

PRELIMINARY REPORT OF 060222

last update on Wed Feb 22 16:40:22 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 2006-02-21 00:00:00 to 2006-02-22 16:40:22

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	46	66	10	1	0
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	46	66	10	1	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	46	66	10	1	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	46	66	10	1	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	49	39	45	11	45
ASA_XCA_AXVIEC20051219_162245_20050916_195733_20061231_000000	49	39	45	11	45
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	49	39	45	11	45
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	49	39	45	11	45

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

No anomalies observed on available MS products:

Polarisation	Start Time
V	20060220 054043
H	20060221 050906

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
<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	-4.006321	0.008900	0.021307
7	P1	-3.002700	0.011712	0.024914
11	P1	-4.087255	0.022291	0.036068
15	P1	-6.063080	0.019701	-0.000602
19	P1	-3.265468	0.006675	-0.028523
22	P1	-4.468116	0.017123	0.039479
26	P1	-4.186339	0.012973	0.024064
30	P1	-5.772492	0.010319	0.006614
3	P1	-16.924032	0.262785	-0.172757
7	P1	-16.667801	0.117541	-0.026874
11	P1	-16.578825	0.326417	0.144227
15	P1	-13.133751	0.110233	0.234252
19	P1	-13.898677	0.065436	-0.001682
22	P1	-15.720210	0.533383	0.420139
26	P1	-15.756831	0.264112	-0.044547
30	P1	-16.550966	0.290108	0.201779

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.503418	0.090653	0.203068
7	P2	-22.417238	0.094298	0.059271
11	P2	-16.253643	0.100212	0.046215
15	P2	-7.183217	0.101244	0.057669
19	P2	-9.151288	0.094805	0.050379
22	P2	-17.939157	0.091995	0.042635
26	P2	-16.212210	0.097993	0.024116
30	P2	-19.638596	0.084354	0.021412

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.197963	0.007081	0.026845
7	P3	-8.197963	0.007081	0.026845
11	P3	-8.197963	0.007081	0.026845
15	P3	-8.197963	0.007081	0.026845
19	P3	-8.197963	0.007081	0.026845
22	P3	-8.197963	0.007081	0.026845
26	P3	-8.197963	0.007081	0.026845
30	P3	-8.197963	0.007081	0.026845

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	-3.740243	0.011496	-0.013617
7	P1	-2.745382	0.007811	-0.033747
11	P1	-2.894964	0.014770	-0.056507
15	P1	-3.514959	0.020711	-0.092142
19	P1	-3.379932	0.010887	0.022453
22	P1	-5.152493	0.022313	-0.044414
26	P1	-5.835567	0.019557	0.083929
30	P1	-5.220718	0.026745	0.054739
3	P1	-11.554007	0.045244	-0.067163
7	P1	-9.936719	0.049776	-0.054767
11	P1	-10.164882	0.060187	-0.148120
15	P1	-10.698933	0.103283	-0.157460
19	P1	-15.445495	0.062598	0.083452
22	P1	-20.379597	1.198093	0.329555
26	P1	-16.535500	0.372737	0.414400
30	P1	-18.242044	0.321660	-0.223202

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.265484	0.043211	0.305500
7	P2	-22.710541	0.078359	0.292237
11	P2	-11.333814	0.030670	0.187081
15	P2	-4.866629	0.029794	0.118968
19	P2	-6.881665	0.027713	0.088008
22	P2	-8.172052	0.029219	0.092515
26	P2	-23.947750	0.027687	0.065747
30	P2	-22.083439	0.019929	0.035741

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.032029	0.003125	0.033327
7	P3	-8.032007	0.003121	0.033602
11	P3	-8.031980	0.003122	0.033678
15	P3	-8.032019	0.003123	0.033460
19	P3	-8.032024	0.003124	0.033594
22	P3	-8.032007	0.003124	0.033989
26	P3	-8.032125	0.003124	0.033588
30	P3	-8.031934	0.003127	0.033262

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	0.000557881
	stdev	1.70462e-07
MEAN Q	mean	0.000520915
	stdev	2.14024e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.138894
	stdev	0.00115905
STDEV Q	mean	0.139248
	stdev	0.00117775



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2006022[012]

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_1PNPDE20060221_003709_000001342045_00202_20797_3819.N1	1	0
ASA_IMM_1PNPDK20060220_130809_000001212045_00196_20791_1113.N1	1	0
ASA_WSM_1PNPDE20060221_112842_000001842045_00209_20804_5812.N1	0	30





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

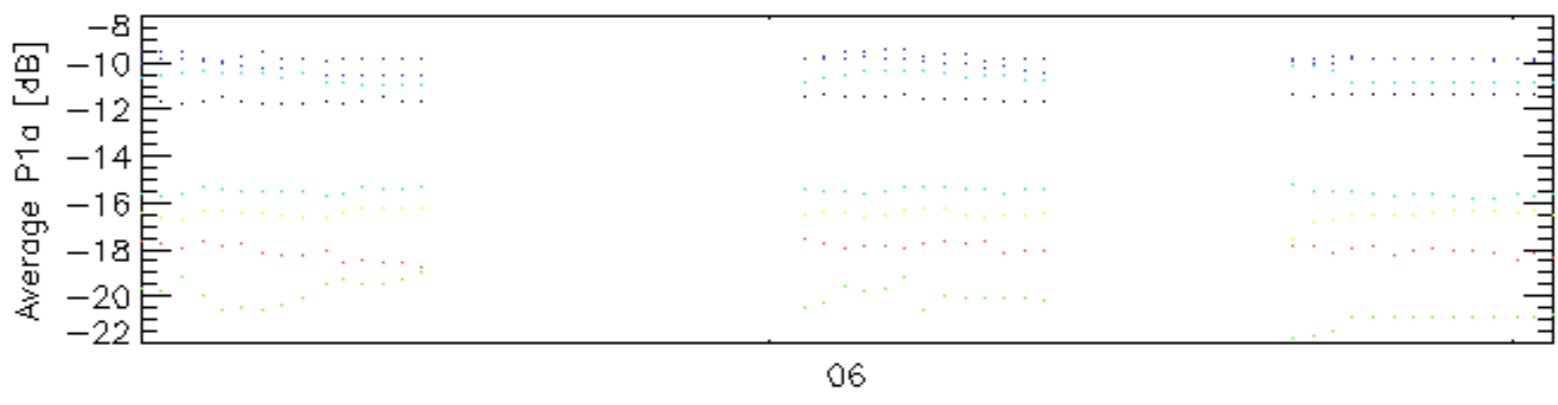
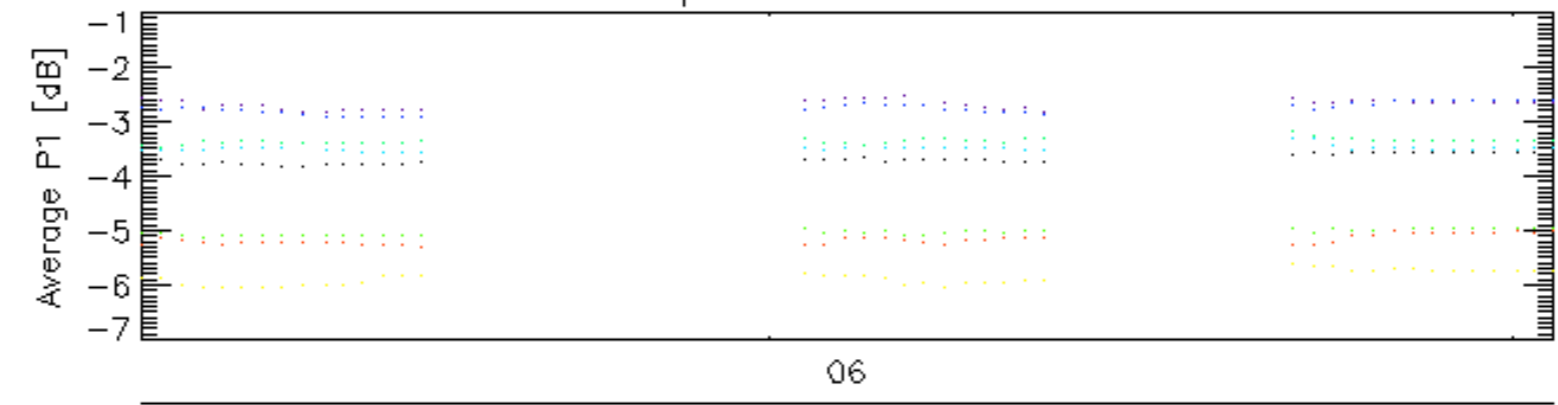
Ascending

Descending

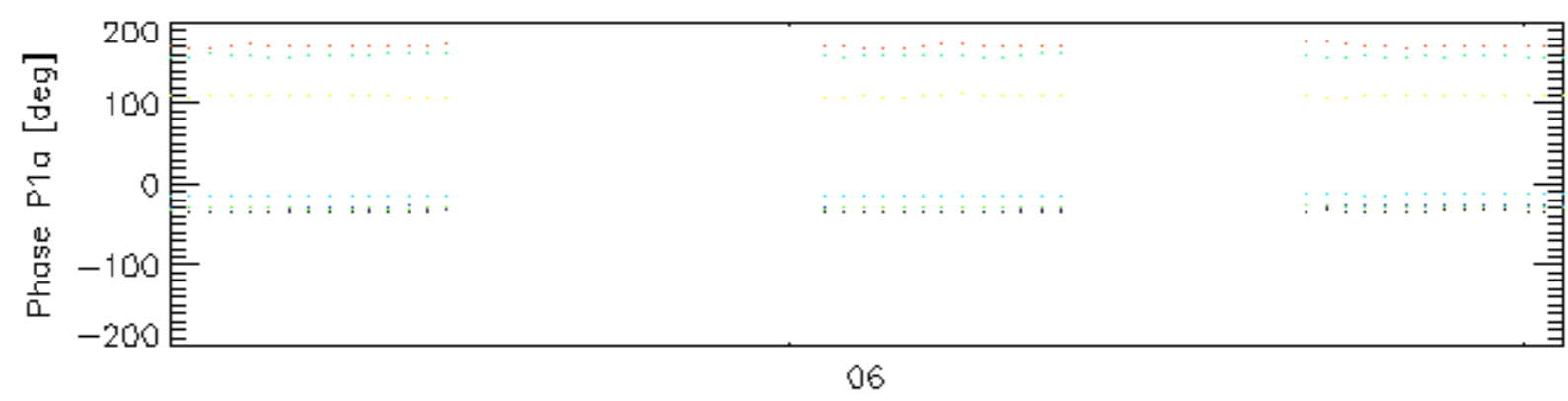
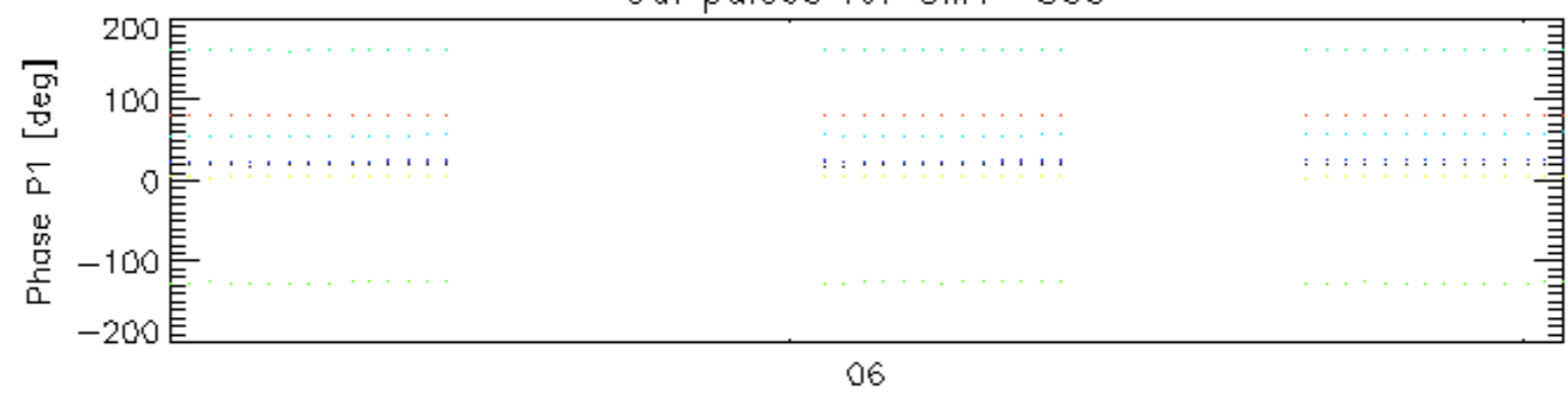
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

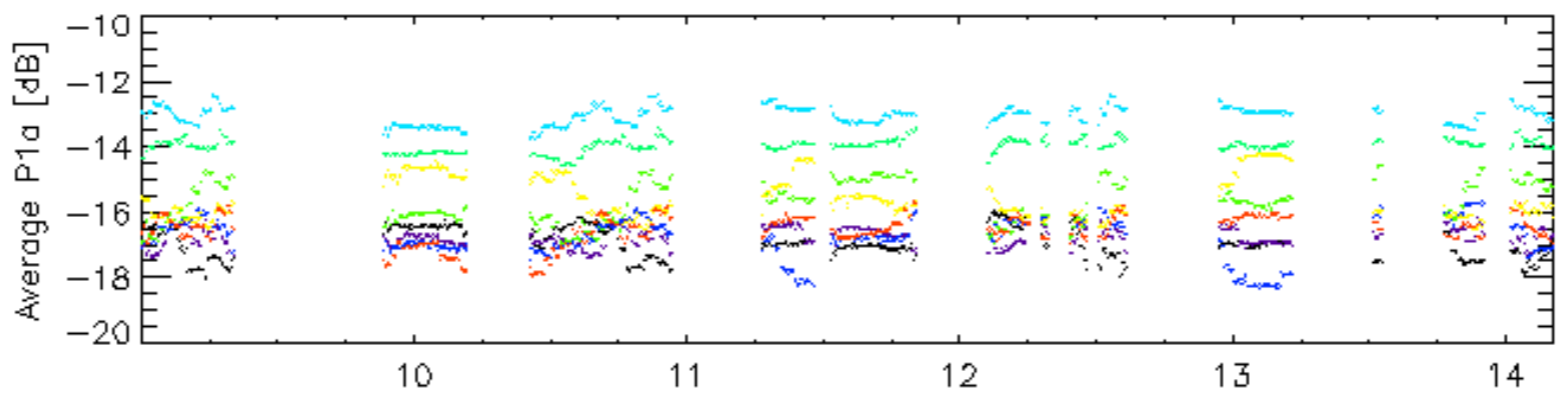
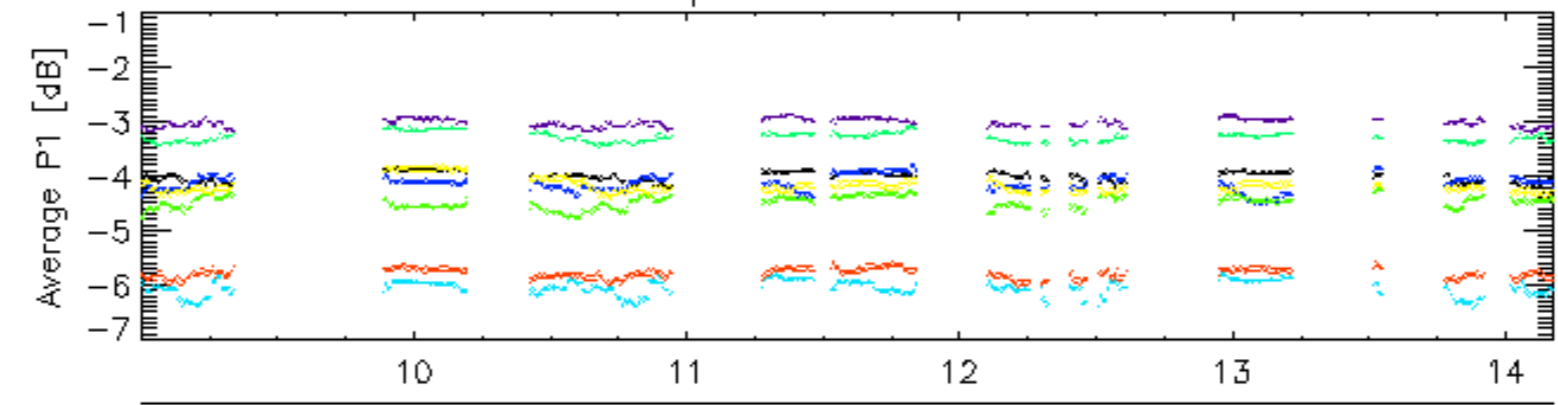


Cal pulses for GM1 SS3

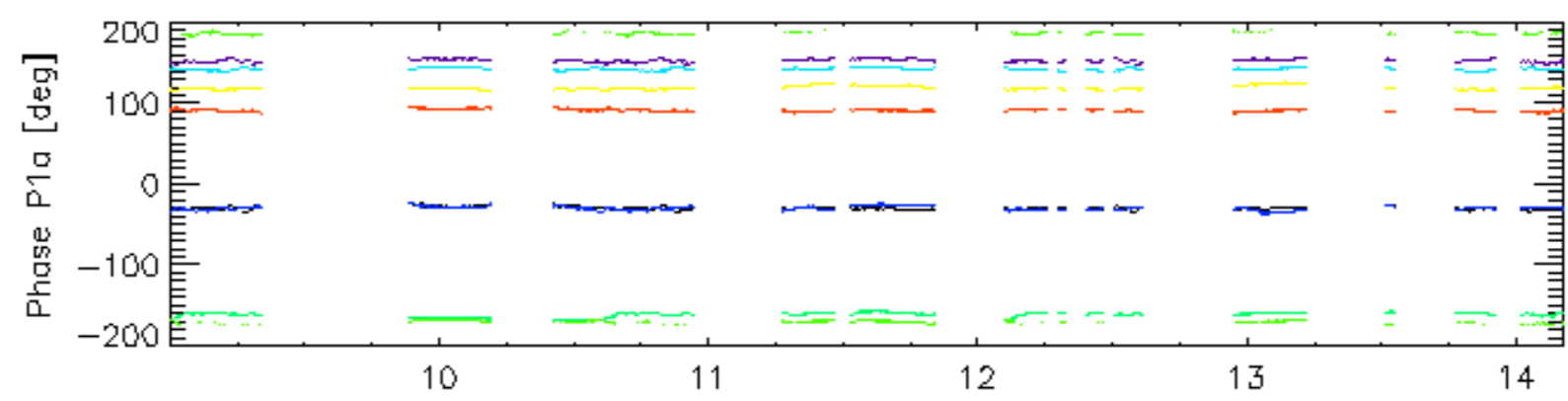
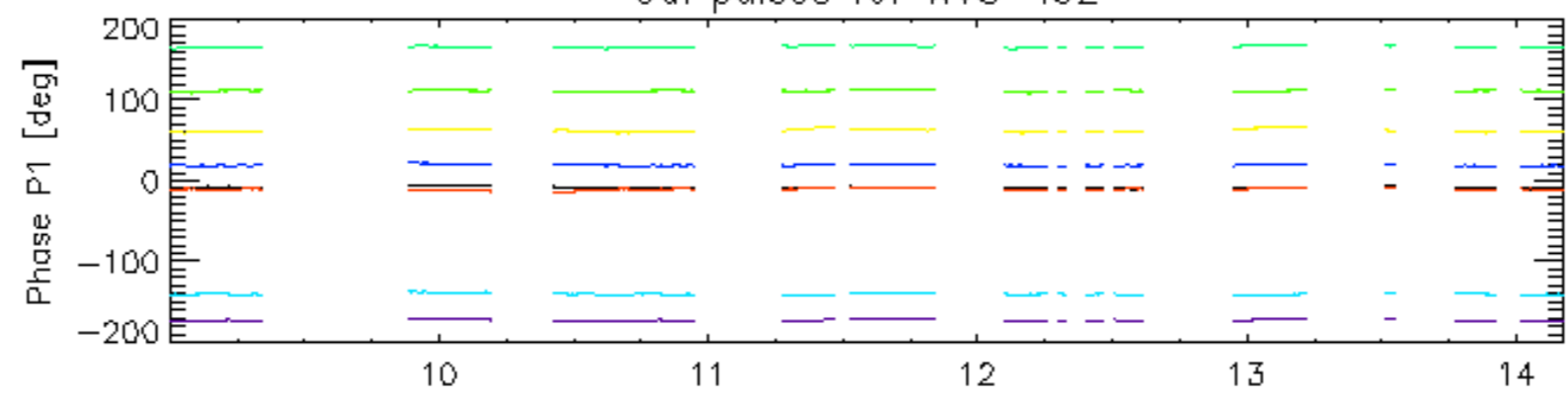


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 ^{21-Feb} _ 26 _ 30

Cal pulses for WVS IS2

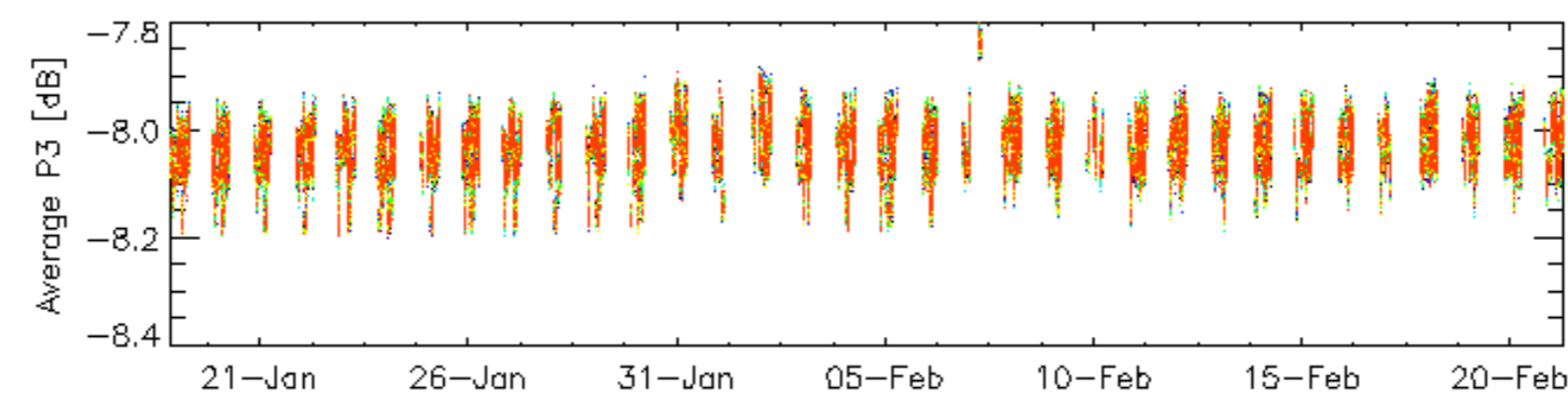
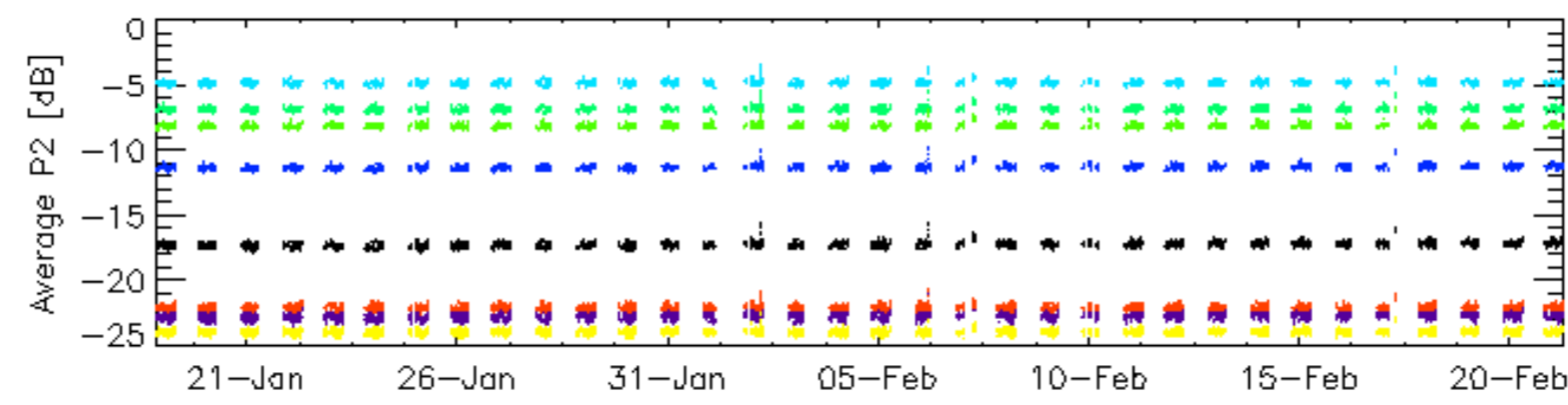
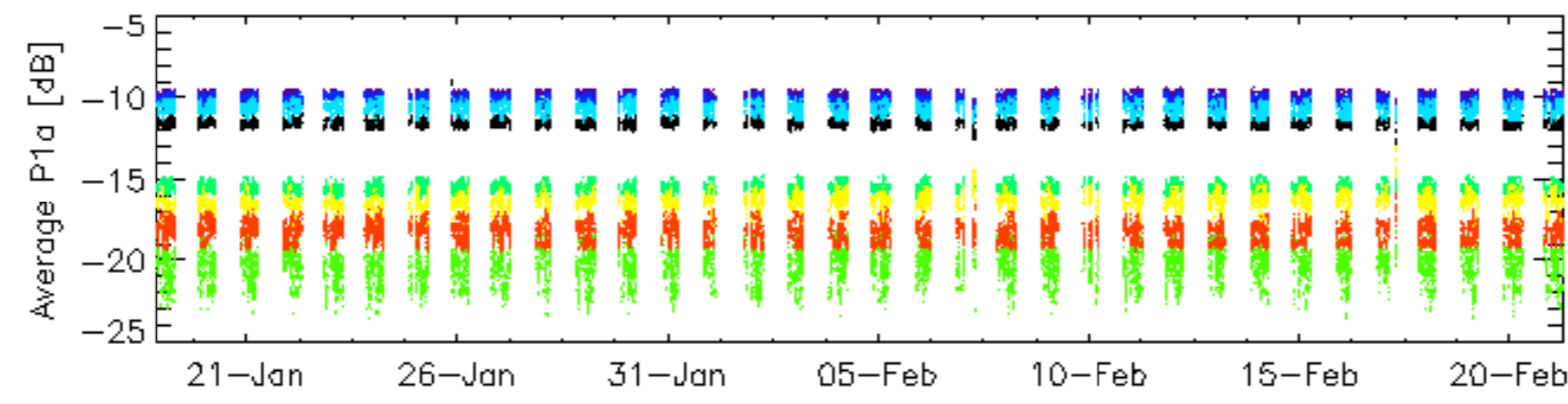
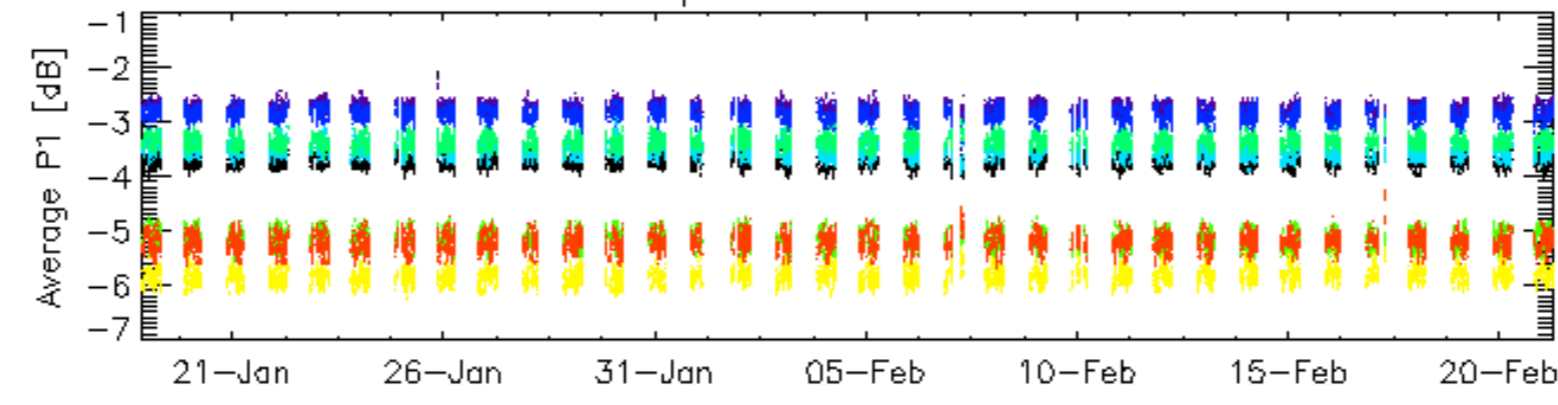


Cal pulses for WVS IS2



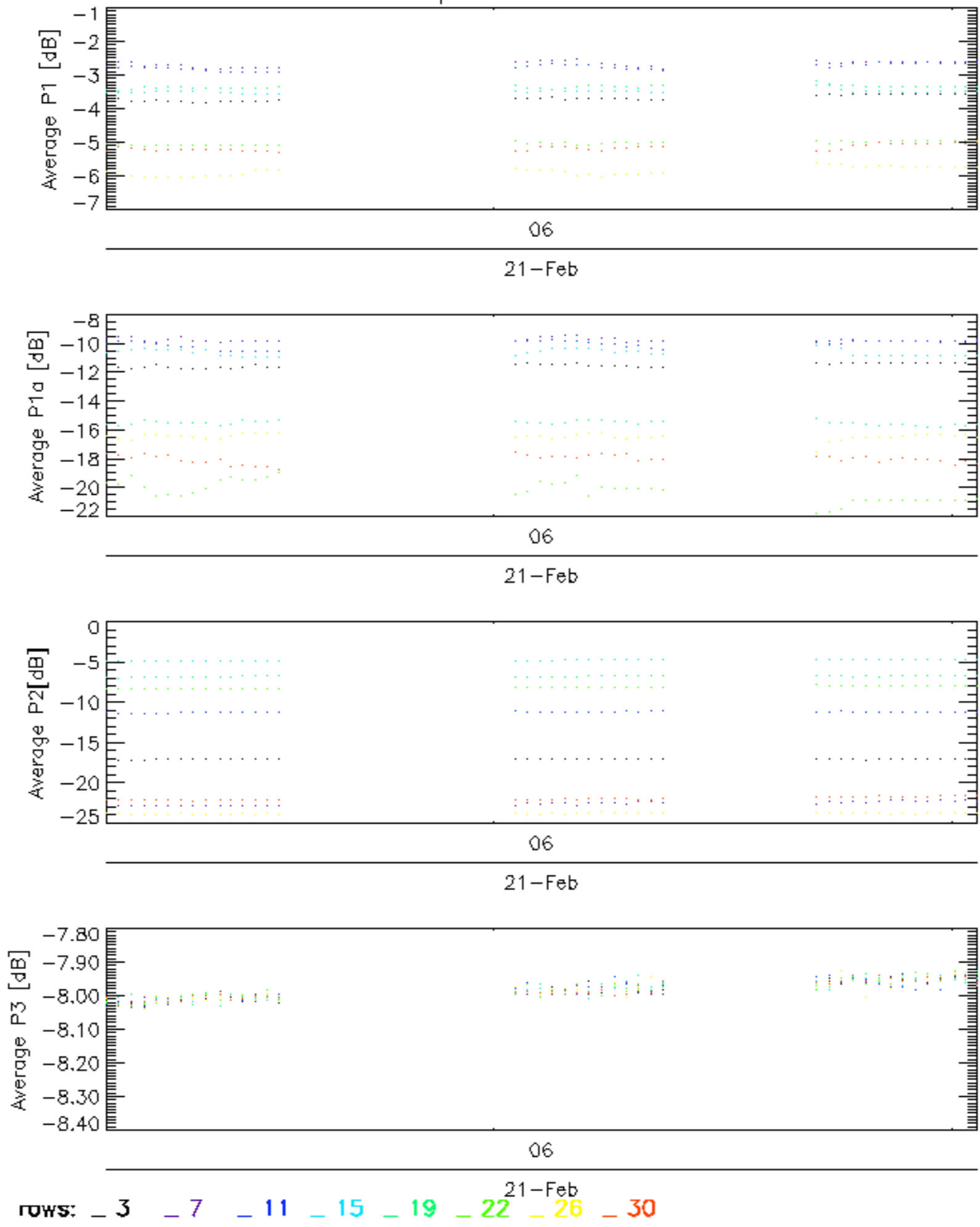
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

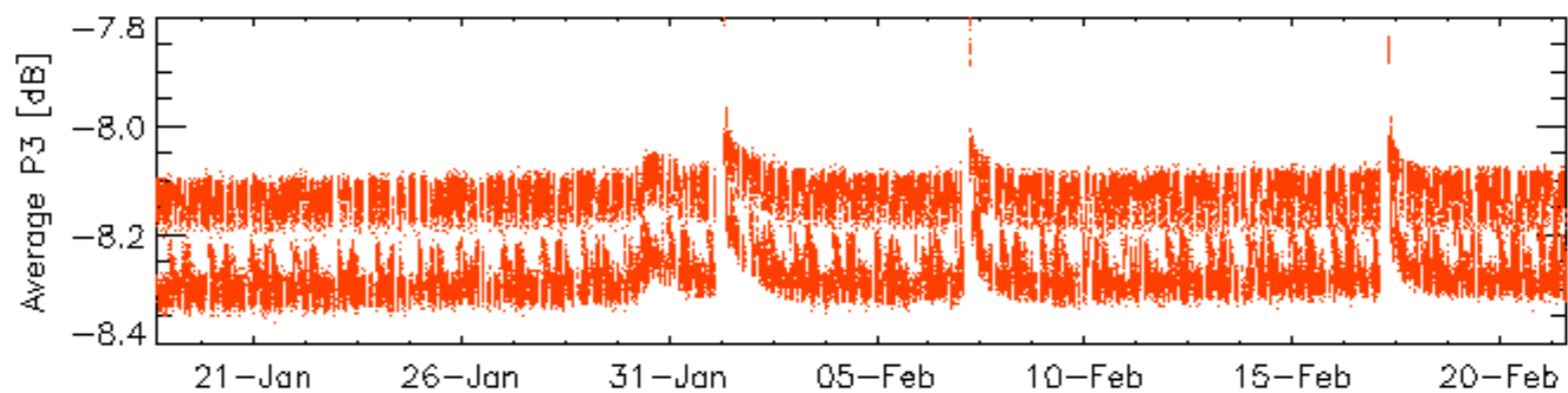
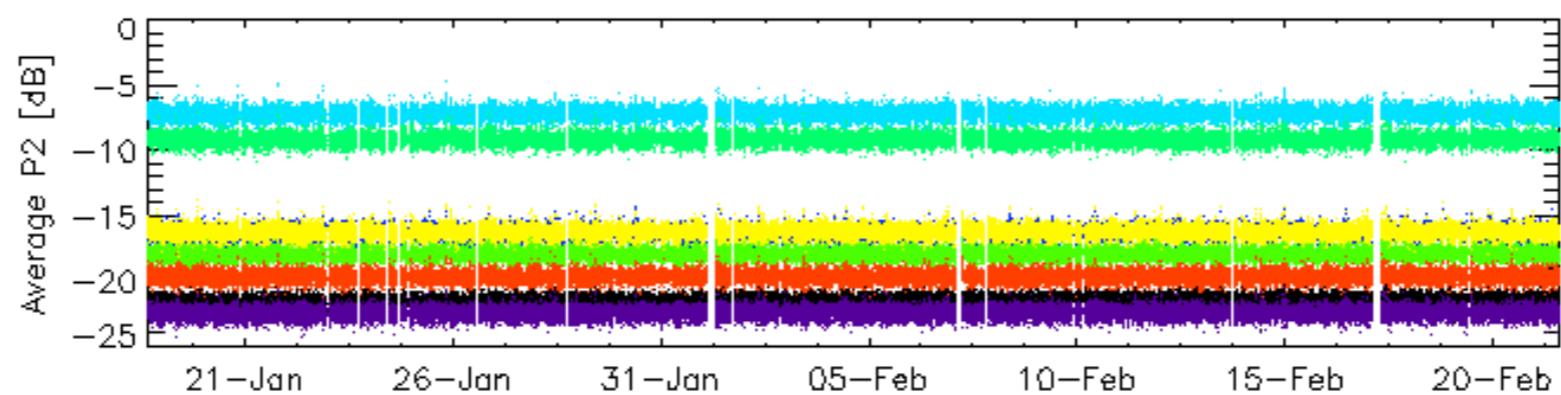
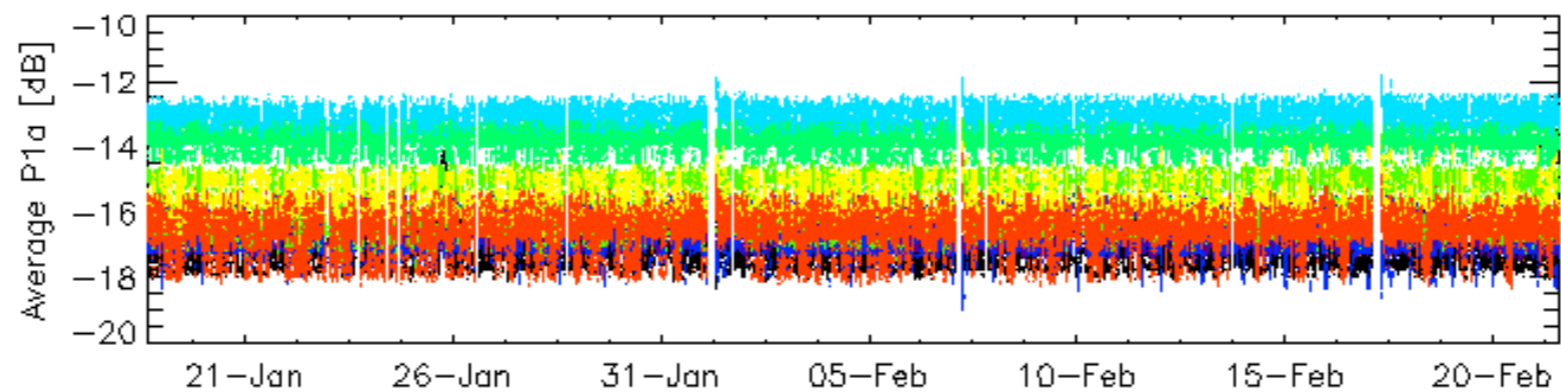
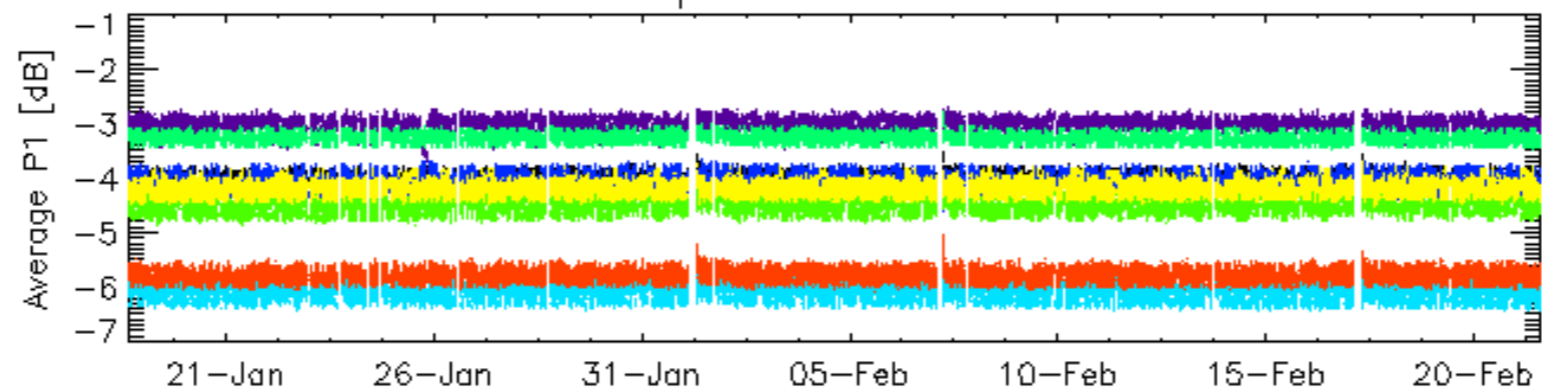


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

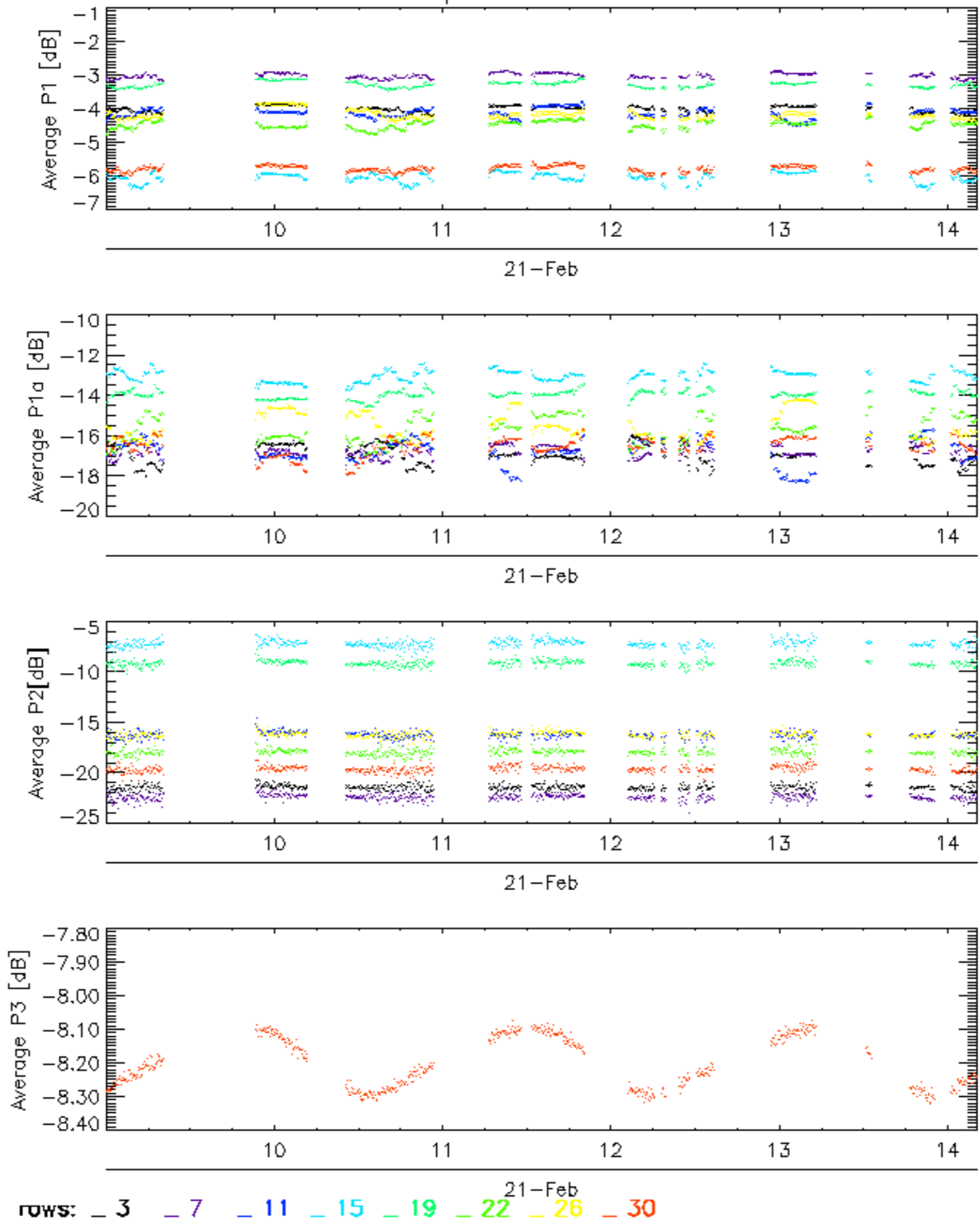


Cal pulses for WVS IS2

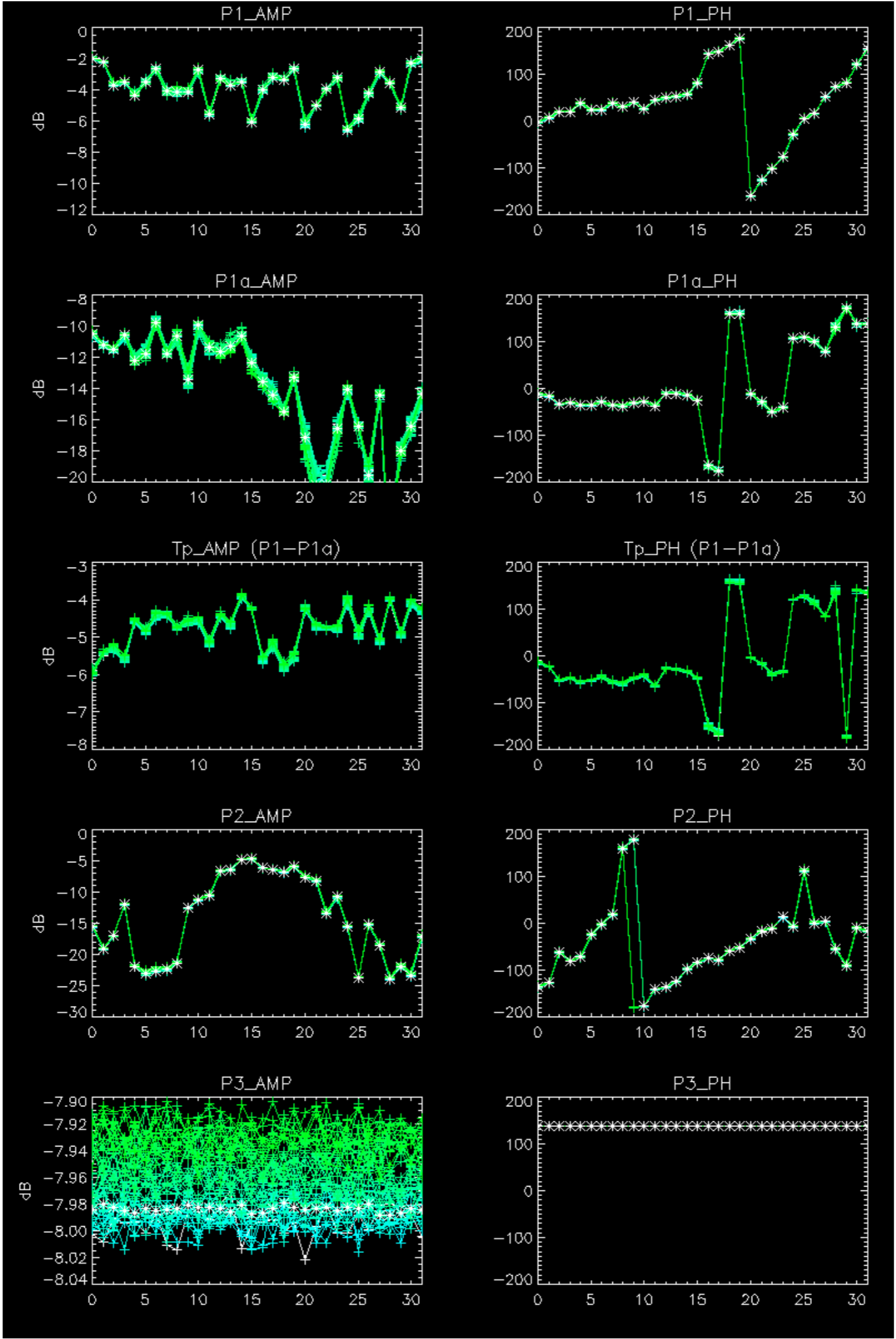


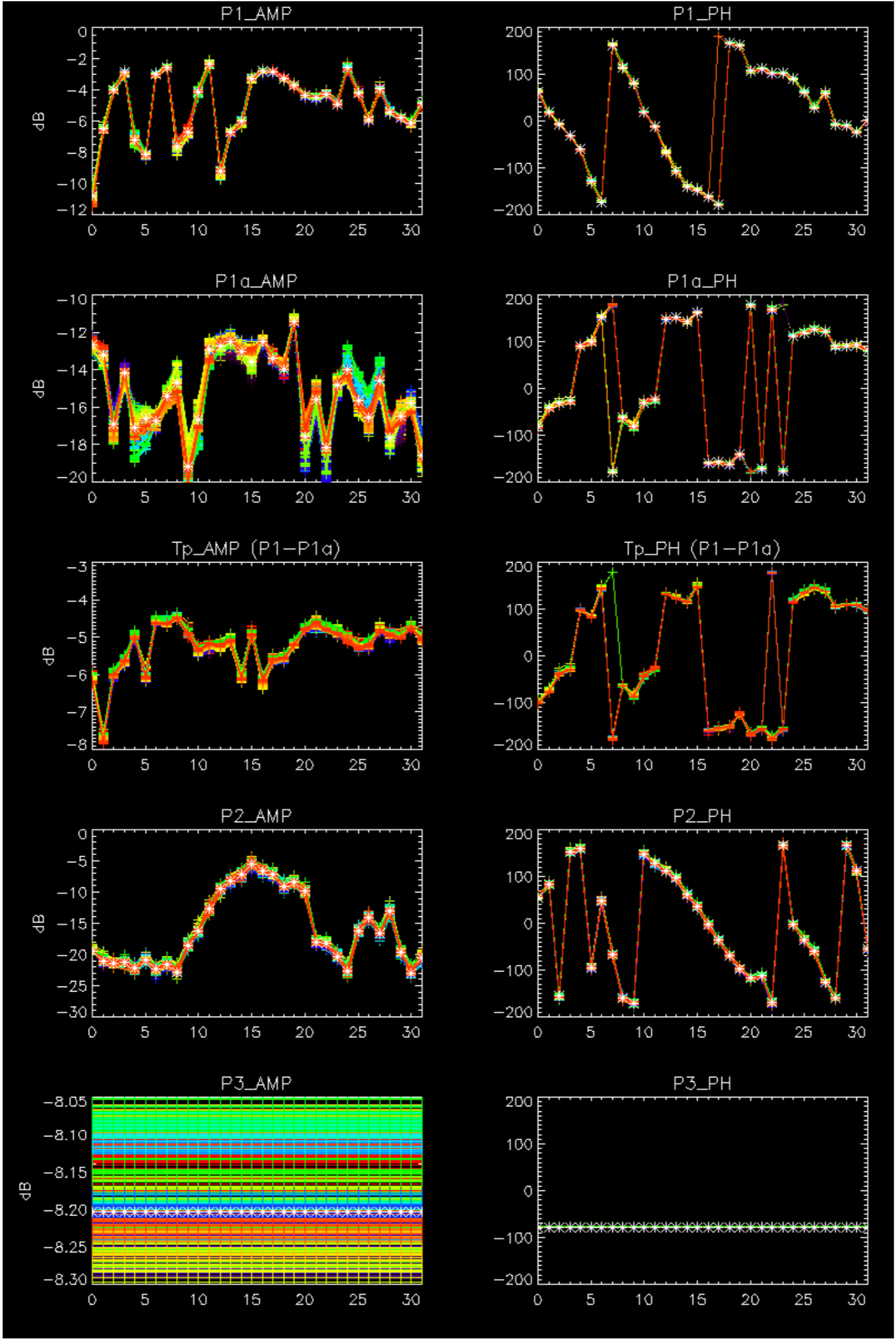
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



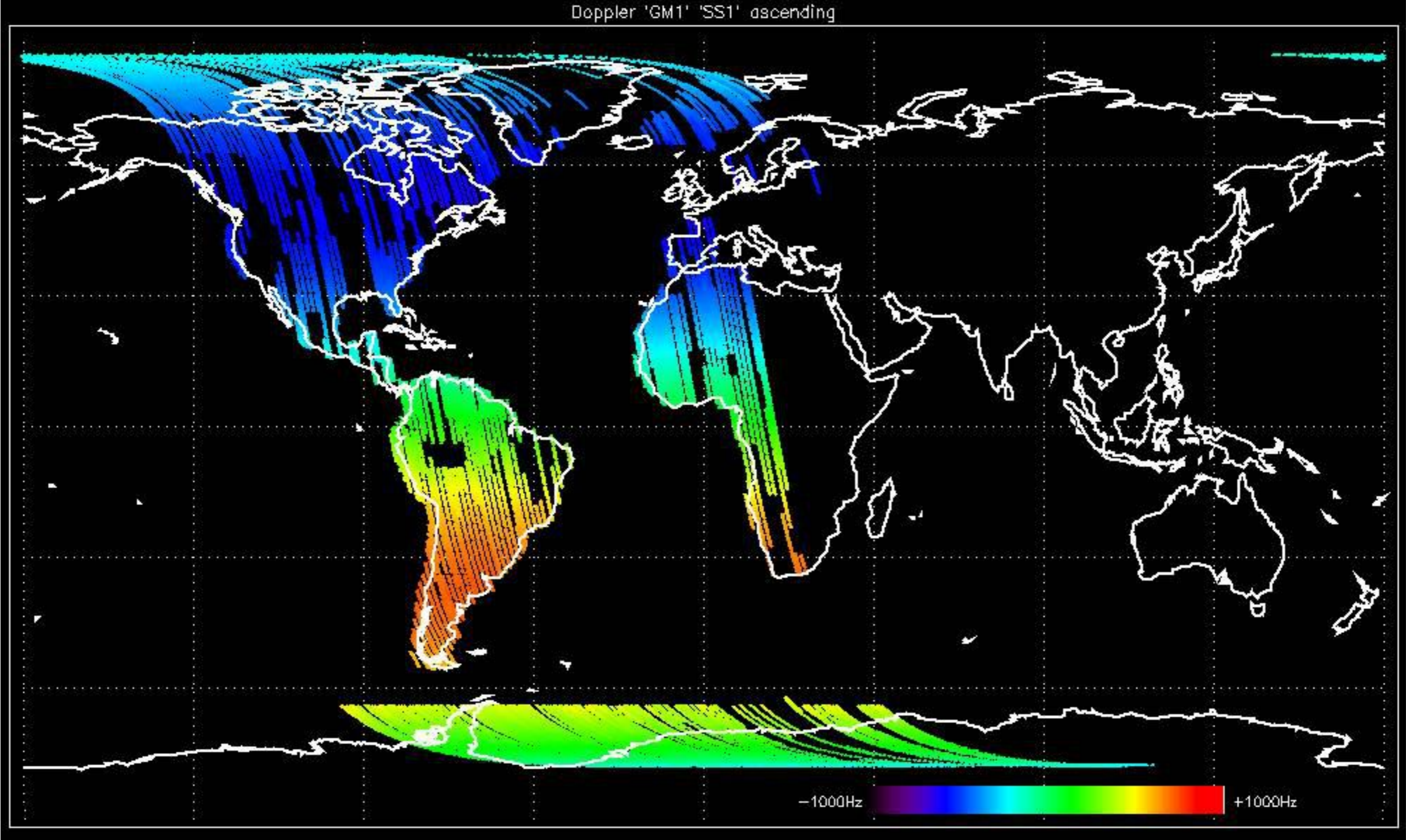
No anomalies observed.



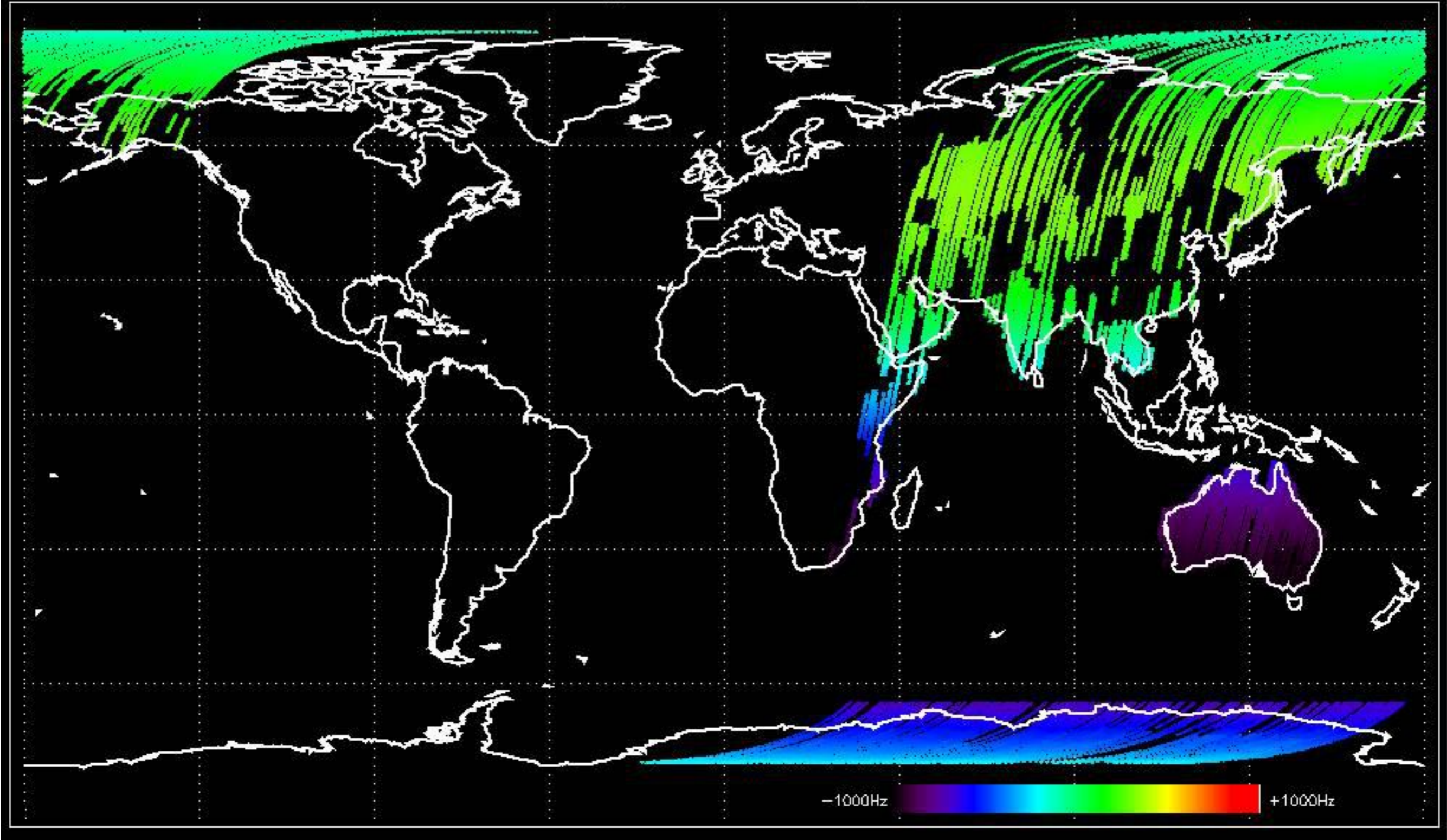


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

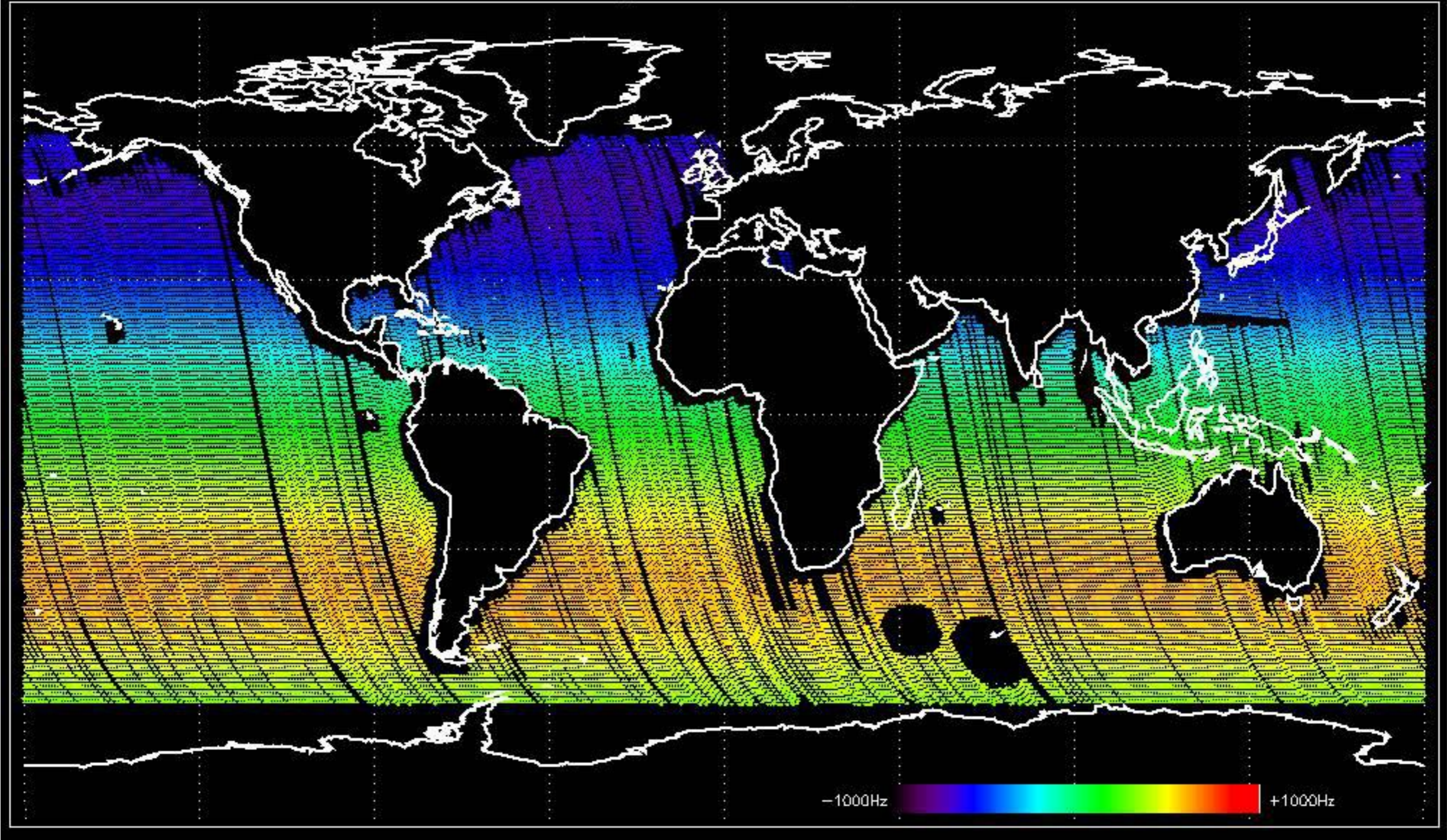
Doppler 'GM1' 'SS1' ascending



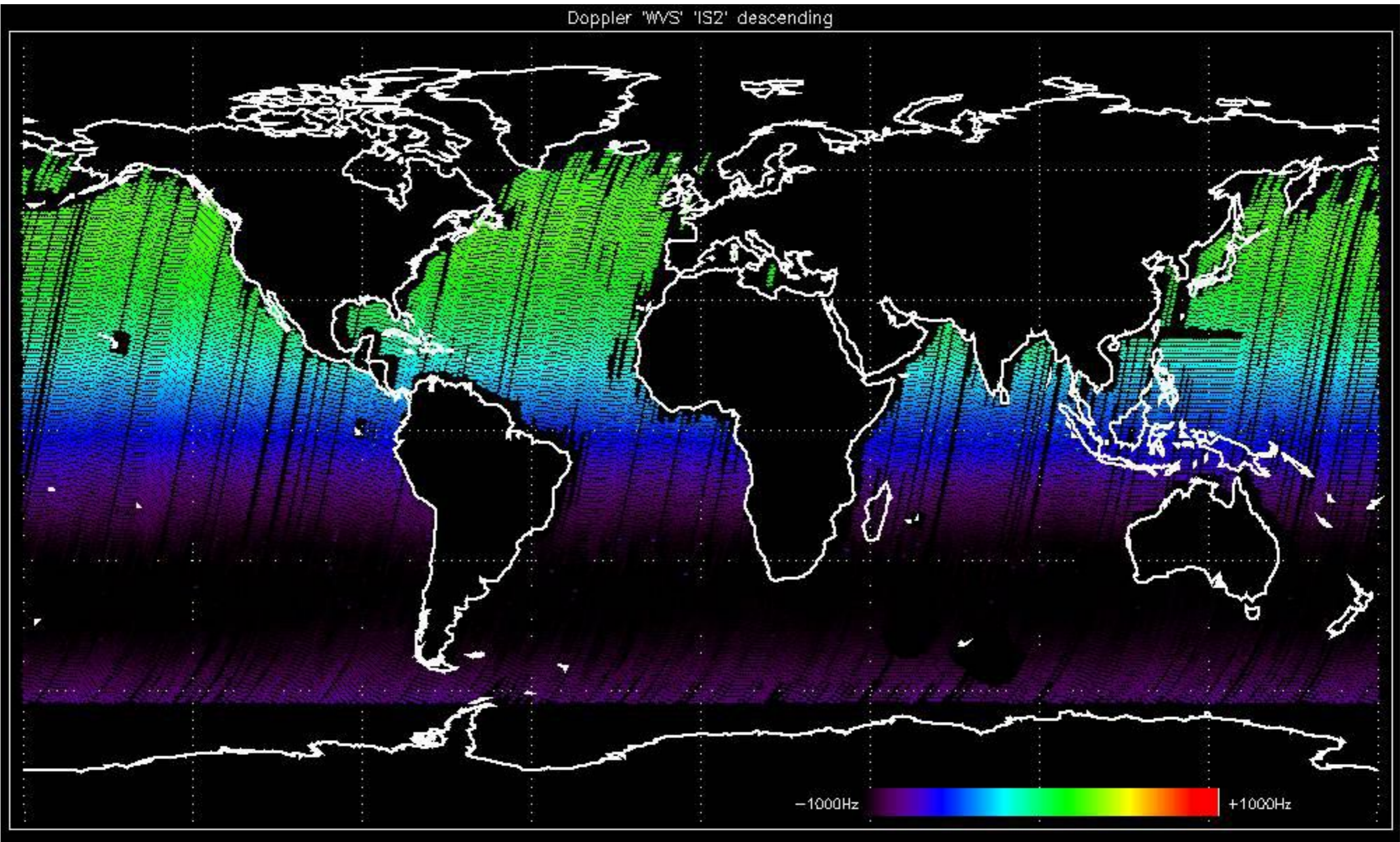
Doppler 'GM1' 'SS1' descending



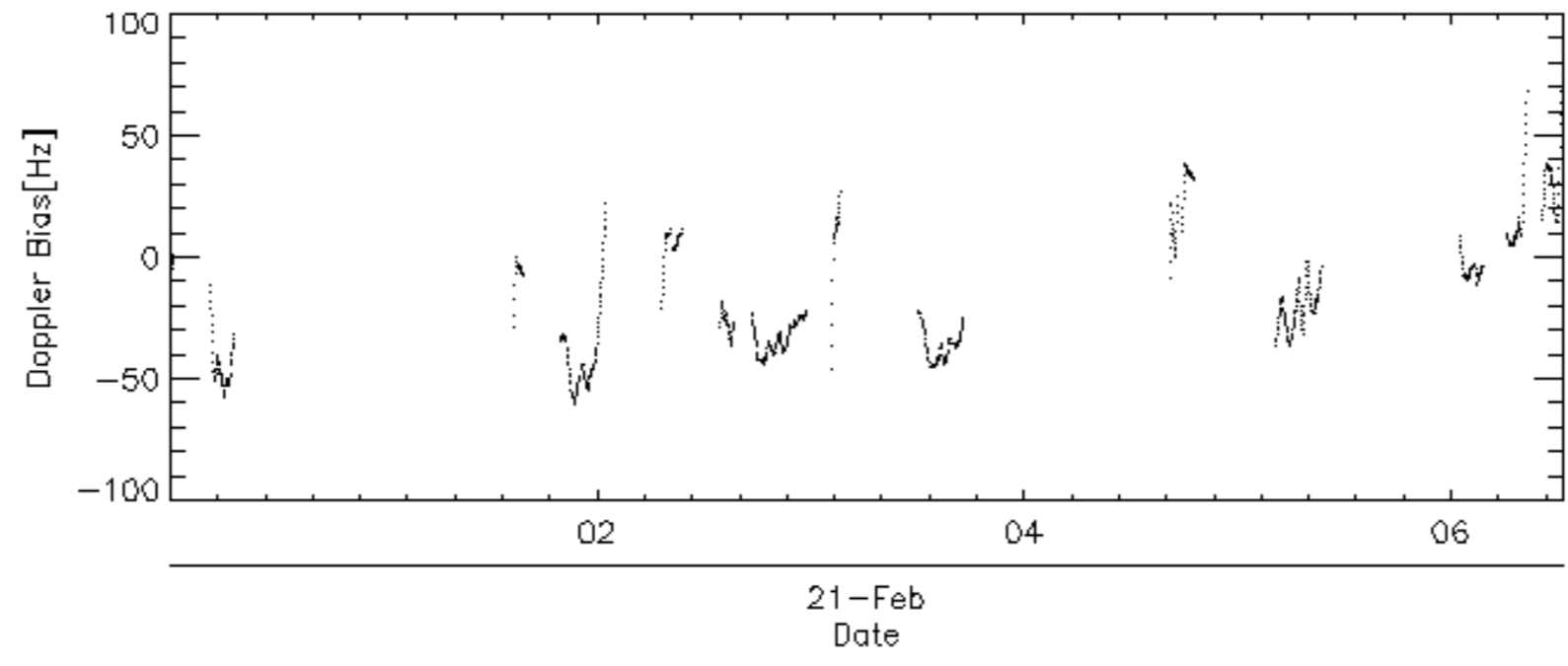
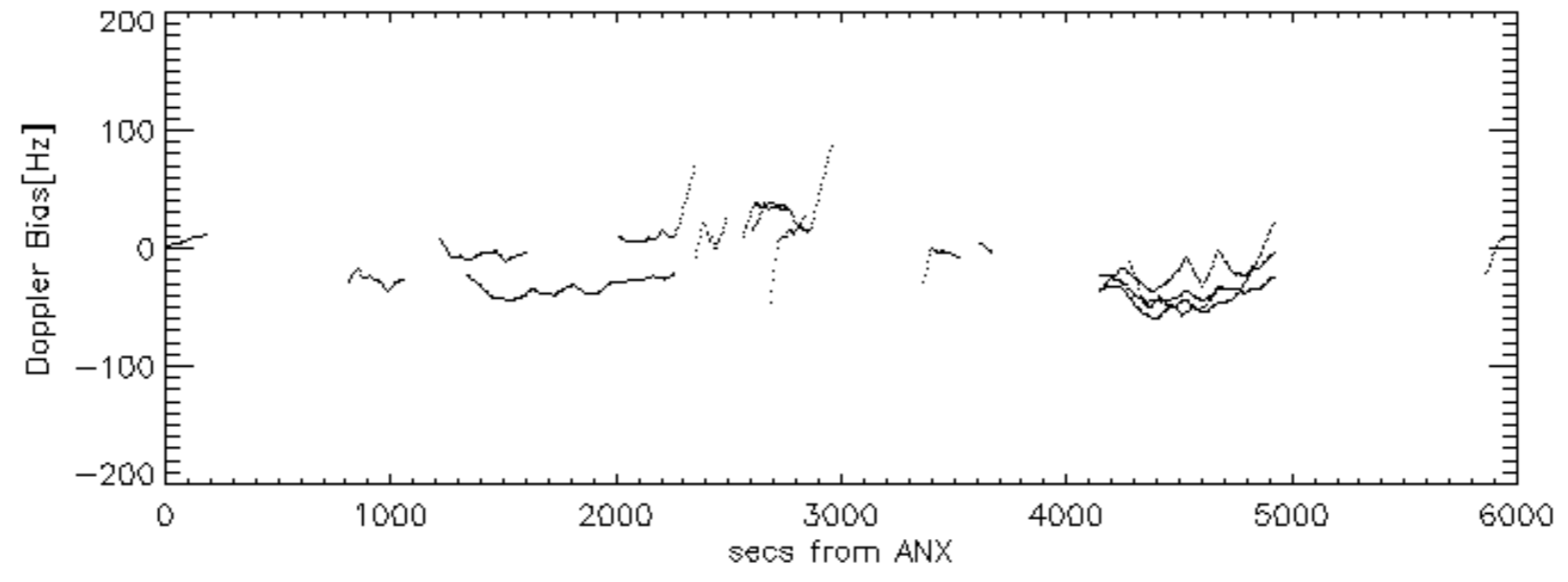
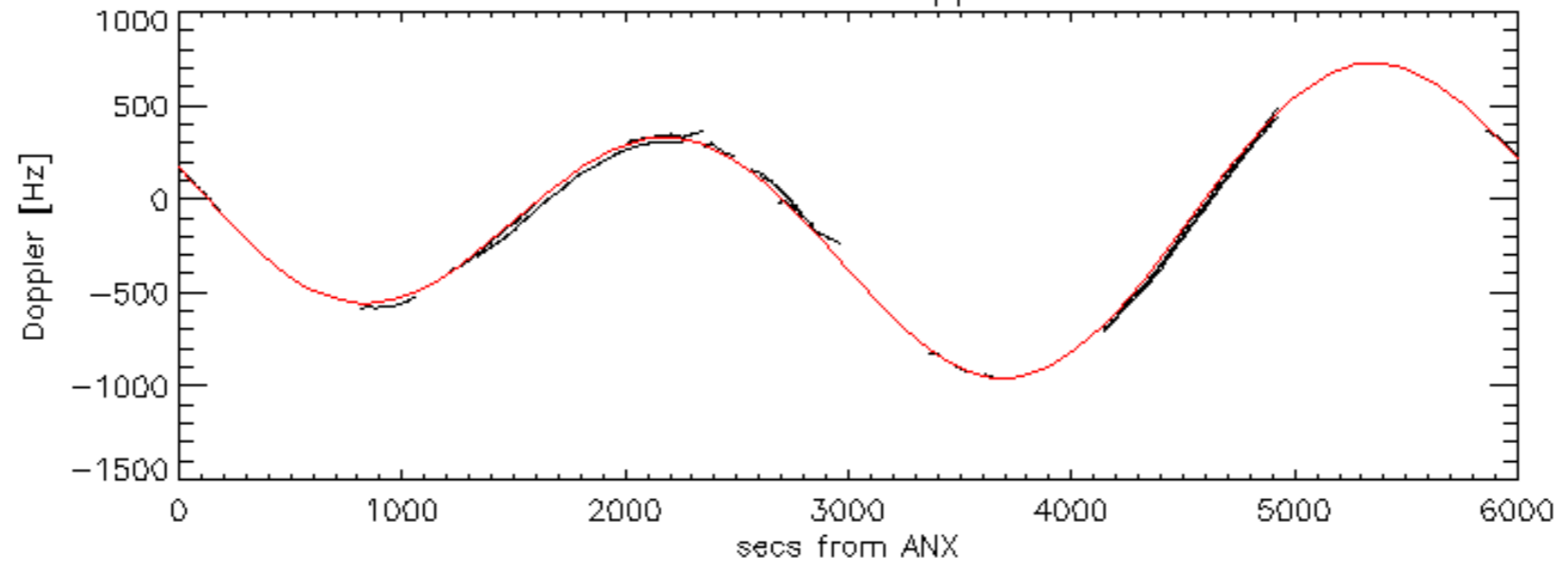
Doppler 'WVS' 'IS2' ascending

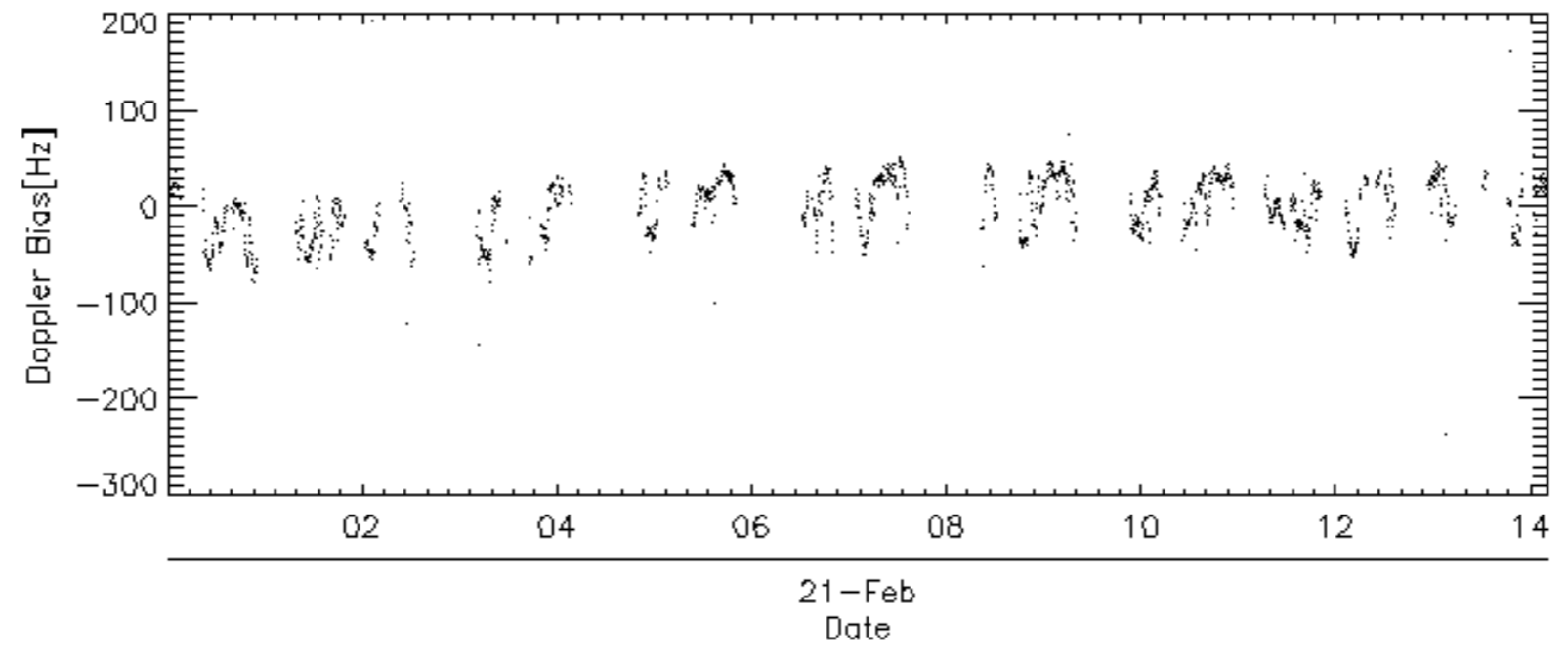
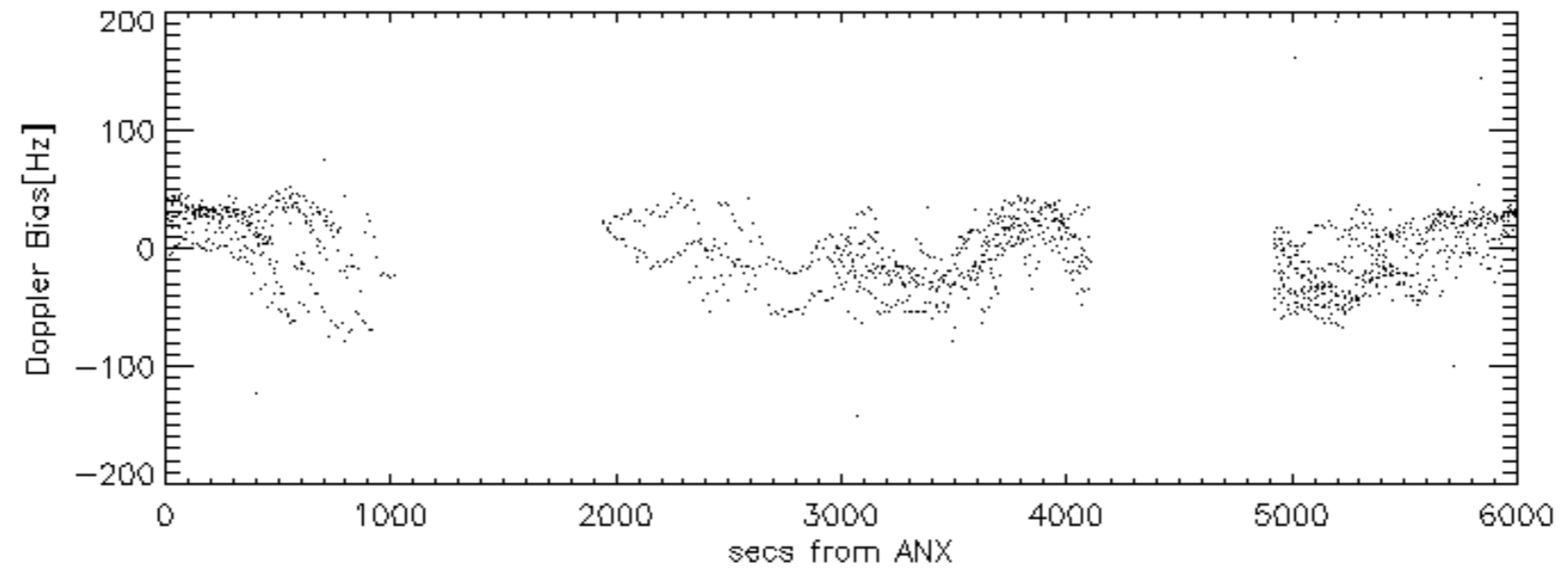
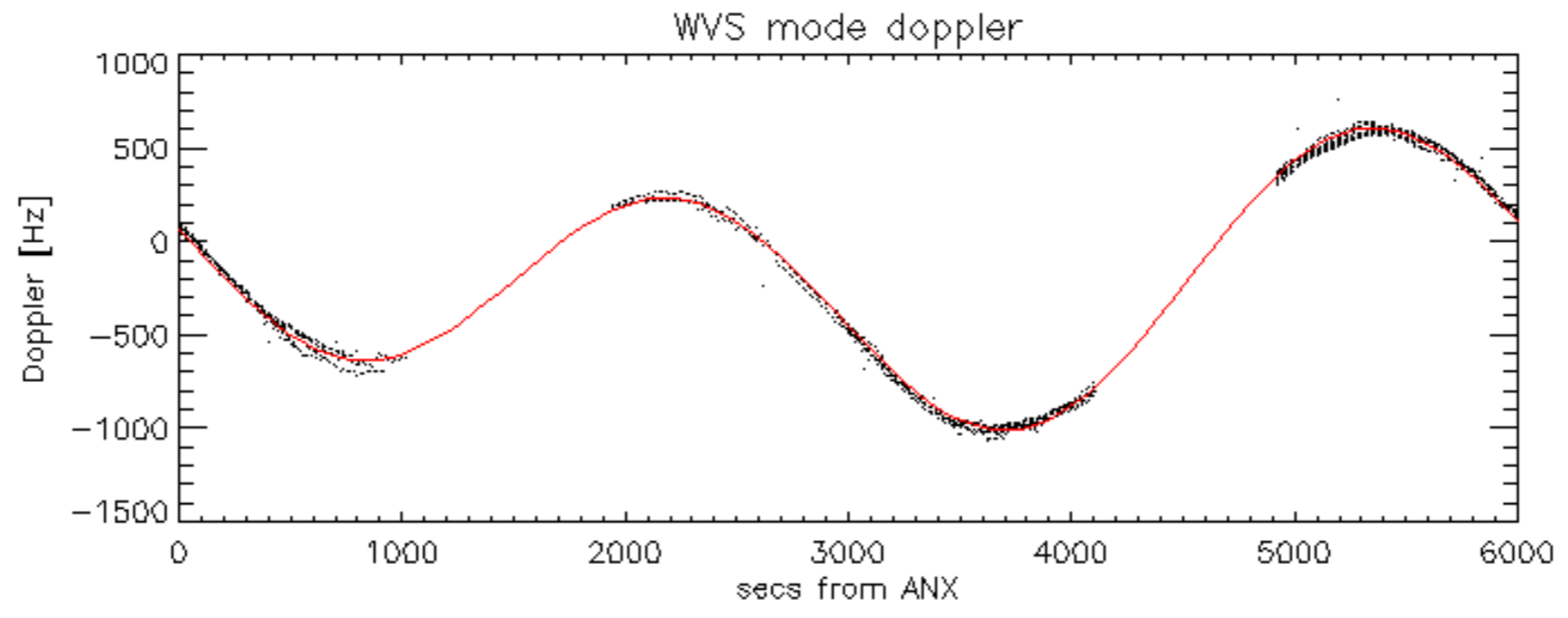


Doppler 'WVS' 'IS2' descending

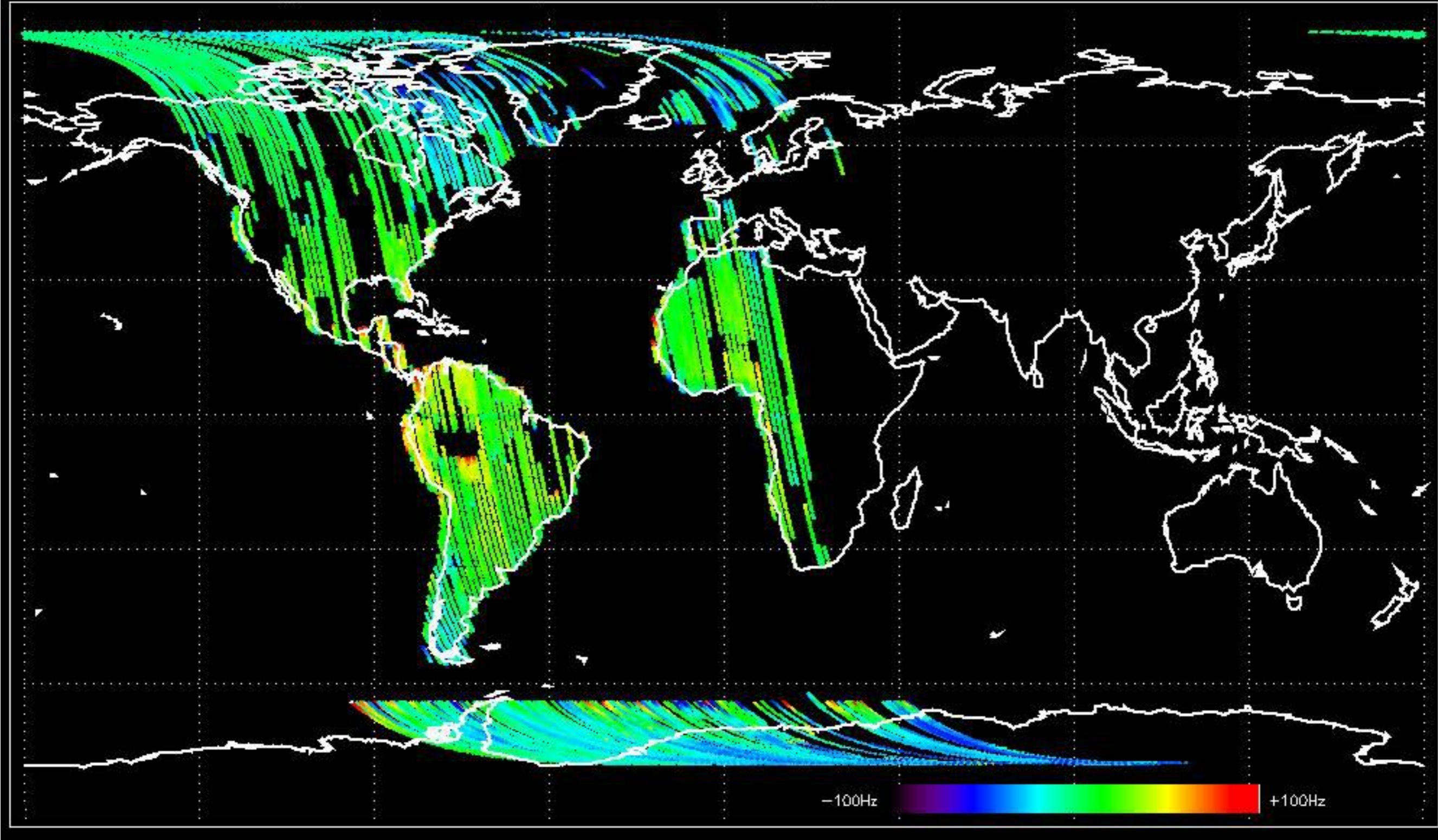


GM1 mode doppler

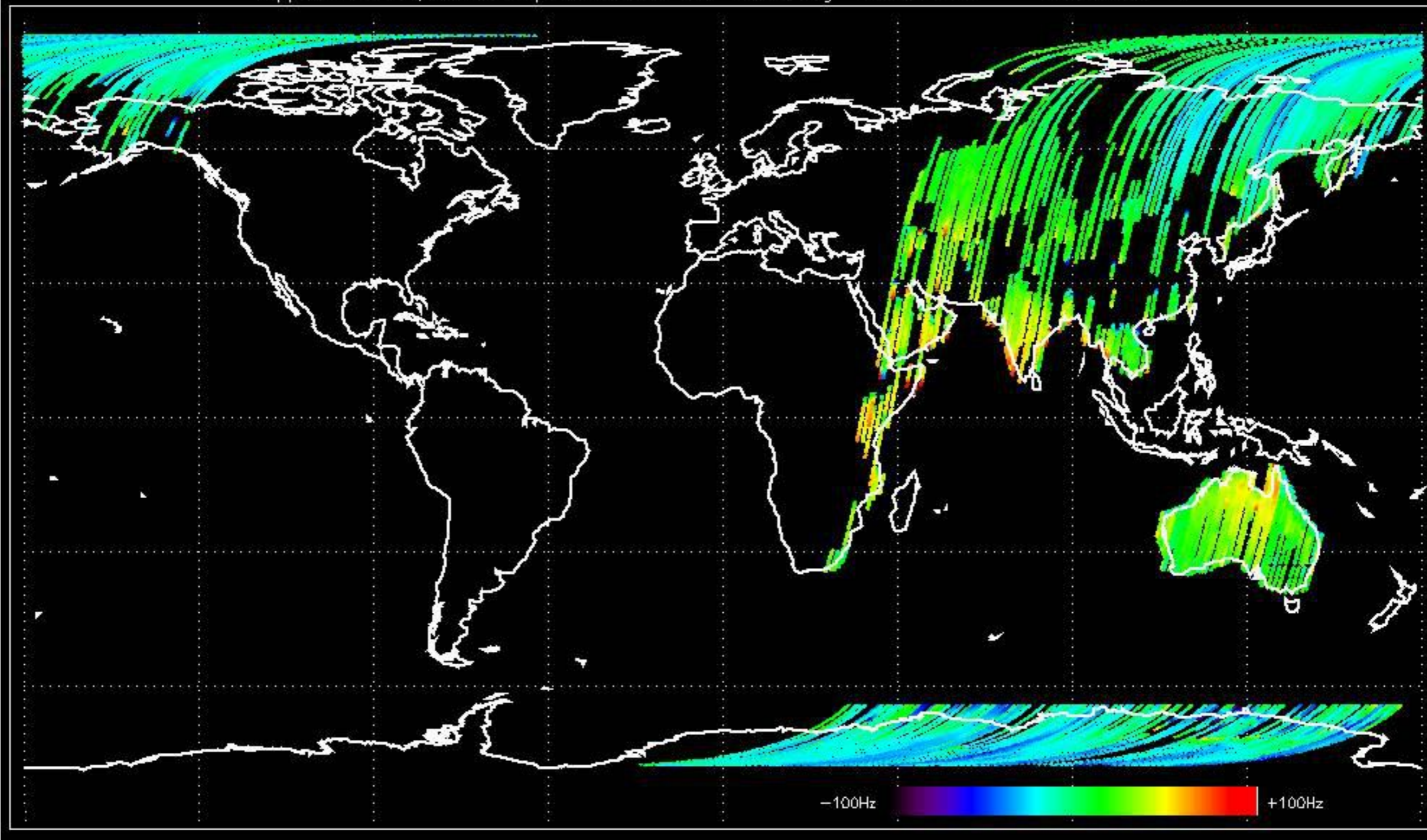




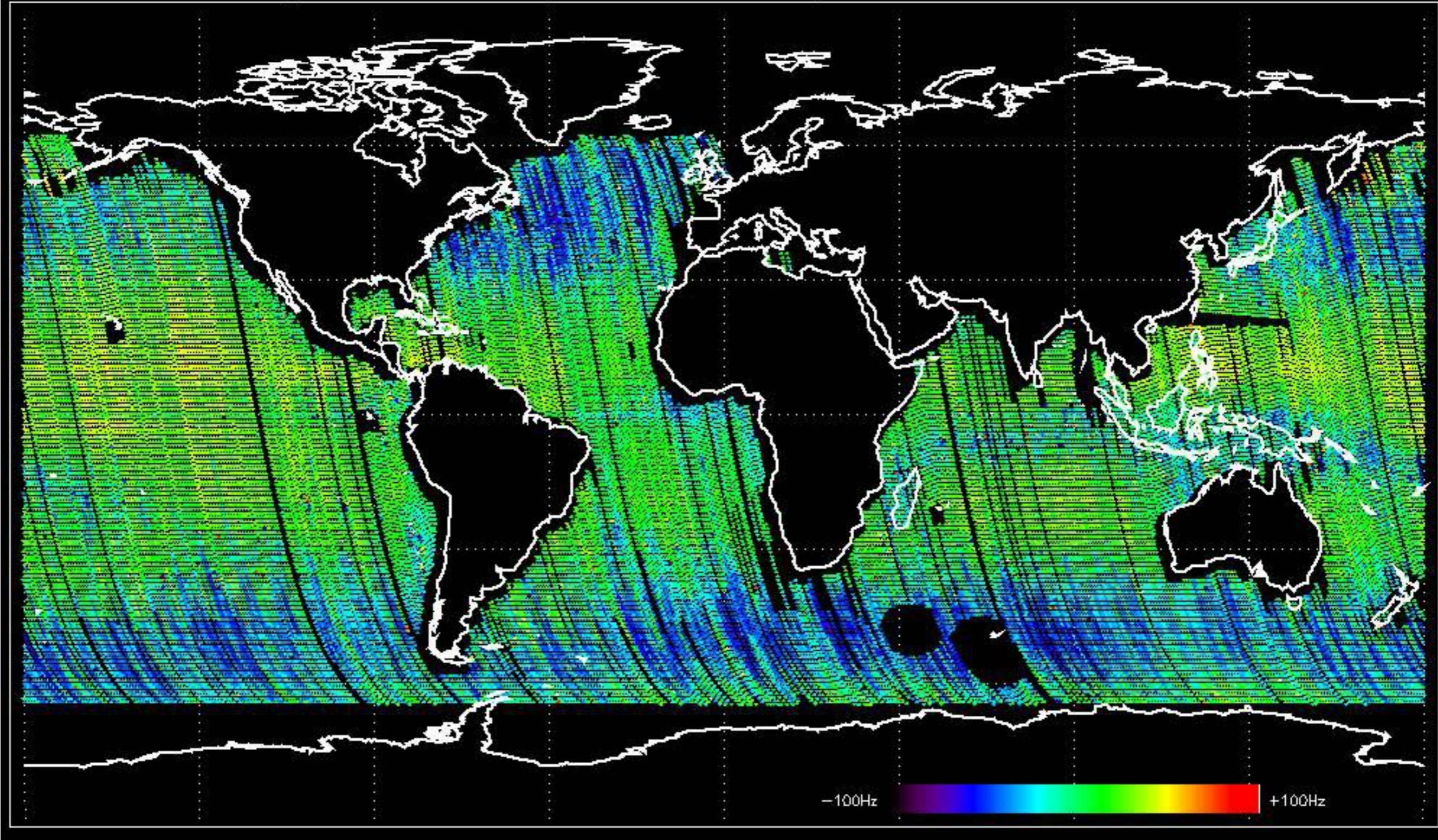
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -10.324567 Hz



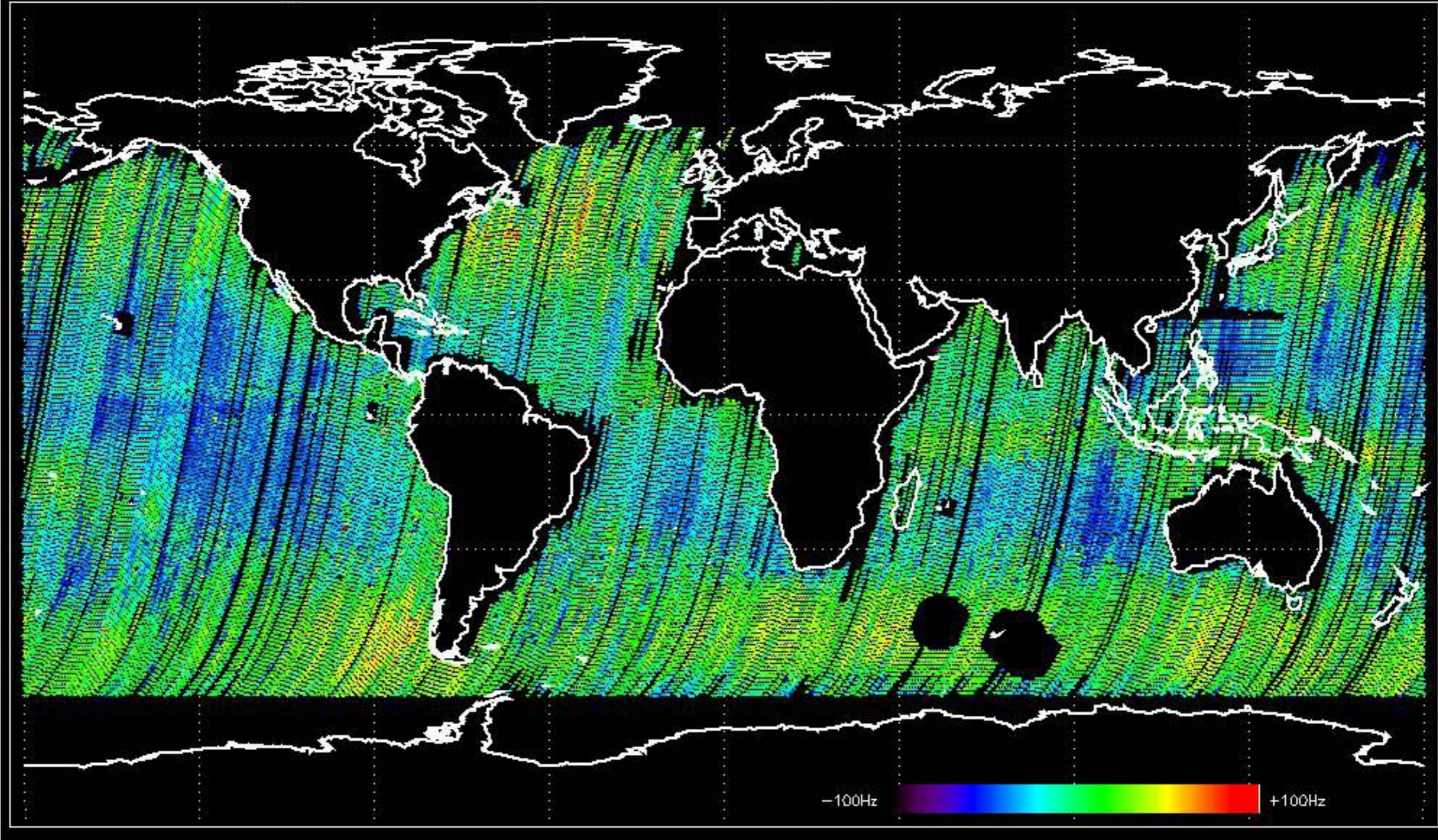
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -12.774561 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -6.8209657 Hz

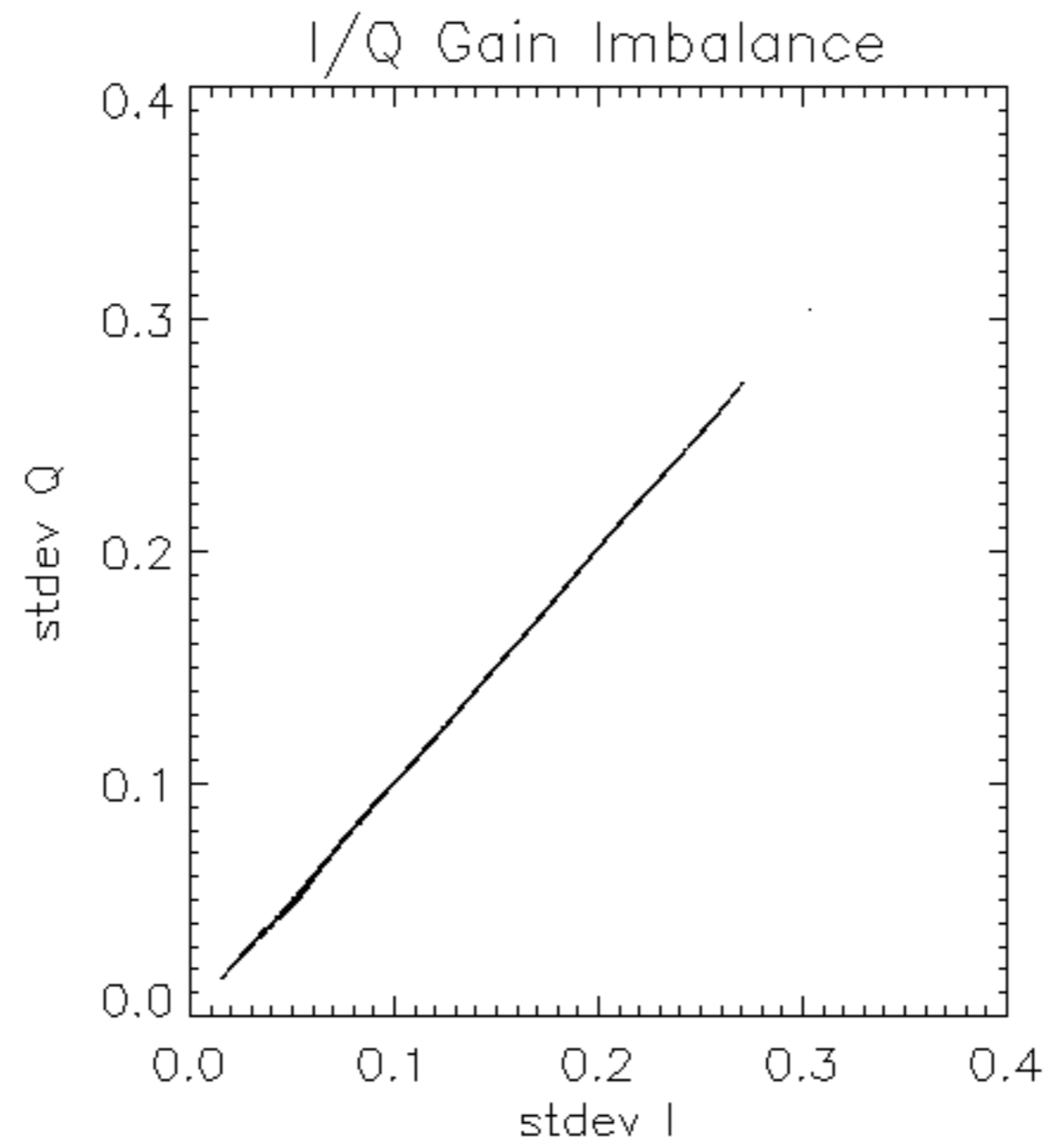


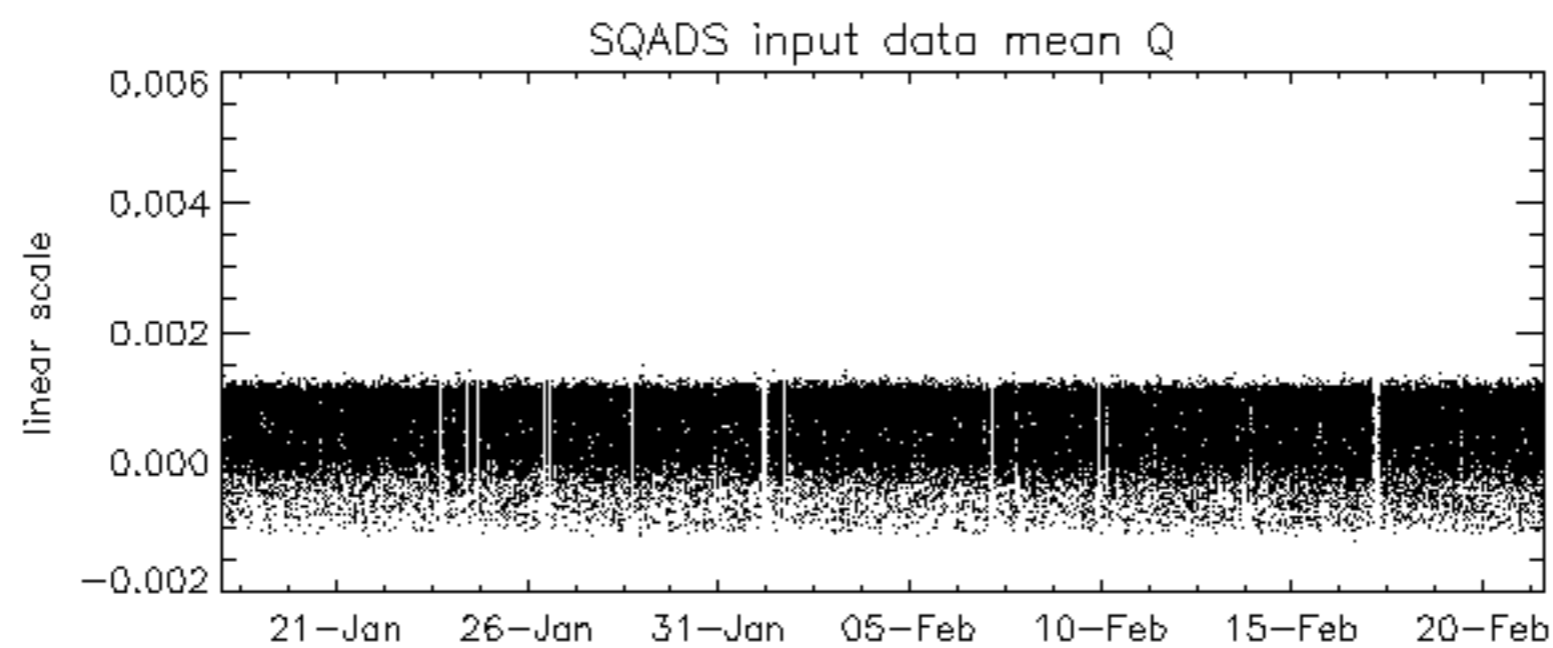
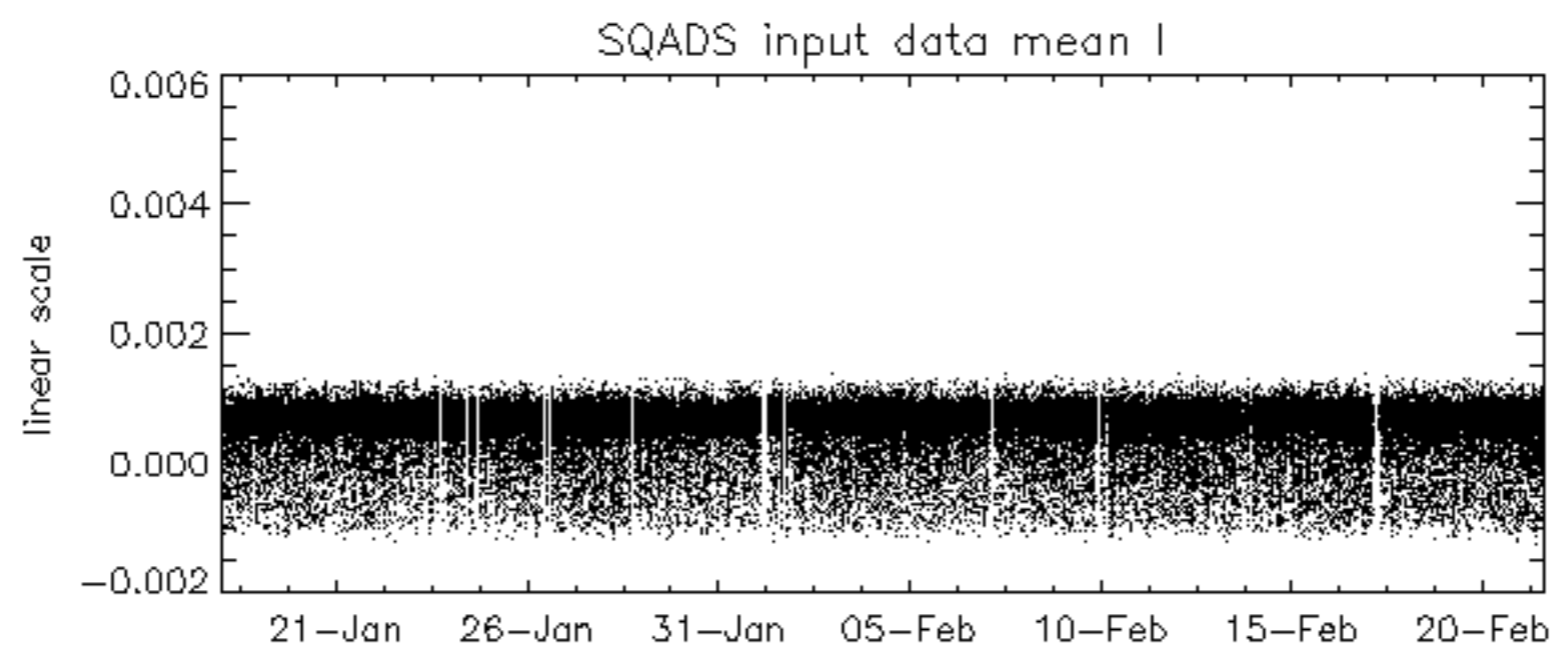
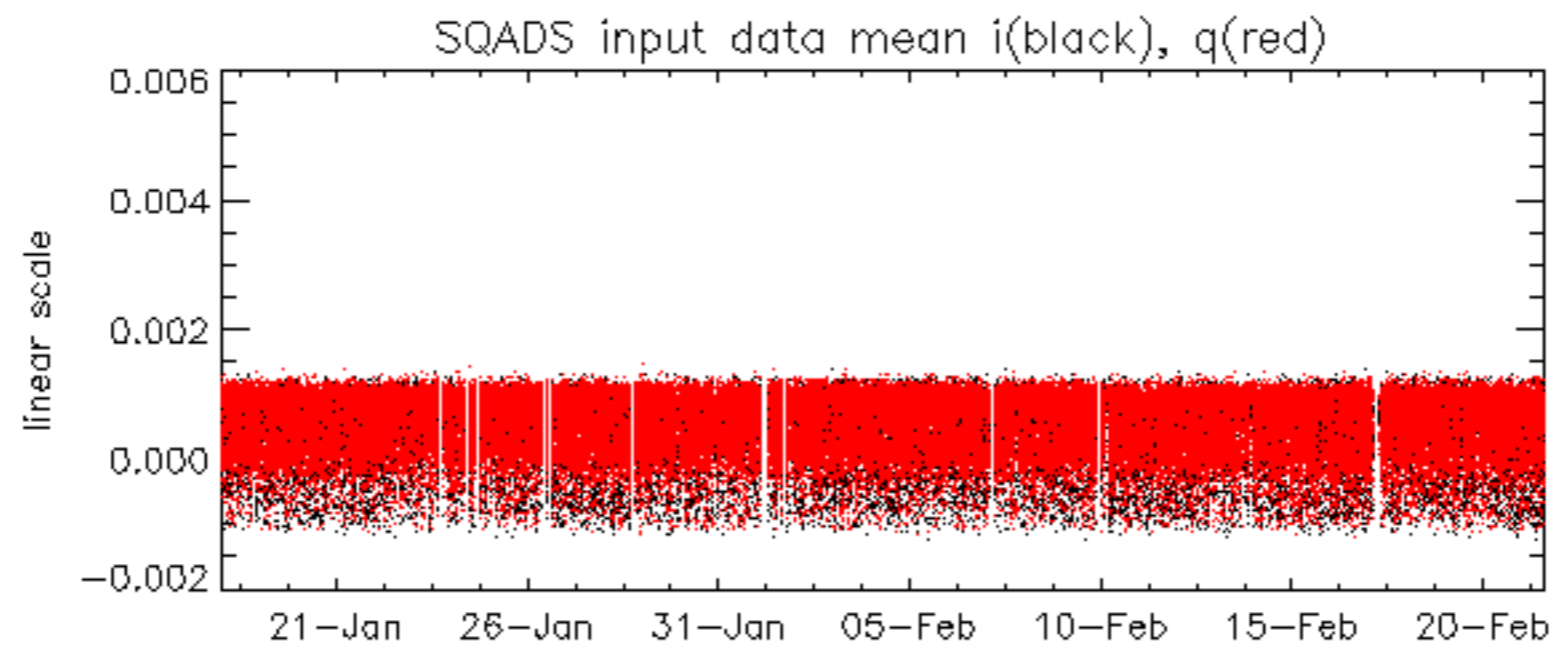
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.8692077 Hz

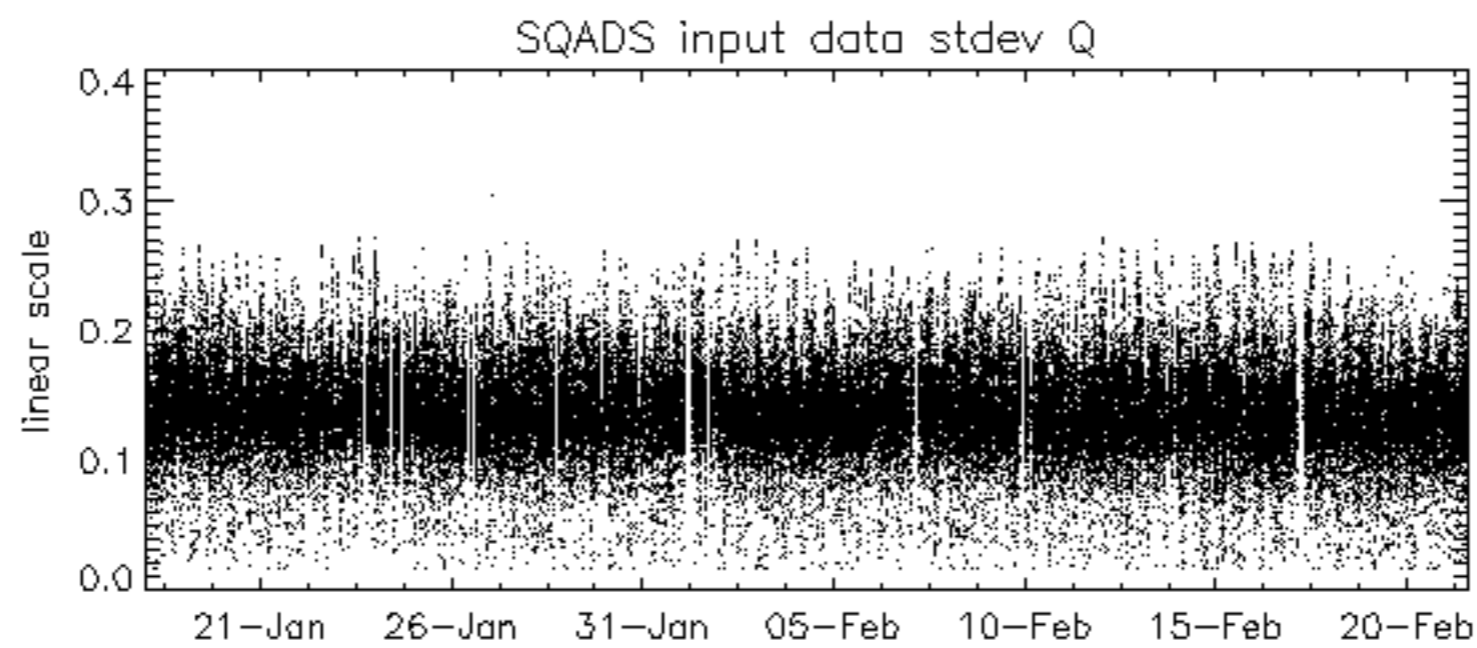
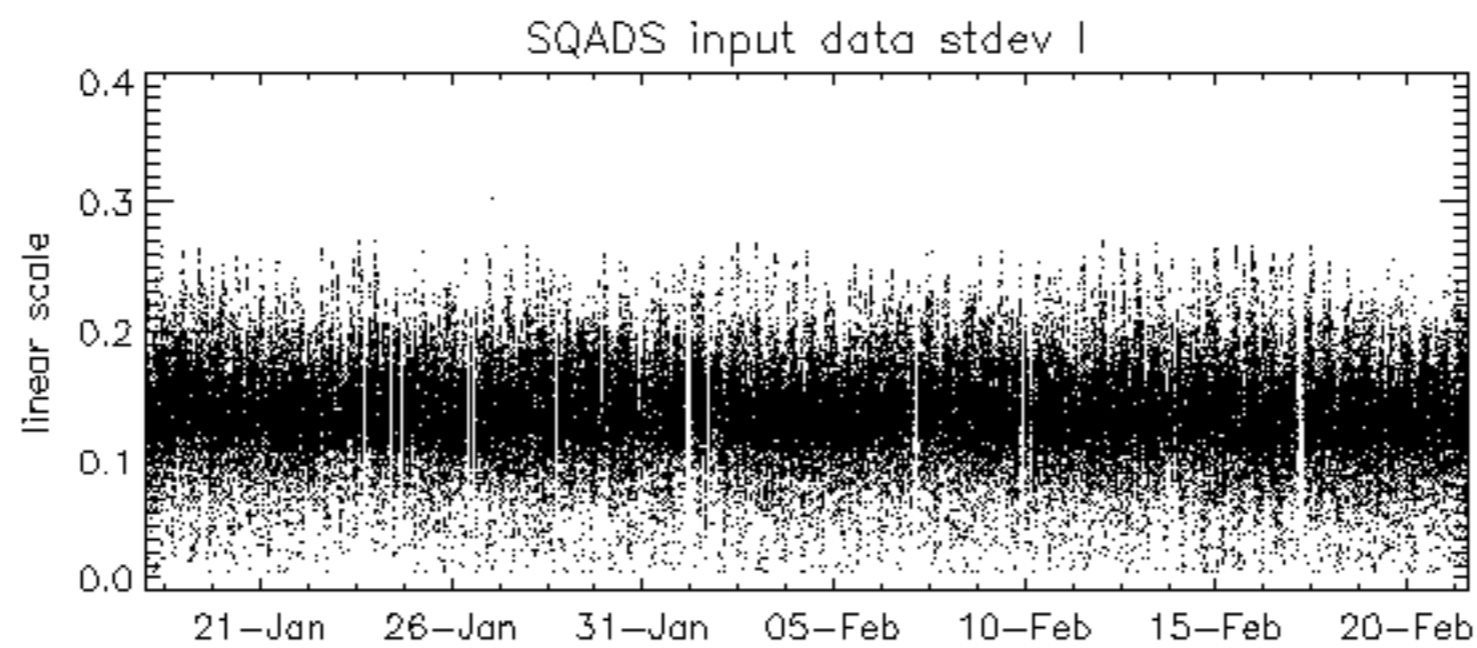
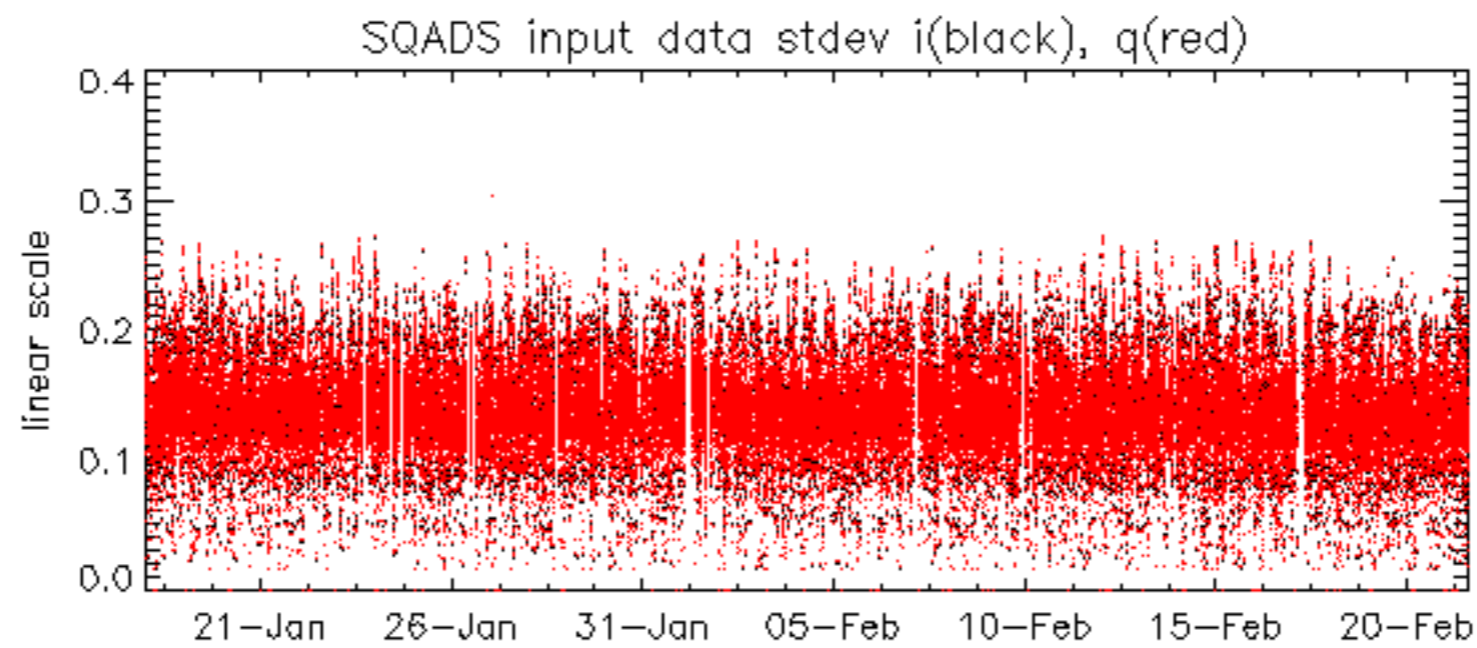


No anomalies observed on available MS products:

No anomalies observed.



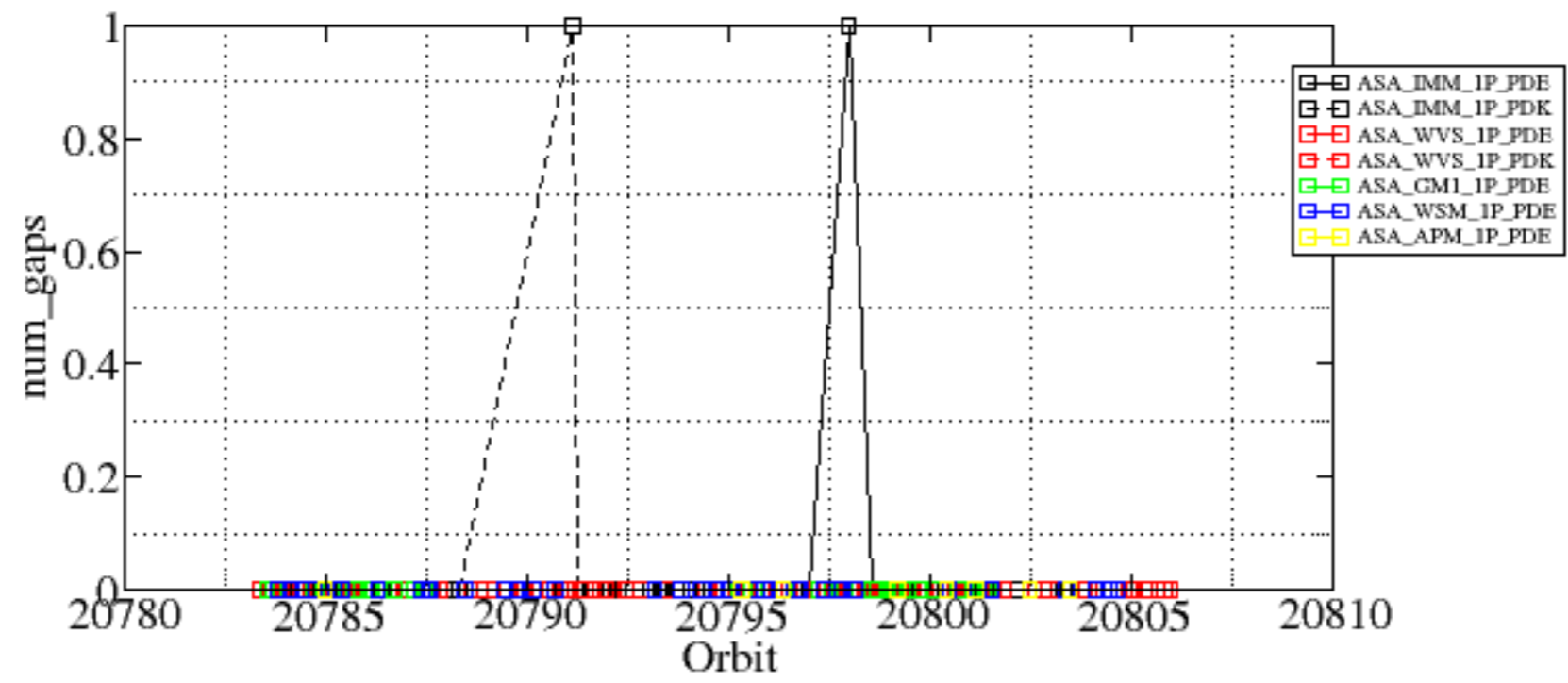


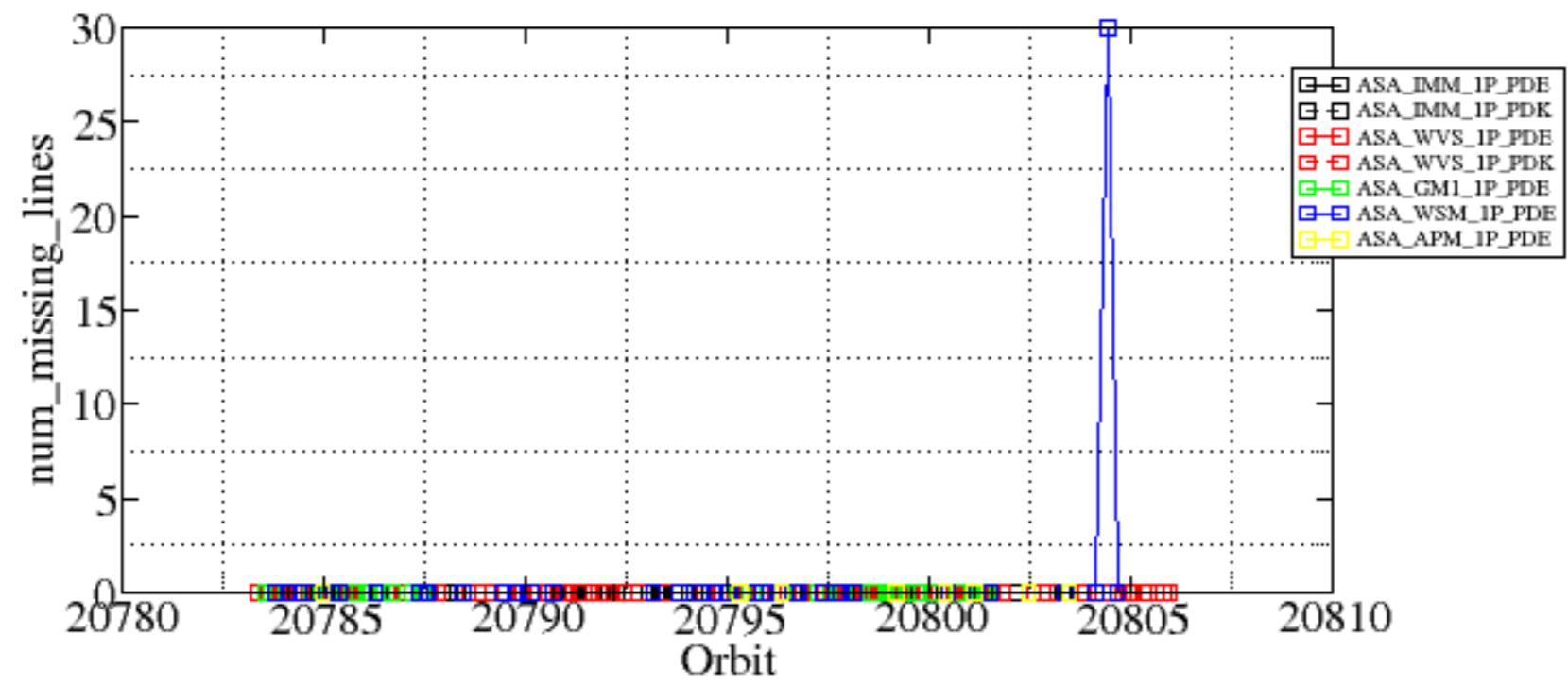


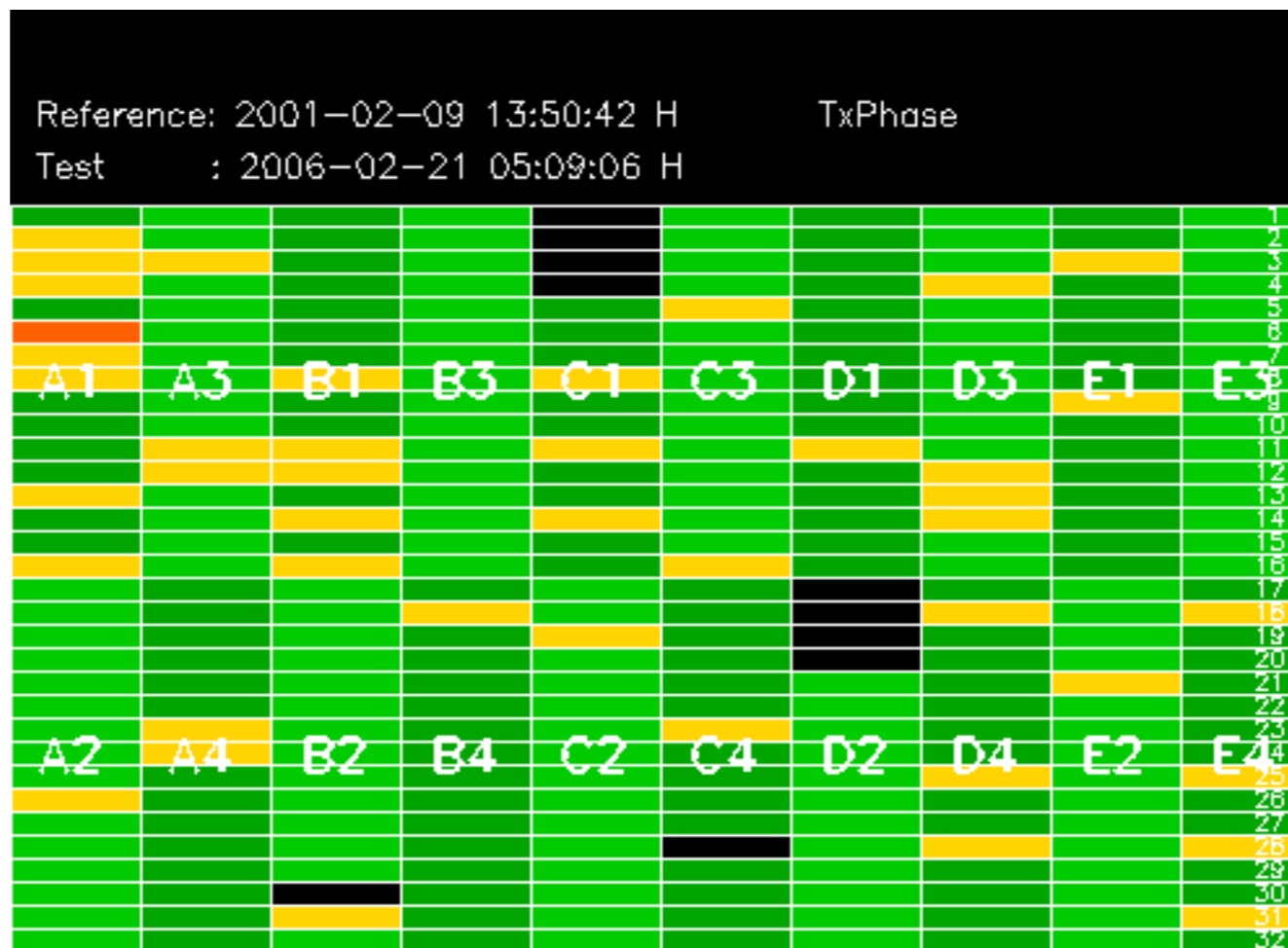
Summary of analysis for the last 3 days 2006022[012]

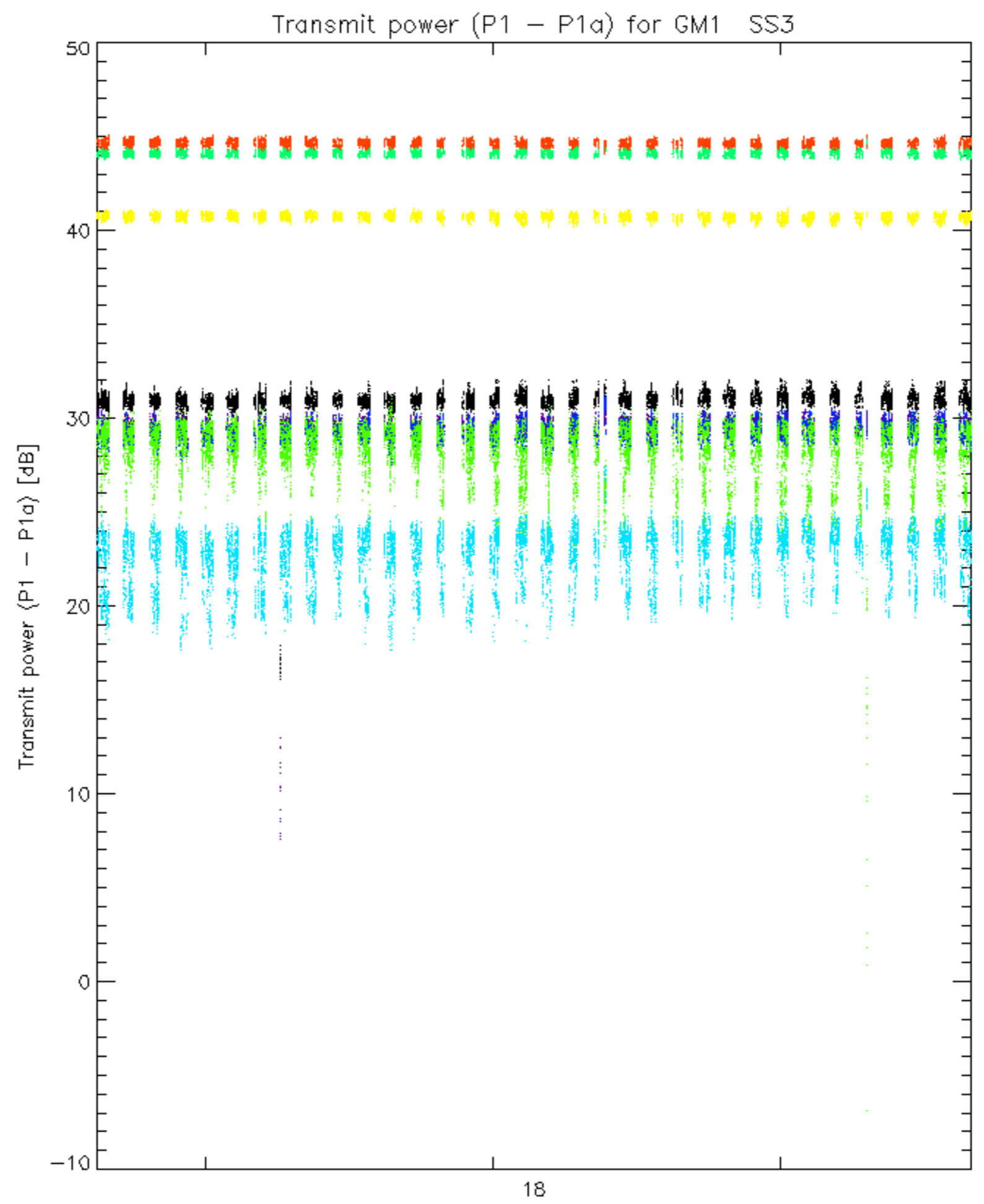
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_IMM_1PNPDE20060221_003709_000001342045_00202_20797_3819.N1	1	0
ASA_IMM_1PNPDK20060220_130809_000001212045_00196_20791_1113.N1	1	0
ASA_WSM_1PNPDE20060221_112842_000001842045_00209_20804_5812.N1	0	30

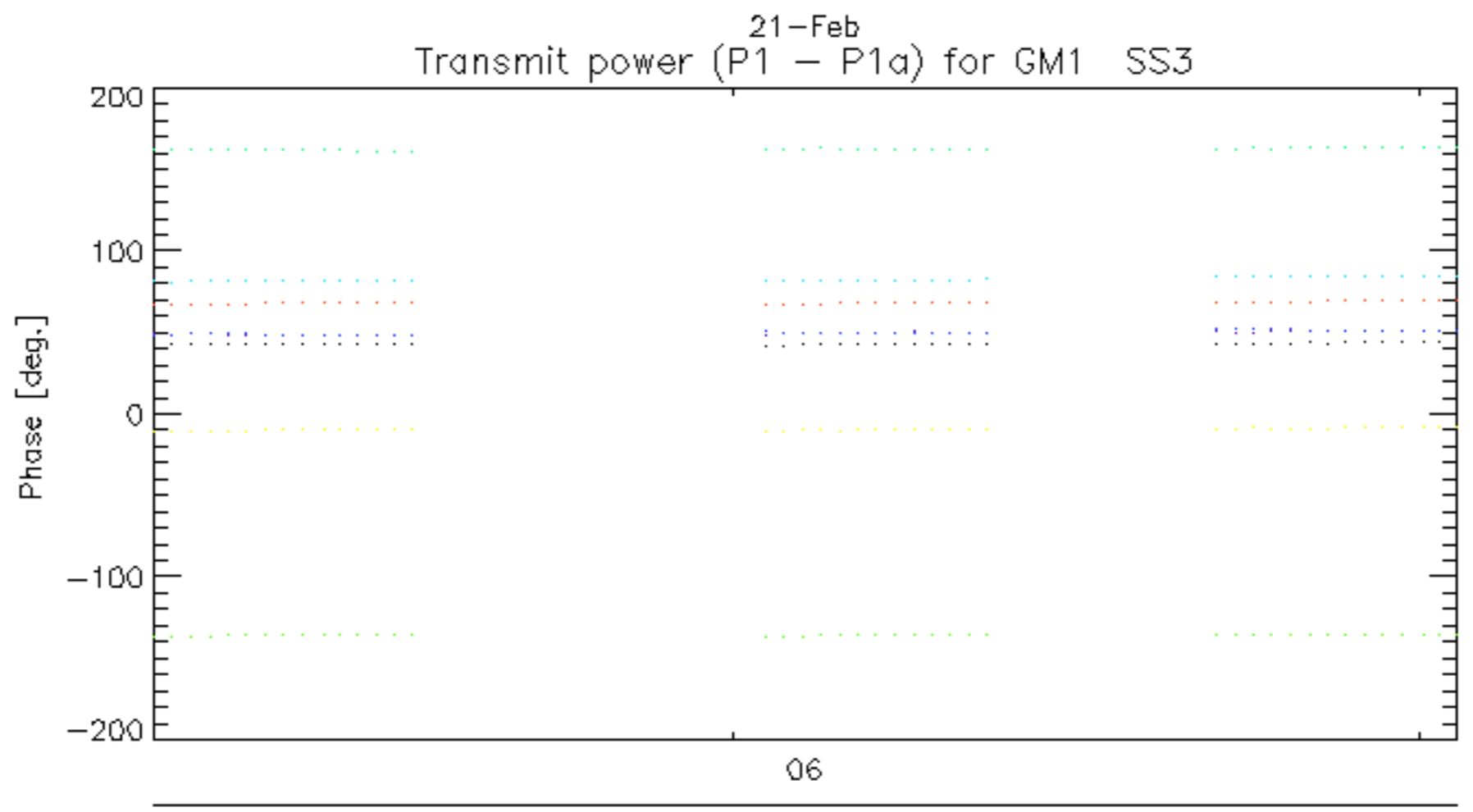
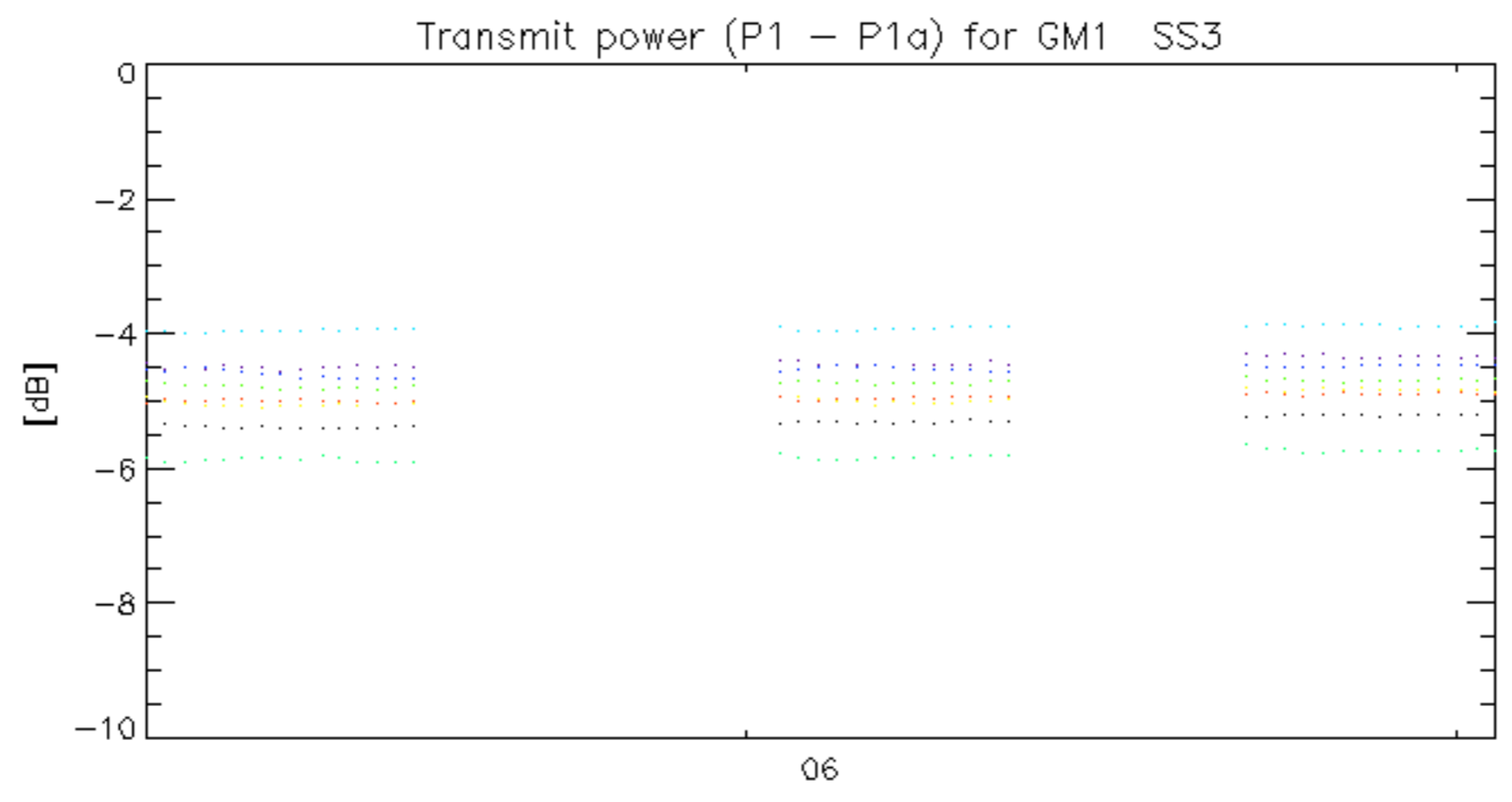




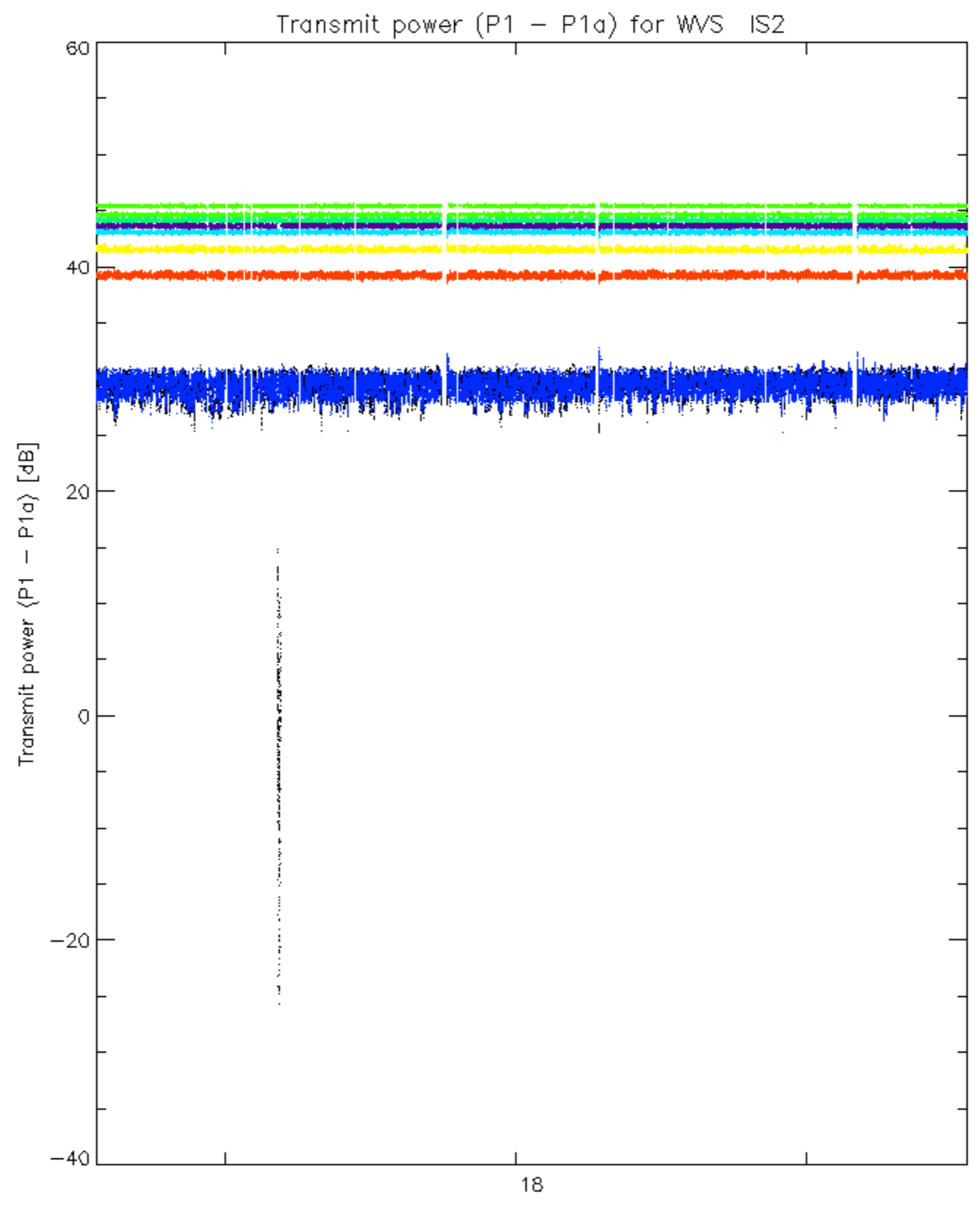




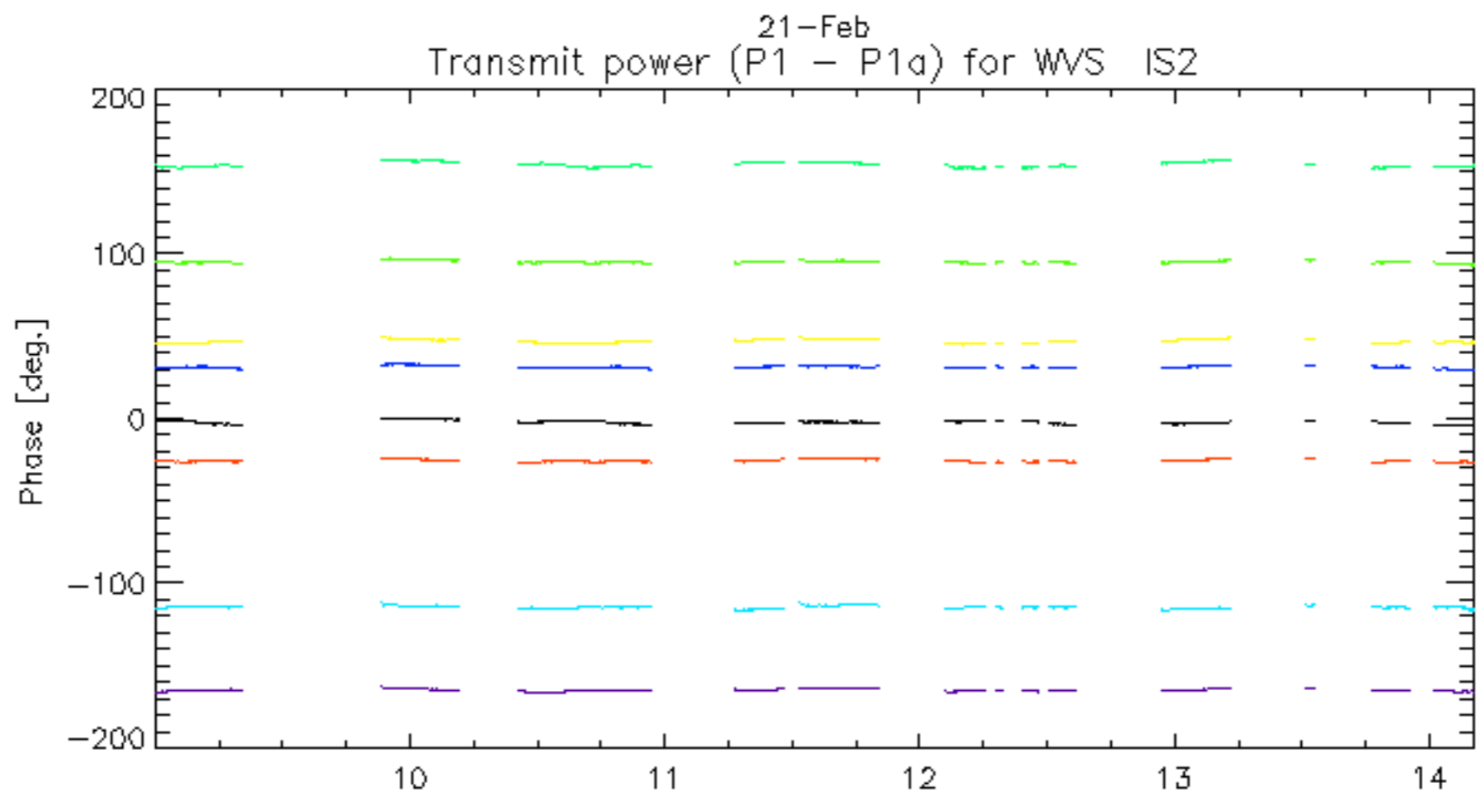
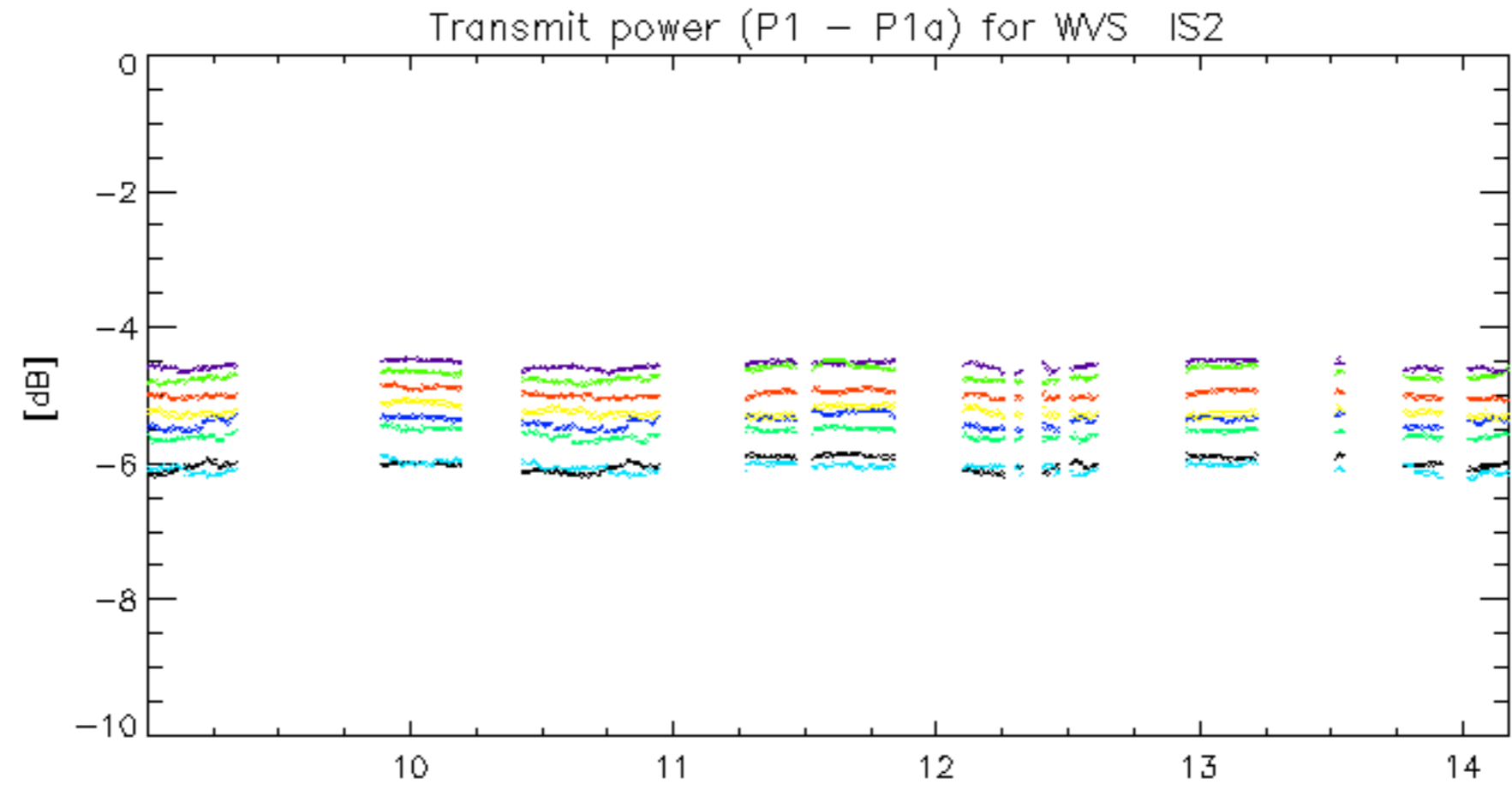
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30



rows: 3 7 11 15 19 22 26 30



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



rows: 3 7 11 15 19 22 26 30

No unavailabilities during the reported period.