

PRELIMINARY REPORT OF 070126

last update on Fri Jan 26 16:37:31 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-01-25 00:00:00 to 2007-01-26 16:37:31

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	42	77	9	1	23
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	42	77	9	1	23
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	77	9	1	23
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	42	77	9	1	23

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	38	49	40	15	52
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	38	49	40	15	52
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	38	49	40	15	52
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	38	49	40	15	52

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	20070126 055505
H	20070125 062641

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



P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.710668	0.043015	0.598536
7	P1a	-10.017010	0.040767	0.607075
11	P1a	-10.507702	0.056483	-0.022064
15	P1a	-10.753468	0.121654	-1.819984
19	P1a	-15.790381	0.064139	-0.574312
22	P1a	-21.602970	1.863287	0.038720
26	P1a	-15.590709	0.376528	-0.109543
30	P1a	-18.131416	0.284356	-0.898060

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.037076	0.011242	0.220576
7	P1	-2.544391	0.005333	0.177163
11	P1	-2.957752	0.011046	-0.179017
15	P1	-3.740617	0.021103	-0.424291
19	P1	-3.611759	0.015192	-0.467851
22	P1	-5.096435	0.018665	-0.322380
26	P1	-5.982694	0.021314	-0.198862
30	P1	-5.333424	0.041458	0.418934

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.212854	0.093573	-0.304498
7	P2	-22.109816	0.135675	0.059298
11	P2	-10.991687	0.079353	-0.021716
15	P2	-5.161130	0.099826	0.176533

19	P2	-7.282871	0.083888	-0.247626
22	P2	-8.341740	0.082097	0.155368
26	P2	-24.336012	0.072578	-0.350743
30	P2	-21.709681	0.076341	0.214151

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.226918	0.007443	-0.230323
7	P3	-8.226918	0.007443	-0.230323
11	P3	-8.226918	0.007443	-0.230323
15	P3	-8.226918	0.007443	-0.230323
19	P3	-8.226918	0.007443	-0.230323
22	P3	-8.226918	0.007443	-0.230323
26	P3	-8.226918	0.007443	-0.230323
30	P3	-8.226918	0.007443	-0.230323

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	-11.729264	0.064480	-0.064174
7	P1a	-10.027907	0.073873	0.027516
11	P1a	-10.379918	0.075412	-0.137589
15	P1a	-10.752109	0.151027	-0.117030
19	P1a	-15.753567	0.088053	-0.029775
22	P1a	-21.436621	1.483910	0.739907
26	P1a	-15.875006	0.323525	0.610238
30	P1a	-18.008553	0.378816	-0.524054

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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3	P1	-3.920645	0.012455	-0.013339
7	P1	-2.461211	0.052666	0.073258
11	P1	-2.827458	0.014463	-0.021882
15	P1	-3.727967	0.031625	-0.116434
19	P1	-3.553054	0.017813	-0.021110
22	P1	-5.004805	0.021677	-0.040707
26	P1	-6.039243	0.022768	0.019516
30	P1	-5.342728	0.034292	0.049909

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.387434	0.076894	0.214193
7	P2	-22.155638	0.160526	0.193655
11	P2	-10.801110	0.076379	0.181720
15	P2	-4.931319	0.160429	0.152097
19	P2	-6.919952	0.143258	0.116281
22	P2	-8.213971	0.089341	0.077117
26	P2	-24.330153	0.118022	0.109843
30	P2	-21.873377	0.110666	0.153680

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.081231	0.002771	0.046249
7	P3	-8.080927	0.002766	0.046092
11	P3	-8.081066	0.002775	0.046439
15	P3	-8.081030	0.002767	0.046164
19	P3	-8.080985	0.002776	0.046456
22	P3	-8.081141	0.002772	0.045632
26	P3	-8.081161	0.002773	0.046735
30	P3	-8.081093	0.002767	0.046154

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	0.000574904
	stdev	1.71098e-07
MEAN Q	mean	0.000500154
	stdev	2.07213e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.132974
	stdev	0.00169599
STDEV Q	mean	0.133307
	stdev	0.00172352



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007012[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
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ASA_IMM_1PNPDE20070125_015755_00000802055_00031_25636_3224.N1	1	19
ASA_GM1_1PNPDK20070124_111259_000004342055_00023_25628_1933.N1	0	14
ASA_GM1_1PNPDK20070124_152257_000007732055_00025_25630_2384.N1	0	7
ASA_GM1_1PNPDK20070124_174519_000005132055_00027_25632_2481.N1	0	36
ASA_GM1_1PNPDK20070124_192744_000003202055_00028_25633_2595.N1	0	8
ASA_WSM_1PNPDE20070125_024515_00000852055_00032_25637_2992.N1	50	10096
ASA_WSM_1PNPDE20070125_152549_000001832055_00040_25645_3606.N1	0	28
ASA_WSM_1PNPDE20070125_170441_00000862055_00041_25646_3646.N1	0	18



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

7.2 - Absolute Doppler for WVS

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

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"/>

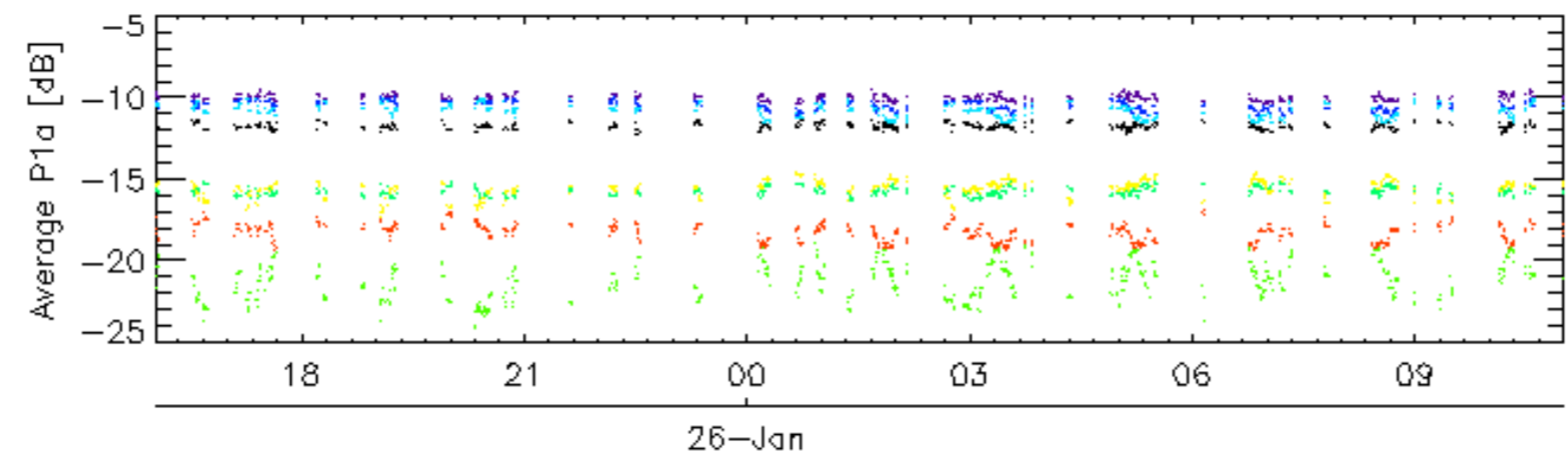
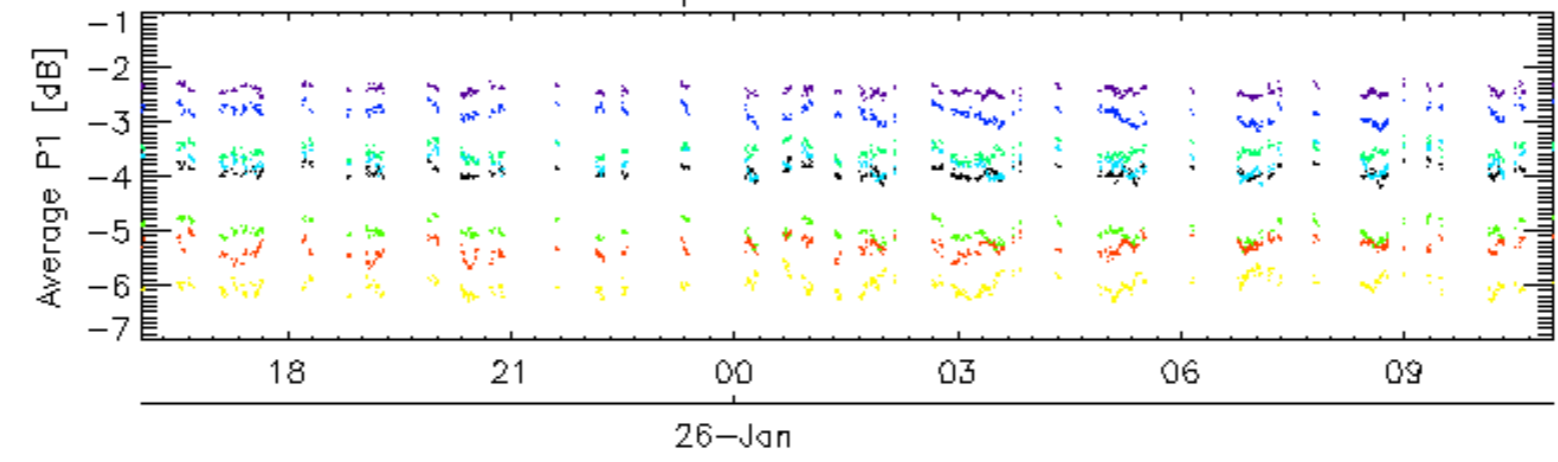
Descending

7.6 - Doppler evolution versus ANX for GM1

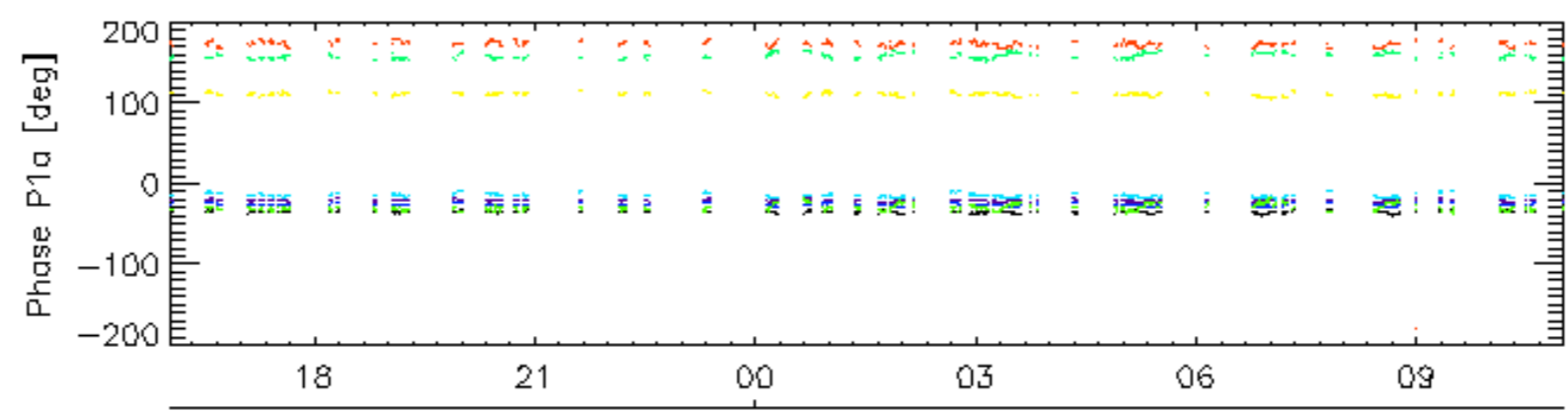
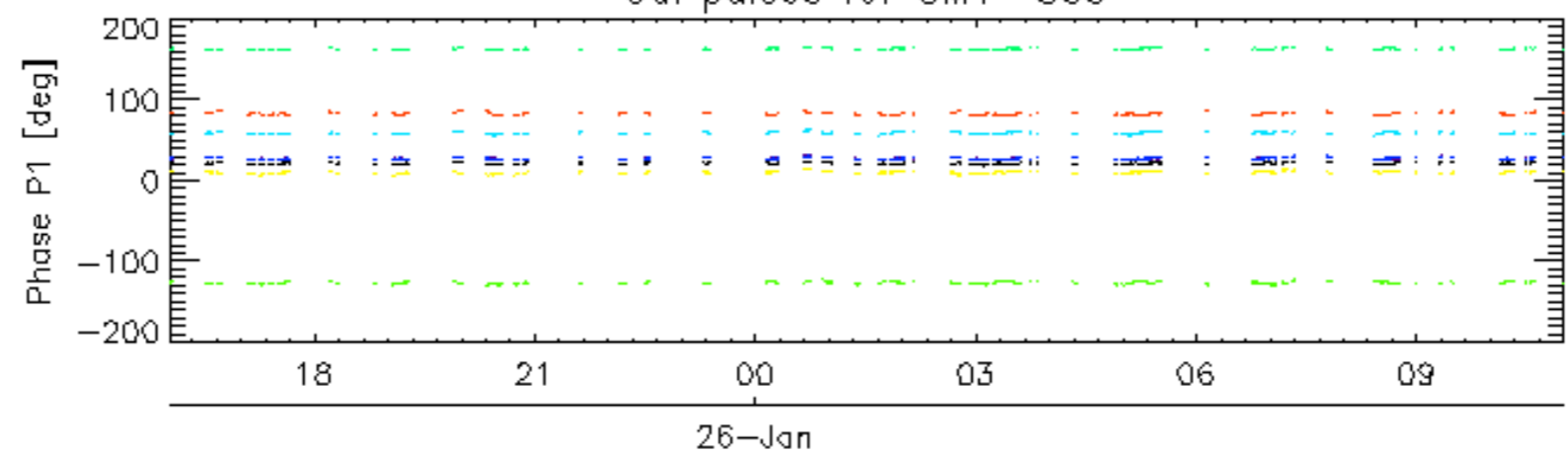
Evolution Doppler error versus ANX

<input type="checkbox"/>

Cal pulses for GM1 SS3

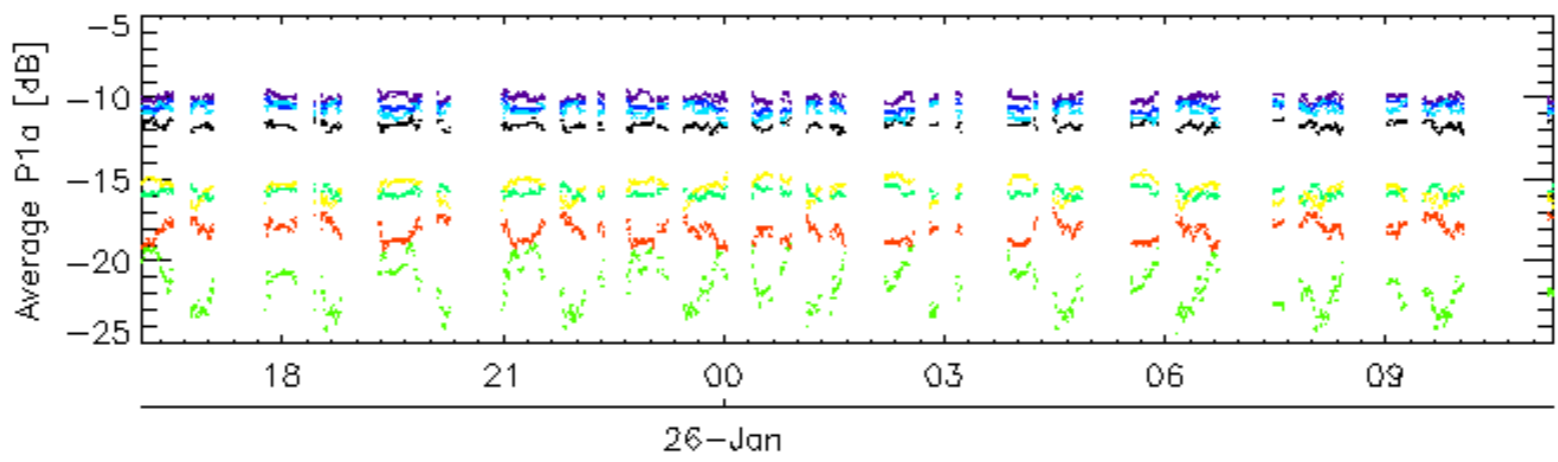
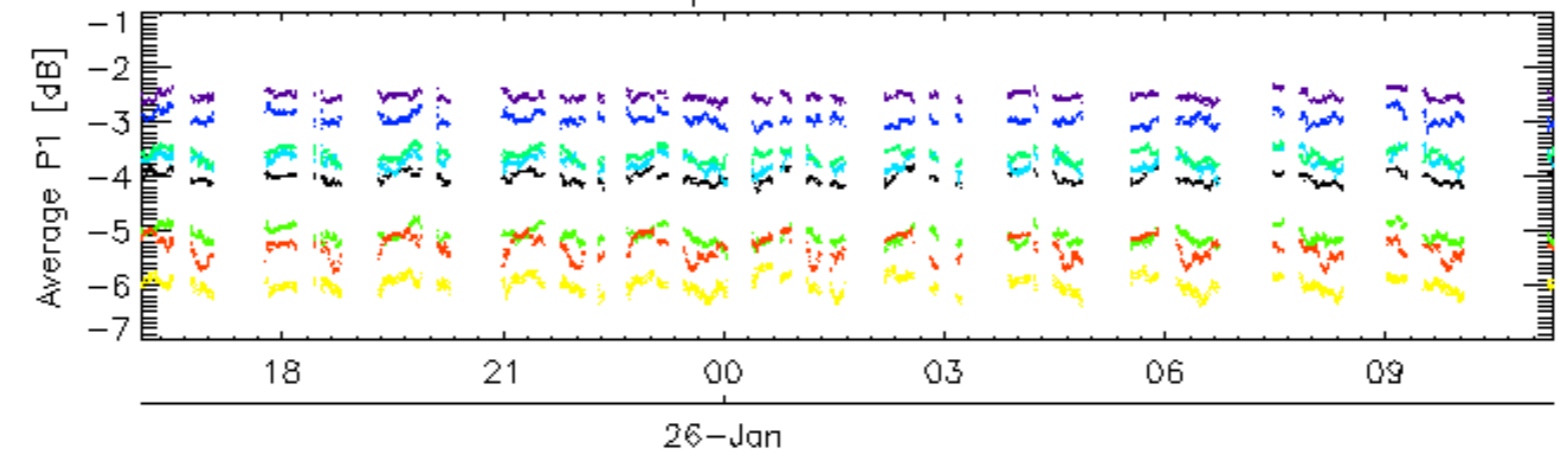


Cal pulses for GM1 SS3

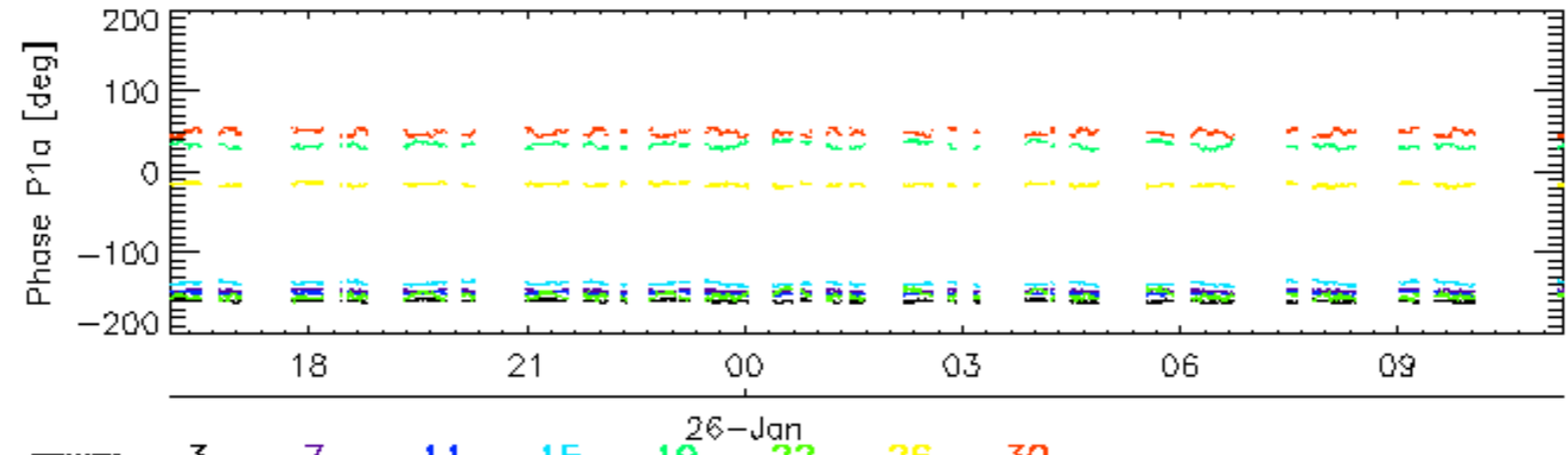
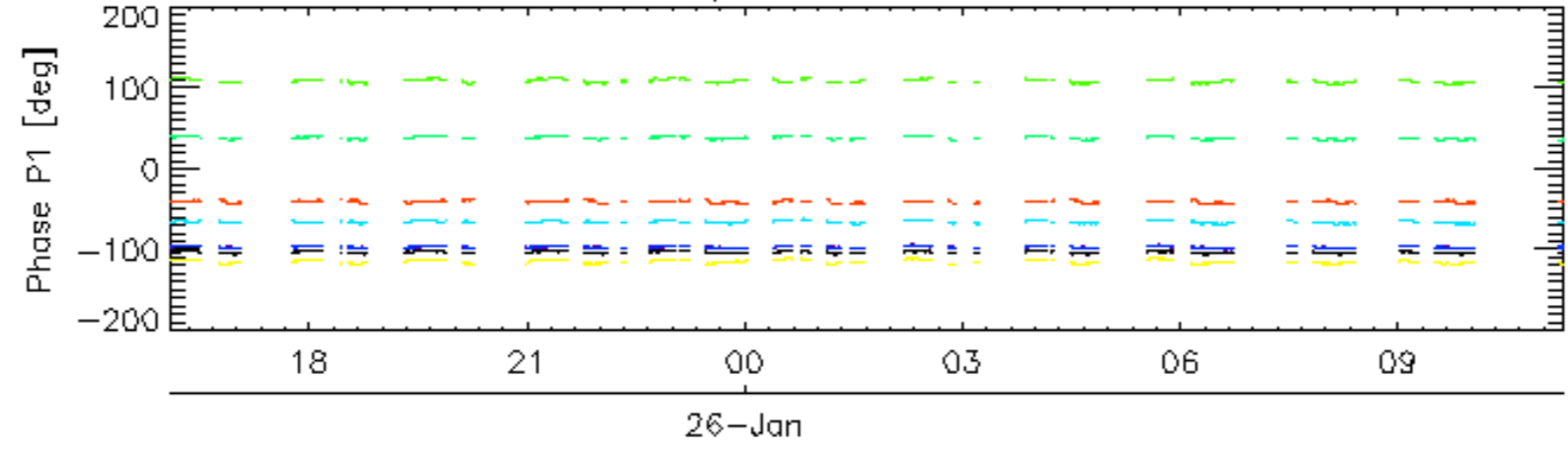


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Cal pulses for WVS IS4

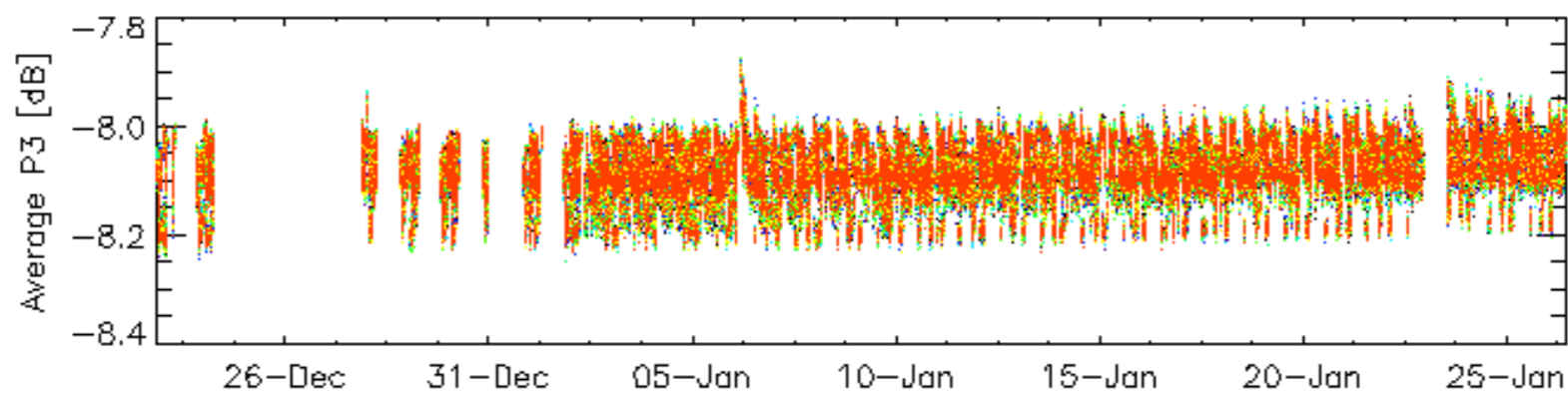
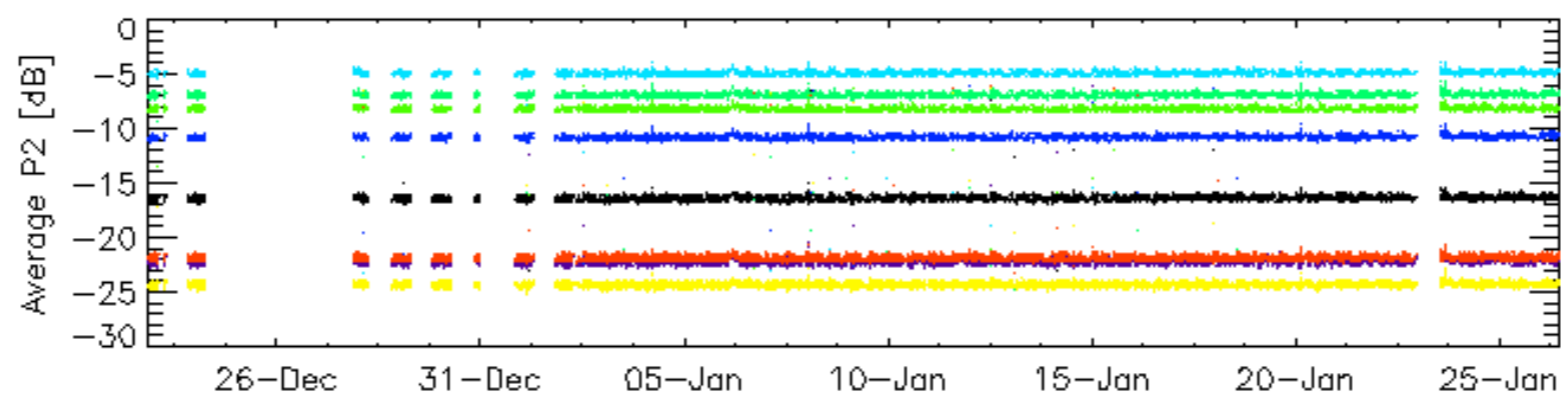
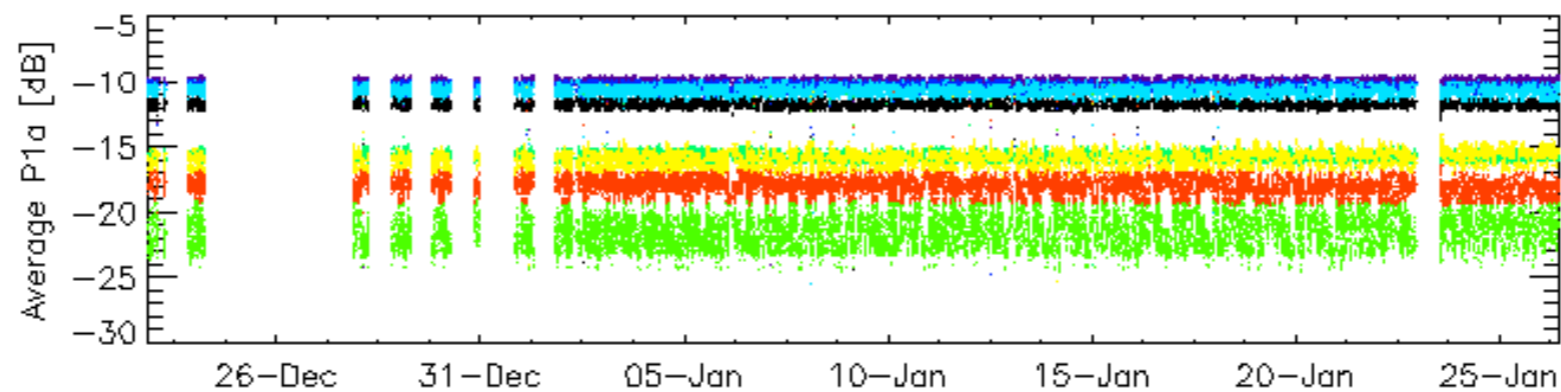
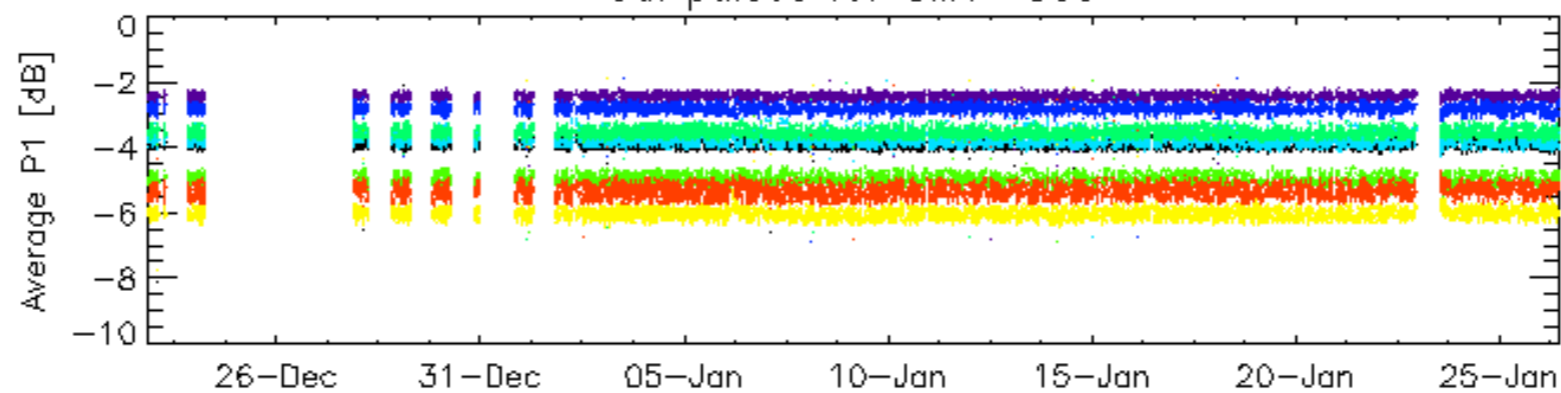


Cal pulses for WVS IS4



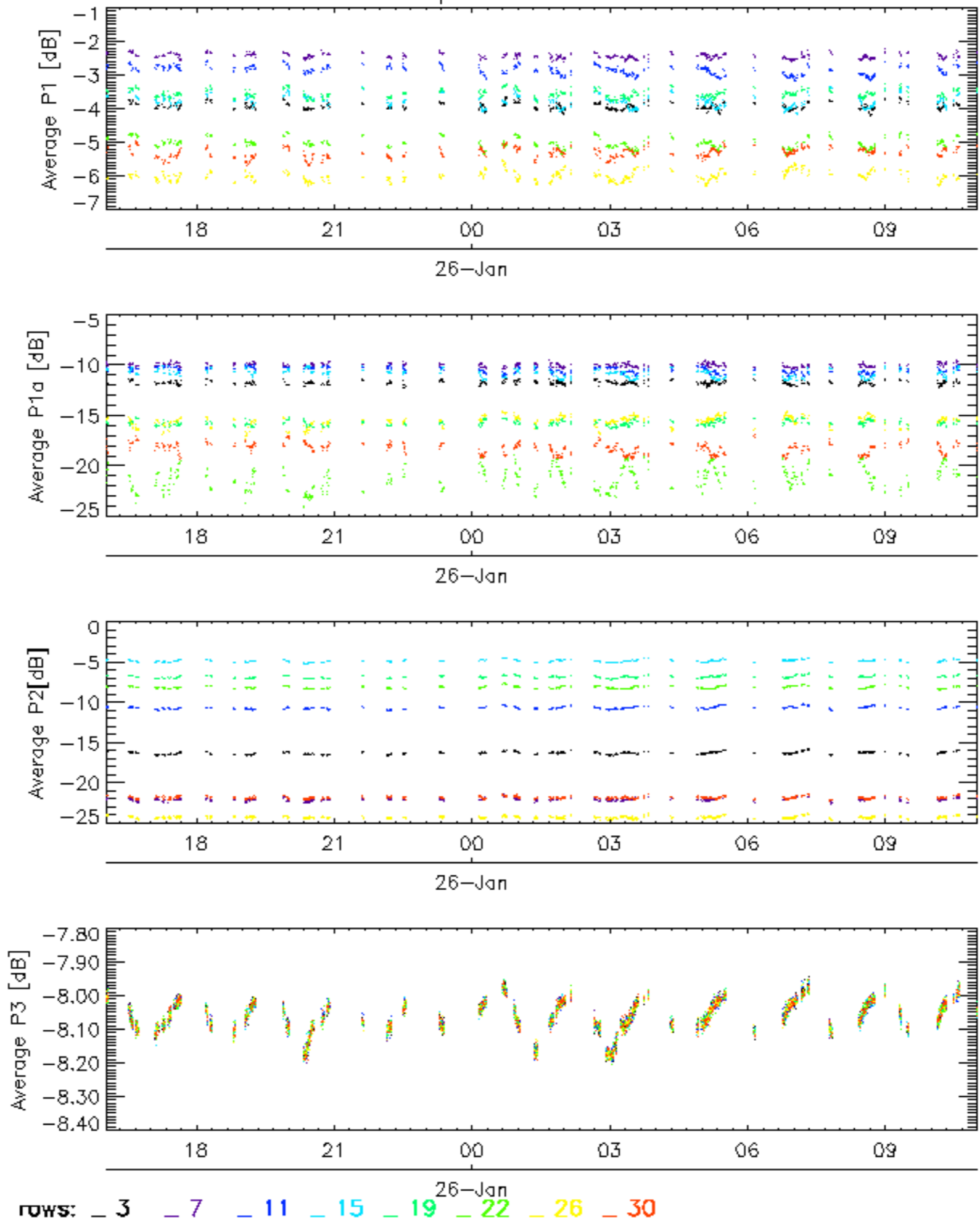
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

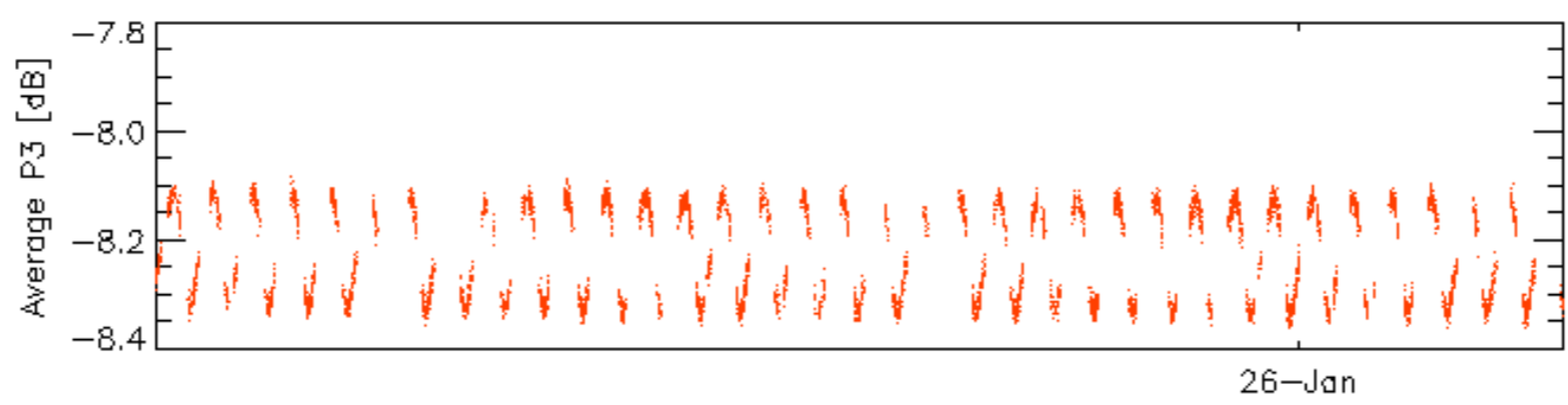
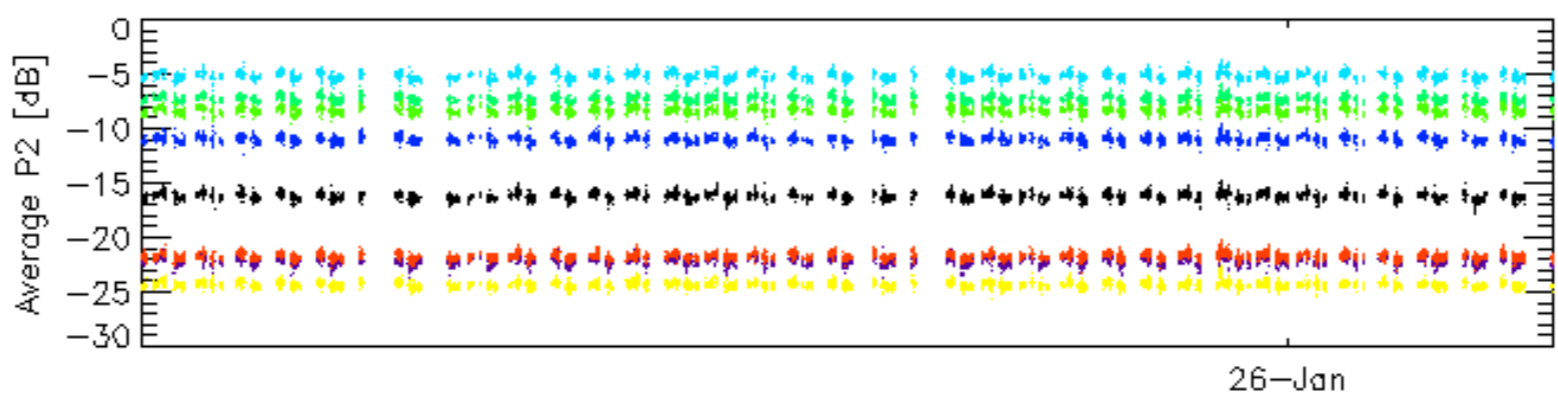
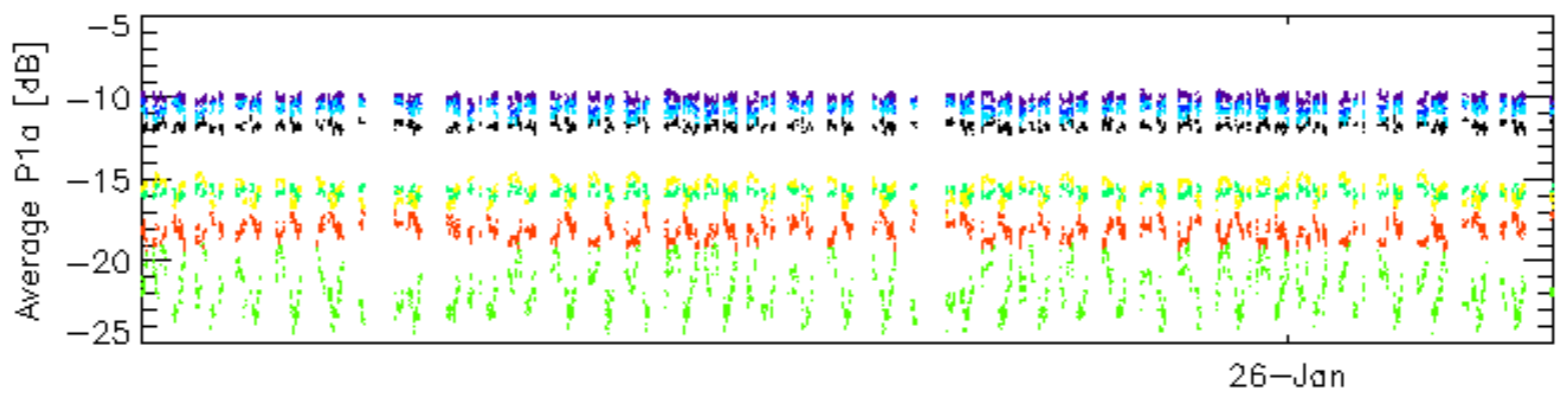
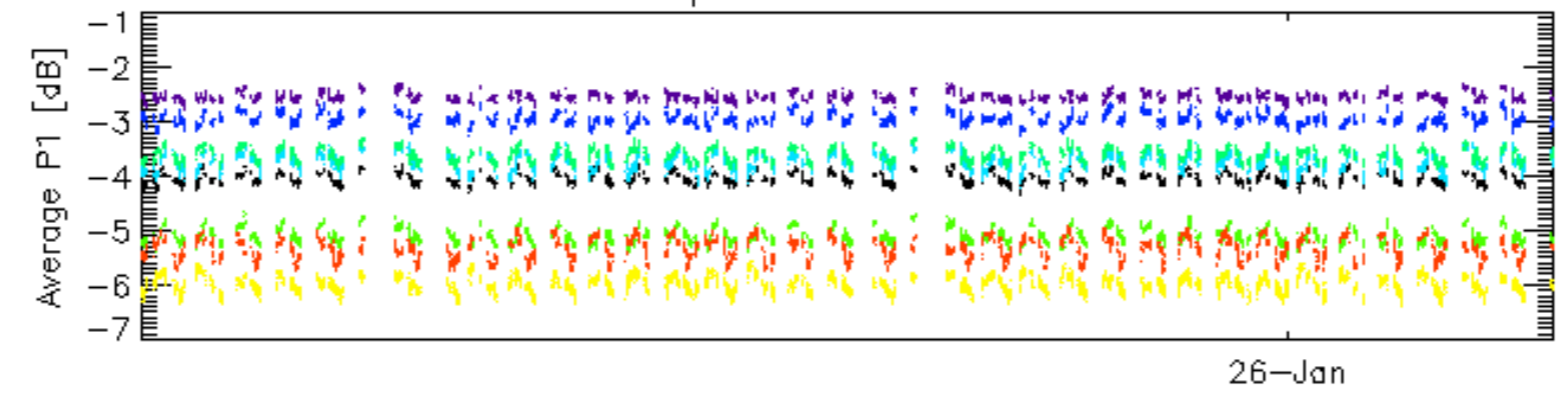


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

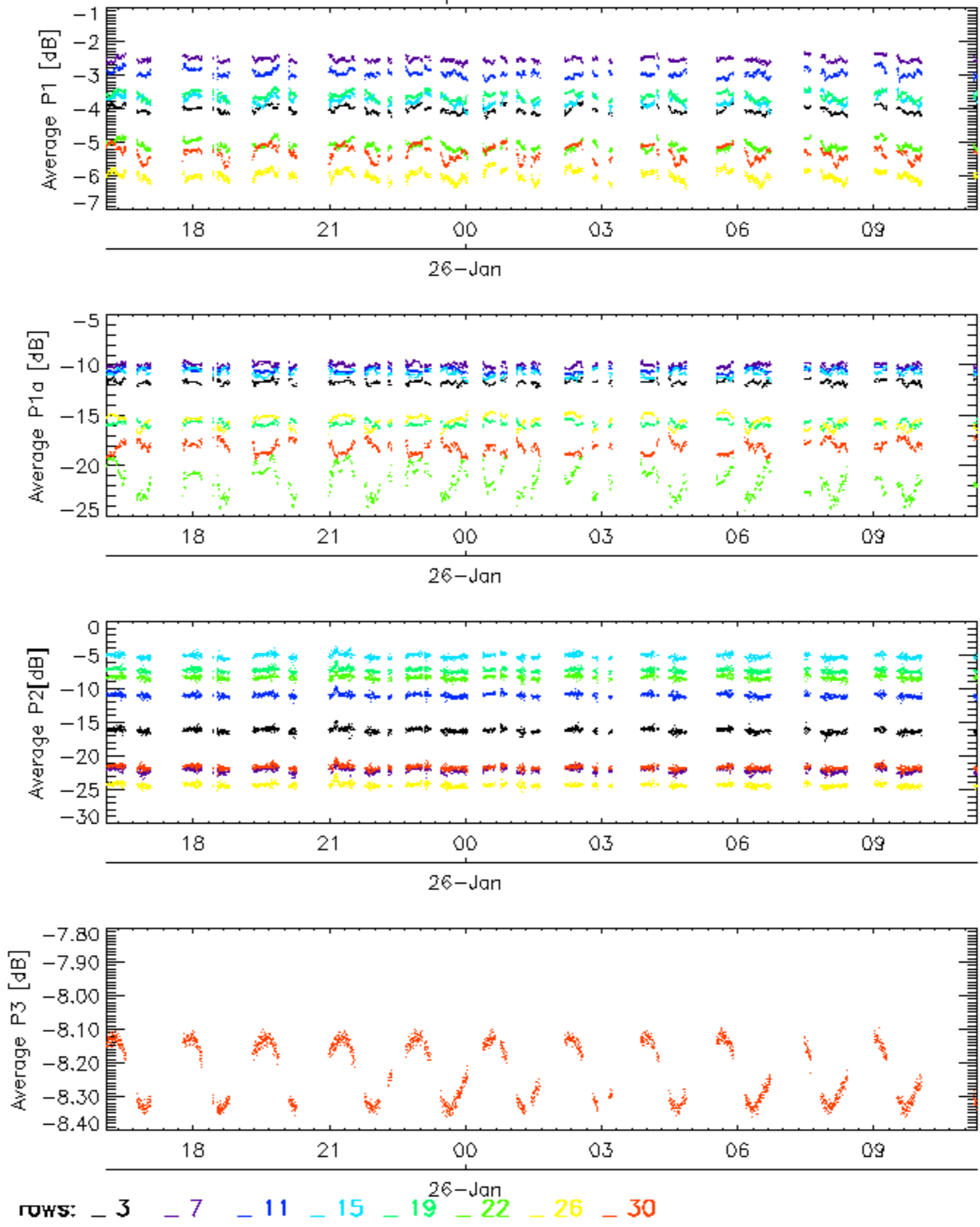


Cal pulses for WVS IS4



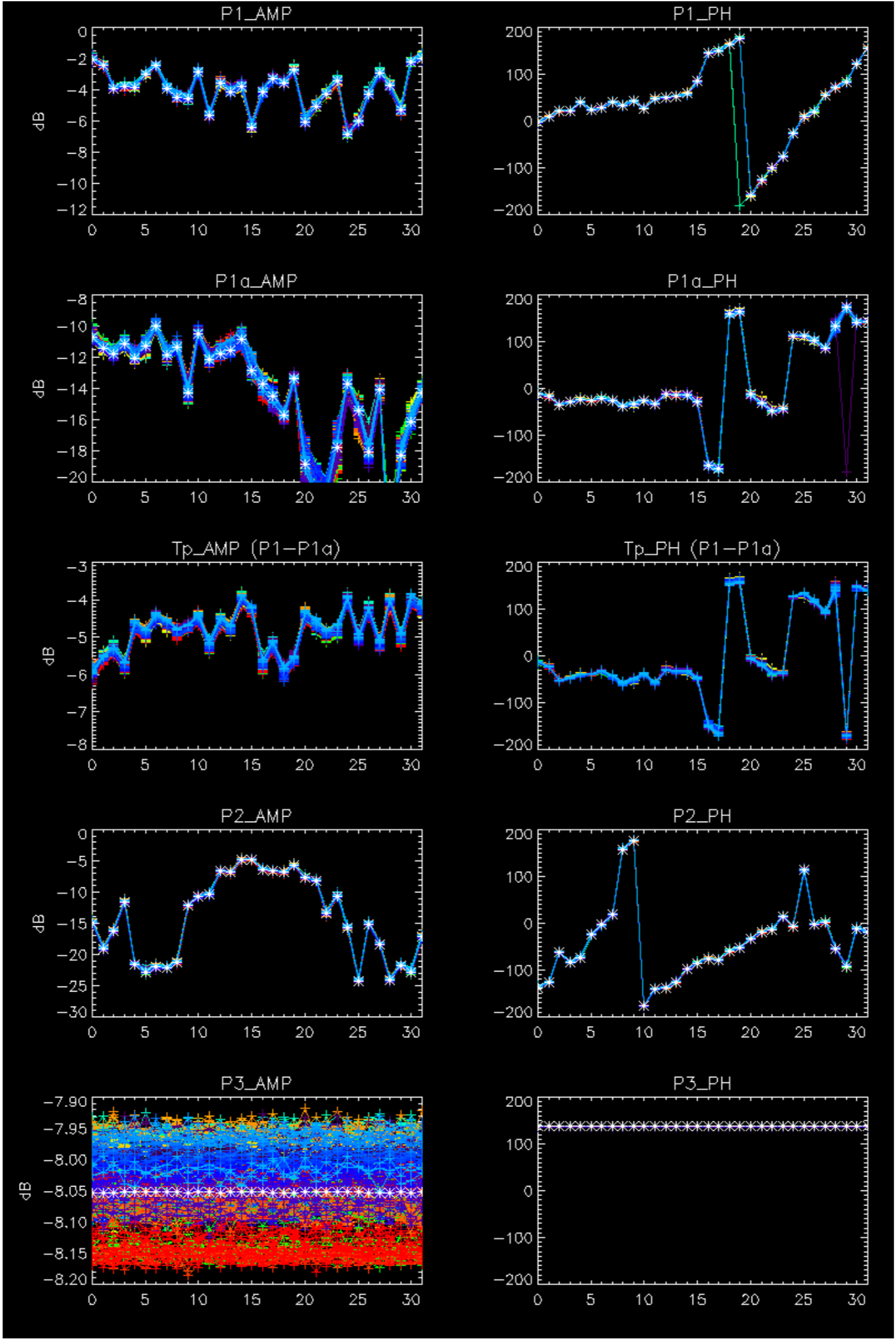
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

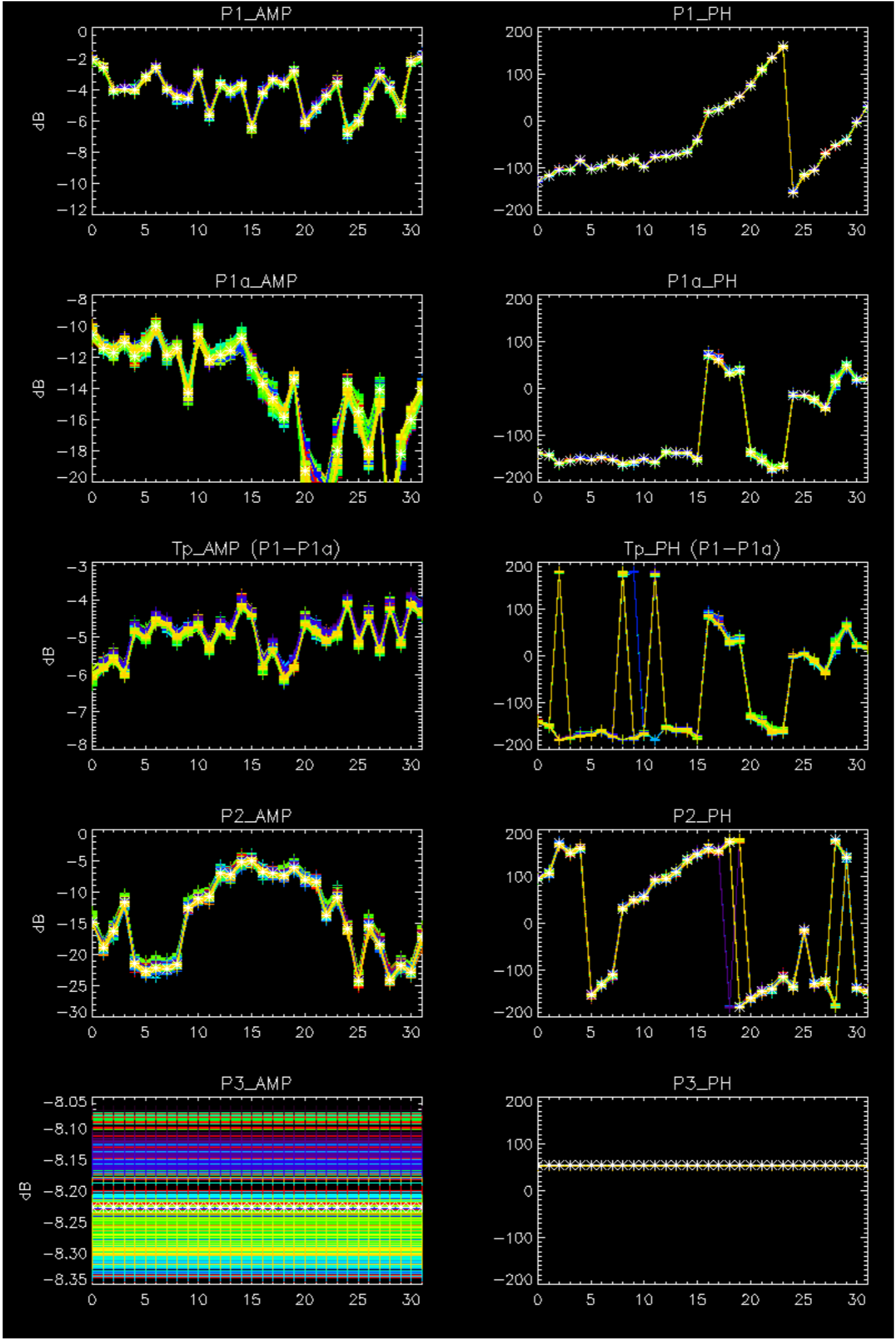
Cal pulses for WVS IS4



No anomalies observed on available browse products

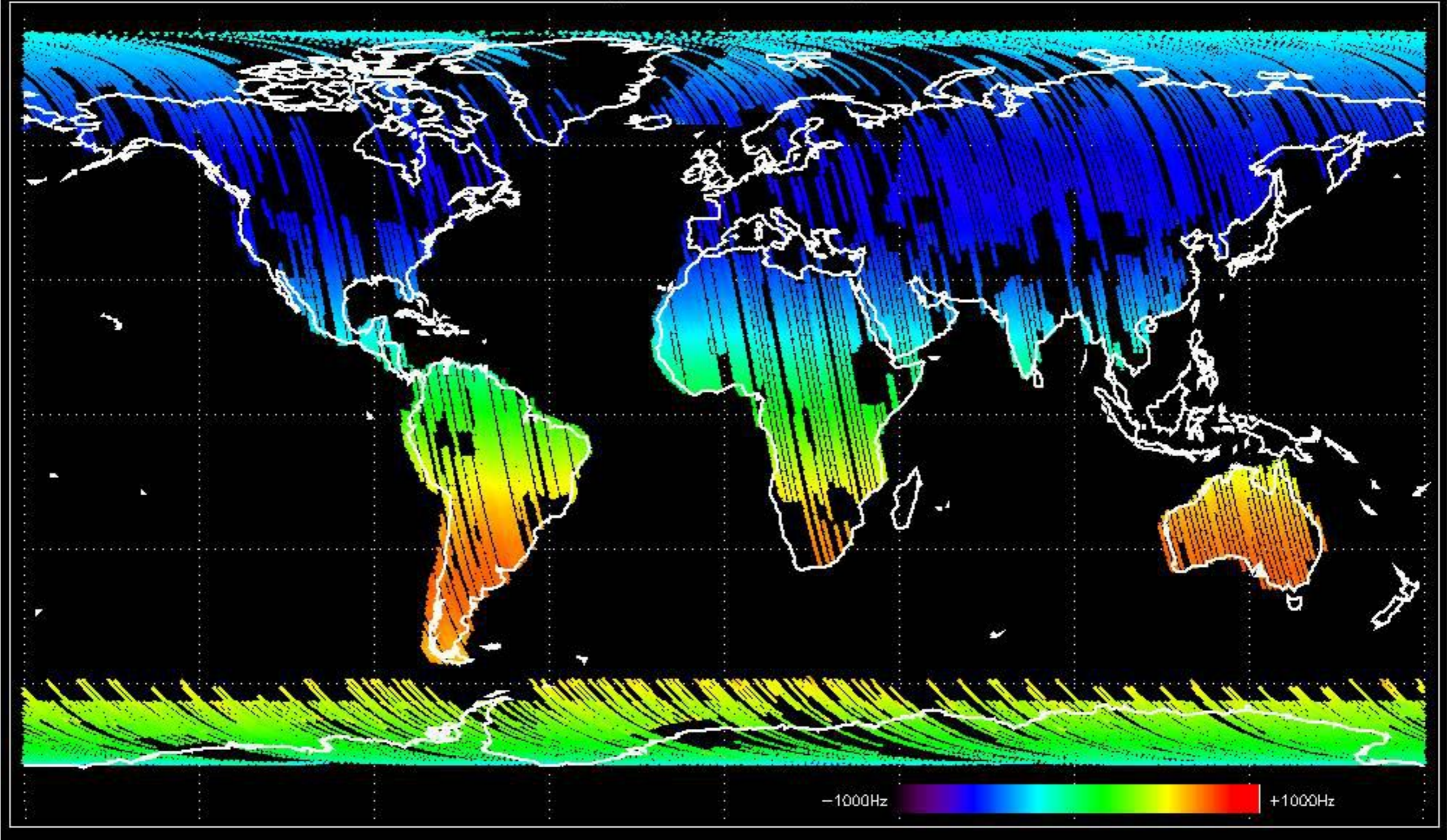
No anomalies observed.



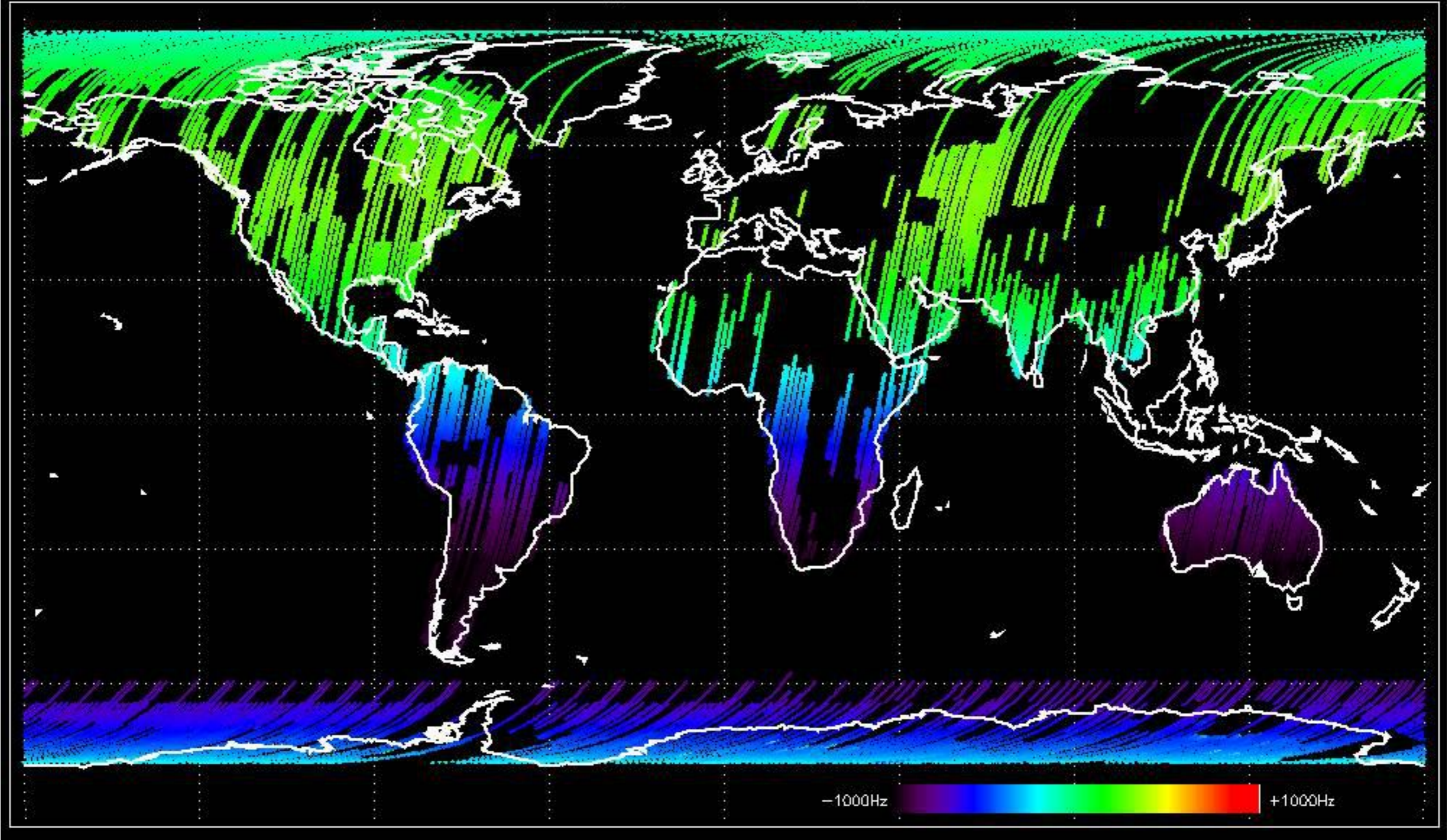


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

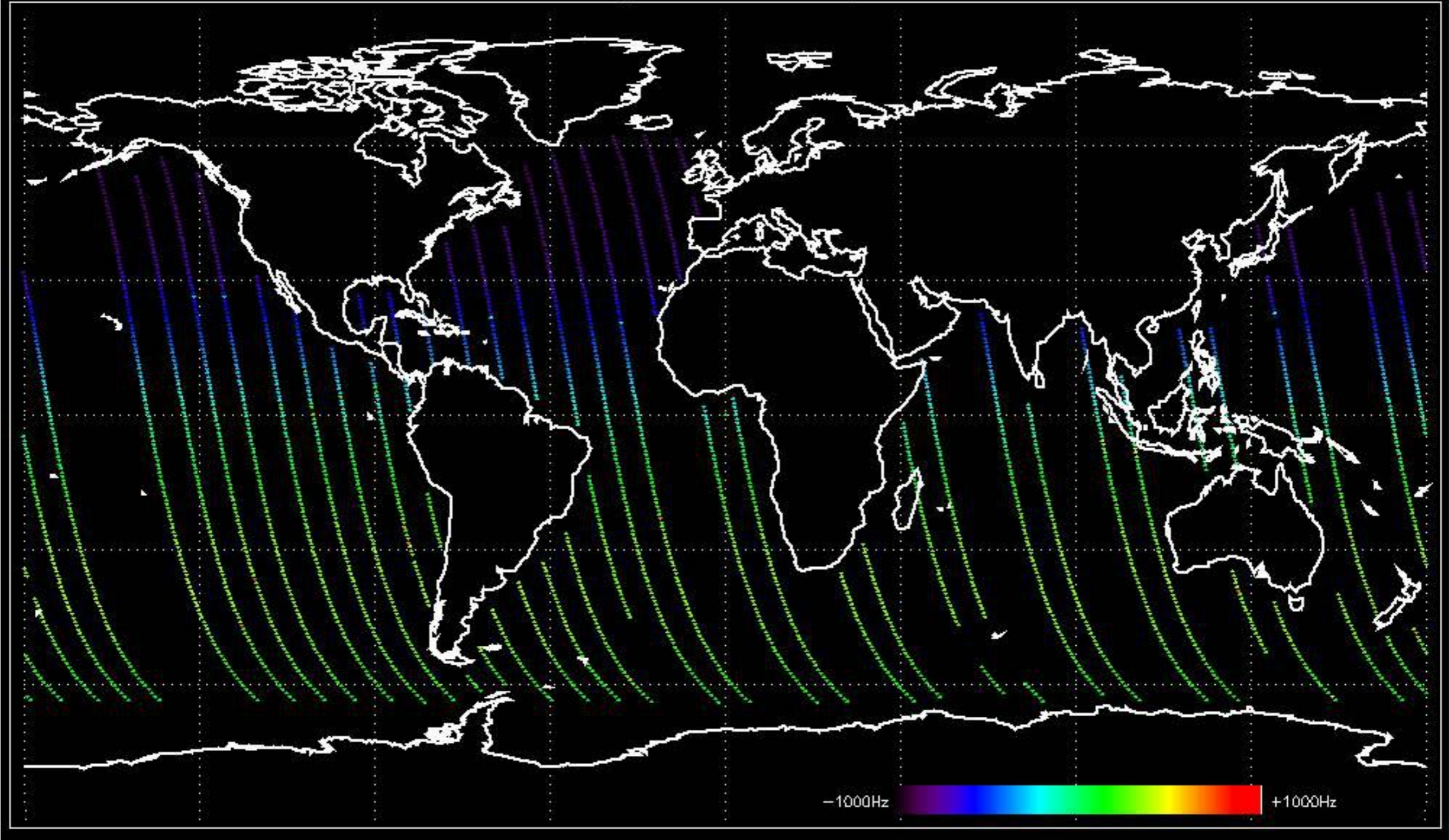
Doppler 'GM1' 'SS1' ascending



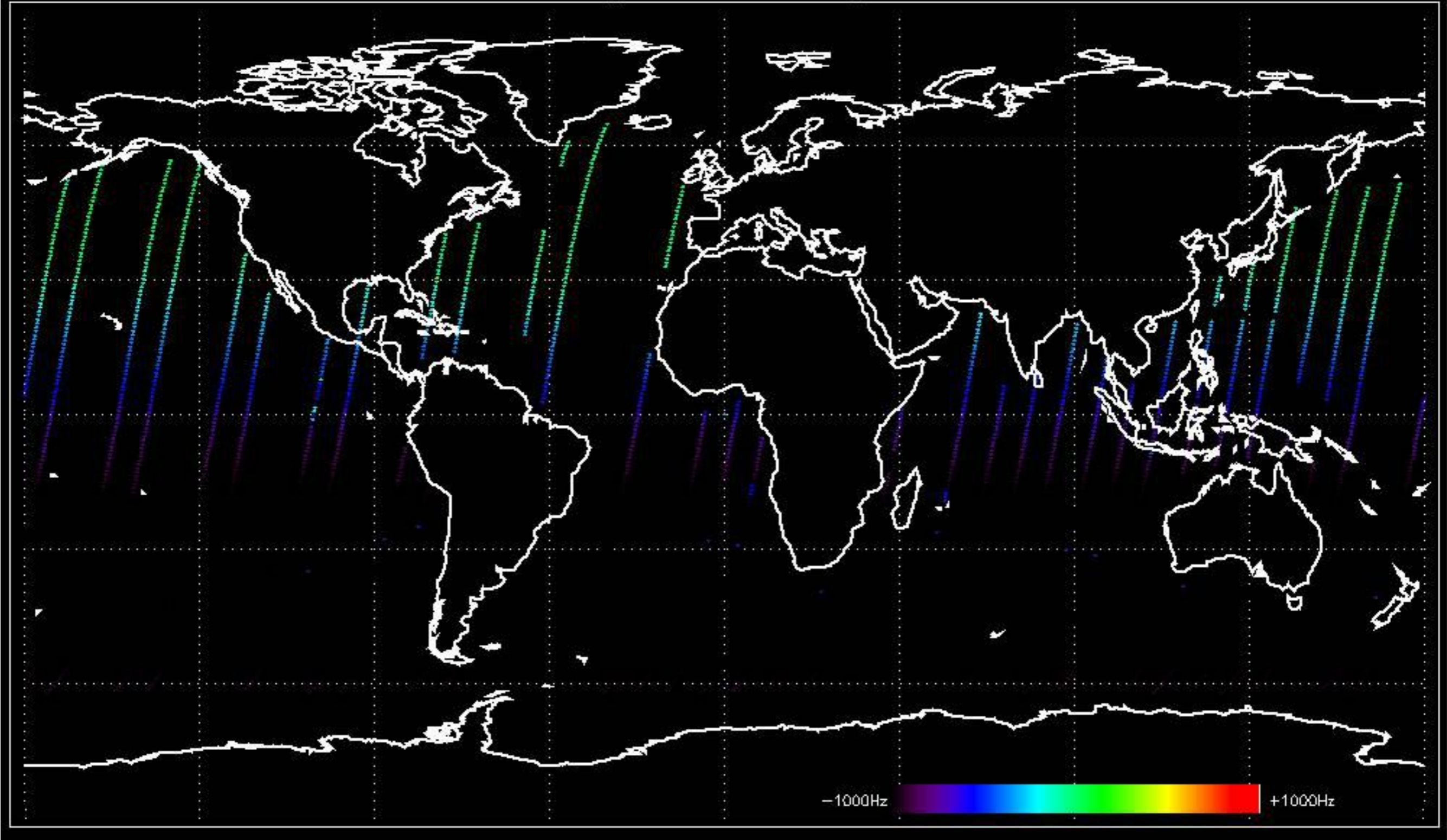
Doppler 'GM1' 'SS1' descending



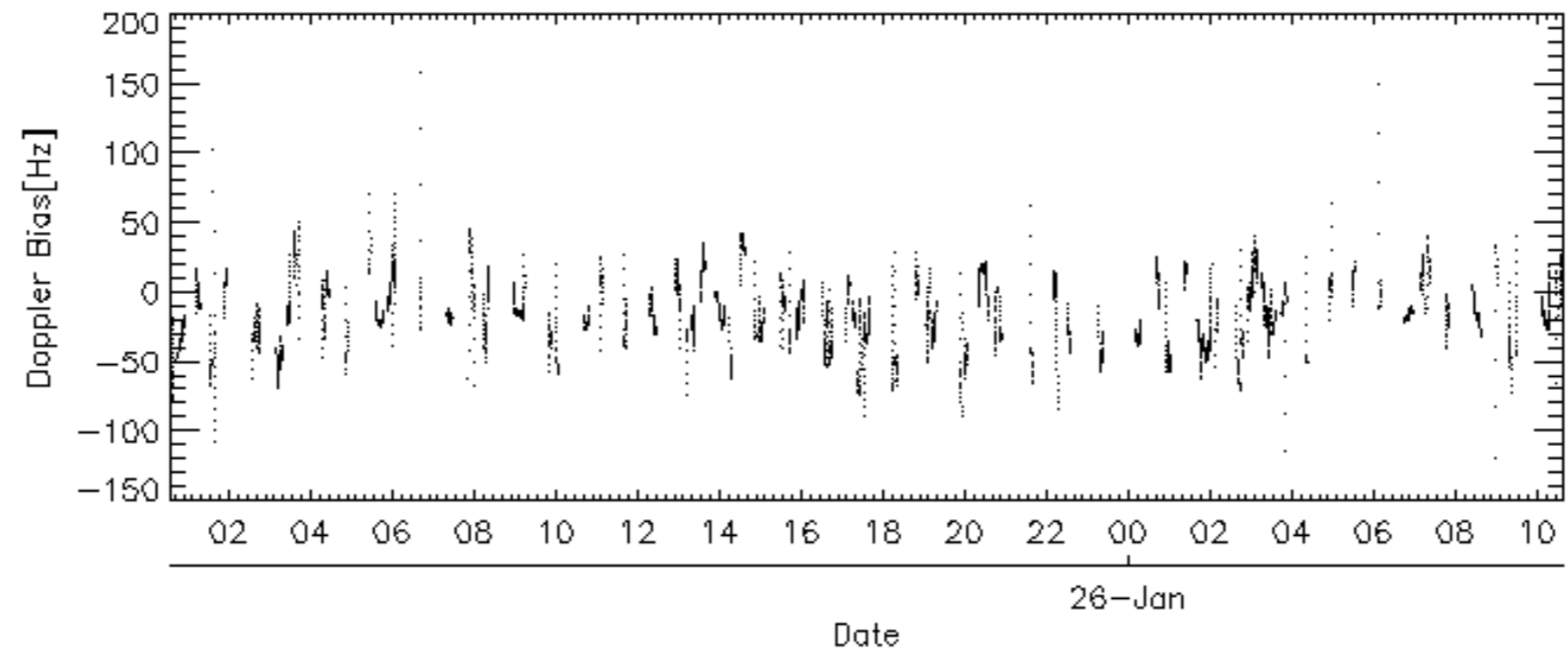
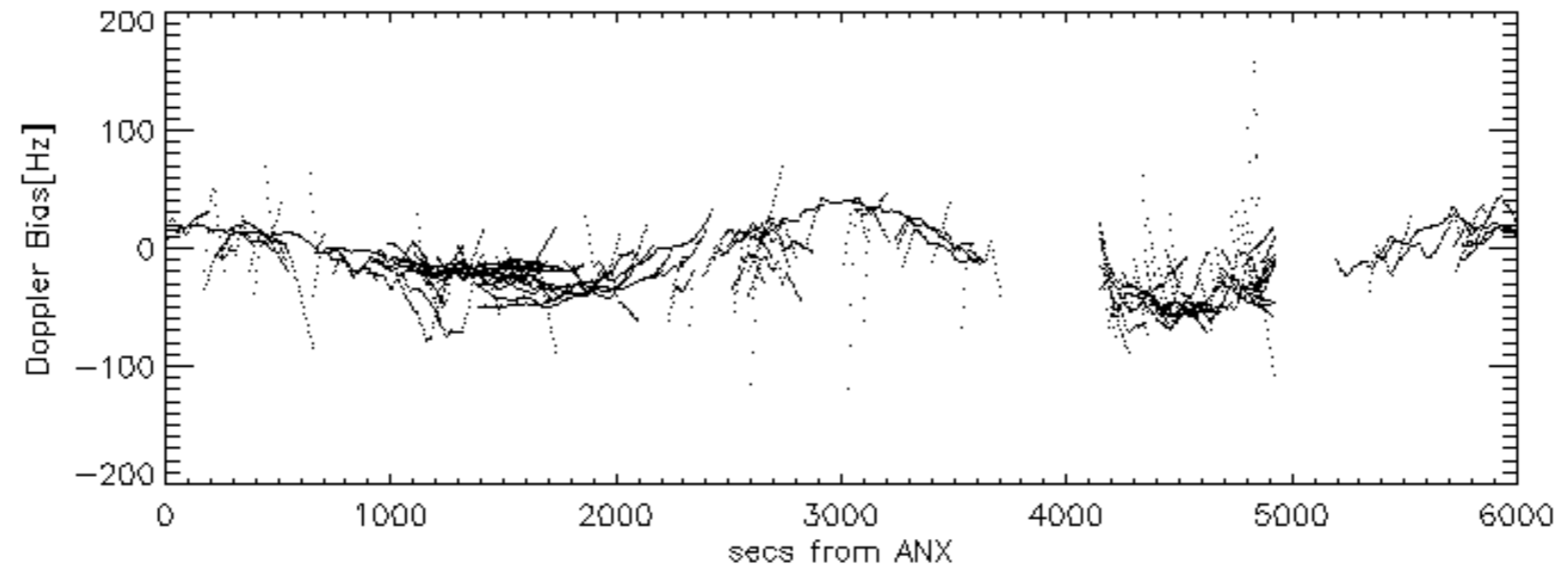
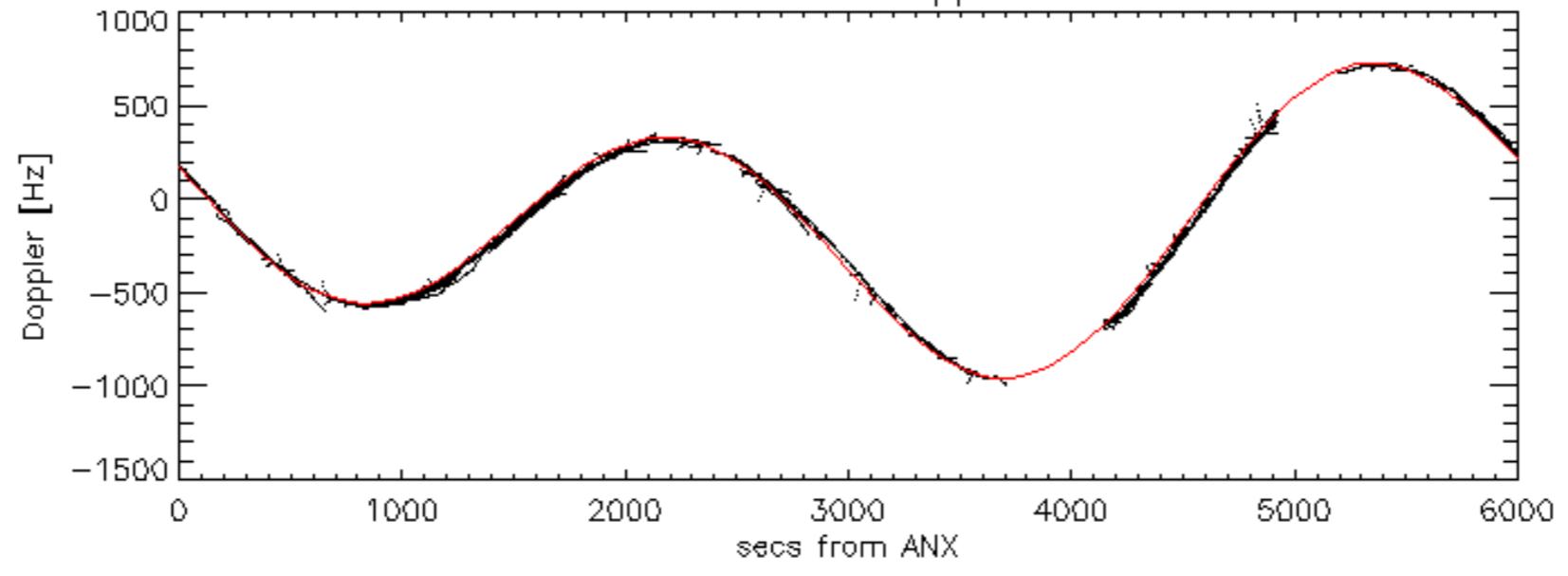
Doppler 'WVS' 'IS4' ascending

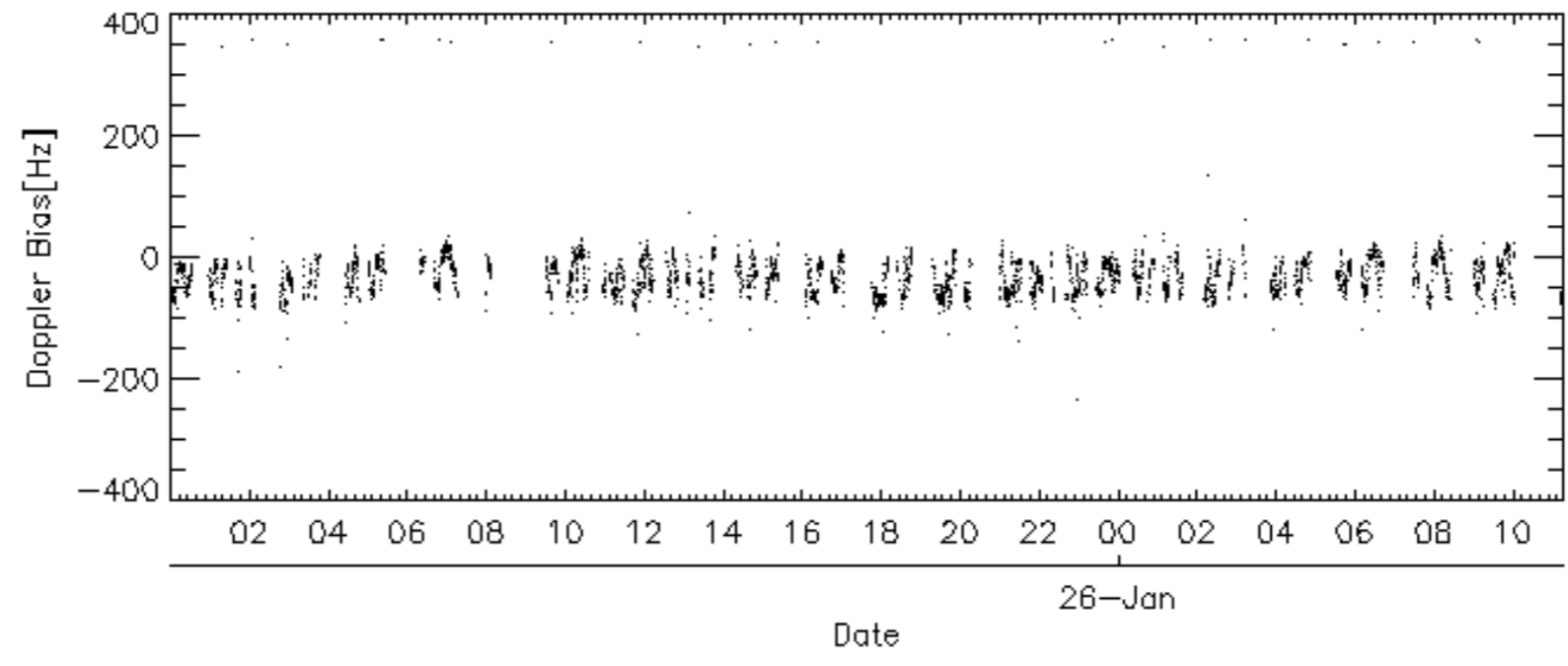
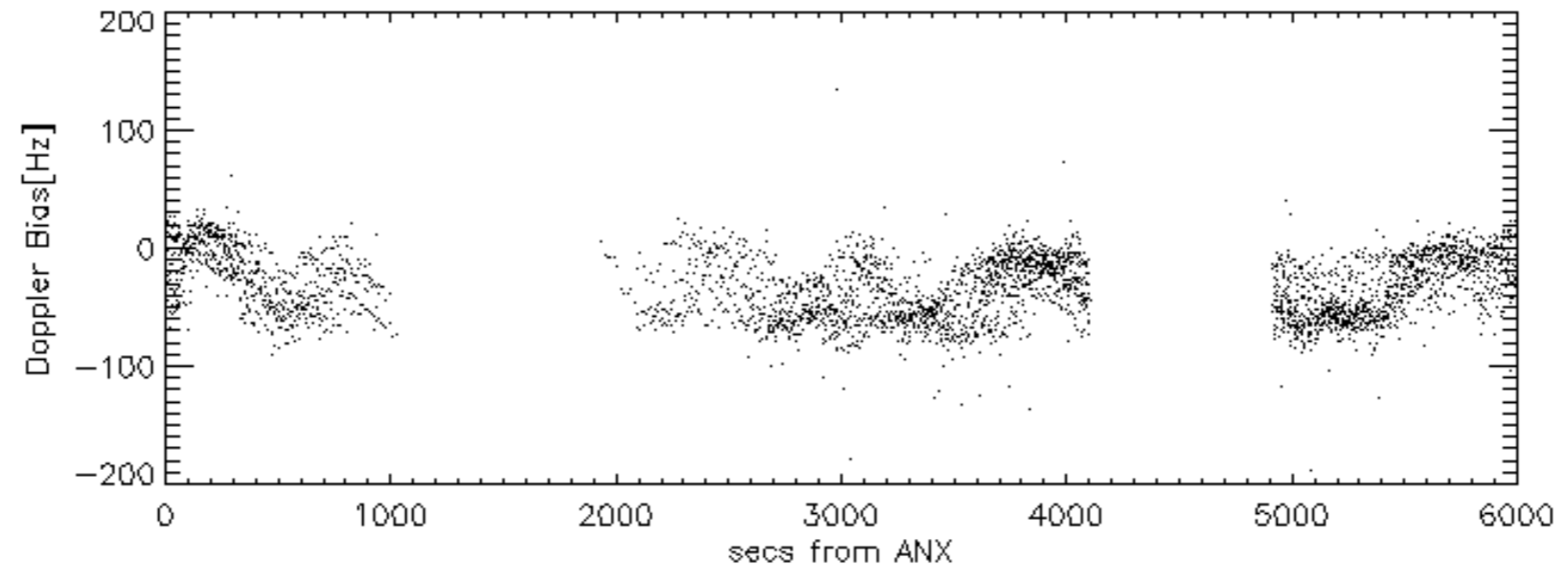
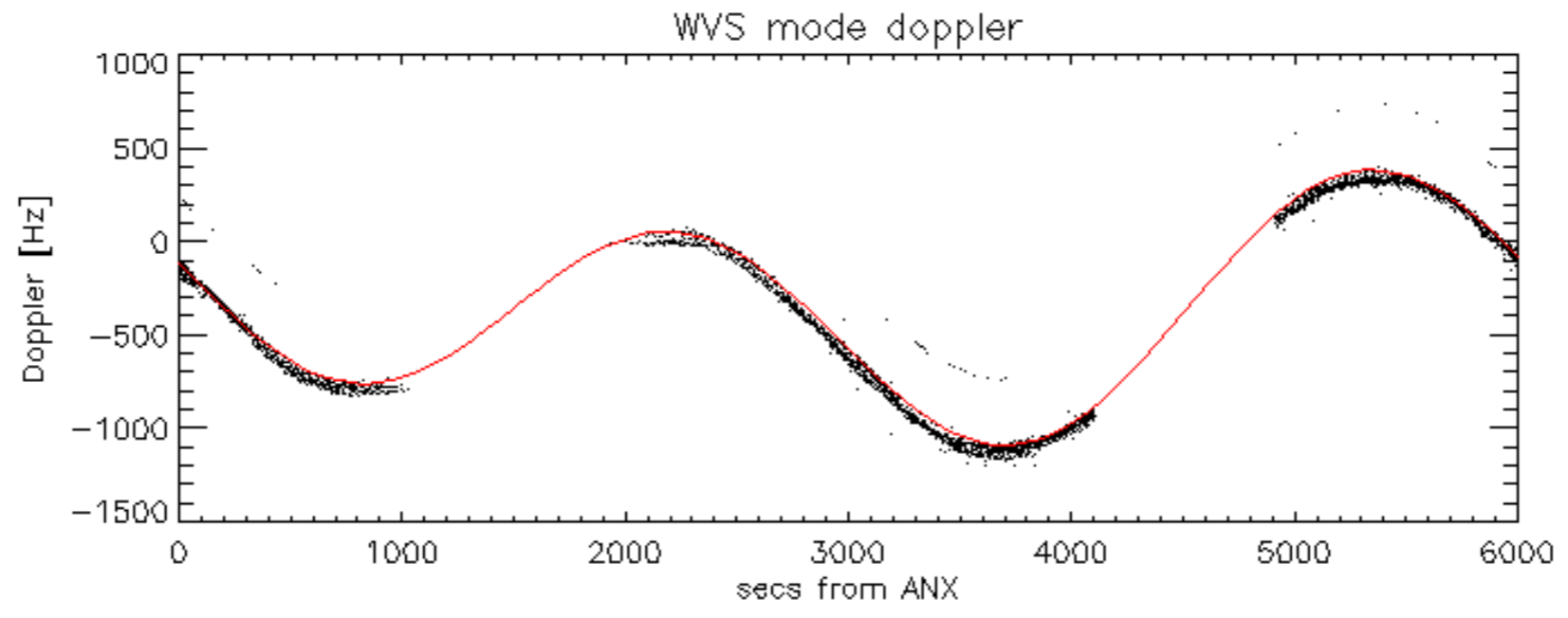


Doppler 'WVS' 'IS4' descending

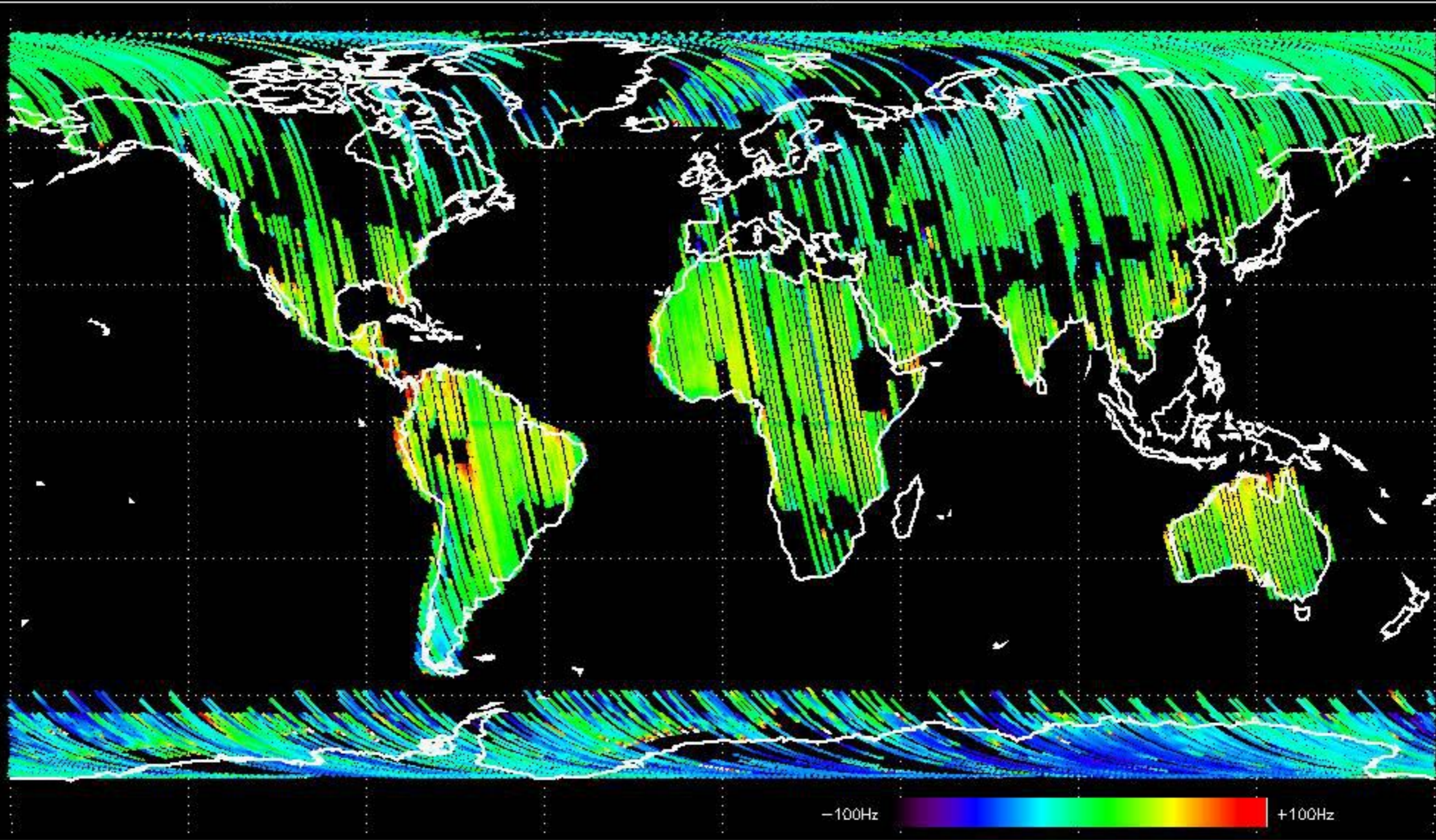


GM1 mode doppler

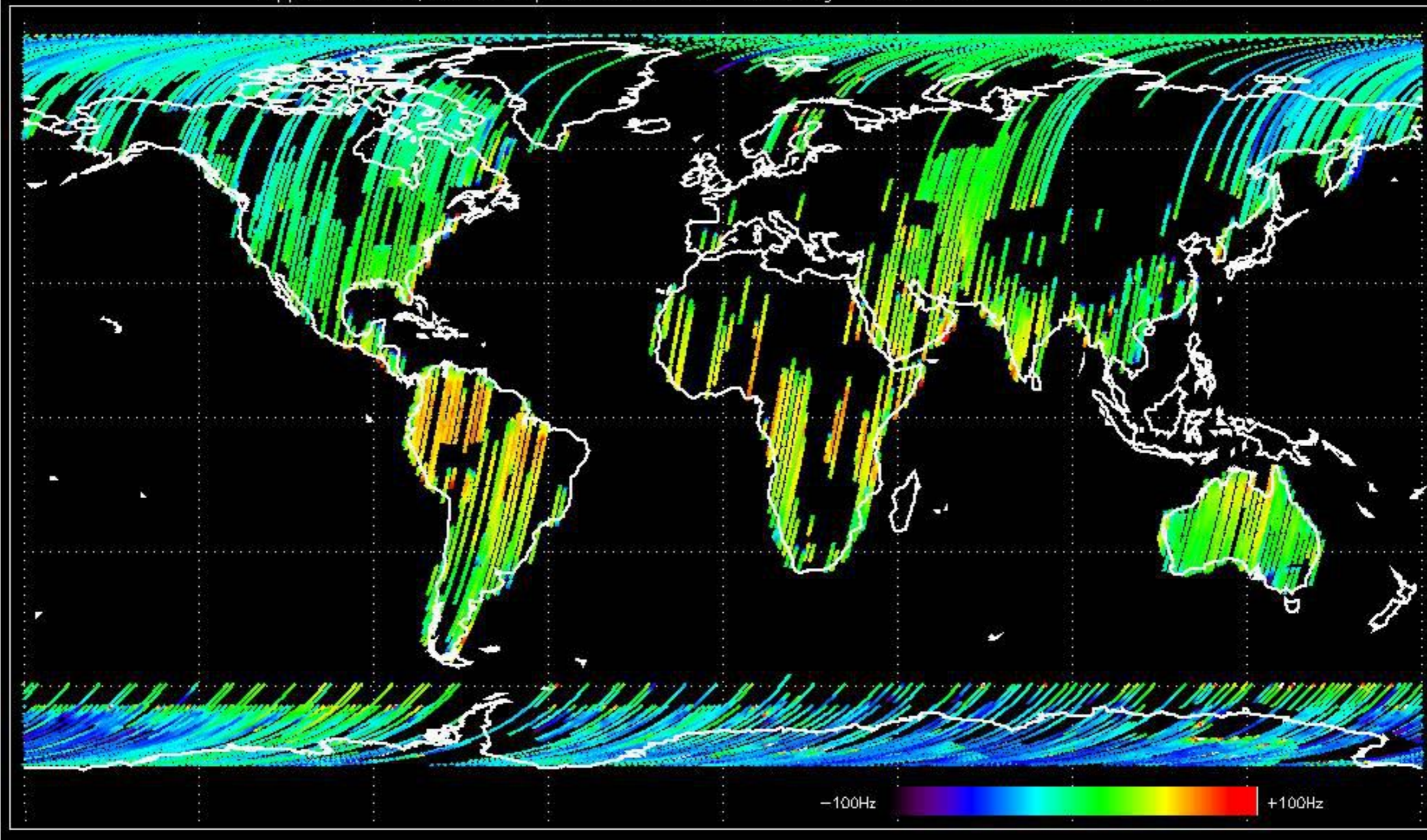




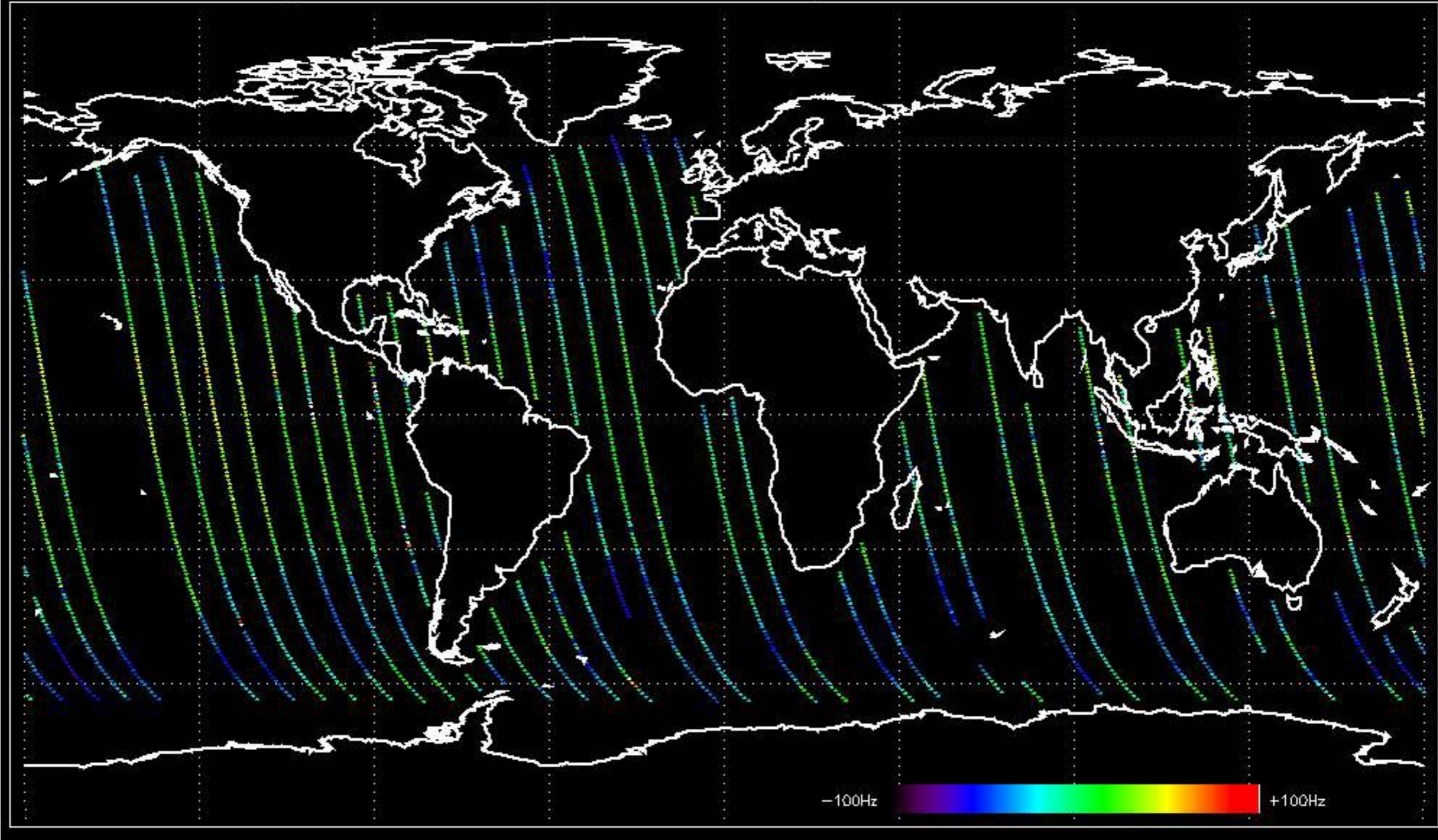
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.999829 Hz



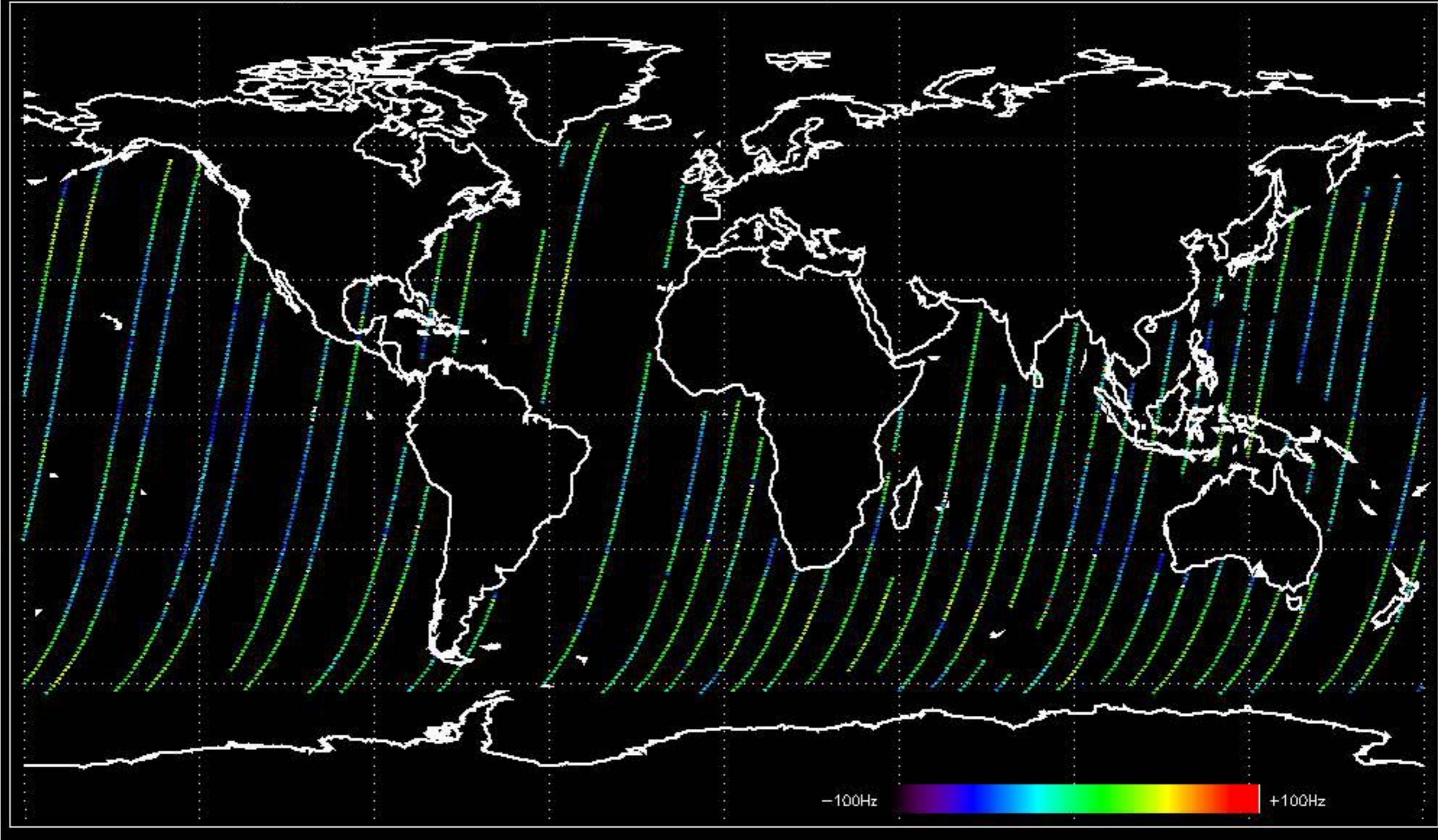
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -19.209618 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -28.849642 Hz

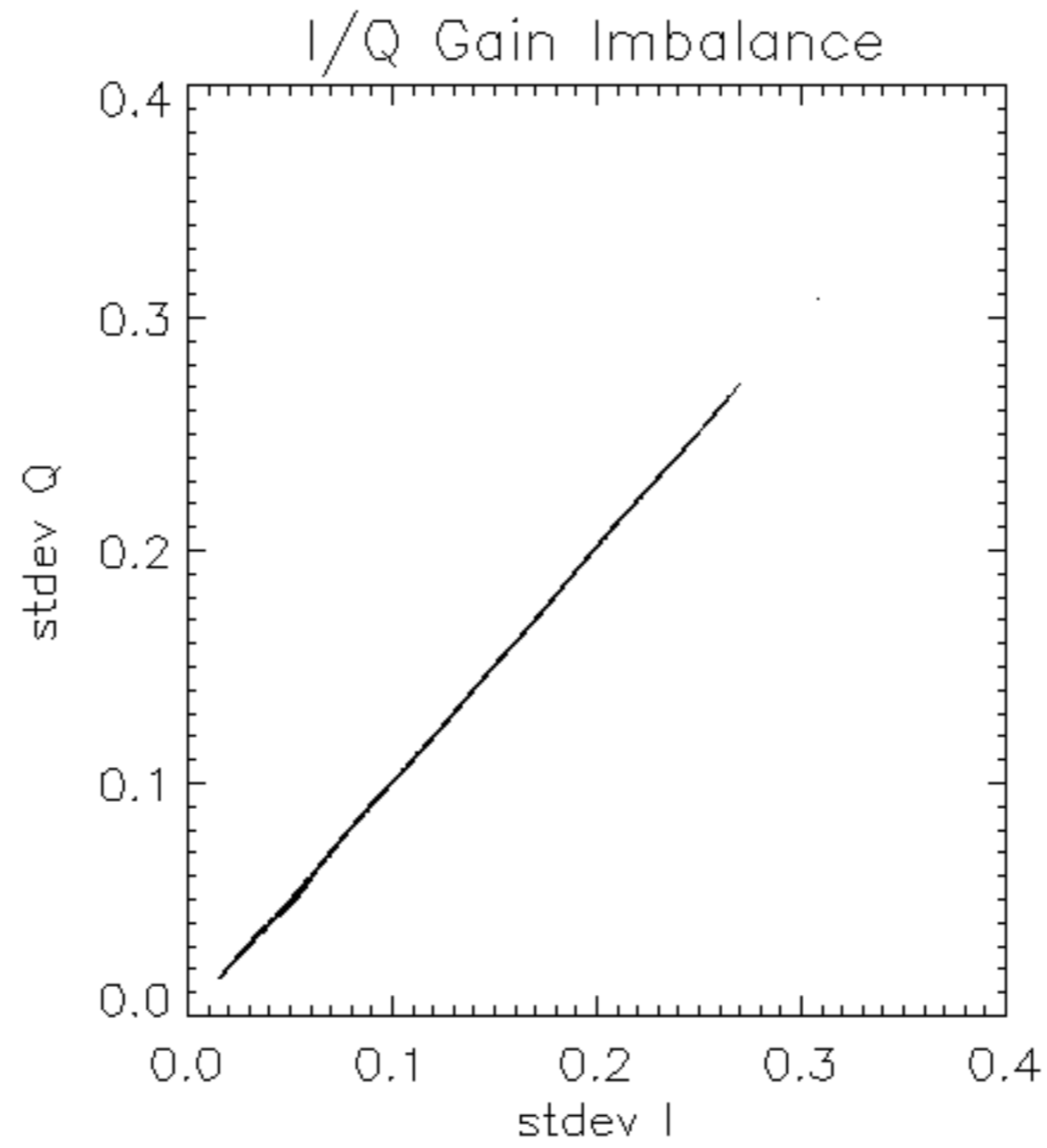


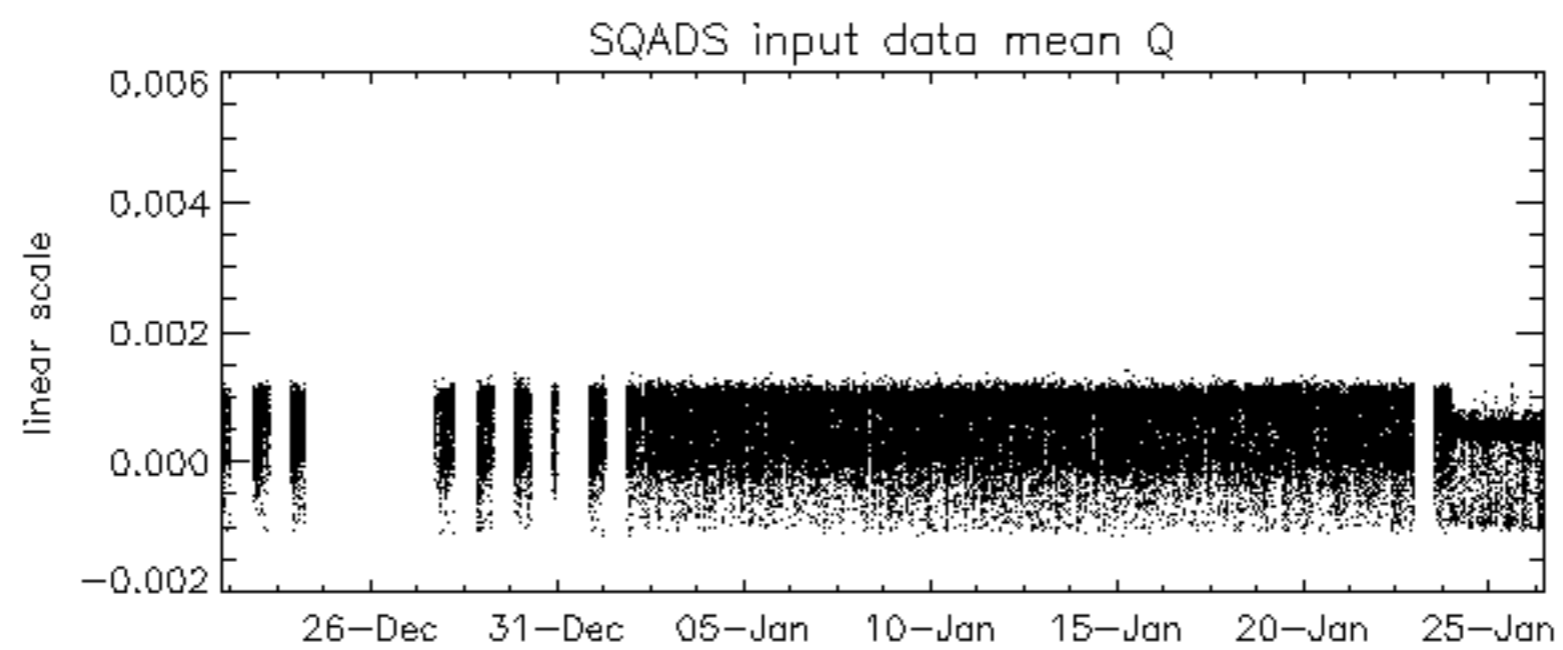
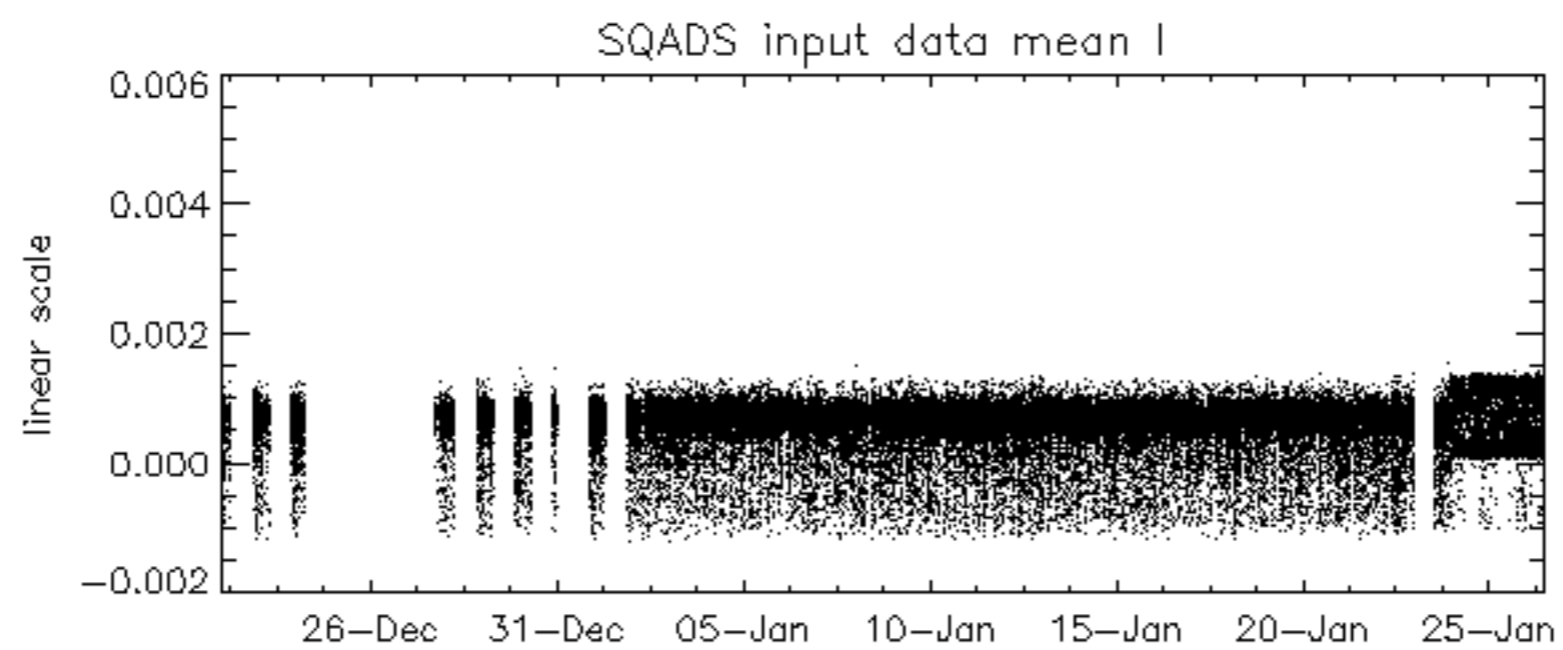
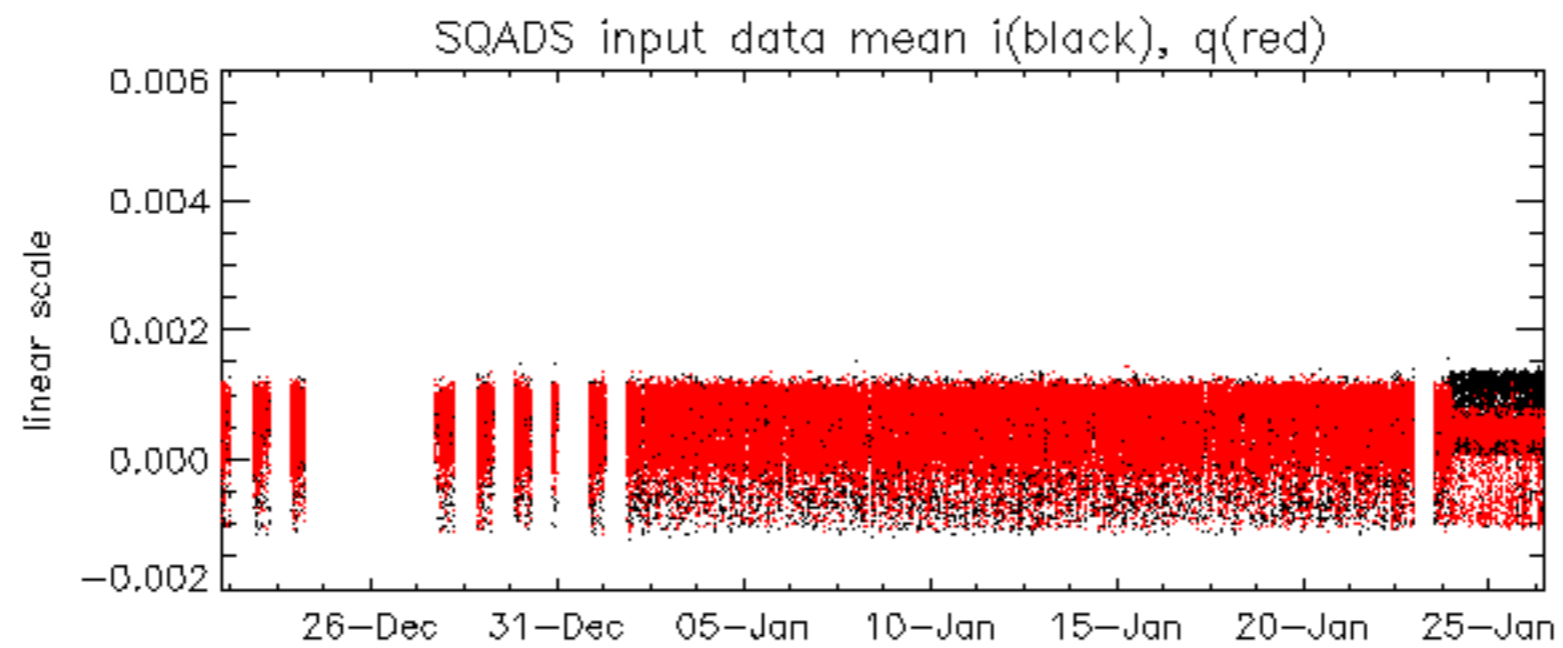
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -36.687784 Hz

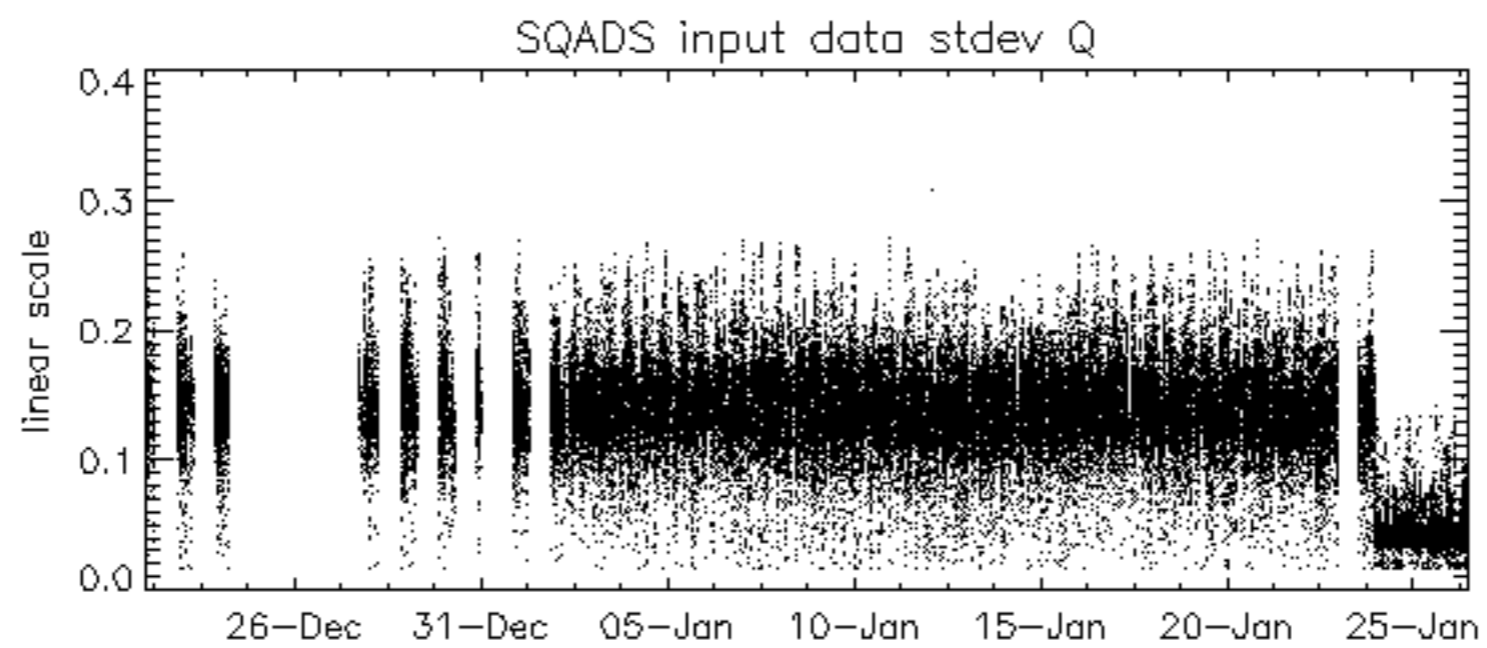
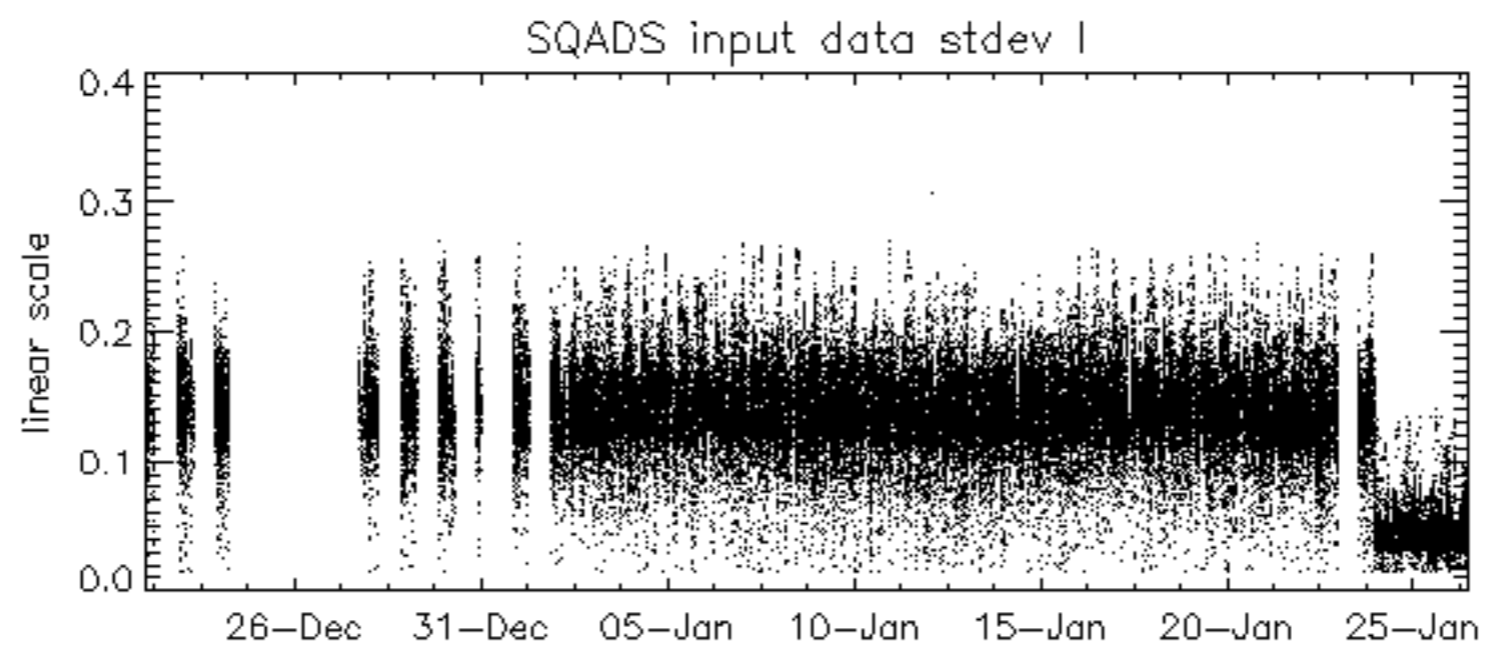
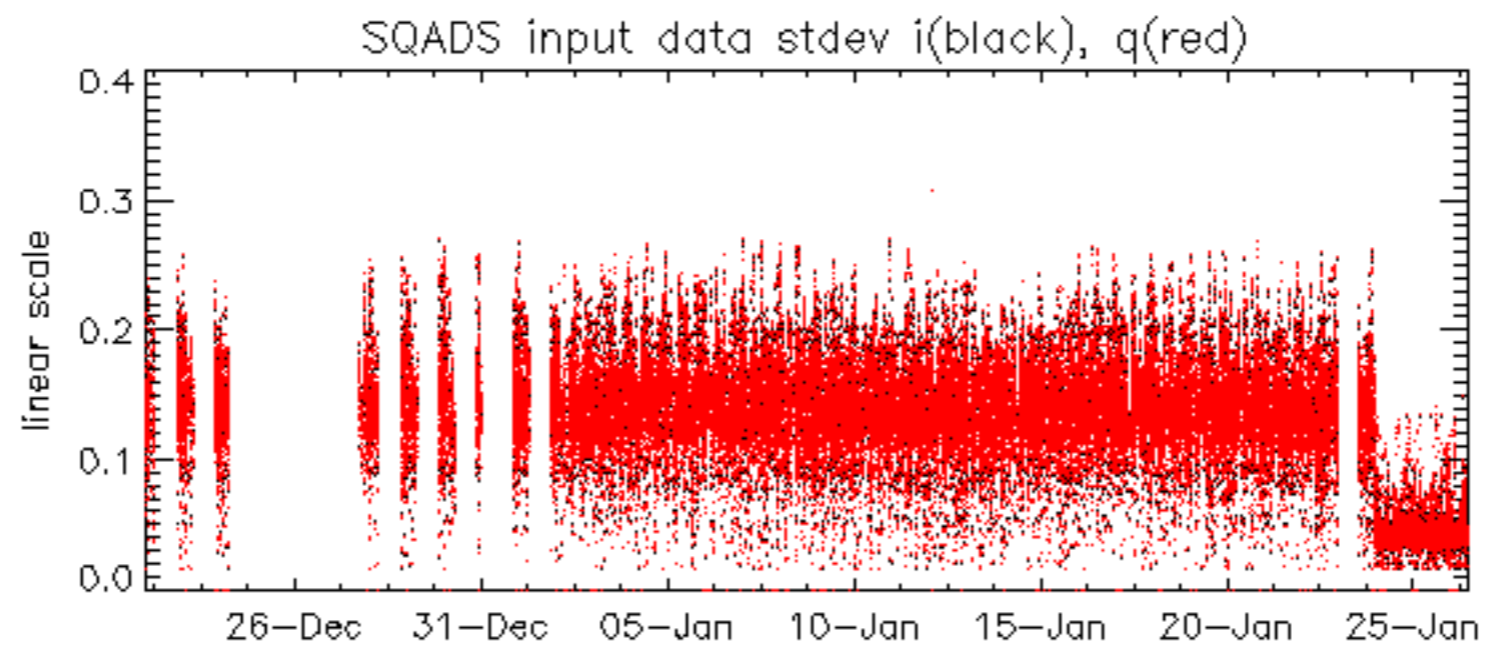


No anomalies observed on available MS products:

No anomalies observed.





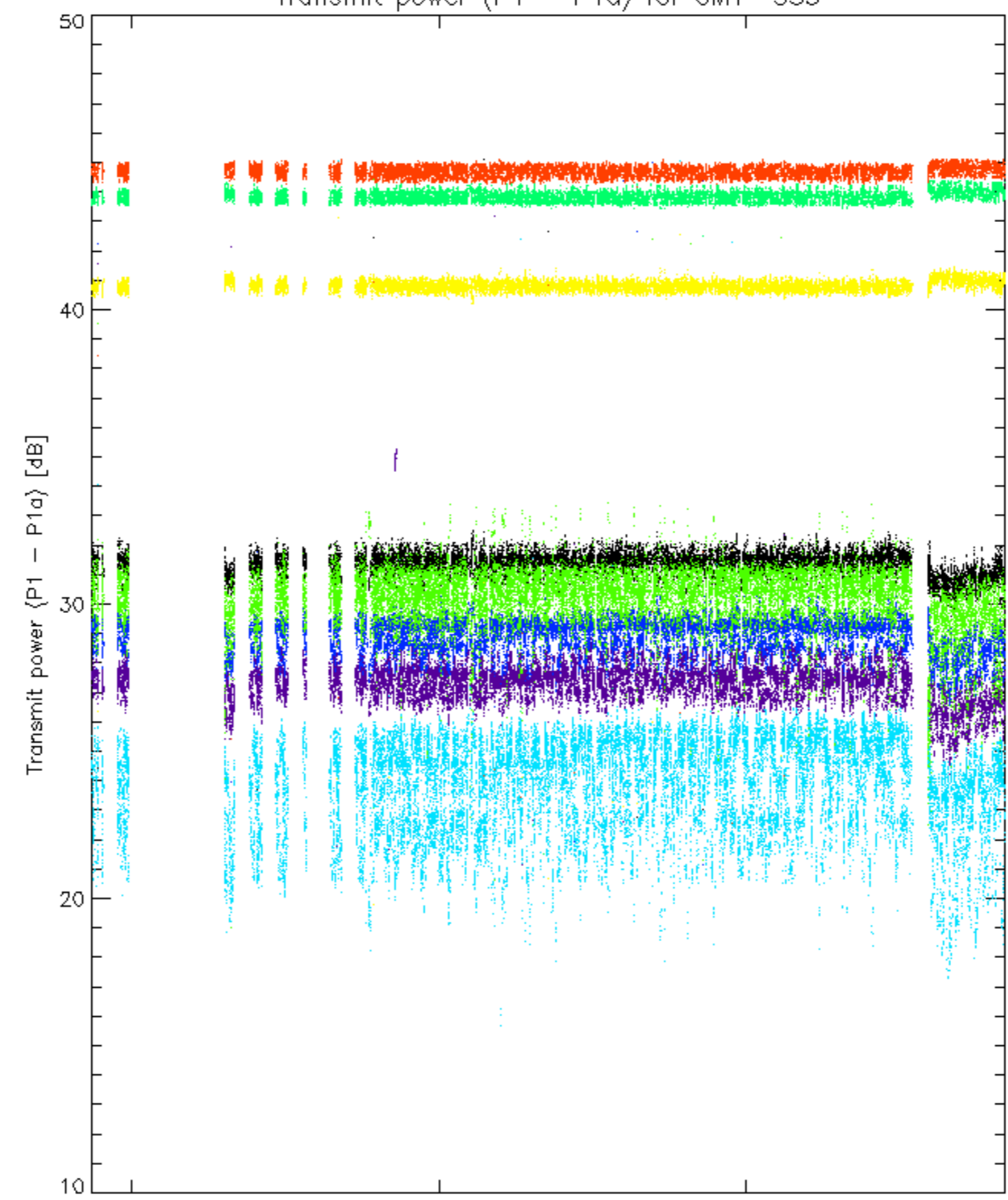


Summary of analysis for the last 3 days 2007012[456]

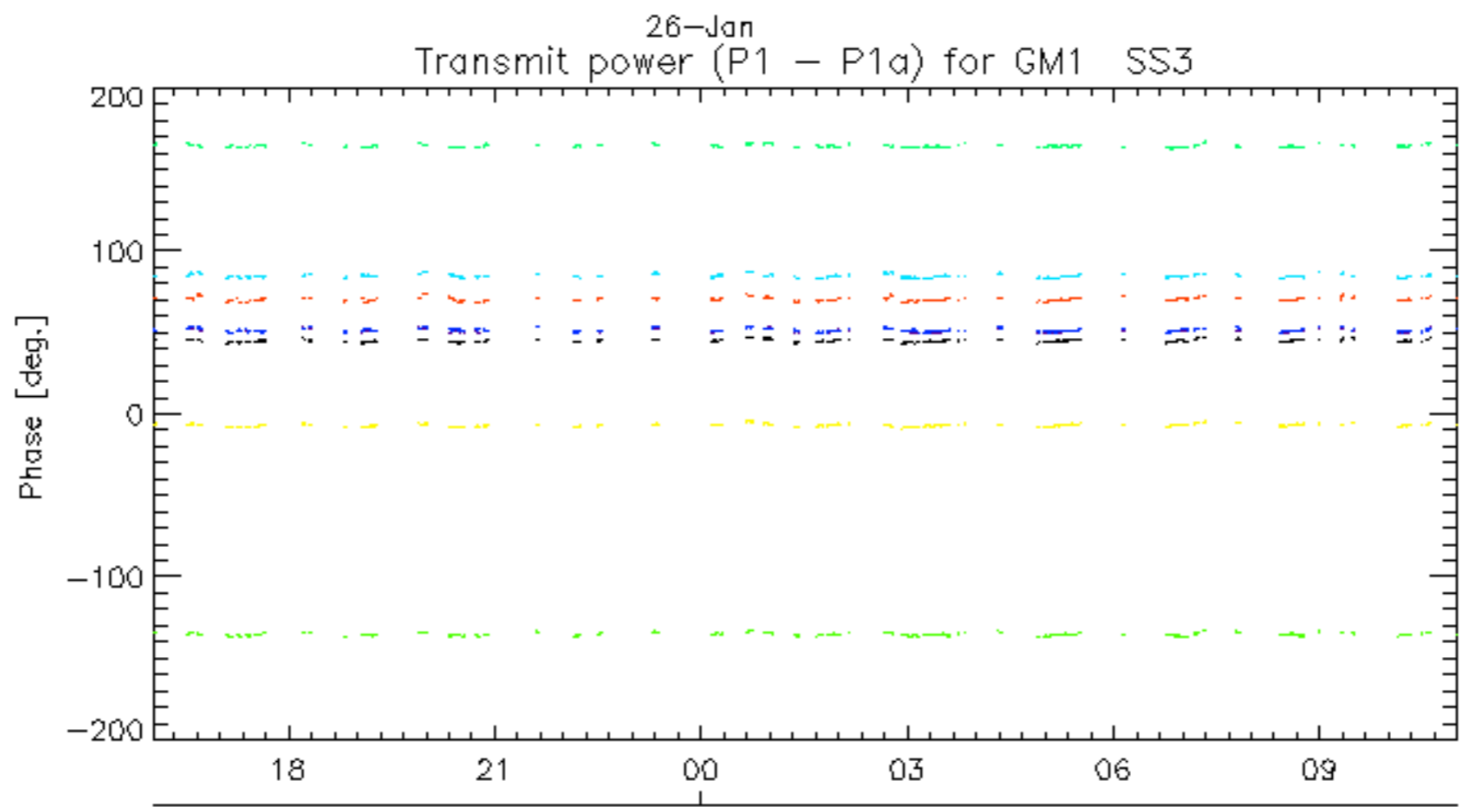
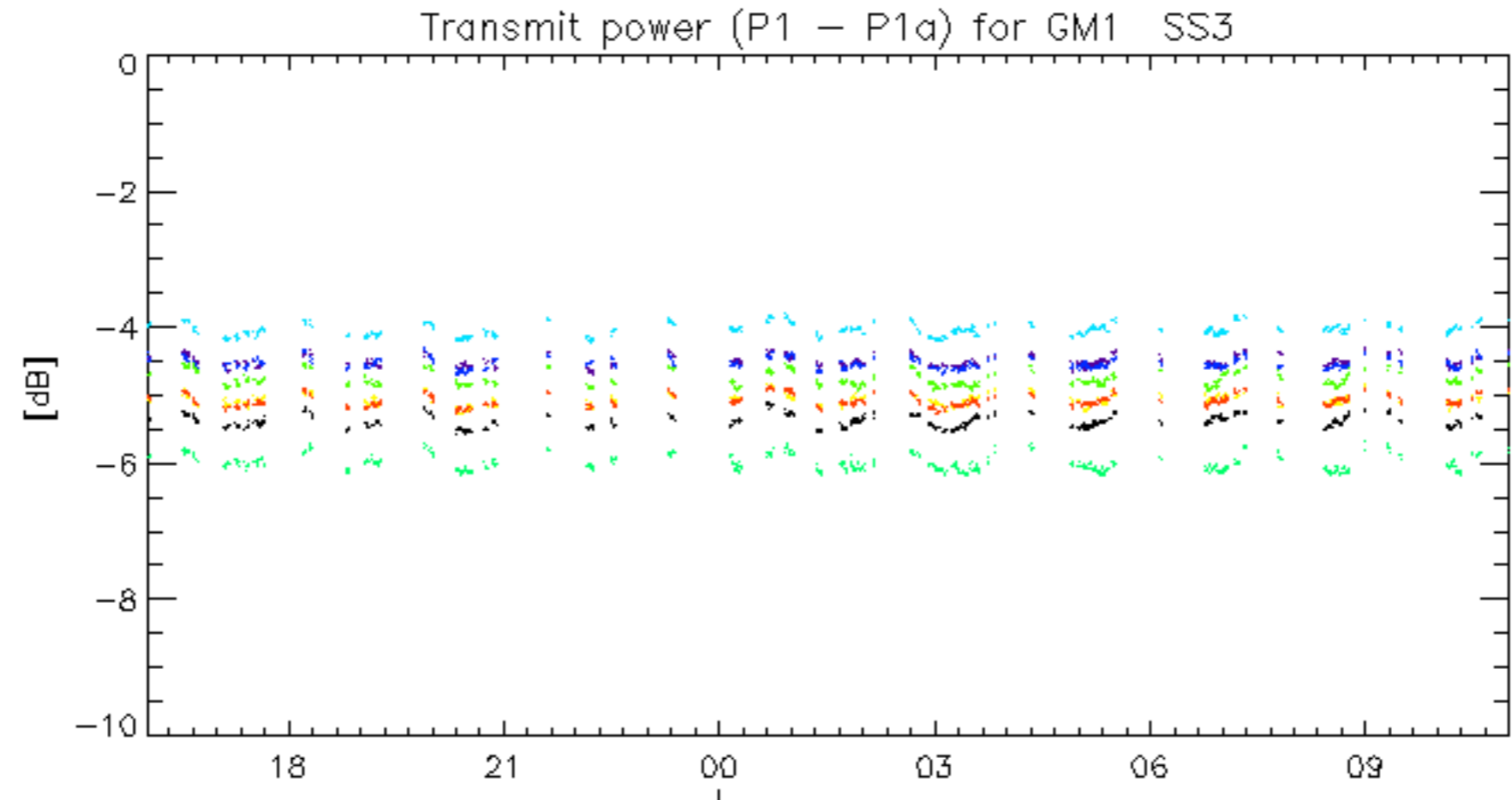
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20070125_015755_00000802055_00031_25636_3224.N1	1	19
ASA_GM1_1PNPDK20070124_111259_000004342055_00023_25628_1933.N1	0	14
ASA_GM1_1PNPDK20070124_152257_000007732055_00025_25630_2384.N1	0	7
ASA_GM1_1PNPDK20070124_174519_000005132055_00027_25632_2481.N1	0	36
ASA_GM1_1PNPDK20070124_192744_000003202055_00028_25633_2595.N1	0	8
ASA_WSM_1PNPDE20070125_024515_00000852055_00032_25637_2992.N1	50	1096
ASA_WSM_1PNPDE20070125_152549_000001832055_00040_25645_3606.N1	0	28
ASA_WSM_1PNPDE20070125_170441_00000862055_00041_25646_3646.N1	0	18

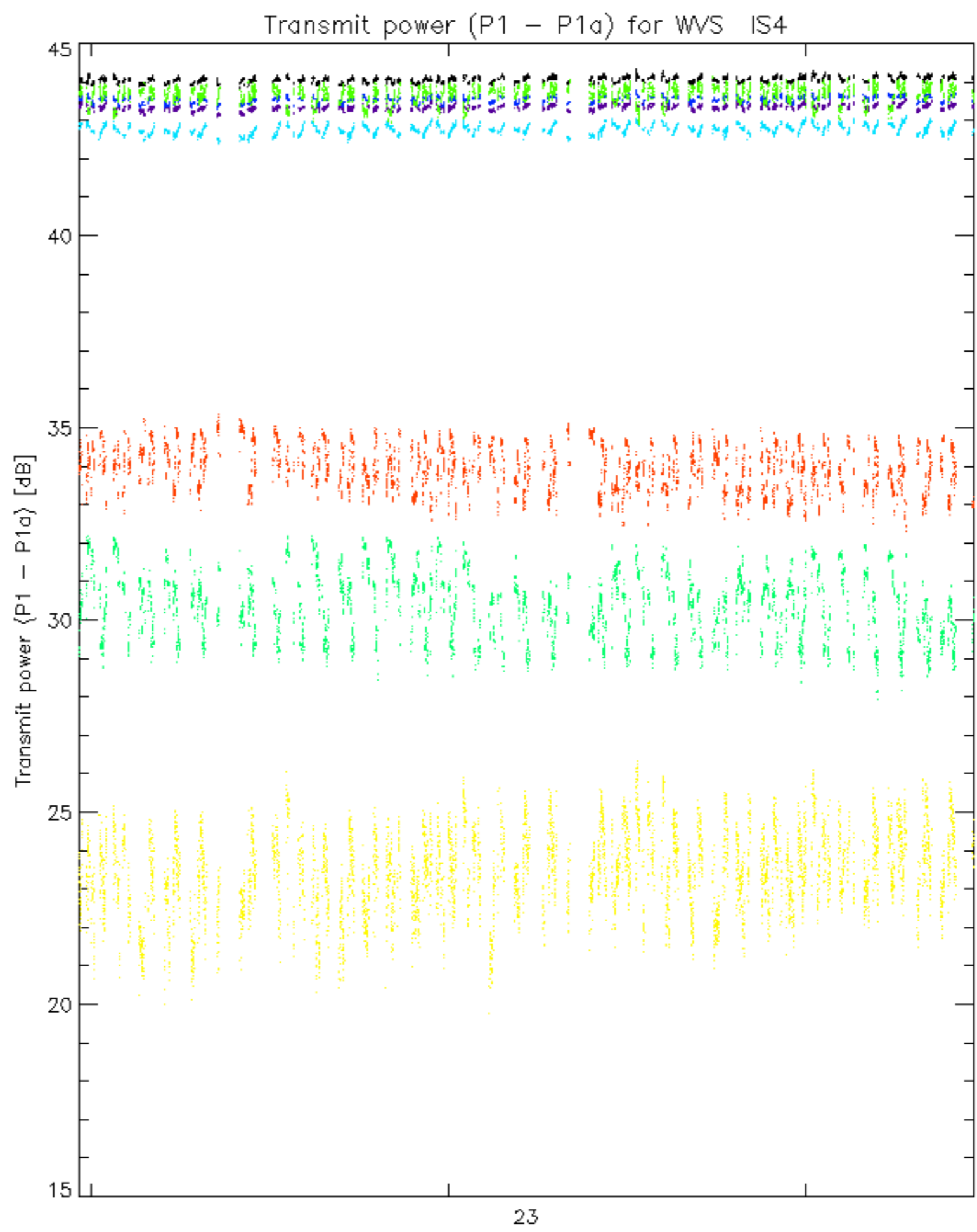
Transmit power (P1 - P1a) for GM1 SS3



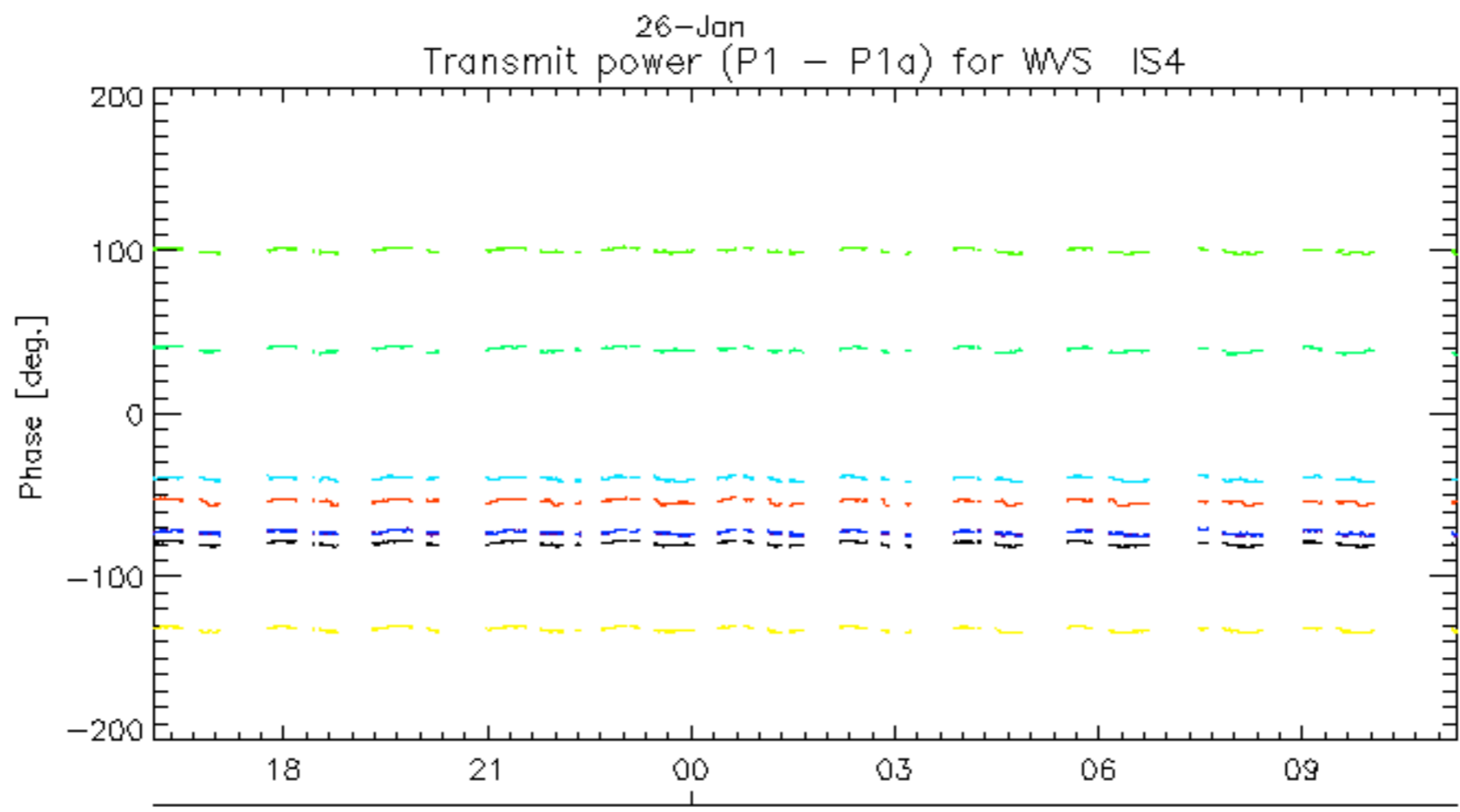
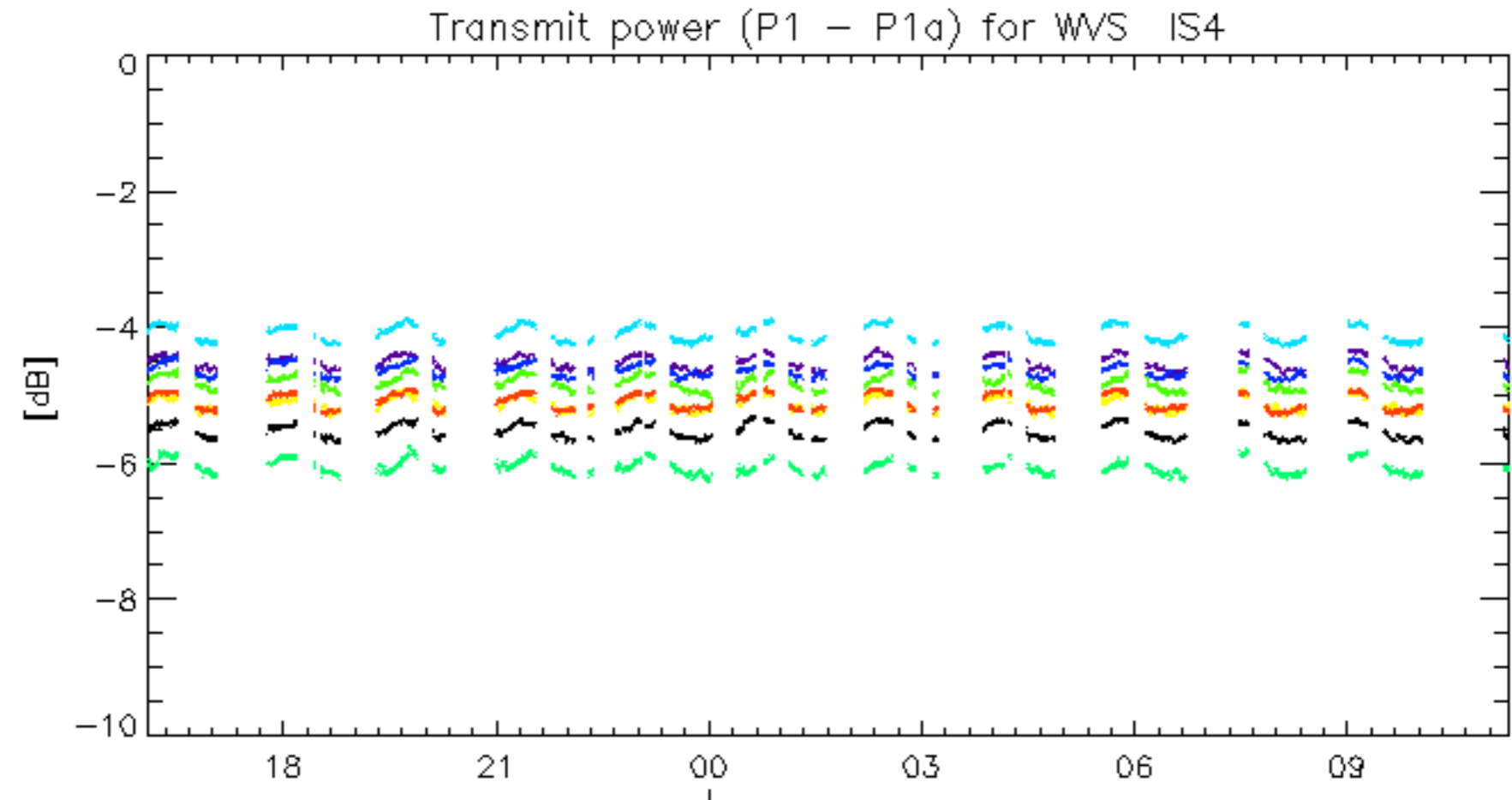
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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



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

No unavailabilities during the reported period.