

PRELIMINARY REPORT OF 050203

last update on Thu Feb 3 11:03:00 GMT 2005

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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 2005-02-02 00:00:00 to 2005-02-03 11:03:00

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	19	33	4	1	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	19	33	4	1	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	19	33	4	1	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	19	33	4	1	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	17	12	5	7	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	17	12	5	7	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	17	12	5	7	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	17	12	5	7	4

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

The MS mode provides an internal health check on an individual module basis. The purpose of this mode is to identify any malfunctioning modules and to identify modules for which calibration offsets are to be applied. No anomalies observed on available MS products:

Polarisation	Start Time
V	20050129 064404
H	20050130 061227

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
☒	☒
☒	☒
☒	☒
☒	☒

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	-3.409240	0.008008	0.043625
7	P1	-3.082036	0.008075	0.014390
11	P1	-4.653302	0.018711	-0.040939
15	P1	-5.643639	0.033233	-0.014751
19	P1	-3.665309	0.004318	0.000778
22	P1	-4.562791	0.014767	0.033262
26	P1	-4.937783	0.012542	-0.007778
30	P1	-7.142063	0.015976	-0.041084
3	P1	-15.906781	0.103023	0.038963
7	P1	-15.509193	0.071467	-0.010597
11	P1	-20.841694	0.225355	-0.136253
15	P1	-11.609146	0.059249	0.034008
19	P1	-14.177028	0.024331	-0.002467
22	P1	-15.943210	0.390549	0.249155
26	P1	-17.637440	0.213987	0.141806
30	P1	-17.906490	0.335272	-0.146342

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.251551	0.086653	0.157284
7	P2	-22.442654	0.115432	0.163514
11	P2	-14.679759	0.107993	0.240604
15	P2	-7.114369	0.099509	0.071794
19	P2	-9.700032	0.098403	0.052504
22	P2	-17.055754	0.096155	0.148693
26	P2	-16.496771	0.095755	0.054960
30	P2	-18.919027	0.081628	0.059653

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.191052	0.006195	0.033020
7	P3	-8.191052	0.006195	0.033020
11	P3	-8.191052	0.006195	0.033020
15	P3	-8.191052	0.006195	0.033020
19	P3	-8.191052	0.006195	0.033020
22	P3	-8.191052	0.006195	0.033020
26	P3	-8.191040	0.006199	0.033137
30	P3	-8.191040	0.006199	0.033137

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	-2.804766	0.018765	0.061013
7	P1	-2.961148	0.070711	-0.031148
11	P1	-3.951734	0.030643	-0.021067
15	P1	-3.520897	0.030247	-0.041787
19	P1	-3.601634	0.013473	0.026704
22	P1	-5.668315	0.066891	-0.090050
26	P1	-6.898736	0.181894	-1.171229
30	P1	-6.286657	0.044215	0.038406
3	P1	-10.769084	0.088264	0.047255
7	P1	-10.153668	0.186313	-0.032688
11	P1	-12.537128	0.129693	-0.056844
15	P1	-11.758128	0.077267	-0.017274
19	P1	-15.606288	0.054048	0.105480
22	P1	-24.093220	1.721053	-0.059350

26	P1	-15.205109	0.460353	-1.120901
30	P1	-20.023283	0.853457	0.098471

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.951935	0.047353	0.129402
7	P2	-22.491388	0.122887	0.166353
11	P2	-10.484508	0.050657	0.250095
15	P2	-5.024971	0.022040	0.066038
19	P2	-6.908773	0.033183	0.088371
22	P2	-7.224536	0.048394	0.107529
26	P2	-23.913719	0.090210	0.098440
30	P2	-21.964514	0.054462	0.058053

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.025762	0.002424	0.035810
7	P3	-8.025827	0.002431	0.035567
11	P3	-8.025909	0.002419	0.035696
15	P3	-8.025899	0.002420	0.036029
19	P3	-8.025922	0.002435	0.035679
22	P3	-8.025851	0.002420	0.035850
26	P3	-8.025802	0.002431	0.035683
30	P3	-8.025870	0.002426	0.035703

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	0.000473821
	stdev	2.14597e-07
MEAN Q	mean	0.000546669
	stdev	2.29808e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129280
	stdev	0.000963009
STDEV Q	mean	0.129518
	stdev	0.000974304



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005020[123]

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_WVS_1PNPDE20050201_000118_000004202034_00202_15286_6252.N1	0	1688
ASA_WVS_1PNPDE20050201_002745_000004942034_00202_15286_6254.N1	0	24
ASA_WVS_1PNPDE20050201_020521_000003152034_00203_15287_6255.N1	0	152
ASA_WVS_1PNPDE20050201_031941_000003452034_00204_15288_6258.N1	0	40
ASA_WVS_1PNPDE20050201_034327_000000902034_00204_15288_6259.N1	0	48

ASA_WVS_1PNPDE20050201_035054_000008092034_00204_15288_6256.N1	0	88
ASA_WVS_1PNPDE20050201_045059_000006742034_00205_15289_6257.N1	0	56
ASA_WVS_1PNPDE20050201_063233_000006442034_00206_15290_6261.N1	0	1384
ASA_WVS_1PNPDE20050201_223745_000000292034_00216_15300_6280.N1	0	48
ASA_WVS_1PNPDE20050201_230601_000001642034_00216_15300_6276.N1	0	48
ASA_WVS_1PNPDE20050202_004321_000001502034_00217_15301_6285.N1	0	56
ASA_WVS_1PNPDE20050202_005019_000000592034_00217_15301_6286.N1	0	96
ASA_WVS_1PNPDE20050202_005346_000002692034_00217_15301_6284.N1	0	104
ASA_WVS_1PNPDE20050202_010933_000004352034_00217_15301_6282.N1	0	72
ASA_WVS_1PNPDE20050202_013114_000000302034_00217_15301_6283.N1	0	32
ASA_WVS_1PNPDE20050202_013414_000000142034_00217_15301_6287.N1	0	96
ASA_WVS_1PNPDE20050202_015126_000000592034_00218_15302_6288.N1	0	144
ASA_WVS_1PNPDE20050202_024738_000001042034_00218_15302_6291.N1	0	56
ASA_WVS_1PNPDE20050202_031150_000000452034_00218_15302_6293.N1	0	16
ASA_WVS_1PNPDE20050202_032326_000000592034_00218_15302_6294.N1	0	64
ASA_GM1_1PNPDE20050201_001400_000004772034_00202_15286_8289.N1	0	79370
ASA_GM1_1PNPDE20050201_005710_000001322034_00203_15287_8301.N1	0	137
ASA_GM1_1PNPDE20050201_021122_000001142034_00203_15287_8305.N1	0	1208
ASA_GM1_1PNPDE20050201_033015_000007732034_00204_15288_8309.N1	0	5267
ASA_GM1_1PNPDE20050201_034549_000002892034_00204_15288_8316.N1	0	2251
ASA_GM1_1PNPDE20050201_040515_000001382034_00205_15289_8317.N1	0	881
ASA_GM1_1PNPDE20050201_041025_000005862034_00205_15289_8311.N1	0	4025
ASA_GM1_1PNPDE20050201_042148_000004592034_00205_15289_8313.N1	0	3155
ASA_GM1_1PNPDE20050201_043854_000005372034_00205_15289_8312.N1	0	3565
ASA_GM1_1PNPDE20050201_051050_000007732034_00205_15289_8319.N1	0	47639
ASA_GM1_1PNPDE20050201_055510_000003802034_00206_15290_8321.N1	0	44400
ASA_GM1_1PNPDE20050201_060411_000002952034_00206_15290_8325.N1	0	33954
ASA_GM1_1PNPDE20050201_061057_000002952034_00206_15290_8324.N1	0	35579
ASA_GM1_1PNPDE20050201_061702_000002652034_00206_15290_8327.N1	0	31271
ASA_GM1_1PNPDE20050201_222937_000001142034_00216_15300_8345.N1	0	174
ASA_GM1_1PNPDE20050201_225230_000002172034_00216_15300_8350.N1	0	660
ASA_GM1_1PNPDE20050201_232818_000001022034_00216_15300_8351.N1	0	167
ASA_GM1_1PNPDE20050202_004109_000001142034_00217_15301_8354.N1	0	591
ASA_GM1_1PNPDE20050202_010331_000001022034_00217_15301_8356.N1	0	498
ASA_GM1_1PNPDE20050202_012243_000001382034_00217_15301_8359.N1	0	744
ASA_GM1_1PNPDE20050202_020406_000009242034_00218_15302_8362.N1	0	572
ASA_GM1_1PNPDE20050202_041234_000001932034_00219_15303_8372.N1	0	74



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



Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

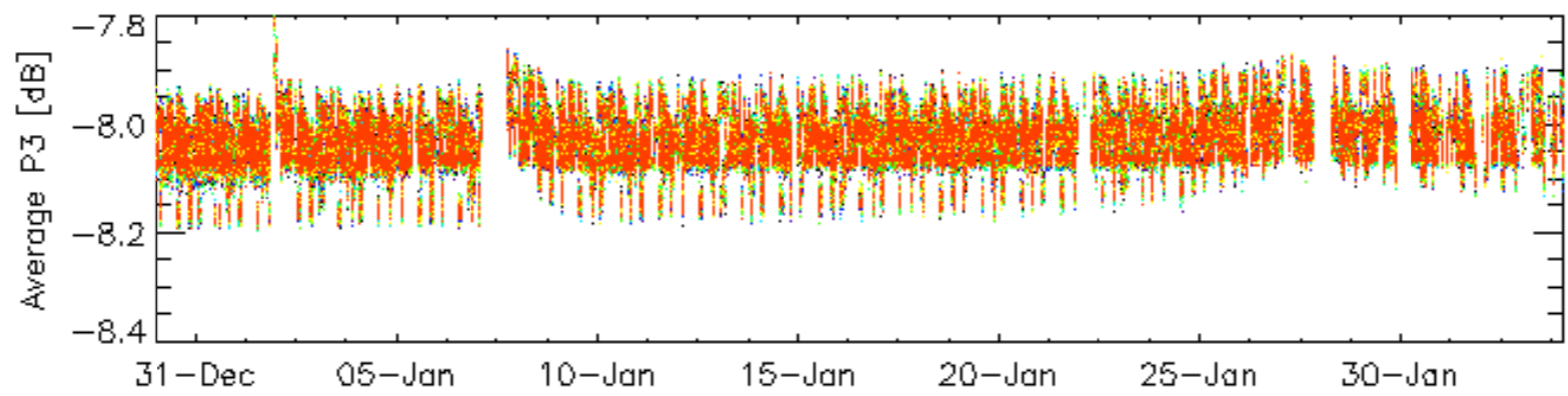
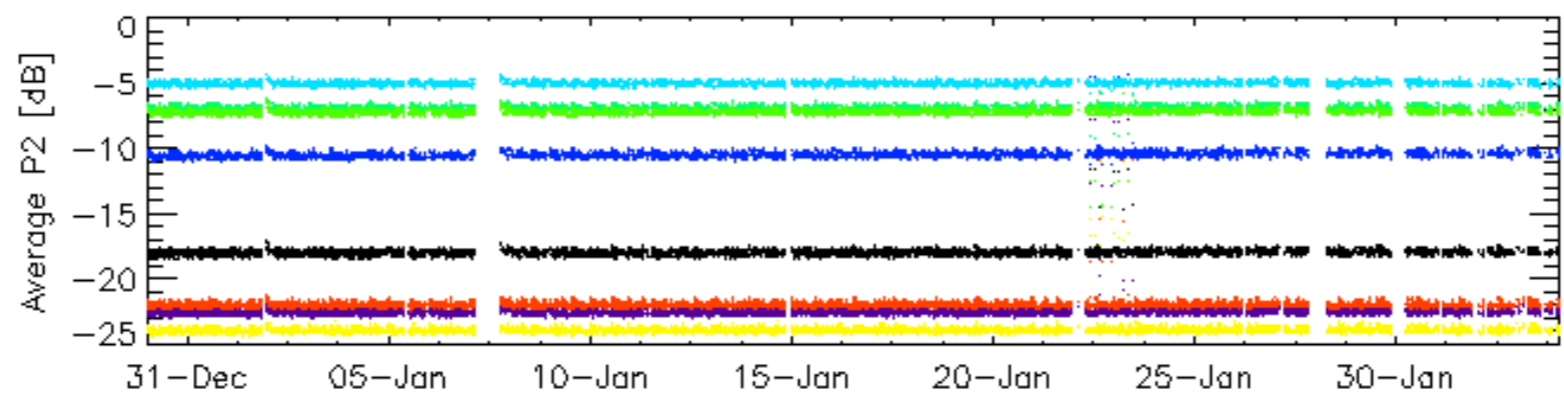
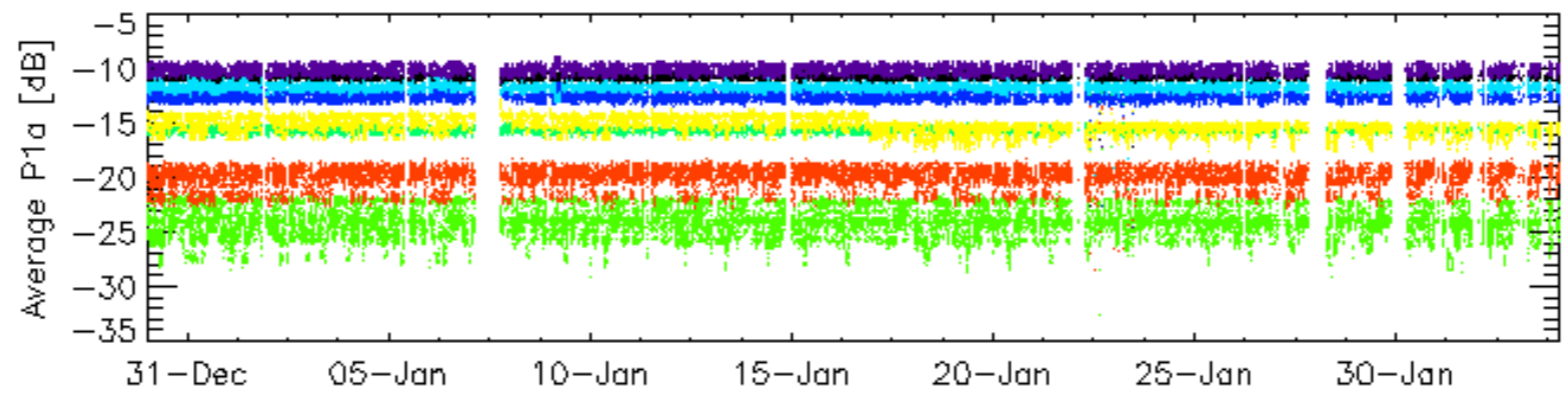
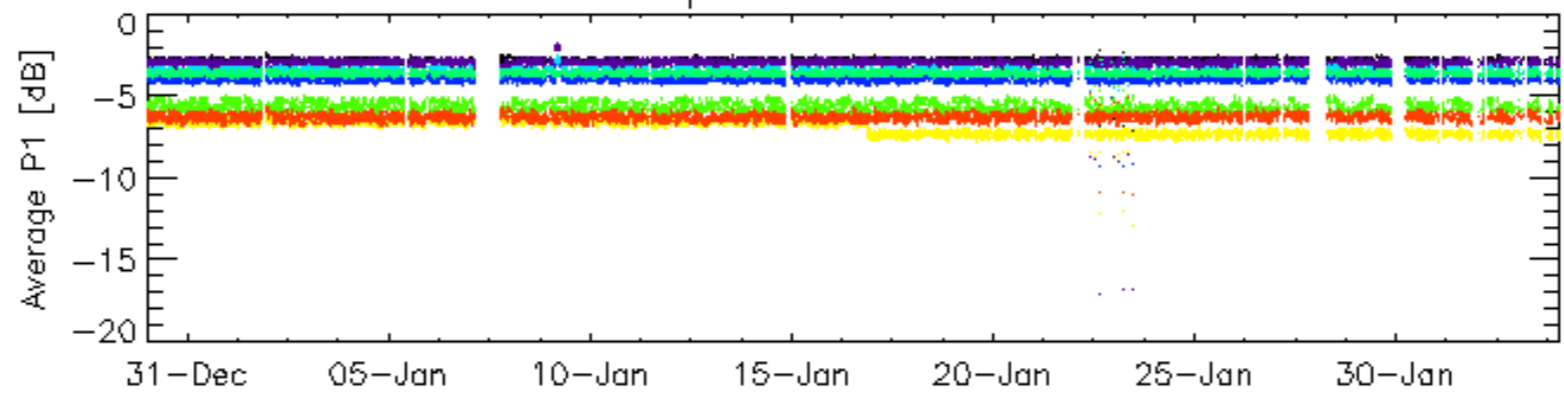
Ascending

Descending

7.6 - Doppler evolution versus ANX for GM1

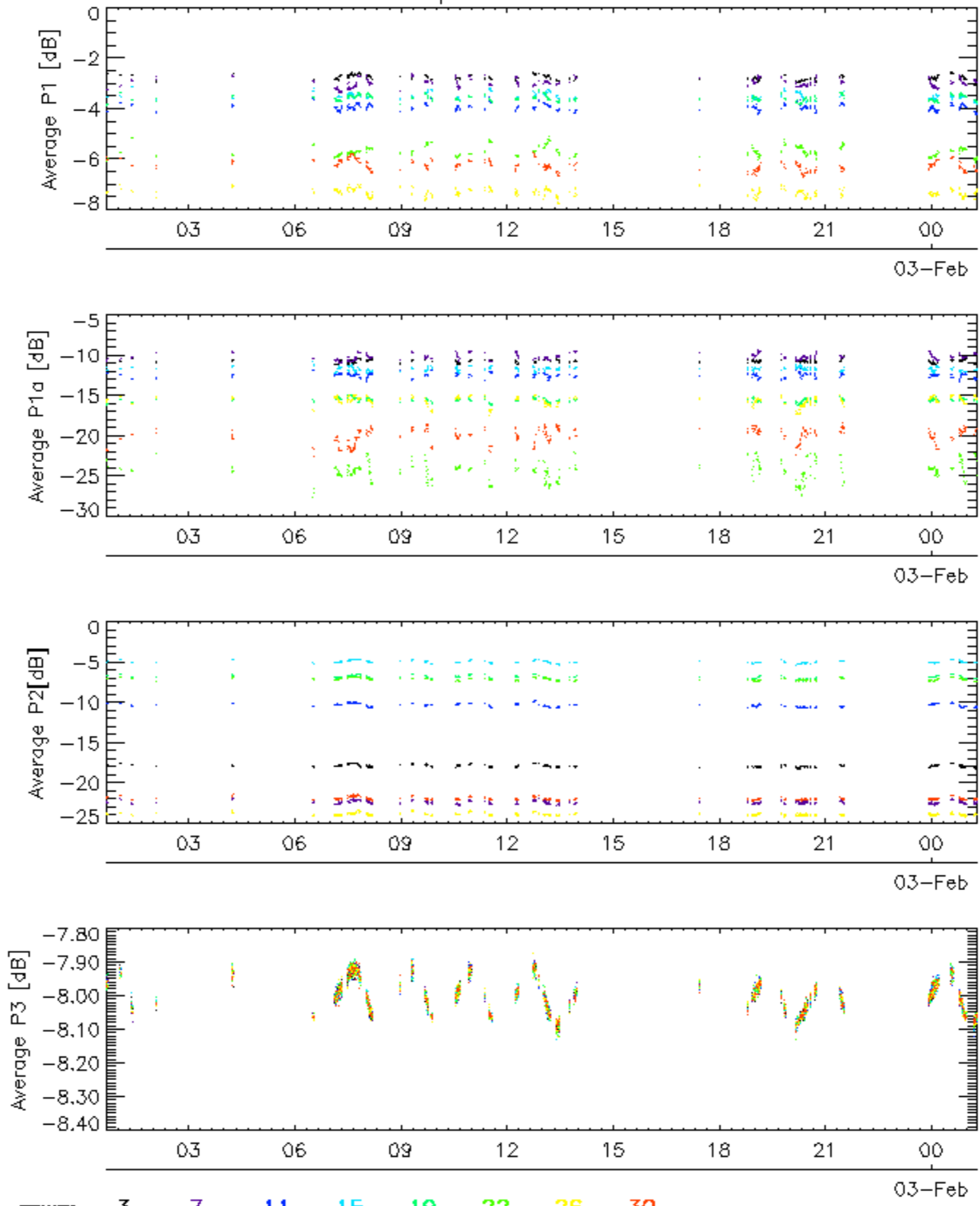
Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

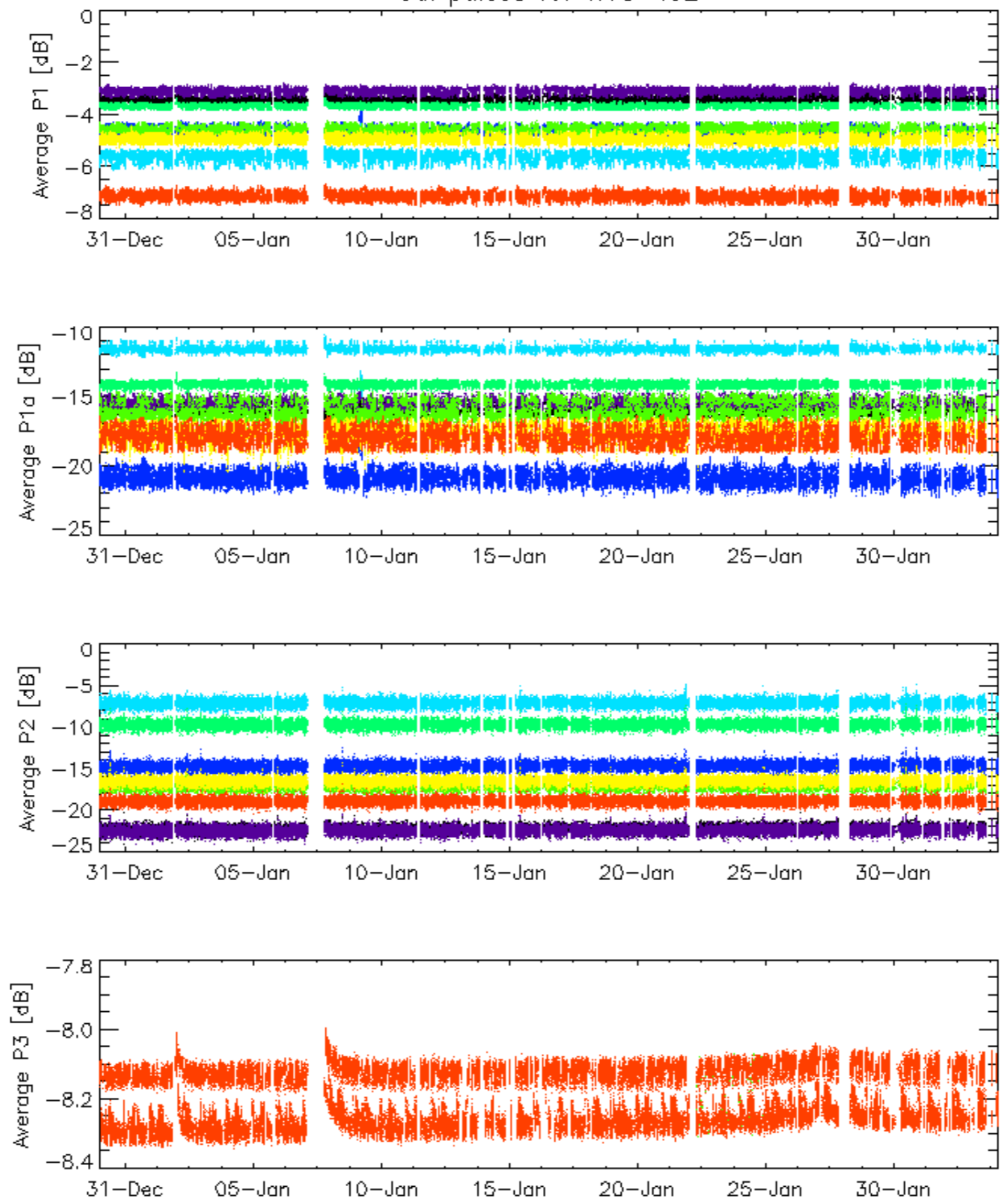


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

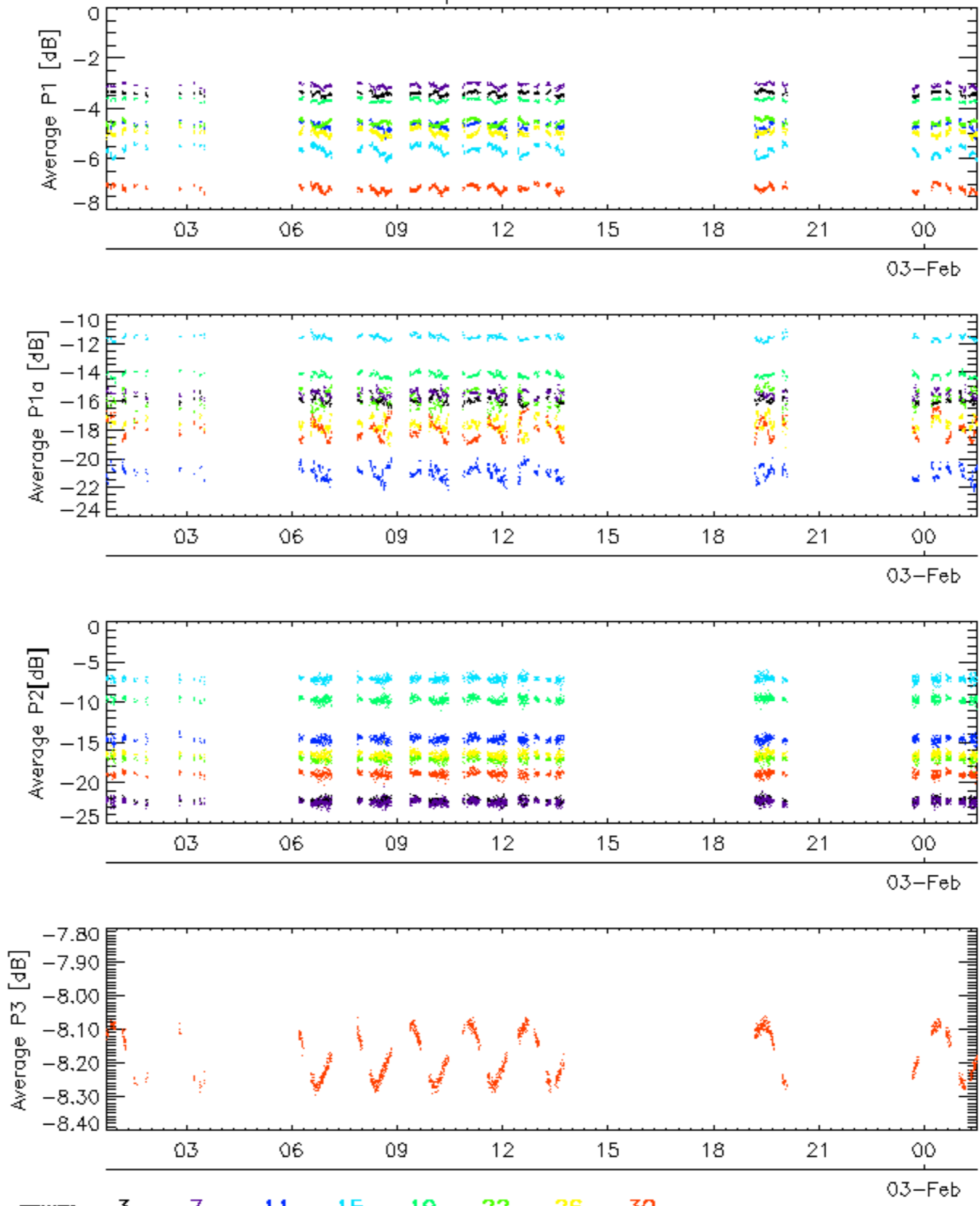


Cal pulses for WVS IS2

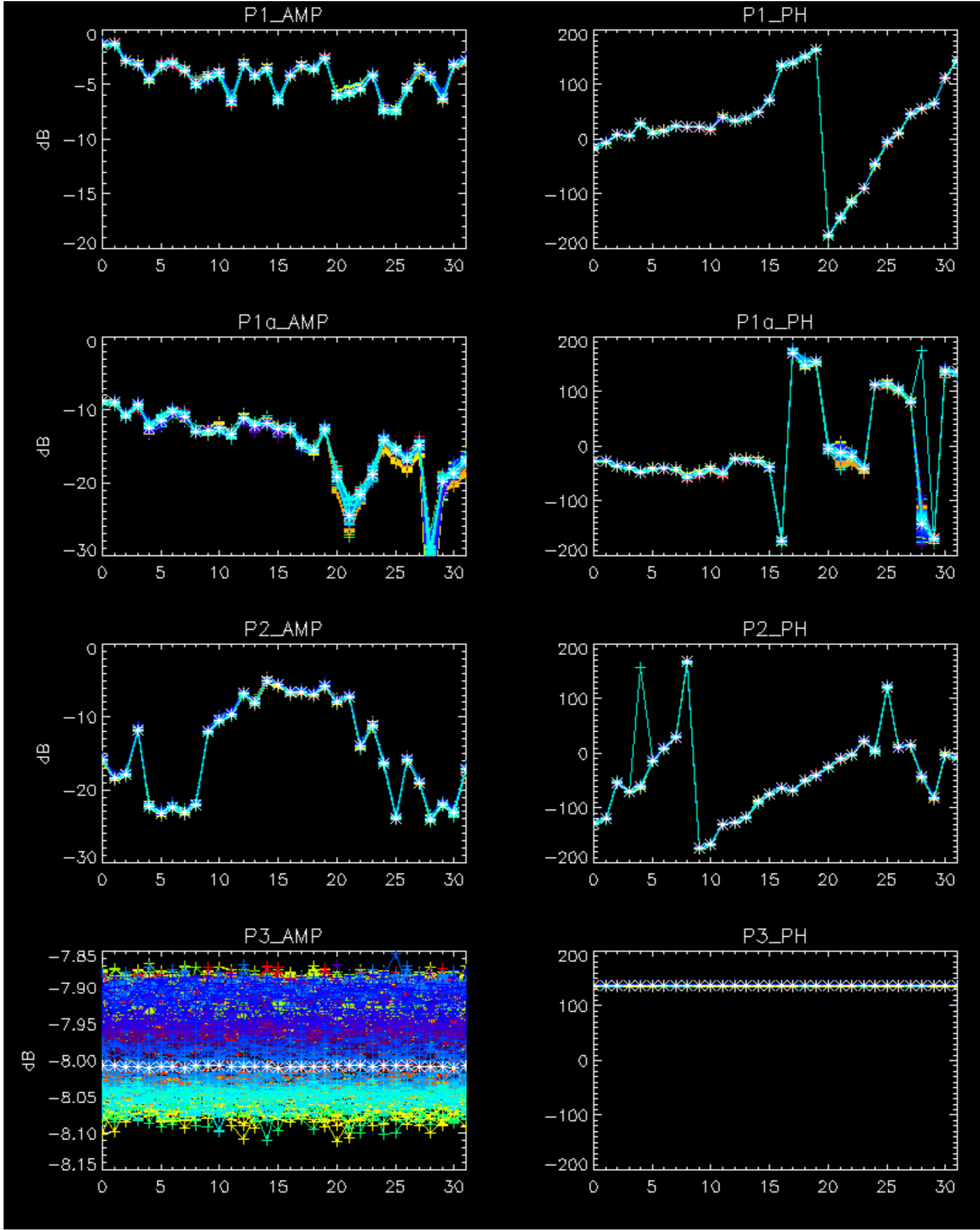


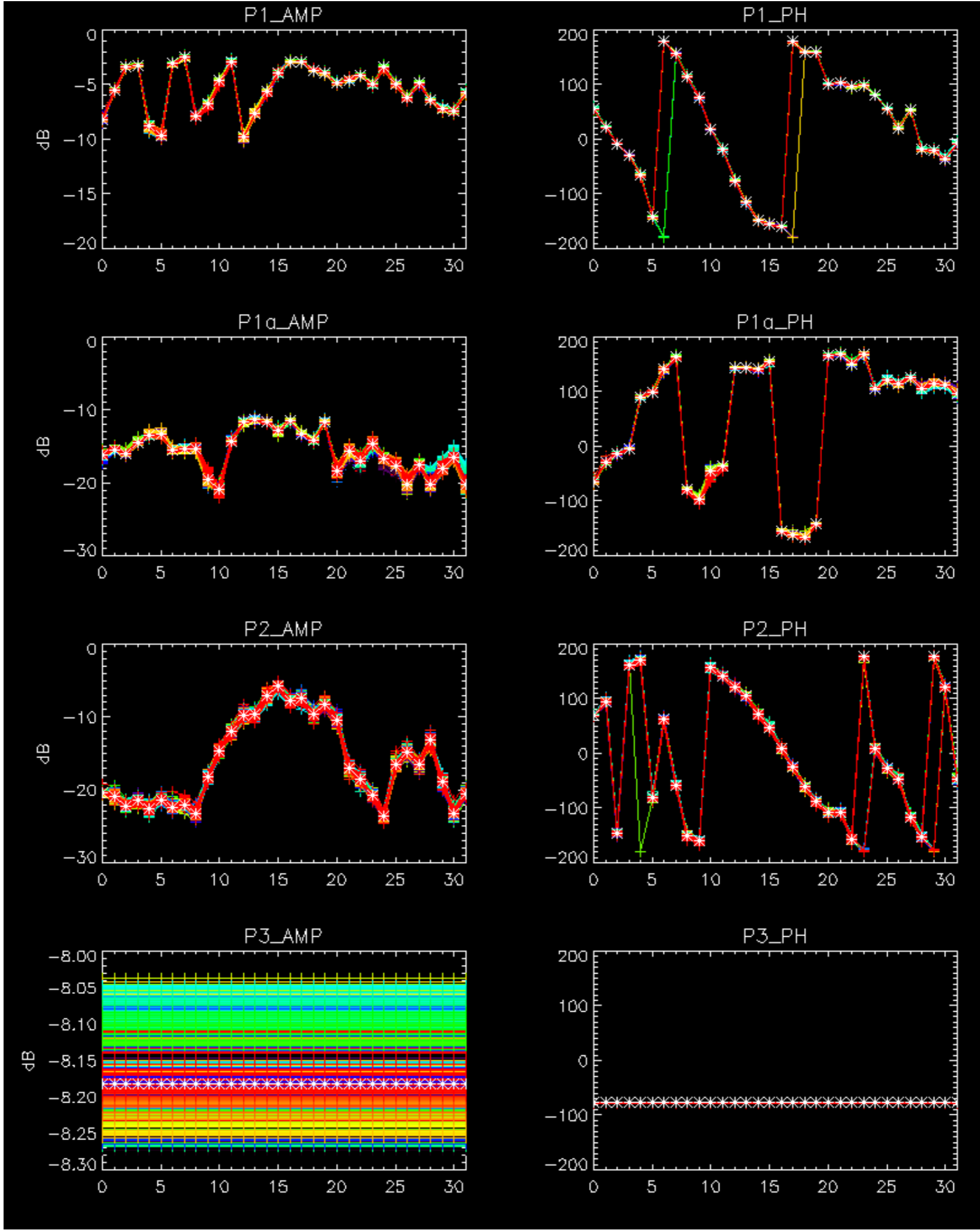
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



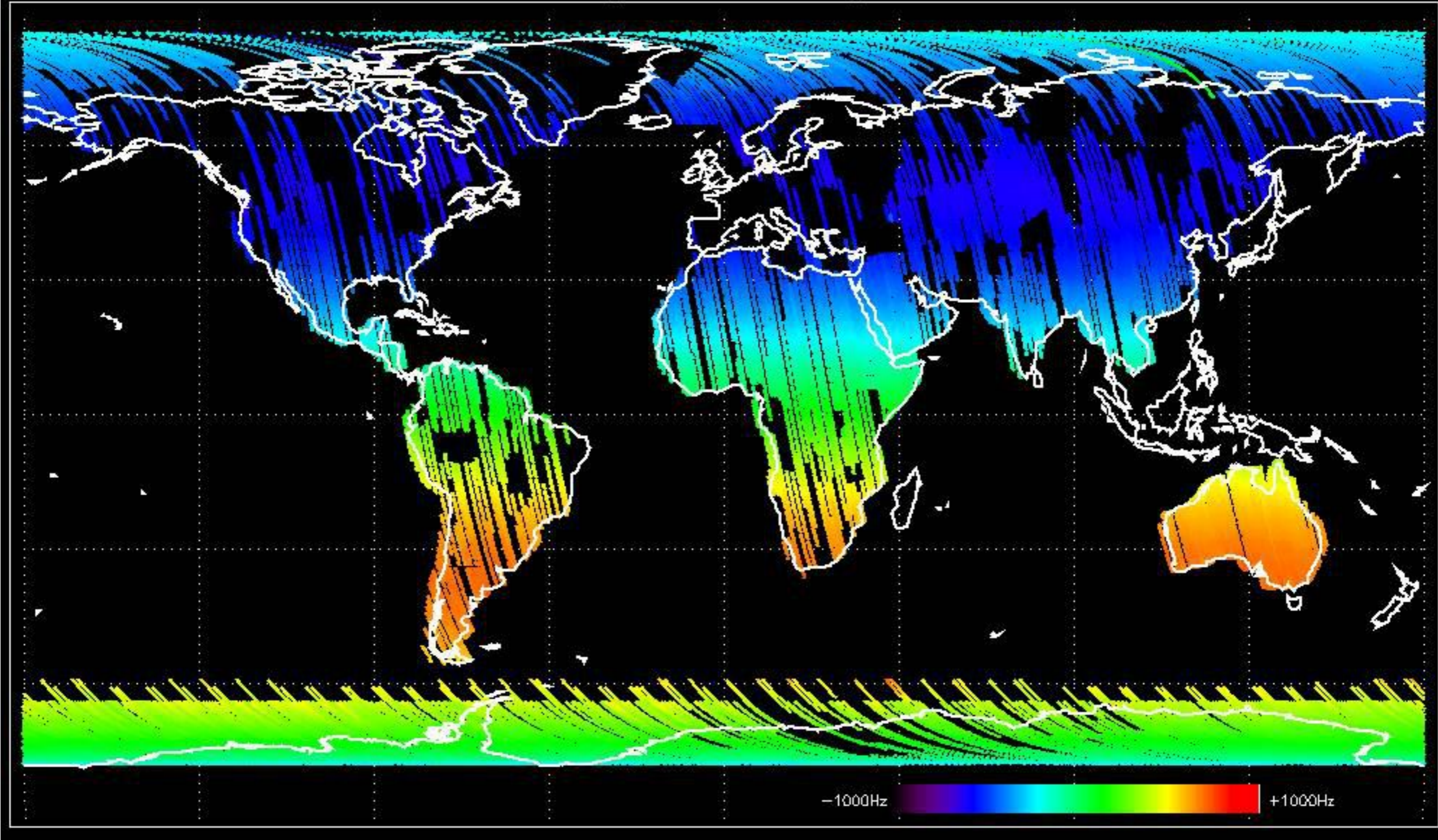
No anomalies observed.



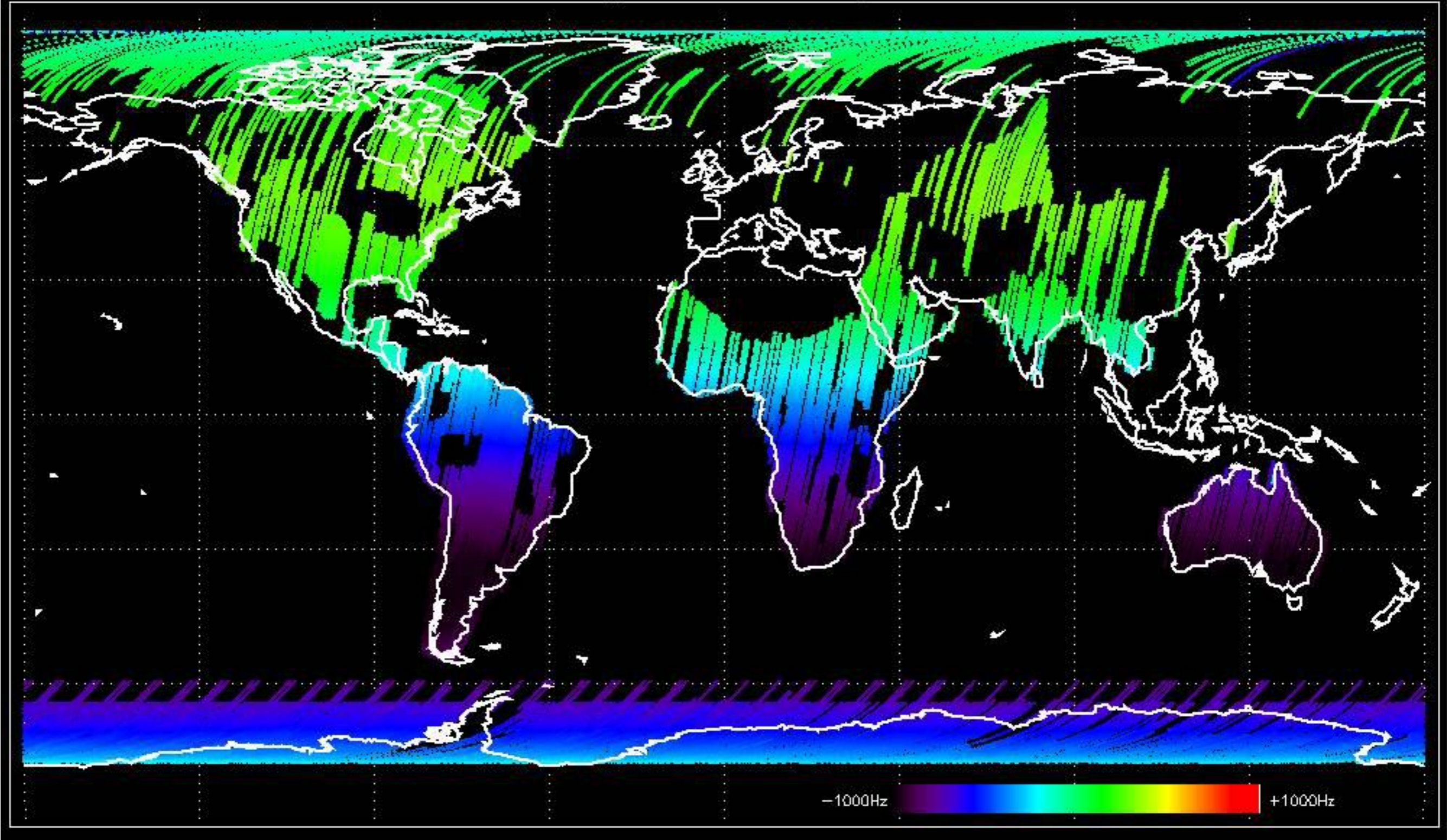


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

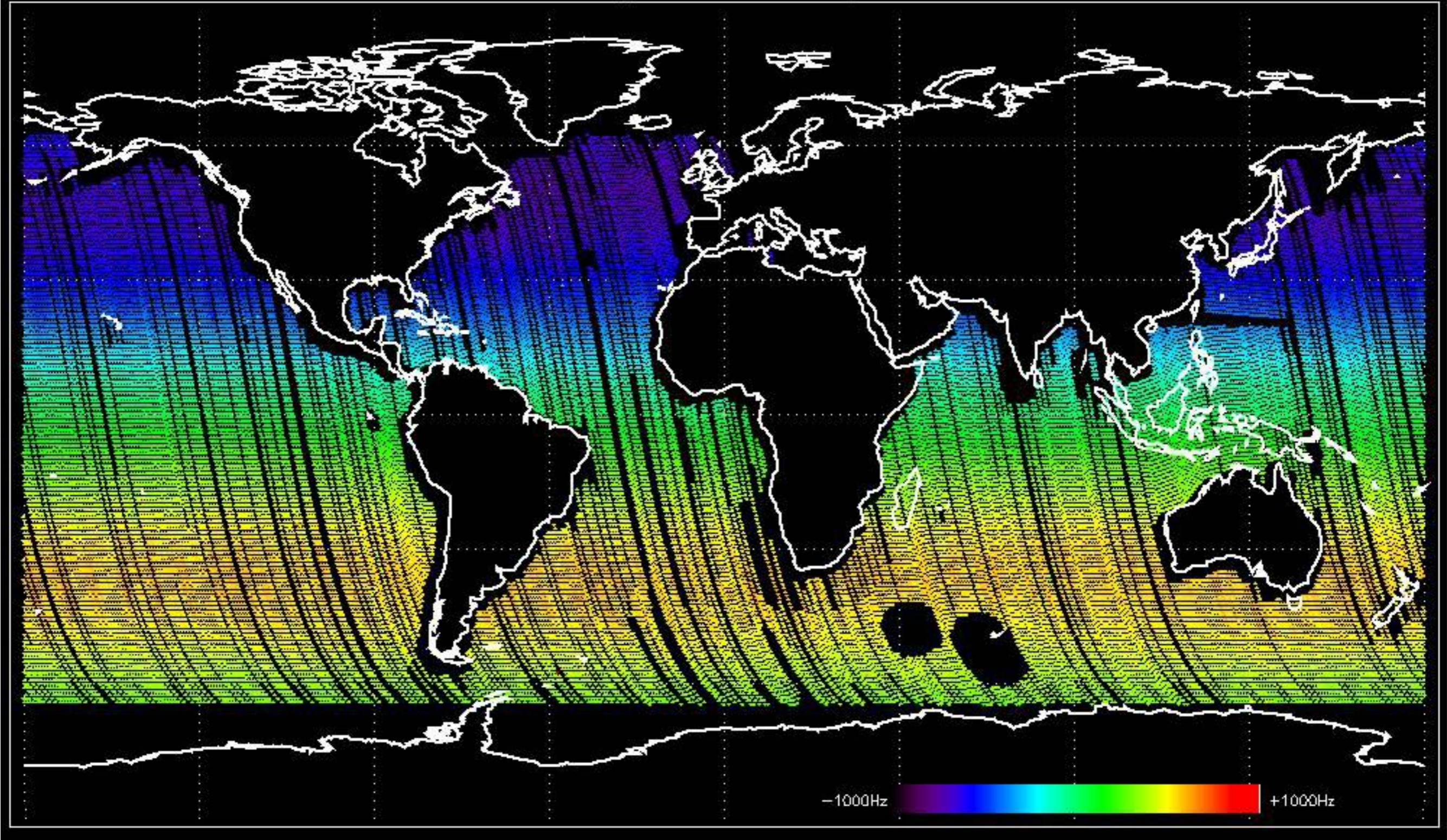
Doppler 'GM1' 'SS1' ascending



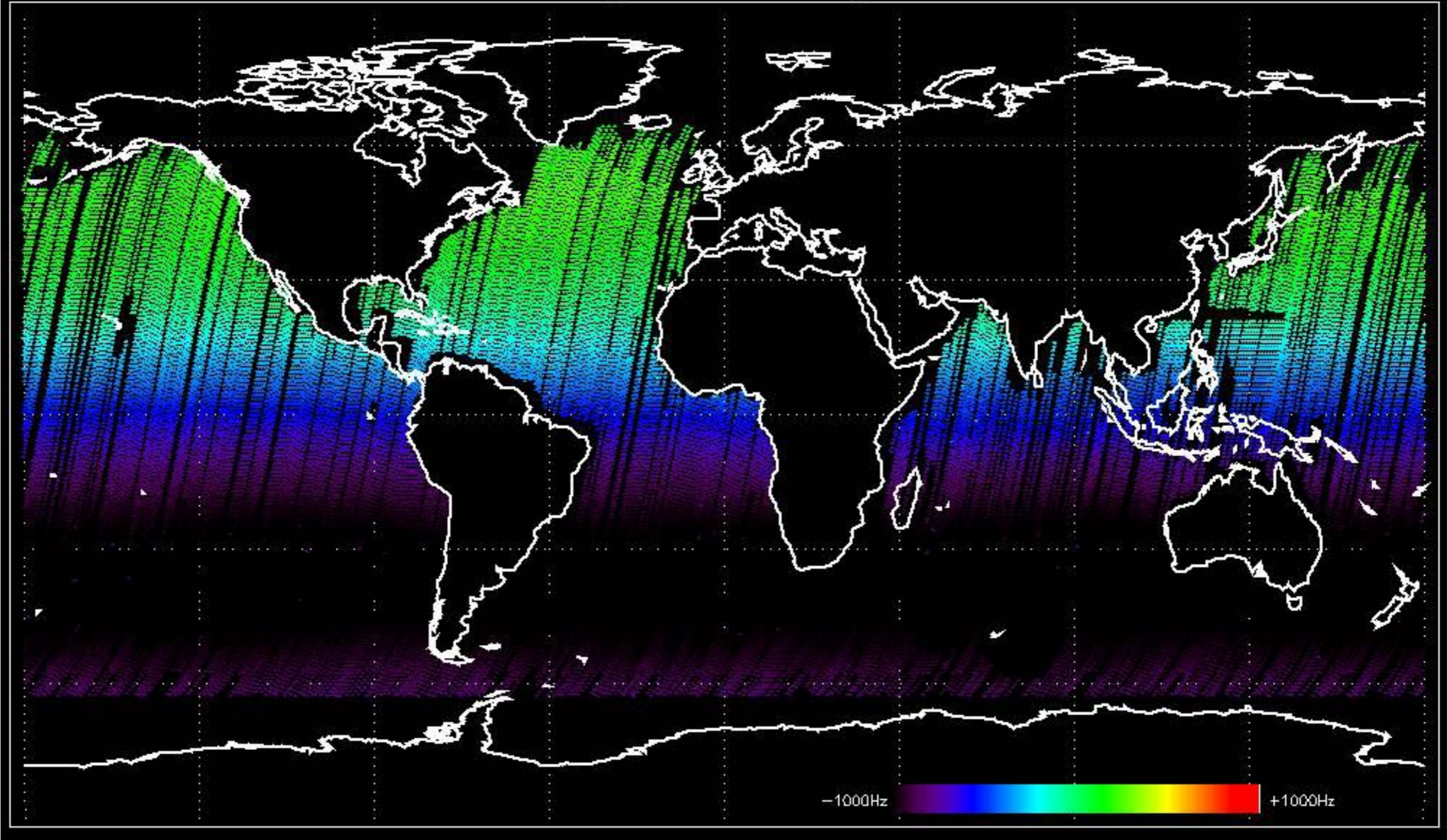
Doppler 'GM1' 'SS1' descending



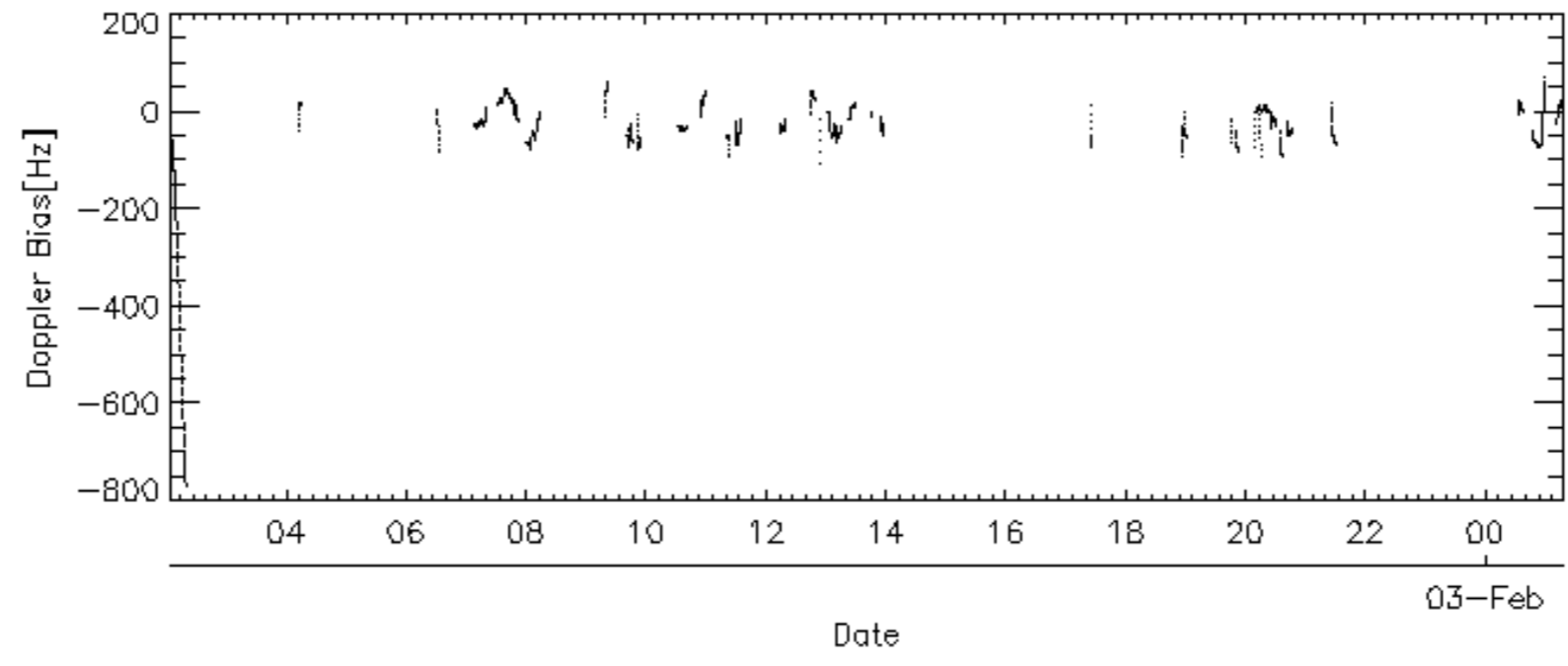
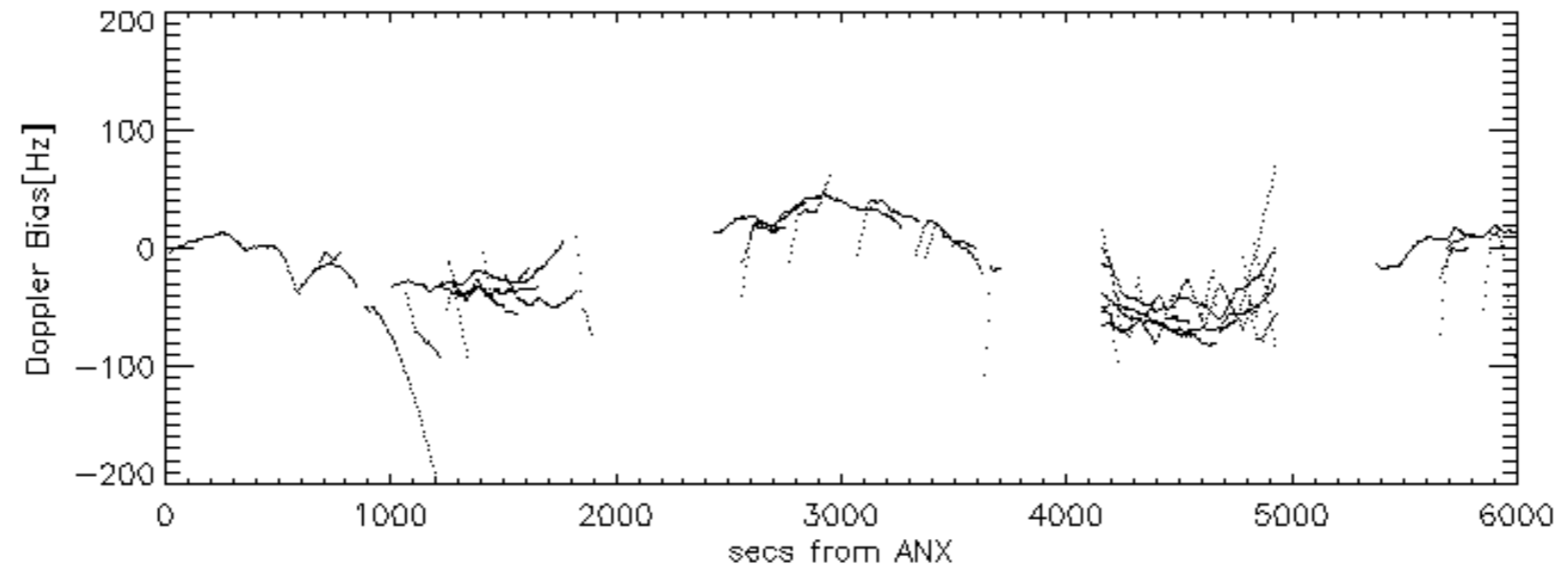
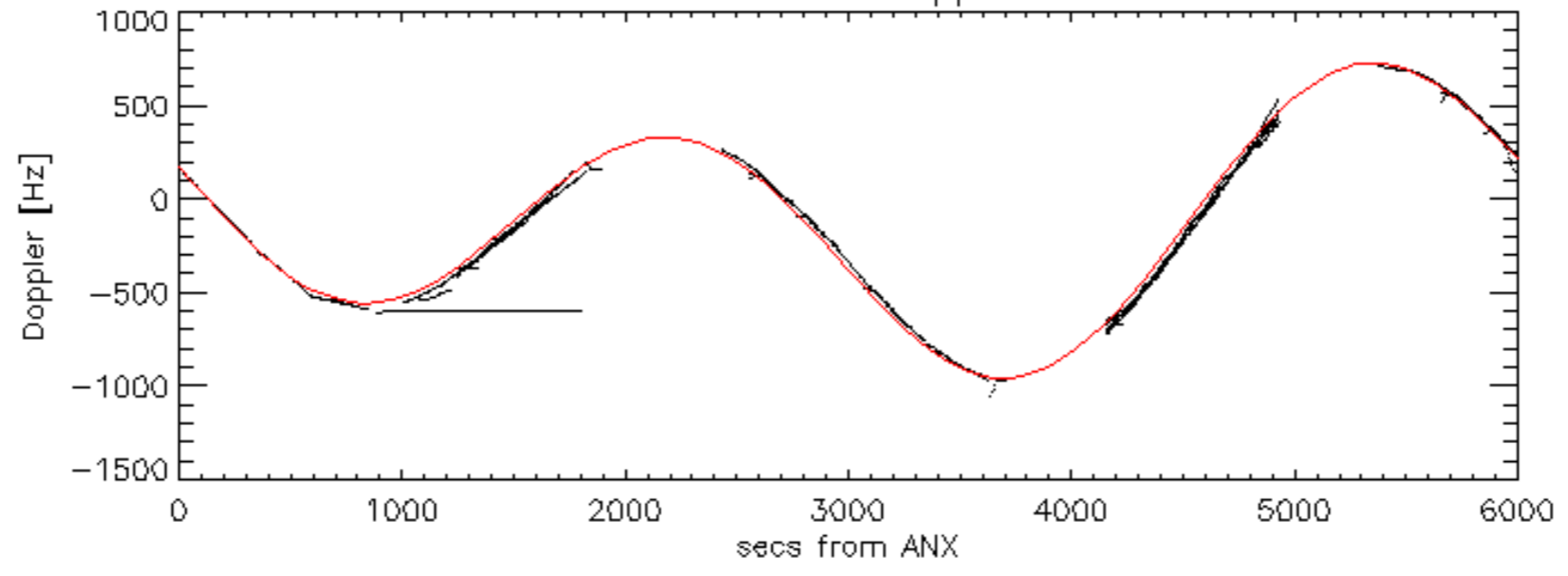
Doppler 'WVS' 'IS2' ascending

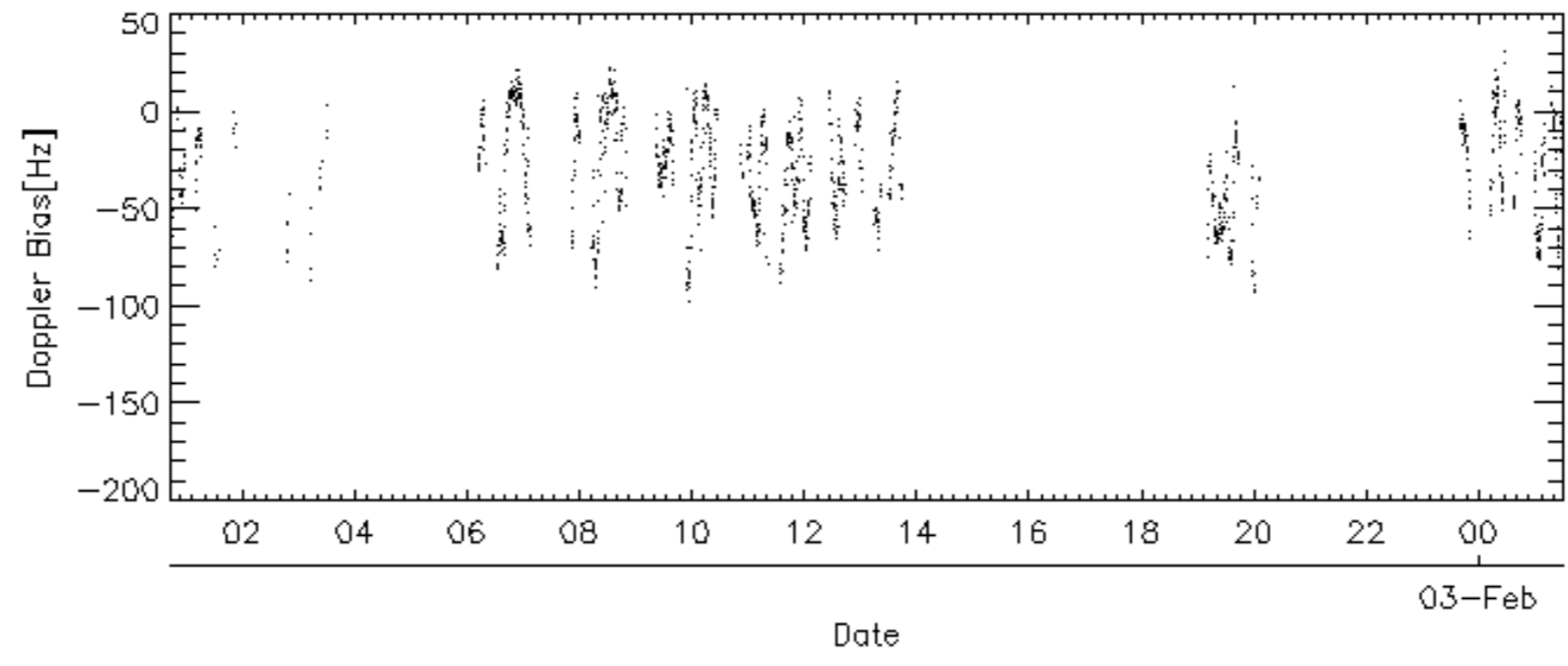
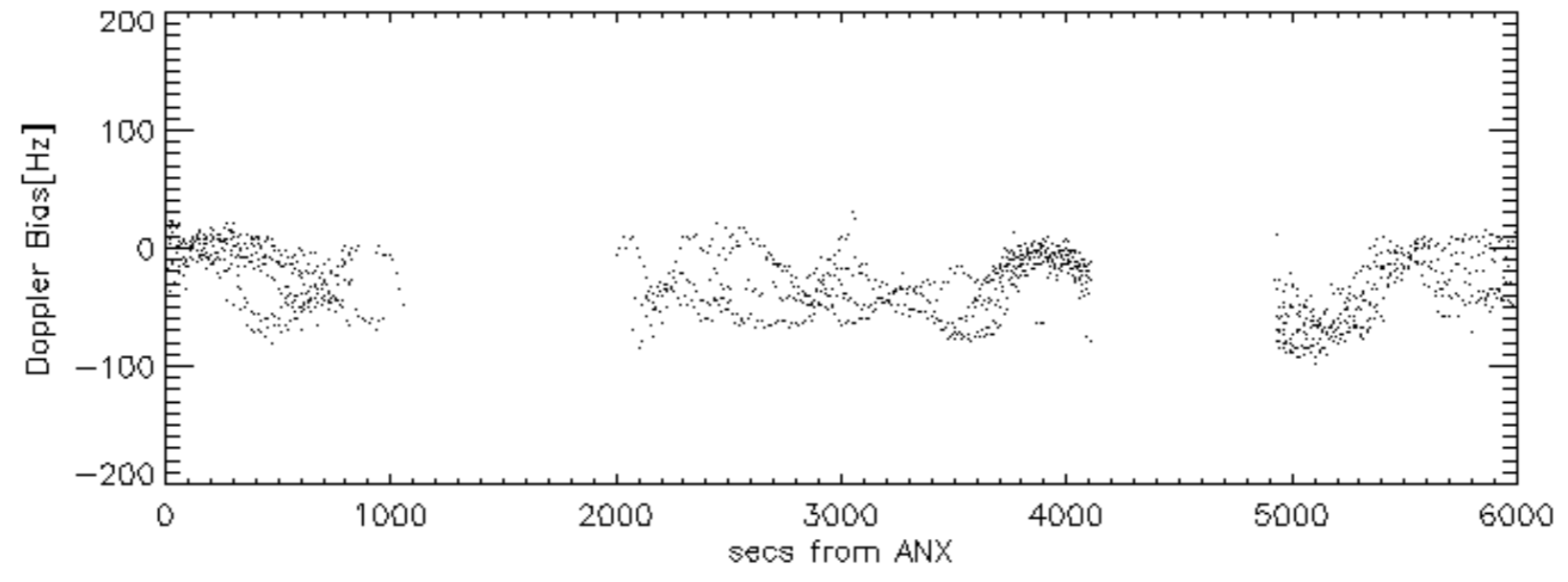
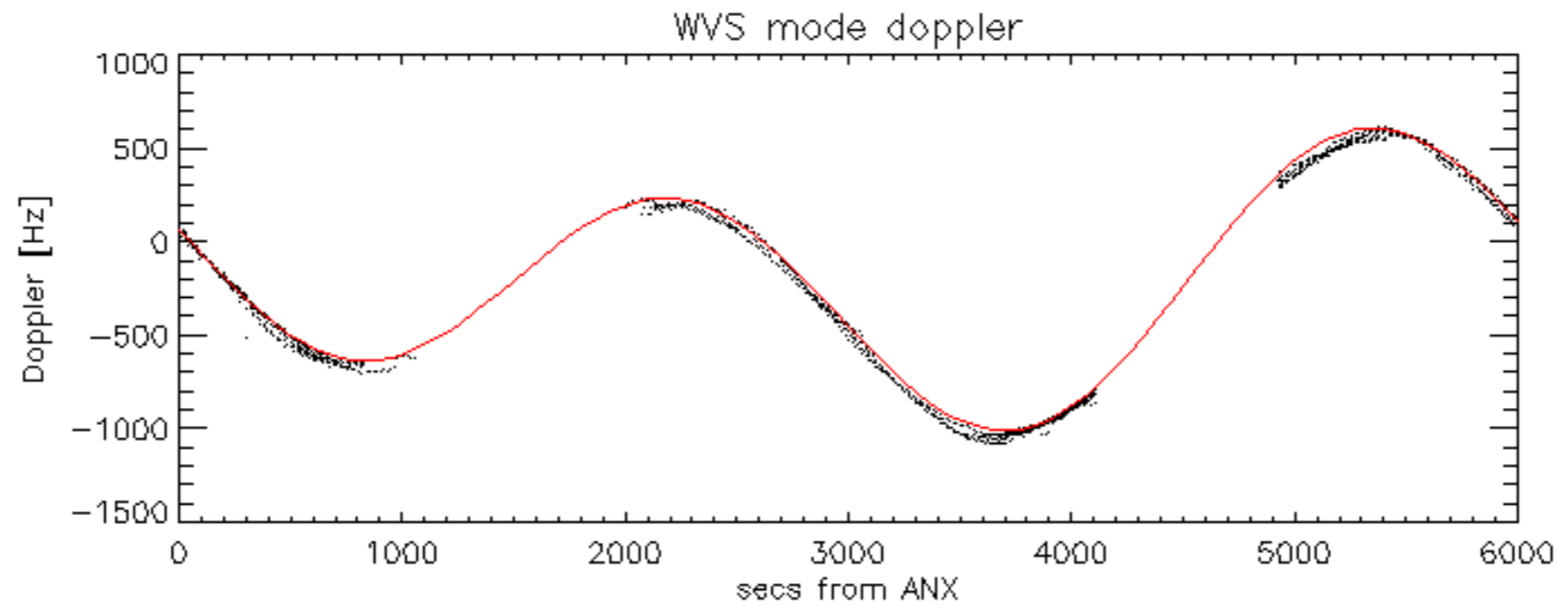


Doppler 'WVS' 'IS2' descending

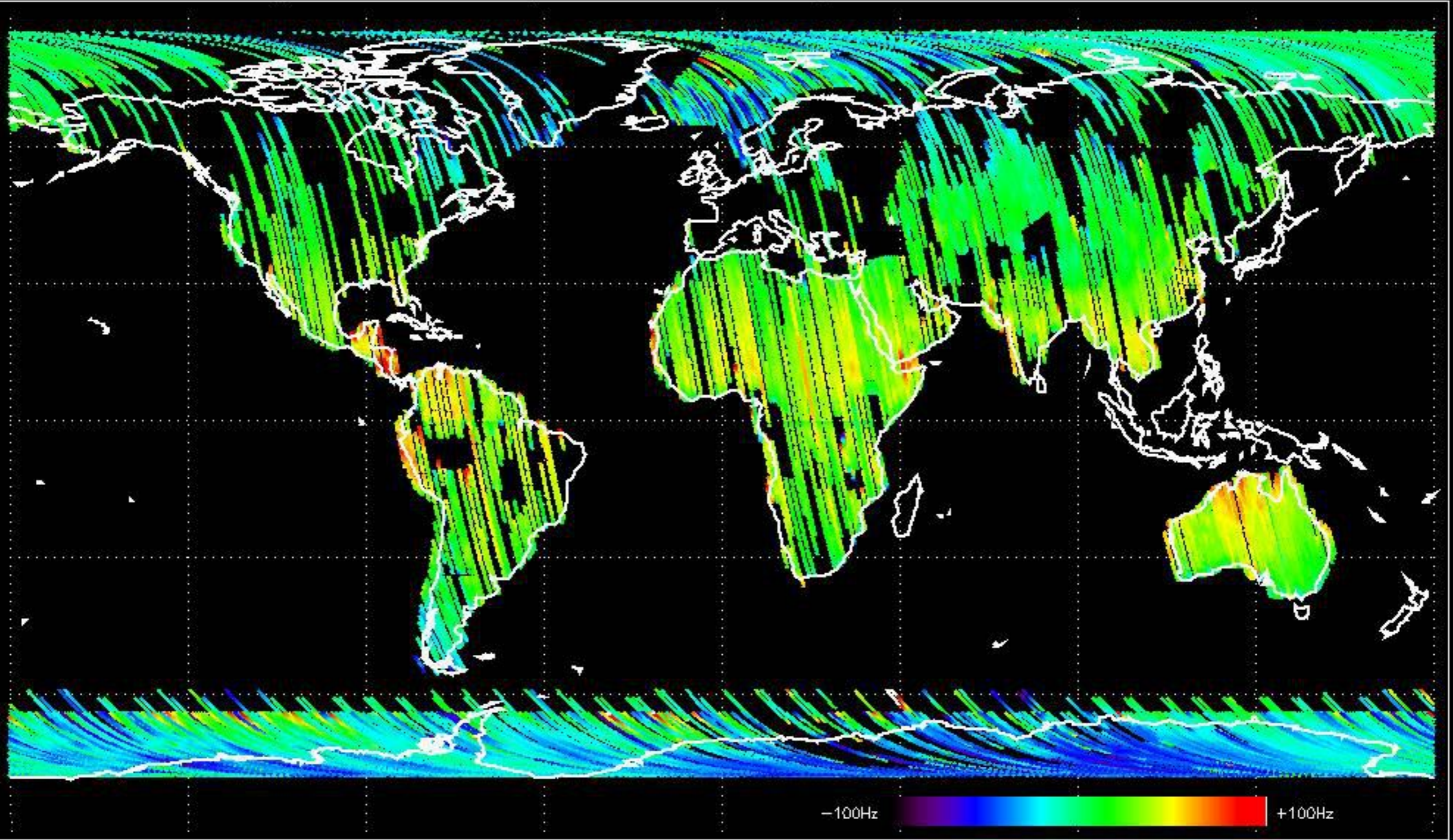


GM1 mode doppler

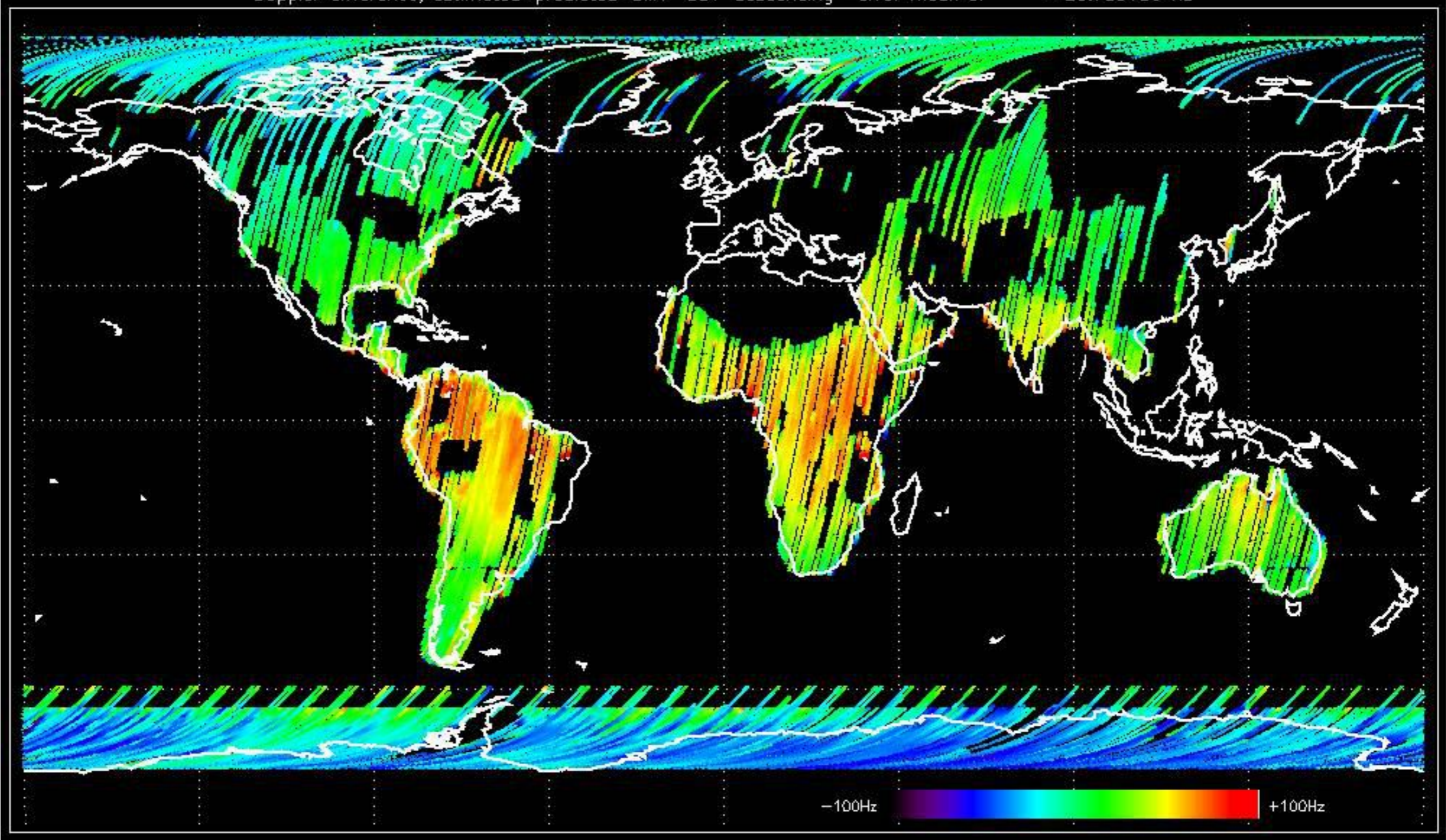




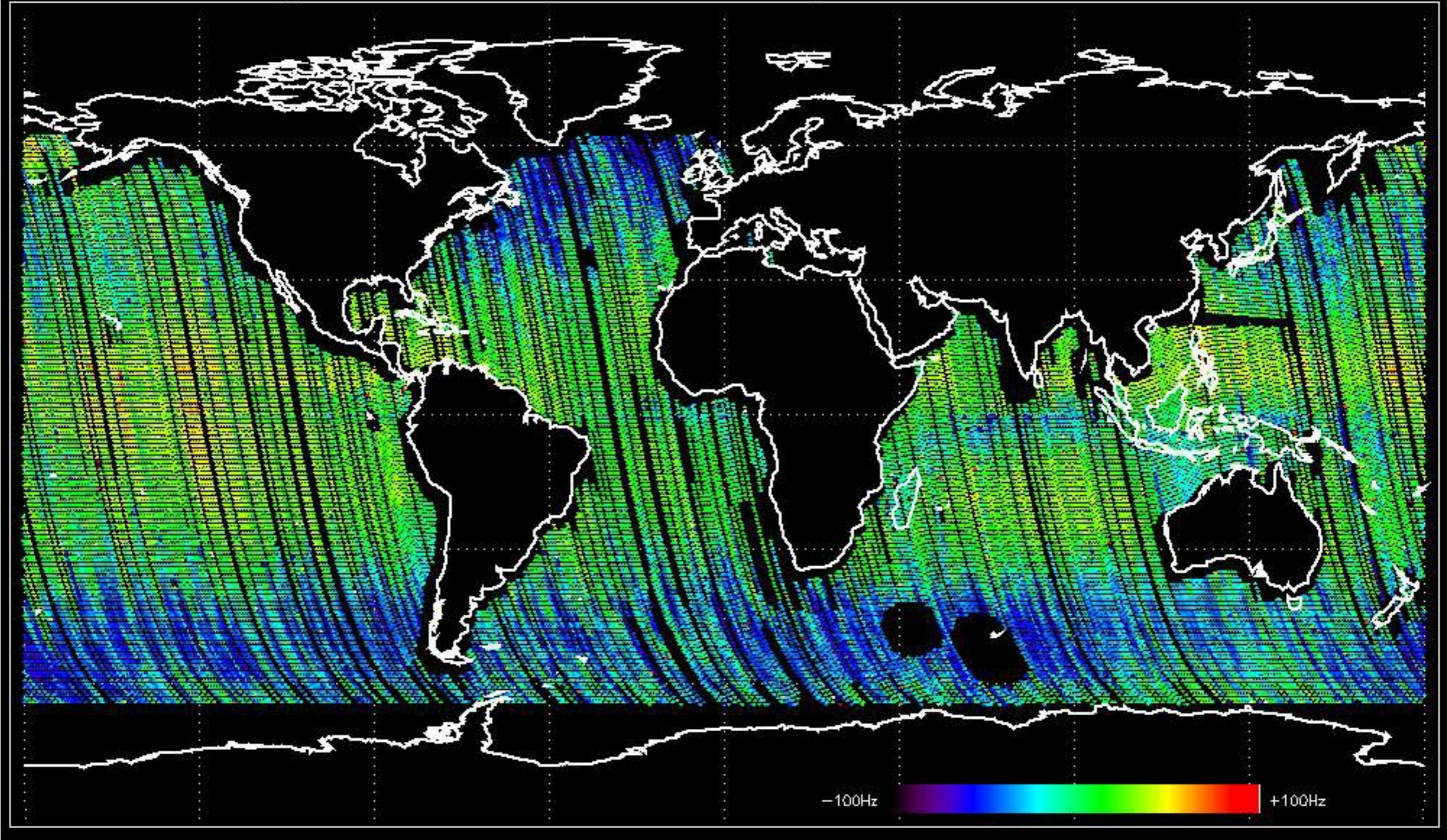
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.700387 Hz



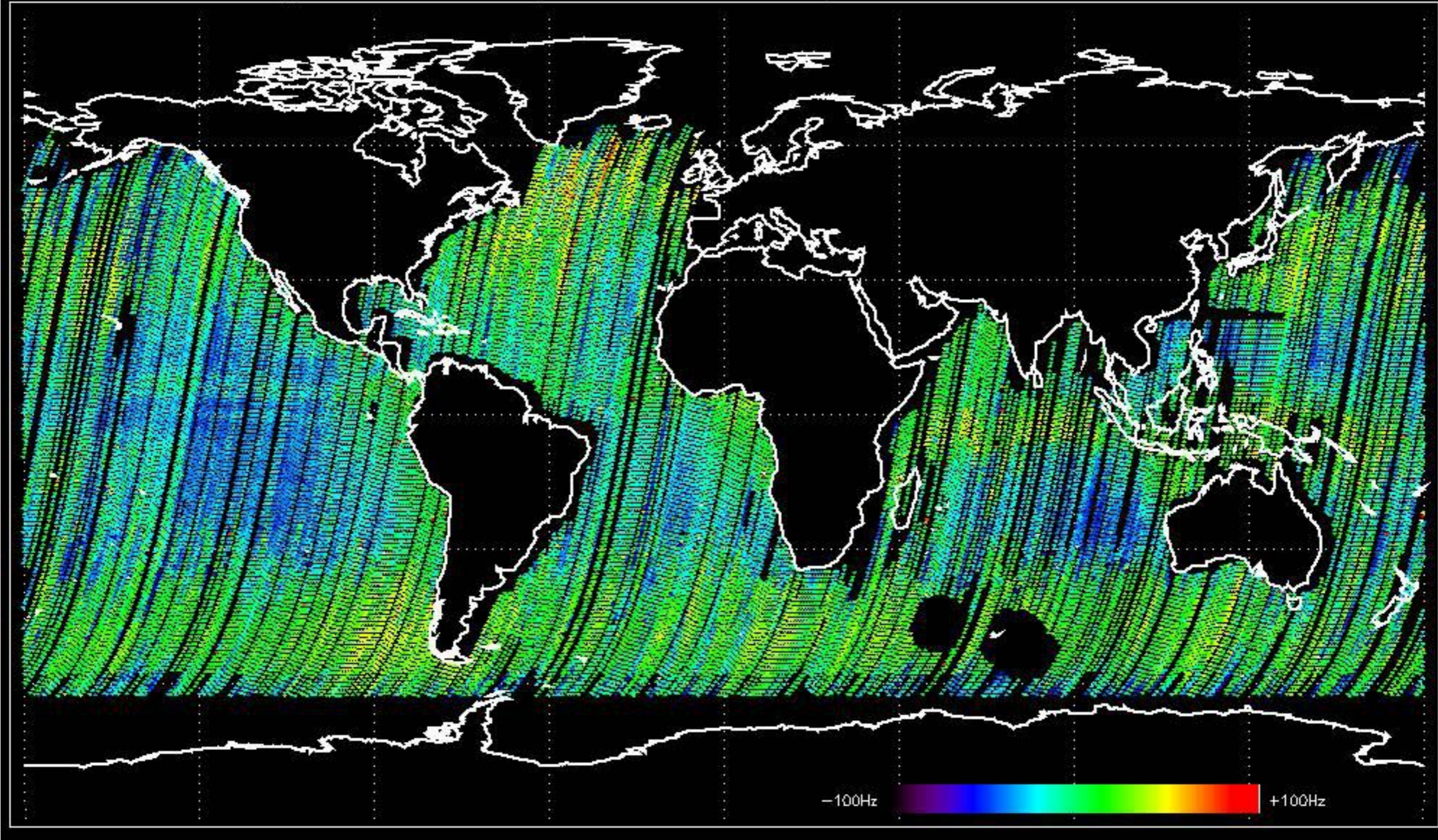
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.789136 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -35.212248 Hz

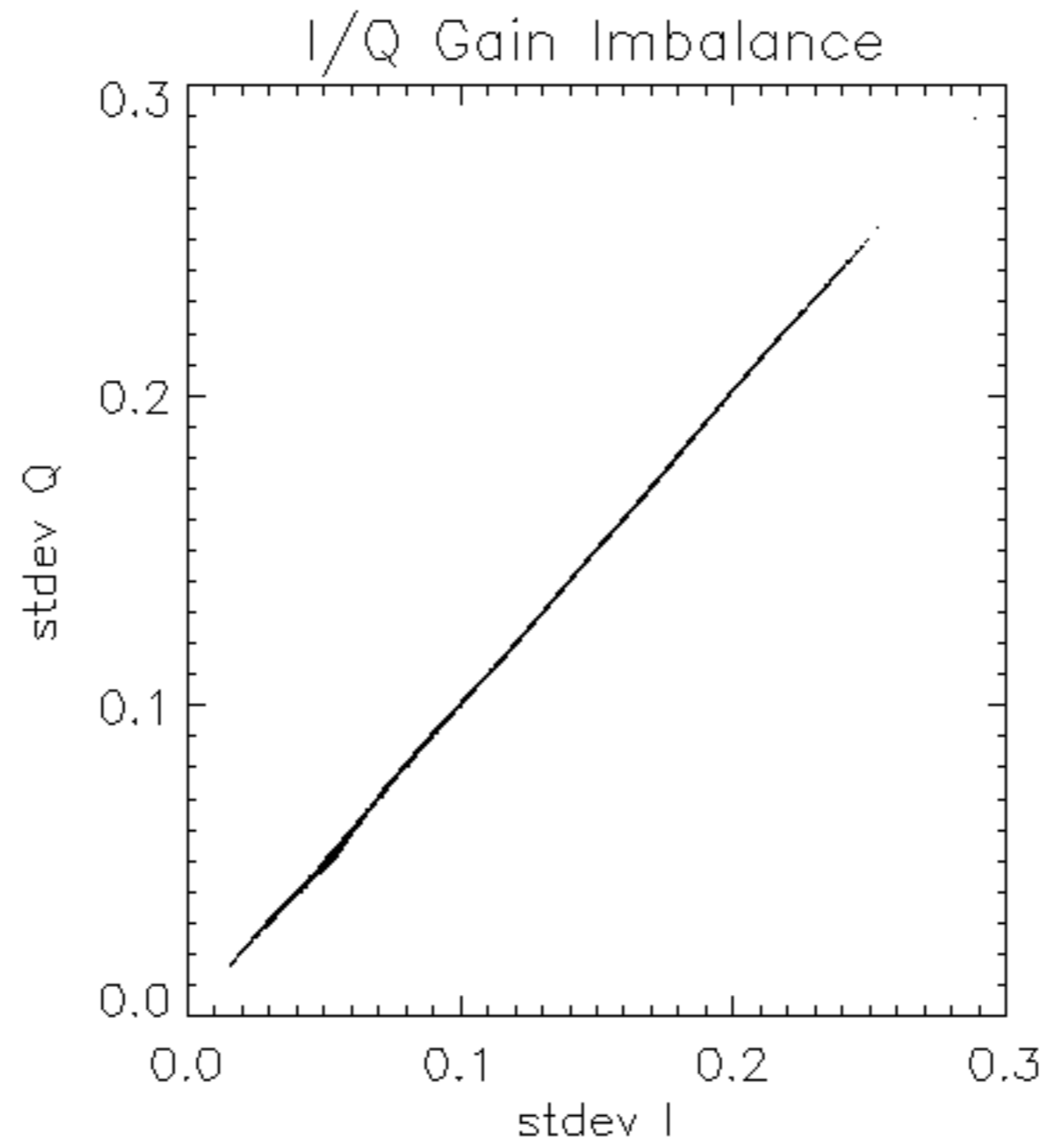


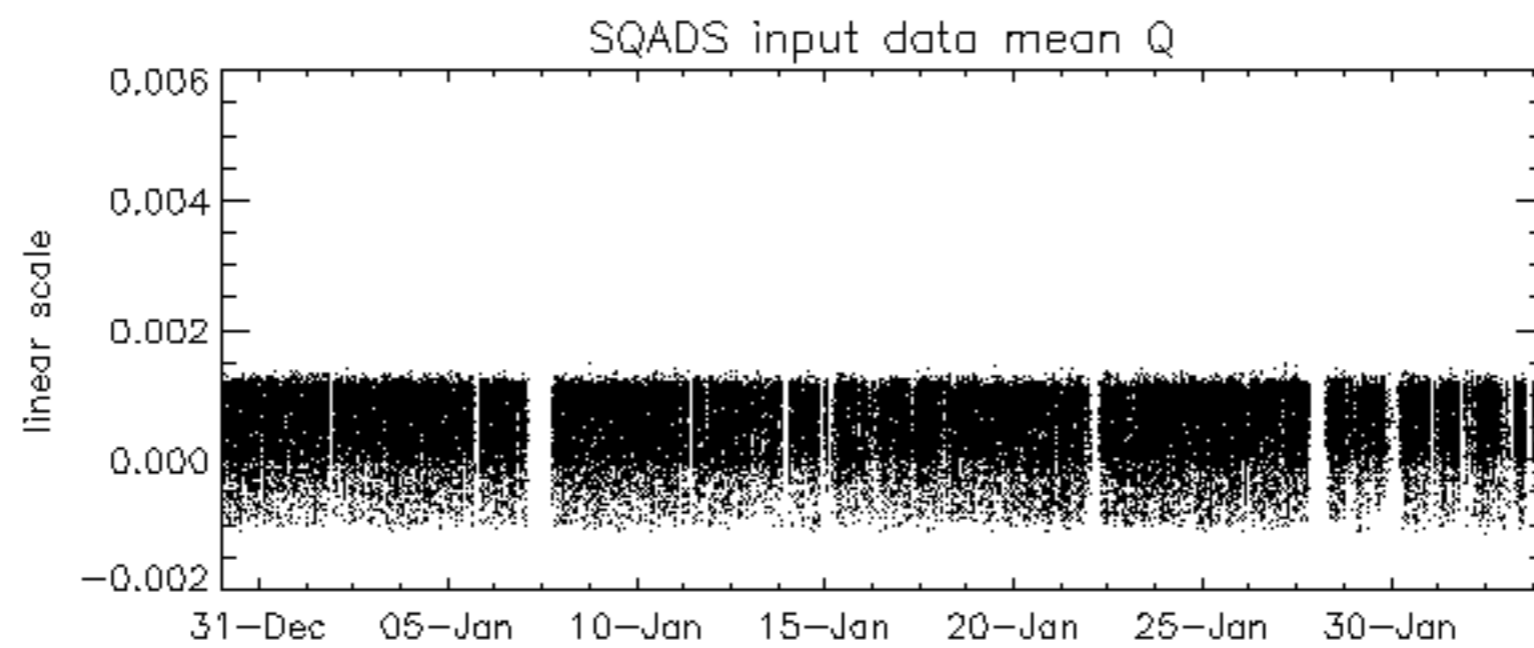
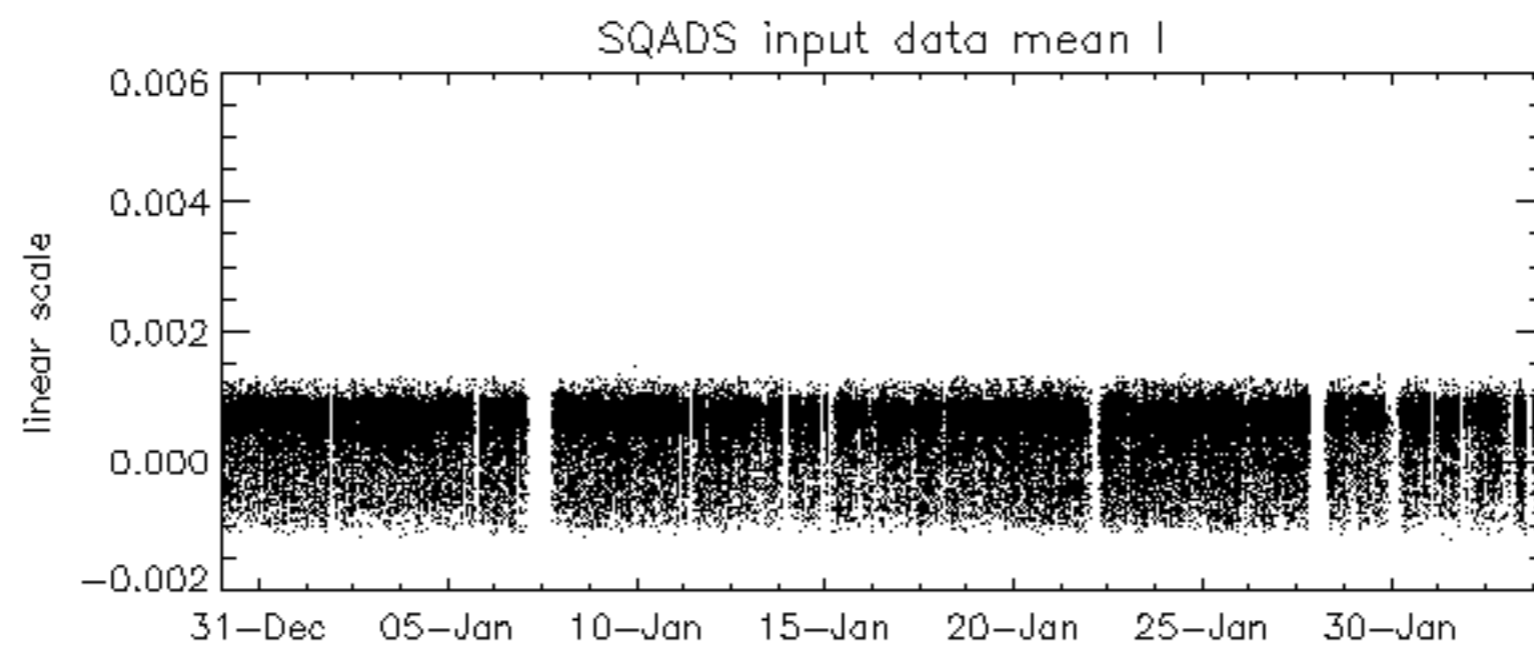
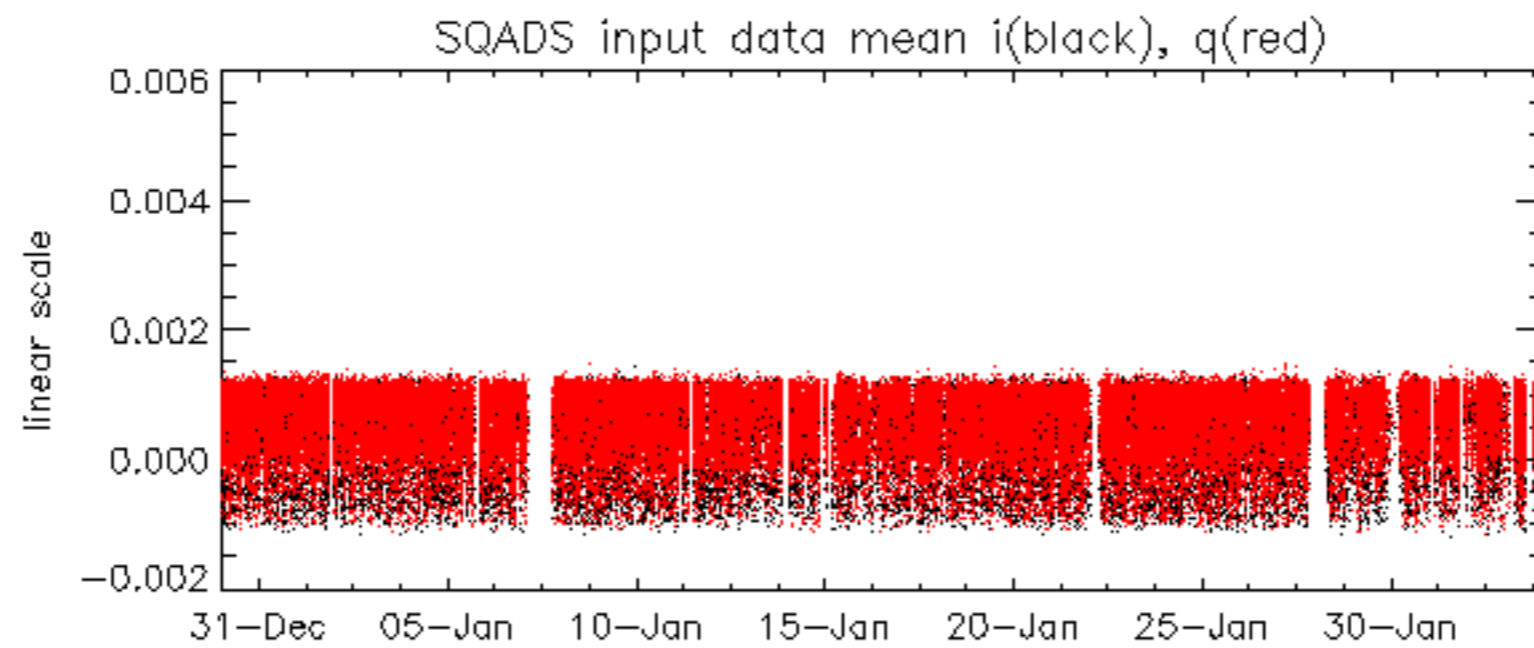
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -36.928297 Hz

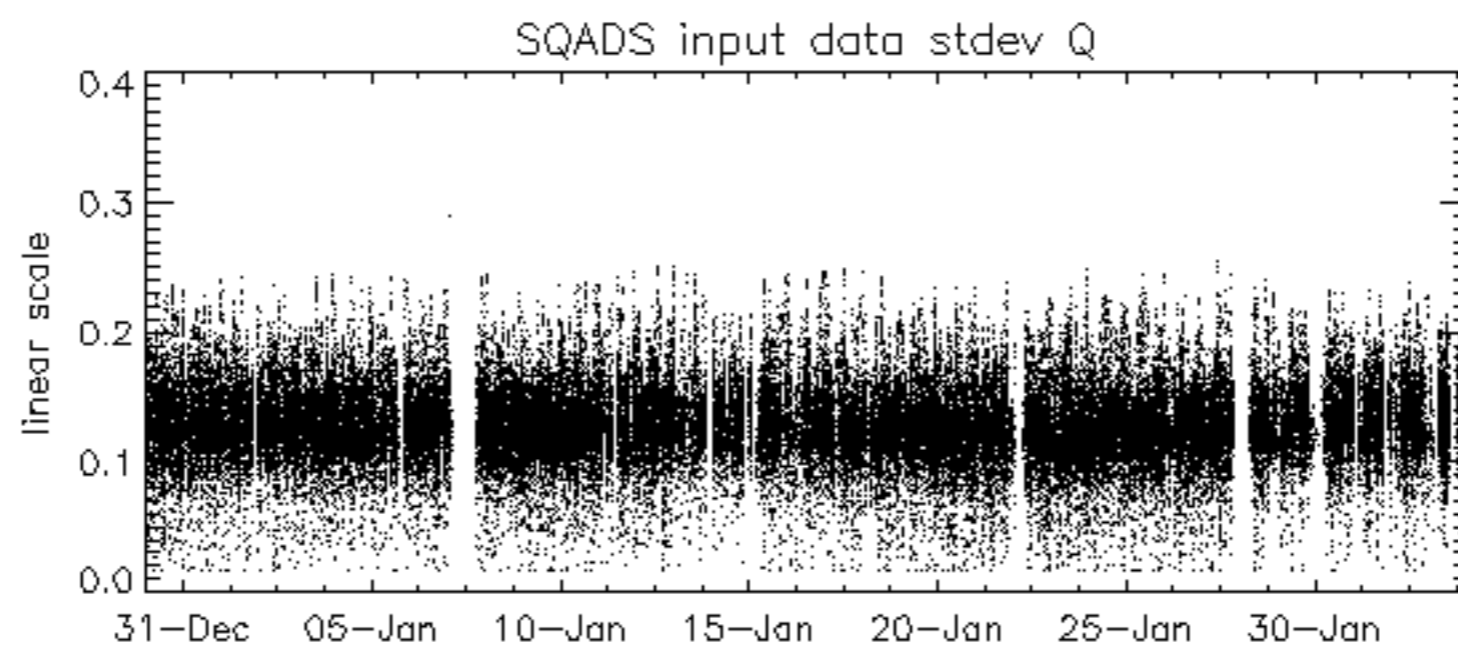
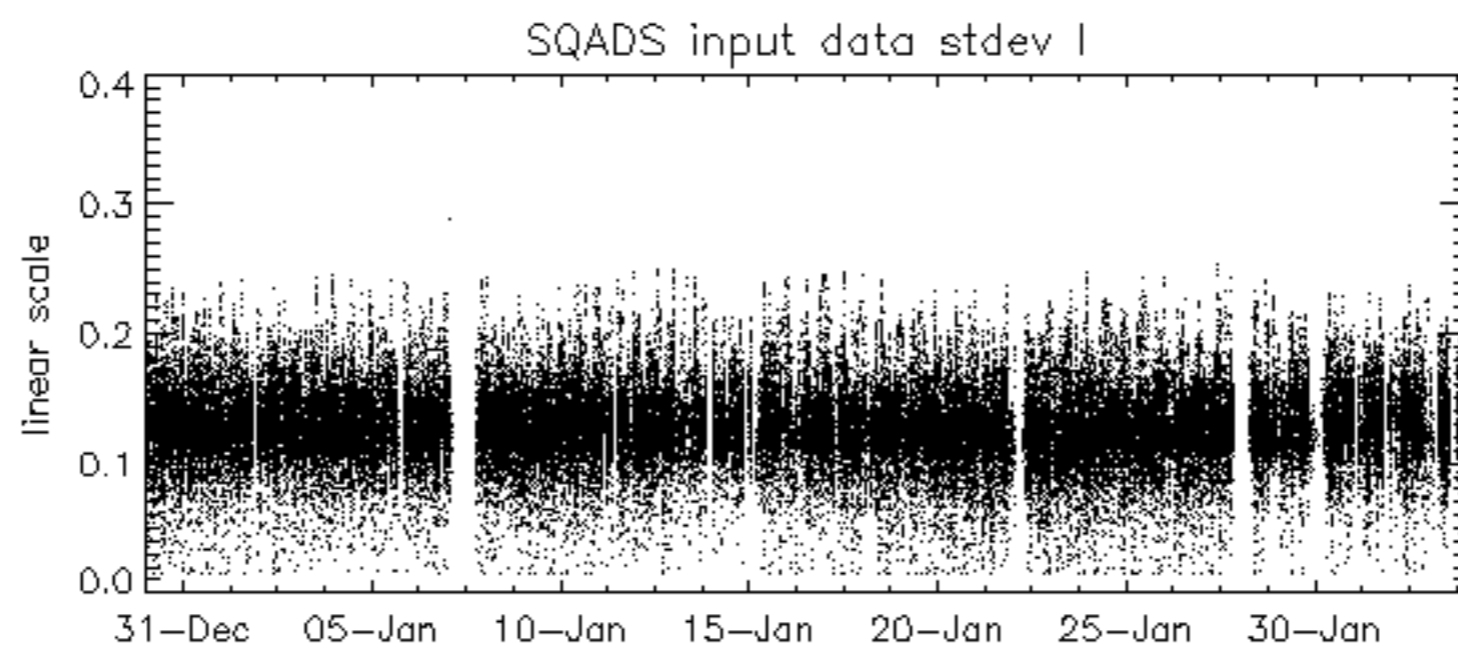
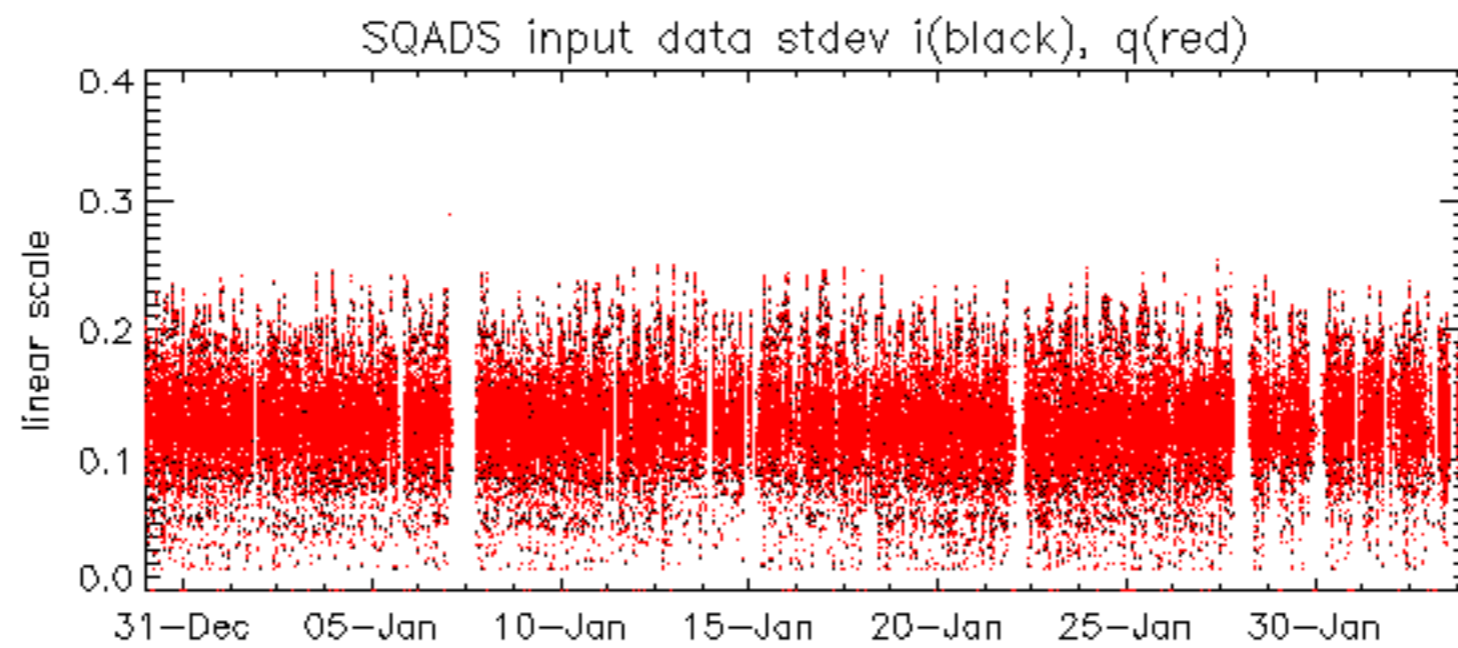


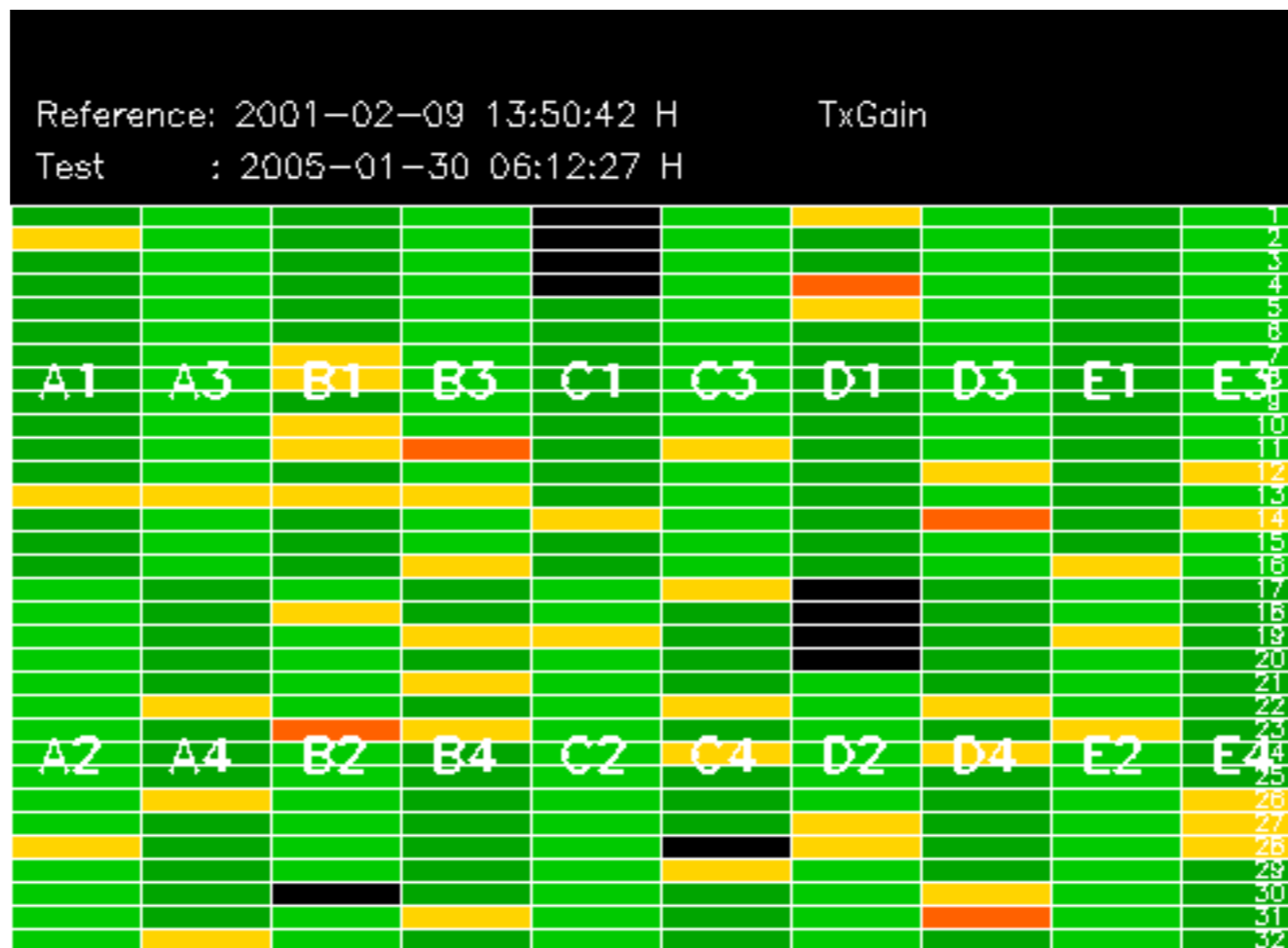
The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.







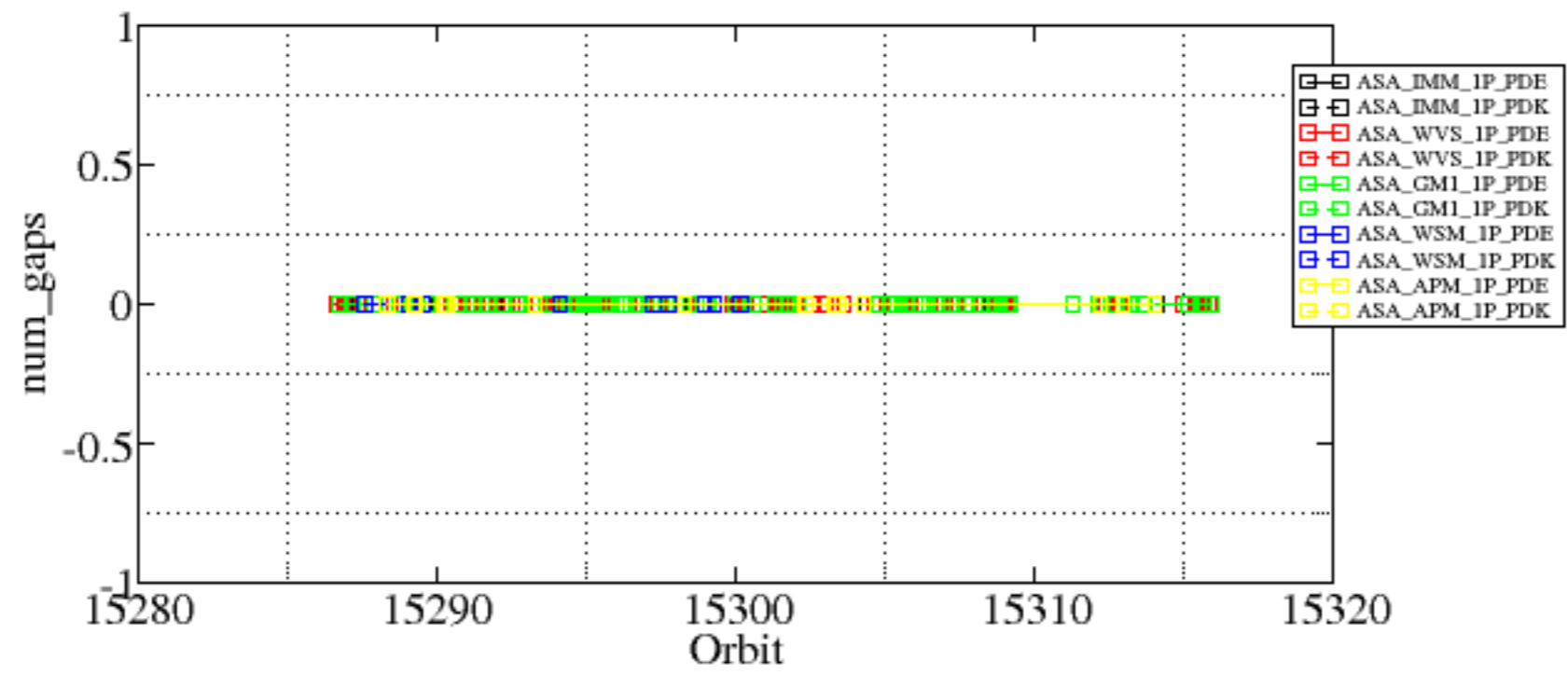


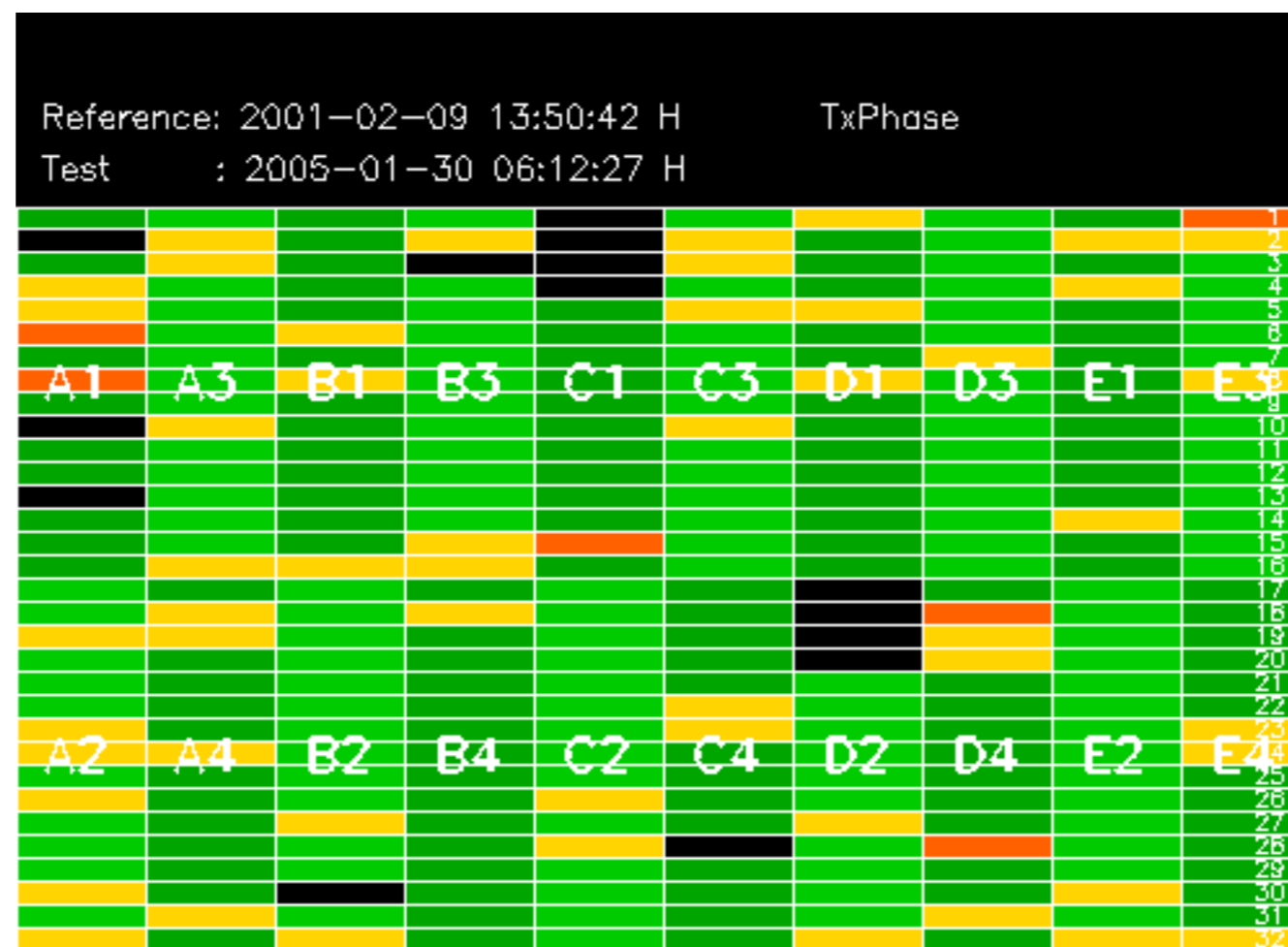
Summary of analysis for the last 3 days 2005020[123]

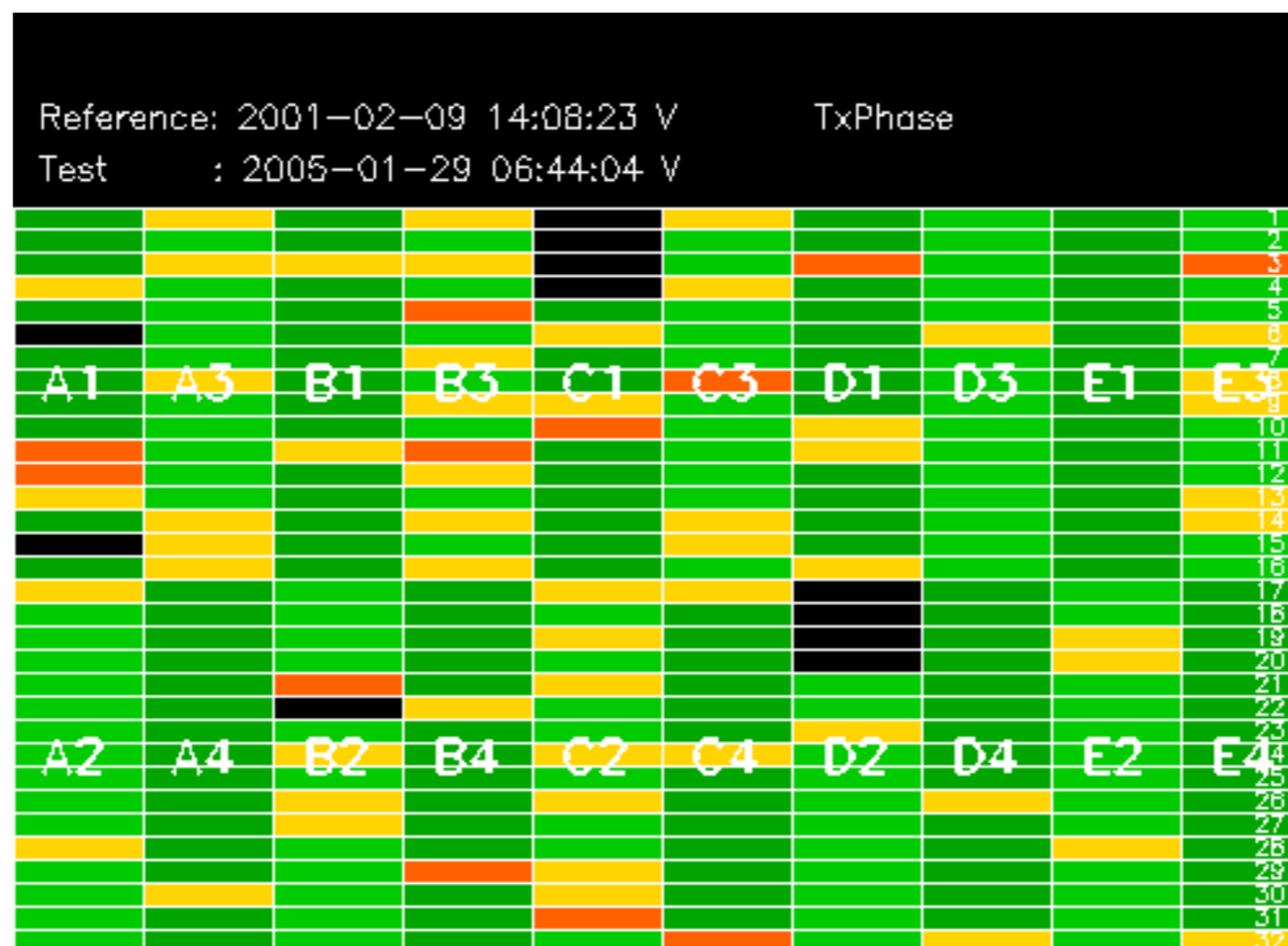
The assumption is taken that the SQUADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

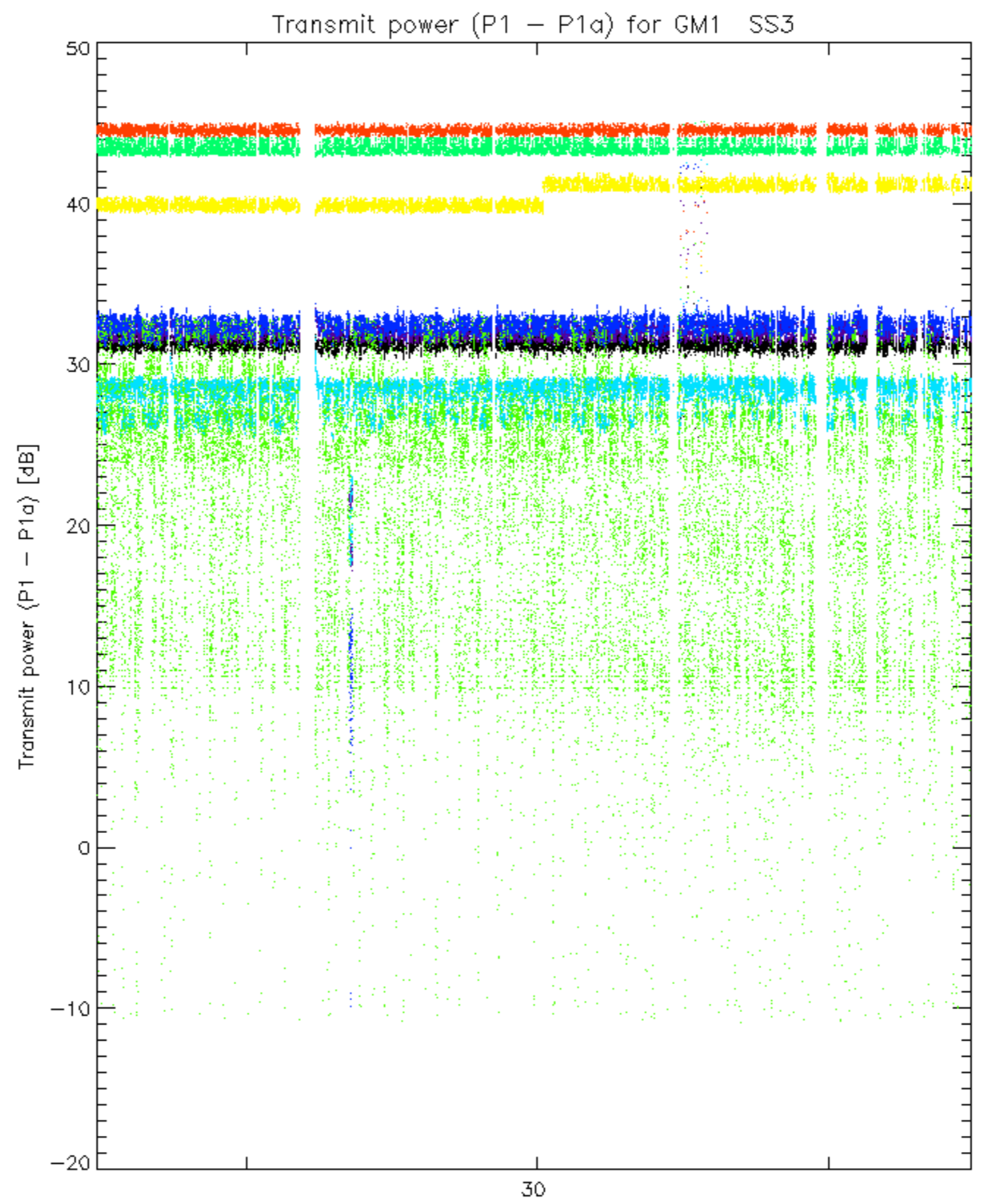
Filename	num_gaps	num_missing_lines
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ASA_WVS_1PNPDE20050201_020521_000003152034_00203_15287_6255.N1	>	152
ASA_WVS_1PNPDE20050201_031941_000003452034_00204_15288_6258.N1	>	40
ASA_WVS_1PNPDE20050201_034327_00000902034_00204_15288_6259.N1	>	48
ASA_WVS_1PNPDE20050201_035054_000008092034_00204_15288_6256.N1	>	88
ASA_WVS_1PNPDE20050201_045059_000006742034_00205_15289_6257.N1	>	56
ASA_WVS_1PNPDE20050201_063233_000006442034_00206_15290_6261.N1	>	1384
ASA_WVS_1PNPDE20050201_223745_00000292034_00216_15300_6280.N1	>	48
ASA_WVS_1PNPDE20050201_230601_000001642034_00216_15300_6276.N1	>	48
ASA_WVS_1PNPDE20050202_004321_000001502034_00217_15301_6285.N1	>	56
ASA_WVS_1PNPDE20050202_005019_000000592034_00217_15301_6286.N1	>	96
ASA_WVS_1PNPDE20050202_005346_000002692034_00217_15301_6284.N1	>	104
ASA_WVS_1PNPDE20050202_010933_000004352034_00217_15301_6282.N1	>	72
ASA_WVS_1PNPDE20050202_013114_00000302034_00217_15301_6283.N1	>	32
ASA_WVS_1PNPDE20050202_013414_00000142034_00217_15301_6287.N1	>	96
ASA_WVS_1PNPDE20050202_015126_000000592034_00218_15302_6288.N1	>	144
ASA_WVS_1PNPDE20050202_024738_000001042034_00218_15302_6291.N1	>	56
ASA_WVS_1PNPDE20050202_031150_000000452034_00218_15302_6293.N1	>	16
ASA_WVS_1PNPDE20050202_032326_000000592034_00218_15302_6294.N1	>	64
ASA_GM1_1PNPDE20050201_001400_000004772034_00202_15286_8289.N1	>	79370
ASA_GM1_1PNPDE20050201_005710_000001322034_00203_15287_8301.N1	>	137
ASA_GM1_1PNPDE20050201_021122_000001142034_00203_15287_8305.N1	>	1208
ASA_GM1_1PNPDE20050201_033015_0000007732034_00204_15288_8309.N1	>	5267
ASA_GM1_1PNPDE20050201_034549_000002892034_00204_15288_8316.N1	>	2251
ASA_GM1_1PNPDE20050201_040515_000001382034_00205_15289_8317.N1	>	881
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ASA_GM1_1PNPDE20050201_042148_000004592034_00205_15289_8313.N1	>	3155
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ASA_GM1_1PNPDE20050201_051050_000007732034_00205_15289_8319.N1	>	47639
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ASA_GM1_1PNPDE20050201_060411_000002952034_00206_15290_8325.N1	>	33954
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ASA_GM1_1PNPDE20050201_061702_000002652034_00206_15290_8327.N1	>	31271
ASA_GM1_1PNPDE20050201_222937_000001142034_00216_15300_8345.N1	>	174
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ASA_GM1_1PNPDE20050201_232818_000001022034_00216_15300_8351.N1	>	167
ASA_GM1_1PNPDE20050202_004109_000001142034_00217_15301_8354.N1	>	591
ASA_GM1_1PNPDE20050202_010331_000001022034_00217_15301_8356.N1	>	498
ASA_GM1_1PNPDE20050202_012243_000001382034_00217_15301_8359.N1	>	744
ASA_GM1_1PNPDE20050202_020406_000009242034_00218_15302_8362.N1	>	572
ASA_GM1_1PNPDE20050202_041234_000001932034_00219_15303_8372.N1	>	74

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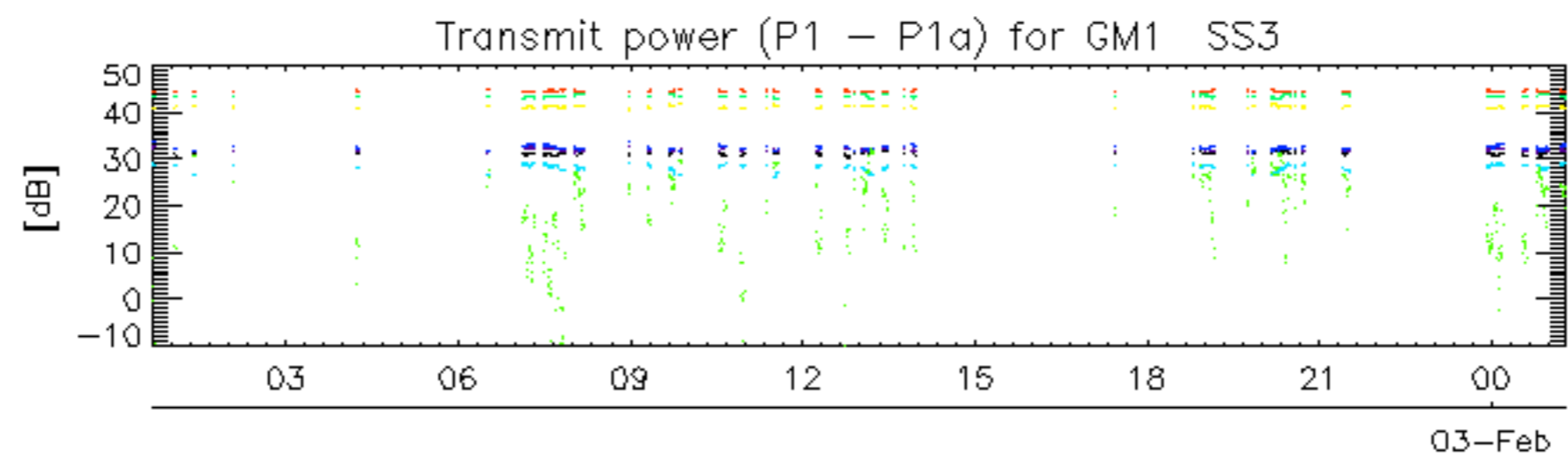




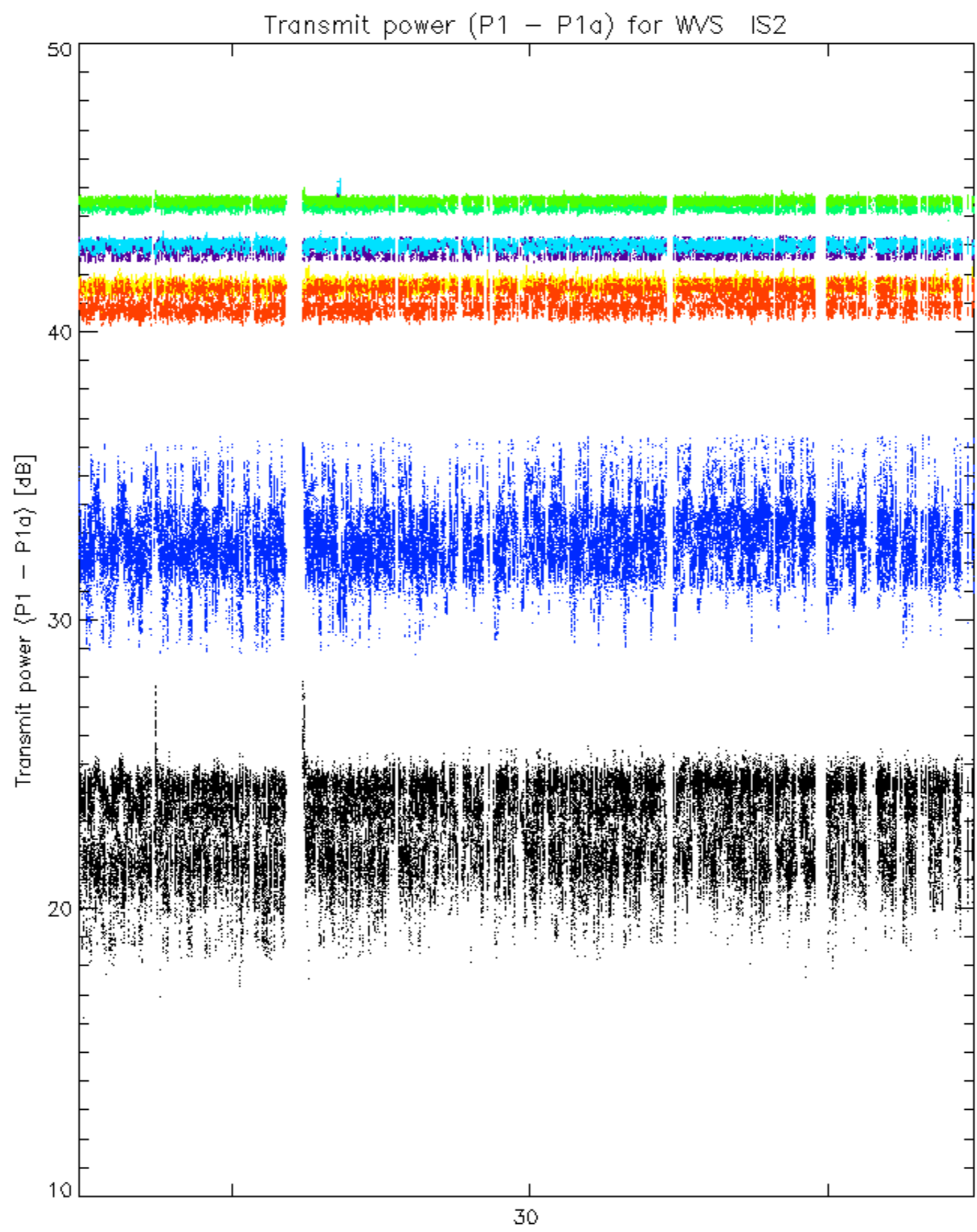




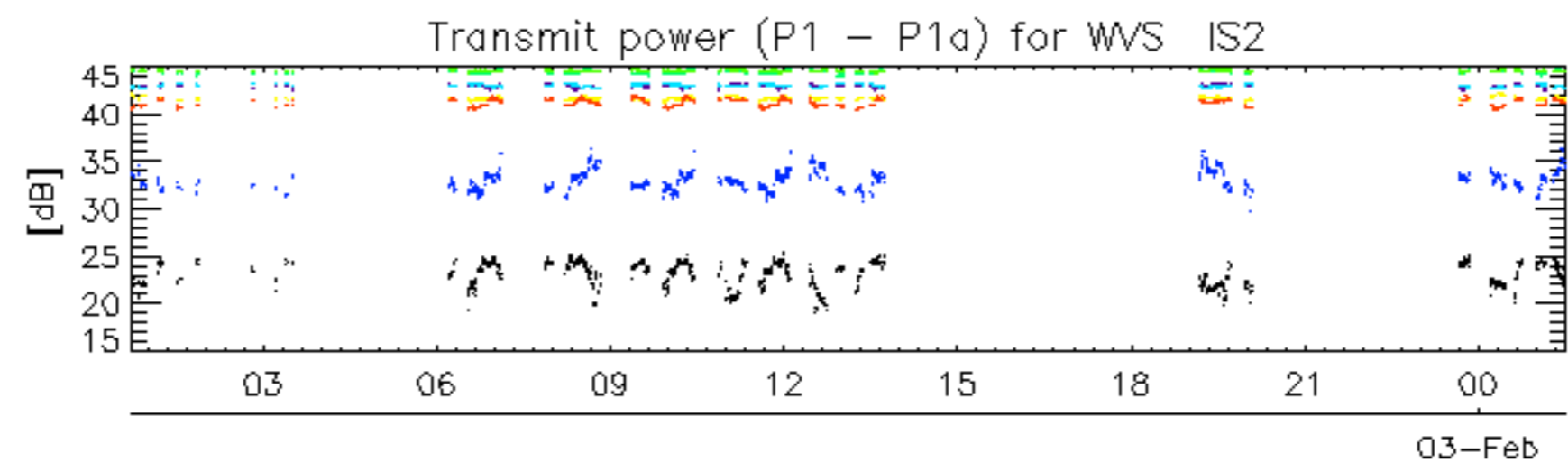
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



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No unavailabilities during the reported period.