

PRELIMINARY REPORT OF 070207

last update on Wed Feb 7 16:20:28 GMT 2007

Due to an ASAR test acquisition campaign, the daily analysis on WVS products will be based on IS4 instead of IS2 during the following periods:

From orbit 25621 (23-Jan-2007) to 25720 (30-Jan-2007) in HH polarization
From orbit 26122 (27-Feb-2007) to 26221 (06-Mar-2007) in HH polarization
From orbit 25721 (30-Jan-2007) to 25820 (06-Feb-2007) in VV polarization
From orbit 26222 (06-Mar-2007) to 26321 (13-Mar-2007) in VV polarization

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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 2007-02-06 00:00:00 to 2007-02-07 16:20:28

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	41	83	13	2	28
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	41	83	13	2	28
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	41	83	13	2	28
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	41	83	13	2	28

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20061107_090002_20050916_195733_20071231_000000	43	52	34	13	53
ASA_XCA_AXVIEC20061221_143253_20050916_195733_20071231_000000	43	52	34	13	53
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	52	34	13	53
ASA_INS_AXVIEC20061220_105425_20030211_000000_20071231_000000	43	52	34	13	53

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	20070207 043731
H	20070206 050907

MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
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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
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4.1.2 - Evolution for GM1

Evolution of cal pulses for GM1
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4.2 - Cyclic statistics

4.2.1 - Evolution for WVS

Evolution of cal pulses for WVS

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P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-16.092316	0.809493	4.030137
7	P1a	-17.277210	0.126478	-0.602455
11	P1a	-17.308714	0.428816	-0.076910
15	P1a	-12.733909	0.125561	-0.378695
19	P1a	-15.054760	0.085633	-0.251778
22	P1a	-15.380820	0.398996	-0.789312
26	P1a	-14.942822	0.289418	0.019225
30	P1a	-17.145704	0.314798	-0.700306

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-4.592386	0.758347	-4.278700
7	P1	-3.073963	0.009292	-0.160581
11	P1	-4.089733	0.023688	-0.231896
15	P1	-6.286224	0.018401	-0.058566
19	P1	-3.701522	0.008005	-0.039081
22	P1	-4.669146	0.012640	-0.032421
26	P1	-3.928136	0.013570	0.001169
30	P1	-5.900166	0.012541	-0.117281

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-21.396614	0.969465	-4.611228
7	P2	-21.626087	0.103785	0.051425
11	P2	-15.493099	0.113660	0.064470

15	P2	-6.985900	0.116519	-0.159845
19	P2	-9.054912	0.098938	-0.124035
22	P2	-18.057308	0.104066	-0.122716
26	P2	-16.460897	0.121326	-0.222721
30	P2	-19.314575	0.097123	-0.109246

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.198462	0.007118	-0.057010
7	P3	-8.198462	0.007118	-0.057010
11	P3	-8.198462	0.007118	-0.057010
15	P3	-8.198462	0.007118	-0.057010
19	P3	-8.198462	0.007118	-0.057010
22	P3	-8.198462	0.007118	-0.057010
26	P3	-8.198462	0.007118	-0.057010
30	P3	-8.198462	0.007118	-0.057010

4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1


P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1a	-11.570963	0.126767	1.966081
7	P1a	-10.019313	0.048947	-0.046791
11	P1a	-10.521623	0.062201	-0.409921
15	P1a	-10.830685	0.131652	-0.104020
19	P1a	-15.746485	0.061947	0.001386
22	P1a	-20.931761	1.334979	0.799805
26	P1a	-15.483684	0.253891	0.307943
30	P1a	-18.320131	0.365292	-0.129531

P1t Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-5.247232	3.093138	-12.438638
7	P1	-2.440723	0.006186	-0.005394
11	P1	-2.858855	0.017361	-0.126653
15	P1	-3.777082	0.032962	-0.114979
19	P1	-3.548991	0.013632	-0.018407
22	P1	-5.022434	0.024010	0.006973
26	P1	-6.001025	0.022337	-0.030206
30	P1	-5.289071	0.023570	0.017427

P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.710325	0.616069	-5.032082
7	P2	-22.032156	0.047379	0.052687
11	P2	-10.692362	0.030305	0.092241
15	P2	-4.841814	0.026116	0.009544
19	P2	-6.841035	0.026404	0.030168
22	P2	-8.150406	0.029297	0.014922
26	P2	-24.252789	0.030916	0.053902
30	P2	-21.798466	0.033546	0.038713

P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.055255	0.002537	0.014326
7	P3	-8.055100	0.002536	0.013517
11	P3	-8.055147	0.002528	0.014976
15	P3	-8.055117	0.002516	0.015218
19	P3	-8.055116	0.002524	0.014398
22	P3	-8.055241	0.002523	0.014824
26	P3	-8.055072	0.002533	0.015701
30	P3	-8.055181	0.002541	0.014078

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	0.000701207
	stdev	2.92718e-07
MEAN Q	mean	0.000244396
	stdev	2.40354e-07



5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.0620448
	stdev	0.00110461
STDEV Q	mean	0.0616156
	stdev	0.00112523



5.3 - Gain imbalance I/Q



6 - Telemetry analysis

Summary of analysis for the last 3 days 2007020[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_GM1_1PNPDK20070206_135601_000003142055_00210_25815_6169.N1	0	8
ASA_GM1_1PNPDK20070206_151422_000001692055_00211_25816_6289.N1	0	6
ASA_WSM_1PNPDE20070205_151401_000000852055_00197_25802_5978.N1	0	1



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

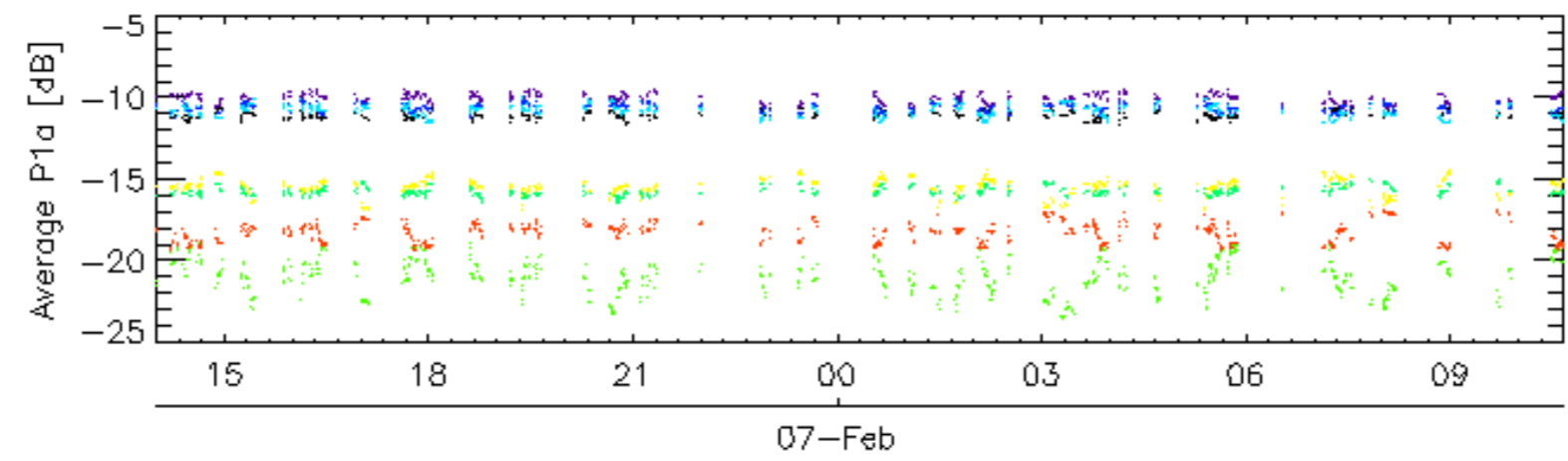
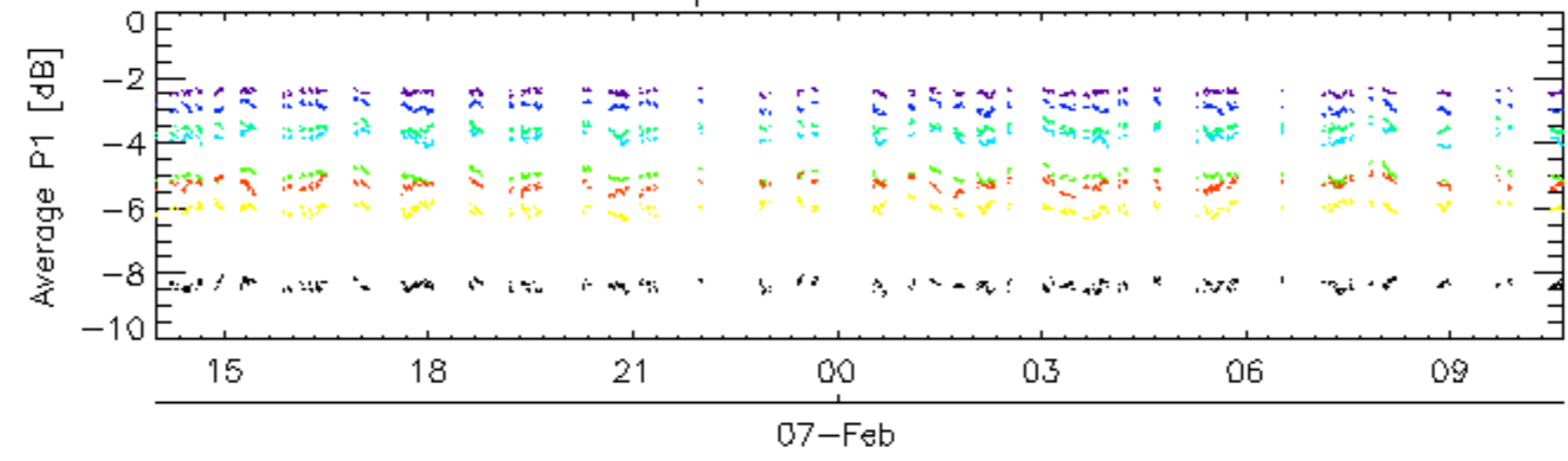
7.5 - Absolute Doppler for GM1

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

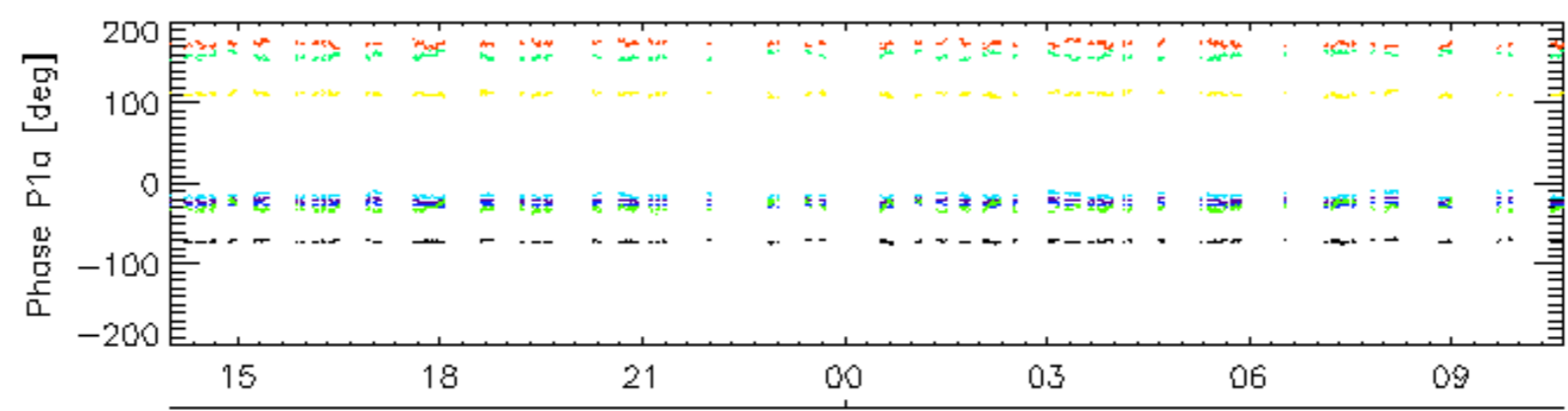
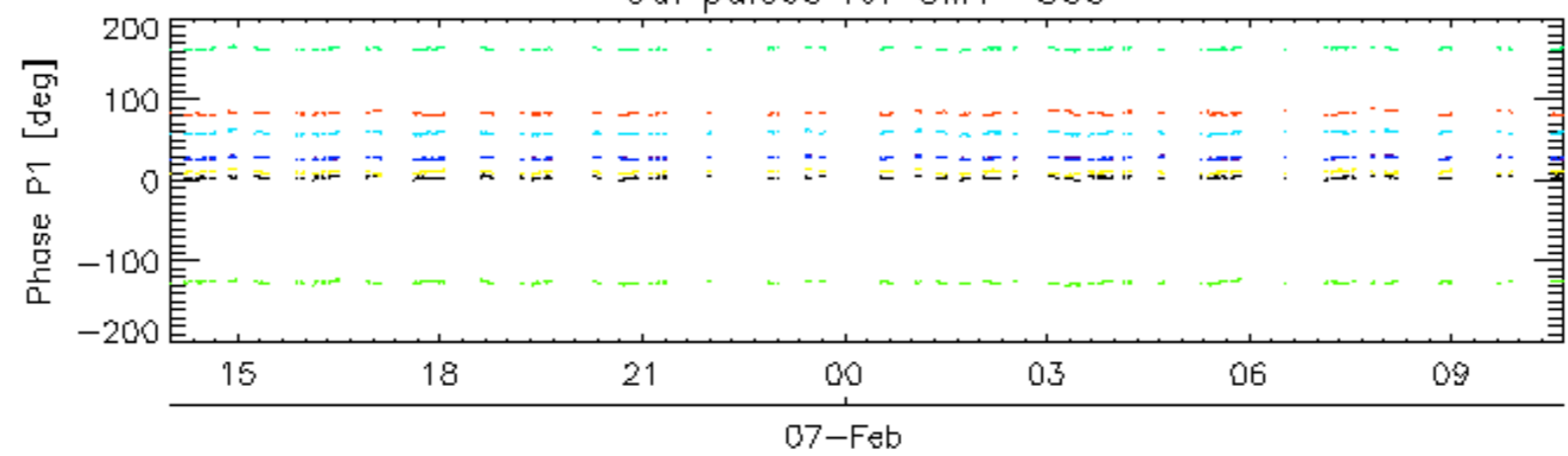
7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX
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Cal pulses for GM1 SS3

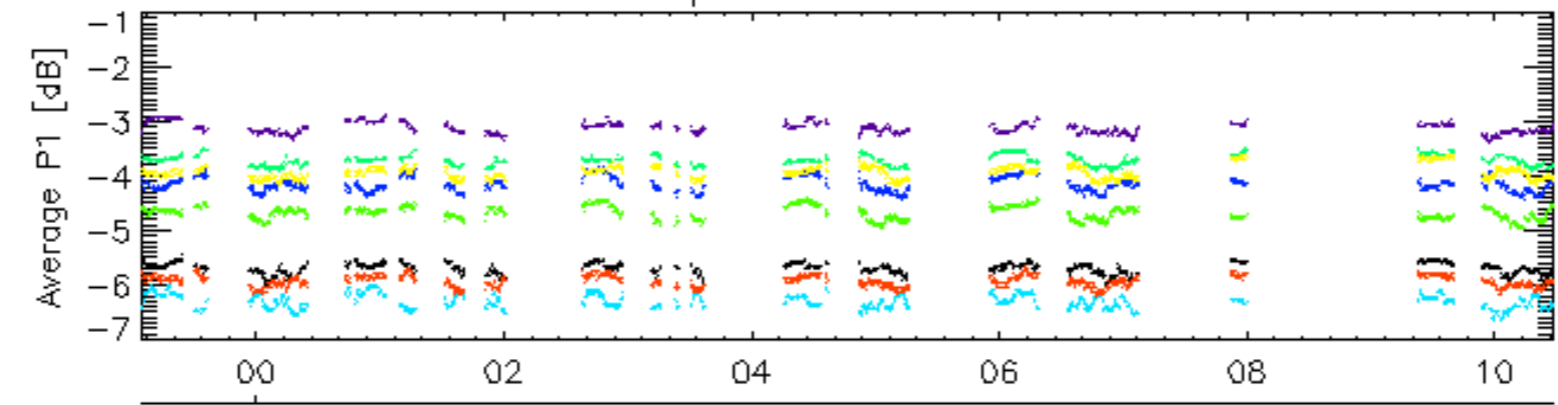


Cal pulses for GM1 SS3

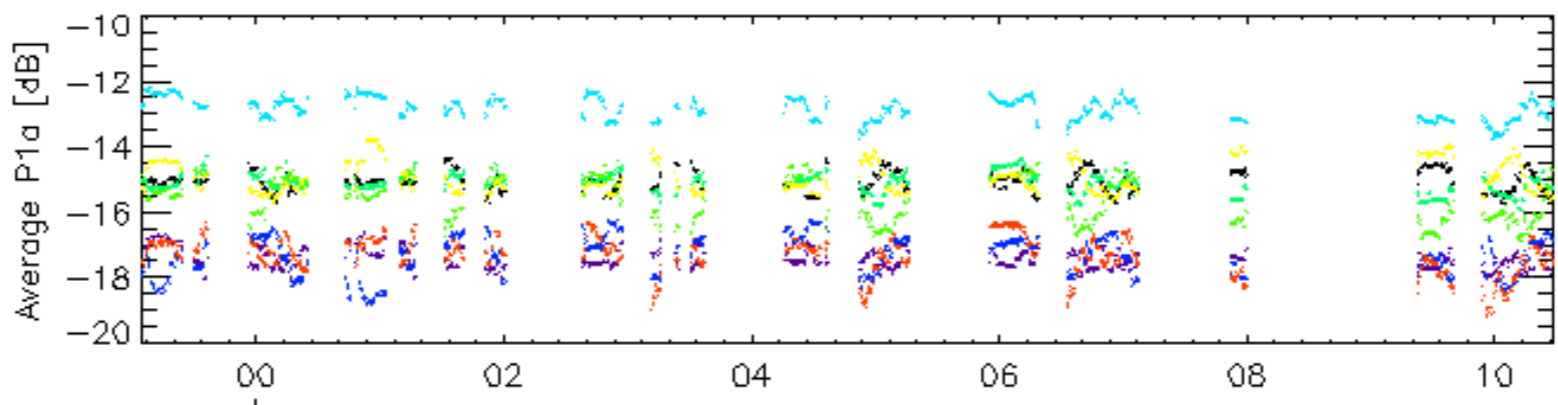


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

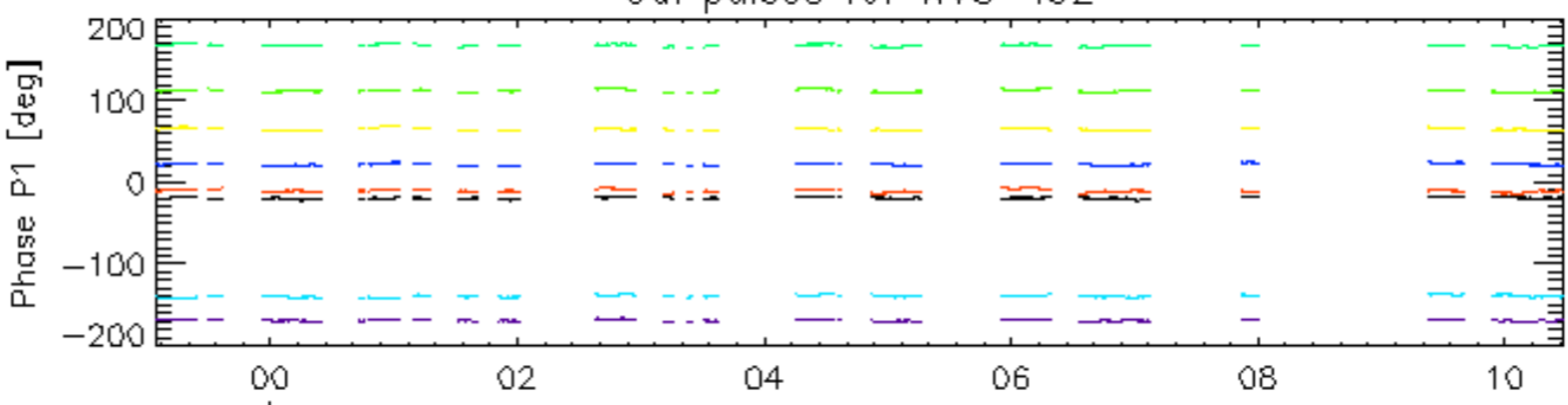


07-Feb

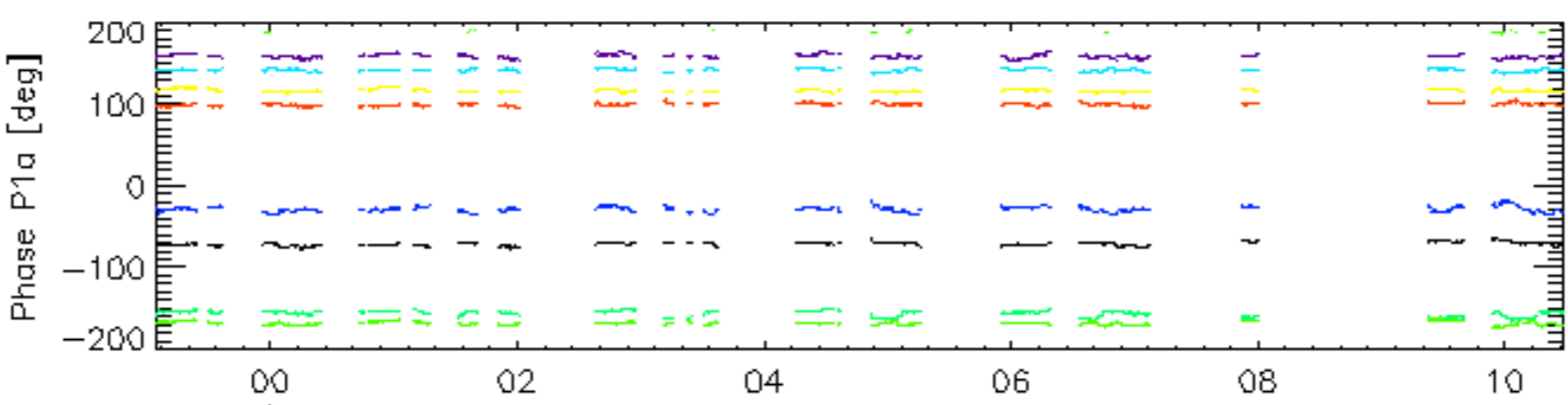


07-Feb

Cal pulses for WVS IS2

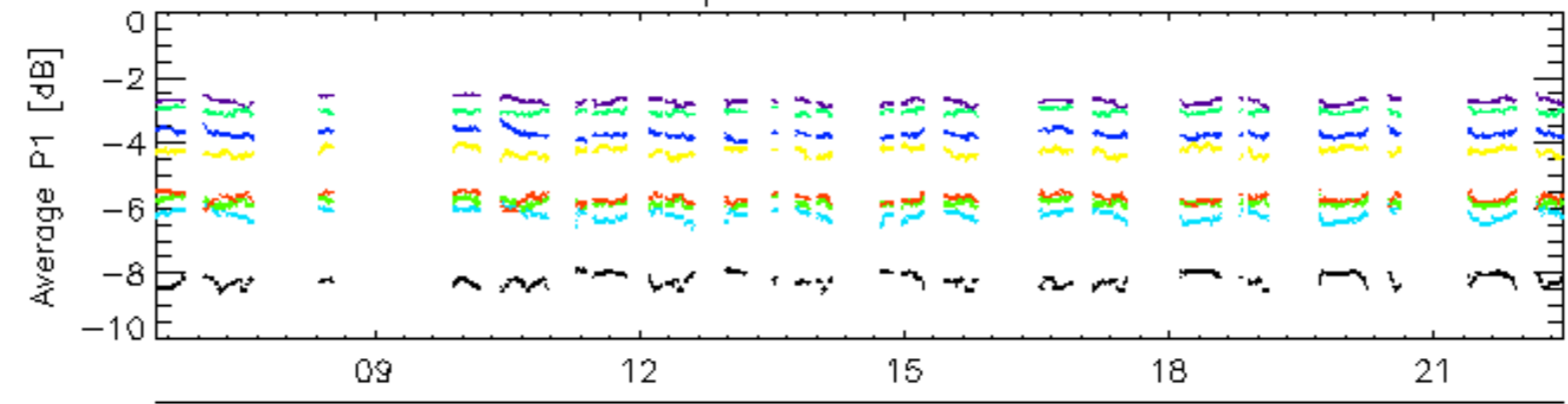


07-Feb

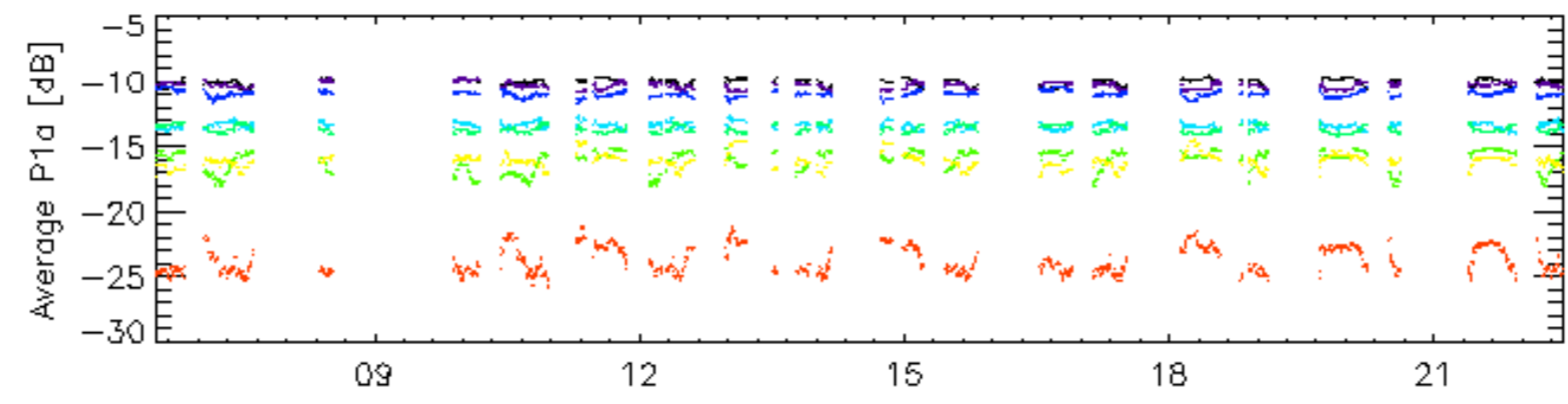


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS4

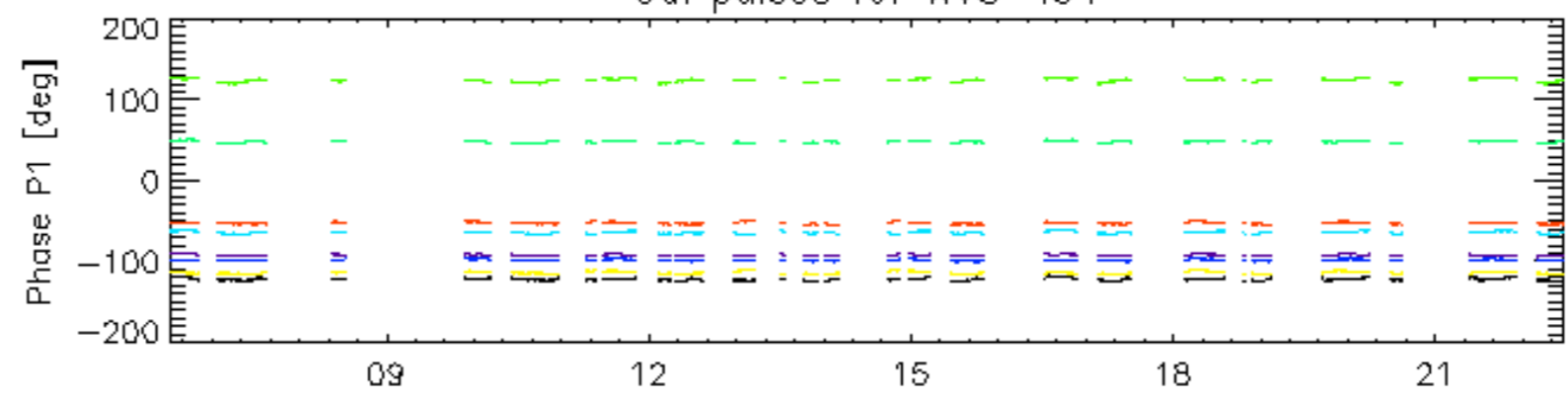


06-Feb

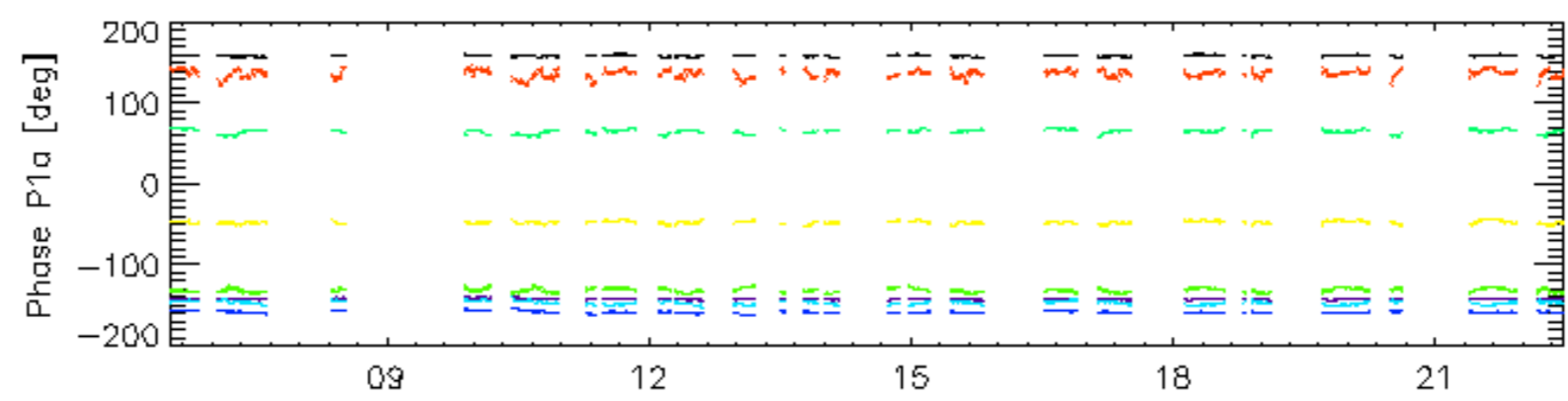


06-Feb

Cal pulses for WVS IS4

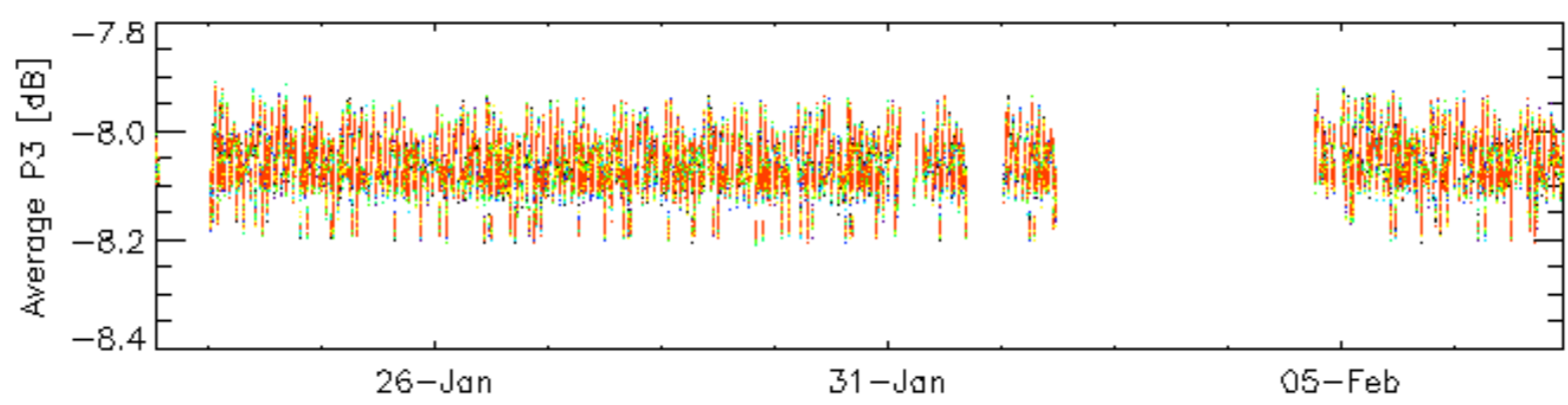
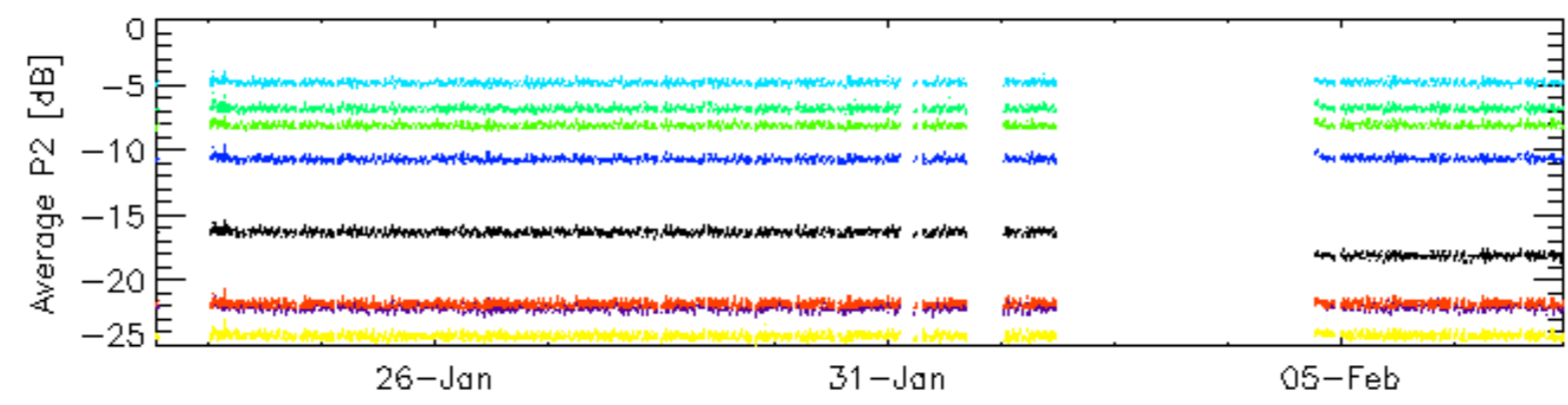
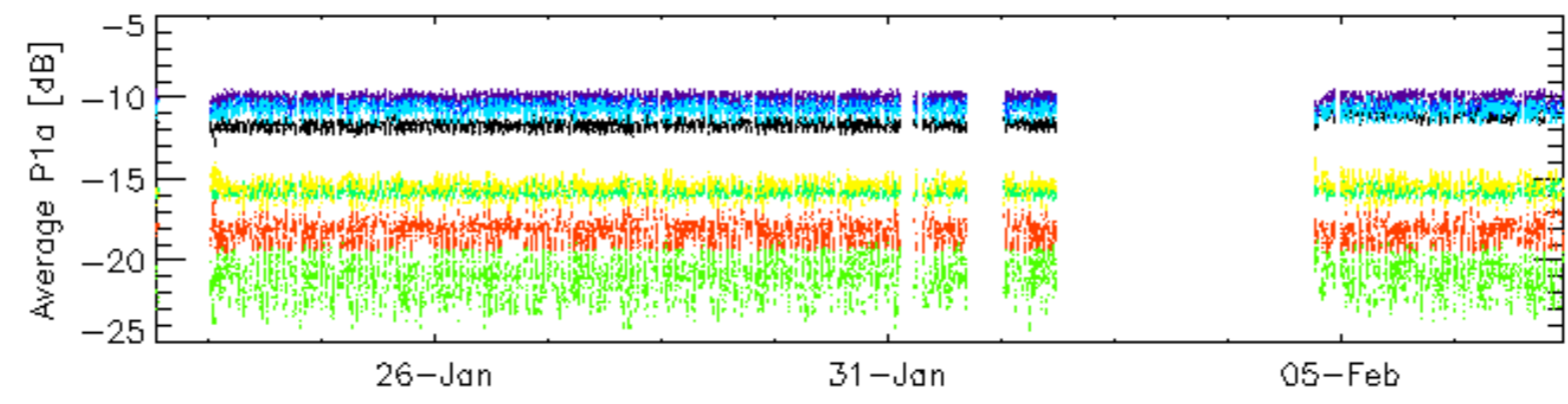
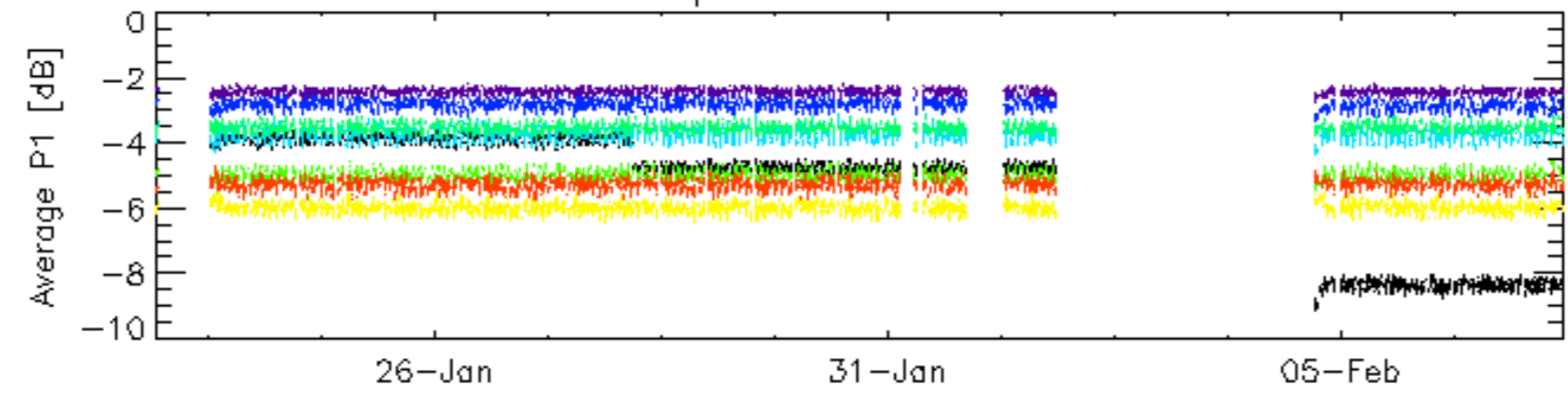


06-Feb



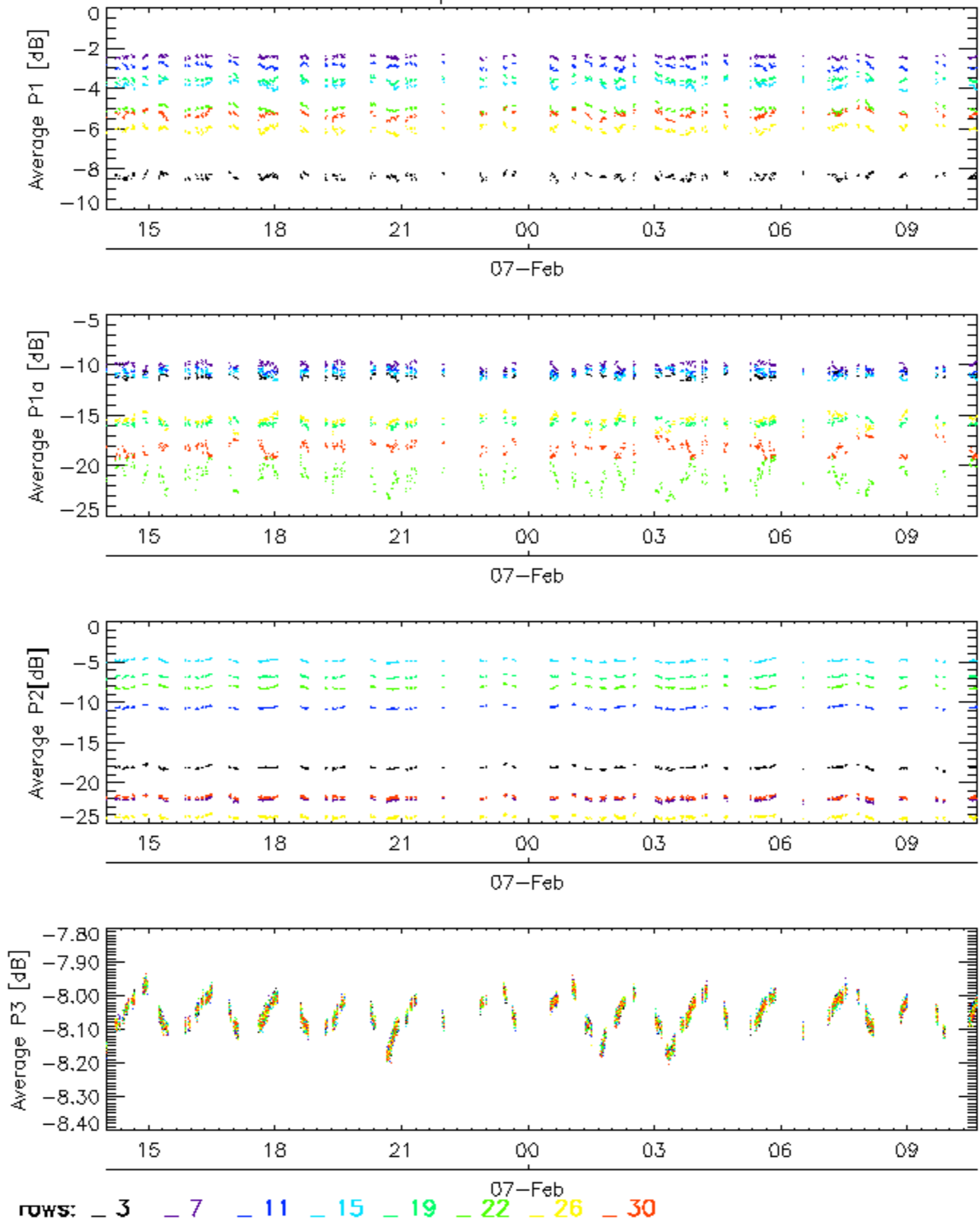
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

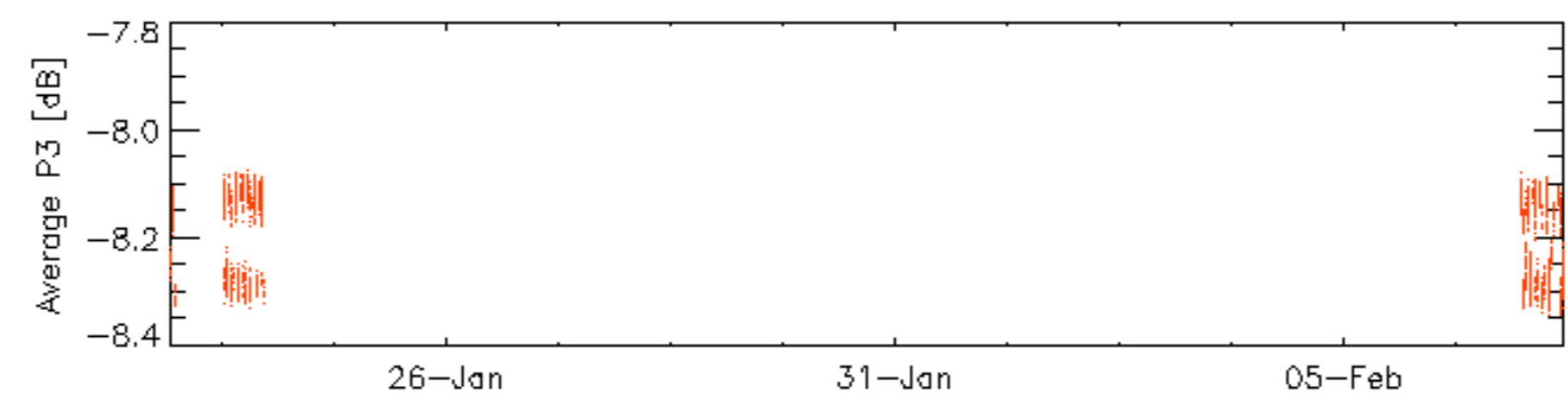
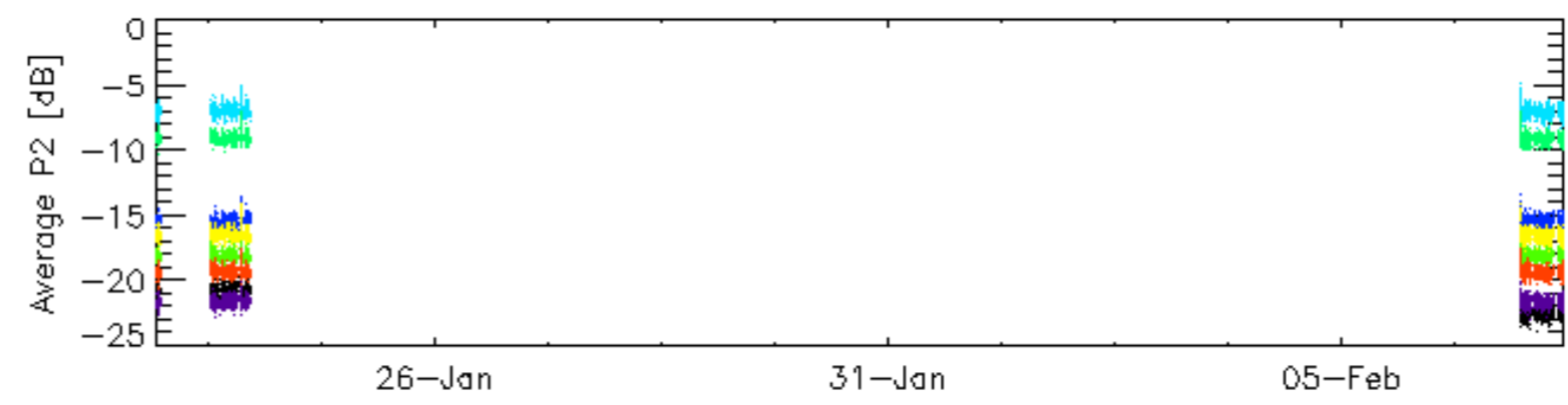
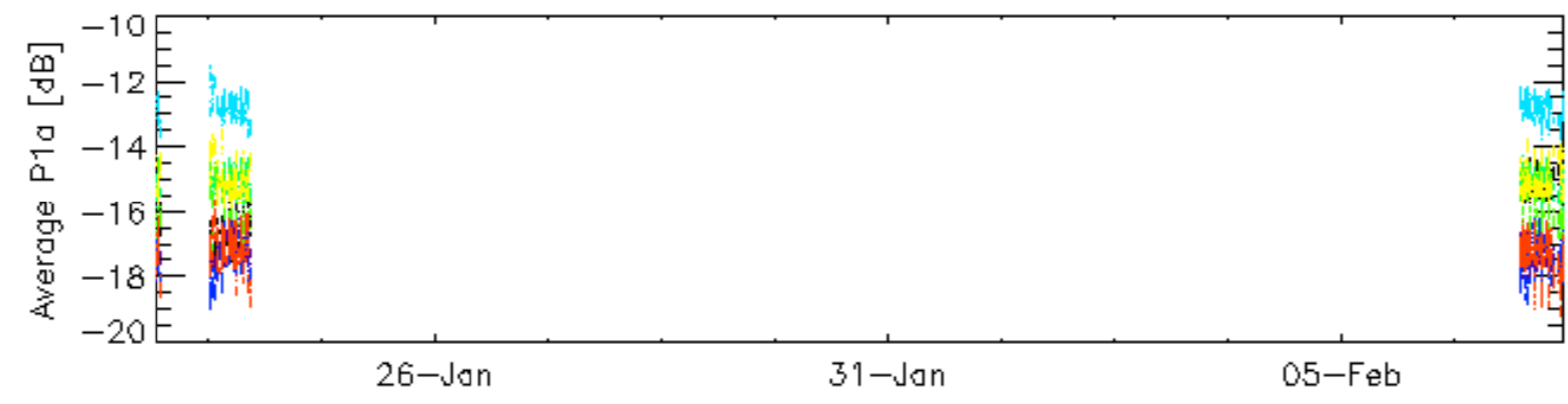
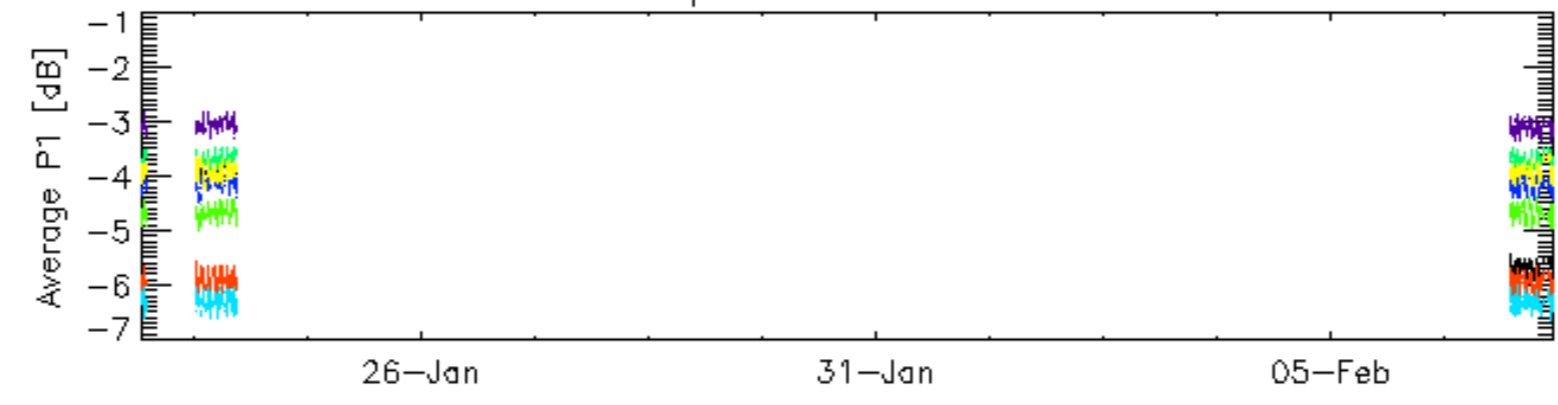


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for GM1 SS3

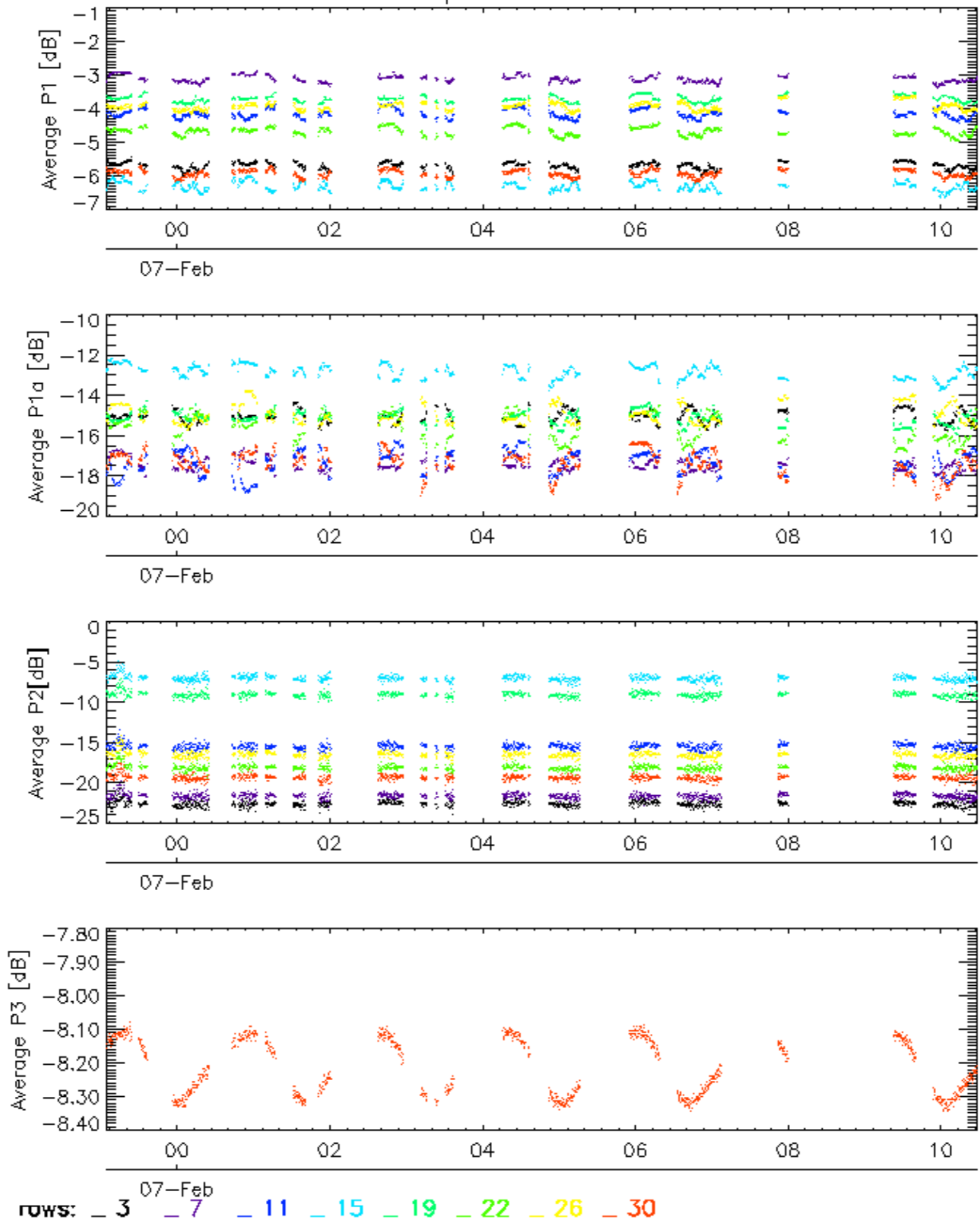


Cal pulses for WVS IS2

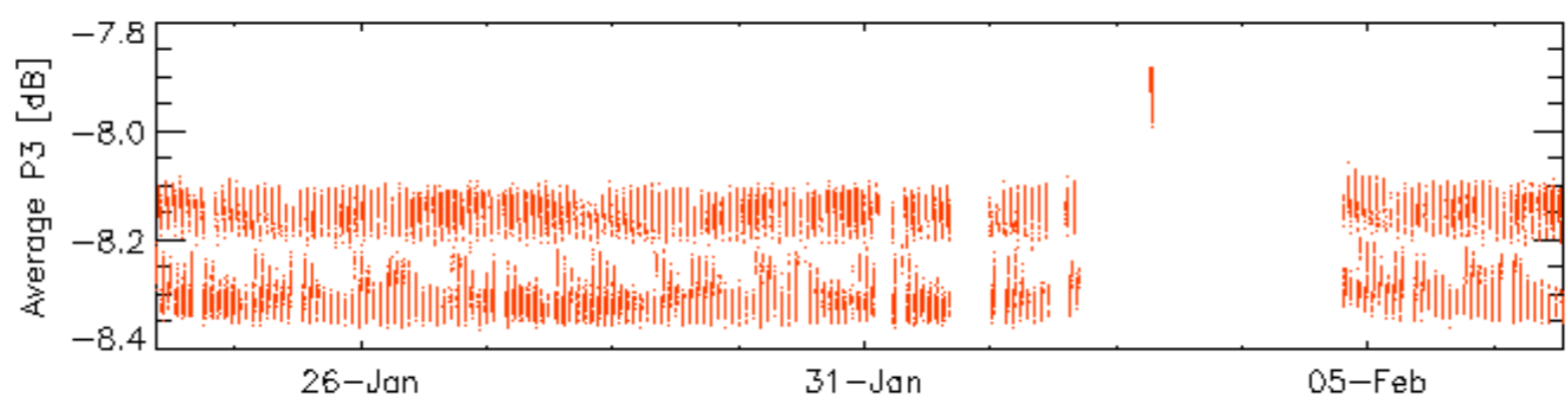
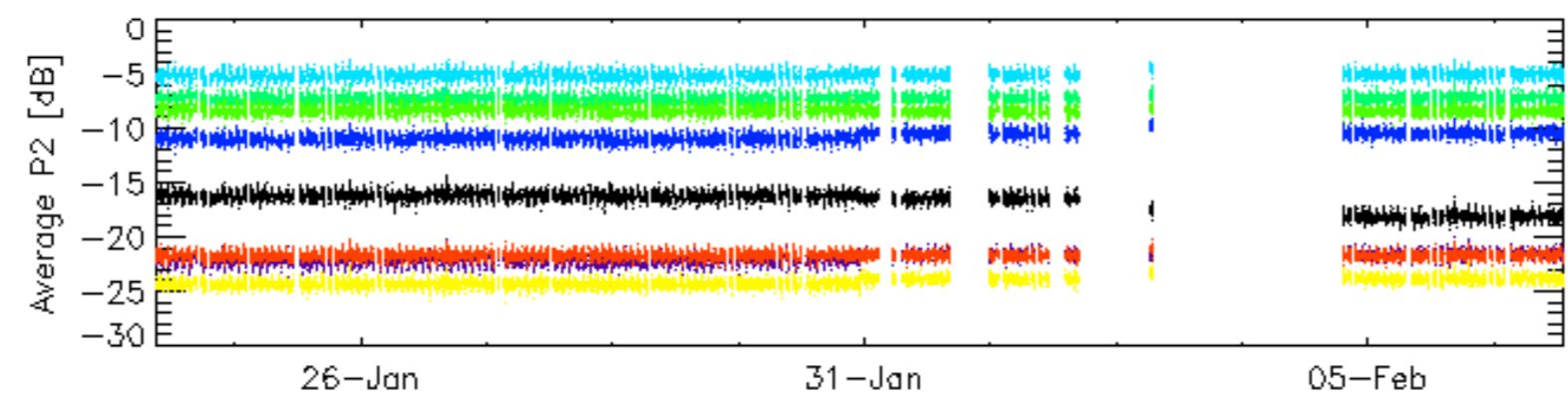
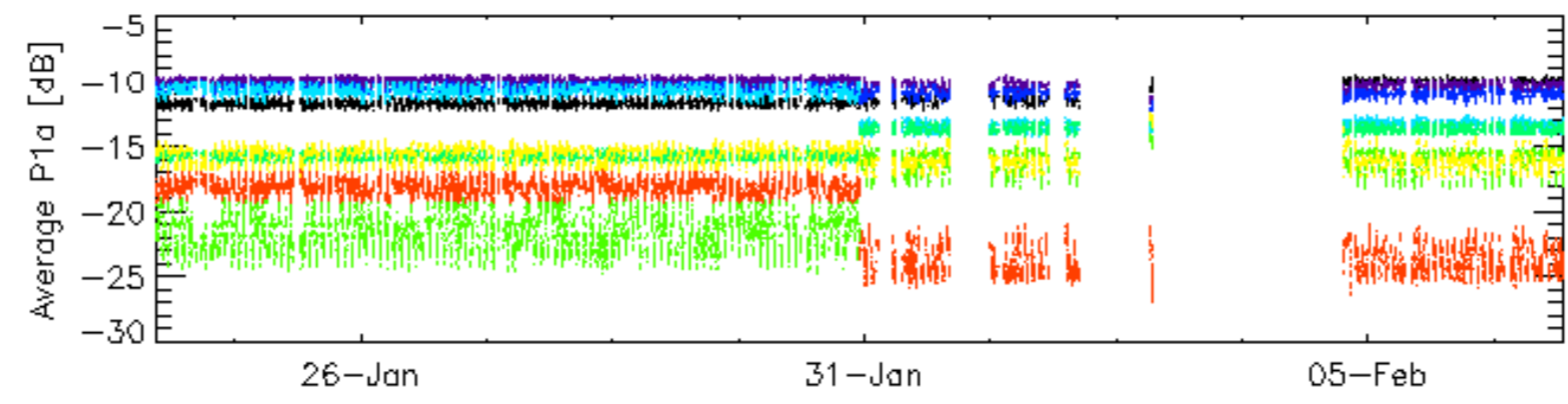
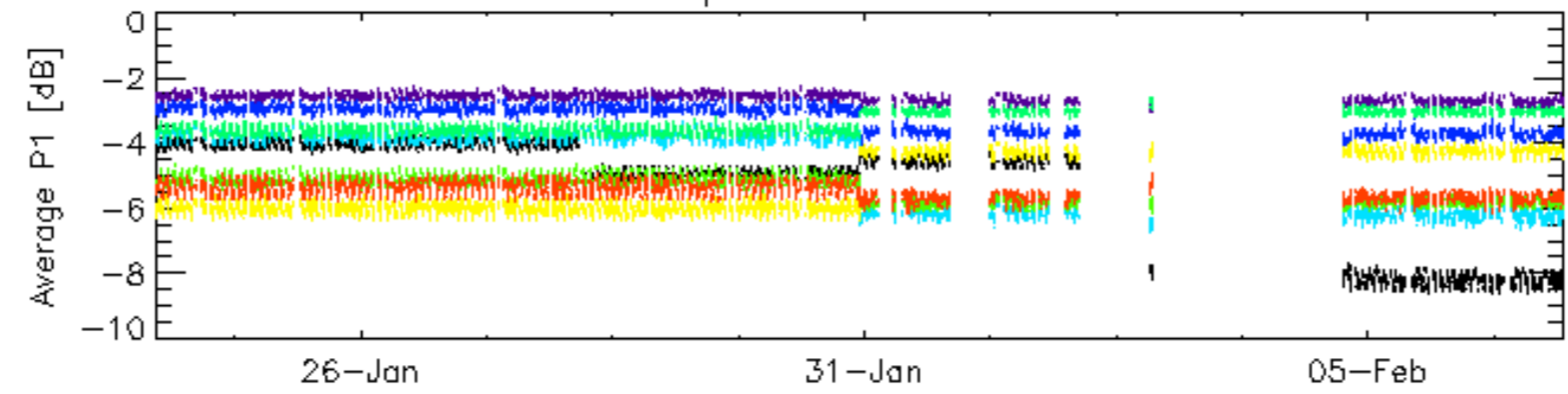


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Cal pulses for WVS IS2

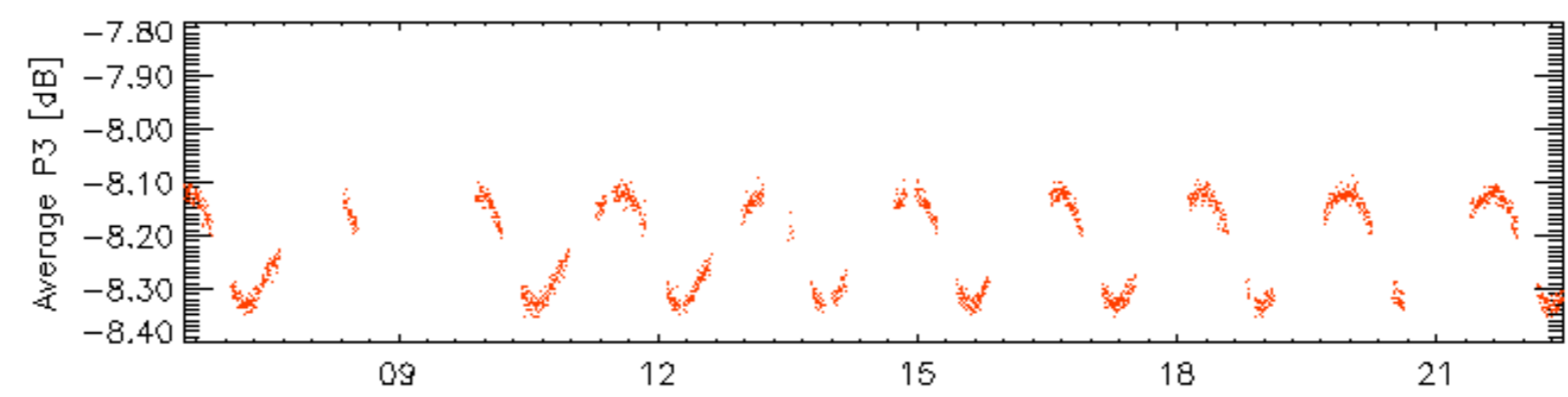
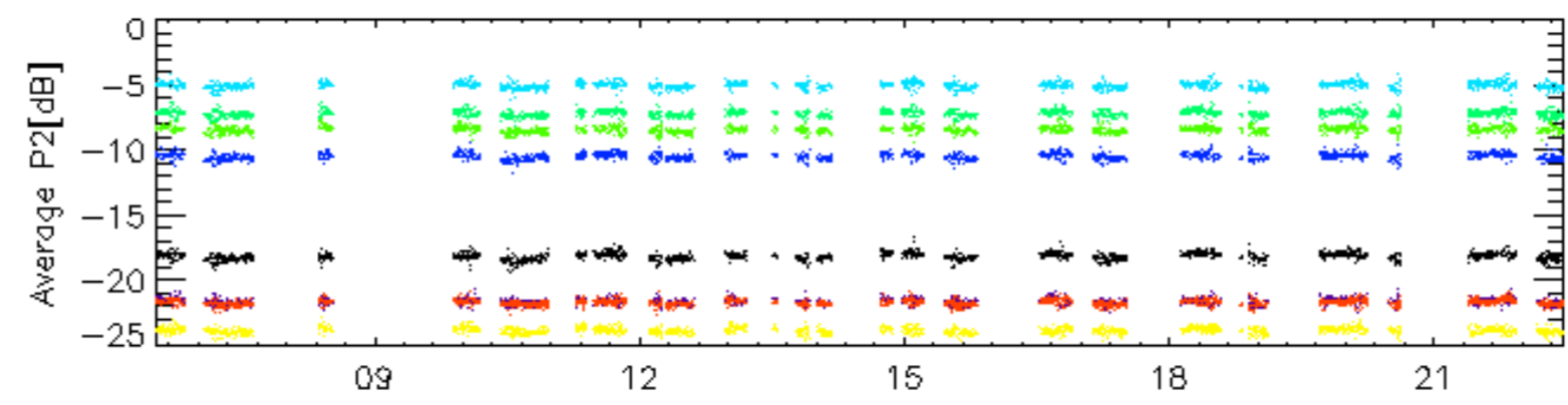
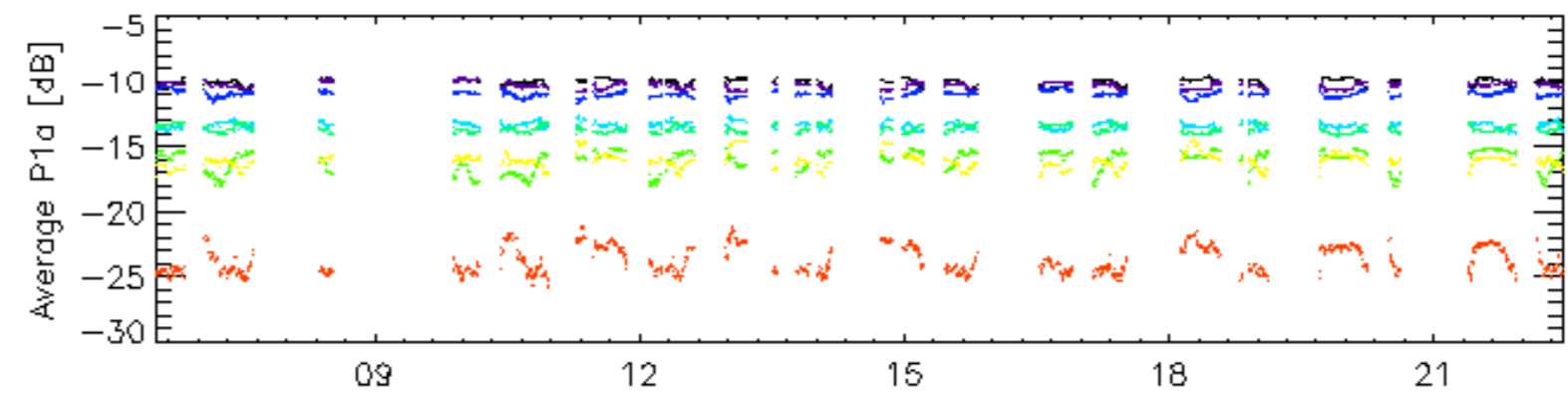
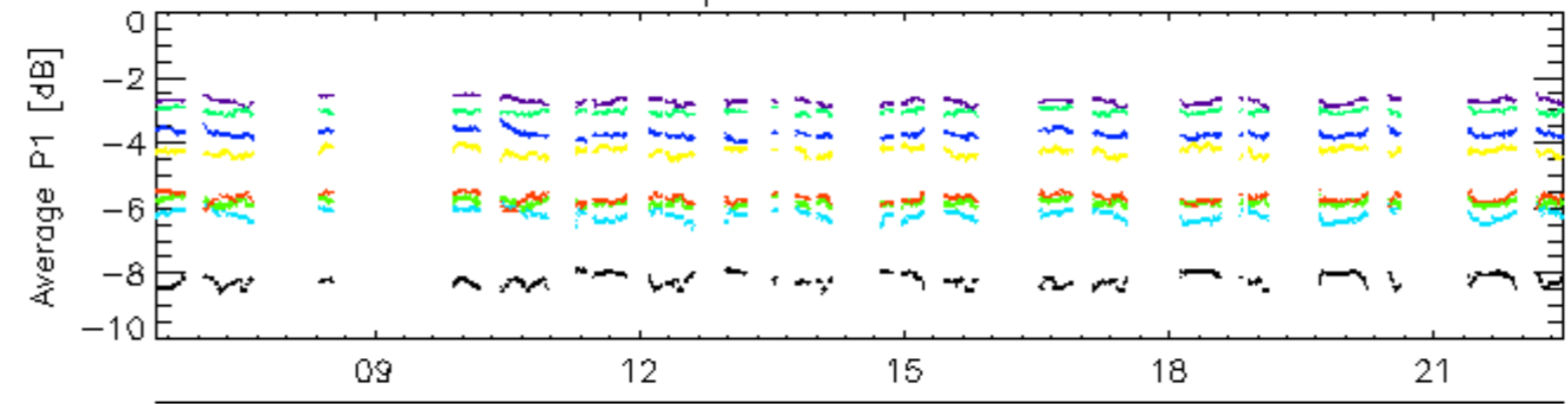


Cal pulses for WVS IS4



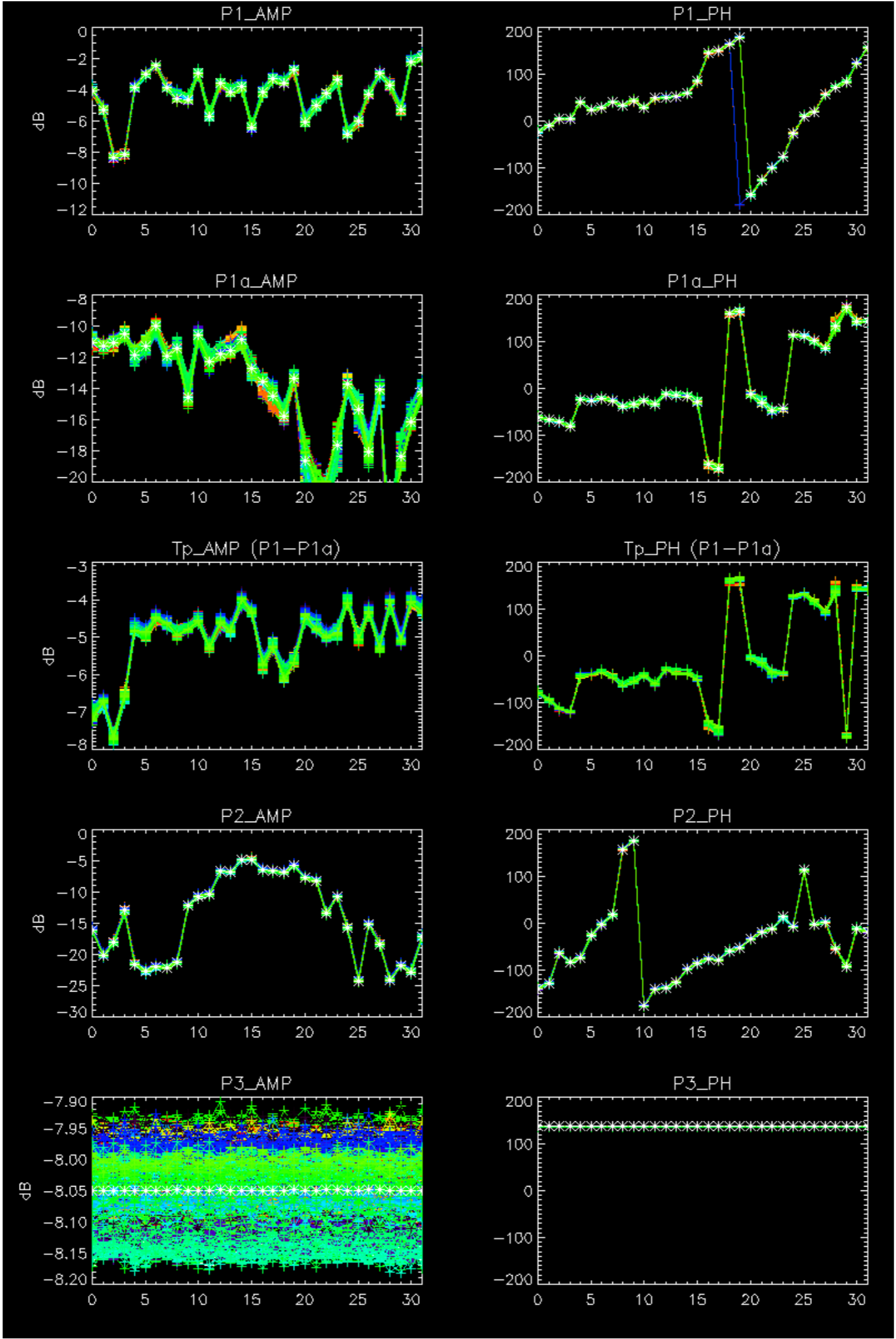
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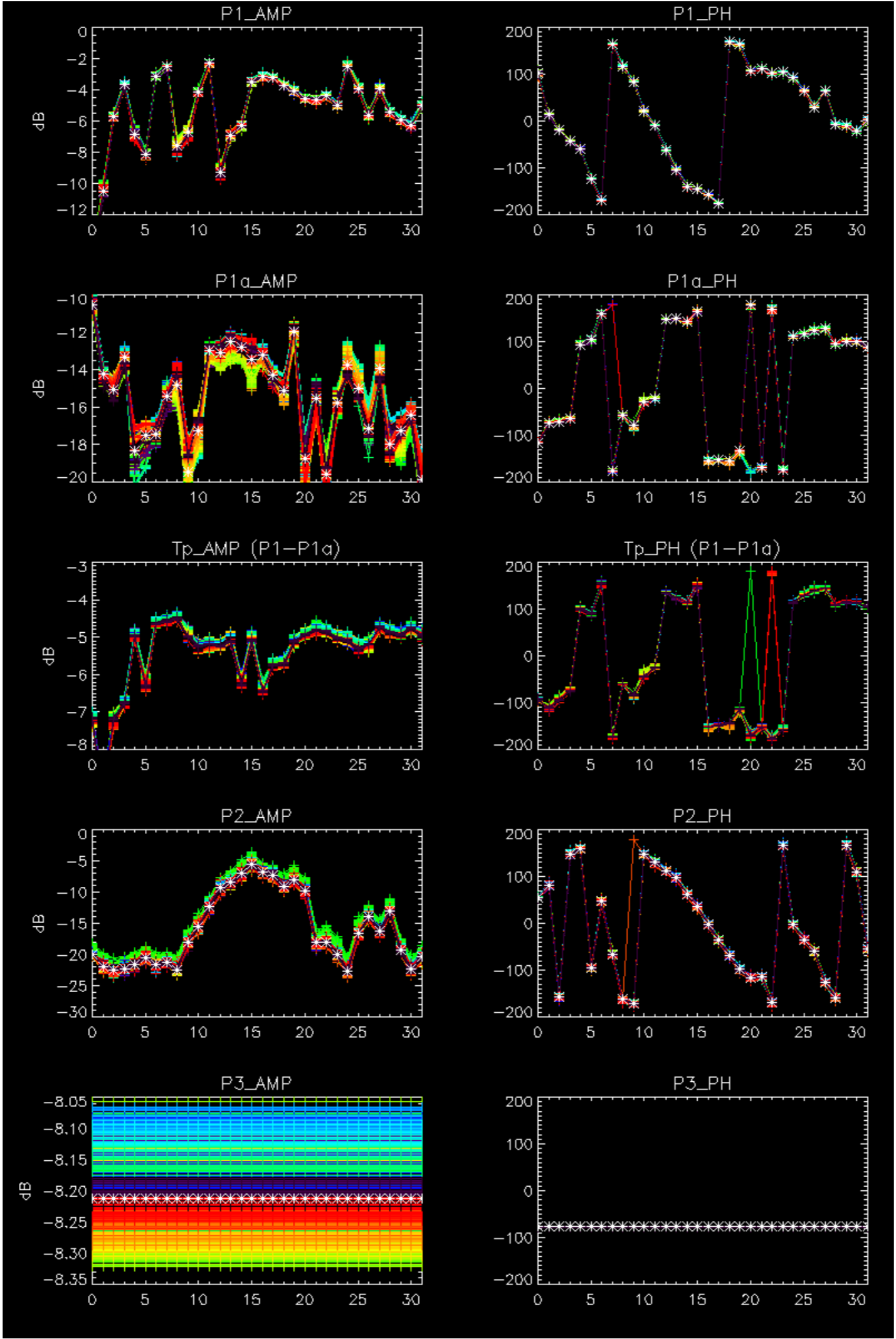
Cal pulses for WVS IS4

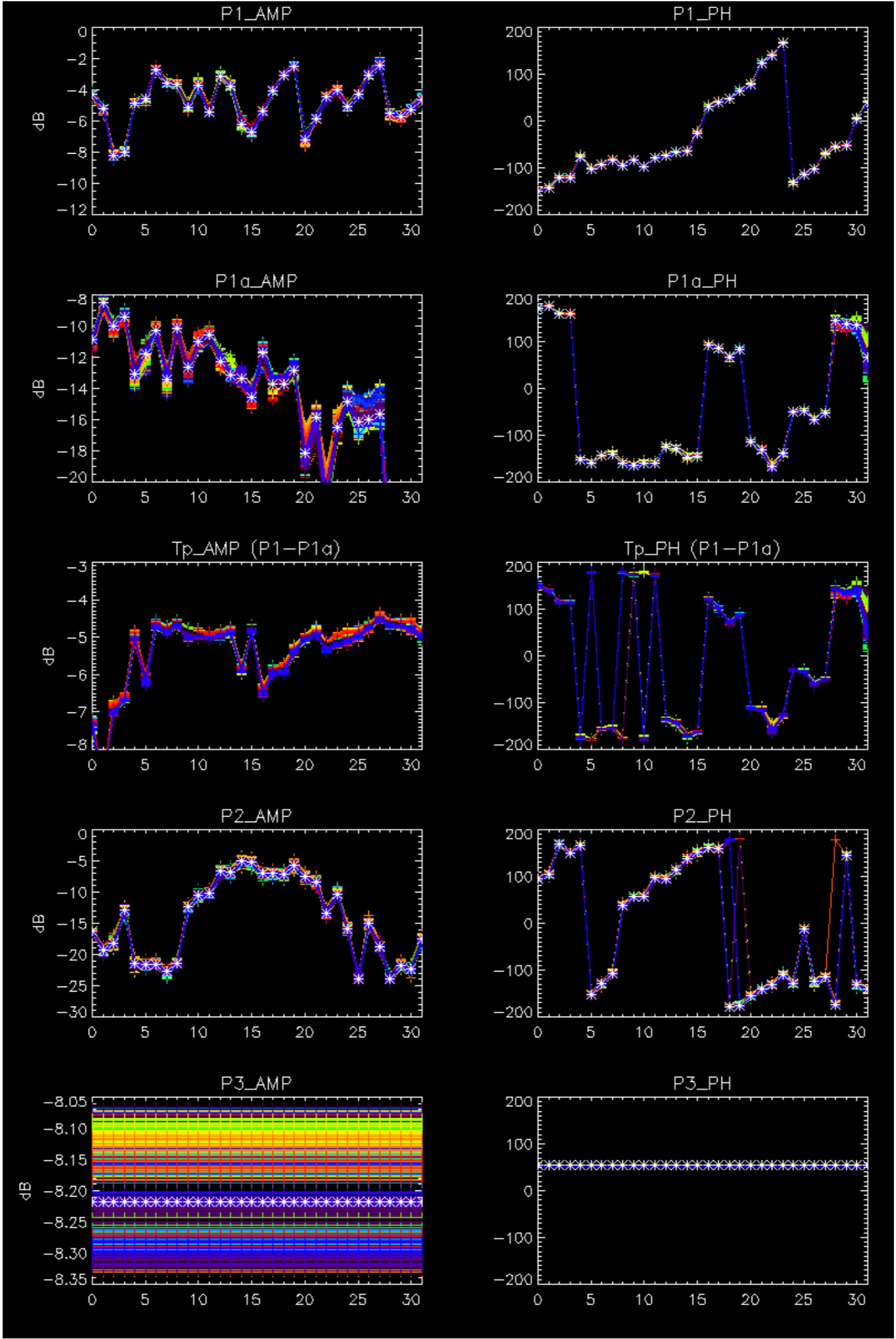


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No anomalies observed.

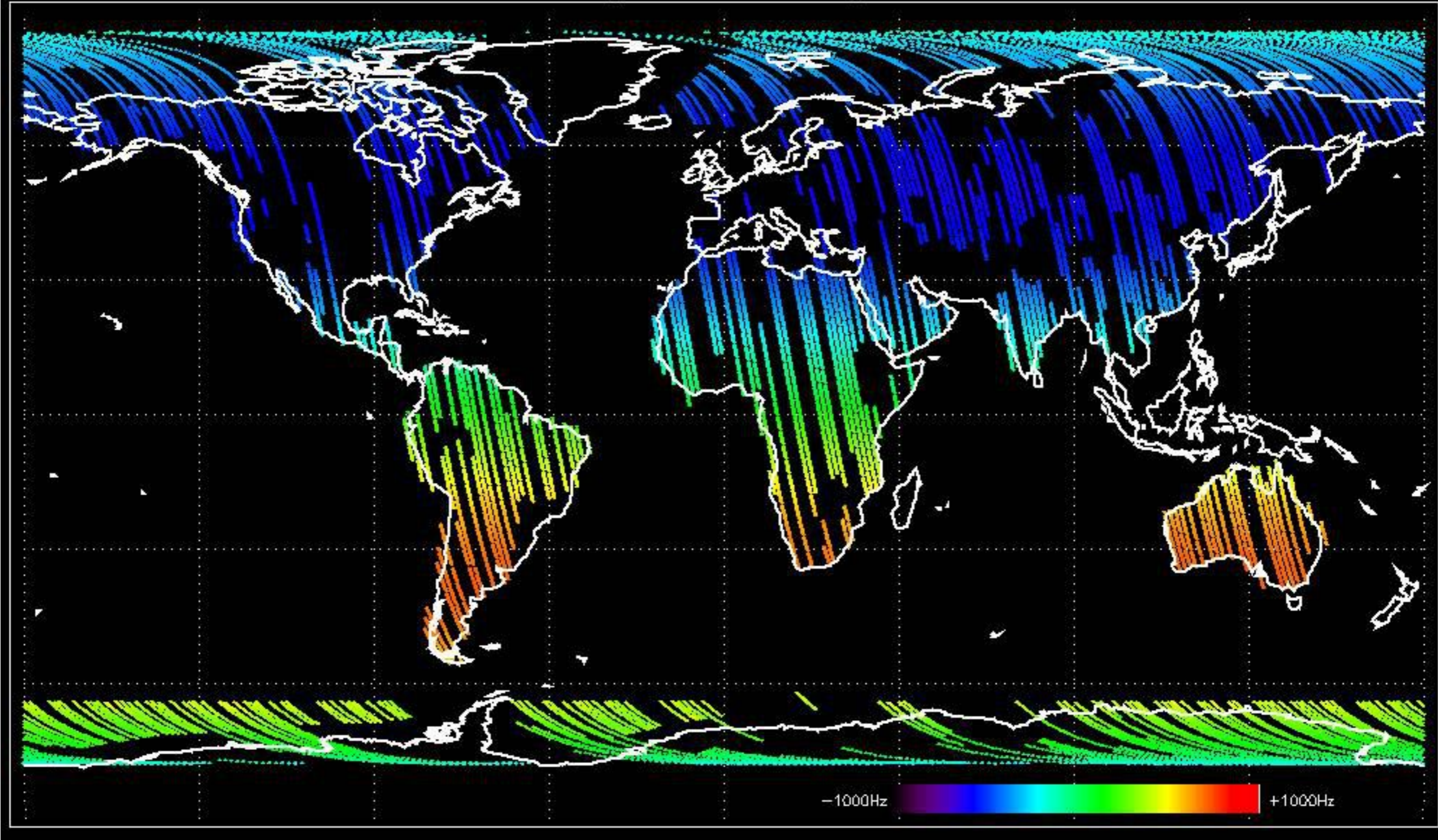




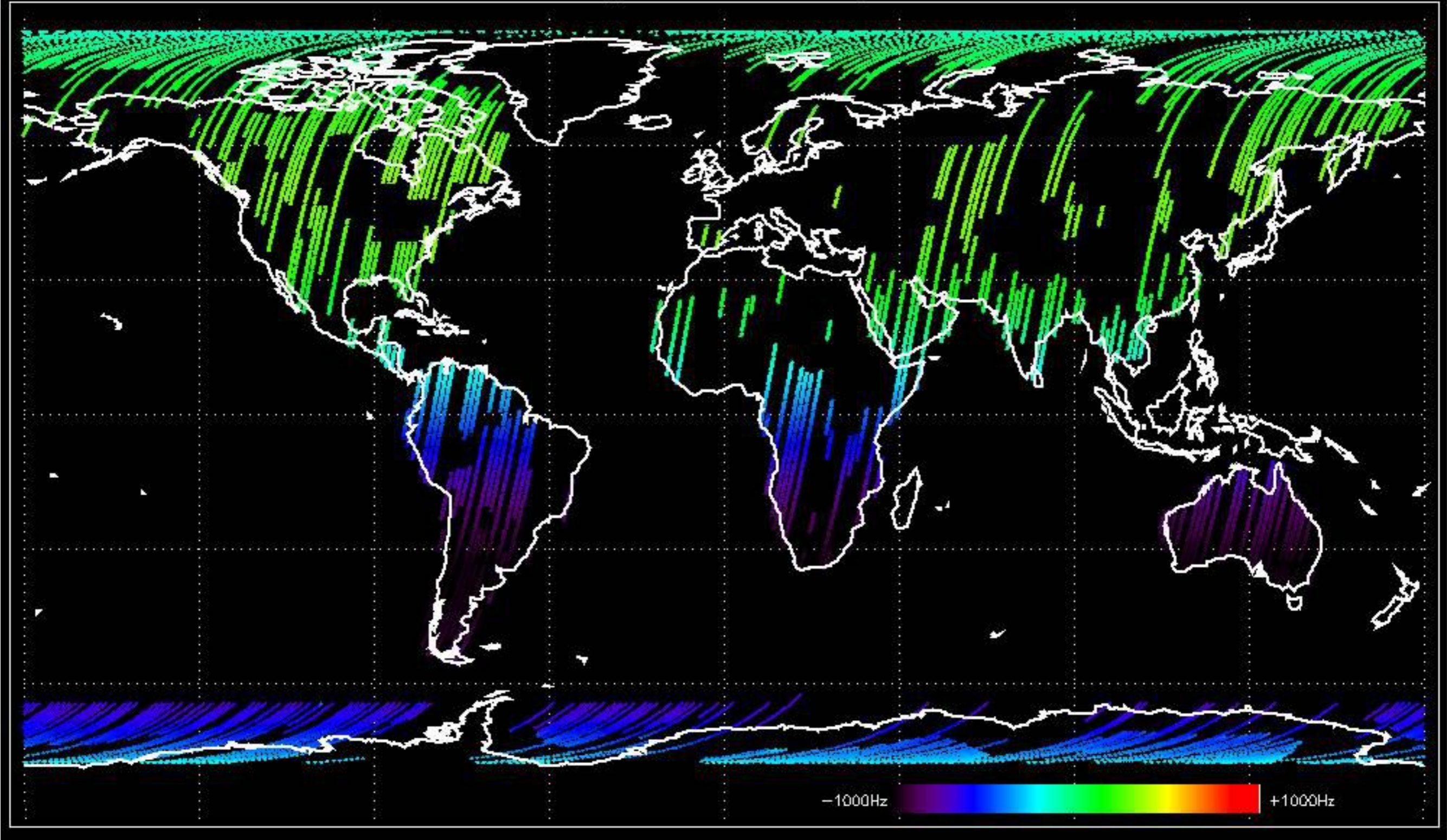


- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

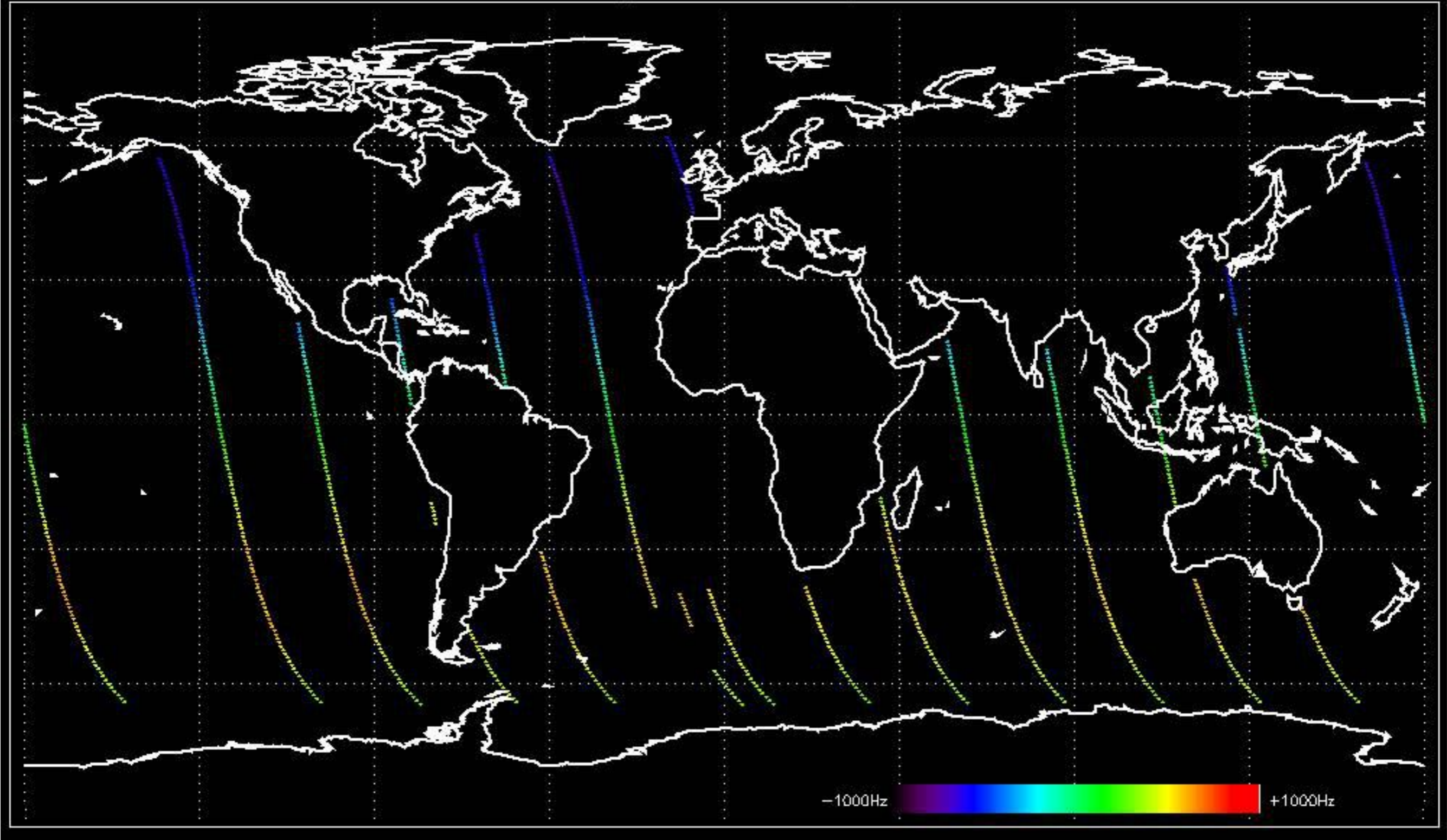
Doppler 'GM1' 'SS1' ascending



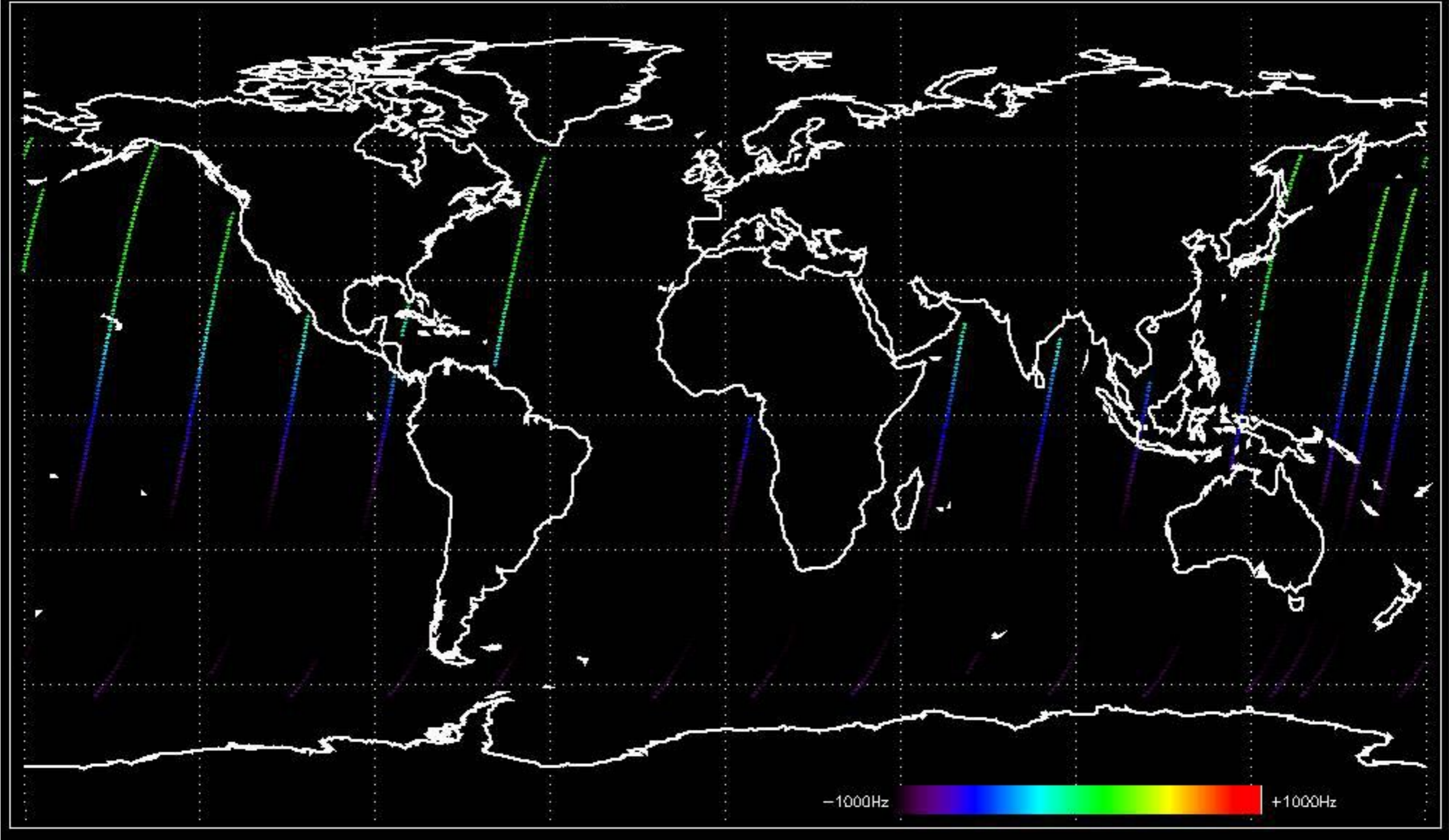
Doppler 'GM1' 'SS1' descending



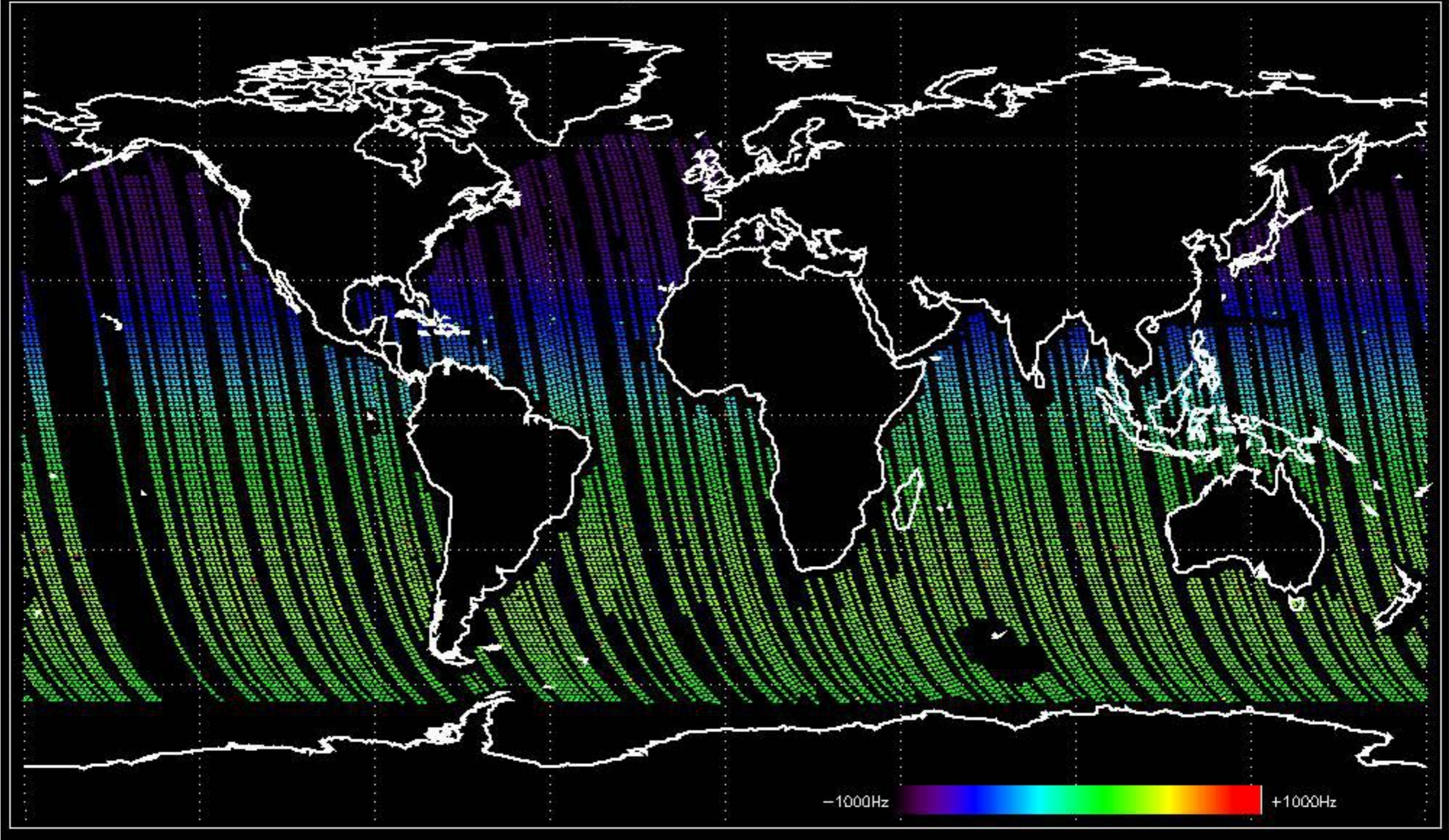
Doppler 'WVS' 'IS2' ascending



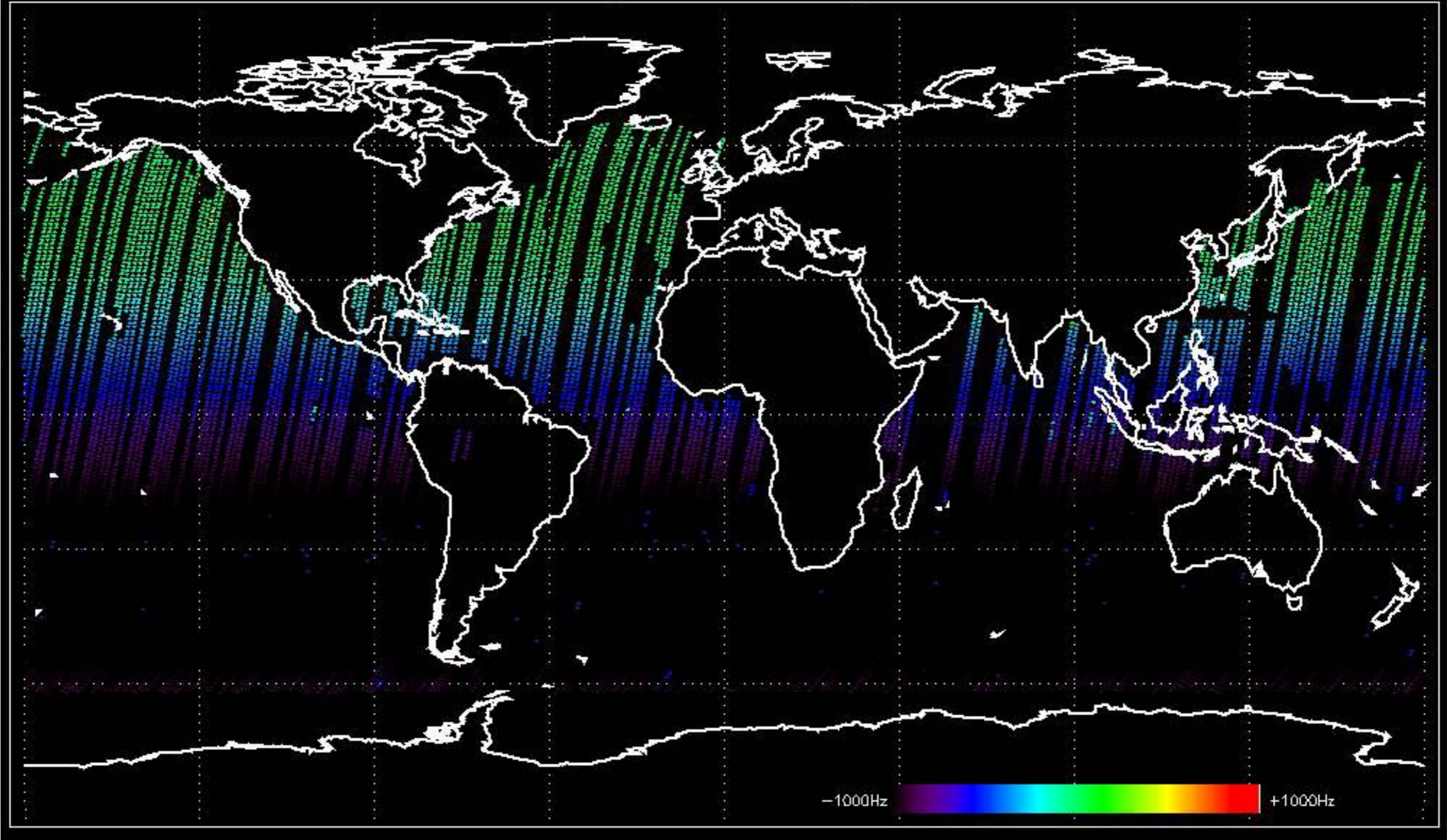
Doppler 'WVS' 'IS2' descending



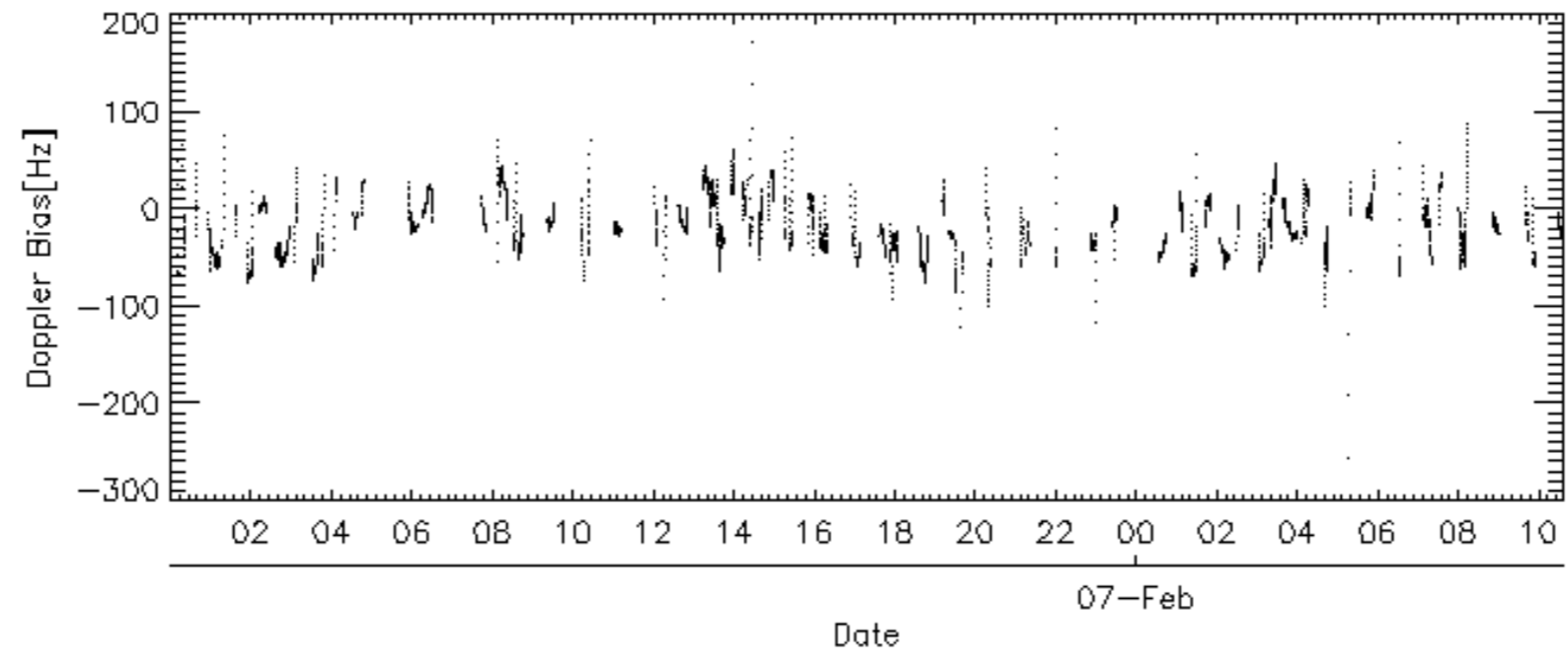
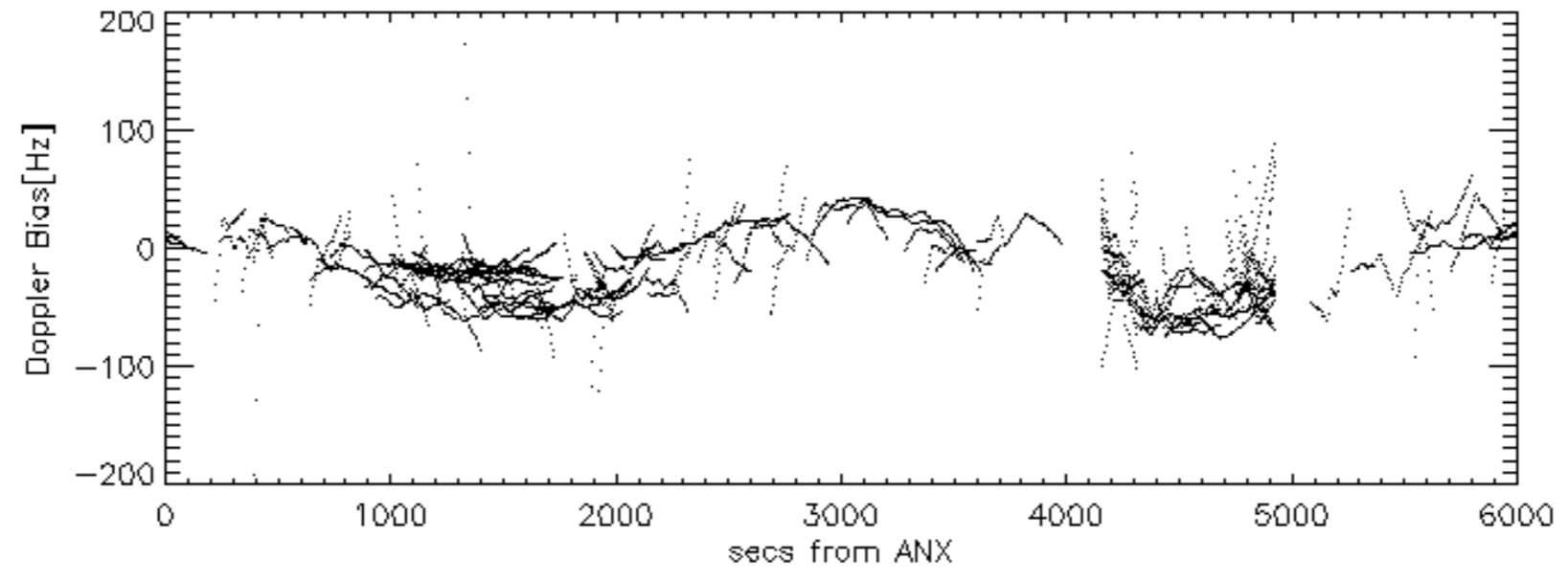
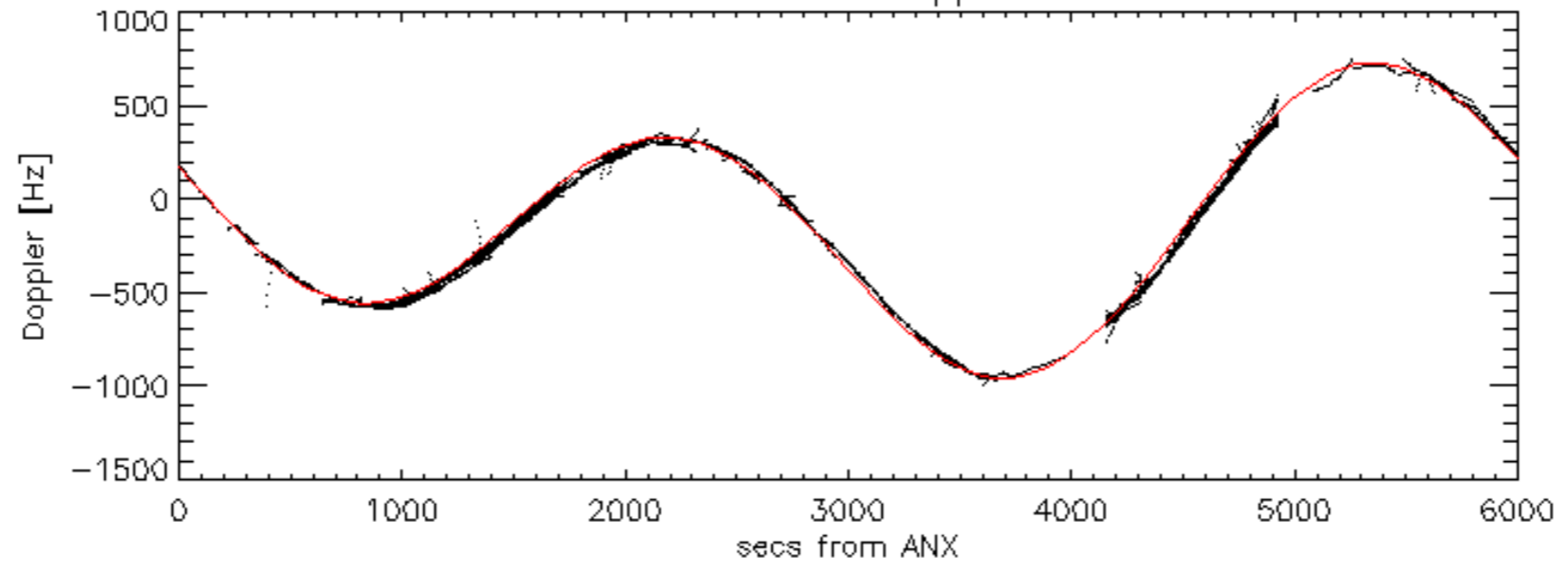
Doppler 'WVS' 'IS4' ascending

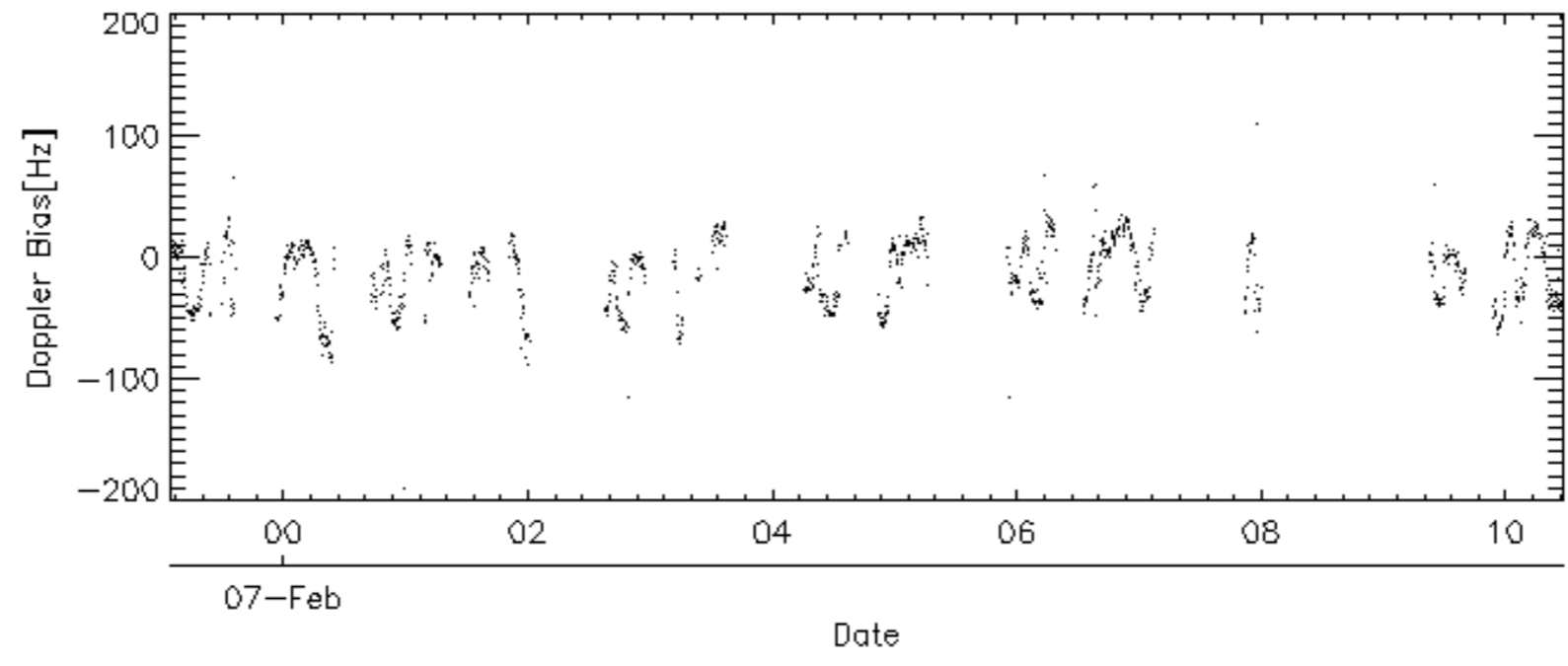
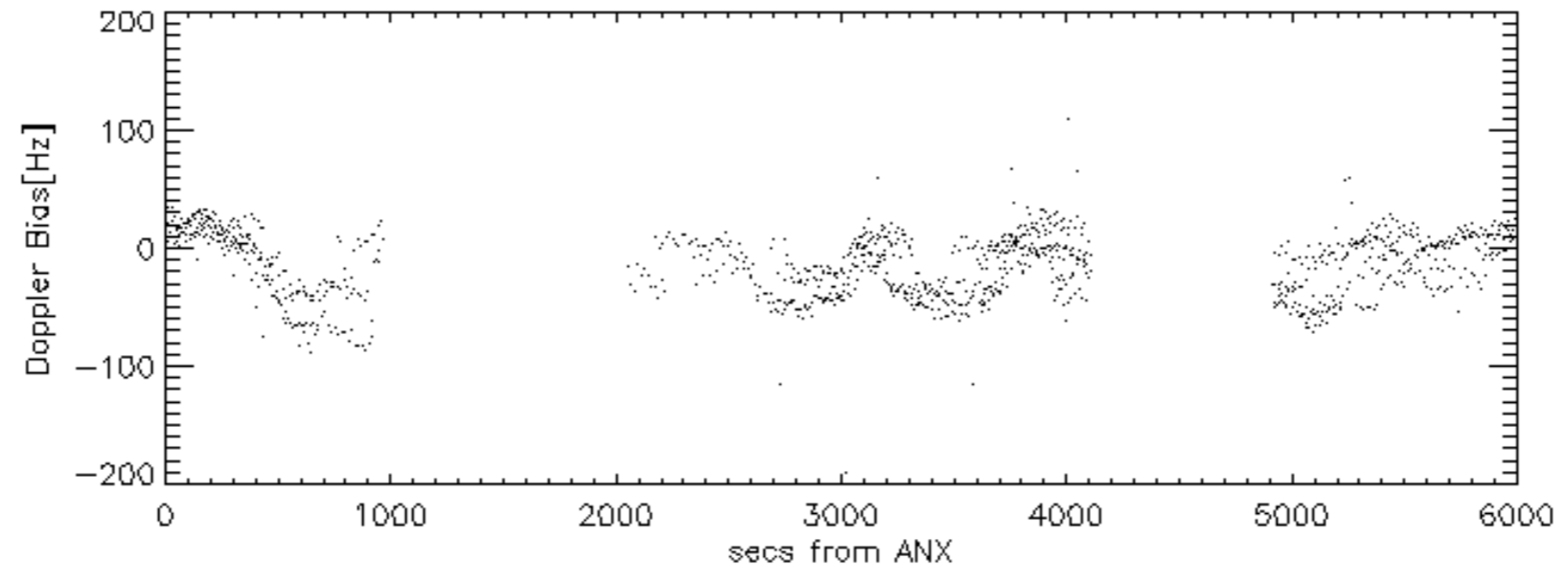
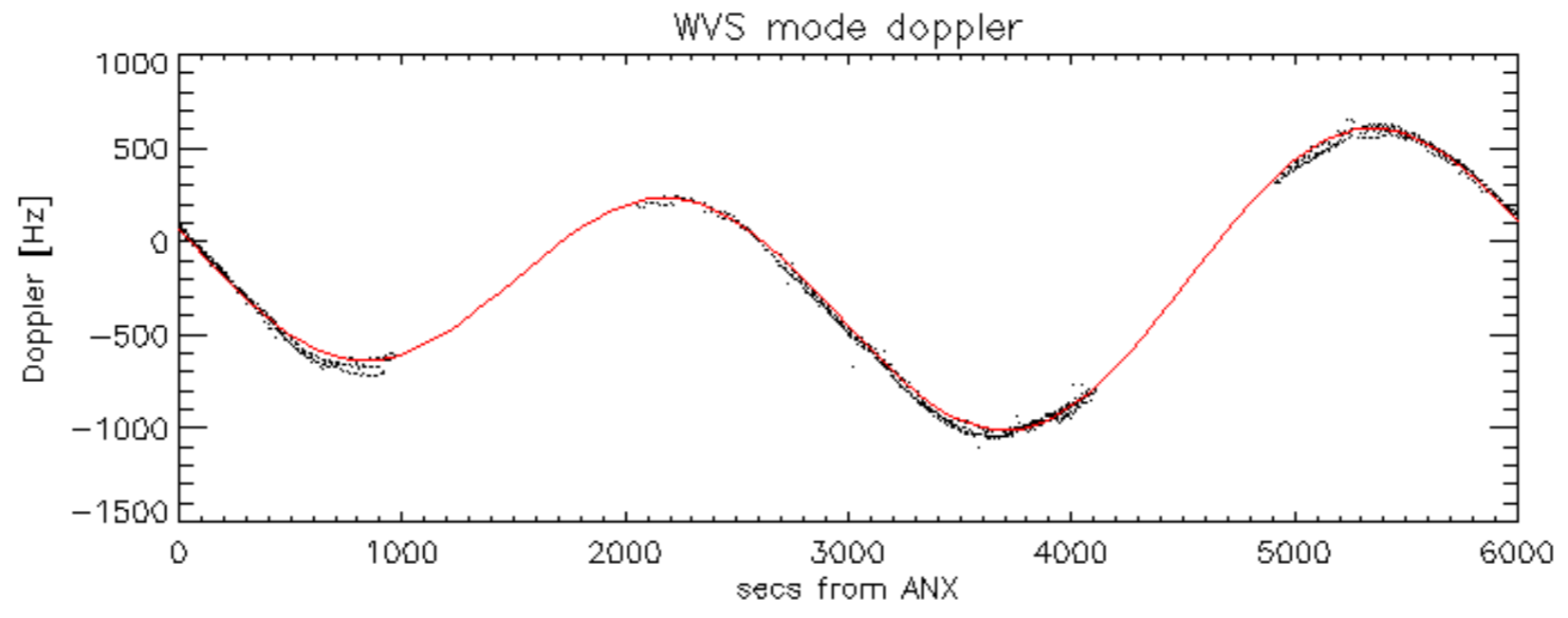


Doppler 'WVS' 'IS4' descending

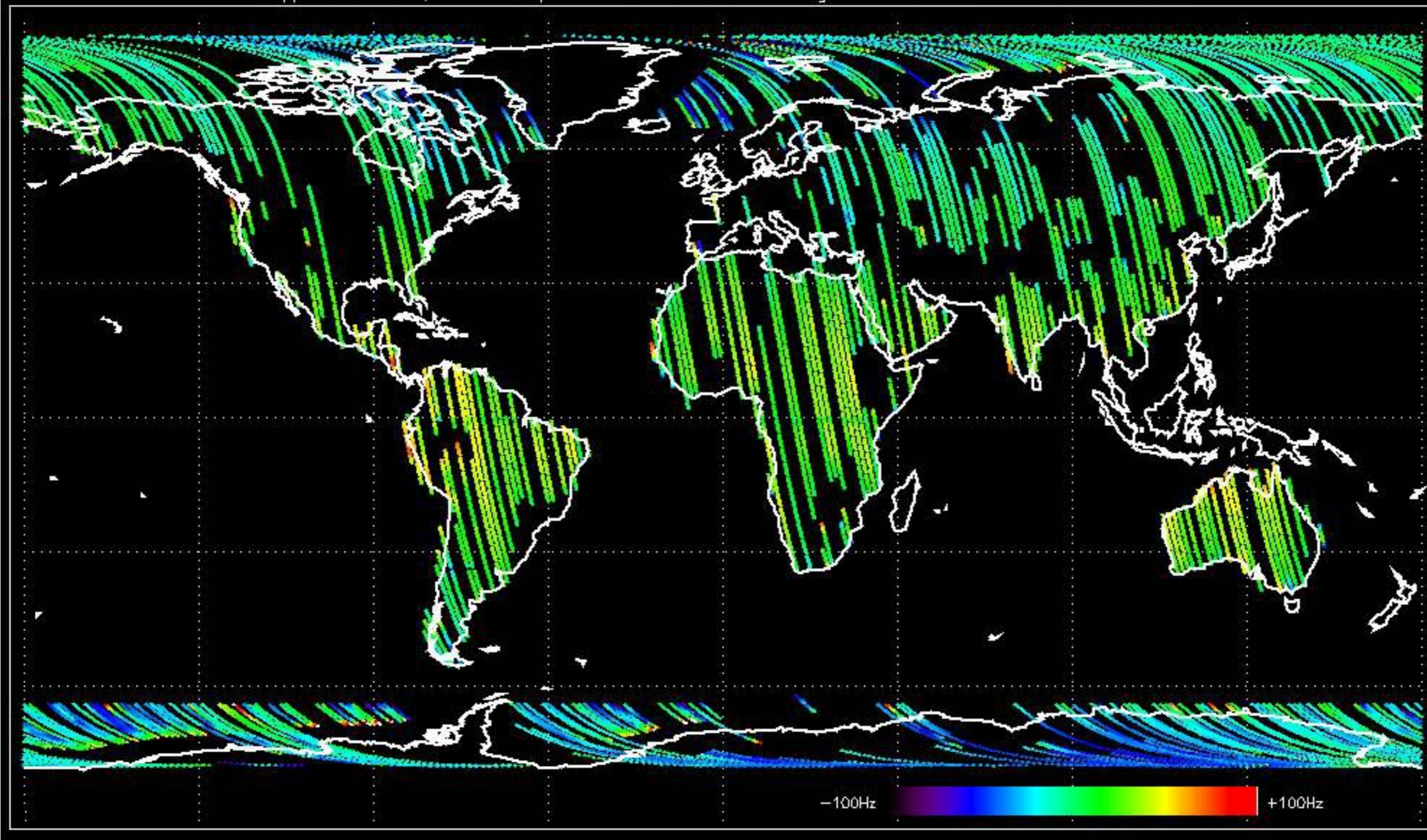


GM1 mode doppler

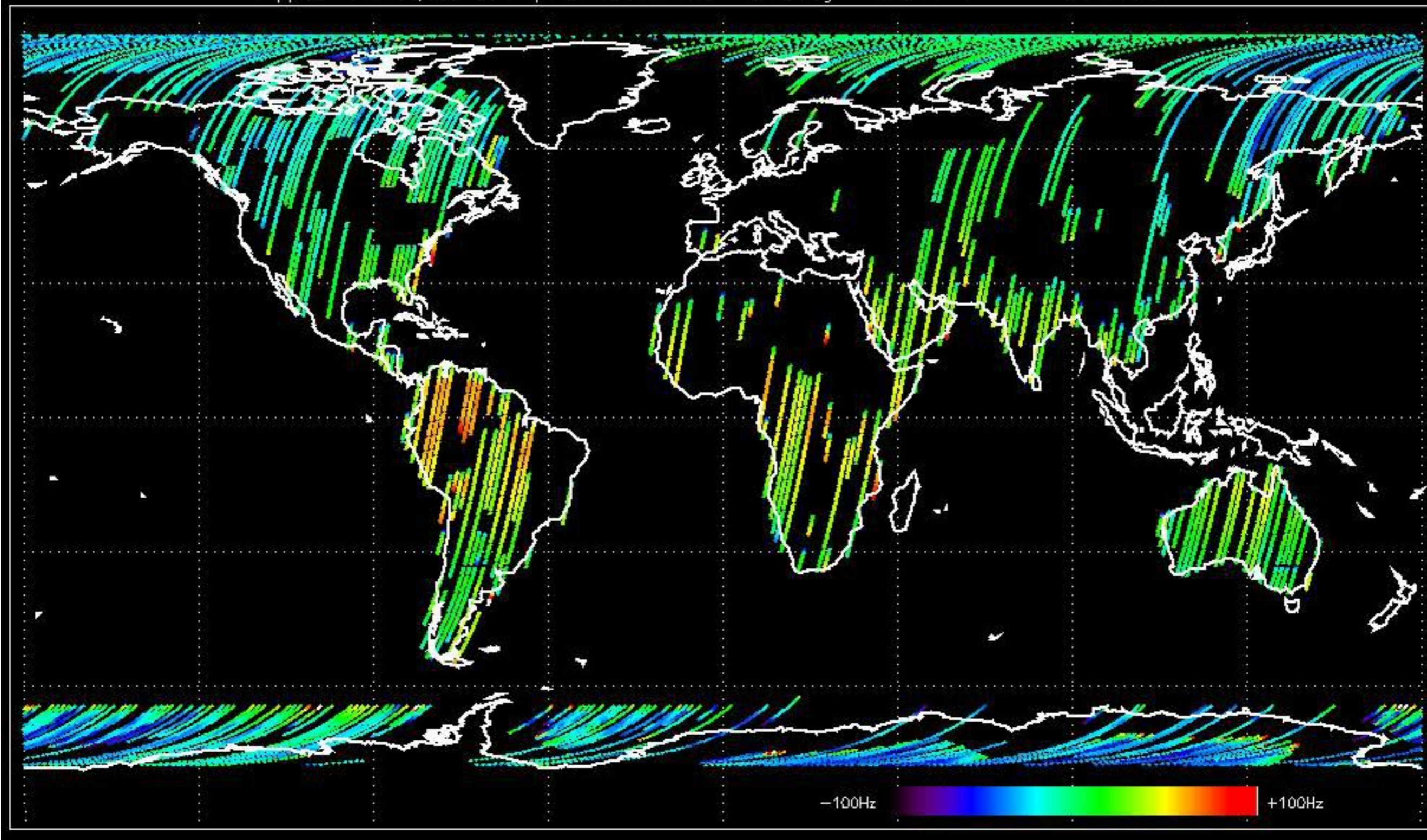




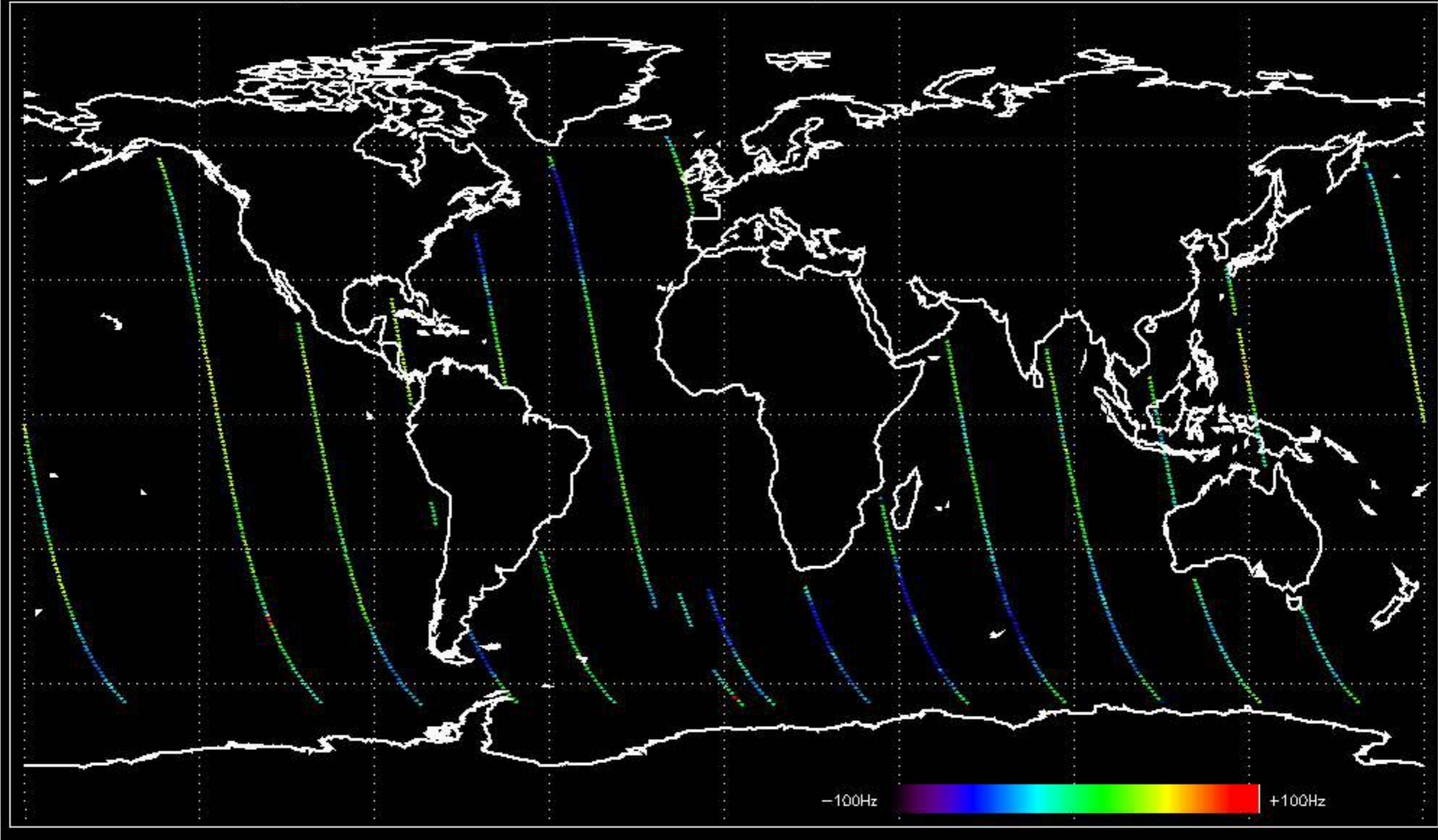
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -17.364286 Hz



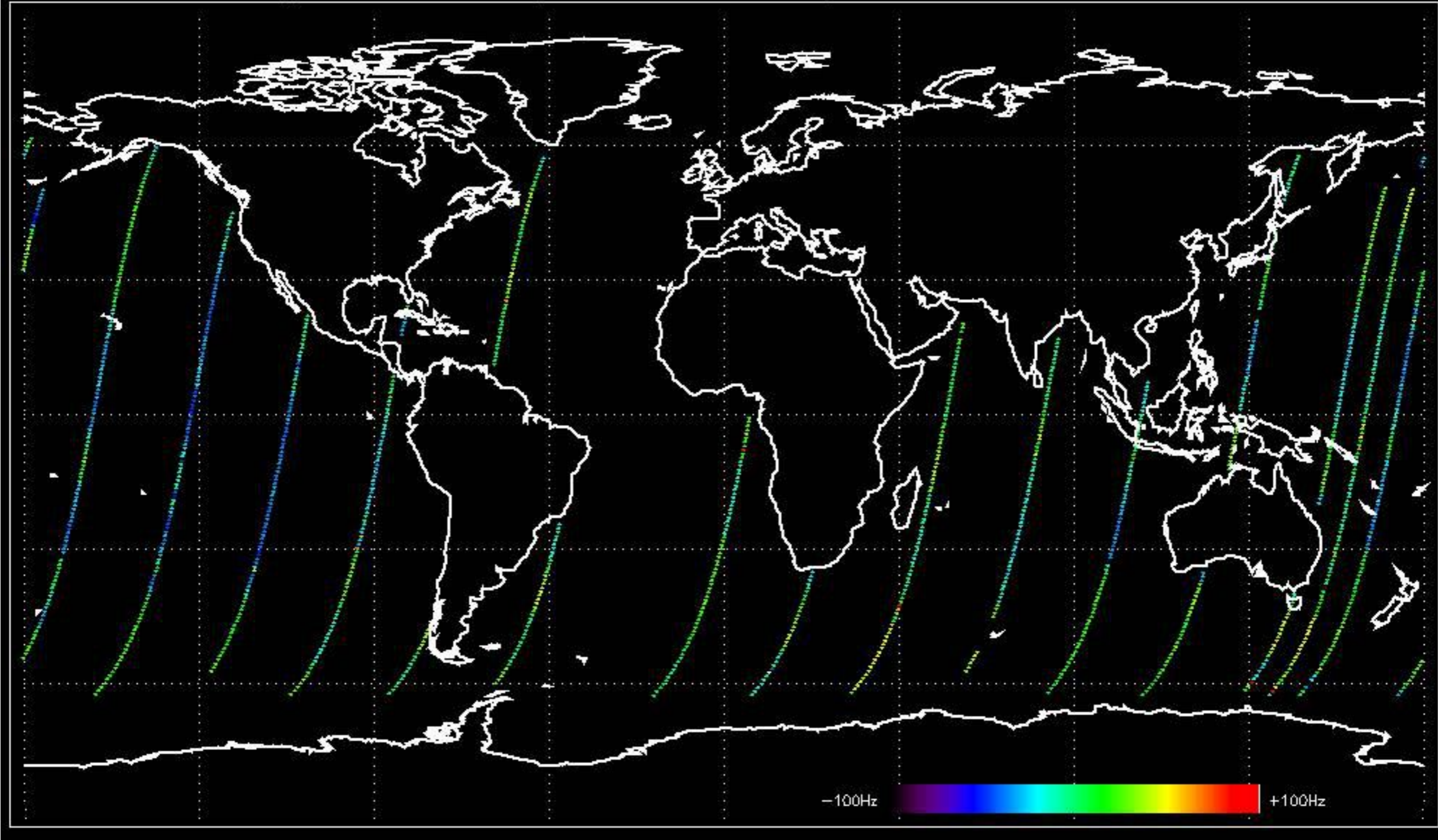
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -18.840669 Hz



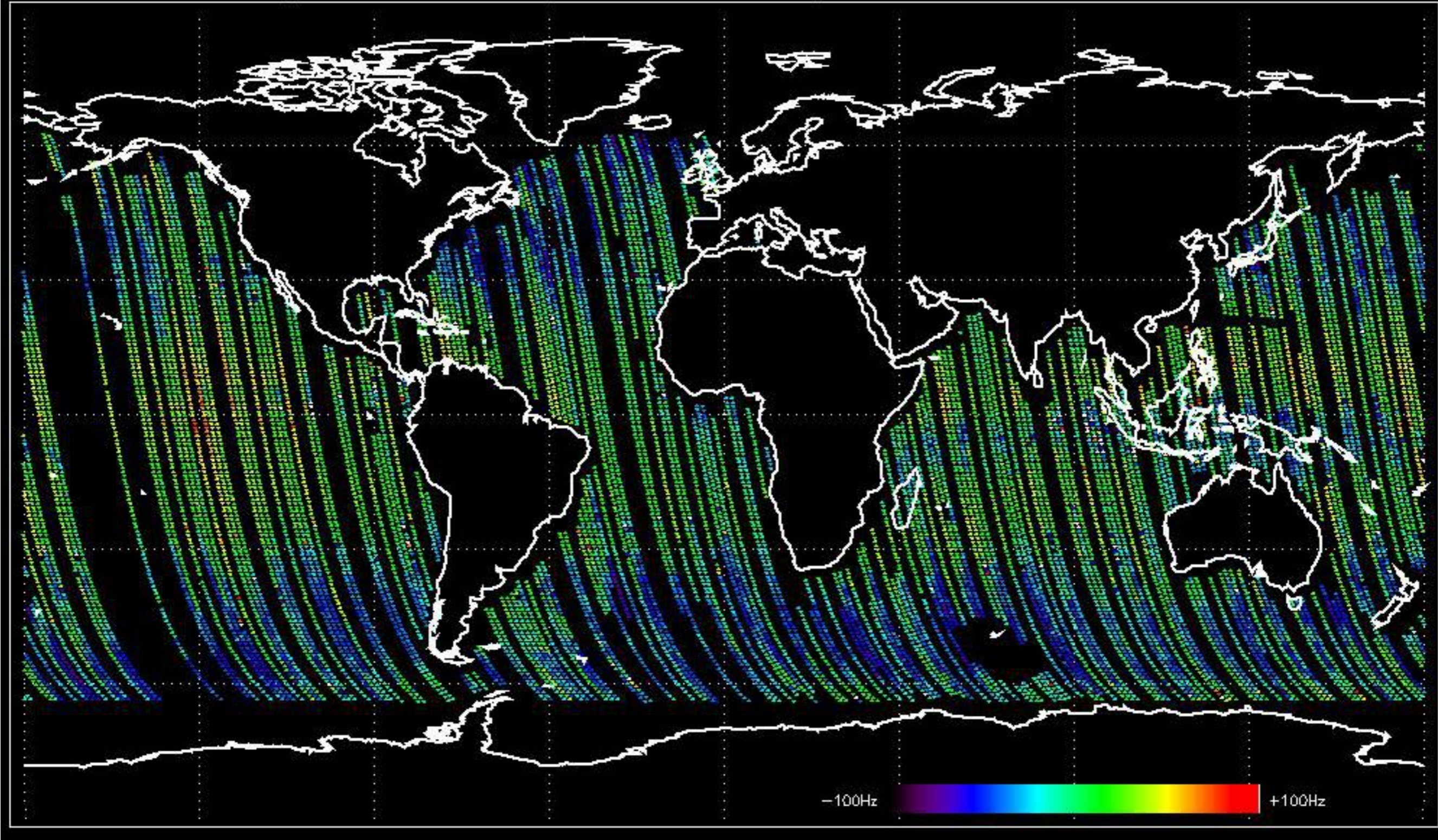
Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -19.381195 Hz



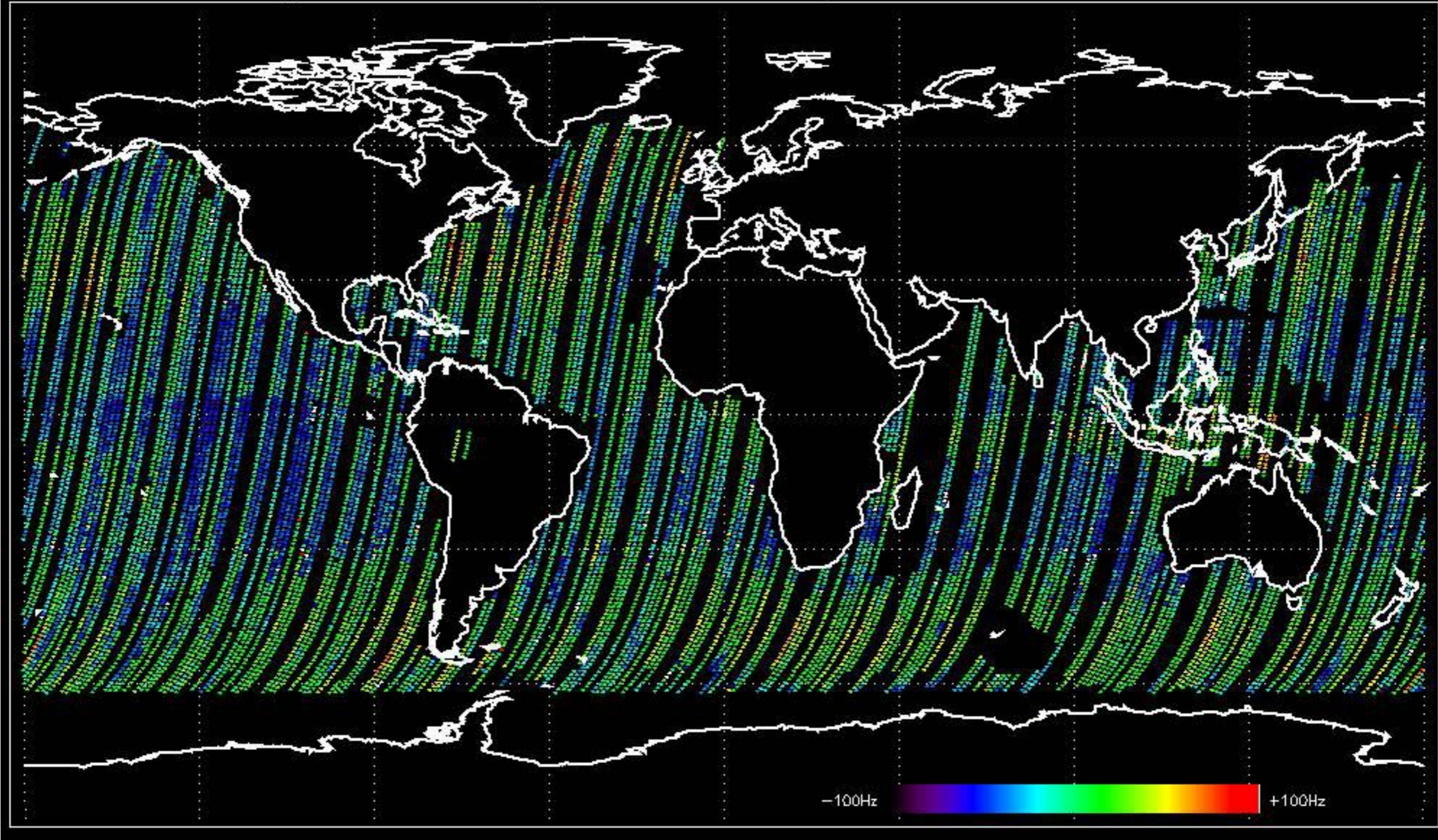
Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -22.464858 Hz



Doppler difference, estimated-predicted 'WVS' 'IS4' ascending -error mean of -22.087024 Hz

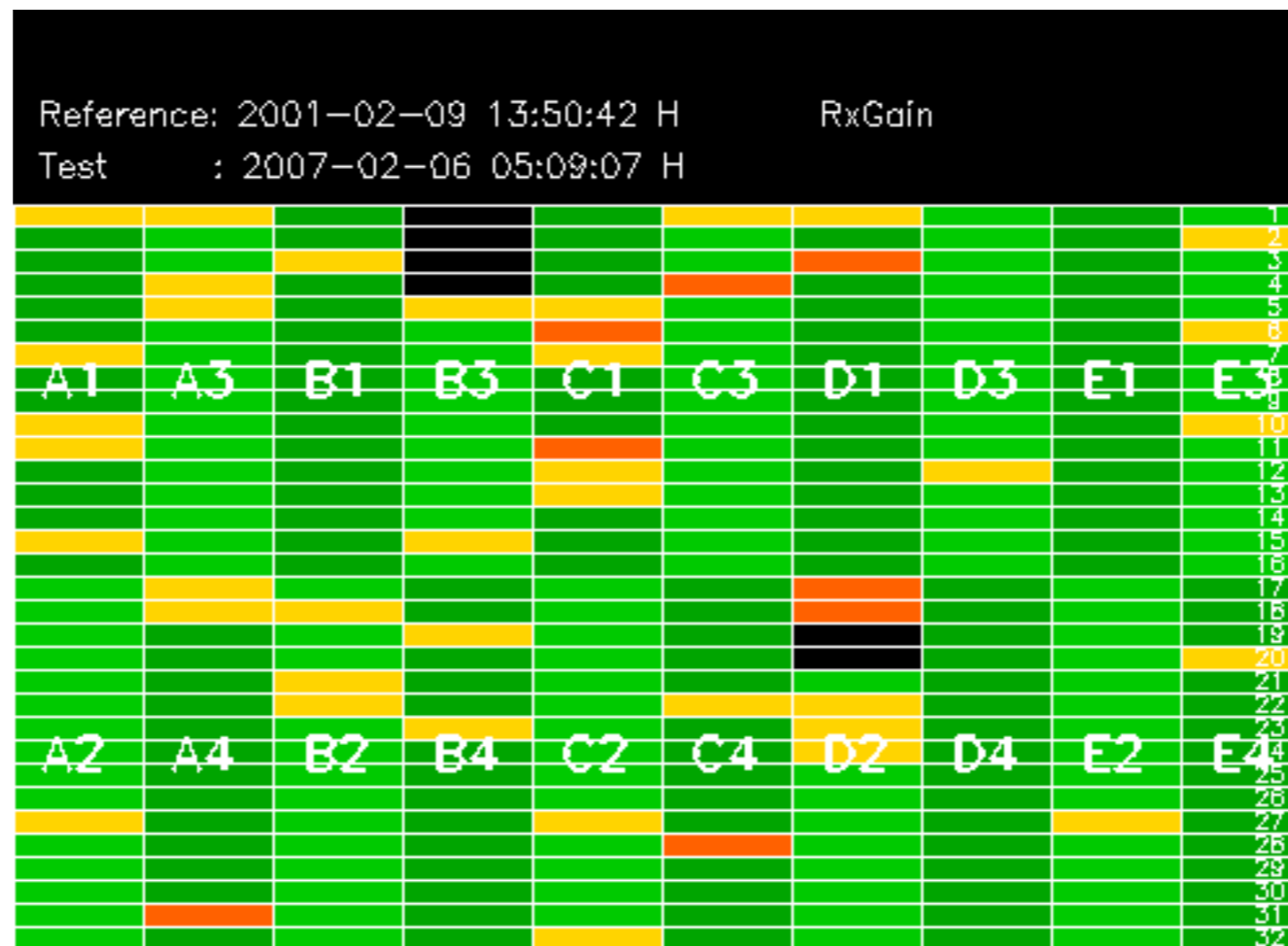


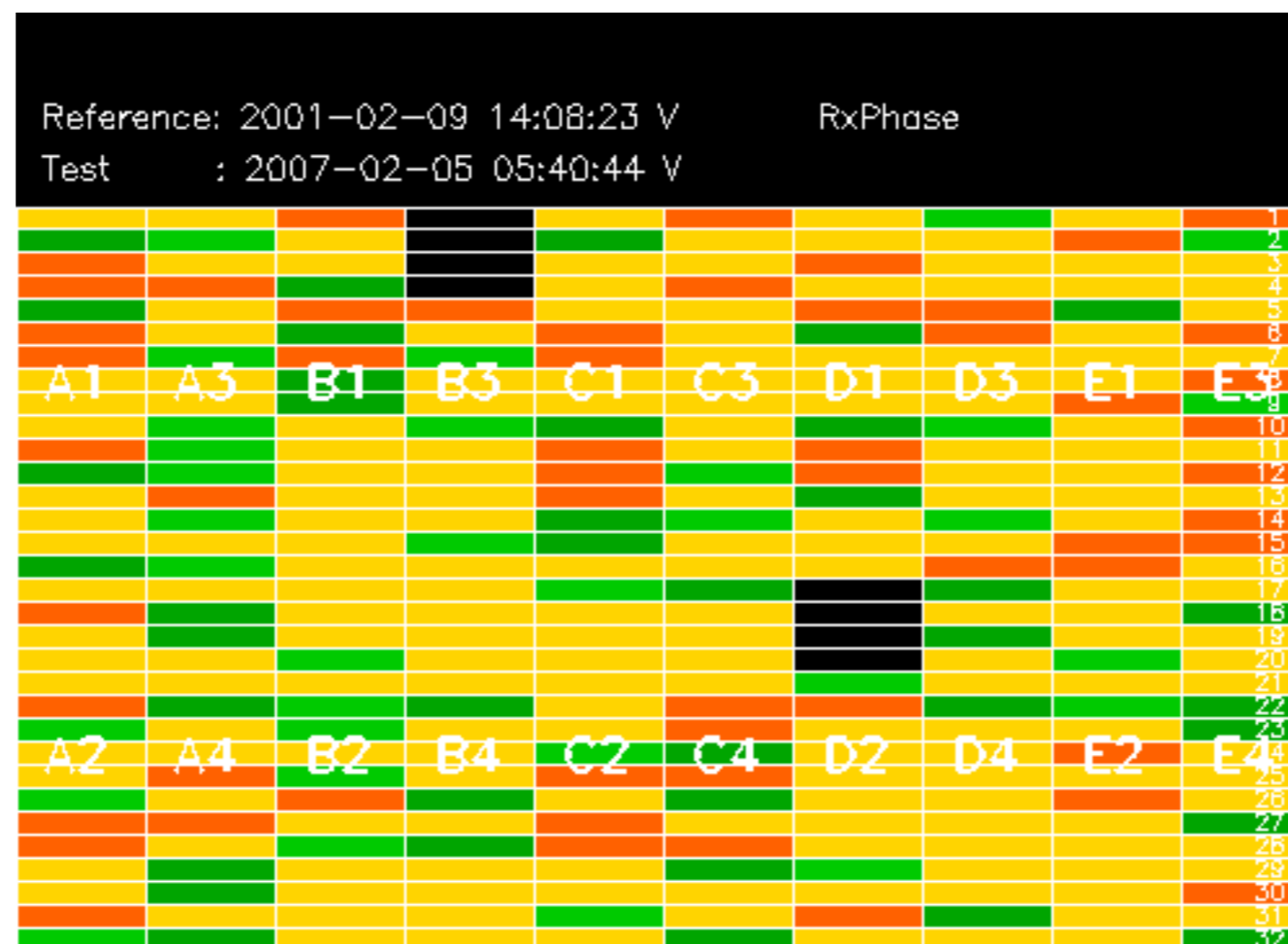
Doppler difference, estimated-predicted 'WVS' 'IS4' descending -error mean of -28.784422 Hz

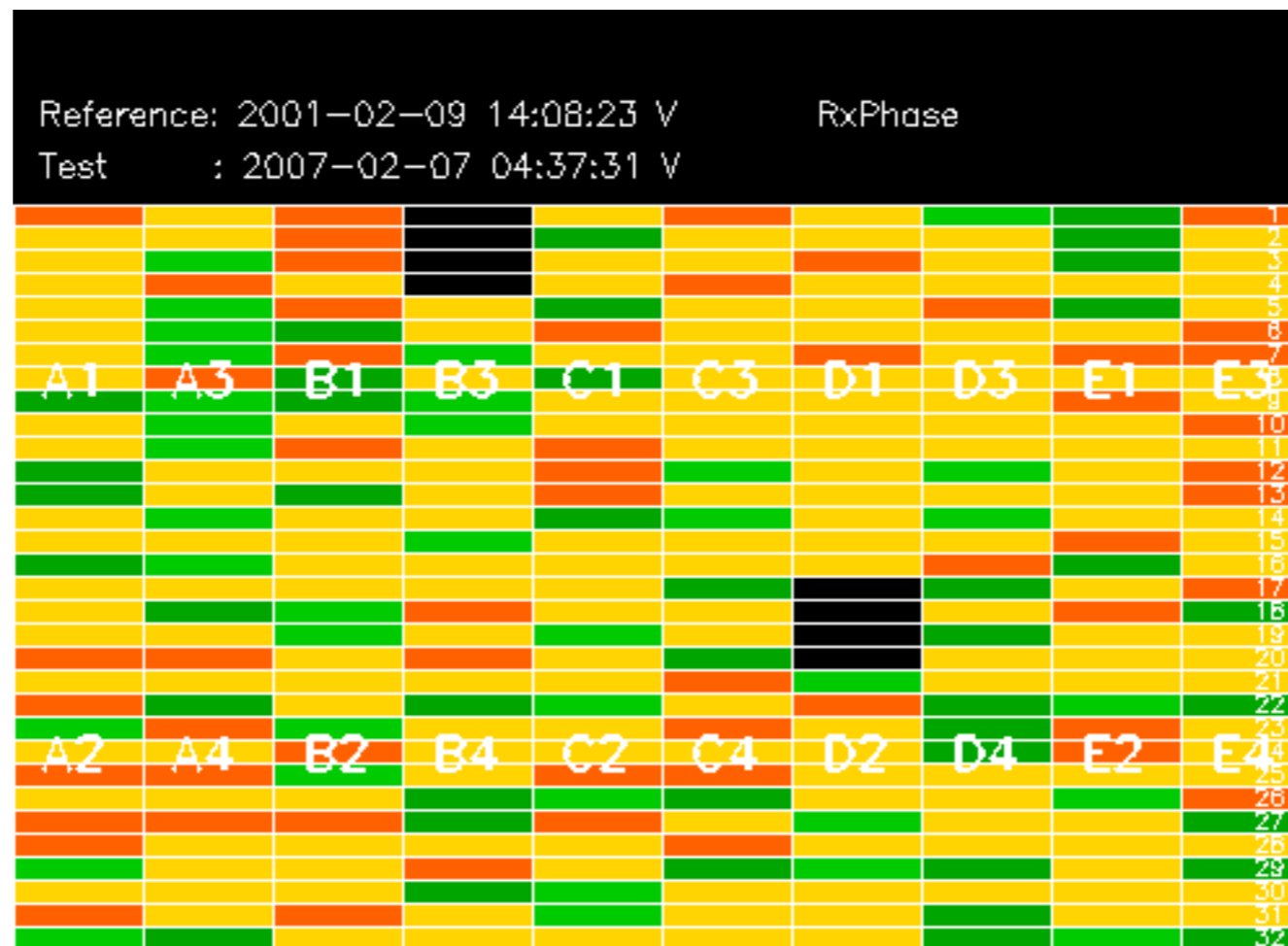


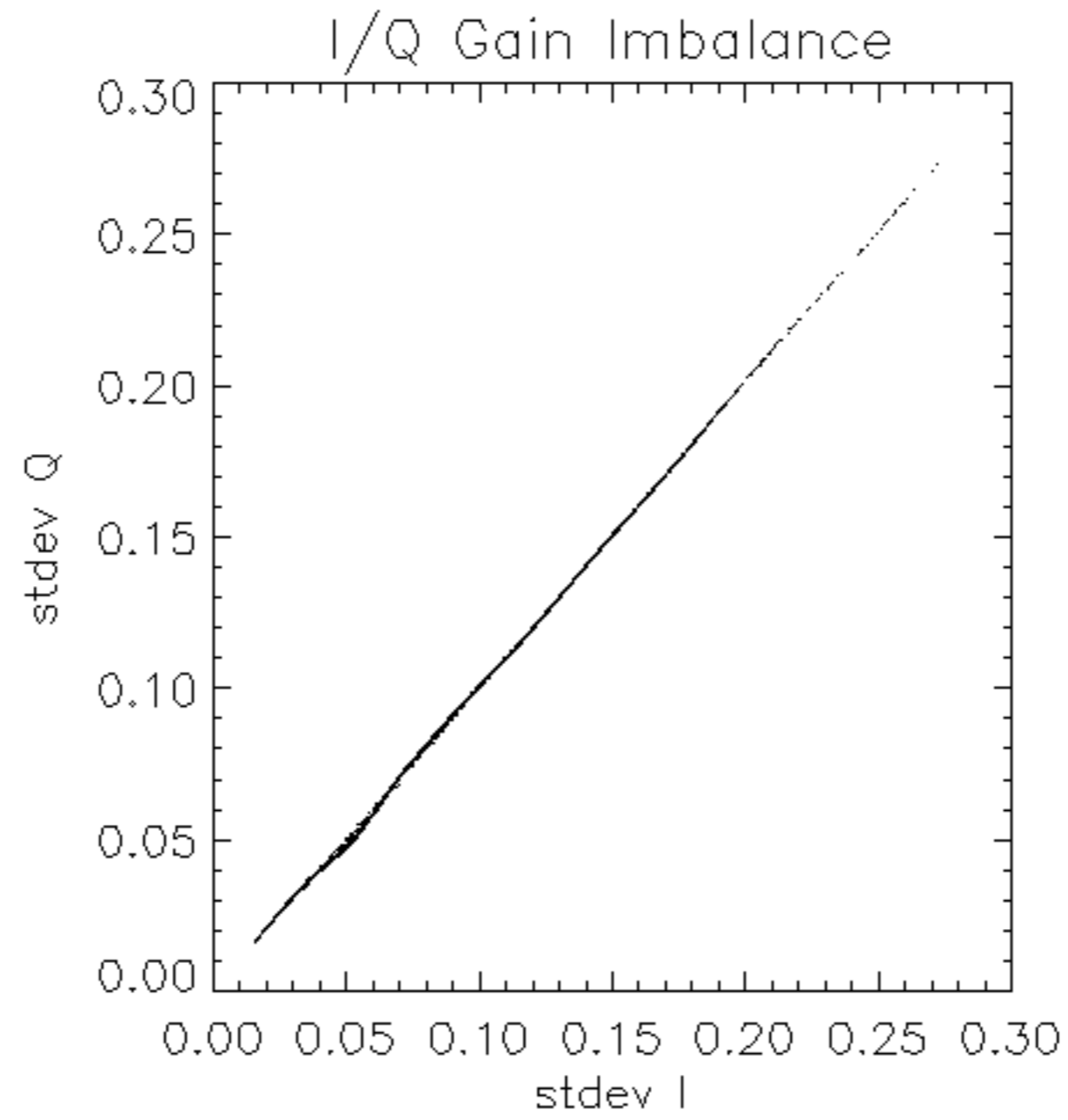
No anomalies observed on available MS products:

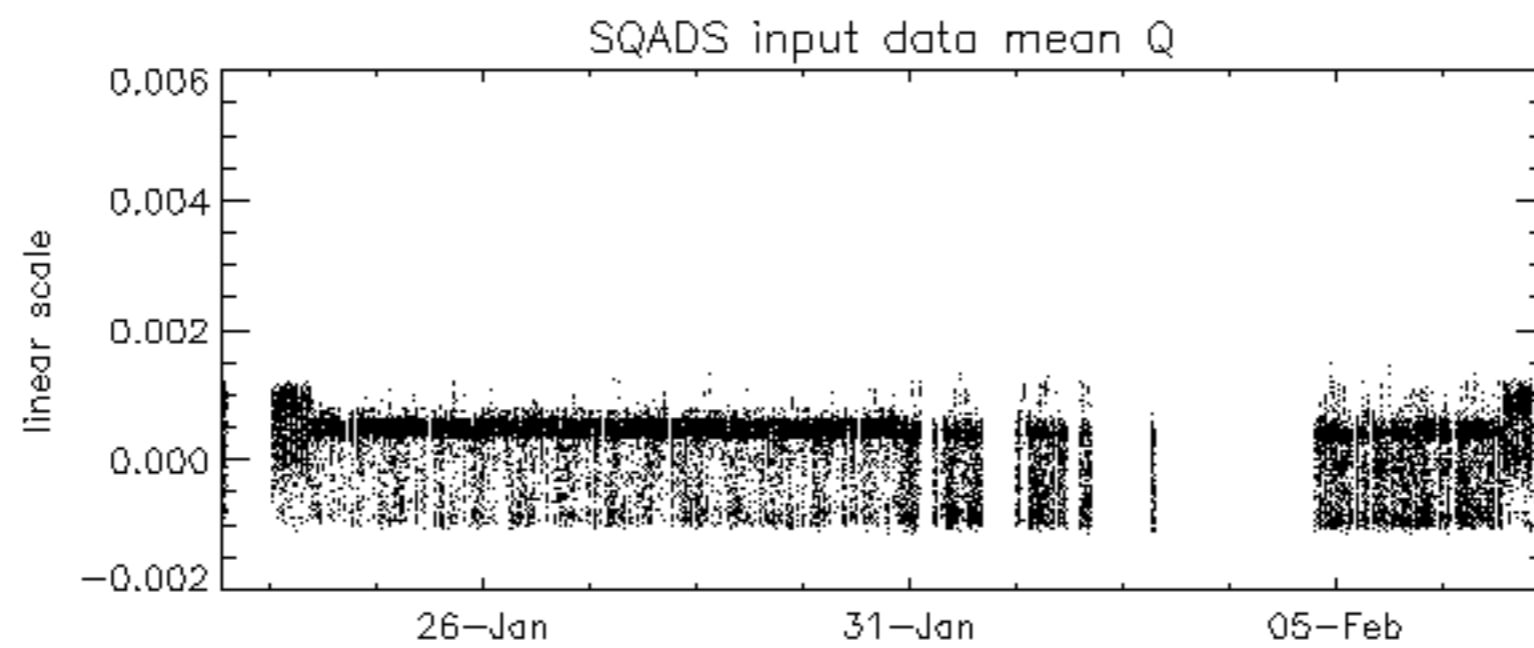
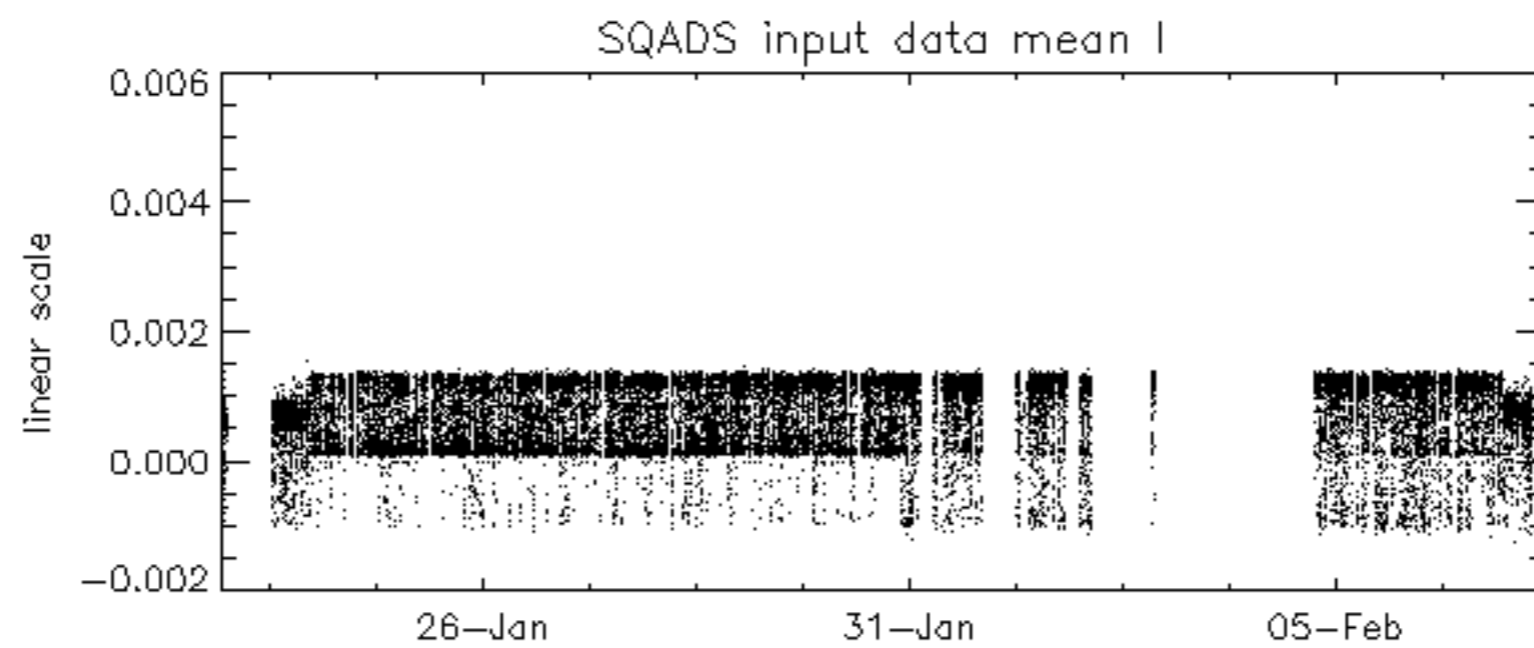
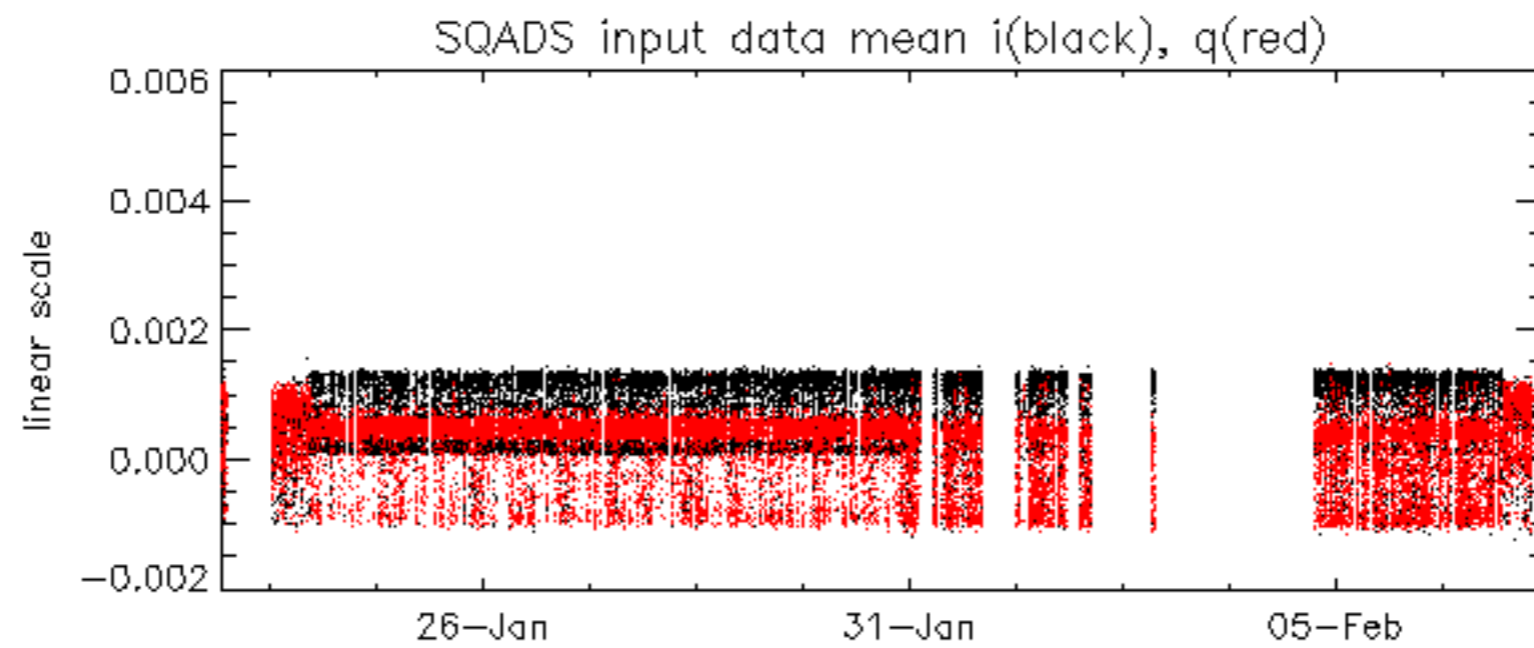
No anomalies observed.

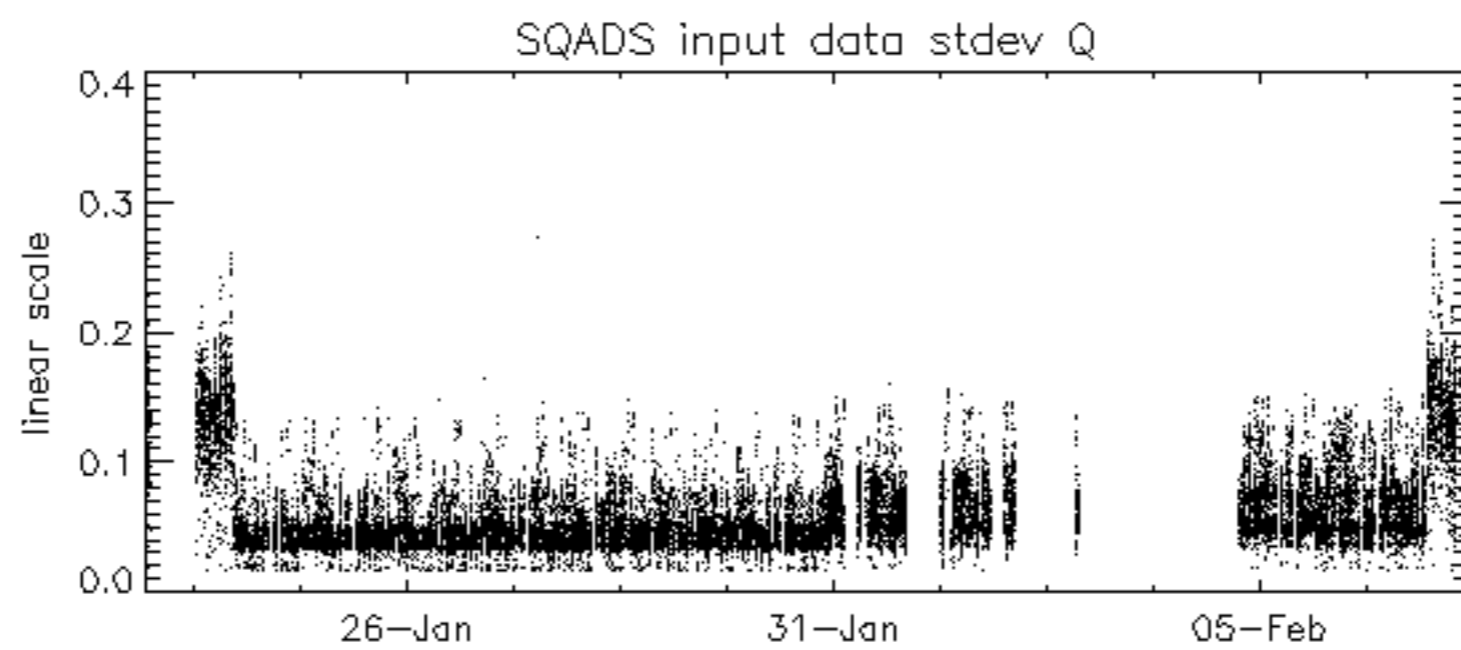
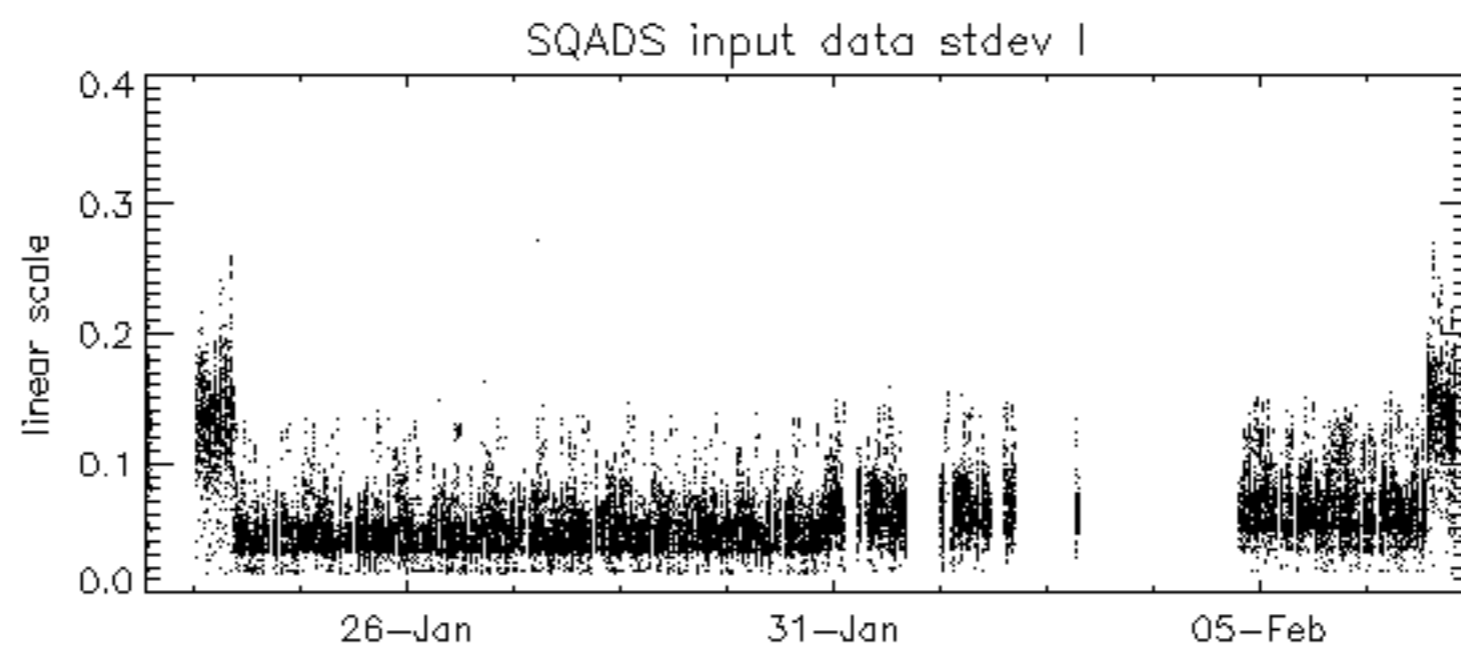
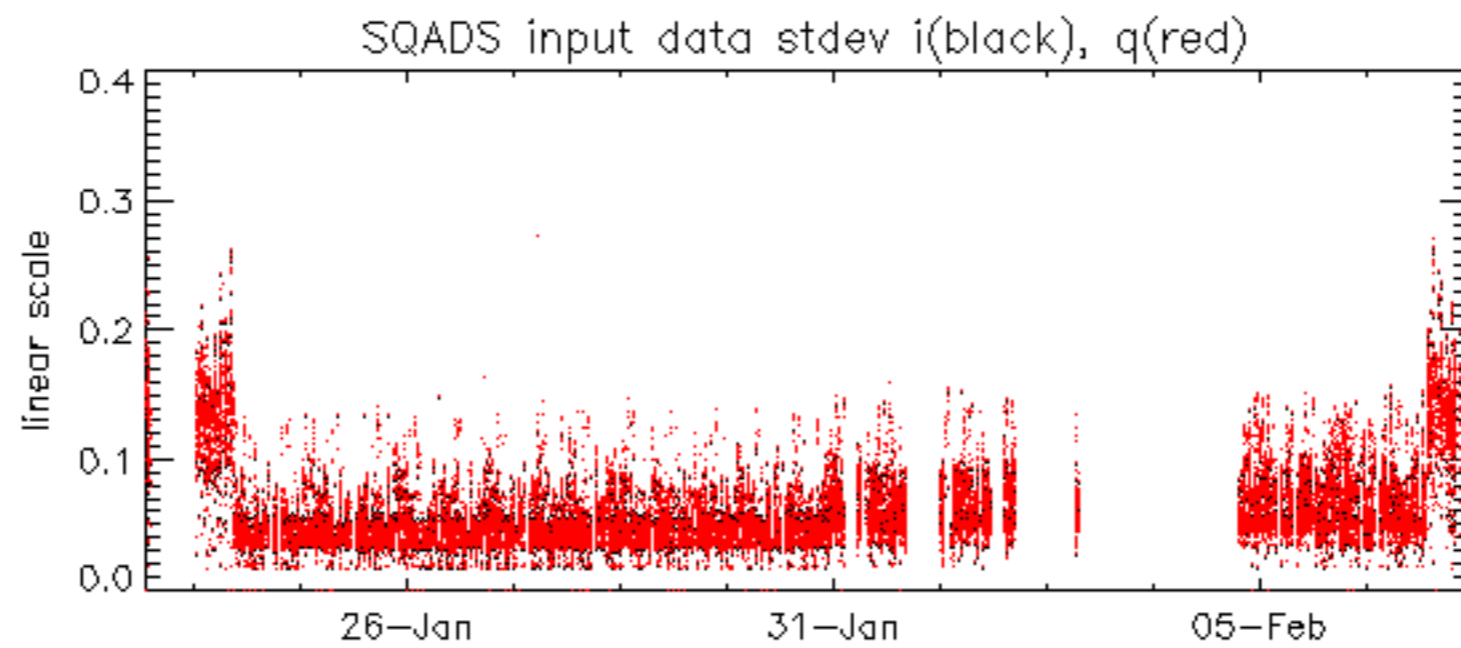








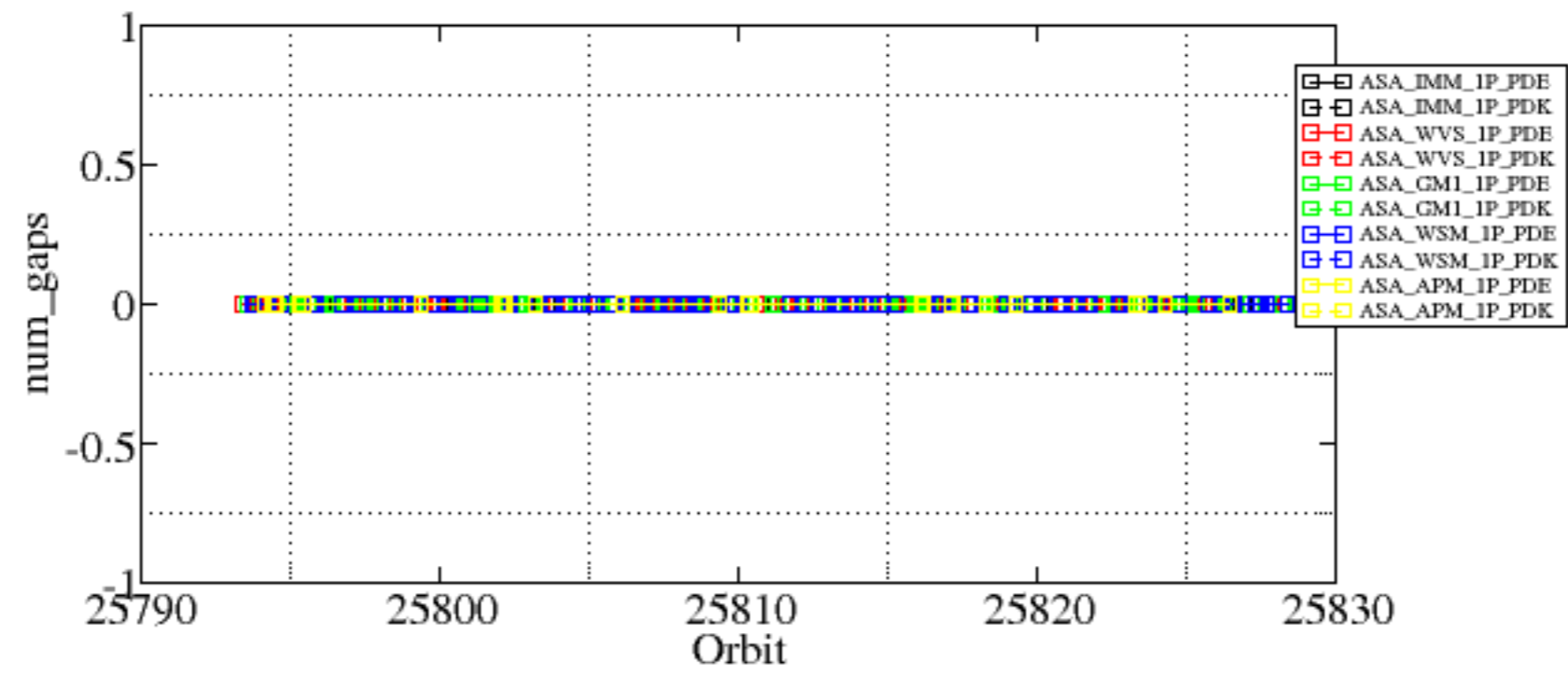


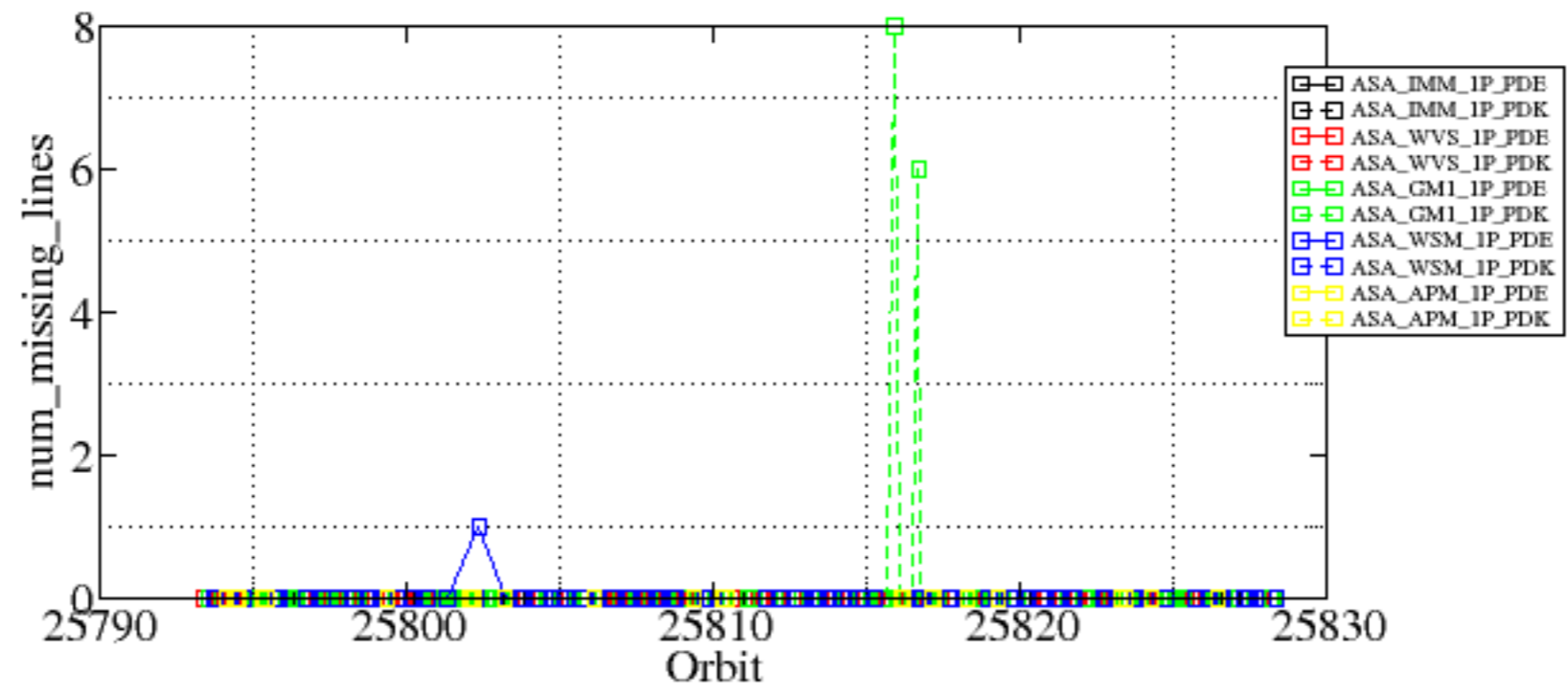


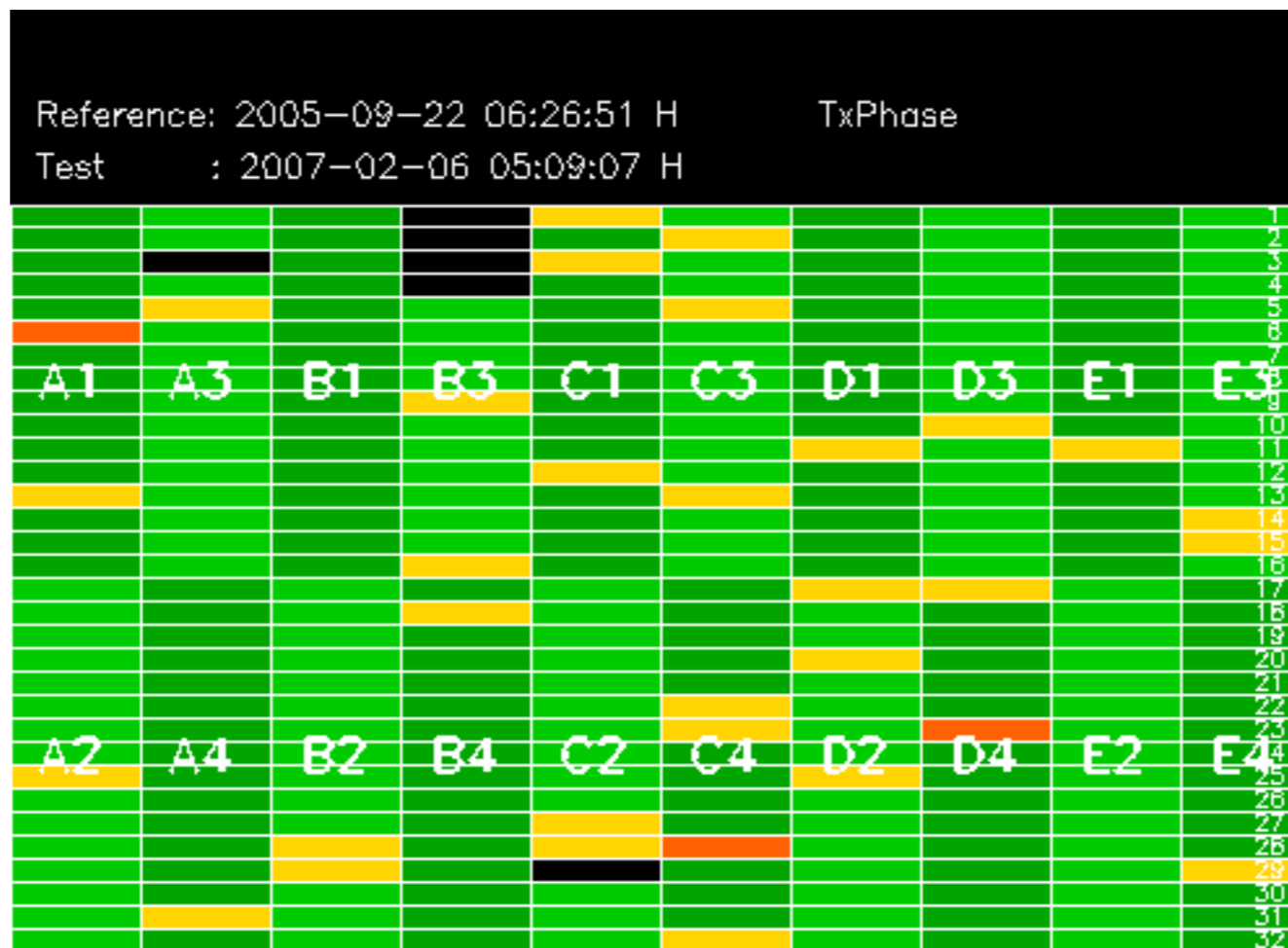
Summary of analysis for the last 3 days 2007020[567]

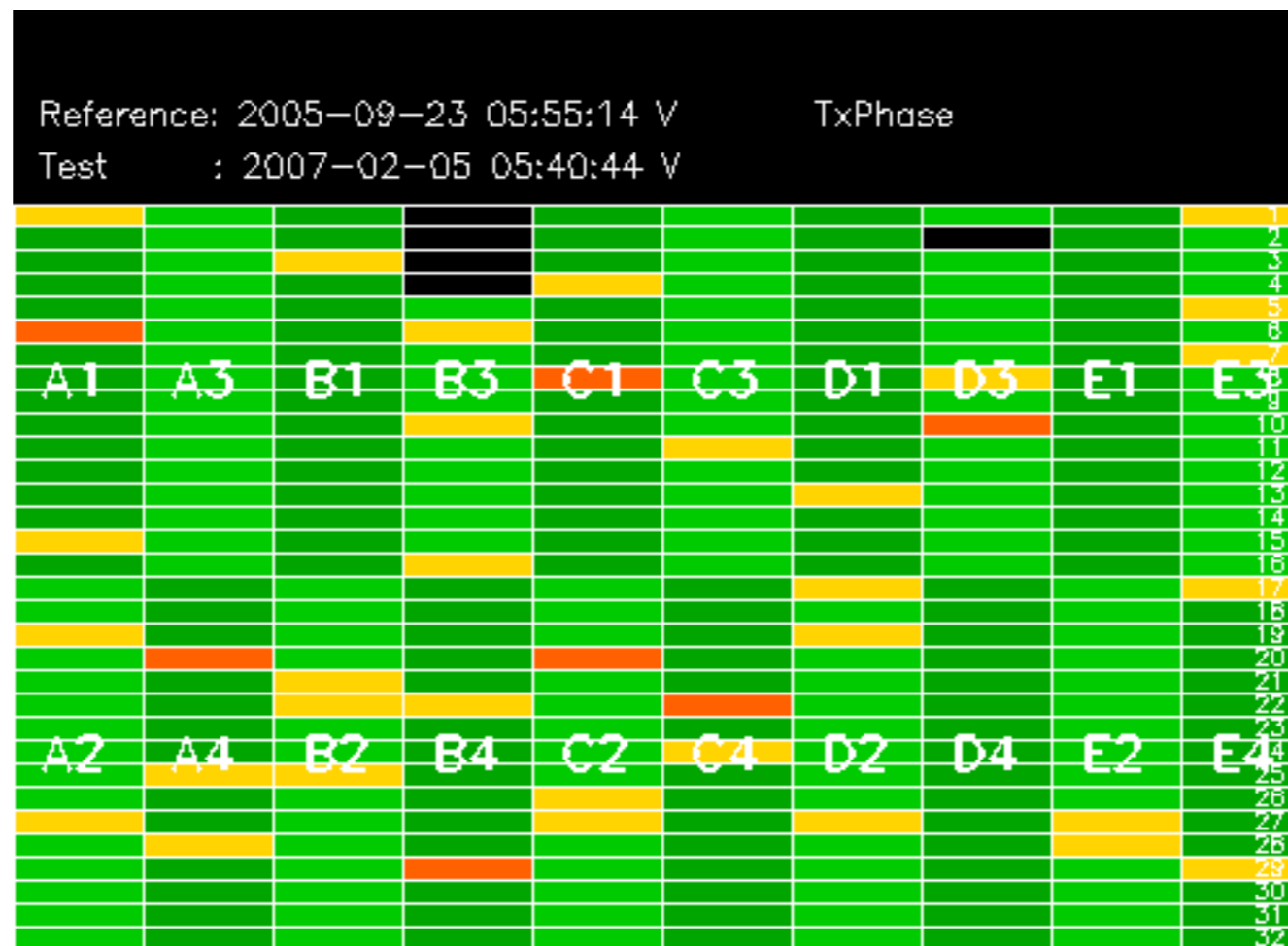
The assumptions is taken that the SQADS num_gaps and num_missing_lines fields are reliable indicators of telemetry problems

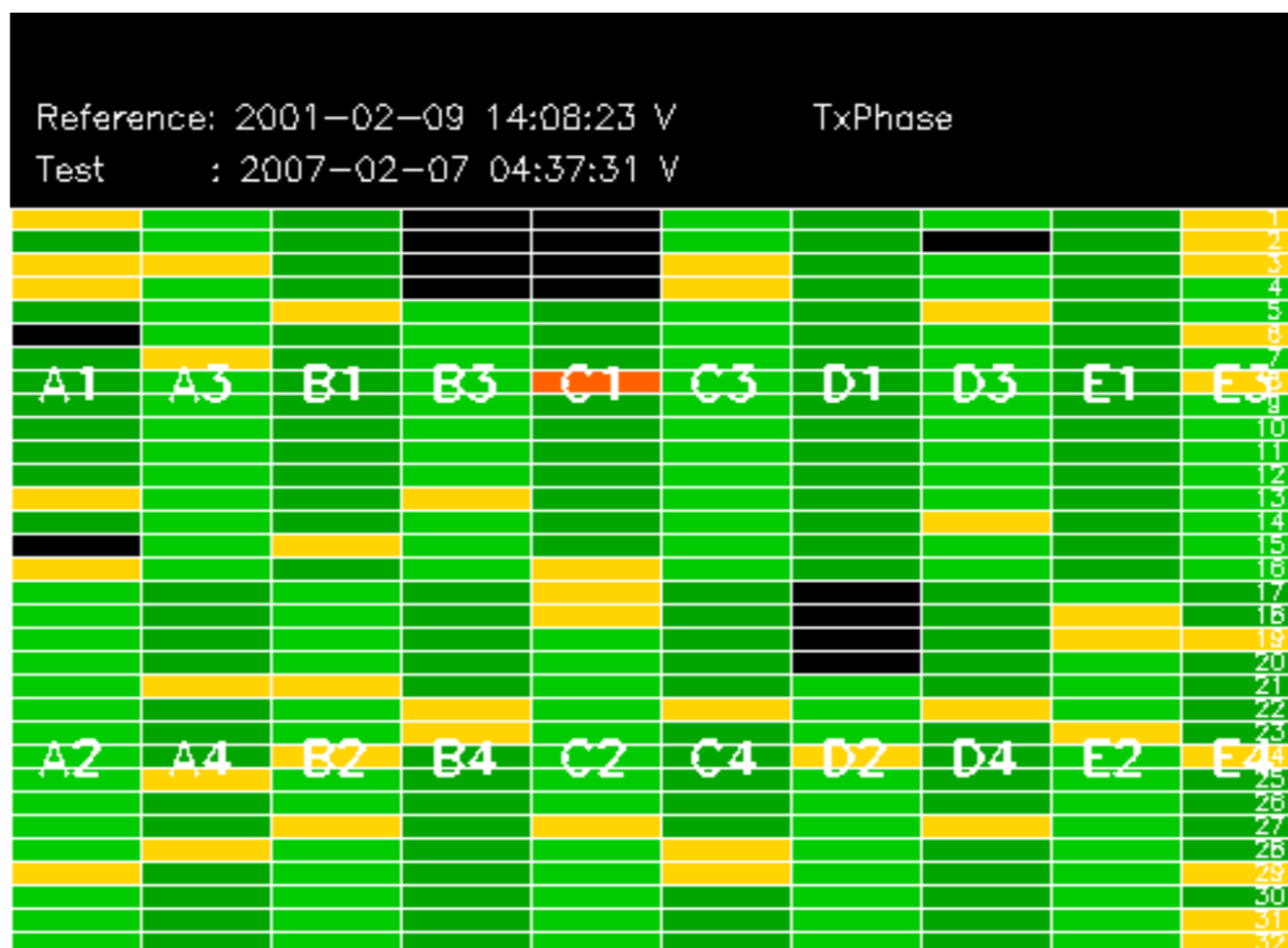
Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20070206_135601_000003142055_00210_25815_6169.N1	0	8
ASA_GM1_1PNPDK20070206_151422_000001692055_00211_25816_6289.N1	0	6
ASA_WSM_1PNPDE20070205_151401_000000852055_00197_25802_5978.N1	0	1



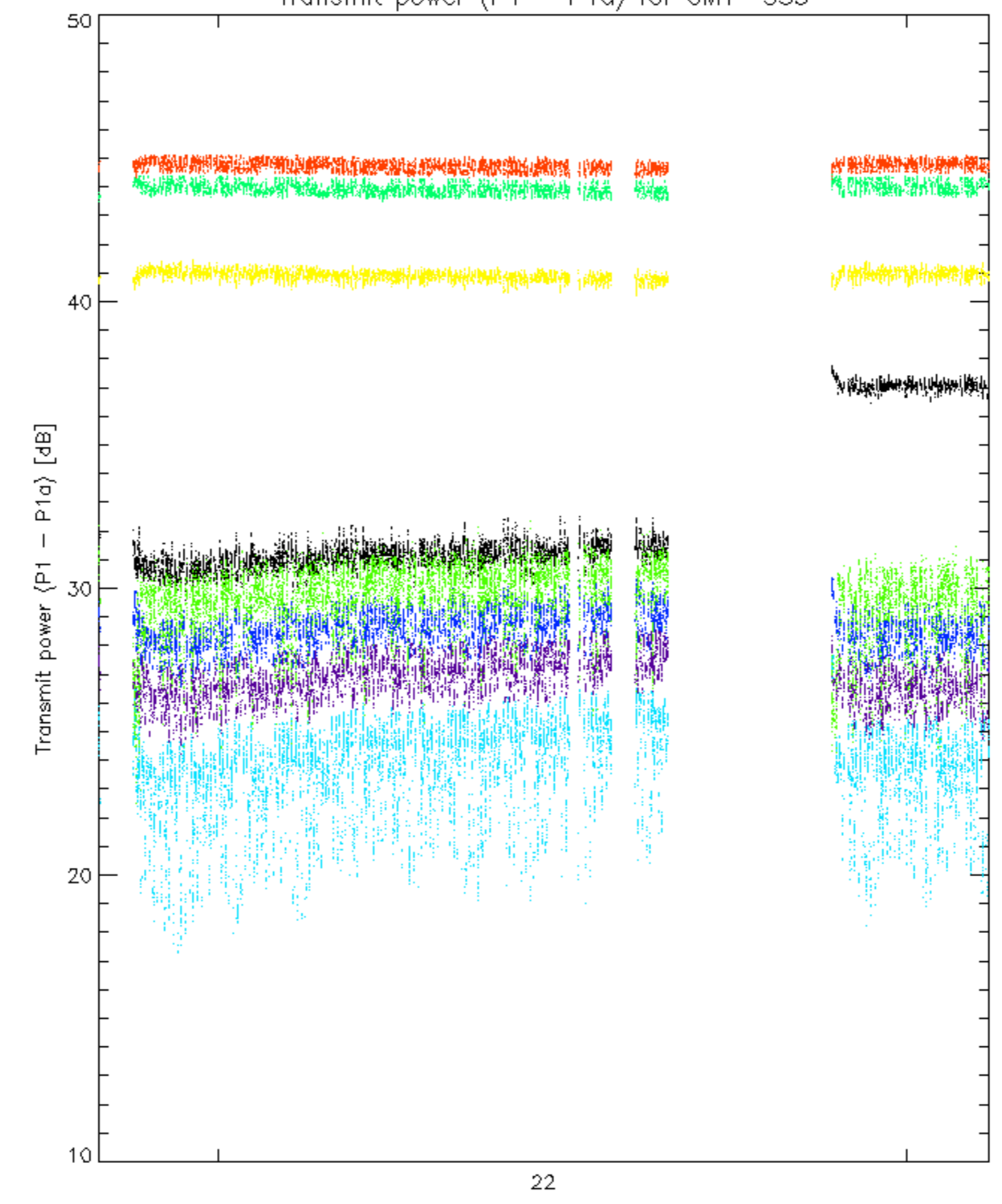




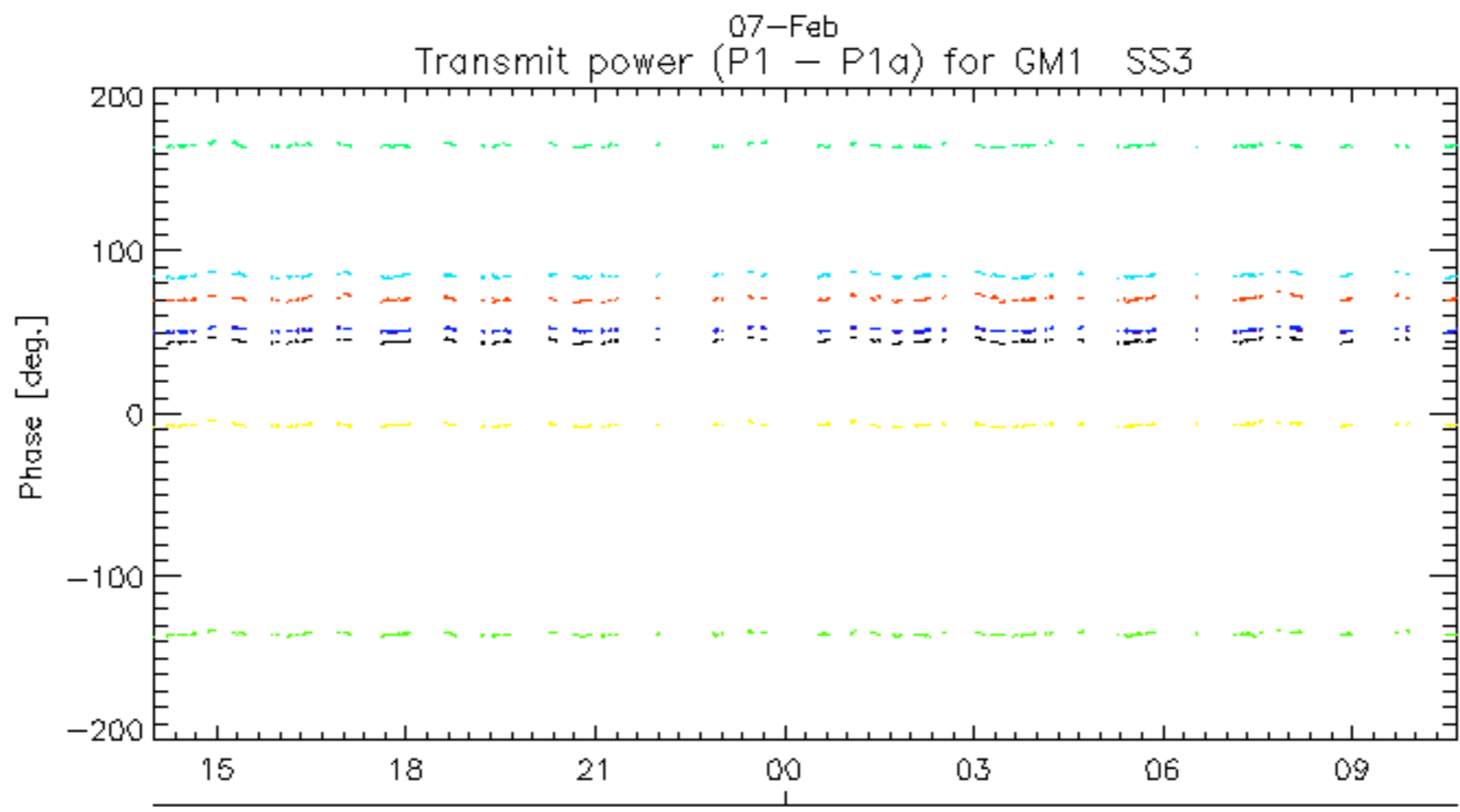
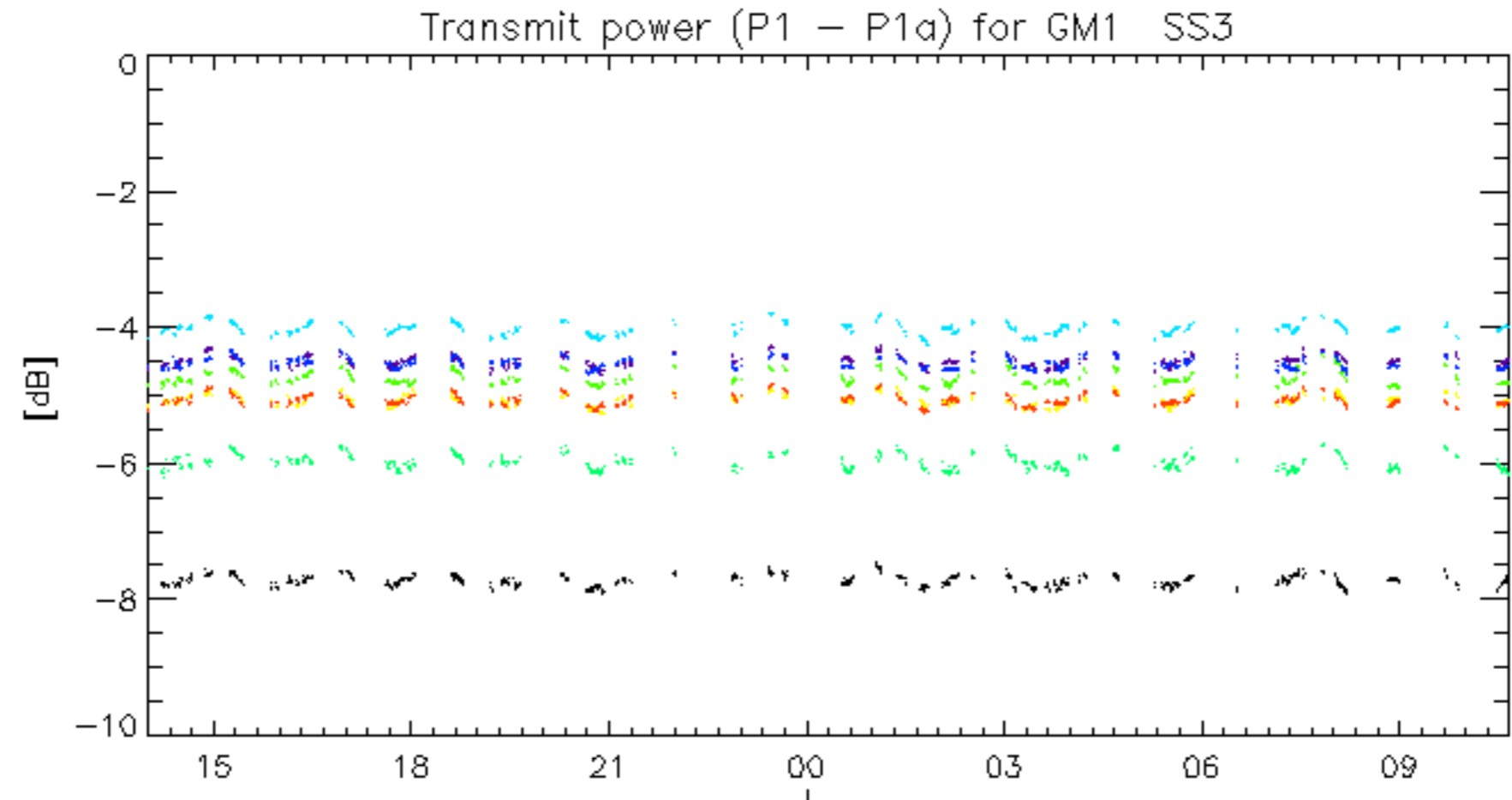




Transmit power (P1 - P1a) for GM1 SS3

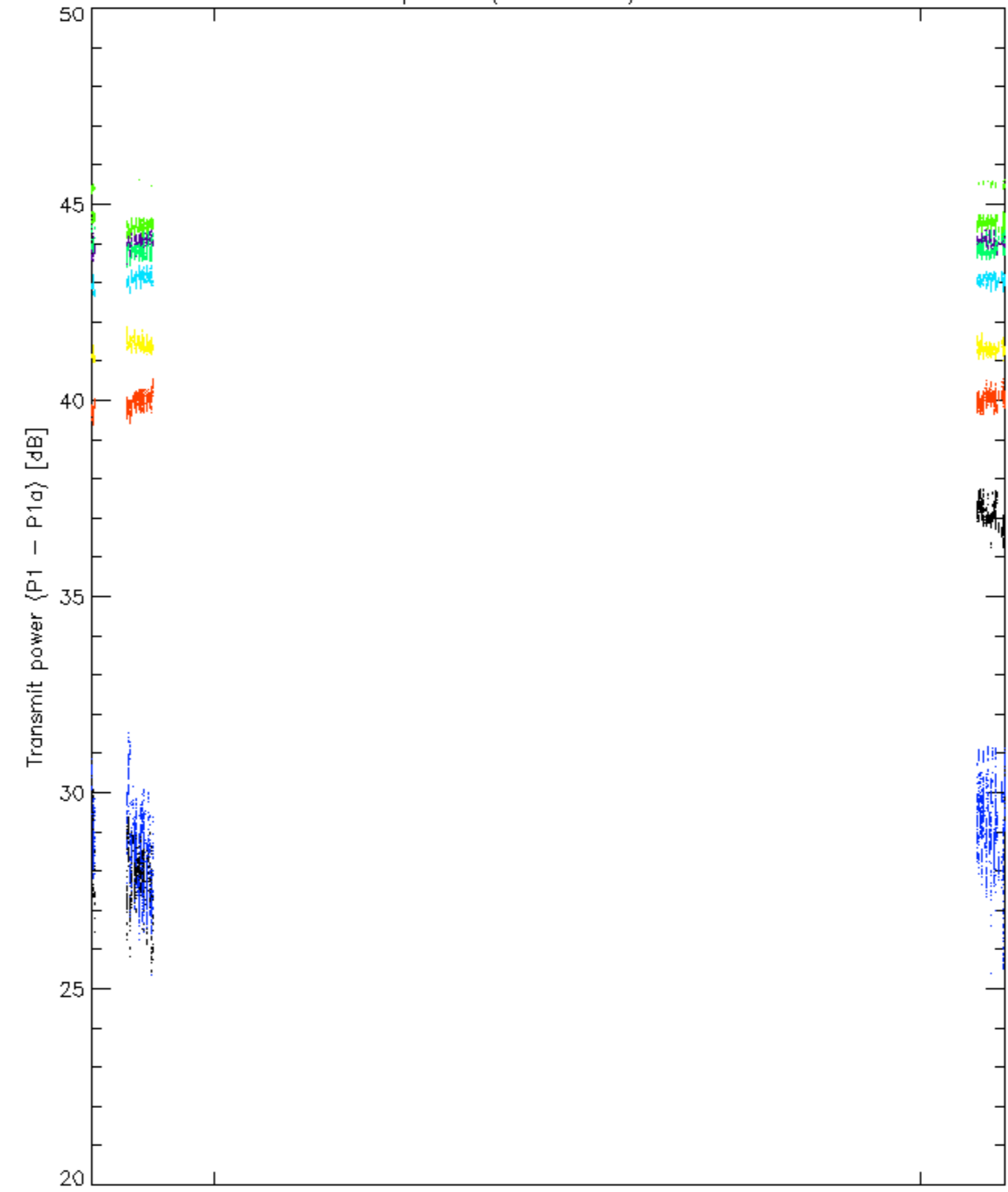


rows: 3 7 11 15 19 22 26 30

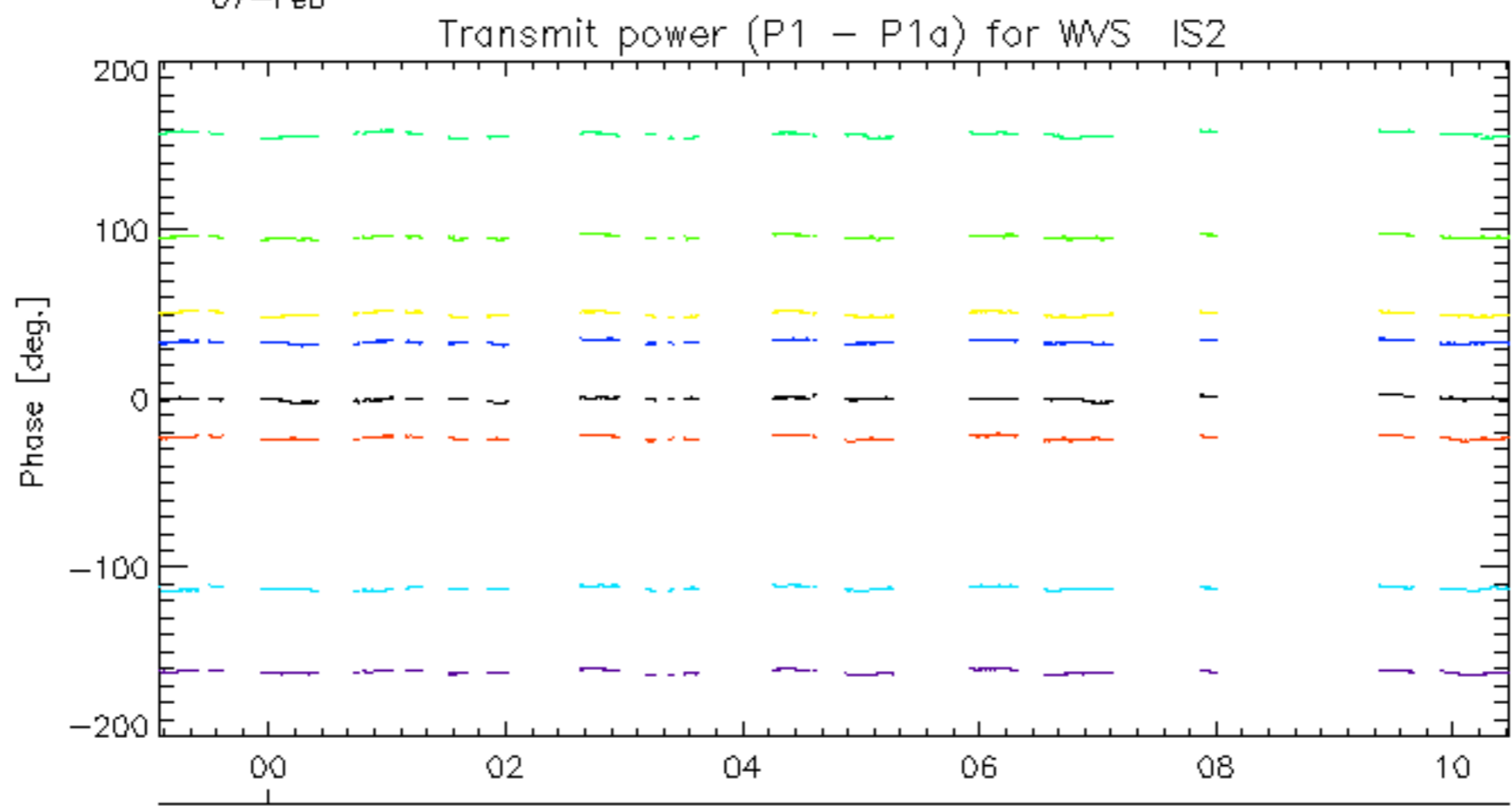
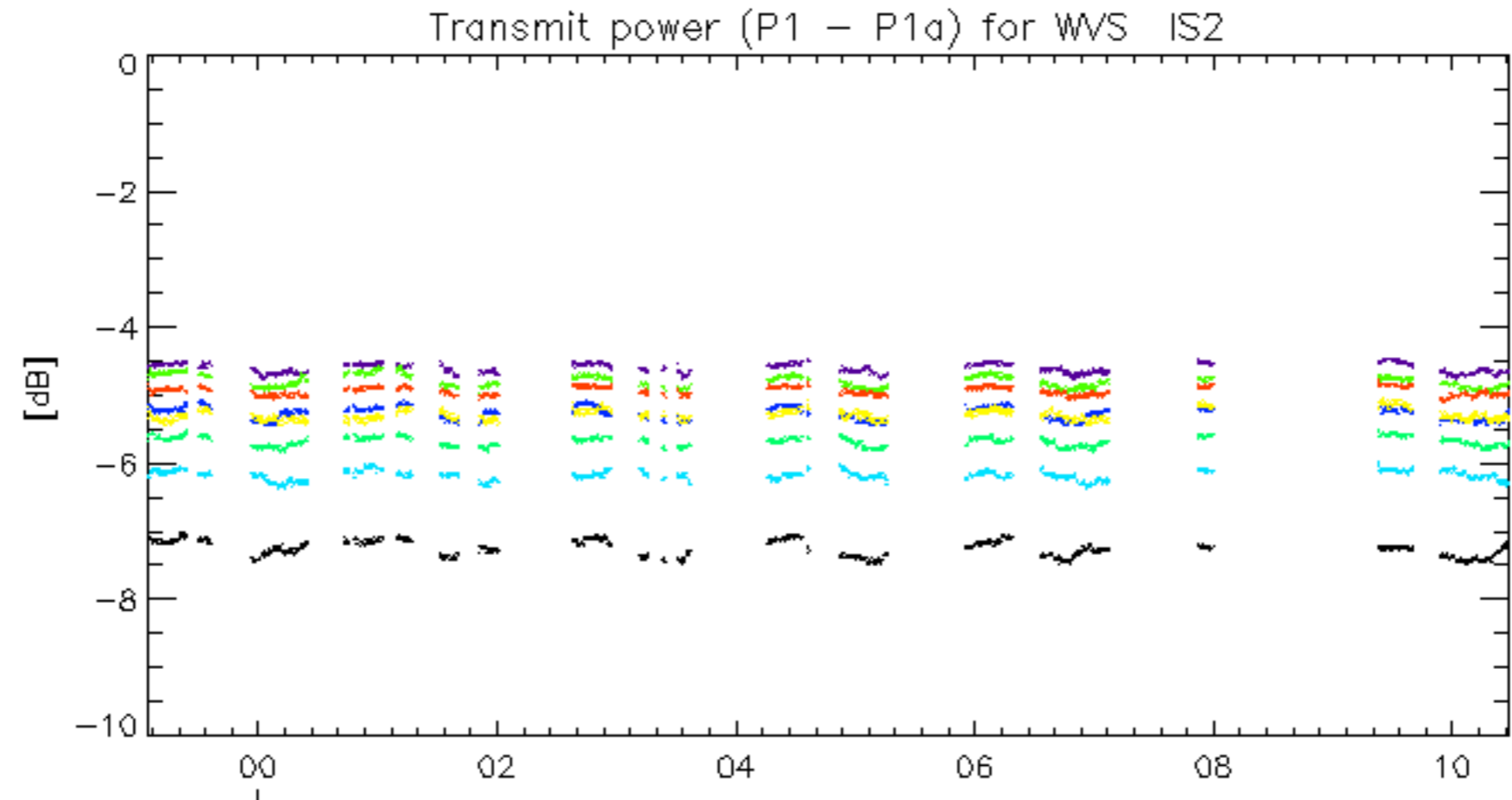


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

Transmit power (P1 - P1a) for WVS IS2

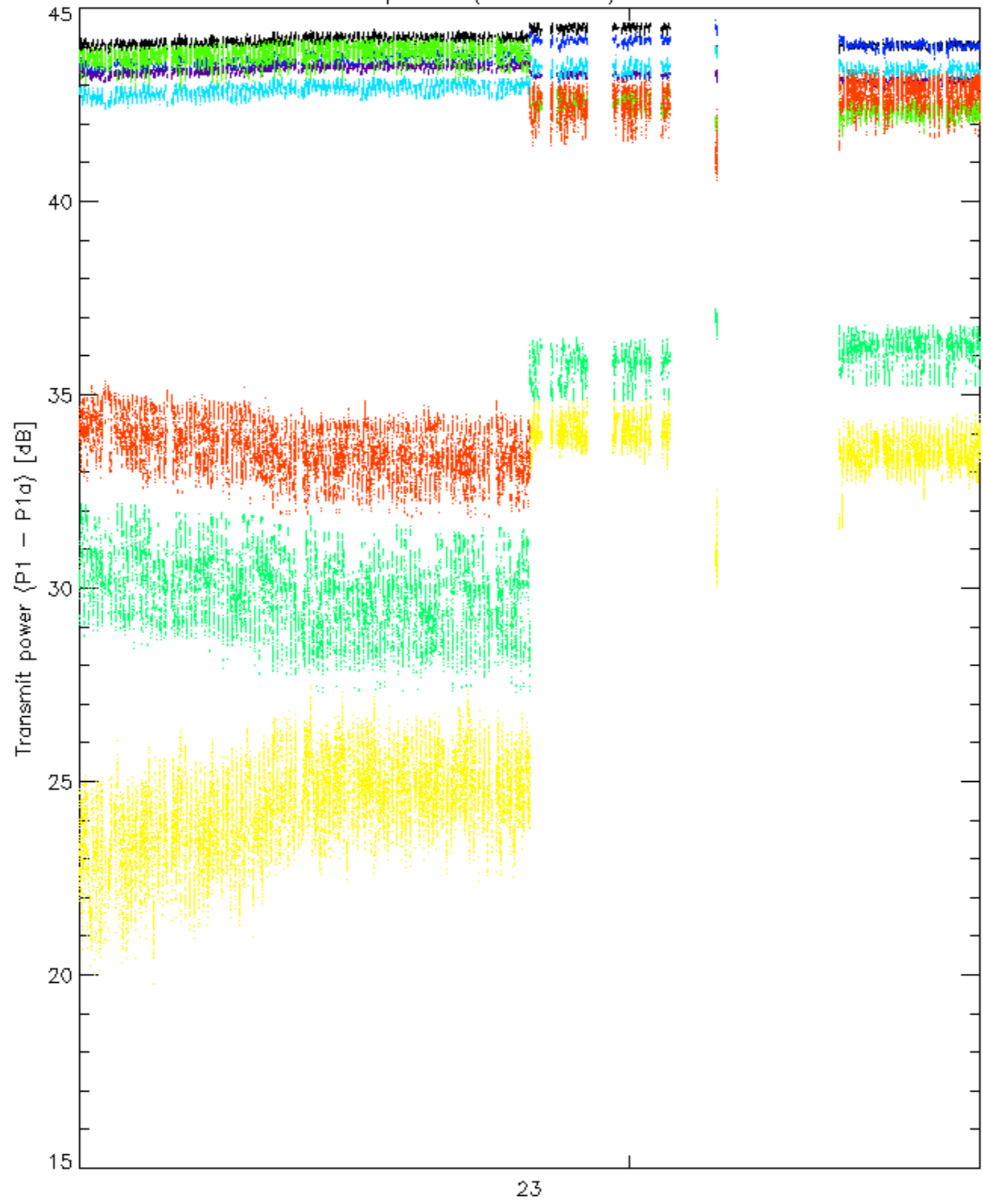


rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

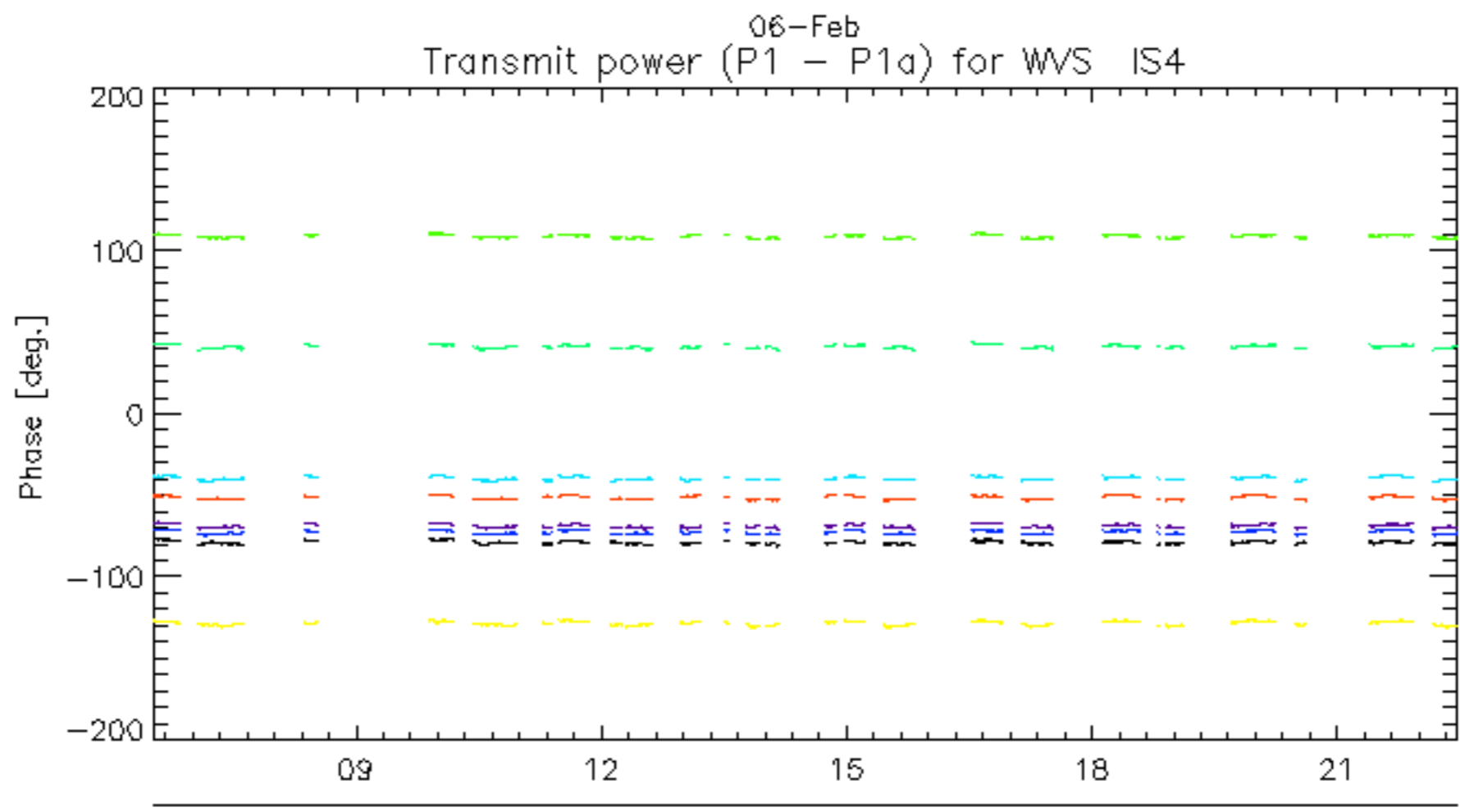
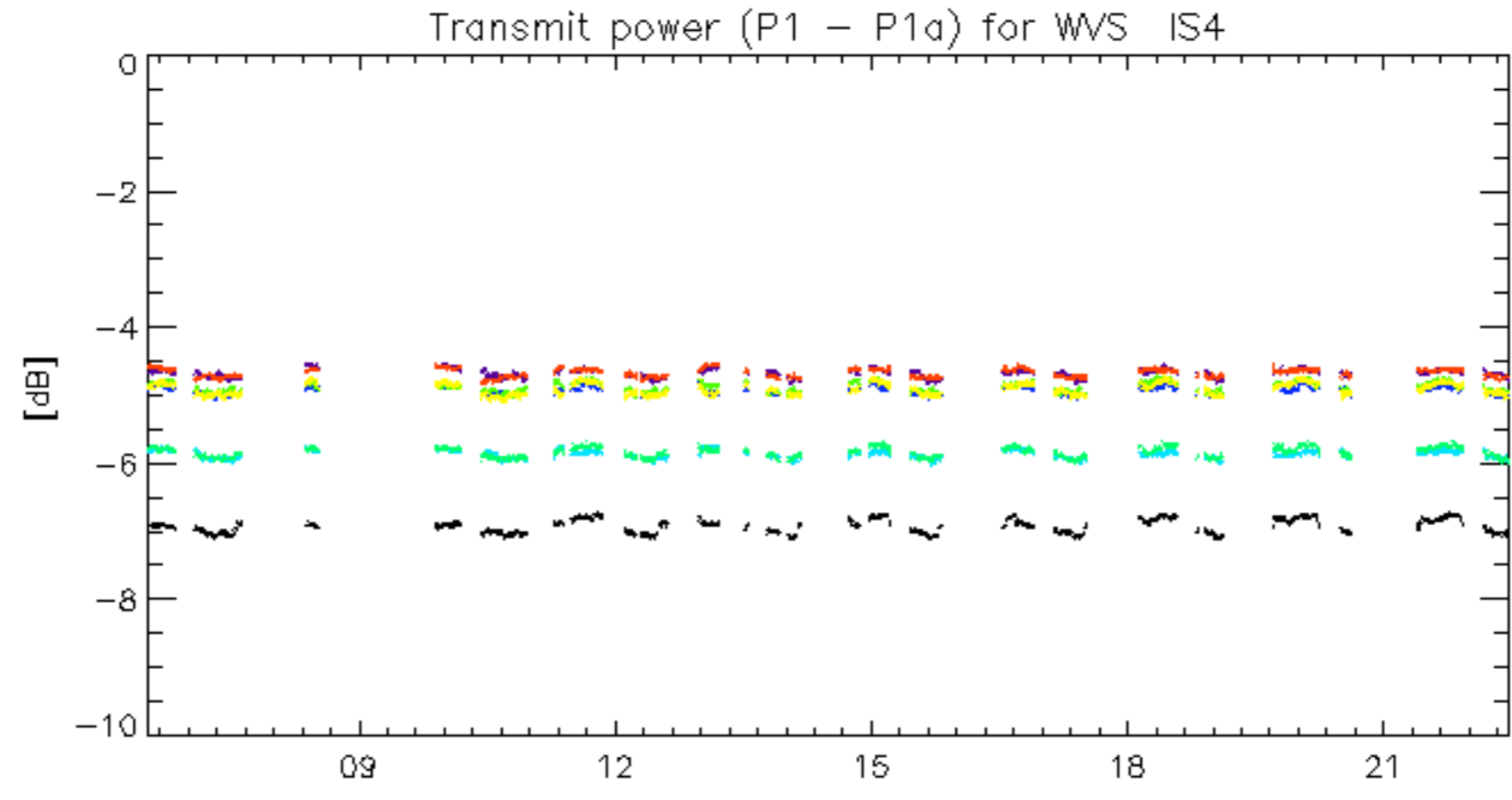


rows: **3** **7** **11** **15** **19** **22** **26** **30**

Transmit power (P1 - P1a) for WVS IS4



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



06-Feb
rows: _ 3 _ 7 _ 11 _ 15 _ 19 _ 22 _ 26 _ 30

No unavailabilities during the reported period.