

PRELIMINARY REPORT OF 060116

last update on Mon Jan 16 16:55:09 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 2006-01-15 00:00:00 to 2006-01-16 16:55:09

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	44	0	9	0	24
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	44	0	9	0	24
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	44	0	9	0	24
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	44	0	9	0	24

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	40	51	28	9	72
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	40	51	28	9	72
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	40	51	28	9	72
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	40	51	28	9	72

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	20060114 064354
H	20060115 061217

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	-4.053635	0.007487	0.052239
7	P1	-2.998210	0.016019	0.024105
11	P1	-4.104618	0.022896	0.034346
15	P1	-6.070139	0.017251	0.041060
19	P1	-3.239588	0.005325	-0.021708
22	P1	-4.488460	0.020274	0.025548
26	P1	-4.221334	0.011843	0.016595
30	P1	-5.770285	0.009863	0.007525
3	P1	-16.996735	0.251680	0.077389
7	P1	-16.573927	0.129829	-0.063298
11	P1	-16.596727	0.338578	0.052117
15	P1	-13.285340	0.133225	0.220359
19	P1	-13.873666	0.073552	-0.000885
22	P1	-15.980764	0.569705	0.360696
26	P1	-15.778470	0.266379	-0.029912
30	P1	-16.625332	0.360996	0.190301

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.662649	0.098515	0.161556
7	P2	-22.507803	0.097907	0.092076
11	P2	-16.349686	0.103604	0.128436
15	P2	-7.234668	0.101723	0.061978
19	P2	-9.194505	0.098633	0.087270
22	P2	-17.940937	0.096826	0.031354
26	P2	-16.231195	0.099735	0.056805
30	P2	-19.667633	0.084336	0.052574

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.222055	0.007759	0.033144
7	P3	-8.222055	0.007759	0.033144
11	P3	-8.222055	0.007759	0.033144
15	P3	-8.222055	0.007759	0.033144
19	P3	-8.222055	0.007759	0.033144
22	P3	-8.222055	0.007759	0.033144
26	P3	-8.222055	0.007759	0.033144
30	P3	-8.222055	0.007759	0.033144

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	-3.717782	0.008549	-0.013809
7	P1	-2.761941	0.007796	0.019621
11	P1	-2.867966	0.010346	0.021267
15	P1	-3.443323	0.018035	-0.062879
19	P1	-3.384071	0.013910	0.041635
22	P1	-5.122065	0.021039	0.004196
26	P1	-5.851577	0.015554	0.009444
30	P1	-5.265775	0.031464	0.066776
3	P1	-11.507738	0.034078	-0.062782
7	P1	-9.938698	0.048947	0.079117
11	P1	-10.059021	0.051166	-0.028767
15	P1	-10.592637	0.079785	-0.108969
19	P1	-15.497057	0.065656	0.108490
22	P1	-20.751907	1.092281	0.489693

26	P1	-16.962704	0.323462	0.501737
30	P1	-18.161291	0.292266	-0.039036

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.500708	0.032624	0.256813
7	P2	-22.944132	0.059694	0.308668
11	P2	-11.491649	0.020967	0.202256
15	P2	-4.948886	0.023776	0.132283
19	P2	-6.946486	0.022750	0.105060
22	P2	-8.200834	0.022704	0.056444
26	P2	-24.002874	0.027225	0.136868
30	P2	-22.115387	0.017539	0.085988

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.066271	0.002553	0.042977
7	P3	-8.066263	0.002557	0.043812
11	P3	-8.066412	0.002557	0.043723
15	P3	-8.066294	0.002549	0.043851
19	P3	-8.066393	0.002550	0.043522
22	P3	-8.066171	0.002553	0.043631
26	P3	-8.066159	0.002538	0.043873
30	P3	-8.066219	0.002553	0.042841

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	0.000542881
	stdev	1.81297e-07
MEAN Q	mean	0.000513824
	stdev	2.21677e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.137292
	stdev	0.00121169
STDEV Q	mean	0.137637
	stdev	0.00123021



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006011[456]

The assumptions 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_1PNPDE20060114_003120_000001252044_00159_20253_0148.N1	1	0
ASA_IMM_1PNPDE20060115_004048_000000622044_00174_20268_0186.N1	1	0





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

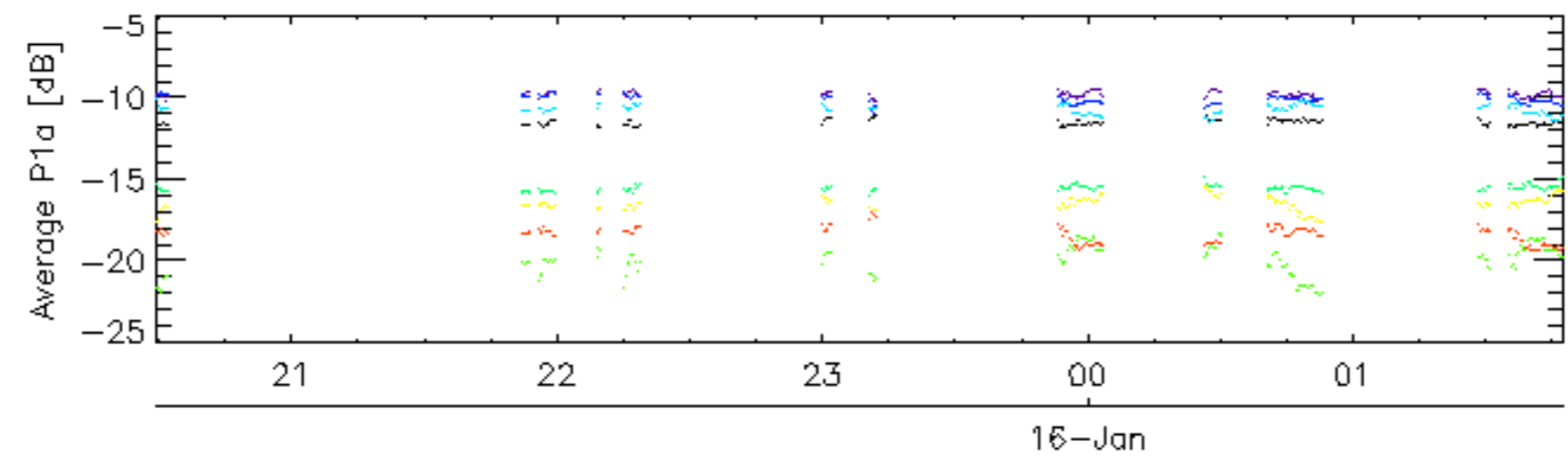
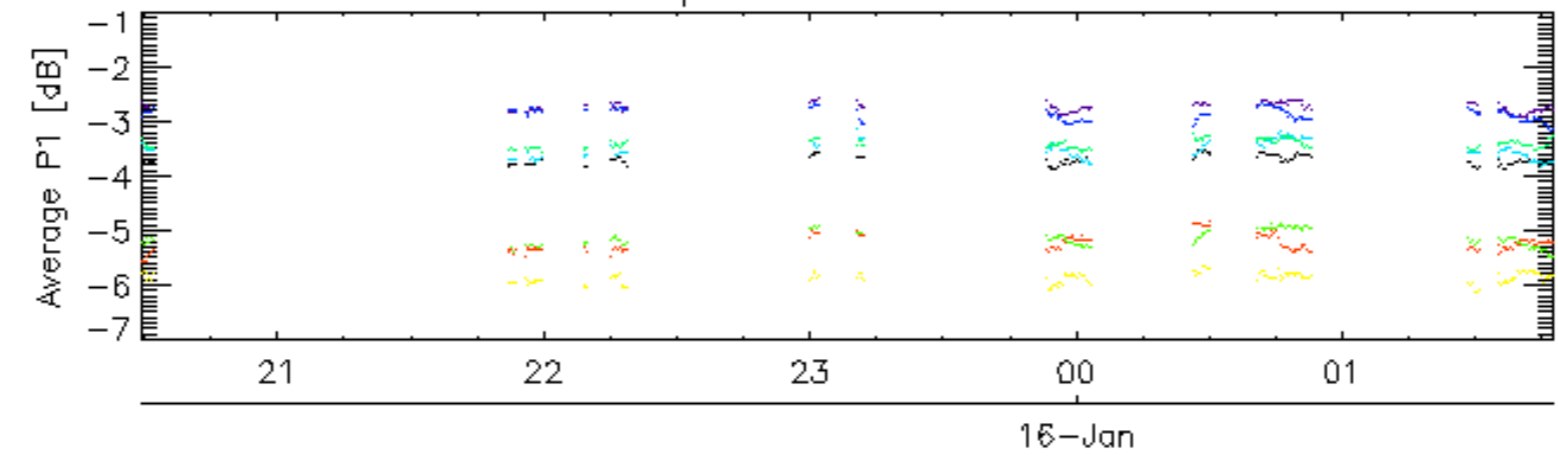
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Ascending
<input type="checkbox"/>
Descending

7.6 - Doppler evolution versus ANX for GM1

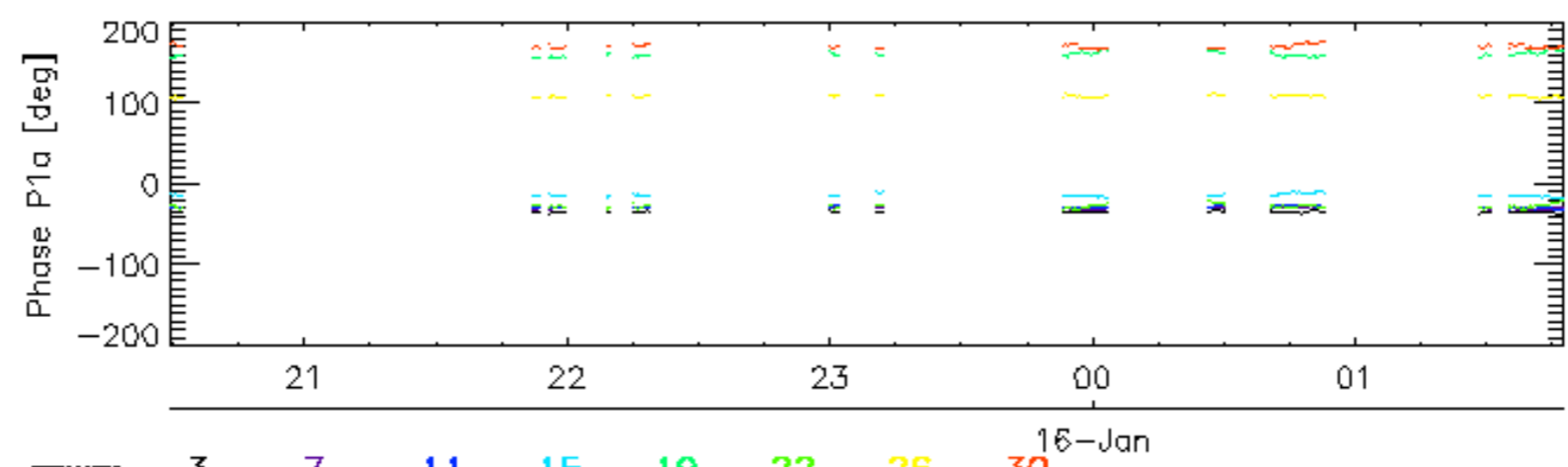
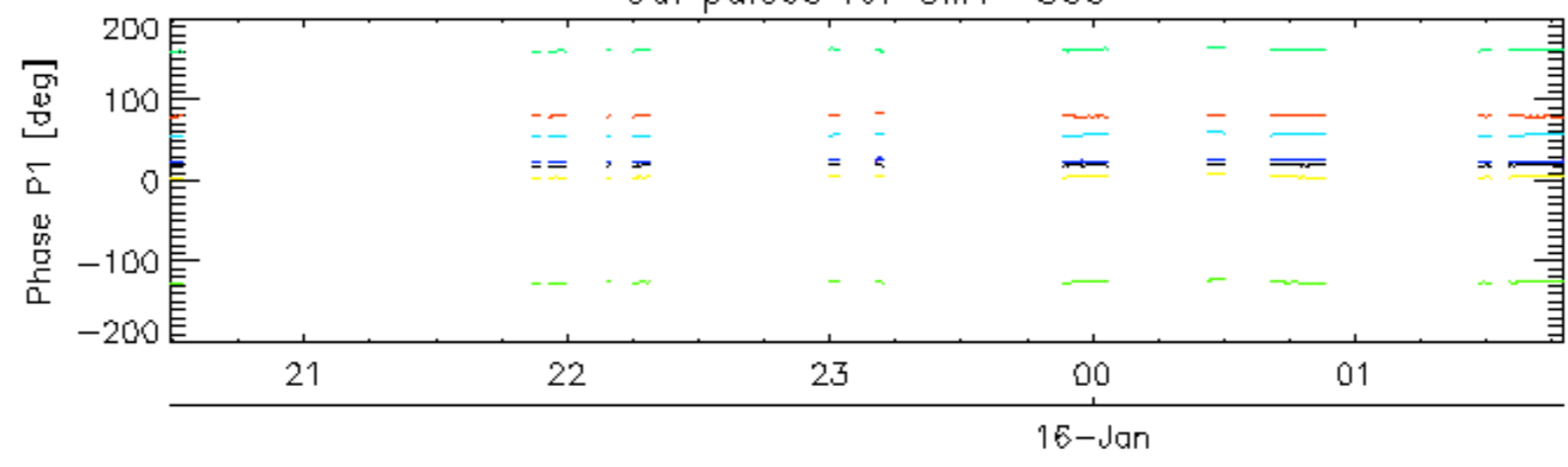
Evolution Doppler error versus ANX

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Cal pulses for GM1 SS3

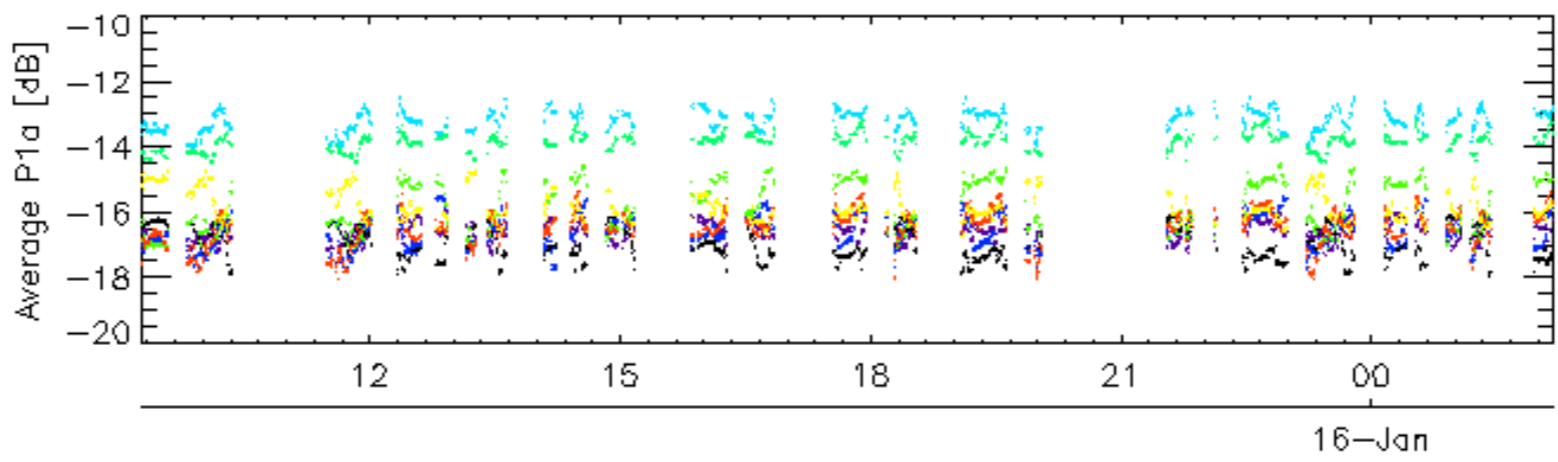
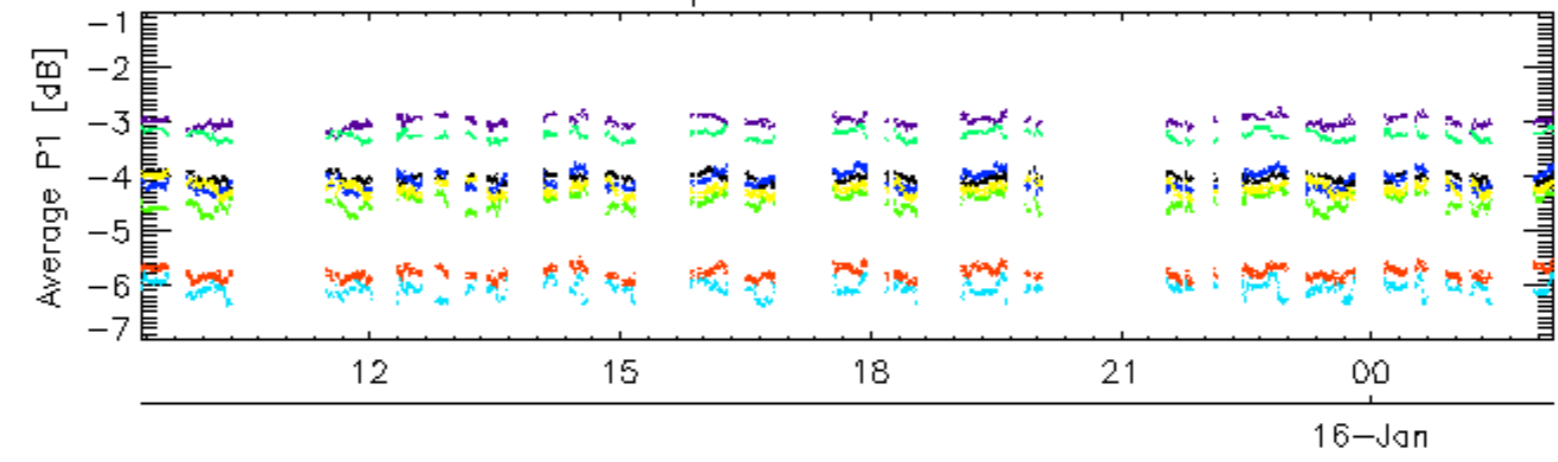


Cal pulses for GM1 SS3

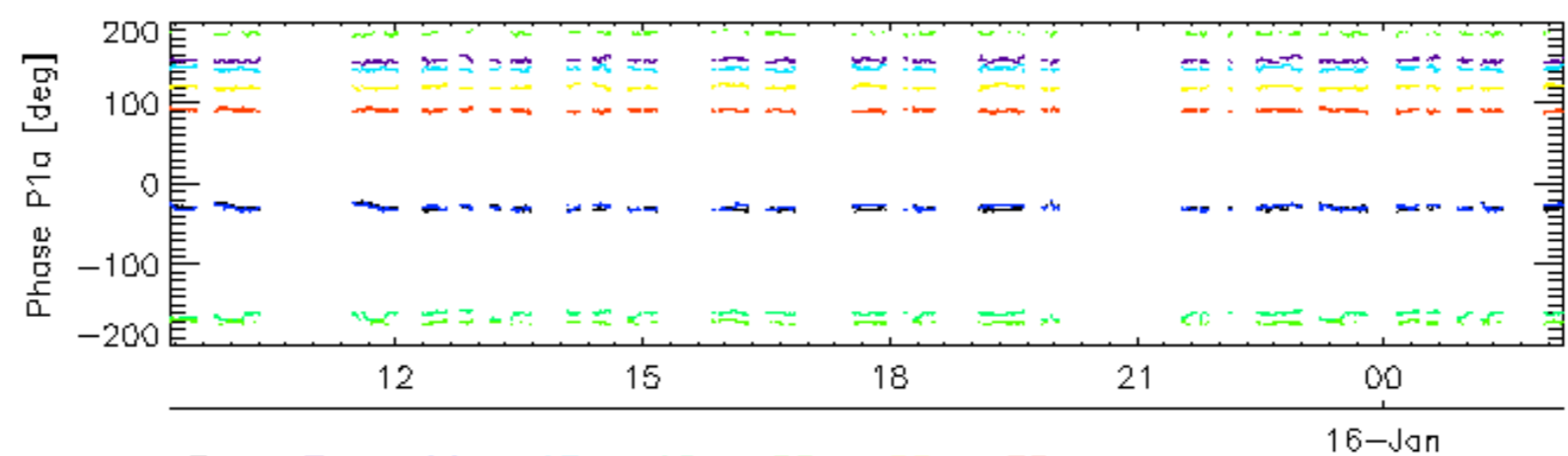
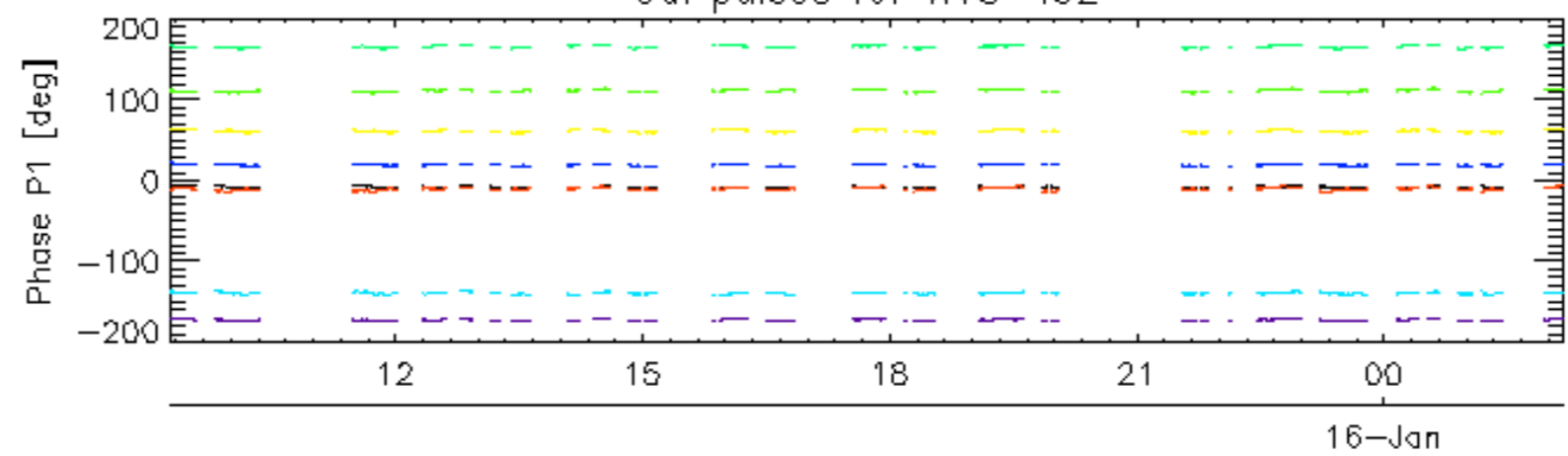


rows: **- 3** **- 7** **- 11** **- 15** **- 19** **- 22** **- 26** **- 30** 16-Jan

Cal pulses for WVS IS2

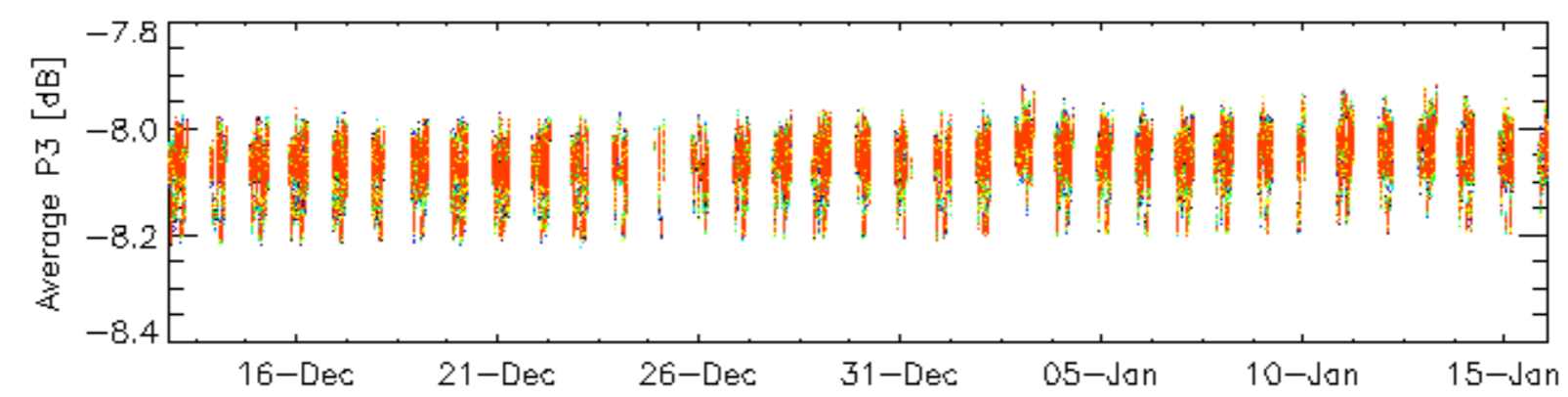
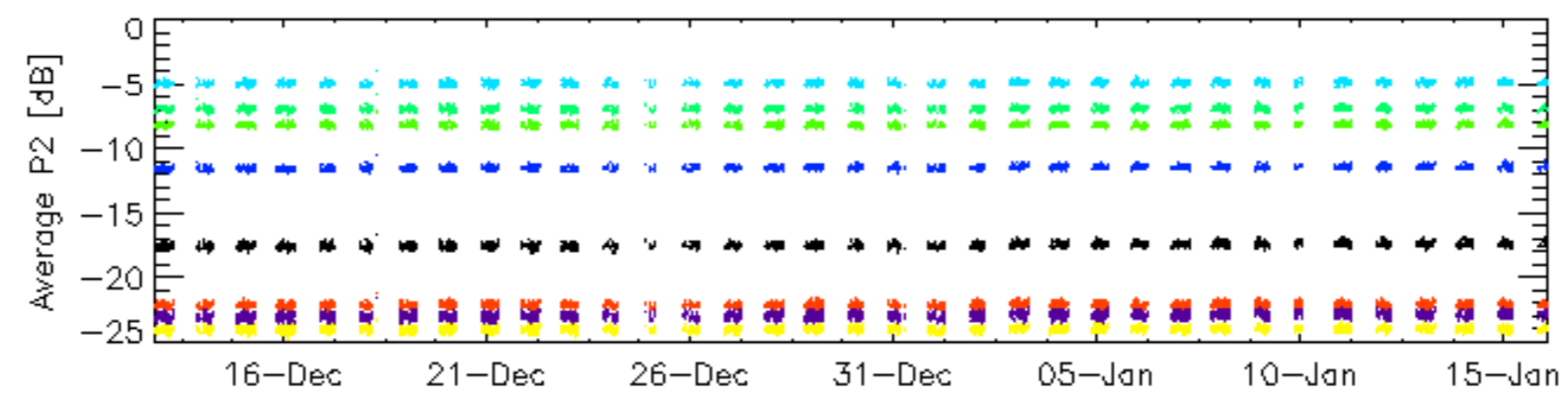
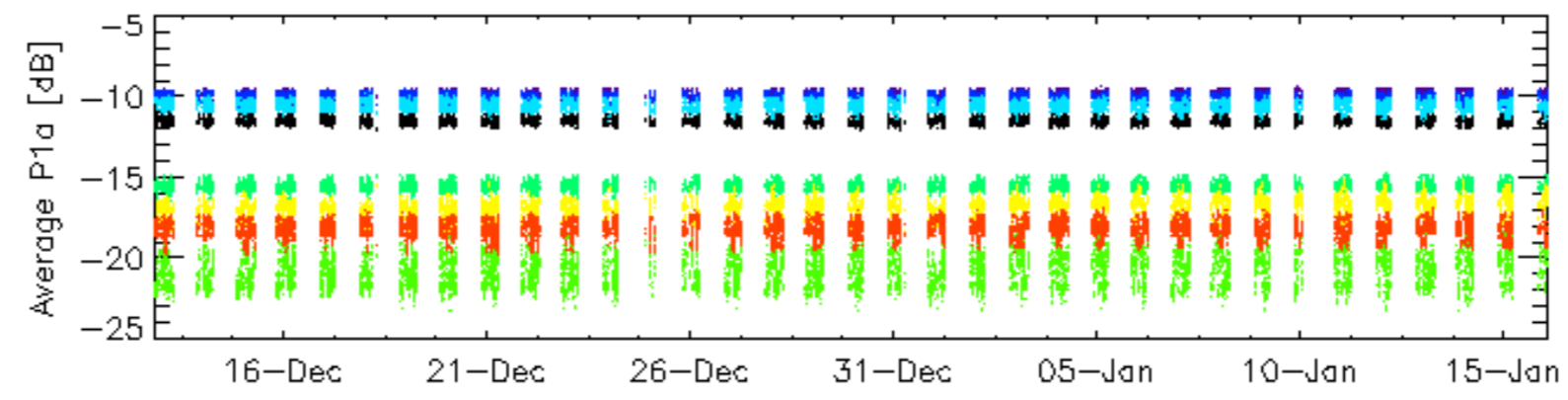
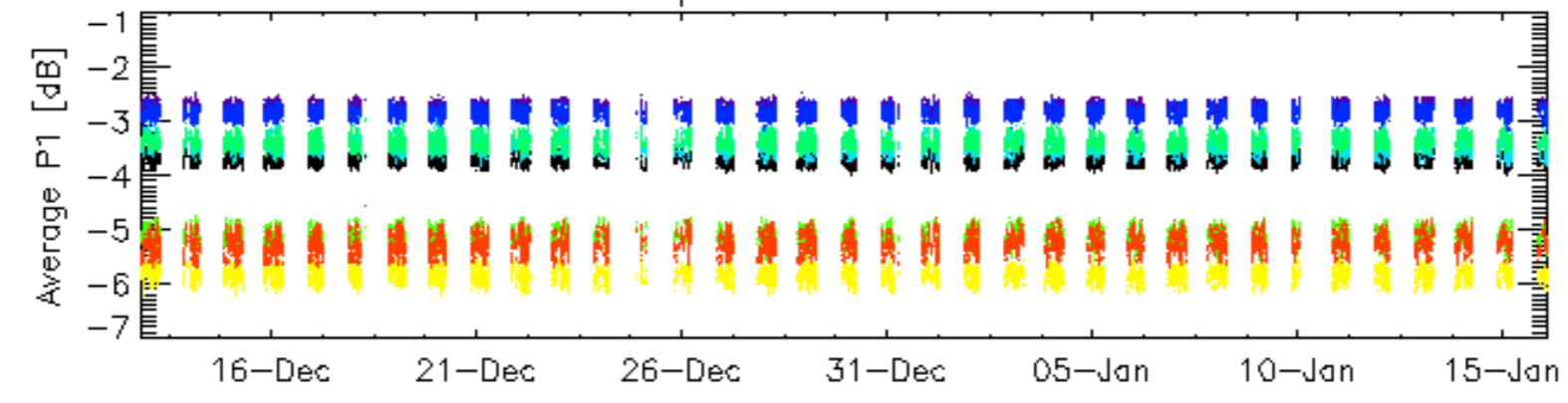


Cal pulses for WVS IS2



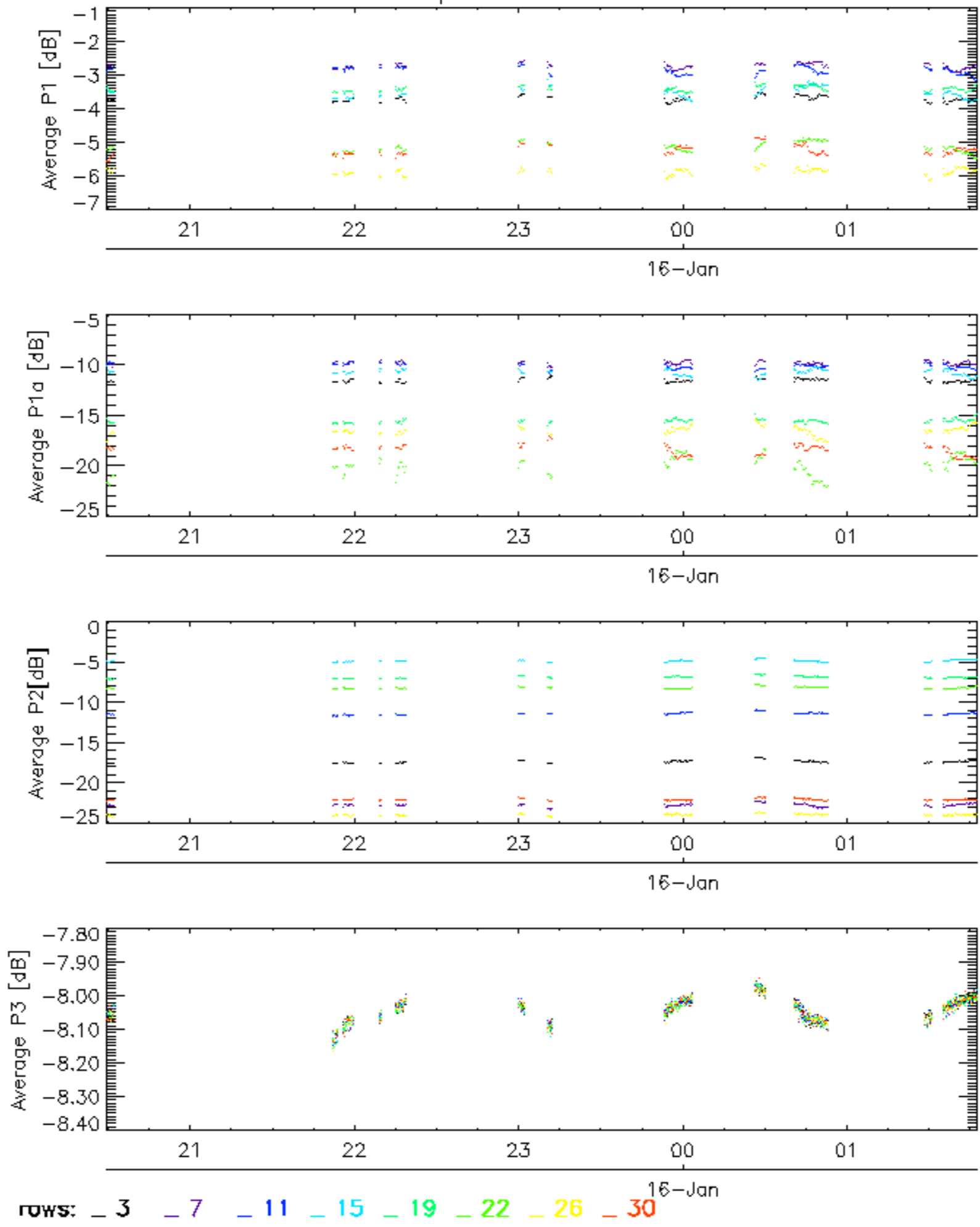
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

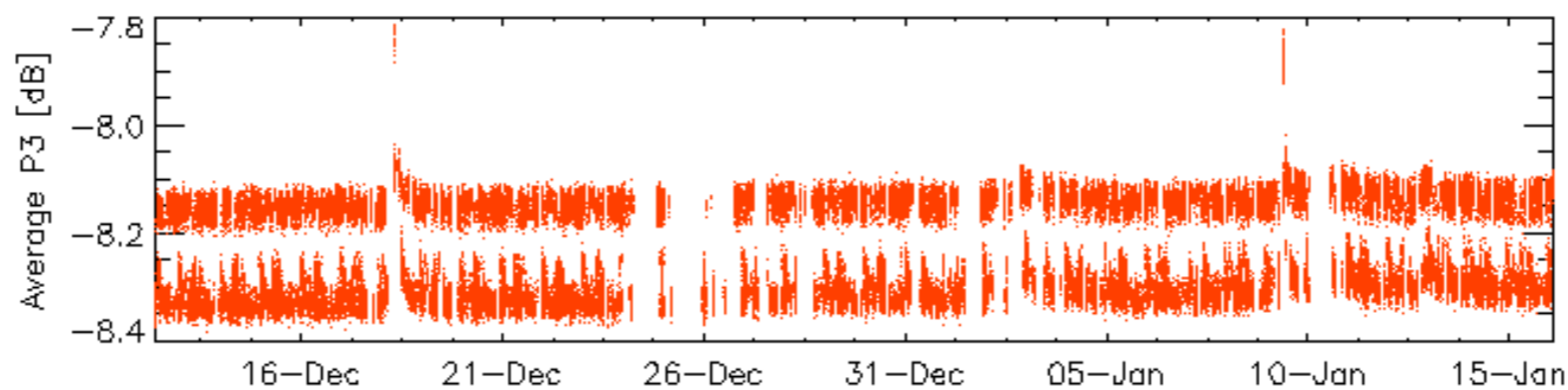
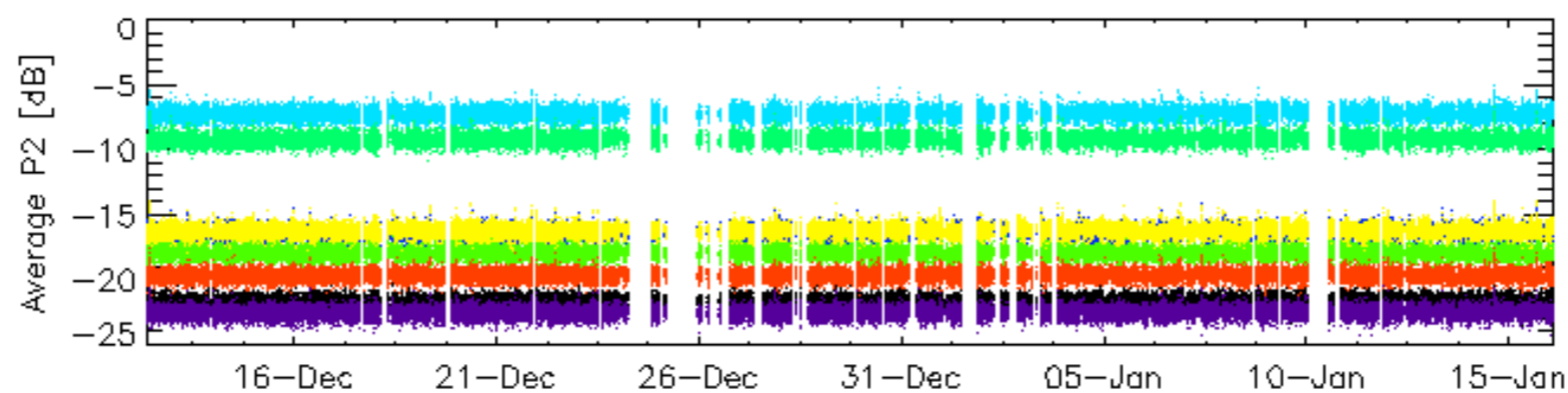
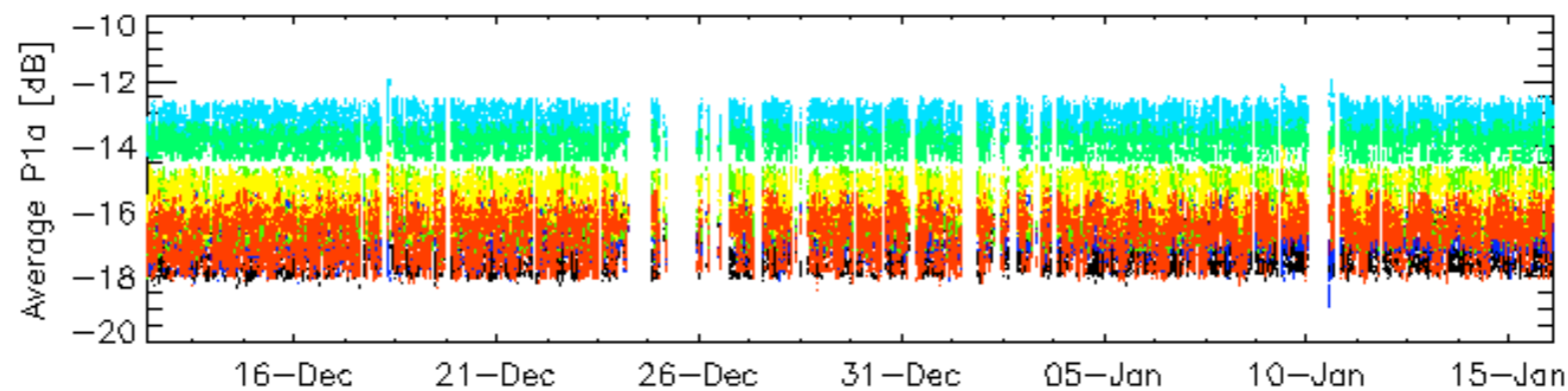
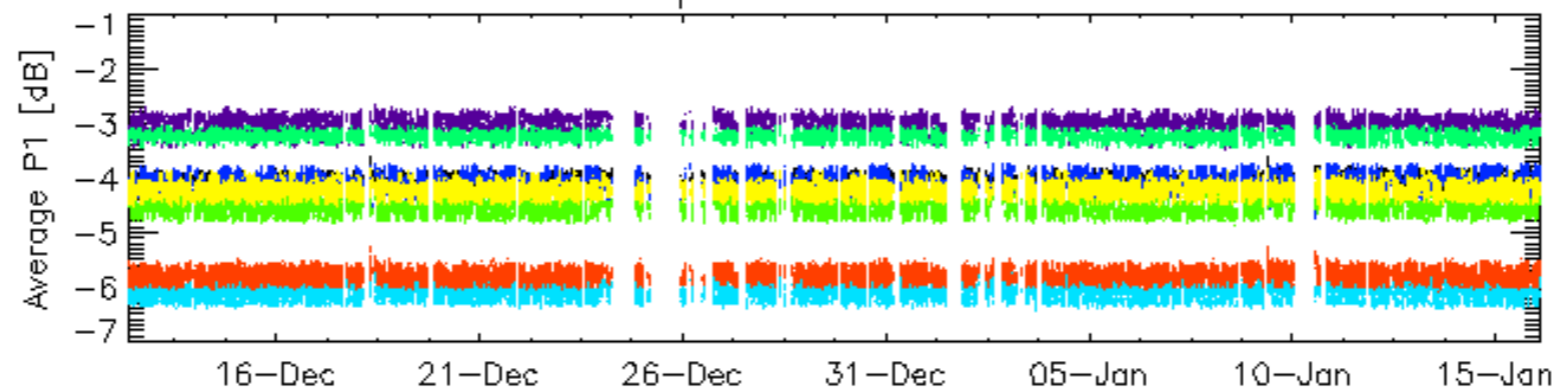


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

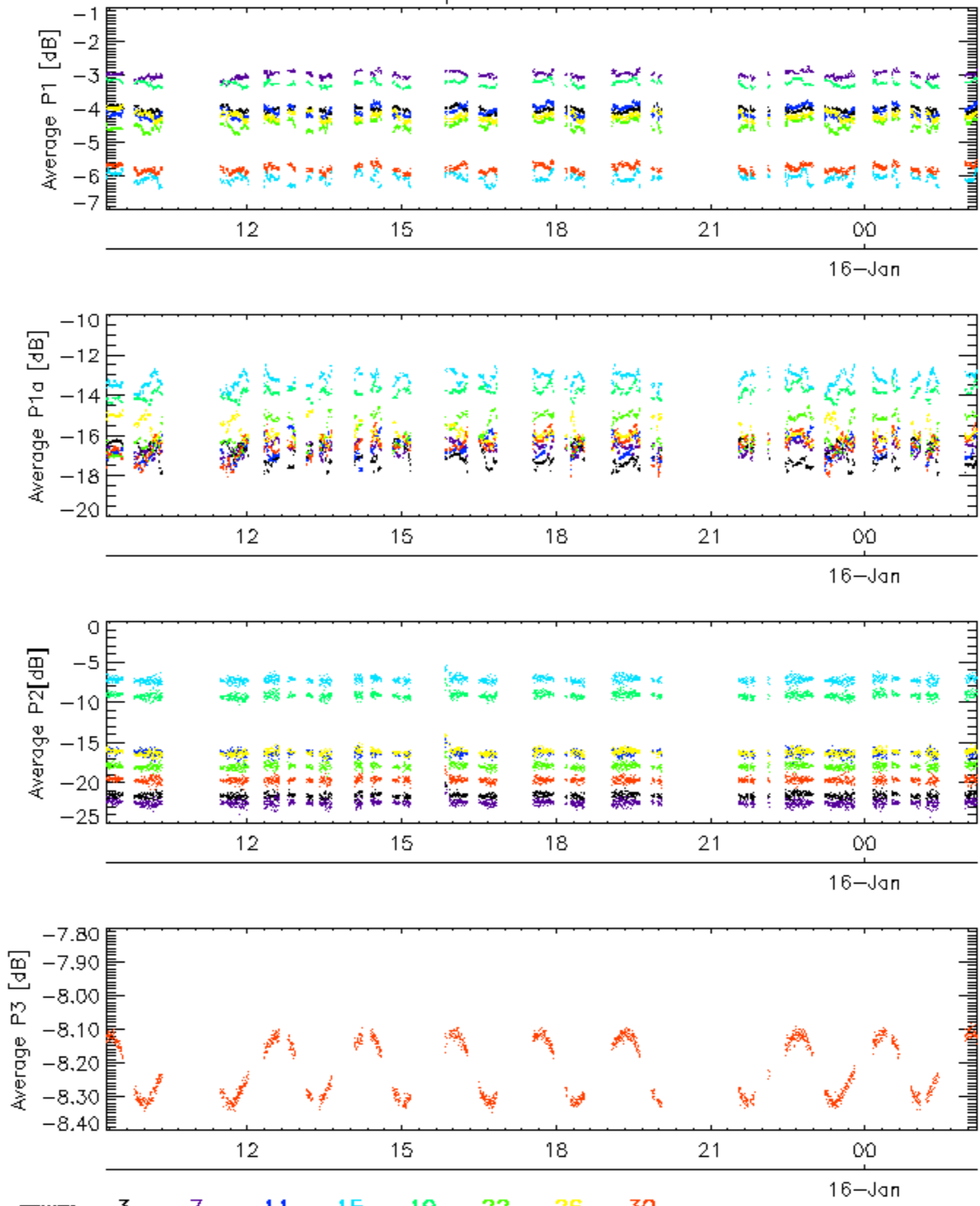


Cal pulses for WVS IS2



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

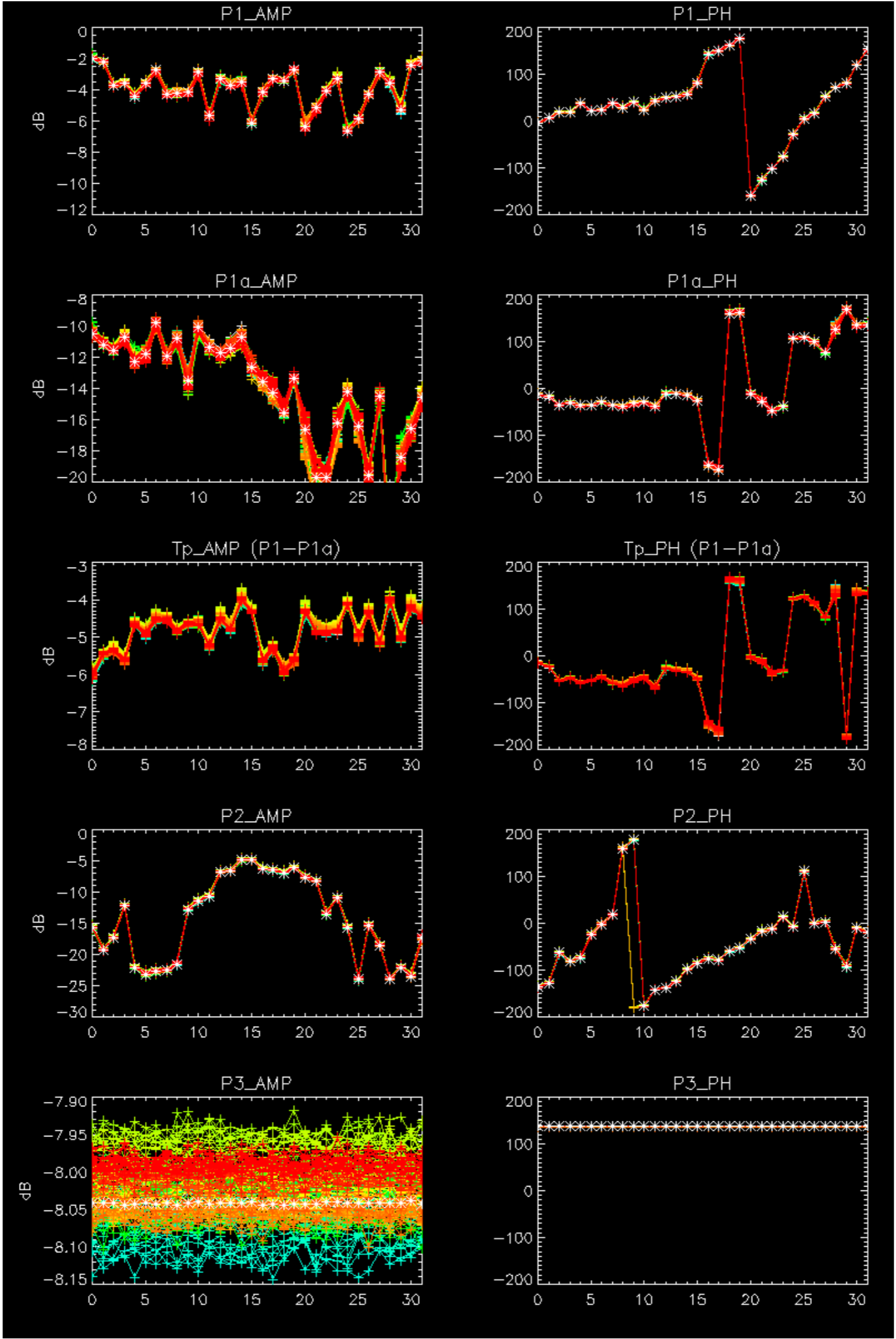
Cal pulses for WVS IS2

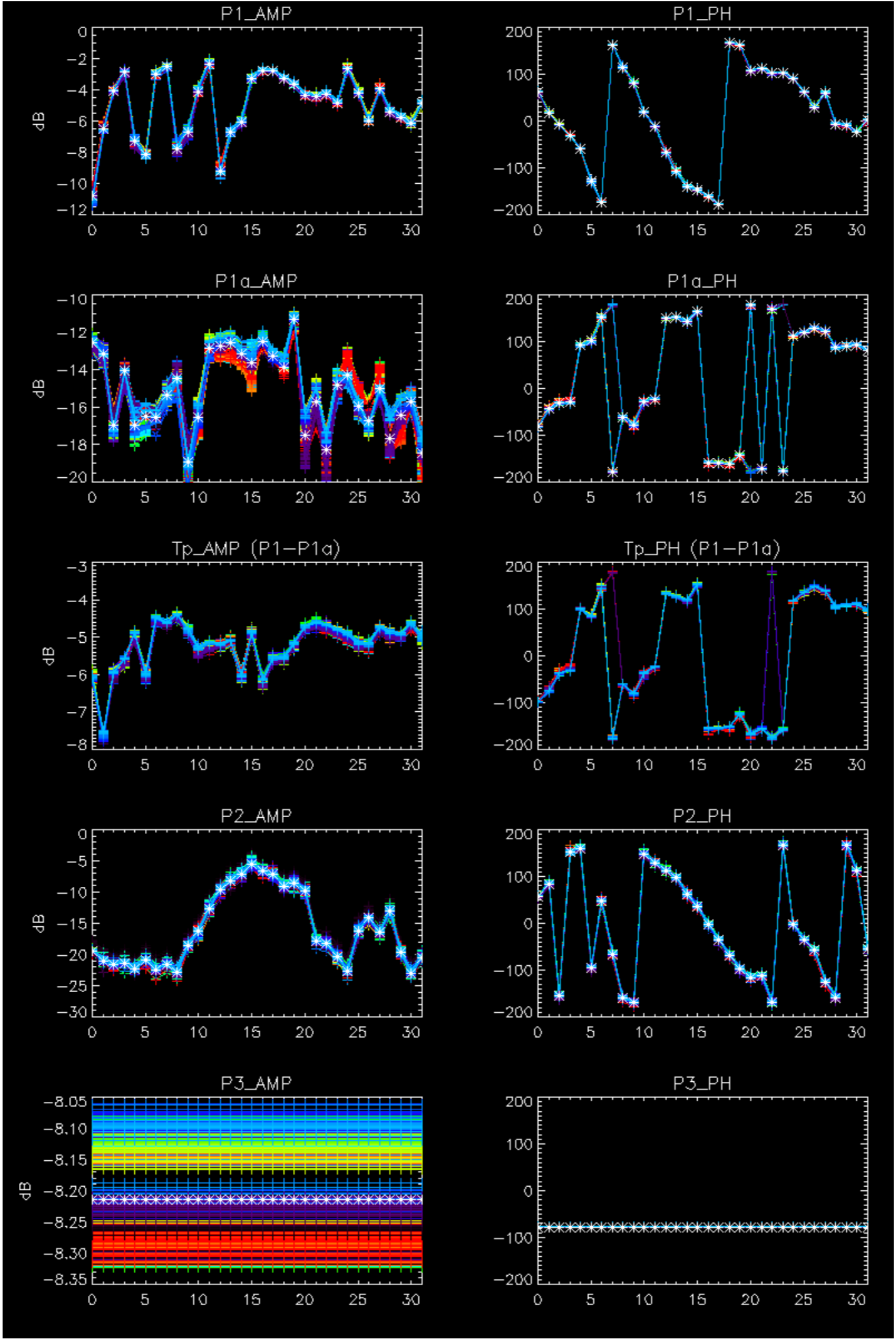


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed on available browse products

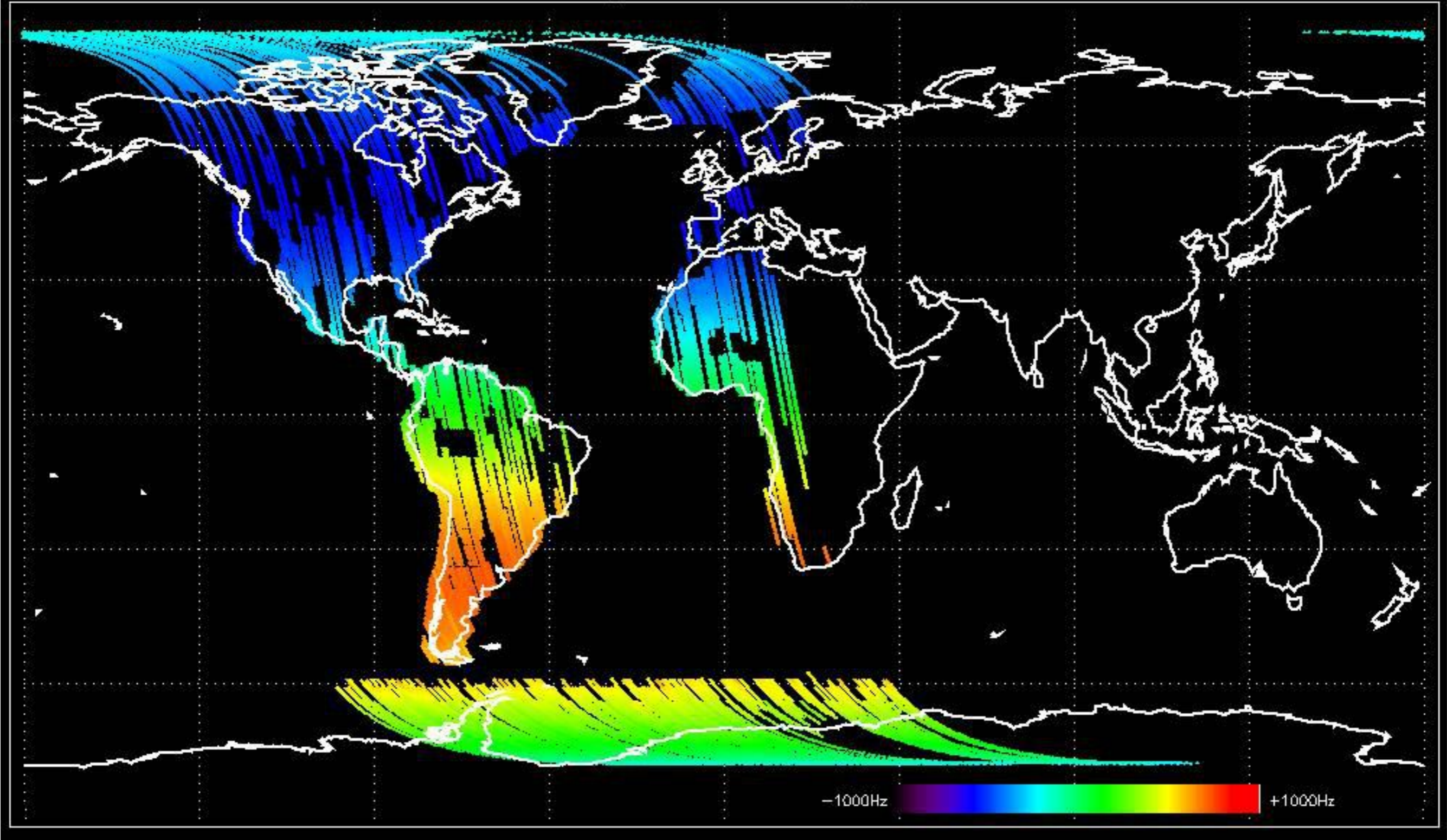
No anomalies observed.



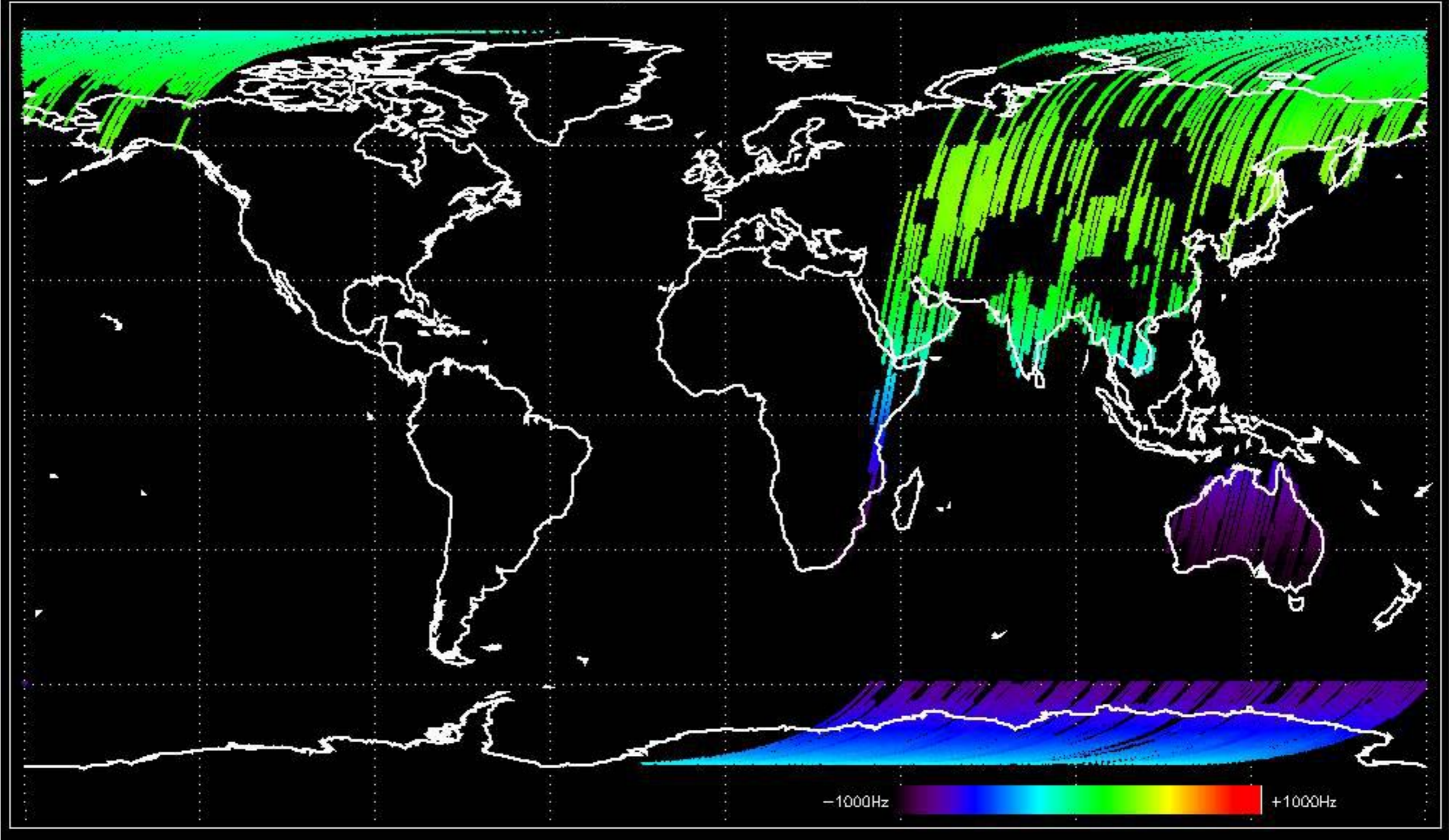


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

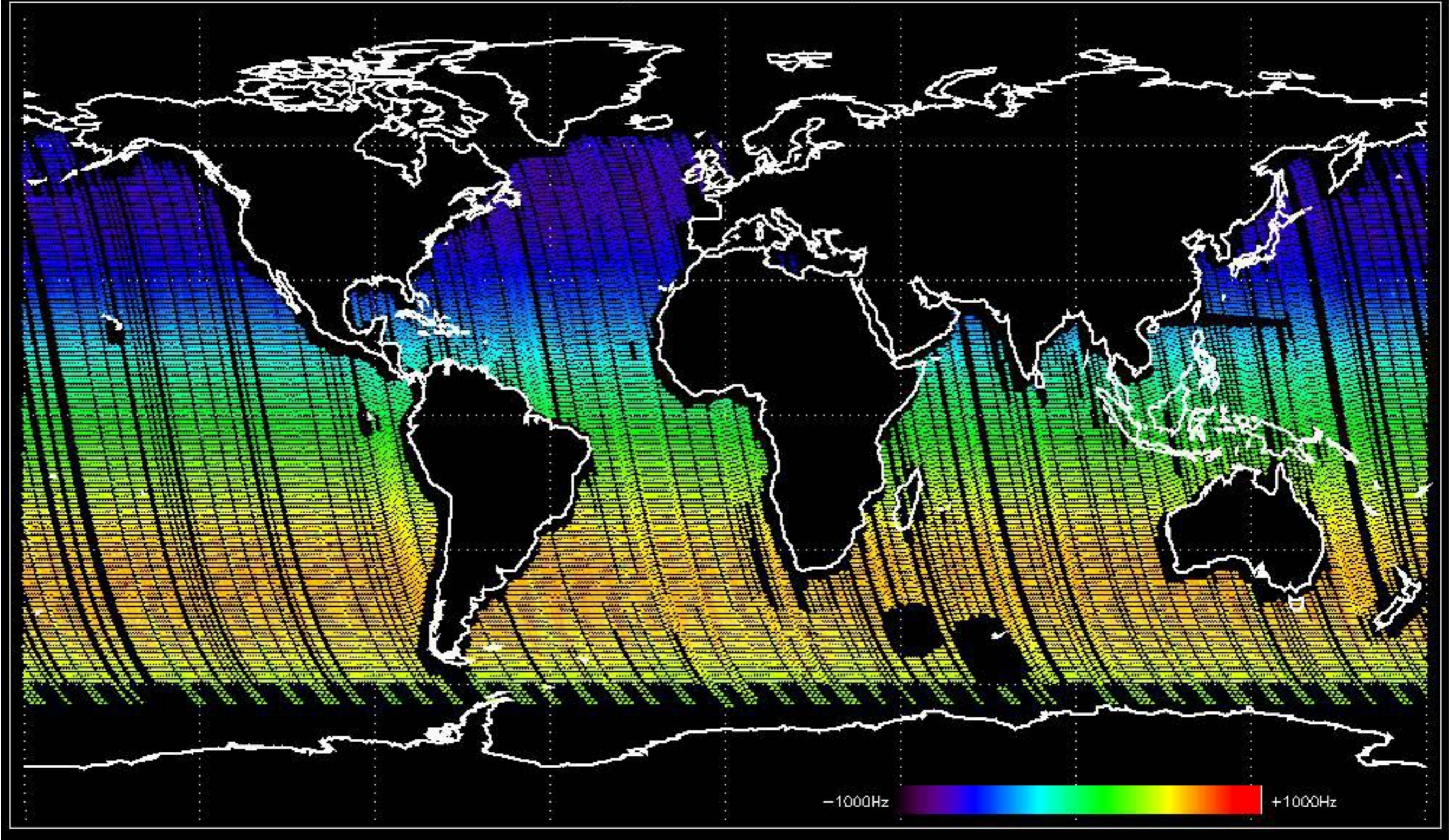
Doppler 'GM1' 'SS1' ascending



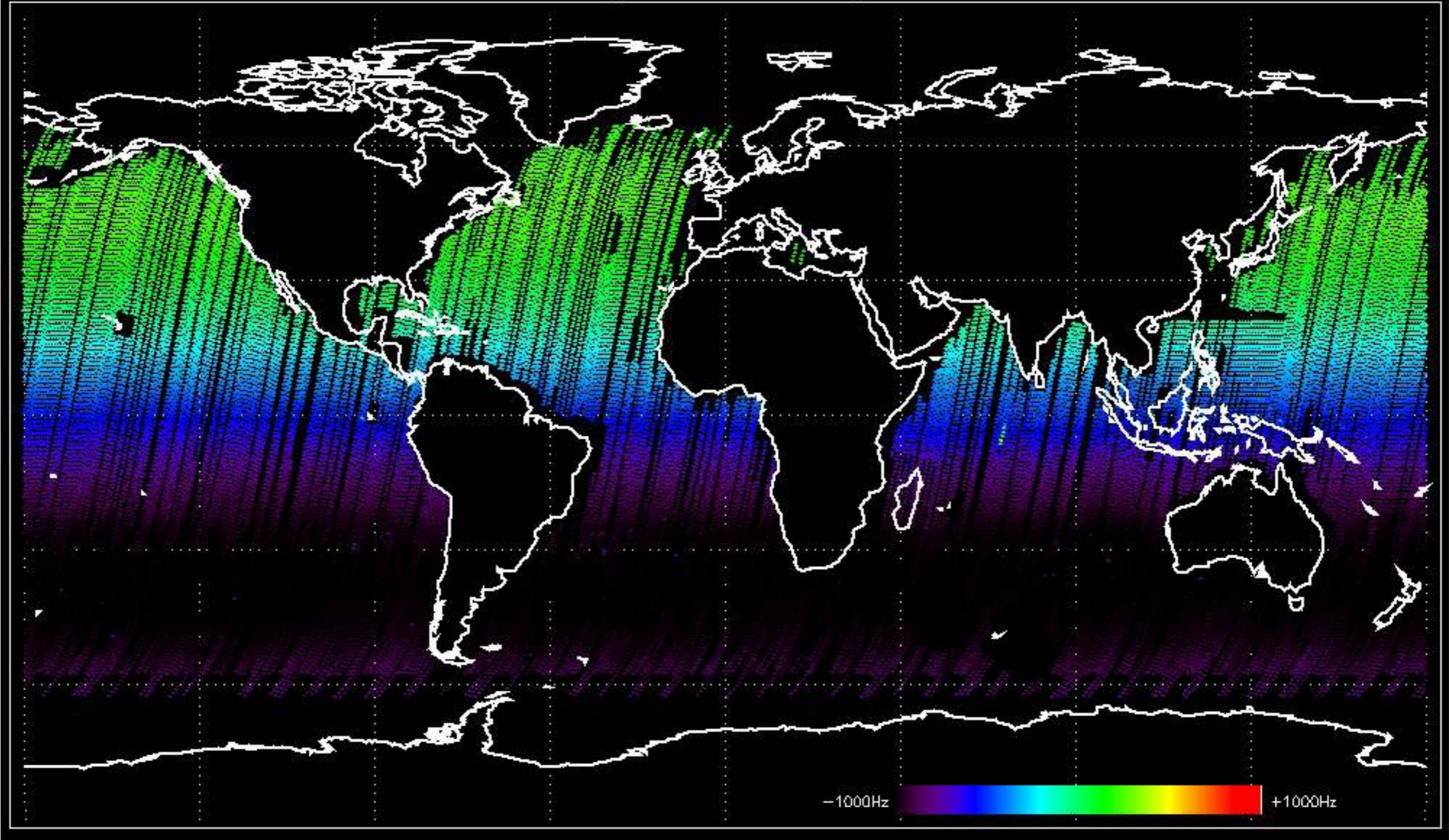
Doppler 'GM1' 'SS1' descending

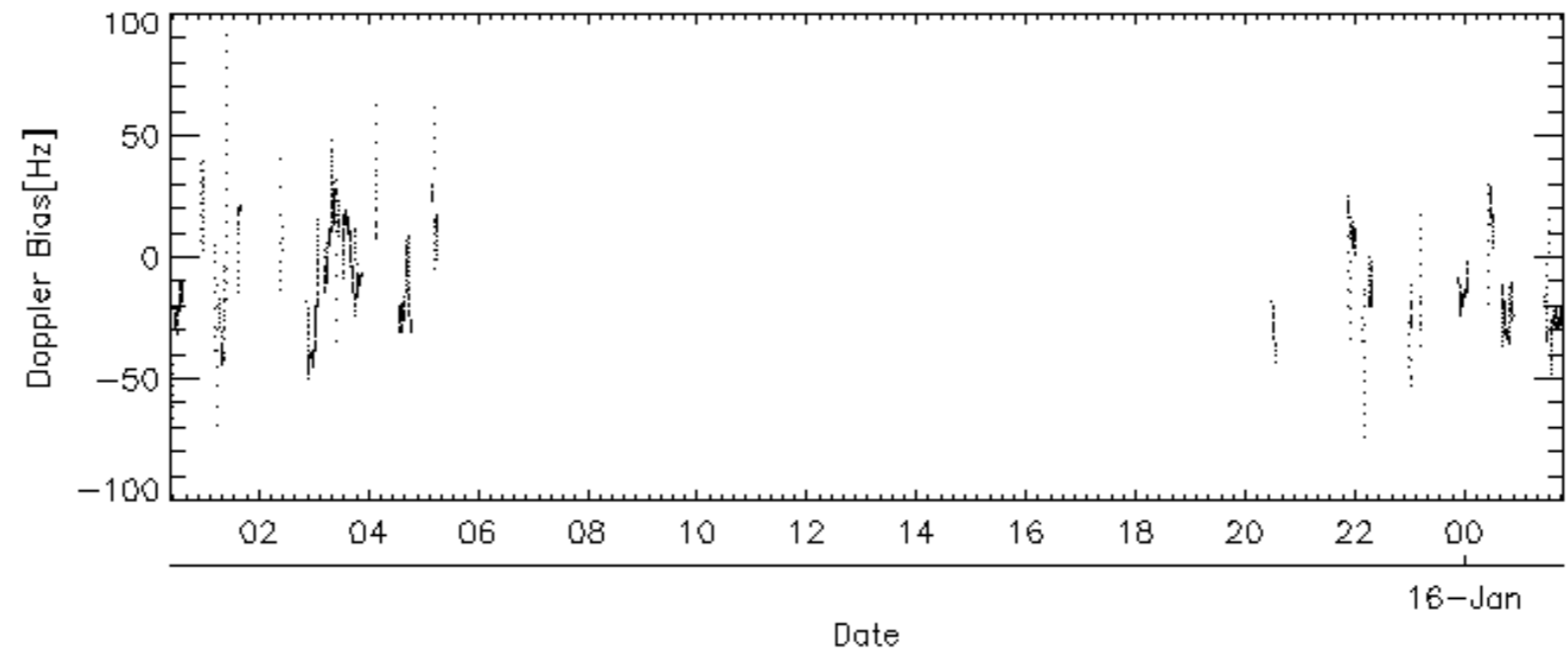
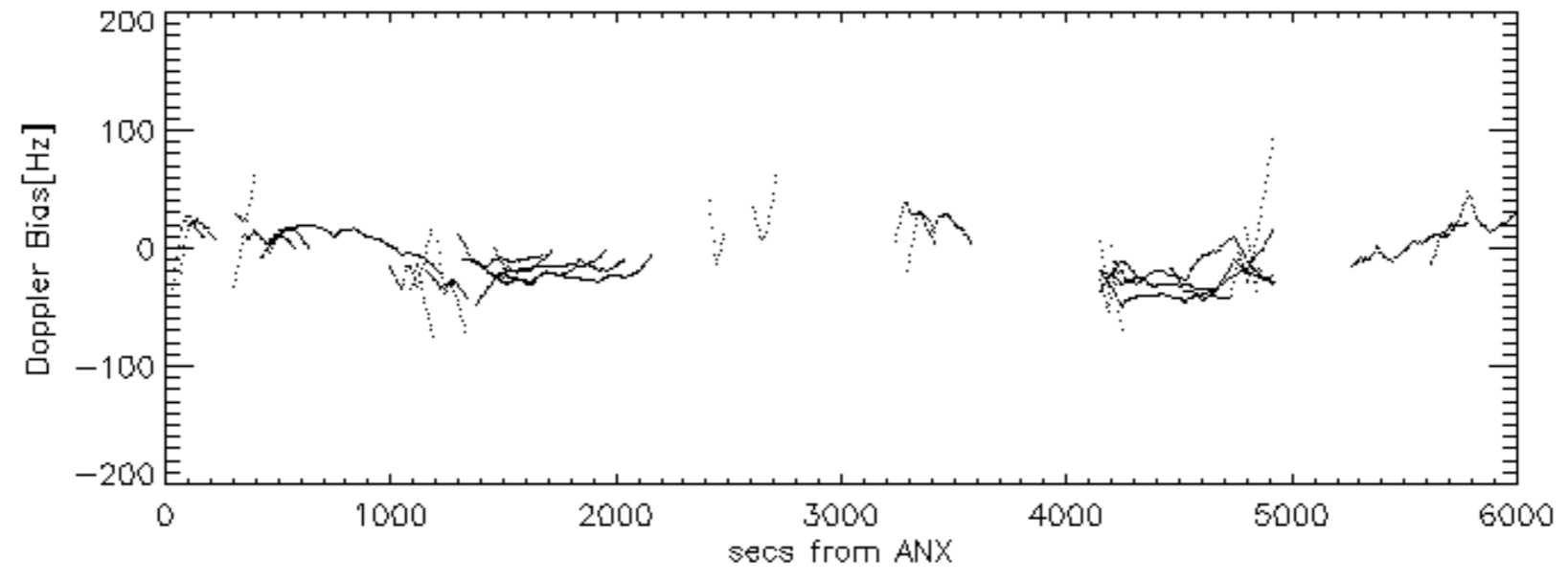
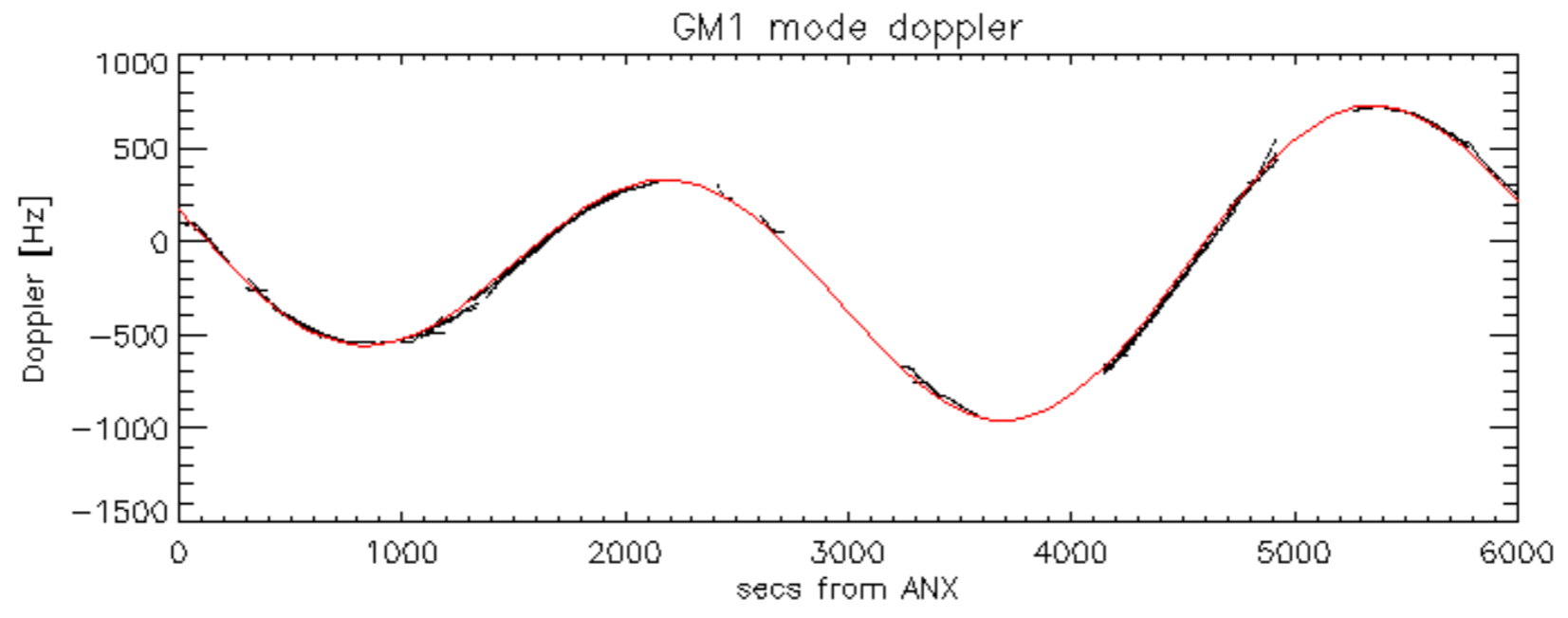


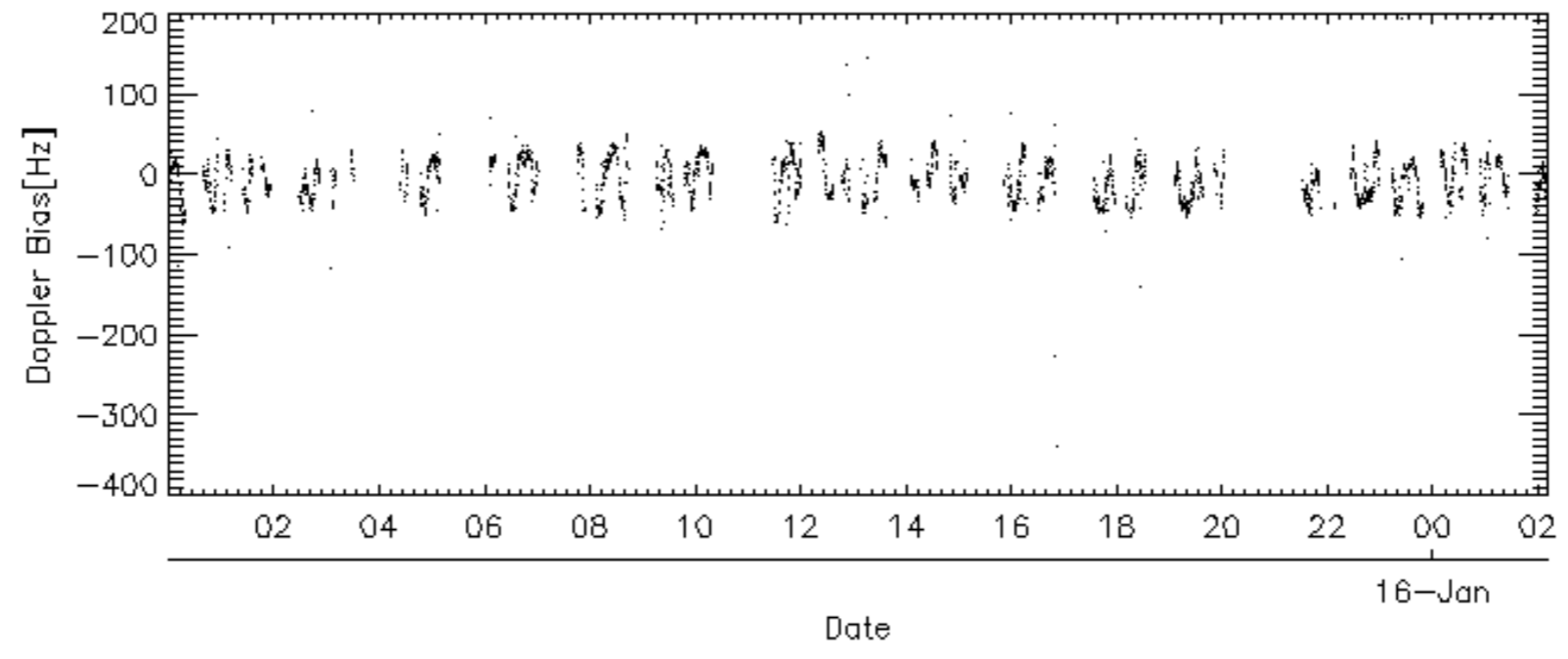
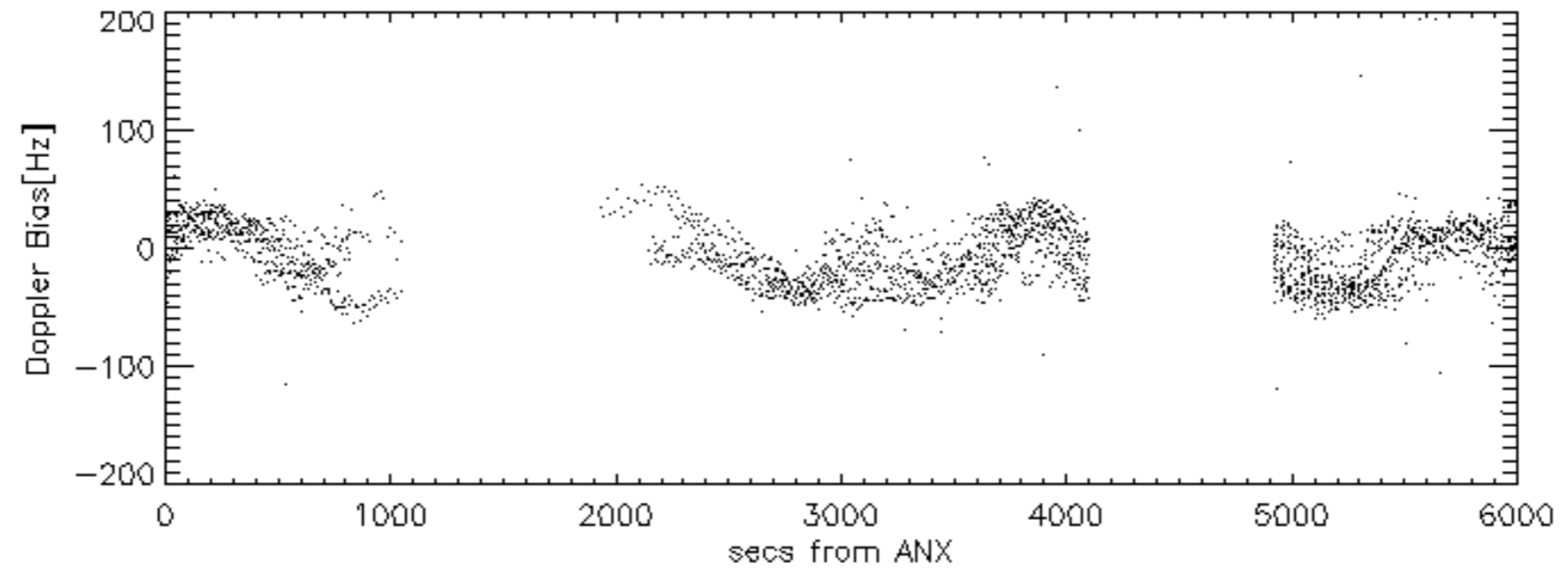
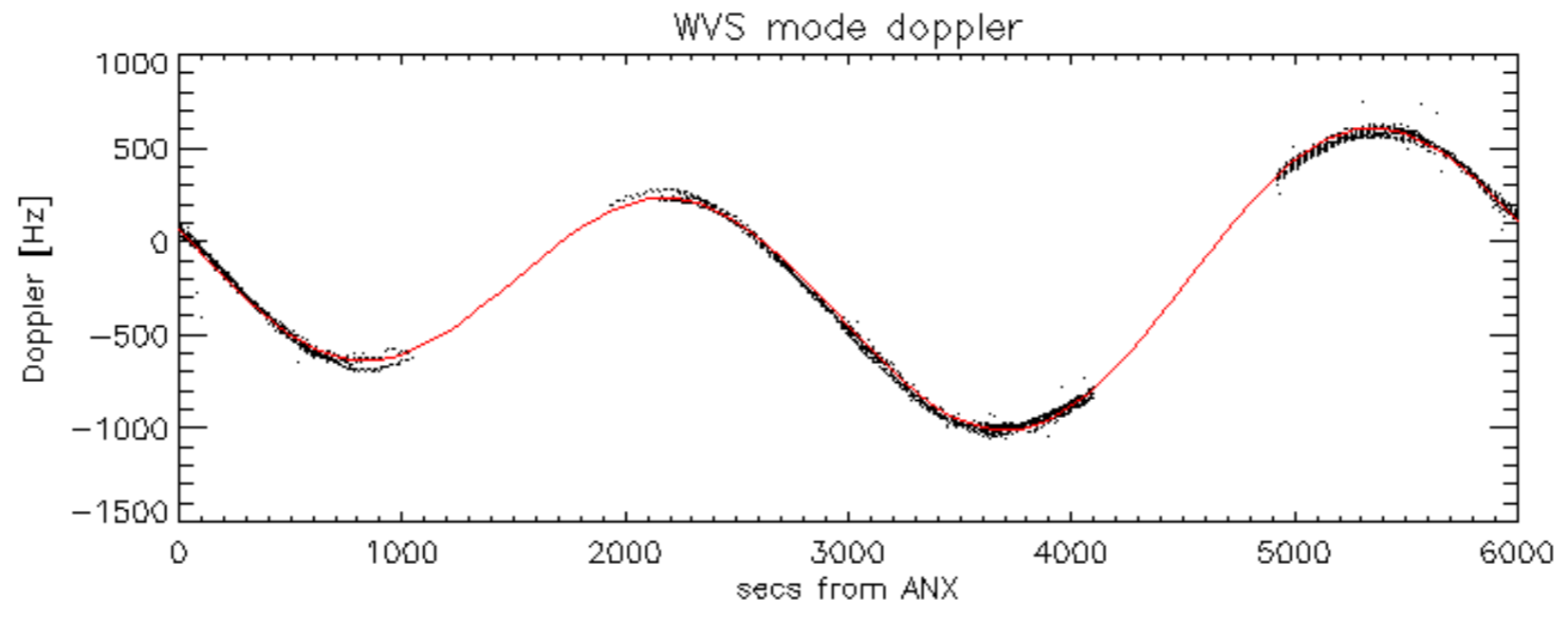
Doppler 'WVS' 'IS2' ascending



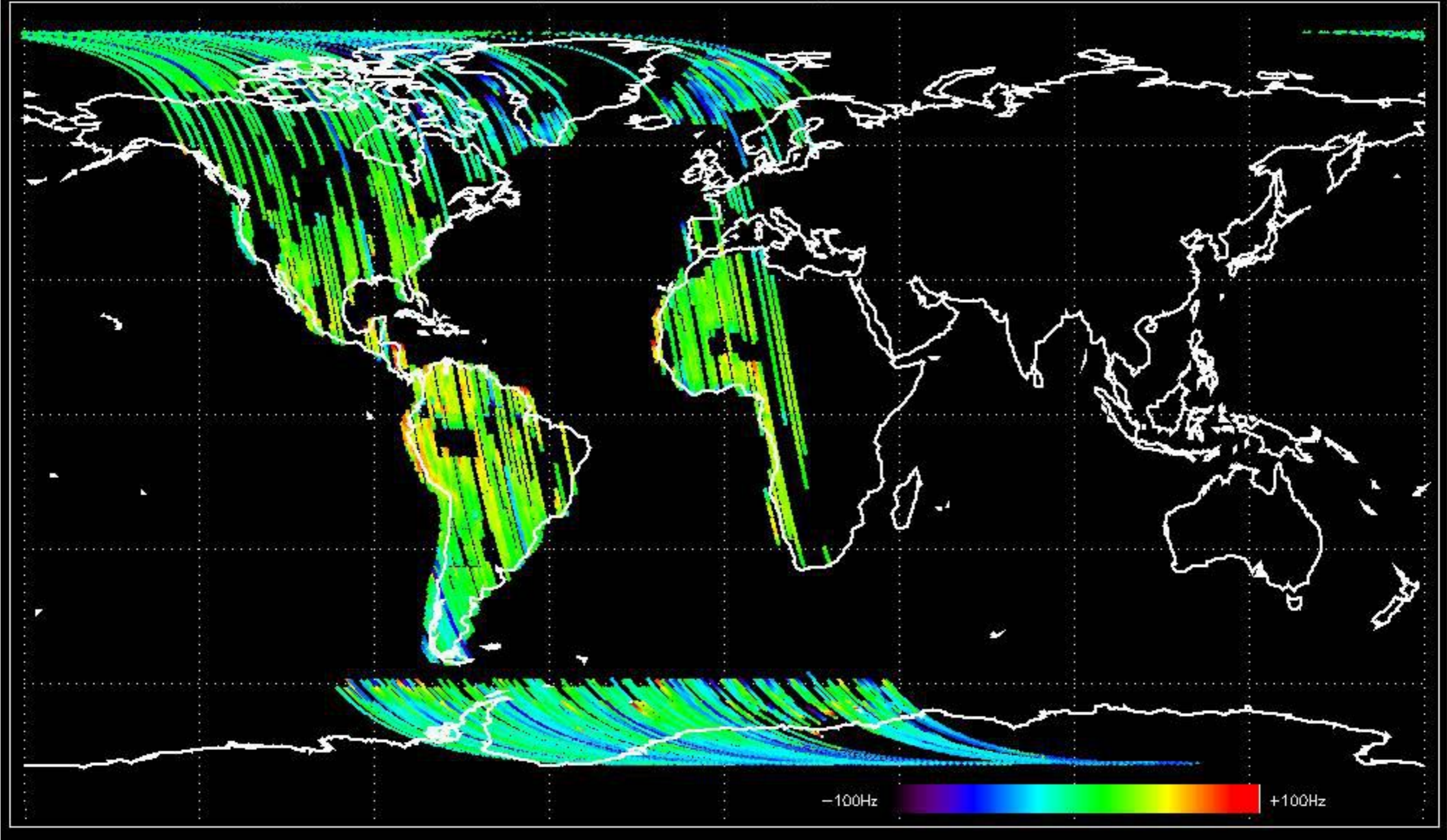
Doppler 'WVS' 'IS2' descending



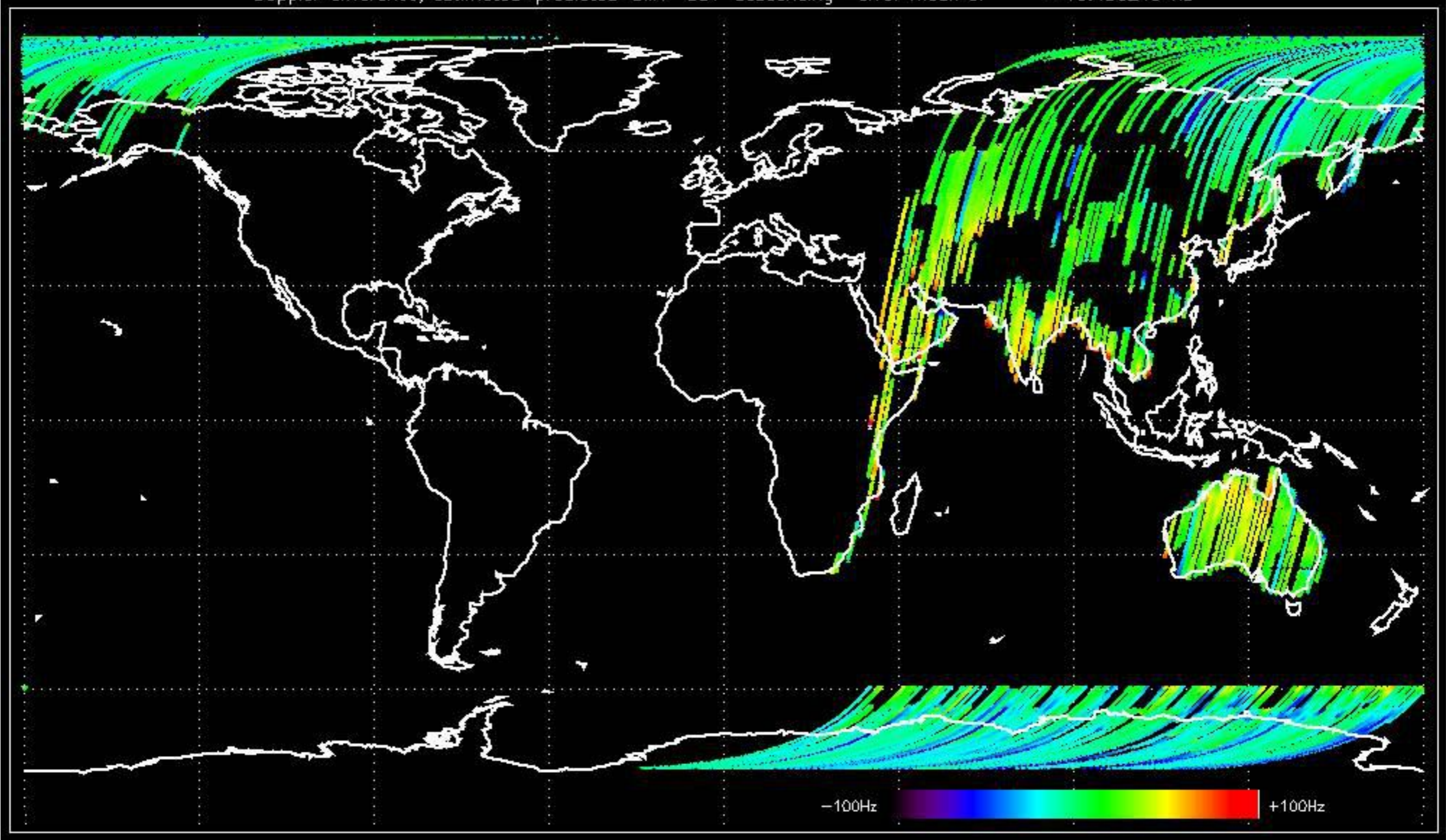




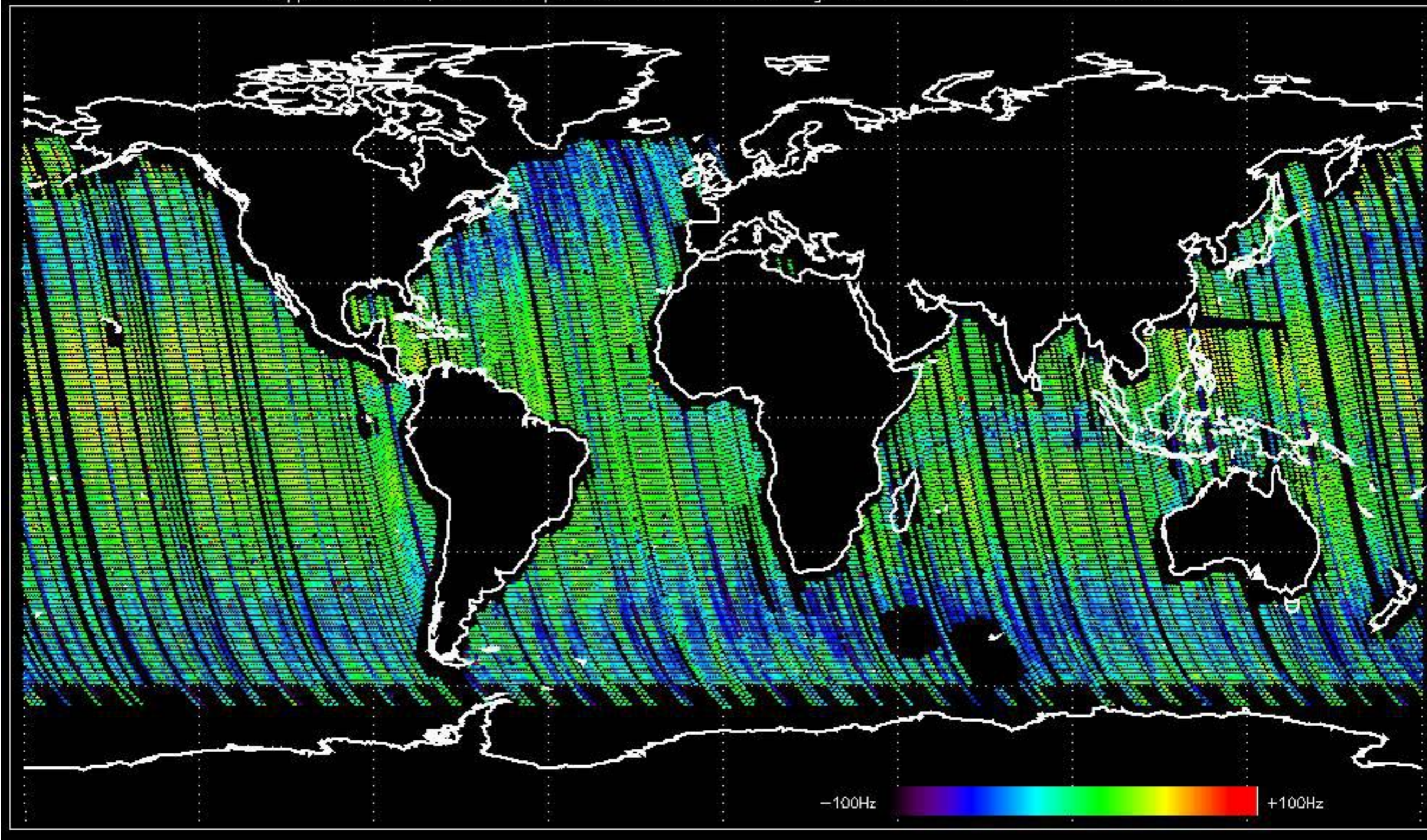
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -13.313007 Hz



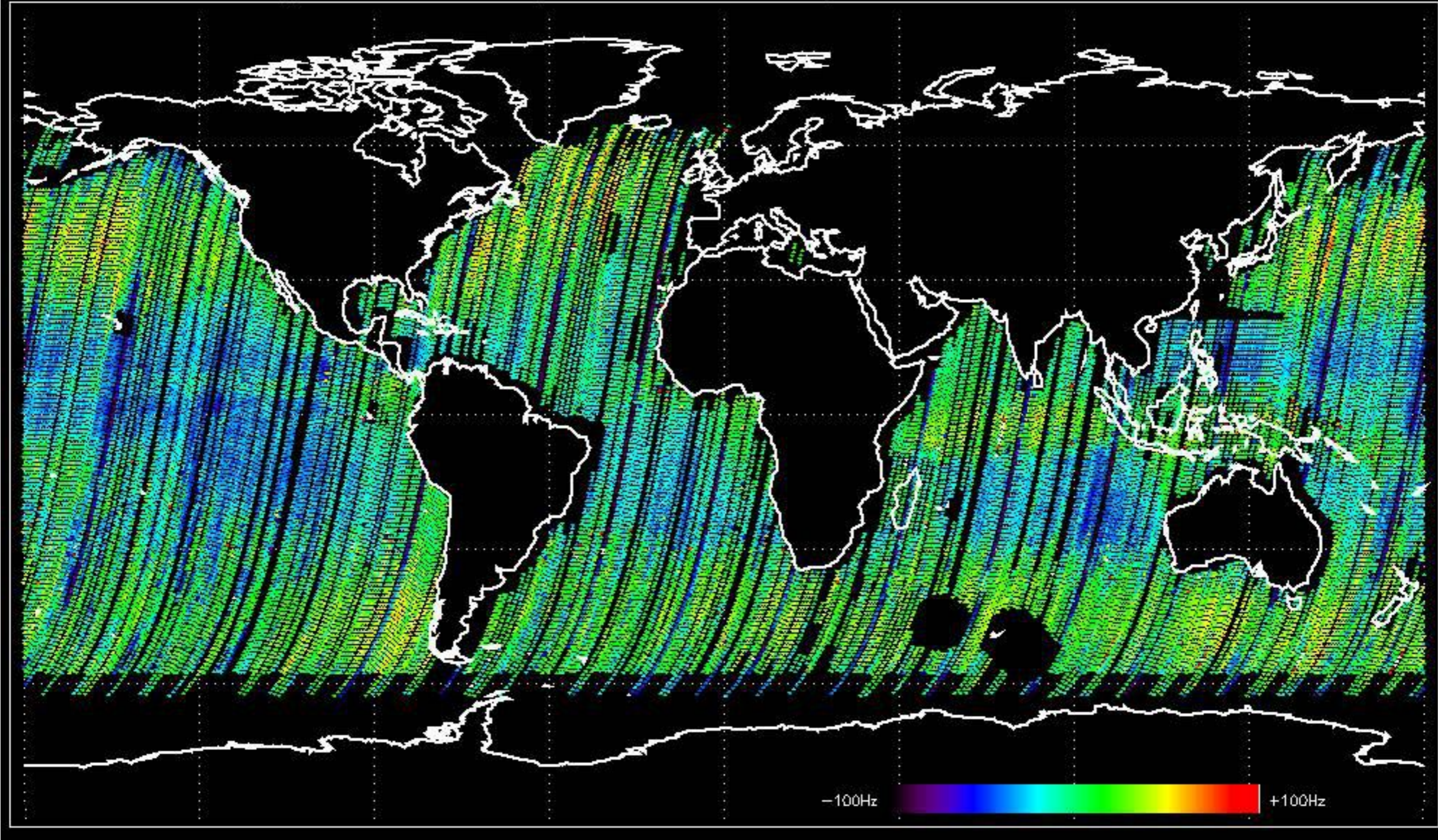
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.480249 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -7.6825269 Hz

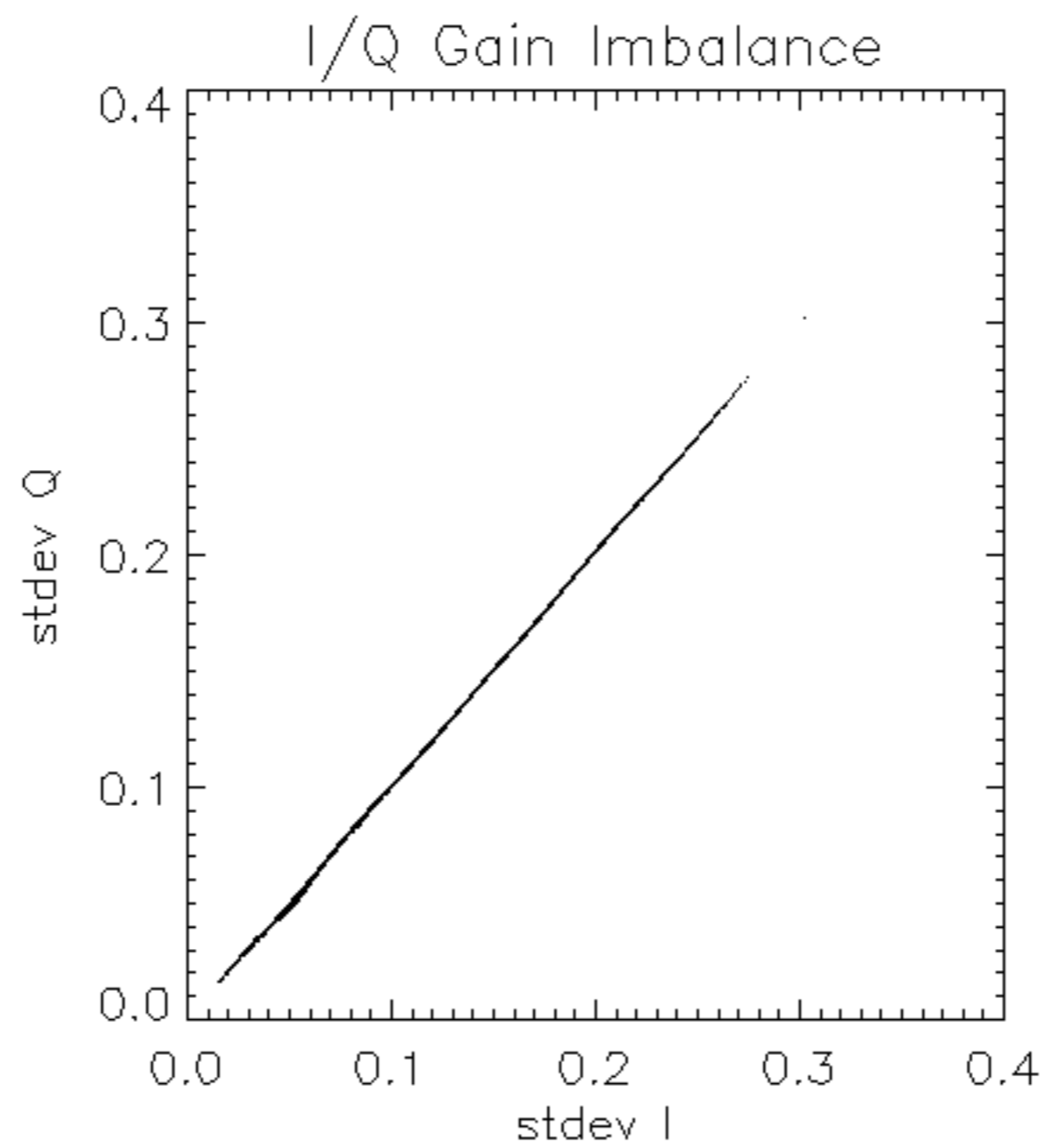


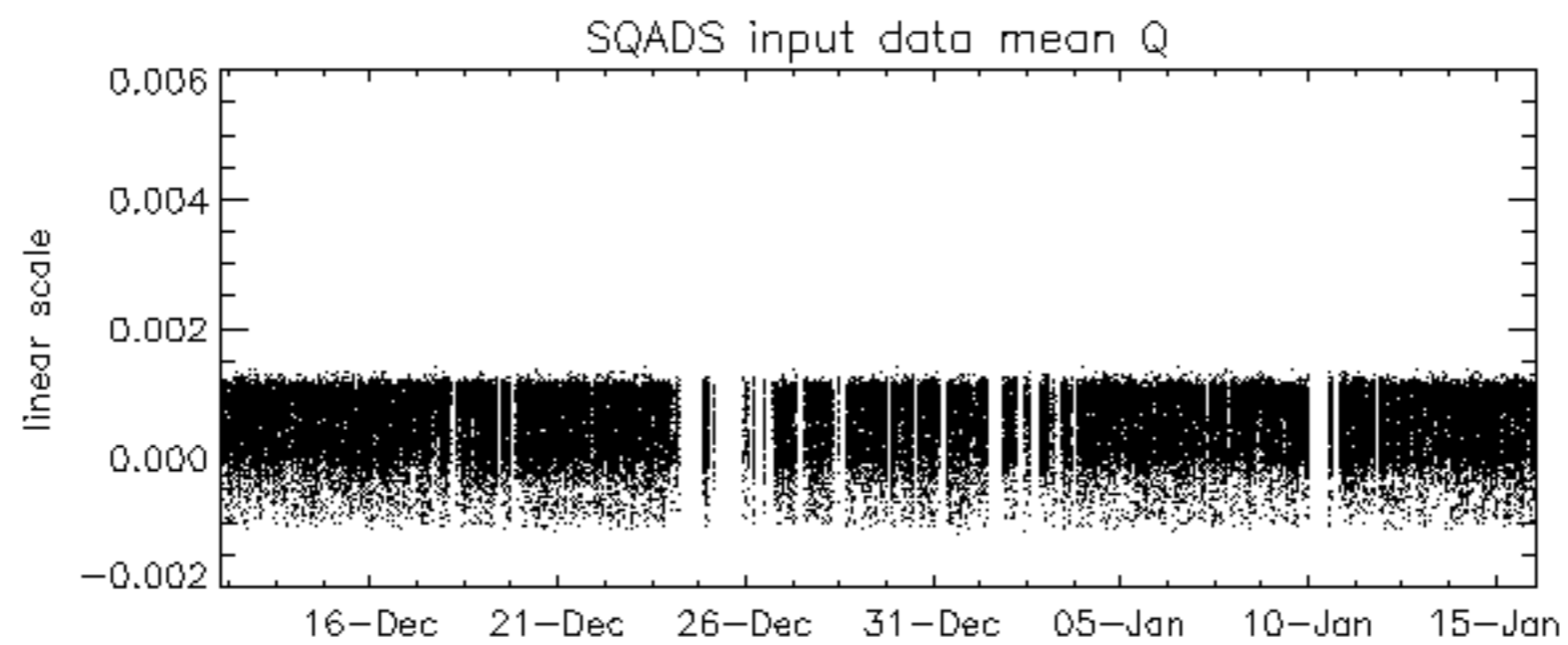
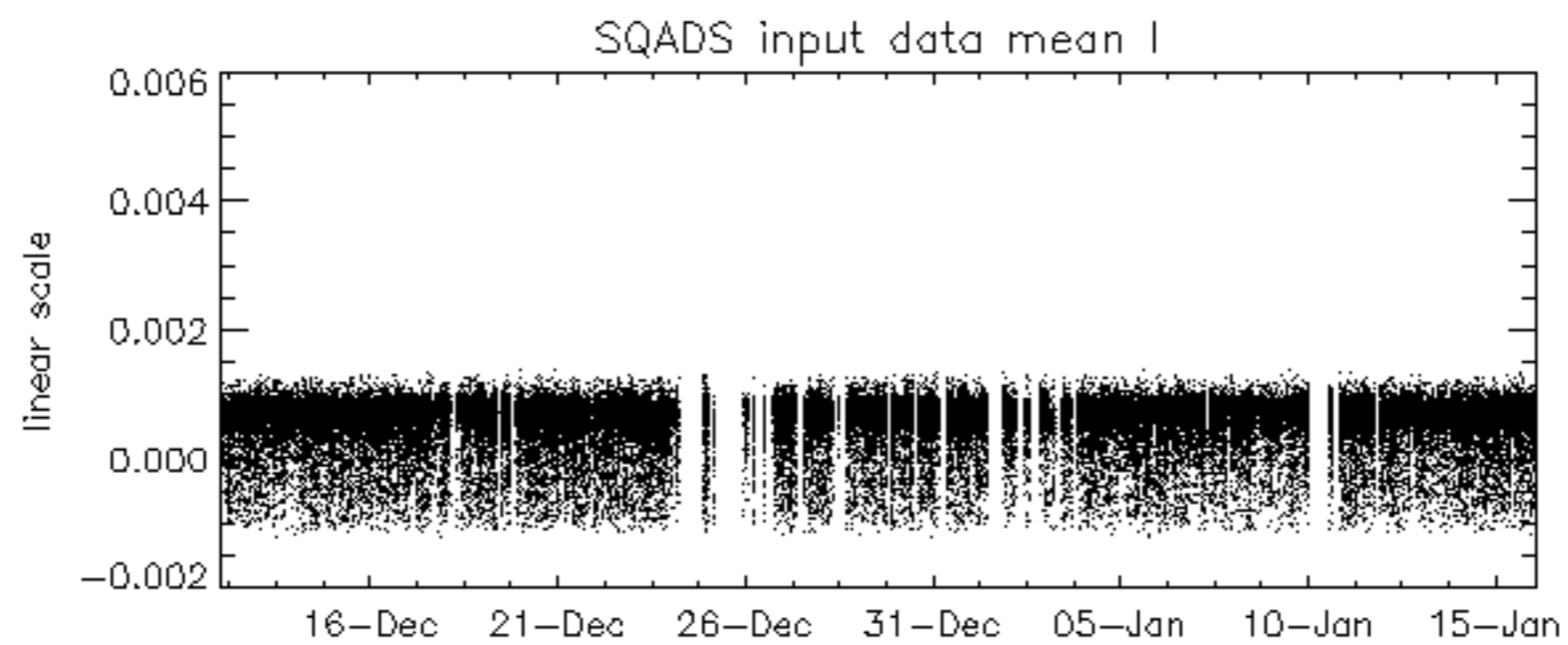
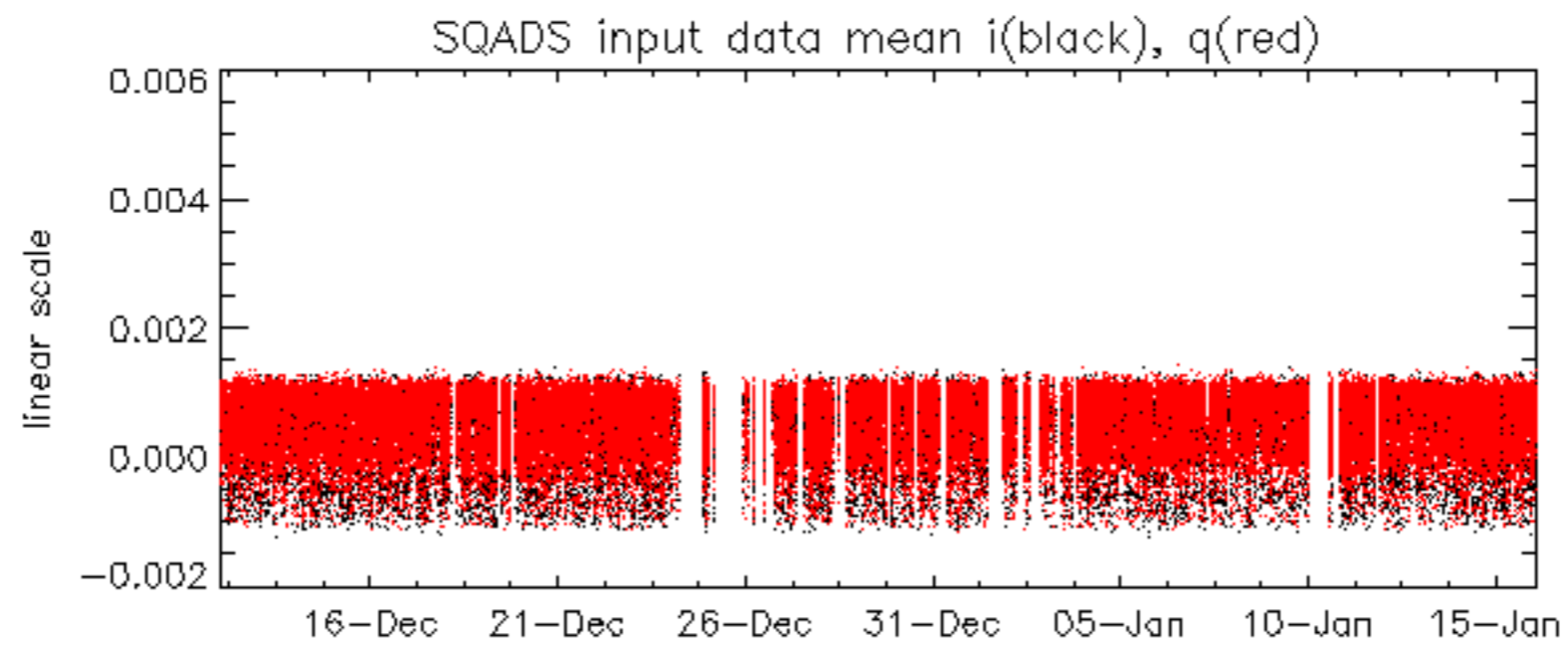
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -9.3680553 Hz

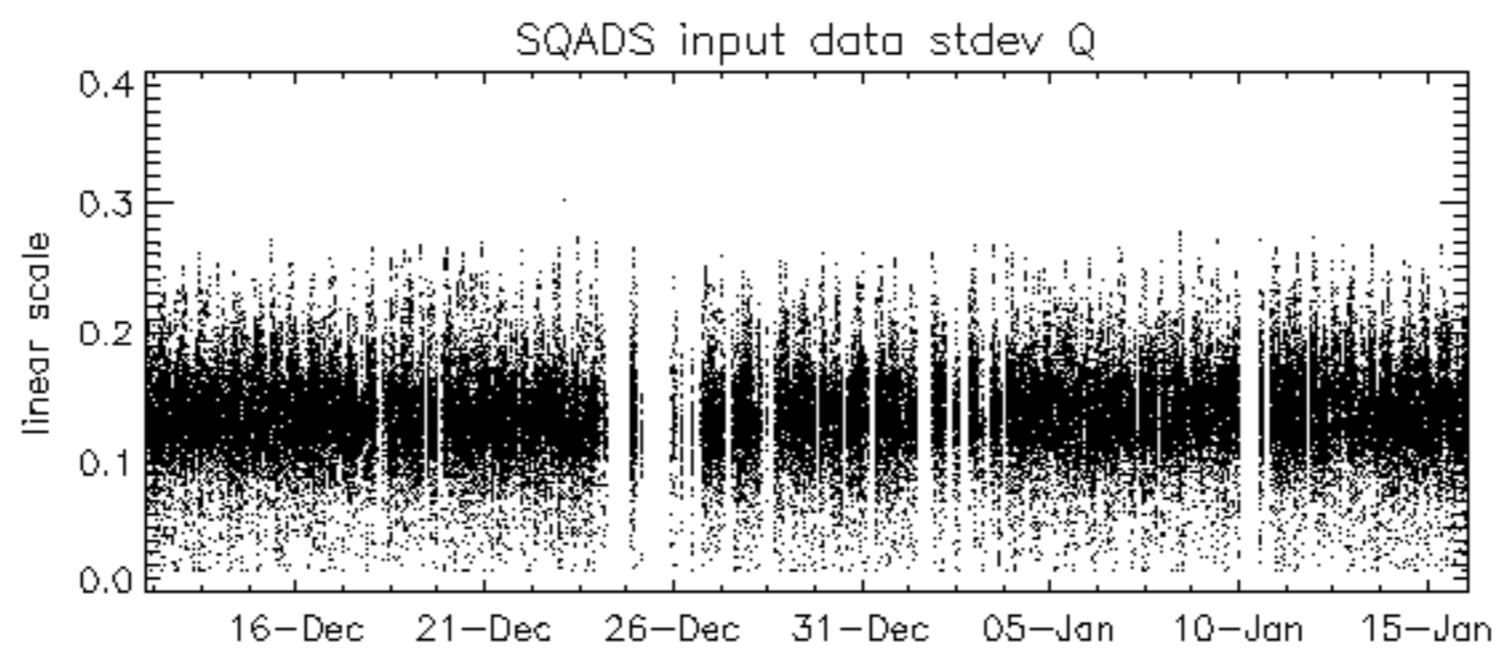
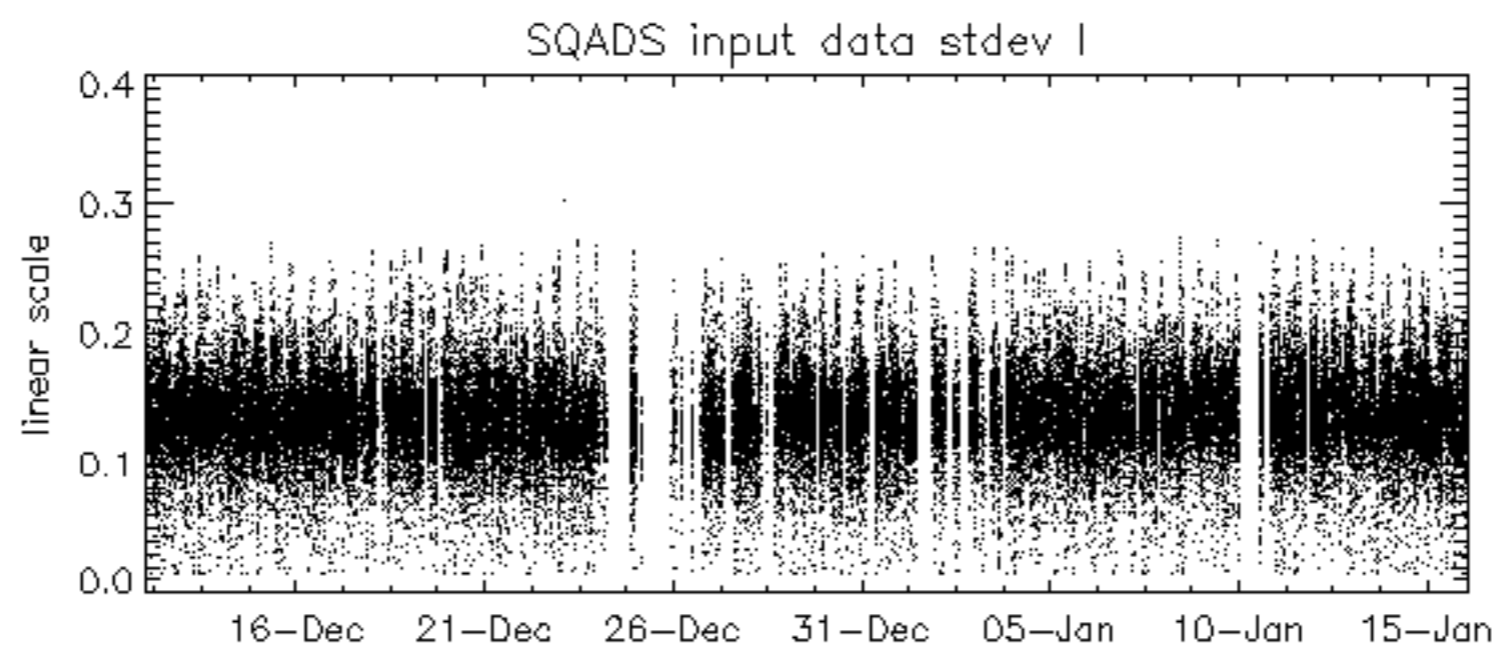
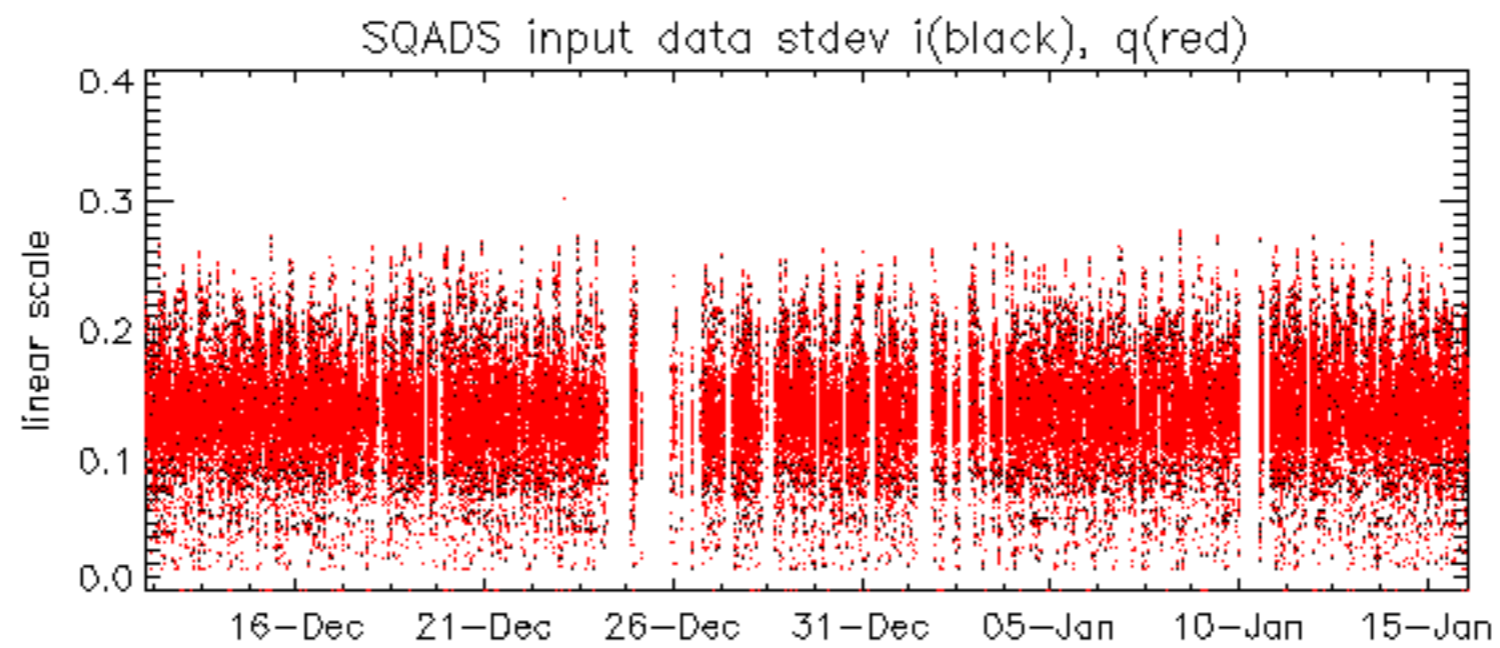


No anomalies observed on available MS products:

No anomalies observed.



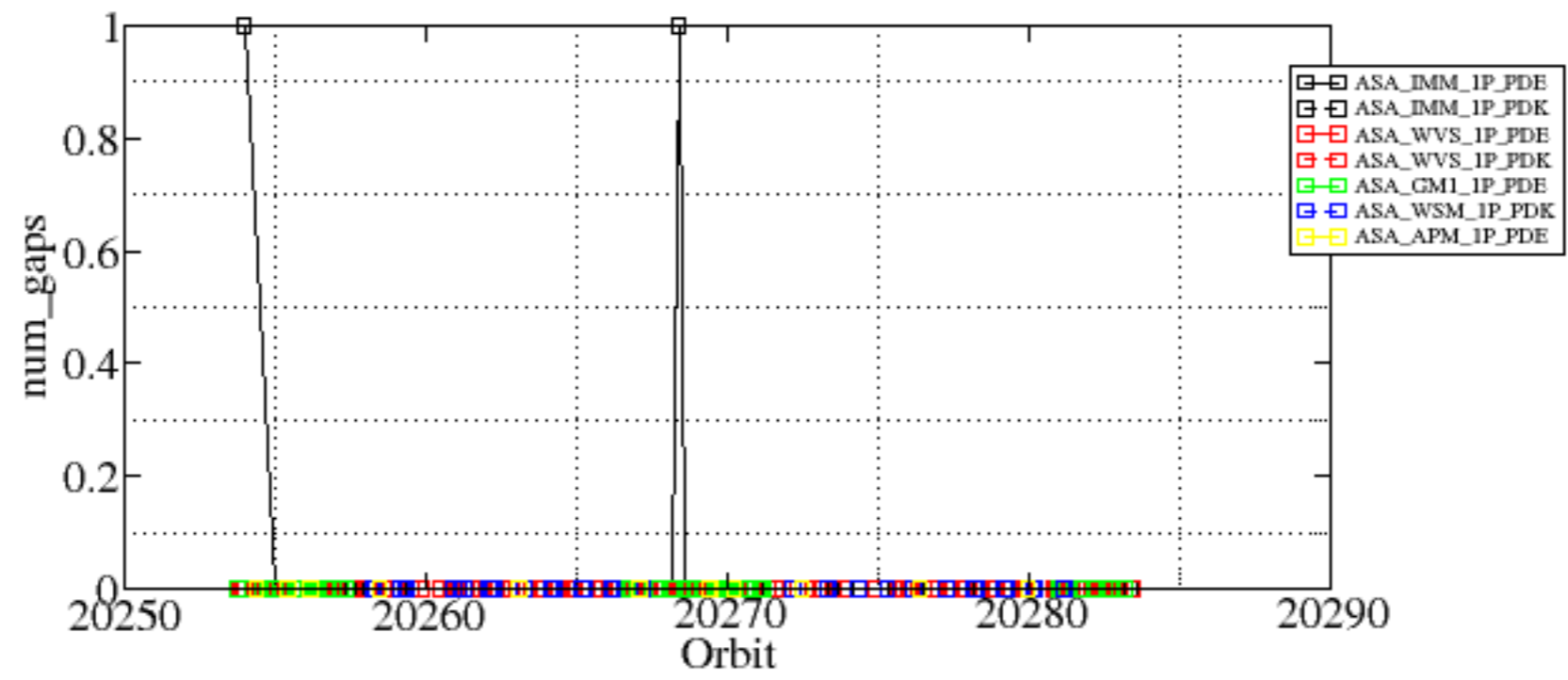


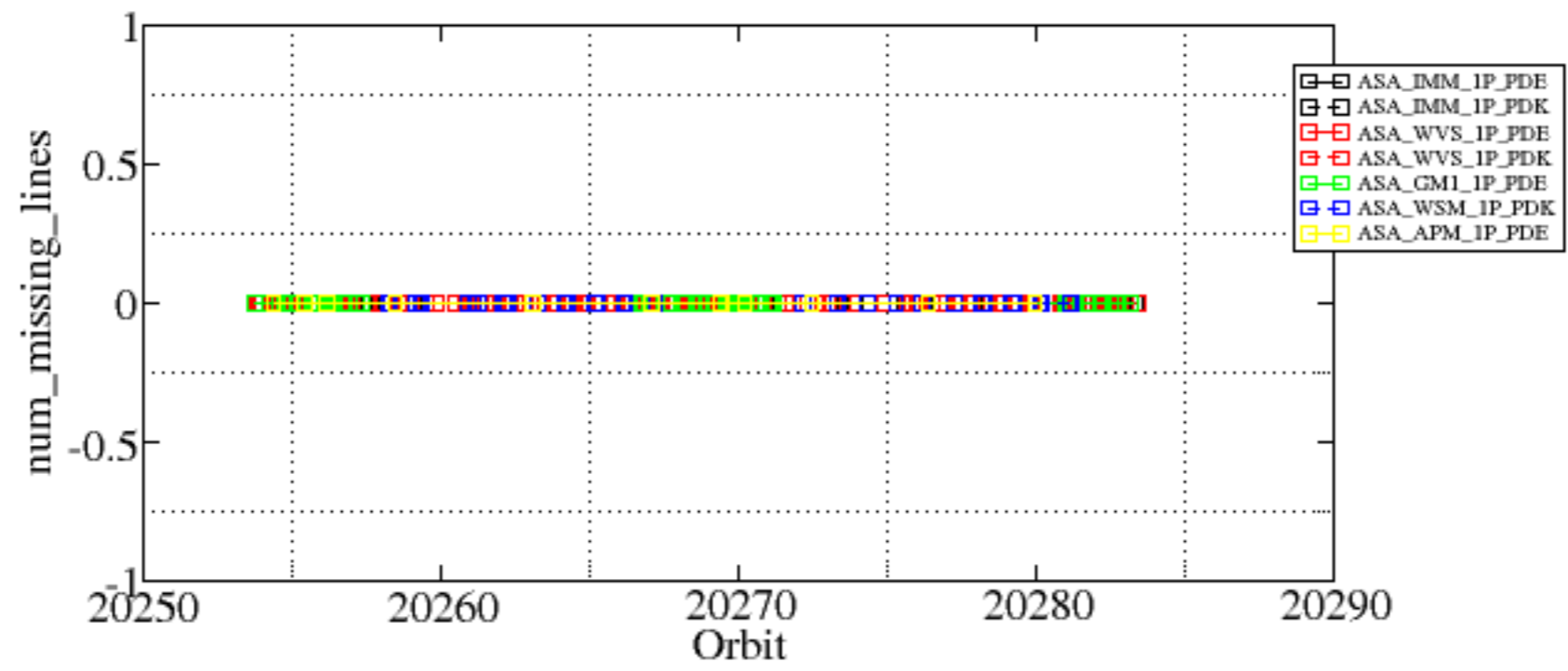


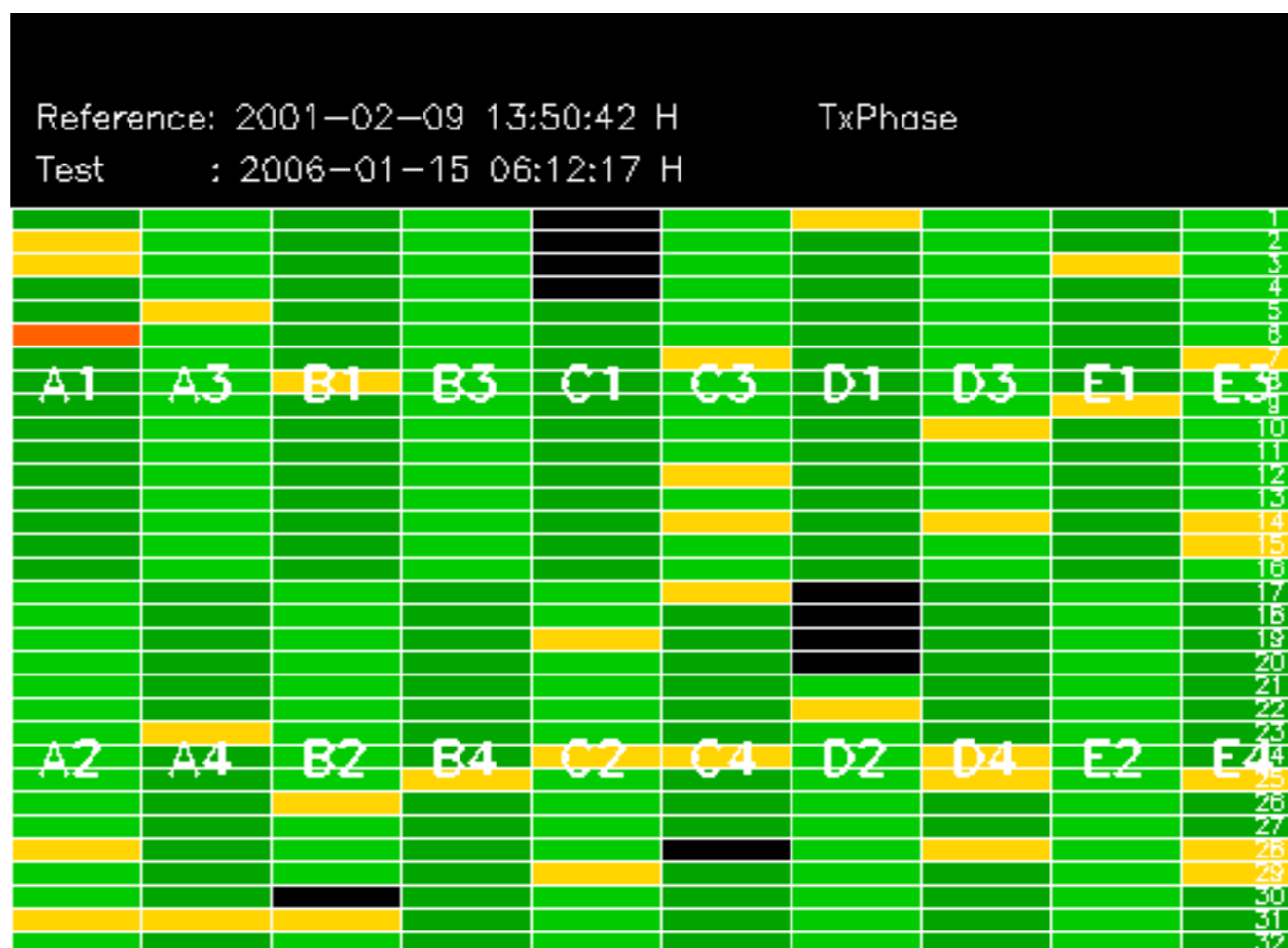
Summary of analysis for the last 3 days 2006011[456]

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

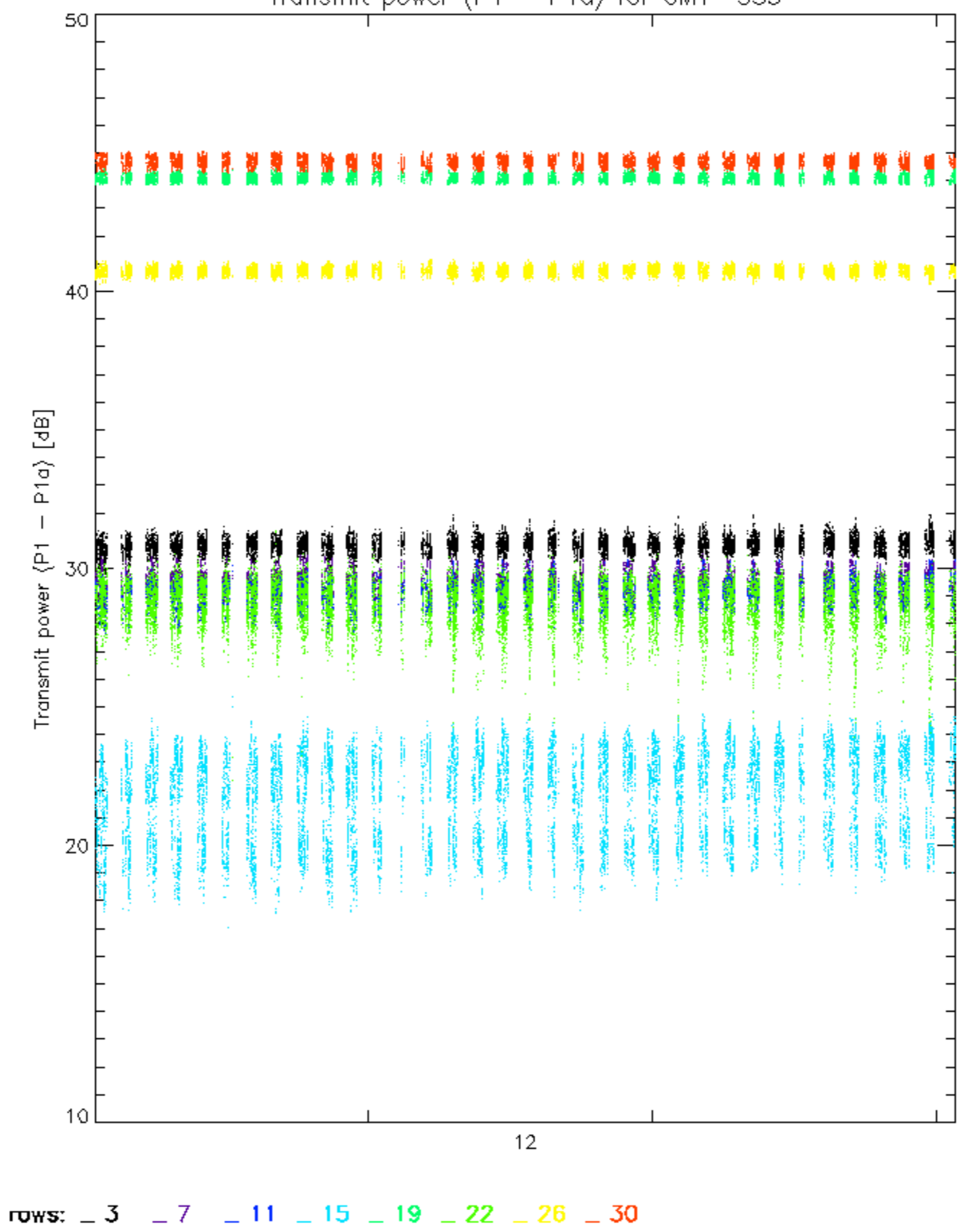
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060114_003120_000001252044_00159_20253_0148.N1	1	0
ASA_IMM_1PNPDE20060115_004048_00000622044_00174_20268_0186.N1	1	0

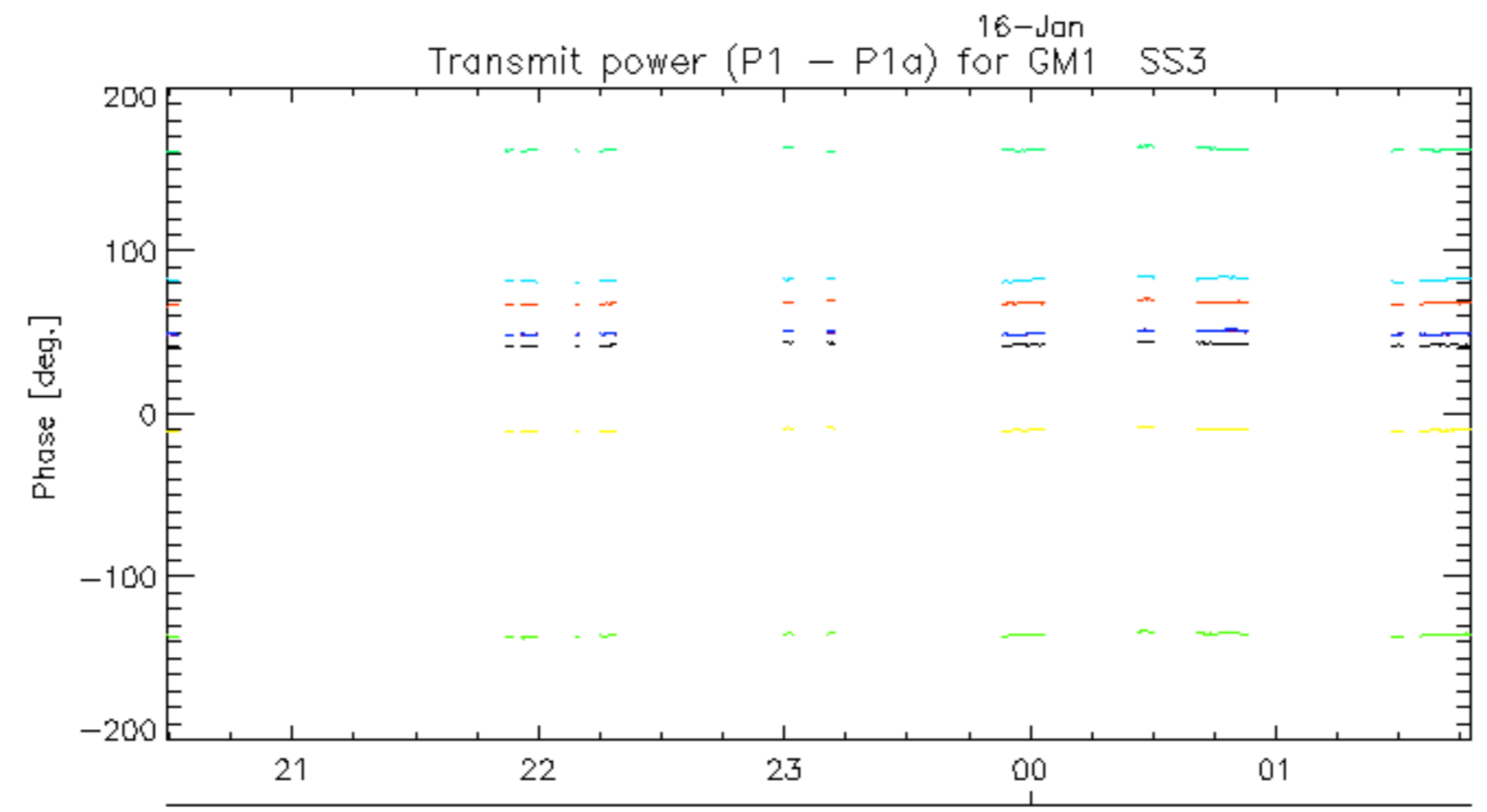
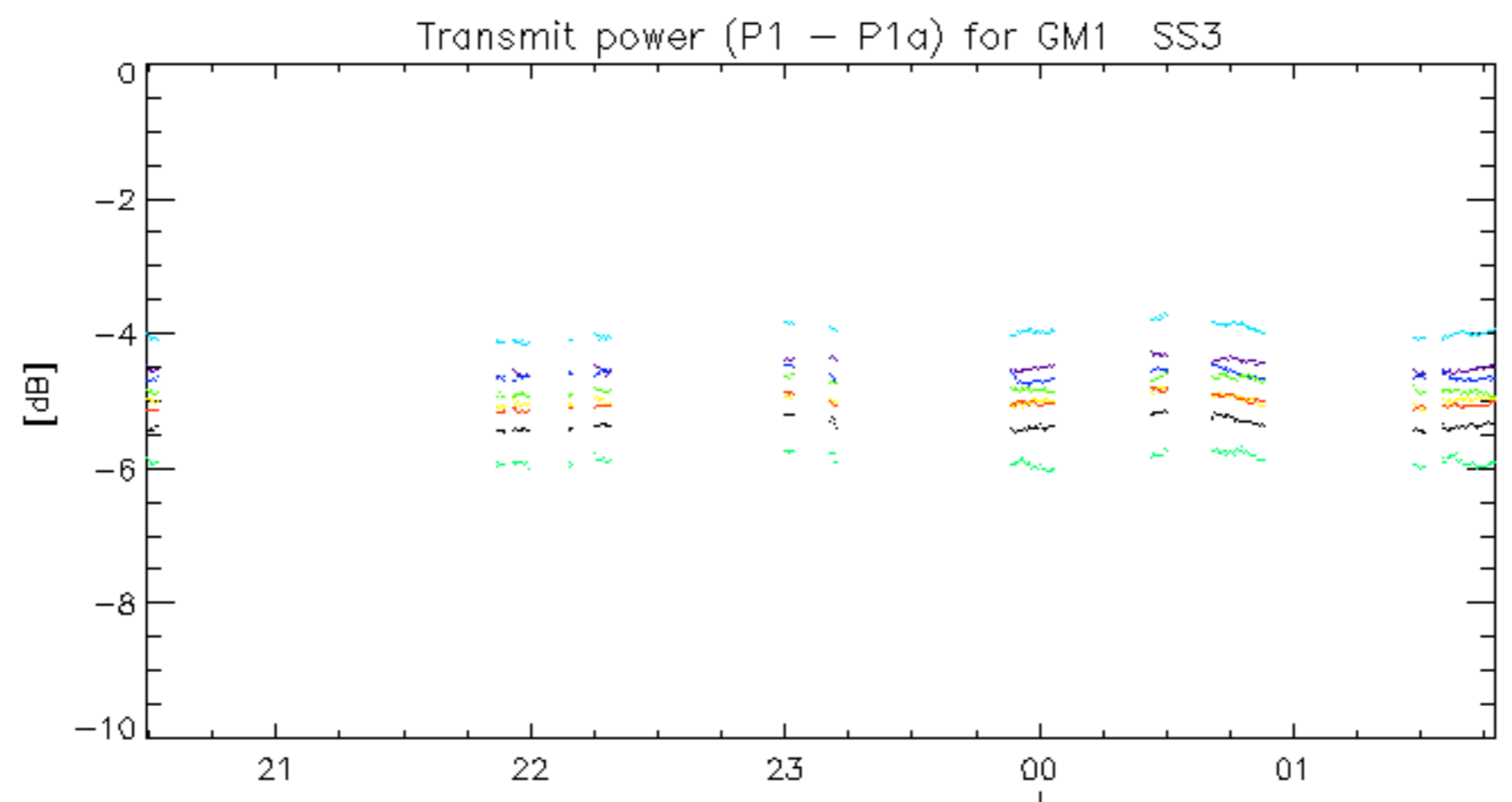




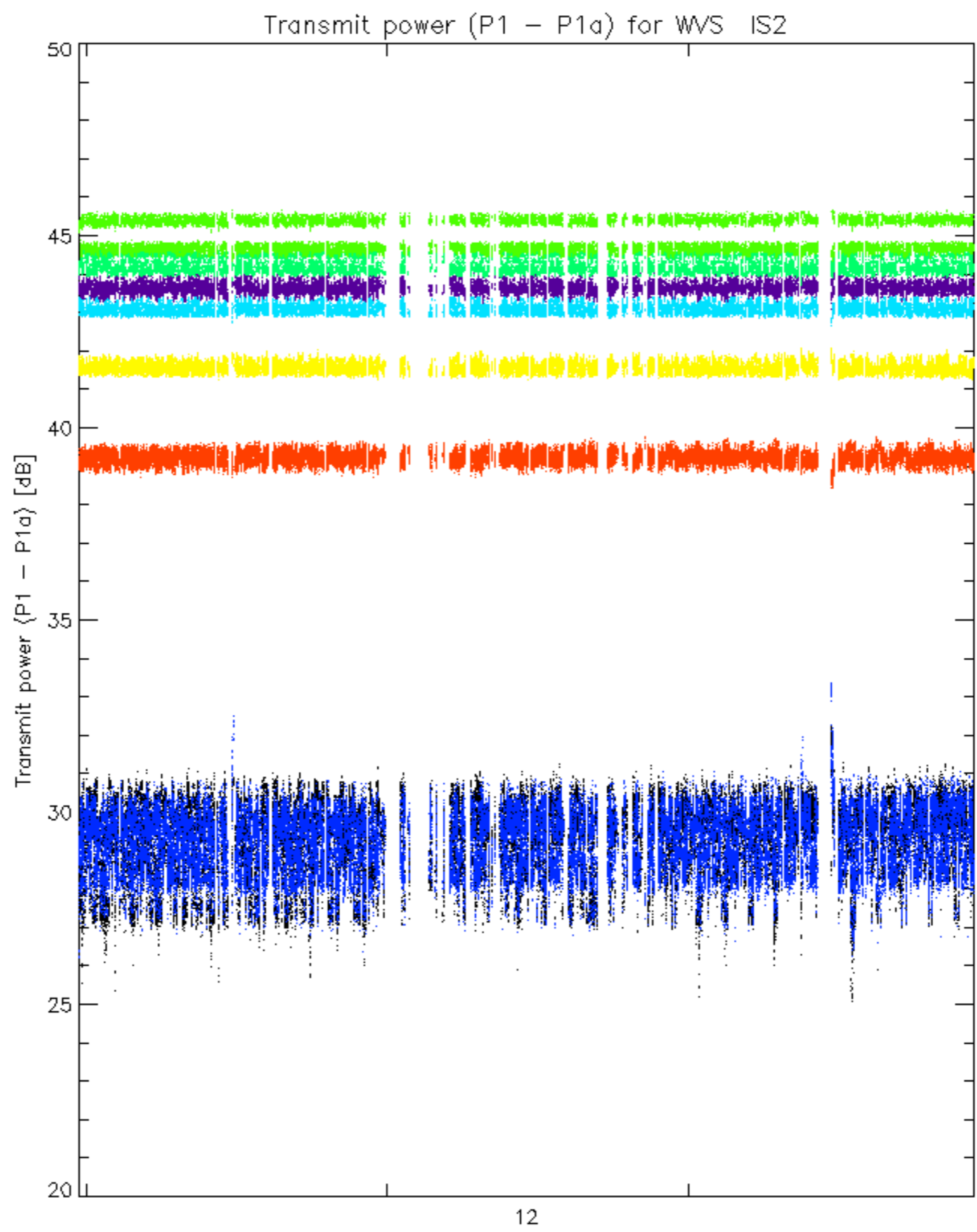


Transmit power (P1 - P1a) for GM1 SS3

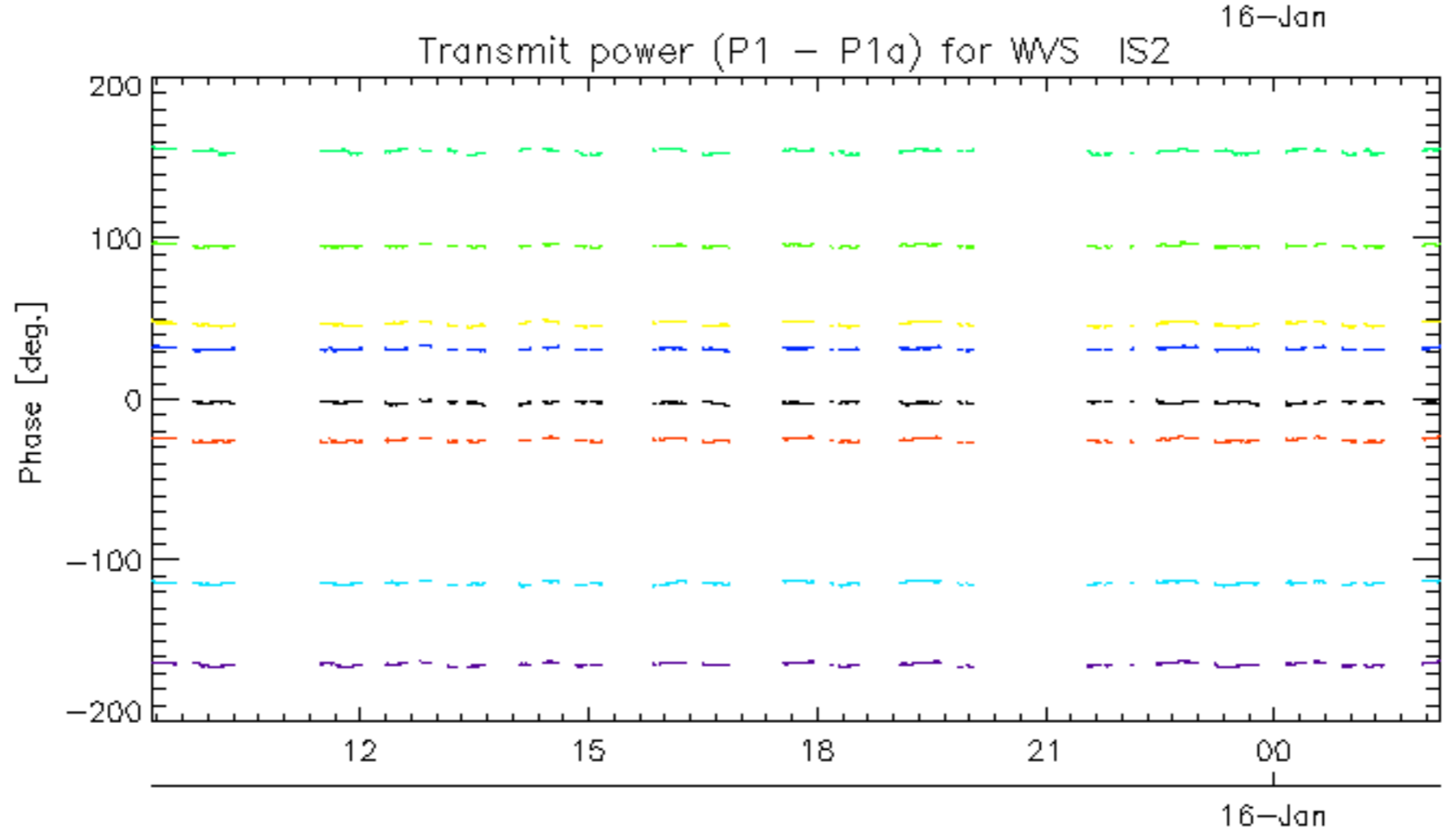
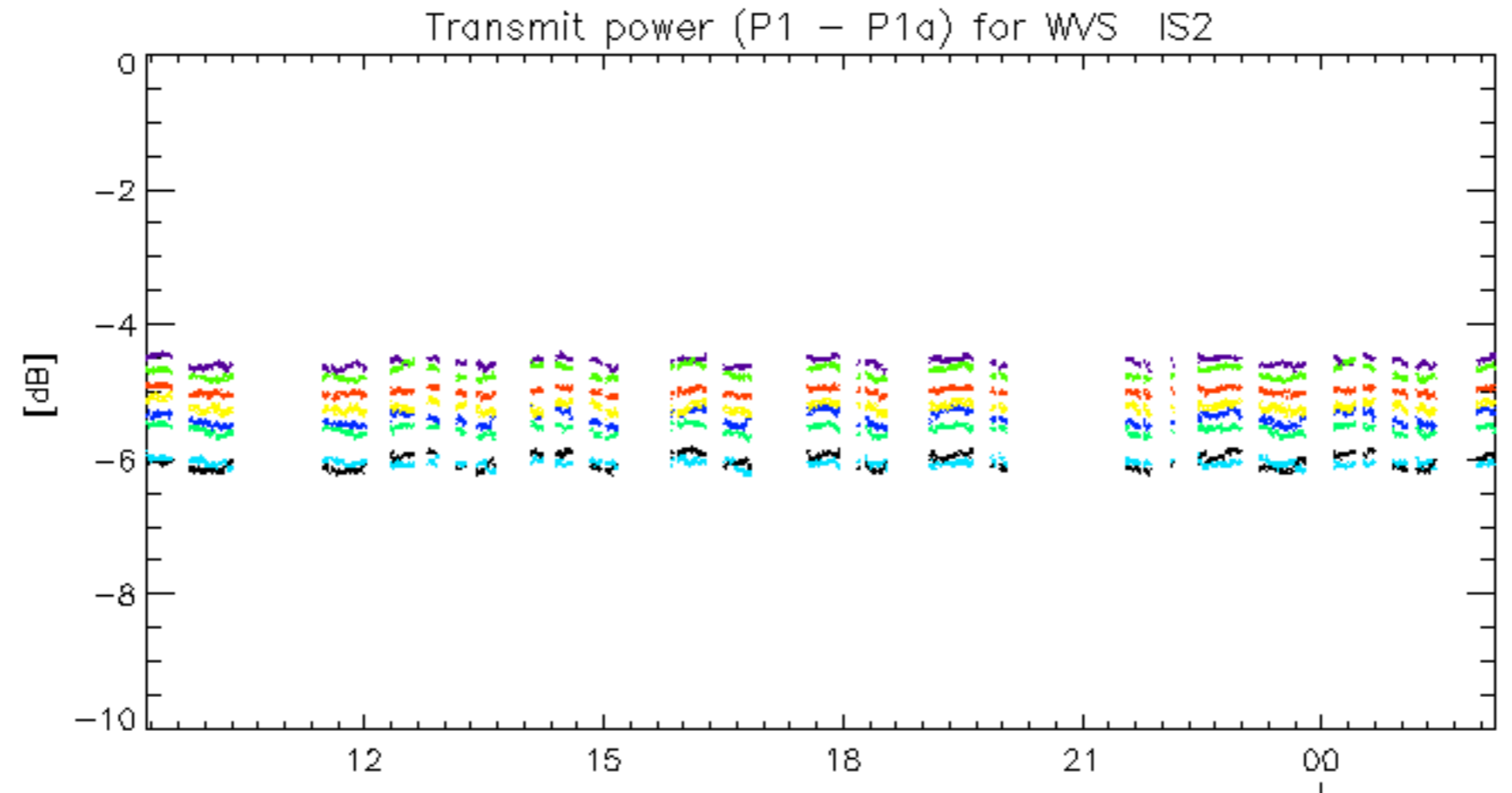




16-Jan
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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



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

No unavailabilities during the reported period.