

PRELIMINARY REPORT OF 050125

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

last update on Thu Jan 27 09:21:38 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

2.2 - Auxiliary files

Summary of the auxiliary files used from 2005-01-26 00:00:00 to 2005-01-27 09:21:38

AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	8	0	0	0	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	8	0	0	0	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	8	0	0	0	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	8	0	0	0	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	16	14	0	2	0
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	16	14	0	2	0
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	16	14	0	2	0
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	16	14	0	2	0

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

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	20050123 095346
H	20050122 084447

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	-3.417123	0.007624	0.032388
7	P1	-3.082643	0.009127	0.008018
11	P1	-4.650999	0.019590	-0.021475
15	P1	-5.648625	0.036379	-0.000013
19	P1	-3.663463	0.005336	-0.006284
22	P1	-4.565724	0.015914	0.016289
26	P1	-4.939405	0.018517	-0.002070
30	P1	-7.134182	0.015034	-0.032773
3	P1	-15.921761	0.104893	0.042810
7	P1	-15.509013	0.083390	0.019854
11	P1	-20.819498	0.266653	-0.054546
15	P1	-11.620723	0.067419	0.011549
19	P1	-14.177437	0.029034	-0.002842
22	P1	-15.975302	0.419055	0.181184
26	P1	-17.659767	0.231095	0.124820
30	P1	-17.882690	0.327006	-0.091158

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.282646	0.086065	0.114783
7	P2	-22.472679	0.143170	0.121405
11	P2	-14.732951	0.142234	0.209747
15	P2	-7.126021	0.106417	0.060573
19	P2	-9.712482	0.150047	0.060753
22	P2	-17.086216	0.096986	0.126527
26	P2	-16.509907	0.104606	0.055449

30	P2	-18.932602	0.081446	0.040889
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P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.196181	0.006796	0.015544
7	P3	-8.196178	0.006796	0.015548
11	P3	-8.196176	0.006796	0.015559
15	P3	-8.196208	0.006798	0.015722
19	P3	-8.196209	0.006798	0.015736
22	P3	-8.196204	0.006798	0.015718
26	P3	-8.196239	0.006805	0.015801
30	P3	-8.196267	0.006801	0.014843

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	-2.816183	0.018895	0.024136
7	P1	-2.958761	0.067417	-0.008846
11	P1	-3.949368	0.030661	-0.029702
15	P1	-3.515151	0.031306	-0.052577
19	P1	-3.607134	0.014014	0.017947
22	P1	-5.652296	0.068426	-0.080507
26	P1	-6.691670	0.129398	-0.806794
30	P1	-6.295562	0.046821	-0.015096
3	P1	-10.774110	0.084963	0.018220
7	P1	-10.147282	0.183793	0.016339
11	P1	-12.522510	0.132295	-0.113513

15	P1	-11.756825	0.075781	-0.047107
19	P1	-15.627980	0.055651	0.080997
22	P1	-24.071152	1.806969	0.114447
26	P1	-15.024400	0.435437	-0.660528
30	P1	-20.034710	0.874517	0.236121

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.976219	0.049656	0.074937
7	P2	-22.524183	0.119280	0.156968
11	P2	-10.541407	0.049635	0.208372
15	P2	-5.035404	0.024529	0.036329
19	P2	-6.926067	0.036792	0.045597
22	P2	-7.247974	0.048722	0.059061
26	P2	-23.929226	0.086663	0.091238
30	P2	-21.973949	0.053855	0.055104

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.031724	0.002876	0.013058
7	P3	-8.031756	0.002885	0.013093
11	P3	-8.031759	0.002876	0.012679
15	P3	-8.031857	0.002877	0.013369
19	P3	-8.031724	0.002889	0.012613
22	P3	-8.031837	0.002864	0.013003
26	P3	-8.031754	0.002882	0.013122
30	P3	-8.031734	0.002879	0.013169

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	0.000465746
	stdev	2.19082e-07
MEAN Q	mean	0.000539595
	stdev	2.33457e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.128364
	stdev	0.000967218
STDEV Q	mean	0.128597
	stdev	0.000978093



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

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

Descending

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

Acsending

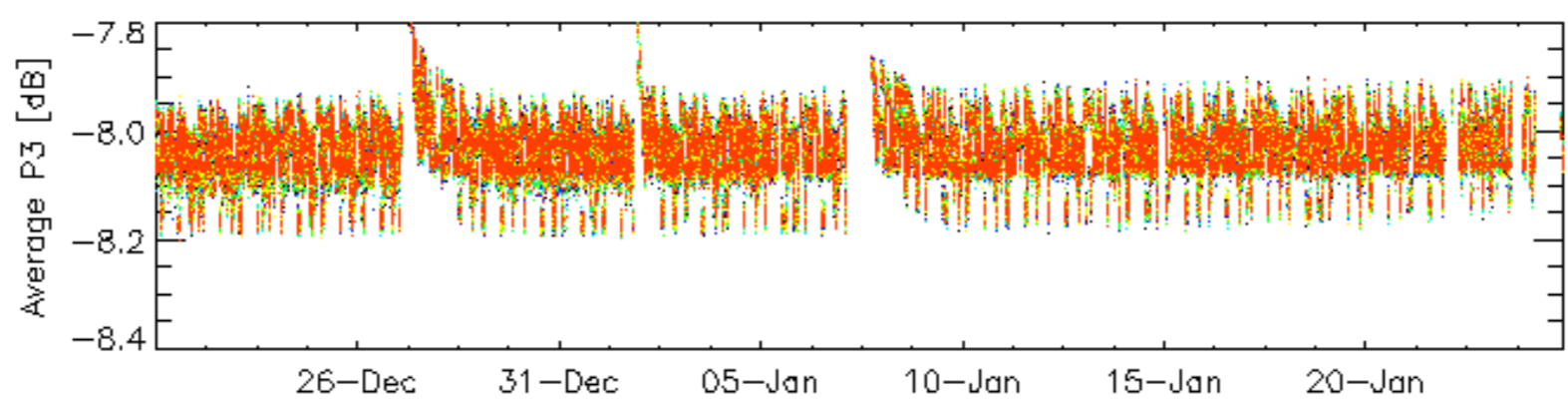
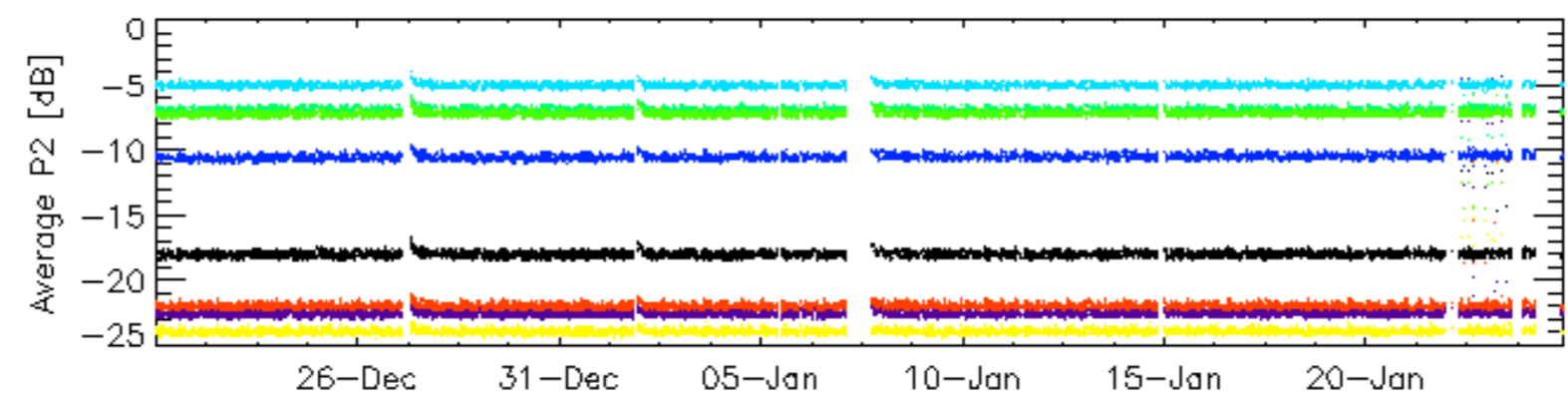
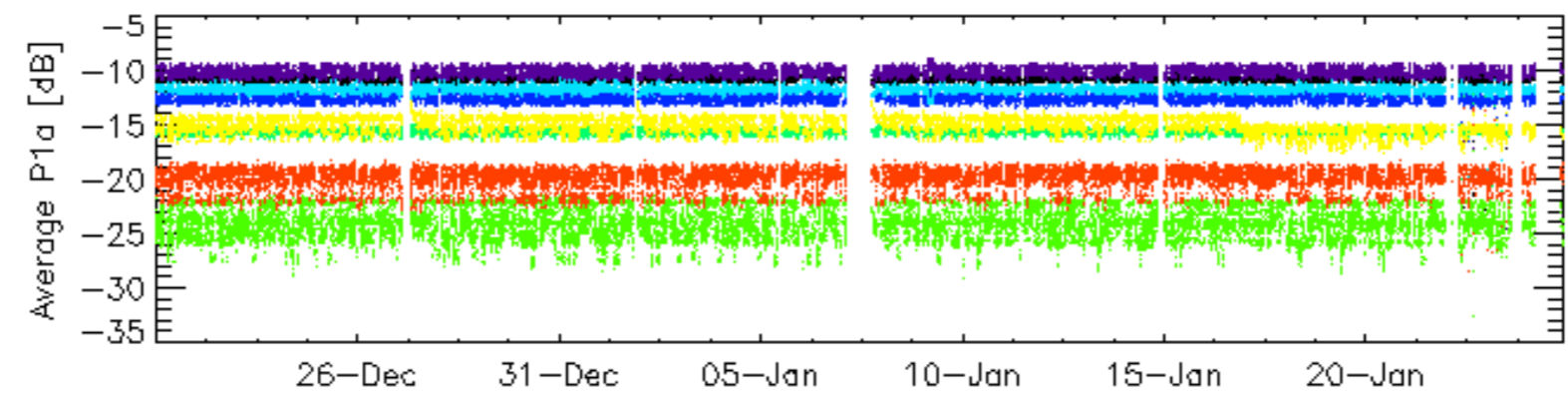
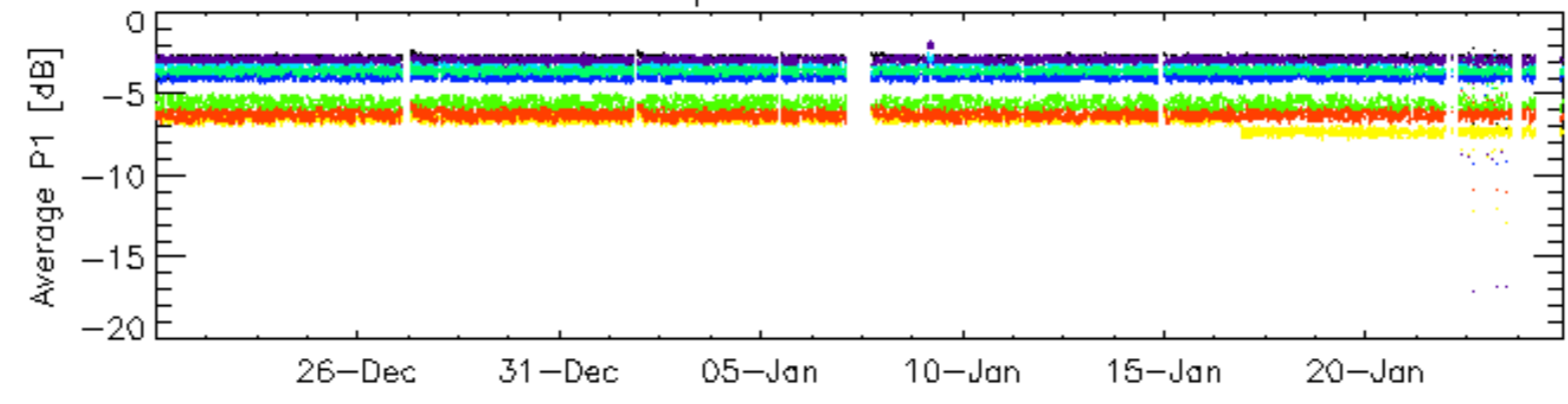
Descending

7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

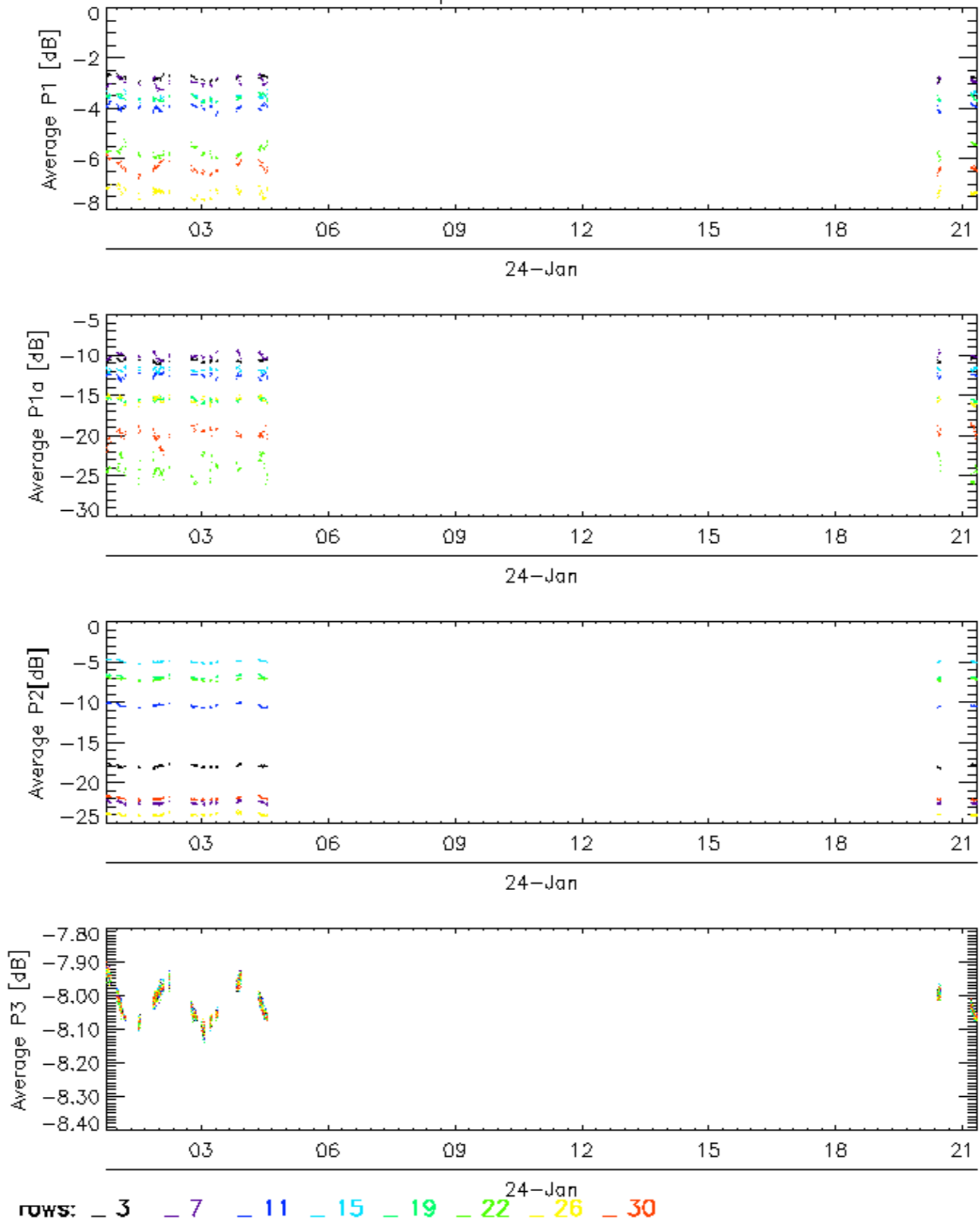


Cal pulses for GM1 SS3

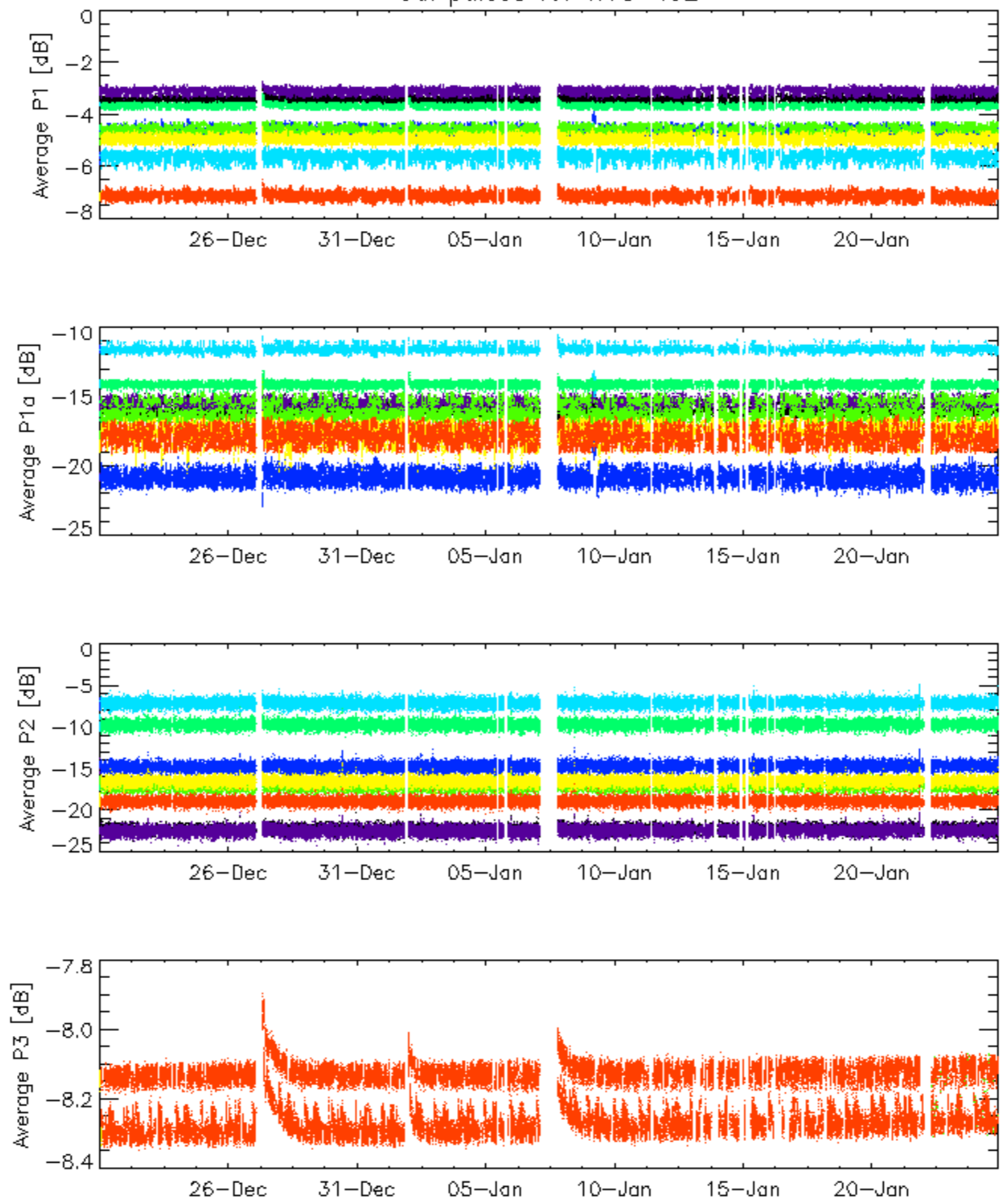


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

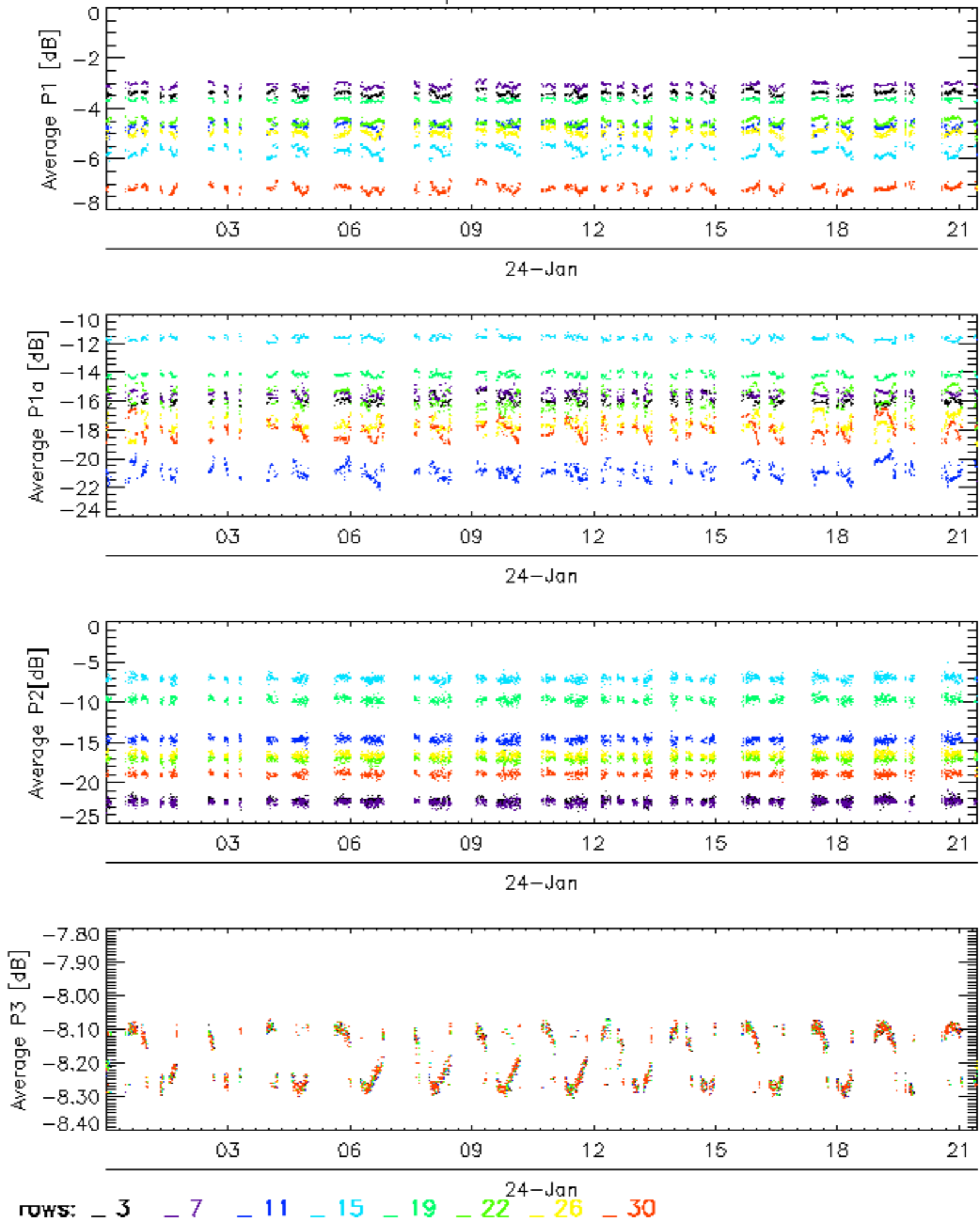


Cal pulses for WVS IS2



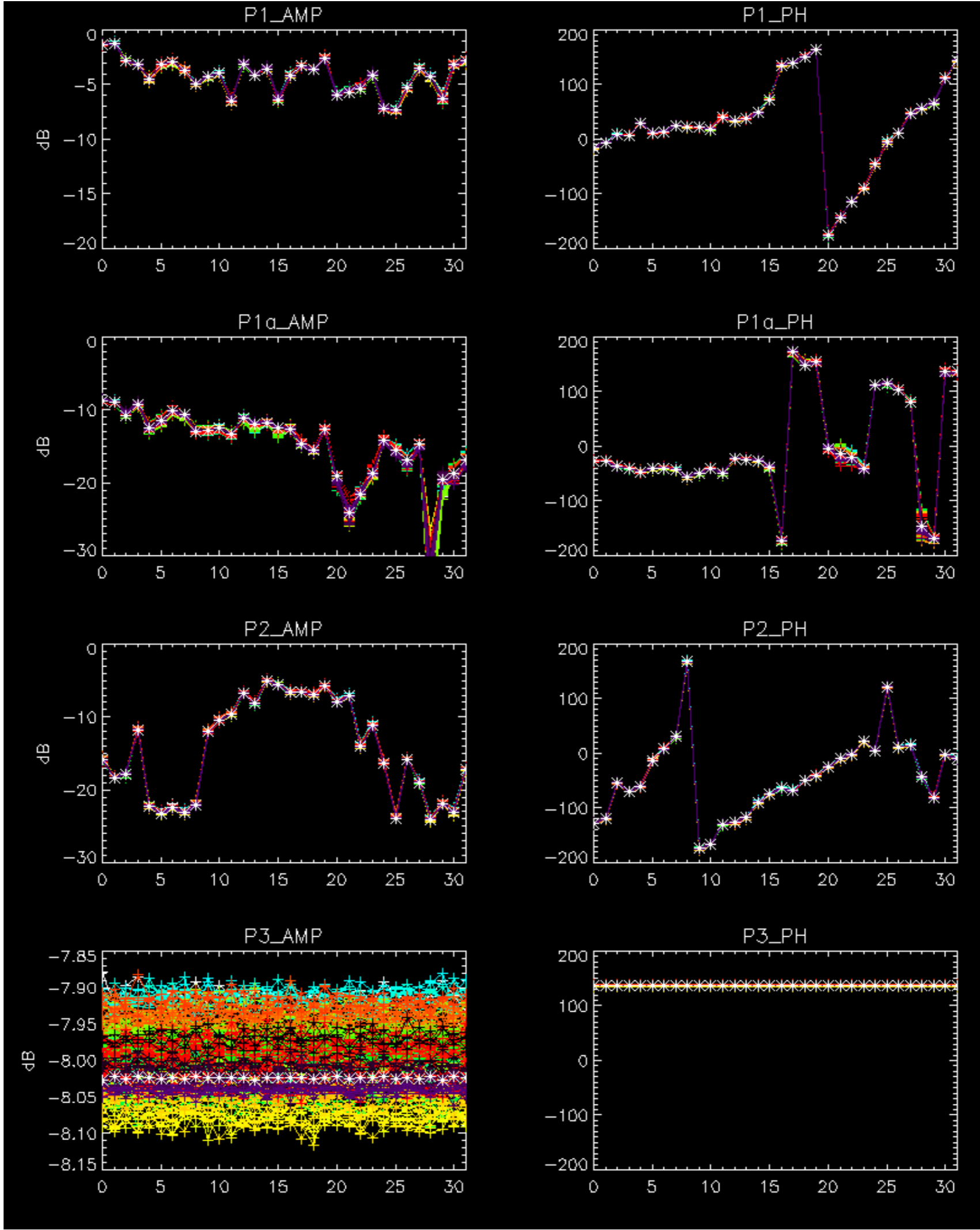
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

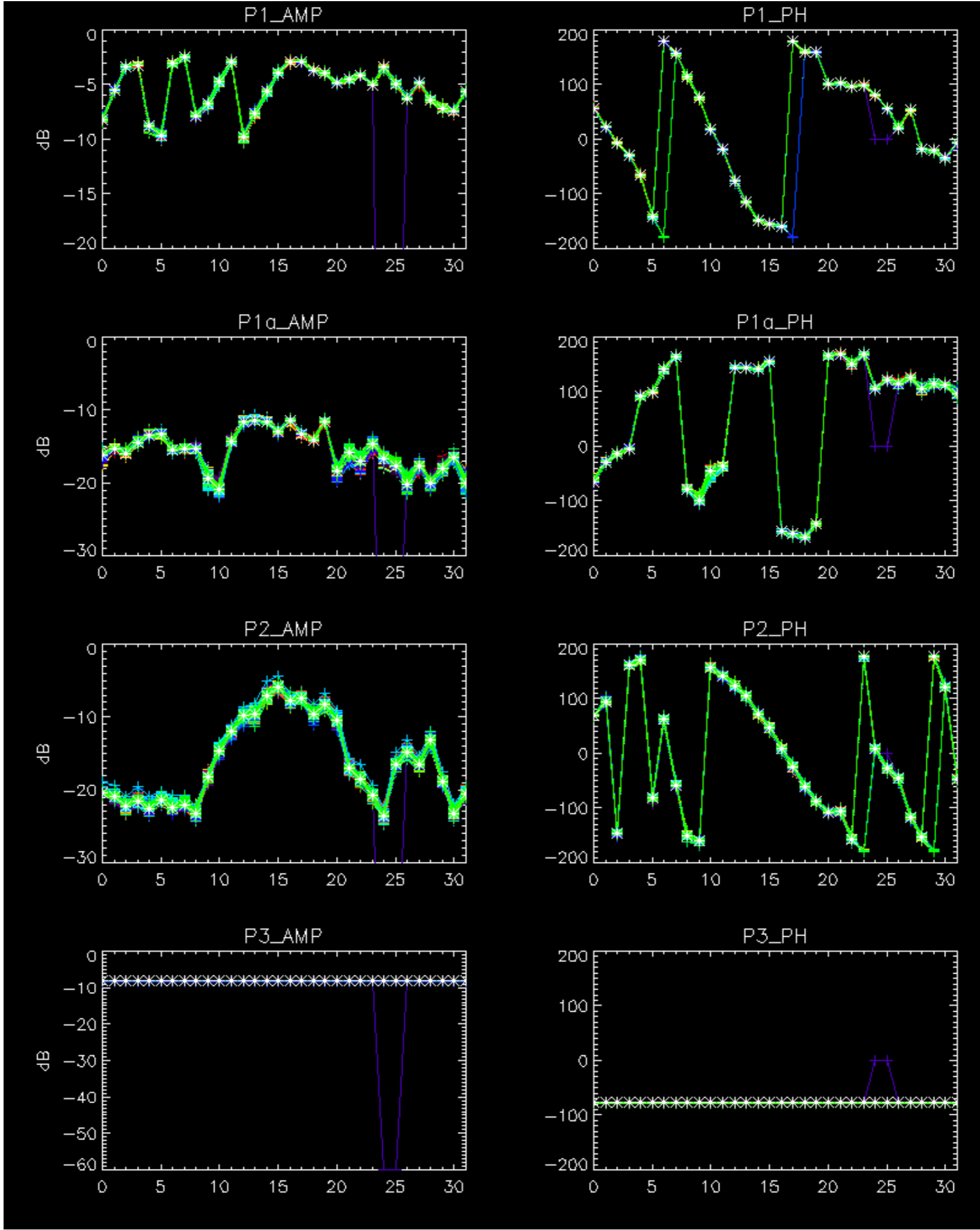
Cal pulses for WVS IS2



No anomalies observed on available browse products

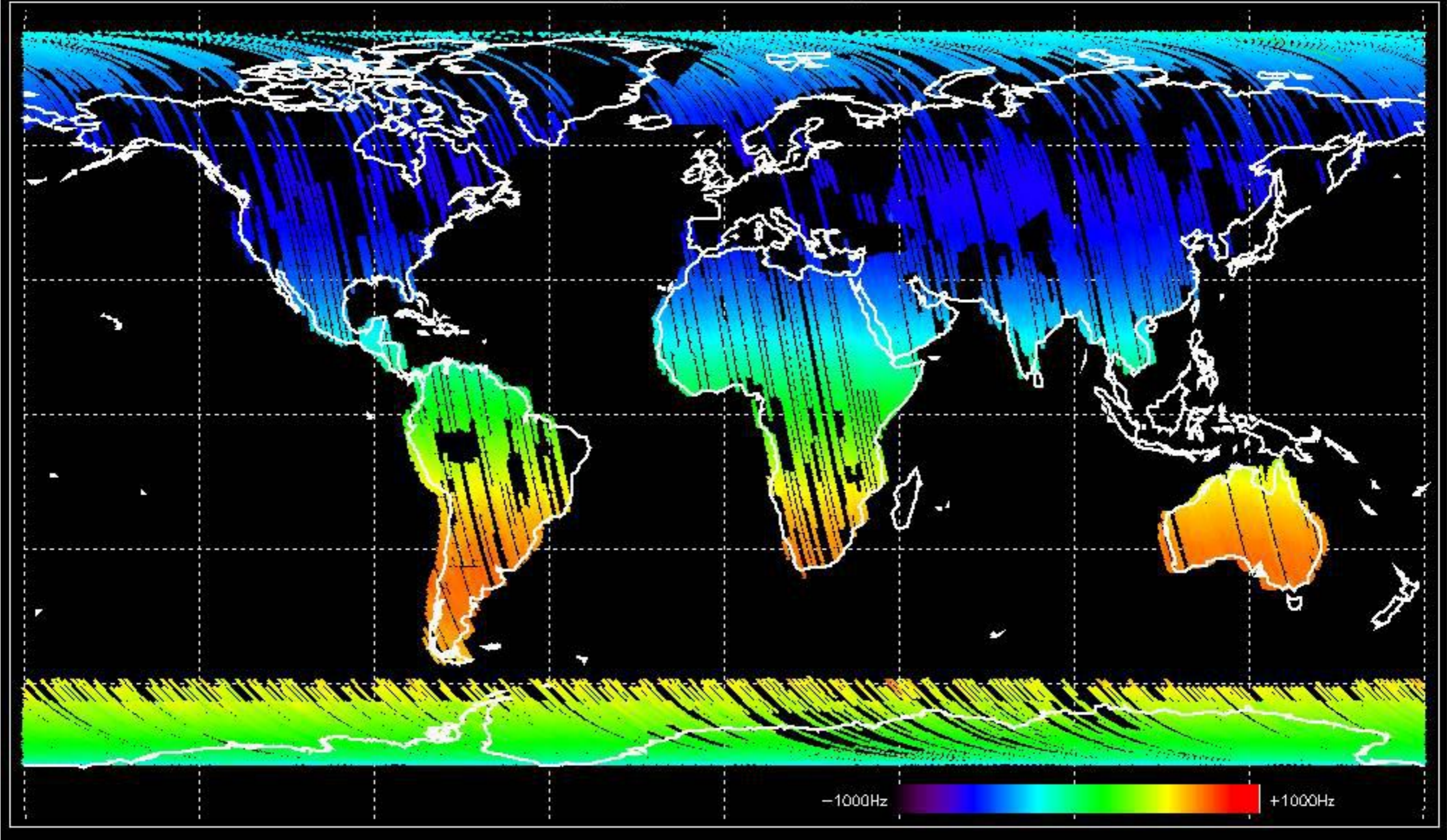
No anomalies observed.



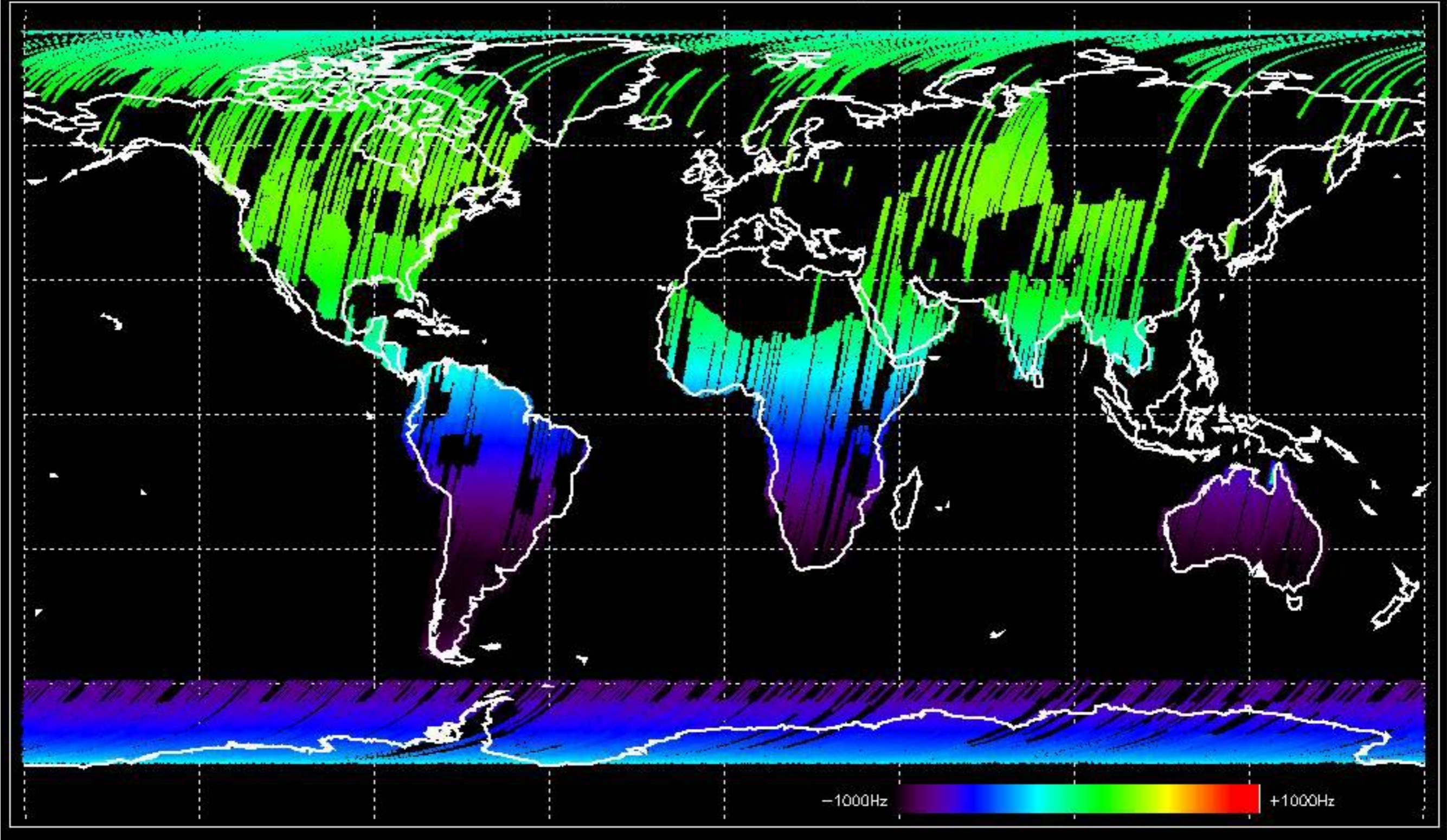


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

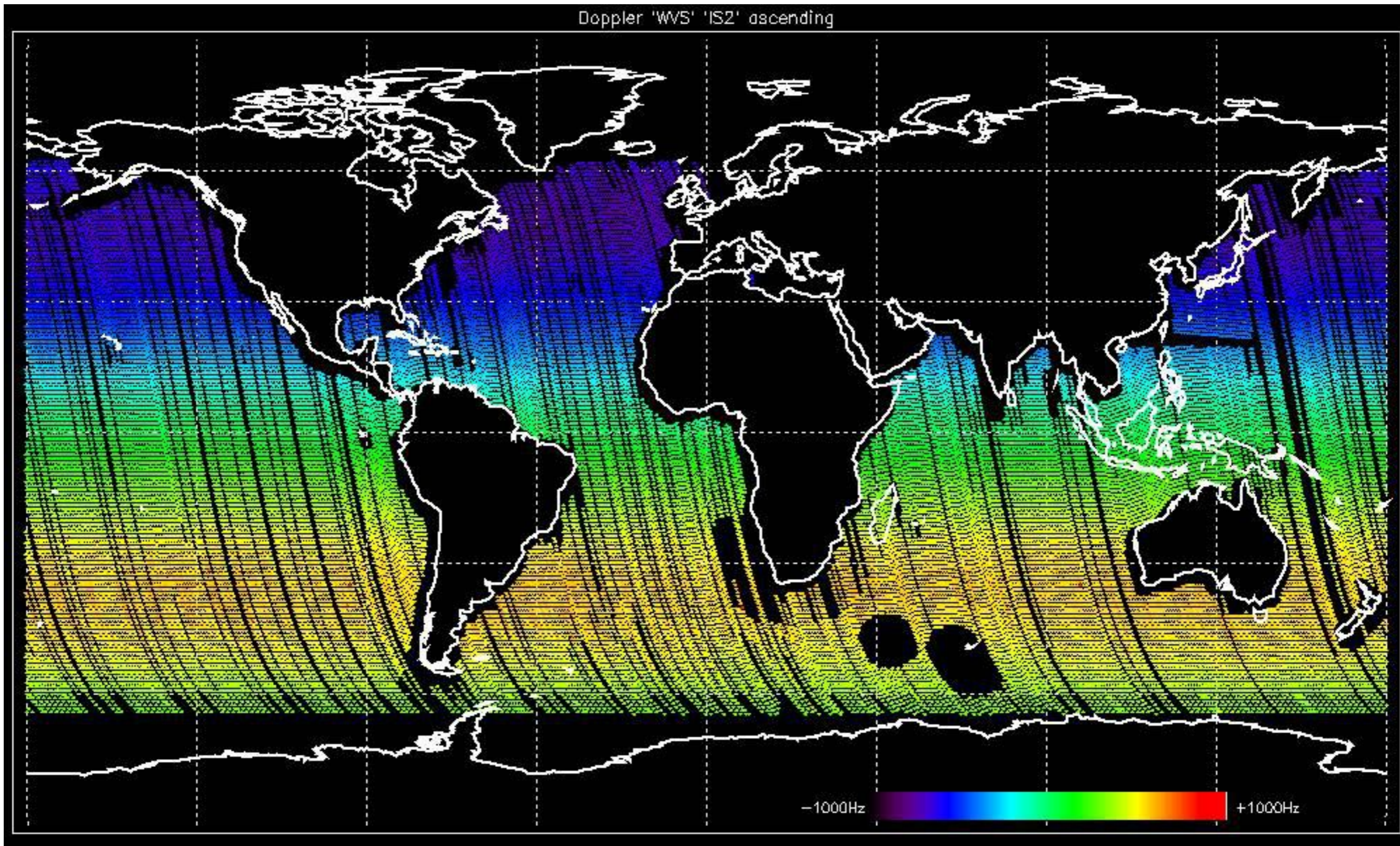
Doppler 'GM1' 'SS1' ascending



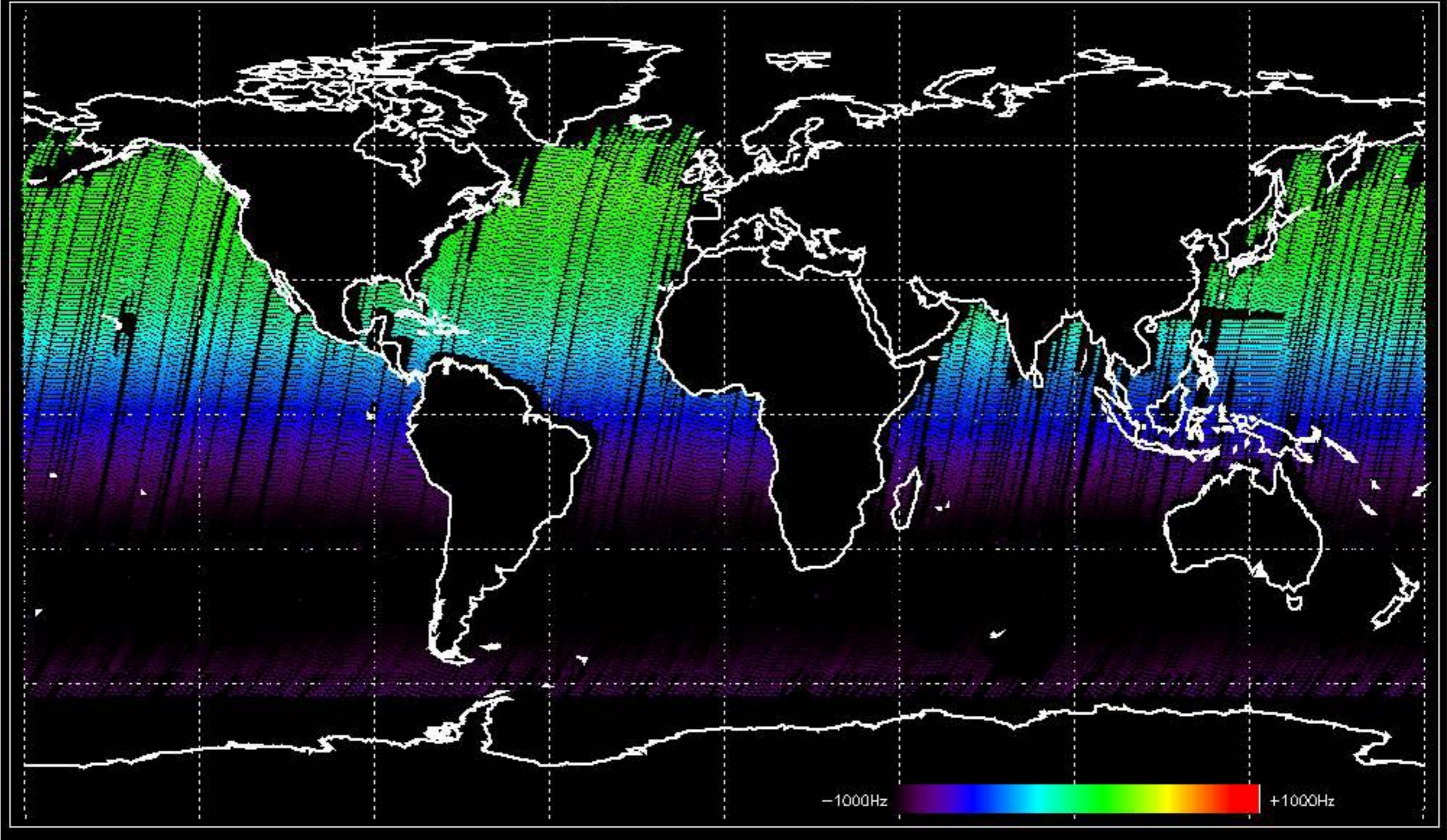
Doppler 'GM1' 'SS1' descending



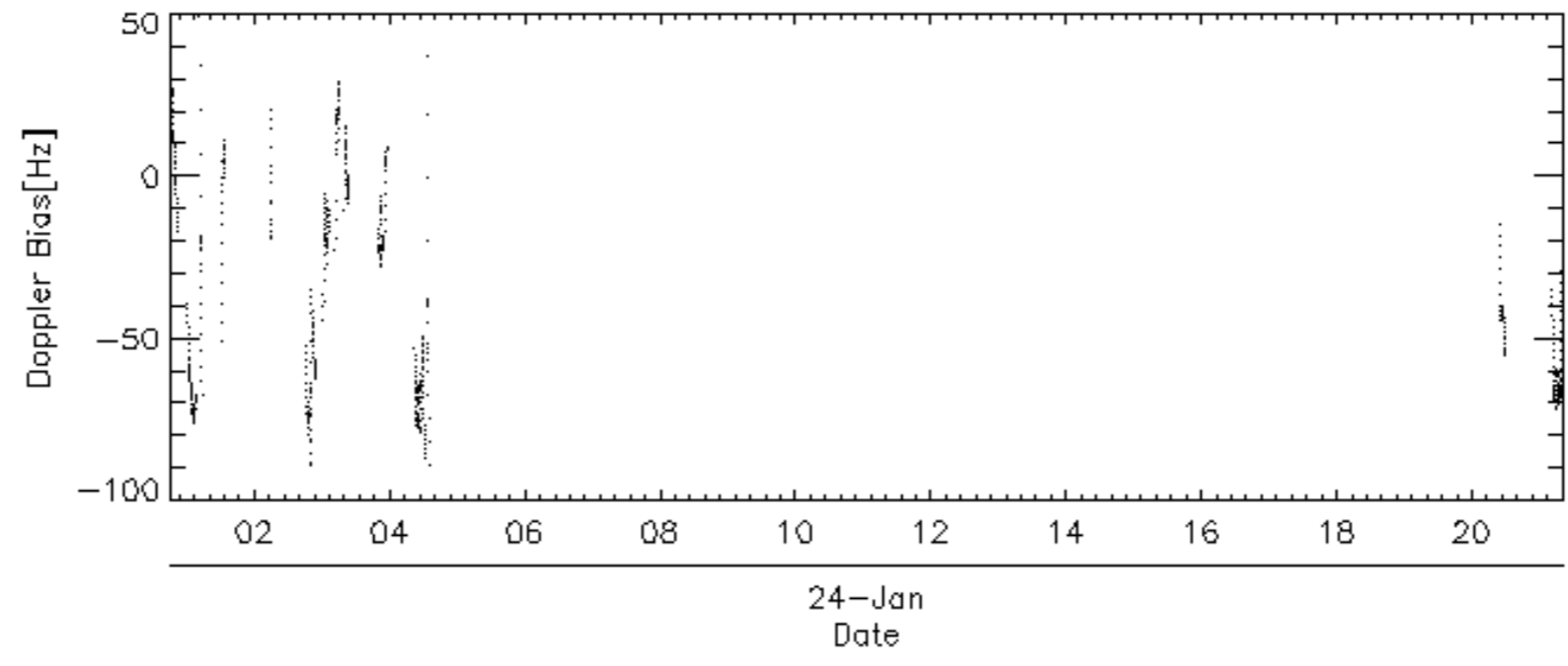
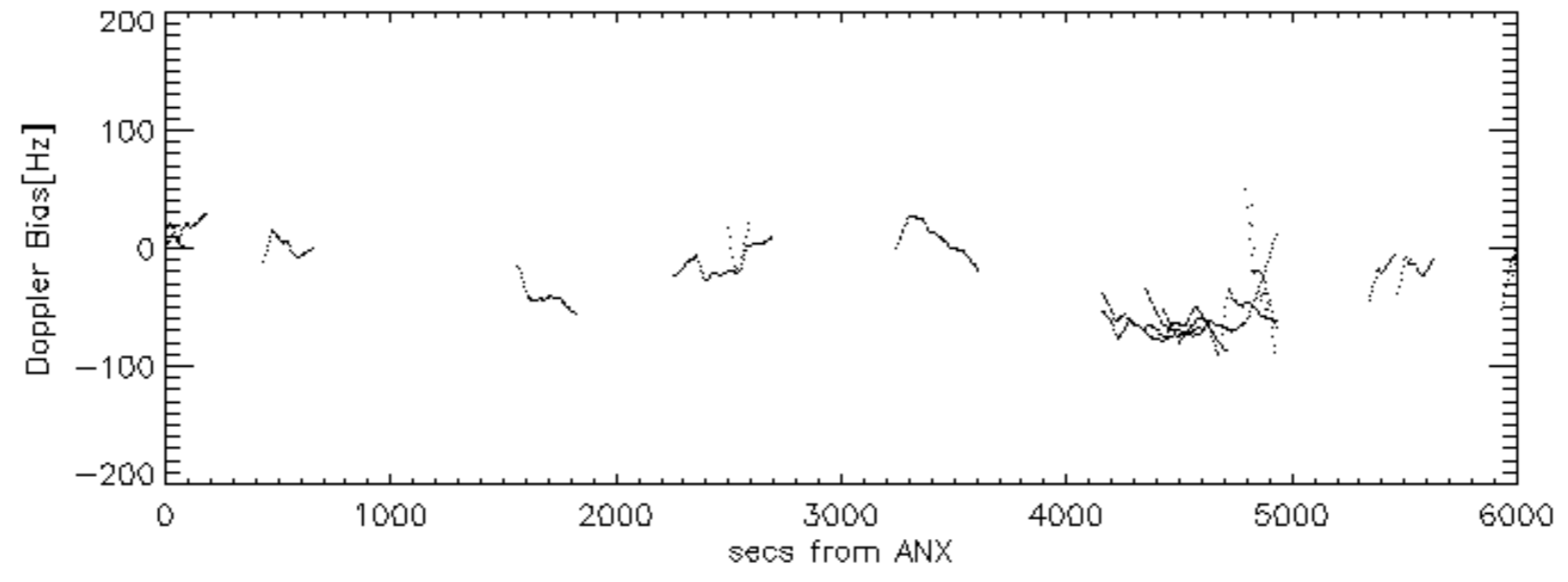
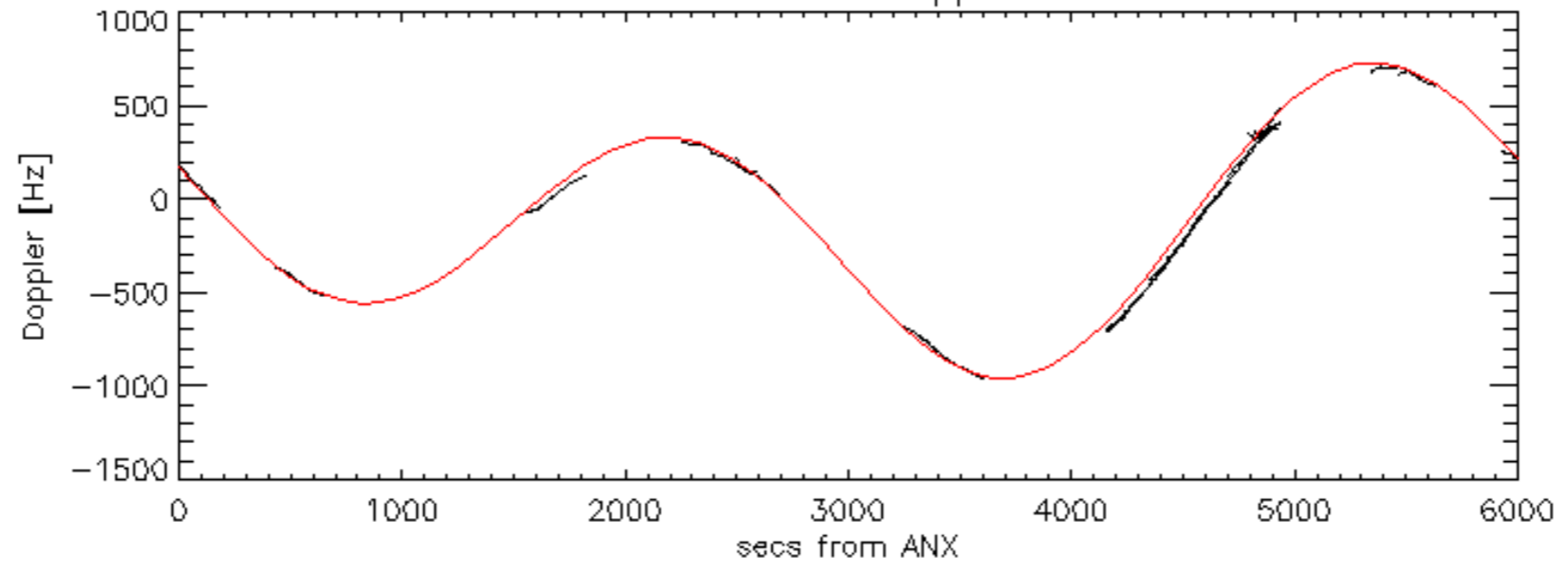
Doppler 'WVS' 'IS2' ascending

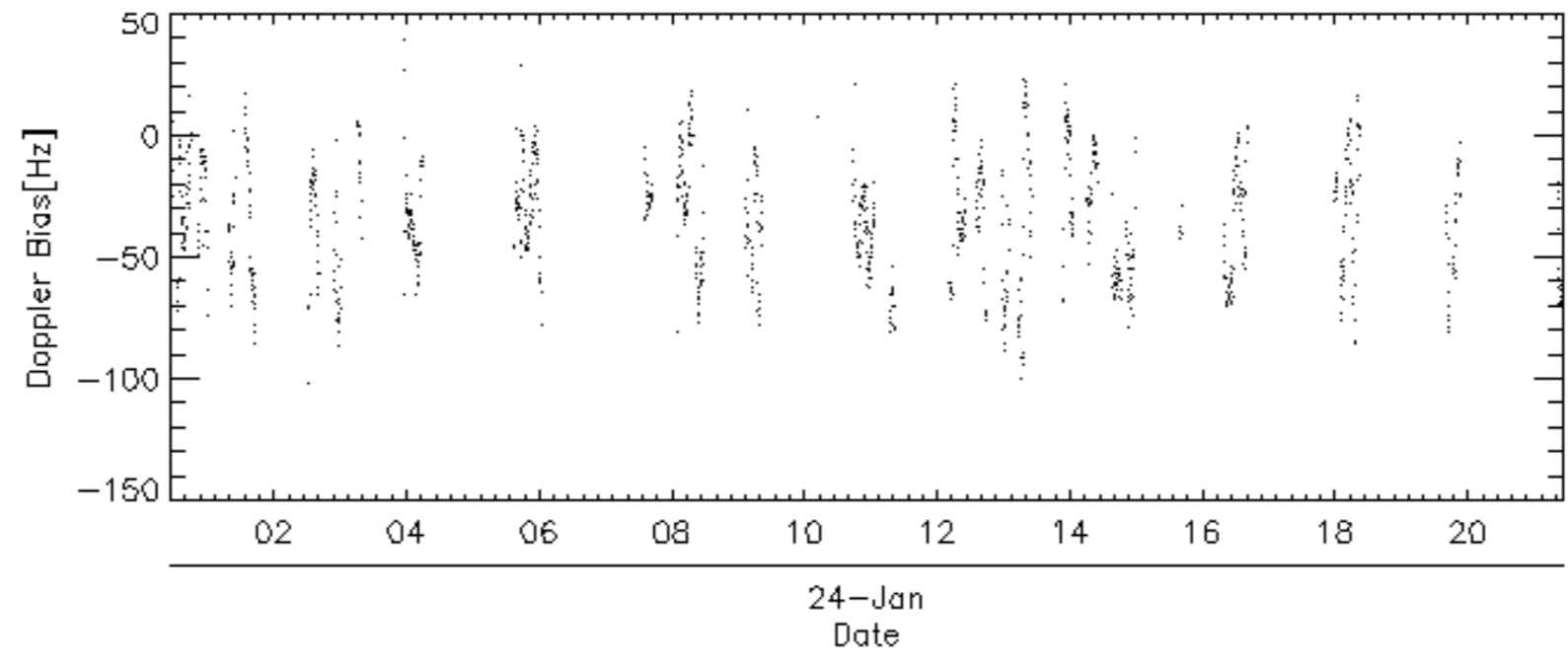
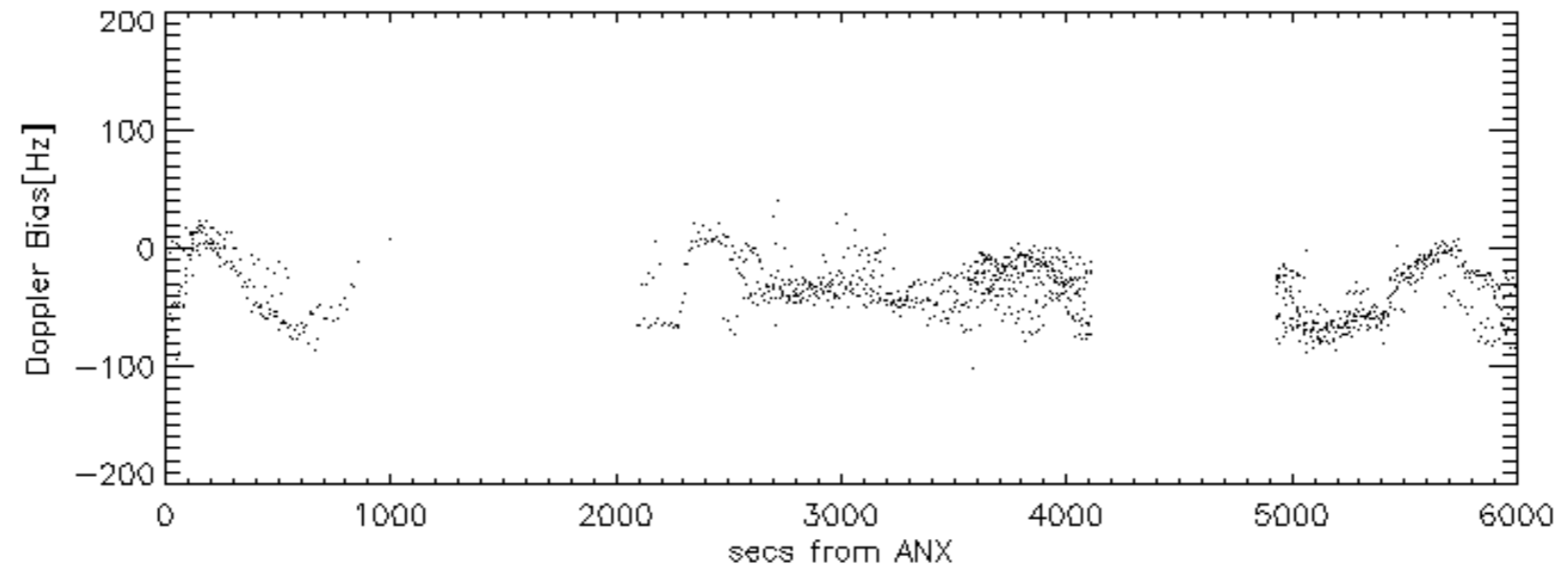
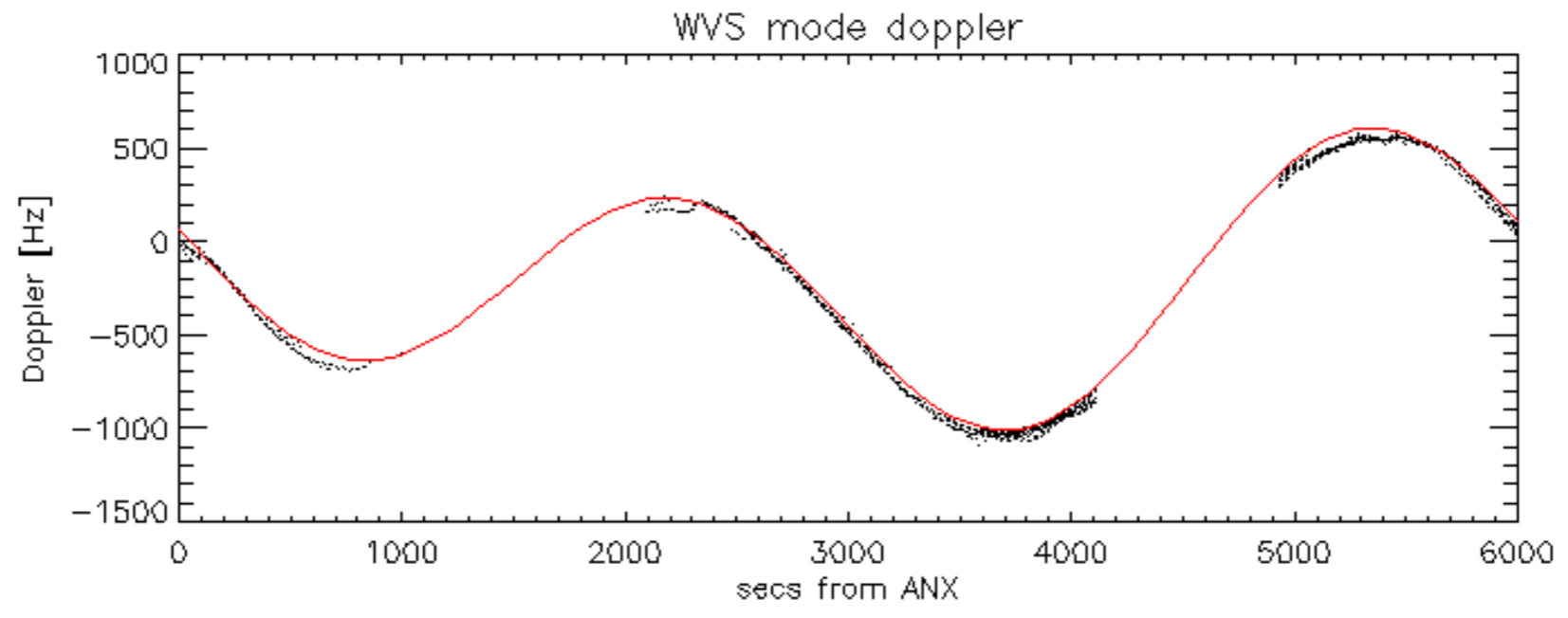


Doppler 'WVS' 'IS2' descending

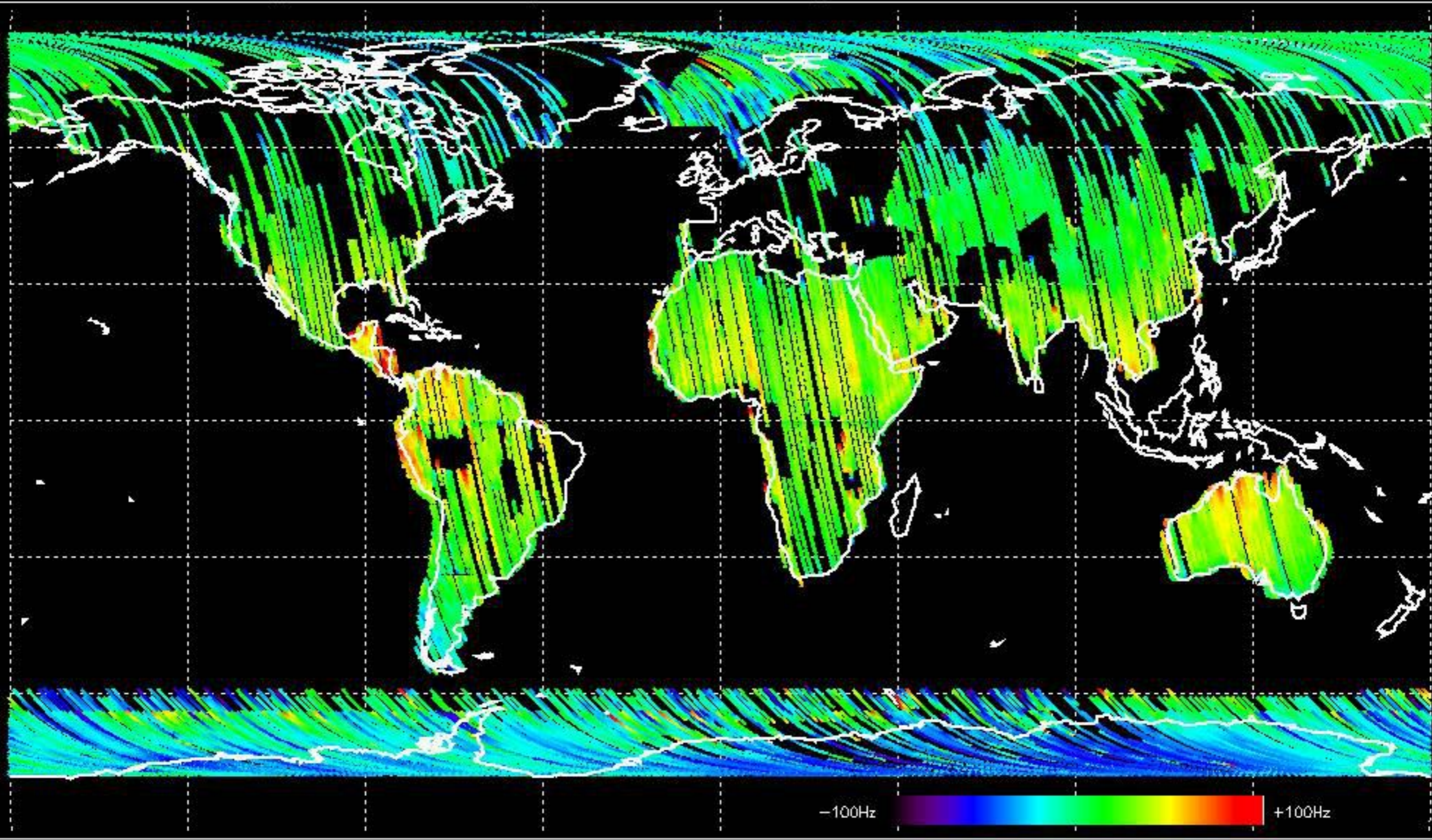


GM1 mode doppler

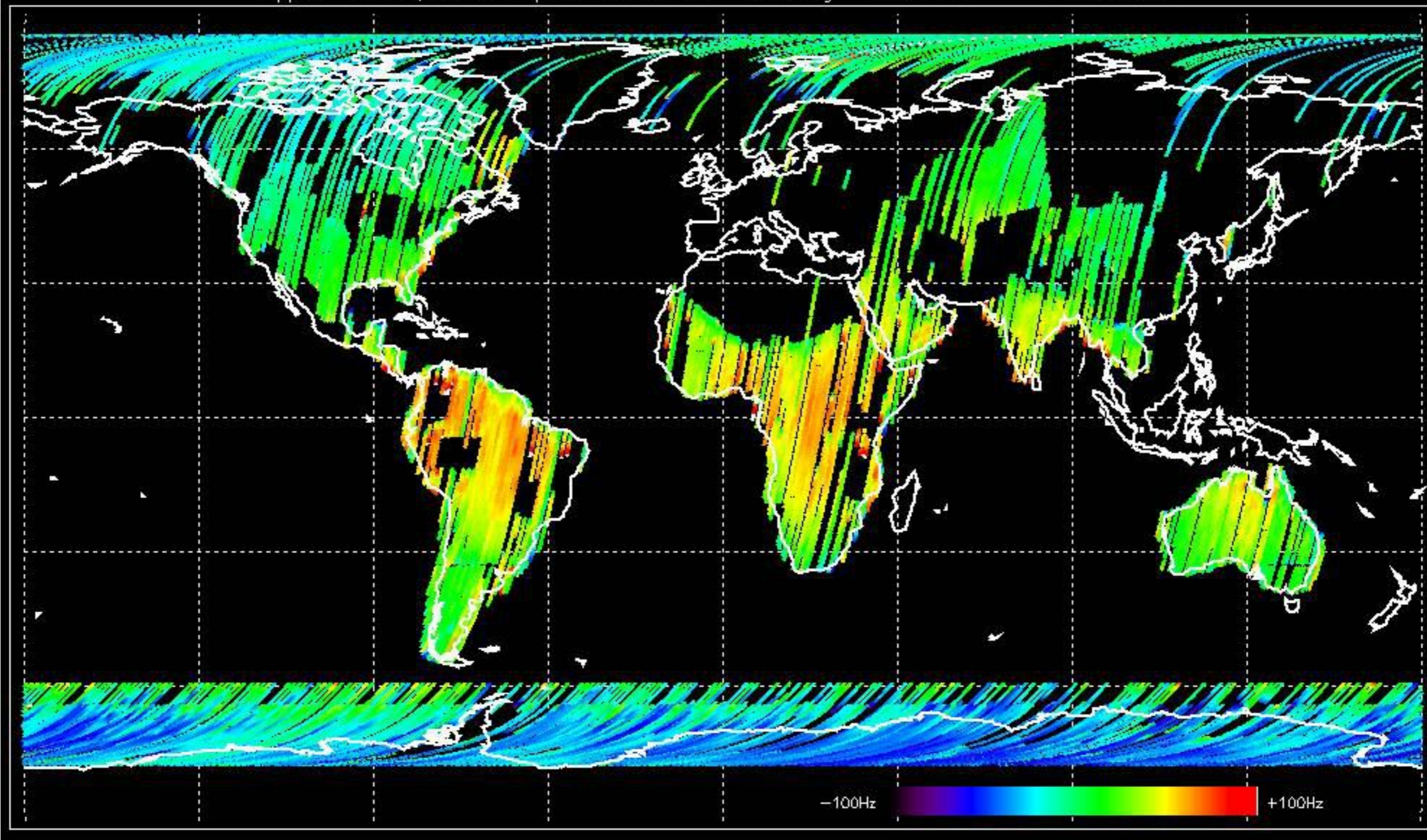




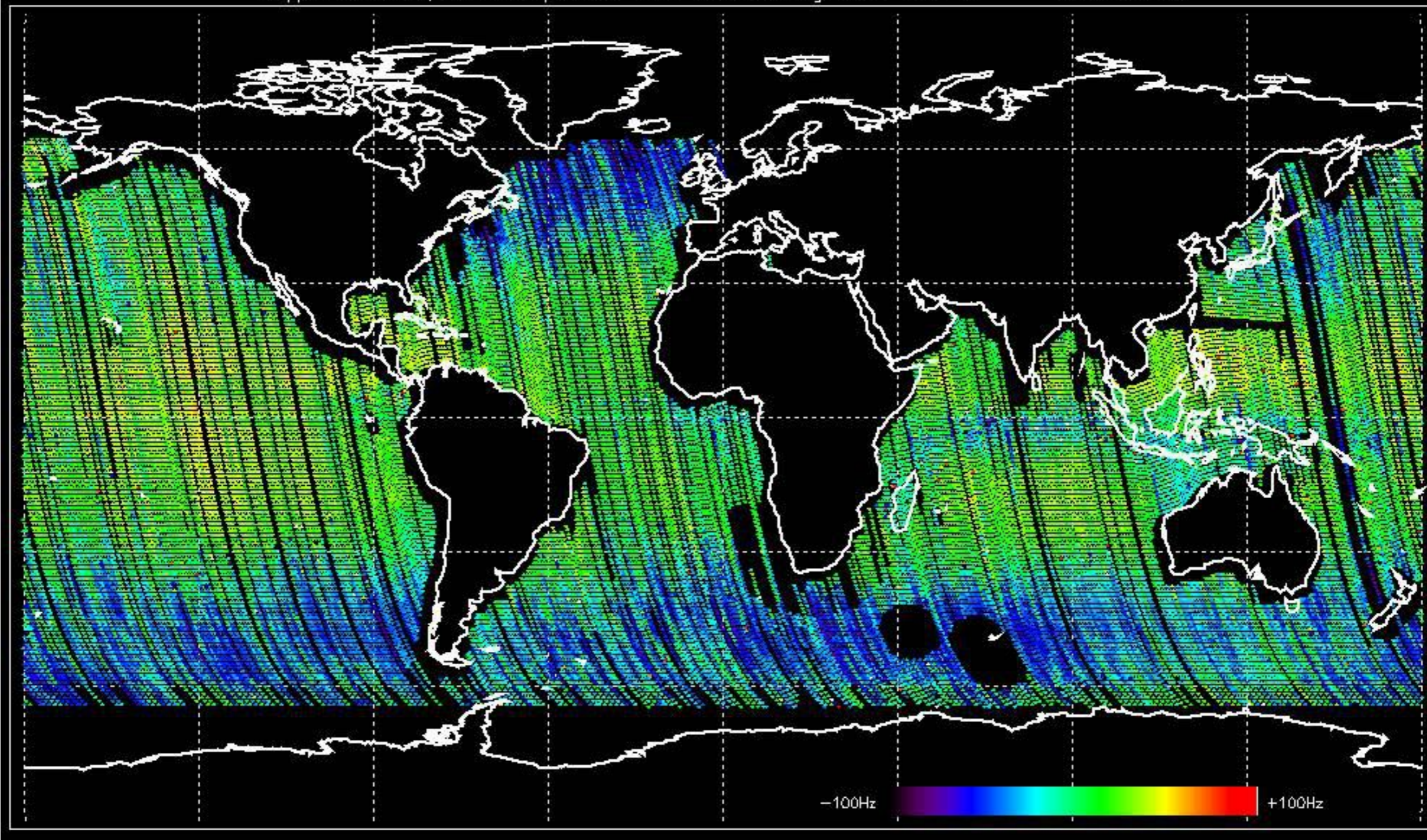
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -33.254731 Hz



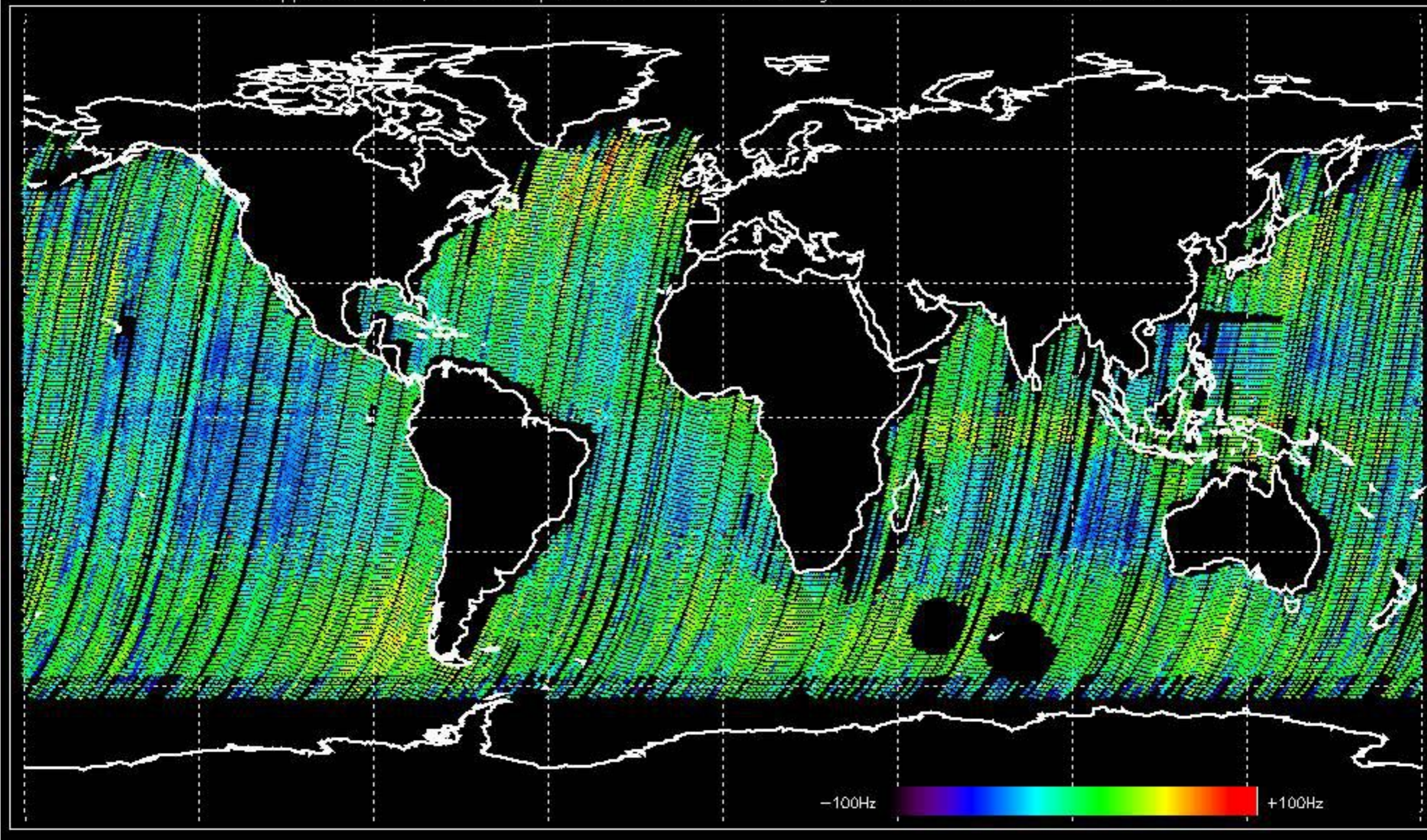
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -28.555139 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -35.544941 Hz

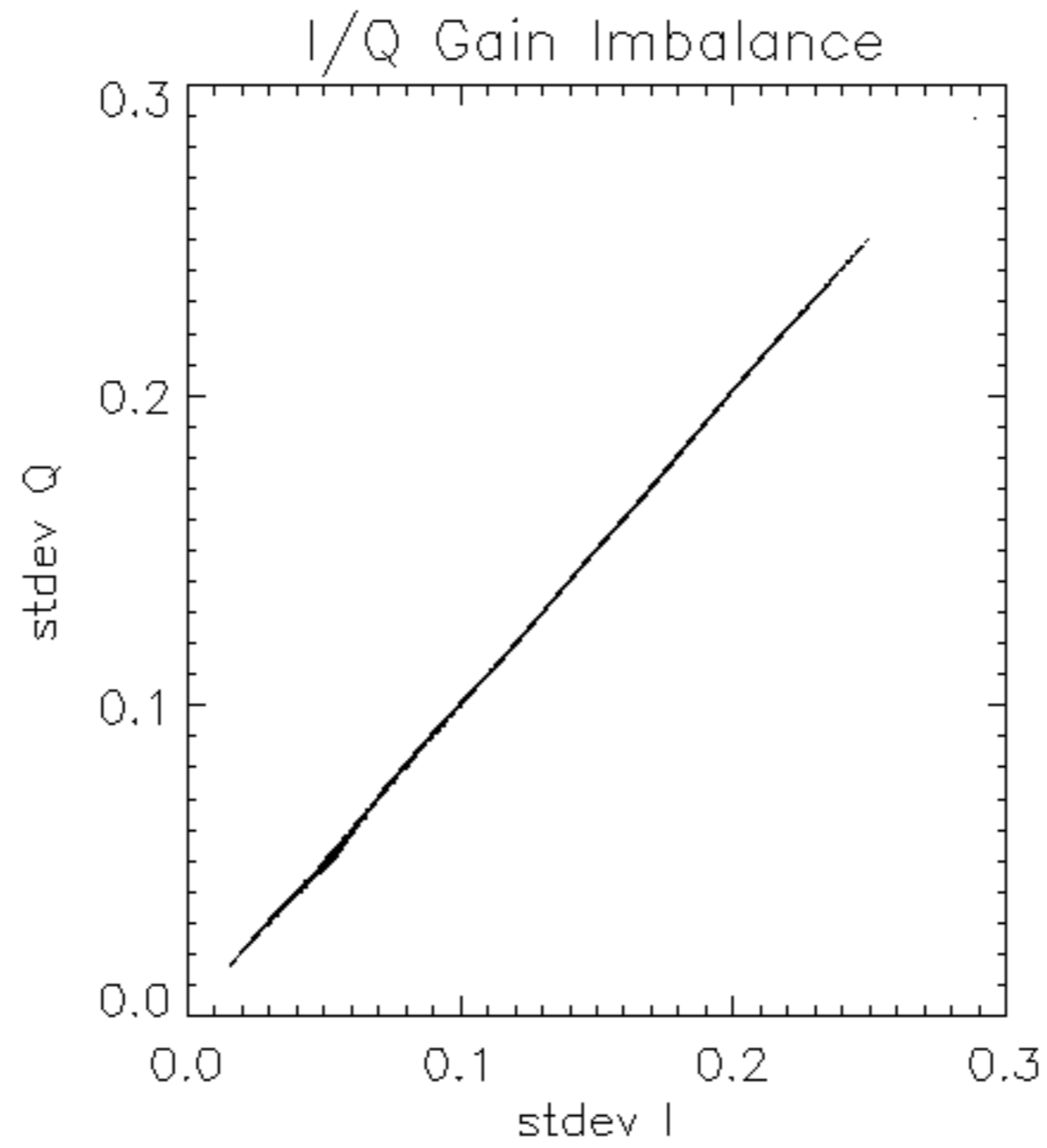


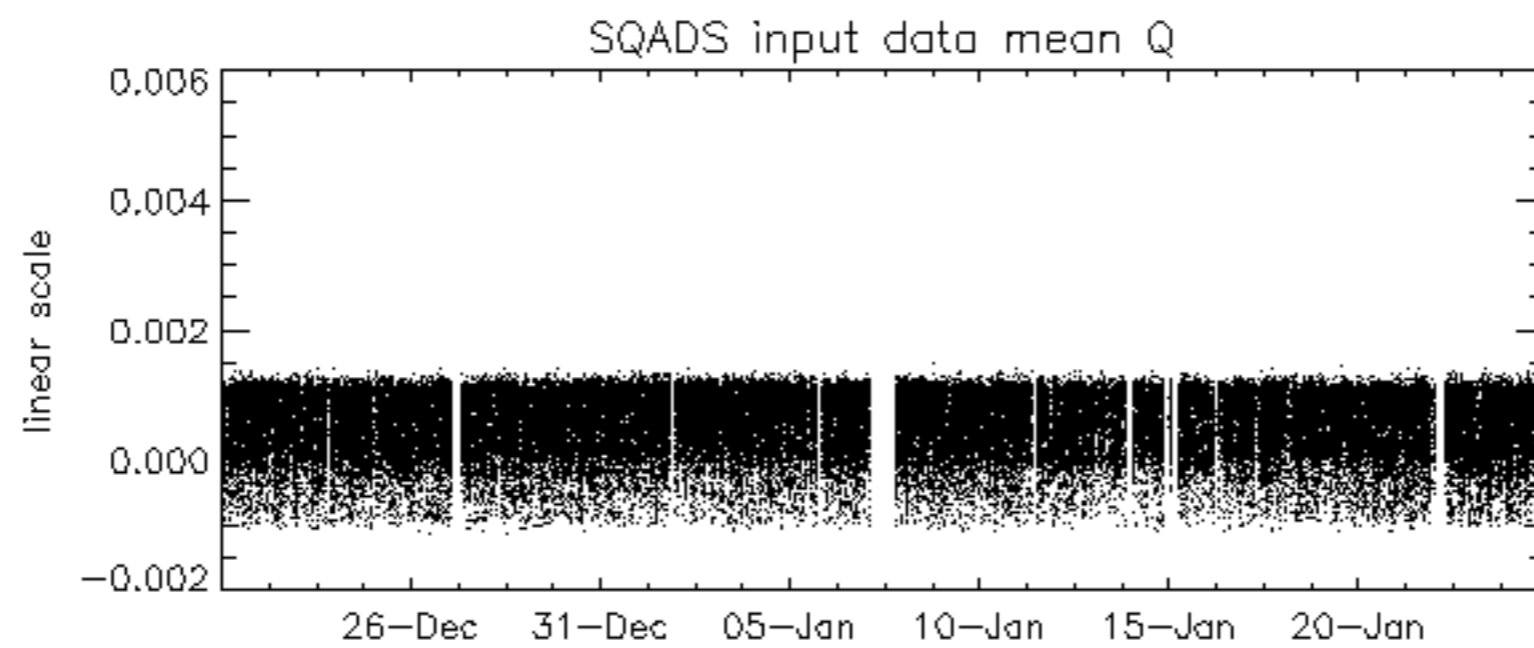
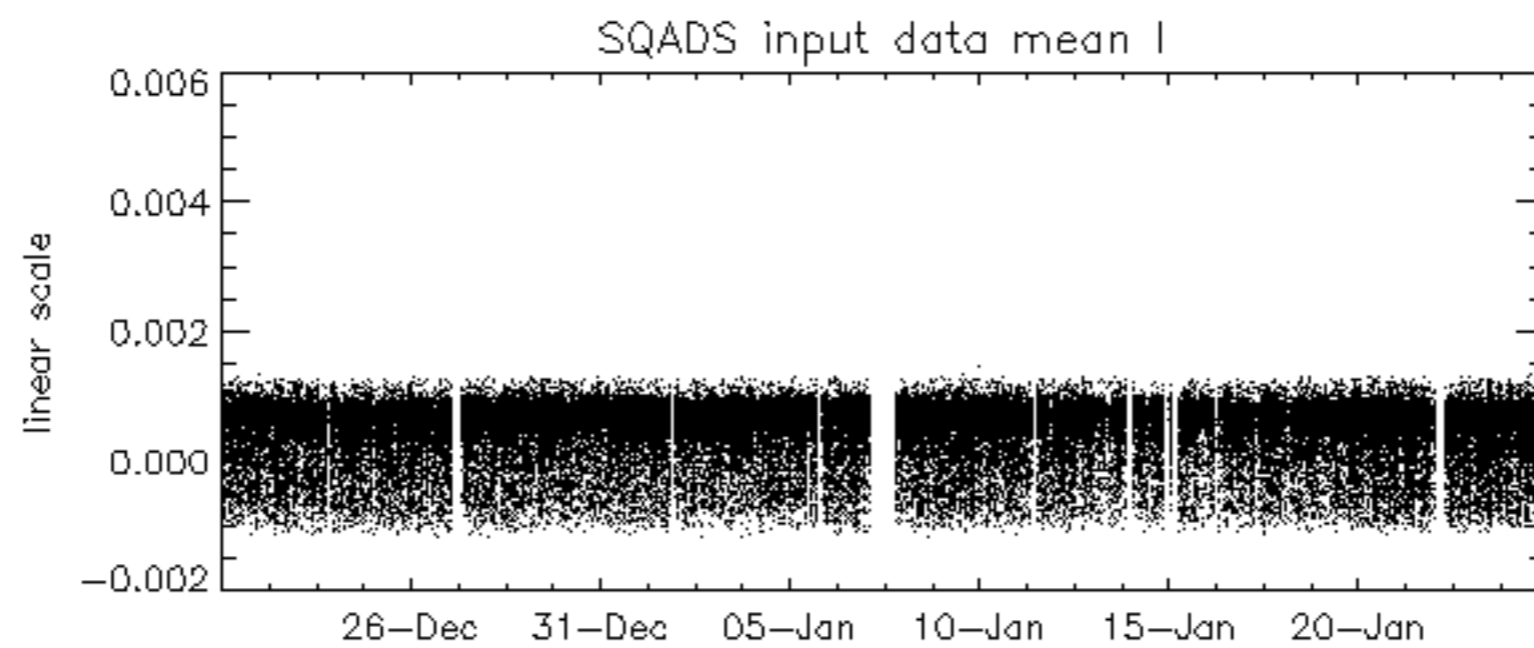
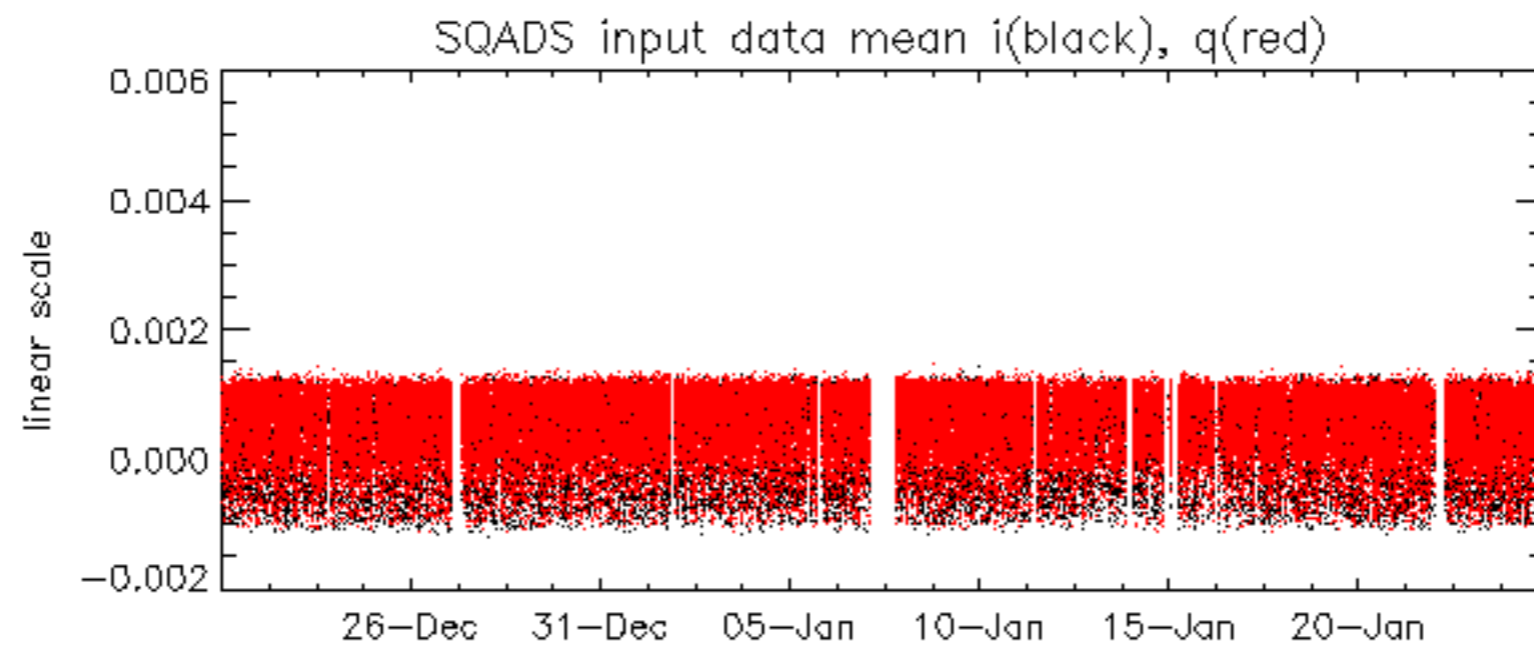
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -37.328029 Hz

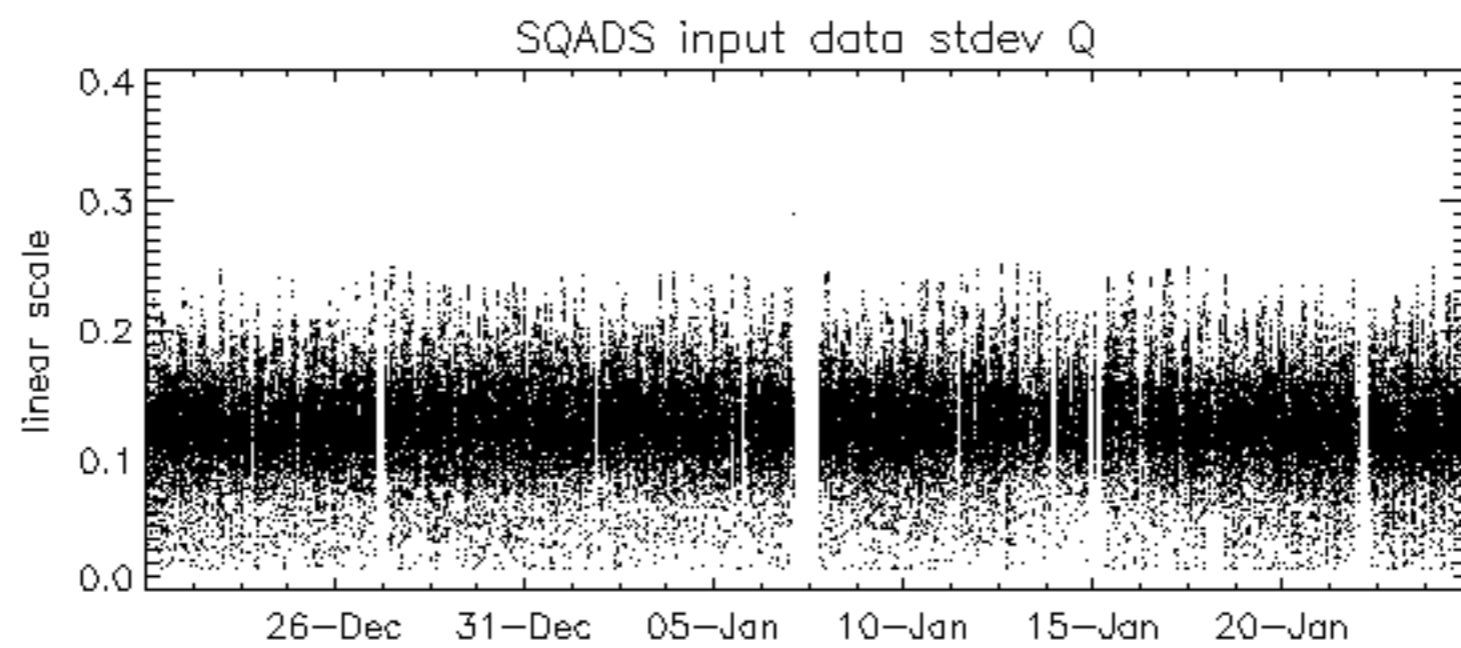
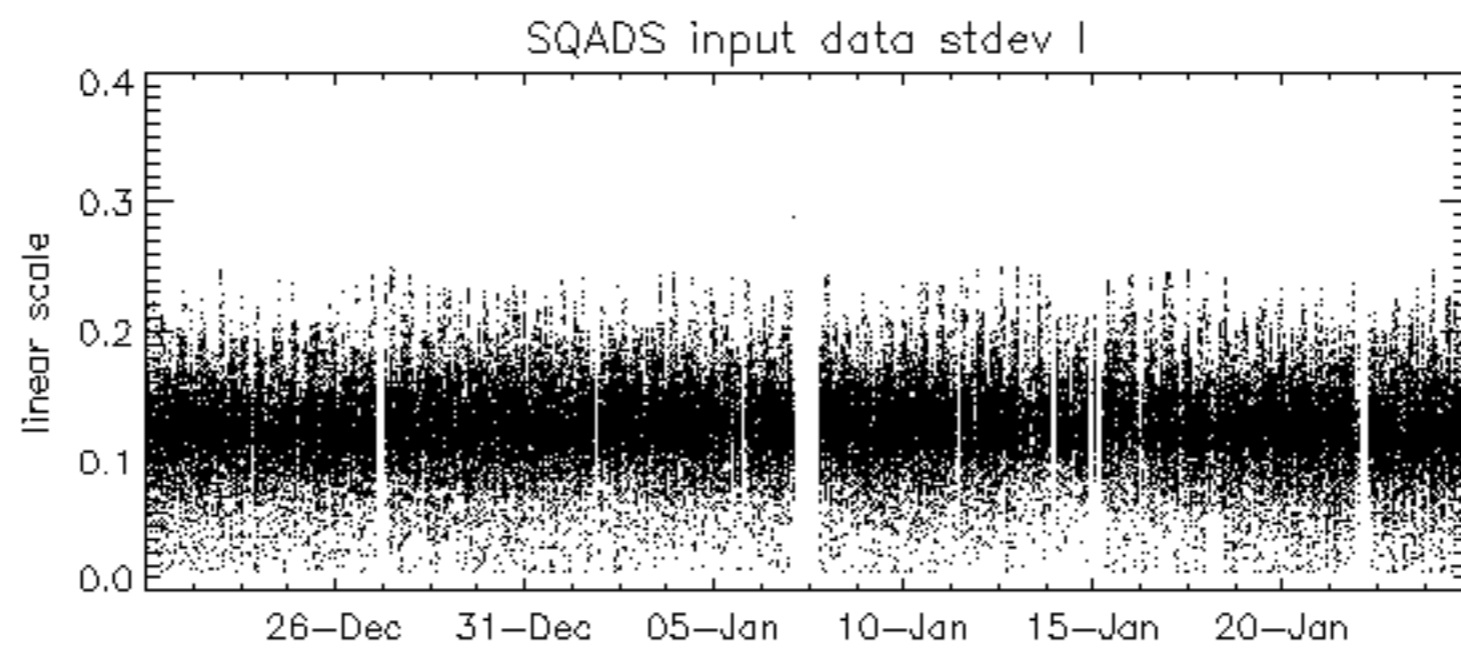
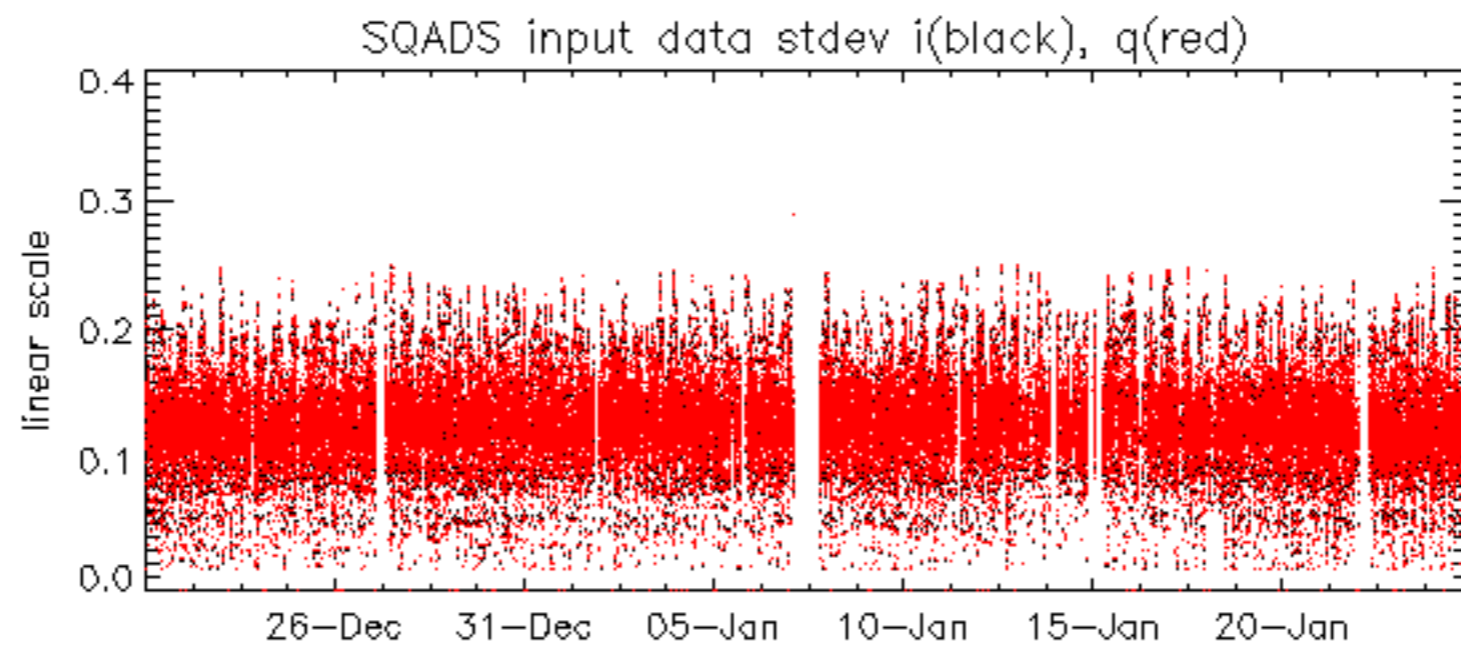


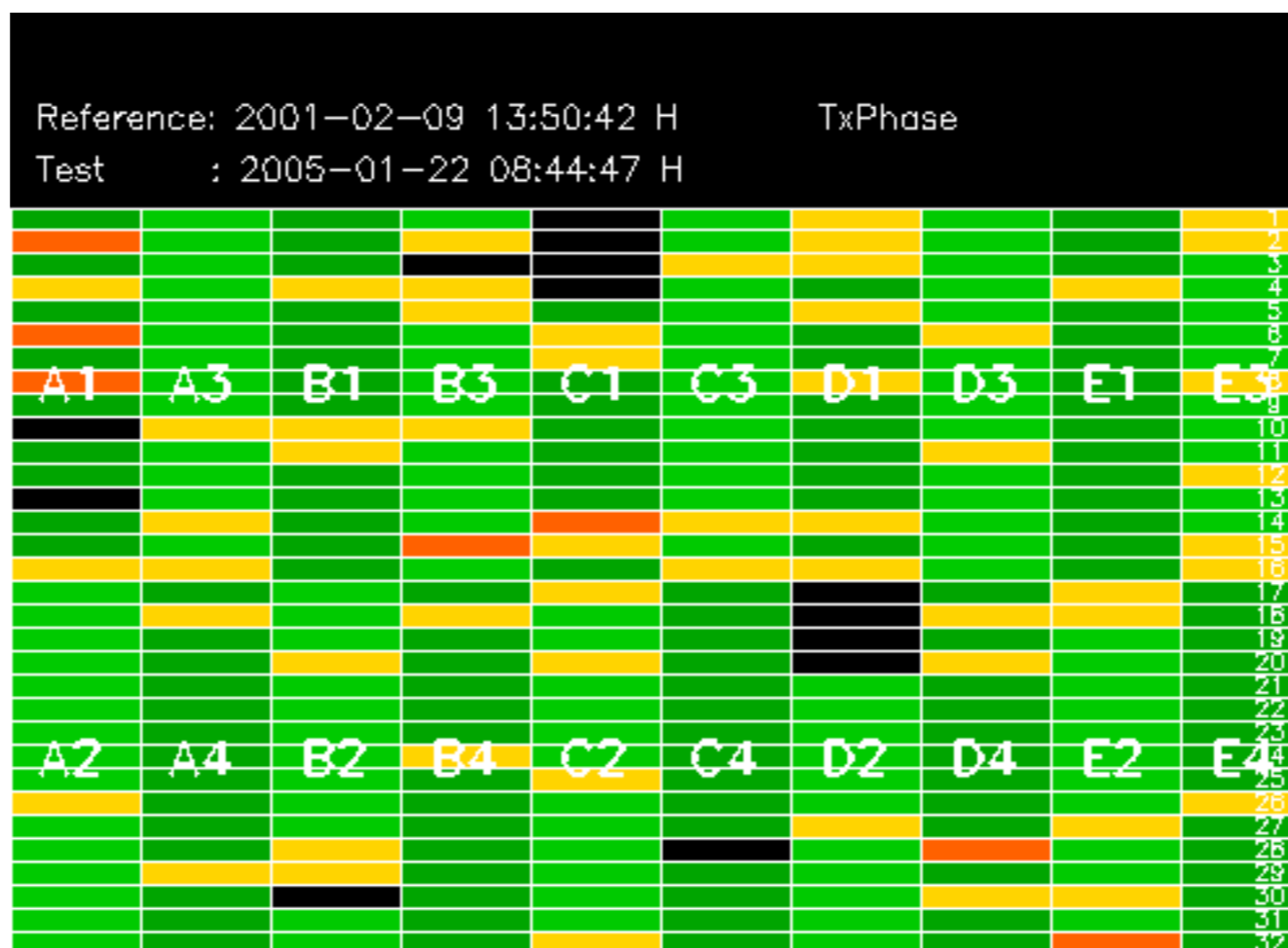
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No anomalies observed on available MS products:

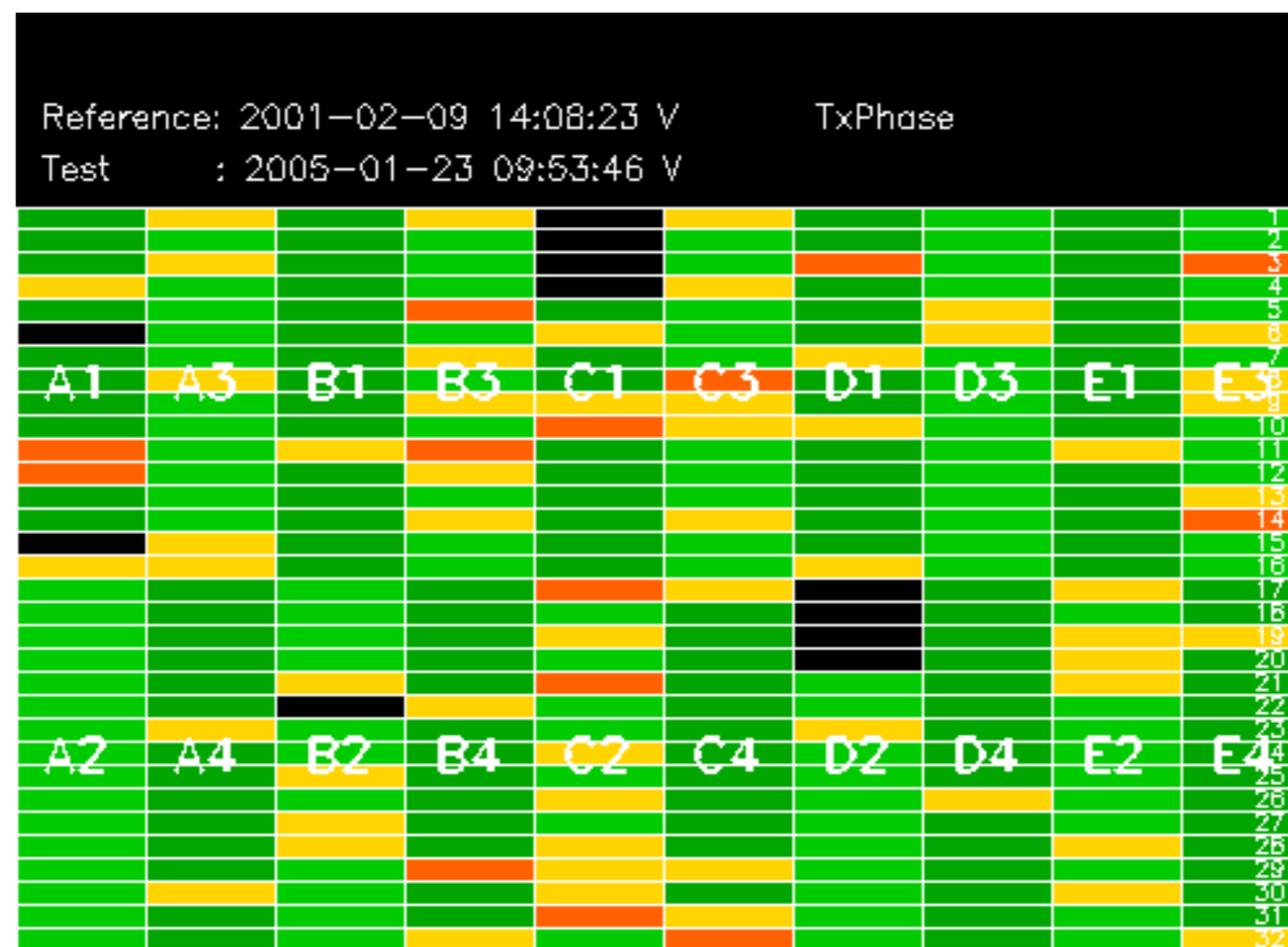
No anomalies observed.



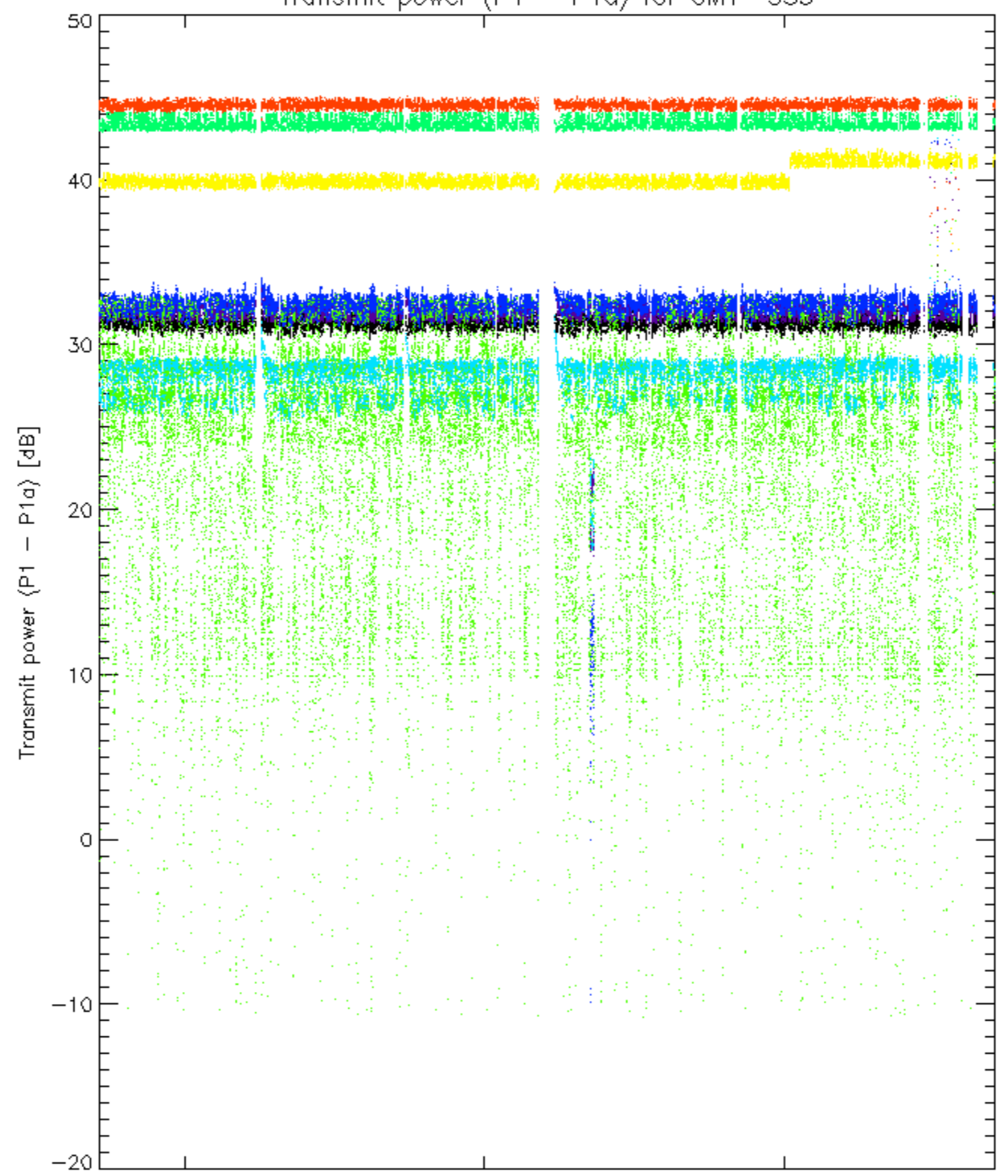




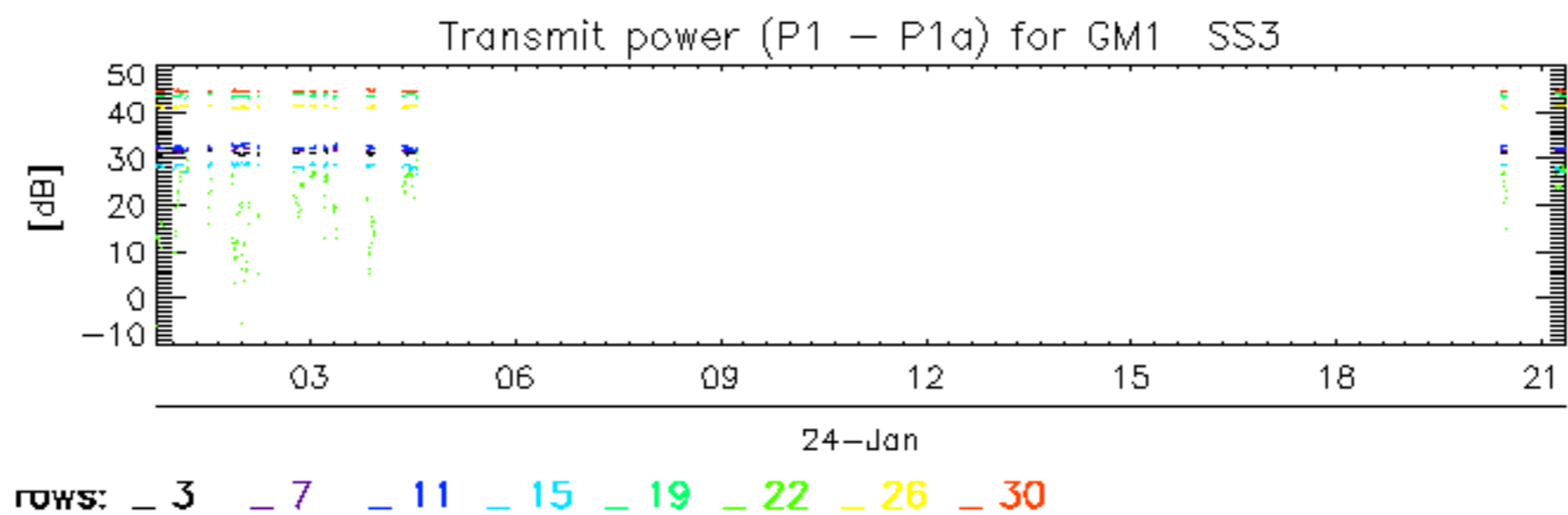




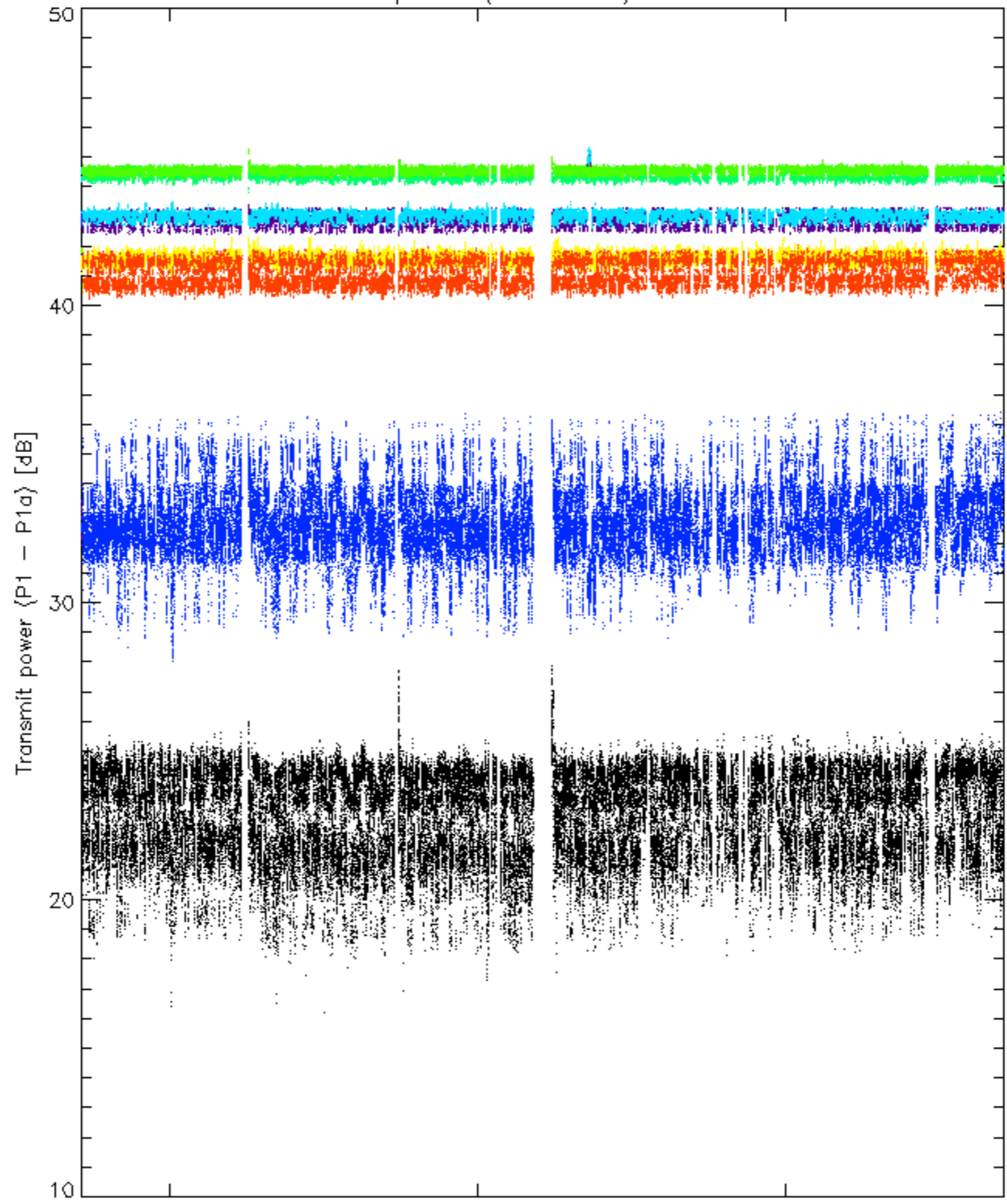
Transmit power (P1 - P1a) for GM1 SS3



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



Transmit power (P1 - P1a) for WVS IS2



21

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

