443	-0.025153
30	P3	-8.236670	0.008443	-0.025153

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	-3.920027	0.013662	-0.015916
7	P1	-2.472520	0.071880	0.032216
11	P1	-2.829157	0.016194	0.022246
15	P1	-3.711304	0.032514	-0.051895
19	P1	-3.550278	0.018772	-0.042258
22	P1	-5.003511	0.022812	0.011249
26	P1	-6.039547	0.026150	-0.066500
30	P1	-5.347653	0.037519	-0.044959
3	P1	-11.723272	0.080236	-0.013620
7	P1	-10.037852	0.094655	0.077346
11	P1	-10.362507	0.094029	-0.015102
15	P1	-10.739659	0.164310	-0.031019
19	P1	-15.745854	0.107998	-0.092094
22	P1	-21.523209	1.480023	0.135300
26	P1	-15.965294	0.323840	0.137125
30	P1	-17.931492	0.376573	-0.133540

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.423244	0.103299	0.061107
7	P2	-22.180147	0.246401	-0.011568
11	P2	-10.829309	0.095630	0.005472
15	P2	-4.956369	0.219311	-0.007486
19	P2	-6.942896	0.223144	-0.001504
22	P2	-8.231164	0.128977	-0.029730
26	P2	-24.339844	0.168019	-0.061718
30	P2	-21.900211	0.145991	0.046618

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.086068	0.003267	-0.015661
7	P3	-8.085792	0.003243	-0.015264
11	P3	-8.086011	0.003265	-0.015401
15	P3	-8.085861	0.003256	-0.016136
19	P3	-8.085940	0.003266	-0.015390
22	P3	-8.085818	0.003267	-0.016379
26	P3	-8.086189	0.003263	-0.015581
30	P3	-8.085928	0.003245	-0.015212

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	0.000568633
	stdev	1.65077e-07
MEAN Q	mean	0.000508172
	stdev	2.11976e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140150
	stdev	0.00117167
STDEV Q	mean	0.140546
	stdev	0.00119129



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007011[456]

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_WVS_1PNPDK20070115_150216_000000002054_00397_25501_7820.N1	1	0
ASA_WVS_1PNPDK20070115_150216_000000002054_00397_25501_7978.N1	1	0
ASA_GM1_1PNPDK20070115_091257_000003202054_00394_25498_7135.N1	0	7
ASA_GM1_1PNPDK20070115_134639_000003622054_00396_25500_7796.N1	0	14
ASA_WSM_1PNPDE20070115_112055_000000852054_00395_25499_8381.N1	0	28
ASA_WSM_1PNPDE20070115_185945_000000912054_00400_25504_8532.N1	0	2





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

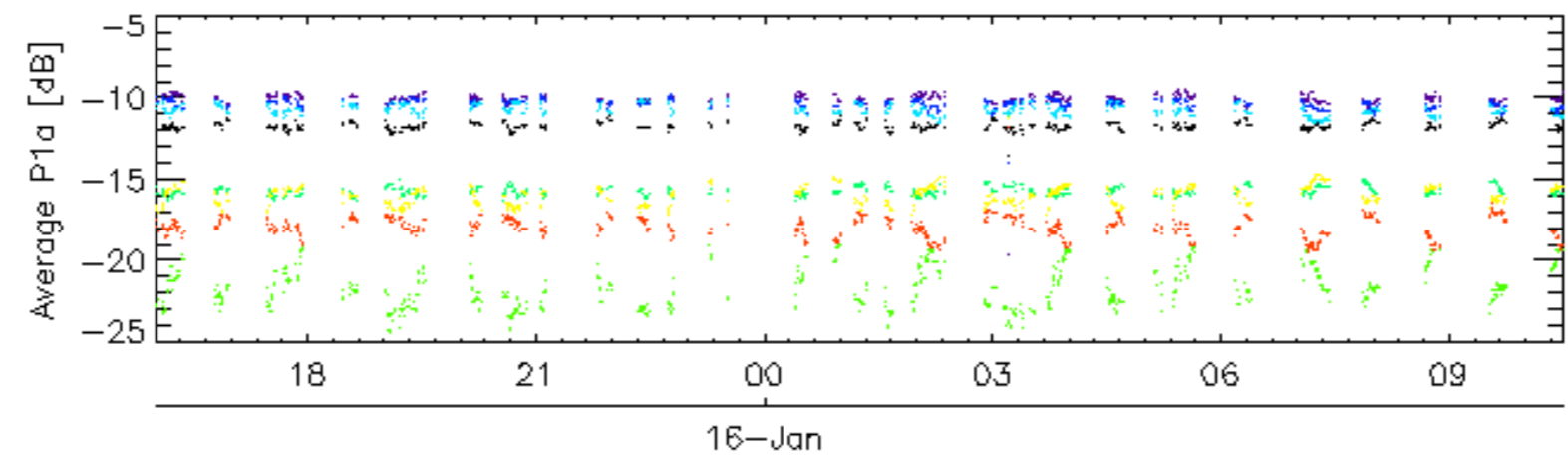
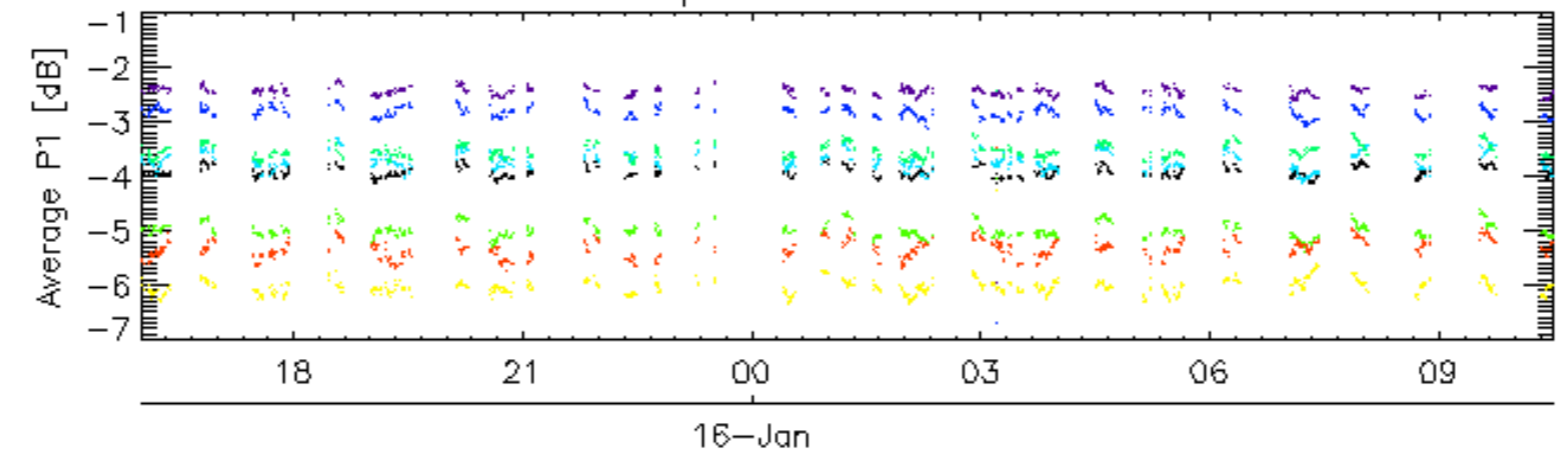
7.5 - Absolute Doppler for GM1

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

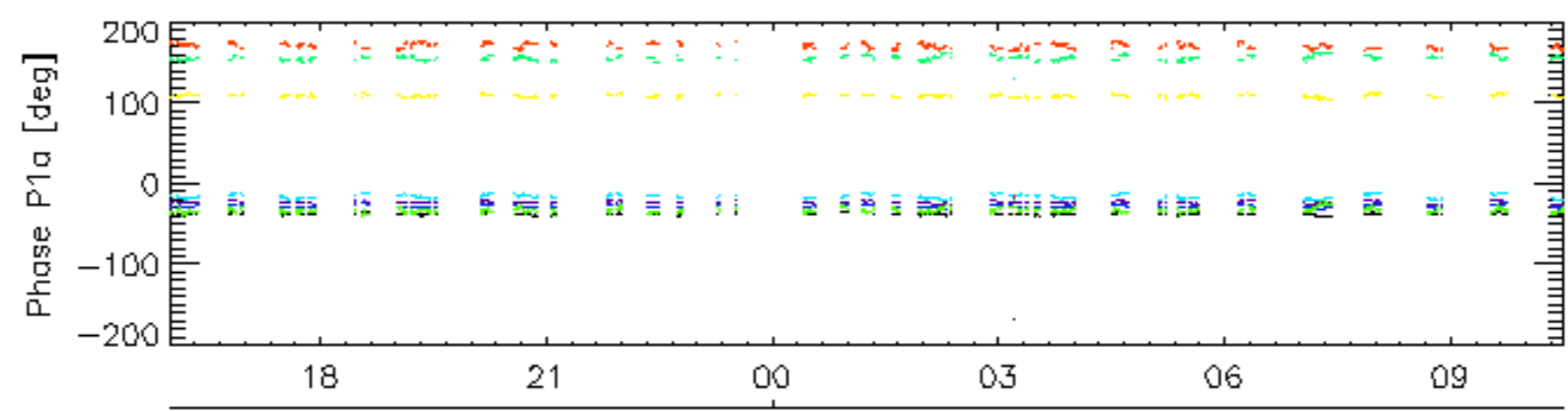
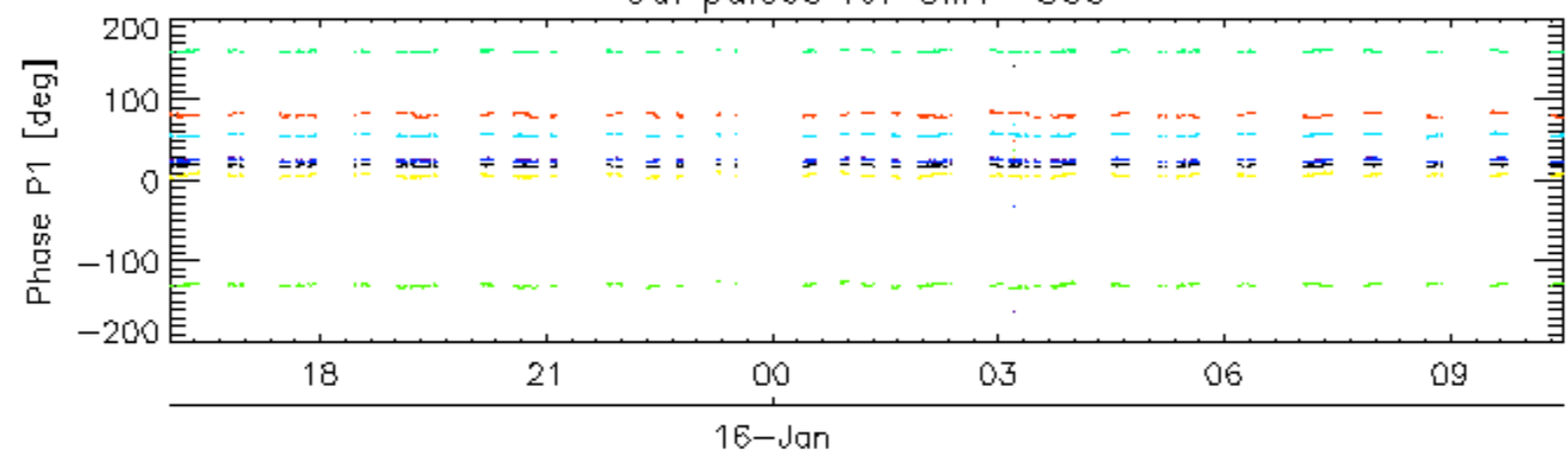
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

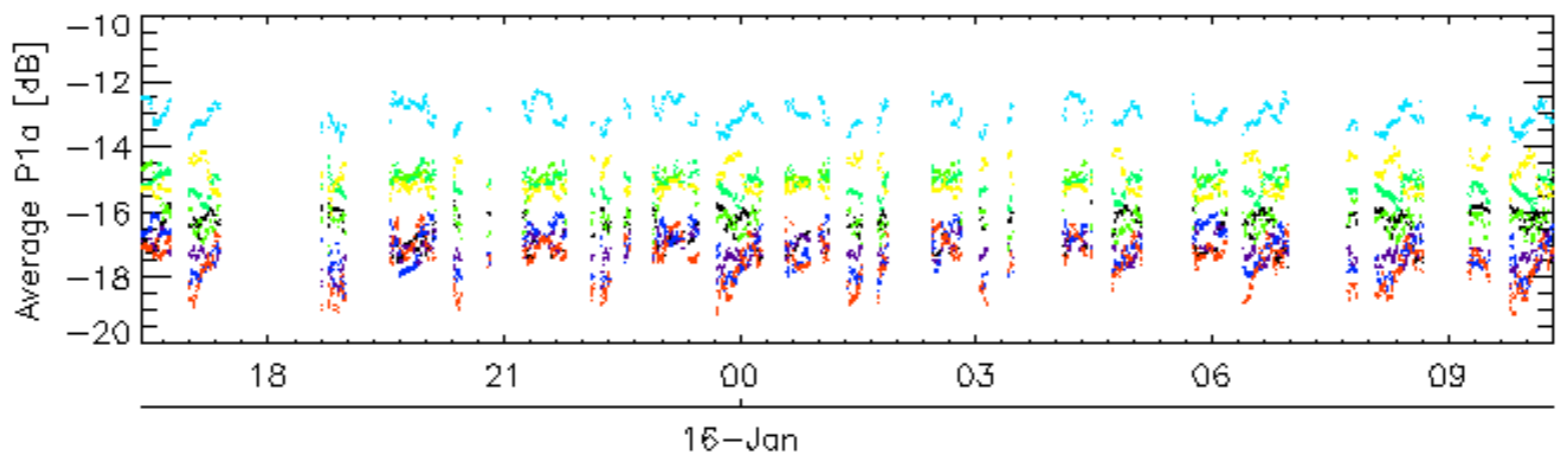
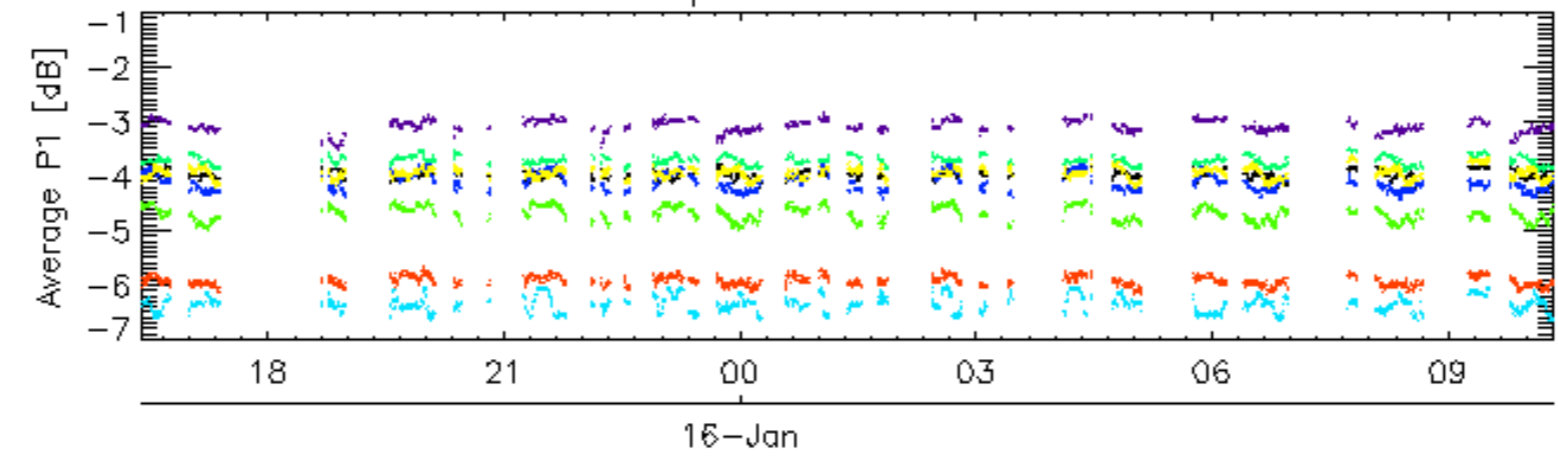


Cal pulses for GM1 SS3

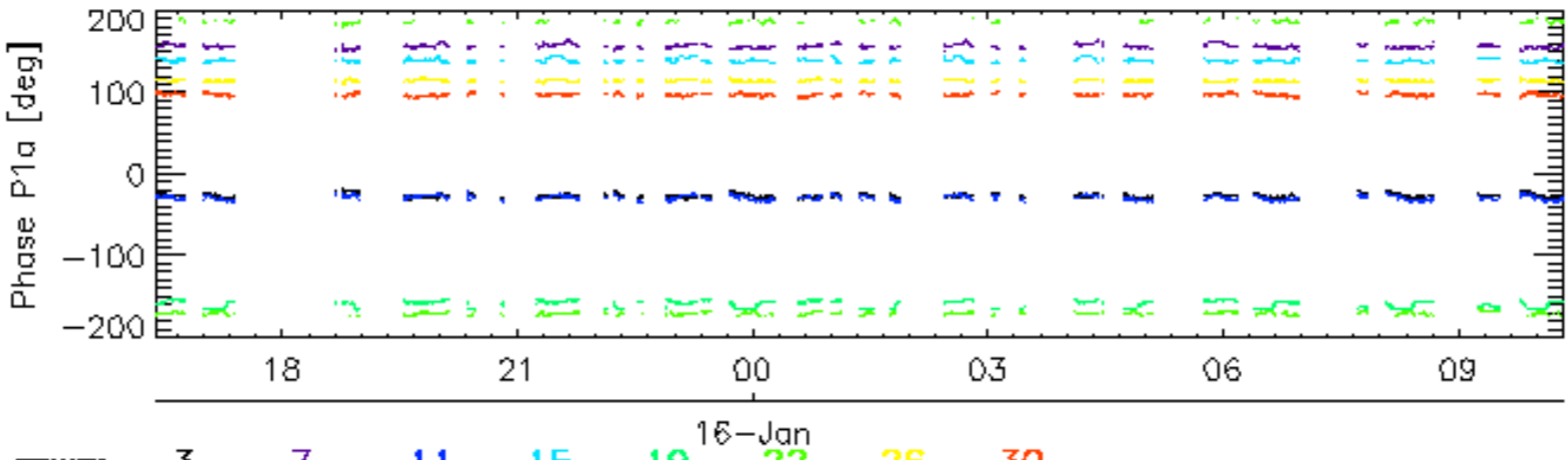
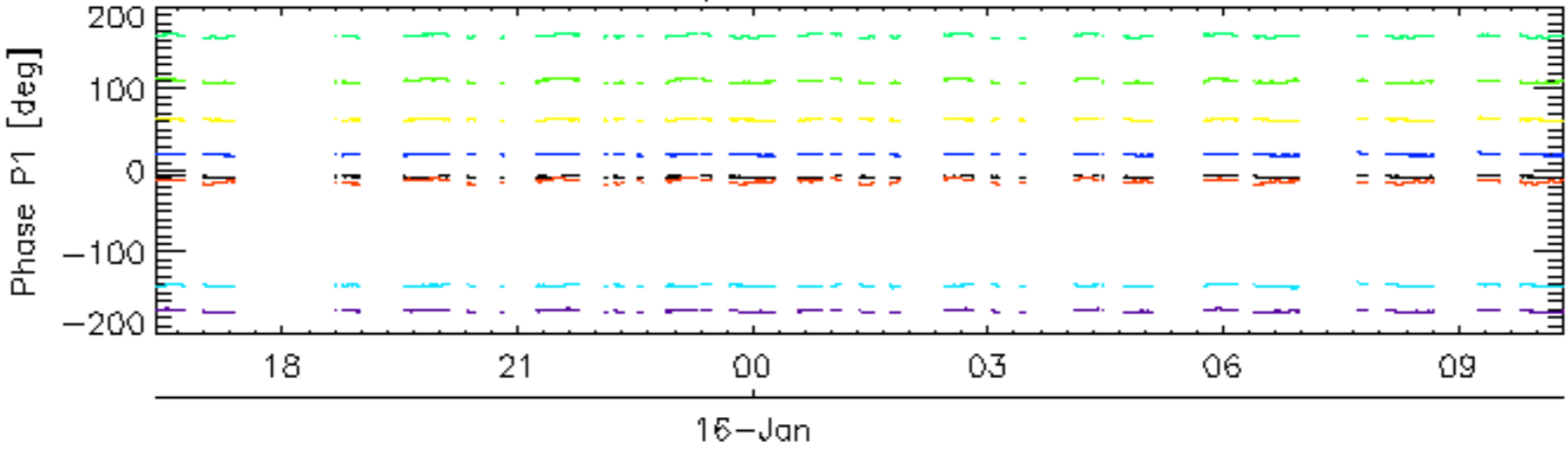


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

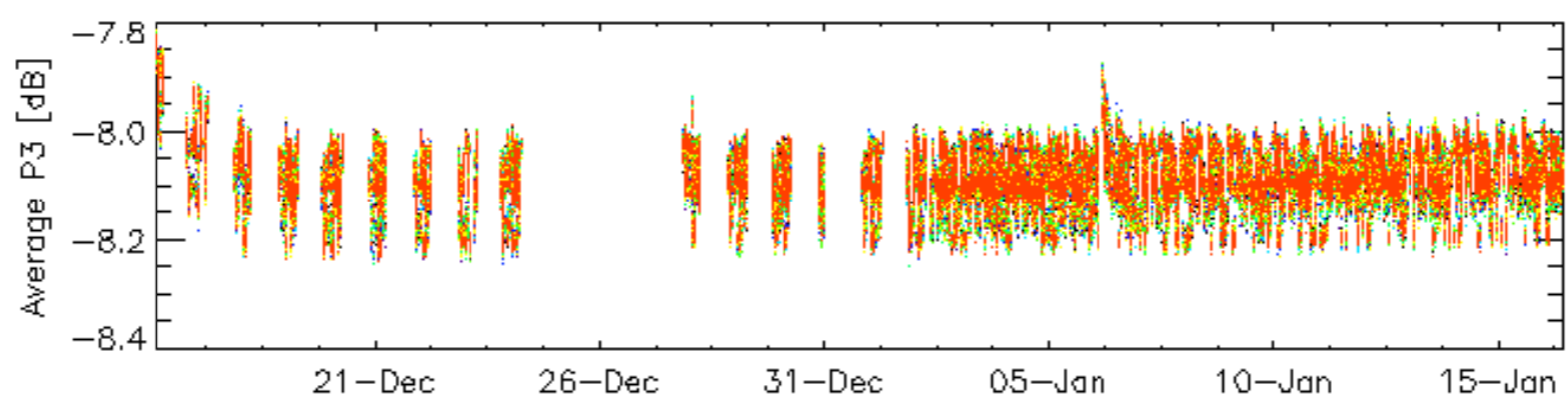
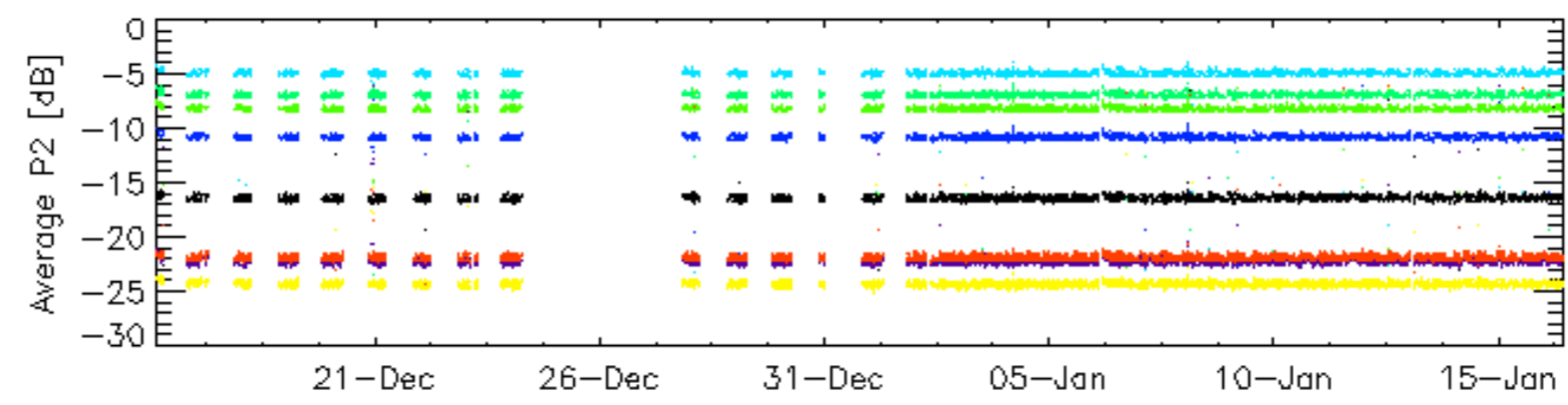
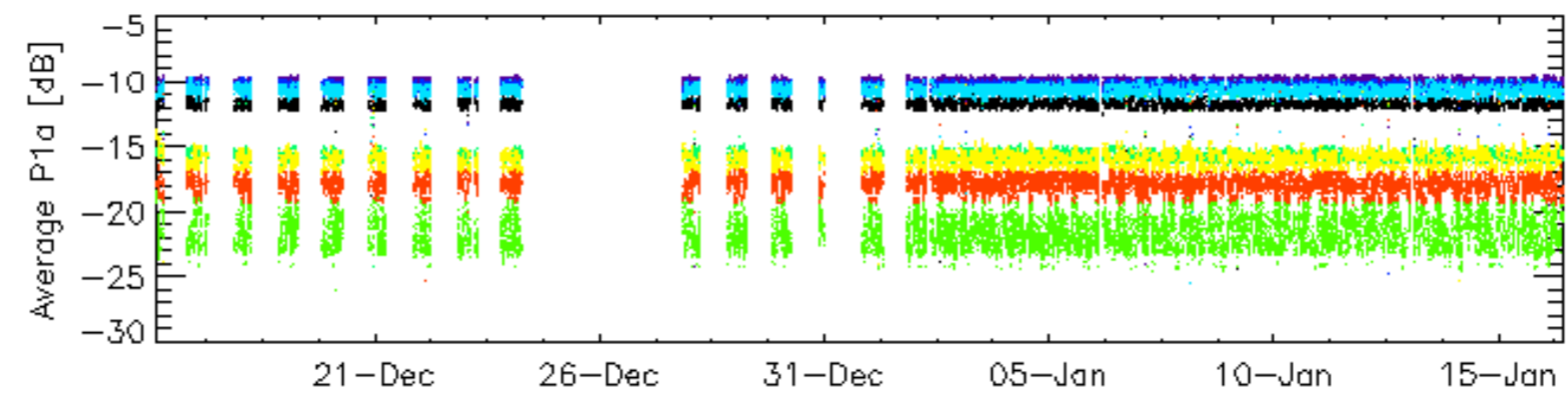
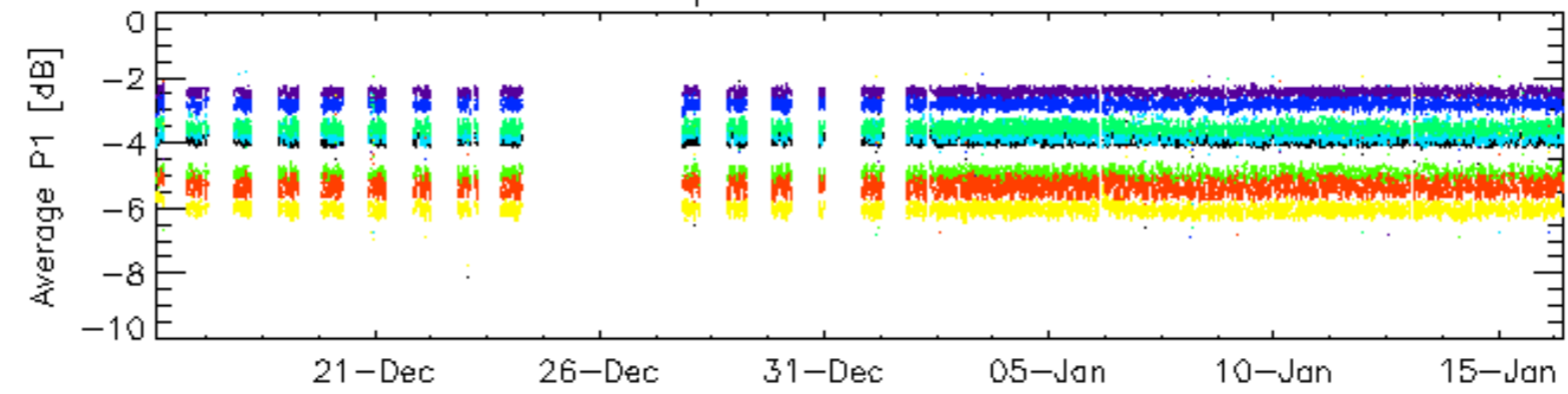


Cal pulses for WVS IS2



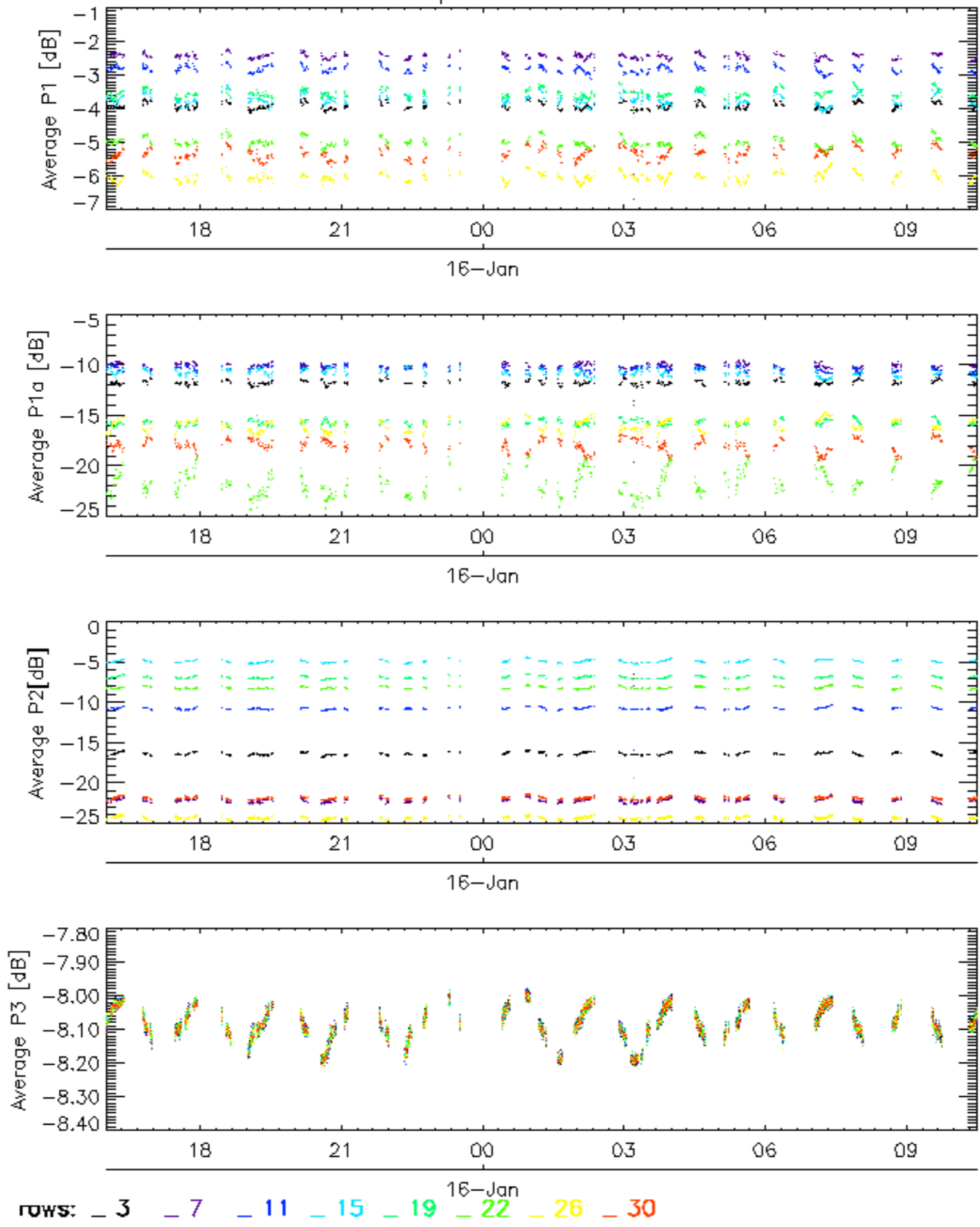
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

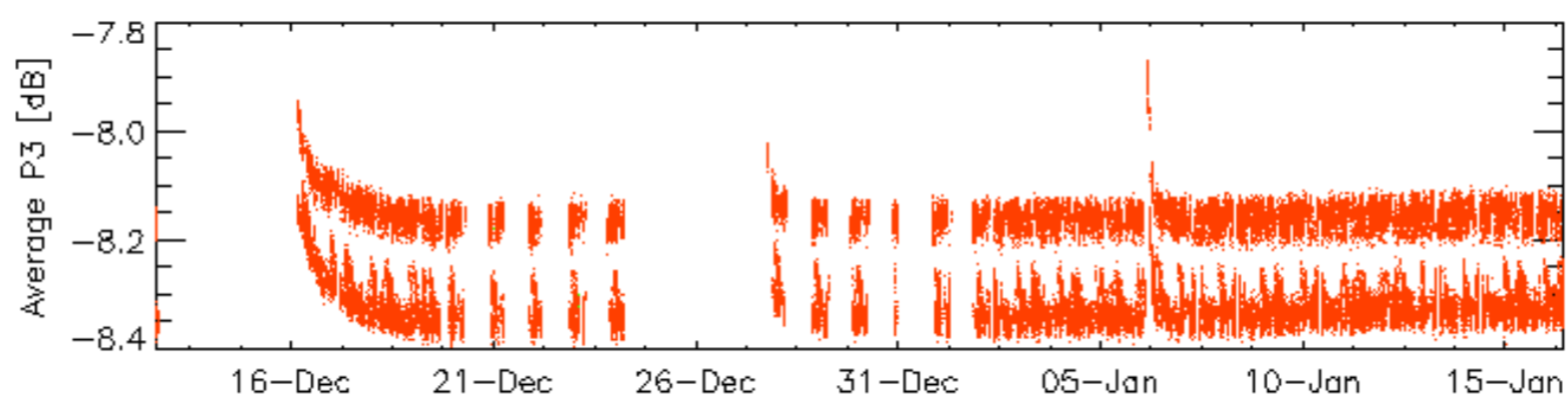
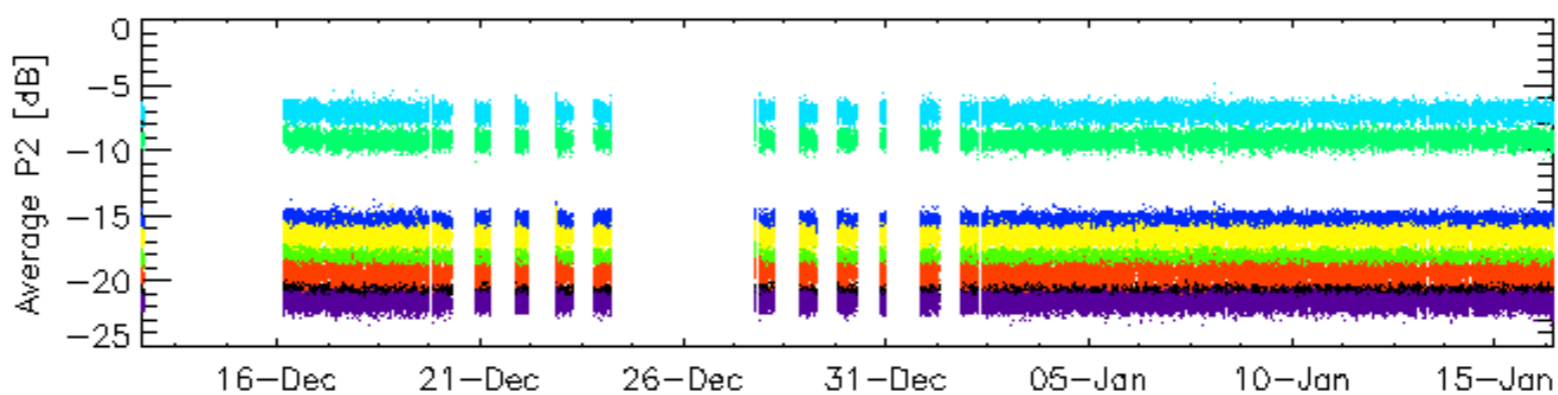
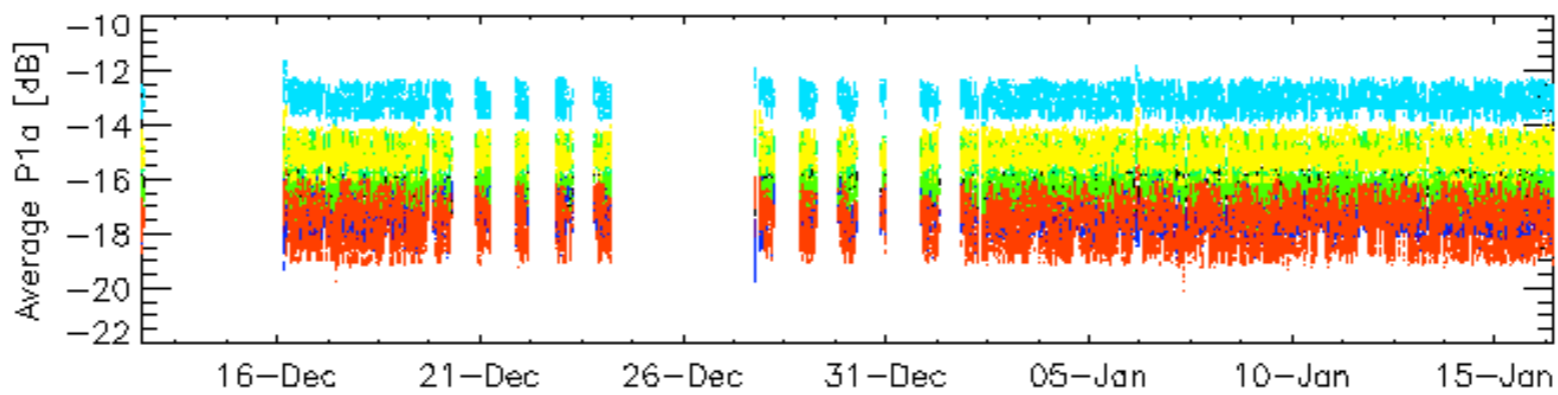
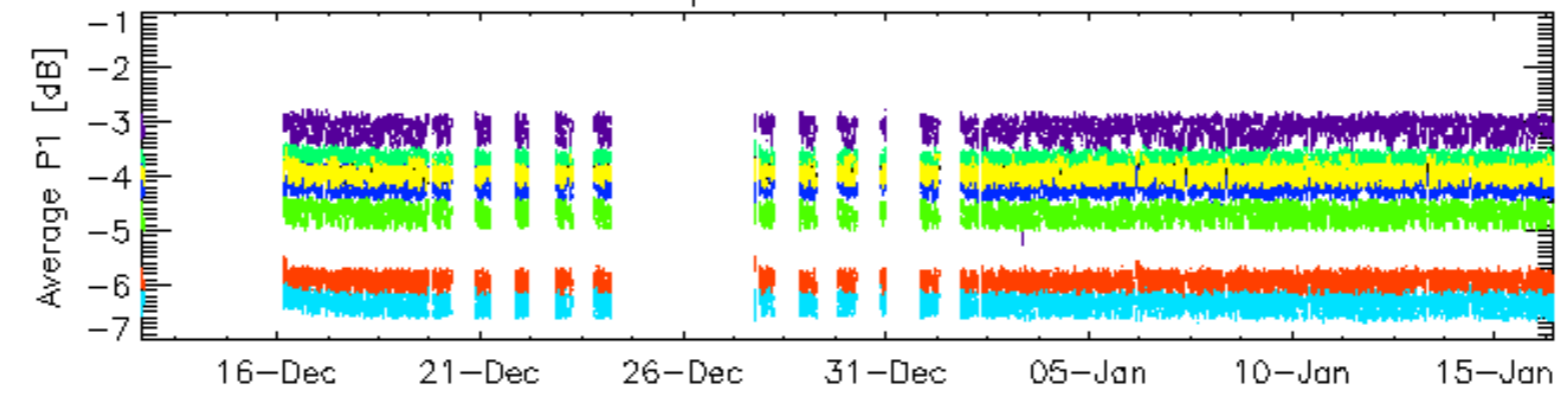


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

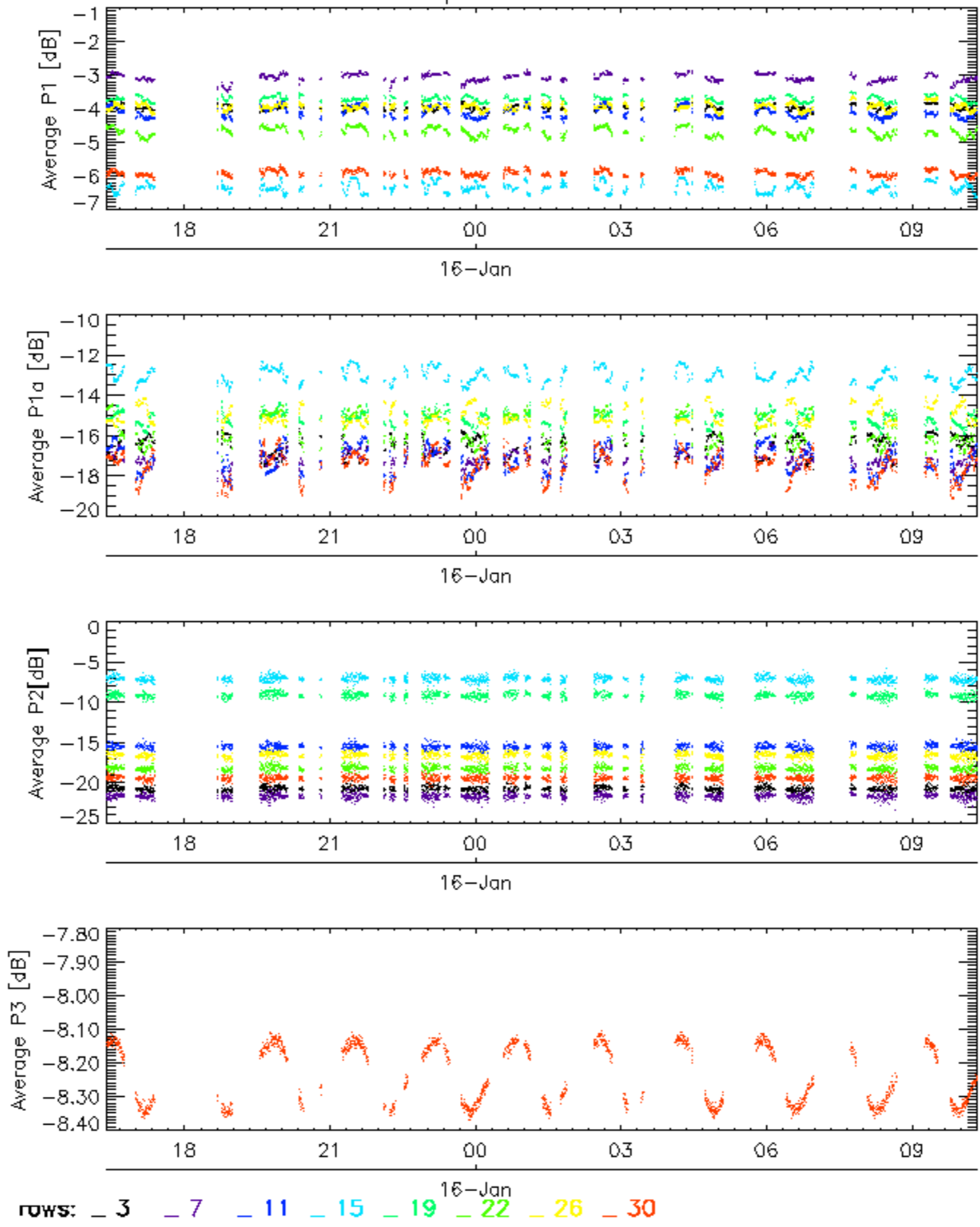


Cal pulses for WVS IS2

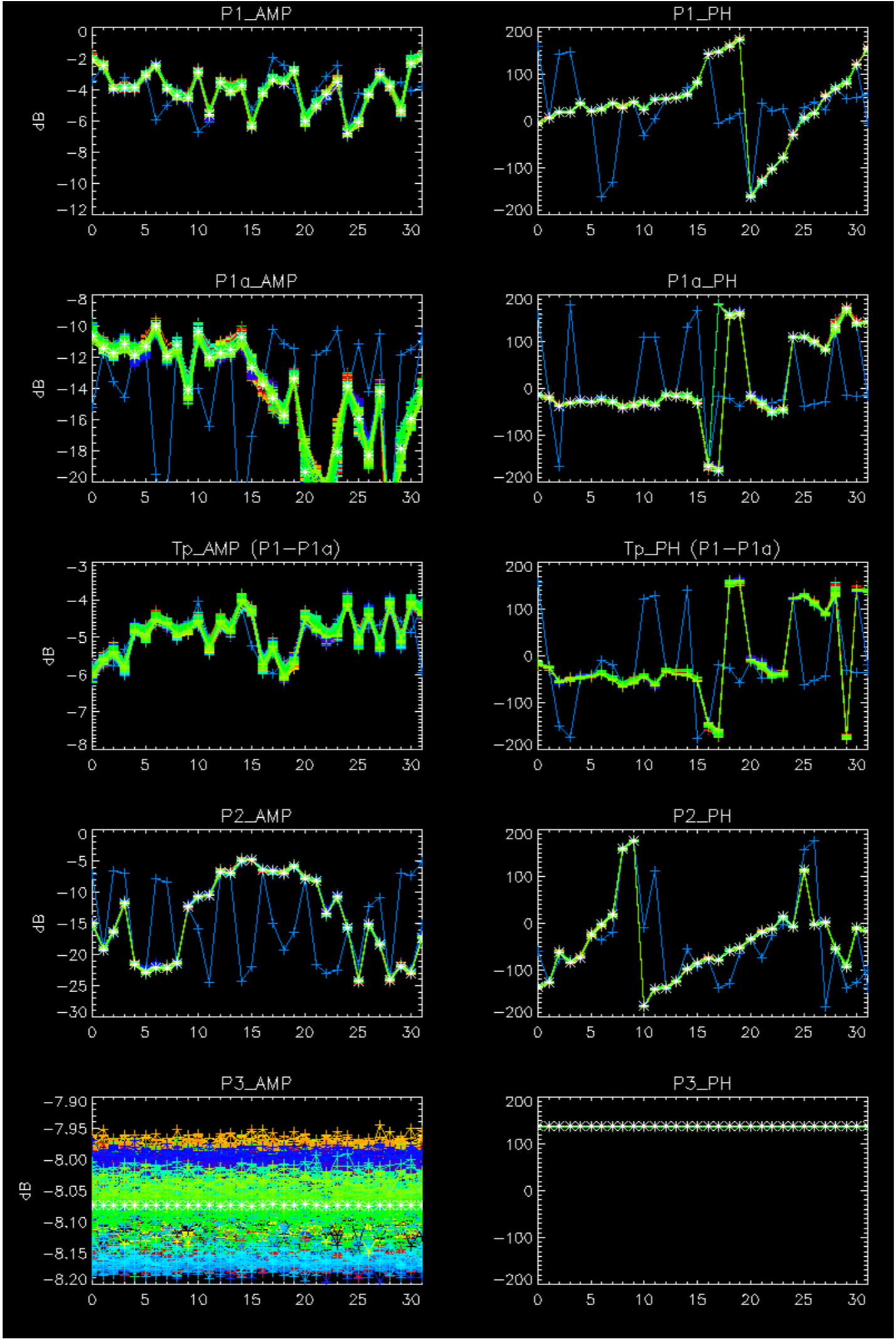


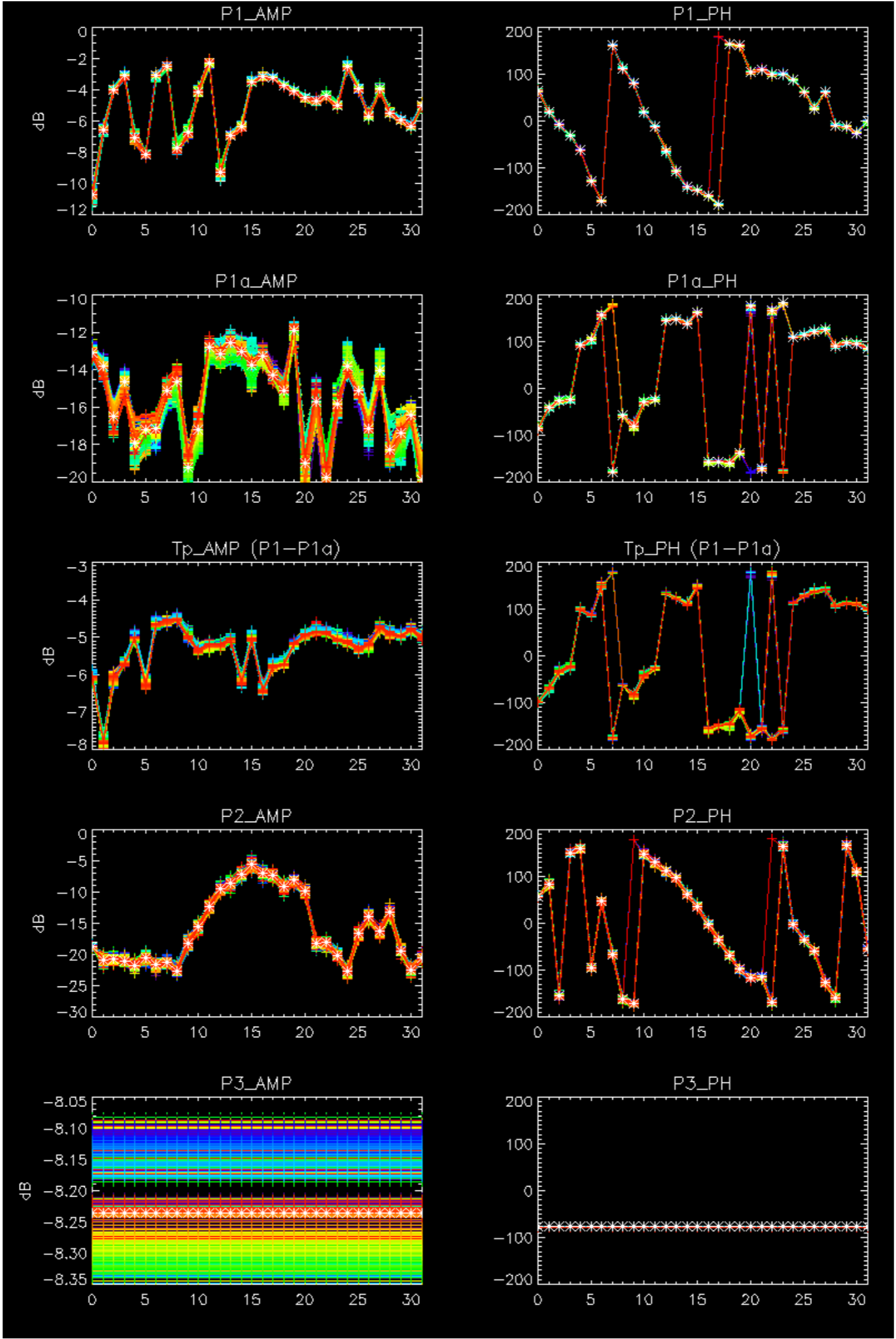
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



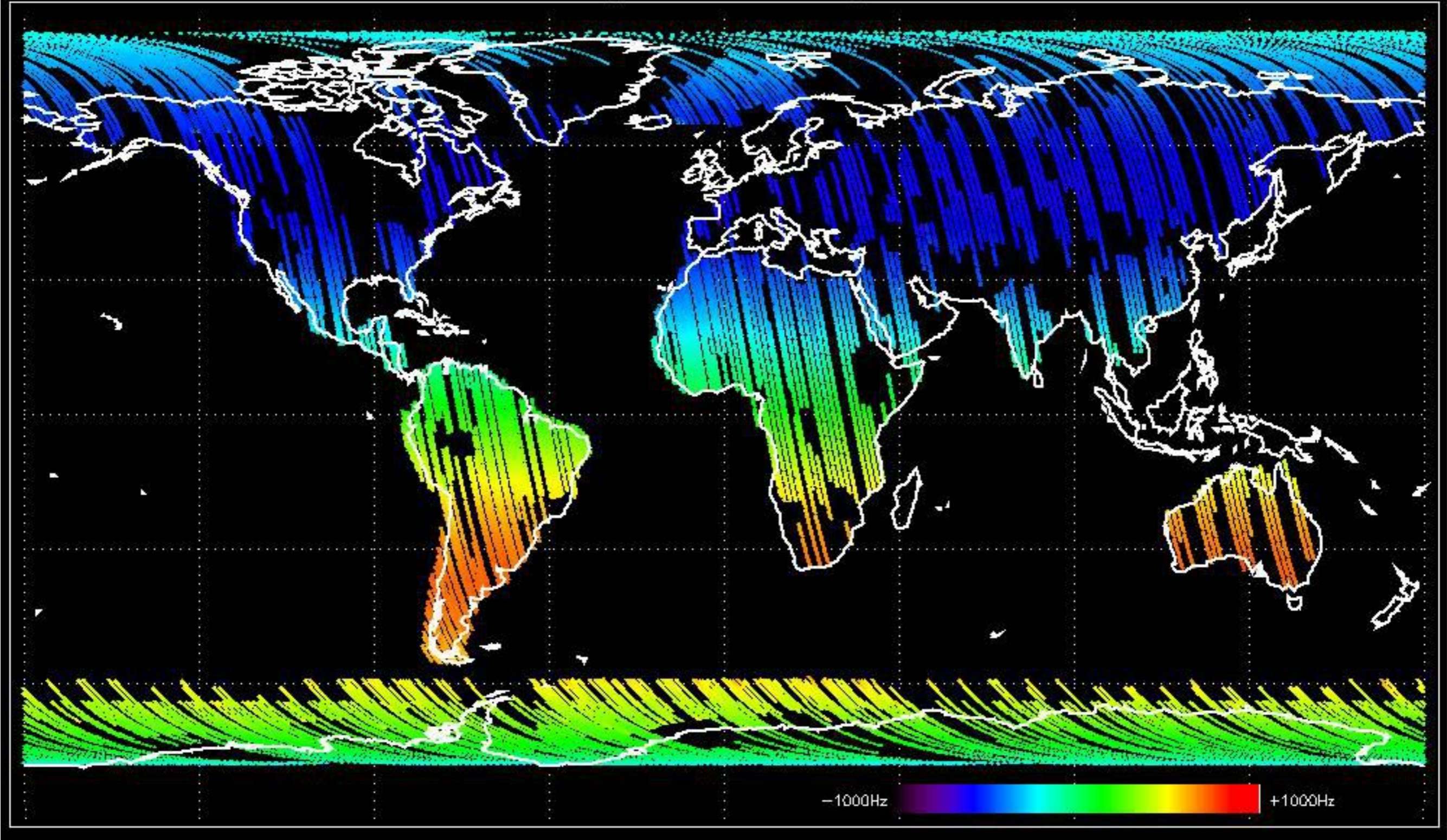
No anomalies observed.



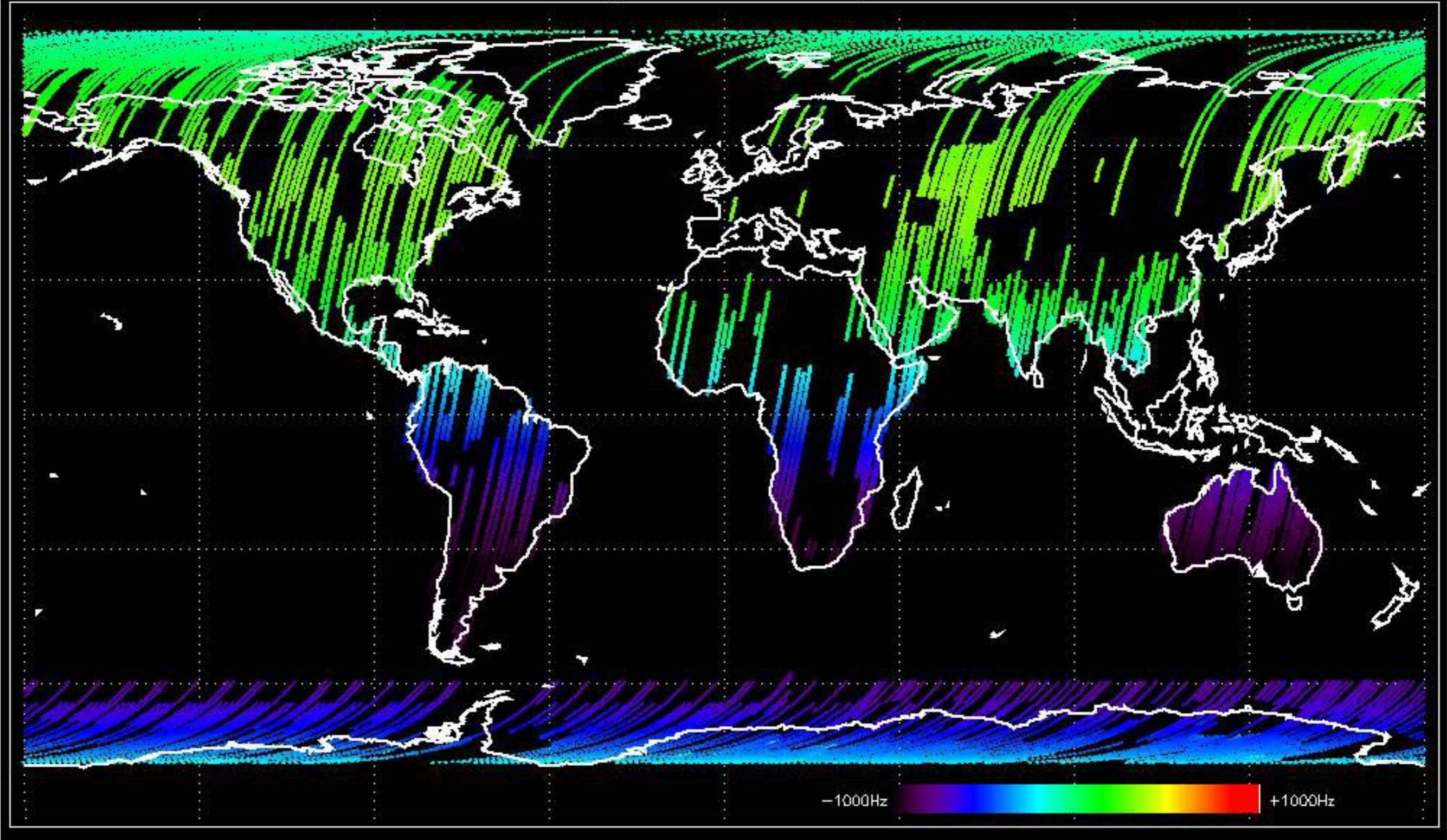


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

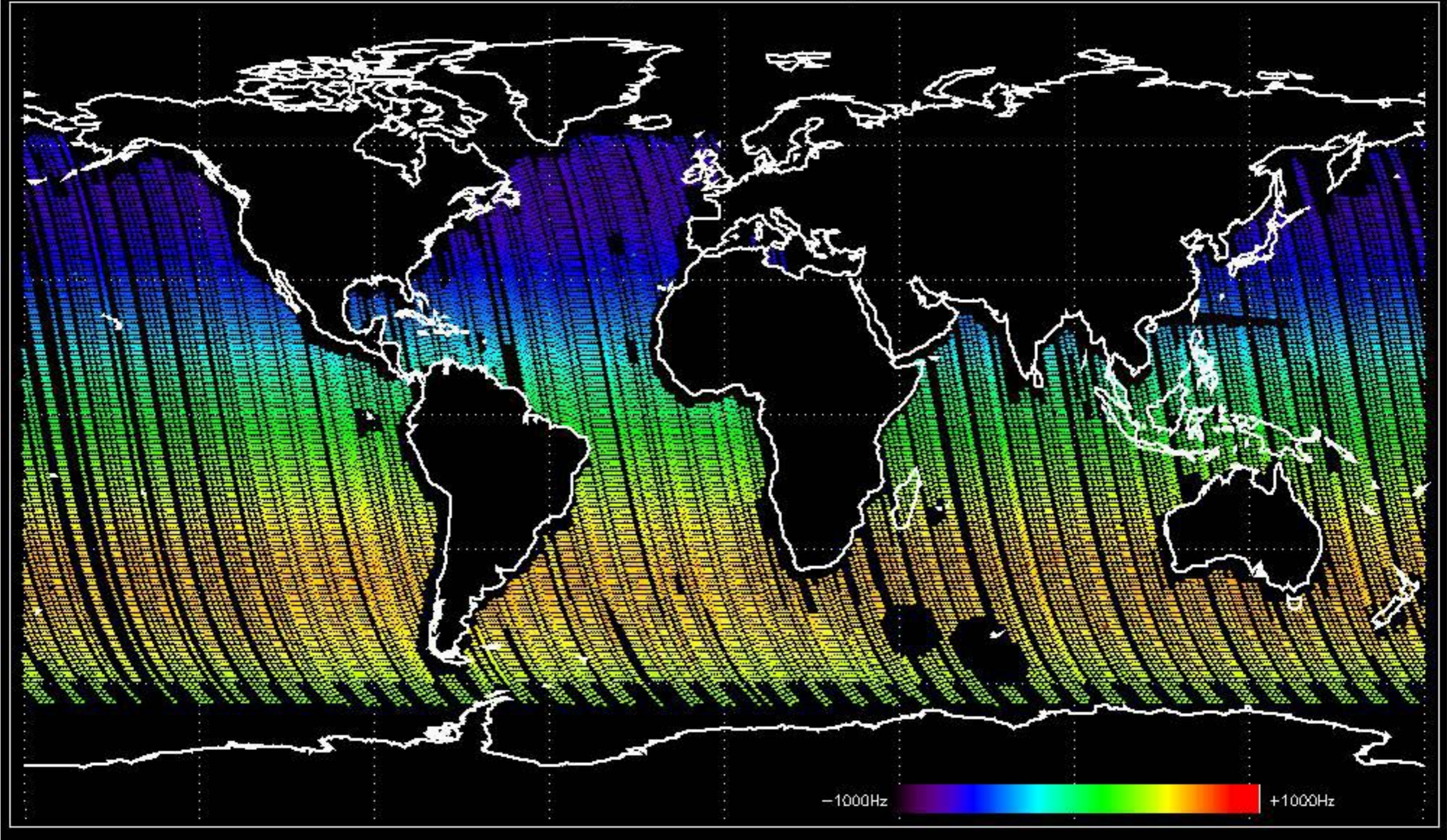
Doppler 'GM1' 'SS1' ascending



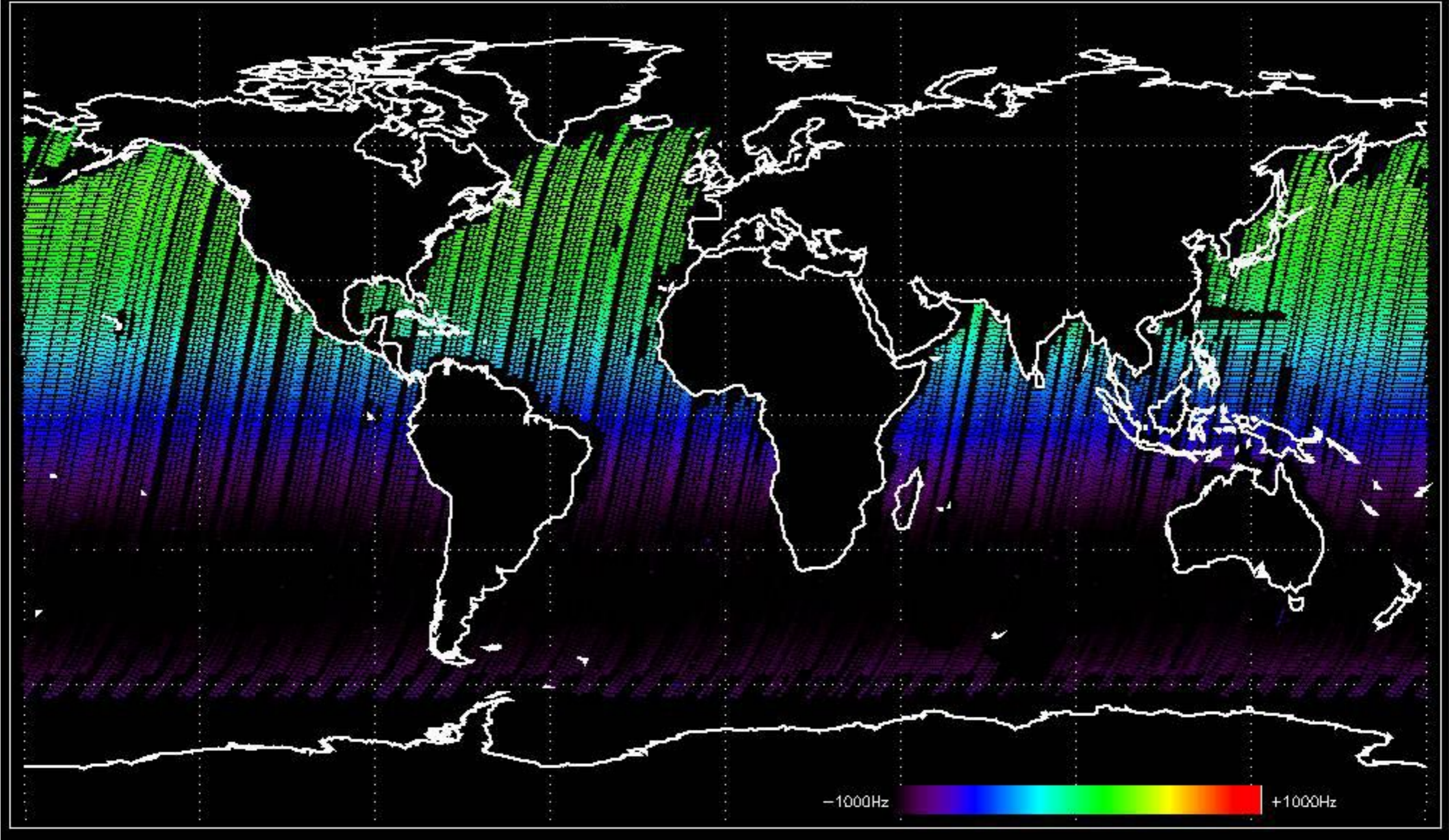
Doppler 'GM1' 'SS1' descending



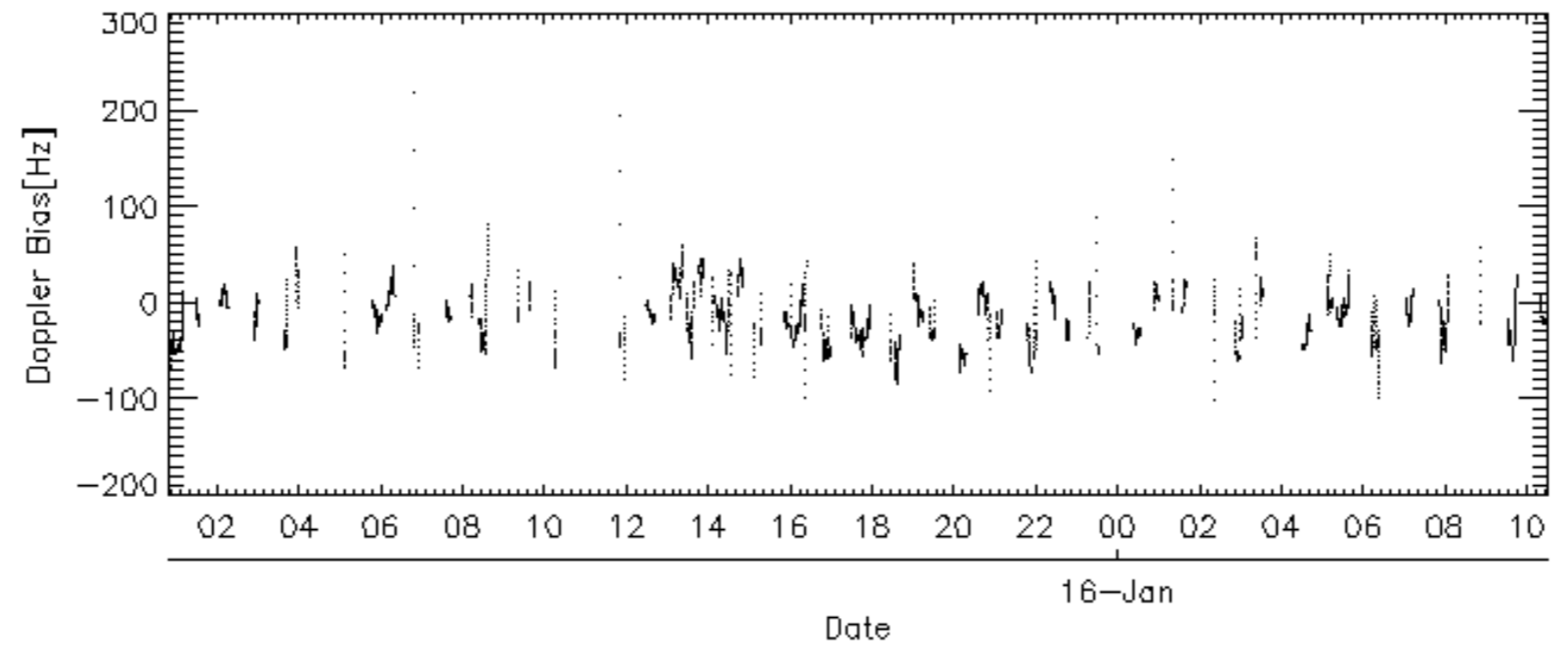
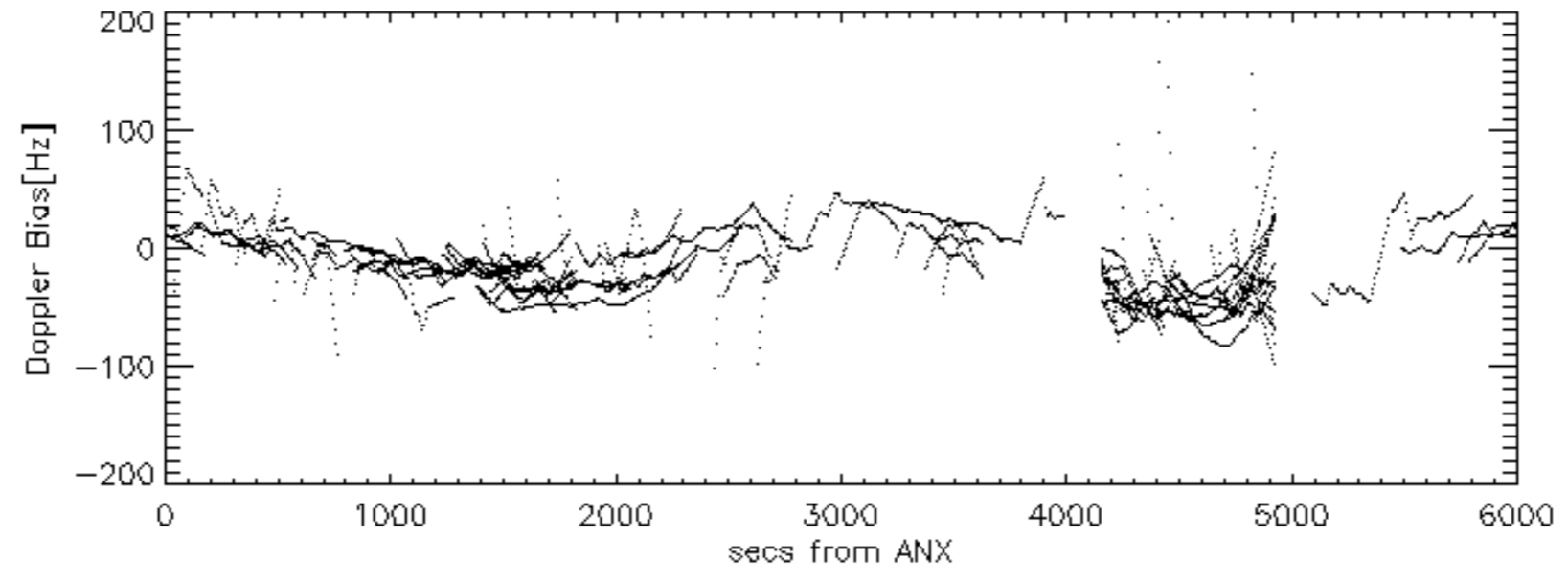
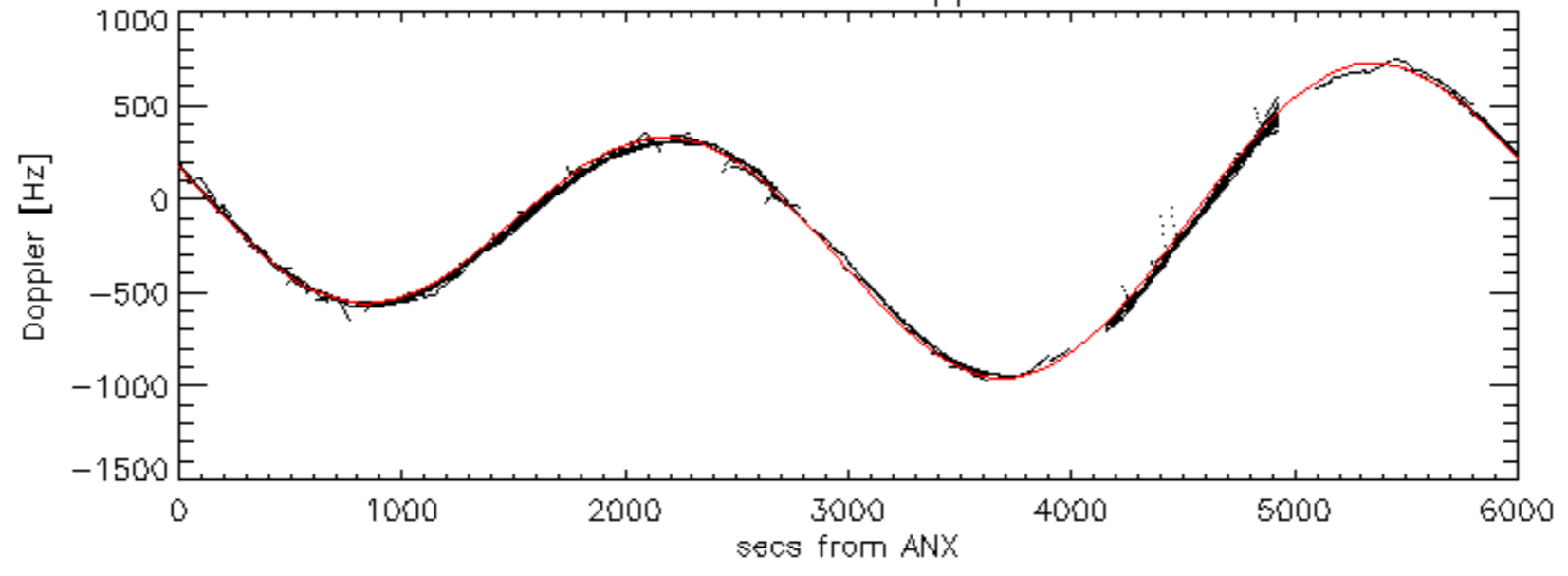
Doppler 'WVS' 'IS2' ascending

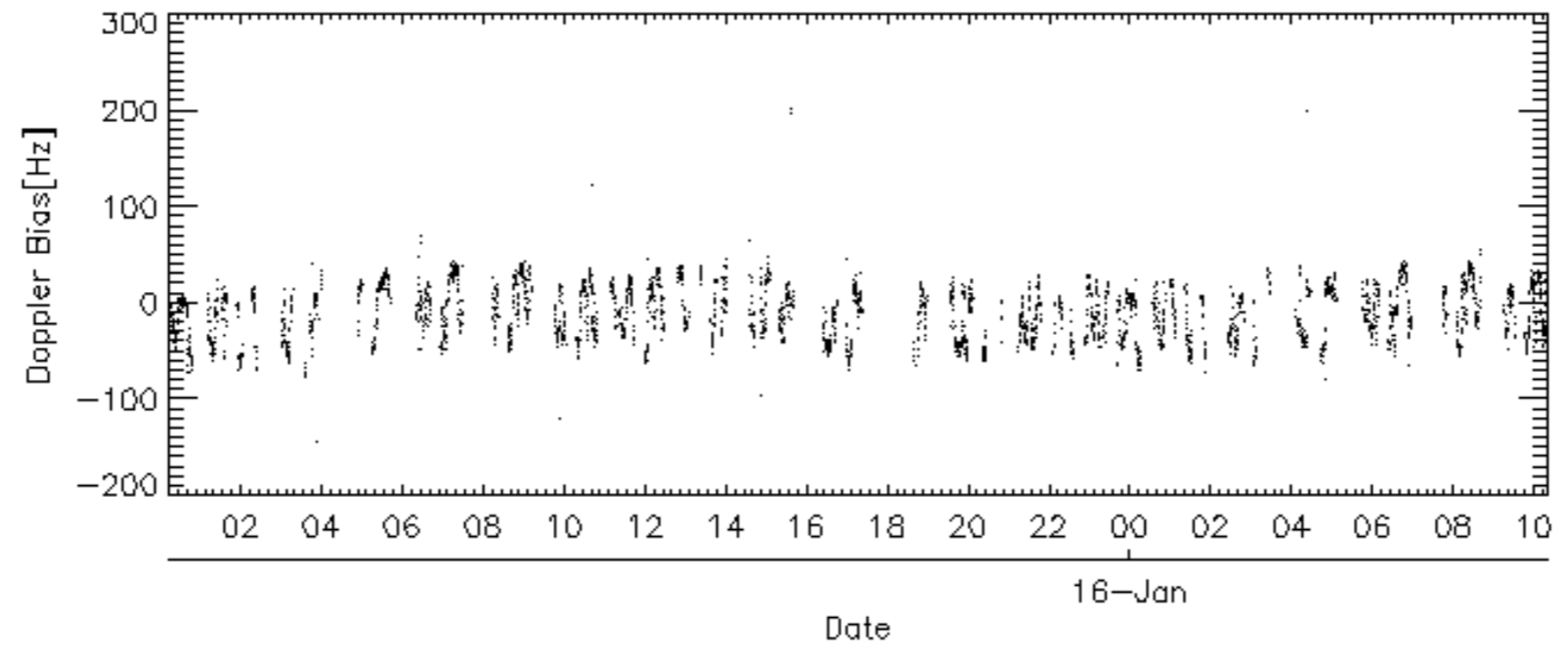
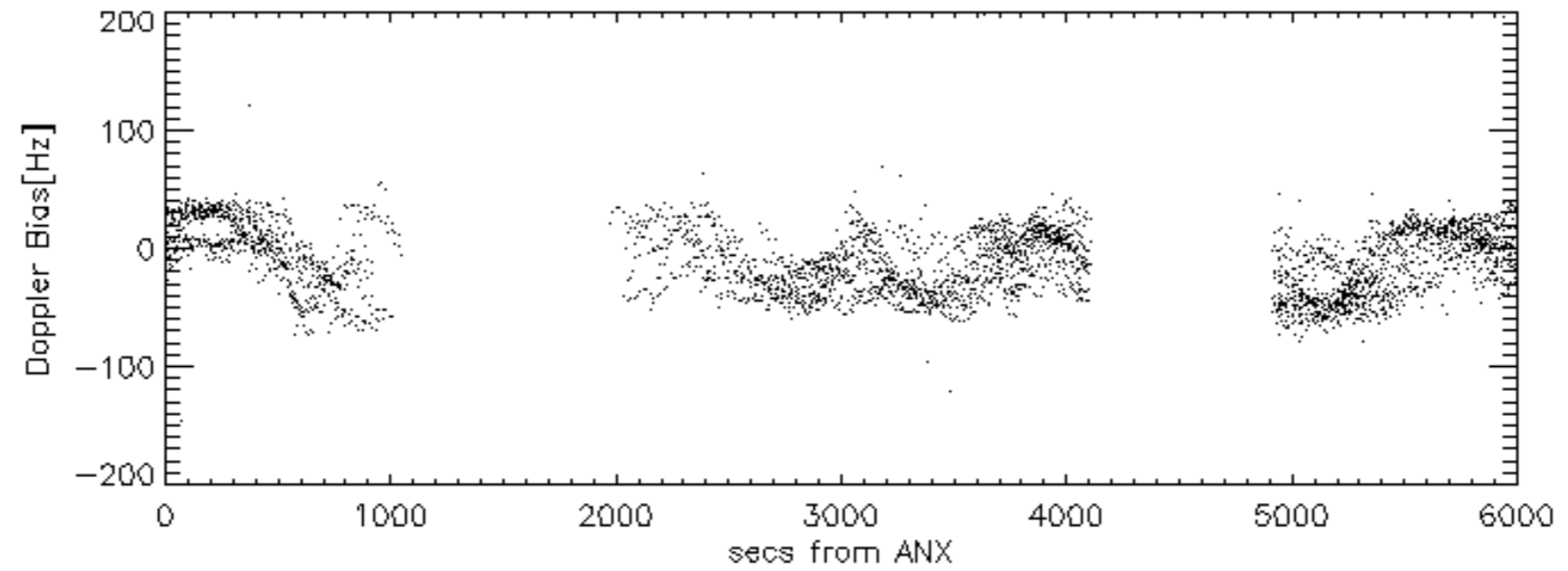
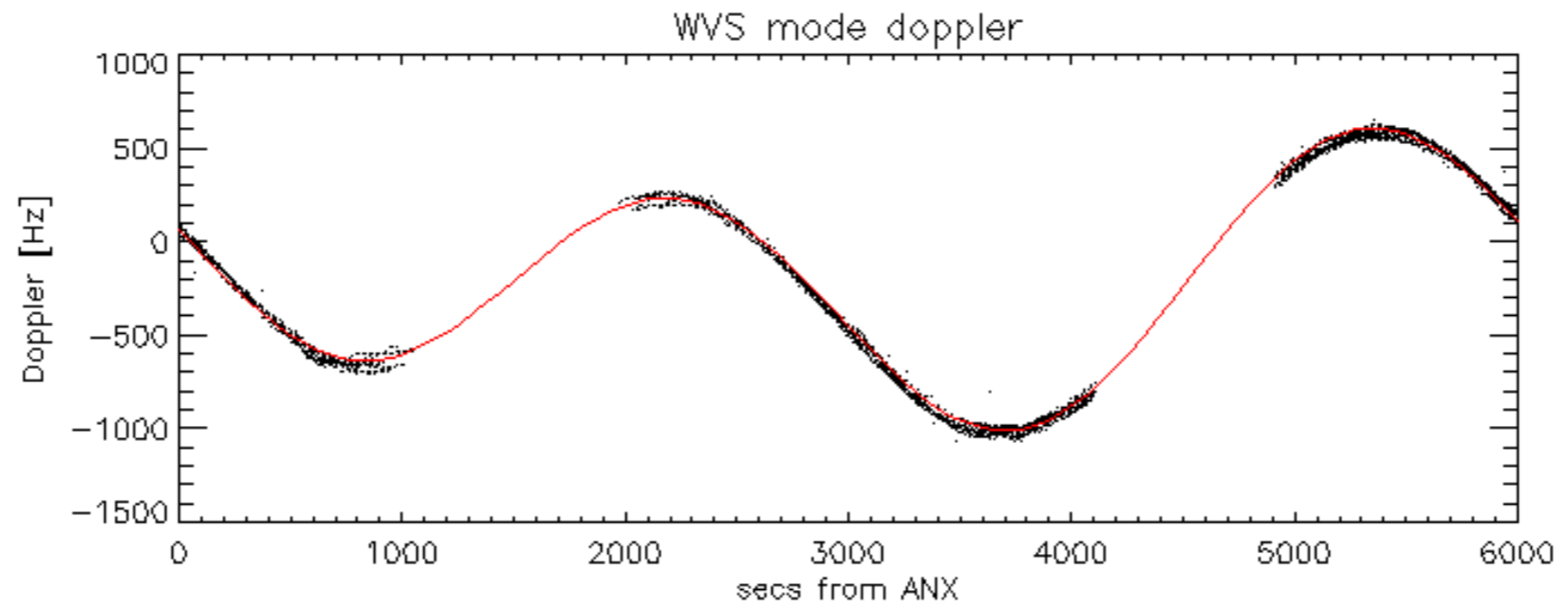


Doppler 'WVS' 'IS2' descending

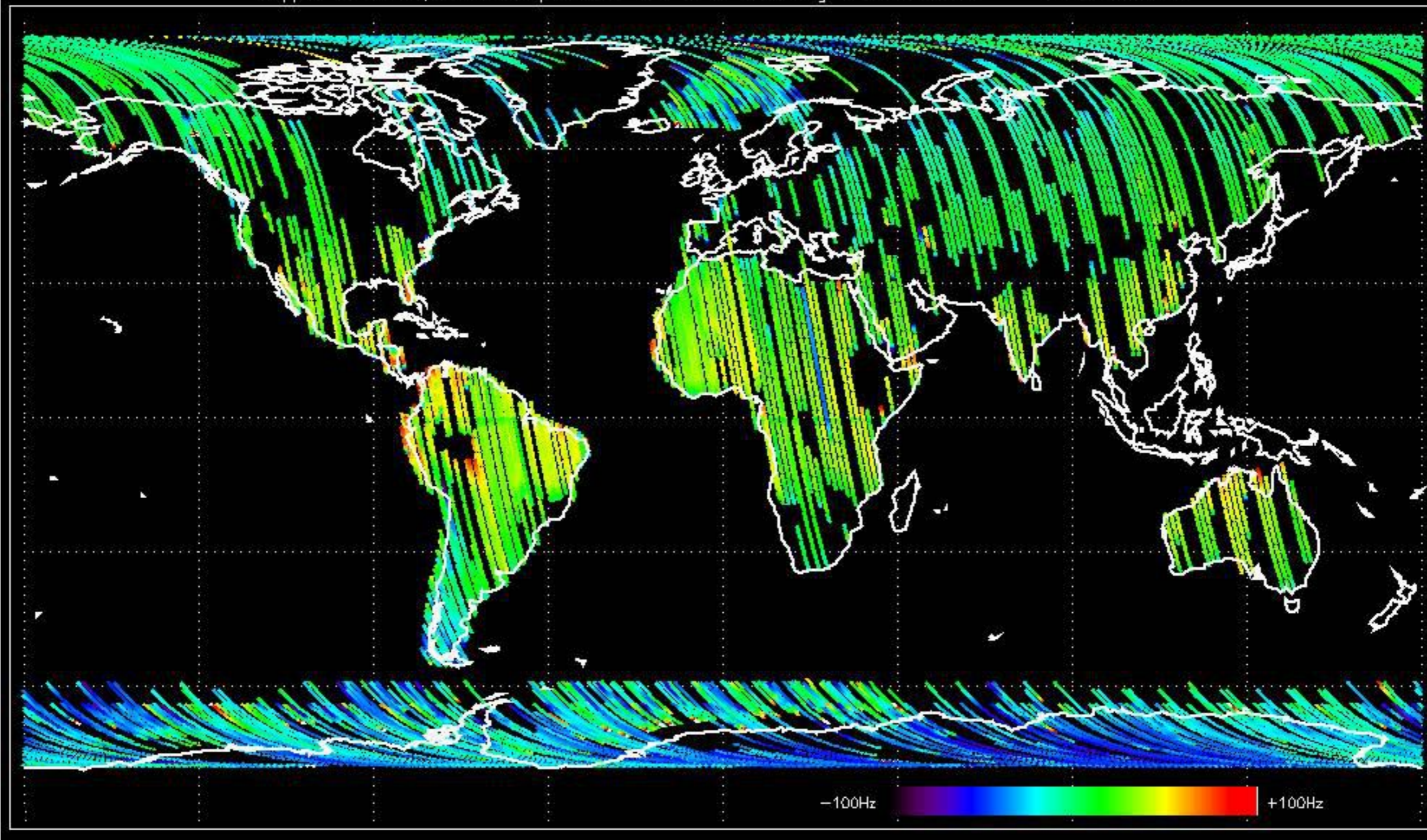


GM1 mode doppler

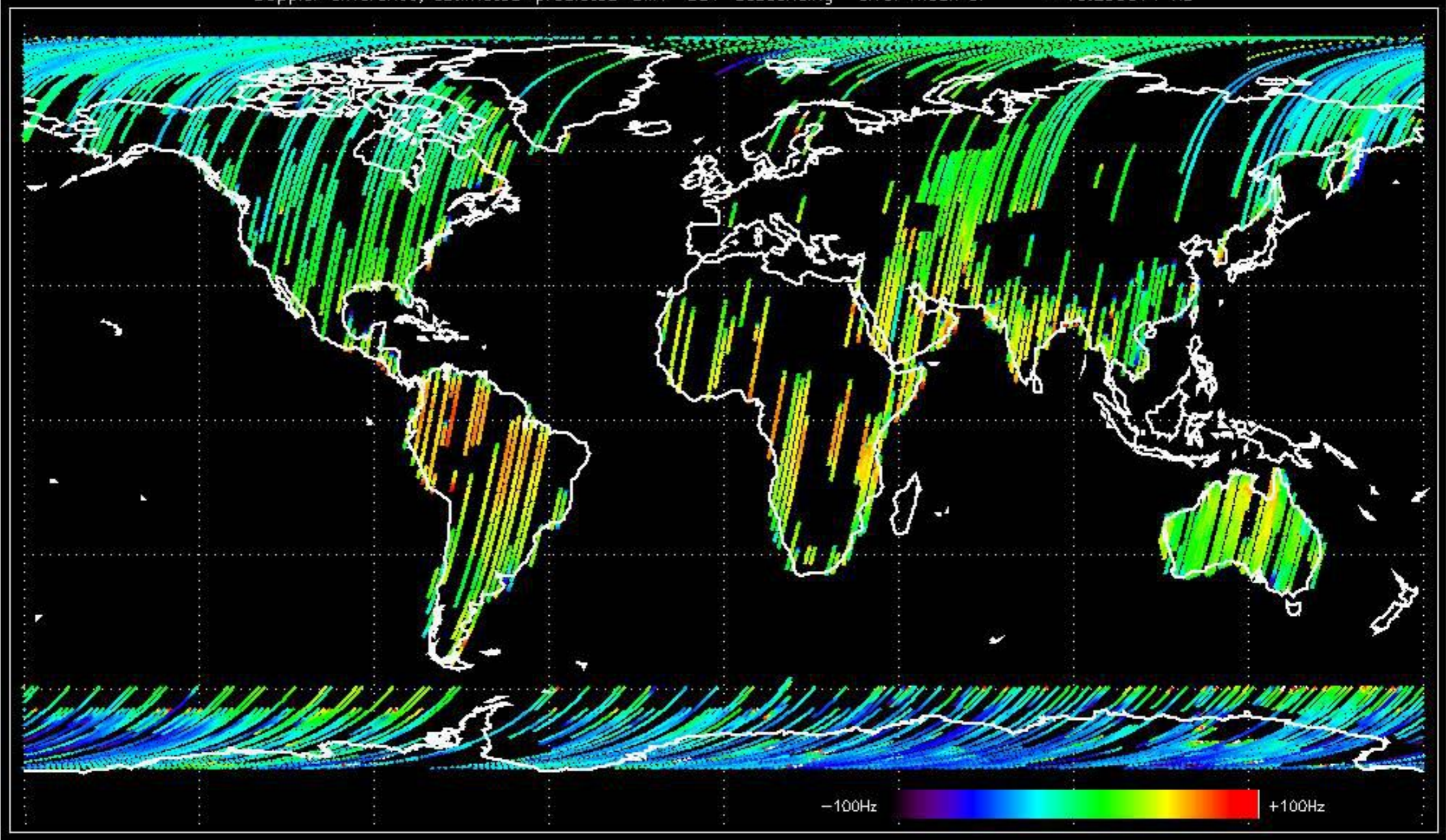




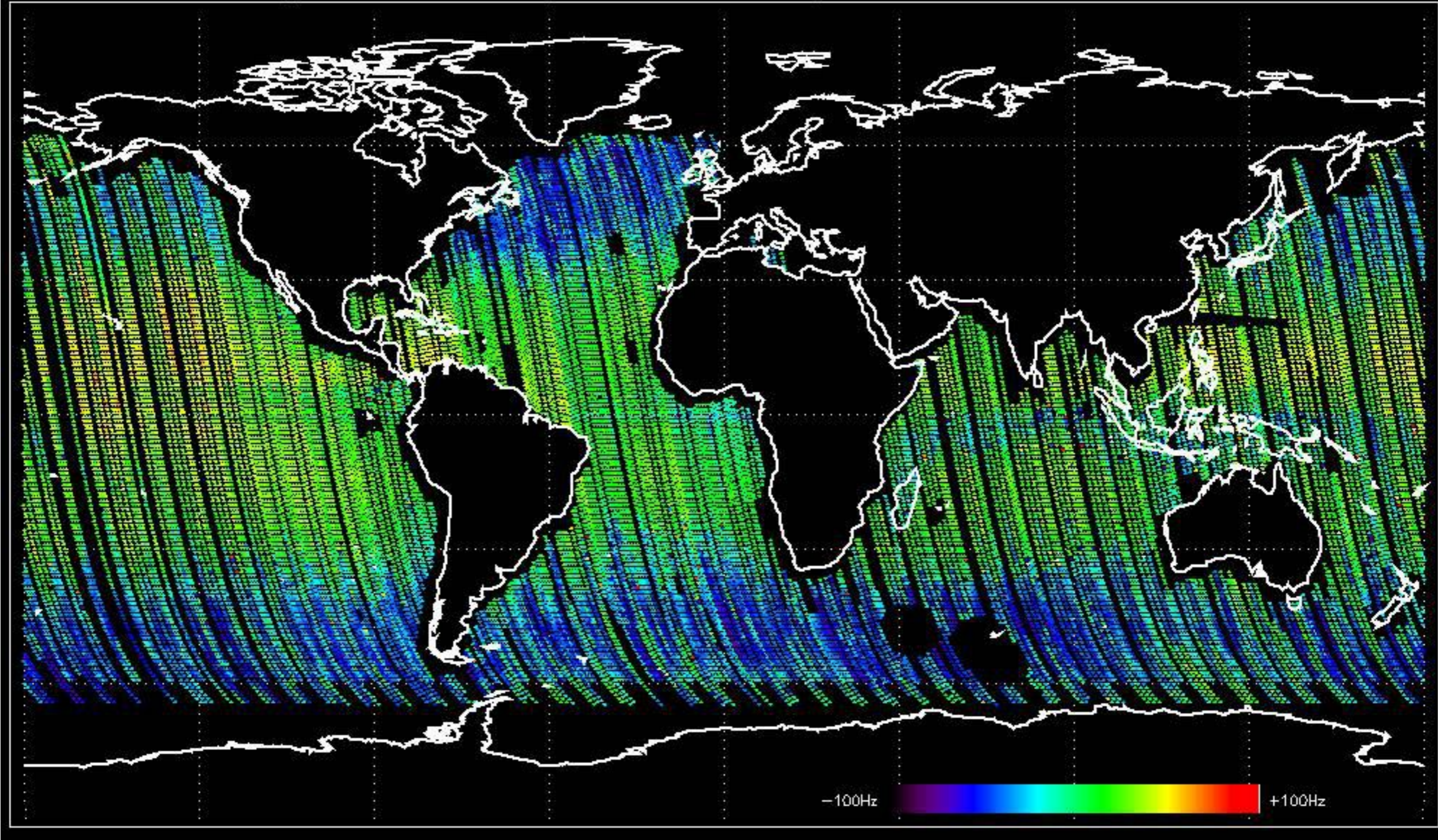
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -19.661114 Hz



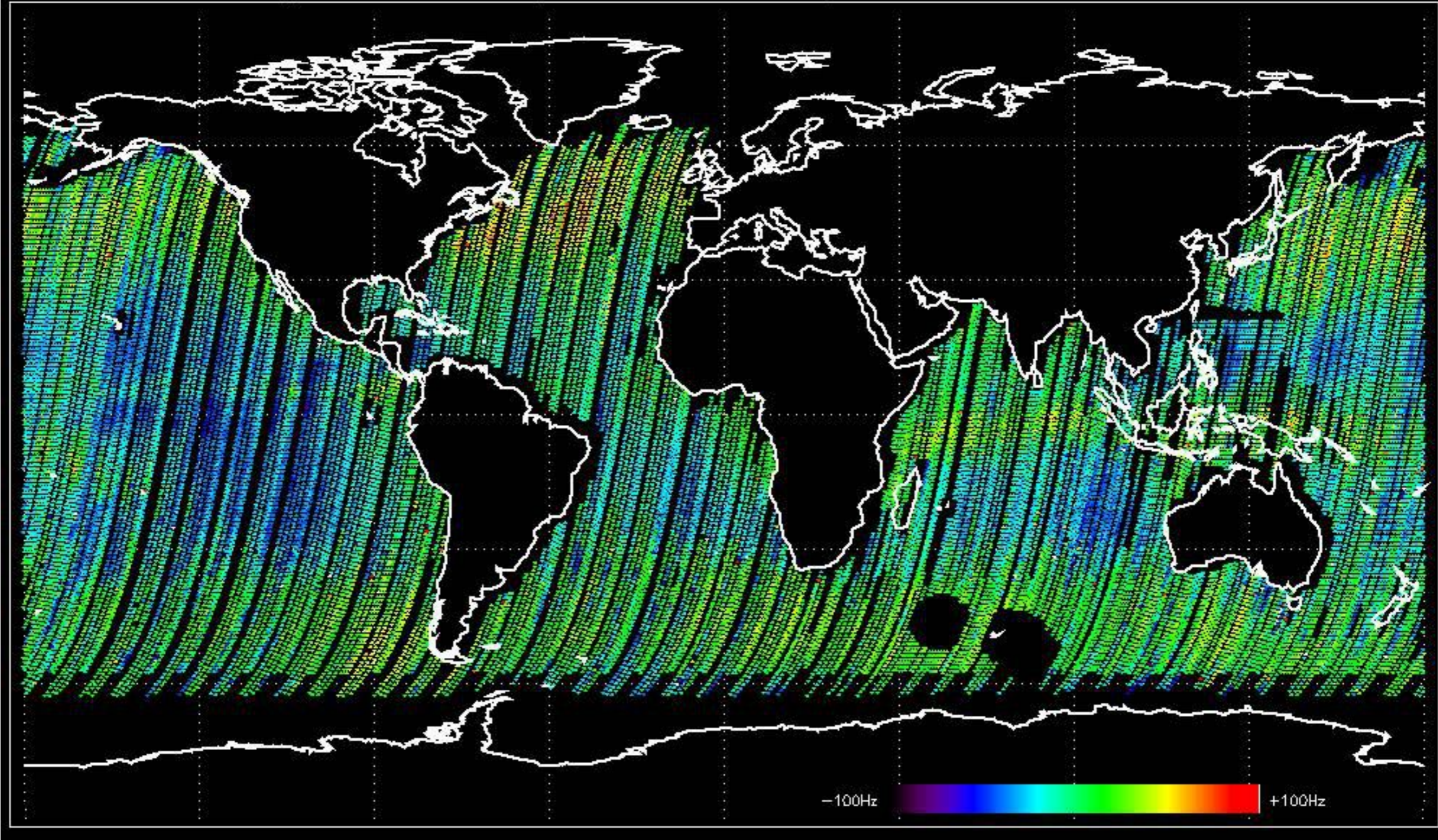
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.299971 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -11.453455 Hz

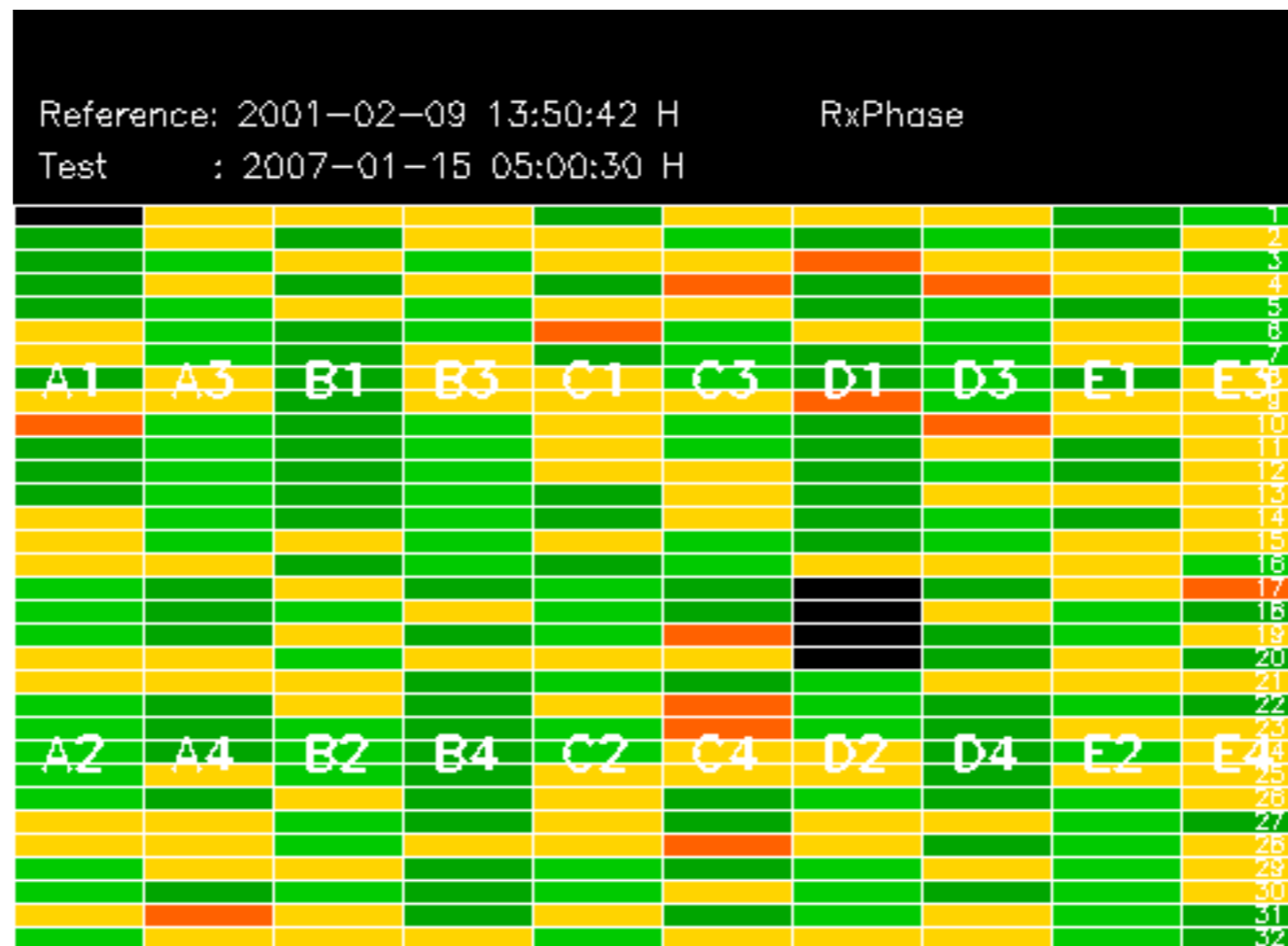


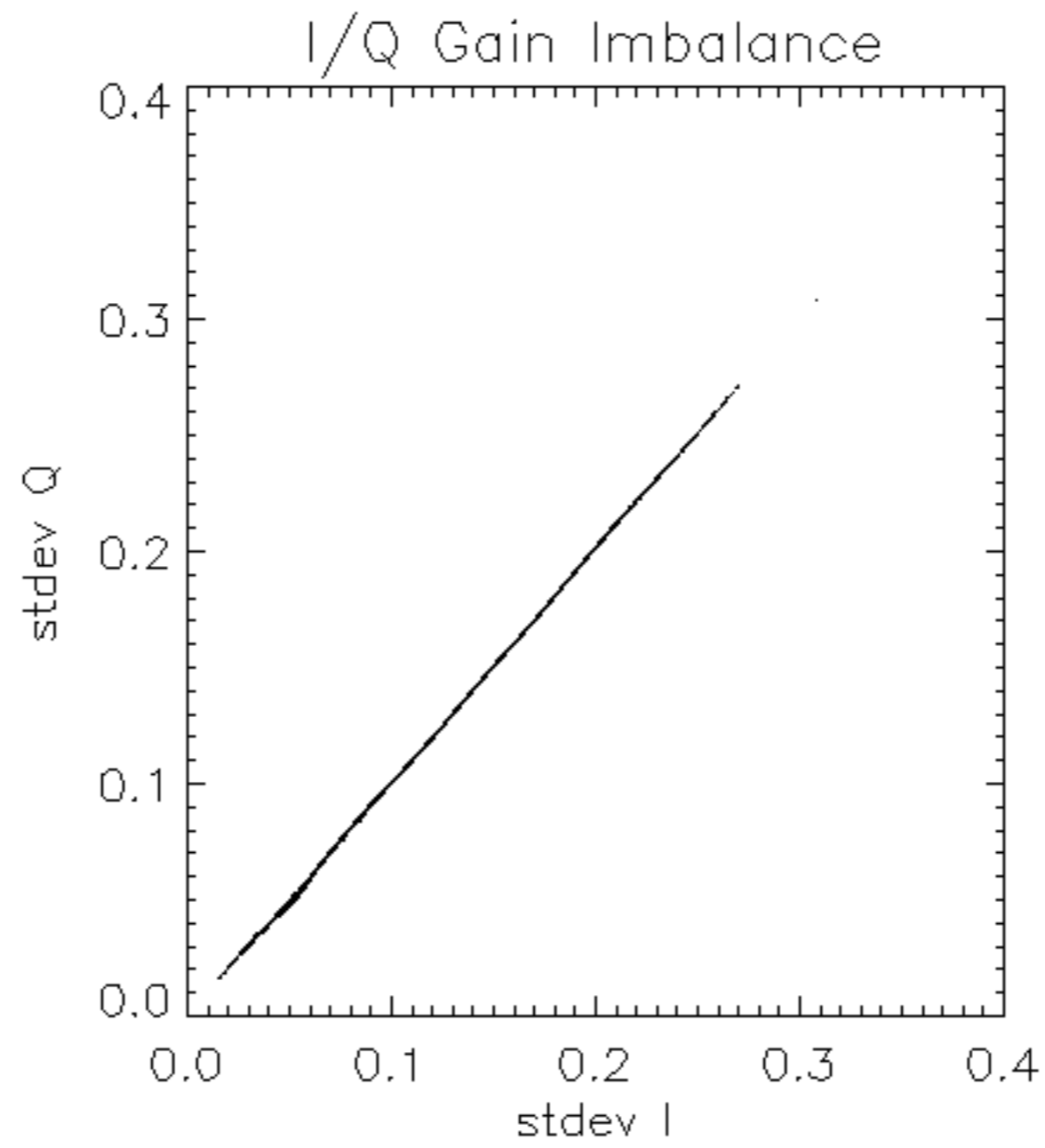
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -12.663747 Hz

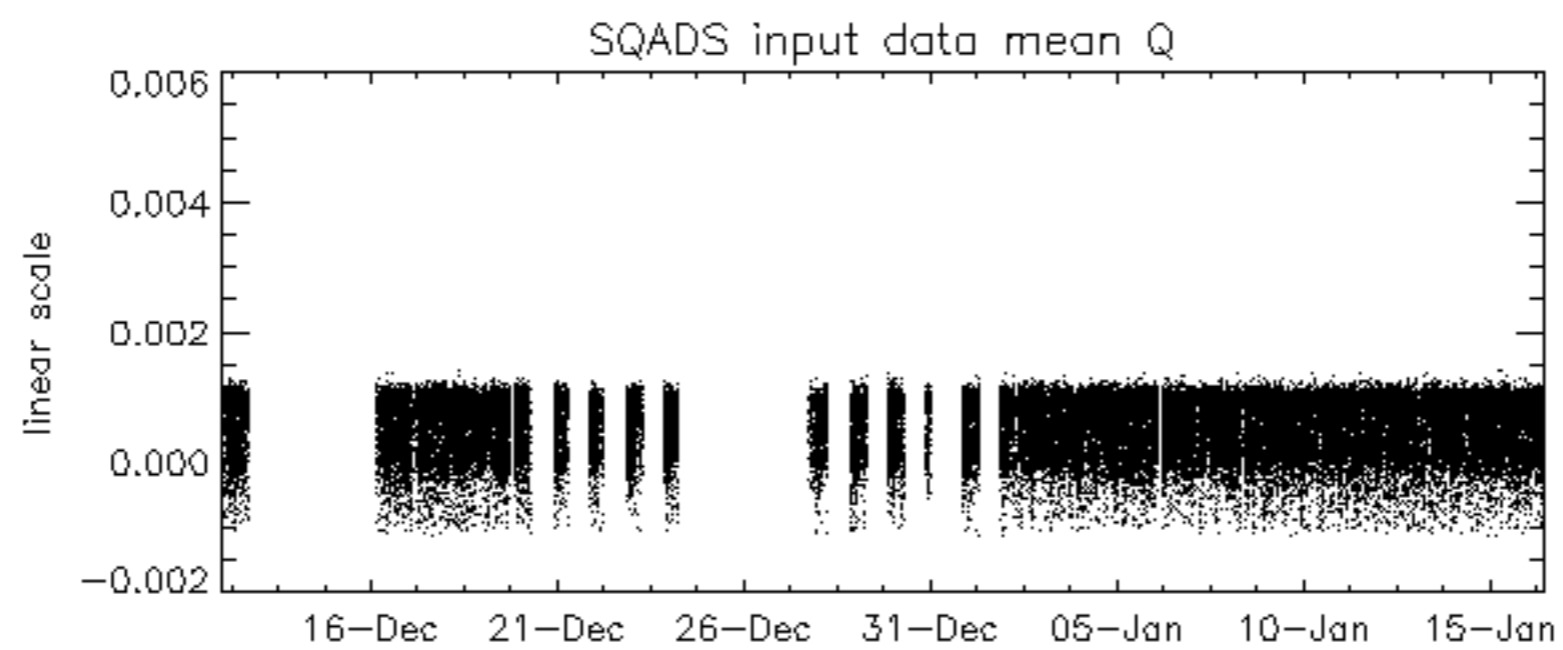
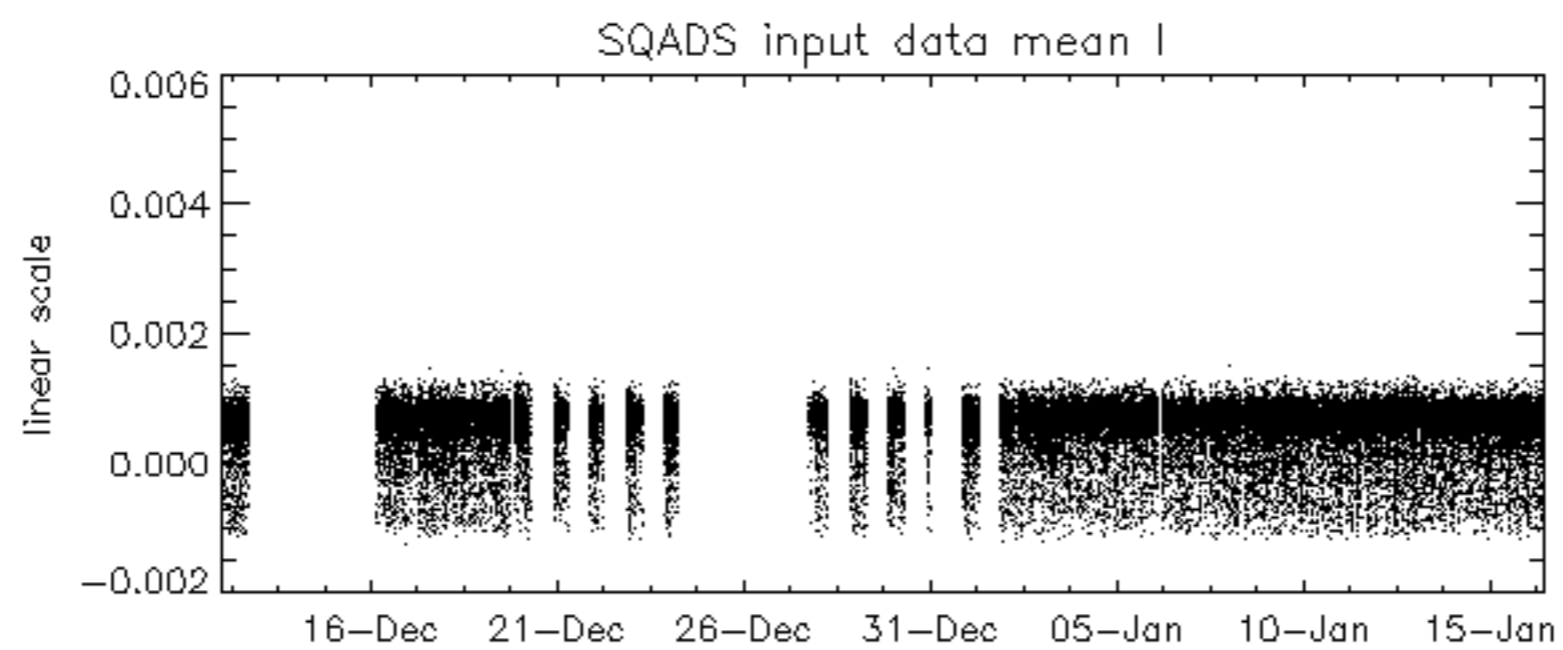
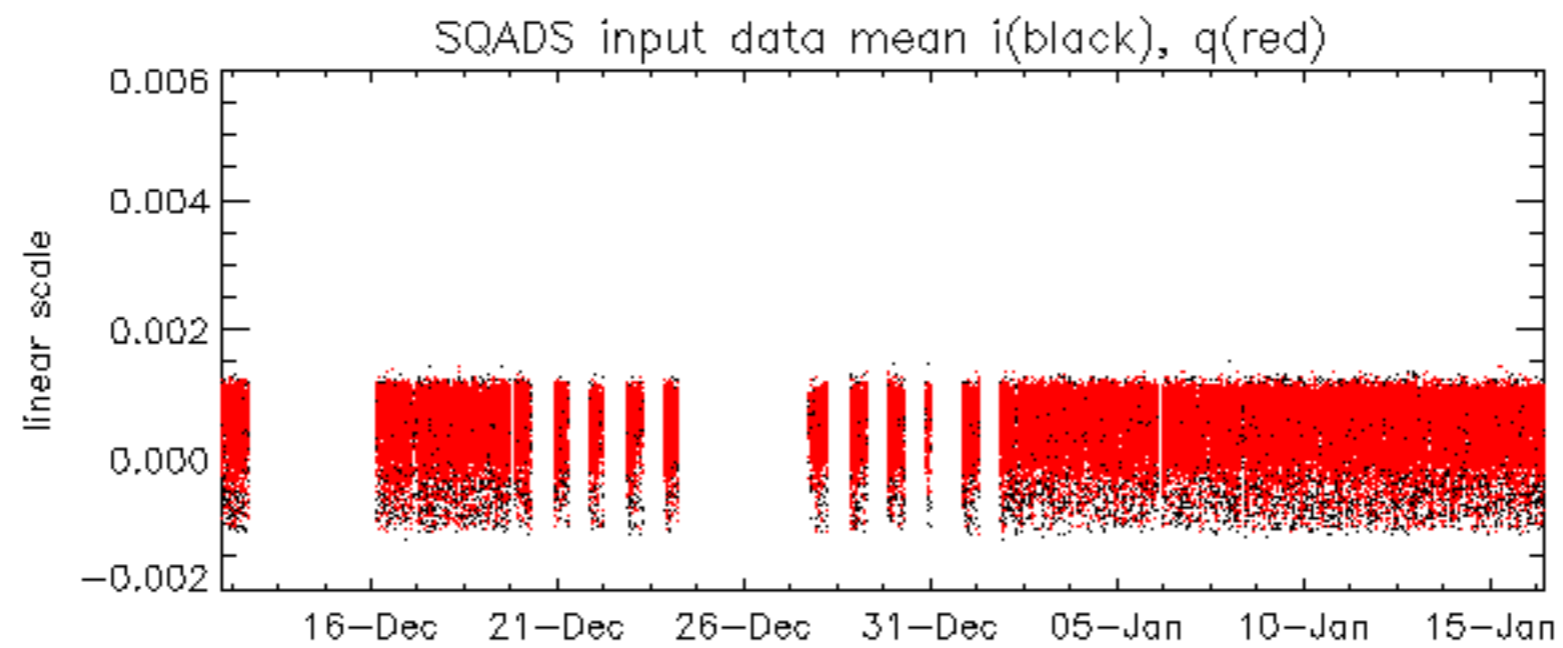


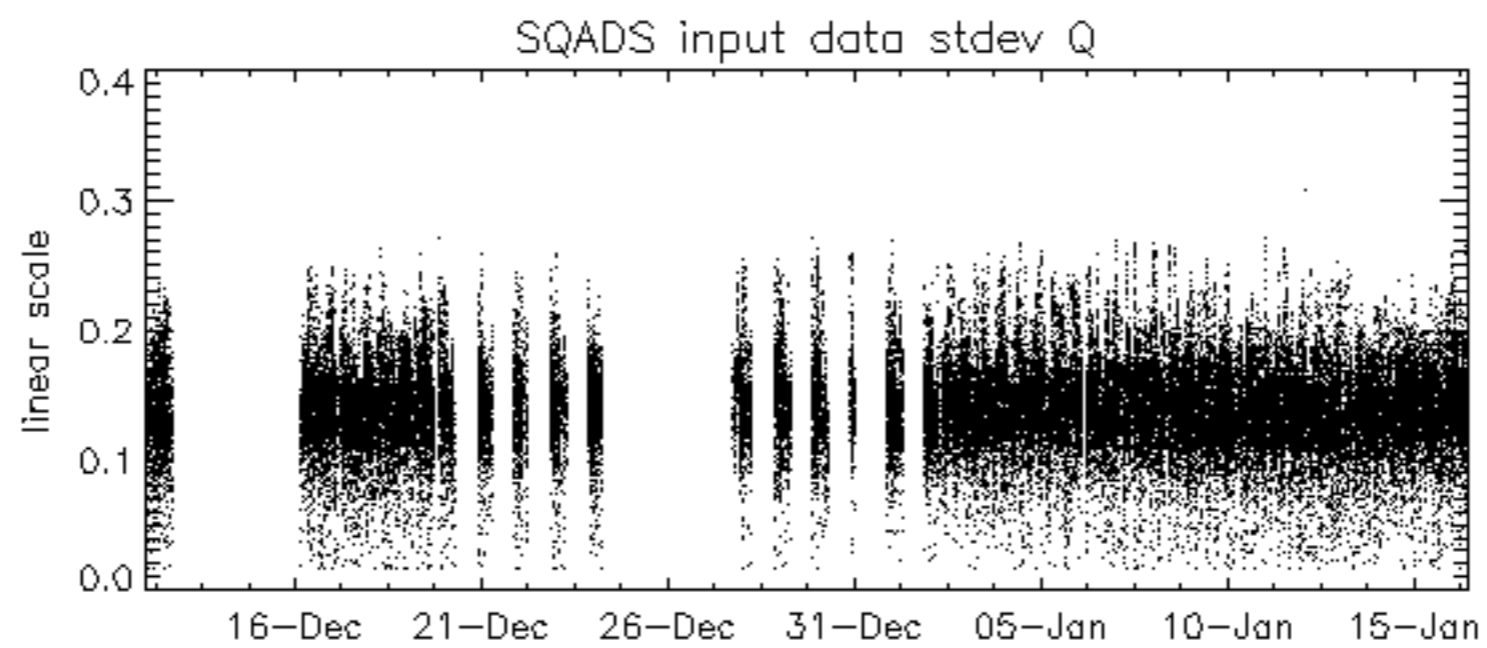
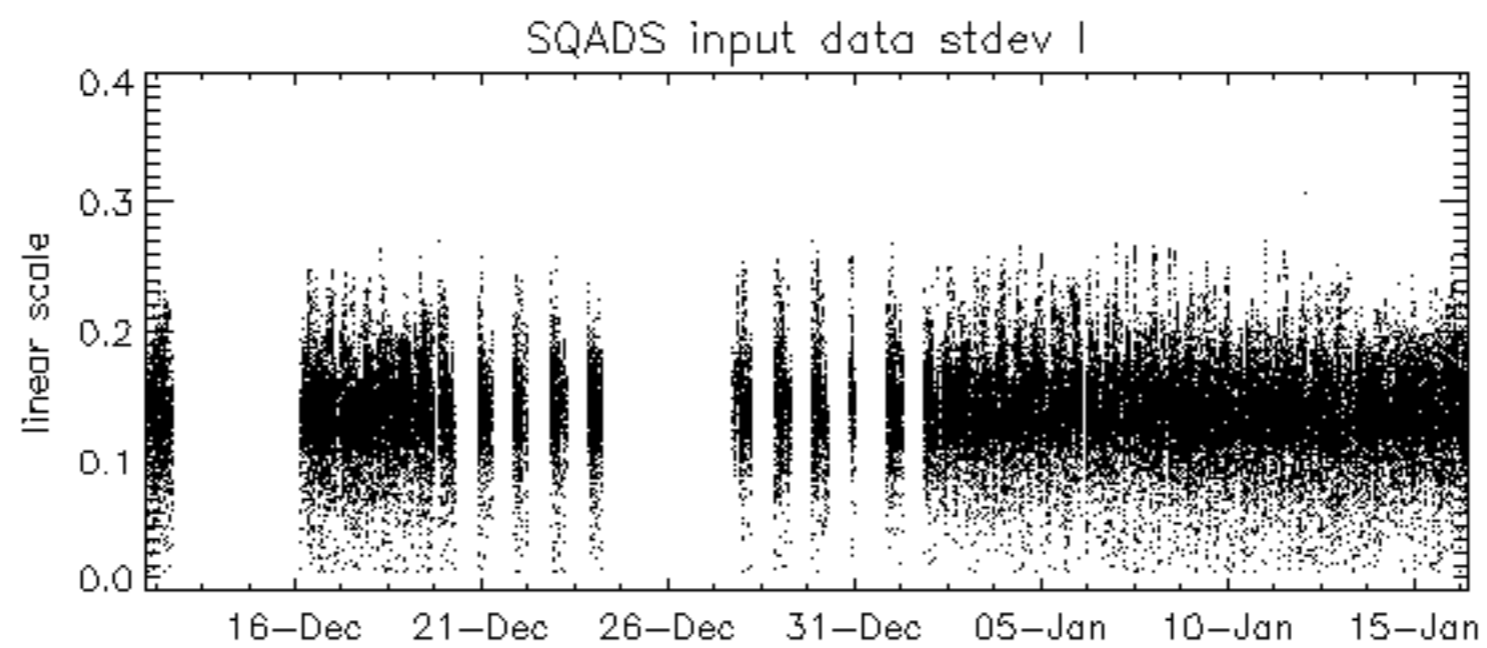
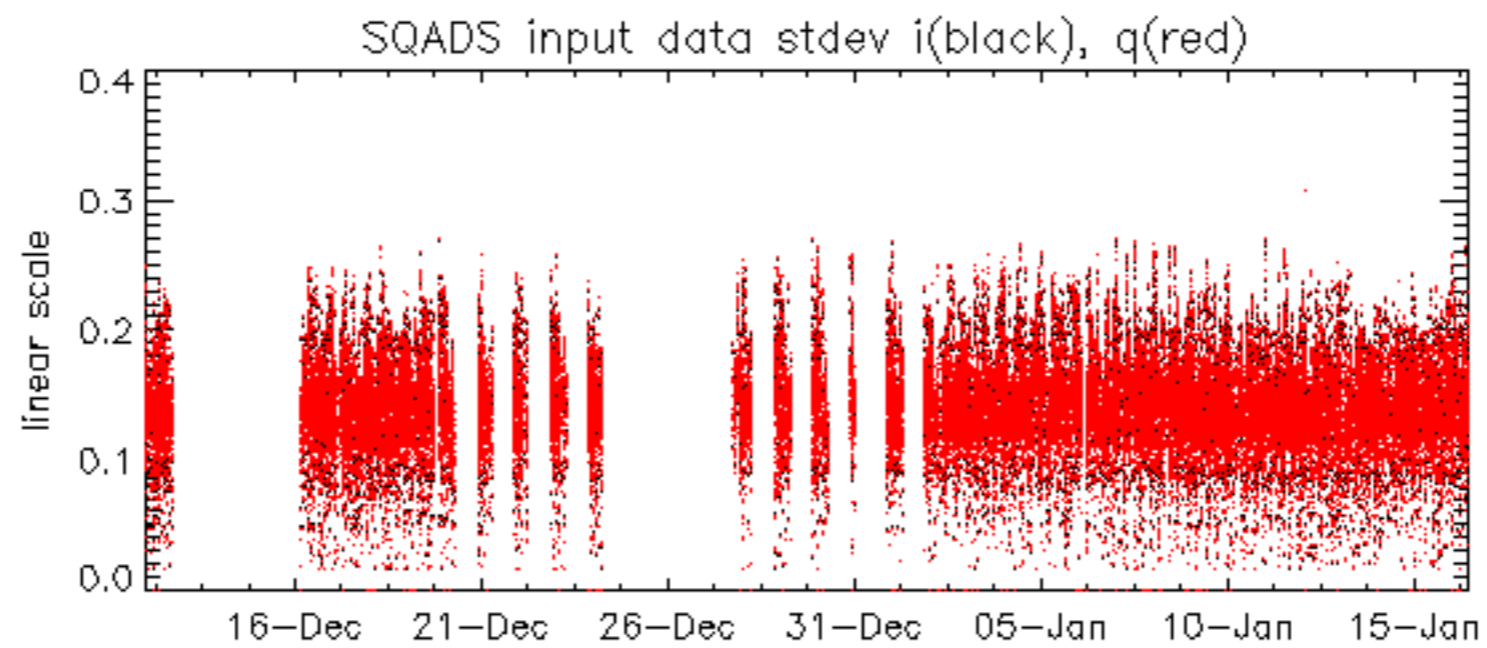
No anomalies observed on available MS products:

No anomalies observed.





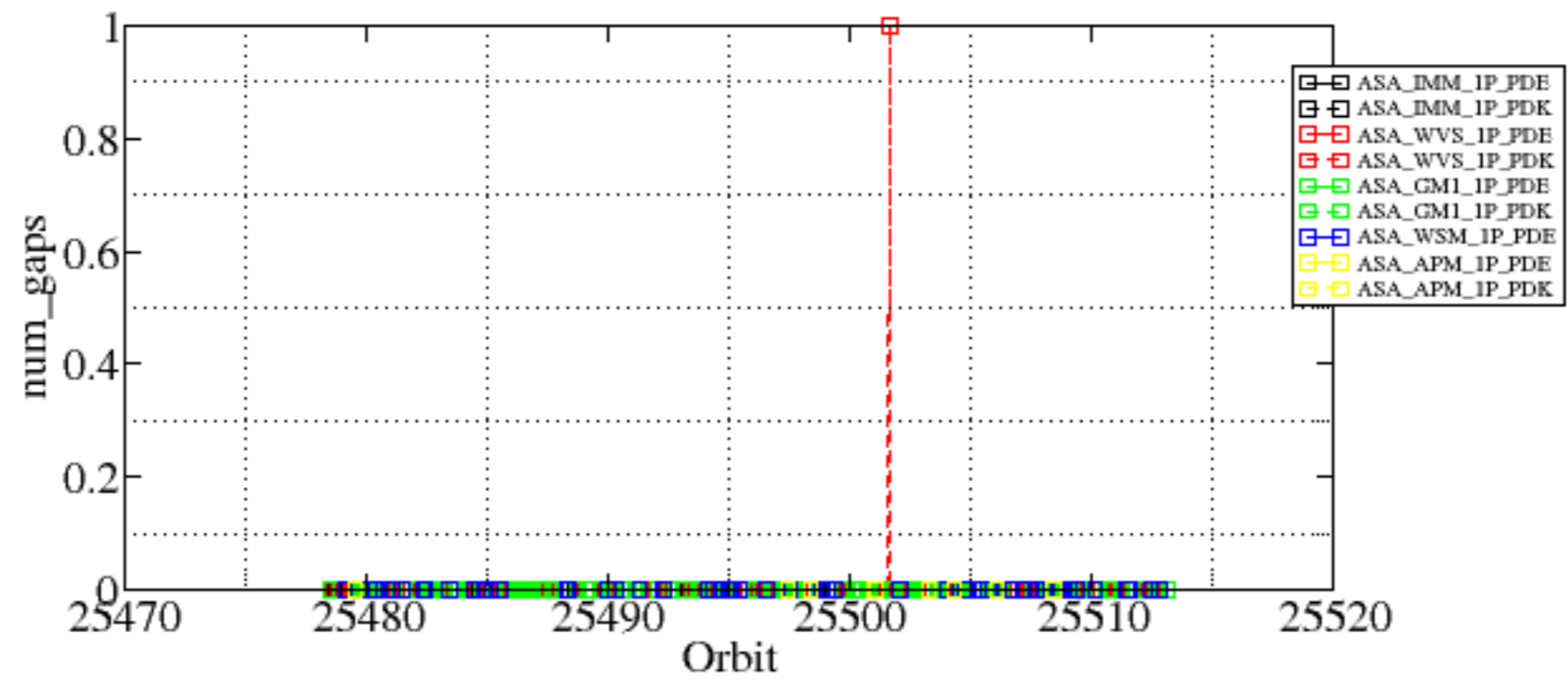


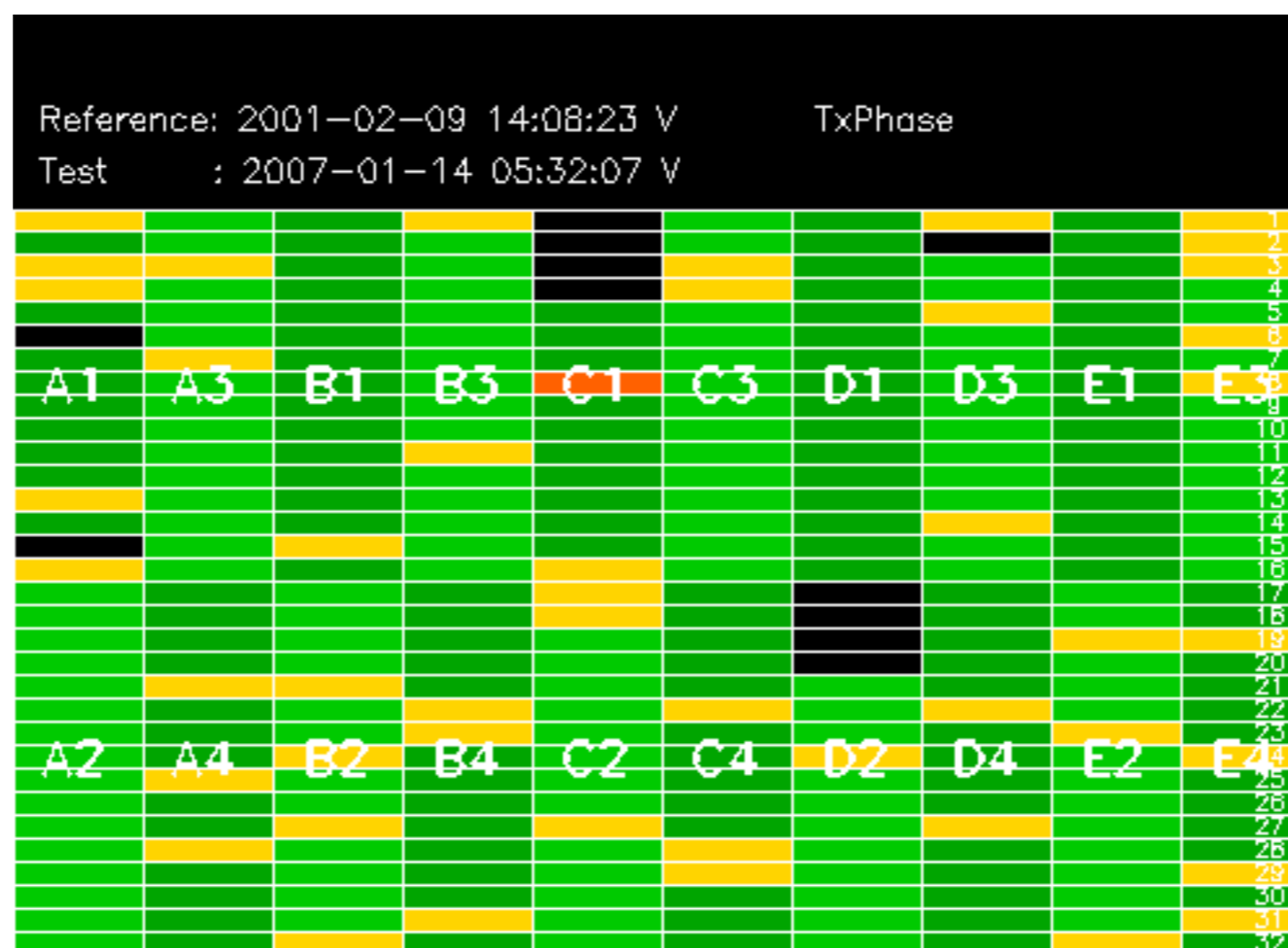


Summary of analysis for the last 3 days 2007011[456]

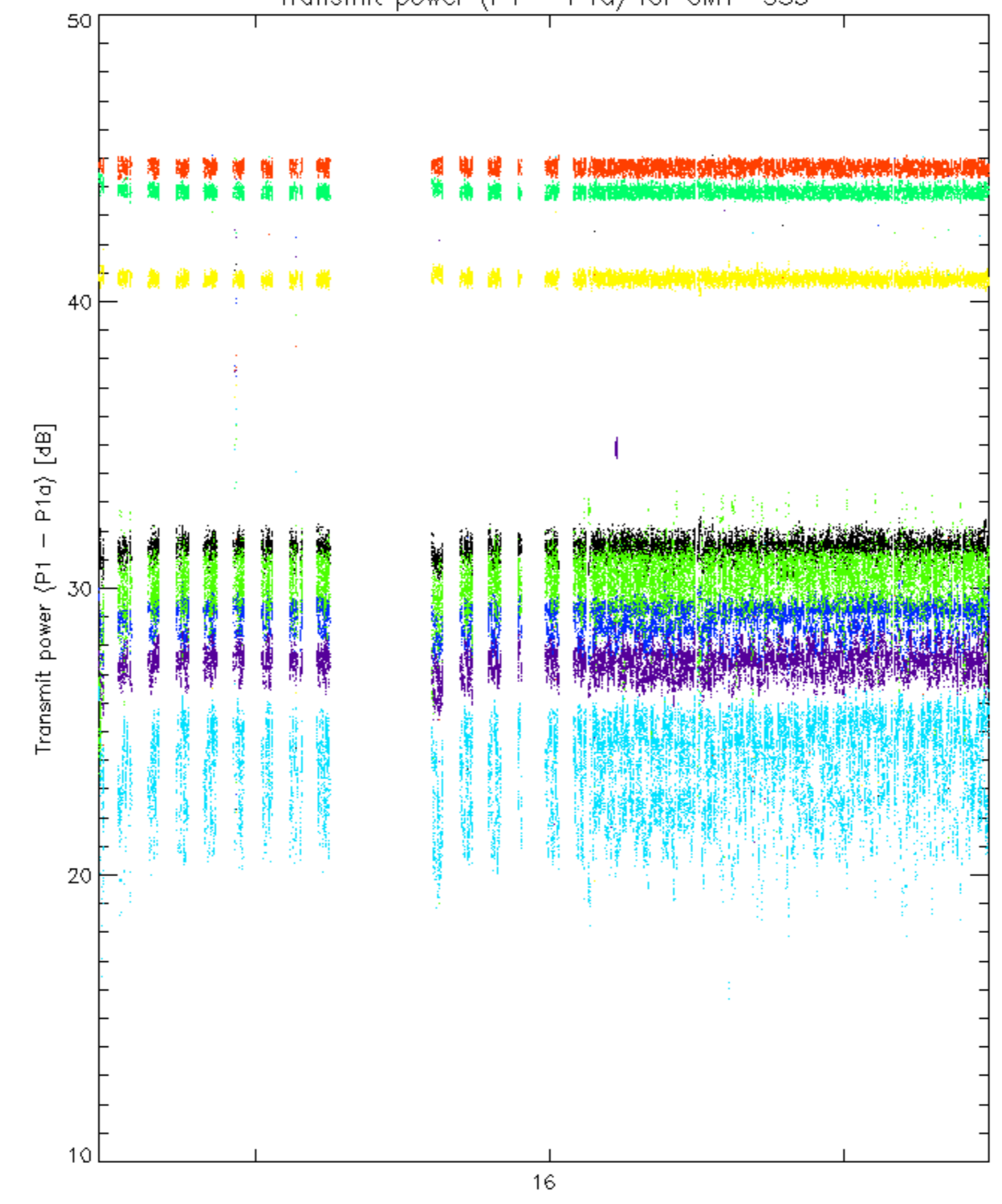
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WVS_1PNPDK20070115_150216_00000002054_00397_25501_7820.N1	1	0
ASA_WVS_1PNPDK20070115_150216_00000002054_00397_25501_7978.N1	1	0
ASA_GM1_1PNPDK20070115_091257_000003202054_00394_25498_7135.N1	0	7
ASA_GM1_1PNPDK20070115_134639_000003622054_00396_25500_7796.N1	0	14
ASA_WSM_1PNPDE20070115_112055_000000852054_00395_25499_8381.N1	0	28
ASA_WSM_1PNPDE20070115_185945_000000912054_00400_25504_8532.N1	0	2

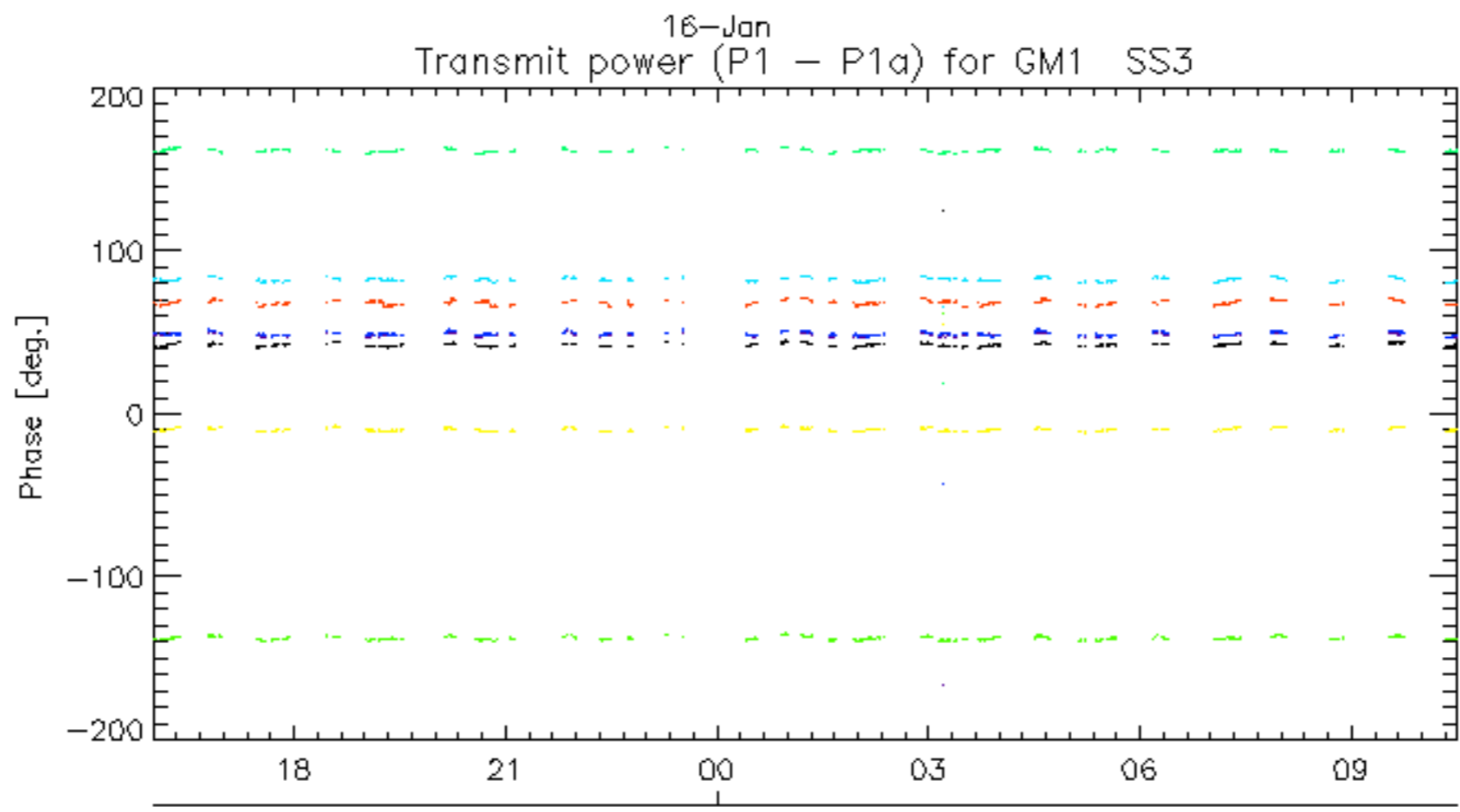
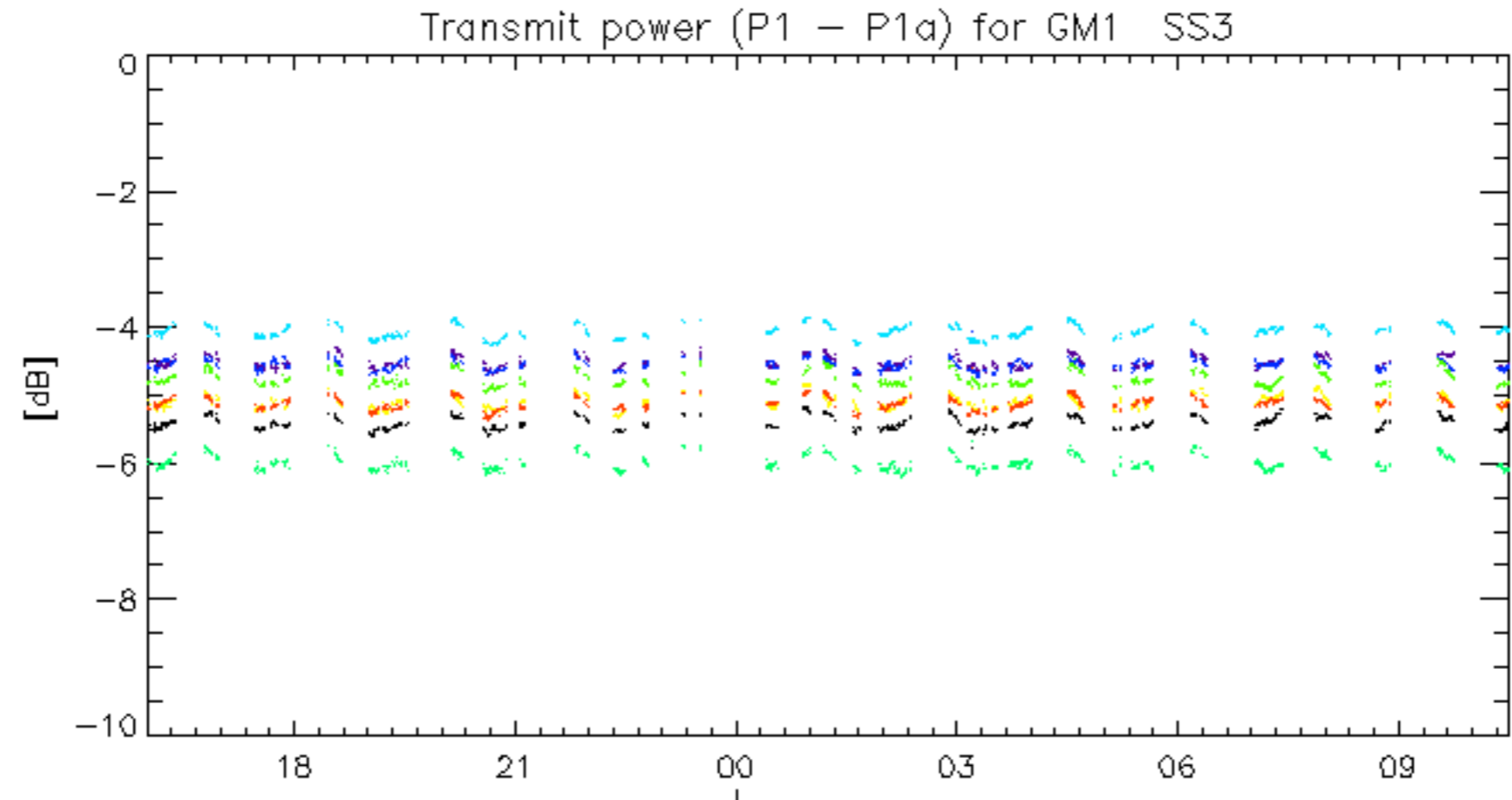




Transmit power (P1 - P1a) for GM1 SS3

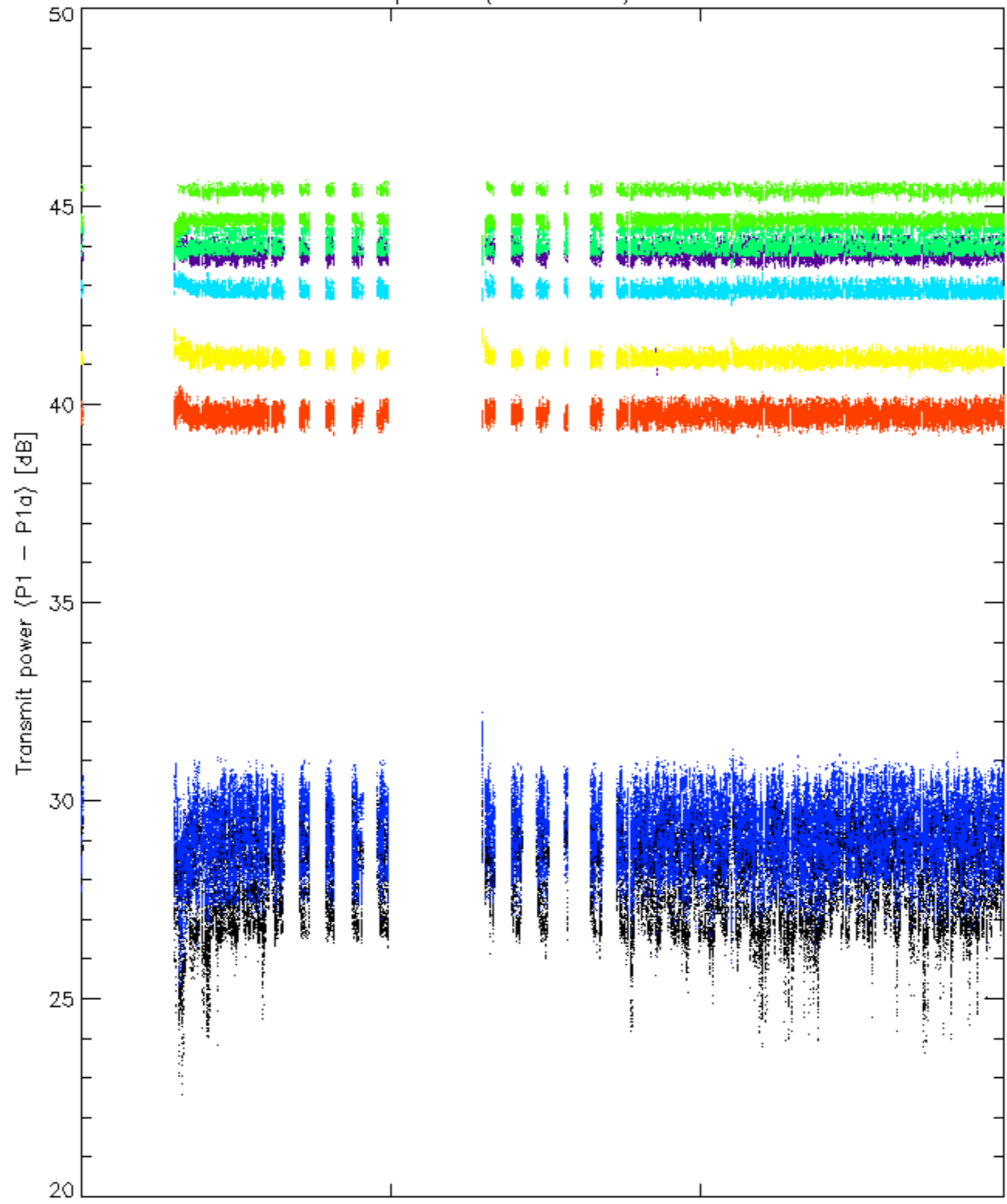


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

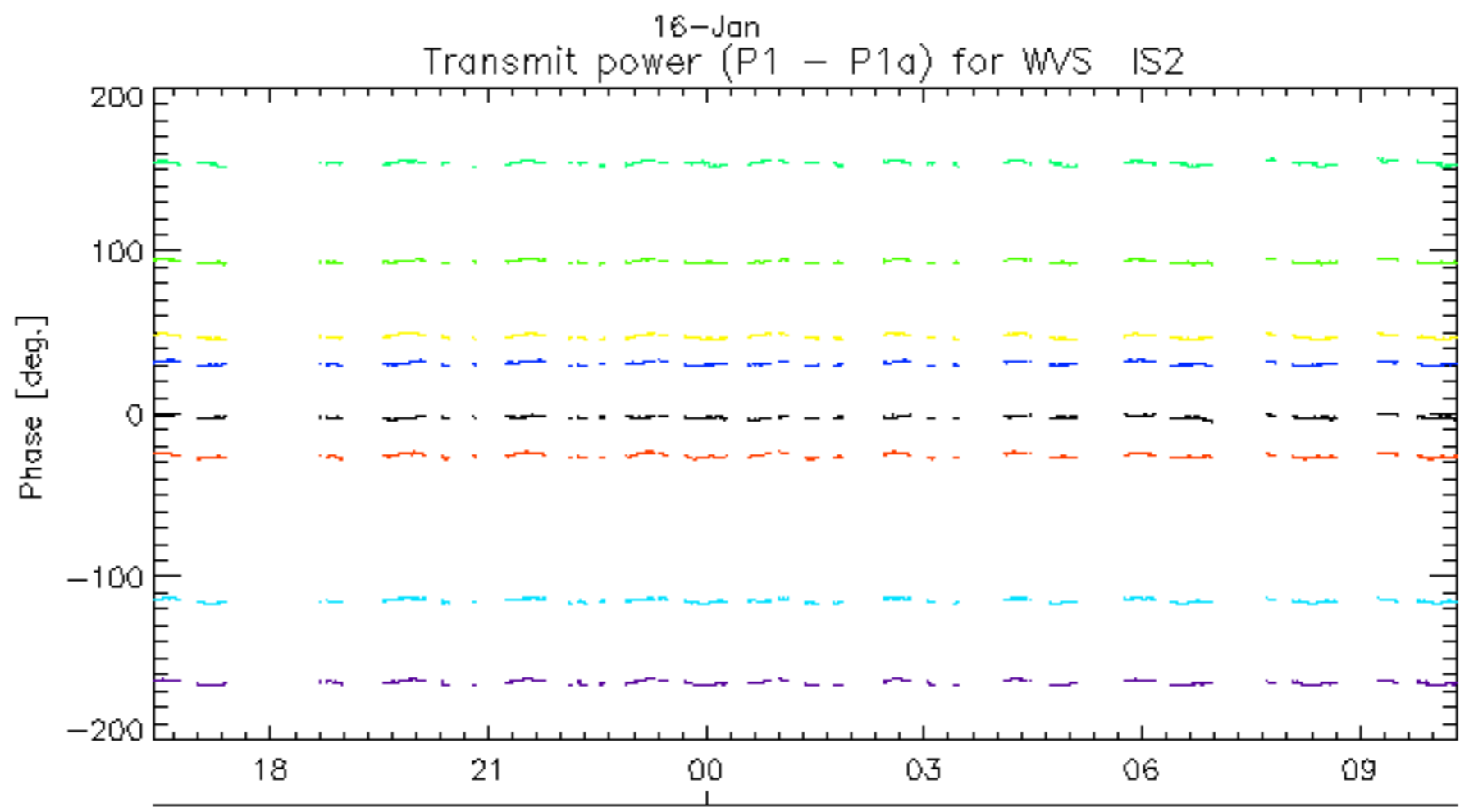
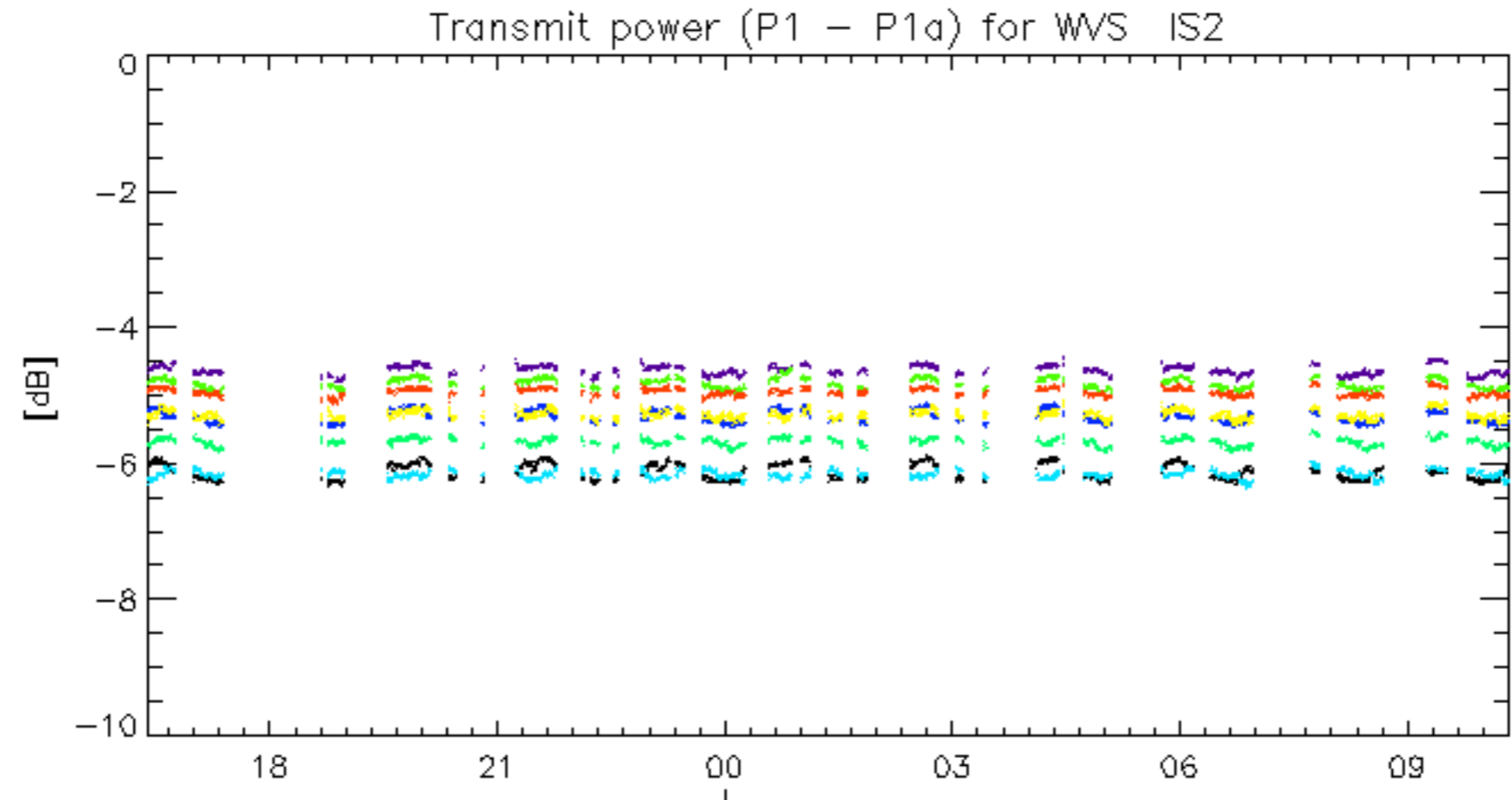


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.