

PRELIMINARY REPORT OF 060130

last update on Mon Jan 30 16:53:24 GMT 2006

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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 2006-01-29 00:00:00 to 2006-01-30 16:53:24

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	42	0	15	1	25
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	42	0	15	1	25
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	42	0	15	1	25
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	42	0	15	1	25

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	51	39	6	38
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	43	51	39	6	38
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	51	39	6	38
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	51	39	6	38

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	20060129 053204
H	20060128 060341

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)
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P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.031839	0.007458	0.054120
7	P1	-3.003597	0.014013	-0.038457
11	P1	-4.100513	0.022510	-0.006781
15	P1	-6.064565	0.017295	-0.007091
19	P1	-3.251041	0.006076	-0.035263
22	P1	-4.484569	0.019793	0.003075
26	P1	-4.208193	0.012856	0.036389
30	P1	-5.773368	0.009814	-0.019660
3	P1	-16.930439	0.267477	0.216659
7	P1	-16.618845	0.126764	-0.133652
11	P1	-16.605940	0.306293	-0.057995
15	P1	-13.232088	0.115561	0.068725
19	P1	-13.888098	0.075778	-0.050947
22	P1	-15.893896	0.566119	0.114297
26	P1	-15.765004	0.255580	0.035466
30	P1	-16.602549	0.334430	-0.047290

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.603752	0.094040	0.108790
7	P2	-22.470440	0.097311	0.090018
11	P2	-16.299982	0.103339	0.086378
15	P2	-7.216071	0.103369	0.029210
19	P2	-9.174388	0.098137	0.012172
22	P2	-17.943266	0.094482	-0.040487
26	P2	-16.222666	0.100658	-0.014109
30	P2	-19.654856	0.084163	0.017901

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.213915	0.007284	0.009191
7	P3	-8.213915	0.007284	0.009191
11	P3	-8.213915	0.007284	0.009191
15	P3	-8.213915	0.007284	0.009191
19	P3	-8.213915	0.007284	0.009191
22	P3	-8.213915	0.007284	0.009191
26	P3	-8.213915	0.007284	0.009191
30	P3	-8.213915	0.007284	0.009191

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	-3.725991	0.010872	-0.012946
7	P1	-2.748849	0.007646	0.044883
11	P1	-2.867799	0.011268	-0.003752
15	P1	-3.466232	0.018693	-0.048934
19	P1	-3.380477	0.012813	-0.009609
22	P1	-5.125897	0.021432	-0.012694
26	P1	-5.856689	0.015595	-0.015088
30	P1	-5.247249	0.029350	0.023876
3	P1	-11.526772	0.039158	-0.041418
7	P1	-9.920946	0.049793	0.032488
11	P1	-10.082021	0.049979	-0.068873
15	P1	-10.624865	0.085750	-0.039670
19	P1	-15.476151	0.060249	0.003373
22	P1	-20.607695	1.202902	0.337101

26	P1	-16.798506	0.336805	0.350383
30	P1	-18.156878	0.316259	-0.032092

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.418892	0.032395	0.187537
7	P2	-22.858608	0.059646	0.171363
11	P2	-11.429721	0.019613	0.111199
15	P2	-4.919056	0.024671	0.054741
19	P2	-6.920683	0.022311	0.044029
22	P2	-8.196193	0.022460	-0.003051
26	P2	-23.972687	0.024490	0.037633
30	P2	-22.097944	0.018268	0.022212

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.053288	0.002474	0.029536
7	P3	-8.053226	0.002471	0.029673
11	P3	-8.053342	0.002472	0.030184
15	P3	-8.053291	0.002491	0.029781
19	P3	-8.053375	0.002475	0.029441
22	P3	-8.053308	0.002472	0.029144
26	P3	-8.053301	0.002467	0.028734
30	P3	-8.053333	0.002483	0.029938

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	0.000560613
	stdev	1.68682e-07
MEAN Q	mean	0.000520390
	stdev	2.14189e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.139487
	stdev	0.00118858
STDEV Q	mean	0.139852
	stdev	0.00120815



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006012[890]

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_1PNPDE20060128_182641_000000352044_00371_20465_1379.N1	0	16







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)


Acsending

<input type="checkbox"/>
Descending

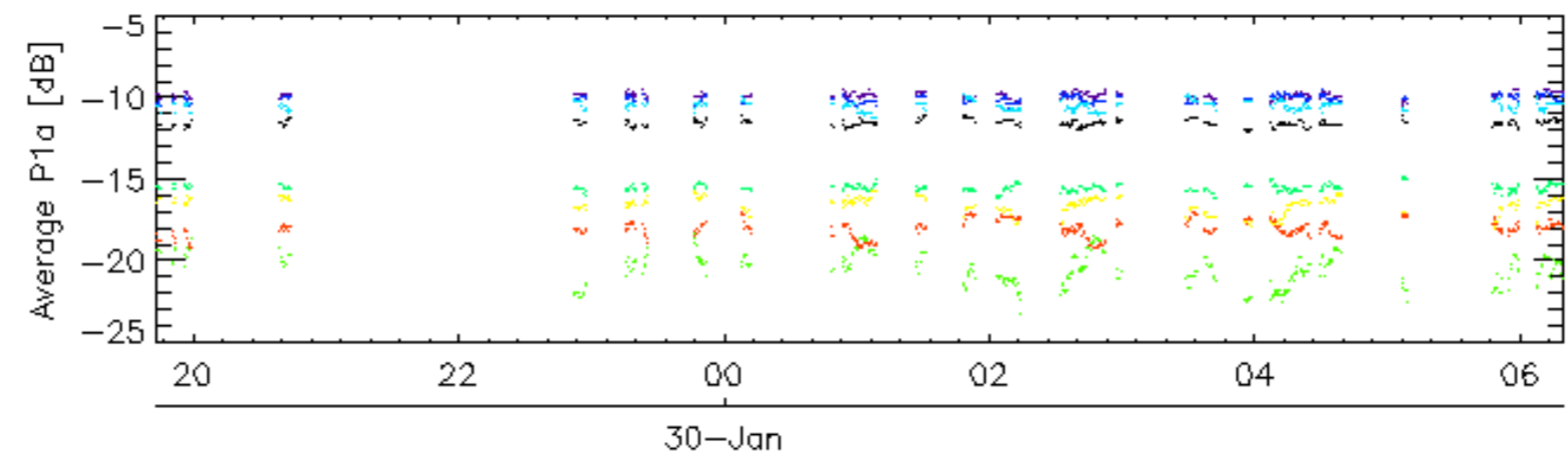
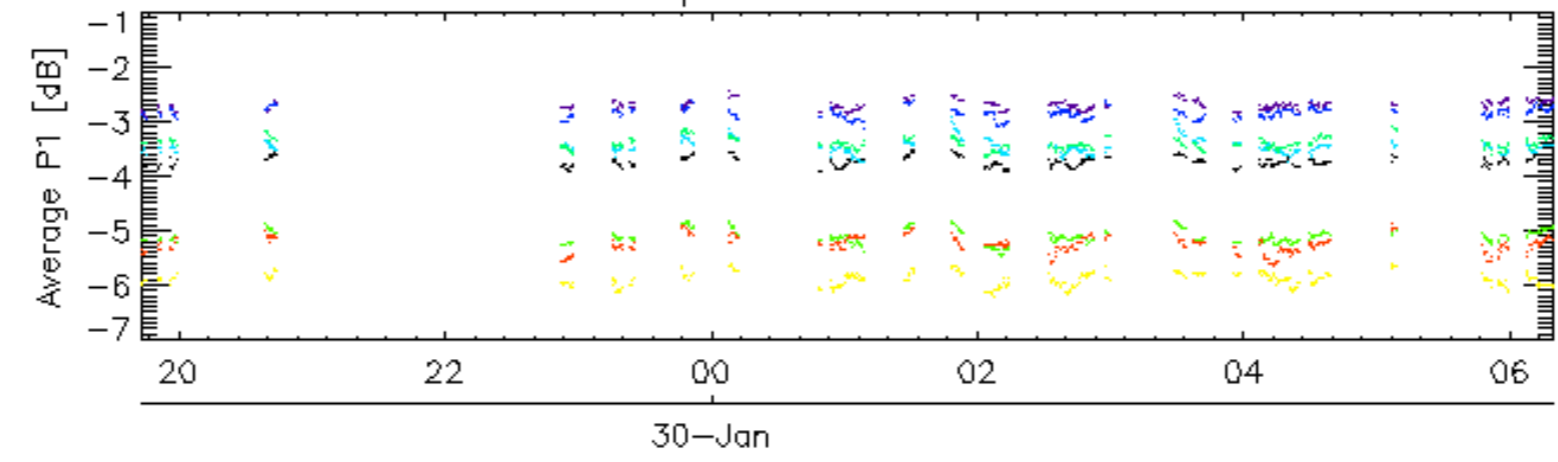
7.5 - Absolute Doppler for GM1

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

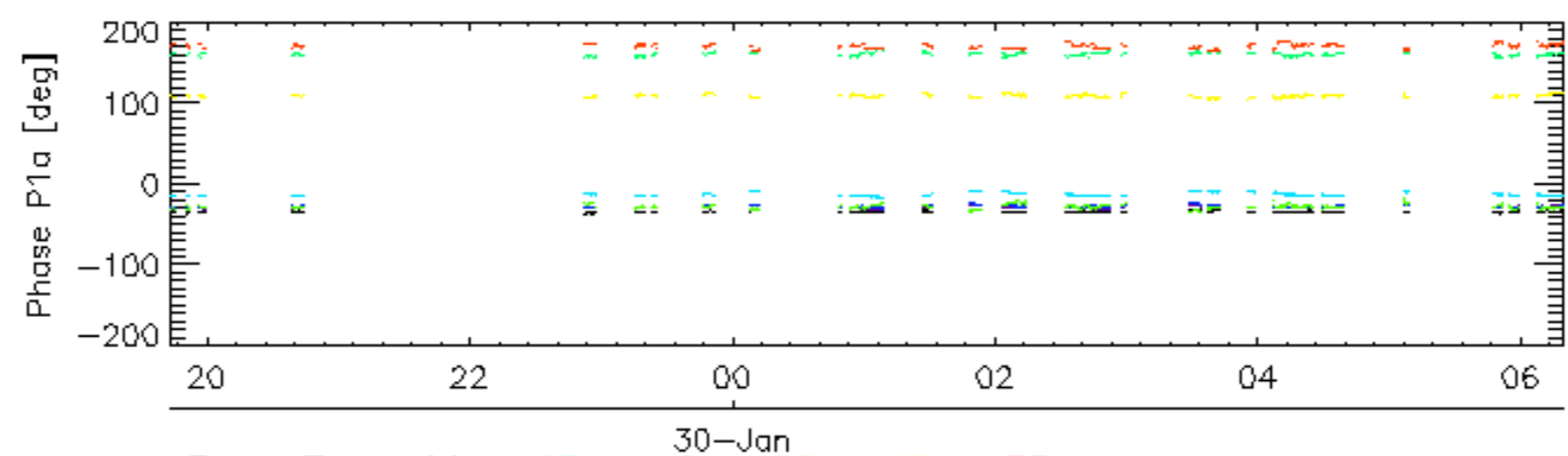
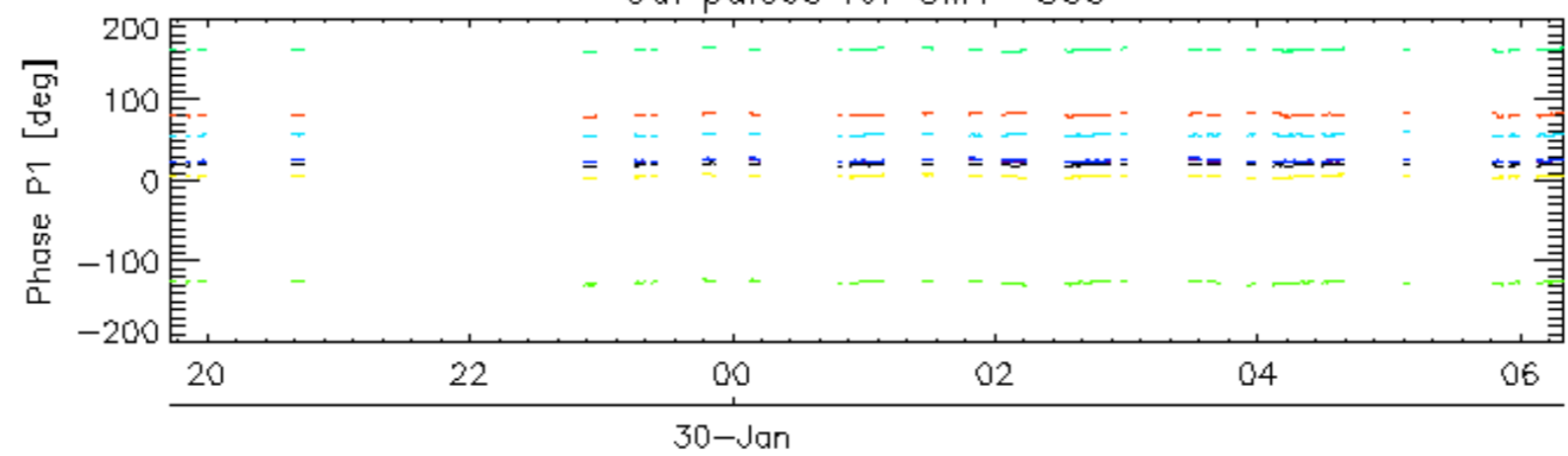
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

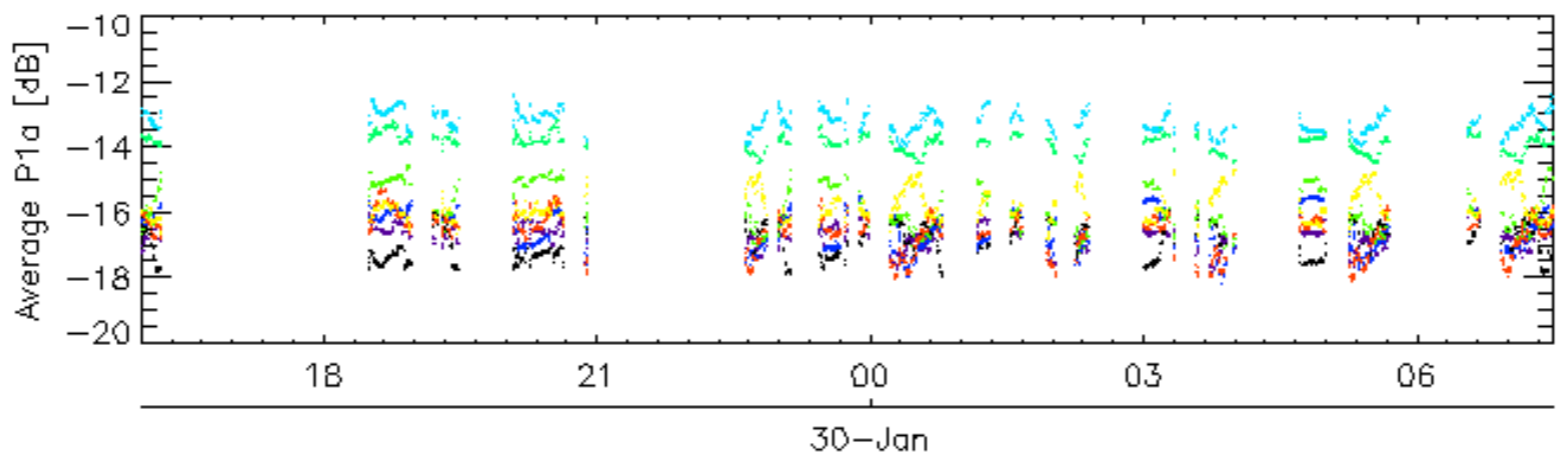
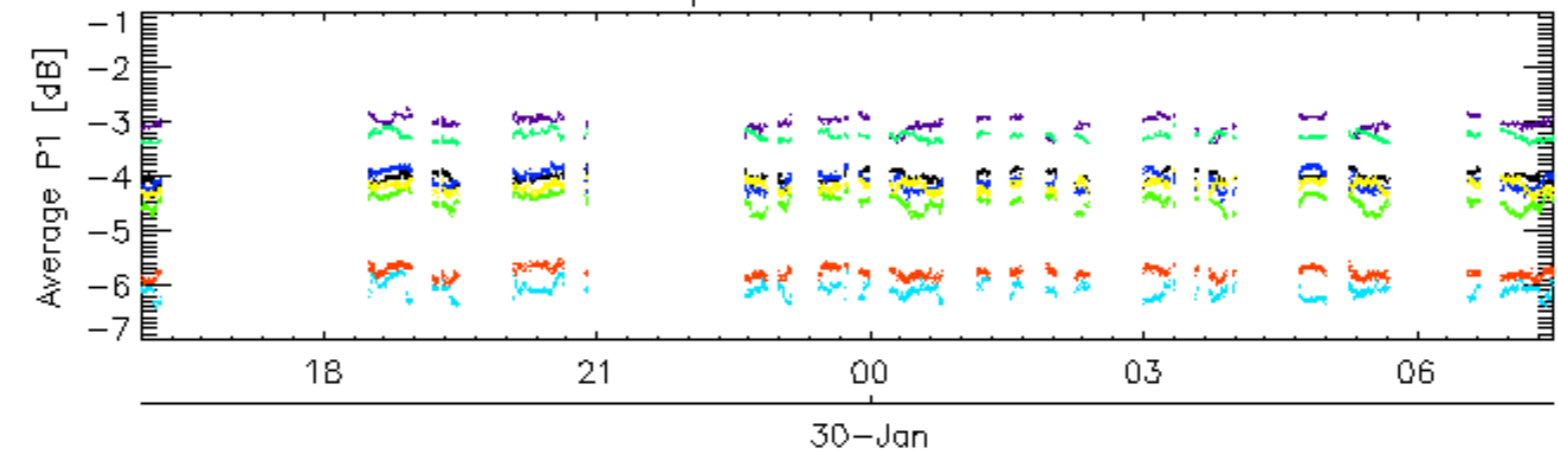


Cal pulses for GM1 SS3

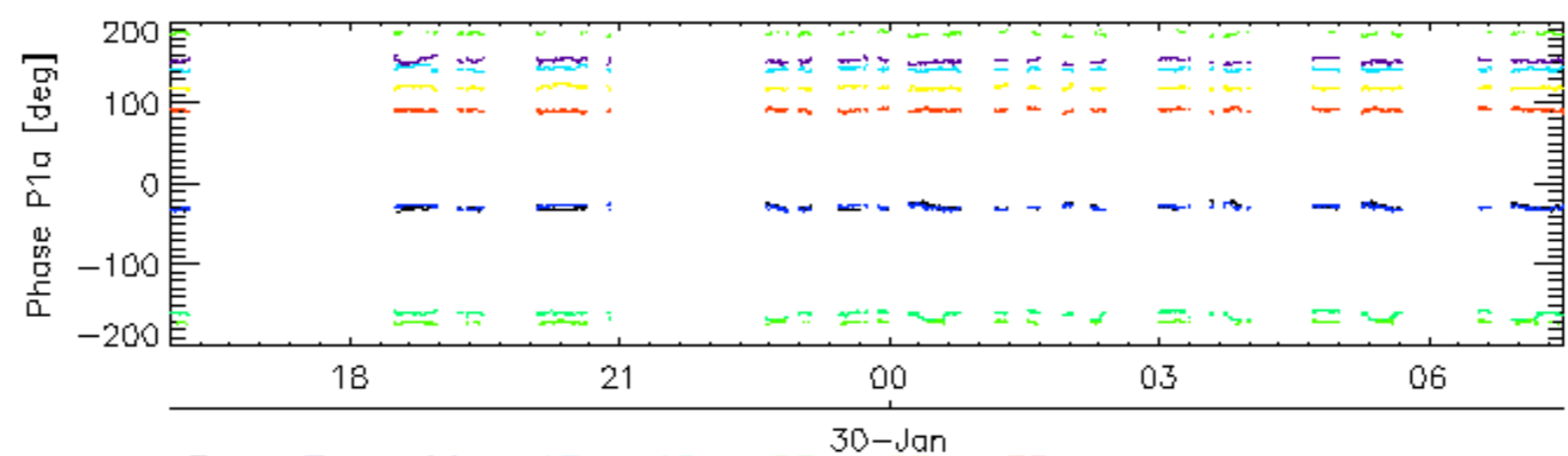
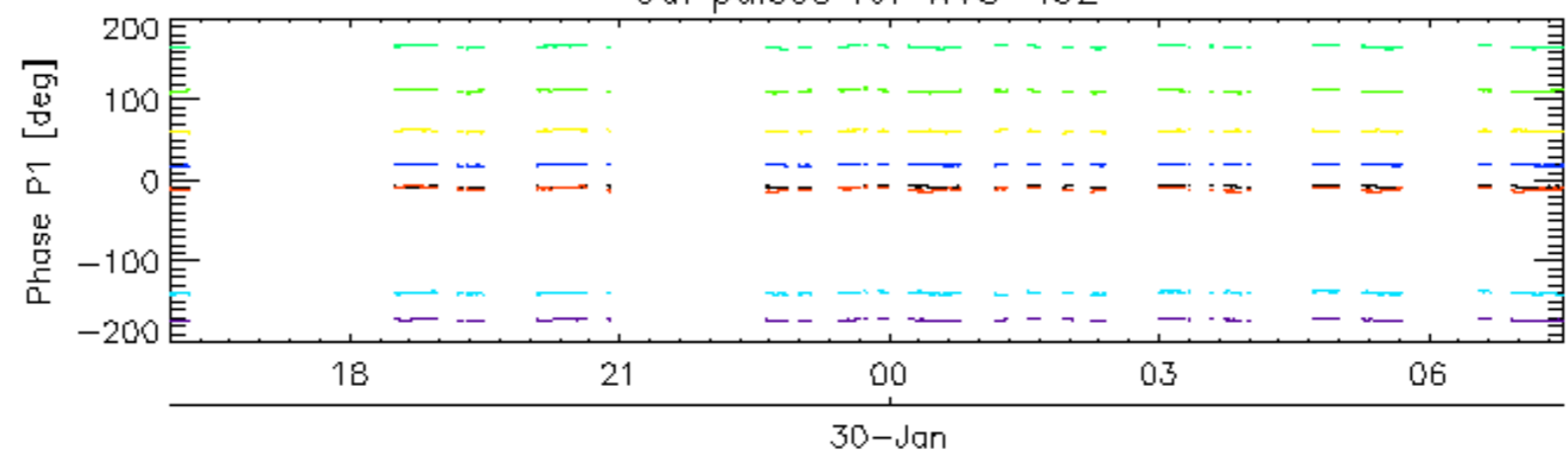


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

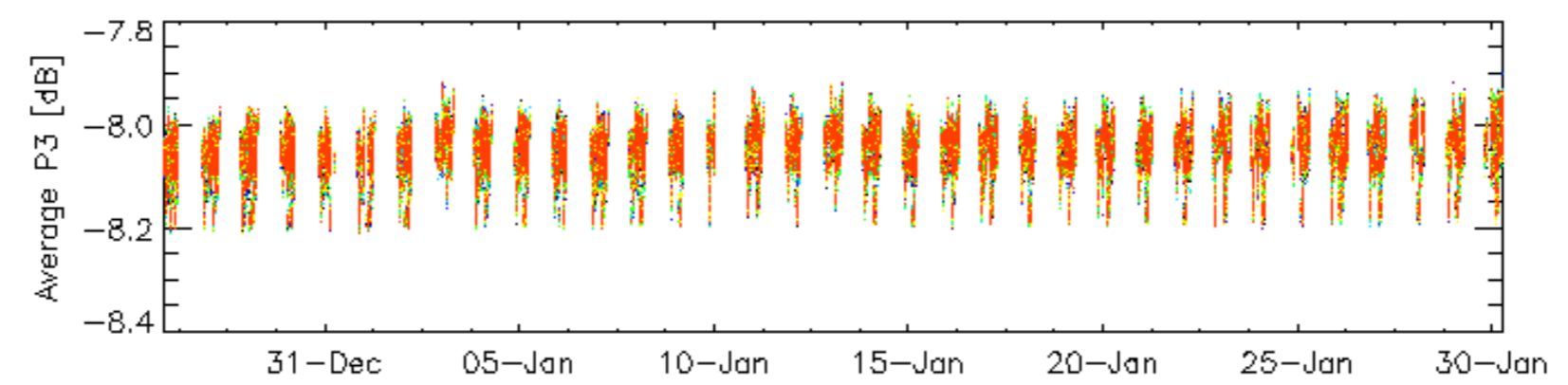
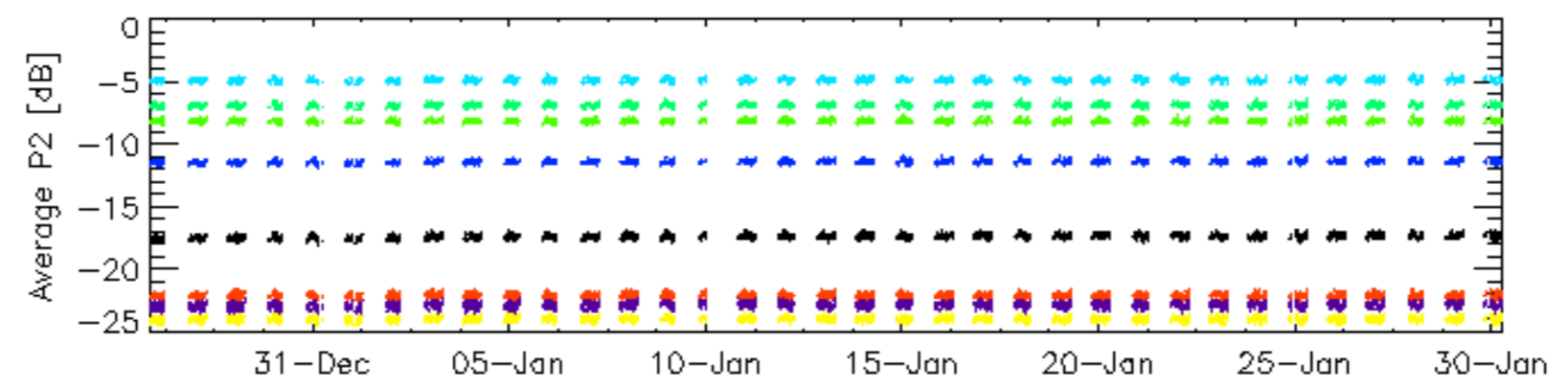
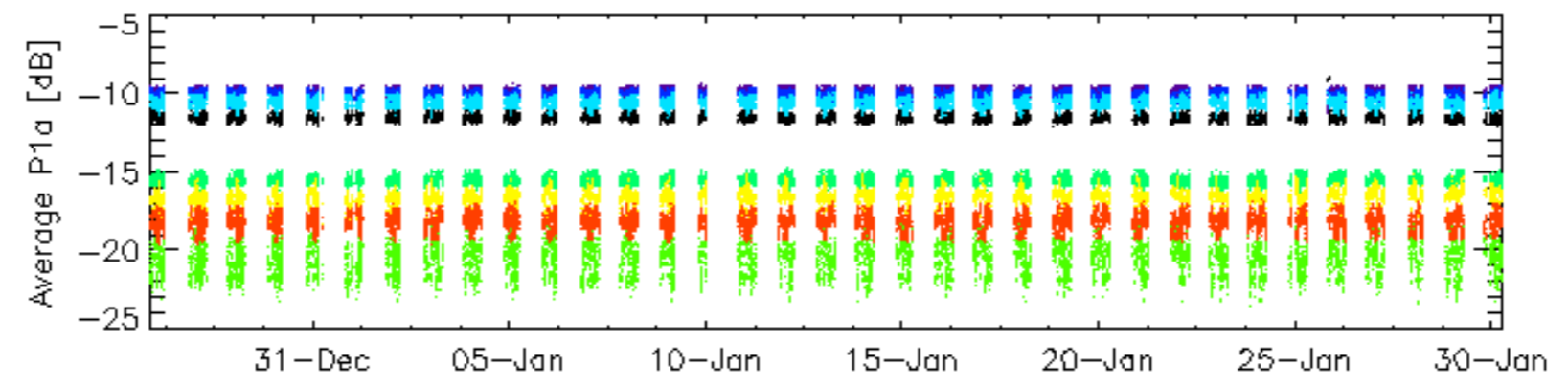
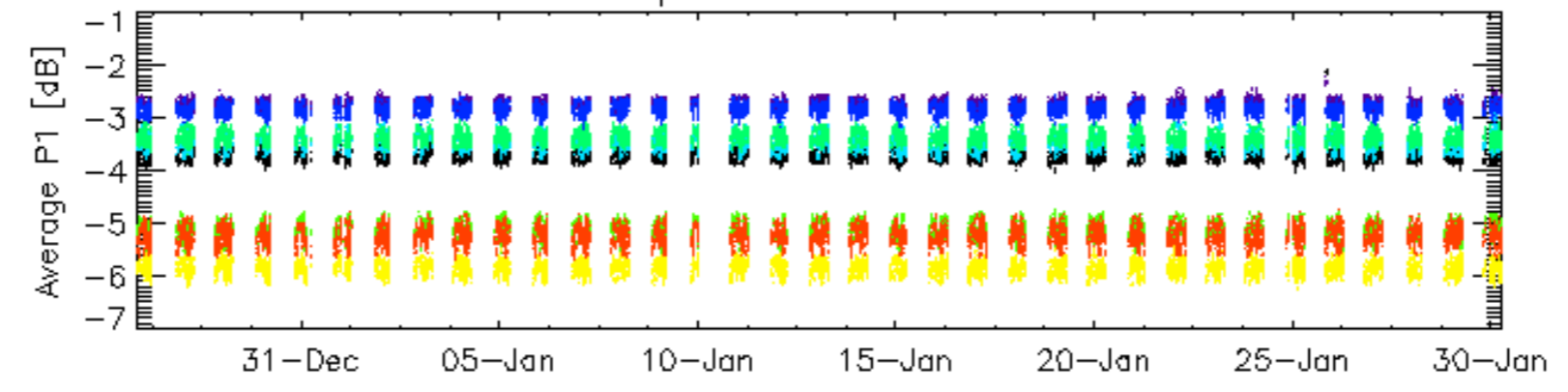


Cal pulses for WVS IS2



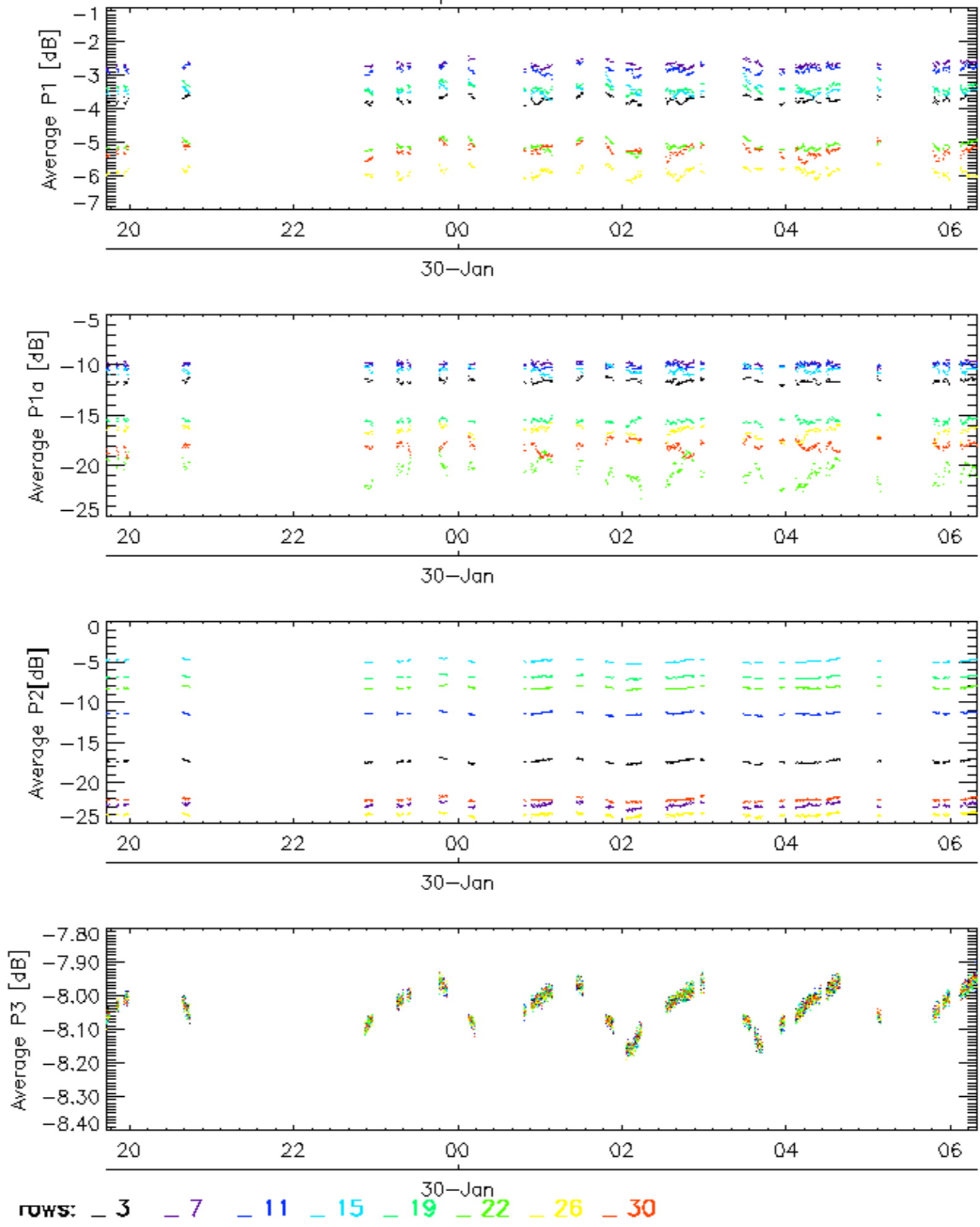
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

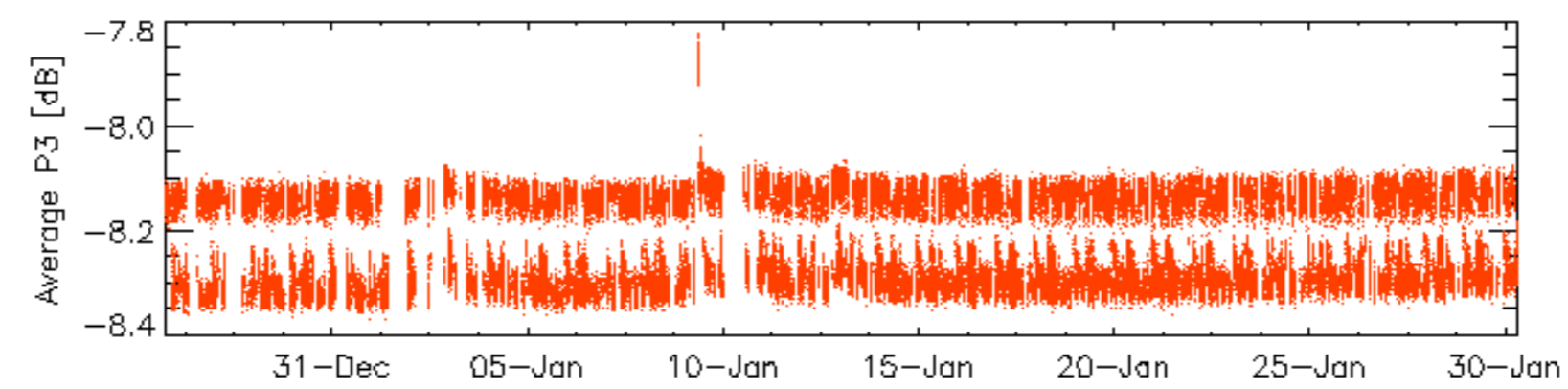
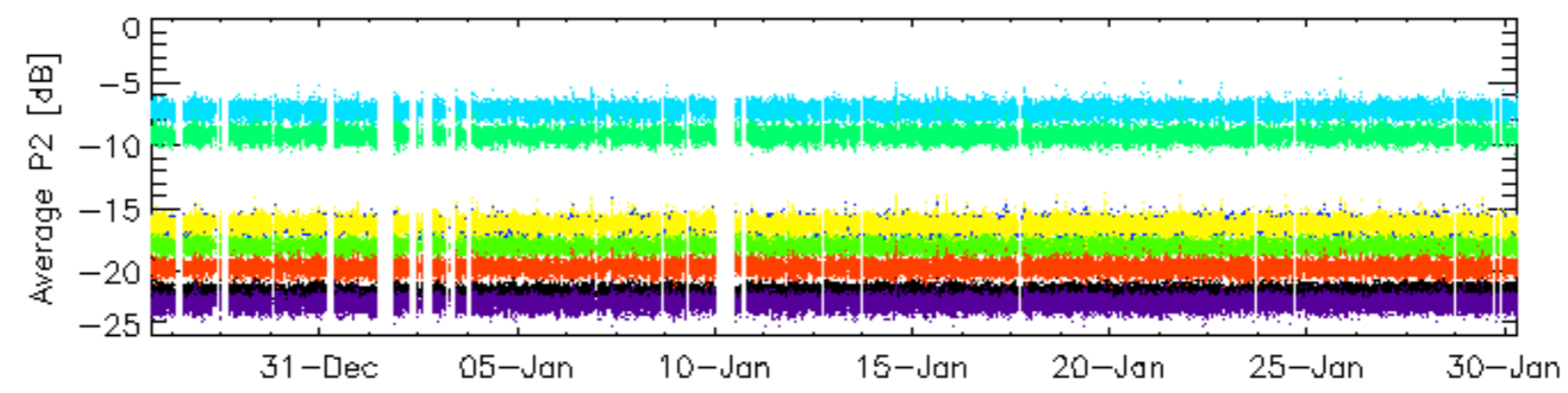
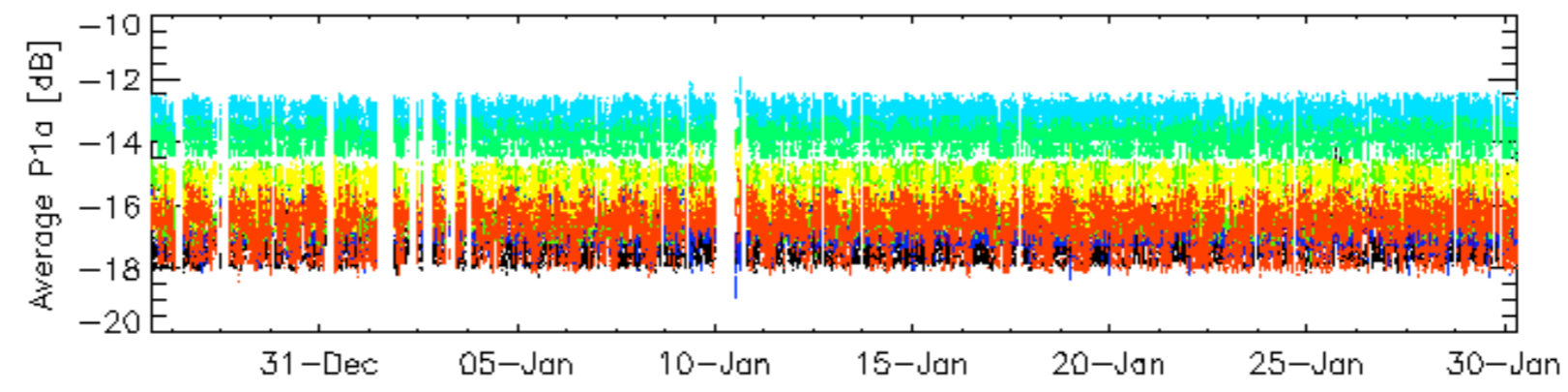
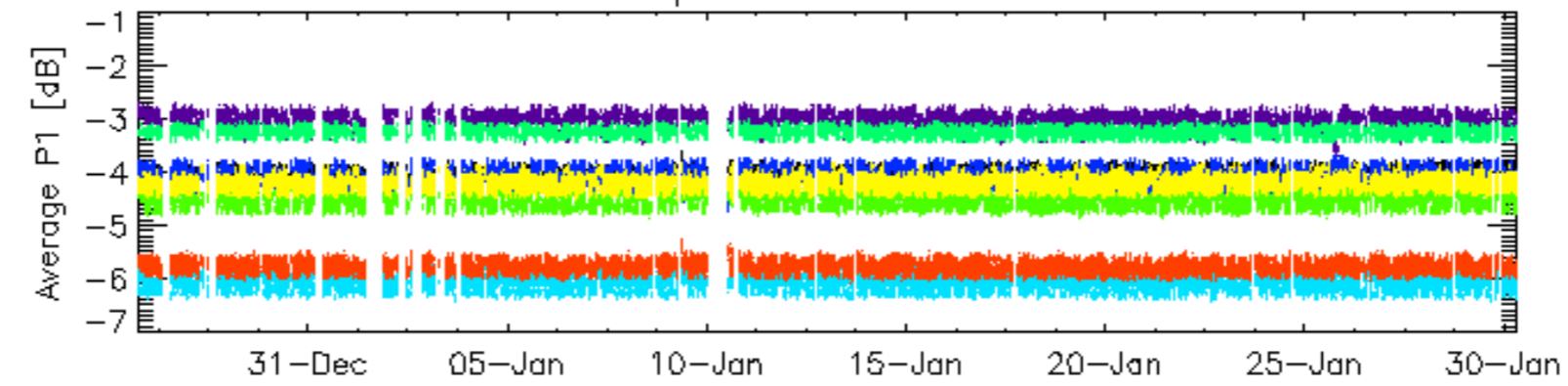


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

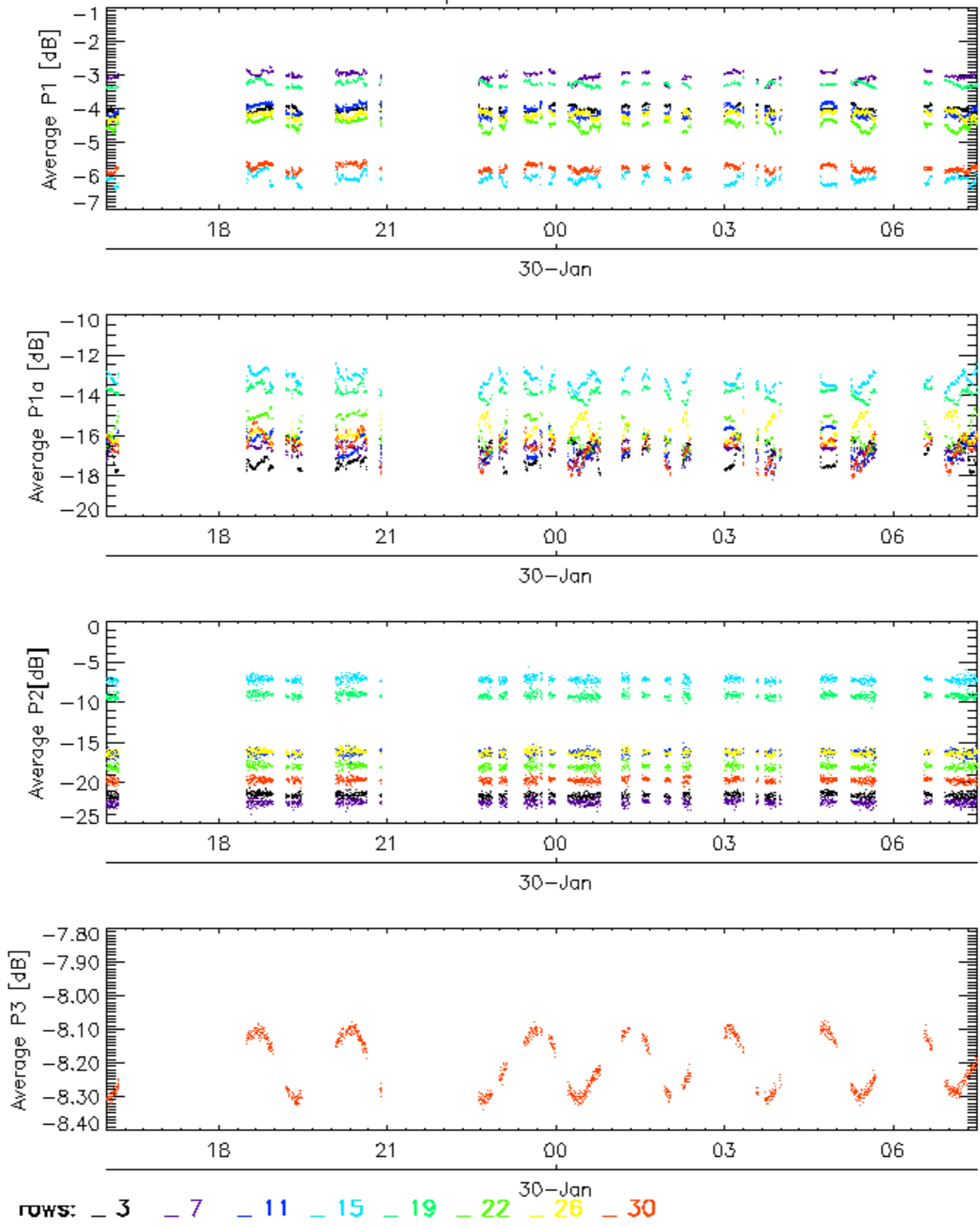


Cal pulses for WVS IS2



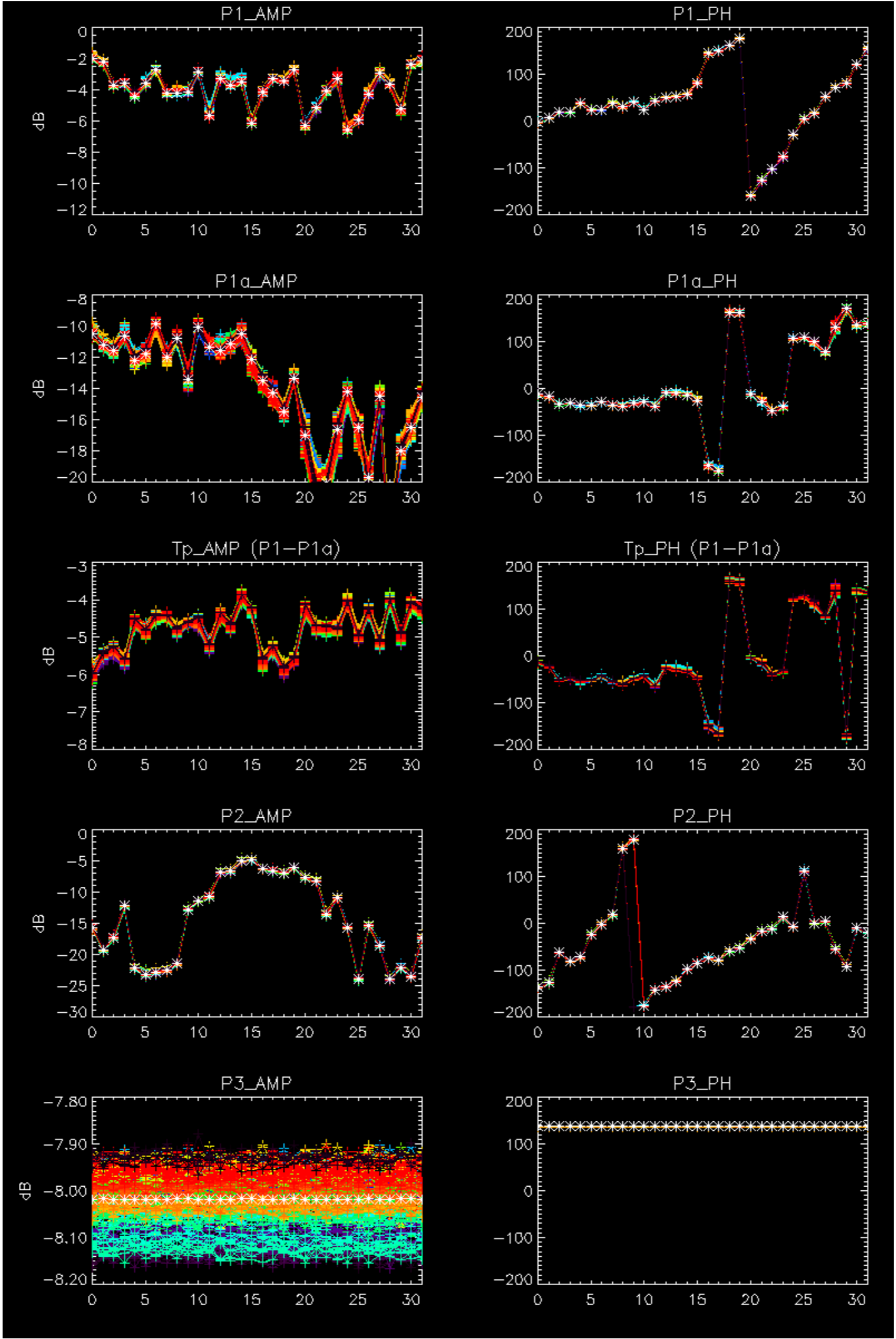
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

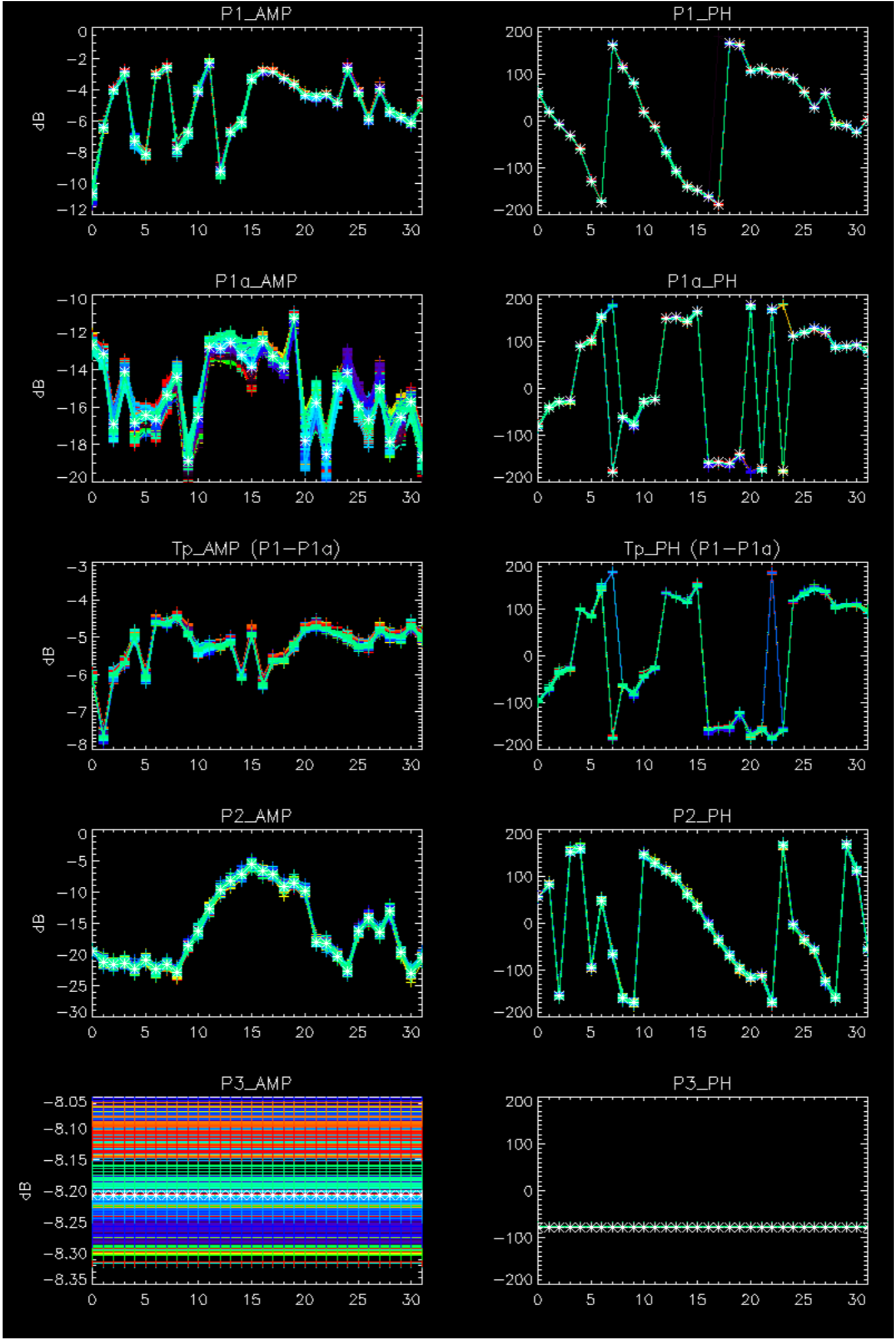
Cal pulses for WVS IS2



No anomalies observed on available browse products

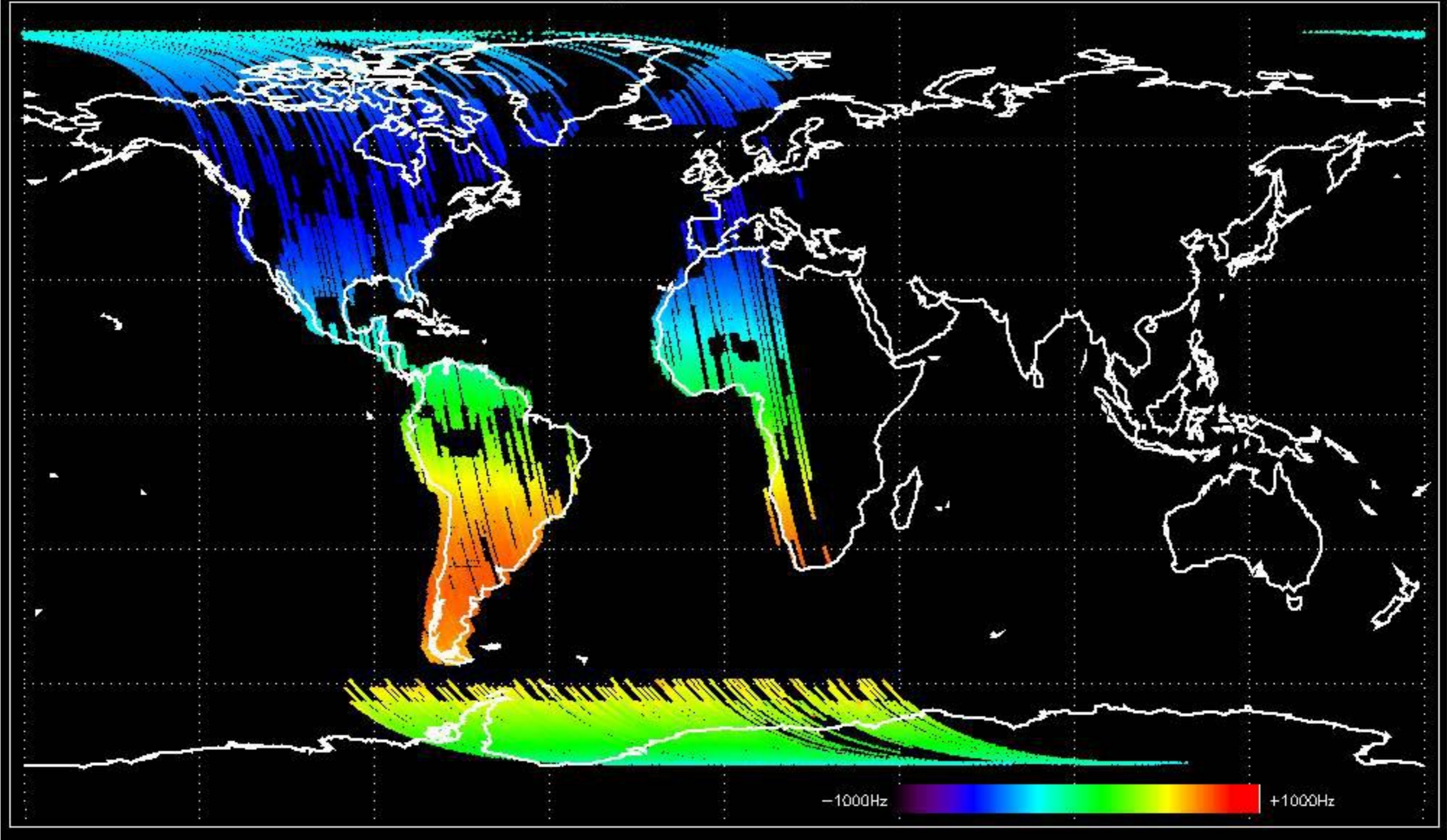
No anomalies observed.



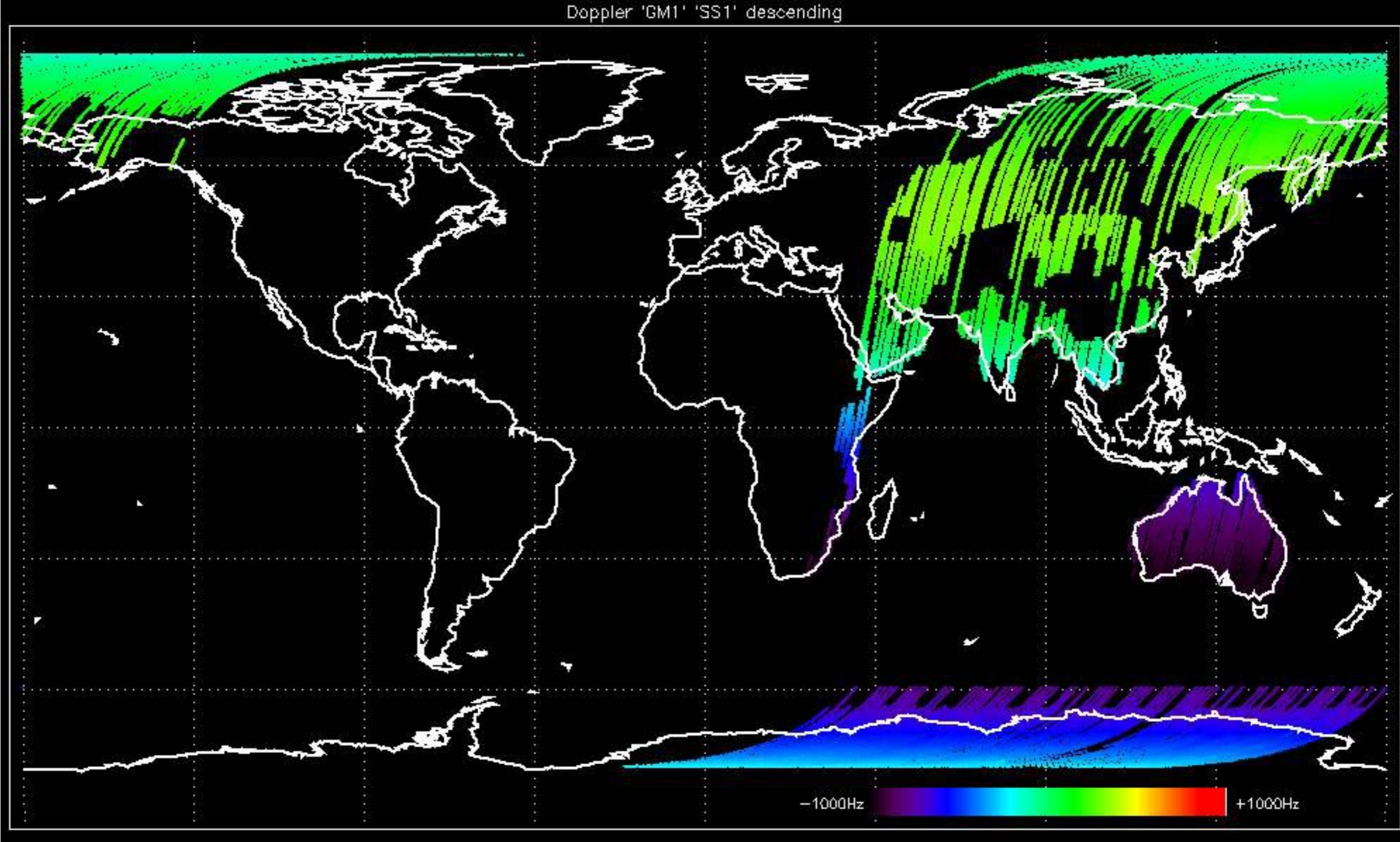


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

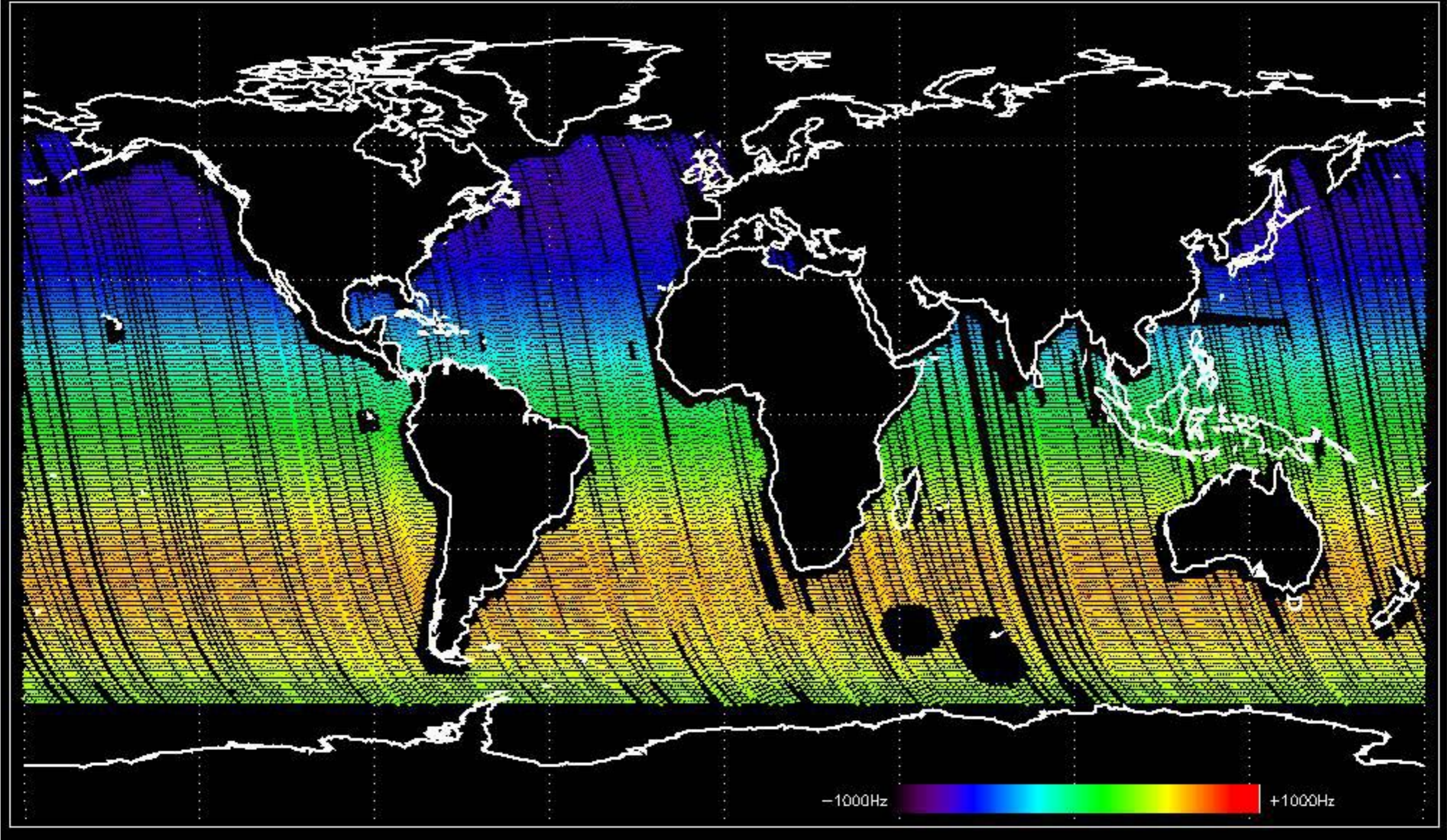
Doppler 'GM1' 'SS1' ascending



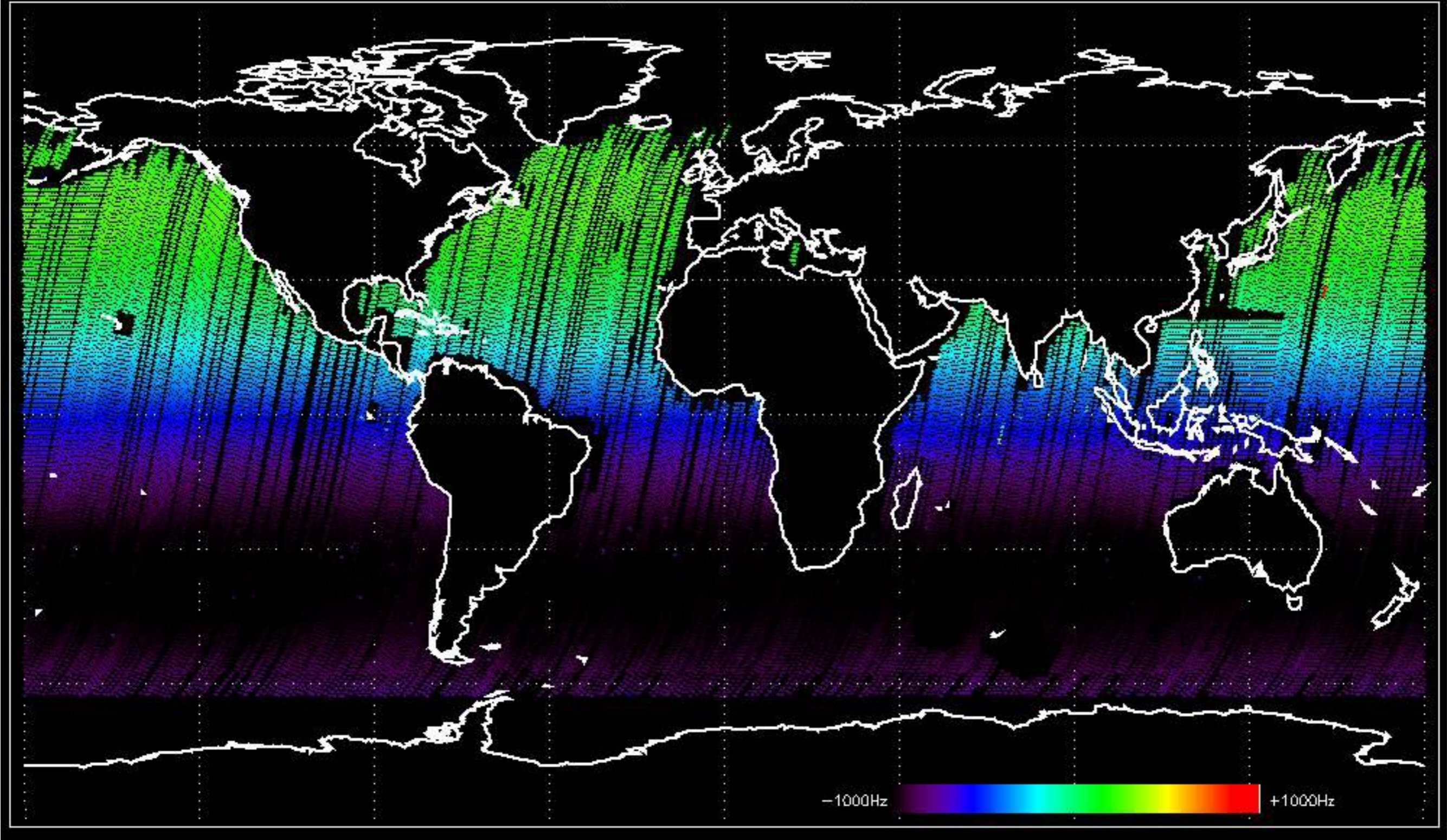
Doppler 'GM1' 'SS1' descending



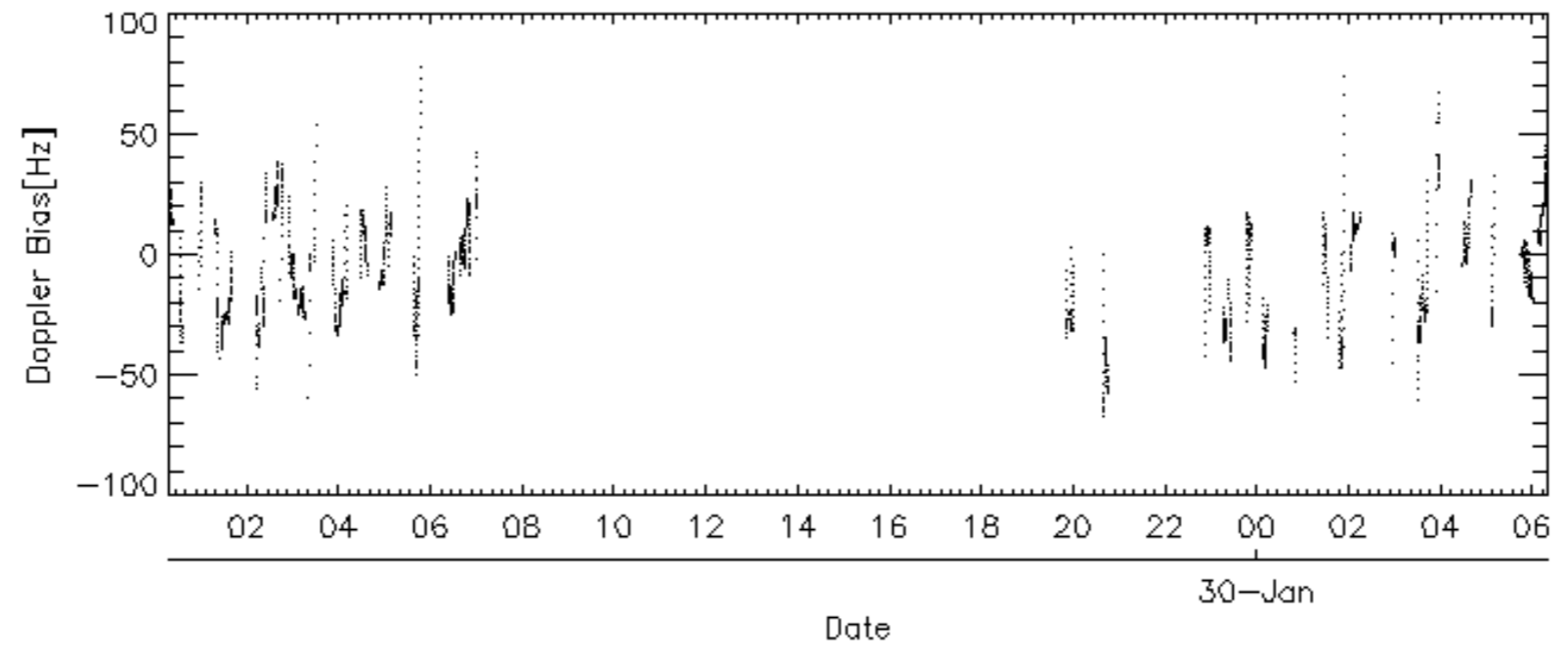
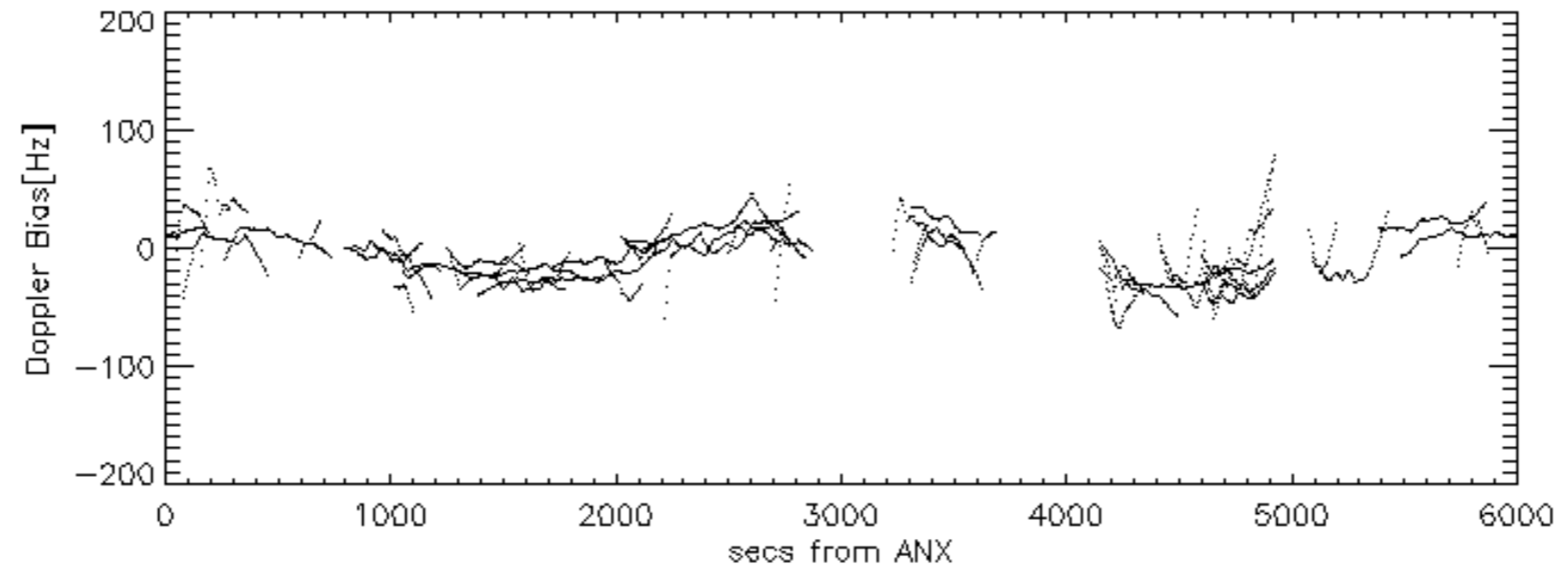
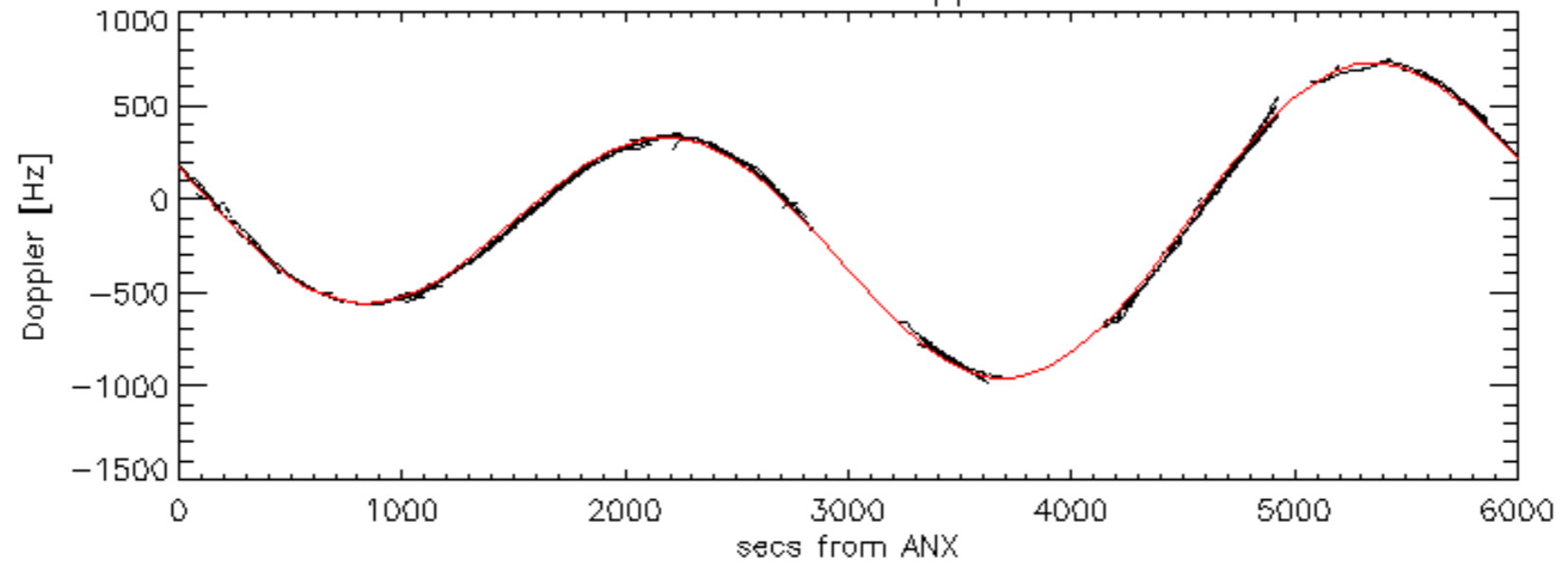
Doppler 'WVS' 'IS2' ascending

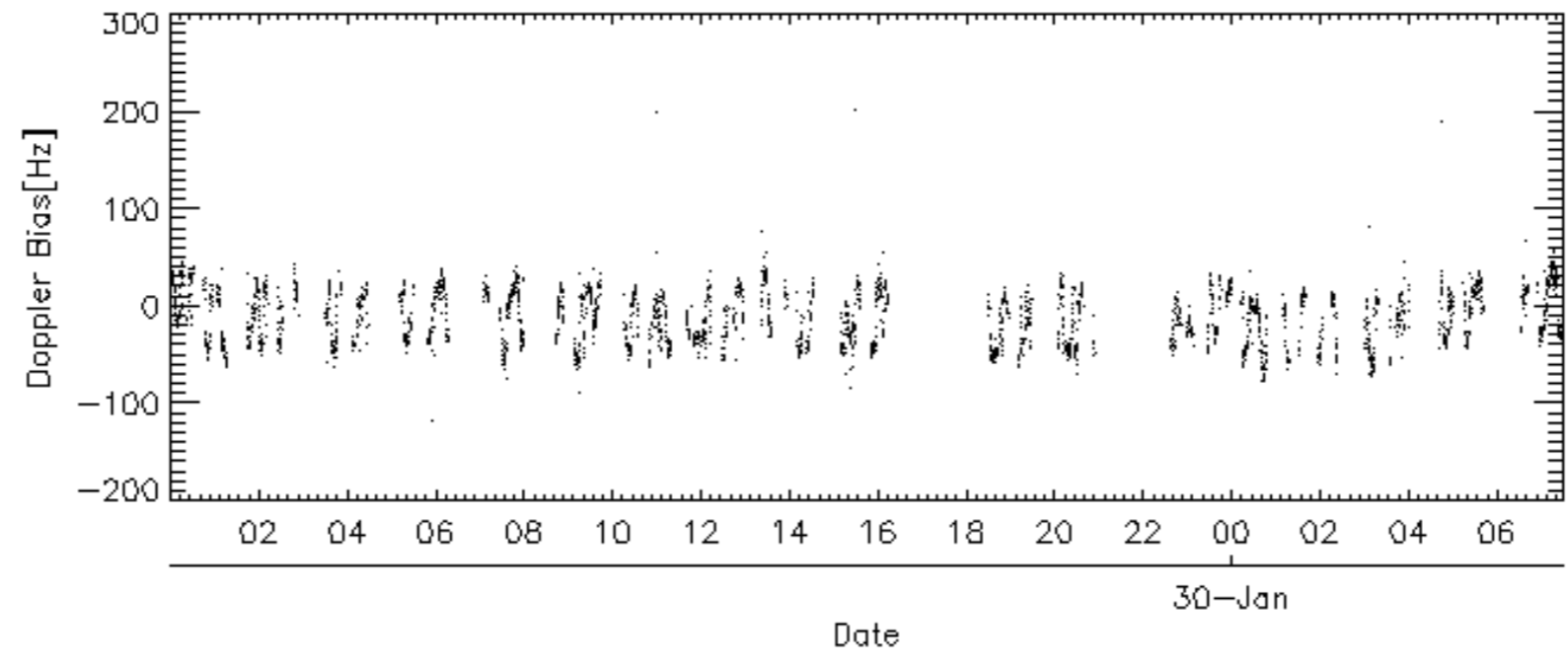
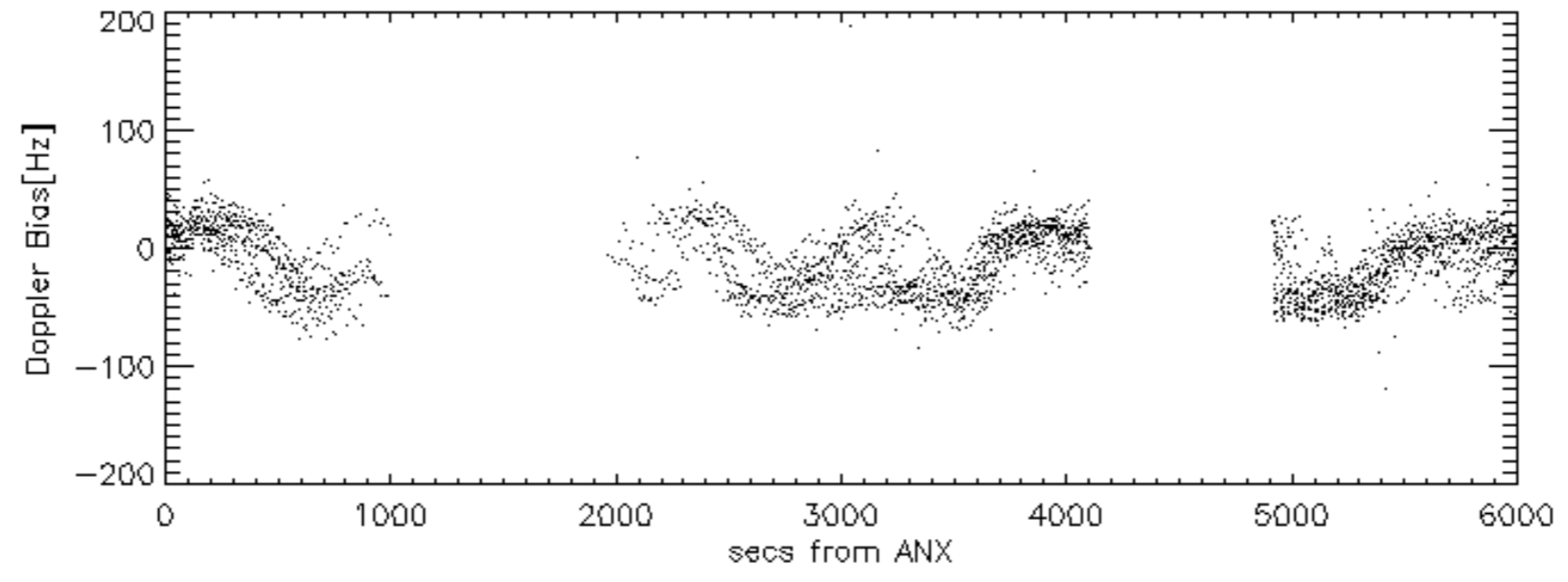
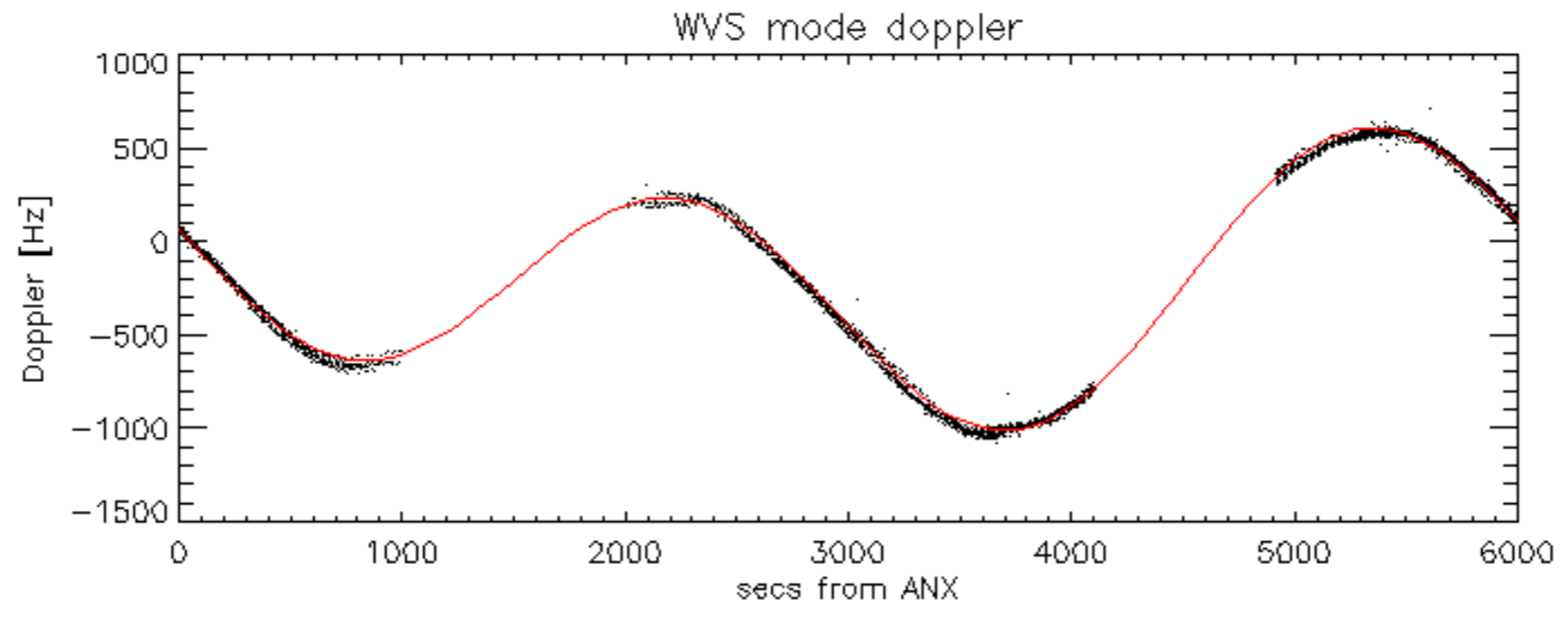


Doppler 'WVS' 'IS2' descending

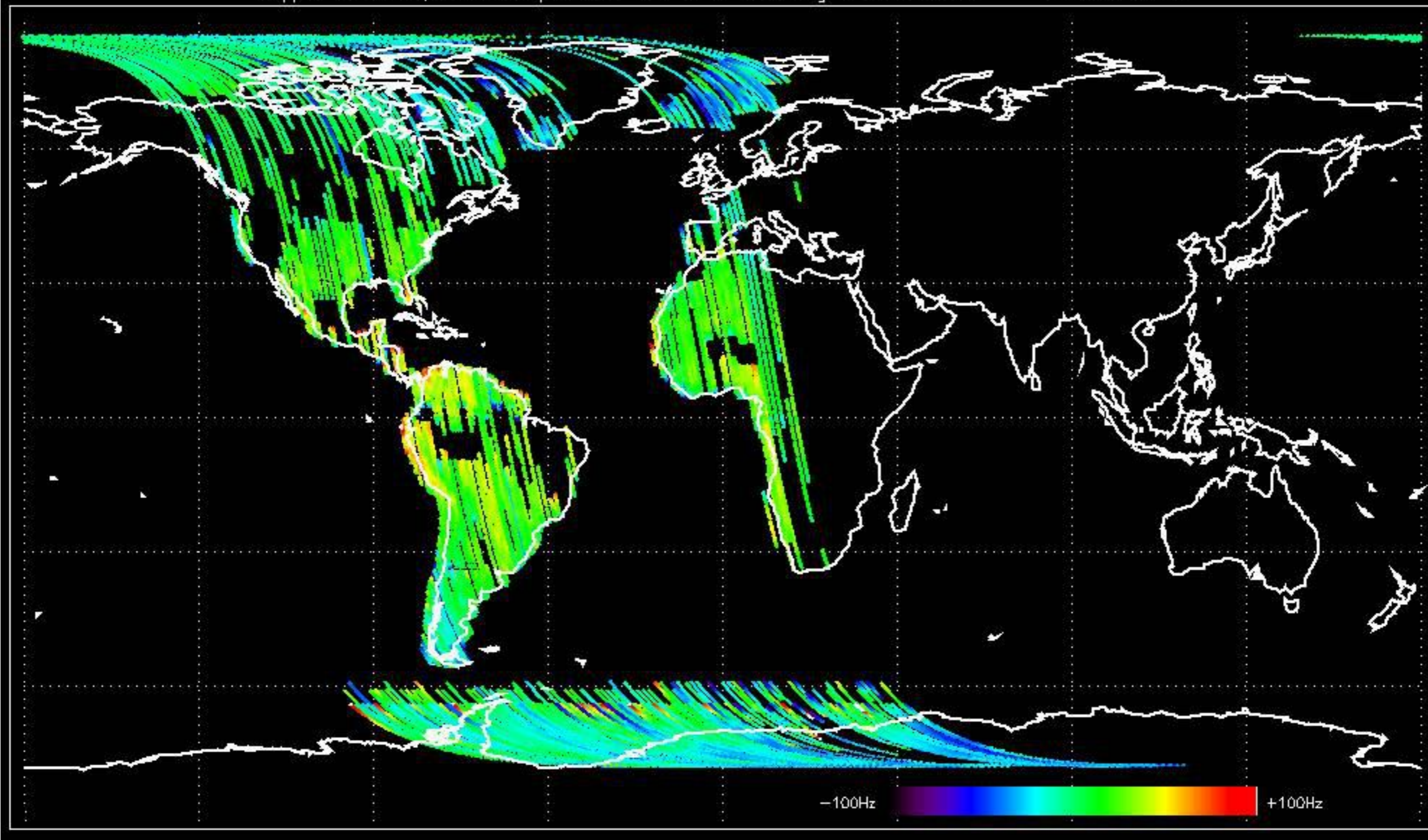


GM1 mode doppler

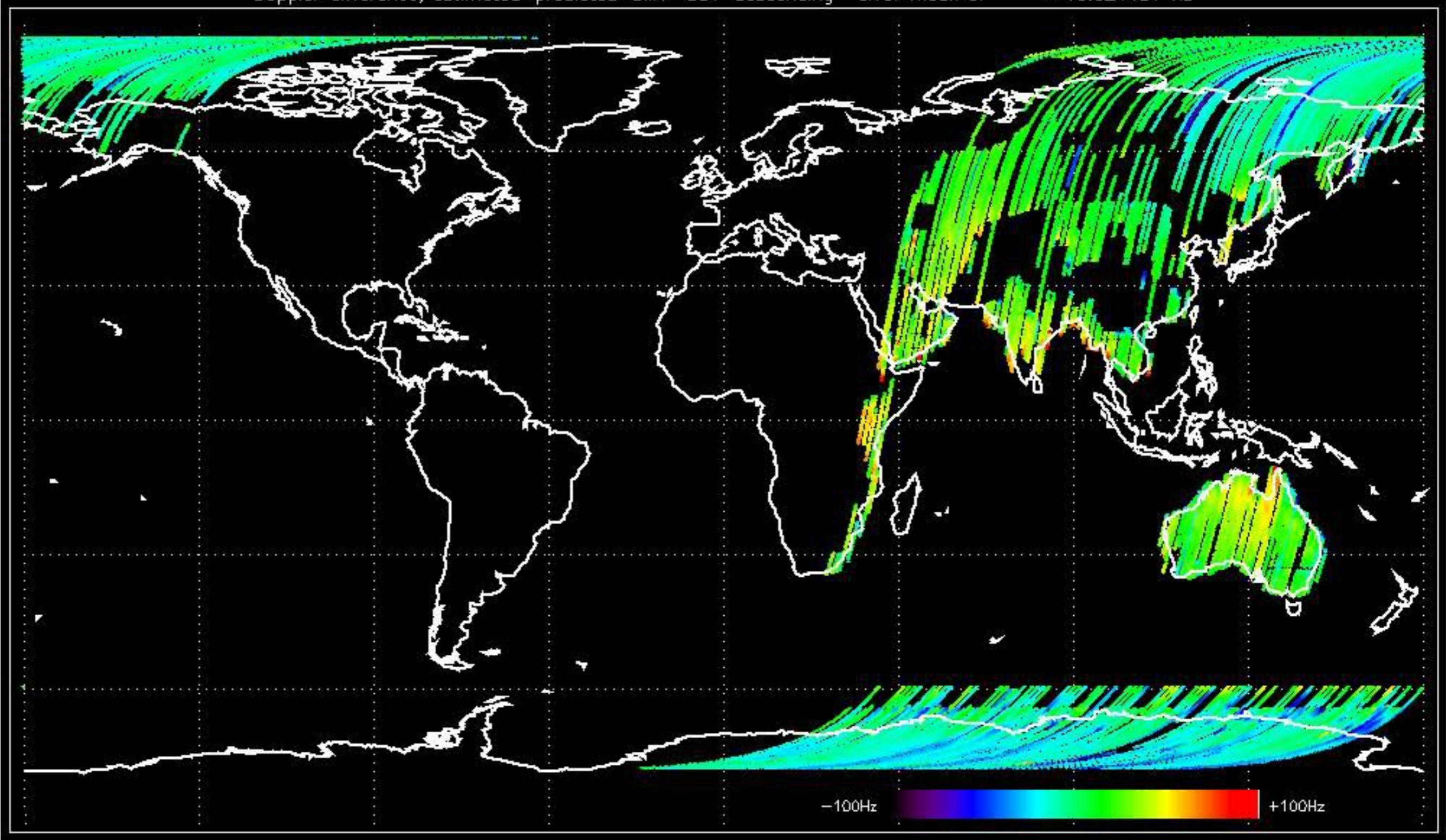




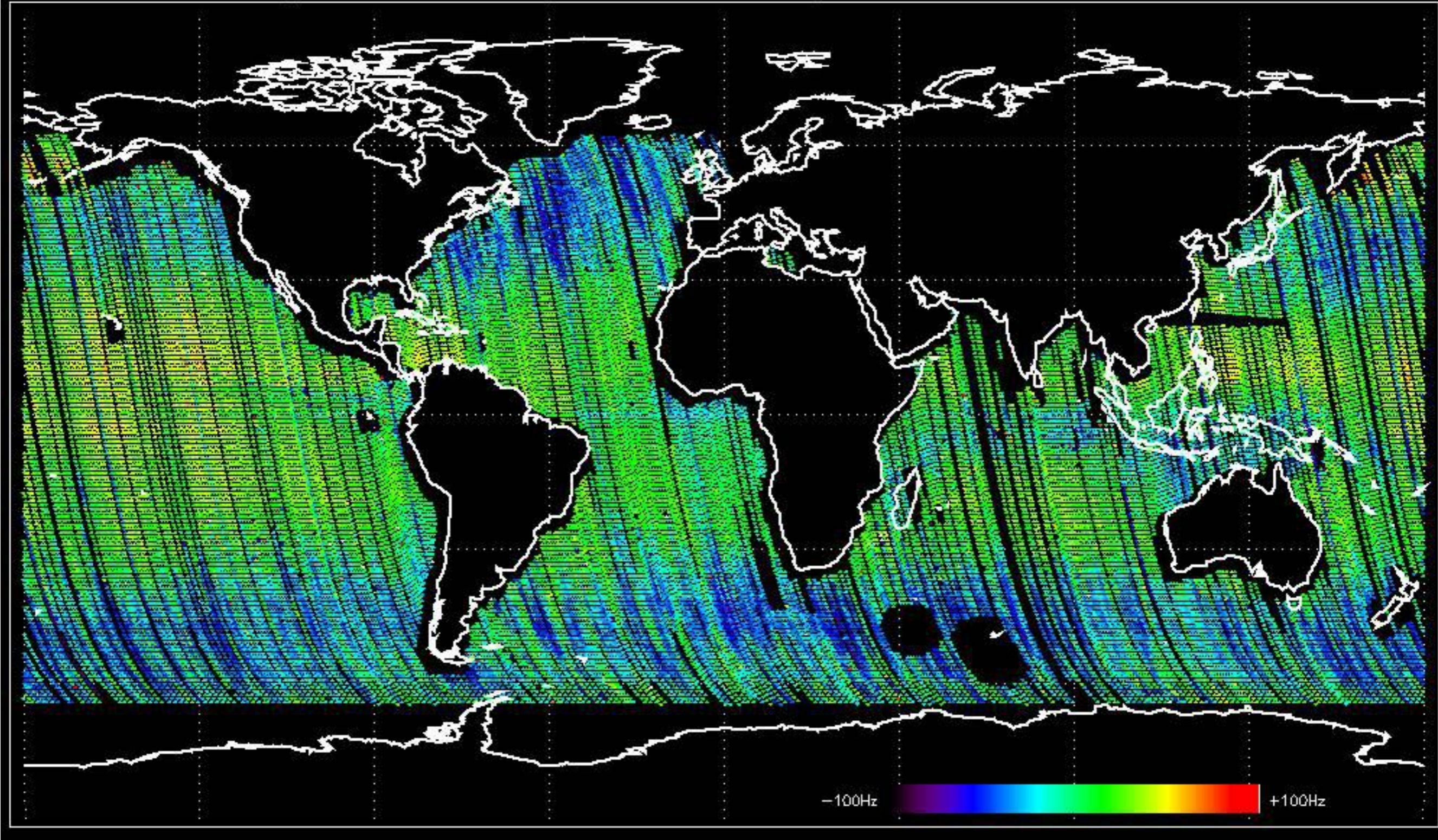
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -11.004810 Hz



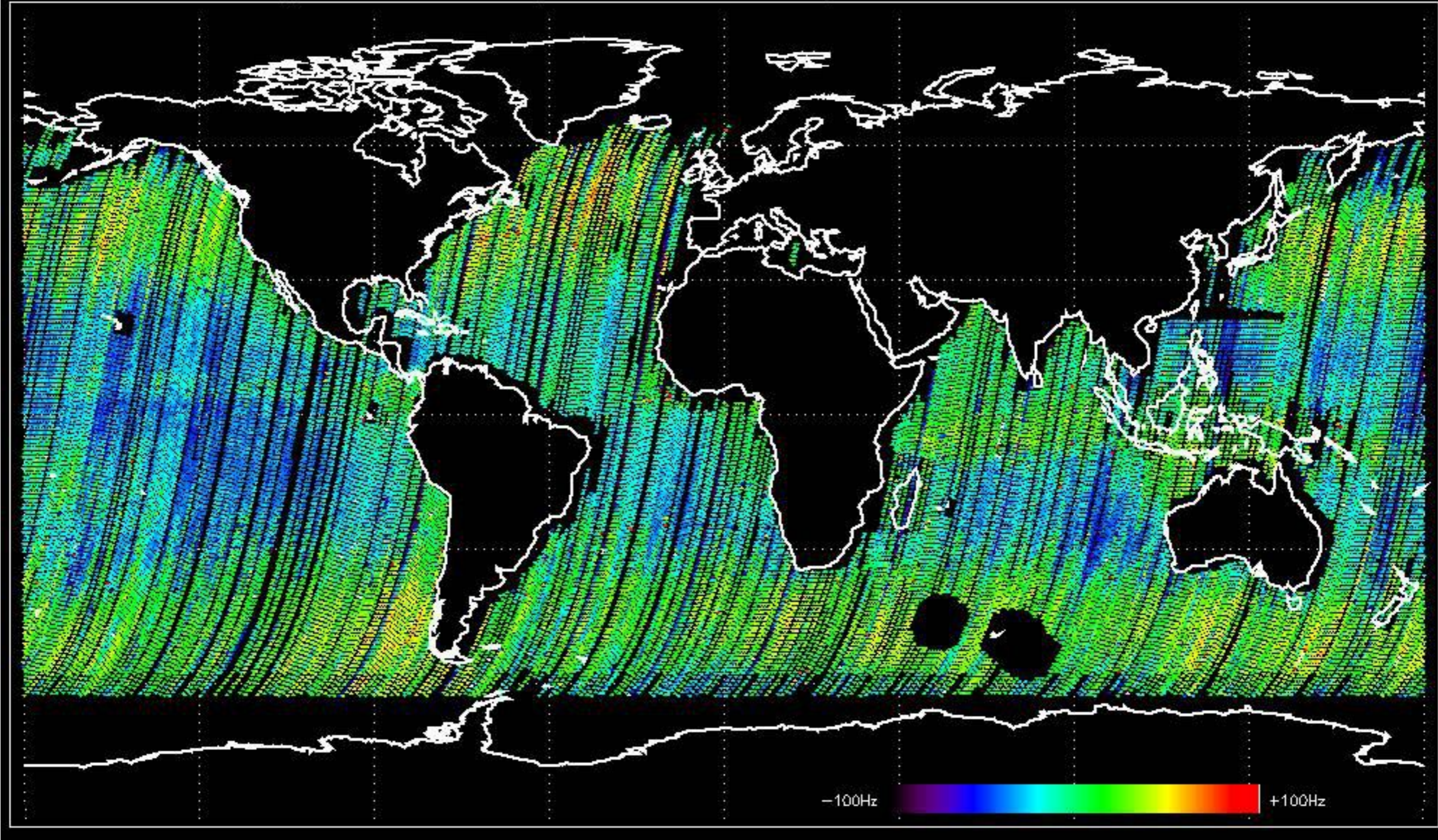
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -15.621431 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -8.7282833 Hz

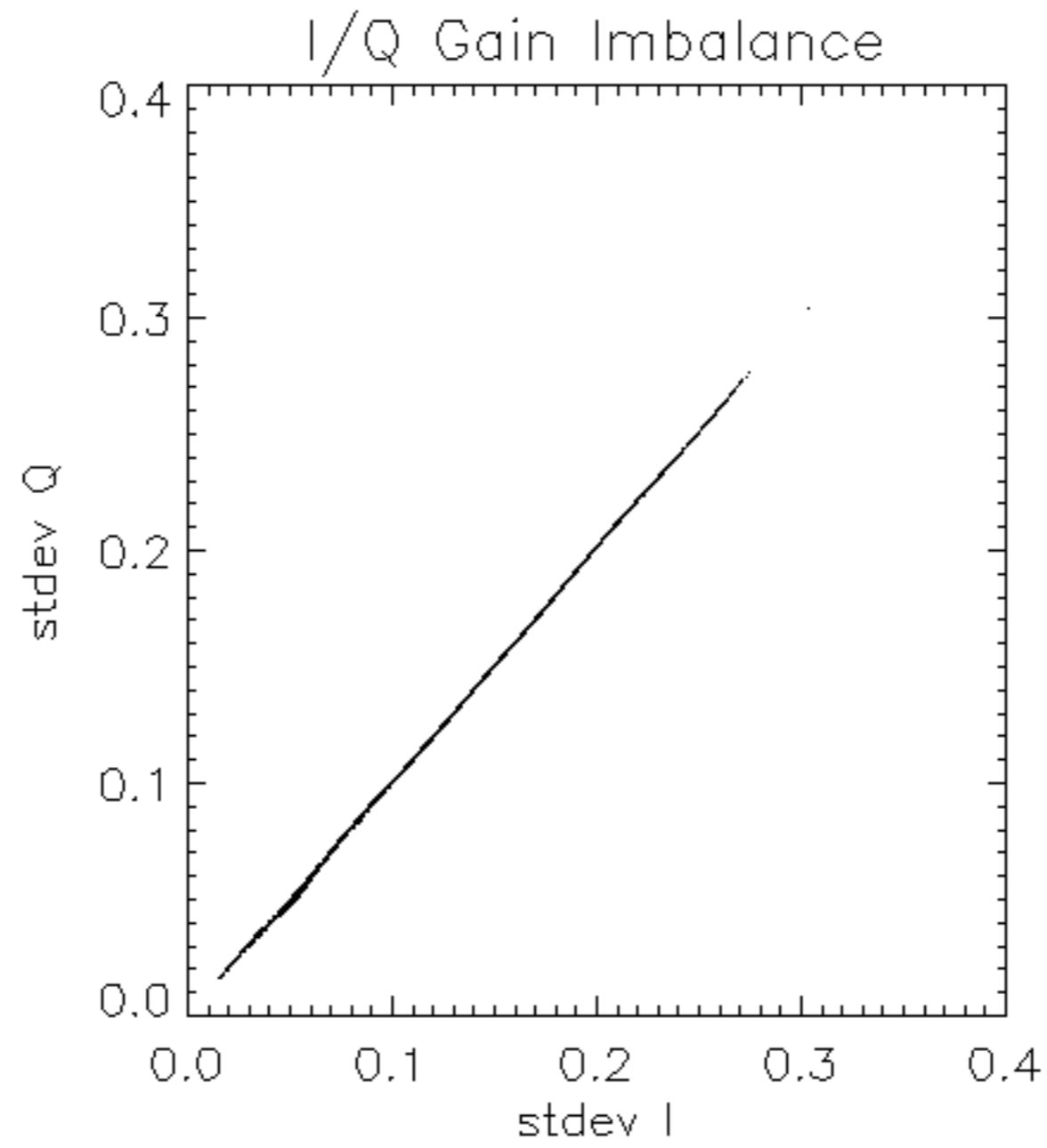


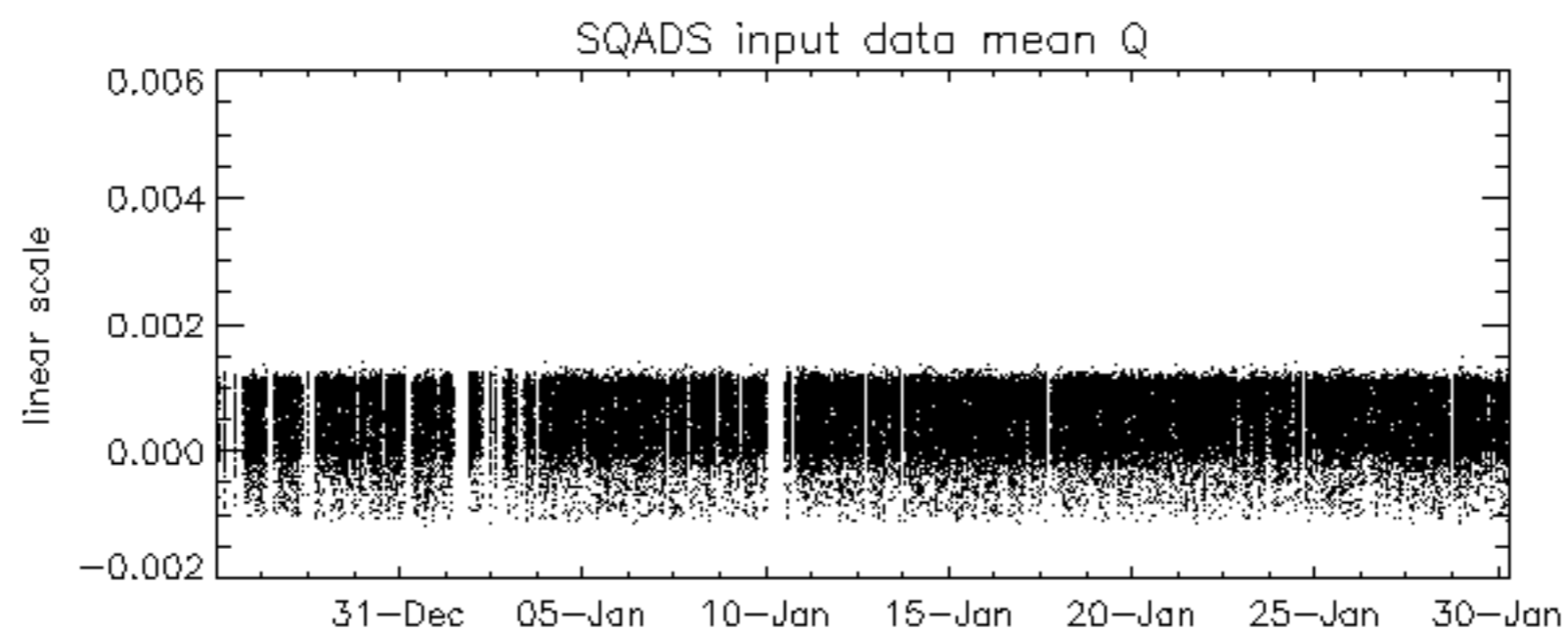
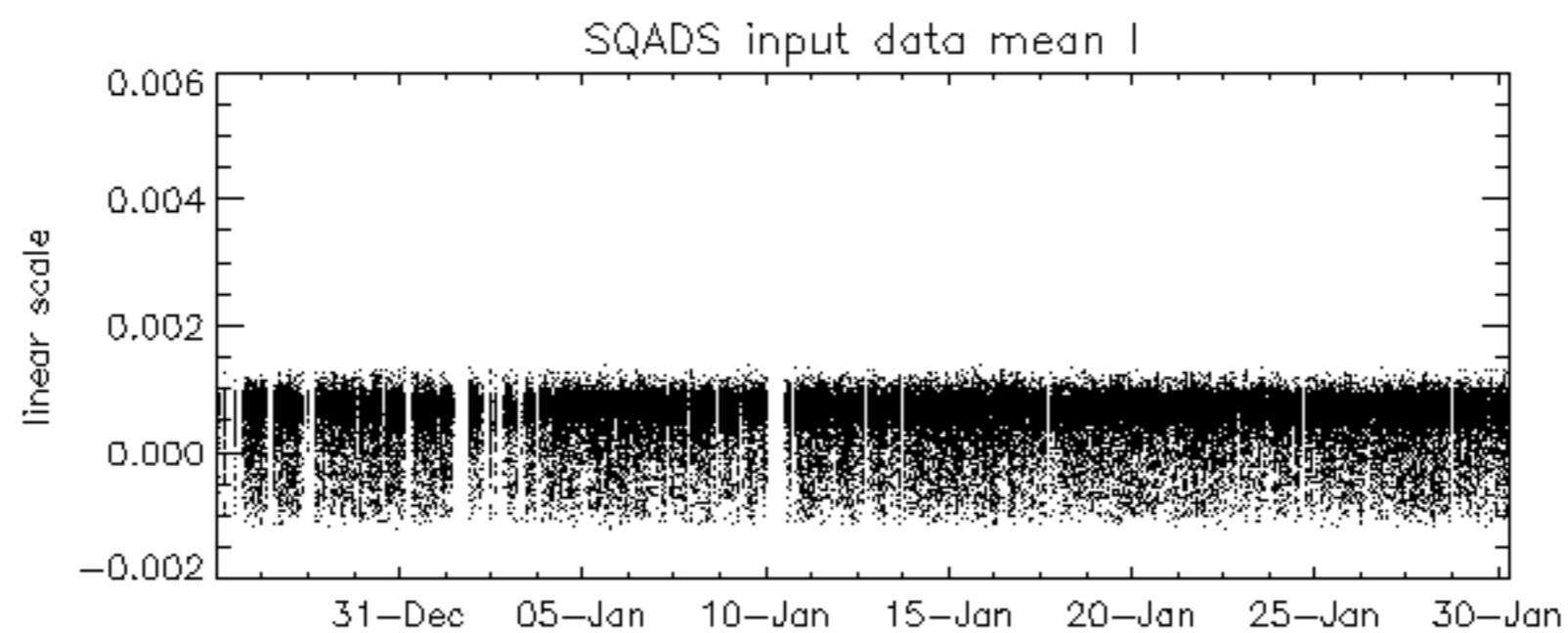
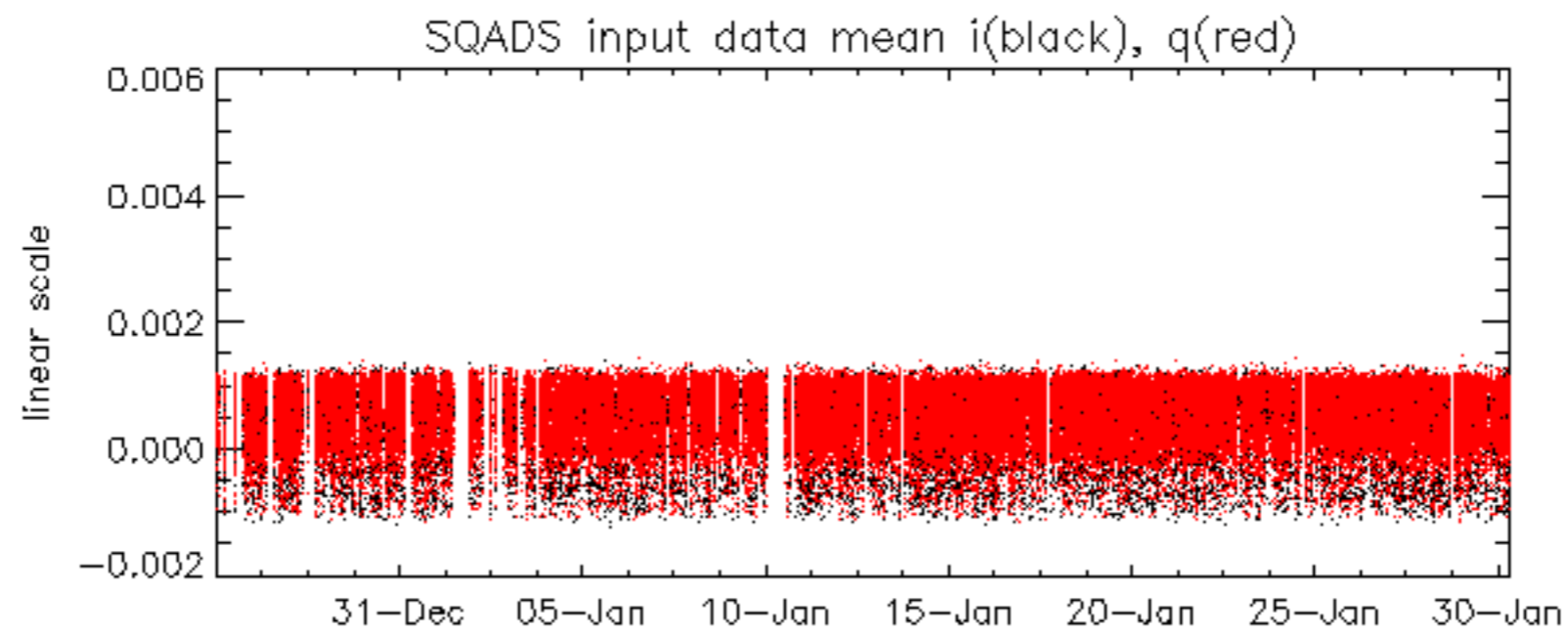
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -10.313953 Hz

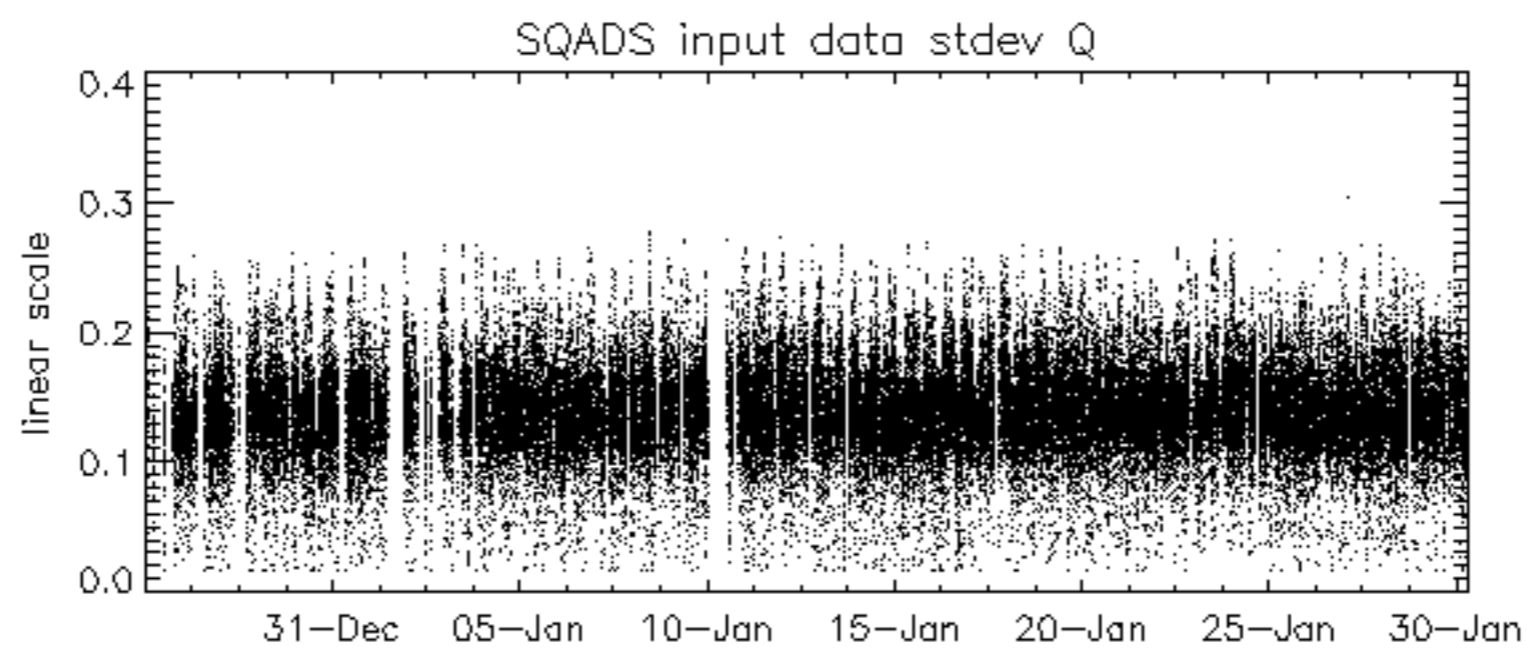
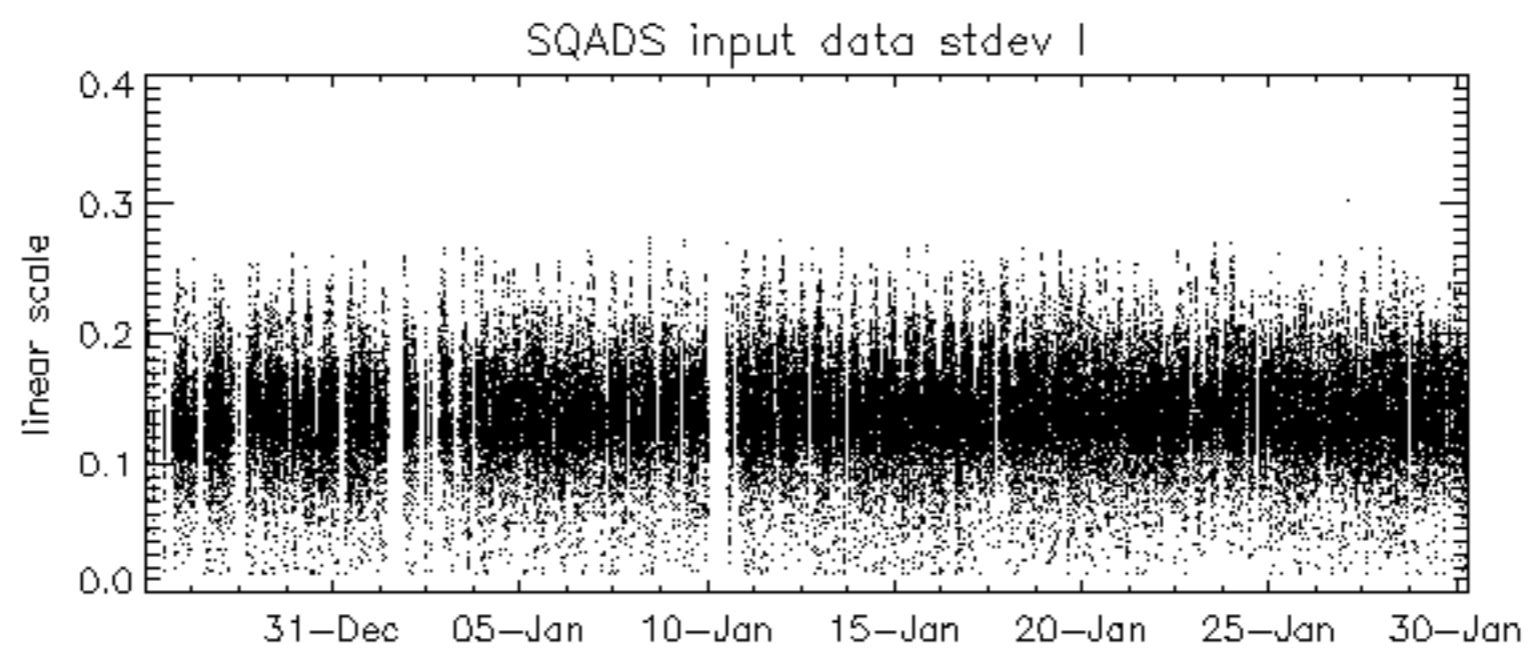
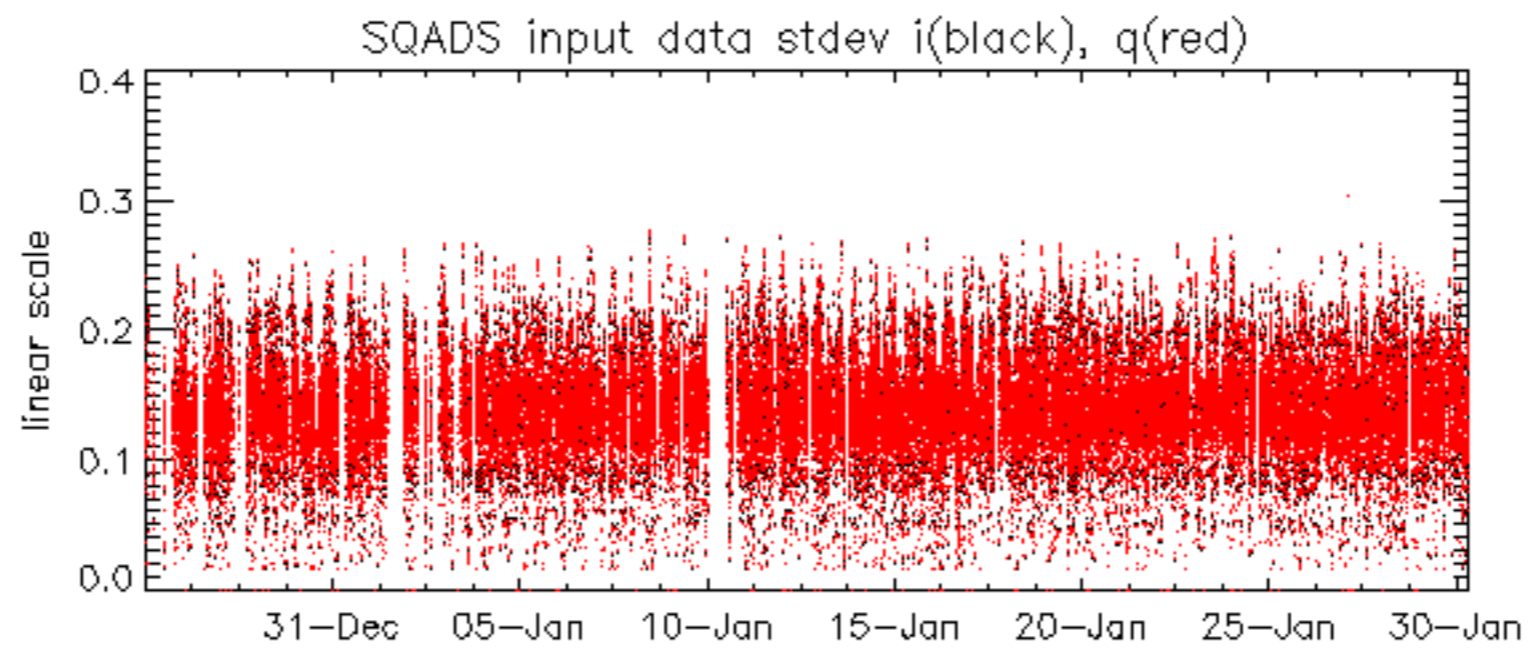


No anomalies observed on available MS products:

No anomalies observed.



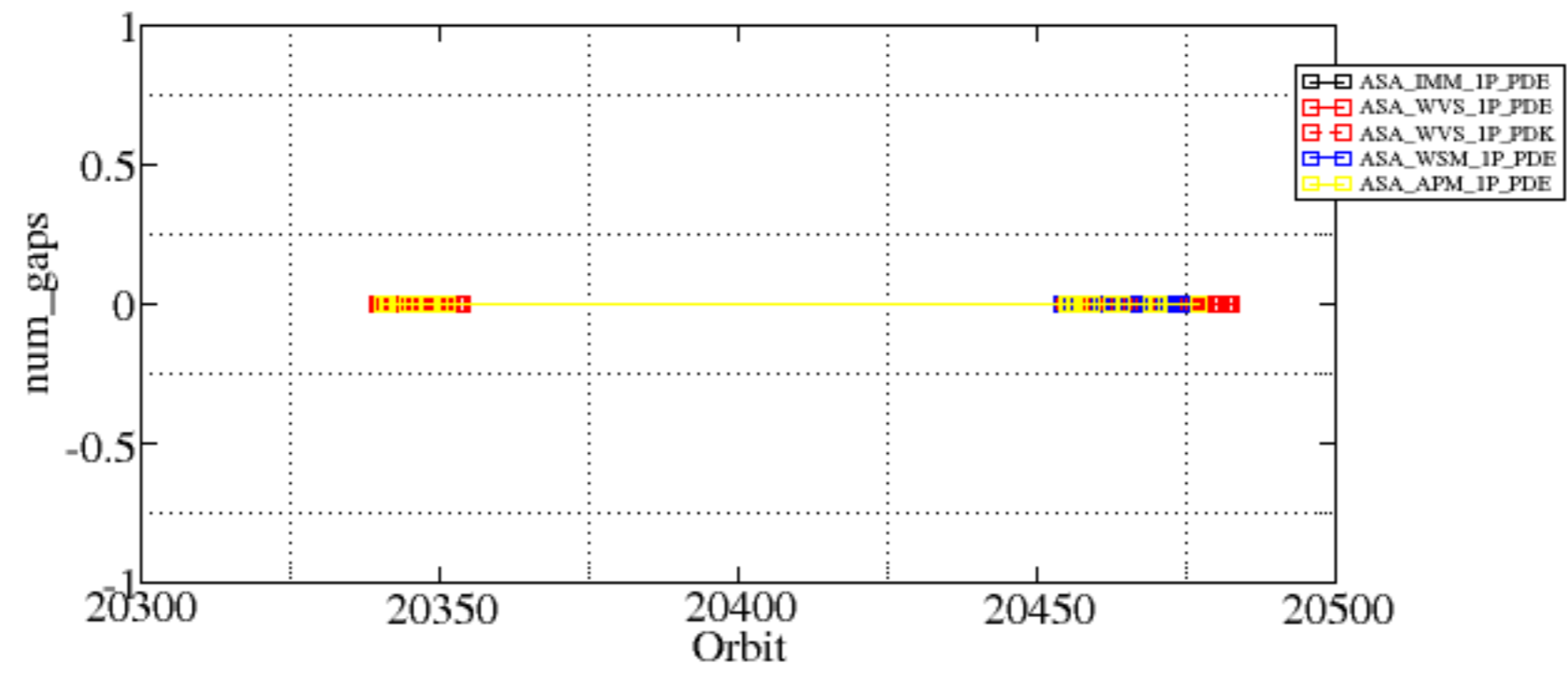


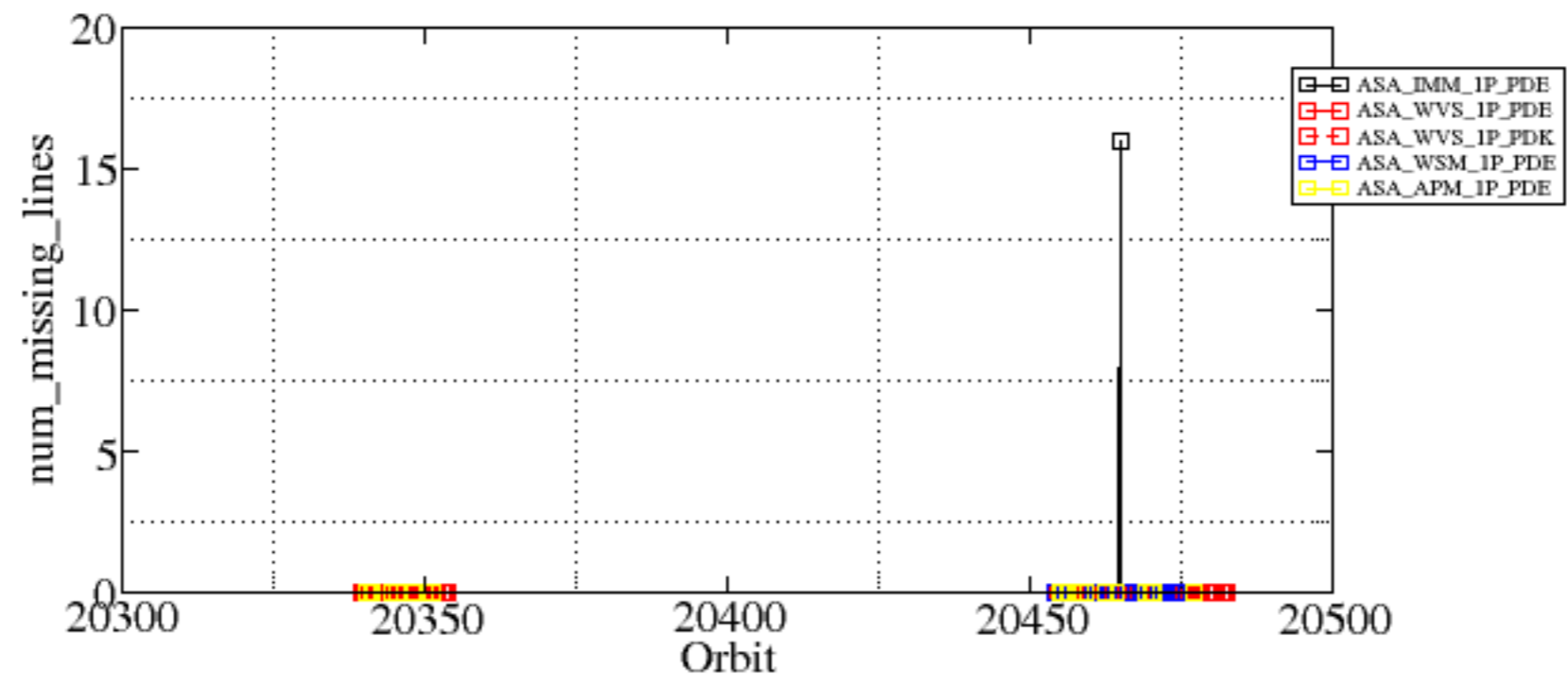


Summary of analysis for the last 3 days 2006012[890]

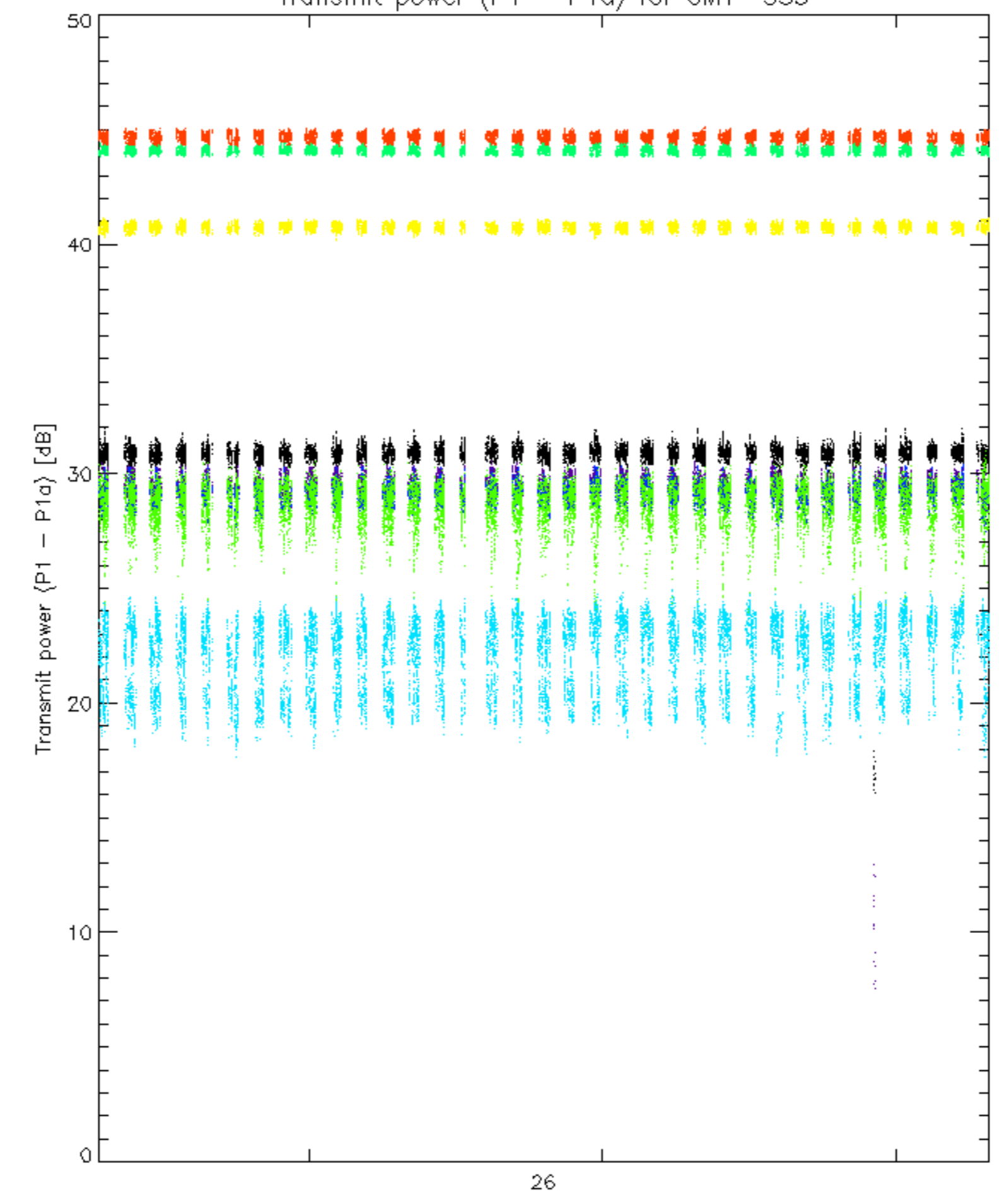
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060128_182641_00000352044_00371_20465_1379.N1	0	16

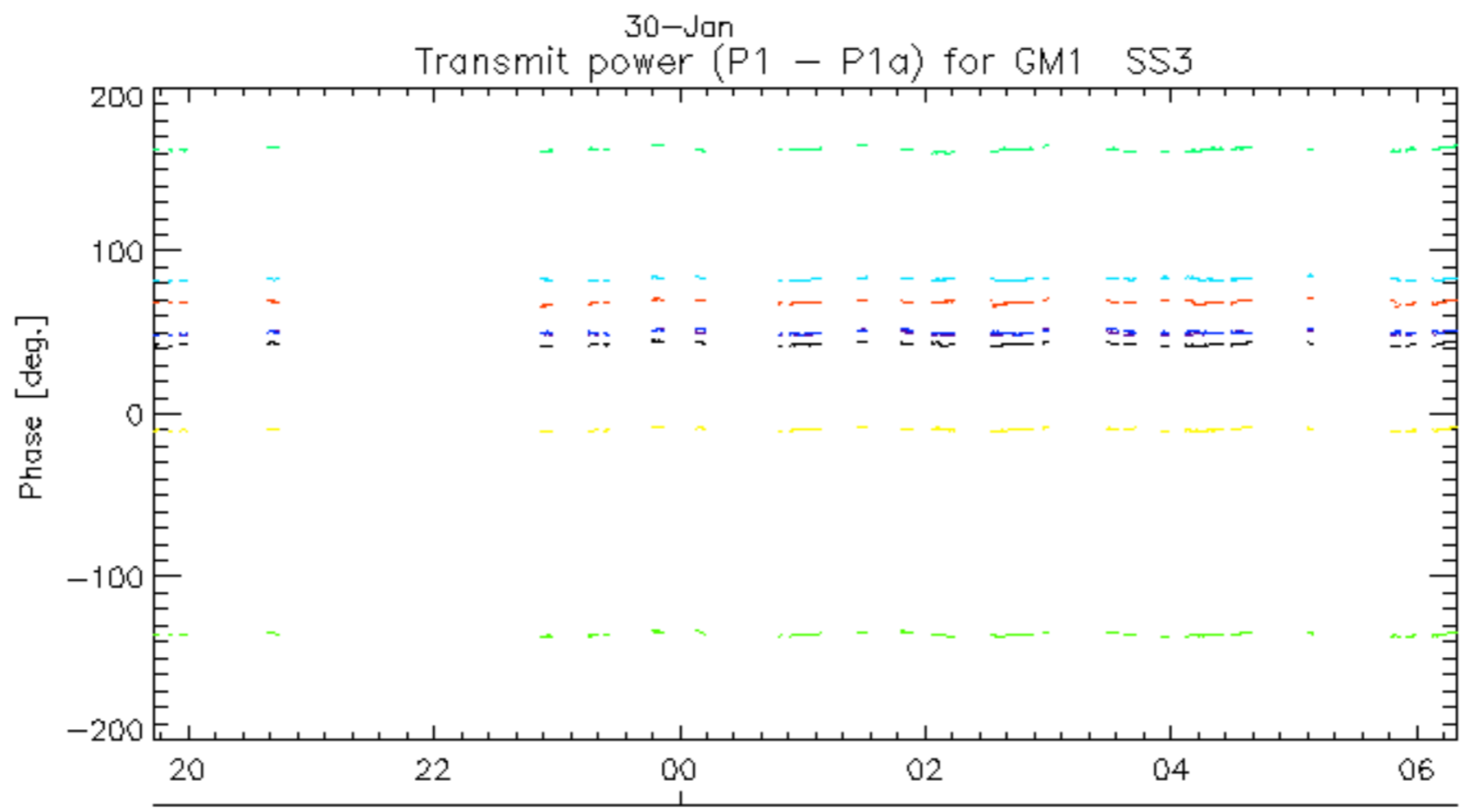
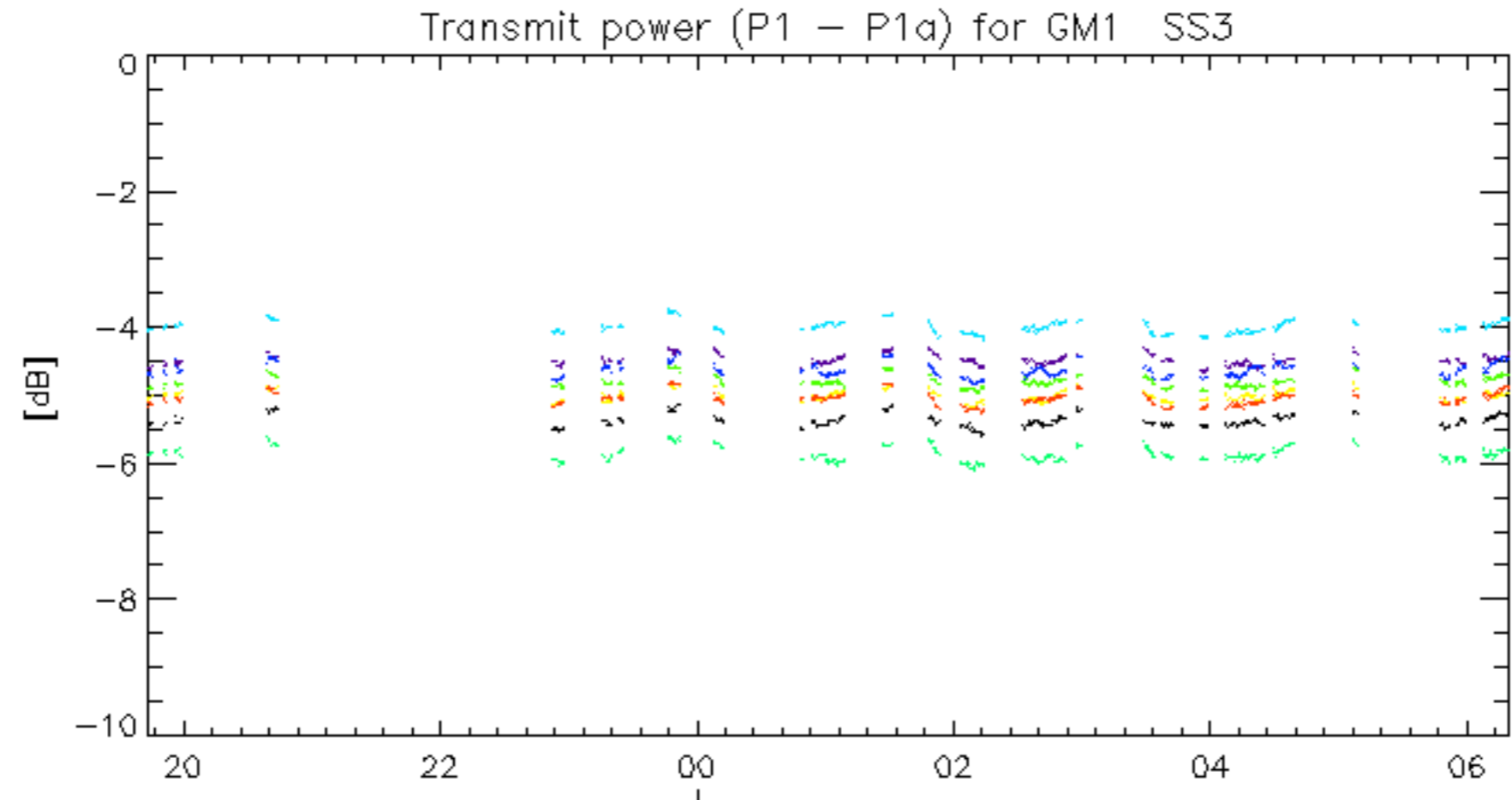




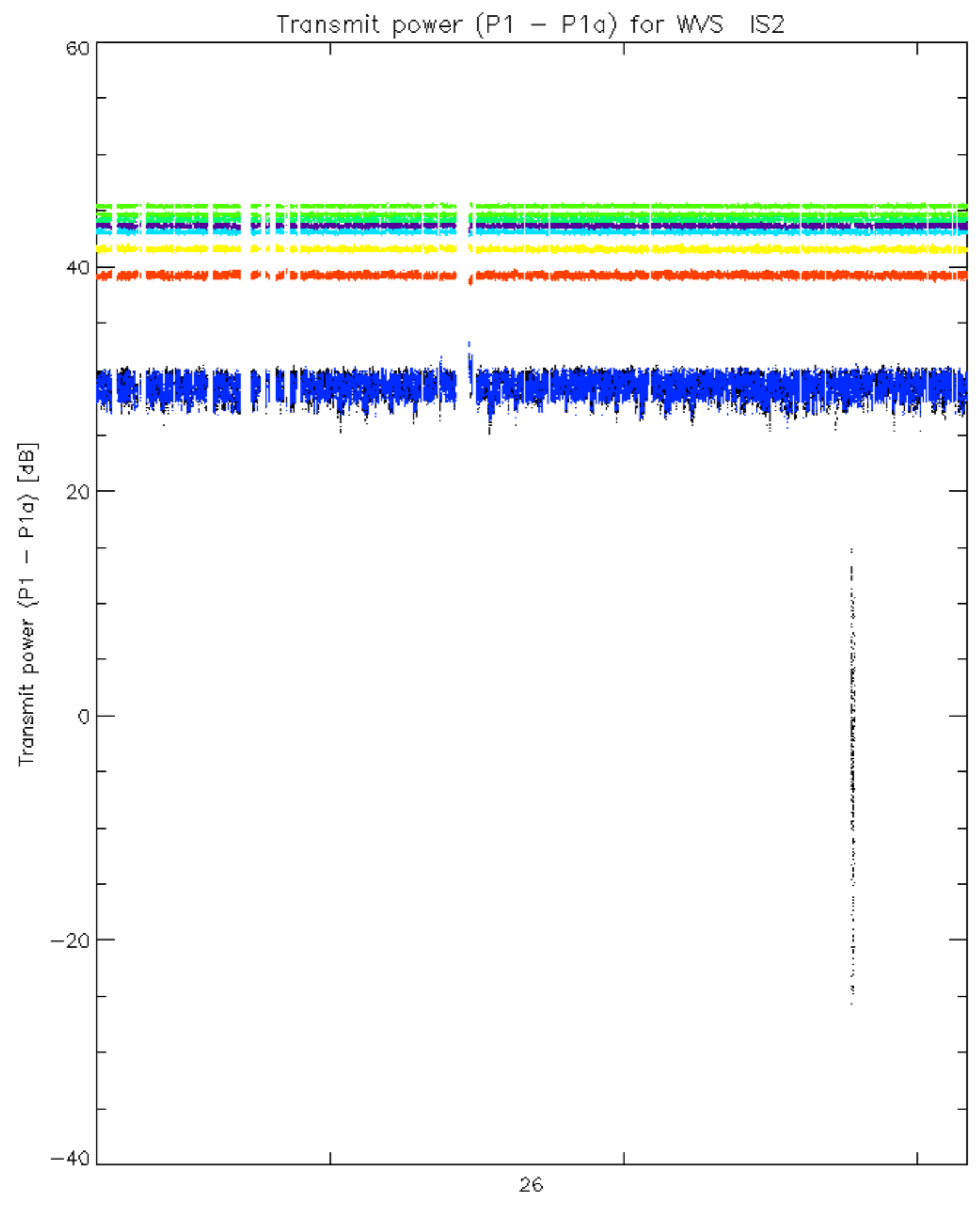
Transmit power (P1 - P1a) for GM1 SS3

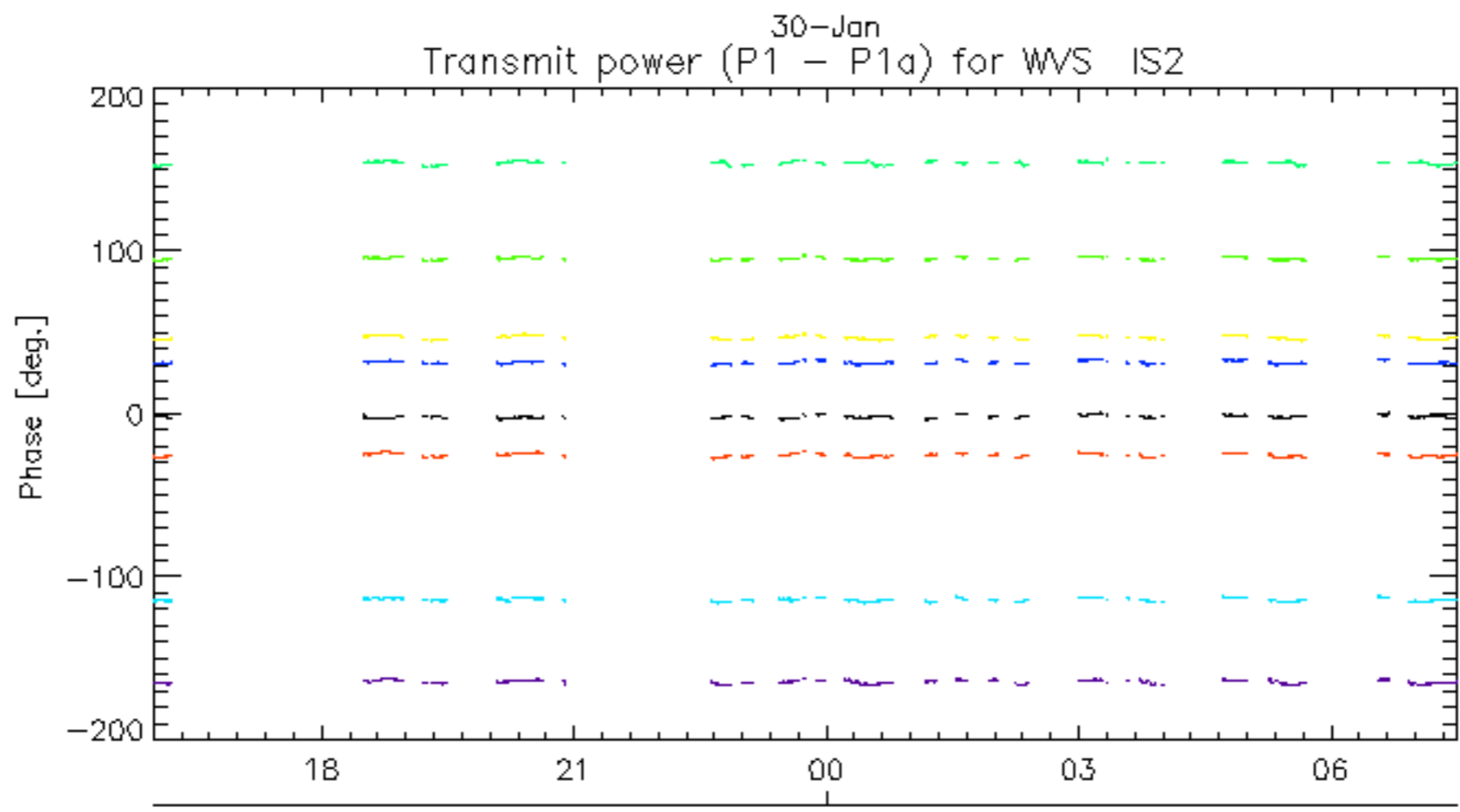
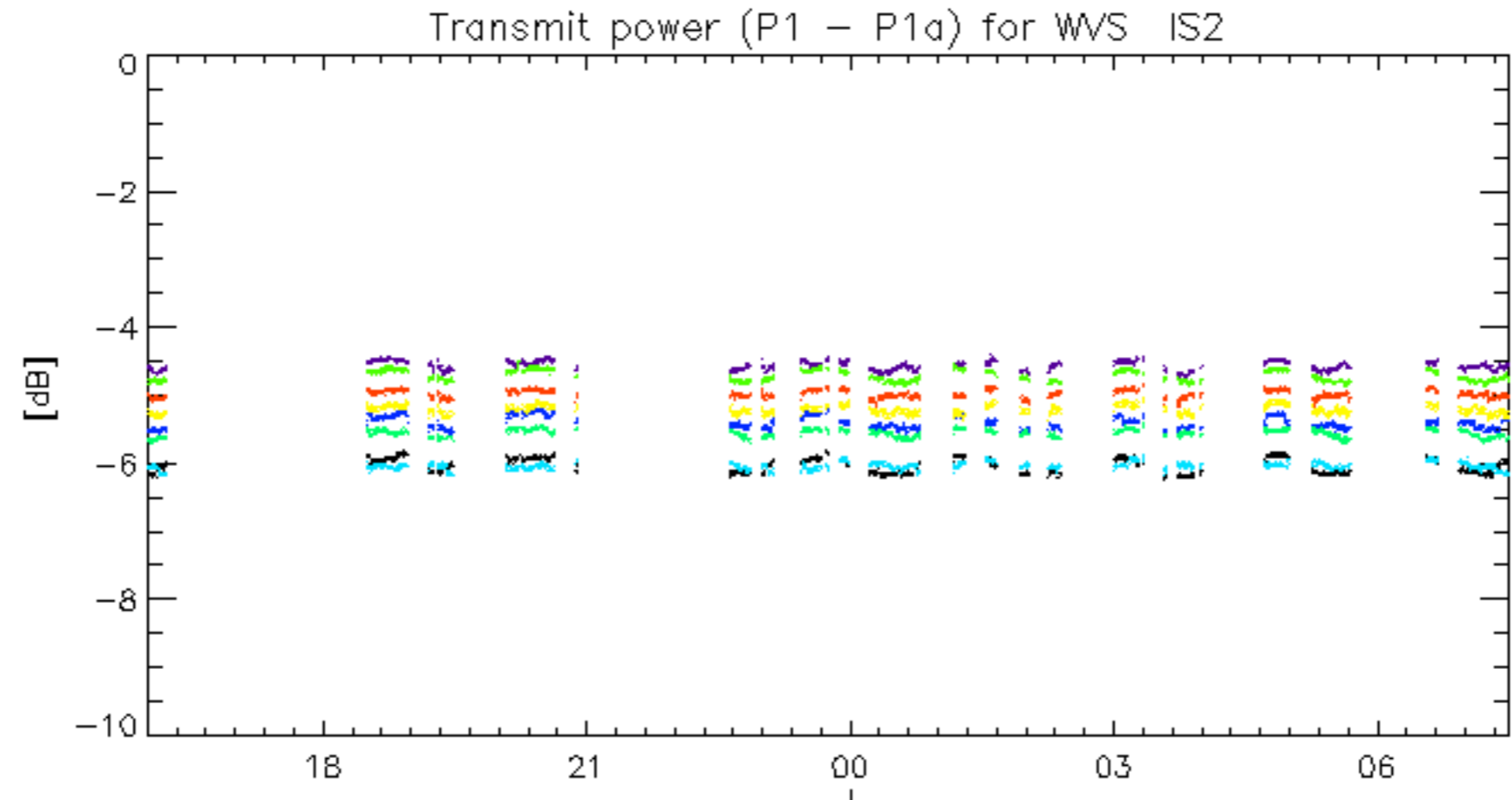


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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





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

No unavailabilities during the reported period.