

PRELIMINARY REPORT OF 050217

last update on Thu Feb 17 11:07:27 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 2005-02-16 00:00:00 to 2005-02-17 11:07:27

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	30	14	3	3	1
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	30	14	3	3	1
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	30	14	3	3	1
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	30	14	3	3	1

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_INS_AXVIEC20041215_180208_20030211_000000_20051231_000000	51	50	5	10	4
ASA_XCA_AXVIEC20041027_164238_20040412_000000_20051231_000000	51	50	5	10	4
ASA_CON_AXVIEC20041215_175442_20030601_000000_20051231_000000	51	50	5	10	4
ASA_XCH_AXVIEC20041215_180350_20020301_000000_20051231_000000	51	50	5	10	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	20050216 071832

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
<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	-3.387512	0.008631	0.049766
7	P1	-3.080551	0.007719	-0.010640
11	P1	-4.672743	0.018987	-0.032343
15	P1	-5.653279	0.030282	-0.005379
19	P1	-3.665313	0.004201	0.001334
22	P1	-4.546082	0.013972	0.047686
26	P1	-4.942687	0.013611	-0.007284
30	P1	-7.157121	0.017267	-0.039619
3	P1	-15.920863	0.092398	-0.107789
7	P1	-15.513303	0.061068	-0.017212
11	P1	-20.885996	0.244290	-0.080766
15	P1	-11.592383	0.028552	0.048958
19	P1	-14.197984	0.025319	-0.084137
22	P1	-15.833808	0.360854	0.246025
26	P1	-17.598021	0.221551	-0.013871
30	P1	-17.921515	0.386871	0.006751

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-22.183416	0.085924	0.168910
7	P2	-22.375084	0.105536	0.147485
11	P2	-14.596915	0.100985	0.167007
15	P2	-7.083077	0.095291	0.057027
19	P2	-9.675592	0.094451	0.060354
22	P2	-16.996637	0.093683	0.119998
26	P2	-16.472424	0.092079	0.058485
30	P2	-18.901842	0.079489	0.038882

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.176904	0.005812	0.033841
7	P3	-8.176904	0.005812	0.033841
11	P3	-8.176904	0.005812	0.033841
15	P3	-8.176904	0.005812	0.033841
19	P3	-8.176904	0.005812	0.033841
22	P3	-8.176904	0.005812	0.033841
26	P3	-8.176808	0.005812	0.033670
30	P3	-8.176808	0.005812	0.033670

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	-2.776073	0.019647	0.077311
7	P1	-2.975200	0.077004	-0.049296
11	P1	-3.965796	0.024377	-0.031358
15	P1	-3.538647	0.024416	-0.030209
19	P1	-3.594026	0.013953	0.015819
22	P1	-5.699953	0.057447	-0.073919
26	P1	-7.221303	0.096469	-0.427417
30	P1	-6.265501	0.041974	0.081580
3	P1	-10.751506	0.093317	-0.015527
7	P1	-10.184188	0.194701	-0.143810
11	P1	-12.561884	0.126659	-0.037662
15	P1	-11.756337	0.079506	0.011786
19	P1	-15.582590	0.055080	0.037326
22	P1	-24.158356	1.481954	-0.338012
26	P1	-15.492147	0.314745	-0.290911
30	P1	-20.047915	0.875059	-0.247677

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-17.898594	0.047476	0.154403
7	P2	-22.438223	0.132253	0.096551
11	P2	-10.386231	0.055201	0.258577
15	P2	-5.002508	0.020807	0.050183
19	P2	-6.872088	0.031770	0.101505
22	P2	-7.180202	0.051144	0.120199
26	P2	-23.879932	0.099825	0.063762
30	P2	-21.943869	0.059159	0.045550

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.011744	0.002527	0.039567
7	P3	-8.011871	0.002538	0.039632
11	P3	-8.011792	0.002539	0.039896
15	P3	-8.011878	0.002536	0.039747
19	P3	-8.011900	0.002552	0.039833
22	P3	-8.011894	0.002533	0.039708
26	P3	-8.011700	0.002536	0.039400
30	P3	-8.011853	0.002540	0.039396

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	0.000469299
	stdev	2.16969e-07
MEAN Q	mean	0.000538772
	stdev	2.30306e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.129024
	stdev	0.000979932
STDEV Q	mean	0.129267
	stdev	0.000990807



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2005021[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_WSM_1PNPDE20050216_025620_000001282034_00419_15503_5630.N1	0	38
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"/>
Ascending
<input type="checkbox"/>
Descending

7.2 - Absolute Doppler for WVS

Evolution of Absolute Doppler

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

7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

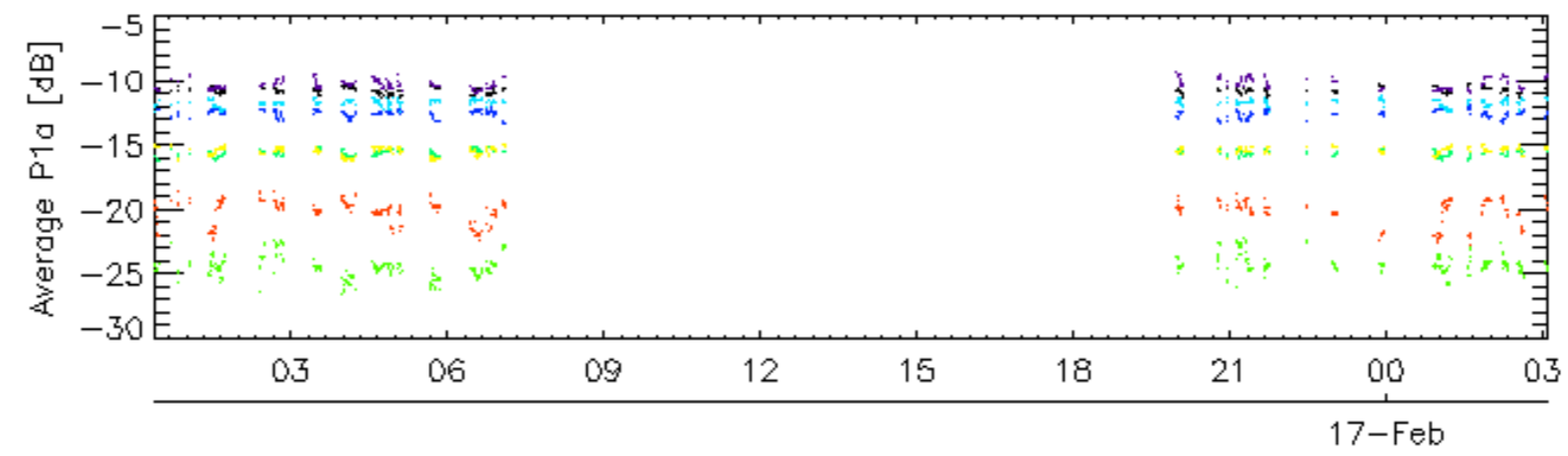
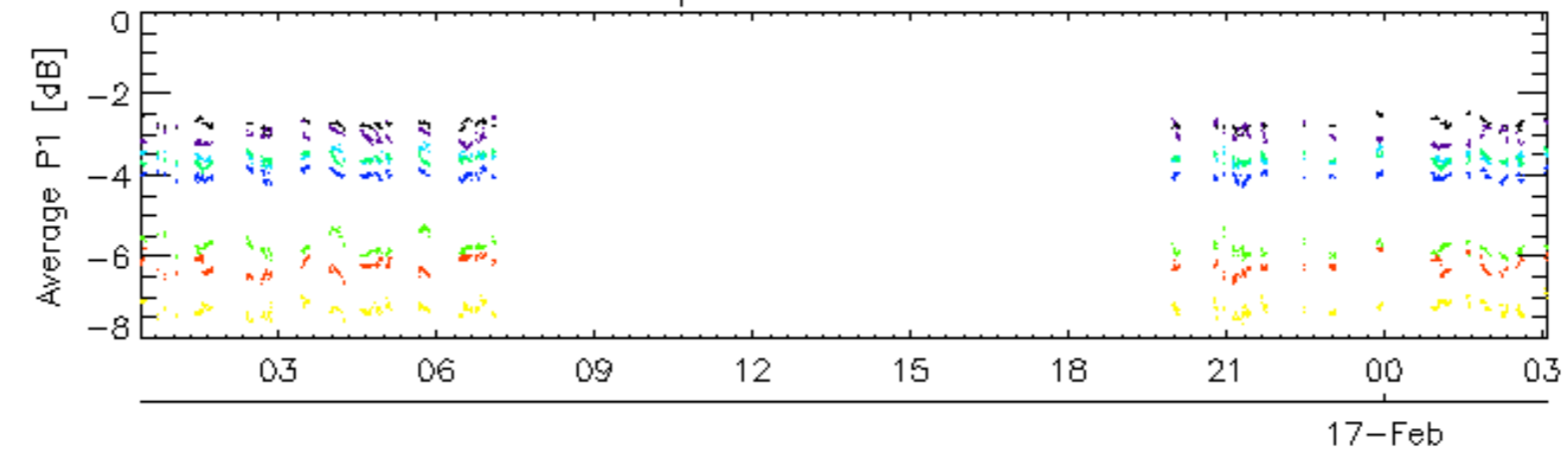
Ascending

Descending

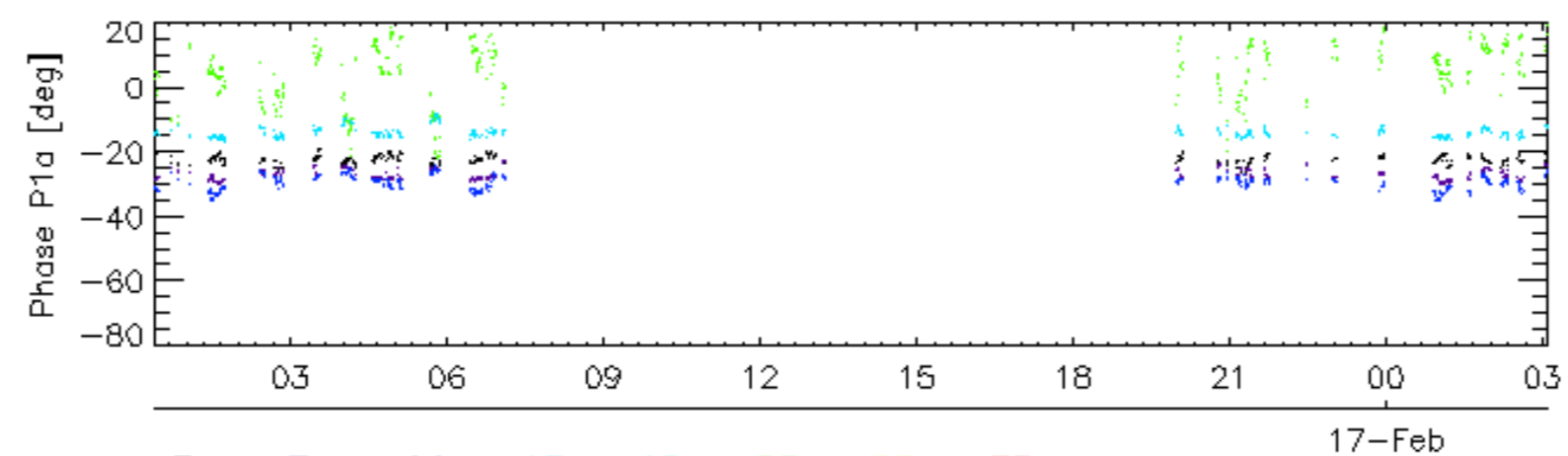
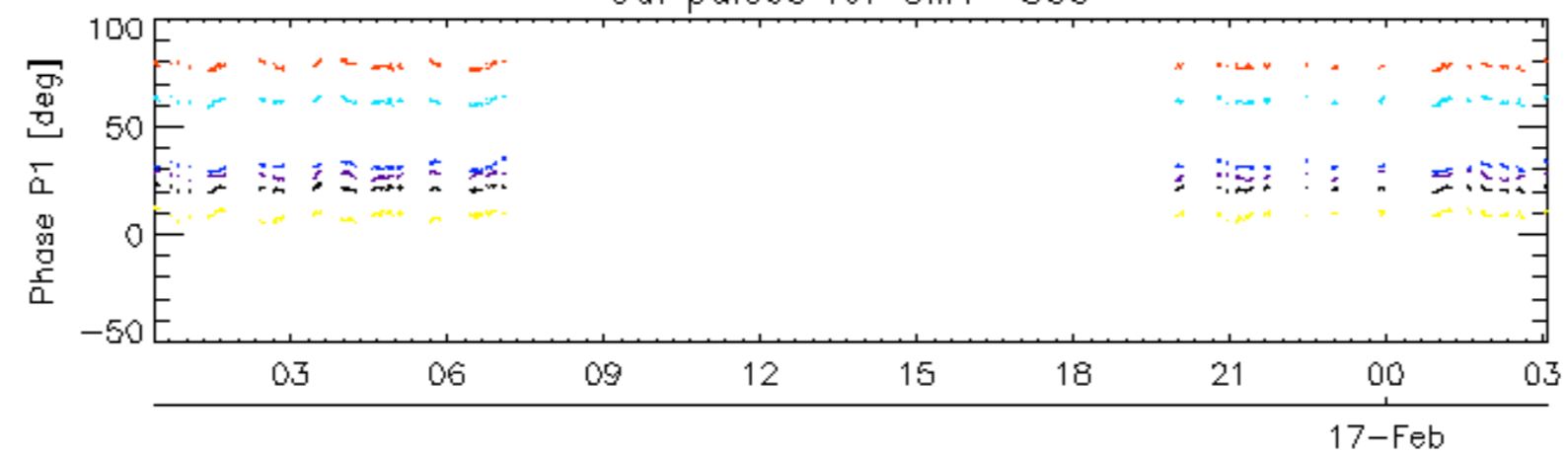
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

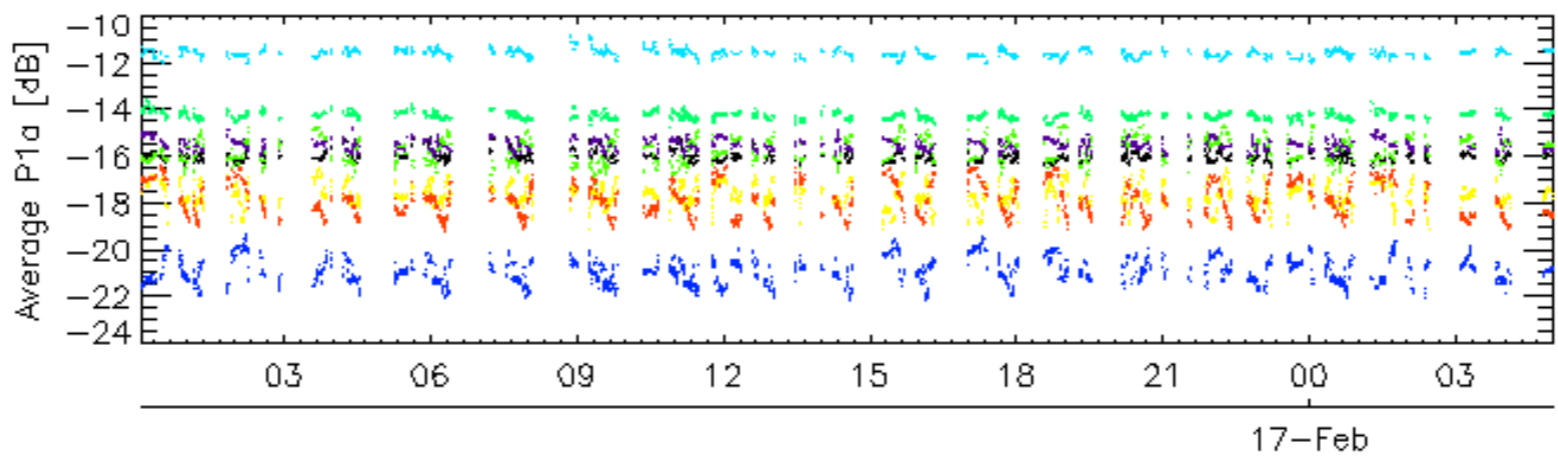
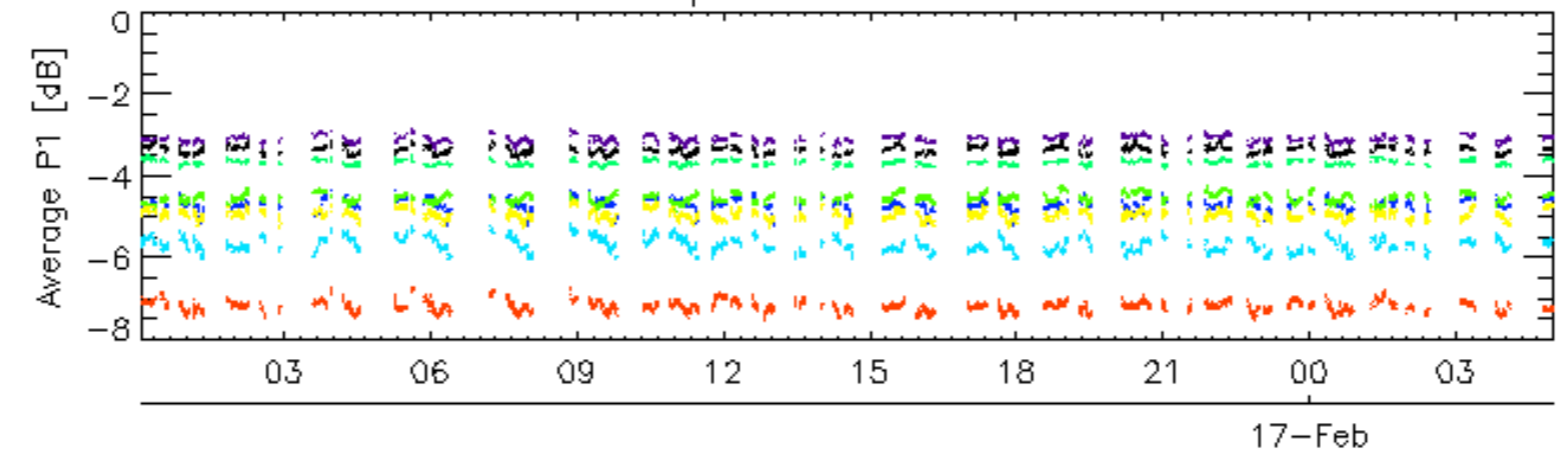


Cal pulses for GM1 SS3

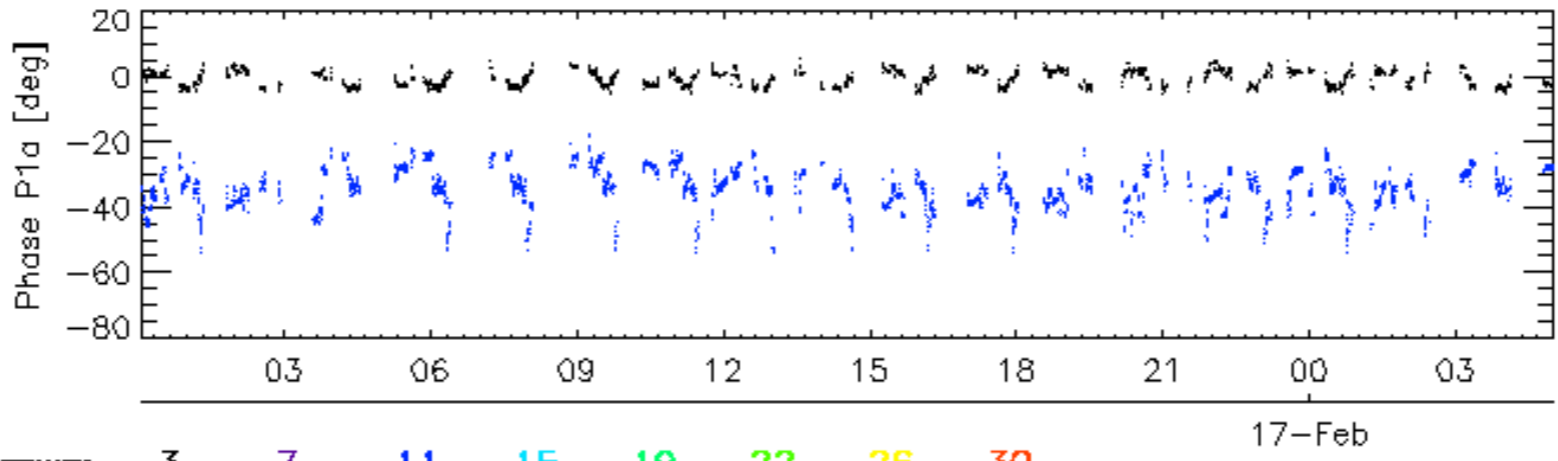
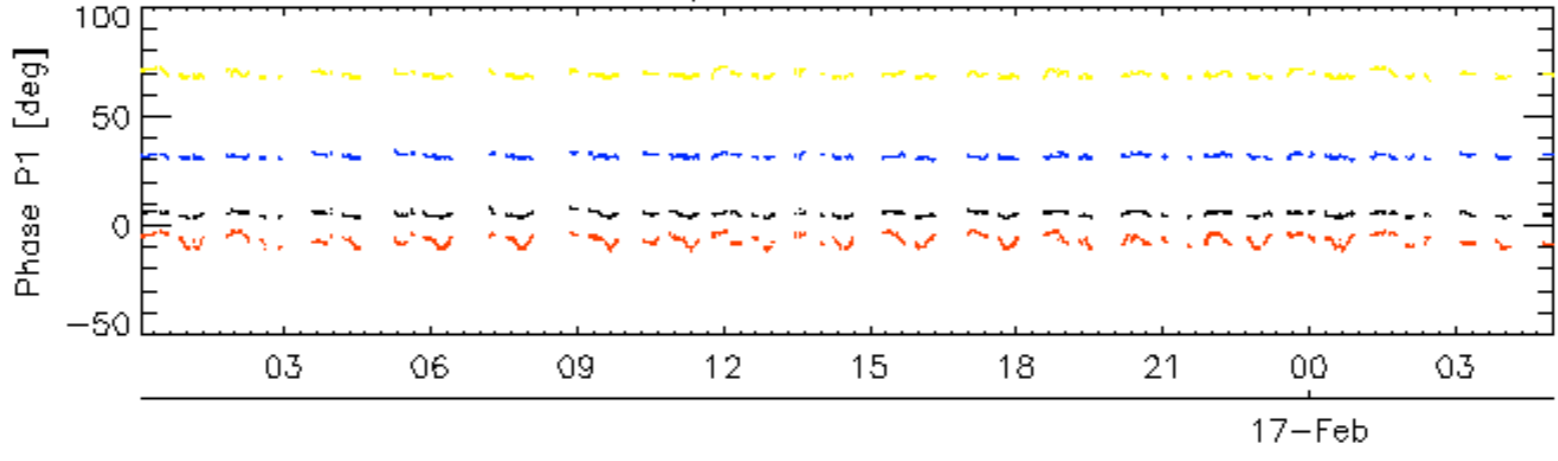


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

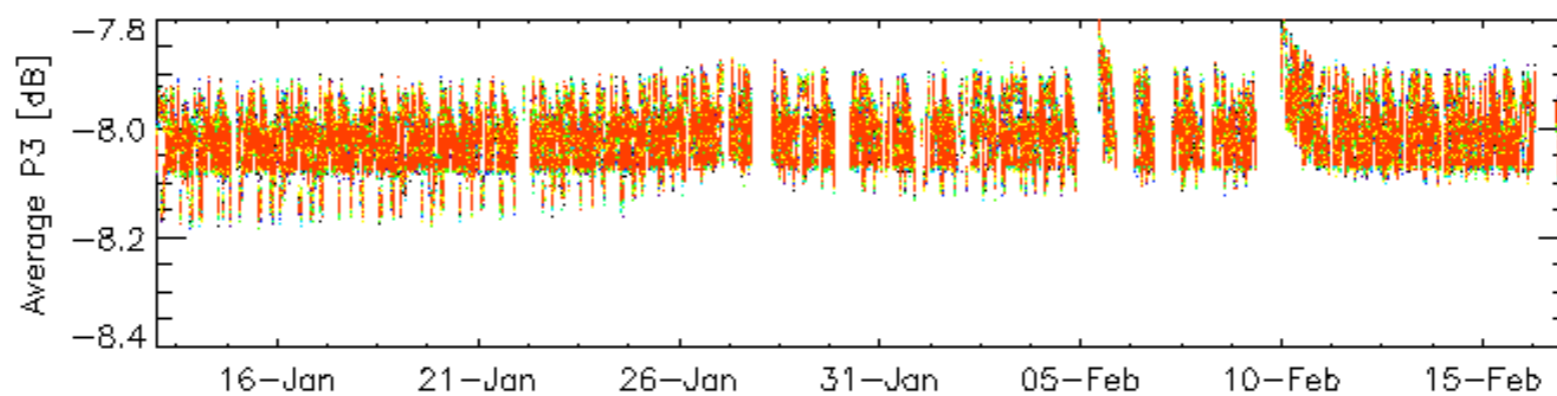
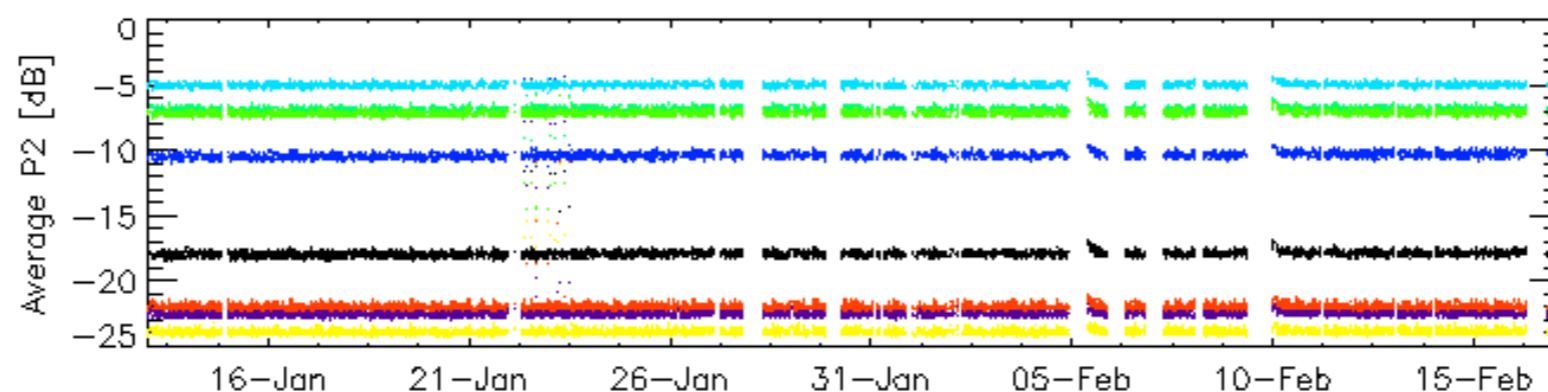
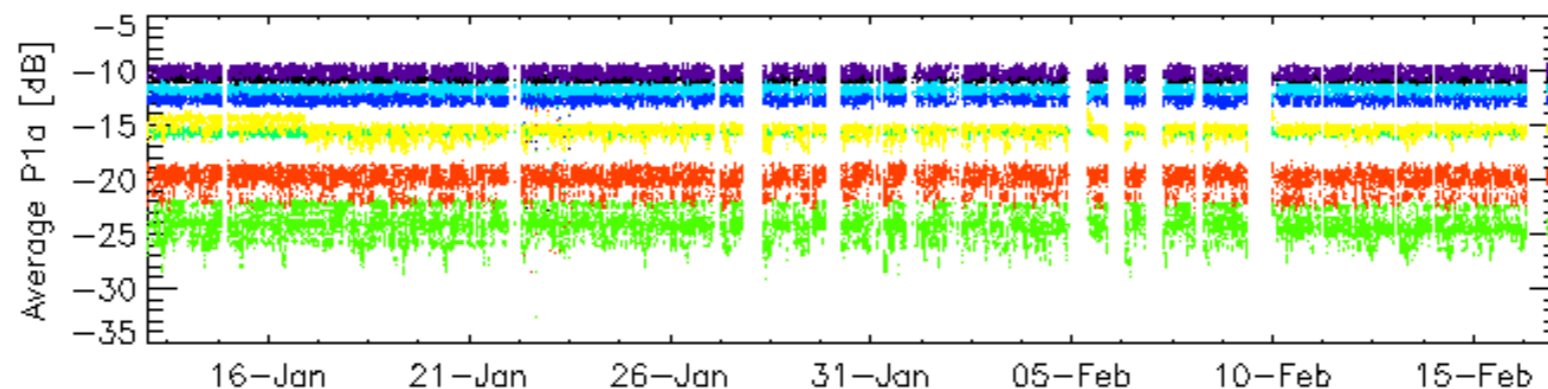
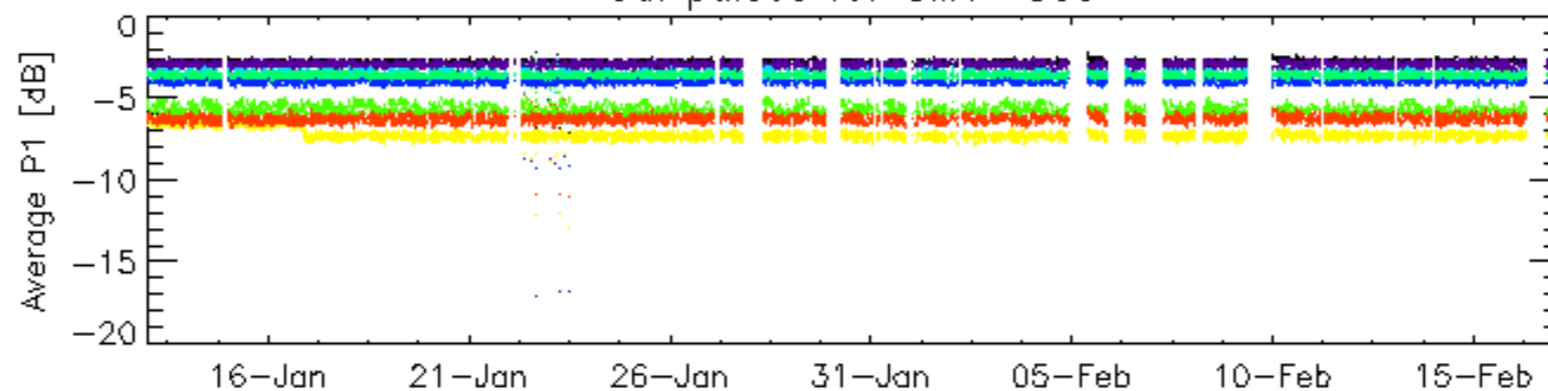


Cal pulses for WVS IS2



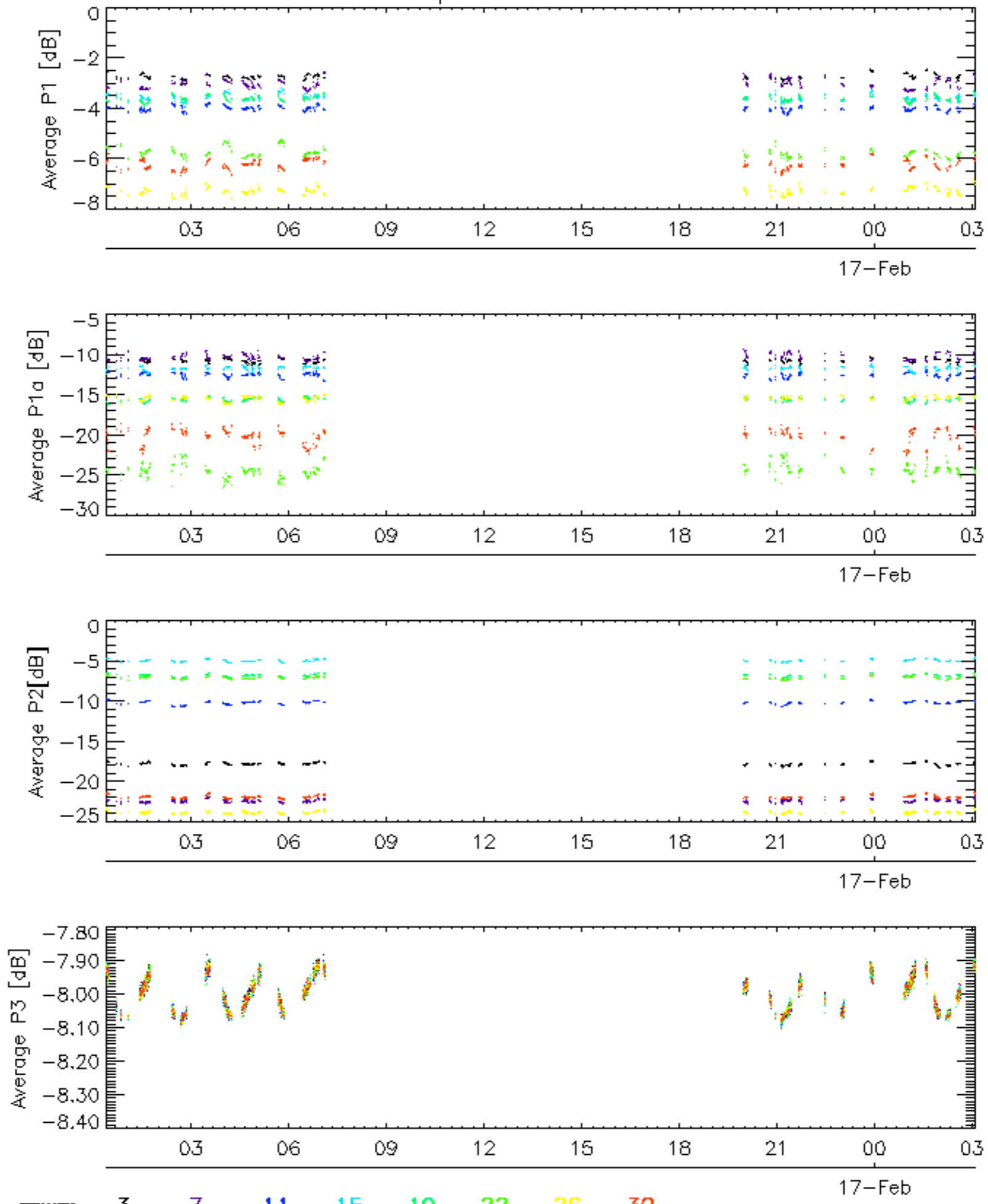
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

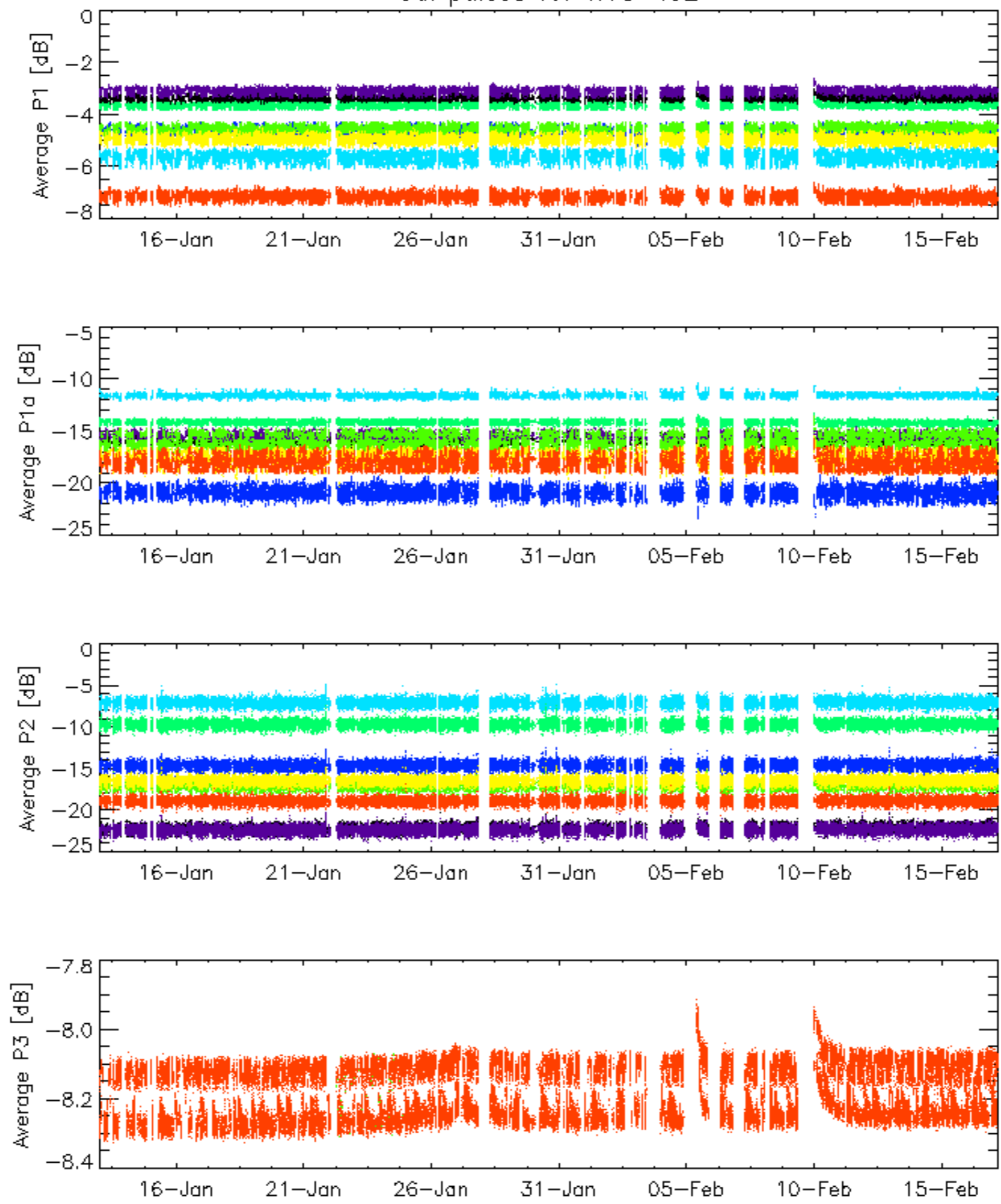


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

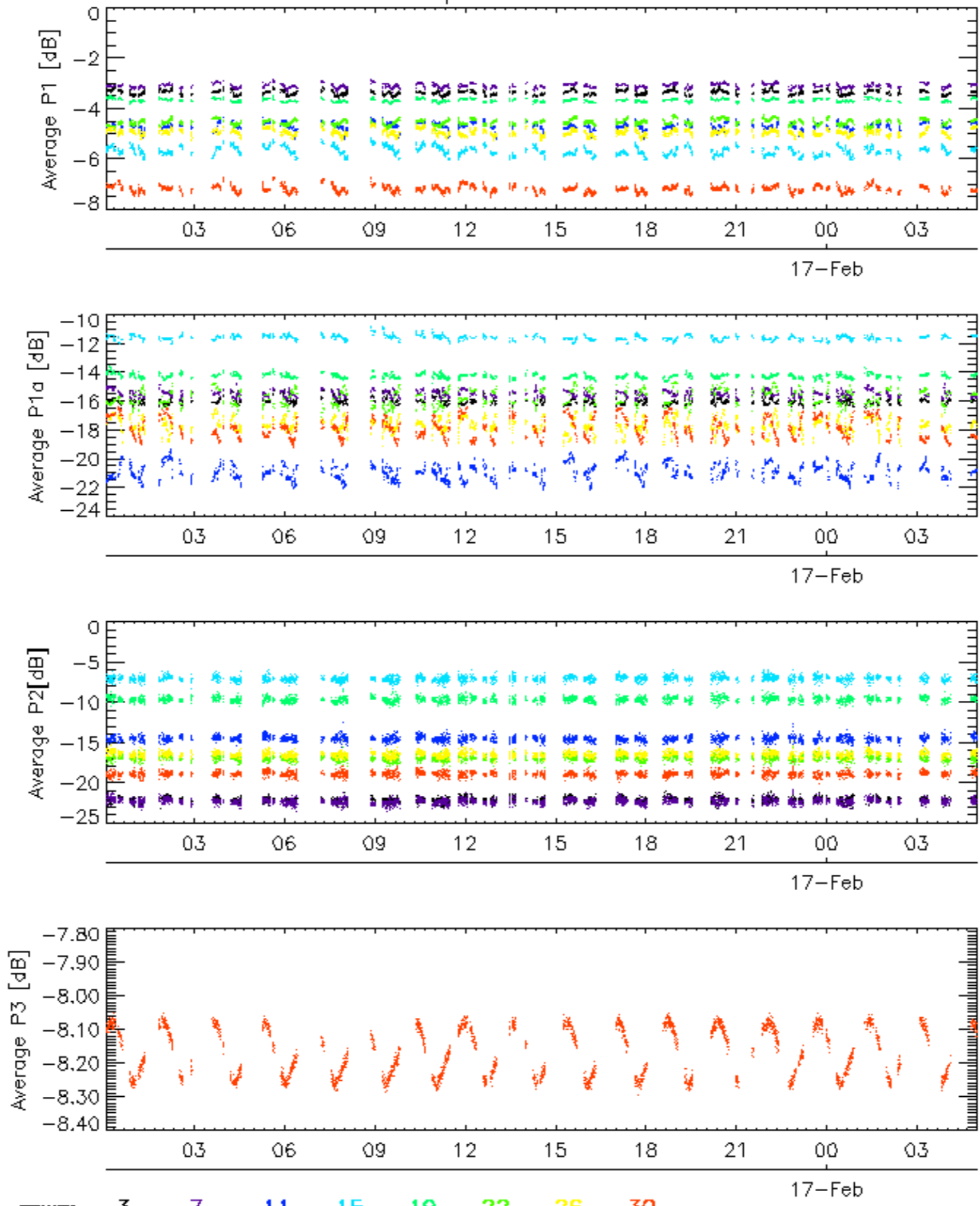


Cal pulses for WVS IS2



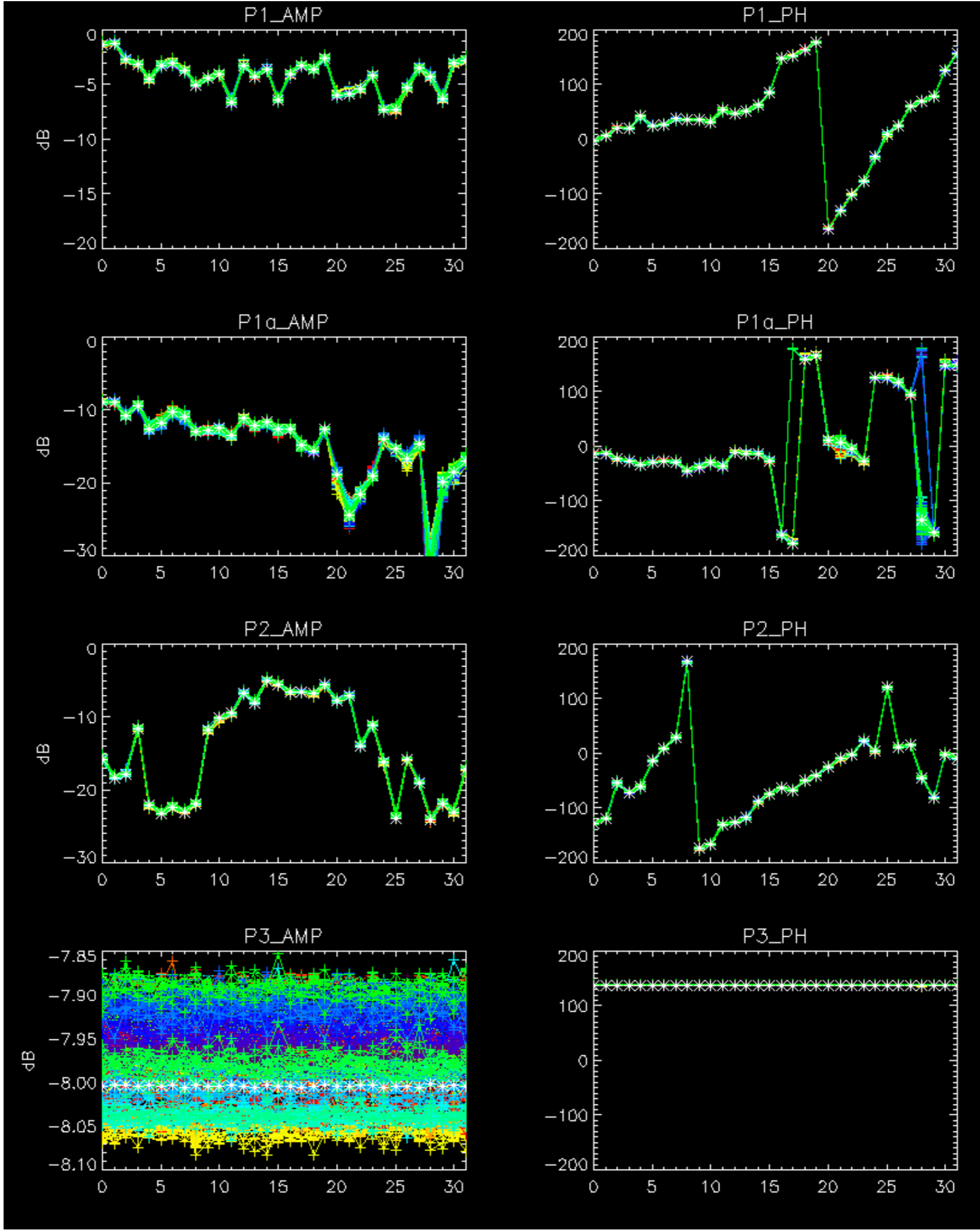
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

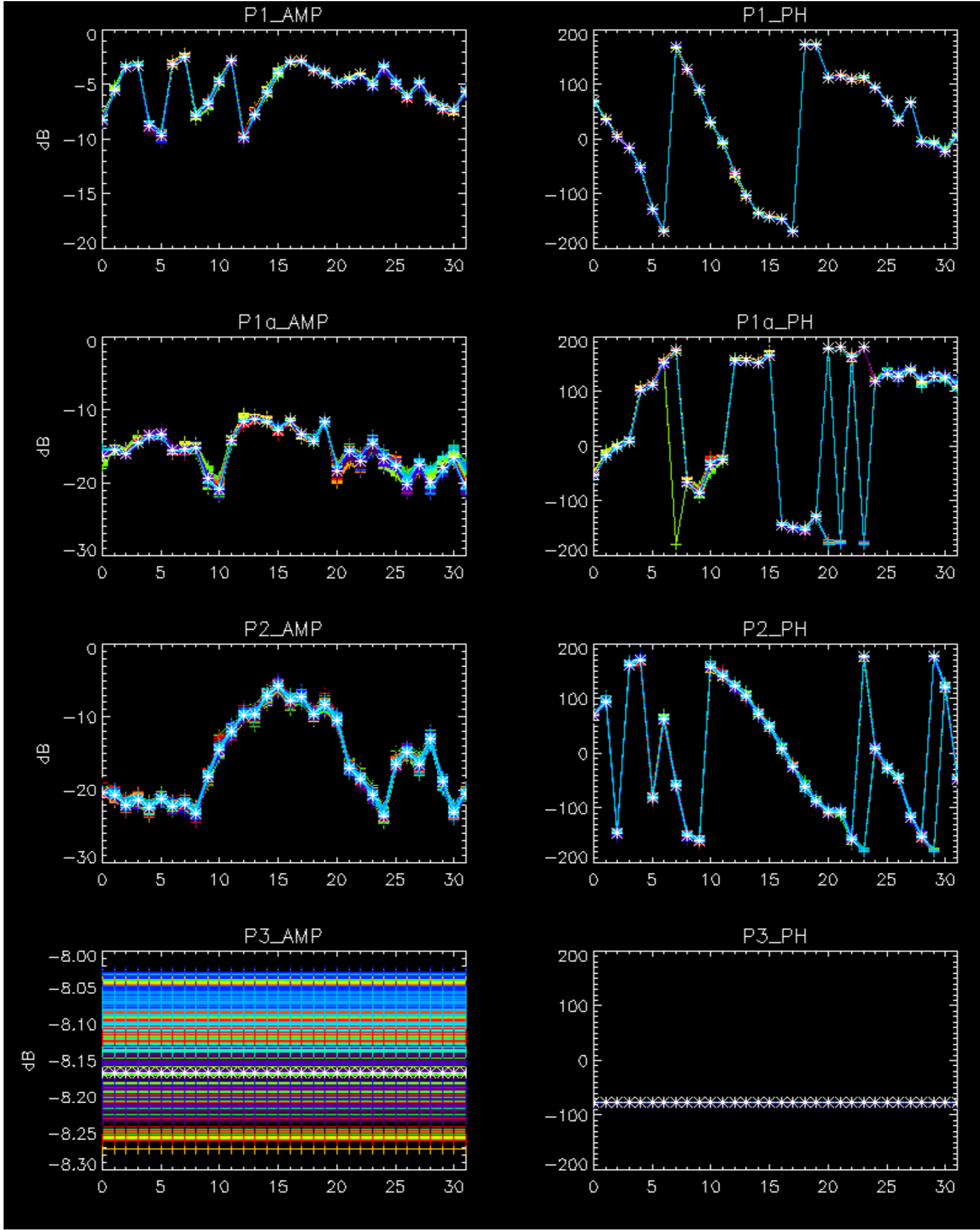
Cal pulses for WVS IS2



rows: 3 7 11 15 19 22 26 30

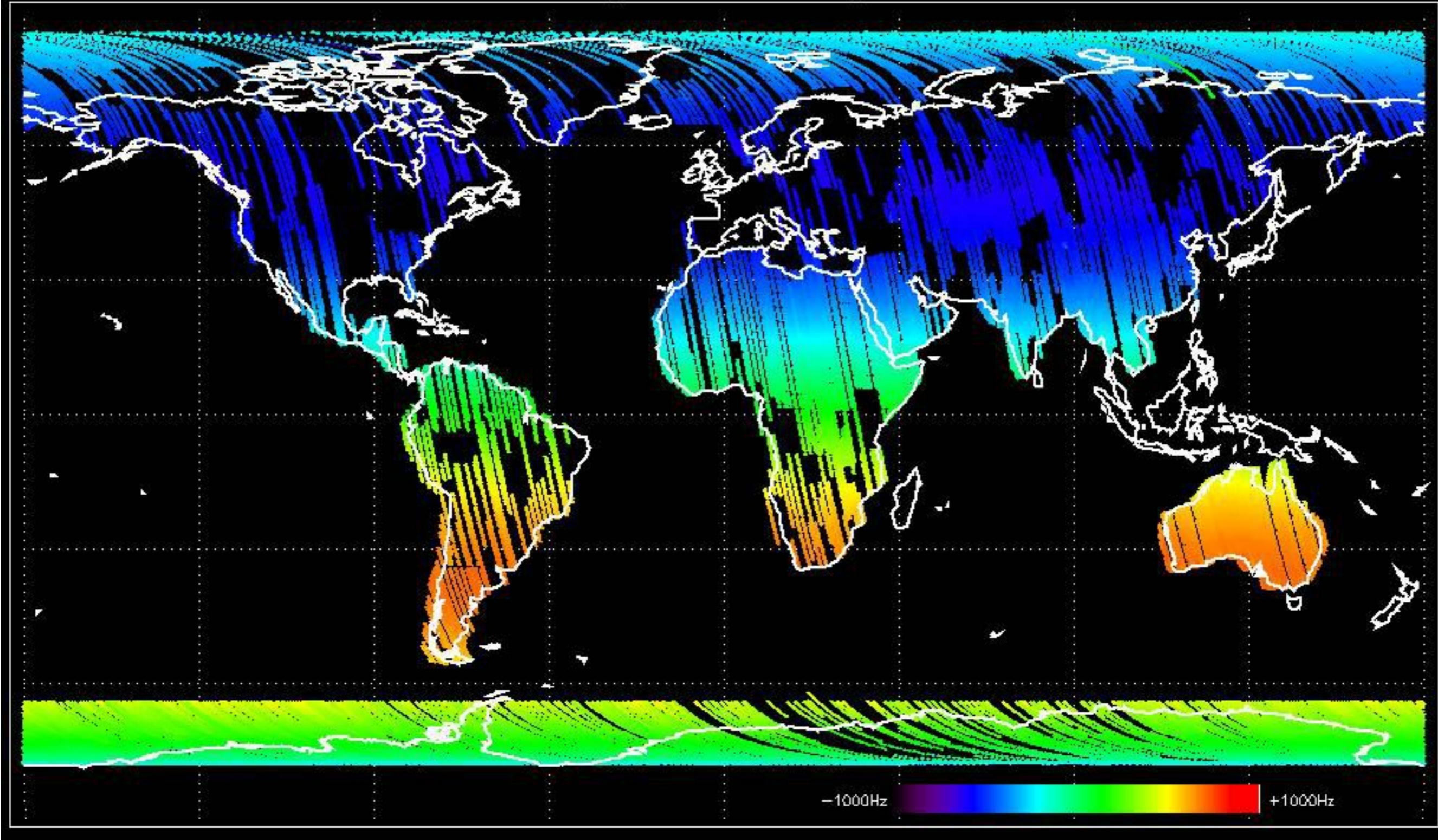
No anomalies observed.



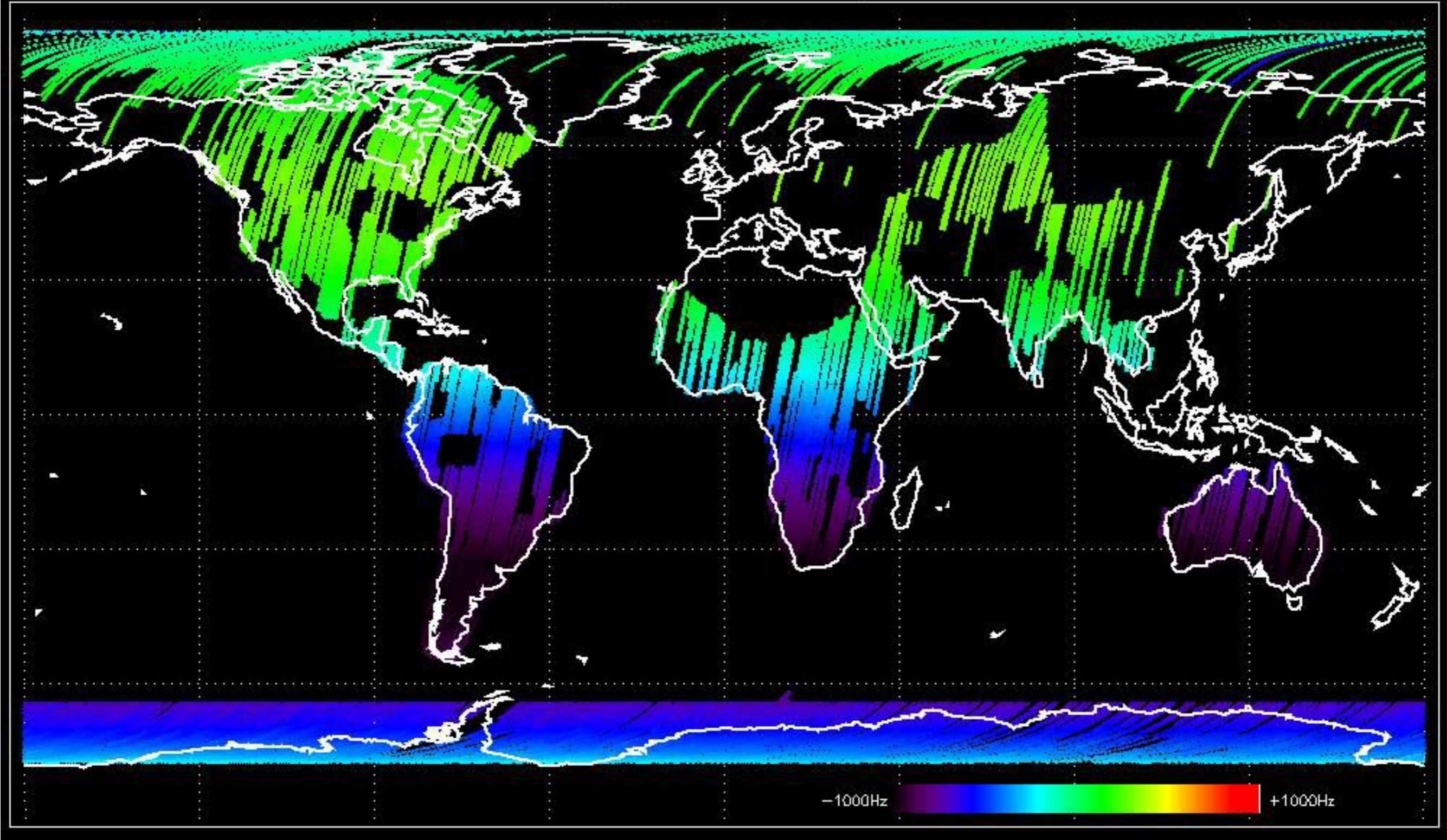


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

Doppler 'GM1' 'SS1' ascending

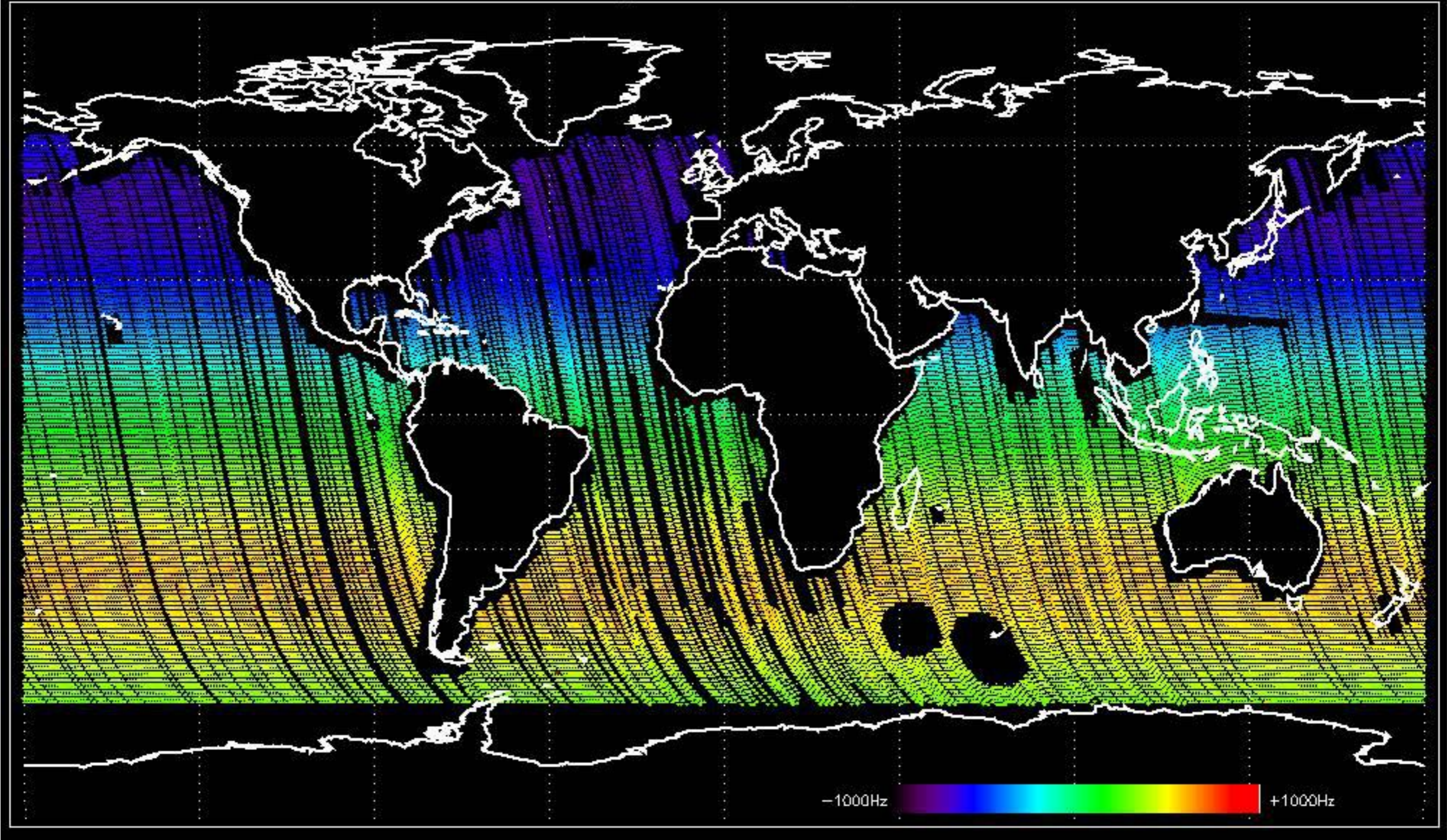


Doppler 'GM1' 'SS1' descending

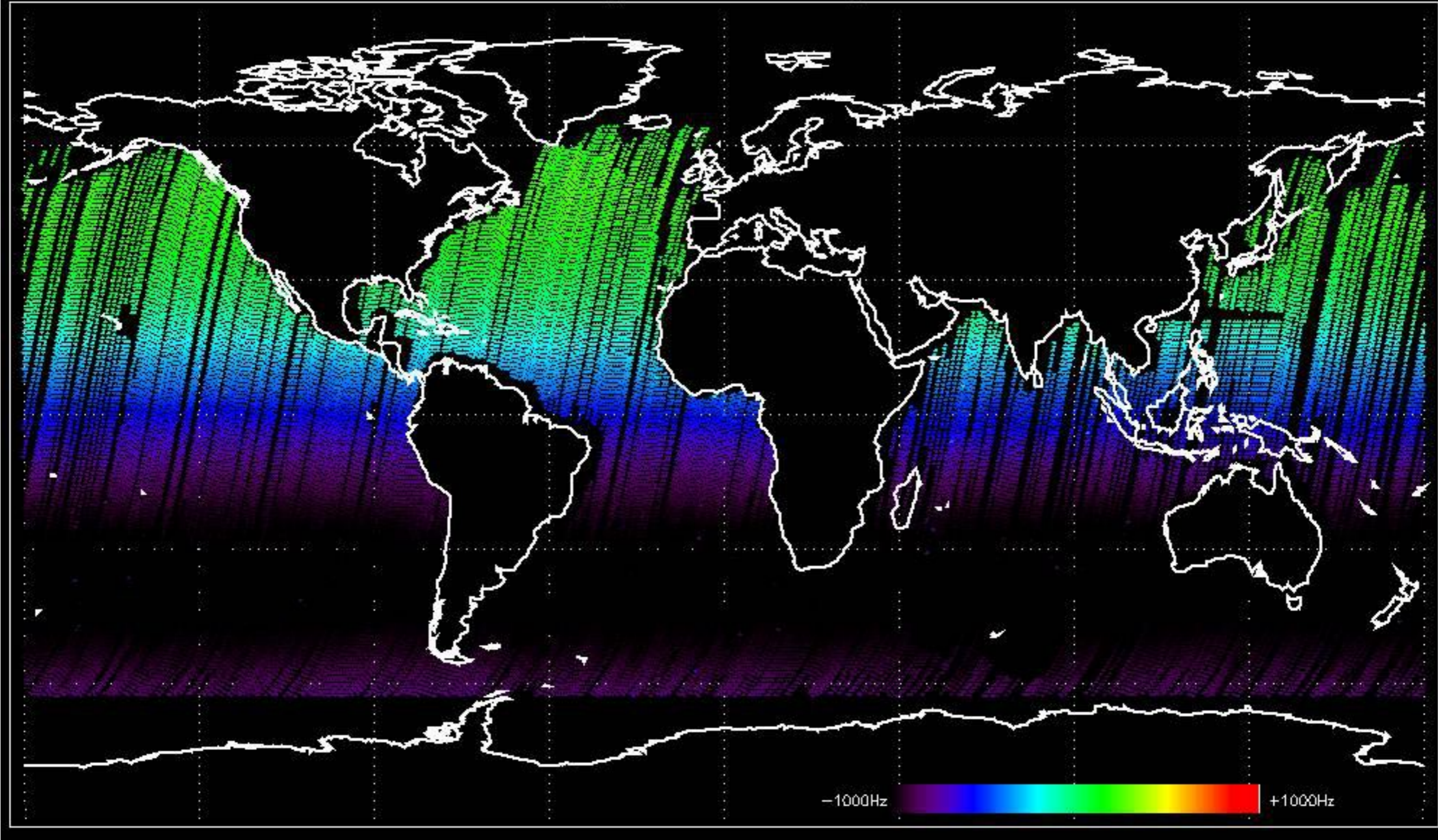


-1000Hz  +1000Hz

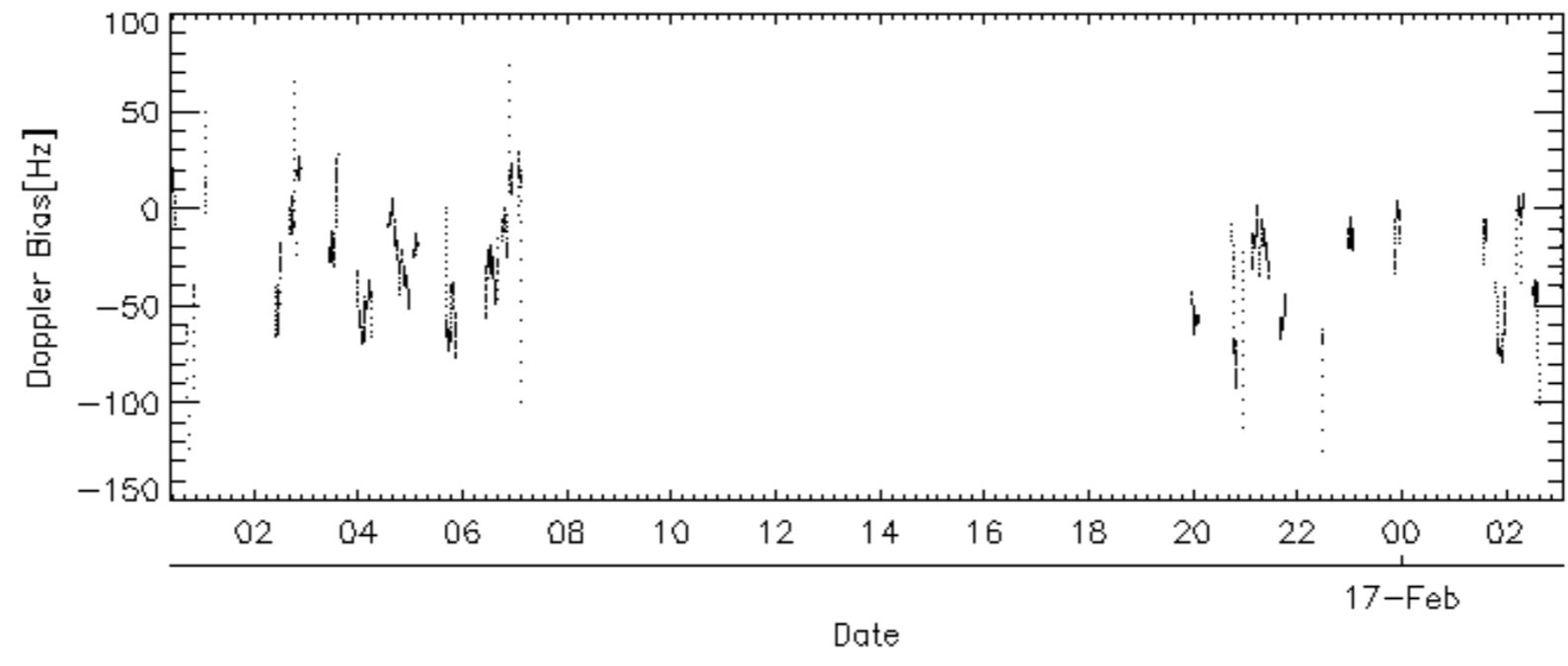
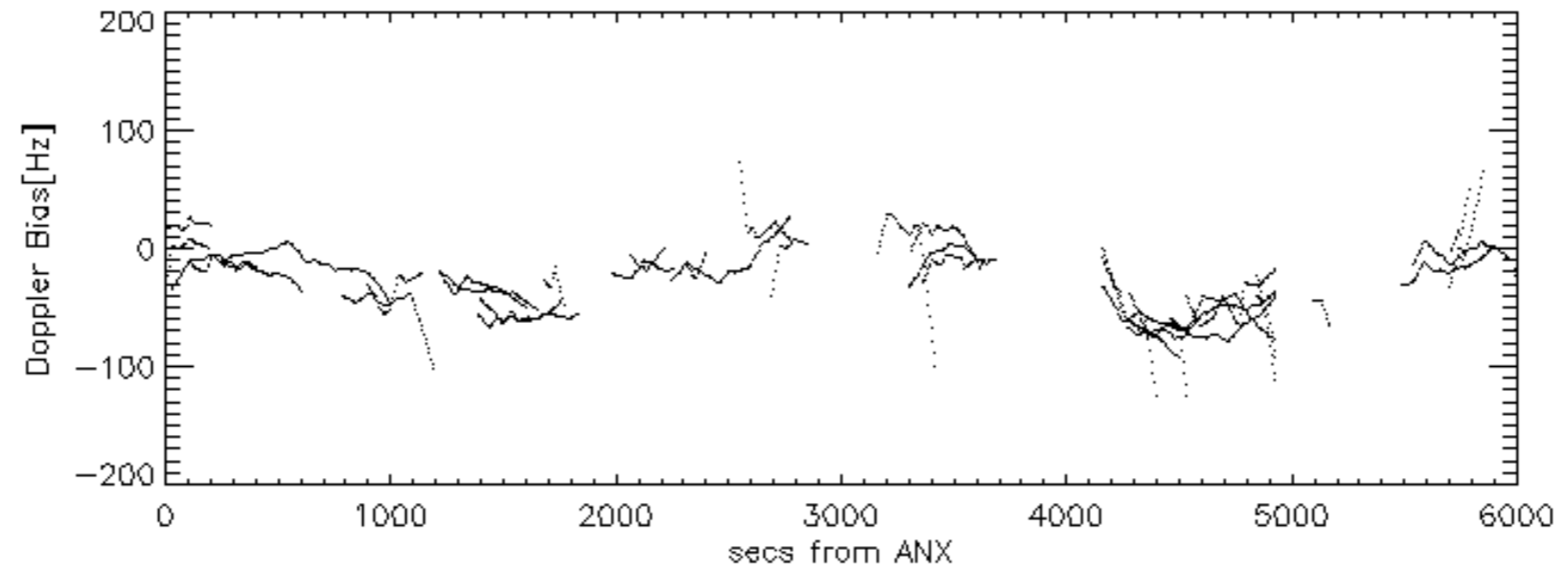
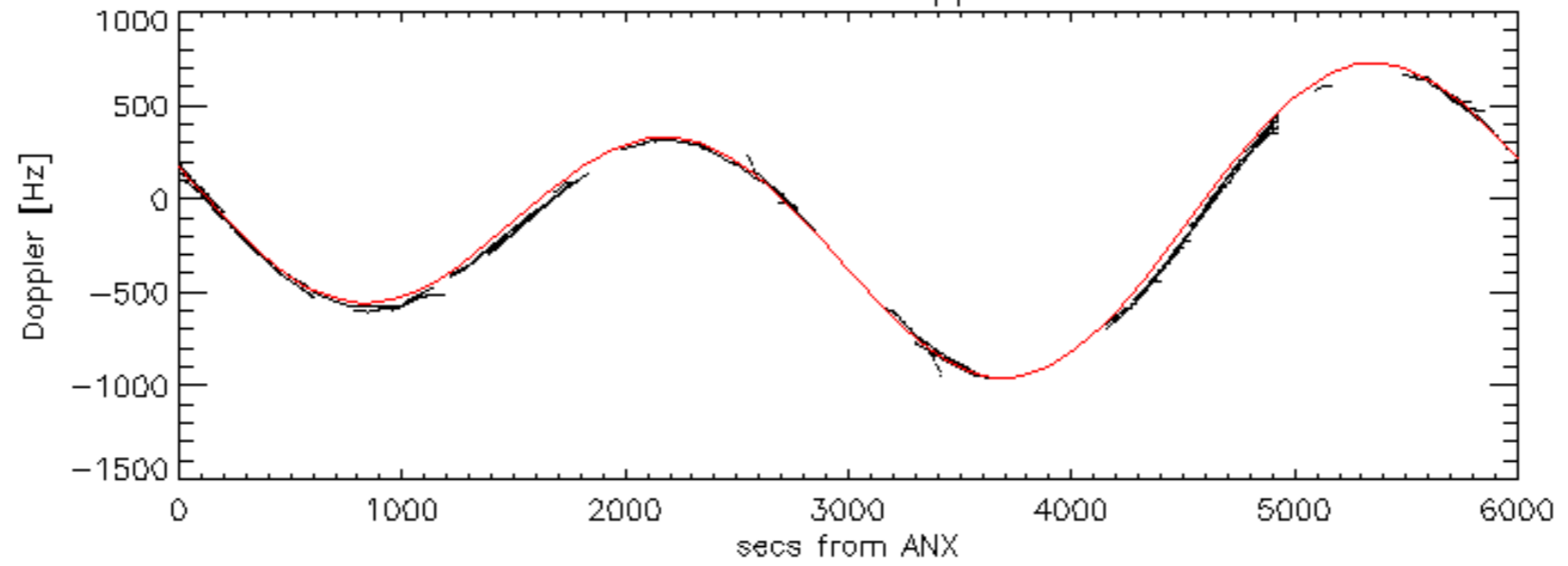
Doppler 'WVS' 'IS2' ascending

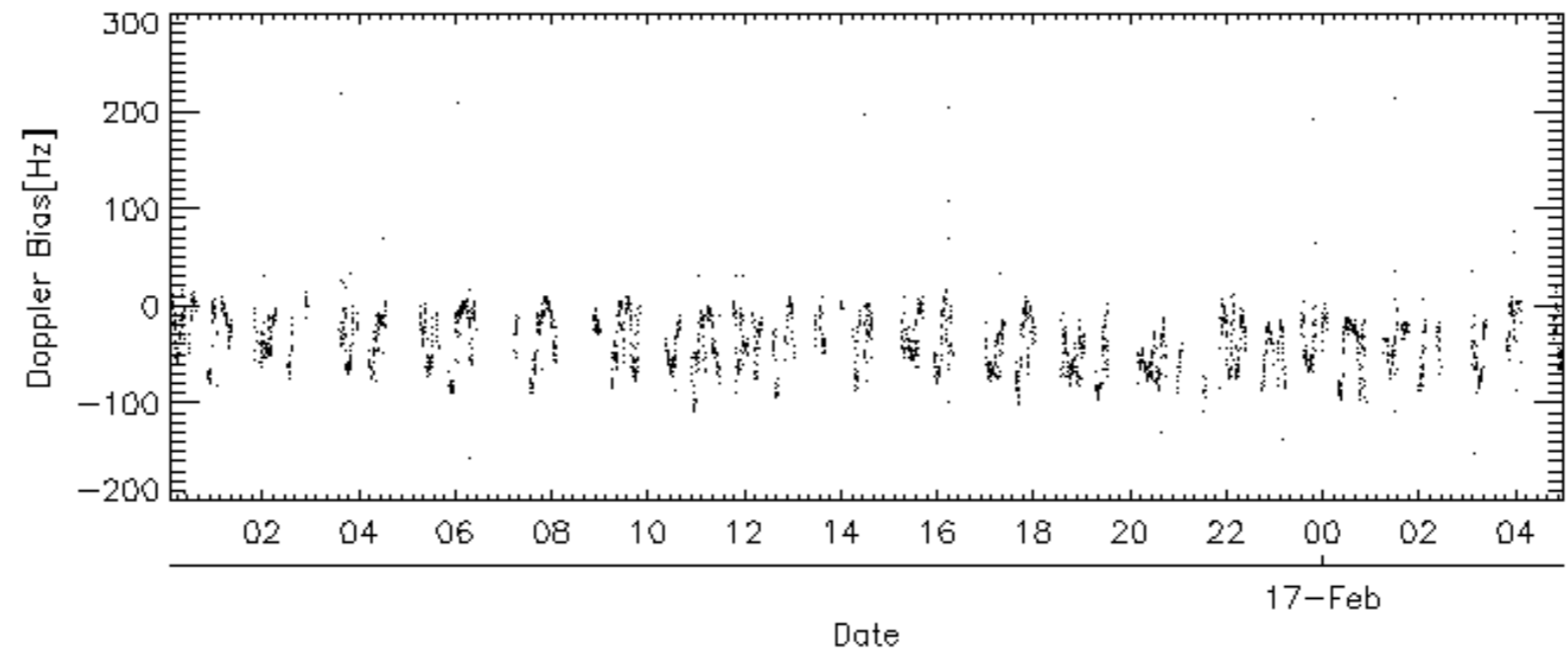
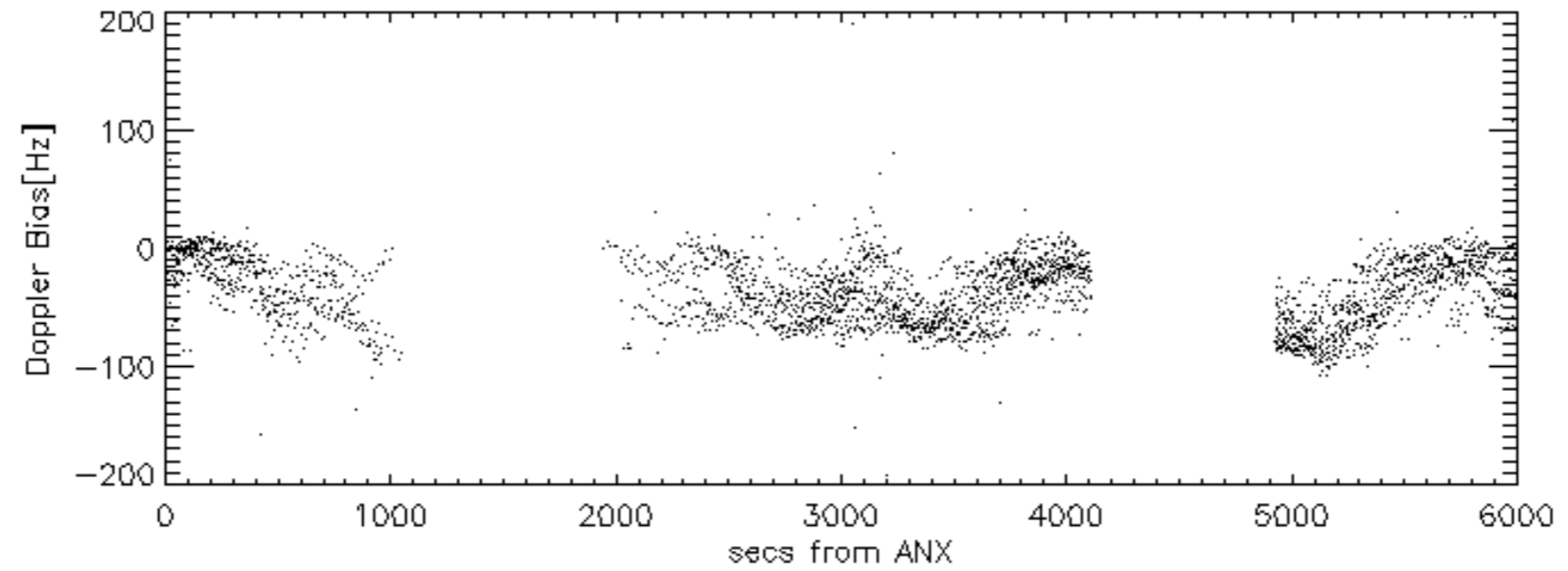
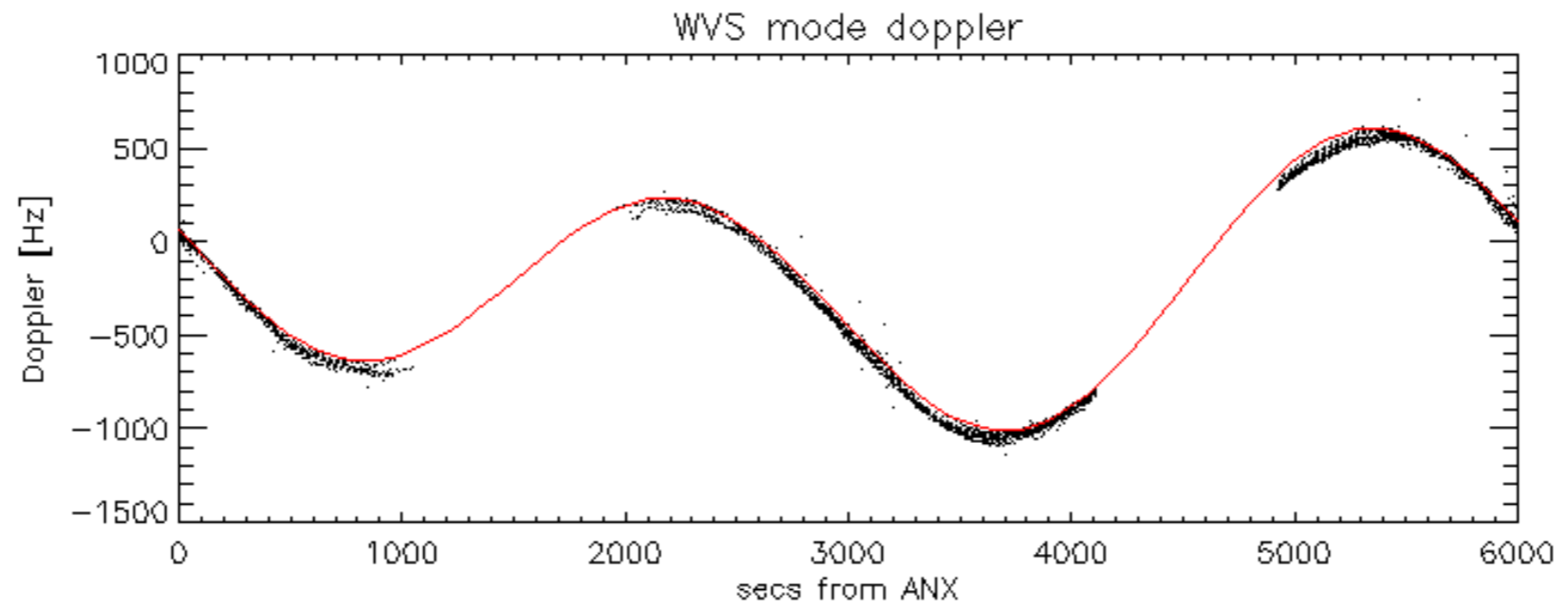


Doppler 'WVS' 'IS2' descending

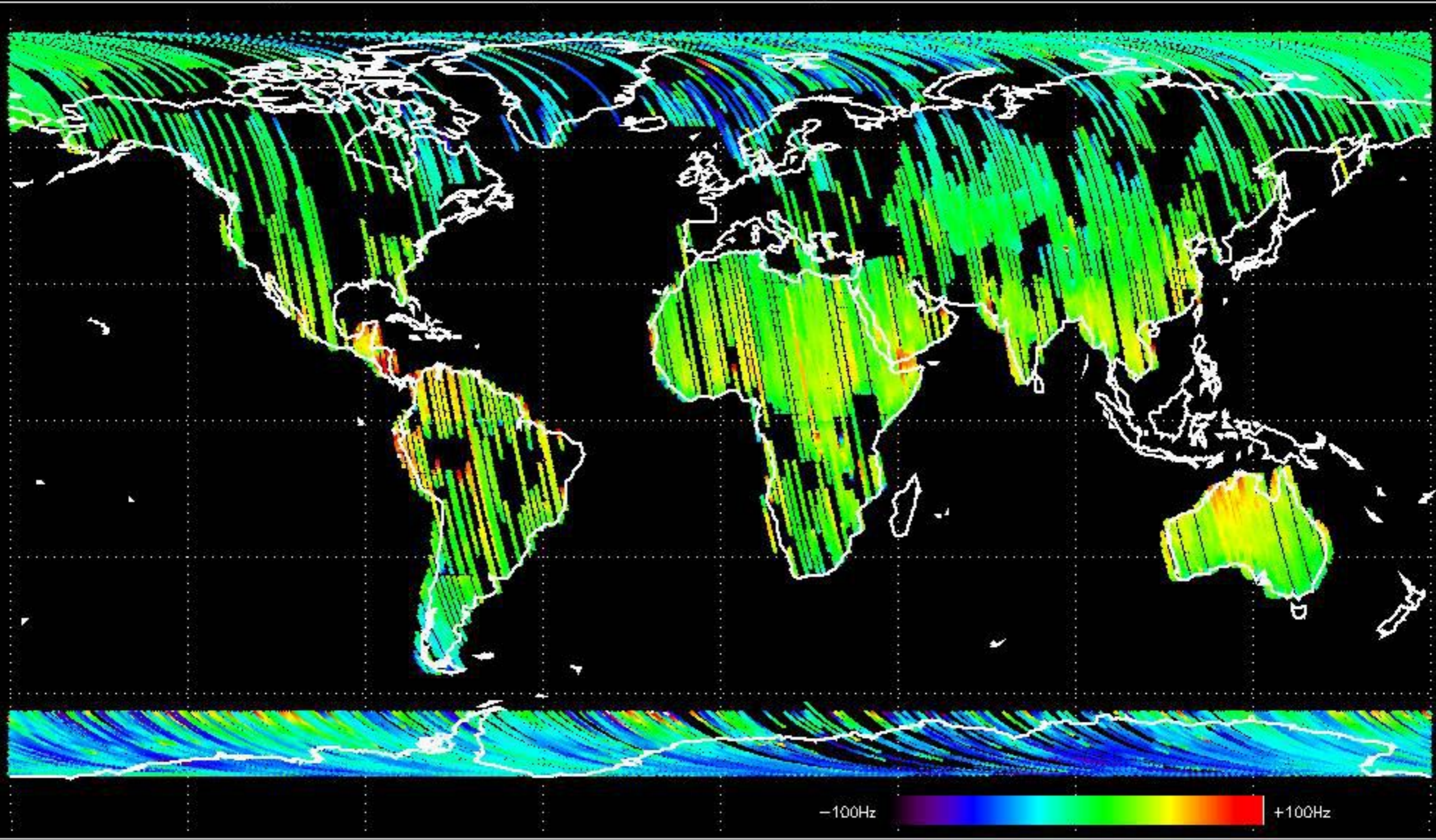


GM1 mode doppler

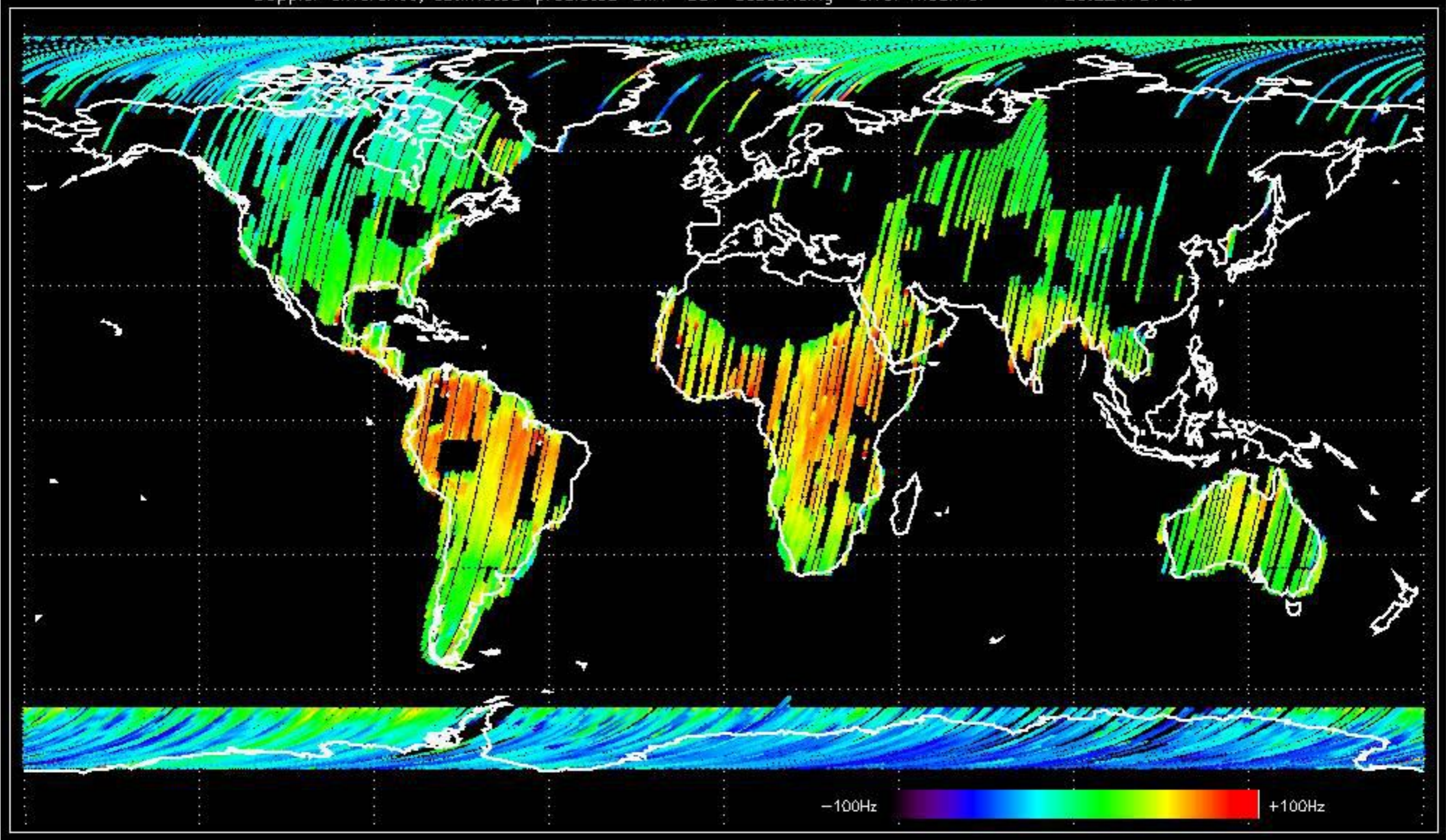




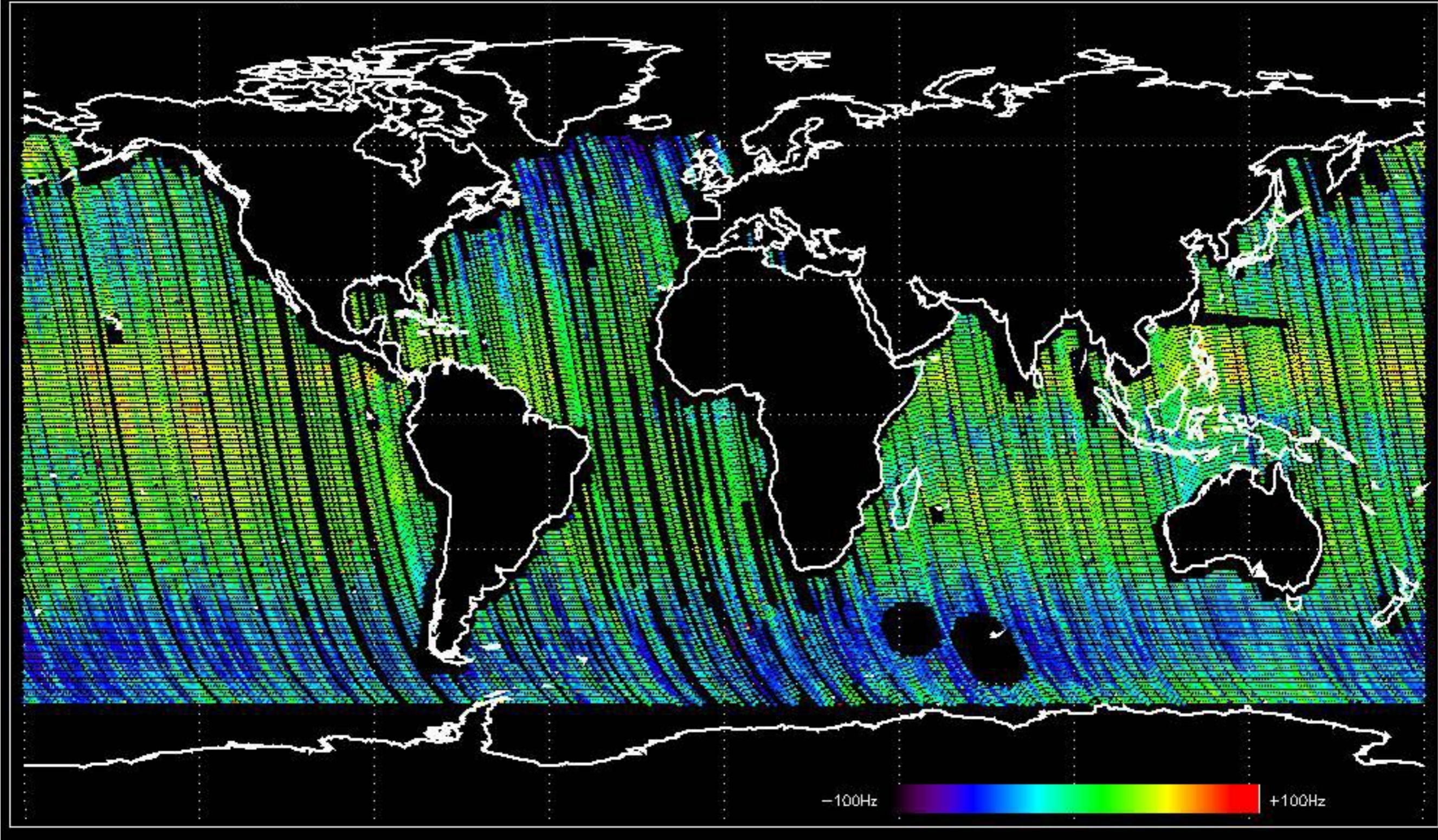
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -31.858480 Hz



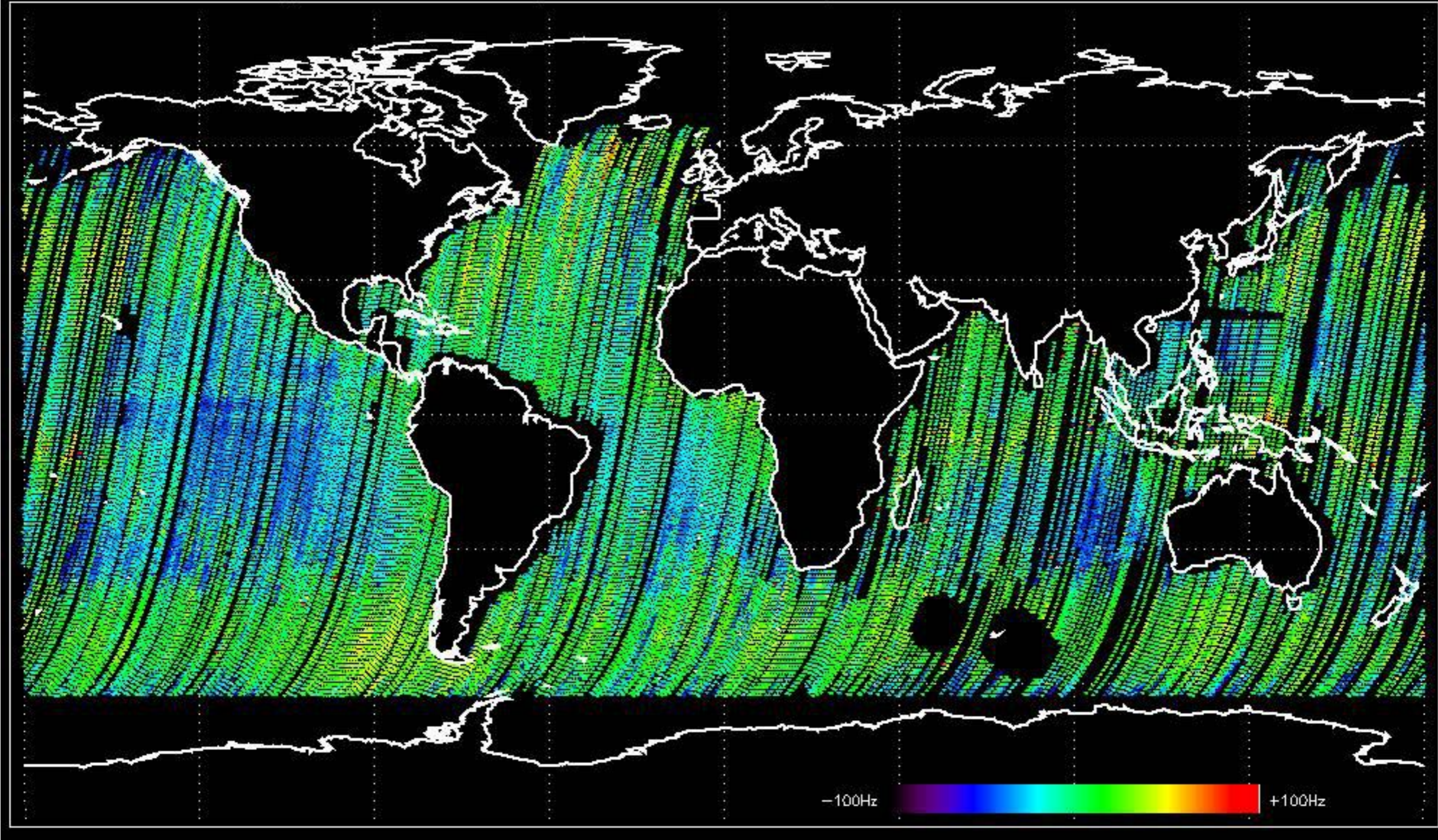
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -29.224781 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -33.702662 Hz

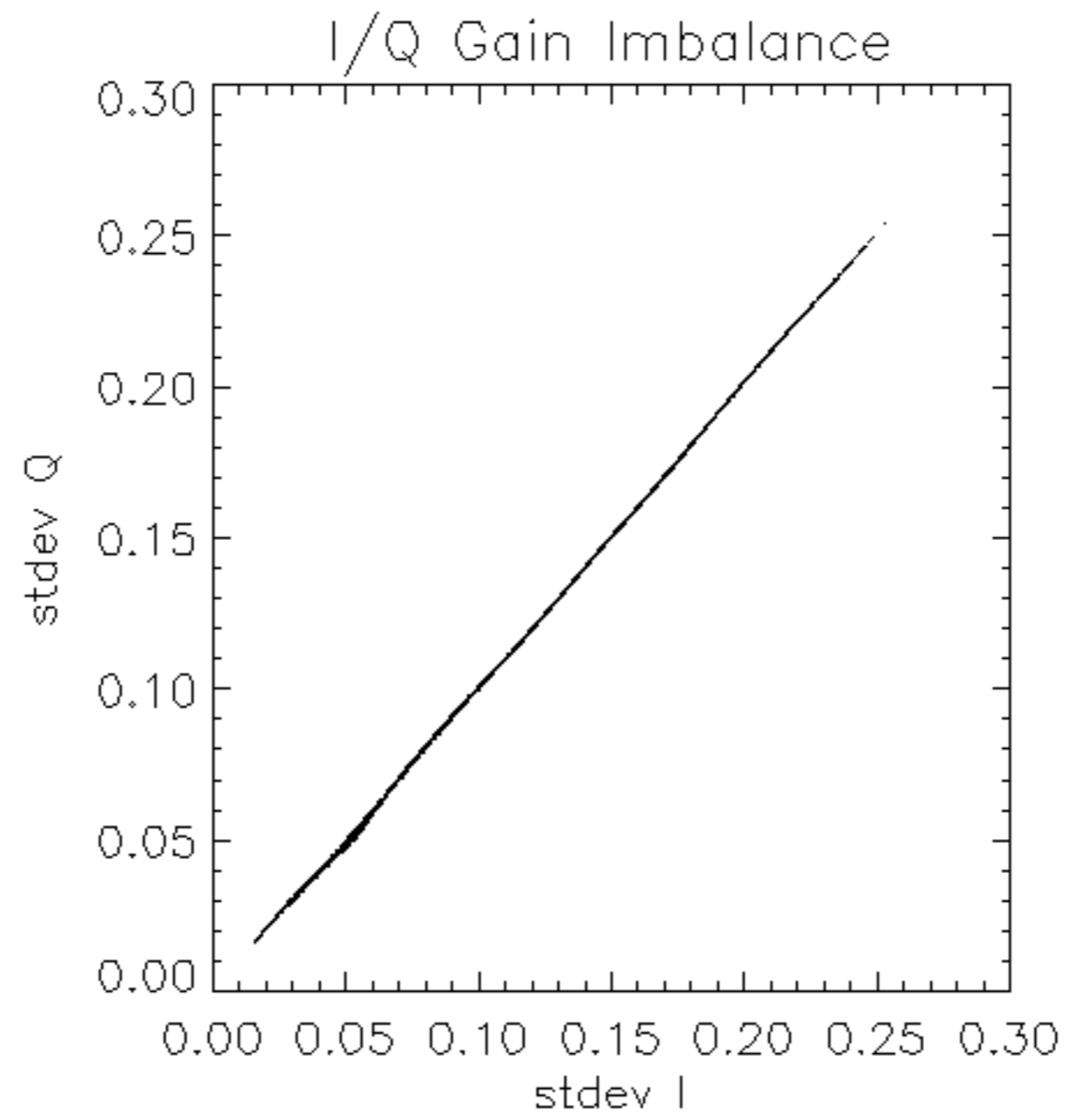


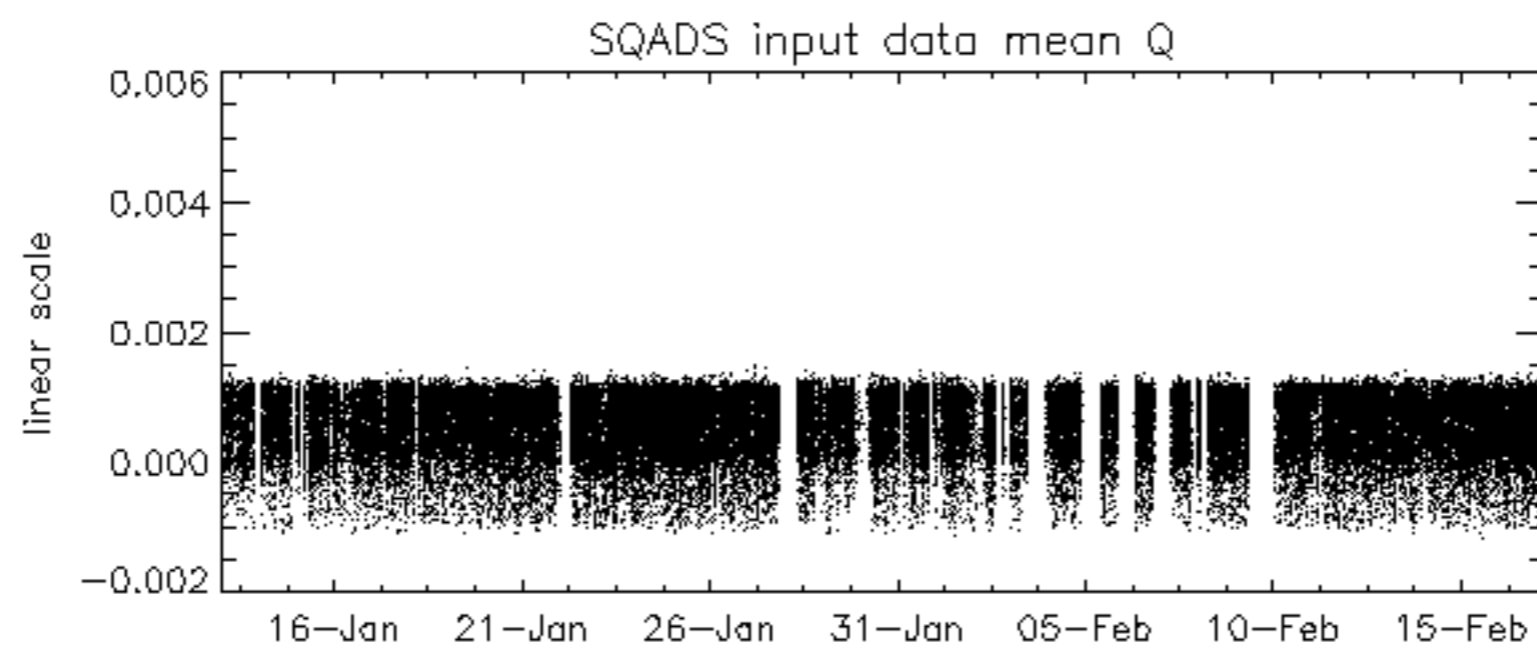
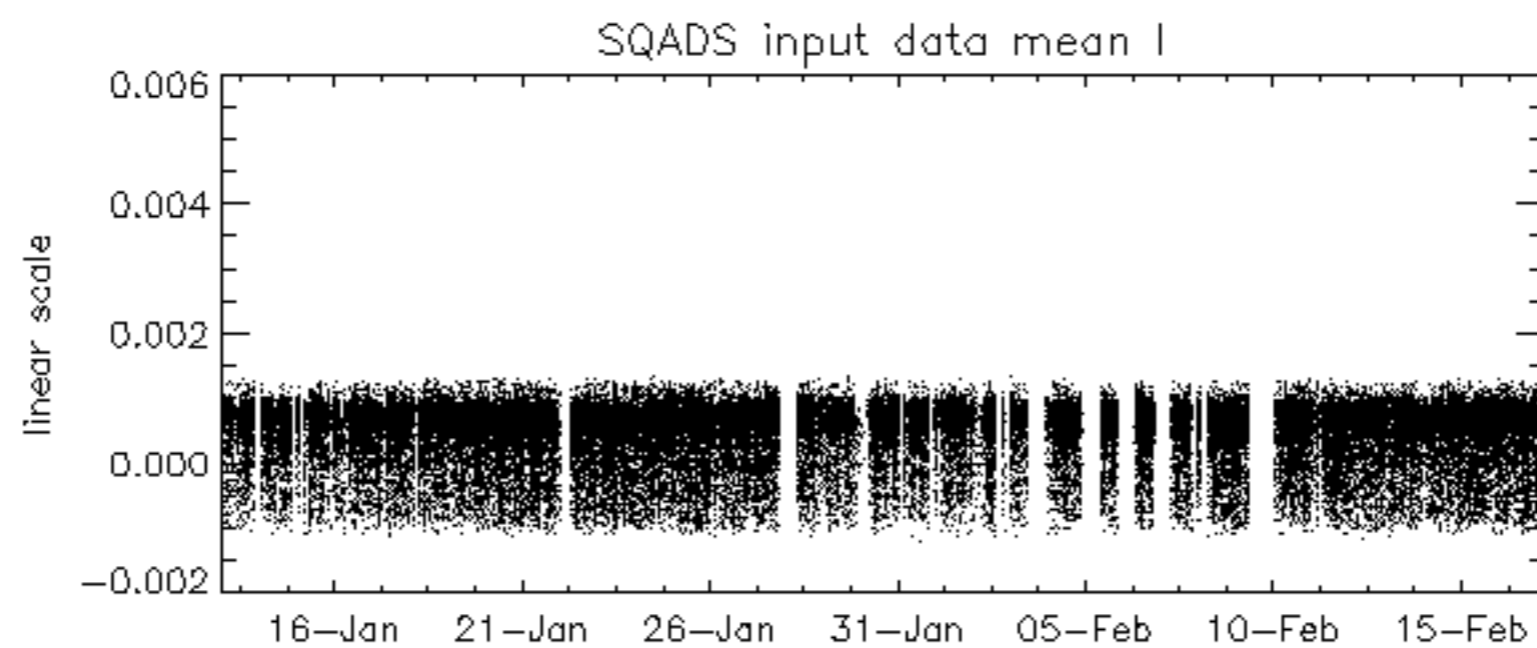
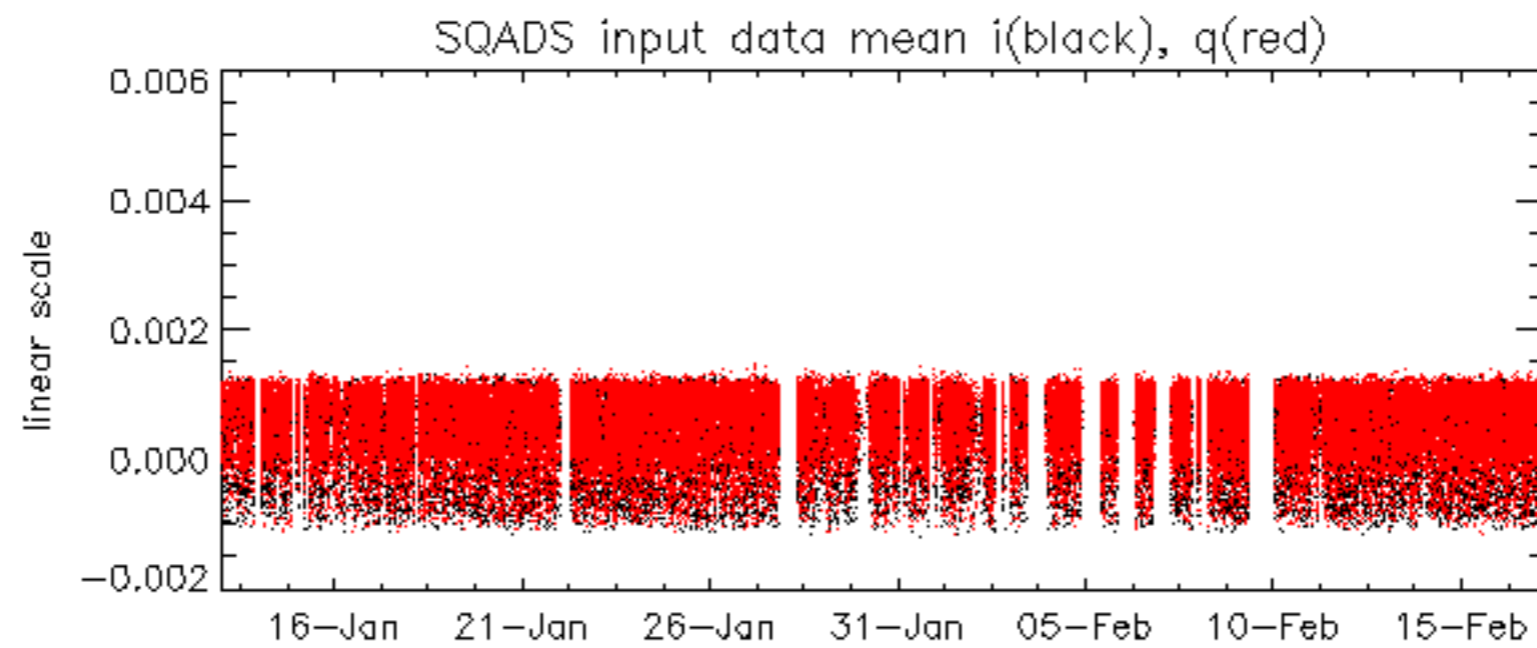
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -34.438389 Hz

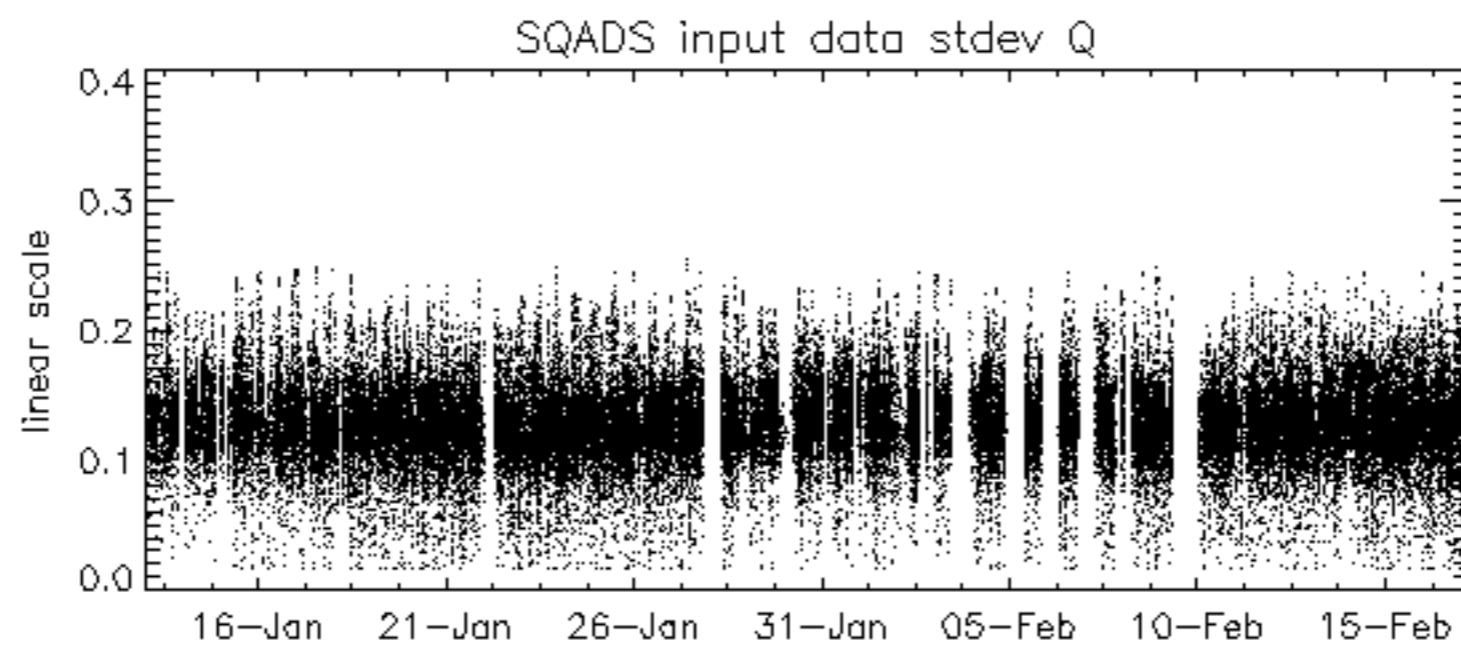
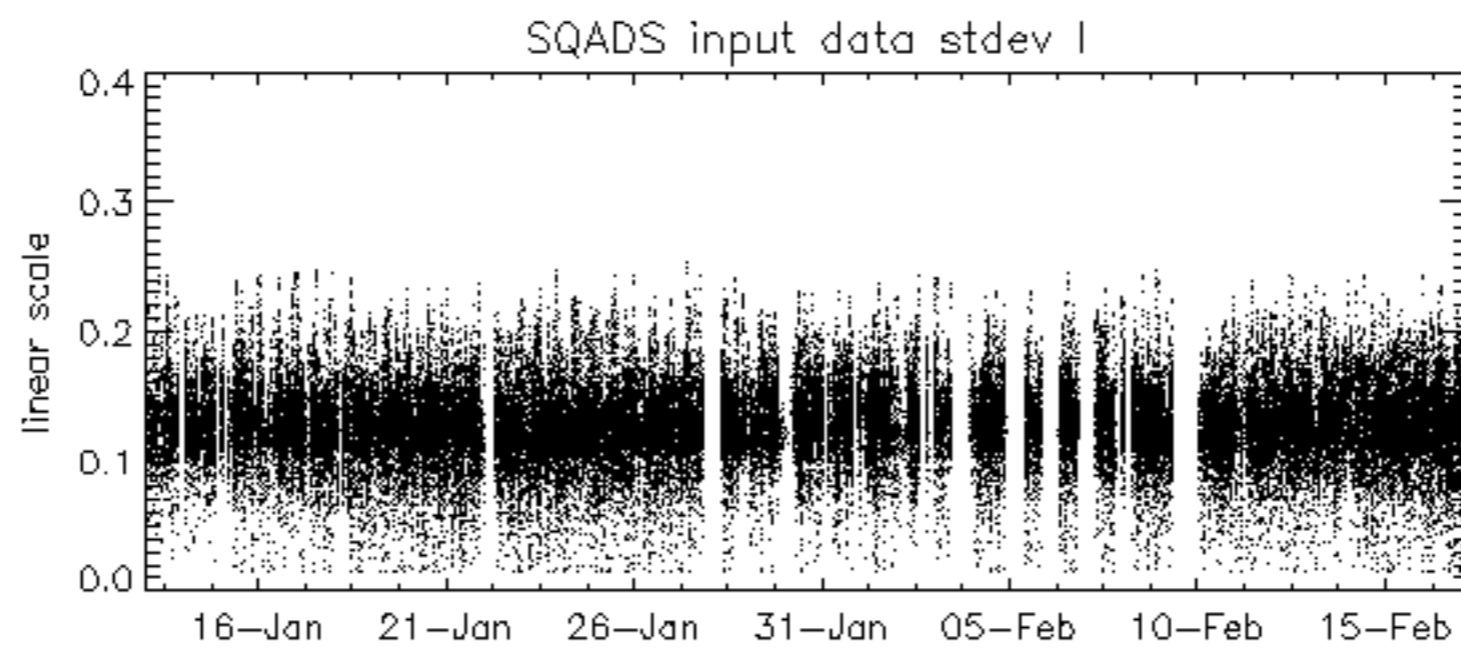
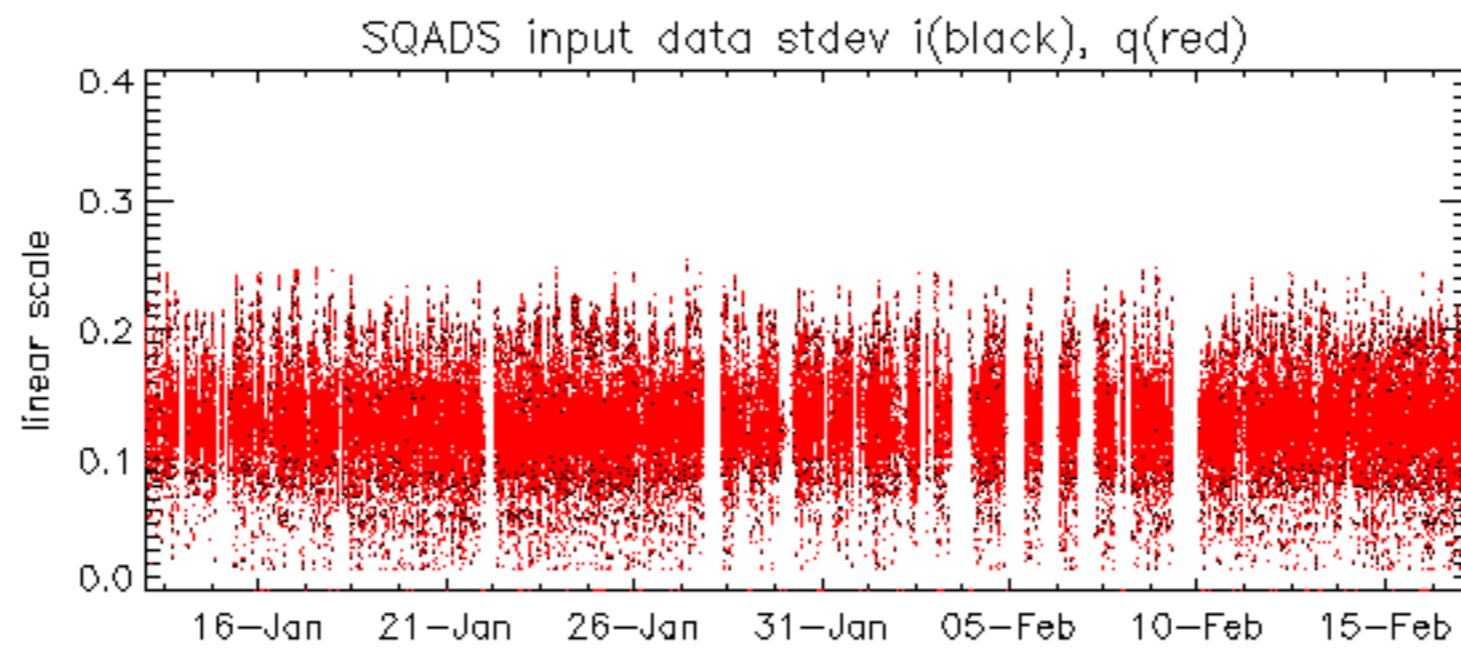


No anomalies observed on available MS products:

No anomalies observed.



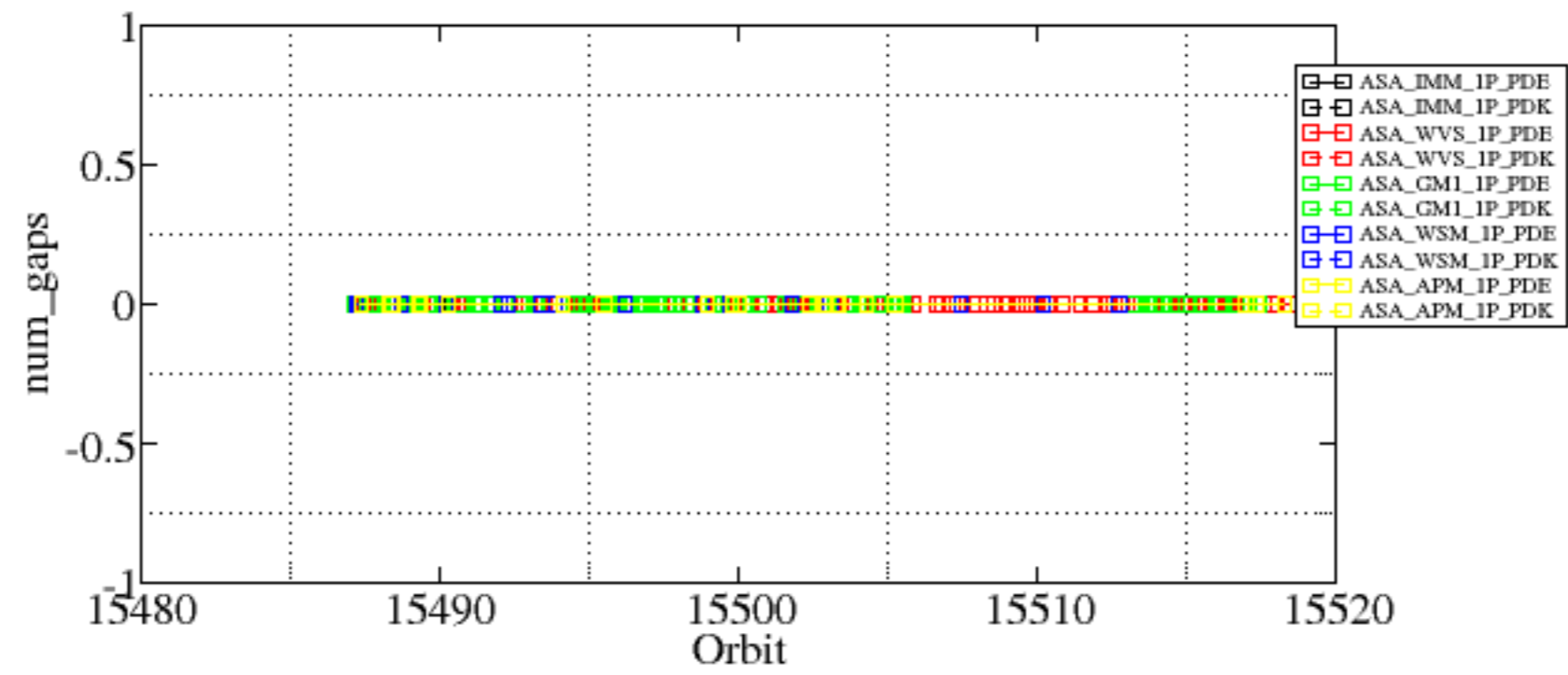


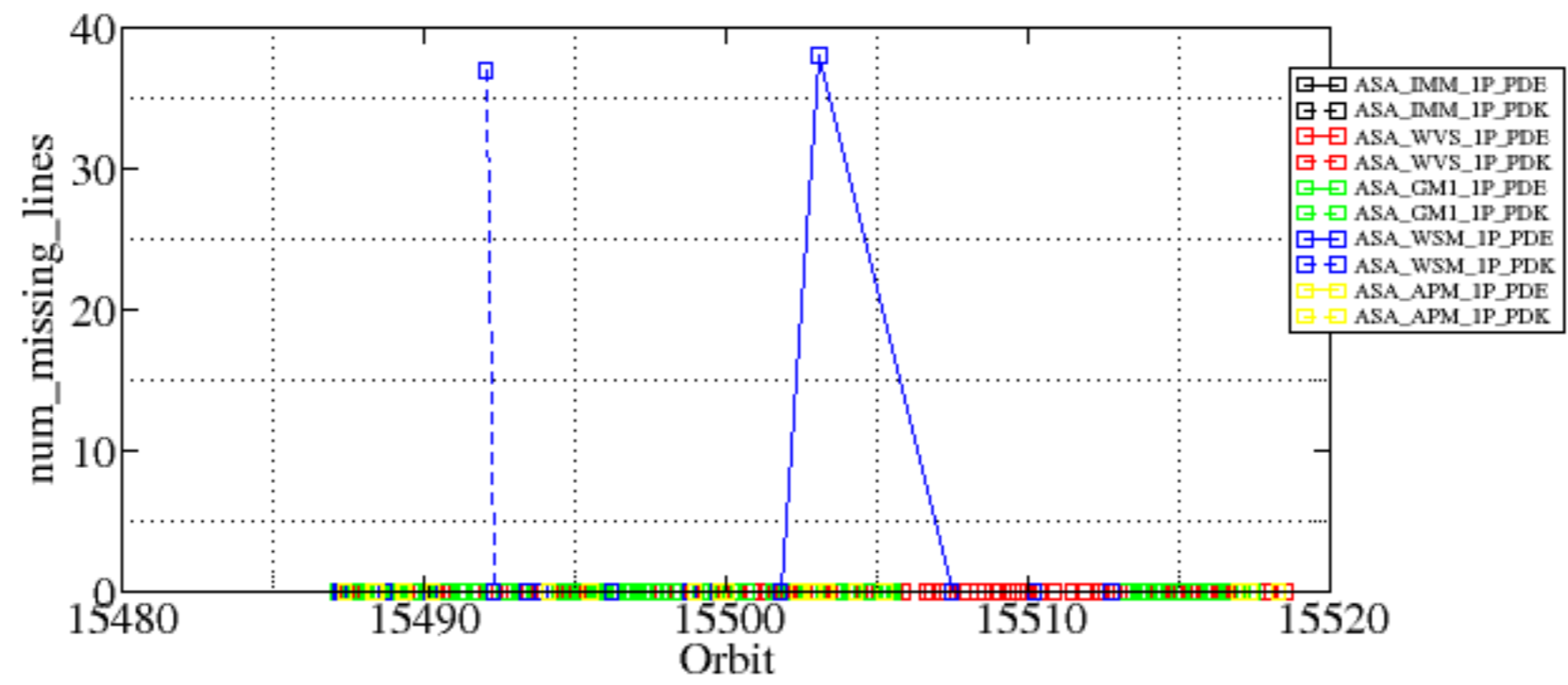


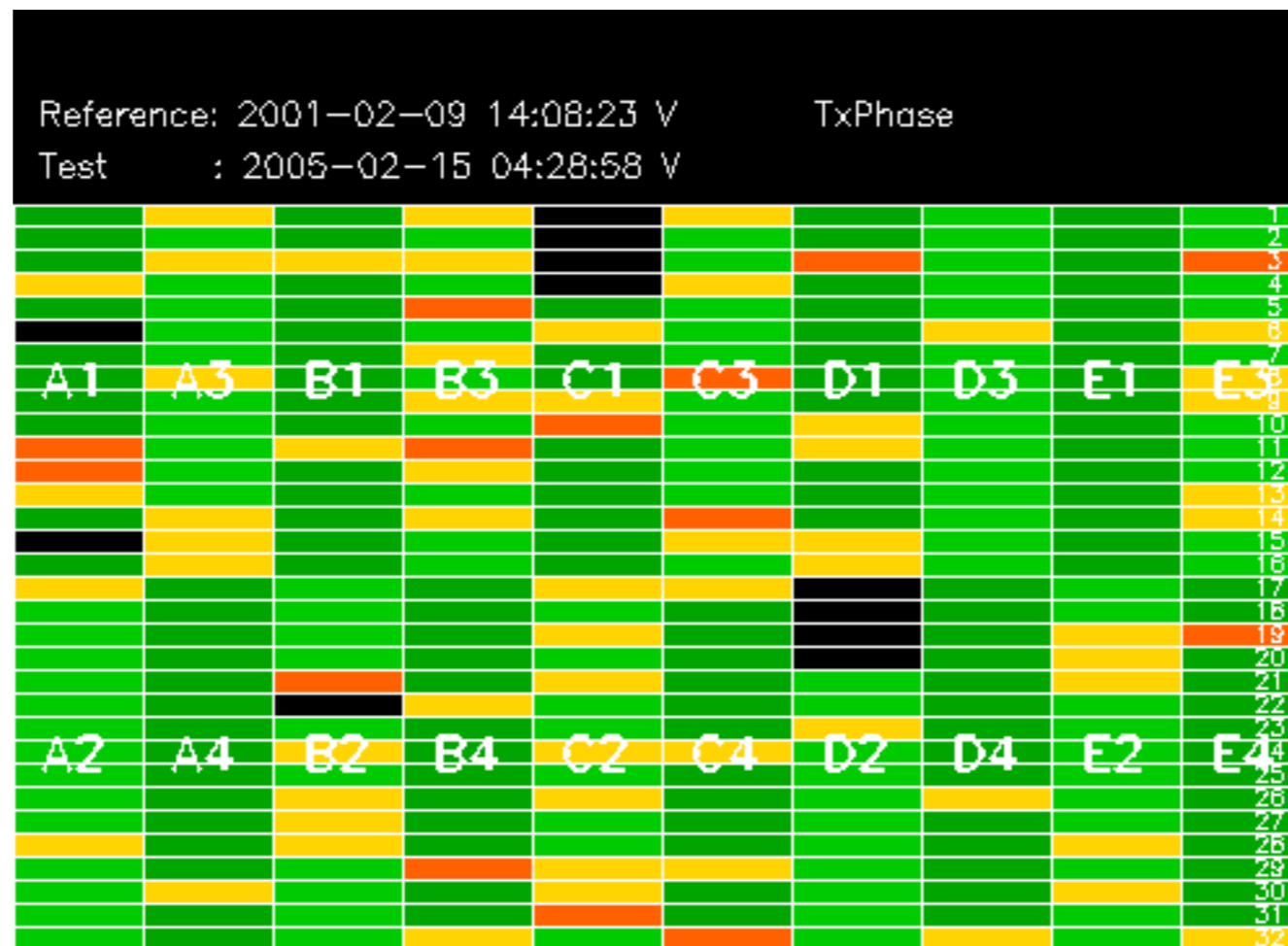
Summary of analysis for the last 3 days 2005021[567]

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

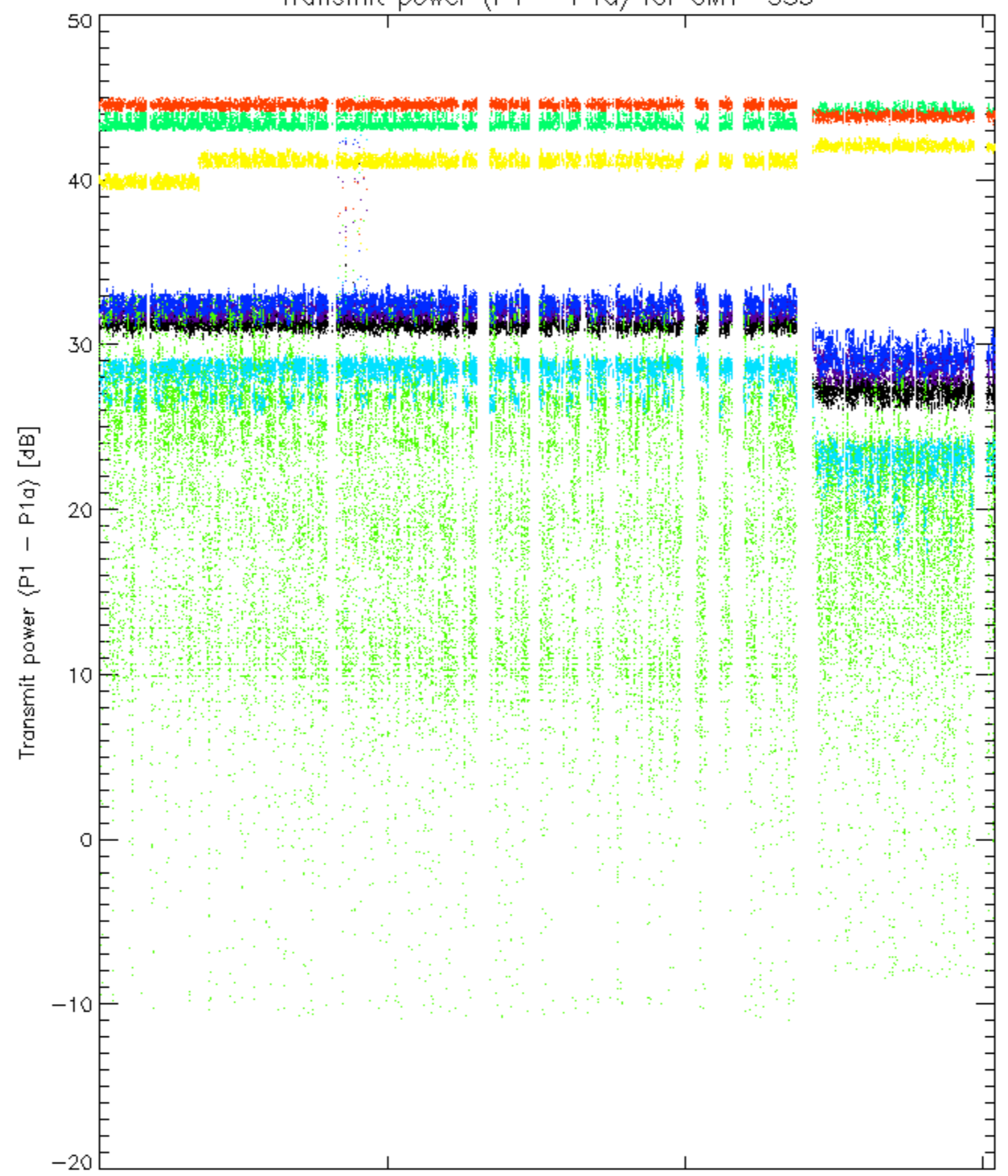
Filename	num_gaps	num_missing_lines
ASA_WSM_1PNPDE20050216_025620_000001282034_00419_15503_5630.N1	0	38
ASA_WSM_1PNPDK20050215_082812_000000862034_00408_15492_5054.N1	0	37



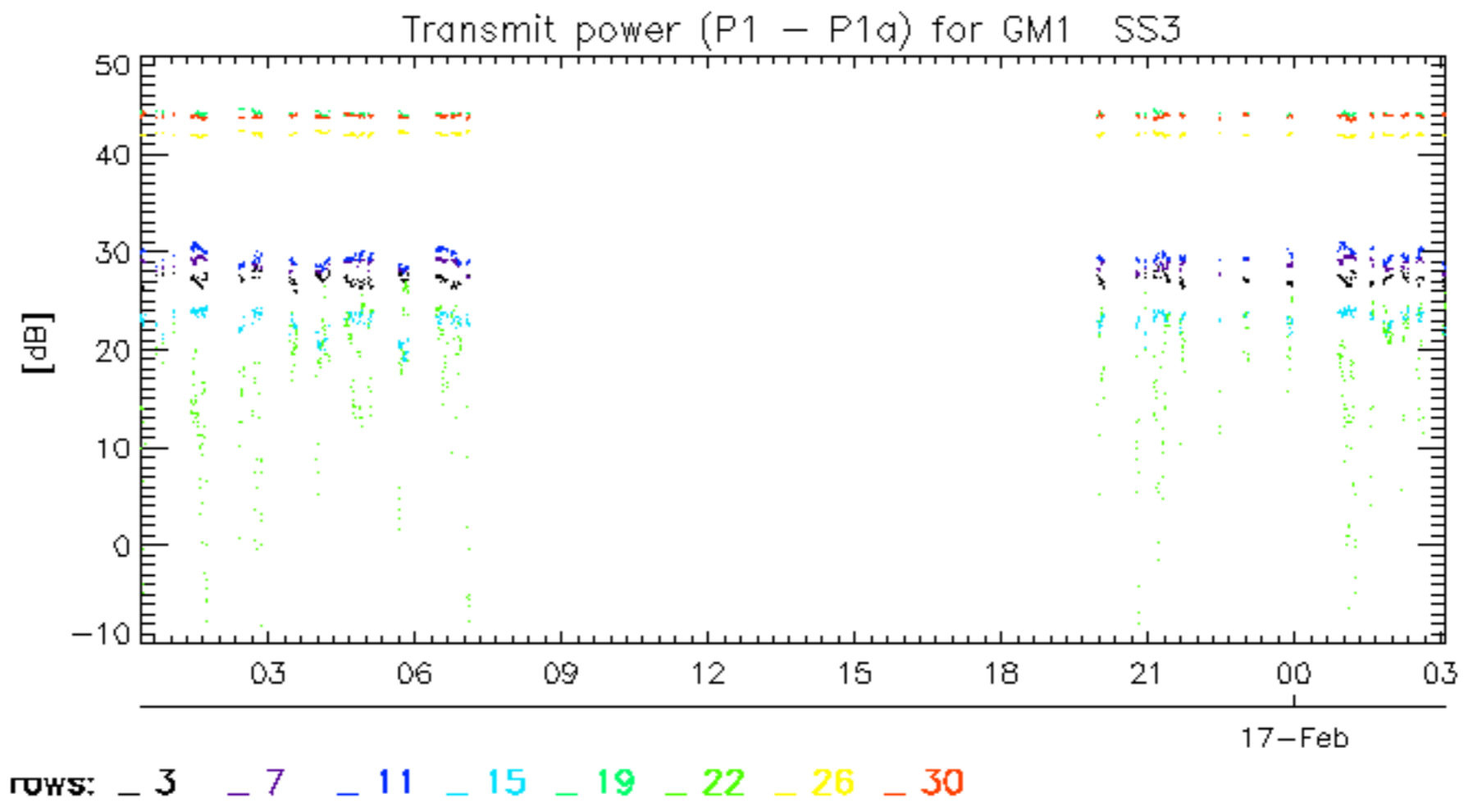


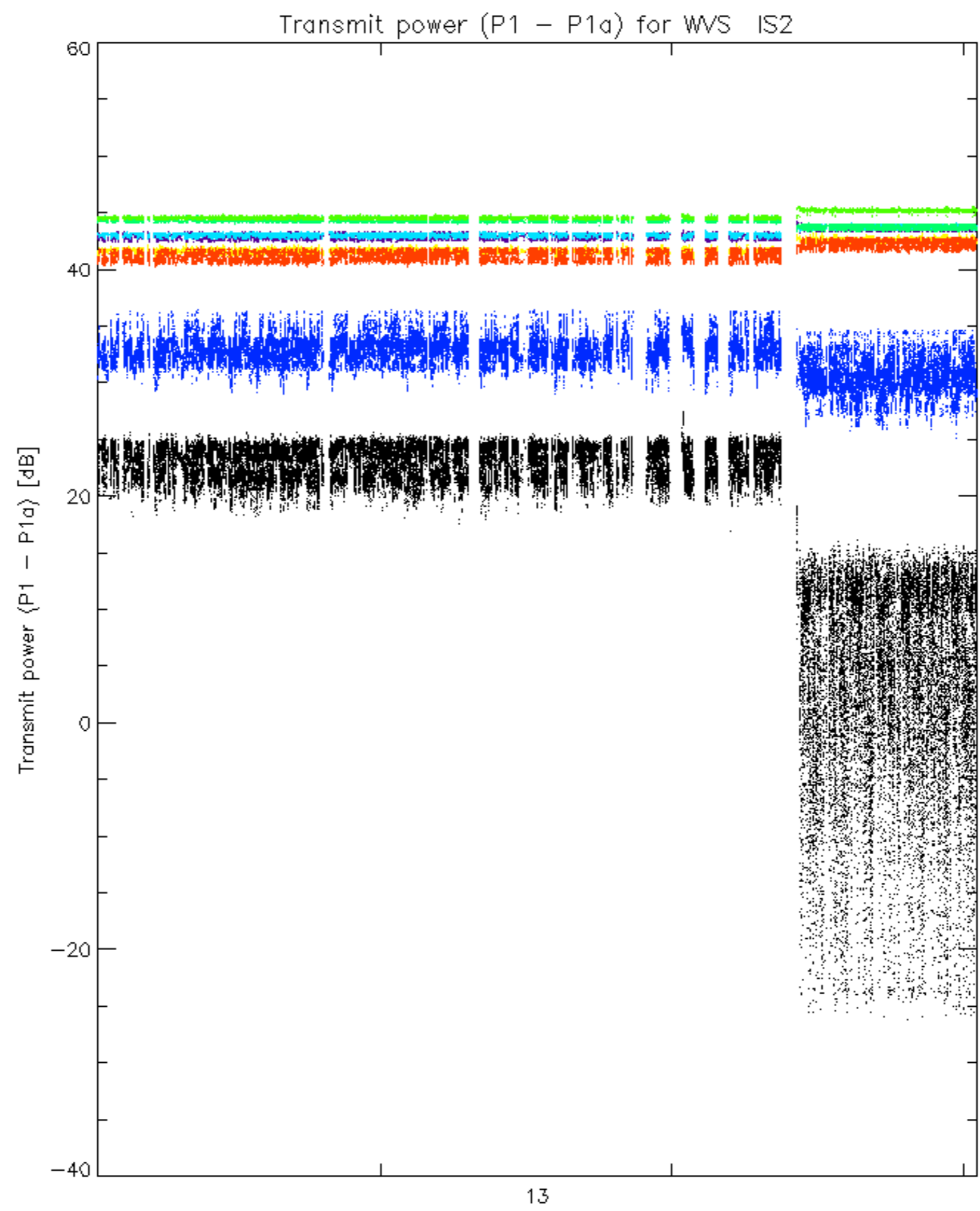


Transmit power (P1 - P1a) for GM1 SS3

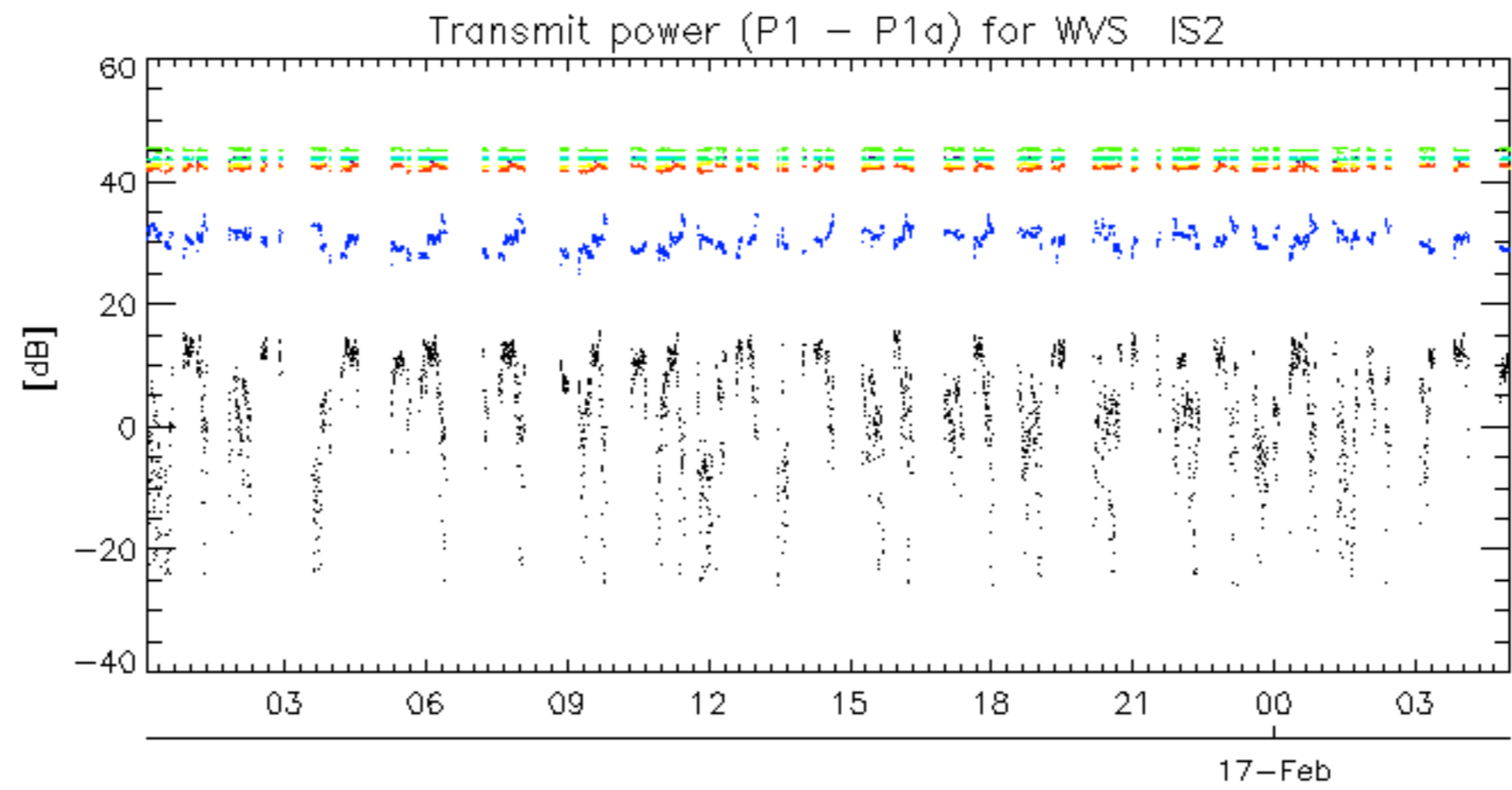


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30





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



No unavailabilities during the reported period.