

PRELIMINARY REPORT OF 070106

last update on Sat Jan 6 16:20:32 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 2007-01-05 00:00:00 to 2007-01-06 16:20:33

PDHS-K

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
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PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	36	46	33	11	62
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	36	46	33	11	62
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	36	46	33	11	62
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	36	46	33	11	62

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	20070105 033419
H	20070106 040926

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"/>

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4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS

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4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1

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4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

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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	-3.965674	0.008037	0.008047
7	P1	-3.139693	0.025002	0.074754
11	P1	-4.123385	0.025380	0.029671
15	P1	-6.337678	0.016304	0.020729
19	P1	-3.673713	0.005109	-0.032710
22	P1	-4.668735	0.014089	-0.028197
26	P1	-3.964447	0.009119	0.014721
30	P1	-5.909107	0.008751	-0.023484
3	P1	-16.547369	0.268365	-0.021808
7	P1	-17.287390	0.196932	0.166093
11	P1	-17.198402	0.492460	-0.105600
15	P1	-13.049878	0.136183	0.116743
19	P1	-15.025101	0.098845	-0.114303
22	P1	-15.838645	0.529383	0.181759
26	P1	-15.081589	0.187122	0.141175
30	P1	-17.531725	0.482037	0.146513

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.805588	0.094578	0.022240
7	P2	-21.709255	0.094156	0.098179
11	P2	-15.566008	0.102229	0.036023
15	P2	-7.113035	0.108518	0.065179
19	P2	-9.193416	0.104589	0.065765
22	P2	-18.234083	0.097980	0.057338
26	P2	-16.604523	0.110001	0.032532
30	P2	-19.454050	0.090034	0.040279

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.243282	0.008932	0.029896
7	P3	-8.243282	0.008932	0.029896
11	P3	-8.243282	0.008932	0.029896

15	P3	-8.243282	0.008932	0.029896
19	P3	-8.243282	0.008932	0.029896
22	P3	-8.243282	0.008932	0.029896
26	P3	-8.243323	0.008932	0.029836
30	P3	-8.243323	0.008932	0.029836

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	-3.928156	0.014746	0.024568
7	P1	-2.471700	0.015720	0.042471
11	P1	-2.854532	0.017120	0.053276
15	P1	-3.697533	0.032383	-0.011080
19	P1	-3.557124	0.019346	0.023100
22	P1	-5.027007	0.023999	0.047220
26	P1	-6.048368	0.028381	0.031708
30	P1	-5.358941	0.037071	0.043174
3	P1	-11.743898	0.085881	0.069657
7	P1	-10.071177	0.082410	0.069426
11	P1	-10.360002	0.111531	-0.004524
15	P1	-10.726486	0.126429	-0.037815
19	P1	-15.739486	0.125271	0.016789
22	P1	-21.622303	1.372626	0.059526
26	P1	-16.076166	0.335873	0.130547
30	P1	-17.888023	0.374065	0.025078

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.480614	0.109234	0.079563
7	P2	-22.236168	0.277537	0.091755
11	P2	-10.873476	0.112232	0.081669
15	P2	-4.997146	0.171853	0.085763
19	P2	-6.978033	0.262451	0.071211
22	P2	-8.261989	0.104243	0.065601
26	P2	-24.345121	0.172184	-0.035557
30	P2	-21.959377	0.114629	0.092018

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.096741	0.004237	0.018931
7	P3	-8.096543	0.004221	0.019297
11	P3	-8.096637	0.004237	0.018957
15	P3	-8.096436	0.004225	0.018838
19	P3	-8.096518	0.004250	0.018820
22	P3	-8.096494	0.004233	0.019376
26	P3	-8.096687	0.004225	0.018465
30	P3	-8.096606	0.004195	0.018919

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	0.000560164
	stdev	1.67171e-07
MEAN Q	mean	0.000493085
	stdev	2.13162e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140341
	stdev	0.00125636
STDEV Q	mean	0.140744
	stdev	0.00127758



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007010[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_WSM_1PNPDE20070104_002424_000001292054_00231_25335_1792.N1	0	61
ASA_WSM_1PNPDE20070104_002424_000003062054_00231_25335_1618.N1	0	61
ASA_WSM_1PNPDE20070104_002424_000003062054_00231_25335_2038.N1	0	61
ASA_WSM_1PNPDE20070104_030430_000002382054_00233_25337_1981.N1	0	15
ASA_WSM_1PNPDE20070104_180904_000000862054_00242_25346_2917.N1	0	35
ASA_WSM_1PNPDE20070104_235452_000002382054_00245_25349_3463.N1	0	36
ASA_WSM_1PNPDE20070106_010151_000003232054_00260_25364_4939.N1	0	36







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)


Ascending

<input type="checkbox"/>
Descending

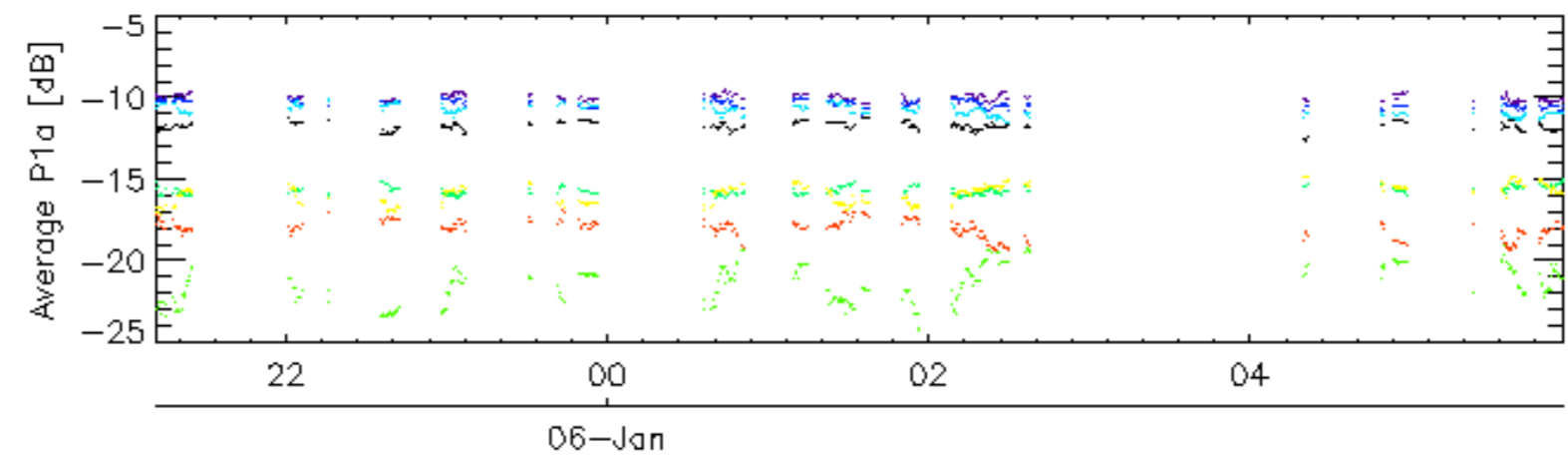
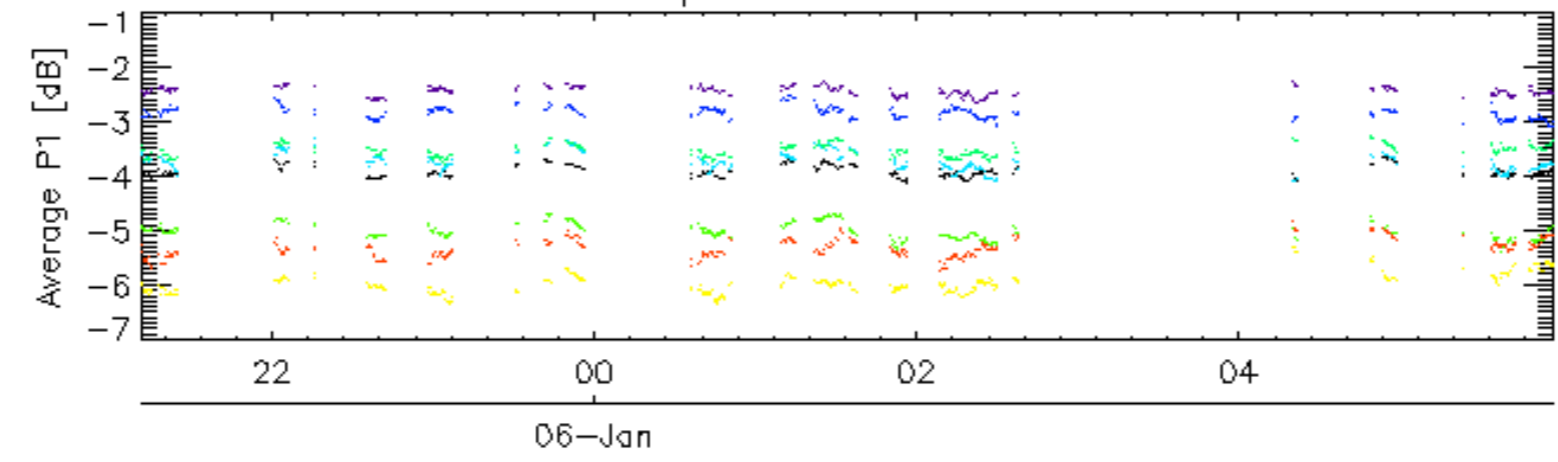
7.5 - Absolute Doppler for GM1

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

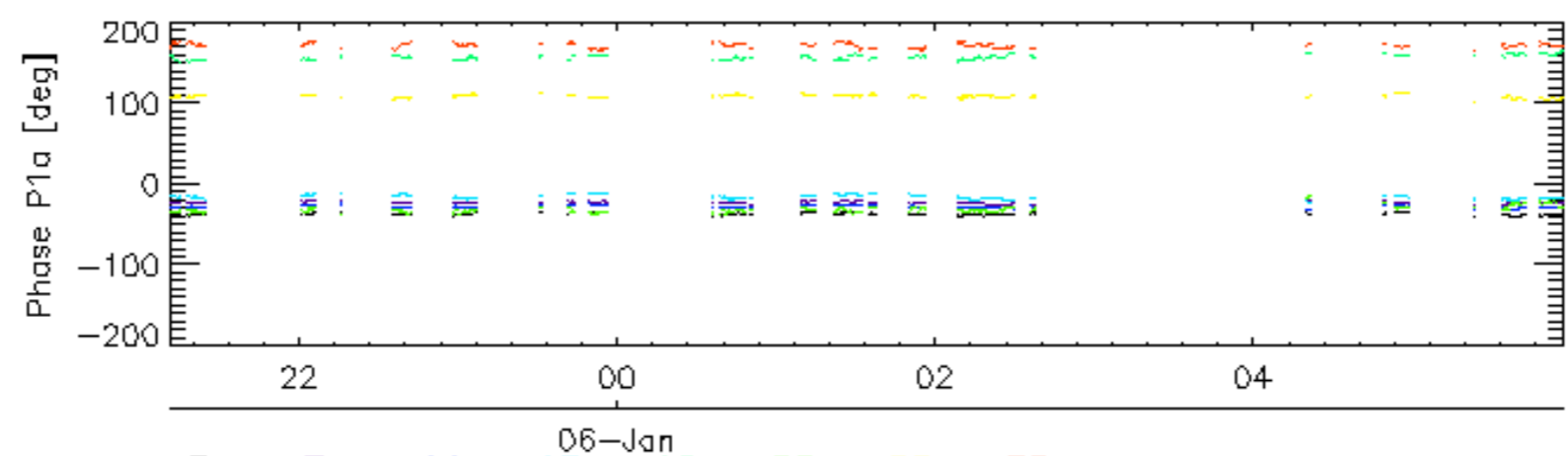
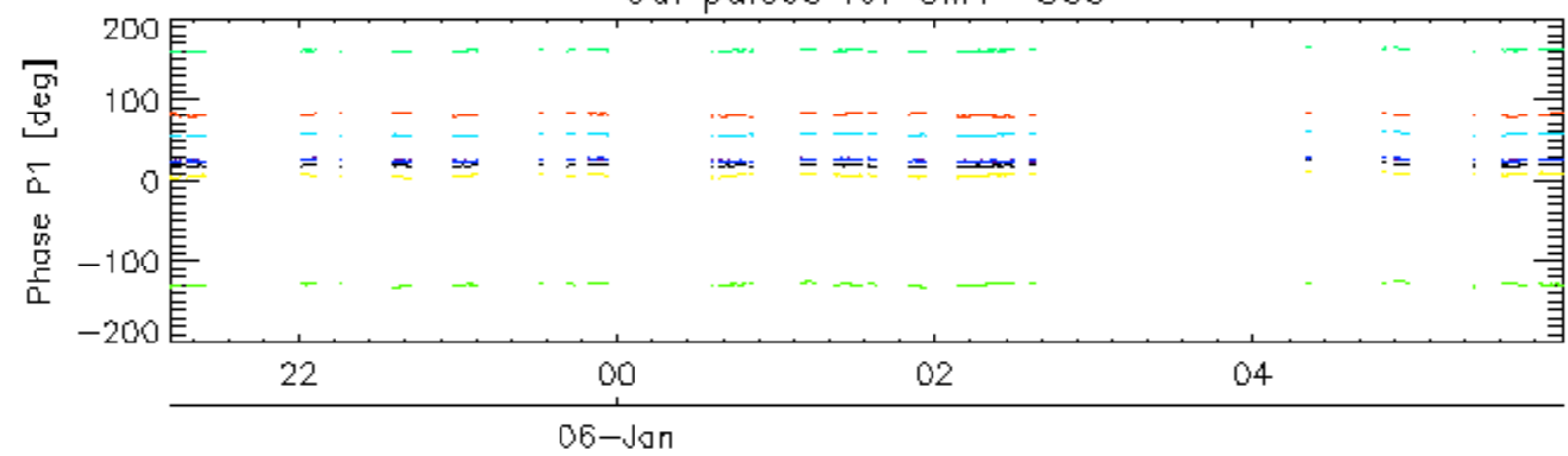
7.6 - Doppler evolution versus ANX for GM1

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

Cal pulses for GM1 SS3

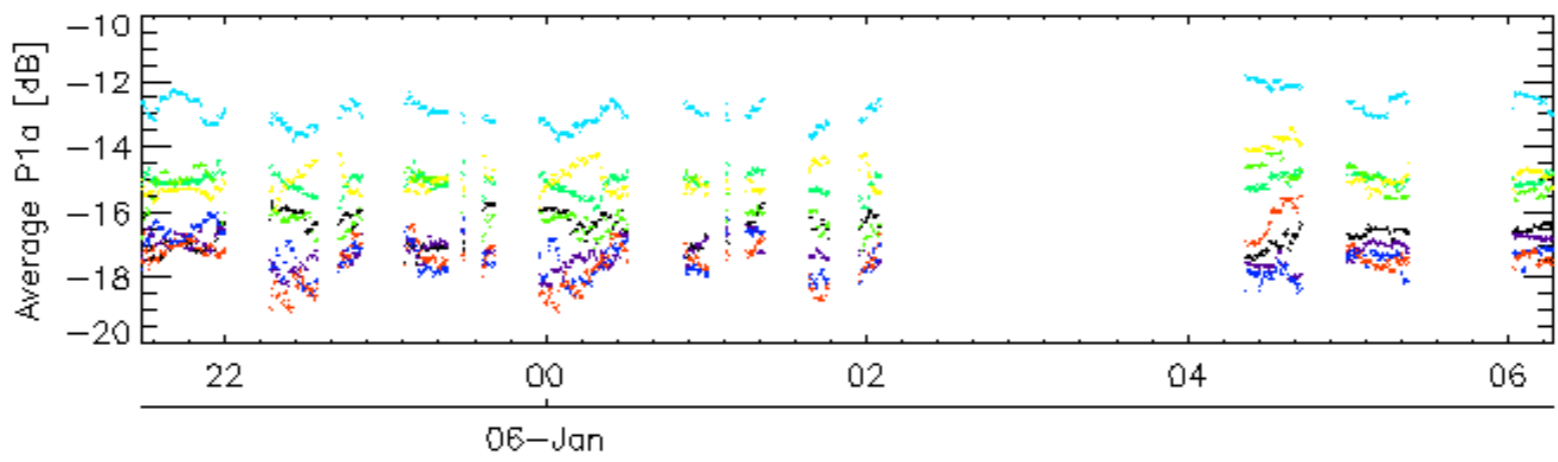
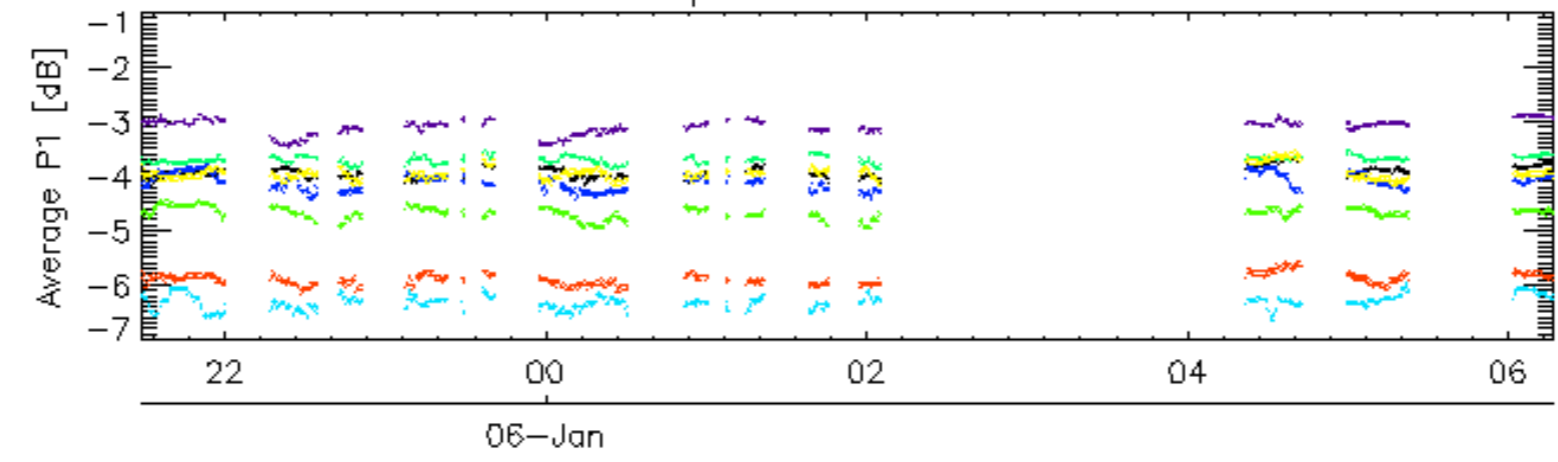


Cal pulses for GM1 SS3

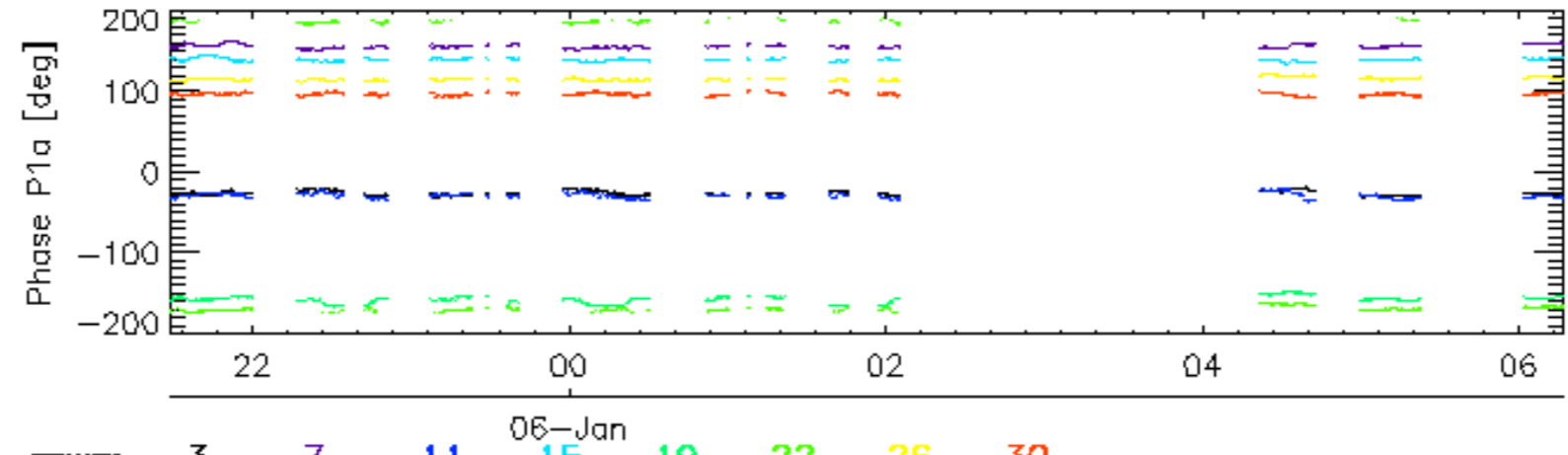
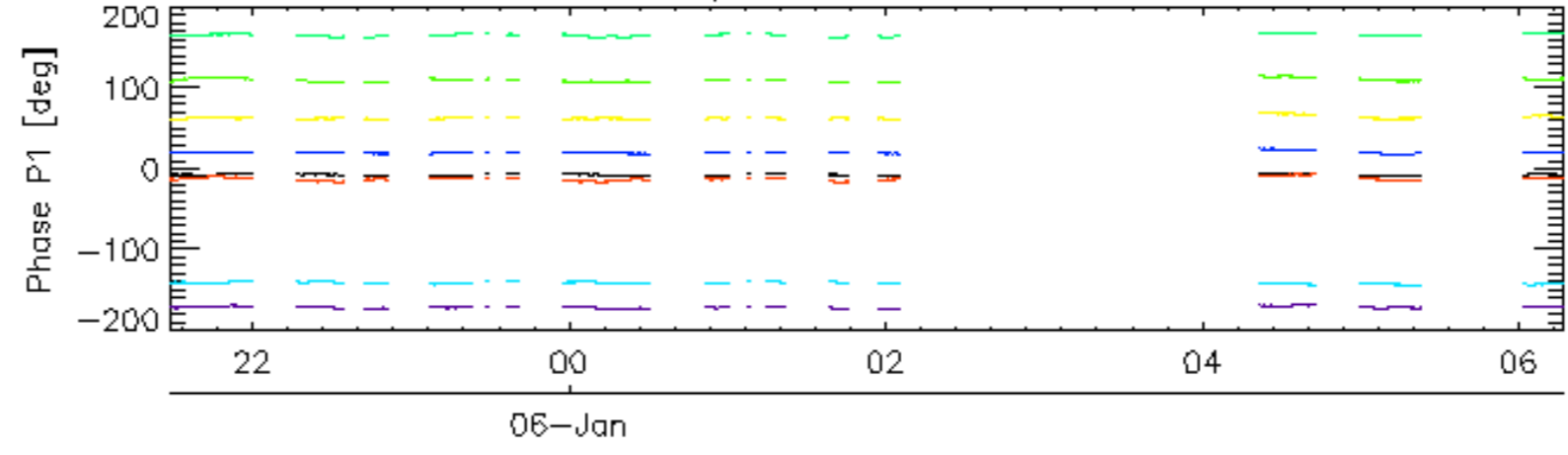


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS2

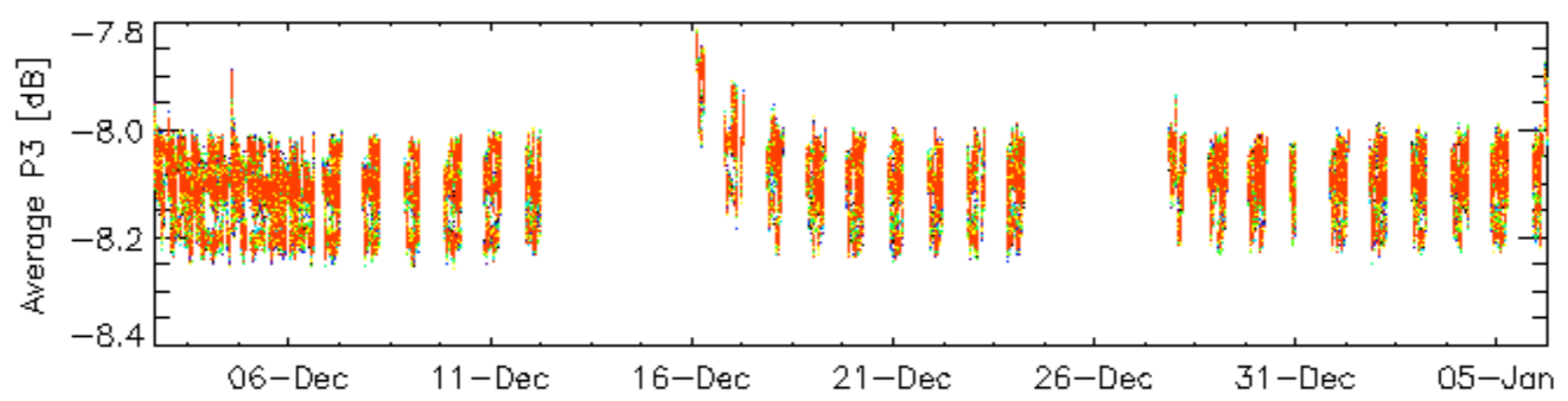
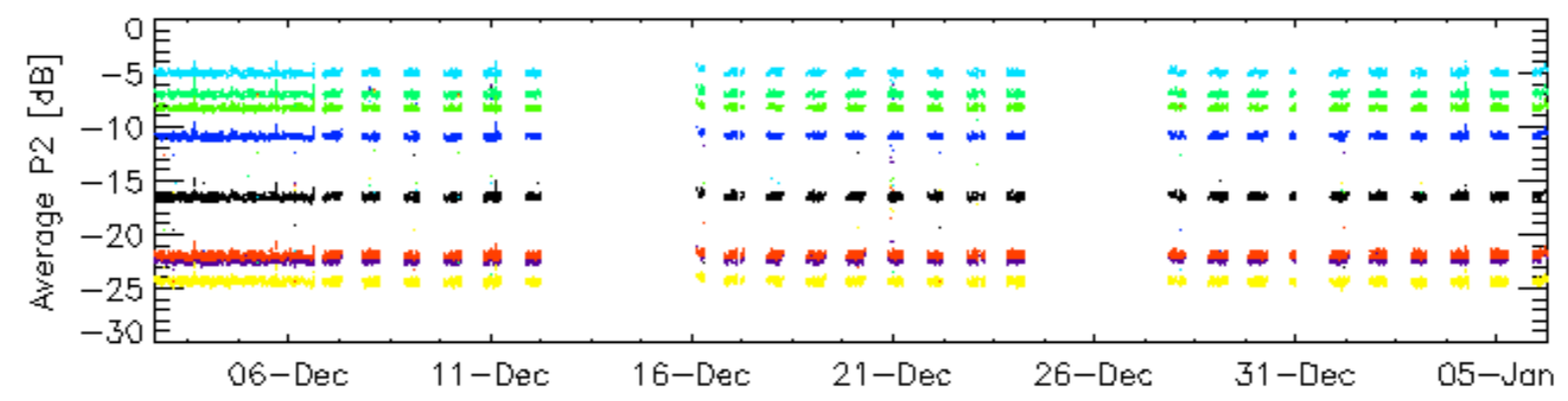
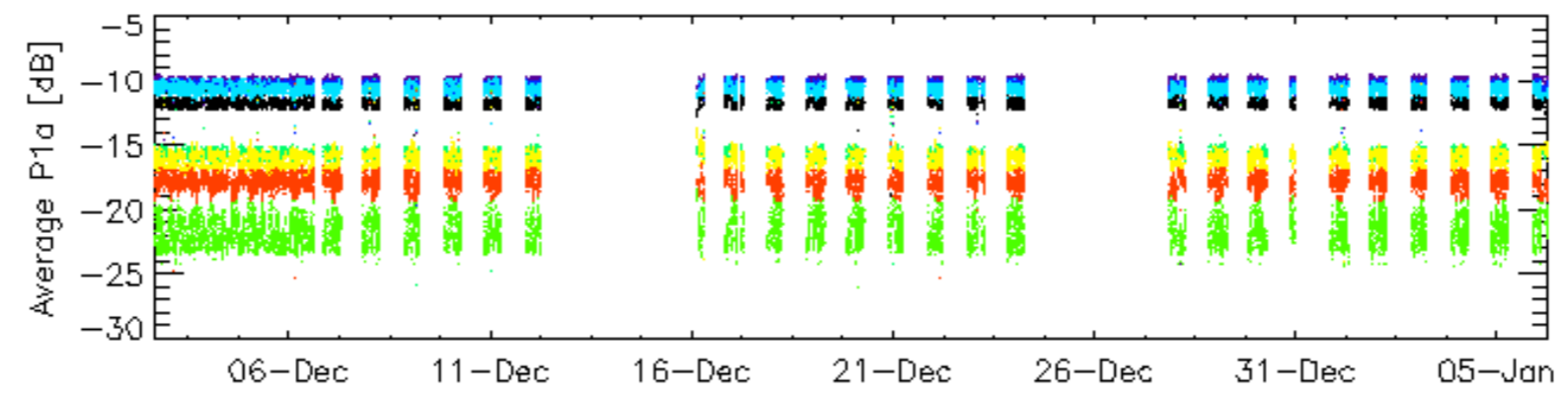
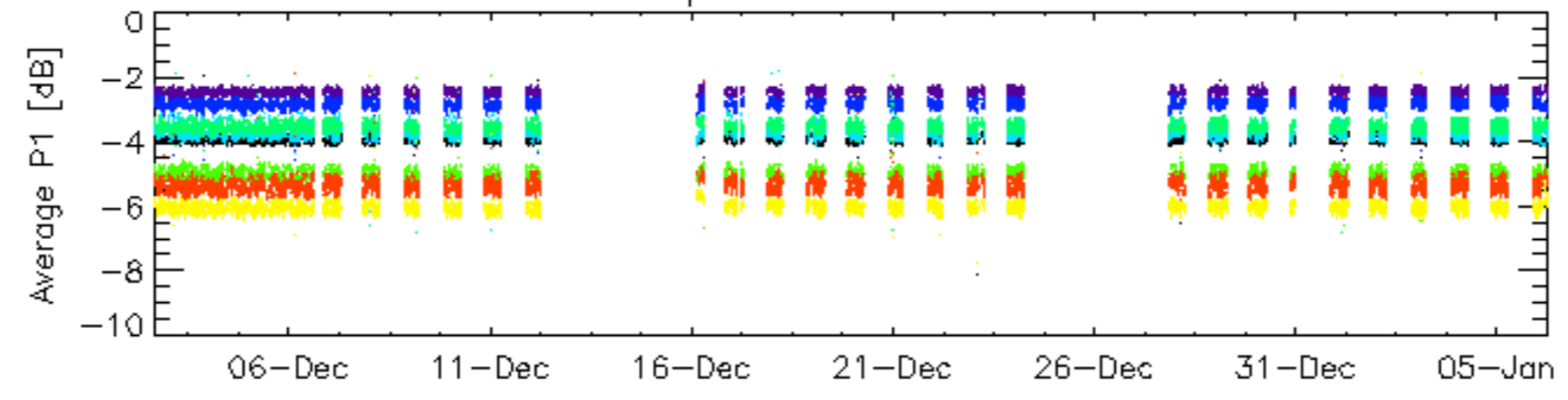


Cal pulses for WVS IS2



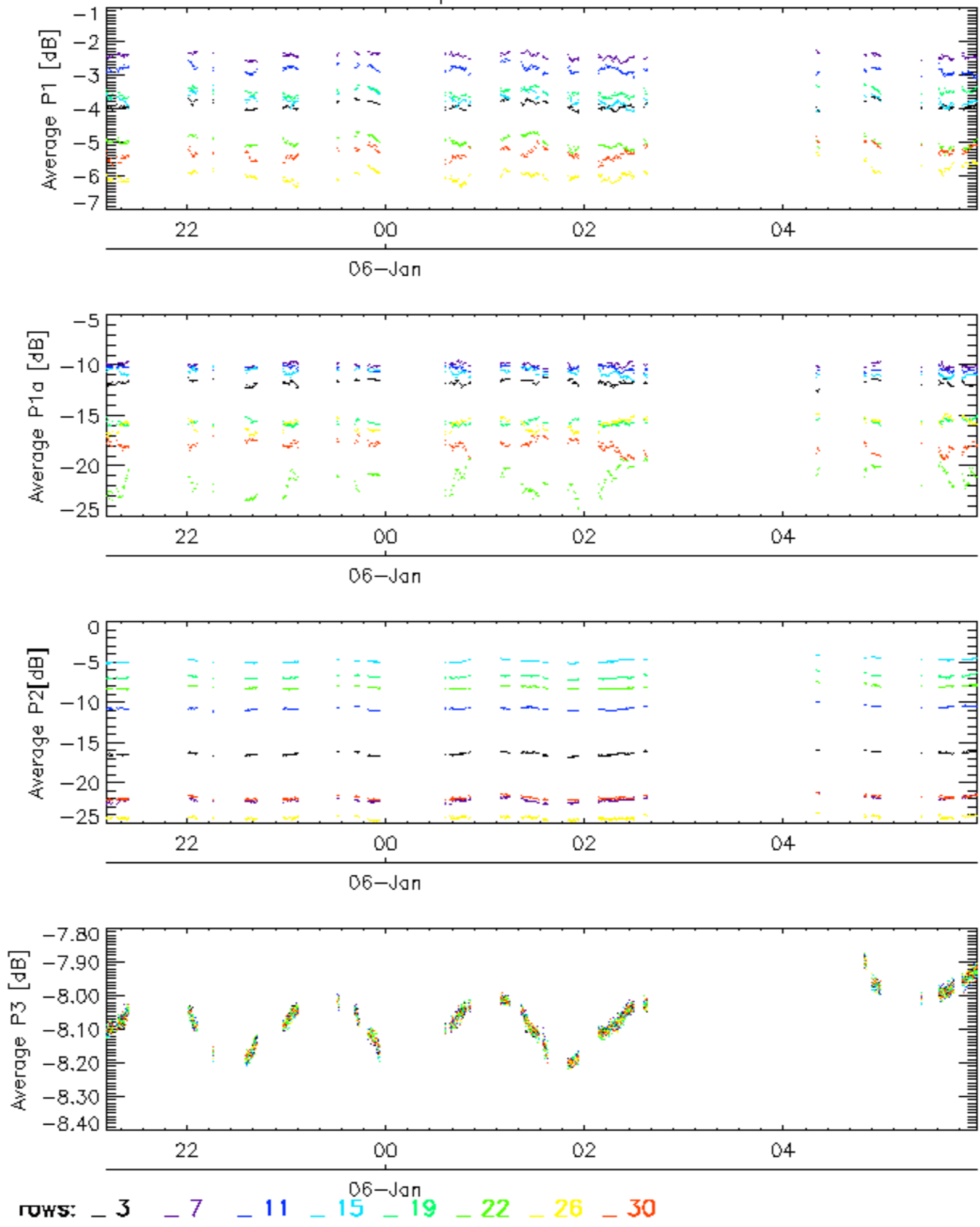
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

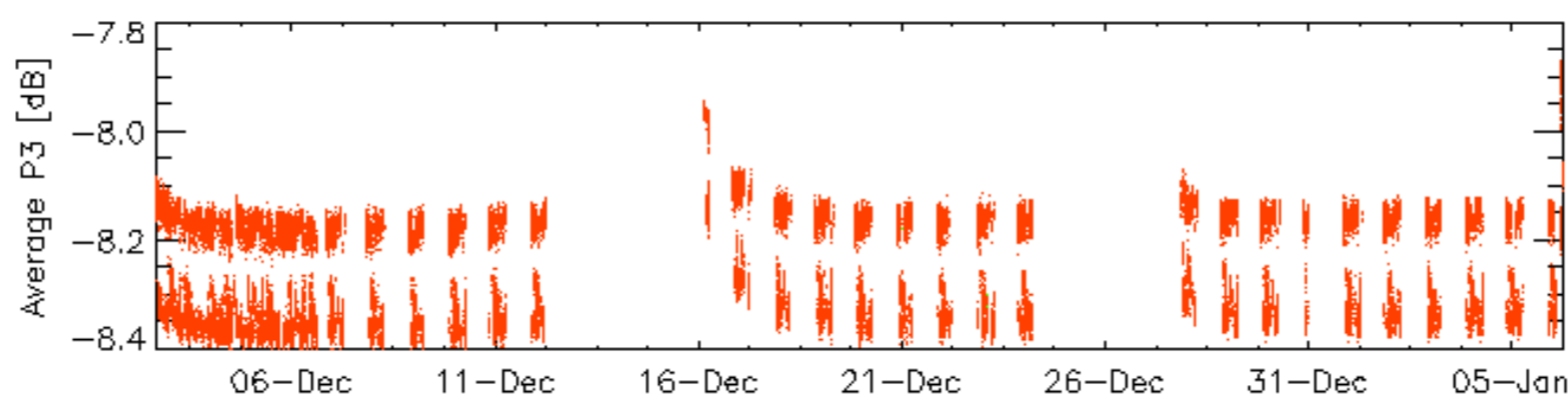
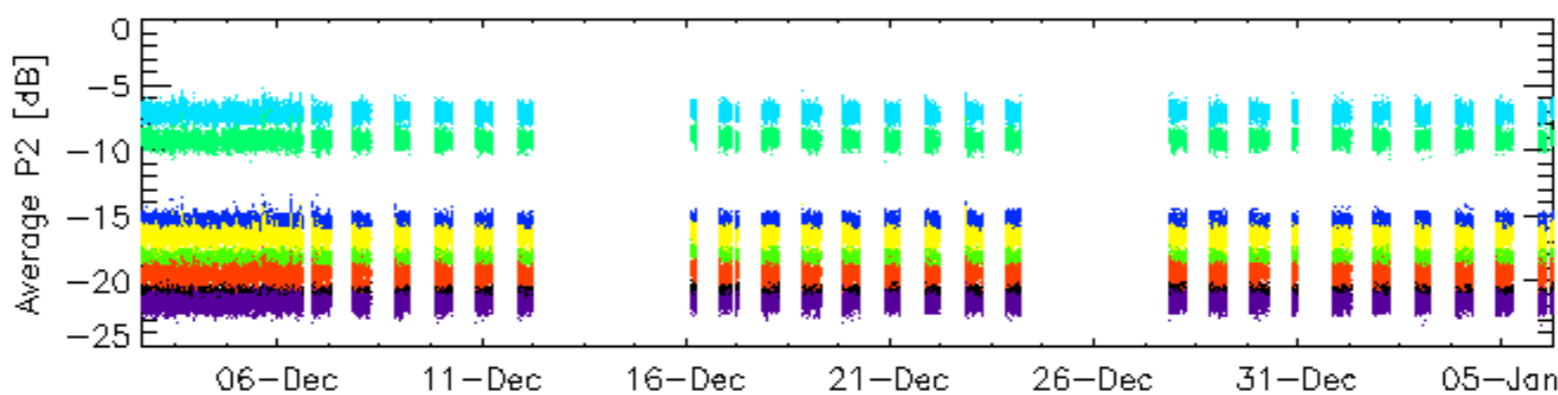
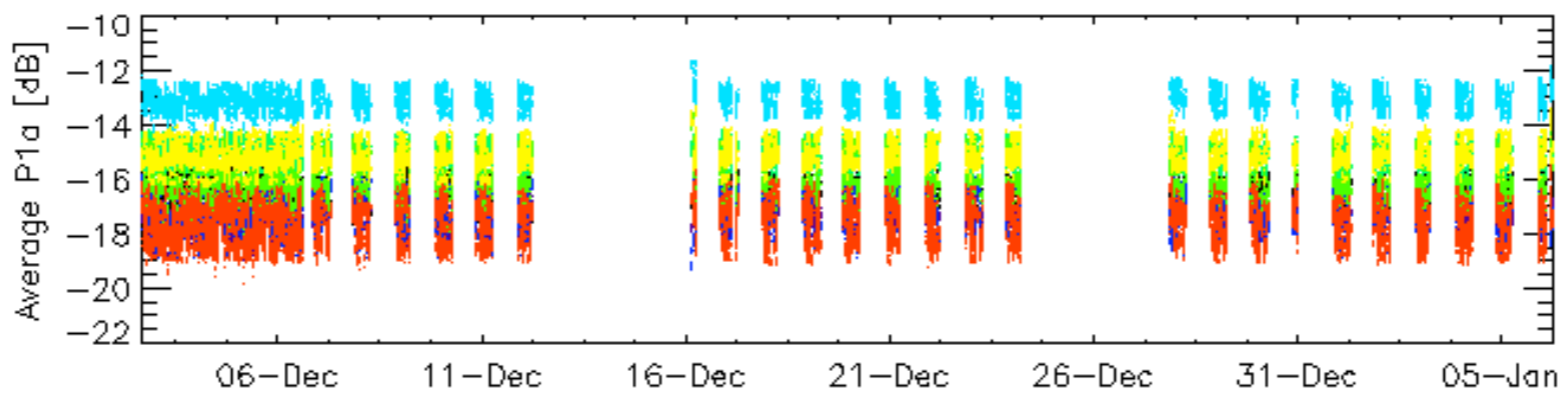
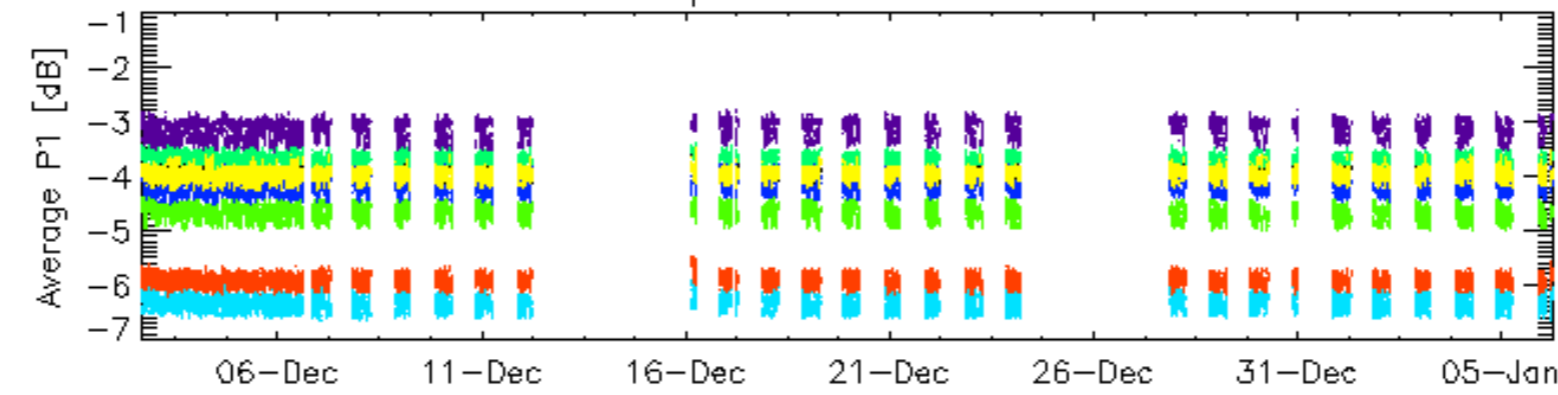


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

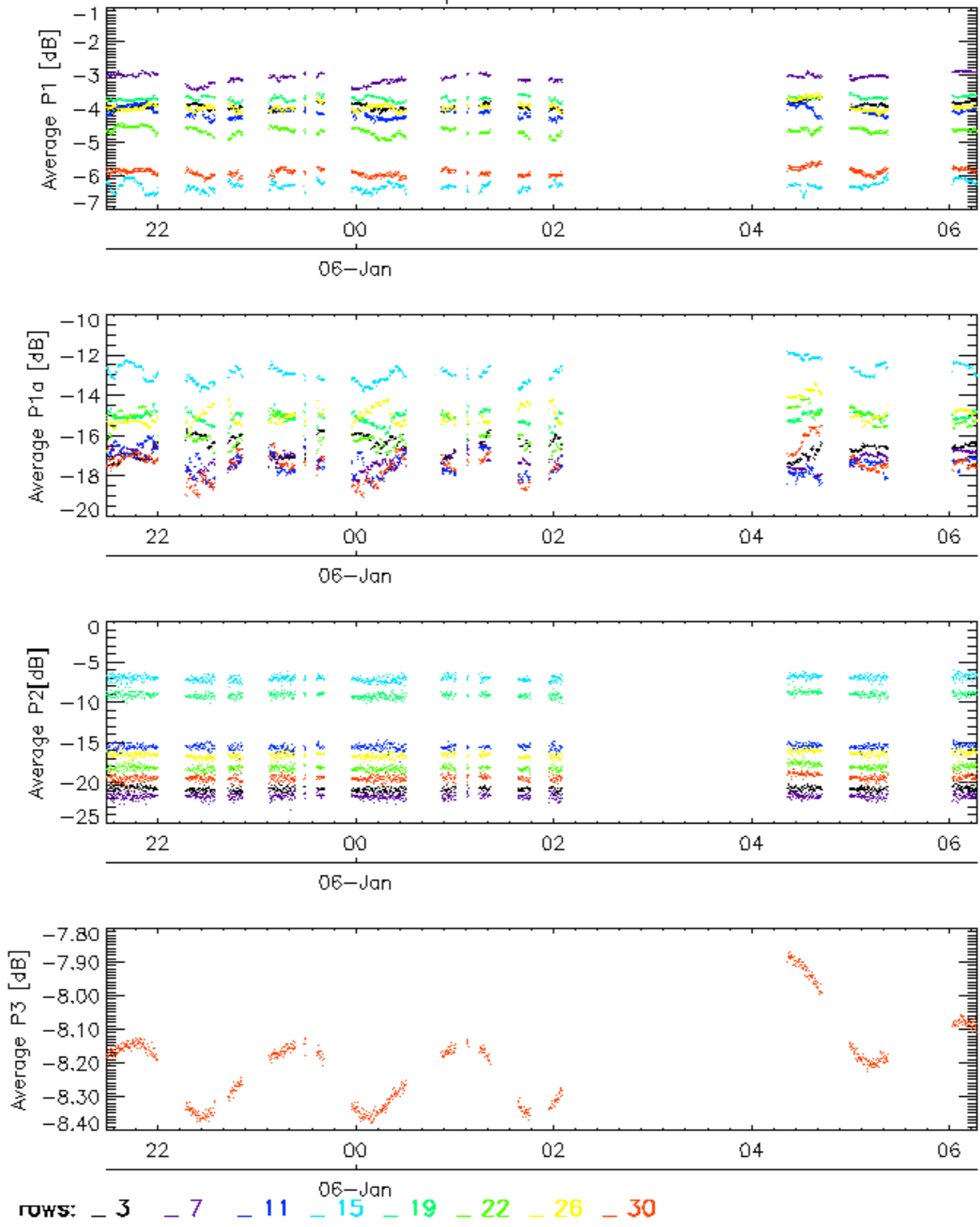


Cal pulses for WVS IS2

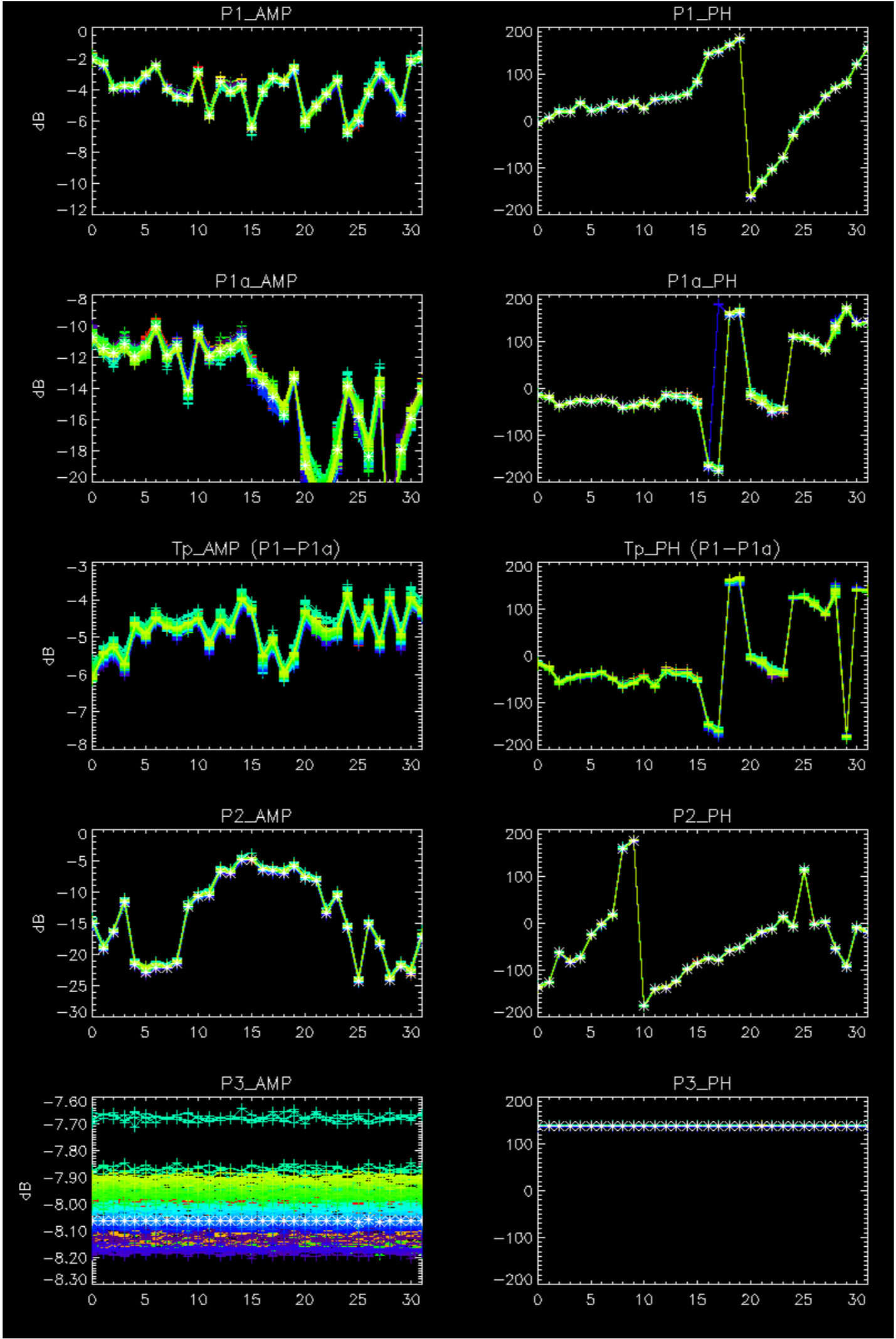


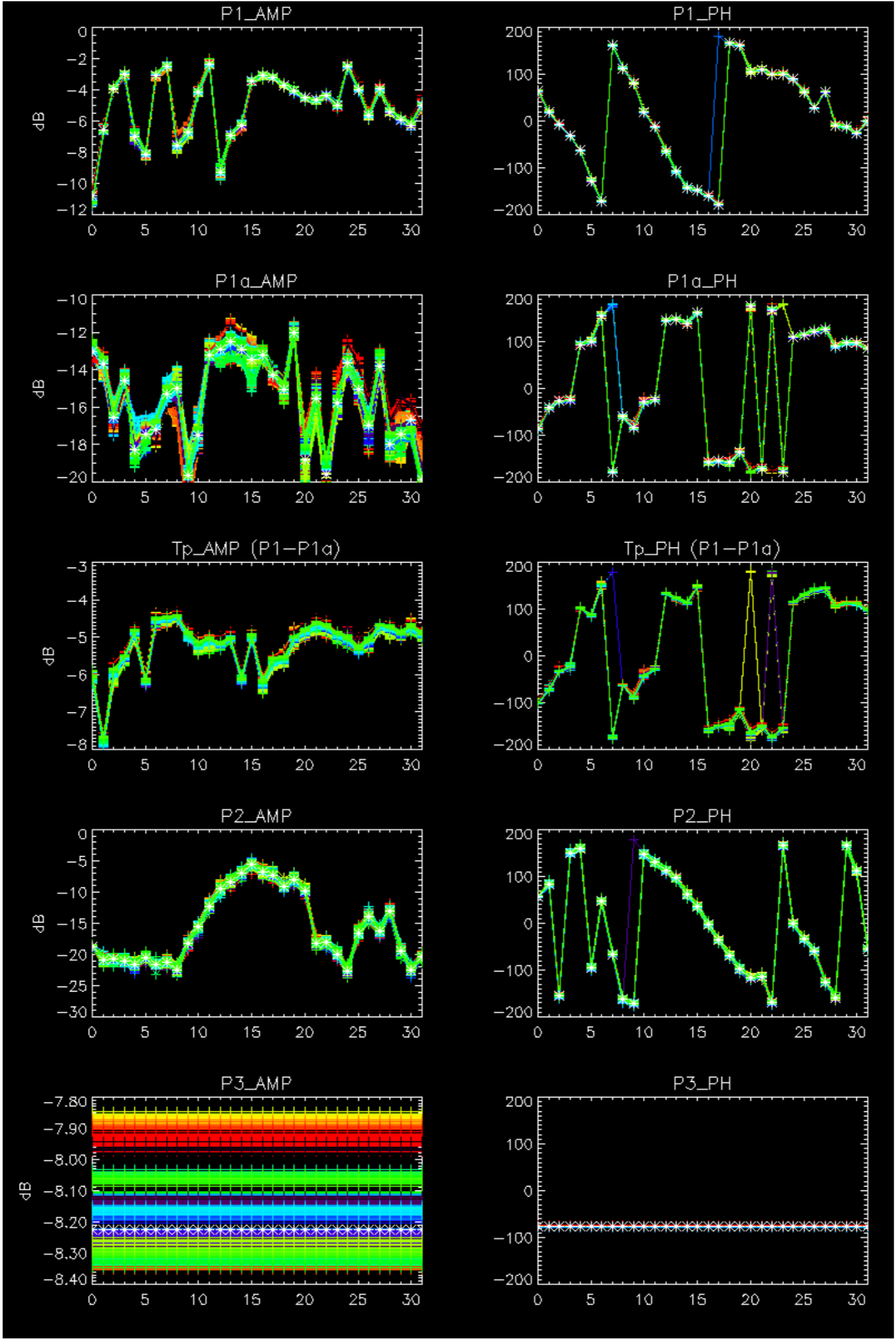
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



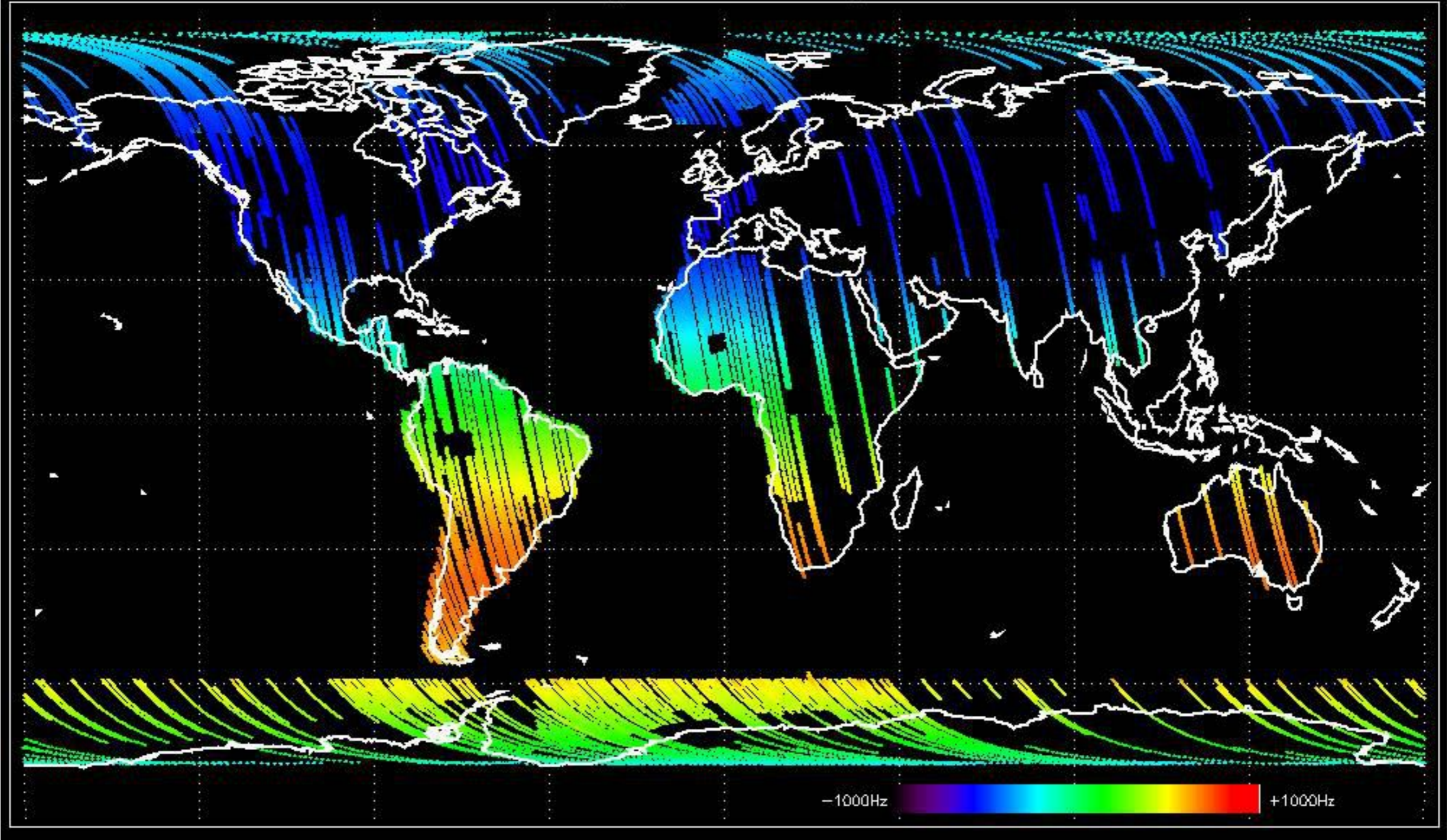
No anomalies observed.



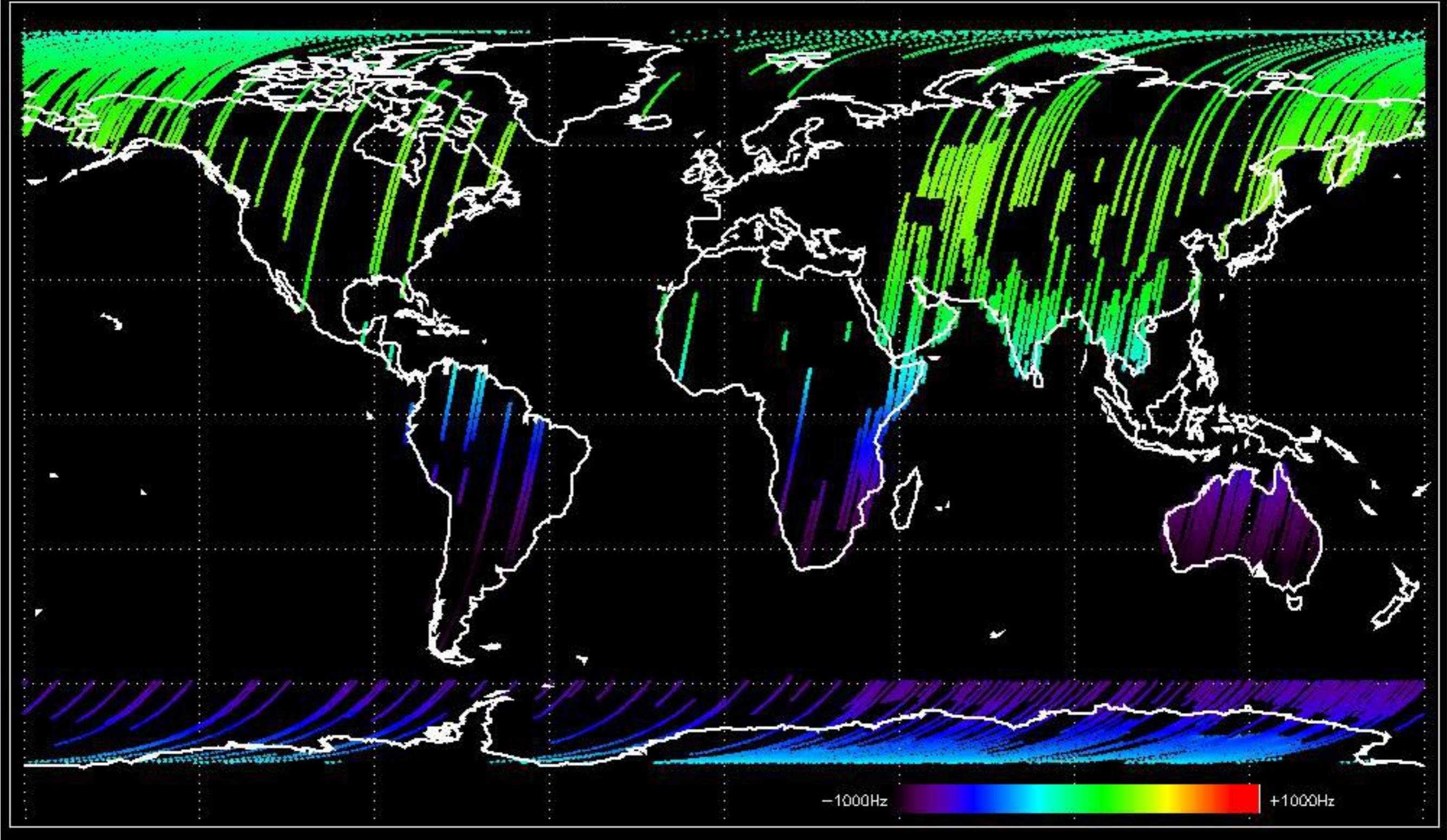


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

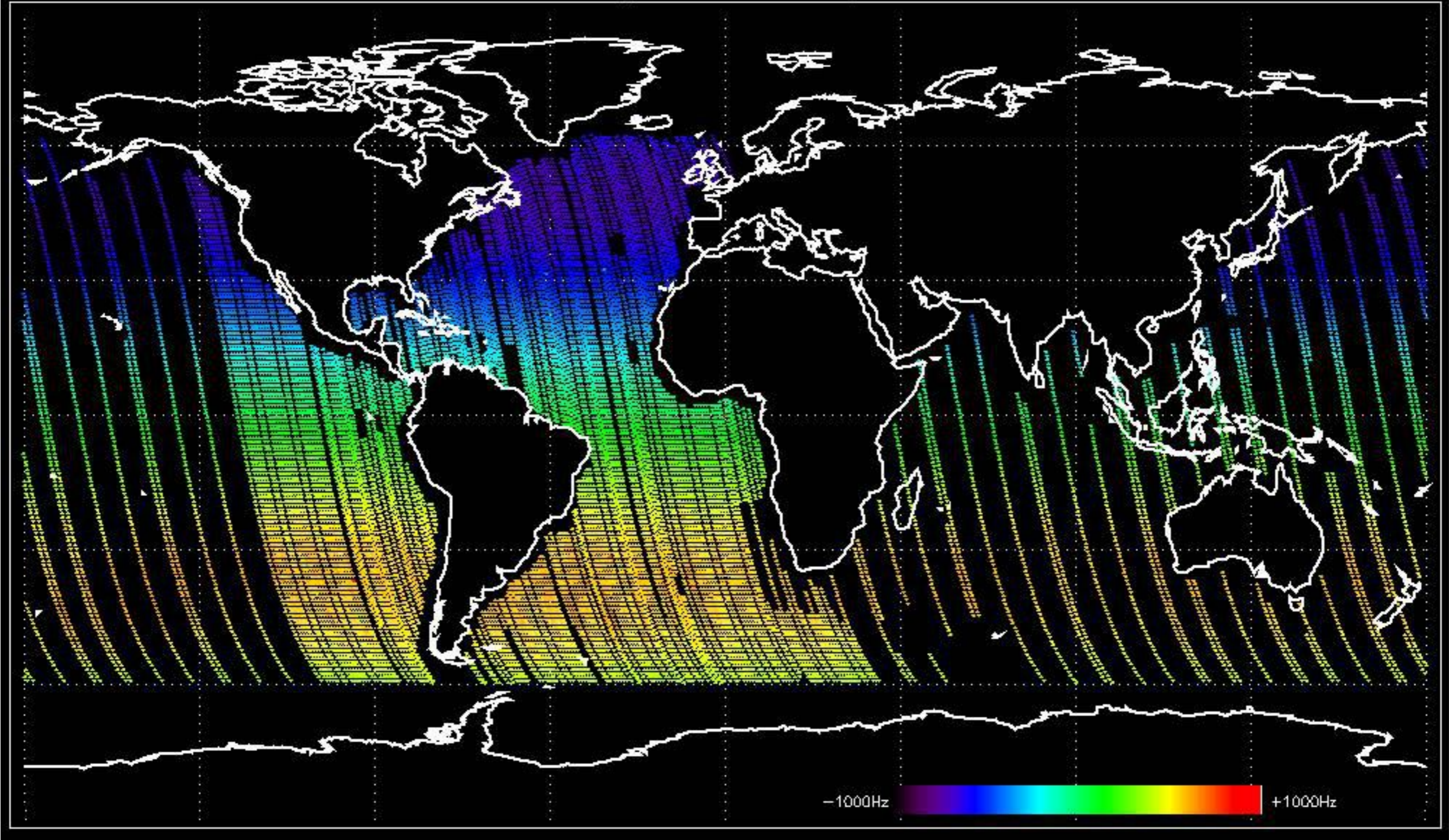
Doppler 'GM1' 'SS1' ascending



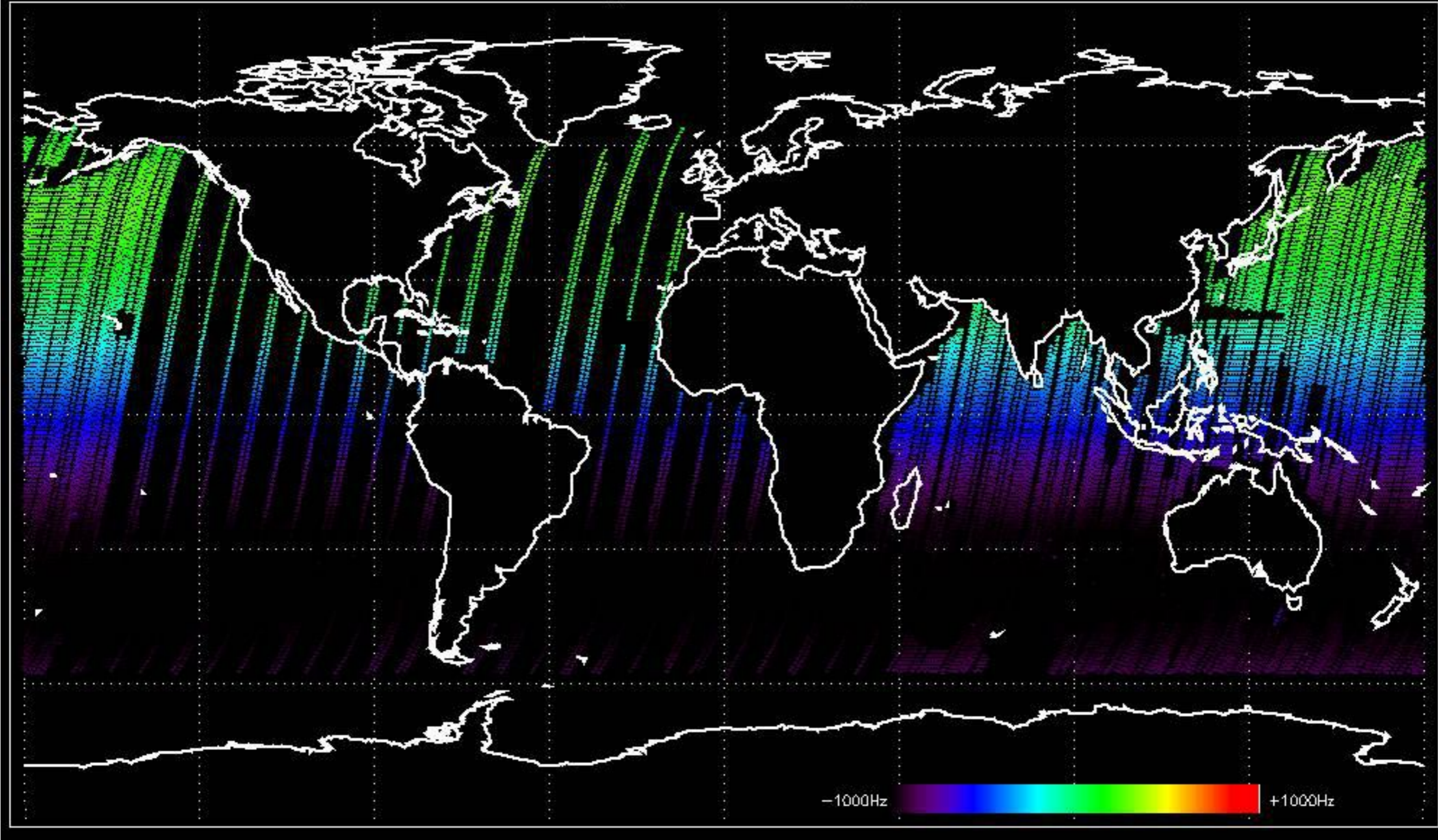
Doppler 'GM1' 'SS1' descending



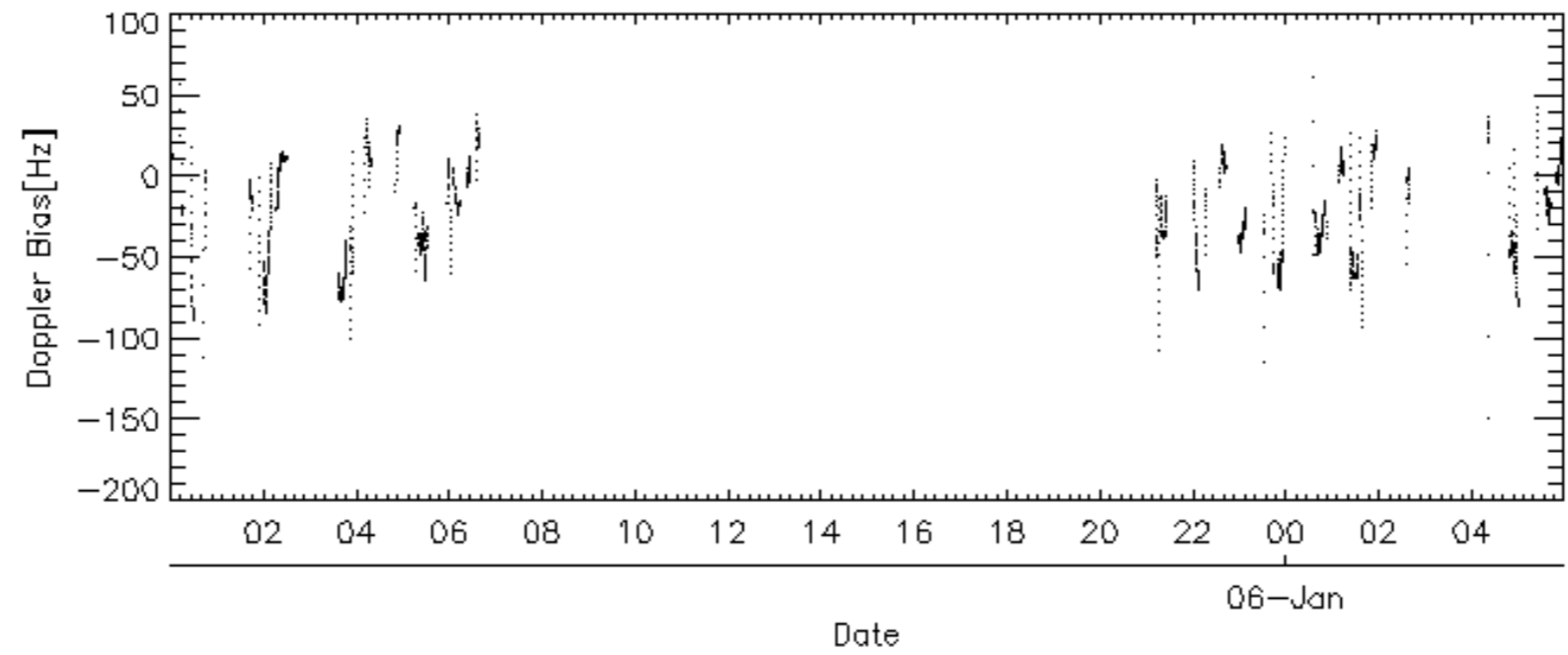
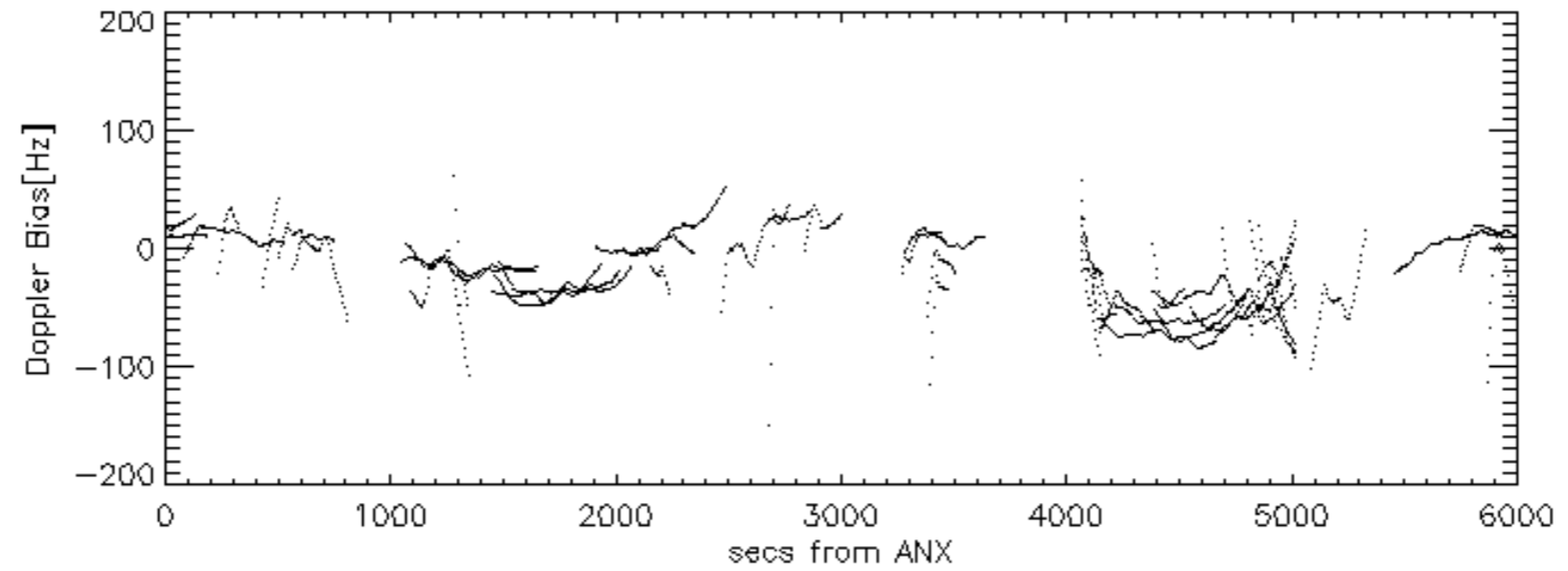
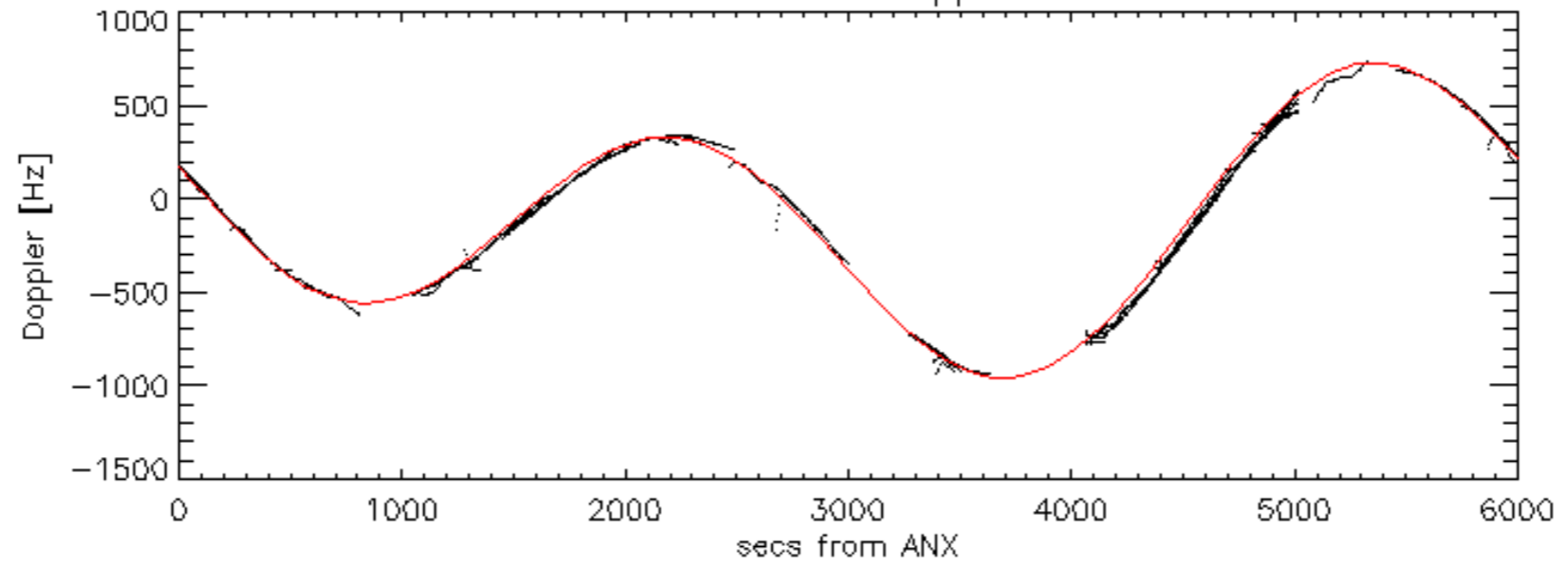
Doppler 'WVS' 'IS2' ascending

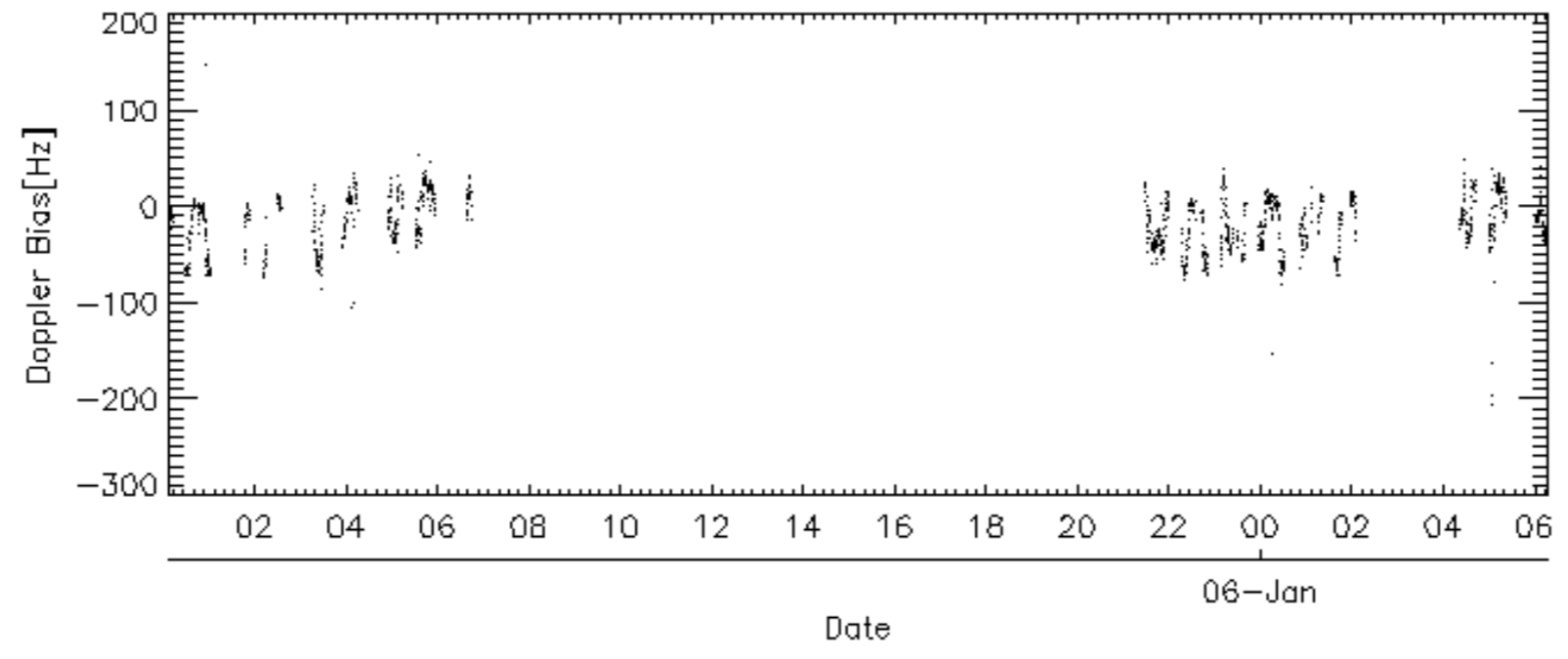
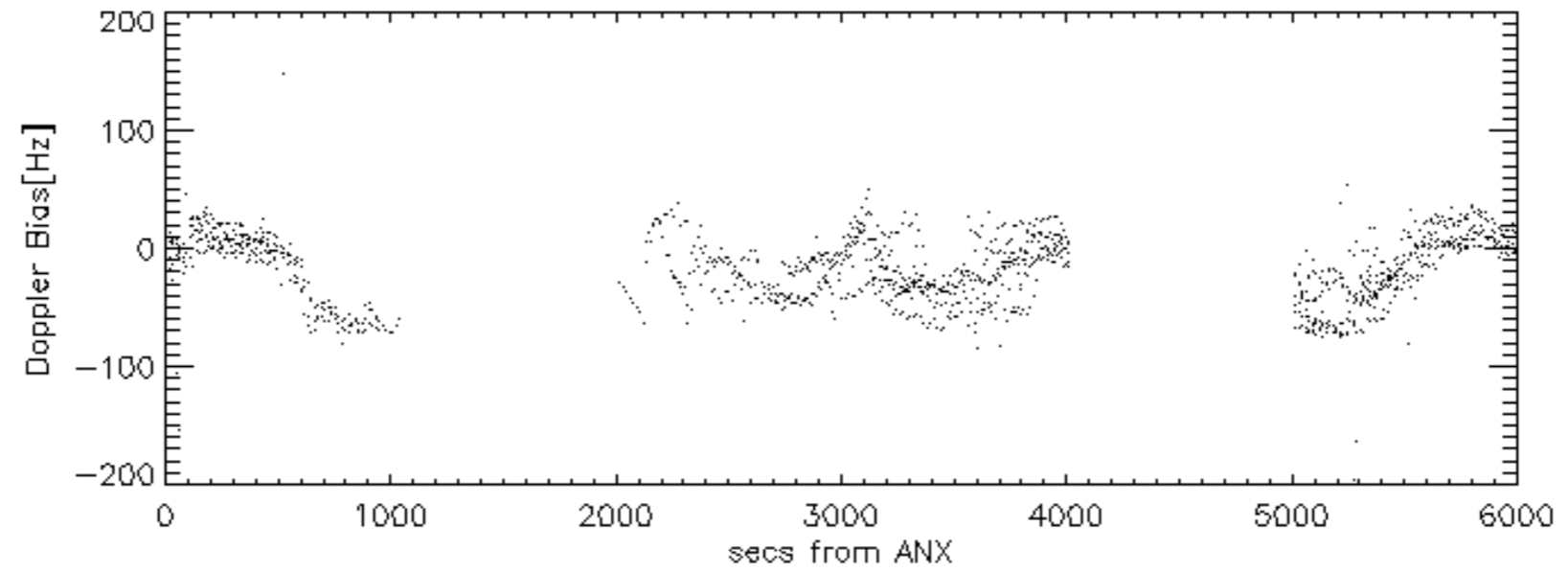
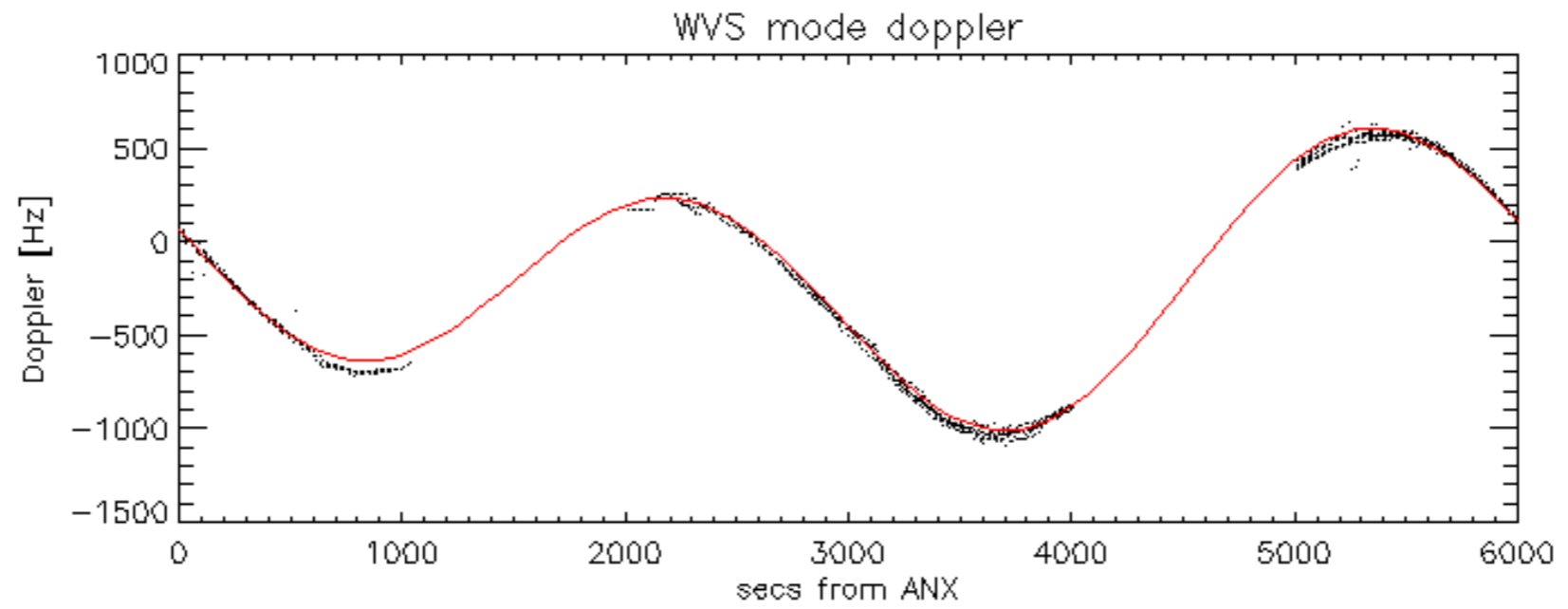


Doppler 'WVS' 'IS2' descending

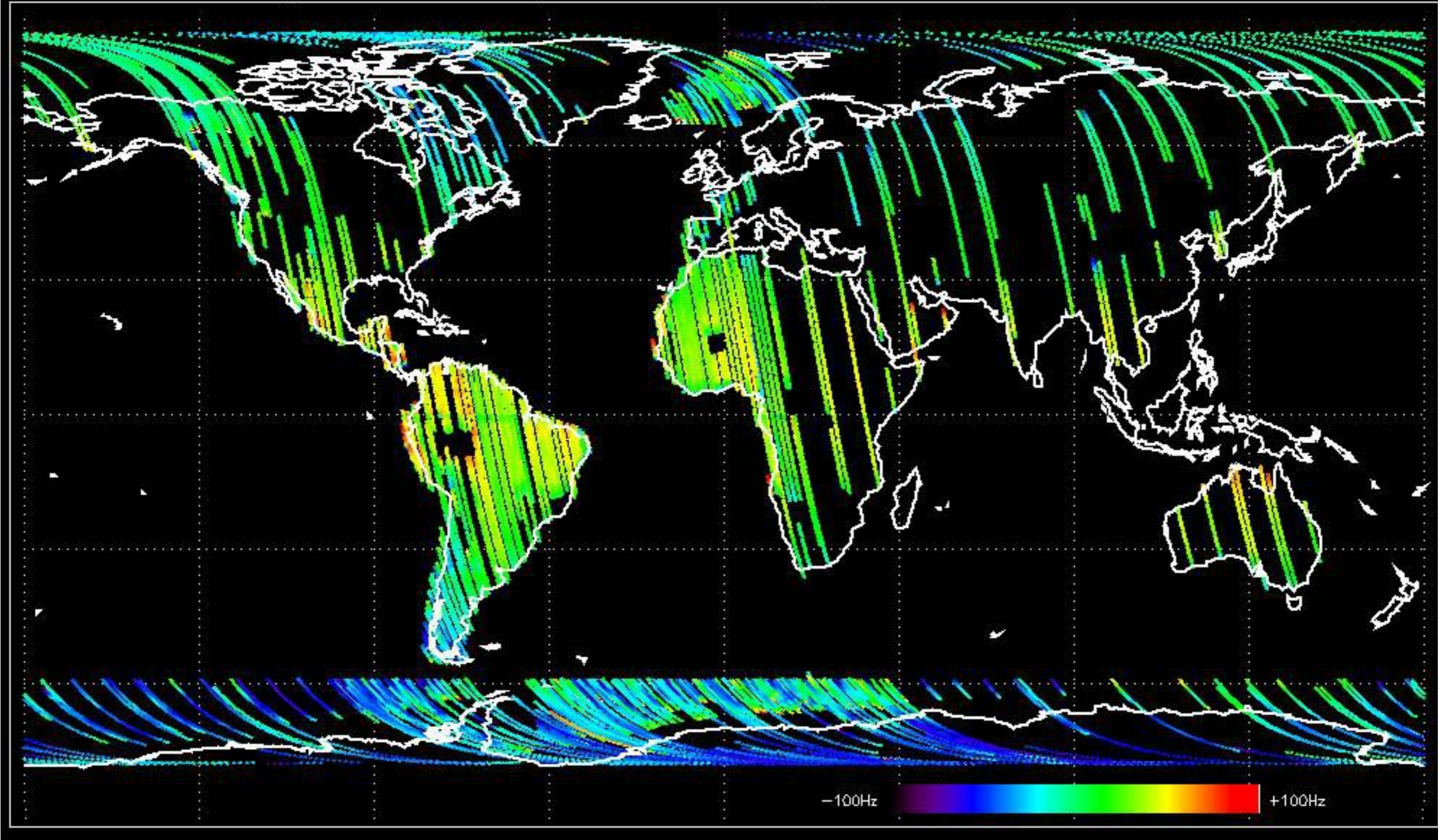


GM1 mode doppler

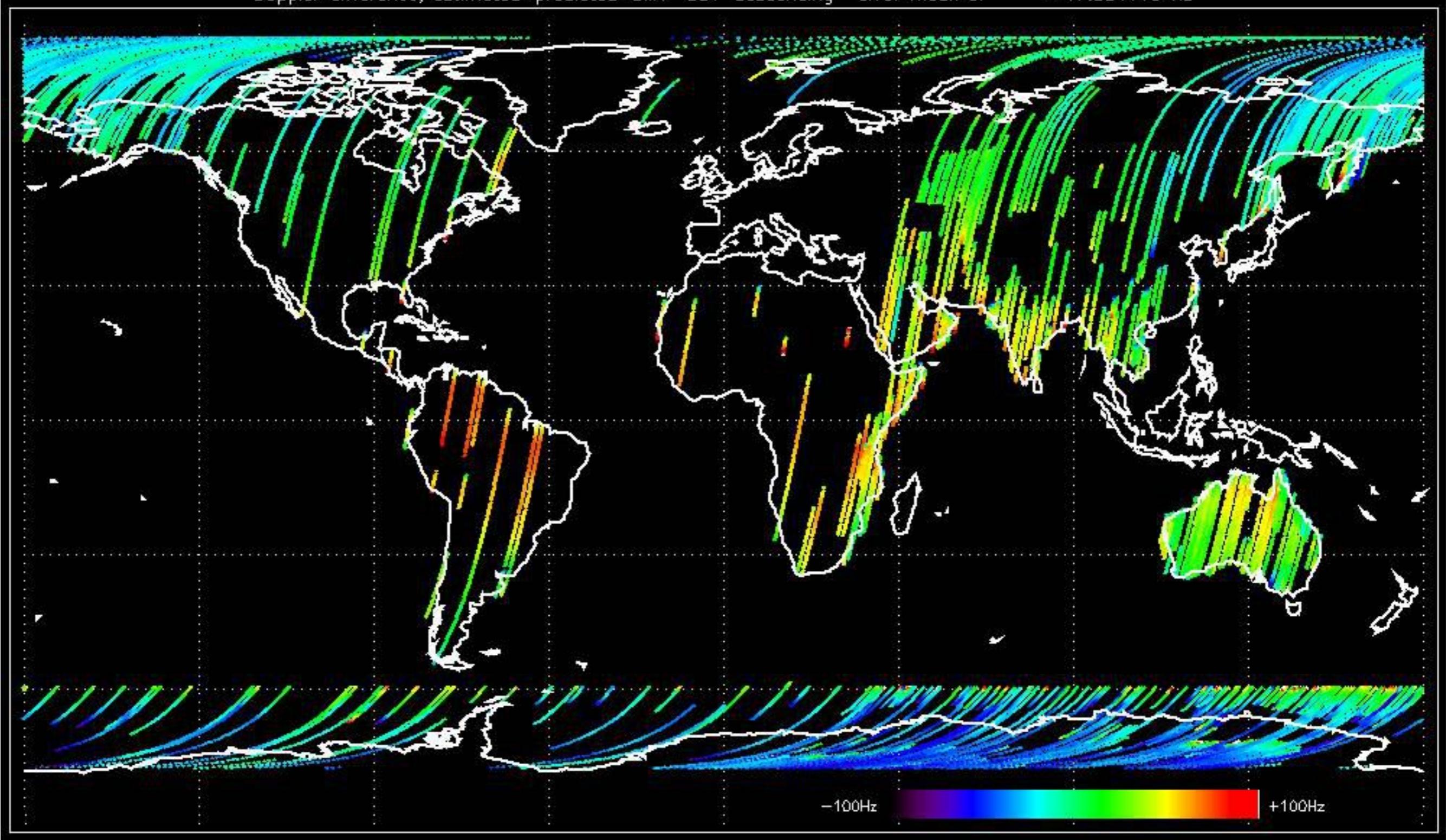




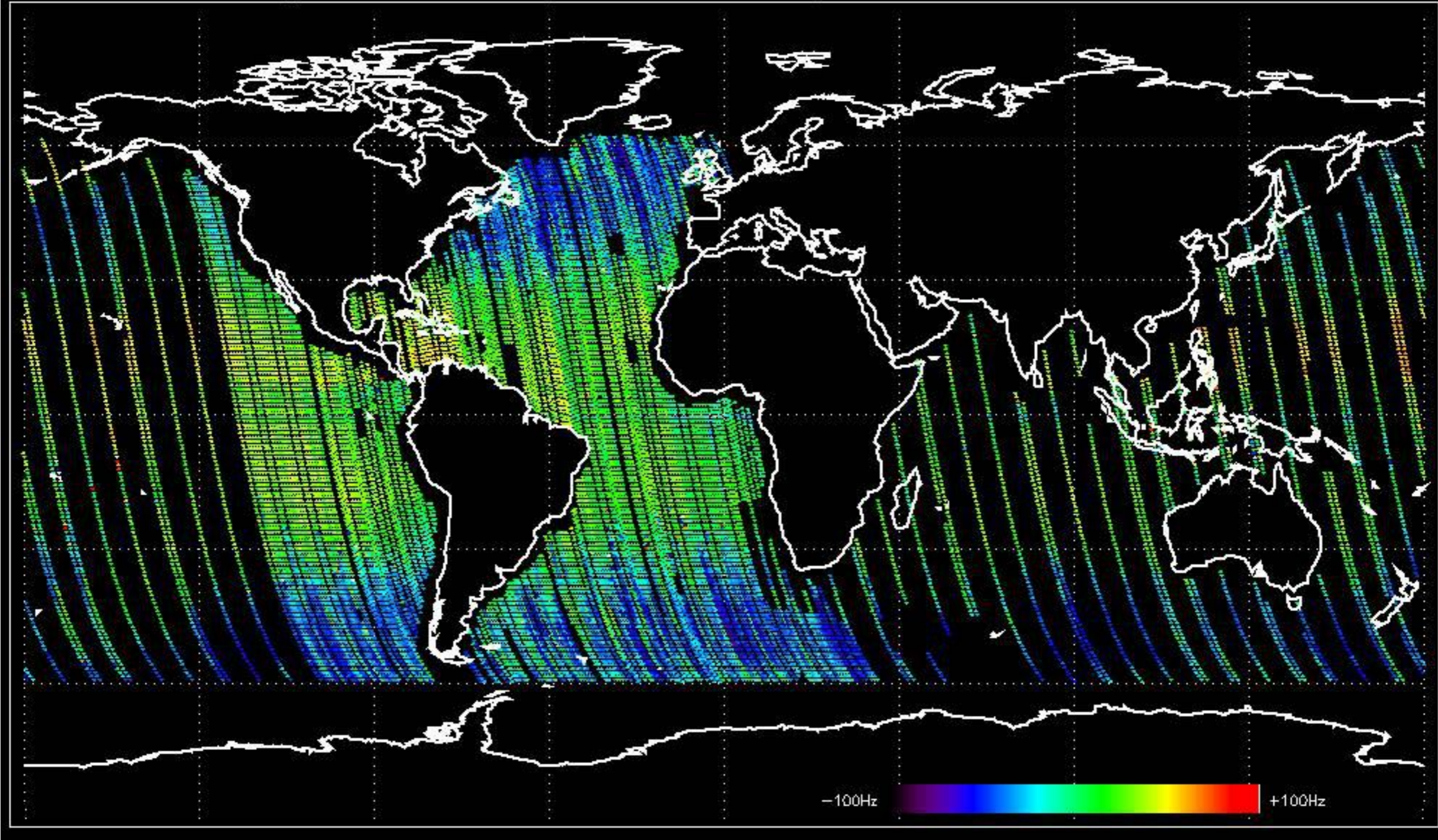
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.297428 Hz



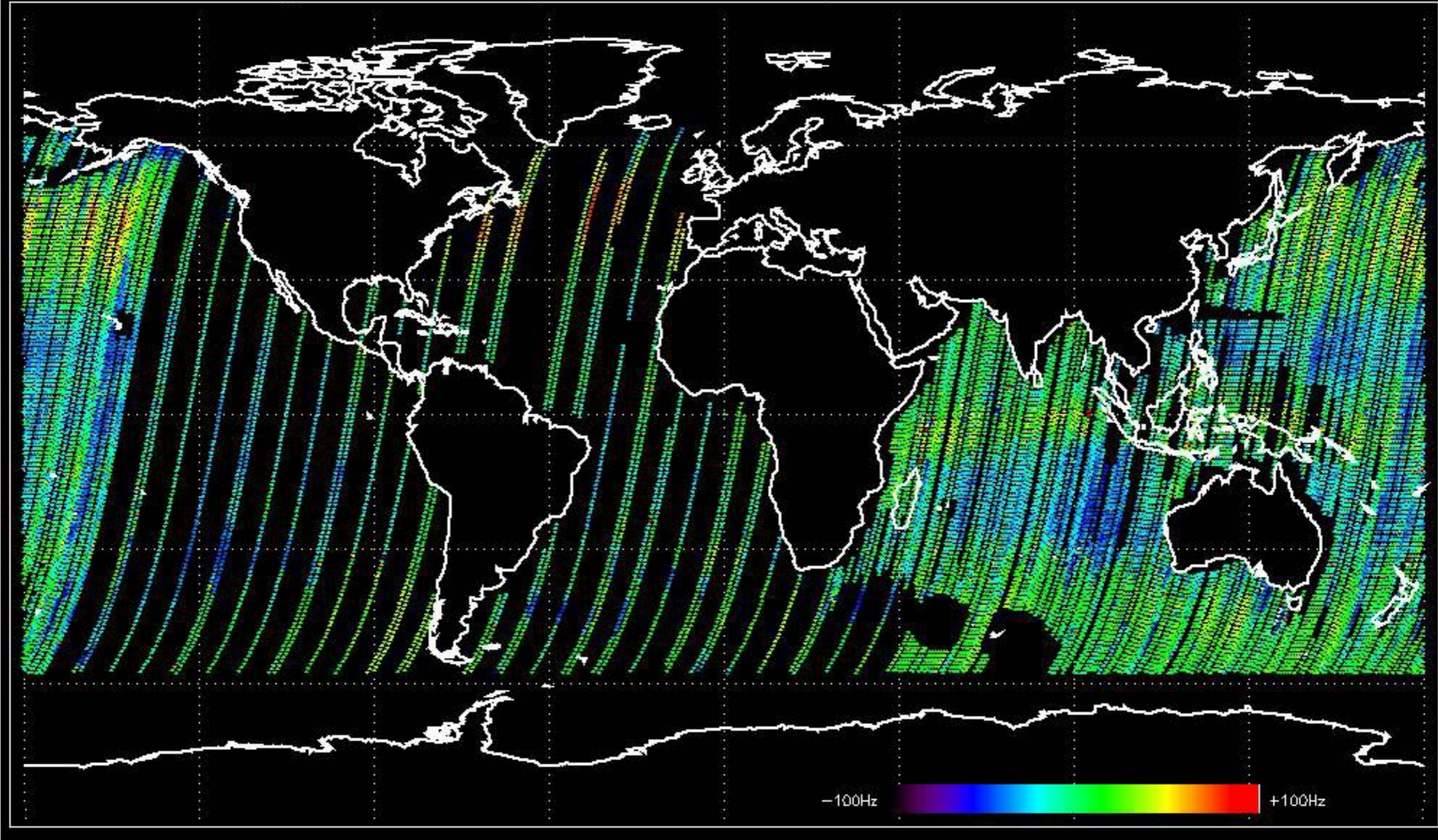
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -17.354110 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -14.545245 Hz

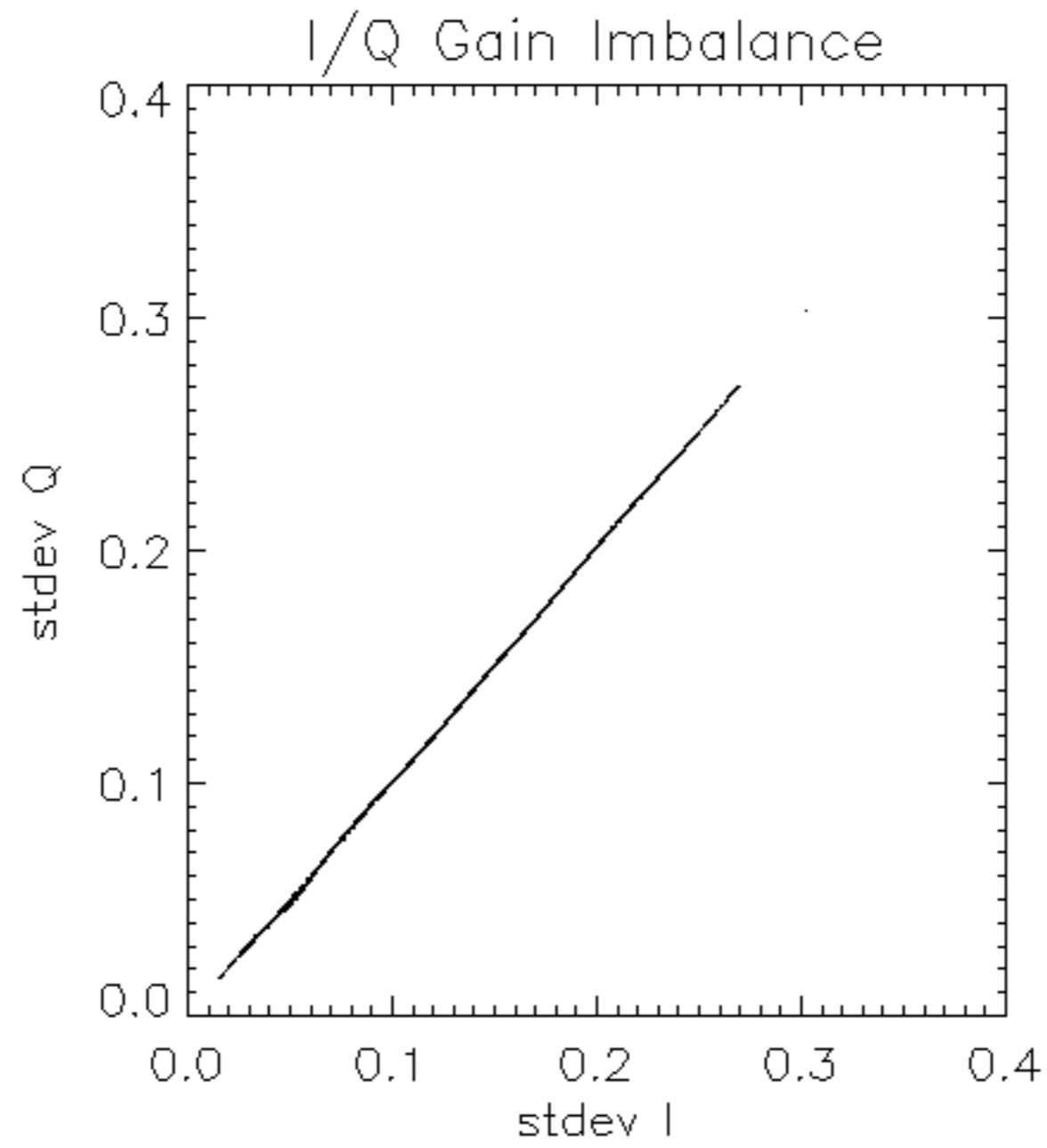


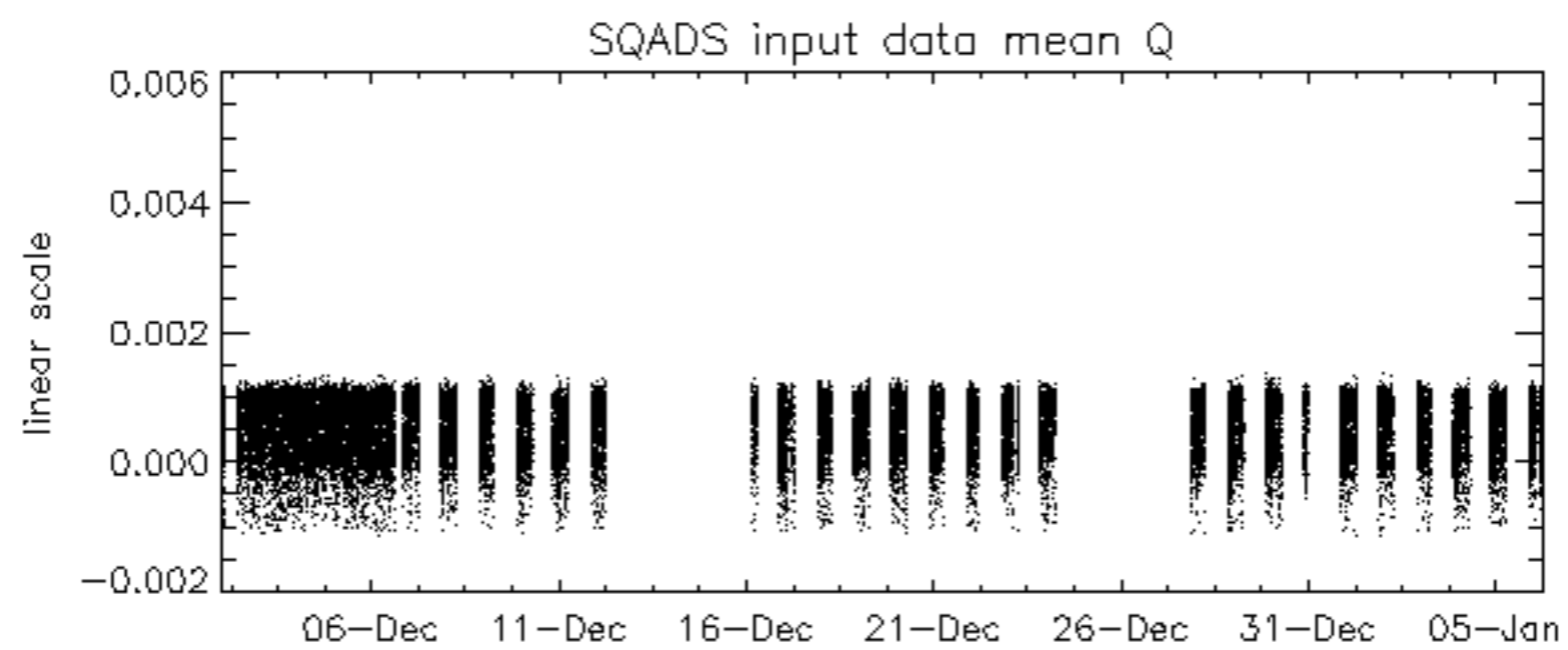
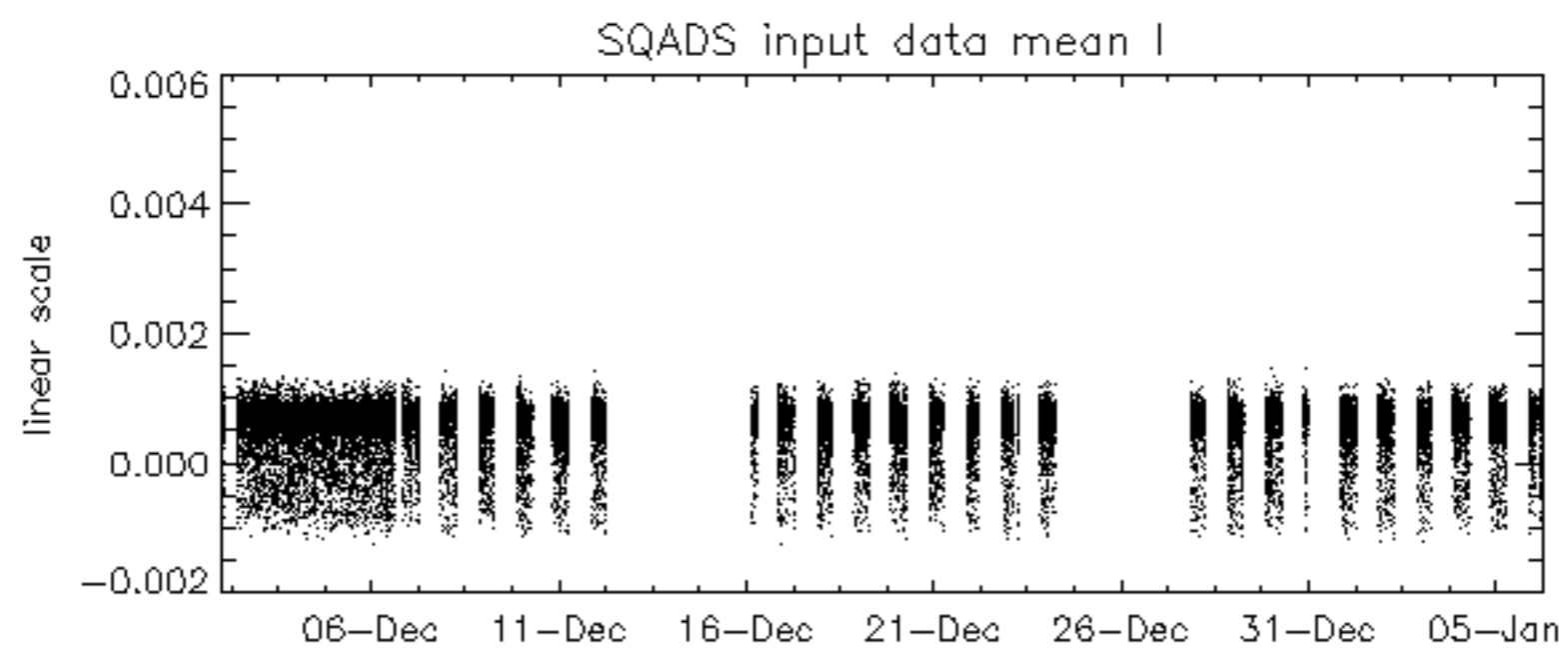
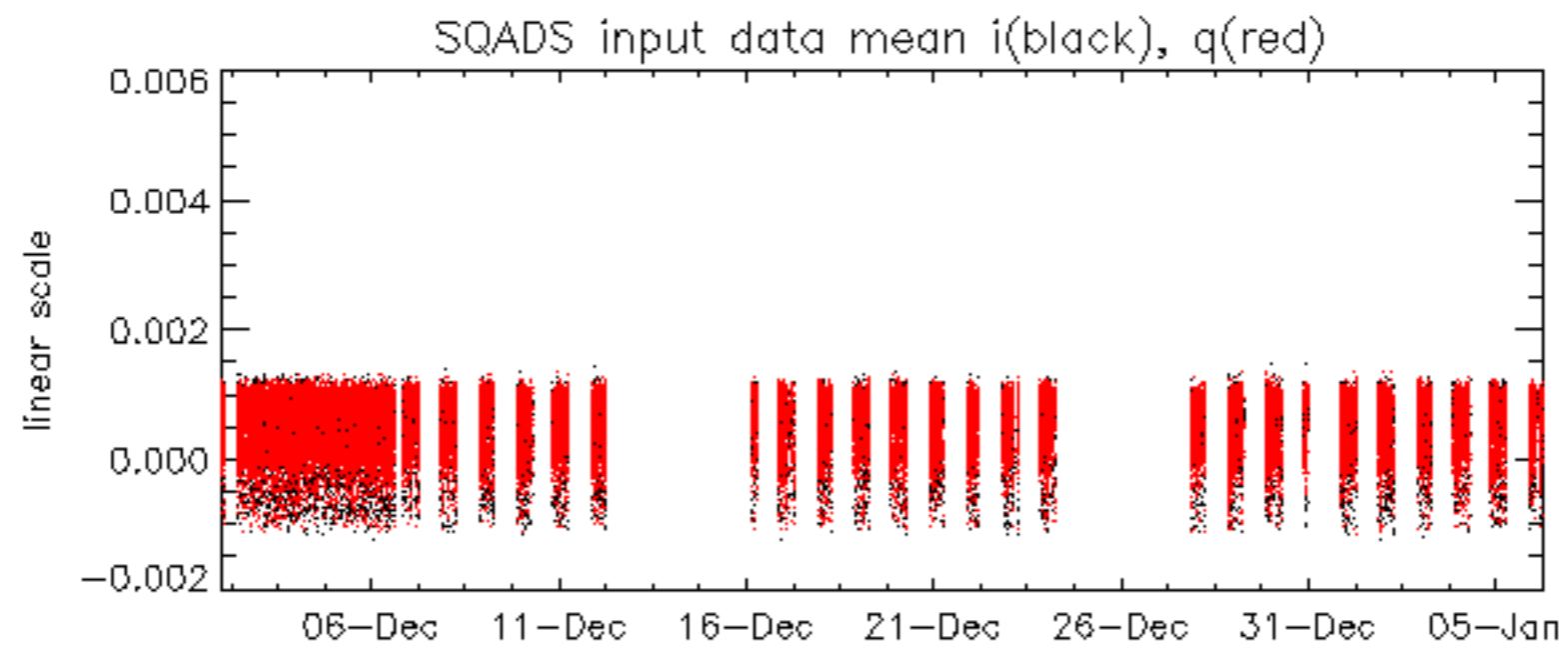
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.4962039 Hz

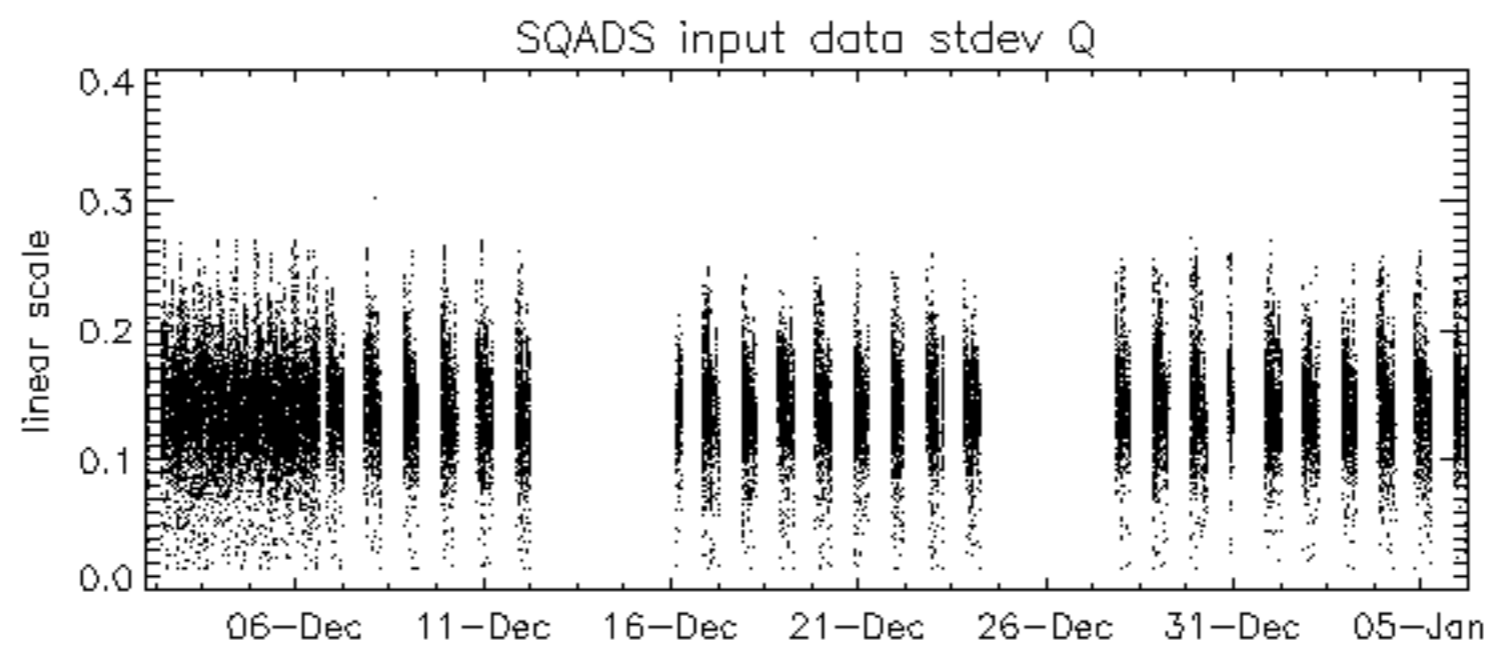
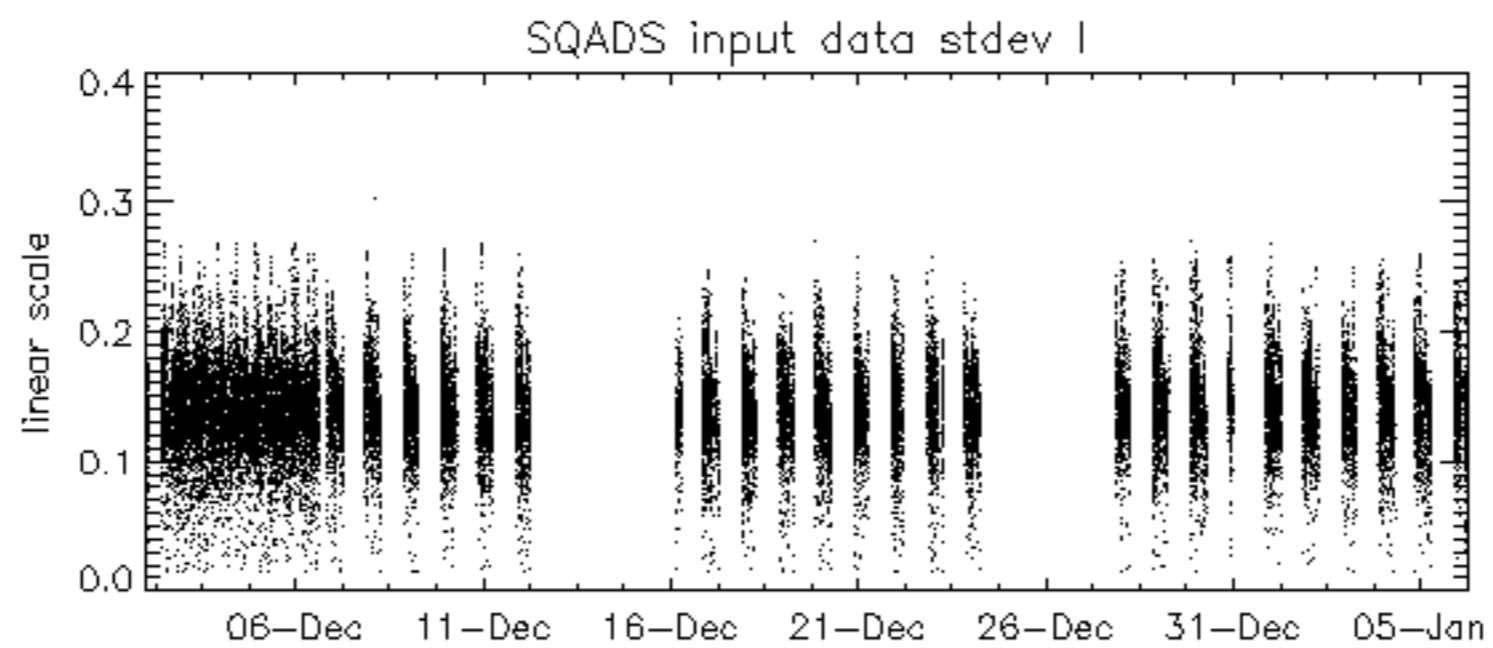
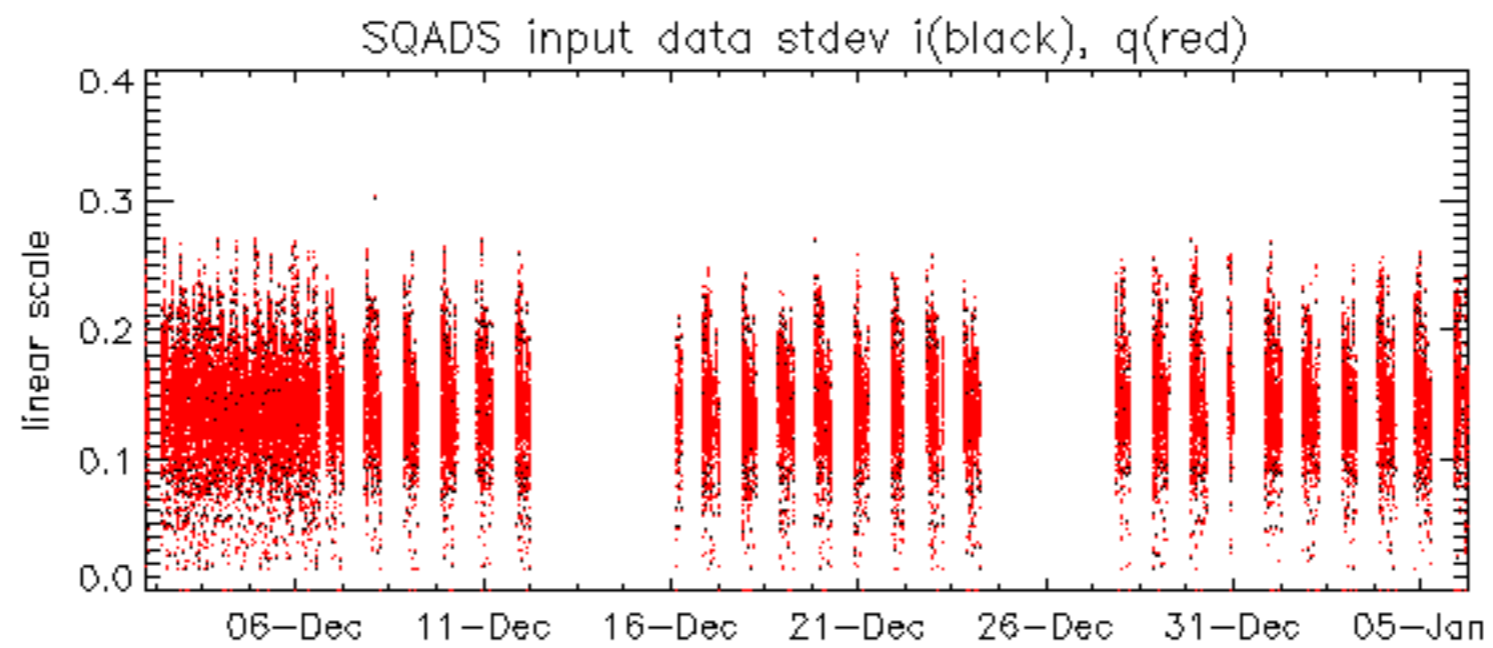


No anomalies observed on available MS products:

No anomalies observed.



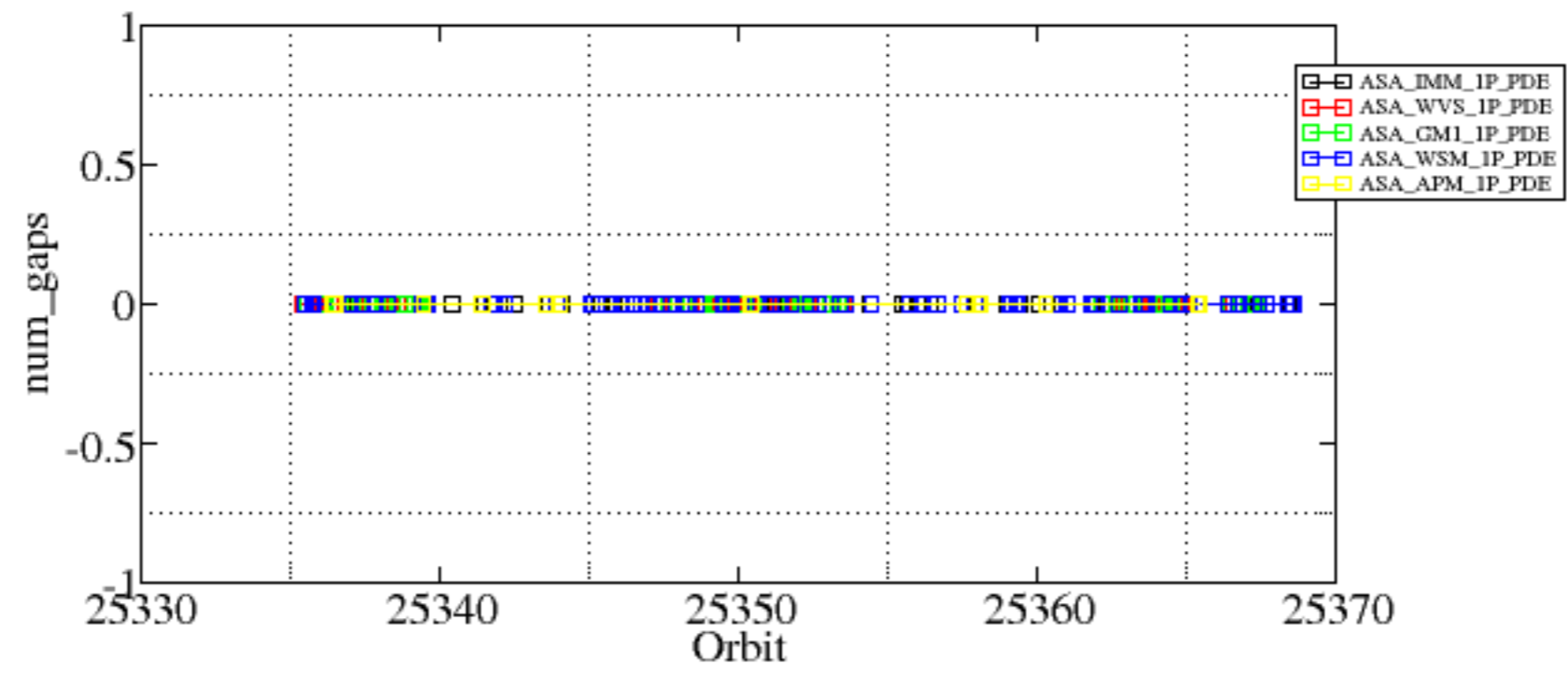


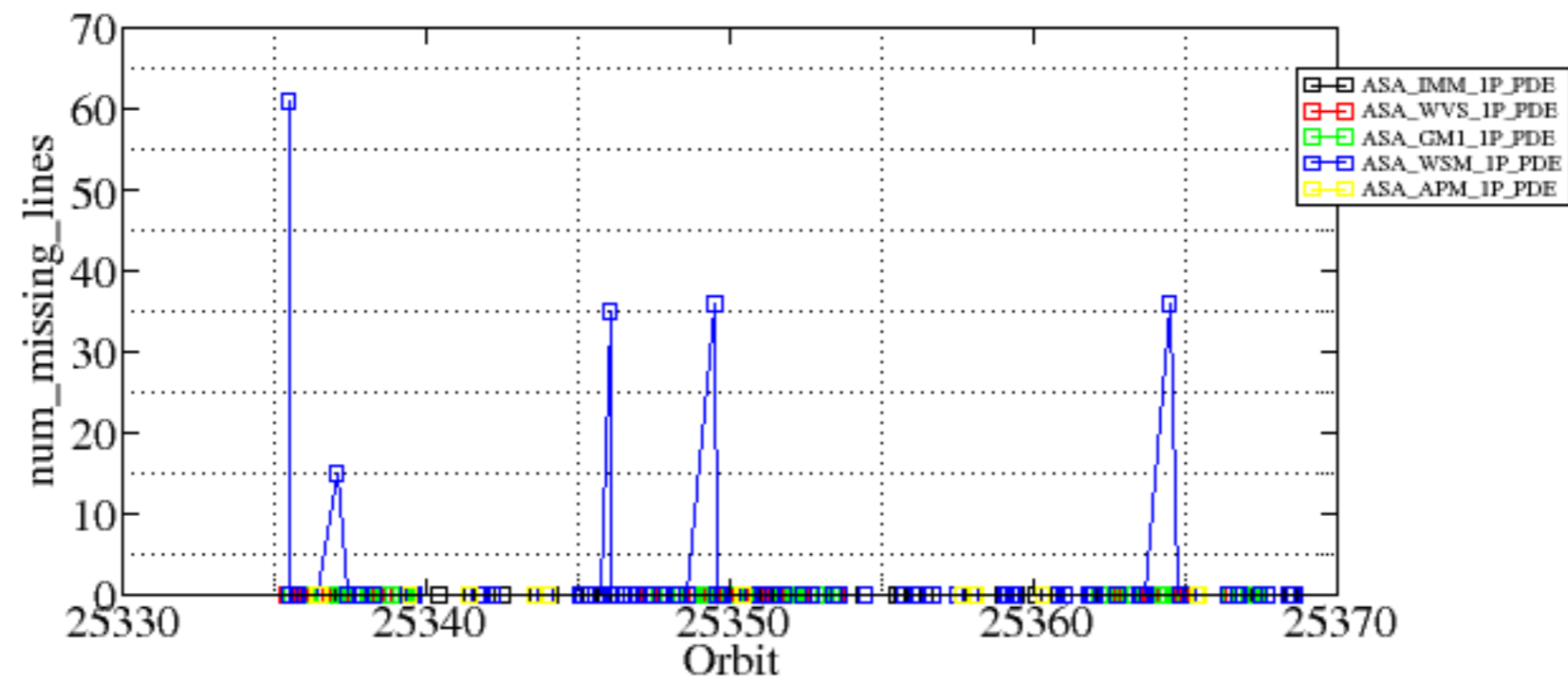


Summary of analysis for the last 3 days 2007010[456]

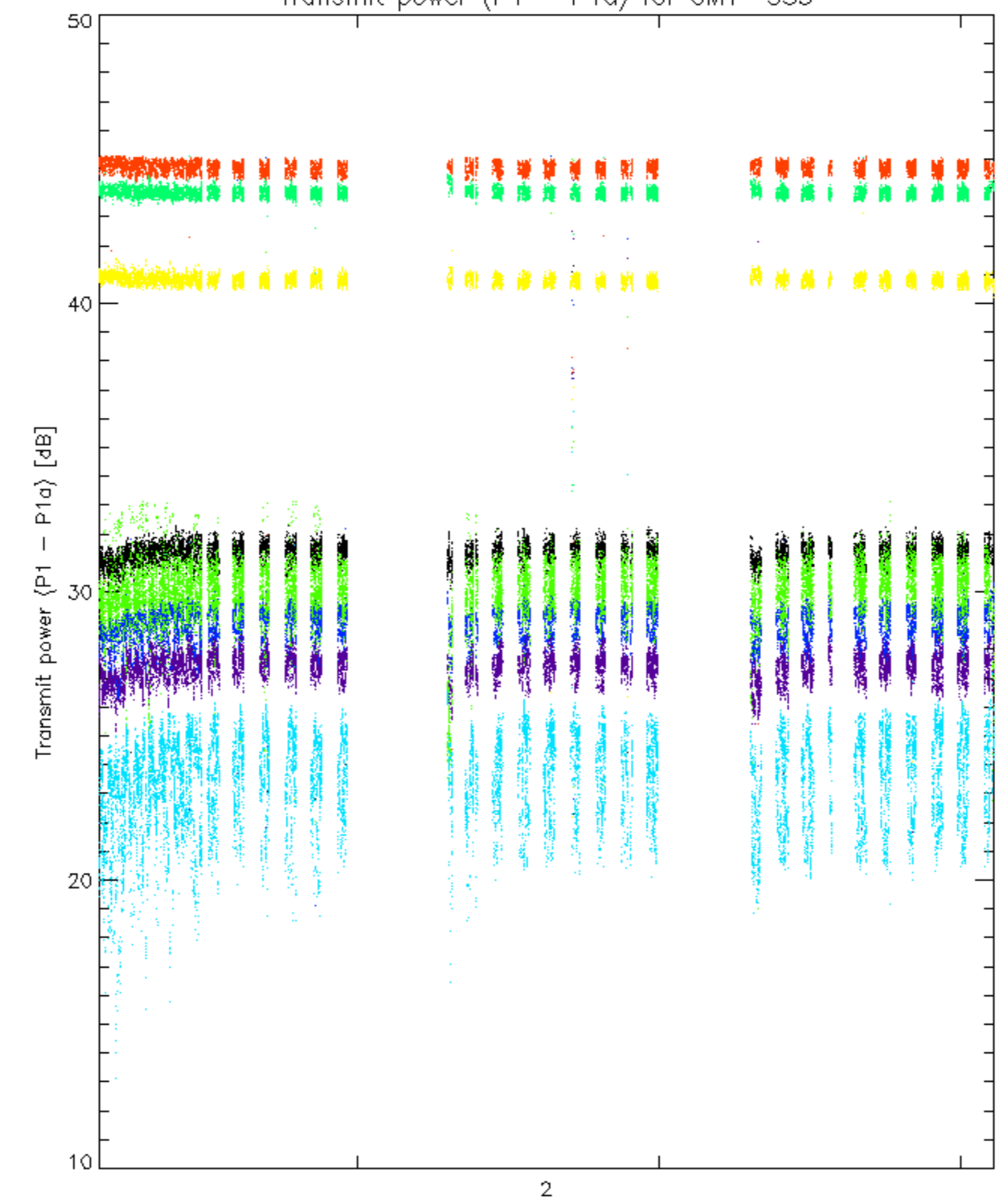
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070104_002424_000001292054_00231_25335_1792.N1	0	61
ASA_WSM_1PNPDE20070104_002424_000003062054_00231_25335_1618.N1	0	61
ASA_WSM_1PNPDE20070104_002424_000003062054_00231_25335_2038.N1	0	61
ASA_WSM_1PNPDE20070104_030430_000002382054_00233_25337_1981.N1	0	15
ASA_WSM_1PNPDE20070104_180904_000000862054_00242_25346_2917.N1	0	35
ASA_WSM_1PNPDE20070104_235452_000002382054_00245_25349_3463.N1	0	36
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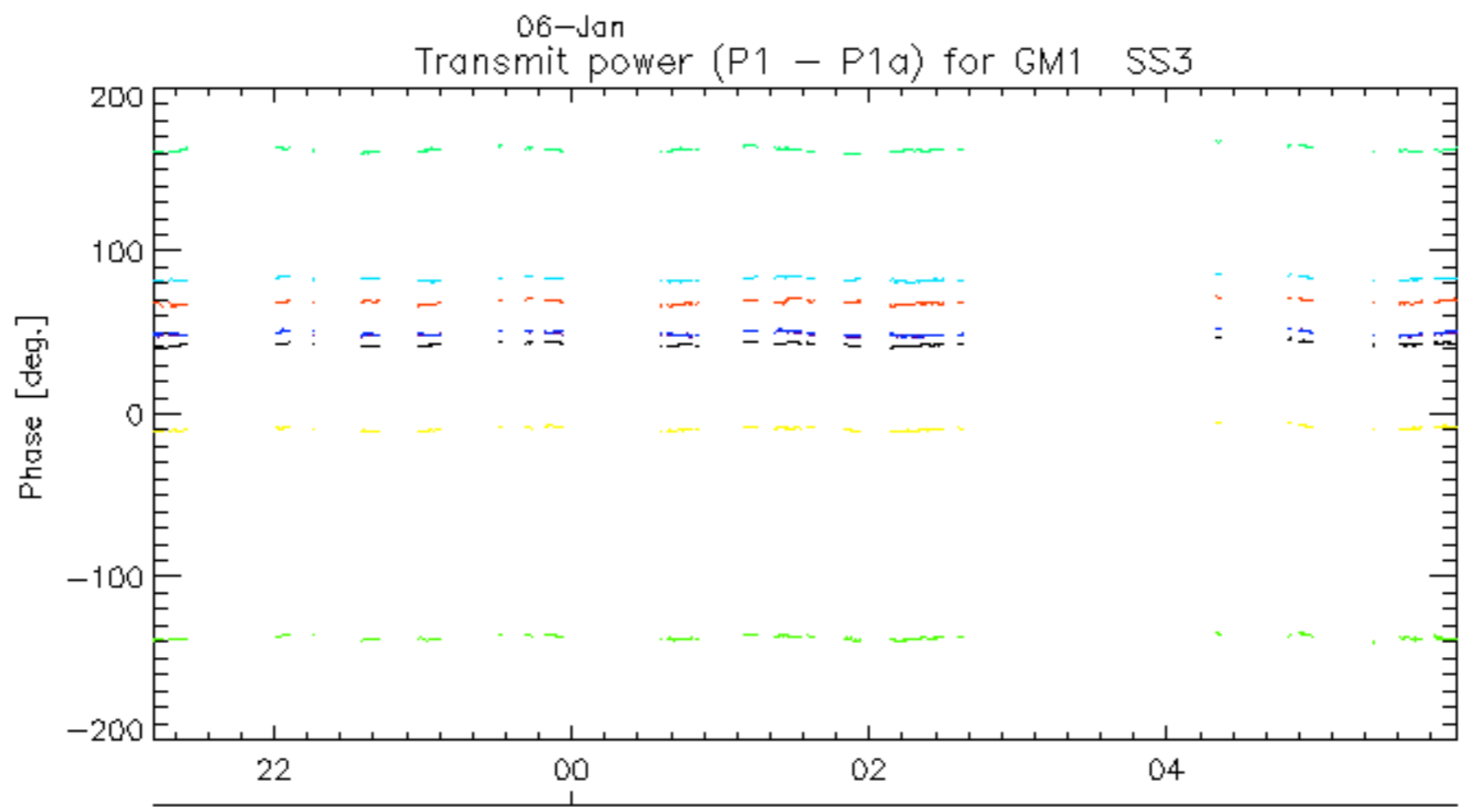
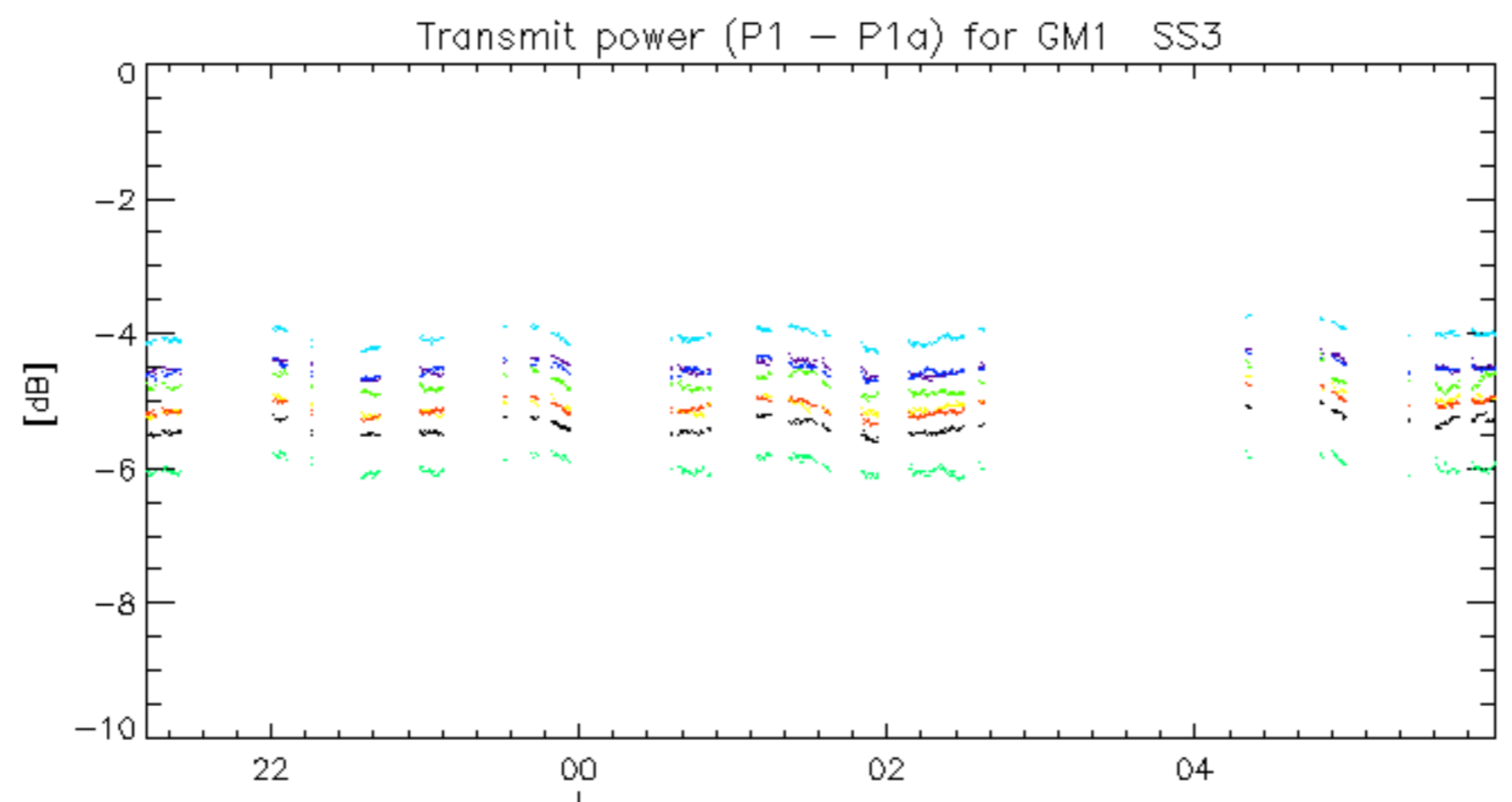




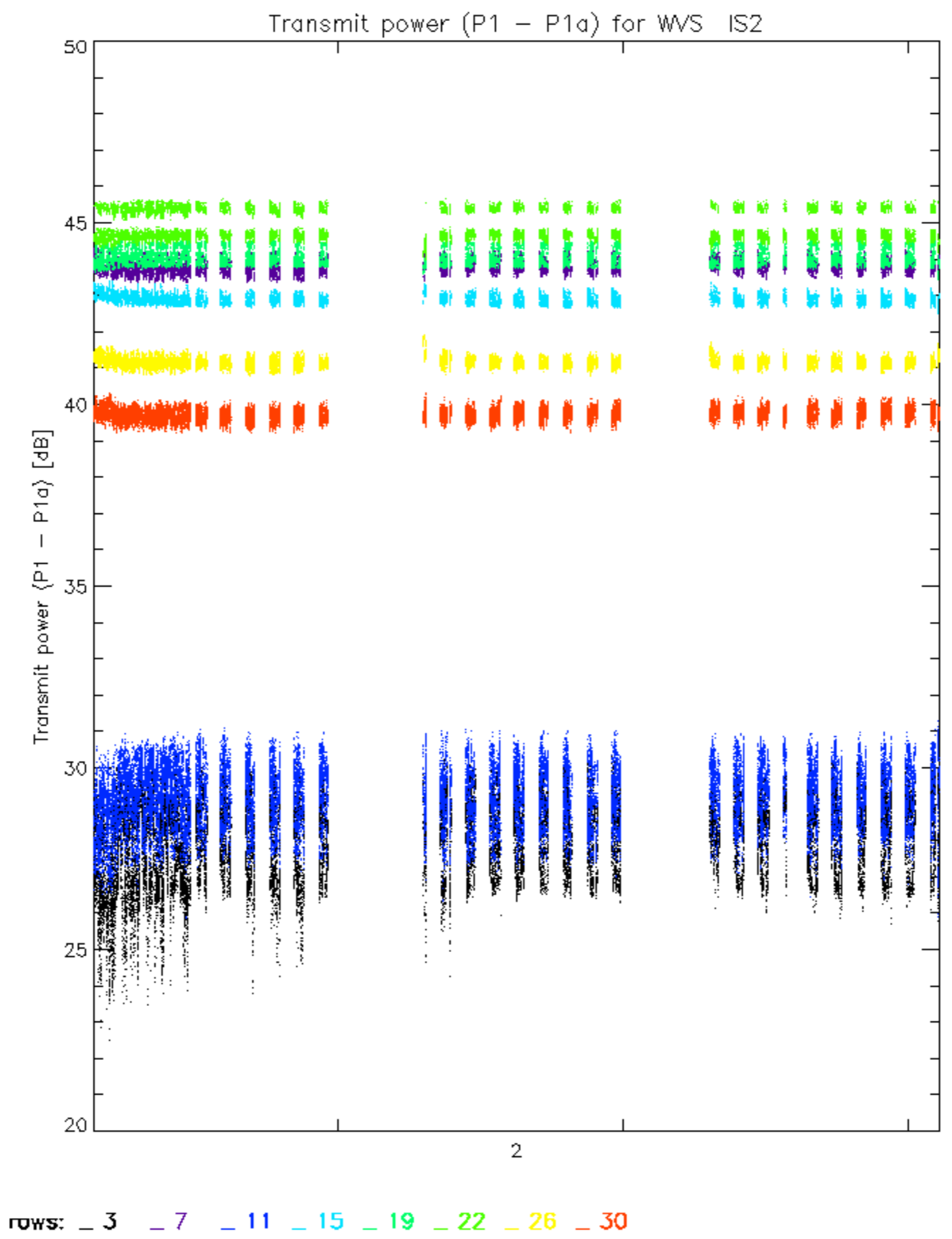
Transmit power (P1 - P1a) for GM1 SS3

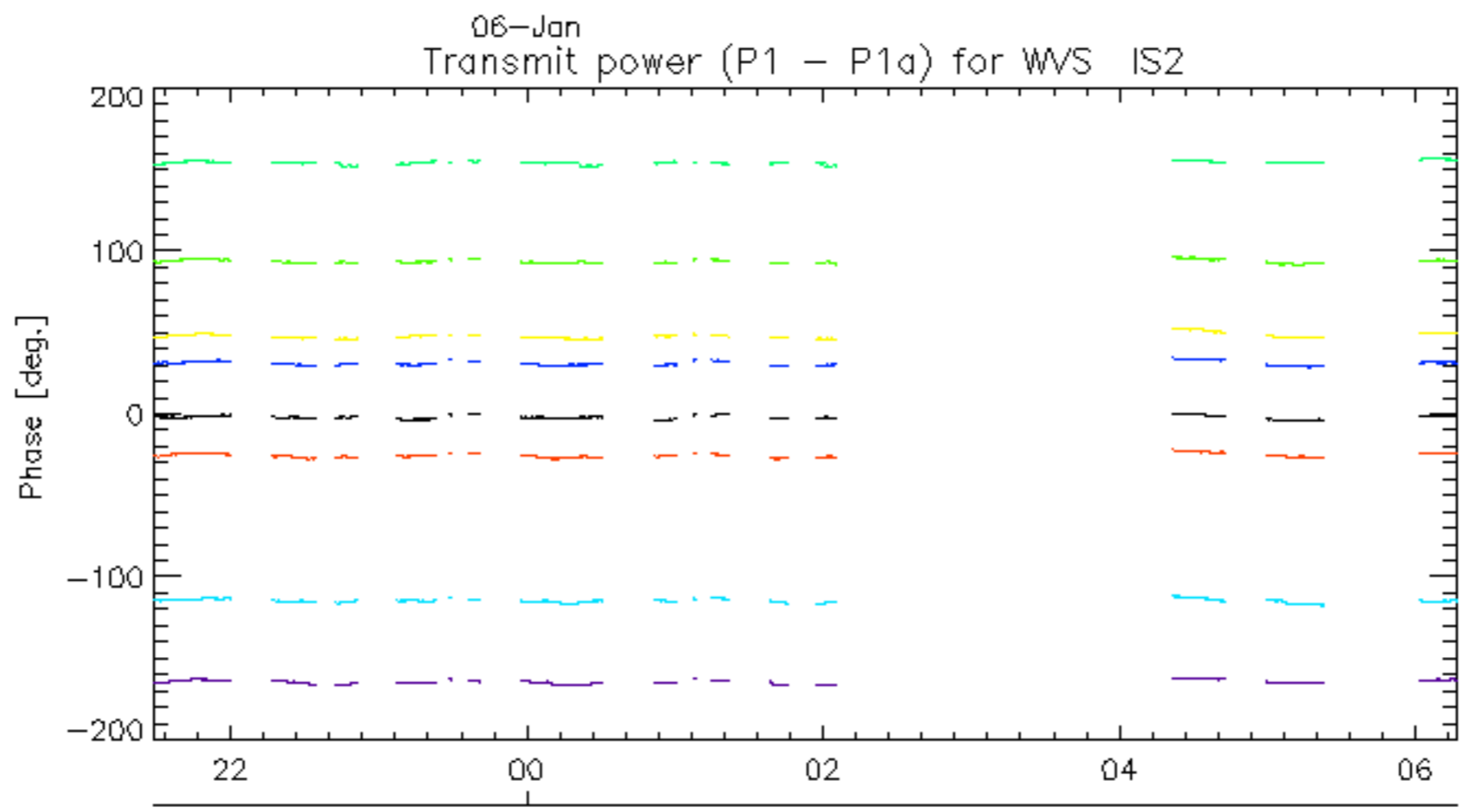
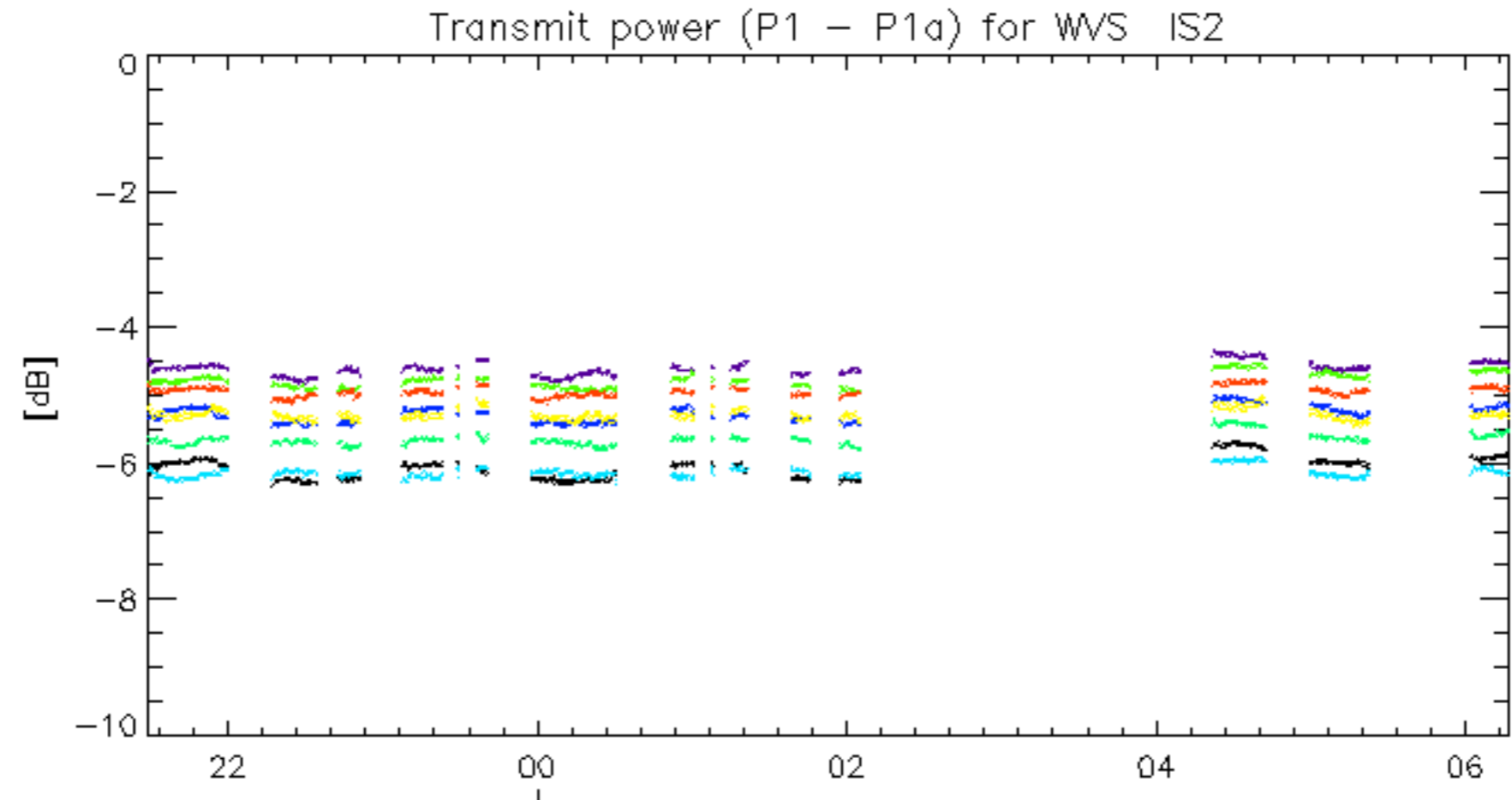


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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No unavailabilities during the reported period.