

PRELIMINARY REPORT OF 050216

last update on Wed Feb 16 11:24:33 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 2005-02-15 00:00:00 to 2005-02-16 11:24:33

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	30	16	3	1	3
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	30	16	3	1	3
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	30	16	3	1	3
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	30	16	3	1	3

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	44	47	4	15	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	44	47	4	15	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	44	47	4	15	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	44	47	4	15	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

No anomalies observed on available MS products:

Polarisation	Start Time
V	20050215 042858
H	20050214 050035

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	-3.389536	0.008619	0.052893
7	P1	-3.080350	0.007741	-0.006426
11	P1	-4.669911	0.018805	-0.039107
15	P1	-5.651203	0.030008	-0.005579
19	P1	-3.665124	0.004235	0.003705
22	P1	-4.547863	0.014015	0.051277
26	P1	-4.941652	0.013568	-0.009090
30	P1	-7.155449	0.017142	-0.034794
3	P1	-15.917094	0.093774	-0.096871
7	P1	-15.513605	0.061918	-0.018242
11	P1	-20.884270	0.238423	-0.093245
15	P1	-11.591182	0.028410	0.046458
19	P1	-14.193917	0.025225	-0.075581
22	P1	-15.844676	0.364324	0.270171
26	P1	-17.598400	0.219078	0.020246
30	P1	-17.926548	0.378425	0.006504

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.189655	0.085710	0.171980
7	P2	-22.380463	0.106236	0.151583
11	P2	-14.602287	0.101242	0.163605
15	P2	-7.085793	0.095657	0.066958
19	P2	-9.677613	0.094759	0.064366
22	P2	-17.000990	0.094071	0.126659
26	P2	-16.474157	0.092676	0.061549
30	P2	-18.902006	0.079709	0.035203

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.177974	0.005862	0.036244
7	P3	-8.177974	0.005862	0.036244
11	P3	-8.177974	0.005862	0.036244
15	P3	-8.177974	0.005862	0.036244
19	P3	-8.177974	0.005862	0.036244
22	P3	-8.177974	0.005862	0.036244
26	P3	-8.177876	0.005862	0.036101
30	P3	-8.177876	0.005862	0.036101

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	-2.777838	0.019610	0.078451
7	P1	-2.973392	0.076106	-0.049061
11	P1	-3.964090	0.024692	-0.028627
15	P1	-3.536430	0.024831	-0.028539
19	P1	-3.594159	0.013920	0.014783
22	P1	-5.695766	0.058458	-0.077783
26	P1	-7.192493	0.112414	-0.552087
30	P1	-6.268148	0.042363	0.088620
3	P1	-10.749416	0.092703	-0.014071
7	P1	-10.181278	0.193875	-0.135796
11	P1	-12.559506	0.126384	-0.026381
15	P1	-11.755648	0.078676	0.018536
19	P1	-15.583359	0.054910	0.038906
22	P1	-24.144724	1.516830	-0.352721
26	P1	-15.468424	0.334674	-0.433040
30	P1	-20.039696	0.877024	-0.268570

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.903326	0.047726	0.158034
7	P2	-22.442036	0.131910	0.108243
11	P2	-10.395830	0.054874	0.261366
15	P2	-5.004081	0.020921	0.055471
19	P2	-6.875422	0.032042	0.105699
22	P2	-7.183556	0.051030	0.124731
26	P2	-23.882679	0.099264	0.072041
30	P2	-21.945345	0.058900	0.048315

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.012739	0.002544	0.043126
7	P3	-8.012836	0.002556	0.043152
11	P3	-8.012794	0.002555	0.043466
15	P3	-8.012838	0.002550	0.043366
19	P3	-8.012890	0.002569	0.043588
22	P3	-8.012894	0.002543	0.043148
26	P3	-8.012719	0.002554	0.043157
30	P3	-8.012809	0.002556	0.042921

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	0.000470658
	stdev	2.15854e-07
MEAN Q	mean	0.000541536
	stdev	2.29049e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129193
	stdev	0.000975164
STDEV Q	mean	0.129435
	stdev	0.000986180



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005021[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_WSM_1PNPDE20050214_172020_000001592034_00399_15483_5064.N1	0	32
ASA_WSM_1PNPDK20050215_082812_000000862034_00408_15492_5054.N1	0	37



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)

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

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.3 - Doppler evolution versus ANX for WVS

Evolution Doppler error versus ANX

<input type="checkbox"/>

7.4 - Unbiased Doppler Error for GM1

Evolution of unbiased Doppler error (Real - Expected)

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

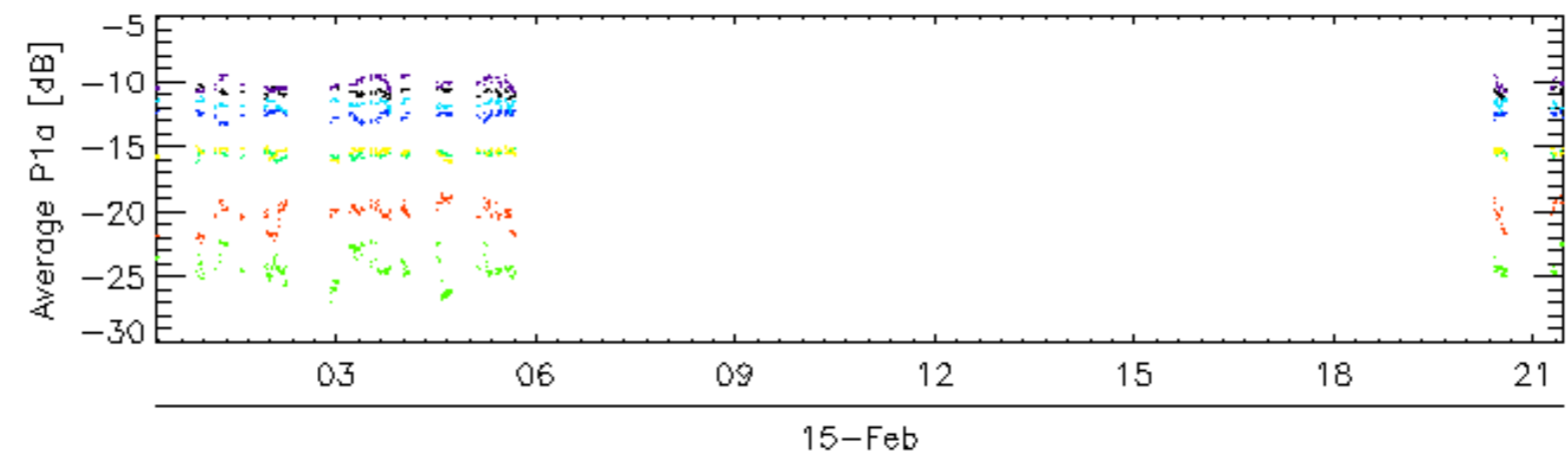
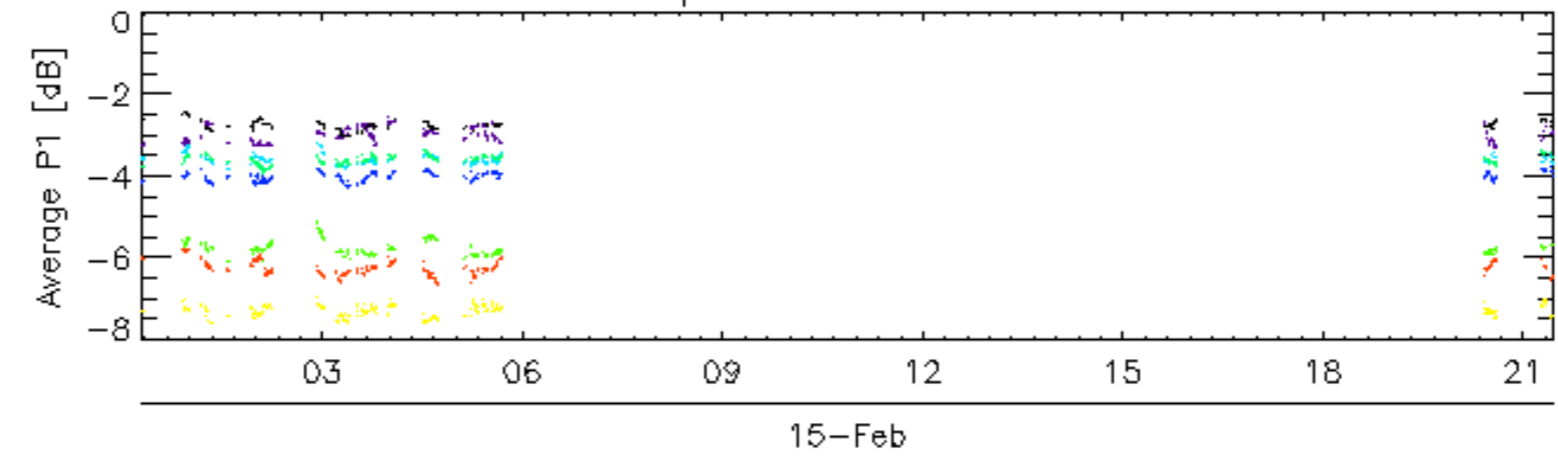
7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler
<input type="checkbox"/>
Ascending
<input type="checkbox"/>
Descending

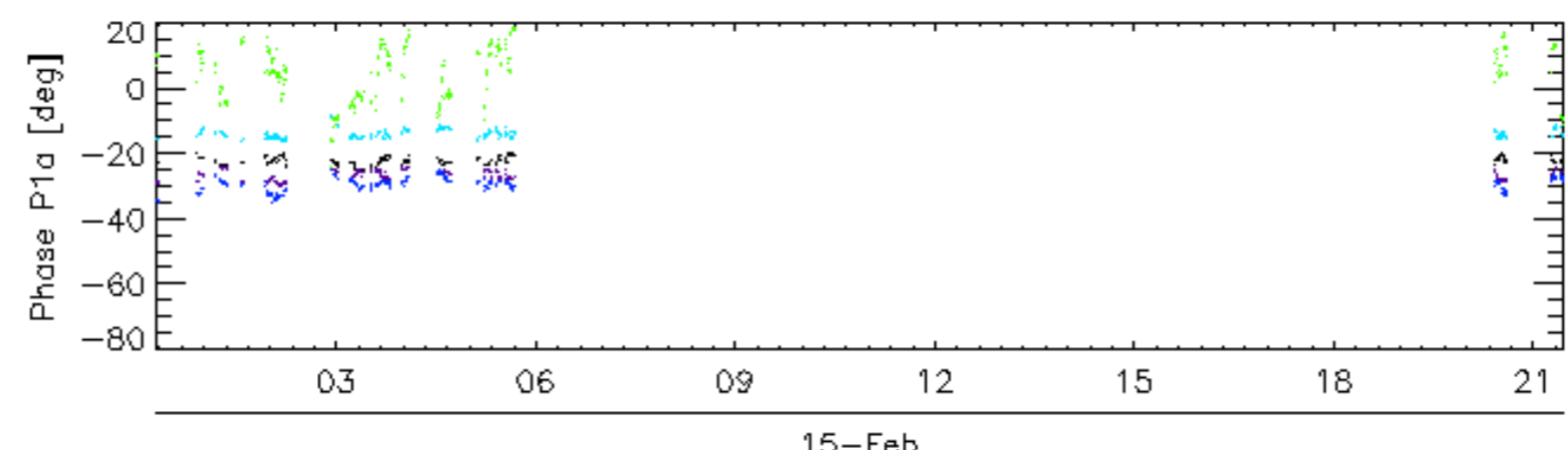
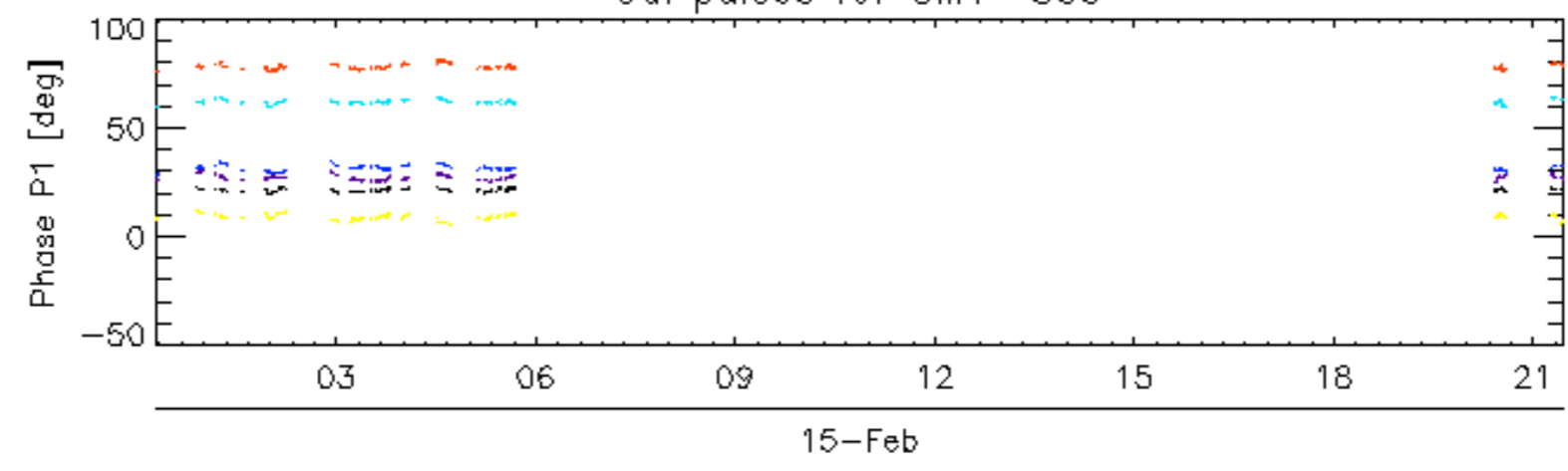
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

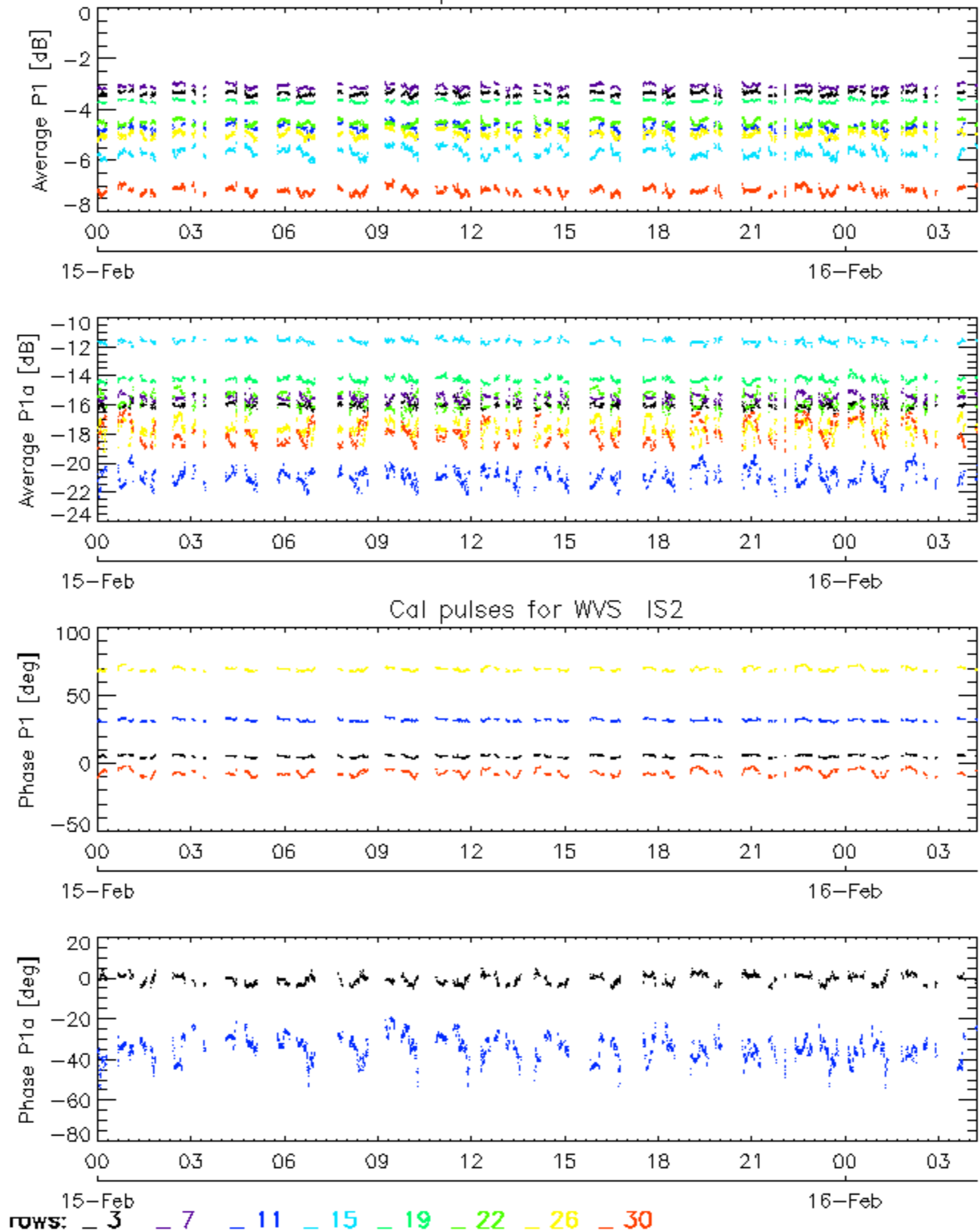


Cal pulses for GM1 SS3

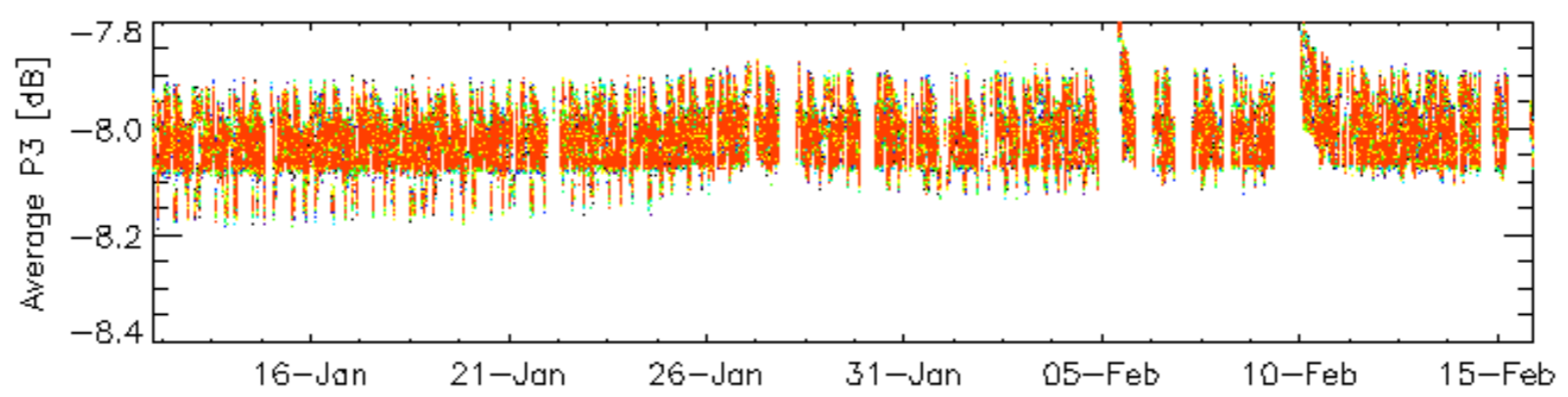
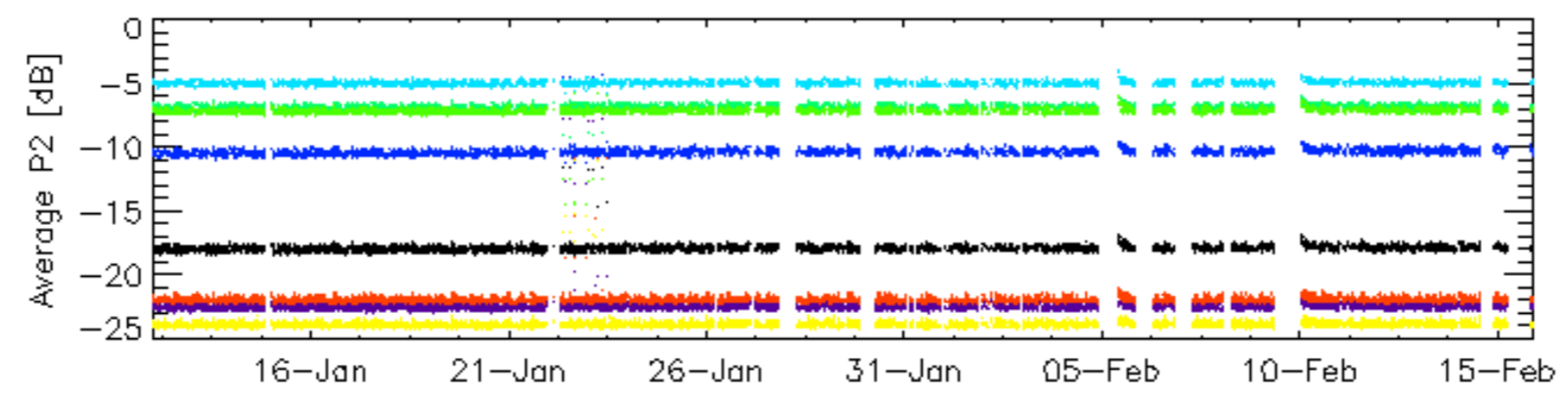
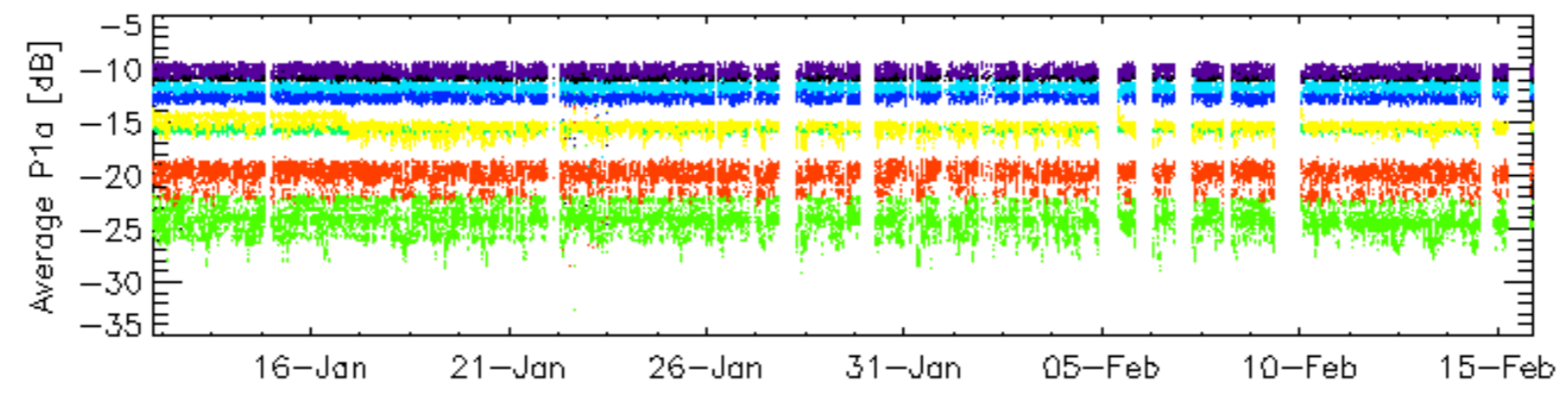
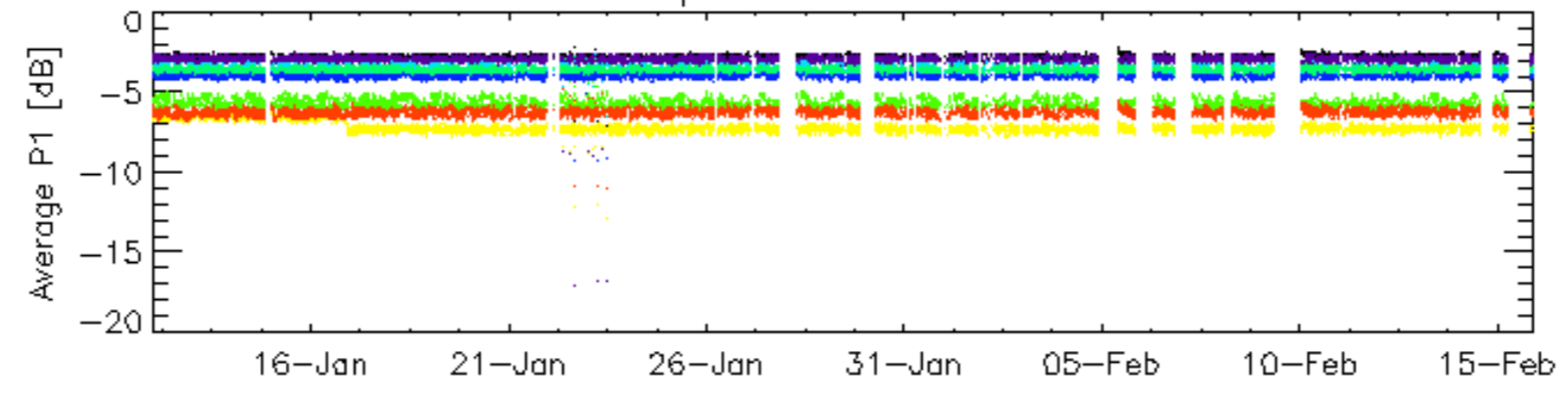


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

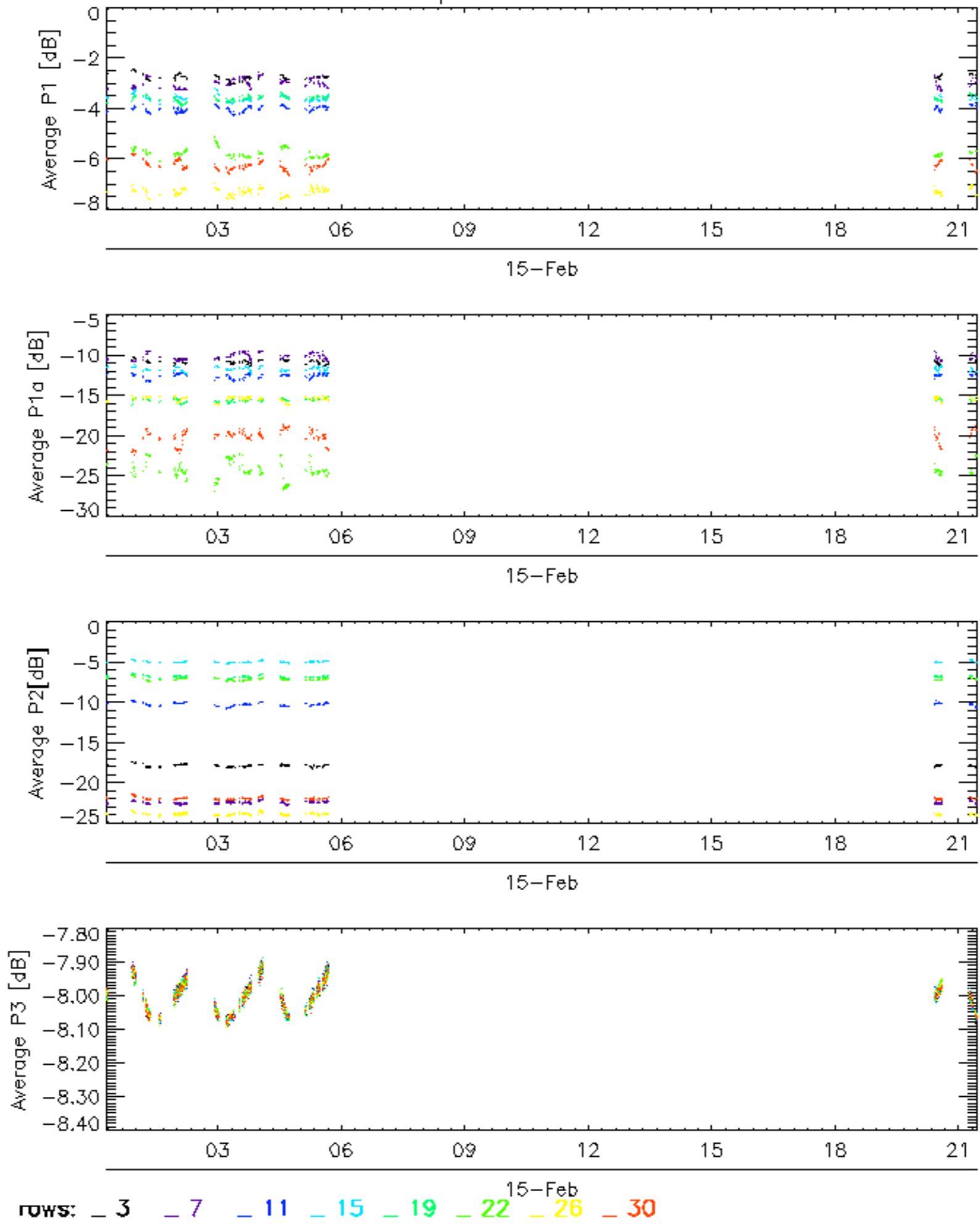


Cal pulses for GM1 SS3

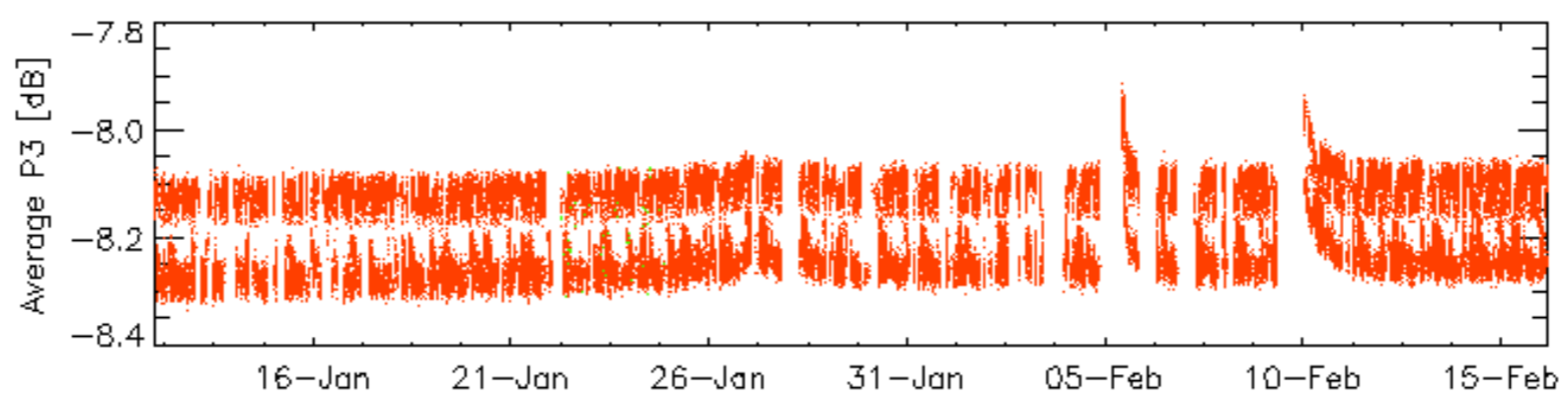
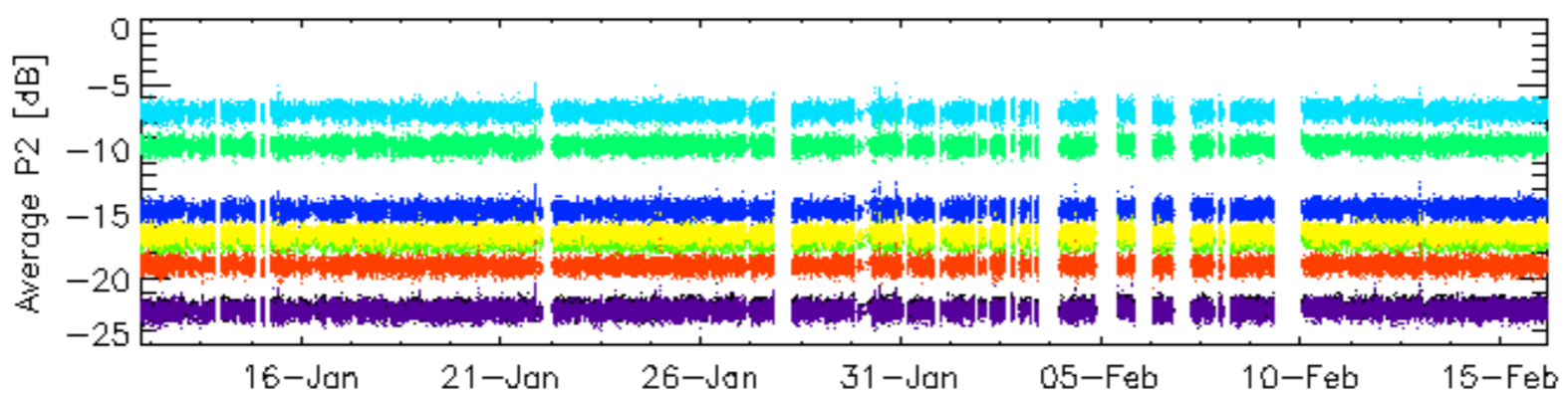
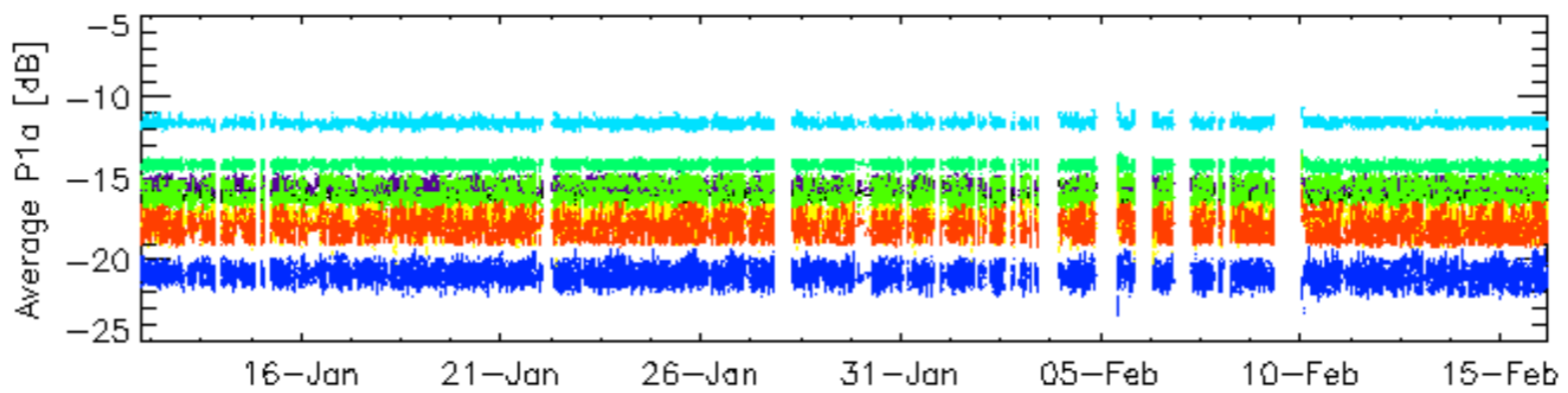
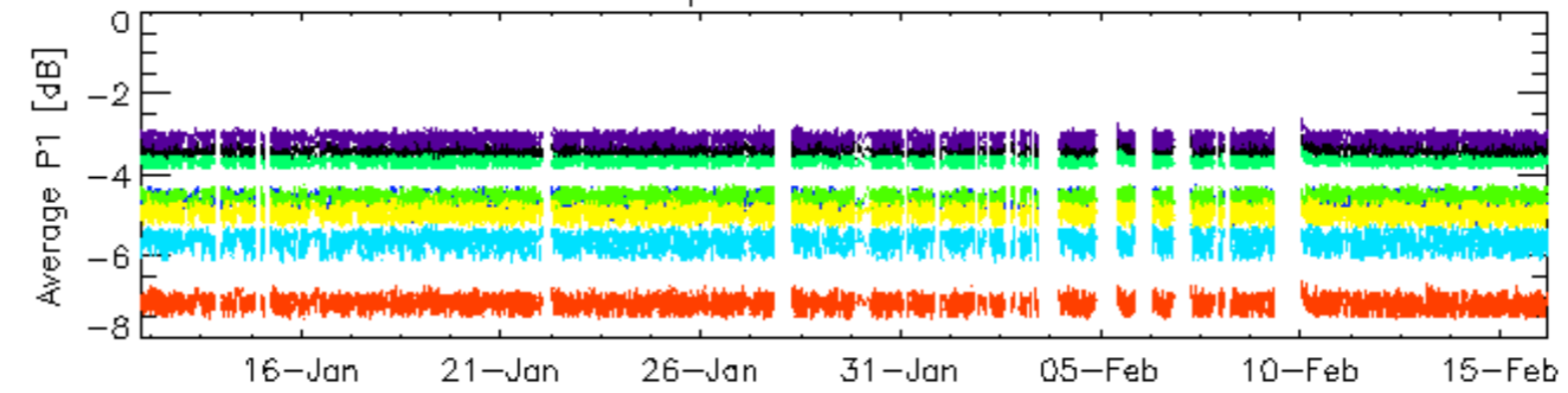


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

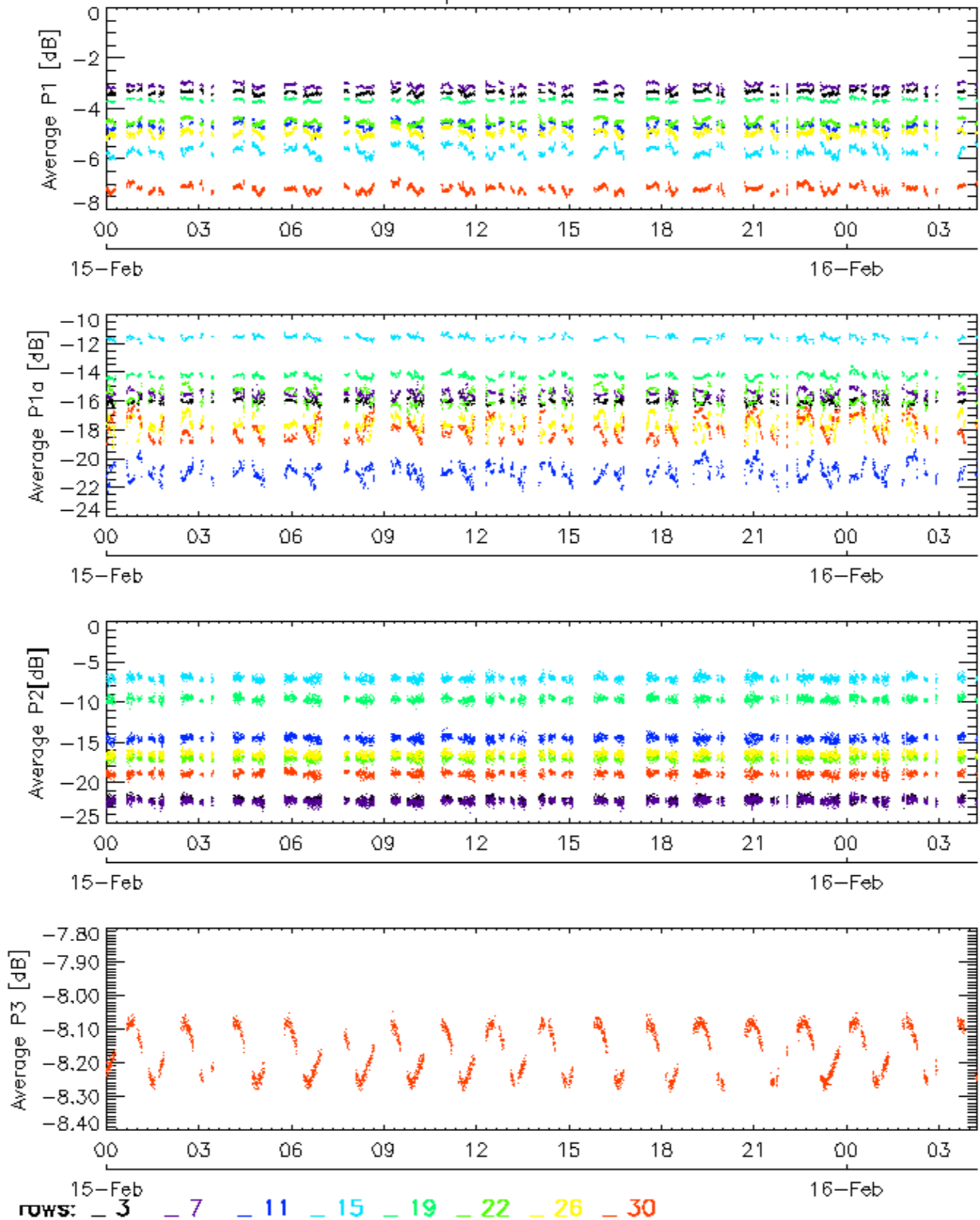


Cal pulses for WVS IS2

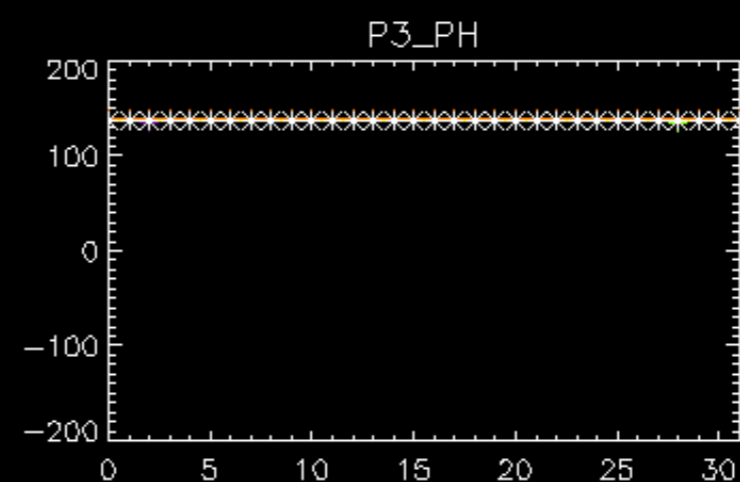
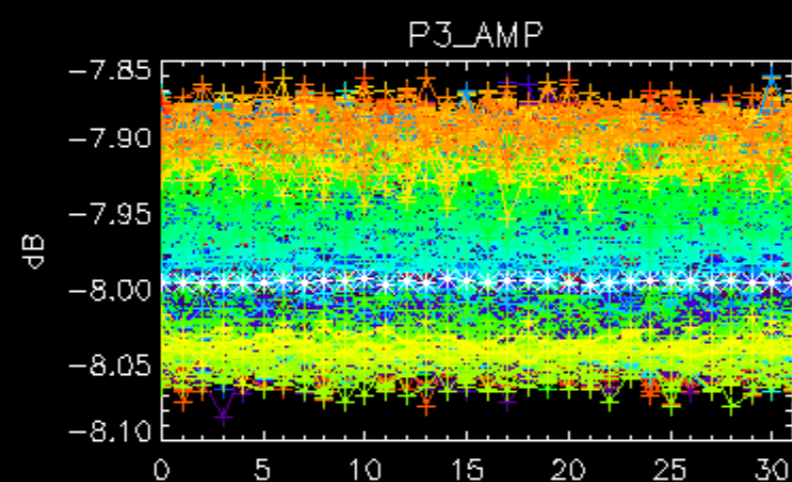
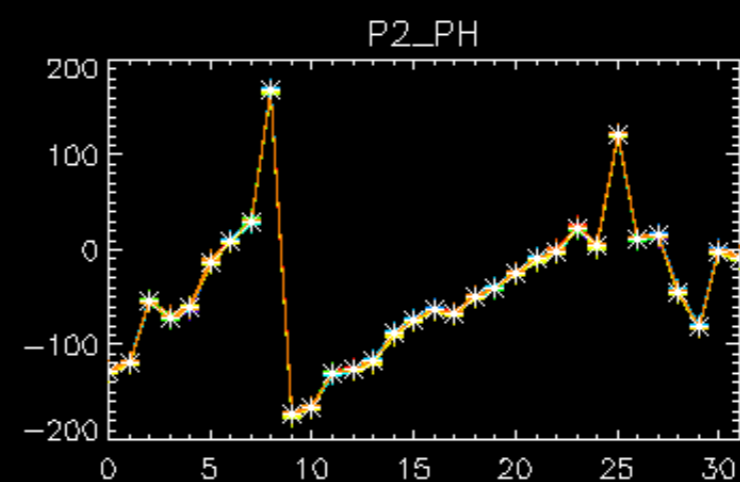
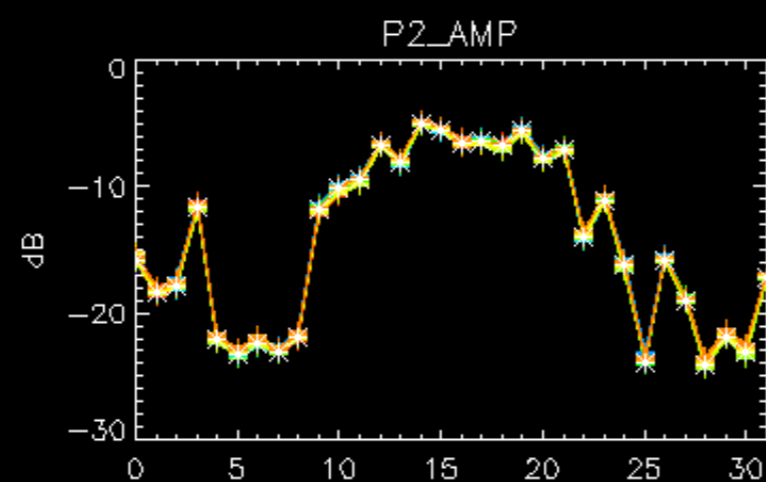
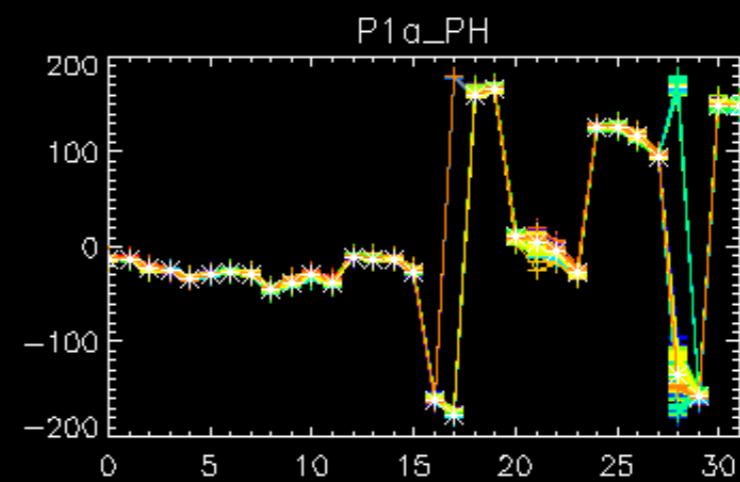
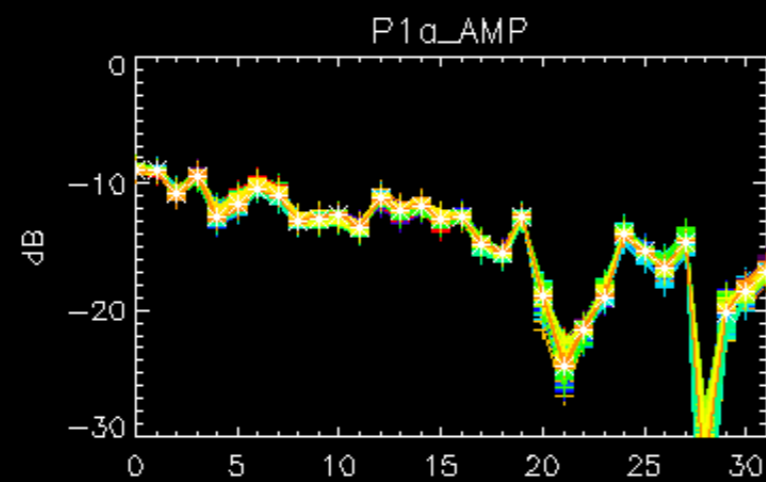
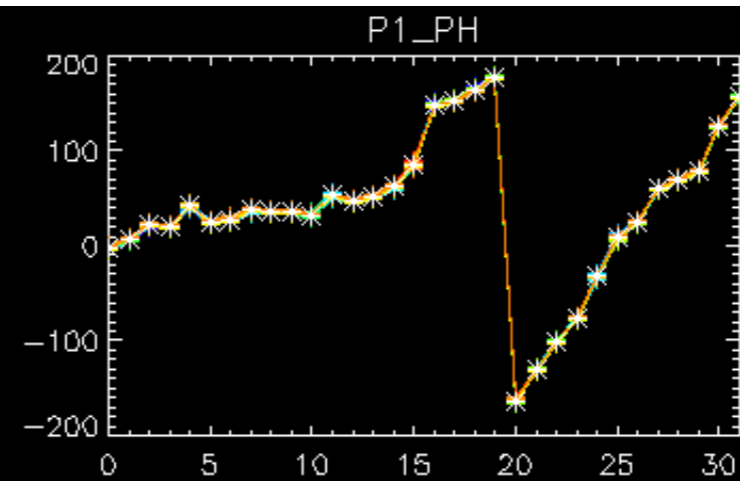
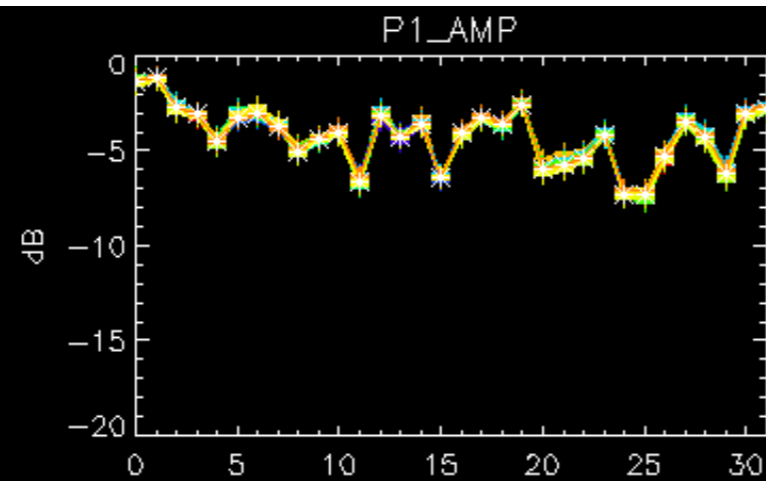


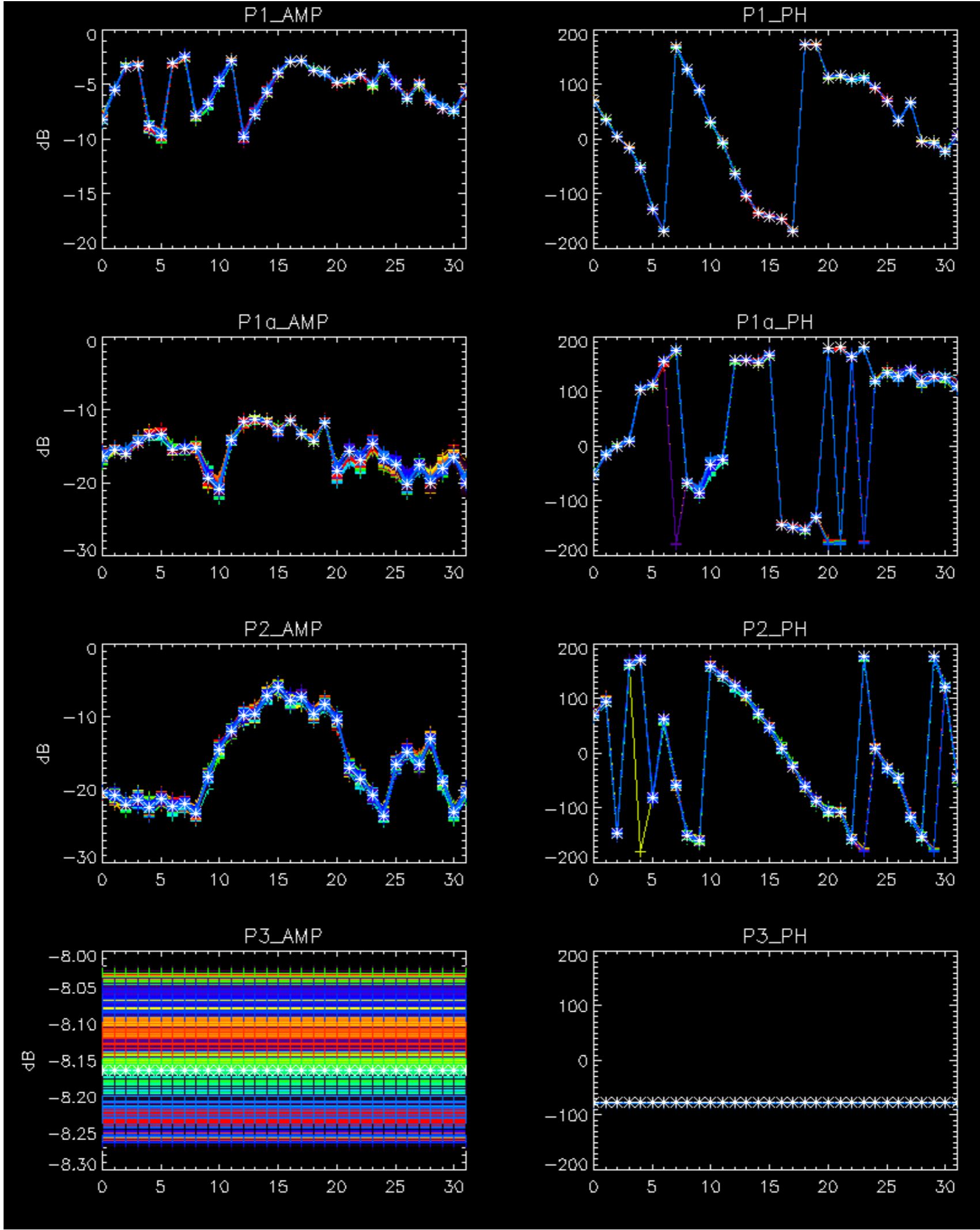
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2



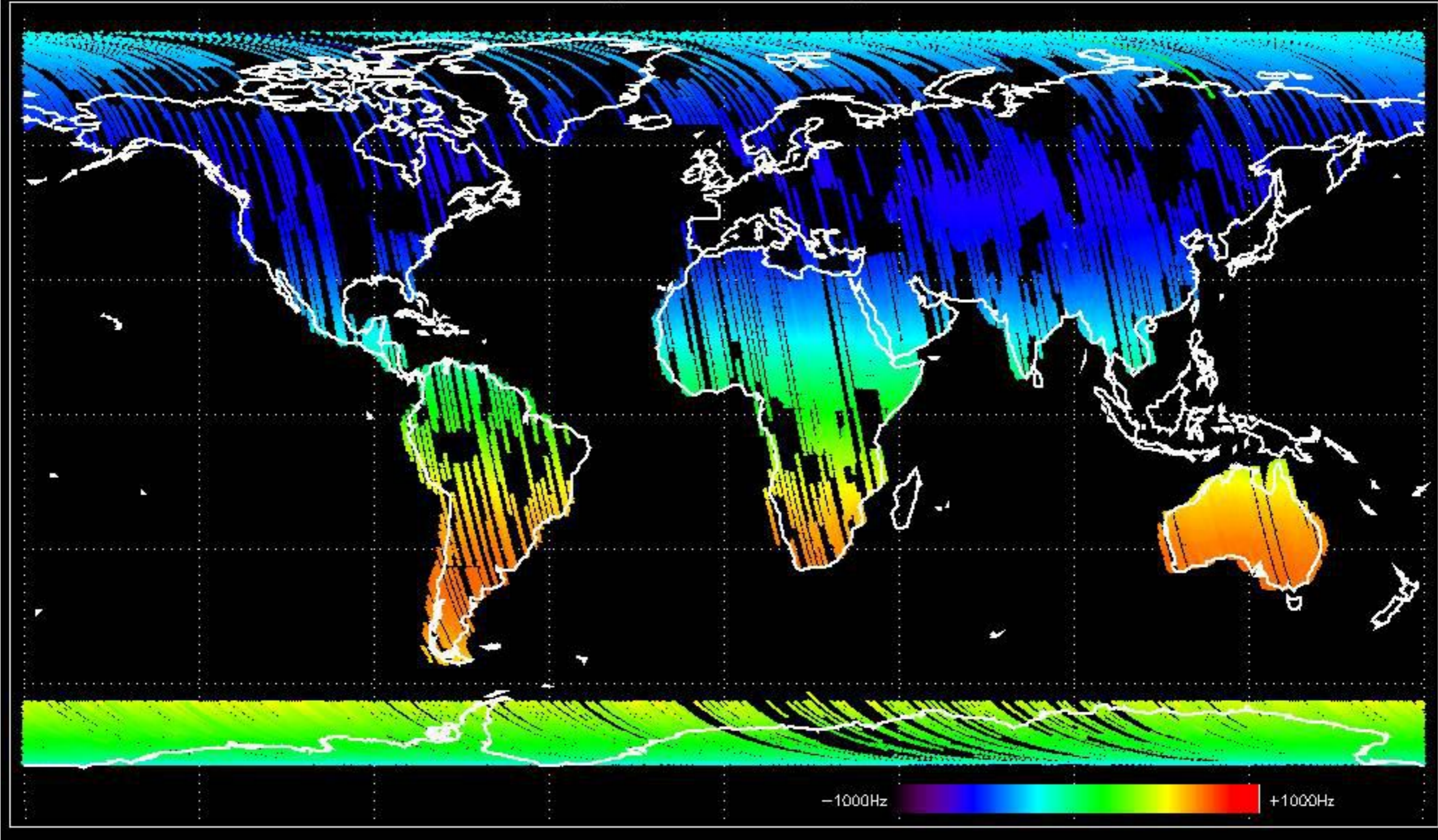
No anomalies observed.



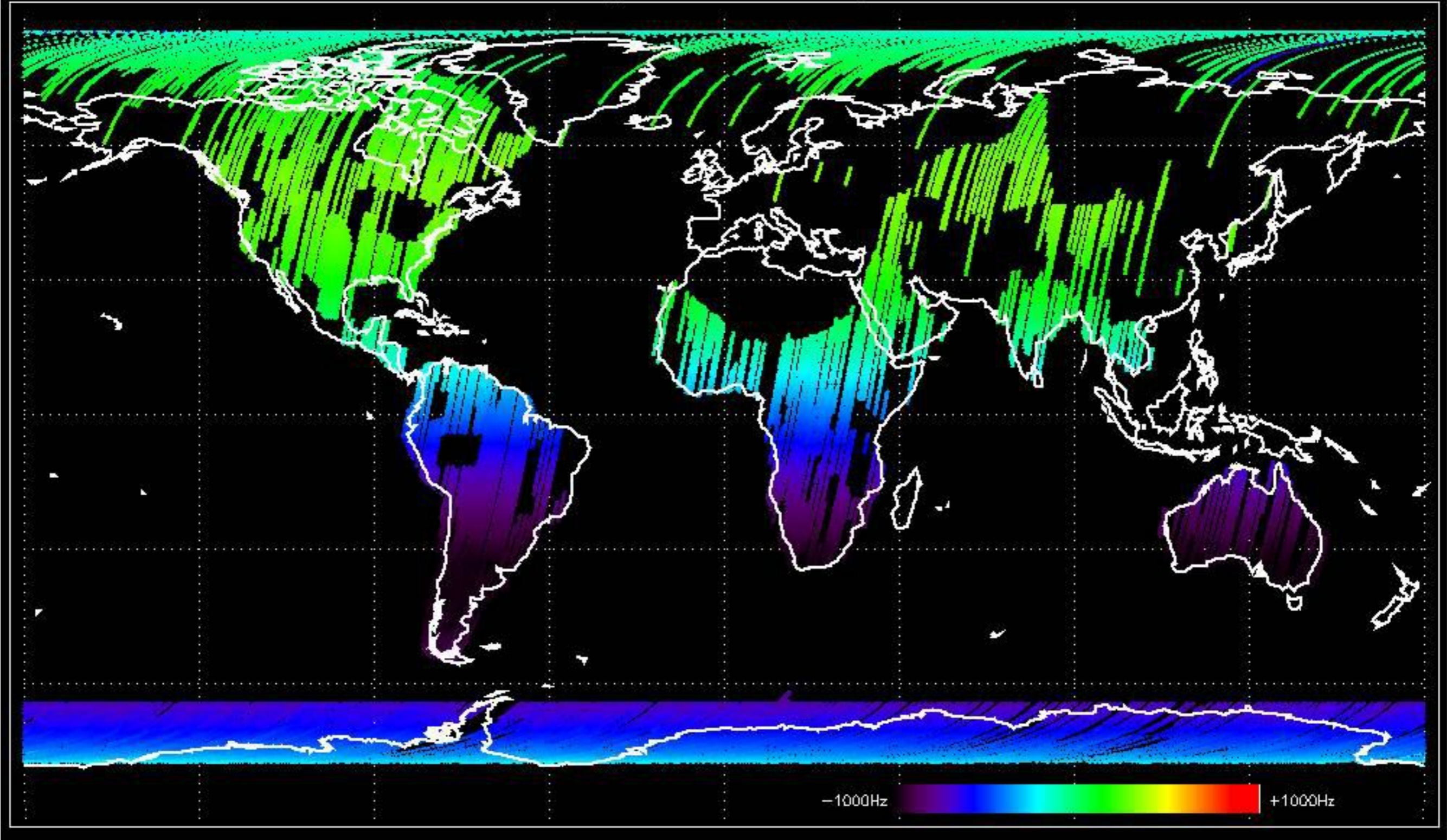


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

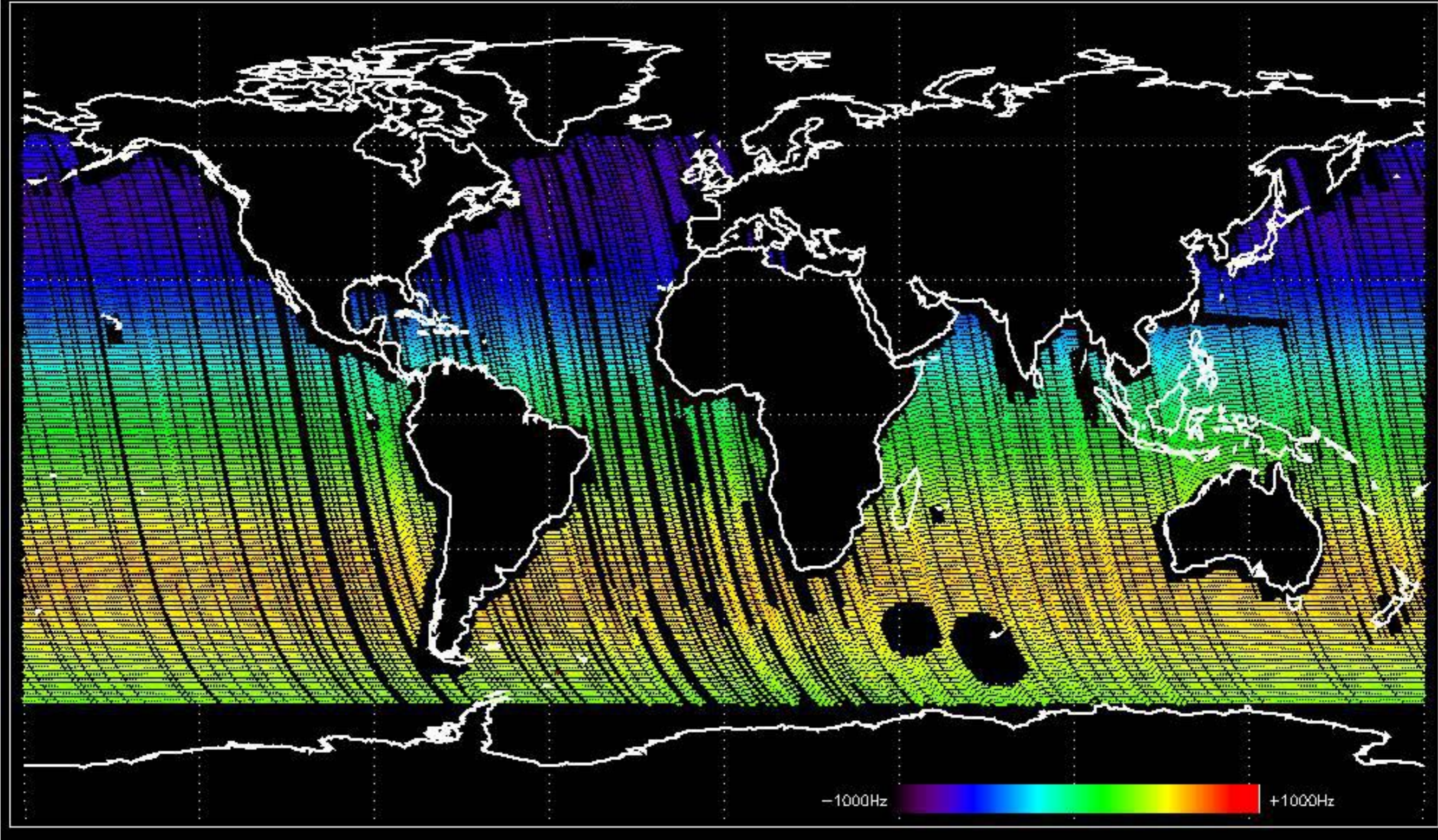
Doppler 'GM1' 'SS1' ascending



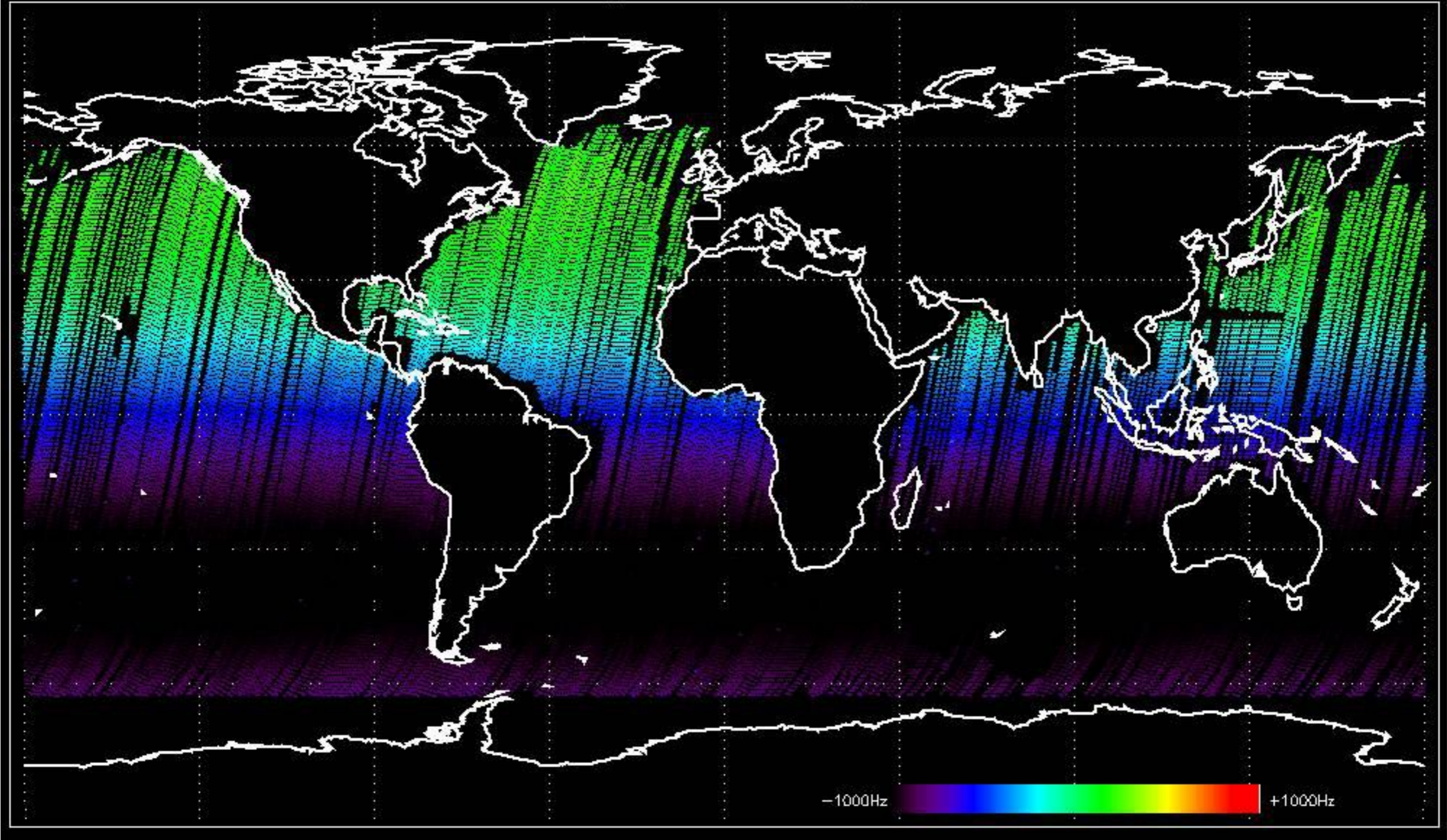
Doppler 'GM1' 'SS1' descending



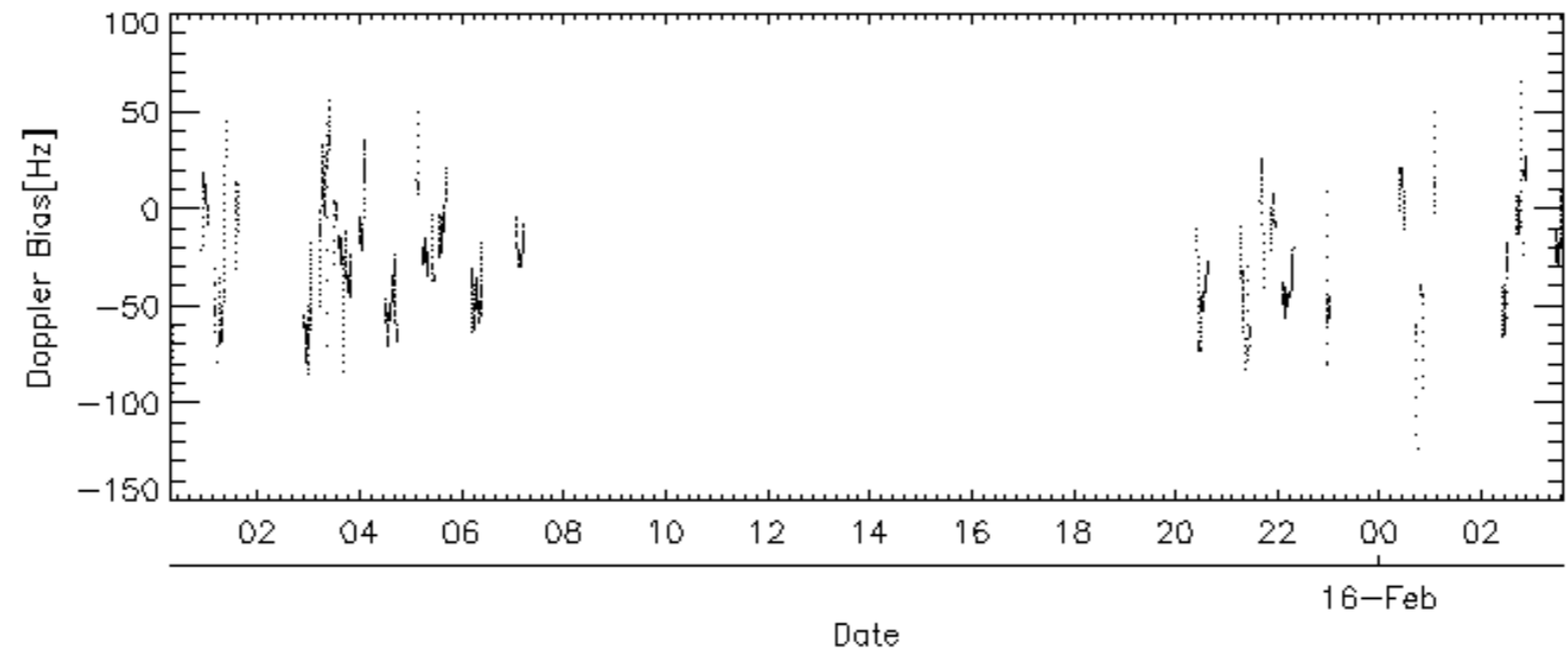
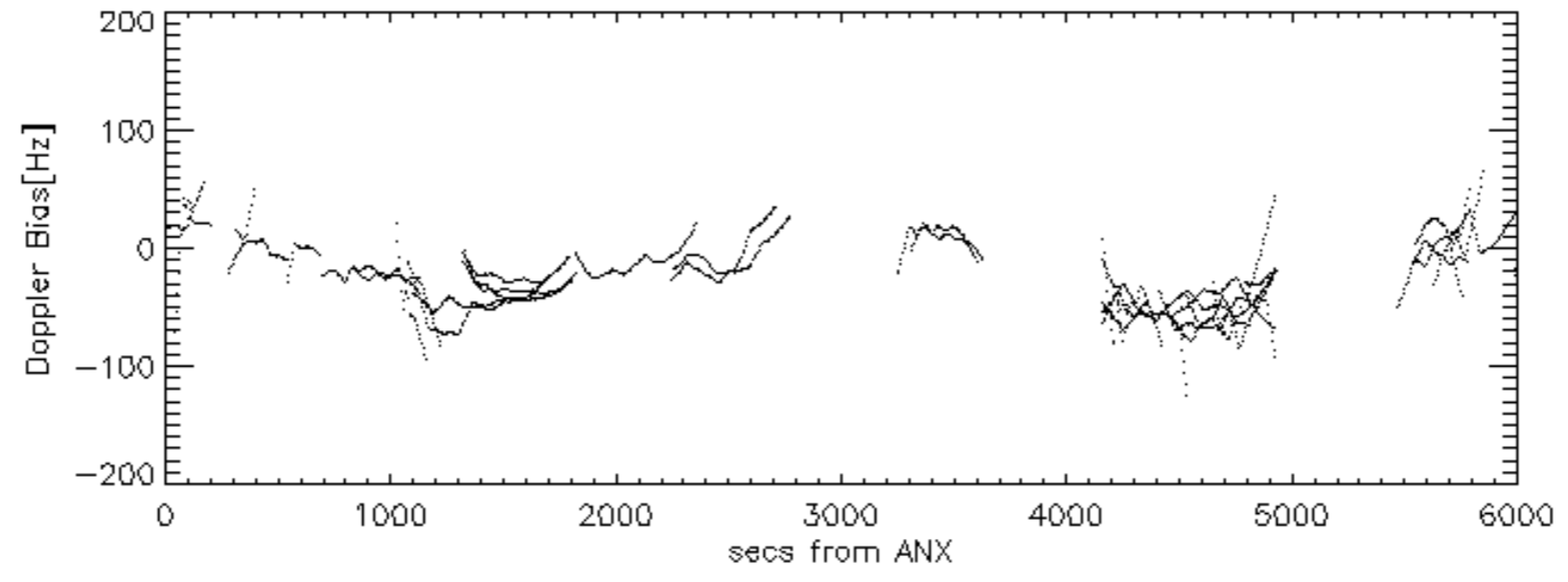
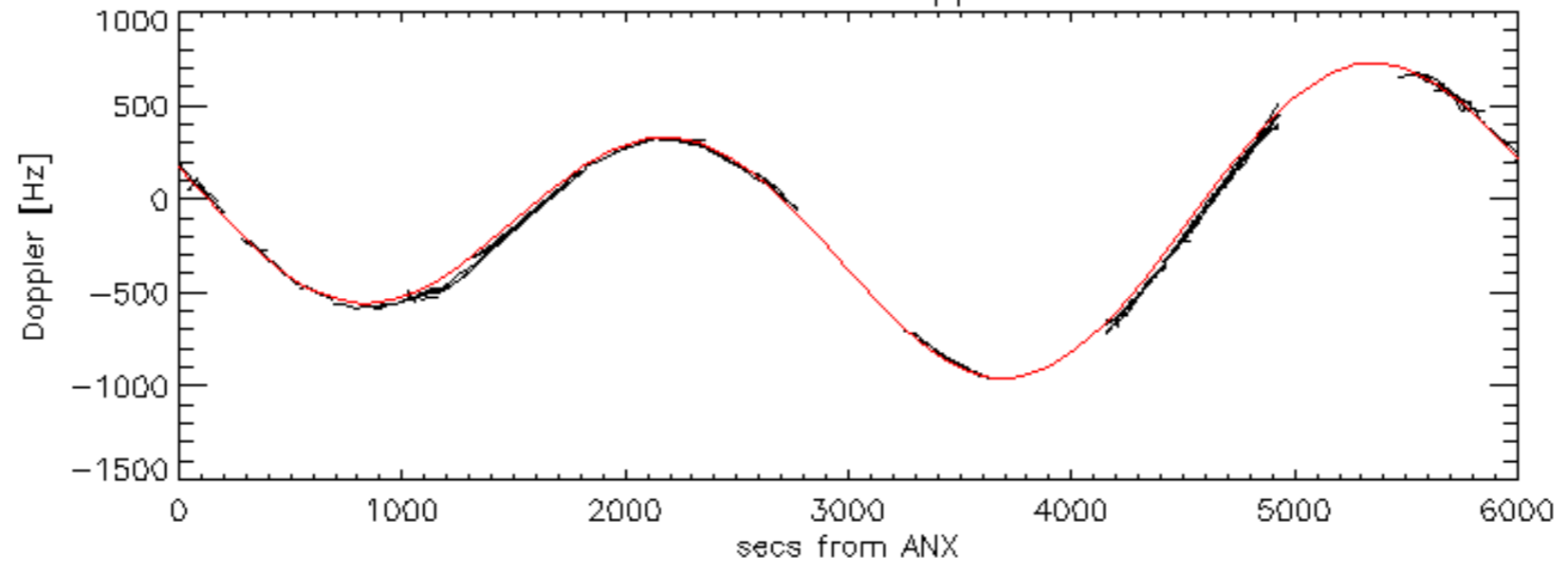
Doppler 'WVS' 'IS2' ascending

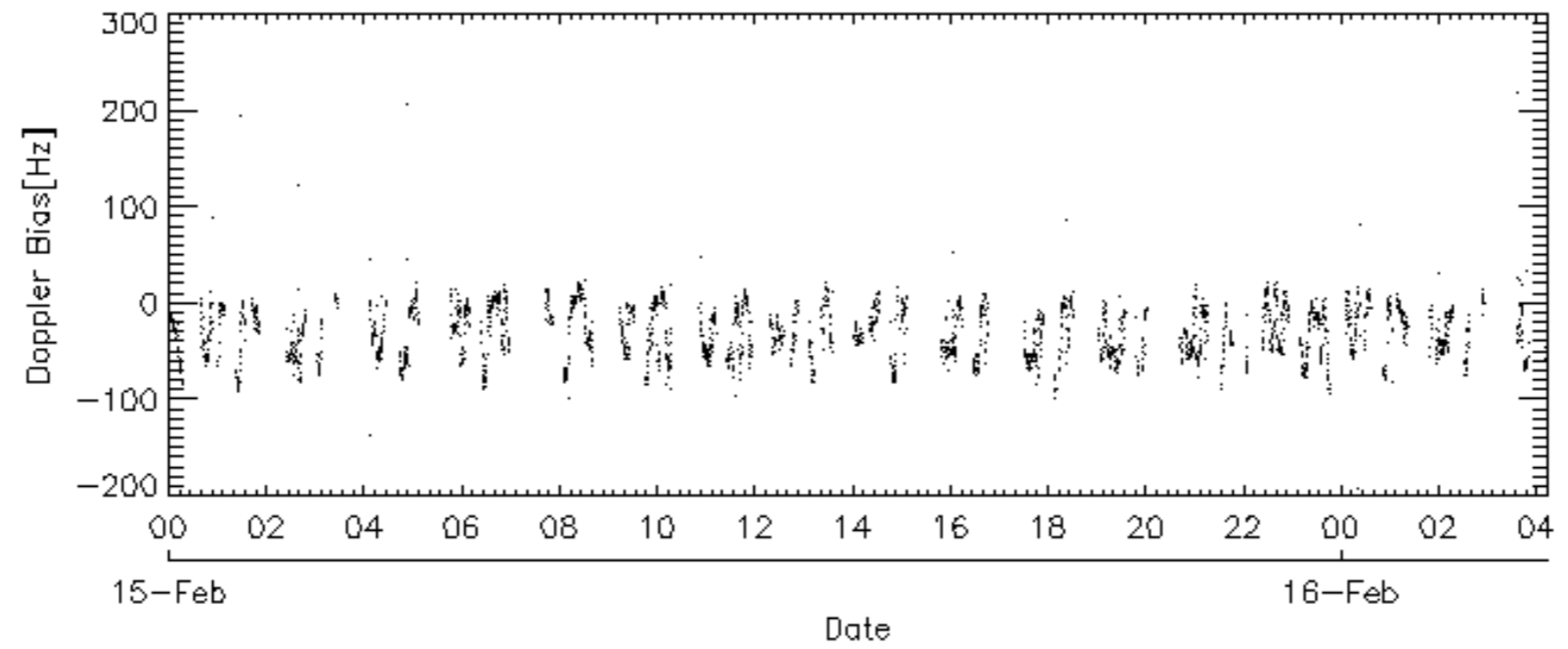
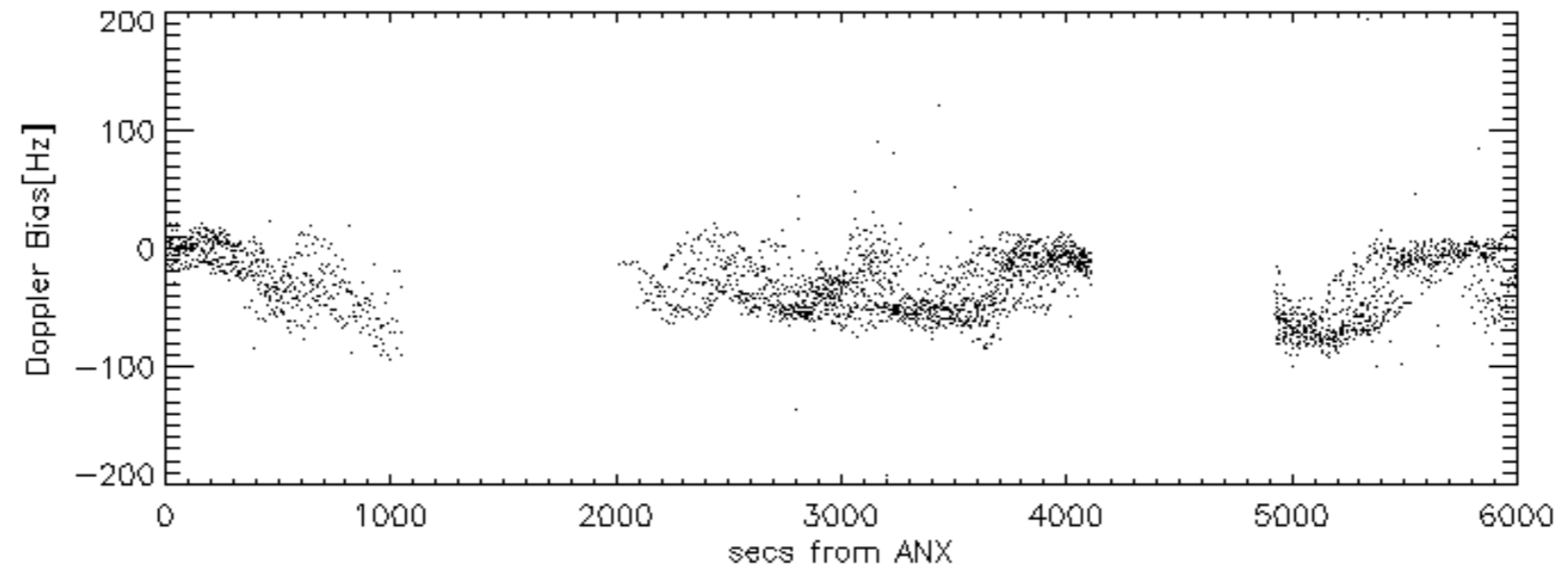
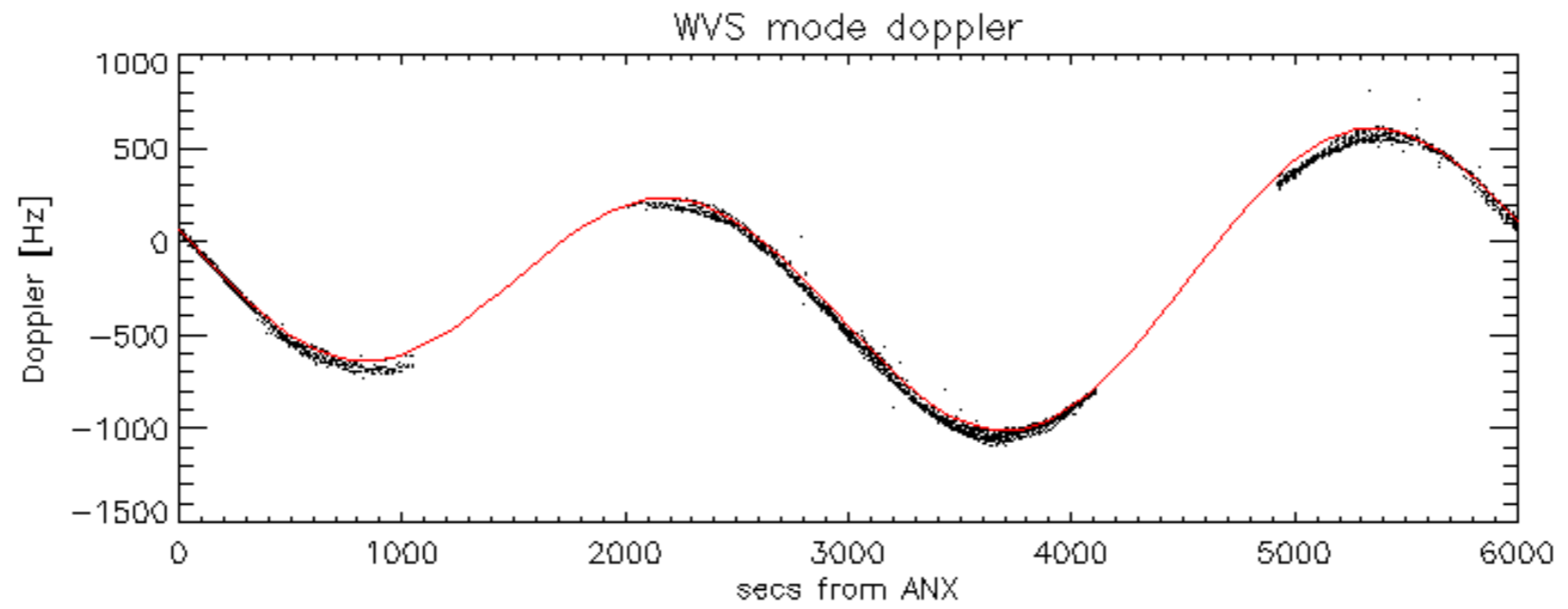


Doppler 'WVS' 'IS2' descending

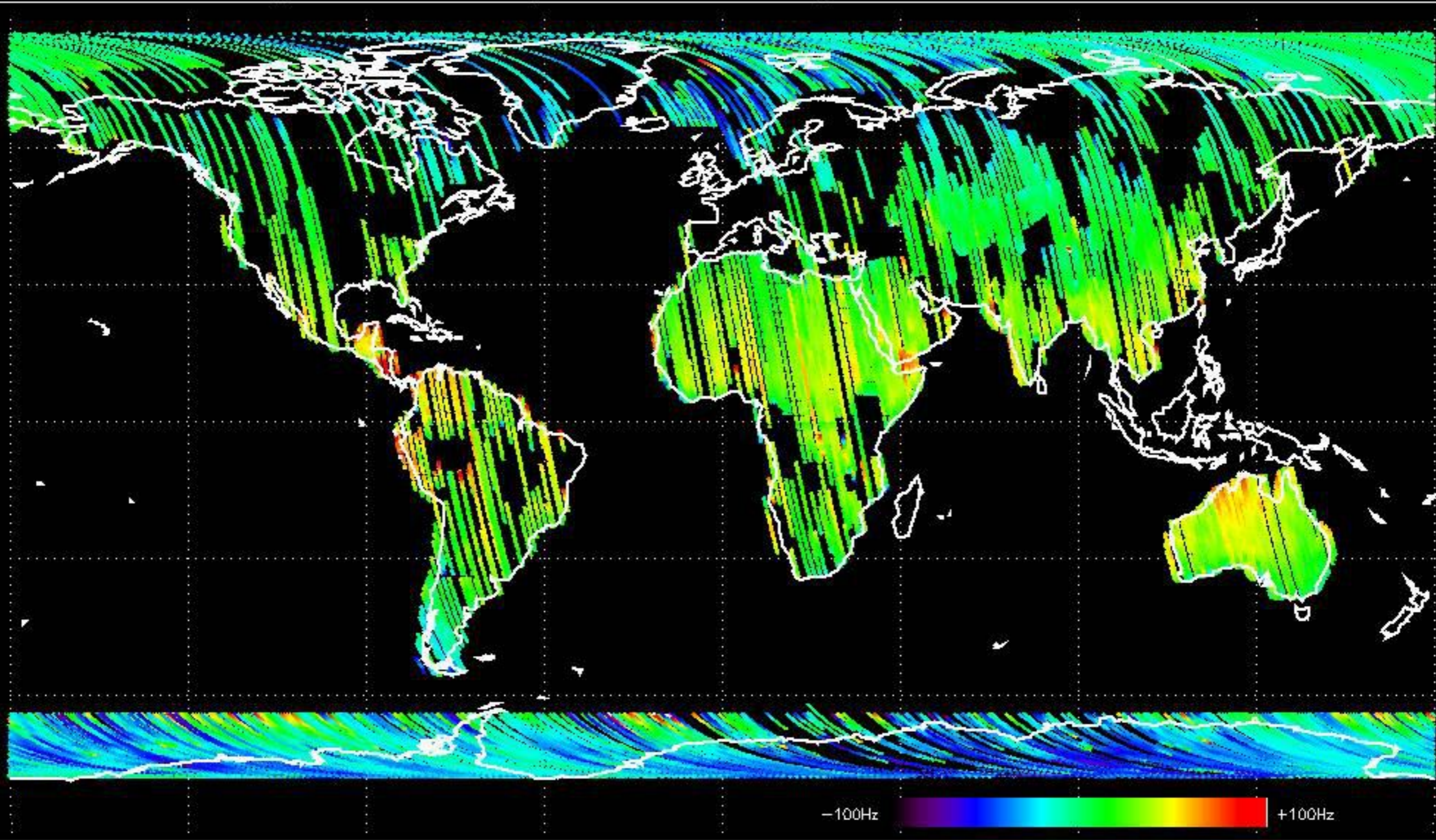


GM1 mode doppler

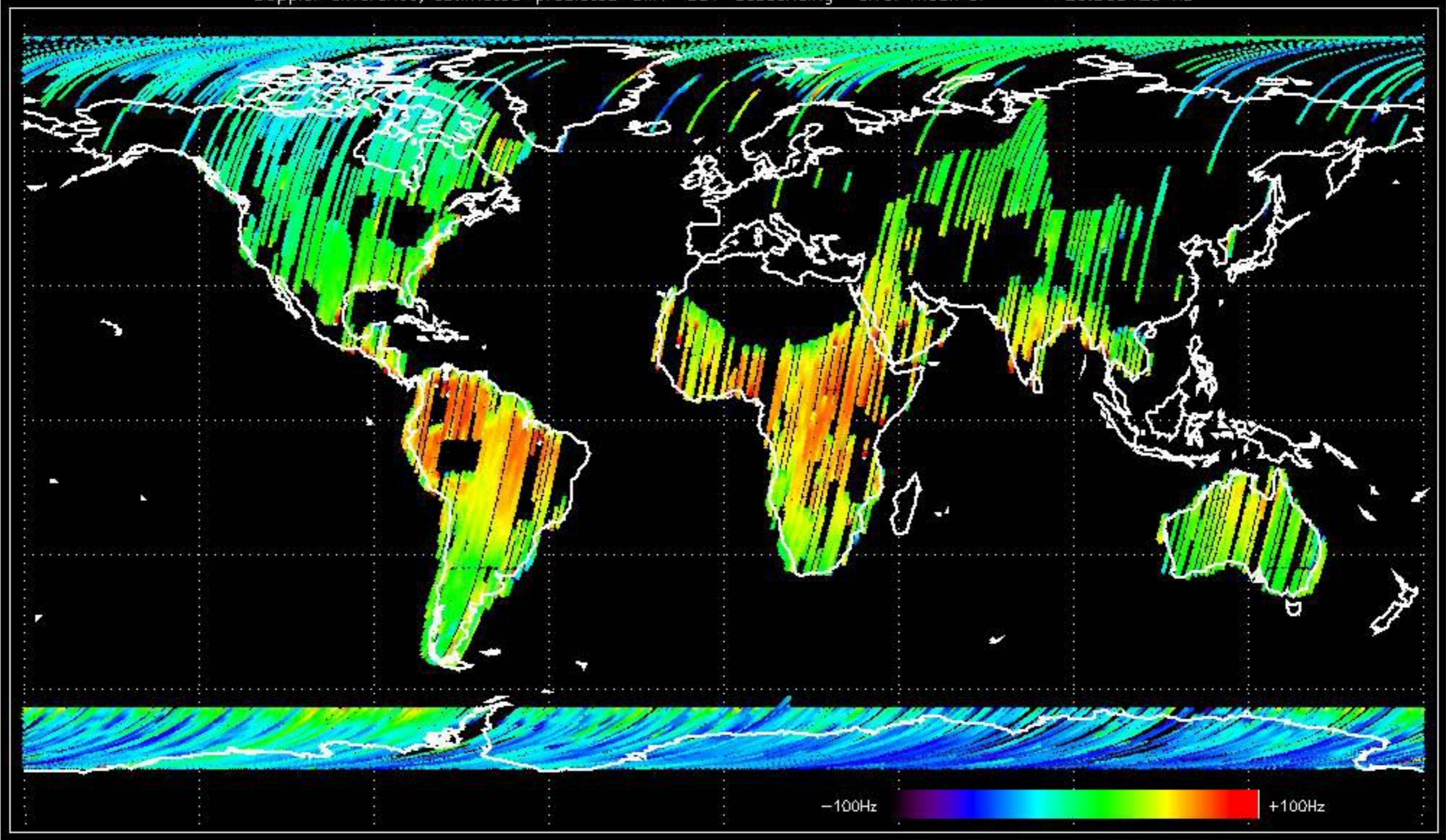




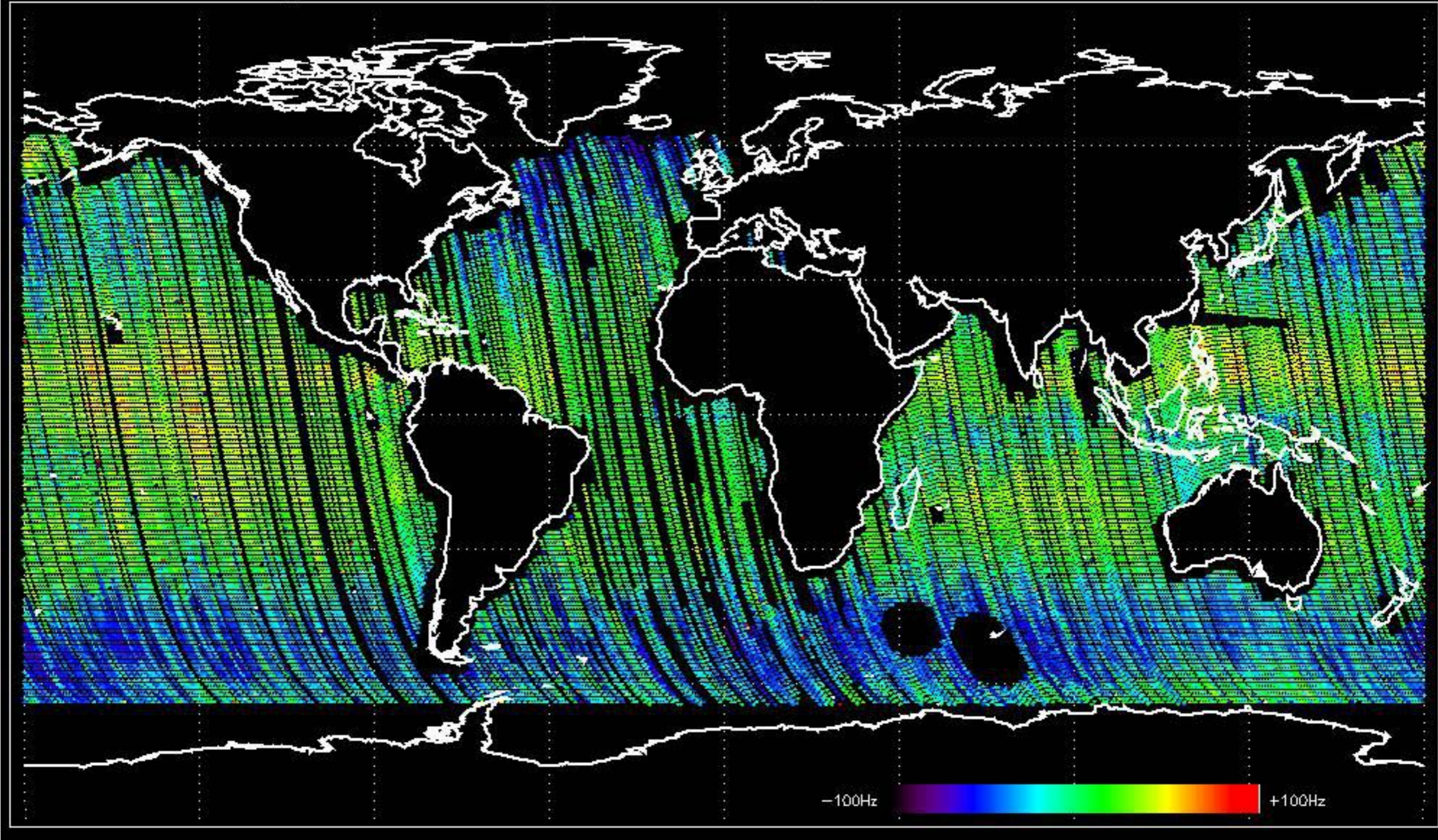
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -32.009166 Hz



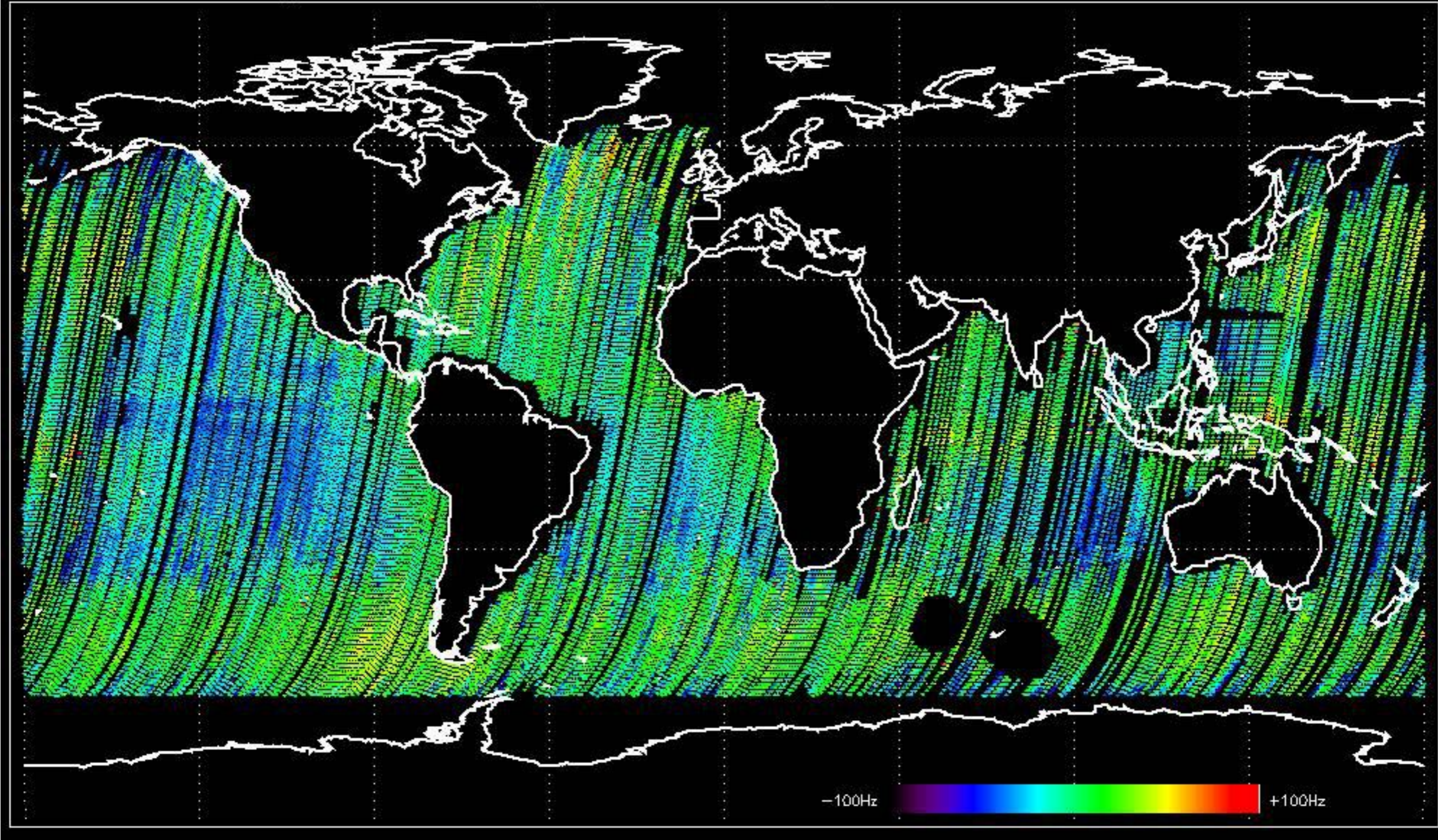
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.368429 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.780986 Hz

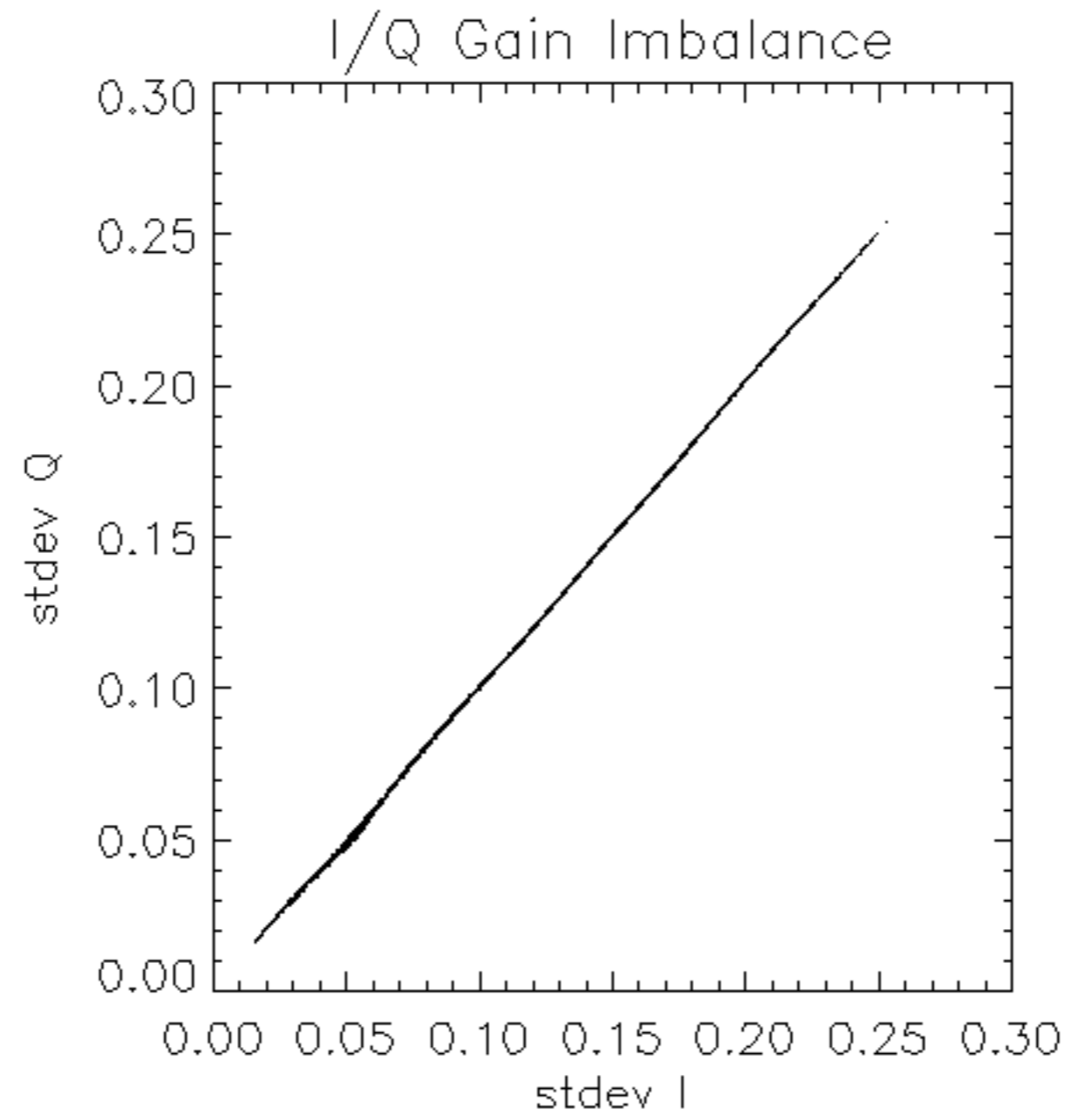


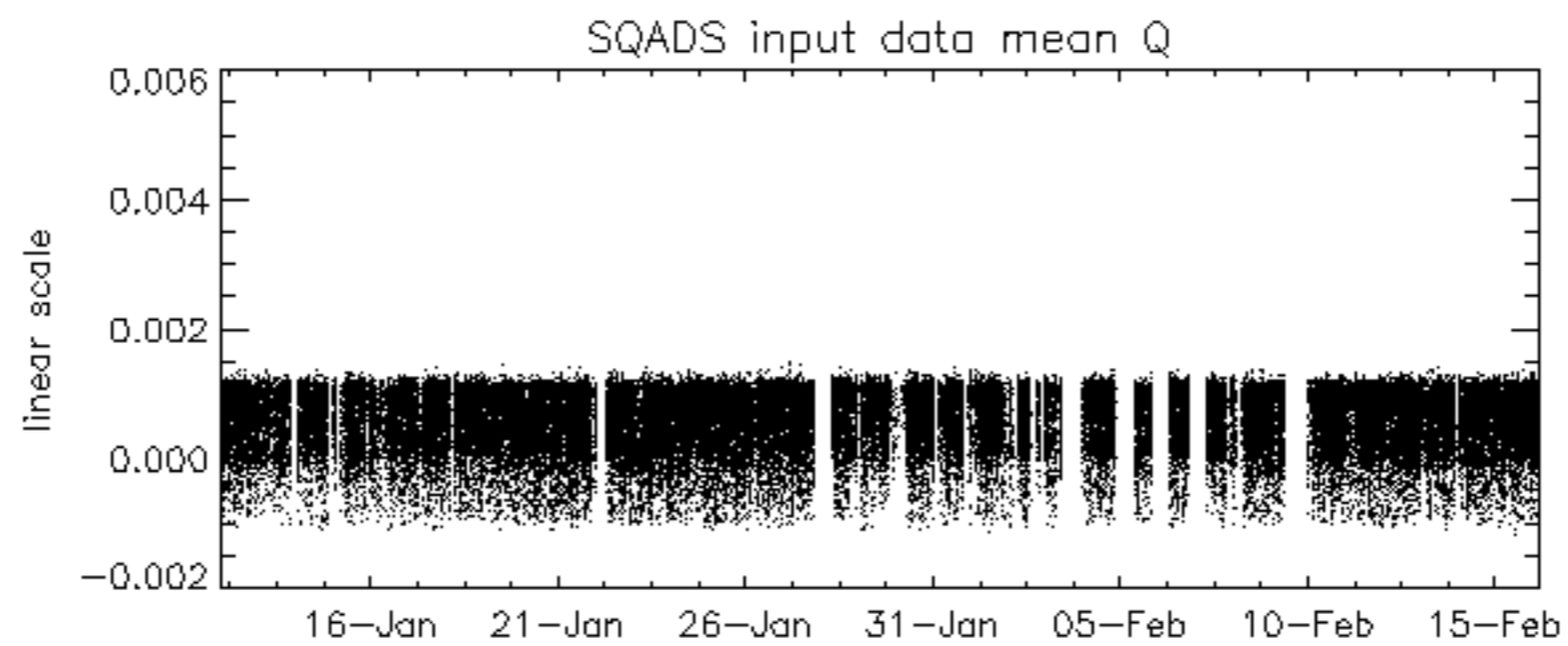
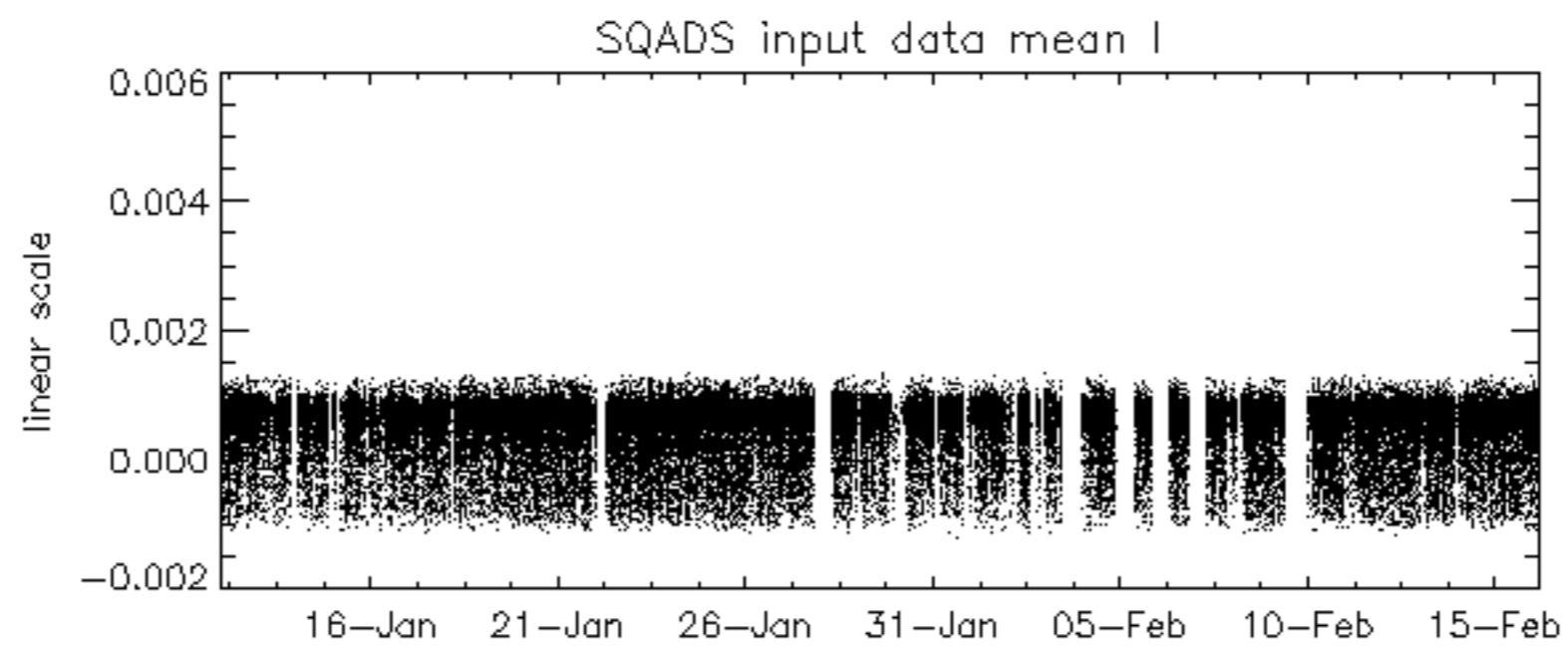
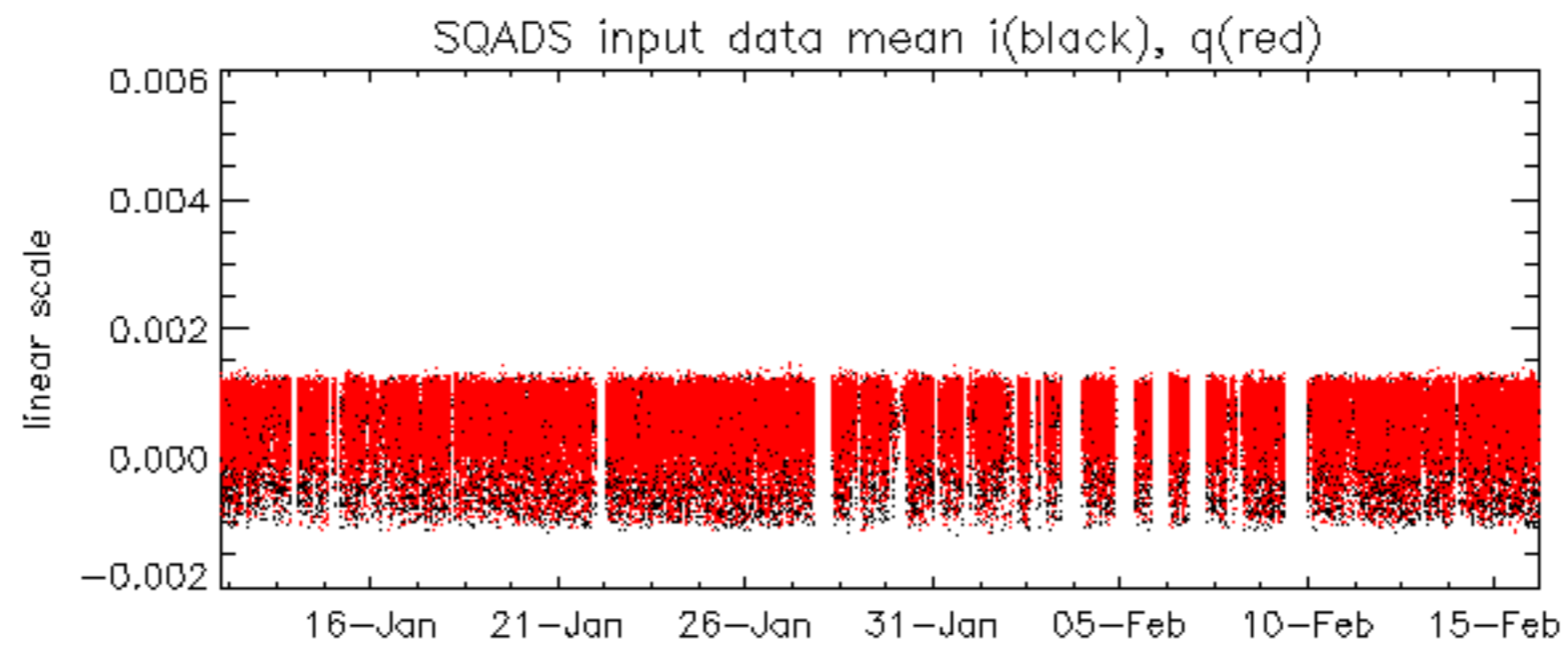
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -34.638271 Hz

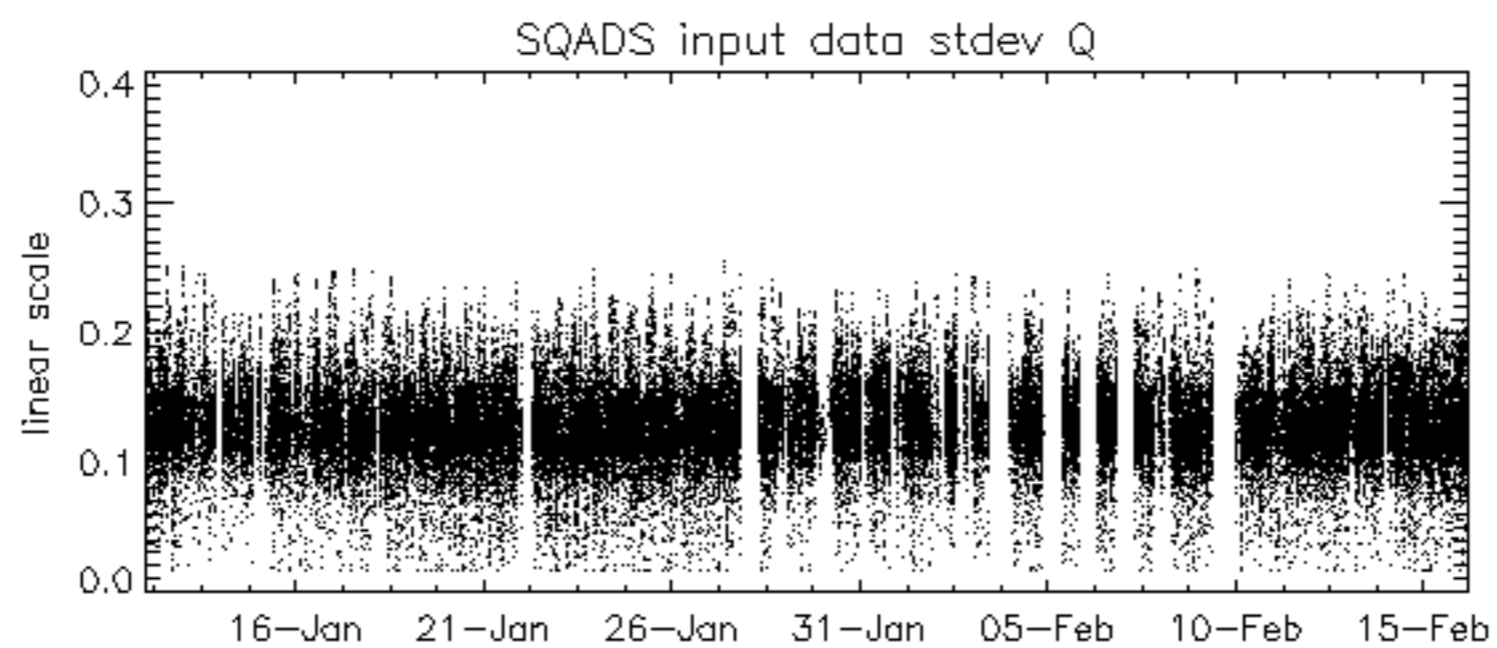
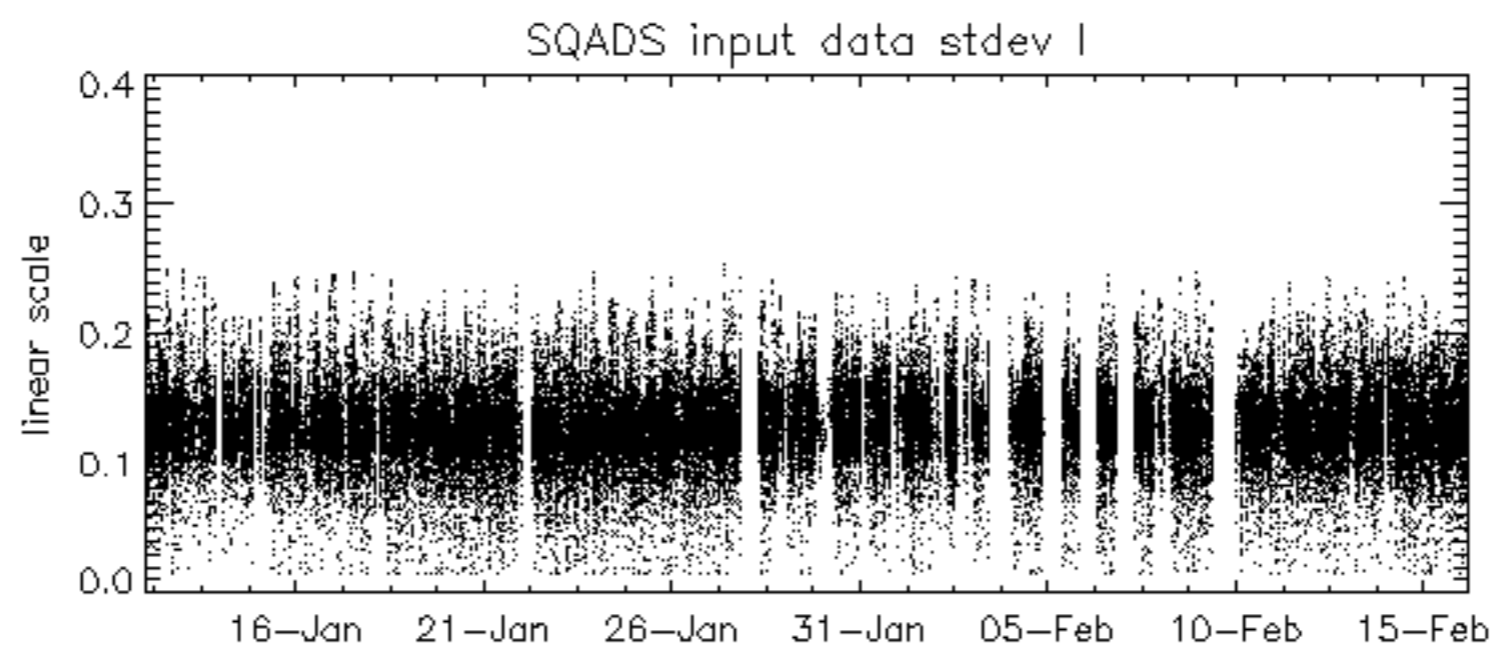
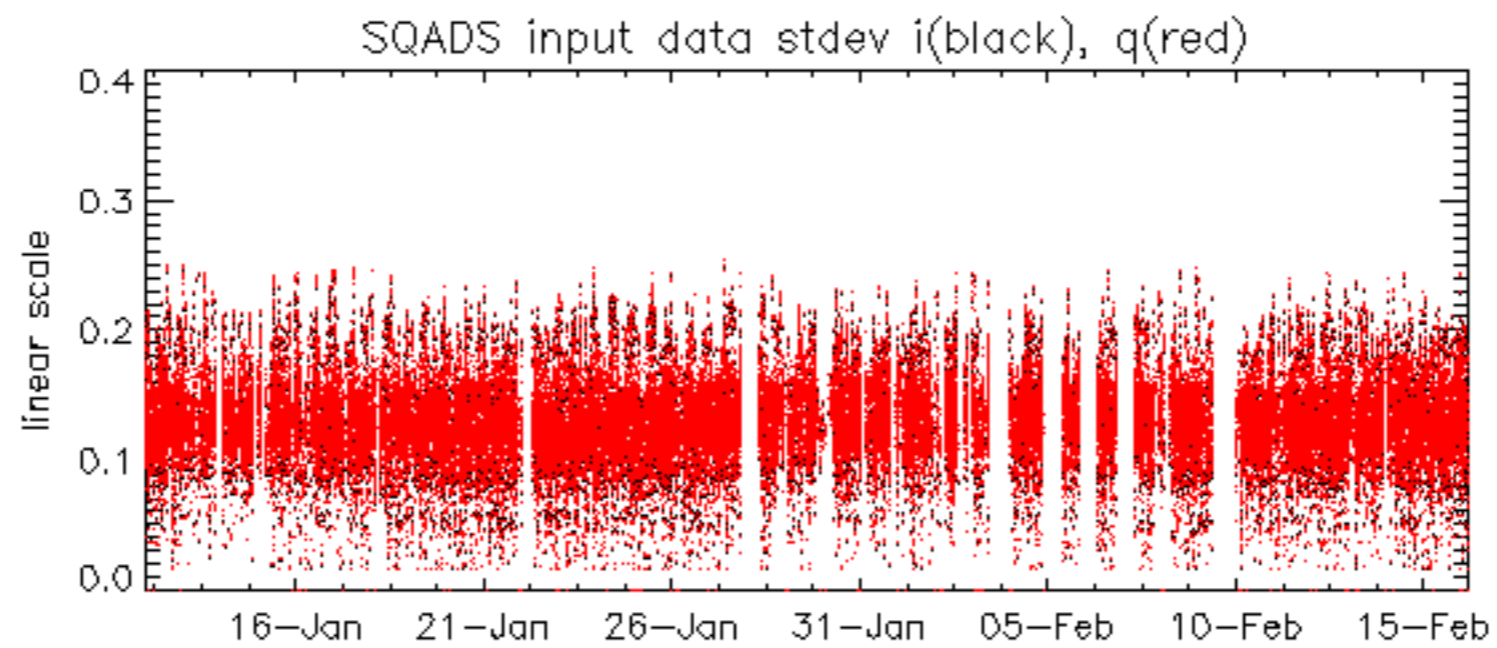


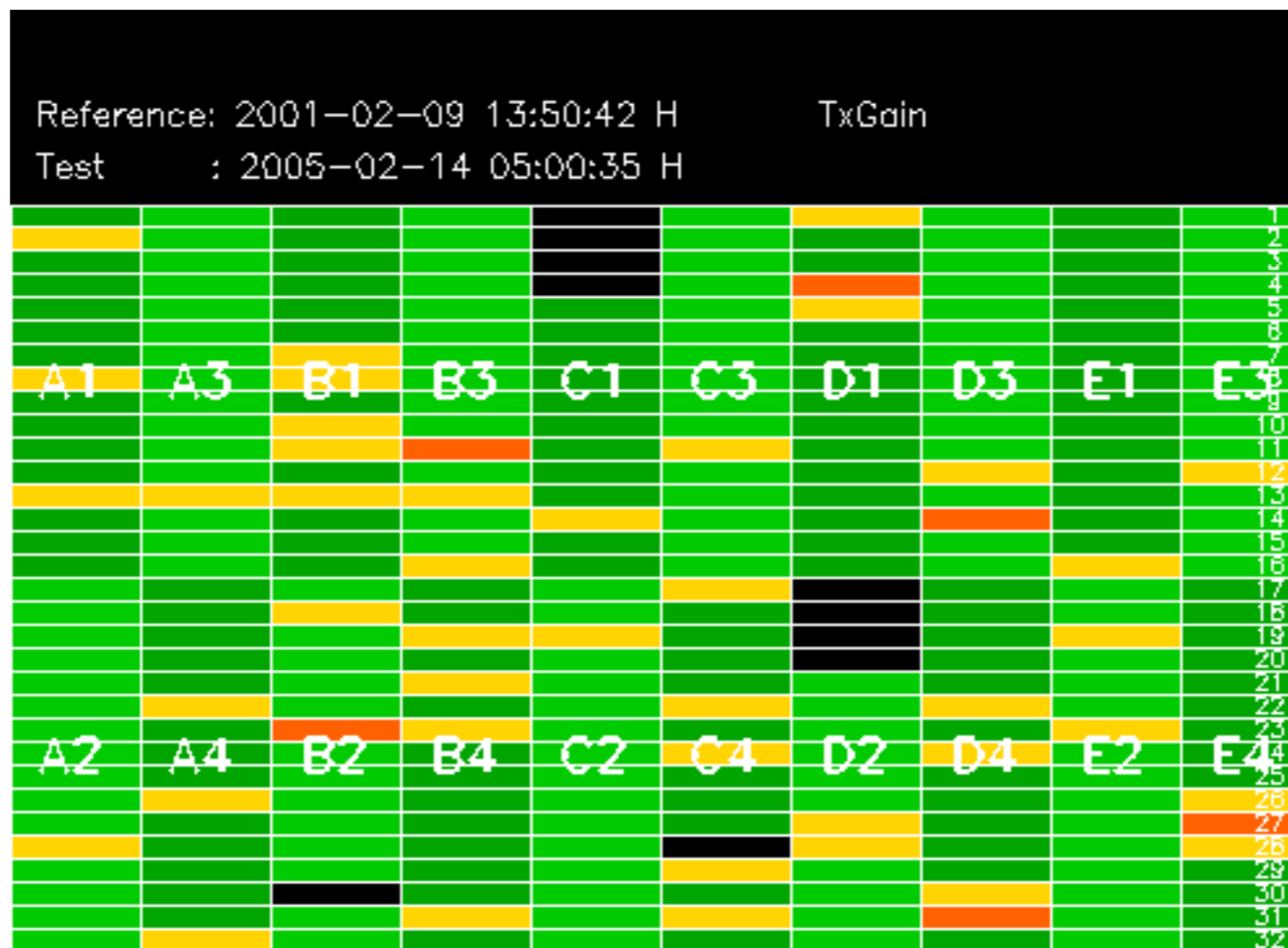
No anomalies observed on available MS products:

No anomalies observed.





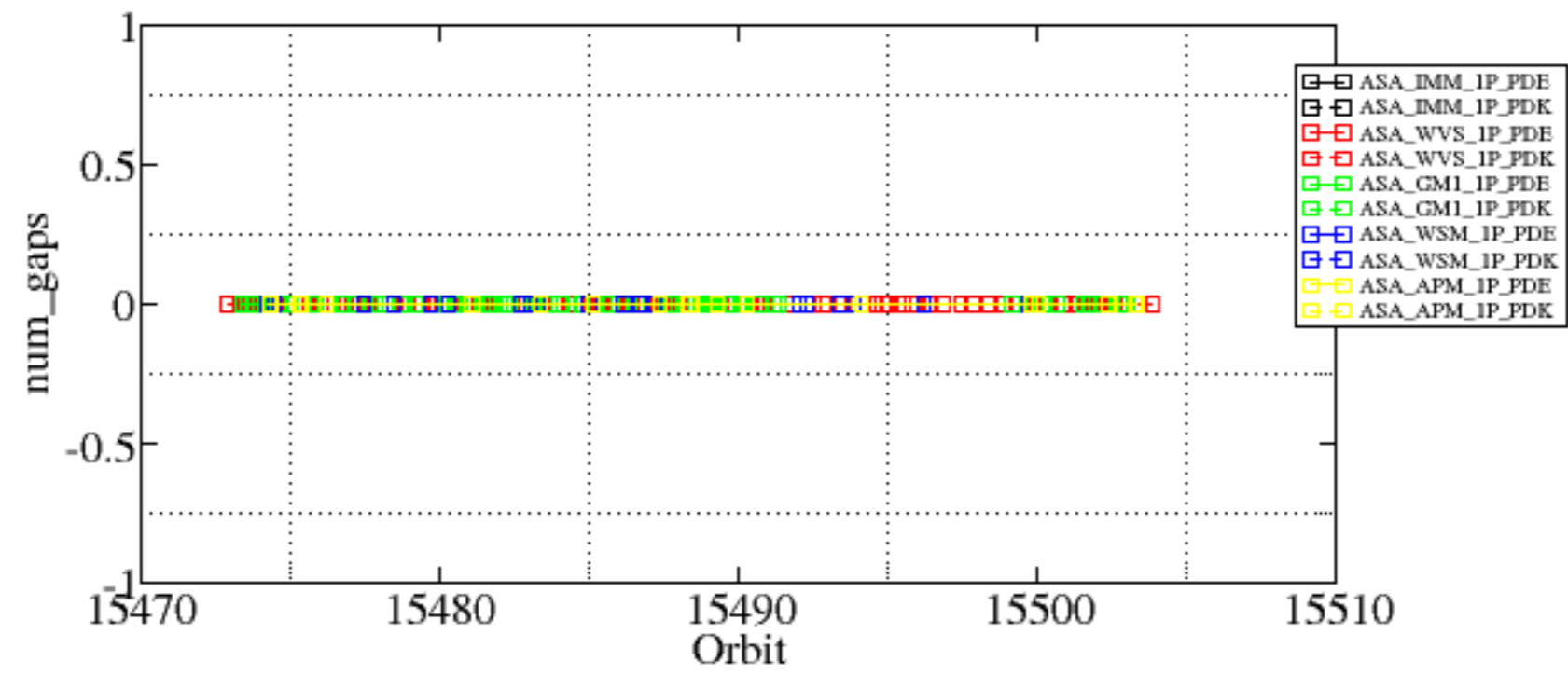


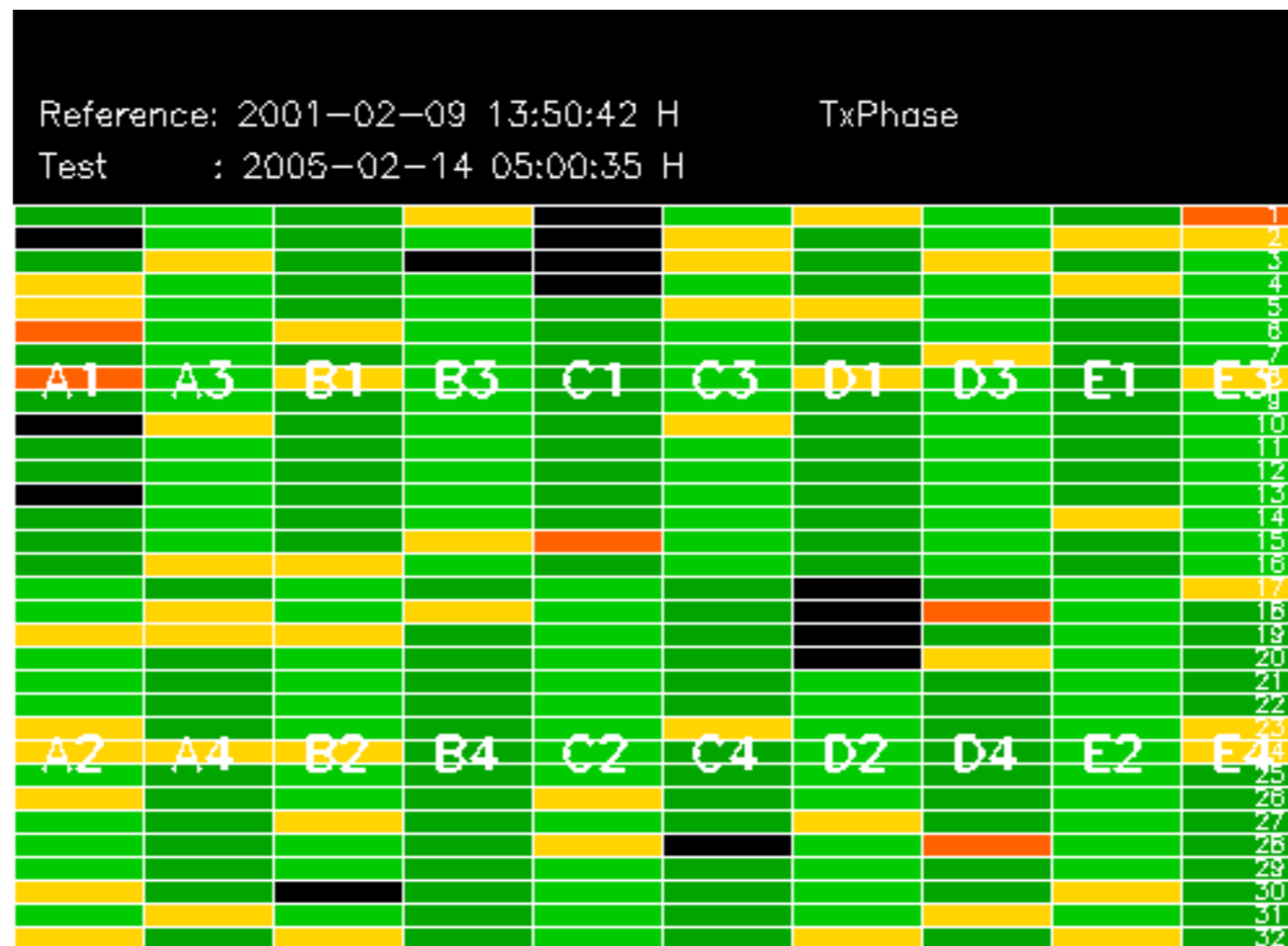


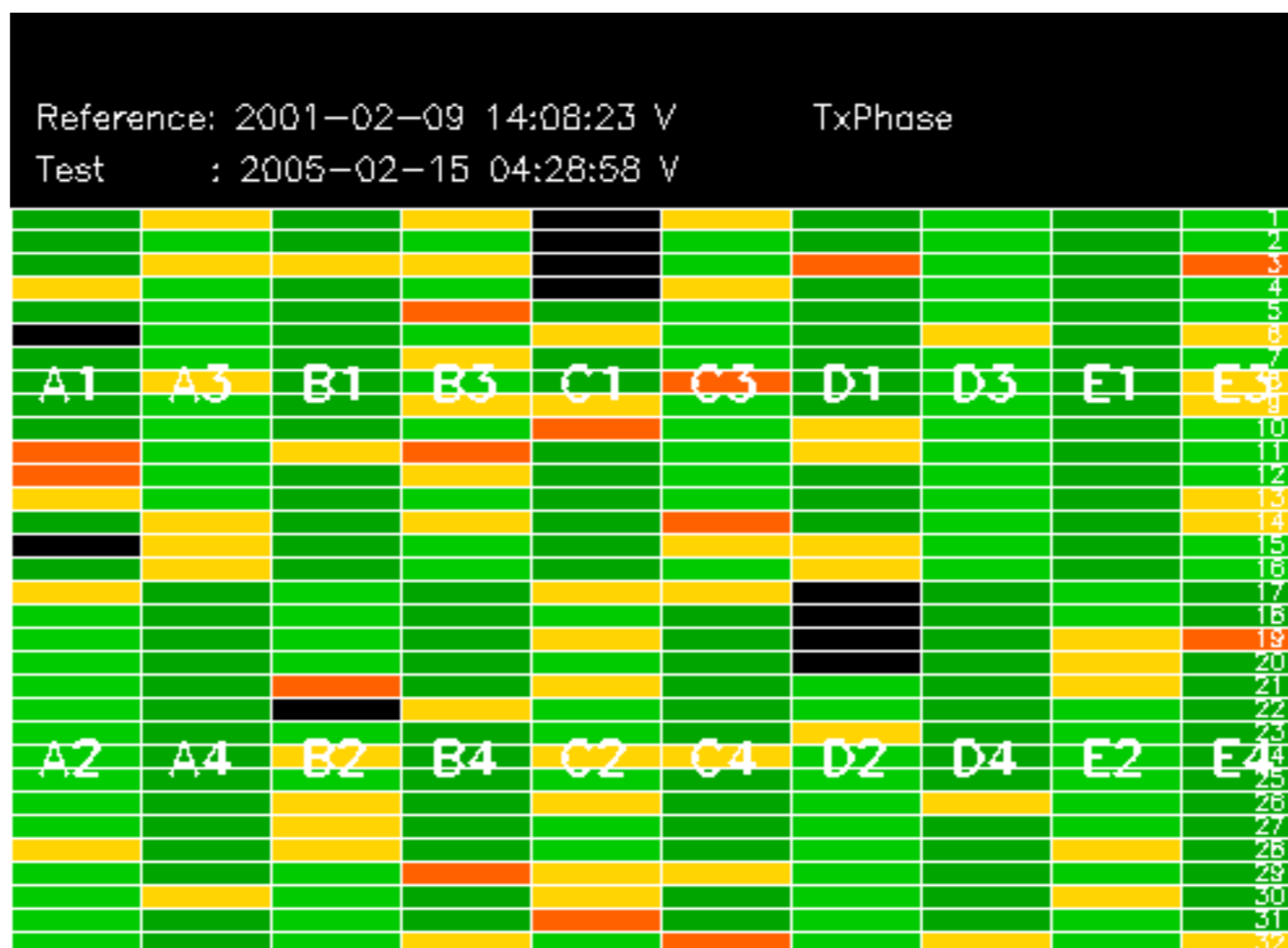
Summary of analysis for the last 3 days 2005021[456]

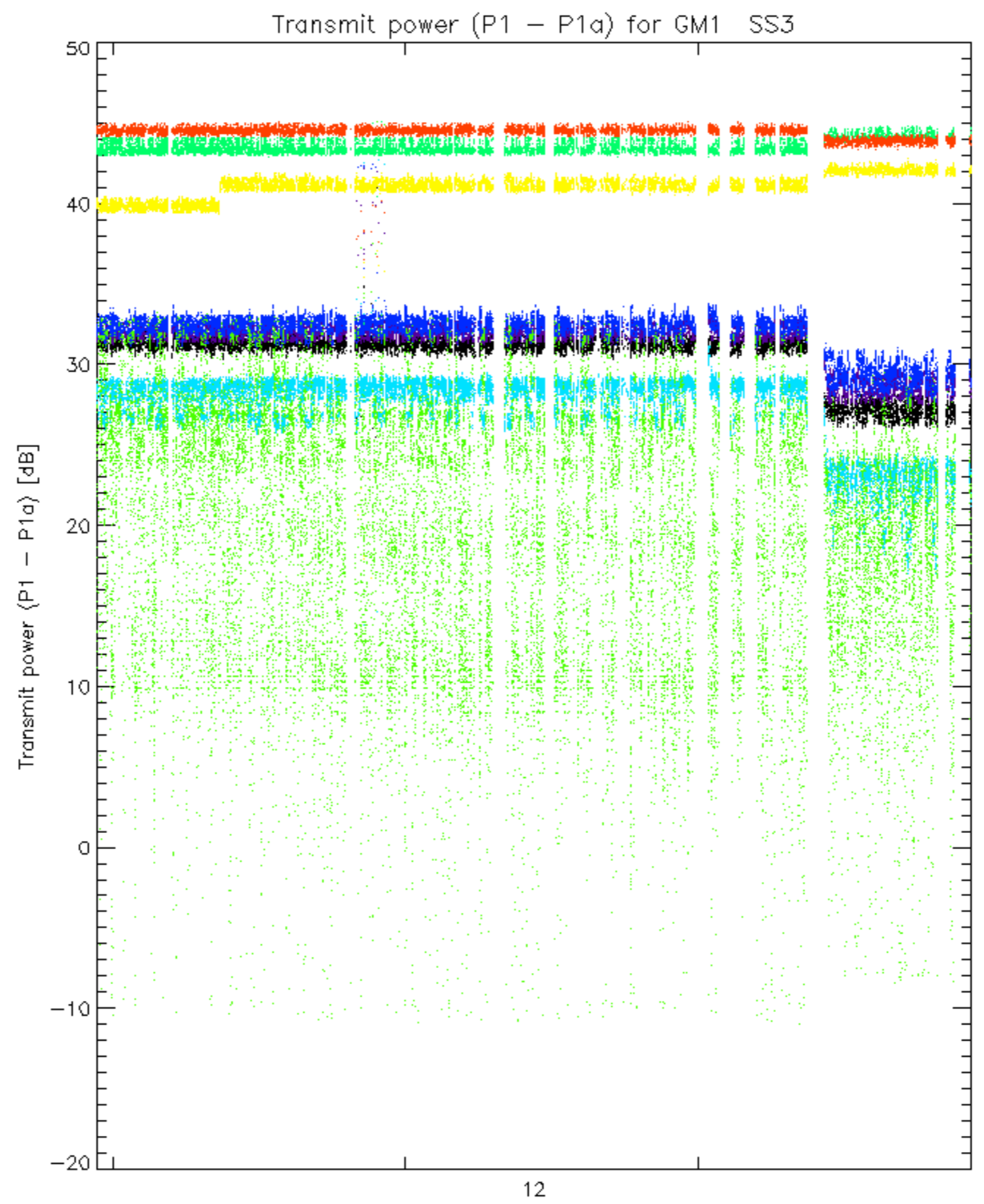
The assumption is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20050214_172020_000001592034_00399_15483_5064.N1	0	32
ASA_WSM_1PNPDK20050215_082812_000000862034_00408_15492_5054.N1	0	37

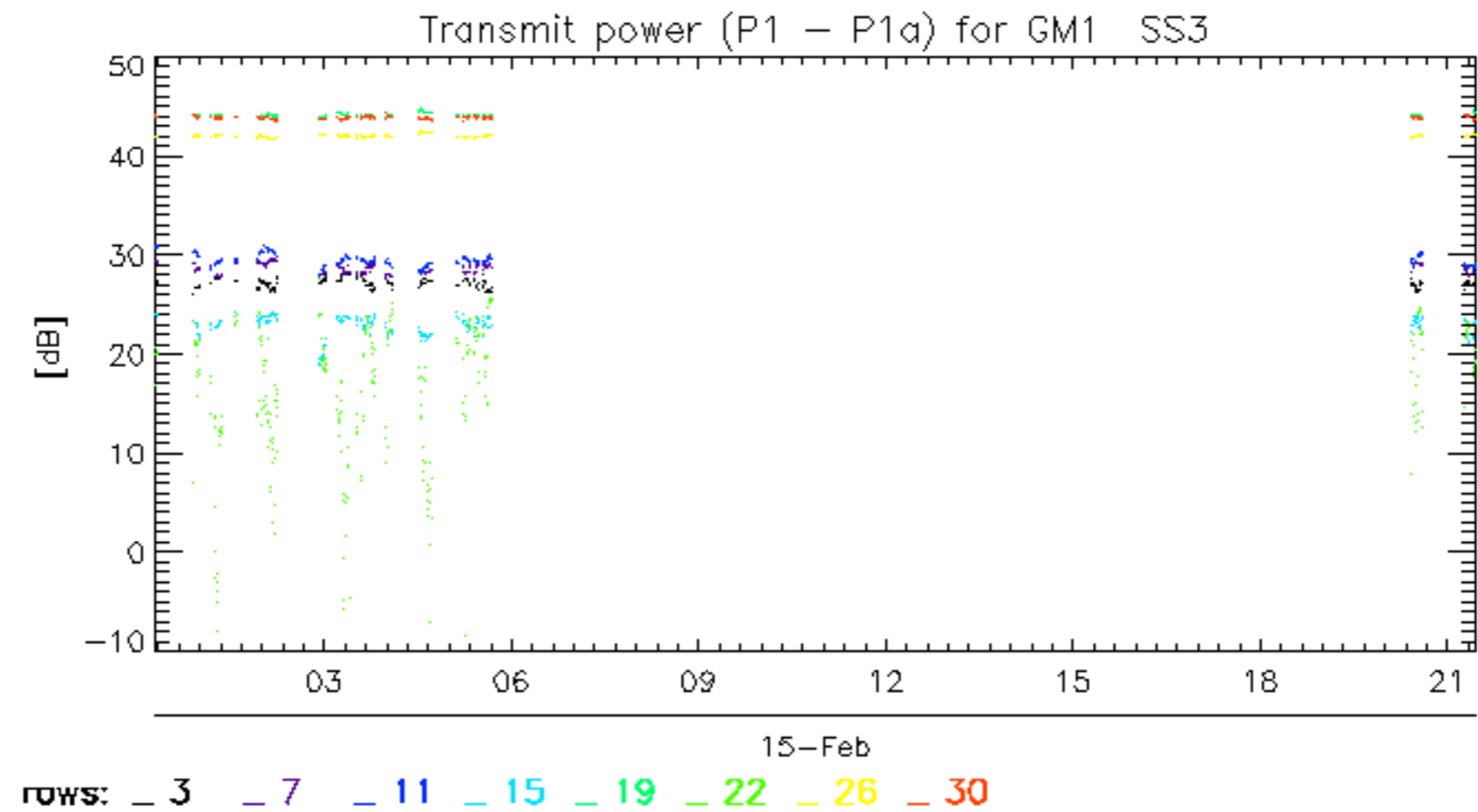


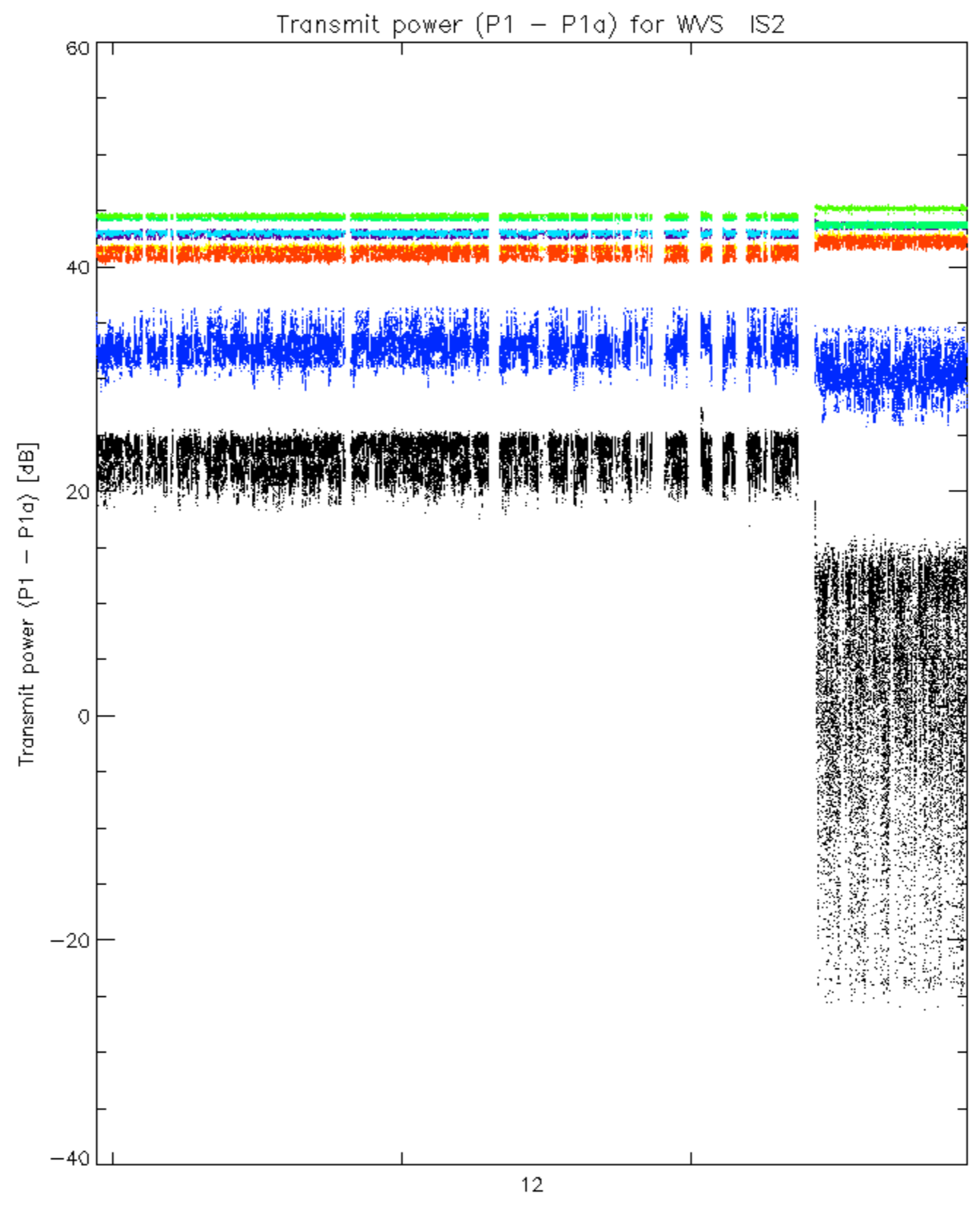




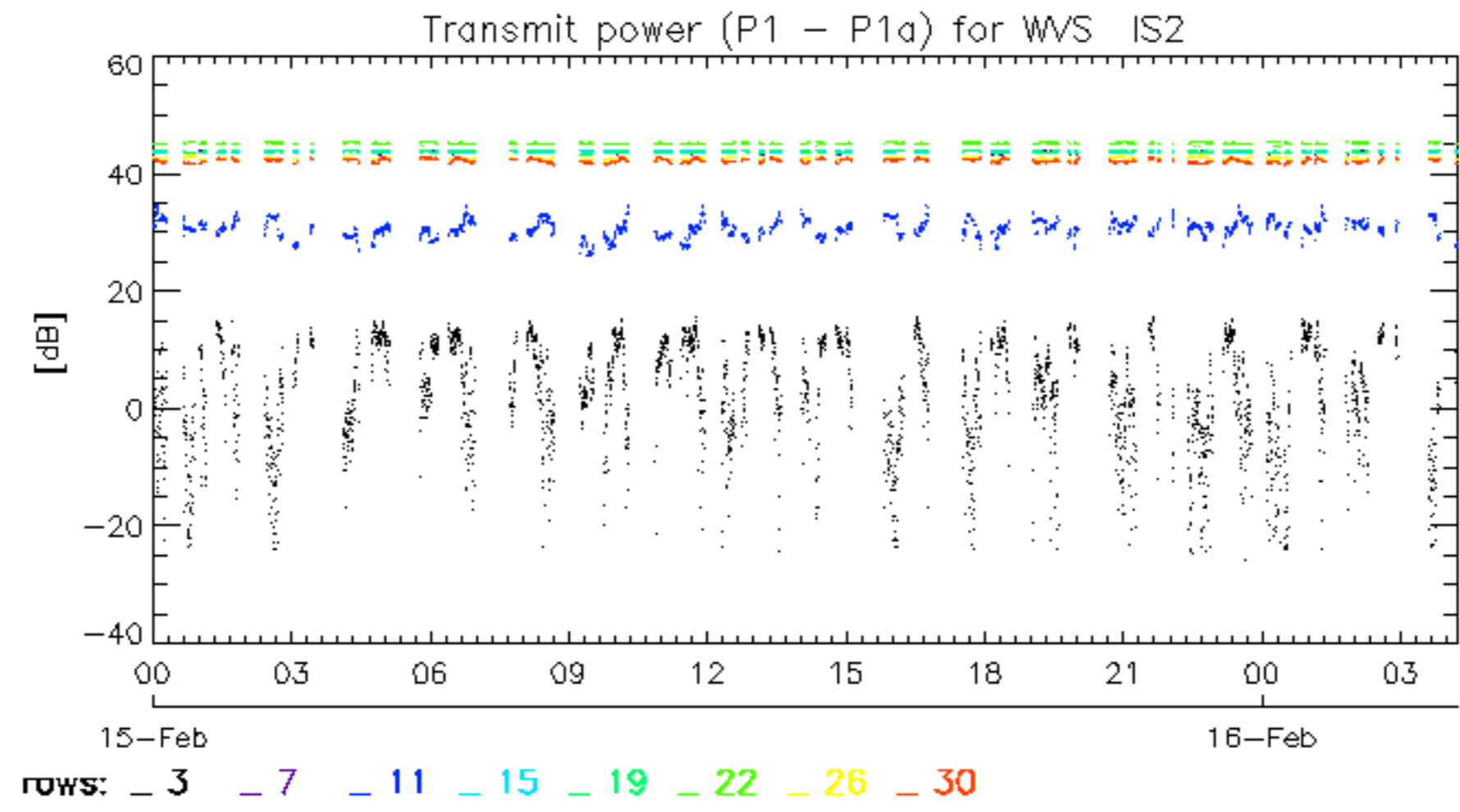


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.