

PRELIMINARY REPORT OF 070105

last update on Fri Jan 5 16:20:54 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 2007-01-04 00:00:00 to 2007-01-05 16:20:54

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	46	52	46	8	58
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	46	52	46	8	58
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	52	46	8	58
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	46	52	46	8	58

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	20070105 033419
H	20070104 040556

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.964813	0.007960	-0.004300
7	P1	-3.137482	0.025030	0.056667
11	P1	-4.121041	0.025695	0.017543
15	P1	-6.334342	0.016617	0.002639
19	P1	-3.670498	0.005253	-0.039921
22	P1	-4.666975	0.014242	-0.033902
26	P1	-3.963521	0.008929	0.008075
30	P1	-5.907413	0.008843	-0.033970
3	P1	-16.547285	0.266978	-0.015983
7	P1	-17.281219	0.196089	0.132303
11	P1	-17.188120	0.491559	-0.095141
15	P1	-13.048374	0.134528	0.070893
19	P1	-15.020880	0.098603	-0.114703
22	P1	-15.835364	0.528422	0.113195
26	P1	-15.085516	0.183516	0.122230
30	P1	-17.527580	0.480131	0.110288

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.800741	0.095098	0.002684
7	P2	-21.709936	0.094516	0.093320
11	P2	-15.564597	0.102339	0.025189
15	P2	-7.110657	0.109327	0.037276
19	P2	-9.191713	0.104974	0.041127
22	P2	-18.231956	0.097955	0.025761
26	P2	-16.601746	0.110818	0.003733
30	P2	-19.453487	0.089746	0.020954

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.242051	0.008839	0.014513

7	P3	-8.242051	0.008839	0.014513
11	P3	-8.242051	0.008839	0.014513
15	P3	-8.242051	0.008839	0.014513
19	P3	-8.242051	0.008839	0.014513
22	P3	-8.242051	0.008839	0.014513
26	P3	-8.242091	0.008839	0.014439
30	P3	-8.242091	0.008839	0.014439

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	-3.926171	0.014827	0.012864
7	P1	-2.471496	0.015477	0.035428
11	P1	-2.853384	0.017334	0.044663
15	P1	-3.695819	0.032091	-0.011141
19	P1	-3.553873	0.020283	0.005162
22	P1	-5.026017	0.024344	0.041657
26	P1	-6.043826	0.030013	-0.001906
30	P1	-5.355313	0.038911	0.022696
3	P1	-11.743124	0.085061	0.062732
7	P1	-10.073195	0.082821	0.063429
11	P1	-10.358155	0.117193	-0.008383
15	P1	-10.723187	0.126105	-0.038729
19	P1	-15.736343	0.125024	-0.003590
22	P1	-21.615805	1.386142	-0.010966
26	P1	-16.071108	0.344583	0.073441
30	P1	-17.886353	0.374201	0.049937

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.475950	0.115117	0.042434
7	P2	-22.230768	0.289429	0.044447
11	P2	-10.869858	0.112320	0.046257
15	P2	-4.993134	0.192536	0.045497
19	P2	-6.974286	0.271105	0.036422
22	P2	-8.257111	0.111798	0.028102
26	P2	-24.337345	0.170266	-0.066778
30	P2	-21.956299	0.119508	0.058321

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.093948	0.004840	0.000635
7	P3	-8.093734	0.004826	0.000916
11	P3	-8.093838	0.004846	0.000644
15	P3	-8.093633	0.004829	0.000695
19	P3	-8.093721	0.004852	0.000538
22	P3	-8.093678	0.004840	0.001007
26	P3	-8.093850	0.004836	0.000096
30	P3	-8.093801	0.004811	0.000632

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	0.000560634
	stdev	1.67363e-07
MEAN Q	mean	0.000496283
	stdev	2.13573e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.140303
	stdev	0.00124163
STDEV Q	mean	0.140705
	stdev	0.00126264



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007010[345]

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_1PNPDE20070103_005606_000003242054_00217_25321_9226.N1	0	36
ASA_WSM_1PNPDE20070103_072858_000003062054_00221_25325_9975.N1	0	1
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





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)

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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

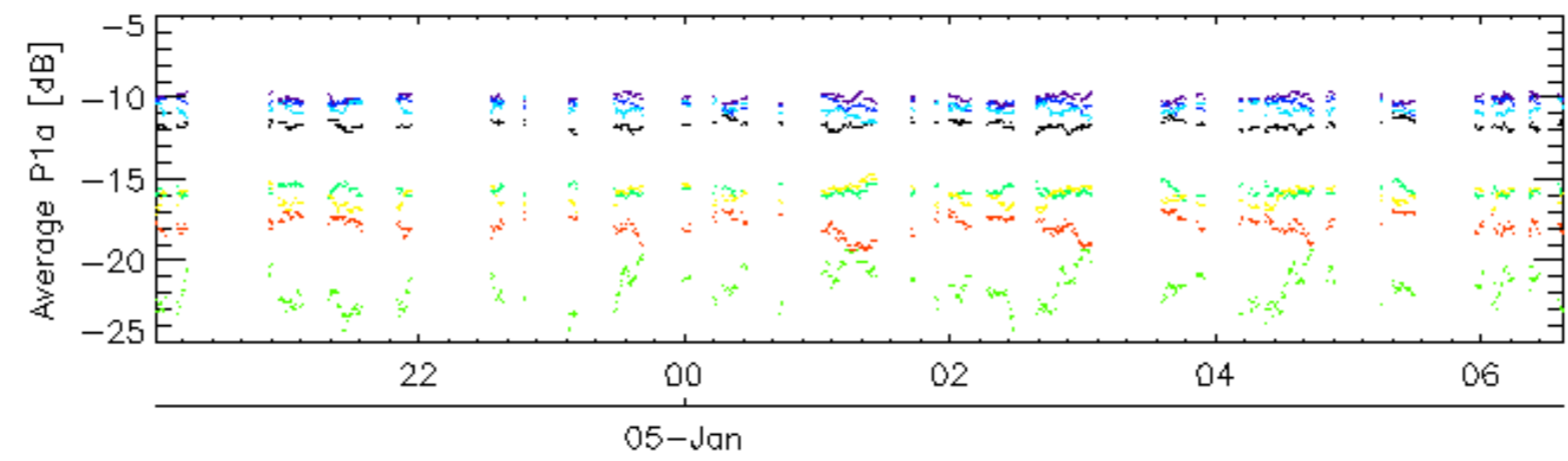
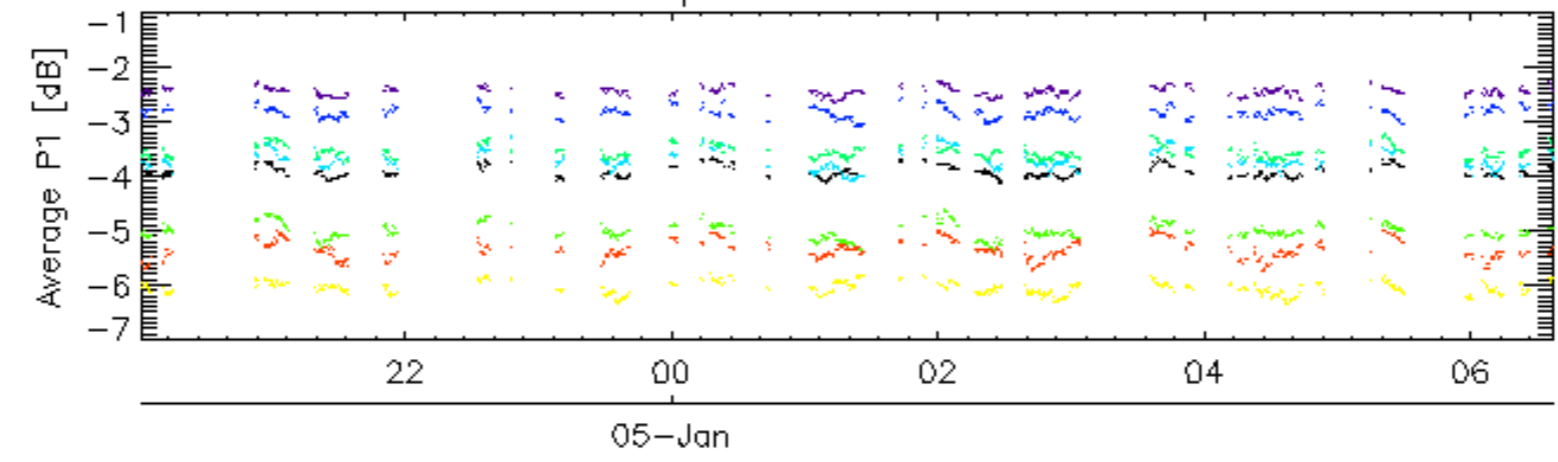
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

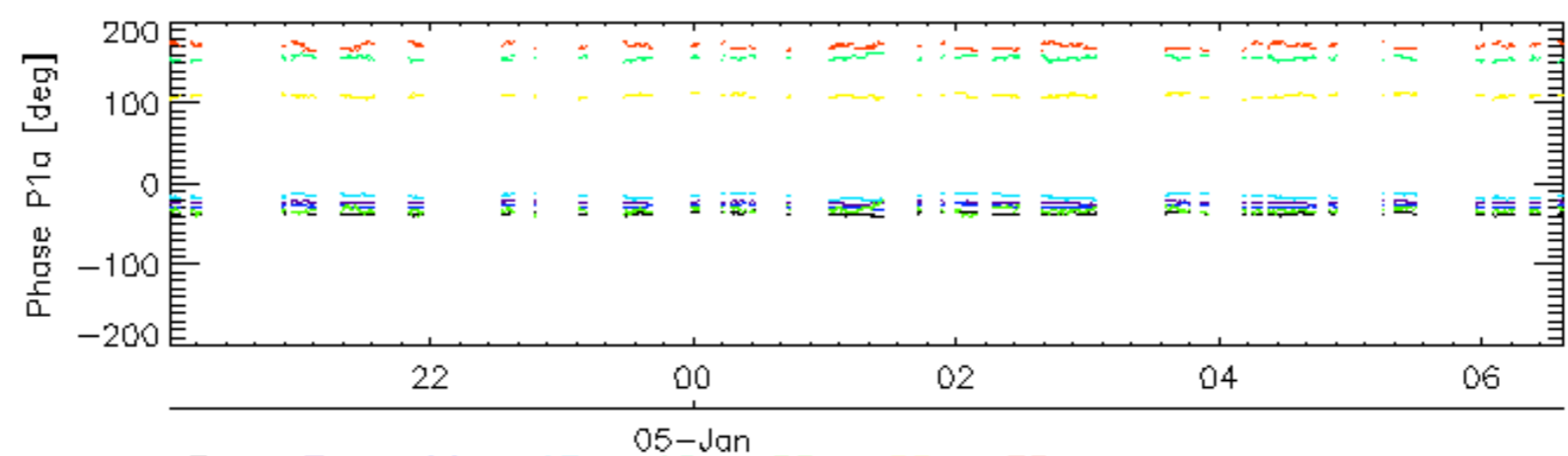
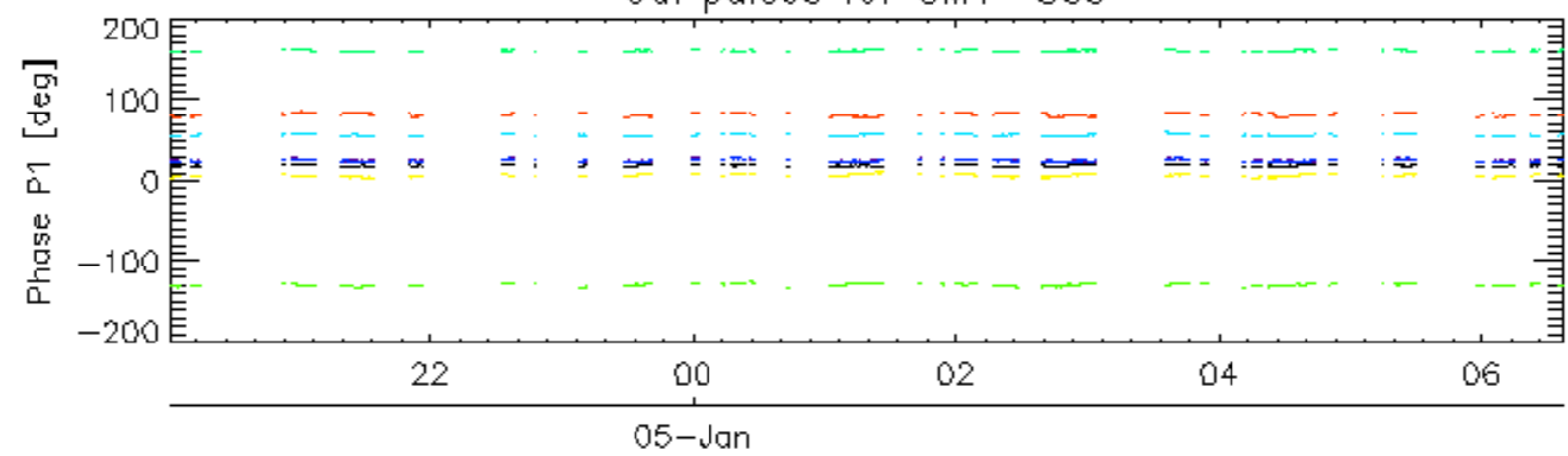
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

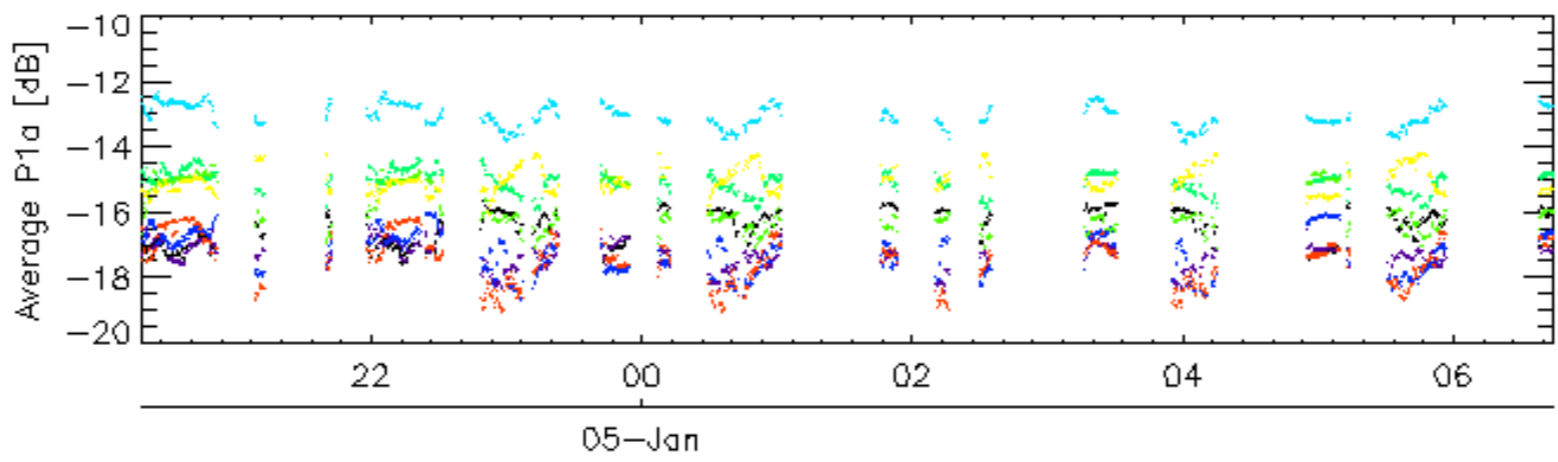
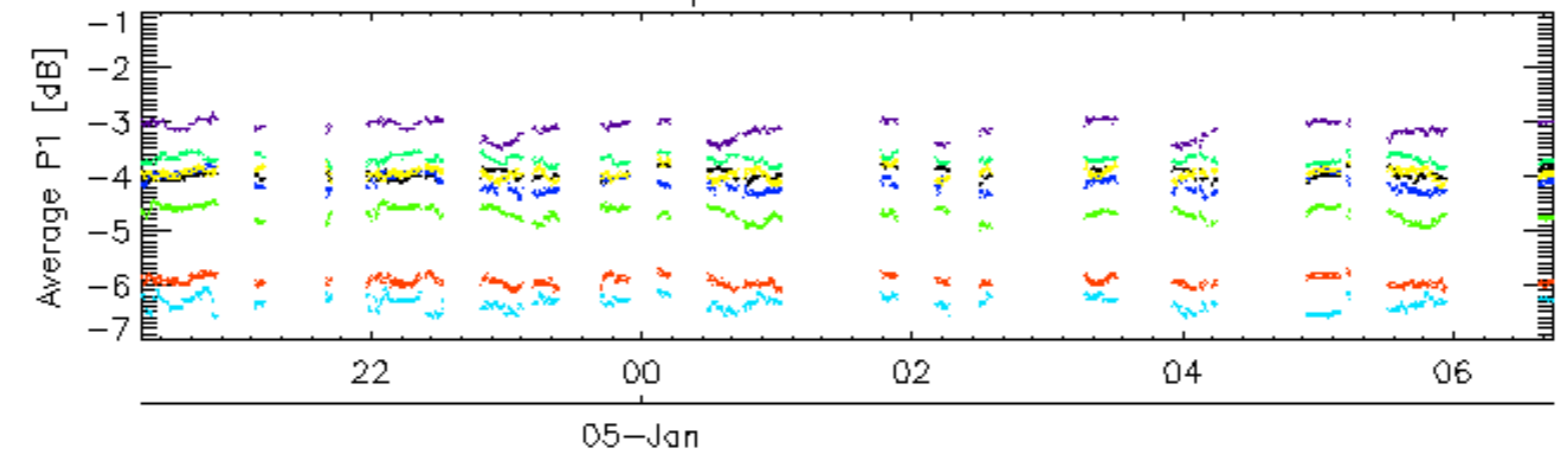


Cal pulses for GM1 SS3

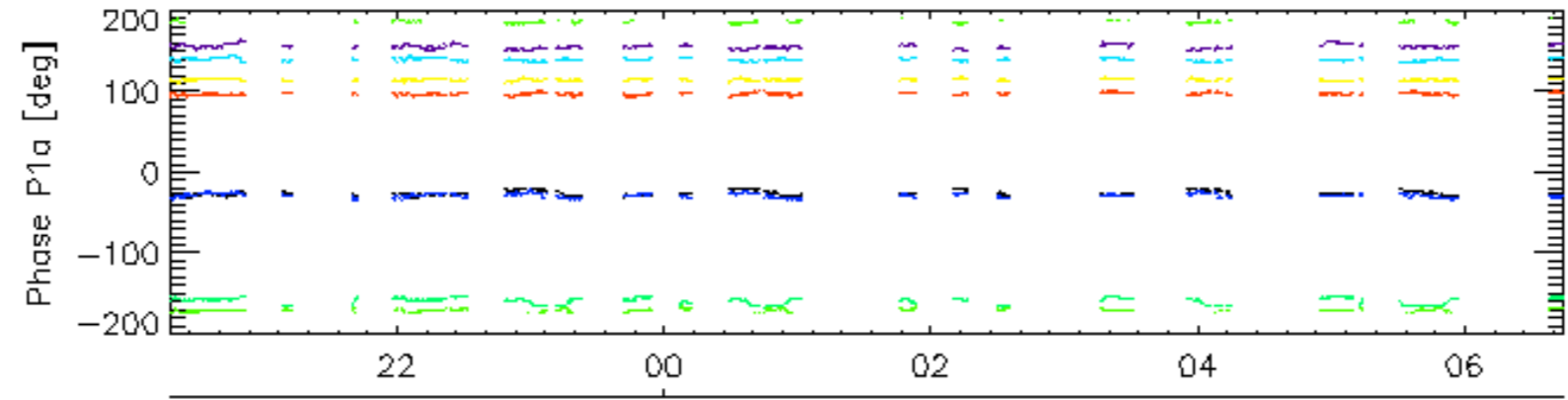
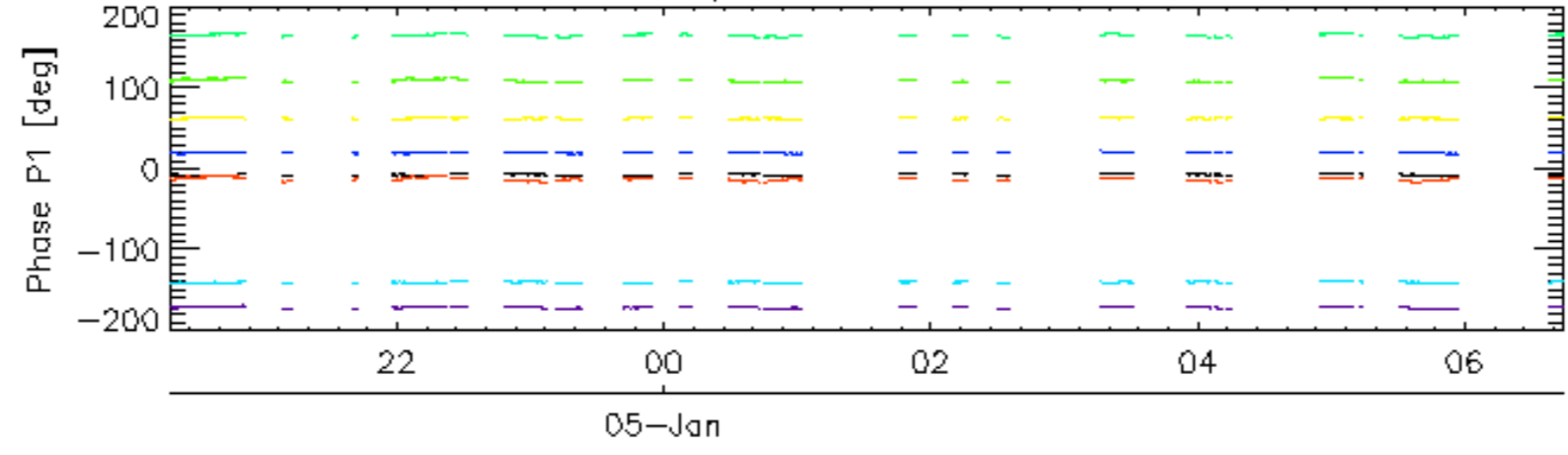


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

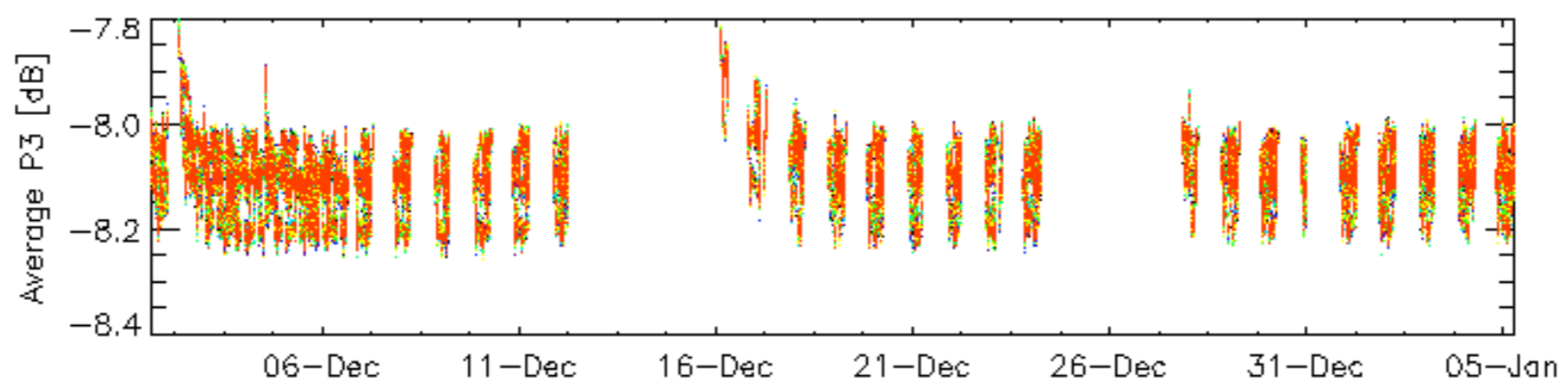
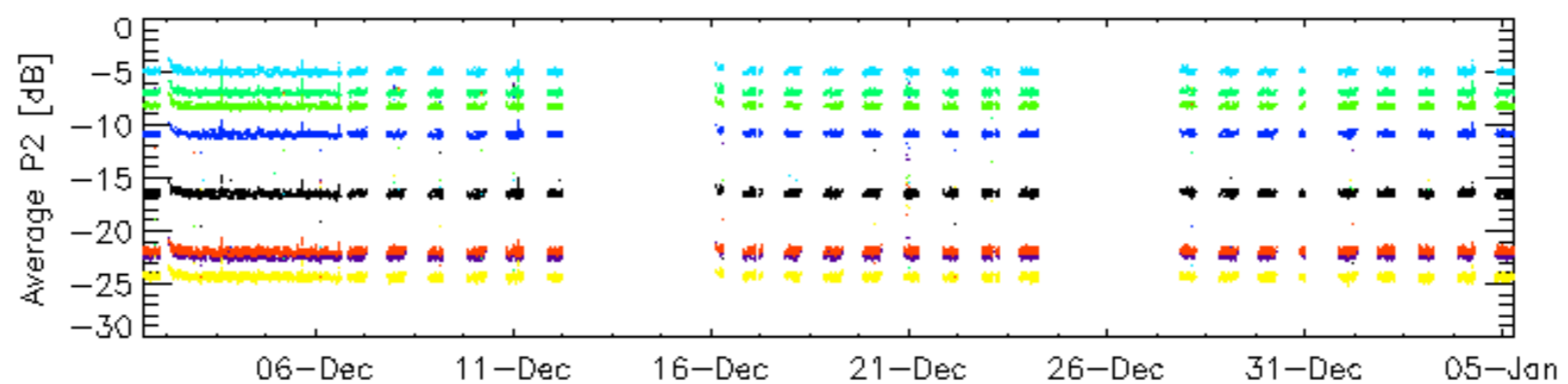
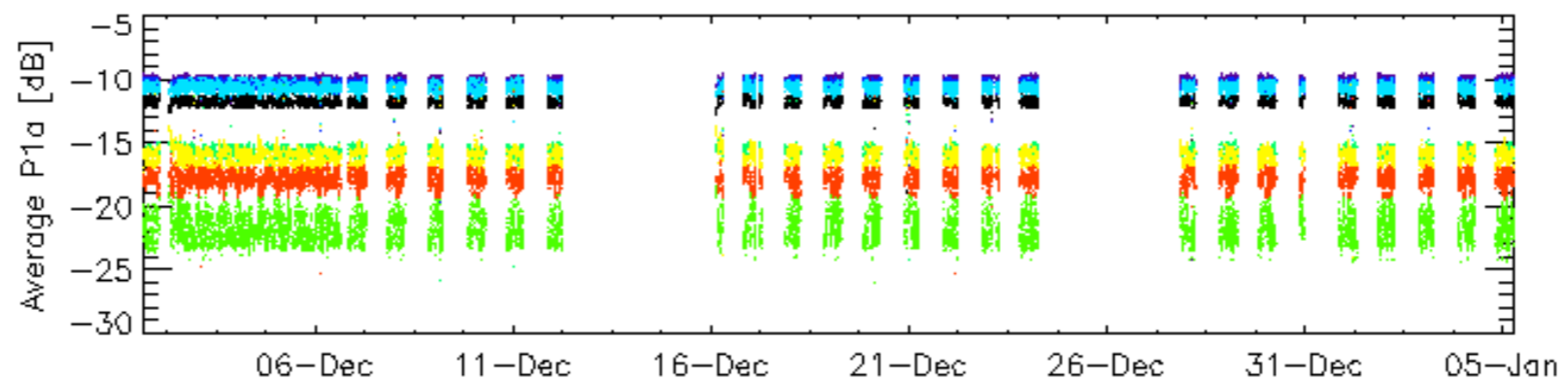
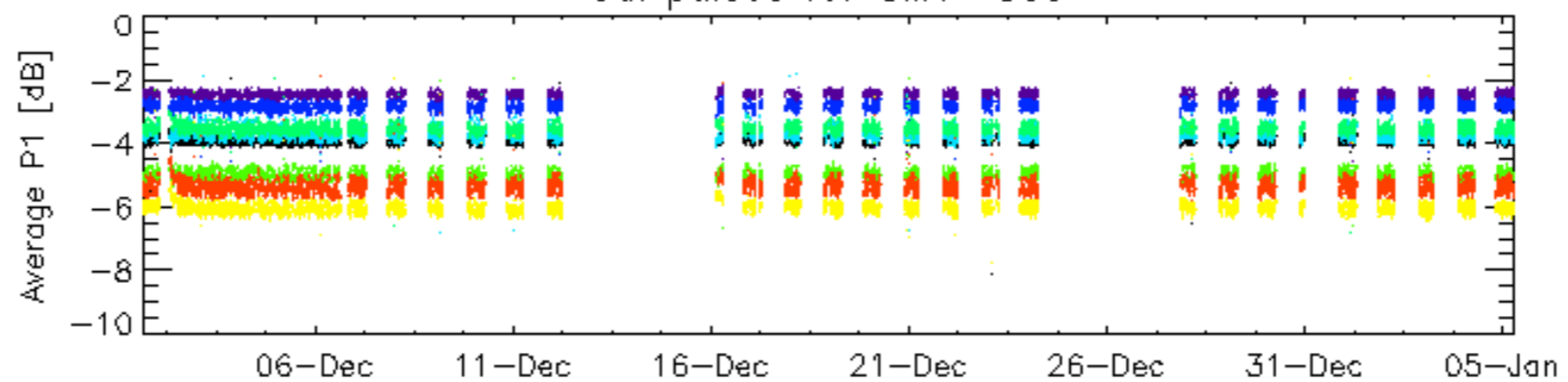


Cal pulses for WVS IS2



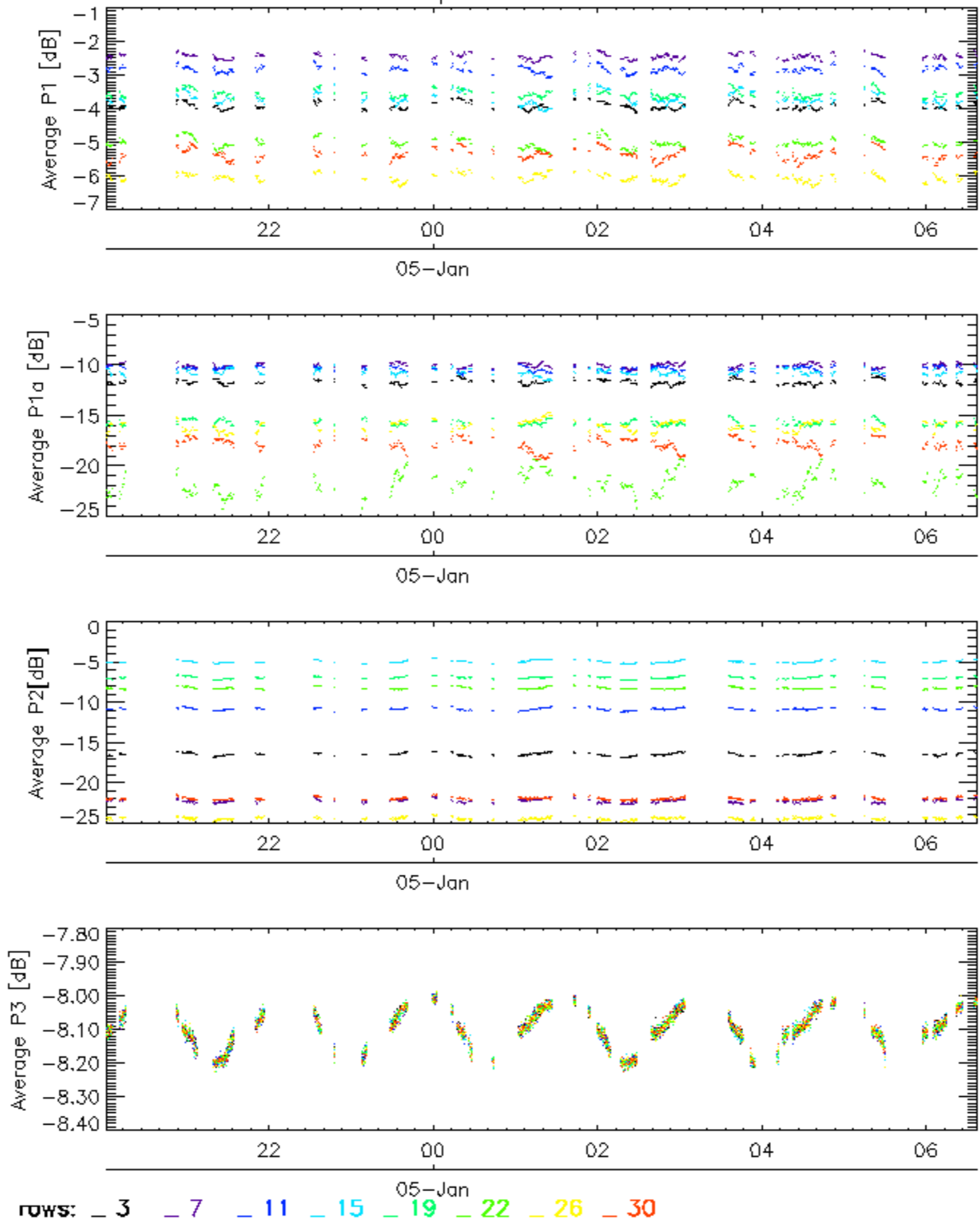
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

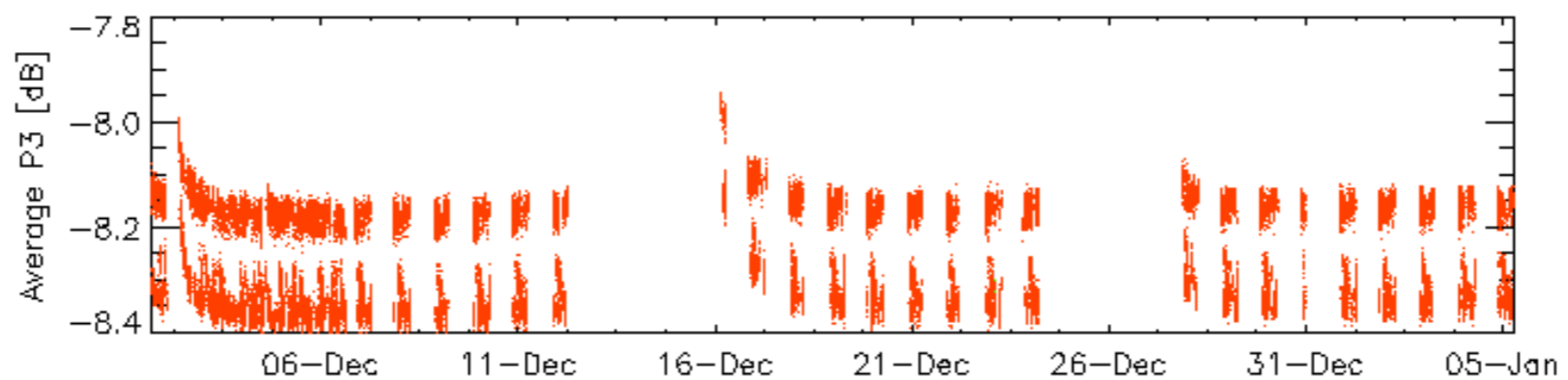
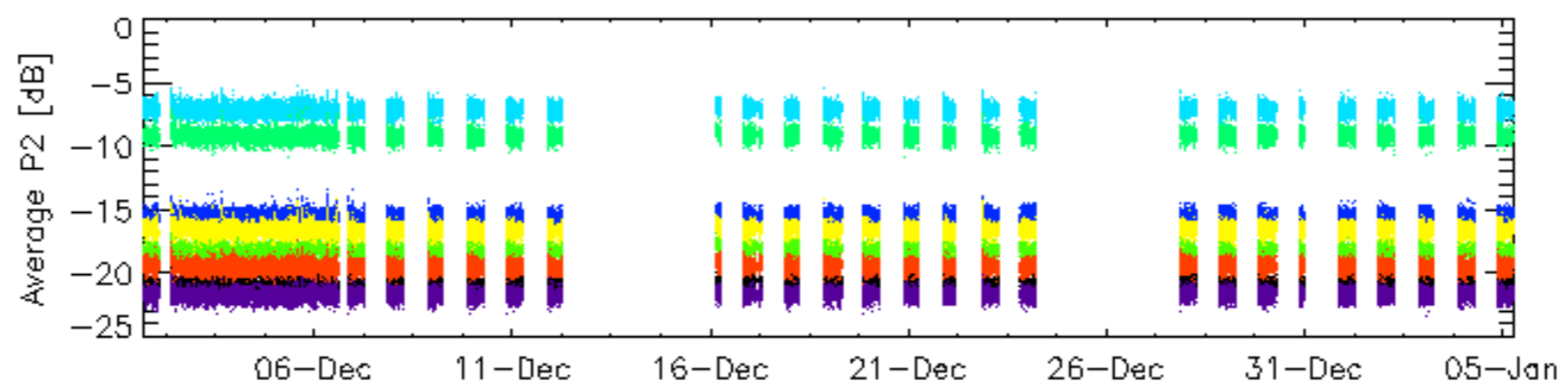
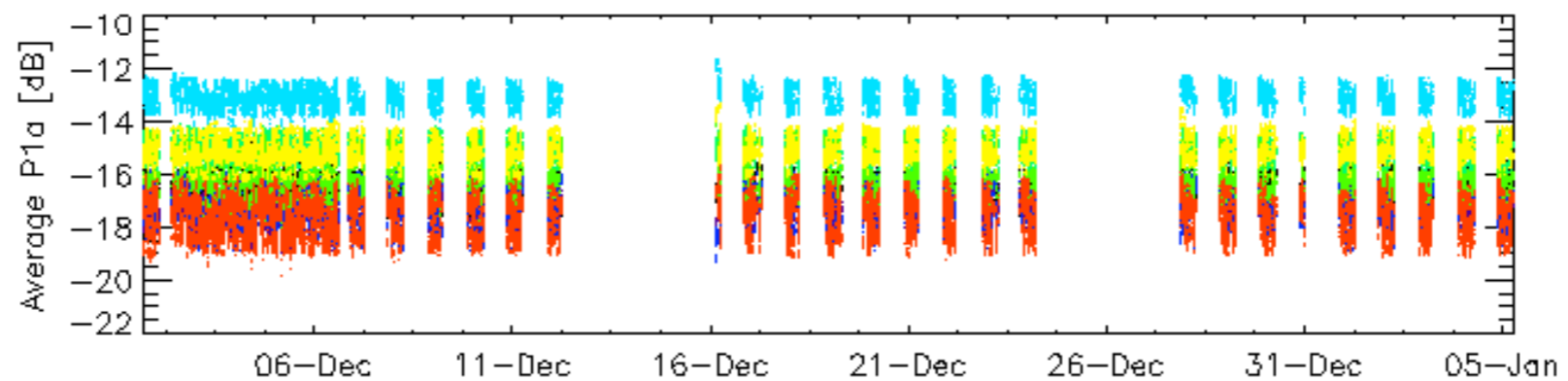
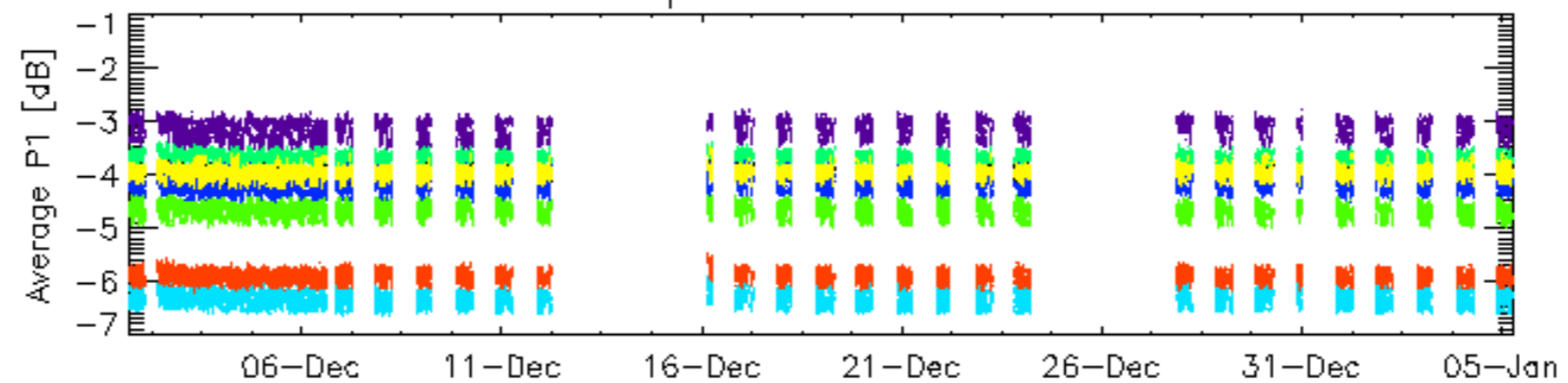


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

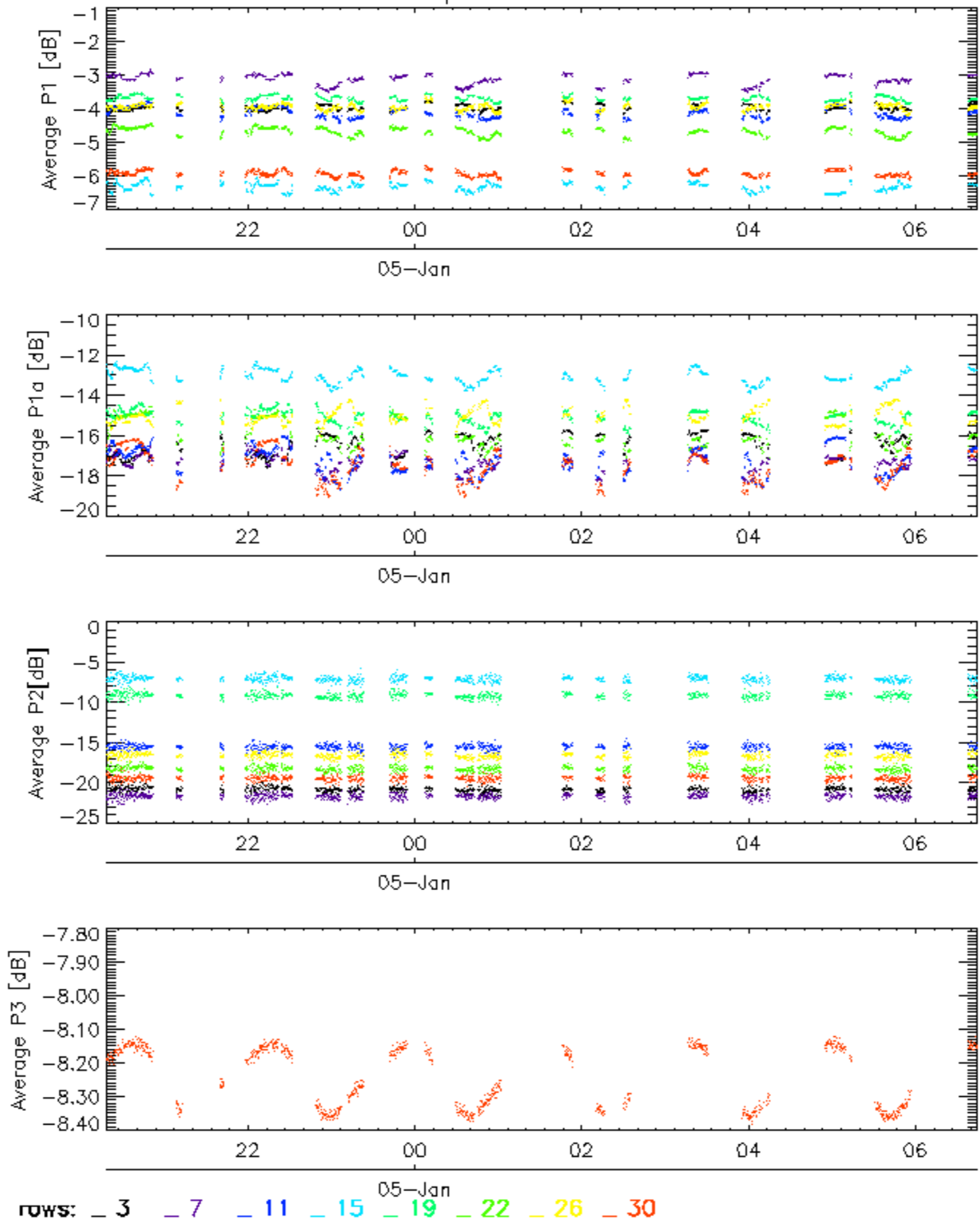


Cal pulses for WVS IS2



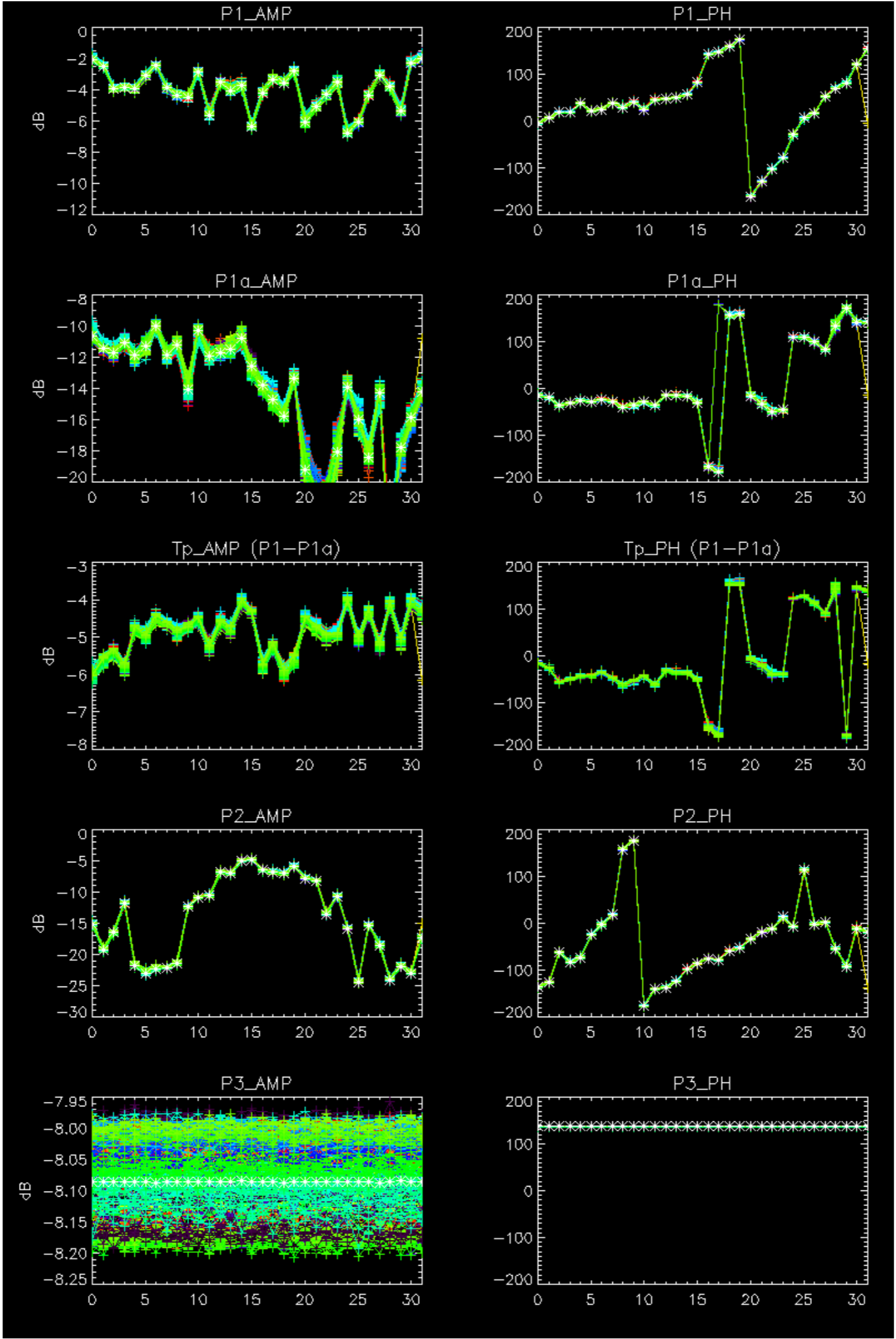
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

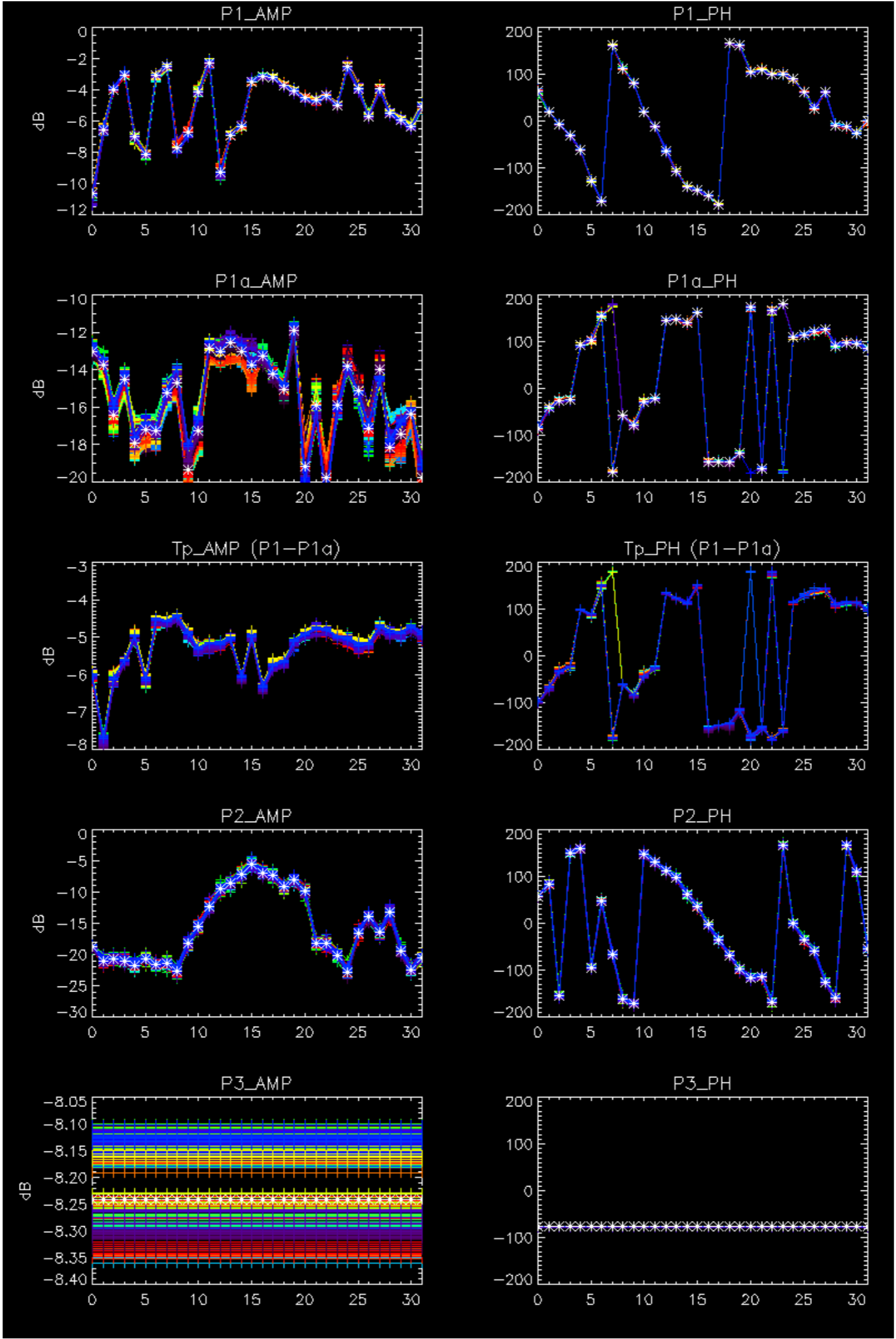
Cal pulses for WVS IS2



No anomalies observed on available browse products

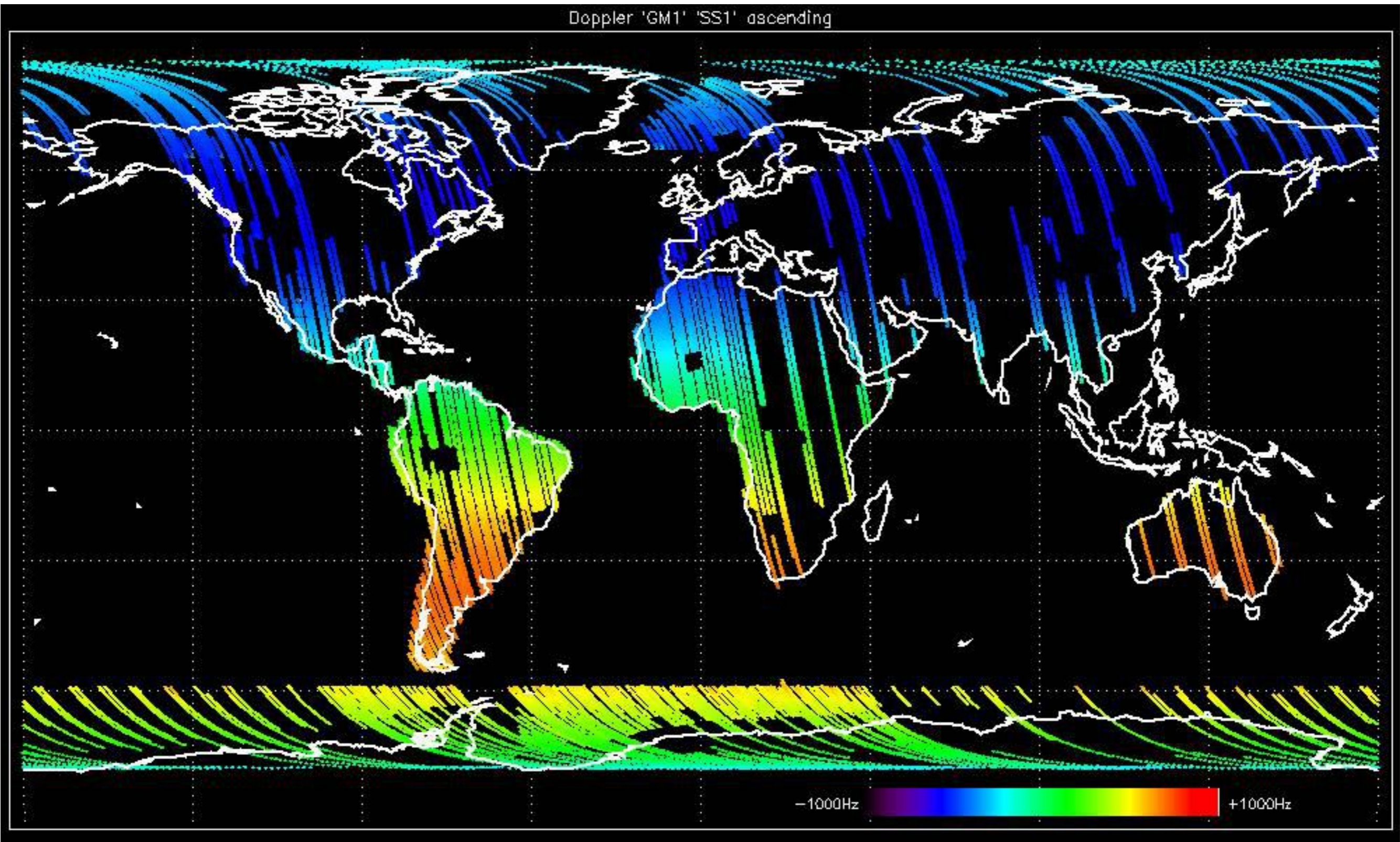
No anomalies observed.



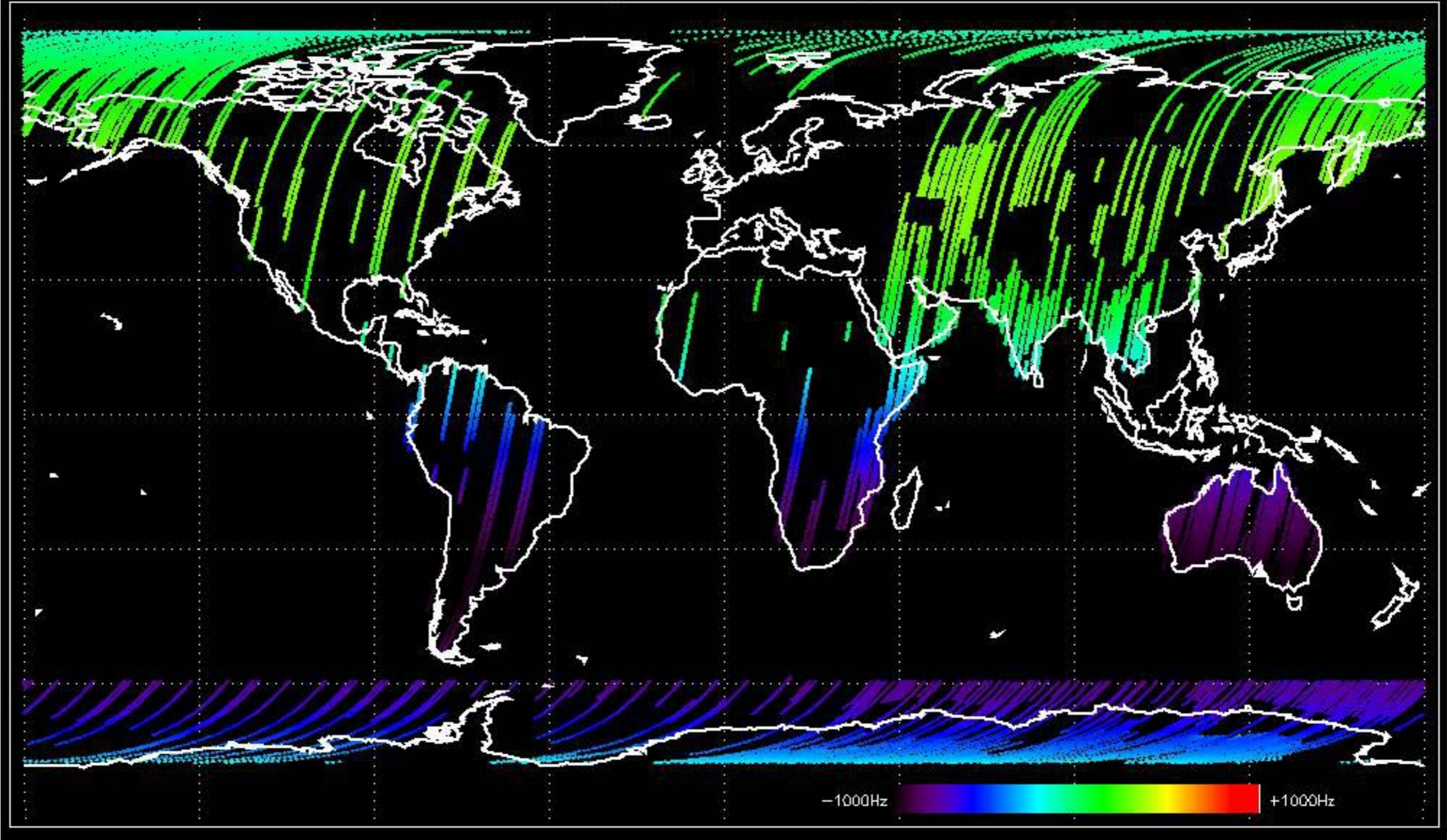


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

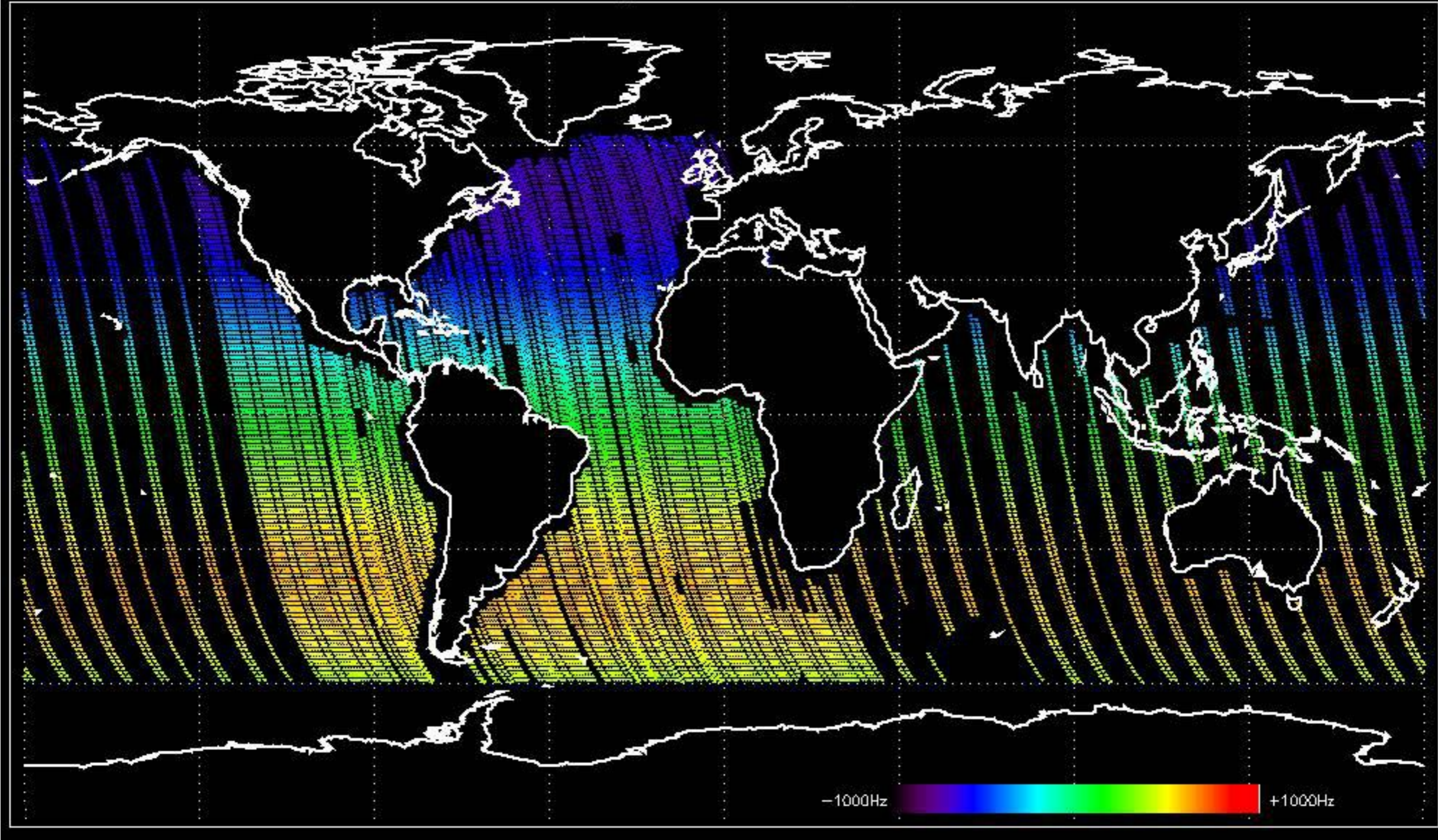
Doppler 'GM1' 'SS1' ascending



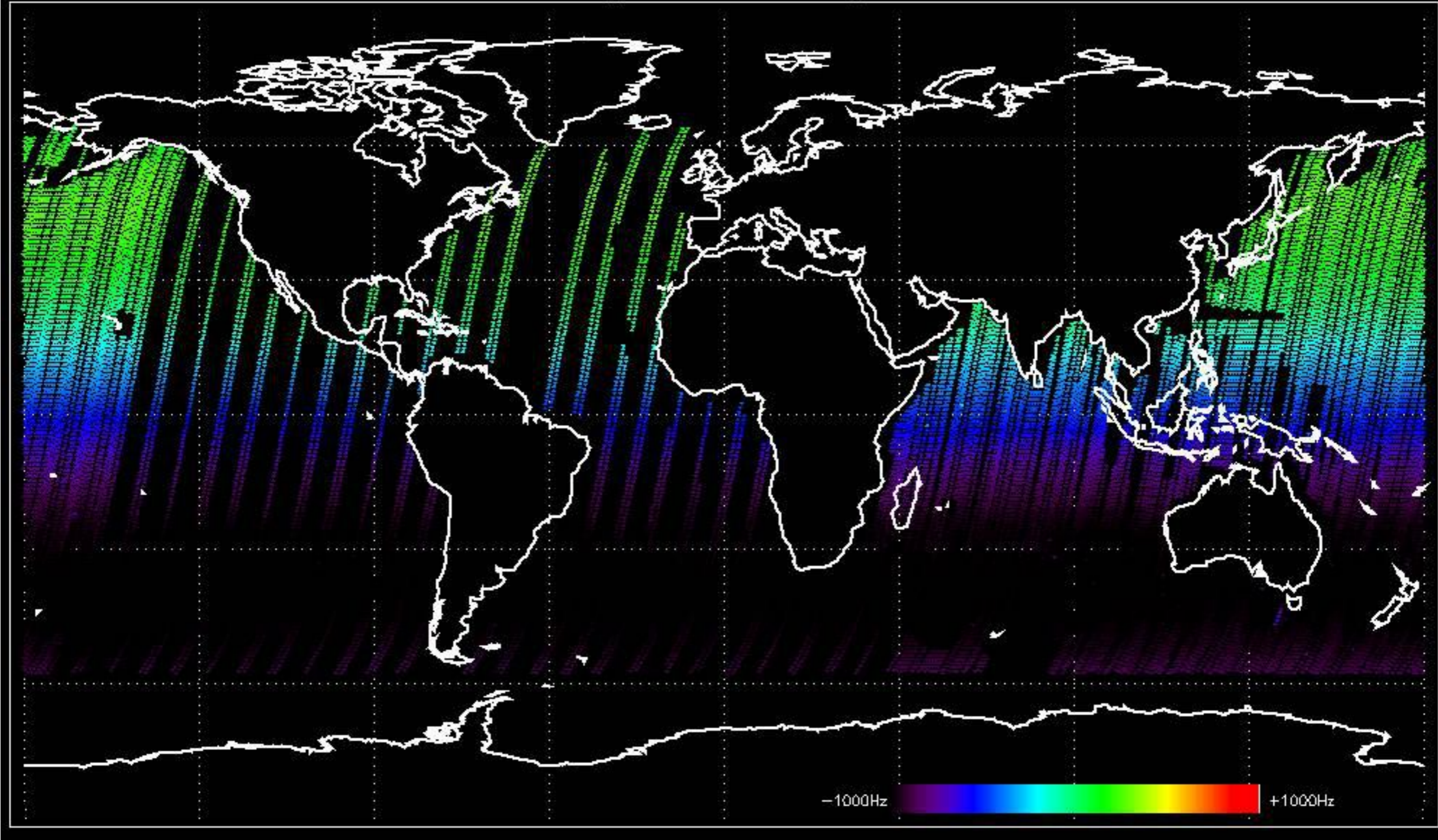
Doppler 'GM1' 'SS1' descending

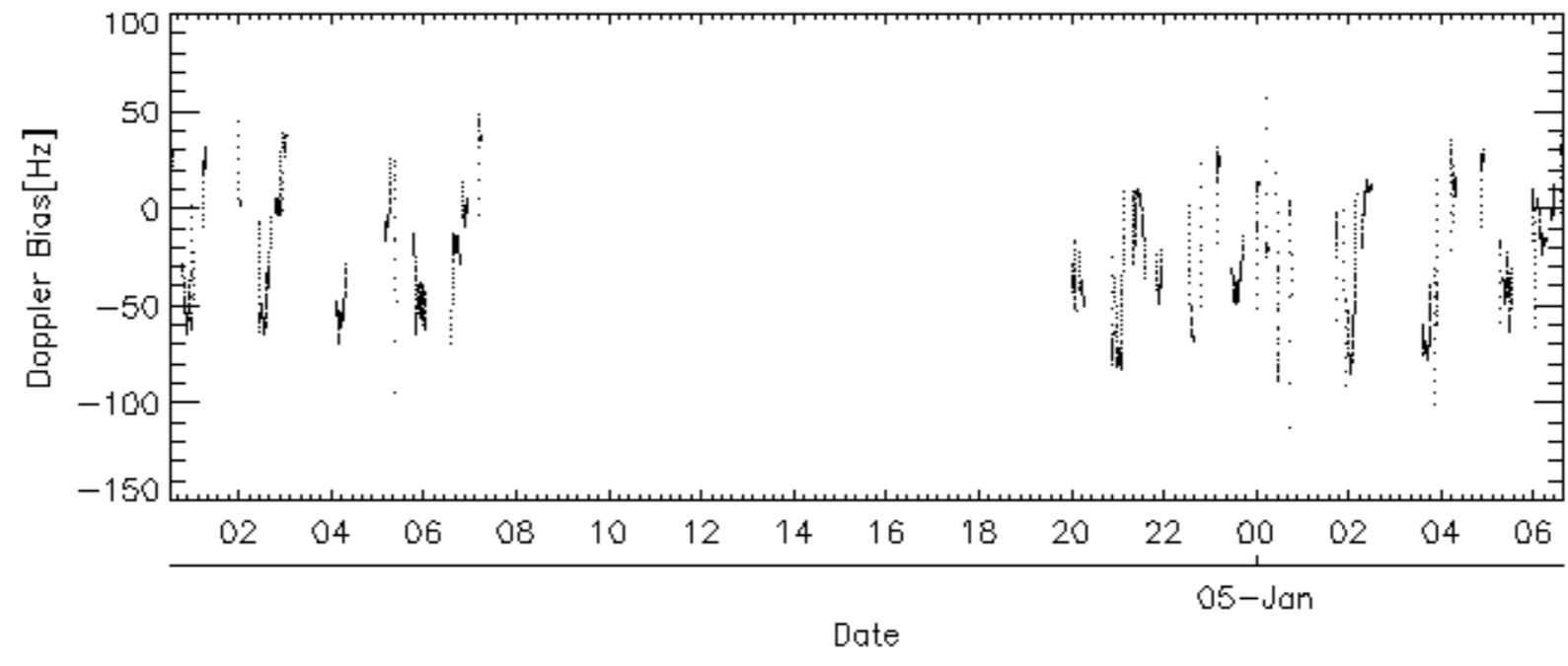
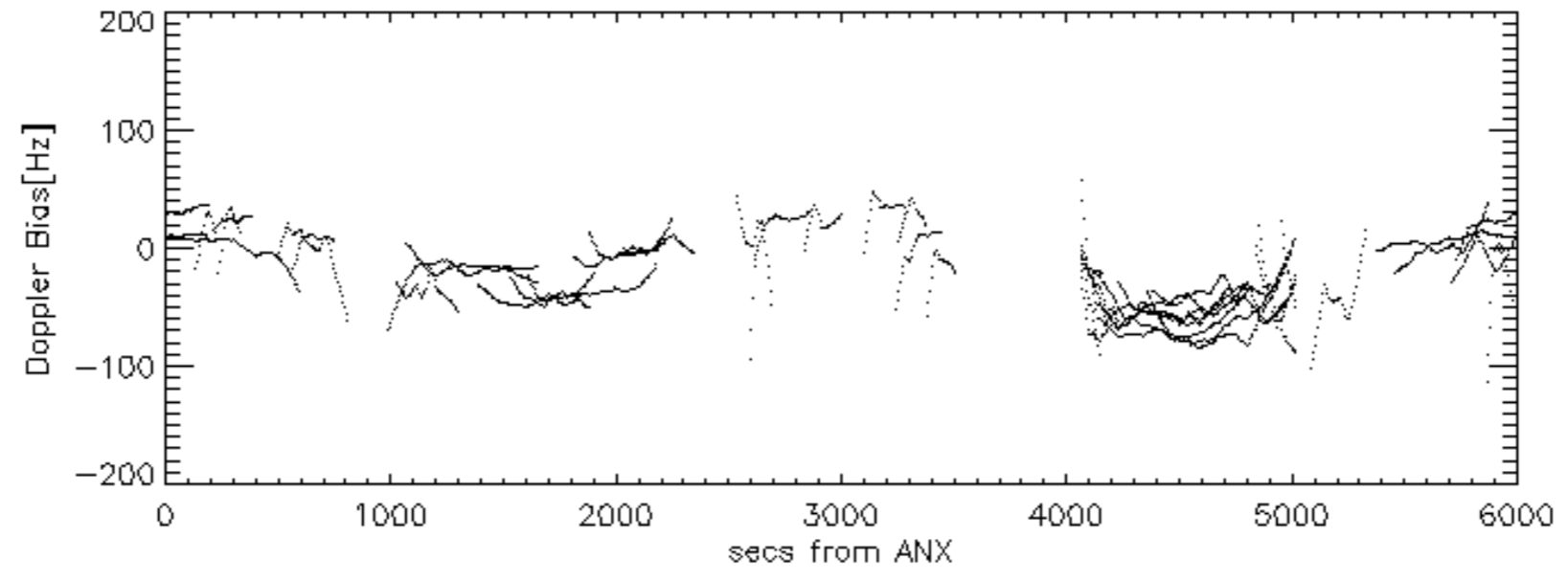
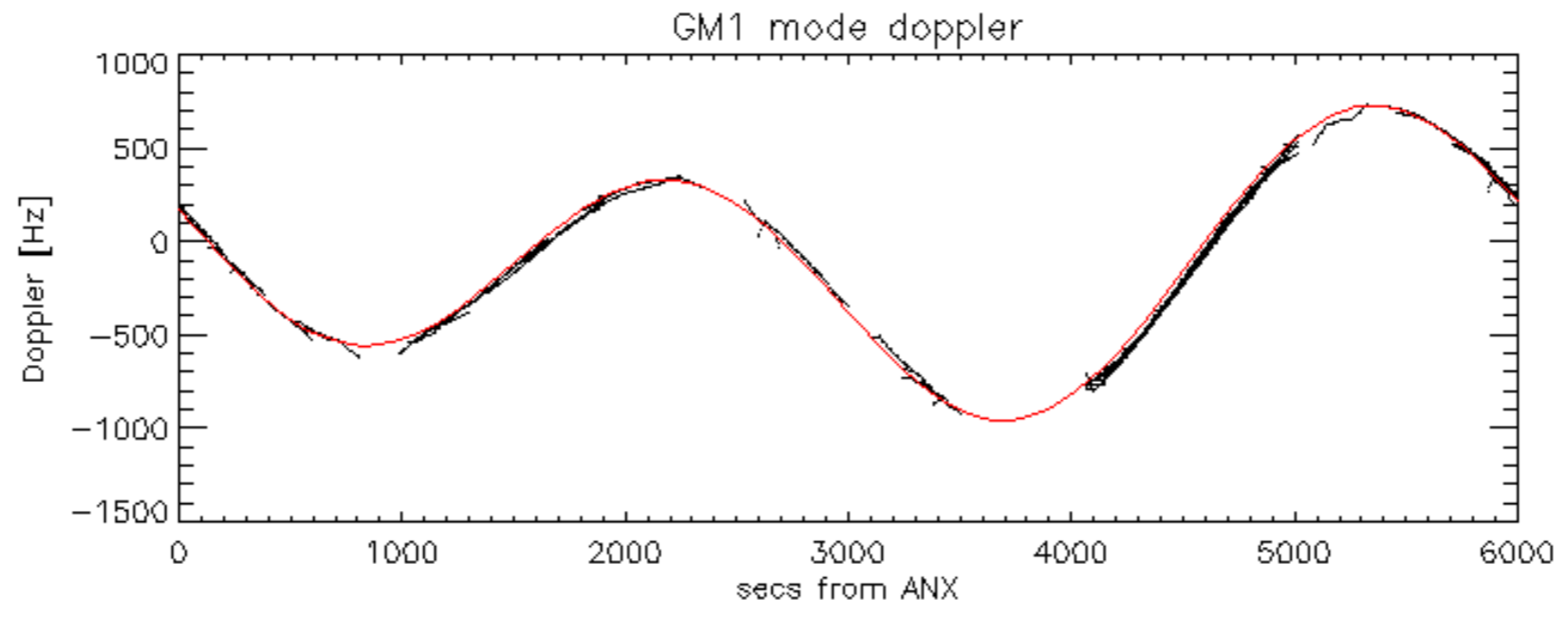


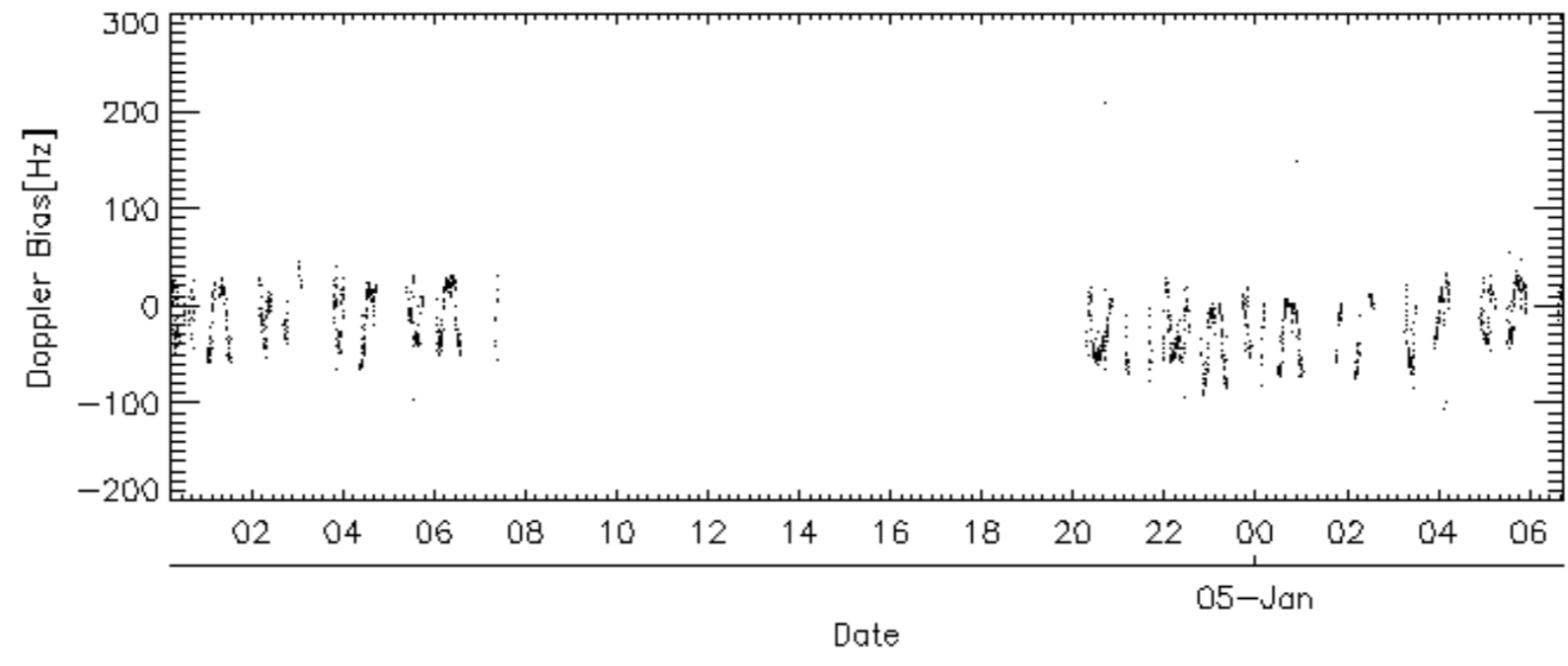
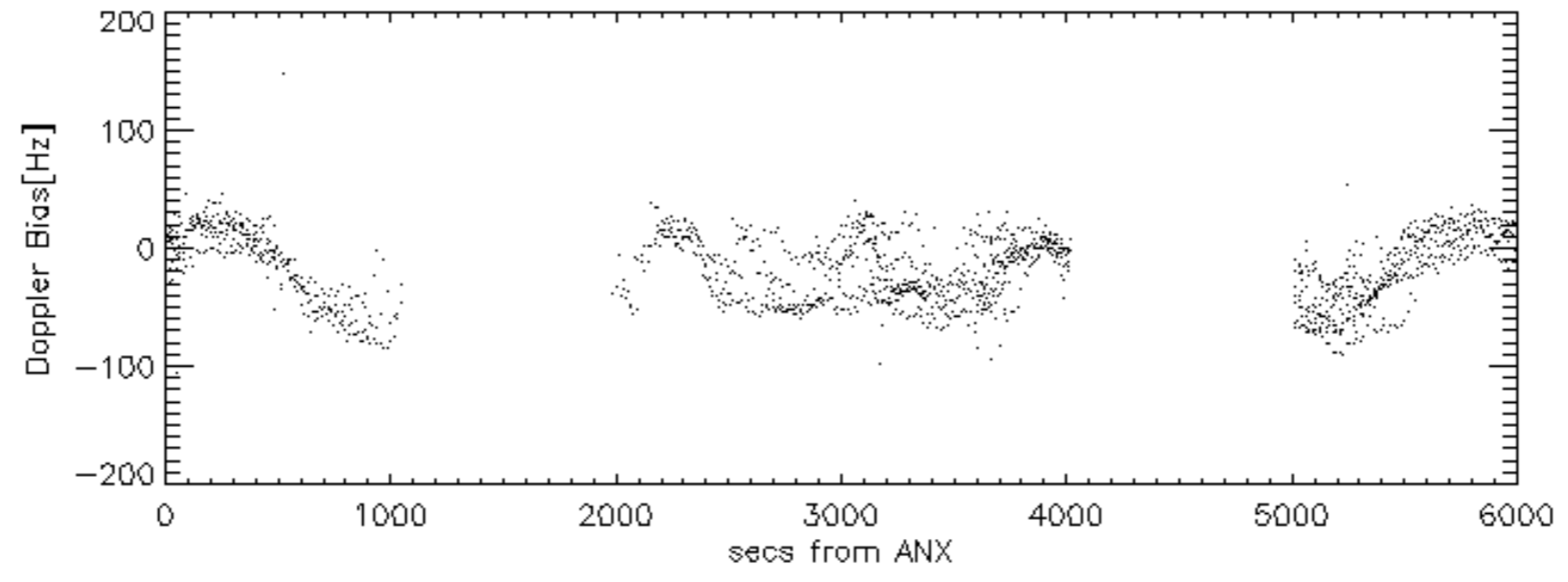
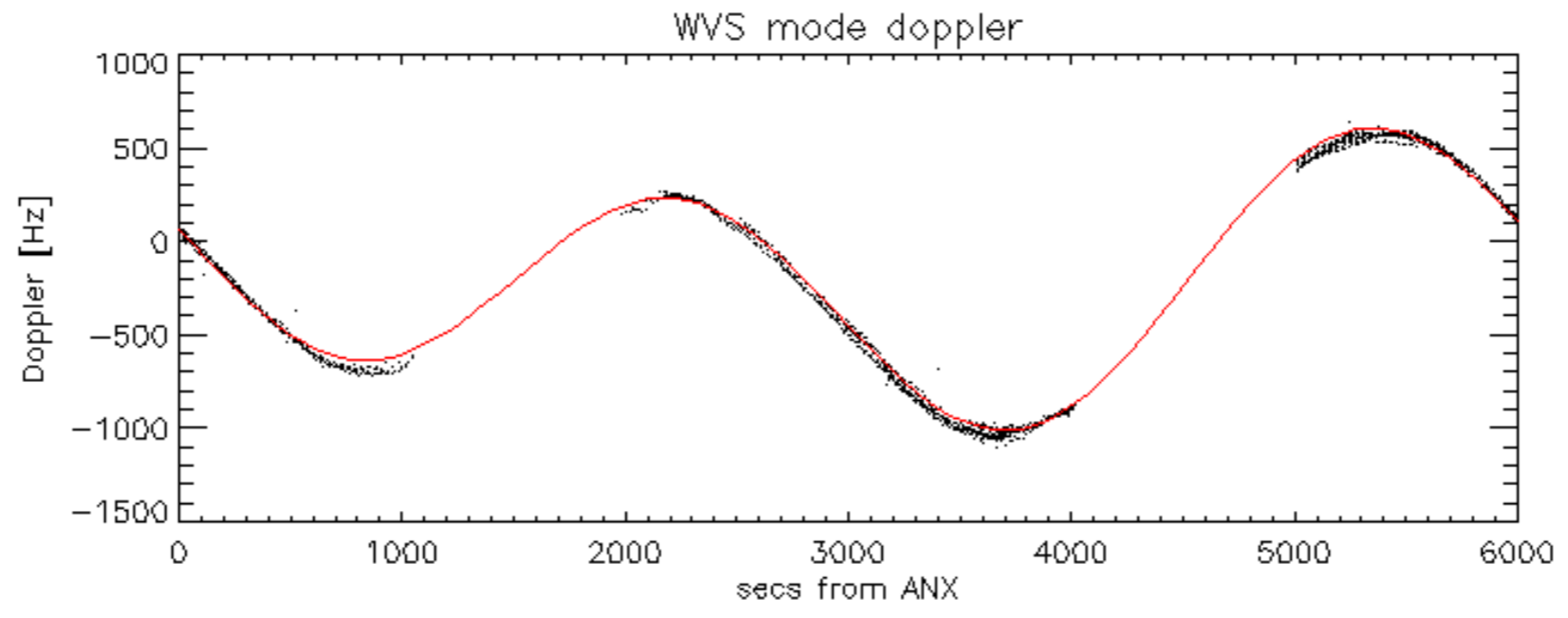
Doppler 'WVS' 'IS2' ascending



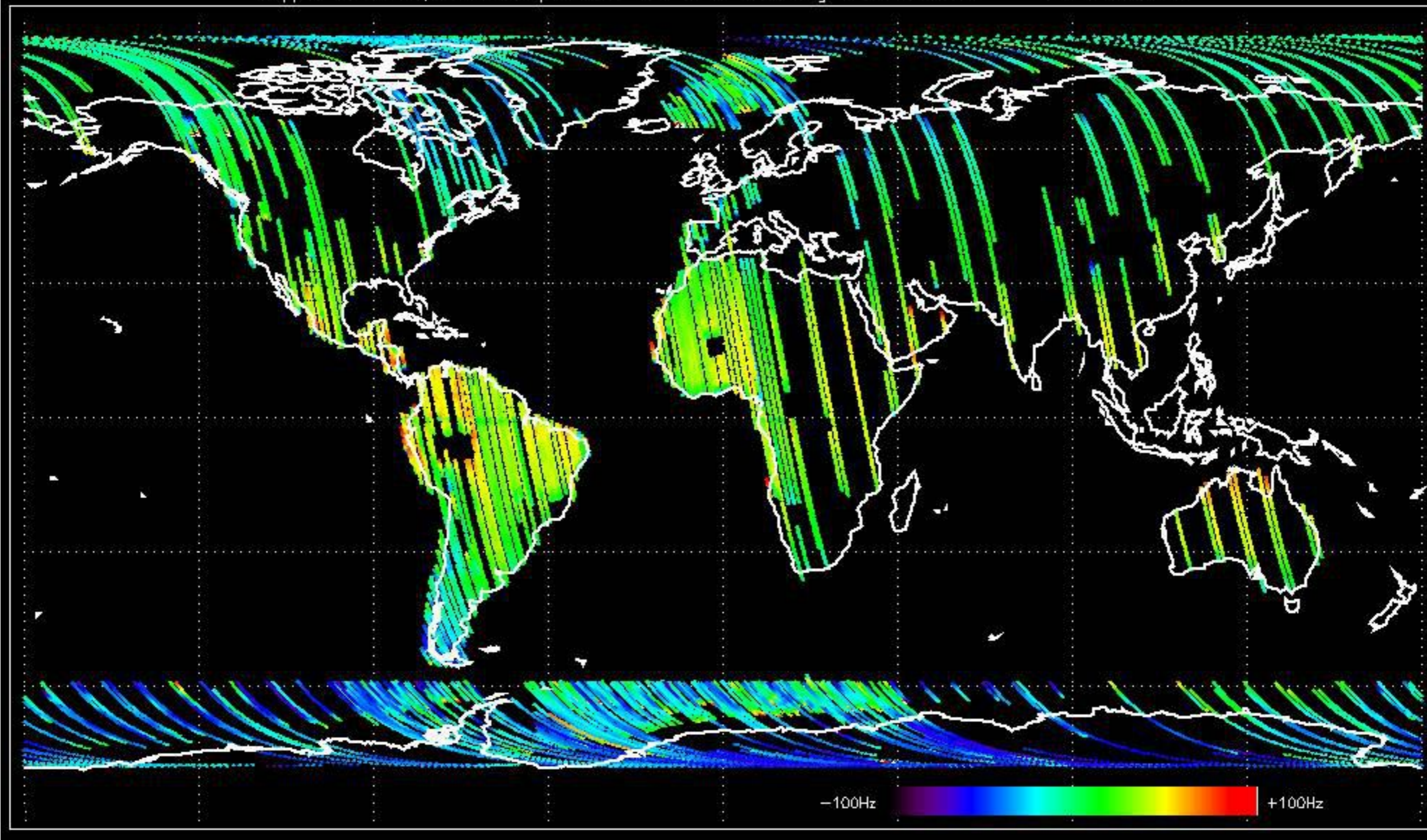
Doppler 'WVS' 'IS2' descending



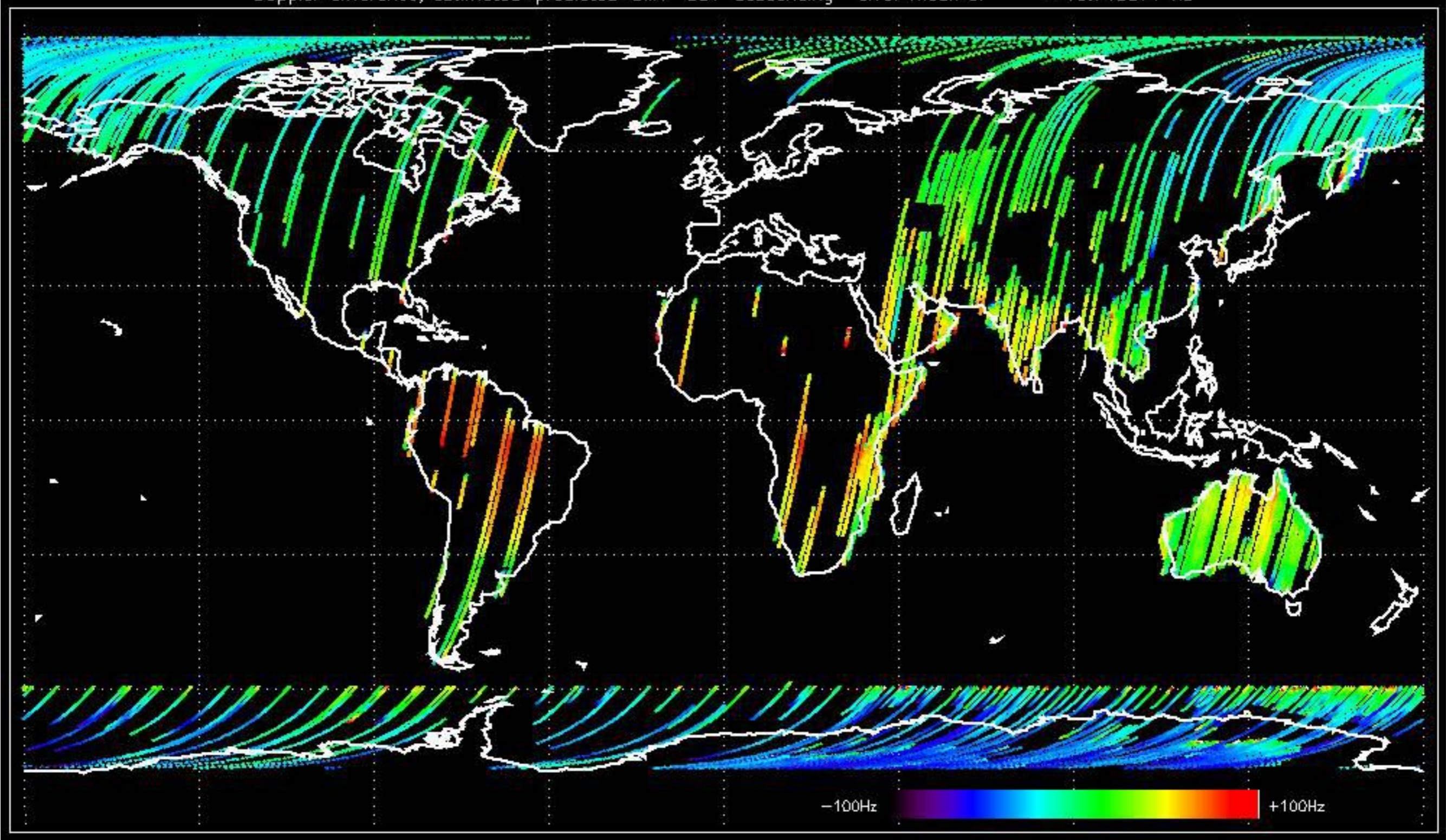




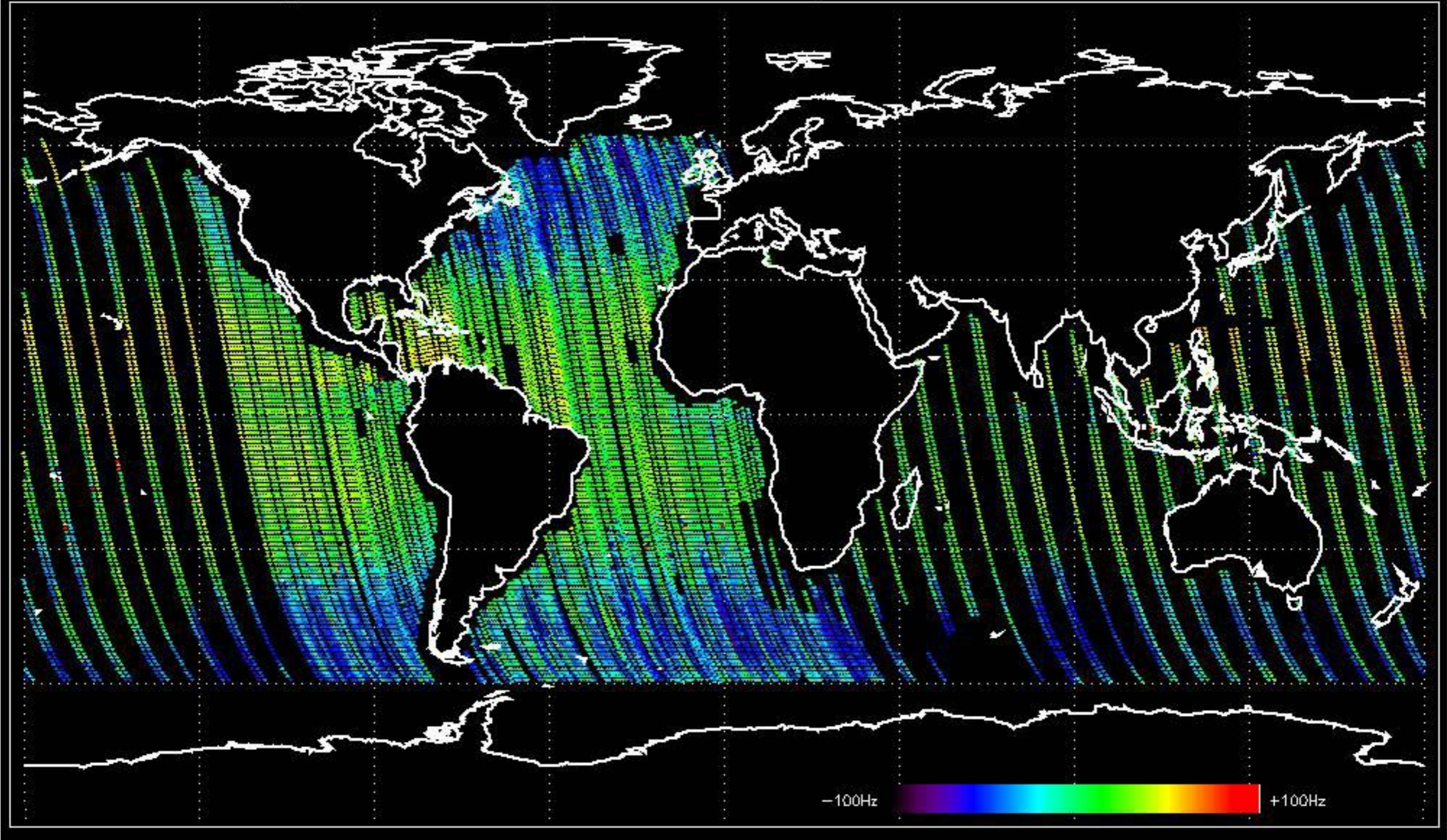
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.484494 Hz



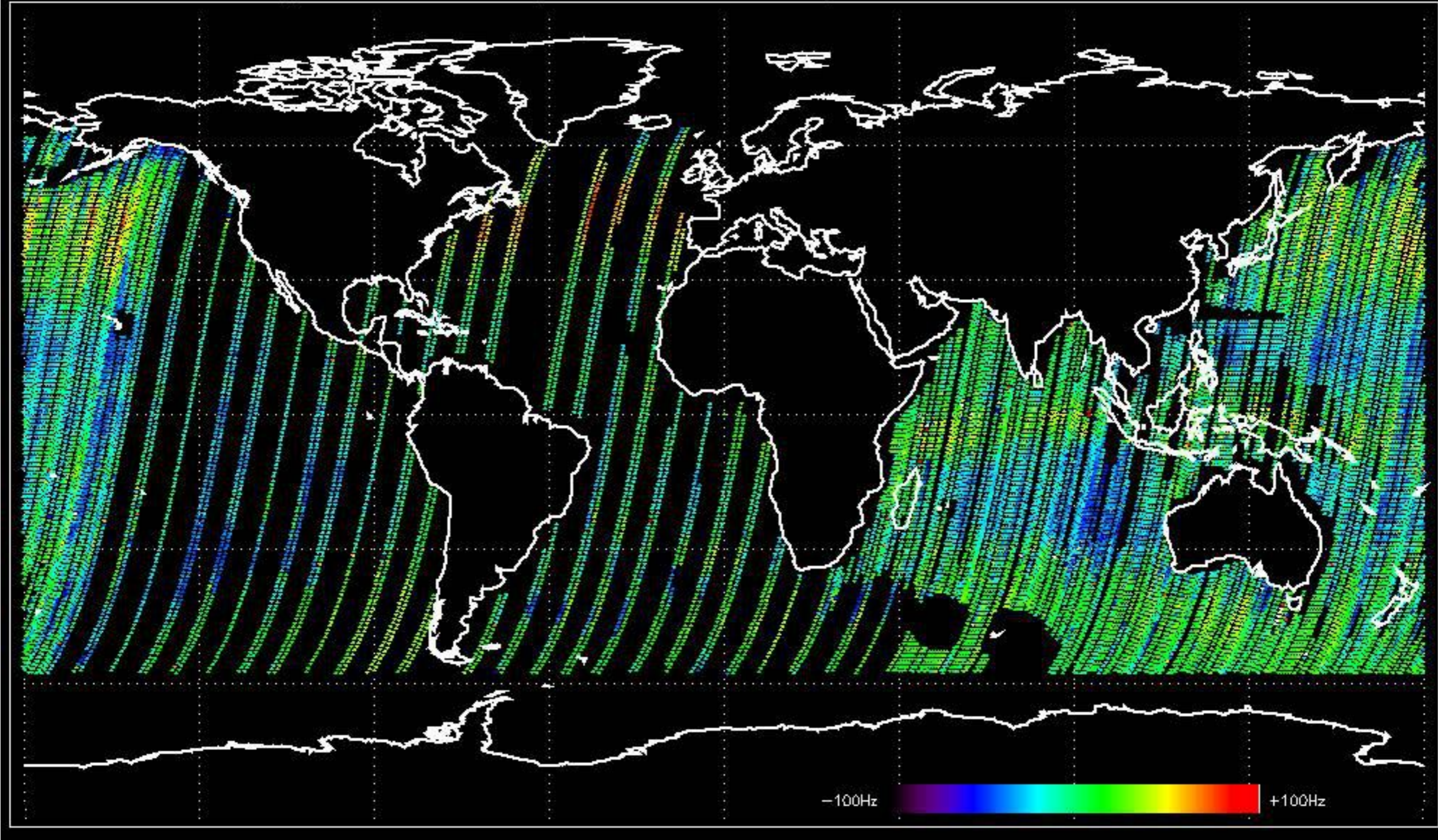
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -16.743071 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -13.868648 Hz

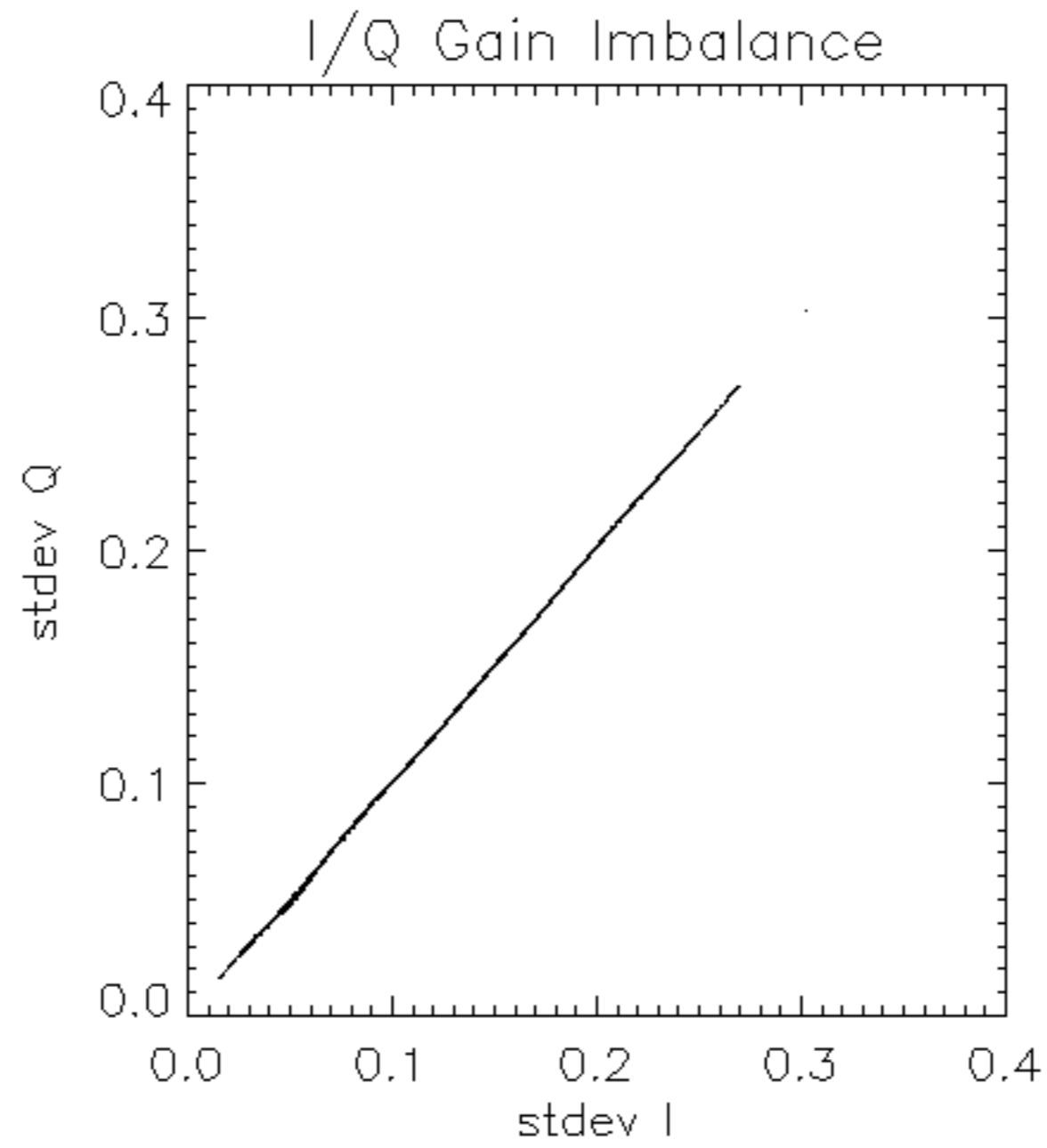


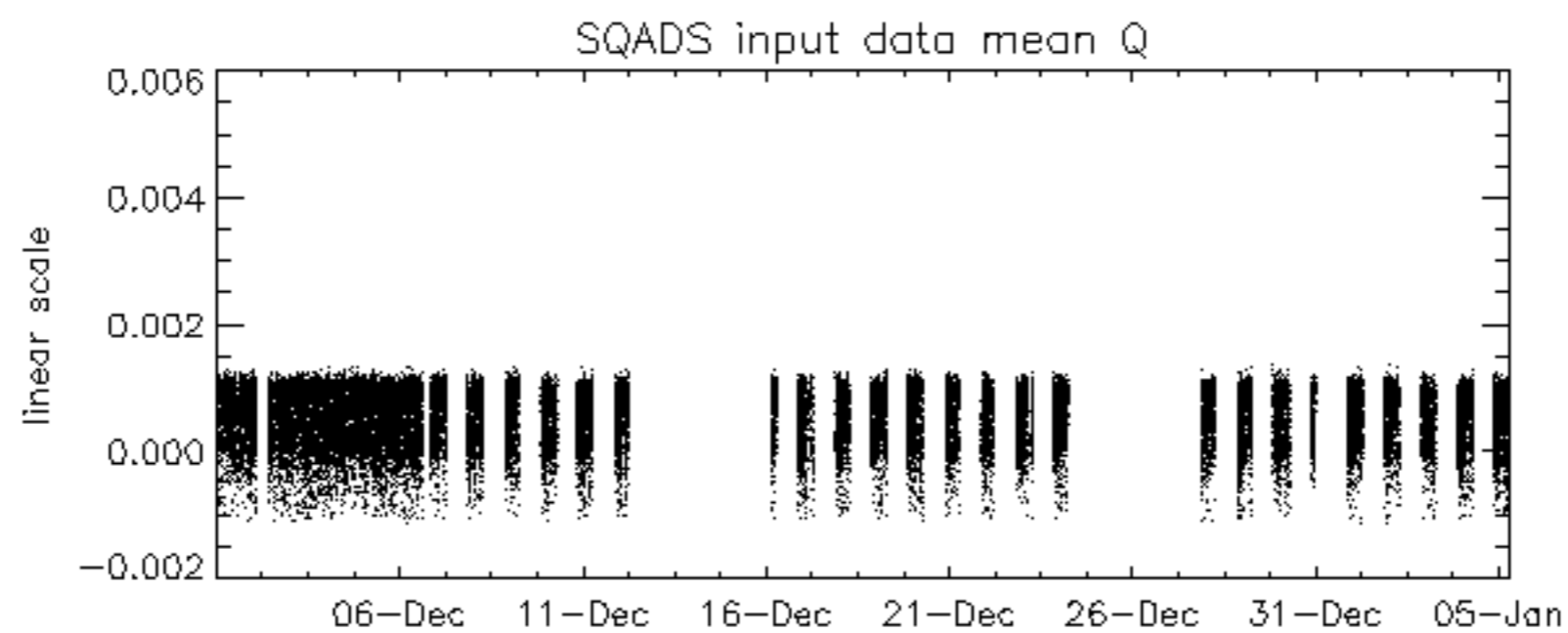
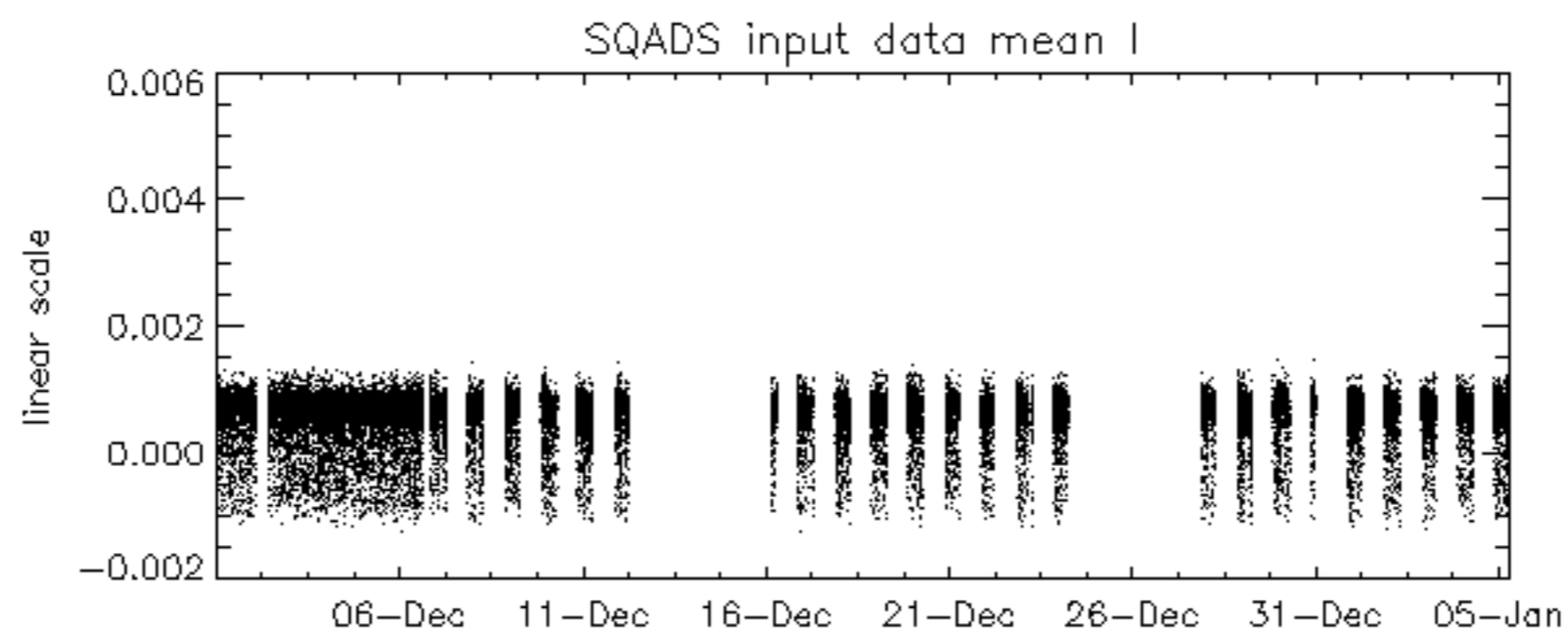
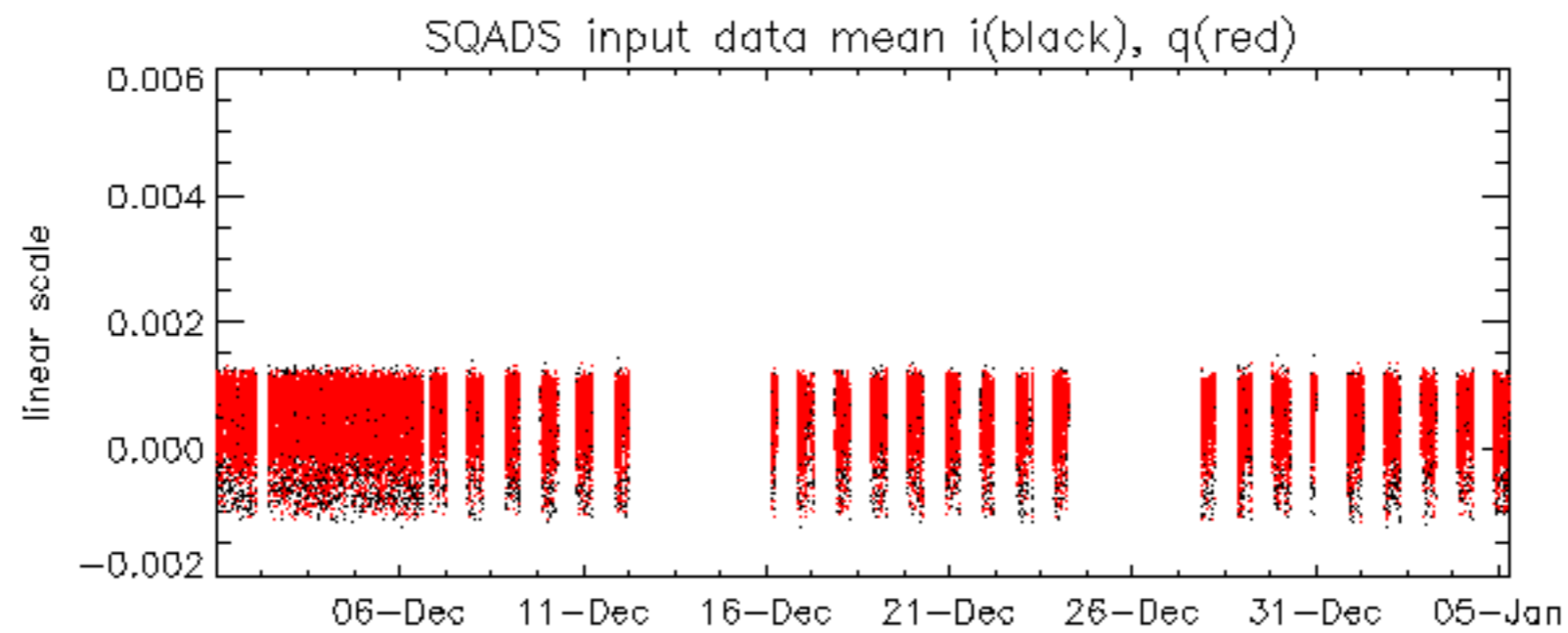
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.5056850 Hz

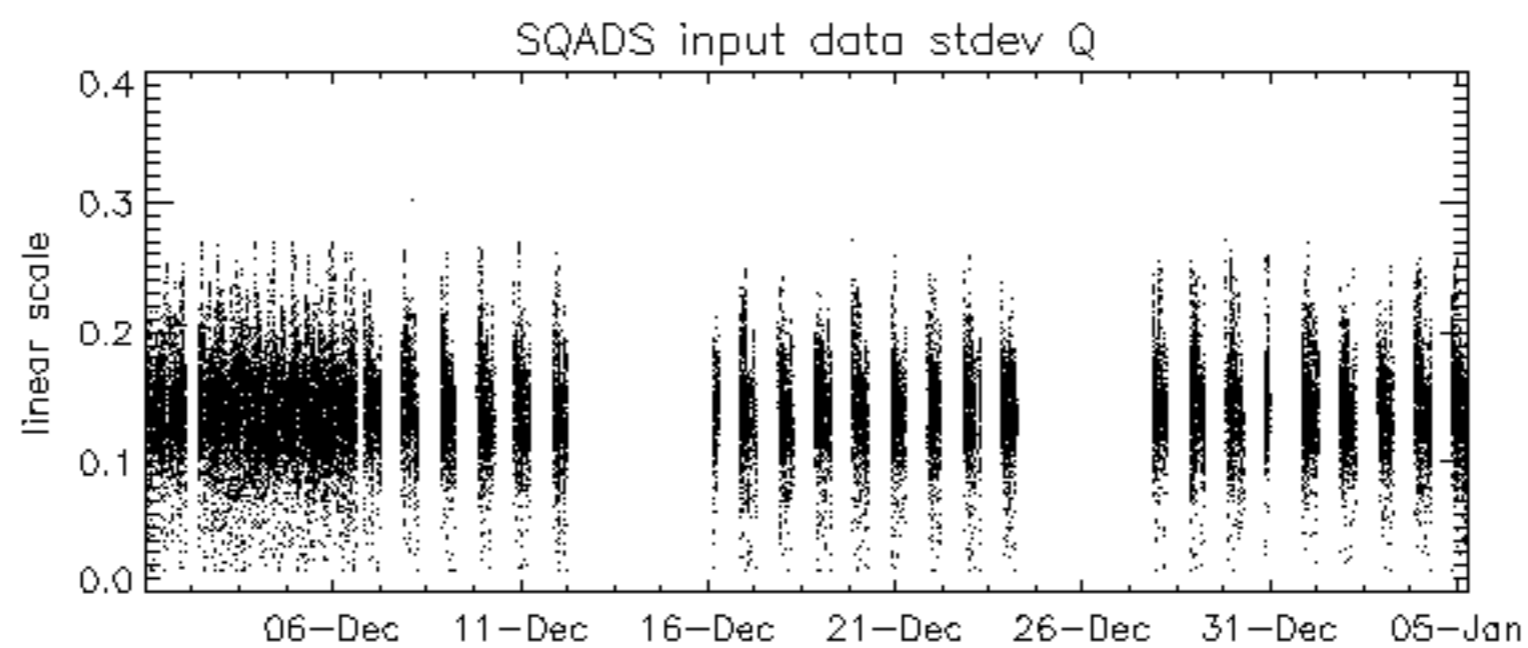
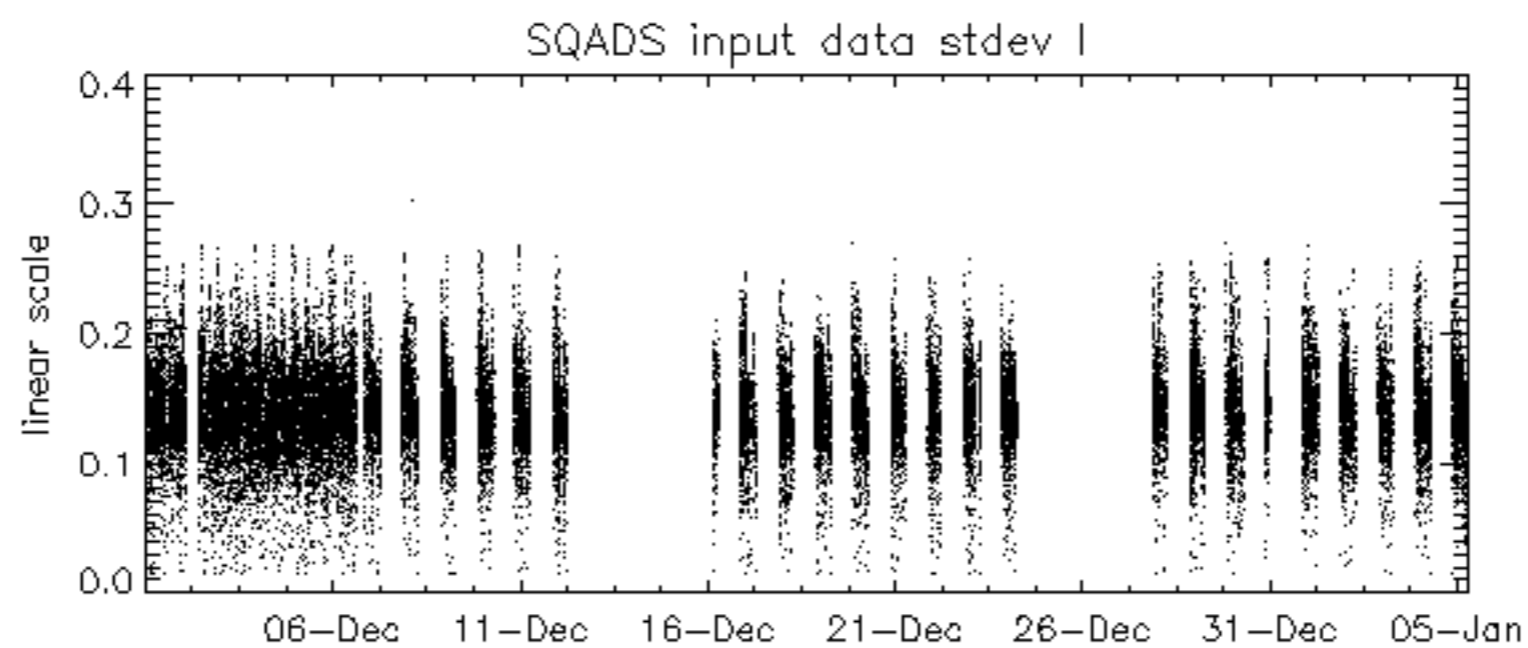
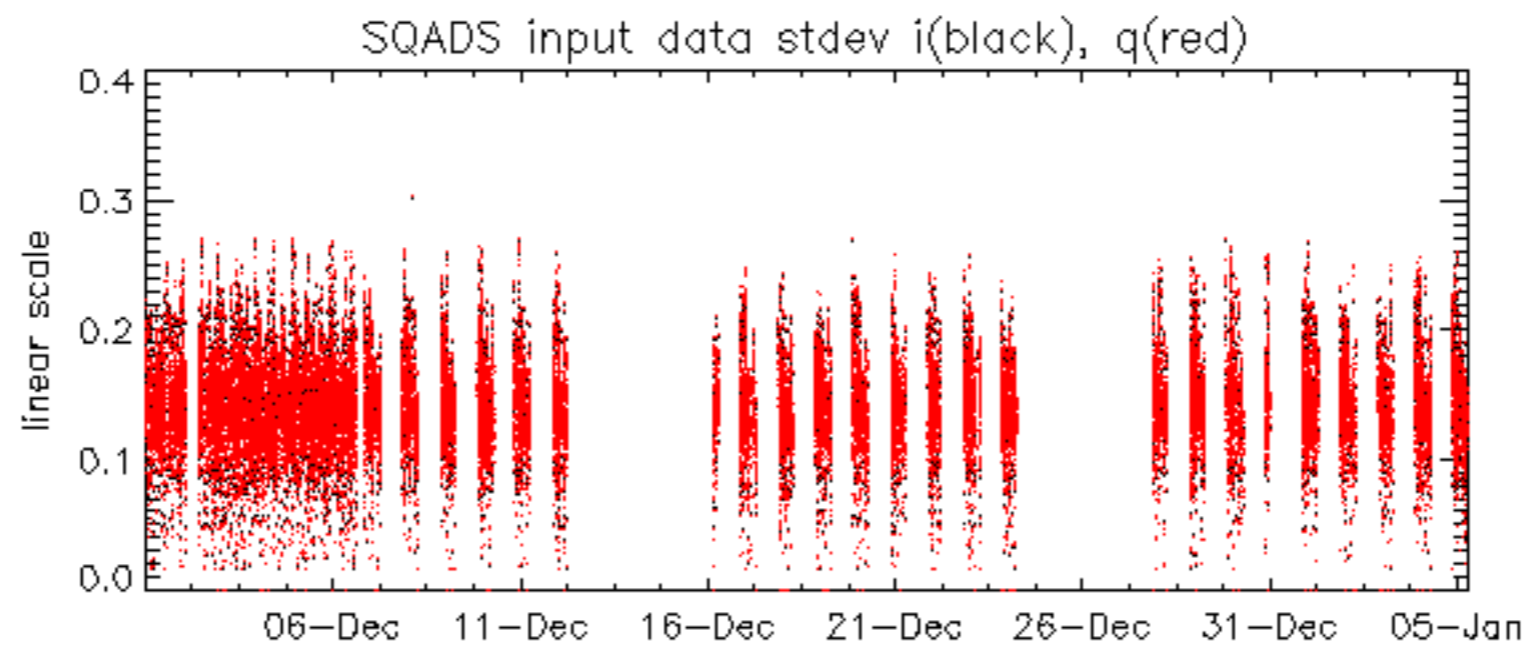


No anomalies observed on available MS products:

No anomalies observed.



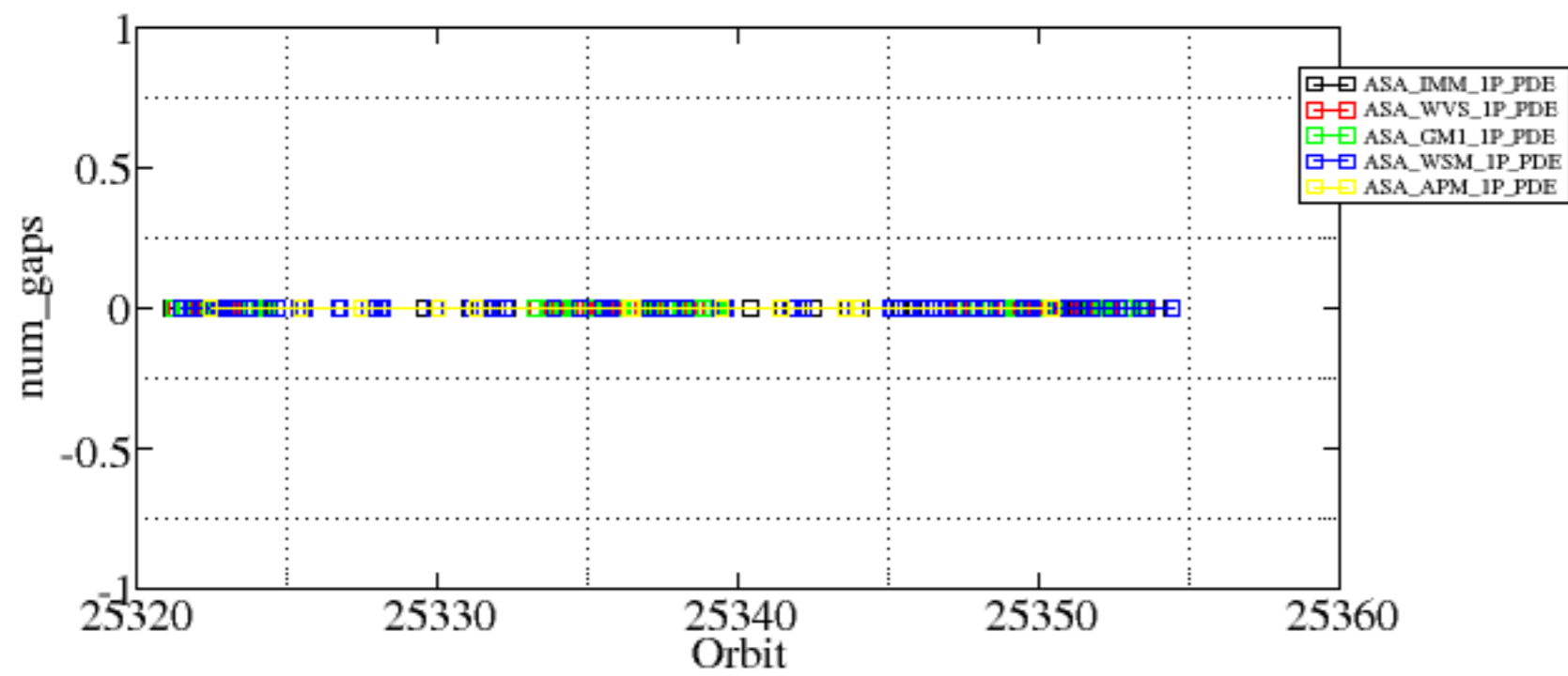


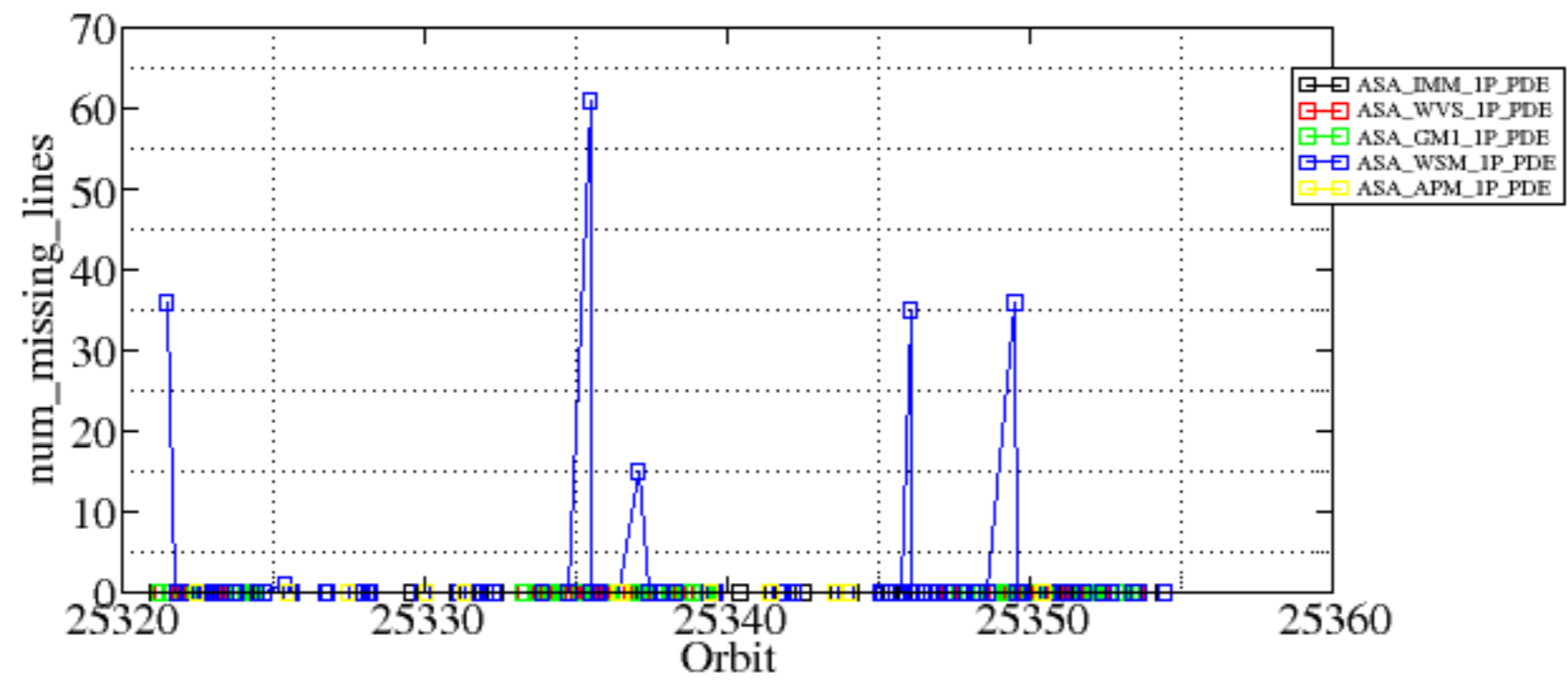


Summary of analysis for the last 3 days 2007010[345]

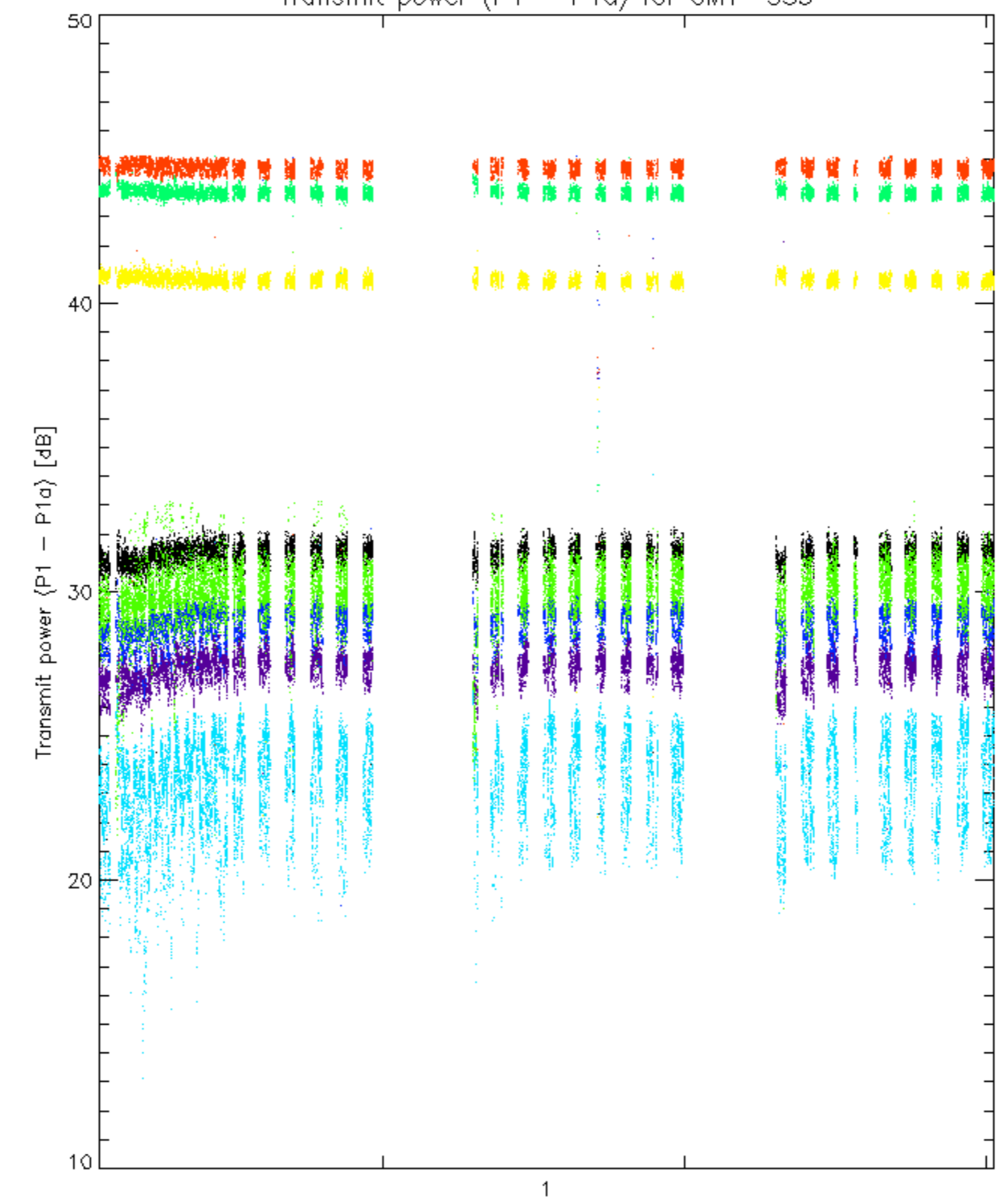
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20070103_005606_000003242054_00217_25321_9226.N1	0	36
ASA_WSM_1PNPDE20070103_072858_000003062054_00221_25325_9975.N1	0	1
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

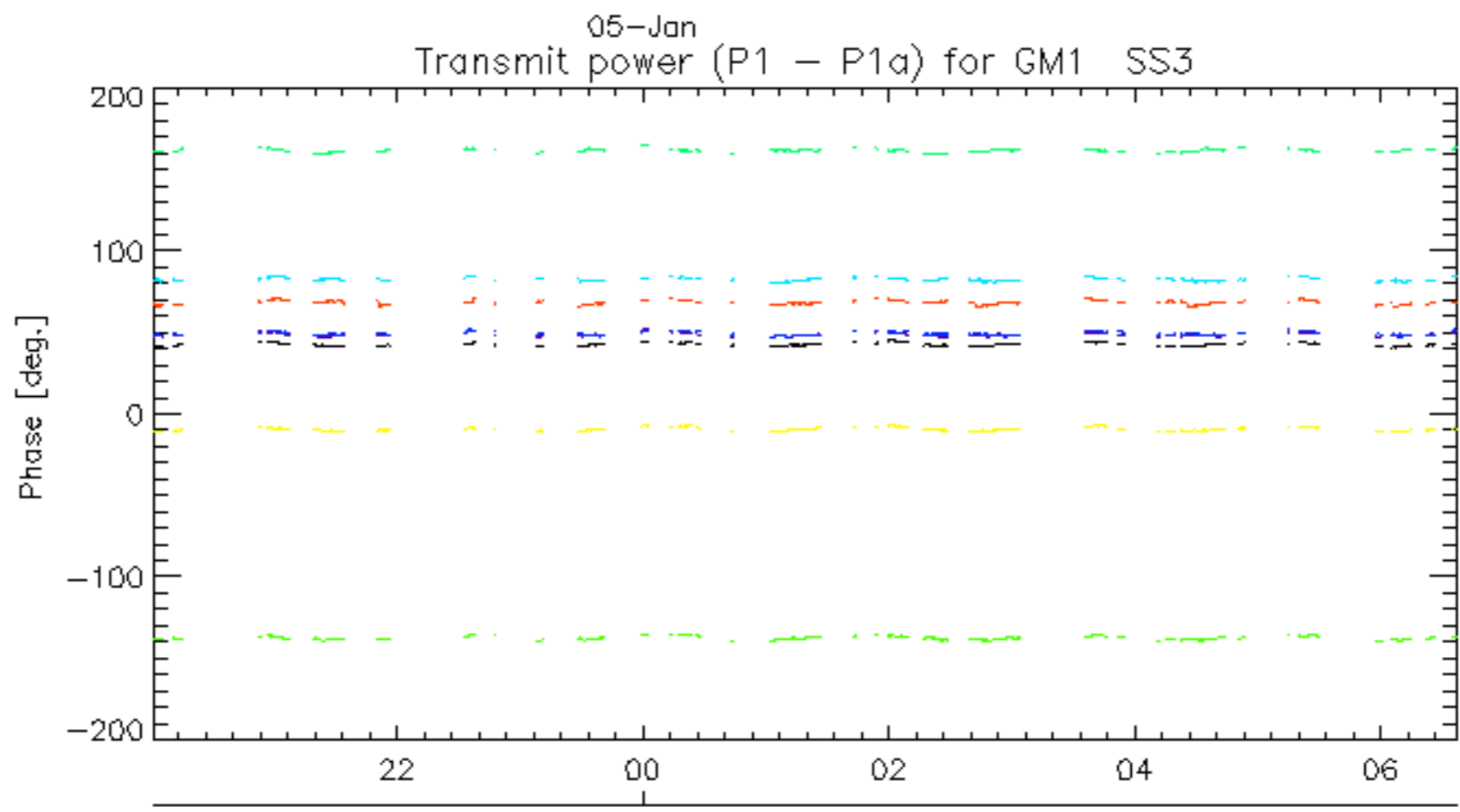
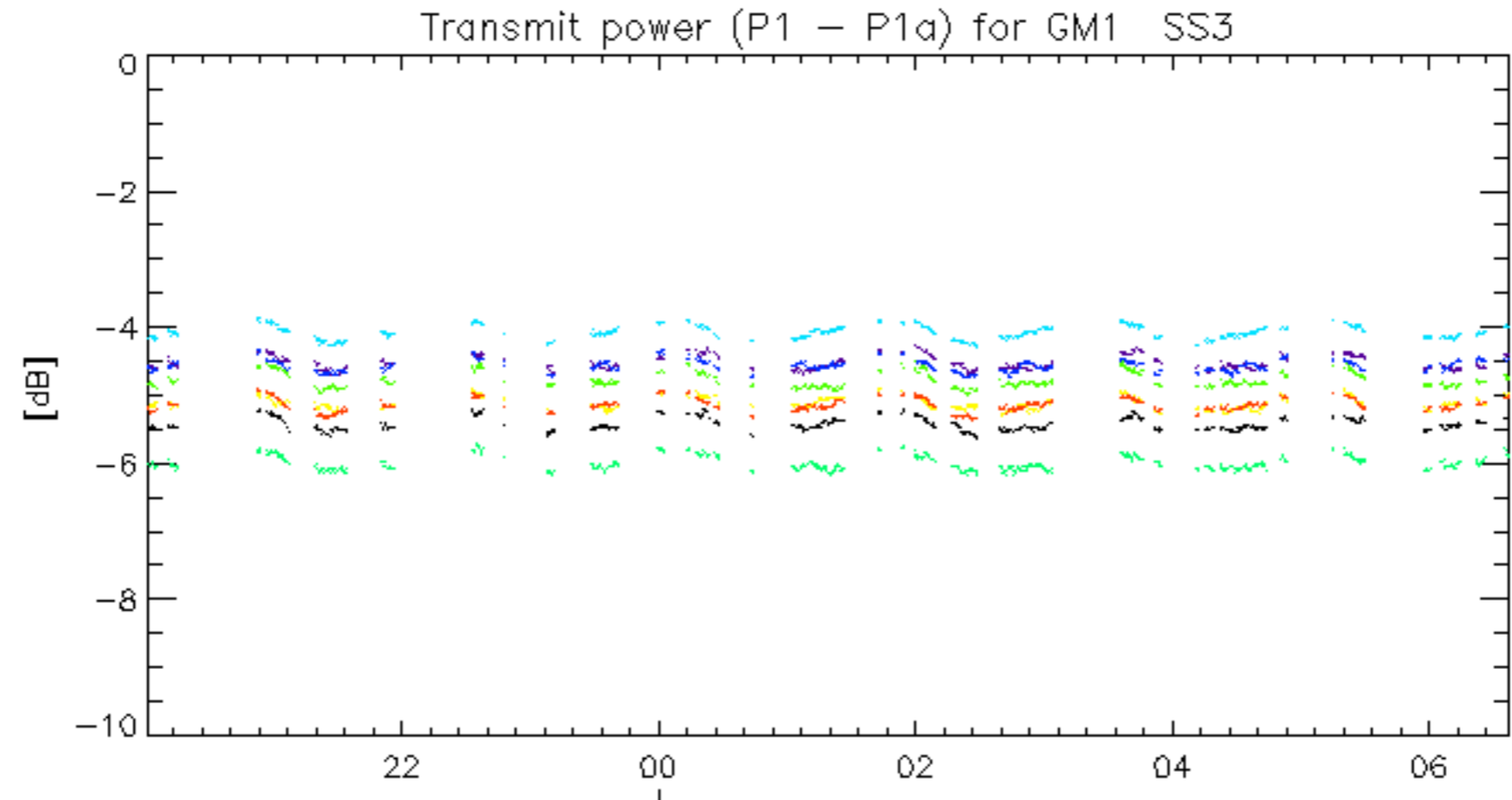




Transmit power (P1 - P1a) for GM1 SS3

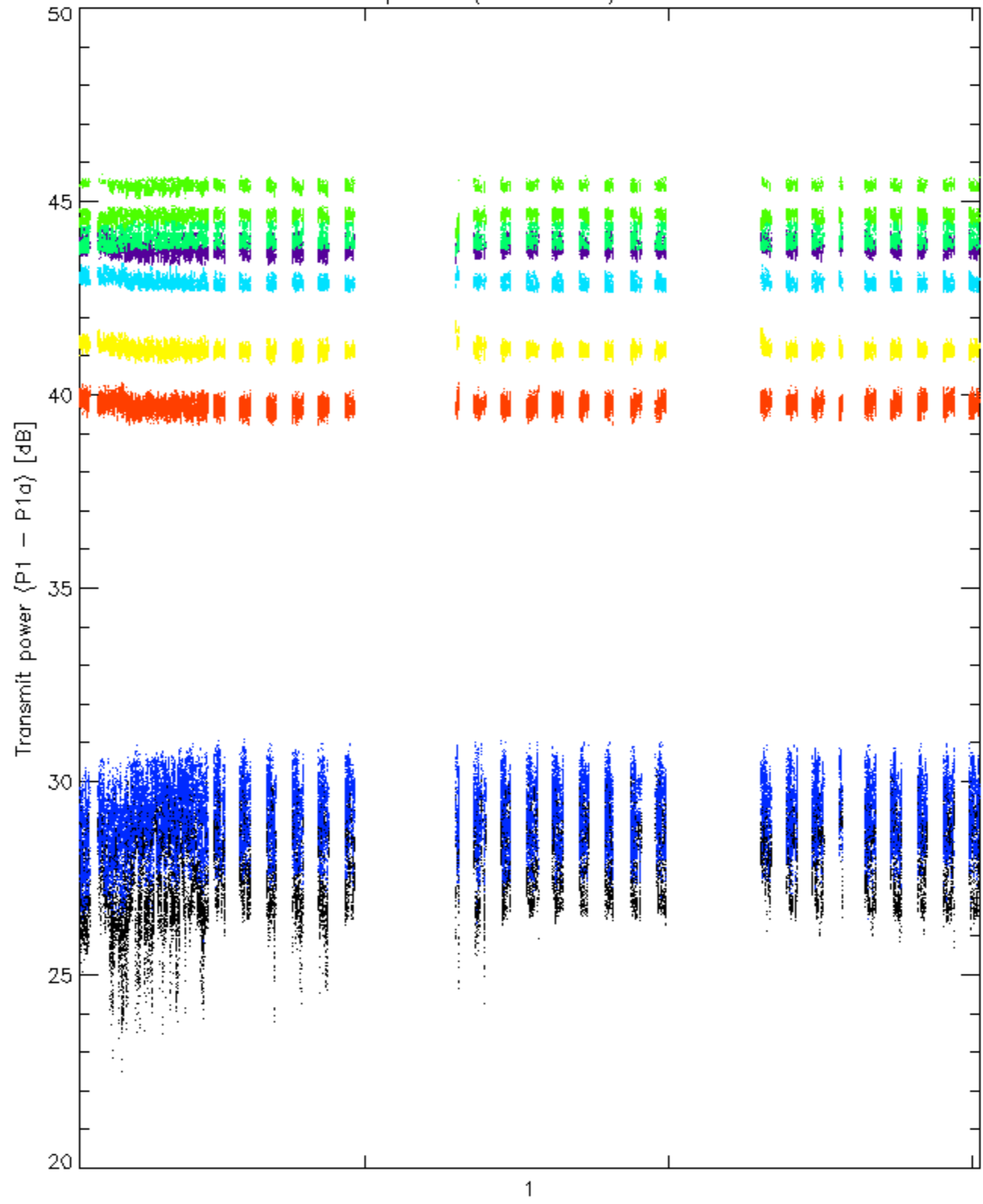


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

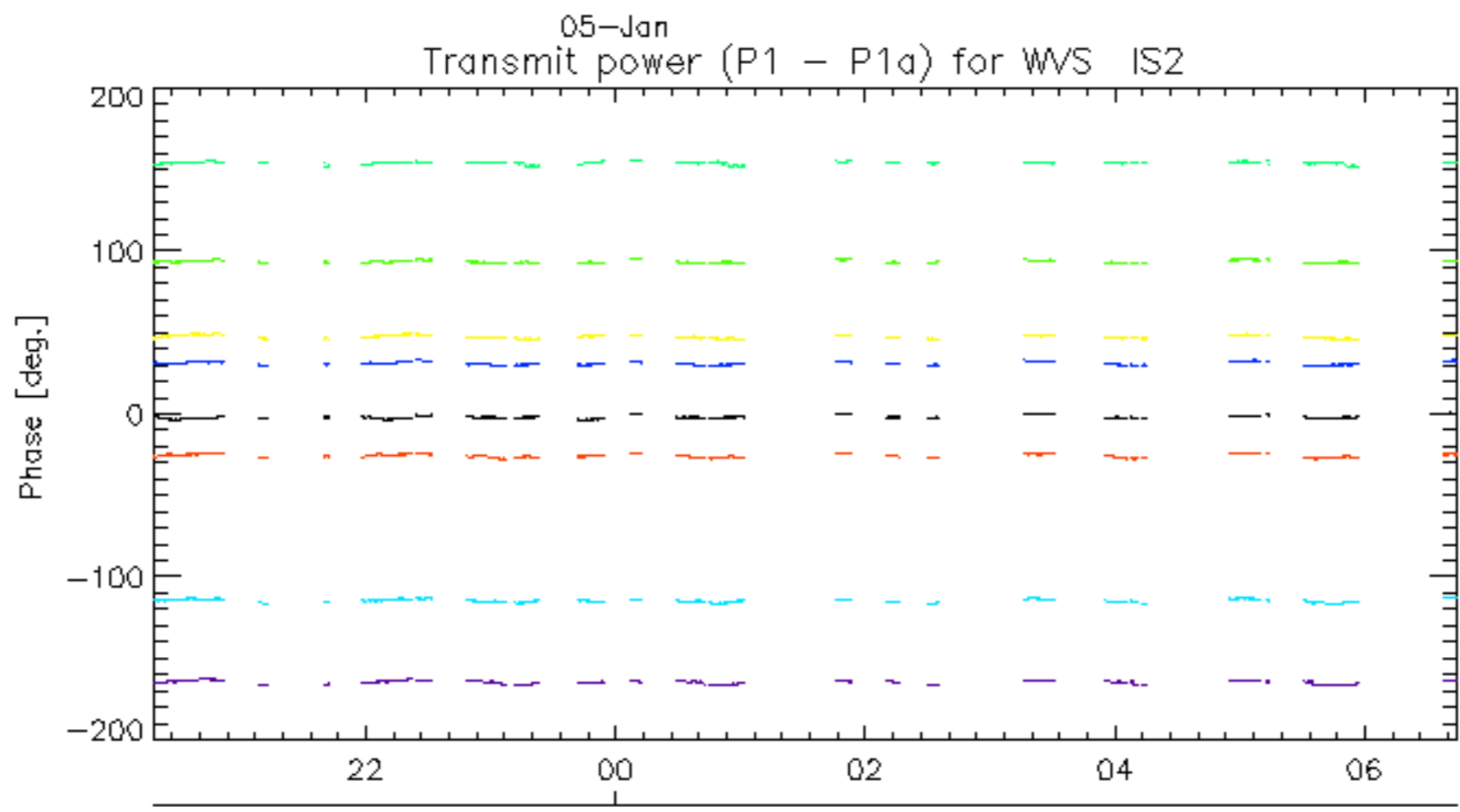
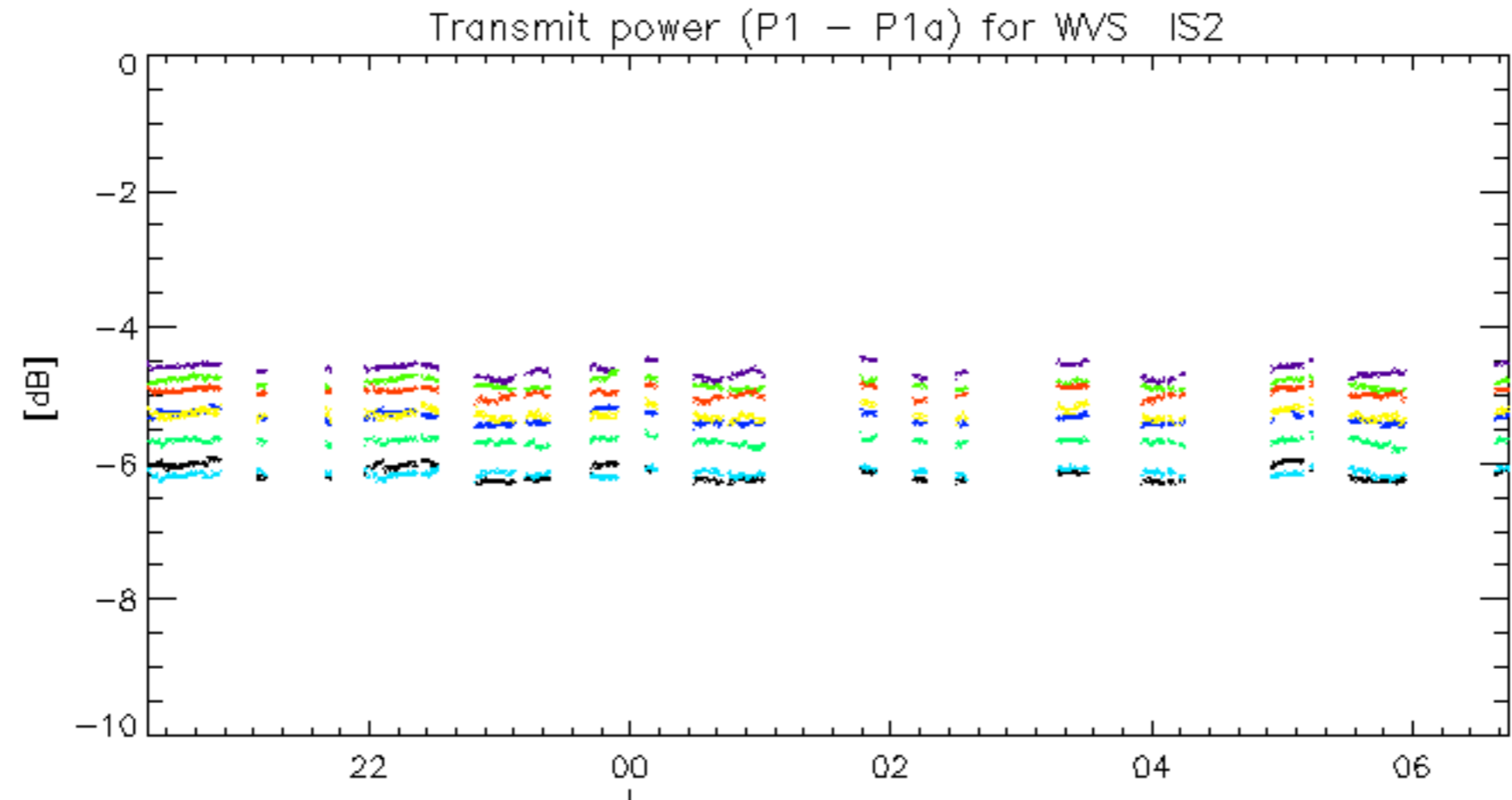


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

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.