

PRELIMINARY REPORT OF 050117

ATTENTION: This report is automatically generated no comments are provided on data analysis

last update on Mon Jan 17 11:05:50 GMT 2005

1. [Introduction](#)
2. [Summary](#)
 - [Instrument Unavailability](#)
 - [Auxiliary files used](#)
 - [Browse Visual Inspection](#)
 - [Module Stepping Results](#)
 - [Data Analysis](#)
3. [Module Stepping](#)
4. [Internal Calibration pulses](#)
 - [Daily statistics](#)
 - [Cyclic statistics](#)
 - [cal pulses monitoring \(all rows\)](#)
5. [Raw Data Statistics](#)
 - [raw data mean I and Q](#)
 - [raw data stdev I and Q](#)
 - [raw gain imbalance](#)
6. [TLM analysis](#)
7. [Wave Doppler analysis](#)
 - [Unbiased Doppler Error for WVS](#)
 - [Absolute Doppler for WVS](#)
 - [Doppler evolution versus ANX for WVS](#)
 - [Unbiased Doppler Error for GM1](#)
 - [Absolute Doppler for GM1](#)
 - [Doppler evolution versus ANX for GM1](#)

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 2005-01-16 00:00:00 to 2005-01-17 11:05:50

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	3	7	4	2	5
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	3	7	4	2	5
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	3	7	4	2	5
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	3	7	4	2	5

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	10	0	4	8	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	10	0	4	8	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	10	0	4	8	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	10	0	4	8	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	20050113 100806
H	20050114 143817

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
⊗	
⊗	
⊗	
⊗	

4 - Internal calibration Results

No anomalies observed.

4.1 - Daily statistics

4.1.1 - Evolution for WVS

Evolution of cal pulses for WVS
⊗
⊗

4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
⊗
⊗

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	-3.426652	0.007175	0.031535
7	P1	-3.085147	0.010426	0.010621
11	P1	-4.645427	0.020067	0.027636
15	P1	-5.647860	0.039877	0.048257
19	P1	-3.662716	0.006405	0.000659
22	P1	-4.571430	0.016714	0.010889
26	P1	-4.941668	0.026634	0.044623
30	P1	-7.128129	0.014295	-0.013944
3	P1	-15.927808	0.105512	0.054152
7	P1	-15.513589	0.100318	0.052248
11	P1	-20.804783	0.316204	-0.045818
15	P1	-11.630260	0.077296	0.067979
19	P1	-14.174732	0.033334	0.014961
22	P1	-16.023834	0.439775	0.087250
26	P1	-17.692543	0.232127	0.095011
30	P1	-17.876421	0.312323	-0.054098

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.313225	0.086596	0.093560
7	P2	-22.506485	0.170995	0.089443
11	P2	-14.783050	0.183575	0.171151
15	P2	-7.143456	0.116496	0.060245
19	P2	-9.729175	0.218224	0.112443
22	P2	-17.118111	0.098621	0.104641
26	P2	-16.524796	0.116478	0.076847

30	P2	-18.942596	0.083279	0.071728
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P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.202908	0.007040	0.021698
7	P3	-8.202898	0.007039	0.021661
11	P3	-8.202880	0.007036	0.021559
15	P3	-8.202844	0.007036	0.021342
19	P3	-8.202816	0.007037	0.021203
22	P3	-8.202820	0.007037	0.021205
26	P3	-8.202873	0.007038	0.021551
30	P3	-8.202733	0.007016	0.021111

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1
<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	-2.822868	0.011718	0.025438
7	P1	-2.954437	0.023834	0.016428
11	P1	-3.943678	0.025701	-0.003112
15	P1	-3.507438	0.029785	-0.009560
19	P1	-3.608320	0.012698	0.006445
22	P1	-5.639066	0.067894	-0.034374
26	P1	-6.533576	0.025051	-0.033365
30	P1	-6.298132	0.044765	-0.001299
3	P1	-10.777682	0.047545	0.004482
7	P1	-10.141842	0.136181	-0.002582
11	P1	-12.500814	0.108674	-0.082162

15	P1	-11.751206	0.054966	-0.021299
19	P1	-15.636835	0.046542	0.036248
22	P1	-24.070303	1.878006	0.030662
26	P1	-14.902248	0.352420	0.243024
30	P1	-20.056990	0.874022	0.153845

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.995457	0.036940	0.066472
7	P2	-22.557484	0.034525	0.109198
11	P2	-10.589124	0.038120	0.190600
15	P2	-5.044239	0.025085	0.029473
19	P2	-6.937582	0.037127	0.039687
22	P2	-7.265008	0.028601	0.079085
26	P2	-23.945988	0.019861	0.034146
30	P2	-21.987909	0.024913	0.052398

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.036140	0.002989	0.019020
7	P3	-8.036077	0.002993	0.018823
11	P3	-8.036103	0.002986	0.018702
15	P3	-8.036263	0.002985	0.018759
19	P3	-8.036080	0.002997	0.018689
22	P3	-8.036210	0.002980	0.018868
26	P3	-8.036138	0.002986	0.018853
30	P3	-8.036113	0.002978	0.018717

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	0.000467544
	stdev	2.21049e-07
MEAN Q	mean	0.000543981
	stdev	2.33512e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128465
	stdev	0.000960626
STDEV Q	mean	0.128699
	stdev	0.000971125



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005011[567]

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_1PNPDK20050115_100814_000002122033_00466_15049_7252.N1	0	2
ASA_IMM_1PNPDK20050116_124036_000000362033_00482_15065_7346.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"/>
Acsending
<input type="checkbox"/>
Descending

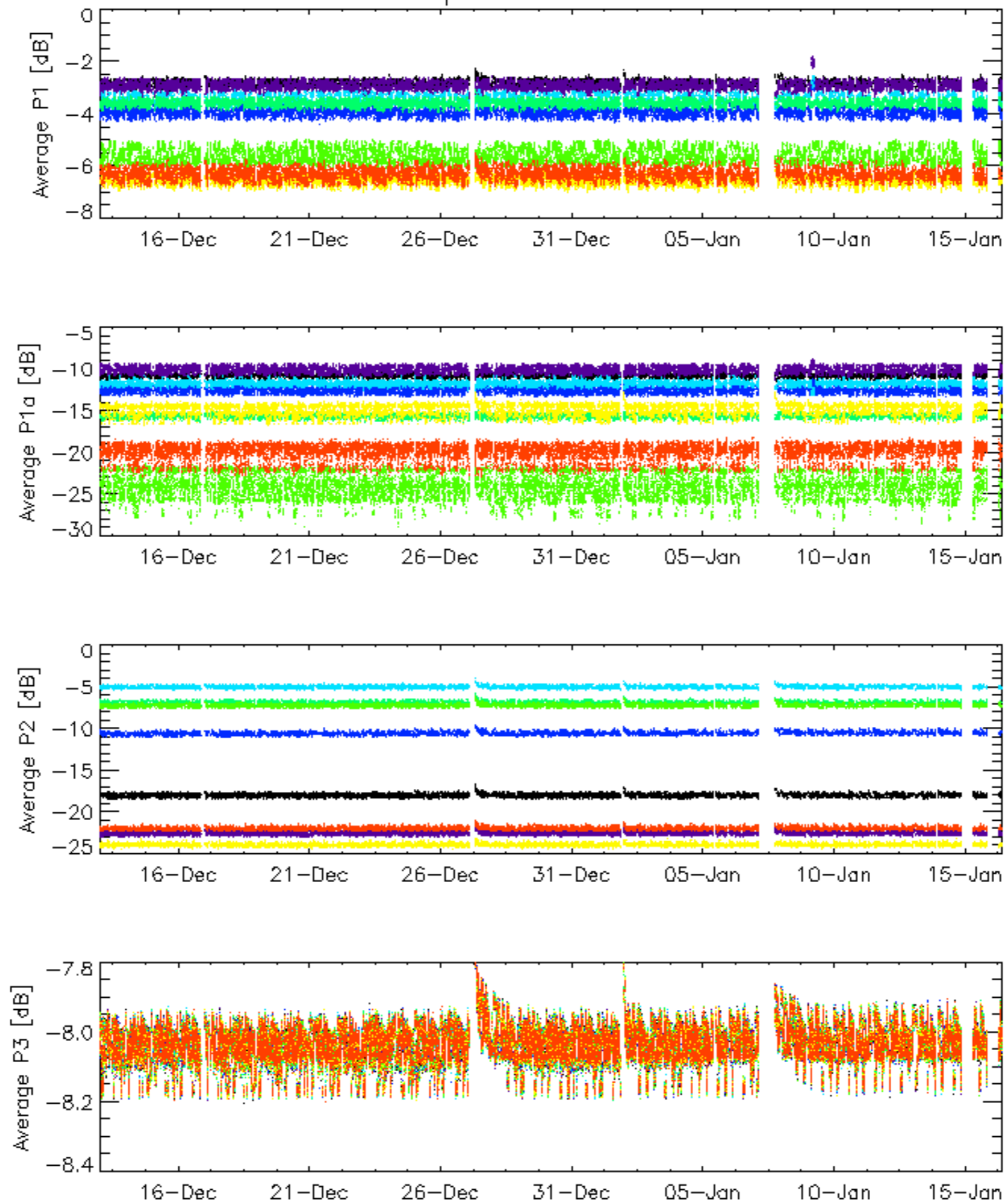
7.5 - Absolute Doppler for GM1**Evolution of Absolute Doppler**

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

7.6 - Doppler evolution versus ANX for GM1**Evolution Doppler error versus ANX**

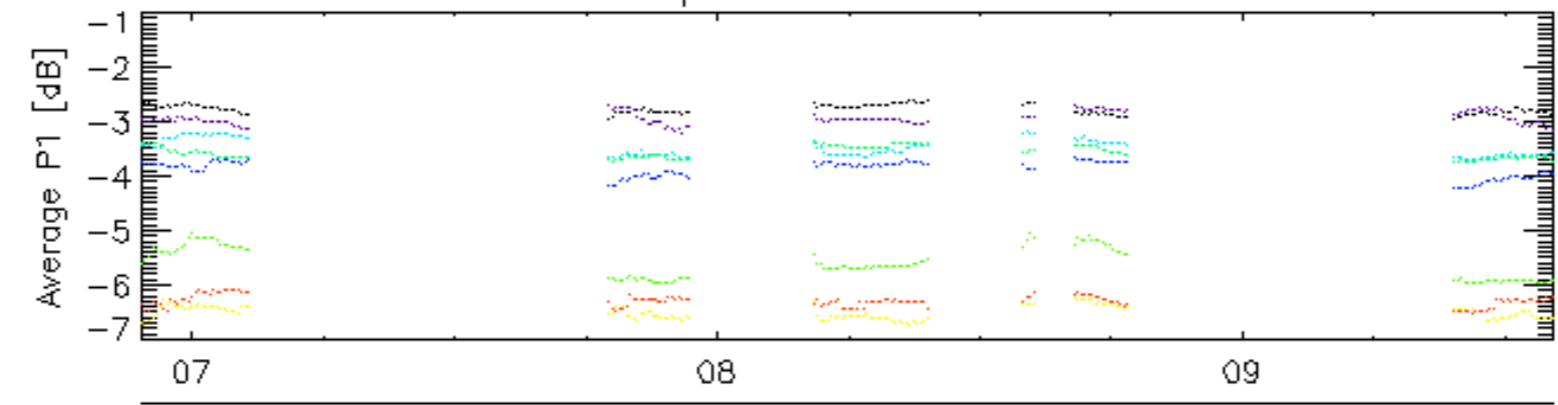
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Cal pulses for GM1 SS3

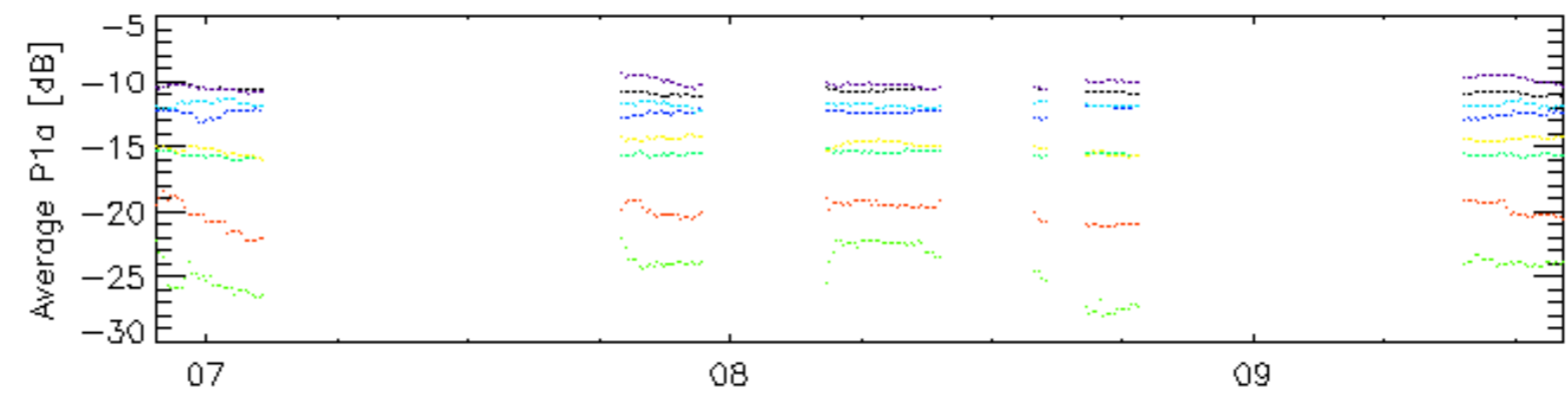


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

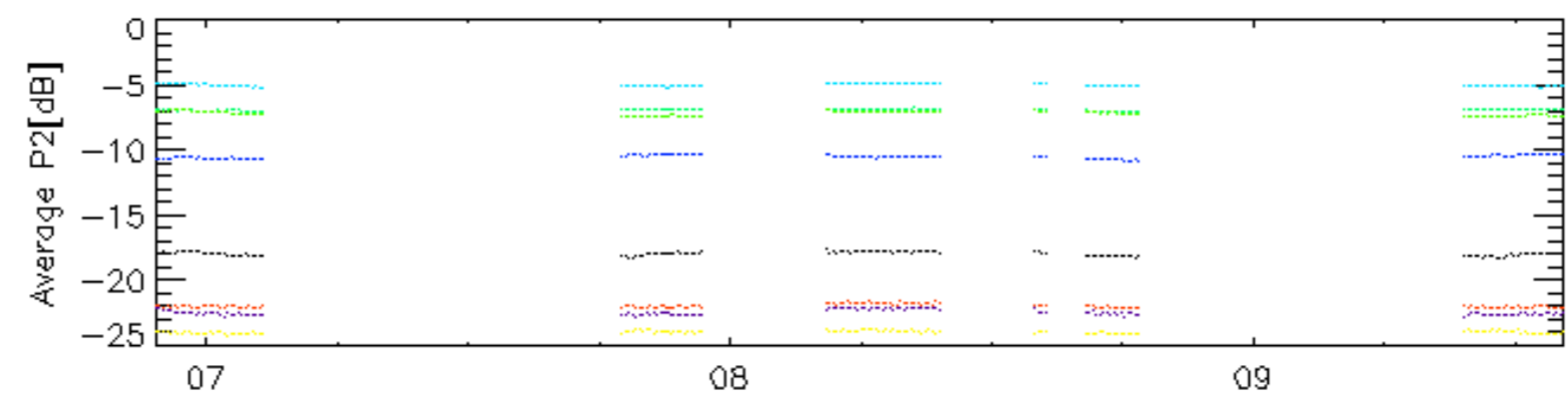
Cal pulses for GM1 SS3



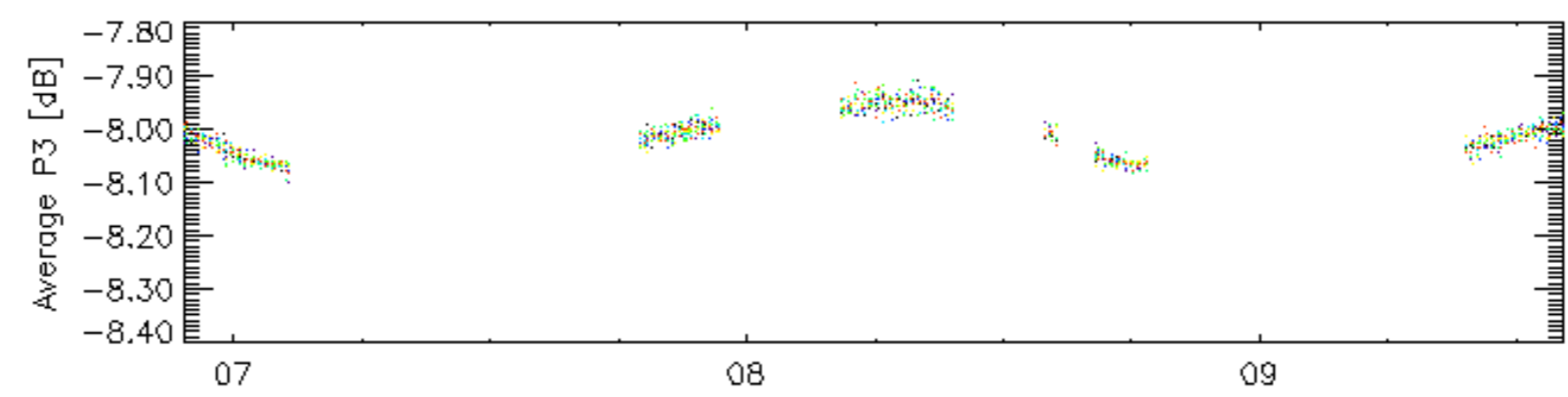
16-Jan



16-Jan



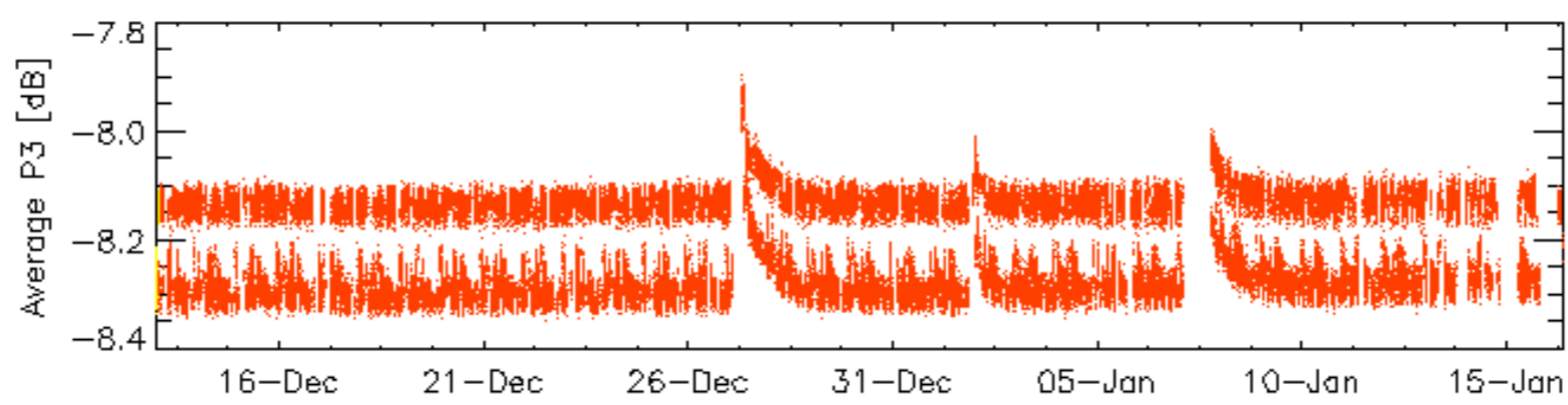
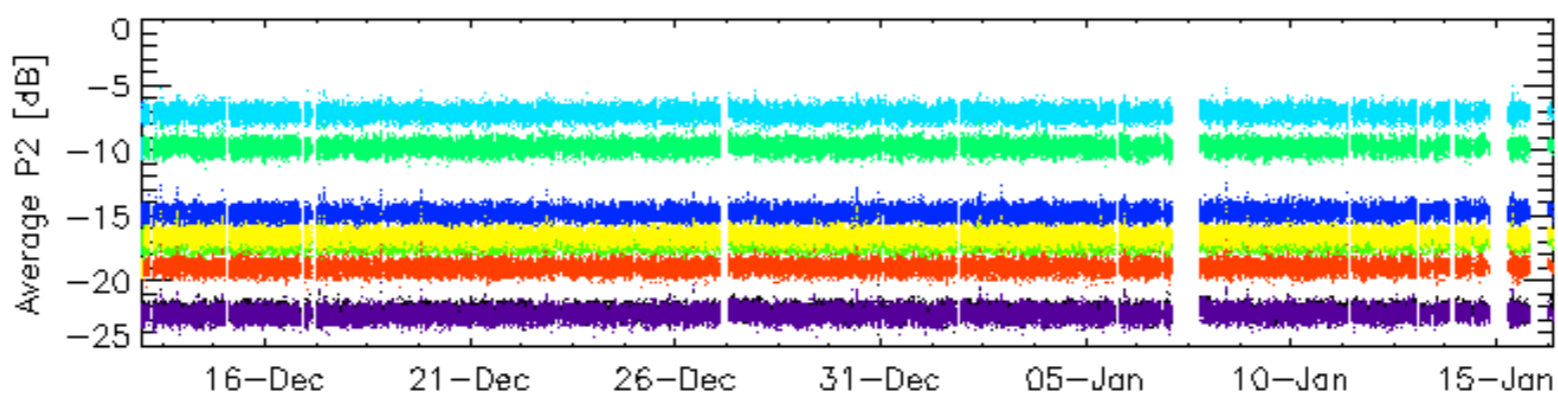
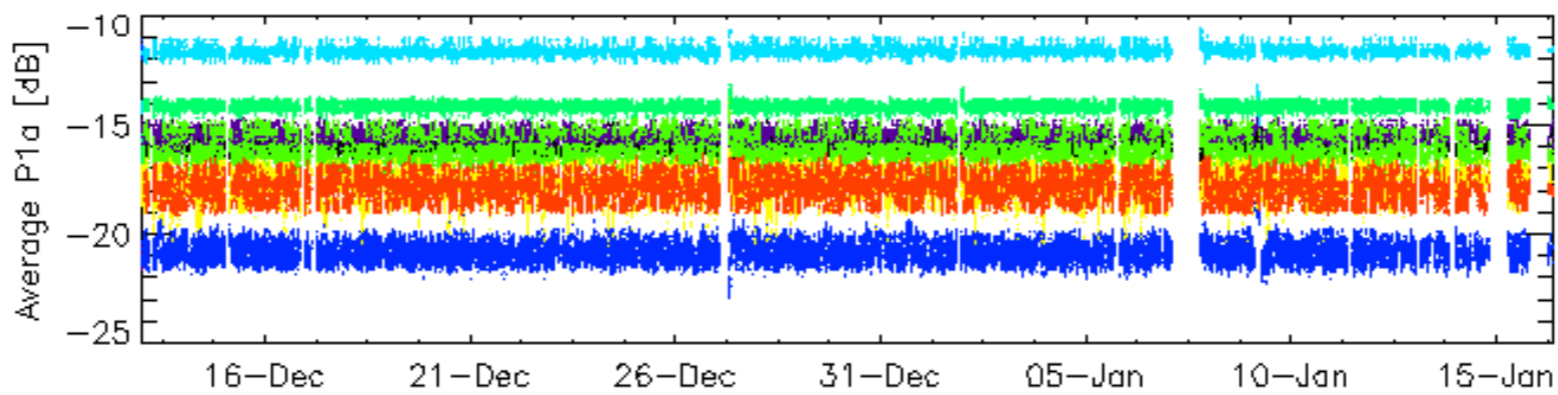
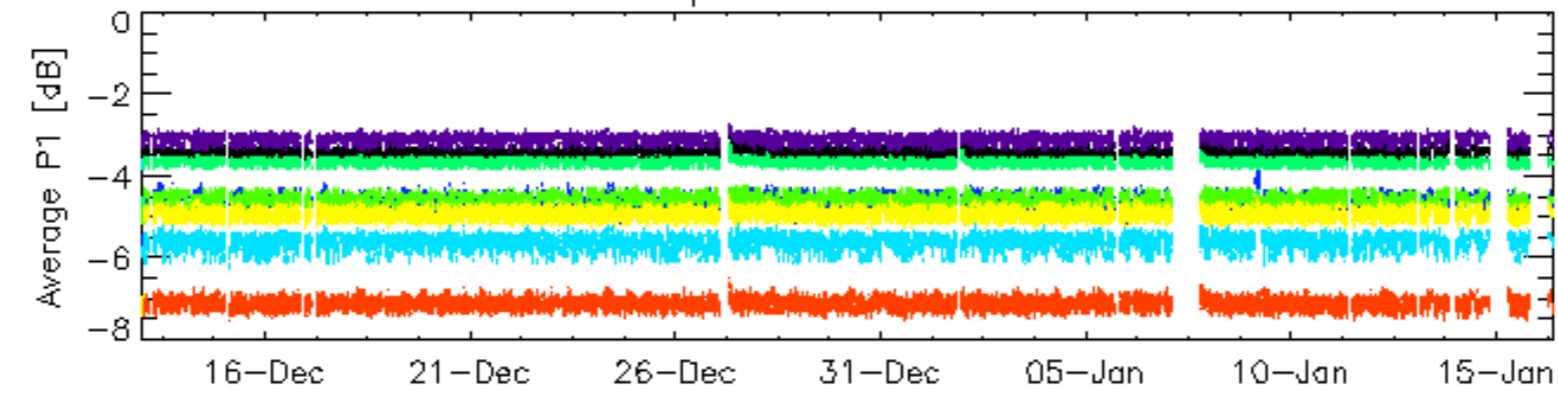
16-Jan



16-Jan

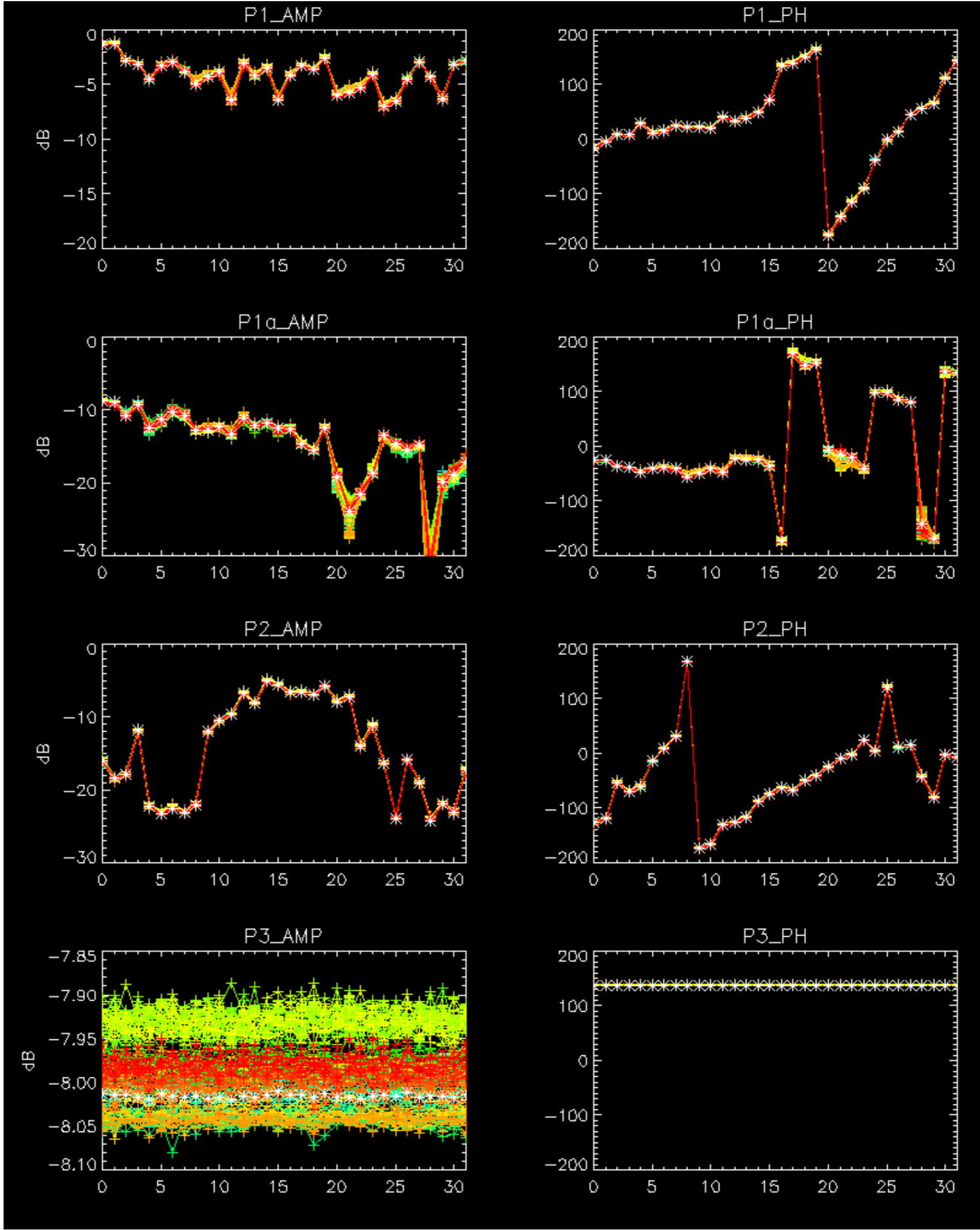
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

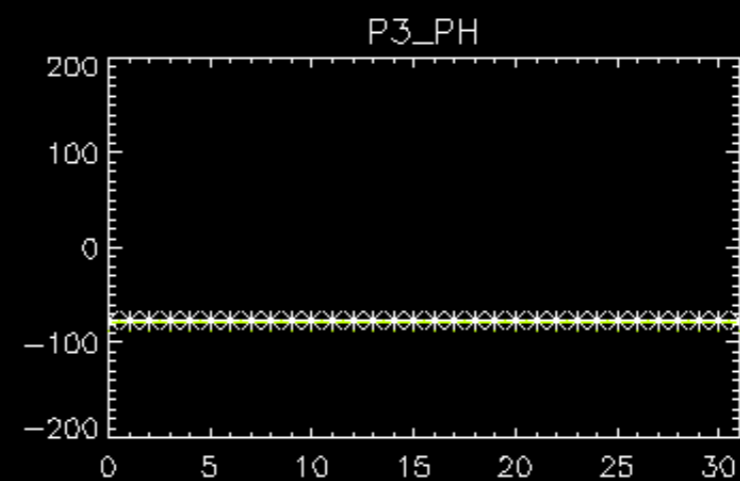
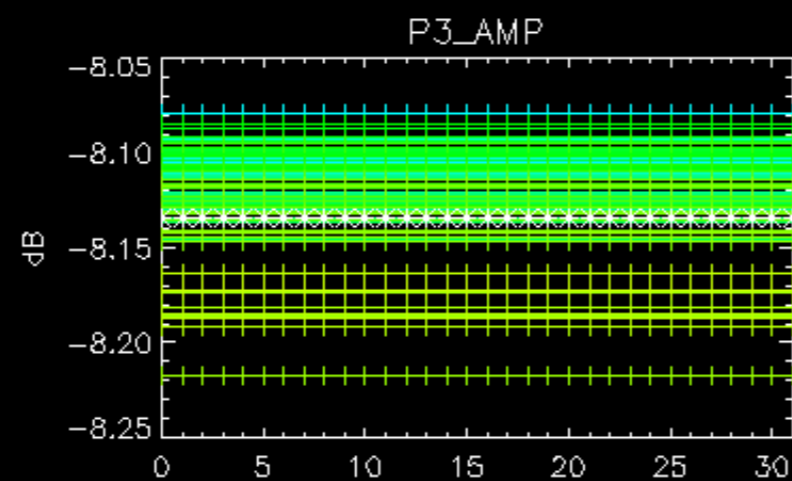
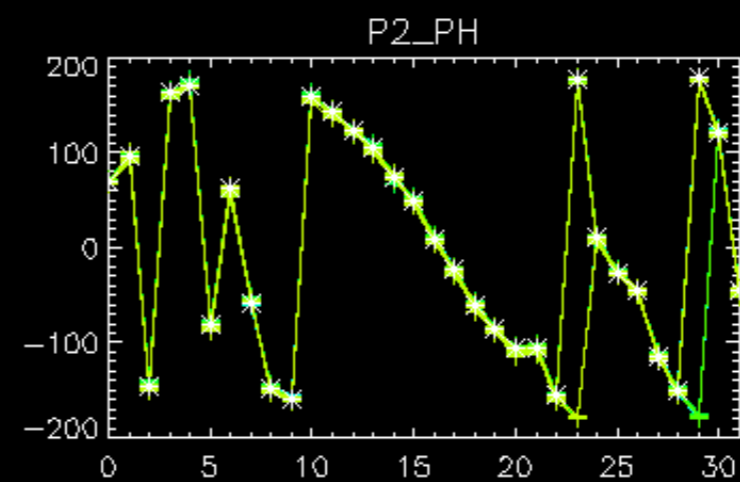
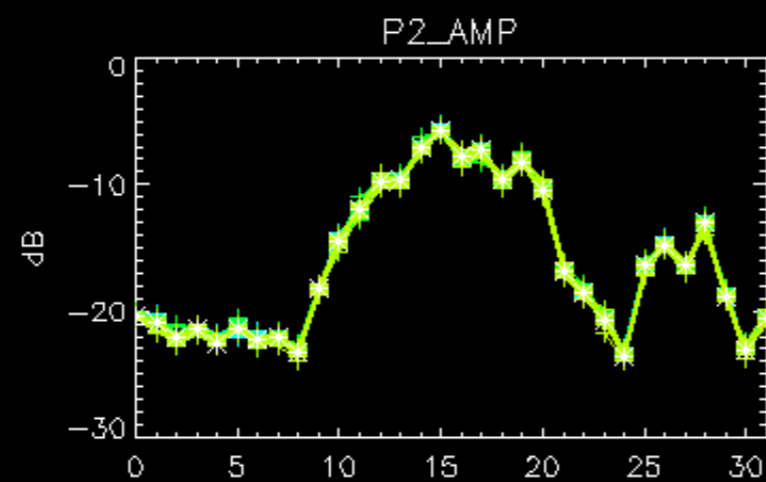
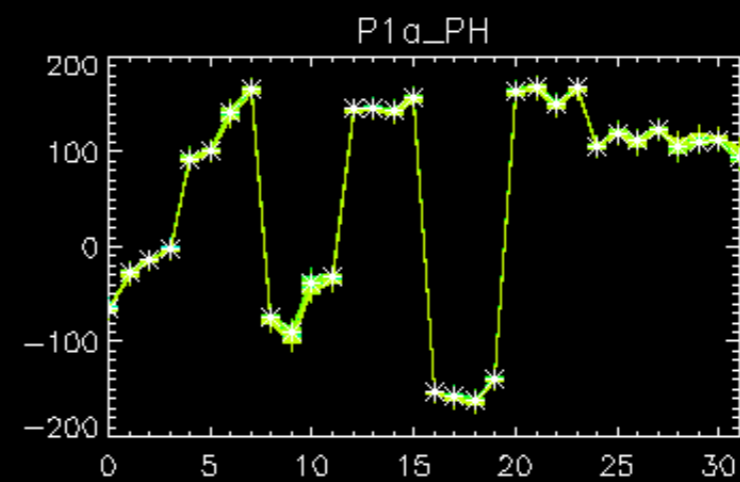
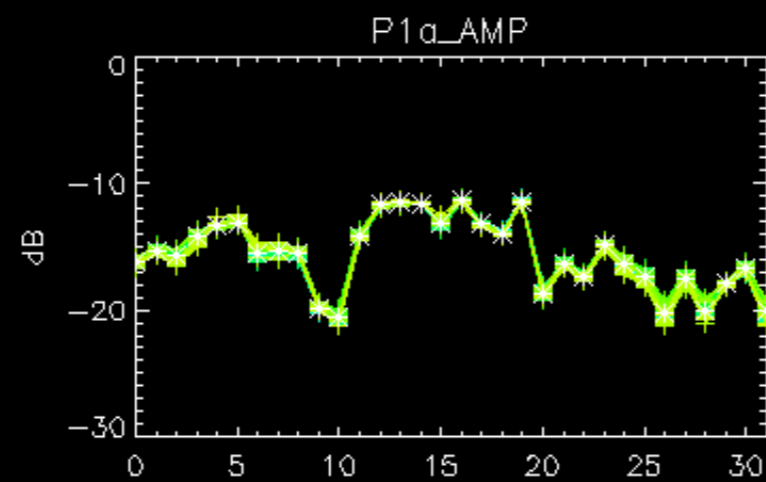
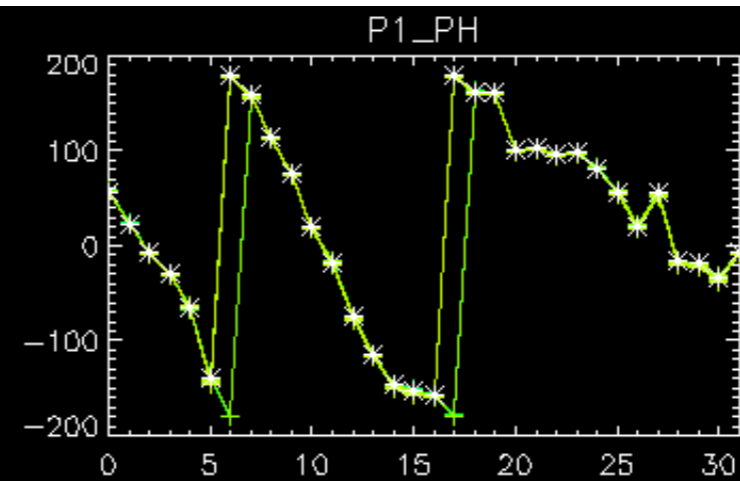
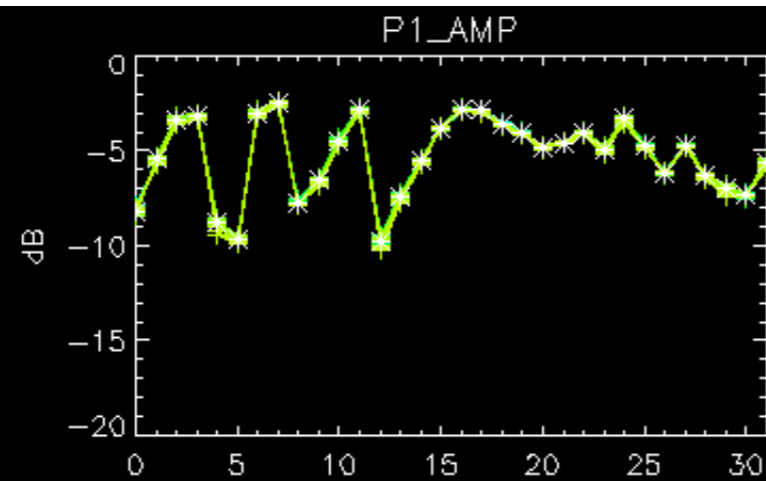
Cal pulses for WVS IS2



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

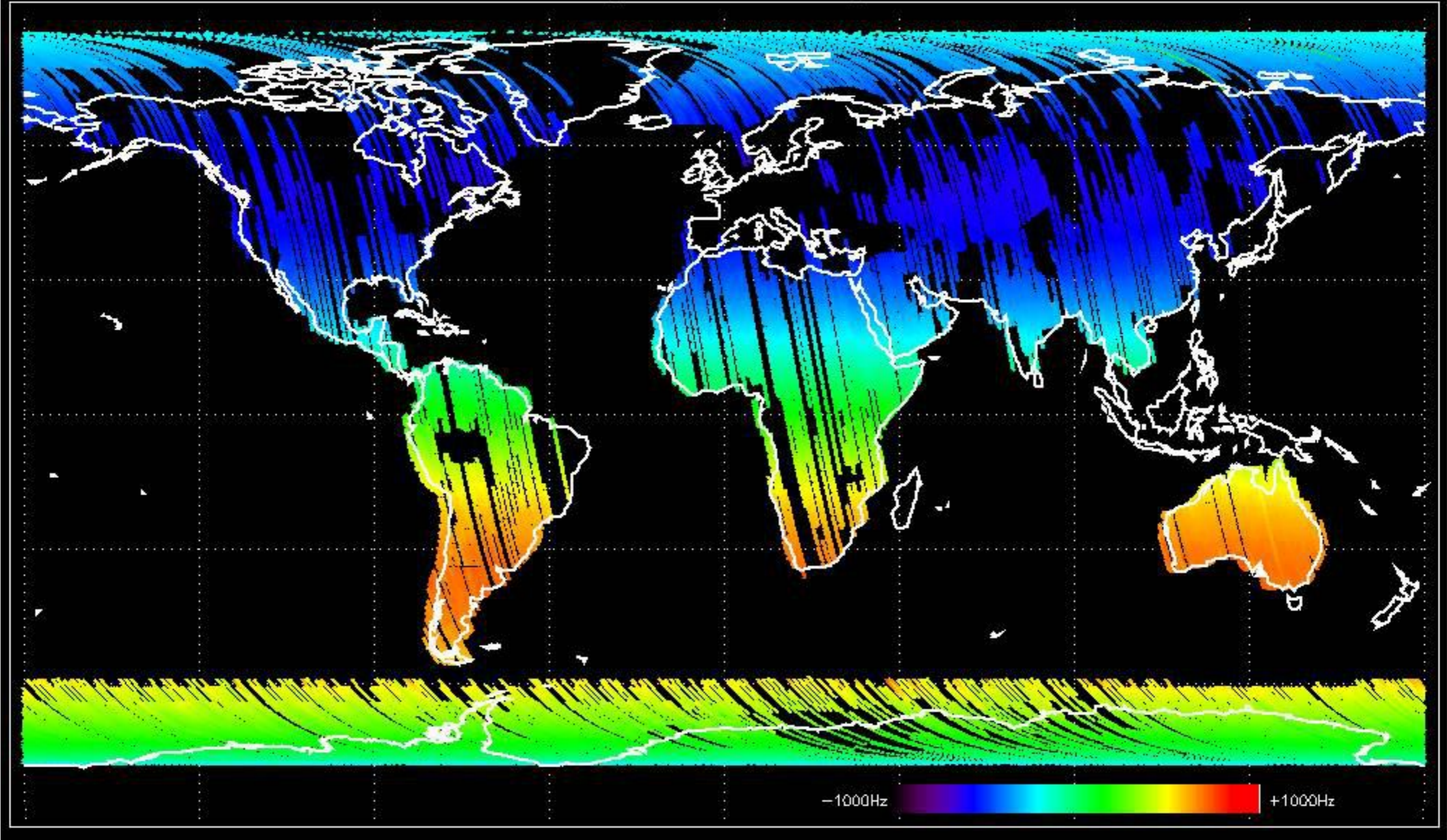
No anomalies observed.



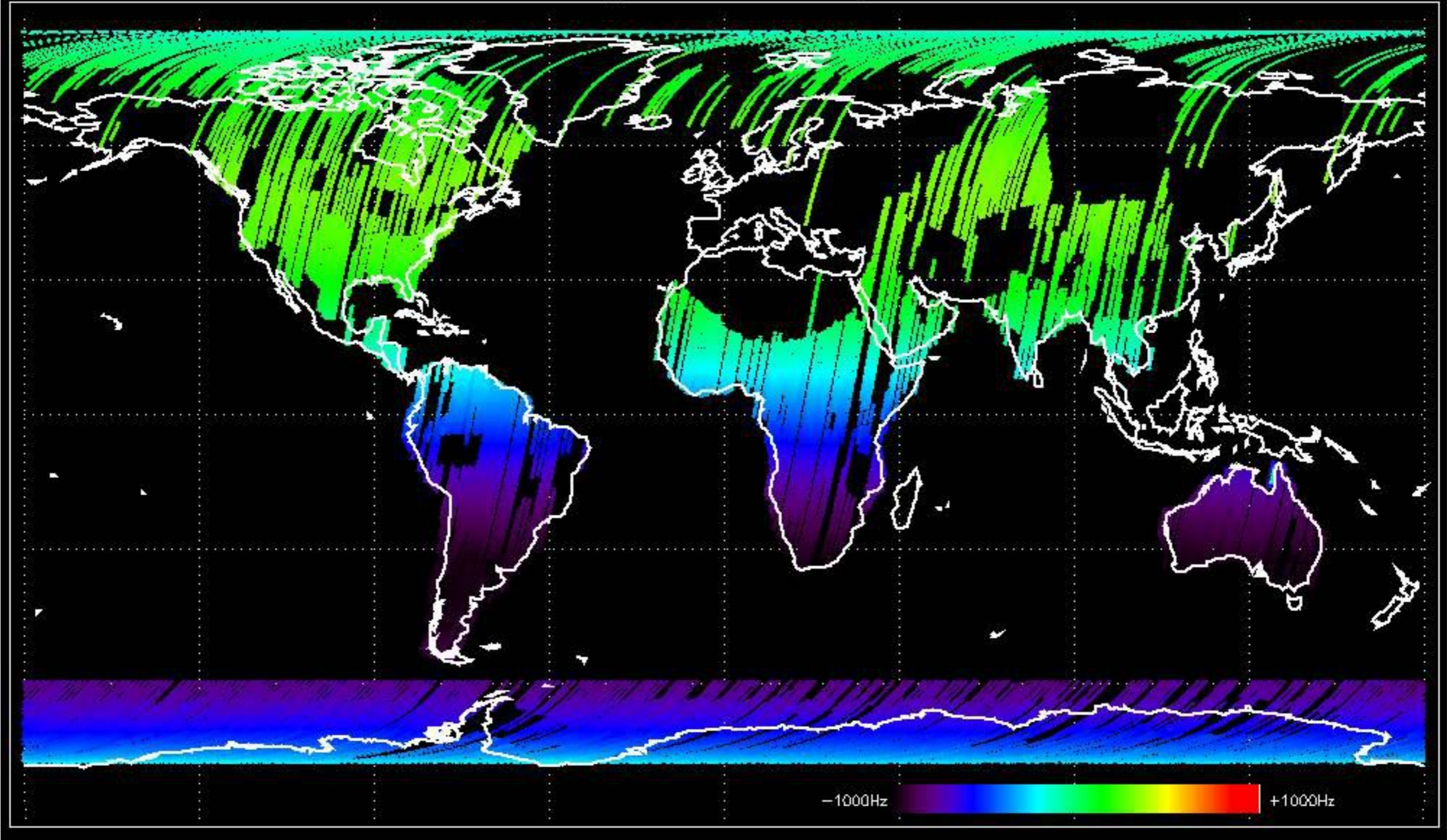


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

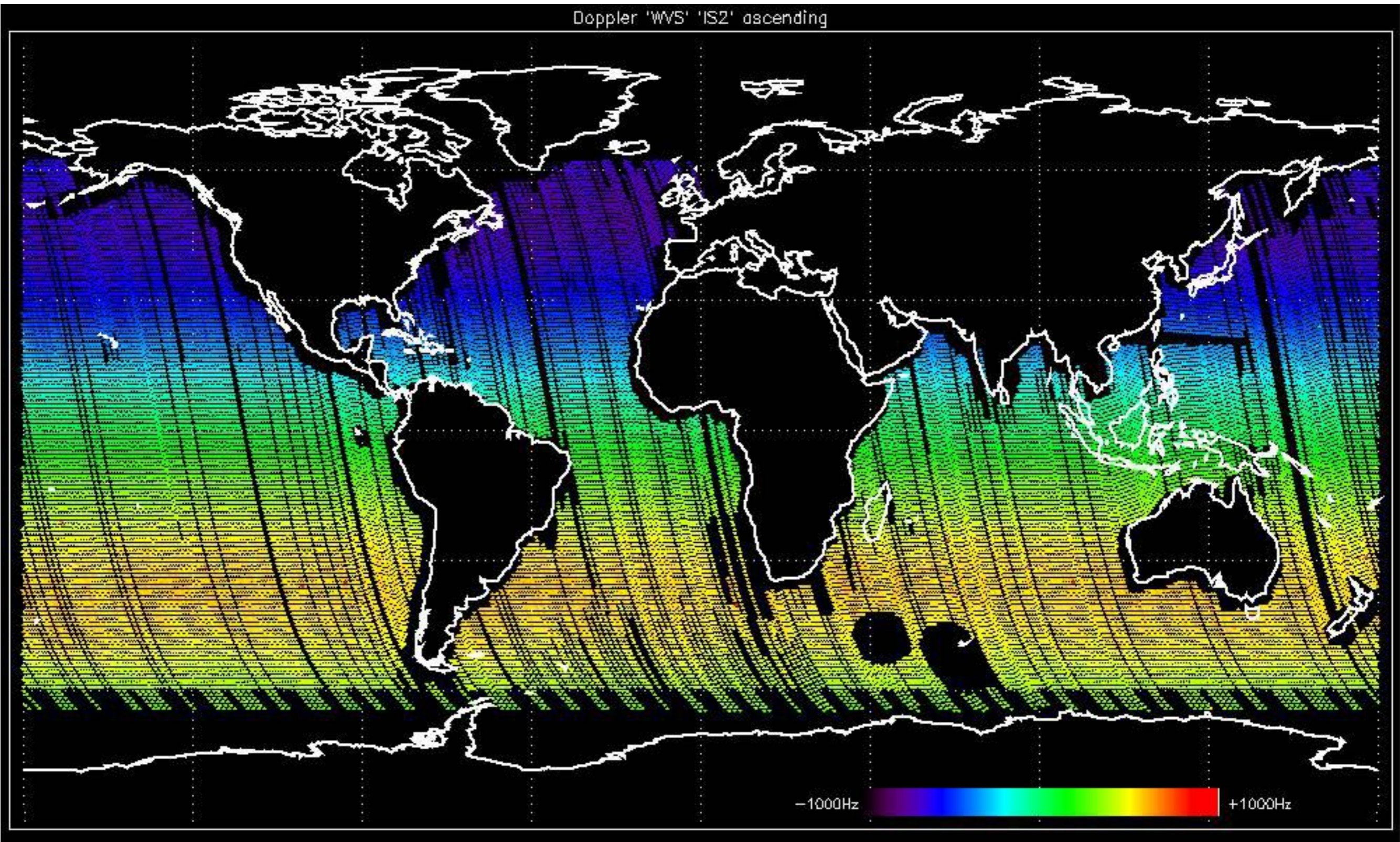
Doppler 'GM1' 'SS1' ascending



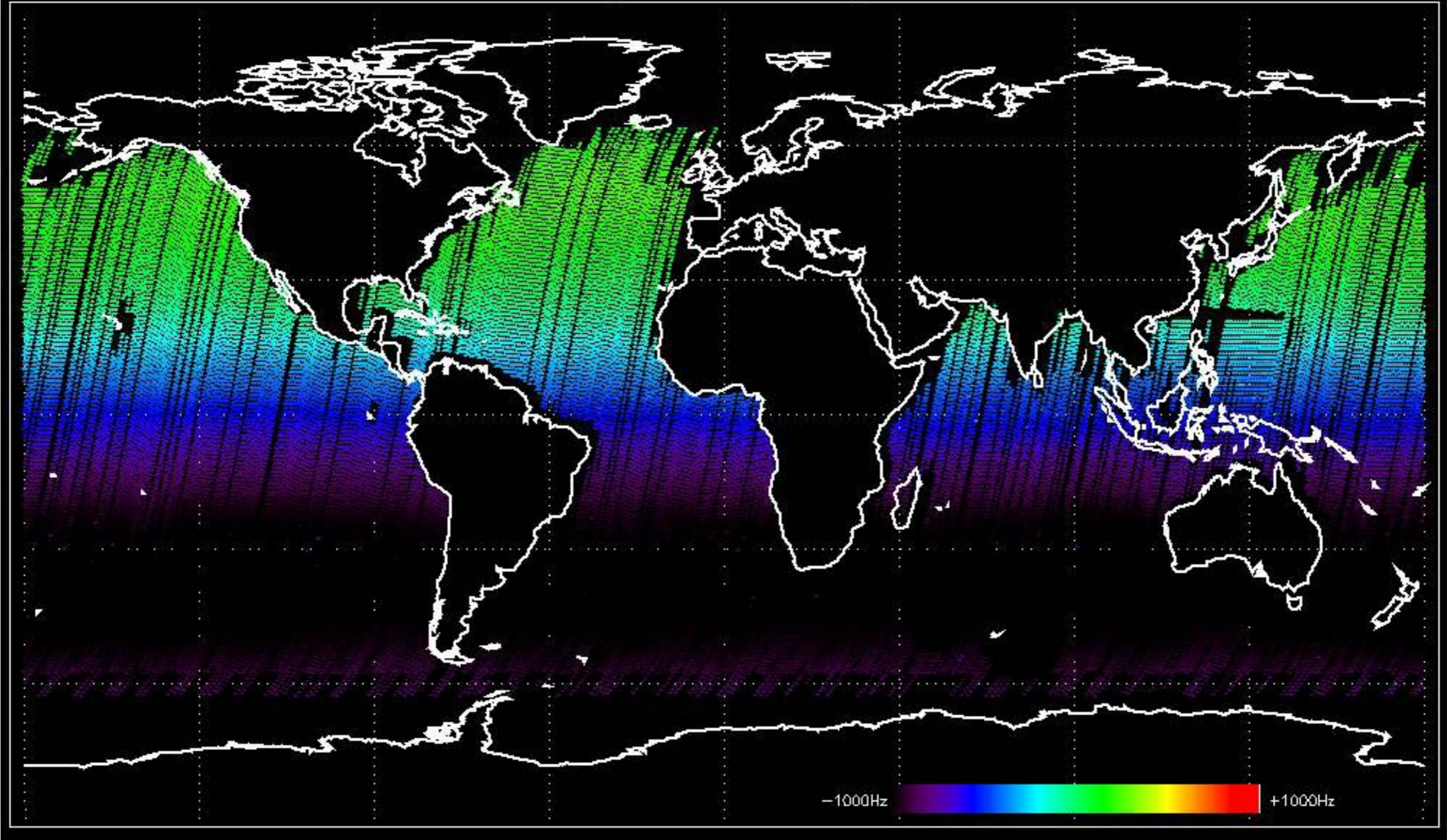
Doppler 'GM1' 'SS1' descending



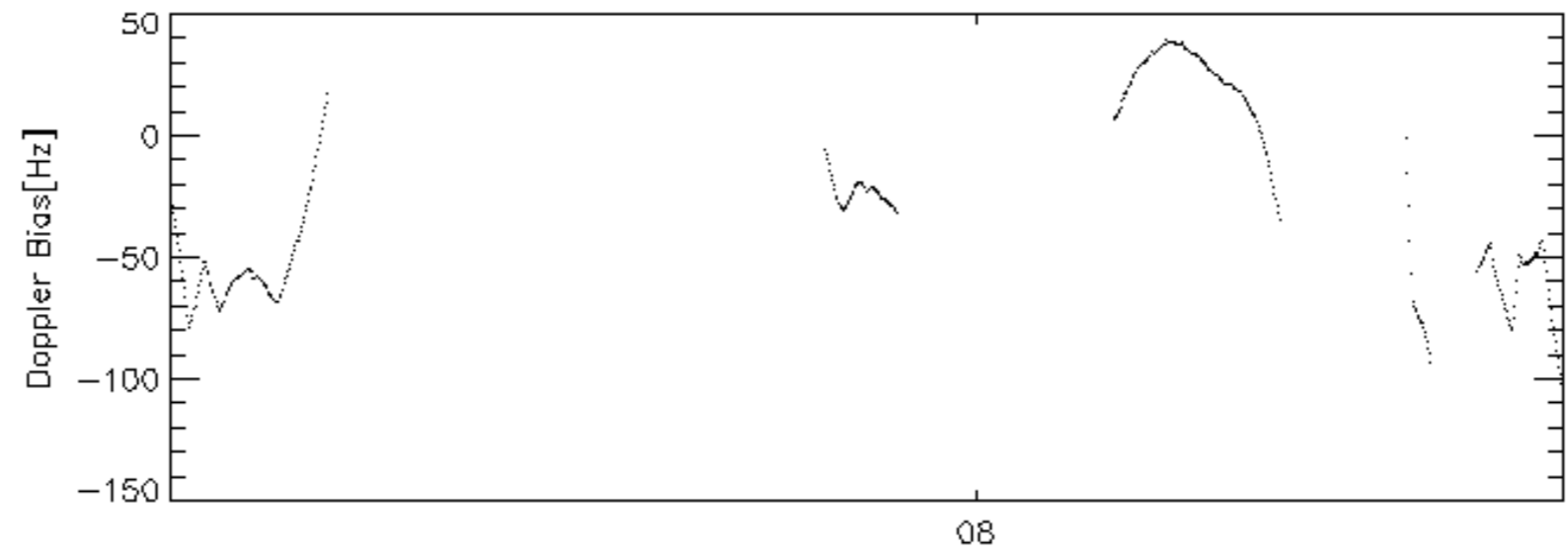
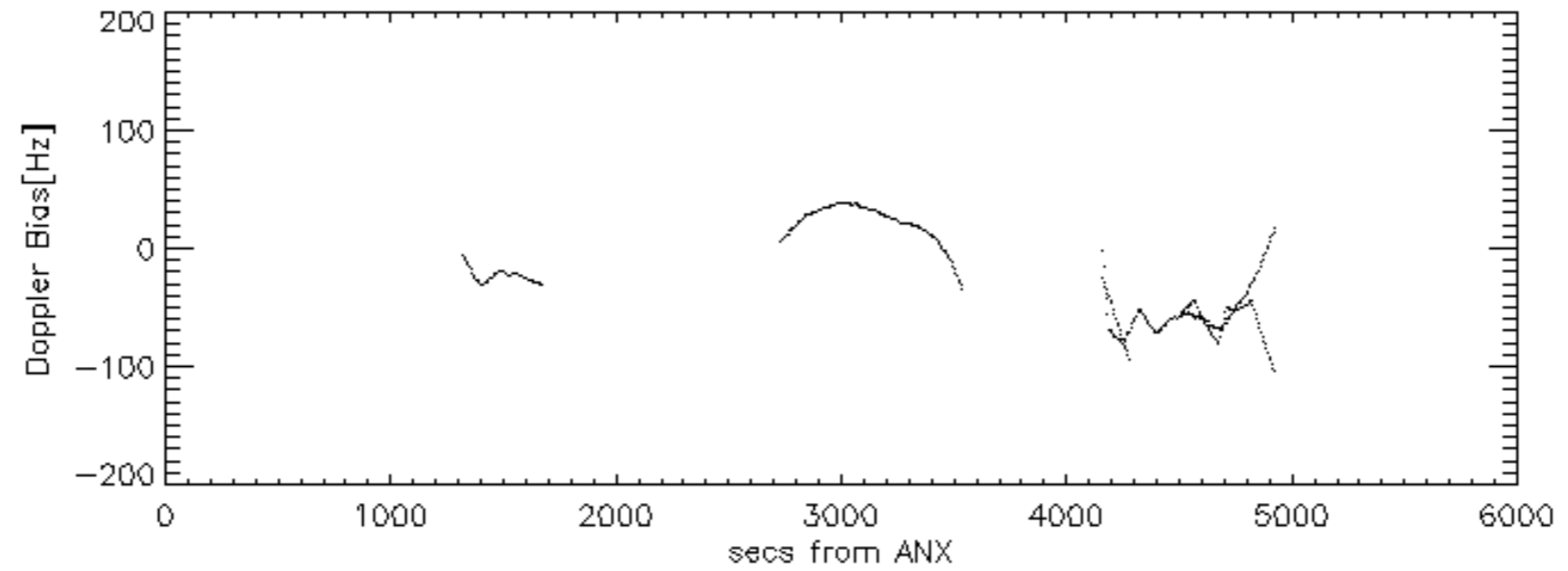
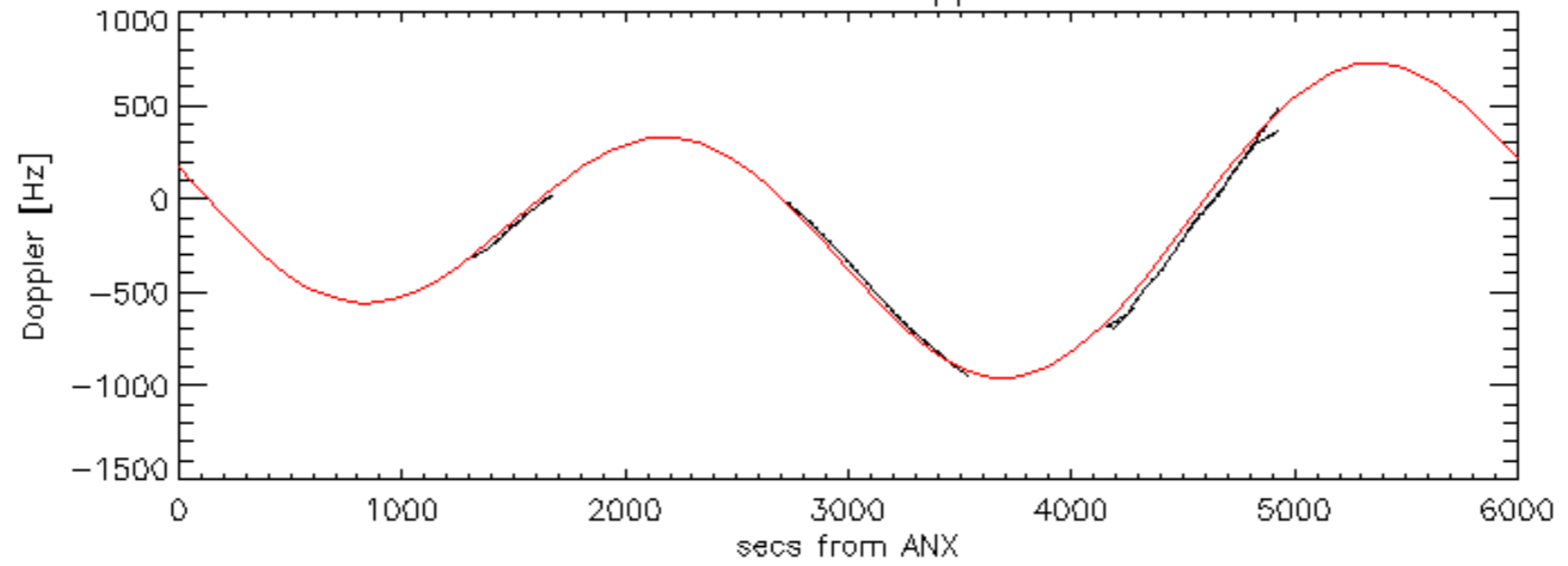
Doppler 'WVS' 'IS2' ascending



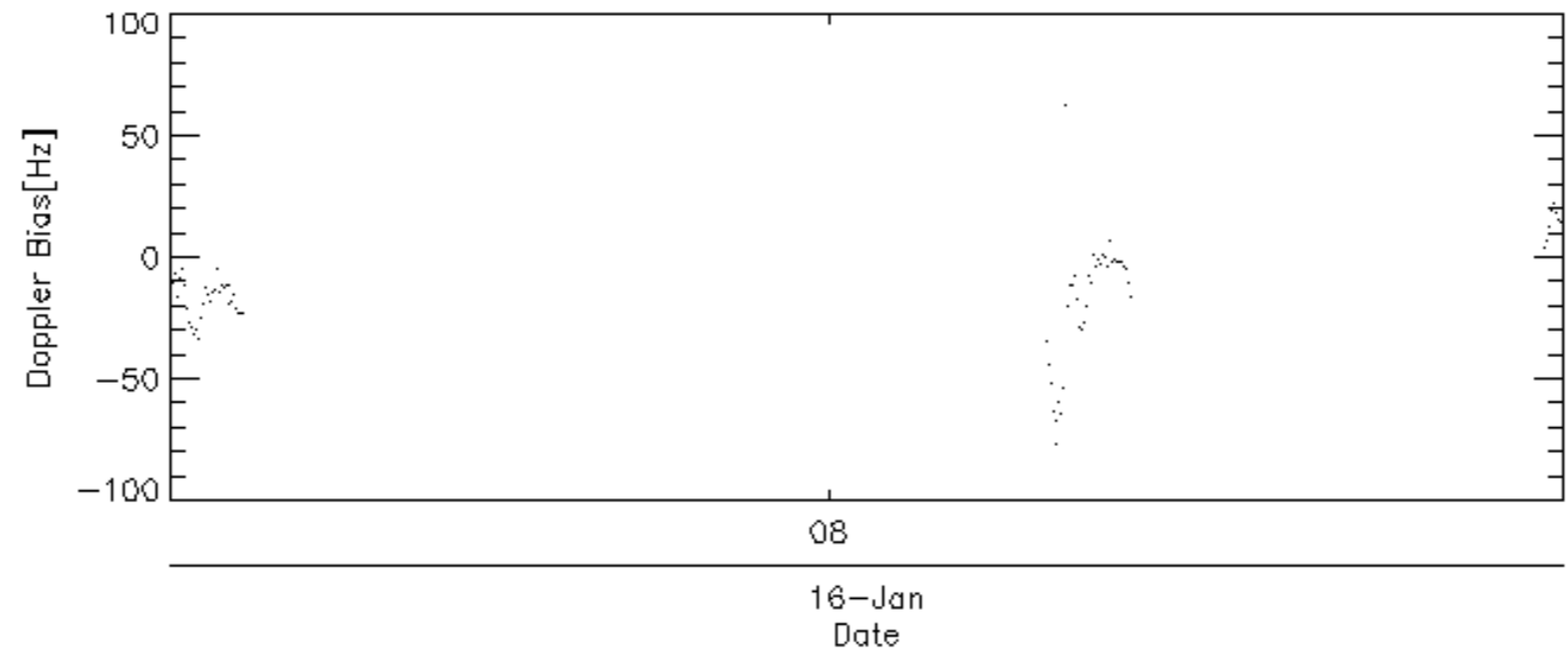
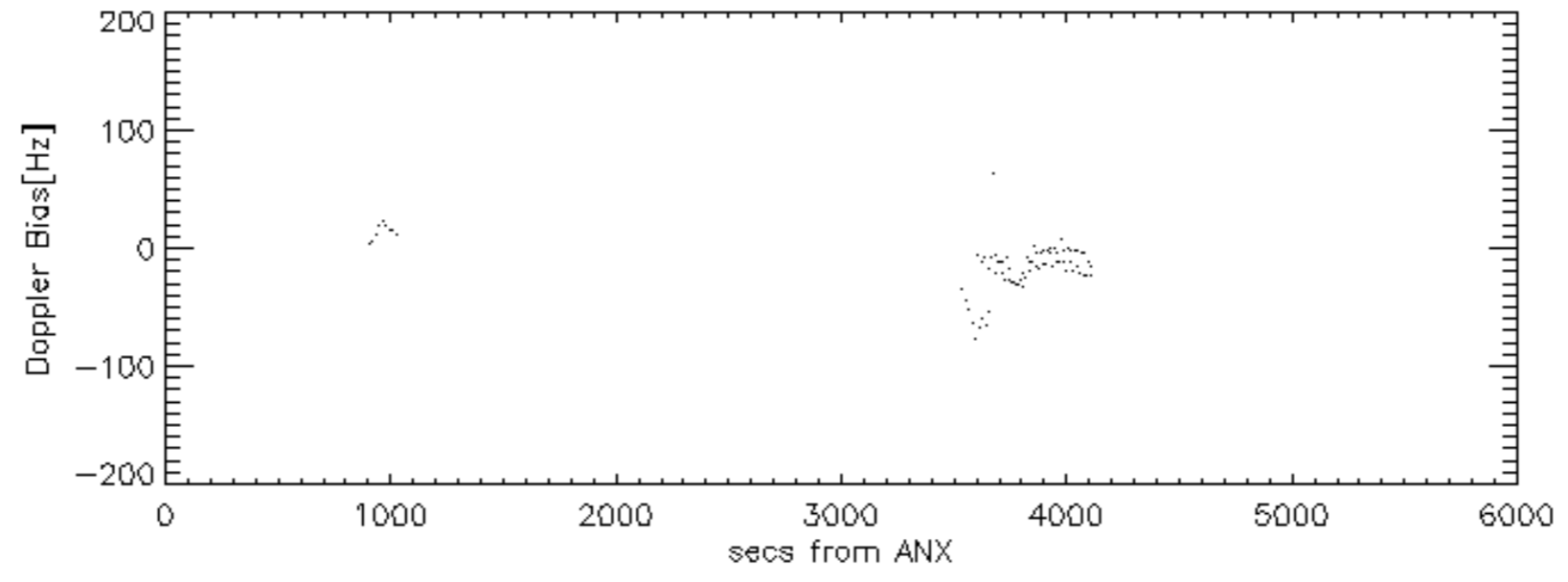
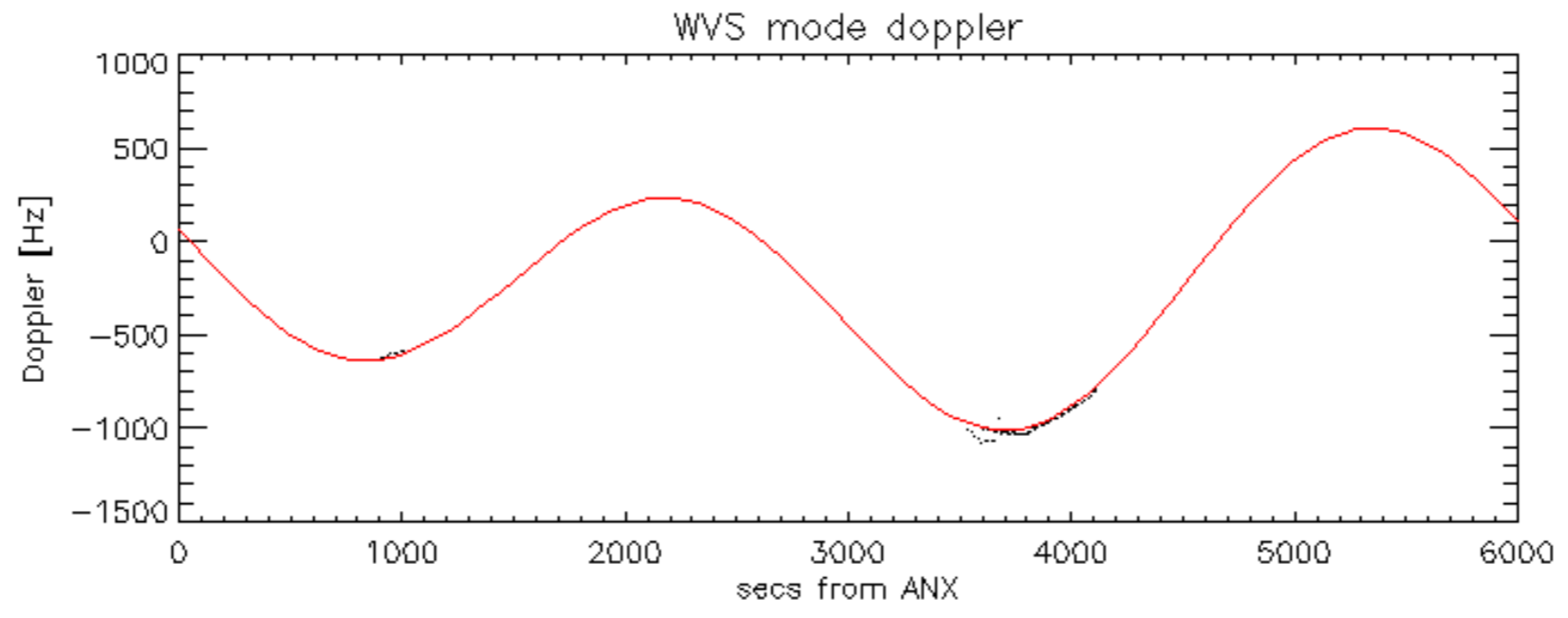
Doppler 'WVS' 'IS2' descending



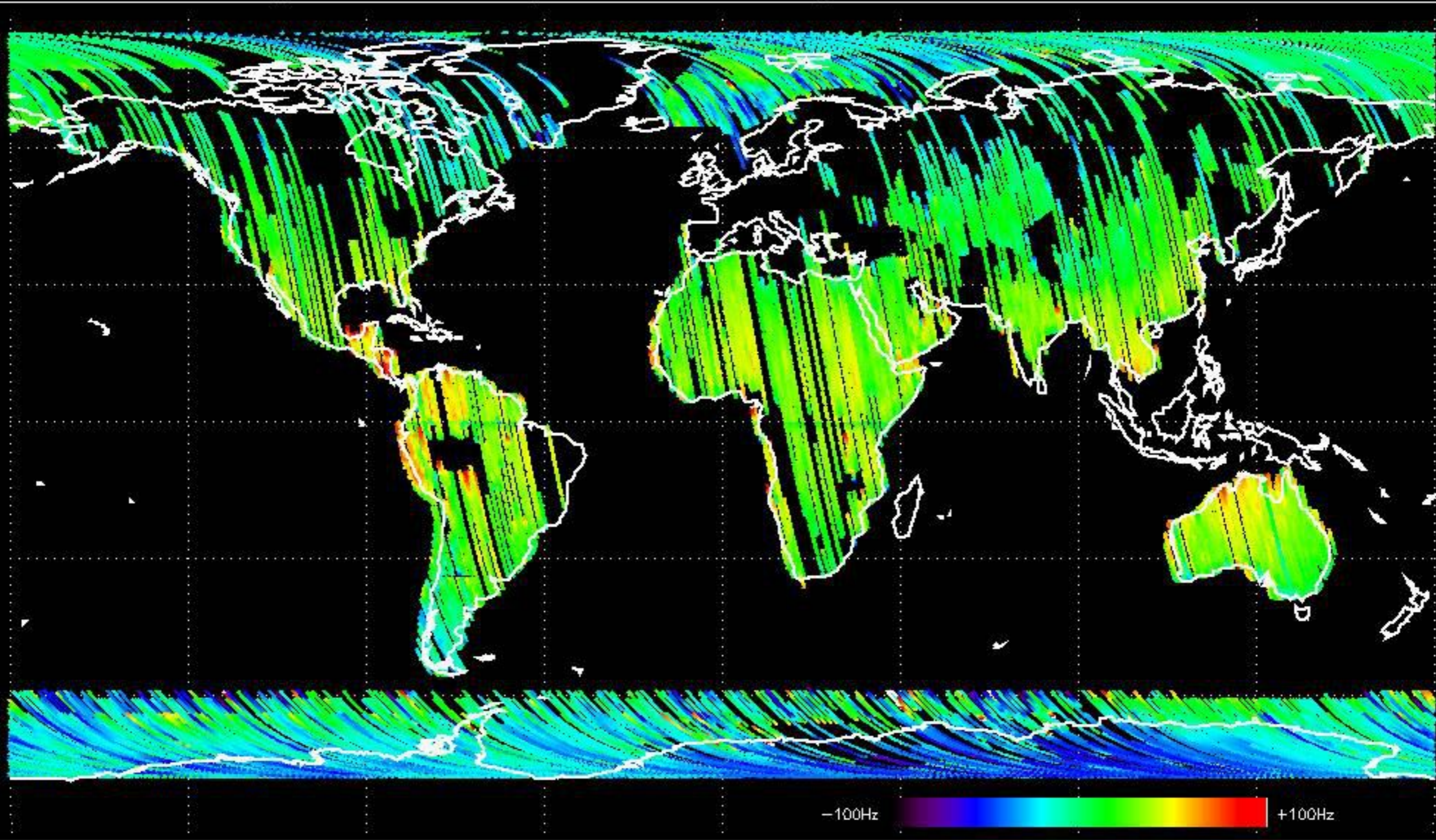
GM1 mode doppler



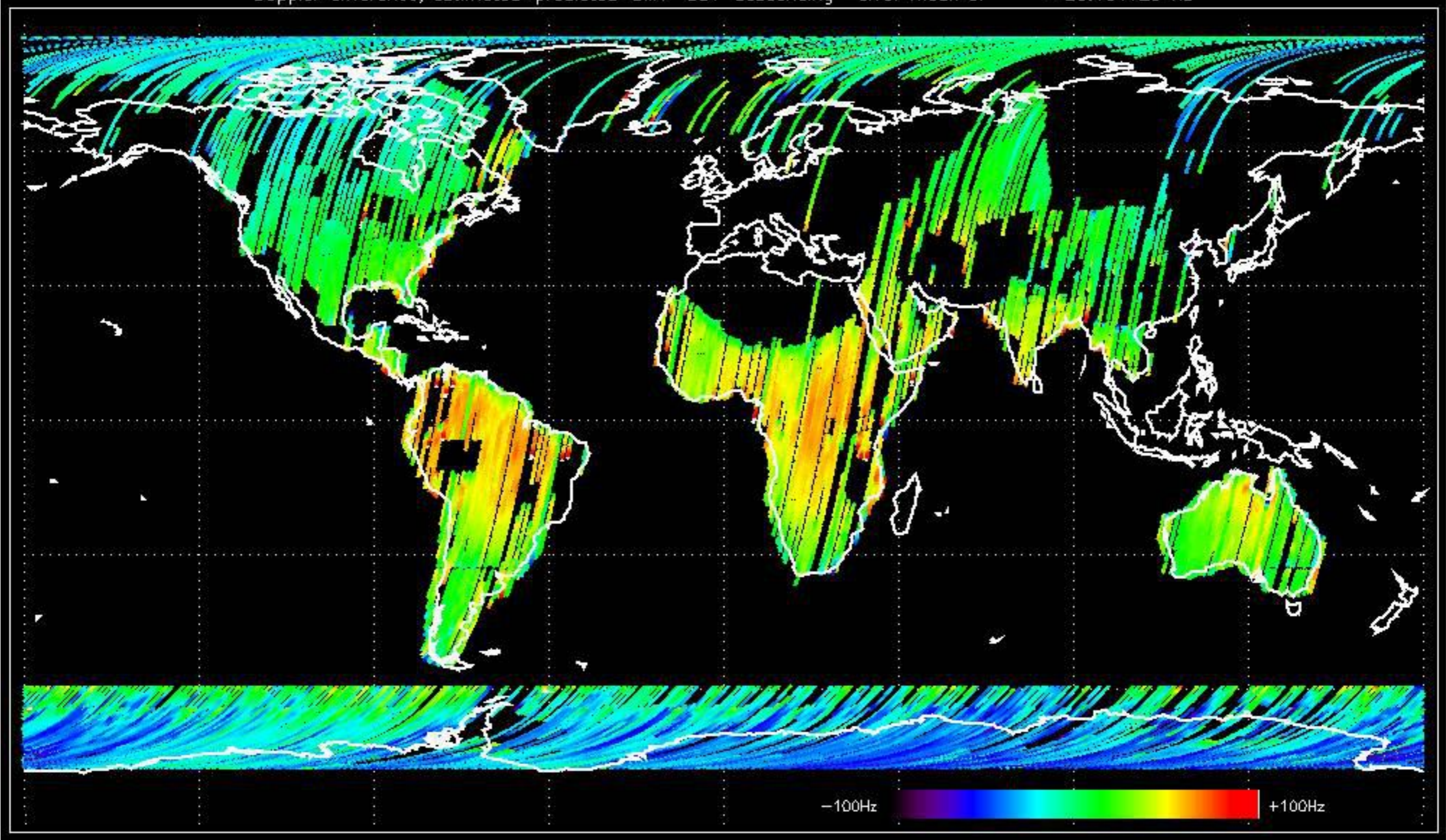
16-Jan
Date



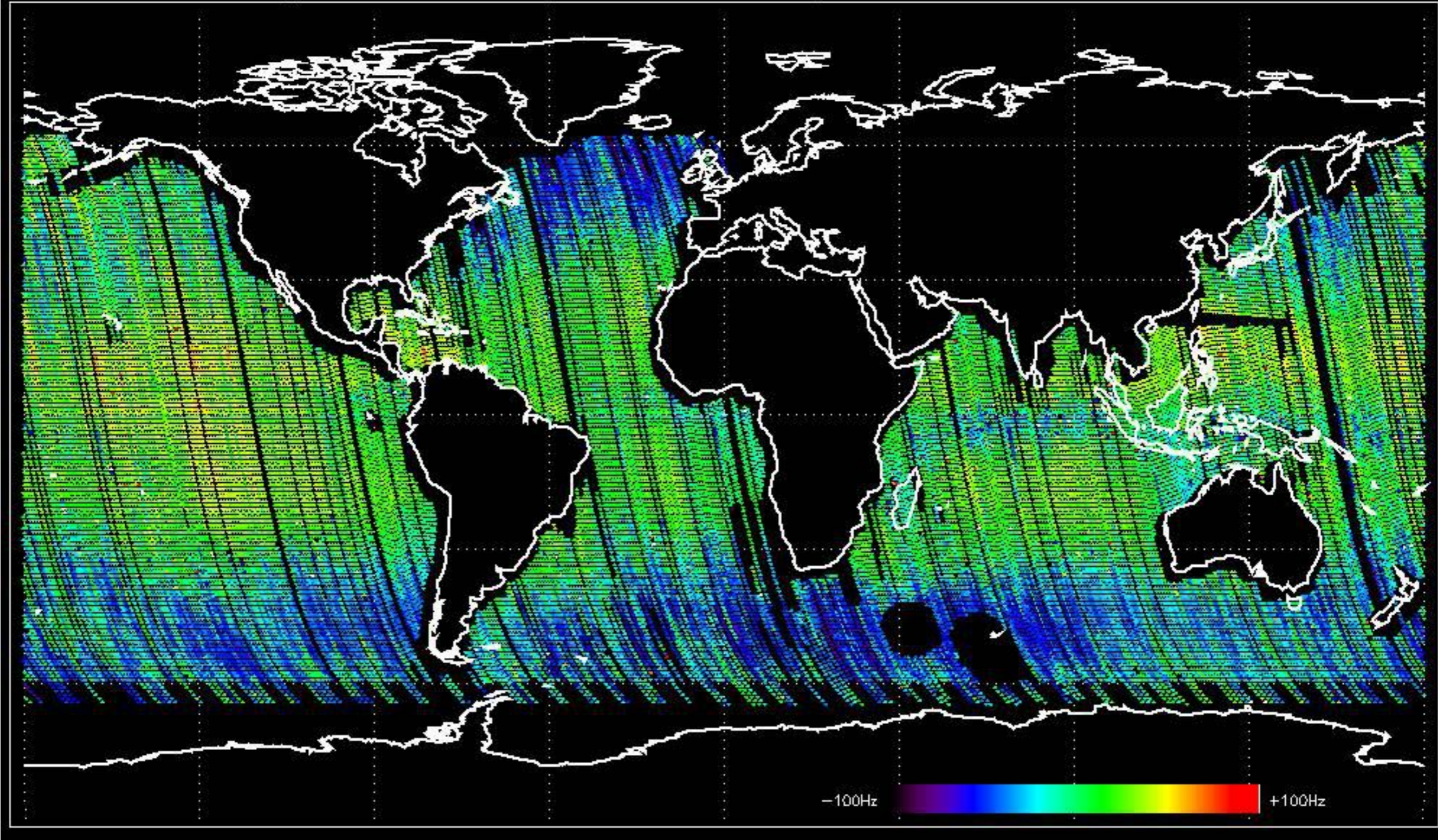
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.118823 Hz



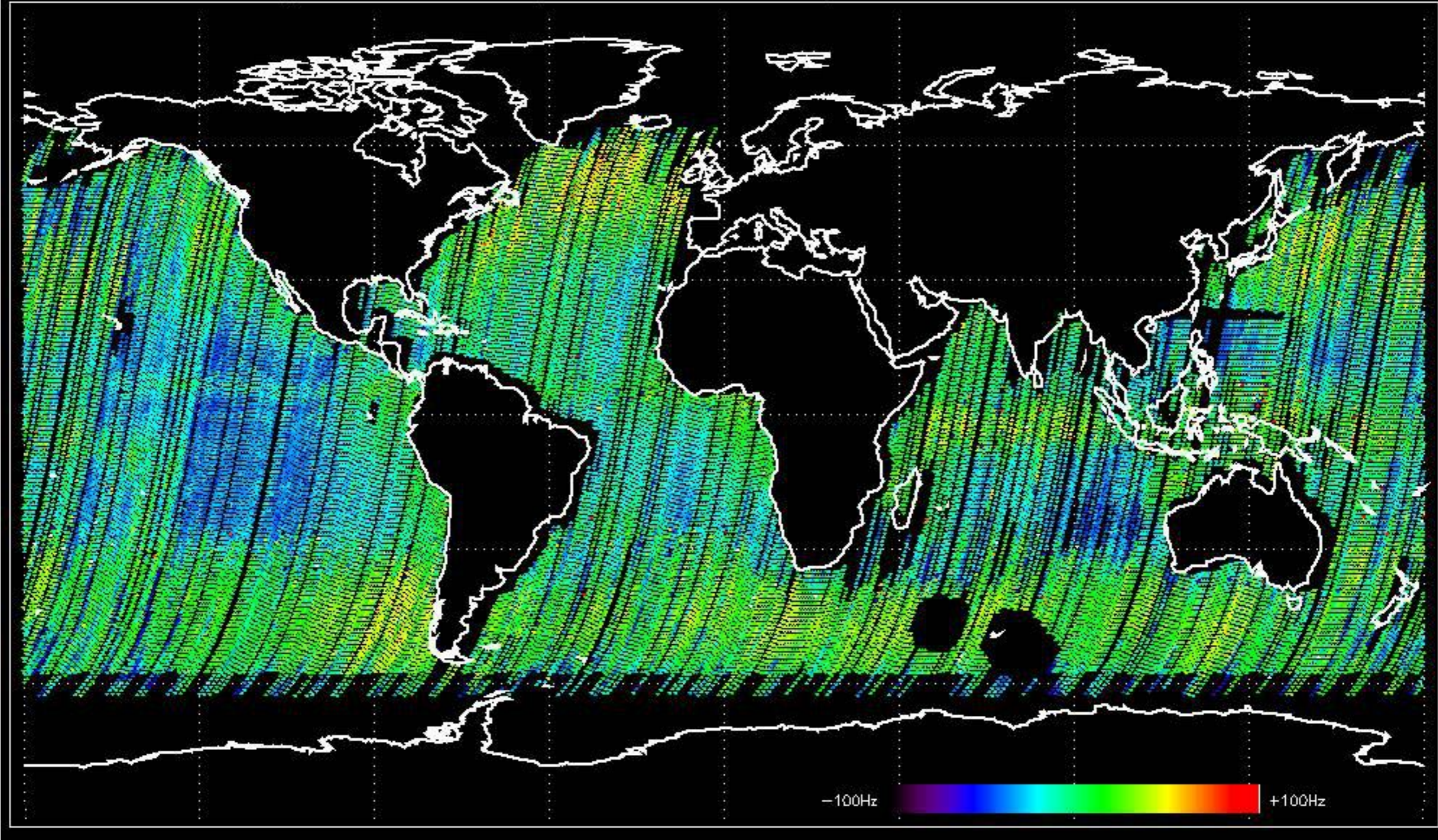
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.104123 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -34.602491 Hz

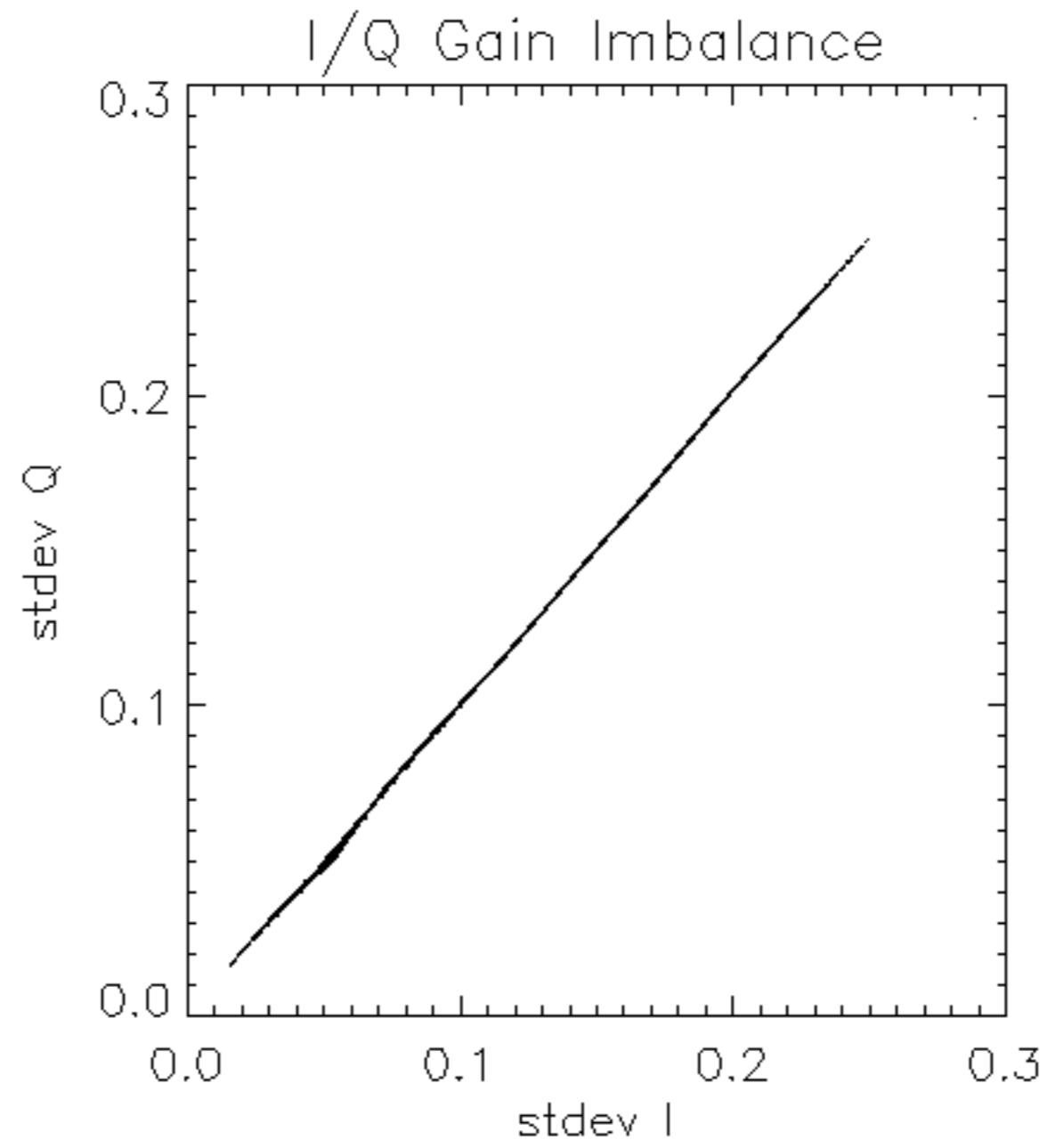


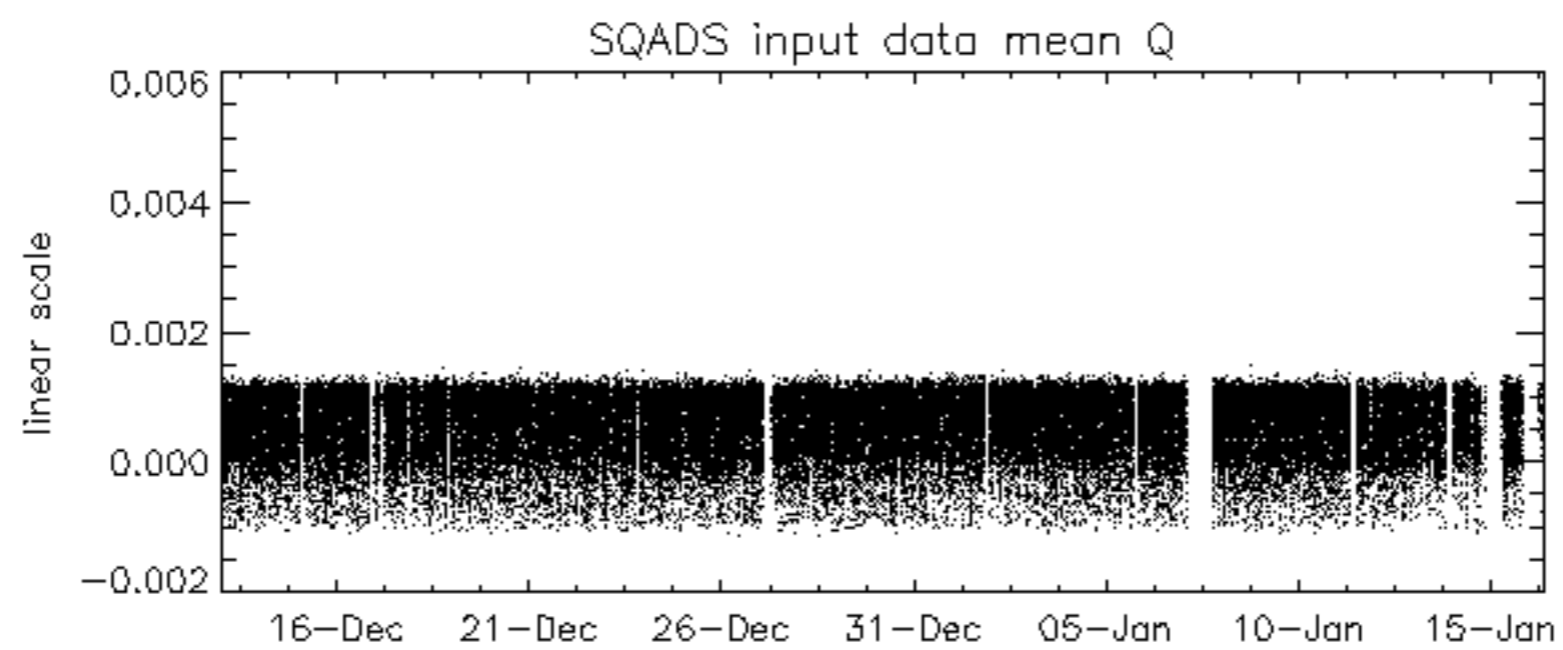
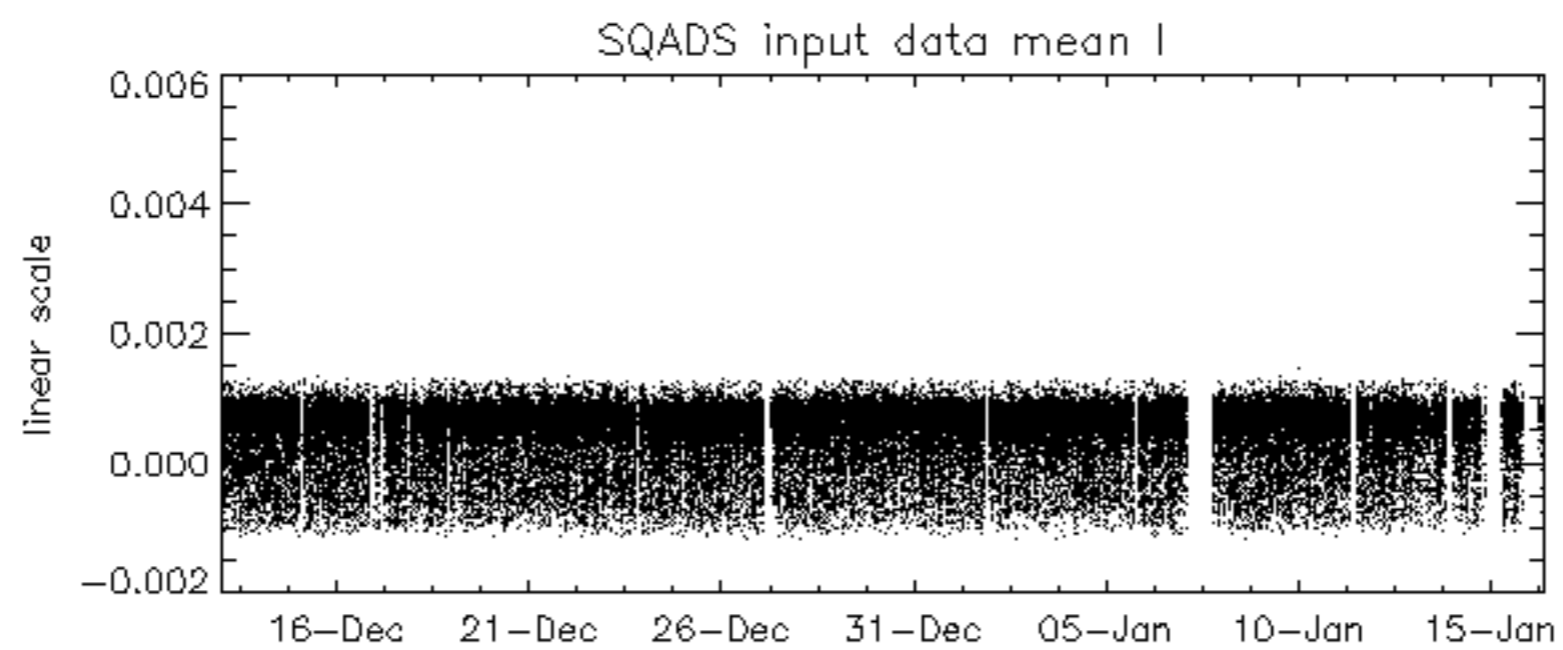
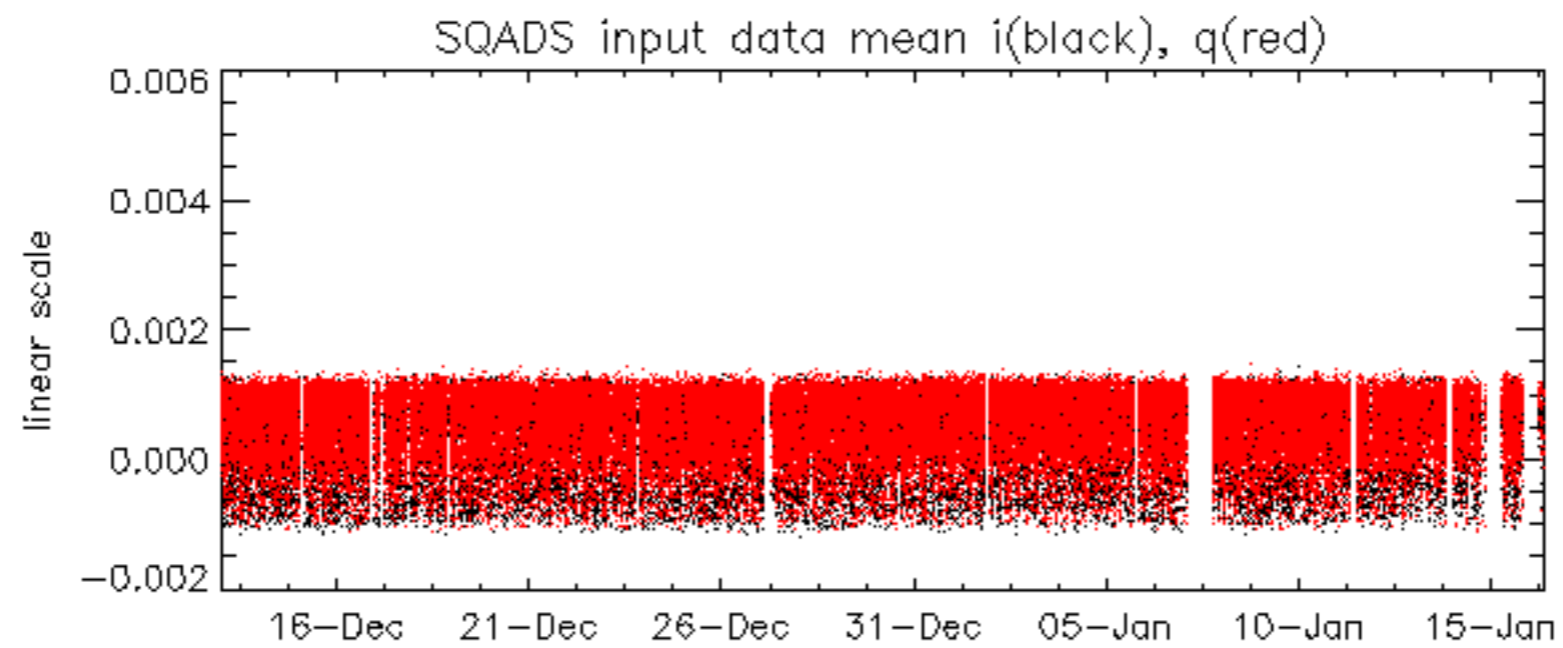
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.541267 Hz

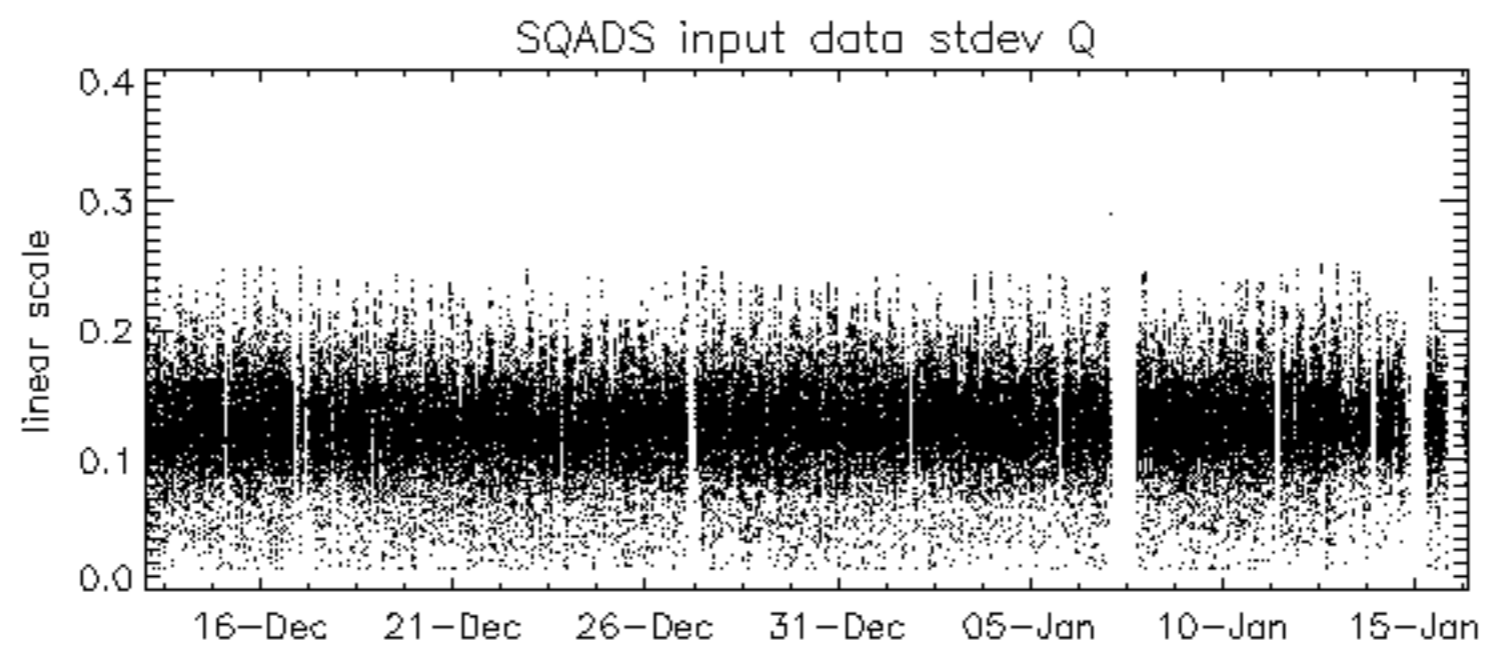
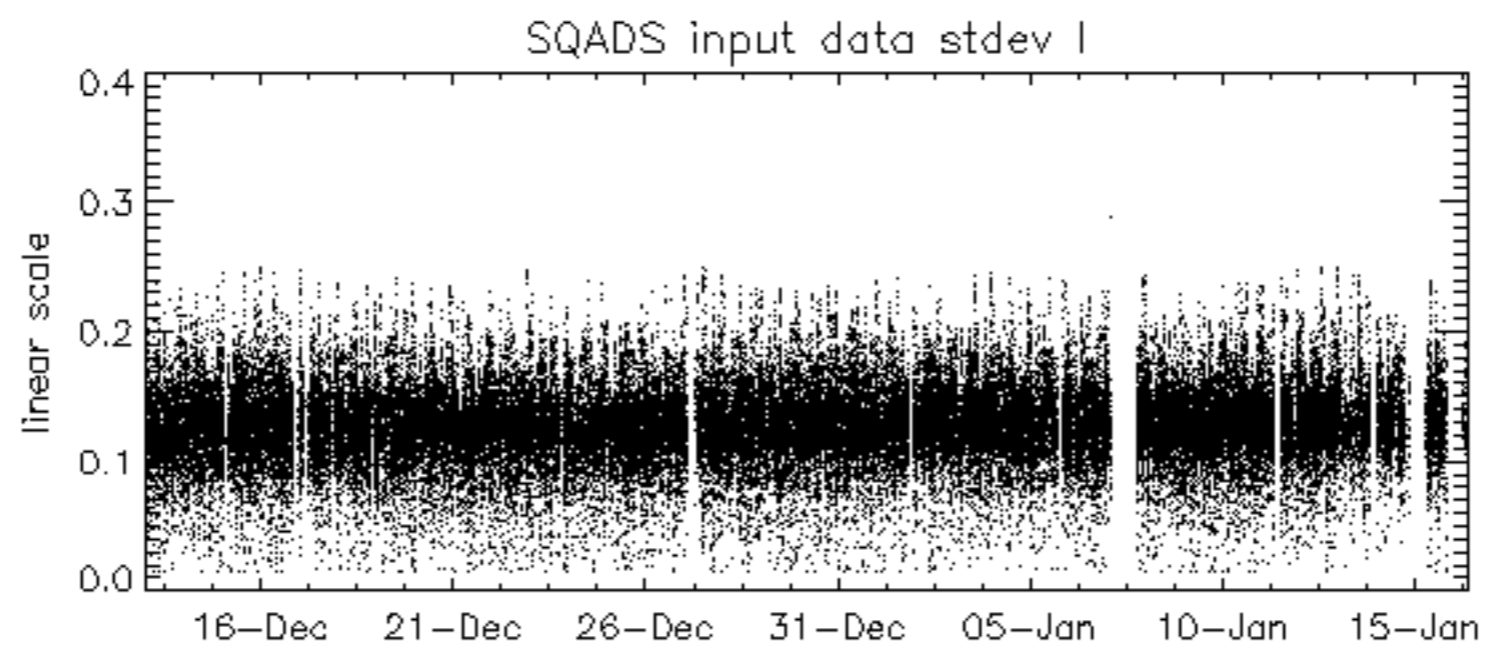
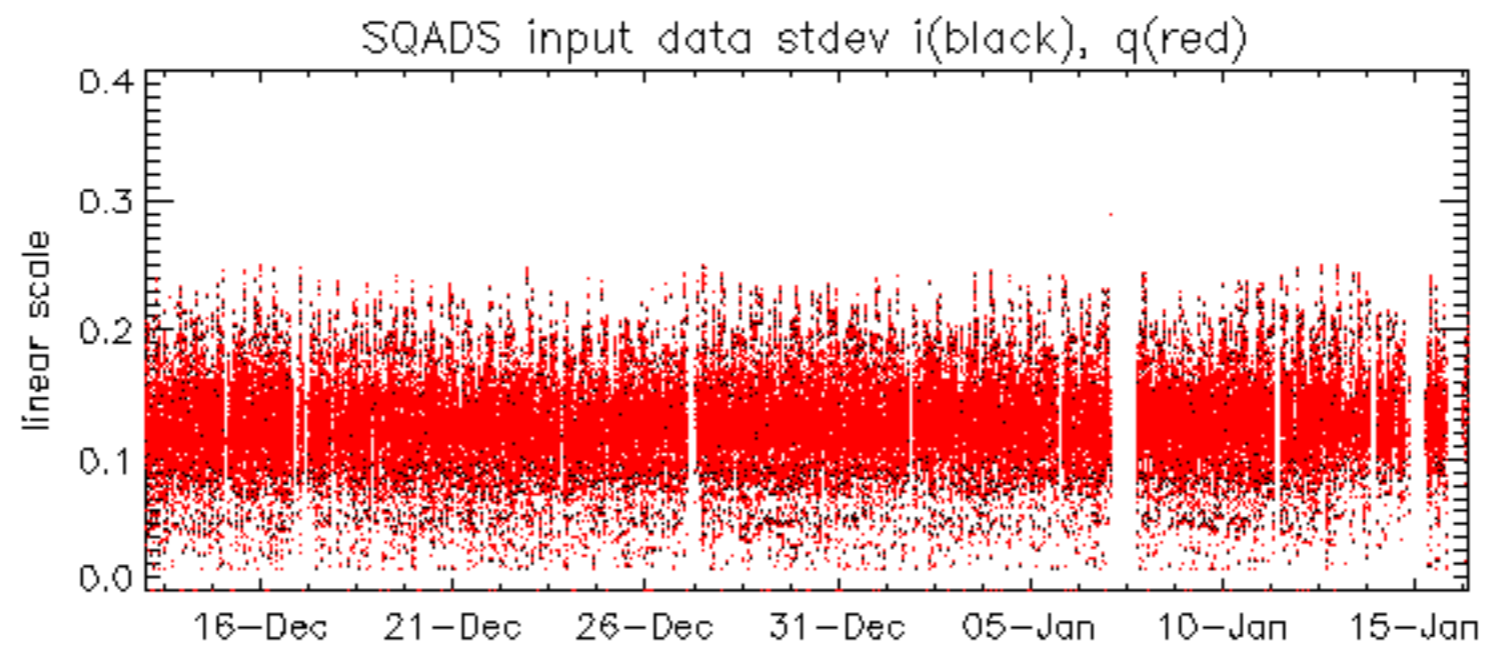


The MS mode provides an internal health check on an individual module basis.
The purpose of this mode is to identify to identify any malfunctioning modules and
to identify modules for which calibration offsets are to be applied.
No anomalies observed on available MS products:

No anomalies observed.



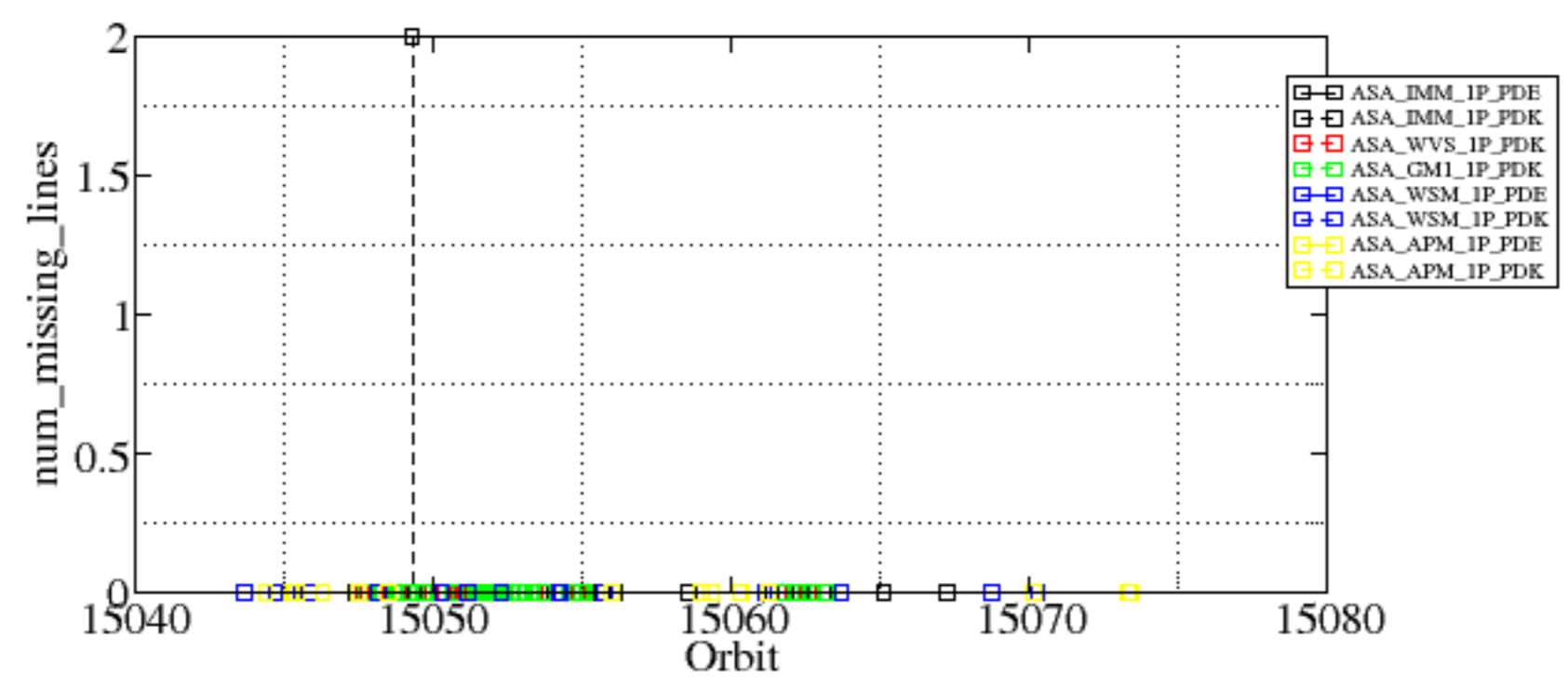


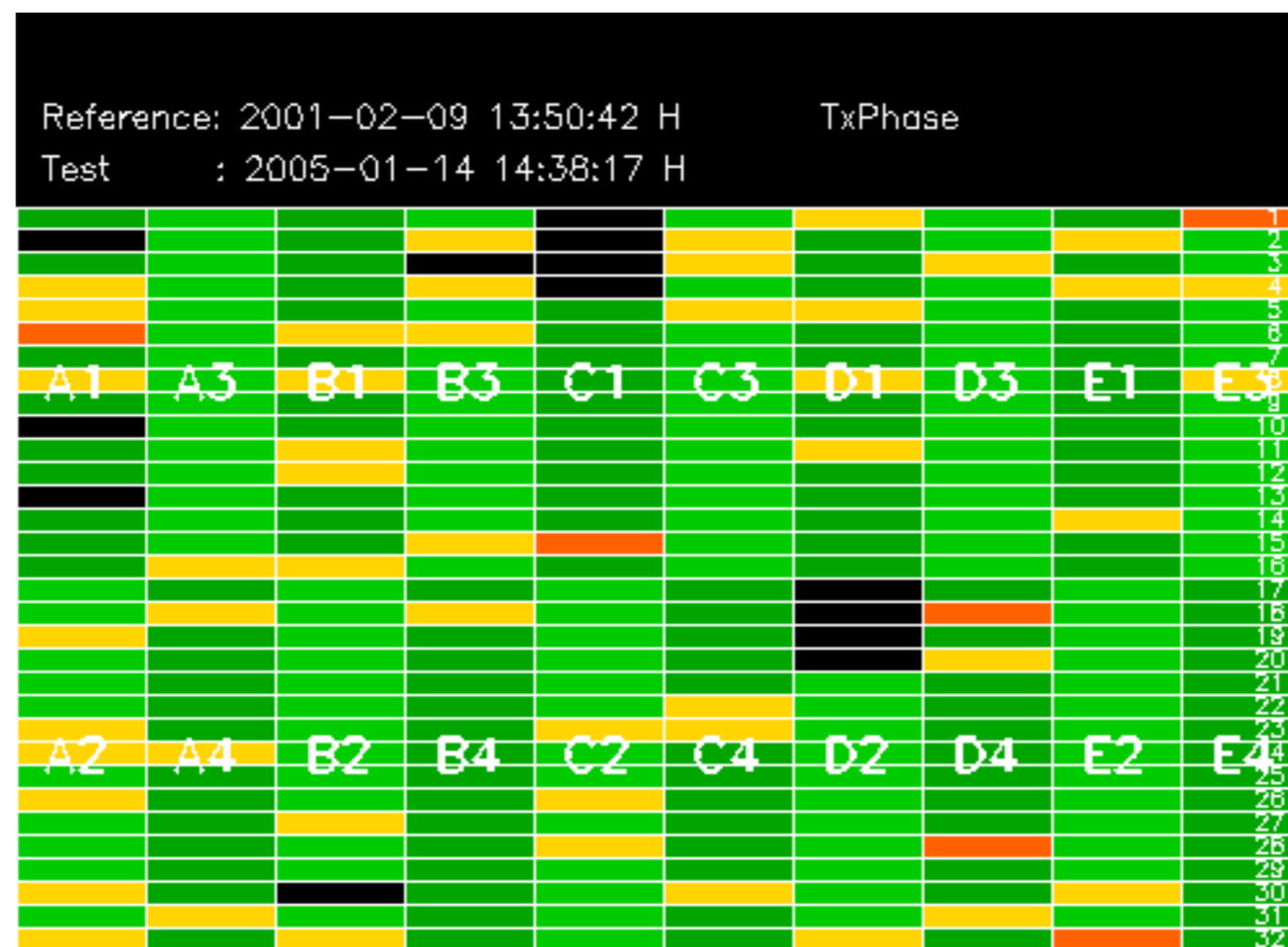


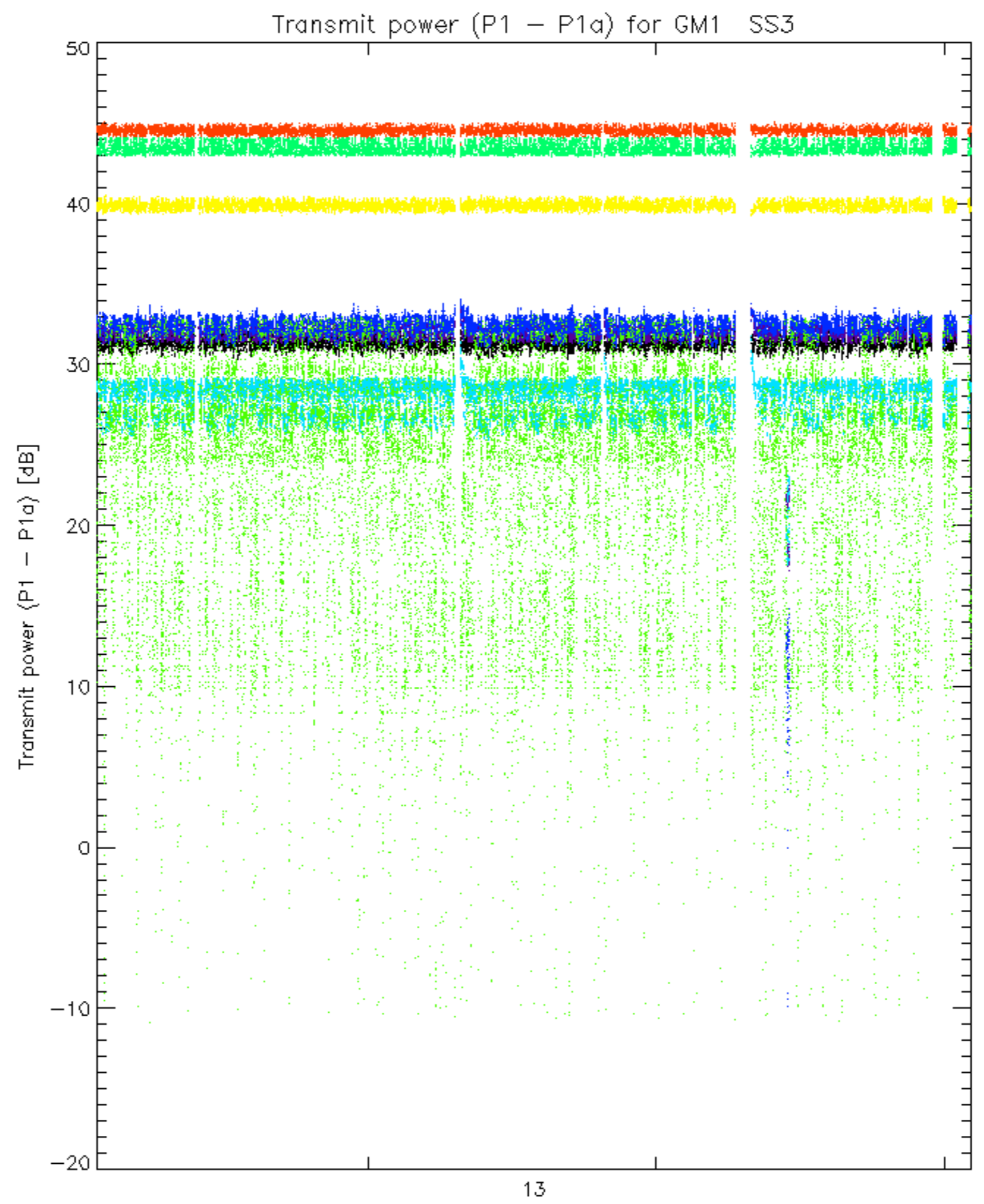
Summary of analysis for the last 3 days 2005011[567]

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

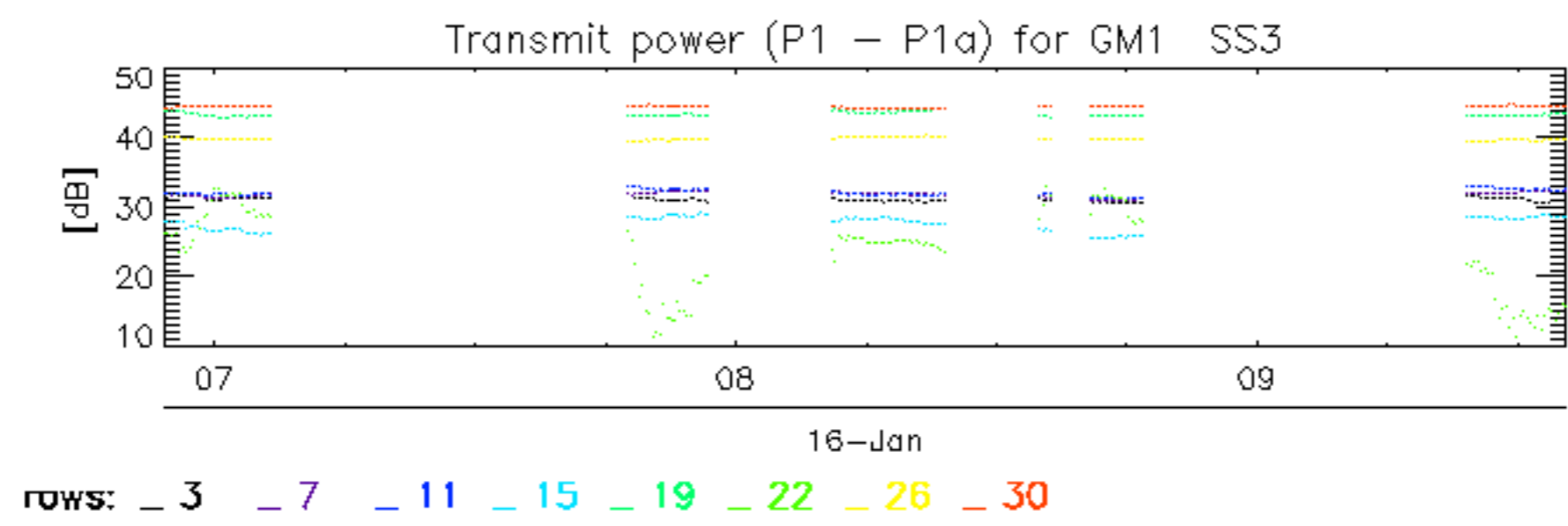
Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDK20050115_100814_000002122033_00466_15049_7252.N1	0	2
ASA_IMM_1PNPDK20050116_124036_00000362033_00482_15065_7346.N1	1	0



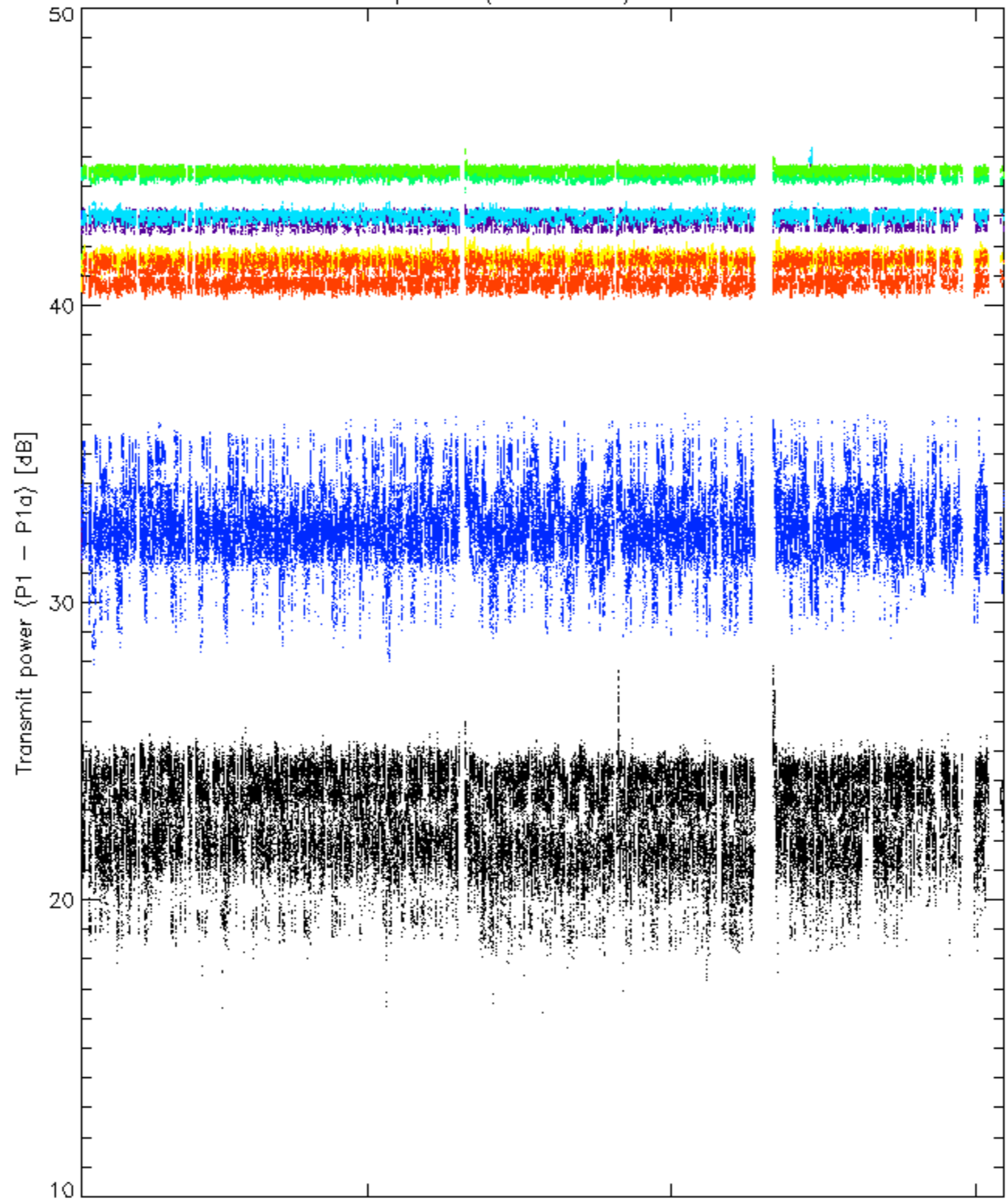




rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

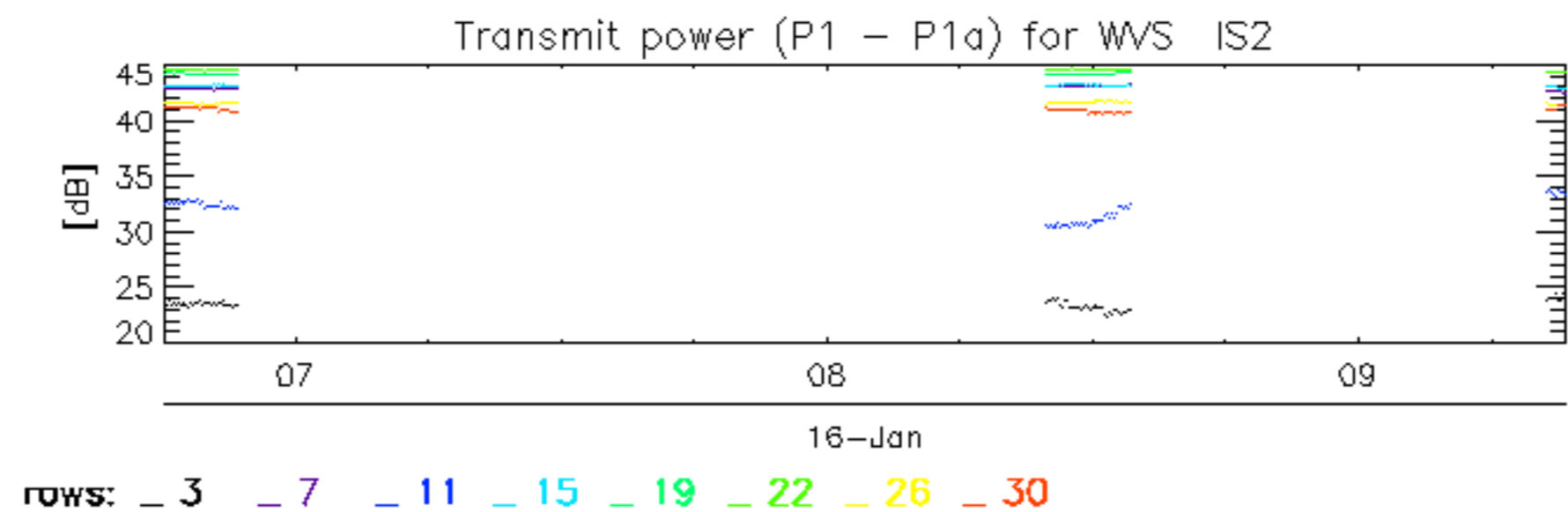


Transmit power (P1 - P1a) for WVS IS2



13

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



No unavailabilities during the reported period.